Beaufort Jasper Water & Sewer Authority

Development Policy

and

Procedure Manual

Effective Date: January 25, 2024

RESOLUTION

ADOPTING THE BEAUFORT JASPER WATER AND SEWER AUTHORITY DEVELOPMENT POLICY AND PROCEDURE MANUAL DATED JANUARY 25, 2024

WHEREAS, it is the policy of the Beaufort-Jasper Water and Sewer Authority to require all development connecting to its water and wastewater systems to follow certain specific procedures; and,

WHEREAS, the Authority has previously adopted a formal procedures document, which has recently been refined, enhanced, and improved by the staff with consideration of input provided by consulting engineers; and,

WHEREAS, the Authority's DPPM Ad Hoc Committee has reviewed the revised Development Policy and Procedure Manual and recommends its adoption by the BJWSA Board of Directors,

NOW, THEREFORE, BE IT RESOLVED by the members of the Beaufort Jasper Water and Sewer Authority duly assembled, that the revised Development Policy and Procedure Manual dated January 25, 2024 is hereby adopted.

ADOPTED, this 25th day of January, 2024 in Regular Session.

(SEAL)

BEAUFORT-JASPER WATER AND SEWER AUTHORITY OF SOUTH CAROLINA

By: Gregory A. Padgett

Gregory A. Padgett, Chair

Attest:

Dr. William Singleton, Secretary/Treasurer

PREFACE

Beaufort-Jasper Water Sewer Authority (BJWSA) supports development within its service area and has established policies to partner with developers to create water and sewer systems that are considered benefits to the whole system including those that are designed to serve all potential customers in the basin, economically feasible to install, efficient to operate, and easy to maintain. The purpose of this policy manual is to provide guidelines for the orderly installation of water and sewer infrastructure by developers in an effort to meet the growing needs of the community in the BJWSA service area. Each project must be reviewed and approved in a professional manner so that the system design, construction standards, and all applicable federal, state, and local rules and regulations are met. It is acknowledged that it is not possible to provide a document that covers every circumstance or situation that may arise. These development guidelines, while intended to be flexible enough to accommodate the individuality of each project, will be modified from time to time as necessary to accommodate changes in conditions, technologies, and best practices.

PERIODIC REVIEWS AND UPDATES TO

BEAUFORT-JASPER WATER SEWER AUTHORITY

DEVELOPMENT POLICY & PROCEDURE MANUAL

Beaufort-Jasper Water Sewer Authority (BJWSA) recognizes that external factors including governmental agency needs, regulatory requirements, environmental compliance, construction safety, new and improved products and materials, changes in construction means and methods, as well as internal practices related to processing and data management will require some level of on-going periodic reviews and updates to the BJWSA DPPM. Should you have input on related topics, please submit those to our Chief of Engineering. Our Chief of Engineering will maintain a rolling list of comments and feedback that will reviewed and considered on a quarterly basis, at his/her discretion.

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1.1) Introduction

Beaufort Jasper Water and Sewer Authority (BJWSA) is a special purpose district created by acts of the General Assembly of South Carolina for the purpose of providing potable water distribution and sanitary sewer service to the residents of Beaufort and Jasper Counties as necessary for public health and the protection of the environment. The following policies and procedures apply to water and wastewater related projects and activities which will become a part of the public system.

1.2) Abbreviations

ADF	Average Daily Flow
ANSI	American National Standards Institute
ASTM	American Society for Testing and Materials
BJWSA	Beaufort Jasper Water and Sewer Authority
CADD	Computer-Aided Design and Drafting
CCF	Capital Contribution Fee or Capacity Fee
CIP	Capital Improvement Program
DPPM	Development Policy and Procedure Manual
DRP	Delegated Review Program
FPS	Feet per Second
GPD	Gallons per Day
HP	Horsepower
HR	Hour
IFC	Issued for Construction
IGA	Inter-Governmental Agreement
LCOG	Lowcountry Council of Governments
NOB	North of Broad
NPSH	Net Positive Suction Head
OCRM	Ocean and Coastal Resource Management
PDF	Peak Daily Flow
PSI	Pounds per Square Inch
PVC	Polyvinyl Chloride
REU	Residential Equivalent Unit
SCDHEC	South Carolina Department of Health and Environmental Control
SCDOT	South Carolina Department of Transportation
SDR	Standard Dimension Ratio
SOB	South of Broad
TDH	Total Dynamic Head

1.3) Definitions

1. **Alternate supply main** - A water main that provides a second supply of water to an area, development, or subdivision, with the primary source of water being the entrance main. This is a second connection between the development and another existing main or planned future main, including those mains located along a spine or collector road of a land development project. It is not the same main as the entrance main connection. The purpose of this alternate supply main is to provide overall system redundancy and avoidance of dead-end lines/systems through the interconnecting of multiple subdivisions, developments or regional water systems.

2. **Approach main** – A water or sewer main extension that is necessary in order to provide service to a parcel of property or development. An approach main connects a developer's proposed system with existing infrastructure owned and maintained by BJWSA.

3. **Authority** - The Board of Directors of the Beaufort-Jasper Water and Sewer Authority (BJWSA), its delegates, and/or employees.

4. **Betterment** – Any improvement to the infrastructure of a development as requested by BJWSA that results in added benefit, to the water and/or sewer system. Examples of betterments include upsizing of pipe diameter to provide additional line capacity to meet future needs and onsite-extensions to the property line to serve future development by others. Upgrades and additions to existing infrastructure as required herein which are needed for the sole purpose of serving the development do not qualify as betterments

5. **Capital Contribution Fees (CCF)** – Also called capacity fees, these fees are assessed to new developments and customers to recover the cost of infrastructure that is constructed by BJWSA to accommodate additional customers. The cost of providing new water and wastewater treatment capacity is extremely expensive, and these fees are a widely accepted utility practice. The fees consider the cost to build treatment plant capacity as well are major distribution and collection system infrastructure. Fees are based on each service's maximum anticipated allotment of water and/or sewer capacity in the BJWSA system.

6. **Capital Improvement Project**– Extension, upgrade, and rehabilitation projects procured under contract with BJWSA and funded through capital funds allocated by the Authority. These projects are prioritized and programmed for execution into a 10-year CIP approved by the Board.

7. **Contractor** - A person, firm, corporation or other legal entity authorized to perform construction by the State of South Carolina Licensing Board for Contractors. A contractor may not perform work outside his licensed capacity.

8. **Density** - Defined as the number of REU per acre or the number of GPD per acre.

9. **Development** – A process performed by businesses, corporations, partnerships, individuals or other entities that encompass the performance of any land improvement operation, OR the

making of any material change in the use of any structure or land, OR the renovation of existing buildings for change in use or scope, OR the division of land into two (2) or more parcels or rights-of-way.

10. **Developer** - Any person, firm, corporation, or other legal entity improving property for commercial, industrial, institutional, or residential purposes.

11. **Water/Sewer Agreement** - A legal agreement between BJWSA and a developer that establishes the conditions under which BJWSA will assume ownership of water or wastewater assets constructed by the developer and provide water and/or wastewater services to a particular development. Developers of large projects are encouraged to meet with BJWSA to discuss the applicability and desirability of a developer agreement. This is not a Developer Agreement as defined per SC Code Section 6-31-10, et seq.

12. **Easement** – A right afforded to BJWSA to use another's real property to access the infrastructure for operation, maintenance or construction activities.

13. **Effluent** – Wastewater that has been treated and suitable for disposal.

14. **Engineer** - A person currently licensed as a Professional Engineer by the South Carolina State Board of Registration for Professional Engineers and Land Surveyors; Division of Occupational and Professional Licensing; Department of Labor, Licensing and Regulation.

15. **Entrance Main** – The water main at the primary entrance to a subdivision, typically the primary source of water for the development.

16. **Infrastructure** – Physical assets, such as treatment plants, pump stations, pipelines and appurtenances, which are required to provide water and sewer service to BJWSA customers.

17. **Land Surveyor** - A person licensed as a Land Surveyor by the South Carolina State Board of Registration for Professional Engineers and Land Surveyors; Division of Occupational and Professional Licensing; Department of Labor, Licensing and Regulation.

18. **Linear construction** – The portion of the water and sewer construction that is linear in nature and includes approach mains and water and sewer main extensions within arterial and collector roads or spine roads for a development. Water and sewer utilities along local subdivision roads or within commercial developments will not be considered linear construction.

19. **Lot** - A single parcel or tract of land that has been subdivided for the purpose of building a residence or commercial facility.

20. **Minor Project** – projects which involve connection of four or fewer water and/or sewer service connections, four or fewer REU's, and don't require a DHEC permit will be considered minor and will not be held to the same plan preparation standards as those for subdivision and commercial property development. Minor project will not be required to provide full hydraulic calculations (Loadings required), 24-hour time analysis is not required, and plan requirements will be very basic unless other jurisdictional requirements dictate a level of service related to plan development (i.e. DOT permit requirements). Submission could be as simple as a cover sheet,

plan sheet, detail sheet, loading summary, and project narrative paragraph. Minor project may assume that their submittal requirements are those outlined only in Section 2.08 B.

21. **Parcel** – A portion or plot of land, usually a division of a larger area.

22. **Plat** - A survey or drawing upon which the development is presented for approval.

23. **Potable Water** – Drinking water that is of sufficiently high quality that it is suitable for human consumption or use.

24. **Preconstruction Conference (Precon)** – The kick-off meeting prior to construction with representatives from BJWSA, the owner/developer, engineer and contractor to discuss general and project-specific procedures.

25. **Project** - Water and/or sewer construction activities required to serve a development in accordance with this policy.

26. **Project Fees** – Fees required to offset the costs associated with design review, construction inspection, conversion of record drawings and legal documents.

27. **Public Right-of-Way** – The portion of land in which a street or road owned and maintained by the South Carolina Department of Transportation or a local government is located.

28. **Record Drawings** – Drawings prepared by the Engineer of Record that compile on-site changes by the contractor and other sources as noted in the as-built drawings of the water and sewer systems at the completion of construction; also known as “as recorded” drawings.

29. **Residential Equivalent Unit (REU)** - A unit of measure established by BJWSA that equals the average daily water consumption and sewer discharge for a typical residential unit.

30. **Reuse (Reclaim) Water** – Wastewater that has been filtered and chemically treated to stringent standards so that the effluent meets state and federal standards for reclaimed water. While it is not suitable for potable water, reuse water can be used for non-potable applications such as irrigation.

31. **Service Authorization** – A letter of acceptance written by BJWSA to SCDHEC after new construction, stating that a water and/or sewer system will be owned, operated, and maintained by the Authority from that point forward. This is forwarded to SCDHEC for Permit to Operate to be issued.

32. **SCDHEC Approval to Place in Operation (a.k.a. Permit to Operate)** – A permit issued by SCDHEC that authorizes a new water and/or sewer system to be placed into operation.

33. **Service Connection** – Pipe laterals from BJWSA water and/or sewer mains to the front property lines of the parcels served.

34. **Sewer Capacity Allotment** – The anticipated sewer usage assigned to a project, based on the calculated maximum daily wastewater flows discharged from the development and measured in gallons per day (GPD). Capacity allotment will be as defined by SCDHEC unit loadings. Historical

loadings may be considered for commercial developments as permissible by SCDHEC regulatory requirements.

35. **Subdivision** - The division of a single tract, parcel, or lot into two or more lots, building sites, rights-of-way, or other divisions for the purpose of immediate or future sale, legacy, or building of a development. This definition also includes mobile home parks, multi-family projects, townhouses, apartments, and planned unit developments.

36. **Transmission Main** –A large-diameter water main that is used to convey water from treatment plants to storage locations within the system. The network of interconnected pipes from the storage facilities to the customers is considered the distribution system.

37. **Wastewater** – Any liquid waste or sewage discharged from a building sanitary plumbing system into a private or central collection, transmission, treatment and disposal system.

38. **Water Capacity Allotment** - The anticipated water usage assigned to a project, based on the calculated maximum daily wastewater flows discharged from the development and measured in gallons per day (GPD). Capacity allotment will be as defined by SCDHEC unit loadings. Historical loadings may be considered for commercial developments as permissible by SCDHEC regulatory requirements.

1.4) BJWSA Development Policies

The policies herein were written in response to requests for guidance by the development community on a number of issues pertaining to BJWSA's role in providing water and sewer services throughout the two-county service area. The intent is to provide clear procedural guidelines and policy to direct engineers and developers through the BJWSA system extension process. For conflicts between the Development Policy and Procedure Manual (DPPM) and the Technical Specifications, BJWSA staff will make the determination of policy interpretation, with the intent that the DPPM will prevail for matters relating to processes and procedures and the Technical Specifications will prevail on technical matters.

For disputes involving policies and/or application of policies, including technical specifications by BJWSA staff, a person or entity may request a policy variance per Section 1.07 contained herein.

1.5) Policy for Infrastructure Extensions or Expansions

1.5.1 Overview

The purpose of this policy is to provide guidelines for the approval of projects that expand or extend the water and sewer infrastructure intended to properties previously underserved and new developments in BJWSA's two-county service area. The rapid expansion of the BJWSA water and sewer systems has resulted in the need for quality standards for those systems being deeded to or constructed for BJWSA in order to reduce overall operations and maintenance costs, reduce the total inventory of spare or replacement components, and to create system familiarity to reduce down time during emergencies.

These policies are also designed to provide consistent and adequate information to contractors constructing the infrastructure so that developer change orders are minimized and so that engineers will have reliable information on which to plan future extension projects.

1.5.2 CIP Program

The Authority has established a 10-year CIP with projects to expand, improve or replace infrastructure used to deliver water and sewer service to its customers in Beaufort and Jasper Counties. Candidate projects are evaluated and prioritized by BJWSA staff based on criticality of the infrastructure to the existing system operations, the availability of funding, and the compatibility with the Authority's mission and strategic goals. The projects are programmed into the 10-year CIP and re-prioritized at least every three-years. Projects for emergency needs or intergovernmental agreements may be added into the CIP between the three-year renewal points.

Some CIP projects may be scheduled to expand or upsize existing infrastructure to accommodate future growth as indicated by BJWSA's master plan or other identified planning efforts. These projects, however, may get reprioritized to later years due to other planned or unplanned needs taking precedence. While BJWSA will make every effort to perform CIP work as scheduled, this may not always be the case and developers may be asked to participate on expansion projects which would ultimately serve their development through a betterment project.

1.5.3 Watermain/Sewer Collection Facilities by Petition (Front Foot Assessment Projects)

A. Private property owners in communities developed before water and sewer service became available may request a pipeline extension project be included in BJWSA's CIP, by submitting a petition calling for a water and/or sewer line extension to serve their neighborhood.

B. Because many older subdivisions in South Carolina were developed before water and sewer services were available, State Statutes (Sec 6-11-1230 (4)) authorize public service districts to install water distribution and sewer collection lines, and to assess the actual cost of the construction to those parcels of land directly abutting the lines. This statutorily authorized funding technique is referred to as a "front foot assessment". This statutory process allows BJWSA to install water distribution or sewer collection facilities to serve an already developed or subdivided area and then, by following a specific legal process, to assess the costs of those facilities against the parcels abutting the lines. The cost of the construction project is then collected from the property owners over a period not to exceed twenty (20) years through an assessment added to their property taxes. As land use changes, BJWSA will recalculate the assessment. This ensures that each parcel included pays its fair share of the project cost in accordance with the state statutes.

C. When the petition is submitted, BJWSA staff will develop a work scope and budgetary cost estimate for the pipeline extension project and schedule a meeting with the citizen group or neighborhood association to present the conceptual design and budgetary cost estimate, including the pro rata cost share of each property served. The affected property owners must then vote to adopt a resolution in support of the pipeline extension project. BJWSA will program the project into the CIP when a 2/3 majority of the property owners vote to adopt the resolution. The project will be incorporated into the CIP as soon as feasible considering other planned projects and budgets. It is important to note that an affirmative vote for the pipeline extension obligates ALL affected property owners to fund their portion of the pipeline upon completion of the project, regardless of whether they voted for or against the resolution.

1.5.4 Infrastructure Extension or Expansion Projects for Developments

When developing sites previously unserved by water and sewer collection facilities, developers are responsible for providing for expansion of the system to serve the water/sewer needs of a development. Such infrastructure to adequately serve the development includes but is not limited to the following:

A. Extension of watermains, forcemains, and/or gravity sewers to the development

B. Approach Mains – All costs for the water and sewer approach mains necessary to provide the required level of service for all phases of the development shall be borne by the developer. BJWSA will not extend an approach main at its expense.

Existing mains to serve a development shall be the same size or larger than the size of the approach main needed by the development.

Water - In instances where the existing water main is smaller than the approach main, the developer's engineer will be required to model the system to show that the system can meet level of service requirements for flow and pressure.

Sewer - In instances where the existing sewer main is smaller than the needed approach main or does not have adequate available capacity, the developer will be required to upsize the capacity of the downstream system to accommodate the development. The approach main shall be a gravity sewer when depth of the existing wastewater infrastructure is sufficient to provide service to any portion of the development. The approach main may be a sewer force main if both the following apply: depth of the existing wastewater infrastructure is insufficient to reach any portion of the development, and the force main serves more than one (1) REU. When the approach main is a gravity sewer, the approach main shall be connected at full depth and installed at the minimum grade for the size main required to serve all phases of the development and adjacent parcels within the service basin.

C. Interconnections – Minimize dead-end water mains, including lollipop systems, by looping water mains and interconnecting to points in the existing system. Entrance mains and alternate source mains can be used for interconnections.

D. Downstream Piping and Pump Station Upgrades (Sewer Infrastructure) – Should the development exceed the capacity of the existing downstream wastewater system after the point of connection, costs associated with the upgraded capacity of the existing downstream wastewater piping and pump stations may be borne by the developer, at BJWSA's discretion. BJWSA may request that developers provide additional infrastructure for a future flow conditions to ensure that upgrades are most efficient for operation and maintenance of the system. In the situation that BJWSA asks for additional infrastructure it will be treated as a Betterment project. BJWSA's discretion will be tied to their current capital project list, scope, and schedule.

E. Extensions within a New Development – A development master plan will be required for all phased developments and is to include primary connections, as well as interconnections between all phases All costs for the water and sewer extensions necessary to provide the required capacity to serve all phases of the development shall be borne by the developer. The developer will be financially responsible for extending water systems within a new development and connecting phases of the development. The sewer extension will be a gravity sewer when depth of the existing wastewater infrastructure is sufficient to provide service to any portion of the development. The sewer extension may be a sewer force main if both the following apply: depth of the existing wastewater infrastructure is insufficient to reach any portion of the development, and the force main serves more than one (1) REU. When the sewer extension is a gravity sewer, the main will be connected at full depth and installed at the minimum grade for the size main required to serve all phases of the development. Exceptions to this requirement may be considered when it can be determined to the satisfaction of BJWSA that the main being extended is a terminus main or a main that cannot otherwise be extended in the future to provide service.

F. Extensions within Subdivided Property – All costs for a system extension to serve a property that had service prior to its subdivision, necessary to provide the required capacity to serve the subdivided property, shall be borne by the developer, including the abandonment of any existing services. The sewer extension shall be a gravity sewer when depth of the existing wastewater infrastructure is sufficient to provide service to any portion of the development. The sewer extension may be a sewer force main if the depth of the existing wastewater infrastructure is insufficient to reach any portion of the development. When the sewer extension is a gravity sewer, the main shall be connected at full depth and installed at the minimum grade for the size main required to serve all phases of the development. Exceptions to this requirement may be considered when it can be determined to the satisfaction of BJWSA that the main being extended is a terminus main or a main that cannot otherwise be extended in the future to provide service.

G. Mains with Future Service Capacity – The cost of designing and constructing mains required for future phases of development may be required by BJWSA, and if so will be treated as a betterment. BJWSA reserves the right to establish design parameters for all proposed water and sewer systems serving new residential, commercial, institutional, and/or industrial developments so that all system improvements are consistent with BJWSA's master plans and standard practices for efficient and economic system operation and maintenance.

H. Alternate Water Supply Main –Alternate water supply mains are installed to assure that BJWSA customers will be minimally inconvenienced in case of a supply interruption, and to comply with the SCDHEC regulations regarding looping of water systems to avoid unnecessary dead ends.

In instances where the entrance main is a single dead-end water main feed to a subdivision an alternate supply main may be required for system interconnection, based on connection availability and sound engineering design principals for redundancy of critical assets. BJWSA may also requires an alternate supply main when an alternate supply of water is available within 250 feet of the new development and the existing watermain is a minimum of 6-inch diameter. All costs for the alternate supply main shall be borne by the developer. In cases where the alternate supply is not accessible via public rights-of-way, the developer shall attempt to obtain the easement(s) or encroachment permit(s) needed to access the alternate source. When an alternate supply main is requested by BJWSA for redundancy only, BJWSA may at their discretion consider this as a Betterment.

I. Unusual construction conditions that preclude this policy requirement include wetland crossings, open cuts over 10-feet deep, or documented denial of the easement or encroachment permit needed to access the alternate source. Road crossings in the method prescribed by the permitting authority will be considered as normal construction and will be required if necessary. For distances greater than 500 feet or if the aforementioned unusual construction condition exists, BJWSA may elect to provide credits over and above what is normal to the installation connection point in the new system or the existing main that will serve as the secondary supply source, and in all cases the alternate water supply main shall not be less than 6 inches in diameter.

J. For subdivisions with multiple entrances, an entrance main should be installed along each entrance road to the development at the expense of the developer by extending the existing water system to provide multiple connection points. Deviation from this requirement may be considered on a case by case basis, but in no case will designs be permissible which do not meet SCDHEC requirements.

K. To better serve each development and provide a more efficient system for the community, BJWSA may request that property owners, developers and engineers work with BJWSA to consider a regional approach and coordinate to design and construct the most efficient utility extensions to serve the general vicinity of the development.

L. **Betterment Projects** – BJWSA may determine that a system expansion planned for a development be upsized or otherwise improved to benefit the BJWSA system beyond that required by the development. BJWSA will determine the appropriate method for reimbursement or contribution to a betterment project on a case-by-case basis. Options for BJWSA's contribution towards the betterment include the following:

(A) Developer performs all work: developer obtains 3 bids for projects valued at over $150,000, BJWSA reimburses upon lowest bid. For projects valued at under $150,000 a single bid/quote is sufficient for BJWSA reimbursement.

(B) Developer performs all work: developer accept BJWSA pre-set amount for betterment, compensated through capacity credits,

(C) BJWSA contributes materials, developer performs installation and all other work: pre-purchased materials from BJWSA will serve as BJWSA's contribution towards completion of the betterment, **no capacity credits or other compensation** will be awarded under this option.

(D) Typically, BJWSA performs all work for betterments which includes a high percentage of cost contribution from BJWSA (e.g., regional pump station), BJWSA may at its discretion program the project into its CIP (based on funding availability and project timing).

Reimbursement for the cost of a betterment will be made in the form of capacity credits as described in the sections below. Regardless of form of BJWSA participation, a Water and Sewer Agreement with BJWSA will be required which specifies the terms of the betterment design, construction, and compensation.

The matrix below is intended to provide a list of the most typical betterments requested and the type of participation BJWSA may offer solely in its discretion.

For these options, participation will be BJWSA's discretion and typically the terms and conditions will be within a project specific utility Agreement.

Related to compensation for professional fees (#6 in the table below), compensation will only be provided for betterments which require substantial design work as determined by BJWSA to include but not be limited to extensive modeling, replacement pumps, regional pump station design, and standby generators. Simply increasing pipe or wet well sizing will not be grounds for being reimbursed for design fees. BJWSA may utilize cost curves or fixed unit prices for allowable professional fees (This process is currently in development).

	Typical Betterment	Potential BJWSA Participation/Contribution Options
1	Upsized pipe	A, C
2	Larger (oversized) wet well	A, B

3	Replacement of pumps	A, B, C
4	New regional pump station	A, B, D
5	New standby generator	A, B, C, D
6	Compensation for professional fees	Percentage of actual betterment cost or other means as determined by BJWSA

A = Obtain 3 bids

B = Receive pre-set pricing

C = Receive pre-purchased materials

D = BJWSA completes betterment and/or project

1.5.5 Capacity Fees and Credits

A. A capacity fee study for the entire system has been conducted by BJWSA to set capital contribution fees (or capacity fees) for available capacity. The capacity fees to be paid by the developers are based on water and sewer capacity needs for each development. Capacity fees for each development are calculated using BJWSA's system-wide development fees for water and wastewater in effect at the time the fees are paid and prior to setting up a preconstruction meeting.

B. Developers may receive capacity credits to apply to current or future projects constructed by said developer. Credits for additional capacity will be issued if one of the following circumstances are met:

1. If a betterment is requested by BJWSA, BJWSA will issue a credit based on the additional incremental cost associated with the betterment, as described in Section D above.

2. In the case where neither the developer nor BJWSA is able to fund the capacity increases in the time frame required for the development of the property, BJWSA will notify the developer that the capacity required to serve the development is unavailable until such time in the future where the project schedule and funding availability can be met.

1.5.6 Requirements to Receive Capacity Credits

A. Capacity credits to developers eligible to receive them based on this policy will be determined based only on the incremental and actual costs associated with the construction materials and installation for upsizing the infrastructure beyond the

capacity needed to serve all phases of the development requiring the extension (i.e. incremental cost of the betterment). Professional services fees may be considered as related to and described in Section D above.

B. Capacity credit amounts below $150,000 will be approved by the BJWSA Chief of Engineering or his/her designee using the estimated construction costs provided by the developer's engineer.

C. If the credit amount is expected to exceed $150,000 the following is required to receive the capacity credits.

1. At least three construction bids must be solicited for the work associated with the credits.

D. Bidders will provide bids on the following:

1. Bid Option A – All work required to provide infrastructure to serve the development only.

2. Bid Option B – All work to provide service to the development, including costs to expand the system capacity or provide for future projects.

3. Upon reviewing the bid information, BJWSA will award the credits equal to the lowest difference in water and/or sewer utility bid options.

1.5.7 Capacity Credit Certificate

A. For developments that receive capacity credits, the credits will be issued based on the actual costs (Dollars) associated with the betterment cost at the time of pre-construction meeting. Capacity credits are not based on REU's; instead are based solely on costs incurred.

B. If credits are issued through a capacity certificate, the dollars/fees will be deducted from capacity fees.

1.5.8 Credits for Existing Services

For properties where there is an existing water and/or sewer services and it is of adequate capacity for a new development, the service can be used without the payment of capacity fees if the use and/or scope remains the same. If the use and/or scope changes, additional capacity fees will be assessed based on the difference between the proposed and existing capacity.

A. In areas where there is an existing water and/or sewer service that needs to be abandoned because it is no longer going to be used and an assignment of capacity has been issued, the developer can receive credits based on the capacity assignment for the service. It is the developer's responsibility to provide proof of capacity assignment. If

the developer cannot produce a capacity certificate, BJWSA may assign a capacity to the property based on historical use.

B. In areas where there is an existing water and/or sewer service that needs to be abandoned because it is no longer going to be used and an assignment of capacity has not been issued, the developer may receive credits in the amount of the current fees charged for the service based on the following current use:

1. Residential Use: 400 gpd for water and 300 gpd for sewer

C. Commercial Use: Historical usage for the service for the last 3 years will be used to determine capacity for a commercial use, with the minimum being equal to 230 GPD for wastewater and 300 GPD for water. The capacity credit will not exceed the capacity for the proposed use.

1.6) Policy for Hydrants

1.6.1 Overview

A. The purpose of this policy is to provide guidance regarding the usage of hydrants on water transmission and distribution pipelines throughout BJWSA's two-county service area in support of life safety systems.

B. BJWSA flushes and tests its hydrants in accordance with SCDHEC standards to determine and record operating characteristics such as flow rate, as well as static and residual pressure. The test information may be used to monitor water distribution system flow characteristics and as a tool to model system performance for use in designing water supplies to new developments and areas where water service is currently unavailable. The test results are also provided as a service to the fire districts in Beaufort and Jasper Counties and used to determine their ISO ratings.

1.6.2 Water System Levels of Service

A. BJWSA will test all hydrants as required by SCDHEC to determine instantaneous flow rate and static and residual pressures at each location.

B. Fire flow requirements are specified by the governing fire jurisdiction and applicable regulations and fire codes. The availability of the required fire flow for a particular development is not guaranteed, and additional fire suppression systems or facilities may be required. Improvements and or system to supply adequate fire protection to serve a development are the responsibility of the developer.

1.6.3 Hydrant Design Requirements

A. Hydrants shall not be placed on water mains 4-inches in diameter and less.

B. It is the responsibility of the developer and his engineer to design a fire protection system that meets the requirements of the fire district based on the available BJWSA system flows and pressures at the point of connection.

1. For fire lines and hydrants located on private property (Within recorded easements) that connect two separate mains in the BJWSA system (i.e. loop) in public rights-of-way, BJWSA will maintain the hydrants at no additional costs to the property owner.

C. For fire lines and hydrants that do not meet the above criteria, BJWSA will maintain the hydrants in accordance with the costs outlined in the Ancillary Fee Schedule.

1.6.4 Flow tests

A. A request for fire flow information currently on file shall be made through BJWSA by e-mailing the hydrant number (on the top nut or on the tag) to hydrant@bjwsa.org. These results are typically from single-hydrant flow tests.

B. Persons or entities wanting to perform fire flow tests on BJWSA's system must be in the presence of BJWSA staff. See BJWSA's Ancillary Fee Schedule for the associated testing fee.

C. Single or Dual Flow Tests

1. Single or dual flow tests can be performed upon request depending on the application.

D. Results may be obtained through the Authority's website by e-mailing the hydrant number (found on the top nut or on the tag) to hydrant@bjwsa.org.

E. Cost for tests are included in the Ancillary Fees.

F. Multiple-Hydrant Flow Tests

1. Fire flow tests using multiple hydrants (more than two) must be coordinated with the Engineering Office. Because this is not a standard practice of BJWSA, a plan and methodology that meets AWWA M17 must be approved by BJWSA prior to flowing multiple hydrants.

G. If the data collected from the flow test of multiple hydrants is used for design calculations, the approved-methodology must be included in the design calculation package.

1.7) Variance Process

A. It is recognized that conditions or situations arise that are unique and may necessitate consideration of circumstances outside of or not covered in these policies. For this reason, a process has been created to allow for variance from the requirements of the DPPM. This will enhance transparency of decision making and allow for documentation of variance requests and dispositions.

B. The Variance Process is intended for unusual and/or unique circumstances and as such should not be used to circumvent standard design requirements specified in this manual.

C. DPPM variances may be requested in writing to the Chief of Engineering. The request must include the specific section of the DPPM for which the variance is requested, the relief sought, and the reason the request is being made. The request must also justify the uniqueness of the situation and clearly document why the variance is needed. Once the request is received, a meeting may be required to discuss the request and gather more information. The request will then be reviewed by the Chief of Engineering and General Manager. A decision will normally be issued within 30 days of the variance request. More complex requests may require an extended timeframe for response. All decisions will be considered final. Any variance request granted will be tracked and reported to the BJWSA Board of Directors.

Chapter 2 - DESIGN AND PERMITTING PROCEDURES

2.1) Overview

These procedures shall be followed by developers who plan, design and construct water and/or sewer services that will be owned and maintained by BJWSA upon completion of the associated work within a development. Depending upon the size and scope of the proposed project, some procedures may be modified by BJWSA. If the development requires an individual tap with no significant system improvements, it will be considered a minor development.

2.2) Design Sequence and Fees

2.2.1 Design Activity Sequence

BJWSA has been approved as a Delegated Review Program (DRP) for SCDHEC's permitting process. As a guide for directing developers and engineers through the plan-approval process with BJWSA, the following outlines the steps for proceeding through the process with additional details on each step provided in the subsequent sections.

1. Water/Wastewater Availability Request and BJWSA Response
2. Preliminary Design Submittal and Pre-design Meeting
3. Design Drawing Preparation
4. Engineering Calculations
5. Permit Submittals
6. Design Review and DRP Process
7. Capacity Commitment and Payment of Fees
8. Preconstruction Conference
9. Construction and Project Inspection
10. Final Inspection and System Testing
11. Project Closeout
12. BJWSA Acceptance and Service Authorization
13. Warranty Period and Warranty Inspection

2.2.2 Water/Wastewater Capacity Fee Determination

A. Water and wastewater capacity must be purchased for each development, based on the number of residential and/or commercial units proposed for SCDHEC construction permitting and also submitted to the municipal planning agency for development permitting as documented in the plans and calculations submitted to BJWSA. In order for a developer to receive a capacity commitment from BJWSA, all capacity fees and any other applicable fees must be paid for the total number of units for which the commitment is requested.

B. If a developer decides to phase a development after DRP approval, capacity fees may not be reduced or refunded unless the number of units is also reduced on the SCDHEC construction permit and the municipal agency development permit. The phasing of a development after approval will require that the utility construction plans be resubmitted through the review process outlined herein. BJWSA must approve the phasing plan as part of the project design review process. The established water and wastewater capacity fees will be used to calculate the fees due which will be quoted along with DRP submittal of the design package. Such fees are due and payable upon receipt of the revised DRP submittal.

C. Residential Development Capacity - Water and wastewater capacity must be purchased for each residential development based on the number of single-family homes, also called residential equivalent units (REU). Capacity fees for residential developments are calculated based on values per REU of 400 GPD for water and 300 GPD for sewer.

D. Multi-family Development Capacity - Water and wastewater capacity must be purchased for each multi-family facility. Water capacity fees are calculated by using a peaking factor of 1.3 times the wastewater capacity, which is calculated using SCDHEC's unit contributory loadings for various applications (Appendix A). Metering of water consumption for these facilities must be accomplished using master meters for each building. The required wastewater capacity fees are calculated using the SCDHEC-approved reduced unit contributory loadings, as shown below. Capacity fees for multi-family projects using the SCDHEC standard loadings for permitting are also based on the reduced loadings shown below.

Apartments	Accepted Unit Loadings
1 bedroom	150 GPD/apartment unit
2 bedroom	200 GPD/apartment unit
3 bedroom	250 GPD/apartment unit

E. Commercial Development Capacity

Water and wastewater capacity must be purchased for each commercial facility in a development. Water capacity is calculated using a peaking factor of 1.3 times the wastewater capacity using SCDHEC's Unit Contributory Loadings Chart for various applications (Appendix A).

1. The minimum capacity required for any commercial unit or space is 230 GPD for wastewater and 300 GPD for water.

    a. For subdivided commercial buildings that choose to install a master meter, the design calculations shall be based on the minimum commercial capacity for each commercial building or unit contributary loadings per Appendix A, whichever is greater. Fees will be assessed per identified building. A backflow prevention device will be required on the water service line.

    b. For individual commercial buildings, not subdivided, that choose to install a single meter and do not identify the end-use, the design calculations shall be based on the minimum commercial capacity, fees will be assessed per the single unit, and the meter size will be limited to ¾" meter with a backflow prevention device.

    c. If in the future individual meters to service the units are requested, it will be the responsibility of the owner to notify BJWSA of the change. The owner will be responsible for installation of the individual meter boxes, individual service lines and any associated backflow prevention devices. The owner will be required to pay any additional fees, including capacity fees, associated with the change in use. When individual water services are installed for each unit, individual sewer services must also be installed with any necessary pretreatment devices.

    d. Additional capacity may be required at the time service is requested and the specific use of the facility is established.

2. For a new development, when a commercial use is not identified in SCDHEC's Unit Contributory Loading Chart, SCDHEC will need to approve the loading for that use. It will be the responsibility of the developer to provide justification to support the loadings. Once supported by BJWSA, BJWSA will submit the request to SCDHEC for use on the project. Historical loading data may be used to justify the request. The historical data shall be from a similar market under similar conditions and contain either 3-years of data for a single facility or shall contain 1-year of data from three facilities. It will be the discretion of BJWSA as to whether the justification provided meets the criteria for a similar facility operating under similar conditions.

3. For existing developments with water that are adding sewer, water billing records may be used as a justification for loadings, with approval by BJWSA.

F. Payment of Fees and Commitment of Capacity - Capacity fees for a proposed development must be paid in full or otherwise secured prior to a commitment of capacity to the project by BJWSA.

1. Transfer, Reassignment or Sale of BJWSA Water/Wastewater Capacity

Water and sewer capacity not assigned to a specific parcel may be transferred or reassigned within the BJWSA service area upon the written approval of the Authority. The transfers and reassignments will be based on the REUs held on the capacity certificate and calculated based on the rate at the time of transfer. Requests for such transfers or reassignments must be directed to the BJWSA Engineering Department and should specify the following:

a. Copy of credit certificate
b. Transferring individual or party.
c. Receiving individual or party.
d. Parcel to which capacity was initially assigned, if applicable.
e. Parcel to which capacity will be assigned.
f. Description of capacity being transferred (water and/or sewer, REU or GPD, etc.).
g. Notarized signatures of all parties taking part in the transfer or reassignment.

2.2.3 BJWSA Ancillary Fees

A. Project Fees

Project development fees are due prior to the Preconstruction Conference. These fees are required to recover staff costs incurred by BJWSA in evaluating the design and monitoring the construction. For a phased development, the fees are based upon the number of units in the specific phase being constructed. The following project fees from BJWSA's Ancillary Fee Schedule will be quoted with the capacity fees:

1. Plan Review Fees
2. Connection Fees
3. Construction Inspection & Testing (Witnessing of Test) Fee
4. Record Drawing Conversion to GIS Fee
5. Easement Recording Fee
6. Pump Station Deed Recording Fee (if a pump station is included in the project)
7. Construction and Hydrant Meter Rental Fees
8. If, in the course of development, construction water is needed, the developer's contractor can rent water meters that connect to hydrant outlets on existing water lines based on the current meter rental policy. The meters available for this purpose are:
9. Construction Meter – ¾" hose bib connection to a hydrant outlet

10. Hydrant Meter/Backflow Device – full size connection to a hydrant outlet
11. These meters can be rented by contacting BJWSA and paying the associated rental deposit indicated in BJWSA's Ancillary Fee Schedule.
12. Water and Sewer Connection Fees

    Connection fees account for the cost associated with physically connecting into an existing, permitted water main, or force main to extend service to a residential development or installing a water or sewer service connection for a commercial development, including any required shutdown coordination efforts. Connection fees are shown in BJWSA's Ancillary Fee Schedule.

13. Meter fees

    Meter fees account for the cost associated with physically setting the meter, and are shown in the BJWSA Ancillary Fee Schedule. Meter fees can be paid after the Permit to Operate and/or Service Authorization have been issued for a project.

14. Sewer Lateral Inspection Fees

    The Authority's responsibility for water and sewer service to a parcel typically ends at the property line fronting the road right-of-way. However, BJWSA crews represent the various municipal building departments by inspecting the gravity sewer lateral from the cleanout at the property line to the structure. In order to inspect the sewer lateral, the developer's plumbing contractor must slope the line at the proper grade and leave the trench open until the sewer inspection is completed. The sewer inspection fee associated with this work is shown in BJWSA's Ancillary Fee Schedule.

2.3) Water and Wastewater Availability

2.3.1 Water and Wastewater Availability Request

A. BJWSA owns, operates and maintains hundreds of miles of water and sewer pipelines throughout Beaufort and Jasper Counties. However, there are some areas where service is not yet available. Potential developers should request information on the availability of water and/or wastewater while performing due diligence prior to purchasing a parcel or tract of land for development.

B. Developers requesting availability may submit an online Water/Wastewater Availability Request Form which is used to describe the location, purpose, scope, and size of a potential project. The completed request form can be submitted online from BJWSA's internet website at www.bjwsa.org. Clarification: This is not necessary for individual phases of a previously approved master plan, unless changes are occurring.

2.3.2 Water and Wastewater Availability Request Response

BJWSA will issue a written response within 10 working days of receipt of the completed request form and supporting documentation. This response will inform the developer of the availability, size and proximity of the water and/or wastewater infrastructure in the requested area. Availability may be contingent on commitment of capacity rather than the operational size of the line or pump station.

2.4) Pre-design Meeting/Preliminary Design Submittal

2.4.1 BJWSA Pre-design Meeting Request

Upon review of the availability request, BJWSA may require a pre-design meeting if staff determines that the project is of sufficient magnitude, if the developer is planning to phase the development, if a pump station using a force main manifold is required by BJWSA, or if there are known capacity issues with the downstream system.

2.4.2 Developer Pre-design Meeting Request

A developer may also request a pre-design meeting to discuss conceptual plans for a development.

2.4.3 Preliminary Design Submittal

A. Based on the outcome of the pre-design meeting, a preliminary design submittal may be required to confirm the design intent prior to submission of the detailed design package. Approval of the preliminary plan is on a conditional and conceptual basis and does not constitute final approval of the plan for construction. Any design items related to the size, location and operational parameters discussed during the preliminary review are subject to change during the review of design documents (permits, plans and design calculations).

B. Items to be submitted are limited to master plan/concept design and hydraulic loadings.

C. Review comments for Preliminary Design submittals are for general comments and not for detailed review. Additional comments will be included during the detailed design review.

2.5) Data Requests for Developments

2.5.1 Types of Data

A. General system information as it relates to the project will be provided to the developer's engineer after the Pre-design Meeting and Preliminary Design Submittal separately from Freedom of Information Act (FOIA) requests.

B. Data to be provided, when available, shall include the following

1. Record Drawings
2. Pump Curves
3. Recent hydrant flow test results
4. Design considerations for water and sewer, including engineering model results
5. Pump station drawdown results
6. BJWSA's hydraulic computer model, if available, calibrated, and up-to-date within the project service area. BJWSA is transitioning to a new level of service, wherein BJWSA will have their own in-house water and sewer models and maintain that infrastructure data themselves. This represents a strategic and impactful shift in the level of service from BJWSA and will require many months to implement. BJWSA will be working through a priority list for models to best serve our customers.

C. Any data provided by BJWSA is for information purposes only and does not relieve the Engineer of Record from performing its own modeling/calculations as required by SCDHEC.

2.5.2 Requests

A. Requests for field locate information should be made by submitting a design ticket with SC 811. Requests for pump station information may be requested from the Engineering Department (Please allow up to 15-business days to fulfill these requests).

B. Responses will be provided within 15 working days per SC Code Section 58-36-100. Responses may be in the form of field marks or available records, including copies of the asset map or record drawings. Information provided is for informational purposes only and should not be used for final design. All assets must be field verified by the engineer or contractor prior to design or construction.

2.5.3 Additional Data

A. BJWSA has prepared a GIS Portal for consulting engineers and surveyors to be able to access our GIS system. For a fee, BJWSA will provide an annual subscription for access. The fee amount may be adjusted at BJWSA's discretion. The annual subscriptions will be

from July 1 to June 30 each year. Please contact the BJWSA GIS department to learn more details.

Please understand that GIS is never a substitute for survey data and GIS information should not be used for detailed design purposes.

B. Requests for additional information can be made through the Engineering Department. (Please allow up to 20-business days to fulfill these requests).

C. Depending on the availability of the requested data, such as historical usage on a property, the response may take longer and BJWSA will contact you to set the appropriate expectation.

2.6) Design Review Process

2.6.1 Purpose

The purpose of the design review process is to verify that the developer, through his/her consulting engineer, is presenting a project that meets SCDHEC regulations, BJWSA technical specifications and provides information useful for future designs, operations and maintenance.

2.6.2 Design Packet Submittal to BJWSA

The engineer of record should prepare a design packet that includes the list of items in this section, submitted together for review. The order of the sheets of the construction plans and design calculations should follow the outline detailed herein as best possible.

2.6.3 Design Packet Submittal to SCDHEC

Once the design package is approved by BJWSA, BJWSA will submit the DRP submittal to SCDHEC, and SCDHEC will issue a project-specific construction permit. In an effort to formalize the design review process and ensure that all necessary information is included in the submission, BJWSA has compiled and adopted the requirements provided herein. Incomplete design packets may be returned without review.

2.7) Design Drawing Requirements

2.7.1 General System Design Requirements

A. Water and wastewater designs shall use BJWSA Technical Specifications and Standard Details on file with SCDHEC and available in the "Developers" Section of the BJWSA website (www.BJWSA.org).

B. Pressure pipe should be located within the road shoulder and gravity sewer should be located within the center of the travel lanes of local and collector roads. Manholes should not be placed in the wheel path, if it can be avoided. Placement of utilities within arterial roadways should be in the shoulders as coordinated with BJWSA and the road owner. Roads should be constructed in a manner to provide a minimum all weather access for maintenance of gravity systems. Pump station roads should be constructed in a manner to provide an all-weather access for maintenance as detailed in the Technical Specifications.

C. Water mains 12" and larger should be connected to two separate points in the system to create interconnections, i.e. looping. If there is a master plan for development with phased construction, water mains 12" and larger may dead end temporarily with a metered blow-off assembly, until such time the main is to be extended to the next phase of development.

D. When possible, BJWSA's prefers for forcemains to discharge into a gravity sewer system. Manifolded forcemain systems are allowed with BJWSA coordination. If a manifolded system is allowed by BJWSA, the entire manifolded forcemain system should be modeled. BJWSA's approach will be to review system curves at many pumping scenarios from all pumps off up to and include all pumps on (When modeled as constant speed pumps). Together with the design engineer, BJWSA will assist with pump selection that identifies the most advantageous pump curve to best-fit the modelled and developed system curve. Other considerations may include pump efficiency, desired system hold times (For new sections of infrastructure), and another pump station impacts. BJWSA is in the process of beginning to keep their own water and wastewater models, and BJWSA will provide model results as that information is developed and available. If BJWSA doesn't have a water or sewer model available, the consultant may be required to prepare a water and/or sewer model. For extensive modelling efforts where the consultant is asked to model BJWSA's existing system, BJWSA may at its discretion provide a reimbursement of this modeling through the betterment process provided the consultant allows BJWSA access to the modeling data.

E. No 90° bends will be allowed on force mains.

F. All water and wastewater services and hydrants are to be placed perpendicular to the main to the maximum extent possible. For water mains that dead-end at a cul-de-sac, extended to the end of the cul-de-sac, with services perpendicular to the main, as most practical.

G. Backlotting of services are not recommended. Backlotting of services may be approved on an individual basis, based upon adequate access. Access will be primarily controlled by the ability of a vac-truck to adequately enter and exit along the mainline. Should

backlotting of services be desired, we recommend scheduling a meeting with BJWSA staff to discuss as soon as a layout is developed.

H. All domestic residential water service lines shall be a 1-inch in diameter on the main side of the meter. All commercial water services shall be a minimum of 2-inch in diameter (When applicable) on the main side of the meter. Commercial water services shall be even diameter, half sizes are not permitted. For services 4-inches or larger a concrete meter vault shall be installed. Design Engineer may be required to submit calculations supporting the selection of a meter size.

I. Conflict structures/boxes are not recommended within the BJWSA system. Conflict structures may be allowed on an individual basis, if all other options are exhausted.

J. Fire lines 4-inch in diameter or larger shall have a post indicator valve. The requirement for a post indicator valve on a 2" fire line shall be at the discretion of the local fire marshal. The post indicator valve shall be installed upstream of the backflow preventer after the point of connection to BJWSA's system.

2.7.2 General Construction Plan Requirements

A. At a minimum, the following elements are required on their respective sheets for review of a standard design submittal:

B. Preference is for Plans to be submitted with field surveyed using South Carolina State Plane, NAD 83 coordinate system (Map Code SC83F). Elevations shall be based on the1988 North American Vertical Datum (NAVD88) or other standard datum that are widely accepted in the surveying community for detailed design. The horizontal datum and vertical datum used by the surveyor for the base mapping shall be identified on the cover sheet and general notes plan sheet(s).

C. Design drawings shall be prepared by a SC licensed professional engineer and include his/her seal and signature certification.

D. A Master Plan of all phases of the development shall be provided with the current phase of construction identified graphically.

E. In order to minimize conflicts with the water and sewer design, complete development design is to be submitted, including general development plans, drainage plans, and demolition plans, along with water and sewer plans. Demolition plans shall include all existing water and wastewater services proposed for abandonment. Show location and width of all existing and proposed BJWSA easements.

F. We prefer all drawings to be submitted on ANSI D size sheets (22" x 34") or Engineering/Architectural D size sheets (24" x 36"). The use of other Architectural-sized sheets or other sizes may be approved on a case-by-case.

G. Minimum font size shall be 0.08 inches (i.e. L80).

H. BJWSA prefers the rotation and spacing of text on drawings to be oriented to the bottom or righthand side of the plan sheet. Text strings shall be arranged in a clear and legible manner.

I. Once approved by BJWSA and prior to the preconstruction conference, cover sheets should be revised to state "Issued for Construction" (IFC) and the date of issuance. We prefer that this is to be located vertically in the top right-hand corner of the cover sheet, above the project name and BJWSA reference number. Stamping "Issued for Construction" on the plans is acceptable; it is not necessary to provide the same information in the revision block.

J. Each drawing sheet (Exception for the title sheet is allowed) should use a title block with the following information provided and/or updated as necessary within the title block:

1. Project title;
2. Sheet title;
3. Sheet number;
4. Plan date;
5. Scale used;
6. Engineer name and contact information, and appropriate seals
7. Revision block with description and date of each revision beginning after BJWSA approval and/or SCDHEC permit having been issued;

K. Stationing of gravity sewer shall be from downstream to upstream. Stationing of water shall begin at the main tie-in to the existing system. left to right across the page.

L. In plan views, all pipes larger than 12-inches shall be drawn to scale, including storm drain pipe, when practical

2.7.3 Cover Sheet

A. Project name in sufficient detail to describe the scope of development, including the project phase, lot numbers and total number of lots, if applicable;

B. BJWSA reference number shall be placed vertically in the top right-hand corner of the cover sheet, in a font that measures no less than 0.2 inches (i.e. L200).

C. Legal name and address of the developer, person in charge and contact information; Project development data, including governmental jurisdiction, tax map number and 911 street address;

D. Site specific data, including GPS location (If available), number of parcels and/or units, and usage designation (single family, multi-family, commercial);

E. Vicinity map showing the general project location with north arrow and scale, including any municipal boundaries, roads and water bodies within 1-mile radius of the project;

F. Schedule of drawings. Design Engineer is not required to exactly match the sheets provided when compared to the schedule of drawings, as long as the missing sheets are not necessary to illustrate the water and/or sewer infrastructure scope of work. BJWSA is not interested in plan sheets that are irrelevant to water and sewer infrastructure. We prefer plan sheet numbers and sheet titles to match the "Schedule of Drawings".

2.7.4 General Notes and Legend Sheet

The General Notes and Legend sheet typically follows the cover sheet in the plan set. It should contain the following information:

A. General Notes:

1. To include all general notes for the project
2. Other elements that shall be shown include municipality, utility, and/or agency contact information, as well as the design engineer's general notes.

B. Legend

1. To include all line types and symbols used in the plan set
2. To include abbreviations used in the plan set

C. Listing of any applicable water/sewer agreements with deed book/page and county recording location and date.

D. Surveyor contact information

E. NOTE: Engineers have the flexibility to add additional legends and notes that are deemed appropriate on sheets other than the general notes sheets.

2.7.5 Water/Sewer Master Plan Sheet

For projects with multiple phases of development, a master plan of the entire development at build-out would be appreciated, when available. This sheet could be placed after the General Notes Sheet or submitted separately from the plan set. When available and they can be displayed in a legible manner, please provide the following items on the master plan:

A. The current phase of development, identified on the master plan with limits of the phase illustrated graphically.
B. All water and sewer infrastructure - existing, proposed and future
C. Interconnection of water and/or sewer mains between all phases of the development
D. Interconnection of water and/or sewer mains between different developments
E. Ties to existing water mains

F. Existing pump station locations with BJWSA reference number
G. Proposed pump station locations

2.7.6 Index Sheet

The purpose of the index sheet is to provide BJWSA reviewers and contractors with an understanding of the project scope and layout within the construction drawing. The project map shall fill the entire sheet and must include the following elements.

A. Labeled roads, streets, parcels, and phase limits within the project boundary;
B. Layout of water and sewer mains, structures, and pump stations;
C. Information on properties adjacent to the proposed project location, including property tax identification number, as well as all roads, parcels, subdivisions, major developments and municipalities within 1000 FT of the project;
D. Designation of streams, lakes, swamps, and wetlands and any other water bodies.
E. Orientation of multiple sheets indexed to show the match lines on connecting drawings.

2.7.7 Existing Conditions/Demolition Sheet

The Existing Conditions/Demolition Sheet should show all existing infrastructure. Demolition items identified should include existing services and existing mains to be abandoned and removed or replaced. As determined by the Design Engineer, existing conditions and demolition plan sheet(s) may be located on the same or different plan sheets. Existing conditions survey drawings may be used as existing conditions documentation.

2.7.8 Water Utility Plan Sheet(s) and Profile Sheet(s)

The purpose of the water utility plan and profile sheets is to show the physical site layout of the project in greater detail, than what is provided on the index sheet. The plan and profile sheet provide specific water design elements as they relate to the civil/site design (staking, paving, grading and drainage). All water mains 10-inches and larger are required to have profiles of the alignment, although it is preferred that all water mains show the alignment in profile view. For water mains projects that do not show profile alignments, all conflicts with the water main are to be shown in profile form, unless typical BJWSA details are comprehensive of the conflict resolution. Plan/profile sheets are preferred for all water main designs and required when the phase of the project being permitted is linear construction. The following elements must be represented on the sheets.

Plan View

1. Existing and/or proposed physical layout of the development, shown in sufficient detail to show roads, streets, lot layouts and phasing limits, as well as water bodies and wetlands;

2. All existing roadways and streets of record (recorded but not constructed) on or abutting the tract shall be shown, including the names and right-of-way widths;

3. Site plans drawn to a horizontal scale no greater than 1" = 10'-0" and no less than 1" = 40'-0";

4. Tax identification numbers (TIN) for all adjacent parcels.

5. A 1” plan overlap is preferred beyond the sheet match lines, with care taken to avoid splitting a lot, street intersection, pump station site or other physical feature; care should also be taken that text is not cut off by the match lines/view settings.

6. In case of re-subdivision, a copy of the existing plat must be submitted with proposed re-subdivisions superimposed thereon;

7. All existing (in gray scale) and proposed (in bold) water and sewer infrastructure, including fittings, hydrants, valves, tracer wire boxes, pipe, etc. and labels for each;

8. Pump stations assigned with a BJWSA ID number and labeled for any view shown.

9. Other existing utilities in proximity to the proposed water and sewer systems, including existing and proposed storm drains, electrical, communications, and natural gas lines, shown in plan and profile views. If proposed utility infrastructure details are known at the time of the submittal, please include that information on the plans.

10. All existing rights-of-way and utility easements, including deed book and page where it’s recorded, to be labeled on the IFC documents in at least one location. All recorded rights-of-way shall be identified on the plan view with ownership, right-of-way width, and the deed book and page where it’s recorded or road name/number, if applicable. Indicate the agency to operate and maintain all proposed roadways. Alternatively, this information may be provided in notes on the plans or on the existing conditions plan sheet(s).

11. All temporary or specific permanent utility easements and proposed rights-of-way shall be labeled on the IFC documents, if available. Temporary and specific permanent utility easements shall be recorded prior to Service Authorization.

12. Please provide stationing along all proposed water mains and sewer forcemain infrastructure, or stationing with offsets. When a profile view is provided, please provide stationing in the profile that corresponds to the stationing in the plan view.

13. Demolition and abandonment may be shown on water and sewer plans.

14. BJWSA prefers sheet keys to be provided within the plan set, when the number of utility plan sheets exceeds ten within a single set. This will significantly speed up the review process for larger projects.

Profile View

1. Existing and proposed grade;
2. Stationing to match the plan view;
3. Pipelines with the following information:
4. Tangent length
5. Pipe diameter
6. Pipe type and class (DIP, PVC, etc.)
7. Linear feet of proposed restraint joints for pipe over 12-inch diameter; if applicable
8. Any known non-typical conflicting utilities and utility crossings; label vertical separation
9. Separation distance of all storm drainage crossing water/sewer pipelines;
10. Stream crossings and/or wetland crossings to include jack and bores and directional drills;
11. Fittings, such as hydrants, restrained joint dimension and location, inline valves, tracer wire boxes, vertical offsets, horizontal bends, etc.;
12. Profiles should align with site plan views and be drawn to a horizontal scale to match the plan view and a vertical scale to be one tenth of the horizontal scale.

2.7.9 Wastewater Utility Plan Sheet(s) and Profile Sheet(s)

The purpose of the wastewater utility plan and profile sheets is to show the physical site layout of the project in greater detail, than what is provided on the index sheet. The plan and profile sheet provide specific wastewater design elements as they relate to the civil/site design (staking, paving, grading and drainage). Plan/profile sheets are preferred for all sewer designs and required when the phase of the project being permitted is linear construction. The following elements must be represented on the sheets.

Plan View

1. Existing and/or proposed physical layout of the development, shown in sufficient detail to show roads, streets, lot layouts and phasing limits, as well as water bodies and wetlands;
2. All existing roadways, including streets of record (recorded but not constructed) on or abutting the tract shall be shown, including the names and right-of-way widths;

3. Site plans should typically be drawn to a horizontal scale no greater than 1" = 10'-0" and no less than 1" = 40'-0";

4. Tax identification numbers (TIN) for all adjacent parcels.

5. A minimum of 1” plan overlap is required beyond the sheet match lines, with care taken to avoid splitting a lot, street intersection, pump station site or other physical feature; Care should also be taken that text is not cut off by the match lines/view settings.

6. In case of re-subdivision, a copy of the existing plat must be submitted with proposed re-subdivisions superimposed thereon;

7. All existing (in gray scale) and proposed (in bold) water and sewer infrastructure;

8. Pump stations assigned with a BJWSA ID number and labeled on water and sewer plans and existing conditions.

9. Other utilities in proximity to the proposed water and sewer systems, including existing and proposed storm drains as well as electrical, communications, and natural gas lines, shown in plan and profile views, when available;

10. All existing rights-of-way, and utility easements, including deed book and page where it’s recorded, to be labeled on the IFC documents in at least one location. All recorded rights-of-way shall be identified on the plan view with ownership, road number, right-of-way width, and the deed book and page where it’s recorded or road number, if applicable. Indicate the agency to operate and maintain all proposed roadways.

11. All proposed rights-of-way and utility easements to be labeled on the IFC documents with deed book and page of its recording, in at least one location.

12. Stationing on all proposed sewer mains in the plan view to match profile view.

Profile View

1. Existing and proposed grade;

2. Stationing to match the plan view;

3. Manholes with the following information:

4. Manhole types (standard, drop, cut-ins)

5. Existing and proposed rim and invert elevations (upstream and downstream)

6. Inverts to have a minimum of one-tenth drop across manhole

7. Pipelines with the following information:

    a. Tangent length
    b. Pipe diameter

c. Pipe type and class (DIP, PVC, etc.)
d. Pipe slope (%)
e. Flow arrow indicating direction of flow for force mains
f. Linear feet of proposed restraint joints; if applicable

8. Any known conflicting utilities and utility crossings; label vertical separation

9. Separation distance of all storm drainage crossing water/sewer pipelines;

10. Identify stream crossings and/or wetland crossings to include jack and bores and directional drills;

11. Fittings, restrained joint dimension and locations, air release valves, information for force mains, tracer wire boxes, vertical offsets, horizontal bends, casings, etc.;

12. Profiles should be drawn to a horizontal scale to match the plan view and a vertical scale to be one tenth of the horizontal scale.

2.7.10 Pump Station Plans and Details

The purpose of this sheet type is to show a horizontal (plan) and vertical (section) representation of the various mechanical, electrical, civil and structural elements that comprise a wastewater pump station. The site plan shall show the actual layout of the pump station to scale with respect to the proposed project site. BJWSA details should be used as a concept for design, but site-specific design shall be prepared by the developer's engineer. Where applicable, the following information shall be provided on this sheet:

1. Plan view of the pump station lot with dimensioning of the features to the property lines of the pump station parcel.

2. Section view of the pump station.

3. Pump station ID number, assigned by BJWSA as part of the DRP submittal.

4. Locations, dimensions, and details of all visible features, including wet well, control panel, receiving manhole, generator or bypass pump connection, appropriately-sized hatches, pipe supports, concrete pad, pipe header, etc. Design Engineer is encouraged to utilize the latest version of BJWSA Standard Details and fill-in necessary design data completely.

5. Flow meters require a certain length of straight-run pipe before and after the flow meter in order to properly operate. This distance is based on the diameter of the pipe in which the flow meter is being installed. Upstream and downstream straight-run pipe dimensions (i.e. number of pipe diameters needed) for flow meter installation, per manufacturer's recommendations, shall be labeled.

6. All weather access road from the closest paved road to the pump station gates.

7. Contour lines showing storm drainage within 20-FT of the site.

8. Pump station electrical data and wet well elevations as listed on BJWSA Standard Details.

9. Design Schedule Table providing pump station conditions as presented in wastewater system calculations to include at a minimum the pump station capacity, total dynamic head (TDH), voltage, power supply (i.e. single-phase or 3-phase), motor horsepower, number of poles, float elevations, height of pump, storage calculations for system, and pump manufacturer.

10. Electrical design sheet and one-line diagram for pump station, signed and sealed by a SC-licensed engineer. Service line location to be shown in the electrical design and location shall be coordinated with BJWSA. Alternatively, one-line electrical drawings can be provided on submittal drawings for the preconstruction meeting or as a separate attachment to the civil plans.

11. The orientation of the pump station site shown on all sheets should be the same on all sheets, if possible.

12. For developments with multiple pump stations, a bubble diagram showing the operational relationship of the pump stations to the BJWSA system shall be included with submitted calculations. Alternatively, bubble diagrams illustrating pump station relationships may be provided within the plan set.

2.7.11 Water/Sewer Detail Sheets

The purpose of these sheets is to provide the contractor with BJWSA standard details that are specific to the proposed project. Standard details are included in BJWSA's Technical Specification Manual. The SCDHEC-approved BJWSA standard details in PDF format shall be used in the construction plans and will be made available upon request by the Engineer of Record. BJWSA standard details cover the minimum construction requirements; it is the responsibility of the Engineer of Record to provide additional information in separate details when applicable.

2.8) Engineering Calculations

2.8.1 General

Appropriate water and sewer design criteria, including number of services, the corresponding usage designations (residential, multi-family, commercial), and unit contributory loadings, must be provided with supporting hydraulic design calculations stamped and signed by the professional engineer of record. The calculations are needed to determine the technical basis of

design derived from the requirements of the proposed project and the availability of sufficient water and sewer capacity to meet or exceed those requirements. The calculations should be legible and have minimum font of 10 pt. At a minimum, the following elements are required for review and approval of the project design calculations, BJWSA prefers these sections separated and, in the order, listed below to expedite review:

2.8.2 Project Hydraulic Loadings – To be submitted as one package to BJWSA

A. Section 1 – Project Summary

1. Project Name and tax map number(s)
2. Date prepared
3. Developer name and contact information
4. Project description to include general location of the project, phase (if applicable), and general scope of work for the project as a whole

B. Section 2 - Sewer and Water Contributory Loadings

1. Average daily demand
    a. Unit contributary loadings – wastewater
    b. Unit contributary loadings - water

2. Summary
    a. Total Wastewater loadings
    b. Total Water loadings
    c. Signature of engineer of record

2.8.3 Project Water System Calculations – To be submitted as one package to BJWSA

A. Section 1 – Overview

1. Water Project Summary
    a. Project location and general description
    b. Total number of parcels and associated usage designations
    c. Phasing
        i. What's been constructed to date
        ii. What remains to be constructed
    d. Brief description of assets being installed

2. Average Daily Water Demand

3. Peak Hourly and Instantaneous Flow Demands (Per DHEC Requirements)

4. Water Unit Loadings - Prior to submitting the design calculations, the engineer should check with BJWSA to determine the proper unit loadings to be used.

B. Section 2 - Hydrant Flow/Pressure Test

1. Basis of design – reference BJWSA Technical Specifications and if applicable the local fire code requirement when stricter than the BJWSA minimum requirement.

2. Provide an instantaneous measurement of flows based on the static and residual pressures in pipelines throughout BJWSA's water distribution system.

3. Supply fire flow and pressure information as well as baseline values for hydraulic modeling applications.

4. BJWSA prefers that the Letter from District Fire Marshal stating fire flow requirements, spacing and number of hydrants required based on the available water distribution system flow be provided during the design review process. If this is provided by the Design Engineer it will help expedite the plan review.

C. Section 3 - Model Analysis of Proposed Water Distribution System

1. Model results with schematic of model for

   a. Peak Instantaneous Demand Analysis
   b. Fire Flow Analysis

2. Flex tables - To include junctions, pipe diameter, flow demand, pressure, linear feet of pipe

D. Section 4 - Conclusions and Recommendations

2.8.4 Project Wastewater System Calculations – To be submitted as one package to BJWSA

A. Section 1 – Overview

1. Wastewater Project Summary

   a. Project location and general description
   b. Total number of parcels/units and associated usage designations

c. Pump stations
d. Phasing
    I. Assets constructed to date
    II. Assets remaining to be constructed

e. Brief description of assets being installed

2. Average Daily and Peak Design Flows

3. Wastewater Unit Loadings - Prior to submitting the design calculations, the engineer should check with BJWSA to determine the proper unit loadings to be used. The Authority has been approved for reduced residential unit loadings.

B. Section 2 - Collection System Considerations

1. Gravity sewer collection systems should be designed at a minimum flow velocity of 2 feet per second (FPS).

2. Collection basin 24-HR retention based on ADF is required in all new sewer systems. Existing systems may be reviewed on a case-by-case basis at BJWSA's discretion.

C. Section 3 - Proposed Pump Station (as required) Considerations

1. Pump System Curves

a. Engineer's design system curves plotted against manufacturer's pump curve

b. Manufacturer's system curves plotted against manufacturer's pump curve

c. Note: The duty point should be in the middle range (between 10% and 90%) of the pump curve as detailed in the Technical Specifications. For a manifolded system, the duty point of the pump operating by itself and the all-pumps-scenario should both be in the middle range of the pump curve.

2. Force Main Sizing:

a. Force main velocities should be between 2 FPS and 8 FPS. Upon completing pump station start-up, field adjustments may be allowed to meet this velocity range; however, the addition of artificial head pressure is not allowed. In betterment discussions, BJWSA will define forcemain velocities.

b. Pump motor shall operate within 10 percentage points of its maximum efficiency

c. Pump sizing and force main sizing should be evaluated together for the most efficient overall design.

3. Pump Cycle Times

4. Wet well Flotation (Flotation Factor of Safety ≥1.5)

5. Proposed Wet well Design – to include duty point, total dynamic head (TDH), float elevations, pump motor phase and horsepower (HP), and net positive suction head (NPSH)

6. Manifolded systems shall be designed with an all-pumps-on scenario and all-pumps-off scenario.

D. Section 4 - Conclusions and Recommendations – to include duty point, TDH, pump phase and HP.

2.9) Permits Required for Installation of Water/Wastewater Utilities

2.9.1 Permit Responsibility

Ultimately, the developer is responsible for obtaining all permits and approvals for their project(s). BJWSA will assist in the process related to the DOT encroachment permits, as a result of current DOT requirements. Developer will provide all necessary information to support the DOT permit.

2.9.2 LCOG 208 Certification

Lowcountry Council of Governments (LCOG) must certify that a project is consistent with the state and regional plans developed pursuant to Section 208 of the Federal Clean Water Act.

2.9.3 OCRM Water/Wastewater Supply Certification

SCDHEC's Office of Ocean and Coastal Resource Management (OCRM) must certify that the project is consistent with the SC Coastal Zone Management Program regarding land disturbance activities which result in changes in the natural topography that cause erosion, contribute to sedimentation, affect the quality and quantity of storm water runoff from the site, or result in disturbance of fresh water wetlands.

2.9.4 SCDHEC Water and Wastewater Permits to Construct

SCDHEC, after receipt of the OCRM certification, will issue separate water and wastewater permits for construction of pipelines and associated infrastructure in compliance with SCDHEC Regulations R.61-58 and/or R.61-67, respectively.

2.9.5 Encroachment Permits

The South Carolina Department of Transportation (SCDOT) requires an encroachment permit from BJWSA and the developer for water or sewer utility construction performed in the SCDOT right-of-way. The encroachment permit grants permission to encroach into the right-of-way for approved construction activities based on the conditions stipulated in the permit. SCDOT Encroachment Permit Application will be signed by BJWSA once the project has received final approval from BJWSA. Encroachment permits may also be required from other agencies such as municipalities, counties, power companies and railroads for work in public rights-of-way.

2.9.6 SCDHEC Water and Wastewater Permits to Operate

SCDHEC, after receipt of the BJWSA Service Authorization, will issue separate water and wastewater permits to place the constructed systems into operation.

2.9.7 Jurisdictional Permits

Other permits as may be required by governing jurisdictions.

2.10) Land Acquisitions

2.10.1 Easements, Specific

Specific easements for water and sewer infrastructure and access shall be acquired prior to service authorization, for all water and sewer infrastructure not located within a public road right-of-way. Specific easements shall be dedicated for use for water and sewer ownership, operation, and maintenance and include any encroachment or licensing agreements required by other utilities. Developer shall provide copies of any encroachment or licensing agreements required by others to BJWSA. Easements shall have terms in favor of BJWSA, such that BJWSA is not responsible for pay for or restoring trees, landscaping, sidewalks, trails, paths, signs, lights, irrigation, structures, decorative items, etc. within the easement. BJWSA will be responsible only to restore the site to grade and provide grass seed, match existing concrete curb when disturbed, and match existing pavements with asphalt or plain concrete when disturbed. The minimum width of a specific easement is determined as follows:

Minimum easement width for a single pipeline – 15 FT.

Minimum easement width for two pressure pipes installed in parallel – 20 FT.

Minimum easement width for pressure pipe and gravity sewer in parallel – 25 FT.

To allow infrastructure to serve nearby areas and properties, BJWSA may require additional specific easements to accommodate future connections, at BJWSA's discretion.

2.10.2 Easements, Blanket

Blanket easements for a property being developed may be allowed at project closeout on a case-by-case basis prior to the acquisition of the specific easements. Issuance of a blanket easement is not intended to replace the need for specific easements, which will still be required at the discretion of BJWSA prior to service authorization.

2.10.3 Deeded Parcels

Pump station properties to be deeded to BJWSA shall be conveyed prior to project close-out at the same time the Bill of Sale is executed transferring the ownership of the assets. A recordable plat shall be provided to BJWSA and BJWSA attorneys will prepare the conveyance document.

2.10.4 Access for Construction

Developer shall be responsible for any and all necessary land acquisition, access agreement, or easements necessary to build proposed project(s). The developer should alert BJWSA staff and indicate that the project is not ready for pre-construction meeting, if the developer is experiencing a delay in getting these items. At BJWSA's discretion, BJWSA may ask for a copy of these documents.

2.11) Design Approval Process

2.11.1 Documentation Required for Design Approval

The following documents are required by BJWSA in addition to the construction plans, calculations and required permits in order to receive design approval.

A. Electronic AutoCAD file of the project boundary survey plat using State Plane Coordinates.

B. Boundary survey in South Carolina State Plane Coordinates shall be prepared by a SC licensed professional land surveyor, provided in electronic format for verification by BJWSA and used as the base layer for all design site plans.

C. Electrical utility letter confirming voltage and phase available to pump station sites.

D. Engineer's submission for Design Approval

E. Once the developer's engineer has compiled all of the relevant elements noted in this section, the design package may be submitted in its entirety for review and approval by BJWSA. Design packages submitted for review must contain electronic (PDF) files of plans and engineering calculations and be sent via e-mail to BJWSA's Development Projects Coordinator. Design packages that are deemed incomplete or non-compliant will be returned to the sender without review. All red-line mark-ups from BJWSA must be returned with any subsequent design submissions for compliance with the comments.

F. Note: Easement documents are required prior to Service Authorization.

2.11.2 Review Response and Compliance Verification of Design Package

A. For all complete design packages submitted to BJWSA by noon on any given Friday, BJWSA will review and respond to the design package within 14 calendar days of that Friday deadline. In general, the process is such that BJWSA will review plans and calculations the week after the Friday submission deadline and will compile comments the second week after the Friday submission deadline. Should a holiday fall within the 14-day review period, an additional week (7 calendar days) may be added to the review period to accommodate the holiday schedule. BJWSA's holiday schedule may be found on our website at www.bjwsa.org.

B. During the review process, BJWSA will confirm if the design is in compliance with BJWSA Technical Specifications and this manual and respond to the submittal in the following manner:

C. **No Exceptions Taken** – Design elements are in compliance with BJWSA requirements and may be submitted for SCDHEC DRP. Submittal to SCDHEC may be denied if previously-approved phases of the development have not begun vertical construction.

D. **Exceptions Noted** – Design elements are nearly in compliance with BJWSA requirements. BJWSA will submit the project for DHEC permitting. Design Engineer is expected to comply with all remaining noted items as a part of preparing IFC plans.

E. **Revise/Resubmit**– BJWSA has determined that the design package is non-compliant and must be redesigned or additional information provided before the engineer is allowed to submit the SCDHEC DRP submittal. Examples of Comments include the following:

F. Previous comments not addressed with no response from the engineer explaining why.

G. New comments due to design revisions

H. Missing notes required to review the plans.

I. Failure to meet the minimum requirements set forth in this document.

J. After compliance of the design package, the developer and/or engineer will be notified in writing. This compliance verification is valid for 12 months from the date of the issuance of the letter and will include the following information:

K. Letter from BJWSA with permission to submit the project for SCDHEC DRP submittal.

L. Confirmation that BJWSA will own, operate, and maintain the constructed water and sewer utilities once construction is completed.

M. Estimation of capacity fees and project fees corresponding to the water and sewer loadings provided in the engineering calculations, which must be paid prior to setting up a preconstruction meeting.

N. After the compliance verification is issued, the developer or engineer may not modify the design package without written consent from BJWSA. Any revisions to the design package will require a resubmission and a new compliance letter by BJWSA. Revisions to the design package may result in additional assessment of capacity or project fees, as determined by BJWSA.

O. Any project that has not proceeded to construction within 12 months of the issuance of the compliance verification shall be considered void and removed from active status. If the project is voided, any future return to active status will require re-submittal as a new project. A new project compliance verification will be required to proceed to construction and new fees will be assessed.

2.11.3 Delegated Review Program (DRP) Submittal – Water/Wastewater

A. BJWSA is an approved DRP agency for water and wastewater construction. Upon approval of the design package and upon the authorization of BJWSA, the engineer of record may submit the following to BJWSA for SCDHEC DRP submission. Each document should be labeled with the BJWSA assigned project number and name, and the subject line of any emails pertaining to the project should also list the BJWSA project number and name.

B. A transmittal letter, signed by the professional engineer of record, noting that the project is a DRP submittal. The letter should state the project has been reviewed by BJWSA and complies with SCDHEC Regulations R.61-58 and/or R.61-67.

C. SCDHEC D-1970 application to construct the water and wastewater facilities with an electronic copy in pdf format signed by the engineer of record and developer. SCDHEC will invoice the engineer for the associated review fees.

D. One (1) set of construction plans in pdf format and a letter referring to the use of BJWSA Technical Specifications. The plans must be sealed, certified and signed by the design engineer in blue ink.

E. One (1) set of design calculations in pdf format for the water and wastewater systems.

F. OCRM certification in pdf format for water and wastewater.

G. One (1) 8½" x 11" copy of a detailed location map separate from the plans in pdf format.

H. One copy of an overall layout sheet in pdf format of the wastewater system separate from the plans, showing the proposed sewer lines and their sizes and including existing streets and sewer lines. The proposed sewer lines must be highlighted for easy identification.

I. Overall layout for water

J. Lowcountry Council of Governments (LCOG) 208 Certification Fee, to be obtained by BJWSA (Check should be made payable to LCOG).

K. BJWSA will submit the application package to SCDHEC via e-permitting for the SCDHEC Construction Permit on the next business day after receipt of all required documentation. Upon issuance of the SCDHEC Construction Permit, the developer or engineer will be responsible for providing copies of the approval letter and the construction permit to BJWSA and the appropriate municipal development agencies.

2.11.4 New Service Connections for Commercial Development

A. New service connections for commercial developments must be performed by BJWSA or a licensed utility contractor. Administrative fees will be charged in accordance with the fee rates and charges indicated in BJWSA's Ancillary Fee Schedule. The procedure for an individual commercial service connection is as follows:

B. A completed Water/Wastewater Availability Request Form (found online at www.bjwsa.org) and site plan must be submitted to the BJWSA. The site plan must show the locations of water and/or sewer laterals, along with connections at the building and/or property line.

C. Water/wastewater usage calculations for the commercial site, including peak water flow requirements in GPM and/or building plumbing system fixture unit counts, should be submitted from the developer's engineer, if available.

D. BJWSA will review the project for certain requirements, such as payment of water and sewer capacity fees, material shop drawing submittals, tap construction methods, backflow prevention devices, water meter sizing and location, fire protection, sewer discharge protection and limitations (grease traps or oil-water separators), etc.

E. Once BJWSA has reviewed and approved the submittal, a commercial quote outlining fees due will be issued to the applicant by the BJWSA. The fees must be paid at least 15 business days prior to the desired date of connection to the system.

F. All sewer laterals, taps and connections must be inspected by BJWSA. The inspections are performed on Monday, Wednesdays and Fridays, with a 24-hour notice required. The piping must be exposed from the building to the street connection at the time of

inspection. All work must be done in accordance with the BJWSA Technical Specifications.

G. Water and sewer connections to new systems may not be used prior to the issuance of a SCDHEC Approval to Place in Operation and BJWSA Service Authorization.

1. For subdivided commercial buildings that choose to install a master meter, the design calculations shall be based on the minimum commercial capacity for each commercial unit or unit contributory loadings per Appendix A, whichever is greater. Fees will be assessed per identified unit. A backflow prevention device will be required on the water service line.

2. For individual commercial buildings, not subdivided, that choose to install a single meter and do not identify the end use, the design calculations shall be based on the minimum commercial capacity, fees will be assessed per the single unit, and the meter size will be limited to a ¾" meter with a backflow prevention device.

3. If in the future individual meters to service the units are requested, it will be the responsibility of the owner to notify BJWSA of the change. The owner will be responsible for installation of the individual meter boxes, individual service lines and any associated backflow prevention devices. The owner will be required to pay any additional fees, including capacity fees, associated with the change in use. When individual water services are installed for each unit, individual sewer services must also be installed with any necessary pretreatment devices.

H. In the case of a multi-family development, water usage for each building will be master metered to include usage for the total number of units in each building.

Chapter 3 - CONSTRUCTION PROCEDURES

3.1) Preconstruction Conference

3.1.1 General

A. A preconstruction conference (precon) shall be required for every development project that involves the construction of water and/or wastewater facilities. The purpose of the precon is as follows:

B. Present the engineer's approved drawings and material submittals;

C. Two (2) printed sets of dated and approved IFC drawings will be provided by the engineer 48-hours prior to the precon – one will be presented to the contractor at the precon and one will be used by BJWSA for construction inspections.

D. IFC drawings and material submittals must be submitted to the BJWSA at least 48 hours prior to the scheduled precon. No construction of water and sewer infrastructure will begin until the precon is held and BJWSA gives authorization to proceed.

E. Review the contractor's proposed construction methods;

F. Review BJWSA safety requirements and construction inspection procedures;

G. Discuss the project close-out requirements.

3.1.2 Scheduling a Precon

A. The precon must be scheduled through BJWSA after receipt of the SCDHEC Construction Permit (When required), approval of the final construction drawings and material shop drawings, verification of contractor licensing, contractor certificate of insurance, and payment of all outstanding fees. Also, the developer or his/her professional engineer must acquire and present all encroachment permits, and electronic drawing files prior to scheduling the precon. By attending the pre-construction meeting the developer and his/her agent is indicating that they have completed any land acquisitions, easements, or related agreement to be able to build the project as shown on the submitted drawings. If the developer hasn't obtained the legal access and rights to build the project as shown, the developer should contact BJWSA to reschedule the pre-construction meeting. For projects where pre-construction meetings are held, and for reasons outside of BJWSA's control the project needs to be re-designed and re-submitted for review and new design review fee will be due to BJWSA as though the process is starting over.

B. Unless otherwise approved by BJWSA, precons will be held on Tuesdays and Thursdays. It is recommended that the engineer contact BJWSA a minimum of five (5) working days prior to the proposed date to ensure availability of all concerned parties.

C. The precon should include the following project stakeholders:

1. Engineer
2. Developer Representative
3. Contractor and sub-contractor(s), if applicable.
4. City/Town, County, and SCDOT representatives, if applicable
5. Other utility representatives if applicable.

D. The engineer is responsible for notifying the project stakeholders. In cases where the developer is unavailable, the engineer may act on the developer's behalf.

E. A list of all contractors and subcontractors performing the water and/or sewer installation must be provided to BJWSA at least 48 hours prior to the precon. If the list is not provided, the precon will need to be rescheduled until after the list is provided.

3.2) Construction Drawing Approval

3.2.1 Issued for Construction (IFC)

A. The project drawings submitted by the engineer in the DRP package represent the approved construction drawings once they are permitted by SCDHEC for issuance of the Permit to Construct. They should be labeled "Issued for Construction" once the Permit to Construct is issued. Construction of water and sewer infrastructure may proceed only if working from BJWSA-approved IFC drawings and subsequent modifications as required.

3.2.2 Deviations from Approved Drawings

A. The developer's engineer is responsible for notifying BJWSA of any modifications to the development master plan. For each development water and sewer system is approved based on overall system efficiency and is coordinated with other developments in the vicinity, including development master plans submitted to BJWSA, in order to ensure system interconnections between phases, developments, subdivisions and areas. If the development product or master plan is altered or revised such that changes to the water and/or sewer system design are necessary, the developer proposing the revisions will be responsible for ensuring planned interconnections are completed and also for properly abandoning existing stub-outs no longer necessary for the approved re-design. The developer will also be responsible for modifying the design in such a way that the

new infrastructure meets the requirements of the general infrastructure design provided herein. All such revisions will need to go through the plan review process and applicable fees will be assessed.

B. If lot lines are altered, the developer will be responsible for any costs associated with moving service laterals, modifying record drawings, and updating BJWSA. Any redesign associated with moving lot lines, must meet the minimum requirements set forth in the BJWSA Technical Specifications, to include abandoning of unused services at the main and relocating mains and/or stub-outs to align with the new design.

C. For any permitted system where the developer is proposing a change in use or demolition of an existing structure, the developer will be responsible for the costs associated with abandoning any unused service laterals as directed by BJWSA. The abandonment of the service lateral must meet the minimum requirements set forth in the BJWSA's Technical Specification, to include abandoning of unused services at the main.

3.2.3 Material Shop Drawing Submittals

A. Material shop drawing submittals are required for all physical assets to ensure that they comply with BJWSA Technical Specifications. These submittals are project-specific, and as such, must include or highlight only the specific materials to be used in the project. All material submittals must be routed in electronic format. Paper submittals or faxes will not be accepted. The submittal approval process and progression are as follows:

B. Material vendor furnishes submittals to the contractor based on the project requirements.

C. Contractor reviews the submittals for compliance with SCDHEC permitted construction drawings and BJWSA Technical Specifications, signs the submittal, and forwards to the developer's engineer-of-record when complete;

D. The developer's engineer-of-record verifies compliance, signs the submittal, and forwards the package to the BJWSA. If it is determined that the material shop drawing submittal is not in compliance, the engineer shall return it to the contractor for correction and resubmission as noted above.

E. BJWSA reviews the submittal from the developer's engineer-of-record, verifies compliance, and notifies the engineer that the materials are approved for construction. If it is determined that the material shop drawing submittal is not in compliance, the submittal will be returned to the engineer for correction and resubmission as noted above.

F. Should the contractor change material suppliers during construction, the new materials would need to be submitted for approval through this same process prior to installation.

G. Material suppliers should be consistent for any run of pipe or any structure.

3.3) Contractor Licensing Requirements

3.3.1 Contractors and Subcontractors

A. A list of all contractors and subcontractors, including their current license number, classification and sub-classifications as listed with the South Carolina Board of Labor, Licensing and Regulation (SCLLR), is required. Each contractor or subcontractor must hold an active license status for the classification of work they are performing on the project and must be within their SCLLR-approved dollar limit.

B. BJWSA reserves the right to reject any contractor and/or subcontractor. No developer or contractor shall subcontract the construction of an approved project to another party without written approval from BJWSA. If it is discovered that a developer/contractor has subcontracted all or part of a job without notification to BJWSA, the contractor and subcontractor may be restricted from performing current and/or future work on utilities connected onto the BJWSA system and the installed product may have to be removed. A stop work order may be issued on any work in progress that is in violation of the terms and conditions of this Developer Policy and Procedure Manual.

3.3.2 Performance

A. Any contractor or subcontractor who, in the opinion of BJWSA, has not performed in a satisfactory manner may be restricted from working on any project that will be connected to the BJWSA system. A notice of restriction shall be issued in writing by the BJWSA via registered mail. A list of contractors restricted from working on BJWSA projects is available from the Engineering Office.

B. Pursuant to the above statements, contractors and/or subcontractors may be rejected or restricted from working on BJWSA projects for the following reasons:

C. Failure to perform work in a timely manner and in accordance with project schedules.

D. Failing to maintain safe working conditions.

E. Constructing facilities not in compliance with approved plans and specifications.

F. Producing sub-standard or poor-quality work.

G. Failure to perform warranty work.

H. Chronic failure to comply with BJWSA's Development Policy and Procedures.

I. Performing work while under a Stop Work Order.

J. Any contractor/subcontractor in violation of this policy may be suspended from work in the BJWSA system for a minimum of one year from the date of notification. The

contractor must submit a request for reinstatement to BJWSA's Director of Engineering after the suspension period has expired.

3.4) General Construction Procedures

3.4.1 General

All work shall be in accordance with the latest edition of BJWSA Technical Specifications. Failure to comply with these specifications will be cause for rejection of all work and record plans.

3.4.2 Worksite Safety

A. Contractor Responsibilities

B. The Contractor is responsible for assuring that construction safety procedures, as required by Federal, State, and Local Regulations, are observed. The Contractor is required to take all necessary steps to prevent injury to persons or property in the performance of his contract.

C. If a BJWSA representative observes unsafe practices or construction methods, he will normally inform the Contractor's Superintendent or Developer's Engineer of the hazard. If appropriate action is not taken, BJWSA may direct that all work be stopped until corrective measures are taken to assure a safe working environment.

D. The Contractor shall remedy any and all damage, injury or loss to any property, caused directly or indirectly, in whole or in part, by the Contractor or a person employed by them, or anyone for whose acts any of them may be liable.

E. Accident Prevention

F. In the performance of the contract, the Contractor shall comply with the applicable provisions of the regulations issued by the Secretary of Labor pursuant to Section 107 of the Contract Work Hours and Safety Standards Act entitled, "Safety and Health Regulations for Construction" (C29 CFT 1518), renumbered as Part 1926. Occupational Safety and Health Standards (29 CFR Part 1910) issued by the Secretary of Labor pursuant to the Williams Steigen Occupational Safety and Health Act of 1970 are applicable to work performed by the Contractor subject to the provisions of the act.

G. The Contractor will utilize and maintain, as required by conditions and progress of the work, all necessary safeguards. He will notify owners of adjacent utilities and property, when execution of the work may affect them.

H. The Contractor will take all necessary precautions for the safety of the general public as well as his employees. All roadside work shall be properly marked with lights, cones and

barrels in accordance with the most recent revision of Part V of the South Carolina Manual on Uniform Traffic Control Devices for Streets and Highways.

I. At all times during the construction of the project and its component parts, the Contractor shall provide, install, and maintain proper temporary supports, shoring, and bracing to prevent any damage, injury, or loss to all employees performing the work and other persons who may be affected.

J. The Contractor will take all necessary precautions to protect existing utilities as required in the South Carolina Underground Facility Damage Prevention Act (SC Code of Laws, Title 58, Chapter 36).

3.4.3 Wet Tap Connections on Water Mains or Force Mains

A. The purpose of this policy is to ensure that BJWSA's water and wastewater pressurized pipelines are not compromised when new developments connect to the system. Because every tap made onto the BJWSA system is a potential contamination and/or leak point, this Tapping Policy must be followed to eliminate the use of excessive taps, improper procedures, and/or unapproved equipment during the tapping process.

B. All 2" through 12" diameter wet taps on existing water and wastewater lines must be performed by BJWSA. Wet taps greater than 12" diameter must be performed by an approved tapping contractor. Size on size taps are not allowed and should be cut in.

C. A minimum size of BJWSA pipeline to be tapped is 6" for the installation of new water mains and 4" for force mains. Fees associated with the tapped connections are listed on BJWSA's Ancillary Fee Schedule.

D. The Developer's contractor will be responsible for safe excavation and shoring of the trench at the location to be tapped and shall mark the tap location.

E. Procedure

1. Once the Contractor pays the associated connection fees, a work order will be generated for BJWSA field crews.

2. The Field Operations Supervisor will coordinate with the contractor and BJWSA inspector to complete the work, typically within three (3) days of receiving the work order.

3. The contractor must excavate the line and install the tap assembly and confirm the pressure test prior to the arrival of BJWSA's tapping crew. If the BJWSA crew arrives as scheduled and the test fails, an additional return charge of one half of the tap cost must be paid prior to rescheduling as listed in the Ancillary Fee Schedule.

4. The tap assembly and associated piping will be owned, operated and maintained by BJWSA at the completion of the project.

3.4.4 Service Interruptions and Shutdowns for Water Main/Force Main Tie-ins

A. When a wet tap is not possible or the relocation of a water or sewer line requires interruption of service, BJWSA must review and approve the procedure. Fees associated with the cut-in connections are listed on BJWSA's Ancillary Fee Schedule.

B. Within 5 days of the precon the contractor is to provide the inspector the plan and schedule regarding the shutdown. The inspector will coordinate the work with Field Operations and GIS staff and respond to the contractor within 45 days. Once BJWSA approval has been received by the contractor, the contractor must contact BJWSA to schedule the interruption a minimum of five (5) business days in advance of the work. BJWSA will identify those customers affected by the shut down and schedule notification a minimum of 48 hours prior to the service interruption. The schedule agreed upon by the contractor must be strictly followed, which may include night work in order to keep businesses operational.

C. If weather conditions prohibit the work from being performed, the interruption must be rescheduled in accordance with the above procedures.

3.4.5 Stop Work Orders

A. BJWSA may issue a stop work order for any of the following reasons:

1. Failure to follow the approved plans and/or specifications and permit requirements for construction of the project;
2. Failure to get BJWSA approval of plan modifications;
3. Failure to abide by applicable BJWSA operational policies and/or procedures, including procedures described in the DPPM;
4. Failure to use OSHA and BJWSA safe work practices in the construction site;
5. Failure to adhere to SCDOT or other municipal requirements or conditions.

B. BJWSA will send copies of the stop work order to the developer, engineer, and contractor. A copy will be left on-site with the in-charge contractor representative.

C. Approval to restart construction shall be issued in writing by BJWSA. Any construction performed by a contractor while under a stop work order will be considered unacceptable by BJWSA and subject to removal and reconstruction.

3.5) Waterline Construction Procedures

3.5.1 Construction Water Use Policy

A. On all projects that require extension of existing water mains, an in-line temporary meter (jumper connection) is required for installation at the same time the wet tap is made for the project. This jumper connection shall consist of a 2" hydrant turbine meter and backflow prevention device. The contractor must contact BJWSA to lease this device. See BJWSA's Ancillary Fee Schedule for the fee associated with the hydrant meter.

B. At all times, the main tap valve will remain closed unless opened by BJWSA for scheduled water usage. Unauthorized use or tampering with the main valve is grounds for a stop work order, administrative fees, civil penalties, or criminal prosecution.

3.5.2 Meter Box Installation

A. Meter boxes shall be installed by the contractor for new services for BJWSA to install the actual metering device.

B. Meter boxes shall be set flush with the finished grade of the lot.

C. Commercial meters and meter boxes shall be installed by BJWSA. Refer to Ancillary Fee Schedule or contact BJWSA for pricing.

3.5.3 Hydrant Usage

A. On projects that required the use of construction water, hydrant operation will be controlled and closely monitored by BJWSA to ensure the integrity of the water system. Contamination of the potable system can occur due to improper use of or improper connection to hydrants.

B. Directly following installation, all hydrants must be bagged and taped, tied or otherwise secured to provide visual confirmation that the water system is not ready for operation and acceptance by BJWSA. Also:

1. No one except BJWSA personnel, the local fire department and authorized customers are approved to use a hydrant or post hydrant within BJWSA's service area.
2. Unauthorized persons or entities may not use a hydrant in the BJWSA system to obtain water to fill tanker trucks, hydro seeders or for any other purpose. To become authorized to use a hydrant, a hydrant meter rental application must be completed and the appropriate deposit paid prior to receiving the hydrant meter.
3. Any unauthorized use of a hydrant will be subject to unauthorized or illegal usage fees.

3.5.4 Unauthorized or Illegal Usage

A. Unauthorized water usage is a violation of BJWSA policies and is subject to Unauthorized Usage Fees as listed in BJWSA's Ancillary Fee Schedule. Unauthorized water usage is also illegal and therefore subject to civil or criminal penalties in Magistrates Court. The decision whether to press legal charges will be made by the BJWSA General Manager.

B. When an illegal connection is found:

1. BJWSA will disconnect and confiscate the device used on any illegal connection. If the responsible person is at the scene, he will be advised of the policy and be required to disconnect the device. Failure to comply with the request may result in BJWSA pressing charges.

2. BJWSA will calculate a bill for the estimated water used based on twice the current unit consumption charge. If water is returned to BJWSA's sewer system, the estimated gallons used will also be subject to sewer charges at the highest volume charge per 1000 gallons currently approved. An invoice including these charges and the Unauthorized Usage Fee will be sent to the appropriate person.

3.6) Gravity Sewer Construction Procedures

3.6.1 Gravity Sewer Main Extensions

Connection to existing manholes must be made in the presence of a BJWSA inspector. A 48-hour advance notification is required. No debris will be allowed to remain within the sewer system. Upon completion of the first section of gravity sewer, the contractor is required to plug the extension. Coring of existing manholes shall be from the outside. The plug is not to be removed until Service Authorization is issued by BJWSA and a SCDHEC Approval to Place in Operation is received. The BJWSA inspector must witness the removal of all plugs. Failure to comply with this provision is a violation of South Carolina State law.

3.6.2 Construction of Manholes on Existing Gravity Sewer Mains

All manholes installed over an existing gravity sewer main must be constructed in the presence of a BJWSA inspector. A 48-hour advance notification is required. The contractor shall provide a signed and sealed field-survey of existing pipe elevations at the point of tie-in, along with upstream and downstream manhole invert elevations before proceeding with manhole installation.

3.6.3 Installation of Pump Station Wet Wells

The installation of all pump station wet wells must be witnessed by a BJWSA inspector. The specific steps to be inspected include the final excavation, placement of the stone base, and installation of the wet well bottom section. A 48-hour advance notification is required.

3.6.4 Force Main Tie-Ins

All tie-ins of force mains into existing manholes must be done in the presence of a BJWSA inspector and at a time coordinated with the operation of the associated pump station. A 48-hour advance notification is required. For onsite coating of manholes, the application needs to be witnessed by BJWSA.

3.7) Construction Inspection Services

3.7.1 Routine Inspections

Routine and unscheduled inspections of ongoing projects will be made by BJWSA personnel during the construction phase to ensure conformance with the approved plans and specifications, as well as compliance with this policy manual.

3.7.2 Access to Construction

Projects approved for construction by BJWSA automatically authorize BJWSA personnel access to the construction site at all times for the purpose of inspecting constructed facilities or observing construction operations in progress. BJWSA inspectors will take appropriate action, as outlined herein, when improper material, unapproved construction or unacceptable workmanship is detected on the project and will notify the contractor, engineer and/or developer.

3.7.3 Compliance with Approved Plans

BJWSA shall make periodic checks during all phases of construction to ensure that the contractor is complying fully with project design and specifications as well as the policies and procedures herein established. Any deviation or revision to the approved engineering plans shall be furnished in writing to the project design engineer. The contractor shall not initiate any deviations or revisions until the engineer and BJWSA have approved the change in writing. Failure to follow approved plans may result in the removal and/or replacement of the unapproved portion of the construction.

Chapter 4 - PROJECT CLOSEOUT PROCEDURES

4.1) BJWSA Inspection Services

In order to efficiently closeout any approved project with BJWSA and ensure that the accurate information and all assets have been properly conveyed, the following closeout procedures should be followed.

4.1.1 Punch-list Inspection

A. When the water and/or wastewater infrastructure is substantially complete, the developer's engineer will be responsible for coordinating a punch-list inspection with the BJWSA inspector assigned to the project. The punch-list inspection on all water and sewer assets will be performed after final grading and associated roadwork is completed and all storm water appurtenances are installed. Prior to scheduling the punch-list inspection, an electronic copy of the preliminary record construction plans should be provided. A 48-hour advanced notification is typically necessary to schedule the punch-list inspection.

B. It is the responsibility of the developer and/or contractor to pump and dispose all extraneous water from the sewer system prior to the inspection. This extraneous water cannot be discharged into BJWSA's wastewater system.

4.1.2 Pump Station Inspection

A. Upon substantial completion of a pump station, the developer's engineer shall schedule a pump station inspection with BJWSA. A 48-hour advanced notification is required to schedule the pump-station inspection.

B. Punch-list items identified during the pump-station inspection shall be corrected prior to the final inspection.

4.1.3 Final Inspection

A. A final inspection may be requested only by the developer's engineer once all items identified during the punch-list inspection have been corrected. The sewer system shall be cleaned and flushed prior to the final inspection. The developer's engineer and BJWSA inspector shall prepare a written punch list of any defects noted during the final inspection, and distribute copies to the developer and contractor. Any corrections to be

made will be reviewed by the developer's engineer and BJWSA inspector prior to issuance of the Service Authorization.

B. Tracer wire testing will be conducted by the contractor during the punch-list and warranty inspections. Low frequency utility locating equipment shall be used to test for conductivity of the tracer wire. Should the tracer wire not conduct a signal, then the punch-list inspection will end immediately and the engineer will need to re-schedule.

4.2) System Testing

4.2.1 General

A. All structures retaining liquid, pressure piping, and gravity sewer piping shall be tested by the contractor as specified in the BJWSA Technical Specifications, in accordance with SCDHEC regulations and as directed by the developer's engineer.

B. All testing must be conducted in the presence of the BJWSA inspector and the engineer's representative in a manner that will minimize interference with the work progress.

C. Engineer's phasing plan for system testing must be approved by BJWSA prior to scheduling any tests. Phasing plan for system testing shall be submitted on D-size (Architectural 24" x 36" or ANSI 22"x34") sheets and show the approved water/sewer infrastructure.

D. Once the phasing plan has been approved, the Contractor shall notify BJWSA at least 48-hours beforehand to schedule testing.

E. The costs associated with all testing shall be borne by the contractor, including all failed tests. Testing on all water and sewer assets will be performed after final grading and associated road base compaction is completed and all storm water appurtenances are installed.

4.2.2 Soil Compaction Testing

A. All BJWSA pipelines constructed in the SCDOT right-of way must be tested and inspected in accordance with SCDOT requirements. Post-installation compaction testing will not be allowed. Completed compaction testing reports must be submitted to BJWSA as part of the project punch-list inspection, prior to project closeout.

4.2.3 Water Main and Force Main Hydrostatic Pressure Testing

A. All pressure pipelines must be subjected to hydrostatic testing in accordance with industry standards. These pipelines shall be tested to 1.5 times the working pressure,

but not less than 150 PSI for a period of 2 hours. If the pipeline experiences a pressure drop, then the test fails. Refer to BJWSA Technical Specifications for more information on this procedure.

B. All system valves within the test area will be operated during the pressure test to ensure that the installation is capable of withstanding ordinary operating pressure without failure or excess leakage at joints and service connections.

4.2.4 Disinfection (BacT) Testing

A. Before being placed in service, all potable water pipelines, fire lines, tanks or other structures used for potable water storage shall be disinfected and tested by the contractor at a SCDHEC-approved laboratory as specified in the BJWSA Technical Specifications and as directed by the developer's engineer.

B. The timing of this test should be coordinated closely between the engineer and contractor due to the compliance window associated with the test results and the review period associated with the SCDHEC Permit to Operate and BJWSA Service Authorization requirements.

4.2.5 Gravity Sewer Testing

A. Air Test – All gravity main tangents between manholes must be tested for leakage before being placed into service.

B. Mandrel Test – All gravity main tangents between manholes must be tested for straightness prior to being placed into service. Also known as a deflection test, is critical to the long-term performance of the sewer line and is conducted by pulling a device called a mandrel through the pipe to verify that there is adequate clearance. The test is to be conducted in accordance with BJWSA Technical Specifications.

C. Lamp Test – All gravity main tangents between manholes must be tested for roundness prior to being placed into service. This test is conducted by placing a mirror at one end of the line and a lamp at the other and checking the reflection of the light. To pass the test, the light must be reflected in a full circle as determined by BJWSA. The test is to be conducted in accordance with BJWSA Technical Specifications.

D. Video Inspection Test – Where, in the opinion of BJWSA, the integrity of the system cannot be determined by the testing listed herein, the contractor may be required to provide a digital video inspection of each gravity sewer main tangent. Costs for video inspection testing shall be borne by the contractor.

E. If the contractor is either unable or unwilling to pass these tests, then he will be required to relay the pipeline tangent and correct the failure before the asset is accepted by BJWSA.

4.2.6 Pump Station Start-up Testing

A. Pump station start-up testing will be performed by the pump manufacturer's representative. The contractor will contact the pump manufacturer's representative, the electrician for the station, and the BJWSA project inspector to witness this start-up.

Following the startup, the test results will be forwarded to the project engineer-of-record, who will submit a copy of the results to BJWSA and certify that the duty point has been met.

4.3) Record Drawing Requirement

4.3.1 General

A. The purpose of the record drawings is to verify that the water and sewer systems serving the project were installed per the approved IFC plans and BJWSA Technical Specifications, in accordance with the SCDHEC approved construction permit, and recorded to show the actual locations of the water and sewer assets conveyed to the Authority for ownership, operation and maintenance.

B. Preliminary record drawings will be reviewed for compliance with the approved design and requirements of the record drawing submittal. Discrepancies will be noted and comments sent to the engineer of record to be incorporated into the final record drawings.

4.3.2 Specific Guidance for Record Drawings

A. Record drawings must be submitted by the developer's engineer in AutoCAD format (dwg) displayed in paper view, and in pdf format and be based off contractor's red-lines, field survey and engineer's observations. A copy of the contractor's red-lines shall be submitted with the preliminary record drawings

B. All electronic files will be reviewed for adherence to BJWSA standards before approval is issued. In addition to the Design Drawing Requirements as described herein Chapter 2, the record drawings shall incorporate the following additional elements:

C. General

1. Contractor's name, address, and telephone number (all sheets).

2. Street names, 911 addresses, and lot numbers (all sheets).

3. The "Record Drawing Date" must be boldly marked on each plan sheet in the revision block with as-built data on the sheet identified by revision number and encircled in a cloud.

4. Only information pertinent to the location of water and/or sewer facilities being dedicated to BJWSA should be shown with other utilities, including stormwater, in gray-scale.

5. All proposed information in the plan view shall be moved to its final surveyed location. Profiles are preferred on record drawings. For proposed information on profiles, the texted may be marked through and as-built information shown near it. Mark-through and redraw when the as-built location on the profile is

more than one inch (scaled horizontally or vertically) from the proposed location. If profiles are removed from the submitted record drawings, all profile information shown on the IFC plans shall be transferred to the plan view on the record drawings.

6. Each plan and profile sheet, plan/profile sheet and pump station sheet shall show material lists for all dedicated assets, which include item name, manufacturer, model number, size and description. All materials shall be accurately identified on the record drawings, including any changes in material manufacturers.

7. Phased projects will be required to submit record drawings for subsequent phases, which include as-recorded information on all prior phases. Existing as-recorded information from previously completed phases shall be gray-scaled. Lot numbers throughout all phases shall run consecutively and not repeat on later phases. Naming convention shall remain consistent throughout phases.

8. Plans shall identify all facilities abandoned in place, but no reference shall be made to any proposed or removed facilities.

9. All storm water, water, and wastewater pipeline utility crossings must be shown, including vertical (in profile view) and horizontal (in plan view) separation distances, depth of cover, and pipe materials. Show the location of all existing and newly-installed dry utilities (electric, cable, telephone, natural gas, etc.), if available.

10. Water, wastewater and storm water pipelines are to be shown concurrently on plan and profile sheets where crossings exist. Do not submit separate sheets for these utilities, if practical. Stormwater drainage invert and pipe diameter may be limited to providing that information where the stormwater infrastructure crosses a water and/or sewer line.

D. Guidance for AutoCAD File

1. Submit one electronic file containing the water and/or wastewater utilities that were shown as-recorded in addition to the site where the utilities were constructed. Preserve the project integrity by maintaining the site as a whole rather than breaking it up into multiple drawing files. The files must have an insertion point of 0,0,0 referencing the South Carolina State Plane Coordinate System.

2. All entities and object colors must be drawn BYLAYER.

3. All dimensions shall be to the nearest one tenth of a foot in the vertical plane and the nearest tenth of a foot in the horizontal plane, with angles to the nearest minute.

E. Easements

1. Show all easements conveyed and surveyed boundaries of any property conveyed to BJWSA as linework on the Record Drawings. Complete easements shall be provided to BJWSA that include book and page where recorded. When possible on the Record Drawings, when infrastructure details won't be obscured, BJWSA prefers to have indicated the book and page # where easements are recorded.

2. Show where water and/or sewer facilities are located within private property through an easement granted by the property owner. Meets and bounds legal descriptions are not required on record drawings, instead, show the linework of the easement on the record drawings.

F. Water Mains and Associated Features

1. Water mains shall be referenced to permanent visible structures, including road centerlines, edges of pavement, buildings, manholes, and catch basins. Rights-of-way/property line boundaries may be used in the absence of the other references noted. Tie-down locations of all valves, bends, and tees, to hydrants, manholes, buildings, markers, or other permanent structures. A minimum of two tie-down dimensions are required for each fitting. Show depth of cover on all valves and fittings if greater than 5 feet. Station numbering is acceptable to show the tie-down locations.

2. A "blow-up" is required of all valve clusters and other areas of congestion if not clearly shown otherwise. Indicate distance from hydrant to main line.

3. Show tie-down locations of water service termination points to permanent structures such as buildings, manholes and hydrants. Property corners may be used in the absence of other reference points when visible permanent structures are not nearby.

G. Gravity Sewer Mains

1. Manholes shall be tied to permanent visible features, including road centerline or edge of pavement, rights-of-way, property line boundaries and/or corners and storm water structures.

2. Identify manholes and pipes that have been lined with specialty coatings and label with coating type and manufacturer.

3. Laterals connection locations to the mainline sewer shall be provided with stationing for their location along the mainline sewer, if available.

4. Show on the drawing the linear feet of sewer main (manhole to manhole) number of single and double services.

5. Provide field-surveyed elevation on top of force main connection to manhole or force main manifold.

H. Sewer Pump Stations

1. Complete layout of the pump station shall be shown in detail, with the layout representing the actual as-built condition of all components. Provide field-surveyed elevations for the following points: influent line invert, bottom of wet well, top of slab (including brass benchmark), pump off level, pump on level, lead/lag levels, both pumps on level, and high-water alarm level. The site-specific pump station detail shall include all conduit layouts, as well as the electrical power service from the meter to the transformer.

I. Record Drawing Certifications

The following statements shall appear on the cover sheet of the record drawings and shall be signed and sealed by the engineer of record, respectively, and show their respective registration numbers. BJWSA prefers a Surveyor's Certification, in lieu of Surveyor's Certification a Contractor's Certification may be provided indicating that the installed assets were surveyed in a professional and reliable manner. Contractor's Certification shall provide company names, individual name, and contact information.

ENGINEERS CERTIFICATION

These record drawings have been prepared based upon information provided by others and our periodic observations. (ENGINEERING FIRM NAME) has reviewed this information and to the best of our information, knowledge and belief these Record Drawings represent the approved site development plans.

ENGINEER'S NAME (PRINTED):

ENGINEER'S SIGNATURE:

SC PE NUMBER:

DATE:

SEAL:

4.4) Project Closeout Requirements

4.4.1 General

A. Before BJWSA issues the Service Authorization for the SCDHEC Permit to Operate, the following documentation must be submitted by the developer's engineer and approved by BJWSA. A list of standard close-out documents is provided in **Appendix B**.

B. Engineer's Certification Letter – Letter from the Engineer-of-Record stating that the project was constructed as designed in accordance with the SCDHEC-approved construction permit, BJWSA Technical Specifications, and the approved IFC plans.

C. Certificate of Non-litigation – Certificate signed by the developer, engineer and contractor that there are no liens or legal actions that would affect the dedication of water and/or sewer utilities to BJWSA.

D. Contractor Guaranty – Guaranty stating that all work described or shown in the construction documents was performed and guaranteed for a period of twelve (12) months from the date of the Permit to Operate or from the date of the Service Authorization when a Permit to Operate does not apply to the project.

E. Cost Certificate – Certificate verifying the incremental overall costs of water/sewer improvements being conveyed to BJWSA.

F. Bill of Sale – Bill conferring ownership of the installed water and sewer physical assets to BJWSA.

G. Pump Station Deed Executed and Recorded – Platting information required for easements and/or real property to be dedicated to BJWSA, conforming to Beaufort and/or Jasper County Development Standards Ordinance (DSO) requirements. A recordable plat shall be provided to BJWSA and BJWSA attorneys will prepare the conveyance document.

H. Water/Sewer Utility Easements - An easement is a right afforded by a private property owner to BJWSA to access the water and sewer infrastructure serving a parcel for construction, maintenance, repair and operation activities and connection to nearby parcels. Easements shall be recorded prior to Service Authorization. Recorded copies of all specific easements required to serve the proposed project shall be provided prior to project closeout.

4.4.2 System Testing Results

Passing results of all applicable test shall be submitted to BJWSA.

4.4.3 Record Drawings

Preliminary record drawings shall be provided to BJWSA for review. Comments will be returned to the developer's engineer and any discrepancies are to be addressed in the final record drawings submitted to BJWSA.

4.4.4 Maintenance Bond

A. A maintenance bond shall be required on all water/wastewater construction projects, except those that meet our definition of a minor project and don't potential impacts to pavement sections or DOT right-of-way. The purpose of the maintenance bond is to protect and ensure the integrity of systems conveyed to BJWSA throughout the warranty period. The principal of the maintenance bond shall be the Developer not the contractor.

1. After issuance of the BJWSA Service Authorization and SCDHEC Operating Permit;
2. Before the development has been completed;
3. Through the warranty period and an additional 6 months to correct any defective items.

B. The amount of the bond shall be 10% of the total water and/or sewer construction costs or $5,000, whichever is greater. The amount must be sufficient to cover all possible repairs required during the warranty period, as well as the manpower costs associated with locating any newly constructed water and/or sewer pipelines in conjunction with ongoing site work done during the remainder of construction. The bond will be cashed in the event that a repair is made to the system by BJWSA personnel during the warranty period. The acceptable form of the bond is a surety bond, certified or cashier's check. Once the BJWSA inspector completes the warranty inspection and/or the 18-month time period has elapsed, the bond will be released. However, if dry utilities are still not installed by the end of the warranty period, the maintenance bond must be extended until after the installation of the dry utilities.

C. A maintenance bond will also be required to cover the period between the issuance of a Partial Permit to Operate and the issuance of the Permit to Operate.

4.5) Final Acceptance – Service Authorization

4.5.1 General

BJWSA will issue a Service Authorization letter upon acceptance of the water and/or sewer system by BJWSA when a SCDHEC Construction Permit is not required. The Service Authorization letter is required to obtain service to the project. A copy of the Service Authorization shall be provided to the developer, engineer, and contractor.

A. Once the engineer-of-record has fulfilled the project closeout requirements as listed herein, the Service Authorization will be issued by BJWSA. To receive the Service Authorization letter, the following items must be submitted in a single packet to BJWSA for review and approval. All documents must be original and signed in blue ink.

1. All punch list items as identified by the engineer and BJWSA inspectors.

2. The engineer's certification letter, along with water pressure and bacteriological test results, and wastewater force main pressure and gravity sewer and/or air pressure test results as applicable. Because the bacteriological test results are valid for 30 days, this test should be performed within 30 days of the issuance of the Service Authorization by BJWSA. Samples results that fall outside the compliance period must be retaken.
3. The Wastewater Pump Station Start-up Report (see Inspector for form) accompanied by design criteria, pump and motor identification, O&M manuals, pump curves and spare parts.
4. Final record drawings received, reviewed and approved by BJWSA.
5. Executed Certificate of Non-Litigation.
6. Contractor's Warranty for not less than one year after receiving the Service Authorization.
7. Certified and notarized cost certificate from the developer.
8. Bill of Sale from the developer for all property to be dedicated to BJWSA, including either fee simple conveyance or granting of rights-of-way.
9. Execution of all easements and deeds necessary for the conveyance of the water and/or sewer facilities to be maintained and owned by BJWSA.
10. Submittal of the maintenance bond guarantee
11. A signed SCDOT approval form/letter indicating their acceptance of the project.
12. Release by other agencies such as State, County or others as applicable for encroachment permits or other liabilities.
13. Repair of any facilities damaged by site construction, paving, drainage, and dry utility installation activities during the warranty period.
14. Payment for any repairs performed by BJWSA.

4.5.2 Gated Residential Communities

A. Receipt of the gate pass code from the developer is required upon final project acceptance for ongoing water and sewer system operation and maintenance by BJWSA personnel. Any change in the gate code must be reported to BJWSA to ensure that there is no interruption in service to customers.

4.5.3 Placing in Operation

A. Upon issuance of the Permit to Operate and/or Service Authorization, the contractor must remove all jumper connections in the water system and plugs in the sewer system in the presence of the BJWSA inspector. The engineer must submit the Service Authorization with the required project certification and test results to SCDHEC in order to obtain the official Approval to Place in Operation. Upon issuance of the SCDHEC approval, BJWSA personnel will operate the main water valve connecting the new

system and the one-year system warranty will begin. Then, the developer can apply for service and request taps and meters. Residential developments and commercial developments can apply for service online at www.bjwsa.org.

B. The BJWSA service authorization and the SCDHEC approval to place in operation must be issued before discharging any wastewater into the sewer system or using potable water in any development.

C. Upon issuance of the Service Authorization and the SCDHEC Approval to Place in Operation, any modifications to the permitted water and sewer system, relocating of lot lines, subdivision or consolidation of existing lots is not permitted without written consent from BJWSA. Any revisions to the permitted systems require approval from BJWSA as outlined in Chapter 2.

4.5.4 Revisions to Developments after Service Authorization and/or Permit to Operate

A. If the development product or master plan is altered or revised such that changes to the BJWSA water and/or sewer system design is necessary, the developer proposing the revisions will be responsible for ensuring planned interconnections are completed and also for properly abandoning existing stub-outs no longer necessary for the development. The developer is responsible for notifying BJWSA of any modifications necessary to the existing system. The revised plans shall be submitted through the plan review process and all applicable fees will be applied.

B. If lot lines are altered, the developer will be responsible for any costs associated with moving service laterals, modifying record drawings, and updating BJWSA. Any redesign associated with moving lot lines, must meet the minimum requirements set forth in the BJWSA Technical Specifications, to include abandoning of unused services at the main and relocating mains and/or stub outs to align with the new design. The revised plans shall be submitted through the plan review process and all applicable fees will be applied.

4.5.5 Temporary Service Authorization for Fire Service and Construction Water ONLY

BJWSA may issue a Temporary Fire Service and Construction Water Service Authorization, in conjunction with SCDHEC Temporary Approval to Place into Operation, if construction water and/or fire protection is needed during construction of the development. The following minimum requirements shall be provided:

A. All hydrants shall be provided stone access for firefighting equipment and vehicles.
B. BacT testing of any part of the system that has been issued a Temporary Service Authorization, shall be repeated as stipulated for the final approval of the project.

C. BJWSA will not assume ownership of the assets for operations, maintenance, or replacement while under Temporary Fire Service and Construction Water. No maintain bond is required for Temporary Fire Service and Construction Water.

4.5.6 Partial Service Authorization

BJWSA may issue a Partial Service Authorization, in conjunction with SCDHEC Partial Approval to Place into Operation, if the project meets the following conditions:

A. If a project is divided into phases;

B. In order to obtain a Partial Service Authorization, the developer's engineer must provide preliminary record drawings, test results, and engineer's certification.

C. BacT testing of any part of the system that has been issued a Partial Service Authorization, shall be repeated as stipulated for the final approval of the project.

D. A maintenance bond is provided for those assets within the area for the Partial Service Authorization.

E. BJWSA will accept those assets at this time for operation, maintenance, and replacement.

4.5.7 Service Authorization

BJWSA shall issue the Service Authorization after verification by the BJWSA staff that the project is complete, all punch-list items have been addressed, and that the information on the record drawings has been field verified and is consistent with the SCDHEC approved design.

4.6) Project Warranty

4.6.1 Warranty Period

A. The one (1) year contractor warranty period begins after the issuance of the SCDHEC Approval to Place in Operation or Service Authorization, when BJWSA opens the valve connecting the new system to the existing system.

B. Manufacturer's warranty of equipment for BJWSA pump stations (i.e. pumps, panels, etc.) shall be (5) years and shall begin at the issuance of the SCDHEC Approval to Place in Operation.

4.6.2 Warranty Inspection

For ongoing site work during the warranty period, any and all locate requests performed by BJWSA field crews will be billed to the developer on a time and expense basis.

A. BJWSA will perform a warranty inspection (to include the area in the SCDOT right-of-way impacted by the project, if applicable) during the last quarter of the warranty period. If needed, a punch list will be developed based on the warranty inspection and submitted to the engineer and developer for correction.

B. The final grade shall be established prior to the setting of meters/meter boxes and cleanouts during construction. If adjustments are required as a result of the warranty inspection, the developer shall be responsible for the costs to re-set the meters/meter boxes and cleanouts to the revised grade.

C. It is the responsibility of the developer to contact the contractor, who will be given 30 days to complete the punch list before the BJWSA arranges for the work to be done. If the BJWSA does the corrections, an invoice for the cost of the work will be sent to the developer. If the developer declines to pay for the corrective work performed by BJWSA, the maintenance bond will be liquidated for the outstanding amount due.

4.6.3 Extension of Warranty Period

A. If there is no flow on the system at the end of the 12-month contractor warranty period, then the maintenance bond will be extended for an addition 12-months from its current expiration date, until such time that there is flow on the system.

1. For any project that requires an extension of the contractor warranty period, the following will be required:

    a. Extension of the bond to match the expiration date of the warranty.
    b. A passing pressure test of the line before the end of the extended warranty period and prior to placing flow on the line.
    c. CCTV of the line before the end of the extended warranty period and prior to placing flow on the line.

APPENDIX A

SCDHEC UNIT CONTRIBUTORY LOADINGS

FOR WASTEWATER TREATMENT FACILITIES

(Reg 61-67, Rev. June 26, 2015)

TYPE OF ESTABLISHMENT	*HYDRAULIC LOADING (GPD)*
Airport Terminal	
Per Employee	8
Per Passenger	4
Apartments, Condominiums, Patio Homes	
Three (3) Bedrooms (per unit)	300
Two (2) Bedrooms (per unit)	225
One (1) Bedroom (per unit)	150
Assembly Halls	
Per Seat	4
Barber Shop	
Per Employee	8
Per Chair	75
Bars, Taverns	
Per Employee	8
Per Seat (excluding restaurant)	30
Beauty Shop	
Per Employee	8
Per Chair	94
Boarding House, Dormitory	
Per Resident	38
Bowling Alley	
Per Employee	8
Per Lane, No Restaurant, Bar or Lounge	94
Camps	
Resort, Luxury (per person)	75
Summer (per person)	38
Day, with Central Bathhouse (per person)	26
Travel Trailer (per site)	131

Car Wash	
Per Car Washed	56
Churches	
Per Seat	2
Clinics, Doctor's Office	
Per Employee	11
Per Patient	4
Country Club, Fitness Center, Spa	
Per Member	38
Dentist Office	
Per Employee	11
Per Chair	6
Per Suction Unit (standard unit)	278
Per Suction Unit (recycling unit)	71
Per Suction Unit (air generated unit)	0
Factories, Industries	
Per Employee	19
Per Employee, with Showers	26
Per Employee, with Kitchen	30
Per Employee, with Showers and Kitchen	34
Fairgrounds	
Average Attendance, Per Person	4
Grocery Stores	
Per Person, no Restaurant or Food Preparation	19
Hospitals	
Per Resident Staff	75
Per Bed	150
Hotels	
Per Bedroom, No Restaurant	75
Institutions	
Per Resident	75
Laundries	
Self Service, Per Machine	300
Marinas	
Per Slip	23

Mobile Homes	
Per Unit	225
Motels	
Per Unit, No Restaurant	75
Nursing Homes	
Per Bed	75
Per Bed, with Laundry	113
Offices, Small Stores, Business, Administration Buildings	
Per Person, No Restaurant	19
Picnic Parks	
Average Attendance, Per Person	8
Prison/Jail	
Per Employee	11
Per Inmate	94
Residences	
Per House, Unit	300
Rest Areas, Welcome Centers	
Per Person	4
Per Person, with Showers	8
Rest Homes	
Per Bed	75
Per Bed, with Laundry	113
Restaurants	
Fast Food Type, Not 24 hours (Per Seat)	30
24 Hour Restaurant (Per Seat)	53
Drive-in (Per Car Served)	30
Vending Machine, Walk-up Deli, Food Prep (Per Person)	30
Schools, Day Care	
Per Person	8
Per Person, with Cafeteria	11
Per Person, with Cafeteria, Gym and Showers	15
Service Stations	
Per Employee	8
Per Car Served	8
Car Wash (Per Car Served)	56

Shopping Centers, Large Department Stores, Malls	
Per Person, No Restaurant	19
Stadiums, Coliseums	
Per Seat, No Restaurant	4
Swimming Pools	
Per Person, with Sewer Facilities and Showers	8
Theaters	
Indoor (Per Seat), Drive In (Per Stall)	4

APPENDIX B

PROJECT CLOSEOUT DOCUMENTS

ATTACHMENTS INCLUDED:

I. Certificate of Non-litigation

II. Contractor Guaranty

III. Cost Certificate

IV. Bill of Sale

V. Water/Sewer Specific Easement Example

VI. Water/Sewer Utility Blanket Easement

APPENDIX C

JANUARY 2025 ADDENDUM TO THE DPPM

AMENDED RESOLUTION

ADOPTING WATER AND WASTEWATER CAPITAL CONTRIBUTION /IMPACT FEES FOR BEAUFORT-JASPER WATER AND SEWER AUTHORITY BEGINNING MARCH 1, 2025 THROUGH JUNE 30, 2027

WHEREAS, the Members of the Beaufort-Jasper Water and Sewer Authority ("Authority") has previously established water and wastewater capital contribution fees for the Authority's various service areas; and

WHEREAS, the Authority last adopted a Resolution which reflected a change in the water and wastewater capital contribution fees on September 26, 2024, after the duly noticed public hearing; and

WHEREAS, the Authority has determined that an additional month will be necessary to properly implement the Contribution/Impact Fee Increase as set forth in the Resolution dated September 26, 2024; and

WHEREAS, the Authority previously determined to phase in changes to the water and wastewater capital contribution/impact fees over a multi-year period now beginning March 1, 2025 and ending June 30, 2027; and

WHEREAS, the Authority previously determined to change the terms of payment from all water and wastewater capital contribution/impact fees being due at pre-construction to a phased approach with the initial capacity fees being due at the time of pre-construction and the remaining fees being due no later than at the time of payment for the meters; and

WHEREAS, no changes to the schedule attached to the September 26, 2024, Resolution have been made with the exception of the initial effective date for the residential water and sewer rates per REU and the commercial water and sewer rates per gpd of March 1, 2025, as reflected in the attached schedule; and

WHEREAS, the change to the terms of payment as passed through the September 26, 2024, Resolution require an amendment to the Development Policy and Procedure Manual ("DPPM"), Section 2.2.2 Water/Wastewater Capacity Fee Determination (F) to reflect the payment of the initial water and wastewater capital contribution/impact fees will be due at pre-construction and the remaining fees due no later than the time of payment for the meters as set forth in the attached schedule as of the effective date of the increase; and

WHEREAS, under the new fee schedule effective March 1, 2025, any capacity fee can be paid in full prior to pre-construction as the phased payment schedule is merely an option to aid the development community with the scheduled fee increases; and

WHEREAS, once the initial capacity fee is paid at pre-construction under the new capacity fee schedule effective March 1, 2025, the capacity fee rates are guaranteed for

twenty-four (24) months thereafter as long as the balance of the fee is paid within that twenty-four (24) month period; and

WHEREAS, under the new capacity fee schedule effective March 1, 2025, only the capacity fees must be paid in full within the twenty-four (24) month period in order to lock in the rate as set forth in the attached fee schedule as meter quotes are only sent out at the time of project close out and service authorization; and

WHEREAS, neither meter fees nor capacity fees can be pre-purchased under the new fee schedule as capacity fee quotes for projects are not issued until a project has made it through BJWSA's design review and receives authorization for the South Carolina Department of Environmental Services (SCDES) permitting or pre-construction and meters fees can only be paid when the project is closed out and a service authorization is received per the existing DPPM; and

WHEREAS, this Resolution shall be made an addendum to the DPPM and shall function as an amendment to the DPPM until such time as the Board approves an updated DPPM; and

WHEREAS, to the extent there is a conflict between the terms of the current DPPM and this Resolution, the terms as set forth in this Resolution shall govern; and

NOW, THEREFORE BE IT RESOLVED by the Members of the Beaufort-Jasper Water and Sewer Authority duly assembled, that the September 26, 2024, Resolution is hereby amended to change the effective date of the implementation of the Capital Contribution/Impact Fees increase to March 1, 2025 and to amend Section 2.2.2 Water/Wastewater Capacity Fee Determination (F) of the Developer Policy and Procedure Manual to reflect a phased payment schedule with the first payment being due at pre-construction and the remaining fees due no later than the time of payment for the meters with an amendment date of March 1, 2025, and that such fees are locked in for a period of twenty-four (24) months after the initial payment is made at pre-construction.

ADOPTED this 23 day of January 2025, in Regular Session.

(SEAL)

BEAUFORT-JASPER WATER AND SEWER AUTHORITY, SOUTH CAROLINA

By: _____
Gregory A. Padgett, Chair

Attest:

_____
William Singleton, Ed. D, Secretary/Treasurer

Effective 3/1/2025	Payment at Precon	Payment at Meters
Residential Water per REU	$1,639.00	$1,113.00
Residential Sewer per REU	$5,362.00	$3,638.00
Commercial Water per gpd (minimum 300 gpd)	$4.10	$2.78
Commercial Sewer per gpd (minimum 200 gpd)	$17.87	$12.13

Effective 7/1/2025	Payment at Precon	Payment at Meters
Residential Water per REU	$1,639.00	$1,461.00
Residential Sewer per REU	$5,362.00	$5,138.00
Commercial Water per gpd (minimum 300 gpd)	$4.10	$3.65
Commercial Sewer per gpd (minimum 200 gpd)	$17.87	$17.13

Effective 7/1/2026	Payment at Precon	Payment at Meters
Residential Water per REU	$1,639.00	$1,801.00
Residential Sewer per REU	$5,362.00	$6,221.00
Commercial Water per gpd (minimum 300 gpd)	$4.10	$4.50
Commercial Sewer per gpd (minimum 200 gpd)	$17.87	$20.74