WATER AND SEWER REVIEW CHECKLIST

August 2020

CITY OF ROCKVILLE
DEPARTMENT OF PUBLIC WORKS (DPW)
111 Maryland Avenue
Rockville, Maryland 20850
240-314-8500
www.rockvillemd.gov

Project Information:

Project Name: _____

Legal Description: Subdivision: _____ Lot(s) and Block(s): _____ Parcel(s): _____

Property Address: _____

Tax Acct. ID(s): _____

Engineering Firm: _____

Contact Person: _____

Phone Number: _____

Email Address: _____

PDS Case No: _____

DPW PWK Permit No. _____ (assigned by DPW)

DPW SMP Permit No: _____ (assigned by DPW)

DPW SCP Permit No: _____ (assigned by DPW)

Proposed Water and Sewer Work: (Check all that apply)

- ☐ Abandon existing water (main and/or connection)
- ☐ Construct new water (main and/or connection)
- ☐ Fire hydrant
- ☐ Abandon existing sewer (main and/or connection)
- ☐ Construct new sewer (main and/or connection)
- ☐ Other _____

How To Use This Checklist:

This checklist has been developed to provide the engineer with guidance in preparing and submitting Water and Sewer Plans. All items in this checklist must be addressed. The engineer must complete each item in the checklist prior to submittal and indicate the status by completing the left hand column entitled "Initial Submission." Use the legend below to complete this column. Any items that are marked INC (incomplete) must be explained. The engineer must sign this checklist indicating that it has been completed in accordance with this guidance and the Submission Acceptance Policy below.

Legend: ☒ = Complete or Provided, N/A = Not Applicable, INC = Incomplete (provide explanation)

Submission Acceptance Policy:

Correctly filling out this checklist will assist in the acceptance, review and approval process. All of the items in SECTION A - APPLICATION SECTION must be provided with the initial submission for the City to accept the package and forward it to the Reviewer. Incomplete submissions may be rejected. Once forwarded to the Reviewer, the Reviewer will have one week to review the package for the items listed in SECTION B - SUBMISSION REQUIRMENTS. Failure to include the required items or to explain items not included may result in the rejection of the submission without review.

_____ _____

Name of Firm Date

_____ _____

Signature of Responsible Person Responsible Person's Name

_____

Title

WATER AND SEWER REVIEW CHECKLIST - PAGE 2

Initial Submission		Rockville's Review 1st	2nd	3rd
A) APPLICATION SECTION (Submissions shall be made using the City's Virtual Permit Application portal available at www.rockvillemd.gov)				
1 _____	Completed and signed Public Works Improvement Plan (PWK) Application	_____	_____	_____
2 _____	Review Fee (Check made out to City of Rockville). Fee amount is based on estimated cost of public improvement work and per the Public Works Development Fee Schedule. Estimates shall use City Standard Prices for Cost Estimating as may be updated - available at: www.rockvillemd.gov/286/Streets-Driveway-Right-of-Way A Public Improvement Plan Resubmission Review Fee is required beginning with the fourth submission	_____	_____	_____
3 _____	One digital (PDF) copy of the proposed plans. Plans must be on 24" x 36" sheets and must utilize the standard City base sheet. Vector-Based PDF files are required for all plans, calculations, reports and other supporting documentation. It is recommended that drawings created in AutoCAD are converted to Vector-Based PDF by using the Autodesk Vector Graphic Converter "DWG to PDF.pc3 plotter driver."	_____	_____	_____
B) SUBMISSION REQUIRMENTS				
1 _____	Transmittal explaining purpose of the submission including explanation of any unusual circumstances	_____	_____	_____
2 _____	One digital (PDF) copy of the Signature Set and approval letter for the related PDS Plan	_____	_____	_____
3 _____	Copy of DPW Water and Sewer Authorization Letter, if applicable	_____	_____	_____
4 _____	One digital (PDF) copy of proposed water and/or sewer easements [second submission]. Easements may be dedicated by plat or by separate document and must be recorded prior to permit issuance. On-site and Off-site easements must be executed prior to plan approval	_____	_____	_____
5 _____	One digital (PDF) copy of Storm Drain Plans for informational purposes and to check crossings [second submission]	_____	_____	_____
6 _____	Documentation that plans have been sent to affected utility companies (PEPCO, Verizon, Washington Gas, COMCAST) for coordination	_____	_____	_____
7 _____	Public Improvement bond estimate [second submission]	_____	_____	_____
8 _____	State of MD Professional Engineer certification on the first sheet of the plan set	_____	_____	_____
9 _____	AutoCAD file of all public improvements, suitable for use in ESRI ArcMap. Required upon City's request prior to as-built approval	_____	_____	_____
C) GENERAL INFORMATION				
1 _____	Include standard notes on the plan: City of Rockville General Notes, Water and Sewer Notes, and Geotechnical Notes (available at www.rockvillemd.gov)	_____	_____	_____
2 _____	All aspects of water and sewer designed in accordance with WSSC standards, specifications and details unless otherwise indicated or directed	_____	_____	_____
3 _____	Add note to all applicable plan and profile sheets where new construction is proposed: Restrain all pipes and fittings	_____	_____	_____
4 _____	Provide water blocking and thrust restraint calculations if connecting to an existing, non-restrained water system or when non-standard details are included in the design	_____	_____	_____
5 _____	Crossings with existing utilities require test pits to verify horizontal and vertical information. If test pits are not performed before plan approval, encountered field conflicts may result in the need to resubmit revised plans to DPW for review and approval. Project delays may occur and additional review fees may be incurred	_____	_____	_____

WATER AND SEWER REVIEW CHECKLIST - PAGE 3

Initial Submission		Rockville's Review 1st	2nd	3rd
C) GENERAL INFORMATION (continued)				
6 _____	Perform soil borings for new subdivisions and/or projects proposing more than 1,000 feet of new public water and/or sewer. Provide a minimum two borings per 1,000 feet of main. Provide a geotechnical report prepared by a qualified professional that identifies recommendations for utility construction, including bedding. Geotechnical recommendations must be incorporated into the design unless otherwise directed. Soil report submitted no later than second submission	_____	_____	_____
7 _____	Completed Plumbing Application and applicable fees submitted to Inspection Services Division (PDS). Refer to ISD Fee Schedule - available at: https://www.rockvillemd.gov/DocumentCenter/View/477/Fee-Schedule---Inspection-Services-Division?bidId=	_____	_____	_____
8 _____	Water and Sewer Plan may be approved but PWK permit will not be issued until the other required DPW permits are issued	_____	_____	_____
D) BASE SHEET				
1 _____	Scale 1" = 30' or larger with Legend, North arrow and Datum (NAD 83/91, NGVD 88) unless otherwise approved. Provide two benchmarks with location, elevation and description. Provide two graticule tick marks per plan view sheet for georeferencing	_____	_____	_____
2 _____	Vicinity Map (1" = 2000') with site outlined/labeled in upper right hand corner	_____	_____	_____
3 _____	Name, address and telephone number of firm or individual that prepared plan	_____	_____	_____
4 _____	Name, address, telephone number, email of Owner/Applicant on the first sheet	_____	_____	_____
5 _____	Title block containing project name, plan description, property's legal description (subdivision, lots, parcels and blocks), election district, etc.	_____	_____	_____
6 _____	Number sheets consecutively and provide match lines if needed	_____	_____	_____
7 _____	Miss Utility Note on first sheet	_____	_____	_____
8 _____	Seal, signature, license number of a Maryland Professional Engineer on all sheets [mylar submission]	_____	_____	_____
9 _____	Add note to all sheets: This Plan Is For Public Improvements Only	_____	_____	_____
E) PLAN VIEW				
1 _____	Property outlined with bearings and distances, and/or rights-of-way within the project limits	_____	_____	_____
2 _____	Proposed right-of-way or easement dedication delineated with acreage and square footage noted. Provide minimum 20' wide easement for water or sewer main and minimum 30' wide easement for parallel water and sewer	_____	_____	_____
3 _____	Existing and proposed public and private streets with rights-of-way shown and widths labeled	_____	_____	_____
4 _____	Adjacent property information with owner name, property address and legal description (i.e. subdivision, lot and block.) If adjacent property is part of the proposed subdivision only lot and block is required	_____	_____	_____
5 _____	All existing and proposed easements shown and labeled with limits, use and liber/folio or plat and plat book. Include P.U.E.s	_____	_____	_____
6 _____	Existing topography and proposed grading at two (2) foot contour interval (only required for sewer outfalls unless otherwise directed)	_____	_____	_____
7 _____	Natural resources such as streams, drainage ways, wetlands, wetlands buffer and 100 year floodplains. Note: 100 year floodplains exist when the drainage area to any point on the property $\geq$ 30 acres	_____	_____	_____
8 _____	Existing trees including type and size as shown on the approved NRI/FSD	_____	_____	_____
9 _____	All existing features within the project limits (buildings, paving, curb and gutter, sidewalk, etc.) shown and labeled to remain, to be removed, to be abandoned, to be relocated, etc.) Layers to be lighter or screened for clarity	_____	_____	_____

WATER AND SEWER REVIEW CHECKLIST - PAGE 4

Initial Submission		Rockville's Review 1st	2nd	3rd
E) PLAN VIEW (continued)				
10 _____	Overhead utilities including utility poles, streetlights, traffic signal poles and equipment. Underground utilities including location, type, material and sizes. Crossings with existing utilities will require test pits to verify horizontal and vertical information	_____	_____	_____
11 _____	Existing water and sewer and appurtenances within the project limits. Include field verified location, size and material for: existing manholes, water and sewer mains, individual service connections, fire hydrants and valves, including nearest hydrant and valve for shut off. Provide field shot inverts and sizes for all pipes into and out of manholes and tops of structures	_____	_____	_____
12 _____	Proposed improvements within project limits (buildings, paving, curb and gutter, sidewalk, etc.)	_____	_____	_____
13 _____	Basement and first floor elevations for each structure	_____	_____	_____
14 _____	Proposed utilities within the project limits (storm drain pipes and structures, gas, electric, cable, etc.) Label size and material	_____	_____	_____
15 _____	Proposed water mains including size, pressure class, all fittings and blocking. Stationing must coordinate with the profile	_____	_____	_____
16 _____	Proposed valves	_____	_____	_____
17 _____	Proposed fire hydrants	_____	_____	_____
18 _____	Water service connection to each lot, parcel, or building shown and labeled. (Sizes to be approved by ISD. Locations to be approved by DPW.)	_____	_____	_____
19 _____	Water meters shown and labeled. (Sizes to be approved by ISD. Locations to be approved by DPW.) Water meter to be placed one (1) foot behind right-of-way into private property unless otherwise approved	_____	_____	_____
20 _____	Show and label water blocking and pipe restraints with WSSC standard detail number. If blocking or restraint is not standard, label as such and provide a special detail on the plan	_____	_____	_____
21 _____	Proposed sewer mains including size, material, class and direction of flow indicated with an arrow to match the profile. Minimum eight (8) inch sewer size	_____	_____	_____
22 _____	Manhole numbers to match profiles. Label manholes with drop connections or transition manholes	_____	_____	_____
23 _____	Sewer service connections shown and labeled with size and material	_____	_____	_____
24 _____	Cleanouts shown and labeled. Cleanouts to be located at property line	_____	_____	_____
25 _____	Legend for all existing and proposed plan elements that are not labeled	_____	_____	_____
F) WATER PROFILE				
1 _____	Scale: Horizontal 1" = 50' and Vertical 1" = 5', or greater	_____	_____	_____
2 _____	Finished and/or approved grade shown and labeled	_____	_____	_____
3 _____	Profiles drawn to match direction of water main on plan view	_____	_____	_____
4 _____	Stationing to match plan view with stations of all valves, bends, tees, etc. shown	_____	_____	_____
5 _____	Mains shown with sizes and material labeled	_____	_____	_____
6 _____	Four (4) feet of cover over finished and/or approved grade or existing street grade	_____	_____	_____
7 _____	Crossings with existing and/or proposed utilities shown and labeled. Include type, material, size and invert of utility at crossing. Minimum one and one-half (1.5) feet vertical clearance between water and sewer, and minimum one (1.0) foot vertical clearance from all other utilities (measured outside to outside)	_____	_____	_____
8 _____	Water service connections shown with address, parcel or lot/block to be served labeled	_____	_____	_____

Initial Submission		Rockville's Review 1st	2nd	3rd
G) SEWER PROFILE				
1 _____	Scale: Horizontal 1" = 50' and Vertical 1" = 5', or greater	_____	_____	_____
2 _____	Finished and/or approved grade shown and labeled	_____	_____	_____
3 _____	Profiles drawn to match direction of sewer main on plan view	_____	_____	_____
4 _____	Pipe lengths with 0+00 set at lowest invert per run	_____	_____	_____
5 _____	Mains shown with sizes, material, class and slopes as percentage and to the hundredth decimal place	_____	_____	_____
6 _____	Sewer designed to normal maximum depth of up to ten (10) feet unless otherwise required due to site or utility clearance constraints and as approved by DPW	_____	_____	_____
7 _____	Minimum slopes must be per WSSC criteria and as approved by DPW. Terminal sewer sections must be a minimum of 1.0%	_____	_____	_____
8 _____	Label all inverts to the hundredth decimal place	_____	_____	_____
9 _____	Material to be ductile iron for all sewer steeper than 10% and at stream crossings. Stream crossing protection shown and standard detail labeled or provided special detail if non-standard	_____	_____	_____
10 _____	Manhole drop connections labeled. Only inside drop method will be permitted	_____	_____	_____
11 _____	Minimum of one-tenth (0.10) foot channel drop through standard manholes	_____	_____	_____
12 _____	Manhole numbers shown to match plan view with field verified rim elevations and slope as percentage to the hundredth decimal place	_____	_____	_____
13 _____	Rim elevations and depths labeled. Rim elevations are to be field verified when manholes are to be set in existing ground or existing streets. Frame and cover to be set flush with existing, proposed or approved grade as applicable	_____	_____	_____
14 _____	When manholes are located in environmentally sensitive areas (forests, streams, etc.), frames and covers shall be set at one (1) foot above existing ground	_____	_____	_____
15 _____	Crossings with existing/proposed utilities shown and labeled. Include type, material, size and invert of utility at crossing. Minimum one (1) foot vertical	_____	_____	_____
16 _____	All SHCs shown with address, parcel or lot/block labeled	_____	_____	_____
17 _____	Minimum 2% slope for all SHCs	_____	_____	_____
18 _____	Sewer to be concrete encased wherever sewer crosses OVER water main. Show and label standard detail number or special detail if non-standard	_____	_____	_____
H) SPECIFIC DESIGN REQUIRMENTS				
1 _____	Water and Sewer Pipe and Structure Schedule with material list	_____	_____	_____
2 _____	Maintain a minimum of ten (10) feet horizontally between water and sewer, and between existing/proposed water and/or sewer and all other structures, utilities and apprutenances (measured outside to outside)	_____	_____	_____
3 _____	Maintain a minimum of five (5) feet horizontally between existing/proposed storm drain pipes and structures, utility poles, dry utilities and appurtenances, conduits, etc. (measured outside to outside)	_____	_____	_____
4 _____	Maintain a minimum 15 feet between water and/or sewer mains (12" dia. or under) and buildings, and a minimum 25 feet from buildings (15" dia. or larger)	_____	_____	_____
5 _____	Minimum fire hydrant spacing shall be 500' in single family developments and 250' to 300' in townhouse and all other areas. Locate hydrants on lot lines and in accordance with WSSC guidelines and/or as directed by DPW and Inspection Services Division (ISD)	_____	_____	_____
6 _____	Fire hydrants must be strapped to mains	_____	_____	_____

Initial Submission		Rockville's Review 1st	2nd	3rd
H) SPECIFIC DESIGN REQUIRMENTS (continued)				
7 _____	All pipe joints and fittings for new construction must be restrained	_____	_____	_____
8 _____	Valves are to be located at all sides of tees and crosses	_____	_____	_____
9 _____	Provide minimum valve spacing to allow shut off of 50 residential units or two street blocks and at all fire hydrant leads	_____	_____	_____
10 _____	Minimize the number of water bends. Minimum 300' radius for DIP and minimum 820' radius for C-900	_____	_____	_____
11 _____	Water should be located seven (7) feet off centerline of proposed curb and gutter	_____	_____	_____
12 _____	Each commercial building, lot or parcel must have a separate sewer and water service connections with meter unless otherwise permitted by City code	_____	_____	_____
13 _____	Manholes should be located outside of driveways aprons, sidewalks, handicap ramps, bike paths and parking spaces whenever possible or as directed	_____	_____	_____
14 _____	Note: All pressure sewer systems and grinder pumps are to be designed in accordance with WSSC standards, specifications and details	_____	_____	_____
15 _____	When only first floor service is proposed, verify and demonstrated that adequate cover over the service connection is achieved within the property	_____	_____	_____
16 _____	When water meters are located on private property they must be placed in an easement. Delineate the easement on the plan and label the dimensions	_____	_____	_____
17 _____	Water meters and connections shall comply with Chapter 24 Section 24-32(a)(5). A separate water service connection and water meter shall be provided for all residential portions of mixed-use structures. Multiple service connections and meters are allowed for one lot provided the additional connections provide service for residential development	_____	_____	_____

COMMENTS: