

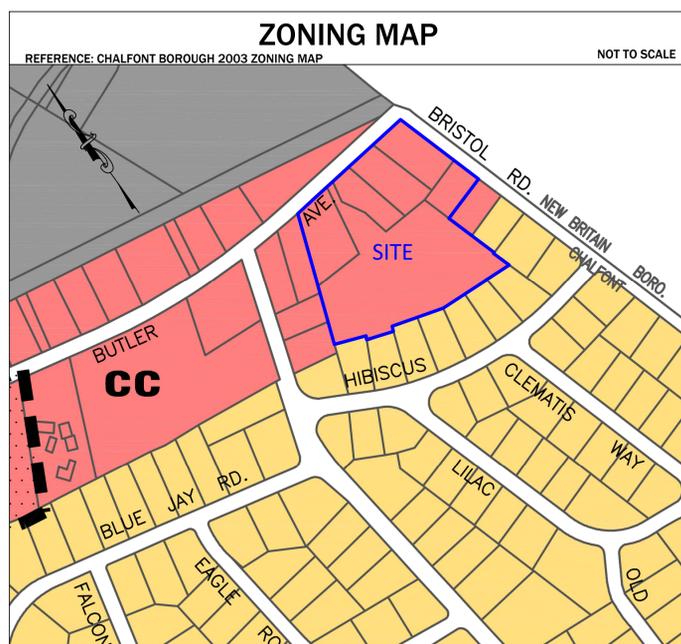
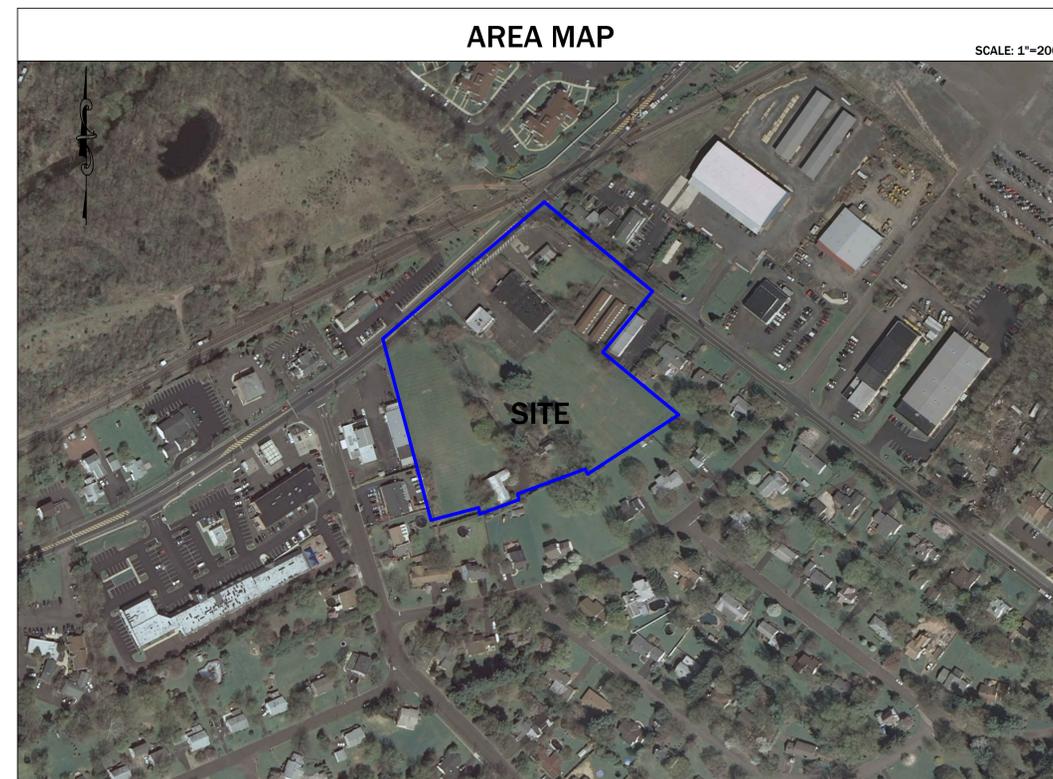
PRELIMINARY/FINAL LAND DEVELOPMENT AND MAJOR SUBDIVISION PLANS

FOR

CHALFONT CROSSING

TMP # 07-012-008, 07-012-008.001, 07-012-008-002, 07-012-008-003, 07-012-008-005, & 07-012-008-007

CHALFONT BOROUGH, BUCKS COUNTY, PA



DRAWING LIST

SHEET NUMBER	DRAWING NUMBER	DRAWING TITLE	LAST REVISED DATE
1	C0.0	COVER SHEET	7/29/2019
2	C0.1	EXISTING CONDITIONS AND DEMOLITION PLAN	7/29/2019
3	C0.2	LOT CONSOLIDATION	7/29/2019
4	C0.3	AERIAL MAP PLAN	7/29/2019
5	C1.0	SUBDIVISION PLAN	7/29/2019
6	C1.1	RECORD PLAN	7/29/2019
7	C1.2	SITE PLAN	7/29/2019
8	C1.3	SITE DETAILS	7/29/2019
9	C2.0	GRADING PLAN	7/29/2019
10	C3.0	DRAINAGE PLAN	7/29/2019
11	C3.1	DRAINAGE DETAILS	7/29/2019
12	C4.0	UTILITY PLAN	7/29/2019
13	C4.1	UTILITY CONSTRUCTION DETAILS	7/29/2019
14	C4.2	UTILITY CONSTRUCTION DETAILS	7/29/2019
15	C5.0	ROADWAY PLAN & PROFILE	7/29/2019
16	C5.1	ROADWAY PLAN & PROFILE	7/29/2019
17	C5.2	ROADWAY PLAN & PROFILE	7/29/2019
18	C6.0	EROSION AND SEDIMENT CONTROL PLAN - PHASE 1	7/29/2019
19	C6.1	EROSION AND SEDIMENT CONTROL PLAN - PHASE 2	7/29/2019
20	C6.2	EROSION AND SEDIMENT CONTROL DETAILS	7/29/2019
21	C6.3	EROSION AND SEDIMENT CONTROL DETAILS	7/29/2019
22	C6.4	POST CONSTRUCTION STORMWATER MANAGEMENT PLAN	7/29/2019
23	C6.5	POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS	7/29/2019
24	C7.0	LANDSCAPING PLAN	7/29/2019
25	C7.1	LIGHTING PLAN	7/29/2019
26	C7.2	LANDSCAPING & LIGHTING DETAILS	7/29/2019
27	C7.3	LANDSCAPE & LIGHTING DETAILS	7/29/2019

SUPPLEMENTAL DRAWINGS

SHEET NUMBER	DRAWING NUMBER	DRAWING TITLE	LAST REVISED DATE
N/A	1 OF 1	TRUCK TURN TEMPLATE	7/29/2019

APPLICANT & OWNER:

ELU CHALFONT LLC
485 DEVON PARK DRIVE
SUITE 106
WAYNE, PA 19087
PHONE: 484-588-5035

CONTACTS

CHALFONT BOROUGH
40 NORTH MAIN STREET
CHALFONT, PA 18914
PHONE: (215) 882-7295

BUCKS COUNTY CONSERVATION
DISTRICT
1456 FERRY ROAD, SUITE 704
DOYLESTOWN, PA 18901
PHONE: 215-345-7577

BOROUGH MANAGER
CHALFONT BOROUGH
BRIAN SHAPIRO
40 NORTH MAIN STREET
CHALFONT, PA 18914
PHONE: (215) 882-7295

PUBLIC WORKS
SHAWN CURRAN; SUPERINTENDENT
40 NORTH MAIN STREET
CHALFONT, PA 18914
PHONE: (215) 882-7295

PREPARED BY:

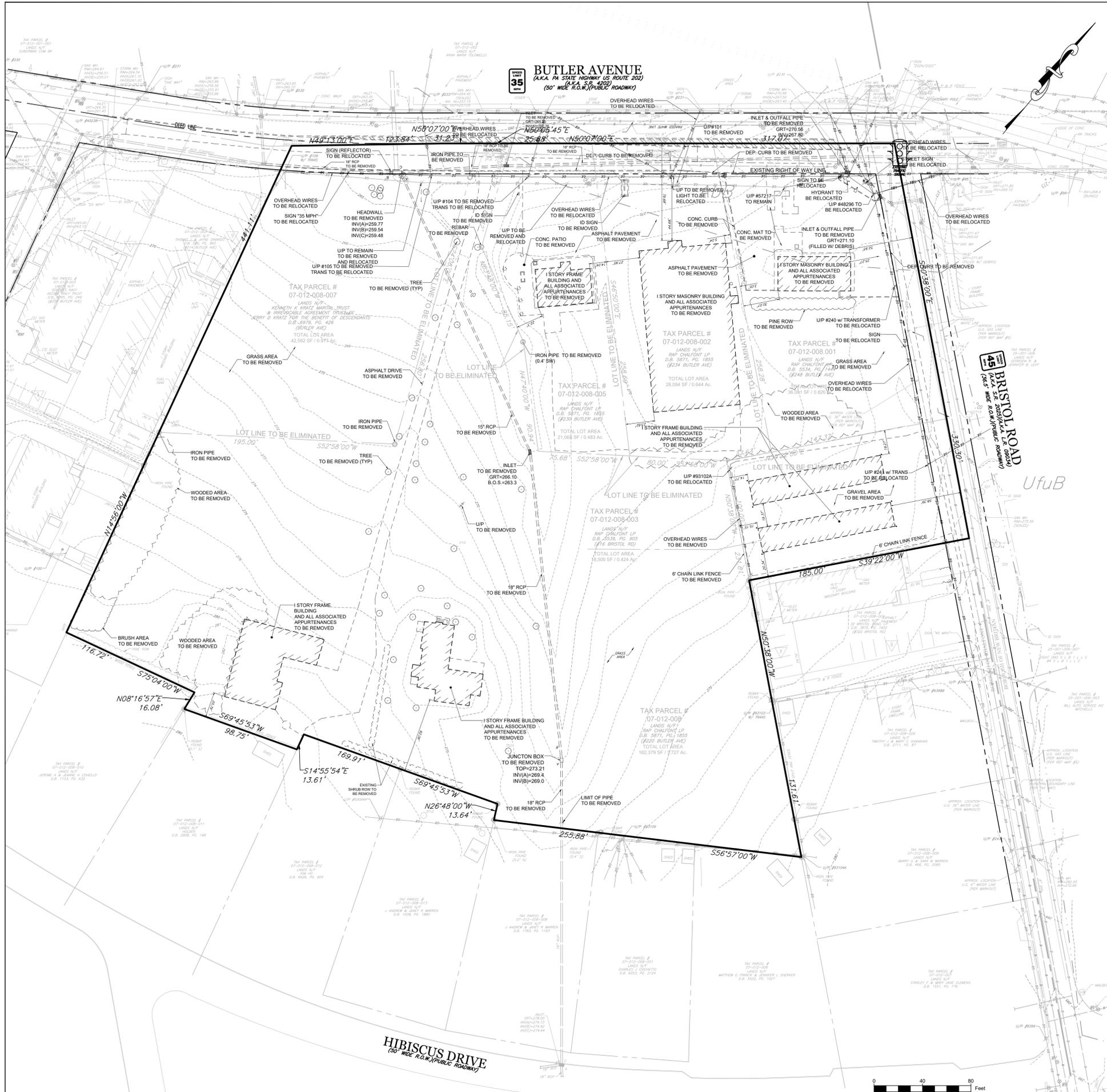


HOLMES CUNNINGHAM LLC
350 EAST BUTLER AVENUE
SUITE 106
NEW BRITAIN, PA 18901
(215) 586-3330

BUCKS COUNTY PLANNING COMMISSION
THE ALMHOUSE NESHAMINY MANOR CENTER
1260 ALMHOUSE ROAD
DOYLESTOWN, PA 18901
215-345-3400

BUCKS/MONT REGION CONTRACTOR AND
BUILDER SERVICES
400 PARK AVENUE
WARMINSTER, PA 18974
PHONE: (215) 956-3270
FAX: (215) 956-3240

REVISED:	7/29/2019
REVISED:	5/10/2019
DATE:	11/15/2018
PROJECT #	1377
DRAWING #	C0.0
SHEET	1 OF 27



DEMOLITION NOTES:

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
2. THE CONTRACTOR SHALL INSPECT THE SITE THOROUGHLY AND FIELD VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES AND LATERALS, UNDERGROUND ELECTRIC, TELEPHONE, VAULTS, GAS, WATER MAINS, ETC. ARE APPROXIMATE AND MUST BE FIELD VERIFIED. OTHER UTILITIES MAY ALSO EXIST. ALL CONTRACTORS USING THESE PLANS FOR DEMOLITION SHALL CONFIRM ALL UTILITIES IN THE FIELD FOR EXACT LOCATIONS, SIZES, MATERIALS, AND ELEVATIONS.
3. THE CONTRACTOR SHALL REVIEW AND COMPLY WITH ALL PROVISIONS OF CHALFONT BOROUGH, AND OTHER JURISDICTIONAL AGENCIES.
4. THE CONTRACTOR SHALL MAINTAIN AND PROTECT ALL OFFSITE PROPERTY AND STRUCTURES FROM ANY AND ALL DAMAGE DURING THE DEMOLITION OPERATION. THE CONTRACTOR SHALL USE ANY NECESSARY PROTECTION SCREENS, PLATFORMS, BRACING, UNDERPINNING, ETC. TO PROTECT OFFSITE PROPERTY. ANY OFFSITE DAMAGE CAUSED BY THE CONTRACTOR OR HIS AGENTS SHALL BE IMMEDIATELY REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY CONSTRUCTION PERMITS INCLUDING, BUT NOT LIMITED TO, SIDEWALK/STREET CLOSING AND DEMOLITION.
6. DEMO CONTRACTOR SHALL COORDINATE DECOMMISSIONING AND REMOVAL OF UTILITY LINES WITH UTILITY CONTRACTOR AS TO LOCATION AND CONDITION OF CAPPING. THE ACCESS SHALL REMAIN OPEN AND OPERATIONAL AT ALL TIMES.
7. ALL EXISTING STRUCTURES, UNLESS OTHERWISE NOTED TO REMAIN, FENCING, TREES, ETC., WITHIN CONSTRUCTION AREA SHALL BE REMOVED & DISPOSED OF OFF SITE.
8. THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL, AND DISPOSING IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES, OF ALL STRUCTURES, PADS, WALLS, FLUMES, FOUNDATIONS, PARKING, DRIVES, DRAINAGE, STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THE REMAINING PLANS CAN BE CONSTRUCTED. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL PER THE SPECIFICATIONS.
9. THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES PRIOR TO THE REMOVAL AND/OR RELOCATION OF UTILITIES. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY CONCERNING PORTIONS OF WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANY AND ANY FEES WHICH ARE TO BE PAID TO THE UTILITY COMPANY FOR THEIR SERVICES. THE CONTRACTOR IS RESPONSIBLE FOR PAYING ALL FEES AND CHARGES.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISCONNECTION OF UTILITY SERVICES TO THE EXISTING BUILDINGS PRIOR TO DEMOLITION OF THE BUILDINGS.
11. ELECTRICAL, TELEPHONE, CABLE, WATER, FIBER OPTIC CABLE AND/OR GAS LINES NEEDING TO BE REMOVED OR RELOCATED SHALL BE COORDINATED WITH THE AFFECTED UTILITY COMPANY. ADEQUATE TIME SHALL BE PROVIDED FOR RELOCATION AND CLOSE COORDINATION WITH THE UTILITY COMPANY IS NECESSARY TO PROVIDE A SMOOTH TRANSITION IN UTILITY SERVICE. CONTRACTOR SHALL PAY CLOSE ATTENTION TO EXISTING UTILITIES WITHIN THE ANY ROAD RIGHT OF WAY DURING CONSTRUCTION.
12. CONTRACTOR MUST PROTECT THE PUBLIC AT ALL TIMES WITH FENCING, BARRICADES, ENCLOSURES, ETC.
13. PRIOR TO DEMOLITION OCCURRING, ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED.
14. SHOULD REMOVE AND/OR RELOCATION ACTIVITIES DAMAGE FENCING, LIGHTING, STORM INLET STRUCTURES AND/OR ANY OTHER EXISTING FEATURE TO REMAIN THEN THE CONTRACTOR SHALL PROVIDE NEW MATERIALS / STRUCTURES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. EXCEPT FOR MATERIALS DESIGNED TO BE RELOCATED ON THIS PLAN, ALL OTHER CONSTRUCTION MATERIALS SHALL BE NEW.
15. CONTRACTOR SHALL MAINTAIN ALL EXISTING PARKING, SIDEWALKS, DRIVES, ETC. CLEAR AND FREE FROM ANY CONSTRUCTION ACTIVITY AND/OR MATERIAL TO ENSURE EASY AND SAFE PEDESTRIAN AND VEHICULAR TRAFFIC TO AND FROM THE SITE. CONTRACTOR SHALL COORDINATE/PHASE ALL CONSTRUCTION ACTIVITY WITHIN PROXIMITY OF THE BUILDING AND UTILITY INTERRUPTIONS WITH THE OWNER TO MINIMIZE DISTURBANCE AND INCONVENIENCE TO EXISTING MALL OPERATION AND THE CUSTOMERS.
16. THE CONTRACTOR SHALL COORDINATE WATERMAIN WORK WITH THE FIRE DEPT. AND THE WATER DEPARTMENT TO PLAN PROPOSED IMPROVEMENTS AND TO ENSURE ADEQUATE FIRE PROTECTION IS CONSTANTLY AVAILABLE TO THE PROJECT AND SITE THROUGH OUT THIS SPECIFIC WORK AND THROUGH ALL PHASES OF CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR ARRANGING/PROVIDING ANY REQUIRED WATERMAIN SHUT OFFS WITH THE WATER COMPANY DURING CONSTRUCTION, ANY COSTS ASSOCIATED WITH WATERMAIN SHUT OFFS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NO EXTRA COMPENSATION WILL BE PROVIDED.

NOTES:

1. BOUNDARY INFORMATION TAKEN FROM PLAN ENTITLED "LOCATION & TOPOGRAPHIC SURVEY", PREPARED BY BLUE MARCH ASSOCIATES, INC. DATED DECEMBER 17, 2013
2. FLOOD ZONE INFORMATION: SUBJECT PARCEL AREA IS LOCATED OUTSIDE ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 500-YEAR FLOODPLAIN) OF THE FLOOD INSURANCE RATE MAP, PANEL NO. 404 OF 532, COMMUNITY MAP NO. 4201700404 WHICH BEARS AN EFFECTIVE DATE OF MARCH 16, 2015.
3. LOCATIONS OF EXISTING UNDERGROUND UTILITIES/FACILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM RECORDS, FIELD MARKOUTS BY UTILITY COMPANIES AND/OR ABOVEGROUND OBSERVATION. NO EXCAVATIONS HAVE BEEN PERFORMED TO LOCATE EXISTING UNDERGROUND UTILITIES. ALL UTILITIES SHOWN HEREON SHOULD BE CONSIDERED APPROXIMATE IN LOCATION, DEPTH, AND SIZE. THE POTENTIAL EXISTS FOR OTHER UNDERGROUND UTILITIES TO BE ENCOUNTERED WHICH ARE NOT SHOWN ON THESE DRAWINGS, BOTH ACTIVE AND ABANDONED. ONLY THE VISIBLE LOCATIONS OF UNDERGROUND UTILITIES AND FACILITIES AT THE TIME OF FIELD SURVEY SHALL BE CONSIDERED TO BE TRUE AND ACCURATE. THE COMPLETENESS OR ACCURACY OF UNDERGROUND UTILITIES AND FEATURES IS NOT GUARANTEED BY SHAHEED A. SMITH GEOSPATIAL, LLC.
4. ALL CONTRACTORS WORKING ON THIS PROJECT SHALL VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND FACILITIES PRIOR TO THE START OF WORK AND SHALL COMPLY WITH THE REQUIREMENTS OF PL852, NO. 287, DEC. 10, 1974 AS LAST AMENDED ON MAR. 29, 2007, PENNSYLVANIA ACT 181.

LEGEND

- CONTOUR
- PROPERTY/R.O.W. LINE
- ADJOINING PROPERTY LINE
- BUILDING LINE

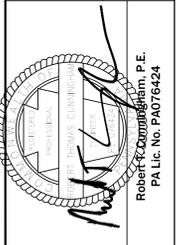
Holmes Cunningham LLC
350 E. Butler Ave., Ste 106
New Britain, PA 18901
(215) 586-3330
www.hcengineering.net



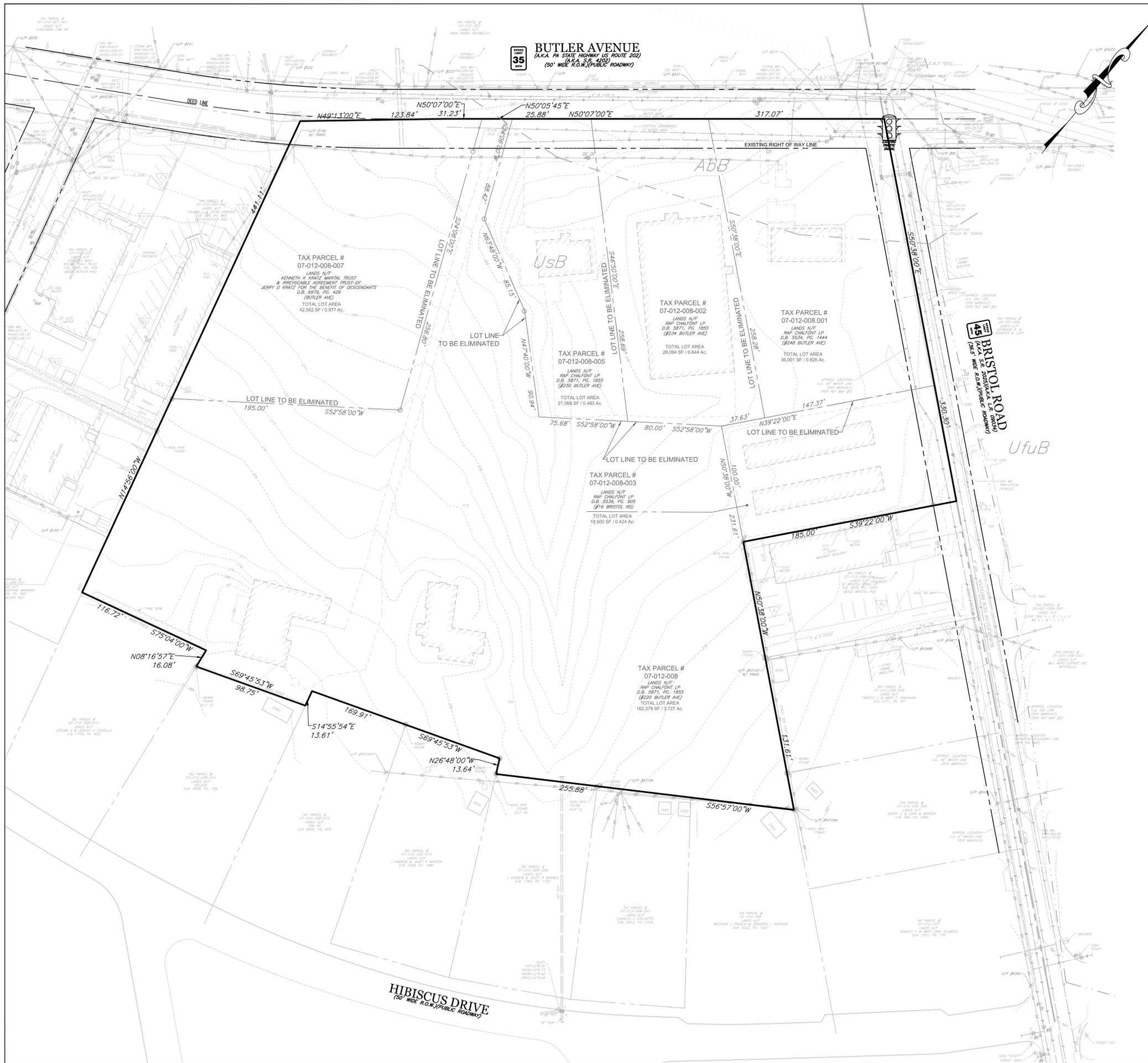
REVISIONS	Description	Date
5-10-19	REVISED PER ORDINANCE	
7-29-19	REVISED PER COMMENTS	

CHALFONT CROSSING
TMP # 07-012-008, 07-012-008.001, 07-012-008-002,
07-012-008-003, 07-012-008-005 & 07-012-008-007
CHALFONT BOROUGH, BUCKS COUNTY, PENNSYLVANIA

EXISTING CONDITIONS AND DEMOLITION PLAN



File No.	1377_CO.1.DWG		
HCE Job	1377	Scale	1"=40'
Date	11/15/2018	Designed	RC
		Sheet	2 of 27
Drawing No.	C0.1		



BUTLER AVENUE
 (A.K.A. PA STATE HIGHWAY US ROUTE 202)
 (A.K.A. S.R. 402)
 (50' WIDE R.O.W./PUBLIC ROADWAY)

PROFESSIONAL ENGINEER'S CERTIFICATION
 I, ROBERT T. CUNNINGHAM, A REGISTERED PROFESSIONAL ENGINEER OF THE COMMONWEALTH OF PENNSYLVANIA, DO HEREBY CERTIFY THAT THIS PLAN MEETS THE REQUIREMENTS OF ALL ORDINANCES AFFECTING THIS SUBDIVISION AND LAND DEVELOPMENT, INCLUDING THE AMENDED ZONING ORDINANCE OF THE CHALFONT BOROUGH IN WHICH THIS SUBDIVISION OR LAND DEVELOPMENT IS LOCATED NOT WITHSTANDING THE ZONING VARIANCES AND OTHER WAIVERS GRANTED BY CHALFONT BOROUGH.

ROBERT T. CUNNINGHAM, P.E.
 PENNSYLVANIA LICENSE NO. PE076424

OWNER'S CERTIFICATION OF INTENT
 I, _____, HEREBY CERTIFY THAT ELU CHALFONT LLC, HAVE LAID OUT UPON OUR LAND SITUATED IN THE CHALFONT BOROUGH, COUNTY OF BUCKS, COMMONWEALTH OF PENNSYLVANIA, LOTS AND STREETS ACCORDING TO THE ACCOMPANYING PLAN WHICH IS INTENDED TO BE FORTHWITH RECORDED.

WITNESS OUR HAND AND SEAL THIS _____ DAY OF _____, 2019.

COMMONWEALTH OF PENNSYLVANIA:
 COUNTY OF _____ DAY OF _____, 2019, BEFORE ME THE SUBSCRIBER, A NOTARY PUBLIC OF THE COMMONWEALTH OF PENNSYLVANIA, PERSONALLY APPEARED _____, WHO ACKNOWLEDGED THIS PLAN TO BE THE OFFICIAL PLAN OF LOTS AND PROPERTY SHOWN THERETO SITUATED IN THE CHALFONT BOROUGH, COUNTY OF BUCKS, COMMONWEALTH OF PENNSYLVANIA, AND DESIRED THAT THIS PLAN BE RECORDED ACCORDING TO LAW.

WITNESS MY HAND AND NOTARIAL SEAL THIS _____ DAY OF _____, 20____.

NOTARY PUBLIC
 (SEAL)
 MY COMMISSION EXPIRES: _____

APPROVAL OF THE CHALFONT BOROUGH PLANNING COMMISSION
 THIS SUBDIVISION AND LAND DEVELOPMENT PLAN WAS REVIEWED BY THE BOROUGH PLANNING COMMISSION ON THIS _____ DAY OF _____, 20____.

(CHAIRMAN) _____

(SECRETARY) _____

APPROVAL OF THE CHALFONT BOROUGH COUNCIL
 THIS SUBDIVISION AND LAND DEVELOPMENT PLAN WAS APPROVED BY RESOLUTION OF THE CHALFONT BOROUGH COUNCIL THIS _____ DAY OF _____, 2019.

(CHAIRMAN) _____

(SECRETARY) _____

REVIEWED BY THE BOROUGH ENGINEER
 THIS SUBDIVISION AND LAND DEVELOPMENT PLAN WAS REVIEWED BY THE APPOINTED CHALFONT BOROUGH ENGINEER _____ P.E., ON THIS _____ DAY OF _____, 20____.

(BOROUGH ENGINEER) _____ P.E.

CERTIFICATION OF REVIEW BY THE BUCKS COUNTY PLANNING COMMISSION
 THIS SUBDIVISION AND LAND DEVELOPMENT PLAN WAS REVIEWED BY THE BUCKS COUNTY PLANNING COMMISSION ON THIS _____ DAY OF _____, 20____.

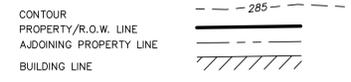
CERTIFICATION FOR RECORDING
 THIS SUBDIVISION AND LAND DEVELOPMENT PLAN WAS RECORDED IN THE OFFICE OF RECORDER OF DEEDS FOR BUCKS COUNTY, AT DOYLESTOWN, PENNSYLVANIA, THIS _____ DAY OF _____, 2019.

BY: _____
 RECORDER OF DEEDS

- NOTES:
- BOUNDARY INFORMATION TAKEN FROM PLAN ENTITLED "LOCATION & TOPOGRAPHIC SURVEY", PREPARED BY BLUE MARCH ASSOCIATES, INC. DATED DECEMBER 17, 2013
 - FLOOD ZONE INFORMATION: SUBJECT PARCEL AREA IS LOCATED OUTSIDE ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 500-YEAR FLOODPLAIN) OF THE FLOOD INSURANCE RATE MAP, PANEL NO. 404 OF 532, COMMUNITY MAP NO. 42017C0404J WHICH BEARS AN EFFECTIVE DATE OF MARCH 16, 2015..

Tax Parcel #	Gross Lot Area (SF)	ROW Area (SF)	Net Lot Area (SF)	Net Lot Area (AC)
07-012-008	162,379	647	161,732	3.713
07-012-008-001	36,001	7,885	28,116	0.645
07-012-008-002	28,094	2,521	25,573	0.587
07-012-008-003	18,500	2,000	16,500	0.379
07-012-008-005	21,068	1,803	19,265	0.442
07-012-008-007	42,582	3,694	38,888	0.893
TOTAL	308,624	18,550	290,074	6.659

LEGEND



Holmes Cunningham LLC
 350 E. Butler Ave., Ste 106
 New Britain, PA 18901
 (215) 586-3330
 www.hcengineering.net

REVISIONS	Description	Date
5-10-19	REVISED PER ORDINANCE	5-10-19
7-29-19	REVISED PER COMMENTS	7-29-19

CALL BEFORE YOU DIG!!
 800-4-A-DAWN
 PENNSYLVANIA ONE
 CALL SYSTEMS, INC.
 1-800-255-1776

CHALFONT CROSSING
 TMP # 07-012-008, 07-012-008-001, 07-012-008-002,
 07-012-008-003, 07-012-008-005 & 07-012-008-007
 CHALFONT BOROUGH, BUCKS COUNTY, PENNSYLVANIA

LOT CONSOLIDATION PLAN

File No.
 1377_C0.2.DWG

HCE Job: 1377
 Date: 11/15/2018
 Scale: 1"=40'
 Designed: RC
 Sheet: 3 of 27

Drawing No.
C0.2



BUTLER AVENUE
 (A.K.A. PA STATE HIGHWAY US ROUTE 202)
 (A.K.A. S.R. 4202)
 (50' WIDE R.O.W. (PUBLIC ROADWAY))



MOYER ROAD
 (20' WIDE R.O.W. (PUBLIC ROADWAY))

BRISTOL ROAD
 (A.K.A. S.R. 1000) (A.K.A. LEASING)
 (65' WIDE R.O.W. (PUBLIC ROADWAY))

HIBISCUS DRIVE
 (20' WIDE R.O.W. (PUBLIC ROADWAY))

Holmes Cunningham LLC
 350 E. Butler Ave., Ste 106
 New Britain, PA 18901
 (215) 586-3330
 www.hcengineering.net

REVISIONS	Date	Description
1	5-10-19	REVISED PER ORDINANCE
2	7-29-19	REVISED PER COMMENTS

CHALFONT CROSSING
 TMP # 07-012-008, 07-012-008.001, 07-012-008-002,
 07-012-008-003, 07-012-008-005 & 07-012-008-007
 CHALFONT BOROUGH, BUCKS COUNTY, PENNSYLVANIA

AERIAL MAP PLAN

Robert R. Cunningham, P.E.
 PA Lic. No. PA076424

File No.	1377_CO.3.DWG
HCE Job	1377
Date	11/15/2018
Scale	1"=40'
Designed	RC
Sheet	4 of 27
Drawing No.	C0.3



PROFESSIONAL ENGINEER'S CERTIFICATION
 I, ROBERT T. CUNNINGHAM, A REGISTERED PROFESSIONAL ENGINEER OF THE COMMONWEALTH OF PENNSYLVANIA, DO HEREBY CERTIFY THAT THIS PLAN MEETS THE REQUIREMENTS OF ALL ORDINANCES AFFECTING THIS SUBDIVISION AND LAND DEVELOPMENT, INCLUDING THE AMENDED ZONING ORDINANCE OF THE CHALFONT BOROUGH IN WHICH THIS SUBDIVISION OR LAND DEVELOPMENT IS LOCATED NOT WITHSTANDING THE ZONING VARIANCES AND OTHER WAIVERS GRANTED BY CHALFONT BOROUGH.

ROBERT T. CUNNINGHAM, P.E.
 PENNSYLVANIA LICENSE NO. PE076424

OWNER'S CERTIFICATION OF INTENT
 I, _____ HEREBY CERTIFY THAT ELU CHALFONT LLC, HAVE LAID OUT UPON OUR LAND SITUATED IN THE CHALFONT BOROUGH, COUNTY OF BUCKS, COMMONWEALTH OF PENNSYLVANIA, LOTS AND STREETS ACCORDING TO THE ACCOMPANYING PLAN WHICH IS INTENDED TO BE FORTHWITH RECORDED.

WITNESS OUR HAND AND SEAL THIS _____ DAY OF _____, 2019.

COMMONWEALTH OF PENNSYLVANIA:
 COUNTY OF _____
 ON THIS _____ DAY OF _____, 2019, BEFORE ME THE SUBSCRIBER, A NOTARY PUBLIC OF THE COMMONWEALTH OF PENNSYLVANIA, PERSONALLY APPEARED _____ WHO ACKNOWLEDGED THIS PLAN TO BE THE OFFICIAL PLAN OF LOTS AND PROPERTY SHOWN THERETO SITUATED IN THE CHALFONT BOROUGH, COUNTY OF BUCKS, COMMONWEALTH OF PENNSYLVANIA, AND DESIRED THAT THIS PLAN BE RECORDED ACCORDING TO LAW.

WITNESS MY HAND AND NOTARIAL SEAL THIS _____ DAY OF _____, 20____.

NOTARY PUBLIC (SEAL)
 MY COMMISSION EXPIRES: _____

APPROVAL OF THE CHALFONT BOROUGH PLANNING COMMISSION
 THIS SUBDIVISION AND LAND DEVELOPMENT PLAN WAS REVIEWED BY THE ZONING PLANNING COMMISSION ON THIS _____ DAY OF _____, 20____.

(CHAIRMAN) _____
 (SECRETARY) _____

APPROVAL OF THE CHALFONT BOROUGH COUNCIL
 THIS SUBDIVISION AND LAND DEVELOPMENT PLAN WAS APPROVED BY RESOLUTION OF THE CHALFONT BOROUGH COUNCIL THIS _____ DAY OF _____, 2019.

(CHAIRMAN) _____
 (SECRETARY) _____

REVIEWED BY THE BOROUGH ENGINEER
 THIS SUBDIVISION AND LAND DEVELOPMENT PLAN WAS REVIEWED BY THE APPOINTED CHALFONT BOROUGH ENGINEER THIS _____ DAY OF _____, 20____.

(BOROUGH ENGINEER) _____ P.E.

CERTIFICATION OF REVIEW BY THE BUCKS COUNTY PLANNING COMMISSION
 THIS SUBDIVISION AND LAND DEVELOPMENT PLAN WAS REVIEWED BY THE BUCKS COUNTY PLANNING COMMISSION ON THIS _____ DAY OF _____, 20____.

CERTIFICATION FOR RECORDING
 THIS SUBDIVISION AND LAND DEVELOPMENT PLAN WAS RECORDED IN THE OFFICE OF RECORDER OF DEEDS FOR BUCKS COUNTY, AT DOYLESTOWN, PENNSYLVANIA, THIS _____ DAY OF _____, 2019.

BY: _____
 RECORDER OF DEEDS

Curve Table

Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	21.99'	14.00'	090°00'01"	N84°22'00"E	19.80'
C2	24.39'	130.00'	010°41'59"	S45°15'30"E	24.35'
C3	21.99'	14.00'	090°00'00"	S84°53'04"E	19.80'
C4	21.85'	14.00'	089°24'11"	N05°24'46"E	19.70'
C5	61.64'	145.00'	024°21'19"	N27°06'40"W	61.17'
C6	21.87'	14.00'	089°29'58"	N59°40'34"W	19.71'
C7	11.7'	72.00'	005°55'44"	S75°19'26"W	11.7'
C8	12.03'	130.00'	005°18'09"	S72°24'55"W	12.03'
C9	85.27'	80.00'	061°04'15"	S39°13'43"W	81.29'
C10	64.24'	120.00'	030°40'24"	S24°01'48"W	63.48'
C11	21.99'	14.00'	089°59'59"	S05°38'00"E	19.80'
C12	31.90'	170.00'	010°44'59"	S45°15'30"E	31.85'
C13	45.72'	105.00'	024°57'00"	S27°24'30"E	45.36'
C14	21.99'	14.00'	090°00'00"	N30°04'00"E	19.80'
C15	15.73'	170.00'	005°18'09"	N72°24'55"E	15.73'
C16	127.91'	120.00'	061°04'15"	N39°13'43"E	121.04'
C17	42.83'	80.00'	030°40'24"	N24°01'48"E	42.32'
C18	5.11'	14.00'	020°54'43"	N61°05'21"W	5.08'
C19	7.16'	130.00'	003°29'12"	N49°03'16"W	7.16'
C20	17.23'	130.00'	007°35'33"	N43°40'46"W	17.21'
C21	32.92'	145.00'	014°35'59"	N70°37'50"E	32.85'
C22	16.52'	145.00'	006°31'34"	N18°11'47"W	16.51'
C23	3.93'	130.00'	001°43'59"	N31°38'08"W	3.93'
C24	33.52'	80.00'	024°00'30"	S31°38'08"W	33.28'
C25	15.27'	80.00'	010°56'15"	S14°09'44"W	15.25'
C26	21.49'	120.00'	010°15'42"	S13°49'27"W	21.46'
C27	1.31'	170.00'	000°26'26"	S50°24'46"E	1.31'
C28	23.08'	105.00'	012°35'32"	N21°13'46"W	23.03'

Curve Table

Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C29	5.22'	14.00'	021°22'31"	N64°22'44"E	5.19'
C30	10.72'	120.00'	005°06'58"	N67°12'22"E	10.71'
C31	18.97'	120.00'	009°03'32"	N60°07'06"E	18.95'
C32	19.58'	120.00'	009°20'56"	N50°54'52"E	19.56'
C33	16.39'	120.00'	007°49'31"	N42°19'39"E	16.38'
C34	14.07'	120.00'	006°43'01"	N35°03'23"E	14.06'
C35	18.09'	120.00'	008°38'11"	N27°22'48"E	18.07'
C36	22.28'	120.00'	010°38'23"	N17°44'31"E	22.25'
C37	7.81'	120.00'	003°43'44"	N10°33'28"E	7.81'
C38	29.20'	80.00'	020°54'45"	N19°08'59"E	29.04'
C40	53.14'	125.00'	024°21'19"	N27°06'40"W	52.74'
C41	13.88'	150.00'	005°18'09"	N72°24'55"E	13.88'
C42	106.59'	100.00'	061°04'15"	N39°13'43"E	101.61'
C43	53.54'	100.00'	030°40'24"	N24°01'48"E	52.90'
C44	80.22'	58.00'	079°15'00"	N89°44'30"E	73.98'
C45	91.48'	1183.28'	004°25'46"	N52°19'53"E	91.46'
C46	21.84'	1183.28'	001°03'28"	S50°38'45"W	21.84'
C47	69.63'	1183.28'	003°22'17"	S52°51'38"W	69.62'
C48	53.05'	34.00'	089°24'11"	N05°24'46"E	47.83'
C49	53.41'	34.00'	090°00'00"	S84°53'04"E	48.08'
C50	22.65'	105.00'	012°1'28"	N33°42'16"W	22.60'
C51	16.77'	14.00'	068°37'29"	S19°22'44"W	15.78'
C52	13.63'	80.00'	009°45'39"	N34°29'11"E	13.61'
C53	16.88'	14.00'	069°01'16"	N73°54'39"E	15.88'
C54	12.21'	145.00'	004°49'22"	N36°52'38"W	12.20'
C55	8.10'	130.00'	003°34'11"	N73°16'55"E	8.10'
C56	36.48'	80.00'	026°07'29"	N56°42'06"E	36.14'
C57	42.75'	120.00'	020°24'42"	S29°09'39"W	42.52'

OPEN SPACE AREA TABLE

Lot #	Gross Lot Area (square feet)	Net Lot Area (square feet)
1	39,147	39,147
2	18,737	18,737
3	3,382	3,382
4	13,045	13,045
5	1,724	1,724
6	1,730	1,730
7	1,885	1,885



LOT AREA TABLE

Lot #	Gross Lot Area (square feet)	Buffer Area (square feet)	Net Lot Area (square feet)
1	2,855	384	2,471
2	1,992	0	1,992
3	1,990	0	1,990
4	2,022	0	2,022
5	2,093	0	2,093
6	2,897	0	2,897
7	2,908	249	2,659
8	2,059	220	1,839
9	1,938	220	1,718
10	1,916	220	1,696
11	2,784	320	2,464
12	2,784	320	2,464
13	1,914	220	1,694
14	1,914	220	1,694
15	1,914	202	1,712
16	2,792	0	2,792
17	2,784	1,073	1,711
18	1,914	118	1,796
19	1,914	88	1,826
20	1,914	88	1,826
21	2,784	128	2,656
22	2,816	160	2,656
23	1,938	110	1,828
24	2,376	135	2,241
25	2,376	135	2,241
26	2,816	160	2,656
27	1,938	110	1,828
28	1,938	110	1,828
29	2,797	164	2,633
30	2,755	200	2,555
31	1,916	138	1,778
32	1,916	138	1,778
33	1,916	138	1,778
34	1,916	138	1,778
35	2,774	188	2,586
36	2,879	321	2,558
37	1,981	221	1,760
38	1,980	220	1,760
39	1,980	220	1,760
40	1,980	220	1,760
41	2,807	320	2,487
42	3,477	0	3,477
43	1,914	0	1,914
44	1,914	0	1,914
45	1,914	0	1,914
46	2,681	0	2,681
47	2,786	0	2,786
48	1,979	0	1,979
49	2,031	0	2,031
50	2,803	0	2,803
51	2,784	0	2,784
52	1,914	0	1,914
53	1,914	0	1,914
54	1,934	0	1,934
55	2,859	0	2,859
56	2,766	0	2,766
57	1,914	0	1,914
58	1,914	0	1,914
59	1,914	0	1,914
60	1,919	0	1,919
61	2,865	0	2,865

- SITE PLAN NOTES**
- BOUNDARY INFORMATION TAKEN FROM PLAN ENTITLED "LOCATION & TOPOGRAPHIC SURVEY", PREPARED BY BLUE MARCH ASSOCIATES, INC. DATED DECEMBER 17, 2013.
 - SUBJECT PROPERTY CONSISTS OF TAX PARCEL NO. 07-012-008, 08-012-008-001, 07-012-008-002, 07-012-008-003, 07-012-008-004, & 07-012-008-007.
 - ANY EXISTING FEATURES DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THE OWNER, AT NO COST TO THE BOROUGH.
 - ALL UTILITIES SERVICING THE PROPOSED SITE ARE TO BE PLACED UNDERGROUND.
 - ALL TRAFFIC SIGNS SHALL MEET APPLICABLE PENNDOT AND CHALFONT BOROUGH STANDARDS.
 - PROPOSED FACILITIES TO BE SERVICED BY AQUA PA WATER AND PUBLIC SEWER PROVIDED BY THE CHALFONT NEW BRITAIN SEWER AUTHORITY (CNBSA) AUTHORITY CHESA.
 - THE ON-SITE ROADS SHALL BE PRIVATE ROADS AND WILL NOT BE DEDICATED TO CHALFONT BOROUGH. ALL PROPOSED ROADS TO BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION (HOA).
 - ON-SITE LIGHTING WILL BE PRIVATELY OWNED AND WILL NOT BE DEDICATED TO CHALFONT BOROUGH.
 - 61 FEE SIMPLE UNITS ARE PROPOSED.
 - BUILDINGS, DRIVEWAYS, GRADING, AND OTHER PROPOSED FEATURES ON PROPOSED LOTS SUBJECT TO CHANGE UPON BUILDING DEPARTMENT PERMIT APPLICATION THAT WILL ILLUSTRATE DETAILED LOT LAYOUTS, ARCHITECTURAL PLANS, AND GRADING.
 - THE LENGTH OF THE PROPOSED PRIVATE DRIVES IS 1,544 LF.
 - TRASH COLLECTION WILL OCCUR VIA CURBSIDE PICKUP ONSITE.
 - OWNERSHIP AND MAINTENANCE OF DRAINAGE FACILITIES AND OPEN SPACE WITHIN THE PROPERTY LIMITS IS TO BE RETAINED BY THE HOMEOWNERS ASSOCIATION. OWNERSHIP, MAINTENANCE, AND INSPECTION RIGHTS OF ALL UTILITIES WITHIN THE PROPERTY LIMITS SHALL BE RETAINED BY THE APPROPRIATE UTILITY AUTHORITY.
 - PORTION OF LOTS WITHIN EASEMENTS WILL BE DEED RESTRICTED FROM DEVELOPMENT, NO PERMANENT STRUCTURES SHALL BE PLACED IN THE PORTIONS OF LOTS WITHIN EASEMENTS.
 - THE CONTRACTOR MUST CONTACT THE CHALFONT NEW BRITAIN SEWER AUTHORITY (CNBSA) ONE WEEK PRIOR TO WATER MAIN CONSTRUCTION, AND 72 HOURS PRIOR TO EXCAVATION NEAR AND CONNECTING INTO EXISTING MAIN.
 - ALL DRIVEWAYS AND PARKING AREAS SHALL BE BLACK-TOPPED OR CEMENTED.
 - CHALFONT BOROUGH SHALL HAVE THE RIGHT TO ENTER PRIVATE PROPERTY TO INSPECT AND REPAIR, IF NECESSARY, ANY STORMWATER MANAGEMENT FACILITY.
 - THE HOMEOWNERS ASSOCIATION IS RESPONSIBLE FOR CONTROLLING AND MAINTAINING THE REQUIRED BUFFERS, REQUIRED TREES, AND ASSOCIATED PLANTINGS.
 - PLOT PLANS SHALL BE SUBMITTED TO THE BOROUGH FOR REVIEW PRIOR TO THE ISSUANCE OF INDIVIDUAL BUILDING PERMITS AND USE AND OCCUPANCY PERMITS.
 - DRIVEWAYS SHALL BE CONSTRUCTED IN A MANNER THAT SIDEWALKS WITHIN THE RIGHT-OF-WAY DO NOT EXCEED 2% MAXIMUM SLOPE AND COMPLY WITH ACCESSIBLE PASSING AREA REQUIREMENTS.
 - TOWNHOUSE LOT LINES ARE SHOWN FOR OWNERSHIP PURPOSE ONLY, ZONING REQUIREMENTS ARE MET FOR THE OVERALL RESIDENTIAL TRACT.
 - THE BEARINGS SHOWN ON THIS PLAN HAVE BEEN ROTATED TO THE PENNSYLVANIA STATE PLAN COORDINATE (SOUTH ZONE) AND MAY NOT MATCH PREVIOUSLY RECORDED PLANS OR DEEDS.
 - THE BUFFER YARD WITHIN INDIVIDUAL OWNED LOTS SHALL BE SUBJECT TO A DEED RESTRICTION TO PROVIDE THE CONTINUANCE OF THE BUFFER YARDS IN ACCORDANCE WITH SECTION 27-555 OF THE CHALFONT BOROUGH ORDINANCE.
 - OPEN SPACE SHALL BE DESIGNATED AS COMMON AREA AND SHALL BE OWNED AND MAINTAINED BY THE HOME OWNER ASSOCIATION.
 - OPEN SPACE SHALL NOT BE SEPARATELY SOLD OR FURTHER SUBDIVIDED AND SHALL NOT BE FURTHER DEVELOPED, EXCEPT FOR RECREATIONAL FACILITIES.
 - EMERGENCY ACCESS TO BE A PAVED SURFACE AND SHALL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION.

Holmes Cunningham LLC
 350 E. Butler Ave., Ste 106
 New Britain, PA 18901
 (215) 586-3330
 www.hcengineering.net

REVISIONS

Date	Description	Revised Per Ordinance	Revised Per Comments
5-10-19			
7-29-19			

CHALFONT CROSSING
 TMP # 07-012-008, 07-012-008-001, 07-012-008-002,
 07-012-008-003, 07-012-008-005 & 07-012-008-007
 CHALFONT BOROUGH, BUCKS COUNTY, PENNSYLVANIA

SUBDIVISION PLAN

Robert T. Cunningham, P.E.
 PA Lic. No. PA076424

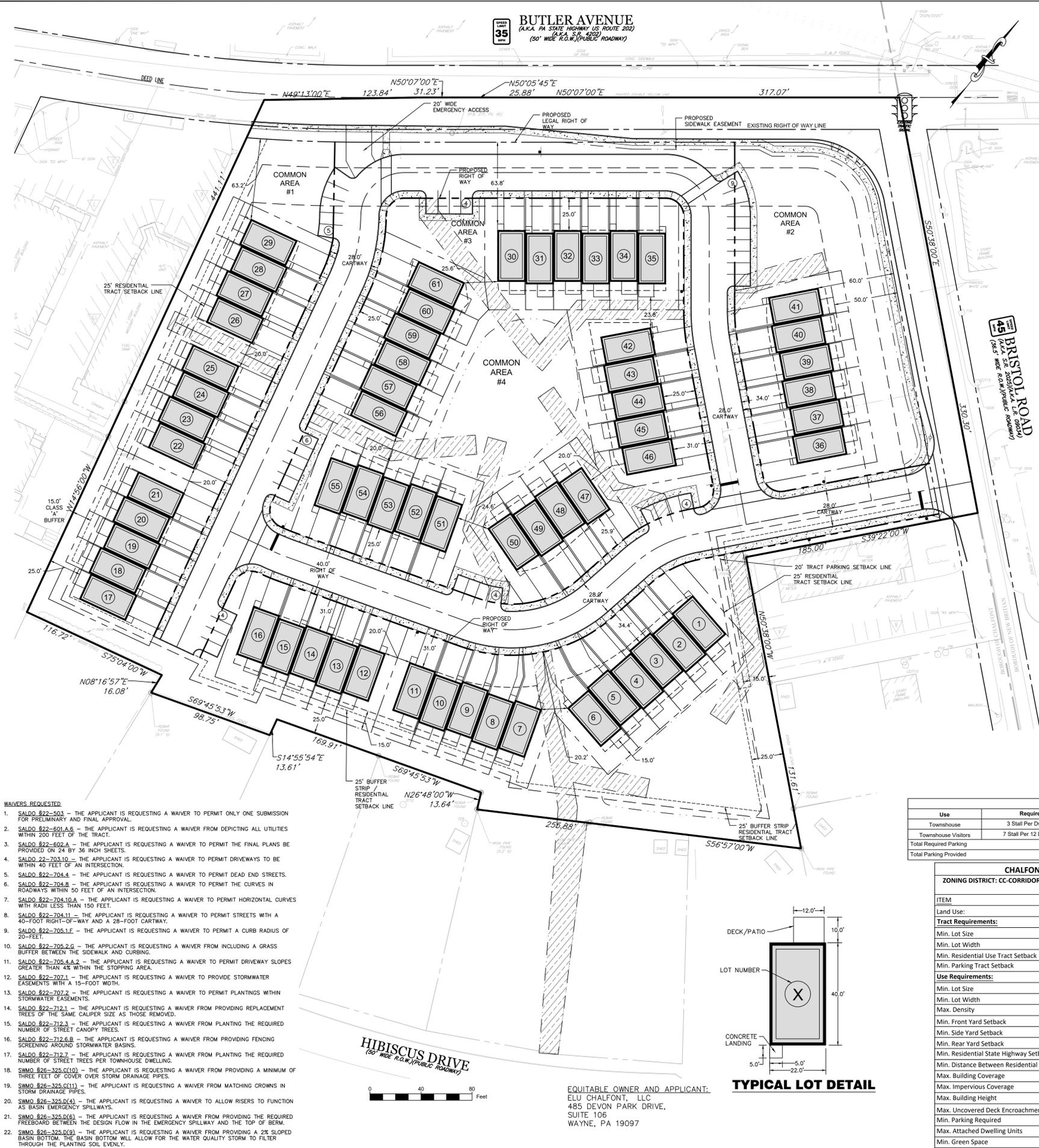
File No.
 1377_C1.0.DWG

HCE Job: 1377
 Date: 11/15/2018
 Scale: 1"=40'

Designed: RC
 Sheet: 5 of 27

Drawing No.
C1.0

BUTLER AVENUE
 (A.K.A. PA STATE HIGHWAY US ROUTE 202)
 (A.K.A. S.R. 4202)
 (50' WIDE R.O.W./PUBLIC ROADWAY)



- SITE PLAN NOTES**
- BOUNDARY INFORMATION TAKEN FROM PLAN ENTITLED "LOCATION & TOPOGRAPHIC SURVEY", PREPARED BY BLUE MARSH ASSOCIATES, INC. DATED DECEMBER 17, 2013.
 - SUBJECT PROPERTY CONSISTS OF TAX PARCEL NO. 07-012-008, 08-012-008-001, 07-012-008-002, 07-012-008-003, 07-012-008-005, & 07-012-008-007.
 - ANY EXISTING FEATURES DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THE OWNER, AT NO COST TO THE BORROWER.
 - ALL UTILITIES SERVING THE PROPOSED SITE ARE TO BE PLACED UNDERGROUND.
 - ALL TRAFFIC SIGNS SHALL MEET APPLICABLE PENNDOT AND CHALFONT BOROUGH STANDARDS.
 - PROPOSED FACILITIES TO BE SERVICED BY AQUA PA WATER AND PUBLIC SEWER PROVIDED BY THE CHALFONT NEW BRITAIN SEWER AUTHORITY (CNBSA).
 - THE ON-SITE ROADS SHALL BE PRIVATE ROADS AND WILL NOT BE DEDICATED TO CHALFONT BOROUGH. ALL PROPOSED ROADS TO BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION (HOA).
 - ON-SITE LIGHTING WILL BE PRIVATELY OWNED AND WILL NOT BE DEDICATED TO CHALFONT BOROUGH.
 - 61 FEE SIMPLE UNITS ARE PROPOSED.
 - BUILDINGS, DRIVEWAYS, GRADING, AND OTHER PROPOSED FEATURES ON PROPOSED LOTS SUBJECT TO CHANGE UPON BUILDING DEPARTMENT PERMIT APPLICATION THAT WILL ILLUSTRATE DETAILED LOT LAYOUTS, ARCHITECTURAL PLANS, AND GRADING.
 - THE LENGTH OF THE PROPOSED PRIVATE DRIVES IS 1,544 LF.
 - TRASH COLLECTION WILL OCCUR VIA CURBSIDE PICKUP ON-SITE.
 - OWNERSHIP AND MAINTENANCE OF DRAINAGE FACILITIES AND COMMON AREAS WITHIN THE PROPERTY LIMITS IS TO BE RETAINED BY THE HOMEOWNERS ASSOCIATION. OWNERSHIP, MAINTENANCE, AND INSPECTION RIGHTS OF ALL UTILITIES WITHIN THE PROPERTY LIMITS SHALL BE RETAINED BY THE APPROPRIATE UTILITY AUTHORITY.
 - PORTION OF LOTS WITHIN EASEMENTS WILL BE DEED RESTRICTED FROM DEVELOPMENT. NO PERMANENT STRUCTURES SHALL BE PLACED IN THE PORTIONS OF LOTS WITHIN THE EASEMENTS.
 - THE CONTRACTOR MUST CONTACT THE CHALFONT NEW BRITAIN SEWER AUTHORITY (CNBSA) ONE WEEK PRIOR TO WATER MAIN CONSTRUCTION, AND 72 HOURS PRIOR TO EXCAVATION NEAR AND CONNECTING INTO THE EXISTING MAIN.
 - ALL DRIVEWAYS AND PARKING AREAS SHALL BE BLACK-TOPPED OR CEMENTED.
 - CHALFONT BOROUGH SHALL HAVE THE RIGHT TO ENTER PRIVATE PROPERTY TO INSPECT AND REPAIR, IF NECESSARY, ANY STORMWATER MANAGEMENT FACILITY.
 - THE HOMEOWNERS ASSOCIATION IS RESPONSIBLE FOR CONTROLLING AND MAINTAINING THE REQUIRED BUFFERS, REQUIRED STREET TREES, AND ASSOCIATED PLANTINGS.
 - PLOT PLANS SHALL BE SUBMITTED TO THE BOROUGH FOR REVIEW PRIOR TO THE ISSUANCE OF INDIVIDUAL BUILDING PERMITS AND USE AND OCCUPANCY PERMITS.
 - DRIVEWAYS SHALL BE CONSTRUCTED IN A MANNER THAT SIDEWALKS WITHIN THE RIGHT-OF-WAY DO NOT EXCEED 2% MAXIMUM SLOPE AND COMPLY WITH ACCESSIBLE PASSING AREA REQUIREMENTS.
 - THE BUFFER YARD WITHIN INDIVIDUAL OWNED LOTS SHALL BE SUBJECT TO A DEED RESTRICTION TO PROVIDE THE CONTINUANCE OF THE BUFFER YARDS IN ACCORDANCE WITH SECTION 27-553 OF THE CHALFONT BOROUGH ORDINANCE.
 - COMMON AREA SHALL BE OWNED AND MAINTAINED BY THE HOME OWNER ASSOCIATION.
 - COMMON AREAS SHALL NOT BE SEPARATELY SOLD OR FURTHER SUBDIVIDED AND SHALL NOT BE FURTHER DEVELOPED EXCEPT FOR RECREATIONAL FACILITIES.

LEGEND

- PROPERTY/R.O.W. LINE
- ADJOINING PROPERTY LINE
- EXISTING BUILDING LINE
- PROPOSED CONCRETE WALK
- PROPOSED BUILDING LINE
- PROPOSED RIGHT OF WAY
- PROPOSED STORMWATER MANAGEMENT
- PROPOSED BUILDING SETBACKS
- PROPOSED BUFFER
- PROPOSED LOT LINE

LOT AREA CALCULATIONS

	S.F.	Acres
Gross Lot Area	308,623	7.085
Land Within R.O.W.	34,630	0.795
Developable Acreage	273,992	6.290

IMPERVIOUS COVERAGE CALCULATIONS

Existing Impervious Area		
Existing Buildings and Features	23,108	0.530
Existing Asphalt	40,026	0.919
Existing Concrete	3,370	0.077
Existing Curb	152	0.003
Total Existing Impervious	66,655	1.530
Existing Impervious Coverage		24.3%

Proposed Impervious Area		
Proposed Dwellings	53,680	1.232
Proposed Walls	79	0.002
Proposed Porch/Patio & Concrete Landings	8,845	0.203
Proposed Driveways	27,524	0.632
Proposed Sidewalk	15,222	0.349
Proposed Roadways & Parking Areas	48,799	1.120
Proposed Curbing	1,577	0.036
Total Proposed Impervious	155,726	3.575
Proposed Impervious Coverage		56.8%

Building Coverage 19.6%

Change in Impervious Area 89,071

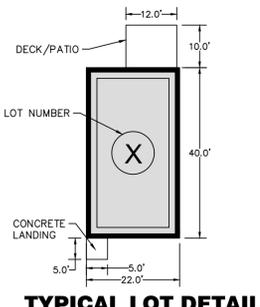
PARKING TABLE

Use	Requirement	Units	Employees	Spaces
Townhouse	3 Stall Per Dwelling Unit	61 Dwelling Units	N/A	183
Townhouse Visitors	7 Stall Per 12 Dwelling Unit	61 DU / 12 DU	N/A	36
Total Required Parking				219
Total Parking Provided				280

CHALFONT BOROUGH ZONING DATA TABLE

ZONING DISTRICT: CC-CORRIDOR COMMERCIAL DISTRICT (BUTLER AVENUE GATEWAY COMMERCIAL OVERLAY)

ITEM	REQUIRED/PERMITTED	PROPOSED
Land Use:	Townhouse B6	Townhouse B6
Tract Requirements:		
Min. Lot Size	18,500 SF	273,992 SF
Min. Lot Width	100 FT	330.3 FT
Min. Residential Use Tract Setback	25 FT	25 FT
Min. Parking Tract Setback	20 FT	20 FT
Use Requirements:		
Min. Lot Size	924 SF	1,711 SF
Min. Lot Width	22 FT	22 FT
Min. Density	10 DU/AC	9.7 DU/AC
Min. Front Yard Setback	25 FT	25 FT
Min. Side Yard Setback	10 FT	10 FT
Min. Rear Yard Setback	15 FT	20 FT
Min. Residential State Highway Setback	50 FT	60 FT
Min. Distance Between Residential Buildings	20 FT	20 FT
Max. Building Coverage	25%	19.6%
Max. Impervious Coverage	75%	56.8%
Max. Building Height	35 FT	< 35 FT
Max. Uncovered Deck Encroachment	50%	50%
Min. Parking Required	See Parking Table	
Max. Attached Dwelling Units	6 DU	6 DU
Min. Green Space	25%	43.2%



- WAIVERS REQUESTED**
- SALDO 822-503 - THE APPLICANT IS REQUESTING A WAIVER TO PERMIT ONLY ONE SUBMISSION FOR PRELIMINARY AND FINAL APPROVAL.
 - SALDO 822-601.A.6 - THE APPLICANT IS REQUESTING A WAIVER FROM DEPICTING ALL UTILITIES WITHIN 200 FEET OF THE TRACT.
 - SALDO 822-602.A - THE APPLICANT IS REQUESTING A WAIVER TO PERMIT THE FINAL PLANS BE PROVIDED ON 24 BY 36 INCH SHEETS.
 - SALDO 22-703.10 - THE APPLICANT IS REQUESTING A WAIVER TO PERMIT DRIVEWAYS TO BE WITHIN 40 FEET OF AN INTERSECTION.
 - SALDO 822-704.4 - THE APPLICANT IS REQUESTING A WAIVER TO PERMIT DEAD END STREETS.
 - SALDO 822-704.8 - THE APPLICANT IS REQUESTING A WAIVER TO PERMIT THE CURVES IN ROADWAYS WITHIN 50 FEET OF AN INTERSECTION.
 - SALDO 822-704.10.A - THE APPLICANT IS REQUESTING A WAIVER TO PERMIT HORIZONTAL CURVES WITH RADII LESS THAN 150 FEET.
 - SALDO 822-704.11 - THE APPLICANT IS REQUESTING A WAIVER TO PERMIT STREETS WITH A 40-FOOT RIGHT-OF-WAY AND A 28-FOOT CARTWAY.
 - SALDO 822-705.1.E - THE APPLICANT IS REQUESTING A WAIVER TO PERMIT A CURB RADIUS OF 20- FEET.
 - SALDO 822-705.2.G - THE APPLICANT IS REQUESTING A WAIVER FROM INCLUDING A GRASS BUFFER BETWEEN THE SIDEWALK AND CURBING.
 - SALDO 822-705.4.2 - THE APPLICANT IS REQUESTING A WAIVER TO PERMIT DRIVEWAY SLOPES GREATER THAN 4% WITHIN THE STOPPING AREA.
 - SALDO 822-707.1 - THE APPLICANT IS REQUESTING A WAIVER TO PROVIDE STORMWATER EASEMENTS WITH A 15-FOOT WIDTH.
 - SALDO 822-707.2 - THE APPLICANT IS REQUESTING A WAIVER TO PERMIT PLANTINGS WITHIN STORMWATER EASEMENTS.
 - SALDO 822-712.1 - THE APPLICANT IS REQUESTING A WAIVER FROM PROVIDING REPLACEMENT TREES OF THE SAME CALIPER SIZE AS THOSE REMOVED.
 - SALDO 822-712.3 - THE APPLICANT IS REQUESTING A WAIVER FROM PLANTING THE REQUIRED NUMBER OF STREET CANOPY TREES.
 - SALDO 822-712.6.B - THE APPLICANT IS REQUESTING A WAIVER FROM PROVIDING FENCING SCREENING AROUND STORMWATER BASINS.
 - SALDO 822-712.7 - THE APPLICANT IS REQUESTING A WAIVER FROM PLANTING THE REQUIRED NUMBER OF STREET TREES PER TOWNHOUSE DWELLING.
 - SWMO 826-325.C(10) - THE APPLICANT IS REQUESTING A WAIVER FROM PROVIDING A MINIMUM OF THREE FEET OF COVER OVER STORM DRAINAGE PIPES.
 - SWMO 826-325.C(11) - THE APPLICANT IS REQUESTING A WAIVER FROM MATCHING CROWNS IN STORM DRAINAGE PIPES.
 - SWMO 826-325.D(4) - THE APPLICANT IS REQUESTING A WAIVER TO ALLOW RISERS TO FUNCTION AS BASIN EMERGENCY SPILLWAYS.
 - SWMO 826-325.D(6) - THE APPLICANT IS REQUESTING A WAIVER FROM PROVIDING THE REQUIRED FREEBOARD BETWEEN THE DESIGN FLOW IN THE EMERGENCY SPILLWAY AND THE TOP OF BASIN.
 - SWMO 826-325.D(9) - THE APPLICANT IS REQUESTING A WAIVER FROM PROVIDING A 2% SLOPED BASIN BOTTOM. THE BASIN BOTTOM WILL ALLOW FOR THE WATER QUALITY STORM TO FILTER THROUGH THE PLANTING SOIL EVENLY.



EQUITABLE OWNER AND APPLICANT:
 ELU CHALFONT, LLC
 485 DEVON PARK DRIVE,
 SUITE 106
 WAYNE, PA 19097

PROFESSIONAL ENGINEER'S CERTIFICATION
 I, ROBERT T. CUNNINGHAM, A REGISTERED PROFESSIONAL ENGINEER OF THE COMMONWEALTH OF PENNSYLVANIA, DO HEREBY CERTIFY THAT THIS PLAN MEETS THE REQUIREMENTS OF ALL ORDINANCES AFFECTING THIS SUBDIVISION AND LAND DEVELOPMENT, INCLUDING THE AMENDED ZONING ORDINANCE OF THE CHALFONT BOROUGH IN WHICH THIS SUBDIVISION OR LAND DEVELOPMENT IS LOCATED NOT WITHSTANDING THE ZONING VARIANCES AND OTHER WAIVERS GRANTED BY CHALFONT BOROUGH.

ROBERT T. CUNNINGHAM, P.E.
 PENNSYLVANIA LICENSE NO. PE076424

OWNER'S CERTIFICATION OF INTENT
 I, _____, HEREBY CERTIFY THAT ELU CHALFONT LLC, HAVE LAID OUT UPON OUR LAND SITUATED IN THE CHALFONT BOROUGH, COUNTY OF BUCKS, COMMONWEALTH OF PENNSYLVANIA, LOTS AND STREETS ACCORDING TO THE ACCOMPANYING PLAN WHICH IS INTENDED TO BE FORTHWITH RECORDED.

WITNESS OUR HAND AND SEAL THIS _____ DAY OF _____, 2019.

COMMONWEALTH OF PENNSYLVANIA:
 COUNTY OF _____

ON THE _____ DAY OF _____, 2017, BEFORE ME THE SUBSCRIBER, A NOTARY PUBLIC OF THE COMMONWEALTH OF PENNSYLVANIA, PERSONALLY APPEARED _____, WHO ACKNOWLEDGED THIS PLAN TO BE THE OFFICIAL PLAN OF LOTS AND PROPERTY SHOWN THERETO SITUATED IN THE CHALFONT BOROUGH, COUNTY OF BUCKS, COMMONWEALTH OF PENNSYLVANIA, AND DESIRED THAT THIS PLAN BE RECORDED ACCORDING TO LAW.

WITNESS MY HAND AND NOTARIAL SEAL THIS _____ DAY OF _____, 20____.

NOTARY PUBLIC (SEAL)
 MY COMMISSION EXPIRES: _____

APPROVAL OF THE CHALFONT BOROUGH PLANNING COMMISSION
 THIS SUBDIVISION AND LAND DEVELOPMENT PLAN WAS REVIEWED BY THE BOROUGH PLANNING COMMISSION ON THIS _____ DAY OF _____, 20____.

(CHAIRMAN) _____

(SECRETARY) _____

APPROVAL OF THE CHALFONT BOROUGH COUNCIL
 THIS SUBDIVISION AND LAND DEVELOPMENT PLAN WAS APPROVED BY RESOLUTION OF THE CHALFONT BOROUGH COUNCIL THIS _____ DAY OF _____, 2019.

(CHAIRMAN) _____

(SECRETARY) _____

REVIEWED BY THE BOROUGH ENGINEER
 THIS SUBDIVISION AND LAND DEVELOPMENT PLAN WAS REVIEWED BY THE APPOINTED CHALFONT BOROUGH ENGINEER _____ P.E. ON THIS _____ DAY OF _____, 20____.

(BOROUGH ENGINEER) _____

CERTIFICATION OF REVIEW BY THE BUCKS COUNTY PLANNING COMMISSION
 THIS SUBDIVISION AND LAND DEVELOPMENT PLAN WAS REVIEWED BY THE BUCKS COUNTY PLANNING COMMISSION ON THIS _____ DAY OF _____, 20____.

BCPC # _____

CERTIFICATION FOR RECORDING
 THIS SUBDIVISION AND LAND DEVELOPMENT PLAN WAS RECORDED IN THE OFFICE OF RECORDER OF DEEDS FOR BUCKS COUNTY, AT DOHLESTOWN, PENNSYLVANIA, THIS _____ DAY OF _____, 2019.

BY: _____
 RECORDER OF DEEDS

SITE CAPACITY CALCULATIONS

Calculation for Base Site Area

		7.085	acres
a. Gross Site Area			
b. Subtract the following:			
Existing area that is set aside for perm. street right-of-way or easement	0.426		acres
Land within Ultimate right-of-way of existing streets	0.369		acres
Land within right-of-way or easements for utilities	0.000		acres
Land within existing areas of drainage or stormwater easements	0.000		acres
Land without development opportunities due to restrictions or covenants	0.000		acres
c. Base Site Area	6.290		acres

Calculation Land with Resource Restrictions and Resource Protection

Resource	Min. Required Protection Ratio	Acres of Land in Resource (Ac.)	Resource Protection Land (Ac.)
Floodplain	1.00	0.00	0.00
Water of the Commonwealth	1.00	0.00	0.00
Ponds	1.00	0.00	0.00
Wetlands	1.00	0.00	0.00
Pond Shore Areas	0.80	0.00	0.00
Wetland Margins	0.80	0.00	0.00
Steep Slopes 15%-25%	0.70	0.00	0.00
Steep Slopes 25%+	0.85	0.00	0.00
Forested Areas With Other Resources	0.80	0.00	0.00
Forested Areas No Other Resources	0.50	0.00	0.00
Land With Resource Restrictions		0.00	acres
Resource Protection Land Required		0.000	acres

Calculation for Net Buildable Site Area

	6.290	acres
a. Base Site Area		
b. Subtract Resource Protection Land	0.000	acres
c. Net Buildable Acres	6.290	acres
d. Max. # of Permitted Dwellings = Net Buildable Acres * Max. Density	63	Dwelling Units

Calculation for Maximum Impervious Surfaces

	6.290	acres
a. Net Building Site Area = Base Site Area - Resource Protection Land		
b. Multiply by Maximum Impervious Surface Ratio	0.750	acres
c. Maximum Impervious Surface	4.718	acres

Site Capacity Summary

	6.290	acres
a. Net Buildable Site Acres		
b. Maximum Number of Dwelling Units	63	acres
b. Maximum Impervious Surface	4.718	acres

Holmes Cunningham LLC
 350 E. Butler Ave., Ste 106
 New Britain, PA 18901
 (215) 586-3330
 www.hcengineering.net

REVISIONS

Date	Description	REVISED PER ORDINANCE	REVISED PER COMMENTS
5-10-19			
7-29-19			

CALL BEFORE YOU DIG !!!
 800-4-A-DIG (4364)
 PENNSYLVANIA ONE CALL SYSTEM, INC.
 1-800-942-1976

CHALFONT CROSSING
 TMP # 07-012-008, 07-012-008.001, 07-012-008-002,
 07-012-008-003, 07-012-008-005 & 07-012-008-007
 CHALFONT BOROUGH, BUCKS COUNTY, PENNSYLVANIA

RECORD PLAN

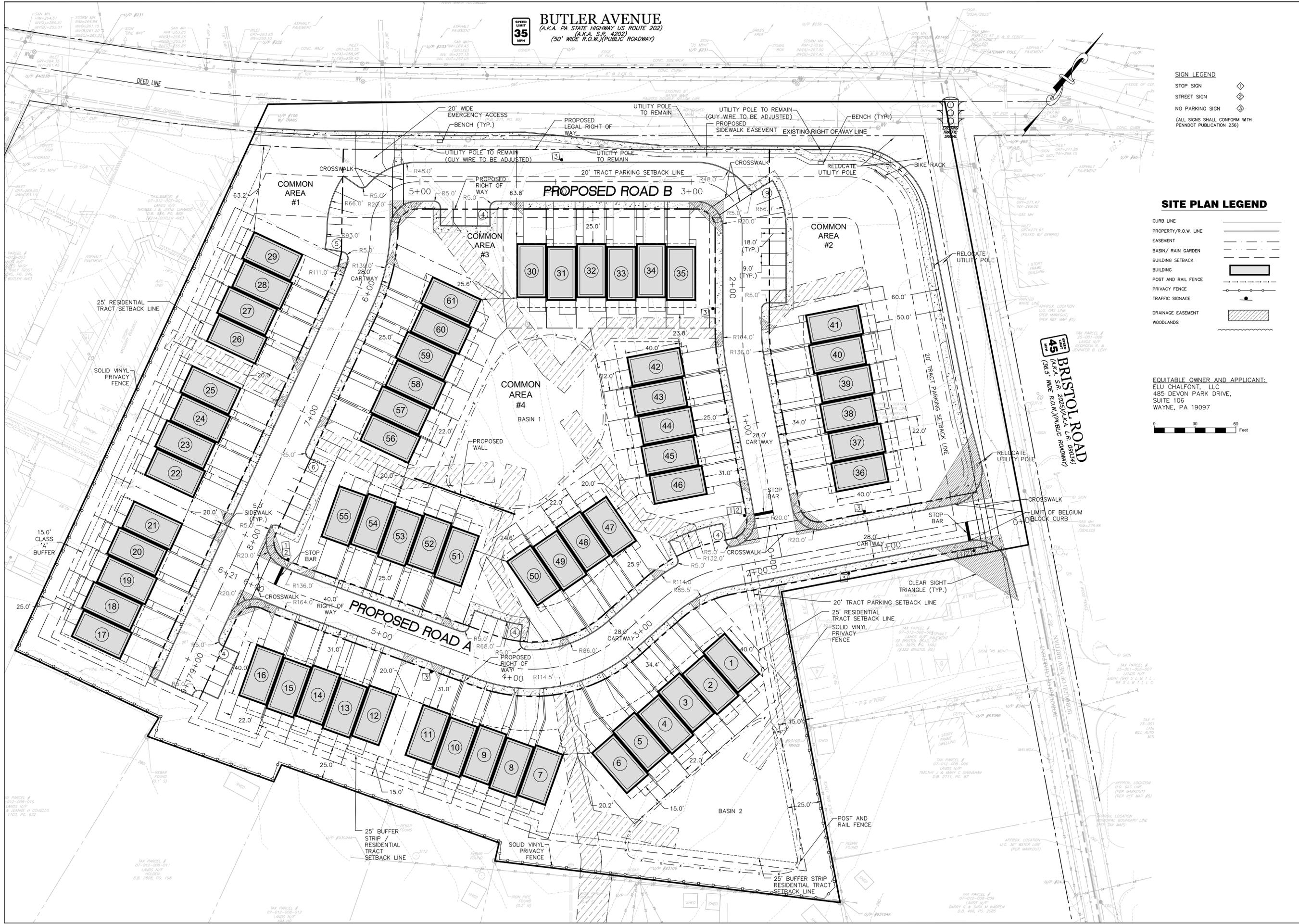
ROBERT T. CUNNINGHAM, P.E.
 PA Lic. No. PA076424

File No.
1377_C1.1.DWG

HCE Job 1377
 Date 11/15/2018
 Scale 1"=40'
 Designed RC
 Sheet 6 of 27

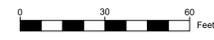
Drawing No.
C1.1

BUTLER AVENUE
 (A.K.A. PA STATE HIGHWAY US ROUTE 202)
 (A.K.A. S.R. 4202)
 (50' WIDE R.O.W.)(PUBLIC ROADWAY)



- SIGN LEGEND**
- STOP SIGN
 - STREET SIGN
 - NO PARKING SIGN
- (ALL SIGNS SHALL CONFORM WITH PENNDOT PUBLICATION 236)

- SITE PLAN LEGEND**
- CURB LINE
 - PROPERTY/R.O.W. LINE
 - EASEMENT
 - BASIN / RAIN GARDEN
 - BUILDING SETBACK
 - BUILDING
 - POST AND RAIL FENCE
 - PRIVACY FENCE
 - TRAFFIC SIGNAGE
 - DRAINAGE EASEMENT
 - WOODLANDS



EQUITABLE OWNER AND APPLICANT:
 ELU CHALFONT, LLC
 485 DEVON PARK DRIVE,
 SUITE 106
 WAYNE, PA 19097

BRISTOL ROAD
 (A.K.A. S.R. 2023)(A.K.A. L.P. 09034)
 (36.5' WIDE R.O.W.)(PUBLIC ROADWAY)

Holmes Cunningham LLC
 350 E. Butler Ave., Ste 106
 New Britain, PA 18901
 (215) 586-3330
 www.hcengineering.net

REVISIONS	Description	Date
5-10-19	REVISED PER ORDINANCE	
7-29-19	REVISED PER COMMENTS	

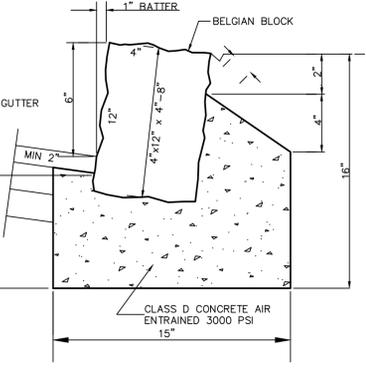
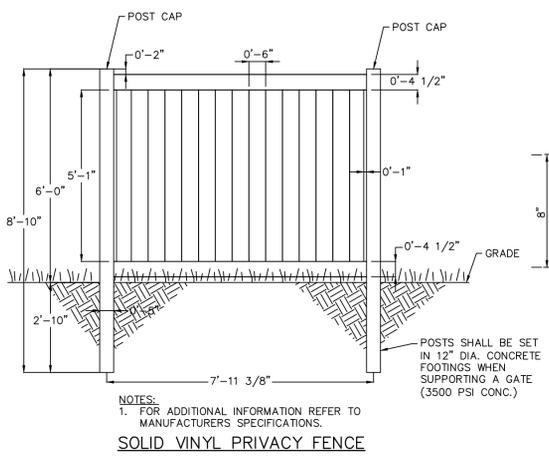
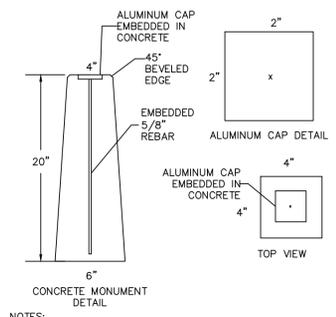
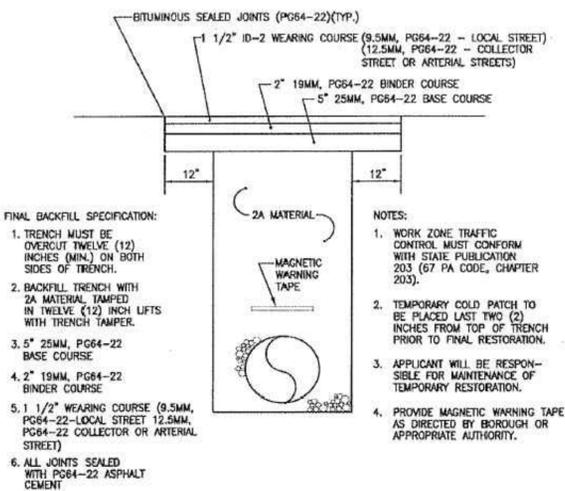
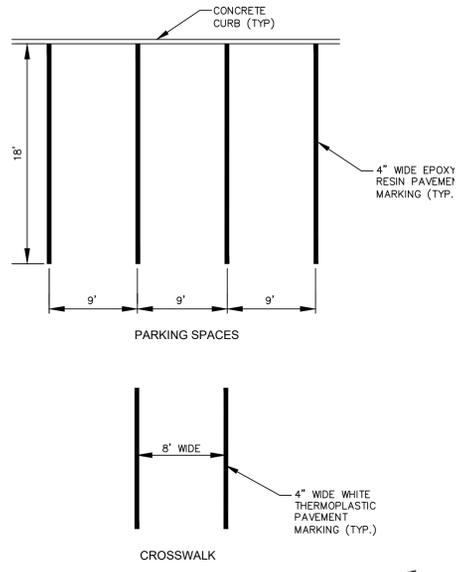
CHALFONT CROSSING
 TMP # 07-012-008, 07-012-008.001, 07-012-008-002,
 07-012-008-003, 07-012-008-005 & 07-012-008-007
 CHALFONT BOROUGH, BUCKS COUNTY, PENNSYLVANIA

DETAILED SITE PLAN

File No.
1377_C1.1.DWG

HCE Job	1377	RC
Date	11/15/2018	
Scale	1"=30'	
Designed		
Sheet	7	of 27

Drawing No.
C1.2



FINAL BACKFILL SPECIFICATION:

- TRENCH MUST BE OVERCUT TWELVE (12) INCHES (MIN.) ON BOTH SIDES OF TRENCH.
- BACKFILL TRENCH WITH 2A MATERIAL TAMPED IN TWELVE (12) INCH LIFTS WITH TRENCH TAMPER.
- 5" 25MM, PG64-22 BASE COURSE
- 2" 19MM, PG64-22 BINDER COURSE
- 1 1/2" WEARING COURSE (9.5MM, PG64-22-LOCAL STREET 12.5MM, PG64-22 COLLECTOR OR ARTERIAL STREET)
- ALL JOINTS SEALED WITH PG64-22 ASPHALT CEMENT

NOTES:

- WORK ZONE TRAFFIC CONTROL MUST CONFORM WITH STATE PUBLICATION 203 (67 PA CODE, CHAPTER 203).
- TEMPORARY COLD PATCH TO BE PLACED LAST TWO (2) INCHES FROM TOP OF TRENCH PRIOR TO FINAL RESTORATION.
- APPLICANT WILL BE RESPONSIBLE FOR MAINTENANCE OF TEMPORARY RESTORATION.
- PROVIDE MAGNETIC WARNING TAPE AS DIRECTED BY BOROUGH OR APPROPRIATE AUTHORITY.

NOTES:

- MONUMENTS TO BE SET FOR OUTBOUND PROPERTY LINE, ULTIMATE RIGHT-OF-WAYS, OPEN SPACE AND ONE SIDE OF EASEMENTS.
- PK NAILS SHALL BE USED IN PLACE OF MONUMENTS IN PAVED AREAS.

NOTES:

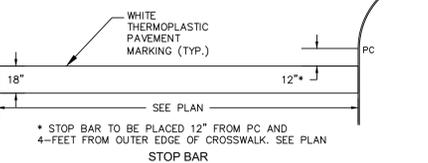
- FOR ADDITIONAL INFORMATION REFER TO MANUFACTURERS SPECIFICATIONS.

SOLID VINYL PRIVACY FENCE

NOTES:

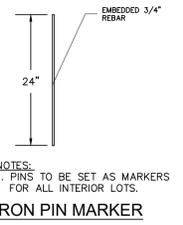
- ON TRANSITIONS FROM AND TO PROPOSED CURB, USE ONE LARGE BLOCK SLOPED AND CUT TO FIT.
- CURB IMMEDIATELY ADJACENT TO INLET CASTING MUST HAVE PREFORMED EXPANSION MATERIAL.
- CONCRETE JOINTS USE MORTAR WITH COMPOSITION - 3 SAND:1 CEMENT, JOINTS TO BE 1/2" WIDE.
- 6" BELGIAN BLOCK CURB TO BE USED FOR ALL ON-SITE RESIDENTIAL ROADS AND RETAIL ROADS.
- CONCRETE CURB TO BE USED IN PENNDOT LEGAL RIGHT-OF-WAY

Figure 8: Road Restoration



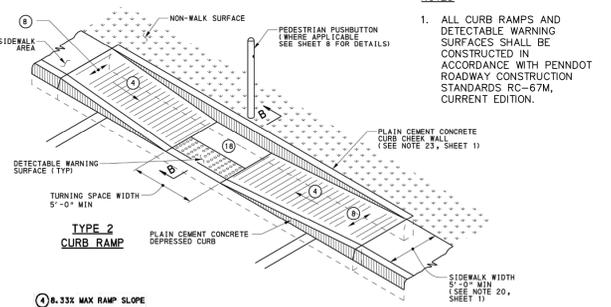
NOTES:

- CONTRACTOR TO INSTALL CROSSWALKS PER THE MANUAL ON UNIFORM TRAFFIC CONTROL STANDARDS (MUTCD), CURRENT EDITION WITH LATEST REVISIONS.
- ALL THERMOPLASTIC AND EPOXY RESIN PAVEMENT MARKINGS TO BE INSTALLED PER THE BOROUGH SPECIFICATIONS AND DESIGN STANDARDS.



NOTES:

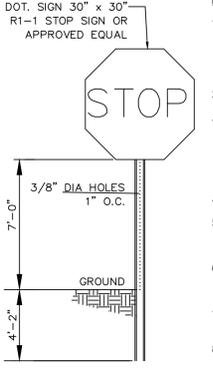
- PINS TO BE SET AS MARKERS FOR ALL INTERIOR LOTS.



NOTES:

- ALL CURB RAMP AND DETECTABLE WARNING SURFACES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE MANUAL ON ROADWAY CONSTRUCTION STANDARDS RC-67M, CURRENT EDITION.
- ALL CURB RAMP REQUIRE A TURNING SPACE WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SEE DETAILS FOR LOCATIONS AND DIMENSIONS.

CURB RAMP DETAIL



NOTES:

- ALL POSTS SHALL BE OF ADEQUATE LENGTH TO MEET THE REQUIREMENTS FOR ERECTION AS STATED IN THE CURRENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS".
- ALL POSTS SHALL BE EMBEDDED 4"-2" MINIMUM BELOW GRADE.
- ALL STEEL POSTS AND BRACKETS SHALL BE CUT, BENT, AND HOLES PUNCHED AND DRILLED BEFORE GALVANIZING. GALVANIZING SHALL BE IN CONFORMANCE WITH CURRENT A.S.T.M. SPECIFICATION A123-78 (OR LATEST REVISED).
- POSTS MAY BE STEEL, ALUMINUM, OR TWO-PIECE U-POST.
- SIGN PANEL SIZES SHALL DETERMINE POST TYPE AND NUMBERS AS SHOWN ON THIS DETAIL AND DIRECTIONAL SIGN SHEET.
- BOLTS SHALL NOT PROTRUDE MORE THAN 3/4" BEYOND THE NUT WHEN TIGHT BUT SHALL ENGAGE ALL THREADS IN THE NUT.
- ALL TRAFFIC AND PEDESTRIAN SIGNAGE SHALL BE MOUNTED ON A BREAKAWAY POST.
- ALL TRAFFIC AND PEDESTRIAN SIGNAGE AND LOCATION SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND ALL CURRENT AMENDMENTS.

STOP SIGN

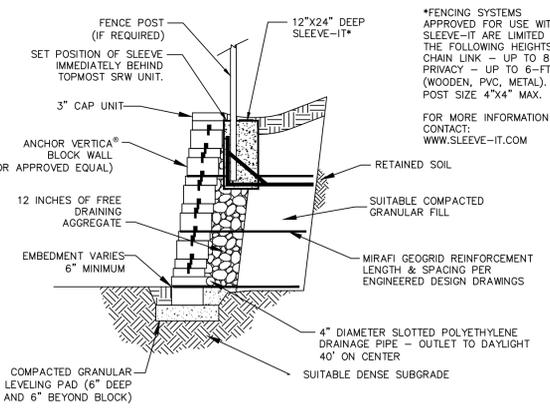


NO PARKING

NOTES:

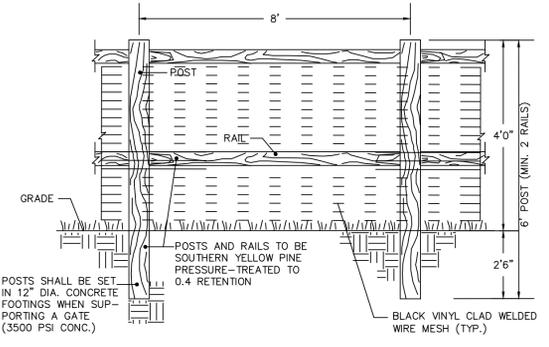
- ALL POSTS SHALL BE OF ADEQUATE LENGTH TO MEET THE REQUIREMENTS FOR ERECTION AS STATED IN THE CURRENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" WITH LATEST REVISIONS.
- ALL POSTS SHALL BE EMBEDDED 3"-0" MINIMUM BELOW GRADE.
- ALL STEEL POSTS AND BRACKETS SHALL BE CUT, BENT, AND HOLES PUNCHED AND DRILLED BEFORE GALVANIZING. GALVANIZING SHALL BE IN CONFORMANCE WITH CURRENT A.S.T.M. SPECIFICATION A123-78 (OR LATEST REVISED).
- POSTS MAY BE STEEL, ALUMINUM, OR TWO-PIECE U-POST.
- SIGN PANEL SIZES SHALL DETERMINE POST TYPE AND NUMBERS AS SHOWN ON THIS DETAIL AND DIRECTIONAL SIGN SHEET.
- BOLTS SHALL NOT PROTRUDE MORE THAN 3/4" BEYOND THE NUT WHEN TIGHT BUT SHALL ENGAGE ALL THREADS IN THE NUT.
- ALL TRAFFIC AND PEDESTRIAN SIGNAGE AND LOCATION SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION WITH LATEST REVISIONS.

SIGNS DETAIL



SHOP DRAWINGS AND CALCULATIONS SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER IN PENNSYLVANIA SHALL BE SUBMITTED AND APPROVED BY THE BOROUGH PRIOR TO WALL CONSTRUCTION.

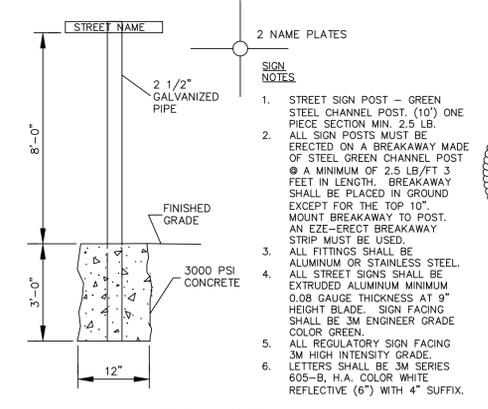
RETAINING WALL



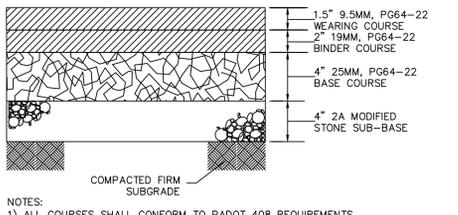
NOTES:

- POSTS AND RAILS TO BE SOUTHERN YELLOW PINE WOOD OR SUITABLE EQUIVALENT MATERIAL.
- POSTS AND RAILS TO BE PRESSURE TREATED TO 0.4 RETENTION

POST AND RAIL FENCE



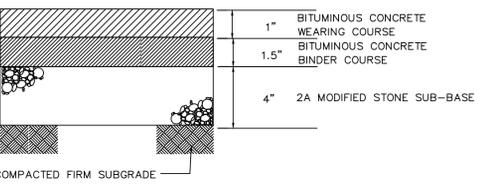
STREET SIGN



NOTES:

- ALL COURSES SHALL CONFORM TO PADOT 408 REQUIREMENTS
- PAVEMENT SECTION TO BE USED FOR ALL ON-SITE PAVING

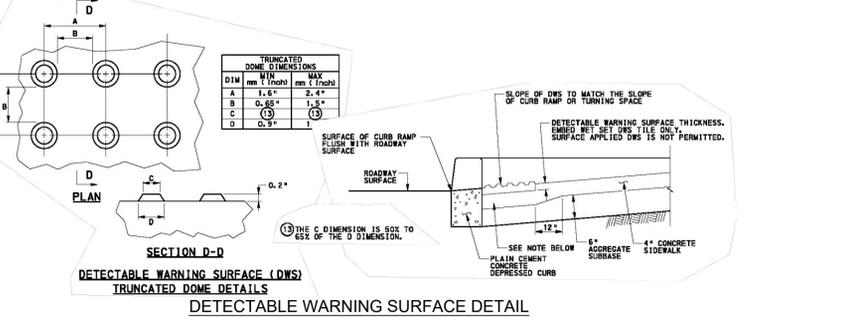
ROAD AND PARKING PAVEMENT SECTION



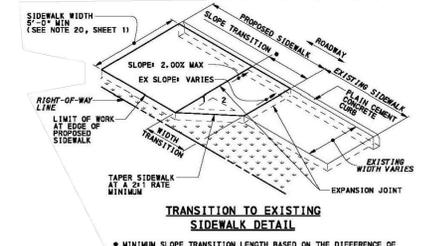
NOTES:

- ALL DRIVEWAYS MUST HAVE A 1.5" CURB REVEAL.
- CURB DEPRESSIONS SHALL BE 4" WIDER THAN THE DRIVEWAY.

DRIVEWAY PAVEMENT & EMERGENCY ACCESS SECTION



DETECTABLE WARNING SURFACE (DWS) TRUNCATED DOME DETAILS



NOTES:

- MINIMUM SLOPE TRANSITION LENGTH BASED ON THE DIFFERENCE OF PROPOSED SIDEWALK CROSS SLOPE AND EXISTING SIDEWALK CROSS SLOPE AT THE LOCATION OF THE IN. THIS MINIMUM LENGTH TO BE DETERMINED BY THE FOLLOWING FORMULA: $\Delta X \text{ SLOPE } X 0.5'$
- THE MINIMUM WIDTH TRANSITION SHALL BE CALCULATED USING THE CHANGE IN WIDTH X 2.
- DEPENDENT ON WHICH IS LONGEST EITHER THE SLOPE TRANSITION OR WIDTH TRANSITION WILL CONTROL THE LENGTH OF SIDEWALK TRANSITION.
- TRANSITION AREAS SERVE AS TEMPORARY CONNECTIONS OF THE PEDESTRIAN ACCESS ROUTE. FUTURE IMPROVEMENTS TO THE EXISTING SIDEWALK OR EXISTING SIDEWALK SHALL INCLUDE REMOVING THE TRANSITION AREA AND CONSTRUCTING A FULLY COMPLYING SIDEWALK.

TRANSITION TO EXISTING SIDEWALK DETAIL

Holmes Cunningham LLC
350 E. Butler Ave., Ste 106
New Britain, PA 18901
(215) 586-3330
www.hcengineering.net

REVISIONS	Description	Date
5-10-19	REVISED PER ORDINANCE	
7-29-19	REVISED PER COMMENTS	

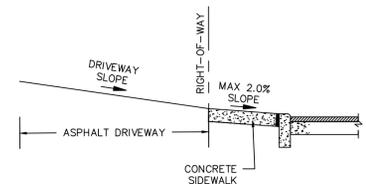
CHALFONT CROSSING
TMP # 07-012-008, 07-012-008.001, 07-012-008-002,
07-012-008-003, 07-012-008-005 & 07-012-008-007
CHALFONT BOROUGH, BUCKS COUNTY, PENNSYLVANIA

SITE DETAILS

File No.	1377_C1.1.DWG
HCE Job	1377
Date	11/15/2018
Scale	N.T.S.
Designed	RC
Sheet	8 of 27
Drawing No.	C1.3



BUTLER AVENUE
(A.K.A. PA STATE HIGHWAY US ROUTE 202)
(50' WIDE R.O.W.) (PUBLIC ROADWAY)



- NOTES:
- 1) THE MAXIMUM DRIVEWAY SLOPE IS 8.0%
 - 2) THE MAXIMUM SLOPE FROM THE RIGHT-OF-WAY TO THE DRIVEWAY APRON IS 2.0%
 - 3) THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH BOTH THE STOPPING AREA AND DRIVEWAY SLOPE REQUIREMENTS.

DRIVEWAY GRADING DETAIL

GRADING LEGEND

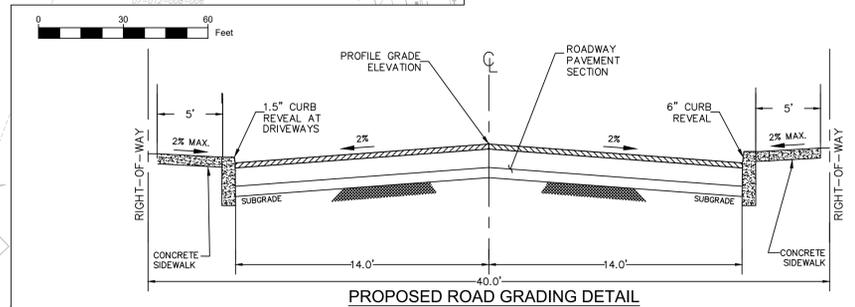
EXISTING CONTOUR	185
EXISTING SPOT ELEVATION	185.2 x
EXISTING TOP/BOTTOM CURB	x TC 154.75 BC 154.25
PROPOSED CONTOUR	185
PROPOSED SPOT ELEVATION	185.2 x
PROPOSED TOP/BOTTOM CURB	x TC 154.75 BC 154.25
SIDEWALK TO REMAIN	[Symbol]

GRADING NOTES

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS IN A MANNER WHICH WILL NOT NEGATIVELY AFFECT ANY EXISTING USERS OF THESE UTILITIES.
2. COMPACTION CRITERIA FOR FILL PLACEMENT IN THE FOLLOWING AREAS SHALL MEET OR EXCEED THE FOLLOWING MINIMUM PERCENTAGE OF THE MAXIMUM MODIFIED PROCTOR DRY DENSITY AS DETERMINED BY ASTM D-1557 USED ON REPRESENTATIVE SOIL SAMPLES, UNLESS MORE STRINGENT CRITERIA IS GIVEN ELSEWHERE:

FILL AREA	% OF MAX. DENSITY
BUILDING FOOTPRINT	95%
PAVEMENT AND ROADWAYS	95%
SIDEWALKS	95%
LANDSCAPE AREAS	93%
TRENCH BACKFILL	SAME AS SURROUNDING AREA
3. PROTECTED SUBGRADE FROM EXCESSIVE WHEEL LOADING DURING CONSTRUCTION INCLUDING CONCRETE TRUCKS AND DUMP TRUCKS.
4. REMOVE AREAS OF FINISHED SUBGRADE FOUND TO HAVE INSUFFICIENT COMPACTION DENSITY TO DEPTH NECESSARY AND REPLACE IN A MANNER THAT WILL COMPLY WITH THE COMPACTION REQUIREMENTS BY USE OF MATERIAL EQUAL TO OR BETTER THAN BEST SUBGRADE MATERIAL ON-SITE. SURFACE OF SUBGRADE AFTER COMPACTION SHALL BE HARD, UNIFORM, SMOOTH, STABLE AND TRUE TO GRADE AND CROSS SECTION.
5. ALL STRIPPED TOPSOIL SHOULD BE REUSED ON SITE TO THE GREATEST EXTENT POSSIBLE. HOWEVER, PRIOR TO REMOVAL OF TOPSOIL FROM THE SITE PERMISSION SHOULD BE OBTAINED FROM THE MUNICIPALITY.
6. THE MAXIMUM SLOPE IS THREE HORIZONTAL TO ONE VERTICAL (3H:1V). THE MINIMUM PERMITTED SLOPE IN LAWN AREAS IS 2% (50H:1V).
7. ALL GRADING SHALL BE A MINIMUM OF 5' FROM THE PROPERTY LINE.
8. THE MAXIMUM SLOPE ON ALL 5 FT X 5 FT PASSING AREAS SHALL BE 2% IN ALL DIRECTIONS.
9. THE SIDEWALK SHALL HAVE A CONTINUOUS GRADE ACROSS THE DRIVEWAYS AND NOT BE SLOPED TO ACCOMMODATE DRIVEWAYS. THE SIDEWALK SHALL HAVE A MAXIMUM CROSS SLOPE OF 2%.
10. TRANSITION FROM PROPOSED SIDEWALKS TO EXISTING SIDEWALKS TO REMAIN SHALL BE IN ACCORDANCE WITH PENNDOT PUBLICATION 72M RC-67 STANDARDS.

BRISTOL ROAD
(A.K.A. SR 2025) (A.K.A. LR 0094)
(76.5' WIDE R.O.W.) (PUBLIC ROADWAY)



Holmes Cunningham LLC
350 E. Butler Ave., Ste 106
New Britain, PA 18901
(215) 586-3330
www.hcengineering.net

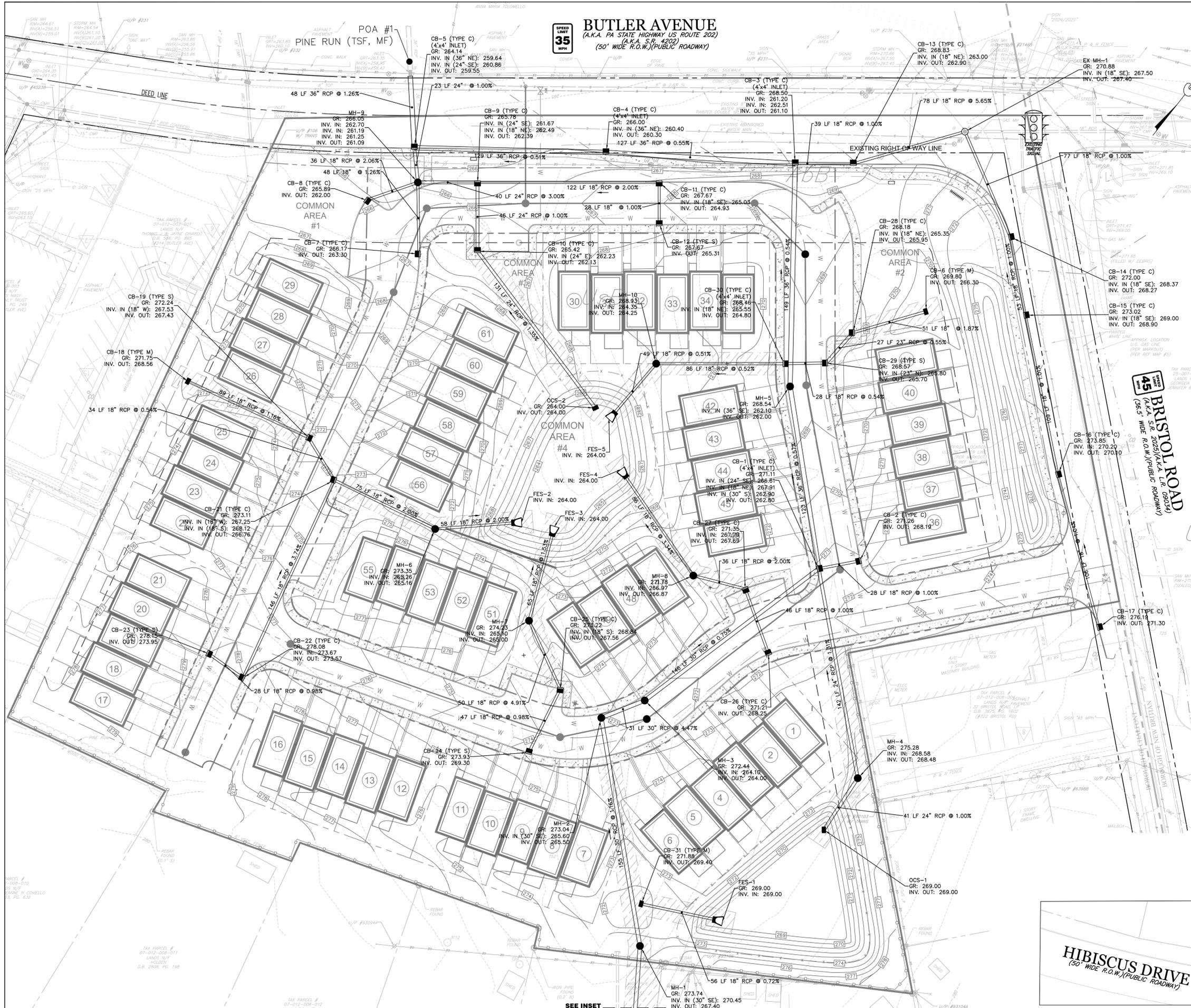
REVISIONS	Description	Date	REVISED PER ORDINANCE	REVISED PER COMMENTS
5-10-19				
7-29-19				

CHALFONT CROSSING
TMP # 07-012-008, 07-012-008.001, 07-012-008-002,
07-012-008-003, 07-012-008-005 & 07-012-008-007
CHALFONT BOROUGH, BUCKS COUNTY, PENNSYLVANIA

GRADING PLAN

Robert Cunningham, P.E.
PA Lic. No. PA076424

File No.	1377_C2.0.dwg		
HCE Job	1377	Scale	1"=30'
Date	11/15/2018	Designed	RC
Sheet	9 of 27		
Drawing No.	C2.0		



DRAINAGE LEGEND

EXISTING STORM PIPE:

EXISTING INLET:

EXISTING MANHOLE:

PROPOSED STORM PIPE:

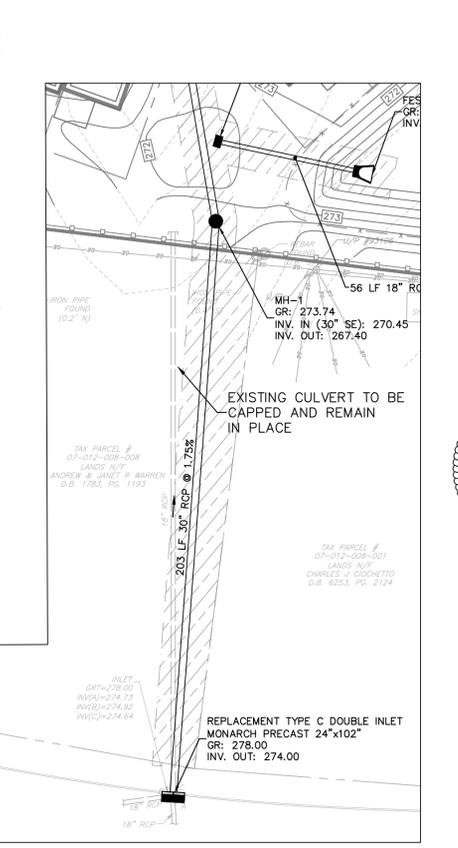
PROPOSED YARD INLET:

PROPOSED CURB INLET:

PROPOSED MANHOLE:

Scale: 0 30 60 Feet

- ### DRAINAGE NOTES
1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE EXISTING LOCATION AND/OR ELEVATION OF FEATURES AS SHOWN ON THESE PLANS IS BASED ON A SURVEY PREPARED BY BOUCHER & JAMES, INC. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
 2. ALL STORM SEWERS AND STRUCTURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH CHALFONT BOROUGH AND PENNSYLVANIA DEPARTMENT OF TRANSPORTATION (PENNDOT) STANDARDS.
 3. THE CONTRACTOR SHALL REVIEW THE STORM DRAINAGE CONNECTIONS TO INLETS, MANHOLES, ETC. AND PROVIDE THE APPROPRIATE BOX SIZE < MANHOLE SIZE, ETC. AS NECESSARY TO ACCOMMODATE THE PROPOSED INLET AND OUTLET PIPES.
 4. ALL CATCH BASINS AND INLETS ARE PROPOSED TO BE 2 FEET IN WIDTH AND 4 FEET IN LENGTH AS PER THE PLAN DETAILS UNLESS OTHERWISE SPECIFIED.
 5. CATCH BASIN GRATE ELEVATIONS WITHIN THE CARTWAY OF THE PROPOSED ROADS SHALL BE SUMPED 2-INCHES FROM THE PROPOSED ROAD ELEVATION AT THE GUTTER LINE. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE OWNER'S ENGINEER IN WRITING PRIOR TO CONSTRUCTION.
 6. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR REVIEW AND APPROVAL BY THE OWNER FOR BASIN PIPES, CONNECTIONS, OUTLET STRUCTURES, CATCH BASINS, MANHOLES AND OTHER STORM STRUCTURES.
 7. DOWNSPOUTS AND SUMP PUMPS SHALL NOT DISCHARGE STORMWATER DIRECTLY ONTO A SIDEWALK OR STREET.
 8. ALL STORMWATER AND DRAINAGE FACILITIES ARE A PERMANENT PART OF THE DEVELOPMENT AND SHALL NOT BE REMOVED, ALTERED, OR MODIFIED WITHOUT PRIOR APPROVAL FROM CHALFONT BOROUGH.
 9. CHALFONT BOROUGH SHALL HAVE THE RIGHT TO ENTER PRIVATE PROPERTY TO INSPECT AND REPAIR, IF NECESSARY, ANY STORMWATER MANAGEMENT OR DRAINAGE FACILITY.
 10. THE STORMWATER MANAGEMENT BASINS WILL BE OWNED AND MAINTAINED BY THE HOMEOWNER'S ASSOCIATION.
 11. ALL STORM PIPES LOCATED OUTSIDE OF PAVED AREAS SHALL HAVE A MINIMUM OF TWO (2) FEET OF COVER.
 12. STORM INLETS AND PIPE WITHIN BUTLER AVENUE AND BRISTOL ROAD WILL BE OWNED AND MAINTAINED BY CHALFONT BOROUGH.



Holmes Cunningham LLC
350 E. Butler Ave., Ste 106
New Britain, PA 18901
(215) 586-3330
www.hcengineering.net

REVISIONS	Description	Date
5-10-19 <td>REVISED PER ORDINANCE <td>5-10-19</td> </td>	REVISED PER ORDINANCE <td>5-10-19</td>	5-10-19
7-29-19 <td>REVISED PER COMMENTS <td>7-29-19</td> </td>	REVISED PER COMMENTS <td>7-29-19</td>	7-29-19

CHALFONT CROSSING
TMP # 07-012-008, 07-012-008.001, 07-012-008.002,
07-012-008.003, 07-012-008.005 & 07-012-008.007
CHALFONT BOROUGH, BUCKS COUNTY, PENNSYLVANIA

DRAINAGE PLAN

Robert F. Cunningham, P.E.
PA Lic. No. PA076424

File No. 1377_C3.0.dwg

HCE Job	1377	Date	11/15/2018	Scale	1"=30'	Designed	RC	Sheet	10 of 27
---------	------	------	------------	-------	--------	----------	----	-------	----------

Drawing No. **C3.0**



BUTLER AVENUE
 (A.K.A. PA STATE HIGHWAY US ROUTE 202)
 (A.K.A. S.R. 4202)
 (50' WIDE R.O.W./PUBLIC ROADWAY)

- UTILITY NOTES**
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS IN A MANNER WHICH WILL NOT NEGATIVELY AFFECT ANY EXISTING USERS OF THESE UTILITIES.
 - CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ACTUAL LOCATIONS OF ALL UTILITY ENTRANCES TO INCLUDE SANITARY SEWER, ELECTRICAL, TELEPHONE AND GAS SERVICE. CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO AVOID CONFLICTS AND ASSURE PROPER DEPTHS ARE ACHIEVED AS WELL AS COORDINATING WITH THE REGULATORY AGENCY AS TO LOCATION AND SCHEDULING OF CONNECTIONS TO THEIR FACILITIES.
 - ANY EXISTING FEATURES DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THE OWNER AT NO COST TO THE BOROUGH.
 - THE PROPOSED DEVELOPMENT WILL INCLUDE THE CONNECTION OF 61 SINGLE FAMILY DWELLINGS TO THE PROPOSED WATER AND SEWER MAINS LOCATED ON-SITE.
 - THE CONTRACTOR IS RESPONSIBLE FOR LOCATING THE EXISTING UTILITY SERVICE (WATER, SEWER, GAS AND ELECTRIC) TO THE PROPERTY AND ENSURE THAT THEY ARE PROPERLY DISCONNECTED FROM THE EXISTING UTILITIES AND RECONNECTED TO THE NEW SERVICES PROVIDED.
 - THE LOCATION OF THE EXISTING GAS MAINS ARE APPROXIMATE. THE CONTRACTOR SHOULD CONSULT LOCAL UTILITY COMPANIES FOR ADDITIONAL INFORMATION.
 - THE LOCATION OF EXISTING ELECTRIC LINES ARE APPROXIMATE. THE CONTRACTOR SHOULD CONSULT LOCAL UTILITY COMPANIES FOR ADDITIONAL INFORMATION.
 - ALL GAS WORK AND OTHER ASSOCIATED APPURTENANCES WILL BE IN CONFORMANCE WITH APPLICABLE LOCAL COUNTY, STATE AND FEDERAL GUIDELINES AND REQUIREMENTS.
 - ALL ELECTRICAL WORK, TRANSFORMER PADS, AND ASSOCIATED APPURTENANCES WILL BE IN CONFORMANCE WITH APPLICABLE LOCAL COUNTY, STATE AND FEDERAL GUIDELINES AND REQUIREMENTS. MIN. DEPTH OF COVER OVER ELECTRIC, GAS, AND CABLE SHALL BE 2 FT.
 - THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING CONDITIONS, UTILITY LOCATIONS, CATHODIC PROTECTION AND INVERTS PRIOR TO CONSTRUCTION. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ANY DISRUPTIONS TO EXISTING UTILITIES SERVICES. ANY CONDITIONS FOUND TO DIFFER FROM THOSE SHOWN BY THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER.
 - THE CONTRACTOR SHALL COORDINATE THE SANITARY SEWER WORK WITH THE CHALFONT NEW BRITAIN SEWER AUTHORITY.
 - EIGHTEEN (18) INCHES VERTICAL CLEARANCE SHOULD BE PROVIDED AT ALL UTILITY CROSSINGS. WHERE THIS CLEARANCE CANNOT BE MAINTAINED, THE WATER MAIN MUST BE ENCASED IN CONCRETE 10 FEET EACH SIDE OF THE CROSSING. IN CASES WHERE THE UTILITY IS A SANITARY OR STORM SEWER MAIN OR A LATERAL AND THE CLEARANCE CANNOT BE MAINTAINED, THEN THE SEWER AND/OR STORM SHALL ALSO BE ENCASED IN CONCRETE.
 - ALL WATER MAINS ARE TO HAVE A MINIMUM COVER OF 4 FEET FROM THE TOP OF THE PIPE TO THE PROPOSED SURFACE ELEVATION.
 - PROVIDE A MINIMUM HORIZONTAL CLEARANCE OF 10 FT BETWEEN SANITARY SEWER MAINS AND WATER MAINS. PROVIDE A 5 FT MINIMUM HORIZONTAL CLEARANCE BETWEEN SANITARY SEWER MAINS AND ALL OTHER UTILITIES.
 - ALL PROPOSED WATER MAINS SHALL BE DUCTILE IRON PIPE, CLASS 52, BITUMINOUS COATED DOUBLE CEMENT MORTAR LINED. ALL PROPOSED WATER LATERALS SHALL BE TYPE K SOFT COPPER CONFORMING TO ASTM B-88 STANDARDS.
 - THE WATER PIPELINE IS TO BE OFFERED FOR DEDICATION TO AQUA.
 - ALL WATER MAIN FITTINGS AND VALVES SHALL BE MECHANICAL JOINT (RESTRAINED) AND THE FITTINGS SHALL BE PROVIDED WITH THRUST BLOCKING. REFER TO DRAWING C4.2 FOR THRUST BLOCK DETAILS AND FITTING SCHEDULES.
 - PROPOSED 8" WATER MAIN SHALL BE WET-TAP CONNECTED TO EXISTING WATER MAIN IN BUTLER AVENUE AND BRISTOL ROAD RIGHT-OF-WAY.
 - ALL FIRE HYDRANTS AND VALVES SHALL OPEN RIGHT (CLOCKWISE).
 - THE HOMEOWNERS ASSOCIATION IS RESPONSIBLE FOR REPLACEMENT OF LANDSCAPING SHOULD DISTURBANCE BE REQUIRED FOR UTILITY REPAIRS.
 - THE CONTRACTOR MUST CONTACT AQUA ONE WEEK PRIOR TO WATER MAIN CONSTRUCTION, AND 72 HOURS PRIOR TO EXCAVATION NEAR AND CONNECTION TO EXISTING WATER MAIN.
 - ALL WATER CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH AQUA SPECIFICATIONS.
 - EACH WATER CUSTOMER SHOULD HAVE A METER WITH BACKFLOW PREVENTER INSTALLED IN THE HOUSE WITH A REMOTE METER RADIO PAD ON THE OUTSIDE WALL.
 - THE CHALFONT NEW BRITAIN SEWER AUTHORITY IS TO BE CONTACTED ONE WEEK PRIOR TO SANITARY SEWER CONSTRUCTION, AND 72 HOURS PRIOR TO EXCAVATING NEAR OR CONNECTING INTO ANY EXISTING SEWER FACILITIES.
 - ALL SANITARY SEWER FACILITIES SHOULD BE CONSTRUCTED IN ACCORDANCE WITH THE CHALFONT NEW BRITAIN SEWER AUTHORITY SPECIFICATIONS.
 - 18 INCHES OF VERTICAL CLEARANCE OR 10 FEET OF HORIZONTAL CLEARANCE SHALL BE PROVIDED BETWEEN THE SANITARY SEWER AND ALL OTHER UTILITIES. OTHERWISE, CONCRETE ENCASEMENT OF THE SANITARY SEWER SHALL BE PROVIDED.
 - THERE SHALL NOT BE BUILT, INSTALLED, CONSTRUCTED, PLANTED OR LOCATED ANY TEMPORARY OR PERMANENT BUILDINGS OR STRUCTURES INCLUDING INFILTRATION BASINS, OR ANY TREES, SHRUBS, OR OTHER LANDSCAPING WITHIN 10 FEET OF SANITARY SEWER FACILITIES, EXCEPT TREES, SHRUBS, AND OTHER LANDSCAPING WHICH WILL NOT GROW TO MORE THAN 6 FEET IN HEIGHT.

BRISTOL ROAD
 (A.K.A. S.R. 2025/A.K.A. L.R. 60034)
 (56' WIDE R.O.W./PUBLIC ROADWAY)

Holmes Cunniff LLC
 350 E. Butler Ave., Ste 106
 New Britain, PA 18901
 (215) 586-3330
 www.hcengineering.net

REVISIONS	Description	Date
5-10-19	REVISED PER ORDINANCE	5-10-19
7-29-19	REVISED PER COMMENTS	7-29-19

CALL BEFORE YOU DIG!!
 800-4-A-SHIELD
 1-800-4-A-SHIELD
 1-800-4-A-SHIELD
 1-800-4-A-SHIELD

CHALFONT CROSSING
 TMP # 07-012-008, 07-012-008.001, 07-012-008.002,
 07-012-008.003, 07-012-008.005 & 07-012-008.007
 CHALFONT BOROUGH, BUCKS COUNTY, PENNSYLVANIA

UTILITY PLAN

File No.
 1377_C4.0.dwg

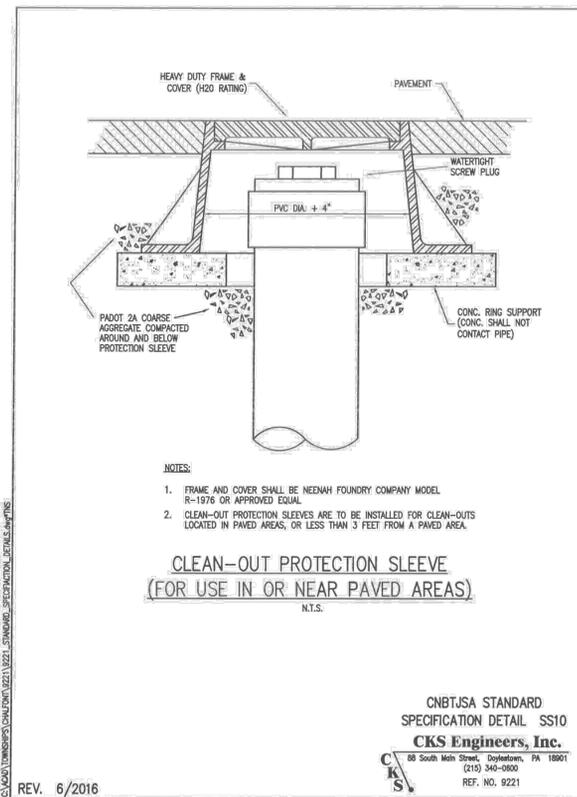
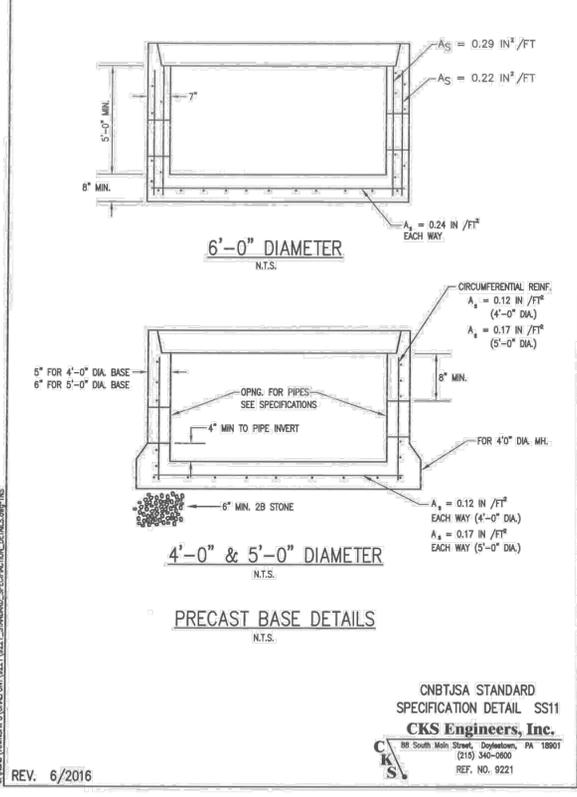
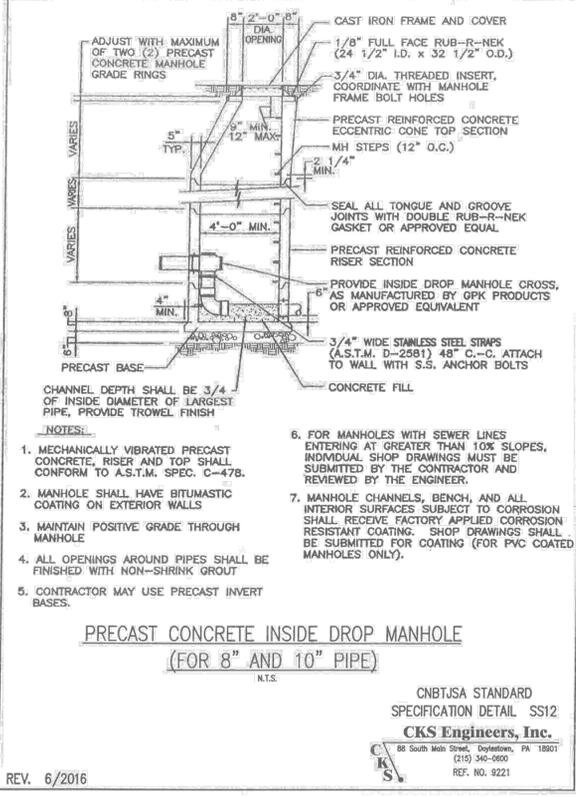
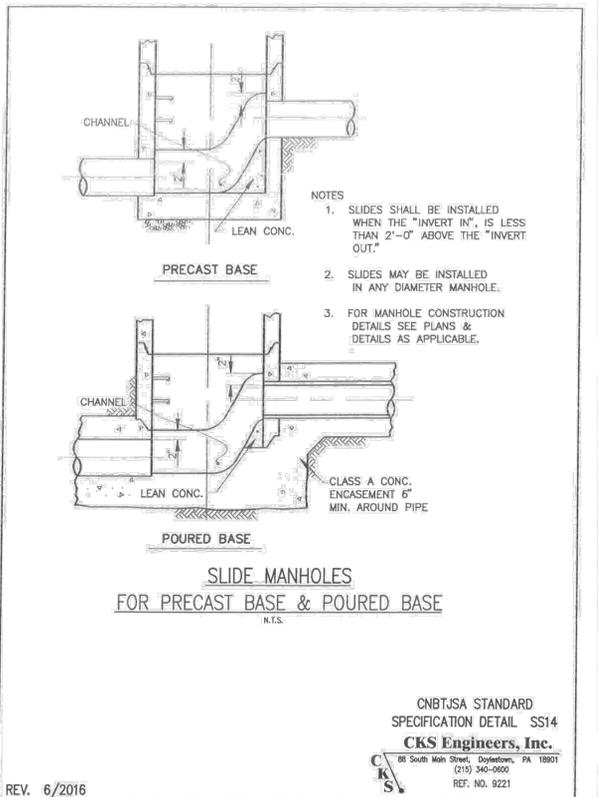
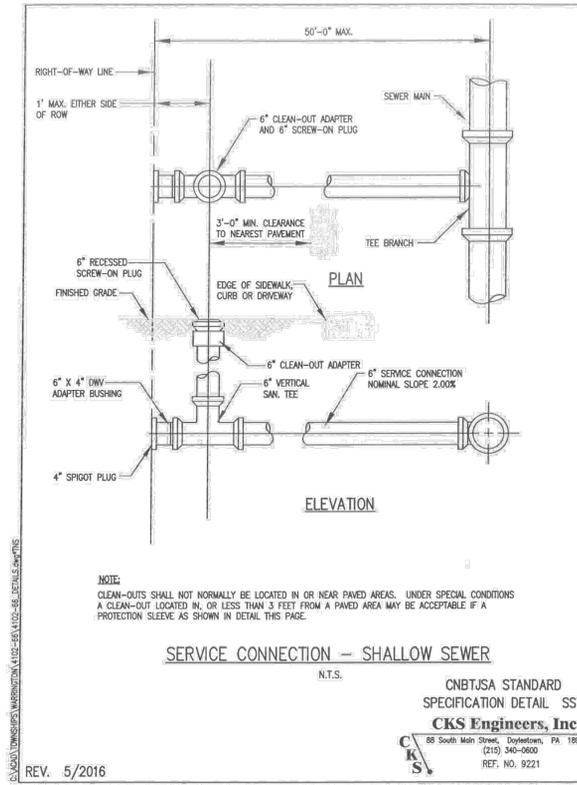
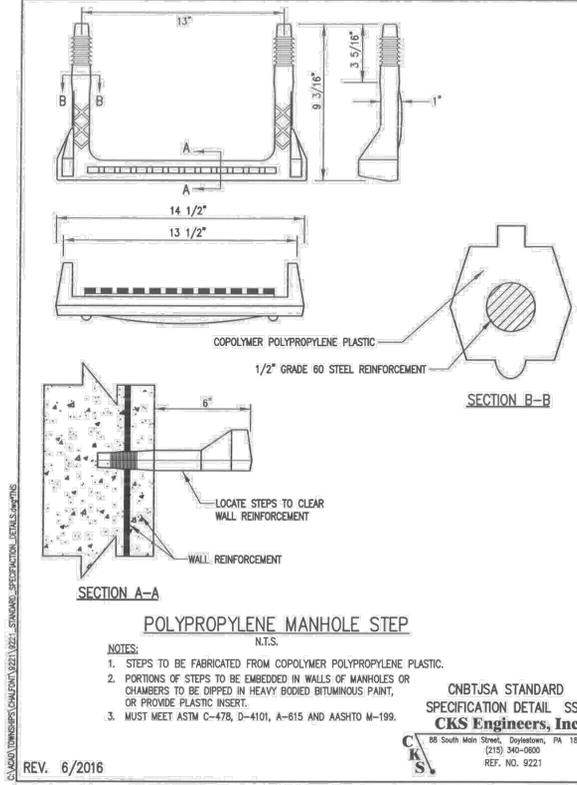
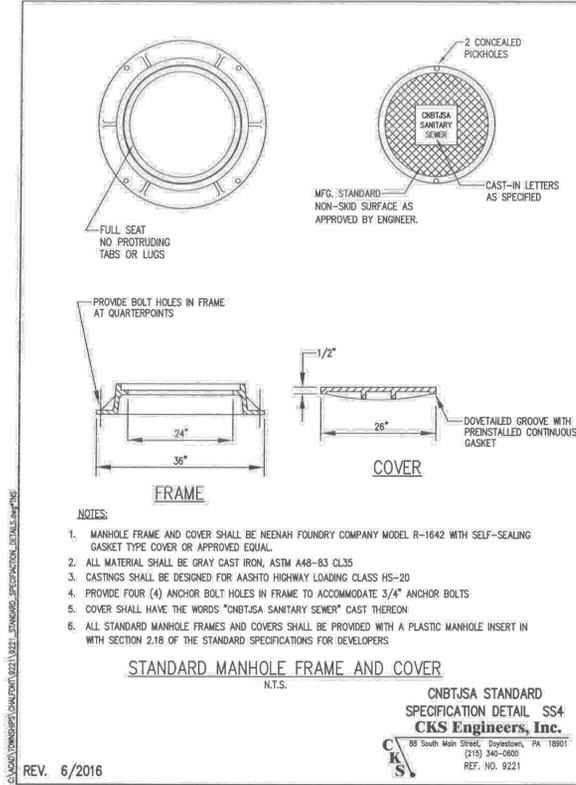
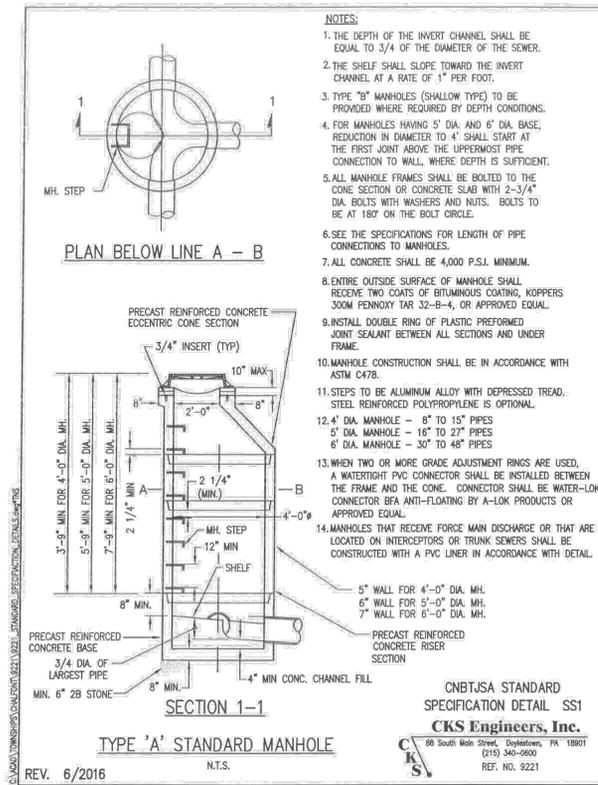
HCE Job 1377
 Date 11/15/2018
 Scale 1"=30'
 Designed RC
 Sheet 12 of 27

Drawing No.
C4.0

UTILITY LEGEND

EXISTING SANITARY SEWER MAIN	— S —
EXISTING SANITARY SEWER MANHOLE	● SAN MH 156 INV 180.00
EXISTING WATER MAIN AND VALVE	— W —
EXISTING FIRE HYDRANT	— F —
PROPOSED SANITARY SEWER MAIN	— S —
PROPOSED SANITARY SEWER MANHOLE	●
PROPOSED WATER MAIN	— W —
PROPOSED WATER VALVE	⊗
PROPOSED FIRE HYDRANT	— F —
PROPOSED SANITARY SERVICE LATERAL	— S —
PROPOSED WATER SERVICE LATERAL	— W —
PROPOSED TELEPHONE, ELECTRIC, & CABLE	— T&E —

Robert C. Cunniff, P.E.
 PA Lic. No. FA0716424



Holmes Cunnigham LLC
350 E. Butler Ave., Ste 106
New Britain, PA 18901
(215) 586-3330
www.hcengineering.net

ENGINEERING

REVISIONS	Description	Date
5-10-19	REVISED PER ORDINANCE	
7-29-19	REVISED PER COMMENTS	

CALL BEFORE YOU DIG IT
PENNSYLVANIA UNIFORM
CONSTRUCTION PRACTICES
AND STANDARDS
- 310 & 311 -
Call System, Inc.
1-800-942-1978

UTILITY LOCATIONS AS SHOWN ON THIS DRAWING ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL CONTACT UTILITY COMPANIES PRIOR TO ANY EXCAVATION.

CHALFONT CROSSING
TMP # 07-012-008, 07-012-008.001, 07-012-008-002,
07-012-008-003, 07-012-008-005 & 07-012-008-007
CHALFONT BOROUGH, BUCKS COUNTY, PENNSYLVANIA

UTILITY CONSTRUCTION DETAILS

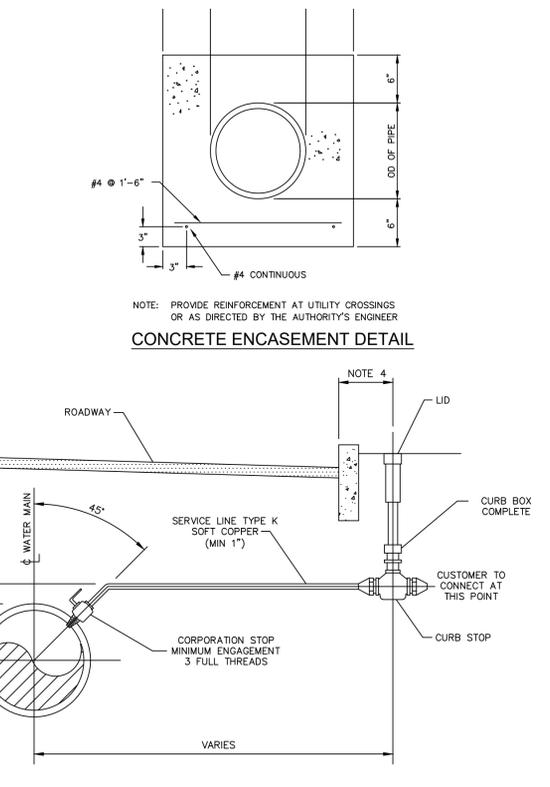
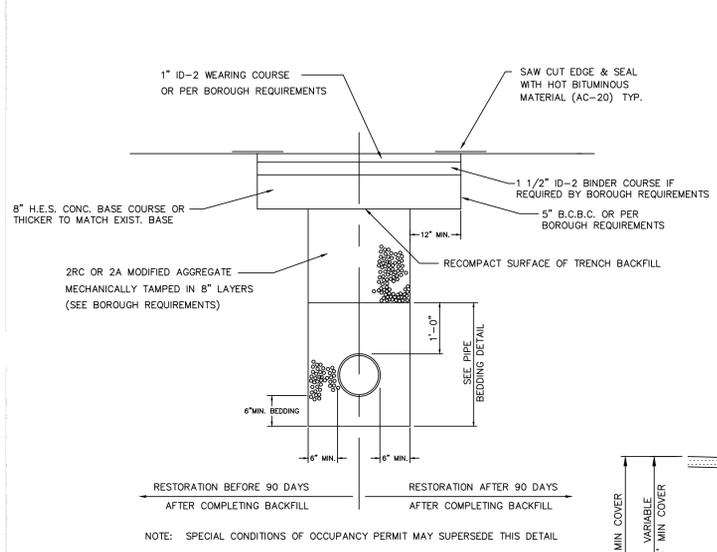
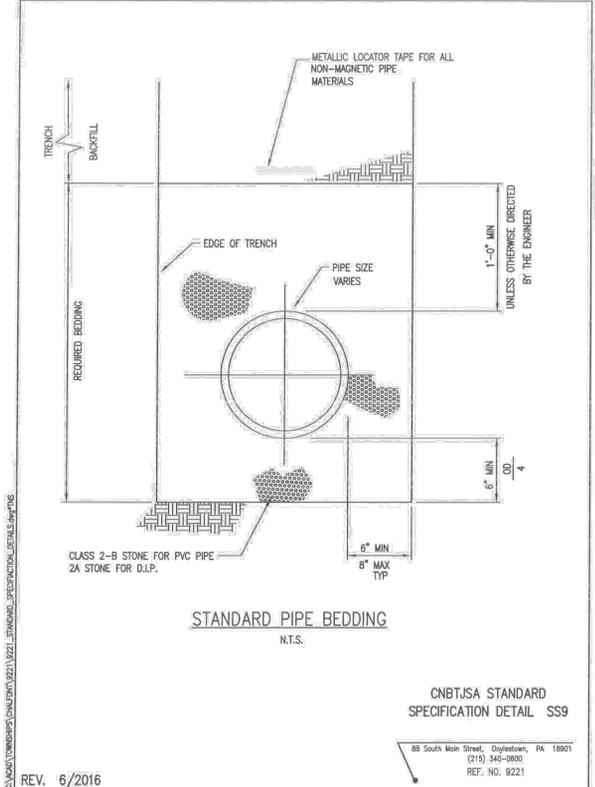
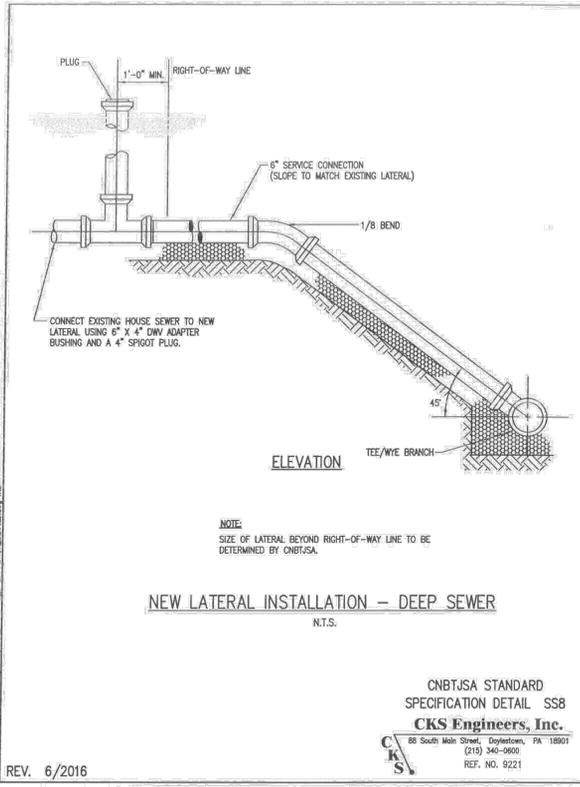
Robert C. Cunningham, P.E.
PA Lic. No. PA076424

File No. 1377_C4.0.dwg

HCE Job	1377	Scale	N.T.S.	Designed	RC	Sheet	13 of 27
---------	------	-------	--------	----------	----	-------	----------

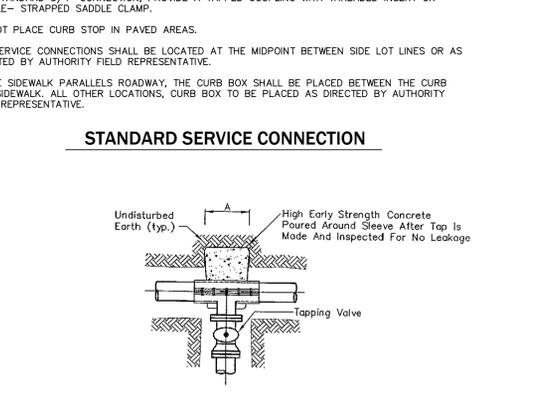
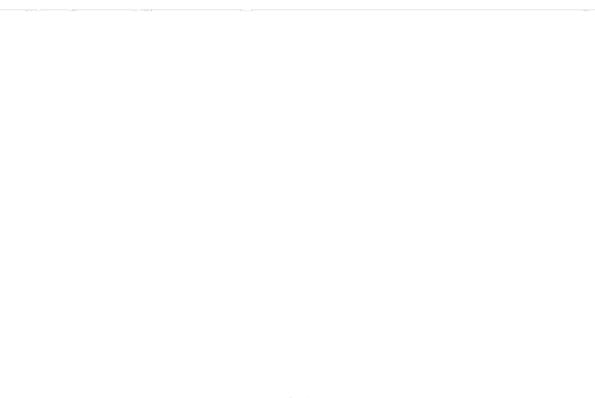
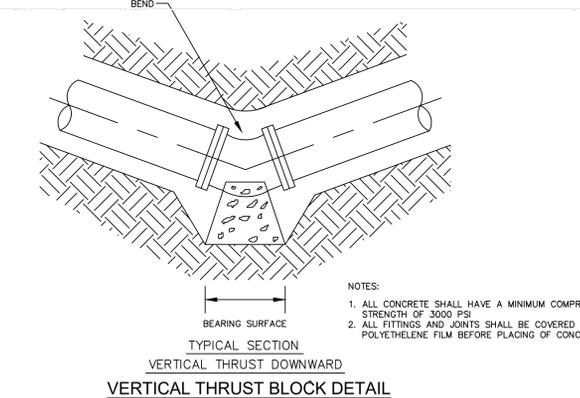
Date 11/15/2018

Drawing No. **C4.1**



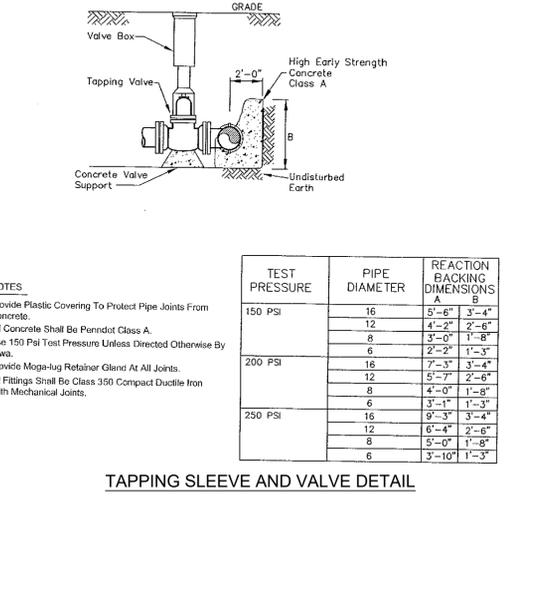
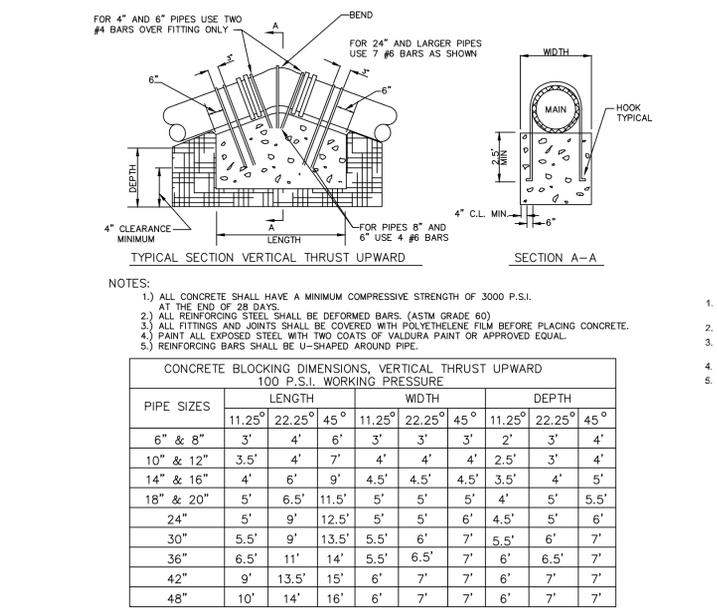
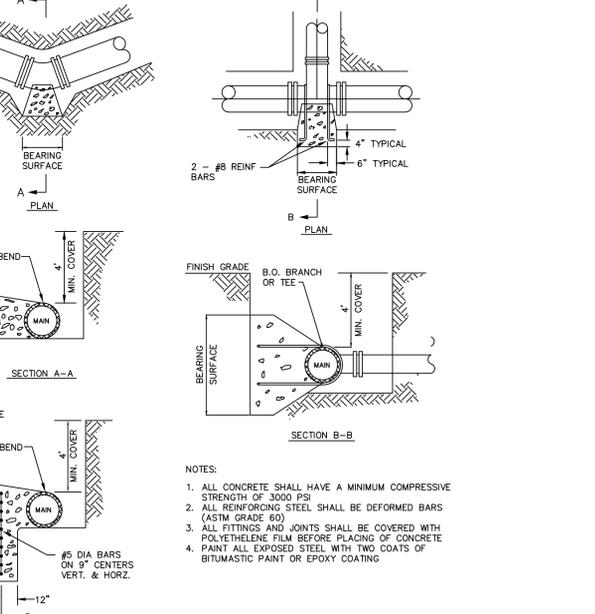
CNBTJSA STANDARD SPECIFICATION DETAIL SS8
CKS Engineers, Inc.
88 South Main Street, Doylestown, PA 18041
(215) 340-0900
REF. NO. 9221

CNBTJSA STANDARD SPECIFICATION DETAIL SS9
88 South Main Street, Doylestown, PA 18041
(215) 340-0900
REF. NO. 9221



Size depends on DIP & PVC Pipe

AND ALLOWABLE LOADS	30°				36°				42°				48°			
	D.E.															
SAND 0.75 TON/SQ.FT.	3.4	6.0	11.0	6.4	6.7	12.8	23.4	14.2	14.8	28.8	52.9	34.4	28.1	48.3	89.7	64.0
SOFT CLAY 1 TON/SQ.FT.	2.6	4.6	8.2	4.8	5.0	9.6	17.5	10.7	11.2	21.7	39.7	28.2	19.6	36.3	67.3	48.0
SAND AND GRAVEL 2 TON/SQ.FT.	1.3	2.3	4.1	2.4	2.5	4.8	8.8	5.3	5.6	10.8	20.0	14.1	9.8	13.1	23.6	24.0
CLAY 4 TON/SQ.FT.	1.0	1.2	2.1	1.3	1.3	2.4	4.4	2.7	2.8	5.4	10.0	7.2	4.9	9.1	16.8	12.0
SOFT ROCK 5 TON/SQ.FT.	1.0	1.0	1.6	1.0	1.0	1.9	3.5	2.2	1.6	4.4	8.0	5.7	3.9	7.3	13.5	9.6
ROCK 15 TON/SQ.FT.	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0



THRUST BLOCK BEARING SURFACE AREA DETAIL

HORIZONTAL THRUST BLOCK DETAIL

UPWARD THRUST BLOCK DETAIL

TAPPING SLEEVE AND VALVE DETAIL

Holmes Cunningham LLC
350 E. Butler Ave., Ste 106
New Britain, PA 18901
(215) 586-3330
www.hcengineering.net

HC ENGINEERING

REVISIONS	Description	Date
5-10-19	REVISED PER ORDINANCE	
7-29-19	REVISED PER COMMENTS	

CALL BEFORE YOU DIG!!
THIS DRAWING HAS NOT BEEN REVISION STRAIGHT TO CONSTRUCTION PHASE AND IS NOT TO BE USED FOR STOP & CALL WORKING DRAWINGS.
Pennsylvania One Call System, Inc.
1-800-942-1978

UTILITY LOCATIONS AS SHOWN ON THIS DRAWING ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO ANY EXCAVATION.

CHALFONT CROSSING
TMP # 07-012-008, 07-012-008.001, 07-012-008-002, 07-012-008-003, 07-012-008-005 & 07-012-008-007
CHALFONT BOROUGH, BUCKS COUNTY, PENNSYLVANIA

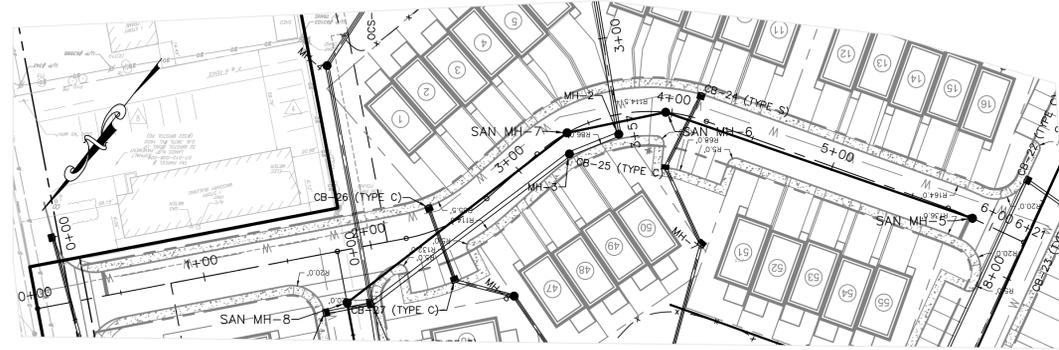
UTILITY CONSTRUCTION DETAILS

Robert Cunningham, P.E.
PA Lic. No. PA076424

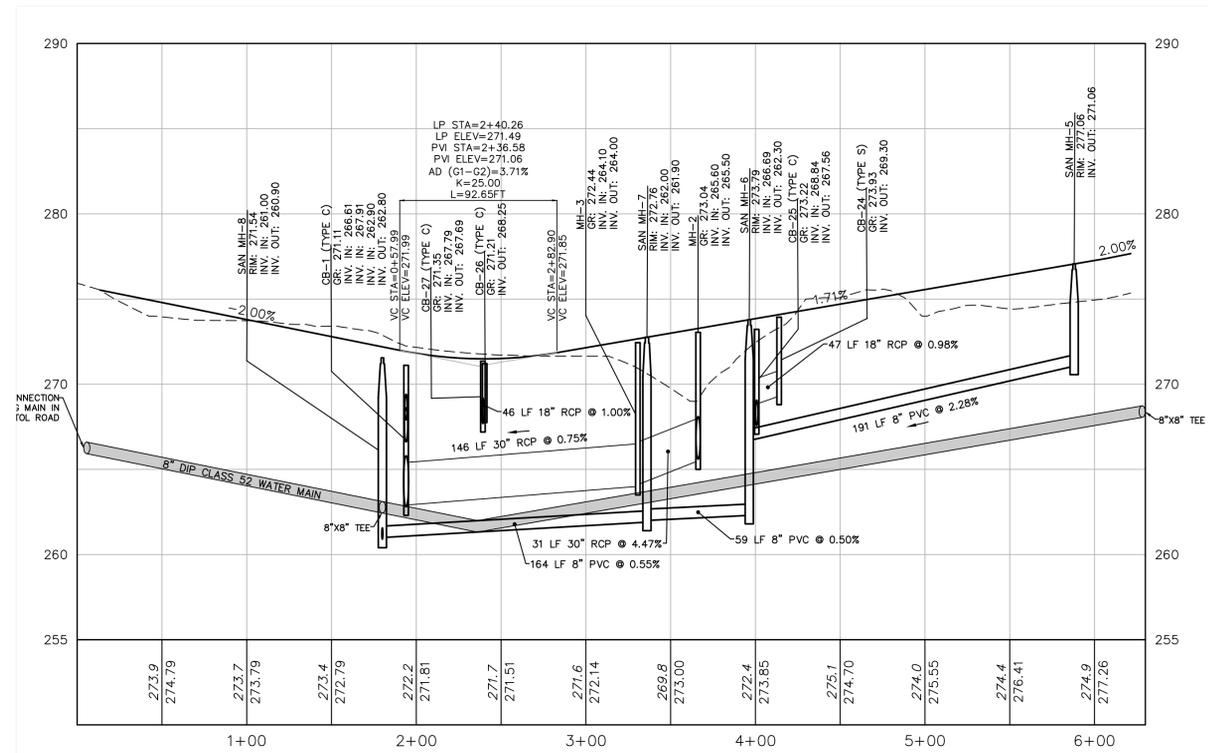
File No. 1377_C4.0.dwg

HCE Job 1377
Date 11/15/2018
Scale N.T.S.
Designed RC
Sheet 14 of 27

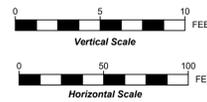
Drawing No. **C4.2**



PROPOSED ROAD 'A' PLAN VIEW



PROPOSED ROAD 'A' PROFILE



STANDARD = PROPOSED PROFILE ELEVATION
 ITALICIZED = EXISTING PROFILE ELEVATION

REVISIONS	Date	Description
	5-10-19	REVISED PER ORDINANCE
	7-29-19	REVISED PER COMMENTS

CALL BEFORE YOU DIG!!
 PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
 CONSTRUCTION PHASE AND
 MAINTENANCE PHASE NOTICES
 TO WORKING DAYS NOTICE
 -- STOP & CALL --
 Pennsylvania One
 Call System, Inc.
 1-800-942-1776

UTILITY LOCATIONS AS SHOWN ON THIS DRAWING ARE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS AND CONTACT UTILITY COMPANIES PRIOR TO ANY EXCAVATION.

CHALFONT CROSSING
 TMP # 07-012-008, 07-012-008.001, 07-012-008-002,
 07-012-008-003, 07-012-008-005 & 07-012-008-007
 CHALFONT BOROUGH, BUCKS COUNTY, PENNSYLVANIA

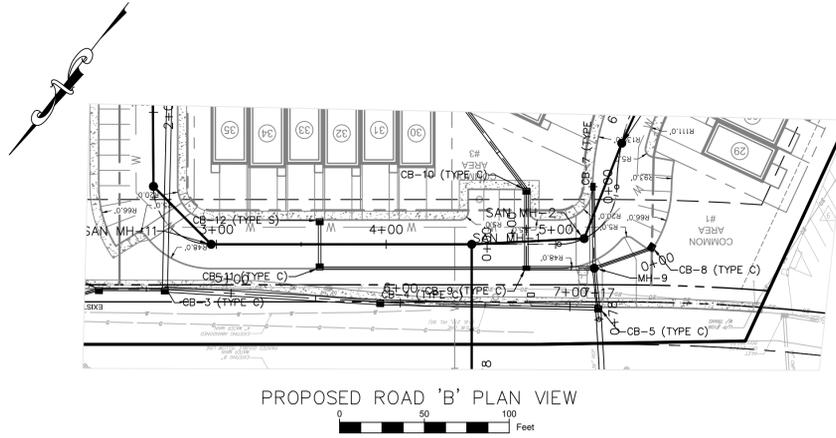
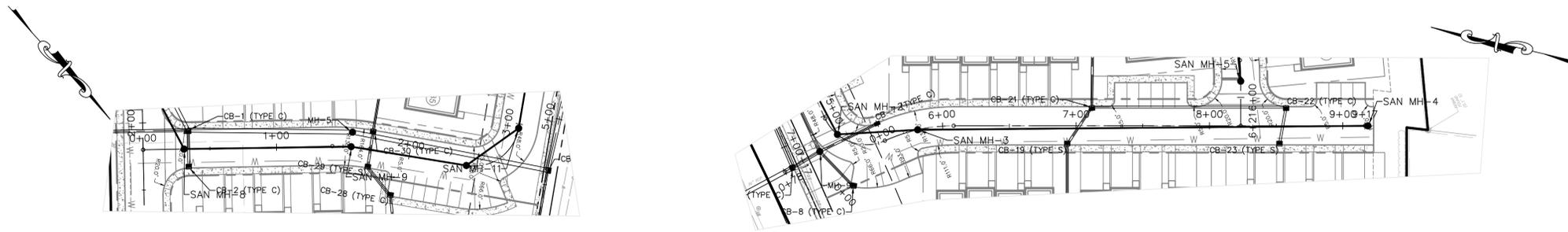
ROADWAY PLAN AND PROFILE

Robert R. Cunningham, P.E.
 PA Lic. No. PA076424

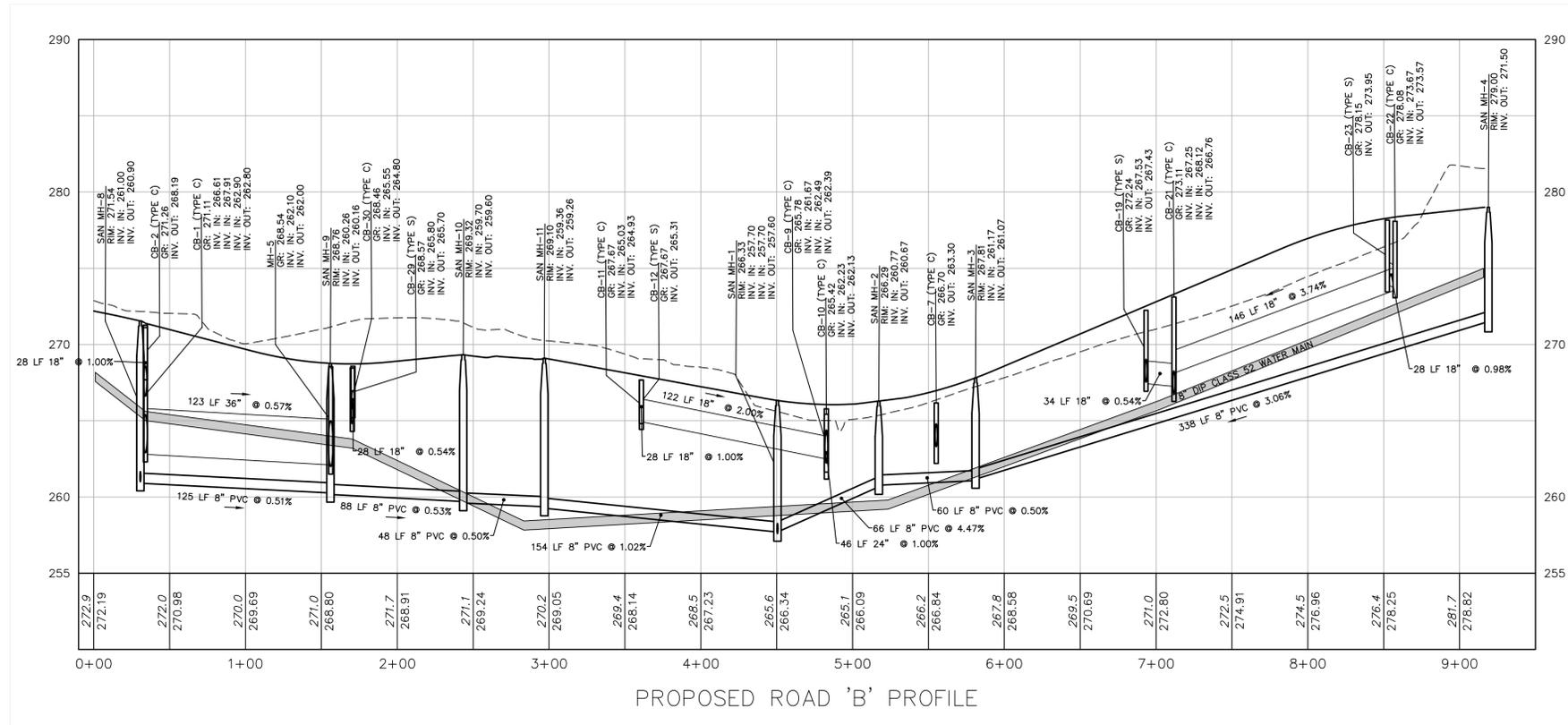
File No.
1377_C5.0.DWG

HCE Job	1377
Date	11/15/2018
Scale	AS SPECIFIED
Designed	RC
Sheet	15 of 27

Drawing No.
C5.0

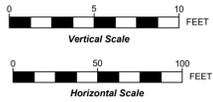


PROPOSED ROAD 'B' PLAN VIEW



PROPOSED ROAD 'B' PROFILE

STANDARD = PROPOSED PROFILE ELEVATION
 ITALICIZED = EXISTING PROFILE ELEVATION



Holmes Cunningham LLC
 350 E. Butler Ave., Ste 106
 New Britain, PA 18901
 (215) 586-3330
 www.hcengineering.net

REVISIONS	Description	Date
5-10-19	REVISED PER ORDINANCE	
7-29-19	REVISED PER COMMENTS	

CALL BEFORE YOU DIG!!
 STOP WORK IMMEDIATELY IF YOU ENCOUNTER AN UNEXPECTED OBSTACLE.
 STOP & CALL
 Call System, Inc.
 1-800-943-1776

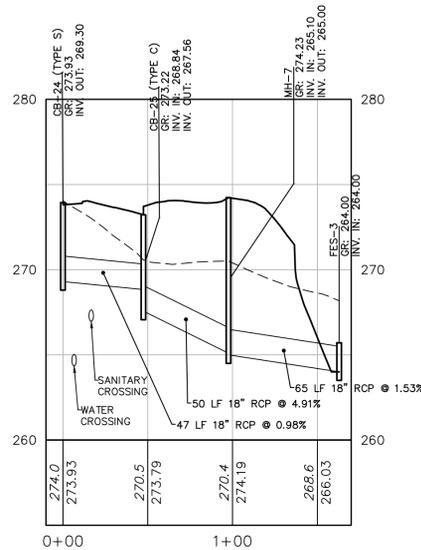
CHALFONT CROSSING
 TMP # 07-012-008, 07-012-008.001, 07-012-008-002,
 07-012-008-003, 07-012-008-005 & 07-012-008-007
 CHALFONT BOROUGH, BUCKS COUNTY, PENNSYLVANIA

ROADWAY PLAN AND PROFILE

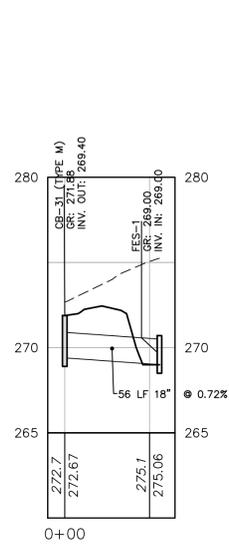
File No.
1377_C5.0.DWG

HCE Job	1377
Date	11/15/2018
Scale	AS SPECIFIED
Designed	RC
Sheet	16 of 27

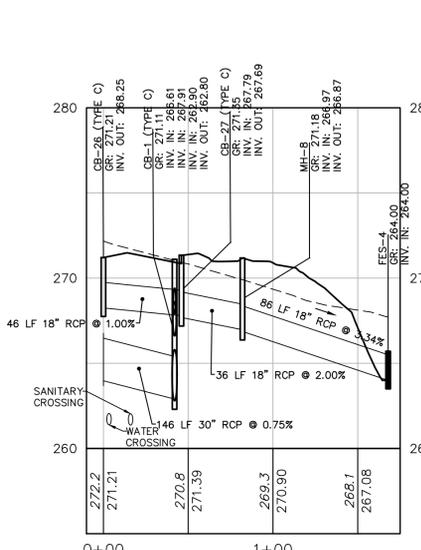
Drawing No.
C5.1



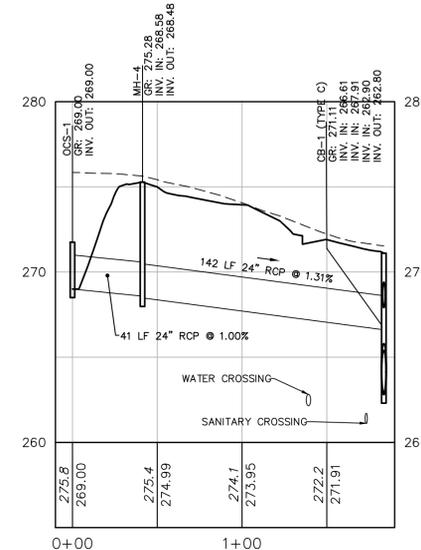
CB-24- TO FES-3 PROFILE



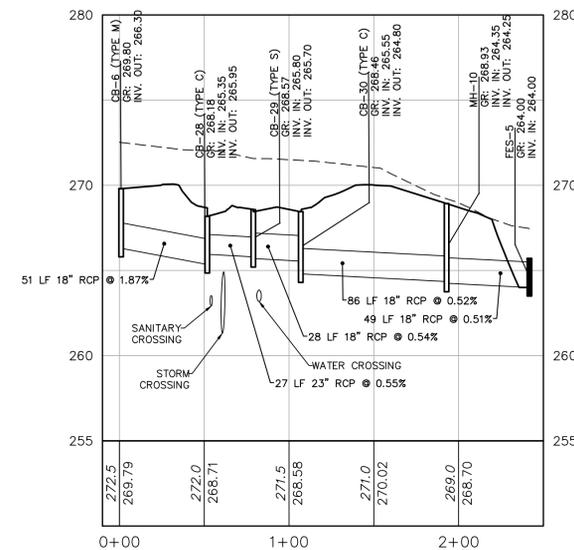
CB-31 TO FES-1 PROFILE



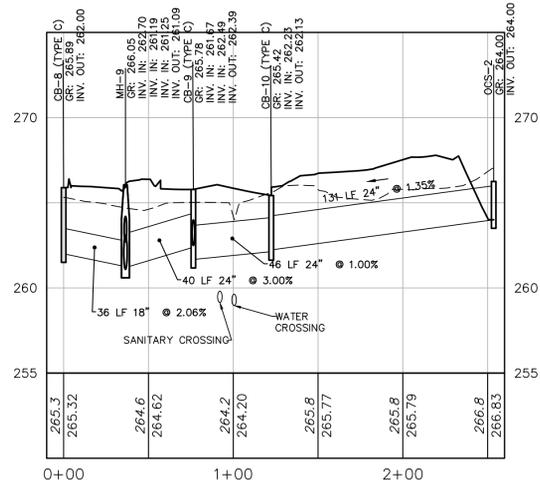
CB-26 TO FES-4 PROFILE



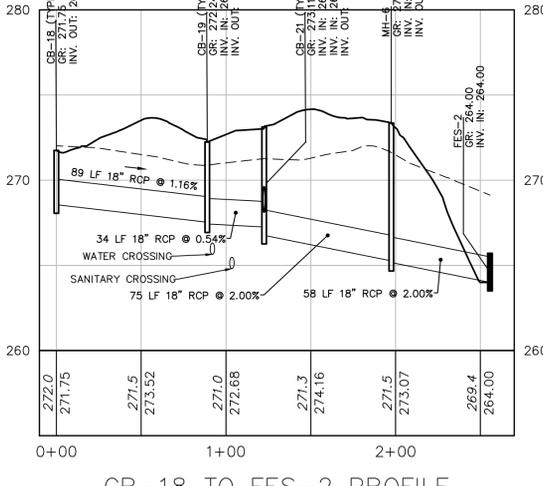
OCS-1 TO CB-1 PROFILE



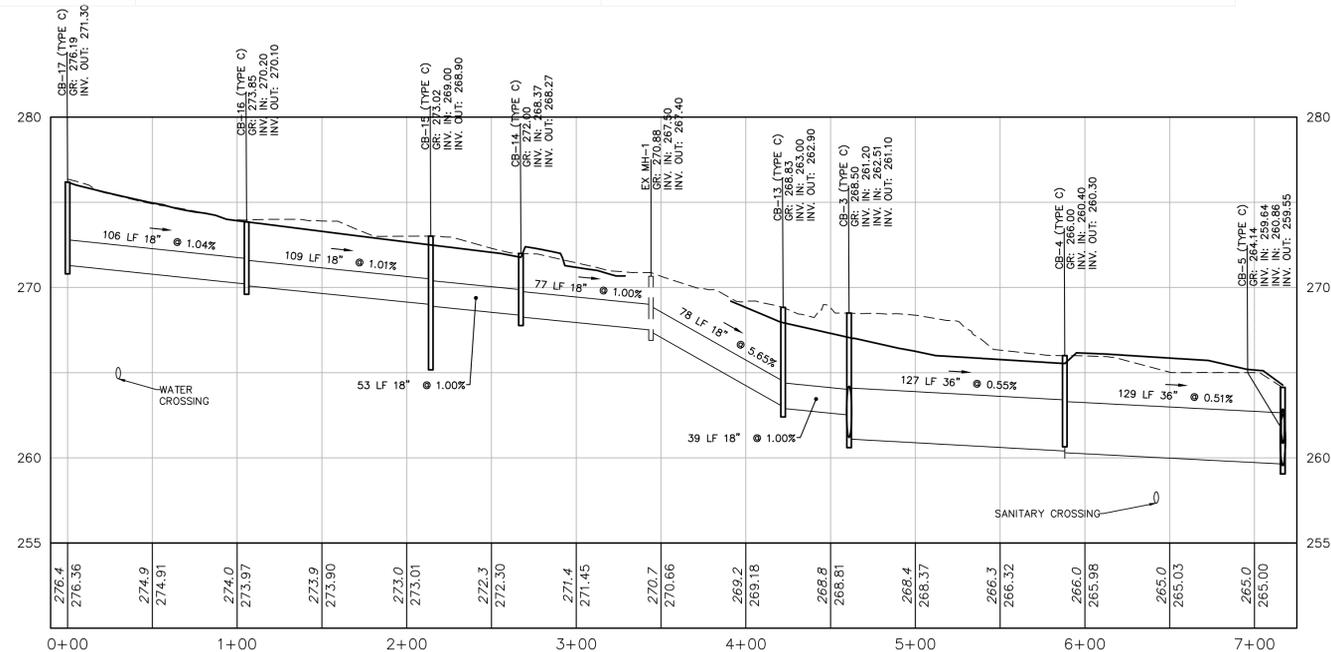
CB-6 TO FES-5 PROFILE



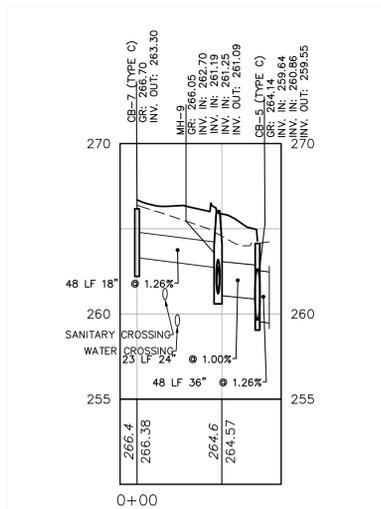
CB-8 TO OCS-2 PROFILE



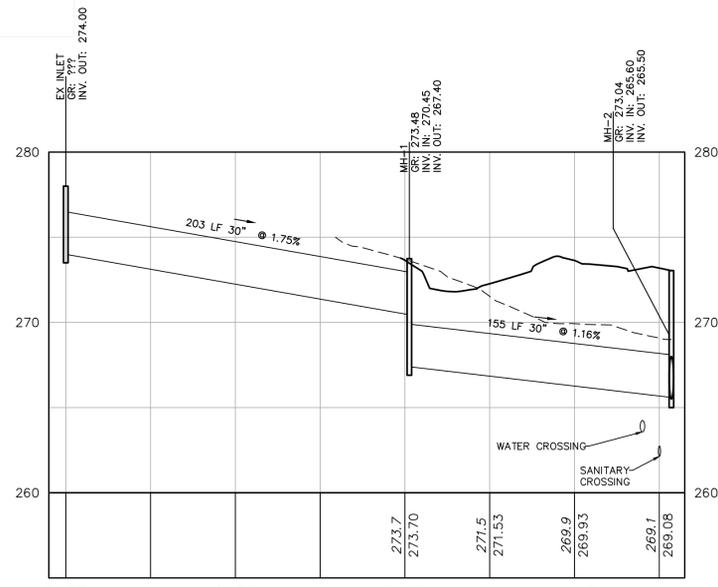
CB-18 TO FES-2 PROFILE



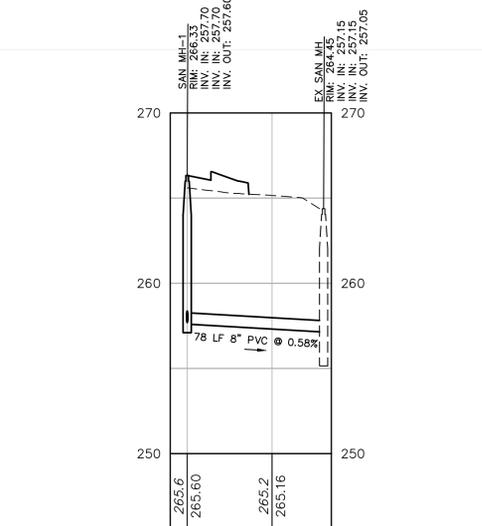
CB-17 TO CB-5 PROFILE



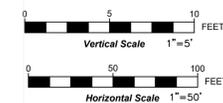
CB-7 TO EXT-1 PROFILE



REPLACEMENT TO MH-2 PROFILE



SAN MH-1 TO EX SAN MH PROFILE

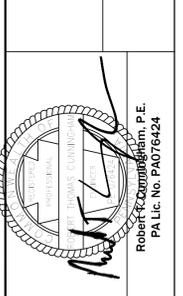


REVISIONS	Description
5-10-19	REVISED PER ORDINANCE
7-29-19	REVISED PER COMMENTS

Date	Description
5-10-19	REVISED PER ORDINANCE
7-29-19	REVISED PER COMMENTS

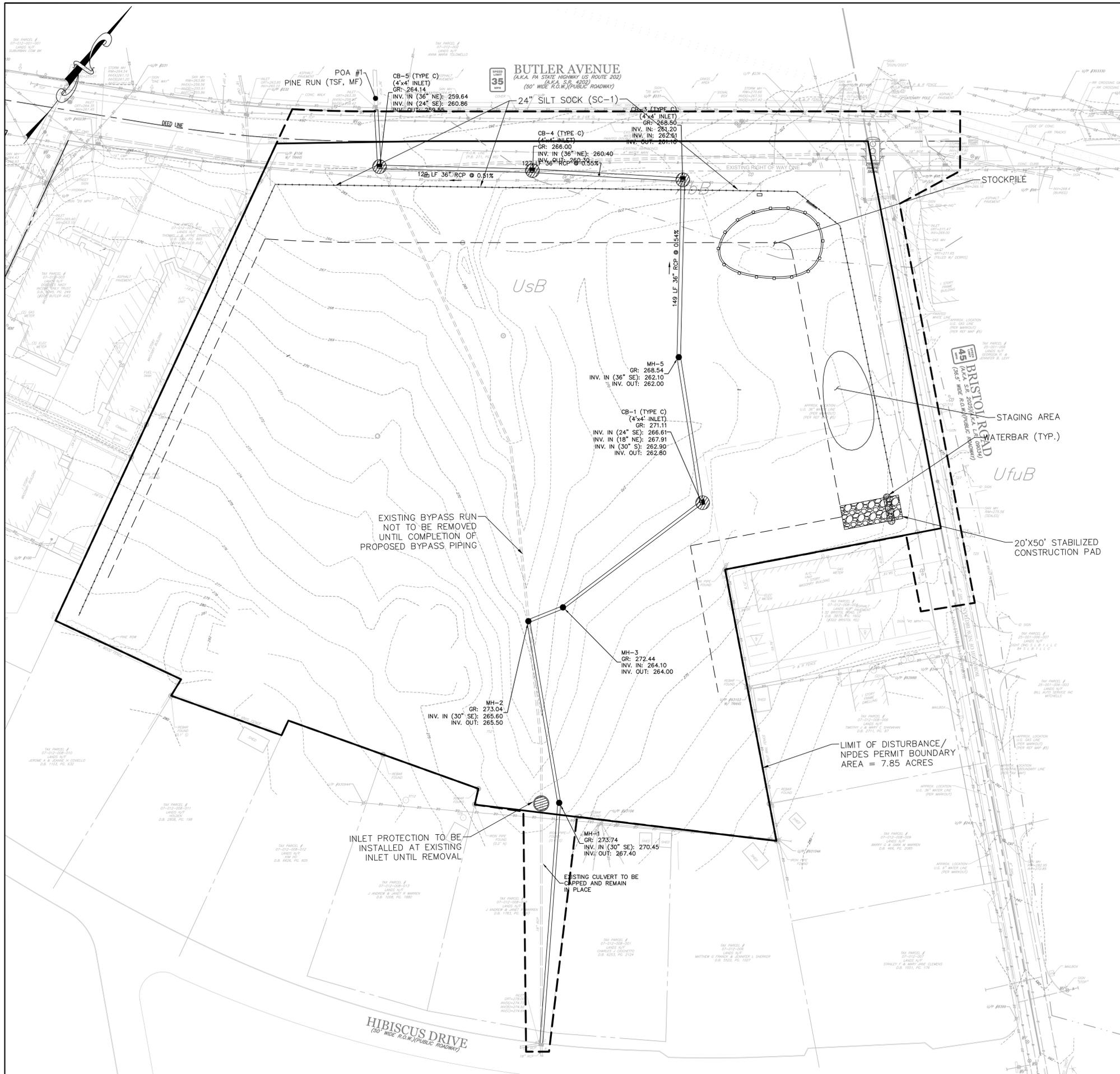
CHALFONT CROSSING
 TMP # 07-012-008, 07-012-008.001, 07-012-008.002,
 07-012-008-003, 07-012-008-005 & 07-012-008-007
 CHALFONT BOROUGH, BUCKS COUNTY, PENNSYLVANIA

ROADWAY PLAN AND PROFILE



File No.	1377_C5.0.DWG
HCE Job	1377
Date	11/15/2018
Scale	AS SPECIFIED
Designed	RC
Sheet	17 of 27

Drawing No.
C5.2



SESC LEGEND

- LIMIT OF DISTURBANCE
- 18" SILT FENCE
- 24" SILT SOCK
- TREE PROTECTION FENCE/ CONSTRUCTION FENCE
- STABILIZED CONSTRUCTION PAD
- SOIL TYPE BOUNDARY
- SOIL TYPE
- BAFFLE
- INLET PROTECTION
- EROSION CONTROL MATTING
- DRAINAGE AREA TO E&S BMP
- RIP-RAP LINING

OWNER AND APPLICANT:
 ELU CHALFONT LLC
 485 DEVON PARK DRIVE
 SUITE 106
 WAYNE, PA 19087

Soils Table

Symbol	Unit Name	HSG	Depth to Water	Depth to Bedrock
AbB	Abbotstown Silt Loam, 3 to 8 Percent Slopes	D	6-8 inches	40-60 inches
UfuB	Urban Land, 0 to 8 Percent Slopes	C	> 80 inches	10-99 inches
UsB	Urban Land - Lawrenceville Complex, 0 to 8 Percent Slopes	C	18-36 inches	48-99 inches

SOIL LIMITATIONS AND RESOLUTION:
 THE SOILS FOUND WITHIN THE PROJECT LIMITS HAVE LIMITATIONS DUE TO POSSIBLE SHALLOW DEPTH TO GROUNDWATER AND POSSIBLE SHALLOW DEPTH TO BEDROCK. IN ORDER TO RESOLVE THE GROUNDWATER LIMITATION, ANY STANDING WATER SHOULD BE PUMPED THROUGH A SEDIMENT FILTER BAG. TO RESOLVE THE BEDROCK LIMITATION, THE CONTRACTOR SHALL DETERMINE WHETHER ROCK IS RIPPLEABLE. IF ROCK IS NOT RIPPLEABLE, BLASTING WILL BE REQUIRED. ALL BLASTING SHALL MEET ALL LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS.

LIMIT OF DISTURBANCE = 7.85 ACRES

CRITICAL STAGES OF PCSM PLAN IMPLEMENTATION
 THE CONVERSION OF THE INFILTRATION BASINS REQUIRES OVERSIGHT BY A LICENSED PROFESSIONAL OR THEIR DESIGNEE.

- GENERAL NOTES**
- SITE GRADING SHALL NOT PROCEED UNTIL ALL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
 - UNDER PENNSYLVANIA LAW, THE CONTRACTOR IS REQUIRED TO NOTIFY THE PENNSYLVANIA ONE-CALL SYSTEM AT 1-800-242-1776 PRIOR TO THE START OF HIS WORK, SO THAT ALL THE VARIOUS UNDERGROUND UTILITY OPERATORS WILL BE ABLE TO LOCATE THEIR OWN UTILITIES.
 - THERE ARE NO HQ OR EV WATERSHEDS LOCATED WITHIN THE PROJECT AREA.
 - THERE ARE NO RIPARIAN BUFFERS EXISTING OR PROPOSED AS PART OF THIS PROJECT (WITHIN OR OUTSIDE THE LIMIT OF DISTURBANCE). ADDITIONALLY, RIPARIAN BUFFER OFFSETS ARE NOT NECESSARY.
 - THERE ARE NO WETLANDS WITHIN THE PROJECT AREA.
 - THERE ARE NO INFILTRATION BMPs LOCATED OUTSIDE PROPOSED GRADING AREAS.
 - THE EXISTING SITE IS NOT UNDERLAIN BY ANY NATURALLY OCCURRING GEOLOGIC FORMATIONS OR SOIL CONDITIONS WHICH COULD CAUSE POLLUTION DURING EARTH DISTURBANCE. THEREFORE, NO LOCATIONS ARE IDENTIFIED ON THIS PLAN AND NO DETAILS ARE PROVIDED FOR DISPOSAL OF SUCH MATERIAL.



Holmes Cunningham LLC
 350 E. Butler Ave., Ste 106
 New Britain, PA 18901
 (215) 586-3330
 www.hcengineering.net

REVISIONS

Date	Description
5-10-19	REVISED PER ORDINANCE
7-29-19	REVISED PER COMMENTS

CALL BEFORE YOU DIG!!
 PENNSYLVANIA ONE-CALL SYSTEM
 1-800-242-1776

CHALFONT CROSSING
 TMP # 07-012-008, 07-012-008.001, 07-012-008-002,
 07-012-008-003, 07-012-008-005 & 07-012-008-007
 CHALFONT BOROUGH, BUCKS COUNTY, PENNSYLVANIA

EROSION AND SEDIMENT CONTROL PLAN - PHASE 1

File No.
1377_C6.0.DWG

HCE Job	1377	RC
Date	11/15/2018	
Scale	1"=40'	
Designed		
Sheet	18	of 27

Drawing No.
C6.0

OWNER AND APPLICANT:
 ELU CHALFONT LLC
 485 DEVON PARK DRIVE
 SUITE 106
 WAYNE, PA 19087

LIMIT OF DISTURBANCE = 7.85 ACRES

CRITICAL STAGES OF PCSM PLAN IMPLEMENTATION
 THE CONVERSION OF THE VEGETATED BASINS REQUIRES OVERSIGHT BY A LICENSED PROFESSIONAL OR THEIR DESIGNEE.

Holmes Cunningham LLC
 350 E. Butler Ave., Ste 106
 New Britain, PA 18901
 www.hcengineering.net



REVISIONS	Description
5-10-19	REVISED PER ORDINANCE
7-29-19	REVISED PER COMMENTS

CALL BEFORE YOU DIG!!
 THIS DRAWING HAS NOT BEEN REVISIONED SINCE THE CONSTRUCTION PHASE AND IS NOT VALID FOR ANY OTHER USE. STOP & CALL Call System, Inc. 1-800-742-1776

Symbol	Unit Name	HSG	Depth to Water	Depth to Bedrock
AbB	Abbottstown Silt Loam, 3 to 8 Percent Slopes	D	6-8 inches	40-60 inches
UfuB	Urban Land, 0 to 8 Percent Slopes	C	> 80 inches	10-99 inches
UsB	Urban Land - Lawrenceville Complex, 0 to 8 Percent Slopes	C	18-36 inches	48-99 inches

SOIL LIMITATIONS AND RESOLUTION:

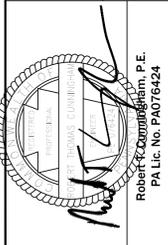
THE SOILS FOUND WITHIN THE PROJECT LIMITS HAVE LIMITATIONS DUE TO POSSIBLE SHALLOW DEPTH TO GROUNDWATER AND POSSIBLE SHALLOW DEPTH TO BEDROCK. IN ORDER TO RESOLVE THE GROUNDWATER LIMITATION, ANY STANDING WATER SHOULD BE PUMPED THROUGH A SEDIMENT FILTER BAG. TO RESOLVE THE BEDROCK LIMITATION, THE CONTRACTOR SHALL DETERMINE WHETHER ROCK IS RIPPLE. IF ROCK IS NOT RIPPLE, BLASTING WILL BE REQUIRED. ALL BLASTING SHALL MEET ALL LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS.

CHALFONT CROSSING
 TMP # 07-012-008, 07-012-008.001, 07-012-008-002,
 07-012-008-003, 07-012-008-005 & 07-012-008-007
 CHALFONT BOROUGH, BUCKS COUNTY, PENNSYLVANIA
EROSION AND SEDIMENT CONTROL PLAN - PHASE 2

	LIMIT OF DISTURBANCE
	SUPER SILT FENCE
	TREE PROTECTION FENCE/ CONSTRUCTION FENCE
	STABILIZED CONSTRUCTION PAD
	SOIL TYPE BOUNDARY
	SOIL TYPE
	BAFFLE
	INLET PROTECTION
	EROSION CONTROL MATTING
	DRAINAGE AREA TO E&S BMP
	RIP-RAP LINING

GENERAL NOTES

- SITE GRADING SHALL NOT PROCEED UNTIL ALL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
- UNDER PENNSYLVANIA LAW, THE CONTRACTOR IS REQUIRED TO NOTIFY THE PENNSYLVANIA ONE-CALL SYSTEM AT 1-800-242-1776 PRIOR TO THE START OF HIS WORK, SO THAT ALL THE VARIOUS UNDERGROUND UTILITY OPERATORS WILL BE ABLE TO LOCATE THEIR OWN UTILITIES.
- THERE ARE NO HQ OR EV WATERSHEDS LOCATED WITHIN THE PROJECT AREA.
- THERE ARE NO RIPARIAN BUFFERS EXISTING OR PROPOSED AS PART OF THIS PROJECT (WITHIN OR OUTSIDE THE LIMIT OF DISTURBANCE). ADDITIONALLY, RIPARIAN BUFFER OFFSETS ARE NOT NECESSARY.
- THERE ARE NO WETLANDS WITHIN THE PROJECT AREA.
- THERE ARE NO INFILTRATION BMPs LOCATED OUTSIDE PROPOSED GRADING AREAS.
- THE EXISTING SITE IS NOT UNDERLAIN BY ANY NATURALLY OCCURRING GEOLOGIC FORMATIONS OR SOIL CONDITIONS WHICH COULD CAUSE POLLUTION DURING EARTH DISTURBANCE. THEREFORE, NO LOCATIONS ARE IDENTIFIED ON THIS PLAN AND NO DETAILS ARE PROVIDED FOR DISPOSAL OF SUCH MATERIAL.



File No.
 1377_C6.0.DWG
 HCE Job 1377
 Date 11/15/2018
 Scale 1"=40'
 Designed RC
 Sheet 19 of 27

Drawing No.
C6.1



SEQUENCE OF CONSTRUCTION

NOTE: SITE DEVELOPMENT OPERATIONS SHOULD BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING GENERAL SEQUENCE OF OPERATIONS. THE CONTRACTOR MAY DEVIATE FROM THE STAGING OF PERMANENT SITE IMPROVEMENT CONSTRUCTION ITEMS, WITH APPROVAL OF THE CONSERVATION DISTRICT INSPECTOR. DEVIATION FROM THE RELATIVE ORDER OF EROSION AND SEDIMENT CONTROL MEASURES SHOULD NOT OCCUR WITHOUT APPROVAL OF THE CONSERVATION DISTRICT INSPECTOR AND SITE ENGINEER.

- CONTACT THE BUCKS COUNTY CONSERVATION DISTRICT (215-345-7577), CHALFONT BOROUGH, AND THE CHALFONT BOROUGH ENGINEER AT LEAST THREE (3) WORKING DAYS PRIOR TO SITE DISTURBANCE.
- EACH STAGE OF THE SEQUENCE OF CONSTRUCTION MUST BE COMPLETED PRIOR TO INITIATION OF THE NEXT STAGE OF THE SEQUENCE OF CONSTRUCTION. CONSTRUCTION MAY OVERLAP INTO A SUBSEQUENT PHASE AS LONG AS ALL EROSION CONTROL MEASURES HAVE BEEN INSTALLED IN THE PREVIOUS PHASE.
- INSTALL CONSTRUCTION ENTRANCE AT SITE ACCESS, CONSTRUCTION STAGING AREAS, STOCKPILE, AND COMPOST FILTER SOCK WHERE SHOWN ON THE PLAN.
- INSTALL STORM SEWER BYPASS AS SHOWN ON PHASE 1 PLAN, WORKING IN A DOWNSTREAM TO UPSTREAM DIRECTION. LIMIT TRENCHING TO THAT AMOUNT WHICH CAN BE COMPLETED IN THE SAME DAY.
- WORKING IN A DOWNSTREAM TO UPSTREAM DIRECTION, INSTALL STORM PIPING FROM OUTFALL TO SEDIMENT TRAPS 1 & 2.
- INSTALL SEDIMENT TRAPS 1 & 2 AND ALL ROCK FILTERS. THE PERMANENT OUTFALL FROM SEDIMENT TRAPS 1 AND 2 SHALL BE INSTALLED WITH THE CONSTRUCTION OF EACH SEDIMENT BMP. THE TEMPORARY RISERS SHALL BE INSTALLED WITH THE CONSTRUCTION OF THE SEDIMENT BMP. ANY DIVERSION CHANNELS AND BERMS, AS SHOWN ON THE PLANS SHALL BE INSTALLED WHEN THE SEDIMENT BMP'S ARE INSTALLED. INSTALL CONSTRUCTION FENCE AROUND TRAP 1 AND TRAP 2.
- STRIP TOPSOIL AND STOCKPILE WHERE SHOWN ON PLAN. ALL STRIPPED TOPSOIL STOCKPILES SHALL HAVE TEMPORARY SEEDING INSTALLED. ROUGH GRADE SITE, PARKING AND BUILDING PADS. INSTALL TEMPORARY EROSION CONTROL BLANKETS, ROCK FILTERS/APRONS, AND RIP RAP.
- BEGIN CONSTRUCTION OF BUILDING FOUNDATIONS. BUILDING CONSTRUCTION MAY COINCIDE WITH ADDITIONAL SITE WORK, INCLUDING UTILITY AND STREET CONSTRUCTION, THAT IS LISTED IN THIS SEQUENCE OF CONSTRUCTION.
- INSTALL WATER, SANITARY SEWER, AND STORM SEWER SYSTEM STARTING AT THE DOWNSTREAM ENDS AND WORKING UPSTREAM. ALL TRENCHES SHALL BE BACKFILLED AT THE END OF EACH DAY. MAKE OFFSITE UTILITY CONNECTIONS AND INSTALL OFFSITE WATER AND SANITARY SEWER. INSTALL CURB, SUBBASE AND BASE COURSE FOR THE ROADS.
- COMPLETE FINAL GRADING AND INSTALL WEARING COURSE AT EACH DRIVEWAY AFTER THE BUILDINGS ARE COMPLETED. AFTER FINAL GRADING IS COMPLETED, APPLY PERMANENT SEEDING MIXTURE AND INSTALL ALL REQUIRED PLANTINGS, FENCING, AND LIGHTING. LIGHTING SHALL BE INSTALLED PRIOR TO THE ISSUANCE OF ANY USE AND OCCUPANCY PERMITS. ONCE ALL BUILDINGS ARE COMPLETED, FLUSH ALL AFFECTED STORM DRAINAGE PIPES OF ACCUMULATED SILT.
- UPON COMPLETE STABILIZATION OF SITE, REMOVE EROSION CONTROL DEVICES, REMOVE TEMPORARY ORIFICE PLATES AND INSTALL PERMANENT STORMWATER BMP'S FOR THE CONSTRUCTION SEQUENCES AND DETAILS FOUND ON THE POST CONSTRUCTION STORMWATER MANAGEMENT PLAN. THE SITE SHALL BE CONSIDERED STABILIZED WHEN THE PERMANENT VEGETATION HAS PROVIDED A 70% GROUND COVER.
- UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENTATION CONTROLS MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENTATION CONTROLS AFTER EACH STORM EVENT OR ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN-OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING, MUST BE PERFORMED IMMEDIATELY.
- WITHIN 90 DAYS AFTER CONSTRUCTION IS COMPLETED, INSTALL WEARING COURSE FOR THE ROADS, REPAIR AND RECONSTRUCT STORM SEWER STRUCTURES, SANITARY SEWER STRUCTURES, LANDSCAPING, LIGHTING, SIDEWALK, DRIVEWAYS, AND/OR ANY OTHER AMENITIES FROM INSTALLATION OF WEARING COURSE.

SEEDING NOTES:

TEMPORARY SEEDING:

- TEMPORARY SEEDING SHALL BE DONE IN AREAS WHERE NO ACTIVITY WORK WILL BE PERFORMED. ANY DISTURBED AREA ON WHICH ACTIVITY HAS CEASED MUST BE SEEDED AND MULCHED IMMEDIATELY.
- DURING NON-GERMINATING PERIODS, ONLY MULCH MUST BE APPLIED AT THE RECOMMENDED RATES. AREAS MULCHED DURING THE NON-GERMINATING PERIODS, MUST BE LIMED, FERTILIZED, SEEDED, AND MULCHED IMMEDIATELY FOLLOWING THE END OF THE NON-GERMINATING PERIOD.
- DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN ONE (1) YEAR MAY BE SEEDED AND MULCHED WITH A QUICK GROWING TEMPORARY SEED MIXTURE.
- DISTURBED AREAS WHICH ARE AT EITHER FINISHED GRADE OR WILL NOT BE DISTURBED AGAIN WITHIN ONE (1) YEAR MUST BE SEEDED WITH A PERMANENT SEED MIXTURE AND MULCHED.
- TEMPORARY SEEDING TYPES:
 - APPLY AGRICULTURAL LIMESTONE AT A RATE OF ONE (1) TON PER ACRE. (5 POUNDS PER 1000 SQUARE FEET)
 - APPLY FERTILIZER AT THE RATE OF 50-50-50 PER ACRE.
 - WORK THE LIMESTONE AND FERTILIZER INTO THE SOIL.
 - UTILIZING THE FOLLOWING SEEDING TYPES, RATES AND TIME SCHEDULE:

TEMPORARY SEEDING

SEASON	RATE	TYPE
MARCH 1 TO JUNE 15	1 LB./1000 SF	ANNUAL RYEGRASS
MAY 15 TO SEPT 15	1 LB./1000 SF	SUDAN GRASS
SEPT 15 TO OCT 15	168 LB./AC	WINTER RYE

- APPLY HAY OR STRAW MULCH (IN ACCORDANCE WITH SECTION NO. 4) AT A RATE OF THREE (3) TONS PER ACRE.

PERMANENT SEEDING:

- DISTURBED AREAS WHICH ARE EITHER AT FINISHED GRADE OR WILL NOT BE DISTURBED AGAIN WITHIN ONE (1) YEAR MUST BE SEEDING WITH A PERMANENT SEED MIXTURE AND MULCHED.
- SEEDING SHALL BE DONE DURING PERIODS FROM APRIL 15TH TO OCTOBER 31ST, UNLESS OTHERWISE DIRECTED. IF SEEDING IS DONE AFTER OCTOBER 1ST, DORMANT SEED MUST BE USED AND DISTURBED AREAS MUST BE MULCHED.
- DISTURBED FINAL GRADED AREAS AND DRAINAGE SWALES WILL BE PERMANENTLY SEED AS FOLLOWS:
 - MINIMUM OF 4" OF TOPSOIL SHALL BE SPREAD OVER ALL AREAS TO BE SEED. TOPSOIL SHALL BE FREE OF STONES, STICKS, WASTE MATERIAL AND SIMILAR DEBRIS. FROZEN GROUND SHALL NOT BE SPREAD AS TOPSOIL AND TOPSOIL SHALL NOT BE SPREAD OVER FROZEN GROUND WHEREVER POSSIBLE.
 - A SOIL ANALYSIS IS RECOMMENDED, HOWEVER, IN LIEU OF AN ANALYSIS APPLY AGRICULTURAL LIMESTONE AND FERTILIZER AT RATES RECOMMENDED BELOW (OR AS SUGGESTED BY THE SOIL TEST RESULTS (ONE (1) TEST PER 25 ACRES)).
 - THE LIMESTONE AND FERTILIZER SHALL BE WORKED INTO THE SOIL TO DEPTHS OF 3 TO 4 INCHES. D. GRASS SHALL NOT BE PLANTED AFTER HEAVY RAIN OR WATERING.
 - ALL SEED USED SHALL BE LABELED IN ACCORDANCE WITH THE U.S. DEPARTMENT OF AGRICULTURE RULES AND REGULATIONS UNDER THE FEDERAL SEED ACT IN EFFECT AT THE TIME OF PURCHASE. INERT MATTER SHALL NOT EXCEED 15% AND BLUE TAG CERTIFIED SEED SHALL BE SUPPLIED WHEREVER POSSIBLE.
 - SMOOTH AND FIRM SEED BED WITH CULTIPACKER OR SIMILAR EQUIPMENT PRIOR TO SEEDING. APPLY SEED UNIFORMLY BY BROADCASTING, DRILLING OR HYDRO SEEDING. COVER SEEDS WITH 1/2" OF SOIL WITH SUITABLE MATERIAL.
 - APPLY HAY OR STRAW MULCH (IN ACCORDANCE WITH SECTION NO. 4) AT A RATE OF THREE (3) TONS PER ACRE.

PERMANENT SEEDING FOR NORMAL MOWED LAWN AREAS:

SEASON	RATE	TYPE
MARCH 1 TO JUNE 1 & AUG 15 TO OCT 1	2 LBS./1000 SF	KY31 TALL FESCUE 80% AND RED TOP 12% RED TOP*
OCT 1 TO MARCH 1 & JUNE 1 TO AUG 1	2 LBS./1000 SF	RED TOP*

(*) USE DORMANT SEED, UNIFORMLY APPLIED, WORKING INTO A DEPTH OF 1/4 INCH. THE USE OF MULCH IS REQUIRED. THE USE OF NETTING OR EROSION CONTROL MATS MAY BE REQUIRED.

PERMANENT SEEDING FOR SPECIAL AREAS (SWALES, POND EMBANKMENTS, LEVEES, DIVERSION CHANNELS, ETC.):

SEASON	RATE	TYPE
MARCH 1 TO JUNE 1 & AUG 15 TO OCT 1	2 LBS./1000 SF	KY31 TALL FESCUE 80% AND RYEGRASS 20%

NOTE: SEEDING PERIODS AND SPECIFICATIONS MAY VARY DUE TO SITE CONDITIONS AND VARIANCES FROM THE TIME THIS REPORT IS WRITTEN AND APPROVED. IT MAY BE NECESSARY TO ADAPT SEED SPECIFICATION, VARIETIES, AND QUALITIES. FOR SPECIAL CONDITIONS CONSULT "GUIDELINE FOR RECLAMATION OF SEVERELY DISTURBED AREAS", PENNSYLVANIA STATE UNIVERSITY.

- FERTILIZER: A SOIL ANALYSIS IS RECOMMENDED BUT IN LIEU OF AN ANALYSIS APPLY AGRICULTURAL LIMESTONE AT A RATE OF FOUR (4) TONS/ACRE AND 10-20-20 FERTILIZER AT A RATE OF 50 LBS. PER 1000 SF. THESE MATERIALS SHALL BE UNIFORMLY APPLIED AND WORKED INTO THE TOPSOIL TO A DEPTH OF 3 TO 4 INCHES IMMEDIATELY BEFORE SEEDING. A 1 0-1 0-10 FERTILIZER WILL BE WORKED INTO THE SURFACE AT A RATE OF 10 LBS. PER 1000 SF.
- HYDRO SEEDING: LIME AND SEED SHALL BE AS SPECIFIED ABOVE, AND FERTILIZER SHALL BE APPLIED AT A RATE OF 40-80 CROWN VETCH SHALL BE INOCULATED AT FOUR TIMES THE MANUFACTURER'S RATE. SHOULD FERTILIZER BE APPLIED WITH THE INOCULANT, IT SHOULD NOT REMAIN IN A SLURRY FOR MORE THAN ONE HOUR. WOOD CELLULOSE FIBER, APPLIED AT A RATE OF 35 LBS. PER 1000 SF, MAY BE APPLIED AS PART OF THE SLURRY IN LIEU OF MULCH. SYNTHETIC MULCH BINDER, SUCH AS CURASOL, DCA-70, TERRE-TACK OR AN APPLICED EQUAL SHALL BE USED PER THE MANUFACTURER'S INSTRUCTIONS TO ANCHOR THE MULCH.
- MULCHING: MULCHING SHALL BE APPLIED AS FOLLOWS:
 - STRAW SHALL BE ALL DRIED AND FREE FROM UNDESIRABLE SEEDS AND COURSE MATERIAL. APPLY AT A RATE OF 115 TO 150 LBS. PER 1000 SF OR 3 TONS PER ACRE. MULCHED AREAS SHALL BE CHECKED PERIODICALLY AND IMMEDIATELY AFTER STORMS AND WIND. DAMAGED OR MISSING MULCH SHALL BE REPLACED. A TACKIFIER APPLIED AFTER STRAW IS RECOMMENDED. TACKIFIER MAY BE ASPHALT OR POLYMER SPRAY. APPLY AT A RATE RECOMMENDED BY THE MANUFACTURER WITH SUITABLE EQUIPMENT. IN LIEU OF MANUFACTURER'S RECOMMENDATIONS APPLY AT A RATE OF .04 TO .06 GALLONS PER SQUARE YARD.
 - NETTING / EROSION CONTROL BLANKETS: THE USE AND INSTALLATION OF EROSION CONTROL BLANKETS OR NETTING SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION AND SHALL BE SELECTED FOR THE PROPER APPLICATION AND CONDITIONS.

UTILITY TRENCHING GUIDELINES:

- CONSTRUCTION REQUIREMENTS -
 - 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.
 - WORK CREWS AND EQUIPMENT FOR TRENCHING, PLACEMENT OF PIPE, PLUG CONSTRUCTION AND BACKFILLING WILL BE SELF CONTAINED AND SEPARATE FROM CLEARING AND GRUBBING AND SITE RESTORATION AND STABILIZATION OPERATIONS.
 - LIMIT DAILY TRENCH EXCAVATION TO THE LENGTH OF PIPE PLACEMENT, PLUG INSTALLATION AND BACKFILLING THAT CAN BE COMPLETED THE SAME DAY.
 - WATER WHICH ACCUMULATES IN THE OPEN TRENCH WILL BE COMPLETELY REMOVED BY PUMPING AS REQUIRED, TO A FACILITY FOR REMOVAL OF SEDIMENTS IN ACCORDANCE WITH PADEP GUIDELINES.
 - 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 AT THE END OF EACH WEEK.
- EXCEPTIONS - IN CERTAIN CASES TRENCHES CANNOT BE BACKFILLED UNTIL THE PIPE IS HYDROSTATICALLY TESTED, OR ANCHORS AND OTHER PERMANENT FEATURES ARE INSTALLED. IN THESE CASES, ALL OF THE REQUIREMENTS LISTED UNDER ITEM 1 WILL REMAIN IN EFFECT WITH THE FOLLOWING EXCEPTIONS:
 - DAILY BACKFILLING OF THE TRENCH MAY BE DELAYED FOR SIX DAYS. ALL PRESSURE TESTING AND THE COMPLETE BACKFILLING OF THE OPEN TRENCH MUST BE COMPLETED BY THE SEVENTH WORKING DAY.
 - IF DAILY BACKFILLING IS DELAYED, THE DISTURBED AREA WILL BE GRADED TO FINAL CONTOURS, APPROPRIATE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES/FACILITIES WILL BE INSTALLED, AND THE AREAS SEEDED AND MULCHED WITHIN THE NEXT TWO CALENDAR DAYS.

BMP MAINTENANCE

THE CONTRACTOR WILL BE RESPONSIBLE FOR THE PROPER CONSTRUCTION STABILIZATION, AND MAINTENANCE OF ALL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES AND RELATED ITEMS INCLUDED WITHIN THIS PLAN. THE CONTRACTOR WILL ALSO BE RESPONSIBLE FOR THE PROPER CONSTRUCTION AND STABILIZATION OF PERMANENT CONTROL MEASURES AND RELATED ITEMS INCLUDED WITHIN THIS PLAN.

DURING CONSTRUCTION THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING INSPECTIONS OF THE BMPs AFTER EACH RUNOFF EVENT AS WELL AS ON A WEEKLY BASIS. THE CONTRACTOR SHALL KEEP A LOG OF ALL INSPECTIONS AND MAINTENANCE PERFORMED ON THE BMPs.

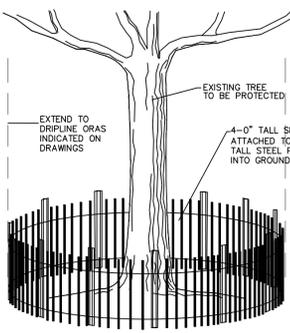
THE OWNER WILL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL PERMANENT CONTROL MEASURES.

SOIL SEDIMENT REMOVED FROM ANY TEMPORARY CONTROL MEASURE DURING REGULAR MAINTENANCE WILL BE INCORPORATED BACK INTO THE EARTHWORK AS FILL ON THE SITE. SOIL SEDIMENT MATERIAL SHALL BE DISTRIBUTED ON-SITE WITHOUT CHANGING DRAINAGE PATTERNS DURING A SPECIFIC CONSTRUCTION STAGE.

SILT FENCE AND ROCK FILTERS WILL BE INSPECTED ONCE A WEEK OR AFTER EVERY STORM EVENT, WHICHEVER COMES FIRST. ANY NECESSARY REPAIRS WILL BE MADE IMMEDIATELY. ACCUMULATED SEDIMENTS WILL BE REMOVED AS REQUIRED TO KEEP THE FENCE FUNCTIONAL. DEPOSITS WILL BE REMOVED WHERE ACCUMULATIONS REACH 1/2 THE ABOVE GROUND HEIGHT OF THE FENCE/ FILTER. UNDERCUTTING OR EROSION OF THE TOE ANCHOR OF THE SILT FENCE WILL BE REPLACED IMMEDIATELY WITH ROCK FILTER OUTLETS. ANY MANUFACTURER'S RECOMMENDATIONS WILL BE ADHERED TO FOR REPLACING SILT FENCE DUE TO WEATHERING.

THE CONSTRUCTION ENTRANCE WILL BE INSPECTED AT THE END OF EACH WORK DAY. THE THICKNESS WILL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSION BY ADDING ROCK. A STOCKPILE OF ROCK MATERIAL WILL BE MAINTAINED ON THE SITE FOR THIS PURPOSE.

AT THE END OF EACH CONSTRUCTION DAY, ANY SEDIMENT DEPOSITED ON PUBLIC ROADWAYS, WILL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE. WASHING OF THE ROADWAY WITH WATER WILL NOT BE PERMITTED.

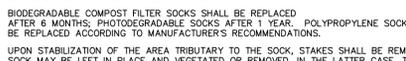
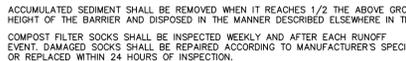
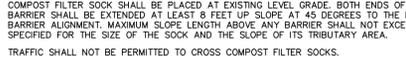
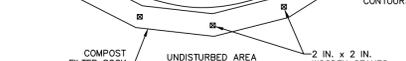
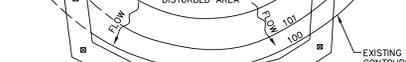
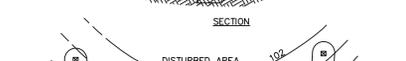
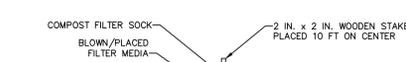
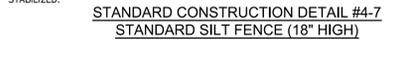
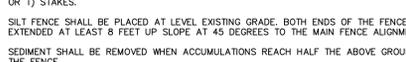
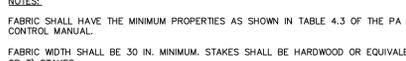
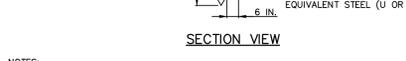
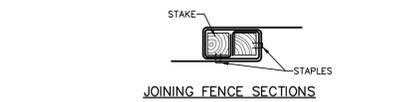


NOTES:
1) FENCE TO BE INSTALLED BEFORE WORK BEGINS.
2) FENCE MUST REMAIN AND BE MAINTAINED THROUGHOUT DURATION OF CONSTRUCTION.
3) GRASS CONSTRUCTION FENCE MAY BE SUBSTITUTED FOR SNOW FENCE.

RECYCLING/ DISPOSAL OF MATERIALS

THE CONSTRUCTION WASTES ANTICIPATED INCLUDE DEMOLITION MATERIALS FROM THE BUILDING AND SITE, DEMOLITION AND EXCESS BUILDING MATERIAL SUCH AS CONCRETE, WOOD, ETC.

ALL BUILDING MATERIAL AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED IN ACCORDANCE WITH DEP'S SOLID WASTE REGULATIONS (25 PA CODE 2601 ET SEQ., 2711 ET SEQ., AND 2871 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.



LIMITING EXPOSED EXTENT AND DURATION OF DISTURBED AREAS THE INITIAL PHASE OF THE PROPOSED PROJECT CONSISTS OF ESTABLISHING THE SOIL EROSION CONTROL MEASURES IN A SEQUENCE APPROPRIATE TOWARD LIMITING SOIL EROSION. THE EXTENT OF DISTURBED LAND HAS BEEN LIMITED TO INCLUDE ONLY THOSE AREAS REQUIRED FOR THE DEVELOPMENT OF THE SUBJECT SITE. ALL SEDIMENT AND EROSION CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCE OR IN THEIR PROPER SEQUENCE AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED. UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY, OR ANY STAGE THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED. THE SEQUENCE OF CONSTRUCTION ACTIVITIES IS OUTLINED IN THE SEQUENCE OF CONSTRUCTION CONTAINED HEREIN AND ON THE DRAWINGS.

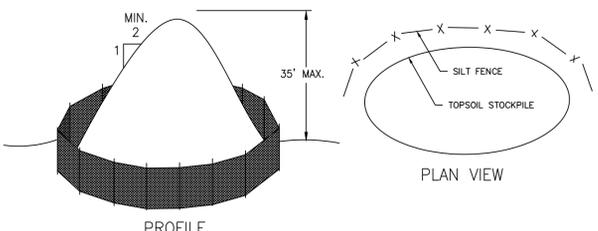
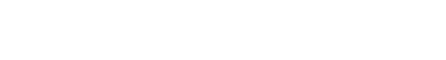
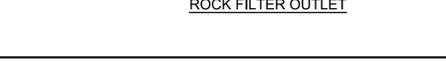
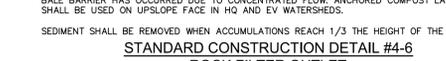
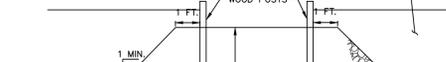
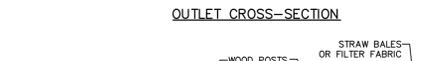
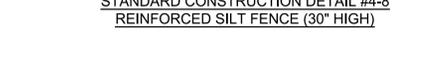
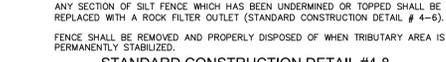
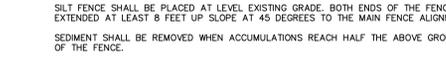
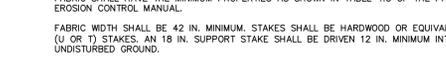
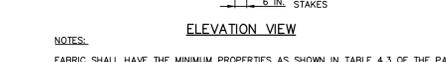
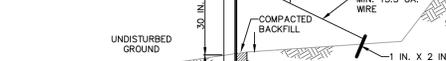
PROTECTION OF EXISTING DRAINAGE FEATURES AND VEGETATION THE PROJECT PROPOSES TO MINIMIZE DISTURBANCE TO THE EXISTING VEGETATION AT THE SITE BY ONLY PROPOSING DISTURBANCE IN THE AREA WHERE NEEDED. THE SITE VEGETATION PROPOSED FOR DISTURBANCE IS MAINLY SCRUB VEGETATION AND VINES WHICH ARE CURRENTLY DETRIMENTAL TO THE LARGE TREES ON THE SOUTHERN PROPERTY LINE.

MINIMIZE SOIL COMPACTION THE PROJECT DESIGN LIMITS THE BULK/ MASS EARTHWORK TO BE PERFORMED AS MUCH AS POSSIBLE. ADDITIONALLY, SOIL COMPACTION WILL NOT BE REQUIRED OTHER THAN IN PROPOSED IMPERVIOUS AREAS.

FEATURES AND MEASURES TO MINIMIZE STORMWATER RUNOFF TEMPORARY STABILIZATION: UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY, OR ANY STAGE THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED. THE DISTURBED AREAS WILL ALSO BE MULCHED WITH UNROTTED STRAW OR SALT HAY. TEMPORARY STABILIZATION MEASURES ARE SPECIFIED ON SOIL EROSION AND SEDIMENT POLLUTION CONTROL DETAIL PLANS.

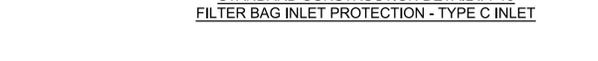
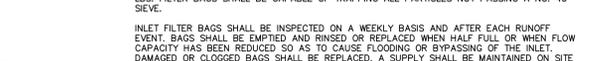
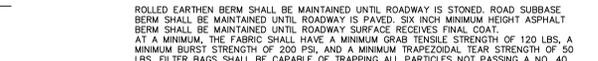
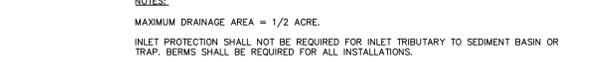
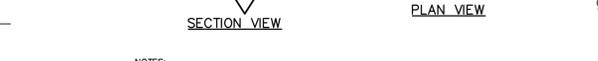
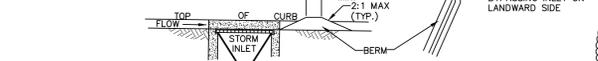
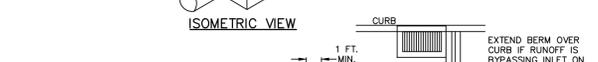
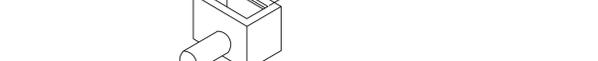
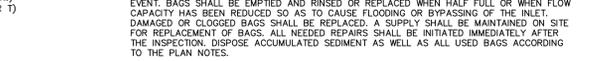
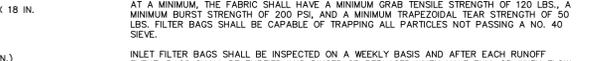
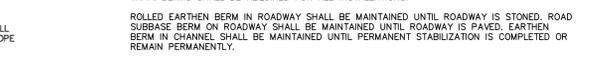
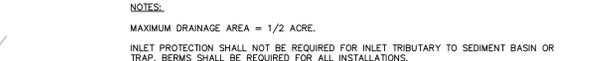
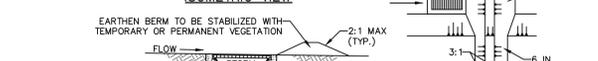
PERMANENT STABILIZATION: ALL SLOPES AND DISTURBED AREAS SHALL BE STABILIZED WITH PERMANENT SEEDING AND LANDSCAPING AS SOON AS POSSIBLE AFTER THE FINAL EARTHMOVING AND CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED. AREAS THAT ARE PROPOSED TO HAVE SPECIFIC LINING SHALL BE STABILIZED WITH THE SPECIFIED LINING AS SOON AS THE EARTHMOVING AND CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED. TEMPORARY SOIL EROSION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL A UNIFORM EROSION RESISTANT PERENNIAL VEGETATIVE COVER OF THE DISTURBED AREA IS ESTABLISHED. PERMANENT STABILIZATION MEASURES ARE SPECIFIED ON THE EROSION AND SEDIMENT POLLUTION CONTROL DETAIL PLANS.

SOLDS SEPARATION: PRIOR TO ANY SITE DISTURBANCE OR CONSTRUCTION ACTIVITIES, A GRAVEL BUFFER WILL BE INSTALLED AT THE EXISTING DRIVEWAYS TO SERVE AS A CONSTRUCTION ENTRANCE. IN ADDITION, FILTER FABRIC FENCING WILL BE INSTALLED AROUND THE PROJECT AREA, DOWNGRADIENT FROM ANY DISTURBANCE, TO PREVENT SEDIMENT FROM LEAVING THE SITE. FILTER FABRIC SILT FENCING WILL BE CONSTRUCTED AND WILL REMAIN OPERATIONAL UNTIL PERMANENT CONTROL MEASURES ARE IN PLACE.



SILT FENCE MUST BE PLACED DOWN SLOPE OF ALL STOCKPILES. IMMEDIATELY APPLY TEMPORARY SEEDING TO ALL STOCKPILES WHICH WILL REMAIN IN PLACE 20 DAYS OR MORE.

STOCKPILE AREA DETAIL



Holmes Cunningham LLC
350 E. Butler Ave., Ste 106
New Britain, PA 18901
(215) 586-3330
www.hcengineering.net



REVISIONS

Date	Description
5-10-19	REVISED PER ORDINANCE
7-29-19	REVISED PER COMMENTS

CALL BEFORE YOU DIG OR IN THE EVENT OF AN EMERGENCY CALL 811. THIS IS A CONSTRUCTION PERMITS AND NOT A PERMIT TO CONDUCT WORK. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL NECESSARY PERMITS AND TO COMPLY WITH ALL APPLICABLE REGULATIONS AND ORDINANCES.

PA Lic. No. PA076424

File No. 1377_C6.2.DWG

Date 11/15/2018

Scale N.T.S.

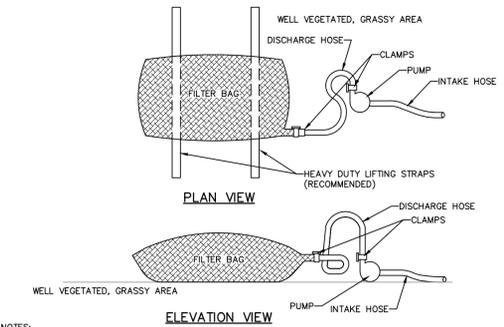
Designed RC

Sheet 20 of 27

Drawing No. C6.2

File No. 1377_C6.2.DWG

Date 11/15/2018



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-3796	350 PSI
LIV 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 NOT 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.

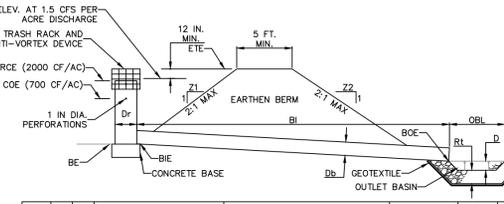
NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HQ OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE.

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**



TRAP NO.	Z1 (FT)	Z2 (FT)	TRAP MATL	RISER DIA (IN)	BOT PERF (FT)	BARREL DIA (IN)	BARREL ELEV (FT)	LENGTH (FT)	OUTLET ELEV (FT)	EMBANKMENT TOP ELEV (FT)	CLEAN OUT COE (FT)	BOTTOM ELEV (FT)
1	4	4	CMP	24	265.75	265.00	RCP	24	264.00	262.23	267.50	265.00
2	4	4	CMP	24	270.75	270.00	RCP	24	269.00	268.58	272.50	269.00

TRAP NO.	CONCRETE BASE			RIPRAP			OUTLET BASIN		
	LENGTH (IN)	WIDTH (IN)	THICK (IN)	DEPTH (IN)	THICK (IN)	DEPTH (IN)	WIDTH (IN)	LENGTH (IN)	
1	36	36	12	---	---	---	---	---	
2	36	36	12	---	---	---	---	---	

NOTES:
 SEE DETAIL #8-3 TEMPORARY RISER FOR DETAILS OF THE TEMPORARY RISER CONSTRUCTION.

FILL MATERIAL FOR THE EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS. THE EMBANKMENT SHALL BE COMPACTED IN LAYERED LIFTS OF NOT MORE THAN 6 TO 9 IN. THE MAXIMUM ROCK SIZE SHALL BE NO GREATER THAN 2/3 THE LIFT THICKNESS.

UPON COMPLETION, THE EMBANKMENT SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED ACCORDING TO THE SPECIFICATIONS OF THE E&S PLAN DRAWINGS.

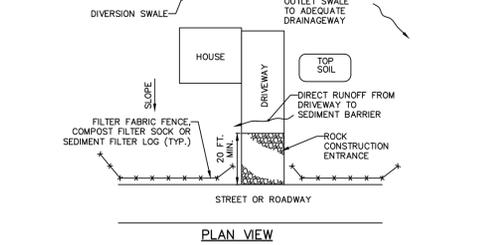
ALL SEDIMENT TRAPS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. ACCESS FOR SEDIMENT REMOVAL AND OTHER REQUIRED MAINTENANCE ACTIVITIES SHALL BE PROVIDED.

A CLEAN OUT STAKE SHALL BE PLACED NEAR THE CENTER OF EACH TRAP. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED THE CLEAN OUT ELEVATION ON THE STAKE AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS. DISPOSE OF MATERIALS REMOVED FROM THE TRAP IN THE MANNER DESCRIBED IN THE E&S PLAN.

CHECK EMBANKMENTS, SPILLWAYS, AND OUTLETS FOR EROSION, PIPING AND SETTLEMENT. CLOGGED OR DAMAGED SPILLWAYS AND/OR EMBANKMENTS SHALL BE IMMEDIATELY RESTORED TO THE DESIGN SPECIFICATIONS. DISPLACED RIPRAP WITHIN THE OUTLET PROTECTION SHALL BE REPLACED IMMEDIATELY.

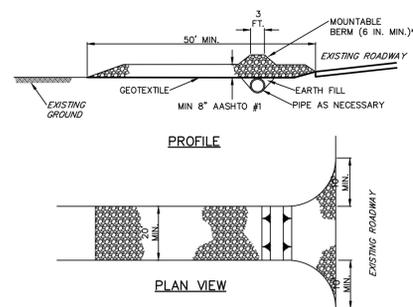
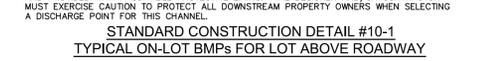
ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISTURBED AREAS INSIDE THE TRAP SHALL BE STABILIZED BEFORE CONVERSION TO A STORMWATER MANAGEMENT FACILITY. TO ASSIST IN REMOVING SEDIMENT, WHICH MAY BE SATURATED, A DEVICE SUCH AS IS SHOWN IN STANDARD CONSTRUCTION DETAIL #7-18 MAY BE USED TO DEWATER THE SEDIMENT PRIOR TO ITS REMOVAL.

**STANDARD CONSTRUCTION DETAIL #8-2
 BARREL/RISER SEDIMENT TRAP**



NOTES:
 THE UPSLOPE DIVERSION CHANNEL SHOULD BE INSTALLED WHEREVER THE LOT EXTENDS MORE THAN 150 FEET ABOVE THE ROADWAY OR WHERE RUNOFF FORM AREAS ABOVE THE LOT IS NOT OTHERWISE DIVERTED AWAY FROM THE LOT. THE CHANNEL SHOULD BE PROPERLY SIZED AND PROVIDED WITH A SUITABLE PROTECTIVE LINING. THE DESIGNER AND/OR CONTRACTOR MUST EXERCISE CAUTION TO PROTECT ALL DOWNSTREAM PROPERTY OWNERS WHEN SELECTING A DISCHARGE POINT FOR THIS CHANNEL.

**STANDARD CONSTRUCTION DETAIL #10-1
 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY**



* MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE

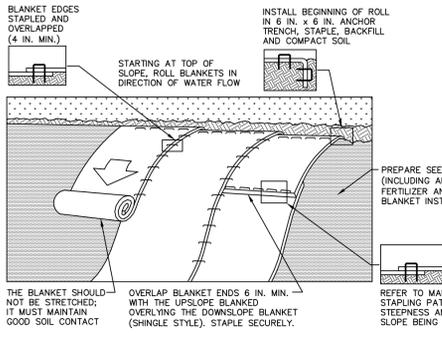
NOTES:
 REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.

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**



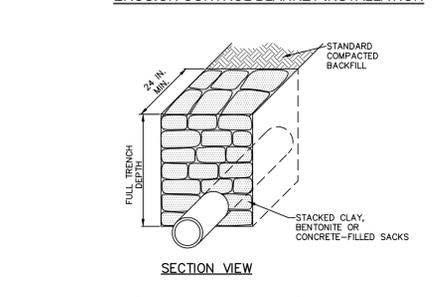
NOTES:
 SEED AND SOIL AMENDMENTS SHALL BE APPLIED ACCORDING TO THE RATES IN THE PLAN DRAWINGS PRIOR TO INSTALLING THE BLANKET.

PROVIDE ANCHOR TRENCH AT TOE OF SLOPE IN SIMILAR FASHION AS AT TOP OF SLOPE. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLOUDS, STICKS, AND GRASS.

BLANKET SHALL HAVE GOOD CONTINUOUS CONTACT WITH UNDERLYING SOIL THROUGHOUT ENTIRE LENGTH. LAY BLANKET LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL. DO NOT STRETCH BLANKET.

THE BLANKET SHALL BE STAPLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL PERMANENT VEGETATION IS ESTABLISHED. A MINIMUM UNIFORM 70% COVERAGE THROUGHOUT THE BLANKETED AREA. DAMAGED OR DISPLACED BLANKETS SHALL BE RESTORED OR REPLACED WITHIN 4 CALENDAR DAYS.

**STANDARD CONSTRUCTION DETAIL #11-1
 EROSION CONTROL BLANKET INSTALLATION**



PA DEP EROSION CONTROL MANUAL TABLE 13.1
 MAXIMUM SPACING AND MATERIALS FOR TRENCH PLUGS

TRENCH SLOPE (%)	SPACING (FT)	PLUG MATERIAL
< 5	1000	* CLAY, BENTONITE, OR CONCRETE FILLED SACKS
5 - 15	500	* CLAY, BENTONITE, OR CONCRETE FILLED SACKS
15 - 25	300	* CLAY, BENTONITE, OR CONCRETE FILLED SACKS
25 - 35	200	* CLAY, BENTONITE, OR CONCRETE FILLED SACKS
35 - 100	100	* CLAY, BENTONITE, OR CONCRETE FILLED SACKS
> 100	50	* CEMENT BAGS (WETTED) OR MORTARED STONE

* TOPSOIL MAY NOT BE USED TO FILL SACKS

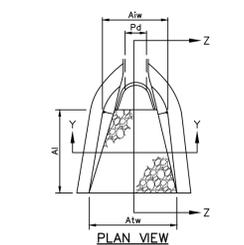
NOTES:
 A MINIMUM OF 2-#8 REBAR SHALL BE PLACED AT RIGHT ANGLES AND PROJECTING THROUGH SIDES OF RISER TO ANCHOR IT TO CONCRETE BASE. REBAR SHALL PROJECT A MINIMUM OF 1/4 RISER DIAMETER BEYOND OUTSIDE OF RISER.

CONCRETE BASE SHALL BE POURED IN SUCH A MANNER SO AS TO INSURE THAT CONCRETE FILLS BOTTOM OF RISER TO INVERT OF THE OUTLET PIPE TO PREVENT RISER FROM BREAKING AWAY FROM THE BASE. MINIMUM BASE WIDTH EQUALS 2 TIMES RISER DIAMETER.

EMBEDDED SECTION OF ALUMINUM OR ALUMINIZED PIPE SHALL BE PAINTED WITH ZINC CHROMATE OR EQUIVALENT.

CLOGGED OR DAMAGED SPILLWAYS SHALL BE REPAIRED IMMEDIATELY. TRASH AND OTHER DEBRIS SHALL BE REMOVED FROM THE BASIN AND RISER.

**STANDARD CONSTRUCTION DETAIL #3-4
 TRENCH PLUG INSTALLATION**



SECTION Y-Y

SECTION Z-Z

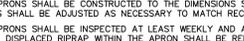
NOTES:
 ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS.

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**

OUTLET NO.	PIPE DIA (IN)	RIPRAP SIZE (IN)	THICK RT (IN)	LENGTH AI (FT)	INITIAL WIDTH AW (FT)	TERMINAL WIDTH ATW (FT)
FES-1	18	3	9	8	4.5	17.0
FES-2	18	3	9	8	4.5	17.0
FES-3	18	3	9	8	4.5	17.0
FES-4	18	3	9	8	4.5	17.0
FES-5	18	3	9	8	4.5	17.0

**STANDARD CONSTRUCTION DETAIL #7-14
 BAFFLE**



NOTES:
 SEE APPROPRIATE BASIN DETAIL FOR PROPER LOCATION AND ORIENTATION. AN ACCEPTABLE ALTERNATIVE IS TO INSTALL A SUPER SILT FENCE AT THE BAFFLE LOCATION

IN POOLS WITH DEPTHS EXCEEDING 7', THE TOP OF THE PLYWOOD BAFFLE DOES NOT NEED TO EXTEND TO THE TEMPORARY RISER CREST. SUPER SILT FENCE BAFFLES NEED NOT EXTEND TO TRCE ELEVATION.

BAFFLES SHALL BE TIED INTO ONE SIDE OF THE BASIN UNLESS OTHERWISE SHOWN ON THE PLAN DRAWINGS. SUBSTITUTION OF MATERIALS NOT SPECIFIED IN THIS DETAIL SHALL BE APPROVED BY THE DEPARTMENT OR THE LOCAL CONSERVATION DISTRICT BEFORE INSTALLATION.

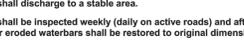
DAMAGED OR WARPED BAFFLES SHALL BE REPLACED WITHIN 7 DAYS OF INSPECTION. BAFFLES REQUIRING SUPPORT POSTS SHALL NOT BE INSTALLED IN BASINS REQUIRING IMPERVIOUS LINERS.

TABLE 3.1 - Maximum Waterbar Spacing

PERCENT SLOPE	SPACING (FT)
< 5	250
5 - 15	150
15 - 30	100
> 30	50

Adapted from USDA Forest Service

**STANDARD CONSTRUCTION DETAIL #3-5
 WATERBAR**



NOTES:
 Waterbars shall discharge to a stable area. Waterbars shall be inspected weekly (daily on active roads) and after each runoff event. Damaged or eroded waterbars shall be restored to original dimensions within 24 hours of inspection.

Maintenance of waterbars shall be provided until roadway, skidtrail, or right-of-way has achieved permanent stabilization.

Waterbars on retired roadways, skidtrails, and right-of-ways shall be left in place after permanent stabilization has been achieved.

TABLE 3.1 - Maximum Waterbar Spacing

PERCENT SLOPE	SPACING (FT)
< 5	250
5 - 15	150
15 - 30	100
> 30	50

Adapted from USDA Forest Service

**STANDARD CONSTRUCTION DETAIL #3-6
 WATERBAR**



NOTES:
 Waterbars shall discharge to a stable area. Waterbars shall be inspected weekly (daily on active roads) and after each runoff event. Damaged or eroded waterbars shall be restored to original dimensions within 24 hours of inspection.

Maintenance of waterbars shall be provided until roadway, skidtrail, or right-of-way has achieved permanent stabilization.

Waterbars on retired roadways, skidtrails, and right-of-ways shall be left in place after permanent stabilization has been achieved.

TABLE 3.1 - Maximum Waterbar Spacing

PERCENT SLOPE	SPACING (FT)
< 5	250
5 - 15	150
15 - 30	100
> 30	50

Adapted from USDA Forest Service

**STANDARD CONSTRUCTION DETAIL #7-16
 CONCRETE ANTI-SEEP COLLAR FOR PERMANENT BASINS OR TRAPS**



NOTES:
 ALL COLLARS SHALL BE INSTALLED SO AS TO BE WATERTIGHT. COLLAR SIZE AND SPACING SHALL BE AS INDICATED WITHIN TABLE.

TABLE 3.1 - Maximum Waterbar Spacing

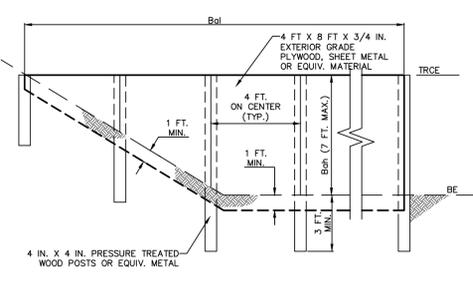
PERCENT SLOPE	SPACING (FT)
< 5	250
5 - 15	150
15 - 30	100
> 30	50

Adapted from USDA Forest Service

**STANDARD CONSTRUCTION DETAIL #8-3
 SEDIMENT TRAP TEMPORARY RISER**



NOTES:
 ALL COLLARS SHALL BE INSTALLED SO AS TO BE WATERTIGHT. COLLAR SIZE AND SPACING SHALL BE AS INDICATED WITHIN TABLE.



NOTES:
 SEE APPROPRIATE BASIN DETAIL FOR PROPER LOCATION AND ORIENTATION. AN ACCEPTABLE ALTERNATIVE IS TO INSTALL A SUPER SILT FENCE AT THE BAFFLE LOCATION

IN POOLS WITH DEPTHS EXCEEDING 7', THE TOP OF THE PLYWOOD BAFFLE DOES NOT NEED TO EXTEND TO THE TEMPORARY RISER CREST. SUPER SILT FENCE BAFFLES NEED NOT EXTEND TO TRCE ELEVATION.

BAFFLES SHALL BE TIED INTO ONE SIDE OF THE BASIN UNLESS OTHERWISE SHOWN ON THE PLAN DRAWINGS. SUBSTITUTION OF MATERIALS NOT SPECIFIED IN THIS DETAIL SHALL BE APPROVED BY THE DEPARTMENT OR THE LOCAL CONSERVATION DISTRICT BEFORE INSTALLATION.

DAMAGED OR WARPED BAFFLES SHALL BE REPLACED WITHIN 7 DAYS OF INSPECTION. BAFFLES REQUIRING SUPPORT POSTS SHALL NOT BE INSTALLED IN BASINS REQUIRING IMPERVIOUS LINERS.

TABLE 3.1 - Maximum Waterbar Spacing

PERCENT SLOPE	SPACING (FT)
< 5	250
5 - 15	150
15 - 30	100
> 30	50

Adapted from USDA Forest Service

**STANDARD CONSTRUCTION DETAIL #10-1
 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY**



NOTES:
 THE UPSLOPE DIVERSION CHANNEL SHOULD BE INSTALLED WHEREVER THE LOT EXTENDS MORE THAN 150 FEET ABOVE THE ROADWAY OR WHERE RUNOFF FORM AREAS ABOVE THE LOT IS NOT OTHERWISE DIVERTED AWAY FROM THE LOT. THE CHANNEL SHOULD BE PROPERLY SIZED AND PROVIDED WITH A SUITABLE PROTECTIVE LINING. THE DESIGNER AND/OR CONTRACTOR MUST EXERCISE CAUTION TO PROTECT ALL DOWNSTREAM PROPERTY OWNERS WHEN SELECTING A DISCHARGE POINT FOR THIS CHANNEL.

STANDARD CONSTRUCTION DETAIL #10-1
 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY

STANDARD CONSTRUCTION DETAIL #10-1
 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY

STANDARD CONSTRUCTION DETAIL #10-1
 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY

STANDARD CONSTRUCTION DETAIL #10-1
 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY

STANDARD CONSTRUCTION DETAIL #10-1
 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY

STANDARD CONSTRUCTION DETAIL #10-1
 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY

STANDARD CONSTRUCTION DETAIL #10-1
 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY

STANDARD CONSTRUCTION DETAIL #10-1
 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY

STANDARD CONSTRUCTION DETAIL #10-1
 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY

STANDARD CONSTRUCTION DETAIL #10-1
 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY

STANDARD CONSTRUCTION DETAIL #10-1
 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY

STANDARD CONSTRUCTION DETAIL #10-1
 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY

STANDARD CONSTRUCTION DETAIL #10-1
 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY

STANDARD CONSTRUCTION DETAIL #10-1
 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY

STANDARD CONSTRUCTION DETAIL #10-1
 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY

STANDARD CONSTRUCTION DETAIL #10-1
 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY

STANDARD CONSTRUCTION DETAIL #10-1
 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY

STANDARD CONSTRUCTION DETAIL #10-1
 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY

STANDARD CONSTRUCTION DETAIL #10-1
 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY

STANDARD CONSTRUCTION DETAIL #10-1
 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY

STANDARD CONSTRUCTION DETAIL #10-1
 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY

STANDARD CONSTRUCTION DETAIL #10-1
 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY

STANDARD CONSTRUCTION DETAIL #10-1
 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY

STANDARD CONSTRUCTION DETAIL #10-1
 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY

STANDARD CONSTRUCTION DETAIL #10-1
 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY

STANDARD CONSTRUCTION DETAIL #10-1
 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY

STANDARD CONSTRUCTION DETAIL #10-1
 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY

STANDARD CONSTRUCTION DETAIL #10-1
 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY

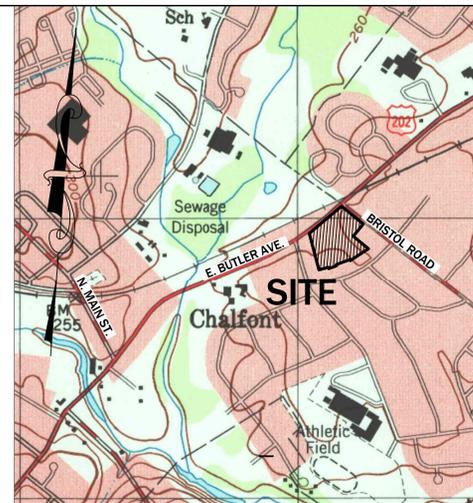
STANDARD CONSTRUCTION DETAIL #10-1
 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY

STANDARD CONSTRUCTION DETAIL #10-1
 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY

STANDARD CONSTRUCTION DETAIL #10-1
 TYPICAL ON-LOT BMPs FOR LOT ABOVE ROADWAY

Holmes Cunningham LLC
 350 E. Butler Ave., Ste 106
 New Britain, PA 18901
 (215) 586-3330
 www.hcengineering.net

REVISIONS	Description	Date
5-10-19 <td>REVISED PER ORDINANCE <td>5-10</td></td>	REVISED PER ORDINANCE <td>5-10</td>	5-10



APPLICANT'S ACKNOWLEDGEMENT:
 I, ROBERT CUNNINGHAM, ON THIS DATE AUGUST 29, 2018, HEREBY CERTIFIES THAT THE STORMWATER MANAGEMENT PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF THE CHALFONT BOROUGH CHAPTER 26 WATER AND STORMWATER MANAGEMENT ORDINANCE.

DESIGN ENGINEER CERTIFICATION:
 I, ROBERT CUNNINGHAM, ON THIS DATE AUGUST 29, 2018, HEREBY CERTIFIES THAT THE STORMWATER MANAGEMENT PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF THE CHALFONT BOROUGH CHAPTER 26 WATER AND STORMWATER MANAGEMENT ORDINANCE.

ROBERT T. CUNNINGHAM, P.E.
 PA LICENSE # PE076424

Test Pit Elevations

Infiltration Test #	Approx. Ground Surf. Elev. (ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)
TP-1	273.0	6.0	267.0
TP-2	270.4	(Dry)	<266.3
TP-3	271.6	4.7	266.9
TP-4	273.6	4.5	269.1
TP-5	268.1	1.2 (1)	267.1 (2)
TP-5A	268.1	1.6	266.5
TP-6	268.6	1.0 (1)	267.6 (2)
TP-6A	266.2	0.8 (1)	265.4 (2)
TP-7	267.4	2.7	264.7
TP-8	269.0	4.8	264.2
TP-9	269.9	3.3	266.6
TP-10	267.8	(Dry)	<260.8
TP-11	273.2	4.7	268.5

1) Represents perched water from pavement subbase or swale
 2) Represents perched water elevation

Soils Table

Symbol	Unit Name	HSG	Depth to Water	Depth to Bedrock
AbB	Abbotstown Silt Loam, 3 to 8 Percent Slopes	D	6-8 inches	40-60 Inches
UfuB	Urban Land, 0 to 8 Percent Slopes	C	> 80 inches	10-99 inches
UsB	Urban Land - Lawrenceville Complex, 0 to 8 Percent Slopes	C	18-36 inches	48-99 Inches

SOIL LIMITATIONS AND RESOLUTION:
 THE SOILS FOUND WITHIN THE PROJECT LIMITS HAVE LIMITATIONS DUE TO POSSIBLE SHALLOW DEPTH TO GROUNDWATER AND POSSIBLE SHALLOW DEPTH TO BEDROCK. IN ORDER TO RESOLVE THE GROUNDWATER LIMITATION, ANY STANDING WATER SHOULD BE PUMPED THROUGH A SEDIMENT FILTER BAG. TO RESOLVE THE BEDROCK LIMITATION, THE CONTRACTOR SHALL DETERMINE WHETHER ROCK IS RIPPLE. IF ROCK IS NOT RIPPLE, BLASTING WILL BE REQUIRED. ALL BLASTING SHALL MEET ALL LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS.

- GENERAL NOTES:**
- SITE GRADING SHALL NOT PROCEED UNTIL ALL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
 - UNDER PENNSYLVANIA LAW THE CONTRACTOR IS REQUIRED TO NOTIFY THE PENNSYLVANIA ONE-CALL SYSTEM AT 1-800-242-1776 PRIOR TO THE START OF HIS WORK, SO THAT ALL THE VARIOUS UNDERGROUND UTILITY OPERATORS WILL BE ABLE TO LOCATE THEIR OWN UTILITIES.
 - THERE ARE NO HO OR EV WATERSHEDS LOCATED WITHIN THE PROJECT AREA.
 - THERE ARE NO RIPARIAN BUFFERS EXISTING OR PROPOSED AS PART OF THIS PROJECT (WITHIN OR OUTSIDE THE LIMIT OF DISTURBANCE). ADDITIONALLY, RIPARIAN BUFFER OFFSETS ARE NOT NECESSARY.
 - THERE ARE NO WETLANDS TO BE DISTURBED WITHIN THE PROJECT AREA.
 - THERE ARE NO INFILTRATION BMPs LOCATED OUTSIDE PROPOSED GRADING AREAS.
 - THE EXISTING SITE IS NOT UNDERLAIN BY ANY NATURALLY OCCURRING GEOLOGIC FORMATIONS OR SOIL CONDITIONS WHICH COULD CAUSE POLLUTION DURING EARTH DISTURBANCE. THEREFORE, NO LOCATIONS ARE IDENTIFIED ON THIS PLAN AND NO DETAILS ARE PROVIDED FOR DISPOSAL OF SUCH MATERIAL.

CRITICAL STAGES OF PCSM PLAN IMPLEMENTATION:
 CONVERSION OF THE INFILTRATION BASIN REQUIRES OVERSIGHT BY A LICENSED PROFESSIONAL OR THEIR DESIGNEE.
 CONSTRUCTION SEQUENCE FOR PCSM BMPs
 REFER TO THE POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS PLAN, SHEET C6.5, FOR SOIL EROSION AND SEDIMENT CONTROL CONSTRUCTION SEQUENCE.
 REFER TO THE INFILTRATION BMP CONSTRUCTION SEQUENCE.

Holmes Cunningham LLC
 350 E. Butler Ave., Ste 106
 New Britain, PA 18901
 (215) 586-3330
 www.hcengineering.net

HC ENGINEERING

REVISIONS

Date	Description	REVISED PER ORDINANCE	REVISED PER COMMENTS
5-10-19			
7-29-19			

APPLICANT:
 ELU CHALFONT LLC

DESIGN ENGINEER CERTIFICATION:
 I, ROBERT CUNNINGHAM, ON THIS DATE AUGUST 29, 2018, HEREBY CERTIFIES THAT THE STORMWATER MANAGEMENT PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF THE CHALFONT BOROUGH CHAPTER 26 WATER AND STORMWATER MANAGEMENT ORDINANCE.

ROBERT T. CUNNINGHAM, P.E.
 PA LICENSE # PE076424

CHALFONT CROSSING
 TMP # 07-012-008, 07-012-008.001, 07-012-008-002,
 07-012-008-003, 07-012-008-005 & 07-012-008-007
 CHALFONT BOROUGH, BUCKS COUNTY, PENNSYLVANIA

POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

Professional Engineer Seal for Robert T. Cunningham, P.E., License # PE076424.

File No. 1377_C6.4.DWG

HCE Job 1377
 Date 11/15/2018
 Scale 1"=40'
 Designed RC
 Sheet 22 of 27

Drawing No. **C6.4**

SEEDING NOTES:

TEMPORARY SEEDING :

- TEMPORARY SEEDING SHALL BE DONE IN AREAS WHERE NO ACTIVITY WORK WILL BE PERFORMED. ANY DISTURBED AREA ON WHICH ACTIVITY HAS CEASED MUST BE SEEDDED AND MULCHED IMMEDIATELY.
- DURING NON-GERMINATING PERIODS, ONLY MULCH MUST BE APPLIED AT THE RECOMMENDED RATES. AREAS MULCHED DURING THE NON-GERMINATING PERIODS, MUST BE LIMED, FERTILIZED, SEEDDED, AND MULCHED IMMEDIATELY FOLLOWING THE END OF THE NON-GERMINATING PERIODS.
- DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE AND WHICH WILL BE REDISTURBED WITHIN ONE (1) YEAR MAY BE SEEDDED AND MULCHED WITH A QUICK GROWING TEMPORARY SEED MIXTURE.
- DISTURBED AREAS WHICH ARE AT EITHER FINISHED GRADE OR WILL NOT BE DISTURBED AGAIN WITHIN ONE (1) YEAR MUST BE SEEDDED WITH A PERMANENT SEED MIXTURE AND MULCHED.
- TEMPORARY SEEDING STEPS:
 - APPLY AGRICULTURAL LIMESTONE AT A RATE OF ONE (1) TON PER ACRE. (5 POUNDS PER, 1000 SQUARE FEET)
 - APPLY FERTILIZER AT THE RATE OF 50-50-50 PER ACRE.
 - WORK THE LIMESTONE AND FERTILIZER INTO THE SOIL.
 - UTILIZING THE FOLLOWING SEEDING TYPES, RATES AND TIME SCHEDULE :

SEASON	TEMPORARY SEEDING RATE	TYPE
MARCH 1 TO JUNE 15	1 LB./1000 SF	ANNUAL RYEGRASS
MAY 15 TO SEPT 15	1 LB./1000 SF	SUDAN GRASS
SEPT 15 TO OCT 15	168 LB./AC	WINTER RYE

PERMANENT SEEDING:

- DISTURBED AREAS WHICH ARE EITHER AT FINISHED GRADE OR WILL NOT BE DISTURBED AGAIN WITHIN ONE (1) YEAR MUST BE SEEDDED WITH A PERMANENT SEED MIXTURE AND MULCHED.
- SEEDING SHALL BE DONE DURING PERIODS FROM APRIL 15TH TO OCTOBER PT, UNLESS OTHERWISE DIRECTED. IF SEEDING IS DONE AFTER OCTOBER 1st, DORMANT SEED MUST BE USED AND DISTURBED AREAS MUST BE MULCHED.
- DISTURBED FINAL GRADED AREAS AND DRAINAGE SWALES WILL BE PERMANENTLY SEEDDED AS FOLLOWS:
 - MINIMUM OF 4" OF TOPSOIL SHALL BE SPREAD OVER ALL AREAS TO BE SEEDDED. TOPSOIL SHALL BE FREE OF STONES, STICKS, WASTE MATERIAL AND SIMILAR DEBRIS. FROZEN GROUND SHALL NOT BE SPREAD AS TOPSOIL AND TOPSOIL SHALL NOT BE SPREAD OVER FROZEN GROUND.
 - A SOIL ANALYSIS IS RECOMMENDED, HOWEVER, IN LIEU OF AN ANALYSIS APPLY AGRICULTURAL LIMESTONE AND FERTILIZER AT RATES RECOMMENDED BELOW (OR AS SUGGESTED BY THE SOIL TEST RESULTS (ONE (1) TEST PER 25 ACRES)).
 - THE LIMESTONE AND FERTILIZER SHALL BE WORKED INTO THE SOIL TO DEPTHS OF 3 TO 4 INCHES. D. GRASS SHALL NOT BE PLANTED AFTER HEAVY RAIN OR WATERING.
 - ALL SEED USED SHALL BE LABELED IN ACCORDANCE WITH THE U.S. DEPARTMENT OF AGRICULTURE RULES AND REGULATIONS UNDER THE FEDERAL SEED ACT IN EFFECT AT THE TIME OF PURCHASE. INERT MATTER SHALL NOT EXCEED 15% AND BLUE TAG CERTIFIED SEED SHALL BE SUPPLIED WHEREVER POSSIBLE.
 - SMOOTH AND FINISH SURFACE EQUIPMENT PRIOR TO SEEDING. APPLY SEED UNIFORMLY BY BROADCASTING, DRILLING OR HYDRO SEEDING. COVER SEEDS WITH 1/2" OF SOIL WITH SUITABLE EQUIPMENT.
 - APPLY HAY OR STRAW MULCH (IN ACCORDANCE WITH SECTION NO. 4) AT A RATE OF THREE (3) TONS PER ACRE.

PERMANENT SEEDING FOR NORMAL MOWED LAWN AREAS:

SEASON	RATE	TYPE
MARCH 1 TO JUNE 1 & AUG 15 TO OCT 1	2 LBS./1000 SF	KY31 TALL FESCUE AND RED TOP 12%
OCT 1 TO MARCH 1 & JUNE 1 TO AUG 1	2 LBS./1000 SF	RED TOP

(* USE DORMANT SEED, UNIFORMLY APPLIED, WORKING INTO A DEPTH OF 1/4 INCH. THE USE OF MULCH IS REQUIRED. THE USE OF NETTING OR EROSION CONTROL MATS MAY BE REQUIRED.)

PERMANENT SEEDING FOR SPECIAL AREAS (SWALES, POND EMBANKMENTS, LEVEES, DIVERSION CHANNELS, ETC.):

SEASON	RATE	TYPE
MARCH 1 TO JUNE 1 & AUG 15 TO OCT 1	2 LBS./1000 SF	KY31 TALL FESCUE 80% AND RYEGRASS 20%

NOTE : SEEDING PERIODS AND SPECIFICATIONS MAY VARY DUE TO SITE CONDITIONS AND VARIANCES FROM THE TIME THIS REPORT IS WRITTEN AND APPROVED. IT MAY BE NECESSARY TO ADAPT SEED SPECIFICATION, VARIETIES, AND QUALITIES. FOR SPECIAL CONDITIONS CONSULT "GUIDELINE FOR RECLAMATION OF SEVERELY DISTURBED AREAS", PENNSYLVANIA STATE UNIVERSITY.

- FERTILIZER : A SOIL ANALYSIS IS RECOMMENDED BUT IN LIEU OF AN ANALYSIS APPLY AGRICULTURAL LIMESTONE AT A RATE OF FOUR (4) TONS/ACRE AND 1000 SF. THESE MATERIALS WILL BE UNIFORMLY APPLIED AND WORKED INTO THE TOPSOIL TO A DEPTH OF 3 TO 4 INCHES. IMMEDIATELY BEFORE SEEDING, A 1 0-1 0-10 FERTILIZER WILL BE WORKED INTO THE SURFACE AT A RATE OF 10 LBS. PER 1000 SF.
- HYDRO SEEDING: LIME AND SEED SHALL BE AS SPECIFIED ABOVE, AND FERTILIZER SHALL BE APPLIED AT A RATE OF 40-80. CROWN VETCH SHALL BE INOCULATED AT FOUR TIMES THE MANUFACTURER'S RATE. SHOULD FERTILIZER BE APPLIED WITH THE INOCULANT, THE MIXTURE SHALL NOT REMAIN IN A SLURRY FOR MORE THAN ONE HOUR. WOOD CELLULOSE FIBER, APPLIED AT A RATE OF 35 LBS. PER 1000 SF, MAY BE APPLIED AS PART OF THE SLURRY IN LIEU OF MULCHING. SYNTHETIC MULCH BINDER, SUCH AS CURASOL, DCA-70, TERRE-TACK OR AN APPROVED EQUAL SHALL BE USED PER THE MANUFACTURER'S INSTRUCTIONS TO ANCHOR THE MULCH.
- MULCHING: MULCHING SHALL BE APPLIED AS FOLLOWS:
 - STRAW - SHALL BE ALL DRIED AND FREE FROM UNDESIRABLE SEEDS AND COARSE MATERIAL, APPLY AT A RATE OF 115 TO 150 LBS. PER 1000 SF OR 3 TONS PER ACRE. MULCHED AREAS SHALL BE CHECKED PERIODICALLY AND IMMEDIATELY AFTER STORMS AND WIND, DAMAGED OR MISSING MULCH SHALL BE REPLACED. A TACKIFIER APPLIED AFTER STRAW IS RECOMMENDED. TACKIFIER MAY BE ASPHALT OR POLYMER SPRAY. APPLY AT A RATE RECOMMENDED BY THE MANUFACTURER WITH SUITABLE EQUIPMENT. IN LIEU OF MANUFACTURERS RECOMMENDATIONS APPLY AT A RATE OF .04 TO .06 GALLONS PER SQUARE YARD.
 - NETTING / EROSION CONTROL BLANKETS - THE USE AND INSTALLATION OF EROSION CONTROL BLANKETS OR NETTING SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION AND SHALL BE SELECTED FOR THE PROPER APPLICATION AND CONDITIONS.

MINIMIZE IMPERVIOUS AREAS

THE PROJECT HAS LIMITED IMPERVIOUS AREAS PROPOSED TO THE MAXIMUM EXTENT POSSIBLE. THE SITE PLAN HAS CLUSTERED THE DEVELOPMENT TO REDUCE THE EXTENT OF PROPOSED ROADWAYS AND THE DRIVEWAYS ARE THE MINIMUM ACCEPTABLE LENGTH.

PROTECTION OF EXISTING DRAINAGE FEATURES AND VEGETATION

THE LIMIT OF DISTURBANCE IS MINIMIZED TO REDUCE THE DISTURBANCE TO THE EXISTING FEATURES. THE EXISTING VEGETATION AROUND THE PERIMETER OF THE SITE IS TO REMAIN TO THE MAXIMUM EXTENT POSSIBLE. THERE IS NO PROPOSED DISTURBANCE TO DRAINAGE FEATURES.

MINIMIZE LAND CLEARING

THE PROJECT HAS LIMITED THE SOIL DISTURBANCE AREA TO THE MAXIMUM EXTENT POSSIBLE AND LAND CLEARING IS LIMITED TO THE AREAS SHOWN ON THE PLAN.

STRUCTURAL AND NON-STRUCTURAL BMPs TO DECREASE STORMWATER RUNOFF

RE-VEGETATE DISTURBED AREAS: ALL DISTURBED AREAS WILL BE PERMANENTLY SEEDDED OR LANDSCAPED. ADDITIONALLY, NEW TREES WILL BE PLANTED THROUGHOUT THE SITE TO REDUCE THE THERMAL IMPACTS OF IMPERVIOUS SURFACES AND REDUCE RUNOFF VOLUME THROUGH TRANSPIRATION.

ROOFTOP DISCONNECTION: DISCONNECTING ROOF LEADERS FROM CONVENTIONAL STORMWATER CONVEYANCE SYSTEMS ALLOWS ROOFTOP RUNOFF TO BE COLLECTED AND MANAGED ON SITE. ROOFTOP RUNOFF CAN BE DIRECTED TO DESIGNATED AREAS FOR ON-SITE STORAGE, TREATMENT AND VOLUME CONTROL. THE PROPOSED ROOF LEADERS FOR EACH DWELLING UNIT WILL DISCHARGE TO VEGETATED AREAS.

BMP SEEDING

BASIN FLOORS / RAIN GARDENS

SEED IN ERNST SEED MIX (ERNMX-180); RAIN GARDEN AREA MIX
SEEDING RATE IS 20 LBS. PER ACRE WITH 30 LBS. PER ACRE GRAIN RYE (COVER CROP)
BASIN FLOOR & RAIN GARDEN AREAS = 24,510 SF
(24510/43560) X 20 = 11.20 LBS. ERNMX-180
(24510/43560) X 30 = 16.80 LBS. GRAIN RYE

ERNMX-180 RAIN GARDEN AREA MIX

- 26% River Oats, PA/VA Ecotype blend (*Chasmanthium latifolium* (Uniola latifolia), PA/VA Ecotype blend)
- 17% Virginia Wildrye, PA Ecotype (*Elymus virginicus*, PA Ecotype)
- 15% Fowl Bluegrass (*Poa palustris*)
- 10% Fox Sedge, PA Ecotype (*Carex vulpinoidea*, PA Ecotype)
- 18% Purple Coneflower, PA Ecotype (*Echinacea purpurea*)
- 4% Blackeyed Susan, Coastal Plain NC Ecotype (*Rudbeckia hirta*, Coastal Plain NC Ecotype)
- 3% Zigzag Aster, PA Ecotype (*Aster prenanthoides* (Symphyotrichum p.), PA Ecotype)
- 3% Blue False Indigo, Southern WV Ecotype (*Baptisia australis*, Southern WV Ecotype)
- 3% Ohio Spiderwort, PA Ecotype (*Tradescantia ohioensis*, PA Ecotype)
- 2% Lanceleaf Coreopsis, Coastal Plain NC Ecotype (*Coreopsis lanceolata*, Coastal Plain NC Ecotype)
- 2% Wild Bergamot, PA Ecotype (*Monarda fistulosa*, PA Ecotype)
- 2% Wild Senna, VA & WV Ecotype (*Senna hebecarpa* (Cassia h.), VA & WV Ecotype)
- 2% Autumn Bergamot, PA Ecotype (*Agrostis perennans*, PA Ecotype)
- 2% Marsh (Dense) Blazing Star (Spiked Gayfeather), PA Ecotype (*Liatris spicata*, PA Ecotype)
- 1% Early Goldenrod, PA Ecotype (*Solidago juncea*, PA Ecotype)
- 1% Oxeeye Sunflower, PA Ecotype (*Helopsis helianthoides*, PA Ecotype)
- 1% Swamp Milkweed, PA Ecotype (*Asclepias incarnata*, PA Ecotype)

BASIN SIDE SLOPES

SEED IN ERNST SEED MIX (ERNMX-181); NATIVE STEEP SLOPE MIX W/ ANNUAL RYEGRASS
SEEDING RATE IS 60 LBS. PER ACRE
SIDE SLOPE AREAS = 25,270 SF
(25270/43560) X 60 = 34.80 LBS. ERNMX-181

ERNMX-181 NATIVE STEEP SLOPE MIX W/ ANNUAL RYEGRASS

- 20% Annual Ryegrass (*Lolium multiflorum* (L. perenne var. italicum))
- 18% Purple Coneflower, PA Ecotype (*Echinacea purpurea*)
- 15% Purpletop (*Tridens flavus*)
- 12% Creeping Red Fescue (*Festuca rubra*)
- 12% Indiangrass, "Prairie View"-IN Ecotype (*Sorghastrum nutans*, "Prairie View"-IN Ecotype)
- 5% Big Bluestem, "Southlow"-MI Ecotype (*Andropogon gerardi*, "Southlow"-MI Ecotype)
- 4% Autumn Bergamot, Albany Pine Bush-NY Ecotype (*Agrostis perennans*, Albany Pine Bush-NY Ecotype)
- 4% Ticklegrass (Rough Bentgrass), PA Ecotype (*Agrostis scabra*, PA Ecotype)
- 2% Partridge Pea, PA Ecotype (*Chamaecrista fasciculata* (Coccia f.), PA Ecotype)
- 2% Purple Coneflower (*Echinacea purpurea*)
- 2% Blackeyed Susan (*Rudbeckia hirta*)
- 1% Marsh (Dense) Blazing Star (Spiked Gayfeather), PA Ecotype (*Liatris spicata*, PA Ecotype)
- 1% Oxeeye Sunflower, PA Ecotype (*Helopsis helianthoides*, PA Ecotype)
- 1% Lanceleaf Coreopsis, Coastal Plain NC Ecotype (*Coreopsis lanceolata*, Coastal Plain NC Ecotype)
- 1% Wild Bergamot (*Monarda fistulosa*)

INFILTRATION BASIN LANDSCAPE MAINTENANCE

THIS BASIN IS DESIGNED TO BECOME NATURALIZED OVER TIME AND WILL REQUIRE LESS MAINTENANCE AS TIME GOES ON.

MOWING - ESTABLISH AND MAINTAIN A NO-MOW ZONE THAT ENCOMPASSES THE BASIN FLOOR AND SIDE SLOPES. MOW THE NO-MOW ZONE 1X/YEAR TO A MINIMUM HEIGHT OF 6". (ANNUALLY IN LATE APRIL/ EARLY MAY). RAKE MOWN MATERIAL AND COMPOST OR DISPOSE OF OFF SITE.

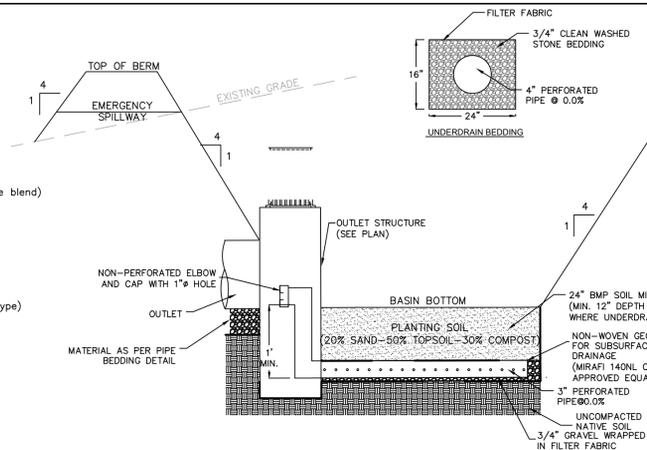
INSPECTIONS - INSPECT BASIN AND NO-MOW ZONES FOR INVASIVE SPECIES SUCH AS PURPLE LOOSESTRIPE, PHRAGMITES, HONEYSUCKLE, ETC. (ANNUALLY IN JULY). IF INVASIVE SPECIES ARE FOUND REMOVE PER RECOMMENDED STANDARDS FOR SPECIFIC SPECIES FOLLOWING GUIDELINES BY PA DCNR (DEPT OF CONSERVATION & NATURAL RESOURCES).

CLEANING - REMOVE TRASH AND DEBRIS (JANUARY & APRIL)

RECYCLING/ DISPOSAL OF MATERIALS

THE CONSTRUCTION WASTES ANTICIPATED INCLUDE DEMOLITION MATERIALS FROM THE BUILDING AND SITE DEMOLITION AND EXCESS BUILDING MATERIAL SUCH AS CONCRETE, WOOD, ETC.

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.



#	TOP OF BERM	EMERGENCY SPILLWAY (RISER)	BASIN BOTTOM
BASIN 1	267.50	266.25	264.00
BASIN 2	272.50	271.00	269.00

VEGETATED BASIN DETAIL

BMP MAINTENANCE PLAN
NOTE: AN ANNUAL REPORT SHALL BE PREPARED AND RETAINED BY THE RESPONSIBLE PARTY STATING THE FOLLOWING MAINTENANCE HAS BEEN PERFORMED.

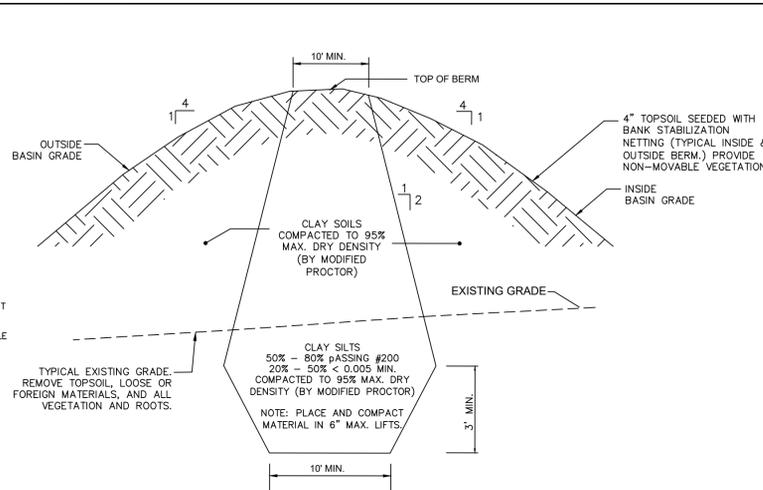
THE HOMEOWNERS ASSOCIATION IS RESPONSIBLE FOR MAINTENANCE OF THE STORMWATER CONVEYANCE SYSTEM, AND ALL OTHER PROPOSED BMP'S.

STORMWATER CONVEYANCE SYSTEM

- CATCH BASINS, MANHOLES AND PIPES TO BE INSPECTED FOR CLOGGING AND EXCESSIVE DEBRIS AND SEDIMENT ACCUMULATION AT LEAST ANNUALLY AS WELL AS AFTER EVERY STORM EXCEEDING 1-INCH OF RAINFALL.
- ALL STRUCTURAL COMPONENTS MUST BE INSPECTED FOR CRACKING, SUBSIDENCE, BREACHING, WEARING, AND DETERIORATION AT LEAST ANNUALLY.

VEGETATED STORMWATER BASIN (MANAGED RELEASE CONCEPT):

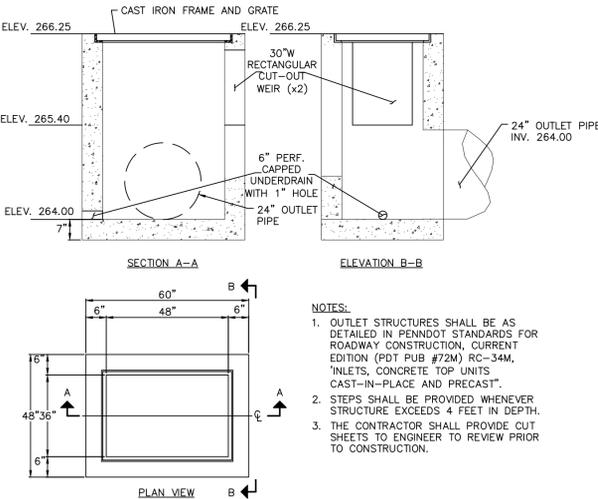
- UPGRADIENT CATCH BASINS AND INLETS SHOULD BE INSPECTED AND CLEANED ANNUALLY, OR MORE OFTEN IF HISTORICAL MAINTENANCE RECORDS SUGGEST A MORE FREQUENT CLEANING.
- THE VEGETATION (FOR THE MRC BMP AND CONTRIBUTING DRAINAGE AREA) SHOULD BE MAINTAINED IN GOOD CONDITION, AND ANY BARE SPOTS REVEGETATED.
- CARE SHOULD BE TAKEN TO AVOID EXCESSIVE COMPACTION BY MOWERS. MOW ONLY AS APPROPRIATE FOR VEGETATIVE SPECIES.
- INSPECT AT LEAST TWO TIMES PER YEAR AFTER RUNOFF EVENTS GREATER THAN 0.8 INCH AND MAKE SURE THAT RUNOFF DRAINS DOWN WITHIN THE DESIGN PARAMETERS (THE LICENSED PROFESSIONAL ENGINEER SHOULD CLEARLY IDENTIFY WHAT THESE PARAMETERS ARE).
- AT LEAST TWO TIMES PER YEAR, OR MORE IF HISTORICAL MAINTENANCE INDICATE IT IS NECESSARY, INSPECT FOR ACCUMULATION OF SEDIMENT, DAMAGE TO OUTLET CONTROL STRUCTURES, EROSION, SIGNS OF WATER CONTAMINATION/SPILLS, AND INSTABILITY. LEAF LITTER NEEDS TO BE REMOVED ANNUALLY.
- AS NEEDED, REMOVE ACCUMULATED SEDIMENT AS REQUIRED TO MAINTAIN INFILTRATION THROUGH THE MRC'S SOIL MEDIA AND TO MAINTAIN WATER QUALITY FUNCTIONALITY. RESTORE ORIGINAL CROSS SECTION. PROPERLY DISPOSE OF SEDIMENT.
- IF POROUS PAVEMENT IS INCLUDED IN THE DESIGN, VACUUM AT LEAST TWICE PER YEAR. VACUUM SHOULD HAVE SUFFICIENT SUCTION POWER AND BE DESIGNED FOR USE WITH POROUS PAVEMENTS.
- ALL MRC BMP COMPONENTS SHOULD BE MAINTAINED AS INDICATED IN THE STORMWATER BMP MANUAL.



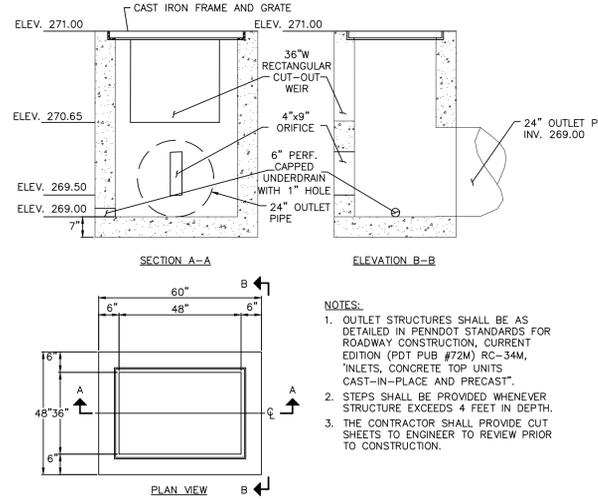
STANDARD BASIN BERM CONSTRUCTION NOTES

- SITE PREPARATION - AREAS UNDER THE EMBANKMENT AND ANY STRUCTURES SHALL BE CLEARED, GRUBBED AND THE TOPSOIL STRIPPED TO REMOVE TREES, VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL. IN ORDER TO FACILITATE CLEAN-OUT AND RESTORATION, THE POOL AREA WILL BE CLEARED OF ALL BRUSH AND EXCESS TREES.
- CUT OFF TRENCH - A CUT-OFF TRENCH WILL BE EXCAVATED ALONG THE BERM CENTERLINE BENEATH EARTH FILL EMBANKMENTS. THE MINIMUM DEPTH SHALL BE 3 FEET. THE CUT-OFF TRENCH SHALL EXTEND TO THE RISER CREST ELEVATION. THE MINIMUM BOTTOM WIDTH SHALL BE 8 FEET BUT WIDE ENOUGH TO PERMIT OPERATION OF COMPACTION EQUIPMENT. THE SIDE SLOPES SHALL BE NO STEEPER THEN 1:1. COMPACTION REQUIREMENTS SHALL BE THE SAME AS THOSE FOR EMBANKMENTS. THE TRENCH SHALL BE KEPT FREE OF STANDING WATER DURING THE BACKFILLING OPERATIONS.
- EMBANKMENT - THE FILL MATERIAL SHALL BE TAKEN FROM SELECTED BORROW AREAS. IT SHALL BE FREE OF ROOTS, WOODY VEGETATION, OVERSIZED STONES ROCKS OR OTHER OBJECTIONABLE MATERIAL. AREAS ON WHICH FILL IS TO BE PLACED SHALL BE SCARIFIED PRIOR TO PLACEMENT OF FILL. THE FILL MATERIAL SHOULD CONTAIN SUFFICIENT MOISTURE SO THAT IT CAN BE FORMED BY HAND INTO BALLS THAT CRUMBLE. IF WATER CAN BE SQUEEZED OUT OF THE BALL, IT IS TOO WET FOR PROPER COMPACTION. FILL MATERIAL MUST BE PLACED IN 6 TO 8 INCH LAYERS AND SHALL BE CONTINUOUS OVER THE ENTIRE LENGTH OF THE FILL. COMPACTION MUST BE OBTAINED BY MECHANICAL SHEEP FOOT ROLLERS. THE EMBANKMENT SHALL BE CONSTRUCTED TO AN ELEVATION OF 5% HIGHER THAN THE DESIGN HEIGHT TO ALLOW FOR SETTLEMENT.

BASIN BERM DETAIL



BASIN 1 OUTLET STRUCTURE DETAIL



BASIN 2 OUTLET STRUCTURE DETAIL

CONSTRUCTION SEQUENCE FOR PCSM BMPs

SITE SPECIFIC CONSTRUCTION SEQUENCE

- REFER TO SHEET C6.2 FOR CONSTRUCTION SEQUENCE.
- ONCE ALL UPSTREAM MEASURES FOR THE BMP HAVE BEEN STABILIZED, THE INDIVIDUAL BMP MAY BE CONSTRUCTED PER THE SEQUENCES IDENTIFIED BELOW.

VEGETATED STORMWATER BASIN (MANAGED RELEASE CONCEPT) / RAIN GARDEN CONSTRUCTION SEQUENCE

- IF ANY UNFAVORABLE CONDITIONS ARE ENCOUNTERED DURING THE INSTALLATION OF THE BASINS (I.E. GROUNDWATER AND/OR BEDROCK PINNACLES OF CARBONATE BEDROCK, ETC.), THE OWNER/ENGINEER SHOULD BE NOTIFIED IMMEDIATELY SINCE THE PROPOSED BASINS MAY NEED TO BE RELOCATED TO A MORE SUITABLE LOCATION ON THE PROPERTY.
- INSTALL TEMPORARY SEDIMENT CONTROL BMPs AS SHOWN ON THE PLANS.
- EXISTING SUB-GRADE IN BIOINFILTRATION AREAS SHALL NOT BE COMPACTED OR SUBJECTED TO EXCESSIVE CONSTRUCTION EQUIPMENT TRAFFIC.
- INITIAL EXCAVATION CAN BE PERFORMED DURING ROUGH SITE GRADING BUT SHALL NOT BE CARRIED TO WITHIN ONE FEET OF THE FINAL BOTTOM ELEVATION. FINAL EXCAVATION SHOULD NOT TAKE PLACE UNTIL ALL DISTURBED AREAS IN THE DRAINAGE AREA HAVE BEEN STABILIZED. BASIN BED AREAS MAY BE USED AS TEMPORARY SEDIMENT FACILITIES PROVIDED THAT THE PROPOSED FINISH ELEVATION OF THE BED IS 12 INCHES LOWER THAN THE BOTTOM ELEVATION OF THE BASIN. IF SEDIMENT FACILITIES ARE LOCATED WITHIN 12 INCHES OF BMP ELEVATION, CONTRACTOR SHALL EXCAVATE MATERIAL TO A DEPTH 36 INCHES BELOW FINAL GRADE AND REPLACE WITH 12 INCHES OF CLEAN, LIGHTLY COMPACTED SOIL PRIOR TO PLACING PLANTING SOIL.
- WHERE EROSION OF SUB-GRADE HAS CAUSED ACCUMULATION OF FINE MATERIALS AND/OR SURFACE PONDING IN THE GRADED BOTTOM, THIS MATERIAL SHALL BE REMOVED WITH LIGHT EQUIPMENT AND THE UNDERLYING SOILS SCARIFIED TO A MINIMUM DEPTH OF 6 INCHES WITH A YORK RAKE OR EQUIVALENT BY LIGHT TRACTOR.
- BRING SUBGRADE OF BIOINFILTRATION AREA TO LINE, GRADE AND ELEVATIONS INDICATED. FILL AND LIGHTLY REGRADE ANY AREAS DAMAGED BY EROSION, PONDING OR TRAFFIC.
- UPON COMPLETION OF THE SUBGRADE WORK, THE ENGINEER SHALL BE NOTIFIED AND SHALL INSPECT AT THE ENGINEER'S DISCRETION BEFORE PROCEEDING WITH INSTALLATION.
- PLANTING SOIL SHALL BE PLACED IMMEDIATELY AFTER APPROVAL OF SUBGRADE SHALL BE REMOVED PRIOR TO INSTALLATION OF SEDIMENT CONTROL DEVICES.
- INSTALL PLANTING SOIL IN 12 INCH MAXIMUM LIFTS AND DO NOT COMPACT. KEEP EQUIPMENT MOVING TO A MINIMUM. DO NOT OVER COMPACT ALL PLANTING SOIL TO GRADES SHOWN ON PLANS.
- PLANT TREES AND SHRUBS ACCORDING TO BASIN DETAILS AND NOTES.
- AFTER INSTALLATION OF ERNST SEED MIX, STABILIZE THE BOTTOM FO THE BASINS WITH BIODEGRADABLE VEGETATIVE MATTING ENSURE SEED MIX DOES NOT WASH AWAY PRIOR TO STABILIZATION.
- PROTECT BASINS FROM SEDIMENT AT ALL TIMES. HAYBALES, DIVERSION BERMS AND/OR OTHER APPROPRIATE MEASURES SHALL BE USED AT THE TOE OF THE SLOPES THAT ARE ADJACENT TO THE RAIN GARDENS TO PREVENT SEDIMENT FROM WASHING INTO THESE AREAS DURING SITE DEVELOPMENT.
- WHEN SITE IS FULLY VEGETATED AND THE SOIL MANTLE IS STABILIZED THE PLAN DESIGNER SHALL BE NOTIFIED AND SHALL INSPECT THE BASIN DRAINAGE AREA AT THE ENGINEER'S DISCRETION BEFORE THE AREA IS BROUGHT ONLINE AND SEDIMENT CONTROL DEVICES REMOVED.
- CONTINUOUS MOISTURE FOR 4-6 WEEKS MUST BE INSURED TO ALLOW PROPER GERMINATION, IF RAIN DOES NOT OCCUR THE CONTRACTOR SHALL PROVIDE SUPPLEMENTAL IRRIGATION TO NEWLY SEEDDED AREAS PER INSTRUCTIONS INCLUDED IN SEEDING SPECIFICATION.

Holmes Cunningham LLC
350 E. Butler Ave., Ste 106
New Britain, PA 18901
(215) 586-3330
www.hcengineering.net

REVISIONS	Description	Date
1	REVISED PER ORDINANCE	5-10-19
2	REVISED PER COMMENTS	7-29-19

CALL BEFORE YOU DIG!!
THIS IS A CONSTRUCTION PROJECT AND YOU MUST CALL 800-4-A-DAWG TO LOCATE UTILITIES.
Call System, Inc.
1-800-474-1776

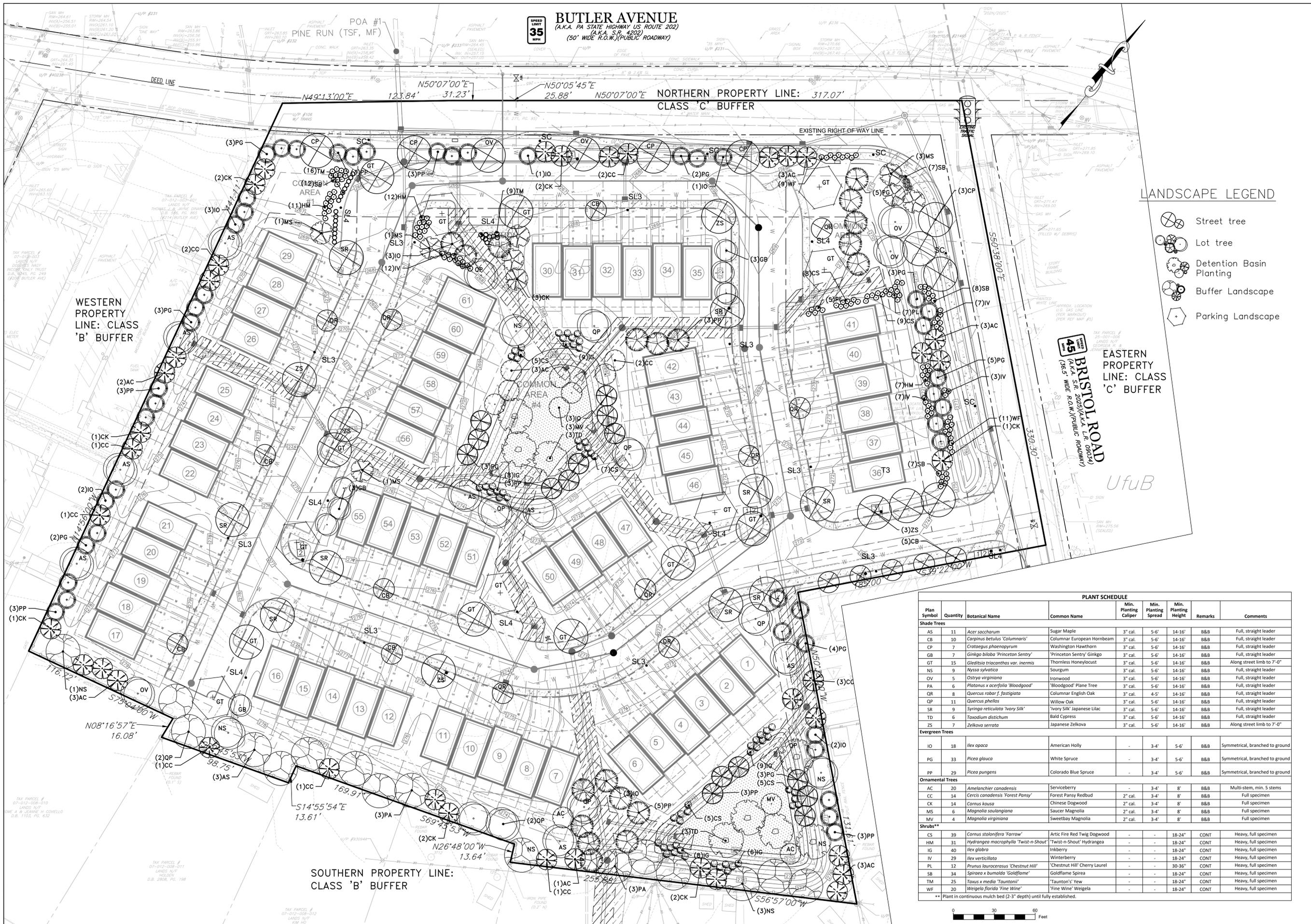
CHALFONT CROSSING
TMP # 07-012-008, 07-012-008.001, 07-012-008.002,
07-012-008.003, 07-012-008.005 & 07-012-008.007
CHALFONT BOROUGH, BUCKS COUNTY, PENNSYLVANIA

POST CONSTRUCTION STORMWATER
MANAGEMENT DETAILS

File No.
1377_C6.4.DWG

HCE Job 1377
Date 11/25/2018
Scale N.T.S.
Designed RC
Sheet 23 of 27

Drawing No.
C6.5



BUTLER AVENUE
 (A.K.A. PA STATE HIGHWAY US ROUTE 202)
 (A.K.A. S.R. 4202)
 (50' WIDE R.O.W.) (PUBLIC ROADWAY)



LANDSCAPE LEGEND

- Street tree
- Lot tree
- Detention Basin Planting
- Buffer Landscape
- Parking Landscape

BRISTOL ROAD
 (A.K.A. S.R. 2023) (A.K.A. L.R. 6023H)
 (36.5' WIDE R.O.W.) (PUBLIC ROADWAY)

Plan Symbol	Quantity	Botanical Name	Common Name	Min. Planting Caliper	Min. Planting Spread	Min. Planting Height	Remarks	Comments
Shade Trees								
AS	11	<i>Acer saccharum</i>	Sugar Maple	3" cal.	5'-6'	14'-16'	B&B	Full, straight leader
CB	10	<i>Carpinus betulus 'Columnaris'</i>	Columnar European Hornbeam	3" cal.	5'-6'	14'-16'	B&B	Full, straight leader
CP	7	<i>Crataegus phoenopyrum</i>	Washington Hawthorn	3" cal.	5'-6'	14'-16'	B&B	Full, straight leader
GB	7	<i>Ginkgo biloba 'Princeton Sentry'</i>	'Princeton Sentry' Ginkgo	3" cal.	5'-6'	14'-16'	B&B	Full, straight leader
GT	15	<i>Gleditsia triacanthos var. inermis</i>	Thornless Honeylocust	3" cal.	5'-6'	14'-16'	B&B	Along street limb to 7'-0"
NS	9	<i>Nyssa sylvatica</i>	Sourgum	3" cal.	5'-6'	14'-16'	B&B	Full, straight leader
OV	5	<i>Ostrya virginiana</i>	Ironwood	3" cal.	5'-6'	14'-16'	B&B	Full, straight leader
PA	6	<i>Platanus x acerifolia 'Bloodgood'</i>	'Bloodgood' Plane Tree	3" cal.	5'-6'	14'-16'	B&B	Full, straight leader
QR	8	<i>Quercus robur f. fastigiata</i>	Columnar English Oak	3" cal.	4'-5'	14'-16'	B&B	Full, straight leader
QP	11	<i>Quercus phellos</i>	Willow Oak	3" cal.	5'-6'	14'-16'	B&B	Full, straight leader
SR	9	<i>Syringa reticulata 'Ivory Silk'</i>	'Ivory Silk' Japanese Lilac	3" cal.	5'-6'	14'-16'	B&B	Full, straight leader
TD	6	<i>Taxodium distichum</i>	Bald Cypress	3" cal.	5'-6'	14'-16'	B&B	Full, straight leader
ZS	7	<i>Zelkova serrata</i>	Japanese Zelkova	3" cal.	5'-6'	14'-16'	B&B	Along street limb to 7'-0"
Evergreen Trees								
IO	18	<i>Ilex opaca</i>	American Holly	-	3'-4'	5'-6'	B&B	Symmetrical, branched to ground
PG	33	<i>Picea glauca</i>	White Spruce	-	3'-4'	5'-6'	B&B	Symmetrical, branched to ground
PP	29	<i>Picea pungens</i>	Colorado Blue Spruce	-	3'-4'	5'-6'	B&B	Symmetrical, branched to ground
Ornamental Trees								
AC	20	<i>Amelanchier canadensis</i>	Serviceberry	-	3'-4'	8'	B&B	Multi-stem, min. 5 stems
CC	14	<i>Cercis canadensis 'Forest Pansy'</i>	Forest Pansy Redbud	2" cal.	3'-4'	8'	B&B	Full specimen
CK	14	<i>Cornus kousa</i>	Chinese Dogwood	2" cal.	3'-4'	8'	B&B	Full specimen
MS	6	<i>Magnolia soulangeana</i>	Saucer Magnolia	2" cal.	3'-4'	8'	B&B	Full specimen
MV	4	<i>Magnolia virginiana</i>	Sweetbay Magnolia	2" cal.	3'-4'	8'	B&B	Full specimen
Shrubs**								
CS	39	<i>Cornus stolonifera 'Farrow'</i>	Artic Fire Red Twig Dogwood	-	-	18-24"	CONT	Heavy, full specimen
HN	31	<i>Hydrangea macrophylla 'Twist-n-Shout'</i>	'Twist-n-Shout' Hydrangea	-	-	18-24"	CONT	Heavy, full specimen
IK	40	<i>Ilex glabra</i>	Inkberry	-	-	18-24"	CONT	Heavy, full specimen
IV	29	<i>Ilex verticillata</i>	Winterberry	-	-	18-24"	CONT	Heavy, full specimen
PL	12	<i>Prunus laurocerasus 'Chestnut Hill'</i>	'Chestnut Hill' Cherry Laurel	-	-	30-36"	CONT	Heavy, full specimen
SB	34	<i>Spiraea x bumalda 'Goldflame'</i>	Goldflame Spiraea	-	-	18-24"	CONT	Heavy, full specimen
TM	25	<i>Taxus x media 'Tauntan'</i>	'Tauntan's' Yew	-	-	18-24"	CONT	Heavy, full specimen
WF	20	<i>Weigela florida 'Fine Wine'</i>	'Fine Wine' Weigela	-	-	18-24"	CONT	Heavy, full specimen

Holmes Cunningham LLC
 350 E. Butler Ave., Ste 106
 New Britain, PA 18901
 (215) 586-3330
 www.hcengineering.net

REVISIONS	Description	Date
5-10-19	REVISED PER ORDINANCE	
7-29-19	REVISED PER COMMENTS	

CHALFONT CROSSING
 TMP # 07-012-008, 07-012-008.001, 07-012-008-002,
 07-012-008-003, 07-012-008-005 & 07-012-008-007
 CHALFONT BOROUGH, BUCKS COUNTY, PENNSYLVANIA



File No.
 1377_C7.0.dwg
 HCE Job: 1377
 Date: 11/15/2018
 Scale: 1" = 30'
 Designed: RC
 Sheet: 24 of 27
 Drawing No.
C7.0

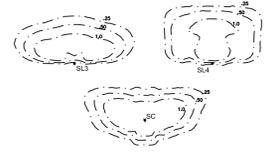


BUTLER AVENUE
 (A.K.A. PA STATE HIGHWAY US ROUTE 202)
 (A.K.A. S.R. 4202)
 (50' WIDE R.O.W.)(PUBLIC ROADWAY)



BRISTOL ROAD
 (A.K.A. S.R. 2023)(A.K.A. L.R. 09034)
 (56.5' WIDE R.O.W.)(PUBLIC ROADWAY)

LIGHTING TEMPLATES



NOTE
 1. THE LIGHTING ALONG BUTLER AVENUE AND BRISTOL ROAD SHALL BE COORDINATED WITH THE BOROUGH LIGHT STANDARDS AND MATCH EXISTING LIGHTS WHERE REQUIRED.



Holmes Cunningham LLC
 350 E. Butler Ave., Ste 106
 New Britain, PA 18901
 (215) 586-3330
 www.hcengineering.net

REVISIONS	Date	Description
REVISED PER ORDINANCE	5-10-19	
REVISED PER COMMENTS	7-29-19	

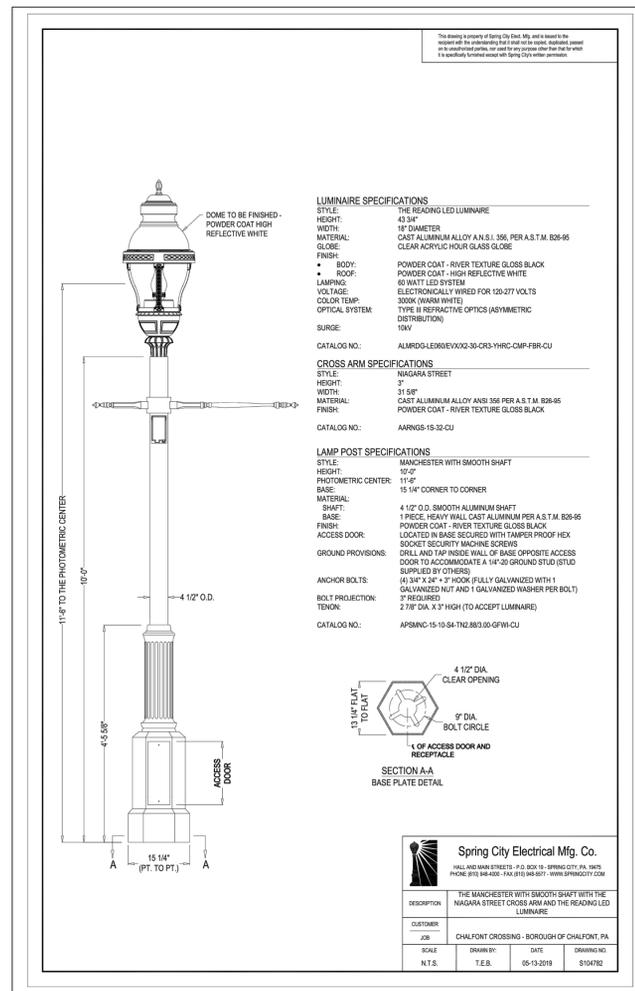
CALL BEFORE YOU DIG IN ALL AREAS TO BE EXCAVATED TO VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES. STOP & CALL 800-4-A-SAFE (4727) FOR A FREE SERVICE MANUAL. PENNSYLVANIA ONE CALL SYSTEM, INC. 1-800-4-A-SAFE (4727) IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES BEFORE EXCAVATION.

CHALFONT CROSSING
 TMP # 07-012-008, 07-012-008.001, 07-012-008-002,
 07-012-008-003, 07-012-008-005 & 07-012-008-007
 CHALFONT BOROUGH, BUCKS COUNTY, PENNSYLVANIA

LIGHTING PLAN

File No.	1377_C7.0.dwg
HCE Job	1377
Date	11/15/2018
Scale	1" = 30'
Designed	RC
Sheet	25 of 27

Drawing No.
C7.1



The drawing is property of Spring City Elec. Mfg. and is loaned to the customer for the project only. It is not to be used for any other project. All dimensions are in inches unless otherwise specified.

LUMINAIRE SPECIFICATIONS
THE READING LED LUMINAIRE
 STYLE: MANCHESTER WITH SMOOTH SHAFT
 HEIGHT: 15'-0"
 PHOTOMETRIC CENTER: 11'-6"
 BASE: 15 1/4" CORNER TO CORNER
 MATERIAL: 15 1/4" O.D. SMOOTH ALUMINUM SHAFT
 FINISH: POWDER COAT - RIVER TEXTURE GLOSS BLACK
 ACCESS DOOR: 1 1/4" DIA. CLEAR OPENING
 BOLT CIRCLE: 9" DIA.
 SECTION A-A
 BASE PLATE DETAIL

CROSS ARM SPECIFICATIONS
 STYLE: NAGARA STREET
 HEIGHT: 3'
 WIDTH: 31 3/8"
 MATERIAL: CAST ALUMINUM ALLOY ANS 356 PER A.S.T.M. B26-65
 FINISH: POWDER COAT - RIVER TEXTURE GLOSS BLACK
 CATALOG NO.: AARNGS-15-32-CU

LAMP POST SPECIFICATIONS
 STYLE: MANCHESTER WITH SMOOTH SHAFT
 HEIGHT: 15'-0"
 PHOTOMETRIC CENTER: 11'-6"
 BASE: 15 1/4" CORNER TO CORNER
 MATERIAL: 15 1/4" O.D. SMOOTH ALUMINUM SHAFT
 FINISH: POWDER COAT - RIVER TEXTURE GLOSS BLACK
 ACCESS DOOR: 1 1/4" DIA. CLEAR OPENING
 BOLT CIRCLE: 9" DIA.
 SECTION A-A
 BASE PLATE DETAIL

Spring City Electrical Mfg. Co.
 1211 Highway 31 South
 Peachtree City, GA 30269
 770-485-8000
 www.springcity.com

DESCRIPTION	QUANTITY	DATE	DRAWING NO.
THE MANCHESTER WITH SMOOTH SHAFT WITH THE NAGARA STREET CROSS ARM AND THE READING LED LUMINAIRE			
CUSTOMER	CHALFONT CROSSING - BOROUGH OF CHALFONT, PA		
JOB			
SCALE	N.T.S.	DATE	05-13-2018
DRAWN BY	T.E.B.	DATE	05-13-2018
CHECKED BY		DATE	05-13-2018

Symbol	Label	Qty	Catalog Number	Description	Lamp	File	Lumens per Lamp	LLF	Watts	Mounting Ht.
SL3	UTLD-E02-LED-E-U-SL3-HSS	9	UTLD-E02-LED-E-U-SL3-HSS	Traditionaire LED Downlight Luminaire (2) Lightbars with AccuLED Optics - Type 3 w/ spill light control and house side shield	(42) 4000K CCT, 70 CRI LEDs	UTLD-E02-LED-E-U-SL3-HSS.ies	Absolute	1	52.1	16'
SL4	UTLD-E02-LED-E-U-SL4-HSS	8	UTLD-E02-LED-E-U-SL4-HSS	Traditionaire LED Downlight Luminaire (2) Lightbars with AccuLED Optics - Type 4 w/ spill light control and house side shield	(42) 4000K CCT, 70 CRI LEDs	UTLD-E02-LED-E-U-SL4-HSS.ies	Absolute	1	52.1	16'

Symbol	Label	Qty	Catalog Number	Description	Lamp	File	Lumens per Lamp	LLF	Watts	Mounting Ht.
SC	RDG-LE060EVX/ X2-30-CR3-YHRC	6	RDG-LE060-X2-30-CR3-YHRC	Cast aluminum housing, frosted plastic lens enclosure	54 white LEDs	RDG-LE060-X2-30-CR3-YHRC.ies	Absolute	1	62.2	11.5'

* Mounted on 10' pole, photometrics based on luminaire optics at 11.5'

Streetworks

Catalog #	Type
Project	Date
Comments	
Prepared by	

DESCRIPTION
 The Traditionaire LED outdoor luminaire displays the old-fashioned charm of traditional area lighting, enhancing any setting with distinctive styling. As a decorative luminaire, the Traditionaire LED tastefully complements the architectural and environmental design of parks and roadways. The high-lumen downlight configuration uses Eaton's patented LightBAR™ technology to deliver uniform and efficient illumination to pedestrian and roadway applications.

SPECIFICATION FEATURES
Construction
 Hinged (stainless steel hinge pins) die-cast aluminum housing and cover with cupola. 3G vibration tested to ensure strength of construction and longevity in application.
Optics
 Choice of six patented, high-efficiency AccuLED Optic™ technology manufactured from injection-molded acrylic. Optics are precisely designed to shape the light output, maximizing efficiency and application spacing. AccuLED Optic technology, creates consistent distributions with the scalability to meet customized application requirements. Offered Standard in 4000K (+/- 275K) CCT and minimum 70 CRI. Optional 3000K CCT, 5000K CCT and 5700K CCT. For the ultimate level of spill light control, an optional house-side shield accessory can be field or factory installed. The house-side shield is designed to seamlessly integrate with the SL2 or SL3 optics.
Electrical
 LED drivers mount to die-cast aluminum back housing for optimal heat sinking, operation efficacy, and prolonged life. Standard drivers feature electronic universal voltage (120-277V 50/60Hz), 347V 60Hz or 480V 60Hz operation, greater than 0.9 power factor, less than 20% harmonic distortion, and is suitable for operation in -40°C to 40°C ambient environments. All fixtures are shipped standard with 10kV/10kA common-mode and differential-mode surge protection. LightBARs feature an IP66 enclosure rating and maintain greater than 95% lumen maintenance at 60,000 hours per IESNA TM-21.
Mounting
 Self-aligning pole-top filter for 3" O.D. pole tops or vertical tenons. Square headed 1-1/4" polymer coated mounting bolts with a lock nut.
Finish
 Cast components finished in a super durable black TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Optional colors include: bronze, grey and white.RAL and custom color matches available.
Warranty
 Five-year warranty.

UTLD TRADITIONAIRE LED DOWNLIGHT

1 - 3 LightBARs
 Solid State LED
 DECORATIVE POST TOP LUMINAIRE

DIMENSIONS

OPTIONAL BIRD CONE

CERTIFICATION DATA
 UL/ULC Listed
 LM79 / LM80 Compliant
 5G Vibration Rated
 IP66 LightBARs
 ISO 9001

ENERGY DATA
 Electronic LED Driver
 >0.9 Power Factor
 <20% Total Harmonic Distortion
 120-277VAC & 60Hz, 347V/60Hz, 480V/60Hz
 -40°C Minimum Temperature
 40°C Ambient Temperature Rating

EPA
 Effective Projected Area: (Sq. Ft.) 2.3
 Shipping Data
 Approximate Net Weight: 27 lbs. (17 kgs.)

TDS16005EN
 2017-10-30 08:03:35

UTLD TRADITIONAIRE LED DOWNLIGHT

POWER AND LUMENS (STANDARD CONFIGURATION - NO LENSES OR BIRD CONE)

LED LightBARs	E01	E02	E03	F01	F02	F03
Number of LEDs	21 LEDs	21 LEDs	21 LEDs	7 LEDs	7 LEDs	7 LEDs
Power (Voltage)	25	52	75	28	55	78
Current @ 120V (A)	0.21	0.43	0.63	0.22	0.46	0.65
Current @ 277V (A)	0.09	0.19	0.27	0.09	0.20	0.28

Optics

	Lumens	E01	E02	E03	F01	F02	F03
T2	Lumens	2,678	5,356	6,033	2,211	4,421	6,032
	BUG Rating	1-0-1	2-0-2	2-0-2	1-0-1	2-0-2	2-0-2
T3	Lumens	2,695	5,391	6,086	2,225	4,450	6,076
	BUG Rating	1-0-1	2-0-2	2-0-2	1-0-1	2-0-2	2-0-2
T4	Lumens	2,637	5,274	5,911	2,177	4,354	6,031
	BUG Rating	1-0-1	1-0-2	1-0-2	1-0-1	1-0-2	1-0-2
SL2	Lumens	2,646	5,292	5,937	2,184	4,368	6,052
	BUG Rating	1-0-1	1-0-2	2-0-2	1-0-1	1-0-1	2-0-2
SL3	Lumens	2,629	5,258	5,886	2,170	4,340	6,010
	BUG Rating	1-0-1	1-0-2	2-0-2	1-0-1	1-0-1	1-0-2
SMQ	Lumens	2,815	5,630	6,445	2,324	4,648	6,072
	BUG Rating	2-0-1	3-0-1	3-0-2	2-0-1	3-0-1	3-0-1
SWG	Lumens	2,825	5,651	6,476	2,333	4,665	6,097
	BUG Rating	2-0-1	3-0-1	3-0-2	2-0-1	3-0-1	3-0-2

LUMEN MAINTENANCE

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.98

ORDERING INFORMATION

Product Family: UTLD-F03-LED-D-U-T3-4N7

Product Family	Number of LightBARs	Source Type	Driver	Voltage	Distribution
UTLD-Traditionaire™ LED Downlight	E01-E03 21 LED LightBARs F01-F03 7 LED LightBARs	LED-Scot® Bi-Color Light Emitting Diodes	Eaton Dimming Dimming™	ULN1004P (120-277V) 8-350V S-347V	T2-Type II T3-Type II T4-Type II SL2-Type II w/Spill Control SL3-Type II w/Spill Control SMQ-Type V Square Medium SWG-Type V Square Wide

Options (Add as Suffix):
 4-NEMA Photocell Photocell
 4N7-NEMA 7 PIN Twistlock Photocell Replacement *
 W-20' #10 Leads
 B-Strip Latches for Tool-less Light Replacement
 U-LULISA Listed
 L-Factory Installed Ladder Rest
 7000-70 CRI / 3000K CCT *
 7000-70 CRI / 5000K CCT *
 8000-60 CRI / 3000K CCT *
 2L-Two Circuits *
 AL-Additive Lens Panels *
 LCF-LightBAR Cover Plate Matches Housing Finish
 RC-Right Cone *
 HSS-Factory Installed House Side Shield *
 AF-Grey
 BZ-Bronze
 WH-White

Accessories (Order Separately):
 T4-Decorative Ladder Rest for Field Installation
 OA122-10V Surge Replacement Module
 LB-HSS-21-Field Installed House Side Shield for "E" LightBARs **
 LB-HSS-27-Field Installed House Side Shield for "F" LightBARs **

NOTES
 1. 31 LED LightBAR driven at 30mA, 7 LED LightBAR driven at 1A.
 2. Standard 4000K CCT and neutral 70 CRI.
 3. Must specify 4N7 option.
 4. Only for use with 480V wire systems. For NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
 5. Only available with dimming driver.
 6. Low level output varies by lot color. Contact factory. Requires two or more LightBARs.
 7. Lens panels and led drivers must be ordered together.
 8. Only for use with SL2 and SL3 distributions.
 9. One required for each LightBAR.

REVISIONS

Date	Description
5-10-19	REVISED PER ORDINANCE
7-29-19	REVISED PER COMMENTS

CALL BEFORE YOU DIG!!
 3 WORKING DAYS NOTICE PER
 ID WORKING DAYS NOTICE PER
 - STOP & CALL
 Pennsylvania One
 Call System, Inc.
 1-800-742-1776

UTILITY LOCATIONS AS SHOWN ON THIS DRAWING ARE THE RESPONSIBILITY OF THE CONTRACTOR. UTILITY COMPANIES FREELY TO ANY FACILITATION.

CHALFONT CROSSING
 TMP # 07-012-008, 07-012-008-001, 07-012-008-002,
 07-012-008-003, 07-012-008-005 & 07-012-008-007
 CHALFONT BOROUGH, BUCKS COUNTY, PENNSYLVANIA

LANDSCAPING & LIGHTING DETAILS

File No.
1377_C7.0.dwg

HCE Job
1377

Date
11/15/2018

Scale
N.T.S.

Designed
RC

Sheet
27 of 27

Drawing No.
C7.3

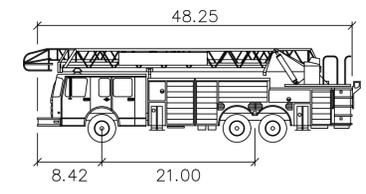
TDS16005EN
2017-10-30 08:03:35

BUTLER AVENUE
 (A.K.A. PA STATE HIGHWAY US ROUTE 202)
 (A.K.A. S.R. 202)
 (50' WIDE R.O.W./PUBLIC ROADWAY)

45
 (A.K.A. S.R. 202/A.K.A. L.R. 202)
 (65' WIDE R.O.W./PUBLIC ROADWAY)



FIRE TRUCK TURNING PLAN



CHALFONT AERIAL

	feet
Width	: 8.83
Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 48.1



Holmes Cunningham LLC
 350 E. Butler Ave., Ste 106
 New Britain, PA 18901
 (215) 586-3330
 www.hcengineering.net

REVISIONS	Description
Date	5-20-19
	7-29-19
	REVISOR PER ORDNANCE
	REVISOR PER COMMENTS

ALL UTILITIES SHOWN ARE AS SHOWN ON THE RECORD DRAWINGS. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION. THIS PLAN IS APPROXIMATE AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACT UTILITIES COMPANIES SHOULD BE CONTACTED FOR LOCATION.

CHALFONT CROSSING
 TMP # 07-012-008, 07-012-008.001, 07-012-008-002,
 07-012-008-003, 07-012-008-005 & 07-012-008-007
 CHALFONT BOROUGH, BUCKS COUNTY, PENNSYLVANIA

TRUCK TURNING PLAN

File No.	1337_C8.0Truck.dwg
HCE Job	1377
Date	11/15/2018
Scale	1"=40'
Designed	RC

Drawing No.
Fig. 1