PROPOSED WAWA
FINAL LAND DEVELOPMENT PLANS

TMP #26-06-101, #26-06-101-003, #26-06-101-004, #26-06-101-005

NEW BRITAIN TOWNSHIP
BUCKS COUNTY, PENNSYLVANIA

DEVELOPED BY:

PROVCO PINEGOOD, CHALFONT, LLC

BOHLER
ENGINEERING

1600 MANOR DRIVE, SUITE 200
CHALFONT, PENNSYLVANIA 18914
Phone: (215) 996-9100
Fax: (215) 996-9102
PA@BohlerEng.com

WAWA CONTACT INFORMATION

WAWA, INC.
ATTN: CHRISTOPHER HOFFMANN 260
BALTIMORE PIKE
RED ROOF OFFICE
WAWA, PA 19063

SITE DATA TABLE: WAWA: 8147	
BUILDING TYPE:	W50-FB-I
CANOPY CONFIGURATION: (WING, STRAIGHT, SPLIT, STACKED)	STRAIGHT
CANOPY TYPE: (SLOPE, FLAT, A-FRAME)	A-FRAME
NUMBER OF MPD'S:	12
NUMBER OF 3+1 MPD'S:	12
NUMBER OF PARKING PLACES:	62
NUMBER OF HCP:	3
NUMBER OF TRUCK/OVERSIZED PARKING:	0
SQ. FT. OF ASPHALT OUTSIDE OF ROW (TO BE SEAL COATED):	71,223 SF
SQ. FT. OF CONCRETE OUTSIDE OF ROW:	21,406 SF
SQ. FT. OF LAWN AREA (TO BE MOWED):	36,256 SF
SQ. FT. OF MULCH AREA:	7,133 SF
SQ. FT. OF WAWA LOT AREA:	180,019 SF

LIST OF VARIANCES GRANTED ON 4/19/18 BY THE ZONING HEARING BOARD

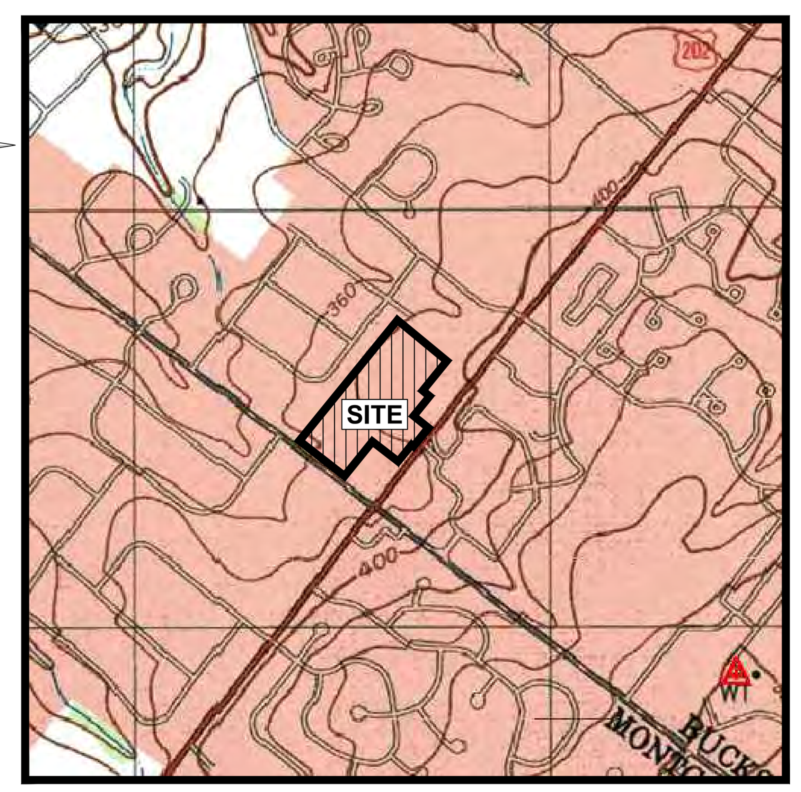
1. A VARIANCE FROM §27-305.J3 1 .C. 1. (USE DEFINITIONS AND REGULATIONS) OF THE NEW BRITAIN TOWNSHIP ZONING CODE TO ALLOW A J31 PLANNED COMMUNITY CENTER MIXED USE WITH A BASE SITE AREA OF 14.864 ACRES IN LIEU OF THE REQUIRED MINIMUM 15 ACRES.

WAIVERS FROM THE NEW BRITAIN TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE GRANTED BY THE BOARD OF SUPERVISORS IN RESOLUTION 2018-13, DATED 8/6/18:

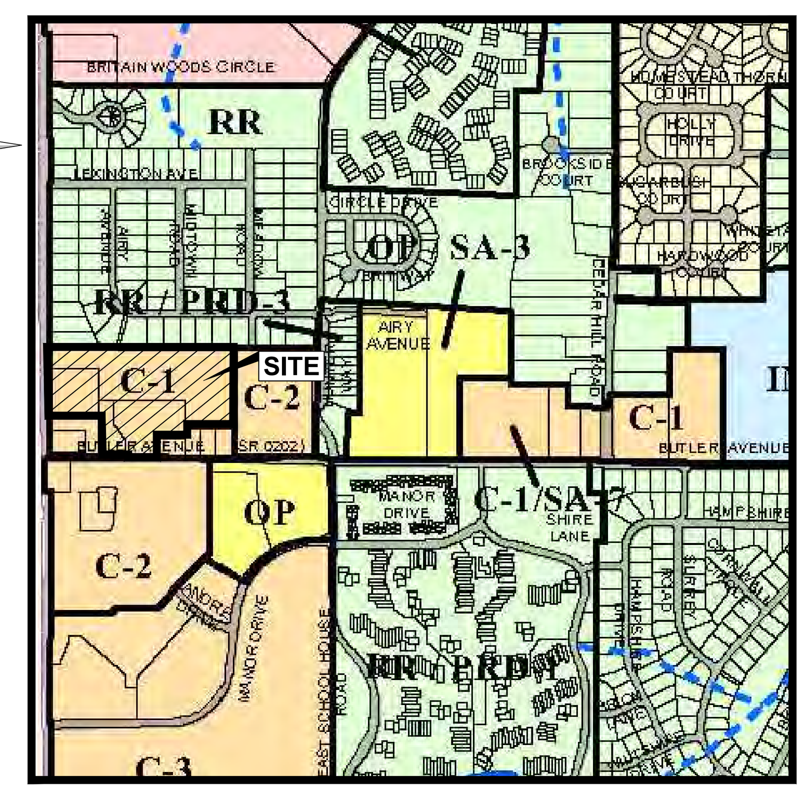
1. A WAIVER FROM SECTION 706.1.C OF THE NEW BRITAIN TOWNSHIP SALDO IS REQUESTED TO ALLOW STRIPED ISLANDS ADJACENT TO THE CONVENIENCE STORE BUILDING PAD.
2. A WAIVER FROM SECTION 706.1.D OF THE NEW BRITAIN TOWNSHIP SALDO IS REQUESTED TO ALLOW CURB RADII LESS THAN 5' AT THE PROPOSED DRIVEWAY ONTO WEST BUTLER AVENUE.

LIST OF DESIGN WAIVERS REQUESTED FROM THE NEW BRITAIN TOWNSHIP SALDO:

1. A WAIVER FROM SECTION 22-705.3.G IS REQUESTED TO ALLOW FOR A SUBDIVISION AND/OR LAND DEVELOPMENT TO ABUT AN EXISTING STREET AND NOT BE REQUIRED TO MILL AND OVERLAY THE ENTIRE WIDTH OF THE ROADWAY A DEPTH OF 1 ½ INCHES.
2. A WAIVER FROM SECTION 22-705.4.C TO ALLOW FOR MINIMUM INTERSECTION SPACING TO BE LESS THAN THE SPECIFIED 1,000 FEET.
3. A WAIVER FROM SECTION 22-713.4.A IS REQUESTED TO ALLOW STREET TREES TO BE PLANTED EVERY 50 FEET AS REQUIRED IN SECTION 22-722.4.C.(7)(A)
4. A WAIVER FROM SECTION 22-713.4.B IS REQUESTED TO ALLOW STREET TREES TO BE PLANTED IN THE PLANTING STRIP LOCATED BETWEEN THE CURB AND THE SIDEWALK AS REQUIRED IN SECTION 22-722.4.C.(7)(B)



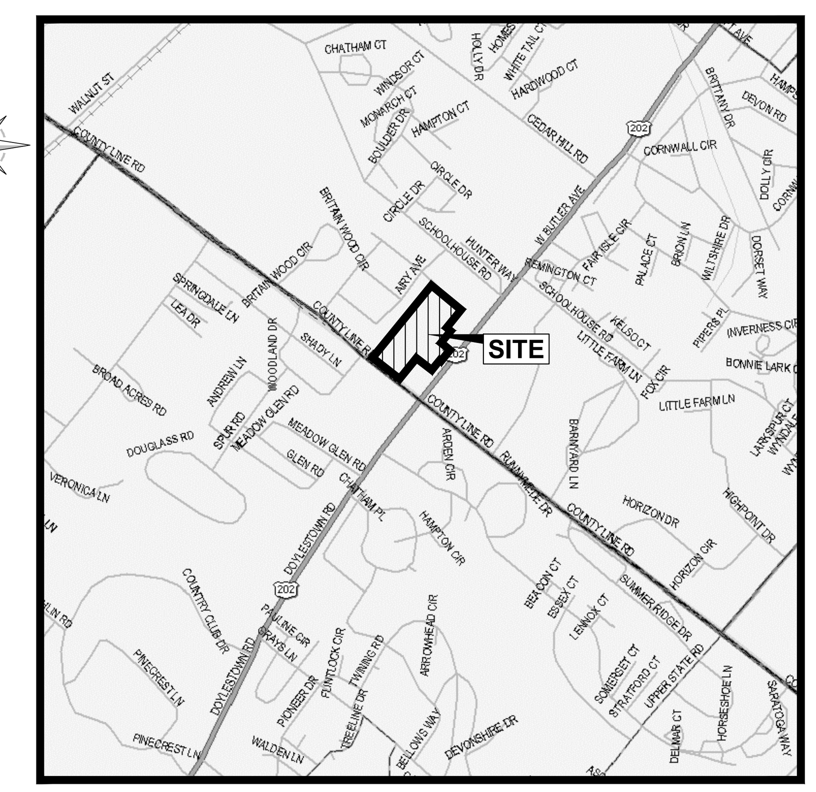
USGS MAP
(DOYLESTOWN USGS QUAD)
SCALE: 1"=1,200'
600 0 1,200



LOCATION MAP
1"=1,000'
500' 0 1,000'

LEGEND

SYMBOL	ZONING DISTRICT
C-1	COMMERCIAL DISTRICT
C-2	COMMERCIAL DISTRICT
C-3	COMMERCIAL DISTRICT
OP	OFFICE PARK DISTRICT
PRD-1	HIGHLANDS SUBDIVISION
PRD-3	HUNTER WAY SUBDIVISION
RR	RESIDENTIAL DISTRICT
SA-3	COMMERCE BANK/KINDERCARE LAND DEVELOPMENT



VICINITY MAP
1"=2,000'
1,000' 0 2,000'

SHEET INDEX

SHEET TITLE	SHEET #
COVER (RECORD PLAN 1 OF 10)	1
NOTES (RECORD PLAN 2 OF 10)	2
LOT CONSOLIDATION PLAN (RECORD PLAN 3 OF 10)	3
OVERALL SITE PLAN (RECORD PLAN 4 OF 10)	4
SITE PLANS (RECORD PLAN 5 & 6 OF 10)	5-6
AERIAL PLAN	7
EXISTING RESOURCE AND SITE ANALYSIS PLAN	8
OVERALL GRADING PLAN	9
GRADING PLANS	10-11
OVERALL UTILITY PLAN	12
UTILITY PLANS	13-14
PROFILES	15
OVERALL LANDSCAPE PLAN	16
LANDSCAPE PLANS	17-18
LANDSCAPE DETAILS	19
LIGHTING PLAN	20
SOIL EROSION & SEDIMENT POLLUTION CONTROL PLAN	21
SOIL EROSION & SEDIMENT POLLUTION CONTROL NOTES	22
SOIL EROSION & SEDIMENT POLLUTION CONTROL DETAILS	23-24
DETAILS	25-28
TRUCK CIRCULATION PLAN	29-30
PRE-DEVELOPMENT DRAINAGE AREA PLAN	31
POST DEVELOPMENT DRAINAGE AREA PLAN	32
INLET DRAINAGE AREA PLAN	33
POST CONSTRUCTION STORMWATER MANAGEMENT PLAN (RECORD PLAN 7 OF 10)	34
POST CONSTRUCTION STORMWATER MANAGEMENT NOTES (RECORD PLAN 8 OF 10)	35
POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS (RECORD PLAN 9 OF 10)	36
POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS (RECORD PLAN 10 OF 10)	37

NOTES:
1. SHEETS 1-6 & 33-37 OF THIS PLAN SET WILL BE CONSIDERED A COMPLETE RECORD PLAN SET FOR FILING PURPOSES IN THE BUCKS COUNTY RECORDER OF DEEDS OFFICE.

CERTIFICATION OF OWNERS INTENT

TO ALL TO WHOM THESE PRESENT MAY COME, WE PROVCO PINEVILLE ACQUISITIONS, LLC, ______________________ SEND GREETINGS, KNOW YE THAT I, WE HAVE LAID OUT ON LANDS IN NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA, CERTAIN LOTS ACCORDING TO THIS PLAN, WHICH IS INTENDED TO BE FORTHWITH RECORDED, WITNESS MY, OUR HAND AND SEAL.

PROVCO PINEGOOD, CHALFONT, LLC

BY: ______________________
(SIGNATURE)

NAME: ______________________
(PRINTED)

TITLE: ______________________

CERTIFICATION OF OWNERS ACKNOWLEDGEMENT

COMMONWEALTH OF PENNSYLVANIA :
: SS
COUNTY OF BUCKS :

ON THIS ________ DAY OF ________________ , 2018 , BEFORE ME A NOTARY PUBLIC IN AND FOR THE COMMONWEALTH OF PENNSYLVANIA, THE UNDERSIGNED OFFICER, PERSONALLY APPEARED ______________________, WHO ACKNOWLEDGED HIMSELF TO BE AN AUTHORIZED ______________________ OF PROVCO PINEGOOD, CHALFONT, LLC, AND THAT ON BEHALF OF SAME, BEING AUTHORIZED TO DO SO, DULY EXECUTED THE FOREGOING INSTRUMENT FOR THE PURPOSES THEREIN CONTAINED.

IN WITNESS WHEREOF, I HEREUNTO SET MY HAND AND OFFICIAL SEAL.

______________________ [SEAL]
NOTARY PUBLIC

MY COMMISSION EXPIRES:__________________

CERTIFICATION OF OWNERS INTENT

TO ALL TO WHOM THESE PRESENT MAY COME, WE CTP MANAGEMENT, LLC, ______________________ SEND GREETINGS, KNOW YE THAT I, WE HAVE LAID OUT ON LANDS IN NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA, CERTAIN LOTS ACCORDING TO THIS PLAN, WHICH IS INTENDED TO BE FORTHWITH RECORDED, WITNESS MY, OUR HAND AND SEAL.

CTP MANAGEMENT, LLC

BY: ______________________
(SIGNATURE)

NAME: ______________________
(PRINTED)

TITLE: ______________________

CERTIFICATION OF OWNERS ACKNOWLEDGEMENT

COMMONWEALTH OF PENNSYLVANIA :
: SS
COUNTY OF BUCKS :

ON THIS ________ DAY OF ________________ , 2018 , BEFORE ME A NOTARY PUBLIC IN AND FOR THE COMMONWEALTH OF PENNSYLVANIA, THE UNDERSIGNED OFFICER, PERSONALLY APPEARED ______________________, WHO ACKNOWLEDGED HIMSELF TO BE AN AUTHORIZED ______________________ OF CTP MANAGEMENT, LLC, AND THAT ON BEHALF OF SAME, BEING AUTHORIZED TO DO SO, DULY EXECUTED THE FOREGOING INSTRUMENT FOR THE PURPOSES THEREIN CONTAINED.

IN WITNESS WHEREOF, I HEREUNTO SET MY HAND AND OFFICIAL SEAL.

______________________ [SEAL]
NOTARY PUBLIC

MY COMMISSION EXPIRES:__________________

APPROVAL OF THE NEW BRITAIN TOWNSHIP BOARD OF SUPERVISORS:

APPROVED BY THE BOARD OF SUPERVISORS OF NEW BRITAIN TOWNSHIP THIS ON THIS ______ DAY OF ______________, 20____.

______________________ ______________________
CHAIRMAN SECRETARY

____
____
____
____
____

REVIEW OF THE TOWNSHIP ENGINEER:

REVIEWED BY NEW BRITAIN TOWNSHIP ENGINEER

TOWNSHIP ENGINEER ______________________

DATE ______________________

BUCKS COUNTY PLANNING COMMISSION

APPROVED BY BUCKS COUNTY PLANNING COMMISSION ________________, 20___.
B.C.P.C. REVIEW # 11432-A

____
____

WETLANDS CERTIFICATION

I, JOHN SZCZEPANSKI, PHD., HEREBY CERTIFY THE DELINEATED WETLANDS SHOWN ON THE PLAN IS IN ACCORDANCE WITH THE FINDINGS OF MY FIELD INVESTIGATION AND BASED UPON THE U.S. ARMY CORPS OF ENGINEER GUIDELINES.

______________________ ______________
JOHN SZCZEPANSKI, PHD. DATE

SURVEYOR'S CERTIFICATION

THIS IS TO CERTIFY THAT THIS PLAN REPRESENTS A FIELD SURVEY MADE BY ME OR UNDER MY SUPERVISION, ON OR ABOUT 11/20/2017, THAT ALL GEOMETRIC DETAILS AS SHOWN ARE CORRECT, AND THAT ALL LOTS OR TRACTS HAVE A BOUNDARY CLOSURE ERROR OF 1:5,000 OR BETTER.

______________________ ______________
JAMES C. WEED DATE
PENNSYLVANIA PROFESSIONAL LAND SURVEYOR
PENNSYLVANIA LICENSE No.: #SU75250

RECORDER OF DEEDS

RECORDED IN THE OFFICE FOR THE RECORDING OF DEED IN AND FOR THE COUNTY OF BUCKS, IN DOYLESTOWN, PENNSYLVANIA

IN PLAN BOOK _______, PAGE ______ ON THE _______.

DAY OF ________________, 20______.

GB
R:\17\PC171170\DRAWINGS\PLAN SETS\LAND DEVELOPMENT\REVISION 1\PC171170DETAILS-1---->LAYOUT: 01 COVER

BOHLER ENGINEERING™
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING PROGRAM MANAGEMENT LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN PERMITTING SERVICES TRANSPORTATION SERVICES
◆ UPSTATE NEW YORK ◆ NEW ENGLAND ◆ BOSTON, MA ◆ NEW YORK, NY ◆ NEW YORK METRO ◆ NORTHERN NEW JERSEY
◆ SOUTHERN NEW JERSEY ◆ PHILADELPHIA, PA ◆ PITTSBURGH, PA ◆ LEHIGH VALLEY, PA ◆ SOUTHEASTERN, PA ◆ REHOBOTH BEACH, DE
◆ BALTIMORE, MD ◆ SOUTHERN MARYLAND ◆ NORTHERN VIRGINIA ◆ CENTRAL VIRGINIA ◆ RALEIGH, NC ◆ WASHINGTON, DC
◆ CHARLOTTE, NC ◆ ATLANTA, GA ◆ TAMPA, FL ◆ SOUTH FLORIDA ◆ DALLAS, TX

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE PROPRIETARY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER ENGINEERING. ONLY APPROVED, SIGNED AND SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES
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REVISIONS

REV	DATE	COMMENT	BY
1	09/21/18	PER TOWNSHIP REVIEW COMMENTS	JHT

CALL BEFORE YOU DIG!

PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE - STOP CALL

PA1 SYSTEM, INC.
1-800-242-1776

POCS SERIAL NUMBER
20172771117

PROJECT No.: PC171170
DRAWN BY: JHT
CHECKED BY: JRK
DATE: 5/18/2018
SCALE: AS NOTED
CAD I.D.: PC171170DETAILS-1

PROJECT:

FINAL LAND DEVELOPMENT PLANS

FOR

PROVCO PINEGOOD, CHALFONT, LLC

PROPOSED WAWA

BUTLER AVENUE (SR 4202) & COUNTY LINE ROAD
NEW BRITAIN TOWNSHIP
BUCKS COUNTY
PENNSYLVANIA

BOHLER ENGINEERING
1600 MANOR DRIVE, SUITE 200
CHALFONT, PENNSYLVANIA 18914
Phone: (215) 996-9100
Fax: (215) 996-9102

www.BohlerEngineering.com

J.R. KORCZAK

PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE074279

SHEET TITLE:

COVER SHEET

(RECORD PLAN 1 OF 10)

SHEET NUMBER:

1

OF 37

REVISION 1 - 2018.09.21

GENERAL NOTES

CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH THE NOTES AND SPECIFICATIONS CONTAINED HEREIN. CONTRACTOR IS RESPONSIBLE TO ENSURE THAT ALL SUBCONTRACTORS FULLY AND COMPLETELY CONFORM TO AND COMPLY WITH THESE REQUIREMENTS.

1. THE FOLLOWING DOCUMENTS ARE INCORPORATED BY REFERENCE AS PART OF THIS SITE PLAN:
   - SURVEY
     CONTROL POINT ASSOCIATES, INC.
     1600 MANOR DRIVE, SUITE 210
     CHALFONT, PA 18914
     PREPARED FOR: PROVCO PINEGOOD, CHALFONT, LLC
     PROJECT NO.: 02-060168-02
     DATED: 10-18-2017
     REVISED: 11-20-2017
   - "GENERAL PROJECT DESCRIPTION AND STORMWATER MANAGEMENT CALCULATIONS", PREPARED BY BOHLER ENGINEERING PA, LLC, DATED 5/18/18, LATEST REVISION.

   PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR MUST VERIFY THAT HE/SHE HAS THE LATEST EDITION OF THE DOCUMENTS REFERENCED ABOVE. THIS IS CONTRACTOR'S RESPONSIBILITY.
2. ALL ACCESSIBLE ADA PARKING SPACES MUST BE CONSTRUCTED TO MEET, AT A MINIMUM, THE MORE STRINGENT OF THE REQUIREMENTS OF THE "AMERICANS WITH DISABILITIES ACT" (ADA) CODE (42 U.S.C. § 12101 et seq. AND 42 U.S.C. § 4151 et seq.) OR THE REQUIREMENTS OF THE JURISDICTION WHERE THE PROJECT IS TO BE CONSTRUCTED, AND ANY AND ALL AMENDMENTS TO BOTH WHICH ARE IN EFFECT WHEN THESE PLANS ARE COMPLETED.
3. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED THE COMMENTS TO ALL PLANS AND OTHER DOCUMENTS REVIEWED AND APPROVED BY THE PERMITTING AUTHORITIES AND CONFIRMED THAT ALL NECESSARY OR REQUIRED PERMITS HAVE BEEN OBTAINED. CONTRACTOR MUST HAVE COPIES OF ALL PERMITS AND APPROVALS ON SITE AT ALL TIMES.
4. THE OWNER/CONTRACTOR MUST BE FAMILIAR WITH AND RESPONSIBLE FOR THE PROCUREMENT OF ANY AND ALL CERTIFICATIONS REQUIRED FOR THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
5. ALL WORK MUST BE PERFORMED IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS AND CONDITIONS OF APPROVAL, AND ALL APPLICABLE REQUIREMENTS, RULES, REGULATIONS, STATUTORY REQUIREMENTS, CODES, LAWS AND STANDARDS OF ALL GOVERNMENTAL ENTITIES WITH JURISDICTION OVER THIS PROJECT.
6. THE GEOTECHNICAL REPORT AND RECOMMENDATIONS SET FORTH HEREIN ARE A PART OF THE REQUIRED CONSTRUCTION DOCUMENTS AND, IN CASE OF CONFLICT, DISCREPANCY OR AMBIGUITY, THE MORE STRINGENT REQUIREMENTS AND/OR RECOMMENDATIONS CONTAINED IN THE PLANS AND THE GEOTECHNICAL REPORT AND RECOMMENDATIONS SHALL TAKE PRECEDENCE UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS. THE CONTRACTOR MUST NOTIFY THE ENGINEER, IN WRITING, OF ANY SUCH CONFLICT, DISCREPANCY OR AMBIGUITY BETWEEN THE GEOTECHNICAL REPORT AND PLANS AND SPECIFICATIONS PRIOR TO PROCEEDING WITH ANY FURTHER WORK.
7. THESE PLANS ARE BASED ON INFORMATION PROVIDED TO BOHLER ENGINEERING BY THE OWNER AND OTHERS PRIOR TO THE TIME OF PLAN PREPARATION. CONTRACTOR MUST FIELD VERIFY EXISTING CONDITIONS AND NOTIFY BOHLER ENGINEERING, IN WRITING, IMMEDIATELY IF ACTUAL SITE CONDITIONS DIFFER FROM THOSE SHOWN ON THE PLAN, OR IF THE PROPOSED WORK CONFLICTS WITH ANY OTHER SITE FEATURES.
8. ALL DIMENSIONS SHOWN ON THE PLANS MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR MUST NOTIFY ENGINEER, IN WRITING, IF ANY CONFLICTS, DISCREPANCIES, OR AMBIGUITIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION. NO EXTRA COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR WORK WHICH HAS TO BE REDONE OR REPAIRED DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS PRIOR TO CONTRACTOR GIVING ENGINEER WRITTEN NOTIFICATION OF SAME AND ENGINEER, THEREAFTER, PROVIDING CONTRACTOR WITH WRITTEN AUTHORIZATION TO PROCEED WITH SUCH ADDITIONAL WORK.
9. CONTRACTOR MUST REFER TO THE ARCHITECTURAL/BUILDING PLANS "OF RECORD" FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRY/EXIT POINTS, ELEVATIONS, PRECISE BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY LOCATIONS.
10. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR MUST COORDINATE THE BUILDING LAYOUT BY CAREFUL REVIEW OF THE LATEST CIVIL PLANS AND THE LATEST ARCHITECTURAL PLANS (INCLUDING, BUT NOT LIMITED TO, STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND FIRE SUPPRESSION PLAN, WHERE APPLICABLE). CONTRACTOR MUST IMMEDIATELY NOTIFY OWNER, ARCHITECT AND BOHLER ENGINEERING, IN WRITING, OF ANY CONFLICTS, DISCREPANCIES OR AMBIGUITIES WHICH EXIST.
11. DEBRIS MUST NOT BE BURIED ON THE SUBJECT SITE AND ALL UNSUITABLE EXCAVATED MATERIAL AND DEBRIS (SOLID WASTE) MUST BE DISPOSED OF IN ACCORDANCE WITH THE REQUIREMENTS OF ANY AND ALL GOVERNMENTAL AUTHORITIES WHICH HAVE JURISDICTION OVER THIS PROJECT OR OVER CONTRACTOR.
12. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING WHEN SHORING IS REQUIRED AND FOR INSTALLING ALL SHORING REQUIRED DURING EXCAVATION (TO BE PERFORMED IN ACCORDANCE WITH CURRENT OSHA STANDARDS) AND ANY ADDITIONAL PRECAUTIONS TO BE TAKEN TO ASSURE THE STABILITY OF ADJACENT, NEARBY AND CONTIGUOUS STRUCTURES AND PROPERTIES.
13. THE CONTRACTOR IS TO EXERCISE EXTREME CARE WHEN PERFORMING ANY WORK ACTIVITIES ADJACENT TO PAVEMENT, STRUCTURES, ETC. WHICH ARE TO REMAIN EITHER FOR AN INITIAL PHASE OF THE PROJECT OR AS PART OF THE FINAL CONDITION. CONTRACTOR IS RESPONSIBLE FOR TAKING ALL APPROPRIATE MEASURES REQUIRED TO ENSURE THE STRUCTURAL STABILITY OF SIDEWALKS AND PAVEMENT, UTILITIES, BUILDINGS, AND INFRASTRUCTURE WHICH ARE TO REMAIN, AND TO PROVIDE A SAFE WORK AREA FOR THIRD PARTIES, PEDESTRIANS AND ANYONE INVOLVED WITH THE PROJECT.
14. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE DONE TO ANY NEW OR EXISTING CONSTRUCTION OR PROPERTY DURING THE COURSE OF CONSTRUCTION, INCLUDING BUT NOT LIMITED TO DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURB, ETC. AND SHALL BEAR ALL COSTS ASSOCIATED WITH SAME TO INCLUDE, BUT NOT BE LIMITED TO, REDESIGN, RE-SURVEY, RE-PERMITTING AND CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR AND MUST REPLACE ALL SIGNAL INTERCONNECTION CABLE, WIRING CONDUITS, AND ANY UNDERGROUND ACCESSORY EQUIPMENT DAMAGED DURING CONSTRUCTION AND MUST BEAR ALL COSTS ASSOCIATED WITH SAME. THE REPAIR OF ANY SUCH NEW OR EXISTING CONSTRUCTION OR PROPERTY MUST RESTORE SUCH CONSTRUCTION OR PROPERTY TO A CONDITION EQUIVALENT TO OR BETTER THAN THE CONDITIONS PRIOR TO COMMENCEMENT OF THE CONSTRUCTION, AND IN CONFORMANCE WITH APPLICABLE CODES, LAWS RULES, REGULATIONS, STATUTORY REQUIREMENTS AND STATUTES. CONTRACTOR MUST BEAR ALL COSTS ASSOCIATED WITH SAME. CONTRACTOR IS RESPONSIBLE TO DOCUMENT ALL EXISTING DAMAGE AND TO NOTIFY THE OWNER AND THE CONSTRUCTION MANAGER PRIOR TO THE START OF CONSTRUCTION.
15. ALL CONCRETE MUST BE AIR ENTRAINED AND HAVE THE MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS UNLESS OTHERWISE NOTED ON THE PLANS, DETAILS AND/OR GEOTECHNICAL REPORT.
16. THE ENGINEER IS NOT RESPONSIBLE FOR CONSTRUCTION METHODS, MEANS, TECHNIQUES OR PROCEDURES, GENERALLY OR FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES OR PROCEDURES FOR COMPLETION OF THE WORK DEPICTED BOTH ON THESE PLANS, AND FOR ANY CONFLICTS/SCOPE REVISIONS WHICH RESULT FROM SAME. CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE METHODS/MEANS FOR COMPLETION OF THE WORK PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
17. THE ENGINEER OF RECORD IS NOT RESPONSIBLE FOR JOB SITE SAFETY. THE ENGINEER OF RECORD HAS NOT BEEN RETAINED TO PERFORM OR BE RESPONSIBLE FOR JOB SITE SAFETY, SAME BEING WHOLLY OUTSIDE OF ENGINEER'S SERVICES AS RELATED TO THE PROJECT. THE ENGINEER OF RECORD IS NOT RESPONSIBLE TO IDENTIFY OR REPORT ANY JOB SITE SAFETY ISSUES, AT ANY TIME.
18. ALL CONTRACTORS MUST CARRY THE SPECIFIED STATUTORY WORKER'S COMPENSATION INSURANCE, EMPLOYER'S LIABILITY INSURANCE AND LIMITS OF COMMERCIAL GENERAL LIABILITY INSURANCE (CGL). ALL CONTRACTORS MUST HAVE THEIR CGL POLICIES ENDORSED TO NAME BOHLER ENGINEERING, AND ITS PAST, PRESENT AND FUTURE OWNERS, OFFICERS, DIRECTORS, PARTNERS, SHAREHOLDERS, MEMBERS, PRINCIPALS, COMMISSIONERS, AGENTS, SERVANTS, EMPLOYEES, AFFILIATES, SUBSIDIARIES, AND RELATED ENTITIES, AND ITS SUBCONTRACTORS AND SUBCONSULTANTS AS ADDITIONAL NAMED INSUREDS AND TO PROVIDE CONTRACTUAL LIABILITY COVERAGE SUFFICIENT TO INSURE THIS HOLD HARMLESS AND INDEMNITY OBLIGATIONS ASSUMED BY THE CONTRACTORS. ALL CONTRACTORS MUST FURNISH BOHLER ENGINEERING WITH CERTIFICATIONS OF INSURANCE AS EVIDENCE OF THE REQUIRED INSURANCE PRIOR TO COMMENCING WORK AND UPON RENEWAL OF EACH POLICY DURING THE ENTIRE PERIOD OF CONSTRUCTION AND FOR ONE YEAR AFTER THE COMPLETION OF CONSTRUCTION. IN ADDITION, ALL CONTRACTORS WILL, TO THE FULLEST EXTENT PERMITTED UNDER THE LAW, INDEMNIFY, DEFEND AND HOLD HARMLESS BOHLER ENGINEERING AND ITS PAST, PRESENT AND FUTURE OWNERS, OFFICERS, DIRECTORS, PARTNERS, SHAREHOLDERS, MEMBERS, PRINCIPALS, COMMISSIONERS, AGENTS, SERVANTS, EMPLOYEES, AFFILIATES, SUBSIDIARIES, AND RELATED ENTITIES, AND ITS SUBCONTRACTORS AND SUBCONSULTANTS FROM AND AGAINST ANY DAMAGES, INJURIES, CLAIMS, ACTIONS, PENALTIES, EXPENSES, PUNITIVE DAMAGES, TORT DAMAGES, STATUTORY CLAIMS, STATUTORY CAUSES OF ACTION, LOSSES, CAUSES OF ACTION, LIABILITIES OR COSTS, INCLUDING, BUT NOT LIMITED TO, REASONABLE ATTORNEYS' FEES AND DEFENSE COSTS, ARISING OUT OF OR IN ANY WAY CONNECTED WITH OR TO THE PROJECT, INCLUDING ALL CLAIMS BY EMPLOYEES OF THE CONTRACTORS, ALL CLAIMS BY THIRD PARTIES AND ALL CLAIMS RELATED TO THE PROJECT. CONTRACTOR MUST NOTIFY ENGINEER, IN WRITING, AT LEAST THIRTY (30) DAYS PRIOR TO ANY TERMINATION, SUSPENSION OR CHANGE OF ITS INSURANCE HEREUNDER.
19. BOHLER ENGINEERING WILL REVIEW OR TAKE OTHER APPROPRIATE ACTION ON THE CONTRACTOR SUBMITTALS, SUCH AS SHOP DRAWINGS, PRODUCT DATA, SAMPLES, AND OTHER DATA, WHICH THE CONTRACTOR IS REQUIRED TO SUBMIT, BUT ONLY FOR THE LIMITED PURPOSE OF CHECKING FOR CONFORMANCE WITH THE DESIGN INTENT AND THE INFORMATION SHOWN IN THE CONSTRUCTION CONTRACT DOCUMENTS. CONSTRUCTION MEANS AND/OR METHODS AND/OR TECHNIQUES OR PROCEDURES, COORDINATION OF THE WORK WITH OTHER TRADES, AND CONSTRUCTION SAFETY PRECAUTIONS ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND BOHLER HAS NO RESPONSIBILITY OR LIABILITY FOR SAME HEREUNDER. BOHLER ENGINEERING'S SHOP DRAWING REVIEW WILL BE CONDUCTED WITH REASONABLE PROMPTNESS WHILE ALLOWING SUFFICIENT TIME TO PERMIT ADEQUATE REVIEW. REVIEW OF A SPECIFIC ITEM MUST NOT INDICATE THAT BOHLER ENGINEERING HAS REVIEWED THE ENTIRE ASSEMBLY OF WHICH THE ITEM IS A COMPONENT. BOHLER ENGINEERING WILL NOT BE RESPONSIBLE FOR ANY DEVIATIONS FROM THE CONSTRUCTION DOCUMENTS NOT PROMPTLY AND IMMEDIATELY BROUGHT TO ITS ATTENTION, IN WRITING, BY THE CONTRACTOR. BOHLER ENGINEERING WILL NOT BE REQUIRED TO REVIEW PARTIAL SUBMISSIONS OR THOSE FOR WHICH SUBMISSIONS OF CORRELATED ITEMS HAVE NOT BEEN RECEIVED.
20. NEITHER THE PROFESSIONAL ACTIVITIES OF BOHLER ENGINEERING, NOR THE PRESENCE OF BOHLER ENGINEERING AND/OR ITS PAST, PRESENT AND FUTURE OWNERS, OFFICERS, DIRECTORS, PARTNERS, SHAREHOLDERS, MEMBERS, PRINCIPALS, COMMISSIONERS, AGENTS, SERVANTS, EMPLOYEES, AFFILIATES, SUBSIDIARIES, AND RELATED ENTITIES, AND ITS SUBCONTRACTORS AND SUBCONSULTANTS AT A CONSTRUCTION/PROJECT SITE, SHALL RELIEVE THE GENERAL CONTRACTOR OF ITS OBLIGATIONS, DUTIES AND RESPONSIBILITIES INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES NECESSARY FOR PERFORMING, OVERSEEING, SUPERINTENDING AND COORDINATING THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND COMPLIANCE ANY HEALTH OR SAFETY PRECAUTIONS REQUIRED BY ANY REGULATORY AGENCIES WITH JURISDICTION OVER THE PROJECT AND/OR PROPERTY. BOHLER ENGINEERING AND ITS PERSONNEL HAVE NO AUTHORITY TO EXERCISE ANY CONTROL OVER ANY CONSTRUCTION CONTRACTOR OR ITS EMPLOYEES IN CONNECTION WITH THEIR WORK OR ANY HEALTH OR SAFETY PROGRAMS OR PROCEDURES. THE GENERAL CONTRACTOR IS SOLELY RESPONSIBLE FOR JOB SITE SAFETY. BOHLER ENGINEERING SHALL BE INDEMNIFIED BY THE GENERAL CONTRACTOR AND MUST BE NAMED AN ADDITIONAL INSURED UNDER THE GENERAL CONTRACTOR'S POLICIES OF GENERAL LIABILITY INSURANCE AS DESCRIBED ABOVE FOR JOB SITE SAFETY.
21. IF THE CONTRACTOR DEVIATES FROM THE PLANS AND SPECIFICATIONS, INCLUDING THE NOTES CONTAINED HEREIN, WITHOUT FIRST OBTAINING THE PRIOR WRITTEN AUTHORIZATION OF THE ENGINEER FOR SUCH DEVIATIONS, THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE PAYMENT OF ALL COSTS INCURRED IN CORRECTING ANY WORK DONE WHICH DEVIATES FROM THE PLANS, ALL FINES AND/OR PENALTIES ASSESSED WITH RESPECT THERETO AND ALL COMPENSATORY OR PUNITIVE DAMAGES RESULTING THEREFROM AND, FURTHER, SHALL DEFEND, INDEMNIFY AND HOLD HARMLESS THE ENGINEER, TO THE FULLEST EXTENT PERMITTED UNDER THE LAW, IN ACCORDANCE WITH THESE NOTES HEREIN, FOR AND FROM ALL FEES, ATTORNEYS' FEES, DAMAGES, COSTS, JUDGMENTS, PENALTIES AND THE LIKE RELATED TO SAME.
22. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE AND PROTECTION OF TRAFFIC PLAN FOR ALL WORK THAT AFFECTS PUBLIC TRAVEL EITHER IN THE R.O.W. OR ON SITE. THE COST FOR THIS ITEM MUST BE INCLUDED IN THE CONTRACTOR'S PRICE.
23. ALL SIGNING AND PAVEMENT STRIPING MUST CONFORM TO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES OR LOCALLY APPROVED SUPPLEMENT.
24. ENGINEER IS NOT RESPONSIBLE FOR ANY INJURY OR DAMAGES RESULTING FROM CONTRACTOR'S FAILURE TO BUILD OR CONSTRUCT IN STRICT ACCORDANCE WITH THE APPROVED PLANS. IF CONTRACTOR AND/OR OWNER FAIL TO BUILD OR CONSTRUCT IN STRICT ACCORDANCE WITH APPROVED PLANS, THEY AGREE TO JOINTLY AND SEVERALLY INDEMNIFY AND HOLD ENGINEER HARMLESS FOR ALL INJURIES AND DAMAGES THAT ENGINEER SUFFERS AND COSTS THAT ENGINEER INCURS.
25. OWNER MUST MAINTAIN AND PRESERVE ALL PHYSICAL SITE FEATURES AND DESIGN FEATURES DEPICTED ON THE PLANS AND RELATED DOCUMENTS, IN STRICT ACCORDANCE WITH THE APPROVED PLAN(S) AND DESIGN AND, FURTHER ENGINEER IS NOT RESPONSIBLE FOR ANY FAILURE TO SO MAINTAIN OR PRESERVE SITE AND/OR DESIGN FEATURES. IF OWNER FAILS TO MAINTAIN AND/OR PRESERVE ALL PHYSICAL SITE FEATURES AND/OR DESIGN FEATURES DEPICTED ON THE PLANS AND RELATED DOCUMENTS, OWNER AGREES TO INDEMNIFY AND HOLD ENGINEER HARMLESS FOR ALL INJURIES AND DAMAGES THAT ENGINEER SUFFERS AND COSTS THAT ENGINEER INCURS AS A RESULT OF SAID FAILURE.
26. ALL DIMENSIONS MUST BE TO FACE OF CURB, EDGE OF PAVEMENT, OR EDGE OF BUILDING, UNLESS NOTED OTHERWISE.
27. ALL CONSTRUCTION AND MATERIALS MUST COMPLY WITH AND CONFORM TO APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, LAWS, ORDINANCES, RULES AND CODES, AND ALL APPLICABLE OSHA REQUIREMENTS.
28. CONTRACTOR AND OWNER MUST INSTALL ALL ELEMENTS AND COMPONENTS IN STRICT COMPLIANCE WITH AND ACCORDANCE WITH MANUFACTURER'S STANDARDS AND RECOMMENDED INSTALLATION CRITERIA AND SPECIFICATIONS. IF CONTRACTOR AND/OR OWNER FAIL TO DO SO, THEY AGREE TO JOINTLY AND SEVERALLY INDEMNIFY AND HOLD ENGINEER HARMLESS FOR ALL INJURIES AND DAMAGES THAT ENGINEER SUFFERS AND COSTS THAT ENGINEER INCURS AS A RESULT OF SAID FAILURE.
29. AS CONTAINED IN THESE DRAWINGS AND ASSOCIATED APPLICATION DOCUMENTS PREPARED BY THE SIGNATORY PROFESSIONAL ENGINEER, THE USE OF THE WORDS CERTIFY OR CERTIFICATION CONSTITUTES AN EXPRESSION OF "PROFESSIONAL OPINION" REGARDING THE INFORMATION WHICH IS THE SUBJECT OF THE UNDERSIGNED PROFESSIONAL KNOWLEDGE OR BELIEF AND IN ACCORDANCE WITH COMMON ACCEPTED PROCEDURE CONSISTENT WITH THE APPLICABLE STANDARDS OF PRACTICE, AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE, EITHER EXPRESSED OR IMPLIED.

SITE SPECIFIC GENERAL NOTES

1. ALL BUFFER YARDS SHALL BE MAINTAINED AND KEPT CLEAN OF DEBRIS, RUBBISH, WEEDS, ETC. NO STRUCTURE, PARKING OR STORAGE, IS PERMITTED WITHIN AND ALL PLANT MATERIALS SHALL BE PERMANENTLY MAINTAINED.
2. ANY SUBDIVISION OF THE PROPERTY THAT WOULD REDUCE THE AREA OF THE PARCELS THAT MAKE UP THE J31 USE WILL REQUIRE APPROVAL FROM THE ZONING HEARING BOARD; HOWEVER, THE APPLICANT MAY SUBDIVIDE OR CONSOLIDATE THESE PARCELS TO ACCOMMODATE FUTURE DEVELOPMENT PROVIDED SUCH SUBDIVISION OR CONSOLIDATION ARE CONSISTENT WITH THE J31 USE REQUIREMENTS.
3. A PENNDOT HIGHWAY OCCUPANCY PERMIT (HOP) SHALL BE OBTAINED AND A COPY PROVIDED TO NEW BRITAIN TOWNSHIP PRIOR TO A USE AND OCCUPANCY PERMIT BEING ISSUED BY THE TOWNSHIP.
4. ALL SURVEY MONUMENTS AND MARKERS SHALL BE SET BY A PENNSYLVANIA LICENSED LAND SURVEYOR WITHIN 0.04 FEET OF THE REQUIRED LOCATION.

GB
R:\17\PC171170\DRAWINGS\PLAN SETS\LAND DEVELOPMENT\REVISION 1\PC171170LANDDEV-1---->LAYOUT: 02 NOTES

ZONING DATA:

1.) THIS PLAN REFERENCES AN "ALTA / NSPS LAND TITLE SURVEY"
PREPARED FOR: PROVCO PINEVILE ACQUISITIONS, LLC
PREPARED BY: JAMES C. WEED, PLS LICENSE #SU075250
CONTROL POINT ASSOCIATES, INC.
1600 MANOR DRIVE, SUITE 210
CHALFONT, PA 18914
PROJECT NO.: 02-060168-02
DATED: 10-18-2017

2.) EQUITABLE OWNER/APPLICANT:
PROVCO PINEGOOD, CHALFONT, LLC
795 E. LANCASTER AVE., BLDG. 2, SUITE 200, VILLANOVA, PA19085
MICHAEL COOLEY (610) 520-4572

3.) TAX PARCELS : #26-006-101, #26-006-101-004, #26-006-101-003, #26-006-101-005 NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA
(TO BE CONSOLIDATED INTO THREE LOTS)

4.) TOTAL GROSS AREA: 15.775 Ac (687,178 SF) NET: 14.998 Ac (653,330 SF)

5.) SITE ZONED: C1 - J31 PCCM-PLANNED COMMUNITY CENTER MIXED USE (PERMITTED BY CONDITIONAL USE)

6.) SITE CAPACITY CALCULATIONS:

GROSS BASE SITE AREA:

TOTAL SITE AREA		15.775 AC.
COUNTY LINE ROAD LEGAL/ULT. RIGHT OF WAY		0.574 AC.
W. BUTLER AVE LEGAL RIGHT OF WAY		0.080 AC.
W. BUTLER AVE ULT. RIGHT OF WAY	-	0.167 AC.
NET BASE SITE AREA	=	14.954 AC.

NET BUILDABLE SITE AREA (NBSA):

RESOURCE	RESTRICTED RATIO		AREA OF LAND IN RESOURCE (AC.)		ACRES OF RESOURCE PROTECTION (LAND IN RESOURCE x RESTRICTIVE RATIO)
100 YR FLOODPLAIN	1.00	X	0.000	=	0.000
LAKES OR PONDS	1.00	X	0.000	=	0.000
WETLANDS	1.00	X	0.254	=	0.254
TOTAL RESTRICTED LAND:					0.254 AC.

BASE SITE AREA (BSA)		14.954 AC
RESTRICTED LAND	-	0.254 AC
NET BUILDABLE SITE AREA (NBSA)	=	14.700 AC

7.) BULK REQUIREMENTS:

	REQUIRED	PROPOSED WAWA	EXISTING FLEX SPACE BUILDING
MINIMUM BASE SITE AREA	15.0 Ac	15.775 Ac (GROSS) 14.954 Ac (NET)	15.775 AC (GROSS) 14.954 AC (NET)
MAX. IMPERVIOUS COVERAGE	75%	29.8% (190,645 SF) (SITE)* 22.6% (129,546 SF) (LOT)	29.8% (190,645 SF) (SITE)* 95.0% (107,955 SF) (LOT)** (ENC)
MIN. LOT WIDTH	150'	356.51'	325.01'
MIN. LOT WIDTH (ACCESSING ARTERIAL)	250'	356.51'	325.01'
MIN. LOT DEPTH	120'	686.96'	293.64'
MAX. BUILDING COVERAGE	40%	1.6% (10,177 SF) (SITE)* 1.8% (10,177 SF) (LOT)	4.6% (29,468 SF) (SITE)* 25.9% (29,468 SF) (LOT)
MIN. YARD SETBACKS:			
FRONT	40'	156.4'	47.4'
SIDE	15'	86.3'	24.8'
REAR	30'	102.0'	92.6'
MIN. BUFFER YARD (ABUT R-DISTRICT)	45'	45'	N/A
MIN. SIZE OF PARKING SPACE:	10'x18'	10'x20'	9'x18' (ENC)
MAX. # OF PARKING SPACE IN A ROW w/o SEPARATION:	15	14	20 (ENC)
MAX. BUILDING HEIGHT	35'	<35 (SEE #8 BELOW)	≤35

8.) PROPOSED BUILDING HEIGHT:
CONVENIENCE STORE
J1 - RETAIL STORE - MAX. BUILDING HEIGHT = 33.0'
GASOLINE SALES
J19 - SERVICE STATION - MAX. CANOPY HEIGHT = 21.21'

9.) PARKING REQUIREMENTS:
A. PROPOSED CONVENIENCE STORE
J1 - RETAIL STORE - 1 SPACE PER 200 S.F. OF TOTAL FLOOR AREA + 1 PER EMPLOYEE
REQUIRED = (5,585 SF / 200 SF) + 5 EMPLOYEES = 33 SPACES
PROVIDED = 50 SPACES (INCLUDING 3 ADA SPACES)
PROPOSED GASOLINE SALES
J19 - SERVICE STATION - 2 SPACES FOR EACH SERVICE BAY
REQUIRED = (6 MPD X 2) = 12 SPACES
PROVIDED = 12 SPACES

B. EXISTING FLEX SPACE BUILDING
(TABLE AND EXISTING SPACES COUNT TAKEN FROM CREAMERY TIRE ZONING PLAN, PREPARED BY GRAF ENGINEERING, LLC, REVISION-0 DATED 11/17/17)

UNIT	AREA (S.F.)	FLOOR AREA (S.F.)	EXISTING TENNANT	USE	PARKING REQUIREMENT	PARKING REQUIRED
A	2,500	2,500	WILLOW HEALTH	J33: SPECIAL PERSONAL SERVICES	- 1 SPACE PER 200 S.F. OF TOTAL FLOOR AREA - 1 SPACE FOR EVERY 2 EMPLOYEES WORKING ON THE PREMISES	14.5
B	5,400 (7 BAYS)	1,981	PEP BOYS	J21: AUTOMOBILE REPAIR J22: AUTOMOTIVE ACCESSORIES	- 2 SPACES FOR EACH SERVICE BAY - 1 SPACE PER 100 S.F. OF TOTAL FLOOR AREA	33.8
C	3,364 (5 BAYS)	3,364	VACANT	N/A	N/A	0.0
D	3,600	3,600	VACANT	N/A	N/A	0.0
E	12,500 (2ND FLOOR)	12,500	VACANT	N/A	N/A	0.0
F	1,250	1,250	MASON ARMY	J17: REPAIR SHOP	- 1 SPACE PER 200 S.F. OF TOTAL FLOOR AREA	6.3
G	2,500	2,500	M.R. JONES (OFFICE)	I3: PROFESSIONAL OFFICE	- 1 SPACE PER 200 S.F. OF TOTAL FLOOR AREA	12.5
H	3,750	3,750	NUK MUAY ACADEMY	J9: INDOOR ENTERTAINMENT	- 1 SPACE PER 100 S.F. FOR PATRON USE OR 3 SEATS, WHICHEVER IS GREATER	37.5
I	3,750	3,750	M.R. JONES (OFFICE)	I3: PROFESSIONAL OFFICE	- 1SPACE PER 200 S.F. OF TOTAL FLOOR AREA	18.8
J	1,250	1,250	VACANT	N/A	N/A	0.0
						123.3
					REQUIRED # OF SPACES (ROUND UP):	124
					NUMBER OF PARKING SPACES EXISTING:	79 (ENC)
					NUMBER OF PARKING SPACES PROPOSED:	81

10.) NATURAL RESOURCE PROTECTION

EXISTING WOODLANDS:	ALLOWABLE DISTURBANCE:	PROPOSED DISTURBANCE:
2.28 AC (99,486 SF)	65%=1.48 AC (64,666 SF)	38.7%=0.883 AC (38,465 SF)

* DENOTES CALCULATED FROM NBSA OF 14.700 AC.
** INCLUDES PROPOSED ADDITIONAL PARKING ISLANDS PROVIDED FOR SEPARATION BETWEEN PARKING LOT & DRIVEWAY
(ENC) DENOTES EXISTING NON-CONFORMITY

ADA INSTRUCTIONS TO CONTRACTOR

CONTRACTORS MUST EXERCISE APPROPRIATE CARE AND PRECISION IN CONSTRUCTION OF ADA ACCESSIBLE COMPONENTS AND ACCESS ROUTES FOR THE SITE. THESE COMPONENTS, AS CONSTRUCTED, MUST COMPLY WITH THE CURRENT ADA STANDARDS AND REGULATIONS' BARRIER FREE ACCESS AND ANY MODIFICATIONS, REVISIONS OR UPDATES TO SAME. FINISHED SURFACES ALONG THE ACCESSIBLE ROUTE OF TRAVEL FROM PARKING SPACE, PUBLIC TRANSPORTATION, PEDESTRIAN ACCESS, INTER-BUILDING ACCESS, TO POINTS OF ACCESSIBLE BUILDING ENTRANCE/EXIT, MUST COMPLY WITH THESE ADA CODE REQUIREMENTS. THESE INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:

- PARKING SPACES AND PARKING AISLES - SLOPE SHALL NOT EXCEED 1:50 (1/4" PER FOOT OR NOMINALLY 2.0%) IN ANY DIRECTION.
- CURB RAMPS - SLOPE MUST NOT EXCEED 1:12 (8.3%)
- LANDINGS - MUST BE PROVIDED AT EACH END OF RAMPS, MUST PROVIDE POSITIVE DRAINAGE, AND MUST NOT EXCEED 1:50 (1/4" PER FOOT OR NOMINALLY 2.0%) IN ANY DIRECTION.
- PATH OF TRAVEL ALONG ACCESSIBLE ROUTE - MUST PROVIDE A 36-INCH OR GREATER UNOBSTRUCTED WIDTH OF TRAVEL (CAR OVERHANGS AND/OR HANDRAILS CANNOT REDUCE THIS MINIMUM WIDTH). THE SLOPE MUST BE NO GREATER THAN 1:20 (5.0%) IN THE DIRECTION OF TRAVEL, AND MUST NOT EXCEED 1:50 (1/4" PER FOOT OR NOMINALLY 2.0%) IN CROSS SLOPE. WHERE PATH OF TRAVEL WILL BE GREATER THAN 1:20 (5.0%), ADA RAMP MUST BE ADHERED TO. A MAXIMUM SLOPE OF 1:12 (8.3%), FOR A MAXIMUM RISE OF 2.5 FEET, MUST BE PROVIDED. THE RAMP MUST HAVE ADA HAND RAILS AND "LEVEL" LANDINGS ON EACH END THAT ARE CROSS SLOPED NO MORE THAN 1:50 IN ANY DIRECTION (1/4" PER FOOT OR NOMINALLY 2.0%) FOR POSITIVE DRAINAGE.
- DOORWAYS - MUST HAVE A "LEVEL" LANDING AREA ON THE EXTERIOR SIDE OF THE DOOR THAT IS SLOPED AWAY FROM THE DOOR NO MORE THAN 1:50 (1/4" PER FOOT OR NOMINALLY 2.0%) FOR POSITIVE DRAINAGE. THIS LANDING AREA MUST BE NO LESS THAN 60 INCHES (5 FEET) LONG, EXCEPT WHERE OTHERWISE PERMITTED BY ADA STANDARDS FOR ALTERNATIVE DOORWAY OPENING CONDITIONS. (SEE ICC/ANSI A117.1-2003 AND OTHER REFERENCES INCORPORATED BY CODE.)
- WHEN THE PROPOSED CONSTRUCTION INVOLVES RECONSTRUCTION, MODIFICATION, REVISION OR EXTENSION OF OR TO ADA COMPONENTS FROM EXISTING DOORWAYS OR SURFACES, CONTRACTOR MUST VERIFY EXISTING ELEVATIONS SHOWN ON THE PLAN. THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE DESIGN ENGINEER OF ANY DISCREPANCIES AND/OR FIELD CONDITIONS THAT DIFFER IN ANY WAY OR ANY RESPECT FROM WHAT IS SHOWN ON THE PLANS, IN WRITING, BEFORE COMMENCEMENT OF WORK. CONSTRUCTED IMPROVEMENTS MUST FALL WITHIN THE MAXIMUM AND MINIMUM LIMITATIONS IMPOSED BY THE BARRIER FREE REGULATIONS AND THE ADA REQUIREMENTS.
- THE CONTRACTOR MUST VERIFY THE SLOPES OF CONTRACTOR'S FORMS PRIOR TO POURING CONCRETE. IF ANY NON-CONFORMANCE IS OBSERVED OR EXISTS,

  CONTRACTOR MUST IMMEDIATELY NOTIFY THE ENGINEER PRIOR TO POURING CONCRETE. CONTRACTOR IS RESPONSIBLE FOR ALL COSTS TO REMOVE, REPAIR AND REPLACE NON-CONFORMING CONCRETE.

IT IS STRONGLY RECOMMENDED THAT THE CONTRACTOR REVIEW THE INTENDED CONSTRUCTION WITH THE LOCAL BUILDING CODE PRIOR TO COMMENCEMENT OF CONSTRUCTION.

GENERAL DEMOLITION NOTES

1. THIS PLAN REFERENCES DOCUMENTS AND INFORMATION BY:
   - SURVEY
     CONTROL POINT ASSOCIATES, INC.
     1600 MANOR DRIVE, SUITE 210
     CHALFONT, PA 18914
     PREPARED FOR: PROVCO PINEVILLE ACQUISITION, LLC
     PROJECT NO.: 02-060168-02
     DATED: 10-18-2017
2. CONTRACTOR SHALL PERFORM ALL WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, (29 U.S.C. 651 et seq.), AS AMENDED AND ANY MODIFICATIONS, AMENDMENTS OR REVISIONS TO SAME.
3. BOHLER ENGINEERING HAS NO CONTRACTUAL, LEGAL, OR OTHER RESPONSIBILITY FOR JOB SITE SAFETY OR JOB SITE SUPERVISION, OR ANYTHING RELATED TO SAME.
4. THE DEMOLITION PLAN IS INTENDED TO PROVIDE GENERAL INFORMATION, ONLY, REGARDING ITEMS TO BE DEMOLISHED AND/OR REMOVED. THE CONTRACTOR MUST ALSO REVIEW THE OTHER SITE PLAN DRAWINGS AND INCLUDE IN DEMOLITION ACTIVITIES ALL INCIDENTAL WORK NECESSARY FOR THE CONSTRUCTION OF THE NEW SITE IMPROVEMENTS.
5. CONTRACTOR MUST RAISE ANY QUESTIONS CONCERNING THE ACCURACY OR INTENT OF THESE PLANS OR SPECIFICATIONS, CONCERNS REGARDING THE APPLICABLE SAFETY STANDARDS, OR THE SAFETY OF THE CONTRACTOR OR THIRD PARTIES IN PERFORMING THE WORK ON THIS PROJECT, WITH BOHLER ENGINEERING, IN WRITING, AND RESPONDED TO BY BOHLER, IN WRITING, PRIOR TO THE INITIATION OF ANY SITE ACTIVITY AND ANY DEMOLITION ACTIVITY. ALL DEMOLITION ACTIVITIES MUST BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS AND ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, RULES, REQUIREMENTS, STATUTES, ORDINANCES AND CODES.
6. PRIOR TO STARTING ANY DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR/TO:
   A. OBTAINING ALL REQUIRED PERMITS AND MAINTAINING THE SAME ON SITE FOR REVIEW BY THE ENGINEER AND OTHER PUBLIC AGENCIES HAVING JURISDICTION THROUGHOUT THE DURATION OF THE PROJECT, SITE WORK AND DEMOLITION WORK.
7. ALL DEMOLITION ACTIVITIES ARE TO BE PERFORMED IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS, AND REFERENCED DOCUMENTS AS WELL AS ALL FEDERAL, STATE AND LOCAL REGULATIONS. ANY DISCREPANCIES OR DEVIATIONS SHALL BE IDENTIFIED BY THE CONTRACTOR TO THE ENGINEER IN WRITING FOR RESOLUTION PRIOR TO INITIATION OF ACTIVITY.
8. PRIOR TO STARTING ANY DEMOLITION CONTRACTOR IS RESPONSIBLE FOR/TO:
   A. ENSURE COPIES OF ALL PERMITS AND APPROVALS ARE ON SITE FOR REVIEW.
   B. THE REQUIRED SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE PRIOR TO SITE DISTURBANCE.
   C. ALL UTILITIES AND SERVICES, INCLUDING BUT NOT LIMITED TO GAS, WATER, ELECTRIC, SANITARY AND STORM SEWER, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC. WITHIN THE LIMITS OF DISTURBANCE, SHALL BE VERTICALLY AND HORIZONTALLY LOCATED. THE CONTRACTOR SHALL USE AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL THE UNDERGROUND UTILITIES.
   D. PROTECT AND MAINTAIN IN OPERATION, ALL ACTIVE SYSTEMS THAT ARE NOT BEING REMOVED DURING ALL DEMOLITION ACTIVITIES.
   E. FAMILIARIZE THEMSELVES WITH THE APPLICABLE UTILITY SERVICE PROVIDER REQUIREMENT AND IS RESPONSIBLE FOR ALL COORDINATION REGARDING UTILITY DEMOLITION AS IDENTIFIED OR REQUIRED FOR PROJECT. THE CONTRACTOR SHALL PROVIDE THE OWNER WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND ABANDONED IN ACCORDANCE WITH JURISDICTION AND UTILITY COMPANY REQUIREMENTS.
   F. COORDINATION WITH UTILITY COMPANIES REGARDING WORKING "OFF-PEAK" HOURS OR ON WEEKENDS AS MAY BE REQUIRED TO MINIMIZE THE IMPACT ON THE AFFECTED PARTIES.
   G. A COMPLETE INSPECTION FOR CONTAMINANTS, BY A LICENSED ENVIRONMENTAL TESTING AGENCY, OF ALL BUILDINGS AND/OR STRUCTURES TO BE REMOVED SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL ENVIRONMENTAL REGULATIONS. ALL CONTAMINANTS SHALL BE REMOVED AND DISPOSED OF BY A FEDERALLY LICENSED CONTRACTOR IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS. ALL ENVIRONMENTAL WORK INCLUDING HAZARDOUS MATERIAL, SOILS, ASBESTOS, OR OTHER REFERENCED OR IMPLIED HEREIN IS SOLELY THE RESPONSIBILITY OF THE OWNER'S ENVIRONMENTAL CONSULTANT.
9. THE CONTRACTOR SHALL PROVIDE ALL THE "MEANS AND METHODS" NECESSARY TO PREVENT MOVEMENT, SETTLEMENT, OR COLLAPSE OF EXISTING STRUCTURES, AND ANY OTHER IMPROVEMENTS THAT ARE REMAINING ON OR OFF SITE.
10. IN THE ABSENCE OF SPECIFIC REQUIREMENTS, THE CONTRACTOR SHALL PERFORM EARTH MOVEMENT ACTIVITIES, DEMOLITION AND REMOVAL OF ALL FOUNDATION WALLS, FOOTINGS, AND OTHER MATERIALS WITHIN THE LIMITS OF DISTURBANCE IN ACCORDANCE WITH DIRECTION BY OWNER'S GEOTECHNICAL ENGINEER.
11. EXPLOSIVES SHALL NOT BE USED WITHOUT PRIOR WRITTEN CONSENT OF BOTH THE OWNER AND APPLICABLE GOVERNMENTAL AUTHORITIES. ALL THE REQUIRED PERMITS AND EXPLOSIVE CONTROL MEASURES THAT ARE REQUIRED BY THE FEDERAL, STATE, AND LOCAL GOVERNMENTS SHALL BE IN PLACE PRIOR TO STARTING AN EXPLOSIVE PROGRAM. THE CONTRACTOR IS ALSO RESPONSIBLE FOR ALL INSPECTION AND SEISMIC VIBRATION TESTING THAT IS REQUIRED TO MONITOR THE EFFECTS ON ALL LOCAL STRUCTURES.
12. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL AND GENERALLY ACCEPTED SAFE PRACTICES IN CONFORMANCE WITH: THE "MANUAL ON UNIFORM TRAFFIC CONTROL," AS WELL AS FEDERAL, STATE, AND LOCAL REGULATIONS WHEN DEMOLITION RELATED ACTIVITIES IMPACT ROADWAYS OR ROADWAY RIGHTS-OF-WAY.
13. THE CONTRACTOR SHALL CONDUCT DEMOLITION ACTIVITIES IN SUCH A MANNER TO INSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, SIDEWALKS, WALKWAYS, AND OTHER ADJACENT FACILITIES. STREET CLOSURE PERMITS MUST BE RECEIVED FROM THE APPROPRIATE GOVERNMENTAL AUTHORITY WHERE REQUIRED.
14. DEMOLITION ACTIVITIES AND EQUIPMENT SHALL NOT USE AREAS OUTSIDE THE DEFINED PROPERTY LINES, WITHOUT WRITTEN PERMISSION OF THE OWNER, AND/OR APPROPRIATE GOVERNMENT AGENCY.
15. USE DUST CONTROL MEASURES TO LIMIT THE AMOUNT OF AIRBORNE DUST AND DIRT RISING AND SCATTERING IN THE AIR TO WITHIN FEDERAL, STATE, AND/OR LOCAL STANDARDS. AFTER THE DEMOLITION IS COMPLETE, ADJACENT STRUCTURES AND IMPROVEMENTS SHALL BE CLEANED OF ALL DUST AND DEBRIS CAUSED BY THE DEMOLITION OPERATIONS. THE CONTRACTOR IS RESPONSIBLE FOR RETURNING ALL ADJACENT AREAS TO THEIR "PRE-DEMOLITION" CONDITION.
16. THE CONTRACTOR IS RESPONSIBLE TO SAFEGUARD THE SITE AS NECESSARY TO PERFORM THE DEMOLITION IN SUCH A MANNER AS TO PREVENT THE UNAUTHORIZED ENTRY OF PERSONS AT ANY TIME.
17. THIS DEMOLITION PLAN IS INTENDED TO IDENTIFY THOSE EXISTING ITEMS/CONDITIONS WHICH ARE TO BE REMOVED. IT IS NOT INTENDED TO PROVIDE DIRECTION OTHER THAN THAT ALL METHODS AND MEANS ARE TO BE IN ACCORDANCE WITH STATE, FEDERAL, LOCAL, AND JURISDICTIONAL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OSHA AND OTHER SAFETY PRECAUTIONS NECESSARY TO PROVIDE A SAFE WORK SITE.
18. THE DEMOLITION CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS OF DAMAGE TO ALL ITEMS THAT ARE TO REMAIN AS A RESULT OF HIS ACTIVITIES. ALL REPAIRS SHALL USE NEW MATERIAL. THE REPAIRS SHALL RESTORE THE ITEM TO THE PRE-DEMOLITION CONDITION.
19. DEBRIS SHALL NOT BE BURIED ON THE SUBJECT SITE. ALL EXCAVATED MATERIAL AND DEBRIS (SOLID WASTE) SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL TOWN, COUNTY, STATE, AND FEDERAL LAWS AND APPLICABLE CODES. THE CONTRACTOR SHALL PROPERLY REMOVE AND DISPOSE OF HAZARDOUS/UNSUITABLE MATERIAL OFF-SITE IN ACCORDANCE WITH ALL APPLICABLE CODES, ORDINANCES, AND LAWS.

GENERAL GRADING & UTILITY NOTES

1. LOCATIONS OF ALL EXISTING AND PROPOSED SERVICES ARE APPROXIMATE AND MUST BE INDEPENDENTLY CONFIRMED WITH LOCAL UTILITY COMPANIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION OR EXCAVATION. SANITARY SEWER AND ALL OTHER UTILITY SERVICE CONNECTION POINTS MUST BE INDEPENDENTLY CONFIRMED BY THE CONTRACTOR IN THE FIELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. ALL DISCREPANCIES MUST IMMEDIATELY BE REPORTED, IN WRITING, TO THE ENGINEER. CONSTRUCTION MUST COMMENCE BEGINNING AT THE LOWEST INVERT (POINT OF CONNECTION) AND PROGRESS UP GRADIENT. PROPOSED INTERFACE POINTS (CROSSINGS) WITH EXISTING UNDERGROUND UTILITIES SHALL BE FIELD VERIFIED BY TEST PITS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. CONTRACTOR MUST VERTICALLY AND HORIZONTALLY LOCATE ALL EXISTING UTILITIES AND SERVICES INCLUDING, BUT NOT LIMITED TO, GAS, WATER, ELECTRIC, SANITARY AND STORM SEWER, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC. WITHIN THE LIMITS OF DISTURBANCE OR WORK SPACE, WHICHEVER IS GREATER. THE CONTRACTOR MUST USE, REFER TO, AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL THE UNDERGROUND UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL DAMAGE TO ANY EXISTING UTILITIES DURING CONSTRUCTION, AT NO COST TO THE OWNER. CONTRACTOR SHALL BEAR ALL COSTS ASSOCIATED WITH DAMAGE TO ANY EXISTING UTILITIES DURING CONSTRUCTION.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL CONSTRUCTION CONTRACT DOCUMENTS INCLUDING, BUT NOT LIMITED TO, ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THE PROJECT WORK SCOPE PRIOR TO THE INITIATION AND COMMENCEMENT OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT AND/OR DISCREPANCY BETWEEN THE DOCUMENTS RELATIVE TO THE SPECIFICATIONS OR THE RELATIVE OR APPLICABLE CODES, REGULATIONS, LAWS, RULES, STATUTES AND/OR ORDINANCES, IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO NOTIFY THE PROJECT ENGINEER OF RECORD, IN WRITING, OF SAID CONFLICT AND/OR DISCREPANCY PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR'S FAILURE TO NOTIFY THE PROJECT ENGINEER SHALL CONSTITUTE CONTRACTOR'S FULL AND COMPLETE ACCEPTANCE OF ALL RESPONSIBILITY TO COMPLETE THE SCOPE OF WORK AS DEFINED BY THE DRAWINGS AND IN FULL COMPLIANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS, LAWS, STATUTES, ORDINANCES AND CODES AND, FURTHER, CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH SAME.
4. THE CONTRACTOR MUST LOCATE AND CLEARLY AND UNAMBIGUOUSLY DEFINE VERTICALLY AND HORIZONTALLY ALL ACTIVE AND INACTIVE UTILITY AND/OR SERVICE SYSTEMS THAT ARE TO BE REMOVED. THE CONTRACTOR IS RESPONSIBLE TO PROTECT AND MAINTAIN ALL ACTIVE AND INACTIVE SYSTEMS THAT ARE NOT BEING REMOVED/RELOCATED DURING SITE ACTIVITY.
5. THE CONTRACTOR MUST FAMILIARIZE ITSELF WITH THE APPLICABLE UTILITY SERVICE PROVIDER REQUIREMENTS AND IS RESPONSIBLE FOR ALL COORDINATION REGARDING UTILITY DEMOLITION AS IDENTIFIED OR REQUIRED FOR THE PROJECT. THE CONTRACTOR MUST PROVIDE THE OWNER WITH WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND ABANDONED IN ACCORDANCE WITH THE JURISDICTION AND UTILITY COMPANY REQUIREMENTS AND ALL OTHER APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES.
6. THE CONTRACTOR MUST INSTALL ALL STORM SEWER AND SANITARY SEWER COMPONENTS WHICH FUNCTION BY GRAVITY PRIOR TO THE INSTALLATION OF ALL OTHER UTILITIES.
7. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF SITE PLAN DOCUMENTS AND ARCHITECTURAL DESIGN FOR EXACT BUILDING UTILITY CONNECTION LOCATIONS, GREASE TRAP REQUIREMENTS/DETAILS, DOOR ACCESS, AND EXTERIOR GRADING. THE ARCHITECT WILL DETERMINE THE UTILITY SERVICE SIZES. THE CONTRACTOR MUST COORDINATE INSTALLATION OF UTILITIES/SERVICES WITH THE INDIVIDUAL COMPANIES, TO AVOID CONFLICTS AND TO ENSURE THAT PROPER DEPTHS ARE ACHIEVED. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT INSTALLATION OF ALL IMPROVEMENTS COMPLIES WITH ALL UTILITY REQUIREMENTS WITH JURISDICTION AND/OR CONTROL OF THE SITE, AND ALL OTHER APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES AND, FURTHER, IS RESPONSIBLE FOR COORDINATING THE UTILITY TIE-INS/CONNECTIONS PRIOR TO CONNECTING TO THE EXISTING UTILITY/SERVICE. WHERE A CONFLICT(S) EXISTS BETWEEN THESE PLANS AND THE ARCHITECTURAL PLANS, OR WHERE ARCHITECTURAL PLAN UTILITY CONNECTION POINTS DIFFER, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE ENGINEER, IN WRITING, AND PRIOR TO CONSTRUCTION, RESOLVE SAME.
8. WATER SERVICE MATERIALS, BURIAL DEPTH, AND COVER REQUIREMENTS MUST BE SPECIFIED BY THE LOCAL UTILITY COMPANY. CONTRACTOR'S PRICE FOR WATER SERVICE MUST INCLUDE ALL FEES, COSTS, TESTING AND APPURTENANCES REQUIRED BY THE UTILITY COMPANY TO PROVIDE FULL AND COMPLETE WORKING SERVICE. CONTRACTOR MUST CONTACT THE APPLICABLE UTILITY COMPANY TO CONFIRM THE SIZE AND TYPE OF WATER METER AND/OR VAULT, PRIOR TO COMMENCING CONSTRUCTION.
9. ALL NEW UTILITIES/SERVICES, INCLUDING ELECTRIC, TELEPHONE, CABLE TV, ETC. ARE TO BE INSTALLED UNDERGROUND. ALL NEW UTILITIES/SERVICES MUST BE INSTALLED IN ACCORDANCE WITH THE UTILITY/SERVICE PROVIDER INSTALLATION SPECIFICATIONS AND STANDARDS.
10. SITE GRADING MUST BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT REFERENCED IN THIS PLAN SET. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING AND REPLACING UNSUITABLE MATERIALS WITH SUITABLE MATERIALS AS SPECIFIED IN THE GEOTECHNICAL REPORT. ALL EXCAVATED OR FILLED AREAS MUST BE COMPACTED AS OUTLINED IN THE GEOTECHNICAL REPORT. MOISTURE CONTENT AT TIME OF PLACEMENT MUST BE SUBMITTED IN A COMPACTION REPORT PREPARED BY A QUALIFIED GEOTECHNICAL ENGINEER, REGISTERED WITH THE STATE WHERE THE WORK IS PERFORMED, VERIFYING THAT ALL FILLED AREAS AND SUBGRADE AREAS WITHIN THE BUILDING PAD AREA AND AREAS TO BE PAVED HAVE BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT AND ALL APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES. SUBBASE MATERIAL FOR SIDEWALKS, CURB, OR ASPHALT MUST BE FREE OF ORGANICS AND OTHER UNSUITABLE MATERIALS. SHOULD SUBBASE BE DEEMED UNSUITABLE BY OWNER/DEVELOPER, OR OWNER/DEVELOPER'S REPRESENTATIVE, SUBBASE IS TO BE REMOVED AND FILLED WITH APPROVED FILL MATERIAL COMPACTED AS DIRECTED BY THE GEOTECHNICAL REPORT. EARTHWORK ACTIVITIES INCLUDING, BUT NOT LIMITED TO, EXCAVATION, BACKFILL, AND COMPACTING MUST COMPLY WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT AND ALL APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES.
11. ALL FILL, COMPACTION, AND BACKFILL MATERIALS REQUIRED FOR UTILITY INSTALLATION MUST BE AS PER THE RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL REPORT AND MUST BE COORDINATED WITH THE APPLICABLE UTILITY COMPANY SPECIFICATIONS. WHEN THE PROJECT DOES NOT HAVE GEOTECHNICAL RECOMMENDATIONS, FILL AND COMPACTION MUST, AT A MINIMUM, COMPLY WITH THE STATE DOT REQUIREMENTS AND SPECIFICATIONS AND CONSULTANT SHALL HAVE NO LIABILITY OR RESPONSIBILITY FOR OR AS RELATED TO FILL, COMPACTION AND BACKFILL.
12. THE CONTRACTOR MUST COMPLY, TO THE FULLEST EXTENT, WITH THE LATEST OSHA STANDARDS AND REGULATIONS, AND/OR ANY OTHER AGENCY WITH JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE "MEANS AND METHODS" REQUIRED TO MEET THE INTENT AND PERFORMANCE CRITERIA OF OSHA, AS WELL AS ANY OTHER ENTITY THAT HAS JURISDICTION FOR EXCAVATION AND/OR TRENCHING PROCEDURES AND CONSULTANT SHALL HAVE NO RESPONSIBILITY FOR OR AS RELATED TO EXCAVATION AND TRENCHING PROCEDURES.
13. PAVEMENT MUST BE SAW CUT IN STRAIGHT LINES, AND EXCEPT FOR EDGE OF BUTT JOINTS, MUST EXTEND TO THE FULL DEPTH OF THE EXISTING PAVEMENT. ALL DEBRIS FROM REMOVAL OPERATIONS MUST BE REMOVED FROM THE SITE AT THE TIME OF EXCAVATION. STOCKPILING OF DEBRIS WILL NOT BE PERMITTED.
14. THE TOPS OF EXISTING MANHOLES, INLET STRUCTURES, UTILITY VALVES, AND SANITARY CLEANOUTS MUST BE ADJUSTED, AS NECESSARY, TO MATCH PROPOSED GRADES IN ACCORDANCE WITH ALL APPLICABLE STANDARDS, REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES.
15. DURING THE INSTALLATION OF SANITARY SEWER, STORM SEWER, AND ALL UTILITIES, THE CONTRACTOR MUST MAINTAIN A CONTEMPORANEOUS AND THOROUGH RECORD OF CONSTRUCTION TO IDENTIFY THE AS-INSTALLED LOCATIONS OF ALL UNDERGROUND INFRASTRUCTURE. THE CONTRACTOR MUST CAREFULLY NOTE ANY INSTALLATIONS THAT DEVIATE FROM THE INFORMATION CONTAINED IN THE UTILITY PLAN. THIS RECORD MUST BE KEPT ON A CLEAN COPY OF THESE PLANS, WHICH CONTRACTOR MUST PROMPTLY PROVIDE TO THE OWNER AT THE COMPLETION OF WORK.
16. WHEN THE SITE IMPROVEMENT PLANS INVOLVE MULTIPLE BUILDINGS, SOME OF WHICH MAY BE BUILT AT A LATER DATE, THE CONTRACTOR MUST EXTEND ALL LINES, INCLUDING BUT NOT LIMITED TO STORM SEWER, SANITARY SEWER, UTILITIES, AND IRRIGATION LINE, TO A POINT AT LEAST FIVE (5) FEET BEYOND THE PAVED AREAS FOR WHICH THE CONTRACTOR IS RESPONSIBLE. CONTRACTOR MUST CAP ENDS AS APPROPRIATE, MARK LOCATIONS WITH A 2X4 STAKE, AND MUST NOTE THE LOCATION OF ALL OF THE ABOVE ON A CLEAN COPY OF THESE PLANS, WHICH CONTRACTOR MUST PROMPTLY PROVIDE TO THE OWNER UPON COMPLETION OF THE WORK.
17. THE CONTRACTOR IS FULLY RESPONSIBLE FOR VERIFICATION OF EXISTING TOPOGRAPHIC INFORMATION AND UTILITY INVERT ELEVATIONS PRIOR TO COMMENCING ANY CONSTRUCTION. CONTRACTOR MUST CONFIRM AND ENSURE 0.75% MINIMUM SLOPE AGAINST ALL ISLANDS, GUTTERS, AND CURBS; 1.0% ON ALL CONCRETE SURFACES; AND 1.5% MINIMUM ON ASPHALT (EXCEPT WHERE ADA REQUIREMENTS LIMIT GRADES), TO PREVENT PONDING. CONTRACTOR MUST IMMEDIATELY IDENTIFY, IN WRITING TO THE ENGINEER, ANY DISCREPANCIES THAT MAY OR COULD AFFECT THE PUBLIC SAFETY, HEALTH OR GENERAL WELFARE, OR PROJECT COST. IF CONTRACTOR PROCEEDS WITH CONSTRUCTION WITHOUT PROVIDING PROPER NOTIFICATION, THIS SHALL BE AT THE CONTRACTOR'S OWN RISK AND, FURTHER, CONTRACTOR SHALL INDEMNIFY, DEFEND AND HOLD HARMLESS THE DESIGN ENGINEER FOR ANY DAMAGES, COSTS, INJURIES, ATTORNEY'S FEES AND THE LIKE WHICH RESULT FROM SAME.
18. PROPOSED TOP OF CURB ELEVATIONS ARE GENERALLY 6" ABOVE EXISTING LOCAL ASPHALT GRADE UNLESS OTHERWISE NOTED. IT IS CONTRACTOR'S OBLIGATION TO ENSURE THAT DESIGN ENGINEER APPROVES FINAL CURBING CUT SHEETS PRIOR TO INSTALLATION OF SAME.
19. REFER TO SITE PLAN FOR ADDITIONAL NOTES.
20. IN THE EVENT OF DISCREPANCIES AND/OR CONFLICTS BETWEEN PLANS OR RELATIVE TO OTHER PLANS, THE SITE PLAN WILL TAKE PRECEDENCE AND CONTROL. CONTRACTOR MUST IMMEDIATELY NOTIFY THE DESIGN ENGINEER, IN WRITING, OF ANY DISCREPANCIES AND/OR CONFLICTS.
21. CONTRACTOR IS REQUIRED TO SECURE ALL NECESSARY AND/OR REQUIRED PERMITS AND APPROVALS FOR ALL OFF SITE MATERIAL SOURCES AND DISPOSAL FACILITIES. CONTRACTOR MUST SUPPLY A COPY OF APPROVALS TO ENGINEER AND OWNER PRIOR TO INITIATING ANY WORK.
22. TOP AND BOTTOM OF WALL ELEVATIONS (TW & BW) REPRESENT THE PROPOSED FINISHED GRADE AT THE FACE OF WALL AND DO NOT REPRESENT THE ELEVATION OF THE PROPOSED WALL (INCLUDING THE CAP UNIT OR FOOTING). WALL FOOTINGS/FOUNDATION ELEVATIONS ARE NOT IDENTIFIED HEREIN AND ARE TO BE SET/DETERMINED BY THE CONTRACTOR BASED ON FINAL STRUCTURAL DESIGN SHOP DRAWINGS PREPARED BY THE APPROPRIATE PROFESSIONAL LICENSED IN THE STATE WHERE THE CONSTRUCTION OCCURS. THE CONTRACTOR MUST ENSURE ALL WALLS SHOWN HEREON MUST BE DESIGNED BY A LICENSED STRUCTURAL ENGINEER AND THAT SIGNED AND SEALED SHOP DRAWINGS ARE APPROVED BY THE MUNICIPALITY PRIOR TO THEIR CONSTRUCTION. FURTHER THE CONTRACTOR SHALL ENSURE THAT FENCING, GUIDERAIL, UTILITIES, AND OTHER SITE AMENITIES IN THE VICINITY OF THE RETAINING WALL(S), PROPOSED SCHEMATICALLY IN THESE PLANS, SHALL BE CONSIDERED AND INCORPORATED INTO THE RETAINING WALL DESIGN (BY OTHERS).
23. STORM DRAINAGE PIPE:

    UNLESS INDICATED OTHERWISE, ALL STORM SEWER PIPE MUST BE REINFORCED CONCRETE PIPE (RCP) CLASS III WITH JOINTS. WHEN HIGH-DENSITY POLYETHYLENE PIPE (HDPE) IS CALLED FOR ON THE PLANS, IT MUST CONFORM TO AASHTO M294 AND TYPE S (SMOOTH INTERIOR WITH ANGULAR CORRUGATIONS) WITH GASKET FOR WATERTIGHT JOINT. PVC PIPE FOR ROOF DRAIN CONNECTION MUST BE SDR 26 OR SCHEDULE 40 UNLESS INDICATED OTHERWISE.
24. SANITARY SEWER MAIN MUST BE POLYVINYL CHLORIDE (PVC) SDR 35 EXCEPT WHERE INDICATED OTHERWISE. SANITARY LATERALS MUST BE PVC SCHEDULE 40 OR PVC SDR 26 UNLESS INDICATED, IN WRITING, OTHERWISE.
25. STORM AND SANITARY SEWER PIPE LENGTHS INDICATED ARE NOMINAL.
26. SEWERS CONVEYING SANITARY FLOW, COMBINED SANITARY, AND STORMWATER FLOW OR INDUSTRIAL FLOW MUST BE SEPARATED FROM WATER MAINS BY A DISTANCE OF AT LEAST 10 FEET HORIZONTALLY. IF SUCH LATERAL SEPARATION IS NOT POSSIBLE, THE PIPES MUST BE IN SEPARATE TRENCHES WITH THE SEWER AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN, OR SUCH OTHER SEPARATION AS APPROVED BY THE GOVERNMENT AGENCY WITH JURISDICTION OVER SAME.
27. WHERE APPROPRIATE SEPARATION FROM A WATER MAIN IS NOT POSSIBLE, THE SEWER MUST BE ENCASED IN CONCRETE, OR CONSTRUCTED OF DUCTILE IRON PIPE USING MECHANICAL OR SLIP-ON JOINTS FOR A DISTANCE OF AT LEAST 10 FEET ON EITHER SIDE OF THE CROSSING. IN ADDITION, ONE FULL LENGTH OF SEWER PIPE SHOULD BE LOCATED SO BOTH JOINTS WILL BE AS FAR FROM THE WATER LINE AS POSSIBLE. WHERE A WATER MAIN CROSSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT FOR THE SEWER MUST BE PROVIDED.
28. WATER MAIN PIPING MUST BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS AND SPECIFICATIONS OF THE LOCAL WATER AUTHORITY ABSENCE OF SUCH REQUIREMENTS, WATER MAIN PIPING MUST BE CEMENT LINED DUCTILE IRON (DIP) MINIMUM CLASS 52 THICKNESS. ALL PIPE AND APPURTENANCES MUST COMPLY WITH THE APPLICABLE AWWA STANDARDS IN EFFECT AT THE TIME OF APPLICATION.
29. CONTRACTOR MUST ENSURE THAT ALL UTILITY TRENCHES LOCATED IN EXISTING PAVED ROADWAYS INCLUDING SEWER, WATER AND STORM SYSTEMS, MUST BE REPAIRED IN ACCORDANCE WITH REFERENCED MUNICIPAL, COUNTY AND/OR DOT DETAILS AS APPLICABLE. CONTRACTOR MUST COORDINATE INSPECTION AND APPROVAL OF COMPLETED WORK WITH THE AGENCY WITH JURISDICTION OVER SAME.
30. WHERE BASEMENTS ARE TO BE PROVIDED FOR PROPOSED DWELLING UNITS, THE DEVELOPER SHALL, BY BORING OR BY TEST PIT, DETERMINE THE DEPTH TO GROUNDWATER AT THE LOCATION OF THE PROPOSED DWELLINGS. WHERE GROUNDWATER IS ENCOUNTERED IN THE BASEMENT AREA, BASEMENTS WILL NOT BE INSTALLED UNLESS SPECIAL CONSTRUCTION METHODS ARE UTILIZED, TO BE REVIEWED AND APPROVED BY THE MUNICIPAL CONSTRUCTION CODE OFFICIAL. IF AND WHERE SUMP PUMPS ARE INSTALLED, ALL DISCHARGES MUST BE CONNECTED TO THE STORM SEWER. A CLEANOUT MUST BE PROVIDED PRIOR TO THE CONNECTION TO THE STORM DRAIN IN ORDER THAT BLOCKAGES CAN BE ADDRESSED.
31. FOR SINGLE AND MULTI-FAMILY RESIDENTIAL PROJECTS, WHERE THE PROPOSED DWELLING AND ADJACENT SPOT ELEVATION(S) ARE SCHEMATIC FOR GENERIC BUILDING FOOTPRINT, GRADES MUST BE ADJUSTED BASED ON FINAL ARCHITECTURAL PLANS TO PROVIDE A MINIMUM OF EIGHT (8) INCHES BELOW TOP OF BLOCK AND /OR EIGHT (8) INCHES BELOW SIDING, WHICHEVER IS LOWEST, AND MUST PROVIDE POSITIVE DRAINAGE (2% MIN.) AWAY FROM DWELLING. ALL CONSTRUCTION, INCLUDING GRADING, MUST COMPLY WITH THE LATEST LOCAL AND STATE BUILDING CODE AND ALL OTHER APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES.
32. LOCATION OF PROPOSED UTILITY POLE RELOCATION IS AT THE SOLE DISCRETION OF UTILITY COMPANY.
33. CONSULTANT IS NEITHER LIABLE NOR RESPONSIBLE FOR ANY SUBSURFACE CONDITIONS AND FURTHER, SHALL HAVE NO LIABILITY FOR ANY HAZARDOUS MATERIALS, HAZARDOUS SUBSTANCES, OR POLLUTANTS ON, ABOUT OR UNDER THE PROPERTY.

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REV	DATE	COMMENT	BY
1	09/21/18	PER TOWNSHIP REVIEW COMMENTS	JHT

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PA1 SYSTEM, INC.
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POCS SERIAL NUMBER
20172771117

PROJECT No.:	PC171170
DRAWN BY:	JHT
CHECKED BY:	JRK
DATE:	5/18/2018
SCALE:	NONE
CAD I.D.:	PC171170LANDDEV-1

PROJECT:

FINAL LAND DEVELOPMENT PLANS

FOR

PROVCO PINEGOOD, CHALFONT, LLC

PROPOSED WAWA

BUTLER AVENUE (SR 4202) & COUNTY LINE ROAD
NEW BRITAIN TOWNSHIP
BUCKS COUNTY
PENNSYLVANIA

BOHLER ENGINEERING
1600 MANOR DRIVE, SUITE 200
CHALFONT, PENNSYLVANIA 18914
Phone: (215) 996-9100
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www.BohlerEngineering.com

J.R. KORCZAK
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE074279

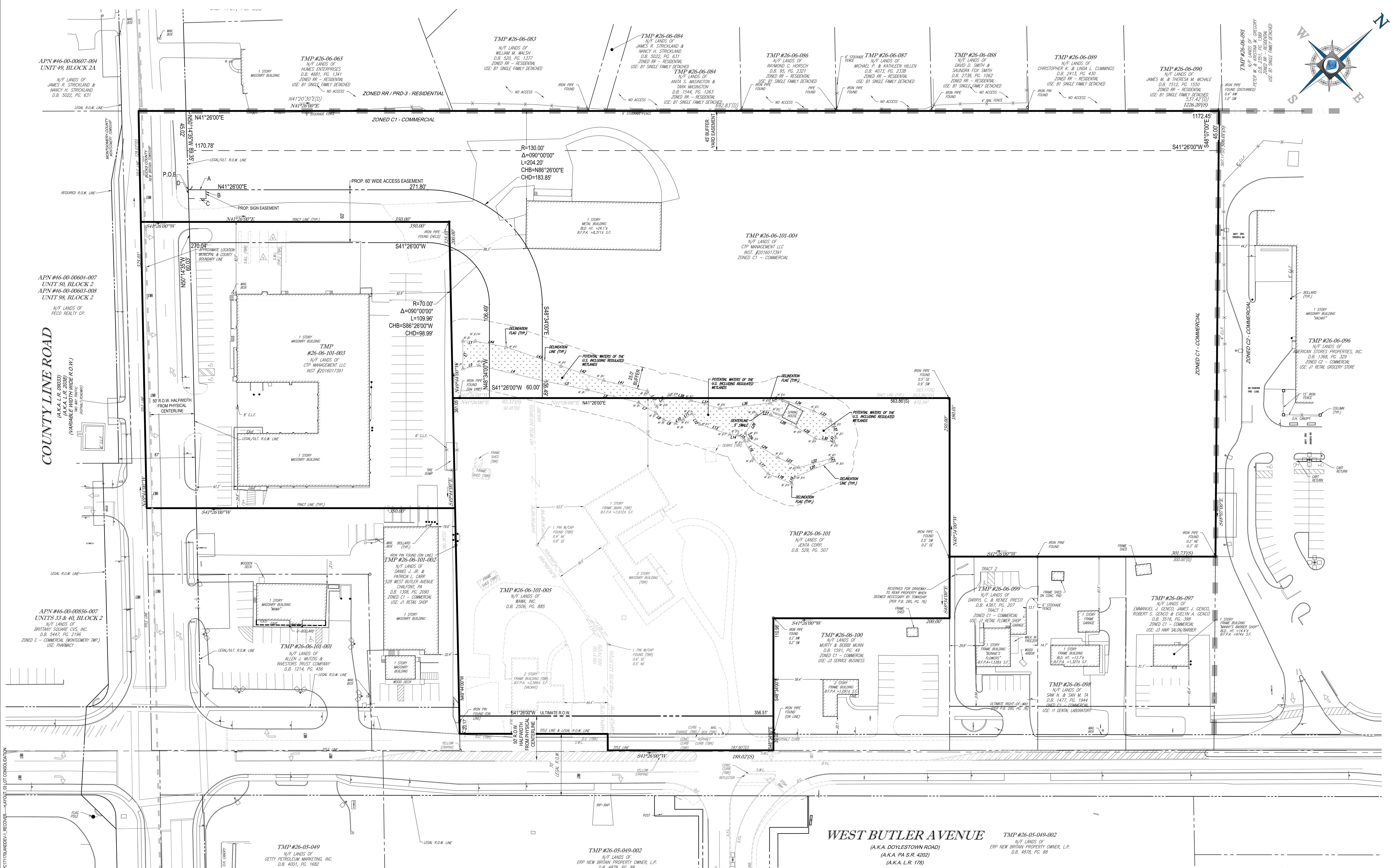
SHEET TITLE:

NOTES

(RECORD PLAN 2 OF 10)

SHEET NUMBER:

REVISION 1 - 2018.09.21



LINE	DISTANCE	BEARING
L1	14.28	S42°11'15"W
L2	31.52	S48°35'34"E
L3	18.78	N30°09'19"E
L4	77.90	N54°49'43"E
L5	47.85	N52°57'21"E
L6	60.16	N55°19'45"E
L7	22.94	N73°11'09"E
L8	11.68	N80°51'45"E
L9	14.22	N59°02'54"E
L10	9.45	N13°35'39"E
L11	12.10	N06°47'26"E
L12	15.28	S84°49'26"E
L13	35.95	N60°14'38"E
L14	8.83	N44°06'29"E
L15	10.42	N80°53'40"E
L16	22.46	S74°45'30"E
L17	24.07	N87°22'41"E
L18	29.18	N64°23'07"E
L19	8.38	N24°03'56"W
L20	45.69	N18°39'33"E
L21	3.57	N69°21'23"W
L22	38.02	S25°50'00"W
L23	25.91	S67°48'35"W
L24	38.96	S71°46'22"W
L25	8.32	N72°44'00"W
L26	24.46	N18°13'10"W
L27	16.52	N42°14'06"E
L28	31.79	N66°59'20"E
L29	24.97	N72°34'02"E
L30	21.83	N52°52'48"E
L31	6.01	N27°36'51"W
L32	19.95	N65°26'18"W
L33	22.08	S71°15'45"W
L34	39.49	S61°57'07"W
L35	13.85	S19°46'43"W
L36	56.68	S35°28'34"W
L37	34.21	S56°56'53"W
L38	25.89	S54°56'21"W
L39	19.20	S01°53'20"E
L40	20.67	N79°40'09"W
L41	50.87	S55°00'39"W
L42	51.14	S60°10'20"W
L43	65.97	S60°32'49"W
L44	35.47	S52°13'15"W

WETLANDS LINE TABLE

PROPOSED SIGN EASEMENT TABLE

	BEARING	DISTANCE
A	N41°26'00"E	20.00'
B	S50°14'35"E	10.00'
C	S41°26'00"W	20.00'
D	N50°14'35"W	10.00'

LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- LEGAL/REQUIRED R.O.W LINE
- ULTIMATE R.O.W LINE
- ZONING BOUNDARY
- COUNTY/TOWNSHIP BOUNDARY
- EXISTING LOT LINE TO BE EXTINGUISHED
- EXISTING UTILITY EASEMENT
- PROPOSED ACCESS EASEMENT
- PROPOSED EASEMENT
- WETLANDS DELINEATION / FLAGGING

50 25 12.5 0 50
1"= 50'

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POCS SERIAL NUMBER
20172771117

PROJECT No.: PC171170
DRAWN BY: JHT
CHECKED BY: JRK
DATE: 5/18/2018
SCALE: 1" = 50'
CAD I.D.: PC171170LANDDEV-1_RECOVE

PROJECT:

FINAL LAND DEVELOPMENT PLANS

FOR

PROVCO PINEGOOD, CHALFONT, LLC

PROPOSED WAWA

BUTLER AVENUE (SR 4202) & COUNTY LINE ROAD
NEW BRITAIN TOWNSHIP
BUCKS COUNTY
PENNSYLVANIA

BOHLER ENGINEERING
1600 MANOR DRIVE, SUITE 200
CHALFONT, PENNSYLVANIA 18914
Phone: (215) 996-9100
Fax: (215) 996-9102
www.BohlerEngineering.com

J.R. KORCZAK
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE074279

SHEET TITLE:

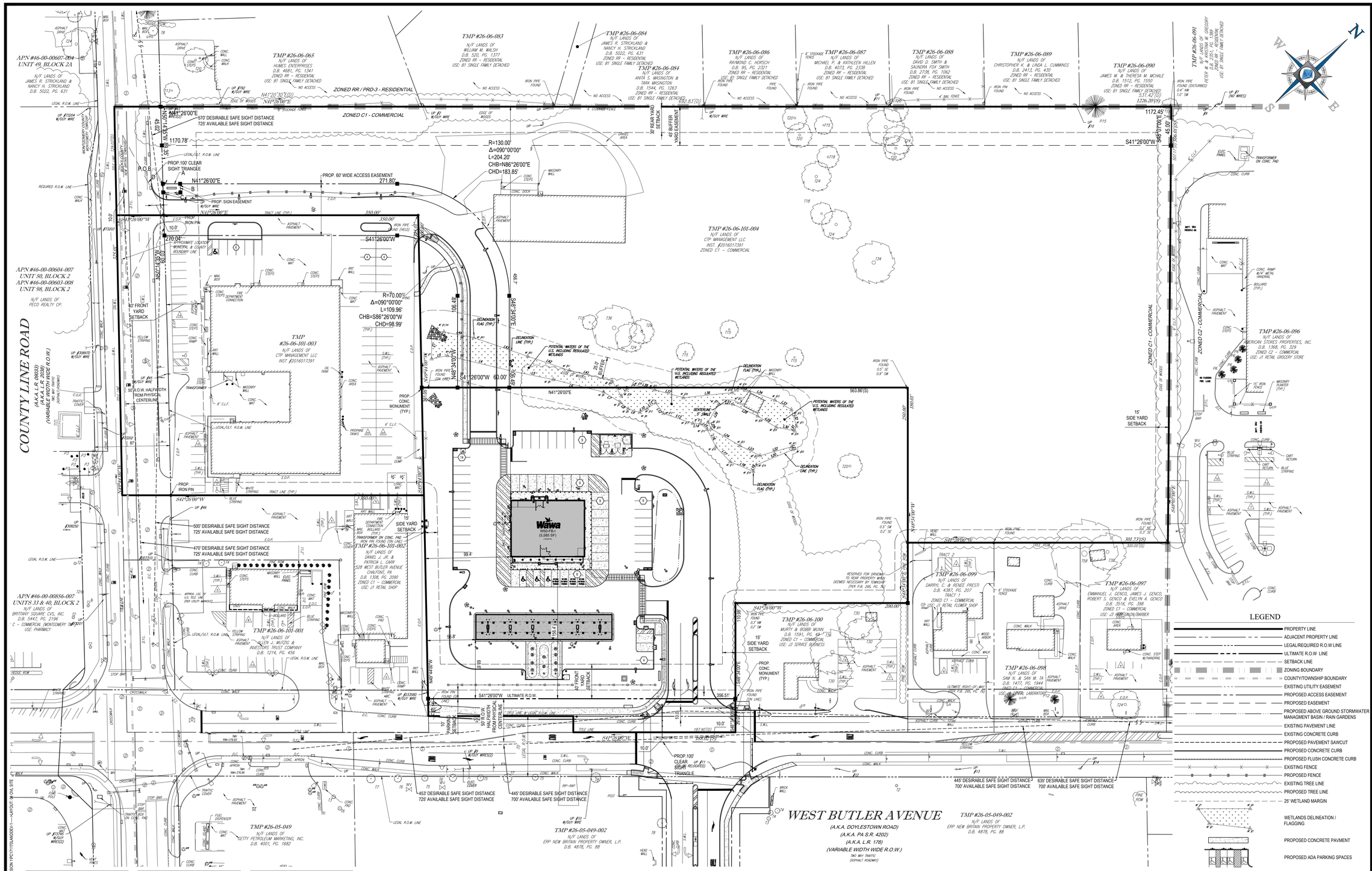
LOT CONSOLIDATION PLAN

(RECORD PLAN 3 OF 10)

SHEET NUMBER:

REVISION 1 - 2018.09.21

JT
R:\17\PC171170\DRAWINGS\PLAN SETS\LAND DEVELOPMENT\REVISION 1\PC171170LANDDEV-1_RECOVER---->LAYOUT: 03 LOT CONSOLIDATION



WETLANDS LINE TABLE		
LINE	DISTANCE	BEARING
L1	14.28	S42°11'15"W
L2	31.52	S48°35'34"E
L3	18.78	N30°09'19"E
L4	77.90	N54°49'43"E
L5	47.85	N52°57'21"E
L6	60.16	N55°19'45"E
L7	22.94	N73°11'09"E
L8	11.68	N80°51'45"E
L9	14.22	N59°02'54"E
L10	9.45	N10°38'39"E
L11	12.10	N06°47'26"E
L12	15.28	S84°49'26"E
L13	35.95	N60°14'38"E
L14	8.83	N44°06'29"E
L15	10.42	N80°53'40"E
L16	22.46	S74°45'30"E
L17	24.07	N87°22'41"E
L18	29.18	N64°23'07"E
L19	8.38	N24°03'56"W
L20	45.69	N18°39'33"E
L21	3.57	N89°21'03"W
L22	38.02	S25°50'00"W
L23	25.91	S67°48'35"W
L24	38.96	S71°46'22"W
L25	8.32	N72°44'00"W
L26	24.46	N18°13'10"W
L27	16.52	N42°14'06"E
L28	31.79	N66°59'20"E
L29	24.97	N72°34'02"E
L30	21.83	N52°52'48"E
L31	6.01	N23°36'51"W
L32	19.95	N65°26'18"W
L33	22.08	S71°11'45"W
L34	39.49	S61°57'07"W
L35	13.85	S19°46'43"W
L36	56.68	S35°28'34"W
L37	34.21	S56°56'53"W
L38	25.89	S54°56'21"W
L39	19.20	S01°53'20"E
L40	20.67	N79°40'09"W
L41	50.87	S55°00'39"W
L42	51.14	S60°10'20"W
L43	65.97	S60°32'49"W
L44	35.47	S52°13'15"W

PROPOSED SIGN EASEMENT TABLE

	BEARING	DISTANCE
A	N41°26'00"E	20.00'
B	S50°14'35"E	10.00'
C	S41°26'00"W	20.00'
D	N50°14'35"W	10.00'

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◆ BOSTON, MA ◆ NORTHERN VIRGINIA ◆ TAMPA, FL
◆ NEW JERSEY ◆ HARRISBURG, PA ◆ ORLANDO, FL
◆ NEW YORK NY ◆ SOUTHEASTERN, PA ◆ RALEIGH, NC
◆ NORTHERN NEW JERSEY ◆ REHOBOTH BEACH, DE ◆ WASHINGTON, DC ◆ DALLAS, TX

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REVISIONS

REV	DATE	COMMENT	BY
1	09/21/18	PER TOWNSHIP REVIEW COMMENTS	JHT

CALL BEFORE YOU DIG!

PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE - STOP CALL

PA1 SYSTEM, INC.
1-800-242-1776

POCS SERIAL NUMBER
20172771117

PROJECT No.: PC171170
DRAWN BY: JHT
CHECKED BY: JRK
DATE: 5/18/2018
SCALE: 1" = 50'
CAD I.D.: PC171170LANDDEV-1

PROJECT:

FINAL LAND DEVELOPMENT PLANS

FOR

PROVCO PINEGOOD, CHALFONT, LLC

PROPOSED WAWA

BUTLER AVENUE (SR 4202) & COUNTY LINE ROAD
NEW BRITAIN TOWNSHIP
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J.R. KORCZAK
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE074279

SHEET TITLE:

OVERALL SITE PLAN

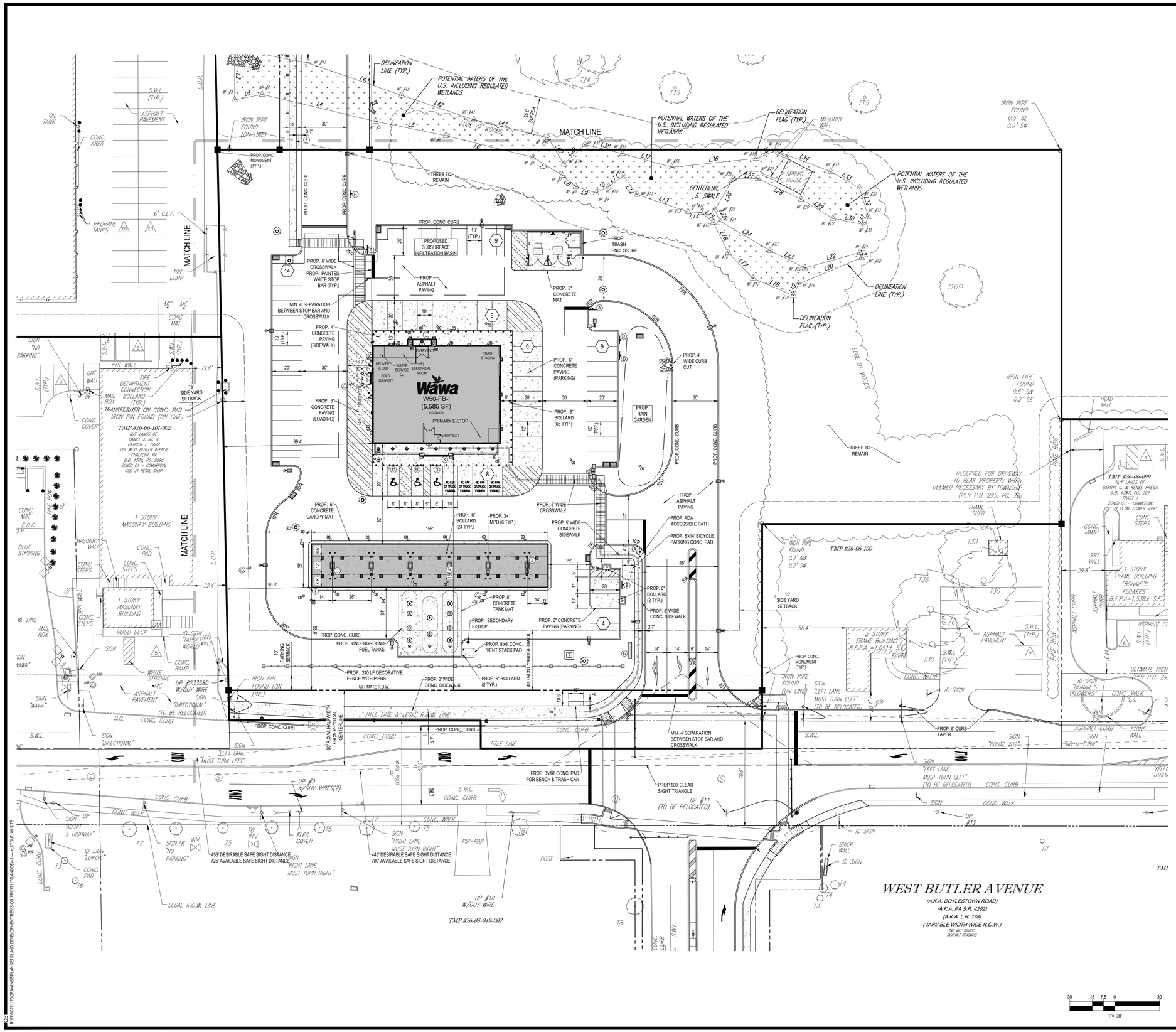
(RECORD PLAN 4 OF 10)

SHEET NUMBER:

4

OF 37

REVISION 1 - 2018.09.21



LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- LEGAL/REQUIRED R.O.W LINE
- ULTIMATE R.O.W LINE
- SETBACK LINE
- ZONING BOUNDARY
- COUNTY/TOWNSHIP BOUNDARY
- EXISTING UTILITY EASEMENT
- PROPOSED ACCESS EASEMENT
- PROPOSED EASEMENT
- PROPOSED ABOVE GROUND STORMWATER MANAGMENT BASIN / RAIN GARDENS
- EXISTING PAVEMENT LINE
- EXISTING CONCRETE CURB
- PROPOSED PAVEMENT SAWCUT
- PROPOSED CONCRETE CURB
- PROPOSED FLUSH CONCRETE CURB
- EXISTING FENCE
- PROPOSED FENCE
- EXISTING TREE LINE
- PROPOSED TREE LINE
- 25' WETLAND MARGIN
- WETLANDS DELINEATION / FLAGGING
- PROPOSED CONCRETE PAVMENT
- PROPOSED ADA PARKING SPACES
- PROPOSED PARKING COUNT
- EXISTING IRON PIN
- PROPOSED CONCRETE MONUMENT
- PROPOSED IRON PIN
- PROPOSED SIGN
- PROPOSED STREET SIGN

PROPOSED TRAFFIC SIGNAGE SYMBOL LEGEND

- (A) PROPOSED "STOP" SIGN (R1-1)
- (B) PROPOSED "RESERVED PARKING" SIGN (R7-8) & "RESERVED PARKING PENALTIES" SIGN (R7-8F)
- (C) PROPOSED "RESERVED PARKING" SIGN (R7-8) "RESERVED PARKING PENALTIES" SIGN (R7-8F) & "VAN ACCESSIBLE" SIGN (R7-8P)
- (D) PROPOSED "EMPLOYEE PARKING ONLY" SIGN
- (E) PROPOSED "AIR PUMP PARKING ONLY" SIGN
- (F) PROPOSED NO PARKING SIGN (R8-3)

PROPOSED SIGNAGE

GROUND SIGNS

KEY	QTY.	DESCRIPTION	PROPOSED AREA (S.F.)	ALLOWABLE AREA (S.F.)
(G)		SHARED FREESTANDING PYLON SIGN (DOUBLE-FACED) (20'-0" HIGH)		
	1	"WAWA" I.D.	23.00	
	1	PRICE DISPLAY	23.87	
	1	3RD PARTY SIGN PANEL	18.33	
			65.20 PER FACE	75.00 PER FACE
(H)		FREESTANDING MONUMENT SIGN (DOUBLE-FACED) (7'10" HIGH)		
	1	"WAWA" I.D.	25.37	
	1	PRICE DISPLAY	24.50	
			49.87 PER FACE	75.00 PER FACE

ON-PREMISES SIGNS (EXCEPT FOR GROUND SIGNS)

KEY	QTY.	DESCRIPTION	PROPOSED AREA (S.F.)	ALLOWABLE AREA (S.F.)
		CANOPY SIGNAGE		
(I)	1	"WAWA" WITH LOGO I.D.	9.03	
(J)	2	"WAWA" GAS PUMP SPANNER	7.84	
			16.87	
		BUILDING MOUNTED SIGNAGE		
(K)	1	32-INCH "WAWA" WITH LOGO	36.90	>36.90
(L)	1	44-INCH "WAWA" WITH LOGO	67.70	>67.70
			104.60	

* MAXIMUM PERMITTED FREESTANDING SIGN HEIGHT UNDER J31 USE = 15 FEET (VARIANCE NEEDED)

TOTAL GROUND SIGNAGE =	115.07
TOTAL CANOPY SIGNAGE =	16.87
TOTAL BUILDING MOUNTED SIGNAGE =	104.60
TOTAL SIGNAGE =	236.54

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◆ NEW ENGLAND ◆ PHILADELPHIA, PA ◆ NORTHERN VIRGINIA ◆ TAMPA, FL
◆ BOSTON, MA ◆ PITTSBURGH, PA ◆ RICHMOND, VA ◆ ORLANDO, FL
◆ NEW YORK CITY ◆ NEW JERSEY ◆ SOUTHEASTERN, PA ◆ RALEIGH, NC ◆ DALLAS, TX
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REVISIONS

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1	09/21/18	PER TOWNSHIP REVIEW COMMENTS	JHT

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PA1 SYSTEM, INC. 1-800-242-1776

POCS SERIAL NUMBER 20172771117

PROJECT No.:	PC171170
DRAWN BY:	JHT
CHECKED BY:	JRK
DATE:	5/18/2018
SCALE:	1" = 30'
CAD I.D.:	PC171170LANDDEV-1

PROJECT:

FINAL LAND DEVELOPMENT PLANS

FOR

PROVCO PINEGOOD, CHALFONT, LLC

PROPOSED WAWA

BUTLER AVENUE (SR 4202) & COUNTY LINE ROAD
NEW BRITAIN TOWNSHIP
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PENNSYLVANIA

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J.R. KORCZAK
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE074279

SHEET TITLE:

SITE PLAN

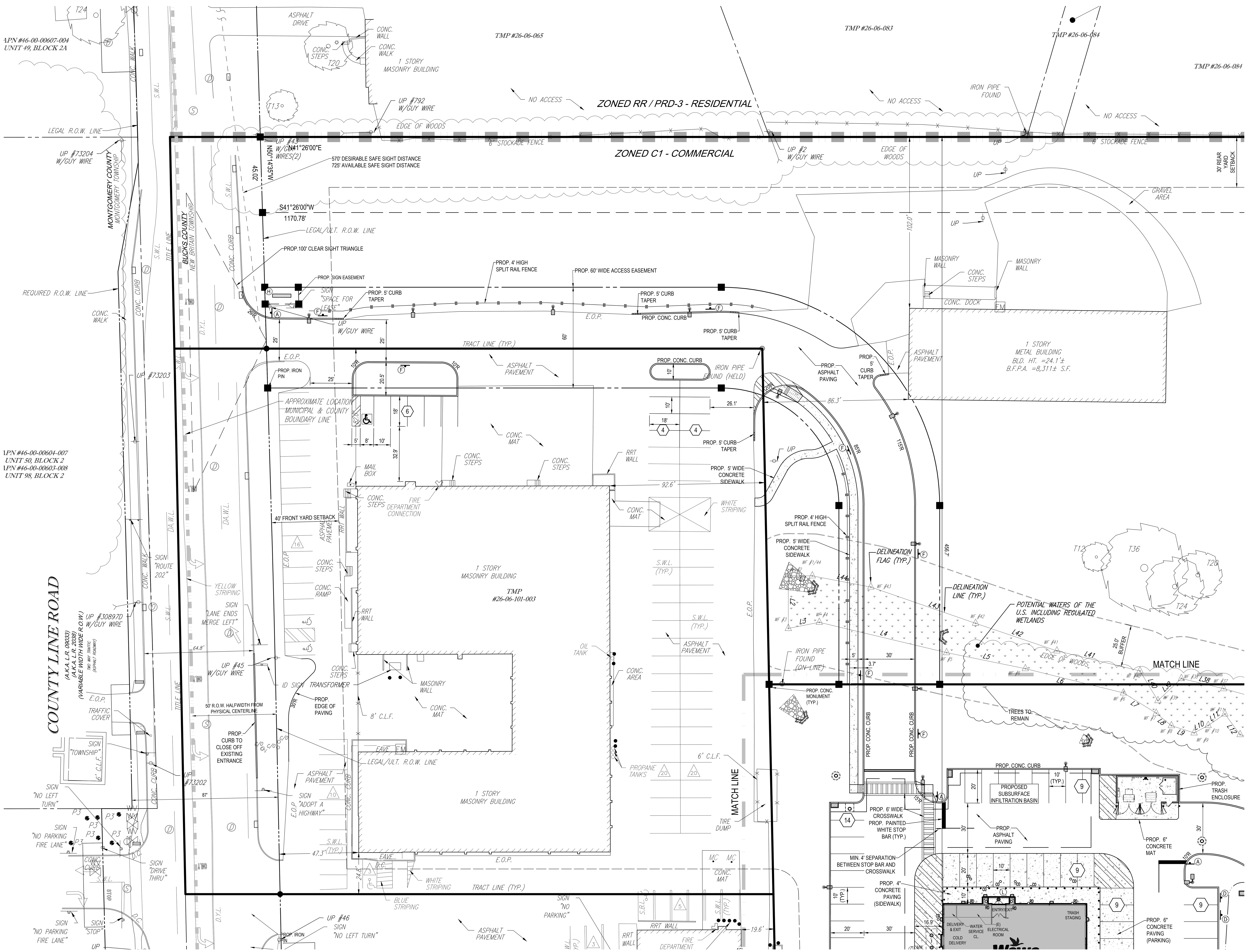
(RECORD PLAN 6 OF 10)

SHEET NUMBER:

5

OF 37

REVISION 1 - 2018.09.21



30 15 7.5 0 30

1"= 30'

LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- LEGAL/REQUIRED R.O.W LINE
- ULTIMATE R.O.W LINE
- SETBACK LINE
- ZONING BOUNDARY
- COUNTY/TOWNSHIP BOUNDARY
- EXISTING UTILITY EASEMENT
- PROPOSED ACCESS EASEMENT
- PROPOSED EASEMENT
- PROPOSED ABOVE GROUND STORMWATER MANAGMENT BASIN / RAIN GARDENS
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- EXISTING CONCRETE CURB
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- PROPOSED ADA PARKING SPACES
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PROPOSED SIGNAGE

GROUND SIGNS

KEY	QTY.	DESCRIPTION	PROPOSED AREA (S.F.)	ALLOWABLE AREA (S.F.)
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	1	"WAWA" I.D.	23.00	
	1	PRICE DISPLAY	23.87	
	1	3RD PARTY SIGN PANEL	18.33	
			65.20 PER FACE	75.00 PER FACE
(H)		FREESTANDING MONUMENT SIGN (DOUBLE-FACED) (7'10" HIGH)		
	1	"WAWA" I.D.	25.37	
	1	PRICE DISPLAY	24.50	
			49.87 PER FACE	75.00 PER FACE

ON-PREMISES SIGNS (EXCEPT FOR GROUND SIGNS)

KEY	QTY.	DESCRIPTION	PROPOSED AREA (S.F.)	ALLOWABLE AREA (S.F.)
		CANOPY SIGNAGE		
(I)	1	"WAWA" WITH LOGO I.D.	9.03	
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		BUILDING MOUNTED SIGNAGE		
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REVISIONS

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1-800-242-1776

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20172771117

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DATE: 5/18/2018
SCALE: 1" = 30'
CAD I.D.: PC171170LANDDEV-1_RECOVE

PROJECT:

FINAL LAND DEVELOPMENT PLANS

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PROPOSED WAWA

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NEW BRITAIN TOWNSHIP
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J.R. KORCZAK
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE074279

SHEET TITLE:

SITE PLAN

(RECORD PLAN 5 OF 10)

SHEET NUMBER:
6
OF 37

REVISION 1 - 2018.09.21

JT
R:\17\PC171170\DRAWINGS\PLAN SETS\LAND DEVELOPMENT\REVISION 1\PC171170LANDDEV-1_RECOVER---->LAYOUT: 06 SITE

LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- LEGAL/REQUIRED R.O.W. LINE
- ULTIMATE R.O.W. LINE
- ZONING BOUNDARY
- COUNTY/TOWNSHIP BOUNDARY

200 100 50 0 200

1"= 200'

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J.R. KORCZAK

PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE074279

SHEET TITLE:

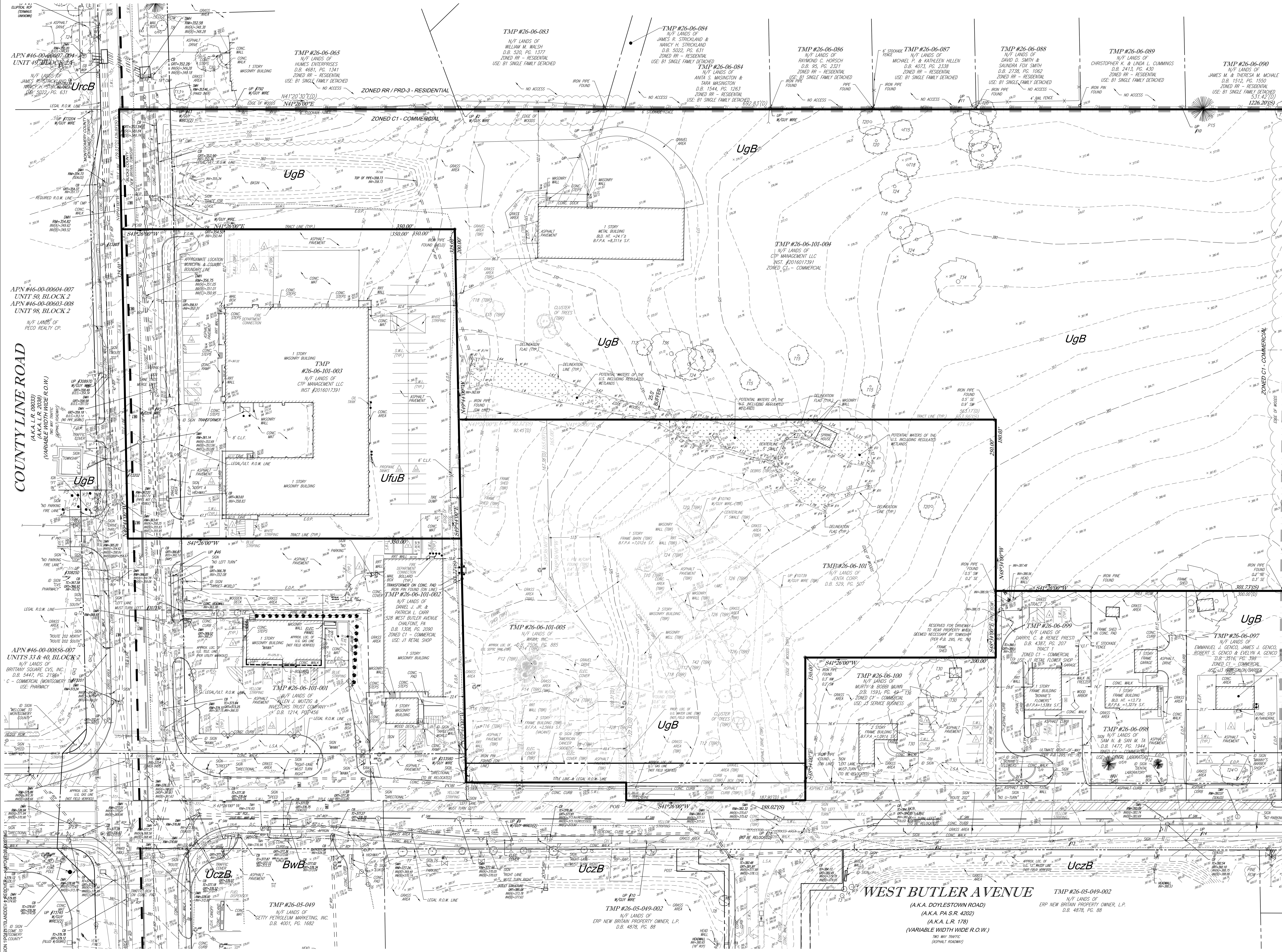
AERIAL PLAN

SHEET NUMBER:

7
OF 37

REVISION 1 - 2018.09.21

CAD
R:\171170\DRAWINGS\PLAN SETS\LAND DEVELOPMENT\REVISION 1\PC171170LANDDEV-1----LAYOUT: 07 AERIAL



LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- LEGAL/REQUIRED R.O.W LINE
- EXISTING LOT LINE TO BE EXTINGUISHED
- EXISTING UTILITY EASEMENT
- COUNTY/TOWNSHIP BOUNDARY
- EXISTING SANITARY LINE
- EXISTING STORMWATER PIPE
- EXISTING WATER LINE
- EXISTING ELECTRIC LINE
- EXISTING TELEPHONE LINE
- EXISTING OVERHEAD LINE
- EXISTING PAVEMENT LINE
- EXISTING CONCRETE CURB
- EXISTING CONCRETE CURB TO BE REMOVED
- EXISTING ASPHALT PAVEMENT TO BE REMOVED
- 250 EXISTING CONTOUR INDEX
- 251 EXISTING CONTOUR INTERVAL
- SOIL DELINEATION LINE
- UgB SOIL TYPE
- EXISTING TREE LINE
- EXISTING TREE LINE TO BE REMOVED
- EXISTING TREE TO BE REMOVED
- EXISTING MANHOLE
- EXISTING UTILITY POLE
- EXISTING IRON PIN
- EXISTING STREET / STOP SIGN

WETLANDS LINE TABLE

LINE	DISTANCE	BEARING
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L7	22.94	N73°11'09"E
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L9	14.22	N59°02'54"E
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L36	56.68	S35°28'34"W
L37	34.21	S56°56'53"W
L38	25.89	S54°56'21"W
L39	19.20	S01°53'20"E
L40	20.67	N79°40'09"W
L41	50.87	S55°00'39"W
L42	51.14	S60°10'20"W
L43	65.97	S60°32'49"W
L44	35.47	S52°13'15"W

UTILITIES:

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SERIAL NUMBER: 20172771117

UTILITY COMPANY	PHONE NUMBER
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CHALFONT-NEW BRITAIN JOINT AUTH.	215-345-1225
BUCKS COUNTY WATER & SEWER	215-750-0585
AQUA PENNSYLVANIA, INC.	610-525-1400
PECO	215-345-9300
NORTH WALES WATER	215-699-4836
NEW BRITAIN TWP.	215-822-1391
COMCAST CABLEVISION	215-961-3800
VERIZON	215-968-0025

SOIL DESCRIPTIONS

SOIL	DESCRIPTION	HYDROLOGIC SOIL GROUP
UfuB	URBAN LAND, 0 TO 8 PERCENT SLOPES	NOT RATED
UgB	URBAN LAND - ABBOTTSTOWN COMPLEX, 0 TO 8 PERCENT SLOPES	D

50 25 12.5 0 50
1"= 50'

BOHLER™ ENGINEERING
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES
◆ UPSTATE NEW YORK ◆ SOUTHERN NEW JERSEY ◆ BALTIMORE, MD ◆ CHARLOTTE, NC
◆ NEW ENGLAND ◆ PHILADELPHIA, PA ◆ SOUTHERN MARYLAND ◆ ATLANTA, GA
◆ BOSTON, MA ◆ PITTSBURGH, PA ◆ NORTHERN VIRGINIA ◆ TAMPA, FL
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REVISIONS

REV	DATE	COMMENT	BY
1	09/21/18	PER TOWNSHIP REVIEW COMMENTS	JHT

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PA1 SYSTEM, INC.
1-800-242-1776

POCS SERIAL NUMBER
20172771117

PROJECT No.:	PC171170
DRAWN BY:	JHT
CHECKED BY:	JRK
DATE:	5/18/2018
SCALE:	1" = 50'
CAD I.D.:	PC171170LANDDEV-1_RECOVE

PROJECT:

FINAL LAND DEVELOPMENT PLANS

FOR

PROVCO PINEGOOD, CHALFONT, LLC

PROPOSED WAWA

BUTLER AVENUE (SR 4202) & COUNTY LINE ROAD
NEW BRITAIN TOWNSHIP
BUCKS COUNTY
PENNSYLVANIA

BOHLER ENGINEERING
1600 MANOR DRIVE, SUITE 200
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Fax: (215) 996-9102
www.BohlerEngineering.com

J.R. KORCZAK
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE074279

SHEET TITLE:

EXISTING RESOURCE AND SITE ANALYSIS PLAN

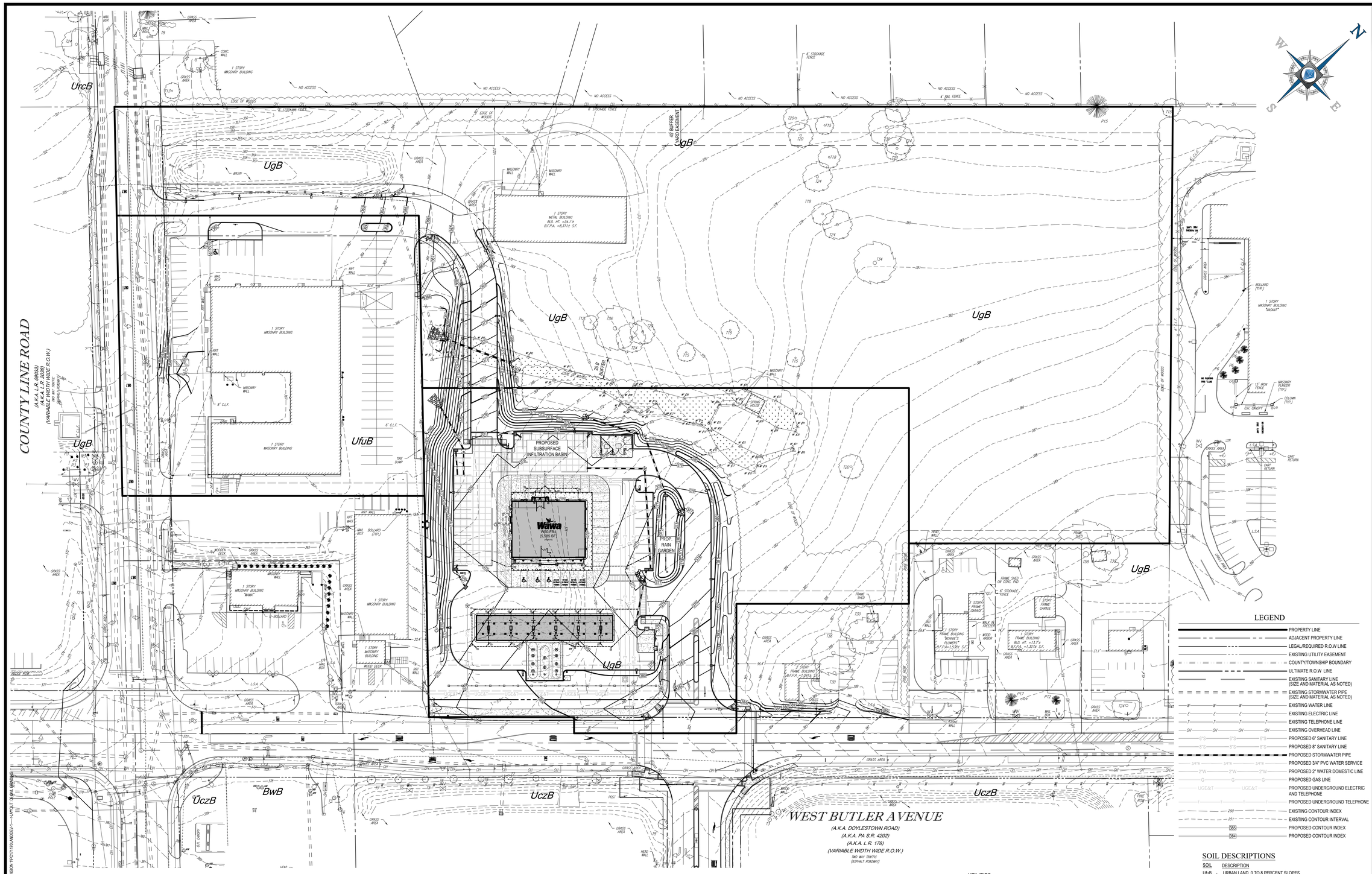
SHEET NUMBER:

8

OF 37

REVISION 1 - 2018.09.21

JT
R:\17\PC171170\DRAWINGS\PLAN SETS\LAND DEVELOPMENT\REVISION 1\PC171170LANDDEV-1_RECOVER — LAYOUT: 08-EXISTING



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- EXISTING TELEPHONE LINE
- EXISTING OVERHEAD LINE
- PROPOSED 6" SANITARY LINE
- PROPOSED 8" SANITARY LINE
- PROPOSED STORMWATER PIPE
- PROPOSED 3/4" PVC WATER SERVICE
- PROPOSED 2" WATER DOMESTIC LINE
- PROPOSED GAS LINE
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- EXISTING CONTOUR INDEX
- EXISTING CONTOUR INTERVAL
- PROPOSED CONTOUR INDEX
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SOIL DESCRIPTIONS

SOIL	DESCRIPTION
UfuB	- URBAN LAND, 0 TO 8 PERCENT SLOPES
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- LONG ISLAND, NY
- NEW YORK METRO
- NORTHERN NEW JERSEY
- SOUTHERN NEW JERSEY
- PHILADELPHIA, PA
- PITTSBURGH, PA
- NEW JERSEY MSA
- SOUTHEASTERN PA
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FOR

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J.R. KORCZAK
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE074279

SHEET TITLE:

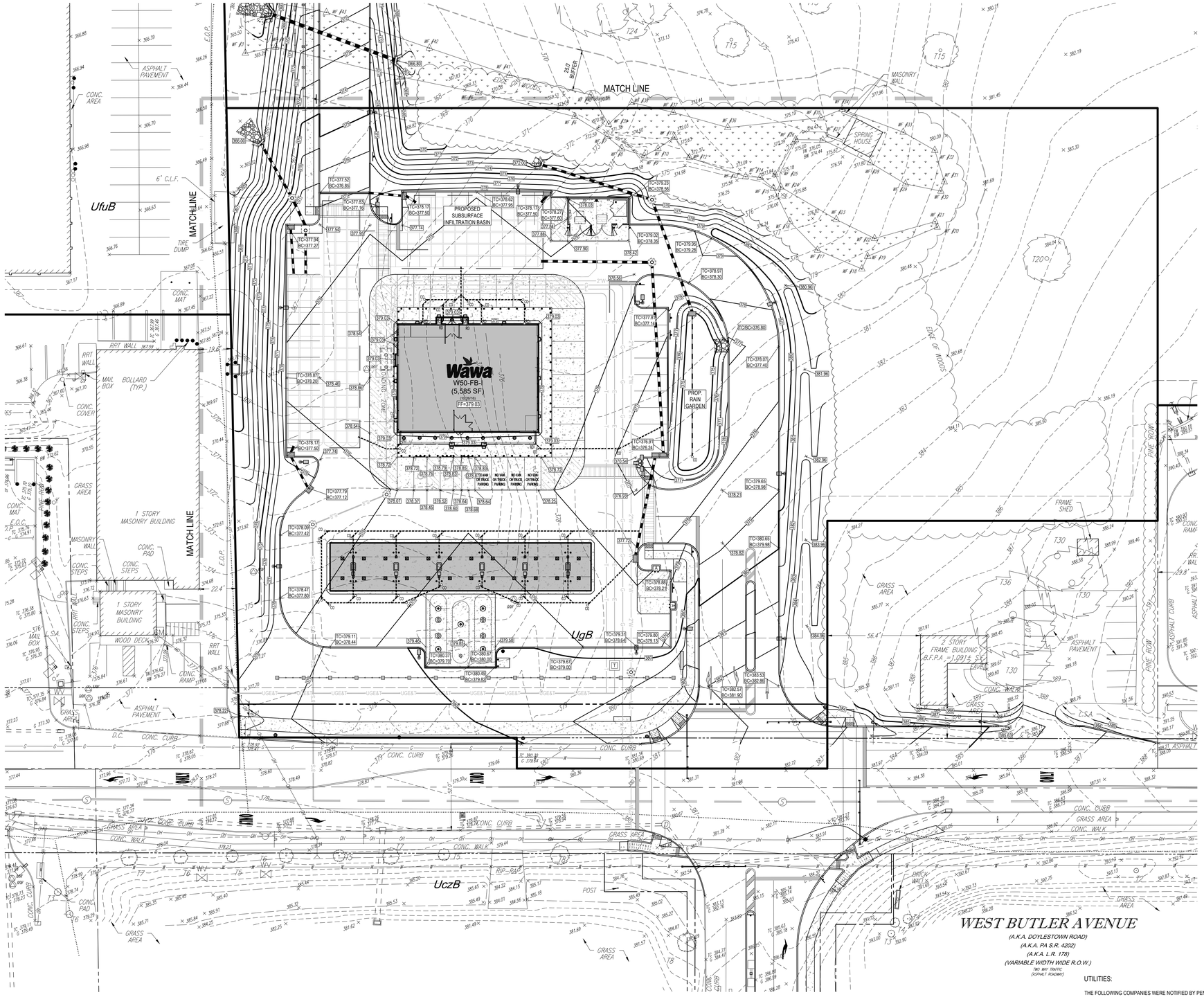
OVERALL GRADING PLAN

SHEET NUMBER:

9

OF 37

REVISION 1 - 2018.09.21



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- PROPOSED UNDERGROUND TELEPHONE
- EXISTING CONTOUR INDEX
- EXISTING CONTOUR INTERVAL
- EXISTING SPOT ELEVATION
- PROPOSED CONTOUR INDEX
- PROPOSED CONTOUR INTERVAL
- PROPOSED RIDGE LINE
- TC 256.50 / BC 256.23 — PROPOSED TOP / BOTTOM OF CURB ELEVATION
- TW 258.00 / BW 250.10 — PROPOSED TOP / BOTTOM OF WALL ELEVATION
- 260.50 — PROPOSED SPOT ELEVATION

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PA1 SYSTEM, INC. 1-800-242-1776

POCS SERIAL NUMBER 20172771117

PROJECT No.: PC171170
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PROJECT:

FINAL LAND DEVELOPMENT PLANS

FOR

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PROPOSED WAWA

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J.R. KORCZAK
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE074279

SHEET TITLE:

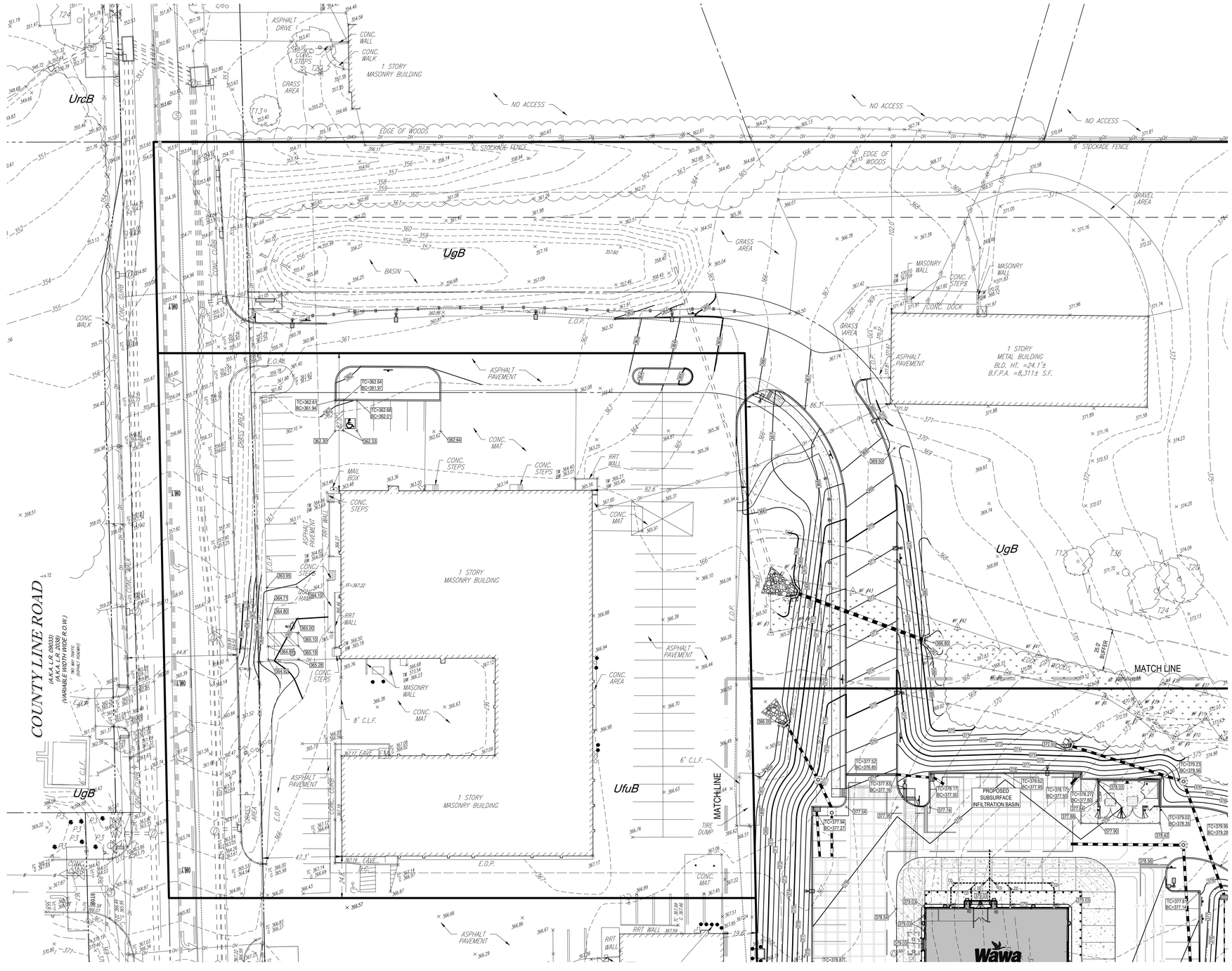
GRADING PLAN

SHEET NUMBER:

10
OF 37

REVISION 1 - 2018.09.21

G:\B
R:\TP\C171170\DRAWINGS\PLAN SETS\LAND DEVELOPMENT\REVISION 1\PC171170LANDDEV-1---FLAT OUT - 10 GRADING



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PROJECT:

FINAL LAND DEVELOPMENT PLANS

FOR

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SHEET TITLE:

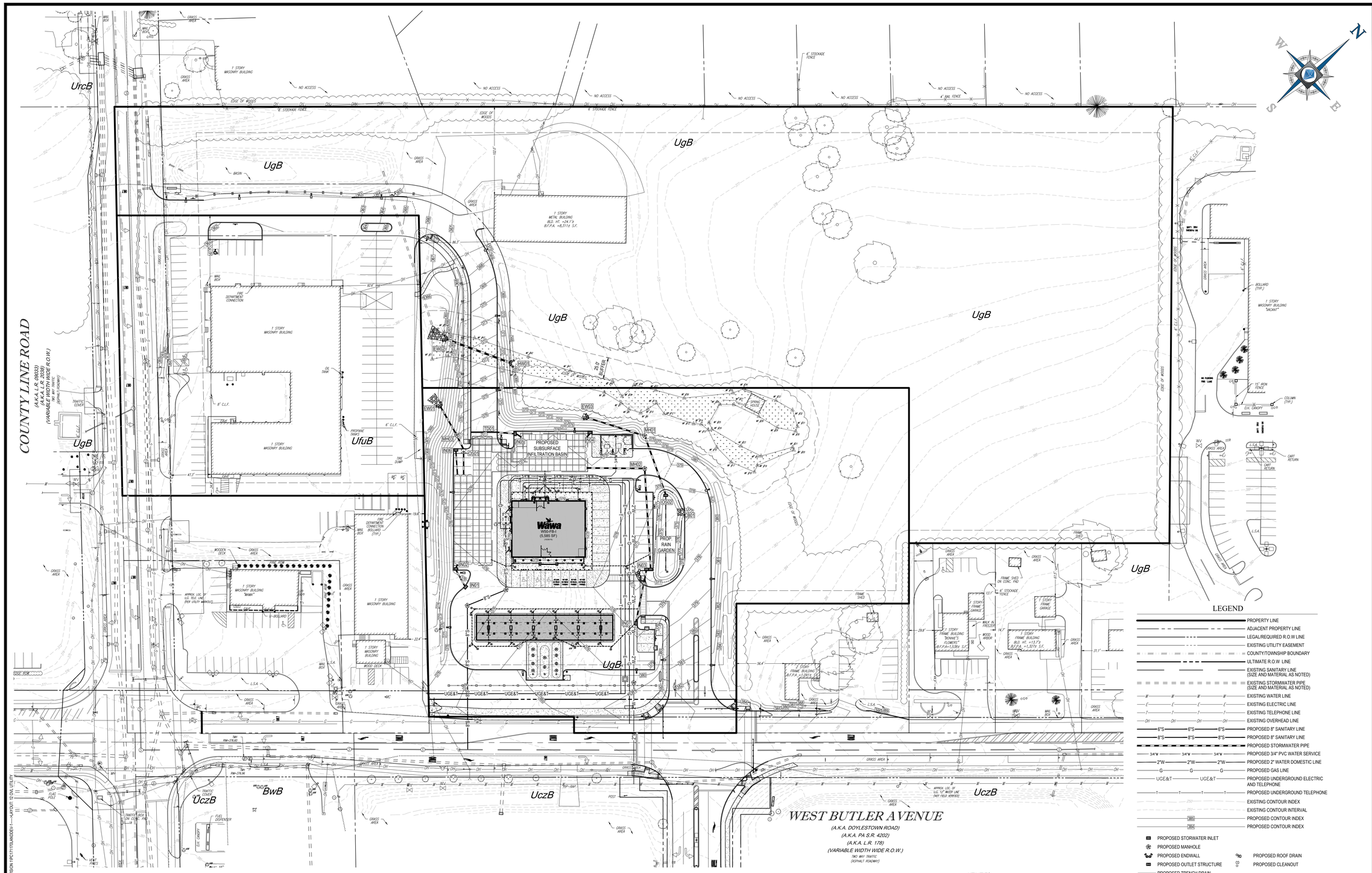
GRADING PLAN

SHEET NUMBER:

11
OF 37

REVISION 1 - 2018.09.21

K:\PC\PC171170\DWG\MASTER PLAN SETS\LAND DEVELOPMENT\REVISION 1\PC171170LANDDEV-1_RECOVER ---- LAYOUT: 11 GRADING



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- PROPOSED MANHOLE
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CHALFONT, PENNSYLVANIA 18914
Phone: (215) 996-9100
Fax: (215) 996-9102
www.BohlerEngineering.com

J.R. KORCZAK
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE074279

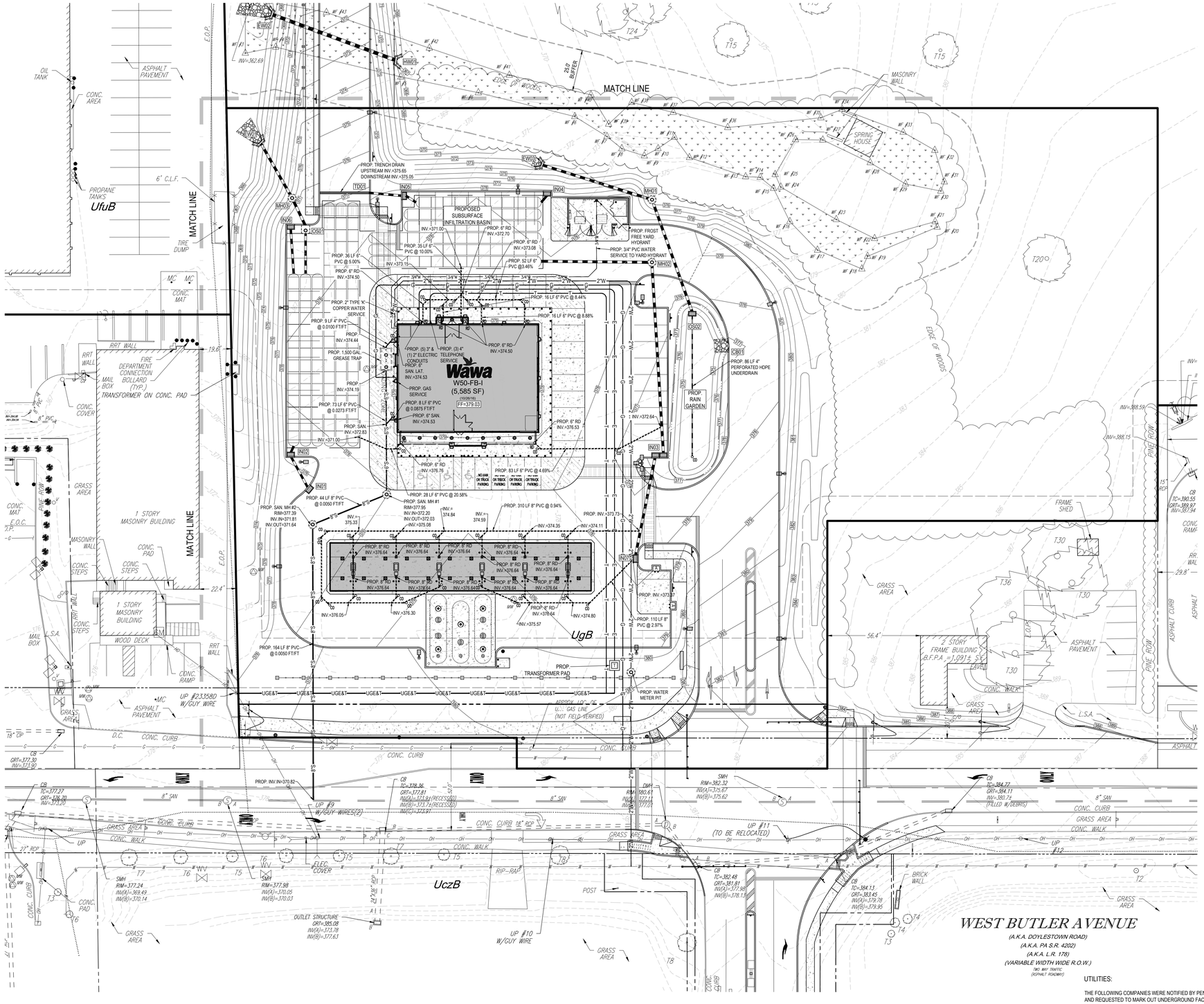
SHEET TITLE:

OVERALL UTILITY PLAN

SHEET NUMBER:

12
OF 37

REVISION 1 - 2018.09.21



STORM PIPE RUN TABLE

RUN	LENGTH (LF)	SLOPE (%)	SIZE (IN)	MATERIAL
IN01 - IN02	22	0.50	15	HDPE
IN02 - UGB1	4	0.50	15	HDPE
IN03 - MH02	114	0.50	18	HDPE
IN04 - UGB1	5	0.60	15	HDPE
IN05 - UGB1	7	0.57	15	HDPE
IN06 - UGB1	27	0.52	15	HDPE
IN07 - IN03	61	2.15	18	HDPE
MH01 - EW03	70	0.50	15	HDPE
MH02 - UGB1	65	0.51	18	HDPE
MH03 - EW01	37	2.08	18	HDPE
OS01 - MH03	17	4.53	18	HDPE
OS02 - MH01	72	0.74	15	HDPE
TD01 - IN05	20	8.00	4	HDPE

STORM STRUCTURE TABLE

STRUCTURE	RIM/GRATE	INVERT(S) IN	INVERT OUT
EW01	-	-	366.00 (18") (MH03)
EW03	-	-	372.12 (15") (MH01)
IN01	377.12	-	370.93 (15") (IN02)
IN02	377.50	370.82 (15") (IN01)	370.65 (15") (UGB1)
IN03	376.24	371.89 (18") (IN07)	371.72 (18") (MH02)
IN04	377.50	-	370.66 (15") (UGB1)
IN05	377.50	373.45 (4") (TD01)	370.67 (15") (UGB1)
IN06	377.27	-	370.77 (15") (UGB1)
IN07	377.72	-	373.20 (18") (IN03)
MH01	375.86	372.47 (15") (OS02)	372.47 (15") (EW03)
MH02	378.69	371.15 (18") (IN03)	370.98 (18") (UGB1)
MH03	375.50	369.73 (18") (OS01)	366.77 (18") (EW01)
OS01	-	-	370.50 (18") (MH03)
OS02	-	-	373.00 (15") (MH01)
TD01	376.85	-	375.05 (4") (IN05)
UGB1	-	370.63 (15") (IN04) 370.63 (15") (IN05) 370.63 (15") (IN02) 370.63 (15") (IN06)	370.65 (18") (MH02)

LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- LEGAL/REQUIRED R.O.W LINE
- EXISTING UTILITY EASEMENT
- COUNTY/TOWNSHIP BOUNDARY
- ULTIMATE R.O.W LINE
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- EXISTING ELECTRIC LINE
- EXISTING TELEPHONE LINE
- EXISTING OVERHEAD LINE
- PROPOSED 8" SANITARY LINE
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- PROPOSED 2" WATER DOMESTIC LINE
- PROPOSED GAS LINE
- PROPOSED UNDERGROUND ELECTRIC AND TELEPHONE
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- PROPOSED OUTLET STRUCTURE
- PROPOSED TRENCH DRAIN
- IN02 PROPOSED STORMWATER INLET LABEL
- PROPOSED ROOF DRAIN
- PROPOSED CLEANOUT

UTILITIES:

THE FOLLOWING COMPANIES WERE NOTIFIED BY PENNSYLVANIA ONE-CALL SYSTEM (1-800-242-1776) AND REQUESTED TO MARK OUT UNDERGROUND FACILITIES AFFECTING AND SERVICING THIS SITE. THE UNDERGROUND UTILITY INFORMATION SHOWN HEREON IS BASED UPON THE UTILITY COMPANIES RESPONSE TO THIS REQUEST.
SERIAL NUMBER: 20172771117

UTILITY COMPANY	PHONE NUMBER
CROWN CASTLE	724-416-2000
CHALFONT-NEW BRITAIN JOINT AUTH.	215-345-1225
BUCKS COUNTY WATER & SEWER	215-750-0585
AQUA PENNSYLVANIA, INC.	610-525-1400
PECO	215-345-9300
NORTH WALES WATER	215-699-4836
NEW BRITAIN TWP.	215-822-1391
COMCAST CABLEVISION	215-961-3800
VERIZON	215-968-0025

SOIL DESCRIPTIONS

SOIL		DESCRIPTION
UfuB	-	URBAN LAND, 0 TO 8 PERCENT SLOPES
UgB	-	URBAN LAND - ABBOTTSTOWN COMPLEX, 0 TO 8 PERCENT SLOPES

30 15 7.5 0 30
1"= 30'

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REVISIONS

REV	DATE	COMMENT	BY
1	09/21/18	PER TOWNSHIP REVIEW COMMENTS	JHT

CALL BEFORE YOU DIG!

PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE - STOP CALL

PA1 SYSTEM, INC.
1-800-242-1776

POCS SERIAL NUMBER
20172771117

PROJECT No.: PC171170
DRAWN BY: JHT
CHECKED BY: JRK
DATE: 5/18/2018
SCALE: 1" = 30'
CAD I.D.: PC171170LANDDEV-1

PROJECT:

FINAL LAND DEVELOPMENT PLANS

FOR

PROVCO PINEGOOD, CHALFONT, LLC

PROPOSED WAWA

BUTLER AVENUE (SR 4202) & COUNTY LINE ROAD
NEW BRITAIN TOWNSHIP
BUCKS COUNTY
PENNSYLVANIA

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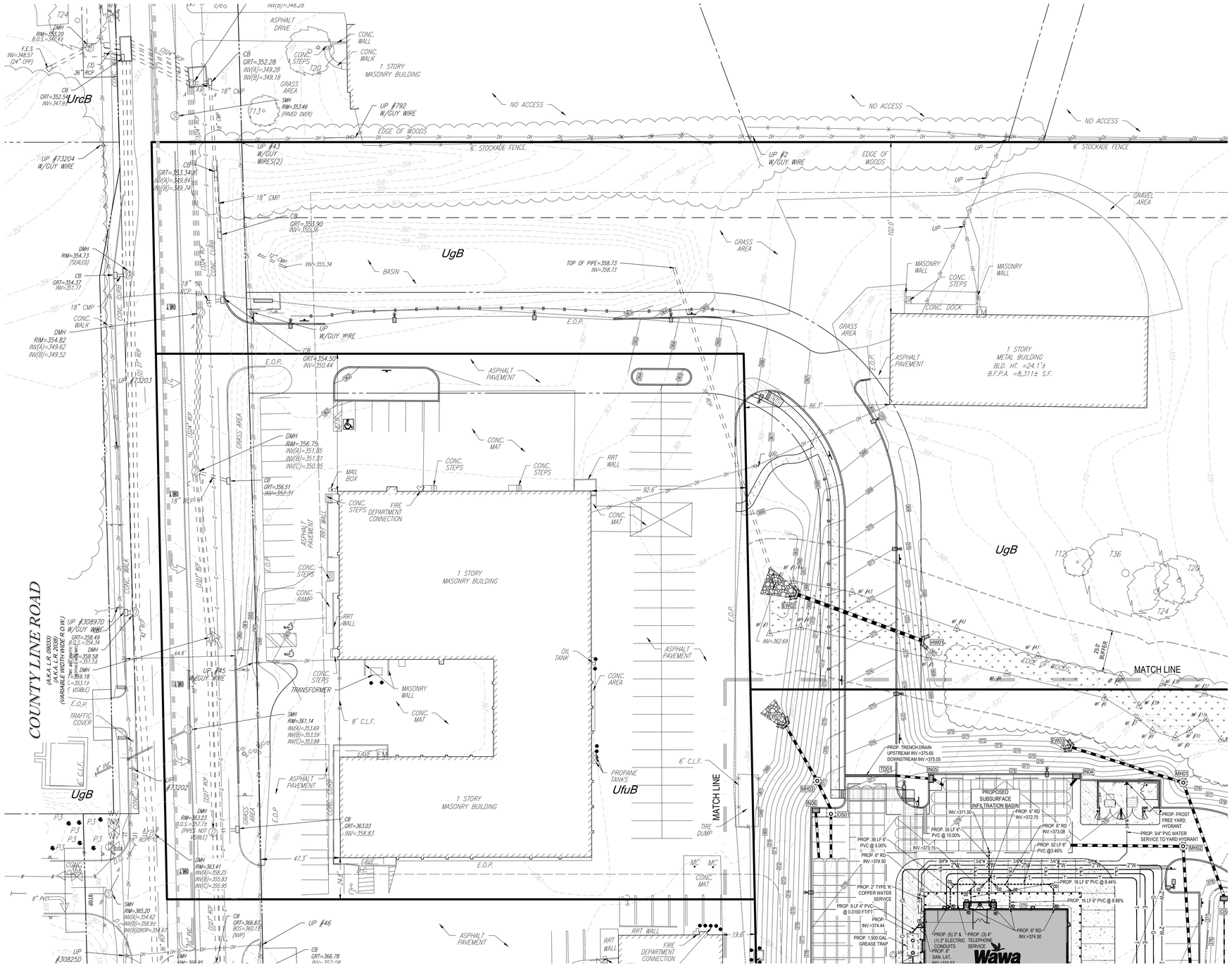
REVISION 1 - 2018.09.21



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PENNSYLVANIA LICENSE No. PE074279

SHEET TITLE:

UTILITY PLAN

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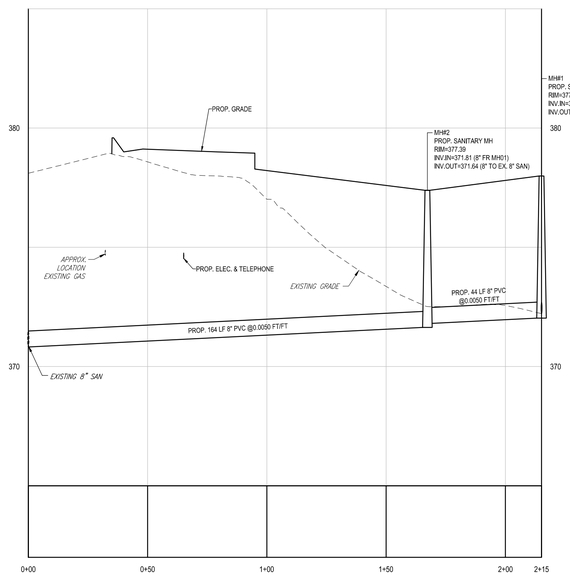
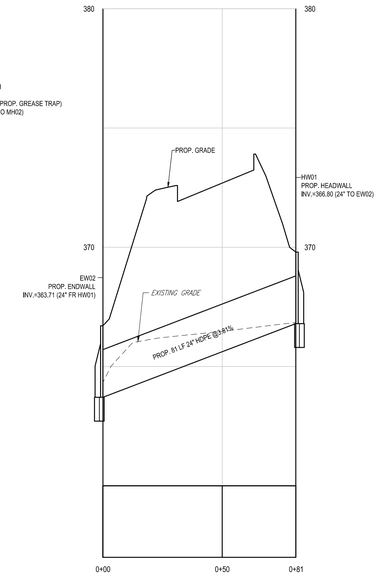
1"= 30'

PC171170\DRAWINGS\PLAN SETS\LAND DEVELOPMENT\REVISION 1\PC171170LANDDEV-1_RECOVER----LAYOUT: 14 UTILITY



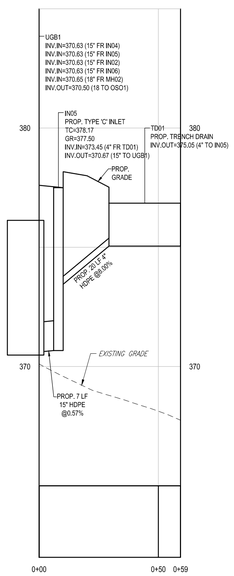
SANITARY - EX PIPE TO SAN MH1

SCALE: 1"= 30 ' HORIZONTAL
1"= 3 ' VERTICAL



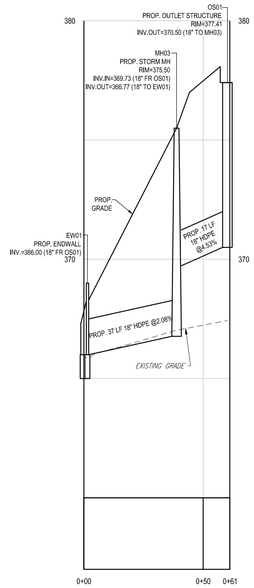
STORM - EW02 TO HW01

SCALE: 1"= 30 ' HORIZONTAL
1"= 3 ' VERTICAL



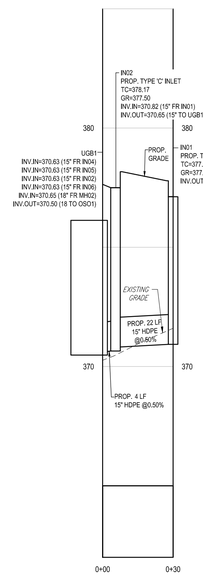
STORM - UGB1 TO TD01

SCALE: 1"= 30 ' HORIZONTAL
1"= 3 ' VERTICAL



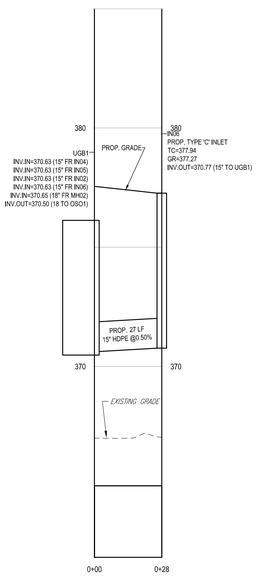
STORM - EW01 TO OS01

SCALE: 1"= 30 ' HORIZONTAL
1"= 3 ' VERTICAL



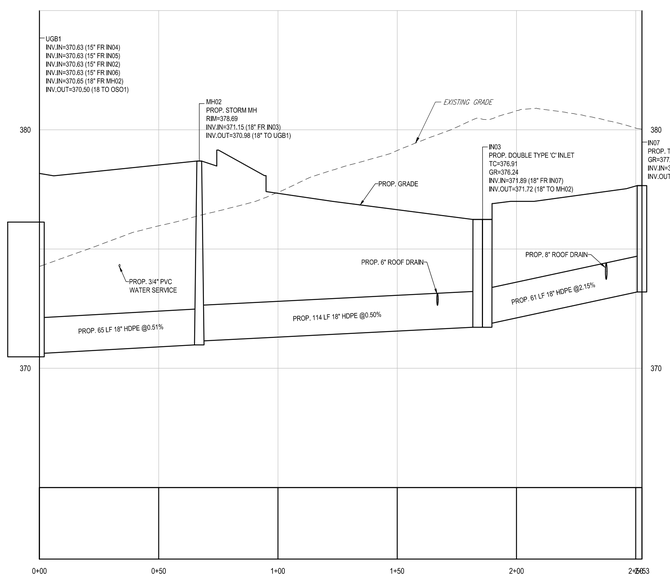
STORM - UGB1 TO IN01

SCALE: 1"= 30 ' HORIZONTAL
1"= 3 ' VERTICAL



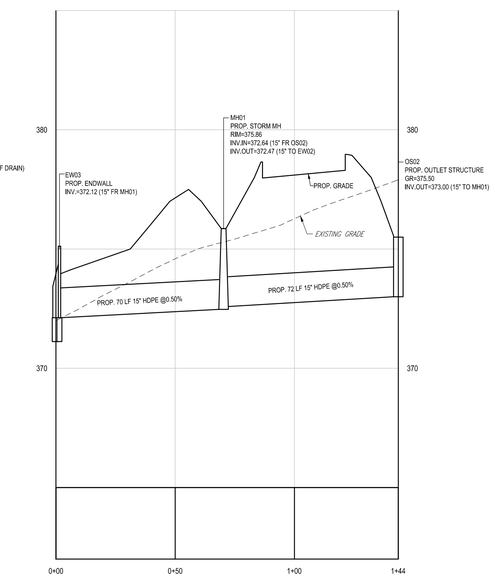
STORM - UGB1 TO IN06

SCALE: 1"= 30 ' HORIZONTAL
1"= 3 ' VERTICAL



STORM - UGB1 TO IN07

SCALE: 1"= 30 ' HORIZONTAL
1"= 3 ' VERTICAL



STORM - EW03 TO OS02

SCALE: 1"= 30 ' HORIZONTAL
1"= 3 ' VERTICAL

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◆ NORTHERN NEW JERSEY ◆ REHOBOTH BEACH, DE ◆ WASHINGTON, DC

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PA1 SYSTEM, INC.
1-800-242-1776

POCS SERIAL NUMBER
20172771117

PROJECT No.: PC171170
DRAWN BY: JCF
CHECKED BY: JRK
DATE: 5/18/2018
SCALE: AS NOTED
CAD I.D.: PC171170CD3D-1

PROJECT:

FINAL LAND DEVELOPMENT PLANS

FOR

PROVCO PINEVILLE ACQUISITIONS, LLC

PROPOSED WAWA

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15

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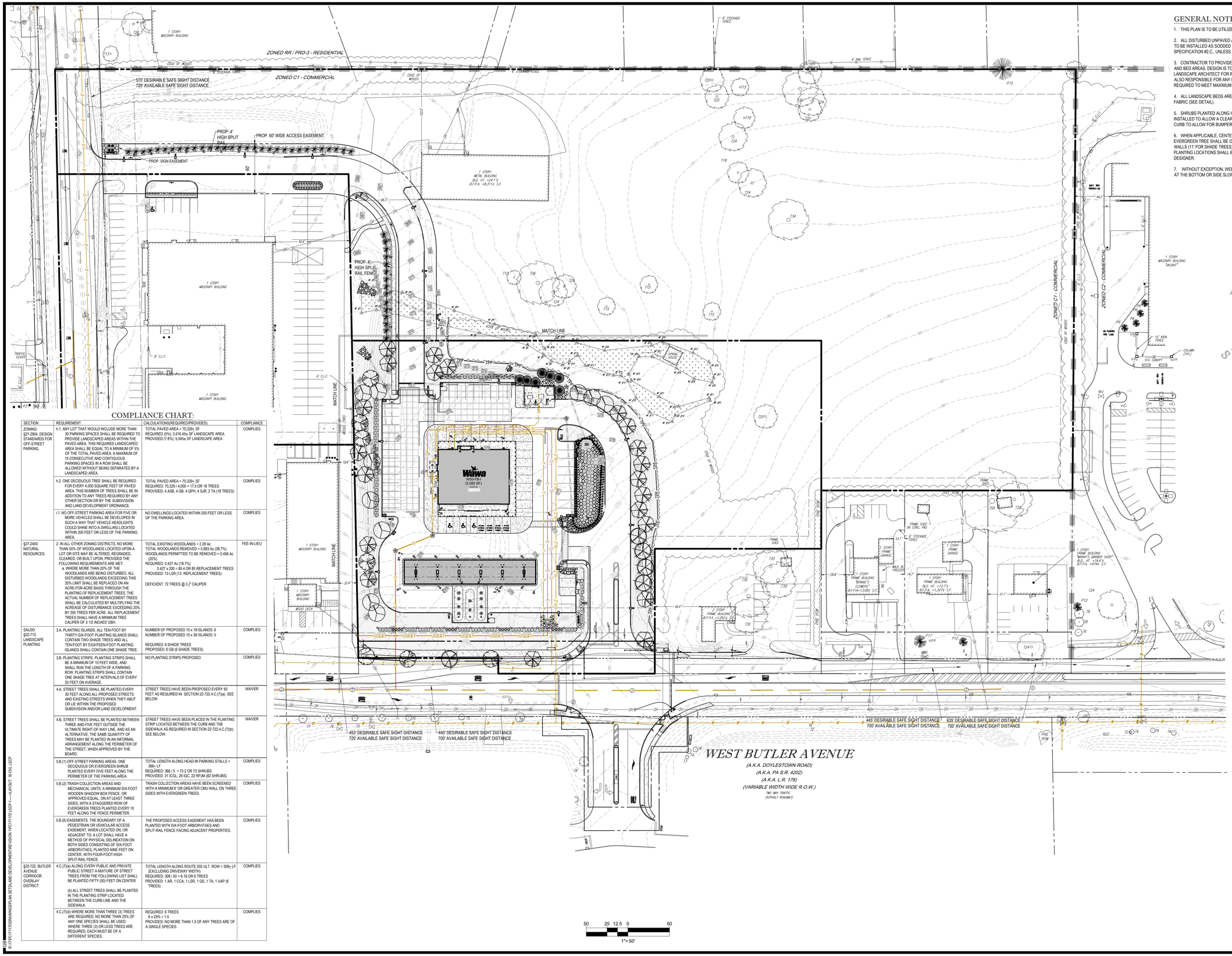
REVISION 1 - 2018.09.19

JT
R:\PC171170\DRAWINGS\PLAN SETS\LAND DEVELOPMENT\REVISION 1\PC171170CD3D-1----5A1X0(1 15-PROFILES



GENERAL NOTES:

1. THIS PLAN IS TO BE UTILIZED FOR LANDSCAPE PURPOSES ONLY.

2. ALL DISTURBED UNPAVED AREAS, EXCLUDING PLANTING BEDS, ARE TO BE INSTALLED AS SODDED LAWN IN ACCORDANCE WITH LANDSCAPE SPECIFICATION #2.C., UNLESS OTHERWISE STATED ON THIS PLAN.

3. CONTRACTOR TO PROVIDE AN IRRIGATION DESIGN FOR BOTH LAWN AND BED AREAS. DESIGN IS TO BE SUBMITTED TO THE PROJECT LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL. CONTRACTOR IS ALSO RESPONSIBLE FOR ANY PRESSURE REDUCING DEVICES REQUIRED TO MEET MAXIMUM PRESSURE REQUIREMENT.

4. ALL LANDSCAPE BEDS ARE TO BE INSTALLED WITH WEED BARRIER FABRIC (SEE DETAIL).

5. SHRUBS PLANTED ALONG HEAD-IN PARKING STALLS SHALL BE INSTALLED TO ALLOW A CLEARANCE OF FIVE FEET FROM FACE OF CURB TO ALLOW FOR BUMPER OVERHANG.

6. WHEN APPLICABLE, CENTER OF PROPOSED ORNAMENTAL OR EVERGREEN TREE SHALL BE OFFSET 6' FROM THE BACK OF RETAINING WALLS (11' FOR SHADE TREES) TO PREVENT WALL FAILURE. FINAL PLANTING LOCATIONS SHALL BE COORDINATED WITH THE WALL DESIGNER.

7. WITHOUT EXCEPTION, WEED BARRIER FABRIC SHALL NOT BE USED AT THE BOTTOM OR SIDE SLOPES OF STORMWATER BMP FACILITIES.

COMPLIANCE CHART:

SECTION	REQUIREMENT	CALCULATIONS(REQUIRED/PROVIDED)	COMPLIANCE
ZONING: §27-2904. DESIGN STANDARDS FOR OFF-STREET PARKING.	h.1. ANY LOT THAT WOULD INCLUDE MORE THAN 30 PARKING SPACES SHALL BE REQUIRED TO PROVIDE LANDSCAPED AREAS WITHIN THE PAVED AREA. THIS REQUIRED LANDSCAPED AREA SHALL BE EQUAL TO A MINIMUM OF 5% OF THE TOTAL PAVED AREA. A MAXIMUM OF 15 CONSECUTIVE AND CONTIGUOUS PARKING SPACES IN A ROW SHALL BE ALLOWED WITHOUT BEING SEPARATED BY A LANDSCAPED AREA.	TOTAL PAVED AREA = 70,329± SF REQUIRED (5%): 3,516.45± SF LANDSCAPE AREA PROVIDED (7.8%): 5,545± SF LANDSCAPE AREA	COMPLIES
	h.2. ONE DECIDUOUS TREE SHALL BE REQUIRED FOR EVERY 4,000 SQUARE FEET OF PAVED AREA. THIS NUMBER OF TREES SHALL BE IN ADDITION TO ANY TREES REQUIRED BY ANY OTHER SECTION OR BY THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.	TOTAL PAVED AREA = 70,329± SF REQUIRED: 70,329 / 4,000 = 17.5 OR 18 TREES PROVIDED: 4 ASB, 4 GB, 4 QPH, 4 SJR, 2 TA (18 TREES)	COMPLIES
	i.1. NO OFF-STREET PARKING AREA FOR FIVE OR MORE VEHICLES SHALL BE DEVELOPED IN SUCH A WAY THAT VEHICLE HEADLIGHTS COULD SHINE INTO A DWELLING LOCATED WITHIN 200 FEET OR LESS OF THE PARKING AREA.	NO DWELLINGS LOCATED WITHIN 200 FEET OR LESS OF THE PARKING AREA.	COMPLIES
§27-2400. NATURAL RESOURCES.	2. IN ALL OTHER ZONING DISTRICTS, NO MORE THAN 50% OF WOODLANDS LOCATED UPON A LOT OR SITE MAY BE ALTERED, REGRADED, CLEARED, OR BUILT UPON. PROVIDED THE FOLLOWING REQUIREMENTS ARE MET: a. WHERE MORE THAN 20% OF THE WOODLANDS ARE BEING DISTURBED, ALL DISTURBED WOODLANDS EXCEEDING THIS 20% LIMIT SHALL BE REPLACED ON AN ACRE-FOR-ACRE BASIS THROUGH THE PLANTING OF REPLACEMENT TREES. THE ACTUAL NUMBER OF REPLACEMENT TREES SHALL BE CALCULATED BY MULTIPLYING THE ACREAGE OF DISTURBANCE EXCEEDING 20% BY 200 TREES PER ACRE. ALL REPLACEMENT TREES SHALL HAVE A MINIMUM TREE CALIPER OF 3 1/2 INCHES' DBH.	TOTAL EXISTING WOODLANDS = 2.28 Ac TOTAL WOODLANDS REMOVED = 0.883 Ac (38.7%) WOODLANDS PERMITTED TO BE REMOVED = 0.456 Ac (20%) REQUIRED: 0.427 Ac (18.7%) 0.427 x 200 = 85.4 OR 85 REPLACEMENT TREES PROVIDED: 13 LSR (13 REPLACEMENT TREES) DEFICIENT: 72 TREES @ 3 ½" CALIPER	FEE-IN-LIEU
SALDO §22-713. LANDSCAPE PLANTING	3.A. PLANTING ISLANDS. ALL TEN-FOOT BY THIRTY-SIX-FOOT PLANTING ISLANDS SHALL CONTAIN TWO SHADE TREES AND ALL TEN-FOOT BY EIGHTEEN-FOOT PLANTING ISLANDS SHALL CONTAIN ONE SHADE TREE.	NUMBER OF PROPOSED 10 x 18 ISLANDS: 6 NUMBER OF PROPOSED 10 x 36 ISLANDS: 0 REQUIRED: 6 SHADE TREES PROPOSED: 6 GB (6 SHADE TREES)	COMPLIES
	3.B. PLANTING STRIPS. PLANTING STRIPS SHALL BE A MINIMUM OF 10 FEET WIDE, AND SHALL RUN THE LENGTH OF A PARKING ROW. PLANTING STRIPS SHALL CONTAIN ONE SHADE TREE AT INTERVALS OF EVERY 25 FEET ON AVERAGE.	NO PLANTING STRIPS PROPOSED.	COMPLIES
	4.A. STREET TREES SHALL BE PLANTED EVERY 30 FEET ALONG ALL PROPOSED STREETS AND EXISTING STREETS WHEN THEY ABUT OR LIE WITHIN THE PROPOSED SUBDIVISION AND/OR LAND DEVELOPMENT.	STREET TREES HAVE BEEN PROPOSED EVERY 50 FEET AS REQUIRED IN SECTION 22-722.4.C.(7)(a). SEE BELOW.	WAIVER
	4.B. STREET TREES SHALL BE PLANTED BETWEEN THREE AND FIVE FEET OUTSIDE THE ULTIMATE RIGHT-OF-WAY LINE, AND AS AN ALTERNATIVE, THE SAME QUANTITY OF TREES MAY BE PLANTED IN AN INFORMAL ARRANGEMENT ALONG THE PERIMETER OF THE STREET, WHEN APPROVED BY THE BOARD.	STREET TREES HAVE BEEN PLACED IN THE PLANTING STRIP LOCATED BETWEEN THE CURB AND THE SIDEWALK AS REQUIRED IN SECTION 22-722.4.C.(7)(b). SEE BELOW.	WAIVER
	5.B.(1) OFF-STREET PARKING AREAS. ONE DECIDUOUS OR EVERGREEN SHRUB PLANTED EVERY FIVE FEET ALONG THE PERIMETER OF THE PARKING AREA.	TOTAL LENGTH ALONG HEAD-IN PARKING STALLS = 366± LF REQUIRED: 366 / 5 = 73.2 OR 73 SHRUBS PROVIDED: 31 ICGL, 29 IGC, 22 RPUM (82 SHRUBS)	COMPLIES
	5.B.(2) TRASH COLLECTION AREAS AND MECHANICAL UNITS. A MINIMUM SIX-FOOT WOODEN SHADOW-BOX FENCE, OR APPROVED EQUAL, ON AT LEAST THREE SIDES, WITH A STAGGERED ROW OF EVERGREEN TREES PLANTED EVERY 10 FEET ALONG THE FENCE PERIMETER.	TRASH COLLECTION AREAS HAVE BEEN SCREENED WITH A MINIMUM 6' OR GREATER CMU WALL ON THREE SIDES WITH EVERGREEN TREES.	COMPLIES
	5.B.(8) EASEMENTS. THE BOUNDARY OF A PEDESTRIAN OR VEHICULAR ACCESS EASEMENT, WHEN LOCATED ON, OR ADJACENT TO, A LOT SHALL HAVE A METHOD OF PHYSICAL DELINEATION ON BOTH SIDES CONSISTING OF SIX-FOOT ARBORVITAES, PLANTED NINE FEET ON CENTER, WITH FOUR-FOOT-HIGH SPLIT-RAIL FENCE.	THE PROPOSED ACCESS EASEMENT HAS BEEN PLANTED WITH SIX-FOOT ARBORVITAES AND SPLIT-RAIL FENCE FACING ADJACENT PROPERTIES.	COMPLIES
§22-722. BUTLER AVENUE CORRIDOR OVERLAY DISTRICT	4.C.(7)(a) ALONG EVERY PUBLIC AND PRIVATE PUBLIC STREET A MIXTURE OF STREET TREES FROM THE FOLLOWING LIST SHALL BE PLANTED FIFTY (50) FEET ON CENTER. (b) ALL STREET TREES SHALL BE PLANTED IN THE PLANTING STRIP LOCATED BETWEEN THE CURB LINE AND THE SIDEWALK.	TOTAL LENGTH ALONG ROUTE 202 ULT. ROW = 308± LF (EXCLUDING DRIVEWAY WIDTH) REQUIRED: 308 / 50 = 6.16 OR 6 TREES PROVIDED: 1 AR, 1 CCA, 1 LSR, 1 QS, 1 TA, 1 UAP (6 TREES)	COMPLIES
	4.C.(7)(d) WHERE MORE THAN THREE (3) TREES ARE REQUIRED, NO MORE THAN 25% OF ANY ONE SPECIES SHALL BE USED. WHERE THREE (3) OR LESS TREES ARE REQUIRED, EACH MUST BE OF A DIFFERENT SPECIES.	REQUIRED: 6 TREES 6 x 25% = 1.5 PROVIDED: NO MORE THAN 1.5 OF ANY TREES ARE OF A SINGLE SPECIES.	COMPLIES

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PA1 SYSTEM, INC.
1-800-242-1776

POCS SERIAL NUMBER
20172771117

PROJECT No.: PC171170
DRAWN BY: JHT
CHECKED BY: JRK
DATE: 5/18/2018
SCALE: 1" = 50'
CAD I.D.: PC171170 LSCP-1

PROJECT:

FINAL LAND DEVELOPMENT PLANS

FOR

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PROPOSED WAWA

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www.BohlerEngineering.com

D.T. NORTH

REGISTERED LANDSCAPE ARCHITECT
PENNSYLVANIA LICENSE No. LA002729

SHEET TITLE:

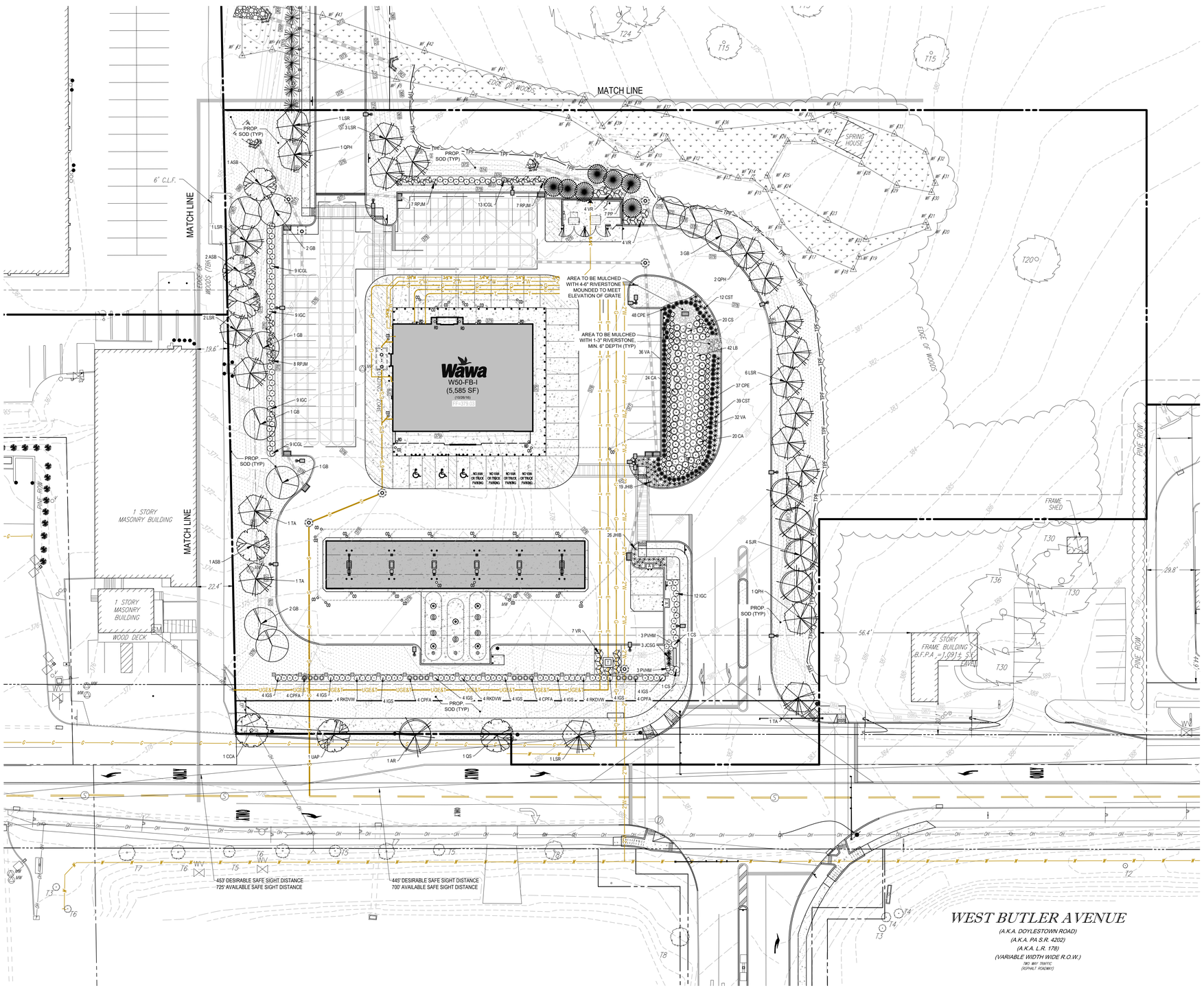
OVERALL LANDSCAPE PLAN

SHEET NUMBER:

16
OF 37

REVISION 1 - 2018.09.21

CAD R:\TPC\171170\DRAWINGS\PLAN SETS\LAND DEVELOPMENT\REVISION 1\PC171170-LSCP-1------LAYOUT: 16-OVL LSCP



GENERAL NOTES:

1. THIS PLAN IS TO BE UTILIZED FOR LANDSCAPE PURPOSES ONLY.

2. ALL DISTURBED UNPAVED AREAS, EXCLUDING PLANTING BEDS, ARE TO BE INSTALLED AS SODDED LAWN IN ACCORDANCE WITH LANDSCAPE SPECIFICATION #2.C., UNLESS OTHERWISE STATED ON THIS PLAN.

3. CONTRACTOR TO PROVIDE AN IRRIGATION DESIGN FOR BOTH LAWN AND BED AREAS. DESIGN IS TO BE SUBMITTED TO THE PROJECT LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL. CONTRACTOR IS ALSO RESPONSIBLE FOR ANY PRESSURE REDUCING DEVICES REQUIRED TO MEET MAXIMUM PRESSURE REQUIREMENT.

4. ALL LANDSCAPE BEDS ARE TO BE INSTALLED WITH WEED BARRIER FABRIC (SEE DETAIL).

5. SHRUBS PLANTED ALONG HEAD-IN PARKING STALLS SHALL BE INSTALLED TO ALLOW A CLEARANCE OF FIVE FEET FROM FACE OF CURB TO ALLOW FOR BUMPER OVERHANG.

6. WHEN APPLICABLE, CENTER OF PROPOSED ORNAMENTAL OR EVERGREEN TREE SHALL BE OFFSET 6' FROM THE BACK OF RETAINING WALLS (11' FOR SHADE TREES) TO PREVENT WALL FAILURE. FINAL PLANTING LOCATIONS SHALL BE COORDINATED WITH THE WALL DESIGNER.

7. WITHOUT EXCEPTION, WEED BARRIER FABRIC SHALL NOT BE USED AT THE BOTTOM OR SIDE SLOPES OF STORMWATER BMP FACILITIES.

LANDSCAPE SCHEDULE

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
SHADE TREE(S)					
AR	1	ACER RUBRUM	RED MAPLE	3 1/2" CAL. MIN.	B+B
ASB	4	ACER SACCHARUM 'BONFIRE'	BONFIRE SUGAR MAPLE	3 1/2" CAL. MIN.	B+B
CCA	1	CARPINUS CAROLINIANA	AMERICAN HORNBEAM	3 1/2" CAL. MIN.	B+B
GB	10	GINKGO BILOBA	MAIDENHAIR TREE GINKO	3 1/2" CAL. MIN.	B+B, MALE ONLY
LSR	14	LIQUIDAMBAR STYRACIFLUA 'ROTUNDILOBA'	SEEDLESS SWEETGUM	3 1/2" CAL. MIN.	B+B
QPH	4	QUERCUS PHELLOS	WILLOW OAK	3 1/2" CAL. MIN.	B+B
QS	1	QUERCUS SHUMARDII	SHUMARD OAK	3 1/2" CAL. MIN.	B+B
SJR	4	SOPHORA JAPONICA 'REGENT'	REGENT JAPANESE PAGODATREE(S)	3 1/2" CAL. MIN.	B+B
TA	3	TILIA AMERICANA	BASSWOOD	3 1/2" CAL. MIN.	B+B
UAP	1	ULMUS AMERICANA 'PRINCETON'	PRINCETON AMERICAN ELM	3 1/2" CAL. MIN.	B+B
	43				
EVERGREEN TREE(S)					
PP	7	PICEA PUNGENS	COLORADO SPRUCE	6-7'	B+B
TOG	46	THUJA X 'GREEN GIANT'	GREEN GIANT ARBORVITAE	6-7'	B+B
	53				
EVERGREEN SHRUB(S)					
CPFA	16	CHAMAECYPARIS PISIFERA 'FILIFERA AUREA NANA'	DWARF GOLD THREAD CYPRESS	30" SPRD. MIN.	CONTAINER
ICGL	31	ILEX CRENATA 'GREEN LUSTER'	GREEN LUSTER HOLLY	30" MIN.	CONTAINER
IGC	55	ILEX GLABRA COMPACTA	DWARF INKBERRY HOLLY	30" MIN.	CONTAINER
IGS	32	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERRY HOLLY	30" MIN.	CONTAINER
JCSG	10	JUNIPERUS CHINENSIS 'SEA GREEN'	SEA GREEN JUNIPER	30" SPRD. MIN.	B+B
RKDVW	12	RHODODENDRON X KURUME 'DELAWARE VALLEY WHITE'	'DELAWARE VALLEY WHITE' AZALEA	30" MIN.	CONTAINER
RPJM	22	RHODODENDRON CAROLINIANA X P.JM	PJM RHODODENDRON	30" MIN.	B+B
VR	15	VIBURNUM X RHYTIDOPHYLLUM	LEATHERLEAF VIBURNUM	3-4'	B+B
	193				
DECIDUOUS SHRUB(S)					
CA	44	CLETHRA ALNIFOLIA	SUMMERSWEET CLETHRA	30" MIN.	CONTAINER
CS	24	CORNUS SERICEA	RED OSIER DOGWOOD	30" MIN.	B+B
LB	42	LINDERA BENZOIN	SPICEBUSH	30" MIN.	CONTAINER
VA	68	VACCINIUM ANGUSTIFOLIUM	LOWBUSH BLUEBERRY	15-18"	CONTAINER
	178				
GROUND COVER					
JHB	60	JUNIPERUS HORIZONTALIS 'MONBER'	ICEE BLUE JUNIPER	15-18" SPRD	CONTAINER
ORNAMENTAL GRASS(ES)					
CPE	85	CAREX PENSYLVANICA	PENNSYLVANIA SEDGE	1 GAL.	CONTAINER
CST	51	CAREX STRICTA	TUSSOCK SEDGE	1 GAL.	CONTAINER
PVHM	16	PANICUM VIRGATUM 'HEAVY METAL'	HEAVY METAL SWITCH GRASS	1 GAL.	CONTAINER
	152				

NOTE: IF ANY DISCREPENCIES OCCUR BETWEEN AMOUNTS SHOWN IN THE PLAN AND THE PLANT LIST, THE PLAN SHALL DICTATE.

30 15 7.5 0 30
1"= 30'

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PA1 SYSTEM, INC. 1-800-242-1776
POCS SERIAL NUMBER 20172771117

PROJECT No.: PC171170
DRAWN BY: JHT
CHECKED BY: JRK
DATE: 5/18/2018
SCALE: 1" = 30'
CAD I.D.: PC171170 LSCP-1

PROJECT:
FINAL LAND DEVELOPMENT PLANS
FOR
PROVCO PINEGOOD, CHALFONT, LLC
PROPOSED WAWA
BUTLER AVENUE (SR 4202) & COUNTY LINE ROAD
NEW BRITAIN TOWNSHIP
BUCKS COUNTY
PENNSYLVANIA

BOHLER ENGINEERING
1600 MANOR DRIVE, SUITE 200
CHALFONT, PENNSYLVANIA 18914
Phone: (215) 996-9100
Fax: (215) 996-9102
www.BohlerEngineering.com

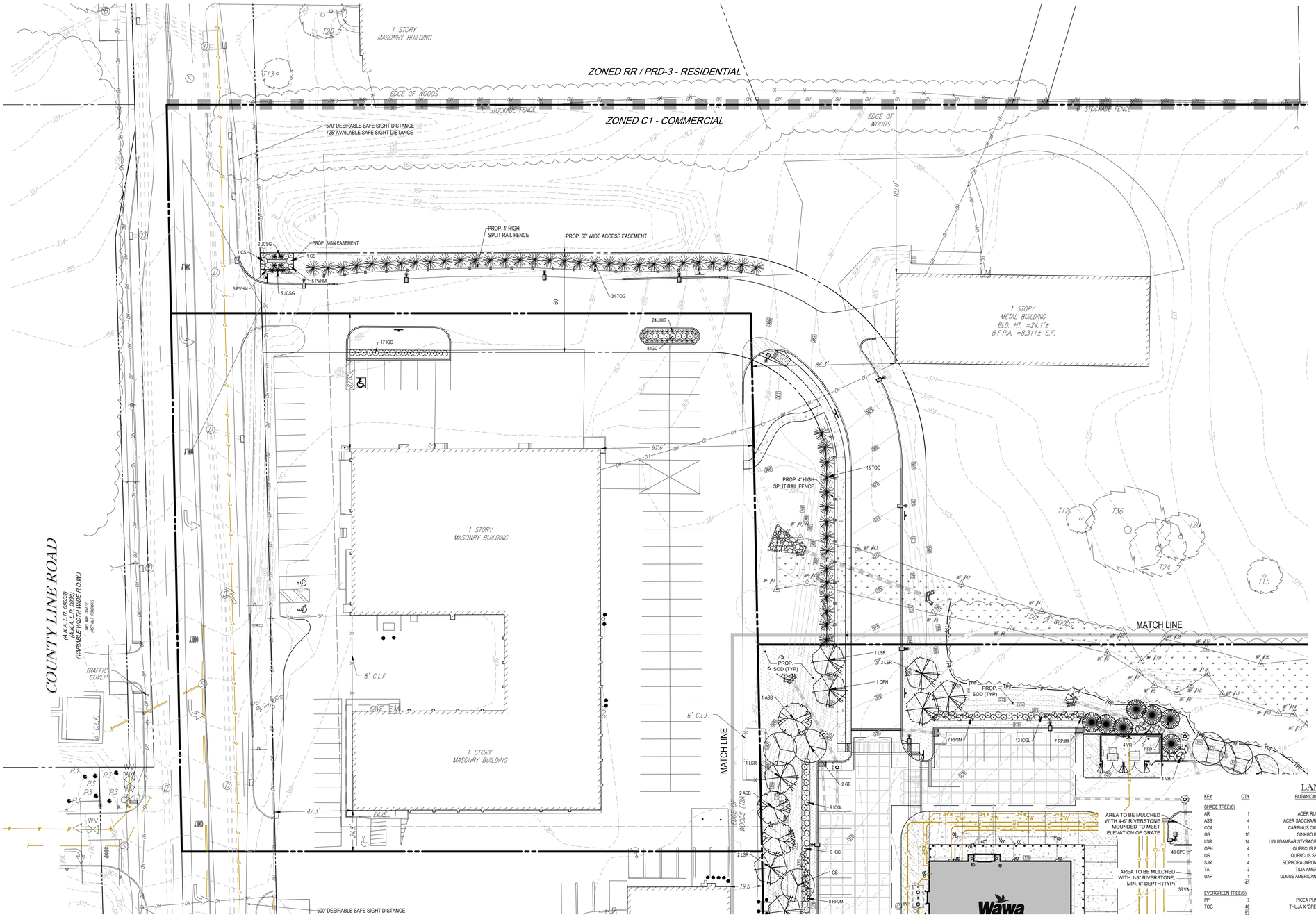
D.T. NORTH
REGISTERED LANDSCAPE ARCHITECT
PENNSYLVANIA LICENSE No. LA002729

SHEET TITLE:
LANDSCAPE PLAN

SHEET NUMBER:
17
OF 37

REVISION 1 - 2018.09.21

GB
R:\PC171170\DRAWINGS\PLAN SETS\LAND DEVELOPMENT\REVISION 1\PC171170 LSCP-1----LAYOUT: 17-LSCP



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30 15 7.5 0 30
1"= 30'

LANDSCAPE SCHEDULE

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	152				

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D.T. NORTH

REGISTERED LANDSCAPE ARCHITECT
PENNSYLVANIA LICENSE No. LA002729

SHEET TITLE:

LANDSCAPE PLAN

SHEET NUMBER:

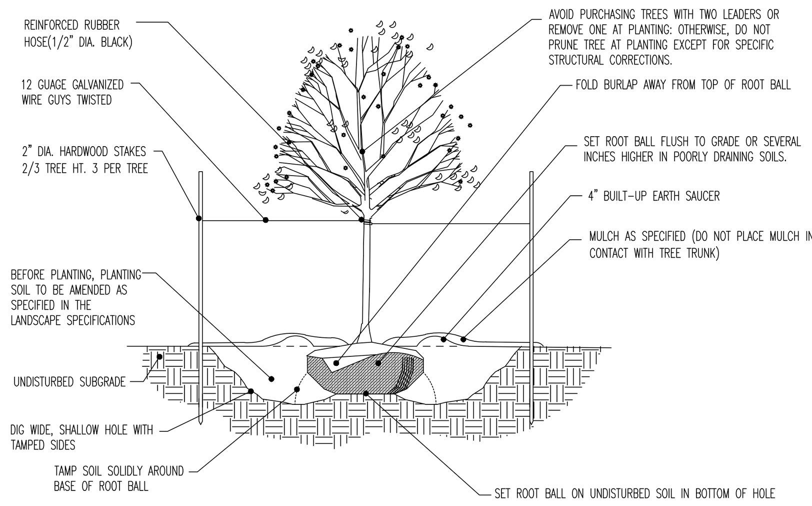
18
OF 37

REVISION 1 - 2018.09.21

CSB
R:\17\PC171170\DRAWINGS\PLAN SET\LAND DEVELOPMENT\REVISION 1\PC171170.LSCP-1----LAYOUT: 18-LSCP

NOTES:

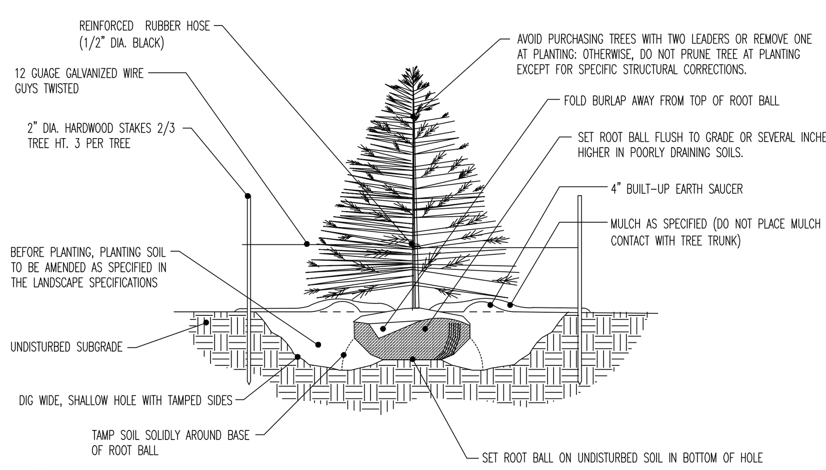
1.) NO SOIL OR MULCH SHALL BE PLACED AGAINST ROOT COLLAR OF PLANT.
2.) REMOVE ALL ROPE FROM TRUNK & TOP OF ROOT BALL. FOLD OR CUT BURLAP BACK FROM TOP 1/3 OF ROOT BALL
3.) PLANTING DEPTH SHALL BE THE SAME AS GROWN IN NURSERY.
4.) THOROUGHLY SOAK THE TREE ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
5.) THE BOTTOM OF PLANTING PIT EXCAVATIONS SHOULD BE SCARIFIED TO AVOID MATTING OF SOIL.
6.) THE MINIMUM DIAMETER OF THE TREE PIT SHALL BE 3 TIMES THE DIAMETER OF THE ROOT BALL.
7.) STAKES SHALL BE REMOVED NO LATER THAN ONE YEAR FROM INSTALLATION.



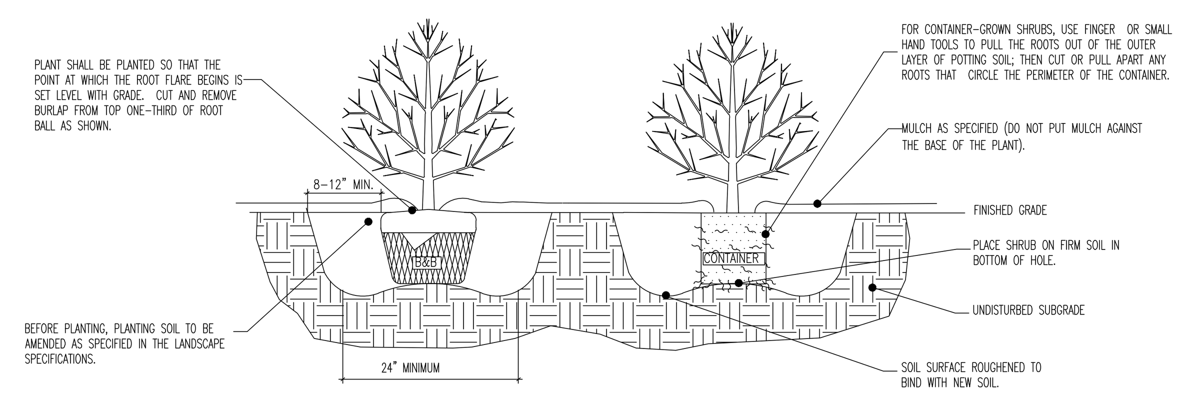
L / S3 DECIDUOUS TREE PLANTING DETAIL
SCALE: N.T.S. REV.: 2017.01.06

NOTES:

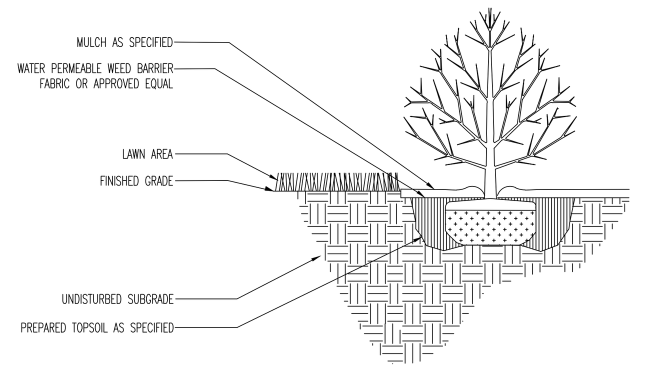
1.) NO SOIL OR MULCH SHALL BE PLACED AGAINST ROOT COLLAR OF PLANT.
2.) REMOVE ALL NON-BIODEGRADABLE MATERIAL AND ROPE FROM TRUNK & TOP OF ROOT BALL. FOLD BURLAP BACK 1/3 FROM ROOT BALL.
3.) PLANTING DEPTH SHALL BE THE SAME AS GROWN IN NURSERY.
4.) THOROUGHLY SOAK THE TREE ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
5.) THE BOTTOM OF PLANTING PIT EXCAVATIONS SHOULD BE SCARIFIED TO AVOID MATTING OF SOIL.
6.) THE MINIMUM DIAMETER OF THE TREE PIT SHALL BE 3 TIMES THE DIAMETER OF THE ROOT BALL.
7.) STAKES SHALL BE REMOVED NO LATER THAN ONE YEAR FROM INSTALLATION.



L / S4 EVERGREEN TREE PLANTING DETAIL
SCALE: N.T.S. REV.: 2017.01.06



L / S5 DECIDUOUS & EVERGREEN SHRUB PLANTING DETAIL
SCALE: N.T.S. REV.: 2017.01.06



L / S13 WEED BARRIER FABRIC DETAIL
SCALE: N.T.S. REV.: 2015.03.19

LANDSCAPE SPECIFICATIONS:

1. SCOPE OF WORK:
THE LANDSCAPE CONTRACTOR SHALL BE REQUIRED TO PERFORM ALL CLEARING, FINISHED GRADING, SOIL PREPARATION, PERMANENT SEEDING OR SODDING, PLANTING AND MULCHING INCLUDING ALL LABOR, MATERIALS, TOOLS AND EQUIPMENT NECESSARY FOR THE COMPLETION OF THIS PROJECT, UNLESS OTHERWISE CONTRACTED BY THE GENERAL CONTRACTOR.

2. MATERIALS
A. GENERAL - ALL HARDSCAPE MATERIALS SHALL MEET OR EXCEED SPECIFICATIONS AS OUTLINED IN THE STATE DEPARTMENT OF TRANSPORTATION'S SPECIFICATIONS.

B. TOPSOIL - NATURAL, FRIABLE, LOAMY SILT SOIL HAVING AN ORGANIC CONTENT NOT LESS THAN 5%, A PH RANGE BETWEEN 4.5-7.0. IT SHALL BE FREE OF DEBRIS, ROCKS LARGER THAN ONE INCH (1"), WOOD, ROOTS, VEGETABLE MATTER AND CLAY CLODS.

C. LAWN - ALL DISTURBED AREAS ARE TO BE TREATED WITH A MINIMUM FOUR INCH (4") THICK LAYER OF TOPSOIL, OR AS DIRECTED BY THE LOCAL ORDINANCE OR CLIENT, AND SEEDED OR SODDED IN ACCORDANCE WITH THE PERMANENT STABILIZATION METHODS INDICATED WITHIN THE SOIL EROSION AND SEDIMENT CONTROL NOTES.
I. LAWN SEED MIXTURE SHALL BE FRESH, CLEAN NEW CROP SEED.
II. SOD SHALL BE STRONGLY ROOTED, WEED AND DISEASE/PEST FREE WITH A UNIFORM THICKNESS. SOD INSTALLED ON SLOPES GREATER THAN 4:1 SHALL BE PEGGED TO HOLD SOD IN PLACE.

D. MULCH - ALL PLANTING BEDS SHALL BE MULCHED WITH A 3" THICK LAYER OF DOUBLE SHREDDED HARDWOOD BARK MULCH, UNLESS OTHERWISE STATED ON THE LANDSCAPE PLAN.

E. FERTILIZER
I. FERTILIZER SHALL BE DELIVERED TO THE SITE MIXED AS SPECIFIED IN THE ORIGINAL UNOPENED STANDARD BAGS SHOWING WEIGHT, ANALYSIS AND NAME OF MANUFACTURER. FERTILIZER SHALL BE STORED IN A WEATHERPROOF PLACE SO THAT IT CAN BE KEPT DRY PRIOR TO USE.
II. FOR THE PURPOSE OF BIDDING, ASSUME THAT FERTILIZER SHALL BE 10% NITROGEN, 6% PHOSPHORUS AND 4% POTASSIUM BY WEIGHT. A FERTILIZER SHOULD NOT BE SELECTED WITHOUT A SOIL TEST PERFORMED BY A CERTIFIED SOIL LABORATORY.

F. PLANT MATERIAL
I. ALL PLANTS SHALL IN ALL CASES CONFORM TO THE REQUIREMENTS OF THE "AMERICAN STANDARD FOR NURSERY STOCK" (ANSI Z60.1), LATEST EDITION, AS PUBLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION (FORMERLY THE AMERICAN ASSOCIATION OF NURSERYMEN).
II. IN ALL CASES, BOTANICAL NAMES SHALL TAKE PRECEDENCE OVER COMMON NAMES FOR ANY AND ALL PLANT MATERIAL.
III. PLANTS SHALL BE LEGIBLY TAGGED WITH THE PROPER NAME AND SIZE. TAGS ARE TO REMAIN ON AT LEAST ONE PLANT OF EACH SPECIES FOR VERIFICATION PURPOSES DURING THE FINAL INSPECTION.
IV. TREES WITH ABRASION OF THE BARK, SUN SCALDS, DISFIGURATION OR FRESH CUTS OF LIMBS OVER 1¼", WHICH HAVE NOT BEEN COMPLETELY CALLUSED, SHALL BE REJECTED. PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES.
V. ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY AND SHALL HAVE A NORMAL HABIT OF GROWTH: WELL DEVELOPED BRANCHES, DENSELY FOLIATED, VIGOROUS ROOT SYSTEMS AND BE FREE OF DISEASE, INSECTS, PESTS, EGGS OR LARVAE.
VI. CALIPER MEASUREMENTS OF NURSERY GROWN TREES SHALL BE TAKEN AT A POINT ON THE TRUNK SIX INCHES (6") ABOVE THE NATURAL GRADE FOR TREES UP TO AND INCLUDING A FOUR INCH (4") CALIPER SIZE. IF THE CALIPER AT SIX INCHES (6") ABOVE THE GROUND EXCEEDS FOUR INCHES (4") IN CALIPER, THE CALIPER SHOULD BE MEASURED AT A POINT 12" ABOVE THE NATURAL GRADE.
VII. SHRUBS SHALL BE MEASURED TO THE AVERAGE HEIGHT OR SPREAD OF THE SHRUB, AND NOT TO THE LONGEST BRANCH.
VIII. TREES AND SHRUBS SHALL BE HANDLED WITH CARE BY THE ROOT BALL.

3. GENERAL WORK PROCEDURES
A. CONTRACTOR TO UTILIZE WORKMANLIKE INDUSTRY STANDARDS IN PERFORMING ALL LANDSCAPE CONSTRUCTION. THE SITE IS TO BE LEFT IN A CLEAN STATE AT THE END OF EACH WORKDAY. ALL DEBRIS, MATERIALS AND TOOLS SHALL BE PROPERLY STORED, STOCKPILED OR DISPOSED OF.

B. WASTE MATERIALS AND DEBRIS SHALL BE COMPLETELY DISPOSED OF AT THE CONTRACTOR'S EXPENSE. DEBRIS SHALL NOT BE BURIED, INCLUDING ORGANIC MATERIALS, BUT SHALL BE REMOVED COMPLETELY FROM THE SITE.

4. SITE PREPARATIONS
A. BEFORE AND DURING PRELIMINARY GRADING AND FINISHED GRADING, ALL WEEDS AND GRASSES SHALL BE DUG OUT BY THE ROOTS AND DISPOSED OF IN ACCORDANCE WITH GENERAL WORK PROCEDURES OUTLINED HEREIN.

B. ALL EXISTING TREES TO REMAIN SHALL BE PRUNED TO REMOVE ANY DAMAGED BRANCHES. THE ENTIRE LIMB OF ANY DAMAGED BRANCH SHALL BE CUT OFF AT THE BRANCH COLLAR. CONTRACTOR SHALL ENSURE THAT CUTS ARE SMOOTH AND STRAIGHT. ANY EXPOSED ROOTS SHALL BE CUT BACK WITH CLEAN, SHARP TOOLS AND TOPSOIL SHALL BE PLACED AROUND THE REMAINDER OF THE ROOTS. EXISTING TREES SHALL BE MONITORED ON A REGULAR BASIS FOR ADDITIONAL ROOT OR BRANCH DAMAGE AS A RESULT OF CONSTRUCTION. ROOTS SHALL NOT BE LEFT EXPOSED FOR MORE THAN ONE (1) DAY. CONTRACTOR SHALL WATER EXISTING TREES AS NEEDED TO PREVENT SHOCK OR DECLINE.

C. CONTRACTOR SHALL ARRANGE TO HAVE A UTILITY STAKE-OUT TO LOCATE ALL UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF ANY LANDSCAPE MATERIAL. UTILITY COMPANIES SHALL BE CONTACTED THREE (3) DAYS PRIOR TO THE BEGINNING OF WORK.

5. TREE PROTECTION
A. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING TREES TO REMAIN. A TREE PROTECTION ZONE SHALL BE ESTABLISHED AT THE DRIP LINE OR 15 FEET FROM THE TRUNK OR AT THE LIMIT OF CONSTRUCTION DISTURBANCE, WHICHEVER IS GREATER. LOCAL STANDARDS THAT MAY REQUIRE A MORE STRICT TREE PROTECTION ZONE SHALL BE HONORED.

B. A FORTY-EIGHT INCH (48") HIGH WOODEN SNOW FENCE OR ORANGE COLORED HIGH-DENSITY 'VISI-FENCE', OR APPROVED EQUAL, MOUNTED ON STEEL POSTS SHALL BE PLACED ALONG THE BOUNDARY OF THE TREE PROTECTION ZONE. POSTS SHALL BE LOCATED AT A MAXIMUM OF EIGHT FEET (8') ON CENTER OR AS INDICATED WITHIN THE TREE PROTECTION DETAIL.

C. WHEN THE TREE PROTECTION FENCING HAS BEEN INSTALLED, IT SHALL BE INSPECTED BY THE APPROVING AGENCY PRIOR TO DEMOLITION, GRADING, TREE CLEARING OR ANY OTHER CONSTRUCTION. THE FENCING ALONG THE TREE PROTECTION ZONE SHALL BE REGULARLY INSPECTED BY THE LANDSCAPE CONTRACTOR AND MAINTAINED UNTIL ALL CONSTRUCTION ACTIVITY HAS BEEN COMPLETED.

D. AT NO TIME SHALL MACHINERY, DEBRIS, FALLEN TREES OR OTHER MATERIALS BE PLACED, STOCKPILED OR LEFT STANDING IN THE TREE PROTECTION ZONE.

6. FINISHED GRADING
A. UNLESS OTHERWISE CONTRACTED, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF TOPSOIL AND THE ESTABLISHMENT OF FINE-GRADING WITHIN THE DISTURBANCE AREA OF THE SITE.

B. LANDSCAPE CONTRACTOR SHALL VERIFY THAT SUBGRADE FOR INSTALLATION OF TOPSOIL HAS BEEN ESTABLISHED. THE SUBGRADE OF THE SITE MUST MEET THE FINISHED GRADE LESS THE REQUIRED TOPSOIL THICKNESS (1"±).

C. ALL LAWN AND PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN AND UNIFORM PLANE WITH NO ABRUPT CHANGE OF SURFACE AS DEPICTED WITHIN THIS SET OF CONSTRUCTION PLANS, UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER OR LANDSCAPE ARCHITECT.

D. ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED TO ALLOW FREE FLOW OF SURFACE WATER IN AND AROUND THE PLANTING BEDS. STANDING WATER SHALL NOT BE PERMITTED IN PLANTING BEDS.

7. TOPSOILING
A. CONTRACTOR SHALL PROVIDE A FOUR INCH (4") THICK MINIMUM LAYER OF TOPSOIL, OR AS DIRECTED BY THE LOCAL ORDINANCE OR CLIENT, IN ALL PLANTING AREAS. TOPSOIL SHOULD BE SPREAD OVER A PREPARED SURFACE IN A UNIFORM LAYER TO ACHIEVE THE DESIRED COMPACTED THICKNESS.

B. ON-SITE TOPSOIL MAY BE USED TO SUPPLEMENT THE TOTAL AMOUNT REQUIRED. TOPSOIL FROM THE SITE MAY BE REJECTED IF IT HAS NOT BEEN PROPERLY REMOVED, STORED AND PROTECTED PRIOR TO CONSTRUCTION.

C. CONTRACTOR SHALL FURNISH TO THE APPROVING AGENCY AN ANALYSIS OF BOTH IMPORTED AND ON-SITE TOPSOIL TO BE UTILIZED IN ALL PLANTING AREAS. THE PH AND NUTRIENT LEVELS MAY NEED TO BE ADJUSTED THROUGH SOIL MODIFICATIONS AS NEEDED TO ACHIEVE THE REQUIRED LEVELS AS SPECIFIED IN THE MATERIALS SECTION ABOVE.

D. ALL LAWN AREAS ARE TO BE CULTIVATED TO A DEPTH OF FOUR INCHES (4"). ALL DEBRIS EXPOSED FROM EXCAVATION AND CULTIVATION SHALL BE DISPOSED OF IN ACCORDANCE WITH GENERAL WORK PROCEDURES SECTION ABOVE. THE FOLLOWING SHALL BE TILLED INTO THE TOP FOUR INCHES (4") IN TWO DIRECTIONS (QUANTITIES BASED ON A 1,000 SQUARE FOOT AREA - FOR BID PURPOSES ONLY [SEE SPECIFICATION 6.A.]):
I. 20 POUNDS 'GRO-POWER' OR APPROVED EQUAL SOIL CONDITIONER/FERTILIZER
II. 20 POUNDS 'NITRO-FORM' (COURSE) 38-0-0 BLUE CHIP OR APPROVED NITROGEN FERTILIZER

E. THE SPREADING OF TOPSOIL SHALL NOT BE CONDUCTED UNDER MUDDY OR FROZEN CONDITIONS.

IRRIGATION SYSTEMS SPECIFICATIONS:

1. ALL IRRIGATION SUPPLY, LATERAL WATER LINES AND SPRINKLER HEADS ARE TO BE LOCATED A MINIMUM OF 3" BEHIND CURB LINE.

2. MINIMUM BURIAL DEPTH FOR ALL SUPPLY AND LATERALS IS 18".

3. ALL LANDSCAPE AREA ADJACENT TO BUILDINGS AND PARKING AREAS AROUND BUILDINGS ARE TO BE IRRIGATED BY DRIP SYSTEMS.

4. LAWN AREAS OUTSIDE OF PERIMETER SIDEWALKS ARE TO BE DESIGN AND CONTROLLER PROGRAMMED TO IRRIGATE AT OFF-PEAK HOURS.

5. SPRINKLERS HEADS ARE TO BE THE FOLLOWING:
RAIN BIRD 5000 SERIES
RAIN BIRD 1804
RAIN BIRD 1812

6. DRIP SYSTEMS ARE TO BE NETAFIN DRIPLINE, 18"X 18" SPACING WITH .9 GPH EMITTERS.

7. IRRIGATION CONTROLLER IS TO BE RAIN BIRD, ESP-16LX, AUTOMATIC CONTROLLER, LOCATED IN MECHANICAL ROOM OF BUILDING.

8. NO SUBSTITUTIONS OR DEVIATION FROM IRRIGATION PLAN WILL BE ALLOWED.

9. IRRIGATION SYSTEMS ARE TO BE WARRANTED BY INSTALLING CONTRACTOR FOR A PERIOD OF ONE YEAR FROM THE DATE OF CERTIFICATE OF OCCUPANCY. IRRIGATION CONTRACTOR IS TO PROVIDE ALL MAINTENANCE, ADJUSTMENT, PROGRAMMING AND WINTERIZATION DURING THE FIRST WARRANTY YEAR.

10. SEPARATE WATER METER TO BE FURNISH FOR IRRIGATION SYSTEM. (SUBJECT TO APPROVAL BY TOWNSHIP OR COUNTY UTILITY AUTHORITY).

8. PLANTING
A. INSOFAR THAT IT IS FEASIBLE, PLANT MATERIAL SHALL BE PLANTED ON THE DAY OF DELIVERY. IN THE EVENT THAT THIS IS NOT POSSIBLE, LANDSCAPE CONTRACTOR SHALL PROTECT UNINSTALLED PLANT MATERIAL. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN A THREE DAY PERIOD AFTER DELIVERY. PLANTS THAT WILL NOT BE PLANTED FOR A PERIOD OF TIME GREATER THAN THREE DAYS SHALL BE HEALED IN WITH TOPSOIL OR MULCH TO HELP PRESERVE ROOT MOISTURE.

B. PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE AND IN ACCORDANCE WITH ACCEPTED LOCAL PRACTICE. PLANTS SHALL NOT BE INSTALLED IN TOPSOIL THAT IS IN A MUDDY OR FROZEN CONDITION.

C. ANY INJURED ROOTS OR BRANCHES SHALL BE PRUNED TO MAKE CLEAN-CUT ENDS PRIOR TO PLANTING UTILIZING CLEAN, SHARP TOOLS. ONLY INJURED OR DISEASED BRANCHING SHALL BE REMOVED.

D. ALL PLANTING CONTAINERS, BASKETS AND NON-BIODEGRADABLE MATERIALS SHALL BE REMOVED FROM ROOT BALLS DURING PLANTING. NATURAL FIBER BURLAP MUST BE CUT FROM AROUND THE TRUNK OF THE TREE AND FOLDED DOWN AGAINST THE ROOT BALL PRIOR TO BACKFILLING.

E. POSITION TREES AND SHRUBS AT THEIR INTENDED LOCATIONS AS PER THE PLANS AND SECURE THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO EXCAVATING PITS, MAKING NECESSARY ADJUSTMENTS AS DIRECTED.

F. PRIOR TO THE ISSUANCE OF ANY CERTIFICATE OF OCCUPANCY, THE PROPOSED LANDSCAPE, AS SHOWN ON THE APPROVED LANDSCAPE PLAN, MUST BE INSTALLED, INSPECTED AND APPROVED BY THE APPROVING AGENCY. THE APPROVING AGENCY SHALL TAKE INTO ACCOUNT SEASONAL CONSIDERATIONS IN THIS REGARD AS FOLLOWS. THE PLANTING OF TREES, SHRUBS, VINES OR GROUND COVER SHALL OCCUR ONLY DURING THE FOLLOWING PLANTING SEASONS:
I. PLANTS: MARCH 15 TO DECEMBER 15
II. LAWN: MARCH 15 TO JUNE 15 OR SEPT. 1 TO DECEMBER 1

PLANTINGS REQUIRED FOR A CERTIFICATE OF OCCUPANCY SHALL BE PROVIDED DURING THE NEXT APPROPRIATE SEASON AT THE MUNICIPALITY'S DISCRETION. CONTRACTOR SHOULD CONTACT APPROVING AGENCY FOR POTENTIAL SUBSTITUTIONS.

G. FURTHERMORE, THE FOLLOWING TREE VARIETIES ARE UNUSUALLY SUSCEPTIBLE TO WINTER DAMAGE. WITH TRANSPLANT SHOCK AND THE SEASONAL LACK OF NITROGEN AVAILABILITY, THE RISK OF PLANT DEATH IS GREATLY INCREASED. IT IS NOT RECOMMENDED THAT THESE SPECIES BE PLANTED DURING THE FALL PLANTING SEASON:

ACER RUBRUM	PLATANUS X ACERIFOLIA
BETULA VARIETIES	POPULUS VARIETIES
CARPINUS VARIETIES	PRUNUS VARIETIES
CRATAEGUS VARIETIES	PYRUS VARIETIES
KOELREUTERIA	QUERCUS VARIETIES
LIQUIDAMBAR STYRACIFLUA	TILIA TOMENTOSA
LIRIODENDRON TULIPIFERA	ZELKOVA VARIETIES

H. PLANTING PITS SHALL BE DUG WITH LEVEL OR CONVEX BOTTOMS, WITH THE WIDTH TWICE THE DIAMETER OF ROOT BALL. THE ROOT BALL SHALL REST ON UNDISTURBED GRADE. EACH PLANT PIT SHALL BE BACKFILLED IN LAYERS WITH THE FOLLOWING PREPARED SOIL MIXED THOROUGHLY:
I. 1 PART PEAT MOSS
II. 1 PART COMPOSTED COW MANURE BY VOLUME
III. 3 PARTS TOPSOIL BY VOLUME
IV. 21 GRAMS 'AGRIFORM' PLANTING TABLETS (OR APPROVED EQUAL) AS FOLLOWS:
A) 2 TABLETS PER 1 GALLON PLANT
B) 3 TABLETS PER 5 GALLON PLANT
C) 4 TABLETS PER 15 GALLON PLANT
D) LARGER PLANTS: 2 TABLETS PER ½" CALIPER OF TRUNK

I. FILL PREPARED SOIL AROUND BALL OF PLANT HALF-WAY AND INSERT PLANT TABLETS. COMPLETE BACKFILL AND WATER THOROUGHLY.

J. ALL PLANTS SHALL BE PLANTED SO THAT THE TOP OF THE ROOT BALL, THE POINT AT WHICH THE ROOT FLARE BEGINS, IS SET AT GROUND LEVEL AND IN THE CENTER OF THE PIT. NO SOIL IS TO BE PLACED DIRECTLY ON TOP OF THE ROOT BALL.

K. ALL PROPOSED TREES DIRECTLY ADJACENT TO WALKWAYS OR DRIVEWAYS SHALL BE PRUNED AND MAINTAINED TO A MINIMUM BRANCHING HEIGHT OF 7' FROM GRADE. NO PRUNING SHALL BE CONDUCTED WITHIN THE FIRST YEAR OF PLANTING.

L. GROUND COVER AREAS SHALL RECEIVE A ¼" LAYER OF HUMUS RAKED INTO THE TOP 1" OF PREPARED SOIL PRIOR TO PLANTING. ALL GROUND COVER AREAS SHALL BE WEEDED AND TREATED WITH A PRE-EMERGENT CHEMICAL AS PER MANUFACTURER'S RECOMMENDATION.

M. NO PLANT, EXCEPT GROUND COVERS, GRASSES OR VINES, SHALL BE PLANTED LESS THAN TWO FEET (2') FROM EXISTING STRUCTURES AND SIDEWALKS.

N. ALL PLANTING AREAS AND PLANTING PITS SHALL BE MULCHED AS SPECIFIED HEREIN TO FILL THE ENTIRE BED AREA OR SAUCER. NO MULCH IS TO TOUCH THE TRUNK OF THE TREE OR SHRUB.

O. ALL PLANTING AREAS SHALL BE WATERED IMMEDIATELY UPON INSTALLATION IN ACCORDANCE WITH THE WATERING SPECIFICATIONS AS LISTED HEREIN.

9. TRANSPLANTING (WHEN REQUIRED)
A. ALL TRANSPLANTS SHALL BE DUG WITH INTACT ROOT BALLS CAPABLE OF SUSTAINING THE PLANT. (SEE SPECIFICATION 2.F. ABOVE)

B. IF PLANTS ARE TO BE STOCKPILED BEFORE REPLANTING, THEY SHALL BE HEALED IN WITH MULCH OR SOIL, ADEQUATELY WATERED AND PROTECTED FROM EXTREME HEAT, SUN AND WIND.

C. PLANTS SHALL NOT BE DUG FOR TRANSPLANTING BETWEEN APRIL 10 AND JUNE 30.

D. UPON REPLANTING, BACKFILL SOIL SHALL BE AMENDED WITH FERTILIZER AND ROOT GROWTH HORMONE.

E. TRANSPLANTS SHALL BE GUARANTEED FOR THE LENGTH OF THE GUARANTEE PERIOD SPECIFIED HEREIN.

F. IF TRANSPLANTS DIE, SHRUBS AND TREES LESS THAN SIX INCHES (6") DBH SHALL BE REPLACED IN KIND. TREES GREATER THAN SIX INCHES (6") DBH MAY BE REQUIRED TO BE REPLACED IN ACCORDANCE WITH THE MUNICIPALITY'S TREE REPLACEMENT GUIDELINES.

10. WATERING
A. NEW PLANTINGS OR LAWN AREAS SHALL BE ADEQUATELY IRRIGATED BEGINNING IMMEDIATELY AFTER PLANTING. WATER SHALL BE APPLIED TO EACH TREE AND SHRUB IN SUCH MANNER AS NOT TO DISTURB BACKFILL AND TO THE EXTENT THAT ALL MATERIALS IN THE PLANTING HOLE ARE THOROUGHLY SATURATED. WATERING SHALL CONTINUE AT LEAST UNTIL PLANTS ARE ESTABLISHED.

B. SITE OWNER SHALL PROVIDE WATER IF AVAILABLE ON SITE AT TIME OF PLANTING. IF WATER IS NOT AVAILABLE ON SITE, CONTRACTOR SHALL SUPPLY ALL NECESSARY WATER. THE USE OF WATERING BAGS IS RECOMMENDED FOR ALL NEWLY PLANTED TREES.

C. IF AN IRRIGATION SYSTEM HAS BEEN INSTALLED ON THE SITE, IT SHALL BE USED TO WATER PROPOSED PLANT MATERIAL, BUT ANY FAILURE OF THE SYSTEM DOES NOT ELIMINATE THE CONTRACTOR'S RESPONSIBILITY OF MAINTAINING THE DESIRED MOISTURE LEVEL FOR VIGOROUS, HEALTHY GROWTH.

11. GUARANTEE
A. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANTS FOR A PERIOD OF EIGHTEEN (18) MONTHS FROM APPROVAL OF LANDSCAPE INSTALLATION BY THE APPROVING AGENCY. CONTRACTOR SHALL SUPPLY THE OWNER WITH A MAINTENANCE BOND FOR TEN PERCENT (10%) OF THE VALUE OF THE LANDSCAPE INSTALLATION WHICH WILL BE RELEASED AT THE CONCLUSION OF THE GUARANTEE PERIOD AND WHEN A FINAL INSPECTION HAS BEEN COMPLETED AND APPROVED BY THE OWNER OR AUTHORIZED REPRESENTATIVE.

B. ANY DEAD OR DYING PLANT MATERIAL SHALL BE REPLACED FOR THE LENGTH OF THE GUARANTEE PERIOD. REPLACEMENT OF PLANT MATERIAL SHALL BE CONDUCTED AT THE FIRST SUCCEEDING PLANTING SEASON. ANY DEBRIS SHALL BE DISPOSED OF OFF-SITE, WITHOUT EXCEPTION.

C. TREES AND SHRUBS SHALL BE MAINTAINED BY THE CONTRACTOR DURING CONSTRUCTION AND THROUGHOUT THE 90 DAY MAINTENANCE PERIOD AS SPECIFIED HEREIN. CULTIVATION, WEEDING, WATERING AND THE PREVENTATIVE TREATMENTS SHALL BE PERFORMED AS NECESSARY TO KEEP PLANT MATERIAL IN GOOD CONDITION AND FREE OF INSECTS AND DISEASE.

D. LAWNS SHALL BE MAINTAINED THROUGH WATERING, FERTILIZING, WEEDING, MOWING, TRIMMING AND OTHER OPERATIONS SUCH AS ROLLING, REGARDING AND REPLANTING AS REQUIRED TO ESTABLISH A SMOOTH, ACCEPTABLE LAWN, FREE OF ERODED OR BARE AREAS.

12. CLEANUP
A. UPON THE COMPLETION OF ALL LANDSCAPE INSTALLATION AND BEFORE THE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL UNUSED MATERIALS, EQUIPMENT AND DEBRIS FROM THE SITE. ALL PAVED AREAS ARE TO BE CLEANED.

B. THE SITE SHALL BE CLEANED AND LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER OR AUTHORIZED REPRESENTATIVE.

SUPPLEMENTAL LANDSCAPE NOTES:

1. ALL TOPSOIL SHALL BE A MINIMUM 4" IN ALL SOD AREAS AND 8" IN TREE, SHRUB AND GROUND COVER BEDS, INCLUDING PARKING LOT ISLAND BEDS. IT SHALL BE APPROVED BY A WAWA CONSTRUCTION REPRESENTATIVE, PRIOR TO INSTALLATION.
2. PLANTING BEHIND PERPENDICULAR PARKING IS TO BE LOCATED A MINIMUM OF 5' BEHIND THE CURB LINE.
3. ALL LANDSCAPE AND GRASS AREAS ARE TO BE HAND RAKED AND LEFT CLEAR OF ALL STONES, ROCK, CONSTRUCTION DEBRIS AND ANY UNSUITABLE MATERIALS.
4. ALL LANDSCAPE AND GRASS AREAS ARE TO BE IRRIGATED BY AUTOMATIC SPRINKLER SYSTEM. (SEE IRRIGATION SPECIFICATION.)
5. LANDSCAPE CONTRACTOR WILL LOCATE ALL UNDERGROUND UTILITIES PRIOR TO ANY EXCAVATION AND PLANTING INSTALLATION.
6. ALL AREAS TO BE LANDSCAPED OR COVERED WITH STONE MUST BE TREATED WITH A PRE-EMERGENCE HERBICIDE (SURFLAN, DACTAL OR APPROVED EQUAL) IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE REGULATIONS AND THE MANUFACTURER'S INSTRUCTIONS.
7. LANDSCAPE CONTRACTOR TO SUPPLY AND INSTALL A PERVIOUS WEED BARRIER (DEWITT, DUPONT OR APPROVED EQUAL) IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS WITHIN ALL LANDSCAPES, INCLUDING STONE AND MULCH BEDS. ALL WEED BARRIER WILL BE OVERLAPPED A MINIMUM OF 6" AT ALL SEAMS. AT PLANT LOCATIONS, BARRIER SHOULD BE CUT IN AN "X" PATTERN SO TO ACCOMMODATE ROOT BALL AND REPLACED AFTER PLANT HAS BEEN INSTALLED.
8. WEED BARRIER SHALL NOT BE VISIBLE IN AREAS DESIGNATED FOR STONE MULCH. WHEN STONE IS CALLED FOR ADJACENT TO CURB OR SIDEWALKS, IT SHALL BE FEATHERED DOWN TO CURB LEVEL FROM A DISTANCE 24" FROM THE CURB.
9. ALL PROPOSED LANDSCAPING TO BE NURSERY GROWN, TYPICAL OF THEIR SPECIES OR VARIETY. THEY ARE TO HAVE NORMAL VIGOROUS ROOT SYSTEMS, FREE FROM DEFECTS AND INFECTIONS AND IN ACCORDANCE WITH ANSI Z60.1
10. ALL PROPOSED PLANTINGS SHOULD BE INSTALLED PER STANDARDS OF THE "AMERICAN NURSERY & LANDSCAPE ASSOCIATION" AND STATE NURSERY/ LANDSCAPE ASSOCIATIONS WITH REGARD TO PLANTING, PIT SIZE, BACKFILL MIXTURE, STAKING AND GUYING.
11. ALL PLANTING CONTAINERS AND BASKETS SHALL BE REMOVED DURING PLANTING. ALL PLANTS SHALL BE SET PLUMB AND POSITIONED SO THAT THE TOP OF THE ROOT COLLAR MATCHES, OR IS NO MORE THAN TWO (2") INCHES ABOVE, FINISHED GRADE. REPLACE AMENDED BACKFILL IN 6-INCH LAYERS AND COMPACT BACKFILL TO ELIMINATE VOIDS. CONTRACTOR SHALL PROVIDE A FOUR-INCH HIGH EARTHEN WATERING SAUCER ALONG THE PERIMETER OF EACH PLANTING PIT. CONTRACTOR SHALL WATER NEWLY PLANTED VEGETATION PRIOR TO MULCHING PLANTING PIT. ALL VOIDS SHALL BE FILLED AND SETTLING MITIGATED AS REQUIRED.
12. AFTER INITIAL WATERING AND PRIOR TO MULCHING, CONTRACTOR SHALL APPLY HERBICIDES AND PRE-EMERGENT HERBICIDES AS REQUIRED TO ELIMINATE ANY WEED SEEDS OR PLANTS PRESENT ON ROOT BALL.
13. ALL PLANTING BEDS AND PITS EXCEPT FOR LANDSCAPE ISLANDS ADJACENT TO THE BUILDING AND DESIGNATED AREA AT THE FUEL VENT STACKS, SHALL BE MULCHED WITH DOUBLE GROUND HARDWOOD MULCH AT A MINIMUM DEPTH OF 3". LANDSCAPE ISLANDS ADJACENT TO DESIGNATED AREA AT FUEL STACKS SHALL BE MULCHED WITH 1"-3" "RIVER STONE" MULCH AND RETAINED WITH AN ALUMINUM LANDSCAPE EDGING (PERMALOCK OR APPROVED EQUAL). FOR LANDSCAPES ADJACENT TO BUILDING, CONTACT PROJECT ENGINEER.
14. SEEDBED PREPARATION
A. APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TESTS OR FERTILIZER MAY BE APPLIED AT THE RATE OF 260 POUNDS PER ACRE OR 6 POUNDS PER 1000 SQUARE FEET USING 10-20-10 OR EQUIVALENT. IN ADDITION, 300 POUNDS 4-1-2 PER ACRE OR EQUIVALENT OF SLOW RELEASE NITROGEN MAY BE USED IN LIEU OF TOPDRESSING.
B. WORK LIME AND FERTILIZER INTO THE SOIL AS PRACTICAL TO A DEPTH OF 4-INCHES WITH A DISC, SPRING TOOTH HARROW OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISKING OPERATION SHOULD PARALLEL TO THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLE UNIFORM, FINE SEEDBED IS PREPARED. ALL BUT CLAY OR SILTY SOILS AND COARSE SANDS SHOULD BE ROLLED TO FIRM THE SEEDBED WHEREVER FEASIBLE.
C. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RETILLED AND FIRMED AS OUTLINED BELOW.
D. GRASS SEEDING MIXTURE AND APPLICATION RATE:

PERCENTAGE OF TOTAL WEIGHT	APPLICATION RATE	SEED TYPE	MIN. GERMINATION ALLOWED
60%	5-7 LBS/1000 S.F.	"REBEL" TALL FESCUE	90 - 97
35%		"YORKTOWN" PERENNIAL RYE	90 - 98
5%		"STREEKER" REDTOP	90 - 92

E. IN AREAS DESIGNATED AS SOD, FESCUE SOD IS TO BE INSTALLED ON MINIMUM 4" TOPSOIL. AREAS TO BE SODDED ARE TO BE PREPARED AS NOTED ABOVE FOR SEEDED AREAS.
16. PLANT MATERIAL SHALL BE GUARANTEED FOR ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETENESS. THE CONTRACTOR SHALL REPLACE PLANTS, DEAD, UNHEALTHY, DYING OR DAMAGED THROUGH LOSS OF BRANCHES AND/OR FOLIAGE. LAWNS THAT ARE NOT IN GOOD CONDITION AT THE END OF THE GUARANTEE PERIOD SHALL BE REPAIRED UNTIL A GOOD LAWN RESULTS. IT IS UNDERSTOOD THAT THE OWNER SHALL ASSUME RESPONSIBILITY FOR WATERING ALL PLANT MATERIAL AND LAWN AREA BEGINNING WITH THE DATE OF SUBSTANTIAL COMPLETENESS.

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◆ NEW ENGLAND ◆ PHILADELPHIA, PA ◆ SOUTHERN MARYLAND ◆ ATLANTA, GA
◆ BOSTON, MA ◆ PITTSBURGH, PA ◆ NORTHERN VIRGINIA ◆ TAMPA, FL
◆ NEW YORK, NY ◆ LEHIGH VALLEY, PA ◆ CENTRAL VIRGINIA ◆ SOUTH FLORIDA
◆ NEW YORK METRO ◆ SOUTHEASTERN, PA ◆ RALEIGH, NC ◆ DALLAS, TX
◆ NORTHERN NEW JERSEY ◆ REHOBOTH BEACH, DE ◆ WASHINGTON, DC
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REVISIONS

REV	DATE	COMMENT	BY
1	09/21/18	PER TOWNSHIP REVIEW COMMENTS	JHT

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PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE - STOP CALL

PA1 SYSTEM, INC.
1-800-242-1776

POCS SERIAL NUMBER
20172771117

PROJECT No.: PC171170
DRAWN BY: JHT
CHECKED BY: JRK
DATE: 5/18/2018
SCALE: AS NOTED
CAD I.D.: PC171170 LSCP-1

PROJECT:

FINAL LAND DEVELOPMENT PLANS

FOR

PROVCO PINEGOOD, CHALFONT, LLC

PROPOSED WAWA

BUTLER AVENUE (SR 4202) & COUNTY LINE ROAD
NEW BRITAIN TOWNSHIP
BUCKS COUNTY
PENNSYLVANIA

BOHLER ENGINEERING
1600 MANOR DRIVE, SUITE 200
CHALFONT, PENNSYLVANIA 18914
Phone: (215) 996-9100
Fax: (215) 996-9102
www.BohlerEngineering.com

D.T. NORTH

REGISTERED LANDSCAPE ARCHITECT
PENNSYLVANIA LICENSE No. LA002729

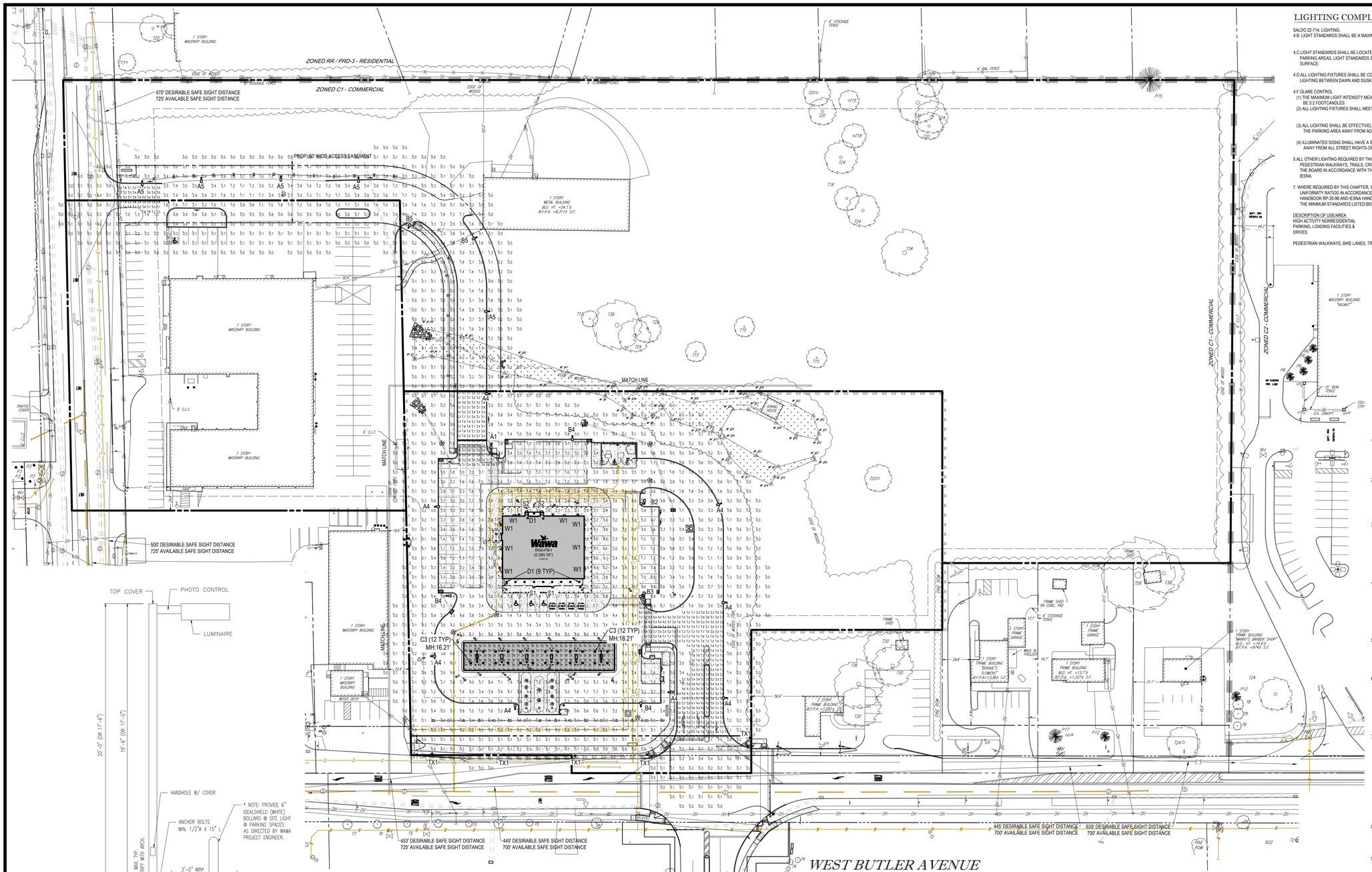
SHEET TITLE:

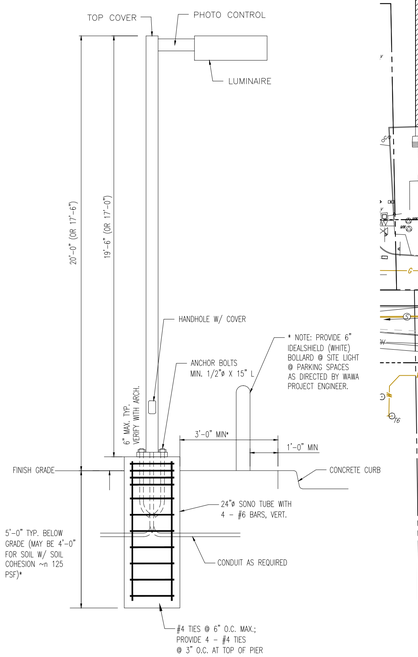
LANDSCAPE DETAILS

SHEET NUMBER:

REVISION 1 - 2018.09.21

GB
R:\17\PC171170\DRAWINGS\PLAN SETS\LAND DEVELOPMENT\REVISION 1\PC171170 LSCP-1----->LAYOUT: 19-LSCP DETAILS





NOTE: THIS DETAIL IS NOT CERTIFIED. FOR INFORMATIONAL PURPOSES ONLY. CONTRACTOR TO PROVIDE SHOP DRAWINGS CERTIFIED BY STRUCTURAL ENGINEER.

LIGHT POLE WITH STANDARD ANCHORING DETAIL

NTS

50 25 12.5 0 50

1"= 50'

LIGHTING COMPLIANCE

SALDO 22-714. LIGHTING.

4.B. LIGHT STANDARDS SHALL BE A MAXIMUM OF 20 FEET IN HEIGHT. [ALL ONSITE LIGHTING COMPLIES]

4.C.LIGHT STANDARDS SHALL BE LOCATED IN PLANTING ISLANDS OR PLANTING STRIPS WITHIN PARKING AREAS. LIGHT STANDARDS SHALL NOT BE INSTALLED DIRECTLY ON THE PARKING AREA SURFACE. [COMPLIES]

4.D.ALL LIGHTING FIXTURES SHALL BE CONTROLLED BY AUTOMATIC PHOTOCELLS TO REGULATE LIGHTING BETWEEN DAWN AND DUSK. [COMPLIES]

4.F.GLARE CONTROL

(1) THE MAXIMUM LIGHT INTENSITY MEASURED AT ANY POINT ALONG THE PROPERTY LINE SHALL BE 0.2 FOOTCANDLES. [ALL ONSITE LIGHTING COMPLIES]

(2) ALL LIGHTING FIXTURES SHALL MEET ALL APPLICABLE IESNA CUTOFF CRITERIA. [ALL ONSITE LIGHTING COMPLIES]

(3) ALL LIGHTING SHALL BE EFFECTIVELY SHIELDED AND DIRECTED TOWARDS THE INTERIOR OF THE PARKING AREA AWAY FROM ADJACENT PROPERTIES. [COMPLIES]

(4) ILLUMINATED SIGNS SHALL HAVE A SHIELDED LIGHTING SOURCE AND SHALL BE DIRECTED AWAY FROM ALL STREET RIGHTS-OF-WAY. [ALL ONSITE LIGHTING COMPLIES]

5.ALL OTHER LIGHTING REQUIRED BY THIS CHAPTER FOR RECREATIONAL FACILITIES, SIDEWALKS, PEDESTRIAN WALKWAYS, TRAILS, CROSSWALKS, BICYCLE LANES, ETC., MAY BE APPROVED BY THE BOARD IN ACCORDANCE WITH THE RECOMMENDED PRACTICES AND STANDARDS OF THE IESNA. [COMPLIES]

7. WHERE REQUIRED BY THIS CHAPTER, ILLUMINATION LEVELS SHALL HAVE INTENSITIES AND UNIFORMITY RATIOS IN ACCORDANCE WITH RECOMMENDED PRACTICES OF THE IESNA HANDBOOK RP-20-98 AND IESNA HANDBOOK RP-8-00, AS AMENDED, AND IN ACCORDANCE WITH THE MINIMUM STANDARDS LISTED BELOW:

DESCRIPTION OF USE/AREA	MAINTAINED FOOTCANDLES	UNIFORMITY AVG:MIN
HIGH ACTIVITY NONRESIDENTIAL PARKING, LOADING FACILITIES & DRIVES	0.9 MIN.	4:1 [COMPLIES]
PEDESTRIAN WALKWAYS, BIKE LANES, TRAILS	0.2 AVERAGE	5:1 [COMPLIES]

GENERAL LIGHTING NOTES

1. THIS PLAN IS TO BE UTILIZED FOR LIGHTING PURPOSES ONLY. ELECTRICAL ENGINEERING, INCLUDING, BUT NOT LIMITED TO, CIRCUITRY, CONDUIT, WIRING, AND ASSOCIATED SPECIFICATIONS, IS NOT WITHIN THE SCOPE OF THIS DOCUMENT.
2. THIS LIGHTING PLAN WAS PREPARED BY:
   RED LEONARD ASSOCIATES
   1340 KEMPER MEADOW DR.
   CINCINNATI, OH 45240
   PH: 513-574-9500
   DRAWING NO.: RL-5234-S1-R3
3. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE SUBMITTALS TO THE PROJECT ENGINEER (BOHLER) FOR REVIEW AND APPROVAL. SUBSTITUTION REQUESTS MUST BE ACCOMPANIED BY A HORIZONTAL PHOTOMETRIC STUDY DEMONSTRATING THAT THE FIXTURE(S) IN QUESTION WILL MEET THE DESIGN INTENT OF THIS PLAN. SUBSTITUTION REQUESTS WITHOUT A PHOTOMETRIC STUDY WILL BE REJECTED.
4. THIS LIGHTING PLAN DEPICTS PROPOSED SUSTAINED ILLUMINATION LEVELS CALCULATED USING DATA PROVIDED BY THE NOTED MANUFACTURER(S). ACTUAL SUSTAINED SITE ILLUMINATION LEVELS AND PERFORMANCE OF LUMINAIRES MAY VARY DUE TO VARIATIONS IN WEATHER, ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, THE SERVICE LIFE OF EQUIPMENT AND LUMINAIRES AND OTHER RELATED VARIABLE FIELD CONDITIONS.
5. THE LIGHTING VALUES AND CALCULATION POINTS DEPICTED ON THIS PLAN ARE ALL ANALYZED ON A HORIZONTAL GEOMETRIC PLANE AT ELEVATION ZERO (GROUND LEVEL) UNLESS OTHERWISE NOTED. THE VALUES DEPICTED ON THIS PLAN ARE IN FOOTCANDLES.
6. THE LUMINAIRES, LAMPS AND LENSES MUST BE REGULARLY INSPECTED/MAINTAINED TO ENSURE THAT THEY FUNCTION PROPERLY. THIS WORK SHOULD INCLUDE, BUT NOT BE LIMITED TO, FREQUENT VISUAL INSPECTIONS, CLEANING OF LENSES, AND RELAMPING ACCORDING TO MANUFACTURER RECOMMENDATIONS. FAILURE TO FOLLOW THE ABOVE STEPS COULD CAUSE THE LUMINARIES FUNCTION IMPROPERLY.
7. THIS LIGHTING PLAN IS INTENDED TO SHOW THE LOCATIONS AND TYPE OF LUMINAIRES, ONLY. POWER SYSTEM, CONDUITS, WIRING, VOLTAGES AND OTHER ELECTRICAL COMPONENTS ARE THE RESPONSIBILITY OF THE ARCHITECT, MEP AND/OR LIGHTING CONTRACTOR, AS INDICATED IN THE CONSTRUCTION CONTRACT DOCUMENTS. THESE ITEMS MUST BE INSTALLED AS REQUIRED BY STATE AND LOCAL REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR INSTALLING LIGHTING FIXTURES AND APPURTENANCES IN ACCORDANCE WITH ALL APPLICABLE BUILDING AND ELECTRICAL CODES AND ALL OTHER APPLICABLE RULES, REGULATIONS, LAWS AND STATUTES.
8. CONTRACTOR MUST BRING TO THE DESIGNER'S ATTENTION, PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, ANY LIGHT LOCATIONS THAT CONFLICT WITH DRAINAGE, UTILITIES, OR OTHER STRUCTURES.
9. THE LIGHTING CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CONTRACTOR REQUIREMENTS INDICATED IN THE SITE PLAN, INCLUDING BUT NOT LIMITED TO, GENERAL NOTES, GRADING AND UTILITY NOTES, SITE SAFETY, AND ALL GOVERNMENTAL RULES, LAWS, ORDINANCES, REGULATIONS AND THE LIKE.
10. UPON OWNER'S ACCEPTANCE OF THE COMPLETED PROJECT, THE OWNER SHALL BE RESPONSIBLE FOR ALL MAINTENANCE, SERVICING, REPAIR AND INSPECTION OF THE LIGHTING SYSTEM AND ALL OF ITS COMPONENTS AND RELATED SYSTEMS, TO ENSURE ADEQUATE LIGHTING LEVELS ARE PRESENT AND FUNCTIONING AT ALL TIMES.

CALCULATION SUMMARY

LABEL	AVG	MAX	MIN	AVG/MIN	MAX/MIN
CANOPY	22.32	30	12	1.86	2.50
DELIVERY	3.15	4.0	2.6	1.21	1.54
DRIVE	1.89	3.7	0.9	2.10	4.11
ENTRANCES & EXITS	2.61	10.3	0.9	2.90	11.44
PAVED	3.13	10.1	0.9	3.48	11.22

LUMINAIRE SCHEDULE

LABEL	QTY	MOUNTING HEIGHT	ARRANGEMENT	LUMENS	LLF	ARR. WATTS	TOTAL WATTS	MANUFACTURER	DESCRIPTION
A1	1	20'-0" AFG	SINGLE	12019	1.000	134.2	134.2	CREE, INC.	ARE-EDG-3M-DA-06-E-UL-WH-700-57K
A4	8	20'-0" AFG	SINGLE	8891	1.000	134	1072	CREE, INC.	ARE-EDG-3MB-DA-06-E-UL-WH-700-57K
A5	5	17'-6" AFG	SINGLE	5996	1.000	93	465	CREE, INC.	ARE-EDG-3MB-DA-04-E-UL-WH-700-57K
B2	1	20'-0" AFG	2@90	12678	1.000	268	268	CREE, INC.	ARE-EDG-4M-DA-06-E-UL-WH-700-57K
B3	1	20'-0" AFG	3@90	12678	1.000	402	402	CREE, INC.	ARE-EDG-4M-DA-06-E-UL-WH-700-57K
B4	3	20'-0" AFG	SINGLE	9549	1.000	134	402	CREE, INC.	ARE-EDG-4MB-DA-06-E-UL-WH-700-57K
B5	2	17'-6" AFG	SINGLE	6440	1.000	93	186	CREE, INC.	ARE-EDG-4MB-DA-04-E-UL-WH-700-57K
C3	24	VARIES, SEE PLAN	SINGLE	7349	0.980	68	1632	CREE, INC.	CAN-304-SL-RD-04-E-UL-WH-525-57K
D1	10	9'-0" AFF	SINGLE	1652	1.000	27.2	272	CREE, INC.	KR6-20L-35K-120V + KR6T-SSGC-FF
S1	2	9'-0" AFF	SINGLE	2011	1.000	46.9	93.8	SCOTT ARCHITECTURAL LIGHTING	WC1 SCOTT ITL61322 S9131 9x20
S2	2	8'-6" AFF	SINGLE	1119	1.000	22.6	45.2	SCOTT ARCHITECTURAL LIGHTING	WC2 SCOTT ITL61321 S9130 9x16
W1	8	15'-0" AFF	SINGLE	4210	0.980	43	344	CREE, INC.	SEC-EDG-3M-WM-04-E-UL-WH-350-57K
TX1	5	14'-0" AFG	POST TOP	--------	--------	------	------	PHILIPS HADCO	PROPOSED STREET LUMINAIRE NOT MODELED. SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. CITY POST LED LUMINAIRE (TX1-32-G2-B-S-L-P-A-1-A-3-R-W-x-3) POLE: PHILIPS P3165

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1	09/21/18	PER TOWNSHIP REVIEW COMMENTS	JHT

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PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE - STOP CALL

PA1 SYSTEM, INC. 1-800-242-1776

POCS SERIAL NUMBER 20172771117

PROJECT No.: PC171170
DRAWN BY: JHT
CHECKED BY: JRK
DATE: 5/18/2018
SCALE: 1" = 50'
CAD I.D.: PC171170 LIGHT-1

PROJECT:

FINAL LAND DEVELOPMENT PLANS

FOR

PROVCO PINEGOOD, CHALFONT, LLC

PROPOSED WAWA

BUTLER AVENUE (SR 4202) & COUNTY LINE ROAD
NEW BRITAIN TOWNSHIP
BUCKS COUNTY
PENNSYLVANIA

BOHLER ENGINEERING
1600 MANOR DRIVE, SUITE 200
CHALFONT, PENNSYLVANIA 18914
Phone: (215) 996-9100
Fax: (215) 996-9102
www.BohlerEngineering.com

D.T. NORTH

REGISTERED LANDSCAPE ARCHITECT
PENNSYLVANIA LICENSE No. LA002729

SHEET TITLE:

LIGHTING PLAN

SHEET NUMBER:

20
OF 37

REVISION 1 - 2018.09.21

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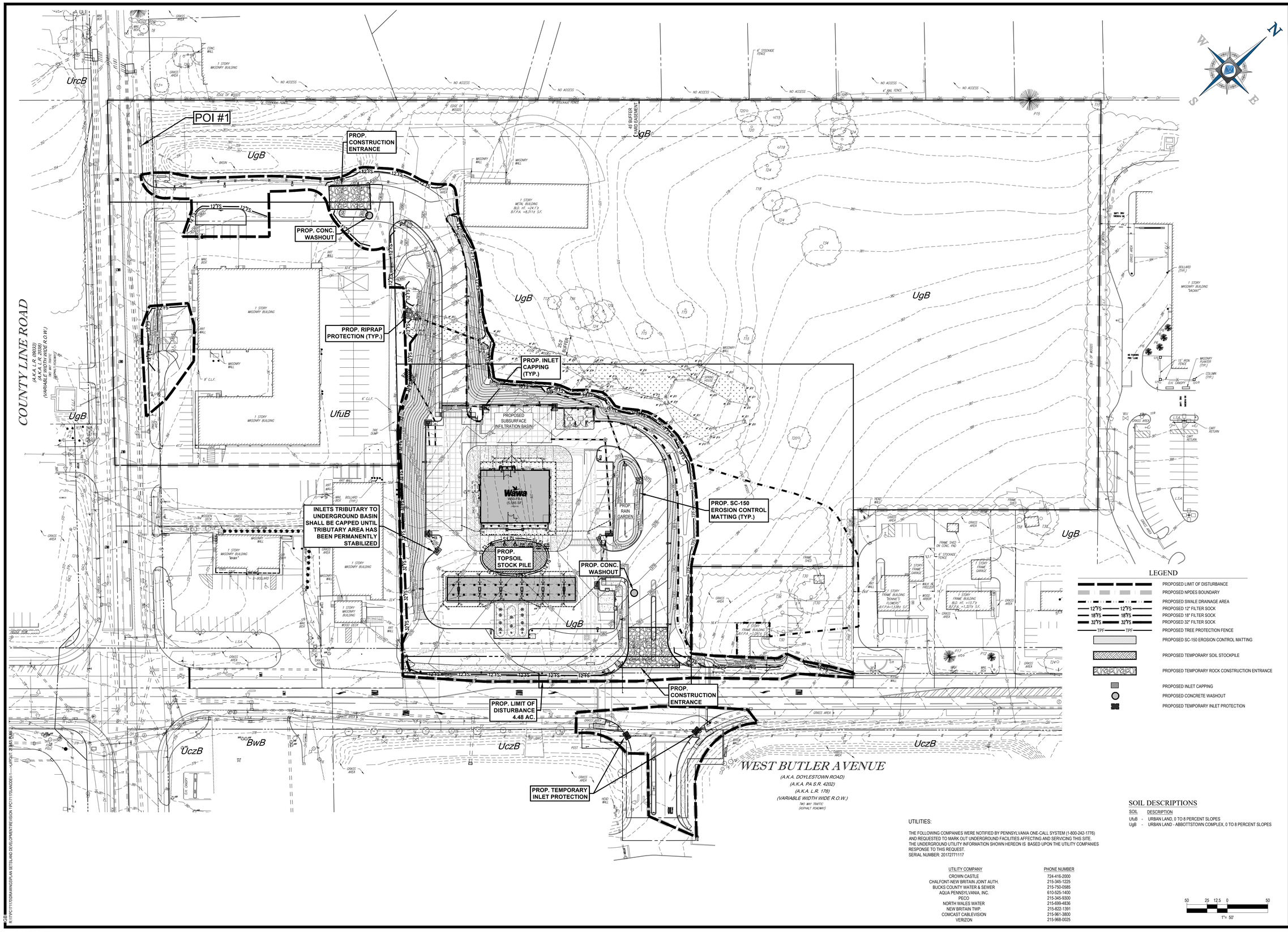

LEGEND

- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED NPDES BOUNDARY
- PROPOSED SWALE DRAINAGE AREA
- 12"FS — PROPOSED 12" FILTER SOCK
- 18"FS — PROPOSED 18" FILTER SOCK
- 32"FS — PROPOSED 32" FILTER SOCK
- TPF — PROPOSED TREE PROTECTION FENCE
- PROPOSED SC-150 EROSION CONTROL MATTING
- PROPOSED TEMPORARY SOIL STOCKPILE
- PROPOSED TEMPORARY ROCK CONSTRUCTION ENTRANCE
- PROPOSED INLET CAPPING
- PROPOSED CONCRETE WASHOUT
- PROPOSED TEMPORARY INLET PROTECTION

UTILITIES:

THE FOLLOWING COMPANIES WERE NOTIFIED BY PENNSYLVANIA ONE-CALL SYSTEM (1-800-242-1776) AND REQUESTED TO MARK OUT UNDERGROUND FACILITIES AFFECTING AND SERVICING THIS SITE. THE UNDERGROUND UTILITY INFORMATION SHOWN HEREON IS BASED UPON THE UTILITY COMPANIES RESPONSE TO THIS REQUEST.
SERIAL NUMBER: 20172771117

UTILITY COMPANY	PHONE NUMBER
CROWN CASTLE	724-416-2000
CHALFONT-NEW BRITAIN JOINT AUTH.	215-345-1225
BUCKS COUNTY WATER & SEWER	215-750-0585
AQUA PENNSYLVANIA, INC.	610-525-1400
PECO	215-841-5300
NORTH WALES WATER	215-699-4836
NEW BRITAIN TWP.	215-822-1391
COMCAST CABLEVISION	215-961-3800
VERIZON	215-968-0025

SOIL DESCRIPTIONS

SOIL		DESCRIPTION
UfuB	-	URBAN LAND, 0 TO 8 PERCENT SLOPES
UgB	-	URBAN LAND - ABBOTTSTOWN COMPLEX, 0 TO 8 PERCENT SLOPES

50 25 12.5 0 50
1"= 50'

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FOR

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www.BohlerEngineering.com

J.R. KORCZAK
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE074279

SHEET TITLE:

SOIL EROSION & SEDIMENT POLLUTION CONTROL PLAN

SHEET NUMBER:

21

OF 37

REVISION 1 - 2018.09.21

SOILS MAP
1"=1,000'
500' 0 1,000'

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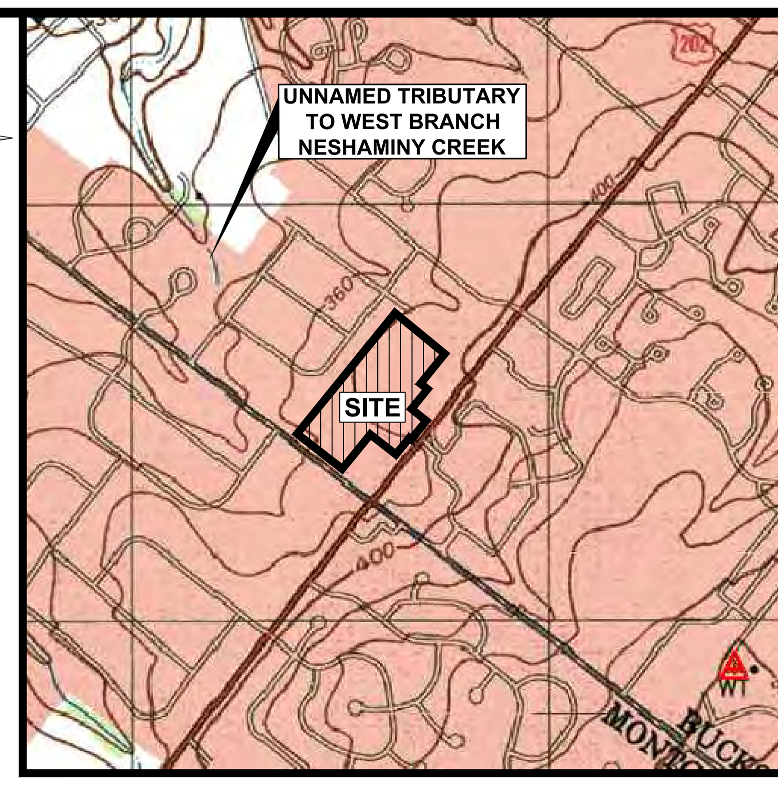

USGS MAP
(DOYLESTOWN USGS QUAD)
SCALE: 1"=1,200'
600 0 1,200

E+S - MONITORING, INSPECTION AND REPORTING REQUIREMENTS

VISUAL INSPECTIONS
THE PERMITTEE AND CO-PERMITTEE(S) MUST ENSURE THAT VISUAL SITE INSPECTIONS ARE CONDUCTED WEEKLY, AND WITHIN 24 HOURS AFTER EACH MEASURABLE RAINFALL EVENT THROUGHOUT THE DURATION OF CONSTRUCTION AND UNTIL THE RECEIPT AND ACKNOWLEDGEMENT OF THE NOT BY THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT. THE VISUAL SITE INSPECTIONS AND REPORTS SHALL BE COMPLETED IN A FORMAT PROVIDED BY THE DEPARTMENT, AND CONDUCTED BY QUALIFIED PERSONNEL, TRAINED AND EXPERIENCED IN EROSION AND SEDIMENT CONTROL, TO ASCERTAIN THAT E&S BMPs AND PCSM BMPs ARE PROPERLY CONSTRUCTED AND MAINTAINED TO EFFECTIVELY MINIMIZE POLLUTION TO THE WATERS OF THIS COMMONWEALTH. A WRITTEN REPORT OF EACH INSPECTION SHALL BE KEPT AND INCLUDE AT A MINIMUM:

(1) A SUMMARY OF SITE CONDITIONS, E&S BMP AND PCSM BMP, IMPLEMENTATION AND MAINTENANCE AND COMPLIANCE ACTIONS; AND

(2) THE DATE, TIME, NAME AND SIGNATURE OF THE PERSON CONDUCTING THE INSPECTION.

NONCOMPLIANCE REPORTING
WHERE E&S, PCSM OR PPC BMPs ARE FOUND TO BE INOPERATIVE OR INEFFECTIVE DURING AN INSPECTION, OR ANY OTHER TIME, THE PERMITTEE AND CO_PERMITTEE(S) SHALL, WITHIN 24 HOURS, CONTACT THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT, BY PHONE OR PERSONAL CONTACT, FOLLOWED BY THE SUBMISSION OF A WRITTEN REPORT WITHIN 5 DAYS OF THE INITIAL CONTACT. NONCOMPLIANCE REPORTS SHALL INCLUDE THE FOLLOWING INFORMATION:

(1) ANY CONDITION ON THE PROJECT SITE WHICH MAY ENDANGER PUBLIC HEALTH, SAFETY, OR THE ENVIRONMENT, OR INVOLVE INCIDENTS WHICH CAUSE OR THREATEN POLLUTION;

(2) THE PERIOD OF NONCOMPLIANCE, INCLUDING EXACT DATES AND TIMES AND/OR ANTICIPATED TIME WHEN THE ACTIVITY WILL RETURN TO COMPLIANCE;

(3) STEPS BEING TAKEN TO REDUCE, ELIMINATE, AND PREVENT RECURRENCE OF THE NONCOMPLIANCE; AND

(4) THE DATE OR SCHEDULE OF DATES, AND IDENTIFYING REMEDIES FOR CORRECTING NONCOMPLIANCE CONDITIONS.

REDUCTION, LOSS, OR FAILURE OF THE BMPs
UPON REDUCTION, LOSS, OR FAILURE OF THE BMPs, THE PERMITTEE AND CO_PERMITTEE SHALL TAKE IMMEDIATE ACTION TO RESTORE THE BMPs OR PROVIDE AN ALTERNATIVE METHOD OF TREATMENT. SUCH RESTORED BMPs OR ALTERNATIVE TREATMENT SHALL BE AT LEAST AS EFFECTIVE AS THE ORIGINAL BMPs.

TERMINATION OF COVERAGE
NOT: UPON PERMANENT STABILIZATION OF EARTH DISTURBANCE ACTIVITIES ASSOCIATED WITH CONSTRUCTION ACTIVITY THAT ARE AUTHORIZED BY THIS PERMIT AND WHEN BMPs IDENTIFIED IN THE PCSM PLAN HAVE BEEN PROPERLY INSTALLED, THE PERMITTEE AND/OR CO_PERMITTEE OF THE FACILITY MUST SUBMIT A NOT FORM THAT IS SIGNED IN ACCORDANCE WITH PART B, SECTION 1.C, SIGNATORY REQUIREMENTS, OF THIS PERMIT. ALL LETTERS CERTIFYING DISCHARGE TERMINATION ARE TO BE SENT TO THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT. THE NOT MUST CONTAIN THE FOLLOWING INFORMATION: FACILITY NAME, ADDRESS, AND LOCATION, OPERATOR NAME AND ADDRESS, PERMIT NUMBER, IDENTIFICATION AND PROOF OF ACKNOWLEDGMENT FROM THE PERSON(S) WHO WILL BE RESPONSIBLE FOR OPERATION AND MAINTENANCE OF THE PCSM BMPs IN ACCORDANCE WITH THE APPROVED PCSM PLAN, AND THE REASON FOR PERMIT TERMINATION. UNTIL THE PERMITTEE HAS RECEIVED WRITTEN ACKNOWLEDGEMENT OF THE NOT, THE PERMITTEE WILL REMAIN RESPONSIBLE FOR OPERATING AND MAINTAINING ALL E&S BMPs AND PCSM BMPs ON THE PROJECT SITE AND WILL BE RESPONSIBLE FOR VIOLATIONS OCCURRING ON THE PROJECT SITE.

COMPLETION CERTIFICATE AND FINAL PLANS
WITHIN 30 DAYS AFTER THE COMPLETION OF EARTH DISTURBANCE ACTIVITIES AUTHORIZED BY THIS PERMIT, INCLUDING THE PERMANENT STABILIZATION OF THE SITE AND PROPER INSTALLATION OF PCSM BMPs IN ACCORDANCE WITH THE APPROVED PCSM PLAN, OR UPON SUBMISSION OF THE NOT IF SOONER, THE PERMITTEE SHALL FILE WITH THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT A STATEMENT SIGNED BY A LICENSED PROFESSIONAL AND BY THE PERMITTEE CERTIFYING THAT WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THIS PERMIT AND THE APPROVED E&S AND PCSM PLANS.

TYPES, DEPTH, SLOPE, LOCATIONS, AND LIMITATIONS OF THE SOILS
§102.4(b)(5)(ii)

SOIL DESCRIPTIONS

SOIL	DESCRIPTION	SOIL GROUP
UfuB -	URBAN LAND, 0 TO 8 PERCENT SLOPES	NOT RATED
UgB -	URBAN LAND - ABBOTTSTOWN COMPLEX, 0 TO 8 PERCENT SLOPES	D

SOIL USE LIMITATIONS AND THEIR RESOLUTIONS PROVIDED

CONTRACTOR SHALL CONSULT WITH GEOTECHNICAL ENGINEER TO DETERMINE SOIL LIMITATIONS AND RESOLUTIONS SPECIFIC TO THIS PROJECT.

1. SOIL TYPES POORLY SUITED AS SOURCES OF TOPSOIL RESTRICT OR PLACE CONDITIONS ON PLANNING VEGETATIVE STABILIZATION. ACIDIC, LOW FERTILITY, EXCESSIVE DRYNESS AND EXCESSIVE WETNESS LIMIT PLANT GROWTH.
RESOLUTIONS: IDENTIFYING AND RESOLVING CHARACTERISTICS, THAT RENDER THE SOIL TYPES POORLY, SUITED AS TOPSOIL.

2. ACIDIC SOIL TYPES EXHIBITING PH REACTION VALUES LOWER THAN ABOUT 5.5, LIMIT VEGETATIVE STABILIZATION. SOIL TESTS MIGHT BE NECESSARY TO DETERMINE SITE SPECIFIC PH REACTION.
RESOLUTIONS: APPLYING LIME CONSISTENT WITH RATES DETERMINED BY SOIL TESTING; SELECTING VEGETATIVE SPECIES TOLERANT TO ACIDIC SOIL CONDITIONS; AND IMPLEMENTING COMBINATIONS OF THESE AND/OR OTHER METHODS. SPECIFIC TOLERANCE INFORMATION IS PROVIDED IN TABLE 1 OF THE EROSION CONTROL & CONSERVATION PLANTINGS ON NONCROPLAND PUBLISHED BY PENN STATE.

3. LOW FERTILITY SOIL TYPES LACKING IN SUFFICIENT AMOUNTS OF ESSENTIAL PLANT NUTRIENTS SUCH AS: NITROGEN, PHOSPHOROUS, POTASSIUM, SULFUR, MAGNESIUM, CALCIUM, IRON, MANGANESE, BORON, CHLORINE, ZINC, COPPER AND MOLYBDENUM, LIMIT VEGETATION STABILIZATION. SOIL TESTS MIGHT BE NECESSARY TO DETERMINE SITE SPECIFIC SOIL FERTILITY.
RESOLUTIONS: INCORPORATING SOIL NUTRIENTS CONSISTENT WITH RATES DETERMINED BY SOIL TESTING; SELECTIVE VEGETATIVE SPECIES TOLERANT TO LOW FERTILITY SOIL CONDITIONS, AND IMPLEMENTING COMBINATIONS OF THESE AND/OR OTHER METHODS. SPECIFIC TOLERANCE INFORMATION IS PROVIDED IN TABLE 1 OF THE EROSION CONTROL & CONSERVATION PLANTINGS ON NONCROPLAND PUBLISHED BY PENN STATE.

4. ERODIBLE SOIL TYPES EXHIBITING K VALUES GREATER THAN 0.36 OR PLASTICITY INDEX VALUES LOWER THAN 10, LIMIT VEGETATIVE STABILIZATION OF CHANNELS.
RESOLUTIONS: TEMPORARY CHANNEL LINING, PROVIDING PERMANENT CHANNEL LINING, DECREASING CHANNEL GRADE, INCREASING CHANNEL WIDTH, SELECTING VEGETATIVE WITH GREATER RETARDANCE, SELECTING PERMANENT LININGS OTHER THAN GRASSES, AND IMPLEMENTING COMBINATION OF THESE AND/OR METHODS. VEGETATIVE RETARDANCE INFORMATION IS PROVIDED IN TABLES 6 AND 7 OF THE EROSION AND SEDIMENT POLLUTION CONTROL MANUAL PUBLISHED BY PADEP.

5. WET SOIL TYPES HAVE EXCESSIVE ROOT ZONE AND SOIL MOISTURES. SOME SOIL SURVEYS INDICATE WETNESS, HIGH WATER TABLE AND FLOODING. THIS INDICATOR IS AFFECTED BY SOIL DISTURBANCE.
RESOLUTIONS: SELECTING VEGETATIVE SPECIES TOLERANT TO WET CONDITIONS, TILING VEGETATIVE AREAS, AND IMPLEMENTING COMBINATIONS OF THESE AND/OR OTHER METHODS. SPECIFIC TOLERANCE INFORMATION IS PROVIDED IN TABLE 1 OF THE EROSION CONTROL & CONSERVATION PLANTINGS ON NONCROPLAND PUBLISHED BY THE PENN STATE.

6. DRY SOIL TYPES LACK SUFFICIENT ROOT ZONE SOIL MOISTURES. THIS INDICATOR IS AFFECTED BY SOIL DISTURBANCE.
RESOLUTIONS: SELECTING VEGETATIVE SPECIES TOLERANT TO DRY CONDITIONS, IRRIGATING VEGETATED AREAS AND IMPLEMENTING COMBINATION OF THESE AND/OR OTHER METHODS. SPECIFIC TOLERANCE INFORMATION IS PROVIDED IN TABLE 1 OF THE EROSION CONTROL & CONSERVATION PLANTINGS ON NONCROPLAND PUBLISHED BY PENN STATE.

7. SOIL TYPES SUSCEPTIBLE TO SINKHOLE AND SOLUTION CHANNEL/CHAMBER FORMATION POSE LIMITATIONS ON LOCATING RESERVOIR AREAS OF SEDIMENT BASINS, SEDIMENT TRAPS, STORMWATER RETENTION BASINS, AND STORMWATER DETENTION BASINS.
RESOLUTIONS: LOCATING THOSE FACILITIES ON OTHER SOIL TYPES, LINING RESERVOIR AREAS WITH IMPERMEABLE LININGS, LIMITING STANDING WATER DEPTHS, LIMITING RETENTION TIMES AND IMPLEMENTING COMBINATIONS OF THESE AND/OR OTHER METHODS.

8. SOIL TYPES THAT EXHIBIT INSTABILITY IN POND EMBANKMENTS OR SUSCEPTIBILITY TO PIPING AND SEEPING POSE LIMITATIONS ON PLANNING EMBANKMENTS OF SEDIMENT BASINS, SEDIMENT TRAPS, STORMWATER RETENTION BASINS AND STORMWATER DETENTION BASINS.
RESOLUTIONS: IMPORTING OTHER SOIL FOR EMBANKMENT OF THOSE FACILITIES, LOCATING THOSE FACILITIES ON OTHER SOIL TYPES, LIMITING EMBANKMENT SLOPE STEEPNESS AND IMPLEMENTING COMBINATIONS OF THESE AND/OR OTHER METHODS.

9. SOIL THAT ARE DIFFICULT TO COMPACT, UNSUITABLE FOR WINTER GRADING, OR SUSCEPTIBLE TO FROST ACTION POSE LIMITATIONS ON PLANNING EMBANKMENTS OF SEDIMENT BASINS, SEDIMENT TRAPS, STORMWATER RETENTION BASINS AND STORMWATER DETENTION BASINS.
RESOLUTIONS: IMPORTING OTHER SOIL FOR EMBANKMENT OF THOSE FACILITIES, LOCATING THOSE FACILITIES ON OTHER SOIL TYPES, NOT CONSTRUCTING EMBANKMENTS DURING PERIODS PRONE TO FROST AND IMPLEMENTING COMBINATIONS OF THESE AND/OR OTHER METHODS

10. SUSCEPTIBILITY FOR THE DEVELOPMENT OF SINKHOLE WITHIN IDENTIFIED SOILS.
RESOLUTIONS: IN THE EVENT THAT PRESENCE OF A SINKHOLE IS DETECTED DURING THE COURSE OF WORK, CORRECTIVE MEASURES SHALL BE PERFORMED UNDER THE OBSERVATION AND GUIDANCE OF THE OWNER'S GEOTECHNICAL CONSULTANT.
EXCAVATE THE LOOSE, WET SOILS SURROUNDING THE SINKHOLE TO EXPOSE THE SINKHOLE "THROAT" (THE OPENING IN THE ROCK) AND THE ADJACENT STABLE SOILS/ROCK WHERE POSSIBLE, THE EXCAVATION SHALL EXTEND A MINIMUM OF TWO FEET (2') BEYOND THE STABLE SOILS OR TO THE ROCK SURFACE, WHICHEVER IS ENCOUNTERED FIRST.
FILL THE EXPOSED SINKHOLE "THROAT" WITH LEAN CONCRETE TO BLOCK THE MIGRATION OF THE UPPER LAYERS OF SOIL THROUGH THE ROCK OPENING.
AFTER CONCRETE HAS CURED OVERNIGHT BACKFILL THE REMAINDER OF THE EXCAVATION WITH CLAYEY SOILS TO PROVIDE A LOW PERMEABILITY BARRIER. THE CLAYEY SOILS SHALL BE PLACED IN 8" LIFTS AND EACH LIFT COMPACTED BY REPEATED PASSES OF THE COMPACTION EQUIPMENT UNTIL STABLE. CARE SHALL BE TAKEN TO ASSURE THAT THE SOIL AT THE EDGES OF THE EXCAVATION ARE WELL COMPACTED.

LOCATION OF ALL SURFACE WATERS AND THEIR CLASSIFICATION UNDER CHAPTER 93
§102.4(b)(5)(v)

1. THE SUBJECT SITE IS LOCATED WITHIN THE NESHAMINY CREEK WATERSHED, WHICH HAS A WWF (WARM WATER FISH) CHAPTER 93 CLASSIFICIATION.
2. THE DEVELOPMENT IS IN NEITHER AN HQ NOR AN EV WATERSHED AND THEREFORE, NO BOUNDARIES ARE SHOWN.
3. THERE ARE WETLANDS LOCATED ON THE PROJECT SITE.

E&S PLAN PLANNING & DESIGN
§102.4(b)(4)

THE FOLLOWING MEASURES ARE TAKEN TO MINIMIZE THE EXTENT AND DURATION OF EARTH DISTURBANCE:
- ACCESS THE SITE THRU DESIGNATED CONSTRUCTION ENTRANCES
- PROTECT WOODLAND AND WETLAND AREAS WITH TREE PROTECTION FENCING
- SEQUENCE CONSTRUCTION ACTIVITIES BY LIMITING DISTURBANCES TO A SPECIFIC TASK SUCH THAT EACH TASK IS COMPLETED BEFORE THE NEXT TASK IS INITIATED

THE FOLLOWING MEASURES ARE TAKEN TO MAXIMIZE PROTECTION OF EXISTING DRAINAGE FEATURES AND VEGETATION:
- ACCESS THE SITE THRU DESIGNATED CONSTRUCTION ENTRANCES
- PROTECT WOODLANDS AND WETLAND AREAS WITH TREE PROTECTION FENCING

THE FOLLOWING MEASURES ARE TAKEN TO MINIMIZE SOIL COMPACTION:
- ACCESS THE SITE THRU DESIGNATED CONSTRUCTION ENTRANCES
- USE OF TREADED MACHINERY WHERE PRACTICAL DURING EARTHMOVING OPERATIONS
- GRADE SITE TO MINIMIZE EXTENT OF CUTS/FILLS

THE FOLLOWING MEASURES ARE TAKEN TO PREVENT OR MINIMIZE GENERATION OF INCREASED STORM WATER RUNOFF:
- DIRECT RUNOFF TO AN SUBSURFACE INFILTRATION STORMWATER BASIN TO CONTROL RUNOFF RATES AND VOLUME
- PROVIDE PLANTED RAIN GARDEN TO HELP REDUCE RUNOFF VOLUME
- RE-VEGETATE DISTURBED AREAS TO HELP REDUCE RUNOFF VOLUME

BUCKS COUNTY CONSERVATION DISTRICT E&S STANDARD NOTES

1. STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET; STOCKPILE SLOPES MUST NOT EXCEED 2:1.
2. THE OPERATOR/RESPONSIBLE PERSON (O/RP) ON SITE SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.
3. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE O/RP SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES (BMPS) TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
4. THE O/RP SHALL ASSURE THAT AN EROSION AND SEDIMENT CONTROL PLAN HAS BEEN PREPARED AND APPROVED BY THE BUCKS COUNTY CONSERVATION DISTRICT AND IS BEING IMPLEMENTED AND MAINTAINED FOR ALL SOILS AND/OR ROCK SPOIL AND BORROW AREAS REGARDLESS OF THEIR LOCATIONS.
5. ALL PUMPING OF SEDIMENT-LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP SUCH AS A PUMPED WATER FILTER BAG DISCHARGING OVER AN UNDISTURBED AREA.
6. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE ON THE PROJECT SITE AT ALL TIMES.
7. EROSION AND SEDIMENT BMPS MUST BE CONSTRUCTED, STABILIZED AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS OF THOSE BMPS.
8. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPS CONTROLS MUST BE REMOVED. AREAS DISTURBED DURING THE REMOVAL OF THE BMPS MUST BE STABILIZED IMMEDIATELY.
9. AT LEAST SEVEN (7) DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITY, THE O/RP SHALL INVITE ALL CONTRACTORS INVOLVED IN THAT ACTIVITY, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE EROSION AND SEDIMENT CONTROL PLAN DESIGNER AND THE BUCKS COUNTY CONSERVATION DISTRICT TO A PRE-CONSTRUCTION MEETING. ALSO, AT LEAST THREE (3) DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITY, ALL CONTRACTORS INVOLVED IN THAT ACTIVITY SHALL NOTIFY THE PENNSYLVANIA ONE-CALL SYSTEM INC. AT 1-800-242-1776 TO DETERMINE ANY UNDERGROUND UTILITIES LOCATIONS.
10. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITY CEASES, THE O/RP SHALL STABILIZE ANY AREAS DISTURBED BY THE ACTIVITY. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT SPECIFIED RATES. DISTURBED AREAS THAT ARE NOT FINISHED GRADE WHICH WILL BE RE-DISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS.
11. DISTURBED AREAS THAT ARE AT A FINISHED GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.
12. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% VEGETATIVE OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.
13. UPON THE INSTALLATION OF TEMPORARY SEDIMENT BASIN RISER(S), A QUALIFIED SITE REPRESENTATIVE SHALL CONDUCT AN IMMEDIATE INSPECTION OF THE RISER(S), WHEREUPON THE BUCKS COUNTY CONSERVATION DISTRICT SHALL BE NOTIFIED IN WRITING THAT THE RISER IS SEALED (WATERTIGHT).
14. AT STREAM CROSSINGS, A 50-FOOT BUFFER SHALL BE MAINTAINED. ON BUFFERS, CLEARINGS, SOD DISTURBANCES AND EXCAVATIONS, EQUIPMENT TRAFFIC SHOULD BE MINIMIZED. ACTIVITY SUCH AS STACKING LOGS, BURNING CLEARED BRUSH, DISCHARGED RAINWATER FROM TRENCHES, WELDING PIPE SECTIONS, REFUELING AND MAINTAINING EQUIPMENT SHOULD BE AVOIDED WITHIN BUFFER ZONES.
15. UNTIL A SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPS MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION CONTROL BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEANOUT, REPAIR, REPLACEMENT, RE-GRADING, RE-SEEDING, RE-MULCHING AND RE-NETTING MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS, OR MODIFICATIONS OF THOSE INSTALLED, WILL BE REQUIRED.
16. SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF ON-SITE IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLIANS OR DRAINAGE AREA SWALES AND IMMEDIATELY STABILIZED OR PLACED IN SOIL STOCKPILES AND STABILIZED.
17. ALL BUILDING MATERIAL AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED IN ACCORDANCE WITH DEP'S SOLID WASTE REGULATIONS (25 PA CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ.) AND/OR ANY ADDITIONAL LOCAL, STATE OR FEDERAL REGULATIONS. NO BUILDING MATERIALS (USED OR UNUSED) OR WASTE MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.

MAINTENANCE PROGRAM
§102.4(b)(5)(x)

THE FOLLOWING MAINTENANCE PROGRAM HAS BEEN DEVELOPED TO PROVIDE FOR THE INSPECTION OF BMPS ON A WEEKLY BASIS AND AFTER EACH MEASURABLE RUNOFF EVENT, AND TO INCLUDE THE REPAIR OF THE BMPS TO ENSURE THEIR EFFECTIVE AND EFFICIENT OPERATION:

UNTIL THE SITE IS STABILIZED AND DURING CONSTRUCTION ACTIVITIES, ALL BMPS MUST BE MAINTAINED PROPERLY BY THE CONTRACTOR. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN-OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING, AND RENETTING MUST BE PERFORMED IMMEDIATELY AND IN ACCORDANCE WITH THESE PROCEDURES, PLANS AND DETAILS. ANY AREAS DISTURBED DURING MAINTENANCE MUST BE STABILIZED IMMEDIATELY IN ACCORDANCE WITH THE GENERAL CONSERVATION NOTES AND SPECIFICATIONS. ALL SITE INSPECTIONS MUST BE DOCUMENTED IN AN INSPECTION LOG KEPT FOR THIS PURPOSE INDICATING THE COMPLIANCE ACTIONS AND THE DATE, TIME AND NAME OF THE PERSON CONDUCTING THE INSPECTION. THE INSPECTION LOG MUST BE KEPT ON SITE AT ALL TIMES AND MADE AVAILABLE TO THE DISTRICT UPON REQUEST.

- COMPOST FILTER SOCK - INSPECTIONS SHALL BE CONDUCTED ON A WEEKLY BASIS AND/OR AFTER EACH RUNOFF EVENT. NEEDED REPAIRS SHOULD BE INITIATED IMMEDIATELY AFTER THE INSPECTION. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES ½ THE ABOVE GROUND SOCK. THE SEDIMENT SHALL BE DISPOSED OF ON SITE AND/OR IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION. BIODEGRADABLE FILTER SOCKS SHALL BE REPLACED AFTER SIX (6) MONTHS; PHOTODEGRADABLE SOCKS AFTER ONE (1) YEAR. UPON STABILIZATION OF THE TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.
- INLET CAPPING - INSPECTIONS SHALL BE CONDUCTED ON A WEEKLY BASIS AND/OR AFTER EACH RUNOFF EVENT. ACCUMULATED SEDIMENT / DEBRIS SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE LOCAL/STATE/FEDERAL REGULATIONS.
- SWALES - SWALES SHALL BE INSPECTED FOR EROSION AND/OR SEDIMENT ACCUMULATION ON AN ANNUAL BASIS, AFTER A SIGNIFICANT RUNOFF EVENT OR AS DIRECTED BY THE CONSERVATION DISTRICT AND/OR BOROUGH ENGINEER. NEEDED MAINTENANCE SHOULD BE INITIATED IMMEDIATELY AFTER THE INSPECTION. AREAS OF EROSION SHALL BE REGRADED AND STABILIZED, AND SEDIMENT MUST BE REMOVED TO RESTORE DESIGN CAPACITIES. ANY REMOVED SEDIMENT SHALL BE DISPOSED OF IN AN APPROVED MANNER AND IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. ALL AREAS DISTURBED DURING MAINTENANCE MUST BE STABILIZED IMMEDIATELY IN ACCORDANCE WITH THE GENERAL CONSERVATION NOTES AND SPECIFICATIONS.
- CONSTRUCTION ENTRANCES - LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE MUST BE INSPECTED FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING. A STABILIZED CONSTRUCTION EXIT SHALL BE CONSTRUCTED WHERE VEHICLES ENTER AND EXIT. EXITS SHALL BE MAINTAINED OR SUPPLEMENTED AS NECESSARY TO PREVENT THE RELEASE OF SEDIMENT FROM VEHICLES LEAVING THE SITE. ANY SEDIMENT DEPOSITED ON THE ROADWAY SHALL BE SWEPT AS NECESSARY THROUGHOUT THE DAY OR AT THE END OF EVERY DAY AND DISPOSED OF IN AN APPROPRIATE MANNER. SEDIMENT SHALL NOT BE WASHED INTO STORM SEWER SYSTEMS. SEDIMENT TRACKED ONTO ANY ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORKDAY AND DISPOSED AS A MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELED OR SWEPT INTO ANY ROAD SIDE DITCH, STORM SEWER OR SURFACE WATER.
- INSPECTIONS SHALL EVALUATE DISTURBED AREAS AND AREAS USED FOR STORING MATERIALS THAT ARE EXPOSED TO RAINFALL FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM OR DISCHARGING FROM THE SITE. IF NECESSARY, THE MATERIALS MUST BE COVERED OR ORIGINAL COVERS MUST BE REPAIRED OR SUPPLEMENTED. ALL AREAS DISTURBED DURING THE EARTHWORK PHASE OF CONSTRUCTION MUST BE TEMPORARILY SEEDED AND STABILIZED WITH HYDRO-STRAW IF PERMANENT STABILIZATION CANNOT BE ACHIEVED WITHIN FOUR (4) DAYS. ALSO, PROTECTIVE BERMS MUST BE CONSTRUCTED, IF NEEDED, IN ORDER TO CONTAIN RUNOFF FROM MATERIAL STORAGE AREAS.
- GRASSED AREAS SHALL BE INSPECTED TO CONFIRM THAT A HEALTHY STAND OF GRASS IS MAINTAINED. THE SITE HAS ACHIEVED FINAL STABILIZATION ONCE ALL AREAS ARE COVERED WITH BUILDING FOUNDATION OR PAVEMENT, OR HAVE A STAND OF GRASS WITH AT LEAST 70 PERCENT DENSITY OR GREATER IN ACCORDANCE WITH PERMIT REQUIREMENTS. THE VEGETATIVE DENSITY MUST BE MAINTAINED TO BE CONSIDERED STABILIZED. AREAS MUST BE WATERED, FERTILIZED, AND RESEEDED AS NEEDED TO ACHIEVE THIS REQUIREMENT.
- ALL DISCHARGE POINTS MUST BE INSPECTED TO DETERMINE WHETHER EROSION AND SEDIMENT CONTROL MEASURES ARE EFFECTIVE IN PREVENTING DISCHARGE OF SEDIMENT FROM THE SITE OR IMPACTS TO RECEIVING WATERS.

LIST OF CRITICAL STAGES

1. INSTALLATION OF THE SUBSURFACE INFILTRATION BASIN
2. INSTALLATION OF THE RAINGARDEN
3. INSTALLATION OF THE INLET WATER QUALITY DEVICES
4. INSTALLATION OF LANDSCAPING

RECYCLING OR DISPOSAL OF MATERIALS
§102.4(b)(5)(xi)

THE FOLLOWING IS A LIST THAT INCLUDES, BUT THAT IS NOT LIMITED TO, THE POTENTIAL CONSTRUCTION WASTES THAT MAY EXIST ON-SITE:
- CONCRETE CURB AND SIDEWALK
- ASPHALT
- E&S BMP - COMPOST FILTER SOCKS
- E&S BMP - EROSION CONTROL MATTING
- E&S BMP - INLET CAPPING
- E&S BMP - REGULATED FILL MATERIALS

ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1, AND 287.1 ET SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE. BELOW IS A LIST OF METHODS FOR THE PROPER RECYCLING/DISPOSAL OF VARIOUS MATERIALS:

1.) DUST CONTROL - CONSTRUCTION TRAFFIC MUST ENTER AND EXIT THE SITE AT THE STABILIZED CONSTRUCTION ENTRANCE. THE PURPOSE IS TO TRAP DUST AND MUD THAT WOULD OTHERWISE BE CARRIED OFF-SITE BY CONSTRUCTION TRAFFIC. WATER TRUCKS WILL BE USED AS NEEDED DURING CONSTRUCTION TO REDUCE DUST GENERATED ON THE SITE. DUST CONTROL MUST BE PROVIDED BY THE CONTRACTOR TO A DEGREE THAT IS ACCEPTABLE TO THE LOCAL CONSERVATION DISTRICT. AFTER CONSTRUCTION, THE SITE WILL BE STABILIZED, WHICH WILL REDUCE THE POTENTIAL FOR DUST GENERATION.

2.) SOLID WASTE DISPOSAL - NO SOLID MATERIALS, INCLUDING BUILDING MATERIALS, ARE ALLOWED TO BE DISCHARGED FROM THE SITE WITH STORMWATER. ALL SOLID WASTE, INCLUDING DISPOSABLE MATERIALS INCIDENTAL TO THE MAJOR CONSTRUCTION ACTIVITIES, MUST BE COLLECTED AND PLACED IN CONTAINERS. THE CONTAINERS WILL BE EMPTIED AS NECESSARY BY A CONTRACT TRASH DISPOSAL SERVICE AND HAULED AWAY FROM THE SITE.

3.) SANITARY FACILITIES - ALL PERSONNEL INVOLVED WITH CONSTRUCTION ACTIVITIES MUST COMPLY WITH STATE AND LOCAL SANITARY OR SEPTIC SYSTEM REGULATIONS. TEMPORARY SANITARY FACILITIES WILL BE PROVIDED AT THE SITE THROUGHOUT THE CONSTRUCTION PHASE. THEY MUST BE UTILIZED BY ALL CONSTRUCTION PERSONNEL AND WILL BE SERVICED BY A LICENSED COMMERCIAL OPERATOR.

4.) WATER SOURCE - NON-STORMWATER COMPONENTS OF SITE DISCHARGE MUST BE CLEAN WATER. WATER USED FOR CONSTRUCTION WHICH DISCHARGES FROM THE SITE MUST ORIGINATE FROM A PUBLIC WATER SUPPLY OR PRIVATE WELL APPROVED BY THE STATE HEALTH DEPARTMENT. WATER USED FOR CONSTRUCTION THAT DOES NOT ORIGINATE FROM AN APPROVED PUBLIC SUPPLY MUST NOT DISCHARGE FROM THE SITE.

5.) CONCRETE WASTE FROM CONCRETE READY-MIX TRUCKS - DISCHARGE OF EXCESS OR WASTE CONCRETE AND/OR WASH WATER FROM CONCRETE TRUCKS WILL BE ALLOWED ON THE CONSTRUCTION SITE, BUT ONLY IN SPECIFICALLY DESIGNATED DIKED AREAS PREPARED TO PREVENT CONTACT BETWEEN THE CONCRETE AND/OR WASH WATER AND STORMWATER THAT WILL BE DISCHARGED FROM THE SITE.

GEOLOGIC FORMATIONS/SOIL CONDITIONS THAT MAY HAVE THE POTENTIAL TO CAUSE POLLUTION
§102.4(b)(5)(xii)

THERE ARE NO GEOLOGIC FORMATIONS OR SOIL CONDITIONS THAT COULD CAUSE CONTAMINANT POLLUTION DURING EARTH DISTURBANCE ACTIVITIES.

POTENTIAL THERMAL IMPACTS TO SURFACE WATERS
§102.4(b)(5)(xiii)

A POTENTIAL FOR THERMAL IMPACTS EXISTS IN INSTANCES WHERE SURFACE RUNOFF IS DIRECTLY CONVEYED TO A RECEIVING STREAM WITHOUT ADEQUATE ATTENUATION OR COOLING. TO AVOID THERMAL IMPACTS, THE FOLLOWING ARE PROPOSED: INSTALLATION OF FILTER SOCK AND SEQUENCING PAVEMENT TO BE COMPLETED LAST AFTER INSTALLATION OF STORMWATER PIPING. ALL OF THOSE MEASURES WILL HELP TO CONTROL RUNOFF VOLUME AND RATE AND THEREBY PROVIDE ADDITIONAL COOLING TIME, THEREBY MINIMIZING THERMAL IMPACTS TO THE RECEIVING STREAM.

E&S PLAN DESIGNED AND IMPLEMENTED TO BE CONSISTENT WITH PCSM PLAN
§102.4(b)(5)(xiv)

REGARDING THE LOCATIONS OF EXISTING RIPARIAN BUFFERS RELATIVE TO THE LIMIT OF DISTURBANCE AND WHETHER PROPOSED INFILTRATION FACILITIES ARE OUTSIDE OF PROPOSED GRADING AREAS, NOTE THE FOLLOWING:
- THERE ARE NO EXISTING OR PROPOSED RIPARIAN BUFFERS.
- THERE ARE NO PROPOSED INFILTRATION BMPs OUTSIDE OF PROPOSED GRADING AREAS.

EXISTING/PROPOSED RIPARIAN FOREST BUFFERS
§102.4(b)(5)(xv)

REGARDING EXISTING OR PROPOSED RIPARIAN FOREST BUFFERS,
- THERE ARE NO EXISTING/PROPOSED RIPARIAN FOREST BUFFERS LOCATED WITHIN OR OUTSIDE THE LIMITS OF DISTURBANCE FOR THIS PROJECT.

DEFINITION OF CLEAN FILL AND IMPORT/EXPORT MATERIAL NOTES
TO COMPLY WITH SECTION C.3 OF NOI

IF THE SITE WILL NEED TO IMPORT OR EXPORT MATERIAL FROM THE SITE, THE RESPONSIBILITY FOR PERFORMING ENVIRONMENTAL DUE DILIGENCE AND DETERMINATION OF CLEAN FILL WILL REST WITH THE APPLICANT.

1.) CLEAN FILL IS DEFINED AS: UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREDGED MATERIAL, USED ASPHALT, AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. (THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE).

2.) CLEAN FILL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE: FILL MATERIALS AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE STILL QUALIFIES AaS CLEAN FILL PROVIDED THE TESTING REVEALS THAT THE FILL MATERIAL CONTAINS CONCENTRATIONS OF REGULATED SUBSTANCES THAT ARE BELOW THE RESIDENTIAL LIMITS IN TABLES FP-1A AND FP-1B FOUND IN THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL".

3.) ANY PERSON PLACING CLEAN FILL THAT HAS BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE MUST USE FORM FP-001 TO CERTIFY THE ORIGIN OF THE FILL MATERIAL AND THE RESULTS OF THE ANALYTICAL TESTING TO QUALIFY THE MATERIAL AS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE OWNER OF THE PROPERTY RECEIVING THE FILL. A COPY OF FORM FP-001 CAN BE FOUND AT THE END OF THESE INSTRUCTIONS.

4.) ENVIRONMENTAL DUE DILIGENCE: THE APPLICANT MUST PERFORM ENVIRONMENTAL DUE DILIGENCE TO DETERMINE IF THE FILL MATERIALS ASSOCIATED WITH THE PROJECT QUALIFY AS CLEAN FILL. ENVIRONMENTAL DUE DILIGENCE IS DEFINED AS: INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECTED TO A SPILL OR RELEASE OF REGULATED SUBSTANCE. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL".

FILL MATERIAL THAT DOES NOT QUALIFY AS CLEAN FILL IS REGULATED FILL. REGULATED FILL IS WASTE AND MUST BE MANAGED IN ACCORDANCE WITH THE DEPARTMENT'S MUNICIPAL OR RESIDUAL WASTE REGULATIONS BASED ON 25 PA. CODE CHAPTERS 287 RESIDUAL WASTE MANAGEMENT OR 271 MUNICIPAL WASTE MANAGEMENT, WHICHEVER IS APPLICABLE. THE REGULATIONS ARE AVAILABLE ON-LINE AT WWW.PACODE.COM.

OVERALL SITE SEQUENCE OF CONSTRUCTION
§102.4(b)(5)(vii)

A. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED IN COMPLIANCE WITH CHAPTER 102 REGULATIONS BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE. UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY THAT WILL EXCEED FOUR (4) DAYS, OR ANY STAGE THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION.

B. AT LEAST SEVEN (7) DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES INCLUDING, BUT NOT LIMITED TO: THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS AND A REPRESENTATIVE OF THE BUCKS COUNTY CONSERVATION DISTRICT FOR AN ON-SITE PRE-CONSTRUCTION MEETING. ALSO, AT LEAST THREE (3) DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INC. AT 1-800-242-1776 FOR BURIED UTILITIES LOCATION.

C. BEFORE INITIATING ANY REVISION TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED E&S CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE BUCKS COUNTY CONSERVATION DISTRICT. THE OPERATOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.

D. THE TERM 'PERMANENT STABILIZATION' USED THROUGHOUT THIS SEQUENCE IS MEANT TO DESCRIBE THE PROPER PLACING, GRADING, CONSTRUCTING, REINFORCING, LINING, AND COVERING OF SOIL, ROCK OR EARTH TO ENSURE THEIR PERMANENT RESISTANCE TO EROSION, SLIDING OR OTHER MOVEMENT. FOR AN EARTH DISTURBANCE TO BE PERMANENTLY STABILIZED, THE DISTURBED AREA SHALL BE COVERED WITH ONE OF THE FOLLOWING: A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER, WITH A DENSITY CAPABLE OF RESISTING ACCELERATED EROSION AND SEDIMENTATION; OR AN ACCEPTABLE BMP THAT PERMANENTLY MINIMIZES ACCELERATED EROSION AND SEDIMENTATION.

E. FOR EACH OF THE 'CRITICAL STAGES' SPECIFIED BELOW, THE PERMITTEE SHALL PROVIDE ENGINEERING OVERSIGHT. A LICENSED PROFESSIONAL OR DESIGNEE KNOWLEDGEABLE IN THE DESIGN AND CONSTRUCTION OF THE SUBSURFACE INFILTRATION BASIN AND RAINGARDEN, PREFERABLY THE DESIGN ENGINEER, SHALL CONDUCT THE OVERSIGHT.

1. INSTALL CONSTRUCTION ENTRANCES AS SHOWN ON THE PLANS. PHYSICALLY MARK LIMIT OF DISTURBANCE AND WETLANDS.
2. INSTALL ALL PERIMETER CONTROLS INCLUSIVE OF FILTER SOCK AND TREE PROTECTION FENCING AS INDICATED ON THE PLANS.
3. CONSTRUCT CULVERT TO DIRECT OFFSITE RUNOFF TO EXISTING PIPE. CONSTRUCTION WITHIN THE WETLAND/STREAM AREAS SHALL FOLLOW THE "WETLAND/STREAM CROSSING CONSTRUCTION SEQUENCE" PROVIDED ON THE E&S DETAILS SHEET.
4. CONSTRUCT SWALE TO DIVERT OFF-SITE RUNOFF. SWALE MUST BE STABILIZED IMMEDIATELY.
5. COMMENCE THE NECESSARY EARTHWORK TO REACH THE GRADES INDICATED ON THE PLANS.
6. INITIATE UTILITY INSTALLATION INCLUDING STORM, SANITARY, WATER, GAS ELECTRIC AND TELECOMMUNICATIONS AS SHOWN ON THE PLANS. STORM AND SANITARY SHALL START AT THE FURTHEST DOWNSTREAM END AND WORK UPSTREAM.
   - PRIOR TO INSTALLATION WITHIN THE ROADWAY, ENSURE THAT THE APPROPRIATE TRAFFIC CONTROL MEASURES ARE IN PLACE.
   - INLETS DISCHARGING TO SUBSURFACE INFILTRATION BASIN MUST BE BLOCKED IMMEDIATELY AFTER INSTALLATION AND REMAIN BLOCKED UNTIL SITE IS FULLY STABILIZED TO PREVENT SEDIMENT FROM ENTERING THE SUBSURFACE INFILTRATION BASIN.
7. CRITICAL STAGE - INSTALLATION OF THE SUBSURFACE INFILTRATION BASIN
   INITIATE INSTALLATION OF THE SUBSURFACE INFILTRATION BASIN. INSTALLATION OF THE UNDERGROUND INFILTRATION BASIN SHALL INCLUDE THE INSTALLATION OF THE OUTFALL SYSTEM (FR OS01 TO EW01).
   REFER TO THE ADDITIONAL INFILTRATION FACILITY SEQUENCING, INSTALLATION AND MAINTENANCE & INSPECTION NOTES PROVIDED ON THE POST CONSTRUCTION STORMWATER MANAGEMENT PLANS FOR CONSTRUCTION OF THE SUBSURFACE INFILTRATION BASIN.
   - PRIOR TO INITIATING CONSTRUCTION, THE CONTRACTOR IS TO PERFORM INFILTRATION TESTING AT THE SUBGRADE ELEVATION TO CONFIRM INFILTRATION RATES. THE RESULTS OF THE TESTING ARE TO BE GIVEN TO THE ENGINEER PROVIDING OVERSIGHT, WHO WILL THEN MAKE A DETERMINATION IF BASIN CONSTRUCTION SHOULD COMMENCE.
   - INLETS DISCHARGING TO SUBSURFACE INFILTRATION BASIN MUST BE BLOCKED IMMEDIATELY AFTER INSTALLATION AND REMAIN BLOCKED UNTIL SITE IS FULLY STABILIZED TO PREVENT SEDIMENT FROM ENTERING THE SUBSURFACE INFILTRATION BASIN.
   - NO HEAVY CONSTRUCTION EQUIPMENT, SUCH AS CRANES, SHALL BE PLACED ON TOP OF THE SUBSURFACE INFILTRATION BASIN TO AVOID DAMAGING THE SUBSURFACE INFILTRATION BASIN OR OVER-COMPACTING THE SUBSURFACE SOILS.
8. BUILDING PAD CONSTRUCTION CAN COMMENCE CONCURRENTLY WITH OTHER ON-SITE IMPROVEMENTS. NOTE THAT BUILDING CONSTRUCTION MAY COMMENCE UPON ACCEPTANCE OF BUILDING PAD BY OWNER.
   - THE CONCRETE WASHOUT MUST BE INSTALLED BEFORE ANY CONCRETE CAN BE POURED ON-SITE.
9. INSTALL THE STONE SUBBASE FOR CURB AND INSTALL CURBING, SIDEWALK, AND CRUSHED AGGREGATE BASE COURSE FOR PAVING.
10. FINAL GRADE AND PLACE TOPSOIL IN ALL LANDSCAPE AREAS. AS SOON AS SLOPES, CHANNELS, DITCHES AND OTHER DISTURBED AREAS REACH FINAL GRADE, THEY MUST BE PERMANENTLY STABILIZED. WHEN FINAL GRADE IS ACHIEVED DURING NON-GERMINATING MONTHS, THE AREA SHOULD BE MULCHED UNTIL THE BEGINNING OF THE NEXT PLANTING SEASON. AS DISTURBED AREAS WITHIN A PROJECT APPROACH FINAL GRADE, PREPARATIONS SHOULD BE MADE FOR SEEDING AND MULCHING TO BEGIN (I.E. ANTICIPATE THE COMPLETION DATE AND SCHEDULE THE SEEDER). IN NO CASE SHOULD AN AREA EXCEEDING 15,000 SQUARE FEET, WHICH IS TO BE STABILIZED BY VEGETATION, REACH FINAL GRADE WITHOUT BEING SEEDED AND MULCHED. WAITING UNTIL EARTHMOVING IS COMPLETED BEFORE MAKING PREPARATIONS FOR SEEDING AND MULCHING IS NOT ACCEPTABLE. SEEDING AND MULCHING REQUIREMENTS ARE SPECIFIED IN THE GENERAL CONSERVATION NOTES AND SPECIFICATIONS.
11. CRITICAL STAGE - INSTALL RAINGARDEN
   ONCE THE AREAS UP-SLOPE TO RAINGARDEN ARE PERMANENTLY STABILIZED, INSTALLATION OF THE FACILITIES CAN COMMENCE. THE RAINGARDEN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE BMP'S SEQUENCE OF CONSTRUCTION AND AS SHOWN IN THE DETAILS ON THE POST CONSTRUCTION STORMWATER MANAGEMENT PLAN AND DETAILS. CONSTRUCTION SHALL INCLUDE, BUT IS NOT LIMITED TO THE FOLLOWING:
   - EXCAVATION TO THE SUBGRADE DEPTH.
   - PLACEMENT OF PLANTING SOIL, RIP-RAP, INSTALLATION OF EROSION CONTROL BLANKETS, AND LANDSCAPING PER THE LANDSCAPE PLAN STARTING THE BOTTOM OF THE FACILITY AND WORKING UP SLOPE. THE CONTRACTOR SHALL DEMONSTRATE THAT THE SOILS MEET THE DESIGN REQUIREMENTS BY FORWARDING COPIES OF THE LABORATORY REPORTS TO THE DESIGN ENGINEER.
   - ANY AREAS DISTURBED DURING CONVERSION ARE TO BE STABILIZED IMMEDIATELY.
12. CRITICAL STAGE - INSTALL THE INLET WATER QUALITY DEVICES. INSTALL INLET WATER QUALITY DEVICES AS SPECIFIED PER THE MANUFACTURER'S RECOMMENDATIONS.
   REFER TO THE MANUFACTURER'S RECOMMENDATION FOR INSTALLATION PROVIDED ON THE POST CONSTRUCTION STORMWATER MANAGEMENT PLANS FOR INSTALLATION OF THE INLET WATER QUALITY DEVICES.
13. CRITICAL STAGE - INSTALL LANDSCAPING. INSTALL FINAL VEGETATION AND LANDSCAPING SPECIFIED ON THE LANDSCAPE PLAN AND DETAILS.
   REFER TO THE LANDSCAPING DETAILS & SPECIFICATIONS PROVIDED ON THE LANDSCAPING PLANS FOR INSTALLATION OF LANDSCAPING.
14. INSTALL BITUMINOUS PAVEMENT AND CONCRETE PAVING.
15. UPON PERMANENT STABILIZATION AND NOTIFICATION TO THE BUCKS COUNTY CONSERVATION DISTRICT, REMOVE ANY REMAINING EROSION AND SEDIMENT CONTROL FACILITIES. ANY AREA DISTURBED DURING THE REMOVAL OF EROSION AND SEDIMENT CONTROL FACILITIES SHALL BE STABILIZED IMMEDIATELY.
16. CLEAR SITE OF DEBRIS AND ALL UNWANTED MATERIALS. OPERATOR SHALL REMOVE FROM SITE, RECYCLE OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP OR DISCHARGE ANY BUILDING MATERIAL OR WASTE AT THIS SITE.
17. DEMOBILIZE.
18. A NOTICE OF TERMINATION FORM SHOULD BE SUBMITTED TO THE BUCKS COUNTY CONSERVATION DISTRICT UPON STABILIZATION AND FINAL COMPLETION OF THIS PROJECT.

LIMITATIONS FOR PENNSYLVANIA SOILS PERTAINING TO EARTH DISTURBANCE PROJECTS

SOIL NAME	CUTBANKS CAVE	CORROSIVE TO CONCRETE/ STEEL	DROUGHTY	EASILY ERODIBLE	FLOODING	DEPTH TO SATURATED ZONE/ SEASONAL HIGH WATER TABLE	HYDRIC/ HYDRIC INCLUSIONS	LOW STRENGTH/ LANDSLIDE PRONE	SLOW PERCOLATION	PIPING	POOR SOURCE OF TOPSOIL	FROST ACTION	SHRINK-SWELL	POTENTIAL SINKHOLE	PONDING	WETNESS
ABBOTTSTOWN	X	C/S		X		X	X	X	X	X	X	X				X

SOILS SURVEY OF BUCKS COUNTY, PENNSYLVANIA. (NOT FIELD VERIFIED)
SOURCE OF NATURAL RESOURCES CONSERVATION SERVICE MAP. AREA DATA: VERSION 13, 10/3/2017

SYMBOL	NAME	HYDROLOGIC SOIL GROUP	SLOPES (%)	DEPTH TO WATER TABLE	DEPTH TO RESTRICTIVE FEATURE	CONTAINS HYDRIC COMPONENTS	SURFACE RUNOFF
UfuB	URBAN LAND	NOT RATED	0-8	N/A	N/A	NO	N/A
UgB	URBAN LAND-ABBOTTSTOWN COMPLEX	D	0-8	≈6-18"	15 TO 30 INCHES TO FRAGIPAN; 40 TO 60 INCHES TO LITCHIC BEDROCK	NO	VERY HIGH

R:\17\PC171170\DRAWINGS\PLAN SETS\LAND DEVELOPMENT\REVISION 1\PC171170DETAILS-1---->LAYOUT: 22 E&S NOTES
GB

BOHLER ENGINEERING™
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING PROGRAM MANAGEMENT LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN PERMITTING SERVICES TRANSPORTATION SERVICES
UPSTATE NEW YORK ◆ NEW ENGLAND ◆ BOSTON, MA ◆ NEW YORK, NY ◆ NEW YORK METRO ◆ NORTHERN NEW JERSEY ◆ SOUTHERN NEW JERSEY ◆ PHILADELPHIA, PA ◆ PITTSBURGH, PA ◆ LEHIGH VALLEY, PA ◆ SOUTHEASTERN, PA ◆ REHOBOTH BEACH, DE ◆ BALTIMORE, MD ◆ SOUTHERN MARYLAND ◆ NORTHERN VIRGINIA ◆ CENTRAL VIRGINIA ◆ RALEIGH, NC ◆ WASHINGTON, DC ◆ CHARLOTTE, NC ◆ ATLANTA, GA ◆ TAMPA, FL ◆ SOUTH FLORIDA ◆ DALLAS, TX

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REVISIONS

REV	DATE	COMMENT	BY
1	09/21/18	PER TOWNSHIP REVIEW COMMENTS	JHT

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE - STOP CALL
PA1 SYSTEM, INC.
1-800-242-1776
POCS SERIAL NUMBER
20172771117

PROJECT No.: PC171170
DRAWN BY: JHT
CHECKED BY: JRK
DATE: 5/18/2018
SCALE: AS NOTED
CAD I.D.: PC171170DETAILS-1

PROJECT:
FINAL LAND DEVELOPMENT PLANS
FOR
PROVCO PINEGOOD, CHALFONT, LLC
PROPOSED WAWA
BUTLER AVENUE (SR 4202) & COUNTY LINE ROAD
NEW BRITAIN TOWNSHIP
BUCKS COUNTY
PENNSYLVANIA

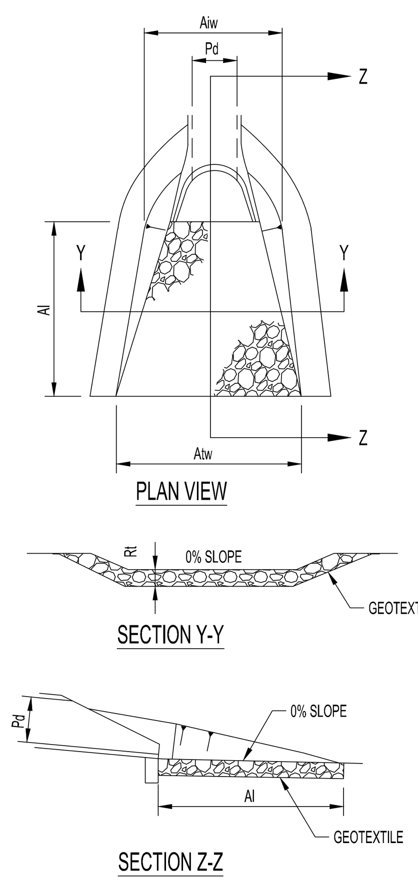
BOHLER ENGINEERING
1600 MANOR DRIVE, SUITE 200
CHALFONT, PENNSYLVANIA 18914
Phone: (215) 996-9100
Fax: (215) 996-9102
www.BohlerEngineering.com

J.R. KORCZAK
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE074279

SHEET TITLE:
SOIL EROSION AND SEDIMENT POLLUTION CONTROL NOTES

SHEET NUMBER:

REVISION 1 - 2018.09.21



OUTLET NO.	PIPE DIA Pd (IN)	RIPRAP SIZE R-_	RIPRAP THICK. Rt (IN)	APRON LENGTH Al (FT)	APRON INITIAL WIDTH Aiw (FT)	APRON TERMINAL WIDTH Atw (FT)
EW01	18	3	9.0	8.0	4.5	12.5
EW02	24	4	18.0	17.0	6.0	23.0
EW03	15	3	9.0	8.0	3.8	11.75

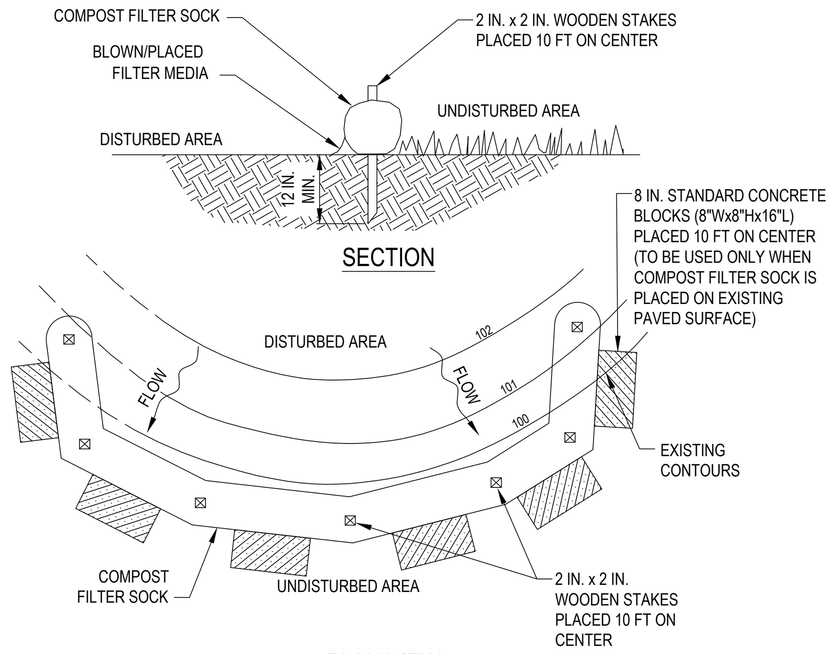
NOTES:

ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS.

ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY.

STANDARD CONSTRUCTION DETAIL #9-1
RIPRAP APRON AT PIPE OUTLET
WITH FLARED END SECTION OR ENDWALL

NOT TO SCALE



NOTES:
SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY BARRIER SHALL NOT EXCEED THAT SPECIFIED FOR THE SIZE OF THE SOCK AND THE SLOPE OF ITS TRIBUTARY AREA.

TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.

ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE BARRIER AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.

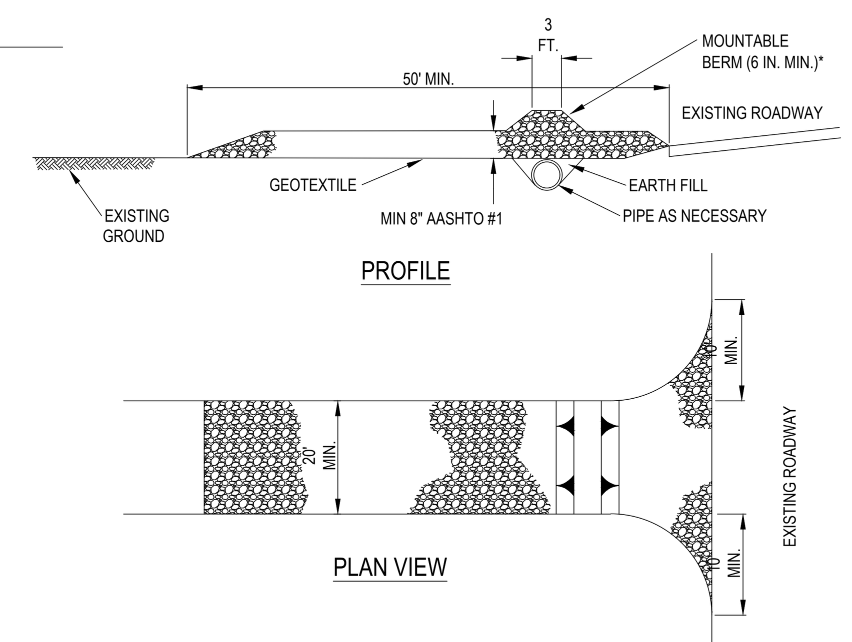
COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.

BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

STANDARD CONSTRUCTION DETAIL #4-1
COMPOST FILTER SOCK

NOT TO SCALE



* MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE

NOTES:

REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.

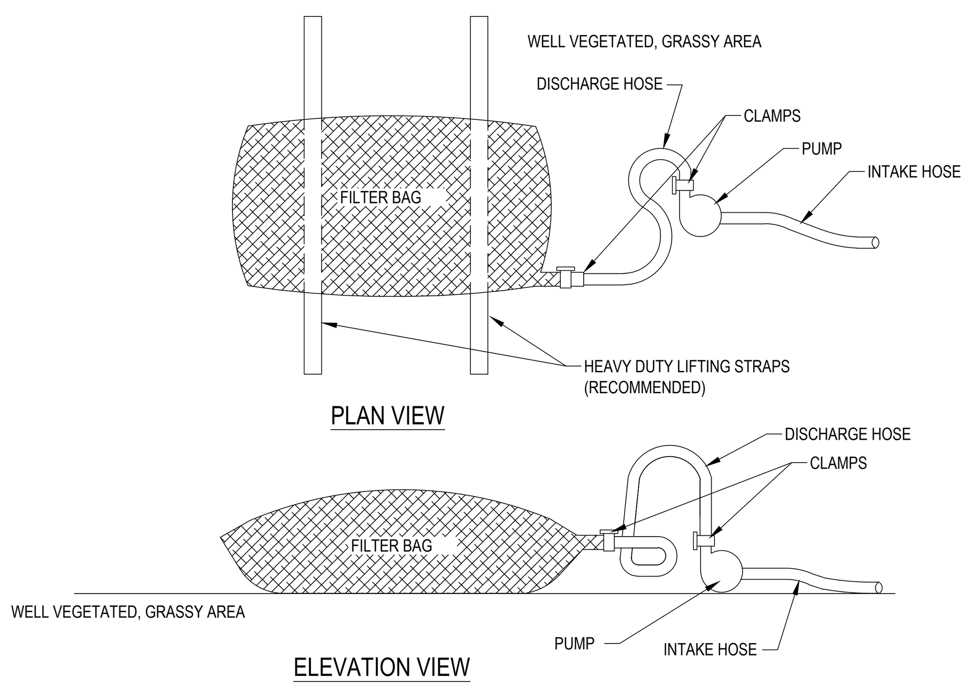
RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.

MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.

MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

STANDARD CONSTRUCTION DETAIL #3-1
ROCK CONSTRUCTION ENTRANCE

NOT TO SCALE



NOTES:

LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE FOLLOWING STANDARDS:

PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D-4884	60 LB/IN
GRAB TENSILE	ASTM D-4632	205 LB
PUNCTURE	ASTM D-4833	110 LB
MULLEN BURST	ASTM D-3786	350 PSI
UV RESISTANCE	ASTM D-4355	70%
AOS % RETAINED	ASTM D-4751	80 SIEVE

A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS SHALL BE PLACED ON STRAPS TO FACILITATE REMOVAL UNLESS BAGS COME WITH LIFTING STRAPS ALREADY ATTACHED.

BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%. FOR SLOPES EXCEEDING 5%, CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS.

NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HQ OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE.

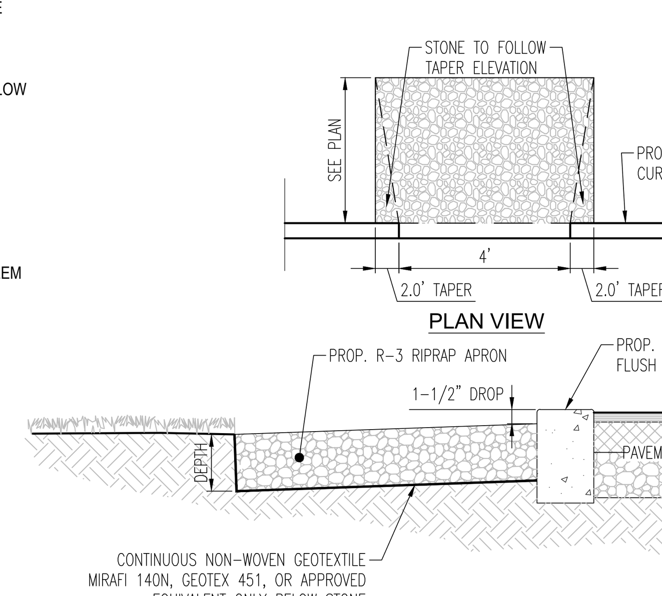
THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.

THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED.

FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

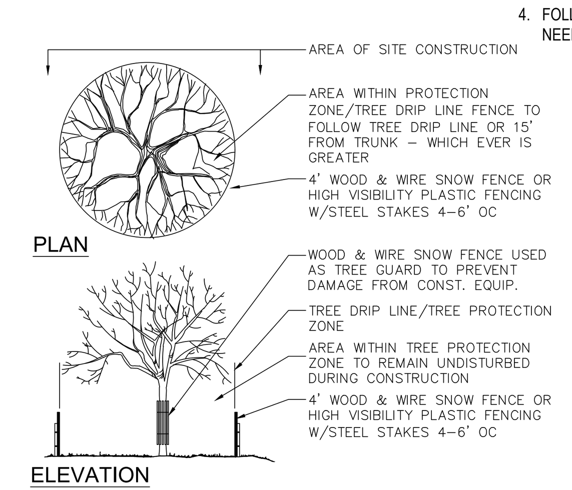
STANDARD CONSTRUCTION DETAIL #3-16
PUMPED WATER FILTER BAG

NOT TO SCALE



DETAIL OF RIP-RAP AT CURB BREAK

N.T.S.



TREE PROTECTION DURING SITE CONSTRUCTION

X / S11 SCALE: N.T.S. REV.: 2015.03.19

GENERAL CONSERVATION NOTES AND SPECIFICATIONS

I. GENERAL INFORMATION

A. THIS EROSION AND SEDIMENT CONTROL PLAN SHALL BE AVAILABLE AT THE SITE.
B. NO SEDIMENT OR SEDIMENT LADEN WATER MUST BE ALLOWED TO LEAVE THE SITE WITHOUT FIRST BEING PROPERLY FILTERED.
C. ANY SEDIMENT THAT IS TRACKED ONTO THE ROAD MUST BE CLEANED OFF BEFORE THE END OF THE DAY.
D. DISTURBED AREAS ON WHICH EARTHMOVING ACTIVITIES HAVE CEASED AND WHICH WILL REMAIN EXPOSED SHALL BE STABILIZED IMMEDIATELY, EITHER TEMPORARILY OR PERMANENTLY, INCLUDING THE RESTORATION OF DRIVEWAYS, STOCKPILES, OFF-SITE UNDERGROUND UTILITY LINES AND GRADED PERIMETER AREAS. DURING NON-GERMINATION PERIODS, MULCH MUST BE APPLIED AT RECOMMENDED RATES. CRUSHED STONE ON PAVEMENT SUBGRADES IS CONSIDERED ADEQUATE PROTECTION.
E. AREAS THAT FAIL TO GERMINATE MUST BE RE-SEEDED OR MULCHED.
F. WHERE DISTURBED AREAS ARE DIFFICULT TO STABILIZE, NETTING SHOULD BE USED TO HOLD SEED AND MULCH IN PLACE; THIS IS ESPECIALLY IMPORTANT AROUND WATERCOURSES, IN SWALES AND AREAS OF CONCENTRATED FLOWS, STEEP SLOPES.
G. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENTATION MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT CONTROL AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, RE-GRADING, RE-SEEDING, RE-MULCHING, AND RE-NETTING, MUST BE PERFORMED IMMEDIATELY. IF AT ANY TIME PRIOR TO SITE STABILIZATION ANY E&SP PROBLEMS OCCUR WHICH REQUIRE ADDITIONAL CONTROLS, IMMEDIATE ACTION MUST BE TAKEN TO CORRECT THE PROBLEMS.
I. THE CONTRACTOR MUST DEVELOP AND COORDINATE WITH OWNER AND HAVE APPROVED BY THE COUNTY CONSERVATION DISTRICT, A SEPARATE EROSION AND SEDIMENT POLLUTION CONTROL PLAN FOR EACH SPOIL, BORROW OR OTHER WORK AREA NOT DETAILED ON THE PERMITTED PLANS, WHETHER LOCATED WITHIN OR OUTSIDE OF THE LIMITS OF CONSTRUCTION.
J. CONTRACTOR SHALL NOTIFY THE COUNTY CONSERVATION DISTRICT OF DISPOSAL METHOD AND LOCATION OF MATERIALS (IF ANY) TO BE REMOVED FROM SITE.
K. STANDARD FOR DISPOSAL OF MATERIALS ALL MATERIALS TO BE RECYCLED OR DISPOSED OF MUST DO SO IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL REGULATIONS. STOCKPILES TO BE HAULED OFF SITE MUST HAVE AN APPROVED EROSION AND SEDIMENT CONTROL PLAN AT THE DESTINATION LOCATION.
L. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN SOIL STABILIZATION THROUGHOUT CONSTRUCTION. ADDITIONAL MEASURES REQUIRED TO ENSURE ON-SITE AND OFF-SITE STABILIZATION IN AND ADJACENT TO CONSTRUCTION ACTIVITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND HALL BE AT NO COST TO THE OWNER. IMMEDIATE NOTIFICATION SHALL BE GIVEN TO THE OWNER AND ENGINEER SHOULD ADDITION STABILIZATION MEASURES BE NECESSARY; IN ACCORDANCE WITH THE NPDES AND/OR SWPPP REQUIREMENTS FOR THE PROJECT.

II. STANDARD FOR LAND GRADING

A. DEFINITION: RESHAPING THE GROUND SURFACE BY GRADING TO PLAN GRADES, WHICH ARE DETERMINED BY TOPOGRAPHIC SURVEY AND LAYOUT.
   1. PROVISIONS SHALL BE MADE TO SAFELY CONDUCT SURFACE WATER TO STORM DRAINS OR SUITABLE WATER COURSES AND TO PREVENT SURFACE RUNOFF FROM DAMAGING CUT FACES AND FULL SLOPES.
   2. ADJOINING PROPERTY SHALL BE PROTECTED FROM EXCAVATION AND FILLING OPERATIONS.
B. INSTALLATION REQUIREMENTS
   1. TIMBER, LOGS, BRUSH, RUBBISH, ROCKS, STUMPS AND VEGETABLE MATTER WHICH WILL INTERFERE WITH THE GRADING OPERATION OR AFFECT THE PLANNED STABILITY OR FILL AREAS SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH STANDARD FOR DISPOSAL OF MATERIALS.
   2. FILL MATERIAL IS TO BE FREE OF BRUSH, RUBBISH, TIMBER, LOGS, VEGETATIVE MATTER AND STUMPS IN AMOUNTS THAT WILL BE DETRIMENTAL TO CONSTRUCTING STABLE FILLS.
   3. ALL FILLS SHALL BE COMPACTED SUFFICIENTLY FOR THEIR INTENDED PURPOSE AND AS REQUIRED TO REDUCE SLIPPING, EROSION OR EXCESS SATURATION.
   4. ALL DISTURBED AREAS SHALL BE LEFT WITH A NEAT AND FINISHED APPEARANCE AND SHALL BE PROTECTED FROM EROSION.
   5. (SEE I. D.)

III. STANDARD FOR UTILITY TRENCH EXCAVATION

A. LIMIT ADVANCE CLEARING AND GRUBBING OPERATIONS TO A DISTANCE EQUAL TO TWO TIMES THE LENGTH OF PIPE INSTALLATION THAT CAN BE COMPLETED IN ONE DAY.
B. LIMIT DAILY TRENCH EXCAVATION TO THE LENGTH OF PIPE PLACEMENT, PLUG INSTALLATION AND BACKFILLING THAT CAN BE COMPLETED THE SAME DAY. DAILY BACKFILLING OF THE TRENCH MAY BE DELAYED FOR A MAX. OF SIX DAYS FOR CERTAIN CASES REQUIRING TESTING OF THE INSTALLED PIPE.
C. WATER WHICH ACCUMULATES IN THE OPEN TRENCH WILL BE COMPLETELY REMOVED BY PUMPING TO A FACILITY FOR REMOVAL OF SEDIMENT (SEDIMENT FILTER BAG, SEE DETAIL) BEFORE PIPE PLACEMENT AND/OR BACKFILLING BEGINS.
D. ON THE DAY FOLLOWING PIPE PLACEMENT AND TRENCH BACKFILLING, THE DISTURBED AREA WILL BE GRADED TO FINAL CONTOURS AND APPROPRIATE TEMPORARY EROSION AND SEDIMENT POLLUTION CONTROL MEASURES / FACILITIES WILL BE INSTALLED. SEEDING AND MULCHING OF ALL DISTURBED AREAS WILL BE DONE IMMEDIATELY.
E. WORK CREWS AND EQUIPMENT FOR TRENCHING, PLACEMENT OF PIPE, PLUG CONSTRUCTION AND BACKFILLING WILL BE SELF CONTAINED AND SEPARATE FORM CLEARING AND GRUBBING AND SITE RESTORATION AND STABILIZATION OPERATIONS.
F. ALL SOIL EXCAVATED FROM THE TRENCH WILL BE PLACED ON THE UPHILL SIDE OF THE TRENCH.

IV. STANDARD FOR TEMPORARY STABILIZATION

A. STANDARD FOR TEMPORARY STABILIZATION WITH FIBERMULCH
   1. MULCHING IS MOST APPLICABLE TO THOSE AREAS SUBJECT TO PERIODIC DISTURBANCE AND REWORKING IN ADDITION, STABILIZATION WITH FIBER MULCH SHALL BE USED DURING NON-GERMINATION PERIODS.
   2. PERFORM ALL CULTURAL OPERATIONS AT RIGHT ANGLES TO THE SLOPE.
   3. GRADE AS NEED AND FEASIBLE. SEE STANDARD FOR LAND GRADING.
   4. PROTECTIVE MATERIALS TO BE USED:
      a. UNROTTED SMALL-GRAIN UN-CHOPPED STRAW OR HAY AT 3.0 TONS PER ACRE (4 TONS PER ACRE BETWEEN NOVEMBER 1 AND MARCH 1) SPREAD UNIFORMLY AND ANCHORED WITH LIQUID MULCH BINDER. BINDER PRODUCTS SHALL BE INSTALLED IN ACCORDANCE WITH THE PRODUCT MANUFACTURER'S SPECIFICATIONS.
      b. HYDROMULCHER. USE IS LIMITED TO FLATTER SLOPES AND DURING OPTIMUM SEEDING PERIODS IN SPRING AND FALL. LIQUID MULCH BINDERS: APPLY IMMEDIATELY AFTER PLACEMENT OF HAY OR STRAW MULCH TO MINIMIZE LOSS BY WIND OR WATER. PRODUCTS TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS.

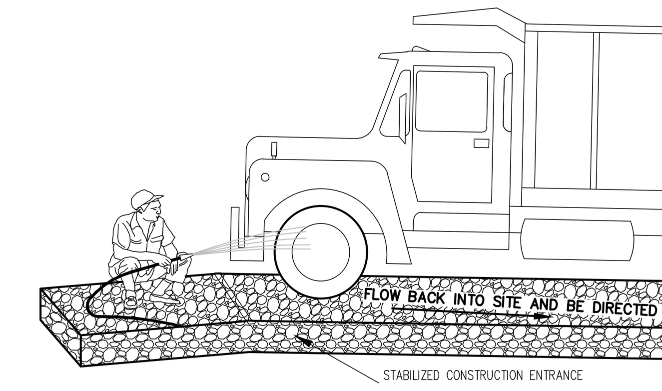
B. STANDARD FOR TEMPORARY STABILIZATION WITH SEED
   1. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN TWELVE (12) MONTHS MUST BE SEEDED AND MULCHED IMMEDIATELY WITH A TEMPORARY COVER.
   2. ALL AREAS TO BE PERMANENTLY SEEDED SHALL ALSO RECEIVE TEMPORARY SEEDING CONCURRENTLY.
   3. SEEDBED PREPARATION FOR TEMPORARY SEEDING
      a. PERFORM ALL CULTURAL OPERATIONS AT RIGHT ANGLES TO SLOPE.
      b. APPLY AGRICULTURAL LIME AT A RATE OF 1 TONE PER ACRE
      c. APPLY 10-20-20 FERTILIZER A RATE OF 500 POUNDS PER ACRE
      d. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF FOUR (4) INCHES.

C. SEEDING: SEE SEEDING SPECIFICATIONS

V. STANDARD FOR PERMANENT STABILIZATION

A. SPECIFICATION FOR SEEDING & SOIL TREATMENT FOR PERMANENT VEGETATIVE COVER
   1. SITE PREPARATION
      a. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION AND ANCHORING, AND MAINTENANCE.
      b. SUBSOIL SHOULD BE TESTED FOR LIME REQUIREMENT AND LIMESTONE, IF NEEDED, SHOULD BE APPLIED TO BRING SOIL PH TO BETWEEN 5.5 AND 7 AND INCORPORATED INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES.
      c. IMMEDIATELY PRIOR TO TOPSOIL DISTRIBUTION, THE SURFACE SHOULD BE SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3-5 INCHES TO PROVIDE A GOOD BOND WITH THE TOPSOIL.
   2. APPLYING TOPSOIL
      a. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING SOIL STRUCTURE.
      b. ALL DISTURBED TOPSOIL ON-SITE IS TO BE REDISTRIBUTED ON-SITE IN AREAS NOT COVERED BY IMPERVIOUS SURFACES. NO REMOVAL OF TOPSOIL IS ALLOWED UNLESS APPROVED BY THE BOROUGH. UNIFORM APPLICATION TO A DEPTH OF 6-8 INCHES (UNSETTLED) IS RECOMMENDED. SOILS WITH A PH OF 4.0 OR LESS OR CONTAINING IRON SULFIDE SHALL BE COVERED WITH A MINIMUM DEPTH OF 12 INCHES OF SOIL HAVING A PH OF 5.0 OR MORE.
   3. SEEDBED PREPARATION
      a. A SOIL TEST SHALL BE CONDUCTED TO ACCURATELY DETERMINE NECESSARY SOIL AMENDMENTS.
      b. PERFORM ALL CULTURAL OPERATIONS AT RIGHT ANGLES TO SLOPE.
      c. SOIL MODIFICATIONS:
         1. APPLY 10-10-40 RATED FERTILIZER AT A RATE OF 1000 POUNDS PER ACRE OR 25 POUNDS PER 1000 SQUARE FEET, OR AS DIRECTED BY SOIL TEST.
         2. APPLY AGRICULTURAL LIME AT A RATE OF 6 TONS PER ACRE OR 240 POUNDS PER 1000 SQUARE FEET, OR AS DIRECTED BY SOIL TEST.
      d. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM FINE SEEDBED IS PREPARED.
      e. REMOVE FROM THE SURFACE ALL STONES ONE INCHE (1") OR LARGER IN ANY DIMENSION, REMOVE ALL OTHER DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, PIECES OF CONCRETE, CLODS, LUMPS OR OTHER UNSUITABLE MATERIAL.
      f. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RE-TILLED AND FIRMED AS ABOVE.
   4. SEEDING: SEE SEEDING SPECIFICATIONS

B. STANDARD FOR PERMANENT STABILIZATION WITH SOD
   1. METHODS AND MATERIALS
      a. CULTIVATED SOD IS PREFERRED OVER NATIVE OR PASTURE SOD. SPECIFY "CERTIFIED SOD," OR OTHER HIGH QUALITY CULTIVATED SOD.
      b. SOD SHOULD BE FREE OF WEEDS AND UNDESIRABLE COARSE WEEDY GRASSES.
      c. SOD SHOULD BE OF UNIFORM THICKNESS, APPROXIMATELY 5/8 INCH, PLUS OR MINUS 1/4 INCH, AT TIME OF CUTTING. (EXCLUDES TOP GROWTH).
      d. SOD SHOULD BE VIGOROUS AND DENSE AND BE ABLE TO RETAIN ITS OWN SHAPE AND WEIGHT WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP FROM THE UPPER 0% OF THE STRIP. BROKEN PADS OR TORN AND UNEVEN ENDS WILL NOT BE ACCEPTABLE.
      e. A SOD OF KENTUCKY 31 TALL FESCUE WITH BLUEGRASS, OR A FESCUE BLEND IS PREFERRED.
      f. ONLY MOIST, FRESH UNHEATED SOD SHOULD BE USED. SOD SHOULD BE HARVESTED, DELIVERED AND INSTALLED WITHIN A PERIOD OF 36 HOURS.
   2. SITE PREPARATIONS: SEE SPECIFICATION FOR SEEDING & SOIL TREATMENT FOR PERMANENT VEGETATIVE COVER (ITEM V.A. ABOVE)
   3. SOD PLACEMENT
      a. SOD STRIPS SHOULD BE LAID ON THE CONTOUR, NEVER UP AND DOWN THE SLOPE, STARTING AT THE BOTTOM OF THE SLOPE AND WORKING UP. ON STEEP SLOPES, THE USE OF LADDERS WILL FACILITATE THE WORK AND PREVENT DAMAGE TO THE SOD. DURING PERIODS OF HIGH TEMPERATURE, LIGHTLY IRRIGATE THE SOIL IMMEDIATELY PRIOR TO LAYING THE SOD.
      b. PLACE SOD STRIPS WITH SNUG EVEN JOINTS THAT ARE STAGGERED. OPEN SPACES INVITE EROSION.
      c. ROLL OR TAMP SOD IMMEDIATELY FOLLOWING PLACEMENT TO INSURE SOLID CONTACT OF ROOT MAT AND SOIL SURFACE. DO NOT OVERLAP SOD. ALL JOINTS SHOULD BE BUTTED TIGHTLY IN ORDER TO PREVENT VOIDS, WHICH WOULD CAUSE DRYING OF THE ROOTS.
      d. ON SLOPES GREATER THAN 3 TO 1, SECURE SOD TO SURFACE SOIL WITH WOOD PEGS, WIRE STAPLES OR A BIODEGRADABLE FASTENER.
      e. SURFACE WATER CANNOT ALWAYS BE DIVERTED FROM FLOWING OVER THE FACE OF THE SLOPE, BUT A CAPPING STRIP OF HEAVY JUTE OR PLASTIC NETTING, PROPERLY SECURED, ALONG THE CROWN OF THE SLOPE AND EDGES WILL PROVIDE EXTRA PROTECTION AGAINST LIFTING AND UNDERCUTTING OF SOD. THE SAME TECHNIQUE CAN BE USED TO ANCHOR SOD IN WATER-CARRYING CHANNELS AND OTHER CRITICAL AREAS. WIRE STAPLES MUST BE USED TO ANCHOR NETTING IN CHANNEL WORK.
      f. IMMEDIATELY FOLLOWING INSTALLATION, SOD SHOULD BE WATERED UNTIL MOISTURE PENETRATES THE SOIL LAYER BENEATH SOD TO A DEPTH OF 4 INCHES. MAINTAIN OPTIMUM MOISTURE FOR AT LEAST TWO WEEKS.
   4. FOLLOW-UP INSPECTION: AFTER THE FIRST GROWING SEASON, THE SOD SHOULD BE INSPECTED TO DETERMINE IF ADDITIONAL FERTILIZATION OR LIMING IS NEEDED.



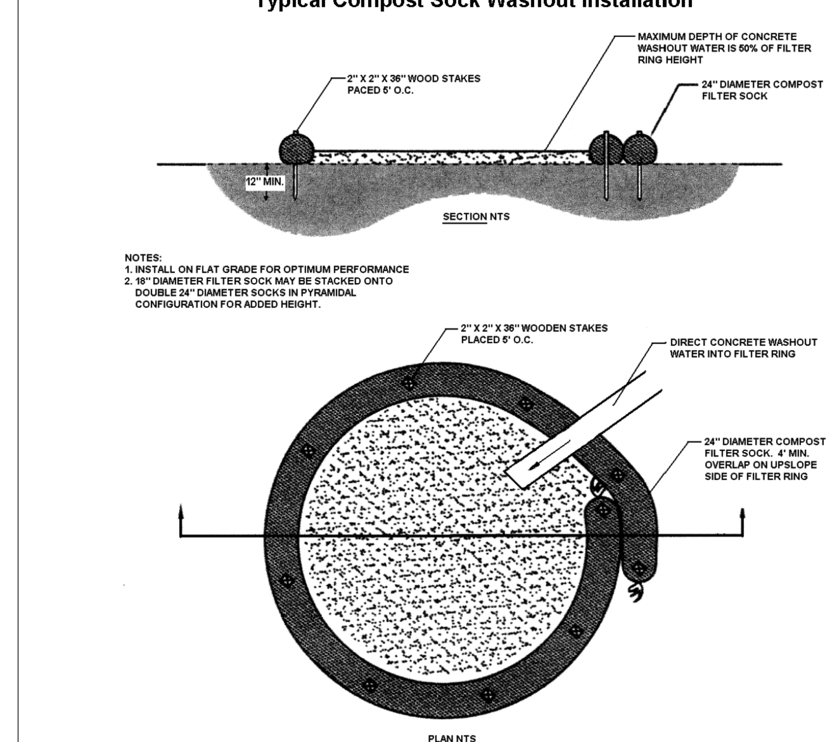
VEHICLE WASH DETAIL

N.T.S.

SEEDING SPECIFICATIONS

1. SEEDING DATES
   A. SEEDING SHALL OCCUR BETWEEN MARCH 1ST AND MAY 15TH OR BETWEEN AUGUST 15TH AND NO LATER THAN OCTOBER 15TH.
   B. IF SEEDING CANNOT BE CONDUCTED DURING THE TIMEFRAMES NOTED ABOVE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL CONSERVATION DISTRICT AND ALL APPROPRIATE AGENCIES TO DETERMINE AN ACCEPTABLE MEANS IN WHICH TO STABILIZE THE SITE THROUGH THE NEXT GROWING SEASON.
2. SEED MIXTURES: SEED MIXTURE TO BE USED ON THIS SITE SHALL CONSIST OF THE FOLLOWING UNLESS OTHERWISE NOTED ON THE PLANS. RATES ARE IN THE FORM OF POUNDS PER ACRE (LB/A) PER PURE LIVE SEED (POUNDS / ACRE PLS). CONTRACTOR WILL NEED TO ADJUST ACCORDINGLY BASED ON THE SEED GERMINATION AND PURITY RATING (SEE ITEM #3 BELOW).
   A. TEMPORARY SEED MIXTURES: DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE DISTURBED AGAIN WITHIN TWELVE (12) MONTHS MUST BE SEEDED WITH A TEMPORARY SEED MIXTURE AS FOLLOWS:
      ANNUAL RYE (40 POUNDS / ACRE PLS)
      OR SPRING OATS (96 POUNDS / ACRE PLS)
      OR WINTER RYE (168 POUNDS / ACRE PLS)
      (REFERENCE: PENN STATE "EROSION CONTROL & CONSERVATION PLANTINGS ON NONCROPLAND", TABLE 5)
   B. PERMANENT SEEDING SHALL CONSIST OF A NURSE CROP PLUS A PERMANENT SEED MIXTURE, AS FOLLOWS:
      I. NURSE CROP (SELECT ONE):
      ANNUAL RYE (10 POUNDS / ACRE PLS)
      OR SPRING OATS (64 POUNDS / ACRE PLS)
      OR WINTER RYE (56 POUNDS / ACRE PLS)
      (REFERENCE: PA DEP EROSION AND SEDIMENT CONTROL PROGRAM MANUAL, LATEST EDITION, TABLE 11.4, SEED MIX #1)
      II. PERMANENT SEED MIX:
      TALL FESCUES (64 POUNDS / ACRE PLS)
      OR FINE FESCUE (35 POUNDS / ACRE PLS)
      OR KENTUCKY BLUEGRASS (25 POUNDS / ACRE PLS) PLUS REDTOP (3 POUNDS / ACRE PLS)
      OR PERENNIAL RYEGRASS (15 POUNDS / ACRE PLS)
      (REFERENCE: PA DEP EROSION AND SEDIMENT CONTROL PROGRAM MANUAL, LATEST EDITION, TABLE 11.4, SEED MIX #2)
3. PURE LIVE SEED:
   A. SEED USED FOR THE PURPOSE OF PERMANENT STABILIZATION SHALL BE LABELED WITH GERMINATION AND PURITY PERCENTAGES. UNLABELED SEED WILL BE REJECTED. SEED SHALL NOT BE USED MORE THAN ONE (1) YEAR BEYOND THE LABEL DATE.
   B. DETERMINING THE PERCENT PURE LIVE SEED (PERCENT PLS) OF A LABELED SEED: MULTIPLY BY THE PERCENTAGE OF PURE SEED BY THE PERCENTAGE OF GERMINATION AND DIVIDE THE RESULT BY 100 ((%PURE X %GERMINATION) / 100)
   C. DETERMINING THE ACTUAL SEED RATE: SIMPLY DIVIDE THE PERCENT PLS RATING OF THE SEED INTO THE PLS REQUIRED, AS NOTED ABOVE. THE RESULT IS THE POUNDS OF SEED REQUIRED. FOR EXAMPLE: IF THE REQUIRED RATE IS 64 POUNDS PLS, AND THE SEED IS RATED AT 35% PLS, DIVIDE 64 BY 0.35 TO GET 182.9 POUNDS, WHICH IS THE AMOUNT OF THAT SEED REQUIRED PER ACRE.
4. APPLICATION OF SEED: SEEDING SHALL BE APPLIED AND ESTABLISHED IN ACCORDANCE WITH THE "EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL" AS PUBLISHED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WATER QUALITY PROTECTION (MOST RECENT EDITION).
   A. SEED SHALL BE APPLIED IN A NON-COMPACTED, ROUGHENED TOPSOIL.
   B. SEED MAY BE APPLIED THROUGH ANY OF THE FOLLOWING MEANS AND METHODS, OR OTHER ACCEPTED INDUSTRY PRACTICES, UNLESS SPECIFICALLY NOTED OTHERWISE ON THESE PLANS:
      I. DRILL SEEDING
      II. BROADCAST SEEDING (TWO DIRECTIONS)
      III. HYDROSEEDING (TWO DIRECTIONS)
   C. ALL SEED SHALL BE TEMPORARILY OR PERMANENTLY STABILIZED UNTIL A 70% PERENNIAL COVER IS ACHIEVED:
      I. TEMPORARY STABILIZATION WITH STRAW:
         1. STRAW MULCH SHALL BE APPLIED ON TOP OF THE FRESHLY SEEDED AREAS AT A RATE OF 3 TONS PER ACRE (4 TONS PER ACRE BETWEEN NOVEMBER 1ST AND MARCH 1ST).
         2. STRAW SHALL BE STABILIZED WITH A WOOD OR PAPER FIBER MULCH AND TACKIFIER SOLUTION IN ACCORDANCE WITH THE PRODUCT MANUFACTURER'S SPECIFICATIONS.
      II. TEMPORARY/PERMANENT STABILIZATION WITH EROSION CONTROL MATTING/BLANKETS (WHERE SPECIFIED):
         1. MATTING/BLANKETS SHALL BE INSTALLED IN AREAS AS NOTED ON THE EROSION & SEDIMENT CONTROL PLAN OR WITHIN 50 FEET OF PONDS, STREAMS OR WETLANDS. THE PRODUCT SHALL BE INSTALLED AND STAPLED ON TOP OF THE SEEDING IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS.
         2. AREAS WITH MATTING/BLANKETS SHALL NOT BE TRACKED (CATWALKED) AFTER INSTALLATION.
         3. MATTING/BLANKETS SHALL BE VISUALLY INSPECTED DAILY TO ENSURE THAT THE PRODUCT IS FUNCTIONING PROPERLY, IS HELD FAST TO THE SOIL SURFACE AND IS IN GOOD CONDITION.
   D. ONCE SEED HAS BEEN SET, VEHICULAR TRAFFIC OR OTHER SOURCES OF COMPACTION SHALL BE AVOIDED
5. IRRIGATION: NEW SEED APPLICATIONS SHOULD BE SUPPLIED WITH ADEQUATE WATER, A MINIMUM OF ¼" TWICE A DAY, UNTIL VEGETATION IS WELL ESTABLISHED (A MINIMUM OF 75% COVER).

FIGURE 3.18
Typical Compost Sock Washout Installation



A suitable impervious geomembrane shall be placed at the location of the washout prior to installing the socks.
Adapted from Filtrexx

CONCRETE WASHOUT NOTES:

-UNDER NO CIRCUMSTANCES MAY WASH WATER FROM THESE VEHICLES BE ALLOWED TO ENTER ANY SURFACE WATERS.

-WASHOUT FACILITIES SHOULD NOT BE PLACED WITHIN 50 FEET OF STORM DRAINS, OPEN DITCHES OR SURFACE WATERS.

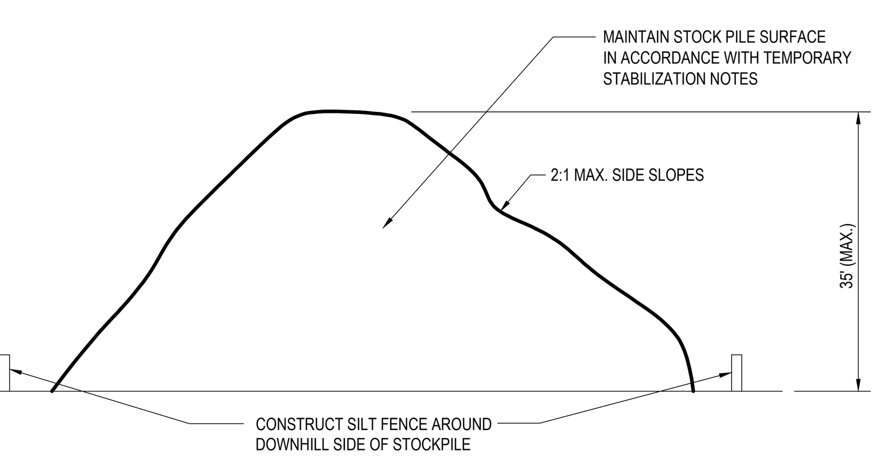
-SHOULD BE A MINIMUM OF 10 FEET WIDE AND PROVIDE AT LEAST 12 INCHES OF FREEBOARD ABOVE THE LIQUID AND SOLID WASTE ANTICIPATED BETWEEN CLEANOUT INTERVALS.

-THE PIT SHOULD BE LINED WITH PLASTIC SHEETING OF AT LEAST 10-MIL THICKNESS (WITH NO HOLES OR TEARS) TO PREVENT LEACHING OF LIQUIDS INTO THE GROUND.

-ALL CONCRETE WASHOUT FACILITIES SHOULD BE INSPECTED DAILY. DAMAGED OR LEAKING WASHOUTS SHOULD BE DEACTIVATED AND REPAIRED OR REPLACED IMMEDIATELY.

-ACCUMULATED MATERIALS SHOULD BE REMOVED WHEN THEY REACH 75% CAPACITY.

-PLASTIC LINERS SHOULD BE REPLACED WITH EACH CLEANING OF THE WASHOUT FACILITY.



TEMPORARY SOIL STOCKPILE DETAIL

X / S8 SCALE: N.T.S. REV.: 2015.03.09

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REVISIONS

REV	DATE	COMMENT	BY
1	09/21/18	PER TOWNSHIP REVIEW COMMENTS	JHT

CALL BEFORE YOU DIG!

PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE - STOP CALL

PA1 SYSTEM, INC. 1-800-242-1776

POCS SERIAL NUMBER 20172771117

PROJECT No.: PC171170
DRAWN BY: JHT
CHECKED BY: JRK
DATE: 5/18/2018
SCALE: AS NOTED
CAD I.D.: PC171170DETAILS-1

PROJECT:

FINAL LAND DEVELOPMENT PLANS

FOR

PROVCO PINEGOOD, CHALFONT, LLC

PROPOSED WAWA

BUTLER AVENUE (SR 4202) & COUNTY LINE ROAD
NEW BRITAIN TOWNSHIP
BUCKS COUNTY
PENNSYLVANIA

BOHLER ENGINEERING
1600 MANOR DRIVE, SUITE 200
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J.R. KORCZAK
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE074279

SHEET TITLE:

SOIL EROSION AND SEDIMENT POLLUTION CONTROL DETAILS

SHEET NUMBER:

REVISION 1 - 2018.09.21

WETLAND CONSTRUCTION SEQUENCE

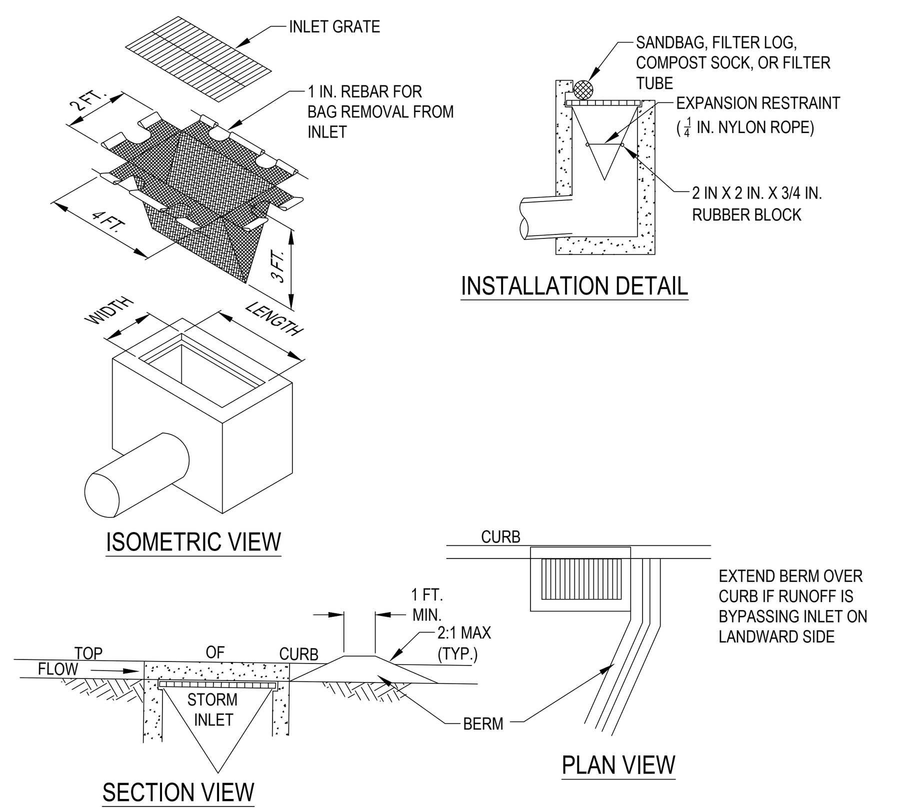
A. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED IN COMPLIANCE WITH CHAPTER 102 REGULATIONS BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE. UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY THAT WILL EXCEED FOUR (4) DAYS, OR ANY STAGE THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION.

B. AT LEAST SEVEN (7) DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES INCLUDING, BUT NOT LIMITED TO: THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS AND A REPRESENTATIVE OF THE BUCKS COUNTY CONSERVATION DISTRICT FOR AN ON-SITE PRE-CONSTRUCTION MEETING. ALSO, AT LEAST THREE (3) DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INC. AT 1-800-242-1776 FOR BURIED UTILITIES LOCATION.

C. BEFORE INITIATING ANY REVISION TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED E&S CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE BUCKS COUNTY CONSERVATION DISTRICT. THE OPERATOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.

D. THE TERM 'PERMANENT STABILIZATION' USED THROUGHOUT THIS SEQUENCE IS MEANT TO DESCRIBE THE PROPER PLACING, GRADING, CONSTRUCTING, REINFORCING, LINING, AND COVERING OF SOIL, ROCK OR EARTH TO ENSURE THEIR PERMANENT RESISTANCE TO EROSION, SLIDING OR OTHER MOVEMENT. FOR AN EARTH DISTURBANCE TO BE PERMANENTLY STABILIZED, THE DISTURBED AREA SHALL BE COVERED WITH ONE OF THE FOLLOWING: A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER, WITH A DENSITY CAPABLE OF RESISTING ACCELERATED EROSION AND SEDIMENTATION; OR AN ACCEPTABLE BMP THAT PERMANENTLY MINIMIZES ACCELERATED EROSION AND SEDIMENTATION.

1. PRIOR TO COMMENCING ANY WORK WITHIN ANY WETLAND AREA THE LIMIT OF DISTURBANCE SHALL BE PHYSICALLY MARKED. MARKERS SUCH AS SURVEY STAKES, POST & ROPE, CONSTRUCTION FENCING, ETC. SHALL BE USED.
2. WHEN VEHICLES NEED TO ENCROACH IN WETLAND AREAS A TEMPORARY CROSSING SHALL BE INSTALLED. THE TEMPORARY CROSSING SHALL CONSIST OF A MATTING WITH A LOW IMPACT MATERIAL SUCH AS A WOOD OR TIRE MAT OR EXPANDED METAL GRATING UNDERLAIN BY GEOTEXTILE.
3. FOR THE ROAD CROSSING:
   A. ANY ACCUMULATED WATER WITHIN THE WORK AREA SHALL BE PUMPED THROUGH A FILTER BAG PRIOR TO BE DISCHARGED TO A SURFACE WATER.
   B. COMMENCE EARTH MOVING TO ACHIEVE THE GRADES SHOWN ON THE PLAN. THE UPSTREAM SLOPES AND DOWNSTREAM SLOPES SHALL BE STABILIZED IMMEDIATELY UPON REACHING FINAL GRADE. ACCUMULATED WATER WITHIN THE WORK AREA SHALL BE PUMPED THROUGH A FILTER BAG PRIOR TO BEING DISCHARGED TO A SURFACE WATER.
   C. INSTALL CULVERT INCLUDING THE RIPRAP APRON AT THE DOWNSTREAM END. DISCHARGE THROUGH THE CULVERT SHALL NOT BE PERMITTED UNTIL THE RIPRAP APRON IS IN PLACE.
   D. ANY DISTURBED AREA AS RESULT OF CONSTRUCTION OF THE TRAIL SHALL BE STABILIZED AND RESTORED TO EXISTING CONDITIONS. STABILIZATION IS DEFINED AS UNIFORM COVERAGE OR DENSITY OF 70% VEGETATION ACROSS THE DISTURBED AREA.



NOTES:

MAXIMUM DRAINAGE AREA = 1/2 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

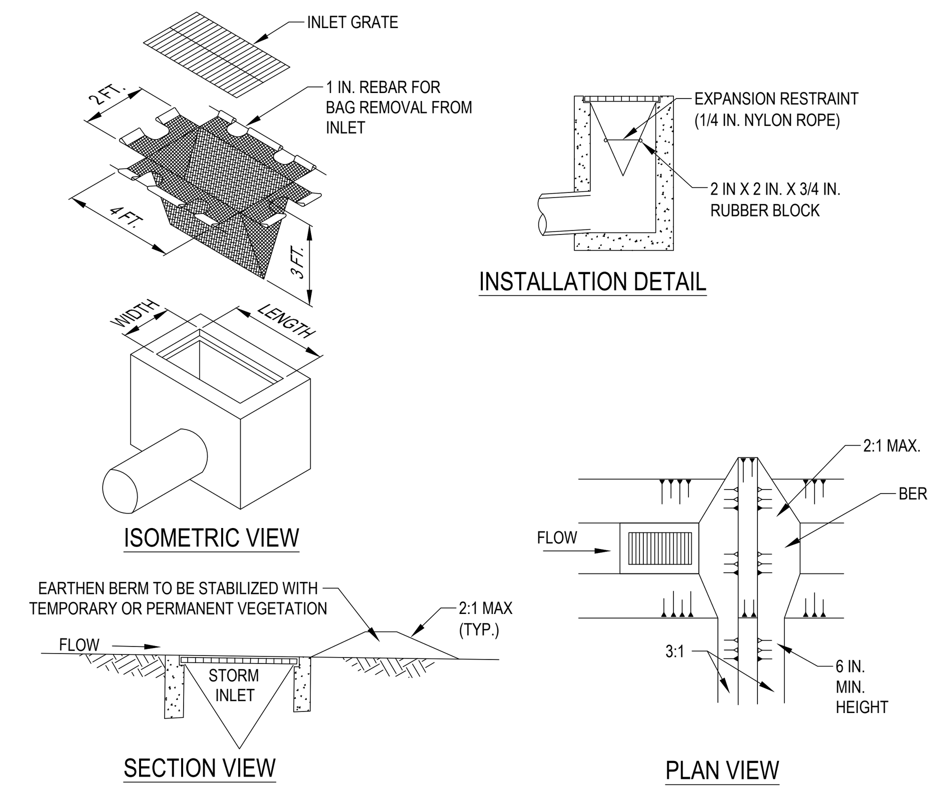
ROLLED EARTHEN BERM SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. SIX INCH MINIMUM HEIGHT ASPHALT BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT.
AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS, A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.

INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE OF ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.

DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

STANDARD CONSTRUCTION DETAIL #4-15
FILTER BAG INLET PROTECTION - TYPE C INLET

NOT TO SCALE



NOTES:

MAXIMUM DRAINAGE AREA = 1/2 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

ROLLED EARTHEN BERM IN ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. EARTHEN BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR REMAIN PERMANENTLY.

AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS., A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.

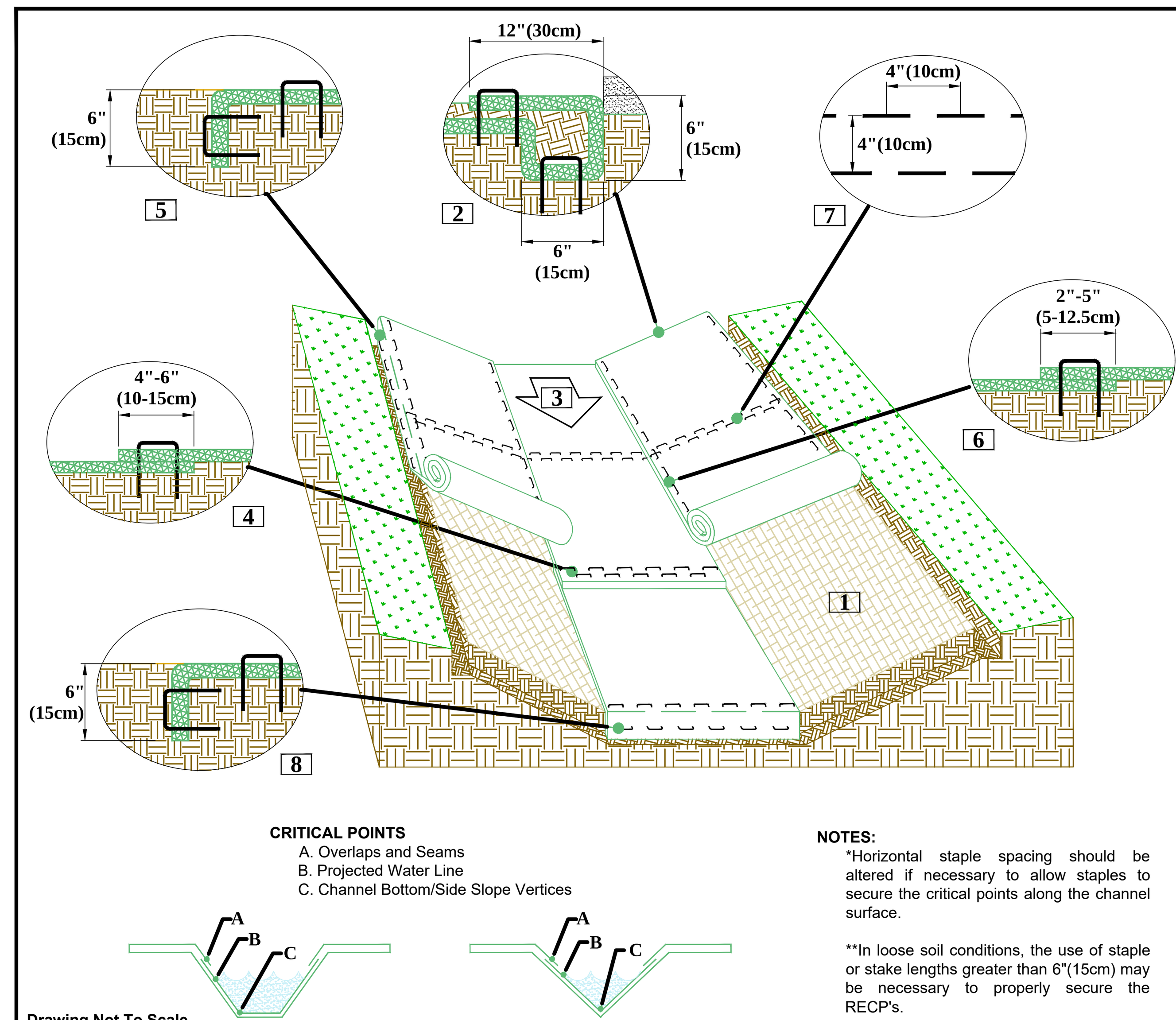
INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.

DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

STANDARD CONSTRUCTION DETAIL #4-16
FILTER BAG INLET PROTECTION - TYPE M INLET

NOT TO SCALE

CHANNEL INSTALLATION DETAIL



CRITICAL POINTS
A. Overlaps and Seams
B. Projected Water Line
C. Channel Bottom/Side Slope Vertices

NOTES:
*Horizontal staple spacing should be altered if necessary to allow staples to secure the critical points along the channel surface.

**In loose soil conditions, the use of staple or stake lengths greater than 6"(15cm) may be necessary to properly secure the RECP's.

Drawing Not To Scale

1. Prepare soil before installing rolled erosion control products (RECPs), including any necessary application of lime, fertilizer, and seed.
2. Begin at the top of the channel by anchoring the RECPs in a 6"(15cm) deep X 6"(15cm) wide trench with approximately 12"(30cm) of RECPs extended beyond the up-slope portion of the trench. Use ShoreMax mat at the channel/culvert outlet as supplemental scour protection as needed. Anchor the RECPs with a row of staples/stakes approximately 12"(30cm) apart in the bottom of the trench. Backfill and compact the trench after stapling. Apply seed to the compacted soil and fold the remaining 12"(30cm) portion of RECPs back over the seed and compacted soil. Secure RECPs over compacted soil with a row of staples/stakes spaced approximately 12" apart across the width of the RECPs.
3. Roll center RECPs in direction of water flow in bottom of channel. RECPs will unroll with appropriate side against the soil surface. All RECPs must be securely fastened to soil surface by placing staples/stakes in appropriate locations as shown in the staple pattern guide.
4. Place consecutive RECPs end-over-end (Shingle style) with a 4"-6" overlap. Use a double row of staples staggered 4" apart and 4" on center to secure RECPs.
5. Full length edge of RECPs at top of side slopes must be anchored with a row of staples/stakes approximately 12"(30cm) apart in a 6"(15cm) deep X 6"(15cm) wide trench. Backfill and compact the trench after stapling.
6. Adjacent RECPs must be overlapped approximately 2"-5" (5-12.5cm) (Depending on RECPs type) and stapled.
7. In high flow channel applications a staple check slot is recommended at 30 to 40 foot (9 -12m) intervals. Use a double row of staples staggered 4"(10cm) apart and 4"(10cm) on center over entire width of the channel.
8. The terminal end of the RECPs must be anchored with a row of staples/stakes approximately 12" (30cm) apart in a 6"(15cm) deep X 6"(15cm) wide trench. Backfill and compact the trench after stapling.

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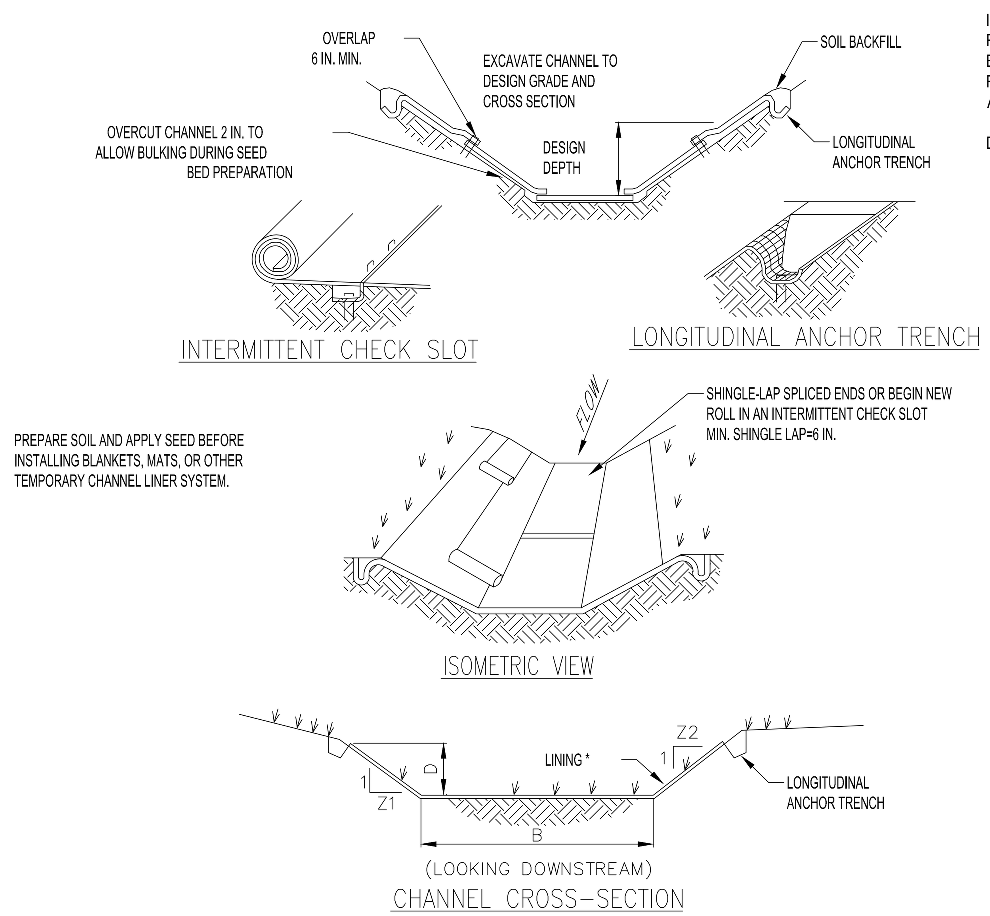
Drawn on: 3-16-11



* SEE MANUFACTURER'S LINING INSTALLATION DETAIL FOR STAPLE PATTERNS, VEGETATIVE STABILIZATION FOR SOIL AMENDMENTS, SEED MIXTURES AND MULCHING INFORMATION

CHANNEL NO.	STATIONS	BOTTOM WIDTH B (FT)	DEPTH D (FT)	TOP WIDTH W (FT)	Z1 (FT)	Z2 (FT)	LINING *
TEMPORARY							
DRAINAGE SWALE #1	ENTIRE	3.0	0.96	8.76	3.0	3.0	NAG SC150
PERMANENT							
DRAINAGE SWALE #1	ENTIRE	3.0	0.96	8.76	3.0	3.0	LAWN (6.0")

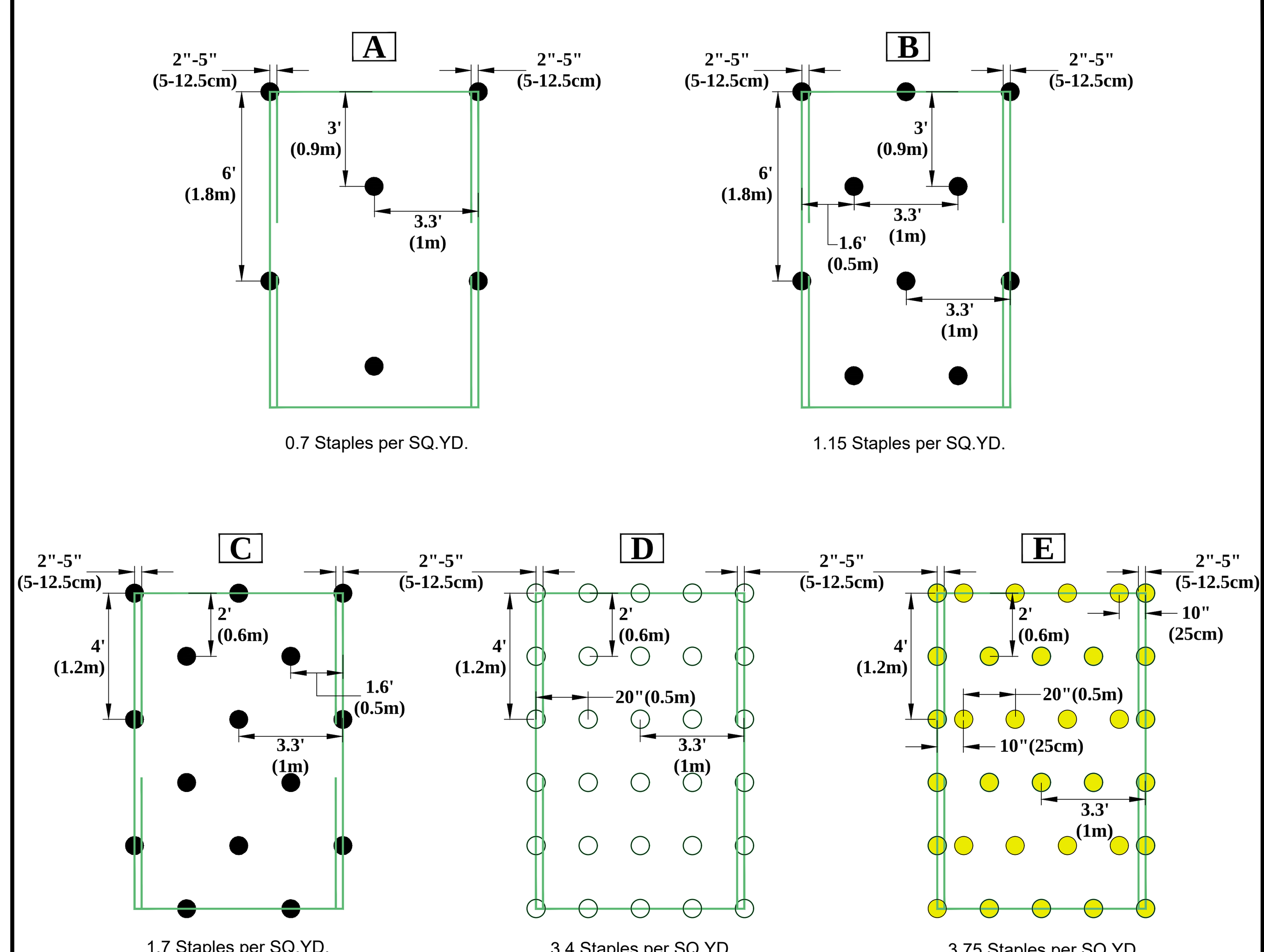
NOTES:
ANCHOR TRENCHES SHALL BE INSTALLED AT BEGINNING AND END OF CHANNEL IN THE SAME MANNER AS LONGITUDINAL ANCHOR TRENCHES.

CHANNEL DIMENSIONS SHALL BE CONSTANTLY MAINTAINED. CHANNEL SHALL BE CLEANED WHENEVER TOTAL CHANNEL DEPTH IS REDUCED BY 25% AT ANY LOCATION. SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS PERMIT ACCESS TO CHANNEL WITHOUT FURTHER DAMAGE. DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY.

NO MORE THAN ONE THIRD OF THE SHOOT (GRASS LEAF) SHALL BE REMOVED IN ANY MOWING. GRASS HEIGHT SHALL BE MAINTAINED BETWEEN 2 AND 3 INCHES UNLESS OTHERWISE SPECIFIED. EXCESS VEGETATION SHALL BE REMOVED FROM PERMANENT CHANNELS TO ENSURE SUFFICIENT CHANNEL CAPACITY.

STANDARD CONSTRUCTION DETAIL #6-1
VEGETATED CHANNEL

NOT TO SCALE



STAPLE PATTERN GUIDE

- 4:1 Slopes (A)
- 3:1 Slopes (B)
- 2:1 Slopes (C)
- 1:1 & Steeper Slopes (D)
- Medium/High Flow Channel (D)
- High Flow Channel And Shoreline (E)

NOTES:
* Use ECMDS® for more accurate staple pattern selection.

Drawing Not To Scale

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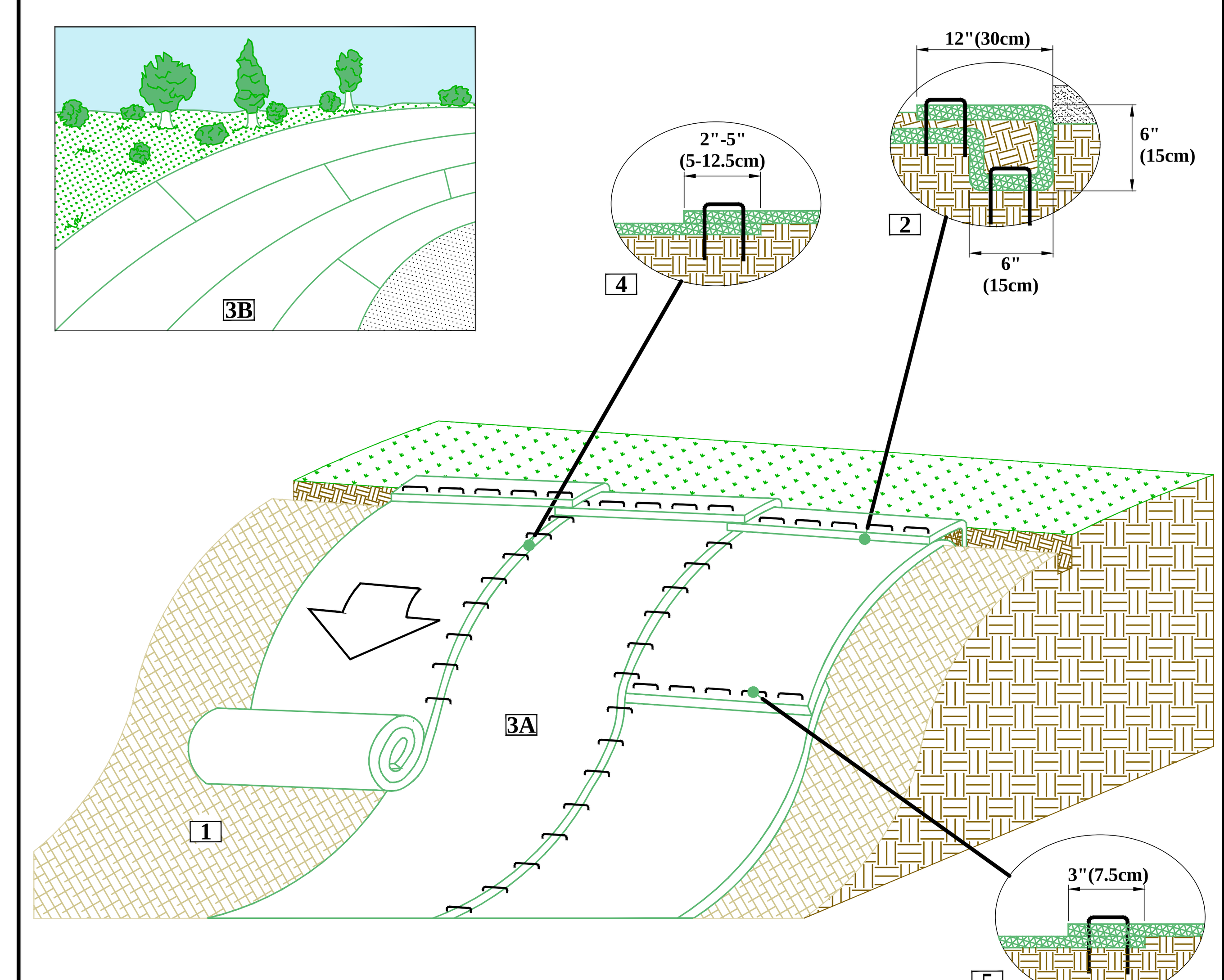
Drawn on: 3-16-11

SLOPE INSTALLATION DETAIL



Drawing Not To Scale

1. Prepare soil before installing rolled erosion control products (RECPs), including any necessary application of lime, fertilizer, and seed.
2. Begin at the top of the slope by anchoring the RECPs in a 6"(15cm) deep X 6"(15cm) wide trench with approximately 12" (30cm) of RECPs extended beyond the up-slope portion of the trench. Anchor the RECPs with a row of staples/stakes approximately 12" (30cm) apart in the bottom of the trench. Backfill and compact the trench after stapling. Apply seed to the compacted soil and fold the remaining 12"(30cm) portion of RECPs back over the seed and compacted soil. Secure RECPs over compacted soil with a row of staples/stakes spaced approximately 12"(30cm) apart across the width of the RECPs.
3. Roll the RECPs (A) down or (B) horizontally across the slope. RECPs will unroll with appropriate side against the soil surface. All RECPs must be securely fastened to soil surface by placing staples/stakes in appropriate locations as shown in the staple pattern guide.
4. The edges of parallel RECPs must be stapled with approximately 2" - 5" (5-12.5cm) overlap depending on the RECPs type.
5. Consecutive RECPs spliced down the slope must be end over end (Shingle style) with an approximate 3"(7.5cm) overlap. Staple through overlapped area, approximately 12"(30cm) apart across entire RECPs width.

*NOTE:
In loose soil conditions, the use of staple or stake lengths greater than 6"(15cm) may be necessary to properly secure the RECP's.

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Drawn on: 3-16-11

GB
R:\17\PC171170\DRAWINGS\PLAN SETS\LAND DEVELOPMENT\REVISION 1\PC171170DETAILS-1----->LAYOUT: 24 E&S DETAILS

BOHLER™ ENGINEERING

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REVISIONS

REV	DATE	COMMENT	BY
1	09/21/18	PER TOWNSHIP REVIEW COMMENTS	JHT

CALL BEFORE YOU DIG!

PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE - STOP CALL

PA1 SYSTEM, INC.
1-800-242-1776

POCS SERIAL NUMBER
20172771117

PROJECT No.: PC171170
DRAWN BY: JHT
CHECKED BY: JRK
DATE: 5/18/2018
SCALE: AS NOTED
CAD I.D.: PC171170DETAILS-1

PROJECT:

FINAL LAND DEVELOPMENT PLANS

FOR

PROVCO PINEGOOD, CHALFONT, LLC

PROPOSED WAWA

BUTLER AVENUE (SR 4202) & COUNTY LINE ROAD
NEW BRITAIN TOWNSHIP
BUCKS COUNTY
PENNSYLVANIA

BOHLER ENGINEERING
1600 MANOR DRIVE, SUITE 200
CHALFONT, PENNSYLVANIA 18914
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J.R. KORCZAK

PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE074279

SHEET TITLE:

EROSION AND SEDIMENTATION CONTROL DETAILS

SHEET NUMBER:

24

OF 37

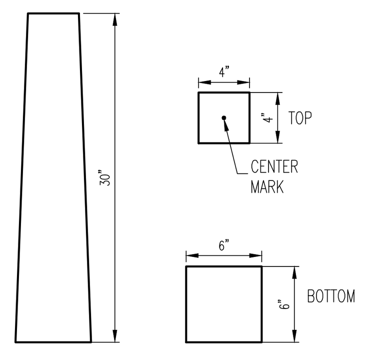
REVISION 1 - 2018.09.21

LIST OF APPLICABLE PADOT DETAILS

SIGNAGE: PA.D.O.T. PUBLICATION 236
(ftp://ftp.dot.state.pa.us/public/pubsforms/Publications/PUB%20236M/Sign%20Index%20for%20Change%201%20%2011-13%20(nomenclature).pdf)
"STOP" SIGN - R1-1 - 30"x30"
"RESERVED PARKING" SIGN - R7-8 - 12"x18"
"RESERVED PARKING PENALTIES" SIGN - R7-8F - 12"x18"
VAN ACCESSIBLE' SIGN - R7-8 F - 12"x18"
NO PARKING SYMBOL SIGN - R7-1 - 24"x24"

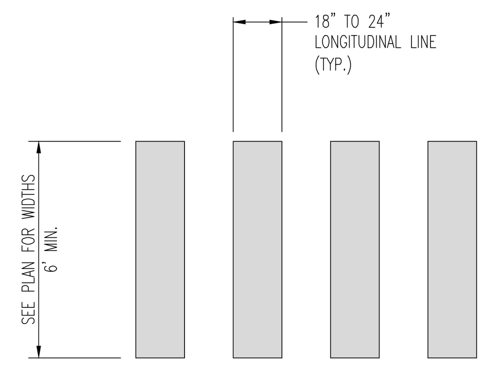
ADDITIONAL DETAILS ASSOCIATED WITH PADOT ROAD IMPROVEMENTS ARE ON THE FOLLOWING STANDARD DETAILS FROM PennDOT PUBLICATION 72M (ftp://ftp.dot.state.pa.us/public/Bureaus/design/PUB72M/PUB72COV.pdf):
(THE PERMITTEE IS REQUIRED TO PROVIDE THE CONTRACTOR WITH COPIES OF THE MOST CURRENT APPLICABLE RC DRAWINGS FROM THE PennDOT PUBLICATION 72M)

STANDARD DRAWING NUMBER	DRAWING DATE
RC - 26M	SEPTEMBER 15, 2016
RC - 28M	SEPTEMBER 15, 2016
RC - 30M	JUNE 1, 2010
RC - 39M	SEPTEMBER 15, 2016
RC - 45M	SEPTEMBER 15, 2016
RC - 46M	SEPTEMBER 15, 2016
RC - 64M	JUNE 1, 2010
RC - 65M	AUGUST 28, 2017
RC - 67M	JUNE 10, 2013



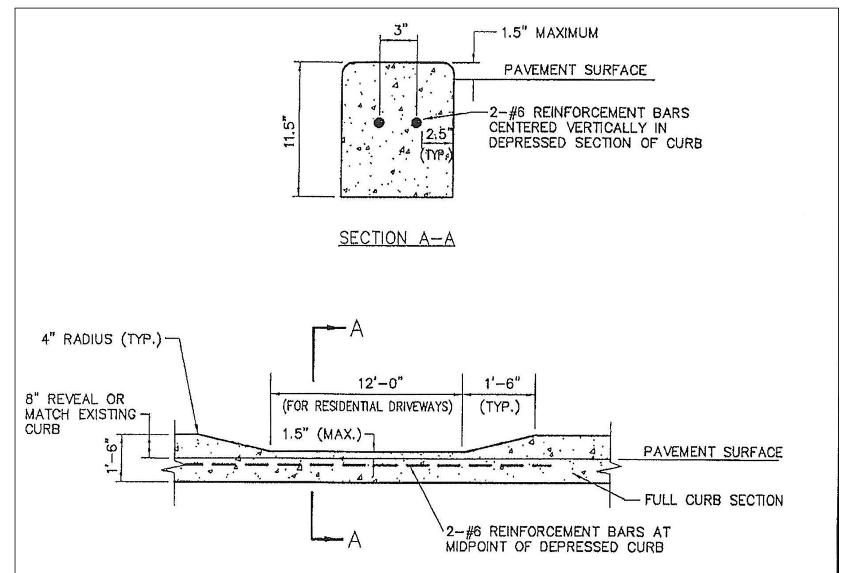
1.) SPECIFICATIONS:
– CLASS 'A' CONCRETE– MINIMUM STRENGTH (3,000 P.S.I. @ 28 DAYS)
– STEEL REINFORCEMENT (#4 REBAR)

A / S11 SURVEYOR'S MONUMENT DETAIL
SCALE: N.T.S. REV.: 2015.03.09



NOTES:
1.) THIS TYPE OF MARKING SHOULD BE USED AT LOCATIONS WHERE SUBSTANTIAL NUMBERS OF PEDESTRIANS CROSS WITHOUT ANY OTHER TRAFFIC CONTROL DEVICE, AT LOCATIONS WHERE PHYSICAL CONDITIONS ARE SUCH THAT ADDED VISIBILITY OF THE CROSSWALK IS NECESSARY, OR AT PLACES WHERE PEDESTRIANS MIGHT NOT BE EXPECTED.
2.) ALL CROSSWALKS SHALL COMPLY WITH THE FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), AS AMENDED.
3.) LONGITUDINAL LINES SHALL BE PERPENDICULAR TO TRAVELED WAY THE EXTEND ACROSS THE FULL WIDTH OF PAVEMENT OR TO THE EDGE OF THE INTERSECTING CROSSWALK TO DISCOURAGE DIAGONAL WALKING BETWEEN CROSSWALKS.
4.) ALL CROSSWALK LONGITUDINAL LINES SHALL BE WHITE THERMOPLAST. ALL LINES AND NEUTRAL AREAS SHALL BE OF EQUAL WIDTHS.
5.) WARNING SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH MUTCD, AS AMENDED.
6.) THE SPACING OF THE LINES SHALL BE SELECTED TO AVOID THE WHEEL PATH.

T / S20 HIGH VISIBILITY CROSSWALK DETAIL (PERPENDICULAR TO INTERSECTION)
SCALE: N.T.S. REV.: 2015.03.09



DEPRESSED CURB DETAIL
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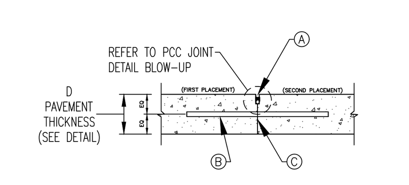
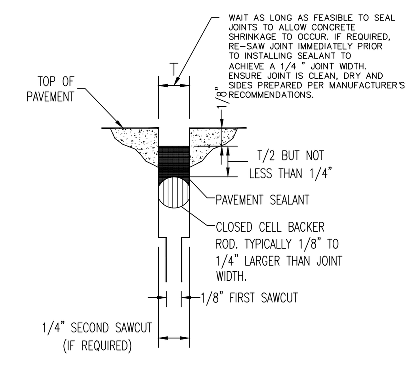
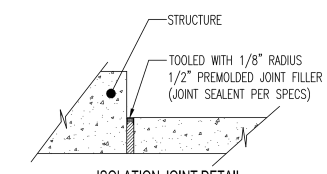
DATE:	LAST REVISED:	SCALE:	DRAWING No:
5/22/09		N.T.S.	12 OF 17



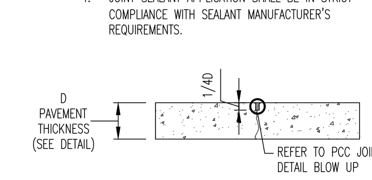
CONSTRUCTION JOINT DETAIL
A. 1/4" WIDE BY 1" DEEP SAW CUT. FILL WITH PAVEMENT SEALANT. MAKE SAW CUT IMMEDIATELY PRIOR TO INSTALLING PAVEMENT SEALANT.
B. 3/4" DIAMETER DOWEL FOR 6" THICK PAVEMENTS AND 1/2" DIAMETER DOWEL FOR 4" OR 5" THICK PAVEMENTS. DOWELS TO BE 10" LONG CENTERED WITH JOINT SPACED AT 18" ON CENTER. DOWEL TO BE INSTALLED IN FORM WITH AN APPROVED DOWEL BASKET. LIGHTLY OIL FULL LENGTH OF DOWEL.
C. APPLY CURING COMPOUND TO SLAB FACE AT A COVERAGE RATE OF 300 SF MAX PER GALLON TO ACT AS A BOND BREAKER AT LEAST 48 HOURS PRIOR TO PLACING NEW SLAB.



PCC JOINT DETAIL BLOW UP (TYP.)
NOTES:
1. ENSURE JOINTS ARE CLEAN AND DRY PRIOR TO THE APPLICATION OF THE JOINT SEALANT.
2. INSTALL CLOSED CELL BACKER ROD AFTER JOINTS HAVE BEEN CLEANED AND DRIED IN ACCORDANCE WITH SEALANT MANUFACTURER'S REQUIREMENTS.
3. INSTALL BACKER TOD AT CONSISTENT AND UNIFORM DEPTH.
4. JOINT SEALANT APPLICATION SHALL BE IN STRICT COMPLIANCE WITH SEALANT MANUFACTURER'S REQUIREMENTS.



ISOLATION JOINT DETAIL
AT STRUCTURES SUCH AS BUILDINGS, RETAINING WALLS/DOCK WALLS, LIGHT POLE BASES, BOLLARDS GAS ISLANDS, CANOPY COLUMNS, ETC.
(PAVEMENT IS NOT CONSIDERED A STRUCTURE)



CONTRACTION JOINT DETAIL

NOTES:

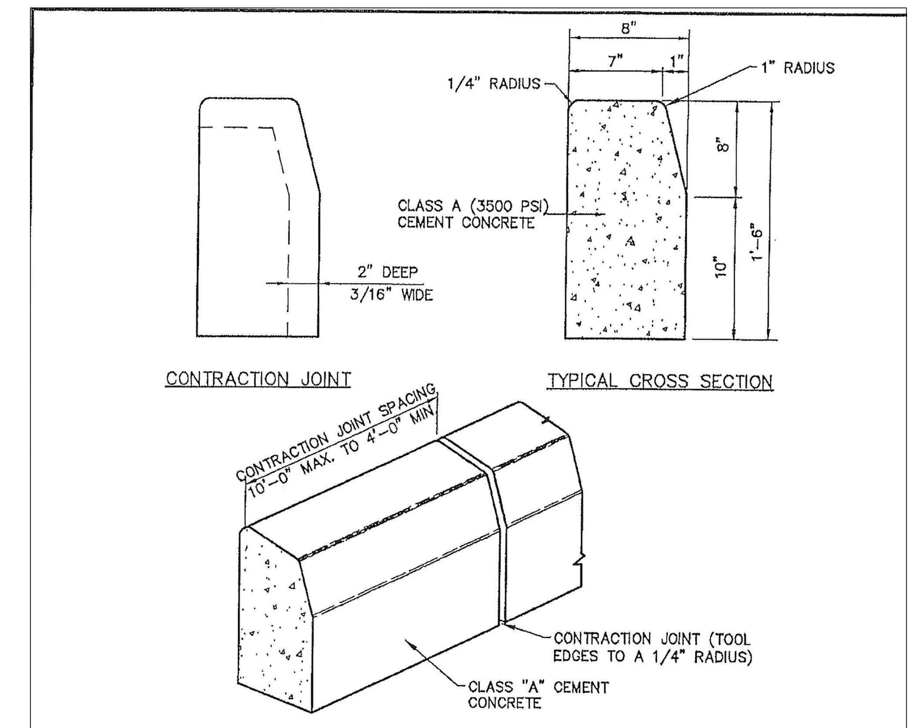
SEE ARCHITECTURAL SPECIFICATION FOR COMPLETE DETAILS

CONTROL JOINT SPACING IS 12'–0" MAXIMUM PARALLEL TO PARKING STALLS AND A SINGLE CONTROL JOINT AT THE CENTERLINE PERPENDICULAR TO PARKING STALLS.

ISOLATION JOINTS ARE REQUIRED AT THE INTERFACE OF THE BUILDING AND THE SIDEWALK AND ANY CURBED ISLANDS.

A CONSTRUCTION JOINT IS REQUIRED AT THE INTERFACE BETWEEN THE SIDEWALK AND PARKING AREA.

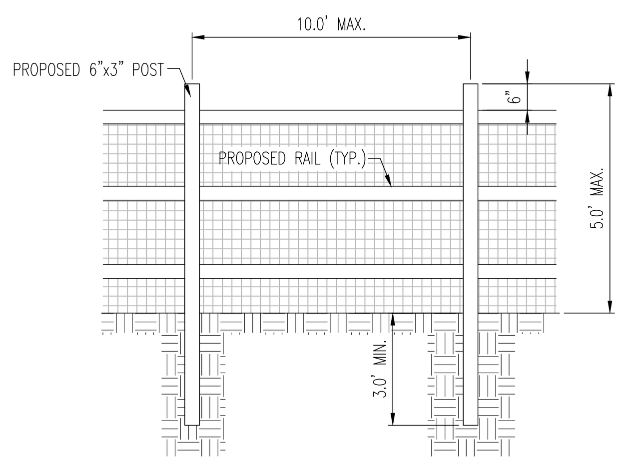
P / S4 CONCRETE JOINTS DETAIL
SCALE: N.T.S. REV.: 2015.10.15



NOTES:
1. PLACE 1/2" PREMOLDED EXPANSION JOINT MATERIAL EVERY 50 FEET (MAX.) AND AT ALL DRIVEWAYS (DEPRESSED CURB CUTS), INLETS, AND CURB RADII.
2. MINIMUM 2–#6 REINFORCING BARS PER SIDE WHERE CURB ABUTS INLET HOODS, INCLUDING PREMOLDED EXPANSION JOINT MATERIAL.
3. WHERE CURB ARE INSTALLED BY A MACHINE, SAW CUTS SHALL BE 2" DEEP, EVERY 10 FEET.

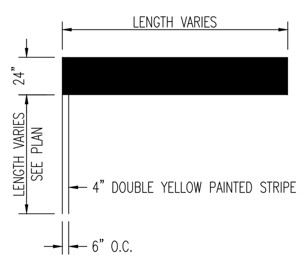
PLAIN CEMENT CONCRETE CURB DETAIL
NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PENNSYLVANIA
GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES
65 EAST BUTLER AVENUE, SUITE 100, NEW BRITAIN, PA 18901-5106 • (215) 345-4330
www.gilmore-assoc.com

DATE:	LAST REVISED:	SCALE:	DRAWING No:
5/22/09		N.T.S.	9 OF 17

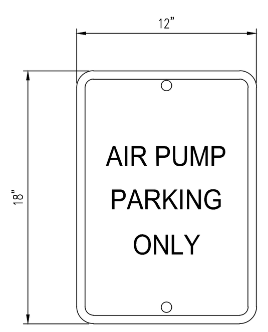


NOTE: ALL WOOD TO BE PRESSURE TREATED LUMBER. GALVANIZED WIRE MESH FENCE (13 GAGE) WITH VINYL COATING TO BE SECURED TO OUTSIDE OF FENCE

A / S4 POST & RAIL FENCE DETAIL
SCALE: N.T.S. REV.: 2015.03.09

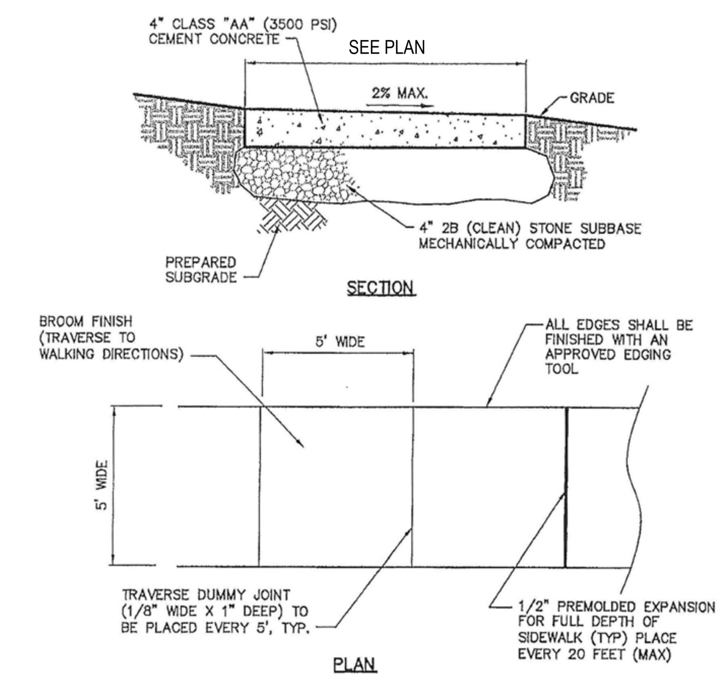


T / S4 WHITE PAINTED STOP BAR DETAIL
SCALE: N.T.S. REV.: 2016.09.29



BACKGROUND COLOR: WHITE
LEGEND COLOR: BLACK

SIGN LETTERING DETAILS
N.T.S.

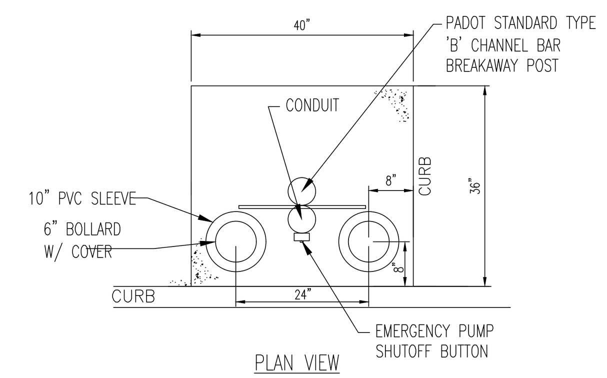


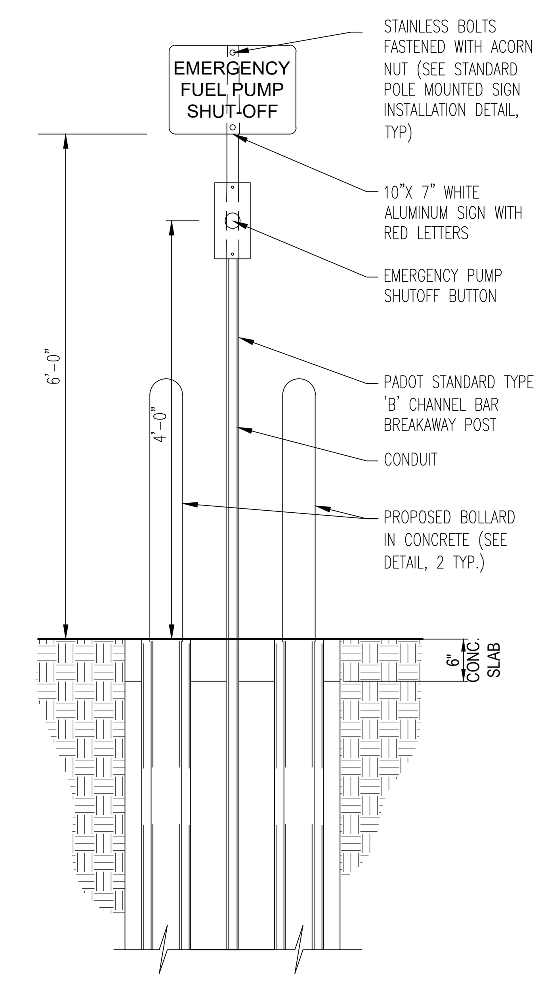
NOTES:
1. WITH ALL PROPOSED SIDEWALK, A NON–SLIP SURFACE TEXTURE SHALL BE BROOMED TRAVERSE TO THE SLOPE OF THE SIDEWALK.
2. ALL SIDEWALK SHALL BE IN ACCORDANCE WITH ACI & PENNDOT STANDARDS.

FOR USE OUTSIDE OF WAWA LOT

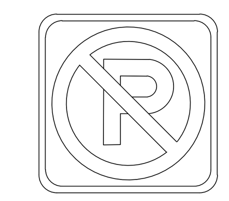
CONCRETE SIDEWALK DETAIL
NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PENNSYLVANIA
GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES
85 EAST BUTLER AVENUE, SUITE 100, NEW BRITAIN, PA 18901-5106 • (215) 345-4330
www.gilmore-assoc.com

DATE:	LAST REVISED:	SCALE:	DRAWING No:
5/22/09		N.T.S.	11 OF 17





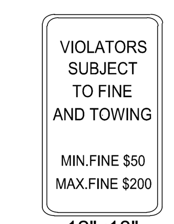
EMERGENCY PUMP SHUTOFF DETAIL
N.T.S.


24"x24"

(R8-3)
NO PARKING SYMBOL SIGN

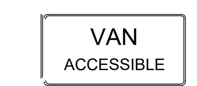
12"x18"

(R7-8)
RESERVED PARKING SIGN



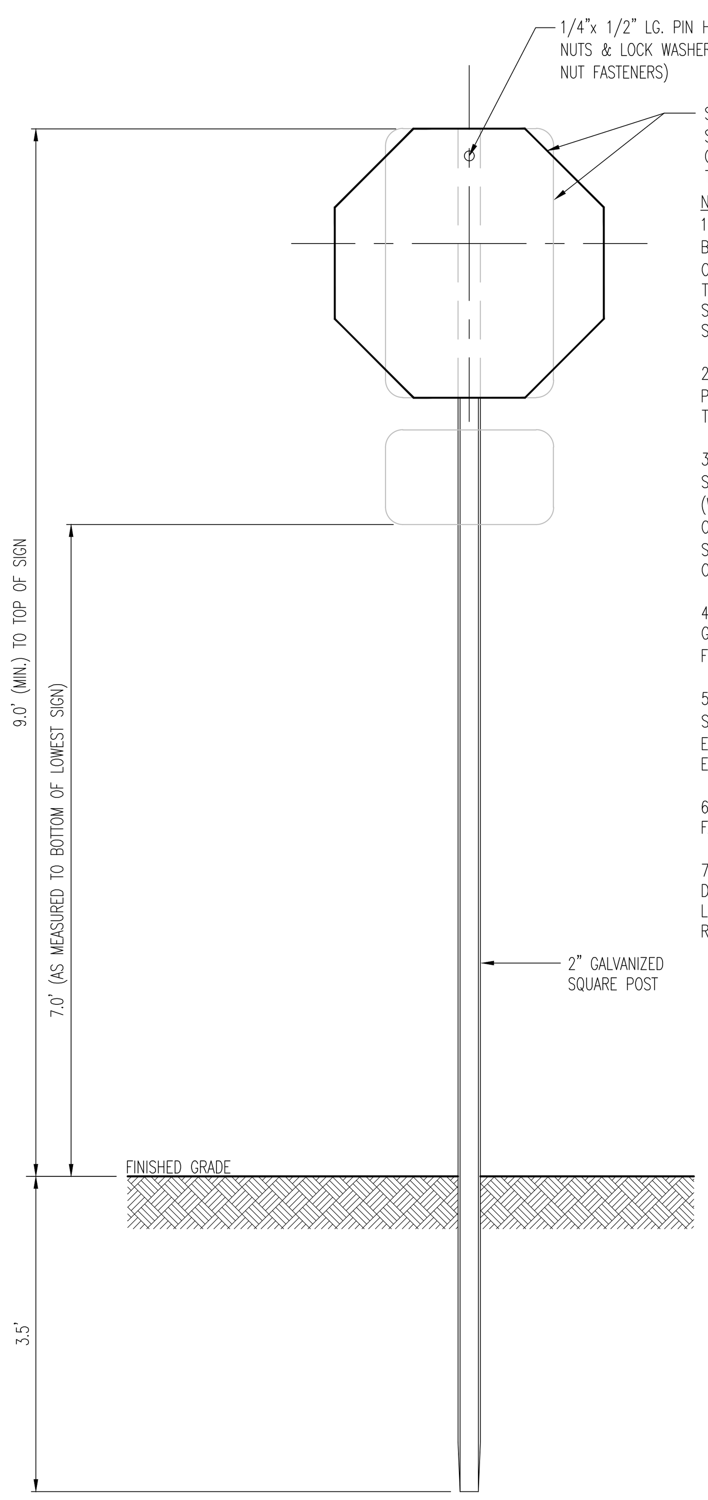
12"x18"

(R7-8F)
RESERVED PARKING PENALTIES SIGN



12"x6"

(R7-8P)
VAN ACCESSIBLE SIGN



NOTES:
1.) POST MOUNTED SIGNS SHALL BE TYPE B CHANNEL BAR POSTS AND SHALL CONFORM TO PADOT "TRAFFIC CONTROL SIGNING STANDARDS" TC–8702B SHEET 8 THRU 11 OF 11. APPROPRIATE POSTS SHALL BE SELECTED BASED ON THE SIZE OF THE SIGN USING THE SELECTION TABLES CONTAINED THEREIN.

2.) SIGN INSTALLATION SHALL BE IN ACCORDANCE WITH PADOT "TRAFFIC CONTROL SIGNING STANDARDS" TC–8702B SHEETS 8 THRU 11 OF 11, AS AMENDED.

3.) SEE CIVIL PLANS FOR EXACT LOCATION, TYPE AND SIZE OF SIGNS. ALL REGULATORY (R SERIES), WARNING (W SERIES) OR OTHER APPROVED SIGNS SHALL CONFORM TO THE PADOT "HANDBOOK OF APPROVED SIGNS", PUBLICATION 236M, AS AMENDED, UNLESS OTHERWISE SPECIFIED.

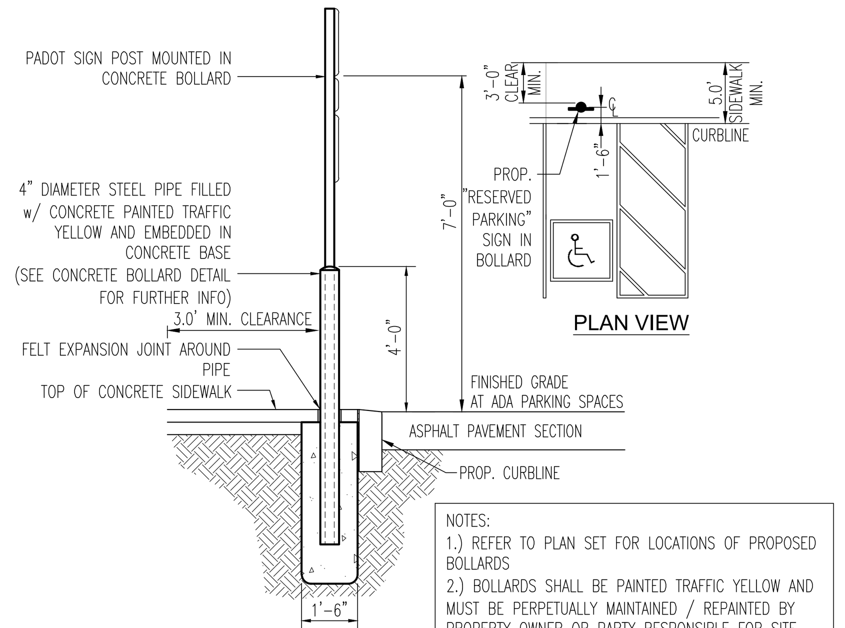
4.) SIGNS SHALL BE SETBACK 2.0' FROM CURB LINES, GUIDE RAILS OR OTHER OBSTRUCTIONS AS MEASURED FROM THE FACE/EDGE OF THE SIGN.

5.) ALONG NON–CURBED LOCAL ROADWAYS SIGNS SHALL BE SETBACK 6.0' FROM THE SHOULDER/PAVING EDGE AND SHALL BE AT A HEIGHT 5.0' ABOVE THE EDGE OF PAVEMENT SURFACE.

6.) ALL SIGNS SHALL BE INSTALLED WITH ACORN NUT FASTENERS.

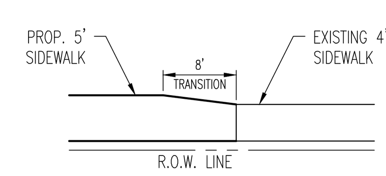
7.) FOR "RESERVED PARKING SIGN" (R7–8) REFER TO DETAILS AND SPECIFIED MOUNTING HEIGHTS WHICH ARE LOWER FOR INCREASED VISIBILITY PER ADA REGULATIONS.

T / S9 STANDARD POLE MOUNTED SIGN INSTALLATION DETAIL
SCALE: N.T.S. REV.: 2015.03.09

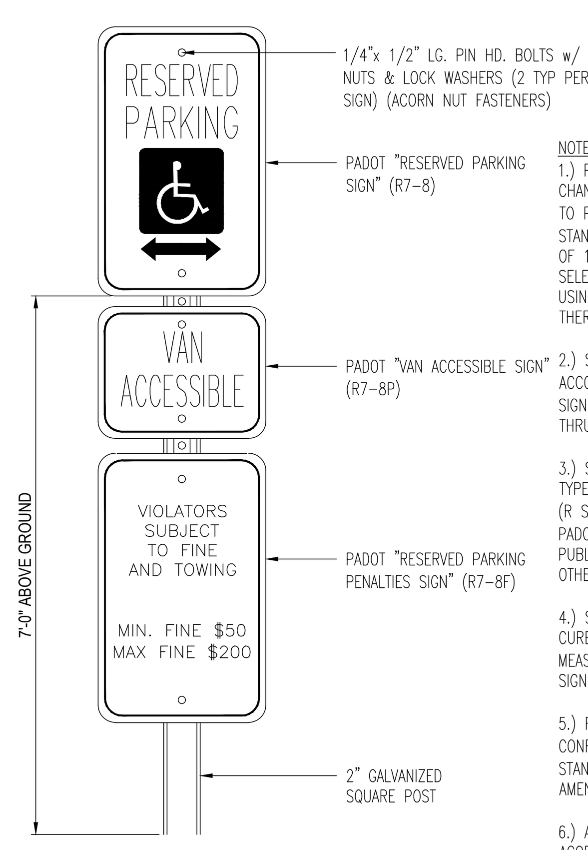


NOTES:
1.) REFER TO PLAN SET FOR LOCATIONS OF PROPOSED BOLLARDS
2.) BOLLARDS SHALL BE PAINTED TRAFFIC YELLOW AND MUST BE PERPETUALLY MAINTAINED / REPAINTED BY PROPERTY OWNER OR PARTY RESPONSIBLE FOR SITE MAINTENANCE.

T / S16 "RESERVED PARKING" SIGN WITHIN BOLLARD DETAIL
SCALE: N.T.S. REV.: 2016.01.05



P / S18 SIDEWALK TIE-IN DETAIL
SCALE: N.T.S. REV.: 2015.03.09



NOTES:
1.) POST MOUNTED SIGNS SHALL BE TYPE B CHANNEL BAR POSTS AND SHALL CONFORM TO PADOT "TRAFFIC CONTROL SIGNING STANDARDS" TC–8702B SHEET 8 THRU 11 OF 11. APPROPRIATE POSTS SHALL BE SELECTED BASED ON THE SIZE OF THE SIGN USING THE SELECTION TABLES CONTAINED THEREIN.

2.) SIGN INSTALLATION SHALL BE IN ACCORDANCE WITH PADOT "TRAFFIC CONTROL SIGNING STANDARDS" TC–8702B SHEETS 8 THRU 11 OF 11, AS AMENDED.

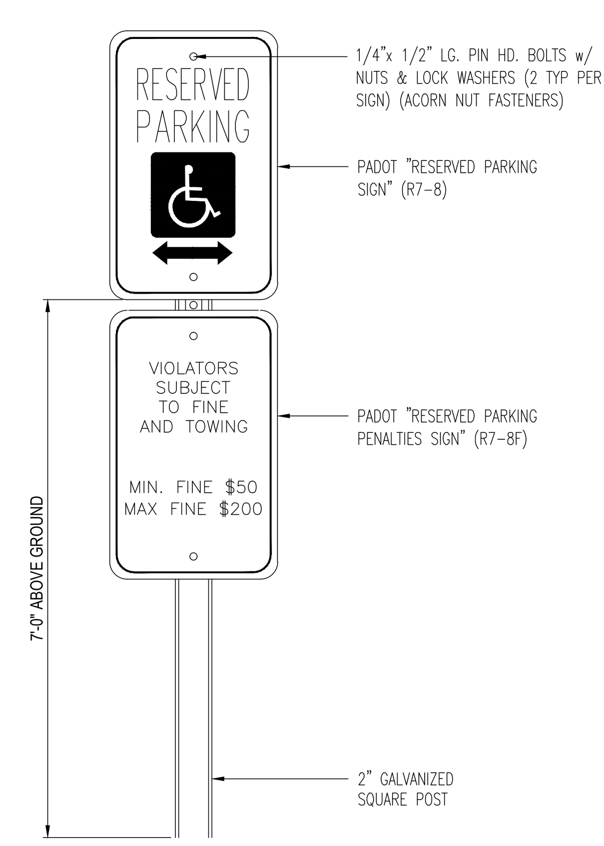
3.) SEE CIVIL PLANS FOR EXACT LOCATION, TYPE AND SIZE OF SIGNS. ALL REGULATORY (R SERIES), SIGNS SHALL CONFORM TO THE PADOT "HANDBOOK OF APPROVED SIGNS", PUBLICATION 236M, AS AMENDED, UNLESS OTHERWISE SPECIFIED.

4.) SIGNS SHALL BE SETBACK 2.0' FROM CURB LINES OR OTHER OBSTRUCTIONS AS MEASURED FROM THE FACE/EDGE OF THE SIGN.

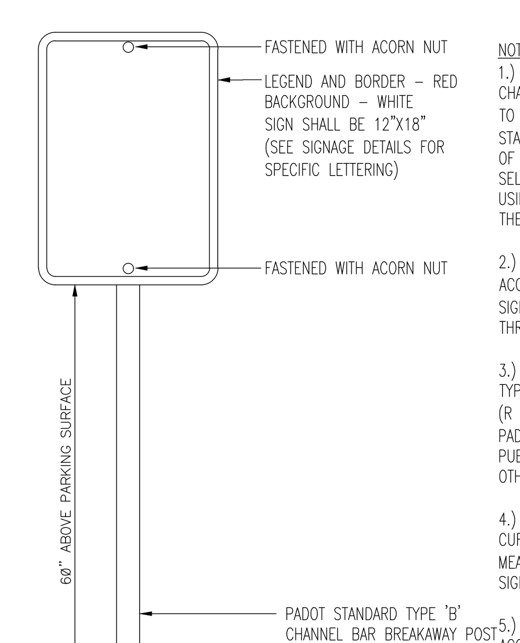
5.) RESERVED PARKING SPACE SIGNS SHALL CONFORM TO DEPARTMENT OF JUSTICE "ADA STANDARDS FOR ACCESSIBLE DESIGN" AS AMENDED.

6.) ALL SIGNS SHALL BE INSTALLED WITH ACORN NUT FASTENERS.

T RESERVE PARKING SPACE w/ PENALTIES & VAN ACCESSIBLE SIGNS
SCALE: N.T.S.



T / S13 RESERVE PARKING SPACE & PENALTIES SIGNS
SCALE: N.T.S. REV.: 2016.01.05



NOTES:
1.) POST MOUNTED SIGNS SHALL BE TYPE B CHANNEL BAR POSTS AND SHALL CONFORM TO PADOT "TRAFFIC CONTROL SIGNING STANDARDS" TC–8702B SHEET 8 THRU 11 OF 11. APPROPRIATE POSTS SHALL BE SELECTED BASED ON THE SIZE OF THE SIGN USING THE SELECTION TABLES CONTAINED THEREIN.

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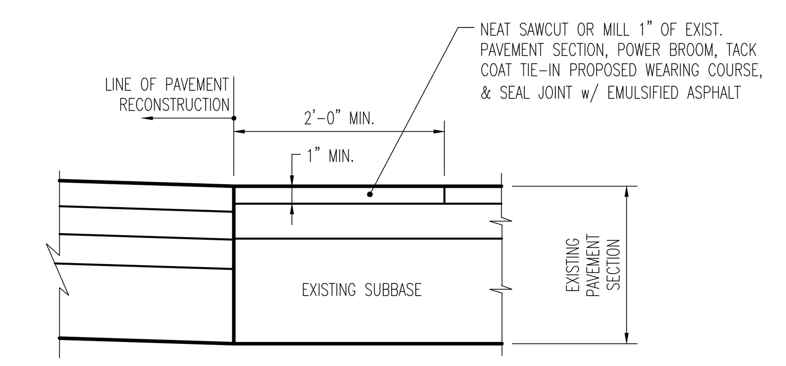
3.) SEE CIVIL PLANS FOR EXACT LOCATION, TYPE AND SIZE OF SIGNS. ALL REGULATORY (R SERIES), SIGNS SHALL CONFORM TO THE PADOT "HANDBOOK OF APPROVED SIGNS", PUBLICATION 236M, AS AMENDED, UNLESS OTHERWISE SPECIFIED.

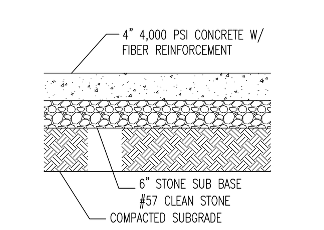
4.) SIGNS SHALL BE SETBACK 2.0' FROM CURBLINES OR OTHER OBSTRUCTIONS AS MEASURED FROM THE FACE/EDGE OF THE SIGN.

5.) ALL SIGNS SHALL BE INSTALLED WITH ACORN NUT FASTENERS.

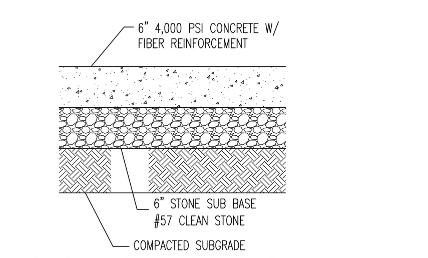
SIGN MOUNTING DETAIL
N.T.S.



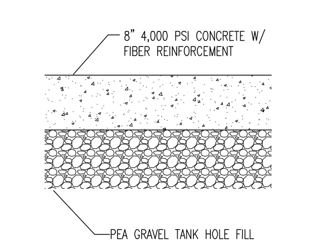
P / S7 PAVEMENT TIE-IN DETAIL
SCALE: N.T.S. REV.: 2015.03.09



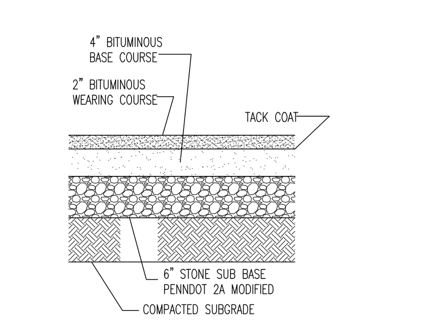
SIDEWALK DETAIL
N.T.S.



PARKING, CANOPY, & TRASH MAT DETAIL
N.T.S.



TANK MAT DETAIL
N.T.S.



BITUMINOUS PAVING
N.T.S.

CONCRETE PAVING SPECIFICATION
1.) LIGHT BROOM FINISH.

2.) USE OF MEMBRANE–CURING COMPOUNDS MEETING ASTM C 309 SHOULD BE THE NORMAL CURING PROCEDURE. AFTER FINISHING AND TEXTURING OPERATIONS HAVE BEEN COMPLETED AND IMMEDIATELY AFTER FREE WATER HAS EVAPORATED, THE SURFACE OF THE SLAB AND ANY EXPOSED EDGES SHOULD BE UNIFORMLY COATED WITH THE MEMBRANE–CURING COMPOUND. IT CAN BE APPLIED BY PRESSURE SPRAYER, WITH A MAXIMUM COVERAGE OF 200 SQ.FT./GAL. TWO APPLICATIONS AT 90 DEG OFFSET MAY BE REQUIRED ON WINDY DAYS.

3.) CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AS SPECIFIED AT 28 DAY STRENGTH.

4.) ALL CONCRETE SHALL HAVE A SLUMP OF NO GREATER THAN 4" (TO WITHIN A TOLERANCE OF 1").

5.) ALL EXPOSED CONCRETE SHALL BE AIR–ENTRAINED, 6% (WITHIN 1% TOLERANCE), CONFORMING TO ASTM C260.

6.) NUMBER OF CONCRETE POURS TO BE DETERMINED BY WAWA.

7.) ALL FORM WORK AND PLACEMENT OF CONCRETE SHALL COMPLY WITH GOOD CONSTRUCTION PRACTICES AND BE IN ACCORDANCE WITH ALL LOCAL GOVERNING CODES, AND REGULATIONS AS WELL AS THE ACI AND UNIFORM BUILDING CODE.

BOHLER ENGINEERING
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING PROGRAM MANAGEMENT LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN PERMITTING SERVICES TRANSPORTATION SERVICES
UPSTATE NEW YORK • NEW ENGLAND • BOSTON, MA • NEW YORK, NY • NEW YORK METRO • NORTHERN NEW JERSEY • SOUTHERN NEW JERSEY • PHILADELPHIA, PA • PITTSBURGH, PA • LEHIGH VALLEY, PA • SOUTHEASTERN, PA • REHOBOTH BEACH, DE • BALTIMORE, MD • SOUTHERN MARYLAND • NORTHERN VIRGINIA • CENTRAL VIRGINIA • RALEIGH, NC • WASHINGTON, DC • CHARLOTTE, NC • ATLANTA, GA • TAMPA, FL • SOUTH FLORIDA • DALLAS, TX

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE PROPRIETARY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM BOHLER ENGINEERING. ONLY APPROVED, SIGNED AND SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES
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REVISIONS

REV	DATE	COMMENT	BY
1	09/21/18	PER TOWNSHIP REVIEW COMMENTS	JHT

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE - STOP CALL
PA1 SYSTEM, INC. 1-800-242-1776
POCS SERIAL NUMBER 20172771117

PROJECT No.: PC171170
DRAWN BY: JHT
CHECKED BY: JRK
DATE: 5/18/2018
SCALE: AS NOTED
CAD I.D.: PC171170DETAILS-1

PROJECT:
FINAL LAND DEVELOPMENT PLANS
FOR
PROVCO PINEGOOD, CHALFONT, LLC
PROPOSED WAWA
BUTLER AVENUE (SR 4202) & COUNTY LINE ROAD
NEW BRITAIN TOWNSHIP
BUCKS COUNTY
PENNSYLVANIA

BOHLER ENGINEERING
1600 MANOR DRIVE, SUITE 200
CHALFONT, PENNSYLVANIA 18914
Phone: (215) 996-9100
Fax: (215) 996-9102
www.BohlerEngineering.com

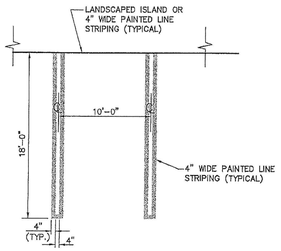
J.R. KORCZAK
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE074279

SHEET TITLE:
DETAILS

SHEET NUMBER:
25
OF 37

REVISION 1 - 2018.09.21

GB R:\17\PC171170\DRAWINGS\PLAN SETS\LAND DEVELOPMENT\REVISION 1\PC171170DETAILS-1---->LAYOUT: 25 DETAILS

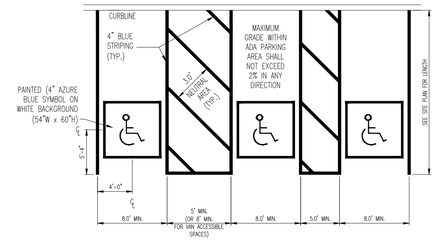


PARKING SPACE STRIPING DETAIL

NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PENNSYLVANIA

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES
65 EAST BUTLER AVENUE, SUITE 100, NEW BRITAIN, PA 18901-5106 • (215) 345-4330
www.gilmore-assoc.com

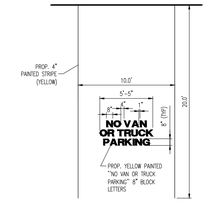
DATE: 5/22/09	LAST REVISED:	SCALE: N.T.S.	DRAWING No: 16 OF 17



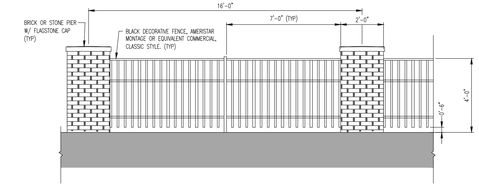
NOTES:
1.) CURB RAMPS MAY NOT EXTEND INTO ANY PORTION OF THE PARKING SPACE OR ASSOCIATED STRIPED ISLAND.

2.) CURB RAMPS, PAVEMENT MARKINGS, & APPLICABLE SIGNAGE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST A.D.A. ACCESSIBILITY GUIDELINES.

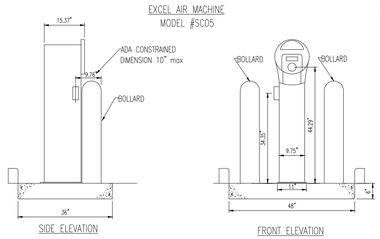
T / S10 ADA ACCESSIBLE PARKING SPACE STRIPING (3 SPACES)
SCALE: N.T.S. REV.: 2016.05.31

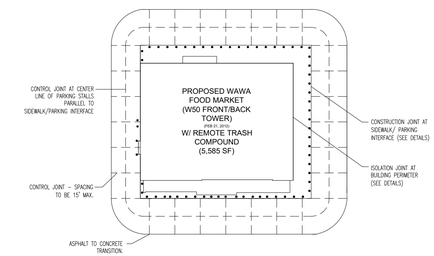


PARKING SPACE LETTERING DETAIL
N.T.S.

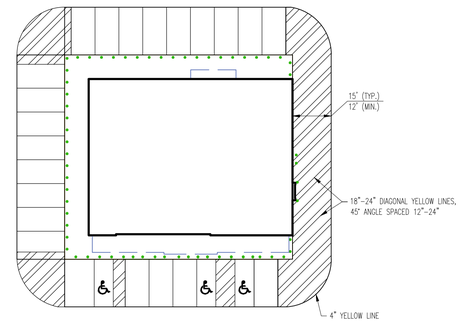


PIER AND FENCE DETAIL
N.T.S.

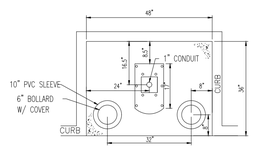




DETAIL OF TYPICAL CONCRETE PAVING JOINT DETAIL (STUCCO W50 F/B TOWER W/ STRIPED ISLANDS)
N.T.S.

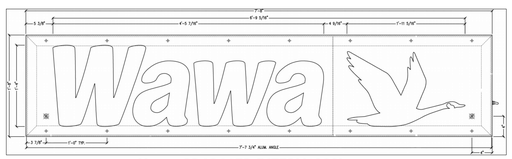


LOADING ZONE STRIPING DETAIL
N.T.S.



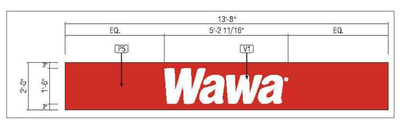
PLAN VIEW

AIR PUMP STAND



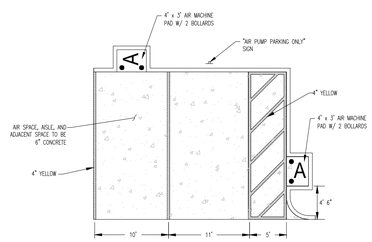
I PROPOSED INTERNALLY ILLUMINATED CANOPY SIGN
N.T.S.

TOTAL AREA =9.03 S.F.

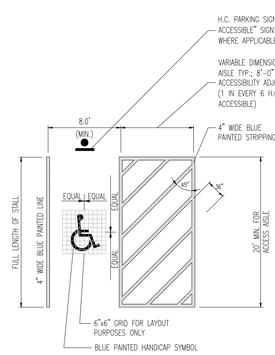


J PROPOSED GAS PUMP SPANNER (STRAIGHT PUMPS)
N.T.S.

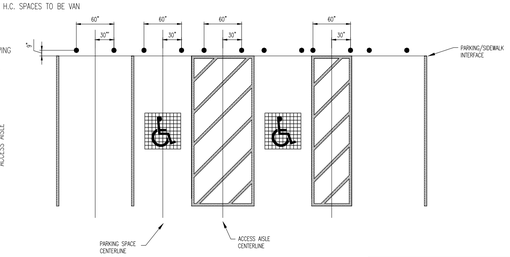
TOTAL AREA =7.84 S.F.



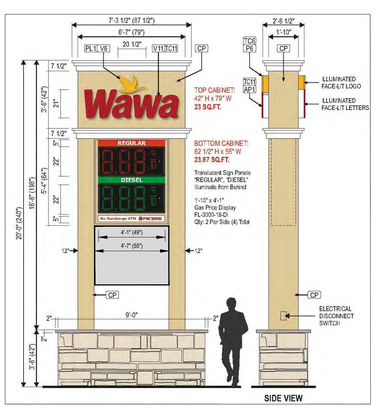
AIR PARKING SPACE DETAIL
N.T.S.



A.D.A. PAINTED MARKINGS
N.T.S.

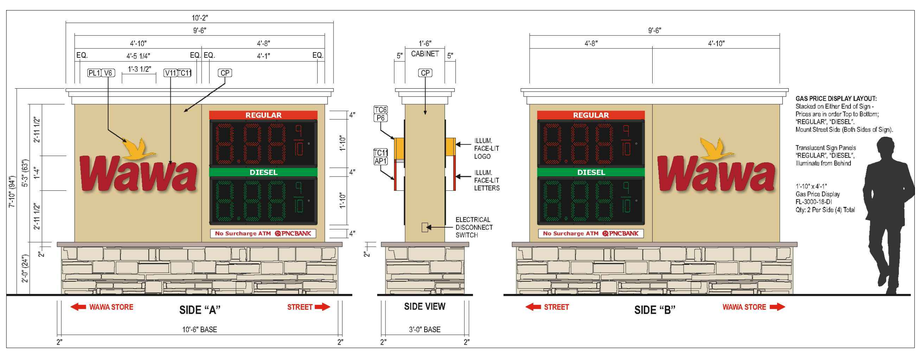


BOLLARD SPACING DETAIL
N.T.S.



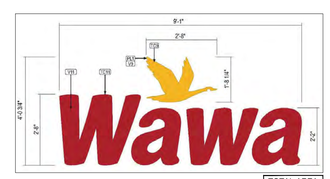
TOTAL AREA =65.20 S.F.

G (P-50)-2 PRODUCT 18" PROPOSED DOUBLE FACED INTERNALLY ILLUMINATED SHARED FREESTANDING PYLON SIGN W/L.E.D PRICE CHANGER
N.T.S.



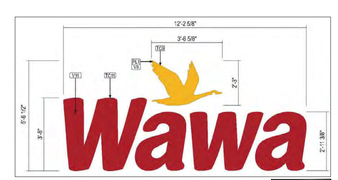
TOTAL AREA =49.87 S.F.

H (M-50)-2 PRODUCT 18" PROPOSED DOUBLE FACED INTERNALLY ILLUMINATED WAWA FREESTANDING PYLON SIGN W/L.E.D PRICE CHANGER
N.T.S.



TOTAL AREA =36.90 S.F.

K PROPOSED 32" INDIVIDUAL ILLUMINATED CHANNEL LETTERS & LOGO
N.T.S.



TOTAL AREA =67.70 S.F.

L PROPOSED 44" INDIVIDUAL ILLUMINATED CHANNEL LETTERS & LOGO
N.T.S.

PROPOSED 3+1 MPD
N.T.S.

TOTAL AREA =1.84 S.F.

BOHLER ENGINEERING
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING · PROGRAM MANAGEMENT · LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN · ENVIRONMENTAL · TRANSPORTATION · TRAFFIC · ITS
◆ UPSTATE NEW YORK ◆ SOUTHERN NEW JERSEY ◆ BALTIMORE, MD. ◆ CHARLOTTE, NC
◆ NEW ENGLAND ◆ PHILADELPHIA, PA ◆ SOUTHERN MARYLAND ◆ ATLANTA, GA
◆ BOSTON, MA ◆ PITTSBURGH, PA ◆ NORTHERN VIRGINIA ◆ TAMPA, FL
◆ NEW JERSEY ◆ HARRISBURG, PA ◆ CENTRAL VIRGINIA ◆ ORLANDO, FL
◆ NEW YORK METRO ◆ SOUTHEASTERN, PA ◆ RALEIGH, NC ◆ DALLAS, TX
◆ NORTHERN NEW JERSEY ◆ REHOBOTH BEACH, DE ◆ WASHINGTON, DC
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REVISIONS

REV	DATE	COMMENT	BY
1	09/21/18	PER TOWNSHIP REVIEW COMMENTS	JHT

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE - STOP CALL
PA1 1-800-242-1776
POCS SERIAL NUMBER 20172771117

PROJECT No.: PC171170
DRAWN BY: JHT
CHECKED BY: JRK
DATE: 5/18/2018
SCALE: AS NOTED
CAD I.D.: PC171170DETAILS-1

PROJECT:
FINAL LAND DEVELOPMENT PLANS
FOR
PROVCO PINEGOOD, CHALFONT, LLC
PROPOSED WAWA
BUTLER AVENUE (SR 4202) & COUNTY LINE ROAD
NEW BRITAIN TOWNSHIP
BUCKS COUNTY
PENNSYLVANIA

BOHLER ENGINEERING
1600 MANOR DRIVE, SUITE 200
CHALFONT, PENNSYLVANIA 18914
Phone: (215) 996-9100
Fax: (215) 996-9102
www.BohlerEngineering.com

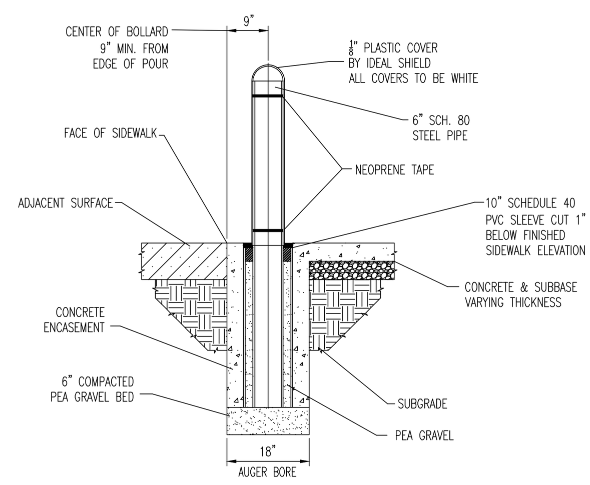
J.R. KORCZAK
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE074279

SHEET TITLE:
DETAILS

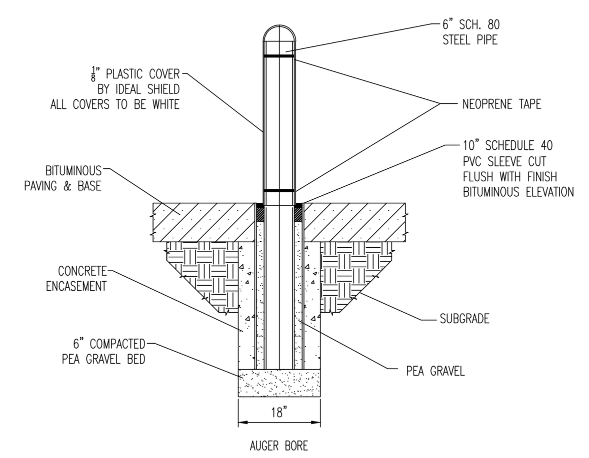
SHEET NUMBER:
26
OF 37

REVISION 1 - 2018.09.21

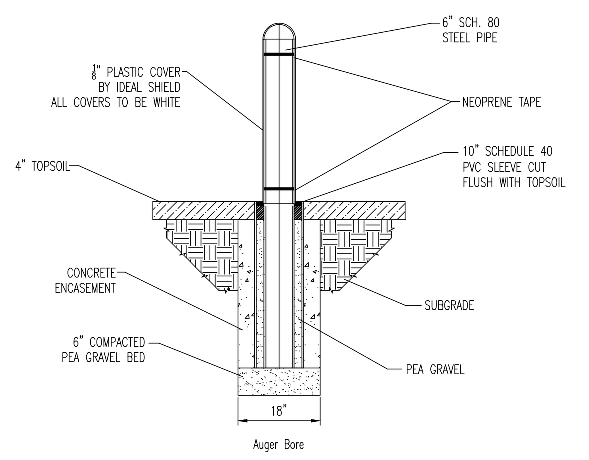
G:\PROJECTS\PROJECTS\PROVCO PINEGOOD\WAWA\SITE PLAN\DETAILS\PC171170DETAILS-1.DWG



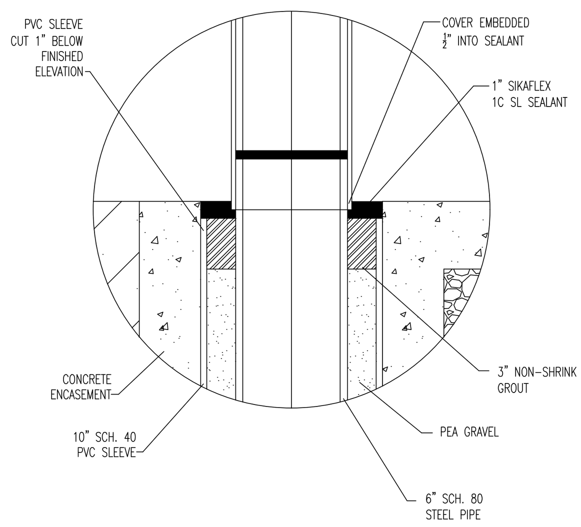
CONCRETE AREAS



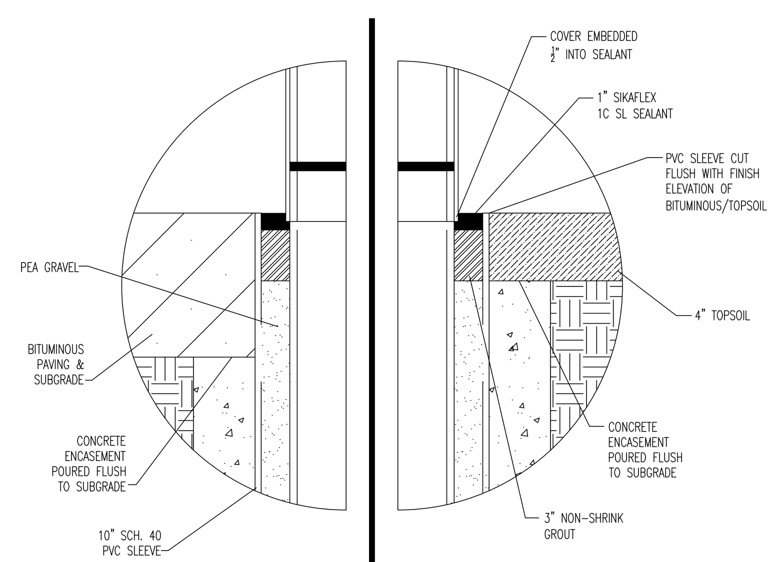
BITUMINOUS AREAS



LANDSCAPED AREAS

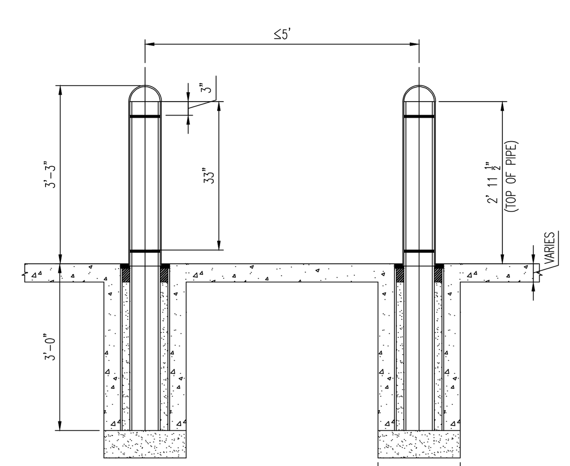


GENERAL DETAILS AND CAULK/GROUT DETAIL FOR CONCRETE AREAS

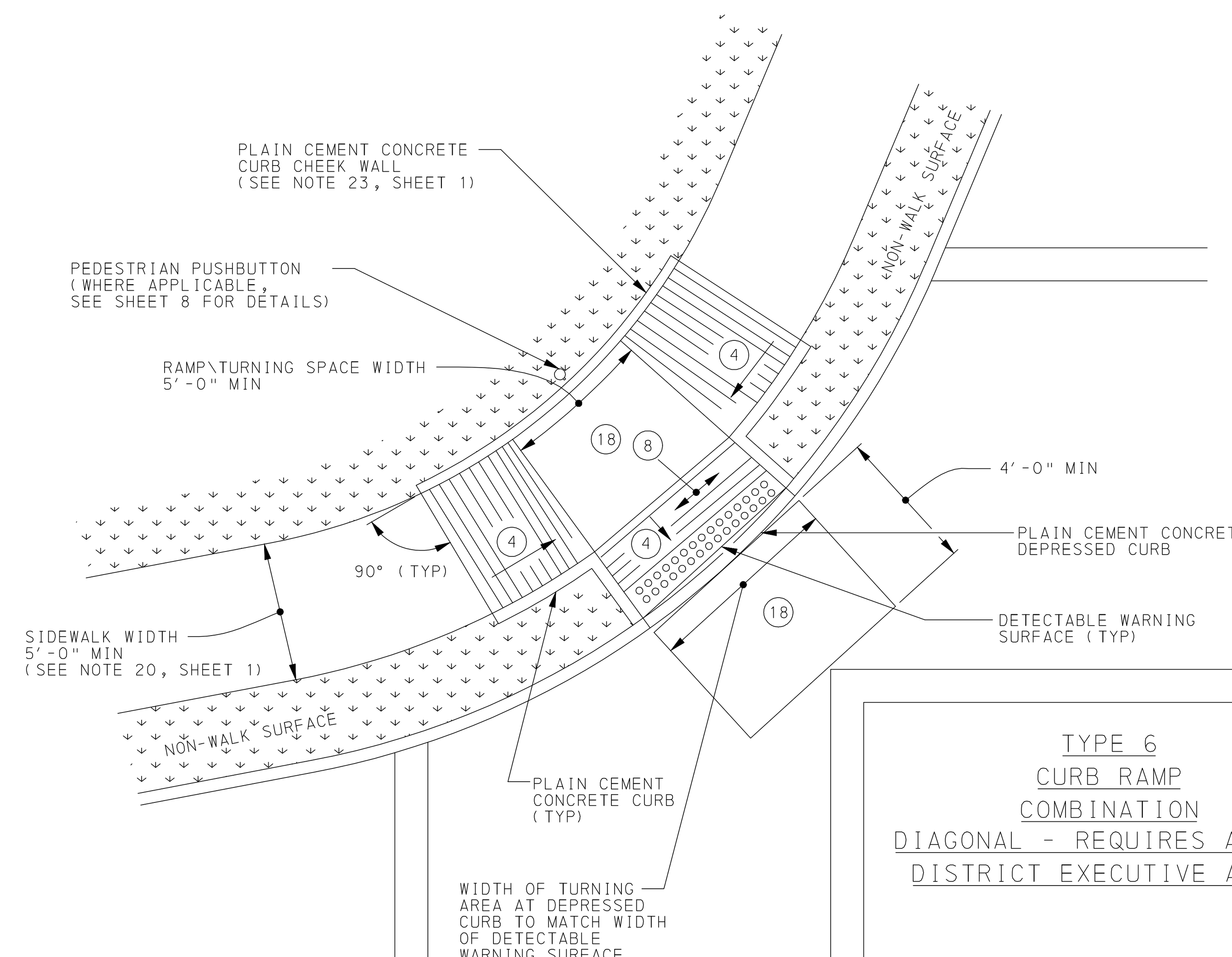


CAULK/GROUT DETAIL FOR LANDSCAPED & BITUMINOUS AREAS

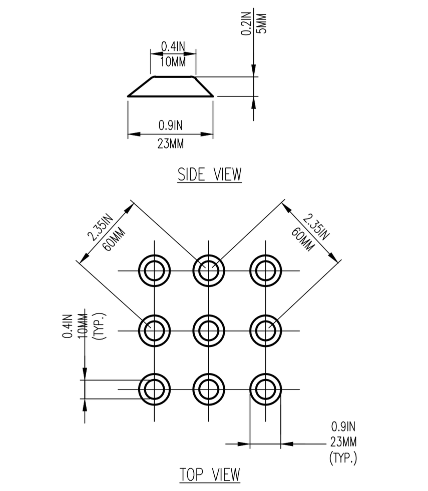
TYPICAL DETAIL
NEW CONSTRUCTION
NO SCALE



GENERAL BOLLARD DIMENSIONS AND SPACING AROUND BUILDING

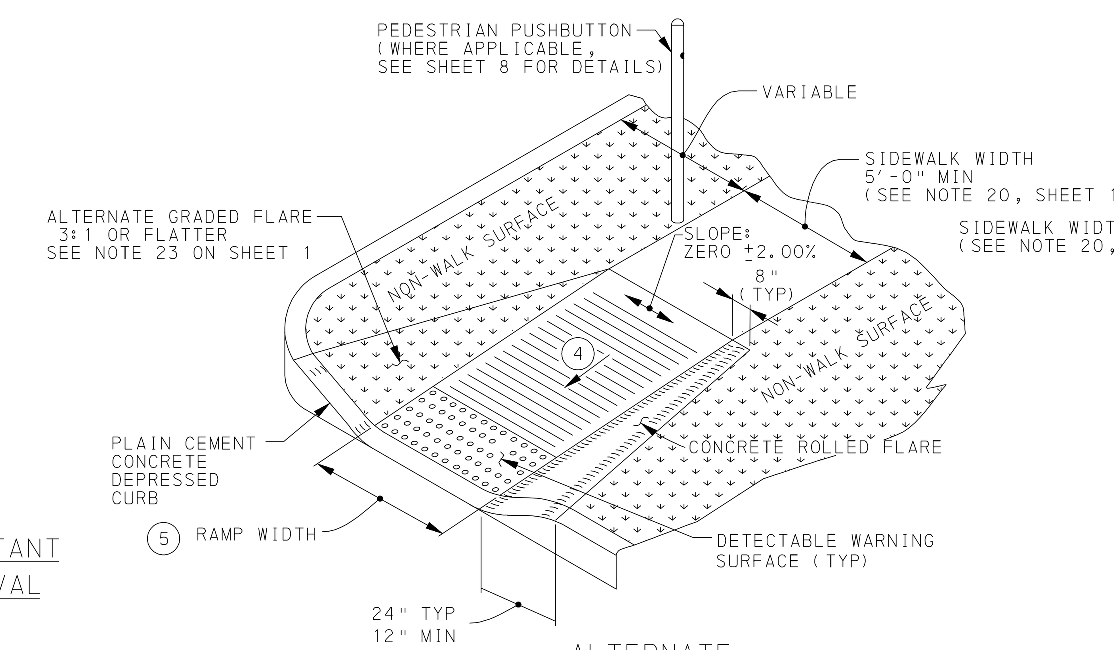


TYPE 6
CURB RAMP
COMBINATION
DIAGONAL - REQUIRES ASSISTANT
DISTRICT EXECUTIVE APPROVAL



NOTES:
1.) DETECTABLE WARNINGS SHALL BE A PRE-MANUFACTURED ARMOUR-TILE TACTILE SYSTEM OR APPROVED EQUIVALENT.
2.) CONTRACTOR TO COORDINATE SPECIFIC SYSTEM AND MATERIALS TO BE UTILIZED WITH THE ENGINEER TO ENSURE LOCAL, STATE AND A.D.A. COMPLIANCE PRIOR TO CONSTRUCTION.

TRUNCATED DOME PATTERN FOR A.D.A. DETECTABLE WARNING SURFACES (FOR USE IN DOT ROADWAYS)
T / S14 SCALE: N.T.S. REV.: 2015.03.09



ALTERNATE
TYPE 4A
CURB RAMP
(PARALLEL)

VICTOR STANLEY, INC.®
-Manufacturers of Quality Site Furnishings since 1962-

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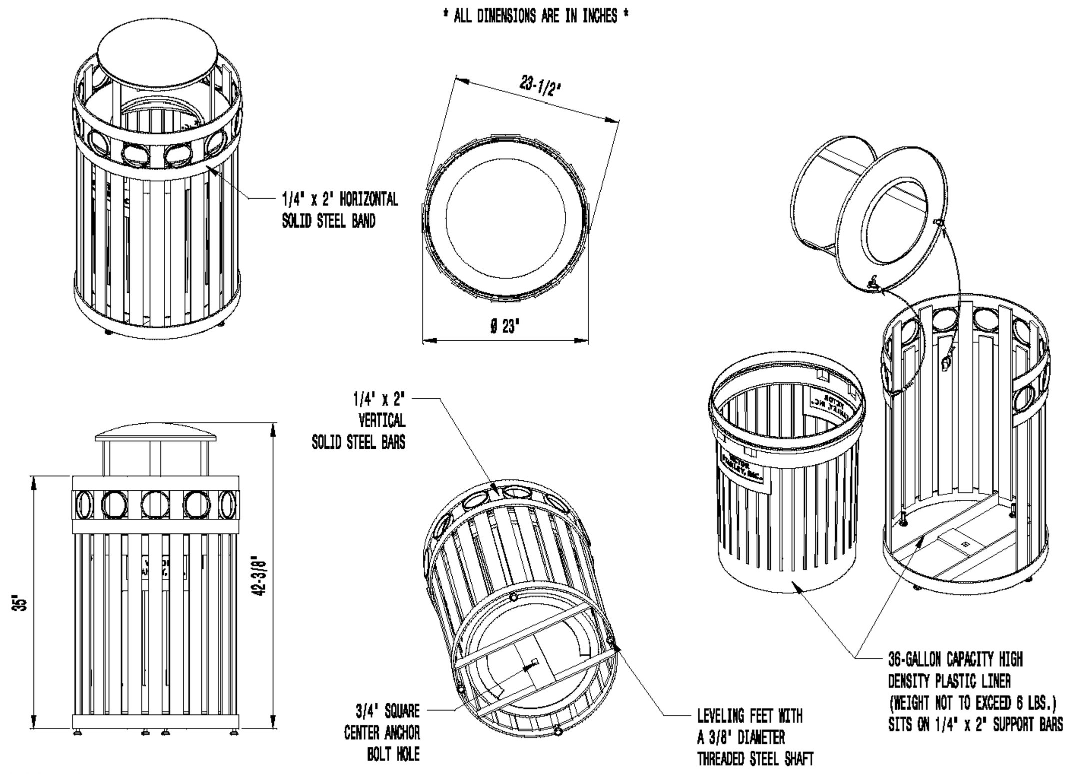
TOLL FREE: (800) 368-2573 (USA & CANADA)
TEL (301) 855-8300 - FAX (410) 257-7579
WEB SITE: HTTP://WWW.VICTORSTANLEY.COM

* ALL DIMENSIONS ARE IN INCHES *



AVAILABLE OPTIONS:
POWDER COATING
10 STANDARD COLORS, 2 OPTIONAL METALLIC COLORS,
CUSTOM COLORS (INCLUDING THE RAL RANGE)
CUSTOM PLAQUES & DECALS
AVAILABLE WITH STEEL PLAQUES IN VARIOUS SIZES AND PRESSURE SENSITIVE VINYL OUTDOOR DECALS.

LIDS
STANDARD TAPERED FORMED LID. AVAILABLE WITH OPTIONAL DOME LID (AS SHOWN), DOME LID WITH STAINLESS STEEL ASHTRAY, CONVEX LID, CONVEX LID WITH SELF-CLOSING DOOR, RAIN BONNET LID, RAIN BONNET LID WITH STAINLESS STEEL ASHTRAY, AND RECYCLE LIDS. ASHTRAYS AVAILABLE WITH OPTIONAL ASHTRAY COVER.
SECURITY
LID IS SECURED WITH VINYL COATED GALVANIZED STEEL AIRCRAFT CABLE. CABLE IS LOOPED AROUND ATTACHMENT BRACKETS AND CRIMPED IN PLACE.

NOTES:
1. DRAWINGS NOT TO SCALE. DO NOT SCALE DRAWINGS.
2. ALL FABRICATED METAL COMPONENTS ARE STEEL SHOTBLASTED, ETCHED, PHOSPHATIZED, PREHEATED, AND ELECTROSTATICALLY POWDER-COATED WITH T.G.I.C. POLYESTER POWDER COATINGS. PRODUCTS ARE FULLY CLEANED AND PRETREATED, PREHEATED AND COATED WHILE HOT TO FILL CREVICES AND BUILD FILM COATING. COATED PARTS ARE THEN FULLY CURED TO COATING MANUFACTURER'S SPECIFICATIONS. THE THICKNESS OF THE RESULTING FINISH AVERAGES 8-10 MILS (200-250 MICRONS).
3. THIS VICTOR STANLEY, INC. PRODUCT MUST BE PERMANENTLY AFFIXED TO THE GROUND. CONSULT YOUR LOCAL CODES FOR REGULATIONS.
4. VICTOR STANLEY, INC., PLASTIC INNER LINERS ARE MOLDED ON TOOLING DESIGNED FOR AND OWNED BY VICTOR STANLEY, INC. THEY OFFER MAXIMUM CAPACITY AND STRENGTH WITH LIGHTWEIGHT CONSTRUCTION USING CRITICAL MOLDED RIBS, INTEGRAL HANDHOLDS, AND HIGH-STRENGTH MATERIALS. THIS MINIMIZES HANDLING DIFFICULTY AND FACILITATES EASY EMPTYING AND STORAGE WHILE AFFORDING LONG SERVICE LIFE.
5. ANCHOR BOLT(S) NOT PROVIDED BY VICTOR STANLEY, INC.
6. FOR HIGH SALT ABUSIVE CLIMATES, HOT DIP GALVANIZING BEFORE POWDER COATING IS AVAILABLE. SEE WRITTEN SPECIFICATIONS FOR DETAILS.
7. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE. CONTACT MANUFACTURER FOR DETAILS.
8. THIS PRODUCT IS SHIPPED FULLY ASSEMBLED.

FC-12
CONCOURSE SERIES
36-GALLON LITTER RECEPTACLE
SHOWN: OPTIONAL DOME LID

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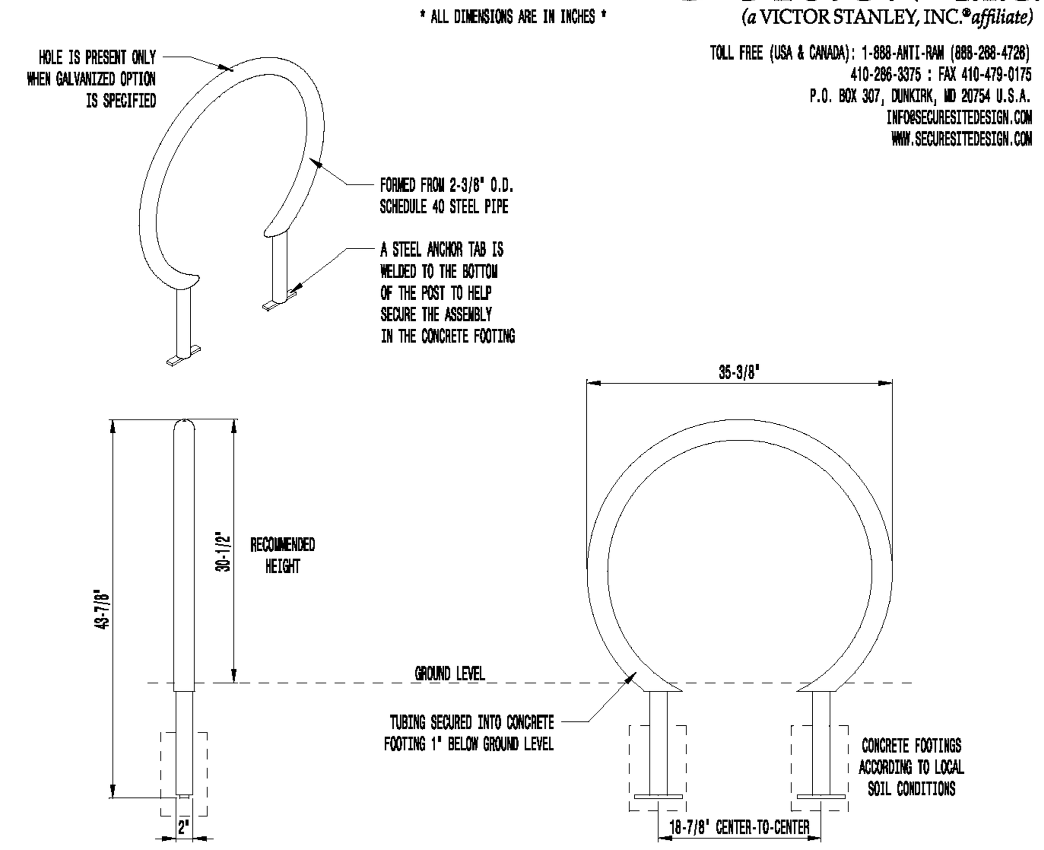
REV. 4/24/12 DRAWN C.D.B. 2012-351

SECURE SITE DESIGN™ L.L.C.
(a VICTOR STANLEY, INC.® affiliate)

* ALL DIMENSIONS ARE IN INCHES *

TOLL FREE (USA & CANADA): 1-888-ANTI-RAM (888-268-4726)
410-286-3375 : FAX 410-479-0175
P.O. BOX 307, DUNKIRK, MD 20754 U.S.A.
INFO@SECURESITEDESIGN.COM
WWW.SECURESITEDESIGN.COM



AVAILABLE OPTIONS:
POWDER COATING
10 AVAILABLE COLORS, 2 OPTIONAL METALLIC COLORS,
CUSTOM COLORS (INCLUDING THE RAL RANGE AT AN ADDITIONAL COST)
(ALL POWDER COAT FINISHES ARE DONE AT VICTOR STANLEY, INC. (VSI) TO MATCH THE VSI PRODUCT LINE)
OTHER FINISHES: GALVANIZED (SPECIAL QUOTE NEEDED)

MOUNTING
STANDARD IN-GROUND (AS SHOWN) AND SURFACE

NOTES:
1. DRAWINGS NOT TO SCALE. DO NOT SCALE DRAWINGS.
2. ALL FABRICATED METAL COMPONENTS ARE STEEL SHOTBLASTED, ETCHED, PHOSPHATIZED, PREHEATED, AND ELECTROSTATICALLY POWDER-COATED WITH T.G.I.C. POLYESTER POWDER COATINGS. PRODUCTS ARE FULLY CLEANED AND PRETREATED, PREHEATED AND COATED WHILE HOT TO FILL CREVICES AND BUILD COATING FILM. COATED PARTS ARE THEN FULLY CURED TO COATING MANUFACTURER'S SPECIFICATIONS. THE THICKNESS OF THE RESULTING FINISH AVERAGES 8-10 MILS (200-250 MICRONS).
3. THIS VICTOR STANLEY, INC. PRODUCT MUST BE PERMANENTLY AFFIXED IN THE GROUND. CONSULT YOUR LOCAL CODES FOR REGULATIONS.
4. FOR HIGH SALT ABUSIVE CLIMATES, HOT DIP GALVANIZING BEFORE POWDER COATING IS AVAILABLE. SEE WRITTEN SPECIFICATIONS FOR DETAILS.
5. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE. CONTACT MANUFACTURER FOR DETAILS.
6. THIS PRODUCT IS SHIPPED FULLY ASSEMBLED.

BRHS-101
CYCLE SENTRY™ SERIES
BIKE RACK
SHOWN: STANDARD IN-GROUND MOUNT

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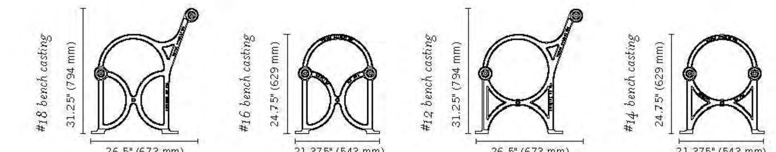
REV. 8/8/13 DRAWN C.R.K 2013-875

CITY SITES™ COLLECTION

Strongly symmetrical, curved castings that enhance the site and delight the eye.

Victor Stanley castings are **GENUINE DUCTILE-IRON** and carry our **10-YEAR WARRANTY** against breakage.

CR-18



CBF-12. Boston, Massachusetts, USA.

CR-18 BENCH
CR-14 BACKLESS BENCH
4, 6 or 8 ft (1.2,1.8 or 2.4 m) length. Steel scrolls. Surface mount.
OPTION: Intermediate armrests.

C-12 BENCH
4, 6 or 8 ft (1.2, 1.8 or 2.4 m) length. Surface mount.
OPTIONS: Wood slats. Recycled plastic slats for 4 and 6 ft (1.2 and 1.8 m) lengths. Intermediate armrests (bolt-on).

CBF-12 BENCH
4, 6 or 8 ft (1.2, 1.8 or 2.4 m) length. Horizontal steel slats. Surface mount.
OPTION: Intermediate armrests.

All City Sites™ castings are available with choice of wood slats, 2nd Site Systems® recycled slats, steel scrolls, horizontal steel slats and horizontal steel rods.

BOHLER ENGINEERING™
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING PROGRAM MANAGEMENT LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN PERMITTING SERVICES TRANSPORTATION SERVICES
UPSTATE NEW YORK · NEW ENGLAND · BOSTON, MA · NEW YORK, NY · NEW YORK METRO · NORTHERN NEW JERSEY
SOUTHERN NEW JERSEY · PHILADELPHIA, PA · PITTSBURGH, PA · LEHIGH VALLEY, PA · SOUTHEASTERN, PA · REHOBOTH BEACH, DE
BALTIMORE, MD · SOUTHERN MARYLAND · NORTHERN VIRGINIA · CENTRAL VIRGINIA · RALEIGH, NC · WASHINGTON, DC
CHARLOTTE, NC · ATLANTA, GA · TAMPA, FL · SOUTH FLORIDA · DALLAS, TX

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REVISIONS

REV	DATE	COMMENT	BY
1	09/21/18	PER TOWNSHIP REVIEW COMMENTS	JHT

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PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE - STOP CALL

PA1 SYSTEM, INC.
1-800-242-1776
POCS SERIAL NUMBER
20172771117

PROJECT No.: PC171170
DRAWN BY: JHT
CHECKED BY: JRK
DATE: 5/18/2018
SCALE: AS NOTED
CAD I.D.: PC171170DETAILS-1

PROJECT:

FINAL LAND DEVELOPMENT PLANS
FOR
PROVCO PINEGOOD, CHALFONT, LLC

PROPOSED WAWA

BUTLER AVENUE (SR 4202) & COUNTY LINE ROAD
NEW BRITAIN TOWNSHIP
BUCKS COUNTY
PENNSYLVANIA

BOHLER ENGINEERING
1600 MANOR DRIVE, SUITE 200
CHALFONT, PENNSYLVANIA 18914
Phone: (215) 996-9100
Fax: (215) 996-9102
www.BohlerEngineering.com

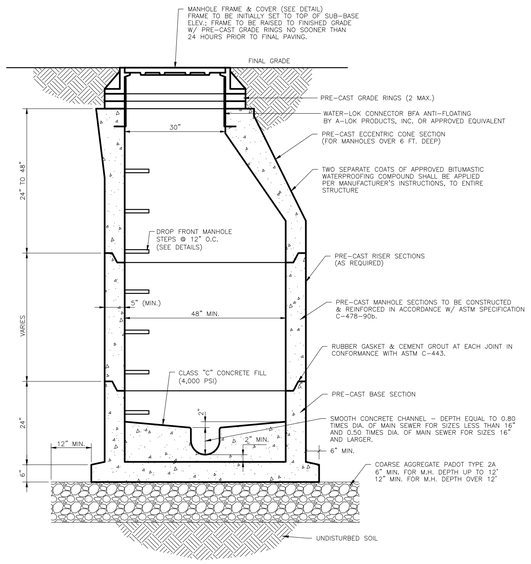
J.R. KORCZAK
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE074279

SHEET TITLE:
DETAILS

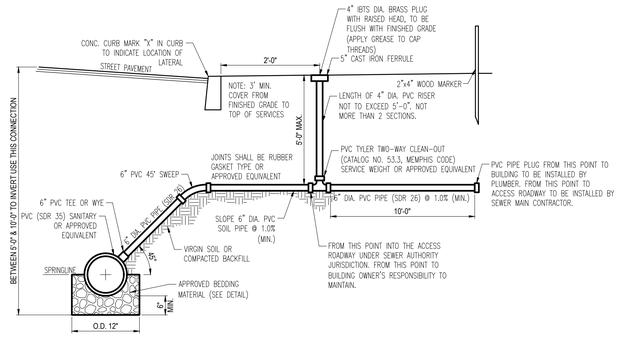
SHEET NUMBER:
27
OF 37

REVISION 1 - 2018.09.21

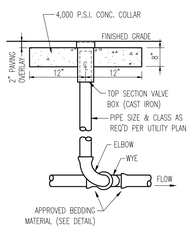
GB
R:\17\PC171170\DRAWINGS\PLAN SETS\LAND DEVELOPMENT\REVISION 1\PC171170DETAILS-1---->LAYOUT: 27 DETAILS



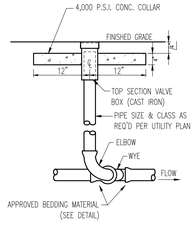
S / S3 PRECAST SANITARY MANHOLE DETAILS
SCALE: N.T.S. REV.: 2015.03.09



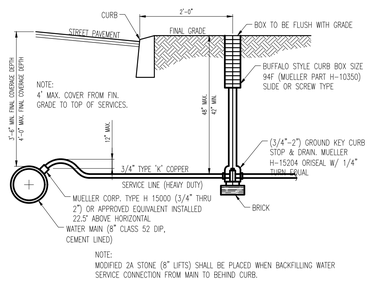
S / S1 TYPICAL SANITARY SEWER LATERAL DETAIL
SCALE: N.T.S. REV.: 2015.03.09



S / S12 TYPICAL CLEANOUT DETAIL (PAVED AREAS)
SCALE: N.T.S. REV.: 2015.03.09

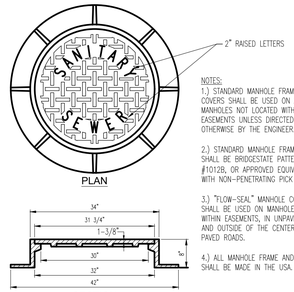


S / S13 TYPICAL CLEANOUT DETAIL (LANDSCAPED AREAS)
SCALE: N.T.S. REV.: 2015.03.09



NOTE:
MODIFIED 2A STONE (8" LIFTS) SHALL BE PLACED WHEN BACKFILLING WATER SERVICE CONNECTION FROM MAIN TO BEHIND CURB.

W / S2 WATER SERVICE CONNECTION DETAIL
SCALE: N.T.S. REV.: 2015.03.09



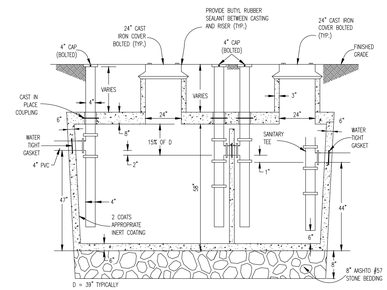
NOTES:
1.) STANDARD MANHOLE FRAMES & COVERS SHALL BE USED ON ALL MANHOLES NOT LOCATED WITHIN EASEMENTS UNLESS DIRECTED OTHERWISE BY THE ENGINEER.

2.) STANDARD MANHOLE FRAME & COVER SHALL BE BRIDGESTATE PATTERN #1012B, OR APPROVED EQUIVALENT, WITH NON-PENETRATING PICK HOLES.

3.) "FLOW-SEAL" MANHOLE COVERS SHALL BE USED ON MANHOLES LOCATED WITHIN EASEMENTS, IN UNPAVED AREAS, AND OUTSIDE OF THE CENTERLINE OF PAVED ROADS.

4.) ALL MANHOLE FRAME AND COVERS SHALL BE MADE IN THE USA.

S / S6 MANHOLE FRAME DETAIL
SCALE: N.T.S. REV.: 2015.03.09



ALL INLET AND OUTLET PIPES SHALL BE INSTALLED NO MORE THAN 6" FROM THE BOTTOM OF THE GREASE TRAP.

TANK TAPERS TOP TO BOTTOM AND IS TRAPEZOIDAL IN CROSS SECTION.

TANK IS 5000 PSI CONCRETE-STEEL REINFORCED (@ 28 DAYS) CONCRETE CONFORMS TO ACI 318-16-4.5.1 AND 318-16-4.5.2, ASTM A615 AND A185

-DIMENSION: 151" INTERIOR/ 163" EXTERIOR LENGTH x 72" INTERIOR/ 84" EXTERIOR WIDTH

NOTES:

1) WHEN LOCATED IN DRIVEWAYS OR PAVED AREAS, GREASE TRAP TO BE DESIGNED FOR APPROPRIATE LOAD BEARING CONDITIONS. GREASE TRAP SHALL BE CAPABLE OF WITHSTANDING HS-20 LOADING.

2) ALL PIPE PENETRATIONS SHALL BE WATERTIGHT.

3) GREASE TRAP SHALL BE PROVIDED WITH GAS-TIGHT MANHOLE COVERS, IN ACCORDANCE WITH TOWNSHIP STANDARD SPECIFICATIONS.

4) PRECAST CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH 5000 PSI.

5) EXTERIOR CONCRETE SURFACES BELOW GRADE SHALL HAVE 2 COATS OF COAL TAR EPOXY.

6) SPECIFIC SEALANT DETAIL AT CONCRETE RISER TO CONCRETE VAULT INTERFACE SHALL BE WATERTIGHT. AT A MINIMUM, THE JOINT SHALL BE SEALED WITH BUTYL RUBBER SEALANT (KENT SEAL #2 OR APPROVED EQUIVALENT) AND THE EXTERIOR OF THE JOINT SHALL BE SEALED WITH NON-SHRINK GROUT IN CONFORMANCE WITH THE TOWNSHIP STANDARD GREASE TRAP DETAIL.

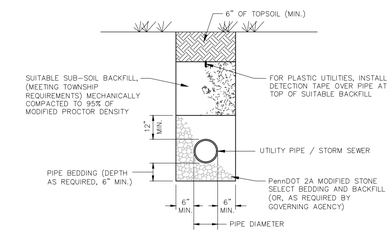
7) TANK SHALL BE TESTED FOR WATER TIGHTNESS BY FILLING FOR 24 HRS. TO SOAK, THEN TOPPED OFF, AND THEN WATCHED FOR 24 HRS. NO DROP IN WATER IS ALLOWED.

8) CAST IRON SHALL BE BOLTED TO CONCRETE WITH MASTIC TAPE (KENT SEAL OR APPROVED EQUIVALENT) SEALANT.

9) MAXIMUM EARTH COVER=5.0', HS-20 LOADING.

10) INLET AND OUTLET EQUIPPED WITH PIPE SEALS.

GREASE TRAP
1500 GALLON (2 COMPARTMENT) TANK



STORM SEWER & UTILITY TRENCH RESTORATION WITHIN PERVIOUS AREAS DETAIL
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ENGINEERING & CONSULTING SERVICES
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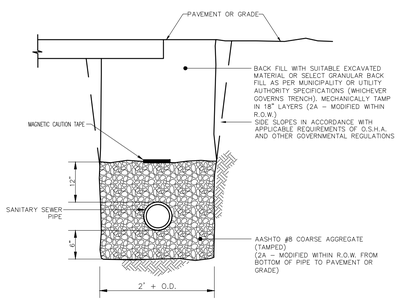
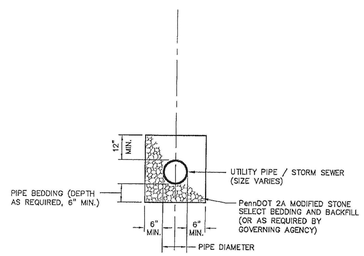
www.gilmore-assoc.com
DATE: 5/22/09 | LAST REVISED: | SCALE: N.T.S. | DRAWING No: 6 OF 17



EXCAVATIONS IN EXISTING PAVED ROADWAYS SHALL BE COORDINATED WITH THE LOCAL PERMITTING AGENCY, AND ALL EXCAVATION SHALL BE PAVED WITH TEMPORARY BITUMINOUS PAVEMENT FROM THE DATE OF ORIGINAL EXCAVATION UNTIL PERMANENT PAVEMENT IS INSTALLED. (MINIMUM = 90 DAYS, MAXIMUM = 120 DAYS)

THIS DETAIL IS NOT FOR USE WITHIN A STATE RIGHT-OF-WAY. REFER TO THE LATEST APPROVED DOT SPECIFICATIONS FOR TRENCH BEDDING WITHIN A STATE RIGHT-OF-WAY.

S / S8 TRENCH BEDDING CLASSIFICATION (SANITARY MAIN)
SCALE: N.T.S. REV.: 2015.03.09



PIPE BEDDING DETAIL
NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PENNSYLVANIA
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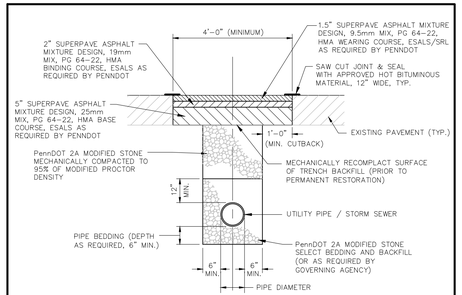

AFTER 90 DAYS RESTORATION

NOTES:

1. BEFORE 90 DAYS, ROADS SHALL BE TEMPORARILY RESTORED WITH 2A COURSE AGGREGATE AND 2" OF PennDOT ID-2 BINDER COURSE (TO GRADE) AND ALLOWED TO SETTLE 90 DAYS PRIOR TO PERMANENT RESTORATION, AS SHOWN ABOVE. PERMANENT RESTORATION OF TRENCHES SHALL BE COMPLETED ONLY AFTER APPROVAL BY TOWNSHIP ENGINEER.
2. RETAINED SUITABLE MATERIAL MAY BE USED AS BACKFILL FOR TRENCHES IN TOWNSHIP RIGHT-OF-WAY (OUTSIDE OF CARTWAY) WHEN MORE THAN THREE (3) FEET FROM EDGE OF EXISTING CARTWAY, CURB, AND/OR SIDEWALK.
3. MINIMUM WIDTH OF ALL RESTORATION SHALL BE FOUR (4) FEET.
4. COLD PATCH SHALL BE APPLIED ON ALL TRENCH RESTORATIONS (PRIOR TO 90 DAYS) WHEN BINDING OR BASE COURSE ARE NOT AVAILABLE DUE TO WEATHER CONDITIONS.
5. FOR PLASTIC UTILITIES, INSTALL DETECTION TAPE OVER PIPE AT TOP OF STONE BACKFILL.

STORM SEWER & UTILITY TRENCH RESTORATION WITHIN PAVED AREAS DETAIL
NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PENNSYLVANIA
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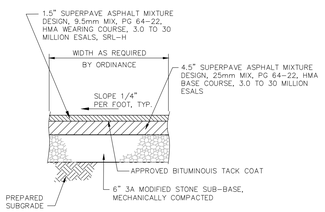

FOR USE IN AREAS OUTSIDE OF THE WAWA LOT

NON-RESIDENTIAL AND MULTI-RESIDENTIAL DRIVEWAYS, PARKING AREAS AND LOADING AREAS PAVING SECTION DETAIL
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PA1 SYSTEM, INC. 1-800-242-1776
POCS SERIAL NUMBER 20172771117

PROJECT No.: PC171170
DRAWN BY: JHT
CHECKED BY: JRK
DATE: 5/18/2018
SCALE: AS NOTED
CAD I.D.: PC171170DETAILS-1

PROJECT:
FINAL LAND DEVELOPMENT PLANS
FOR
PROVCO PINEGOOD, CHALFONT, LLC
PROPOSED WAWA
BUTLER AVENUE (SR 4202) & COUNTY LINE ROAD
NEW BRITAIN TOWNSHIP
BUCKS COUNTY
PENNSYLVANIA

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Phone: (215) 996-9100
Fax: (215) 996-9102
www.BohlerEngineering.com

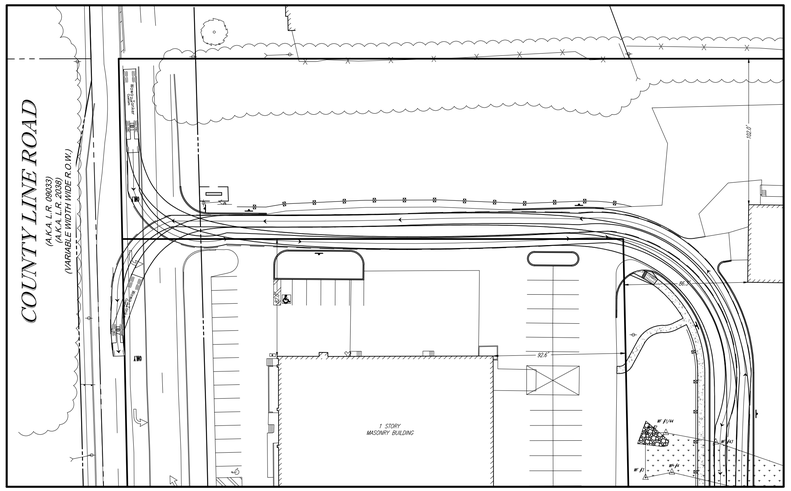
J.R. KORCZAK
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE074279

SHEET TITLE:
DETAILS

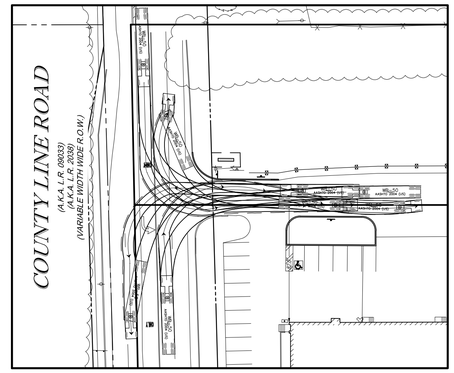
SHEET NUMBER:
28
OF 37

REVISION 1 - 2018.09.21

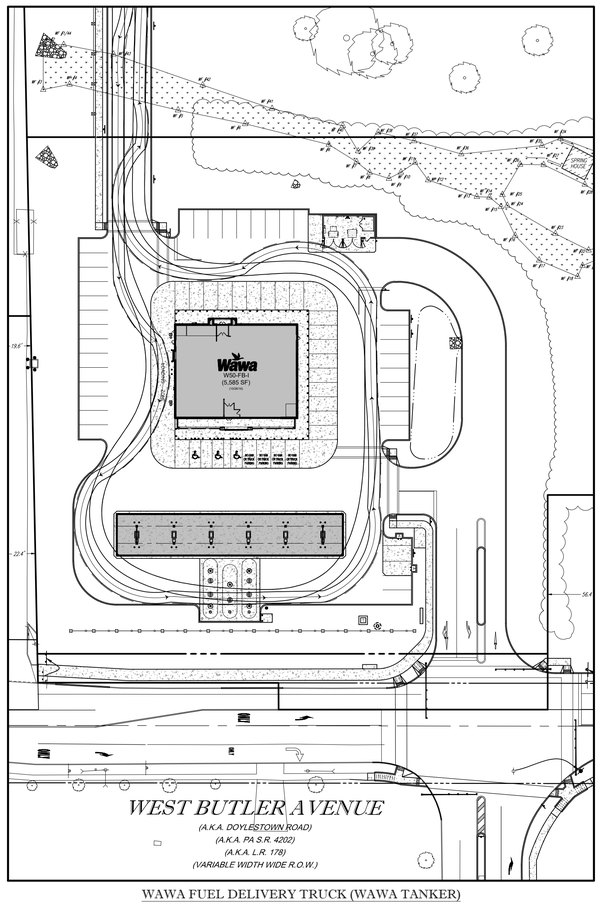
G:\PC171170\DRAWINGS\PLAN SET\LAND DEVELOPMENT\REVISION 1\PC171170DETAILS-1---LAYOUT DETAILS



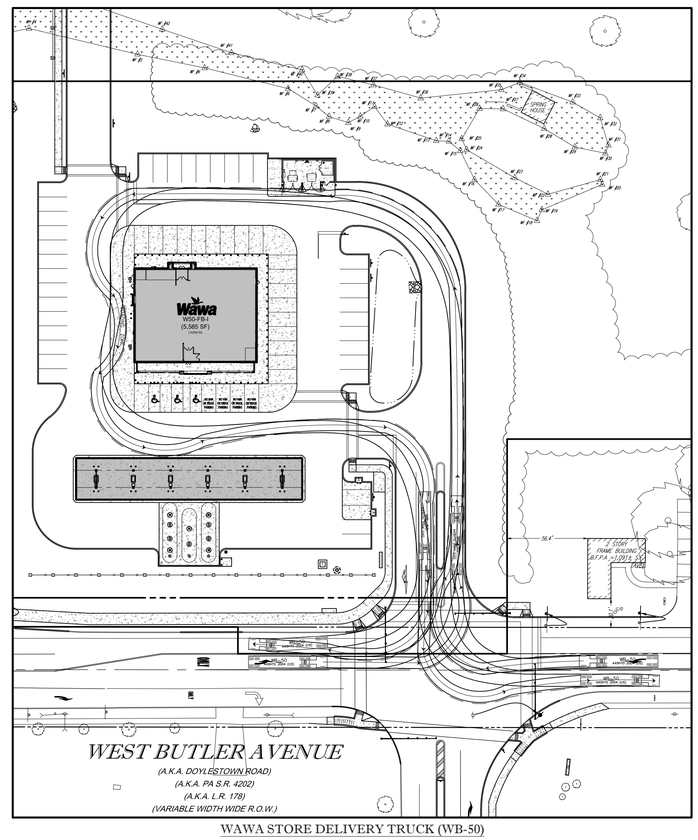
WAWA FUEL DELIVERY TRUCK (WAWA TANKER)



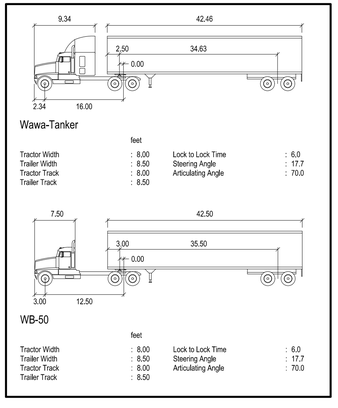
WAWA STORE DELIVERY TRUCK (WB-50)



WAWA FUEL DELIVERY TRUCK (WAWA TANKER)



WAWA STORE DELIVERY TRUCK (WB-50)



50 25 12.5 0 50

1"= 50'

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REVISIONS

REV	DATE	COMMENT	BY
1	09/21/18	PER TOWNSHIP REVIEW COMMENTS	JHT

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PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE - STOP CALL

PA1 SYSTEM, INC.
1-800-242-1776

POCS SERIAL NUMBER
20172771117

PROJECT No.: PC171170
DRAWN BY: JHT
CHECKED BY: JRK
DATE: 5/18/2018
SCALE: 1" = 50'
CAD I.D.: PC171170LANDDEV-1

PROJECT:

FINAL LAND DEVELOPMENT PLANS

FOR

PROVCO PINEGOOD, CHALFONT, LLC

PROPOSED WAWA

BUTLER AVENUE (SR 4202) & COUNTY LINE ROAD
NEW BRITAIN TOWNSHIP
BUCKS COUNTY
PENNSYLVANIA

BOHLER ENGINEERING
1600 MANOR DRIVE, SUITE 200
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Phone: (215) 996-9100
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www.BohlerEngineering.com

J.R. KORCZAK
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE074279

SHEET TITLE:

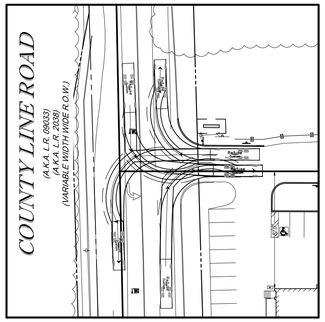
TRUCK CIRCULATION PLAN

SHEET NUMBER:

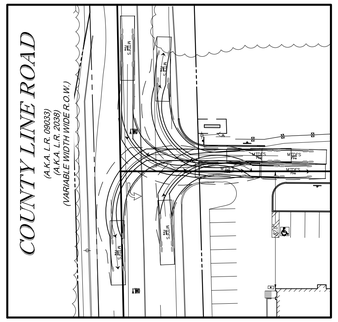
29
OF 37

REVISION 1 - 2018.09.21

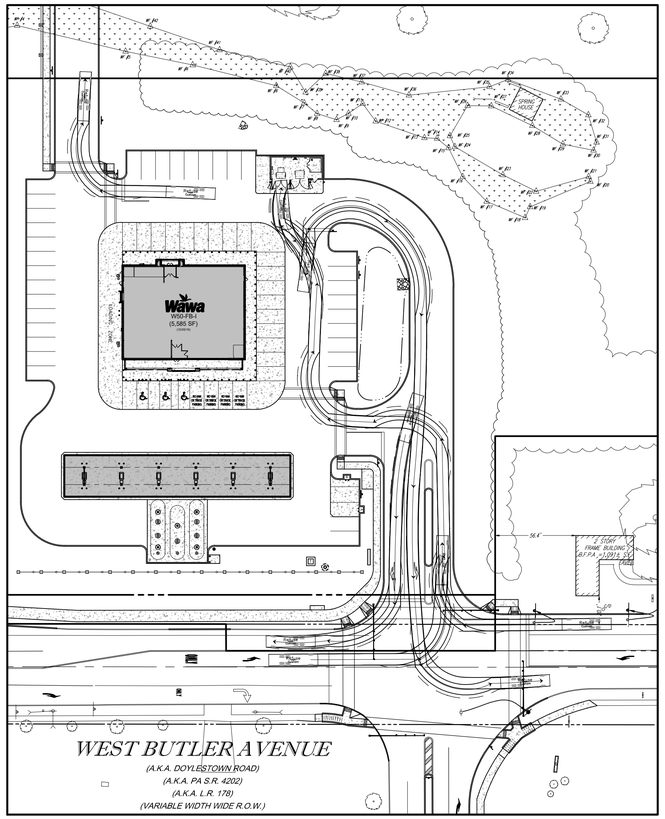
CJG
K:\PC171170\DRAWINGS\PLAN SETS\LAND DEVELOPMENT\REVISION 1\PC171170LANDDEV-1----LAYOUT: 29 TRUCK



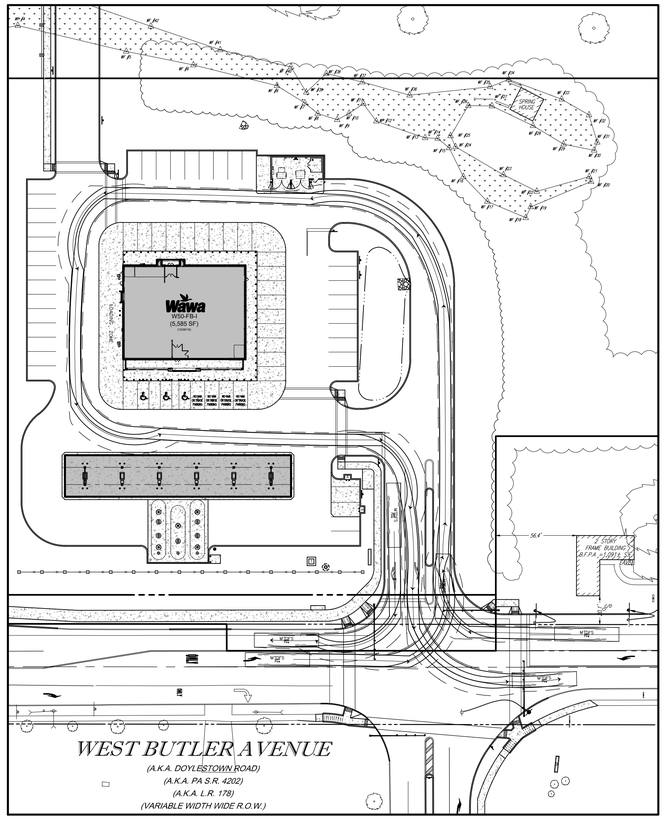
WAWA REFUSE TRUCK



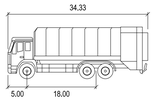
WAWA FIRE TRUCK (MTDFS)



WAWA REFUSE TRUCK



WAWA FIRE TRUCK (MTDFS)



Refuse

	feet
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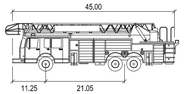
Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.0



MTDFS

	feet
Width	: 9.80
Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 30.0

50 25 12.5 0 50

1"= 50'

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1-800-242-1776

POCS SERIAL NUMBER
20172771117

PROJECT No.: PC171170
DRAWN BY: JHT
CHECKED BY: JRK
DATE: 5/18/2018
SCALE: 1" = 50'
CAD I.D.: PC171170LANDDEV-1

PROJECT:

FINAL LAND DEVELOPMENT PLANS

FOR

PROVCO PINEGOOD, CHALFONT, LLC

PROPOSED WAWA

BUTLER AVENUE (SR 4202) & COUNTY LINE ROAD
NEW BRITAIN TOWNSHIP
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J.R. KORCZAK
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE074279

SHEET TITLE:

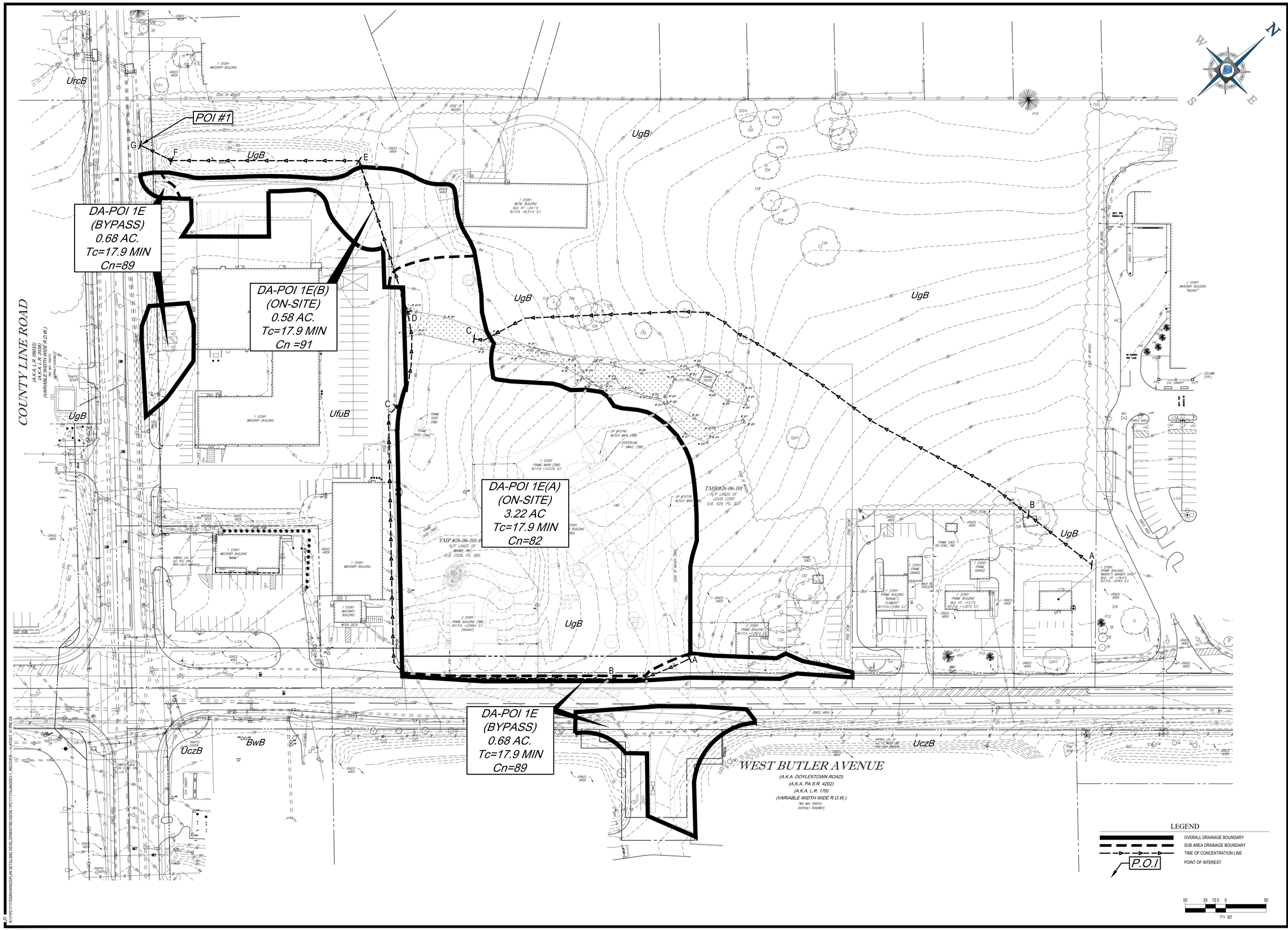
TRUCK CIRCULATION PLAN

SHEET NUMBER:

30
OF 37

REVISION 1 - 2018.09.21

G:\B
K:\PC\PC171170\DRAWINGS\PLAN SETS\LAND DEVELOPMENT\REVISION 1\PC171170LANDDEV1----LAYOUT 30 TRUCK



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1-800-242-1776

POCS SERIAL NUMBER
20172771117

PROJECT No.: PC171170
DRAWN BY: JHT
CHECKED BY: JRK
DATE: 5/18/2018
SCALE: 1" = 50'
CAD I.D.: PC171170LANDDEV-1, RECOVER

PROJECT:

FINAL LAND DEVELOPMENT PLANS

FOR

PROVCO PINEGOOD, CHALFONT, LLC

PROPOSED WAWA

BUTLER AVENUE (SR 4202) & COUNTY LINE ROAD
NEW BRITAIN TOWNSHIP
BUCKS COUNTY
PENNSYLVANIA

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www.BohlerEngineering.com

J.R. KORCZAK
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE074279

SHEET TITLE:

PRE-DEVELOPMENT DRAINAGE AREA PLAN

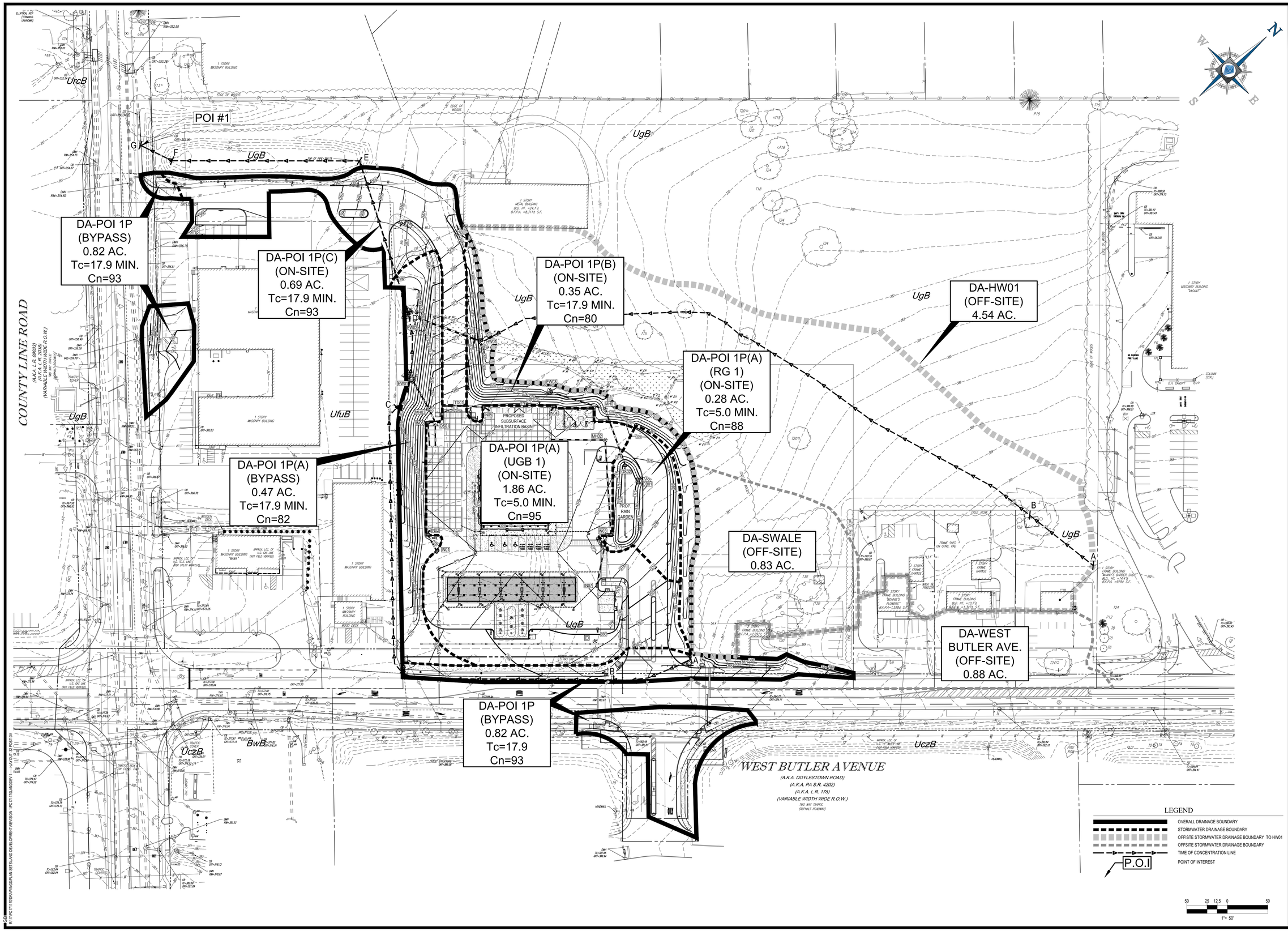
SHEET NUMBER:

31

OF 37

REVISION 1 - 2018.09.21

JT K:\PC\171170\DRAWINGS\PLAN SETS\LAND DEVELOPMENT\REVISION 1\PC171170LANDDEV-1_RECOVER.dwg -- 9/21/2018 3:17 PM EDT



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PROJECT:

FINAL LAND DEVELOPMENT PLANS

FOR

PROVCO PINEGOOD, CHALFONT, LLC

PROPOSED WAWA

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NEW BRITAIN TOWNSHIP
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J.R. KORCZAK
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE074279

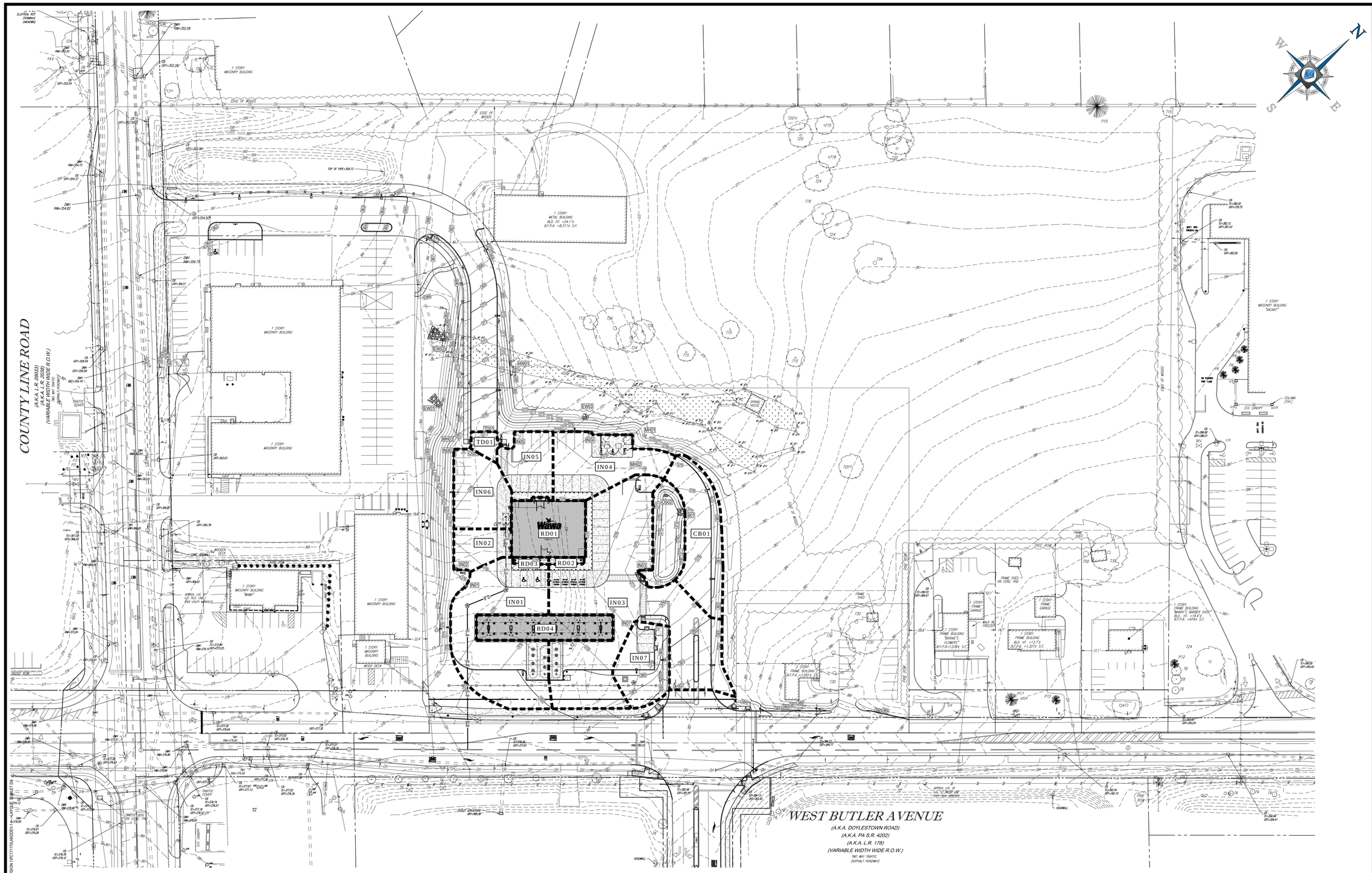
SHEET TITLE:

POST DEVELOPMENT DRAINAGE AREA PLAN

SHEET NUMBER:

32
OF 37

REVISION 1 - 2018.09.21



LEGEND

- - - - - -	INLET DRAINAGE BOUNDARIES
IN01	INLET DRAINAGE AREA

50 25 12.5 0 50

1"= 50'

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REVISIONS

REV	DATE	COMMENT	BY
1	09/21/18	PER TOWNSHIP REVIEW COMMENTS	JHT

CALL BEFORE YOU DIG!

PENNSYLVANIA LAW REQUIRES
3 WORKING DAYS NOTICE FOR
CONSTRUCTION PHASE AND 10
WORKING DAYS IN DESIGN
STAGE - STOP CALL

PA1 SYSTEM, INC.
1-800-242-1776

POCS SERIAL NUMBER
20172771117

PROJECT No.: PC171170
DRAWN BY: JHT
CHECKED BY: JRK
DATE: 5/18/2018
SCALE: 1" = 50'
CAD I.D.: PC171170LANDDEV-1

PROJECT:

FINAL LAND DEVELOPMENT PLANS

FOR

PROVCO PINEGOOD, CHALFONT, LLC

PROPOSED WAWA

BUTLER AVENUE (SR 4202) & COUNTY LINE ROAD
NEW BRITAIN TOWNSHIP
BUCKS COUNTY
PENNSYLVANIA

BOHLER ENGINEERING
1600 MANOR DRIVE, SUITE 200
CHALFONT, PENNSYLVANIA 18914
Phone: (215) 996-9100
Fax: (215) 996-9102
www.BohlerEngineering.com

J.R. KORCZAK
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE074279

SHEET TITLE:

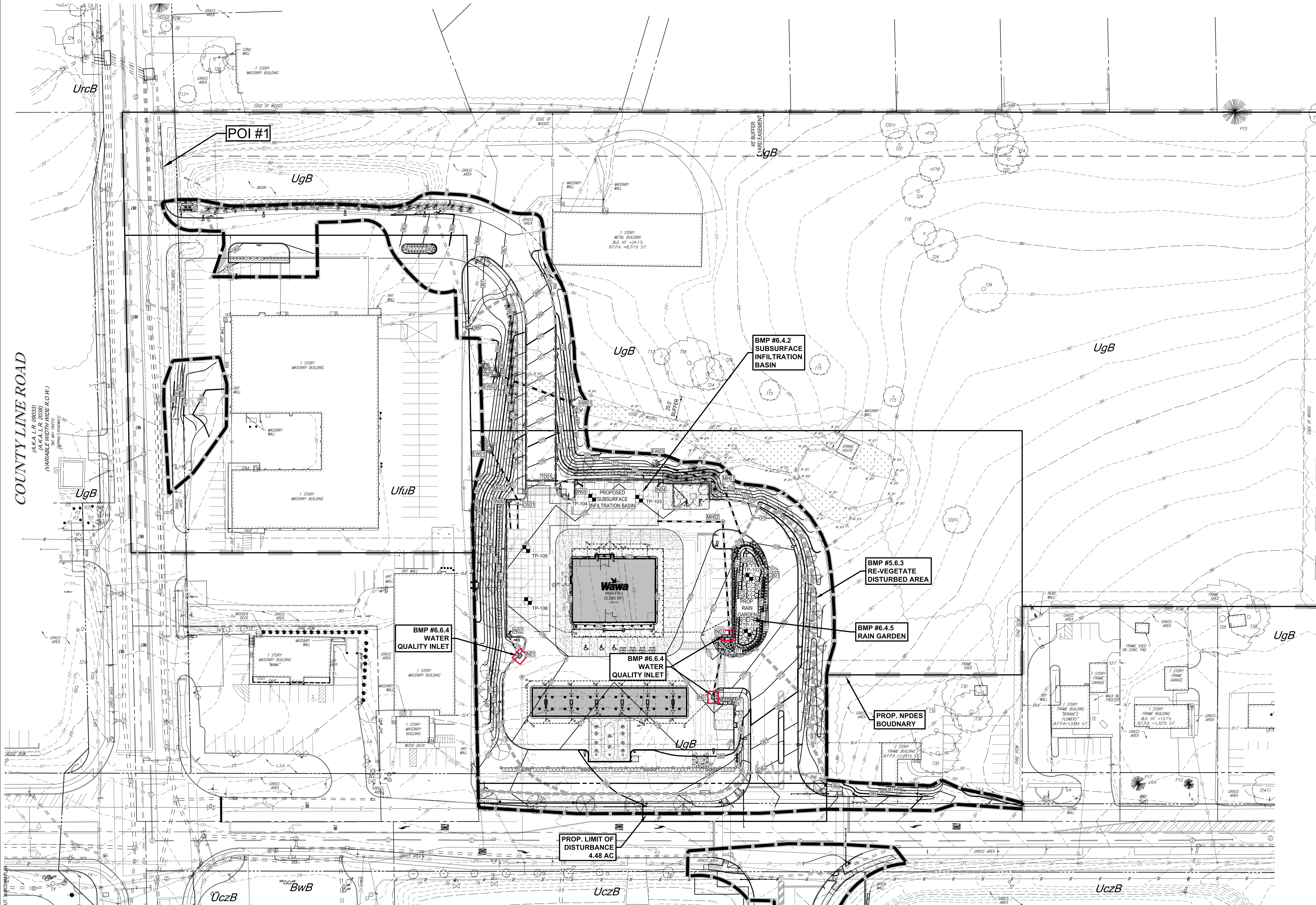
INLET DRAINAGE AREA PLAN

SHEET NUMBER:

33
OF 37

REVISION 1 - 2018.09.21

K:\171\PC171170\DRAWINGS\PLAN SETS\LAND DEVELOPMENT\VESION 1\PC171170LANDDEV-1 - JHT.DWG - JHT 1:1



TEST PIT NUMBER	EXISTING GROUND ELEVATION (FT.)	WEATHERED ROCK		BEDROCK		GROUNDWATER		INFILTRATION TESTING		RATE (IN/HR)	DESIGN RATE (IN/HR)
		ELEVATION (FT.)	DEPTH (FT.)	ELEVATION (FT.)	DEPTH (FT.)	ELEVATION (FT.)	DEPTH (FT.)	ELEVATION (FT.)	DEPTH (FT.)		
TP-101	380.80	377.80	3.00	376.80	4.00	-	-	379.80	1.00	(DR-101A) 1.50	0.66
										(DR-101B) 1.13	
TP-102	378.70	374.20	4.50	370.70	8.00	373.70	5.00	376.20	2.50	(DR-102A) 0.50	0.28
										(DR-102B) 0.63	
TP-103	372.80	368.50	4.30	366.60	6.20	367.00	5.80	370.50	2.30	(DR-103A) 0.19	0.08
										(DR-103B) 0.13	
TP-104	371.00	367.00	4.00	-	-	366.20	4.80	369.00	2.00	(DR-104A) 0.19	0.08
										(DR-104B) 0.13	
TP-105	367.80	364.80	3.00	362.50	5.30	365.00	2.80	367.00	0.80	(DR-105A) 0.63	0.24
										(DR-105B) 0.31	
TP-106	369.00	367.20	1.80	365.70	3.30	367.20	1.80	-	-	-	-

LEGEND

- PROPOSED PROPERTY LINE
- SOILS DELINEATION LINE
- UgB — SOILS TYPE
- 251 — EXISTING CONTOUR ELEVATION
- 384 — PROPOSED CONTOUR ELEVATION
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- OVERALL DRAINAGE AREA
- STORMWATER DRAINAGE BOUNDARY
- PROPOSED NPDES BOUNDARY
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED LANDSCAPING
- TP-101 — PROPOSED TEST PIT
- PROPOSED WATER QUALITY FILTER

SOIL DESCRIPTIONS

SOIL	DESCRIPTION
UfuB	- URBAN LAND, 0 TO 8 PERCENT SLOPES
UgB	- URBAN LAND - ABBOTTSTOWN COMPLEX, 0 TO 8 PERCENT SLOPES

50 25 12.5 0 50

1"= 50'

R:\17\PC171170\DRAWINGS\PLAN SETS\LAND DEVELOPMENT\REVISION 1\PC171170LANDDEV-1----LAYOUT: 34-PCSWM-PLAN GB

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www.BohlerEngineering.com

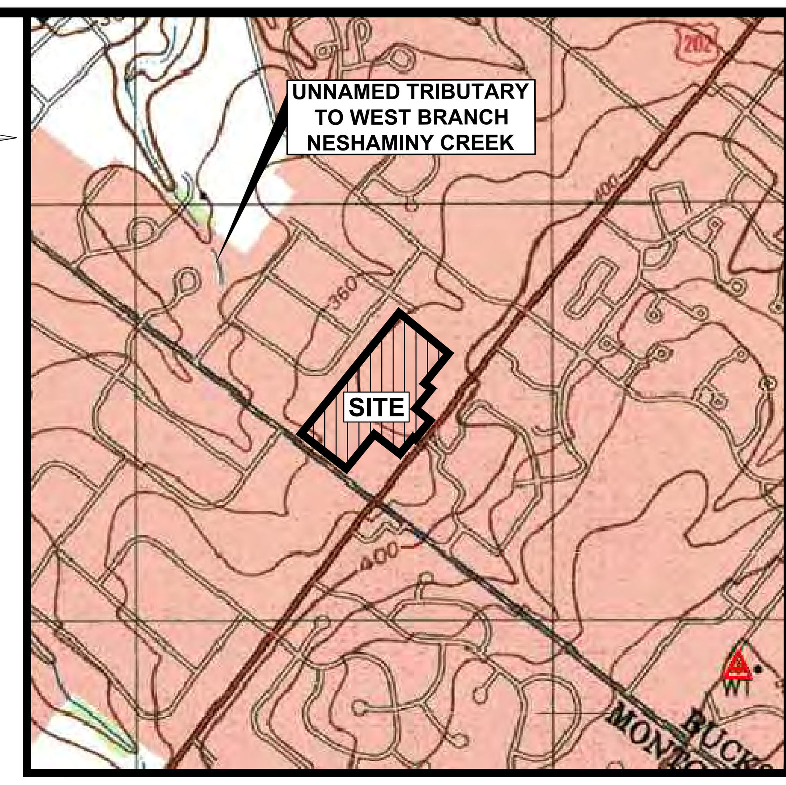
J.R. KORCZAK
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE074279

SHEET TITLE: POST CONSTRUCTION STORMWATER MANAGEMENT PLAN
(RECORD PLAN 7 OF 10)

SHEET NUMBER:
34
OF 37

REVISION 1 - 2018.09.21

SOILS MAP
1"=1,000'
500' 0 1,000'



USGS MAP
(DOYLESTOWN USGS QUAD)
SCALE: 1"=1,200'
600 0 1,200

TYPES, DEPTH, SLOPE, LOCATIONS, AND LIMITATIONS OF THE SOILS
§102.8(f)(2)

SOIL DESCRIPTIONS

SOIL	DESCRIPTION	SOIL GROUP
UfuB -	URBAN LAND, 0 TO 8 PERCENT SLOPES	NOT RATED
UgB -	URBAN LAND - ABBOTTSTOWN COMPLEX, 0 TO 8 PERCENT SLOPES	D

SOIL USE LIMITATIONS AND THEIR RESOLUTIONS PROVIDED

CONTRACTOR SHALL CONSULT WITH GEOTECHNICAL ENGINEER TO DETERMINE SOIL LIMITATIONS AND RESOLUTIONS SPECIFIC TO THIS PROJECT.

1. SOIL TYPES POORLY SUITED AS SOURCES OF TOPSOIL RESTRICT OR PLACE CONDITIONS ON PLANNING VEGETATIVE STABILIZATION. ACIDIC, LOW FERTILITY, EXCESSIVE DRYNESS AND EXCESSIVE WETNESS LIMIT PLANT GROWTH.
RESOLUTIONS: IDENTIFYING AND RESOLVING CHARACTERISTICS, THAT RENDER THE SOIL TYPES POORLY, SUITED AS TOPSOIL.

2. ACIDIC SOIL TYPES EXHIBITING PH REACTION VALUES LOWER THAN ABOUT 5.5, LIMIT VEGETATIVE STABILIZATION. SOIL TESTS MIGHT BE NECESSARY TO DETERMINE SITE SPECIFIC PH REACTION.
RESOLUTIONS: APPLYING LIME CONSISTENT WITH RATES DETERMINED BY SOIL TESTING; SELECTING VEGETATIVE SPECIES TOLERANT TO ACIDIC SOIL CONDITIONS; AND IMPLEMENTING COMBINATIONS OF THESE AND/OR OTHER METHODS. SPECIFIC TOLERANCE INFORMATION IS PROVIDED IN TABLE 1 OF THE EROSION CONTROL & CONSERVATION PLANTINGS ON NONCROPLAND PUBLISHED BY PENN STATE.

3. LOW FERTILITY SOIL TYPES LACKING IN SUFFICIENT AMOUNTS OF ESSENTIAL PLANT NUTRIENTS SUCH AS: NITROGEN, PHOSPHOROUS, POTASSIUM, SULFUR, MAGNESIUM, CALCIUM, IRON, MANGANESE, BORON, CHLORINE, ZINC, COPPER AND MOLYBDENUM, LIMIT VEGETATION STABILIZATION. SOIL TESTS MIGHT BE NECESSARY TO DETERMINE SITE SPECIFIC SOIL FERTILITY.
RESOLUTIONS: INCORPORATING SOIL NUTRIENTS CONSISTENT WITH RATES DETERMINED BY SOIL TESTING; SELECTIVE VEGETATIVE SPECIES TOLERANT TO LOW FERTILITY SOIL CONDITIONS, AND IMPLEMENTING COMBINATIONS OF THESE AND/OR OTHER METHODS. SPECIFIC TOLERANCE INFORMATION IS PROVIDED IN TABLE 1 OF THE EROSION CONTROL & CONSERVATION PLANTINGS ON NONCROPLAND PUBLISHED BY PENN STATE.

4. ERODIBLE SOIL TYPES EXHIBITING K VALUES GREATER THAN 0.36 OR PLASTICITY INDEX VALUES LOWER THAN 10, LIMIT VEGETATIVE STABILIZATION OF CHANNELS.
RESOLUTIONS: TEMPORARY CHANNEL LINING, PROVIDING PERMANENT CHANNEL LINING, DECREASING CHANNEL GRADE, INCREASING CHANNEL WIDTH, SELECTING VEGETATIVE WITH GREATER RETARDANCE, SELECTING PERMANENT LININGS OTHER THAN GRASSES, AND IMPLEMENTING COMBINATION OF THESE AND/OR METHODS. VEGETATIVE RETARDANCE INFORMATION IS PROVIDED IN TABLES 6 AND 7 OF THE EROSION AND SEDIMENT POLLUTION CONTROL MANUAL PUBLISHED BY PADEP.

5. WET SOIL TYPES HAVE EXCESSIVE ROOT ZONE AND SOIL MOISTURES. SOME SOIL SURVEYS INDICATE WETNESS, HIGH WATER TABLE AND FLOODING. THIS INDICATOR IS AFFECTED BY SOIL DISTURBANCE.
RESOLUTIONS: SELECTING VEGETATIVE SPECIES TOLERANT TO WET CONDITIONS, TILING VEGETATIVE AREAS, AND IMPLEMENTING COMBINATIONS OF THESE AND/OR OTHER METHODS. SPECIFIC TOLERANCE INFORMATION IS PROVIDED IN TABLE 1 OF THE EROSION CONTROL & CONSERVATION PLANTINGS ON NONCROPLAND PUBLISHED BY THE PENN STATE.

6. DRY SOIL TYPES LACK SUFFICIENT ROOT ZONE SOIL MOISTURES. THIS INDICATOR IS AFFECTED BY SOIL DISTURBANCE.
RESOLUTIONS: SELECTING VEGETATIVE SPECIES TOLERANT TO DRY CONDITIONS, IRRIGATING VEGETATED AREAS AND IMPLEMENTING COMBINATION OF THESE AND/OR OTHER METHODS. SPECIFIC TOLERANCE INFORMATION IS PROVIDED IN TABLE 1 OF THE EROSION CONTROL & CONSERVATION PLANTINGS ON NONCROPLAND PUBLISHED BY PENN STATE.

7. SOIL TYPES SUSCEPTIBLE TO SINKHOLE AND SOLUTION CHANNEL/CHAMBER FORMATION POSE LIMITATIONS ON LOCATING RESERVOIR AREAS OF SEDIMENT BASINS, SEDIMENT TRAPS, STORMWATER RETENTION BASINS, AND STORMWATER DETENTION BASINS.
RESOLUTIONS: LOCATING THOSE FACILITIES ON OTHER SOIL TYPES, LINING RESERVOIR AREAS WITH IMPERMEABLE LININGS, LIMITING STANDING WATER DEPTHS, LIMITING RETENTION TIMES AND IMPLEMENTING COMBINATIONS OF THESE AND/OR OTHER METHODS.

8. SOIL TYPES THAT EXHIBIT INSTABILITY IN POND EMBANKMENTS OR SUSCEPTIBILITY TO PIPING AND SEEPING POSE LIMITATIONS ON PLANNING EMBANKMENTS OF SEDIMENT BASINS, SEDIMENT TRAPS, STORMWATER RETENTION BASINS AND STORMWATER DETENTION BASINS.
RESOLUTIONS: IMPORTING OTHER SOIL FOR EMBANKMENT OF THOSE FACILITIES, LOCATING THOSE FACILITIES ON OTHER SOIL TYPES, LIMITING EMBANKMENT SLOPE STEEPNESS AND IMPLEMENTING COMBINATIONS OF THESE AND/OR OTHER METHODS.

9. SOIL THAT ARE DIFFICULT TO COMPACT, UNSUITABLE FOR WINTER GRADING, OR SUSCEPTIBLE TO FROST ACTION POSE LIMITATIONS ON PLANNING EMBANKMENTS OF SEDIMENT BASINS, SEDIMENT TRAPS, STORMWATER RETENTION BASINS AND STORMWATER DETENTION BASINS.
RESOLUTIONS: IMPORTING OTHER SOIL FOR EMBANKMENT OF THOSE FACILITIES, LOCATING THOSE FACILITIES ON OTHER SOIL TYPES, NOT CONSTRUCTING EMBANKMENTS DURING PERIODS PRONE TO FROST AND IMPLEMENTING COMBINATIONS OF THESE AND/OR OTHER METHODS

10. SUSCEPTIBILITY FOR THE DEVELOPMENT OF SINKHOLE WITHIN IDENTIFIED SOILS.
RESOLUTIONS: IN THE EVENT THAT PRESENCE OF A SINKHOLE IS DETECTED DURING THE COURSE OF WORK, CORRECTIVE MEASURES SHALL BE PERFORMED UNDER THE OBSERVATION AND GUIDANCE OF THE OWNER'S GEOTECHNICAL CONSULTANT.
EXCAVATE THE LOOSE, WET SOILS SURROUNDING THE SINKHOLE TO EXPOSE THE SINKHOLE "THROAT" (THE OPENING IN THE ROCK) AND THE ADJACENT STABLE SOILS/ROCK WHERE POSSIBLE, THE EXCAVATION SHALL EXTEND A MINIMUM OF TWO FEET (2') BEYOND THE STABLE SOILS OR TO THE ROCK SURFACE, WHICHEVER IS ENCOUNTERED FIRST.
FILL THE EXPOSED SINKHOLE "THROAT" WITH LEAN CONCRETE TO BLOCK THE MIGRATION OF THE UPPER LAYERS OF SOIL THROUGH THE ROCK OPENING.
AFTER CONCRETE HAS CURED OVERNIGHT BACKFILL THE REMAINDER OF THE EXCAVATION WITH CLAYEY SOILS TO PROVIDE A LOW PERMEABILITY BARRIER. THE CLAYEY SOILS SHALL BE PLACED IN 8" LIFTS AND EACH LIFT COMPACTED BY REPEATED PASSES OF THE COMPACTION EQUIPMENT UNTIL STABLE. CARE SHALL BE TAKEN TO ASSURE THAT THE SOIL AT THE EDGES OF THE EXCAVATION ARE WELL COMPACTED.

SOILS SURVEY OF BUCKS COUNTY, PENNSYLVANIA. (NOT FIELD VERIFIED)
SOURCE OF NATURAL RESOURCES CONSERVATION SERVICE MAP. AREA DATA: VERSION 13, 10/3/2017

SYMBOL	NAME	HYDROLOGIC SOIL GROUP	SLOPES (%)	DEPTH TO WATER TABLE	DEPTH TO RESTRICTIVE FEATURE	CONTAINS HYDRIC COMPONENTS	SURFACE RUNOFF
UfuB	URBAN LAND	NOT RATED	0-8	N/A	N/A	NO	N/A
UgB	URBAN LAND-ABBOTTSTOWN COMPLEX	D	0-8	≈6-18"	15 TO 30 INCHES TO FRAGIPAN; 40 TO 60 INCHES TO LITCHIC BEDROCK	NO	VERY HIGH

LIMITATIONS FOR PENNSYLVANIA SOILS PERTAINING TO EARTH DISTURBANCE PROJECTS

SOIL NAME	CUTBANKS CAVE	CORROSIVE TO CONCRETE/ STEEL	DROUGHTY	EASILY ERODIBLE	FLOODING	DEPTH TO SATURATED ZONE/ SEASONAL HIGH WATER TABLE	HYDRIC/ HYDRIC INCLUSIONS	LOW STRENGTH/ LANDSLIDE PRONE	SLOW PERCOLATION	PIPING	POOR SOURCE OF TOPSOIL	FROST ACTION	SHRINK-SWELL	POTENTIAL SINKHOLE	PONDING	WETNESS
ABBOTTSTOWN	X	C/S		X		X	X	X	X	X	X	X				X

LONG-TERM OPERATION AND MAINTENANCE SCHEDULE
§102.8(f)(10)

1. UNTIL THE SITE IS STABILIZED AND DURING THE CONSTRUCTION ACTIVITIES, ALL BMPS MUST BE MAINTAINED PROPERLY BY CONTRACTOR. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL BMPS AS SPECIFIED. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN-OUT, REPAIR, REPLACEMENT, RE-GRADING, RE-SEEDING, RE-MULCHING AND RE-NETTING MUST BE PERFORMED IMMEDIATELY AND IN ACCORDANCE WITH THESE PROCEDURES, PLANS, AND DETAILS. ANY AREAS DISTURBED DURING MAINTENANCE MUST BE STABILIZED IMMEDIATELY IN ACCORDANCE WITH THE GENERAL CONSERVATION NOTES AND SPECIFICATIONS.
2. ALL SITE INSPECTIONS MUST BE DOCUMENTED IN AN INSPECTION LOG KEPT FOR THIS PURPOSE INDICATING THE COMPLIANCE ACTIONS AND THE DATE, TIME AND NAME OF THE PERSON CONDUCTING THE INSPECTION. THE INSPECTION LOG MUST BE KEPT ON SITE AT ALL TIMES AND MADE AVAILABLE TO THE MUNICIPALITY, STATE DEP, OR DISTRICT UPON REQUEST.
3. SHOULD ON-SITE EROSION OCCUR FROM THE LANDSCAPED AREAS, THE SOURCE OF EROSION SHALL BE IMMEDIATELY STABILIZED AND THE INLETS AND STORMWATER PIPING SHALL BE CHECKED FOR ACCUMULATION AND CLEARED IF ACCUMULATION OF SEDIMENT EXISTS.
4. INSPECT INFILTRATION FACILITIES AFTER RUNOFF EVENTS AND MAKE SURE THAT RUNOFF DRAINS DOWN WITHIN 72 HOURS. INSPECT FOR ACCUMULATION OF SEDIMENT, DAMAGE TO OUTLET CONTROL STRUCTURES, SIGNS OF WATER CONTAMINATION/SPILLS, AND SIGNS OF EROSION.
5. REMOVE ACCUMULATED SEDIMENT FROM THE FACILITIES AS REQUIRED. RESTORE ORIGINAL CROSS-SECTION IF NECESSARY. PROPERLY DISPOSE OF SEDIMENT AS SPECIFIED. FOR ABOVE-GROUND INFILTRATION FACILITIES, REMOVE AND REPLACE SAND/STONE LAYER AS NECESSARY IF FACILITY DEWATERING TIME EXCEEDS 72 HOURS.

PROVCO PINEGOOD, CHALFONT, LLC IS RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE STORMATER MANAGEMENT BMPS AS DESCRIBED HEREIN.

PCSWM - GENERAL PLANNING & DESIGN
§102.8(b)8

1. THE FOLLOWING MEASURES WERE TAKEN TO PRESERVE THE INTEGRITY OF STREAM CHANNELS AND TO MAINTAIN AND PROTECT THE PHYSICAL, BIOLOGICAL, AND CHEMICAL QUALITIES OF THE RECEIVING STREAM:
   - DIRECT RUNOFF FROM IMPERVIOUS SURFACES TO BMPS
   - USE NATIVE SPECIES, WHICH REQUIRE LESS FERTILIZATION AND CHEMICAL APPLICATION THAN NON-NATIVE SPECIES.
   - MAINTAIN GENERALLY THE SAME DRAINAGE PATTERNS AS IN THE EXISTING CONDITION
2. THE FOLLOWING MEASURES WERE TAKEN TO PREVENT AN INCREASE IN THE RATE OF STORM WATER RUNOFF:
   - DIRECT RUNOFF TO A SUBSURFACE INFILTRATION BASIN TO CONTROL RUNOFF RATES
   - PROVIDE A RAIN GARDEN TO HELP REDUCE RUNOFF RATES
   - MINIMIZE IMPERVIOUS AREAS WHERE PRACTICAL
   - MAINTAIN GENERALLY THE SAME DRAINAGE PATTERNS AS IN THE EXISTING CONDITION
3. THE FOLLOWING MEASURES WERE TAKEN TO MINIMIZE ANY INCREASE IN STORM WATER RUNOFF VOLUME:
   - PROVIDE A RAIN GARDENS TO HELP REDUCE RUNOFF VOLUME
   - PROVIDE A SUBSURFACE INFILTRATION BASIN TO HELP REDUCE RUNOFF VOLUME
   - MINIMIZE IMPERVIOUS AREAS WHERE PRACTICAL
4. THE FOLLOWING MEASURES WERE TAKEN TO MINIMIZE IMPERVIOUS AREAS:
   - PROVIDED MINIMUM WIDTH DRIVE AISLES WHERE PRACTICAL
5. THE FOLLOWING MEASURES ARE TAKEN TO MAXIMIZE PROTECTION OF EXISTING DRAINAGE FEATURES AND VEGETATION:
   - ACCESS THE SITE THRU DESIGNATED CONSTRUCTION ENTRANCES.
   - PROTECT WOODLANDS AND WETLAND MARGIN WITH TREE PROTECTION FENCING.
   - PROPOSED BMPS SUCH AS THE SUBSURFACE INFILTRATION BASIN, RAINGARDEN WITH SLOW RELEASE, RE-VEGETATION OF DISTURBED AREAS & A WATER QUALITY FILTER WILL TREAT RUNOFF THROUGHOUT THE SITE AND OFF-SITE RUNOFF WILL BE DIVERTED THROUGH A PROPOSED SWALE THAT DIRECTS RUNOFF INTO THE EXISTING WETLANDS, WHERE A PROPOSED CULVERT THEN DIRECTS THE RUNOFF TO AN EXISTING PIPE THAT DISCHARGES INTO THE EXISTING ABOVEGROUND BASIN.
6. THE FOLLOWING MEASURES WERE TAKEN TO MINIMIZE LAND CLEARING AND GRADING:
   - PROTECT WOODLANDS AND WETLAND MARGIN WITH TREE PROTECTION FENCING.
   - GRADE SITE TO MINIMIZE EXTENT OF CUTS/FILLS
   - AREAS NOT REQUIRED TO BE CLEAR SHALL BE MAINTAINED IN EXISTING CONDITIONS
7. THE FOLLOWING MEASURES ARE TAKEN TO MINIMIZE SOIL COMPACTION:
   - ACCESS THE SITE THRU DESIGNATED CONSTRUCTION ENTRANCES
   - USE TREADED MACHINERY WHERE PRACTICAL DURING EARTHMOVING OPERATIONS
   - GRADE SITE TO MINIMIZE EXTENT OF CUTS/FILLS
8. THE FOLLOWING MEASURES WERE TAKEN TO UTILIZE OTHER STRUCTURAL OR NONSTRUCTURAL BMPS THAT PREVENT OR MINIMIZE CHANGES IN STORM WATER RUNOFF:
   - DIRECT RUNOFF TO A SUBSURFACE INFILTRATION BASIN TO CONTROL RUNOFF RATES & VOLUME.
   - PROVIDE RAIN GARDENS TO HELP REDUCE RUNOFF RATES & VOLUME.
   - PROVIDE LANDSCAPE RESTORATION TO HELP REDUCE RUNOFF VOLUME.
   - MINIMIZE IMPERVIOUS AREAS WHERE PRACTICAL

BMP	QUANTITY	SCHEDULE	INSPECTION TASK	MAINTENANCE	FAILURE INDICATORS
BMP 5.6.3 RE-VEGETATE DISTURBED AREAS		ANNUALLY	- INSPECT FOR DYING/DEAD PLANT MATERIAL - INSPECT FOR INVASIVE SPECIES	REMOVE INVASIVE SPECIES AND DISCARD IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS. ANY PLANT THAT IS FOUND TO BE DEAD OR IS DYING AND CANNOT BE SAVED SHALL BE REPLACED IN KIND.	FAILURE INDICATORS INCLUDE AN EXCESSIVE GROWTH OF INVASIVE SPECIES AND VEGETATION THAT FAILS TO ESTABLISH OR DIES OFF. UPON OBSERVING A FAILURE INDICATOR A QUALIFIED INDIVIDUAL SUCH AS A LANDSCAPE ARCHITECT OR SOIL SCIENTIST/ENGINEER SHALL BE CONSULTED TO DETERMINE THE EXACT CAUSE OF THE FAILURE. REMEDIATION SHALL BE IN ACCORDANCE WITH THE QUALIFIED INDIVIDUALS RECOMMENDATIONS BASED ON THEIR INVESTIGATION.
BMP 6.4.2 SUBSURFACE INFILTRATION BASIN		AFTER EACH STORM >3"	- INSPECT WATER DRAWDOWN TIME TO BE WITHIN 72 HOURS	ACCUMULATED DEBRIS AND SEDIMENT IN INLETS OR YARD DRAINS SHOULD BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.	IF ANY INFILTRATION BASIN IS OBSERVED TO FAIL TO DEWATER WITHIN THE ALLOWABLE 72 HOURS THE OWNER SHALL NOTIFY THE ENGINEER OF RECORD OR QUALIFIED GEOTECHNICAL ENGINEER TO DEVELOP A PLAN TO ADDRESS THE DEFICIENCY.
		4 TIMES PER YEAR	- INSPECT FOR ANY PONDING WATER		
		2 TIMES PER YEAR	- INSPECT STRUCTURES - INSPECT FOR SEDIMENT ACCUMULATION - INSPECT VEGETATIVE COVER CONDITION		
		ANNUALLY	- INSPECT FOR INVASIVE PLANT SPECIES		
BMP 6.4.5 RAIN GARDEN		4 TIMES PER YEAR	- INSPECT FOR LITTER AND SEDIMENT ACCUMULATION - INSPECT VEGETATIVE COVER CONDITION - EVALUATE PLANT GROWTH	NEEDED MAINTENANCE SHOULD BE CONDUCTED IMMEDIATELY AFTER EACH INSPECTION. THE LITTER AND SEDIMENT SHALL BE REMOVED TO RESTORE DESIGN CAPACITIES AND DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.	FAILURE INDICATORS INCLUDE IF THE RAINGARDEN/BIORETENTION BASIN DOES NOT DEWATER WITHIN 72 HOURS OR IF AN ABUNDANCE OF WETLAND PLANTS ARE FOUND WITHIN THE RAINGARDEN/BIORETENTION BASIN. UPON OBSERVING A FAILURE INDICATOR A QUALIFIED INDIVIDUAL SUCH AS AN ENGINEER OR SOIL SCIENTIST/ENGINEER SHALL BE CONSULTED TO DETERMINE THE EXACT CAUSE OF FAILURE. UPON FURTHER INVESTIGATION PERFORMED BY THE QUALIFIED INDIVIDUAL A REMEDIATION PLAN SHALL BE IMPLEMENTED TO RESTORE THE BASIN TO ITS ORIGINAL DESIGN CAPACITIES, THIS INCLUDES PERFORMING ADDITIONAL INFILTRATION TESTING TO DETERMINE WHETHER THE FACILITY HAS BEEN BROUGHT BACK TO ITS ORIGINAL DESIGN CAPACITIES.
		ANNUALLY	- REMOVE DETRITUS, CUT BACK DORMANT PERENNIAL PLANS - INSPECT FOR INVASIVE PLANT SPECIES - INSPECT MULCH LEVEL AND REPLENISH AS NECESSARY		
BMP 6.6.4 WATER QUALITY FILTERS		2 TIMES PER YEAR	- INSPECT OPERATION OF DEVICE - INSPECT FOR ACCUMULATION OF COLLECTED MATERIALS - INSPECT FOR RIPPED MEBRANE IN THE CARTRIDGE/TENTACLE.	NEEDED MAINTENANCE SHALL BE PERFORMED IMMEDIATELY AFTER THE INSPECTION. ACCUMULATION OF SEDIMENT/DEBRIS SHALL BE REMOVED IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS/RECOMMENDATIONS. THE SEDIMENT/DEBRIS SHALL BE REMOVED, RECYCLED OR DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. IF UPON INSPECTION THE MEMBRANE FROM ANY CARTRIDGE/TENTACLE IS FOUND TO BE TORN, THE ENTIRE CATRIDGE/TENTACLE SHALL BE REPLACED IMMEDIATELY. THE CARTRIDGE/TENTACLE SHALL BE REPLACED EVERY 3 YEARS REGARDLESS OF CONDITION.	SIGNS OF FAILURE IN A JELLYFISH INCLUDE SEDIMENT/DEBRIS LADEN RUNOFF FLOWING OUT OF THE FILTER. MAINTENANCE SHALL BE PERFORMED IMMEDIATELY IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS AND RECOMMENDATIONS.

RECYCLING OR DISPOSAL OF MATERIALS
§102.8(f)(11)

THE FOLLOWING IS A LIST THAT INCLUDES, BUT THAT IS NOT LIMITED TO, THE POTENTIAL CONSTRUCTION WASTES THAT MAY EXIST ON-SITE:
- CONCRETE CURB AND SIDEWALK
- ASPHALT
- DEBRIS COLLECTED IN INLETS
- SEDIMENT CAPTURED IN WATER QUALITY INLETS OR SUBSURFACE INFILTRATION BASIN

ALL DEBRIS AND SEDIMENT SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1, AND 287.1 ET SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.

GEOLOGIC FORMATIONS/SOIL CONDITIONS THAT MAY HAVE THE POTENTIAL TO CAUSE POLLUTION
§102.8(f)(12)

THERE ARE NO GEOLOGIC FORMATIONS OR SOIL CONDITIONS THAT COULD CAUSE CONTAMINANT POLLUTION DURING EARTH DISTURBANCE ACTIVITIES.

RIPARIAN FOREST BUFFER MANAGEMENT PLAN
§102.8(f)(14)

REGARDING EXISTING OR PROPOSED RIPARIAN FOREST BUFFERS
- THERE ARE NO EXISTING/PROPOSED RIPARIAN FOREST BUFFERS LOCATED WITHIN OR OUTSIDE THE LIMITS OF DISTURBANCE FOR THIS PROJECT.

RECEIVING SURFACE WATERS
§102.8(f)(5)

1. THE SUBJECT SITE IS LOCATED WITHIN THE NESHAMINY CREEK WATERSHED, WHICH HAS A WWF (WARM WATER FISH) CHAPTER 93 CLASSIFICIATION.
2. THE DEVELOPMENT IS IN NEITHER AN HQ NOR AN EV WATERSHED AND THEREFORE, NO BOUNDARIES ARE SHOWN.
3. THERE ARE WETLANDS LOCATED ON THE PROJECT SITE.

GENERAL NOTES FOR P.C.S.W.M. B.M.P.s

1. A SITE INSPECTION AND APPROVAL BY THE BUCKS COUNTY CONSERVATION DISTRICT IS REQUIRED PRIOR TO THE REMOVAL OR CONVERSION OF SEDIMENT BASINS AND TRAPS.
2. BOHLER ENGINEERING SHALL BE NOTIFIED OF THE PRE-CONSTRUCTION MEETING DATE AND BMP CONSTRUCTION SCHEDULE.
3. THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO LIMIT THE COMPACTION IN THE PROPOSED BMP BOTTOMS.
4. REFER TO THE BMP CONSTRUCTION DETAILS FOR THE CONSTRUCTION OF ALL PROPOSED STORMWATER MANAGEMENT BMPS.
5. REFER TO THE PCSWM PLAN AND DETAILS FOR SPECIFIC BMP CONSTRUCTION GUIDELINES.
6. AS-BUILT PLANS OF THE STORMWATER BMPS FOR EACH PROJECT PHASE SHALL BE PROVIDED WITHIN SIX MONTHS FOLLOWING THE COMPLETION OF EACH PHASE. THE AS-BUILT PLANS SHALL BE SIGNED AND SEALED BY A PA REGISTERED PROFESSIONAL SURVEYOR.
7. A NOTICE OF TERMINATION (NOT) WILL BE REQUIRED TO BE SUBMITTED FOLLOWING APPROVAL OF THE FINAL AS-BUILT PLANS. PRIOR TO ACCEPTING THE NOT, THE DEPARTMENT AND/OR CONSERVATION DISTRICT STAFF WILL PERFORM A FINAL INSPECTION TO ENSURE SITE STABILIZATION AND VERIFY ADEQUATE INSTALLATION AND FUNCTION OF STORMWATER BMPS.

OVERALL SITE SEQUENCE OF CONSTRUCTION
§102.8(f)(7)

A. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED IN COMPLIANCE WITH CHAPTER 102 REGULATIONS BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE. UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY THAT WILL EXCEED FOUR (4) DAYS, OR ANY STAGE THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED WITH THE APPROPRIATE TEMPORARY OR PERMANENT STABILIZATION.

B. AT LEAST SEVEN (7) DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES INCLUDING, BUT NOT LIMITED TO: THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS AND A REPRESENTATIVE OF THE BUCKS COUNTY CONSERVATION DISTRICT FOR AN ON-SITE PRE-CONSTRUCTION MEETING. ALSO, AT LEAST THREE (3) DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INC. AT 1-800-242-1776 FOR BURIED UTILITIES LOCATION.

C. BEFORE INITIATING ANY REVISION TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED E&S CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE BUCKS COUNTY CONSERVATION DISTRICT. THE OPERATOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.

D. THE TERM 'PERMANENT STABILIZATION' USED THROUGHOUT THIS SEQUENCE IS MEANT TO DESCRIBE THE PROPER PLACING, GRADING, CONSTRUCTING, REINFORCING, LINING, AND COVERING OF SOIL, ROCK OR EARTH TO ENSURE THEIR PERMANENT RESISTANCE TO EROSION, SLIDING OR OTHER MOVEMENT. FOR AN EARTH DISTURBANCE TO BE PERMANENTLY STABILIZED, THE DISTURBED AREA SHALL BE COVERED WITH ONE OF THE FOLLOWING: A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER, WITH A DENSITY CAPABLE OF RESISTING ACCELERATED EROSION AND SEDIMENTATION; OR AN ACCEPTABLE BMP THAT PERMANENTLY MINIMIZES ACCELERATED EROSION AND SEDIMENTATION.

E. FOR EACH OF THE 'CRITICAL STAGES' SPECIFIED BELOW, THE PERMITTEE SHALL PROVIDE ENGINEERING OVERSIGHT. A LICENSED PROFESSIONAL OR DESIGNEE KNOWLEDGEABLE IN THE DESIGN AND CONSTRUCTION OF THE SUBSURFACE INFILTRATION BASIN AND RAINGARDEN, PREFERABLY THE DESIGN ENGINEER, SHALL CONDUCT THE OVERSIGHT.

1. INSTALL CONSTRUCTION ENTRANCES AS SHOWN ON THE PLANS. PHYSICALLY MARK LIMIT OF DISTURBANCE AND WETLANDS.
2. INSTALL ALL PERIMETER CONTROLS INCLUSIVE OF FILTER SOCK AND TREE PROTECTION FENCING AS INDICATED ON THE PLANS.
3. CONSTRUCT CULVERT TO DIRECT OFFSITE RUNOFF TO EXISTING PIPE. CONSTRUCTION WITHIN THE WETLAND/STREAM AREAS SHALL FOLLOW THE "WETLAND/STREAM CROSSING CONSTRUCTION SEQUENCE" PROVIDED ON THE E&S DETAILS SHEET.
4. CONSTRUCT SWALE TO DIVERT OFF-SITE RUNOFF. SWALE MUST BE STABILIZED IMMEDIATELY.
5. COMMENCE THE NECESSARY EARTHWORK TO REACH THE GRADES INDICATED ON THE PLANS.
6. INITIATE UTILITY INSTALLATION INCLUDING STORM, SANITARY, WATER, GAS ELECTRIC AND TELECOMMUNICATIONS AS SHOWN ON THE PLANS. STORM AND SANITARY SHALL START AT THE FURTHEST DOWNSTREAM END AND WORK UPSTREAM.
   - PRIOR TO INSTALLATION WITHIN THE ROADWAY, ENSURE THAT THE APPROPRIATE TRAFFIC CONTROL MEASURES ARE IN PLACE.
   - INLETS DISCHARGING TO SUBSURFACE INFILTRATION BASIN MUST BE BLOCKED IMMEDIATELY AFTER INSTALLATION AND REMAIN BLOCKED UNTIL SITE IS FULLY STABILIZED TO PREVENT SEDIMENT FROM ENTERING THE SUBSURFACE INFILTRATION BASIN.
7. CRITICAL STAGE - INSTALLATION OF THE SUBSURFACE INFILTRATION BASIN
   INITIATE INSTALLATION OF THE SUBSURFACE INFILTRATION BASIN. INSTALLATION OF THE UNDERGROUND INFILTRATION BASIN SHALL INCLUDE THE INSTALLATION OF THE OUTFALL SYSTEM (FR OS01 TO EW01).
   REFER TO THE ADDITIONAL INFILTRATION FACILITY SEQUENCING, INSTALLATION AND MAINTENANCE & INSPECTION NOTES PROVIDED ON THE POST CONSTRUCTION STORMWATER MANAGEMENT PLANS FOR CONSTRUCTION OF THE SUBSURFACE INFILTRATION BASIN.
   - PRIOR TO INITIATING CONSTRUCTION, THE CONTRACTOR IS TO PERFORM INFILTRATION TESTING AT THE SUBGRADE ELEVATION TO CONFIRM INFILTRATION RATES. THE RESULTS OF THE TESTING ARE TO BE GIVEN TO THE ENGINEER PROVIDING OVERSIGHT, WHO WILL THEN MAKE A DETERMINATION IF BASIN CONSTRUCTION SHOULD COMMENCE.
   - INLETS DISCHARGING TO SUBSURFACE INFILTRATION BASIN MUST BE BLOCKED IMMEDIATELY AFTER INSTALLATION AND REMAIN BLOCKED UNTIL SITE IS FULLY STABILIZED TO PREVENT SEDIMENT FROM ENTERING THE SUBSURFACE INFILTRATION BASIN.
   - NO HEAVY CONSTRUCTION EQUIPMENT, SUCH AS CRANES, SHALL BE PLACED ON TOP OF THE SUBSURFACE INFILTRATION BASIN TO AVOID DAMAGING THE SUBSURFACE INFILTRATION BASIN OR OVER-COMPACTING THE SUBSURFACE SOILS.
8. BUILDING PAD CONSTRUCTION CAN COMMENCE CONCURRENTLY WITH OTHER ON-SITE IMPROVEMENTS. NOTE THAT BUILDING CONSTRUCTION MAY COMMENCE UPON ACCEPTANCE OF BUILDING PAD BY OWNER.
   - THE CONCRETE WASHOUT MUST BE INSTALLED BEFORE ANY CONCRETE CAN BE POURED ON-SITE.
9. INSTALL THE STONE SUBBASE FOR CURB AND INSTALL CURBING, SIDEWALK, AND CRUSHED AGGREGATE BASE COURSE FOR PAVING.
10. FINAL GRADE AND PLACE TOPSOIL IN ALL LANDSCAPE AREAS. AS SOON AS SLOPES, CHANNELS, DITCHES AND OTHER DISTURBED AREAS REACH FINAL GRADE, THEY MUST BE PERMANENTLY STABILIZED. WHEN FINAL GRADE IS ACHIEVED DURING NON-GERMINATING MONTHS, THE AREA SHOULD BE MULCHED UNTIL THE BEGINNING OF THE NEXT PLANTING SEASON. AS DISTURBED AREAS WITHIN A PROJECT APPROACH FINAL GRADE, PREPARATIONS SHOULD BE MADE FOR SEEDING AND MULCHING TO BEGIN (I.E. ANTICIPATE THE COMPLETION DATE AND SCHEDULE THE SEEDER). IN NO CASE SHOULD AN AREA EXCEEDING 15,000 SQUARE FEET, WHICH IS TO BE STABILIZED BY VEGETATION, REACH FINAL GRADE WITHOUT BEING SEEDED AND MULCHED. WAITING UNTIL EARTHMOVING IS COMPLETED BEFORE MAKING PREPARATIONS FOR SEEDING AND MULCHING IS NOT ACCEPTABLE. SEEDING AND MULCHING REQUIREMENTS ARE SPECIFIED IN THE GENERAL CONSERVATION NOTES AND SPECIFICATIONS.
11. CRITICAL STAGE - INSTALL RAINGARDEN
   ONCE THE AREAS UP-SLOPE TO RAINGARDEN ARE PERMANENTLY STABILIZED, INSTALLATION OF THE FACILITIES CAN COMMENCE, THE RAINGARDEN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE BMP'S SEQUENCE OF CONSTRUCTION AND AS SHOWN IN THE DETAILS ON THE POST CONSTRUCTION STORMWATER MANAGEMENT PLAN AND DETAILS. CONSTRUCTION SHALL INCLUDE, BUT IS NOT LIMITED TO THE FOLLOWING:
   - EXCAVATION TO THE SUBGRADE DEPTH.
   - PLACEMENT OF PLANTING SOIL, RIP-RAP, INSTALLATION OF EROSION CONTROL BLANKETS, AND LANDSCAPING PER THE LANDSCAPE PLAN STARTING THE BOTTOM OF THE FACILITY AND WORKING UP SLOPE. THE CONTRACTOR SHALL DEMONSTRATE THAT THE SOILS MEET THE DESIGN REQUIREMENTS BY FORWARDING COPIES OF THE LABORATORY REPORTS TO THE DESIGN ENGINEER.
   - ANY AREAS DISTURBED DURING CONVERSION ARE TO BE STABILIZED IMMEDIATELY.
12. CRITICAL STAGE - INSTALL THE INLET WATER QUALITY DEVICES. INSTALL INLET WATER QUALITY DEVICES AS SPECIFIED PER THE MANUFACTURER'S RECOMMENDATIONS.
   REFER TO THE MANUFACTURER'S RECOMMENDATION FOR INSTALLATION PROVIDED ON THE POST CONSTRUCTION STORMWATER MANAGEMENT PLANS FOR INSTALLATION OF THE INLET WATER QUALITY DEVICES.
13. CRITICAL STAGE - INSTALL LANDSCAPING. INSTALL FINAL VEGETATION AND LANDSCAPING SPECIFIED ON THE LANDSCAPE PLAN AND DETAILS.
   REFER TO THE LANDSCAPING DETAILS & SPECIFICATIONS PROVIDED ON THE LANDSCAPING PLANS FOR INSTALLATION OF LANDSCAPING.
14. INSTALL BITUMINOUS PAVEMENT AND CONCRETE PAVING.
15. UPON PERMANENT STABILIZATION AND NOTIFICATION TO THE BUCKS COUNTY CONSERVATION DISTRICT, REMOVE ANY REMAINING EROSION AND SEDIMENT CONTROL FACILITIES. ANY AREA DISTURBED DURING THE REMOVAL OF EROSION AND SEDIMENT CONTROL FACILITIES SHALL BE STABILIZED IMMEDIATELY.
16. CLEAR SITE OF DEBRIS AND ALL UNWANTED MATERIALS. OPERATOR SHALL REMOVE FROM SITE, RECYCLE OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP OR DISCHARGE ANY BUILDING MATERIAL OR WASTE AT THIS SITE.
17. DEMOBILIZE.
18. A NOTICE OF TERMINATION FORM SHOULD BE SUBMITTED TO THE BUCKS COUNTY CONSERVATION DISTRICT UPON STABILIZATION AND FINAL COMPLETION OF THIS PROJECT.

LIST OF CRITICAL STAGES
§102.8(f)(7)

1. INSTALLATION OF THE SUBSURFACE INFILTRATION BASIN
2. INSTALLATION OF THE RAINGARDEN
3. INSTALLATION OF THE INLET WATER QUALITY DEVICES
4. INSTALLATION OF LANDSCAPING

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REVISIONS

REV	DATE	COMMENT	BY
1	09/21/18	PER TOWNSHIP REVIEW COMMENTS	JHT

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE - STOP CALL
PA1 SYSTEM, INC. 1-800-242-1776
POCS SERIAL NUMBER 20172771117

PROJECT No.: PC171170
DRAWN BY: JHT
CHECKED BY: JRK
DATE: 5/18/2018
SCALE: AS NOTED
CAD I.D.: PC171170DETAILS-1

PROJECT:
FINAL LAND DEVELOPMENT PLANS
FOR
PROVCO PINEGOOD, CHALFONT, LLC
PROPOSED WAWA
BUTLER AVENUE (SR 4202) & COUNTY LINE ROAD
NEW BRITAIN TOWNSHIP
BUCKS COUNTY
PENNSYLVANIA

BOHLER ENGINEERING
1600 MANOR DRIVE, SUITE 200
CHALFONT, PENNSYLVANIA 18914
Phone: (215) 996-9100
Fax: (215) 996-9102
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J.R. KORCZAK
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE074279

SHEET TITLE: POST CONSTRUCTION STORMWATER MANAGEMENT NOTES
(RECORD PLAN 8 OF 10)
SHEET NUMBER:
35
OF 37

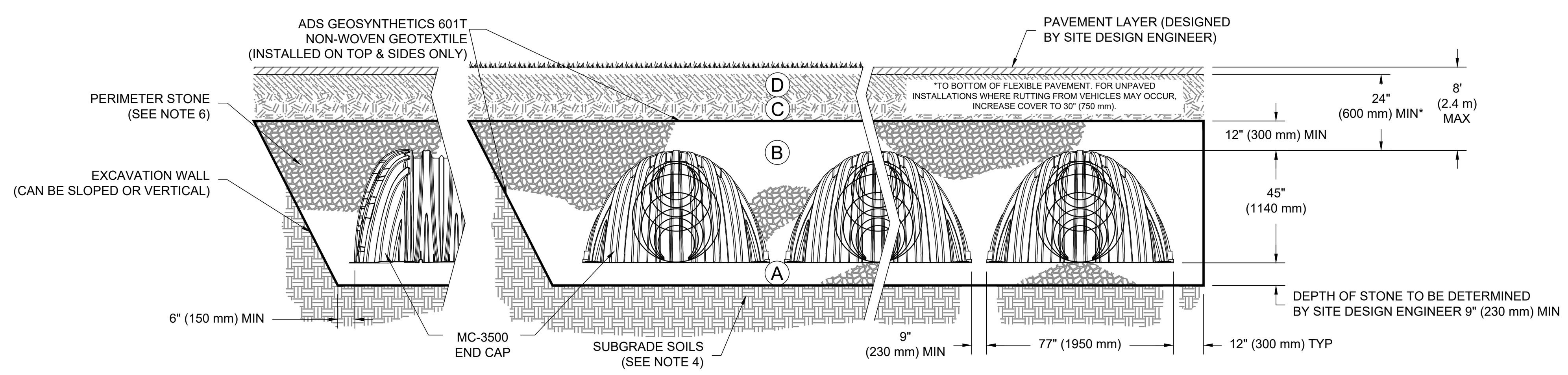
REVISION 1 - 2018.09.21

GB
R:\17\PC171170\DRAWINGS\PLAN SETS\LAND DEVELOPMENT\REVISION 1\PC171170DETAILS-1---->LAYOUT: 35 PCSWM NOTES

ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

MATERIAL LOCATION		DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 4	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. [2,3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.



*FOR COVER DEPTHS GREATER THAN 8.0' (2.4 m) PLEASE CONTACT STORMTECH

NOTES:

1. MC-3500 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
4. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
   PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

MC-3500 STANDARD CROSS SECTION
DATE: 11/18/14 | DRAWN: JLM | PROJECT #: | CHECKED: JLM

REV	DRW	CHK	DESCRIPTION
01/19/16	JLM	JLM	UPDATE

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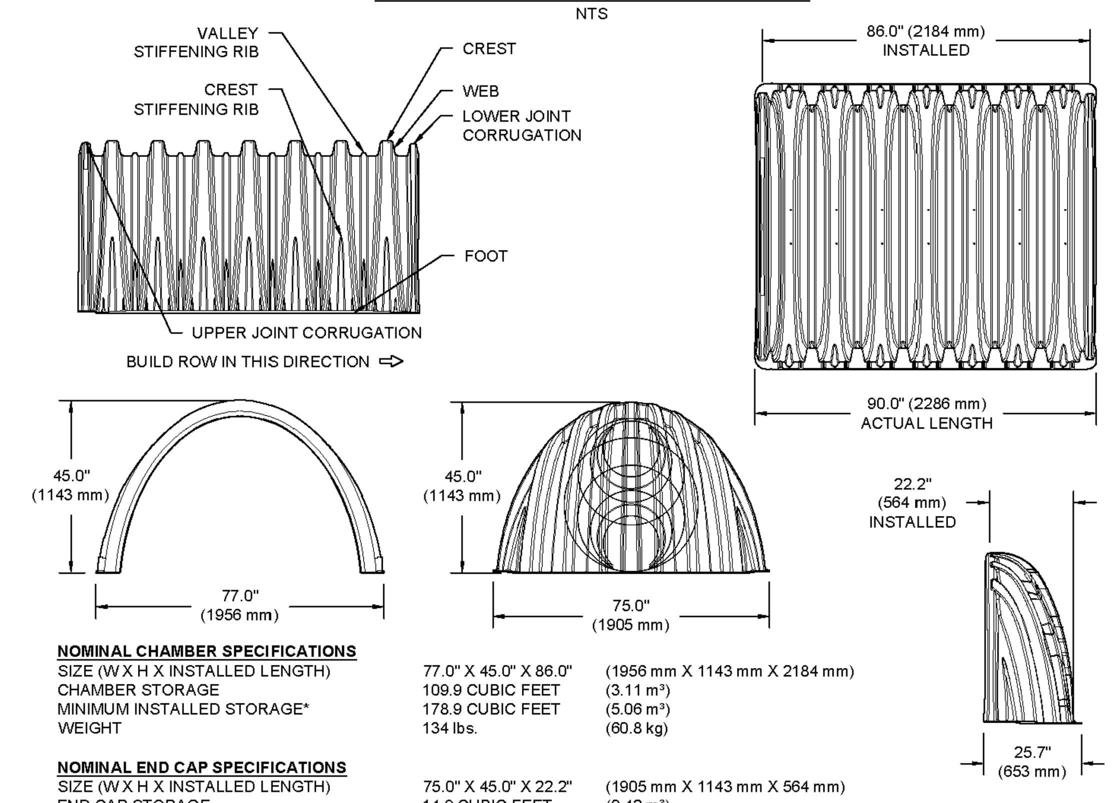
THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS UNDER THE DIRECTION OF THE SITE DESIGN ENGINEER OR OTHER PROJECT REPRESENTATIVE. THE SITE DESIGN ENGINEER SHALL REVIEW THIS DRAWING PRIOR TO CONSTRUCTION. IT IS THE ULTIMATE RESPONSIBILITY OF THE SITE DESIGN ENGINEER TO ENSURE THAT THE PRODUCT(S) DEPICTED AND ALL ASSOCIATED DETAILS MEET ALL APPLICABLE LAWS, REGULATIONS, AND PROJECT REQUIREMENTS.

SHEET 1 OF 1

MC-3500 TECHNICAL SPECIFICATION

NTS



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	77.0" X 45.0" X 86.0"	(1956 mm X 1143 mm X 2184 mm)
CHAMBER STORAGE	109.9 CUBIC FEET	(3.11 m³)
MINIMUM INSTALLED STORAGE*	178.9 CUBIC FEET	(5.06 m³)
WEIGHT	134 lbs.	(60.8 kg)

NOMINAL END CAP SPECIFICATIONS

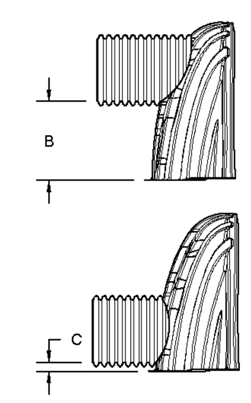
SIZE (W X H X INSTALLED LENGTH)	75.0" X 45.0" X 22.2"	(1905 mm X 1143 mm X 564 mm)
END CAP STORAGE	14.9 CUBIC FEET	(0.42 m³)
MINIMUM INSTALLED STORAGE*	46.0 CUBIC FEET	(1.30 m³)
WEIGHT	49 lbs.	(22.2 kg)

*ASSUMES 12" (305 mm) STONE ABOVE, 9" (229 mm) STONE FOUNDATION AND BETWEEN CHAMBERS, 6" (152 mm) STONE PERIMETER IN FRONT OF END CAPS AND 40% STONE POROSITY

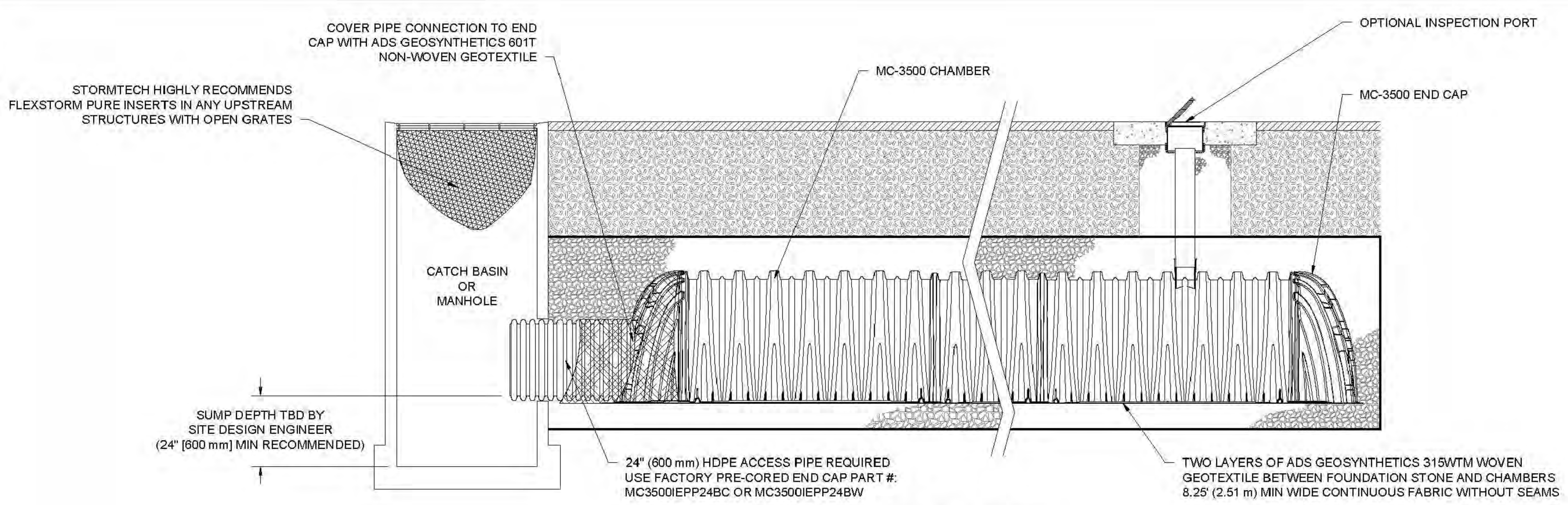
STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
END CAPS WITH A WELDED CROWN PLATE END WITH "C"
END CAPS WITH A PREFABRICATED WELDED STUB END WITH "W"

PART #	STUB	B	C
MC3500IEPP06T	6" (150 mm)	33.21" (844 mm)	---
MC3500IEPP06B		---	0.66" (17 mm)
MC3500IEPP08T	8" (200 mm)	31.16" (791 mm)	---
MC3500IEPP08B		---	0.81" (21 mm)
MC3500IEPP10T	10" (250 mm)	29.04" (738 mm)	---
MC3500IEPP10B		---	0.93" (24 mm)
MC3500IEPP12T	12" (300 mm)	26.36" (670 mm)	---
MC3500IEPP12B		---	1.35" (34 mm)
MC3500IEPP15T	15" (375 mm)	23.39" (594 mm)	---
MC3500IEPP15B		---	1.50" (38 mm)
MC3500IEPP18TC	18" (450 mm)	20.03" (509 mm)	---
MC3500IEPP18TW			
MC3500IEPP18BC		---	1.77" (45 mm)
MC3500IEPP18BW			
MC3500IEPP24TC	24" (600 mm)	14.48" (368 mm)	---
MC3500IEPP24TW			
MC3500IEPP24BC		---	2.06" (52 mm)
MC3500IEPP24BW			
MC3500IEPP30BC	30" (750 mm)	---	2.75" (70 mm)

NOTE: ALL DIMENSIONS ARE NOMINAL



CUSTOM PRECORED INVERTS ARE AVAILABLE UPON REQUEST. INVENTORIED MANIFOLDS INCLUDE 12-24" (300-600 mm) SIZE ON SIZE AND 15-48" (375-1200 mm) ECCENTRIC MANIFOLDS. CUSTOM INVERT LOCATIONS ON THE MC-3500 END CAP CUT IN THE FIELD ARE NOT RECOMMENDED FOR PIPE SIZES GREATER THAN 10" (250 mm). THE INVERT LOCATION IN COLUMN 'B' ARE THE HIGHEST POSSIBLE FOR THE PIPE SIZE.



MC-3500 ISOLATOR ROW DETAIL
NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

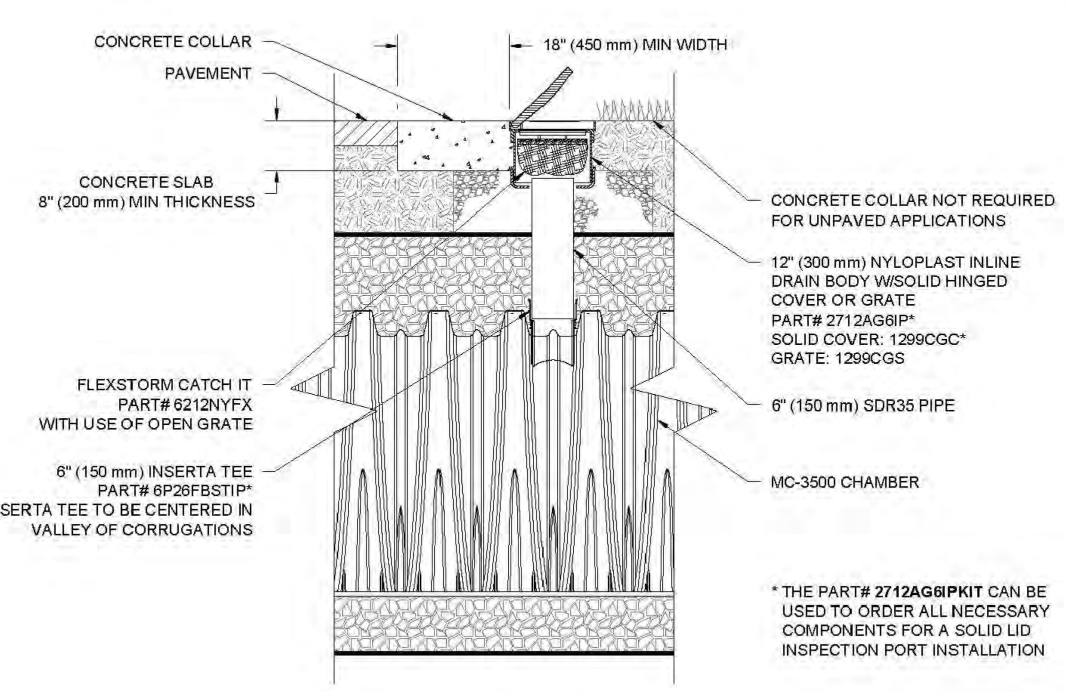
STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.



* THE PART# **2712AG6IPKIT** CAN BE USED TO ORDER ALL NECESSARY COMPONENTS FOR A SOLID LID INSPECTION PORT INSTALLATION

MC-3500 6" INSPECTION PORT DETAIL
NTS

ISOLATOR ROW DETAILS
MC-3500
DATE: 03/08/17 | DRAWN: JLM | PROJECT #: | CHECKED:

REV	DWN	CKD	DESCRIPTION
09/13/17	JLM		UPDATE END CAP PART NUMBERS

StormTech® Detention • Retention • Water Quality
70 INWOOD ROAD, SUITE 3 | ROCKY HILL | CT | 06067
860-529-8188 | 888-892-2694 | WWW.STORMTECH.COM

ADS® ADVANCED DRAINAGE SYSTEMS, INC.
4640 TRUEMAN BLVD
HILLIARD, OH 43026

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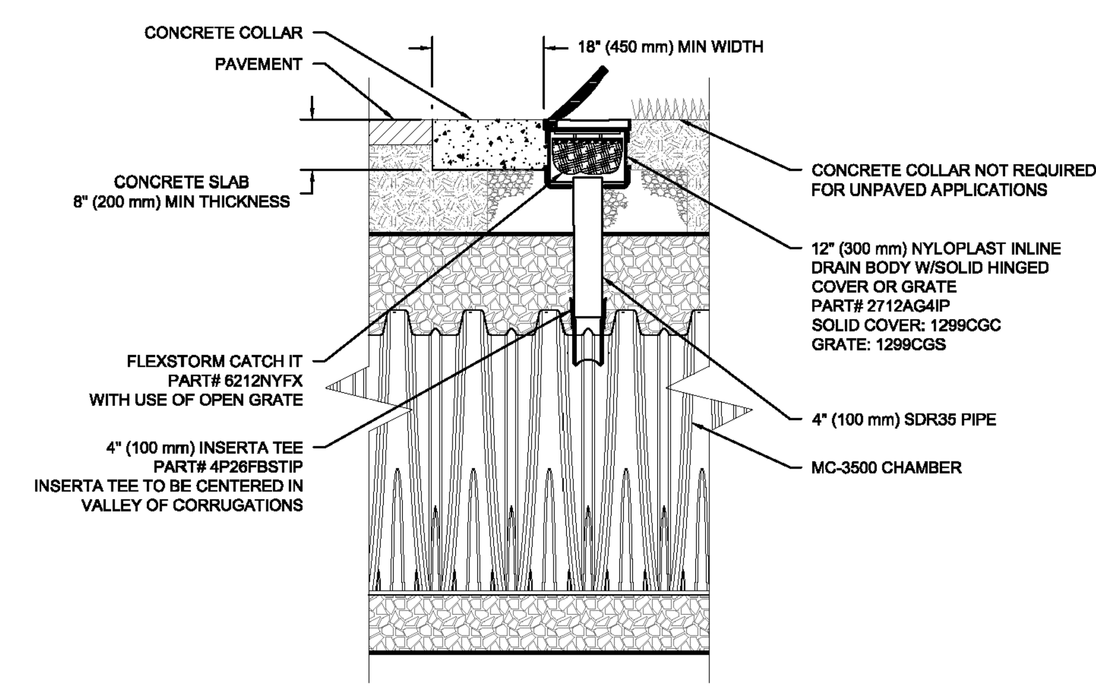
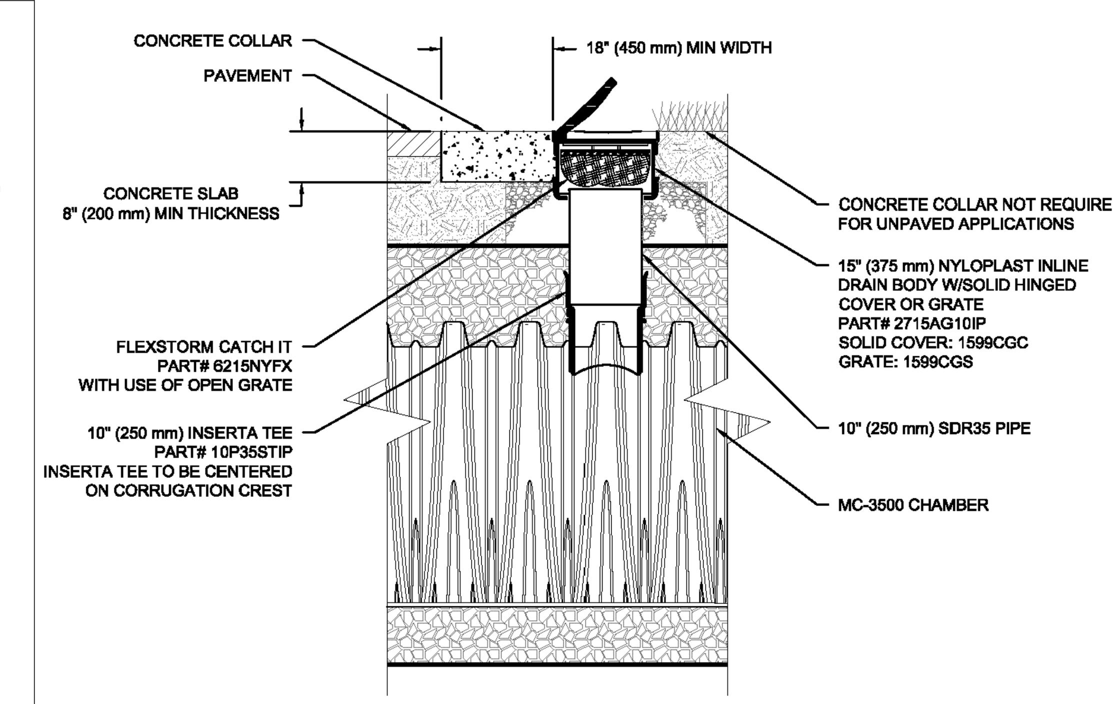
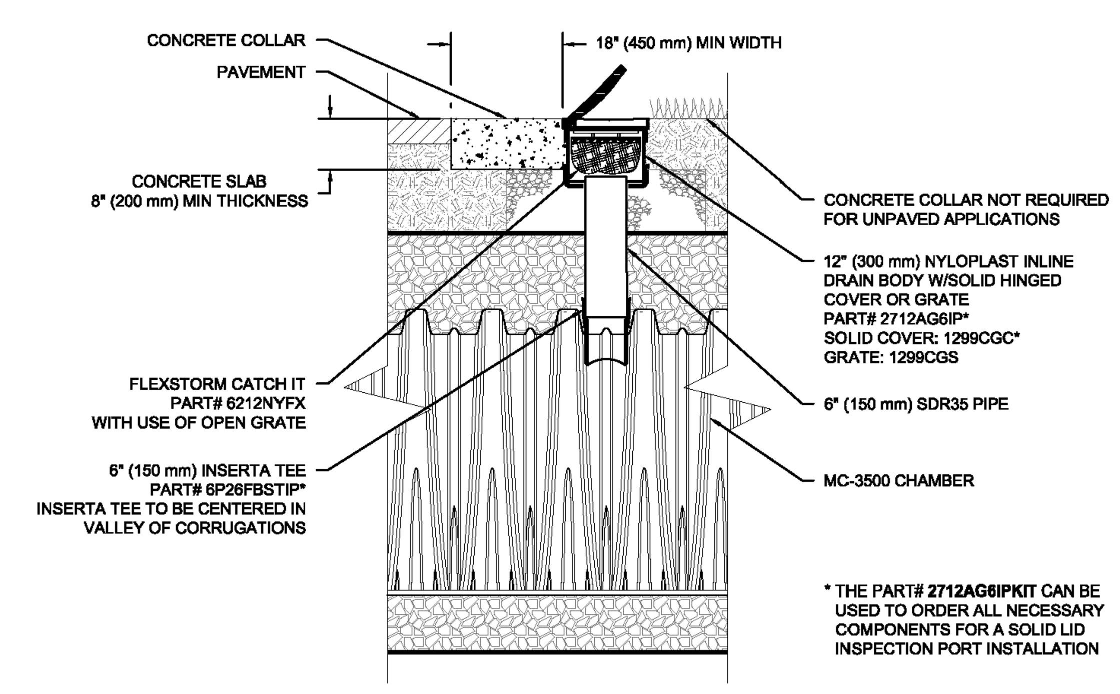
SHEET 1 OF 1



MC-3500 4" INSPECTION PORT DETAIL
NTS



MC-3500 10" INSPECTION PORT DETAIL
NTS



* THE PART# **2712AG6IPKIT** CAN BE USED TO ORDER ALL NECESSARY COMPONENTS FOR A SOLID LID INSPECTION PORT INSTALLATION

MC-3500 6" INSPECTION PORT DETAIL
NTS

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◆ SOUTHERN NEW JERSEY ◆ PHILADELPHIA, PA ◆ PITTSBURGH, PA ◆ LEHIGH VALLEY, PA ◆ SOUTHEASTERN, PA ◆ REHOBOTH BEACH, DE
◆ BALTIMORE, MD ◆ SOUTHERN MARYLAND ◆ NORTHERN VIRGINIA ◆ CENTRAL VIRGINIA ◆ RALEIGH, NC ◆ WASHINGTON, DC
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REVISIONS

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1	09/21/18	PER TOWNSHIP REVIEW COMMENTS	JHT

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PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE - STOP CALL

PA1 SYSTEM, INC.
1-800-242-1776

POCS SERIAL NUMBER
20172771117

PROJECT No.: PC171170
DRAWN BY: JHT
CHECKED BY: JRK
DATE: 5/18/2018
SCALE: AS NOTED
CAD I.D.: PC171170DETAILS-1

PROJECT:

FINAL LAND DEVELOPMENT PLANS

FOR

PROVCO PINEGOOD, CHALFONT, LLC

PROPOSED WAWA

BUTLER AVENUE (SR 4202) & COUNTY LINE ROAD
NEW BRITAIN TOWNSHIP
BUCKS COUNTY
PENNSYLVANIA

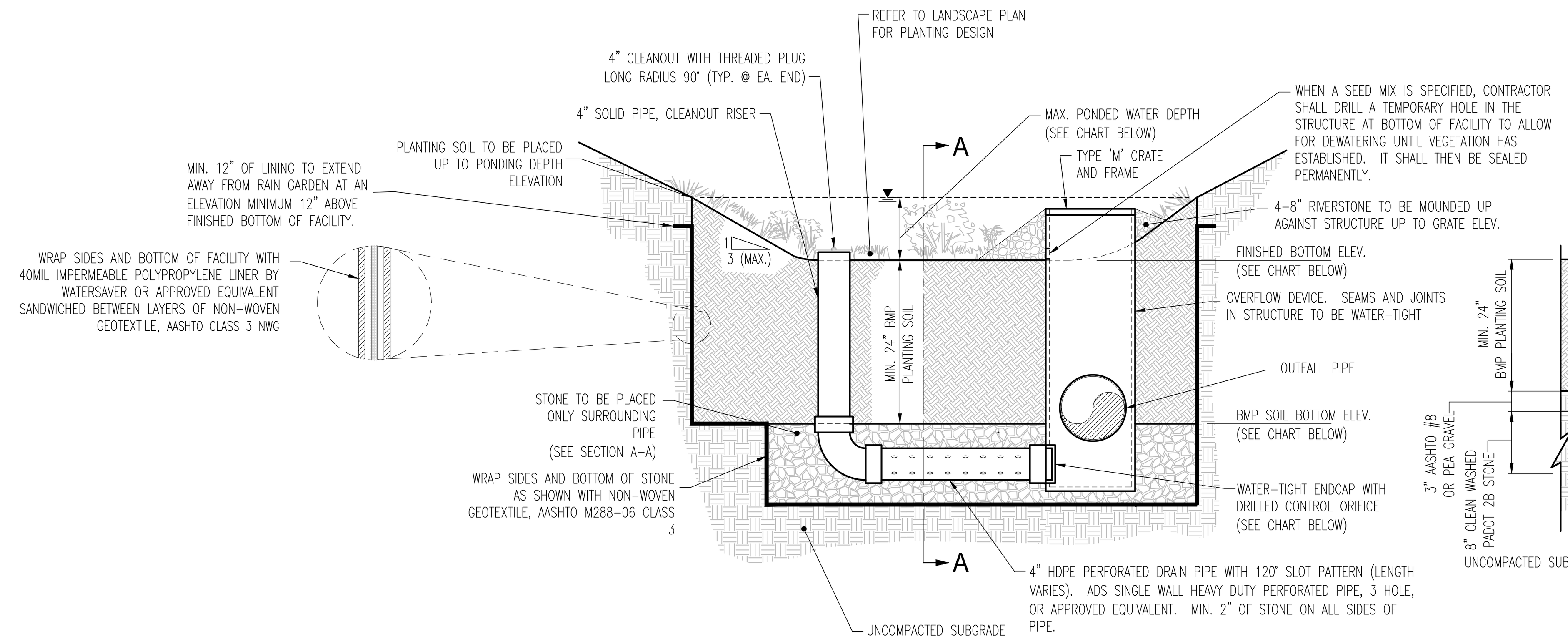
BOHLER ENGINEERING
1600 MANOR DRIVE, SUITE 200
CHALFONT, PENNSYLVANIA 18914
Phone: (215) 996-9100
Fax: (215) 996-9102
www.BohlerEngineering.com

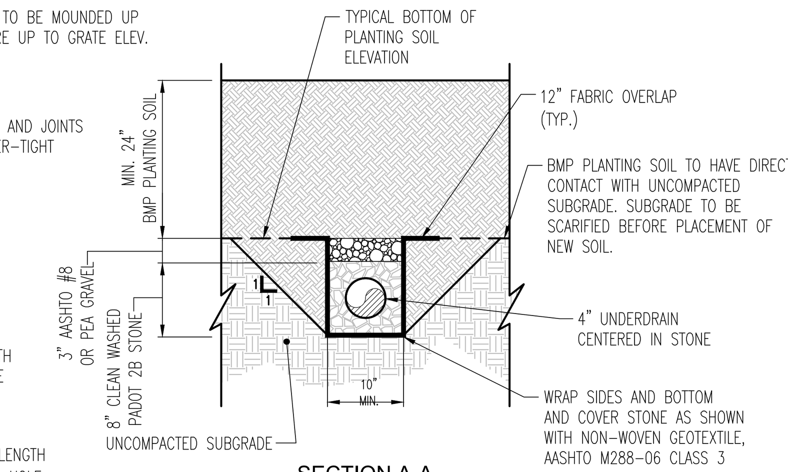
J.R. KORCZAK
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE074279

SHEET TITLE: POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS
(RECORD PLAN 9 OF 10)

SHEET NUMBER:
36
OF 37

REVISION 1 - 2018.09.21





SECTION A-A

FACILITY NUMBER	FINISHED BOTTOM ELEVATION	BMP SOIL BOTTOM ELEVATION	STONE BOTTOM ELEVATION	OVERFLOW GRATE ELEVATION	MAXIMUM PONDING DEPTH	OVERFLOW DEVICE	UNDERDRAIN ORIFICE SIZE	UNDERDRAIN ORIFICE ELEVATION*	INVERT OUT
RG #1	375.00	373.00	372.08	375.50	0.50	TYPE 'M' INLET	3"	372.25	373.00

TYPICAL RAINGARDEN DETAIL

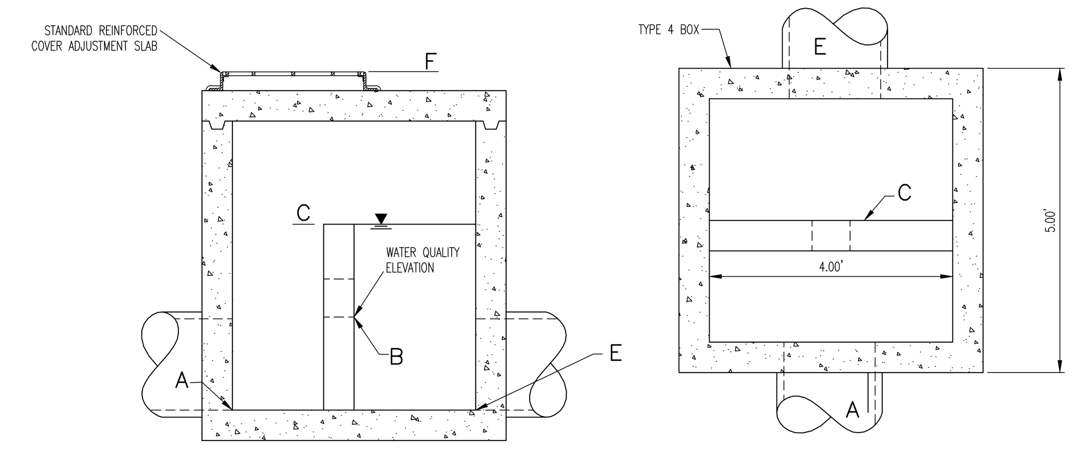
N.T.S.

PLANTING SOIL SPECIFICATIONS FOR B.M.P. FACILITIES

PLANTING SOIL SHALL BE A MANUFACTURED SOIL COMPRISED OF A CLEAN TOPSOIL SUPPLEMENTED WITH ORGANIC MATERIAL. THE TOPSOIL COMPONENT SHALL BE COMPRISED OF ROUGHLY 80% SAND, 10% CLAY AND 10% SILT (PER PERMEABILITY CLASS K4 – SOILS WITH PERMEABILITY OF 6–20 IN/HR – OF THE USDA SOIL PERMEABILITY/TEXTURAL TRIANGLE). IT SHALL BE FREE OF ROCKS OR DEBRIS LARGER THAN 1" IN DIAMETER. THE ORGANIC MATTER COMPONENT SHALL BE COMPRISED OF LEAF COMPOST HIGH IN ORGANIC CONTENT (25%–40% ORGANIC MATTER). THESE COMPONENTS ARE TO BE KEPT SEPARATE UNTIL INSTALLATION. AT TIME OF INSTALLATION, THE TOPSOIL COMPONENT IS TO BE INSTALLED FIRST TO FULL DEPTH (PER THE DETAIL) WITH EXCEPTION OF THE TOP 2–3". 2–3" OF THE ORGANIC MATTER COMPONENT IS TO BE LAYERED ON TOP AND THEN TILLED TO A DEPTH OF 8–10" AND THEN HAND-RAKED SMOOTH. ONCE THE ORGANIC MATTER COMPONENT HAS BEEN PUT IN PLACE, HEAVY MACHINERY SHALL NOT PERMITTED WITHIN THE BMP AREA. THE CONTRACTOR SHALL SUBMIT DOCUMENTATION INCLUDING TEST DATA SHOWING, AT A MINIMUM, THE EXACT TEXTURAL COMPOSITION, THE pH AND SPECIFIC ORGANIC MATERIAL TO BE USED IN EACH BMP.

RAINGARDEN CONSTRUCTION SEQUENCE

1.) THE RAINGARDEN FACILITY SHALL BE EXCAVATED TO THE DEPTH AND SIZE REQUIRED. THE CONTRACTOR MUST TAKE CARE TO NOT COMPACT IN-SITU SOILS.
2.) SUBSOILS IN THE ENTIRE GARDEN AREA MUST BE THOROUGHLY AND DEEPLY SCARIFIED BEFORE THE CONTRACTOR PLACES THE PLANTING SOIL MATERIAL. SCARIFYING MUST BE DONE WITH A "TOOTHED" BACKHOE.
3.) EVERY RAINGARDEN FACILITY SHALL HAVE AN UNDER DRAIN. THESE SHALL BE INSTALLED BEFORE PROCEEDING.
4.) INSTALL PLANTING SOIL MIX TO DEPTH REQUIRED.
5.) PRE-SOAK THE PLANTING SOIL PRIOR TO PLANTING VEGETATION IN ORDER TO AID IN SETTLEMENT.
6.) PLANT RAINGARDEN FACILITIES WORKING FROM THE BOTTOM OF THE BASIN UP SIDES. RAINGARDEN FACILITY SHRUBS AND TREES SHALL BE INSTALLED PER THE LANDSCAPE PLAN.
7.) THE CONTRACTOR SHALL COVER THE PLANTING SOIL MIX WITH A MAXIMUM OF 2 INCHES OF SHREDDED WOOD MULCH AND PROTECT THE GARDEN WITH SILT FENCE IF EROSION FROM SURROUNDING AREAS IS CONCERN UNTIL ADJACENT LANDSCAPE BECOMES ESTABLISHED.



BASIN OUTLET STRUCTURE DETAILS
SUBSURFACE INFILTRATION BASIN #1

N.T.S.

SUBSURFACE INFILTRATION BASIN (UGB) OUTLET STRUCTURES TABLE

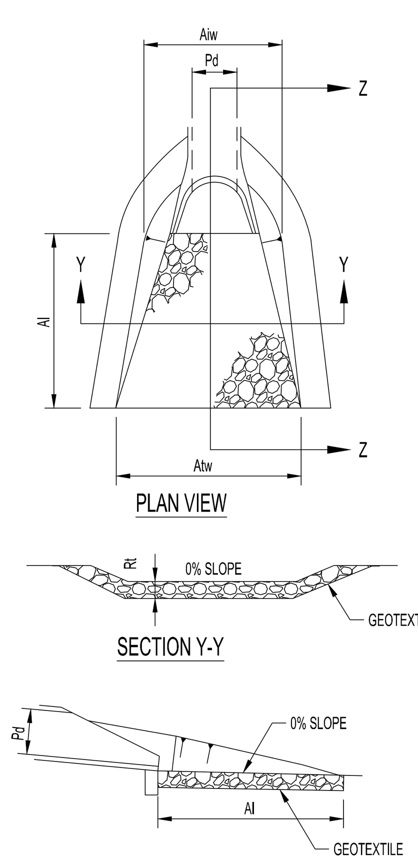
UGB #	INFLOW 'A' (BASIN PIPE INVERT @ OUTLET STRUCTURE) DIA. (IN.)	INFLOW 'A' ELEV.	CONTROL ORIFICE 'B' DIA. (IN.)	CONTROL ORIFICE 'B' ELEV.	WEIR 'C' LENGTH (FT.)	WEIR 'C' ELEV.	OUTFLOW ELEV. 'E' DIA. (IN.)	OUTFLOW ELEV. 'E' ELEV.	RIM ELEV. 'F'
1	18	371.40	3.0	371.93	4.00	375.30	18	370.50	377.41

OUTLET STRUCTURE NOTES:
1. BUTYL RESIN MASTIC SEAL SHALL BE PLACED WITHIN ALL JOINTS OF THE OUTLET STRUCTURE WHEN ASSEMBLED AND BETWEEN TOP OF GRADE AND TOP OF STRUCTURE.
2. FURNISH OUTLET BOX WITH ALUMINUM STEPS.
3. ORIFICE 'B' IS THE WATER QUALITY ELEVATION.

SUBSURFACE INFILTRATION BASIN (UGB) DESIGN INFORMATION

BASIN	BOTTOM OF STONE ELEVATION	BOTTOM OF STORMTECH ELEVATION	TOP OF STONE ELEVATION	STORMTECH MODULE BED* LENGTH	STORMTECH MODULE BED* WIDTH	MODEL	NUMBER OF CHAMBERS	NUMBER OF ENDCAPS
UGB #1	370.50	371.25	376.00	149.48'	155.11'	ADS MC-3500	176	24

*THE LONGEST OVERALL DIMENSION HAS BEEN GIVEN. LENGTHS/WIDTHS WILL VARY ACCORDING TO DESIGN ON PLANS.



OUTLET NO.	PIPE DIA Pd (IN)	RIPRAP SIZE R-_	RIPRAP THICK. Rt (IN)	APRON LENGTH Al (FT)	APRON INITIAL WIDTH Aiw (FT)	APRON TERMINAL WIDTH Atw (FT)
EW01	18	3	9.0	8.0	4.5	12.5
EW02	24	4	18.0	17.0	6.0	23.0
EW03	15	3	9.0	8.0	3.8	11.75

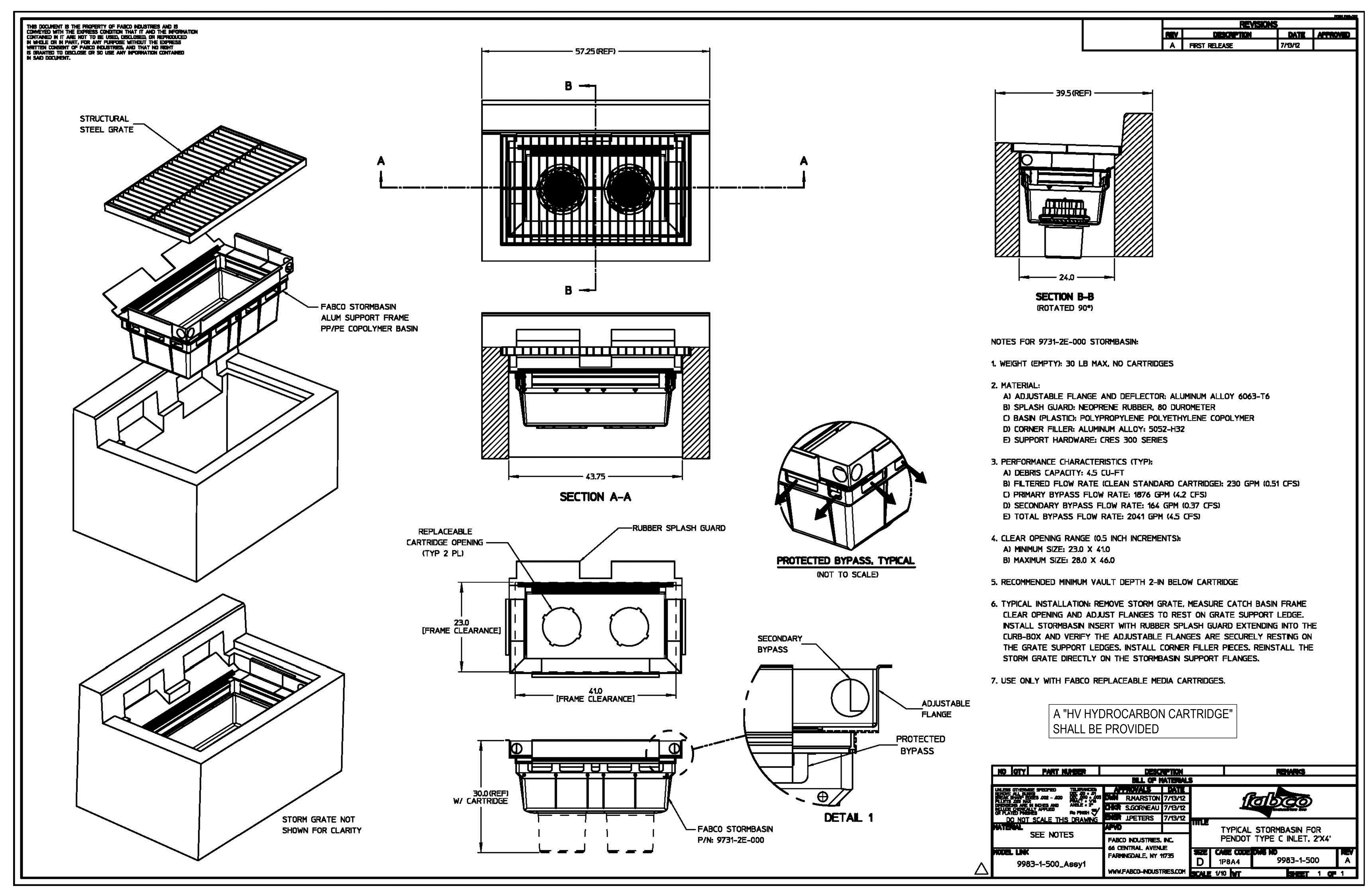
NOTES:

ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS.

ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY.

STANDARD CONSTRUCTION DETAIL #9-1
RIPRAP APRON AT PIPE OUTLET
WITH FLARED END SECTION OR ENDWALL

NOT TO SCALE



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FINAL LAND DEVELOPMENT PLANS

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PENNSYLVANIA

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1600 MANOR DRIVE, SUITE 200
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J.R. KORCZAK
PROFESSIONAL ENGINEER
PENNSYLVANIA LICENSE No. PE074279

SHEET TITLE: POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS
(RECORD PLAN 10 OF 10)

SHEET NUMBER:

37
OF 37

REVISION 1 - 2018.09.21

GB
R:\17\PC171170\DRAWINGS\PLAN SETS\LAND DEVELOPMENT\REVISION 1\PC171170DETAILS-1---->LAYOUT: 37 PCSWM DETAILS