3850-FM-BCW0362A 6/2016



### COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF CLEAN WATER

DEP Code #: 1-09932-280-3J

### SEWAGE FACILITIES PLANNING MODULE COMPONENT 4A - MUNICIPAL PLANNING AGENCY REVIEW

Note to Project Sponsor: To expedite the review of your proposal, one copy of your completed planning module package and one copy of this *Planning Agency Review Component* should be sent to the local municipal planning agency for their comments.

### SECTION A. PROJECT NAME (See Section A of instructions)

**Project Name** 

Garton Tract

### SECTION B. REVIEW SCHEDULE (See Section B of instructions)

1. Date plan received by municipal planning agency <u>1/26/2022</u>

2. Date review completed by agency

SECTION	۱C.	AGEN	CY REVIEW (See Section C of instructions)	
Yes	No			
$\boxtimes$		1.	Is there a municipal comprehensive plan adopted under the Municipalities Planning Code (53 P.S. 10101, <i>et seq.</i> )?	
$\boxtimes$		2.	Is this proposal consistent with the comprehensive plan for land use?	
			If no, describe the inconsistencies	
$\boxtimes$		3.	Is this proposal consistent with the use, development, and protection of water resources?	
			If no, describe the inconsistencies	
$\boxtimes$		4.	Is this proposal consistent with municipal land use planning relative to Prime Agricultural Land Preservation?	
	$\boxtimes$	5.	Does this project propose encroachments, obstructions, or dams that will affect wetlands?	
			If yes, describe impacts	
	$\boxtimes$	6.	Will any known historical or archaeological resources be impacted by this project?	
			If yes, describe impacts	
	$\boxtimes$	7.	Will any known endangered or threatened species of plant or animal be impacted by this project?	
			If yes, describe impacts	
$\boxtimes$		8.	Is there a municipal zoning ordinance?	
$\boxtimes$		9.	Is this proposal consistent with the ordinance?	
			If no, describe the inconsistencies	
	$\boxtimes$	10.	Does the proposal require a change or variance to an existing comprehensive plan or zoning ordinance?	
$\boxtimes$		11.	Have all applicable zoning approvals been obtained?	
$\boxtimes$		12.	Is there a municipal subdivision and land development ordinance?	

### 3850-FM-BCW0362A 6/2016

SECTIO	N C.	AGEN	CY REVIEW (continued)	
Yes	No			
$\bowtie$		13.	Is this proposal consistent with the ordinance?	
			If no, describe the inconsistencies	
$\boxtimes$		14.	s this plan consistent with the municipal Official Sewage Facilities Plan?	
			If no, describe the inconsistencies	
	$\boxtimes$	15.	Are there any wastewater disposal needs in the area adjacent to this proposal that should be considered by the municipality?	
			If yes, describe	
	$\boxtimes$	16.	Has a waiver of the sewage facilities planning requirements been requested for the residual tract of this subdivision?	
			If yes, is the proposed waiver consistent with applicable ordinances?	
			If no, describe the inconsistencies	
		17.	Name, title and signature of planning agency staff member completing this section:	
			Title: Planning Commission Chairperson	
			Signature:	
			Date:	
			Name of Municipal Planning Agency: New Britain Township Planning Commission	
			Address 207 Park Avenue, Chalfont, PA 18914	
			Telephone Number: 215-822-1391	
SECTIO	ND.	ADDIT	IONAL COMMENTS (See Section D of instructions)	
			ot limit municipal planning agencies from making additional comments concerning the relevancy other plans or ordinances. If additional comments are needed, attach additional sheets.	
The plan	ining ag	lency m	ust complete this component within 60 days.	

This component and any additional comments are to be returned to the applicant.



February 8, 2022

File No. 17-11015

Matthew West, Township Manager New Britain Township 207 Park Avenue Chalfont, PA 18914

Reference: 114 Sellersville Road, Planning Module Components TMPs #26-1-38, 39, & 40-2

Dear Matt:

Pursuant to your request, Gilmore & Associates, Inc. has reviewed the revised PaDEP Sewage Facilities Planning Module application for the above referenced project. The Applicant received conditional preliminary/final plan approval from the Board of Supervisors on December 18, 2017 to create one new single-family dwelling lot. The proposed new lot will be serviced by public sewer from the Chalfont-NBT Joint Sewage Authority via a new sewer lateral. Though the subdivision is located within the Township's Public Sewer Service Area because there is an existing Connection Management Plan for this area, an Act 537 Planning Module is required.

Based on the Township's Act 537 Sewage Facilities Plan, we have no objection to the planning component of the public sewer connection for the new house. Therefore, our office has attached Component 4A – "Municipal Planning Agency Review" for consideration by the Township Planning Commission (PC). Please add the attached Component 4A to the upcoming PC Meeting to be signed and dated by the Chairman.

Once the Component 4A is signed by the PC, we recommend the Board of Supervisors adopt the enclosed Resolution to revise the Township's Act 537 Plan at an upcoming meeting. If adopted by the Board of Supervisors, please execute the PADEP Transmittal Letter, Completeness Checklist, and Resolution sections of the Planning Module. Once signed, these four documents shall be incorporated into the Applicant's full Planning Module submission and forwarded to DEP electronically for review and approval.

If you have any questions regarding the above, please contact this office.

Sincerely,

farmien archand

Janene Marchand, P.E. Gilmore & Associates, Inc.

JM

Enclosures (Component 4A, Transmittal Letter, Completeness Checklist, Board Resolution)

Michael Walsh, Assistant Manager
 Ryan Gehman, Assistant Planning and Zoning Officer (1 hard copy of each attachment)
 Peter Nelson, Esquire, Grim, Biehn & Thatcher
 Craig Garton, Applicant
 Craig D. Kennard, P.E., C.O.O., Gilmore & Associates, Inc.

BUILDING ON A FOUNDATION OF EXCELLENCE

### COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF CLEAN WATER

DEP Code #: 1-09932-278-3j

### SEWAGE FACILITIES PLANNING MODULE COMPONENT 4A - MUNICIPAL PLANNING AGENCY REVIEW

**Note to Project Sponsor:** To expedite the review of your proposal, one copy of your completed planning module package and one copy of this *Planning Agency Review Component* should be sent to the local municipal planning agency for their comments.

### SECTION A. PROJECT NAME (See Section A of instructions)

**Project Name** 

lohin subdivision

### **SECTION B. REVIEW SCHEDULE** (See Section B of instructions)

1. Date plan received by municipal planning agency February 9, 2022

2. Date review completed by agency

SECTION C.		AGEN	AGENCY REVIEW (See Section C of instructions)				
Yes	No						
		1.	Is there a municipal comprehensive plan adopted under the Municipalities Planning Code (53 P.S. 10101, <i>et seq.</i> )?				
$\boxtimes$		2.	Is this proposal consistent with the comprehensive plan for land use?				
			If no, describe the inconsistencies				
$\boxtimes$		3.	Is this proposal consistent with the use, development, and protection of water resources?				
			If no, describe the inconsistencies				
		4.	Is this proposal consistent with municipal land use planning relative to Prime Agricultural Land Preservation?				
	$\boxtimes$	5.	Does this project propose encroachments, obstructions, or dams that will affect wetlands?				
			If yes, describe impacts				
	$\boxtimes$	6.	Will any known historical or archaeological resources be impacted by this project?				
			If yes, describe impacts				
	$\boxtimes$	7.	Vill any known endangered or threatened species of plant or animal be impacted by this project?				
			If yes, describe impacts				
$\boxtimes$		8.	Is there a municipal zoning ordinance?				
$\square$		9.	Is this proposal consistent with the ordinance?				
			If no, describe the inconsistencies				
		10.	Does the proposal require a change or variance to an existing comprehensive plan or zoning ordinance?				
$\boxtimes$		11.	Have all applicable zoning approvals been obtained?				
$\boxtimes$		12.	Is there a municipal subdivision and land development ordinance?				

### 3850-FM-BCW0362A 6/2016

SECTIO	NC.	AGEN	CY REVIEW (continued)		
Yes	No				
$\boxtimes$		13.	Is this proposal consistent with the ordinance?		
			If no, describe the inconsistencies		
	$\boxtimes$	14.	s this plan consistent with the municipal Official Sewage Facilities Plan?		
			If no, describe the inconsistencies treatment plant in hilltown township		
	$\boxtimes$	15.	Are there any wastewater disposal needs in the area adjacent to this proposal that should be considered by the municipality?		
			If yes, describe		
	$\boxtimes$	16.	Has a waiver of the sewage facilities planning requirements been requested for the residual tract of this subdivision?		
			If yes, is the proposed waiver consistent with applicable ordinances?		
			If no, describe the inconsistencies		
		17.	Name, title and signature of planning agency staff member completing this section: Name: Marco Tustanowsky		
			Title: chairman		
			Signature:		
			Date:		
			Name of Municipal Planning Agency: <u>new britain township planning commission</u>		
			Address 207 park avenue, chalfont, pa, 18914		
		_	Telephone Number: 215 822 1391		
SECTIO	ND.	ADDIT	IONAL COMMENTS (See Section D of instructions)		
This com of the pre	nponen oposed	t does n I plan to	not limit municipal planning agencies from making additional comments concerning the relevancy other plans or ordinances. If additional comments are needed, attach additional sheets.		
The plan	ning aç	gency m	ust complete this component within 60 days.		

This component and any additional comments are to be returned to the applicant.



February 14, 2022

File No. 17-05038

Matthew West, Township Manager New Britain Township 207 Park Avenue Chalfont, PA 18914

Reference: Michael Lohin, 7-Lot Planning Module Component 4A Township Line Road and Walters Road TMP #26-001-043 & 26-001-043-003

Dear Matt:

Pursuant to your request, Gilmore & Associates, Inc. has reviewed the PaDEP Sewage Facilities Planning Module application for the above referenced project which has been resubmitted due to the project being revised from 4 to 7 lots. The Board of Supervisors adopted the conditional Preliminary/Final Plan Resolution on September 27, 2021, to approve the 7 single-family dwelling lot subdivision. A forcemain is proposed within Township Line Road to direct sewage flows to the Hilltown Township Wastewater Treatment Plant. As the Township approved only the parcels within the Lohin subdivision to connect to public sewer in Hilltown Township, one condition of the approval was to remove any indication from the plan of any proposed or future connection of any adjacent parcels to this public sewer system. Because the subdivision is proposed to be serviced by the Hilltown Township Water and Sewer Authority, a Revision is required to New Britain and Hilltown Township's Act 537 Sewage Facilities Plans. There is an existing agreement in place between the two Sewer Authorities dated September 9, 2020, related to the proposed sewer services.

Based on the Township's Act 537 Sewage Facilities Plan, we have no objection to the planning component of the proposed public sewer connection. Therefore, our office has attached Component 4A – "Municipal Planning Agency Review" for consideration by the Township Planning Commission (PC). Please add the attached Component 4A to the upcoming PC Meeting Agenda to be signed and dated by the Chairman.

Once the Component 4A is signed by the PC, we recommend the Board of Supervisors adopt the Resolution to revise the Township's Act 537 Plan at an upcoming meeting. If adopted by the Board of Supervisors, the PADEP Transmittal Letter, Completeness Checklist, and Resolution sections of the Planning Module shall be executed. Once signed, each of these documents shall be incorporated into the Applicant's full Planning Module submission and forwarded to DEP electronically for review and approval.

If you have any questions regarding the above, please contact this office.

Sincerely,

Januremanchand

Janene Marchand, P.E. Gilmore & Associates, Inc.

JM

Enclosures (Component 4A)

BUILDING ON A FOUNDATION OF EXCELLENCE

cc: Michael Walsh, Assistant Manager Ryan Gehman, Assistant Planning and Zoning Officer (1 hard copy) Peter Nelson, Esquire, Grim, Biehn & Thatcher Michael Lohin, Applicant Robert L. Showalter, P.E., R.L. Showalter & Associates, Inc. Craig D. Kennard, P.E., C.O.O., Gilmore & Associates, Inc.

and the second second second
and the state of the same state of the state
and the assessed when a stand a measure and and
annen andere an eine andere eine an eine an eine an eine ander an eine ander an eine andere an eine an eine an
This was a second to be a
· · · · · · · · · · · · · · · · · · ·
Ballanara aller and a second a second a second as a
a star a labolita e na a marte a printing a ser a se a distance de la ser a ser a ser a ser a ser a ser a ser a A ser a s
· · · · · · · · · · · · · · · · · · ·
A REAL PROPERTY AND A REAL
· Construction of the second s
· · · · · · · · · · · · · · · · · · ·
- no o a successive de single successive at
- a title additional to -

# **NEW BRITAIN TOWNSHIP**

207 Park Avenue • Chalfont, PA 18914 • Telephone: (215) 822-1391

### **SUBDIVISION & LAND DEVELOPMENT APPLICATION**

1.	Date of Application:		12/9/21	TOWNSHIP USE ONLY
2.	Date of Plan or Revision:		11/30/21	Date Recieved: 12-9-21;1KG
3.	Application for:		Butler Ave Mixed Use	Payment: Check #:
4.	Name of Subdivision or Land Development:		Butler Ave Mixed Use	Receipt #: Escrow Acc, #:
5.	Location:		409 W. Butler Ave	
6.	Tax Map Parcel #: 26-005-023	Total Acr		6.6
7.	Net Buildable Site Area (from Section 2401):		6.6 acres	
8.	Zoning Requirements: Zoning District	Minimum	Lot Size	Maximum Density
	Front Yard	Side Yar	d	Rear Yard
9.	Number of Lots or Dwelling Units:		70	
10.	Equitable Owner of Record of Land:		Butler Pike Properties LP	
	Address:		76 Grifftith Miles Circle	
			Warminster, PA 18974	
	Phone: 215-675-3141	E-mail:	kevin@countybuildersinc.com	
11.	Applicant:		Butler Pike Properties LP	
	Address:		76 Griffith Miles Circle	
			Warminster, PA 18974	
	Phone: 215-675-3141	E-mail:	kevin@countybuilderinc.com	
12.	Registered Engineer or Surveyor:		Holmes Cunningham Engineering	
	Address:		409 E. Butler Avenue, Unit 5	
			Doylestown, PA 18901	
	Phone: 215-586-3330	E-mail:	rob@hcengineering.net	

This is to certify that I have read Article V of the New Britain Township Subdivision and Land Development Ordinance and that the accompanying plan meets the requirements of that Article to the best of my knowledge.

h: And

Signature of Applicant

1/0

Signature of Registered Engineer or Surveyor

SUBDIVIS	SION & LAND DEVELOPMENT
PLAN	SUBMISSION CHECKLIST
Date of Application:	12/9/21
Subdivision/Land Development Name:	Butler Avenue Mixed Use
Address of Property:	409 W. Butler Avenue
Owner(s) Name:	Butler Pike Properties LP
Applicant(s) Name:	Butler Pike Properties LP
Tax Map Parcel Number:	26-005-023
Plan Sets for New Britain Township -	Folded to 8 1/2 x 11: (18 Total)
NBT Board of Supervisors (11x17) - 5 Copies	NBT Planning Commission (11x17) - 7 Copies
🖌 Township Engineer (Full Size) - 2 Copies	✓ NBT File (Full Size) - 3 Copies
🗹 Fire Marshal (Full Size) - 1 Copy	
Plan Sets for Outside Agencies - Fold	ed to 8 1/2 x 11: The applicant must show proof of submission to the
outside agencies listed below (stamped copy	y or cover letter and copy of application form). The following plan sets e agency and must be submitted to the outside agency by the applicant.
✓ Bucks County Planning Commission - 1 Copy	
Bucks County Conservation District - 1 Copy	
✓ Water Authority (North Penn/North Wales/Aq	ua) - 1 Copy
Chalfont New Britain Joint Sewer Authority - 3	
OR	
Bucks County Department of Health - 1 Copy	
	itted to the Township: All applicants include these items or the
application will be considered administrative	
New Britain Township Subdivision and Land I	Development Application (1 Signed Original)
Filing Fee according to the most current Fee	Schedule adopted by Resolution
Escrow Fee according to the most current Fe	e Schedule adopted by Resolution
Contract for Professional Services Agreemen	t (3 Signed Originals)
Application to Bucks County Planning Commi	ssion (Provide Proof of Submission)
Application to Bucks County Conservation Dis	strict (Provide Proof of Submission)
	be completed by the applicant's professional engineer or land surveyor)
Stomwater Management Report (2 Copies)	
PADEP Sewage Facilities Planning Module A	pplication/Mailer (Original & 2 Copies)
✓ Traffic Impact Study, if applicable (2 Copies)	
PADOT Highway Occupancy Permit Plan/App	
NA Community Impact Assessment Report, if app	licable (4 Copies)
Reviewed By:	Date:
Township Representative	
submitted directly to New Britain Township. **The attached checklist is provided for the app	e to New Britain Township. All plan sets, applications and forms shall be licant as a guideline to assist in the submission process. All applicants must e considered administratively incomplete and returned to the applicant.**
	2

4	٢	٠	
		,	
	,		

ł

### **APPLICANT'S CHECKLIST AND SUBMISSION PROCEDURES**

**IMPORTANT:** It is recommended that this item be completed by the applicant's professional engineer or land surveyor.

Please use the following checklist as a guideline for application submission. If applicable, the Township and Township Engineer will look for these items in your application. Failure to provide an applicable item may delay acceptance of the application and plan approval. Please be advised that final approval will not be granted by the Township unless final approvals are granted by the appropriate water and sewer authorities.

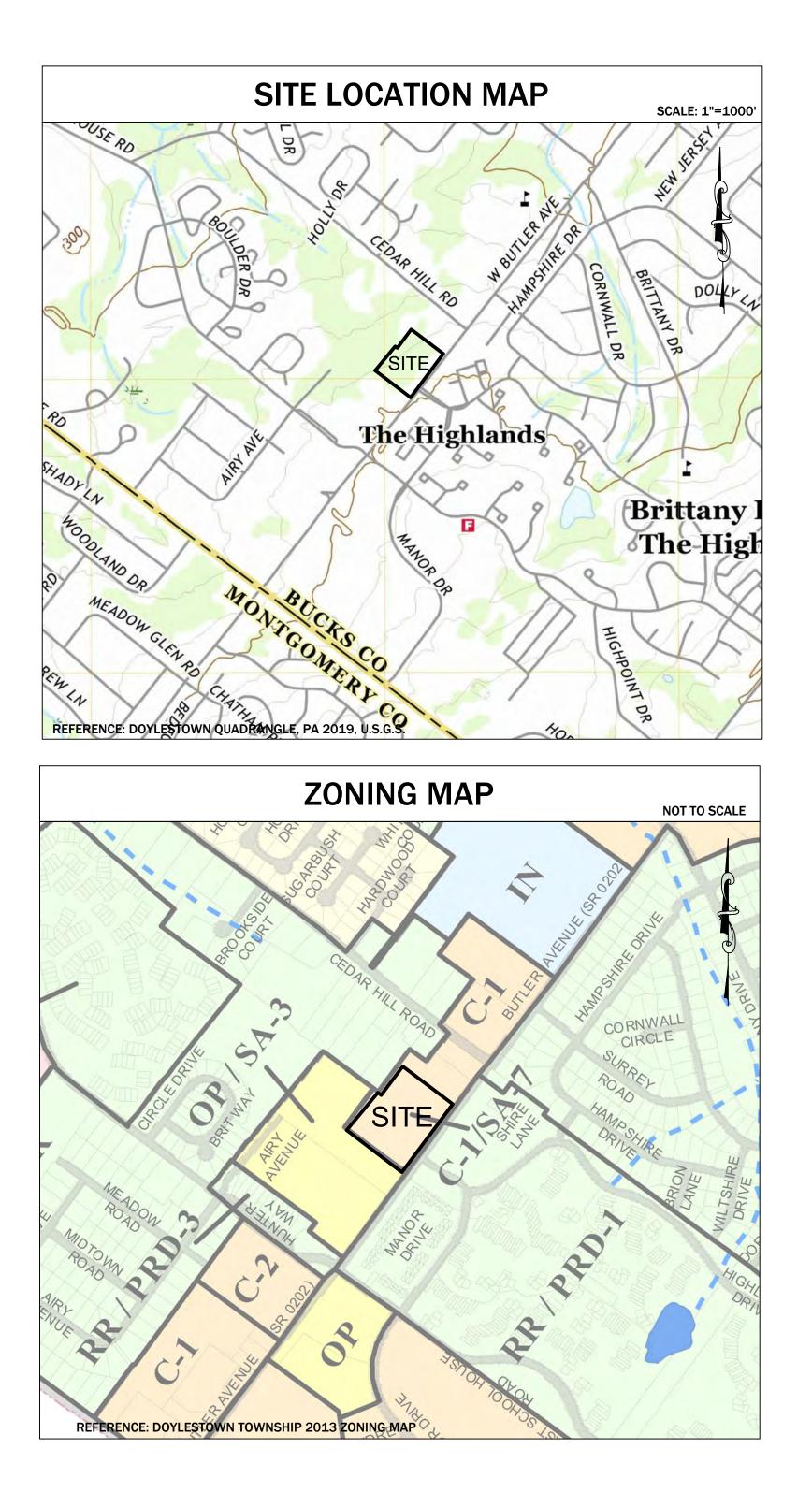
### Note: Maximum Record Plan Sheet Size 24" x 36"

	ltem	Code*	Applicant Comments
$\checkmark$	Type of Water Supply ☑ Public		
$\checkmark$	Type of Sewage Disposal Facilities		
$\checkmark$	PADEP Sewage Facilities Planning Module Application/Mailer		
$\checkmark$	List of Waivers/Variances/Special Exceptions on Record Plan		
$\checkmark$	Letter of Requested Waivers with Justification		
$\checkmark$	Provide 5 Signature Lines on the Record Plan for the Board of Supervisors		
$\checkmark$	Indicate Zoning Data Chart on Record Plan (required and proposed dimensions)		
$\checkmark$	Indicate Parking Requirements on Record Plan (required and proposed spaces)		· _
$\checkmark$	Indicate proposed Use Designation on Record Plan	<u> </u>	
$\checkmark$	Indicate Site Capacity Calculations on Record Plan		
	Adjoining Property Owner Names and Tax Map Parcel Numbers		·
$\checkmark$	Soil Erosion and Sediment Control Plan	1 <del>7</del>	
$\checkmark$	Utility Plan		
	Landscape and Lighting Plan (show street trees, buffer plantings, lighting locations, isolux lines)		
$\checkmark$	Stormwater Management Plan		
$\checkmark$	Wetlands Certification on Record Plan		•••••
$\checkmark$	PADOT Permit Application/Plan		
	Existing and Proposed Easement, Right-of-Way or Other restrictions on the Property		
-Notec	on Application P-Noted on Plan Sheet	N/A - Not App	licable W - Noted on List of Waivers

3

\*A

# PRELIMINARY AND FINAL LAND DEVELOPMENT PLANS FOR **BUTLER AVENUE PROPERTY** T.P. # 26-005-023 **409 WEST BUTLER AVENUE** NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA





# **CONTACTS**

**NEW BRITAIN TOWNSHIP 207 PARK AVENUE** CHALFONT, Pa 18914 PHONE: (215)-822-1391

TOWNSHIP PUBLIC WORKS DEPARTMENT 207 PARK AVENUE CHALFONT, PA 18914 PHONE(215)-822-1391

BUCKS COUNTY PLANNING COMMISSION THE ALMSHOUSE NESHAMINY MANOR CENTER 1260 ALMSHOUSE ROAD **DOYLESTOWN, PA 18901** 215-345-3400 **BUCKS COUNTY CONSERVATION** DISTRICT



TOWNSHIP ENGINEER **GILMORE & ASSOCIATES, Inc** 65 EAST BUTLER AVENUE, SUITE 100 NEW BRITAIN, PA 18901 PHONE 215 345 4330

1456 FERRY ROAD, SUITE 704 DOYLESTOWN, PA 18901 215-345-7577

**AQUA AMERICA** 762 LANCASTER AVE BRYN MAWR, PA 19010 PHONE: (610) 525 - 1400

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

CHALFONT-NEW BRITAIN TOWNSHIP JOINT SEWAGE AUTHORITY **1645 UPPER STATE ROAD** DOYLESTOWN, PA 18901 PHONE: (215) 345-1225

NORTH WALES WATER AUTHORITY 200 W WALNUT ST, NORTH WALES, PA 19454 PHONE: (215) 699-4836

PECO WARMINSTER SERVICE BUILDING 400 PARK AVE., WARMINSTER, PA 18974 ELECTRIC PHONE: (215) 956-3270 NEW ELECTRIC PHONE: (215) 956-3010 **ELECTRIC EMERGENCY: (800) 841-4141** GAS PHONE: (800) 454-4100 NEW GAS PHONE: (800) 454-4100 GAS EMERGENCY: (800) 841-4141 GAS EMERGENCY(ALT): (844) 841-4151

DRAWING LIST SHEET DRAWING DRAWING TITLE LAST REVISED DATE NUMBER NUMBER C0.0 COVER SHEET 11/30/2021 C0.1 EXISTING CONDITIONS PLAN 11/30/2021 C0.2 AERIAL MAP 11/30/2021 C1.0 RECORD SITE PLAN 11/30/2021 C1.1 11/30/2021 SITE CONSTRUCTION DETAILS C2.0 **GRADING PLAN** 11/30/2021 C2.1 DETAILED GRADING PLAN 11/30/2021 DRAINAGE PLAN C2.2 11/30/2021 C3.0 UTILITY PLAN 11/30/2021 C3.1 UTILITY CONSTRUCTION DETAILS 11/30/2021 10 11 C3.2 UTILITY CONSTRUCTION DETAILS 11/30/2021 C4.0 11/30/2021 12 STORM AND SANITARY SEWER PROFILES C5.0 11/30/2021 EROSION AND SEDIMENT CONTROL PLAN C5.1 11/30/202 RUSION AND SEDIMENT CONTROL DETAILS 15 C5.2 EROSION AND SEDIMENT CONTROL DETAILS 11/30/2021 C5.3 16 POST CONSTRUCTION STORMWATER MANAGEMENT PLAN 11/30/2021 17 C5.4 POST CONSTRUCTION STORMWATER MANAGEMENT DETAILS 11/30/2021 18 C6.0 LANDSCAPE PLAN 11/30/2021 LIGHTING PLAN 19 C6.1 11/30/2021 20 LANDSCAPE AND LIGHTING DETIALS C6.2 11/30/2021 C7.0 TRUCK TURN PLAN 21 11/30/2021

# **APPLICANT/OWNER:**

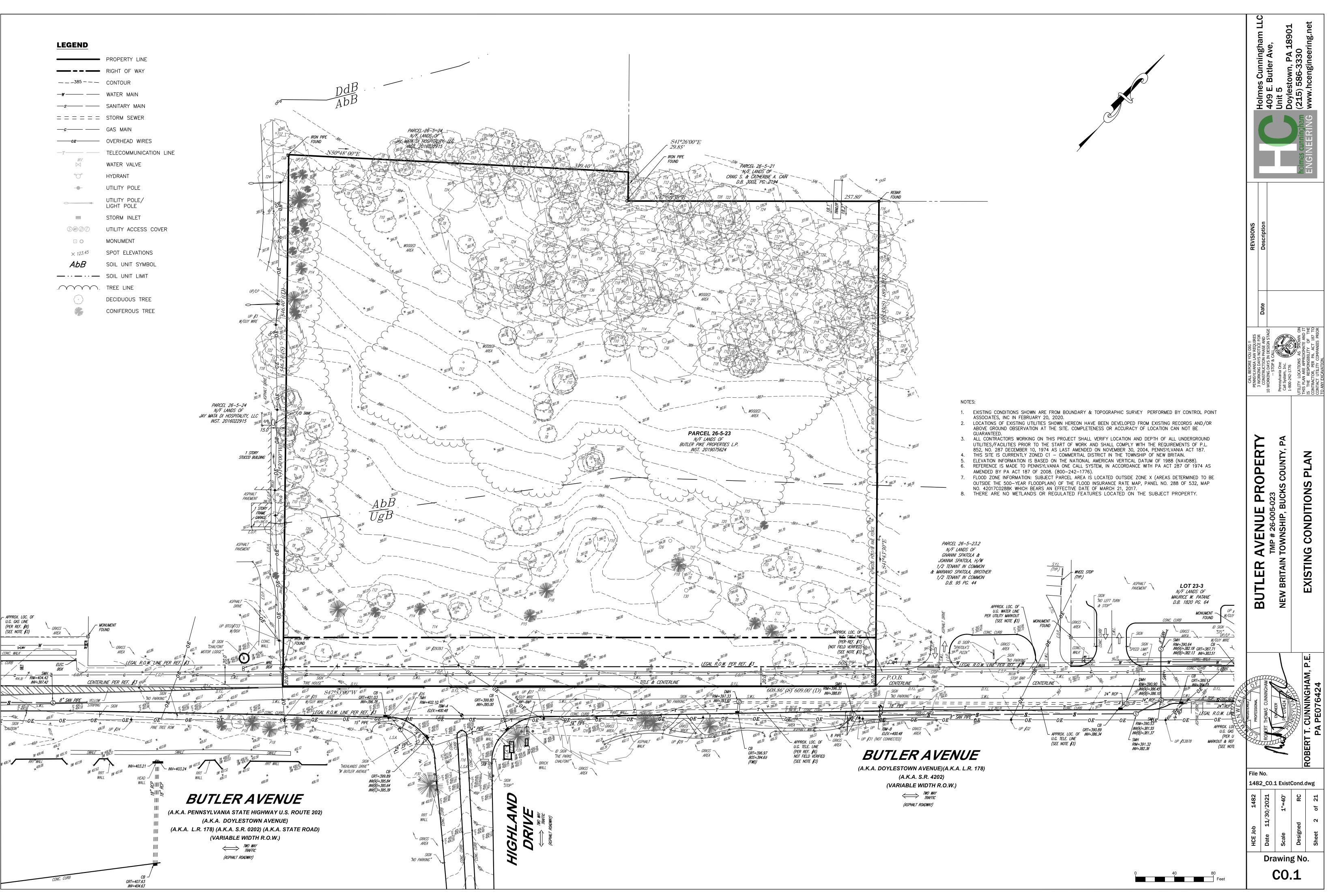
**BUTLER PIKE PROPERTIES, LP. 76 GRIFFITHS MILES CIRCE** P.O. BOX 2579 WARMINSTER, PA 18974

**PREPARED BY:** 



HOLMES CUNNINGHAM LLC 409 EAST BUTLER AVENUE UNIT 5 DOYLESTOWN, PA 18901 (215) 586-3330

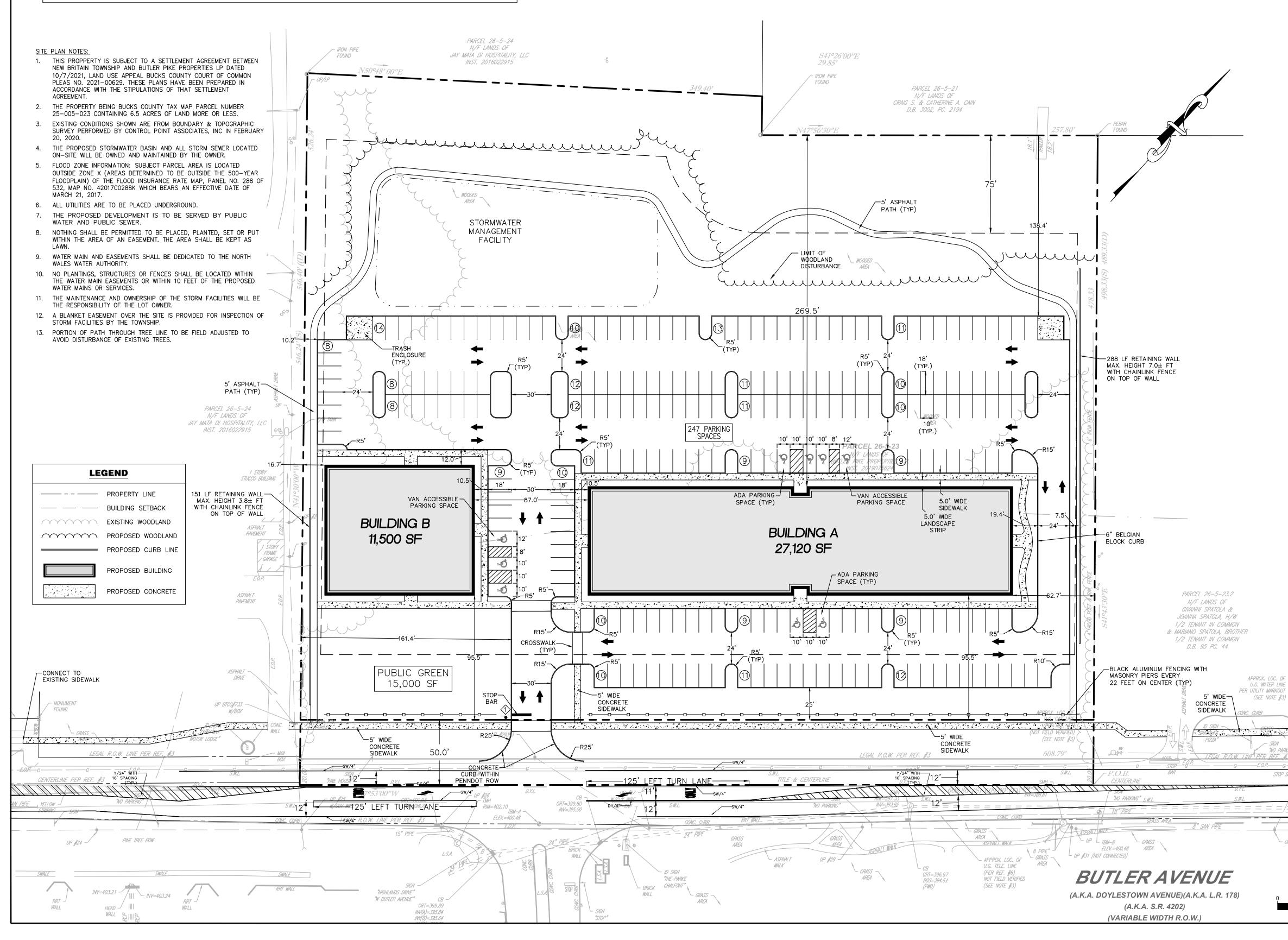
DATE: 12	1/30/2021
PROJECT #	1482
DRAWING #	CO.0
SHEET	1 OF 21





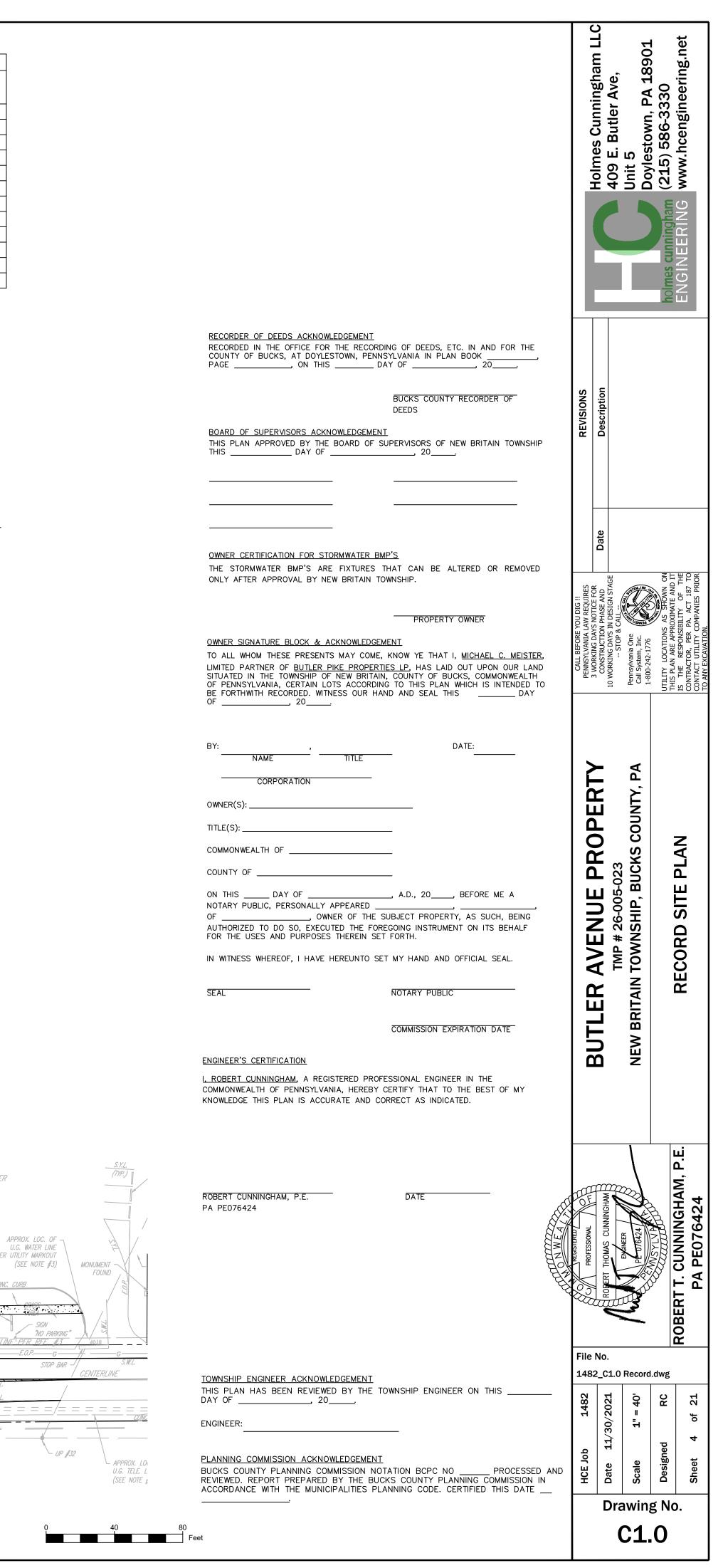
	Zoning Table			
Zone: C-1	- Commercial District; Butler Avenue Corridor	Overlay District		
ITEM	REQUIRED/ PERMITTED	PROPOSED	ORDINANCE SECTION	
Uses	Various Uses	5*	27-300, 27-1201	Lot Calculation
C-1 District Regulations				Gross Lot Area
Min. Lot Area	1 Acre	6.5 Acres	27-1202.b	ROW Area
Min. Lot Width	250 FT	608 FT	27-1202.b	Net Lot Area
Min. Lot Depth	120 FT	448 FT	27-1202.b	Proposed Area
Min. Front Yard Setback	40 FT	95 FT	27-1202.b	Proposed Buildi
Min. Side Yard Setback	15 FT	16 FT	27-1202.b	Proposed Buildi
Min. Rear Yard Setback	30 FT	269 FT	27-1202.b	Proposed Sidew
Max. Building Coverage	40%	13.5%	27-1202.b	Proposed Aspha
Max. Impervious Surface Coverage (Site)	70%	52.3%	27-1202.b	Proposed Curb
Max. Impervious Surface Coverage (Lot)	75%	52.3%	27-1202.b	
Min. Required Buffer Yard	45 FT	50 FT	27-2801	Proposed Paver
Off-Street Parking Regulations	· · · ·			Total Proposed
B7 Apartments (1 - 3 Bedrooms)	2 Spaces/DU (70 Units)	140 Spaces	27-2901.B.B7.b	Impervious Cove
I1 Medical Office	1 Space/175 SF (11,500 SF)	66 Spaces	27-2901.I.I1	Building Coverage
Min. Paved Area Setback	20 FT	10 FT*	27-2904.g	

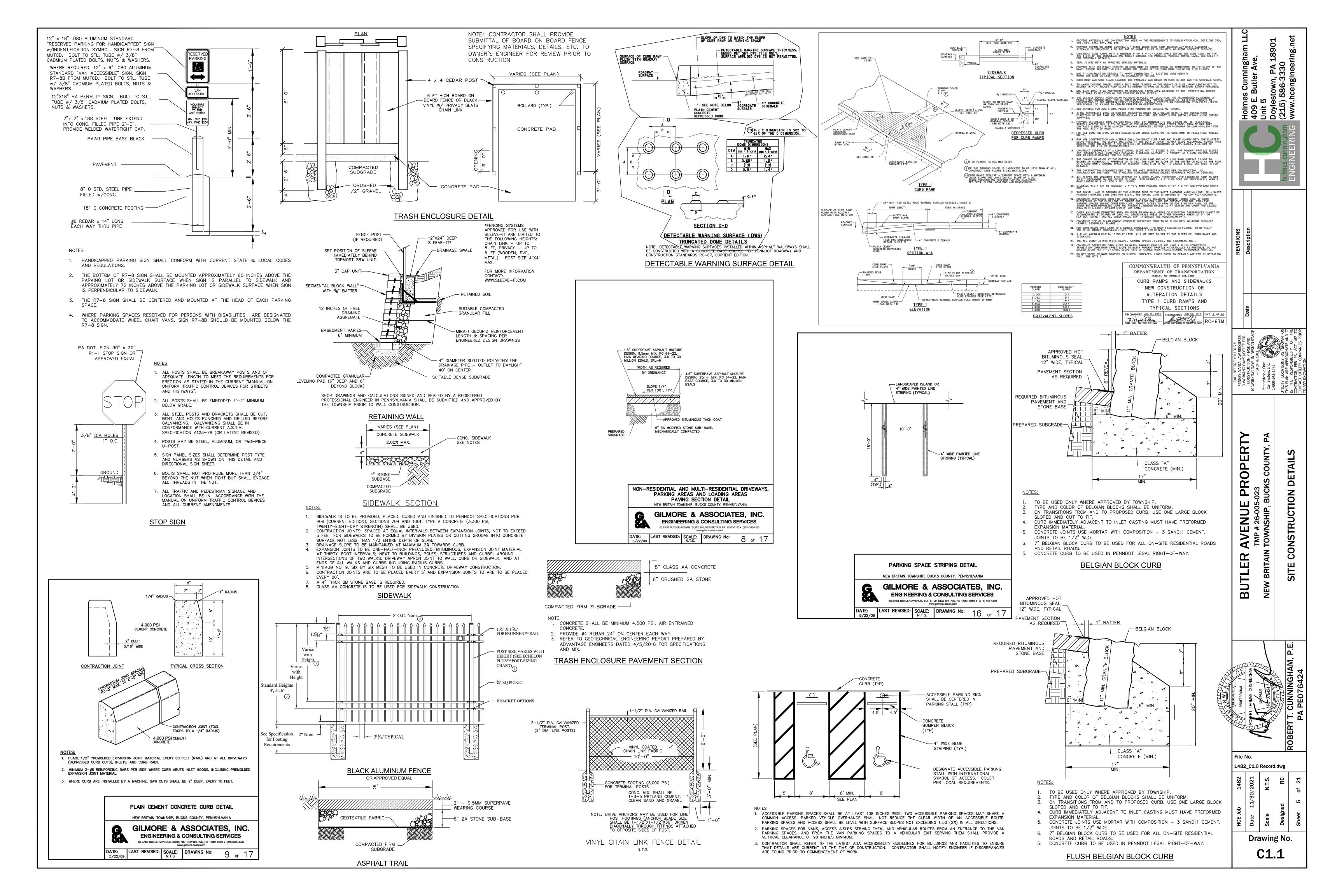
\* Permitted as noted in the stipulation agreement

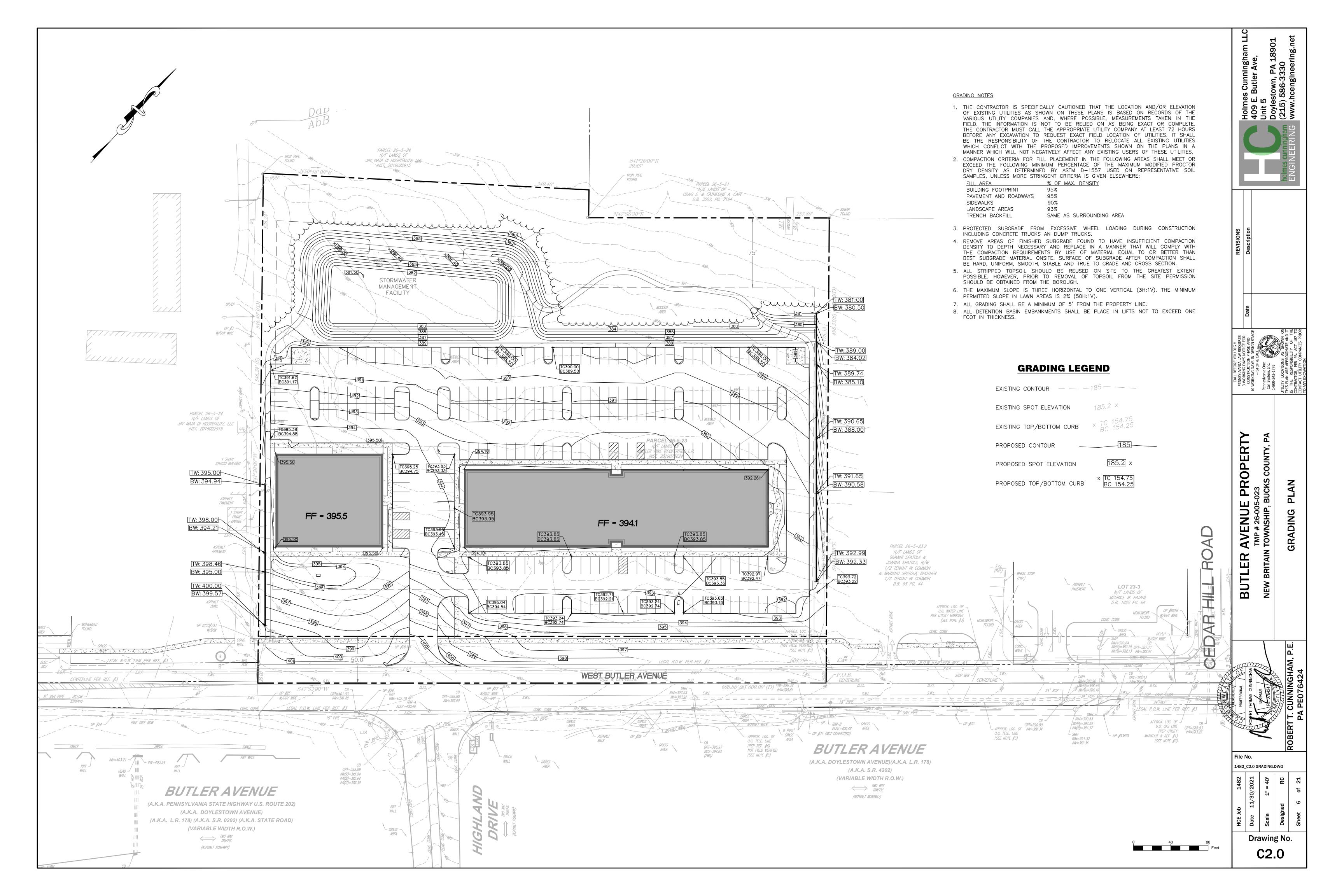


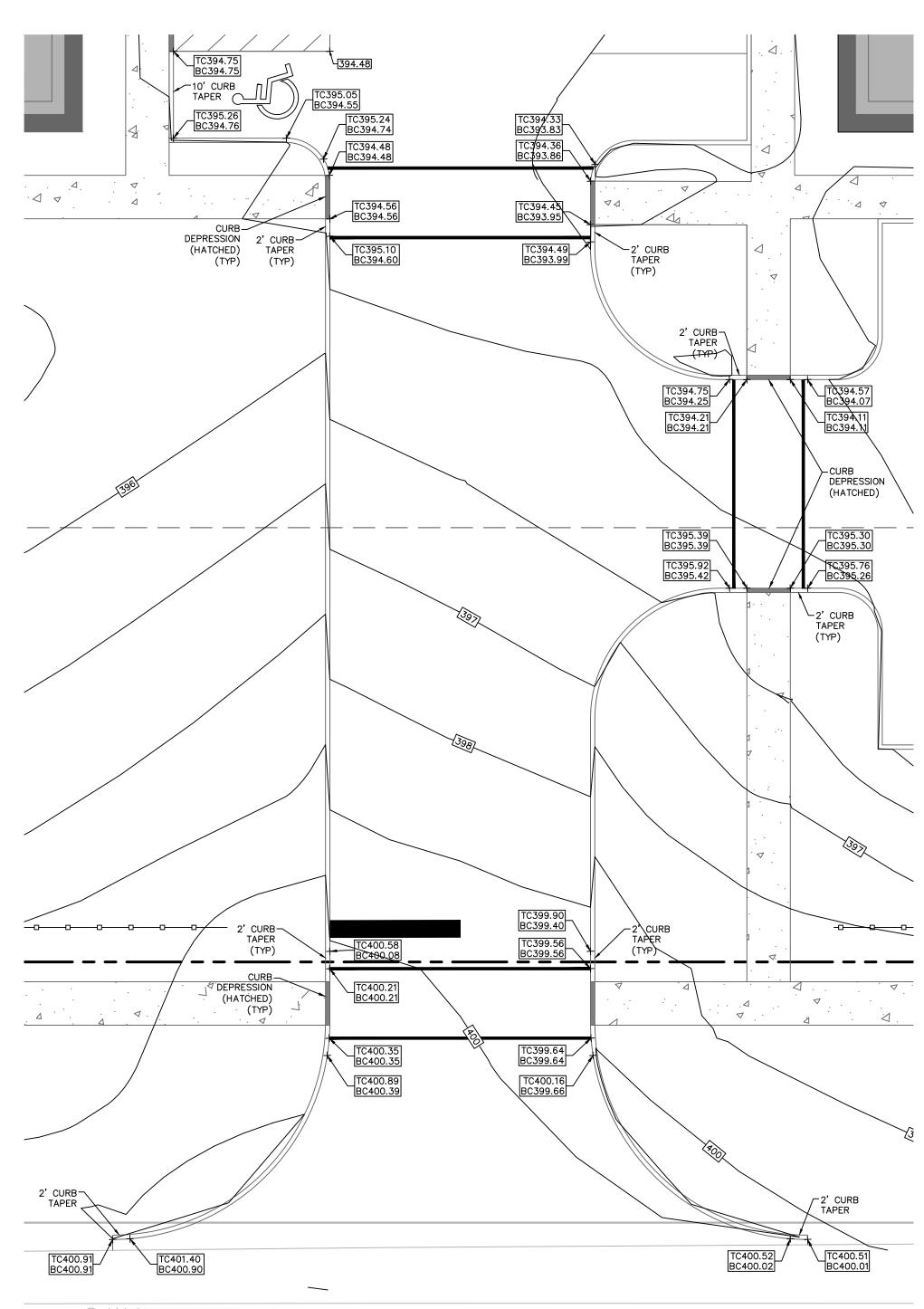
COVERAGE CALCULATIONS				
Lot Calculations	S.F.	AC		
Gross Lot Area	316,570	7.27		
ROW Area	30,438	0.70		
Net Lot Area	286,132	6.57		
Proposed Areas	S.F.	AC		
Proposed Building A	27,120	0.62		
Proposed Building B	11,500	0.26		
Proposed Sidewalks	7,261	0.17		
Proposed Asphalt Path	6,679	0.15		
Proposed Curb	1,847	0.04		
Proposed Pavement	95,349	2.19		
Total Proposed Impervious	149,756	3.44		
Impervious Coverage	52.3%			
Building Coverage	13.5%			

RESOURCE PROTECTION CALCULATIONS							
Natural Resource	Required Protection Ratio	Land in Resources	Required Resource Protection Land	Proposed Protected Area	Proposed Protection Ratio		
	%	Ac.	Ac.	Ac.	%		
Watercourses	100%	0.00	0.00	0.00	N/A		
Riparian Buffer	100%	0.00	0.00	0.00	N/A		
Floodplain & Floodplain Soil	100%	0.00	0.00	0.00	N/A		
Wetlands	100%	0.00	0.00	0.00	N/A		
Lakes and Ponds	100%	0.00	0.00	0.00	N/A		
Wetlands Margin	80%	0.00	0.00	0.00	N/A		
Woodlands*	30%	3.78	1.13	1.18	31.1%		
Steep Slopes 8-15%	60%	0.00	0.00	0.00	N/A		
Steep Slopes 15-25%	70%	0.00	0.00	0.00	N/A		
Steep Slopes 25%+	85%	0.00	0.00	0.00	N/A		



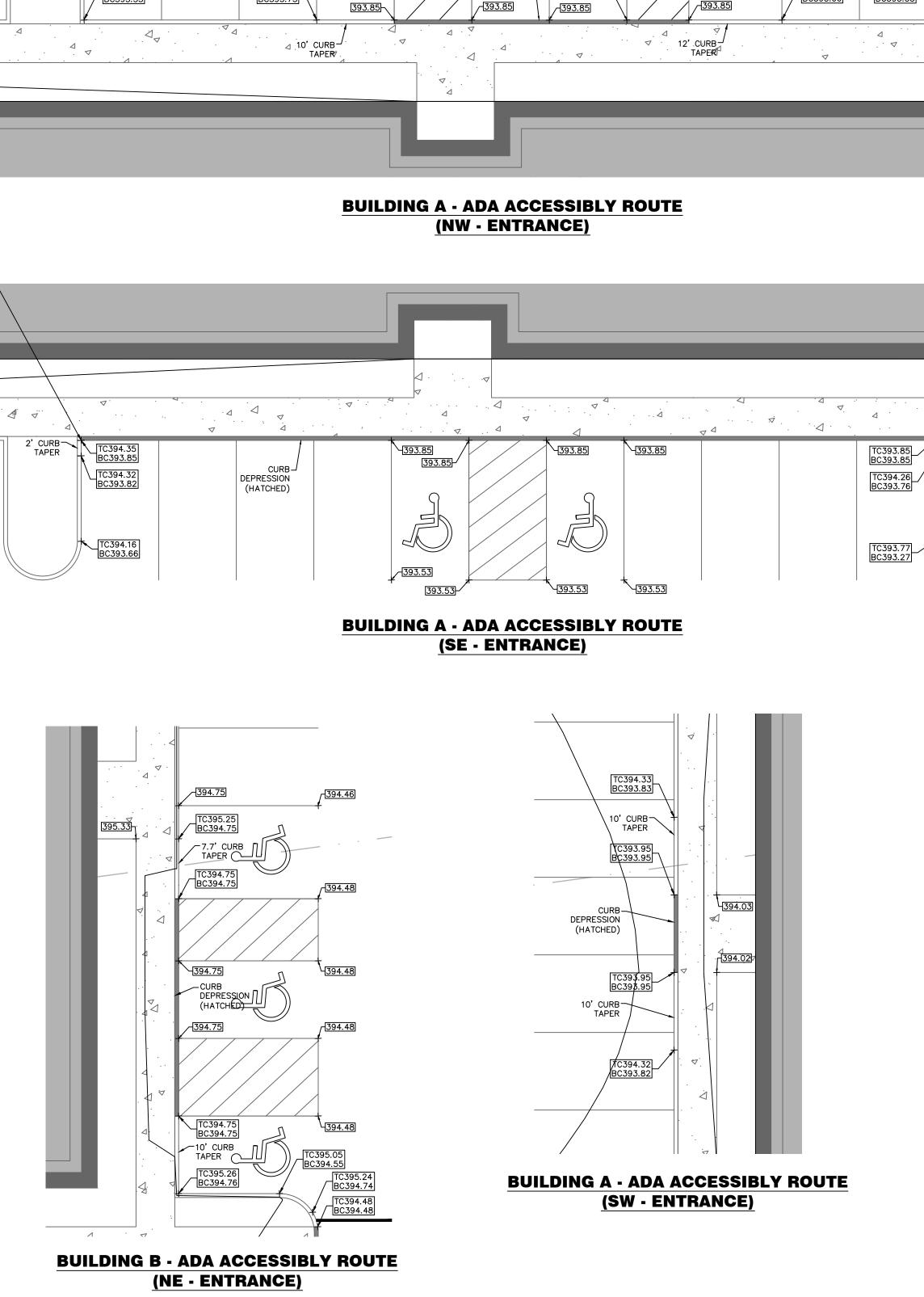


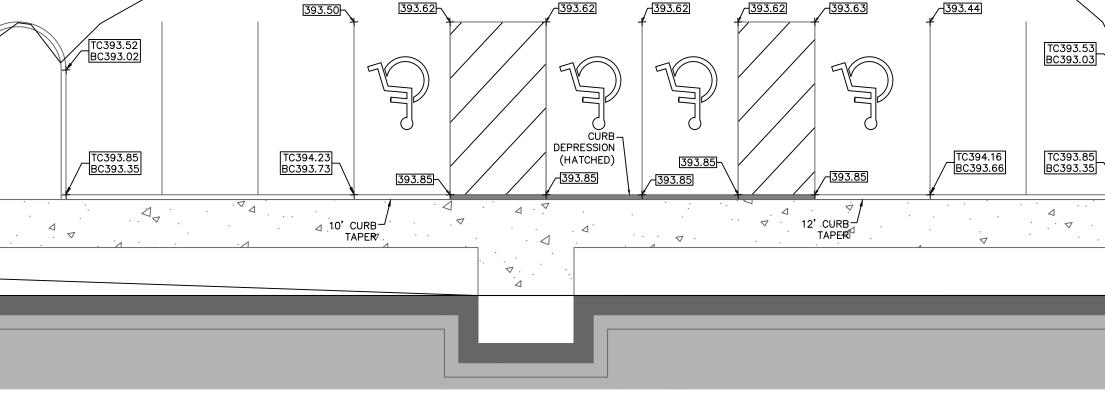


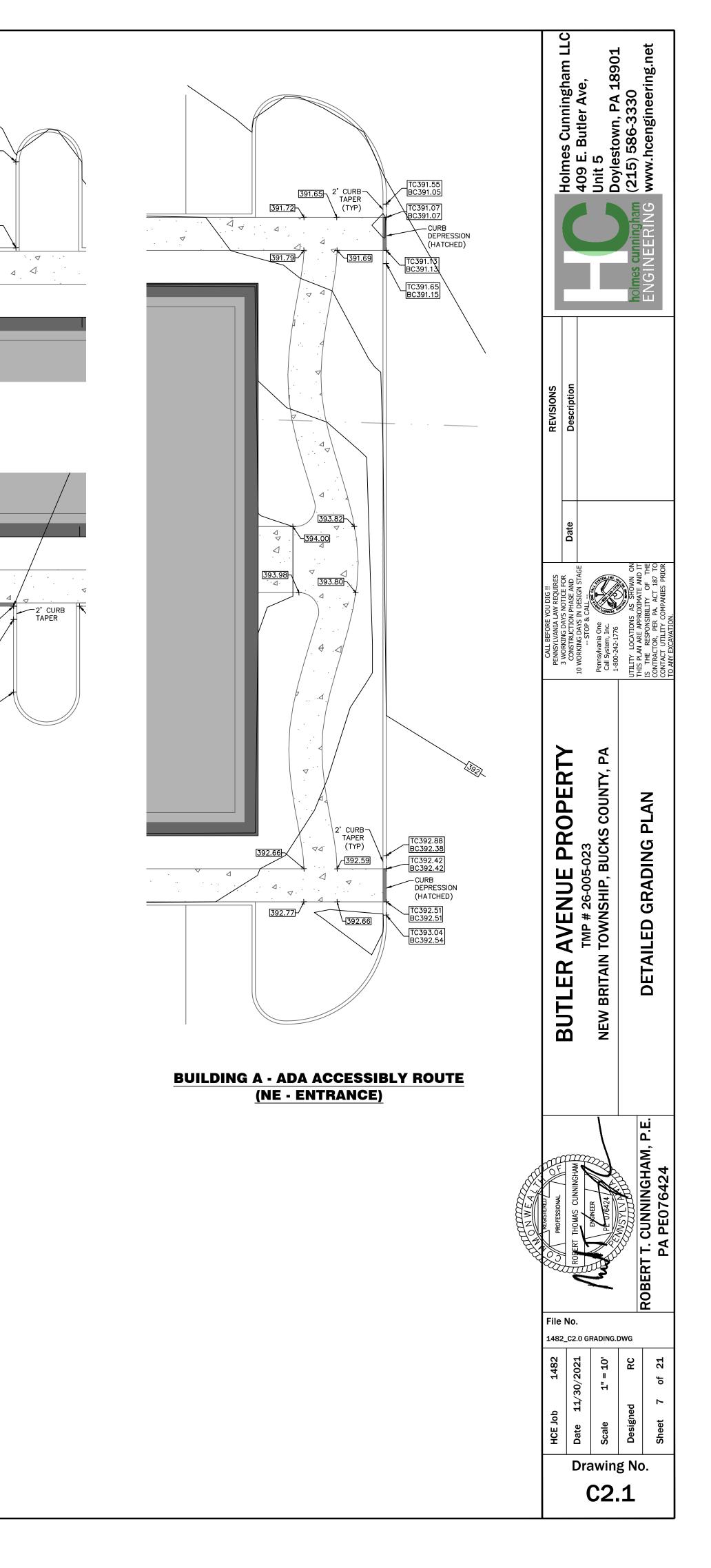


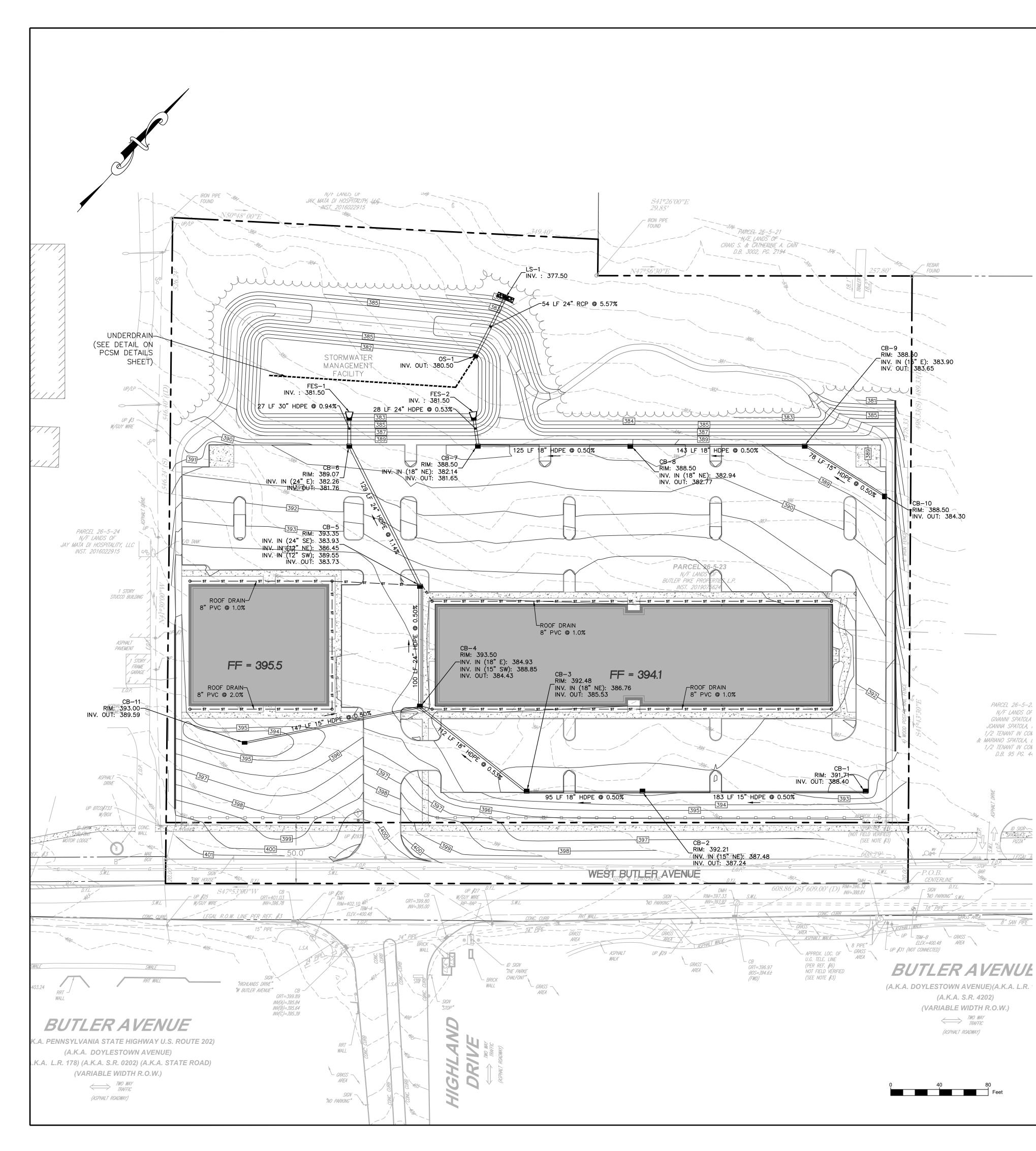
S. M.L.

SITE CROSSWALKS

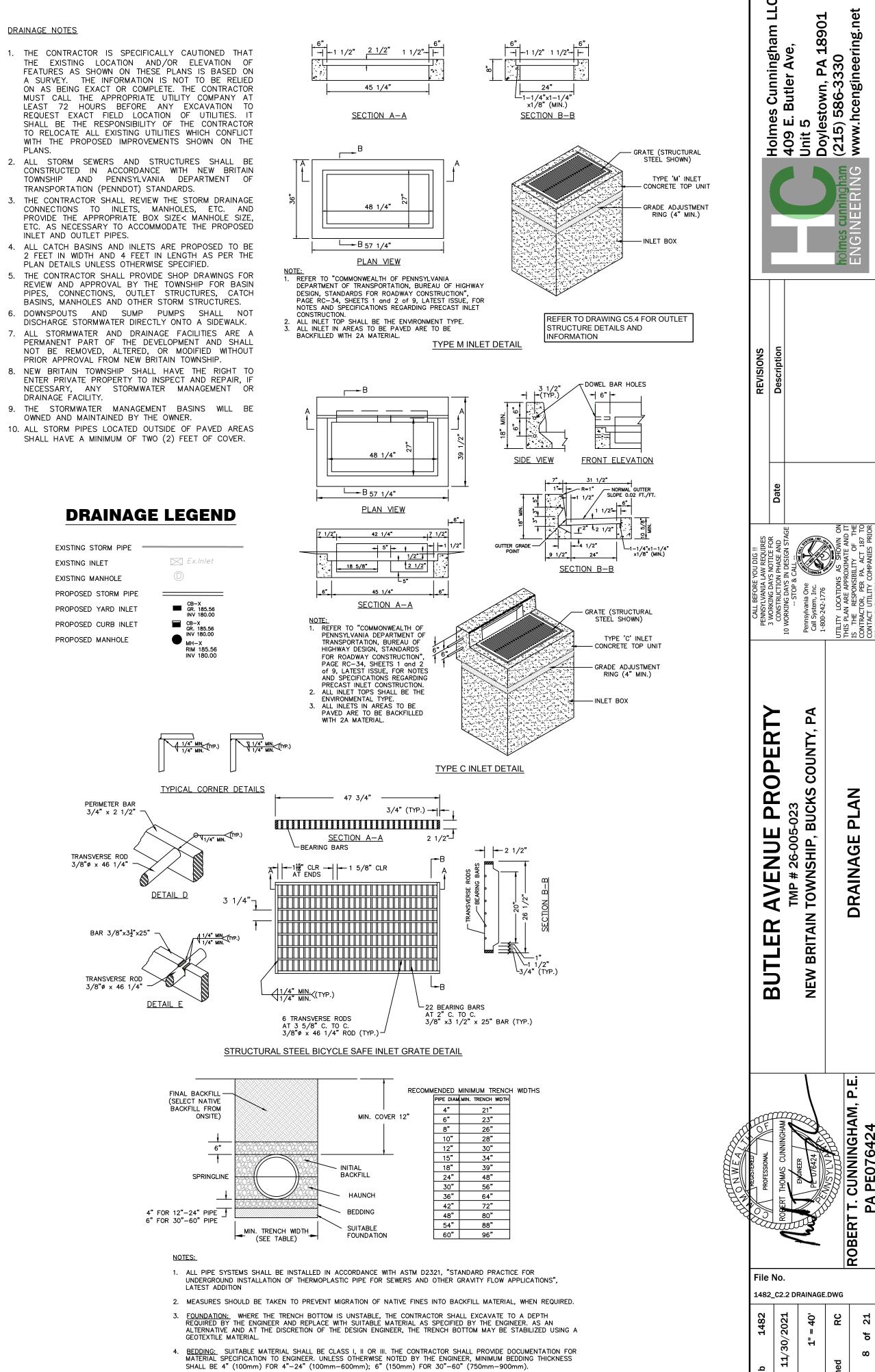


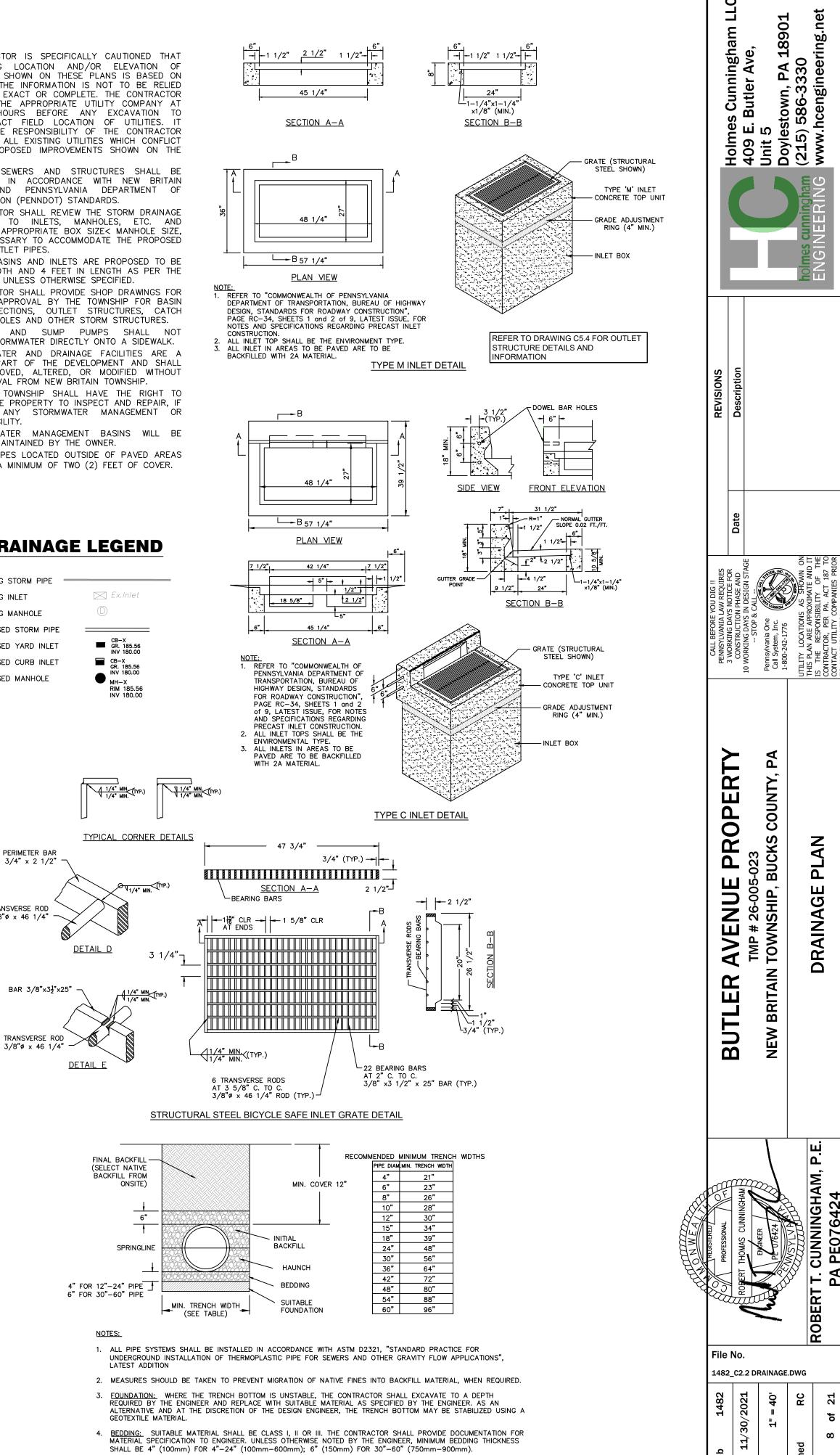






- DRAINAGE NOTES
- THE EXISTING LOCATION AND/OR ELEVATION OF FEATURES AS SHOWN ON THESE PLANS IS BASED ON A SURVEY. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS
- CONSTRUCTED IN ACCORDANCE WITH NEW BRITAIN TOWNSHIP AND PENNSYLVANIA DEPARTMENT OF
- 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.
- 2 FEET IN WIDTH AND 4 FEET IN LENGTH AS PER THE PLAN DETAILS UNLESS OTHERWISE SPECIFIED.
- REVIEW AND APPROVAL BY THE TOWNSHIP FOR BASIN PIPES, CONNECTIONS, OUTLET STRUCTURES, CATCH BASINS, MANHOLES AND OTHER STORM STRUCTURES.
- DISCHARGE STORMWATER DIRECTLY ONTO A SIDEWALK. ALL STORMWATER AND DRAINAGE FACILITIES ARE A PERMANENT PART OF THE DEVELOPMENT AND SHALL
- PRIOR APPROVAL FROM NEW BRITAIN TOWNSHIP. 8. NEW BRITAIN TOWNSHIP SHALL HAVE THE RIGHT TO
- NECESSARY, ANY STORMWATER MANAGEMENT OR DRAINAGE FACILITY.
- OWNED AND MAINTAINED BY THE OWNER.





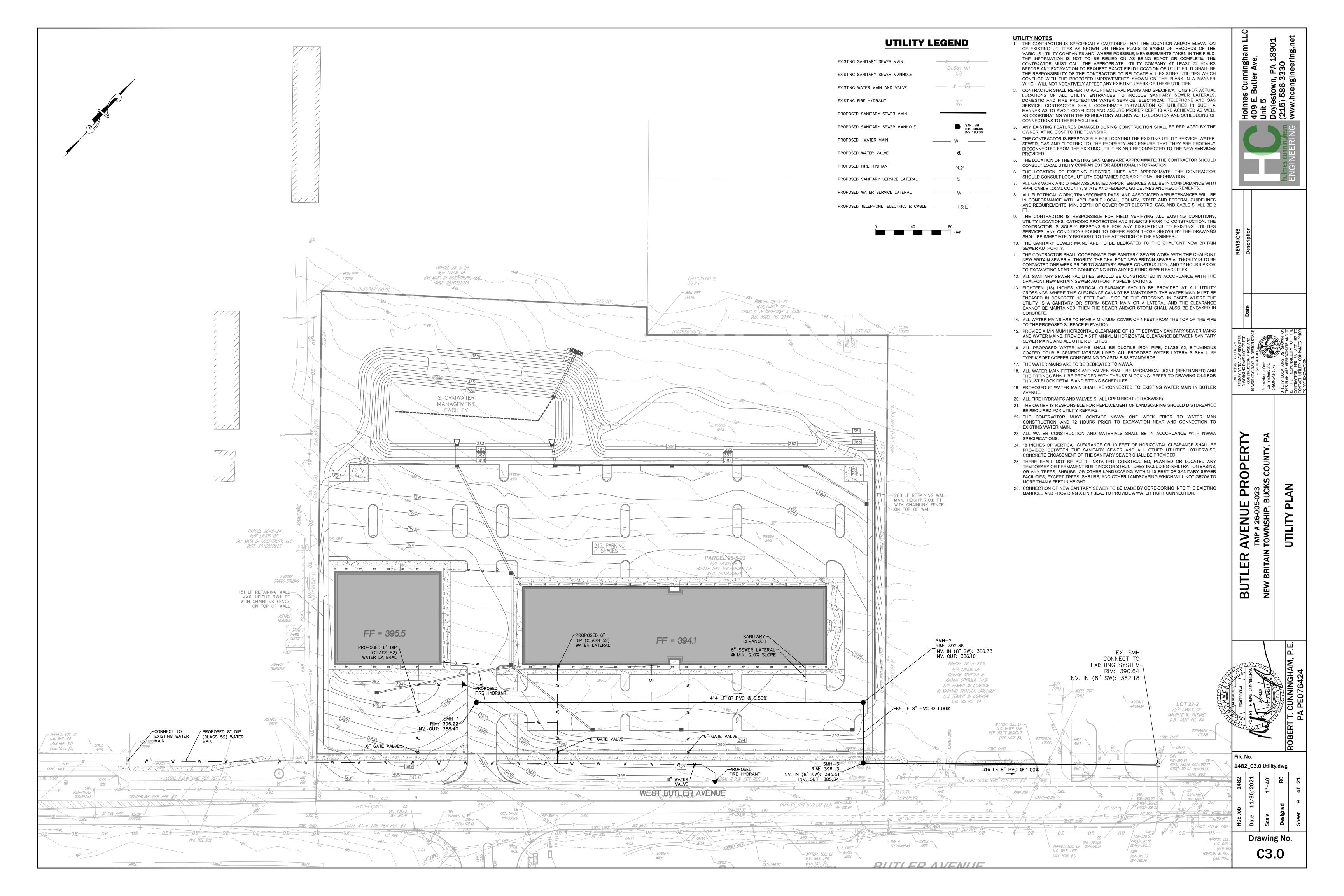
5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN " ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.

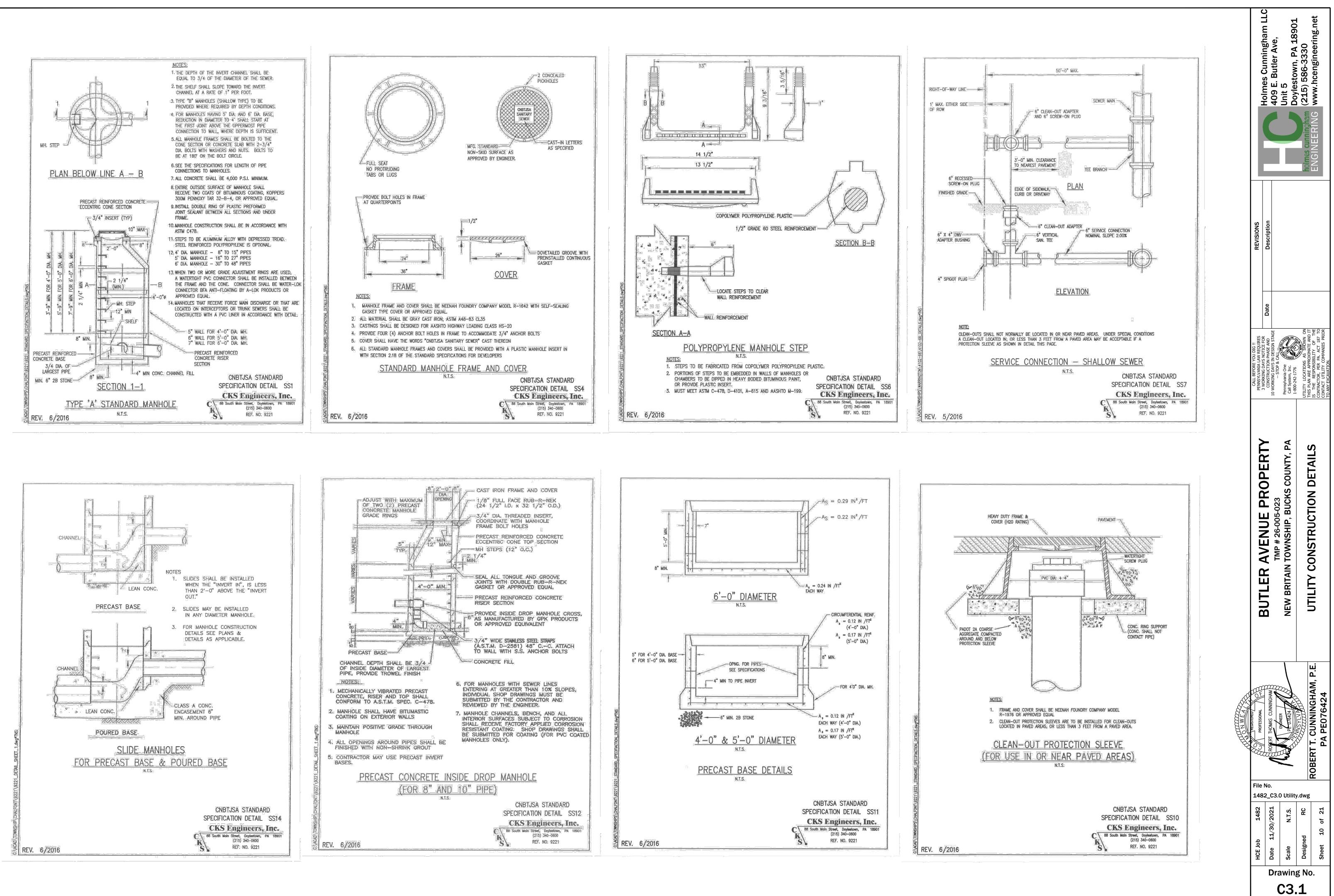
6. <u>MINIMUM COVER</u>: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 54"-60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

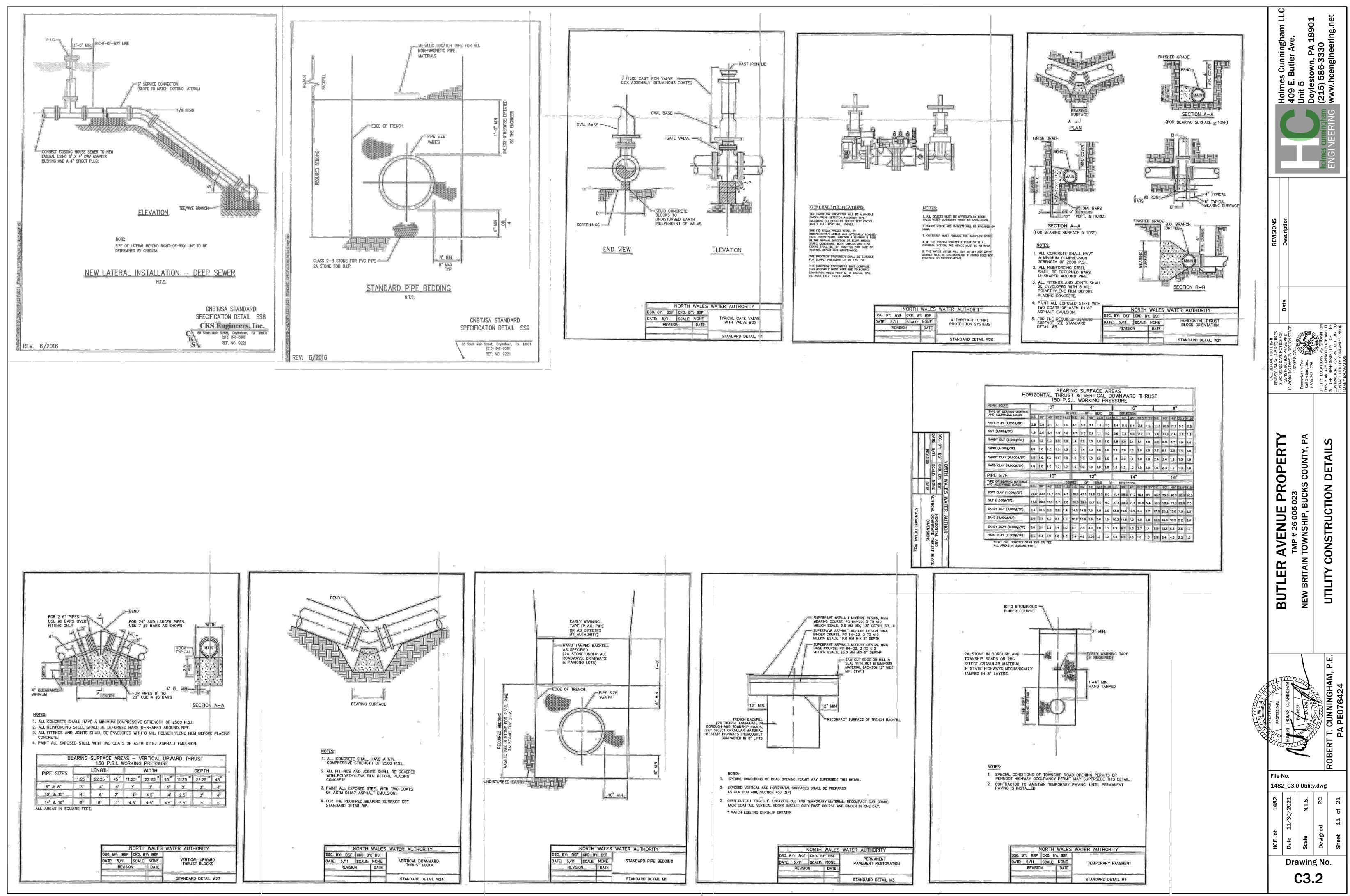
Drawing No.

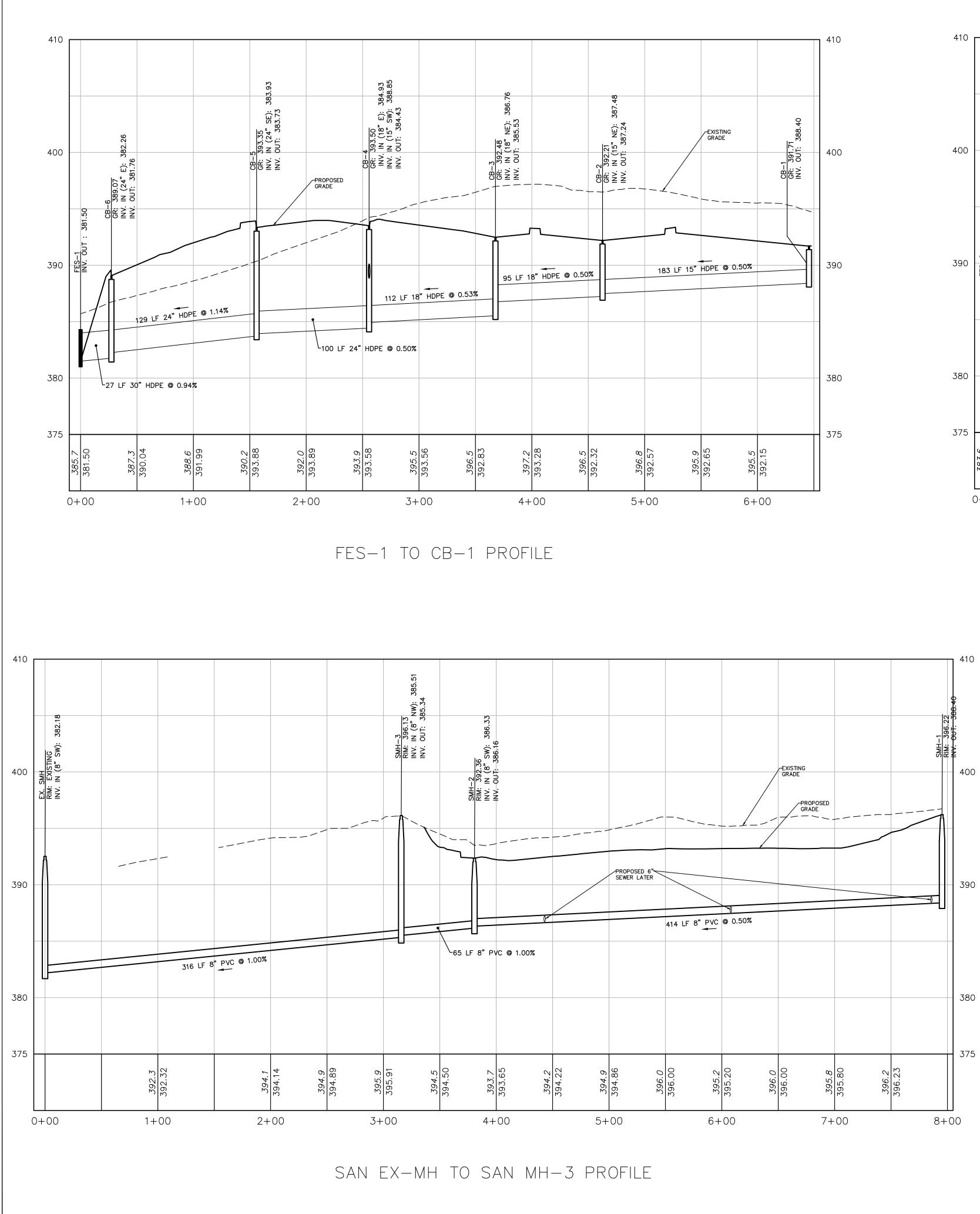
C2.2

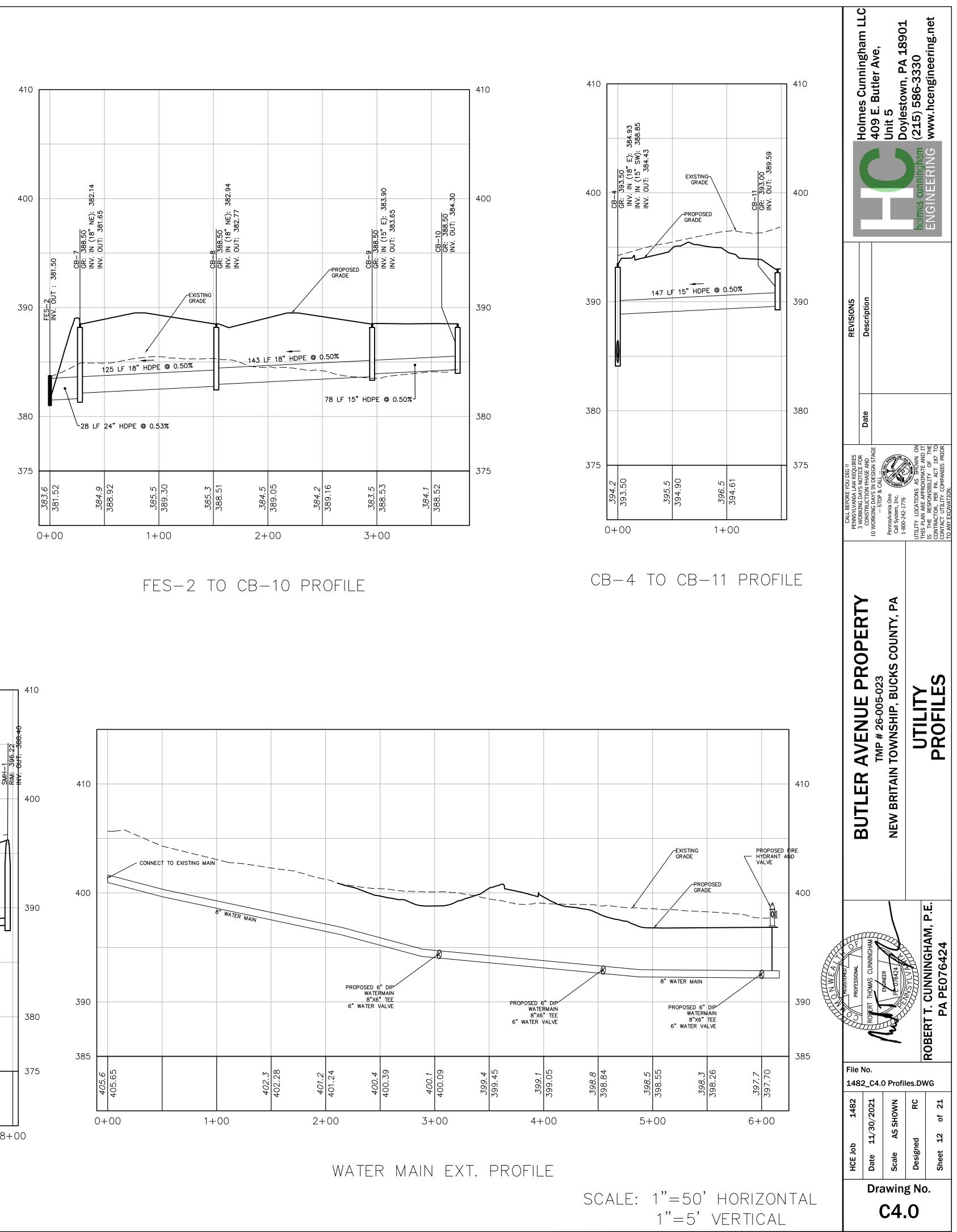
HDPE PIPE DETAIL

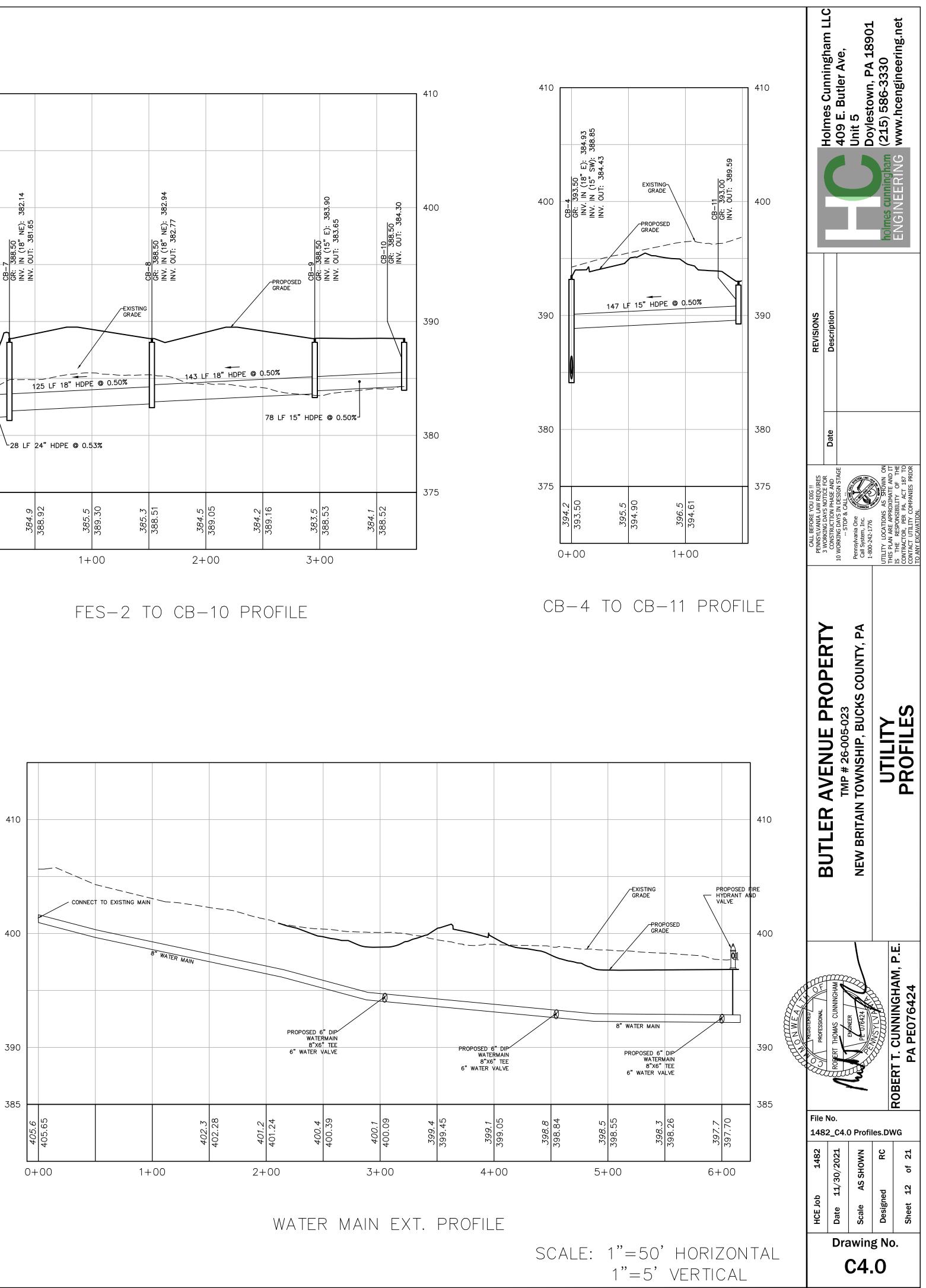








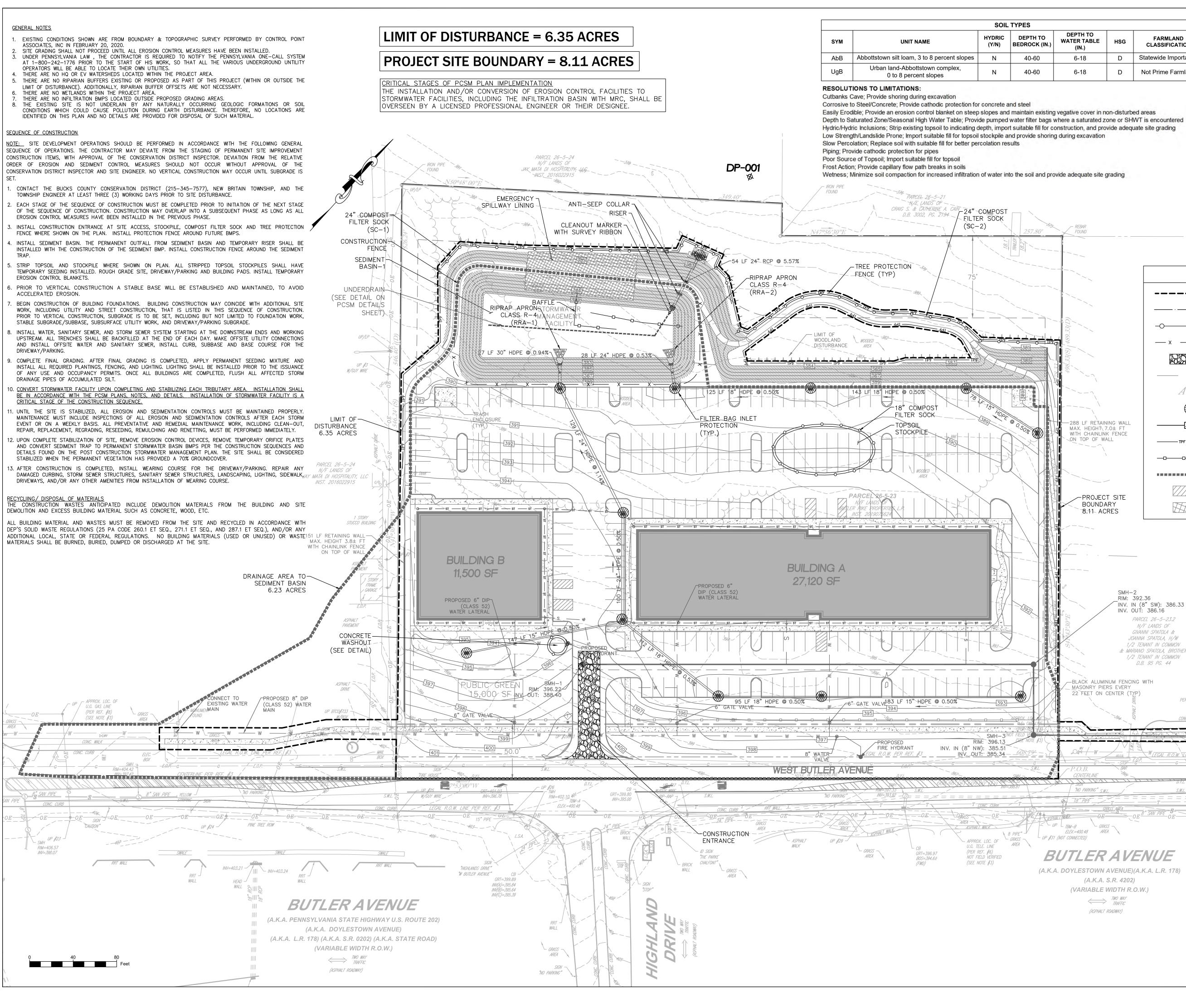




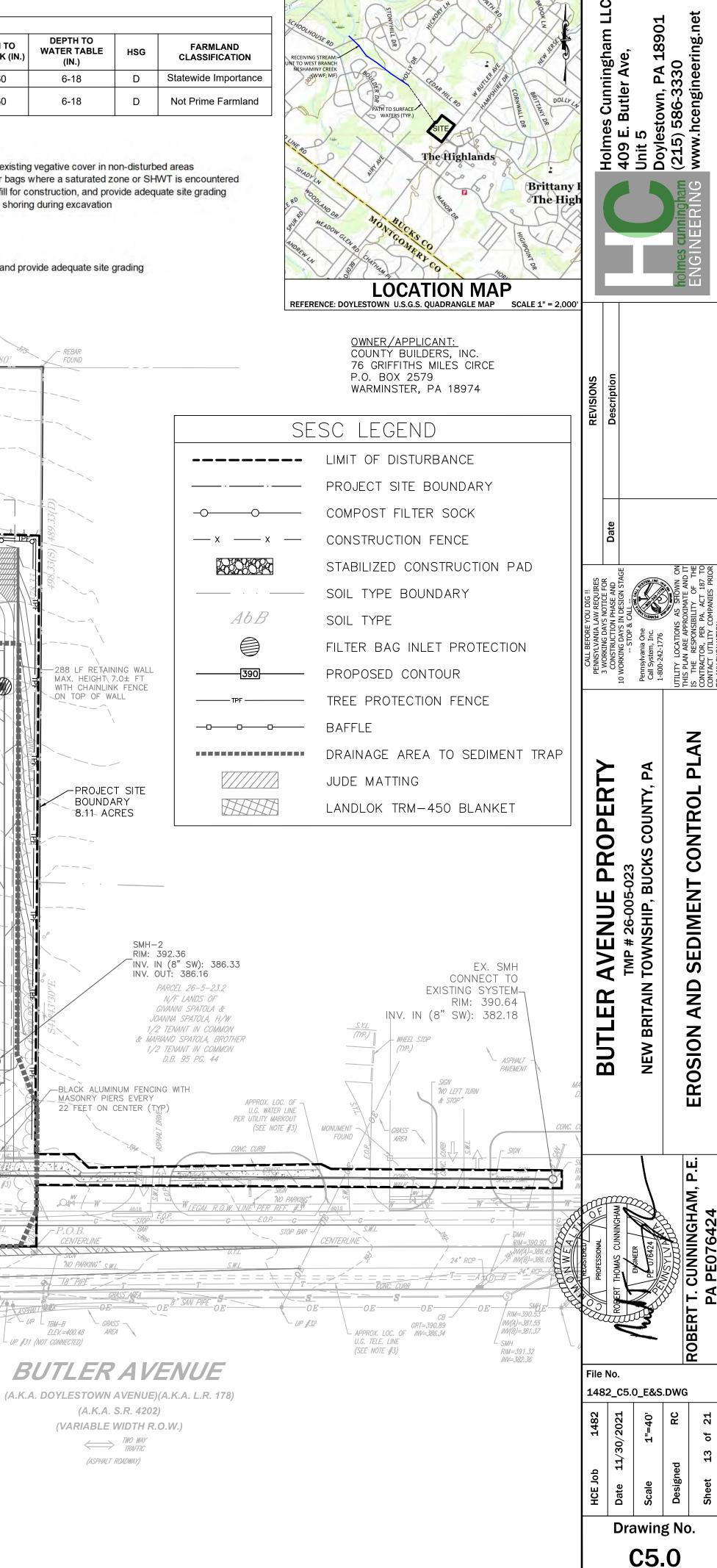
- ASSOCIATES, INC IN FEBRUARY 20. 2020. SITE GRADING SHALL NOT PROCEED UNTIL ALL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
- THERE ARE NO HQ OR EV WATERSHEDS LOCATED WITHIN THE PROJECT AREA.
- THE EXISTING SITE IS NOT UNDERLAIN BY ANY NATURALLY OCCURRING GEOLOGIC FORMATIONS OR SOIL CONDITIONS WHICH COULD CAUSE POLLUTION DURING EARTH DISTURBANCE. THEREFORE, NO LOCATIONS ARE IDENTIFIED ON THIS PLAN AND NO DETAILS ARE PROVIDED FOR DISPOSAL OF SUCH MATERIAL.

- TOWNSHIP ENGINEER AT LEAST THREE (3) WORKING DAYS PRIOR TO SITE DISTURBANCE.

- EROSION CONTROL BLANKETS.
- ACCELERATED EROSION.
- WORK, INCLUDING UTILITY AND STREET CONSTRUCTION. THAT IS LISTED IN THIS SEQUENCE OF CONSTRUCTION. PRIOR TO VERTICAL CONSTRUCTION, SUBGRADE IS TO BE SET, INCLUDING BUT NOT LIMITED TO FOUNDATION WORK, STABLE SUBGRADE/SUBBASE, SUBSURFACE UTILITY WORK, AND DRIVEWAY/PARKING SUBGRADE.
- DRIVEWAY/PARKING.
- DRAINAGE PIPES OF ACCUMULATED SILT.
- BE IN ACCORDANCE WITH THE PCSM PLANS, NOTES, AND DETAILS. INSTALLATION OF STORMWATER FACILITY IS A CRITICAL STAGE OF THE CONSTRUCTION SEQUENCE.
- REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING, MUST BE PERFORMED IMMEDIATELY.
- AND CONVERT SEDIMENT TRAP TO PERMANENT STORMWATER BASIN BMPS PER 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% GROUNDCOVER.
- DRIVEWAYS, AND/OR ANY OTHER AMENITIES FROM INSTALLATION OF WEARING COURSE.



) N.)	DEPTH TO WATER TABLE (IN.)	HSG	FARMLAND CLASSIFICATION
	6-18	D	Statewide Importance
	6-18	D	Not Prime Farmland



IF THE SITE WILL NEED TO HAVE FILL IMPORTED FROM AN OFF SITE LOCATION, THE RESPONSIBILITY FOR PERFORMING ENVIRONMENTAL DUE DILIGENCE AND THE DETERMINATION OF CLEAN FILL WILL RESIDE WITH THE OPERATOR.

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

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

### EROSION / SEDIMENT CONTROL PLAN STANDARD NOTES

STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET; STOCKPILE SLOPES MUST NOT EXCEED 2L:1V.

THE OPERATOR/RESPONSIBLE PERSON (O/RP) ON SITE SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.

IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE O/RP SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES (BMPS) TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.

THE O/RP SHALL ASSURE THAT AN EROSION AND SEDIMENT CONTROL PLAN HAS BEEN PREPARED, APPROVED BY THE BUCKS COUNTY CONSERVATION DISTRICT AND IS BEING IMPLEMENTED AND MAINTAINED FOR ALL SOIL AND/OR ROCK SPOIL AND BORROW AREAS REGARDLESS OF THEIR LOCATIONS

ALL PUMPING OF SEDIMENT-LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP SUCH AS A PUMPED WATER FILTER BAG DISCHARGING OVER UNDISTURBED AREAS.

A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE ON THE PROJECT SITE AT ALL TIMES. EROSION AND SEDIMENT BMPS MUST BE CONSTRUCTED, STABILIZED AND FUNCTIONAL BEFORE SITE

DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS OF THOSE BMPS AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMP CONTROLS MUST BE REMOVED. AREAS DISTURBED DURING THE REMOVAL OF THE BMPS MUST BE STABILIZED IMMEDIATELY.

AT LEAST SEVEN (7) DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITY, THE O/RP SHALI INVITE ALL CONTRACTORS INVOLVED IN THAT ACTIVITY, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE EROSION AND SEDIMENT CONTROL PLAN DESIGNER AND THE BUCKS COUNTY CONSERVATION DISTRICT TO A PRE-CONSTRUCTION MEETING. ALSO, AT LEAST THREE DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITY, ALL CONTRACTORS INVOLVED IN THAT ACTIVITY SHALL NOTIFY THE PENNSYLVANIA ONE-CALL SYSTEM INC. AT 1-800-242-1776 TO DETERMINE ANY UNDERGROUND UTILITIES LOCATIONS.

IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITY CEASES, THE O/RP SHALL STABILIZE ANY AREAS DISTURBED BY THE ACTIVITY. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT SPECIFIED RATES. DISTURBED AREAS THAT ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS.

DISTURBED AREAS THAT ARE AT FINISHED GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.

AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% (PERCENT) VEGETATIVE OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.

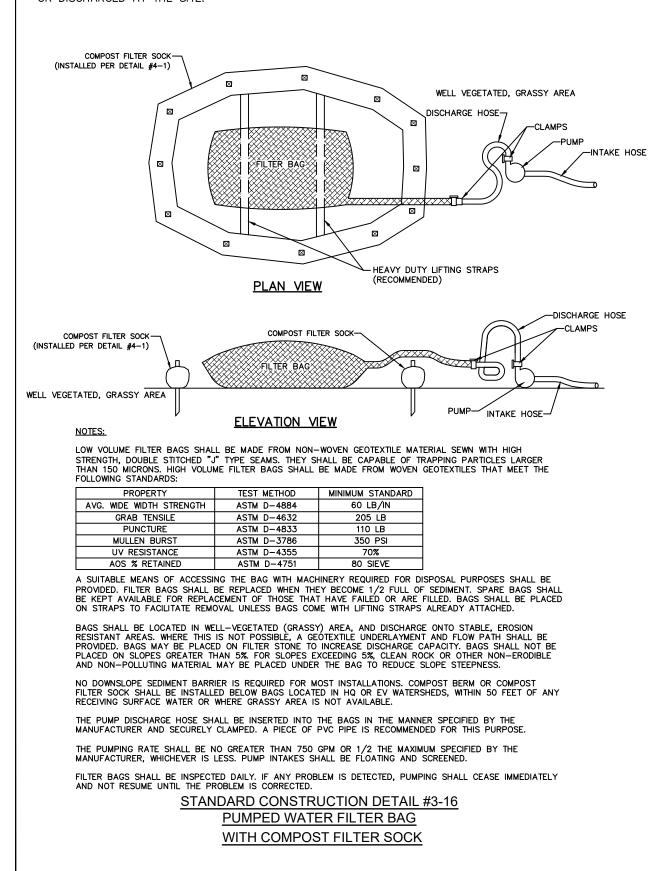
UPON THE INSTALLATION OF TEMPORARY SEDIMENT BASIN RISER(S), A QUALIFIED SITE REPRESENTATIVE SHALL CONDUCT AN IMMEDIATE INSPECTION OF THE RISER(S), WHEREUPON THE BUCKS COUNTY CONSERVATION DISTRICT SHALL BE NOTIFIED IN WRITING THAT THE RISER IS SEALED (WATERTIGHT).

AT STREAM CROSSINGS, A 50-FOOT BUFFER SHALL BE MAINTAINED. ON BUFFERS, CLEARINGS, SOD DISTURBANCES AND EXCAVATIONS, EQUIPMENT TRAFFIC SHOULD BE MINIMIZED. ACTIVITY SUCH AS STACKING LOGS, BURNING CLEARED BRUSH, DISCHARGING RAINWATER FROM TRENCHES, WELDING PIPE SECTIONS, REFUELING AND MAINTAINING EQUIPMENT SHOULD BE AVOIDED WITHIN BUFFER ZONES.

UNTIL A SITE IS STABILIZED. ALL EROSION AND SEDIMENT BMPS MUST BE MAINTAINED PROPERLY MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION CONTROL BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEANOUT, REPAIR, REPLACEMENT, RE-GRADING, RE-SEEDING, RE-MULCHING AND RE-NETTING MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS, OR MODIFICATIONS OF THOSE INSTALLED, WILL BE REQUIRED.

SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF ON-SITE IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED OR PLACED IN SOIL STOCKPILES AND STABILIZED.

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.



TEMPORARY SEEDING :

- 1. 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
- 2. 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 PERIODS.
- 3. 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.
- 4. 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 STEPS:
- A. APPLY AGRICULTURAL LIMESTONE AT A RATE OF ONE (1) TON PER ACRE. (5 POUNDS PER, 1000 SQUARE B. 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

6. ALL SEED SHALL BE LABELED, DATED AND QUALITY CONSISTENT WITH SECTION NO. 2 PERMANENT SEEDING:

- 1. DISTURBED AREAS WHICH ARE EITHER AT FINISHED GRADE OR WILL NOT BE DISTURBED AGAIN WITHIN ONE (1)
- YEAR MUST BE SEEDED 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 1", DORMANT SEED MUST BE USED AND DISTURBED AREAS MUST BE MULCHED.
- 3. DISTURBED FINAL GRADED AREAS AND DRAINAGE SWALES WILL BE PERMANENTLY SEEDED AS FOLLOWS: A. MINIMUM OF 4" OF TOPSOIL SHALL BE SPREAD OVER ALL AREAS TO BE SEEDED. 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.
- B. 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)).
- C. 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 D. 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 Ε. 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

					PERM	IAN	ENT	SEE	DING	FOR	NORMAL	MOWED	LAWN	A
SEASON										R/	ATE.			
MARCH 1	ΤO	JUNE	1	&	AUG	15	ΤO	OCT	1	2	LBS./100	00 SF	KY31	

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 MARCH 1 TO JUNE 1 & AUG 15 TO OCT 1 2 LBS./1000 SF KY31 TALL FESCUE 80%
- 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 FERTILIZED AT A RATE OF 50 LBS. PER 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: A. 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 MANUFACTURERS RECOMMENDATIONS APPLY AT A RATE OF .04 TO .06 GALLONS PER SQUARE YARD.
- B. 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:
- 1. CONSTRUCTION REQUIREMENTS -
- PIPE INSTALLATION THAT CAN BE COMPLETED IN ONE DAY. B. 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. D. 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 E. 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
- AT THE END OF EACH WEEK 2. 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: A. 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. B. 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 INPECTIONS 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.

COMPOST FILTER SOCK 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 SOCK FUNCTIONAL. DEPOSITS WILL BE REMOVED WHERE ACCUMULATIONS REACH 1/2 THE ABOVE GROUND HEIGHT OF THE SOCK. UNDERCUTTING OR EROSION OF THE TOE ANCHOR OF THE COMPOST FILTER SOCK WILL BE REPLACED IMMEDIATELY WITH ROCK FILTER OUTLETS. ANY MANUFACTURER'S RECOMMENDATIONS WILL BE ADHERED TO FOR REPLACING COMPOST FILTER SOCK 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.

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

AREAS: TYPE TALL FESCUE

AND RED TOP 12%

TYPE

AND RYEGRASS 20%

A. LIMIT ADVANCE CLEARING AND GRUBBING OPERATIONS TO A DISTANCE EQUAL TO TWO TIMES THE LENGTH OF

MEASURES/FACILITIES WILL BE INSTALLED. SEEDING AND MULCHING OF ALL DISTURBED AREAS WILL BE DONE

LIMITING EXPOSED EXTENT AND DURATION OF DISTURBED AREASTHE 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 RUNOFFTEMPORARY STABILIZATION: UPON TEMPORARY OF PERMANENT VEGETATION 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 NOTES: ACTIVITIES HAVE BEEN COMPLETED. AREAS THAT ARE PROPOSED TO HAVE SPECIFIC LINING SHALL BE MAXIMUM DRAINAGE AREA = 1/2 ACRE. 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 SHALL BE REQUIRED FOR ALL INSTALLATIONS. A UNIFORM EROSION RESISTANT PERENNIAL VEGETATIVE COVER OF THE DISTURBED AREA IS ESTABLISHED. PERMANENT STABILIZATION MEASURES ARE SPECIFIED ON THE EROSION AND SEDIMENT BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE POLLUTION CONTROL DETAIL PLANS.

AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS., A MINIMUM SOLIDS SEPARATION: PRIOR TO ANY SITE DISTURBANCE OR CONSTRUCTION ACTIVITIES, A GRAVEL BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS BUFFER WILL BE INSTALLED AT THE EXISTING DRIVEWAYS TO SERVE AS A CONSTRUCTION ENTRANCE. IN SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE. 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 INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS 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 BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED PLACE.

TREE PROTECTION NOTES

. Prior to any site work, clearing, tree removal, grading, or construction, the tree protection area shall be delineated by the following methods: 1) The tree protection area that is delineated on the site prior to construction shall conform to the approved development plans.

(2) Forty-eight inch high orange snow fence or other suitable fence, such as super silt fence, mounted on steel posts located 8 feet on center, shall be placed along the boundary of the tree protection area.

(3) Trees being removed shall not be felled, pushed or pulled into a tree protection area or into rees that are to be preserved. (4) Grade changes and excavations shall not encroach upon the Tree protection area.

(5) No toxic materials, including petroleum products shall be stored less than 100 feet from a trée protection area or a watercourse. If field conditions warrant, a greater distance may be required.

(6) The area within the tree protection area shall not be built upon nor shall any materials be stored there either temporarily or permanently. Vehicles and equipment shall not be parked in the tree protection area.

(7) When tree stumps are located within 10 feet of the tree protection area, the stumps shall be removed by means of a stump grinder to minimize the effect on surrounding root systems. (8) Tree roots which must be severed shall be cut by a backhoe or similar equipment aligned radially to the tree. This method reduces the lateral movement of the roots during excavation, which if done by other methods could damage the intertwined roots of adjacent trees. (9) Within 4 hours of any severance of roots, all tree roots that have been exposed and/or damaged shall be trimmed cleanly and covered temporarily with moist peat moss, burlap, or other biodegradable material to keep them from drying out until permanent cover can be installed. (10) Sediment, retention, and detention basins shall not discharge into the tree protection area. (11) Sediment, retention, and detention basins shall not be located within the tree protection

(12) Trees shall not be used for roping, cables, signs, or fencing. Nails and spikes shall not be driven into trees. Protection from Grade Change.

(1) When the original grade cannot be retained at the tree protection area line, a retaining wall shall be constructed outside the tree protection area. 2) Appropriate details of the retaining wall design shall be provided.

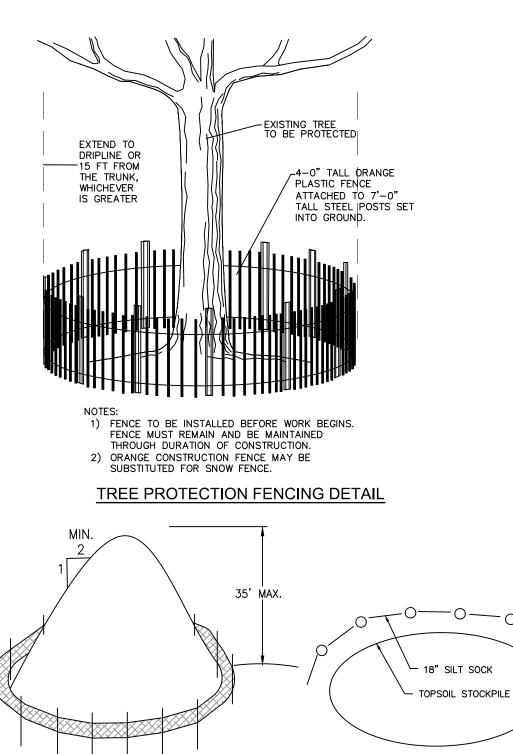
To ensure the survival of trees, the following methods shall be used. The top of the wall shall be four inches above the finished grade level.

b) The wall shall be constructed of large stones, bricks, building tiles, concrete blocks, or treated wood beams not less than 6 inches by 6 inches. A means for drainage through the wall shall be provided so water will not accumulate on either side of the wall. Weep holes shall be required within any wall. a) Any severed roots as a result of excavation shall be trimmed so that their edges are

smooth and are cut back to a lateral root if exposed. Trees Damaged During Construction. Tree trunks and exposed roots damaged during construction shall be protected from further damage. Damaged branches shall be pruned according to National Arborist Association standards. All cuts shall be made sufficiently close to the trunk

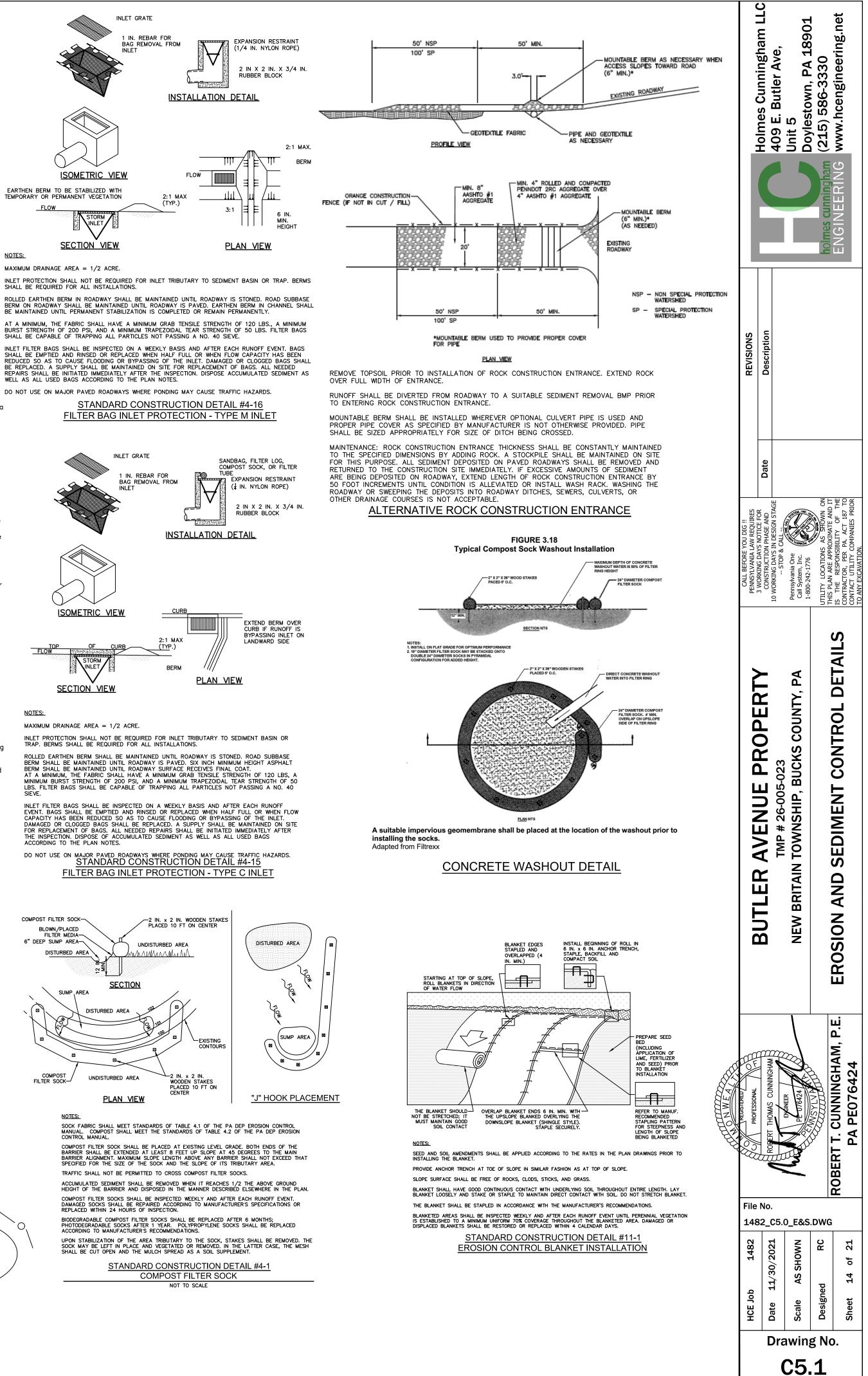
or parent limb without cutting into the branch collar or leaving a protruding stub. All necessary pruning cuts must be made to prevent bark from being torn from the tree and to facilitate rapid Tree Replacement. In the event that trees that are to be protected are

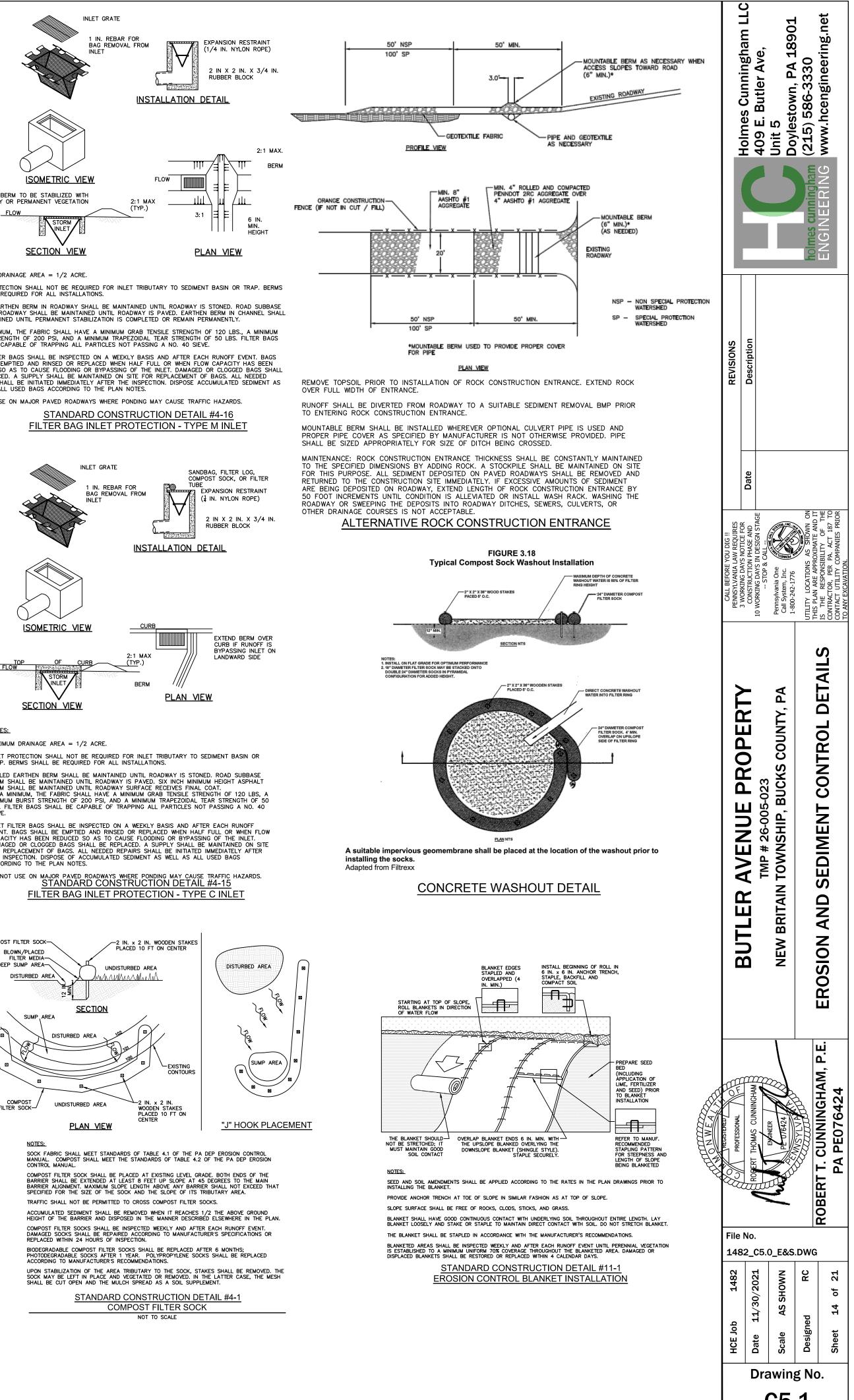
removed or damaged by accident or by violation of the tree protection requirements, trees shall be replaced on an inch for inch basis.

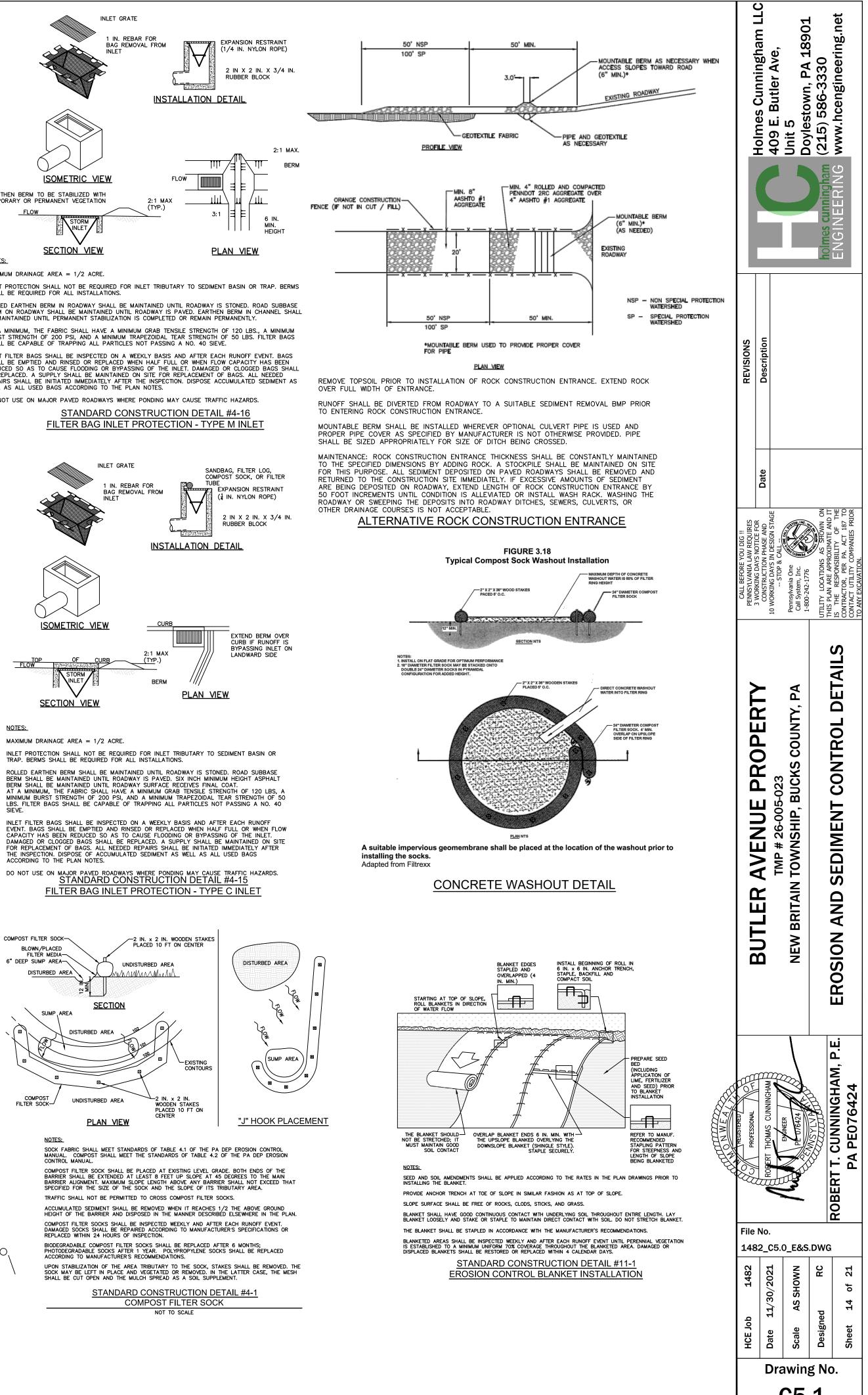


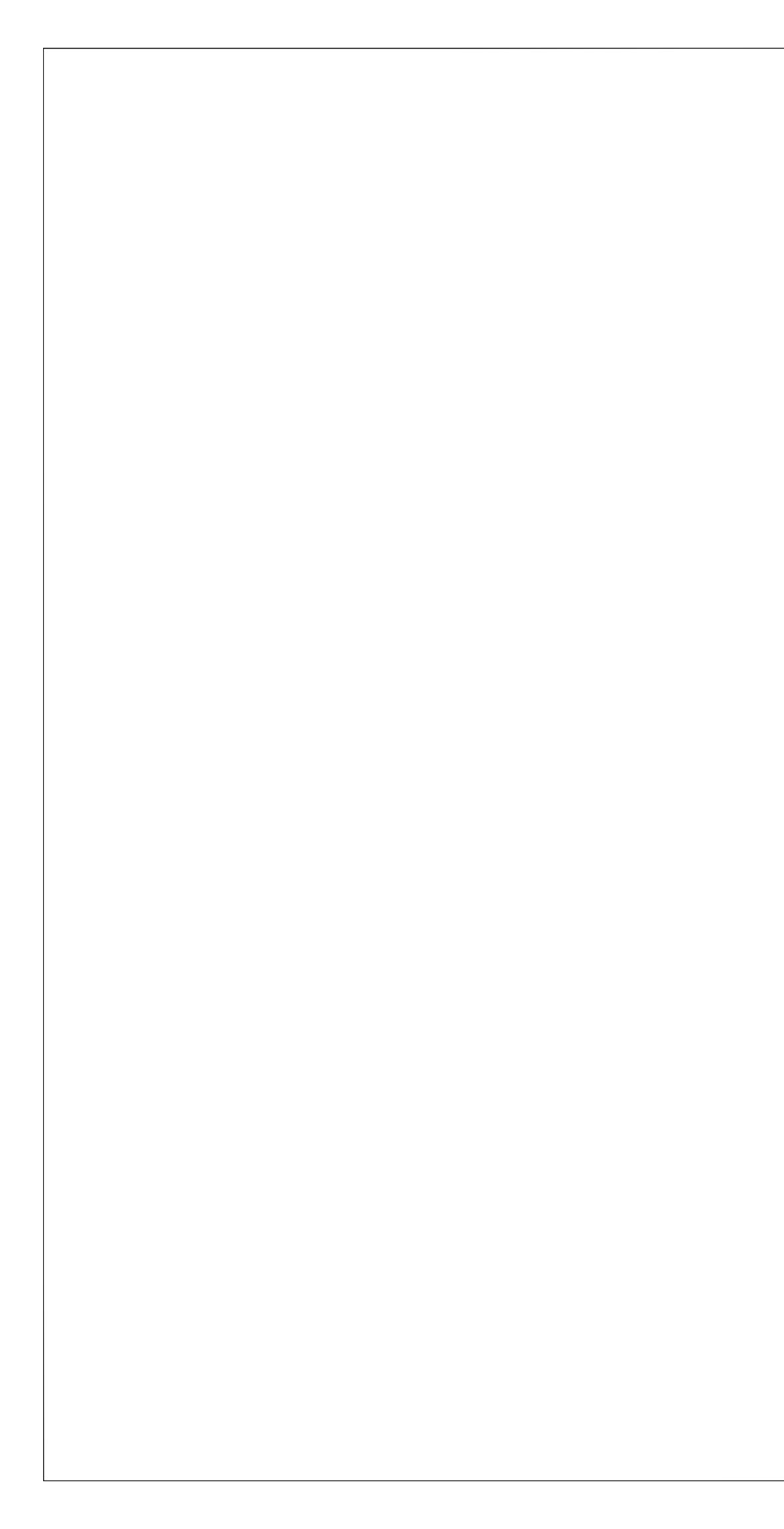


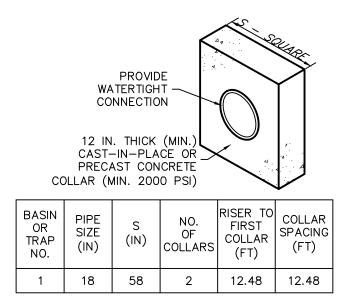
PLAN VIEW







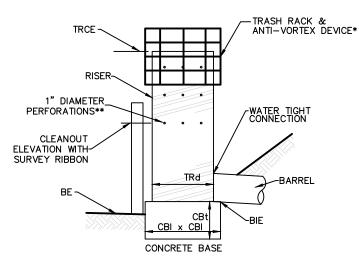




NOTES:

1. ALL COLLARS SHALL BE INSTALLED SO AS TO BE WATERTIGHT. 2. COLLAR SIZE AND SPACING SHALL BE AS INDICATED WITHIN TABLE.

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



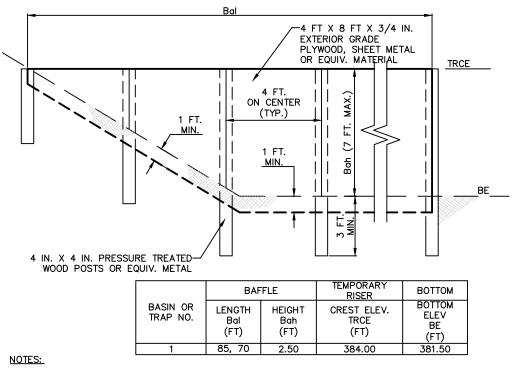
\* SEE STANDARD CONSTRUCTION DETAIL #7-5, TRASH RACK AND ANTI-VORTEX DEVICE \*\* LOWEST ROW OF HOLES AT SEDIMENT CLEAN-OUT ELEVATION

	RISER				PERFOR	ATIONS		CONCRETE BASE		BARREL
BASIN NO.	DIA TRd (IN)	CREST ELEV TRCE (FT)	MAT'L	LOWEST ROW OF HOLES ELEV (FT)	NO. ROWS**	NO. HOLES PER ROW	VERT. SPACING OF ROWS (FT)	LENGTH AND WIDTH CBI (IN)	THICKNESS CBt (IN)	INLET ELEV BIE (FT)
1	18	384	CMP	382.75	2	4, 4	.42	36	12	377.50
RISER	: IMUM OF 2-# TO ANCHOR ID OUTSIDE OF	IT TO CON								

CONCRETE BAS	SE SHALL	BE POURE	D IN SUO	CH A MANN	IER SO A	AS TO INSU	RE THAT C	ONCRETE
BOTTOM OF R	ISER TO I	INVERT OF	THE LO	VEST PERM	ANENT IN	IVERT PIPE	TO PREVEN	IT RISER
BREAKING AWA	Y FROM TH	HE BASE. M	INIMUM B	ASE WIDTH	EQUALS 2	2 TIMES RISE	R DIAMETER	
EMBEDDED SEC	TION OF				SHALL		WITH ZINC	CHROMA
EQUIVALENT.					SHALL			

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

SEDIMENT SHALL BE REMOVED FROM THE BASIN WHEN SEDIMENT HAS ACCUMULATED TO THE PROPOSED SURVEY RIBBON ELEVATION ON THE CLEANOUT STAKE. SEDIMENT MUST BE DISPOSED OF IN ACCORDANCE WITH REQUIREMENTS ON THE E&S PLAN. ALL PERMANENT ORIFICES OF THE PROPOSED OUTLET STRUCTURE SHALL BE BLOCKED AND SEALED WITH MARINE-GRADE PLYWOOD AND EPOXY OR GROUTED. TEMPORARY OUTLET HOLES SHALL BE DRILLED PRIOR TO INSTALLATION OF THE SEDIMENT BASIN, AND SHALL BE PERMANENTLY SEALED WITH GROUT OR EPOXY UPON CONVERSION OF THE BASIN TO A PERMANENT STORMWATER FACILITY. RISER CREST ELEVATION MAY BE ACHIEVED BY ADDING ENCLOSED A MARINE-GRADE PLYWOOD BOX AROUND THE OUTLET STRUCTURE, OR A CONCRETE RISER MAY BE ADDED TO THE TOP OF THE BOX. STANDARD CONSTRUCTION DETAIL #7-7 SEDIMENT BASIN RISER AND CLEANOUT



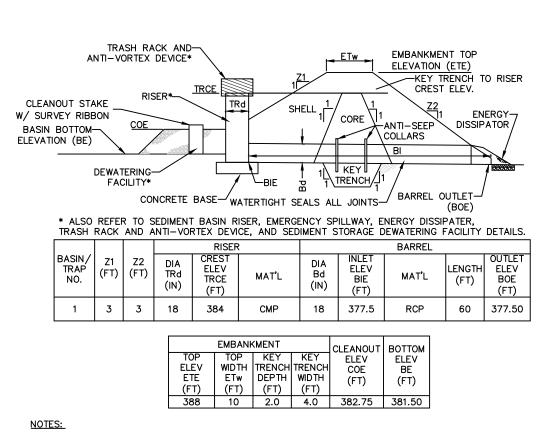
SEE APPROPRIATE BASIN DETAIL FOR PROPER LOCATION AND ORIENTATION.

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.

STANDARD CONSTRUCTION DETAIL #7-14 <u>BAFFLE</u>



SEDIMENT BASINS, INCLUDING ALL APPURTENANT WORKS, SHALL BE CONSTRUCTED TO THE DETAIL AND DIMENSIONS SHOWN ON THE E&S PLAN DRAWINGS.

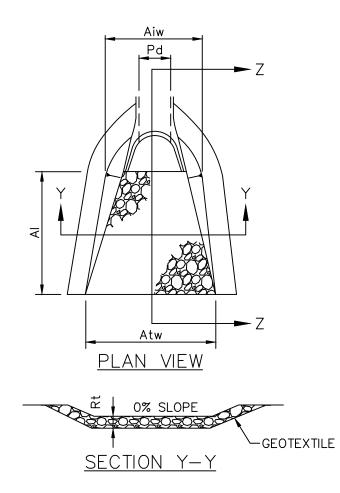
AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO A DEPTH OF TWO FEET PRIOR TO ANY PLACEMENT AND COMPACTION OF EARTHEN FILL. FILL MATERIAL FOR THE EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS. 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. TREES SHALL NOT BE PLANTED ON THE EMBANKMENT. ACCESS SHALL BE PROVIDED FOR SEDIMENT REMOVAL AND OTHER REQUIRED MAINTENANCE ACTIVITIES.

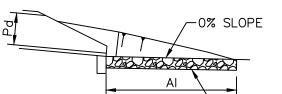
A CLEAN OUT STAKE SHALL BE PLACED NEAR THE CENTER OF EACH BASIN. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED THE CLEAN OUT ELEVATION ON THE STAKE AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS. DISPOSE OF MATERIALS REMOVED FROM THE BASIN IN THE MANNER DESCRIBED IN THE E&S PLAN.

INSPECT ALL SEDIMENT BASINS ON AT LEAST A WEEKLY BASIS <u>AND</u> AFTER EACH RUNOFF EVENT. CHECK BASIN EMBANKMENTS, SPILLWAYS, AND OUTLETS FOR EROSION, PIPING AND SETTLEMENT. NECESSARY REPAIRS SHALL BE MADE IMMEDIATELY. DISPLACED RIPRAP WITHIN THE OUTLET ENERGY DISSIPATER SHALL BE REPLACED IMMEDIATELY. ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISTURBED AREAS SHALL BE STABILIZED INSIDE THE BASIN BEFORE CONVERSION TO A STORMWATER MANAGEMENT FACILITY. THE DEVICE SHOWN IN STANDARD CONSTRUCTION DETAIL #7-16 MAY BE USED TO DEWATER SATURATED SEDIMENT PRIOR TO ITS REMOVAL. ROCK FILTERS SHALL BE ADDED AS NECESSARY.

ALL BASIN EMBANKMENTS SHOULD BE COMPACTED BY SHEEPSFOOT OR PAD ROLLER. THE LOOSE LIFT THICKNESS SHOULD BE 9 INCHES OR LESS, DEPENDING ON ROLLER SIZE, AND THE MAXIMUM PARTICLE SIZE IS 6 INCHES OR LESS. FIVE PASSES OF THE COMPACTION EQUIPMENT OVER THE ENTIRE SURFACE OF EACH LIFT IS REQUIRED. EMBANKMENT COMPACTION TO VISIBLE NON-MOVEMENT IS ALSO REQUIRED.

STANDARD CONSTRUCTION DETAIL #7-6 SEDIMENT BASIN EMBANKMENT AND SPILLWAY DETAILS PERFORATED RISER



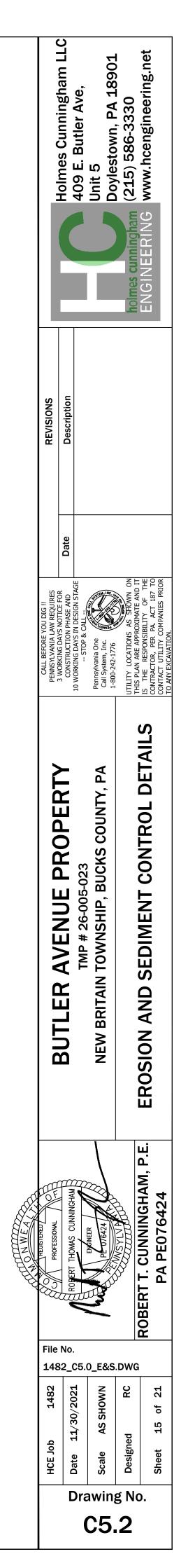


		GEOTEXTILE					
		<u>SEC</u>	TION Z	<u>Z-Z</u>			
	PIPE	RIPI	RAP		APRON		
OUTLET NO.	DIA Pd (IN)	SIZE R	THICK. Rt (IN)	LENGTH Al (FT)	INITIAL WIDTH Aiw (FT)	TERMINAL WIDTH Atw (FT)	
RRA #1	30	4	18	16	7.5	23.5	
RRA #2	24	4	18	12	6	18	

### <u>NOTES:</u>

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.

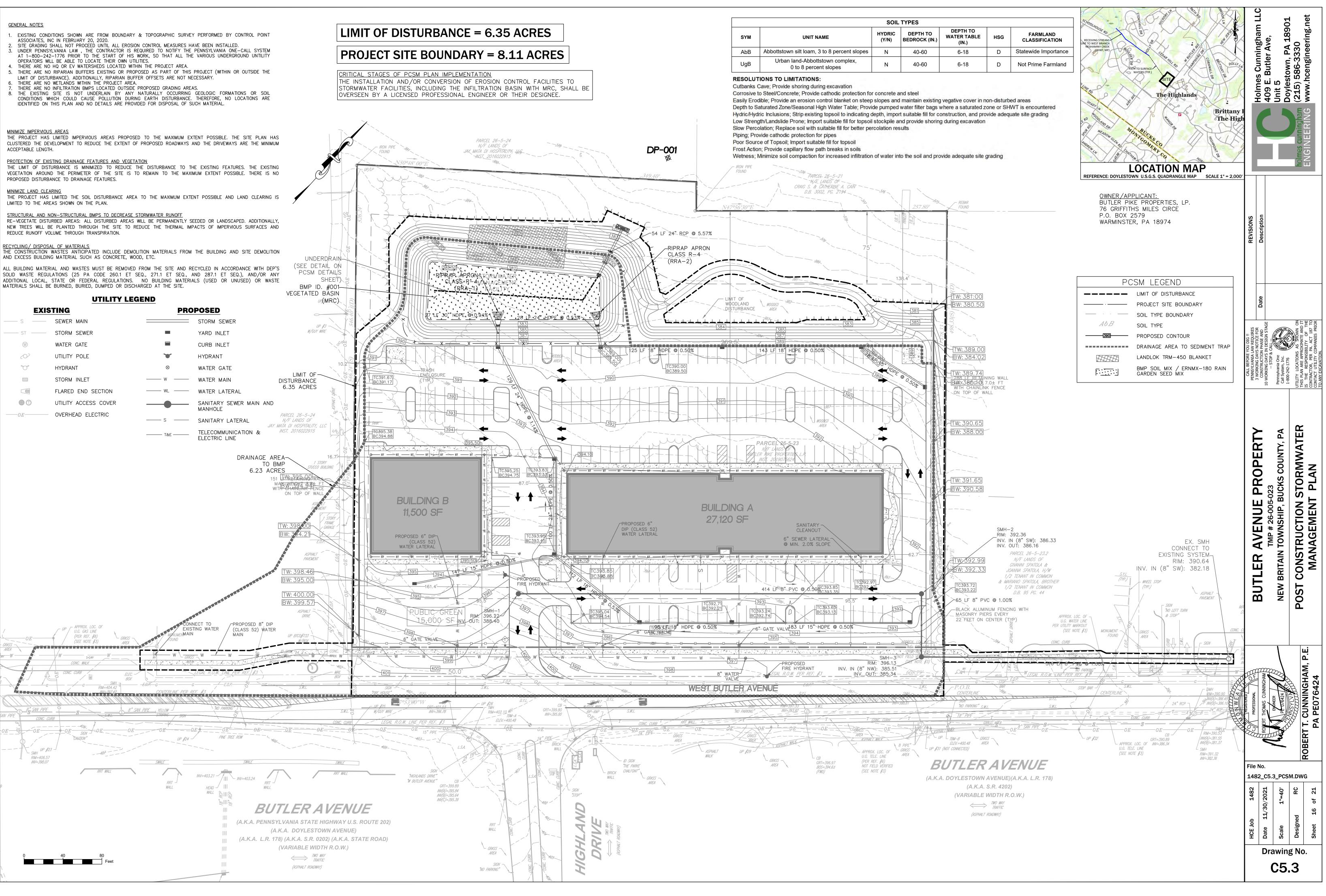
STANDARD CONSTRUCTION DETAIL #9-1 **RIPRAP APRON AT PIPE OUTLET** WITH FLARED END SECTION OR ENDWALL



DES OF FILLS MATE OR

- ASSOCIATES, INC IN FEBRUARY 20. 2020.

- THERE ARE NO WETLANDS WITHIN THE PROJECT AREA.
- 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.



TEMPORARY SEEDING :	<u>BASIN FLOORS</u> SEED IN ERNST SEED MIX (ERNMX—180); RAIN GARDEN AREA SEEDING RATE IS 20 LBS. PER ACRE WITH 30 LBS. PER ACR
1. TEMPORARY SEEDING SHALL BE DONE IN AREAS WHERE NO ACTIVITY WORK WILL BE PERFORMED. ANY DISTURBED AREA ON	ERNMX-180 RAIN GARDEN AREA MIX
WHICH ACTIVITY HAS CEASED MUST BE SEEDED AND MULCHED IMMEDIATELY. 2. 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 PERIODS.	26% River Oats, PA/VA Ecotype blend (Chasmanthium latifol 17% Virginia Wildrye, PA Ecotype (Elymus virginicus, PA Ecot 15% Fowl Bluegrass (Poa palustris) 10% Fox Sedge, PA Ecotype (Carex vulpinoidea, PA Ecotype)
<ol> <li>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.</li> </ol>	6% Purple Coneflower (Echinacea purpurea) 4% Blackeyed Susan, Coastal Plain NC Ecotype (Rudbeckia H 3% Zigzag Aster, PA Ecotype (Aster prenanthoides (Symphyo
4. 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.	3% Blue False Indigo, Southern WV Ecotype (Baptisia austra 3% Ohio Spiderwort, PA Ecotype (Tradescantia chiensis, PA 2% Lanceleaf Coreopsis, Coastal Plain NC Ecotype (Coreopsi
<ol> <li>TEMPORARY SEEDING STEPS:</li> <li>A. APPLY AGRICULTURAL LIMESTONE AT A RATE OF ONE (1) TON PER ACRE. (5 POUNDS PER, 1000 SQUARE FEET)</li> </ol>	2% Wild Bergamot, PA Ecotype (Monarda fistulosa, PA Ecoty 2% Wild Senna, VA & WV Ecotype (Senna hebecarpa (Cassic 2% Autumn Bentgrass, PA Ecotype (Agrostis perennans, PA
<ul> <li>B. APPLY FERTILIZER AT THE RATE OF 50-50-50 PER ACRE.</li> <li>C. WORK THE LIMESTONE AND FERTILIZER INTO THE SOIL.</li> <li>D. UTILIZING THE FOLLOWING SEEDING TYPES, RATES AND TIME SCHEDULE :</li> </ul>	2% Marsh (Dense) Blazing Star (Spiked Gayfeather), PA Eco 1% Early Goldenrod, PA Ecotype (Solidago juncea, PA Ecoty 1% Oxeye Sunflower, PA Ecotype (Heliopsis helianthoides, PA 1% Swamp Milkweed, PA Ecotype (Asclepias incarnata, PA Ec
TEMPORARY SEEDING SEASON RATE TYPE MARCH 1 TO JUNE 15 1 LB./1000 SF ANNUAL RYEGRASS	
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	BASIN LANDSCAPE MAINTENANCE
<ul><li>E. APPLY HAY OR STRAW MULCH (IN ACCORDANCE WITH SECTION NO. 4) AT A RATE OF THREE (3) TONS PER ACRE.</li><li>6. ALL SEED SHALL BE LABELED, DATED AND QUALITY CONSISTENT WITH SECTION NO. 2</li></ul>	THIS BASIN IS DESIGNED TO BECOME NATURALIZED O AS TIME GOES ON.
PERMANENT SEEDING:	MOWING – ESTABLISH AND MAINTAIN A NO-MOW ZO
1. DISTURBED AREAS WHICH ARE EITHER AT FINISHED GRADE OR WILL NOT BE DISTURBED AGAIN WITHIN ONE (1) YEAR MUST BE SEEDED WITH A PERMANENT SEED MIXTURE AND MULCHED.	SIDE SLOPES. MOW THE NO-MOW ZONE 1X/YEAR TO APRIL/ EARLY MAY). RAKE MOWN MATERIAL AND COMI
<ol> <li>SEEDING SHALL BE DONE DURING PERIODS FROM APRIL 15TH TO OCTOBER PT, UNLESS OTHERWISE DIRECTED. IF SEEDING IS DONE AFTER OCTOBER 1", DORMANT SEED MUST BE USED AND DISTURBED AREAS MUST BE MULCHED.</li> </ol>	INSPECTIONS - INSPECT BASIN AND NO-MOW ZON LOOSESTRIFE, PHRAGMITES, HONEYSUCKLE, ETC. (/
<ul> <li>DISTURBED FINAL GRADED AREAS AND DRAINAGE SWALES WILL BE PERMANENTLY SEEDED AS FOLLOWS:</li> <li>A. MINIMUM OF 4" OF TOPSOIL SHALL BE SPREAD OVER ALL AREAS TO BE SEEDED. TOPSOIL SHALL BE FREE OF STONES, STICKS, WASTE MATERIAL AND SIMILAR DEBRIS. FROZEN GROUND SHALL NOT BE SPREAD AS TOPSOIL AND TOPSOIL SHALL</li> </ul>	FOUND REMOVE PER RECOMMENDED STANDARDS FOF PA DCNR (DEPT OF CONSERVATION & NATURAL RESOU
NOT BE SPREAD OVER FROZEN GROUND. B. A SOIL ANALYSIS IS RECOMMENDED, HOWEVER, IN LIEU OF AN ANALYSIS APPLY AGRICULTURAL LIMESTONE AND FERTILIZER	<u>CLEANING</u> – REMOVE TRASH AND DEBRIS (JANUARY &
AT RATES RECOMMENDED BELOW (OR AS SUGGESTED BY THE SOIL TEST RESULTS (ONE (1) TEST PER 25 ACRES)). C. 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.	Ε
D. 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.	D
E. 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 '/2" OF SOIL WITH SUITABLE EQUIPMENT.	TOP OF BERM = C $1$ $3$
F. 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:	SPILLWAY = A
SEASON RATE TYPE MARCH 1 TO JUNE 1 & AUG 15 TO OCT 1 2 LBS./1000 SF KY31 TALL FESCUE	BASIN SPILLWAY DET
AND RED TOP 12% OCT 1 TO MARCH 1 & JUNE 1 TO AUG 1 2 LBS./1000 SF RED TOP*	LINING
((*) 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.)	(FT)         (FT)         (FT)         (FT)           1         386.58         386.91         388.00         75.00
PERMANENT SEEDING FOR SPECIAL AREAS (SWALES, POND EMBANKMENTS, LEVEES, DIVERSION CHANNELS, ETC):	NOTE: 1. BASIN OUTLET PIPES SHALL BE CONTRUCTED WI
SEASON RATE TYPE MARCH 1 TO JUNE 1 & AUG 15 TO OCT 1 2 LBS./1000 SF KY31 TALL FESCUE 80% AND RYEGRASS 20%	<ol> <li>BASIN BERM TO BE PLACED IN 8 INCH LIFTS AI DENSITY AS ESTABLISHED BY ASTMD-1557 PRIOF</li> </ol>
NOTE : SEEDING PERIODS AND SPECIFICATIONS MAY VARY DUE TO SITE CONDITIONS AND VARIANCES FROM THE TIME THIS	<ol> <li>SPILLWAY LINING TO BE PLACED FROM 3' INSIDI BASIN.</li> <li>SPILLWAY LINING SHALL BE LANDLOK TRM450 OF</li> </ol>
REPORT IS WRITTEN AND APPROVED. IT MAY BE NECESSARY TO ADAPT SEED SPECIFICATION, VARIETIES, AND QUALITIES. FOR SPECIAL CONDITIONS CONSULT <u>"GUIDELINE FOR RECLAMATION OF SEVERELY DISTURBED AREAS".</u> PENNSYLVANIA STATE UNIVERSITY.	BASIN SPILLWAY
4. 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 FERTILIZED AT A RATE OF 50 LBS. PER 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.	BMP MAINTENANCE PLAN
<ol> <li>5. 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</li> </ol>	NOTE: AN ANNUAL REPORT SHALL BE PREPARED AND RETAINED MAINTENANCE HAS BEEN PERFORMED.
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	THE HOMEOWNERS ASSOCIATION IS RESPONSIBLE FOR MAINTENAN OTHER PROPOSED BMP'S.
<ul> <li>50CH AS CORASOL, DCA-70, TERRE-TACK OK AN AFFROVED EQUAL SHALL BE USED FER THE MANOFACTORER'S INSTRUCTIONS TO ANCHOR THE MULCH.</li> <li>6. MULCHING: MULCHING SHALL BE APPLIED AS FOLLOWS:</li> </ul>	• CATCH BASINS, MANHOLES AND PIPES TO BE INSPECTED
A. 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	<ul> <li>CATCH BASINS, MARINELES AND FIFES TO BE INSPECTED ACCUMULATION AT LEAST ANNUALLY AS WELL AS AFTER E</li> <li>ALL STRUCTURAL COMPONENTS MUST BE INSPECTED FO DETERIORATION AT LEAST ANNUALLY.</li> </ul>
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 SOLARE YARD	VEGETATED STORMWATER FACILITY/BASIN (MANAGED RELEASE CON
SQUARE YARD. B. 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.	<ul> <li>UPGRADIENT CATCH BASINS AND INLETS SHOULD BE INS HISTORICAL MAINTENANCE RECORDS SUGGEST A MORE FREGO THE VEGETATION (FOR THE MRC BMP AND CONTRIBUTIN CONDITION, AND ANY BARE SPOTS REVEGETATED.</li> </ul>
CONSTRUCTION SEQUENCE FOR PCSM BMPS SITE SPECIFIC CONSTRUCTION SEQUENCE SITE SPECIFIC CONSTRUCTION SEQUENCE	<ul> <li>CARE SHOULD BE TAKEN TO AVOID EXCESSIVE COMPA VEGETATIVE SPECIES.</li> <li>INSPECT AT LEAST TWO TIMES PER YEAR AFTER RUNOFF</li> </ul>
SITE SPECIFIC CONSTRUCTION SEQUENCE 1. REFER TO SHEET C5.0 FOR SITE-SPECIFIC CONSTRUCTION SEQUENCE.	RUNOFF DRAINS DOWN WITHIN THE DESIGN PARAMETERS ( IDENTIFY WHAT THESE PARAMETERS ARE). • AT LEAST TWO TIMES PER YEAR, OR MORE IF HISTORICAL
<ol> <li>ONCE ALL UPSTREAM MEASURES FOR THE BMP HAVE BEEN STABILIZED, THE INDIVIDUAL BMP MAY BE CONSTRUCTED PER THE SEQUENCES IDENTIFIED BELOW.</li> </ol>	ACCUMULATION OF SEDIMENT, DAMAGE TO OUTLET CONTAMINATION/SPILLS, AND INSTABILITY. LEAF LITTER NEE • AS NEEDED, REMOVE ACCUMULATED SEDIMENT AS REQUIR
SEQUENCE OF CONSTRUCTION FOR CONVERSION OF SEDIMENT BASIN TO VEGETATED BASIN (MANAGED RELEASE CONCEPT) 1. IF ANY UNFAVORABLE CONDITIONS ARE ENCOUNTERED DURING THE INSTALLATION OF THE BASINS (I.E. GROUNDWATER AND/OR	MEDIA AND TO MAINTAIN WATER QUALITY FUNCTIONALITY. OF SEDIMENT. • IF POROUS PAVEMENT IS INCLUDED IN THE DESIGN, VACU
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. 2. INSTALL TEMPORARY SEDIMENT CONTROL BMPS AS SHOWN ON THE PLANS.	SUFFICIENT SUCTION POWER AND BE DESIGNED FOR USE W ALL MRC BMP COMPONENTS SHOULD BE MAINTAINED AS IN
<ol> <li>EXISTING SUB-GRADE IN BIOINFILTRATION AREAS SHALL NOT BE COMPACTED OR SUBJECTED TO EXCESSIVE CONSRUCTION EQUIPMENT TRAFFIC.</li> <li>INITIAL EXCAVATION CAN BE PERFORMED DURING ROUGH SITE GRADING BUT SHALL NOT BE CARRIED TO WITHIN ONE FEET OF</li> </ol>	TREE PLANTINGS • TREES SHALL BE PLANTED IN ACCORDANCE WITH SP ARCHITECT.
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 ELEVATION OF THE BMP SOIL IN THE BED IS 12 INCHES LOWER THAN THE BOTTOM ELEVATION OF THE SEDIMENT	<ul> <li>NEW PLANT MATERIAL SHALL BE GUARANTEED TO BE ALI OF FIVE YEARS FOLLOWING CONSTRUCTION. THE HOMEOWN</li> </ul>
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 WILL 12 INCHES OF CLEAN, LIGHTLY COMPACTED SOIL PRIOR TO PLACING PLANTING SOIL.	ARE AVAILABLE FOR REPLACEMENT DURING THIS TIME PEI THE PROJECT LIFE (50 YEARS). • TREES SHALL BE INSPECTED ANNUALLY AND PRUNED AS N
<ol> <li>5. SEDIMENT SHALL BE FLUSHED FROM THE STORMWATER CONVEYANCE SYSTEM BEFORE CONVERSION MAY COMMENCE. THE SEDIMENT FACILITY MAY BE DEWATERED BY WAITING UNTIL THE WATER SURFACE IN THE FACILITY IS INFILTRATED.</li> <li>6. UPON STABILIZATION OF THE TRIBUTARY AREA, WHERE 70% VEGETATION COVERAGE IS ACHIEVED, CONVERSION MAY COMMENCE.</li> </ol>	IF IT IS DETERMINED THAT THE TREE IS IN POOR H IMMEDIATELY TO DETERMINE THE PROPER COURSE OF ACTION
WHERE ACCUMULATION OF FINE MATERIALS AND/OR SURFACE PONDING IN THE GRADED BOTTOM HAS OCCURED, THIS MATERIAL SHALL BE REMOVED WITH LIGHT EQUIPMENT AND THE UNDERLYING SOILS SCARIFIED TO A MINIMUM DEPTH OF 6 INCHES WITH A	BASIN MAINTENANCE SCHEDULE
YORK RAKE OR EQUIVALENT BY LIGHT TRACTOR. 7. SEDIMENT FACILITY STRUCTURES INCLUDING BAFFLES, CLEANOUT STAKES, AND OTHER NON-PERMANENT APPURTENANCES SHALL BE REMOVED FROM THE FACILITY. THE PERMANENT ORIFICE/WEIR(S) SHALL REMAIN PROTECTED UNTIL COMPLETION OF FACILITY	THIS BASIN IS DESIGNED TO BECOME NATURALIZED OVER TIME
CONVERSION. 8. BRING SUBGRADE OF BIOINFILTRATION AREA TO LINE, GRADE AND ELEVATIONS INDICATED. FILL AND LIGHTLY REGRADE ANY AREAS DAMAGED BY EROSION, PONDING OR TRAFFIC.	MOWING – ESTABLISH AND MAINTAIN A NO-MOW ZONE THAT IT THE NO-MOW ZONE $1X/YEAR$ TO A MINIMUM HEIGHT OF 6". (A
<ol> <li>UPON COMPLETION OF THE SUBGRADE WORK, THE ENGINEER SHALL BE NOTIFIED AND SHALL INSPECT AT THE ENGINEER'S DISCRETION BEFORE PROCEEDING WITH INSTALLATION.</li> <li>BMP SOIL SHALL BE PLACED IMMEDIATELY AFTER APPROVAL OF SUBGRADE. ANY ACCUMULATION OF DEBRIS OR SEDIMENT THAT</li> </ol>	INSPECTIONS – INSPECT BASIN AND NO-MOW ZONES FOR INV HONEYSUCKLE, ETC. (ANNUALLY IN JULY). IF INVASIVE SPECIE FOR SPECIFIC SPECIES FOLLOWING GUIDELINES BY PA DCNR (D
<ul> <li>TAKES PLACE AFTER APPROVAL OF SUBGRADE SHALL BE REMOVED PRIOR TO INSTALLATION OF PLANTING SOIL AT NO EXTRA COST TO THE OWNER.</li> <li>11. INSTALL BMP SOIL IN 12 INCH MAXIMUM LIFTS AND DO NOT COMPACT. KEEP EQUIPMENT MOVING TO A MINIMUM. DO NOT OVER</li> </ul>	CLEANING – REMOVE TRASH AND DEBRIS (JANUARY & APRIL)
COMPACT. INSTALL BMP SOIL IN 12 INCH MAXIMUM LIFTS AND DO NOT COMPACT. REEP EQUIPMENT MOVING TO A MINIMUM. DO NOT OVER COMPACT. INSTALL PLANTING SOIL TO GRADES SHOWN ON PLANS.	

SEEDING NOTES:

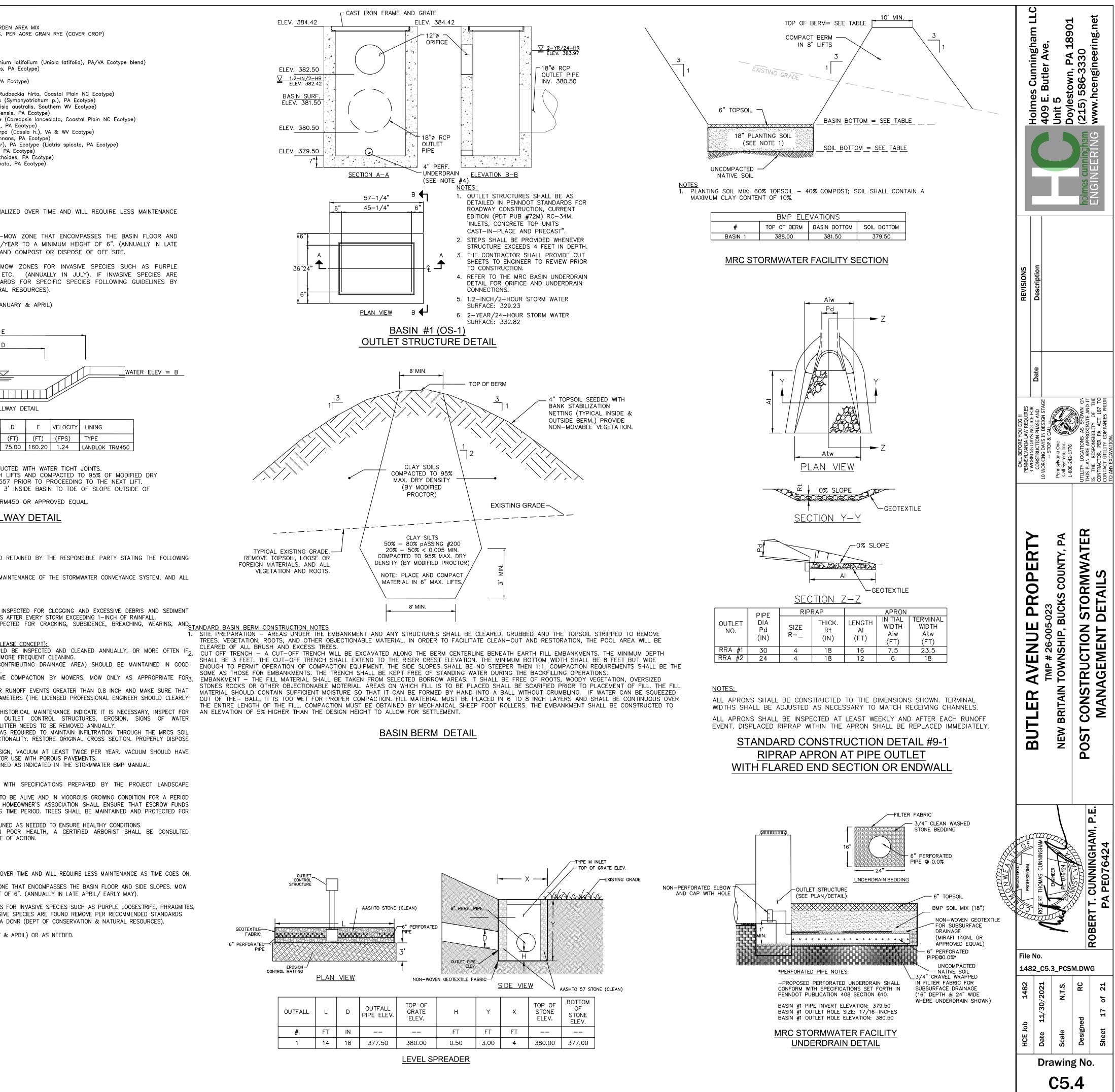
BMP SEEDING

12. PLANT TREES AND SHRUBS ACCORDING TO BASIN DETAILS AND NOTES. 13. AFTER INSTALLATION OF ERNST SEED MIX, STABILIZE THE BOTTOM OF THE BASINS WITH BIODEGRADABLE REVEGETATIVE MATTING TO ENSURE SEED MIX DOES NOT WASH AWAY PRIOR TO STABILIZATION.

14. PROTECT BASINS FROM SEDIMENT AT ALL TIMES. COMPOST FILTER SOCKS 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. 15. 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. THE SEDIMENT BASIN RISER AND REMAINING CONTROL DEVICES SHALL BE REMOVED, AND THE PERMANTNE ORIFICES/WEIRS SHALL BE OPENED FOR OPERATION.

6. CONTINUOUS MOISTURE FOR 4-6 WEEKS MUST BE INSURED TO ALLOW PROPER GERMINATION, IF RAIN DOES NOT OCCUR CONTRACTOR SHALL PROVIDE SUPPLEMENTAL IRRIGATION TO NEWLY SEEDED AREAS PER INSTRUCTIONS INCLUDED IN SEEDING SPECIFICATION.



AFTER EVERY STORM EXCEEDING 1-INCH OF RAINFALL.

IORE FREQUENT CLEANING. INTRIBUTING DRAINAGE AREA) SHOULD BE MAINTAINED IN GOOD COMPACTION BY MOWERS. MOW ONLY AS APPROPRIATE FOR3. RUNOFF EVENTS GREATER THAN 0.8 INCH AND MAKE SURE THAT

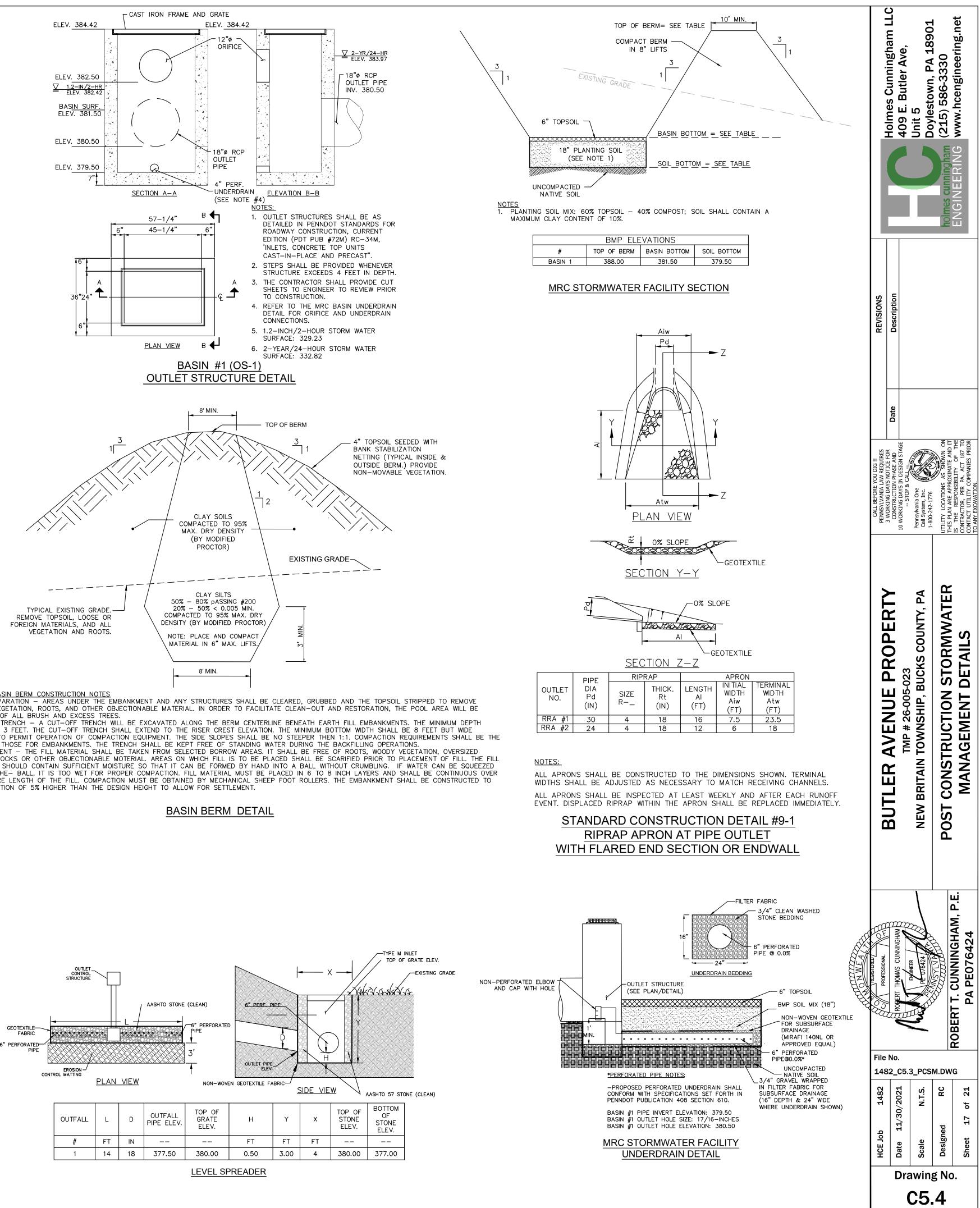
OUTLET CONTROL STRUCTURES, EROSION, SIGNS OF WATER TTER NEEDS TO BE REMOVED ANNUALLY. REQUIRED TO MAINTAIN INFILTRATION THROUGH THE MRCS SOIL IONALITY. RESTORE ORIGINAL CROSS SECTION. PROPERLY DISPOSE GN, VACUUM AT LEAST TWICE PER YEAR. VACUUM SHOULD HAVE R USE WITH POROUS PAVEMENTS.

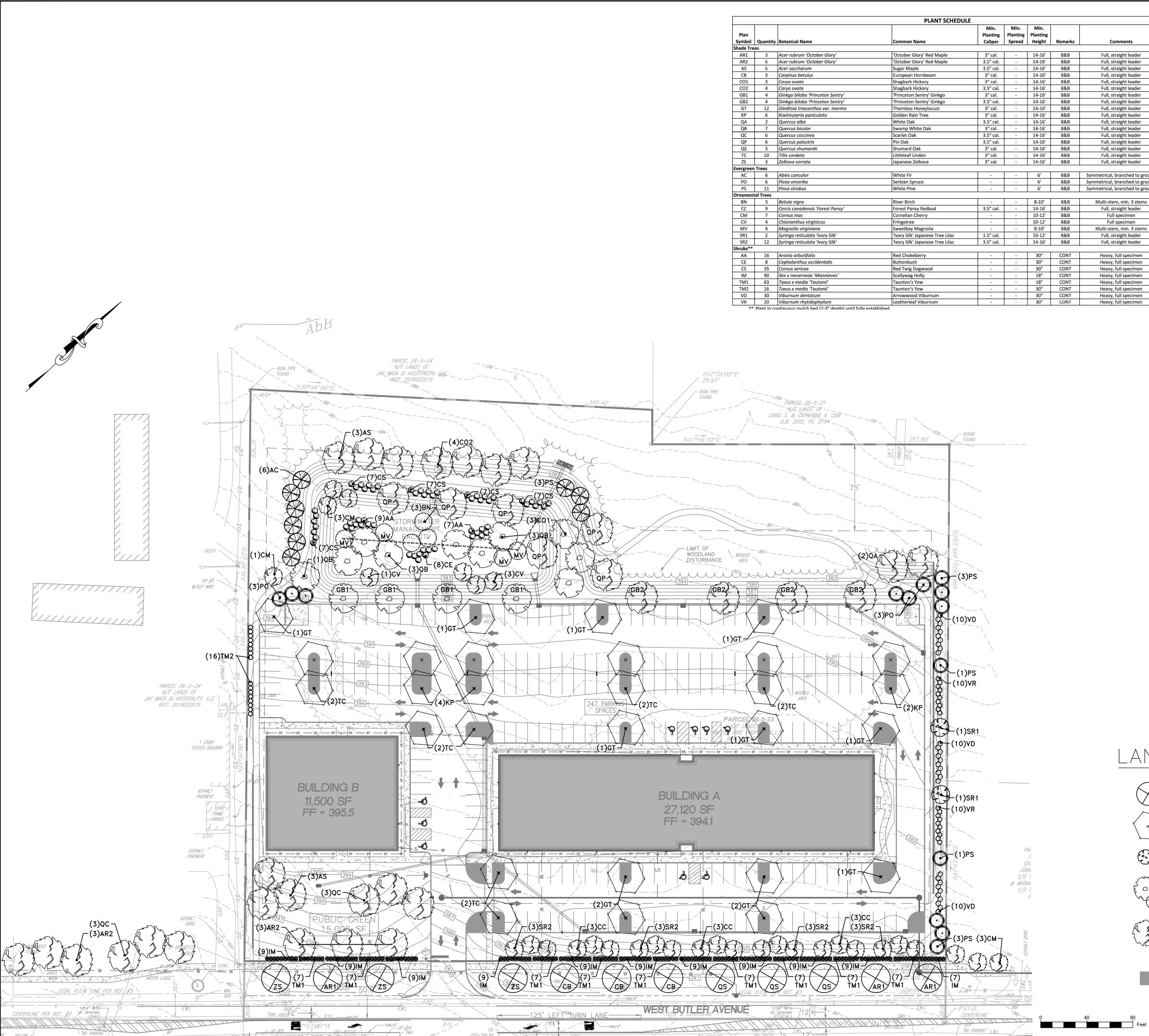
WITH SPECIFICATIONS PREPARED BY THE PROJECT LANDSCAPE BE ALIVE AND IN VIGOROUS GROWING CONDITION FOR A PERIOD HOMEOWNER'S ASSOCIATION SHALL ENSURE THAT ESCROW FUNDS TIME PERIOD. TREES SHALL BE MAINTAINED AND PROTECTED FOR

OF ACTION.

VER TIME AND WILL REQUIRE LESS MAINTENANCE AS TIME GOES ON. E THAT ENCOMPASSES THE BASIN FLOOR AND SIDE SLOPES. MOW

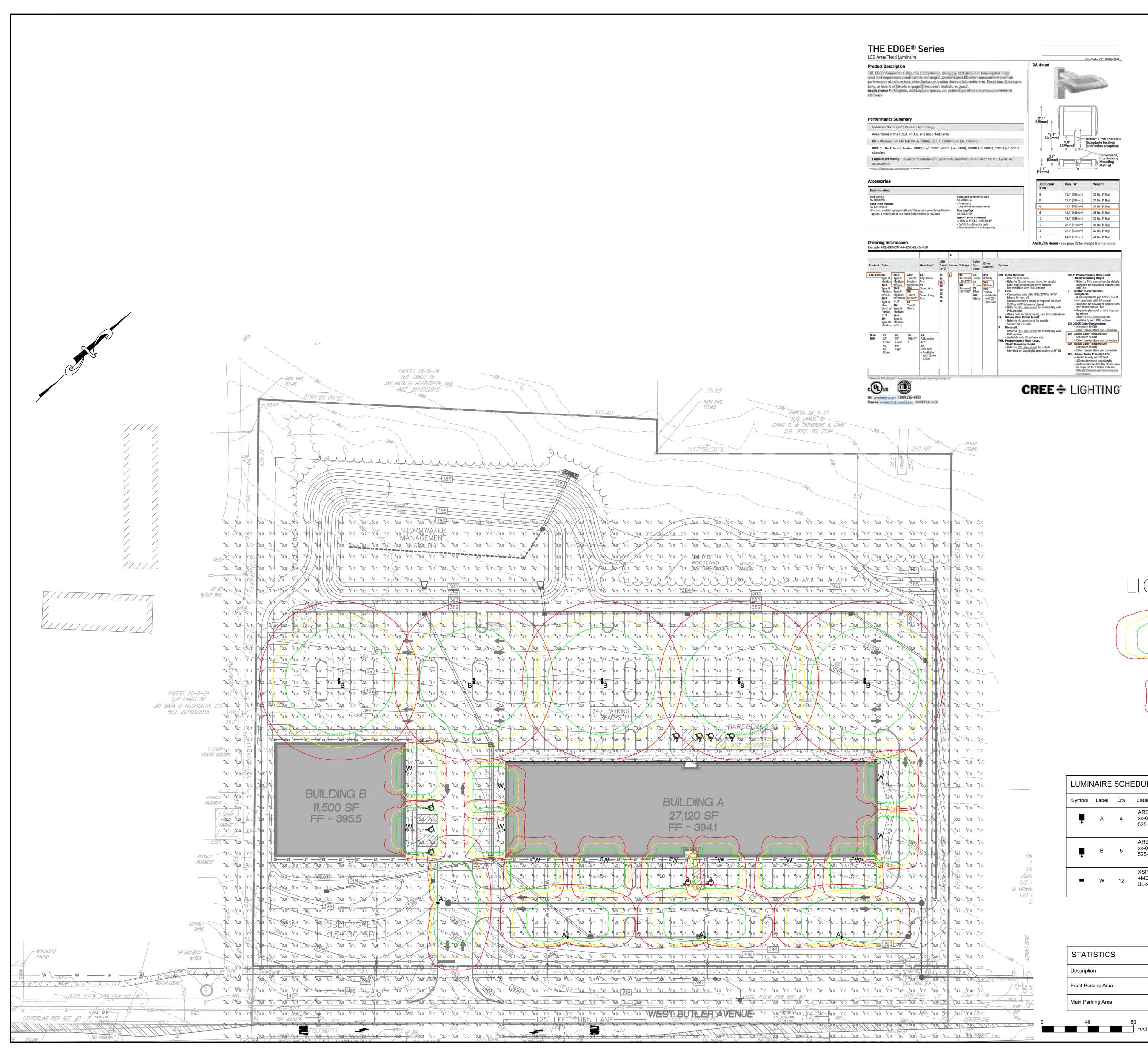
FOR INVASIVE SPECIES SUCH AS PURPLE LOOSESTRIFE, PHRAGMITES, VE SPECIES ARE FOUND REMOVE PER RECOMMENDED STANDARDS DCNR (DEPT OF CONSERVATION & NATURAL RESOURCES).

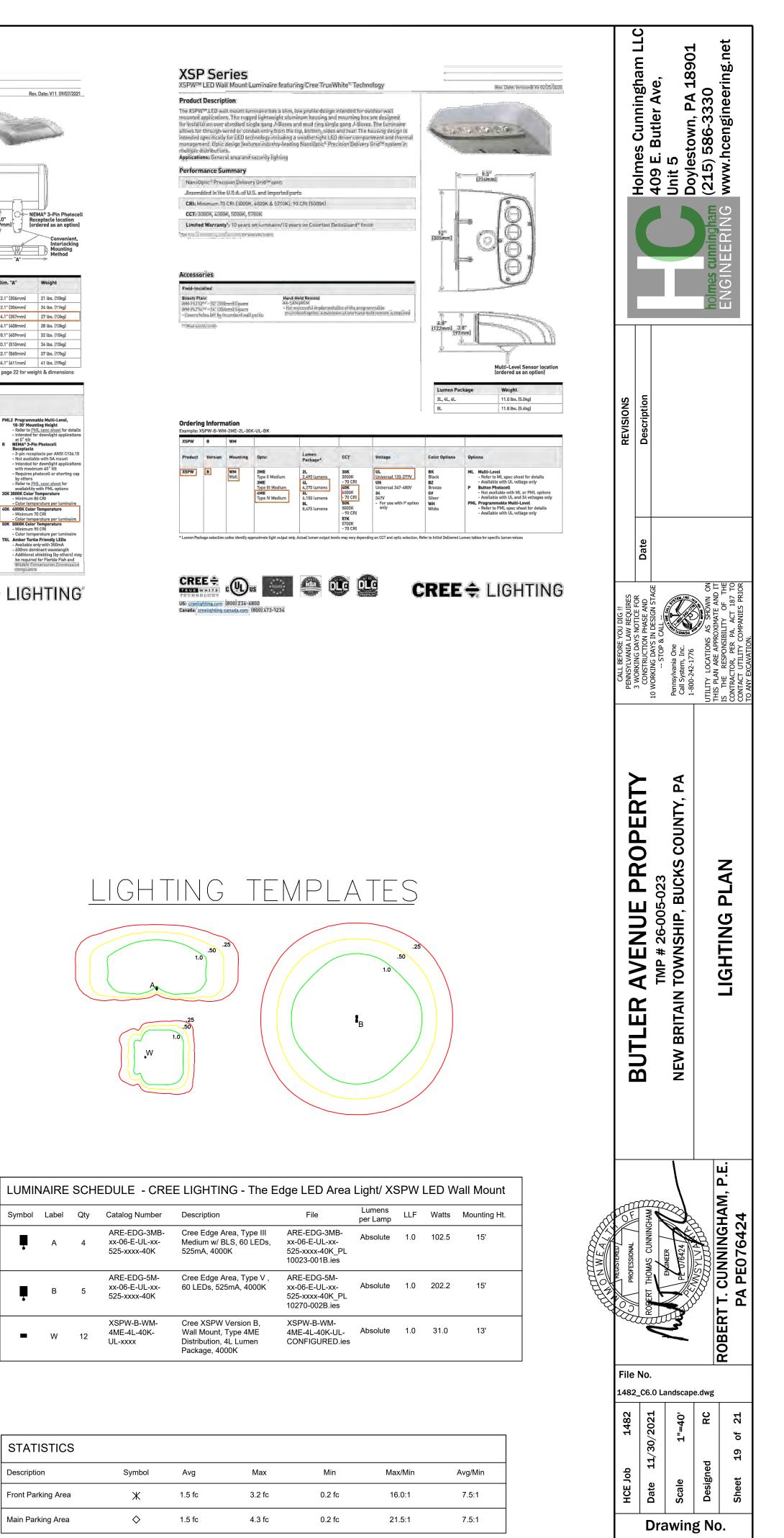




				_				
	1	1	PLANT SCHEDUL		1			1
				Min.	Min.	Min.		
Plan				Planting	Planting	Planting		
		Botanical Name	Common Name	Caliper	Spread	Height	Remarks	Comments
Shade Tre					1			
AR1	3	Acer rubrum 'October Glory'	'October Glory' Red Maple	3" cal.	-	14-16'	B&B	Full, straight leader
AR2	6	Acer rubrum 'October Glory'	'October Glory' Red Maple	3.5" cal.	-	14-16'	B&B	Full, straight leader
AS	6	Acer saccharum	Sugar Maple	3.5" cal.	-	14-16'	B&B	Full, straight leader
CB	3	Carpinus betulus	European Hornbeam	3" cal.	-	14-16'	B&B	Full, straight leader
CO1	3	Carya ovata	Shagbark Hickory	3" cal.	-	14-16'	B&B	Full, straight leader
CO2	4	Carya ovata	Shagbark Hickory	3.5" cal.	-	14-16'	B&B	Full, straight leader
GB1	4	Ginkgo biloba 'Princeton Sentry'	'Princeton Sentry' Ginkgo	3" cal.	-	14-16'	B&B	Full, straight leader
GB2	4	Ginkgo biloba 'Princeton Sentry'	'Princeton Sentry' Ginkgo	3.5" cal.	-	14-16'	B&B	Full, straight leader
GT	12	Gleditsia triacanthos var. inermis	Thornless Honeylocust	3" cal.	-	14-16'	B&B	Full, straight leader
KP	6	Koelreuteria paniculata	Golden Rain Tree	3" cal.	-	14-16'	B&B	Full, straight leader
QA	2	Quercus alba	White Oak	3.5" cal.	-	14-16'	B&B	Full, straight leader
QB	7	Quercus bicolor	Swamp White Oak	3" cal.	-	14-16'	B&B	Full, straight leader
QC	6	Quercus coccinea	Scarlet Oak	3.5" cal.	-	14-16'	B&B	Full, straight leader
QP	6	Quercus palustris	Pin Oak	3.5" cal.	-	14-16'	B&B	Full, straight leader
QS	3	Quercus shumardii	Shumard Oak	3" cal.	-	14-16'	B&B	Full, straight leader
TC	10	Tilia cordata	Littleleaf Linden	3" cal.	-	14-16'	B&B	Full, straight leader
ZS	3	Zelkova serrata	Japanese Zelkova	3" cal.	-	14-16'	B&B	Full, straight leader
Evergreer	n Trees							
AC	6	Abies concolor	White Fir	-	-	6'	B&B	Symmetrical, branched to ground
PO	6	Picea omorika	Serbian Spruce	-	-	6'	B&B	Symmetrical, branched to ground
PS	11	Pinus strobus	White Pine	-	-	6'	B&B	Symmetrical, branched to ground
Ornamen	tal Trees							
BN	3	Betula nigra	River Birch	-	-	8-10'	B&B	Multi-stem, min. 3 stems
CC	9	Cercis canadensis 'Forest Pansy'	Forest Pansy Redbud	3.5" cal.	-	14-16'	B&B	Full, straight leader
CM	7	Cornus mas	Cornelian Cherry	-	-	10-12'	B&B	Full specimen
CV	4	Chionanthus virginicus	Fringetree	-	-	10-12'	B&B	Full specimen
MV	4	Magnolia virginiana	Sweetbay Magnolia	-	-	8-10'	B&B	Multi-stem, min. 3 stems
SR1	2	Syringa reticulata 'Ivory Silk'	'Ivory Silk' Japanese Tree Lilac	1.5" cal.	-	10-12'	B&B	Full, straight leader
SR2	12	Syringa reticulata 'Ivory Silk'	'Ivory Silk' Japanese Tree Lilac	3.5" cal.	-	14-16'	B&B	Full, straight leader
Shrubs**	•			•				·
AA	16	Aronia arbutifolia	Red Chokeberry	-	-	30"	CONT	Heavy, full specimen
CE	8	Cephalanthus occidentalis	Buttonbush	-	-	30"	CONT	Heavy, full specimen
CS	35	Cornus sericea	Red Twig Dogwood	-	-	30"	CONT	Heavy, full specimen
IM	90	llex x meserveae 'Monnieves'	Scallywag Holly	-	-	18"	CONT	Heavy, full specimen
TM1	63	Taxus x media 'Tautonii'	Taunton's Yew	-	-	18"	CONT	Heavy, full specimen
TM2	16	Taxus x media 'Tautonii'	Taunton's Yew	-	-	30"	CONT	Heavy, full specimen
VD	30	Viburnum dentatum	Arrowwood Viburnum	-	-	30"	CONT	Heavy, full specimen
VR	20	Viburnum rhytidophyllum	Leatherleaf Viburnum	-	-	30"	CONT	Heavy, full specimen
**	Diaut in an	ntinuous mulch bed (2-3" depth) until fully esta	l-R-h - d					

				1 LLC 01 net
Comments straight leader straight leader straight leader straight leader	Subdivision Ordinance Item Z.O. 27-2400 Natural Resources	Requirement           Up to 60% woodland disturbance is permitted.** Disturbance           beyond 60%, up to a maximum of 70% shall be permitted, provided           that the planting of replacement trees is provided for the additional           disturbance beyond 60%.	OWNSHIP Plan Proposed	Holmes Cunningham LL 409 E. Butler Ave, Unit 5 Doylestown, PA 18901 (215) 586-3330 www.hcengineering.net
straight leader straight leader straight leader straight leader		Required replacement trees = acreage of disturbance exceeding 60% x 200 trees per acre. .33 acres over 60% x 200 = 66 replacement trees Replacement trees shall have min. caliper of 3.5"	34 Shade trees 32 Ornamental trees	Holmes Cun 409 E. Butle Unit 5 Doylestown, (215) 586-3 www.hcengi
straight leader straight leader straight leader straight leader straight leader straight leader	Z.O. 27-2800 Buffer Yards	Buffer yards shall be required where a nonresidential zoning district adjoins a residential zoning district. Buffer yards shall include a planting strip which creates a dense screen of closely planted trees or shrubs. 288' along RR residential district	existing vegetation	
straight leader straight leader straight leader , branched to ground	Z.O. 27-2904.h Paved Area Landscaping	Any lot with more than 30 parking spaces shall have required landscape area equal to a minimum of 5% of the total paved area. One deciduous tree shall be required for every 4,000 sf of paved area. Paved area: 94,632 sf		GINEE
, branched to ground , branched to ground em, min. 3 stems		94632 x .05 = 4,732 sf 94632/4000 = 24 deciduous trees	5,737 sf (6%) 24 Shade trees	
straight leader II specimen II specimen em, min. 3 stems	S.O. 22-713.3 Parking Area Landscape	All 10'x36' planting islands shall contain 2 shade trees and all 10'x18' planting islands shall contain 1 shade tree (6), 10'x36' plantings islands x 2 = 12 shade trees	Satisfied by Paved Area	
straight leader straight leader y, full specimen		(17), 10'x36' plantings islands x 2 = 17 shade trees	Landscaping <sup>(W1]</sup> Satisfied by Paved Area Landscaping <sup>[W1]</sup> 4 Shade trees <sup>[W2]</sup>	DNS
r, full specimen r, full specimen r, full specimen r, full specimen r, full specimen	S.O. 22-713.4 Street Trees	Street trees shall be planted every 30' along all proposed streets and existing streets when they abut or lie within the proposed subdivision and/or land development. Trees shall be planted 3-5' outside the ultimate right-of-way.	See Street Tree requirements for Butler Ave. Corridor Overlay District below	REVISIONS Description
r, full specimen r, full specimen	S.O. 22-713.5.B.(1) Landscape Buffers & Screens - Off-street Parking Areas	One deciduous or evergreen shrub planted every five feet along the perimeter of the parking area. Parking along Butler Ave:	Satisfied by Butler Ave. Corridor Overlay District plantings <sup>[W1]</sup>	
		Eastern parking lot perimeter: 250' 250/5 = 50 shrubs Northern parking lot perimeter: 510'	50 Shrubs	te
		S10/5 = 102 shrubs Western parking lot perimeter: 80' 80/5 = 16 shrubs	existing buffer 16 Shrubs	Date
	S.O. 22-713.5.B.(2) Landscape Buffers & Screens - Trash Collection Areas	A minimum of 6' wooden shadow-box fence, or approved equal, on at least three sides, with a staggered row of evergreen trees planted every 10' along the fence perimeter.	screening fence 6 Evergreen trees	CALL BEFORE YOU DIG !! PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE STOP & CALL Pennsyvania One Call System, Inc. 1-800-242-1776 1-800-242-1777 1-8000-242-1777 1-8000-242-1777 1-8000-242-17777
	S.O. 22-713.5.B.(3) Landscape Buffers & Screens - Detention/ Retention Basins	One deciduous or evergreen tree planted every 20 feet, plus one deciduous or evergreen shrub every 10 feet along the basin perimeter, planted in an informal arrangement. Detention Basin: 585' 585/20 = 30 Deciduous or Evergreen trees	14 Shade trees 7 Ornamental trees 9 Evergreen trees	CALL BEFORE YO PENNSYLVANIA LAW 3 WORKING DAYS IN 3 WORKING DAYS IN CONSTRUCTION F CONSTRUCTION F CONSTRUCTION F 10 WORKING DAYS IN STOP & CA Pennsylvania One Call System, Inc. 1-800-242-1776 1-800-242-1776 1-800-242-1776 1-800-242-1776 1-1717 LOCATIONS / THIS PLAN ARE APPRO IS THE RESPONSIBIL CONTACT UTLITY CONTACT TO ANY EXCAVITION.
	S.O. 22-713.5.B.(6) Landscape Buffers &	585/10 = 59 Deciduous or Evergreen shrubs A berm varying in height from three to five feet, with one ornamental or evergreen tree for every 20 feet, plus one deciduous	59 Shrubs	
	Screens - Multifamily Residential Units	or evergreen shrub for every 10 feet, planted in an informal arrangement along the perimeter of the property. Southern property line (Butler Ave. frontage)	waiver granted	
		Eastern property line: 448'-92'(existing vegetation = 356' 356/20 = 18 ornamental or evergreen trees 356/10 = 36 deciduous or evergreen shrubs	<ul> <li>2 Ornamental trees <sup>[W3]</sup></li> <li>8 Evergreen trees <sup>[W3]</sup></li> <li>satisfied by off-street parking</li> </ul>	KOPERT KS COUNTY, F AN
		Northern property line	perimeter shrubs <sup>[W1]</sup> existing vegetation	
	S.O. 22-722.4.C.(7)(a) Butler Ave. Corridor Overlay District - Street Trees	Along every public street, a mixture of street trees shall be planted 50 feet on center. BUTLER AVE.: 609' - 30'(driveway opening) = 579' 579/50 = 12 Trees	12 Shade trees	PE PL
	Area Landscaping and	Where parking areas are proposed to be located between a street and a principal building, a buffer fence shall be installed within 5' of the ultimate right-of-way of the street between this parking area and the street.	fencing & masonry piers	BUTLER AVENUE PI TMP # 26-005-023 NEW BRITAIN TOWNSHIP, BUCI LANDSCAPE PL
	Buffering	Evergreen hedge plants, initially 18-24" in height and maintained at a height of no less than 30 inches, shall be installed and maintained between the fencing and the street.	153 shrubs	
		Total Landscape Proposed	88 Shade Trees 23 Evergreen Trees 41 Ornamental Trees 278 Shrubs	BUTL BUTL
	[W1] [W2]	Per settlement stipulation and agreement. Waiver requested due to overlapping landscape requirements. Waiver requested due to utility conflicts in certain parking lot islands. Waiver requested due to wall/ sidewalk conflicts and spatial constrain	ts.	
LANDS	SCAPE	LEGEND		і Ц Ц
$\bigotimes$	Street tr	ee		PROFESSIONAL PROFESSIONAL THOMAS CUNNINGHAM PROFESSIONAL THOMAS CUNNINGHAM PROFESSIONAL
×	Paved Ar	ea/Parking lot land	dscape	
	Landscap	e Buffers & Scree	ns	ROBERT T.
	Detentior Planting	n Basin		File No. 1482_C6.0 Landscape.dwg
	Replacem	nent trees		1482 1/30/2021 1"=40' 1 RC 18 of 21
	Paved ar calculatio	ea landscape on		HCE Job Date 1: Scale Designed
80 Feet				Drawing No.





C6.1

GENERAL	LANDSCAPE	PLANTING	NOTES:

PLANTING MATERIALS

- NAMES OF PLANTS AS DESCRIBED ON THIS PLAN CONFORM TO THOSE GIVEN IN "STANDARDIZED PLANT NAMES", 1942 EDITION PREPARED BY THE AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE. NAMES OF PLANT VARIETIES NOT INCLUDED THEREIN CONFORM TO NAMES GENERALLY ACCEPTED IN NURSERY TRADE.
- STANDARDS FOR TYPE, SPREAD, HEIGHT, ROOT BALL AND QUALITY OF NEW PLANT MATERIAL SHALL BE IN ACCORDANCE WITH GUIDELINES AS SET FORTH IN THE "AMERICAN STANDARD FOR NURSERY STOCK" PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN PLANT MATERIAL SHALL HAVE NORMAL HABIT OF GROWTH AND BE HEALTHY, VIGOROUS, AND FREE FROM DISEASES AND INSECT INFESTATION NEW PLANT MATERIAL SHALL BE NURSERY GROWN UNLESS SPECIFIED OTHERWISE. ALL PLANTS SHALL BE SET PLUMB AND SHALL BEAR THE
- SAME RELATIONSHIP TO FINISHED GRADE AS THE PLANT'S ORIGINAL GRADE BEFORE DIGGING. PLANT MATERIAL OF THE SAME SPECIES AND SPECIFIED AS THE SAME SIZE SHOULD BE SIMILAR IN SHAPE, COLOR AND HABIT. THE LANDSCAPE ARCHITECT HAS THE RIGHT TO REJECT PLANT MATERIAL THAT DOES NOT CONFORM TO THE TYPICAL OR SPECIFIED HABIT OF THAT SPECIES.
- THE CONTRACTOR SHALL NOT MAKE SUBSTITUTIONS. IF THE SPECIFIED LANDSCAPE MATERIAL IS NOT OBTAINABLE. THE CONTRACTOR SHALL SUBMIT PROOF OF NON-AVAILABILITY TO THE LANDSCAPE ARCHITECT AND OWNER TOGETHER WITH A WRITTEN PROPOSAL FOR USE OF AN EQUIVALENT MATERIAL THE LANDSCAPE ARCHITECT MAY REVIEW PLANT MATERIALS AT THE SITE, BEFORE PLANTING, FOR COMPLIANCE WITH REQUIREMENTS FOR
- GENUS SPECIES VARIETY SIZE AND QUALITY THE LANDSCAPE ARCHITECT RETAINS THE RIGHT TO FURTHER REVIEW PLANT MATERIALS FOR SIZE AND CONDITION OF BALLS AND ROOT SYSTEM, INSECTS, INJURIES, AND LATENT DEFECTS, AND TO REJECT UNSATISFACTORY OR DEFECTIVE MATERIAL AT ANY TIME DURING PROGRESS OF WORK. THE CONTRACTOR SHALL REMOVE REJECTED PLANT MATERIALS IMMEDIATELY FROM PROJECT SITE AS DIRECTED BY THE LANDSCAPE ARCHITECT OR OWNER.
- PLANTING SOILS
- REUSE SURFACE SOILS STOCKPILED ON SITE, VERIFYING COMPLIANCE WITH PLANTING SOIL AND TOPSOIL CRITERIA IN THIS SPECIFICATION THROUGH TESTING. CLEAN SURFACE SOIL OF ALL ROOTS, PLANTS, SOD, AND GRAVEL OVER 1" IN DIAMETER AND DELETERIOUS MATERIALS. IF ON-SITE SOILS ARE TO BE USED FOR PROPOSED PLANTING, THE CONTRACTOR SHALL DEMONSTRATE, THROUGH SOIL TESTING, THAT ON-SITE SOILS MEET THE SAME CRITERIA AS INDICATED IN NOTES PLANS AND SPECIFICATIONS
- SUPPLEMENT WITH IMPORTED OR MANUFACTURED TOPSOIL FROM OFF SITE SOURCES WHEN TOPSOIL AND PLANTING SOIL QUANTITIES ARE INSUFFICIENT. OBTAIN SOIL DISPLACED FROM NATURALLY WELL-DRAINED SITES WHERE TOPSOIL OCCURS AT LEAST 4" DEEP. DO NOT OBTAIN FROM AGRICULTURAL LAND, BOGS, MARSHES OR CONTAMINATED SITES.
- . IF DEPTH OF PLANTING SOILS AND TOPSOIL IS NOT INDICATED IN PLANS OR DETAILS, A MINIMUM 18" DEPTH SHALL BE PROVIDED FOR ALL TREES AND LARGE SHRUBS; MINIMUM 12" DEPTH SHALL BE PROVIDED FOR GROUNDCOVERS, HERBACEOUS AND MEADOW OR ORNAMENTAL GRASS AREAS AND A MINIMUM 6" LAYER SHALL BE INSTALLED IN ALL LAWN AREAS. TOPSOIL AND PLANTING SOIL DEPTH INDICATED ON PLANS AND PLANTING DETAILS AND NARRATIVE SPECIFICATIONS SHALL GOVERN DEPTH WHEN PROVIDED.
- WHERE PLANTING AREAS ARE PROPOSED FOR FORMER PAVED OR GRAVEL AREAS, BEDS SHALL BE EXCAVATED TO A MINIMUM 30" DEPTH AND, AT A MINIMUM, BE BACKFILLED WITH BOTTOM LAYER OF SANDY LOAM (ORGANIC CONTENT LESS THAN 2%) OVER WHICH TOPSOIL AND PLANTING SOILS WILL BE PLACED AT DEPTHS INDICATED IN PLANS, DETAILS AND NOTES.
- IF THE QUANTITY OF SOLLS FROM THE SITE IS NOT ADEQUATE TO FILL PLANTING AREAS TO THE DEPTH INDICATED IN THE PLANS AND DETAILS, CONTRACTOR SHALL FURNISH PLANTING SOILS THAT ARE FREE OF BROKEN GLASS, PAINT CHIPS, PLASTIC, DELETERIOUS MATERIALS, ROOTS, WEEDS, BOULDERS, COBBLES AND GRAVEL OVER 1" IN DIAMETER AND COMPLY WITH THE FOLLOWING CRITERIA: -SOILS SHALL MEET ALL APPLICABLE SOIL REMEDIATION STANDARDS -ORGANIC CONTENT: 2-5% IN NATIVE SOILS; UP TO 10% IN AMENDED SOILS
- -SOLUBLE SALTS: LESS THAN 0.5 MM HOS/CM -SOIL PH: 4.5-7% TO BE AMENDED PER SOIL TEST RESULTS
- -PHYSICAL (SIEVE) ANALYSIS/ SOIL TEXTURE SAND: 40-60% SILT: 25-60% CLAY: 5-20% -NOT MORE THAN 1% OF MATERIAL SHALL BE RETAINED BY A #4 SIEVE.
- ALL PLANTING SOILS SHALL BE SUBMITTED FOR TESTING TO THE STATE COOPERATIVE EXTENSION SERVICE, OR APPROVED EQUAL, PRIOR TO DELIVERY TO THE SITE. CONTRACTOR SHALL FURNISH SOIL SAMPLES AND SOIL TEST RESULTS TO LANDSCAPE ARCHITECT OR OWNER AT A RATE OF ONE SAMPLE PER 500 CUBIC YARDS TO ENSURE CONSISTENCY ACROSS THE TOTAL VOLUME OF PLANTING SOIL REQUIRED. TEST RESULTS SHALL EVALUATE FOR ALL CRITERIA LISTED IN THIS SPECIFICATION. IF TESTING AGENCY DETERMINES THAT THE SOILS ARE DEFICIENT IN ANY MANNER AND MAY BE CORRECTED BY ADDING AMENDMENTS, THE CONTRACTOR SHALL FOLLOW STATED RECOMMENDATIONS FOR SOIL IMPROVEMENT AND FURNISH SUBMITTALS FOR ALL AMENDMENTS PRIOR TO DELIVERY OF SOIL TO THE PROJECT SITE.
- IF SOIL ORGANIC CONTENT IS INADEQUATE, SOIL SHALL BE AMENDED WITH COMPOST OR ACCEPTABLE, WEED FREE, ORGANIC MATTER, ORGANIC AMENDMENT SHALL BE WELL COMPOSTED, PH RANGE OF 6-8; MOISTURE CONTENT 35-55% BY WEIGHT 100% PASSING THROUGH 1" SIEVE; SOLUBLE SALT CONTENT LESS THAN 0.5 MM HOS/CM; MEETING ALL APPLICABLE ENVIRONMENTAL CRITERIA FOR CLEAN FILL; FREE OF BROKEN GLASS, PAINT CHIPS, PLASTIC, DELETERIOUS MATERIALS, ROOTS, WEEDS, BOULDERS, COBBLES AND GRAVEL OVER 1" IN DIAMETER
- SCARIFY AND/OR TILL ALL COMPACTED SUBSOILS PRIOR TO ADDING PLANTING SOIL OR TOPSOIL. PLANTING SOILS AND TOPSOIL SHALL BE PLACED IN 12-18" LIFTS THAT ARE LOOSELY COMPACTED. NO SOILS SHALL BE PLACED IN A FROZEN OR MUDDY CONDITION.

### DELIVERY, STORAGE, AND HANDLING

- PACKAGED MATERIALS: PACKAGED MATERIALS SHALL BE DELIVERED IN CONTAINERS SHOWING WEIGHT, ANALYSIS, AND NAME OF MANUFACTURER. MATERIALS SHALL BE PROTECTED FROM DETERIORATION DURING DELIVERY, AND WHILE STORED AT SITE.
- TREES AND SHRUBS: THE CONTRACTOR SHALL PROVIDE TREES AND SHRUBS DUG FOR THE GROWING SEASON FOR WHICH THEY WILL B PLANTED. DO NOT PRUNE PRIOR TO DELIVERY UNLESS OTHERWISE DIRECTED BY THE LANDSCAPE ARCHITECT. DO NOT BEND OR BIND-TI TREES OR SHRUBS IN SUCH A MANNER AS TO DAMAGE BARK, BREAK BRANCHES, OR DESTROY NATURAL SHAPE. PROVIDE PROTECTIVE COVERING DURING TRANSIT. DO NOT DROP OR BREAK BALLED STOCK DURING DELIVERY OR HANDLING.
- ALL PLANTS SHALL BE BALLED AND BURLAPPED OR CONTAINER GROWN AS SPECIFIED. NO CONTAINER GROWN STOCK WILL BE ACCEPTED IF IT IS ROOT BOUND. ALL ROOT BALL WRAPPING AND BINDING MATERIAL MADE OF SYNTHETICS OR PLASTICS SHALL BE REMOVED FROM THE TOP OF THE BALL AT THE TIME OF PLANTING, IF THE PLANT IS SHIPPED WITH A WIRE BASKET AROUND THE ROOT BALL, THE WIRE BASKET SHALL BE CUT AND FOLDED DOWN 8" INTO THE PLANTING HOLE. WITH CONTAINER-GROWN STOCK, THE CONTAINER SHALL BE REMOVED AND THE ROOT BALL SHALL BE CUT THROUGH THE SURFACE IN TWO LOCATIONS.
- THE CONTRACTOR SHALL HAVE TREES AND SHRUBS DELIVERED TO SITE AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED AND PLANT IMMEDIATELY. IF PLANTING IS DELAYED MORE THAN 6 HOURS AFTER DELIVERY, THE CONTRACTOR SHALL SET TREES AND SHRUBS IN SHADE, PROTECT FROM WEATHER AND MECHANICAL DAMAGE AND KEEP ROOTS MOIST BY COVERING WITH MULCH, BURLAP OR OTHER ACCEPTABLE MEANS OF RETAINING MOISTURE. INSTALLATION
- THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITY AND SEWER LINES PRIOR TO THE START OF EXCAVATION ACTIVITIES. NOTIFY THE PROJECT ENGINEER AND OWNER IMMEDIATELY OF ANY CONFLICTS WITH PROPOSED PLANTING LOCATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE.
- NO PLANTINGS OR STRUCTURES SHALL BE LOCATED WITHIN THE WATER MAIN EASEMENTS OR WITHIN 10 FEET OF THE PROPOSED WATER MAINS OR WATER SERVICES.
- THE CONTRACTOR TO STAKE OUT PLANTING LOCATIONS. FOR REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT AND/OR OWNER BEFORE PLANTING WORK BEGINS. THE LANDSCAPE ARCHITECT AND/OR OWNER SHALL DIRECT THE CONTRACTOR IN THE FINAL PLACEMENT OF ALL PLANT MATERIAL AND LOCATION OF PLANTING BEDS TO ENSURE COMPLIANCE WITH DESIGN INTENT UNLESS OTHERWISE INSTRUCTED. NO PLANT SHALL BE PUT INTO THE GROUND BEFORE FINISHED GRADING HAS BEEN COMPLETED AND APPROVED BY THE PROJECT
- LANDSCAPE ARCHITECT OR PROJECT ENGINEER. ALL LANDSCAPED AREAS TO BE CLEARED OF ROCKS, STUMPS, TRASH AND OTHER UNSIGHTLY DEBRIS. ALL FINE GRADED AREAS SHOULD BE
- HAND RAKED SMOOTH ELIMINATING ANY CLUMPS AND UNEVEN SURFACES PRIOR TO PLANTING OR MULCHING. ALL PLANT MATERIAL SHALL BE INSTALLED AS PER DETAILS, NOTES AND CONTRACT SPECIFICATIONS. THE LANDSCAPE ARCHITECT MAY
- THE CONTRACTOR SHALL KEEP AREA CLEAN DURING DELIVERY AND INSTALLATION OF PLANT MATERIALS. REMOVE AND DISPOSE OF OFF-SITE ANY ACCUMULATED DEBRIS OR UNUSED MATERIALS. REPAIR DAMAGE TO ADJACENT AREAS CAUSED BY LANDSCAPE INSTALLATION
- AFTER PLANT IS PLACED IN TREE PIT LOCATION, ALL TWINE HOLDING ROOT BALL TOGETHER SHOULD BE COMPLETELY REMOVED AND THE BURLAP SHOULD BE PULLED DOWN SO 1/3 OF THE ROOT BALL IS EXPOSED. SYNTHETIC BURLAP SHOULD BE COMPLETELY REMOVED AFTER
- INSTALLATION. . MULCH SHOULD NOT BE PILED UP AROUND THE TRUNK OF ANY PLANT MATERIAL. NO MULCH OR TOPSOIL SHOULD BE TOUCHING THE BASE
- OF THE TRUNK ABOVE THE ROOT COLLAR. 10. ALL PLANTS SHALL BE WATERED THOROUGHLY TWICE DURING THE FIRST 24-HOUR PERIOD AFTER PLANTING. ALL PLANTS SHALL THEN BE WATERED WEEKLY OR AS REQUIRED BY SITE AND WEATHER CONDITIONS TO MAINTAIN VIGOROUS AND HEALTHY PLANT GROWTH.
- . AFTER COMPLETION OF A PROJECT, ALL EXPOSED GROUND SURFACES THAT ARE NOT PAVED WITHIN THE CONTRACT LIMIT LINE, AND THAT ARE NOT COVERED BY LANDSCAPE PLANTING OR SEEDING AS SPECIFIED, SHALL BE COVERED BY A SHREDDED HARDWOOD BARK OR APPROVED EQUAL MULCH THAT WILL PREVENT SOIL EROSION AND THE EMANATION OF DUST. GUARANTEE
- NEW PLANT MATERIAL SHALL BE GUARANTEED TO BE ALIVE AND IN VIGOROUS GROWING CONDITION FOR A PERIOD OF 18 MONTHS FOLLOWING ACCEPTANCE BY THE OWNER. PLANT MATERIAL FOUND TO BE UNHEALTHY, DYING OR DEAD DURING THIS PERIOD, SHALL BE REMOVED AND REPLACED IN KIND BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER. LAWN SEED<u>NOTES:</u>
- . PRIOR TO SEEDING, AREA IS TO BE TOPSOILED, FINE GRADED, AND RAKED OF ALL DEBRIS LARGER

	THAN 2" DIAMETER.	
2.	THE FOLLOWING SEED MIX S	SHALL BE SOWN AT THE RATES AS DEPICTED:
	RED FESCUE PERENNIAL RYEGRASS KENTUCKY BLUEGRASS SPREADING FESCUE	1 1/2 LBS./1,000 SF 1 LBS./1,000 SF 1 1/2 LBS./1,000 SF 1 LBS./1,000 SF

REVIEW INSTALLATION AND MAINTENANCE PROCEDURES

OPERATIONS.

- 3. SEED MIX SHALL BE MULCHED WITH SALT HAY OR UNROTTED SMALL GRAIN STRAW AT A RATE OF 2
- TONS/AC OR 90 LBS/1,000 SF 4. SEEDING DATES FOR THIS MIXTURE SHALL BE AS FOLLOWS:
- SPRING: APRIL 1 MAY 31 FALL: AUGUST 16 - OCTOBER 31
- . GERMINATION RATES WILL VARY AS TO TIME OF YEAR FOR SOWING. CONTRACTOR TO IRRIGATE SEEDED AREA UNTIL AN ACCEPTABLE STAND OF COVER IS ESTABLISHED BY OWNER.

TREE PROTECTION NOTES:

- . ALL EXISTING SHADE TREES WITHIN THE LIMITS OF TREE PROTECTION FENCING AND AS DIRECTED BY THE LANDSCAPE ARCHITECT SHALL BE PROTECTED THROUGHOUT THE DURATION OF WORK.
- 2. DEMOLITION AND GRADING WORK ADJACENT TO PROTECTED TREES SHALL BE PERFORMED BY A QUALIFIED PERSON WITH A MINIMUM OF FIVE (5) YEARS EXPERIENCE IN WORKING WITH EXCAVATION EQUIPMENT. CONTRACTOR TO PROTECT ROOT MASS AGAINST DAMAGE DURING EXCAVATION. ANY TREE ROOTS THAT ARE DISTURBED, BROKEN OR CUT SHALL BE PRUNED BACK WITH CLEAN SHARP TOOLS.
- . TO MINIMIZE DISTURBANCE OF VEGETATION TO REMAIN, ALL TREE STUMPS TO BE REMOVED WITHIN 10' OF TREE PROTECTION FENCE SHALL BE REMILLED USING A STUMP GRINDER.
- ALL EXPOSED TREE ROOTS SHALL BE THOROUGHLY IRRIGATED ON A DAILY BASIS UNTIL BACKFILLING CAN OCCUR AS DIRECTED BY THE PROJECT LANDSCAPE ARCHITECT.
- 5. ALL WORK TO BE PERFORMED UNDER THE DIRECT SUPERVISION OF EITHER THE OWNER'S REPRESENTATIVE OR PROJECT LANDSCAPE ARCHITECT. NOTIFY OWNER A MINIMUM OF 48 HOURS PRIOR TO ANY EARTHWORK / EXCAVATION WORK.

# GENERAL LIGHTING NOTES:

- AND OPERATION.
- WORK TRADES TO AVOID CONFLICT WITH FINISHED AND PROPOSED WORK.
- 6. ALL SITE LIGHTING RELATED WORK AND MATERIALS SHALL COMPLY WITH CITY, COUNTY, AND OTHER APPLICABLE GOVERNING AUTHORITY REQUIREMENTS.
- 7. SITE ELECTRICAL CONTRACTOR TO COORDINATE LOCATION OF EASEMENTS, UNDERGROUND UTILITIES AND DRAINAGE BEFORE DRILLING POLE BASES.
- OPERATING EFFECTIVELY, EFFICIENTLY AND SAFELY.

- CONDITIONS.
- PEDESTALS.
- 14. LIGHTING SUBSTITUTION REQUIREMENTS:

- BE ENTIRELY BORNE BY THE CONTRACTOR.
- DESCRIPTION.
- DOCUMENTS
- FINISH. AND PHYSICAL CHARACTERISTICS.

INFILTRATION BASIN & SIDE SLOPE SEEDING

# BASIN FLOOR

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 AREAS = 11.411 SF  $(11411/43560) \times 20 = 5.24 \text{ LBS. ERNMX} - 180$  $(11411/43560) \times 30 = 7.86$  LBS. GRAIN RYE

ERNMX-180 RAIN GARDEN AREA MIX

- 17% Virginia Wildrye, PA Ecotype (Elymus virginicus, PA Ecotype) 15% Fowl Bluegrass (Poa palustris)
- 10% Fox Sedge, PA Ecotype (Carex vulpinoidea, PA Ecotype) 6% Purple Coneflower (Echinacea purpurea)
- 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 ohiensis, PA 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 Bentgrass, 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% Oxeye Sunflower, PA Ecotype (Heliopsis 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 = 15,659 SF
- $(15659/43560) \times 60 = 21.57 \text{ LBS. ERNMX} 181$

ERNMX-181 NATIVE STEEP SLOPE MIX W/ ANNUAL RYEGRASS 20% Annual Ryegrass (Lolium multiflorum (L. perenne var. italicum))

- 18% Virginia Wildrye, PA Ecotype (Elymus virginicus, PA Ecotype) 15% Purpletop (Tridens flavus) 12% Creeping Red Fescue (Festuca rubra)
- 12% Indiangrass, 'Prairie View'-IN Ecotype (Sorghastrum nutans, 'Prairie View'-IN Ecotype) 5% Big Bluestern, 'Southlow'-MI Ecotype (Andropogon gerardii, 'Southlow'-MI Ecotype)
- 4% Autumn Bentgrass, 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 (Cassia 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% Oxeye Sunflower, PA Ecotype (Heliopsis helianthoides, PA Ecotype) 1% Lanceleaf Coreopsis, Coastal Plain NC Ecotype (Coreopsis lanceolata, Coastal Plain NC Ecotype)
- 1% Wild Bergamot (Monarda fistulosa)

## BASIN 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 LOOSESTRIFE, 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)

<u>CLEANING</u> – REMOVE TRASH AND DEBRIS (JANUARY & APRIL)

PROVIDE A CONCRETE BASE FOR EACH LIGHT POLE AT THE LOCATIONS INDICATED ON THE CONSTRUCTION DRAWINGS AND IN ACCORDANCE WITH PROJECT PLANS AND SPECIFICATIONS RELATING DIRECTLY TO CAST-IN-PLACE CONCRETE. CONTRACTOR TO COORDINATE INSTALLATION OF UNDERGROUND FEEDER CABLE FOR EXTERIOR LIGHTING WITH EXISTING AND PROPOSED UTILITIES. SITE DRAINAGE SYSTEMS, AND PAVING. CONTRACTOR SHALL PROMPTLY NOTIFY THE OWNER'S

REPRESENTATIVE SHOULD ANY UTILITIES, NOT SHOWN ON THE PLANS, BE FOUND DURING EXCAVATIONS. 3. CONTRACTOR TO OPERATE EACH LUMINAIRE AFTER INSTALLATION AND CONNECTION. INSPECT FOR IMPROPER CONNECTIONS

4. AIM AND ADJUST ALL LUMINAIRES TO PROVIDE ILLUMINATION LEVELS AND DISTRIBUTION AS INDICATED ON THE CONSTRUCTION DRAWINGS OR AS DIRECTED BY THE LANDSCAPE ARCHITECT AND/OR OWNER. INSTALLATION OF ALL LIGHTING FIXTURES, POLES, FOOTINGS, AND FEEDER CABLE TO BE COORDINATED WITH ALL SITE

8. SITE ELECTRICAL CONTRACTOR TO COORDINATE POWER SOURCE WITH LIGHT FIXTURES TO INSURE ALL SITE LIGHTING IS

9. SITE ELECTRICAL CONTRACTOR SHALL CONFIRM THAT LIGHT FIXTURES MATCH SPECIFICATIONS ON THE PLANS.

10. REFER TO ELECTRIFICATION PLAN BY OTHERS FOR PROVIDING ADEQUATE POWER FOR SITE LIGHTING.

11. SITE ELECTRICAL CONTRACTOR SHALL EXAMINE AND VERIFY THAT SOIL CONDITIONS ARE SUITABLE TO SUPPORT LOADS EXERTED UPON THE FOUNDATIONS DURING EXCAVATION. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY UNSATISFACTORY

12. POLE FOUNDATIONS SHALL NOT BE POURED IF FREE STANDING WATER IS PRESENT IN EXCAVATED AREA. 13. ELECTRICIAN AND INSTALLATION OF WALL MOUNTED FIXTURES SHALL BE COORDINATED WITH THE ARCHITECTURAL, STRUCTURAL, AND SITE DRAWINGS FOR SAFETY AND TO PROVEN EXPOSED WIRING.

14. THE LIGHT POLE FOUNDATIONS FOR FIXTURE 'B' SHALL EXTEND AT LEAST 30" ABOVE FINISHED PAVING ON CONCRETE

A. ALL LIGHTING SUBSTITUTIONS MUST BE MADE WITHIN 14 DAYS PRIOR TO THE BID DATE TO PROVIDE AMPLE TIME FOR REVIEW AND TO ISSUE AN ADDENDUM INCORPORATING THE SUBSTITUTION WITH THE FOLLOWING REQUIREMENTS:

B. ANY SUBSTITUTION TO LIGHTING FIXTURES, POLES, ETC. MUST BE APPROVED BY THE OWNER, ENGINEER AND TENANTS. C. COMPUTER PREPARED PHOTOMETRIC LAYOUT OF THE PROPOSED LIGHTED AREA WHICH INDICATES BY ISOFOOTCANDLE THE SYSTEM'S PERFORMANCE. ANY COST ASSOCIATED WITH REVIEW AND/OR APPROVAL OF THE SUBSTITUTIONS SHALL

### D. A PHOTOMETRIC REPORT FROM A NATIONAL INDEPENDENT TESTING LABORATORY WITH REPORT NUMBER, DATE FIXTURE CATALOG NUMBER, LUMINAIRE AND LAMP SPECIFICATIONS; IES CALCULATIONS, CANDLEPOWER TABULATIONS, ZONE LUMEN SUMMARY, ISOLUX PLOT, AND CATALOGUE CUTS. CATALOGUE CUTS MUST IDENTIFY, BUT NOT LIMITED TO, OPTICS, LAMP TYPE, DISTRIBUTION TYPE, REFLECTOR, LENS, BALLASTS, WATTAGE, VOLTAGE, FINISH AND HOUSING

E. POLE MANUFACTURER AASHTO CALCULATIONS INDICATING THE POLE AND ANCHOR BOLTS BEING SUBMITTED ARE CAPABLE OF SUPPORTING THE POLE AND FIXTURE SYSTEMS BEING UTILIZED IN ACCORDANCE WITH THE CONTRACT

F. THE UNDERWRITERS LABORATORY LISTING AND FILE NUMBER FOR THE SPECIFIC FIXTURE(S) TO BE UTILIZED.

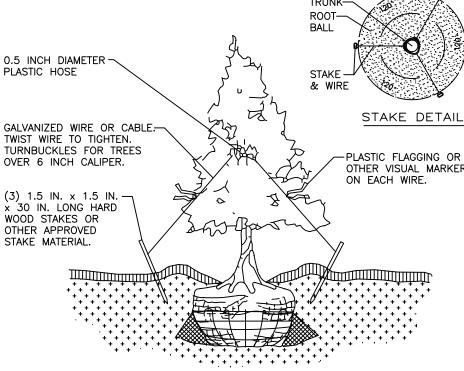
G. A COLOR PHOTOGRAPH THAT CLEARLY SHOWS THE REPLACEMENT FIXTURE POLE MOUNTED, THE FIXTURE'S COLOR,

H. LIGHTING LAYOUT AND LEVELS COMPLY WITH THE ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA (IESNA) SAFETY STANDARDS AND ALL OTHER LOCAL CODES AND/OR TENANT REQUIREMENTS.

26% River Oats, PA/VA Ecotype blend (Chasmanthium latifolium (Uniola latifolia), PA/VA Ecotype blend)

4% Blackeyed Susan, Coastal Plain NC Ecotype (Rudbeckia hirta, Coastal Plain NC Ecotype)

2% Lanceleaf Coreopsis, Coastal Plain NC Ecotype (Coreopsis lanceolata, Coastal Plain NC Ecotype)



1. ALL STAKES SHALL BE DRIVEN OUTSIDE THE EDGE OF THE ROOT BALL. ASSURE THAT THE BEARING SURFACE OF THE PROTECTIVE COVERING OF THE WIRE OR

CABLE AGAINST THE TREE TRUNK IS A MINIMUM 0.5 INCH.

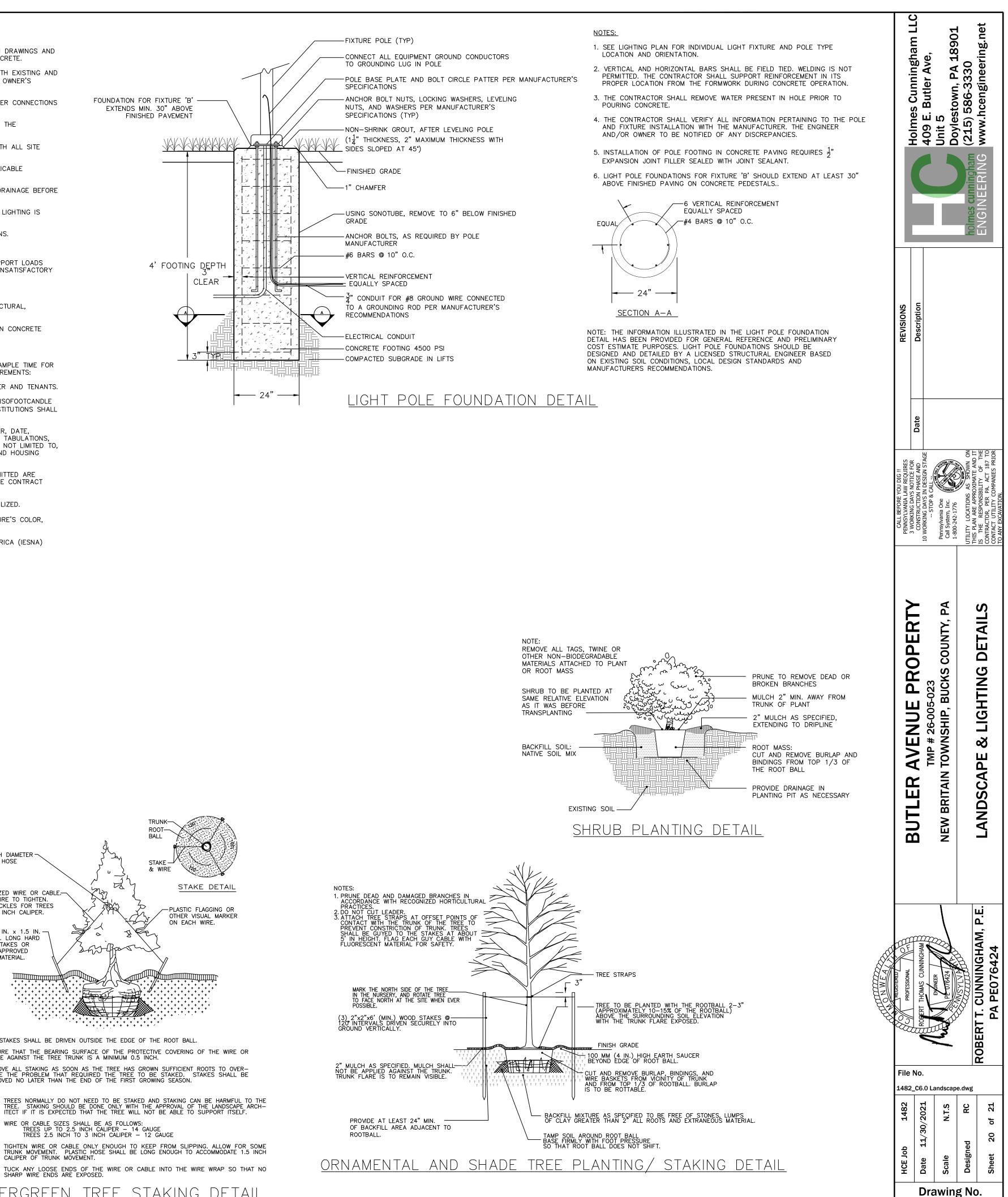
3. REMOVE ALL STAKING AS SOON AS THE TREE HAS GROWN SUFFICIENT ROOTS TO OVER-COME THE PROBLEM THAT REQUIRED THE TREE TO BE STAKED. STAKES SHALL BE REMOVED NO LATER THAN THE END OF THE FIRST GROWING SEASON.

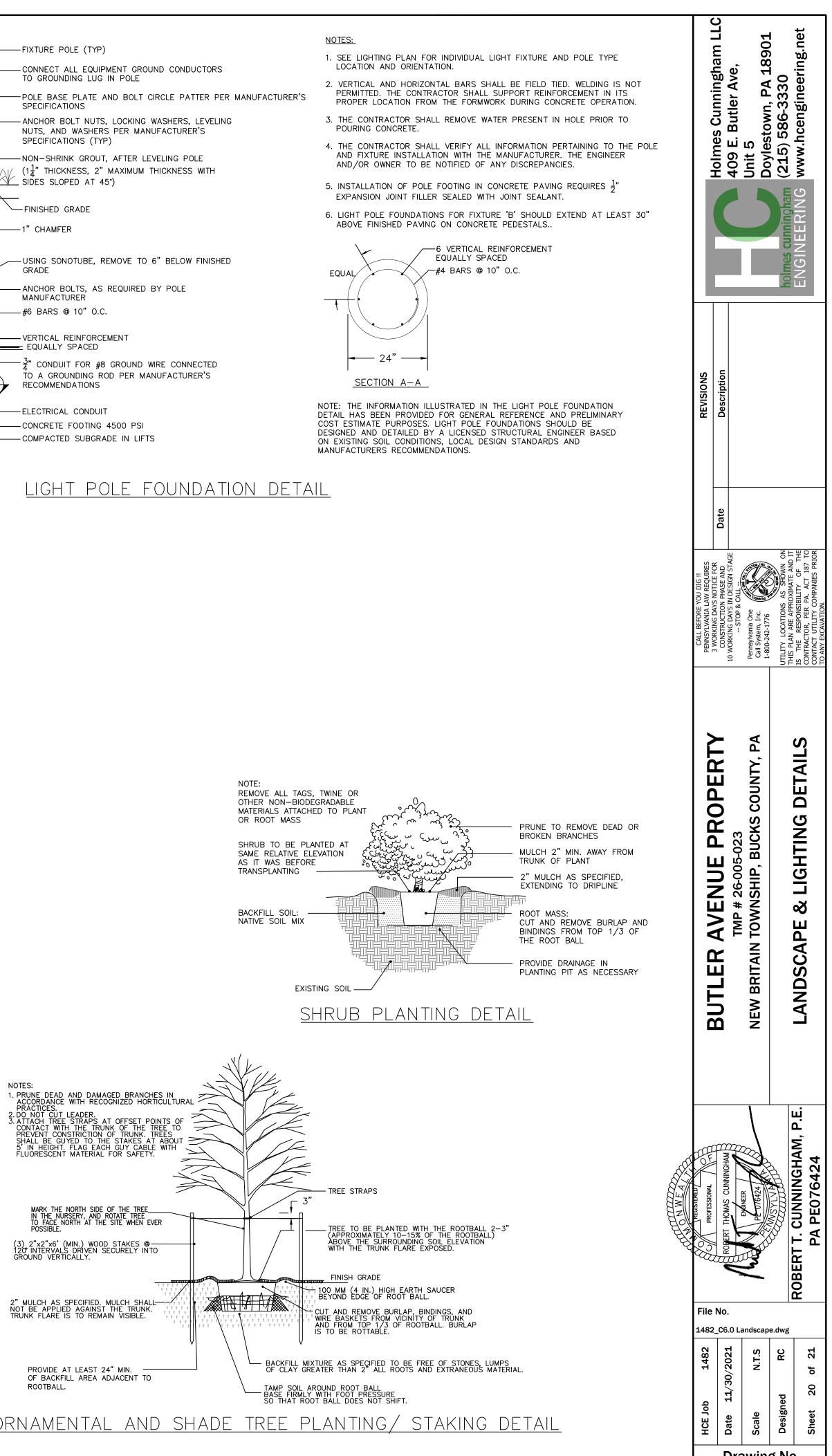
TREES NORMALLY DO NOT NEED TO BE STAKED AND STAKING CAN BE HARMFUL TO THE TREE. STAKING SHOULD BE DONE ONLY WITH THE APPROVAL OF THE LANDSCAPE ARCH-ITECT IF IT IS EXPECTED THAT THE TREE WILL NOT BE ABLE TO SUPPORT ITSELF.

WIRE OR CABLE SIZES SHALL BE AS FOLLOWS: TREES UP TO 2.5 INCH CALIPER - 14 GAUGE TREES 2.5 INCH TO 3 INCH CALIPER - 12 GAUGE

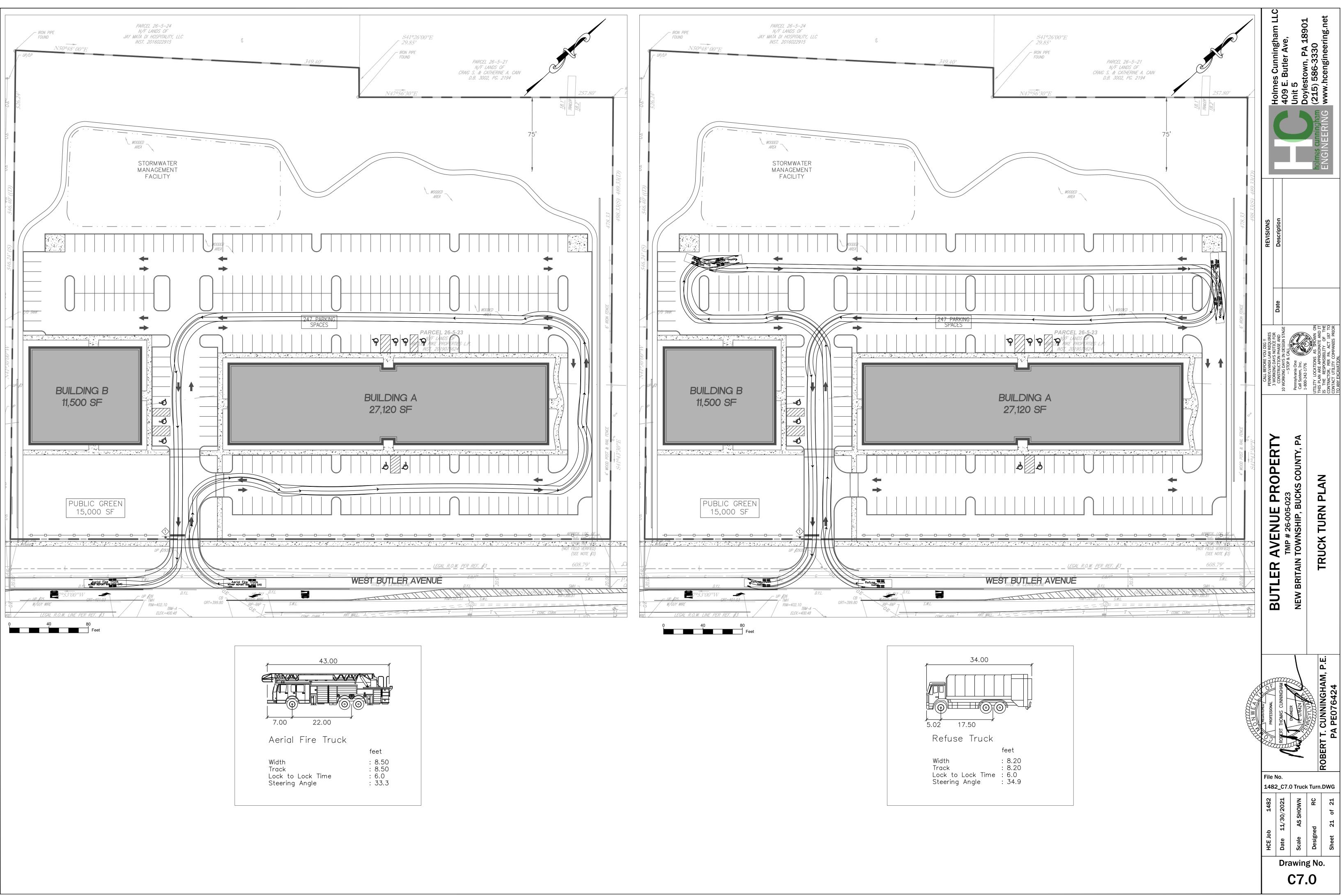
TIGHTEN WIRE OR CABLE ONLY ENOUGH TO KEEP FROM SLIPPING. ALLOW FOR SOME TRUNK MOVEMENT. PLASTIC HOSE SHALL BE LONG ENOUGH TO ACCOMMODATE 1.5 INCH CALIPER OF TRUNK MOVEMENT.

EVERGREEN TREE STAKING DETAIL





C6.2





January 19, 2022

File No. 19-04109

Matthew West, Township Manager New Britain Township 207 Park Avenue Chalfont, PA 18914

Reference: County Builders, Inc. - Preliminary LD Plan Review 1 West Butler Avenue TMP # 26-005-023

Dear Matt:

Pursuant to your request, Gilmore & Associates, Inc. has reviewed the Preliminary Plan for the abovereferenced project. Upon review by our office, we offer the following comments for consideration:

### I. Submission

- A. Preliminary and Final Land Development Plans for Butler Avenue Property, as prepared by Holmes Cunningham, LLC, consisting of twenty-one (21) Sheets, dated November 30, 2021.
- B. Post Construction Stormwater Management Plan Narrative for Butler Avenue Property, as prepared by Holmes Cunningham, LLC, dated November 30, 2021.
- C. Traffic Impact Assessment for Proposed Mixed Use Development Butler Avenue, as prepared by Heinrich & Klein Associates, Inc. dated November 29, 2021.
- D. New Britain Township Subdivision & Land Development Application dated December 7, 2021.
- E. Sewage Facilities Planning Module Mailer for Butler Avenue Mixed Use.
- II. <u>Reference Documentation</u>
  - A. Settlement Stipulation and Agreement between New Briatin Township Board of Supervisors and Butler Pike Properties, L.P., Land Use Appeal Docket No. 2021-00629 dated October 7, 2021.
- III. General Information

The subject property, TMP #26-005-023, is a 7.27-acre parcel on the 400 block of West Butler Avenue (S.R.4202) within the Township's C-1 Commercial District and Butler Avenue Corridor Overlay District. The wooded lot is situated adjacent to C-1-zoned parcels to the north (Spatolas/Mavis Tire), RR/PRD-1 to the east (Highlands/Grey Friar), OP/SA-3 to the south (Chalfont Motor Lodge) and RR to the west (Cedar HIII single-famiy detached dwellings). The Applicant proposes I1 Medical Office, a By-Right Use, and B7 Apartment Use, which is not a permitted use within the C1 District. Related improvements include public water and sewer, 247 parking spaces, public green, fence with masonry piers and site trail. Stormwater management is proposed to be addressed with a Managed Release Concept basin at the rear of the property.

New Britain Township Board of Supervisors and Butler Pike Properties L.P. entered into a Settlement Stipulation and Agreement on October 7, 2021 which permitted the Apartment Use and included several variances and waivers.

65 East Butler Avenue | Suite 100 | New Britain, PA 18901 | Phone: 215-345-4330 | Fax: 215-345-8606

### III. Review Comments

### A. Stipulated Agreement

The Stipulated Agreement was based on the "Butler Avenue Property Settlement Plan, sheet CP-6", prepared by Holmes Cunningham Engineering, Inc, dated August 1, 2019, last revised, June 24, 2021 ("*Settlement Plan*"). Per #3 of the Stipulated Agreement, the Settlement Plan shall be deemed compliant with the Zoning Ordinance and the variances granted by the Zoning Hearing Board were confirmed and/or modified generally as follows:

- <u>§27-300.a.</u> To permit more than one principal use and more than one principal structure.
- §27-3005.b.B7 To permit the B7 Apartment Use to be developed on the Property.
- <u>§27-1201.</u> To permit the B7 Apartment Use and the D1 Nursery School/Day-Care Center Use in the C-1 Commercial Zoning District.
- <u>§27-2400.f.2.</u> To permit disturbance of up to 70% of woodlands on the Property with associated planting of replacement trees for disturbance beyond 60%.
- <u>§27-2904.g.5</u> To permit the paved area adjacent to the proposed buildings to be ten (10) feet from the abutting exterior walls.

We offer the following comments below related to the Stipulated agreement and Settlement Plan where the numbers referenced are as noted within the filed Stipulated Agreement:

- <u>Stipulated Agreement #5</u> The Property Owner shall be entitled to land development approval for the residential and commercial development of the Property for the apartment and commercial use(s) upon the filing of a land development plan in substantial conformity with the "Settlement Plan". We note the following deviations from the "Settlement Plan":
  - a. Building B is shown as 11,500 SF on the Preliminary Plan as compared to the 8,000-SF building on the Settlement Plan. We note that the parking layout has been revised from the Settlement Plan to eliminate 10 spaces along the rear of Building B, as well as 2 spaces along the main access driveway. This results in 19 of the 66 parking spaces required for Building B being provided on the opposite side of the main access driveway.
  - b. The Stipulation #8 allows for additional commercial uses on the ground floor of the Apartment building, though no commercial uses appear to be proposed in Building A. Although not required, the BCPC recommends the applicant explore some amount of commercial spaces on the ground floor of Building A to create a more characteristic mixed-use-type development.
  - c. Based on the Apartment and Medical Office uses proposed, 206 spaces are required. The total number of parking spaces was reduced from 263 on the Settlement Plan to 247 spaces. The layout shall be revised to provide the number of parking spaces as depicted on the Settlement Plan.
  - d. The asphalt trail has been adjusted at the rear of the property through the woodlands and around the proposed stormwater facility.
  - e. The sidewalk adjacent to the two buildings were shown as 10 feet wide on the Settlement Plan, where now a 5-foot walkway is proposed. However, where parking stalls are proposed adjacent to a sidewalk or walkway, the minimum width of the sidewalk or walkway shall be increased to a minimum width of six feet. (§22-708.2.F)
- Stipulated Agreement #9.a. The plans depict the Butler Avenue Corridor Overlay District (BACOD) fencing as required. A Construction Detail shall be provided in accordance with <u>§22-722.4.D.(7)(a)</u>.

- 3. <u>Stipulated Agreement #9.d.</u> The Property Owner identifies the Public Green at the Butler Avenue frontage. However, SALDO<u>§22-722.4.G</u> requires green spaces to contain shrubs and trees, public benches, and some type of public amenity, such as gardens, sculptures, gazebos, or fountains. While the proposed Public Green provides 9 shade trees (3 Red Maple, 3 Sugar Maple, and 3 Scarlet Oak per Sheet 18 of 21), shrubs, benches and an amenity shall be provided as approved by the Board of Supervisors (Board).
- 4. <u>Stipulated Agreement #10.a.</u> The plans depict the installation of a 5-foot sidewalk along the frontage of Butler Avenue from the northern and southern property lines of the Property, generally as depicted on the Settlement Plan. The proposed sidewalk along Butler Avenue shall extend through TMP# 26-5-23.2 and connect to the existing sidewalk on TMP# 26-5-23.3 to complete the accessible route in accordance with the Stipulated Agreement including all requisite curb ramps and Streetprint crosswalks in accordance with Township and PennDOT standards.
- 5. <u>Stipulated Agreement #11</u> The proposed development shall meet the requirements of the PADEP and New Britain Township Stormwater Management Ordinance, to the satisfaction of the Township Engineer. Comments related to compliance with the Township Stormwater Management Ordinance are provided herein.
- 6. <u>Stipulated Agreement #12</u> The proposed development shall meet the buffer yard requirements of the Zoning Ordinance and Township SALDO. The location of the 45-foot buffer yard shall be shown and labeled on the Record Plan for the medical office, while a 30-foot buffer yard is required for B7 Apartment Buildings. At the discretion of the Board of Supervisors, existing deciduous and coniferous trees larger than 2 inches in caliper and/or 6 feet in height located within a proposed buffer yard may be considered to meet the requirements of this section. The Applicant shall present the existing buffer trees to the Board for approval and it shall be determined if supplemental plantings are required. Every buffer yard shall be permanently protected by the placement of a conservation easement over it running with the land. (§§27-2803.a & e)
- 7. <u>Stipulated Agreement #13</u> The Plans shall note the following granted waivers from the provisions of the New Britain Township SALDO:
  - a. <u>§22-505</u> From providing a Community Impact Assessment Report.
  - b. <u>§22-705.3</u> From undertaking roadway widening and associated improvements along the Butler Avenue frontage, subject to such improvements as may be required under the jurisdiction of PennDOT.
  - c. <u>§22-713.5.B(6)</u> From providing berm and screen plantings for a B7 Apartment Use, as to the Butler Avenue frontage only.
  - d. §22-715 From providing park and recreation land.
  - e. <u>§22-722</u> From compliance with the Butler Avenue Overlay requirements other than those specifically required under [the Agreement] or as shown on the Settlement Plan.
- 8. <u>Stipulated Agreement #15</u> Additional disturbance beyond 60%, up to a maximum of 70% of the woodlands on the Property, shall be permitted, provided that the planting of replacement trees is provided for the additional disturbed area beyond 60%. The Resource Protection Calculations on Sheet 4 of 21 indicate that 31.1% of the woodlands is being protected which equates to 68.9% disturbance. Therefore, 8.9% of woodlands requires 66 replacement trees based on 0.33 acres at 200 trees per acre. We note that the the woodlands disturbance area does not consider trees that were certified as dead by an arborist. In addition, there are individual trees within the front yard that do not appear to be considered woodlands. Finally, the calculation does not include disturbance. We recommend a site meeting to determine if the existing, living trees have a continuous canopy and if the trail can be installed without disturbing the woodlands required to be protected.

- 9. <u>Stipulated Agreement #15.d</u>. The individual planting location and the specific species of each replacement tree shall be determined by the Township. The plans propose 34 Shade Trees and 32 Ornamental Trees for a total of 66 trees per Sheet 18 of 21. It shall be clarified which plantings are proposed to satisfy the tree replacement requirement and the Board shall approve the locations and species.
- 10. <u>Stipulated Agreement #16</u> The date of the Settlement Stipulation and conditions #3, #4, #6, #7, #8, #13 and #14 related to variances and waivers granted, approved zoning uses for Buildings A and B, and required fees which supercede the Township code, shall be noted on the plan.
- B. Zoning Ordinance

We offer the following comments with respect to the New Britain Township Zoning Ordinance:

- <u>§27-201</u> The ratio base site area is the area definition used to calculate the impervious and building areas for the site. It shall be clarified that the coverage calculations on Sheet 4 of 21 utilize the Ratio Base Site Area.
- 2. <u>§27-1202.a</u> No use in the C-1 Commercial District shall exceed 35 feet in height, however, apartment buildings, Use B7, are permitted to be 40 feet. The proposed building heights and maximum permitted height shall be noted on the Record Plan, Sheet 4.
- <u>§27-1202.b</u> The front, side and rear yard setback lines shall be dimensioned and labeled on the Record Plan, Sheet 4. We note that apartment buildings have separate setback requirements for the B7 Use.
- 4. <u>§27-2401.c</u> For subdivisions and land developments, deed restrictions meeting Township specifications must be placed in the deed for each site that has natural resource protection areas within its boundaries. The restrictions shall provide for the continuance of the resource protection areas. A natural resource easement shall be designated on the plan described by metes and bounds to protect the minimum 30% of existing woodlands to remain and an Agreement prepared by the Township Solicitor.
- 5. The Traffic Impact Assessment (TIA) states that there will be some increase in peak hour traffic delay due to the proposed uses, however, there will be no anticipated changes in levels of service to the noted intersections, with the exception of one Level of Service drop for Highland Drive. We offer the following comments related to the TIA:
  - a. <u>§27-2501.a.1.</u> The TIA shall include the number of floors and a comprehensive description of the proposed Apartment building to verify that the correct land use was applied for the trip generation calculations.
  - b. <u>§27-2501.a.6.</u> All roadways and/or intersections showing a level of service below C shall be considered deficient, and specific recommendations for the elimination of these problems shall be listed. This listing of recommended improvements shall include, but not be limited to, the following elements: internal circulation design, site access location and design, external roadway and intersection design and improvements and widenings, traffic signal installation and operation including signal timing, transit design improvements, and reduced intensities of use. All physical roadway improvements shall be shown in sketches. The recommended improvements for both roadways and transit shall include, for each improvement, the party responsible for the improvement, the cost and funding of the improvement and the completion date for the improvement.

- c. The TIA indicates turning lanes are warranted at the access driveway and two left-hand turning lanes are shown on the plans at the proposed entrance. A separate right deceleration lane is not noted to be warranted. In addition, the TIA indicates a two-way center left turn lane should be extended to the north and south of the "Low Volume Driveway". Given the other left-turn lanes in the vicinity, a center-turn lane should be considered and discussed with PennDOT from Schoolhouse Road to north of Cedar Hill Road. The HOP Plan shall be provided showing the extent of the proposed improvements as required by PennDOT, once determined.
- d. We recommend the Applicant coordinate with Bucks County Transport regarding a designated Doylestown DART bus service stop at this development.
- e. A Signage and Pavement Marking Plan along Butler Avenue indicating the calculated, proposed lane shift and taper lengths shall be provided. This may be deferred to the HOP phase, however, the proposed northbound striping approaching the access will need to be addressed.
- 6. <u>§27-2600</u> The location and details of any proposed signs for the medical office and apartment building shall be reviewed and approved by the Zoning Officer.
- 7. <u>§27-2901</u> The Zoning Table shall be revised to list the number of required spaces for each use under the Required/Permitted column and the number of spaces proposed under the Proposed column.
- 8. <u>§27-2904.d.3</u> Access driveways shall have a 6% maximum grade, except that the initial 20 feet from the edge of the cartway of a public street shall be a maximum of 3% grade. Based on the curb elevations on Sheet 7, it appears the initial 20 feet from the cartway may exceed 3%, while the remainder of the driveway has a slope of approximately 6.7 to 7.5%. The driveway grading shall be verified to clearly meet the minimum required driveway slopes.

### C. <u>Subdivision and Land Development Ordinance</u>

We offer the following comments with respect to the current New Britain Township Subdivision and Land Development Ordinance:

- 1. <u>§22-502.1.A.(3)</u> The property metes and bounds should be shown with a darker text for visibility on the Record Plan. In addition, the title line, legal and ultimate right-of-way lines, shall be clearly labeled on the Record Plan, as well as, the metes and bounds.
- 2. <u>§22-502.1.A.(4)</u> Legal descriptions shall be submitted for the ultimate right-of-way to be dedicated to the Township (via easement), legal right-of-way to be dedicated to PennDOT, all defined easements such as biketrail and clear sight triangle easements, deed-restricted areas, such as open space or conservation easements, buffer yards, access easements, and offsite temporary construction easements. The plan shall include bearings and distances as necessary so the legal descriptions can be reviewed against the plan.
- 3. §22-502.1.B A copy of the deed for the subject tract shall be submitted.
- 4. <u>§22-502.1.B.(8)</u> The zoning classifications of the surrounding properties shall be noted on the Record Plan.
- <u>§22-502.1.B.(16)</u> Architectural sketches are encouraged to be submitted showing elevation, perspective, building materials and colors. We recommend the Applicant present renderings for the Board's review demonstrating architectural consistency between the materials, designs and styles used for the buildings, retaining walls, masonry peirs/fencing, trash screens, etc.

- 6. <u>§22-502.1.B.(20)</u> Plan notations regarding offers of dedication of public rights-of-way and improvements and plan notations for ownership and maintenance responsibilities of open space, public green, protected natural resources easements, stormwater management facilities, utilities, etc. shall be provided. The Record Plan shall include notations specifying the area between the title line and the legal to be dedicated to PennDOT and the area between the Legal and Ultimate right-of-way lines are to be dedicated to the Township.
- 7. <u>§22-502.1.B.(21)</u> The recording certification shall be provided on the Record Plan for the Professional land surveyor.
- 8. <u>§22-502.1.D.(10)</u> Contour lines measured at vertical intervals of two feet, as determined by an on-site field survey, not interpretation of United States Geologic Service (USGS) Maps, are required for the area within 100 feet of the tract. The plans shall indicate the benchmark elevation and the location and shall be based on the Chalfont-New Britain Township Joint Sewage Authority vertical datum. Additional topography shall be provided downstream of the level spreader, and as needed for any required emergency access or offsite improvements.
- 9. <u>§22-502.1.1.(3)</u> Utility crossings for the water, sanitary sewer and storm pipe shall be shown on the profiles to verify adequate clearance between utility lines. Concrete encasements shall be provided as necessary.
- <u>§22-502.1.I.(4)</u> A centerline profile for the proposed access driveway shall be provided to the street intersection, showing elevations at ten-foot intervals, slope, ultimate right-way line and curb line and edge of pavement.
- 11.  $\underline{\$22-502.1.J.(1)}$  The following comments related to the construction details shall be addressed:
  - a. The Trash Enclosure Detail shows the installation of the perimeter fence outside of the concrete pad. This would conflict with the adjacent parking spaces and curb. The detail shall be revised to clarify how the enclosure should be constructed in the proposed locations.
  - b. A detail shall be provided for the trash enclosure bollards, as applicable.
  - c. The plan includes a detail for a Vinyl Chain Link Fence. The plan shall clarify where this fence is proposed.
- 12. §22-704.2.A Easements for single utility lines shall be a minimum of 20 feet. The Utility Plan shows the proposed sanitary sewer connection crossing through TMP# 26-5-23.2 to the existing manhole. In addition, the water line extends through TMP# 26-5-24 where it connects at an existing valve that appears to be within the Butler Avenue ultimate right-of-way. Both of these utility connections are between the legal and ultimate right-of-way for these adjacent properties. The Developer shall determine if the ultimate rights-of-way has been accepted for dedication or if easements will be required for the installation of these utilities across the adjacent properties.
- 13. §22-705. The Applicant shall obtain a Highway Occupancy Permit (HOP) from PennDOT, for the access to Butler Avenue (SR4202). The Applicant shall copy the Township on all correspondence with PennDOT and extend an invitation to the Township for all meetings. Additionally, to facilitate the Township review of the HOP submission, the Applicant shall include Gilmore & Associates as an "Engineering Firm" on the permit application within the PennDOT ePermitting System. Though the Applicant received a waiver from road improvements, subject to PennDOT's requirements, our office may have additional comments related to the HOP Plans once submitted. We recommend that a condition be placed on any Township Plan Approvals, that once approved, any significant changes to the plan as required by PennDOT or other outside agency be presented to the Board of Supervisors prior to construction.

- 14. <u>§22-705.5.C &13.H</u> A fifty-foot clear sight triangle must be provided for all driveways, measured from the point of intersection of the street right-of-way line and edge of the driveway. The site plan shall contain a notation that states that the applicant is required to maintain the area of the clear sight triangle and the Township has the right to enter and perform required maintenance in the area if deemed critical to public welfare pursuant to a Declaration of Covenants, Restrictions, and Conditions approved by the Board.
- 15. <u>§22-705.6</u> Minimum sight distances for stopping, passing and intersections shall comply with PennDOT standards. The required and available sight distance lines and measurements shall be shown on the plans.
- 16. <u>§22-705.15.D. & §22-722 7.F.(3)</u> Proposed crosswalks shall have the brick red thermoplastic street imprinted with the herringbone pattern and a six-inch white line on either side. See attached details. Crosswalks on the adjacent properties shall be provided as well.
- 17. <u>§22-706.2.C.</u> Sidewalks shall be located within a public right-of-way, public easement or common open space area. An easement should be provided for the entirety of the 5-foot-wide asphalt path through the site. In addition, easements shall be provided for the proposed public sidewalk on the adjacent properties unless it can be confirmed that the sidewalks are proposed within the public right-of-way or existing easement.
- 18. <u>§22-706.3.B</u> All curbs and sidewalks shall provide access in accordance with accessibility guidelines. The PennDOT Curb Ramp detail provided on Sheet 5 does not appear to be applicable. The Detailed Grading Plan of the crosswalks and accessible ramps shall include additional spot elevations for the sidewalk showing a maximum 2% slope at all landing and turning areas.
- 19. <u>§22-706.3.G</u> The extent of the detectable warning surface shall also be shown. A note specifying all curb ramps shall be provided with "brick red" detectable warning surfaces or other approved contrasting color shall be added to the detail.
- 20. <u>§22-707.B.(4)</u> The maximum center-line grade for pedestrian walkways and recreational trails shall not exceed 8%. Based on the proposed contours, it appears the asphalt trail exceeds an 8% slope where it enters and exits the woodlands area. The grading of the trail shall be revised to 8% or less.
- 21. <u>§22-707.C</u> The Asphalt Trail detail on Sheet 5 shall be revised to specify 2 ½ inches of 9.5mm Superpave wearing course.
- 22. <u>§22-708.6.B</u> The grade of parking areas shall be a maximum of 5% and a minimum of 1%. The parking area behind Building B and a portion of the center aisle behind Building A have slopes which exceed 5%. The parking lot grading shall be revised as necessary to meet this requirement.
- 23. <u>§22-708.6.H</u> Stop signs and stop bars shall be provided as necessary throughout the parking area where crosswalks are proposed and at the end of parking aisles where they intersect the main access drive. In addition, the location of all accessible parking signs shall be shown on the Record Plan.
- 24. <u>§22-710.2 & 3</u> All comments from the Fire Marshal's review dated January 11, 2022 shall be addressed related to fire lanes, emergency site and building access, water service, etc. Adequate access shall be provided to the Fire Marshal's satisfaction.
- 25. <u>§22-711</u> The following comments related to the grading design/plan shall be addressed:

- a. Detailed grading shall be provided for the proposed driveway crossings on the adjacent properties to demonstrate accessibility.
- b. Additional spot elevations shall be provided along the driveway around the eastern corner on Building A to clarify the high point grade break.
- c. Spot elevations shall be provided at the corners of the rear parking lot along the NW curbline.
- d. An additional spot elevation shall be provided at the southern corner of the parking area between Buildings A and B.
- e. The TC/BC spot elevation of 393.85 at the southern corner of Building A indicates a depressed curb and appears to be incorrect. This spot elevation shall be revised as necessary.
- f. The inlet locations shall be provided on the Grading Plan to verify the proposed slopes to the inlets.
- 26. <u>§22-711.2</u> The following comments related to erosion controls shall be addressed:
  - a. Prior to the installation of the parking lot curb, sediment from disturbance on the northeastrn half of the site will bypass the sediment basin and runoff to the rear of the site. Measures shall be provided where necessary to direct the sediment runoff towards the sediment trap until the curb is constructed.
  - b. Additional silt sock shall be provided at the following locations:
    - 1) On the downslope side of the northern retaining wall to prevent sediment runoff onto the adjacent property.
    - 2) Along the southern property line where grading for the proposed asphalt trail will result in sediment runoff onto the adjacent property.
    - 3) Downslope of the disturbance between the parking lot and the asphalt trail to protect the area of woodlands to remain.
    - 4) Downslope of the disturbance from the sidewalk installation on the adjacent properties.
  - c. Erosion control matting shall be provided for the 3:1 slopes on the low end of the northern retaining wall.
  - d. The type of erosion control matting on the downslope side of the level spreader shall be specified.
- 27. <u>§22-711.4.A</u> Retaining wall specifications, calculations and design details shall be approved by the Township Engineer prior to final plan approval by the Township. Design plans, specifications and details, signed and sealed by a licensed professional engineer, shall be provided. Wall style, finish and color shall be coordinated with proposed building architecture.

In addition, the asphalt walkway is directly adjacent to the retaining wall along the southern side of the site. Fall protection fence or railing is required to be installed where there is a 30-inch or greater vertical change. A detail shall be provided for any required fence while insuring the minimum walkway width is maintained.

28. §22-711.4.C – The top or bottom edge of slopes shall be a minimum of 5 feet from property lines in order to permit normal rounding of the edge without encroaching onto the abutting property. The proposed grading and retaining wall construction will require disturbance within 5 feet of the adjacent properties. Further, improvements are required along Butler Avenue on adjacent properties. The grading shall be revised, however, if a waiver is granted, the Developer shall obtain temporary construction easements as necessary to allow access for the proposed grading and improvements.

- 29. <u>§§22-712.2.B & F</u> The Applicant shall install stormwater management facilities, on- and offsite, as necessary to convey stormwater runoff along or through the property to a natural outfall, such as a watercourse, drainage swale, storm sewer, or other drainage facilities. If an applicant concentrates or redirects stormwater runoff to discharge at another location on the property, the applicant is responsible for constructing an adequate channel or storm sewer system on downstream properties until a natural outfall is reached. A natural outfall shall have sufficient capacity to receive stormwater without deterioration of the facility and without adversely affecting property in the watershed. Though a level spreader is proposed, there has been a history of drainage complaints in the area. Additional information shall be provided to demonstrate the downstream properties receiving stormwater runoff from the site are not adversely impacted.
- 30. <u>§22-712.3.G</u> The calculations for the 10 minute time of concentration used for Proposed PR1 shall be provided in the PCSM Plan Narrative. We note that the time of concentration path for Proposed PR1 shown on the Post Development Drainage Area Map does not appear consistent with the proposed storm sewer layout.
- 31. <u>§22-712.4.G</u> All basin outlet pipes shall be watertight reinforced concrete having "O-Ring" joints. The plan shall specify O-ring RCP for the pipe between the basin outlet structure and the level spreader.
- 32. <u>§22-712.4.H</u> The spillway elevation on the Basin Spillway Detail on Sheet 17 shall be coordinated with the spot elevations shown on the plans and report.
- 33. <u>§22-712.4.L</u> The inlet grate shall only be used as an emergency outflow and the grate elevation shall be equal to or higher than the one-hundred-year water surface elevation, but at least six inches below the emergency spillway elevation. The outlet structure grate elevation of 384.42 is lower than the 100-year water elevation of 384.66. The outlet structure shall be revised to provide a grate elevation equal to or higher than the 100-year water surface elevation.
- 34. <u>§22-712.4.N</u> Detention basins shall be installed before the construction of any buildings or site improvements, unless otherwise approved by the Board and the Bucks County Conservation District. A preliminary basin as-built plan must be submitted and approved by the Township Engineer prior to beginning any building construction to confirm that the constructed volumes are in accordance with the design plans. A note requiring this shall be included on the record plan and in the sequence of construction.
- 35. <u>§§22-712.6 & 8</u> The following comments related to the storm structures shall be addressed:
  - a. The inverts of the roof drain connections should be included for the inlet construction.
  - b. The plan and profiles shall specify the type of inlet and inlet top.
  - c. Cleanouts shall be provided for the basin underdrain and the level spreader distribution pipe.
- 36. <u>§§22-712.6.E & 712.12</u> At least one inlet shall be required at the curb tangent on the upstream side of all access drive intersections with public roadways. A culvert or storm sewer shall be provided for all access drives.
- 37. <u>§22-712.8.B</u> A Type "DW" endwall shall be provided at the termination of all storm sewer systems. DW endwalls shall be provided at the outlet pipes into the basin.
- 38. <u>§22-712.13.C.(1)</u> The BMP Maintenance Plan on Sheet 17 shall be revised as necessary to clarify the ownership and maintenance responsibilities of the stormwater management facilities and storm sewer conveyance system.
- 39. <u>§22-712.13.D</u>. A fee is required to maintain the stormwater management facilities located within public right-of-way or any easement owned by the Township.
- 40. <u>§22-713.</u> The following issues related to the Landscape Plan should be addressed:

- a. There are multiple locations where proposed plantings are in close proximity to underground utilities. We recommend a minimum distance of 10 feet be provided between proposed plantings and utilities.
- b. The Plant Schedule provided on Sheet 18 of 21 Landscape Plan indicates a quantity of 90 Scallywag Holly, whereas the plan shows 97. The plan and schedule shall be coordinated.
- c. The Golden Rain Tree species shall be replaced with an alternate species due to this being on the DCNR invasive plant "Watch" list.
- 41. <u>§22-713.3.D.</u> The placement of light standards shall be coordinated with the landscape plan to avoid conflicts. We recommend a minimum distance of 10 feet be provided between proposed plantings and light fixtures. For instance, it appears that a proposed tree in the Public Green area is in close proximity to a proposed light fixture.
- 42. <u>§22-713.5.B.(1)</u> One deciduous or evergreen shrub shall be planted every five feet along the perimeter of the parking area. We note that 16 shrubs are required along the southern property boundary and 16 shrubs are provided, whereas the proposed spacing does not provide an effective buffer due to a 20-foot gap in the plantings. Shrubs shall be placed five feet on center in a continuous hedge.
- 43. <u>§22-713.5.B.(2)</u> This section requires, at a minimum, a 6-foot wooden shadow-box fence with a staggered row of evergreen trees be provided at 10-foot spacings to screen from trash areas. We note that the Trash Enclosure Detail provided on Sheet 5 of 21 Site Construction Details indicates that a board on board fence OR a black vinyl chain link fence with privacy slats will be utilized. The proposed screening shall be provide in accordance with the Ordinance and clarified and detailed on Sheet 5 of 21, Site Construction Details.
- 44. <u>§§22-714.2 & 7</u> Pedestrian scaled lighting shall be positioned along on-site walks and trails such that lighting levels along them maintain a consistent 0.2 footcandle. No lighting is proposed along the front of Building B, within the public green, and the associated walkway is not adequately illuminated. Lighting shall be provided for the areas and walkways open to the general public and multifamily residents.
- 45. <u>§22-714.4.B.</u> Light standards shall be a maximum of 20 feet in height, and have a concrete base raised 30 inches above finished grade. The Light Pole Foundation Detail on Sheet 20 notes that the foundation for fixture 'B' extends 30 inches above finished pavement. This shall also be specified for fixture 'A' which is directly behind the curb and could be damaged by vehicles pulling into the adjacent parking spaces.
- 46. <u>§22-714.4.C.</u> Light standards shall be located in planting islands or planting strips within parking areas, not installed directly on the parking area surface. Several of the light standards at the rear of Buildings A and B are located directly on the parking surface and shall be relocated.
- 47. <u>§22-714.7.</u> The Statistics chart provided on Sheet 19 of 21 Lighting Plan indicates a Max/Min ratio of 21.5:1 and a Avg/Min ratio of 7.5:1 for the Main Parking Area. Current IES guidelines recommend a Max/Min ratio no greater than 20:1 and the Township of New Britain Subdivision and Land Development Ordinance specifies a Avg/Min ratio no greater than 4:1. Lighting shall be revised to comply with current recommended guidelines and Ordinance.
- 48. <u>§22-716.2.C.</u> Concrete monuments shall be shown on the Record Plan at the intersections of the Ultimate right-of-way with the property lines and at any changes in direction.
- 49. <u>§22-718</u> Correspondence shall be submitted from North Wales Water Authority indicating that they have adequate water supply to service the proposed apartment building and medical office. In addition, approval and service agreements shall be provided for the proposed connections.

- 50. <u>§22-720</u> We note that a Sewage Planning Module Application Mailer has been submitted. Unless DEP indicates a full Planning Module is not required, a completed PADEP Sewage Facilities Planning Module shall accompany the subsequent preliminary plan application. Prior to submitting the planning module to the Township for approval, the planning module shall have been executed by the applicant, responsible engineer, CNBJSA, Department of Health and Bucks County Planning Commission. A Sewage Facilities Planning Module shall be approved by the Township, Authority, and PADEP prior to final plan approval by the Township. A copy of the "Will-Serve" letter and approved sewer agreement, shall be submitted to the Township and our office prior to plan recording.
- 51. <u>§22-905.1.A</u> The Applicant is responsible for any other required reviews, approvals, permits, etc. (i.e., BCPC, BCCD, PADEP, PennDOT, CNBJSA, Fire Marshal, North Wales Water Authority, Aqua, Township Road Opening Permit, etc.) as applicable.
- D. <u>Stormwater Management Ordinance</u>

The design uses the Managed Release Concept (MRC) for the stormwater facility which impounds the 1.2-inch/2-hour storm for vegetation, filters the runoff through a soil media, infiltrates into undisturbed soils to the extent possible, with stormwater released through an underdrain.

- 1. <u>§26-123.2</u> The proposed design utilizes the MRC developed by PADEP to meet the volume control requirement which is permitted for situations where infiltration is infeasible. We note that the proposed managed release concept is subject to PADEP approval.
- 2. <u>§26-123.C.(6)</u> A soils evaluation of the project site shall be required to determine the suitability of infiltration facilities. All regulated activities are required to perform a detailed soils evaluation by a qualified design professional which at minimum address soil permeability, depth to bedrock, and subgrade stability. The PCSM report notes that infiltration tests were not conducted based on the soil maps. A soils evaluation must still be completed to verify infiltration is not feasible before proposing to use the managed release concept. In addition, test pits shall be completed to determine the depth to restrictive features, such as bedrock or groundwater which could effect the design and construcability of the managed release concept basin.
- 3. §26-125.2 & §22-712.3.B Stormwater runoff peak discharges from all development sites with a drainage area greater than one acre shall be calculated using a generally accepted calculation technique that is based on the NRCS Soil Cover Complex Method. The peak rates provided in the PCSM report were calculated using the Dekalb Rational Method. Based on a disturbance area of 6.35 acres, the peak rates shall be calculated using the SCS method. We defer review of the remaining analysis until the stormwater report is updated to utilize the correct method.
- 4. <u>§26-162.3.D</u> A statement, signed by the facility owner, acknowledging that the stormwater facilities and BMPs are fixtures that can be altered or removed only after approval by the municipality, shall be added to the plan.
- 5. <u>§26-164.1</u> The Applicant shall sign an Operation and Maintenance (O&M) agreement with the municipality covering all stormwater and storm sewer facilities and BMPs that are to be privately owned. The O&M agreement shall be transferred with transfer of ownership and shall be prepared by the Township Solicitor.
- 6. <u>§26-165.2</u> The owner must provide the municipal easements to perform inspections and maintenance for stormwater runoff conveyance, detention, etc. We recommend a blanket easement be provided via a note on the plan and within the O&M Agreement.

 <u>Township Resolution #2022-03</u> – The Applicant will be required to pay a fee for the proposed onsite BMP to provide a financial guarantee for the timely installation, proper construction and continued maintenance by the owner of the subject property. The fee shall be 5% of the total construction cost of the proposed BMP. The Applicant's professional shall submit a cost estimate once the design is finalized.

Considering the extent of the required plan revisions identified in this letter, we may have additional comments upon resubmission by the Applicant and upon review of the final plan requirements. In order to help expedite the review process of the resubmission of the plan, the Applicant shall submit a response letter which addresses each of the above comments. Changes that have been made to the application that are unrelated to the review comments shall also be identified in the response letter.

If you have any questions regarding the above, please contact this office.

Sincerely,

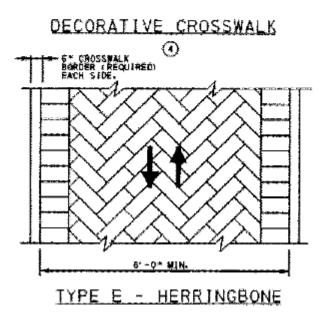
farune Marchand

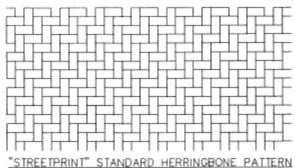
Janene Marchand, P.E., Gilmore & Associates, Inc.

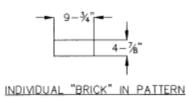
JM/tw/sl

Attachments (Streetprint Crosswalk Detail)

cc: Michael Walsh, Assistant Manager Ryan Gehman, Assistant Planning and Zoning Officer Randy Teschner, Fire Marshall Peter Nelson, Esq., Grim, Biehn & Thatcher Kevin Reilly, County Builders, Inc., Applicant Kellie A. McGowan, Eastburn and Gray Robert T. Cunningham, P.E., Holmes Cunningham, LLC. John Schmidt, CNBTJSA Robert C. Bender, North Wales Water Authority Craig D. Kennard, P.E., C.O.O, Gilmore & Associates, Inc. Damon Drummond, P.E., Gilmore & Associates, Inc. Pedestrian crosswalks in public streets, internal streets, drives, and parking areas shall be distinguished from asphalt driving surfaces through the use of maroon-colored Streetprint asphalt imprinted textured crosswalks, or an appropriate alternative approved by the Board of Supervisors. The use of this distinguishing material is to enhance pedestrian safety and comfort, as well as, the attractiveness of the crosswalks. These crosswalks shall be at least as wide as the sidewalks/walkways to which they connect and shall match the following illustration.







NOTES:

- STREETPRINT PATTERN MAY BE SET INTO PAVEMENT EITHER AT THE TIME SURFACE COURSE IS LAYED AND STILL HOT OR AFTER THE WEARING COURSE HAS BEEN GIVEN TIME TO SET, WHEREBY THE CROSSWALK SECTION WOULD BE REHEATED AND THE PATTERN IMPRINTED INTO THE PAVING. CONTRACTOR SHALL CONSULT WITH STREETPRINT FOR SPECIFIC REQUIREMENTS AND COORDINATE WITH TOWNSHIP ENGINEER FOR INSPECTION PURPOSES.
- 2. EXISTING PAVEMENT AT MANOR DRIVE CROSSINGS ARE TO BE MILLED AND OVERLAYED WITH A NEW WEARING COURSE. STREETPRINT PATTERN WILL BE SET INTO THE NEW OVERLAY COURSE. PLACEMENT OF THE PATTERN MAY BE AT PLACEMENT OF THE WEARING COURSE OR REHEATED AFTER A TIME PERIOD THE NEW WEARING COURSE IS ALLOWED TO SET. THE EXISTING PAVEMENT MAY BE REHEATED AS AN ALTERNATE, PROVIDED THE MANUFACTURER DETERMINES THIS IS FEASIBLE FOR THE EXISTING PAVEMENT CONDITIONS ON MANOR DRIVE.
- 3. STREETPRINT CONTACT: PHONE 1-800-688-5652 WEBSITE: www.streetprint.com
- 4. A STANDARD STREETPRINT COLOR SHALL BE USED FOR THE COLORATION OF THE CROSSWALK. COLOR SAMPLES SHALL BE SUBMITTED TO THE TOWNSHIP ENGINEER FOR APPROVAL.

### "STREETPRINT" ASPHALT IMPRINTED TEXTURED CROSSWALKS

NOT TO SCALE

February 11, 2022



Matthew West, Township Manager New Britain Township 207 Park Avenue Chalfont, PA 18914

#### RE: West Butler Avenue – Preliminary Land Development Plan Review 1 TMP#: 26-005-023 New Britain Township, Bucks County, PA HCE Project No.: 1482

Dear Mr. West:

Enclosed please find a revised plan titled "Record Site Plan" for the above referenced project. We are in receipt of several review letters for this project. The enclosed site plan has been revised to address the many of the comments contained in those letters along with preliminary comments received from PennDOT. Below please find responses to each of the comments contained in those letters.

#### Review Letter from Gilmore & Associates, Inc. dated January 19, 2022.

#### Review Comments

#### A. Stipulated Agreement

The Stipulated Agreement was based on the "Butler Avenue Property Settlement Plan, sheet CP-6", prepared by Holmes Cunningham Engineering, Inc, dated August 1, 2019, last revised, June 24, 2021 ("Settlement Plan"). Per #3 of the Stipulated Agreement, the Settlement Plan shall be deemed compliant with the Zoning Ordinance and the variances granted by the Zoning Hearing Board were confirmed and/or modified generally as follows:

- §27-300.a. To permit more than one principal use and more than one principal structure.
- §27-3005.b.B7 To permit the B7 Apartment Use to be developed on the Property.
- §27-1201. To permit the B7 Apartment Use and the D1 Nursery School/Day-Care Center Use in the C-1 Commercial Zoning District.
- §27-2400.f.2. To permit disturbance of up to 70% of woodlands on the Property with associated planting of replacement trees for disturbance beyond 60%.
- §27-2904.g.5 To permit the paved area adjacent to the proposed buildings to be ten (10) feet from the abutting exterior walls.

We offer the following comments below related to the Stipulated agreement and Settlement Plan where the numbers referenced are as noted within the filed Stipulated Agreement:

1. <u>Stipulated Agreement #5</u> – The Property Owner shall be entitled to land development approval for the residential and commercial development of the Property for the apartment and commercial use(s) upon the filing of a land development plan in substantial conformity with the "Settlement Plan". We note the following deviations from the "Settlement Plan":

a. Building B is shown as 11,500 SF on the Preliminary Plan as compared to the 8,000-SF building on the Settlement Plan. We note that the parking layout has been revised from the Settlement Plan to eliminate 10 spaces along the rear of Building B, as well as 2 spaces along the main access driveway. This results in 19 of the 66 parking spaces required for Building B being provided on the opposite side of the main access driveway.

Response: Complied. Building B has been revised back to an 8,000 square foot footprint which permits 2 stories for a total building area of 16,000 square feet, identical to the Settlement Plan. The parking spaces behind Building B have been added back to the plan.

b. The Stipulation #8 allows for additional commercial uses on the ground floor of the Apartment building, though no commercial uses appear to be proposed in Building A. Although not required, the BCPC recommends the applicant explore some amount of commercial spaces on the ground floor of Building A to create a more characteristic mixed-use-type development.

Response: Complied. The plan has been revised to propose a single-use 600 square foot commercial space in Building A.

c. Based on the Apartment and Medical Office uses proposed, 206 spaces are required. The total number of parking spaces was reduced from 263 on the Settlement Plan to 247 spaces. The layout shall be revised to provide the number of parking spaces as depicted on the Settlement Plan.

Response: Complied. The layout has been revised to provide generally the same amount of parking spaces, with a modification to the layout and associated loss of spaces to provide required ADA handicap parking spaces at the required locations in proximity to Building A and Building B. The reduction is *de minimus* and the plan remains in substantial conformity with the Settlement Plan.

d. The asphalt trail has been adjusted at the rear of the property through the woodlands and around the proposed stormwater facility. **Response: Acknowledged.** 

e. The sidewalk adjacent to the two buildings were shown as 10 feet wide on the Settlement Plan, where now a 5-foot walkway is proposed. However, where parking stalls are proposed adjacent to a sidewalk or walkway, the minimum width of the sidewalk or walkway shall be increased to a minimum width of six feet. (§22-708.2.F)

Response: The plan has been revised to provide the required 6-foot-wide sidewalks in locations adjacent to parking stalls.

2. <u>Stipulated Agreement #9.a.</u> – The plans depict the Butler Avenue Corridor Overlay District (BACOD) fencing as required. A Construction Detail shall be provided in accordance with §22-722.4.D.(7)(a).

Response: Will Comply. The required fencing construction detail will be provided in conformance with the Corridor Overlay requirements.

3. <u>Stipulated Agreement #9.d.</u> – The Property Owner identifies the Public Green at the Butler Avenue frontage. However, SALDO§22-722.4.G requires green spaces to contain shrubs and trees, public benches, and some type of public amenity, such as gardens, sculptures, gazebos, or fountains. While the proposed Public Green provides 9 shade trees (3 Red



Maple, 3 Sugar Maple, and 3 Scarlet Oak per Sheet 18 of 21), shrubs, benches and an amenity shall be provided as approved by the Board of Supervisors (Board).

## Response: Will Comply. Shrubs, benches, and a public amenity in the form of a gazebo for public use will be provided.

4. <u>Stipulated Agreement #10.a.</u> – The plans depict the installation of a 5-foot sidewalk along the frontage of Butler Avenue from the northern and southern property lines of the Property, generally as depicted on the Settlement Plan. The proposed sidewalk along Butler Avenue shall extend through TMP# 26-5-23.2 and connect to the existing sidewalk on TMP# 26-5-23.3 to complete the accessible route in accordance with the Stipulated Agreement including all requisite curb ramps and Streetprint crosswalks in accordance with Township and PennDOT standards.

#### **Response: Will Comply.**

5. Stipulated Agreement #11 – The proposed development shall meet the requirements of the PADEP and New Britain Township Stormwater Management Ordinance, to the satisfaction of the Township Engineer. Comments related to compliance with the Township Stormwater Management Ordinance are provided herein. **Response: Will Comply.** 

6. Stipulated Agreement #12 – The proposed development shall meet the buffer yard requirements of the Zoning Ordinance and Township SALDO. The location of the 45-foot buffer yard shall be shown and labeled on the Record Plan for the medical office, while a 30-foot buffer yard is required for B7 Apartment Buildings. At the discretion of the Board of Supervisors, existing deciduous and coniferous trees larger than 2 inches in caliper and/or 6 feet in height located within a proposed buffer yard may be considered to meet the requirements of this section. The Applicant shall present the existing buffer trees to the Board for approval and it shall be determined if supplemental plantings are required. Every buffer yard shall be permanently protected by the placement of a conservation easement over it running with the land. (§§27-2803.a & e) **Response: Will Comply.** 

7. Stipulated Agreement #13 – The Plans shall note the following granted waivers from the provisions of the New Britain Township SALDO:

a. <u>§22-505</u> – From providing a Community Impact Assessment Report.

b. <u>§22-705.3</u> – From undertaking roadway widening and associated improvements along the Butler Avenue frontage, subject to such improvements as may be required under the jurisdiction of PennDOT.

c.  $\underline{\$22-713.5.B(6)}$  – From providing berm and screen plantings for a B7 Apartment Use, as to the Butler Avenue frontage only.

d. <u>§22-715</u> – From providing park and recreation land.

e. <u>§22-722</u> – From compliance with the Butler Avenue Overlay requirements other than those specifically required under [the Agreement] or as shown on the Settlement Plan.

Response: Will Comply. The plans will be updated to list the granted waivers.

8. Stipulated Agreement #15 – Additional disturbance beyond 60%, up to a maximum of 70% of the woodlands on the Property, shall be permitted, provided that the planting of replacement trees is provided for the additional disturbed area beyond 60%. The Resource Protection Calculations on Sheet 4 of 21 indicate that 31.1% of the woodlands is being protected which equates to 68.9% disturbance. Therefore, 8.9% of woodlands



requires 66 replacement trees based on 0.33 acres at 200 trees per acre. We note that the woodlands disturbance area does not consider trees that were certified as dead by an arborist. In addition, there are individual trees within the front yard that do not appear to be considered woodlands. Finally, the calculation does not include disturbance required for the perimeter asphalt trail as it's noted to be field located to avoid tree disturbance. We recommend a site meeting to determine if the existing, living trees have a continuous canopy and if the trail can be installed without disturbing the woodlands required to be protected.

Response: Will Comply. The 66 replacement trees are shown on the plan. An onsite meeting will be set with the Township Engineer.

9. <u>Stipulated Agreement #15.d.</u> – The individual planting location and the specific species of each replacement tree shall be determined by the Township. The plans propose 34 Shade Trees and 32 Ornamental Trees for a total of 66 trees per Sheet 18 of 21. It shall be clarified which plantings are proposed to satisfy the tree replacement requirement and the Board shall approve the locations and species.

Response: Will Comply. The plans will be updated to show which trees are included as replacement trees.

10. <u>Stipulated Agreement #16</u> – The date of the Settlement Stipulation and conditions #3, #4, #6, #7, #8, #13 and #14 related to variances and waivers granted, approved zoning uses for Buildings A and B, and required fees which supercede the Township code, shall be noted on the plan.

Response: Will Comply. The notes will be added to the plan.

#### B. Zoning Ordinance

We offer the following comments with respect to the New Britain Township Zoning Ordinance:

1. <u>§27-201</u> – The ratio base site area is the area definition used to calculate the impervious and building areas for the site. It shall be clarified that the coverage calculations on Sheet 4 of 21 utilize the Ratio Base Site Area.

#### Response: Will Comply.

2. <u>§27-1202.a</u> – No use in the C-1 Commercial District shall exceed 35 feet in height, however, apartment buildings, Use B7, are permitted to be 40 feet. The proposed building heights and maximum permitted height shall be noted on the Record Plan, Sheet 4. **Response: Will Comply. The notes will be added to the plan.** 

3. <u>§27-1202.b</u> – The front, side and rear yard setback lines shall be dimensioned and labeled on the Record Plan, Sheet 4. We note that apartment buildings have separate setback requirements for the B7 Use.

Response: Will Comply. The dimensions will be added to the plan. The setbacks match the Settlement Plan.

4. <u>\$27-2401.c</u> – For subdivisions and land developments, deed restrictions meeting Township specifications must be placed in the deed for each site that has natural resource protection areas within its boundaries. The restrictions shall provide for the continuance of the resource protection areas. A natural resource easement shall be designated on the plan described by metes and bounds to protect the minimum 30% of existing woodlands to remain and an Agreement prepared by the Township Solicitor.

Response: Will Comply.



5. The Traffic Impact Assessment (TIA) states that there will be some increase in peak hour traffic delay due to the proposed uses, however, there will be no anticipated changes in levels of service to the noted intersections, with the exception of one Level of Service drop for Highland Drive. We offer the following comments related to the TIA:

a. §27-2501.a.1. – The TIA shall include the number of floors and a comprehensive description of the proposed Apartment building to verify that the correct land use was applied for the trip generation calculations.

## Response: The TIA will be updated to show the number of floors. The TIA used the correct land use for a 3-story apartment building.

b. §27-2501.a.6. – All roadways and/or intersections showing a level of service below C shall be considered deficient, and specific recommendations for the elimination of these problems shall be listed. This listing of recommended improvements shall include, but not be limited to, the following elements: internal circulation design, site access location and design, external roadway and intersection design and improvements and widenings, traffic signal installation and operation including signal timing, transit design improvements, and reduced intensities of use. All physical roadway improvements shall be shown in sketches. The recommended improvements for both roadways and transit shall include, for each improvement, the party responsible for the improvement, the cost and funding of the improvement and the completion date for the improvement.

Response: Reference is made to Table 4 of the TIA. No roadway and/or intersection in the study area is currently operating at or will operate in the future at a level of service below C. Furthermore, based on the operation of the signalized intersection and the application of warrants to unsignalized intersections, this ordinance provision is obsolete. Finally, as noted in the comment letter, there will be no anticipated changes in levels of service to the noted intersections, with the exception of one Level of Service drop for Butler Avenue at Schoolhouse Road (instead of Highland Drive). The northbound left turn lane is projected to drop from LOS B to C during the afternoon peak hour. Accordingly, no improvements are recommended due to any roadways and/or intersections showing a level of service below C.

c. The TIA indicates turning lanes are warranted at the access driveway and two left-hand turning lanes are shown on the plans at the proposed entrance. A separate right deceleration lane is not noted to be warranted. In addition, the TIA indicates a two-way center left turn lane should be extended to the north and south of the "Low Volume Driveway". Given the other left-turn lanes in the vicinity, a center-turn lane should be considered and discussed with PennDOT from Schoolhouse Road to north of Cedar Hill Road. The HOP Plan shall be provided showing the extent of the proposed improvements as required by PennDOT, once determined.

Response: Will Comply. The center-turn lane is proposed from Schoolhouse Road to Cedar Hill Road.

d. We recommend the Applicant coordinate with Bucks County Transport regarding a designated Doylestown DART bus service stop at this development.

Response: Complied. The applicant has met with Bucks County Transport and a designated Doylestown DART bus stop is proposed on-site.



e. A Signage and Pavement Marking Plan along Butler Avenue indicating the calculated, proposed lane shift and taper lengths shall be provided. This may be deferred to the HOP phase, however, the proposed northbound striping approaching the access will need to be addressed.

Response: Will Comply. HOP plans are in progress and will be submitted to New Britain Township when submitted to PennDOT. A three-lane cross section is proposed from Schoolhouse Road to Cedar Hill Road so there won't be any lane shifts/tapers for through traffic in the area of the improvement.

6. <u>§27-2600</u> – The location and details of any proposed signs for the medical office and apartment building shall be reviewed and approved by the Zoning Officer. **Response:** Acknowledged.

7. <u>§27-2901</u> – The Zoning Table shall be revised to list the number of required spaces for each use under the Required/Permitted column and the number of spaces proposed under the Proposed column.

#### Response: Will Comply.

8. <u>§27-2904.d.3</u> – Access driveways shall have a 6% maximum grade, except that the initial 20 feet from the edge of the cartway of a public street shall be a maximum of 3% grade. Based on the curb elevations on Sheet 7, it appears the initial 20 feet from the cartway may exceed 3%, while the remainder of the driveway has a slope of approximately 6.7 to 7.5%. The driveway grading shall be verified to clearly meet the minimum required driveway slopes.

Response: Will Comply. The grading requirements will be met.

#### C. Subdivision and Land Development Ordinance

1. §22-502.1.A.(3) – The property metes and bounds should be shown with a darker text for visibility on the Record Plan. In addition, the title line, legal and ultimate right-of-way lines, shall be clearly labeled on the Record Plan, as well as, the metes and bounds. **Response: Will Comply.** 

2. <u>§22-502.1.A.(4)</u> – Legal descriptions shall be submitted for the ultimate right-of-way to be dedicated to the Township (via easement), legal right-of-way to be dedicated to PennDOT, all defined easements such as bike trail and clear sight triangle easements, deed-restricted areas, such as open space or conservation easements, buffer yards, access easements, and offsite temporary construction easements. The plan shall include bearings and distances as necessary so the legal descriptions can be reviewed against the plan. **Response: Will Comply.** 

3. <u>§22-502.1.B</u> – A copy of the deed for the subject tract shall be submitted. **Response: Will Comply.** 

4. <u>§22-502.1.B.(8)</u> – The zoning classifications of the surrounding properties shall be noted on the Record Plan.

#### Response: Will Comply.

5. <u>§22-502.1.B.(16)</u> – Architectural sketches are encouraged to be submitted showing elevation, perspective, building materials and colors. We recommend the Applicant present renderings for the Board's review demonstrating architectural consistency between the



materials, designs and styles used for the buildings, retaining walls, masonry peirs/fencing, trash screens, etc.

## Response: Will Comply. Architectural consistency is proposed throughout the project.

6. §22-502.1.B.(20) – Plan notations regarding offers of dedication of public rights-of-way and improvements and plan notations for ownership and maintenance responsibilities of open space, public green, protected natural resources easements, stormwater management facilities, utilities, etc. shall be provided. The Record Plan shall include notations specifying the area between the title line and the legal to be dedicated to PennDOT and the area between the Legal and Ultimate right-of-way lines are to be dedicated to the Township.

#### Response: Will Comply.

7. §22-502.1.B.(21) – The recording certification shall be provided on the Record Plan for the Professional land surveyor.

#### Response: Will Comply.

8. §22-502.1.D.(10) – Contour lines measured at vertical intervals of two feet, as determined by an on-site field survey, not interpretation of United States Geologic Service (USGS) Maps, are required for the area within 100 feet of the tract. The plans shall indicate the benchmark elevation and the location and shall be based on the Chalfont-New Britain Township Joint Sewage Authority vertical datum. Additional topography shall be provided downstream of the level spreader, and as needed for any required emergency access or offsite improvements.

#### Response: Will Comply.

9. §22-502.1.I.(3) – Utility crossings for the water, sanitary sewer and storm pipe shall be shown on the profiles to verify adequate clearance between utility lines. Concrete encasements shall be provided as necessary.

#### Response: Will Comply.

10. \$22-502.1.1.(4) - A centerline profile for the proposed access driveway shall be provided to the street intersection, showing elevations at ten-foot intervals, slope, ultimate right-way line and curb line and edge of pavement.

#### Response: Will Comply.

11. §22-502.1.J.(1) – The following comments related to the construction details shall be addressed:

a. The Trash Enclosure Detail shows the installation of the perimeter fence outside of the concrete pad. This would conflict with the adjacent parking spaces and curb. The detail shall be revised to clarify how the enclosure should be constructed in the proposed locations.

#### Response: Will Comply.

b. A detail shall be provided for the trash enclosure bollards, as applicable. **Response: Will Comply.** 

c. The plan includes a detail for a Vinyl Chain Link Fence. The plan shall clarify where this fence is proposed.

Response: The plan will be clarified to show that the black vinyl chain link fence with privacy slats is for the trash enclosure.



12. §22-704.2.A – Easements for single utility lines shall be a minimum of 20 feet. The Utility Plan shows the proposed sanitary sewer connection crossing through TMP# 26-5-23.2 to the existing manhole. In addition, the water line extends through TMP# 26-5-24 where it connects at an existing valve that appears to be within the Butler Avenue ultimate right-of-way. Both of these utility connections are between the legal and ultimate right-of-way for these adjacent properties. The Developer shall determine if the ultimate rights-of-way has been accepted for dedication or if easements will be required for the installation of these utilities across the adjacent properties.

Response: Will Comply.

13. §22-705. – The Applicant shall obtain a Highway Occupancy Permit (HOP) from PennDOT, for the access to Butler Avenue (SR4202). The Applicant shall copy the Township on all correspondence with PennDOT and extend an invitation to the Township for all meetings. Additionally, to facilitate the Township review of the HOP submission, the Applicant shall include Gilmore & Associates as an "Engineering Firm" on the permit application within the PennDOT ePermitting System. Though the Applicant received a waiver from road improvements, subject to PennDOT's requirements, our office may have additional comments related to the HOP Plans once submitted. We recommend that a condition be placed on any Township Plan Approvals, that once approved, any significant changes to the plan as required by PennDOT or other outside agency be presented to the Board of Supervisors prior to construction.

Response: Will Comply. PennDOT has reviewed the conceptual submission and the applicant has forwarded PennDOT's comments to the Township Engineer. All of PennDOT's comments are "Will Comply".

14. §22-705.5.C &13.H – A fifty-foot clear sight triangle must be provided for all driveways, measured from the point of intersection of the street right-of-way line and edge of the driveway. The site plan shall contain a notation that states that the applicant is required to maintain the area of the clear sight triangle and the Township has the right to enter and perform required maintenance in the area if deemed critical to public welfare pursuant to a Declaration of Covenants, Restrictions, and Conditions approved by the Board.

#### Response: Will Comply.

15. §22-705.6 – Minimum sight distances for stopping, passing and intersections shall comply with PennDOT standards. The required and available sight distance lines and measurements shall be shown on the plans. **Response: Will Comply.** 

16. §22-705.15.D. & §22-722 7.F.(3) – Proposed crosswalks shall have the brick red thermoplastic street imprinted with the herringbone pattern and a six-inch white line on either side. See attached details. Crosswalks on the adjacent properties shall be provided as well.

#### Response: Will Comply.

17. §22-706.2.C. – Sidewalks shall be located within a public right-of-way, public easement or common open space area. An easement should be provided for the entirety of the 5-foot-wide asphalt path through the site. In addition, easements shall be provided for the proposed public sidewalk on the adjacent properties unless it can be confirmed that the sidewalks are proposed within the public right-of-way or existing easement.



#### Response: Will Comply.

18. §22-706.3.B – All curbs and sidewalks shall provide access in accordance with accessibility guidelines. The PennDOT Curb Ramp detail provided on Sheet 5 does not appear to be applicable. The Detailed Grading Plan of the crosswalks and accessible ramps shall include additional spot elevations for the sidewalk showing a maximum 2% slope at all landing and turning areas.

#### Response: Will Comply.

19. §22-706.3.G – The extent of the detectable warning surface shall also be shown. A note specifying all curb ramps shall be provided with "brick red" detectable warning surfaces or other approved contrasting color shall be added to the detail. **Response: Will Comply.** 

20.  $\S$ 22-707.B.(4) – The maximum center-line grade for pedestrian walkways and recreational trails shall not exceed 8%. Based on the proposed contours, it appears the asphalt trail exceeds an 8% slope where it enters and exits the woodlands area. The grading of the trail shall be revised to 8% or less.

#### Response: Will Comply. Slope will be revised to be 8% maximum.

21.  $\$22-707.C - The Asphalt Trail detail on Sheet 5 shall be revised to specify 2 <math>\frac{1}{2}$  inches of 9.5mm Superpave wearing course. **Response: Will Comply.** 

22. §22-708.6.B – The grade of parking areas shall be a maximum of 5% and a minimum of 1%. The parking area behind Building B and a portion of the center aisle behind Building A have slopes which exceed 5%. The parking lot grading shall be revised as necessary to meet this requirement.

# Response: Will Comply. The parking lot grades will be revised to provide a 5% maximum grade.

23. §22-708.6.H – Stop signs and stop bars shall be provided as necessary throughout the parking area where crosswalks are proposed and at the end of parking aisles where they intersect the main access drive. In addition, the location of all accessible parking signs shall be shown on the Record Plan.

#### Response: Will Comply.

§22-710.2 & 3 - All comments from the Fire Marshal's review dated January 11, 2022 shall be addressed related to fire lanes, emergency site and building access, water service, etc. Adequate access shall be provided to the Fire Marshal's satisfaction.
 Response: The entirety of the Fire Marshal's review letter is "Will Comply".

25. §22-711 – The following comments related to the grading design/plan shall be addressed:

- a. Detailed grading shall be provided for the proposed driveway crossings on the adjacent properties to demonstrate accessibility. **Response: Will Comply.**
- b. Additional spot elevations shall be provided along the driveway around the eastern corner on Building A to clarify the high point grade break.



#### Response: Will Comply.

- c. Spot elevations shall be provided at the corners of the rear parking lot along the NW curbline.
   Response: Will Comply.
- d. An additional spot elevation shall be provided at the southern corner of the parking area between Buildings A and B. **Response: Will Comply.**
- e. The TC/BC spot elevation of 393.85 at the southern corner of Building A indicates a depressed curb and appears to be incorrect. This spot elevation shall be revised as necessary.
   Response: Will Comply.
- f. The inlet locations shall be provided on the Grading Plan to verify the proposed slopes to the inlets.
   Response: Will Comply.
- 26. §22-711.2 The following comments related to erosion controls shall be addressed:

a. Prior to the installation of the parking lot curb, sediment from disturbance on the northeastern half of the site will bypass the sediment basin and runoff to the rear of the site. Measures shall be provided where necessary to direct the sediment runoff towards the sediment trap until the curb is constructed. **Response: Will Comply.** 

- b. Additional silt sock shall be provided at the following locations:
  - On the downslope side of the northern retaining wall to prevent sediment runoff onto the adjacent property.
     Response: Will Comply.
  - Along the southern property line where grading for the proposed asphalt trail will result in sediment runoff onto the adjacent property.
     Response: Will Comply.
  - Downslope of the disturbance between the parking lot and the asphalt trail to protect the area of woodlands to remain.
     Response: Will Comply.
  - Downslope of the disturbance from the sidewalk installation on the adjacent properties.
     Response: Will Comply.

c. Erosion control matting shall be provided for the 3:1 slopes on the low end of the northern retaining wall.

#### Response: Will Comply.

d. The type of erosion control matting on the downslope side of the level spreader shall be specified.



#### Response: Will Comply.

27. §22-711.4.A – Retaining wall specifications, calculations and design details shall be approved by the Township Engineer prior to final plan approval by the Township. Design plans, specifications and details, signed and sealed by a licensed professional engineer, shall be provided. Wall style, finish and color shall be coordinated with proposed building architecture. In addition, the asphalt walkway is directly adjacent to the retaining wall along the southern side of the site. Fall protection fence or railing is required to be installed where there is a 30-inch or greater vertical change. A detail shall be provided for any required fence while ensuring the minimum walkway width is maintained.

Response: Will Comply to the satisfaction of the Township Engineer.

28. §22-711.4.C – The top or bottom edge of slopes shall be a minimum of 5 feet from property lines in order to permit normal rounding of the edge without encroaching onto the abutting property. The proposed grading and retaining wall construction will require disturbance within 5 feet of the adjacent properties. Further, improvements are required along Butler Avenue on adjacent properties. The grading shall be revised, however, if a waiver is granted, the Developer shall obtain temporary construction easements as necessary to allow access for the proposed grading and improvements.

## Response: A waiver is requested from this requirement as the proposed curb lines are shown in the same proximity to the property lines as the approved Settlement Plan.

29. §§22-712.2.B & F – The Applicant shall install stormwater management facilities, on- and offsite, as necessary to convey stormwater runoff along or through the property to a natural outfall, such as a watercourse, drainage swale, storm sewer, or other drainage facilities. If an applicant concentrates or redirects stormwater runoff to discharge at another location on the property, the applicant is responsible for constructing an adequate channel or storm sewer system on downstream properties until a natural outfall is reached. A natural outfall shall have sufficient capacity to receive stormwater without deterioration of the facility and without adversely affecting property in the watershed. Though a level spreader is proposed, there has been a history of drainage complaints in the area. Additional information shall be provided to demonstrate the downstream properties receiving stormwater runoff from the site are not adversely impacted. **Response: Will Comply.** 

30. §22-712.3.G – The calculations for the 10 minute time of concentration used for Proposed PR1 shall be provided in the PCSM Plan Narrative. We note that the time of concentration path for Proposed PR1 shown on the Post Development Drainage Area Map does not appear consistent with the proposed storm sewer layout. **Response: Will Comply.** 

31. §22-712.4.G – All basin outlet pipes shall be watertight reinforced concrete having "O-Ring" joints. The plan shall specify O-ring RCP for the pipe between the basin outlet structure and the level spreader.

#### Response: Will Comply.

32. §22-712.4.H – The spillway elevation on the Basin Spillway Detail on Sheet 17 shall be coordinated with the spot elevations shown on the plans and report. **Response: Will Comply.** 

33. §22-712.4.L – The inlet grate shall only be used as an emergency outflow and the grate elevation shall be equal to or higher than the one-hundred-year water surface elevation, but at



least six inches below the emergency spillway elevation. The outlet structure grate elevation of 384.42 is lower than the 100-year water elevation of 384.66. The outlet structure shall be revised to provide a grate elevation equal to or higher than the 100-year water surface elevation. **Response: Will Comply.** 

34. §22-712.4.N – Detention basins shall be installed before the construction of any buildings or site improvements, unless otherwise approved by the Board and the Bucks County Conservation District. A preliminary basin as-built plan must be submitted and approved by the Township Engineer prior to beginning any building construction to confirm that the constructed volumes are in accordance with the design plans. A note requiring this shall be included on the record plan and in the sequence of construction.

#### Response: Will Comply.

35. §§22-712.6 & 8 – The following comments related to the storm structures shall be addressed:

a. The inverts of the roof drain connections should be included for the inlet construction.

Response: Will Comply.

b. The plan and profiles shall specify the type of inlet and inlet top. **Response: Will Comply.** 

c. Cleanouts shall be provided for the basin underdrain and the level spreader distribution pipe.

#### Response: Will Comply.

36. §§22-712.6.E & 712.12 – At least one inlet shall be required at the curb tangent on the upstream side of all access drive intersections with public roadways. A culvert or storm sewer shall be provided for all access drives.

#### Response: Will Comply.

37. §22-712.8.B – A Type "DW" endwall shall be provided at the termination of all storm sewer systems. DW endwalls shall be provided at the outlet pipes into the basin. **Response: Will Comply.** 

38. §22-712.13.C.(1) – The BMP Maintenance Plan on Sheet 17 shall be revised as necessary to clarify the ownership and maintenance responsibilities of the stormwater management facilities and storm sewer conveyance system.

Response: Will Comply. Butler Pike Properties, LP and successors will handle all ownership and maintenance responsibilities.

39. §22-712.13.D. – A fee is required to maintain the stormwater management facilities located within public right-of-way or any easement owned by the Township. **Response: Acknowledged.** 

40. §22-713. – The following issues related to the Landscape Plan should be addressed:

a. There are multiple locations where proposed plantings are in close proximity to underground utilities. We recommend a minimum distance of 10 feet be provided between proposed plantings and utilities.

Response: Will Comply to the satisfaction of the Township Engineer.



b. The Plant Schedule provided on Sheet 18 of 21 Landscape Plan indicates a quantity of 90 Scallywag Holly, whereas the plan shows 97. The plan and schedule shall be coordinated.

#### Response: Will Comply.

c. The Golden Rain Tree species shall be replaced with an alternate species due to this being on the DCNR invasive plant "Watch" list. **Response: Will Comply.** 

41. §22-713.3.D. – The placement of light standards shall be coordinated with the landscape plan to avoid conflicts. We recommend a minimum distance of 10 feet be provided between proposed plantings and light fixtures. For instance, it appears that a proposed tree in the Public Green area is in close proximity to a proposed light fixture.

Response: Will Comply to the satisfaction of the Township Engineer.

- 42. §22-713.5.B.(1) One deciduous or evergreen shrub shall be planted every five feet along the perimeter of the parking area. We note that 16 shrubs are required along the southern property boundary and 16 shrubs are provided, whereas the proposed spacing does not provide an effective buffer due to a 20-foot gap in the plantings. Shrubs shall be placed five feet on center in a continuous hedge.
  Response: Will Comply.
- 43. §22-713.5.B.(2) This section requires, at a minimum, a 6-foot wooden shadow-box fence with a staggered row of evergreen trees be provided at 10-foot spacings to screen from trash areas. We note that the Trash Enclosure Detail provided on Sheet 5 of 21 Site Construction Details indicates that a board on board fence OR a black vinyl chain link fence with privacy slats will be utilized. The proposed screening shall be provided in accordance with the Ordinance and clarified and detailed on Sheet 5 of 21, Site Construction Details.

Response: A black vinyl chain link fence with privacy slats will be utilized for the trash enclosures and the applicant Will Comply with the required screening plantings.

44. §§22-714.2 & 7 – Pedestrian scaled lighting shall be positioned along on-site walks and trails such that lighting levels along them maintain a consistent 0.2 footcandle. No lighting is proposed along the front of Building B, within the public green, and the associated walkway is not adequately illuminated. Lighting shall be provided for the areas and walkways open to the general public and multifamily residents.

Response: Will Comply except for the walking trail through the woodlands and around the stormwater basin as this is a nuisance to neighbors and that portion of the walking trail is not open to the public after dark.

- 45. §22-714.4.B. Light standards shall be a maximum of 20 feet in height, and have a concrete base raised 30 inches above finished grade. The Light Pole Foundation Detail on Sheet 20 notes that the foundation for fixture 'B' extends 30 inches above finished pavement. This shall also be specified for fixture 'A' which is directly behind the curb and could be damaged by vehicles pulling into the adjacent parking spaces. **Response: Will Comply.**
- 46. §22-714.4.C. Light standards shall be located in planting islands or planting strips within parking areas, not installed directly on the parking area surface. Several of the light standards at the rear of Buildings A and B are located directly on the parking surface and shall be relocated.



#### Response: Will Comply to the satisfaction of the Township Engineer.

- 47. §22-714.7. The Statistics chart provided on Sheet 19 of 21 Lighting Plan indicates a Max/Min ratio of 21.5:1 and a Avg/Min ratio of 7.5:1 for the Main Parking Area. Current IES guidelines recommend a Max/Min ratio no greater than 20:1 and the Township of New Britain Subdivision and Land Development Ordinance specifies a Avg/Min ratio no greater than 4:1. Lighting shall be revised to comply with current recommended guidelines and Ordinance. Response: Will Comply.
- §22-716.2.C. Concrete monuments shall be shown on the Record Plan at the intersections of the Ultimate right-of-way with the property lines and at any changes in direction.
   Response: Will Comply.
- 49. §22-718 Correspondence shall be submitted from North Wales Water Authority indicating that they have adequate water supply to service the proposed apartment building and medical office. In addition, approval and service agreements shall be provided for the proposed connections. **Response: Will comply. Applicant has submitted to NWWA.**
- 50. §22-720 We note that a Sewage Planning Module Application Mailer has been submitted. Unless DEP indicates a full Planning Module is not required, a completed PADEP Sewage Facilities Planning Module shall accompany the subsequent preliminary plan application. Prior to submitting the planning module to the Township for approval, the planning module shall have been executed by the applicant, responsible engineer, CNBJSA, Department of Health and Bucks County Planning Commission. A Sewage Facilities Planning Module shall be approved by the Township, Authority, and PADEP prior to final plan approval by the Township. A copy of the "Will-Serve" letter and approved sewer agreement, shall be submitted to the Township and our office prior to plan recording.

Response: Will Comply. A full Sewage Planning Module is not required.

51. §22-905.1.A - The Applicant is responsible for any other required reviews, approvals, permits, etc. (i.e., BCPC, BCCD, PADEP, PennDOT, CNBJSA, Fire Marshal, North Wales Water Authority, Aqua, Township Road Opening Permit, etc.) as applicable. **Response: Acknowledged.** 

#### D. <u>Stormwater Management Ordinance</u>

The design uses the Managed Release Concept (MRC) for the stormwater facility which impounds the 1.2-inch/2-hour storm for vegetation, filters the runoff through a soil media, infiltrates into undisturbed soils to the extent possible, with stormwater released through an underdrain.

1. <u>§26-123.2</u> – The proposed design utilizes the MRC developed by PADEP to meet the volume control requirement which is permitted for situations where infiltration is infeasible. We note that the proposed managed release concept is subject to PADEP approval.

#### Response: Acknowledged.

2. <u>§26-123.C.(6)</u> – A soils evaluation of the project site shall be required to determine the suitability of infiltration facilities. All regulated activities are required to perform a detailed soils evaluation by a qualified design professional which at minimum address soil permeability, depth to bedrock, and subgrade stability. The PCSM report notes that infiltration tests were not conducted based on the soil maps. A soils evaluation must still be completed to verify infiltration is not feasible before proposing to use the managed release concept. In addition, test pits shall be completed to determine the depth to



restrictive features, such as bedrock or groundwater which could affect the design and constructability of the managed release concept basin.

## Response: Infiltration Testing has been completed and the Infiltration Testing Report will be submitted to the Township.

3. <u>§26-125.2 & §22-712.3.B</u> – Stormwater runoff peak discharges from all development sites with a drainage area greater than one acre shall be calculated using a generally accepted calculation technique that is based on the NRCS Soil Cover Complex Method. The peak rates provided in the PCSM report were calculated using the Dekalb Rational Method. Based on a disturbance area of 6.35 acres, the peak rates shall be calculated using the SCS method. We defer review of the remaining analysis until the stormwater report is updated to utilize the correct method. **Response: Will Comply.** 

# 4. <u>\$26-162.3.D</u> – A statement, signed by the facility owner, acknowledging that the stormwater facilities and BMPs are fixtures that can be altered or removed only after approval by the municipality, shall be added to the plan. **Response: Will Comply.**

5.  $\underline{\$26-164.1}$  – The Applicant shall sign an Operation and Maintenance (O&M) agreement with the municipality covering all stormwater and storm sewer facilities and BMPs that are to be privately owned. The O&M agreement shall be transferred with transfer of ownership and shall be prepared by the Township Solicitor. **Response: Will Comply.** 

6. <u>§26-165.2</u> – The owner must provide the municipal easements to perform inspections and maintenance for stormwater runoff conveyance, detention, etc. We recommend a blanket easement be provided via a note on the plan and within the O&M Agreement.

#### Response: Will Comply.

7. <u>Township Resolution #2022-03</u> – The Applicant will be required to pay a fee for the proposed onsite BMP to provide a financial guarantee for the timely installation, proper construction and continued maintenance by the owner of the subject property. The fee shall be 5% of the total construction cost of the proposed BMP. The Applicant's professional shall submit a cost estimate once the design is finalized. **Response: Acknowledged.** 

#### Review Letter from New Britain Fire Marshal dated January 11, 2022.

1. A second Entrance needs to be added. This could be an emergency access located on the east end of proposed by Spatolas Pizza.

## Response: An emergency access has been added to the east end of the site in proximity to Spatolas Restaurant.

- 2. There should be three fire hydrants added to plans (see map)
  - a. One west side of main drive
  - b. One west side of second entrance
  - c. One in rear of large building located on island main entrance drive

Response: Will Comply.



3. The water line on west butler should be 12 inches. **Response: Will Comply.** 

4. Show all water services to building. **Response: Will Comply.** 

5. Supply a plan showing that ladder truck can make turns in the parking lot around the building.

Response: The Truck Turning Plan is provided as the last sheet in the plan set.

If you have any questions or require additional information, please do not hesitate to contact us at 215-586-3330 or rob@hcengineering.net

Very truly yours, Holmes Cunningham Engineering

Rob Cunningham, Partner

Cc: Peter Nelson, Esq – Township Solidictor Kellie McGowan, Esq. – Obermeyer Gilmore and Associates Butler Pike Properties LP

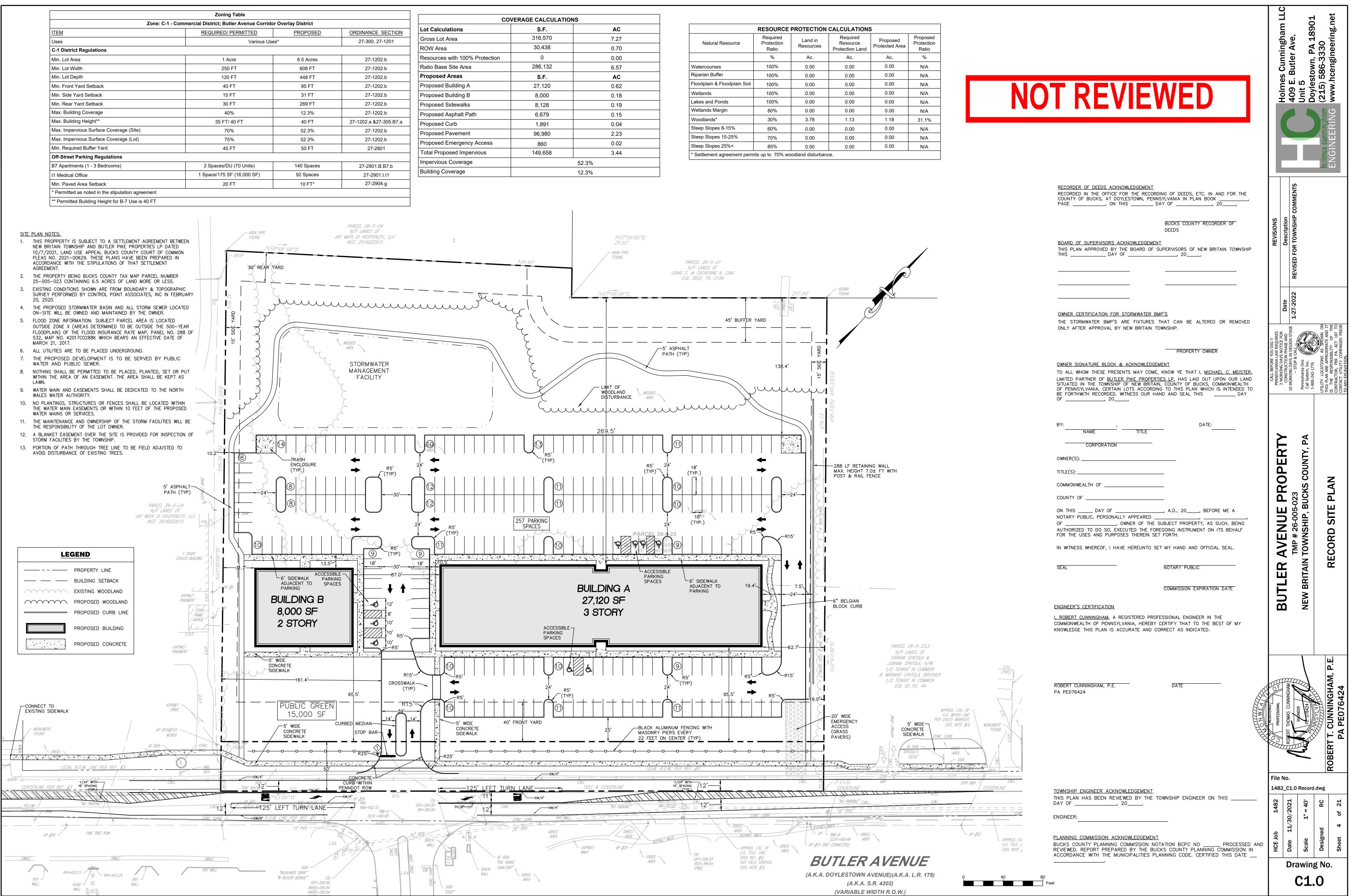
O:\1482 - CB Butler Avenue\Outbound\Twp Response Letter 2022-02-11.docx



Zoning Table				COVERAGE CALCULATIONS		
Zone: C-1 - Commercial District; Butler Avenue Corridor Overlay District			Lot Calculations	S.F.		
TEM	REQUIRED/ PERMITTED	PROPOSED	ORDINANCE SECTION			AC
Jses	Various Uses	<b>*</b>	27-300, 27-1201	Gross Lot Area	316,570	7.27
C-1 District Regulations				ROW Area	30,438	0.70
/in. Lot Area	1 Acre	6.5 Acres	27-1202.b	Resources with 100% Protection	0	0.00
/in. Lot Width	250 FT	608 FT	27-1202.b	Ratio Base Site Area	286,132	6.57
/in. Lot Depth	120 FT	448 FT	27-1202.b	Proposed Areas	S.F.	AC
/in. Front Yard Setback	40 FT	95 FT	27-1202.b	Proposed Building A	27,120	0.62
/in. Side Yard Setback	15 FT	31 FT	27-1202.b	Proposed Building B	8,000	0.18
<i>I</i> in. Rear Yard Setback	30 FT	269 FT	27-1202.b	Proposed Sidewalks	8,128	0.19
/ax. Building Coverage	40%	12.3%	27-1202.b	Proposed Asphalt Path	6,679	0.15
/ax. Building Height**	35 FT/ 40 FT	40 FT	27-1202.a &27-305.B7.a	Proposed Curb	1,891	0.04
Iax. Impervious Surface Coverage (Site)	70%	52.3%	27-1202.b	Proposed Pavement	96,980	2.23
/ax. Impervious Surface Coverage (Lot)	75%	52.3%	27-1202.b	Proposed Emergency Access	860	0.02
/in. Required Buffer Yard	45 FT	50 FT	27-2801	Total Proposed Impervious	149,658	3.44
Off-Street Parking Regulations				· · ·	149,000	
37 Apartments (1 - 3 Bedrooms)	2 Spaces/DU (70 Units)	140 Spaces	27-2901.B.B7.b	Impervious Coverage	52.3%	
1 Medical Office	1 Space/175 SF (16,000 SF)	92 Spaces	27-2901.I.I1	Building Coverage		12.3%
/in. Paved Area Setback	20 FT	10 FT*	27-2904.g			

- NEW BRITAIN TOWNSHIP AND BUTLER PIKE PROPERTIES LP DATED 10/7/2021, LAND USE APPEAL BUCKS COUNTY COURT OF COMMON PLEAS NO. 2021-00629. THESE PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH THE STIPULATIONS OF THAT SETTLEMENT AGREEMENT.

- 532, MAP NO. 42017C0288K WHICH BEARS AN EFFECTIVE DATE OF MARCH 21, 2017.
- WATER AND PUBLIC SEWER.



RESOURCE PROTECTION	
RESOURCE FROTECTION	CALCULATIONS

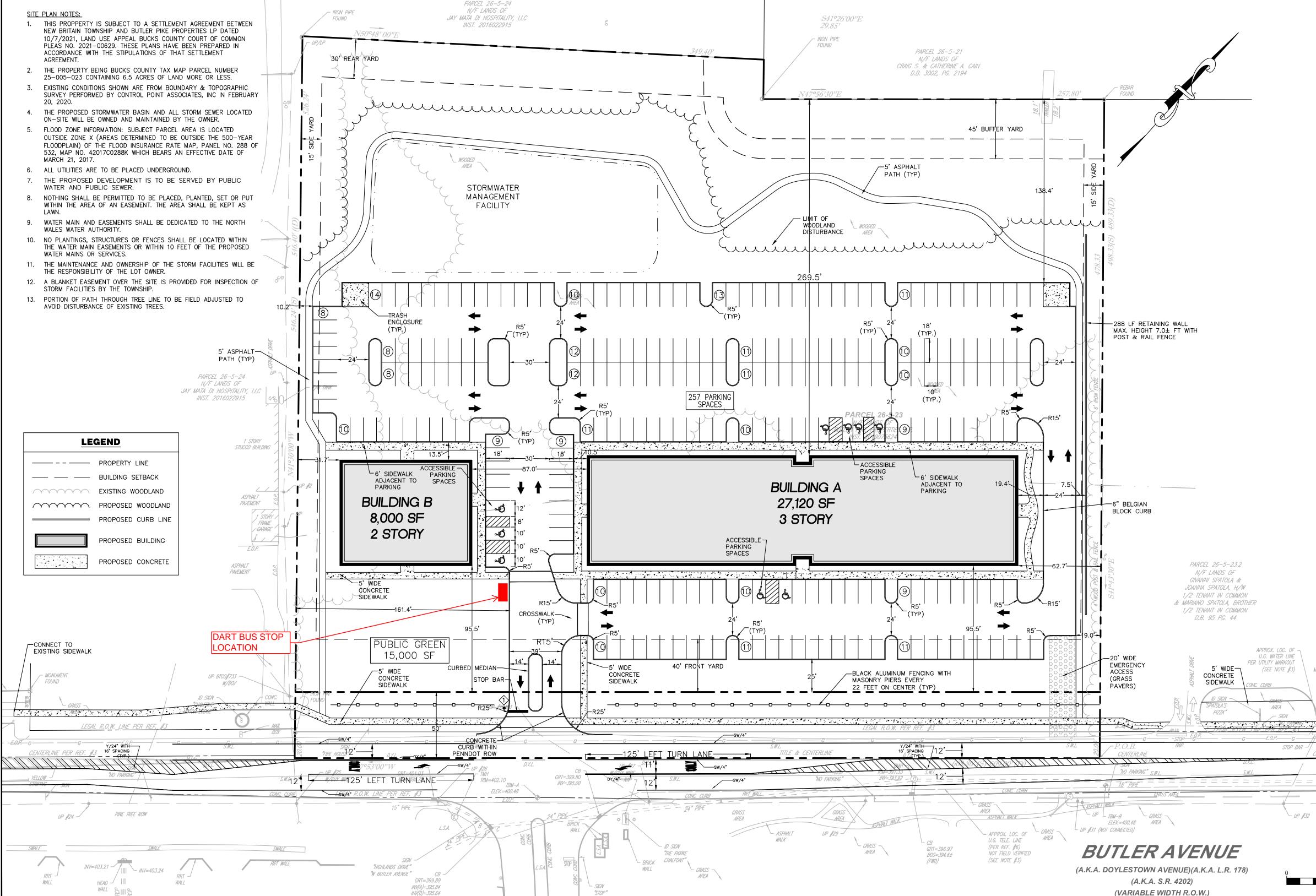
RESOURCE PROTECTION CALCULATIONS					
Natural Resource	Required Protection Ratio	Land in Resources	Required Resource Protection Land	Proposed Protected Area	Proposed Protection Ratio
	%	Ac.	Ac.	Ac.	%
Watercourses	100%	0.00	0.00	0.00	N/A
Riparian Buffer	100%	0.00	0.00	0.00	N/A
Floodplain & Floodplain Soil	100%	0.00	0.00	0.00	N/A
Wetlands	100%	0.00	0.00	0.00	N/A
Lakes and Ponds	100%	0.00	0.00	0.00	N/A
Wetlands Margin	80%	0.00	0.00	0.00	N/A
Woodlands*	30%	3.78	1.13	1.18	31.1%
Steep Slopes 8-15%	60%	0.00	0.00	0.00	N/A
Steep Slopes 15-25%	70%	0.00	0.00	0.00	N/A
Steep Slopes 25%+	85%	0.00	0.00	0.00	N/A
* Settlement agreement perm	nits up to 70% wo	odland disturband	ce.		

Zoning Table Zone: C-1 - Commercial District; Butler Avenue Corridor Overlay District				COVERAGE CALCULATIONS		
	Lot Calculations	S.F.	AC			
TEM	REQUIRED/ PERMITTED	PROPOSED	ORDINANCE SECTION	Gross Lot Area	316,570	7.27
Jses	Various Uses	5*	27-300, 27-1201		,	
C-1 District Regulations				ROW Area	30,438	0.70
<i>I</i> in. Lot Area	1 Acre	6.5 Acres	27-1202.b	Resources with 100% Protection	0	0.00
/in. Lot Width	250 FT	608 FT	27-1202.b	Ratio Base Site Area	286,132	6.57
/in. Lot Depth	120 FT	448 FT	27-1202.b	Proposed Areas	S.F.	AC
/in. Front Yard Setback	40 FT	95 FT	27-1202.b	Proposed Building A	27,120	0.62
/in. Side Yard Setback	15 FT	31 FT	27-1202.b	Proposed Building B	8,000	0.18
/lin. Rear Yard Setback	30 FT	269 FT	27-1202.b	Proposed Sidewalks	8,128	0.19
/ax. Building Coverage	40%	12.3%	27-1202.b	Proposed Asphalt Path	6,679	0.15
/ax. Building Height**	35 FT/ 40 FT	40 FT	27-1202.a &27-305.B7.a	Proposed Curb	1,891	0.04
Iax. Impervious Surface Coverage (Site)	70%	52.3%	27-1202.b	Proposed Pavement	96,980	2.23
/ax. Impervious Surface Coverage (Lot)	75%	52.3%	27-1202.b	Proposed Emergency Access	860	0.02
/in. Required Buffer Yard	45 FT	50 FT	27-2801	Total Proposed Impervious	149,658	3.44
Off-Street Parking Regulations					149,000	
37 Apartments (1 - 3 Bedrooms)	2 Spaces/DU (70 Units)	140 Spaces	27-2901.B.B7.b	Impervious Coverage	52.3%	
1 Medical Office	1 Space/175 SF (16,000 SF)	92 Spaces	27-2901.I.I1	Building Coverage		12.3%
/in. Paved Area Setback	20 FT	10 FT*	27-2904.g			

NEW BRITAIN TOWNSHIP AND BUTLER PIKE PROPERTIES LP DATED 10/7/2021, LAND USE APPEAL BUCKS COUNTY COURT OF COMMON PLEAS NO. 2021-00629. THESE PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH THE STIPULATIONS OF THAT SETTLEMENT AGREEMENT.

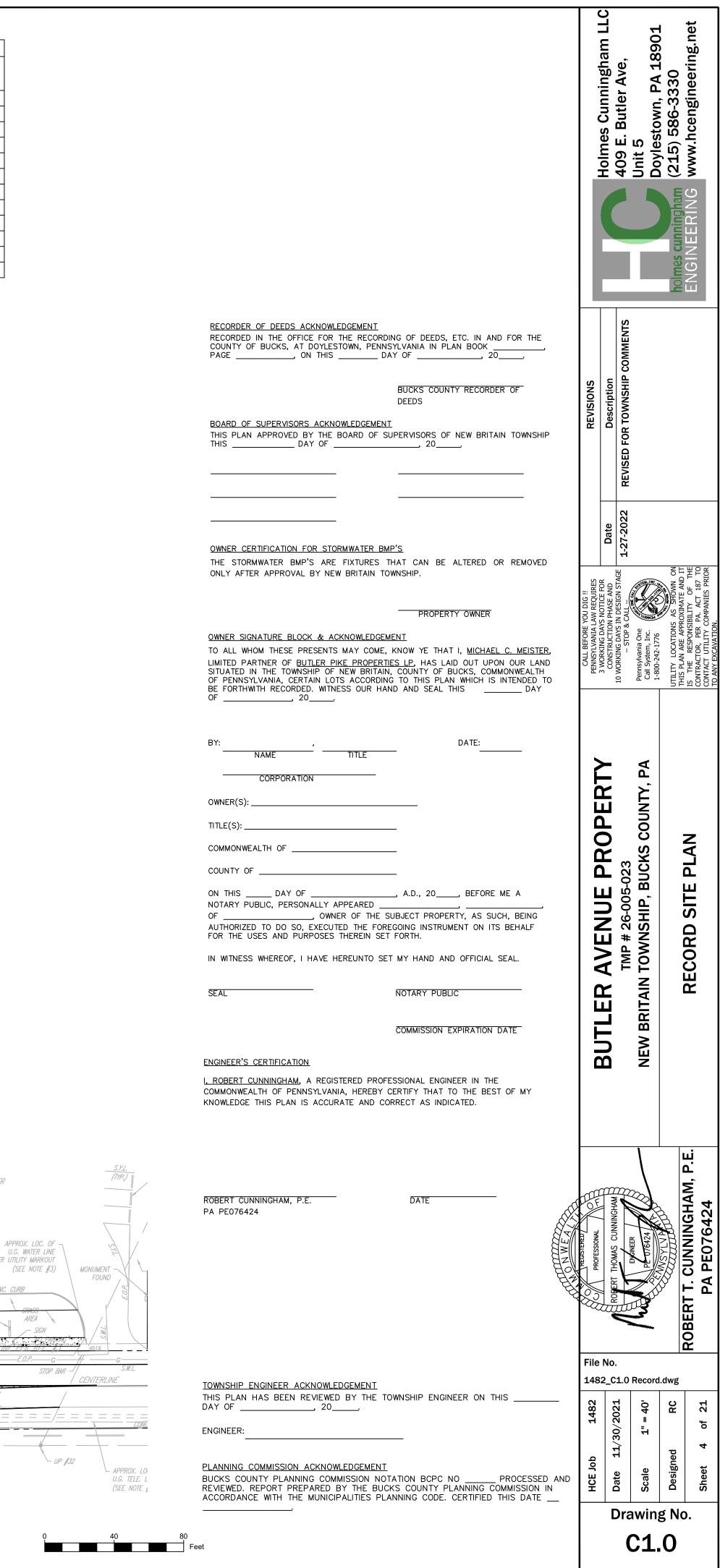
\*\* Permitted Building Height for B-7 Use is 40 FT

- 532, MAP NO. 42017C0288K WHICH BEARS AN EFFECTIVE DATE OF MARCH 21, 2017.
- WATER AND PUBLIC SEWER.



RESOURCE PROTECTION	
RESOURCE FROTECTION	CALCULATIONS

RESOURCE PROTECTION CALCULATIONS					
Natural Resource	Required Protection Ratio	Land in Resources	Required Resource Protection Land	Proposed Protected Area	Proposed Protection Ratio
	%	Ac.	Ac.	Ac.	%
Watercourses	100%	0.00	0.00	0.00	N/A
Riparian Buffer	100%	0.00	0.00	0.00	N/A
Floodplain & Floodplain Soil	100%	0.00	0.00	0.00	N/A
Wetlands	100%	0.00	0.00	0.00	N/A
Lakes and Ponds	100%	0.00	0.00	0.00	N/A
Wetlands Margin	80%	0.00	0.00	0.00	N/A
Woodlands*	30%	3.78	1.13	1.18	31.1%
Steep Slopes 8-15%	60%	0.00	0.00	0.00	N/A
Steep Slopes 15-25%	70%	0.00	0.00	0.00	N/A
Steep Slopes 25%+	85%	0.00	0.00	0.00	N/A
* Settlement agreement perm	nits up to 70% wo	odland disturband	ce.		



AREA 🔪

- SIGN

#### PLANNING COMMISSION:

BCPC Bucks County Planning Commission

The Almshouse Neshaminy Manor Center 1260 Almshouse Road Doylestown, Pennsylvania 18901 215.345.3400 FAX 215.345.3886 E-mail: planningcommission@buckscounty.org Tom Tosti, Chairman Richard Donovan, Vice Chairman Thomas J. Jennings, Esq., Secretary

> James J. Keenan James E. Miller, Jr. David R. Nyman Judith J. Reiss Edward J. Tokmajian Walter S. Wydro

> > Evan J. Stone Executive Director

#### **MEMORANDUM**

То:	New Britain Township Board of Supervisors New Britain Township Planning Commission
From:	Staff of the Bucks County Planning Commission
Date:	January 18, 2022
Subject:	BCPC #9134-C Preliminary Plan of Land Development for Butler Avenue Mixed Use TMP #26-5-23 Applicant: Butler Pike Properties, LP Owner: Same Plan Dated: November 30, 2021 Date Received: December 22, 2021

This proposal has been reviewed by the Bucks County Planning Commission professional staff, which prepared the following comments in accordance with the Pennsylvania Municipalities Planning Code (Section 502).

#### **GENERAL INFORMATION**

- Proposal: Construct two structures on a 7.27-acre lot. The first structure (Building A) has a proposed footprint of 27,120 square feet and includes 70 apartment units. The second structure (Building B) has a proposed footprint of 11,500 square feet and includes a medical office. Both structures are proposed to be served by public water and public sewer.
- Location: Along the northwest side of West Butler Avenue, approximately 800 feet northeast of its intersection with Schoolhouse Road.
- Zoning: The C-1 Commercial District does not permit Use B7 Apartment. The C-1 District permits Use I1 Medical Office on lots of at least 1 acre with minimum yards of 40 feet, 15 feet, and 30 feet, for front, side, and rear yards, respectively.

The site is subject to a Settlement Stipulation and Agreement dated October 7, 2021. The agreement includes land development terms and conditions pertaining to allowing more than one principal use and more than one principal structure on the site. Various terms and conditions are specified for amenities, off-site improvements, fee-in-lieu of recreation lands, and woodlands disturbance.

Present Use: Vacant



COUNTY COMMISSIONERS:

#### COMMENTS

 Settlement Stipulation and Agreement, Ground floor commercial—The Settlement Stipulation and Agreement outlines the terms of agreement for the mixed-use development proposed on the site and requires substantial conformity with the plan entitled "Butler Avenue Property Settlement Plan, sheet CP-6," which is included as Appendix "A" in the agreement. Paragraph 8. of the agreement states that a portion of the ground floor of Building A may also be used for commercial use. The proposed plan does not appear to include such a use for Building A.

Mixed-use development, in its truest sense, features multiple uses within the same structure. This configuration also better aligns with the idea that concentrated mixed-use development patterns can promote non-vehicular travel, and can serve as a foundation for placemaking, a strategy outlined in the DVRPC report *Butler Avenue Revitalization Strategies* (DVRPC, 2009). For this reason, we recommend the applicant explore the inclusion of some amount of commercial space on the ground floor of Building A.

2. **Granted waivers**—The Settlement Stipulation and Agreement indicates that the township and property owner agree that the applicant be entitled to the granting of waivers from the following subdivision and land development ordinance (SALDO) requirements:

Section 22-505 from providing a Community Impact Assessment Report

<u>Section 22-705.3.</u> from undertaking roadway widening and associated improvements along the Butler Avenue frontage

<u>Section 22-715</u> from providing park and recreation land

Section 22-722 from compliance with most of the Butler Avenue Overlay requirements

The final plan should note all granted waivers.

3. **Parking allotment**—The amount of parking spaces shown on the plan (247) does not match that which is shown as proposed within the zoning table (206). This discrepancy should be corrected.

Additionally, while we recognize that Section 27.2901 of the zoning ordinance specifies two parking spaces per dwelling unit for apartment units of 1 to 3 bedrooms, we are skeptical that this amount in its entirety is necessary. We recommend that consideration be given to reducing the amount of provided parking to align with a recent study published by the Delaware Valley Regional Planning Commission (DVRPC)<sup>1</sup>. The study estimates vehicles per household in comparable communities to be 0.90 for Studio/1-bedroom apartments, 1.39 for 2-bedroom apartments, and 1.61 for 3-bedroom apartments. The area's access to public transportation options (Doylestown DART and SEPTA Regional Rail) also supports an anticipated reduction in vehicle trip generation rates resulting from higher transit-accessibility. A reduction in parking area can also help reduce impervious coverage, optimize site development, and create more area for public space and amenities.

<sup>&</sup>lt;sup>1</sup> Multifamily Housing Research Summary (DVRPC, October 2018). <u>https://www.dvrpc.org/SmartGrowth/Multifamily/pdf/DVPRC\_Multifamily-Housing-Research-Summary.pdf</u>

The zoning ordinance allows for the consideration of a conditional reduction in off-street parking under the process outlined in Section 27.2903.b. We strongly recommend the applicant and township consider the possibility of a reduction in parking area for the reasons mentioned above.

4. **Doylestown DART coordination**—We note that this site is situated along an existing service route of the Doylestown DART. The proposed residential and medical office uses will greatly benefit from this access to public transportation; however, to maximize the usage of this service, we recommend the applicant coordinate with Bucks County Transport, the agency that operates the DART. Specifically, we recommend seeking the provision of signage and a designated stop in front of this proposed development.

#### 5. Landscape plan

- a. **Registered landscape architect**—We recommend that the landscape plan be prepared, signed, and sealed by a registered landscape architect licensed in the state of Pennsylvania.
- b. **Golden rain tree**—The plan proposes six golden rain trees (*Koelreuteria paniculata*) within the parking area. We note that this is a weak wooded tree and can create a significant amount of seed and leaf litter. Given the proposed location within a parking area, we recommend the applicant explore an alternative species.
- c. **Oak trees**—As part of the overall landscaping for the site, the landscape plan proposes 24 oak trees consisting of white oaks, swamp white oaks, scarlet oaks, pin oaks, and shumard oaks. Oak trees, while typically a good native tree for plantings, are subject to bacterial leaf scorch which is an infectious chronic disease that is affecting several species of oaks in southeastern Pennsylvania.<sup>2</sup> Municipal officials should monitor planting plans to ensure that oaks are not overplanted, to avoid the risk of infection and eventual loss of these trees.
- 6. **Sewage facilities**—The applicant must submit a Sewage Facilities Planning Module Application Mailer to the Pennsylvania Department of Environmental Protection (PaDEP) to determine if an Act 537 Planning Module must be submitted for this proposed land development.

This review will be included in the Bucks County Planning Commission board materials for the February 2, 2022, meeting. It is not necessary for you to attend this meeting, but you are welcome to do so and to offer comments on the proposal to the BCPC board and staff.

In order that we may be more aware of your concerns, please send us a copy of all municipal decisions sent to this applicant.

#### JS:emh

cc: Kevin Reilly, Butler Pike Properties, LP (via email)
 Robert Cunningham, PE, Holmes Cunningham Engineering (via email)
 Janene Marchand, PE, Gilmore & Associates, Township Engineer (via email)
 Matt West, Township Manager (via email)
 Vince Volpe, Executive Director, Bucks County Transport (via email)
 Lou White, Doylestown DART Committee (via email)

<sup>&</sup>lt;sup>2</sup> <u>https://extension.psu.edu/bacterial-leaf-scorch</u>



## Township of New Britain

Office of Fire Marshal Office of Code Enforcement

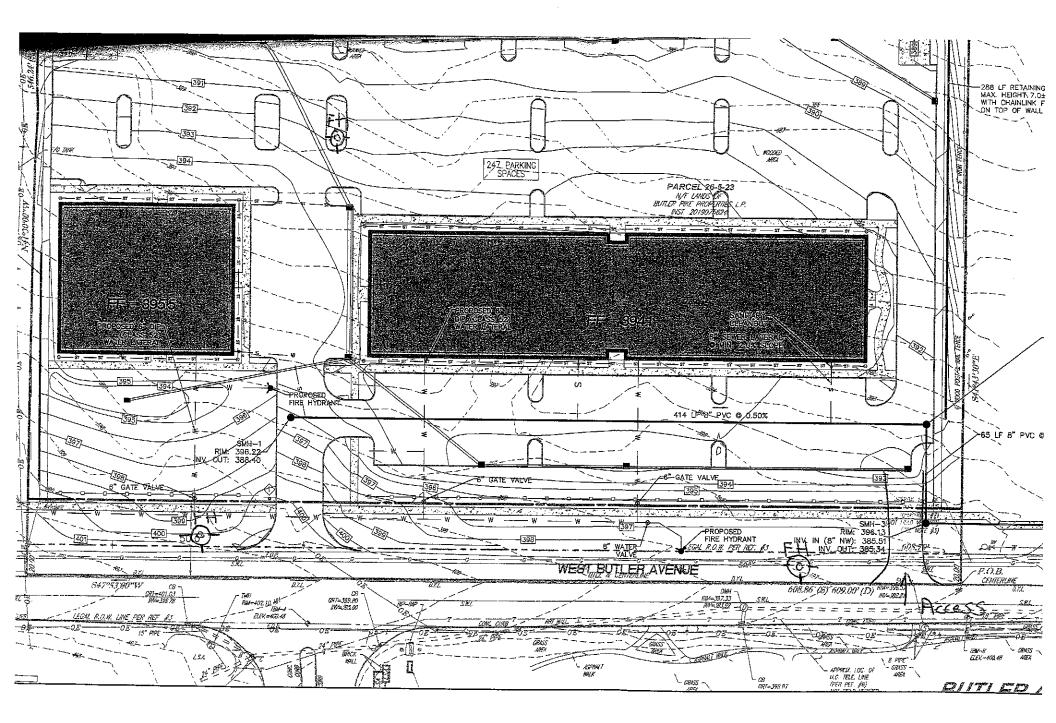
January 11, 2022

RE: Fire Marshal review Butler Avenue Property T.P. # 26005-023

Review By: Randal J. Teschner Fire Marshal, Code Enforcement Officer

#### The following is a list of items to be addressed:

- 1. A second Entrance needs to be added. This could be an emergency access located on the east end of property by Spatolas Pizza
- 2. There should be three hydrants added to plans ( see map )
  - a. One west side of main drive
  - b. One west side of second entrance
  - c. One in rear of large building located on island main entrance drive
- 3. The water line on west butler should be 12 inches
- 4. Show all water services to building.
- 5. Supply a plan showing that ladder truck can make turns in the parking lot around the building.



#### MEETING MINUTES January 25, 2022 7:00 PM

A Meeting of the New Britain Township Planning Commission was held on January 25, 2022, at the Township Administration Building, 207 Park Avenue, New Britain Township, PA beginning at 7:00 p.m. In attendance were Chair Stephanie Shortall, members Theresa Rizzo Grimes, Deborah Rendon, Marco Tustanowsky, Michelle Martin and Kenneth Onsa. Township Assistant Planning & Zoning Officer Ryan Gehman was also in attendance.

#### I. Reorganization

**1. Appointment of Temporary Chair:** Upon nomination by Mr. Tustanowsky, seconded by Ms. Rendon, and unanimously carried, Ms. Shortall was appointed as Temporary Chair.

**2. Nomination of Chair:** Upon nomination by Mr. Scanzillo, seconded by Ms. Shortall, Mr. Tustanowsky was nominated as Chair. No other nominations were presented.

#### **3.** Appointment of Chair:

MOTION: A motion was made by Mr. Scanzillo, seconded by Ms. Shortall, and unanimously carried, to close nominations and appoint Mr. Tustanowsky as Chair.

**4.** Nomination of Vice Chair: Upon nomination by Mr. Tustanowsky, seconded by Ms. Martin, Mr. Scanzillo was nominated as Vice Chair. No other nominations were presented.

#### 5. Appointment of Vice Chair:

## MOTION: A motion was made by Mr. Tustanowsky, seconded by Ms. Martin, and unanimously carried, to close the nominations and appoint Mr. Scanzillo as Vice Chair.

**6.** Nomination of Secretary: Upon nomination by Mr. Scanzillo, seconded by Mr. Tustanowsky, Ms. Rendon was nominated as Secretary. No other nominations were presented.

#### 7. Appointment of Secretary:

MOTION: A motion was made by Mr. Scanzillo, seconded by Mr. Tustanowsky, and unanimously carried, to close the nominations and appoint Ms. Rendon as Secretary.

#### II. Approval of Minutes:

#### 1. Minutes of August 24, 2021 Planning Commission Meeting:

MOTION: Upon motion of Mr. Tustanowsky, seconded by Ms. Shortall, the August 24, 2021 meeting minutes were unanimously approved.

#### III. Informal Discussion Among Planning Commission Regarding 409 W Butler Ave and Future Meetings

The 409 W Butler Avenue applicant could not appear at the 1/25 Planning Commission meeting because they did not complete their surrounding resident notification affidavit required by the Township's Subdivision and Land Development ordinance. Mr. Tustanowsky initiated a brief informal conversation about the project. He reminded the other members what the project entailed and asked if other members had reviewed the documents for the project. The members discussed the plans amongst themselves and the stipulated agreement for the project. The Planning Commission noted that the stipulated agreement included language that required the project to receive approval within 90 days. The conversation evolved into one about mixed-use developments around the Township and in surrounding townships, with members stating their views on various mixed-use projects nearby.

The schedule of the Planning Commission was discussed, specifically that in 2022 there will only be one (1) Planning Commission meeting per month. Because the applicant could not be at the meeting, the Planning Commission discussed adding a future meeting. Tuesday, February 8th, was suggested, and the members discussed the feasibility of notifying residents in that short time.

Mr. Onsa asked some general questions about the procedure of Planning Commission meetings. He wondered what developers typically present in a meeting and what feedback the Planning Commission gives the applicant. Ms. Rendon explained that the Commission is primarily an advisory body to the board. Mr. Tustanowsky explained the typical process of a meeting and offered to sit down with Mr. Onsa one on one and talk more in-depth about what typically occurs in meetings.

Mr. Tustanowsky asked if there were any public comments. Resident Holly Pulido asked about the project's location and use. Mr. Tustanowsky responded that County Builders is proposing two new buildings at 409 W Butler Ave, one for apartments and one that will likely be medical offices.

The Planning Commission took no action at this time.

#### IV. Adjournment

MOTION: A motion was made by Mr. Tustanowsky, seconded by Mr. Scanzillo, and unanimously carried to adjourn the January 25, 2022 Meeting at 7:25 p.m.

Respectfully Submitted,

1mpl Johna

Ryan Gehman, Assistant Planning & Zoning Officer

Marco Tustanowsky, Chair