APPENDIX A

APPLICATION FORM

WASHINGTON TOWNSHIP

1021 Washington Blvd. Bangor, Pa. 18013

Phone 610-588-1524

Fax 610-588-0245

Zoning Department

Application for Subdivision or Land Development

A. GENERAL INFORMATION:						
ate of Application:						
Name of Subdivision/Submission:						
B. PLOT INFORMATION:						
Parcel ID:						
Zoning District:						
Total Acres:						
Number of Lots:						
Minimum Lot Size:						
Proposed Plot						
Improvements:						
C. <u>SUBMISSION:</u>						
B major outarnition (1 Lots of more)	☐ Minor Subdivision (3 Lots or less)					
☐ Land Development	☐ Site Plan Review					
☐ Lot line Adjustment						
D. <u>PLAN:</u>						
☐ New	□ Preliminary					
☐ Revised	☐ Sketch					
☐ Preliminary /Final	☐ Alternate					

	E. OWNER/APPLICANT	<u>/ENGINEER:</u>			
	Applicant's Name:		Phone:		
,	Address:	City:	State:	Zip:	
	Property Owner's Name		Phone:		
	Address:	City:	State:	Zip:	
	Engineer's Name:		Phone:		
		SHALL BE SUBMITTED NOT LATE mission Meetings are held on th ill not be accepted.)			
		•			
	☐ Affida	avit of Posting			
	(Property must be posted at least 14 days before the meeting)				
	One (1) cop	y of each:			
, are della es.		ronic copy of the entire submiss tained in a CD, E-Mail, or equiva	-	mat or equivalent	
	Check or Mo	oney Order:			
	☐ Requ	ired fee – (Check or Money Orde Township".)	r is to be made payabl	e to "Washington	
	copies of the Plans. Initi	Township reserves the right to al fees are non-refundable. Any applicant and must be paid in fu	charges over and abo	ove the initial fees are	
		ey certify that all of the informa e to the terms and conditions s		-	
	······	(FOR OFFICE USE		~~~~~	
	Fee(s) \$		Check Number:		
	Received By:		Date:	AND	

WASHINGTON TOWNSHIP

1021 Washington Blvd. Bangor, Pa. 18013

Phone 610-588-1524

Zoning Department

Fax 610-588-0245

NOTICE TO ALL APPLICANTS FOR SUBDIVISION AND/OR LAND DEVELOPMENT

The Applicant for Subdivision and/or Land Development must post the property involved 14 days prior to the scheduled Planning Commission meeting in accordance with Section 3.3 B.3.

The Applicant shall provide an Affidavit of Posting prior to the acceptance of the submission by the Planning Commission for review.

Failure of the Applicant to post the property and submit the affidavit of posting will require Washington Township to advertise once each week for two successive weeks in a newspaper of general circulation within the municipality. The first publication shall not be more than 30 days and the second publication shall not be less than 7 days before the Planning Commission meeting.

Advertising will require the hearing to be held the month after submission in order to comply with the Public Notice requirements of the SALDO and MPC.

The cost of the advertising shall be the responsibility of the Applicant.

NOTICE OF PUBLIC MEETING

WASHINGTON TOWNSHIP PLANNING COMMISSION

SCHEDULED MEETING: Begin	nning at 7:00 PM		
on		20	
LOCATION: The Washington 1021 Washingto	•	-	
WILL CONSIDER REVIEW OF:	Sketch Plan – P Or Land Develo		
	Subd	ivision – Land [Development
DESCRIPTION:			
UNIFIED PARCEL I.D. MAP	BLO	СК	LOT
APPLICANT:	<u>(</u>	OWNER OF RE	CORD:

Affidavit of Posting

Re: Posting of Premises Locate	d at				
Washington Township, Northar	mpton County	, Pennsylvania.			
NOTICE OF PUBLIC MEETIN	NG FOR SUB	DIVISION AN	D/OR LAN	D DEVEL	OPMENT
Subdivision/Land Development Na	ame:				
Unified Parcel I.D. Map	Block		Lot		
Owner of Record:					
_					
Applicant (if other than owner):					
				_	
I, the undersigned, hereby certify					
hours that I personal Washington Township, Northamp					
Print Name					
Signature					

APPENDIX B

PLAN CHECKLISTS

Sketch Plan Checklist

General Submission items:

		1. Ten (10) copies of the completed Application	Form
		2. Ten (10) copies of the Sketch Plan Checklist	
		3. Ten (10) copies of the Sketch Plan (Prints 24"	x 36")
		4. One (1) copy of the Sketch Plan (11' x 17')	
		5. One (1) electronic copy of the entire submission equivalent	on package in PDF format or
		6. Ten (10) copies of all supporting documents	
		7. Submission to LVPC (applicant option)	
		8. The required fee (in accordance with the Tow	nship fee schedule)
		9. Affidavit of Posting or Proof of Publication	
A 19			
Applicant:			
Name:			
Address:			
Telephone:			
Applicant's Sta	tement:		
I hereby certify	all of th	e above information is included in this application	
Applicant's Sigr	nature: _		Date:

Note: The Township may require the submission of additional copies of the Plan and other information.

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Appendix B. 1 Minor Subdivision Final Plan Checklist

A. <u>Property Informati</u>	<u>on:</u>
1. Property Location:	
2. Property Owner's N	lame: Phone:
3. Property Owner's A	ddress:
4. Applicant's Name:_	Phone:
5. Applicant's Address	i
B. <u>General Submissio</u>	n Items:
□ Yes □ N/A	1. Ten (10) copies of completed Application form.
☐ Yes ☐ N/A	2. Ten (10) copies of the Preliminary/Final Plan Checklist.
☐ Yes ☐ N/A	3. Ten (10) copies of Preliminary/Final Plan (Prints 24" x 36").
☐ Yes ☐ N/A	4. One (1) copy of the Preliminary/Final Plan (11" x 17").
☐ Yes ☐ N/A	One (1) electronic copy of the entire submission package in PDF format or equivalent.
☐ Yes ☐ N/A	6. Ten (10) copies of all supporting documents.
☐ Yes ☐ N/A	7. Seven (7) sets of Planning Module.
☐ Yes ☐ N/A	8. Review letter from PennDOT (if applicable).
☐ Yes ☐ N/A	9. The required fee (in accordance with the Township fee schedule).
☐ Yes ☐ N/A	10. Affidavit of Posting or Proof of Publication.
☐ Yes ☐ N/A	11. Prepared Response letter from Professional Engineer/Surveyor/Landscape Architect.

☐ Yes	□ N/A	1.	Drawings at a size of 24" x 36" and 11" x 17". Other sizes may be permitted if approved by the Township Engineer.
☐ Yes	□ N/A	2.	Written and graphic scales as approved by the Township Engineer. Typical acceptable scales are $1''=20'$, $1''=30'$, $1''=40'$, $1''=50'$, $1''=60'$, and $1''=100'$ or similar.
☐ Yes	□ N/A	3.	Dimensions set in feet and decimal part thereof and bearings in degrees, minutes, and seconds.
☐ Yes	□ N/A	4.	Sheets numbered and showing relationship to total number of sheets.
☐ Yes	□ N/A	5.	An adequate legend indicating clearly which features are existing and which are proposed.
☐ Yes	□ N/A	6.	Revisions noted, if Plan is a revision of previously submitted plan.
☐ Yes	□ N/A	7.	A boundary line shown as a solid heavy line.
D. <u>Gen</u>	eral Informatio	<u>n:</u>	
☐ Yes	□ N/A	1.	Name and location of subdivision.
☐ Yes	□ N/A	2.	Name and address of: Landowner. Developer. Corporate officers and major shareholders. Adjourning property owners.
☐ Yes	□ N/A	3.	Executed Owner's Statement (see Appendix C).
☐ Yes	□ N/A	4.	Name, address, signature and seal of the licensed engineer or surveyor and Executed Engineer's/Surveyor's Statement (see Appendix C).
☐ Yes	□ N/A	5.	Approval/review signature blocks for: Township Supervisors. Township Planning Commission. Township Engineer. 3" x 5" space for Lehigh Valley Planning Commission's approval seal.
☐ Yes	□ N/A	6.	Location map at a scale of 1" = 2,000' (or other scale acceptable to the Township Engineer) showing the relation of the site to streets and all Zoning District and Municipal boundaries within five hundred (500') feet.
□ Voc	CI N/A	7	Graphic and/or written scale

C. <u>Specific Plan Requirements</u> – Drafting Standards:

⊔ Yes	⊔ N/A	. North arrow.
☐ Yes	□ N/A	. Date of plan and all subsequent revision dates.
☐ Yes	□ N/A	O. Site Boundary and Boundaries of all adjoining properties with names and addresses of Landowners.
☐ Yes	□ N/A	 The Deed Book volume and page number, as entered by the County Recorder, referencing the latest source of title to the land being subdivided.
☐ Yes	□ N/A	2. Tax Map sheet, block and lot number for the tract being subdivided.
E. <u>Natı</u>		es the Plan include the location of the following natural features on the site thin 50 feet of the site:
☐ Yes	□ N/A	. Contour lines at an interval of not more than two (2') feet if slopes are over 5%.
☐ Yes	□ N/A	. Permanent and seasonal high water table areas.
☐ Yes	□ N/A	. Watercourses, lakes and wetlands with names, if any.
☐ Yes	□ N/A	. Location and extent of various soil types with SCS definitions and DEP classifications for each.
F. <u>Bou</u>	ndary Lines of T	<u>ct:</u>
☐ Yes	□ N/A	. Boundary lines of the area being subdivided.
☐ Yes	□ N/A	. Location and type of all existing and proposed monumentation.
☐ Yes	□ N/A	. Deed descriptions, prepared by an appropriate licensed professional.
G. <u>Mar</u>	n-Made Feature	- Does the plan include the location of the following man-made features on the site and within 50 feet of the site:
☐ Yes	□ N/A	. Contour sufficient bearings, length of lines, radii, arc lengths, street widths, rights-of-way, and easement widths of all lots, streets, rights-of-way, easements and community or public areas to accurately and completely reproduce each and every course on the ground.
☐ Yes	□ N/A	. Existing lot layout on the site.
☐ Yes	□ N/A	. Historic sites or structures, including name and description.
☐ Yes	□ N/A	. Sewer lines, water lines, stormwater drains and culverts.

D tes	LJ N/A	which might affect development.
H. <u>Zoni</u>	ng Requiremen	nts:
☐ Yes	□ N/A	1. Applicable Zoning Districts.
☐ Yes	□ N/A	2. Lot size and yard requirements.
☐ Yes	□ N/A	3. Required open space.
☐ Yes	□ N/A	4. Building setback line.
I. <u>Prop</u>	osed Layout:	
☐ Yes	□ N/A	1. Total acreage of the site.
☐ Yes	□ N/A	2. Proposed lot layout with identification number and total number of lots.
☐ Yes	□ N/A	3. Lot width, depth and area.
☐ Yes	□ N/A	 Rights-of-way, restrictive covenants and easements for all drainage, utilities and other purposes which might affect development, with designations of areas to be dedicated to the Township.
☐ Yes	□ N/A	5. Open space areas and recreation areas.
☐ Yes	□ N/A	6. Well location.
☐ Yes	□ N/A	7. Primary Sewage Disposal Bed.
☐ Yes	□ N/A	8. Secondary Sewage Disposal Bed.
☐ Yes	□ N/A	9. Soil probe location with depth to limiting zone.
☐ Yes	□ N/A	10. Percolation test location with average test rate.
☐ Yes	□ N/A	11. Storm drainage facilities or structures.
☐ Yes	□ N/A	12. Private deed restrictions already imposed or to be imposed as a condition to sale.
J. <u>Supp</u>	ortive Docume	nts and Information:
☐ Yes	□ N/A	1. Residual lands sketch.
☐ Yes	□ N/A	2. Planning Module.

☐ Yes ☐ N/A	-	epared by an appropriate licensed professional, for all ays and easements to be dedicated to the Township.
K. APPLICANT'S STATE	EMENT:	
my knowledge. Furthe	er, I hereto acknowledge the For other information to co	ned in this application is true and correct according to ne Township may require the submission of additional amplete this submission. Refer to Fee Schedule and
Applicant's Signature:		Date:
L. ENGINEER'S/SURVE	YOR'S STATEMENT	
	Pennsylvania, do hereby o	, a registered professional Engineer/Surveyor of certify that the completed checklist is true and correct
Engineer's/Surveyor's	Signature:	Date:

Appendix B. 2 Major Subdivision & Land Development Preliminary Plan Checklist

A. Property Information	on:	
1. Property Location:		***************************************
2. Property Owner's N	ame:	Phone:
3. Property Owner's A	ddress:	
4. Applicant's Name:_		Phone:
5. Applicant's Address	•	
B. <u>General Submission</u>	ı Items:	
☐ Yes ☐ N/A	1. Ten (10) copies of completed Application form	
☐ Yes ☐ N/A	2. Ten (10) copies of the Preliminary Plan Checkli	st.
☐ Yes ☐ N/A	3. Ten (10) copies of the Preliminary Plan (Prints	24" x 36").
☐ Yes ☐ N/A	4. One (1) copy of the Preliminary Plan (11" x 17").
☐ Yes ☐ N/A	5. One (1) electronic copy of the entire submission equivalent.	n package in PDF format or
☐ Yes ☐ N/A	6. Ten (10) copies of all supporting documents.	
☐ Yes ☐ N/A	7. Seven (7) sets of Planning Module.	
☐ Yes ☐ N/A	8. Review letter from Northampton County Cons	ervation District.
☐ Yes ☐ N/A	9. Review letter from PennDOT (if applicable).	
☐ Yes ☐ N/A	10. Review letter from appropriate utility compa	nies.
☐ Yes ☐ N/A	11. The required fee (in accordance with the Tow	nship fee schedule).
☐ Yes ☐ N/A	10. Affidavit of Posting or Proof of Publication.	
☐ Yes ☐ N/A	11. Prepared Response letter from Professional E	ingineer/Surveyor/Landscape

C. Spe	cific Plan Requir	rements – Drafting Standards:
□ Yes	□ N/A	1. Drawings at a size of 24" \times 36" and 11" \times 17". Other sizes may be permitted if approved by the Township Engineer.
☐ Yes	□ N/A	 Written and graphic scales as approved by the Township Engineer. Typical acceptable scales are 1"=20', 1"=30', 1"=40', 1"=50', 1"=60', and 1"=100' or similar.
☐ Yes	□ N/A	3. Profiles drawn at a vertical scale of: Five (5') feet per inch or ten (10') feet per inch (for horizontal scale of 1"=50') or Ten (10') feet per inch (for horizontal scale of 1"=100')
		Ten (10) receiper men (10) nonzontal scale of 1 = 100)
☐ Yes	□ N/A	 Dimensions set in feet and decimal part thereof and bearings in degrees, minutes, and seconds.
☐ Yes	□ N/A	4. Sheets numbered and showing relationship to total number of sheets.
☐ Yes	□ N/A	An adequate legend indicating clearly which features are existing and which are proposed.
☐ Yes	□ N/A	6. Revisions noted and dated, if Plan is a revision of previously submitted plan.
☐ Yes	□ N/A	7. A boundary line shown as a solid heavy line.
D. <u>Ger</u>	neral Informatio	on:
☐ Yes	□ N/A	1. A title, "Preliminary Plan".
☐ Yes	□ N/A	2. Sheet title (eg. "Layout Plan")
☐ Yes	□ N/A	3. Name and location of subdivision or land development.
☐ Yes	□ N/A	3. Graphic and/or written scales.
☐ Yes	□ N/A	4. Date of plan and all subsequent revision dates.
☐ Yes	□ N/A	 Name, address, signature and seal to Engineer's Statement (see Appendix C) of the licensed engineer, surveyor, architect or landscape architect responsible for preparation of the Plan.
☐ Yes	□ N/A	6. North Arrow.
☐ Yes	□ N/A	7. Site boundaries with survey precisions of 1 in 10,000 or better.
	LI N/A	7. Site boundaries with survey precisions of 1 in 20,000 or better.
☐ Yes	□ N/A	Site Boundary and Boundaries of all adjoining properties with names and addresses of landowners.

E. Natu	ral Features:		
☐ Yes	□ N/A	1.	Slope areas (0-8%, 8-12%, 12-15%, 15-25%, over 25%).
☐ Yes	□ N/A	2.	Permanent and seasonal high water table areas.
☐ Yes	□ N/A	3.	Location and extent of various soil types with SCS classifications and DEP definitions for each and 100-year floodplain (if mapped).
☐ Yes	□ N/A	4.	Forested areas.
☐ Yes	□ N/A	5.	Watercourses, lakes and wetlands (with names, if any).
F. <u>Man</u>	-Made Features		Does the Plans include the location of the following man-made features on e site being subdivided or developed and within 100 feet of the site:
☐ Yes	□ N/A	1.	Streets and right-of-way (including names and rights-of-way widths) on the site and on immediately adjacent tracts
☐ Yes	□ N/A	2.	Existing lot layout on the site and on immediately adjacent tracts.
☐ Yes	□ N/A	3.	Historic sites or structures, including name and description.
□ Yes	□ N/A	4.	Sewer lines, water lines, storm water drains and culverts.
☐ Yes	□ N/A	5.	Bridges.
☐ Yes	□ N/A	6.	Utility easements and restrictive covenants and easements for purposes which might affect development.
G. <u>Pro</u> t	oosed Features:	<u> </u>	
☐ Yes	□ N/A	1.	Layout of streets with centerlines, cartways and rights-of-way, and proposed names.
☐ Yes	□ N/A	2.	Layout of lots with identification number.
☐ Yes	□ N/A	3.	Building setback lines from all lot lines.
□ Yes	□ N/A	4.	The arrangement and use of buildings and parking areas in nonresidential developments and planned residential developments, with all necessary dimensions and number of parking spaces. (Elevations and perspective sketches of proposed buildings are encouraged)
☐ Yes	□ N/A	5.	Rights-of-way, restrictive covenants and easements for all drainage, utilities or other purposes which might affect development.
☐ Yes	□ N/A	6.	Sidewalks and pedestrian paths.
☐ Yes	□ N/A	7.	Open space areas.
☐ Yes	□ N/A	8.	Recreation facilities.

⊔ Yes	⊔ N/A	proposed final contours.
☐ Yes	□ N/A	10. Well location.
☐ Yes	□ N/A	11. Primary Sewage Disposal Bed.
☐ Yes	□ N/A	12. Secondary Sewage Disposal Bed.
☐ Yes	□ N/A	13. Soil probe location.
☐ Yes	□ N/A	14. Percolation test location.
H. <u>Layo</u>	out Plan:	
☐ Yes	□ N/A	1. Name and address of landowner.
☐ Yes	□ N/A	2. Names and addresses of developers.
☐ Yes	□ N/A	3. Names and addresses of Corporate officers and major shareholders.
☐ Yes	□ N/A	4. Names and address of adjoining property owners.
☐ Yes	□ N/A	5. Owners Statement of Acknowledgement (see Appendix C).
☐ Yes	□ N/A	6. Approval/review signature blocks (see Appendix C).
☐ Yes	□ N/A	7. Location map at a scale of 1"=2000' (or other scale acceptable to the Township Engineer) showing the relation of the site to adjoining properties, streets, zoning district boundaries, and municipal boundaries within 1000' feet.
☐ Yes	□ N/A	8. Project Summary List (see Section 5.3 E.5.an).
i. <u>Prop</u>	osed Features:	
☐ Yes	□ N/A	 Approximate dimensions, and areas of lots expressed in both square feet and acres.
J. Stree	ets:	
☐ Yes	□ N/A	1. Cartway and right-of-way width.
☐ Yes	□ N/A	Centerline with bearings, distances, horizontal curve data and stations corresponding to the profile.
☐ Yes	□ N/A	3. Right-of-way lines and curb lines with horizontal curve radii at intersections?
☐ Yes	□ N/A	4. Beginning and end of proposed construction.
☐ Yes	□ N/A	5. Tie-ins by courses and distances to intersection of all public roads, with their names and widths of cartway and right-of-way.

K. <u>(</u>	Grading	g Plan:	
	∕es □	N/A 1	Existing and proposed contour lines at intervals of two (2') feet (if slope is 15% or less and five (5') feet (if slope is over 15%).
	∕es 🗖	N/A 2	2. Street centerline data and stations corresponding to the profile.
L. <u>S</u>	Storm D	<u>)rainage:</u>	
	∕es □	N/A 1	L. Location and size of facilities with stations corresponding to the profile.
	∕es 🗆	N/A 2	2. Locations of inlets with invert elevation of flow line and grade at the top of each line.
	∕es 🗖	N/A 3	3. Watershed areas for each drainage structure or swale.
	∕es 🗖	N/A 4	1. Property lines and ownership, with details of easements where required.
	∕es □	N/A S	5. Beginning and end of proposed construction.
	∕es □	N/A 6	5. Location of all other drainage facilities and public utilities in the vicinity of storm drain lines.
	∕es 🗆	N/A 7	Hydraulic system standards for culverts, bridge structures and/or other storm facilities.
	∕es 🗆	N/A 8	3. Location and size of proposed drainage swales.
м.	<u>Utility</u>	Plan:	
	i.	Proposed on-l	ot sanitary sewage disposal systems.
	Yes □	I N/A 1	1. Existing and proposed contour lines at intervals of two (2') feet (if slope is 15% or less) and five (5') feet (if slope is over 15%).
	∕es □	I N/A 2	2. Proposed location of the well.
	∕es □	I N/A	3. Proposed or typical location of dwelling.
	∕es 🗆	I N/A	1. Proposed location of subsurface disposal bed and alternate bed.
	∕es 🗆	N/A 5	5. Location of percolation test holes and soil probe pit.
	∕es 🏻	I N/A	5. Permanent and seasonal high water table areas.
	ii.	Proposed cen	tralized sanitary sewers.
	Yes □	I N/A	1. Location and size of line with stations corresponding to the profile.
	∕es □	I N/A 2	2. Location of manholes with invert elevation of flow line and grade at the top of each manhole.
	∕es □	N/A 3	3. Property lines and ownership, with details of easements where required.

☐ Yes	□ N/A	4. Beginning and end of proposed construction.
☐ Yes	□ N/A	5. Location of laterals.
☐ Yes	□ N/A	6. Location of all other drainage facilities and public utilities in the vicinity of sanitary sewer lines.
	iii. Proposed ce	entralized water system.
☐ Yes	□ N/A	1. Location and size of water line.
☐ Yes	□ N/A	2. Plans pertaining to water source.
☐ Yes	□ N/A	3. Fire hydrants.
	iv. Proposed o	n-lot water system.
☐ Yes	□ N/A	1. Location of all wells (existing and proposed).
☐ Yes	□ N/A	2. Street lighting.
N. Eros	sion and Sedime	ent Plan:
☐ Yes	□ N/A	1. Comply with regulations of the Northampton County Conservation District.
☐ Yes	□ N/A	2. Use stormwater runoff calculations governed by the parameters set forth in Appendix D.
O. <u>Roa</u>	d Profiles:	
☐ Yes	□ N/A	1. Profile of existing ground surfaces along centerline of street.
☐ Yes	□ N/A	2. Proposed centerline grade with percent on tangents and elevations at fifty (50') foot intervals.
☐ Yes	□ N/A	3. All vertical curve data including length, elevations and minimum sight distance as required by Article 10.
P. <u>Sani</u>	tary Sewer and	Storm Drain Profiles:
☐ Yes	□ N/A	 Profiles of existing ground surface with elevations at top of manholes or inlets.
☐ Yes	□ N/A	2. Profile of storm drain or sewer showing type and size of pipe, grade, cradle, manhole and inlet locations, and invert elevations along flow line.
☐ Yes	□ N/A	3. All line crossings of other utilities.
☐ Yes	□ N/A	4. Invert elevations along flow line at manholes, inlets, and at line crossing of other utilities

Q. Con	Q. Construction Details:		
☐ Yes	□ N/A	1. Typical cross-section and specifications for street construction as required by Article 10.	
☐ Yes	□ N/A	2. Drainage swale cross-section and construction materials.	
☐ Yes	□ N/A	3. Pipe bedding details.	
☐ Yes	□ N/A	4. Storm drainage structures.	
☐ Yes	□ N/A	5. Sanitary sewer structures.	
☐ Yes	□ N/A	6. Curb and sidewalk details.	
R. Supr	portive Docume	ents and Information:	
☐ Yes	□ N/A	1. Private deed restrictions or covenants already imposed or to be imposed as a condition of sale.	
☐ Yes	□ N/A	2. Map of all property holdings of the owner within 1000 feet of the proposed subdivision, indicating the site of the proposed subdivision.	
☐ Yes	□ N/A	3. A sketch plan of a proposed road system with any property holdings contiguous to the proposed subdivision.	
☐ Yes	□ N/A	4. Certification of the Public Water System.	
☐ Yes	□ N/A	5. Certification of a Centralized Sewage Disposal System.	
☐ Yes	□ N/A	6. Certification of On-Lot Sewage System.	
☐ Yes	□ N/A	7. Storm drainage calculations. (See Appendix D)	
☐ Yes	□ N/A	8. Development Statement and Schedule.	
☐ Yes	□ N/A	9. Highway Occupancy Permit.	
S. Appl	S. <u>Applicant's Statement:</u>		
I hereby certify that all of the information contained in this application is true and correct according to my knowledge. Further, I hereto acknowledge the Township may require the submission of additional copies of the Plan and/or other information to complete this submission.			
Applicant's Signature: Date:			

Appendix B. 3

Major Subdivision & Land Development Final Plan Checklist

A. Pro	perty Informati	on:	
1. Pro	perty Location:		
2. Pro	perty Owner's N	ame:	Phone:
3. Pro	perty Owner's Ac	ddress:	
4. App	olicant's Name:_		Phone:
5. App	olicant's Address	•	
B. <u>Ge</u>	neral Submissio	n Items:	
☐ Yes	□ N/A	1. Ten (10) copies of completed Application form	
☐ Yes	□ N/A	2. Ten (10) copies of the final Plan Checklist.	
☐ Yes	□ N/A	3. Ten (10) copies of the final Plan (Prints 24" x 36	5").
☐ Yes	□ N/A	4. One (1) mylar reproducible of the Final Plan (if	required).
☐ Yes	□ N/A	5. One (1) copy of the Final Plan (11" x 17").	
☐ Yes	□ N/A	6. One (1) electronic copy of the entire submissio equivalent.	n package in PDF format or
☐ Yes	□ N/A	7. Ten (10) copies of all supporting documents.	
☐ Yes	□ N/A	8. Review letter from Northampton County Conse	ervation District.
☐ Yes	□ N/A	9. Review letter from PennDOT (if applicable)?	
☐ Yes	□ N/A	10. Review letter from appropriate utility compar	nies.
☐ Yes	□ N/A	11. The required fee (in accordance with the Tow	nship fee schedule).
☐ Yes	□ N/A	12. Prepared Response letter from Professional E Architect.	ngineer/Surveyor/Landscape
C. <u>Spe</u>	cific Plan Requi	rements – Drafting Standards:	
□ Yes	□ N/A	1. Drawings at a size of 24" x 36" and 11" x 17".	Other sizes may be permitted i

☐ Yes	□ N/A	2.	Written and graphic scales as approved by the Township Engineer. Typical acceptable scales are $1''=20'$, $1''=30'$, $1''=40'$, $1''=50'$, $1''=60'$, and $1''=100'$ or similar.
☐ Yes	□ N/A	3.	Profiles drawn at a vertical scale of: Five (5') feet per inch or ten (10') feet per inch (for horizontal scale of 1"=50' or
			Ten (10') feet per inch (for horizontal scale of 1"=100').
☐ Yes	□ N/A	4.	Dimensions set in feet and decimal part thereof and bearings in degrees, minutes, and seconds.
☐ Yes	□ N/A	4.	Sheets numbered and showing relationship to total number of sheets.
☐ Yes	□ N/A	5.	An adequate legend indicating clearly which features are existing and which are proposed.
☐ Yes	□ N/A	6.	Revisions noted and dated, if Plan is a revision of previously submitted plan.
☐ Yes	□ N/A	7.	A boundary line shown as a solid heavy line.
D. Gen	eral Informatio	<u>n:</u>	
☐ Yes	□ N/A	1.	A title, "Final Plan".
☐ Yes	□ N/A	2.	Sheet title (eg. "Layout Plan")
☐ Yes	□ N/A	3,	Name and location of subdivision or land development.
☐ Yes	□ N/A	3.	Graphic and/or written scales.
☐ Yes	□ N/A	4.	Date of plan and all subsequent revision dates.
☐ Yes	□ N/A	5.	Name, address, signature and seal to Engineer's Statement (see Appendix C) of the licensed engineer, surveyor, architect or landscape architect responsible for preparation of the Plan.
☐ Yes	□ N/A	6.	North Arrow.
☐ Yes	□ N/A	7.	Site boundaries with survey precisions of 1 in 10,000 or better.
☐ Yes	□ N/A	8.	Site Boundary and Boundaries of all adjoining properties with names and addresses of landowners.
☐ Yes	□ N/A	9.	Location and type of all existing monumentation.
F. Natu	ıral Features:		
☐ Yes	□ N/A	1	Slope areas (0-8%, 8-12%, 12-15%, 15-25%, over 25%).
			Permanent and seasonal high water table areas
	1 1 IV/M	,	i cinancio anu scasniai nen walci idile dieas.

☐ Yes	□ N/A	 Location and extent of various soil types with SCS classifications and DEP definitions for each and 100-year floodplain (if mapped).
☐ Yes	□ N/A	1. Forested areas.
☐ Yes	□ N/A	5. Watercourses, lakes and wetlands (with names, if any).
		- Does the Plans include the location of the following man-made features on I or developed and within 100 feet of the site:
☐ Yes	□ N/A	1. Streets and right-of-way (including names and rights-of-way widths) on the site and on immediately adjacent tracts
☐ Yes	□ N/A	2. Existing lot layout on the site and on immediately adjacent tracts.
□ Yes	□ N/A	3. Historic sites or structures, including name and description.
☐ Yes	□ N/A	4. Sewer lines, water lines, storm water drains and culverts.
☐ Yes	□ N/A	5. Bridges.
☐ Yes	□ N/A	Utility easements and restrictive covenants and easements for purposes which might affect development.
G. <u>Pro</u> j	oosed Features:	
☐ Yes	□ N/A	 Layout of streets with centerlines, cartways and rights-of-way, and proposed names.
☐ Yes	□ N/A	2. Layout of lots with identification number.
☐ Yes	□ N/A	3. Building setback lines from all lot lines.
☐ Yes	□ N/A	4. The arrangement and use of buildings and parking areas in nonresidential developments and planned residential developments, with all necessary dimensions and number of parking spaces. (Elevations and perspective sketches of proposed buildings are encouraged)
☐ Yes	□ N/A	Rights-of-way, restrictive covenants and easements for all drainage, utilities or other purposes which might affect development.
☐ Yes	□ N/A	5. Sidewalks and pedestrian paths.
☐ Yes	□ N/A	7. Open space areas.
☐ Yes	□ N/A	B. Recreation facilities.
☐ Yes	□ N/A	 Proposed monumentation with reference to proposed improvements and proposed final contours.
☐ Yes	□ N/A	10. Well location.

LJ 162	LJ N/A	11	i. Primary Sewage Disposal Bed.
☐ Yes	□ N/A	12	2. Secondary Sewage Disposal Bed.
☐ Yes	□ N/A	13	3. Soil probe location.
☐ Yes	□ N/A	14	I. Percolation test location.
H. Prot	ective Covenan	<u>ts</u> -	- Do the plans have protective covenants for:
☐ Yes	□ N/A	1.	Building setbacks.
☐ Yes	□ N/A	2.	Clear site triangle easements (see Sections 10.4H and 10.12D).
☐ Yes	□ N/A	3.	Utility, drainage and slope easements.
☐ Yes	□ N/A	4.	"Well and sewage disposal systems shall be constructed in accordance with recommended standards of the Pennsylvania Department of Environmental Protection." (if appropriate)
☐ Yes	□ N/A	5.	"Individual owners of lots must apply to the Township for a sewage permit prior to undertaking the construction of an on-lot sewage disposal system." (if appropriate)
☐ Yes	□ N/A	6.	"The Planning Commission and Board of Supervisors have not passed upon the feasibility of any individual lot or location within a lot being able to sustain any type of well or sewage disposal system" (if appropriate).
I. Plot Plan and Layout Plan Additional Information:			
☐ Yes	□ N/A	1.	Name and address of landowner.
☐ Yes	□ N/A	2.	Names and addresses of developers.
☐ Yes	□ N/A	3.	Names and addresses of corporate officers and major shareholders.
☐ Yes	□ N/A	4.	Names and address of adjoining property owners.
☐ Yes	□ N/A	5.	Owners Statement of Acknowledgement (see Appendix C).
☐ Yes	□ N/A	6.	Approval/review signature blocks (see Appendix C).
☐ Yes	□ N/A	7	Location map at a scale of 1"=2000' (or other scale acceptable to the Township Engineer) showing the relation of the site to adjoining properties, streets, zoning district boundaries, and municipal boundaries within 1000' feet.
☐ Yes	□ N/A	8.	Project Summary List (see Section 5.3 E.5.an).
J. <u>Prop</u>	osed Features:		
☐ Yes	□ N/A	1.	Layouts of lots, with identification number.
M Vac	□ N/A	3	Layout of streets

LJY	es ⊔ N/A	3. Proposed names.
ΠY	es 🗖 N/A	4. Cartway and right-of-way width.
ΠY	es □ N/A	5. Centerline with bearings, distances, and curve data.
☐ Y	es □ N/A	6. Right-of-way lines and curb lines with radii at intersections.
ΠY	es □ N/A	7. Beginning and end of proposed construction.
□Y	es □ N/A	8. Tie-ins by courses and distances to intersection of all public roads, with their names and widths of cartway and right-of-way.
□Y	es 🗆 N/A	9. Building setback lines.
ΠY	es □ N/A	 Rights-of-way, restrictive covenants, and easements for all drainage, utilities, or other purposes which might affect development.
к. <u>г</u>	Plot Plan Addition	al Information:
ΠY	es 🗆 N/A	1. Site boundaries with closure of 1 in 10,000.
□Y	es 🗆 N/A	2. Boundaries of all adjoining properties with names of landowners.
□ Y	es 🗆 N/A	3. Location and type of all existing monumentation.
	es 🗖 N/A	4. North arrow.
L. <u>L</u>	ocation of Existing	g Man-Made Features Within 100 Feet of the Tract Being Subdivided:
□Y	es □ N/A	 Streets and rights-of-way, including name and right-of-way widths, on the site and on immediately adjacent tracts.
□ Y	es 🗆 N/A	2. Existing lot layouts on the site and on immediately adjacent tracts.
□ Y	es 🗖 N/A	3. Utility easements, restrictive covenants, and easements for purposes which might affect development.
M.	Grading Plan:	
ΠY	es □ N/A	1. Existing and proposed contour lines at intervals of two (2') feet (if slope is 15% or less) and five (5') feet (if slope if over 15%).
☐ Y	es 🗖 N/A	2. Street centerline data and stations corresponding to the profile.
N. <u>9</u>	Storm Drainage:	
□Y	es 🗆 N/A	1. Location and size of facilities with stations corresponding to the profile.
ΠY	es 🗖 N/A	2. Locations of inlets with invert elevation of flow line and grade at the top of each line.
ΠY	es 🗆 N/A	3. Watershed areas for each drainage structure or swale.
Пν	es 🗆 N/A	4. Property lines and ownership, with details of easements where required.

☐ Yes	□ N/A	5. Beginning and end of proposed construction.
☐ Yes	□ N/A	6. Location of all other drainage facilities and public utilities in the vicinity of storm drain lines.
☐ Yes	□ N/A	7. Hydraulic system standards for culverts, bridge structures and/or other storm facilities.
☐ Yes	□ N/A	8. Location and size of proposed drainage swales.
O. <u>Utili</u>	ity Plan:	
	i. Proposed on	-lot sanitary sewage disposal systems.
☐ Yes	□ N/A	1. Existing and proposed contour lines at intervals of two (2') feet (if slope is 15% or less) and five (5') feet (if slope is over 15%).
☐ Yes	□ N/A	2. Proposed location of the well.
☐ Yes	□ N/A	3. Proposed or typical location of dwelling.
☐ Yes	□ N/A	4. Proposed location of subsurface disposal field and alternate field.
☐ Yes	□ N/A	5. Location of percolation test holes and soil probe pit.
☐ Yes	□ N/A	6. Permanent and seasonal high water table areas.
	ii. Proposed ce	ntralized sanitary sewers.
☐ Yes	□ N/A	1. Location and size of line with stations corresponding to the profile.
☐ Yes	□ N/A	2. Location of manholes with invert elevation of flow line and grade at the top of each manhole.
☐ Yes	□ N/A	3. Property lines and ownership, with details of easements where required.
☐ Yes	□ N/A	4. Beginning and end of proposed construction.
☐ Yes	□ N/A	5. Location of laterals.
☐ Yes	□ N/A	6. Location of all other drainage facilities and public utilities in the vicinity of sanitary sewer lines.
	iii. Proposed ce	ntralized water system.
☐ Yes	□ N/A	1. Location and size of water line.
☐ Yes	□ N/A	2. Plans pertaining to water source.
☐ Yes	□ N/A	3. Fire hydrants.
	iv. Proposed o	n-lot water system.
☐ Yes	□ N/A	1. Location of all wells (existing and proposed).

☐ Yes	□ N/A	2. Street lighting.
P. Eros	ion and Sedime	ent Plan:
☐ Yes	□ N/A	1. Comply with regulations of the Northampton County Conservation District.
☐ Yes	□ N/A	2. Use stormwater runoff calculations governed by the parameters set forth in Appendix D or other methods approved by the Township Engineer.
Q. <u>Roa</u>	d Profiles:	
☐ Yes	□ N/A	1. Profile of existing ground surfaces along centerline of street.
☐ Yes	□ N/A	2. Proposed centerline grade with percent on tangents and elevations at fifty (50') foot intervals.
☐ Yes	□ N/A	3. All vertical curve data including length, elevations and minimum sight distance as required by Article 10.
R. <u>Sani</u>	itary Sewer and	Storm Drain Profiles:
☐ Yes	□ N/A	 Profiles of existing ground surface with elevations at top of manholes or inlets.
☐ Yes	□ N/A	2. Profile of storm drain or sewer showing type and size of pipe, grade, cradle, manhole and inlet locations, and invert elevations along flow line.
☐ Yes	□ N/A	3. All line crossings of other utilities.
☐ Yes	□ N/A	4. Invert elevations along flow line at manholes, inlets, and at line crossing of
		other utilities.
S. Con	struction Detail	<u>s:</u>
☐ Yes	□ N/A	1. Typical cross-section and specifications for street construction as required by Article 10.
☐ Yes	□ N/A	2. Drainage swale cross-section and construction materials.
☐ Yes	□ N/A	3. Pipe bedding details.
☐ Yes	□ N/A	4. Storm drainage structures.
☐ Yes	□ N/A	5. Sanitary sewer structures.
☐ Yes	□ N/A	6. Curb and sidewalk details.
T. Sup	portive Docume	ents and Information:
☐ Yes	□ N/A	1. Private deed restrictions or covenants already imposed or to be imposed as a condition of sale.

Applica	int's Signature:	Date:		
	•	of the information contained in this application is true and correct according to er, I hereto agree to the terms and conditions set forth in this application.		
V. App	olicant's Statem	ent:		
	_	er should provide a certifying statement that the changes identified as part of B inges that have been made to the Plan. See Appendix C Certifications.		
resubn circle.	nissions to the T	turn a copy of this Final Plan Checklist with any revisions, corrections or ownship. Any changes from the original submission shall be identified with a red uired Plan map copies should be submitted with the changes identified in red		
	Township may plete this subm	require the submission of additional copies of the Plan and/or other information ission.		
U. <u>Disc</u>	<u>claimer:</u>			
☐ Yes	□ N/A	8. Legal descriptions, prepared by an appropriate licensed professional, for all lots and for all roadways and easements to be dedicated to the Township.		
☐ Yes	□ N/A	7. Development Statement and Schedule.		
☐ Yes	□ N/A	6. Storm drainage calculations (see Appendix D).		
☐ Yes	□ N/A	5. Utilities Agreements and permits.		
☐ Yes	□ N/A	4. Open Space Agreement.		
☐ Yes	□ N/A	3. Non-dedicated Streets Agreement.		
☐ Yes	□ N/A	2. Deed of dedication along with a plan of such improvement.		

WASHINGTON TOWNSHIP

1021 Washington Boulevard Bangor, PA 18013 – 9415

Phone: (610) 588 – 1524 Fax: (610) 588 – 0245

APPENDIX C:

ENGINEER'S/SURVEYOR'S STATEMENT, OWNER'S STATEMENT AND APPROVAL/REVIEW BLOCK FORM

C.1.	ENGINEER'S/SURVEYOR'S STATEMENT		
survey requir	I,	by certify that the Plan, p as surveyed by me for the	repared from field owners and that the
		Engineer/Surveyor's	Signature and Address
C.2.	OWNER'S STATEMENT		
pendir use all as sew depose Towns and in	We, the owners of this plat of land being the sole owners of this property in peacing affecting the title of same, hereby ded the road rights-of-way, utility easements wer lines and storm drainage facilities as see and say that we have complied with all ship Subdivision and Land Development Committee the Township of Washington against of this plat for whatever reason presents.	eful possession of it and the cate to the Township of Value and rights-of-way of public hown on this Subdivision frequirements and provision and provision and growing the control of the	hat there are no suits Vashington for public lic improvements such Plan. We further ons of the Washington ne Township harmless
(Owner	rs Signature)	(Owners Signature)	
SWOR	N AND SUBSCRIBED BEFORE THIS	DAY OF	, 20

NOTARY PUBLIC

C. 3. APPROVAL/REVIEW BLOCK

COUNTIES.	I VALLEY PLANNING COMMISSION FOR I	LEHIGH AND NORTHAMPTON
LVPC Staff Person Respon	sible for Review	Date
APPROVED BY THE WASH	INGTON TOWNSHIP PLANNING COMMIS	SSION
Chairman	Secretary	Date
APPROVED* BY THE WAS	HINGTON TOWNSHIP ENGINEER	
		Date
APPROVED BY THE WASH	INGTON TOWNSHIP BOARD OF SUPERVI	ISORS
Chairman	Secretary	Date
C.4. <u>ENGINEER'S/SUR</u> <u>RESUBMISSION</u>	VEYOR'S STATEMENT REGARDING REVI	ISIONS, CORRECTIONS AND
	a re	
- · ·	Commonwealth of Pennsylvania, do her ons and corrections required as a result	•
	Development Ordinance of Washington early identified by my letter of transmitt	
	Engineer	/Surveyor's Signature
	Engineer,	/Surveyor's Address

^{*} For minor subdivisions the term "Approved" shall be replaced with "Closure reviewed by:"

Appendix D

Storm Water Drainage Runoff Calculation

1. Rational Formula

The method used in calculating runoff shall be the Rational Formula Q=CIA, in which "Q" is the storm flow in cubic feet per second, "C" is a coefficient indicating the degree of imperviousness of the drainage area, "I" is the intensity of rainfall in inches per hours for the particular frequency of storm used, and "A" is the drainage area in acres.

2. <u>Values of Coefficient "C"</u>

- A. All predevelopment calculations shall be in accordance with Ordinance 271 Amended Martins Creek/Jacoby Creek Watershed Act 167 Stormwater Management Ordinance.
- B. Coefficient "C" used for the calculation of runoff shall be based on the anticipated ultimate use of the land.

3. Values of Storm Intensity "I"

- A. The values of "I" in inches per hour, to be used are listed in Ordinance 271.
- B. Release rates from storage structures and from each subdivision or land development shall be based on the runoff from the two-year predevelopment storm event.
- C. In addition to the requirements found in Ordinance 271 (whichever is more stringent), storage structures and peak flows from subdivisions or land developments shall be designed such that the post-development five-year peak discharge will not exceed the predevelopment two-year peak discharge for the primary outlet structure and from the development.
- D. All storage structures shall be designed with emergency spillways. The minimum design capacity of the emergency spillway shall be the 25 year post-development peak discharge while maintaining a minimum 1.0 foot freeboard, and the 100 year post-development peak discharge rate while maintaining a minimum 0.5 foot freeboard.
- E. Storms with a frequency of twenty-five (25) years shall be used for drainage facilities other than storage structures in new developments and for minor streets, and fifty (50) year storms shall be used for Collector and Arterial highways. The time of flow shall be the time which it takes to reach the location of the drainage facility to be designed, and shall include overland flow time plus gutter flow time plus time of flow through pipes, culverts, or natural streams. Overland flow time shall be computed using a generally accepted chart or formula.
- F. Other measures to control storm flow such as downspouts into French drains, dry wells, and stone filter berms may be required by the Township.

4. Suggested Runoff Velocities

Suggested runoff velocities are listed in Ordinance 271.

5. Velocity of Flow in Open Channels

A. The velocity of flow in open channels, and in closed drains not under pressure, shall be determined by Manning's velocity equation:

$$\frac{1.486}{V=n}$$
 ($\frac{a}{p}$) 2/3 1/2 V= $\frac{1}{p}$ S

V = velocity in feet per second

n = coefficient of roughness

a = cross-section area of structure

p = perimeter of the wetted channel

s = slope in feet per foot

- B. The coefficient of roughness, "n", shall be as follows unless otherwise approved by the Township Engineer:
 - 1. 0.015 for concrete pipe and similar paving
 - 2. 0.025 for corrugated metal pipes and flumes.
 - 3. 0.04 for earth ditches.

6. Permissible Stream Velocities in Open Channels

	Allowable Velocity
<u>Material</u>	(Feet Per Second)
Well established grass on good soil –	
Short pliant bladed grass	5-6
Bunch grass, soil exposed	2-4
Stiff stemmed grass	2-3
Earth without vegetation –	
Fine sand or silt	1-2
Ordinary firm loam	2-3
Stiff Clay	3-5
Clay and gravel	4-5
Coarse gravel	4-5
Soft Shale	5-6
Other –	
Bituminous or cement stabilized channels	6
Paved Channels	10-15

7. Calculations

The Grading and Storm Drainage Plan shall include calculations indicating velocities of flow, grades, sizes, and capacities of water carrying structures, debris or sediment basins, and retention and detention structures and sufficient design information to construct such facilities.

8. <u>Detention Basin Requirements</u>

- A. In addition to the requirements found in Ordinance 271, detention basin shall be designed such that the post-development 5 year peak discharge shall not exceed the predevelopment 2 year peak discharge; the post development 10 year peak discharge shall not exceed the predevelopment 5 year peak discharge; the post development 25 year post development peak discharge shall not exceed the predevelopment 10 year peak discharge, while maintaining a minimum freeboard of one foot.
- B. The emergency spillway shall be able to pass the 100 year post development peak discharge with 0.5 feet of freeboard measured to the top of the berm.
- C. The emergency spillway and the outfall of the detention basin shall be lined with mortared rip rap and shall meet requirements of PennDOT Publication 408. Other lining methods may be considered by the Township Engineer.
- D. The minimum top width of the detention basin berm shall be 10 feet, unless the Township Engineer determines that a greater width shall be required.
- E. Maximum inside and outside slopes of earthen detention basin shall be 5 horizontal to 1 vertical. An access slope of 8 horizontal to 1 vertical (maximum) may be required, based upon recommendation by the Township Engineer.
- F. Where no existing point of concentration exists, the outfall from a detention basin shall not discharge closer than 30 feet from the adjoining property line, unless permission is given, in writing, by said adjacent property owner.
 - Where discharge from the detention basin is to be spread into sheet flow, the allowable flow shall be determined by the predevelopment flow rate for a two year storm, across the length of the spreader.
- G. Antisteep collars and a cutoff trench shall be required on basins having a berm height exceeding 5 feet.
 - Watertight antisteep collars shall be installed around the discharge pipe at intervals not to exceed 24 feet or as approved by the Township Engineer. Collar shall extend a minimum of 2 feet beyond the outside of the pipe.
- H. Where, in the opinion of the Township Engineer, soil permeability is low, an area, just preceding the outlet structure, representing 25% of the basin flor area or 1,200 square

feet, whichever is smaller, shall be excavated to a minimum depth of 22", filled with minimum 18" depth of #3A (or larger) aggregate, covered with 4" depth topsoil and seeded or sodded.

- I. Fencing, surrounding the detention basin, shall be required if any of the following conditions are evident:
 - 1. The maximum design depth of water in the basin shall exceed 30".
 - 2. The basin is intended to retain water for periods exceeding 4 hours after rainfall subsides.
 - 3. The Washington Township Board of Supervisors determines that public safety would be endangered if the basin were not fenced.

Fencing shall be a minimum 4 feet high, chain link or other as approved by the Board of Supervisors, and shall have suitable gates to permit access by maintenance vehicles.

- J. Where a detention basin shall be constructed in view of an existing dwelling or an existing proposed street, and the basin depth exceeds 30", it shall be screened from view using evergreen screening or other methods approved by the Board of Supervisors.
- K. Basins not having direct access to a public street shall have a 25' wide, usable access easement to a public street.
- L. The design engineer shall verify that the operation of the detention facility will not significantly increase downstream peaking conditions per the adopted Act 167 Stormwater Management Plan.

Appendix E

Centralized Sewage Disposal System Procedures and Requirements

1. General

All centralized sewage disposal system design, plans and construction shall:

- A. Be compatible with sewage feasibility studies and plans on the Township.
- B. Comply with all requirements of the Department of Environmental Protection and of the Township, whichever may be more stringent.
- C. Be approved by the appropriate agencies prior to Final Plan submission.

2. Collection

All sanitary sewers and appurtenances shall be designed and constructed in accordance with regulations and requirements of the Department of Environment Protection (as set forth in the Sewerage Manual prepared by the Bureau of Water Quality Management), and/or the Township. In the case of relatively small Community Sewage Systems (as defined in Chapter 73 of the Department Regulations) the applicant may submit a written request for a variance from such requirements together with justification therefor. All sanitary sewers shall be designed and constructed to provide adequate capacity for the ultimate flow of the subject development plus such additional flow as may be projected to be generated by adjacent or nearby properties within a period of twenty (20) years.

The plans shall provide that all individual lateral connections be installed to the curb or right-ofway at the time of initial installation.

- A. <u>Existing Facility.</u> Plans for the extension of existing sanitary sewers shall be prepared by or on behalf of the utility and approved by it. Such plans shall be submitted to the Township Planning Commission and the Engineer. The Utility shall also secure such approvals, permits and certificates of convenience to furnish such services from the appropriate State agencies as required.
- B. Proposed Facility. Plans for proposed sanitary sewers shall be prepared by a registered professional engineer well versed and knowledgeable in the field. Such plans shall be submitted to the Township Planning Commission and the Engineer. The applicant shall also secure such approvals, permits and certificates as required.

3. Community Sewage Systems

All systems utilizing subsurface disposal of sewage effluent (Community Sewage Systems as defined by Chapter 73 of the Department of Environmental Protection Regulations) shall be designed and constructed in accordance with requirements of the aforesaid Chapter 73 and the Township.

The registered Professional Engineer employed by the applicant shall certify that the existing or proposed facility has adequate capacity to satisfactorily treat the total projected sewage flow.

4. <u>Sewerage Services</u>

All systems classified as Sewerage Services (as defined by Chapter 73 of the Department of Environmental Protection Regulations) shall be designed and constructed in accordance with regulations and requirements set forth in the Sewerage Manual prepared by the Bureau of Water Quality Management.

- A. <u>Existing Facility.</u> The utility shall demonstrate the adequacy of treatment capacity to serve the proposed subdivision or land development.
- B. Proposed Facility. Plans for proposed treatment and discharge facilities shall be prepared by a registered Professional Engineer well versed and knowledgeable in the field. Such plans shall be submitted to the Township Planning Commission and the Engineer. The applicant shall also secure such approvals, permits and certificates as required.

5. Township Official Plan

The applicant shall demonstrate compliance with or cause to be prepared such revisions as may be requested for the Official Township Sewage Plan and Township Sewage Feasibility study.

Appendix F

Central Water System Development Procedures and Requirements

1. Central Water Supply

A Central Water Supply System shall meet the requirements stated herein prior to the approval of a preliminary subdivision or land development plan which proposes to use such Central Water Supply Systems.

A. Existing Utility

- The Utility shall submit plans for extension of its present distribution system to the Washington Township Planning Commission and the Township Engineer. The Utility shall also secure such permits and certificates to furnish such services from the appropriate State Agencies where required by Ordinance.
- 2. The Utility shall demonstrate an adequacy of supply to provide a minimum of 110 gallons per capita per day and/or 400 gallons per day for each residential dwelling unit to be serviced. Service to Industrial or Commercial establishments shall show adequacy of supply to meet said Industrial or Commercial needs as established by the American Water Works Association and/or Pennsylvania Department of Environmental Protection.
- B. <u>Proposed Utility</u>. Any proposed new utility shall be engineered by a registered professional engineer.

The Applicant shall present evidence to the Township Planning Commission that the subdivision or land development is to be supplied by a certified public utility, property owner's association, or by a municipal corporation, authority or utility. A copy of a Certificate, Cooperation Agreement, or Commitment or Agreement to serve the area in question, shall be acceptable.

2. Sanitary Survey

A sanitary survey at the proposed well site shall be performed by the Pennsylvania Department of Environmental Protection.

3. Well Construction Procedures and Requirements

A. The inside diameter of the permanent casting and drill holes shall not be less than a nominal six inches and the casting shall consist of black steel pipe with a minimum wall thickness of 0.280 inch conforming to ASTM Specification A-53 having either screwed couplings or welded joints and equipped with a six inch forged steel drive shoe.

- B. The well shall be constructed by the driving of a temporary nominal ten inch diameter steel pipe to a solid rock formation and the under drilling of a nominal ten inch diameter hole for a minimum depth of twenty feet into hard rock below the bottom of the ten inch casing. The permanent six inch casing shall be concentrically set in the hole at this point and shall extend from the bottom of the hole to one foot above the final grade elevation. The annular space between the inner casing and the drilled hole and between the inner and outer casing shall be completely sealed with quick-setting cement grout. The grout shall be forced by pressure into the annular space, starting at the bottom and the operation shall be continuous until the grout flushes out at the ground surface with the outer casing being withdrawn as grouting proceeds. The quick-setting cement shall be a minimum of two inches thick surrounding the permanent casing.
- C. The quick-setting grout shall be allowed to set for a minimum period of thirty six hours and no work is to be performed on the well during this period. Extreme care must be taken in all subsequent drilling of the six inch well to avoid jarring and cracking the grout. The Contractor shall supply and install a threaded type cap for temporary sealing of the casing to prevent tampering with or the insertion of foreign objects into the well.
- D. The well must be commercially straight and true. Under no circumstances may the deviations from plumb be sufficient to interfere with the installation of proper operation of a shaft driven turbine type well pump.
- E. Utility Company water source shall be centrally located within a dedicated open space water protection zone of minimum 43,560 square feet in area. No buildings other than the Utility Company pumping station, Standtank, etc. shall be constructed thereon. No on-lot sewage disposal system shall be constructed within two hundred feet of such water source well.

4. <u>Dynamic Water Recovery Rate and Draw-Down Test</u>

A. Test Required

- Deep well water sources shall be tested to determine the Dynamic Recovery
 Rate draw-down. The time duration of said test shall encompass a continuous
 seventy two hour period minimum.
- The proposed new Utility Company or Developer shall notify the Township Engineer and the Pennsylvania Department of Environmental Protection Agency of the date and time said test is scheduled to start and end by registered or certified mail. Such notification must be received at least seven days prior to starting the test.
- 3. The test results shall be recorded in triplicate on the appropriate forms provided by the Township Engineer and certified as to accuracy of test performance by a registered Professional Engineer licensed in the Commonwealth of Pennsylvania. Such test results shall bear the Engineer's seal and signature.

- B. <u>Test Procedure</u>. The Dynamic Recovery Rate and draw-down test shall be conducted as follows:
 - 1. a. Requirement for wells situated in water bearing slate. Four test hole wells drilled to the same depth as the source well and having a minimum diameter of two inches shall be placed in each of the four quadrants at a distance of one hundred feet from said well in order to determine the area of influence and specific capacity of the source well.

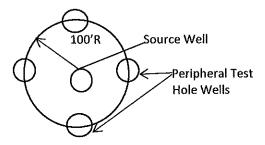


Figure F-1

- b. A submersible pump, capable of variable output, having sufficient capacity to exceed the Dynamic Recovery Rate of the water source shall be employed for said test. It is recommended that the capacity of the source pump be such that draw-down to within twenty feet of the source pump be achieved in a maximum of three hours.
- c. A suitable calibrated water meter capable of measuring the water output in units of gallons or cubic feet shall be connected to the water source pump outlet.
- d. The exact location of the water source pump with respect to the bottom of the well shall be recorded and maintained constant for the duration of the test.
- e. The water source pump shall be operated at maximum capacity and output for the first six hours of the test or until the water level in the source well reaches a point twenty feet above the water source pump. The elapsed time and rate of pumping shall be recorded at sixty minute intervals on the provided log data form.
- f. Draw-down of the source well in feet shall be recorded at sixty minute intervals as well as the water draw-down of any required peripheral test hole wells on the log data form.
- 2. Reduce the maximum rate of pumping by ten gallons per minute and continue pumping for the next two hours of test or until the water level reaches a point twenty feet above the water source pump. The elapsed time, rate of pumping

and draw-down of the source well and, where required, the peripheral test hole wells shall be recorded on the log data forms at sixty minute intervals.

- 3. Continue the above procedure using the two hour time periods or the criteria of water level above the source pump until the conditions are such that the Dynamic Recovery Rate of the water source equals the pumping rate (dynamic equilibrium). The Township Engineer may increase the increment of gallons per minute reduction where on-site review of the data warrants such action. Note, as the Dynamic Recovery Rate is approached, the increment of gallons per minute reduction will need to be reduced from ten gallons per minute to eight gallons per minute to five gallons per minute to zero gallons per minute. At this point, no deductible change in draw-down will occur. If any change in draw-down is detected, either plus or minus, dynamic equilibrium has not been achieved.
- 4. When said Dynamic Recovery Rate is reached, record elapsed time, pumping rate and draw-down on the log data form and continue pumping at this rate for the remainder of the seventy two hour test time or a minimum of twenty four hours, whichever is the greater time. Elapsed time, pumping rate and draw-down of the source well and where required, the peripheral test wells, shall be recorded hourly.
- 5. Measures of static water level recovery shall be made on the source well and peripheral test hole wells where required on an hourly basis and the data recorded for a minimum time period of twenty four hours upon cessation of the Dynamic Recovery Rate test.
- 6. Calculations of Specific Capacity and safe daily yield of the source well shall be submitted to the Township Engineer and appropriate State Agency by the registered Professional Engineer employed by the Utility Company or Developer for review and analysis.
- 7. Where peripheral test hole wells were required for determining specific capacity of the source well aquifer, such test hole wells shall be abandoned by filling with sand to the level twenty feet into bedrock and filling the remaining distance to the surface with quick-setting grout.

5. Water Distribution System Requirements

A. <u>Water Mains</u>

- 1. Water mains shall be a minimum of eight inches in diameter.
- 2. Gate valves shall be installed at all street intersections. Spacing between gate valves shall not exceed twelve hundred feet.

3. Acceptable Materials:

- a. Cement lined cast iron pipe.
- b. Cement lined ductile iron pipe
- c. Steel pipe
- d. Reinforced concrete pipe (for mains greater or equal to twelve inches in diameter).
- e. Other suitable materials approved by the Township Engineer having inherent properties of non-corrosiveness, mechanical strength under pressure or vacuum and non-susceptibility to pitting or formation of tubercles.

Note: Wall thickness of all distribution pipe materials shall be capable of withstanding 250 pounds per square inch pressure test without rupture.

B. <u>Customer Connections</u>

- 1. All service connections from the main to the customer shall be minimum of three-quarters inch inside diameter (I.D.).
- Customer service connections shall be one of the approved materials for mains.
 Heavy wall copper may be used for service connections where soils are not
 permeated or subject to acidic ground drainage waters.
- 3. A curb stop shall be furnished for each customer service connection.
- 4. Water supply pressure shall be a minimum 40 pounds per square inch at the customer's meter.
- Cross connections A cross connection is any physical connection, direct or indirect, which provides a potential opportunity for non-potable water to enter a conduit, pipe or receptacle containing potable water. Such cross connections are prohibited.

C. Leakage Test

 Extension of existing utilities or proposed utilities distribution system shall meet the requirements stated herein. No installation shall be approved until the leakage is less than the number of gallons per hour as determined by the formula below:

Where:

L = Allowable leakage in gallons per hour.

N = Number of joints in the length of pipe.

D = Nominal diameter of the pipe in inches.

P = The average test pressure during test.

2. Leakage tests are conducted by measuring, through a calibrated meter, the amount of water which enters the test section under normal working pressures for a period of at least two hours.

6. Water Service Area Requirement – Drilled Well Source

- A. The Dynamic Recovery Rate in gallons per minute establishes the criteria for adequacy of the water source based on 110 gallons per capita day or 400 gallons per dwelling unit per day.
- B. The minimum number of residential dwelling units that may be serviced by a utility within any service area shall be fifty.
- C. If the Dynamic Recovery Rate is insufficient to meet the adequacy of supply requirements for the service area under consideration, additional Drilled Well Water sources must be developed. Such additional sources shall be located in geologically separate aquifers. When the utility intends to employ more than one well in a single aquifer, a Dynamic Recovery Rate and draw-down test shall be connected on each well simultaneously to determine the adequacy of supply of such aquifer. In addition, such test shall encompass a continuous test time period of 120 hours minimum.

7. Distribution, Storage and Maintenance Requirements

- A. Utilities serving fifty or more, but less than one hundred customers, shall maintain a minimum distribution storage capability of one hundred percent of the twenty four hour demand and one complete set of standby replacement pumps.
- B. Utilities serving greater than one hundred but less than two hundred customers shall maintain a minimum distribution storage capacity of one hundred percent of the maximum twenty four hour demand, a complete set of standby replacement pumps and an auxiliary power generating source. A single fire hydrant connected by an 8" cast iron (or other suitable pipe material)main directly to the storage facilities shall also be

provided. Such hydrant shall meet local fire company requirements for size and hose connections.

- C. Utilities servicing greater than 200 customers shall provide elevated storage facilities of sufficient capacity to meet Insurance Services Office requirements for fire protection, fire hydrants and design requirements of the American Water Works Association. Said fire hydrants shall meet local fire company requirements for size and hose connections.
- D. All utilities are required to furnish the municipality with an accurate comprehensive map showing exact location of the utilities distribution system. Additions or changes within said system shall be duly noted thereon and the utility shall furnish updates of said comprehensive map within 30 days of the completion of such additions or changes.
- E. The Insurance Service Office requirements for low or medium value residential and commercial areas are indicated in the table below. Subject to changes by the Insurance Services Office.

Zone	Rated Capacity GPM	Time Duration (Hours)	Residual Pressure At Rated Capacity	
Residential	500	4	20 PSI	
Commercial	1000	6	20 PSI	

8. Nonmunicipal Owned Public Utilities

All utilities furnishing the public with water service shall be organized in such fashion as to fall within the jurisdiction of the Pennsylvania Public Utilities Commission.

	CTED by the Supervisors of the Township of		
Washington, County of Northampton and Commonwealth of Pennsylvania, into an Ordinance this 9 th day of Seprember , 2020.			
	WASHINGTON TOWNSHIP BOARD OF SUPERVISORS		
	By: Robert Smith, Chairman		
	By: David Hess		
	By: Carl Tolino		
ATTEST:			
By: Sal Puty Gail Putvinski, Secretary			
Approved and certified this 9th	day of <u>Sterember</u> , 2020.		
	Robert Smith, Chairman		
ATTEST:			
By: Sal Puture Gail Putvinski, Secretary			