INTRODUCED: August 15, 2016

AN ORDINANCE No. 2016-206

To authorize the execution of a Utility Facilities Agreement, a Non-Resident Water Services Contract, a Non-Resident Wastewater Services Contract, and certain other documents between the City of Richmond and Central Virginia Investments/Rocketts Landing, LLC necessary to facilitate the construction of utility facilities for and the provision of water and wastewater service to a mixed-use development in the County of Henrico.

Patron – Mayor Jones

Approved as to form and legality
by the City Attorney

PUBLIC HEARING: SEPT 12, 2016 AT 6 P.M.

THE CITY OF RICHMOND HEREBY ORDAINS:

§ 1. That the Chief Administrative Officer, for and on behalf of the City of Richmond, is hereby authorized to execute a Utility Facilities Agreement between the City of Richmond and Central Virginia Investments/Rocketts Landing, LLC for the purpose of providing for the construction and transfer to the City of certain utility facilities to support a mixed-use development in the County of Henrico, provided that the Utility Facilities Agreement must be substantially in the form of the document attached to this ordinance and first must be approved as to form by the City Attorney.

AYES:	9	NOES:	0	ABSTAIN:	
ADOPTED:	SEPT 12 2016	REJECTED:		STRICKEN:	

§ 2. That the Director of Public Utilities, for and on behalf of the City of Richmond, is authorized to execute a Non-Resident Water Services Contract between the City of Richmond and Central Virginia Investments/Rocketts Landing, LLC for the purpose of providing water service to a mixed-use development in the County of Henrico, provided that the Non-Resident Water Services Contract must be substantially in the form of the document attached to the Utility Facilities Agreement attached to this ordinance and first must be approved as to form by the City Attorney.

§ 3. That the Director of Public Utilities, for and on behalf of the City of Richmond, is authorized to execute a Non-Resident Wastewater Services Contract between the City of Richmond and Central Virginia Investments/Rocketts Landing, LLC for the purpose of providing wastewater service to a mixed-use development in the County of Henrico, provided that the Non-Resident Wastewater Services Contract must be substantially in the form of the document attached to the Utility Facilities Agreement attached to this ordinance and first must be approved as to form by the City Attorney.

§ 4. That the Chief Administrative Officer, for and on behalf of the City of Richmond, is hereby authorized to accept the dedication of water mains, water service connections, sanitary sewer mains, and sanitary sewer lateral connections as described in and pursuant to the Utility Facilities Agreement and to accept the deed and execute the other documents necessary to consummate such dedication, provided that such deed and other documents first must be approved as to form by the City Attorney.

§ 5. That the Director of Public Utilities, for and on behalf of the City of Richmond, is authorized to execute future Non-Resident Water Services Contracts between the City of Richmond and Central Virginia Investments/Rocketts Landing, LLC pursuant to and as described

in the Utility Facilities Agreement for the purpose of providing water service to future phases of a mixed-use development in the County of Henrico, provided that each such Non-Resident Water Services Contract must be generally in conformance with the form document attached to the Utility Facilities Agreement attached to this ordinance and first must be approved as to form by the City Attorney.

§ 6. That the Director of Public Utilities, for and on behalf of the City of Richmond, is authorized to execute future Non-Resident Wastewater Services Contracts between the City of Richmond and Central Virginia Investments/Rocketts Landing, LLC pursuant to and as described in the Utility Facilities Agreement for the purpose of providing wastewater service to future phases of a mixed-use development in the County of Henrico, provided that each such Non-Resident Wastewater Services Contract must be generally in conformance with the form document attached to the Utility Facilities Agreement attached to this ordinance and first must be approved as to form by the City Attorney.

§ 7. This ordinance shall be in force and effect upon adoption.

CITY OF RICHMOND
INTRACITY CORRESPONDENCE

RECEIVED
AUG 0 1 2016
OFFICE OF CITY ATTORNEY

O & R REQUEST

DATE: July 8, 2016 **EDITION:** 1

4-5457
O & R REQUEST
JUL 12 2016
Chief Administration Office
City of Richmond

TO: The Honorable Members of City Council

THROUGH: Dwight C. Jones, Mayor

THROUGH: Selena Cuffee-Glenn, Chief Administrative Officer

THROUGH: Jay A. Brown, Director of Budget and Strategic Planning

THROUGH: Lenora Reid, Deputy Chief Administrative Officer - Finance

THROUGH: John B. Wack, Finance Director

THROUGH: John Buturla, Interim Deputy Chief Administrative Officer

FROM: Robert Steidel, Director of Public Utilities FOR

RE: Utility Facilities Agreement between the CITY OF RICHMOND and CENTRAL VIRGINIA INVESTMENTS/ROCKETTS LANDING, LLC
Non-Resident Water Service Contract between CITY OF RICHMOND and CENTRAL VIRGINIA INVESTMENTS/ROCKETTS LANDING, LLC
Non-Resident Wastewater Service Contract between the CITY OF RICHMOND and CENTRAL VIRGINIA INVESTMENTS/ROCKETTS LANDING, LLC

ORD. OR RES. No. _____

PURPOSE: To authorize the Chief Administrative Officer to sign the attached Utility Facilities Agreement between the CITY OF RICHMOND and CENTRAL VIRGINIA INVESTMENTS / ROCKETTS LANDING, LLC. To authorize the Director of Public Utilities to sign the attached Non-Resident Water Service Contract between CITY OF RICHMOND and CENTRAL VIRGINIA INVESTMENTS / ROCKETTS LANDING, LLC. To authorize the Director of Public Utilities to sign the attached Non-Resident Wastewater Service Contract between the CITY OF RICHMOND and CENTRAL VIRGINIA INVESTMENTS / ROCKETTS LANDING, LLC.

REASON: CENTRAL VIRGINIA INVESTMENTS/ROCKETTS LANDING, LLC, a Virginia limited liability company (hereinafter referred to as "Rocketts Landing"), intends to develop on the premises situated in Henrico County, Virginia, portions of the real property shown on the plat included as an exhibit to the proposed Utility Facilities Agreement, ("Rocketts Landing Master Plan," prepared by Saunders & Crouse Architects, dated 2016). Such portions are designated as Land Bays 5 and 6 and constitute the balance of the undeveloped portion, in Henrico County, of the Rocketts Landing project (a mixed-use project consisting of residential, office, retail, restaurant and/or hotel),

together with any other real property annexed or added to the Rocketts Landing project, including, without limitation, the Virginia Rigging and Vulcan Parcels as applicable. Rocketts Landing intends to develop the foregoing project in phases and requires new water and wastewater service. Henrico County in 2005 and 2007 agreed that the City should serve water and wastewater services to the Rocketts Landing project and that position is unchanged in 2016. The City's Department of Public Utilities is willing to provide and is capable of providing such utility services at the applicable utility rates and fees.

RECOMMENDATION: The City Administration recommends adoption.

BACKGROUND: The City's Department of Public Utilities currently provides water and wastewater services to Rocketts Landing phases constructed prior to 2016. Expansion of this service, with the agreement of Henrico County, is in the public interest due to the City's Department of Public Utilities ability and readiness to serve. City Code authorizes the City to provide water and wastewater utility service outside of the City's corporate limits. City Council approval is required to authorize execution of the attached proposed utility agreements, which have been adapted to reflect the special conditions of the proposed development and the negotiations between the parties.

FISCAL IMPACT / COST: Rocketts Landing will pay the installation cost for water and wastewater service. Rocketts Landing, in further consideration, shall pay the City $1,720,902.00 (the "Payment") in addition to the payment of costs, fees, and charges otherwise set forth in this Agreement. Rocketts Landing shall make the Payment to the City in two installments, including (i) a payment of $860,451.00 which Rocketts Landing shall make upon execution of this Agreement, and (ii) a payment of $860,451.00 which Rocketts Landing shall make no later than the second anniversary of the execution of this Agreement.

FISCAL IMPLICATIONS: Continuing cost to the Department of Public Utilities will be to provide the water and wastewater service for these new customers. That cost will be off-set by revenue paid by the new customers for the water and wastewater service.

REPORTING: No new reporting required.

BUDGET AMENDMENT NECESSARY: No.

REVENUE TO CITY: Revenue will be received by the City for water and wastewater service. The developer will not commit to natural gas so the City will not receive revenue for that service. Rocketts Landing, in further consideration, will pay the City $1,720,902.00.

DESIRED EFFECTIVE DATE: Upon Adoption.

REQUESTED INTRODUCTION DATE: July 25, 2016.

CITY COUNCIL PUBLIC HEARING DATE: September 12, 2016.

REQUESTED AGENDA: Consent Agenda.

RECOMMENDED COUNCIL COMMITTEE: Land Use.

CONSIDERATION BY OTHER GOVERNMENTAL ENTITIES: Henrico County.

AFFECTED AGENCIES:

- Department of Public Utilities, City of Richmond
- Department of Finance, City of Richmond

RELATIONSHIP TO EXISTING ORD. OR RES.: None.

REQUIRED CHANGES TO WORK PROGRAM(S): None.

ATTACHMENTS:

- Utility Facilities Agreement between the CITY OF RICHMOND and CENTRAL VIRGINIA INVESTMENTS/ROCKETTS LANDING, LLC, with exhibits, including, among others, (i) a Non-Resident Water Service Contract between CITY OF RICHMOND and CENTRAL VIRGINIA INVESTMENTS/ROCKETTS LANDING, LLC, and (ii) a Non-Resident Wastewater Service Contract between the CITY OF RICHMOND and CENTRAL VIRGINIA INVESTMENTS/ROCKETTS LANDING, LLC.

STAFF:

- Robert Steidel, DPU Director
- Rosemary Green, DPU Deputy Director

UTILITY FACILITIES AGREEMENT

THIS UTILITY FACILITIES AGREEMENT ("Agreement"), made this ____ day of _____, 2016, by and between the **CITY OF RICHMOND**, a municipal corporation of the Commonwealth of Virginia (hereinafter referred to as the "City"), and **CENTRAL VIRGINIA INVESTMENTS/ROCKETTS LANDING, LLC**, a Virginia limited liability company (hereinafter referred to as "Rocketts Landing"), owner of the Property as such term is described below:

WHEREAS, Rocketts Landing intends to develop on the premises situated in Henrico County, Virginia, portions of the real property on the plat, "Rocketts Landing Master Plan," prepared by Saunders & Crouse Architects, dated 2016, attached hereto as Exhibit A and made a part of this Agreement. Such portions are designated as Land Bays 5 and 6 and constitute the balance of the undeveloped portion, in Henrico County, of the Rocketts Landing project (a mixed-use project consisting of residential, office, retail, restaurant and/or hotel), together with any other real property annexed or added to the Rocketts Landing project, including, without limitation, the Virginia Rigging and Vulcan Parcels as applicable. All of the foregoing real property collectively shall be described hereinafter as the "Property," and all of the foregoing project shall be described hereinafter as the "Project;" and

WHEREAS, Rocketts Landing intends to develop the Project in phases, designated as Land Bays 5 through 6, with each phase being described as a "Phase," and with the phases collectively being described as "Phases;" and

WHEREAS, Rocketts Landing has provided the City with buildout information for the Project and for Phase Land Bay 5, blocks 17-19; and

WHEREAS, Rocketts Landing has requested that the City provide the Project with water and wastewater utility service for Phase Land Bay 5, blocks 17-19, as soon as possible; and

WHEREAS, the City's Department of Public Utilities (the "Department") is willing to provide and is capable of providing such utility services; and

WHEREAS, pursuant to the Code of the City of Richmond, Virginia (the "City Code"), Rocketts Landing will sign at the same time as execution of this Agreement, a City of Richmond Non-Resident Water Contract and a City of Richmond Non-Resident Wastewater Contract (hereinafter each type of agreement referred to as a "Utility Service Agreement," and, collectively, referred to as the "Utility Service Agreements"), all pertaining to utility service for Phase Land Bay 5, blocks 17-19; and

WHEREAS, the Utility Service Agreements provide terms of service that govern the relationship between the City as a service provider and Rocketts Landing as a customer; and

WHEREAS, subject to the terms of this Agreement, the City and Rocketts Landing intend to enter into additional Utility Service Agreements to provide water and wastewater utility service to future Phases that are not encompassed in Phase Land Bay 5, blocks 17-19, subject to Rocketts Landing's submission and the Director's approval of plans for such future Phases and subject to terms of such service as agreed to between the City and Rocketts Landing.

NOW, THEREFORE, in consideration of the sum of Ten Dollars ($10.00) and other good and valuable consideration from Rocketts Landing, the sufficiency and receipt of which is hereby mutually agreed and acknowledged, for the purposes and under the conditions set forth herein, the City and Rocketts Landing (together, the "Parties") agree as follows:

ARTICLE I

Definitions

For the purposes of this Agreement, the following defined terms shall have the meanings specified below:

- The "Department" means the City's Department of Public Utilities.
- "Facilities" is a general and collective term for all water and sanitary sewer lines, devices and appurtenances on the Property, regardless of whether the lines, devices and appurtenances ultimately will be owned by Rocketts Landing, the City, or other entities, under the terms of this Agreement.
- "Final Remediation Plan" means the environmental remediation plan filed with the Virginia Department of Environmental Quality ("DEQ") for the Project on October 24, 2002 and any revisions to said Plan.
- "Non-Resident" means any customer of the Department who does not reside at or on or own property to which service is provided within the City or Richmond corporate limits.
- "Potable Water" means safe drinking water as produced and distributed by the City's water treatment plant.
- "Sanitary Sewer Lateral Connection" means a pipe and cleanout behind the curb installed partially in a private street, alley, utility easement or County public street

or alley and partially on private property used to convey waste, refuse, liquids and other materials from a Sanitary Sewer Lateral Service Line to a Sanitary Sewer Main, including the physical connection to the Sanitary Sewer Main. All connections shall be located within the easement area dedicated to the City pursuant to deeds of easement.

- "Sanitary Sewer Lateral Service Line" means the pipe that extends from the building to the cleanout, to convey waste, refuse, liquids and other materials from a building to the Sanitary Sewer Lateral Connection.

- "Sanitary Sewer Main" means the pipe installed in a private street, alley, utility easement or County public street or alley extending parallel or nearly parallel to the line of property abutting thereon through which waste, refuse, liquids or other materials are conveyed.

- "Service Line Backflow Preventer" means facilities and equipment installed to prevent the flow of water or other liquids, materials or substances into the pipes or into other facilities of the City's potable water distribution system from any other source other than the City's normal sources of water.

- "Street" means every road, thoroughfare, alley, avenue, drive, crescent, boulevard, lane, highway, park, or way of whatever nature, publicly or privately owned, used by Rocketts Landing.

- "Utility Easement" means an exclusive and perpetual property right that permits the owner of public water or sanitary sewer utilities installed in land to enter upon private property to construct, reconstruct, maintain, repair and operate those utilities.

- "Water Main" means the pipe installed in a private street, alley, utility easement or County public street or alley extending parallel or nearly parallel to the line of property abutting thereon through which public drinking water is conveyed or distributed.

- "Water Service Connection" means facilities and equipment installed in the private street, alley, utility easement or County public street between the Water Main and the outlet of the City's water meter used to supply public potable water to any premises. All connections shall be located within the easement area dedicated to the City pursuant to deeds of easement.

- "Water Service Line" means facilities and equipment installed beginning at the City's water meter and continuing into the building used to supply water to any premises.

ARTICLE II

Facilities to Meet City and County Standards; Rocketts Landing Warrants Facilities

Rocketts Landing shall install all Water Mains, inclusive of required fittings and appurtenances, Service Line Backflow Preventers, Water Service Connections, Water Service Lines, and sampling hydrants at its expense and in full compliance with the City's applicable standards. Costs and responsibilities for such installation, testing, and inspection are discussed in further detail in Articles III and IV below. Rocketts Landing shall obtain all required City permits for all Water Service Connections, and all other required City permits. Once Rocketts Landing obtains all such required permits, the Department will inspect the installation and testing of the Water Service Connections, Water Mains, Service Line Backflow Preventers, Water Service Lines, and sampling hydrants at Rocketts Landing's expense.

Rocketts Landing shall install all Sanitary Sewer Mains, inclusive of required fittings and appurtenances, Sanitary Sewer Lateral Connections, and Sanitary Sewer Lateral Service Lines at its expense and in full compliance with the City's applicable standards. Costs and responsibilities for such installation, testing, and inspection are discussed in further detail in Articles III and IV below. Rocketts Landing shall obtain all required City permits for all Sanitary Sewer Lateral Connections, and all other required City permits. Once Rocketts Landing obtains all such required permits, the Department will inspect the installation and testing of the Sanitary Sewer Mains and Sanitary Sewer Lateral Connections at Rocketts Landing's expense.

Rocketts Landing warrants to the City that the Facilities installed by Rocketts Landing on the Property shall be of first quality, shall comply with all applicable City standards, and shall be free from faults and defects for a period of twelve (12) months from the date the City accepts, in writing from the Director of Public Utilities, the Facilities (the "Warranty"). The Warranty shall cover any defects in workmanship of the Facilities and materials, whatever the cause of defect. In the event that Warranty repairs are needed which result from defective workmanship and the need for which becomes apparent within the period of the Warranty, the City will notify Rocketts Landing in writing and will repair the Facilities at Rocketts Landing's cost and expense. The City shall have the discretion to make the determination that Warranty repairs are needed, and will bill Rocketts Landing for all costs relating to such repairs, which bill Rocketts Landing shall pay promptly. If Rocketts Landing fails to pay a City bill for repairs under the Warranty within thirty-three (33) days of the billing date, the City may provide Rocketts Landing with written notice of nonpayment. If Rocketts Landing fails to cure such nonpayment within thirteen (13) days of the date of the City's written notice, Rocketts Landing shall be in default of its obligations hereunder and the City may draw down the amount of the presented bill from

the Letter of Credit provided as additional security in accordance with this Agreement and will retain all other applicable rights and legal remedies to enforce this Agreement.

ARTICLE III

City Acceptance of Facilities; Rocketts Landing Responsibilities Prior to Acceptance; Ownership of Facilities

A. Water Facilities

1. The City agrees that, upon satisfactory execution of the respective Utility Service Agreements, satisfactory completion of all inspections and testing, full payment of all fees required hereunder or otherwise by law, and the filing of all permits, and the City's receipt of as-built drawings satisfactory to the City in its sole discretion, and upon donation and recording of the required easements and deeds of dedication by the Parties, the City will connect existing water lines that will be used to serve the Property to the City's water distribution system, the City will take ownership of existing Water Mains, Water Service Connections and meters that will serve the Property, and the City will provide water to the Property. The City will accept additional Water Service Connections to its system on a connection-by-connection basis as each line is installed, tested and once all necessary future legal documents are filed of record. With the exception of the punch list work to be performed, under supervision of City inspector(s), Rocketts Landing agrees not to perform work on, or to interfere in any way with, City-owned Water Mains, inclusive of appurtenances, Water Service Connections or meters once the lines, mains and connections are accepted by the City. Rocketts Landing will retain ownership of all existing and future Water Service Lines and Service Line Backflow Preventers. As owner of the Water Service Lines and Service Line Backflow Preventers, Rocketts Landing will bear the legal responsibility for the physical and financial operation, maintenance, annual inspection, reconstruction, replacement, and realignment of these facilities.

2. The City's inspection process of water facilities will include an inspection and review of certified inspection reports, material cut-sheets, as-built drawings and/or material pay tickets. The City's testing process will include testing and physically connecting the new approved water distribution system to the active public water system, at Rocketts Landing's expense. Any required meter adjustments, prior to full acceptance by the City, shall be made at Rocketts Landing's expense. Connecting any Water Main includes excavating the tie-in connection point hole including proper shoring, ensuring the new Water Main is at an elevation to connect to the existing main and approximately ten (10) feet from the tie-in point. Rocketts Landing shall provide finish grade for fire hydrant and meter box locations at its expense. Rocketts Landing shall be responsible for securing and maintaining water service resetters and boxes until the meter is set and the area is graded at Rocketts Landing's expense. Rocketts Landing shall perform all restoration work at its expense.

B. Wastewater Facilities

1. The City agrees that, upon satisfactory execution of the respective Utility Service Agreements; satisfactory completion of all inspections and testing; the City's receipt of a certified copy of a satisfactory CCTV sewer line inspection of all Sanitary Sewer Mains, including video and written documentation; full payment of all fees required hereunder or otherwise by law and the filing of all permits; and the City's receipt of as-built drawings satisfactory to the City in its sole discretion; and upon donation and recording of the required Easements and deeds of dedication by the Parties, the City will take ownership of the existing Sanitary Sewer Mains and Sanitary Sewer Lateral Connections installed by Rocketts Landing that will serve the Property and the City will provide for the treatment of sanitary sewage for the Property. With the exception of the punch list work to be performed, Rocketts Landing agrees not to perform work on, or to interfere in any way with, City-owned Sanitary Sewer Mains or Sanitary Sewer Lateral Connections once the mains are accepted by the City. Rocketts Landing shall provide the Department with the following documents for review and approval prior to the City taking ownership of the Sanitary Sewer Mains and Sanitary Sewer Lateral Connections: (1) copies of approved manhole and sewer main testing reports; and (2) copies of any testing, materials installed to standards and certified inspection reports made by any Rocketts Landing employee or contractor, including all environmental reports, with any attached maps. Rocketts Landing shall retain ownership of all Sanitary Sewer Lateral Service Lines. As owner of the Sanitary Sewer Lateral Service Lines, Rocketts Landing shall bear the legal responsibility for the physical and financial operation, maintenance, reconstruction, replacement, and realignment of these lines.

2. The City's inspection process of wastewater facilities will include an inspection and review of certified inspection reports, material cut-sheets, as-built drawings and/or material pay tickets. The City's testing process will include testing the new approved wastewater collection system prior to any discharges being allowed to the City's wastewater utility mains, at Rocketts Landing's expense. Connecting any Sewer Main to an active City Sewer Main will be the full responsibility of Rocketts Landing and will be fully at their expense. Rocketts Landing shall be responsible for securing and maintaining manholes and cleanouts until the area is graded at Rocketts Landing's expense. Rocketts Landing shall perform all restoration work at its expense.

C. General

The City acknowledges and agrees that Rocketts Landing intends to develop the Project on a "phased" basis with parcels of the Property to be developed from time to time, and that the parties' respective obligations as to Facilities installed under this Agreement in each Phase (including, without limitation, Rocketts Landing's Warranty obligations under Article II above and the terms and conditions of this Article III and Articles IV, V, VI, and VII below, and further including, without limitation, the City's obligations to

inspect, test, and accept and provide services as to such Facilities) shall apply as to each parcel of Property in each Phase on a parcel-by-parcel basis as and when the applicable Plan of Development for the respective Phase is approved and such parcel is developed, subject to, *inter alia*, satisfactory execution of the necessary Utility Service Agreements for each Phase as set forth in Article VII. In furtherance of the foregoing, and without limitation, the City's obligations herein to inspect, test, and accept the Facilities shall accrue and apply as and when parcels are developed from time to time, and prior to the installation of all Facilities throughout the balance of the Phase in which the parcel is developed.

ARTICLE IV

Rocketts Landing to Pay Installation, Connection, Inspection, and Testing Fees, and to File Permits

Rocketts Landing shall apply for and obtain appropriate permits for construction of all Water Mains, inclusive of appurtenances, Water Service Connections, and Water Service Lines. Rocketts Landing shall construct Water Mains, inclusive of appurtenances, Water Service Connections, and Water Service Lines at its own expense. Provided, however, the City shall be responsible for connecting the Water Mains constructed by Rocketts Landing to active City Water Mains. Rocketts Landing shall pay the applicable Installation Fee for connections made to active City Water Mains.

Rocketts Landing agrees that it will submit water service permit applications and corresponding payment for each building on the Property as and when such buildings are constructed or renovated. Upon receipt of payment for each building and upon approval of the underlying permits, inspection and approval of the Service Line Backflow Preventer, the City will set a meter. Rocketts Landing agrees that it will contact the Department prior to taking service through any meter set using this process.

For any building that will connect to an existing Sanitary Sewer Lateral Service Line(s) or Sanitary Sewer Lateral Connection(s), Rocketts Landing shall pay the Department the then applicable City connection fee(s).

For buildings without an existing Sanitary Sewer Lateral Connection, Rocketts Landing shall apply for and obtain appropriate permits and have its contractor construct these laterals with required testing and oversight/inspection to be provided by the City at Rocketts Landing's expense.

Rocketts Landing shall submit sanitary sewer service permit applications and corresponding payments for each building on the Property as and when such buildings are constructed or renovated.

For each requested water and sanitary sewer service connection located within the Property, Rocketts Landing shall pay the City the City's applicable connection fee and other fees (including, without limitation, connection, installation, inspection, review, and permit fees) prior to the City making or allowing such connection.

If such services are necessary under the terms of this Agreement, Rocketts Landing shall pay the City as billed for inspection, testing and connection services, including, but not limited to, design, engineering and/or surveying time, and including required site visits during normal business hours (7 AM to 5 PM; Monday through Friday), or related to multiple site visits per day, or related to extended site visits per day (more than one (1) hour per visit). Rocketts Landing shall pay the Department as billed by the Department for such services based upon the number of actual staff hours spent on the respective tasks.

ARTICLE V

Rocketts Landing to Donate Easements

For each Phase of the Project, Rocketts Landing shall donate to the City, at Rocketts Landing's cost, which cost shall include all fees for professionals retained by Rocketts Landing and any associated expenses incurred by Rocketts Landing, exclusive and perpetual Utility Easements that will allow the City to access its Water Mains, Water Service Connections, Sanitary Sewer Lateral Connections, and Sanitary Sewer Mains. Such Utility Easements must include general warranty of title (subject to matters of record that will not impede use of the easements), based upon affirmation by Rocketts Landing that it is capable of conferring marketable title reasonably acceptable to the City and in a form acceptable to City's legal counsel. Such Utility Easements must be provided by and signed by the appropriate representatives for Rocketts Landing prior to the City providing the requested utility services.

ARTICLE VI

Rocketts Landing to Donate Facilities by Deed of Dedication

For each Phase of the Project, Rocketts Landing shall provide, at Rocketts Landing's cost, which cost shall include all fees for professionals retained by Rocketts Landing and any associated expenses incurred by Rocketts Landing, a deed of dedication formally transferring ownership to the City of all Water Mains, Water Service Connections, Sanitary Sewer Mains and Sanitary Sewer Lateral Connections installed on the Property in connection with the Phase, in a form acceptable to City's legal counsel. The deed of dedication must be recorded before the City will accept ownership and before any water or treatment of sanitary sewage will be provided under the terms of this Agreement. Rocketts Landing agrees to provide, at its cost, additional deeds for any future Water Service Connections that will service the Property, before any such Water Service Connection is accepted by the City.

ARTICLE VII

Miscellaneous Terms

Rocketts Landing, in further consideration, shall pay the City $1,720,902.00 (the "Payment") in addition to the payment of costs, fees, and charges otherwise set forth in this Agreement. Rocketts Landing shall make the Payment to the City in two installments, including (i) a payment of $860,451.00 which Rocketts Landing shall make upon execution of this Agreement, and (ii) a payment of $860,451.00 which Rocketts Landing shall make to the City no later than the second anniversary of the execution of this Agreement. The City's obligations to Rocketts Landing pursuant to this Agreement are contingent, *inter alia*, on Rocketts Landing's full and timely payments to the City set forth in this paragraph.

The City retains the right in the future to connect properties, regardless of their ownership, to City-owned Facilities and to provide utility service therefrom without providing any compensation to Rocketts Landing. However, nothing in this language shall require the City to connect any property, currently existing or in the future, to the City-owned Facilities, except as agreed to herein and through applicable Utility Service Agreements.

Rocketts Landing shall ensure that every building, structure and other improvement erected on its Property to be served by the City under this Agreement shall conform in all respects to the provisions of the Henrico County zoning ordinance, building, fire prevention, plumbing and electrical codes, and all other laws and ordinances relating to the use of the Property, building construction, and safety of the public and building occupants.

Rocketts Landing shall sign (i) the Non-Resident Water Contract; and (ii) the Non-Resident Wastewater Contract both pertaining to Phase Land Bay 5, blocks 17-19, and

attached hereto as Exhibit B, concurrent with the execution of this Agreement. The City will not provide any initial water or wastewater service to any building before both of the initial Utility Service Agreements are executed and Rocketts Landing otherwise has met the requirements of this Agreement.

The Parties will execute additional Non-Resident Water Contracts and Non-Resident Wastewater Contracts to provide utility service to any future Phases, consistent with the Project plans, as Rocketts Landing provides the City with development plans for such Phases, and subject to the City's approval of such development plans as set forth herein. The Utility Service Agreements for each future Phase shall be in the forms set forth in Exhibit C, subject to any changes required by law for such Phase, or as the parties otherwise might agree mutually. The City and Rocketts Landing intend that this Agreement shall apply to all Phases of the entire Project, unless the Agreement expires or is terminated. Provided, however, the City shall not be obligated to enter into Utility Service Agreements with Rocketts Landing for any proposed future Phase in the event Rocketts Landing fails to request the City's approval of such proposed future Phase's development plans, within forty-eight (48) months following the parties' entering into Utility Service Agreements for the previously agreed-upon Phase. The City will not provide any water or wastewater service to any building within any future Phase prior to (i) both of the corresponding Utility Service Agreements having been executed for the given Phase; (ii) Rocketts Landing providing the City with the required easements and deed of easement for such Phase, and (iii) Rocketts Landing otherwise having met all of the requirements of this Agreement.

No offsite City utility incremental improvements ("offsite improvements") are required to extend and provide City utility service to the facilities included within Phase Land Bay 5, blocks 17-19. Therefore the City will not impose on Rocketts Landing any offsite improvements charges for this Phase.

At any time prior to the tenth year anniversary of the effective date of this Agreement, if the City determines that offsite improvements are needed due to potential water demands from an unrelated and currently unknown source, Rocketts Landing may elect, by providing the City with written notice to the City, to apply for service connections pursuant to City Code Sections 28-390 and 28-711 and to pay the City in advance for the utility connection fees for some or all of the then future Phases beyond Phase Land Bay 5, blocks 17-19 (the "Advance Payment"), based upon the planned design loads, number of connections and applicable meter sizes for each selected future Phase at the then current rate schedule in Appendix A of the City Code. For any future Phase for which Rocketts Landing has made an Advance Payment, the City will not impose on Rocketts Landing any offsite improvement charges. For any future Phase for which Rocketts Landing has not made such an Advance Payment, the City may impose offsite improvement charges on Rocketts Landing as the City deems necessary through the associated Utility Service Agreements for such future Phase. (By making an Advance Payment, Rocketts Landing would secure needed capacity on the City's distribution

infrastructure and would ensure that the need for any offsite improvements required to provide service to the affected Phase, for the design load used to calculate the Advance Payment for the affected Phase, will not be attributed to Rocketts Landing.)

The City will notify Rocketts Landing in writing in the event the City determines that providing utility service to any entity requesting service other than Rocketts Landing would trigger the need for offsite City utility incremental improvements to provide utility service to the other entity and to Rocketts Landing with respect to the projected demands for the entire Project buildout as provided to the City. (The attached Exhibit D ("Rocketts Landing Water System Modeling Updates" letter from Christopher Petree to Jonathan Cosby, dated March 13, 2015) provides the basis for the City's determination that absent utility demands from unrelated and currently unknown sources, no offsite improvements are needed to provide City water or wastewater utility service to Rocketts Landing through buildout.) The City's notice shall include the projected cost of such required offsite City utility incremental improvements. In order to invoke its conditional right to make an Advance Payment as set forth in the preceding paragraph, Rocketts Landing must, within sixty (60) days of the date of the City's notice to Rocketts Landing, notify the City in writing of Rocketts Landing's intent to make an Advance Payment and must make such payment to the City within an additional forty-five (45) days.

Until a Certificate of Satisfactory Completion of Remediation (the "Certificate of Completion") is issued by the Virginia Department of Environmental Quality ("DEQ") for all phases of the development, Rocketts Landing shall comply in all respects with the Rocketts Landing Final Remediation Plan or any currently applicable or updated version of a voluntary remediation plan filed and accepted by DEQ (the "Final Remediation Plan"), which Final Remediation Plan will be in place until such time as a Certificate of Completion is issued by the DEQ. Thereafter, Rocketts Landing shall comply with any future restrictive covenants established by DEQ pursuant to the Certificate of Completion and recorded in the Property's chain of title. Until a Certificate of Completion is issued by DEQ, Rocketts Landing shall indemnify and hold harmless the City for any fines, fees or any costs whatsoever (including attorneys' fees) if incurred by the City resulting from Rocketts Landing's violation of the Final Remediation Plan.

As additional security for its performance under this Agreement, Rocketts Landing agrees concurrently with this Agreement to provide the City with an irrevocable letter of credit for $100,000 in a form acceptable to the City (the "Letter of Credit"). No water or wastewater utility service will be provided by the City until Rocketts Landing has provided the Letter of Credit to the City. If Rocketts Landing defaults in respect to any of the payments required under this Agreement (after the expiration of the applicable notice and cure period), (i) the City shall have the right to require the bank to make payment to the City of the amount of proceeds under the Letter of Credit equal to such overdue payment, provided that the City shall have given Rocketts Landing ten (10) days' notice of the City's intent to draw on the Letter of Credit, and Rocketts Landing has not, within such ten (10)

day period, deposited in cash with the City the amount of alleged default, and (ii) the City may, at the City's option (but the City shall not be required to) apply the sum so paid to it by the bank to the extent required to satisfy the overdue payment. Rocketts Landing agrees to cause the bank to renew the Letter of Credit, in the same form from time to time during the term of this Agreement as set forth in Article VIII herein, so that a Letter of Credit issued by the bank to the City shall be in full force and effect throughout the term. If Rocketts Landing fails to cause the bank to renew the Letter of Credit, the City shall have the right to require the bank to make payment to the City of the entire proceeds of the Letter of Credit, provided that the City shall have given Rocketts Landing ten (10) days' notice of the City's intent to draw on the Letter of Credit. If Rocketts Landing shall fully and faithfully comply with all of the terms, required payments, provisions, covenants, and conditions of this Agreement, the Letter of Credit shall be returned to Rocketts Landing in the event the City elects, pursuant to this Article VII, not to negotiate additional Utility Service Agreements for any future Phase proposed by Rocketts Landing. The City reserves the right to include additional reasonable letter of credit performance security requirements in the individual Utility Service Agreements.

Rocketts Landing reserves the right to transfer and dedicate to Henrico County any Streets located within the Property subject to the rights of the City set forth in this Agreement, and in any deeds of easement and deeds of dedication of improvements. Any deed or other dedication in favor of Henrico County with respect to the Property shall contain an acknowledgement of the City's rights as set forth in the deeds of easement and the deeds of dedication, and all City easements shall be identified on any Henrico County dedication plats involving the Properties.

ARTICLE VIII

General Terms

Incorporation of Recitals. All of the recitals to this Agreement are incorporated into this Agreement and made a part hereof.

Incorporation of Exhibits. All of the exhibits attached hereto are incorporated into this Agreement and made a part hereof.

Non-Waiver. No party shall be deemed to have waived the exercise of any right hereunder unless such waiver is made expressly and in writing, and no such waiver of any such right in any one instance shall be deemed a waiver as to any other instance of any other right.

Headings. Any headings used in this Agreement are for purposes of convenience only and shall not modify or enlarge the interpretation of the text of this Agreement. The words "herein," "hereof" and "hereunder" and other words of similar import shall refer to this Agreement as a whole and not to a particular Article, Section, Subsection or Paragraph.

Completeness and Modification. This Agreement constitutes the entire agreement between the parties hereto with respect to the transactions contemplated hereby and supersedes all prior discussions, understandings, agreements and negotiations between the parties hereto. The Agreement may be modified only by a written instrument duly executed by the parties hereto.

Choice of Law and Forum. With regard to the rights and responsibilities among the City and Rocketts Landing, the laws, rules and regulations of the Commonwealth of Virginia shall govern this Agreement and any performances made or actions brought thereunder. Any action arising from this Agreement or its performance shall be brought and maintained only in a court allocated within the City of Richmond, Virginia. Rocketts Landing waives any claim that any such court has no personal jurisdiction over Rocketts Landing or that venue in such court is incorrect or unacceptable.

Availability of Funds. The City's monetary obligations under the terms of this Agreement during this and any subsequent calendar or fiscal year are subject to the availability of funds encumbered pursuant to Section 6.20 of the Charter of the City of Richmond.

Severability. The City and Rocketts Landing agree that even if one section of this Agreement is subsequently found to be unlawful, the remainder of the terms and conditions shall remain intact.

Assignment. Subject to the following sentence, neither of the parties may assign nor otherwise encumber any rights or responsibilities under this Agreement without the prior written consent of the other party, which consent may be withheld by any party in its sole and absolute discretion. Notwithstanding the foregoing, Rocketts Landing may assign its rights under this Agreement, but not its obligations under this Agreement, in whole or in part, to the owners of a parcel(s) from time to time located within Rocketts Landing as to such parcel(s). Subject to the foregoing assignment rights, the provisions of this Agreement shall be treated as covenants running with the Property and shall be binding on and inure to the benefit of any successor in interest to the Property.

Indemnification and Hold Harmless Provision. Except to the extent caused by the sole negligence or willful acts of the City, Rocketts Landing shall indemnify and hold harmless the City, its officers, its agents and its employees from and against any and all losses, liabilities, claims, actions, damages and expenses made or brought (collectively, "claims or actions"), including but not limited to court costs and attorneys' fees, arising from any default (after any applicable notice and cure period) by Rocketts Landing of its obligations specified in this Agreement, as well as claims or actions arising from negligent or intentional acts of Rocketts Landing, its officers, its agents and its employees. Further, Rocketts Landing shall assume the entire responsibility and liability for any and all damages to persons or property or to the environment caused by or resulting from or arising

out of any negligent or intentional acts on the part of Rocketts Landing, its subcontractors, its agents or its employees under or in connection with this Agreement, except to the extent caused by the sole negligence or willful acts of the City. Rocketts Landing shall, upon written demand by the City, assume and defend the City at Rocketts Landing's sole expense against any and all such claims or actions. This section shall survive, irrespective of termination or expiration of this Agreement, (i) with respect to such claims or actions brought or made concerning only a particular parcel or parcels of Property and respective Facilities, for a period of twelve (12) months from the date Rocketts Landing provides the City with the required deed(s) of dedication applicable to such parcel's or parcels' Facilities; and (ii) for all other claims and actions, for a period of twenty-four (24) months from the date of termination or expiration of this Agreement.

Term. This Agreement and the rights, obligations and liabilities of the parties hereunder shall expire and terminate upon the earlier of (i) the date forty-eight (48) months following the date Rocketts Landing has provided the City with the last deed of dedication required by Article VI herein, (ii) at such time that Rocketts Landing and the City mutually agree in writing to terminate the Agreement; or (iii) at such time set by the City in the event Rocketts Landing has failed to make any payment to the City required pursuant to this Agreement, provided, however, that the City has provided Rocketts Landing with at least thirty (30) days' written notice of such nonpayment and the City's selected termination date and that Rocketts Landing has failed to make the required payment by the end of the notice period or such other time period mutually agreed to by the parties. The expiration or termination of this Agreement shall not result in the termination of any otherwise active Utility Service Agreements already entered into pursuant to this Agreement.

Notices. Any notices required in accordance with the terms of this Agreement shall be in writing and served by certified mail or registered mail, or delivered in person and duly acknowledged, as follows:

To City:	Director of Public Utilities City of Richmond 730 East Broad Street, 6th floor Richmond, Virginia 23219 Attn: Robert C. Steidel
With a copy to:	City Attorney City of Richmond 900 East Broad Street, 4th floor Richmond, Virginia 23219
To Rocketts Landing:	Central Virginia Investments/Rocketts Landing, LLC 300 S. 12th Street Richmond, Virginia 23219 Attn: Jason Vickers Smith
With a copy to:	Hirschler Fleischer 2100 East Cary Street Richmond, Virginia 23223-7078 Attn: Brian K. Jackson, Esquire

Effective Date. This Agreement will be effective on the date of execution by all parties.

Independent Contractors. The parties agree that this Agreement creates no legal relationship (*i.e.*, no partnership, no employer-employee relationship) of any kind between the City and Rocketts Landing.

SIGNATURES APPEAR ON THE FOLLOWING PAGE

WITNESS the following signatures:

CENTRAL VIRGINIA INVESTMENTS/ROCKETTS LANDING, LLC,
a Virginia limited liability company

By: WVS/Central Virginia Investments, LLC, a Virginia limited liability company

_____

By: Jason Vickers-Smith, its Member Manager

_____

Date

CITY OF RICHMOND, VIRGINIA

_____

By: Selena Cuffee-Glenn, its Chief Administrative Officer

_____

Date

APPROVED AS TO FORM:

_____

City Attorney's Office

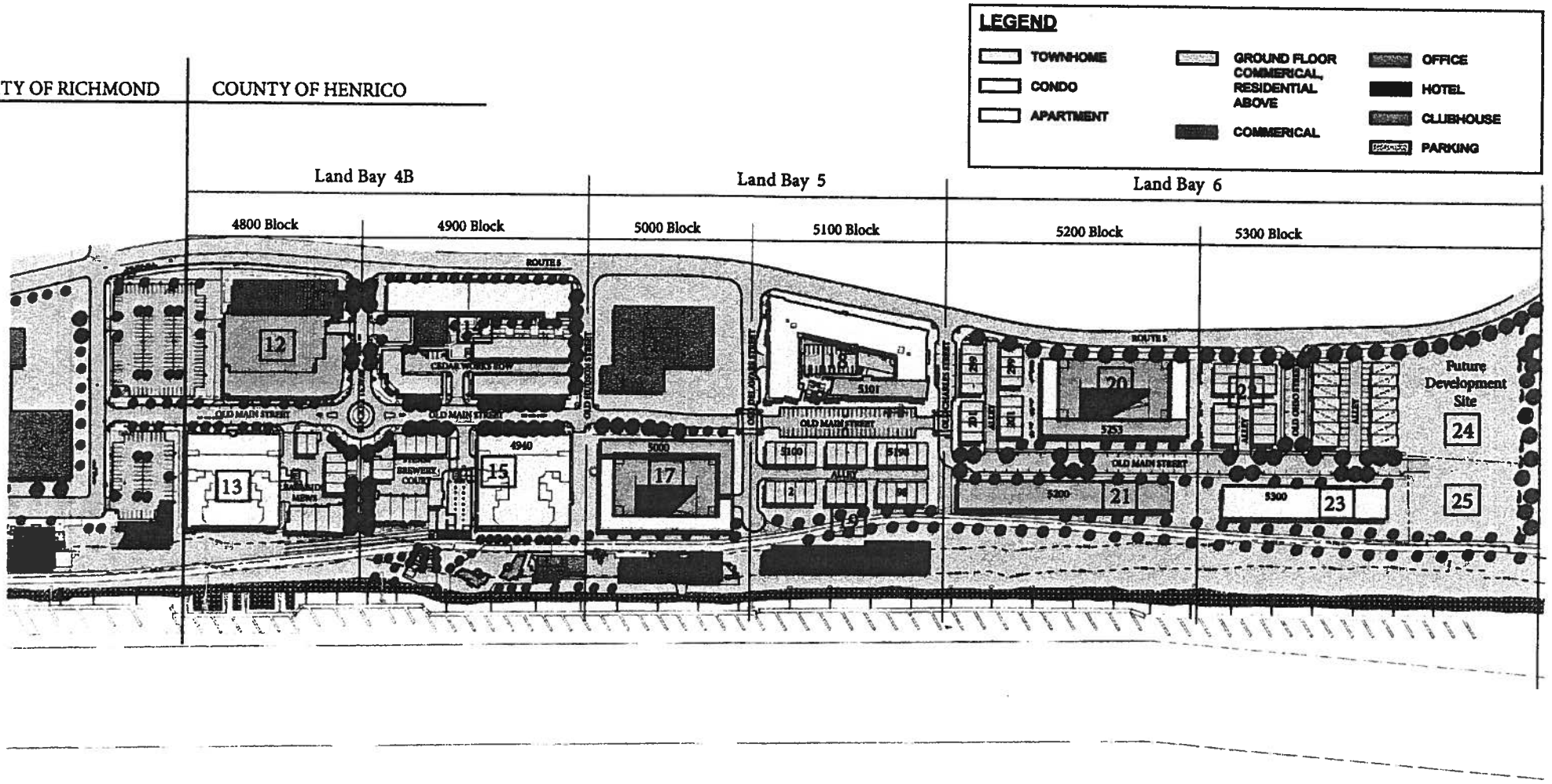
APPROVED AS TO CONTENT:

_____

City of Richmond, Director of Public Utilities

Exhibit A (to the Utility Facilities Agreement)

"Rocketts Landing Master Plan"
by Saunders & Crouse Architects, dated 2016



Master Plan

Rocketts Landing Master Plan

Henrico County, Virginia

saunders +crouse ARCHITECTS

Exhibit B (to the Utility Facilities Agreement)

Non-Resident Water Contract

Non-Resident Wastewater Contract

CITY OF RICHMOND
NON-RESIDENT WATER SERVICE CONTRACT

THIS NON-RESIDENT WATER SERVICE CONTRACT made this ____ day of _____, 2016, by and between the **CITY OF RICHMOND**, a municipal corporation of the Commonwealth of Virginia (hereinafter referred to as the "City"), and **CENTRAL VIRGINIA INVESTMENTS/ROCKETTS LANDING, LLC**, a Virginia limited liability company (hereinafter referred to as "Rocketts Landing"):

WITNESSETH:

That for and in consideration of the mutual benefits resulting from the undertakings of the parties hereto set forth in this contract (this "Water Service Contract"), the City and Rocketts Landing (hereinafter together referred to as the "parties") covenant and agree each with the other as follows:

1. The parties have entered into a Utility Facilities Agreement, dated _____, 2016 setting forth, *inter alia*, that the City and Rocketts Landing will sign at the same time as the Utility Facilities Agreement this Water Service Contract to provide water service to Rocketts Landing's premises situated in the County of Henrico, Virginia, identified as Land Bay 5, Blocks 17-19 (the "Property"), as shown on the drawing, "Rocketts Landing Master Plan," prepared by Saunders & Crouse Architects, dated 2016, and attached hereto as Exhibit A and incorporated hereunder, and the foregoing project Phase Land Bay 5, Blocks 17-19 hereinafter being described as the "Project." Notwithstanding anything to the contrary, services provided hereunder by the City shall be sufficient for and consistent with an urban mixed-use project of the size and scope of the Project.

2. Rocketts Landing shall have a City-approved cross connection program in place prior to the provision of service under this Water Service Contract.

3. The City's obligation to supply water utility service as to a parcel located within the Property is conditioned on, *inter alia*, Rocketts Landing's demonstration, to the City's satisfaction, that Rocketts Landing has complied with all prevailing subdivision laws. Without limitation, a building permit, zoning confirmation letter issued by Henrico County, or zoning certification letter issued by a member of the Virginia State Bar shall satisfy this requirement.

4. The water utility service provided hereunder by the City shall be at rates fixed by the Council of the City (the "City Council"), which the City Council may change or modify at any time and from time to time. If the City Council prescribes a demand or special charge uniformly for developer-installed water service supplied within the City, Rocketts Landing also shall pay such charge, which the City Council may change or modify uniformly at any time or from time to time.

5. Rocketts Landing shall pay service charges for all private fire protection connections in accordance with applicable City rate schedules for these connections.

6. Rocketts Landing shall pay to the City all charges made for such water utility service, and upon Rocketts Landing's failure, refusal or neglect so to do, the City shall cut off the water service after giving Rocketts Landing the same written notice to that effect as is given consumers of water in

the City before such service is cut off for non-payment of water bills, and water service shall not be restored until such charges are paid.

7. Rocketts Landing shall indemnify, keep and hold the City free and harmless from liability on account of injury or damage to Rocketts Landing or to any other person or property, directly or indirectly resulting from the failure of the City to supply such water utility service in whole or in part, and in the event that suit shall be brought against the City, either independently or jointly with Rocketts Landing on account thereof, Rocketts Landing shall defend the City in any such suit at the cost of Rocketts Landing, and in the event of a final judgment being obtained against the City, either independently or jointly with Rocketts Landing, then Rocketts Landing shall pay such judgment with all costs and hold the City harmless therefrom.

8. (a) The parties acknowledge and agree that the Project's preliminary water model ("Preliminary Model") depicting the location, character and size of the main extensions and connections and the plans and specifications for such main extensions and connections and the materials used in the installation, replacement, maintenance and repair of such main extensions and connections is approved by the City. (The attached Exhibit B ("Rocketts Landing Water System Modeling Updates" letter from Christopher Petree to Jonathan Cosby, dated March 13, 2015) provides the basis for the Preliminary Model). Any material changes to the Preliminary Model shall be subject to the approval of the City's Director of Public Utilities ("Director").

(b) Rocketts Landing shall be responsible for installing all such main extensions and connections solely at Rocketts Landing's expense, and Rocketts Landing shall provide the City with utility easements, acceptable to the Director in the Director's sole discretion, consistent with typical City standards, for all such extensions. In connection with the County Plan of Development for a parcel located within the Property, the City shall review all such main extensions and connections, including the installation, replacement, maintenance and repair of such main extensions and connections, and all such main extensions are subject to the Director's approval. Main extensions and connections shall be installed only at such points as approved by the Director.

9. The City shall have the right to make or permit additional extensions of and connections to all extensions after their construction.

10. The quality and pressure of water delivered under this contract shall be that in the main from which the water is supplied at the points and times of delivery.

11. Water shall not be delivered to any one connection with the main at a rate in excess of 100 gallons per minute without the written approval of the Director.

12. Neither Rocketts Landing nor those claiming under Rocketts Landing shall resell water supplied by the City.

13. Rocketts Landing shall be responsible for paying the entire cost, including engineering and inspection costs, of constructing the main extensions and connections contemplated by this Water Service Contract, subject to the terms and conditions set forth in the City Code, as may be amended from time to time, as required by the Utility Facilities Agreement entered into by the City and Rocketts Landing this date, and as set forth in any applicable regulations promulgated by the Director.

14. The City's obligation to supply water utility service within the Property is conditioned on, *inter alia*, Rocketts Landing's compliance as to the Property with all of Rocketts Landing's obligations set forth by the Utility Facilities Agreement entered into by the City and Rocketts Landing this date, including, but not limited to, Rocketts Landing's obligation to pay the City the fees set forth in Article VII of the Utility Facilities Agreement entered into by the City and Rocketts Landing this date.

15. The quantity of water furnished to Rocketts Landing shall be measured through meters furnished, owned, controlled, maintained and operated by the City and installed on the connection with the main extension at the cost and expense of Rocketts Landing at such points of delivery of water to Rocketts Landing as determined by the Director. Title to all water shall pass to Rocketts Landing at the point and time of delivery.

16. Rocketts Landing shall be bound and controlled by and shall observe and comply with all ordinances, resolutions, rules and regulations, conditions and penalties heretofore and hereafter adopted by the City Council, or adopted pursuant to authority granted by the City Council, relating to the supplying of water to consumers within and without the City, the sources of the City's water supply, and its purification and distribution systems.

17. The Director may suspend water service to Rocketts Landing at any time whenever in the Director's reasonable judgment:

(a) The use of water is excessive or interferes with or impairs the maintenance and operation of the City's production and distribution system,

(b) A possible contamination to the potable drinking water system could exist,

(c) Rocketts Landing fails, refuses or neglects to observe and comply with the terms and conditions of this water service contract and all laws, ordinances, resolutions, rules and regulations governing City water service, and such continues for more than thirty (30) days following Rocketts Landing's receipt of written notice of same,

(d) Water is required, or may be required, for the use of consumers in the City; or

(e) When Henrico County undertakes to and does supply all such services to the full extent provided hereunder (and Rocketts Landing accepts such services from the County).

18. The Chief Administrative Officer, or the Director, may suspend water service to Rocketts Landing without notice during any time in which, in the Chief Administrative Officer's judgment, or in the Director's judgment, an emergency exists, including, without limitation, the existence of conditions threatening persons, health, public safety or material damage to property.

19. In addition to Rocketts Landing's rights under the assignment provisions of the Utility Facilities Agreement (which shall also apply to this Water Service Contract), Rocketts Landing may assign this Water Service Contract and the rights, benefits, privileges, duties and obligations inured, received, imposed and assumed thereby to the tenants of the property receiving water service or to

another owner thereof, on a meter-by-meter basis; provided, however, that Rocketts Landing shall not assign the City's right to payment for utility services provided pursuant to this contract and Rocketts Landing shall remain responsible hereunder for payment to the City for such utility services until the new customer has applied for, and has been approved by the City for, water utility service in the new customer's name. The parties agree that any entity applying for water utility service as an owner of a parcel on the Property and approved by the City for water utility service shall be considered to have been assigned, by Rocketts Landing, the rights, benefits, privileges, duties and obligations inured, received, imposed and assumed under this Water Service Contract as to such parcel on the Property, and as otherwise conditioned by this paragraph.

[Signature Pages to Follow]

IN WITNESS THEREOF, the City has caused its name to be subscribed hereunto by its Director of Public Utilities, and Rocketts Landing has hereunto affixed Rocketts Landing's signature and seal as of the day and year first above written.

ROCKETTS LANDING:

CENTRAL VIRGINIA INVESTMENTS/ ROCKETTS LANDING, LLC,
a Virginia limited liability company

By: WVS/Central Virginia Investments, LLC,
a Virginia limited liability company

By: _____
Jason Vickers-Smith, its Member Manager

CITY:

CITY OF RICHMOND,
a municipal corporation of the City of Richmond

By: _____
Name: _____
Its: _____

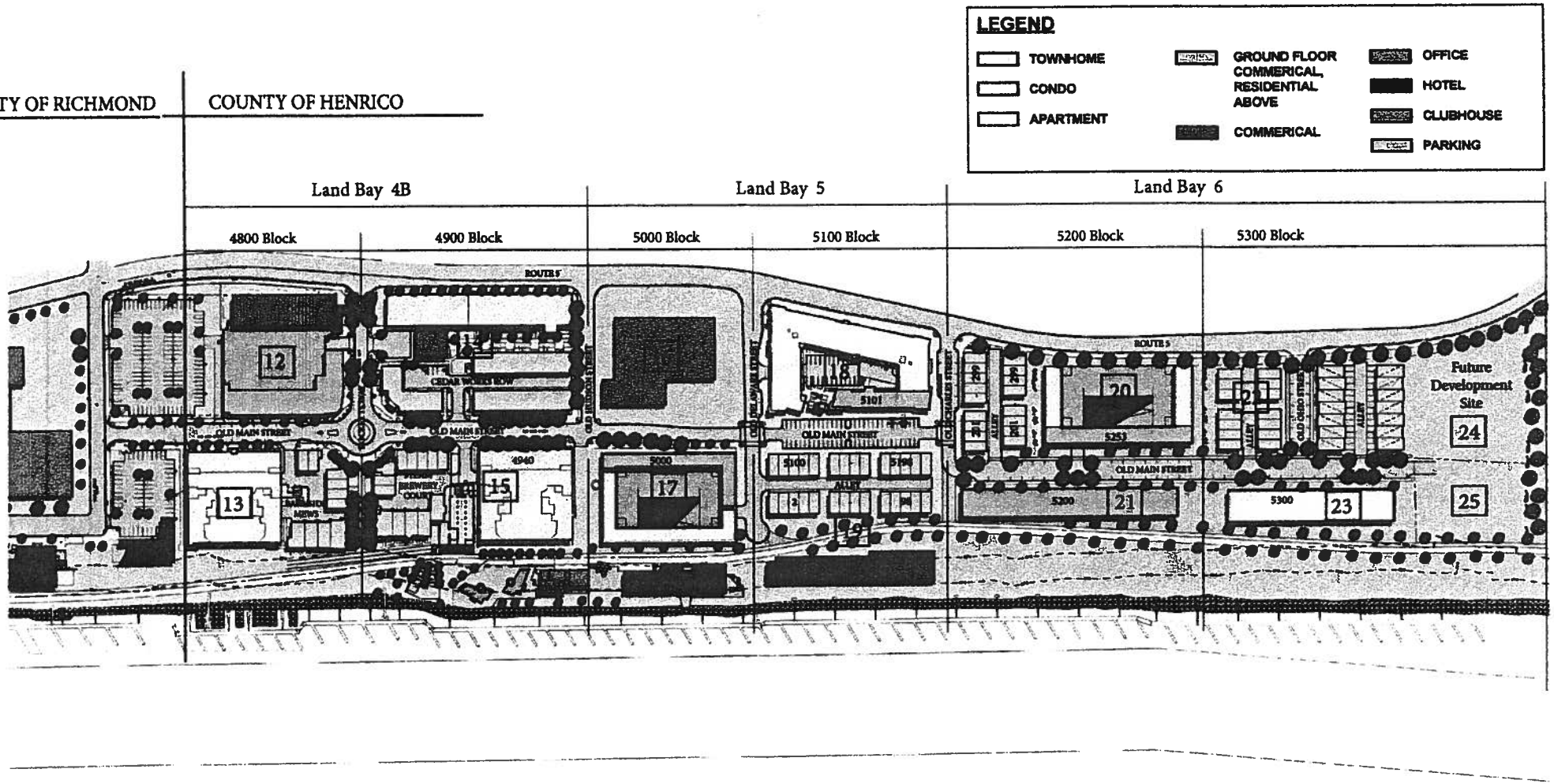
APPROVED AS TO FORM:

_____
City Attorney's Office

Exhibit A (to the Non-Resident Water Contract)

"Rocketts Landing Master Plan"

by Saunders & Crouse Architects, dated 2016



Master Plan

Rocketts Landing Master Plan

Henrico County, Virginia

saunders + crouse ARCHITECT

Exhibit B (to the Non-Resident Water Contract)

"Rocketts Landing Water System Modeling Updates"

Letter from Christopher Petree to Jonathan Cosby, dated March 13, 2015

TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.

1001 Boulders Parkway
Suite 300
Richmond, VA 23225

P 804.200.6500
F 804.560.1016
www.timmons.com

March 13, 2015

Mr. Jonathan Cosby, PE
City of Richmond Department of Public Utilities
400 Jefferson Davis Highway
Richmond, VA 23224

RE: Rocketts Landing Water System Modeling Updates

Dear Mr. Cosby:

Recently the Rocketts Landing developer (*The WVS Companies, LLC*) has commissioned a revised Master Plan for Phase 3 and the future build-out of the development. Building layouts, sizes and proposed uses have changed, along with the conceptual waterline alignment, prompting the submission of the Rocketts Landing hydraulic analysis for your review. This memo is intended to help clarify what the changes are and why they were made.

Design Changes

Waterline Alignment

In order to accommodate the proposed building locations in the revised Master Plan, portions of the waterline contained in the future phase were relocated. The general concept of a 16-inch main with 8-inch laterals remained as the basis of design. During our analysis, it was discovered that the 8-inch loop, previously shown along the western edge of the future phase, is no longer necessary to meet the minimum hydraulic performance requirements. It is possible that looped system will be utilized as the design of the future development progresses, however, any loops were eliminated from the this model analysis in an effort provide conservative results.

Flow Demands

Blocks 17 through 26 were revised in the hydraulic analysis to include new demands for the proposed building types. For Phase 2, Block 17 was previously modeled as a combined residential/commercial site with a total peak domestic demand of 92.1 gpm. The new Master Plan designates Block 17 as 318,750 gross square feet (gsf) of office space, resulting in a total peak domestic demand of 179.3 gpm. Also part of Phase 2, Block 19 was modeled as 55 residential units in the previous submission with a total peak domestic demand of 41.3 gpm. Block 19 is now 45 residential units combined with 24,000 gsf of office space for a total peak domestic demand of 55.7 gpm. Block 18 (Phase 3) was previously modeled as 35 townhomes, for a combined peak domestic demand of 26 gallons per minute (gpm). For this submission, Block 18 has been changed to 200,000 gsf of apartments, for a total peak domestic demand of 150.1 gpm.

Rocketts Landing Water System Modeling Updates
March 13, 2015

All of the demands associated with the future build-out were adjusted according to the proposed Master Plan as well. Block 20 was previously modeled as 25 townhomes with a total peak demand of 19 gpm and is now a parking deck with 122,500 gsf for a total peak demand of 23.0 gpm. Block 21 was previously modeled as 21 residential units with a total peak demand of 15.7 gpm and is now 187,000 gsf of apartments with a total peak demand of 140.13 gpm. Block 22 was previously modeled with a peak demand of 154.2 gpm and is now 100,000 gsf of office space with a peak demand of 18.8 gpm. Block 23 was previously modeled as 136 residential units with a total peak demand of 102.1 gpm and is now 58,333 gsf of condominiums with a total peak demand of 36.5 gpm. Block 24 was previously modeled as 50,000 gsf of commercial space with a total peak demand of 67.5 gpm and is now modeled as 280,000 gsf of parking deck with a total peak demand of 52.7 gpm. Block 25 was previously modeled as 120,000 gsf of commercial space with a total peak demand of 162.0 gpm and is now 116,666 gsf of condominiums with a total peak demand of 72.9 gpm. Block 26 was previously modeled as 80,000 gsf of commercial space with a total peak demand of 108.0 gpm and is now 100,000 gsf of office space with a total peak demand of 18.8 gpm.

Since the previous submission, plans were formulated to build the new Stone Brewery near Williamsburg Avenue and Nicholson Street. A total peak demand of 440 gpm was included in this model to account for that development.

These changes reduce the combined peak domestic demand for the model from 3258 gpm to 3,238. However, approximately 77% of those demands are applied to the water system upstream of the new conceptual alignment. The combined peak demands for the future build-out were reduced from 974.9 gpm to 449.3 gpm. This reduction in peak flow significantly improved the hydraulic performance of the proposed improvements.

As a conservative measure, the ISO demand for each building in the new Master Plan was modeled as 2,500 gpm, split amongst three fire hydrants near the applicable block of development. When considering the building sizes and projected uses and construction types of the current master plan, it is very likely that the actual ISO demand requirements will be less for most future buildings.

Scenarios

Because the changes described above will only affect Phase 3 and future phases of Rocketts Landing, the hydraulic analysis results accompanying this letter will primarily focus on these phases.

The scenarios included in the attached analysis are:

Full Build-out – Average Domestic Demand
Full Build-out – Peak Hour Demand (PHD)
Full Build-out – PHD + ISO @ Block 17 (Phase 2)
Full Build-out – PHD + ISO @ Block 18 (Phase 3)
Full Build-out – PHD + ISO @ Block 19 (Phase 2)
Full Build-out – PHD + ISO @ Block 20 (future phase)
Full Build-out – PHD + ISO @ Block 21 (future phase)
Full Build-out – PHD + ISO @ Block 22 (future phase)
Full Build-out – PHD + ISO @ Block 23 (future phase)
Full Build-out – PHD + ISO @ Block 24 (future phase)

Rocketts Landing Water System Modeling Updates
March 13, 2015

Full Build-out – PHD + ISO @ Block 25 (future phase)
Full Build-out – PHD + ISO @ Block 26 (future phase)
Full Build-out – PHD + Fire Flow (500 gpm from each hydrant, non-simultaneously)

Analysis Results

By revising the peak demands according to the new Master Plan, the 8-inch loop along the western edge of the future phase is no longer needed to maintain residual pressures above the 20 psi minimum specified by State and City standards. Below is a brief summary of the system's performance:

- The lowest system-wide residual pressure under the *Full Build-out – PHD* scenario is **51.6 psi.** (peak domestic demands only)
- The lowest system-wide residual pressure under the *Full Build-out – PHD + ISO @ Block 22* scenario is **20.0 psi.** (worst-case result for the entire hydraulic analysis)

A full report of model results, including pipe tables, can be found in **Appendix A.**

If you have any comments or questions on any of information provided, please do not hesitate to contact me at (804) 200-6422 or chris.petree@timmons.com.

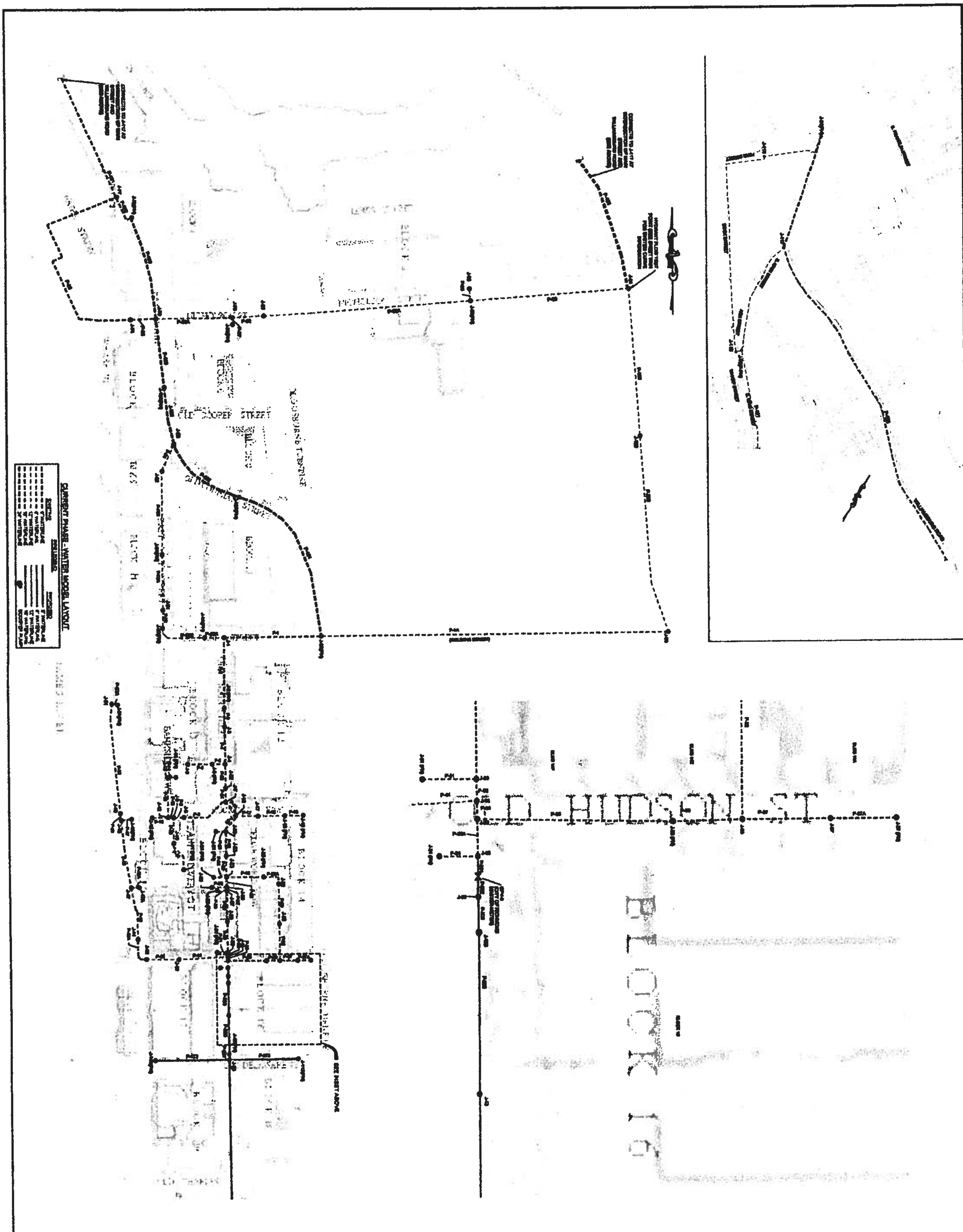
We would also be happy to meet with you to discuss the enclosed information should you need to.

Respectfully Submitted,

Chris Petree

Christopher Petree, PE
Project Manager, Timmons Group

APPENDIX A



TIMMONS GROUP

YOUR VISION ACHIEVED THROUGH OURS.

THIS DRAWING PREPARED AT THE CORPORATE OFFICE
1001 Boulders Parkway, Suite 300 | Richmond, VA 23225

Site Development | Residential | Infrastructure | Technology

DATE	REVISION DESCRIPTION
[illegible]	REVISED WATERLINES TO SINGLE LINE SYSTEM
[illegible]	REVISED BLOCKS 18 & 20 FROM APTS TO TOWNHOMES
[illegible]	REVISED BLOCKS 17-25 PER NEW MASTER PLAN

ROCKETTS LANDING
CITY OF RICHMOND AND HENRICO COUNTY
WATER MODEL - EXISTING AND PHASE 3 WATERLINE LAYOUT

NOT TO SCALE | C. PETREE | C. PETREE | C. MURRAY | 67006 | WM1

TIMMONS GROUP

ROCKETTS LANDING

CITY OF RICHMOND AND HENRICO COUNTY

WATER MODEL EXISTING, PHASE 3 AND ULTIMATE WATERLINE LAYOUT

67006

WM2

Site Development | Residential | Infrastructure | Technology

MASTER PLAN - WATER MODEL LAYOUT

MATCHLINE-SEE SHEET WM3

BLOCK 16

D. HUDSON ST

WATER SOURCE INFORMATION

[illegible]

THE FLOW HYDRANT IS LOCATED AT THE INTERSECTION OF WILLIAMSBURG ROAD AND NICHOLSON STREET

[illegible]

CALIBRATION FLOW TEST

[illegible]

MODEL DESIGN NOTES:

[illegible]

WATER REQUIREMENTS ("EXISTING" PHASE 1) - PER BLOCK/BUILDING(S) MODELED

[illegible]

WATER REQUIREMENTS ("FUTURE" PHASE 1) - PER BLOCK/BUILDING(S) MODELED

[illegible]

WATER REQUIREMENTS ("EXISTING" PHASE 2) - PER BLOCK/BUILDING(S) MODELED

[illegible]

WATER REQUIREMENTS ("FUTURE" PHASE 2) - PER BLOCK/BUILDING(S) MODELED

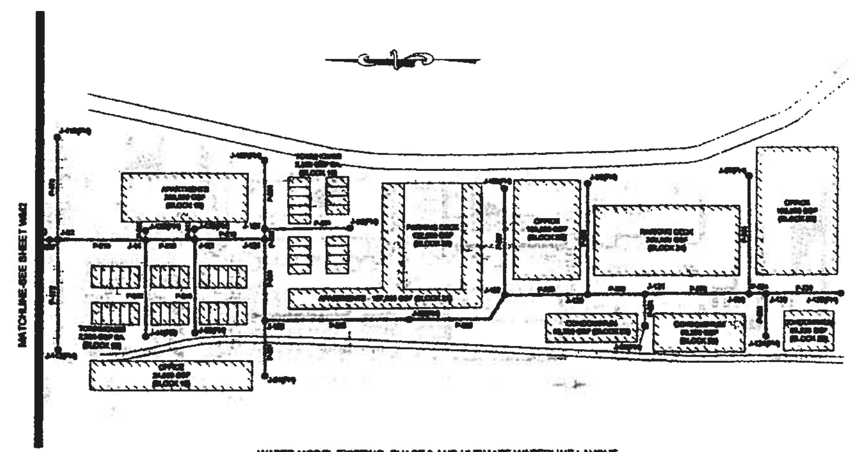
[illegible]

WATER REQUIREMENTS ("PROPOSED" PHASE 3) - PER BLOCK/BUILDING(S) MODELED

[illegible]

WATER REQUIREMENTS ("FUTURE" BUILDOUT) - PER BLOCK/BUILDING(S) MODELED

[illegible]



WATER MODEL EXISTING, PHASE 3 AND ULTIMATE WATERLINE LAYOUT

[illegible]

TIMMONS GROUP

YOUR VISION ACHIEVED THROUGH OURS.

Site Development | Residential | Infrastructure | Technology

[illegible]

DATE: 3/4/14

DRAWN BY: C. McNAIR

DESIGNED BY: C. PETREE

CHECKED BY: C. PETREE

SCALE: NOT TO SCALE

ROCKETTS LANDING

CITY OF RICHMOND AND HENRICO COUNTY

WATER MODEL - DESIGN CRITERIA AND RESULTS

JOB NO. 67006

SHEET NO. WM3

Full Build-out – Average Domestic Demand

Scenario: Full Build-out - Average Domestic Demand
Current Time Step: 0.000Hr
FlexTable: Junction Table

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	37.00	109.40	214.40	76.8
J-1A(FH)	37.00	0.00	214.40	76.8
J-2 (FH)	45.00	0.00	214.36	73.3
J-3	46.00	45.70	214.35	72.8
J-4	47.00	0.00	214.33	72.4
J-5 (FH)	47.00	0.00	214.33	72.4
J-6	48.00	16.70	214.33	72.0
J-7	48.00	0.00	214.31	72.0
J-8	49.00	1.40	214.31	71.5
J-9	49.00	0.00	214.31	71.5
J-10	49.00	1.40	214.31	71.5
J-11 (FH)	49.00	0.00	214.31	71.5
J-12	49.00	0.00	214.31	71.5
J-13	48.00	1.10	214.31	72.0
J-14 (FH)	48.00	0.00	214.31	72.0
J-15 (FH)	46.00	0.00	214.31	72.8
J-16	48.00	0.00	214.30	72.0
J-17	47.00	0.60	214.30	72.4
J-18 (FH)	48.00	0.00	214.30	72.0
J-19 (FH)	48.00	19.80	214.30	72.0
J-20	48.00	0.00	214.30	71.9
J-21 (FH)	48.00	0.00	214.30	71.9
J-22	49.00	1.90	214.29	71.5
J-23	49.00	0.00	214.28	71.5
J-24 (FH)	49.00	0.00	214.28	71.5
J-25	49.00	0.00	214.27	71.5
J-26	49.00	13.60	214.27	71.5
J-27	49.00	0.00	214.27	71.5
J-28 (FH)	49.00	0.00	214.27	71.5
J-29	49.00	2.20	214.26	71.5
J-30	48.00	0.00	214.26	71.9
J-31 (FH)	48.00	0.00	214.26	71.9
J-32	48.00	0.00	214.25	71.9
J-33	48.00	0.00	214.25	71.9
J-34 (FH)	48.00	0.00	214.25	71.9
J-35 (FH)	49.00	0.00	214.26	71.5
J-36	49.00	0.00	214.26	71.5
J-37	49.00	5.30	214.26	71.5
J-37(FH)	47.00	0.00	214.26	72.4
J-38	49.00	2.20	214.26	71.5
J-39	50.00	23.10	214.26	71.1
J-39 (FH)	49.00	0.00	214.27	71.5
J-40	45.00	0.00	214.25	73.2
J-41	29.00	15.00	214.25	80.2
J-42	28.00	0.00	214.25	80.6
J-42(FH)	27.00	0.00	208.36	78.5
J-43	27.00	66.40	208.37	78.5
J-44	28.00	0.00	208.36	78.0
J-44(FH)	28.00	0.00	208.36	78.0
J-45	48.00	0.00	214.25	71.9
J-47	25.00	0.00	214.25	81.9
J-47A	25.00	3.50	214.25	81.9
J-48	22.00	0.00	214.25	83.2
J-48(FH)	19.00	0.00	214.25	84.5
J-49	22.00	0.00	214.25	83.2
J-51	18.00	0.00	214.25	84.9
J-51(FH)	19.00	0.00	214.25	84.5

J-52	47.00	0.60	214.32	72.4
J-53	38.00	0.00	208.36	73.7
J-54 (F-FH)	38.00	5.00	208.35	73.7
J-55 (F-FH)	38.00	0.00	208.35	73.7
J-56 (F-FH)	34.00	19.50	208.34	75.4
J-57 (F-FH)	31.00	6.95	208.34	76.7
J-58 (F-FH)	30.00	9.70	208.35	77.2
J-59 (F-FH)	27.00	60.40	208.34	78.5
J-59(FH)	36.00	12.50	214.40	77.2
J-60 (F-FH)	27.00	27.00	208.34	78.5
J-61	37.00	94.00	214.40	76.8
J-61(FH)	38.00	0.00	214.41	76.3
J-62	38.00	20.50	214.43	76.3
J-63	32.00	102.40	214.50	79.0
J-70	27.00	38.00	214.52	81.1
J-74	27.00	0.00	214.52	81.1
J-75	23.00	104.60	214.73	83.0
J-76(FH)	24.00	0.00	214.73	82.5
J-77	22.00	0.00	214.58	83.3
J-78(FH)	22.00	63.10	214.52	83.3
J-79(F-FH)	23.00	0.00	216.19	83.6
J-80(FH)	32.00	0.00	215.67	79.5
J-81(FH)	83.00	0.00	216.55	57.8
J-83	46.00	0.00	216.29	73.7
J-84	31.00	0.00	216.65	80.3
J-85	33.00	162.96	215.67	79.0
J-86(FH)	40.00	0.00	214.49	75.5
J-89	24.00	0.00	214.85	82.6
J-96	48.00	0.00	208.38	69.4
J-106(FH)	36.00	0.00	214.51	77.2
J-107(FH)	36.00	0.00	214.50	77.2
J-109	47.00	0.00	208.38	69.8
J-112(FH)	28.00	0.00	208.36	78.0
J-113(FH)	45.00	57.40	208.34	70.7
J-117	52.00	0.00	216.55	71.2
J-118	37.00	0.00	216.53	77.7
J-119	13.00	0.00	216.20	87.9
J-120	36.00	69.44	216.46	78.1
J-121	30.44	55.60	208.35	77.0
J-122(FH)	46.00	0.00	208.36	70.2
J-123(FH)	46.00	0.00	208.35	70.2
J-124	33.74	0.00	208.35	75.5
J-125	37.52	0.00	208.35	73.9
J-126	48.00	5.90	208.35	69.4
J-127(FH)	53.00	0.00	208.35	67.2
J-128	28.00	0.00	208.34	78.0
J-129(FH)	52.00	6.95	208.34	67.6
J-130	34.00	0.00	208.34	75.4
J-131	36.00	0.00	208.34	74.6
J-132	34.00	0.00	208.34	75.4
J-133	32.00	0.00	208.34	76.3
J-134(FH)	22.00	13.50	208.34	80.6
J-135(FH)	28.00	0.00	208.34	78.0

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Scenario: Full Build-out - Average Domestic Demand
Current Time Step: 0.000Hr
FlexTable: Pipe Table

Label	Length (Scaled) (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (Absolute) (gpm)	Velocity (ft/s)	Headloss (ft)	Start Node	Stop Node
P-1	297	16	Ductile Iron	110.0	577.52	0.9216	0.09	J-1	J-86(FH)
P-1A	1,046	8	Ductile Iron	120.0	258.03	1.6470	1.80	J-83	J-86(FH)
P-2	211	16	Ductile Iron	120.0	488.40	0.7793	0.04	J-1	J-2 (FH)
P-3	56	16	Ductile Iron	120.0	488.40	0.7793	0.01	J-2 (FH)	J-3
P-4	112	16	Ductile Iron	120.0	442.70	0.7064	0.02	J-3	J-4
P-5	40	8	Ductile Iron	120.0	16.70	0.1066	0.00	J-4	J-5 (FH)
P-6	76	8	Ductile Iron	120.0	16.70	0.1066	0.00	J-5 (FH)	J-6
P-8	149	8	Ductile Iron	120.0	3.90	0.0249	0.00	J-7	J-8
P-9	31	8	Ductile Iron	120.0	2.50	0.0160	0.00	J-8	J-9
P-10	77	8	Ductile Iron	120.0	1.40	0.0089	0.00	J-9	J-10
P-11	91	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-10	J-11 (FH)
P-12	16	8	Ductile Iron	120.0	1.10	0.0070	0.00	J-9	J-12
P-13	120	8	Ductile Iron	120.0	1.10	0.0070	0.00	J-12	J-13
P-14	25	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-13	J-14 (FH)
P-15	49	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-12	J-15 (FH)
P-16	55	16	Ductile Iron	120.0	421.50	0.6726	0.01	J-7	J-16
P-17	70	12	Ductile Iron	120.0	20.40	0.0579	0.00	J-16	J-17
P-18	82	12	Ductile Iron	120.0	19.80	0.0562	0.00	J-17	J-18 (FH)
P-19	56	12	Ductile Iron	120.0	19.80	0.0562	0.00	J-18 (FH)	J-19 (FH)
P-20	58	16	Ductile Iron	120.0	401.10	0.6400	0.01	J-16	J-20
P-21	30	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-20	J-21 (FH)
P-22	75	16	Ductile Iron	120.0	401.10	0.6400	0.01	J-20	J-22
P-23	63	16	Ductile Iron	120.0	399.20	0.6370	0.01	J-22	J-23
P-24	40	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-23	J-24 (FH)
P-25	30	16	Ductile Iron	120.0	347.59	0.5547	0.00	J-23	J-25
P-26	46	8	Ductile Iron	120.0	13.60	0.0868	0.00	J-25	J-26
P-27	8	16	Ductile Iron	120.0	333.99	0.5330	0.00	J-25	J-27
P-28	29	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-27	J-28 (FH)
P-29	93	16	Ductile Iron	120.0	333.99	0.5330	0.01	J-27	J-29
P-30	93	16	Ductile Iron	120.0	331.79	0.5294	0.01	J-29	J-30
P-31	32	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-30	J-31 (FH)
P-32	12	16	Ductile Iron	120.0	331.79	0.5294	0.00	J-30	J-45
P-33	14	16	Ductile Iron	120.0	313.29	0.4999	0.00	J-45	J-32
P-33A	20	16	Ductile Iron	120.0	334.30	0.5334	0.00	J-33	J-32
P-34	23	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-33	J-34 (FH)
P-35	118	8	Ductile Iron	120.0	21.01	0.1341	0.00	J-32	J-35 (FH)
P-36	42	8	Ductile Iron	120.0	21.01	0.1341	0.00	J-35 (FH)	J-36
P-37	50	8	Ductile Iron	120.0	5.30	0.0338	0.00	J-36	J-37
P-37A	43	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-37	J-37(FH)
P-38	110	8	Ductile Iron	120.0	26.31	0.1679	0.00	J-36	J-38
P-39	138	8	Ductile Iron	120.0	28.51	0.1820	0.00	J-38	J-39
P-39A	48	8	Ductile Iron	120.0	51.61	0.3294	0.00	J-39	J-39 (FH)
P-40	115	8	Ductile Iron	120.0	51.61	0.3294	0.01	J-39 (FH)	J-23
P-41	159	12	Ductile Iron	120.0	18.50	0.0525	0.00	J-45	J-40
P-42	93	12	Ductile Iron	120.0	18.50	0.0525	0.00	J-40	J-42
P-47	34	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-48(FH)
P-48	158	8	Ductile Iron	120.0	3.50	0.0223	0.00	J-41	J-47
P-48A	79	8	Ductile Iron	120.0	18.50	0.1181	0.00	J-41	J-42
P-49	204	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-47	J-48
P-49A	32	6	Ductile Iron	120.0	3.50	0.0397	0.00	J-47A	J-47
P-50	16	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-49
P-52	335	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-49	J-51
P-52A	18	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-51	J-51(FH)
P-53	72	16	Ductile Iron	120.0	426.00	0.6798	0.01	J-4	J-52
P-54	42	16	Ductile Iron	120.0	425.40	0.6788	0.01	J-52	J-7
P-69A	60	12	Ductile Iron	110.0	20.28	0.0575	0.00	J-1	J-1A(FH)
P-69B	149	12	Ductile Iron	110.0	20.28	0.0575	0.00	J-1A(FH)	J-59(FH)
P-72	55	12	Ductile Iron	110.0	32.78	0.0930	0.00	J-59(FH)	J-61
P-73A	168	12	Ductile Iron	110.0	126.78	0.3596	0.01	J-61	J-61(FH)
P-73B	242	12	Ductile Iron	110.0	126.78	0.3596	0.02	J-61(FH)	J-62
P-74	99	8	Ductile Iron	110.0	147.28	0.9400	0.07	J-62	J-63

P-86	104	8	Ductile Iron	110.0	18.59	0.1186	0.00	J-74	J-70
P-86A	235	12	Ductile Iron	110.0	487.87	1.3840	0.21	J-70	J-75
P-87	21	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-75	J-76(FH)
P-88	721	6	Ductile Iron	90.0	18.59	0.2109	0.06	J-74	J-77
P-92	95	12	Ductile Iron	110.0	592.47	1.6807	0.12	J-75	J-89
P-92A	626	12	Ductile Iron	110.0	592.47	1.6807	0.82	J-89	J-80(FH)
P-93	477	12	Ductile Iron	110.0	755.43	2.1430	0.98	J-80(FH)	J-84
P-95	33	12	Ductile Iron	110.0	162.96	0.4623	0.00	J-80(FH)	J-85
P-159	172	24	Ductile Iron	110.0	569.17	0.4037	0.01	J-63	J-106(FH)
P-160	195	24	Ductile Iron	110.0	569.17	0.4037	0.01	J-106(FH)	J-70
P-161	526	24	Ductile Iron	110.0	319.49	0.2266	0.01	J-86(FH)	J-107(FH)
P-162	269	24	Ductile Iron	110.0	319.49	0.2266	0.00	J-107(FH)	J-63
P-172	227	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-53	J-112(FH)
P-173	211	8	Ductile Iron	120.0	57.40	0.3664	0.02	J-53	J-113(FH)
P-188	2,981	16	Ductile Iron	110.0	182.40	0.2911	0.11	J-84	J-117
P-189	685	8	Ductile Iron	90.0	100.85	0.6437	0.35	J-117	J-79(F-FH)
P-190	326	24	Ductile Iron	120.0	100.71	0.0714	0.00	J-70	J-78(FH)
P-191	1,043	8	Ductile Iron	90.0	182.40	1.1642	1.61	J-77	J-79(F-FH)
P-192	89	8	Ductile Iron	120.0	163.81	1.0456	0.07	J-78(FH)	J-77
P-193	701	24	Ductile Iron	110.0	81.55	0.0578	0.00	J-117	J-81(FH)
P-194	423	12	Ductile Iron	110.0	81.55	0.2313	0.01	J-81(FH)	J-118
P-195	1,375	8	Ductile Iron	110.0	81.55	0.5205	0.33	J-118	J-119
P-196	35	8	Ductile Iron	110.0	81.55	0.5205	0.01	J-119	J-79(F-FH)
P-199	448	12	Ductile Iron	110.0	327.48	0.9290	0.20	J-84	J-120
P-200	595	12	Ductile Iron	110.0	258.03	0.7320	0.17	J-120	J-83
P-201	13	16	Ductile Iron	120.0	334.30	0.5334	0.00	J-33	GPV-6
P-202	11	16	Ductile Iron	120.0	334.30	0.5334	0.00	GPV-6	J-96
P-205	21	16	Ductile Iron	120.0	334.30	0.5334	0.00	J-96	J-109
P-207	7	16	Ductile Iron	120.0	267.90	0.4275	0.00	J-42(FH)	J-53
P-208	97	16	Ductile Iron	120.0	334.30	0.5334	0.01	J-109	J-43
P-209	124	16	Ductile Iron	120.0	267.90	0.4275	0.01	J-43	J-42(FH)
P-210	178	16	Ductile Iron	120.0	210.50	0.3359	0.01	J-53	J-44
P-212	200	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-44(FH)
P-213	100	16	Ductile Iron	120.0	210.50	0.3359	0.00	J-44	J-121
P-215	193	8	Ductile Iron	120.0	9.70	0.0619	0.00	J-121	J-58 (F-FH)
P-216	19	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-122(FH)
P-217	22	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-121	J-123(FH)
P-218	143	16	Ductile Iron	120.0	145.20	0.2317	0.00	J-121	J-124
P-220	169	16	Ductile Iron	120.0	139.30	0.2223	0.00	J-124	J-125
P-221	115	8	Ductile Iron	120.0	5.00	0.0319	0.00	J-125	J-54 (F-FH)
P-222	21	8	Ductile Iron	120.0	5.90	0.0377	0.00	J-124	J-126
P-223	142	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-126	J-127(FH)
P-224	174	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-126	J-55 (F-FH)
P-225	295	16	Ductile Iron	120.0	134.30	0.2143	0.01	J-125	J-59 (F-FH)
P-226	221	16	Ductile Iron	120.0	73.90	0.1179	0.00	J-59 (F-FH)	J-128
P-227	222	8	Ductile Iron	120.0	6.95	0.0444	0.00	J-128	J-129(FH)
P-228	169	16	Ductile Iron	120.0	66.95	0.1068	0.00	J-128	J-130
P-229	231	8	Ductile Iron	120.0	19.50	0.1245	0.00	J-130	J-56 (F-FH)
P-230	116	16	Ductile Iron	120.0	47.45	0.0757	0.00	J-130	J-131
P-231	65	8	Ductile Iron	120.0	27.00	0.1723	0.00	J-131	J-60 (F-FH)
P-232	211	16	Ductile Iron	120.0	20.45	0.0326	0.00	J-131	J-132
P-233	246	8	Ductile Iron	120.0	6.95	0.0444	0.00	J-132	J-57 (F-FH)
P-234	34	16	Ductile Iron	120.0	13.50	0.0215	0.00	J-132	J-133
P-235	88	8	Ductile Iron	120.0	13.50	0.0862	0.00	J-133	J-134(FH)
P-236	151	16	Ductile Iron	120.0	0.00	0.0000	0.00	J-133	J-135(FH)

Full Build-out – Peak Hour Demand (PHD)

Scenario: Full Build-out - Peak Hour Demand
Current Time Step: 0.000Hr
FlexTable: Junction Table

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	37.00	295.38	188.64	65.6
J-1A(FH)	37.00	0.00	188.64	65.6
J-2 (FH)	45.00	0.00	188.39	62.0
J-3	46.00	123.39	188.32	61.6
J-4	47.00	0.00	188.21	61.1
J-5 (FH)	47.00	0.00	188.20	61.1
J-6	48.00	45.09	188.20	60.7
J-7	48.00	0.00	188.10	60.6
J-8	49.00	3.78	188.10	60.2
J-9	49.00	0.00	188.10	60.2
J-10	49.00	3.78	188.10	60.2
J-11 (FH)	49.00	0.00	188.10	60.2
J-12	49.00	0.00	188.10	60.2
J-13	48.00	2.97	188.10	60.6
J-14 (FH)	48.00	0.00	188.10	60.6
J-15 (FH)	46.00	0.00	188.10	61.5
J-16	48.00	0.00	188.05	60.6
J-17	47.00	1.62	188.05	61.0
J-18 (FH)	48.00	0.00	188.05	60.6
J-19 (FH)	48.00	53.46	188.05	60.6
J-20	48.00	0.00	188.00	60.6
J-21 (FH)	48.00	0.00	188.00	60.6
J-22	49.00	5.13	187.94	60.1
J-23	49.00	0.00	187.89	60.1
J-24 (FH)	49.00	0.00	187.89	60.1
J-25	49.00	0.00	187.87	60.1
J-26	49.00	36.72	187.86	60.1
J-27	49.00	0.00	187.86	60.1
J-28 (FH)	49.00	0.00	187.86	60.1
J-29	49.00	5.94	187.81	60.1
J-30	48.00	0.00	187.75	60.5
J-31 (FH)	48.00	0.00	187.75	60.5
J-32	48.00	0.00	187.74	60.5
J-33	48.00	0.00	187.72	60.5
J-34 (FH)	48.00	0.00	187.72	60.5
J-35 (FH)	49.00	0.00	187.75	60.0
J-36	49.00	0.00	187.75	60.0
J-37	49.00	14.31	187.75	60.0
J-37(FH)	47.00	0.00	187.75	60.9
J-38	49.00	5.94	187.77	60.0
J-39	50.00	62.37	187.80	59.6
J-39 (FH)	49.00	0.00	187.82	60.1
J-40	45.00	0.00	187.74	61.8
J-41	29.00	40.50	187.73	68.7
J-42	28.00	0.00	187.74	69.1
J-42(FH)	27.00	0.00	180.22	66.3
J-43	27.00	179.28	180.27	66.3
J-44	28.00	0.00	180.18	65.8
J-44(FH)	28.00	0.00	180.18	65.8
J-45	48.00	0.00	187.74	60.5
J-47	25.00	0.00	187.73	70.4
J-47A	25.00	9.45	187.73	70.4
J-48	22.00	0.00	187.73	71.7
J-48(FH)	19.00	0.00	187.73	73.0
J-49	22.00	0.00	187.73	71.7
J-51	18.00	0.00	187.73	73.4
J-51(FH)	19.00	0.00	187.73	73.0

J-52	47.00	1.62	188.14	61.1
J-53	38.00	0.00	180.22	61.5
J-54 (F-FH)	38.00	13.50	180.11	61.5
J-55 (F-FH)	38.00	0.00	180.13	61.5
J-56 (F-FH)	34.00	52.65	180.05	63.2
J-57 (F-FH)	31.00	18.76	180.06	64.5
J-58 (F-FH)	30.00	26.19	180.15	65.0
J-59 (F-FH)	27.00	163.08	180.08	66.2
J-59(FH)	36.00	33.75	188.65	66.0
J-60 (F-FH)	27.00	72.90	180.05	66.2
J-61	37.00	253.80	188.65	65.6
J-61(FH)	38.00	0.00	188.73	65.2
J-62	38.00	55.35	188.84	65.3
J-63	32.00	276.48	189.29	68.1
J-70	27.00	102.60	189.38	70.3
J-74	27.00	0.00	189.39	70.3
J-75	23.00	282.42	190.74	72.6
J-76(FH)	24.00	0.00	190.74	72.1
J-77	22.00	0.00	189.80	72.6
J-78(FH)	22.00	170.37	189.39	72.4
J-79(F-FH)	23.00	0.00	199.94	76.6
J-80(FH)	32.00	0.00	196.68	71.2
J-81(FH)	83.00	0.00	202.16	51.6
J-83	46.00	0.00	200.56	66.9
J-84	31.00	0.00	202.85	74.4
J-85	33.00	440.00	196.66	70.8
J-86(FH)	40.00	0.00	189.22	64.6
J-89	24.00	0.00	191.52	72.5
J-96	48.00	0.00	180.34	57.3
J-106(FH)	36.00	0.00	189.33	66.3
J-107(FH)	36.00	0.00	189.26	66.3
J-109	47.00	0.00	180.33	57.7
J-112(FH)	28.00	0.00	180.22	65.9
J-113(FH)	45.00	154.98	180.08	58.4
J-117	52.00	0.00	202.17	65.0
J-118	37.00	0.00	202.07	71.4
J-119	13.00	0.00	200.00	80.9
J-120	36.00	187.50	201.62	71.7
J-121	30.44	150.12	180.15	64.8
J-122(FH)	46.00	0.00	180.18	58.1
J-123(FH)	46.00	0.00	180.15	58.0
J-124	33.74	0.00	180.13	63.3
J-125	37.52	0.00	180.11	61.7
J-126	48.00	15.93	180.13	57.2
J-127(FH)	53.00	0.00	180.13	55.0
J-128	28.00	0.00	180.07	65.8
J-129(FH)	52.00	18.76	180.07	55.4
J-130	34.00	0.00	180.07	63.2
J-131	36.00	0.00	180.06	62.3
J-132	34.00	0.00	180.06	63.2
J-133	32.00	0.00	180.06	64.1
J-134(FH)	22.00	36.45	180.06	68.4
J-135(FH)	28.00	0.00	180.06	65.8

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Scenario: Full Build-out - Peak Hour Demand
Current Time Step: 0.000Hr
FlexTable: Pipe Table

Label	Length (Scaled) (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (Absolute) (gpm)	Velocity (ft/s)	Headloss (ft)	Start Node	Stop Node
P-1	297	16	Ductile Iron	110.0	1,559.31	2.4882	0.58	J-1	J-86(FH)
P-1A	1,046	8	Ductile Iron	120.0	696.69	4.4468	11.35	J-83	J-86(FH)
P-2	211	16	Ductile Iron	120.0	1,318.68	2.1042	0.25	J-1	J-2 (FH)
P-3	56	16	Ductile Iron	120.0	1,318.68	2.1042	0.07	J-2 (FH)	J-3
P-4	112	16	Ductile Iron	120.0	1,195.29	1.9073	0.11	J-3	J-4
P-5	40	8	Ductile Iron	120.0	45.09	0.2878	0.00	J-4	J-5 (FH)
P-6	76	8	Ductile Iron	120.0	45.09	0.2878	0.01	J-5 (FH)	J-6
P-8	149	8	Ductile Iron	120.0	10.53	0.0672	0.00	J-7	J-8
P-9	31	8	Ductile Iron	120.0	6.75	0.0431	0.00	J-8	J-9
P-10	77	8	Ductile Iron	120.0	3.78	0.0241	0.00	J-9	J-10
P-11	91	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-10	J-11 (FH)
P-12	16	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-9	J-12
P-13	120	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-12	J-13
P-14	25	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-13	J-14 (FH)
P-15	49	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-12	J-15 (FH)
P-16	55	16	Ductile Iron	120.0	1,138.05	1.8160	0.05	J-7	J-16
P-17	70	12	Ductile Iron	120.0	55.08	0.1563	0.00	J-16	J-17
P-18	82	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-17	J-18 (FH)
P-19	56	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-18 (FH)	J-19 (FH)
P-20	58	16	Ductile Iron	120.0	1,082.97	1.7281	0.05	J-16	J-20
P-21	30	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-20	J-21 (FH)
P-22	75	16	Ductile Iron	120.0	1,082.97	1.7281	0.06	J-20	J-22
P-23	63	16	Ductile Iron	120.0	1,077.84	1.7199	0.05	J-22	J-23
P-24	40	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-23	J-24 (FH)
P-25	30	16	Ductile Iron	120.0	938.50	1.4976	0.02	J-23	J-25
P-26	46	8	Ductile Iron	120.0	36.72	0.2344	0.00	J-25	J-26
P-27	8	16	Ductile Iron	120.0	901.78	1.4390	0.00	J-25	J-27
P-28	29	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-27	J-28 (FH)
P-29	93	16	Ductile Iron	120.0	901.78	1.4390	0.06	J-27	J-29
P-30	93	16	Ductile Iron	120.0	895.84	1.4295	0.05	J-29	J-30
P-31	32	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-30	J-31 (FH)
P-32	12	16	Ductile Iron	120.0	895.84	1.4295	0.01	J-30	J-45
P-33	14	16	Ductile Iron	120.0	845.89	1.3498	0.01	J-45	J-32
P-33A	20	16	Ductile Iron	120.0	902.61	1.4403	0.01	J-33	J-32
P-34	23	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-33	J-34 (FH)
P-35	118	8	Ductile Iron	120.0	56.72	0.3620	0.01	J-32	J-35 (FH)
P-36	42	8	Ductile Iron	120.0	56.72	0.3620	0.00	J-35 (FH)	J-36
P-37	50	8	Ductile Iron	120.0	14.31	0.0913	0.00	J-36	J-37
P-37A	43	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-37	J-37(FH)
P-38	110	8	Ductile Iron	120.0	71.03	0.4534	0.02	J-36	J-38
P-39	138	8	Ductile Iron	120.0	76.97	0.4913	0.03	J-38	J-39
P-39A	48	8	Ductile Iron	120.0	139.34	0.8894	0.03	J-39	J-39 (FH)
P-40	115	8	Ductile Iron	120.0	139.34	0.8894	0.06	J-39 (FH)	J-23
P-41	159	12	Ductile Iron	120.0	49.95	0.1417	0.00	J-45	J-40
P-42	93	12	Ductile Iron	120.0	49.95	0.1417	0.00	J-40	J-42
P-47	34	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-48(FH)
P-48	158	8	Ductile Iron	120.0	9.45	0.0603	0.00	J-41	J-47
P-48A	79	8	Ductile Iron	120.0	49.95	0.3188	0.01	J-41	J-42
P-49	204	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-47	J-48
P-49A	32	6	Ductile Iron	120.0	9.45	0.1072	0.00	J-47A	J-47
P-50	16	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-49
P-52	335	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-49	J-51
P-52A	18	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-51	J-51(FH)
P-53	72	16	Ductile Iron	120.0	1,150.20	1.8354	0.07	J-4	J-52
P-54	42	16	Ductile Iron	120.0	1,148.58	1.8328	0.04	J-52	J-7
P-69A	60	12	Ductile Iron	110.0	54.75	0.1553	0.00	J-1	J-1A(FH)
P-69B	149	12	Ductile Iron	110.0	54.75	0.1553	0.00	J-1A(FH)	J-59(FH)
P-72	55	12	Ductile Iron	110.0	88.50	0.2511	0.00	J-59(FH)	J-61
P-73A	168	12	Ductile Iron	110.0	342.30	0.9710	0.08	J-61	J-61(FH)
P-73B	242	12	Ductile Iron	110.0	342.30	0.9710	0.11	J-61(FH)	J-62
P-74	99	8	Ductile Iron	110.0	397.65	2.5381	0.45	J-62	J-63

P-86	104	8	Ductile Iron	110.0	49.87	0.3183	0.01	J-74	J-70
P-86A	235	12	Ductile Iron	110.0	1,317.26	3.7368	1.35	J-70	J-75
P-87	21	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-75	J-76(FH)
P-88	721	6	Ductile Iron	90.0	49.87	0.5659	0.41	J-74	J-77
P-92	95	12	Ductile Iron	110.0	1,599.68	4.5380	0.78	J-75	J-89
P-92A	626	12	Ductile Iron	110.0	1,599.68	4.5380	5.16	J-89	J-80(FH)
P-93	477	12	Ductile Iron	110.0	2,039.68	5.7861	6.17	J-80(FH)	J-84
P-95	33	12	Ductile Iron	110.0	440.00	1.2482	0.02	J-80(FH)	J-85
P-159	172	24	Ductile Iron	110.0	1,536.76	1.0899	0.04	J-63	J-106(FH)
P-160	195	24	Ductile Iron	110.0	1,536.76	1.0899	0.05	J-106(FH)	J-70
P-161	526	24	Ductile Iron	110.0	862.63	0.6118	0.05	J-86(FH)	J-107(FH)
P-162	269	24	Ductile Iron	110.0	862.63	0.6118	0.02	J-107(FH)	J-63
P-172	227	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-53	J-112(FH)
P-173	211	8	Ductile Iron	120.0	154.98	0.9892	0.14	J-53	J-113(FH)
P-188	2,981	16	Ductile Iron	110.0	492.47	0.7858	0.68	J-84	J-117
P-189	685	8	Ductile Iron	90.0	272.28	1.7379	2.22	J-117	J-79(F-FH)
P-190	326	24	Ductile Iron	120.0	272.22	0.1931	0.00	J-70	J-78(FH)
P-191	1,043	8	Ductile Iron	90.0	492.47	3.1433	10.14	J-77	J-79(F-FH)
P-192	89	8	Ductile Iron	120.0	442.59	2.8250	0.42	J-78(FH)	J-77
P-193	701	24	Ductile Iron	110.0	220.18	0.1562	0.01	J-117	J-81(FH)
P-194	423	12	Ductile Iron	110.0	220.18	0.6246	0.09	J-81(FH)	J-118
P-195	1,375	8	Ductile Iron	110.0	220.18	1.4054	2.08	J-118	J-119
P-196	35	8	Ductile Iron	110.0	220.18	1.4054	0.05	J-119	J-79(F-FH)
P-199	448	12	Ductile Iron	110.0	884.19	2.5083	1.23	J-84	J-120
P-200	595	12	Ductile Iron	110.0	696.69	1.9764	1.05	J-120	J-83
P-201	13	16	Ductile Iron	120.0	902.61	1.4403	0.01	J-33	GPV-6
P-202	11	16	Ductile Iron	120.0	902.61	1.4403	0.01	GPV-6	J-96
P-205	21	16	Ductile Iron	120.0	902.61	1.4403	0.01	J-96	J-109
P-207	7	16	Ductile Iron	120.0	723.33	1.1542	0.00	J-42(FH)	J-53
P-208	97	16	Ductile Iron	120.0	902.61	1.4403	0.06	J-109	J-43
P-209	124	16	Ductile Iron	120.0	723.33	1.1542	0.05	J-43	J-42(FH)
P-210	178	16	Ductile Iron	120.0	568.35	0.9069	0.05	J-53	J-44
P-212	200	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-44(FH)
P-213	100	16	Ductile Iron	120.0	568.35	0.9069	0.03	J-44	J-121
P-215	193	8	Ductile Iron	120.0	26.19	0.1672	0.00	J-121	J-58 (F-FH)
P-216	19	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-122(FH)
P-217	22	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-121	J-123(FH)
P-218	143	16	Ductile Iron	120.0	392.04	0.6256	0.02	J-121	J-124
P-220	169	16	Ductile Iron	120.0	376.11	0.6002	0.02	J-124	J-125
P-221	115	8	Ductile Iron	120.0	13.50	0.0862	0.00	J-125	J-54 (F-FH)
P-222	21	8	Ductile Iron	120.0	15.93	0.1017	0.00	J-124	J-126
P-223	142	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-126	J-127(FH)
P-224	174	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-126	J-55 (F-FH)
P-225	295	16	Ductile Iron	120.0	362.61	0.5786	0.03	J-125	J-59 (F-FH)
P-226	221	16	Ductile Iron	120.0	199.53	0.3184	0.01	J-59 (F-FH)	J-128
P-227	222	8	Ductile Iron	120.0	18.76	0.1198	0.00	J-128	J-129(FH)
P-228	169	16	Ductile Iron	120.0	180.77	0.2884	0.01	J-128	J-130
P-229	231	8	Ductile Iron	120.0	52.65	0.3361	0.02	J-130	J-56 (F-FH)
P-230	116	16	Ductile Iron	120.0	128.12	0.2044	0.00	J-130	J-131
P-231	65	8	Ductile Iron	120.0	72.90	0.4653	0.01	J-131	J-60 (F-FH)
P-232	211	16	Ductile Iron	120.0	55.22	0.0881	0.00	J-131	J-132
P-233	246	8	Ductile Iron	120.0	18.76	0.1198	0.00	J-132	J-57 (F-FH)
P-234	34	16	Ductile Iron	120.0	36.45	0.0582	0.00	J-132	J-133
P-235	88	8	Ductile Iron	120.0	36.45	0.2327	0.00	J-133	J-134(FH)
P-236	151	16	Ductile Iron	120.0	0.00	0.0000	0.00	J-133	J-135(FH)

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Full Build-out – PHD + Sprinkler + ISO @ Block 17
(Phase 2)

J-52	47.00	1.62	118.64	31.0
J-53	38.00	0.00	101.47	27.5
J-54 (F-FH)	38.00	13.50	101.06	27.3
J-55 (F-FH)	38.00	34.56	101.08	27.3
J-56 (F-FH)	34.00	52.65	101.00	29.0
J-57 (F-FH)	31.00	18.76	101.01	30.3
J-58 (F-FH)	30.00	26.19	101.10	30.8
J-59 (F-FH)	27.00	163.08	101.03	32.0
J-59(FH)	36.00	33.75	123.02	37.6
J-60 (F-FH)	27.00	72.90	101.01	32.0
J-61	37.00	253.80	123.09	37.2
J-61(FH)	38.00	0.00	123.51	37.0
J-62	38.00	55.35	124.12	37.3
J-63	32.00	276.48	126.14	40.7
J-70	27.00	102.60	126.60	43.1
J-74	27.00	0.00	126.63	43.1
J-75	23.00	282.42	132.40	47.3
J-76(FH)	24.00	0.00	132.40	46.9
J-77	22.00	0.00	128.00	45.9
J-78(FH)	22.00	170.37	126.61	45.3
J-79(F-FH)	23.00	0.00	161.68	60.0
J-80(FH)	32.00	0.00	153.54	52.6
J-81(FH)	83.00	0.00	169.05	37.2
J-83	46.00	0.00	164.32	51.2
J-84	31.00	0.00	171.33	60.7
J-85	33.00	440.00	153.52	52.1
J-86(FH)	40.00	0.00	125.67	37.1
J-89	24.00	0.00	135.18	48.1
J-96	48.00	0.00	102.48	23.6
J-106(FH)	36.00	0.00	126.36	39.1
J-107(FH)	36.00	0.00	125.98	38.9
J-109	47.00	0.00	102.39	24.0
J-112(FH)	28.00	0.00	101.47	31.8
J-113(FH)	45.00	26.24	101.46	24.4
J-117	52.00	0.00	169.06	50.6
J-118	37.00	0.00	168.75	57.0
J-119	13.00	0.00	161.86	64.4
J-120	36.00	187.50	167.90	57.1
J-121	30.44	329.40	101.11	30.6
J-122(FH)	46.00	0.00	101.15	23.9
J-123(FH)	46.00	0.00	101.11	23.8
J-124	33.74	0.00	101.09	29.1
J-125	37.52	0.00	101.07	27.5
J-126	48.00	15.93	101.08	23.0
J-127(FH)	53.00	0.00	101.08	20.8
J-128	28.00	0.00	101.03	31.6
J-129(FH)	52.00	18.76	101.02	21.2
J-130	34.00	0.00	101.02	29.0
J-131	36.00	0.00	101.02	28.1
J-132	34.00	0.00	101.02	29.0
J-133	32.00	0.00	101.02	29.9
J-134(FH)	22.00	36.45	101.01	34.2
J-135(FH)	28.00	0.00	101.02	31.6

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Scenario: Full Build-out - PHD + ISO @ 17 (Phase 2)
Current Time Step: 0.000Hr
FlexTable: Pipe Table

Label	Length (Scaled) (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (Absolute) (gpm)	Velocity (ft/s)	Headloss (ft)	Start Node	Stop Node
P-1	297	16	Ductile Iron	110.0	3,735.40	5.9606	2.90	J-1	J-86(FH)
P-1A	1,046	8	Ductile Iron	120.0	1,350.22	8.6181	38.64	J-83	J-86(FH)
P-2	211	16	Ductile Iron	120.0	3,995.86	6.3762	1.99	J-1	J-2 (FH)
P-3	56	16	Ductile Iron	120.0	3,995.86	6.3762	0.53	J-2 (FH)	J-3
P-4	112	16	Ductile Iron	120.0	3,872.46	6.1793	1.00	J-3	J-4
P-5	40	8	Ductile Iron	120.0	45.09	0.2878	0.00	J-4	J-5 (FH)
P-6	76	8	Ductile Iron	120.0	45.09	0.2878	0.01	J-5 (FH)	J-6
P-8	149	8	Ductile Iron	120.0	10.53	0.0672	0.00	J-7	J-8
P-9	31	8	Ductile Iron	120.0	6.75	0.0431	0.00	J-8	J-9
P-10	77	8	Ductile Iron	120.0	3.78	0.0241	0.00	J-9	J-10
P-11	91	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-10	J-11 (FH)
P-12	16	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-9	J-12
P-13	120	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-12	J-13
P-14	25	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-13	J-14 (FH)
P-15	49	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-12	J-15 (FH)
P-16	55	16	Ductile Iron	120.0	3,815.22	6.0879	0.48	J-7	J-16
P-17	70	12	Ductile Iron	120.0	55.08	0.1563	0.00	J-16	J-17
P-18	82	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-17	J-18 (FH)
P-19	56	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-18 (FH)	J-19 (FH)
P-20	58	16	Ductile Iron	120.0	3,760.14	6.0000	0.49	J-16	J-20
P-21	30	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-20	J-21 (FH)
P-22	75	16	Ductile Iron	120.0	3,760.14	6.0000	0.63	J-20	J-22
P-23	63	16	Ductile Iron	120.0	3,755.01	5.9919	0.53	J-22	J-23
P-24	40	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-23	J-24 (FH)
P-25	30	16	Ductile Iron	120.0	3,361.79	5.3644	0.21	J-23	J-25
P-26	46	8	Ductile Iron	120.0	36.72	0.2344	0.00	J-25	J-26
P-27	8	16	Ductile Iron	120.0	3,325.07	5.3058	0.05	J-25	J-27
P-28	29	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-27	J-28 (FH)
P-29	93	16	Ductile Iron	120.0	3,325.07	5.3058	0.62	J-27	J-29
P-30	93	16	Ductile Iron	120.0	3,319.13	5.2963	0.62	J-29	J-30
P-31	32	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-30	J-31 (FH)
P-32	12	16	Ductile Iron	120.0	3,319.13	5.2963	0.08	J-30	J-45
P-33	14	16	Ductile Iron	120.0	3,177.11	5.0697	0.09	J-45	J-32
P-33A	20	16	Ductile Iron	120.0	3,487.71	5.5653	0.15	J-33	J-32
P-34	23	8	Ductile Iron	120.0	833.33	5.3190	0.35	J-33	J-34 (FH)
P-35	118	8	Ductile Iron	120.0	310.60	1.9825	0.29	J-32	J-35 (FH)
P-36	42	8	Ductile Iron	120.0	310.60	1.9825	0.10	J-35 (FH)	J-36
P-37	50	8	Ductile Iron	120.0	14.31	0.0913	0.00	J-36	J-37
P-37A	43	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-37	J-37(FH)
P-38	110	8	Ductile Iron	120.0	324.91	2.0738	0.29	J-36	J-38
P-39	138	8	Ductile Iron	120.0	330.85	2.1117	0.38	J-38	J-39
P-39A	48	8	Ductile Iron	120.0	393.22	2.5098	0.18	J-39	J-39 (FH)
P-40	115	8	Ductile Iron	120.0	393.22	2.5098	0.43	J-39 (FH)	J-23
P-41	159	12	Ductile Iron	120.0	142.02	0.4029	0.01	J-45	J-40
P-42	93	12	Ductile Iron	120.0	49.95	0.1417	0.00	J-40	J-42
P-47	34	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-48(FH)
P-48	158	8	Ductile Iron	120.0	9.45	0.0603	0.00	J-41	J-47
P-48A	79	8	Ductile Iron	120.0	49.95	0.3188	0.01	J-41	J-42
P-49	204	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-47	J-48
P-49A	32	6	Ductile Iron	120.0	9.45	0.1072	0.00	J-47A	J-47
P-50	16	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-49
P-52	335	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-49	J-51
P-52A	18	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-51	J-51(FH)
P-53	72	16	Ductile Iron	120.0	3,827.37	6.1073	0.63	J-4	J-52
P-54	42	16	Ductile Iron	120.0	3,825.76	6.1047	0.36	J-52	J-7
P-69A	60	12	Ductile Iron	110.0	555.83	1.5768	0.07	J-1	J-1A(FH)
P-69B	149	12	Ductile Iron	110.0	555.83	1.5768	0.17	J-1A(FH)	J-59(FH)
P-72	55	12	Ductile Iron	110.0	589.58	1.6725	0.07	J-59(FH)	J-61
P-73A	168	12	Ductile Iron	110.0	843.38	2.3925	0.42	J-61	J-61(FH)
P-73B	242	12	Ductile Iron	110.0	843.38	2.3925	0.61	J-61(FH)	J-62
P-74	99	8	Ductile Iron	110.0	898.73	5.7364	2.02	J-62	J-63
P-86	104	8	Ductile Iron	110.0	95.60	0.6102	0.03	J-74	J-70

P-86A	235	12	Ductile Iron	110.0	2,891.63	8.2029	5.80	J-70	J-75
P-87	21	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-75	J-76(FH)
P-88	721	6	Ductile Iron	90.0	95.60	1.0848	1.37	J-74	J-77
P-92	95	12	Ductile Iron	110.0	3,174.05	9.0041	2.79	J-75	J-89
P-92A	626	12	Ductile Iron	110.0	3,174.05	9.0041	18.36	J-89	J-80(FH)
P-93	477	12	Ductile Iron	110.0	3,614.05	10.2523	17.79	J-80(FH)	J-84
P-95	33	12	Ductile Iron	110.0	440.00	1.2482	0.02	J-80(FH)	J-85
P-159	172	24	Ductile Iron	110.0	3,560.40	2.5250	0.21	J-63	J-106(FH)
P-160	195	24	Ductile Iron	110.0	3,560.40	2.5250	0.24	J-106(FH)	J-70
P-161	526	24	Ductile Iron	110.0	2,385.19	1.6916	0.31	J-86(FH)	J-107(FH)
P-162	269	24	Ductile Iron	110.0	2,385.19	1.6916	0.16	J-107(FH)	J-63
P-172	227	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-53	J-112(FH)
P-173	211	8	Ductile Iron	120.0	26.24	0.1675	0.01	J-53	J-113(FH)
P-188	2,981	16	Ductile Iron	110.0	941.74	1.5027	2.27	J-84	J-117
P-189	685	8	Ductile Iron	90.0	520.69	3.3234	7.38	J-117	J-79(F-FH)
P-190	326	24	Ductile Iron	120.0	675.77	0.4793	0.02	J-70	J-78(FH)
P-191	1,043	8	Ductile Iron	90.0	941.74	6.0109	33.68	J-77	J-79(F-FH)
P-192	89	8	Ductile Iron	120.0	846.14	5.4007	1.38	J-78(FH)	J-77
P-193	701	24	Ductile Iron	110.0	421.06	0.2986	0.02	J-117	J-81(FH)
P-194	423	12	Ductile Iron	110.0	421.06	1.1944	0.29	J-81(FH)	J-118
P-195	1,375	8	Ductile Iron	110.0	421.06	2.6875	6.90	J-118	J-119
P-196	35	8	Ductile Iron	110.0	421.06	2.6875	0.18	J-119	J-79(F-FH)
P-199	448	12	Ductile Iron	110.0	1,537.72	4.3622	3.43	J-84	J-120
P-200	595	12	Ductile Iron	110.0	1,350.22	3.8303	3.58	J-120	J-83
P-201	13	16	Ductile Iron	120.0	2,654.38	4.2356	0.06	J-33	GPV-6
P-202	11	16	Ductile Iron	120.0	2,654.38	4.2356	0.05	GPV-6	J-96
P-205	21	16	Ductile Iron	120.0	2,654.38	4.2356	0.09	J-96	J-109
P-207	7	16	Ductile Iron	120.0	1,641.77	2.6198	0.01	J-42(FH)	J-53
P-208	97	16	Ductile Iron	120.0	2,654.38	4.2356	0.43	J-109	J-43
P-209	124	16	Ductile Iron	120.0	2,475.10	3.9495	0.48	J-43	J-42(FH)
P-210	178	16	Ductile Iron	120.0	1,615.52	2.5779	0.31	J-53	J-44
P-212	200	8	Ductile Iron	120.0	833.33	5.3190	3.02	J-44	J-44(FH)
P-213	100	16	Ductile Iron	120.0	782.19	1.2481	0.05	J-44	J-121
P-215	193	8	Ductile Iron	120.0	26.19	0.1672	0.00	J-121	J-58 (F-FH)
P-216	19	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-122(FH)
P-217	22	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-121	J-123(FH)
P-218	143	16	Ductile Iron	120.0	426.60	0.6807	0.02	J-121	J-124
P-220	169	16	Ductile Iron	120.0	376.11	0.6002	0.02	J-124	J-125
P-221	115	8	Ductile Iron	120.0	13.50	0.0862	0.00	J-125	J-54 (F-FH)
P-222	21	8	Ductile Iron	120.0	50.49	0.3223	0.00	J-124	J-126
P-223	142	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-126	J-127(FH)
P-224	174	8	Ductile Iron	120.0	34.56	0.2206	0.01	J-126	J-55 (F-FH)
P-225	295	16	Ductile Iron	120.0	362.61	0.5786	0.03	J-125	J-59 (F-FH)
P-226	221	16	Ductile Iron	120.0	199.53	0.3184	0.01	J-59 (F-FH)	J-128
P-227	222	8	Ductile Iron	120.0	18.76	0.1198	0.00	J-128	J-129(FH)
P-228	169	16	Ductile Iron	120.0	180.77	0.2884	0.01	J-128	J-130
P-229	231	8	Ductile Iron	120.0	52.65	0.3361	0.02	J-130	J-56 (F-FH)
P-230	116	16	Ductile Iron	120.0	128.12	0.2044	0.00	J-130	J-131
P-231	65	8	Ductile Iron	120.0	72.90	0.4653	0.01	J-131	J-60 (F-FH)
P-232	211	16	Ductile Iron	120.0	55.22	0.0881	0.00	J-131	J-132
P-233	246	8	Ductile Iron	120.0	18.76	0.1198	0.00	J-132	J-57 (F-FH)
P-234	34	16	Ductile Iron	120.0	36.45	0.0582	0.00	J-132	J-133
P-235	88	8	Ductile Iron	120.0	36.45	0.2327	0.00	J-133	J-134(FH)
P-236	151	16	Ductile Iron	120.0	0.00	0.0000	0.00	J-133	J-135(FH)

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Full Build-out – PHD + Sprinkler + ISO @ Block 18
(Phase 3)

Scenario: Full Build-out - PHD + ISO @ Block 18 (Phase 3)
Current Time Step: 0.000Hr
FlexTable: Junction Table

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	37.00	0.00	180.60	62.1
J-1A(FH)	37.00	0.00	180.66	62.2
J-2 (FH)	45.00	0.00	179.44	58.2
J-3	46.00	58.05	179.13	57.6
J-4	47.00	0.00	178.53	56.9
J-5 (FH)	47.00	0.00	178.53	56.9
J-6	48.00	45.09	178.52	56.5
J-7	48.00	0.00	177.94	56.2
J-8	49.00	0.00	177.94	55.8
J-9	49.00	0.00	177.94	55.8
J-10	49.00	0.00	177.94	55.8
J-11 (FH)	49.00	0.00	177.94	55.8
J-12	49.00	0.00	177.94	55.8
J-13	48.00	2.97	177.94	56.2
J-14 (FH)	48.00	0.00	177.94	56.2
J-15 (FH)	46.00	0.00	177.94	57.1
J-16	48.00	0.00	177.66	56.1
J-17	47.00	1.62	177.66	56.5
J-18 (FH)	48.00	0.00	177.66	56.1
J-19 (FH)	48.00	53.46	177.66	56.1
J-20	48.00	0.00	177.37	56.0
J-21 (FH)	48.00	0.00	177.37	56.0
J-22	49.00	2.16	177.00	55.4
J-23	49.00	0.00	176.69	55.2
J-24 (FH)	49.00	0.00	176.69	55.2
J-25	49.00	0.00	176.57	55.2
J-26	49.00	36.72	176.56	55.2
J-27	49.00	0.00	176.54	55.2
J-28 (FH)	49.00	0.00	176.54	55.2
J-29	49.00	0.00	176.17	55.0
J-30	48.00	0.00	175.81	55.3
J-31 (FH)	48.00	0.00	175.81	55.3
J-32	48.00	0.00	175.71	55.3
J-33	48.00	0.00	175.62	55.2
J-34 (FH)	48.00	0.00	175.62	55.2
J-35 (FH)	49.00	0.00	175.86	54.9
J-36	49.00	0.00	175.92	54.9
J-37	49.00	14.31	175.92	54.9
J-37(FH)	47.00	0.00	175.92	55.8
J-38	49.00	5.94	176.08	55.0
J-39	50.00	62.37	176.30	54.6
J-39 (FH)	49.00	0.00	176.41	55.1
J-40	45.00	0.00	175.76	56.6
J-41	29.00	0.00	175.76	63.5
J-42	28.00	0.00	175.76	63.9
J-42(FH)	27.00	31.86	162.85	58.8
J-43	27.00	0.00	163.42	59.0
J-44	28.00	0.00	162.04	58.0
J-44(FH)	28.00	(N/A)	(N/A)	(N/A)
J-45	48.00	0.00	175.76	55.3
J-47	25.00	0.00	175.76	65.2
J-47A	25.00	0.00	175.76	65.2
J-48	22.00	0.00	175.76	66.5
J-48(FH)	19.00	0.00	175.76	67.8
J-49	22.00	0.00	175.76	66.5
J-51	18.00	0.00	175.76	68.3
J-51(FH)	19.00	0.00	175.76	67.8

J-52	47.00	0.00	178.16	56.7
J-53	38.00	0.00	162.82	54.0
J-54 (F-FH)	38.00	(N/A)	(N/A)	(N/A)
J-55 (F-FH)	38.00	(N/A)	(N/A)	(N/A)
J-56 (F-FH)	34.00	(N/A)	(N/A)	(N/A)
J-57 (F-FH)	31.00	(N/A)	(N/A)	(N/A)
J-58 (F-FH)	30.00	(N/A)	(N/A)	(N/A)
J-59 (F-FH)	27.00	(N/A)	(N/A)	(N/A)
J-59(FH)	36.00	33.75	180.80	62.6
J-60 (F-FH)	27.00	(N/A)	(N/A)	(N/A)
J-61	37.00	33.75	180.86	62.2
J-61(FH)	38.00	0.00	181.07	61.9
J-62	38.00	0.00	181.37	62.0
J-63	32.00	0.00	182.25	65.0
J-70	27.00	0.00	182.47	67.3
J-74	27.00	0.00	182.49	67.3
J-75	23.00	0.00	185.00	70.1
J-76(FH)	24.00	0.00	185.00	69.7
J-77	22.00	0.00	183.04	69.7
J-78(FH)	22.00	0.00	182.48	69.4
J-79(F-FH)	23.00	0.00	196.51	75.1
J-80(FH)	32.00	0.00	192.75	69.5
J-81(FH)	83.00	0.00	199.45	50.4
J-83	46.00	0.00	198.39	65.9
J-84	31.00	0.00	200.37	73.3
J-85	33.00	440.00	192.73	69.1
J-86(FH)	40.00	0.00	181.96	61.4
J-89	24.00	0.00	186.02	70.1
J-96	48.00	0.00	166.68	51.3
J-106(FH)	36.00	0.00	182.36	63.3
J-107(FH)	36.00	0.00	182.15	63.2
J-109	47.00	0.00	163.86	50.6
J-112(FH)	28.00	(N/A)	(N/A)	(N/A)
J-113(FH)	45.00	26.24	162.82	51.0
J-117	52.00	0.00	199.46	63.8
J-118	37.00	0.00	199.34	70.2
J-119	13.00	0.00	196.58	79.4
J-120	37.45	187.50	199.28	70.0
J-121	30.44	150.12	161.82	56.8
J-122(FH)	0.00	833.33	161.75	70.0
J-123(FH)	0.00	833.33	161.49	69.9
J-124	33.74	0.00	161.74	55.4
J-125	37.52	(N/A)	(N/A)	(N/A)
J-126	0.00	0.00	161.43	69.8
J-127(FH)	0.00	833.33	159.28	68.9
J-128	0.00	(N/A)	(N/A)	(N/A)
J-129(FH)	0.00	(N/A)	(N/A)	(N/A)
J-130	0.00	(N/A)	(N/A)	(N/A)
J-131	0.00	(N/A)	(N/A)	(N/A)
J-132	0.00	(N/A)	(N/A)	(N/A)
J-133	0.00	(N/A)	(N/A)	(N/A)
J-134(FH)	0.00	(N/A)	(N/A)	(N/A)
J-135(FH)	0.00	(N/A)	(N/A)	(N/A)

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Scenario: Full Build-out - PHD + ISO @ Block 18 (Phase 3)
Current Time Step: 0.000Hr
FlexTable: Pipe Table

Label	Length (Scaled) (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (Absolute) (gpm)	Velocity (ft/s)	Headloss (ft)	Start Node	Stop Node
P-1	297	16	Ductile Iron	110.0	2,484.20	3.9640	1.36	J-1	J-86(FH)
P-1A	1,046	8	Ductile Iron	90.0	638.13	4.0730	16.43	J-83	J-86(FH)
P-2	211	16	Ductile Iron	120.0	2,990.92	4.7726	1.16	J-1	J-2 (FH)
P-3	56	16	Ductile Iron	120.0	2,990.92	4.7726	0.31	J-2 (FH)	J-3
P-4	112	16	Ductile Iron	120.0	2,932.87	4.6800	0.59	J-3	J-4
P-5	40	8	Ductile Iron	120.0	45.09	0.2878	0.00	J-4	J-5 (FH)
P-6	76	8	Ductile Iron	120.0	45.09	0.2878	0.01	J-5 (FH)	J-6
P-8	149	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-7	J-8
P-9	31	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-8	J-9
P-10	77	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-9	J-10
P-11	91	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-10	J-11 (FH)
P-12	16	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-9	J-12
P-13	120	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-12	J-13
P-14	25	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-13	J-14 (FH)
P-15	49	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-12	J-15 (FH)
P-16	55	16	Ductile Iron	120.0	2,884.81	4.6033	0.28	J-7	J-16
P-17	70	12	Ductile Iron	120.0	55.08	0.1563	0.00	J-16	J-17
P-18	82	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-17	J-18 (FH)
P-19	56	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-18 (FH)	J-19 (FH)
P-20	58	16	Ductile Iron	120.0	2,829.73	4.5154	0.29	J-16	J-20
P-21	30	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-20	J-21 (FH)
P-22	75	16	Ductile Iron	120.0	2,829.73	4.5154	0.37	J-20	J-22
P-23	63	16	Ductile Iron	120.0	2,827.57	4.5119	0.31	J-22	J-23
P-24	40	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-23	J-24 (FH)
P-25	30	16	Ductile Iron	120.0	2,520.67	4.0222	0.12	J-23	J-25
P-26	46	8	Ductile Iron	120.0	36.72	0.2344	0.00	J-25	J-26
P-27	8	16	Ductile Iron	120.0	2,483.95	3.9636	0.03	J-25	J-27
P-28	29	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-27	J-28 (FH)
P-29	93	16	Ductile Iron	120.0	2,483.95	3.9636	0.36	J-27	J-29
P-30	93	16	Ductile Iron	120.0	2,483.95	3.9636	0.36	J-29	J-30
P-31	32	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-30	J-31 (FH)
P-32	12	16	Ductile Iron	120.0	2,483.95	3.9636	0.05	J-30	J-45
P-33	14	16	Ductile Iron	120.0	2,483.95	3.9636	0.05	J-45	J-32
P-33A	20	16	Ductile Iron	120.0	2,708.22	4.3215	0.09	J-33	J-32
P-34	23	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-33	J-34 (FH)
P-35	118	8	Ductile Iron	120.0	224.27	1.4315	0.16	J-32	J-35 (FH)
P-36	42	8	Ductile Iron	120.0	224.27	1.4315	0.06	J-35 (FH)	J-36
P-37	50	8	Ductile Iron	120.0	14.31	0.0913	0.00	J-36	J-37
P-37A	43	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-37	J-37(FH)
P-38	110	8	Ductile Iron	120.0	238.58	1.5228	0.16	J-36	J-38
P-39	138	8	Ductile Iron	120.0	244.52	1.5607	0.22	J-38	J-39
P-39A	48	8	Ductile Iron	120.0	306.89	1.9588	0.11	J-39	J-39 (FH)
P-40	115	8	Ductile Iron	120.0	306.89	1.9588	0.27	J-39 (FH)	J-23
P-41	159	12	Ductile Iron	120.0	0.00	0.0000	0.00	J-45	J-40
P-42	93	12	Ductile Iron	120.0	0.00	0.0000	0.00	J-40	J-42
P-47	34	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-48(FH)
P-48	158	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-41	J-47
P-48A	79	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-41	J-42
P-49	204	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-47	J-48
P-49A	32	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-47A	J-47
P-50	16	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-49
P-52	335	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-49	J-51
P-52A	18	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-51	J-51(FH)
P-53	72	16	Ductile Iron	120.0	2,887.78	4.6080	0.37	J-4	J-52
P-54	42	16	Ductile Iron	120.0	2,887.78	4.6080	0.22	J-52	J-7
P-69A	60	12	Ductile Iron	110.0	506.72	1.4374	0.06	J-1	J-1A(FH)
P-69B	149	12	Ductile Iron	110.0	506.72	1.4374	0.15	J-1A(FH)	J-59(FH)
P-72	55	12	Ductile Iron	110.0	540.47	1.5332	0.06	J-59(FH)	J-61
P-73A	168	12	Ductile Iron	110.0	574.22	1.6289	0.21	J-61	J-61(FH)
P-73B	242	12	Ductile Iron	110.0	574.22	1.6289	0.30	J-61(FH)	J-62
P-74	99	8	Ductile Iron	110.0	574.22	3.6651	0.88	J-62	J-63
P-86	104	8	Ductile Iron	110.0	58.43	0.3730	0.01	J-74	J-70

P-86A	235	12	Ductile Iron	110.0	1,846.13	5.2371	2.53	J-70	J-75
P-87	21	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-75	J-76(FH)
P-88	721	6	Ductile Iron	90.0	58.43	0.6631	0.55	J-74	J-77
P-92	95	12	Ductile Iron	110.0	1,846.13	5.2371	1.02	J-75	J-89
P-92A	626	12	Ductile Iron	110.0	1,846.13	5.2371	6.73	J-89	J-80(FH)
P-93	477	12	Ductile Iron	110.0	2,286.13	6.4853	7.62	J-80(FH)	J-84
P-95	33	12	Ductile Iron	110.0	440.00	1.2482	0.02	J-80(FH)	J-85
P-159	172	24	Ductile Iron	110.0	2,420.29	1.7165	0.10	J-63	J-106(FH)
P-160	195	24	Ductile Iron	110.0	2,420.29	1.7165	0.12	J-106(FH)	J-70
P-161	526	24	Ductile Iron	110.0	1,846.07	1.3092	0.19	J-86(FH)	J-107(FH)
P-162	269	24	Ductile Iron	110.0	1,846.07	1.3092	0.10	J-107(FH)	J-63
P-172	227	8	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-53	J-112(FH)
P-173	211	8	Ductile Iron	120.0	26.24	0.1675	0.01	J-53	J-113(FH)
P-188	2,981	16	Ductile Iron	110.0	574.16	0.9162	0.91	J-84	J-117
P-189	685	8	Ductile Iron	90.0	317.45	2.0262	2.95	J-117	J-79(F-FH)
P-190	326	24	Ductile Iron	120.0	515.73	0.3658	0.01	J-70	J-78(FH)
P-191	1,043	8	Ductile Iron	90.0	574.16	3.6647	13.47	J-77	J-79(F-FH)
P-192	89	8	Ductile Iron	120.0	515.73	3.2918	0.55	J-78(FH)	J-77
P-193	701	24	Ductile Iron	110.0	256.71	0.1821	0.01	J-117	J-81(FH)
P-194	423	12	Ductile Iron	110.0	256.71	0.7282	0.12	J-81(FH)	J-118
P-195	1,375	8	Ductile Iron	110.0	256.71	1.6385	2.76	J-118	J-119
P-196	35	8	Ductile Iron	110.0	256.71	1.6385	0.07	J-119	J-79(F-FH)
P-199	448	12	Ductile Iron	110.0	825.63	2.3421	1.09	J-84	J-120
P-200	595	12	Ductile Iron	110.0	638.13	1.8102	0.89	J-120	J-83
P-201	13	16	Ductile Iron	120.0	2,708.22	4.3215	0.06	J-33	GPV-6
P-202	11	16	Ductile Iron	120.0	2,708.22	4.3215	0.05	GPV-6	J-96
P-205	21	8	Ductile Iron	120.0	2,708.22	17.2860	2.82	J-96	J-109
P-207	7	16	Ductile Iron	120.0	2,676.36	4.2707	0.03	J-42(FH)	J-53
P-208	97	16	Ductile Iron	120.0	2,708.22	4.3215	0.44	J-109	J-43
P-209	124	16	Ductile Iron	120.0	2,708.22	4.3215	0.57	J-43	J-42(FH)
P-210	178	16	Ductile Iron	120.0	2,650.12	4.2288	0.78	J-53	J-44
P-212	200	8	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-44	J-44(FH)
P-213	100	16	Ductile Iron	120.0	1,816.79	2.8990	0.22	J-44	J-121
P-215	193	8	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-121	J-58 (F-FH)
P-216	19	8	Ductile Iron	120.0	833.33	5.3190	0.29	J-44	J-122(FH)
P-217	22	8	Ductile Iron	120.0	833.33	5.3190	0.33	J-121	J-123(FH)
P-218	143	16	Ductile Iron	120.0	833.33	1.3297	0.07	J-121	J-124
P-220	169	16	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-124	J-125
P-221	115	8	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-125	J-54 (F-FH)
P-222	21	8	Ductile Iron	120.0	833.33	5.3190	0.32	J-124	J-126
P-223	142	8	Ductile Iron	120.0	833.33	5.3190	2.15	J-126	J-127(FH)
P-224	174	8	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-126	J-55 (F-FH)
P-225	295	16	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-125	J-59 (F-FH)
P-226	221	16	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-59 (F-FH)	J-128
P-227	222	8	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-128	J-129(FH)
P-228	169	16	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-128	J-130
P-229	231	8	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-130	J-56 (F-FH)
P-230	116	16	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-130	J-131
P-231	65	8	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-131	J-60 (F-FH)
P-232	211	16	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-131	J-132
P-233	246	8	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-132	J-57 (F-FH)
P-234	34	16	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-132	J-133
P-235	88	8	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-133	J-134(FH)
P-236	151	16	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-133	J-135(FH)

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Full Build-out – PHD + Sprinkler + ISO @ Block 19
(future phase)

Scenario: Full Build-out - PHD + ISO @ 19 (Future)
Current Time Step: 0.000Hr
FlexTable: Junction Table

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	37.00	295.38	130.52	40.5
J-1A(FH)	37.00	0.00	130.57	40.5
J-2 (FH)	45.00	0.00	128.76	36.2
J-3	46.00	123.39	128.29	35.6
J-4	47.00	0.00	127.41	34.8
J-5 (FH)	47.00	0.00	127.41	34.8
J-6	48.00	45.09	127.41	34.4
J-7	48.00	0.00	126.54	34.0
J-8	49.00	3.78	126.54	33.5
J-9	49.00	0.00	126.54	33.5
J-10	49.00	3.78	126.54	33.5
J-11 (FH)	49.00	0.00	126.54	33.5
J-12	49.00	0.00	126.54	33.5
J-13	48.00	2.97	126.54	34.0
J-14 (FH)	48.00	0.00	126.54	34.0
J-15 (FH)	46.00	0.00	126.54	34.8
J-16	48.00	0.00	126.12	33.8
J-17	47.00	1.62	126.12	34.2
J-18 (FH)	48.00	0.00	126.12	33.8
J-19 (FH)	48.00	53.46	126.12	33.8
J-20	48.00	0.00	125.70	33.6
J-21 (FH)	48.00	0.00	125.70	33.6
J-22	49.00	5.13	125.14	32.9
J-23	49.00	0.00	124.68	32.7
J-24 (FH)	49.00	0.00	124.68	32.7
J-25	49.00	0.00	124.50	32.7
J-26	49.00	36.72	124.50	32.7
J-27	49.00	0.00	124.45	32.6
J-28 (FH)	49.00	0.00	124.45	32.6
J-29	49.00	5.94	123.91	32.4
J-30	48.00	0.00	123.36	32.6
J-31 (FH)	48.00	0.00	123.36	32.6
J-32	48.00	0.00	123.21	32.5
J-33	48.00	0.00	123.08	32.5
J-34 (FH)	48.00	0.00	123.08	32.5
J-35 (FH)	49.00	0.00	123.46	32.2
J-36	49.00	0.00	123.55	32.3
J-37	49.00	14.31	123.55	32.3
J-37(FH)	47.00	0.00	123.55	33.1
J-38	49.00	5.94	123.80	32.4
J-39	50.00	62.37	124.13	32.1
J-39 (FH)	49.00	0.00	124.29	32.6
J-40	45.00	0.00	123.29	33.9
J-41	29.00	40.50	123.28	40.8
J-42	28.00	0.00	123.29	41.2
J-42(FH)	27.00	0.00	106.80	34.5
J-43	27.00	179.28	107.55	34.8
J-44	28.00	0.00	105.70	33.6
J-44(FH)	28.00	0.00	105.70	33.6
J-45	48.00	0.00	123.29	32.6
J-47	25.00	0.00	123.28	42.5
J-47A	25.00	9.45	123.28	42.5
J-48	22.00	0.00	123.28	43.8
J-48(FH)	19.00	0.00	123.28	45.1
J-49	22.00	0.00	123.28	43.8
J-51	18.00	0.00	123.28	45.6
J-51(FH)	19.00	0.00	123.28	45.1

J-52	47.00	1.62	126.86	34.6
J-53	38.00	0.00	106.76	29.7
J-54 (F-FH)	38.00	874.64	102.60	28.0
J-55 (F-FH)	38.00	867.89	101.50	27.5
J-56 (F-FH)	34.00	52.65	104.44	30.5
J-57 (F-FH)	31.00	18.76	104.45	31.8
J-58 (F-FH)	30.00	847.72	102.09	31.2
J-59 (F-FH)	27.00	163.08	104.47	33.5
J-59(FH)	36.00	33.75	130.72	41.0
J-60 (F-FH)	27.00	72.90	104.45	33.5
J-61	37.00	253.80	130.78	40.6
J-61(FH)	38.00	0.00	131.16	40.3
J-62	38.00	55.35	131.71	40.5
J-63	32.00	276.48	133.54	43.9
J-70	27.00	102.60	133.95	46.3
J-74	27.00	0.00	133.98	46.3
J-75	23.00	282.42	139.21	50.3
J-76(FH)	24.00	0.00	139.21	49.8
J-77	22.00	0.00	135.24	49.0
J-78(FH)	22.00	170.37	133.97	48.4
J-79(F-FH)	23.00	0.00	166.13	61.9
J-80(FH)	32.00	0.00	158.54	54.7
J-81(FH)	83.00	0.00	172.89	38.9
J-83	46.00	0.00	168.52	53.0
J-84	31.00	0.00	174.98	62.3
J-85	33.00	440.00	158.51	54.3
J-86(FH)	40.00	0.00	133.12	40.3
J-89	24.00	0.00	141.75	50.9
J-96	48.00	0.00	108.34	26.1
J-106(FH)	36.00	0.00	133.73	42.3
J-107(FH)	36.00	0.00	133.40	42.1
J-109	47.00	0.00	108.20	26.5
J-112(FH)	28.00	0.00	106.76	34.1
J-113(FH)	45.00	26.24	106.75	26.7
J-117	52.00	0.00	172.90	52.3
J-118	37.00	0.00	172.62	58.7
J-119	13.00	0.00	166.29	66.3
J-120	36.00	187.50	171.81	58.8
J-121	30.44	150.12	105.10	32.3
J-122(FH)	46.00	0.00	105.70	25.8
J-123(FH)	46.00	0.00	105.10	25.6
J-124	33.74	0.00	104.69	30.7
J-125	37.52	0.00	104.50	29.0
J-126	48.00	15.93	104.33	24.4
J-127(FH)	53.00	0.00	104.33	22.2
J-128	28.00	0.00	104.46	33.1
J-129(FH)	52.00	18.76	104.46	22.7
J-130	34.00	0.00	104.46	30.5
J-131	36.00	0.00	104.46	29.6
J-132	34.00	0.00	104.46	30.5
J-133	32.00	0.00	104.46	31.3
J-134(FH)	22.00	36.45	104.45	35.7
J-135(FH)	28.00	0.00	104.46	33.1

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Scenario: Full Build-out - PHD + ISO @ 19 (Future)
Current Time Step: 0.000Hr
FlexTable: Pipe Table

Label	Length (Scaled) (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (Absolute) (gpm)	Velocity (ft/s)	Headloss (ft)	Start Node	Stop Node
P-1	297	16	Ductile Iron	110.0	3,527.27	5.6284	2.61	J-1	J-86(FH)
P-1A	1,046	8	Ductile Iron	120.0	1,287.79	8.2197	35.40	J-83	J-86(FH)
P-2	211	16	Ductile Iron	120.0	3,740.52	5.9687	1.76	J-1	J-2 (FH)
P-3	56	16	Ductile Iron	120.0	3,740.52	5.9687	0.47	J-2 (FH)	J-3
P-4	112	16	Ductile Iron	120.0	3,617.13	5.7718	0.88	J-3	J-4
P-5	40	8	Ductile Iron	120.0	45.09	0.2878	0.00	J-4	J-5 (FH)
P-6	76	8	Ductile Iron	120.0	45.09	0.2878	0.01	J-5 (FH)	J-6
P-8	149	8	Ductile Iron	120.0	10.53	0.0672	0.00	J-7	J-8
P-9	31	8	Ductile Iron	120.0	6.75	0.0431	0.00	J-8	J-9
P-10	77	8	Ductile Iron	120.0	3.78	0.0241	0.00	J-9	J-10
P-11	91	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-10	J-11 (FH)
P-12	16	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-9	J-12
P-13	120	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-12	J-13
P-14	25	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-13	J-14 (FH)
P-15	49	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-12	J-15 (FH)
P-16	55	16	Ductile Iron	120.0	3,559.89	5.6805	0.42	J-7	J-16
P-17	70	12	Ductile Iron	120.0	55.08	0.1563	0.00	J-16	J-17
P-18	82	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-17	J-18 (FH)
P-19	56	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-18 (FH)	J-19 (FH)
P-20	58	16	Ductile Iron	120.0	3,504.81	5.5926	0.43	J-16	J-20
P-21	30	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-20	J-21 (FH)
P-22	75	16	Ductile Iron	120.0	3,504.81	5.5926	0.55	J-20	J-22
P-23	63	16	Ductile Iron	120.0	3,499.68	5.5844	0.46	J-22	J-23
P-24	40	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-23	J-24 (FH)
P-25	30	16	Ductile Iron	120.0	3,130.01	4.9945	0.18	J-23	J-25
P-26	46	8	Ductile Iron	120.0	36.72	0.2344	0.00	J-25	J-26
P-27	8	16	Ductile Iron	120.0	3,093.29	4.9359	0.05	J-25	J-27
P-28	29	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-27	J-28 (FH)
P-29	93	16	Ductile Iron	120.0	3,093.29	4.9359	0.55	J-27	J-29
P-30	93	16	Ductile Iron	120.0	3,087.35	4.9265	0.54	J-29	J-30
P-31	32	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-30	J-31 (FH)
P-32	12	16	Ductile Iron	120.0	3,087.35	4.9265	0.07	J-30	J-45
P-33	14	16	Ductile Iron	120.0	3,037.40	4.8468	0.08	J-45	J-32
P-33A	20	16	Ductile Iron	120.0	3,324.45	5.3048	0.13	J-33	J-32
P-34	23	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-33	J-34 (FH)
P-35	118	8	Ductile Iron	120.0	287.05	1.8322	0.25	J-32	J-35 (FH)
P-36	42	8	Ductile Iron	120.0	287.05	1.8322	0.09	J-35 (FH)	J-36
P-37	50	8	Ductile Iron	120.0	14.31	0.0913	0.00	J-36	J-37
P-37A	43	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-37	J-37(FH)
P-38	110	8	Ductile Iron	120.0	301.36	1.9235	0.25	J-36	J-38
P-39	138	8	Ductile Iron	120.0	307.30	1.9614	0.33	J-38	J-39
P-39A	48	8	Ductile Iron	120.0	369.67	2.3595	0.16	J-39	J-39 (FH)
P-40	115	8	Ductile Iron	120.0	369.67	2.3595	0.39	J-39 (FH)	J-23
P-41	159	12	Ductile Iron	120.0	49.95	0.1417	0.00	J-45	J-40
P-42	93	12	Ductile Iron	120.0	49.95	0.1417	0.00	J-40	J-42
P-47	34	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-48(FH)
P-48	158	8	Ductile Iron	120.0	9.45	0.0603	0.00	J-41	J-47
P-48A	79	8	Ductile Iron	120.0	49.95	0.3188	0.01	J-41	J-42
P-49	204	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-47	J-48
P-49A	32	6	Ductile Iron	120.0	9.45	0.1072	0.00	J-47A	J-47
P-50	16	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-49
P-52	335	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-49	J-51
P-52A	18	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-51	J-51(FH)
P-53	72	16	Ductile Iron	120.0	3,572.04	5.6999	0.55	J-4	J-52
P-54	42	16	Ductile Iron	120.0	3,570.42	5.6973	0.32	J-52	J-7
P-69A	60	12	Ductile Iron	110.0	508.63	1.4429	0.06	J-1	J-1A(FH)
P-69B	149	12	Ductile Iron	110.0	508.63	1.4429	0.15	J-1A(FH)	J-59(FH)
P-72	55	12	Ductile Iron	110.0	542.38	1.5386	0.06	J-59(FH)	J-61
P-73A	168	12	Ductile Iron	110.0	796.18	2.2586	0.38	J-61	J-61(FH)
P-73B	242	12	Ductile Iron	110.0	796.18	2.2586	0.55	J-61(FH)	J-62
P-74	99	8	Ductile Iron	110.0	851.53	5.4351	1.83	J-62	J-63

P-86	104	8	Ductile Iron	110.0	91.22	0.5823	0.03	J-74	J-70
P-86A	235	12	Ductile Iron	110.0	2,741.62	7.7774	5.25	J-70	J-75
P-87	21	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-75	J-76(FH)
P-88	721	6	Ductile Iron	90.0	91.22	1.0351	1.25	J-74	J-77
P-92	95	12	Ductile Iron	110.0	3,024.04	8.5786	2.55	J-75	J-89
P-92A	626	12	Ductile Iron	110.0	3,024.04	8.5786	16.78	J-89	J-80(FH)
P-93	477	12	Ductile Iron	110.0	3,464.04	9.8268	16.45	J-80(FH)	J-84
P-95	33	12	Ductile Iron	110.0	440.00	1.2482	0.02	J-80(FH)	J-85
P-159	172	24	Ductile Iron	110.0	3,367.49	2.3882	0.19	J-63	J-106(FH)
P-160	195	24	Ductile Iron	110.0	3,367.49	2.3882	0.22	J-106(FH)	J-70
P-161	526	24	Ductile Iron	110.0	2,239.48	1.5882	0.28	J-86(FH)	J-107(FH)
P-162	269	24	Ductile Iron	110.0	2,239.48	1.5882	0.14	J-107(FH)	J-63
P-172	227	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-53	J-112(FH)
P-173	211	8	Ductile Iron	120.0	26.24	0.1675	0.01	J-53	J-113(FH)
P-188	2,981	16	Ductile Iron	110.0	898.83	1.4343	2.08	J-84	J-117
P-189	685	8	Ductile Iron	90.0	496.96	3.1720	6.77	J-117	J-79(F-FH)
P-190	326	24	Ductile Iron	120.0	637.24	0.4519	0.01	J-70	J-78(FH)
P-191	1,043	8	Ductile Iron	90.0	898.83	5.7371	30.90	J-77	J-79(F-FH)
P-192	89	8	Ductile Iron	120.0	807.61	5.1548	1.27	J-78(FH)	J-77
P-193	701	24	Ductile Iron	110.0	401.87	0.2850	0.02	J-117	J-81(FH)
P-194	423	12	Ductile Iron	110.0	401.87	1.1400	0.27	J-81(FH)	J-118
P-195	1,375	8	Ductile Iron	110.0	401.87	2.5651	6.33	J-118	J-119
P-196	35	8	Ductile Iron	110.0	401.87	2.5651	0.16	J-119	J-79(F-FH)
P-199	448	12	Ductile Iron	110.0	1,475.29	4.1851	3.18	J-84	J-120
P-200	595	12	Ductile Iron	110.0	1,287.79	3.6532	3.28	J-120	J-83
P-201	13	16	Ductile Iron	120.0	3,324.45	5.3048	0.09	J-33	GPV-6
P-202	11	16	Ductile Iron	120.0	3,324.45	5.3048	0.07	GPV-6	J-96
P-205	21	16	Ductile Iron	120.0	3,324.45	5.3048	0.14	J-96	J-109
P-207	7	16	Ductile Iron	120.0	3,145.17	5.0187	0.04	J-42(FH)	J-53
P-208	97	16	Ductile Iron	120.0	3,324.45	5.3048	0.65	J-109	J-43
P-209	124	16	Ductile Iron	120.0	3,145.17	5.0187	0.75	J-43	J-42(FH)
P-210	178	16	Ductile Iron	120.0	3,118.92	4.9768	1.06	J-53	J-44
P-212	200	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-44(FH)
P-213	100	16	Ductile Iron	120.0	3,118.92	4.9768	0.60	J-44	J-121
P-215	193	8	Ductile Iron	120.0	847.72	5.4108	3.01	J-121	J-58 (F-FH)
P-216	19	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-122(FH)
P-217	22	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-121	J-123(FH)
P-218	143	16	Ductile Iron	120.0	2,121.08	3.3846	0.42	J-121	J-124
P-220	169	16	Ductile Iron	120.0	1,237.25	1.9743	0.18	J-124	J-125
P-221	115	8	Ductile Iron	120.0	874.64	5.5827	1.90	J-125	J-54 (F-FH)
P-222	21	8	Ductile Iron	120.0	883.82	5.6412	0.35	J-124	J-126
P-223	142	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-126	J-127(FH)
P-224	174	8	Ductile Iron	120.0	867.89	5.5396	2.84	J-126	J-55 (F-FH)
P-225	295	16	Ductile Iron	120.0	362.61	0.5786	0.03	J-125	J-59 (F-FH)
P-226	221	16	Ductile Iron	120.0	199.53	0.3184	0.01	J-59 (F-FH)	J-128
P-227	222	8	Ductile Iron	120.0	18.76	0.1198	0.00	J-128	J-129(FH)
P-228	169	16	Ductile Iron	120.0	180.77	0.2884	0.01	J-128	J-130
P-229	231	8	Ductile Iron	120.0	52.65	0.3361	0.02	J-130	J-56 (F-FH)
P-230	116	16	Ductile Iron	120.0	128.12	0.2044	0.00	J-130	J-131
P-231	65	8	Ductile Iron	120.0	72.90	0.4653	0.01	J-131	J-60 (F-FH)
P-232	211	16	Ductile Iron	120.0	55.22	0.0881	0.00	J-131	J-132
P-233	246	8	Ductile Iron	120.0	18.76	0.1198	0.00	J-132	J-57 (F-FH)
P-234	34	16	Ductile Iron	120.0	36.45	0.0582	0.00	J-132	J-133
P-235	88	8	Ductile Iron	120.0	36.45	0.2327	0.00	J-133	J-134(FH)
P-236	151	16	Ductile Iron	120.0	0.00	0.0000	0.00	J-133	J-135(FH)

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Full Build-out – PHD + Sprinkler + ISO @ Block 20
(future phase)

Scenario: Full Build-out - PHD + ISO @ 20 (Future Phase)
Current Time Step: 0.000Hr
FlexTable: Junction Table

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	37.00	295.38	130.16	40.3
J-1A(FH)	37.00	0.00	130.22	40.3
J-2 (FH)	45.00	0.00	128.40	36.1
J-3	46.00	123.39	127.93	35.4
J-4	47.00	0.00	127.04	34.6
J-5 (FH)	47.00	0.00	127.04	34.6
J-6	48.00	45.09	127.04	34.2
J-7	48.00	0.00	126.17	33.8
J-8	49.00	3.78	126.17	33.4
J-9	49.00	0.00	126.17	33.4
J-10	49.00	3.78	126.17	33.4
J-11 (FH)	49.00	0.00	126.17	33.4
J-12	49.00	0.00	126.17	33.4
J-13	48.00	2.97	126.17	33.8
J-14 (FH)	48.00	0.00	126.17	33.8
J-15 (FH)	46.00	0.00	126.17	34.7
J-16	48.00	0.00	125.75	33.6
J-17	47.00	1.62	125.75	34.1
J-18 (FH)	48.00	0.00	125.74	33.6
J-19 (FH)	48.00	53.46	125.74	33.6
J-20	48.00	0.00	125.32	33.5
J-21 (FH)	48.00	0.00	125.32	33.5
J-22	49.00	5.13	124.76	32.8
J-23	49.00	0.00	124.29	32.6
J-24 (FH)	49.00	0.00	124.29	32.6
J-25	49.00	0.00	124.11	32.5
J-26	49.00	36.72	124.11	32.5
J-27	49.00	0.00	124.06	32.5
J-28 (FH)	49.00	0.00	124.06	32.5
J-29	49.00	5.94	123.51	32.2
J-30	48.00	0.00	122.97	32.4
J-31 (FH)	48.00	0.00	122.97	32.4
J-32	48.00	0.00	122.82	32.4
J-33	48.00	0.00	122.68	32.3
J-34 (FH)	48.00	0.00	122.68	32.3
J-35 (FH)	49.00	0.00	123.07	32.0
J-36	49.00	0.00	123.16	32.1
J-37	49.00	14.31	123.16	32.1
J-37(FH)	47.00	0.00	123.16	32.9
J-38	49.00	5.94	123.41	32.2
J-39	50.00	62.37	123.74	31.9
J-39 (FH)	49.00	0.00	123.90	32.4
J-40	45.00	0.00	122.90	33.7
J-41	29.00	40.50	122.89	40.6
J-42	28.00	0.00	122.89	41.1
J-42(FH)	27.00	0.00	106.32	34.3
J-43	27.00	179.28	107.08	34.6
J-44	28.00	0.00	105.21	33.4
J-44(FH)	28.00	0.00	105.21	33.4
J-45	48.00	0.00	122.90	32.4
J-47	25.00	0.00	122.89	42.4
J-47A	25.00	9.45	122.89	42.4
J-48	22.00	0.00	122.89	43.6
J-48(FH)	19.00	0.00	122.89	44.9
J-49	22.00	0.00	122.89	43.6
J-51	18.00	0.00	122.89	45.4
J-51(FH)	19.00	0.00	122.89	44.9

J-52	47.00	1.62	126.49	34.4
J-53	38.00	0.00	106.28	29.5
J-54 (F-FH)	38.00	41.31	103.37	28.3
J-55 (F-FH)	38.00	867.89	100.66	27.1
J-56 (F-FH)	34.00	52.65	102.39	29.6
J-57 (F-FH)	31.00	18.76	102.40	30.9
J-58 (F-FH)	30.00	26.19	104.61	32.3
J-59 (F-FH)	27.00	996.41	102.58	32.7
J-59(FH)	36.00	33.75	130.37	40.8
J-60 (F-FH)	27.00	72.90	102.39	32.6
J-61	37.00	253.80	130.43	40.4
J-61(FH)	38.00	0.00	130.82	40.2
J-62	38.00	55.35	131.37	40.4
J-63	32.00	276.48	133.21	43.8
J-70	27.00	102.60	133.62	46.1
J-74	27.00	0.00	133.65	46.1
J-75	23.00	282.42	138.90	50.1
J-76(FH)	24.00	0.00	138.90	49.7
J-77	22.00	0.00	134.91	48.8
J-78(FH)	22.00	170.37	133.63	48.3
J-79(F-FH)	23.00	0.00	165.93	61.8
J-80(FH)	32.00	0.00	158.31	54.6
J-81(FH)	83.00	0.00	172.71	38.8
J-83	46.00	0.00	168.33	52.9
J-84	31.00	0.00	174.82	62.2
J-85	33.00	440.00	158.29	54.2
J-86(FH)	40.00	0.00	132.79	40.1
J-89	24.00	0.00	141.45	50.8
J-96	48.00	0.00	107.87	25.9
J-106(FH)	36.00	0.00	133.40	42.1
J-107(FH)	36.00	0.00	133.06	42.0
J-109	47.00	0.00	107.73	26.3
J-112(FH)	28.00	0.00	106.28	33.9
J-113(FH)	45.00	26.24	106.28	26.5
J-117	52.00	0.00	172.73	52.2
J-118	37.00	0.00	172.44	58.6
J-119	13.00	0.00	166.09	66.2
J-120	36.00	187.50	171.63	58.7
J-121	30.44	150.12	104.61	32.1
J-122(FH)	46.00	0.00	105.21	25.6
J-123(FH)	46.00	0.00	104.61	25.4
J-124	33.74	0.00	103.85	30.3
J-125	37.52	0.00	103.37	28.5
J-126	48.00	15.93	103.49	24.0
J-127(FH)	53.00	0.00	103.49	21.8
J-128	28.00	0.00	102.41	32.2
J-129(FH)	52.00	852.10	98.92	20.3
J-130	34.00	0.00	102.41	29.6
J-131	36.00	0.00	102.41	28.7
J-132	34.00	0.00	102.40	29.6
J-133	32.00	0.00	102.40	30.5
J-134(FH)	22.00	36.45	102.40	34.8
J-135(FH)	28.00	0.00	102.40	32.2

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Scenario: Full Build-out - PHD + ISO @ 20 (Future Phase)
Current Time Step: 0.000Hr
FlexTable: Pipe Table

Label	Length (Scaled) (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (Absolute) (gpm)	Velocity (ft/s)	Headloss (ft)	Start Node	Stop Node
P-1	297	16	Ductile Iron	110.0	3,536.88	5.6438	2.62	J-1	J-86(FH)
P-1A	1,046	8	Ductile Iron	120.0	1,290.68	8.2381	35.55	J-83	J-86(FH)
P-2	211	16	Ductile Iron	120.0	3,752.32	5.9875	1.77	J-1	J-2 (FH)
P-3	56	16	Ductile Iron	120.0	3,752.32	5.9875	0.47	J-2 (FH)	J-3
P-4	112	16	Ductile Iron	120.0	3,628.93	5.7907	0.88	J-3	J-4
P-5	40	8	Ductile Iron	120.0	45.09	0.2878	0.00	J-4	J-5 (FH)
P-6	76	8	Ductile Iron	120.0	45.09	0.2878	0.01	J-5 (FH)	J-6
P-8	149	8	Ductile Iron	120.0	10.53	0.0672	0.00	J-7	J-8
P-9	31	8	Ductile Iron	120.0	6.75	0.0431	0.00	J-8	J-9
P-10	77	8	Ductile Iron	120.0	3.78	0.0241	0.00	J-9	J-10
P-11	91	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-10	J-11 (FH)
P-12	16	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-9	J-12
P-13	120	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-12	J-13
P-14	25	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-13	J-14 (FH)
P-15	49	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-12	J-15 (FH)
P-16	55	16	Ductile Iron	120.0	3,571.69	5.6993	0.42	J-7	J-16
P-17	70	12	Ductile Iron	120.0	55.08	0.1563	0.00	J-16	J-17
P-18	82	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-17	J-18 (FH)
P-19	56	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-18 (FH)	J-19 (FH)
P-20	58	16	Ductile Iron	120.0	3,516.61	5.6114	0.43	J-16	J-20
P-21	30	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-20	J-21 (FH)
P-22	75	16	Ductile Iron	120.0	3,516.61	5.6114	0.56	J-20	J-22
P-23	63	16	Ductile Iron	120.0	3,511.48	5.6032	0.47	J-22	J-23
P-24	40	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-23	J-24 (FH)
P-25	30	16	Ductile Iron	120.0	3,140.69	5.0116	0.18	J-23	J-25
P-26	46	8	Ductile Iron	120.0	36.72	0.2344	0.00	J-25	J-26
P-27	8	16	Ductile Iron	120.0	3,103.97	4.9530	0.05	J-25	J-27
P-28	29	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-27	J-28 (FH)
P-29	93	16	Ductile Iron	120.0	3,103.97	4.9530	0.55	J-27	J-29
P-30	93	16	Ductile Iron	120.0	3,098.03	4.9435	0.55	J-29	J-30
P-31	32	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-30	J-31 (FH)
P-32	12	16	Ductile Iron	120.0	3,098.03	4.9435	0.07	J-30	J-45
P-33	14	16	Ductile Iron	120.0	3,048.08	4.8638	0.08	J-45	J-32
P-33A	20	16	Ductile Iron	120.0	3,336.24	5.3236	0.13	J-33	J-32
P-34	23	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-33	J-34 (FH)
P-35	118	8	Ductile Iron	120.0	288.16	1.8393	0.25	J-32	J-35 (FH)
P-36	42	8	Ductile Iron	120.0	288.16	1.8393	0.09	J-35 (FH)	J-36
P-37	50	8	Ductile Iron	120.0	14.31	0.0913	0.00	J-36	J-37
P-37A	43	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-37	J-37(FH)
P-38	110	8	Ductile Iron	120.0	302.47	1.9306	0.25	J-36	J-38
P-39	138	8	Ductile Iron	120.0	308.41	1.9685	0.33	J-38	J-39
P-39A	48	8	Ductile Iron	120.0	370.78	2.3666	0.16	J-39	J-39 (FH)
P-40	115	8	Ductile Iron	120.0	370.78	2.3666	0.39	J-39 (FH)	J-23
P-41	159	12	Ductile Iron	120.0	49.95	0.1417	0.00	J-45	J-40
P-42	93	12	Ductile Iron	120.0	49.95	0.1417	0.00	J-40	J-42
P-47	34	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-48(FH)
P-48	158	8	Ductile Iron	120.0	9.45	0.0603	0.00	J-41	J-47
P-48A	79	8	Ductile Iron	120.0	49.95	0.3188	0.01	J-41	J-42
P-49	204	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-47	J-48
P-49A	32	6	Ductile Iron	120.0	9.45	0.1072	0.00	J-47A	J-47
P-50	16	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-49
P-52	335	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-49	J-51
P-52A	18	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-51	J-51(FH)
P-53	72	16	Ductile Iron	120.0	3,583.84	5.7187	0.55	J-4	J-52
P-54	42	16	Ductile Iron	120.0	3,582.22	5.7161	0.32	J-52	J-7
P-69A	60	12	Ductile Iron	110.0	510.81	1.4491	0.06	J-1	J-1A(FH)
P-69B	149	12	Ductile Iron	110.0	510.81	1.4491	0.15	J-1A(FH)	J-59(FH)
P-72	55	12	Ductile Iron	110.0	544.56	1.5448	0.06	J-59(FH)	J-61
P-73A	168	12	Ductile Iron	110.0	798.36	2.2648	0.38	J-61	J-61(FH)
P-73B	242	12	Ductile Iron	110.0	798.36	2.2648	0.55	J-61(FH)	J-62
P-74	99	8	Ductile Iron	110.0	853.71	5.4491	1.84	J-62	J-63

P-86	104	8	Ductile Iron	110.0	91.43	0.5835	0.03	J-74	J-70
P-86A	235	12	Ductile Iron	110.0	2,748.55	7.7971	5.28	J-70	J-75
P-87	21	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-75	J-76(FH)
P-88	721	6	Ductile Iron	90.0	91.43	1.0374	1.26	J-74	J-77
P-92	95	12	Ductile Iron	110.0	3,030.97	8.5982	2.56	J-75	J-89
P-92A	626	12	Ductile Iron	110.0	3,030.97	8.5982	16.86	J-89	J-80(FH)
P-93	477	12	Ductile Iron	110.0	3,470.97	9.8464	16.51	J-80(FH)	J-84
P-95	33	12	Ductile Iron	110.0	440.00	1.2482	0.02	J-80(FH)	J-85
P-159	172	24	Ductile Iron	110.0	3,376.40	2.3945	0.19	J-63	J-106(FH)
P-160	195	24	Ductile Iron	110.0	3,376.40	2.3945	0.22	J-106(FH)	J-70
P-161	526	24	Ductile Iron	110.0	2,246.21	1.5930	0.28	J-86(FH)	J-107(FH)
P-162	269	24	Ductile Iron	110.0	2,246.21	1.5930	0.14	J-107(FH)	J-63
P-172	227	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-53	J-112(FH)
P-173	211	8	Ductile Iron	120.0	26.24	0.1675	0.01	J-53	J-113(FH)
P-188	2,981	16	Ductile Iron	110.0	900.82	1.4374	2.09	J-84	J-117
P-189	685	8	Ductile Iron	90.0	498.06	3.1790	6.80	J-117	J-79(F-FH)
P-190	326	24	Ductile Iron	120.0	639.02	0.4532	0.01	J-70	J-78(FH)
P-191	1,043	8	Ductile Iron	90.0	900.82	5.7497	31.02	J-77	J-79(F-FH)
P-192	89	8	Ductile Iron	120.0	809.39	5.1662	1.27	J-78(FH)	J-77
P-193	701	24	Ductile Iron	110.0	402.76	0.2856	0.02	J-117	J-81(FH)
P-194	423	12	Ductile Iron	110.0	402.76	1.1425	0.27	J-81(FH)	J-118
P-195	1,375	8	Ductile Iron	110.0	402.76	2.5707	6.35	J-118	J-119
P-196	35	8	Ductile Iron	110.0	402.76	2.5707	0.16	J-119	J-79(F-FH)
P-199	448	12	Ductile Iron	110.0	1,478.18	4.1933	3.19	J-84	J-120
P-200	595	12	Ductile Iron	110.0	1,290.68	3.6614	3.30	J-120	J-83
P-201	13	16	Ductile Iron	120.0	3,336.24	5.3236	0.09	J-33	GPV-6
P-202	11	16	Ductile Iron	120.0	3,336.24	5.3236	0.07	GPV-6	J-96
P-205	21	16	Ductile Iron	120.0	3,336.24	5.3236	0.14	J-96	J-109
P-207	7	16	Ductile Iron	120.0	3,156.96	5.0375	0.04	J-42(FH)	J-53
P-208	97	16	Ductile Iron	120.0	3,336.24	5.3236	0.65	J-109	J-43
P-209	124	16	Ductile Iron	120.0	3,156.96	5.0375	0.75	J-43	J-42(FH)
P-210	178	16	Ductile Iron	120.0	3,130.72	4.9957	1.07	J-53	J-44
P-212	200	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-44(FH)
P-213	100	16	Ductile Iron	120.0	3,130.72	4.9957	0.60	J-44	J-121
P-215	193	8	Ductile Iron	120.0	26.19	0.1672	0.00	J-121	J-58 (F-FH)
P-216	19	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-122(FH)
P-217	22	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-121	J-123(FH)
P-218	143	16	Ductile Iron	120.0	2,954.41	4.7143	0.77	J-121	J-124
P-220	169	16	Ductile Iron	120.0	2,070.59	3.3040	0.47	J-124	J-125
P-221	115	8	Ductile Iron	120.0	41.31	0.2637	0.01	J-125	J-54 (F-FH)
P-222	21	8	Ductile Iron	120.0	883.82	5.6412	0.35	J-124	J-126
P-223	142	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-126	J-127(FH)
P-224	174	8	Ductile Iron	120.0	867.89	5.5396	2.84	J-126	J-55 (F-FH)
P-225	295	16	Ductile Iron	120.0	2,029.28	3.2381	0.79	J-125	J-59 (F-FH)
P-226	221	16	Ductile Iron	120.0	1,032.86	1.6481	0.17	J-59 (F-FH)	J-128
P-227	222	8	Ductile Iron	120.0	852.10	5.4388	3.50	J-128	J-129(FH)
P-228	169	16	Ductile Iron	120.0	180.77	0.2884	0.01	J-128	J-130
P-229	231	8	Ductile Iron	120.0	52.65	0.3361	0.02	J-130	J-56 (F-FH)
P-230	116	16	Ductile Iron	120.0	128.12	0.2044	0.00	J-130	J-131
P-231	65	8	Ductile Iron	120.0	72.90	0.4653	0.01	J-131	J-60 (F-FH)
P-232	211	16	Ductile Iron	120.0	55.22	0.0881	0.00	J-131	J-132
P-233	246	8	Ductile Iron	120.0	18.76	0.1198	0.00	J-132	J-57 (F-FH)
P-234	34	16	Ductile Iron	120.0	36.45	0.0582	0.00	J-132	J-133
P-235	88	8	Ductile Iron	120.0	36.45	0.2327	0.00	J-133	J-134(FH)
P-236	151	16	Ductile Iron	120.0	0.00	0.0000	0.00	J-133	J-135(FH)

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Full Build-out – PHD + Sprinkler + ISO @ Block 21
(future phase)

Scenario: Full Build-out - PHD + ISO @ 21 (Future Phase)
Current Time Step: 0.000Hr
FlexTable: Junction Table

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	37.00	295.38	131.39	40.8
J-1A(FH)	37.00	0.00	131.45	40.9
J-2 (FH)	45.00	0.00	129.66	36.6
J-3	46.00	123.39	129.20	36.0
J-4	47.00	0.00	128.33	35.2
J-5 (FH)	47.00	0.00	128.33	35.2
J-6	48.00	45.09	128.33	34.8
J-7	48.00	0.00	127.48	34.4
J-8	49.00	3.78	127.48	34.0
J-9	49.00	0.00	127.48	34.0
J-10	49.00	3.78	127.48	34.0
J-11 (FH)	49.00	0.00	127.48	34.0
J-12	49.00	0.00	127.48	34.0
J-13	48.00	2.97	127.48	34.4
J-14 (FH)	48.00	0.00	127.48	34.4
J-15 (FH)	46.00	0.00	127.48	35.3
J-16	48.00	0.00	127.06	34.2
J-17	47.00	1.62	127.06	34.6
J-18 (FH)	48.00	0.00	127.06	34.2
J-19 (FH)	48.00	53.46	127.06	34.2
J-20	48.00	0.00	126.64	34.0
J-21 (FH)	48.00	0.00	126.64	34.0
J-22	49.00	5.13	126.10	33.4
J-23	49.00	0.00	125.64	33.2
J-24 (FH)	49.00	0.00	125.64	33.2
J-25	49.00	0.00	125.46	33.1
J-26	49.00	36.72	125.46	33.1
J-27	49.00	0.00	125.42	33.1
J-28 (FH)	49.00	0.00	125.42	33.1
J-29	49.00	5.94	124.88	32.8
J-30	48.00	0.00	124.35	33.0
J-31 (FH)	48.00	0.00	124.35	33.0
J-32	48.00	0.00	124.20	33.0
J-33	48.00	0.00	124.07	32.9
J-34 (FH)	48.00	0.00	124.07	32.9
J-35 (FH)	49.00	0.00	124.44	32.6
J-36	49.00	0.00	124.53	32.7
J-37	49.00	14.31	124.53	32.7
J-37(FH)	47.00	0.00	124.53	33.5
J-38	49.00	5.94	124.78	32.8
J-39	50.00	62.37	125.10	32.5
J-39 (FH)	49.00	0.00	125.26	33.0
J-40	45.00	0.00	124.28	34.3
J-41	29.00	40.50	124.27	41.2
J-42	28.00	0.00	124.27	41.7
J-42(FH)	27.00	0.00	107.99	35.0
J-43	27.00	179.28	108.72	35.4
J-44	28.00	0.00	106.91	34.1
J-44(FH)	28.00	0.00	106.91	34.1
J-45	48.00	0.00	124.28	33.0
J-47	25.00	0.00	124.27	42.9
J-47A	25.00	9.45	124.27	42.9
J-48	22.00	0.00	124.27	44.2
J-48(FH)	19.00	0.00	124.27	45.5
J-49	22.00	0.00	124.27	44.2
J-51	18.00	0.00	124.27	46.0
J-51(FH)	19.00	0.00	124.27	45.5

J-52	47.00	1.62	127.79	35.0
J-53	38.00	0.00	107.95	30.3
J-54 (F-FH)	38.00	0.00	105.12	29.0
J-55 (F-FH)	38.00	867.89	102.38	27.9
J-56 (F-FH)	34.00	52.65	104.13	30.3
J-57 (F-FH)	31.00	18.76	104.14	31.6
J-58 (F-FH)	30.00	26.19	106.32	33.0
J-59 (F-FH)	27.00	996.41	104.32	33.5
J-59(FH)	36.00	33.75	131.59	41.4
J-60 (F-FH)	27.00	72.90	104.14	33.4
J-61	37.00	253.80	131.65	41.0
J-61(FH)	38.00	0.00	132.03	40.7
J-62	38.00	55.35	132.57	40.9
J-63	32.00	276.48	134.38	44.3
J-70	27.00	102.60	134.78	46.6
J-74	27.00	0.00	134.81	46.6
J-75	23.00	282.42	139.98	50.6
J-76(FH)	24.00	0.00	139.98	50.2
J-77	22.00	0.00	136.05	49.3
J-78(FH)	22.00	170.37	134.80	48.8
J-79(F-FH)	23.00	0.00	166.64	62.1
J-80(FH)	32.00	0.00	159.10	55.0
J-81(FH)	83.00	0.00	173.32	39.1
J-83	46.00	0.00	169.00	53.2
J-84	31.00	0.00	175.40	62.5
J-85	33.00	440.00	159.08	54.5
J-86(FH)	40.00	0.00	133.97	40.7
J-89	24.00	0.00	142.50	51.3
J-96	48.00	0.00	109.50	26.6
J-106(FH)	36.00	0.00	134.57	42.6
J-107(FH)	36.00	0.00	134.24	42.5
J-109	47.00	0.00	109.36	27.0
J-112(FH)	28.00	0.00	107.95	34.6
J-113(FH)	45.00	26.24	107.94	27.2
J-117	52.00	0.00	173.34	52.5
J-118	37.00	0.00	173.06	58.9
J-119	13.00	0.00	166.79	66.5
J-120	36.00	187.50	172.25	58.9
J-121	30.44	150.12	106.32	32.8
J-122(FH)	46.00	0.00	106.91	26.4
J-123(FH)	46.00	0.00	106.32	26.1
J-124	33.74	0.00	105.57	31.1
J-125	37.52	0.00	105.12	29.2
J-126	48.00	15.93	105.22	24.8
J-127(FH)	53.00	0.00	105.22	22.6
J-128	28.00	0.00	104.16	32.9
J-129(FH)	52.00	852.10	100.66	21.1
J-130	34.00	0.00	104.15	30.4
J-131	36.00	0.00	104.15	29.5
J-132	34.00	0.00	104.15	30.3
J-133	32.00	0.00	104.15	31.2
J-134(FH)	22.00	36.45	104.14	35.5
J-135(FH)	28.00	0.00	104.15	32.9

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Scenario: Full Build-out - PHD + ISO @ 21 (Future Phase)
Current Time Step: 0.000Hr
FlexTable: Pipe Table

Label	Length (Scaled) (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (Absolute) (gpm)	Velocity (ft/s)	Headloss (ft)	Start Node	Stop Node
P-1	297	16	Ductile Iron	110.0	3,503.21	5.5901	2.58	J-1	J-86(FH)
P-1A	1,046	8	Ductile Iron	120.0	1,280.58	8.1736	35.03	J-83	J-86(FH)
P-2	211	16	Ductile Iron	120.0	3,711.01	5.9216	1.73	J-1	J-2 (FH)
P-3	56	16	Ductile Iron	120.0	3,711.01	5.9216	0.46	J-2 (FH)	J-3
P-4	112	16	Ductile Iron	120.0	3,587.62	5.7247	0.86	J-3	J-4
P-5	40	8	Ductile Iron	120.0	45.09	0.2878	0.00	J-4	J-5 (FH)
P-6	76	8	Ductile Iron	120.0	45.09	0.2878	0.01	J-5 (FH)	J-6
P-8	149	8	Ductile Iron	120.0	10.53	0.0672	0.00	J-7	J-8
P-9	31	8	Ductile Iron	120.0	6.75	0.0431	0.00	J-8	J-9
P-10	77	8	Ductile Iron	120.0	3.78	0.0241	0.00	J-9	J-10
P-11	91	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-10	J-11 (FH)
P-12	16	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-9	J-12
P-13	120	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-12	J-13
P-14	25	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-13	J-14 (FH)
P-15	49	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-12	J-15 (FH)
P-16	55	16	Ductile Iron	120.0	3,530.38	5.6334	0.41	J-7	J-16
P-17	70	12	Ductile Iron	120.0	55.08	0.1563	0.00	J-16	J-17
P-18	82	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-17	J-18 (FH)
P-19	56	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-18 (FH)	J-19 (FH)
P-20	58	16	Ductile Iron	120.0	3,475.30	5.5455	0.42	J-16	J-20
P-21	30	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-20	J-21 (FH)
P-22	75	16	Ductile Iron	120.0	3,475.29	5.5455	0.55	J-20	J-22
P-23	63	16	Ductile Iron	120.0	3,470.17	5.5373	0.46	J-22	J-23
P-24	40	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-23	J-24 (FH)
P-25	30	16	Ductile Iron	120.0	3,103.27	4.9519	0.18	J-23	J-25
P-26	46	8	Ductile Iron	120.0	36.72	0.2344	0.00	J-25	J-26
P-27	8	16	Ductile Iron	120.0	3,066.55	4.8933	0.05	J-25	J-27
P-28	29	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-27	J-28 (FH)
P-29	93	16	Ductile Iron	120.0	3,066.55	4.8933	0.54	J-27	J-29
P-30	93	16	Ductile Iron	120.0	3,060.61	4.8838	0.53	J-29	J-30
P-31	32	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-30	J-31 (FH)
P-32	12	16	Ductile Iron	120.0	3,060.61	4.8838	0.07	J-30	J-45
P-33	14	16	Ductile Iron	120.0	3,010.66	4.8041	0.08	J-45	J-32
P-33A	20	16	Ductile Iron	120.0	3,294.93	5.2577	0.13	J-33	J-32
P-34	23	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-33	J-34 (FH)
P-35	118	8	Ductile Iron	120.0	284.27	1.8144	0.24	J-32	J-35 (FH)
P-36	42	8	Ductile Iron	120.0	284.27	1.8144	0.09	J-35 (FH)	J-36
P-37	50	8	Ductile Iron	120.0	14.31	0.0913	0.00	J-36	J-37
P-37A	43	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-37	J-37(FH)
P-38	110	8	Ductile Iron	120.0	298.58	1.9058	0.25	J-36	J-38
P-39	138	8	Ductile Iron	120.0	304.52	1.9437	0.32	J-38	J-39
P-39A	48	8	Ductile Iron	120.0	366.89	2.3418	0.16	J-39	J-39 (FH)
P-40	115	8	Ductile Iron	120.0	366.89	2.3418	0.38	J-39 (FH)	J-23
P-41	159	12	Ductile Iron	120.0	49.95	0.1417	0.00	J-45	J-40
P-42	93	12	Ductile Iron	120.0	49.95	0.1417	0.00	J-40	J-42
P-47	34	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-48(FH)
P-48	158	8	Ductile Iron	120.0	9.45	0.0603	0.00	J-41	J-47
P-48A	79	8	Ductile Iron	120.0	49.95	0.3188	0.01	J-41	J-42
P-49	204	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-47	J-48
P-49A	32	6	Ductile Iron	120.0	9.45	0.1072	0.00	J-47A	J-47
P-50	16	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-49
P-52	335	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-49	J-51
P-52A	18	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-51	J-51(FH)
P-53	72	16	Ductile Iron	120.0	3,542.53	5.6528	0.54	J-4	J-52
P-54	42	16	Ductile Iron	120.0	3,540.91	5.6502	0.32	J-52	J-7
P-69A	60	12	Ductile Iron	110.0	503.17	1.4274	0.06	J-1	J-1A(FH)
P-69B	149	12	Ductile Iron	110.0	503.17	1.4274	0.14	J-1A(FH)	J-59(FH)
P-72	55	12	Ductile Iron	110.0	536.92	1.5231	0.06	J-59(FH)	J-61
P-73A	168	12	Ductile Iron	110.0	790.72	2.2431	0.38	J-61	J-61(FH)
P-73B	242	12	Ductile Iron	110.0	790.72	2.2431	0.54	J-61(FH)	J-62
P-74	99	8	Ductile Iron	110.0	846.07	5.4003	1.81	J-62	J-63

P-86	104	8	Ductile Iron	110.0	90.72	0.5790	0.03	J-74	J-70
P-86A	235	12	Ductile Iron	110.0	2,724.28	7.7282	5.19	J-70	J-75
P-87	21	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-75	J-76(FH)
P-88	721	6	Ductile Iron	90.0	90.72	1.0294	1.24	J-74	J-77
P-92	95	12	Ductile Iron	110.0	3,006.70	8.5294	2.52	J-75	J-89
P-92A	626	12	Ductile Iron	110.0	3,006.70	8.5294	16.61	J-89	J-80(FH)
P-93	477	12	Ductile Iron	110.0	3,446.70	9.7776	16.30	J-80(FH)	J-84
P-95	33	12	Ductile Iron	110.0	440.00	1.2482	0.02	J-80(FH)	J-85
P-159	172	24	Ductile Iron	110.0	3,345.19	2.3724	0.19	J-63	J-106(FH)
P-160	195	24	Ductile Iron	110.0	3,345.19	2.3724	0.22	J-106(FH)	J-70
P-161	526	24	Ductile Iron	110.0	2,222.64	1.5763	0.27	J-86(FH)	J-107(FH)
P-162	269	24	Ductile Iron	110.0	2,222.64	1.5763	0.14	J-107(FH)	J-63
P-172	227	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-53	J-112(FH)
P-173	211	8	Ductile Iron	120.0	26.24	0.1675	0.01	J-53	J-113(FH)
P-188	2,981	16	Ductile Iron	110.0	893.88	1.4264	2.06	J-84	J-117
P-189	685	8	Ductile Iron	90.0	494.22	3.1545	6.70	J-117	J-79(F-FH)
P-190	326	24	Ductile Iron	120.0	632.79	0.4488	0.01	J-70	J-78(FH)
P-191	1,043	8	Ductile Iron	90.0	893.88	5.7054	30.58	J-77	J-79(F-FH)
P-192	89	8	Ductile Iron	120.0	803.16	5.1264	1.26	J-78(FH)	J-77
P-193	701	24	Ductile Iron	110.0	399.65	0.2834	0.02	J-117	J-81(FH)
P-194	423	12	Ductile Iron	110.0	399.65	1.1337	0.27	J-81(FH)	J-118
P-195	1,375	8	Ductile Iron	110.0	399.65	2.5509	6.26	J-118	J-119
P-196	35	8	Ductile Iron	110.0	399.65	2.5509	0.16	J-119	J-79(F-FH)
P-199	448	12	Ductile Iron	110.0	1,468.08	4.1646	3.15	J-84	J-120
P-200	595	12	Ductile Iron	110.0	1,280.58	3.6327	3.25	J-120	J-83
P-201	13	16	Ductile Iron	120.0	3,294.93	5.2577	0.09	J-33	GPV-6
P-202	11	16	Ductile Iron	120.0	3,294.93	5.2577	0.07	GPV-6	J-96
P-205	21	16	Ductile Iron	120.0	3,294.93	5.2577	0.14	J-96	J-109
P-207	7	16	Ductile Iron	120.0	3,115.65	4.9716	0.04	J-42(FH)	J-53
P-208	97	16	Ductile Iron	120.0	3,294.93	5.2577	0.64	J-109	J-43
P-209	124	16	Ductile Iron	120.0	3,115.65	4.9716	0.74	J-43	J-42(FH)
P-210	178	16	Ductile Iron	120.0	3,089.41	4.9298	1.04	J-53	J-44
P-212	200	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-44(FH)
P-213	100	16	Ductile Iron	120.0	3,089.41	4.9298	0.58	J-44	J-121
P-215	193	8	Ductile Iron	120.0	26.19	0.1672	0.00	J-121	J-58 (F-FH)
P-216	19	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-122(FH)
P-217	22	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-121	J-123(FH)
P-218	143	16	Ductile Iron	120.0	2,913.10	4.6484	0.75	J-121	J-124
P-220	169	16	Ductile Iron	120.0	2,029.28	3.2381	0.45	J-124	J-125
P-221	115	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-125	J-54 (F-FH)
P-222	21	8	Ductile Iron	120.0	883.82	5.6412	0.35	J-124	J-126
P-223	142	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-126	J-127(FH)
P-224	174	8	Ductile Iron	120.0	867.89	5.5396	2.84	J-126	J-55 (F-FH)
P-225	295	16	Ductile Iron	120.0	2,029.28	3.2381	0.79	J-125	J-59 (F-FH)
P-226	221	16	Ductile Iron	120.0	1,032.86	1.6481	0.17	J-59 (F-FH)	J-128
P-227	222	8	Ductile Iron	120.0	852.10	5.4388	3.50	J-128	J-129(FH)
P-228	169	16	Ductile Iron	120.0	180.77	0.2884	0.01	J-128	J-130
P-229	231	8	Ductile Iron	120.0	52.65	0.3361	0.02	J-130	J-56 (F-FH)
P-230	116	16	Ductile Iron	120.0	128.12	0.2044	0.00	J-130	J-131
P-231	65	8	Ductile Iron	120.0	72.90	0.4653	0.01	J-131	J-60 (F-FH)
P-232	211	16	Ductile Iron	120.0	55.22	0.0881	0.00	J-131	J-132
P-233	246	8	Ductile Iron	120.0	18.76	0.1198	0.00	J-132	J-57 (F-FH)
P-234	34	16	Ductile Iron	120.0	36.45	0.0582	0.00	J-132	J-133
P-235	88	8	Ductile Iron	120.0	36.45	0.2327	0.00	J-133	J-134(FH)
P-236	151	16	Ductile Iron	120.0	0.00	0.0000	0.00	J-133	J-135(FH)

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Full Build-out – PHD + Sprinkler + ISO @ Block 22
(future phase)

Scenario: Full Build-out - PHD + ISO @ 22 (Future Phase)
Current Time Step: 0.000Hr
FlexTable: Junction Table

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	37.00	295.38	130.83	40.6
J-1A(FH)	37.00	0.00	130.89	40.6
J-2 (FH)	45.00	0.00	129.08	36.4
J-3	46.00	123.39	128.62	35.7
J-4	47.00	0.00	127.75	34.9
J-5 (FH)	47.00	0.00	127.74	34.9
J-6	48.00	45.09	127.74	34.5
J-7	48.00	0.00	126.88	34.1
J-8	49.00	3.78	126.88	33.7
J-9	49.00	0.00	126.88	33.7
J-10	49.00	3.78	126.88	33.7
J-11 (FH)	49.00	0.00	126.88	33.7
J-12	49.00	0.00	126.88	33.7
J-13	48.00	2.97	126.88	34.1
J-14 (FH)	48.00	0.00	126.88	34.1
J-15 (FH)	46.00	0.00	126.88	35.0
J-16	48.00	0.00	126.46	33.9
J-17	47.00	1.62	126.46	34.4
J-18 (FH)	48.00	0.00	126.46	33.9
J-19 (FH)	48.00	53.46	126.46	33.9
J-20	48.00	0.00	126.04	33.8
J-21 (FH)	48.00	0.00	126.04	33.8
J-22	49.00	5.13	125.49	33.1
J-23	49.00	0.00	125.02	32.9
J-24 (FH)	49.00	0.00	125.02	32.9
J-25	49.00	0.00	124.85	32.8
J-26	49.00	36.72	124.84	32.8
J-27	49.00	0.00	124.80	32.8
J-28 (FH)	49.00	0.00	124.80	32.8
J-29	49.00	5.94	124.26	32.6
J-30	48.00	0.00	123.72	32.8
J-31 (FH)	48.00	0.00	123.72	32.8
J-32	48.00	0.00	123.57	32.7
J-33	48.00	0.00	123.44	32.6
J-34 (FH)	48.00	0.00	123.44	32.6
J-35 (FH)	49.00	0.00	123.81	32.4
J-36	49.00	0.00	123.90	32.4
J-37	49.00	14.31	123.90	32.4
J-37(FH)	47.00	0.00	123.90	33.3
J-38	49.00	5.94	124.15	32.5
J-39	50.00	62.37	124.48	32.2
J-39 (FH)	49.00	0.00	124.64	32.7
J-40	45.00	0.00	123.65	34.0
J-41	29.00	40.50	123.64	40.9
J-42	28.00	0.00	123.64	41.4
J-42(FH)	27.00	0.00	107.23	34.7
J-43	27.00	179.28	107.97	35.0
J-44	28.00	0.00	106.17	33.8
J-44(FH)	28.00	0.00	106.17	33.8
J-45	48.00	0.00	123.65	32.7
J-47	25.00	0.00	123.64	42.7
J-47A	25.00	9.45	123.64	42.7
J-48	22.00	0.00	123.64	44.0
J-48(FH)	19.00	0.00	123.64	45.3
J-49	22.00	0.00	123.64	44.0
J-51	18.00	0.00	123.64	45.7
J-51(FH)	19.00	0.00	123.64	45.3

J-52	47.00	1.62	127.20	34.7
J-53	38.00	0.00	107.19	29.9
J-54 (F-FH)	38.00	13.50	104.03	28.6
J-55 (F-FH)	38.00	34.56	104.86	28.9
J-56 (F-FH)	34.00	833.33	97.76	27.6
J-57 (F-FH)	31.00	18.76	101.17	30.4
J-58 (F-FH)	30.00	26.19	105.59	32.7
J-59 (F-FH)	27.00	163.08	102.58	32.7
J-59(FH)	36.00	33.75	131.04	41.1
J-60 (F-FH)	27.00	906.23	100.03	31.6
J-61	37.00	253.80	131.10	40.7
J-61(FH)	38.00	0.00	131.48	40.4
J-62	38.00	55.35	132.02	40.7
J-63	32.00	276.48	133.84	44.1
J-70	27.00	102.60	134.25	46.4
J-74	27.00	0.00	134.28	46.4
J-75	23.00	282.42	139.48	50.4
J-76(FH)	24.00	0.00	139.48	50.0
J-77	22.00	0.00	135.53	49.1
J-78(FH)	22.00	170.37	134.27	48.6
J-79(F-FH)	23.00	0.00	166.31	62.0
J-80(FH)	32.00	0.00	158.74	54.8
J-81(FH)	83.00	0.00	173.04	39.0
J-83	46.00	0.00	168.69	53.1
J-84	31.00	0.00	175.13	62.4
J-85	33.00	440.00	158.72	54.4
J-86(FH)	40.00	0.00	133.43	40.4
J-89	24.00	0.00	142.02	51.1
J-96	48.00	0.00	108.76	26.3
J-106(FH)	36.00	0.00	134.03	42.4
J-107(FH)	36.00	0.00	133.70	42.3
J-109	47.00	0.00	108.62	26.7
J-112(FH)	28.00	58.05	107.16	34.2
J-113(FH)	45.00	26.24	107.18	26.9
J-117	52.00	0.00	173.06	52.4
J-118	37.00	0.00	172.78	58.7
J-119	13.00	0.00	166.47	66.4
J-120	36.00	187.50	171.96	58.8
J-121	30.44	150.12	105.60	32.5
J-122(FH)	46.00	0.00	106.17	26.0
J-123(FH)	46.00	0.00	105.60	25.8
J-124	33.74	0.00	104.87	30.8
J-125	37.52	0.00	104.03	28.8
J-126	48.00	15.93	104.86	24.6
J-127(FH)	53.00	0.00	104.86	22.4
J-128	28.00	0.00	101.61	31.8
J-129(FH)	52.00	852.10	98.12	20.0
J-130	34.00	0.00	101.25	29.1
J-131	36.00	0.00	101.17	28.2
J-132	34.00	0.00	101.17	29.1
J-133	32.00	0.00	101.17	29.9
J-134(FH)	22.00	36.45	101.17	34.3
J-135(FH)	28.00	0.00	101.17	31.7

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Scenario: Full Build-out - PHD + ISO @ 22 (Future Phase)
Current Time Step: 0.000Hr
FlexTable: Pipe Table

Label	Length (Scaled) (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (Absolute) (gpm)	Velocity (ft/s)	Headloss (ft)	Start Node	Stop Node
P-1	297	16	Ductile Iron	110.0	3,518.62	5.6146	2.60	J-1	J-86(FH)
P-1A	1,046	8	Ductile Iron	120.0	1,285.20	8.2031	35.27	J-83	J-86(FH)
P-2	211	16	Ductile Iron	120.0	3,729.91	5.9518	1.75	J-1	J-2 (FH)
P-3	56	16	Ductile Iron	120.0	3,729.91	5.9518	0.46	J-2 (FH)	J-3
P-4	112	16	Ductile Iron	120.0	3,606.52	5.7549	0.87	J-3	J-4
P-5	40	8	Ductile Iron	120.0	45.09	0.2878	0.00	J-4	J-5 (FH)
P-6	76	8	Ductile Iron	120.0	45.09	0.2878	0.01	J-5 (FH)	J-6
P-8	149	8	Ductile Iron	120.0	10.53	0.0672	0.00	J-7	J-8
P-9	31	8	Ductile Iron	120.0	6.75	0.0431	0.00	J-8	J-9
P-10	77	8	Ductile Iron	120.0	3.78	0.0241	0.00	J-9	J-10
P-11	91	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-10	J-11 (FH)
P-12	16	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-9	J-12
P-13	120	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-12	J-13
P-14	25	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-13	J-14 (FH)
P-15	49	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-12	J-15 (FH)
P-16	55	16	Ductile Iron	120.0	3,549.28	5.6636	0.42	J-7	J-16
P-17	70	12	Ductile Iron	120.0	55.08	0.1563	0.00	J-16	J-17
P-18	82	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-17	J-18 (FH)
P-19	56	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-18 (FH)	J-19 (FH)
P-20	58	16	Ductile Iron	120.0	3,494.20	5.5757	0.43	J-16	J-20
P-21	30	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-20	J-21 (FH)
P-22	75	16	Ductile Iron	120.0	3,494.20	5.5757	0.55	J-20	J-22
P-23	63	16	Ductile Iron	120.0	3,489.07	5.5675	0.46	J-22	J-23
P-24	40	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-23	J-24 (FH)
P-25	30	16	Ductile Iron	120.0	3,120.39	4.9792	0.18	J-23	J-25
P-26	46	8	Ductile Iron	120.0	36.72	0.2344	0.00	J-25	J-26
P-27	8	16	Ductile Iron	120.0	3,083.67	4.9206	0.05	J-25	J-27
P-28	29	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-27	J-28 (FH)
P-29	93	16	Ductile Iron	120.0	3,083.67	4.9206	0.54	J-27	J-29
P-30	93	16	Ductile Iron	120.0	3,077.73	4.9111	0.54	J-29	J-30
P-31	32	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-30	J-31 (FH)
P-32	12	16	Ductile Iron	120.0	3,077.73	4.9111	0.07	J-30	J-45
P-33	14	16	Ductile Iron	120.0	3,027.78	4.8314	0.08	J-45	J-32
P-33A	20	16	Ductile Iron	120.0	3,313.83	5.2879	0.13	J-33	J-32
P-34	23	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-33	J-34 (FH)
P-35	118	8	Ductile Iron	120.0	286.05	1.8258	0.25	J-32	J-35 (FH)
P-36	42	8	Ductile Iron	120.0	286.05	1.8258	0.09	J-35 (FH)	J-36
P-37	50	8	Ductile Iron	120.0	14.31	0.0913	0.00	J-36	J-37
P-37A	43	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-37	J-37(FH)
P-38	110	8	Ductile Iron	120.0	300.36	1.9171	0.25	J-36	J-38
P-39	138	8	Ductile Iron	120.0	306.30	1.9551	0.33	J-38	J-39
P-39A	48	8	Ductile Iron	120.0	368.67	2.3531	0.16	J-39	J-39 (FH)
P-40	115	8	Ductile Iron	120.0	368.67	2.3531	0.38	J-39 (FH)	J-23
P-41	159	12	Ductile Iron	120.0	49.95	0.1417	0.00	J-45	J-40
P-42	93	12	Ductile Iron	120.0	49.95	0.1417	0.00	J-40	J-42
P-47	34	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-48(FH)
P-48	158	8	Ductile Iron	120.0	9.45	0.0603	0.00	J-41	J-47
P-48A	79	8	Ductile Iron	120.0	49.95	0.3188	0.01	J-41	J-42
P-49	204	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-47	J-48
P-49A	32	6	Ductile Iron	120.0	9.45	0.1072	0.00	J-47A	J-47
P-50	16	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-49
P-52	335	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-49	J-51
P-52A	18	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-51	J-51(FH)
P-53	72	16	Ductile Iron	120.0	3,561.43	5.6829	0.55	J-4	J-52
P-54	42	16	Ductile Iron	120.0	3,559.81	5.6804	0.32	J-52	J-7
P-69A	60	12	Ductile Iron	110.0	506.67	1.4373	0.06	J-1	J-1A(FH)
P-69B	149	12	Ductile Iron	110.0	506.67	1.4373	0.15	J-1A(FH)	J-59(FH)
P-72	55	12	Ductile Iron	110.0	540.42	1.5330	0.06	J-59(FH)	J-61
P-73A	168	12	Ductile Iron	110.0	794.22	2.2530	0.38	J-61	J-61(FH)
P-73B	242	12	Ductile Iron	110.0	794.22	2.2530	0.55	J-61(FH)	J-62
P-74	99	8	Ductile Iron	110.0	849.57	5.4226	1.82	J-62	J-63

P-86	104	8	Ductile Iron	110.0	91.04	0.5811	0.03	J-74	J-70
P-86A	235	12	Ductile Iron	110.0	2,735.39	7.7597	5.23	J-70	J-75
P-87	21	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-75	J-76(FH)
P-88	721	6	Ductile Iron	90.0	91.04	1.0331	1.25	J-74	J-77
P-92	95	12	Ductile Iron	110.0	3,017.81	8.5609	2.54	J-75	J-89
P-92A	626	12	Ductile Iron	110.0	3,017.81	8.5609	16.72	J-89	J-80(FH)
P-93	477	12	Ductile Iron	110.0	3,457.81	9.8091	16.39	J-80(FH)	J-84
P-95	33	12	Ductile Iron	110.0	440.00	1.2482	0.02	J-80(FH)	J-85
P-159	172	24	Ductile Iron	110.0	3,359.47	2.3825	0.19	J-63	J-106(FH)
P-160	195	24	Ductile Iron	110.0	3,359.47	2.3825	0.22	J-106(FH)	J-70
P-161	526	24	Ductile Iron	110.0	2,233.42	1.5839	0.27	J-86(FH)	J-107(FH)
P-162	269	24	Ductile Iron	110.0	2,233.42	1.5839	0.14	J-107(FH)	J-63
P-172	227	8	Ductile Iron	120.0	58.05	0.3705	0.02	J-53	J-112(FH)
P-173	211	8	Ductile Iron	120.0	26.24	0.1675	0.01	J-53	J-113(FH)
P-188	2,981	16	Ductile Iron	110.0	897.05	1.4314	2.07	J-84	J-117
P-189	685	8	Ductile Iron	90.0	495.98	3.1657	6.75	J-117	J-79(F-FH)
P-190	326	24	Ductile Iron	120.0	635.64	0.4508	0.01	J-70	J-78(FH)
P-191	1,043	8	Ductile Iron	90.0	897.05	5.7257	30.78	J-77	J-79(F-FH)
P-192	89	8	Ductile Iron	120.0	806.01	5.1446	1.26	J-78(FH)	J-77
P-193	701	24	Ductile Iron	110.0	401.07	0.2844	0.02	J-117	J-81(FH)
P-194	423	12	Ductile Iron	110.0	401.07	1.1378	0.27	J-81(FH)	J-118
P-195	1,375	8	Ductile Iron	110.0	401.07	2.5600	6.30	J-118	J-119
P-196	35	8	Ductile Iron	110.0	401.07	2.5600	0.16	J-119	J-79(F-FH)
P-199	448	12	Ductile Iron	110.0	1,472.70	4.1777	3.17	J-84	J-120
P-200	595	12	Ductile Iron	110.0	1,285.20	3.6458	3.27	J-120	J-83
P-201	13	16	Ductile Iron	120.0	3,313.83	5.2879	0.09	J-33	GPV-6
P-202	11	16	Ductile Iron	120.0	3,313.83	5.2879	0.07	GPV-6	J-96
P-205	21	16	Ductile Iron	120.0	3,313.83	5.2879	0.14	J-96	J-109
P-207	7	16	Ductile Iron	120.0	3,134.55	5.0018	0.04	J-42(FH)	J-53
P-208	97	16	Ductile Iron	120.0	3,313.83	5.2879	0.65	J-109	J-43
P-209	124	16	Ductile Iron	120.0	3,134.55	5.0018	0.74	J-43	J-42(FH)
P-210	178	16	Ductile Iron	120.0	3,050.26	4.8673	1.02	J-53	J-44
P-212	200	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-44(FH)
P-213	100	16	Ductile Iron	120.0	3,050.26	4.8673	0.57	J-44	J-121
P-215	193	8	Ductile Iron	120.0	26.19	0.1672	0.00	J-121	J-58 (F-FH)
P-216	19	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-122(FH)
P-217	22	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-121	J-123(FH)
P-218	143	16	Ductile Iron	120.0	2,873.95	4.5859	0.73	J-121	J-124
P-220	169	16	Ductile Iron	120.0	2,823.46	4.5054	0.84	J-124	J-125
P-221	115	8	Ductile Iron	120.0	13.50	0.0862	0.00	J-125	J-54 (F-FH)
P-222	21	8	Ductile Iron	120.0	50.49	0.3223	0.00	J-124	J-126
P-223	142	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-126	J-127(FH)
P-224	174	8	Ductile Iron	120.0	34.56	0.2206	0.01	J-126	J-55 (F-FH)
P-225	295	16	Ductile Iron	120.0	2,809.96	4.4838	1.45	J-125	J-59 (F-FH)
P-226	221	16	Ductile Iron	120.0	2,646.88	4.2236	0.97	J-59 (F-FH)	J-128
P-227	222	8	Ductile Iron	120.0	852.10	5.4388	3.50	J-128	J-129(FH)
P-228	169	16	Ductile Iron	120.0	1,794.78	2.8639	0.36	J-128	J-130
P-229	231	8	Ductile Iron	120.0	833.33	5.3190	3.49	J-130	J-56 (F-FH)
P-230	116	16	Ductile Iron	120.0	961.45	1.5342	0.08	J-130	J-131
P-231	65	8	Ductile Iron	120.0	906.23	5.7843	1.15	J-131	J-60 (F-FH)
P-232	211	16	Ductile Iron	120.0	55.22	0.0881	0.00	J-131	J-132
P-233	246	8	Ductile Iron	120.0	18.76	0.1198	0.00	J-132	J-57 (F-FH)
P-234	34	16	Ductile Iron	120.0	36.45	0.0582	0.00	J-132	J-133
P-235	88	8	Ductile Iron	120.0	36.45	0.2327	0.00	J-133	J-134(FH)
P-236	151	16	Ductile Iron	120.0	0.00	0.0000	0.00	J-133	J-135(FH)

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Full Build-out – PHD + Sprinkler + ISO @ Block 23
(future phase)

Scenario: Full Build-out - PHD + ISO @ 23 (Future Phase)
Current Time Step: 0.000Hr
FlexTable: Junction Table

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	37.00	295.38	132.55	41.3
J-1A(FH)	37.00	0.00	132.60	41.4
J-2 (FH)	45.00	0.00	130.85	37.1
J-3	46.00	123.39	130.40	36.5
J-4	47.00	0.00	129.55	35.7
J-5 (FH)	47.00	0.00	129.55	35.7
J-6	48.00	45.09	129.54	35.3
J-7	48.00	0.00	128.71	34.9
J-8	49.00	3.78	128.71	34.5
J-9	49.00	0.00	128.71	34.5
J-10	49.00	3.78	128.71	34.5
J-11 (FH)	49.00	0.00	128.71	34.5
J-12	49.00	0.00	128.71	34.5
J-13	48.00	2.97	128.71	34.9
J-14 (FH)	48.00	0.00	128.71	34.9
J-15 (FH)	46.00	0.00	128.71	35.8
J-16	48.00	0.00	128.31	34.7
J-17	47.00	1.62	128.30	35.2
J-18 (FH)	48.00	0.00	128.30	34.7
J-19 (FH)	48.00	53.46	128.30	34.7
J-20	48.00	0.00	127.89	34.6
J-21 (FH)	48.00	0.00	127.89	34.6
J-22	49.00	5.13	127.36	33.9
J-23	49.00	0.00	126.91	33.7
J-24 (FH)	49.00	0.00	126.91	33.7
J-25	49.00	0.00	126.74	33.6
J-26	49.00	36.72	126.74	33.6
J-27	49.00	0.00	126.69	33.6
J-28 (FH)	49.00	0.00	126.69	33.6
J-29	49.00	5.94	126.17	33.4
J-30	48.00	0.00	125.65	33.6
J-31 (FH)	48.00	0.00	125.65	33.6
J-32	48.00	0.00	125.50	33.5
J-33	48.00	0.00	125.37	33.5
J-34 (FH)	48.00	0.00	125.37	33.5
J-35 (FH)	49.00	0.00	125.74	33.2
J-36	49.00	0.00	125.82	33.2
J-37	49.00	14.31	125.82	33.2
J-37(FH)	47.00	0.00	125.82	34.1
J-38	49.00	5.94	126.07	33.3
J-39	50.00	62.37	126.38	33.0
J-39 (FH)	49.00	0.00	126.54	33.5
J-40	45.00	0.00	125.58	34.9
J-41	29.00	40.50	125.57	41.8
J-42	28.00	0.00	125.57	42.2
J-42(FH)	27.00	0.00	109.56	35.7
J-43	27.00	179.28	110.28	36.0
J-44	28.00	0.00	108.50	34.8
J-44(FH)	28.00	0.00	108.50	34.8
J-45	48.00	0.00	125.58	33.6
J-47	25.00	0.00	125.57	43.5
J-47A	25.00	9.45	125.57	43.5
J-48	22.00	0.00	125.57	44.8
J-48(FH)	19.00	0.00	125.57	46.1
J-49	22.00	0.00	125.57	44.8
J-51	18.00	0.00	125.57	46.5
J-51(FH)	19.00	0.00	125.57	46.1

J-52	47.00	1.62	129.02	35.5
J-53	38.00	0.00	109.52	30.9
J-54 (F-FH)	38.00	13.50	106.36	29.6
J-55 (F-FH)	38.00	34.56	107.19	29.9
J-56 (F-FH)	34.00	0.00	104.07	30.3
J-57 (F-FH)	31.00	18.76	103.70	31.5
J-58 (F-FH)	30.00	26.19	107.92	33.7
J-59 (F-FH)	27.00	996.41	104.91	33.7
J-59(FH)	36.00	33.75	132.74	41.9
J-60 (F-FH)	27.00	906.23	102.67	32.7
J-61	37.00	253.80	132.80	41.4
J-61(FH)	38.00	0.00	133.17	41.2
J-62	38.00	55.35	133.70	41.4
J-63	32.00	276.48	135.48	44.8
J-70	27.00	102.60	135.88	47.1
J-74	27.00	0.00	135.91	47.1
J-75	23.00	282.42	140.99	51.1
J-76(FH)	24.00	0.00	140.99	50.6
J-77	22.00	0.00	137.13	49.8
J-78(FH)	22.00	170.37	135.89	49.3
J-79(F-FH)	23.00	0.00	167.30	62.4
J-80(FH)	32.00	0.00	159.85	55.3
J-81(FH)	83.00	0.00	173.90	39.3
J-83	46.00	0.00	169.63	53.5
J-84	31.00	0.00	175.94	62.7
J-85	33.00	440.00	159.82	54.9
J-86(FH)	40.00	0.00	135.08	41.1
J-89	24.00	0.00	143.48	51.7
J-96	48.00	0.00	111.04	27.3
J-106(FH)	36.00	0.00	135.67	43.1
J-107(FH)	36.00	0.00	135.35	43.0
J-109	47.00	0.00	110.90	27.6
J-112(FH)	28.00	0.00	109.52	35.3
J-113(FH)	45.00	26.24	109.51	27.9
J-117	52.00	0.00	173.91	52.7
J-118	37.00	0.00	173.63	59.1
J-119	13.00	0.00	167.46	66.8
J-120	36.00	187.50	172.83	59.2
J-121	30.44	150.12	107.93	33.5
J-122(FH)	46.00	0.00	108.50	27.0
J-123(FH)	46.00	0.00	107.93	26.8
J-124	33.74	0.00	107.20	31.8
J-125	37.52	0.00	106.36	29.8
J-126	48.00	15.93	107.19	25.6
J-127(FH)	53.00	0.00	107.19	23.4
J-128	28.00	0.00	104.43	33.1
J-129(FH)	52.00	18.76	104.43	22.7
J-130	34.00	0.00	104.07	30.3
J-131	36.00	0.00	103.82	29.3
J-132	34.00	0.00	103.70	30.2
J-133	32.00	0.00	103.68	31.0
J-134(FH)	22.00	869.78	102.24	34.7
J-135(FH)	28.00	0.00	103.68	32.7

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Scenario: Full Build-out - PHD + ISO @ 23 (Future Phase)
Current Time Step: 0.000Hr
FlexTable: Pipe Table

Label	Length (Scaled) (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (Absolute) (gpm)	Velocity (ft/s)	Headloss (ft)	Start Node	Stop Node
P-1	297	16	Ductile Iron	110.0	3,471.31	5.5391	2.53	J-1	J-86(FH)
P-1A	1,046	8	Ductile Iron	120.0	1,271.01	8.1126	34.55	J-83	J-86(FH)
P-2	211	16	Ductile Iron	120.0	3,671.86	5.8592	1.70	J-1	J-2 (FH)
P-3	56	16	Ductile Iron	120.0	3,671.86	5.8592	0.45	J-2 (FH)	J-3
P-4	112	16	Ductile Iron	120.0	3,548.47	5.6623	0.85	J-3	J-4
P-5	40	8	Ductile Iron	120.0	45.09	0.2878	0.00	J-4	J-5 (FH)
P-6	76	8	Ductile Iron	120.0	45.09	0.2878	0.01	J-5 (FH)	J-6
P-8	149	8	Ductile Iron	120.0	10.53	0.0672	0.00	J-7	J-8
P-9	31	8	Ductile Iron	120.0	6.75	0.0431	0.00	J-8	J-9
P-10	77	8	Ductile Iron	120.0	3.78	0.0241	0.00	J-9	J-10
P-11	91	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-10	J-11 (FH)
P-12	16	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-9	J-12
P-13	120	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-12	J-13
P-14	25	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-13	J-14 (FH)
P-15	49	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-12	J-15 (FH)
P-16	55	16	Ductile Iron	120.0	3,491.23	5.5709	0.40	J-7	J-16
P-17	70	12	Ductile Iron	120.0	55.08	0.1563	0.00	J-16	J-17
P-18	82	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-17	J-18 (FH)
P-19	56	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-18 (FH)	J-19 (FH)
P-20	58	16	Ductile Iron	120.0	3,436.15	5.4830	0.41	J-16	J-20
P-21	30	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-20	J-21 (FH)
P-22	75	16	Ductile Iron	120.0	3,436.15	5.4830	0.53	J-20	J-22
P-23	63	16	Ductile Iron	120.0	3,431.02	5.4749	0.45	J-22	J-23
P-24	40	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-23	J-24 (FH)
P-25	30	16	Ductile Iron	120.0	3,067.81	4.8953	0.17	J-23	J-25
P-26	46	8	Ductile Iron	120.0	36.72	0.2344	0.00	J-25	J-26
P-27	8	16	Ductile Iron	120.0	3,031.09	4.8367	0.05	J-25	J-27
P-28	29	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-27	J-28 (FH)
P-29	93	16	Ductile Iron	120.0	3,031.09	4.8367	0.52	J-27	J-29
P-30	93	16	Ductile Iron	120.0	3,025.15	4.8272	0.52	J-29	J-30
P-31	32	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-30	J-31 (FH)
P-32	12	16	Ductile Iron	120.0	3,025.15	4.8272	0.07	J-30	J-45
P-33	14	16	Ductile Iron	120.0	2,975.20	4.7475	0.08	J-45	J-32
P-33A	20	16	Ductile Iron	120.0	3,255.78	5.1952	0.13	J-33	J-32
P-34	23	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-33	J-34 (FH)
P-35	118	8	Ductile Iron	120.0	280.59	1.7909	0.24	J-32	J-35 (FH)
P-36	42	8	Ductile Iron	120.0	280.59	1.7909	0.08	J-35 (FH)	J-36
P-37	50	8	Ductile Iron	120.0	14.31	0.0913	0.00	J-36	J-37
P-37A	43	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-37	J-37(FH)
P-38	110	8	Ductile Iron	120.0	294.90	1.8823	0.24	J-36	J-38
P-39	138	8	Ductile Iron	120.0	300.84	1.9202	0.32	J-38	J-39
P-39A	48	8	Ductile Iron	120.0	363.21	2.3183	0.16	J-39	J-39 (FH)
P-40	115	8	Ductile Iron	120.0	363.21	2.3183	0.37	J-39 (FH)	J-23
P-41	159	12	Ductile Iron	120.0	49.95	0.1417	0.00	J-45	J-40
P-42	93	12	Ductile Iron	120.0	49.95	0.1417	0.00	J-40	J-42
P-47	34	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-48(FH)
P-48	158	8	Ductile Iron	120.0	9.45	0.0603	0.00	J-41	J-47
P-48A	79	8	Ductile Iron	120.0	49.95	0.3188	0.01	J-41	J-42
P-49	204	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-47	J-48
P-49A	32	6	Ductile Iron	120.0	9.45	0.1072	0.00	J-47A	J-47
P-50	16	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-49
P-52	335	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-49	J-51
P-52A	18	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-51	J-51(FH)
P-53	72	16	Ductile Iron	120.0	3,503.38	5.5903	0.53	J-4	J-52
P-54	42	16	Ductile Iron	120.0	3,501.76	5.5877	0.31	J-52	J-7
P-69A	60	12	Ductile Iron	110.0	495.93	1.4068	0.06	J-1	J-1A(FH)
P-69B	149	12	Ductile Iron	110.0	495.93	1.4068	0.14	J-1A(FH)	J-59(FH)
P-72	55	12	Ductile Iron	110.0	529.68	1.5026	0.06	J-59(FH)	J-61
P-73A	168	12	Ductile Iron	110.0	783.48	2.2226	0.37	J-61	J-61(FH)
P-73B	242	12	Ductile Iron	110.0	783.48	2.2226	0.53	J-61(FH)	J-62
P-74	99	8	Ductile Iron	110.0	838.83	5.3540	1.78	J-62	J-63

P-86	104	8	Ductile Iron	110.0	90.05	0.5747	0.03	J-74	J-70
P-86A	235	12	Ductile Iron	110.0	2,701.28	7.6630	5.11	J-70	J-75
P-87	21	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-75	J-76(FH)
P-88	721	6	Ductile Iron	90.0	90.05	1.0218	1.22	J-74	J-77
P-92	95	12	Ductile Iron	110.0	2,983.70	8.4641	2.48	J-75	J-89
P-92A	626	12	Ductile Iron	110.0	2,983.70	8.4641	16.37	J-89	J-80(FH)
P-93	477	12	Ductile Iron	110.0	3,423.70	9.7123	16.09	J-80(FH)	J-84
P-95	33	12	Ductile Iron	110.0	440.00	1.2482	0.02	J-80(FH)	J-85
P-159	172	24	Ductile Iron	110.0	3,315.61	2.3514	0.19	J-63	J-106(FH)
P-160	195	24	Ductile Iron	110.0	3,315.61	2.3514	0.21	J-106(FH)	J-70
P-161	526	24	Ductile Iron	110.0	2,200.30	1.5604	0.27	J-86(FH)	J-107(FH)
P-162	269	24	Ductile Iron	110.0	2,200.30	1.5604	0.14	J-107(FH)	J-63
P-172	227	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-53	J-112(FH)
P-173	211	8	Ductile Iron	120.0	26.24	0.1675	0.01	J-53	J-113(FH)
P-188	2,981	16	Ductile Iron	110.0	887.30	1.4159	2.03	J-84	J-117
P-189	685	8	Ductile Iron	90.0	490.58	3.1313	6.61	J-117	J-79(F-FH)
P-190	326	24	Ductile Iron	120.0	626.88	0.4446	0.01	J-70	J-78(FH)
P-191	1,043	8	Ductile Iron	90.0	887.30	5.6634	30.17	J-77	J-79(F-FH)
P-192	89	8	Ductile Iron	120.0	797.25	5.0887	1.24	J-78(FH)	J-77
P-193	701	24	Ductile Iron	110.0	396.71	0.2813	0.01	J-117	J-81(FH)
P-194	423	12	Ductile Iron	110.0	396.71	1.1254	0.26	J-81(FH)	J-118
P-195	1,375	8	Ductile Iron	110.0	396.71	2.5321	6.18	J-118	J-119
P-196	35	8	Ductile Iron	110.0	396.71	2.5321	0.16	J-119	J-79(F-FH)
P-199	448	12	Ductile Iron	110.0	1,458.51	4.1375	3.11	J-84	J-120
P-200	595	12	Ductile Iron	110.0	1,271.01	3.6056	3.20	J-120	J-83
P-201	13	16	Ductile Iron	120.0	3,255.78	5.1952	0.08	J-33	GPV-6
P-202	11	16	Ductile Iron	120.0	3,255.78	5.1952	0.07	GPV-6	J-96
P-205	21	16	Ductile Iron	120.0	3,255.78	5.1952	0.14	J-96	J-109
P-207	7	16	Ductile Iron	120.0	3,076.50	4.9092	0.04	J-42(FH)	J-53
P-208	97	16	Ductile Iron	120.0	3,255.78	5.1952	0.63	J-109	J-43
P-209	124	16	Ductile Iron	120.0	3,076.50	4.9092	0.72	J-43	J-42(FH)
P-210	178	16	Ductile Iron	120.0	3,050.26	4.8673	1.02	J-53	J-44
P-212	200	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-44(FH)
P-213	100	16	Ductile Iron	120.0	3,050.26	4.8673	0.57	J-44	J-121
P-215	193	8	Ductile Iron	120.0	26.19	0.1672	0.00	J-121	J-58 (F-FH)
P-216	19	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-122(FH)
P-217	22	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-121	J-123(FH)
P-218	143	16	Ductile Iron	120.0	2,873.95	4.5859	0.73	J-121	J-124
P-220	169	16	Ductile Iron	120.0	2,823.46	4.5054	0.84	J-124	J-125
P-221	115	8	Ductile Iron	120.0	13.50	0.0862	0.00	J-125	J-54 (F-FH)
P-222	21	8	Ductile Iron	120.0	50.49	0.3223	0.00	J-124	J-126
P-223	142	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-126	J-127(FH)
P-224	174	8	Ductile Iron	120.0	34.56	0.2206	0.01	J-126	J-55 (F-FH)
P-225	295	16	Ductile Iron	120.0	2,809.96	4.4838	1.45	J-125	J-59 (F-FH)
P-226	221	16	Ductile Iron	120.0	1,813.55	2.8939	0.48	J-59 (F-FH)	J-128
P-227	222	8	Ductile Iron	120.0	18.76	0.1198	0.00	J-128	J-129(FH)
P-228	169	16	Ductile Iron	120.0	1,794.78	2.8639	0.36	J-128	J-130
P-229	231	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-130	J-56 (F-FH)
P-230	116	16	Ductile Iron	120.0	1,794.78	2.8639	0.25	J-130	J-131
P-231	65	8	Ductile Iron	120.0	906.23	5.7843	1.15	J-131	J-60 (F-FH)
P-232	211	16	Ductile Iron	120.0	888.55	1.4179	0.12	J-131	J-132
P-233	246	8	Ductile Iron	120.0	18.76	0.1198	0.00	J-132	J-57 (F-FH)
P-234	34	16	Ductile Iron	120.0	869.78	1.3879	0.02	J-132	J-133
P-235	88	8	Ductile Iron	120.0	869.78	5.5516	1.44	J-133	J-134(FH)
P-236	151	16	Ductile Iron	120.0	0.00	0.0000	0.00	J-133	J-135(FH)

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Full Build-out – PHD + Sprinkler + ISO @ Block 24
(future phase)

Scenario: Full Build-out - PHD + ISO @ 24 (Future Phase)
Current Time Step: 0.000Hr
FlexTable: Junction Table

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	37.00	295.38	133.10	41.6
J-1A(FH)	37.00	0.00	133.15	41.6
J-2 (FH)	45.00	0.00	131.41	37.4
J-3	46.00	123.39	130.97	36.8
J-4	47.00	0.00	130.13	36.0
J-5 (FH)	47.00	0.00	130.13	36.0
J-6	48.00	45.09	130.12	35.5
J-7	48.00	0.00	129.30	35.2
J-8	49.00	3.78	129.30	34.7
J-9	49.00	0.00	129.30	34.7
J-10	49.00	3.78	129.30	34.7
J-11 (FH)	49.00	0.00	129.30	34.7
J-12	49.00	0.00	129.30	34.7
J-13	48.00	2.97	129.30	35.2
J-14 (FH)	48.00	0.00	129.30	35.2
J-15 (FH)	46.00	0.00	129.30	36.0
J-16	48.00	0.00	128.90	35.0
J-17	47.00	1.62	128.90	35.4
J-18 (FH)	48.00	0.00	128.90	35.0
J-19 (FH)	48.00	53.46	128.90	35.0
J-20	48.00	0.00	128.49	34.8
J-21 (FH)	48.00	0.00	128.49	34.8
J-22	49.00	5.13	127.96	34.2
J-23	49.00	0.00	127.52	34.0
J-24 (FH)	49.00	0.00	127.52	34.0
J-25	49.00	0.00	127.35	33.9
J-26	49.00	36.72	127.34	33.9
J-27	49.00	0.00	127.30	33.9
J-28 (FH)	49.00	0.00	127.30	33.9
J-29	49.00	5.94	126.78	33.7
J-30	48.00	0.00	126.26	33.9
J-31 (FH)	48.00	0.00	126.26	33.9
J-32	48.00	0.00	126.12	33.8
J-33	48.00	0.00	125.99	33.7
J-34 (FH)	48.00	0.00	125.99	33.7
J-35 (FH)	49.00	0.00	126.36	33.5
J-36	49.00	0.00	126.44	33.5
J-37	49.00	14.31	126.44	33.5
J-37(FH)	47.00	0.00	126.44	34.4
J-38	49.00	5.94	126.68	33.6
J-39	50.00	62.37	126.99	33.3
J-39 (FH)	49.00	0.00	127.15	33.8
J-40	45.00	0.00	126.20	35.1
J-41	29.00	40.50	126.19	42.0
J-42	28.00	0.00	126.19	42.5
J-42(FH)	27.00	0.00	110.30	36.0
J-43	27.00	179.28	111.02	36.3
J-44	28.00	0.00	109.26	35.2
J-44(FH)	28.00	0.00	109.26	35.2
J-45	48.00	0.00	126.20	33.8
J-47	25.00	0.00	126.19	43.8
J-47A	25.00	9.45	126.19	43.8
J-48	22.00	0.00	126.19	45.1
J-48(FH)	19.00	0.00	126.19	46.4
J-49	22.00	0.00	126.19	45.1
J-51	18.00	0.00	126.19	46.8
J-51(FH)	19.00	0.00	126.19	46.4

J-52	47.00	1.62	129.60	35.7
J-53	38.00	0.00	110.26	31.3
J-54 (F-FH)	38.00	13.50	107.14	29.9
J-55 (F-FH)	38.00	34.56	107.96	30.3
J-56 (F-FH)	34.00	833.33	100.54	28.8
J-57 (F-FH)	31.00	833.33	99.96	29.8
J-58 (F-FH)	30.00	26.19	108.69	34.0
J-59 (F-FH)	27.00	163.08	105.72	34.1
J-59(FH)	36.00	33.75	133.29	42.1
J-60 (F-FH)	27.00	906.23	102.64	32.7
J-61	37.00	253.80	133.35	41.7
J-61(FH)	38.00	0.00	133.72	41.4
J-62	38.00	55.35	134.24	41.6
J-63	32.00	276.48	136.01	45.0
J-70	27.00	102.60	136.40	47.3
J-74	27.00	0.00	136.43	47.3
J-75	23.00	282.42	141.48	51.3
J-76(FH)	24.00	0.00	141.48	50.8
J-77	22.00	0.00	137.65	50.0
J-78(FH)	22.00	170.37	136.42	49.5
J-79(F-FH)	23.00	0.00	167.62	62.6
J-80(FH)	32.00	0.00	160.21	55.5
J-81(FH)	83.00	0.00	174.17	39.4
J-83	46.00	0.00	169.93	53.6
J-84	31.00	0.00	176.20	62.8
J-85	33.00	440.00	160.18	55.0
J-86(FH)	40.00	0.00	135.61	41.4
J-89	24.00	0.00	143.95	51.9
J-96	48.00	0.00	111.77	27.6
J-106(FH)	36.00	0.00	136.19	43.3
J-107(FH)	36.00	0.00	135.87	43.2
J-109	47.00	0.00	111.63	28.0
J-112(FH)	28.00	0.00	110.26	35.6
J-113(FH)	45.00	26.24	110.26	28.2
J-117	52.00	0.00	174.19	52.9
J-118	37.00	0.00	173.91	59.2
J-119	13.00	0.00	167.77	67.0
J-120	36.00	187.50	173.11	59.3
J-121	30.44	150.12	108.69	33.9
J-122(FH)	46.00	0.00	109.26	27.4
J-123(FH)	46.00	0.00	108.69	27.1
J-124	33.74	0.00	107.97	32.1
J-125	37.52	0.00	107.15	30.1
J-126	48.00	15.93	107.97	25.9
J-127(FH)	53.00	0.00	107.97	23.8
J-128	28.00	0.00	104.76	33.2
J-129(FH)	52.00	18.76	104.76	22.8
J-130	34.00	0.00	104.04	30.3
J-131	36.00	0.00	103.79	29.3
J-132	34.00	0.00	103.67	30.1
J-133	32.00	0.00	103.67	31.0
J-134(FH)	22.00	36.45	103.67	35.3
J-135(FH)	28.00	0.00	103.67	32.7

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Scenario: Full Build-out - PHD + ISO @ 24 (Future Phase)
Current Time Step: 0.000Hr
FlexTable: Pipe Table

Label	Length (Scaled) (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (Absolute) (gpm)	Velocity (ft/s)	Headloss (ft)	Start Node	Stop Node
P-1	297	16	Ductile Iron	110.0	3,456.02	5.5147	2.51	J-1	J-86(FH)
P-1A	1,046	8	Ductile Iron	120.0	1,266.42	8.0833	34.32	J-83	J-86(FH)
P-2	211	16	Ductile Iron	120.0	3,653.09	5.8292	1.68	J-1	J-2 (FH)
P-3	56	16	Ductile Iron	120.0	3,653.09	5.8292	0.45	J-2 (FH)	J-3
P-4	112	16	Ductile Iron	120.0	3,529.70	5.6323	0.84	J-3	J-4
P-5	40	8	Ductile Iron	120.0	45.09	0.2878	0.00	J-4	J-5 (FH)
P-6	76	8	Ductile Iron	120.0	45.09	0.2878	0.01	J-5 (FH)	J-6
P-8	149	8	Ductile Iron	120.0	10.53	0.0672	0.00	J-7	J-8
P-9	31	8	Ductile Iron	120.0	6.75	0.0431	0.00	J-8	J-9
P-10	77	8	Ductile Iron	120.0	3.78	0.0241	0.00	J-9	J-10
P-11	91	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-10	J-11 (FH)
P-12	16	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-9	J-12
P-13	120	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-12	J-13
P-14	25	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-13	J-14 (FH)
P-15	49	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-12	J-15 (FH)
P-16	55	16	Ductile Iron	120.0	3,472.46	5.5410	0.40	J-7	J-16
P-17	70	12	Ductile Iron	120.0	55.08	0.1563	0.00	J-16	J-17
P-18	82	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-17	J-18 (FH)
P-19	56	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-18 (FH)	J-19 (FH)
P-20	58	16	Ductile Iron	120.0	3,417.38	5.4531	0.41	J-16	J-20
P-21	30	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-20	J-21 (FH)
P-22	75	16	Ductile Iron	120.0	3,417.38	5.4531	0.53	J-20	J-22
P-23	63	16	Ductile Iron	120.0	3,412.25	5.4449	0.44	J-22	J-23
P-24	40	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-23	J-24 (FH)
P-25	30	16	Ductile Iron	120.0	3,050.81	4.8682	0.17	J-23	J-25
P-26	46	8	Ductile Iron	120.0	36.72	0.2344	0.00	J-25	J-26
P-27	8	16	Ductile Iron	120.0	3,014.09	4.8096	0.04	J-25	J-27
P-28	29	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-27	J-28 (FH)
P-29	93	16	Ductile Iron	120.0	3,014.09	4.8096	0.52	J-27	J-29
P-30	93	16	Ductile Iron	120.0	3,008.15	4.8001	0.52	J-29	J-30
P-31	32	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-30	J-31 (FH)
P-32	12	16	Ductile Iron	120.0	3,008.15	4.8001	0.07	J-30	J-45
P-33	14	16	Ductile Iron	120.0	2,958.20	4.7204	0.08	J-45	J-32
P-33A	20	16	Ductile Iron	120.0	3,237.02	5.1653	0.13	J-33	J-32
P-34	23	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-33	J-34 (FH)
P-35	118	8	Ductile Iron	120.0	278.82	1.7797	0.23	J-32	J-35 (FH)
P-36	42	8	Ductile Iron	120.0	278.82	1.7797	0.08	J-35 (FH)	J-36
P-37	50	8	Ductile Iron	120.0	14.31	0.0913	0.00	J-36	J-37
P-37A	43	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-37	J-37(FH)
P-38	110	8	Ductile Iron	120.0	293.13	1.8710	0.24	J-36	J-38
P-39	138	8	Ductile Iron	120.0	299.07	1.9089	0.31	J-38	J-39
P-39A	48	8	Ductile Iron	120.0	361.44	2.3070	0.15	J-39	J-39 (FH)
P-40	115	8	Ductile Iron	120.0	361.44	2.3070	0.37	J-39 (FH)	J-23
P-41	159	12	Ductile Iron	120.0	49.95	0.1417	0.00	J-45	J-40
P-42	93	12	Ductile Iron	120.0	49.95	0.1417	0.00	J-40	J-42
P-47	34	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-48(FH)
P-48	158	8	Ductile Iron	120.0	9.45	0.0603	0.00	J-41	J-47
P-48A	79	8	Ductile Iron	120.0	49.95	0.3188	0.01	J-41	J-42
P-49	204	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-47	J-48
P-49A	32	6	Ductile Iron	120.0	9.45	0.1072	0.00	J-47A	J-47
P-50	16	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-49
P-52	335	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-49	J-51
P-52A	18	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-51	J-51(FH)
P-53	72	16	Ductile Iron	120.0	3,484.61	5.5604	0.53	J-4	J-52
P-54	42	16	Ductile Iron	120.0	3,482.99	5.5578	0.31	J-52	J-7
P-69A	60	12	Ductile Iron	110.0	492.46	1.3970	0.06	J-1	J-1A(FH)
P-69B	149	12	Ductile Iron	110.0	492.46	1.3970	0.14	J-1A(FH)	J-59(FH)
P-72	55	12	Ductile Iron	110.0	526.21	1.4927	0.06	J-59(FH)	J-61
P-73A	168	12	Ductile Iron	110.0	780.01	2.2127	0.37	J-61	J-61(FH)
P-73B	242	12	Ductile Iron	110.0	780.01	2.2127	0.53	J-61(FH)	J-62
P-74	99	8	Ductile Iron	110.0	835.36	5.3319	1.77	J-62	J-63

P-86	104	8	Ductile Iron	110.0	89.73	0.5727	0.03	J-74	J-70
P-86A	235	12	Ductile Iron	110.0	2,690.26	7.6317	5.07	J-70	J-75
P-87	21	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-75	J-76(FH)
P-88	721	6	Ductile Iron	90.0	89.73	1.0181	1.22	J-74	J-77
P-92	95	12	Ductile Iron	110.0	2,972.68	8.4329	2.47	J-75	J-89
P-92A	626	12	Ductile Iron	110.0	2,972.68	8.4329	16.26	J-89	J-80(FH)
P-93	477	12	Ductile Iron	110.0	3,412.68	9.6810	16.00	J-80(FH)	J-84
P-95	33	12	Ductile Iron	110.0	440.00	1.2482	0.02	J-80(FH)	J-85
P-159	172	24	Ductile Iron	110.0	3,301.43	2.3414	0.19	J-63	J-106(FH)
P-160	195	24	Ductile Iron	110.0	3,301.43	2.3414	0.21	J-106(FH)	J-70
P-161	526	24	Ductile Iron	110.0	2,189.60	1.5529	0.27	J-86(FH)	J-107(FH)
P-162	269	24	Ductile Iron	110.0	2,189.60	1.5529	0.14	J-107(FH)	J-63
P-172	227	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-53	J-112(FH)
P-173	211	8	Ductile Iron	120.0	26.24	0.1675	0.01	J-53	J-113(FH)
P-188	2,981	16	Ductile Iron	110.0	884.14	1.4108	2.02	J-84	J-117
P-189	685	8	Ductile Iron	90.0	488.84	3.1202	6.57	J-117	J-79(F-FH)
P-190	326	24	Ductile Iron	120.0	624.05	0.4426	0.01	J-70	J-78(FH)
P-191	1,043	8	Ductile Iron	90.0	884.14	5.6433	29.97	J-77	J-79(F-FH)
P-192	89	8	Ductile Iron	120.0	794.42	5.0706	1.23	J-78(FH)	J-77
P-193	701	24	Ductile Iron	110.0	395.30	0.2803	0.01	J-117	J-81(FH)
P-194	423	12	Ductile Iron	110.0	395.30	1.1214	0.26	J-81(FH)	J-118
P-195	1,375	8	Ductile Iron	110.0	395.30	2.5231	6.14	J-118	J-119
P-196	35	8	Ductile Iron	110.0	395.30	2.5231	0.16	J-119	J-79(F-FH)
P-199	448	12	Ductile Iron	110.0	1,453.92	4.1245	3.09	J-84	J-120
P-200	595	12	Ductile Iron	110.0	1,266.42	3.5926	3.18	J-120	J-83
P-201	13	16	Ductile Iron	120.0	3,237.02	5.1653	0.08	J-33	GPV-6
P-202	11	16	Ductile Iron	120.0	3,237.02	5.1653	0.07	GPV-6	J-96
P-205	21	16	Ductile Iron	120.0	3,237.02	5.1653	0.13	J-96	J-109
P-207	7	16	Ductile Iron	120.0	3,057.74	4.8792	0.04	J-42(FH)	J-53
P-208	97	16	Ductile Iron	120.0	3,237.02	5.1653	0.62	J-109	J-43
P-209	124	16	Ductile Iron	120.0	3,057.74	4.8792	0.71	J-43	J-42(FH)
P-210	178	16	Ductile Iron	120.0	3,031.50	4.8373	1.00	J-53	J-44
P-212	200	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-44(FH)
P-213	100	16	Ductile Iron	120.0	3,031.50	4.8373	0.56	J-44	J-121
P-215	193	8	Ductile Iron	120.0	26.19	0.1672	0.00	J-121	J-58 (F-FH)
P-216	19	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-122(FH)
P-217	22	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-121	J-123(FH)
P-218	143	16	Ductile Iron	120.0	2,855.19	4.5560	0.72	J-121	J-124
P-220	169	16	Ductile Iron	120.0	2,804.70	4.4754	0.83	J-124	J-125
P-221	115	8	Ductile Iron	120.0	13.50	0.0862	0.00	J-125	J-54 (F-FH)
P-222	21	8	Ductile Iron	120.0	50.49	0.3223	0.00	J-124	J-126
P-223	142	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-126	J-127(FH)
P-224	174	8	Ductile Iron	120.0	34.56	0.2206	0.01	J-126	J-55 (F-FH)
P-225	295	16	Ductile Iron	120.0	2,791.20	4.4539	1.43	J-125	J-59 (F-FH)
P-226	221	16	Ductile Iron	120.0	2,628.12	4.1937	0.96	J-59 (F-FH)	J-128
P-227	222	8	Ductile Iron	120.0	18.76	0.1198	0.00	J-128	J-129(FH)
P-228	169	16	Ductile Iron	120.0	2,609.35	4.1637	0.72	J-128	J-130
P-229	231	8	Ductile Iron	120.0	833.33	5.3190	3.49	J-130	J-56 (F-FH)
P-230	116	16	Ductile Iron	120.0	1,776.02	2.8340	0.24	J-130	J-131
P-231	65	8	Ductile Iron	120.0	906.23	5.7843	1.15	J-131	J-60 (F-FH)
P-232	211	16	Ductile Iron	120.0	869.78	1.3879	0.12	J-131	J-132
P-233	246	8	Ductile Iron	120.0	833.33	5.3190	3.72	J-132	J-57 (F-FH)
P-234	34	16	Ductile Iron	120.0	36.45	0.0582	0.00	J-132	J-133
P-235	88	8	Ductile Iron	120.0	36.45	0.2327	0.00	J-133	J-134(FH)
P-236	151	16	Ductile Iron	120.0	0.00	0.0000	0.00	J-133	J-135(FH)

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

CITY OF RICHMOND
NON-RESIDENT WASTEWATER SERVICE CONTRACT

THIS NON-RESIDENT WASTEWATER SERVICE CONTRACT made this ____ day of _____, 2016, by and between the **CITY OF RICHMOND**, a municipal corporation of the Commonwealth of Virginia (hereinafter referred to as the "City"), and **CENTRAL VIRGINIA INVESTMENTS/ROCKETTS LANDING, LLC**, a Virginia limited liability company (hereinafter referred to as "Rocketts Landing"):

WITNESSETH:

That for and in consideration of the mutual benefits resulting from the undertakings of the parties hereto set forth in this contract (this "Wastewater Service Contract"), the City and Rocketts Landing (hereinafter together referred to as the "parties") covenant and agree each with the other as follows:

1. The parties have entered into a Utility Facilities Agreement, dated _____ __, 2016 setting forth, *inter alia*, that the City and Rocketts Landing will sign at the same time as the Utility Facilities Agreement this Wastewater Service Contract to provide wastewater service to Rocketts Landing's premises situated in the County of Henrico, Virginia, identified as Land Bay 5, Blocks 17-19 (the "Property"), as shown on the drawing, "Rocketts Landing Master Plan," prepared by Saunders & Crouse Architects, dated 2016, and attached hereto as Exhibit A and incorporated hereunder, and the foregoing project Phase Land Bay 5, Blocks 17-19 hereinafter being described as the "Project." Notwithstanding anything to the contrary, services provided hereunder by the City shall be sufficient for and consistent with an urban mixed-use project of the size and scope of the Project.

2. Rocketts Landing shall be responsible for constructing the sanitary sewer extensions and connections contemplated by this Agreement, at Rocketts Landing's sole expense, including engineering and inspection costs, and subject to the terms and conditions set forth in Section 28-592 of the Code of the City of Richmond, Virginia, as may be amended from time to time, as required by the Utility Facilities Agreement entered into by the City and Rocketts Landing this date, and as set forth in any applicable regulations promulgated by the City's Director of Public Utilities (the "Director"). All such sewer extensions and connections, including the installation, replacement, maintenance and repair of such extensions and connections, are subject to the Director's approval. All such sewer extensions and connections shall be installed only at such points as approved by the Director.

3. The City will retain the right to make or permit additional extensions of and connections to all main extensions after construction.

4. The City's obligation to supply wastewater utility service as to a parcel within the Property is conditioned on, *inter alia*, Rocketts Landing's demonstration, to the City's satisfaction, that Rocketts Landing has complied with all prevailing subdivision laws. Without limitation, a building permit, zoning confirmation letter issued by Henrico County, or zoning certification letter issued by a member of the Virginia State Bar shall satisfy this requirement.

5. The City shall supply the wastewater utility service within the Property at uniform rates fixed by the Council of the City of Richmond (the "Council"), which may be changed or modified at any time or from time to time by the Council; and if a demand or special charge is uniformly prescribed by the Council for services supplied in the City, such charge shall be applied to similar services under this Wastewater Service Contract, which may be changed or modified at any time or from time to time by the Council.

6. Rocketts Landing shall pay to the City all charges made for wastewater service, and upon failure, refusal or neglect so to do, the City shall cut off such services after giving Rocketts Landing the same written notice to that effect as is given consumers of services in the City before such service is cut off. Such service shall not be restored until such charges are paid.

7. The City's obligation to supply wastewater service within the Property is conditioned on, *inter alia*, Rocketts Landing's compliance with all of Rocketts Landing's obligations set forth by the Utility Facilities Agreement entered into by the City and Rocketts Landing this date, including, but not limited to, Rocketts Landing's obligation to pay the City the fees set forth in Article VII of the Utility Facilities Agreement entered into by the City and Rocketts Landing this date.

8. Rocketts Landing shall indemnify, keep and hold the City free and harmless from liability on account of injury or damage to Rocketts Landing or to any other person or property directly or indirectly resulting from the failure of the City to supply such service in whole or in part, and in the event that suit shall be brought against the City, either independently or jointly with Rocketts Landing on account thereof, Rocketts Landing shall defend the City in any such suit at the cost of Rocketts Landing, and in the event of a final judgment being obtained against the City, either independently or jointly with Rocketts Landing, then Rocketts Landing shall pay such judgment with all costs and hold the City harmless therefrom.

9. Rocketts Landing shall not discharge, cause to be discharged or permit to be discharged into the City's wastewater system any of the following waters, wastes or effluent:

(a) Any liquid or vapor having a temperature higher than 150 degrees Fahrenheit;

(b) Any water or waste which contains more than 100 parts per million by weight of fat, oil, or grease;

(c) Any flammable or explosive liquid, solid or gas;

(d) Any raw garbage, ashes, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, wood, paunch manure or any other solid or viscous substance that causes obstruction of the flow in sewers or interferes with the operation of the city's wastewater system;

(e) Any water or waste having a concentration of acidity and alkalinity of less than pH 5.5 or more than pH 9.0 or having any other corrosive property that causes or is likely to cause damage or injury or that constitutes or is likely to constitute a hazard to structures, equipment or personnel employed in the operation of the city's wastewater system;

(f) Any water or wastewater containing a toxic or poisonous substance that injures or is likely to injure or interferes with or is likely to interfere with any sewage treatment process or constitutes or is likely to constitute a hazard to person or animals or creates or is likely to create any hazard in the waters receiving the effluent of the main sewage treatment plant;

(g) Any noxious or malodorous gas or substance that creates a public nuisance; or

(h) Stormwater sewage or surface or subsurface water.

10. If the City finds that any of the waters, wastes or effluents discussed above in paragraph 9 are being discharged into the City's wastewater system, Rocketts Landing shall cause such discharge to be discontinued or shall provide and install such facilities, devices and equipment as are necessary to prevent the consequences resulting from the discharge of such waters, wastes or effluent into the City's wastewater system. These facilities, devices or equipment shall be of the character and capacity as required by City standards, and shall be installed in a location that will allow for ready and easy access for observation, maintenance, sampling, cleaning and inspection. All costs for providing, installing, maintaining, cleaning and operating such facilities shall be borne by Rocketts Landing. If Rocketts Landing fails, refuses or neglects to provide, install, maintain, clean or operate such facilities, devices or equipment, or fails, refuses or neglects to do so in an efficient and proper manner, Rocketts Landing shall be responsible for paying the City to treat the effluent discharged in the City's wastewater system such that there are no consequences to the City's wastewater system.

11. Rocketts Landing shall conduct all measurements, tests and analyses of such waters, wastes or effluents in accordance with the Standard Methods for the Examination of Water and Wastewater (latest edition), as prepared, approved and published jointly by the American Public Health Association and the American Water Works Association, when applicable.

12. The City will treat and dispose of the sanitary sewage conveyed into the City's wastewater system in the same manner and to the same extent or degree as it does all other sewage.

13. The City's Department of Public Utilities shall have the right to inspect all services at all times. Any violation of any term of service in paragraph 9, 10 or 11 shall be deemed sufficient cause for discontinuation of such services, after giving Rocketts Landing the same written notice to that effect as is given consumers of services in the City before such service is cut off.

14. Rocketts Landing shall not discharge sewage at any rate greater than 100 gallons per minute into any one connection, without the written approval of the Director.

15. Rocketts Landing shall install sanitary sewer lateral connections in accordance with the City's plans and specifications.

16. Rocketts Landing shall be bound and controlled by and shall observe and comply with all uniform ordinances, resolutions, rules and regulations, conditions and penalties heretofore and hereafter adopted by the Council, or pursuant to authority granted by the Council, relating to the supplying of wastewater service to consumers within and without the City.

17. The Director may suspend wastewater service under this contract at any time (and during the time) whenever, in the Director's reasonable judgment:

(a) The use of water is excessive or interferes with or impairs the maintenance and operation of the City's production and distribution system;

(b) The volume of wastewater discharged into the City's wastewater system or facilities overcharges or is likely to overcharge such system or facilities;

(c) Rocketts Landing fails, refuses or neglects to observe and comply with the terms and conditions of this Wastewater Service Contract and all laws, ordinances, resolutions, rules and regulations governing City wastewater services, and such continues for more than thirty (30) days following Rocketts Landing's receipt of written notice of same;

(d) Water is or may be required for the use of consumers in the City, or the City's wastewater system or facilities are or may be required to provide wastewater disposal service to residents of the City; or

(e) Henrico County undertakes to and does supply all such services to the full extent provided hereunder (and Rocketts Landing accepts such service from Henrico County).

18. The Chief Administrative Officer, or the Director, may suspend water service to Rocketts Landing without notice during any time in which, in the Chief Administrative Officer's judgment, or in the Director's judgment, an emergency exists, including, without limitation, the existence of conditions threatening persons, health, public safety or material damage to property.

19. In addition to Rocketts Landing's rights under the assignment provisions of the Utility Facilities Agreement (which shall also apply to this Wastewater Service Contract), Rocketts Landing may assign this Wastewater Service Contract and the rights, benefits, privileges, duties and obligations inured, received, imposed and assumed thereby to the tenants of the Property receiving wastewater service or to another owner thereof; on a connection-by-connection basis, provided, however, that Rocketts Landing shall not assign the City's right to payment for utility services provided pursuant to this contract and Rocketts Landing shall remain responsible hereunder for payment to the City for such utility services until the new customer has applied for, and has been approved by the City for, wastewater utility service in the customer's name. The parties agree that any entity applying for wastewater service as an owner of a parcel on the Property and approved by the City for wastewater utility service, shall be considered to have been assigned, by Rocketts Landing, the rights, benefits, privileges, duties and obligations inured, received, imposed and assumed under this Wastewater Service Contract as to such parcel on the Property, and as otherwise conditioned by this paragraph.

[Signature Pages to Follow]

IN WITNESS THEREOF, the City has caused its name to be subscribed hereunto by its Director of Public Utilities and Rocketts Landing has hereunto affixed Rocketts Landing's signature and seal as of the day and year first above written.

ROCKETTS LANDING:

CENTRAL VIRGINIA INVESTMENTS/ ROCKETTS LANDING, LLC,
a Virginia limited liability company

By: WVS/Central Virginia Investments, LLC,
a Virginia limited liability company

By: _____
Jason Vickers-Smith, its Member Manager

CITY:

CITY OF RICHMOND,
a municipal corporation of the City of Richmond

By: _____
Name: _____
Its: _____

APPROVED AS TO FORM:

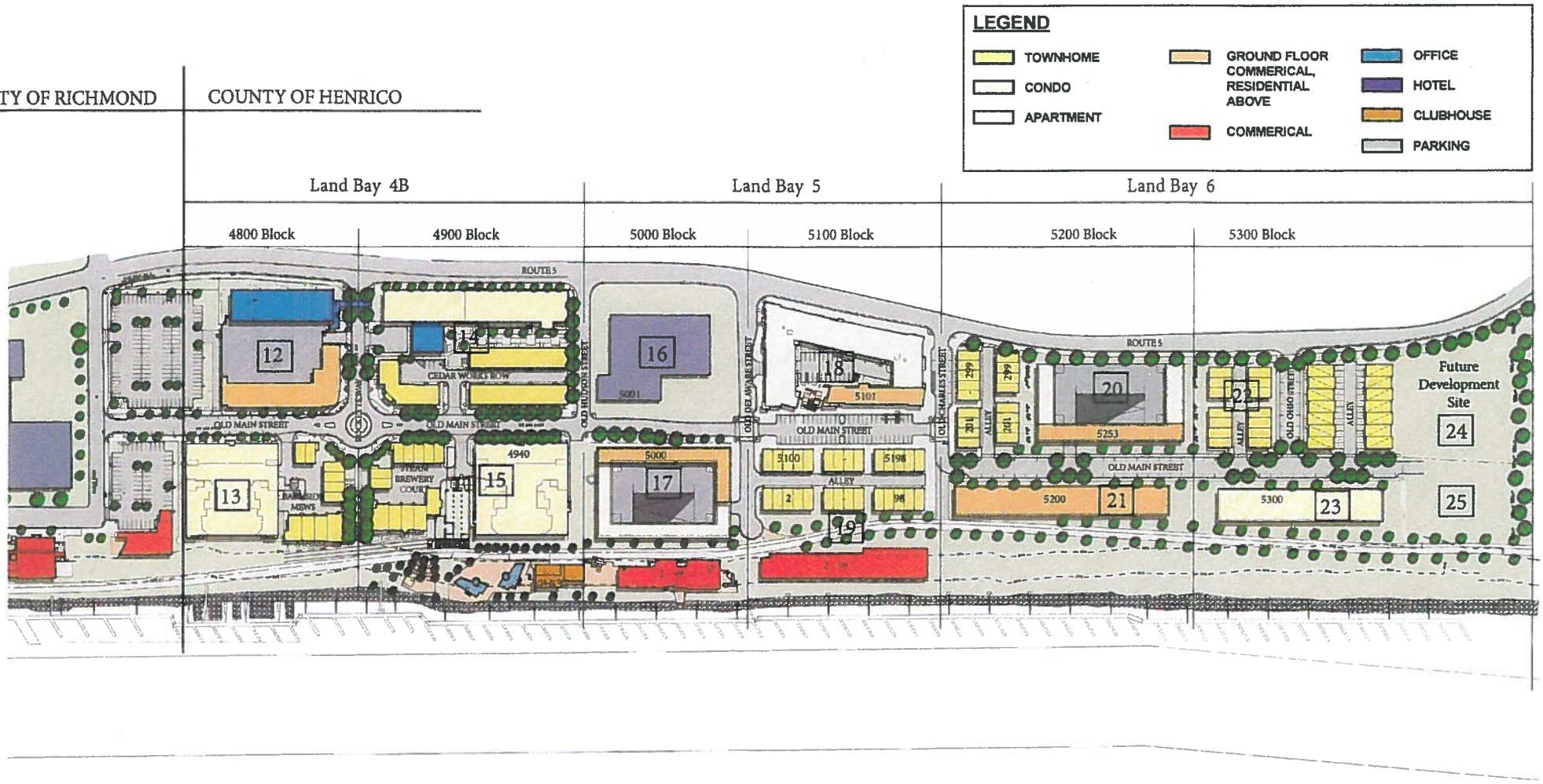
_____
City Attorney's Office

7145264-2 034844.00030

Exhibit A (to the Non-Resident Wastewater Contract)

"Rocketts Landing Master Plan"

by Saunders & Crouse Architects, dated 2016



Master Plan

Rocketts Landing Master Plan

Henrico County, Virginia

saunders + crouse ARCHITECTS

Exhibit C (to the Utility Facilities Agreement)

Forms

Non-Resident Water Contract

Non-Resident Wastewater Contract

CITY OF RICHMOND
NON-RESIDENT WATER SERVICE CONTRACT

THIS NON-RESIDENT WATER SERVICE CONTRACT made this ____ day of _____, _____, by and between the **CITY OF RICHMOND**, a municipal corporation of the Commonwealth of Virginia (hereinafter referred to as the "City"), and **CENTRAL VIRGINIA INVESTMENTS/ROCKETTS LANDING, LLC**, a Virginia limited liability company (hereinafter referred to as "Rocketts Landing"):

WITNESSETH:

That for and in consideration of the mutual benefits resulting from the undertakings of the parties hereto set forth in this contract (this "Water Service Contract"), the City and Rocketts Landing (hereinafter together referred to as the "parties") covenant and agree each with the other as follows:

1. The parties have entered into a Utility Facilities Agreement, dated _____ __, _____ setting forth, *inter alia*, that the City and Rocketts Landing will sign at the same time as the Utility Facilities Agreement this Water Service Contract to provide water service to Rocketts Landing's premises situated in the County of Henrico, Virginia, identified as Land Bay _____, Blocks _____ (the "Property"), as shown on the drawing, "Rocketts Landing Master Plan," prepared by Saunders & Crouse, dated 2016, and attached hereto as Exhibit A and incorporated hereunder, and the foregoing Phase Land Bay _____, Blocks _____ project hereinafter being described as the "Project." Notwithstanding anything to the contrary, services provided hereunder by the City shall be sufficient for and consistent with an urban mixed-use project of the size and scope of the Project.

2. Rocketts Landing shall have a City-approved cross connection program in place prior to the provision of service under this Water Service Contract.

3. The City's obligation to supply water utility service as to a parcel located within the Property is conditioned on, *inter alia*, Rocketts Landing's demonstration, to the City's satisfaction, that Rocketts Landing has complied with all prevailing subdivision laws. Without limitation, a building permit, zoning confirmation letter issued by Henrico County, or zoning certification letter issued by a member of the Virginia State Bar shall satisfy this requirement.

4. The water utility service provided hereunder by the City shall be at rates fixed by the Council of the City (the "City Council"), which the City Council may change or modify at any time and from time to time. If the City Council prescribes a demand or special charge uniformly for developer-installed water service supplied within the City, Rocketts Landing also shall pay such charge, which the City Council may change or modify uniformly at any time or from time to time.

5. Rocketts Landing shall pay service charges for all private fire protection connections in accordance with applicable City rate schedules for these connections.

6. Rocketts Landing shall pay to the City all charges made for such water utility service, and upon Rocketts Landing's failure, refusal or neglect so to do, the City shall cut off the water service after giving Rocketts Landing the same written notice to that effect as is given consumers of water in

the City before such service is cut off for non-payment of water bills, and water service shall not be restored until such charges are paid.

7. Rocketts Landing shall indemnify, keep and hold the City free and harmless from liability on account of injury or damage to Rocketts Landing or to any other person or property, directly or indirectly resulting from the failure of the City to supply such water utility service in whole or in part, and in the event that suit shall be brought against the City, either independently or jointly with Rocketts Landing on account thereof, Rocketts Landing shall defend the City in any such suit at the cost of Rocketts Landing, and in the event of a final judgment being obtained against the City, either independently or jointly with Rocketts Landing, then Rocketts Landing shall pay such judgment with all costs and hold the City harmless therefrom.

8. (a) The parties acknowledge and agree that the Project's preliminary water model ("Preliminary Model") depicting the location, character and size of the main extensions and connections and the plans and specifications for such main extensions and connections and the materials used in the installation, replacement, maintenance and repair of such main extensions and connections is approved by the City. (The attached Exhibit B _____, dated _____ provides the basis for the Preliminary Model). Any material changes to the Preliminary Model shall be subject to the approval of the City's Director of Public Utilities ("Director").

(b) Rocketts Landing shall be responsible for installing all such main extensions and connections solely at Rocketts Landing's expense, and Rocketts Landing shall provide the City with utility easements, acceptable to the Director in the Director's sole discretion, consistent with typical City standards, for all such extensions. In connection with the County Plan of Development for a parcel located within the Property, the City shall review all such main extensions and connections, including the installation, replacement, maintenance and repair of such main extensions and connections, and all such main extensions are subject to the Director's approval. Main extensions and connections shall be installed only at such points as approved by the Director.

9. The City shall have the right to make or permit additional extensions of and connections to all extensions after their construction.

10. The quality and pressure of water delivered under this contract shall be that in the main from which the water is supplied at the points and times of delivery.

11. Water shall not be delivered to any one connection with the main at a rate in excess of 100 gallons per minute without the written approval of the Director.

12. Neither Rocketts Landing nor those claiming under Rocketts Landing shall resell water supplied by the City.

13. Rocketts Landing shall be responsible for paying the entire cost, including engineering and inspection costs, of constructing the main extensions and connections contemplated by this Water Service Contract, subject to the terms and conditions set forth in the City Code, as may be amended from time to time, as required by the Utility Facilities Agreement entered into by the City and Rocketts Landing this date, and as set forth in any applicable regulations promulgated by the Director.

14. The City's obligation to supply water utility service within the Property is conditioned on, *inter alia*, Rocketts Landing's compliance as to the Property with all of Rocketts Landing's obligations set forth by the Utility Facilities Agreement entered into by the City and Rocketts Landing this date, including, but not limited to, Rocketts Landing's obligation to pay the City the fees set forth in Article VII of the Utility Facilities Agreement entered into by the City and Rocketts Landing this date.

15. The quantity of water furnished to Rocketts Landing shall be measured through meters furnished, owned, controlled, maintained and operated by the City and installed on the connection with the main extension at the cost and expense of Rocketts Landing at such points of delivery of water to Rocketts Landing as determined by the Director. Title to all water shall pass to Rocketts Landing at the point and time of delivery.

16. Rocketts Landing shall be bound and controlled by and shall observe and comply with all ordinances, resolutions, rules and regulations, conditions and penalties heretofore and hereafter adopted by the City Council, or adopted pursuant to authority granted by the City Council, relating to the supplying of water to consumers within and without the City, the sources of the City's water supply, and its purification and distribution systems.

17. The Director may suspend water service to Rocketts Landing at any time whenever in the Director's reasonable judgment:

(a) The use of water is excessive or interferes with or impairs the maintenance and operation of the City's production and distribution system,

(b) A possible contamination to the potable drinking water system could exist,

(c) Rocketts Landing fails, refuses or neglects to observe and comply with the terms and conditions of this water service contract and all laws, ordinances, resolutions, rules and regulations governing City water service, and such continues for more than thirty (30) days following Rocketts Landing's receipt of written notice of same,

(d) Water is required, or may be required, for the use of consumers in the City; or

(e) When Henrico County undertakes to and does supply all such services to the full extent provided hereunder (and Rocketts Landing accepts such services from the County).

18. The Chief Administrative Officer, or the Director, may suspend water service to Rocketts Landing without notice during any time in which, in the Chief Administrative Officer's judgment, or in the Director's judgment, an emergency exists, including, without limitation, the existence of conditions threatening persons, health, public safety or material damage to property.

19. In addition to Rocketts Landing's rights under the assignment provisions of the Utility Facilities Agreement (which shall also apply to this Water Service Contract), Rocketts Landing may assign this Water Service Contract and the rights, benefits, privileges, duties and obligations inured, received, imposed and assumed thereby to the tenants of the property receiving water service or to

another owner thereof, on a meter-by-meter basis; provided, however, that Rocketts Landing shall not assign the City's right to payment for utility services provided pursuant to this contract and Rocketts Landing shall remain responsible hereunder for payment to the City for such utility services until the new customer has applied for, and has been approved by the City for, water utility service in the new customer's name. The parties agree that any entity applying for water utility service as an owner of a parcel on the Property and approved by the City for water utility service shall be considered to have been assigned, by Rocketts Landing, the rights, benefits, privileges, duties and obligations inured, received, imposed and assumed under this Water Service Contract as to such parcel on the Property, and as otherwise conditioned by this paragraph.

[Signature Pages to Follow]

IN WITNESS THEREOF, the City has caused its name to be subscribed hereunto by its Director of Public Utilities, and Rocketts Landing has hereunto affixed Rocketts Landing's signature and seal as of the day and year first above written.

ROCKETTS LANDING:

CENTRAL VIRGINIA INVESTMENTS/ ROCKETTS LANDING, LLC,
a Virginia limited liability company

By: WVS/Central Virginia Investments, LLC,
a Virginia limited liability company

By: _____
Jason Vickers-Smith, its Member Manager

CITY:

CITY OF RICHMOND,
a municipal corporation of the City of Richmond

By: _____
Name: _____
Its: _____

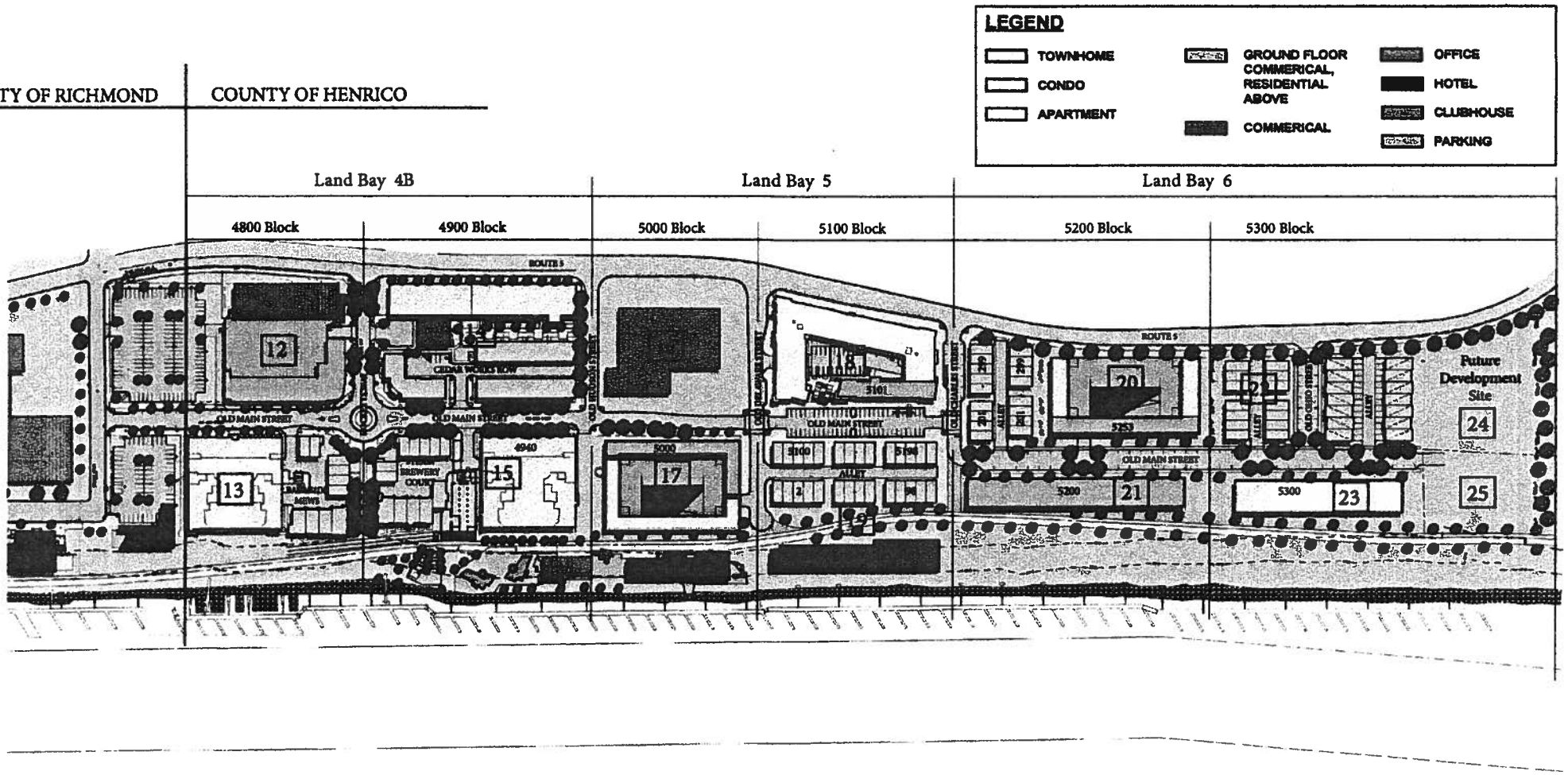
APPROVED AS TO FORM:

_____
City Attorney's Office

Exhibit A (to the Non-Resident Water Contract)

"Rocketts Landing Master Plan"

by Saunders & Crouse Architects, dated 2016



Master Plan

Rocketts Landing Master Plan

Henrico County, Virginia

saunders +crouse ARCHITECTS

Exhibit B (to the Non-Resident Water Contract)

CITY OF RICHMOND
NON-RESIDENT WASTEWATER SERVICE CONTRACT

THIS NON-RESIDENT WASTEWATER SERVICE CONTRACT made this ____ day of _____, _____, by and between the **CITY OF RICHMOND**, a municipal corporation of the Commonwealth of Virginia (hereinafter referred to as the "City"), and **CENTRAL VIRGINIA INVESTMENTS/ROCKETTS LANDING, LLC**, a Virginia limited liability company (hereinafter referred to as "Rocketts Landing"):

WITNESSETH:

That for and in consideration of the mutual benefits resulting from the undertakings of the parties hereto set forth in this contract (this "Wastewater Service Contract"), the City and Rocketts Landing (hereinafter together referred to as the "parties") covenant and agree each with the other as follows:

1. The parties have entered into a Utility Facilities Agreement, dated _____ __, _____ setting forth, *inter alia*, that the City and Rocketts Landing will sign at the same time as the Utility Facilities Agreement this Wastewater Service Contract to provide wastewater service to Rocketts Landing's premises situated in the County of Henrico, Virginia, identified as Land Bay ____, Blocks _____ (the "Property"), as shown on the drawing, "Rocketts Landing Master Plan," prepared by Saunders & Crouse, dated 2016, and attached hereto as Exhibit A and incorporated hereunder, and the foregoing Phase Land Bay _____, Blocks _____ project hereinafter being described as the "Project." Notwithstanding anything to the contrary, services provided hereunder by the City shall be sufficient for and consistent with an urban mixed-use project of the size and scope of the Project.

2. Rocketts Landing shall be responsible for constructing the sanitary sewer extensions and connections contemplated by this Agreement, at Rocketts Landing's sole expense, including engineering and inspection costs, and subject to the terms and conditions set forth in Section 28-592 of the Code of the City of Richmond, Virginia, as may be amended from time to time, as required by the Utility Facilities Agreement entered into by the City and Rocketts Landing this date, and as set forth in any applicable regulations promulgated by the City's Director of Public Utilities (the "Director"). All such sewer extensions and connections, including the installation, replacement, maintenance and repair of such extensions and connections, are subject to the Director's approval. All such sewer extensions and connections shall be installed only at such points as approved by the Director.

3. The City will retain the right to make or permit additional extensions of and connections to all main extensions after construction.

4. The City's obligation to supply wastewater utility service as to a parcel within the Property is conditioned on, *inter alia*, Rocketts Landing's demonstration, to the City's satisfaction, that Rocketts Landing has complied with all prevailing subdivision laws. Without limitation, a building permit, zoning confirmation letter issued by Henrico County, or zoning certification letter issued by a member of the Virginia State Bar shall satisfy this requirement.

5. The City shall supply the wastewater utility service within the Property at uniform rates fixed by the Council of the City of Richmond (the "Council"), which may be changed or modified at any time or from time to time by the Council; and if a demand or special charge is uniformly prescribed by the Council for services supplied in the City, such charge shall be applied to similar services under this Wastewater Service Contract, which may be changed or modified at any time or from time to time by the Council.

6. Rocketts Landing shall pay to the City all charges made for wastewater service, and upon failure, refusal or neglect so to do, the City shall cut off such services after giving Rocketts Landing the same written notice to that effect as is given consumers of services in the City before such service is cut off. Such service shall not be restored until such charges are paid.

7. The City's obligation to supply wastewater service within the Property is conditioned on, *inter alia*, Rocketts Landing's compliance with all of Rocketts Landing's obligations set forth by the Utility Facilities Agreement entered into by the City and Rocketts Landing this date, including, but not limited to, Rocketts Landing's obligation to pay the City the fees set forth in Article VII of the Utility Facilities Agreement entered into by the City and Rocketts Landing this date.

8. Rocketts Landing shall indemnify, keep and hold the City free and harmless from liability on account of injury or damage to Rocketts Landing or to any other person or property directly or indirectly resulting from the failure of the City to supply such service in whole or in part, and in the event that suit shall be brought against the City, either independently or jointly with Rocketts Landing on account thereof, Rocketts Landing shall defend the City in any such suit at the cost of Rocketts Landing, and in the event of a final judgment being obtained against the City, either independently or jointly with Rocketts Landing, then Rocketts Landing shall pay such judgment with all costs and hold the City harmless therefrom.

9. Rocketts Landing shall not discharge, cause to be discharged or permit to be discharged into the City's wastewater system any of the following waters, wastes or effluent:

(a) Any liquid or vapor having a temperature higher than 150 degrees Fahrenheit;

(b) Any water or waste which contains more than 100 parts per million by weight of fat, oil, or grease;

(c) Any flammable or explosive liquid, solid or gas;

(d) Any raw garbage, ashes, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, wood, paunch manure or any other solid or viscous substance that causes obstruction of the flow in sewers or interferes with the operation of the city's wastewater system;

(e) Any water or waste having a concentration of acidity and alkalinity of less than pH 5.5 or more than pH 9.0 or having any other corrosive property that causes or is likely to cause damage or injury or that constitutes or is likely to constitute a hazard to structures, equipment or personnel employed in the operation of the city's wastewater system;

(f) Any water or wastewater containing a toxic or poisonous substance that injures or is likely to injure or interferes with or is likely to interfere with any sewage treatment process or constitutes or is likely to constitute a hazard to person or animals or creates or is likely to create any hazard in the waters receiving the effluent of the main sewage treatment plant;

(g) Any noxious or malodorous gas or substance that creates a public nuisance; or

(h) Stormwater sewage or surface or subsurface water.

10. If the City finds that any of the waters, wastes or effluents discussed above in paragraph 9 are being discharged into the City's wastewater system, Rocketts Landing shall cause such discharge to be discontinued or shall provide and install such facilities, devices and equipment as are necessary to prevent the consequences resulting from the discharge of such waters, wastes or effluent into the City's wastewater system. These facilities, devices or equipment shall be of the character and capacity as required by City standards, and shall be installed in a location that will allow for ready and easy access for observation, maintenance, sampling, cleaning and inspection. All costs for providing, installing, maintaining, cleaning and operating such facilities shall be borne by Rocketts Landing. If Rocketts Landing fails, refuses or neglects to provide, install, maintain, clean or operate such facilities, devices or equipment, or fails, refuses or neglects to do so in an efficient and proper manner, Rocketts Landing shall be responsible for paying the City to treat the effluent discharged in the City's wastewater system such that there are no consequences to the City's wastewater system.

11. Rocketts Landing shall conduct all measurements, tests and analyses of such waters, wastes or effluents in accordance with the Standard Methods for the Examination of Water and Wastewater (latest edition), as prepared, approved and published jointly by the American Public Health Association and the American Water Works Association, when applicable.

12. The City will treat and dispose of the sanitary sewage conveyed into the City's wastewater system in the same manner and to the same extent or degree as it does all other sewage.

13. The City's Department of Public Utilities shall have the right to inspect all services at all times. Any violation of any term of service in paragraph 9, 10 or 11 shall be deemed sufficient cause for discontinuation of such services, after giving Rocketts Landing the same written notice to that effect as is given consumers of services in the City before such service is cut off.

14. Rocketts Landing shall not discharge sewage at any rate greater than 100 gallons per minute into any one connection, without the written approval of the Director.

15. Rocketts Landing shall install sanitary sewer lateral connections in accordance with the City's plans and specifications.

16. Rocketts Landing shall be bound and controlled by and shall observe and comply with all uniform ordinances, resolutions, rules and regulations, conditions and penalties heretofore and hereafter adopted by the Council, or pursuant to authority granted by the Council, relating to the supplying of wastewater service to consumers within and without the City.

17. The Director may suspend wastewater service under this contract at any time (and during the time) whenever, in the Director's reasonable judgment:

(a) The use of water is excessive or interferes with or impairs the maintenance and operation of the City's production and distribution system;

(b) The volume of wastewater discharged into the City's wastewater system or facilities overcharges or is likely to overcharge such system or facilities;

(c) Rocketts Landing fails, refuses or neglects to observe and comply with the terms and conditions of this Wastewater Service Contract and all laws, ordinances, resolutions, rules and regulations governing City wastewater services, and such continues for more than thirty (30) days following Rocketts Landing's receipt of written notice of same;

(d) Water is or may be required for the use of consumers in the City, or the City's wastewater system or facilities are or may be required to provide wastewater disposal service to residents of the City; or

(e) Henrico County undertakes to and does supply all such services to the full extent provided hereunder (and Rocketts Landing accepts such service from Henrico County).

18. The Chief Administrative Officer, or the Director, may suspend water service to Rocketts Landing without notice during any time in which, in the Chief Administrative Officer's judgment, or in the Director's judgment, an emergency exists, including, without limitation, the existence of conditions threatening persons, health, public safety or material damage to property.

19. In addition to Rocketts Landing's rights under the assignment provisions of the Utility Facilities Agreement (which shall also apply to this Wastewater Service Contract), Rocketts Landing may assign this Wastewater Service Contract and the rights, benefits, privileges, duties and obligations inured, received, imposed and assumed thereby to the tenants of the Property receiving wastewater service or to another owner thereof; on a connection-by-connection basis, provided, however, that Rocketts Landing shall not assign the City's right to payment for utility services provided pursuant to this contract and Rocketts Landing shall remain responsible hereunder for payment to the City for such utility services until the new customer has applied for, and has been approved by the City for, wastewater utility service in the customer's name. The parties agree that any entity applying for wastewater service as an owner of a parcel on the Property and approved by the City for wastewater utility service, shall be considered to have been assigned, by Rocketts Landing, the rights, benefits, privileges, duties and obligations inured, received, imposed and assumed under this Wastewater Service Contract as to such parcel on the Property, and as otherwise conditioned by this paragraph.

[Signature Pages to Follow]

IN WITNESS THEREOF, the City has caused its name to be subscribed hereunto by its Director of Public Utilities and Rocketts Landing has hereunto affixed Rocketts Landing's signature and seal as of the day and year first above written.

ROCKETTS LANDING:

CENTRAL VIRGINIA INVESTMENTS/ ROCKETTS LANDING, LLC,
a Virginia limited liability company

By: WVS/Central Virginia Investments, LLC,
a Virginia limited liability company

By: _____
Jason Vickers-Smith, its Member Manager

CITY:

CITY OF RICHMOND,
a municipal corporation of the City of Richmond

By: _____
Name: _____
Its: _____

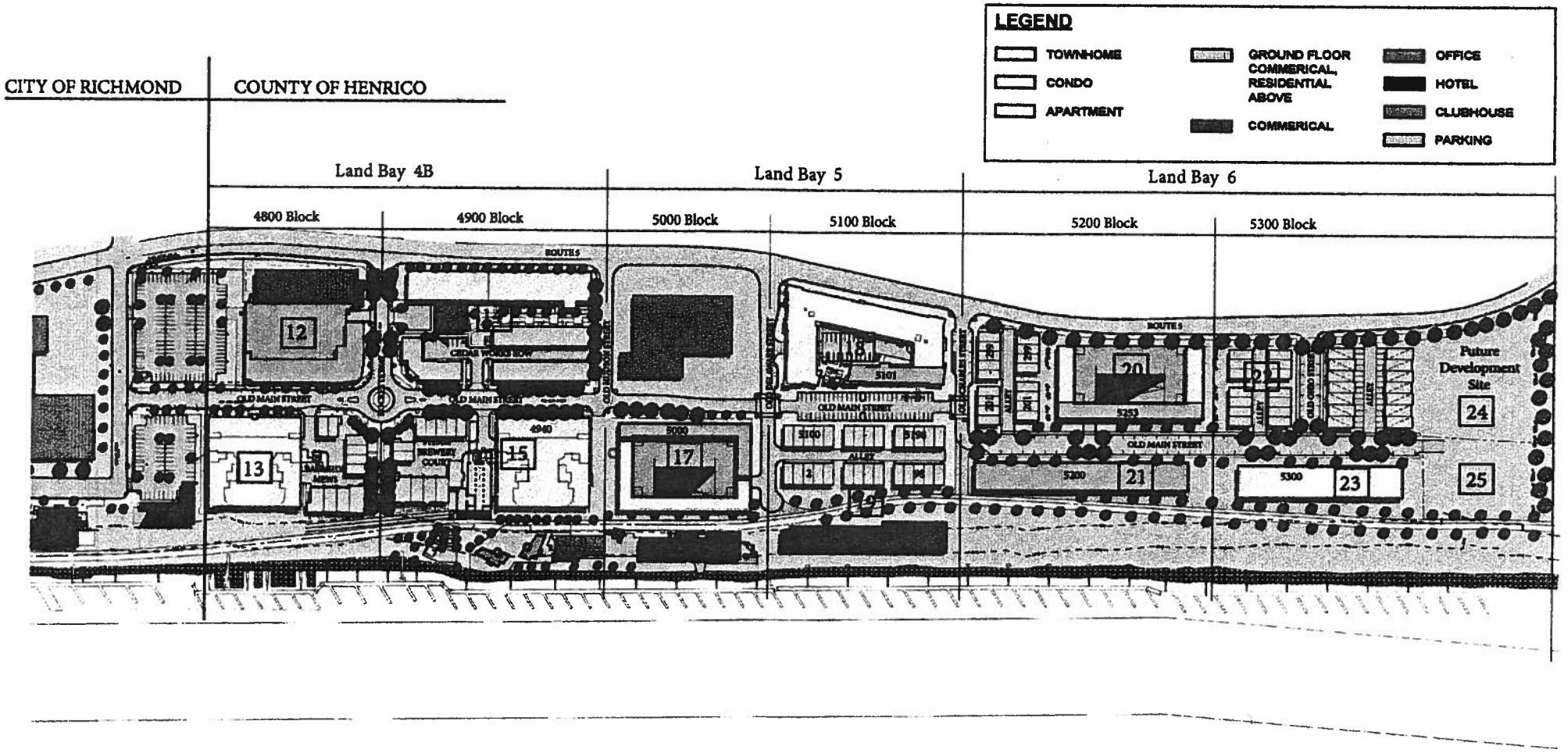
APPROVED AS TO FORM:

_____
City Attorney's Office

7145264-2 034844.00030

Exhibit A (to the Non-Resident Wastewater Contract)

"Rocketts Landing Master Plan"
by Saunders & Crouse Architects, dated 2016



Master Plan

Rocketts Landing Master Plan

Henrico County, Virginia

saunders +crouse ARCHITECTS

Exhibit D (to the Utility Facilities Agreement)

"Rocketts Landing Water System Modeling Updates"
Letter from Christopher Petree to Jonathan Cosby, dated March 13, 2015

TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.

1001 Boulders Parkway
Suite 300
Richmond, VA 23225

P 804.200.6500
F 804.560.1016
www.timmons.com

March 13, 2015

Mr. Jonathan Cosby, PE
City of Richmond Department of Public Utilities
400 Jefferson Davis Highway
Richmond, VA 23224

RE: Rocketts Landing Water System Modeling Updates

Dear Mr. Cosby:

Recently the Rocketts Landing developer (*The WVS Companies, LLC*) has commissioned a revised Master Plan for Phase 3 and the future build-out of the development. Building layouts, sizes and proposed uses have changed, along with the conceptual waterline alignment, prompting the submission of the Rocketts Landing hydraulic analysis for your review. This memo is intended to help clarify what the changes are and why they were made.

Design Changes

Waterline Alignment

In order to accommodate the proposed building locations in the revised Master Plan, portions of the waterline contained in the future phase were relocated. The general concept of a 16-inch main with 8-inch laterals remained as the basis of design. During our analysis, it was discovered that the 8-inch loop, previously shown along the western edge of the future phase, is no longer necessary to meet the minimum hydraulic performance requirements. It is possible that looped system will be utilized as the design of the future development progresses, however, any loops were eliminated from the this model analysis in an effort provide conservative results.

Flow Demands

Blocks 17 through 26 were revised in the hydraulic analysis to include new demands for the proposed building types. For Phase 2, Block 17 was previously modeled as a combined residential/commercial site with a total peak domestic demand of 92.1 gpm. The new Master Plan designates Block 17 as 318,750 gross square feet (gsf) of office space, resulting in a total peak domestic demand of 179.3 gpm. Also part of Phase 2, Block 19 was modeled as 55 residential units in the previous submission with a total peak domestic demand of 41.3 gpm. Block 19 is now 45 residential units combined with 24,000 gsf of office space for a total peak domestic demand of 55.7 gpm. Block 18 (Phase 3) was previously modeled as 35 townhomes, for a combined peak domestic demand of 26 gallons per minute (gpm). For this submission, Block 18 has been changed to 200,000 gsf of apartments, for a total peak domestic demand of 150.1 gpm.

Rocketts Landing Water System Modeling Updates
March 13, 2015

All of the demands associated with the future build-out were adjusted according to the proposed Master Plan as well. Block 20 was previously modeled as 25 townhomes with a total peak demand of 19 gpm and is now a parking deck with 122,500 gsf for a total peak demand of 23.0 gpm. Block 21 was previously modeled as 21 residential units with a total peak demand of 15.7 gpm and is now 187,000 gsf of apartments with a total peak demand of 140.13 gpm. Block 22 was previously modeled with a peak demand of 154.2 gpm and is now 100,000 gsf of office space with a peak demand of 18.8 gpm. Block 23 was previously modeled as 136 residential units with a total peak demand of 102.1 gpm and is now 58,333 gsf of condominiums with a total peak demand of 36.5 gpm. Block 24 was previously modeled as 50,000 gsf of commercial space with a total peak demand of 67.5 gpm and is now modeled as 280,000 gsf of parking deck with a total peak demand of 52.7 gpm. Block 25 was previously modeled as 120,000 gsf of commercial space with a total peak demand of 162.0 gpm and is now 116,666 gsf of condominiums with a total peak demand of 72.9 gpm. Block 26 was previously modeled as 80,000 gsf of commercial space with a total peak demand of 108.0 gpm and is now 100,000 gsf of office space with a total peak demand of 18.8 gpm.

Since the previous submission, plans were formulated to build the new Stone Brewery near Williamsburg Avenue and Nicholson Street. A total peak demand of 440 gpm was included in this model to account for that development.

These changes reduce the combined peak domestic demand for the model from 3258 gpm to 3,238. However, approximately 77% of those demands are applied to the water system upstream of the new conceptual alignment. The combined peak demands for the future build-out were reduced from 974.9 gpm to 449.3 gpm. This reduction in peak flow significantly improved the hydraulic performance of the proposed improvements.

As a conservative measure, the ISO demand for each building in the new Master Plan was modeled as 2,500 gpm, split amongst three fire hydrants near the applicable block of development. When considering the building sizes and projected uses and construction types of the current master plan, it is very likely that the actual ISO demand requirements will be less for most future buildings.

Scenarios

Because the changes described above will only affect Phase 3 and future phases of Rocketts Landing, the hydraulic analysis results accompanying this letter will primarily focus on these phases.

The scenarios included in the attached analysis are:

Full Build-out – Average Domestic Demand
Full Build-out – Peak Hour Demand (PHD)
Full Build-out – PHD + ISO @ Block 17 (Phase 2)
Full Build-out – PHD + ISO @ Block 18 (Phase 3)
Full Build-out – PHD + ISO @ Block 19 (Phase 2)
Full Build-out – PHD + ISO @ Block 20 (future phase)
Full Build-out – PHD + ISO @ Block 21 (future phase)
Full Build-out – PHD + ISO @ Block 22 (future phase)
Full Build-out – PHD + ISO @ Block 23 (future phase)
Full Build-out – PHD + ISO @ Block 24 (future phase)

Rocketts Landing Water System Modeling Updates
March 13, 2015

Full Build-out – PHD + ISO @ Block 25 (future phase)
Full Build-out – PHD + ISO @ Block 26 (future phase)
Full Build-out – PHD + Fire Flow (500 gpm from each hydrant, non-simultaneously)

Analysis Results

By revising the peak demands according to the new Master Plan, the 8-inch loop along the western edge of the future phase is no longer needed to maintain residual pressures above the 20 psi minimum specified by State and City standards. Below is a brief summary of the system's performance:

- The lowest system-wide residual pressure under the *Full Build-out – PHD* scenario is **51.6 psi.** (peak domestic demands only)
- The lowest system-wide residual pressure under the *Full Build-out – PHD + ISO @ Block 22* scenario is **20.0 psi.** (worst-case result for the entire hydraulic analysis)

A full report of model results, including pipe tables, can be found in **Appendix A.**

If you have any comments or questions on any of information provided, please do not hesitate to contact me at (804) 200-6422 or chris.petree@timmons.com.

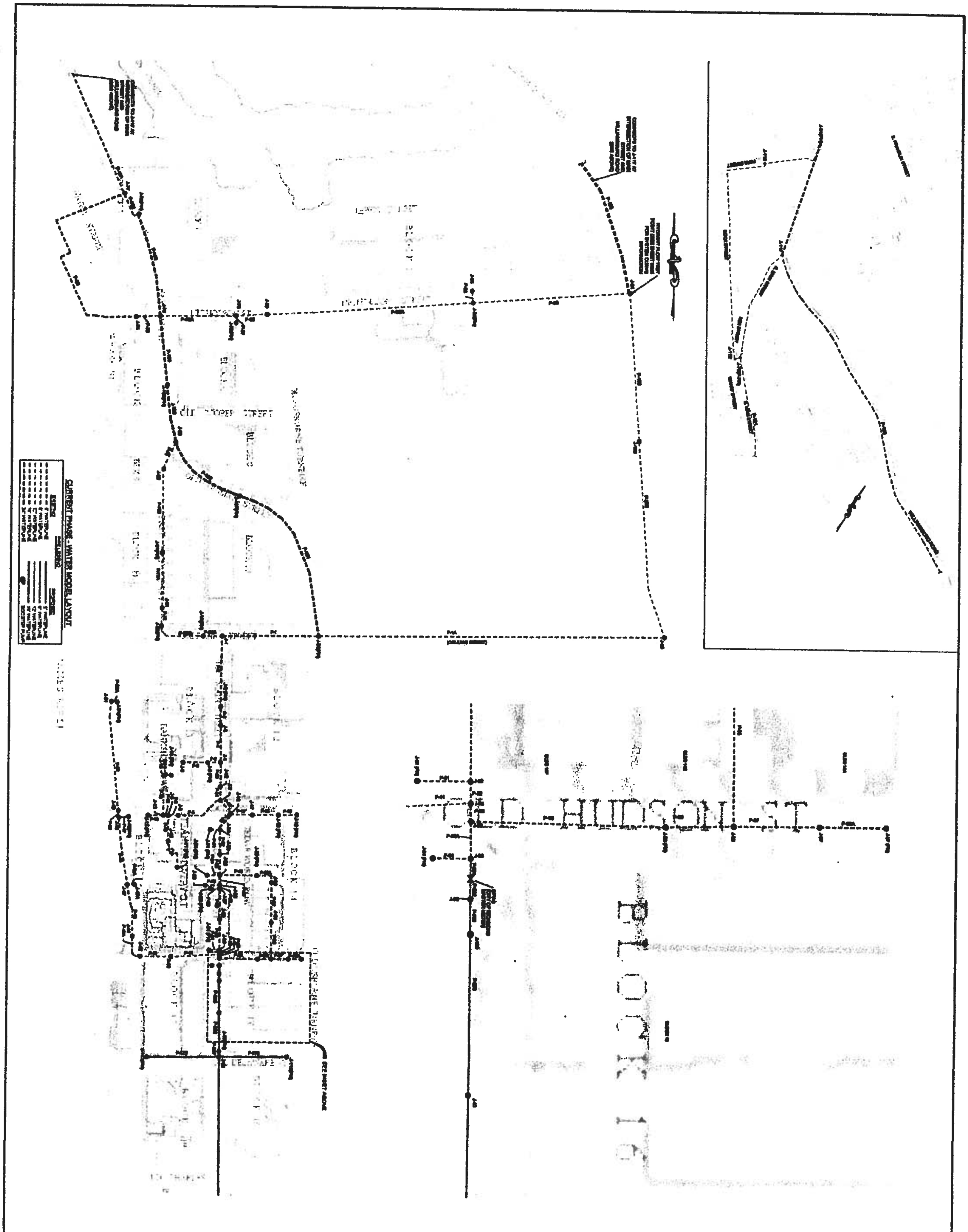
We would also be happy to meet with you to discuss the enclosed information should you need to.

Respectfully Submitted,

Chris Petree

Christopher Petree, PE
Project Manager, Timmons Group

APPENDIX A



TIMMONS GROUP

YOUR VISION ACHIEVED THROUGH OURS.

THIS DRAWING PREPARED AT THE CORPORATE OFFICE

Site Development | Residential | Infrastructure | Technology

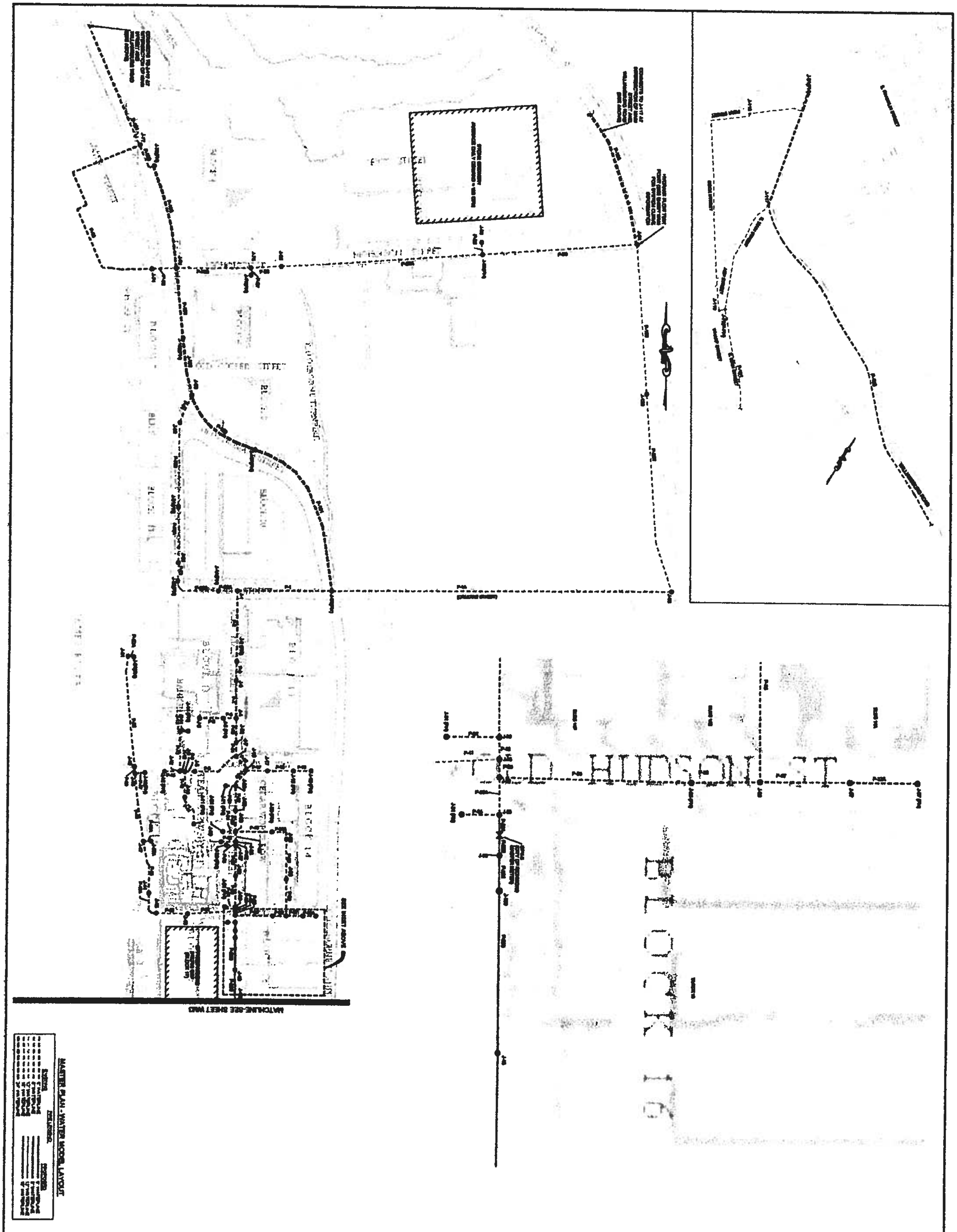
ROCKETTS LANDING

CITY OF RICHMOND AND HENRICO COUNTY

WATER MODEL - EXISTING AND PHASE 3 WATERLINE LAYOUT

SHEET NO.	JOB NO.	SCALE	CHECKED BY	DESIGNED BY	DRAWN BY	DATE
WM1	67006	NOT TO SCALE	C. PETREE	C. PETREE	C. NORMAN	3/6/14

DATE	REVISION DESCRIPTION
11/4/14	REVISED WATERLINES TO SINGLE-LINE SYSTEM
11/4/14	REVISED BLOCKS 18 & 20 FROM APTS TO TOWNHOMES
3/6/15	REVISED BLOCKS 17-26 PER NEW MASTER PLAN



TIMMONS GROUP

YOUR VISION ACHIEVED THROUGH OURS.

THIS DRAWING PREPARED AT THE CORPORATE OFFICE

Site Development | Residential | Infrastructure | Technology

ROCKETTS LANDING

CITY OF RICHMOND AND HENRICO COUNTY

WATER MODEL EXISTING, PHASE 3 AND ULTIMATE WATERLINE LAYOUT

67006

WM2

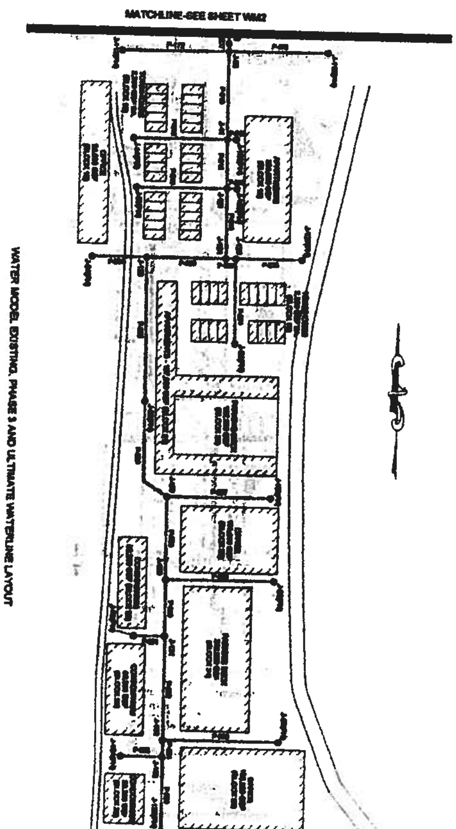
NOT TO SCALE

C. PETREE

C. PETREE

C. MCNAIR

DATE	REVISION DESCRIPTION
[illegible]	REVISED WATERLINES TO SINGLE-LINE SYSTEM
[illegible]	REVISED BLOCKS 18 & 20 FROM APTS TO TOWNHOMES
[illegible]	REVISED BLOCKS 17-18 PER NEW MASTER PLAN



TIMMONS GROUP

YOUR VISION ACHIEVED THROUGH OURS.

THIS DRAWING PREPARED AT THE CORPORATE OFFICE

1001 Boulders Parkway, Suite 300 | Richmond, VA 23225
TEL 804.200.6500 FAX 804.560.1016 www.timmons.com

Site Development | Residential | Infrastructure | Technology

DATE	REVISION DESCRIPTION
11/8/05	REVISED WATERLINES TO SINGLE LINE SYSTEM
11/8/05	REVISED BLOCKS 18 & 20 FROM APTS TO TOWNHOMES
2/6/06	REVISED BLOCKS 17-20 PER NEW MASTER PLAN

DATE: 3/6/06

DESIGNED BY: C. FETTKE
DRAWN BY: C. HOWARD
CHECKED BY: C. FETTKE
SCALE: NOT TO SCALE

ROCKETTS LANDING

CITY OF RICHMOND AND HENRICO COUNTY

WATER MODEL - DESIGN CRITERIA AND RESULTS

JOB NO. 67006
SHEET NO. WM3

Full Build-out – Average Domestic Demand

Scenario: Full Build-out - Average Domestic Demand
Current Time Step: 0.000Hr
FlexTable: Junction Table

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	37.00	109.40	214.40	76.8
J-1A(FH)	37.00	0.00	214.40	76.8
J-2 (FH)	45.00	0.00	214.36	73.3
J-3	46.00	45.70	214.35	72.8
J-4	47.00	0.00	214.33	72.4
J-5 (FH)	47.00	0.00	214.33	72.4
J-6	48.00	16.70	214.33	72.0
J-7	48.00	0.00	214.31	72.0
J-8	49.00	1.40	214.31	71.5
J-9	49.00	0.00	214.31	71.5
J-10	49.00	1.40	214.31	71.5
J-11 (FH)	49.00	0.00	214.31	71.5
J-12	49.00	0.00	214.31	71.5
J-13	48.00	1.10	214.31	72.0
J-14 (FH)	48.00	0.00	214.31	72.0
J-15 (FH)	46.00	0.00	214.31	72.8
J-16	48.00	0.00	214.30	72.0
J-17	47.00	0.60	214.30	72.4
J-18 (FH)	48.00	0.00	214.30	72.0
J-19 (FH)	48.00	19.80	214.30	72.0
J-20	48.00	0.00	214.30	71.9
J-21 (FH)	48.00	0.00	214.30	71.9
J-22	49.00	1.90	214.29	71.5
J-23	49.00	0.00	214.28	71.5
J-24 (FH)	49.00	0.00	214.28	71.5
J-25	49.00	0.00	214.27	71.5
J-26	49.00	13.60	214.27	71.5
J-27	49.00	0.00	214.27	71.5
J-28 (FH)	49.00	0.00	214.27	71.5
J-29	49.00	2.20	214.26	71.5
J-30	48.00	0.00	214.26	71.9
J-31 (FH)	48.00	0.00	214.26	71.9
J-32	48.00	0.00	214.25	71.9
J-33	48.00	0.00	214.25	71.9
J-34 (FH)	48.00	0.00	214.25	71.9
J-35 (FH)	49.00	0.00	214.26	71.5
J-36	49.00	0.00	214.26	71.5
J-37	49.00	5.30	214.26	71.5
J-37(FH)	47.00	0.00	214.26	72.4
J-38	49.00	2.20	214.26	71.5
J-39	50.00	23.10	214.26	71.1
J-39 (FH)	49.00	0.00	214.27	71.5
J-40	45.00	0.00	214.25	73.2
J-41	29.00	15.00	214.25	80.2
J-42	28.00	0.00	214.25	80.6
J-42(FH)	27.00	0.00	208.36	78.5
J-43	27.00	66.40	208.37	78.5
J-44	28.00	0.00	208.36	78.0
J-44(FH)	28.00	0.00	208.36	78.0
J-45	48.00	0.00	214.25	71.9
J-47	25.00	0.00	214.25	81.9
J-47A	25.00	3.50	214.25	81.9
J-48	22.00	0.00	214.25	83.2
J-48(FH)	19.00	0.00	214.25	84.5
J-49	22.00	0.00	214.25	83.2
J-51	18.00	0.00	214.25	84.9
J-51(FH)	19.00	0.00	214.25	84.5

J-52	47.00	0.60	214.32	72.4
J-53	38.00	0.00	208.36	73.7
J-54 (F-FH)	38.00	5.00	208.35	73.7
J-55 (F-FH)	38.00	0.00	208.35	73.7
J-56 (F-FH)	34.00	19.50	208.34	75.4
J-57 (F-FH)	31.00	6.95	208.34	76.7
J-58 (F-FH)	30.00	9.70	208.35	77.2
J-59 (F-FH)	27.00	60.40	208.34	78.5
J-59(FH)	36.00	12.50	214.40	77.2
J-60 (F-FH)	27.00	27.00	208.34	78.5
J-61	37.00	94.00	214.40	76.8
J-61(FH)	38.00	0.00	214.41	76.3
J-62	38.00	20.50	214.43	76.3
J-63	32.00	102.40	214.50	79.0
J-70	27.00	38.00	214.52	81.1
J-74	27.00	0.00	214.52	81.1
J-75	23.00	104.60	214.73	83.0
J-76(FH)	24.00	0.00	214.73	82.5
J-77	22.00	0.00	214.58	83.3
J-78(FH)	22.00	63.10	214.52	83.3
J-79(F-FH)	23.00	0.00	216.19	83.6
J-80(FH)	32.00	0.00	215.67	79.5
J-81(FH)	83.00	0.00	216.55	57.8
J-83	46.00	0.00	216.29	73.7
J-84	31.00	0.00	216.65	80.3
J-85	33.00	162.96	215.67	79.0
J-86(FH)	40.00	0.00	214.49	75.5
J-89	24.00	0.00	214.85	82.6
J-96	48.00	0.00	208.38	69.4
J-106(FH)	36.00	0.00	214.51	77.2
J-107(FH)	36.00	0.00	214.50	77.2
J-109	47.00	0.00	208.38	69.8
J-112(FH)	28.00	0.00	208.36	78.0
J-113(FH)	45.00	57.40	208.34	70.7
J-117	52.00	0.00	216.55	71.2
J-118	37.00	0.00	216.53	77.7
J-119	13.00	0.00	216.20	87.9
J-120	36.00	69.44	216.46	78.1
J-121	30.44	55.60	208.35	77.0
J-122(FH)	46.00	0.00	208.36	70.2
J-123(FH)	46.00	0.00	208.35	70.2
J-124	33.74	0.00	208.35	75.5
J-125	37.52	0.00	208.35	73.9
J-126	48.00	5.90	208.35	69.4
J-127(FH)	53.00	0.00	208.35	67.2
J-128	28.00	0.00	208.34	78.0
J-129(FH)	52.00	6.95	208.34	67.6
J-130	34.00	0.00	208.34	75.4
J-131	36.00	0.00	208.34	74.6
J-132	34.00	0.00	208.34	75.4
J-133	32.00	0.00	208.34	76.3
J-134(FH)	22.00	13.50	208.34	80.6
J-135(FH)	28.00	0.00	208.34	78.0

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Scenario: Full Build-out - Average Domestic Demand
Current Time Step: 0.000Hr
FlexTable: Pipe Table

Label	Length (Scaled) (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (Absolute) (gpm)	Velocity (ft/s)	Headloss (ft)	Start Node	Stop Node
P-1	297	16	Ductile Iron	110.0	577.52	0.9216	0.09	J-1	J-86(FH)
P-1A	1,046	8	Ductile Iron	120.0	258.03	1.6470	1.80	J-83	J-86(FH)
P-2	211	16	Ductile Iron	120.0	488.40	0.7793	0.04	J-1	J-2 (FH)
P-3	56	16	Ductile Iron	120.0	488.40	0.7793	0.01	J-2 (FH)	J-3
P-4	112	16	Ductile Iron	120.0	442.70	0.7064	0.02	J-3	J-4
P-5	40	8	Ductile Iron	120.0	16.70	0.1066	0.00	J-4	J-5 (FH)
P-6	76	8	Ductile Iron	120.0	16.70	0.1066	0.00	J-5 (FH)	J-6
P-8	149	8	Ductile Iron	120.0	3.90	0.0249	0.00	J-7	J-8
P-9	31	8	Ductile Iron	120.0	2.50	0.0160	0.00	J-8	J-9
P-10	77	8	Ductile Iron	120.0	1.40	0.0089	0.00	J-9	J-10
P-11	91	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-10	J-11 (FH)
P-12	16	8	Ductile Iron	120.0	1.10	0.0070	0.00	J-9	J-12
P-13	120	8	Ductile Iron	120.0	1.10	0.0070	0.00	J-12	J-13
P-14	25	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-13	J-14 (FH)
P-15	49	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-12	J-15 (FH)
P-16	55	16	Ductile Iron	120.0	421.50	0.6726	0.01	J-7	J-16
P-17	70	12	Ductile Iron	120.0	20.40	0.0579	0.00	J-16	J-17
P-18	82	12	Ductile Iron	120.0	19.80	0.0562	0.00	J-17	J-18 (FH)
P-19	56	12	Ductile Iron	120.0	19.80	0.0562	0.00	J-18 (FH)	J-19 (FH)
P-20	58	16	Ductile Iron	120.0	401.10	0.6400	0.01	J-16	J-20
P-21	30	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-20	J-21 (FH)
P-22	75	16	Ductile Iron	120.0	401.10	0.6400	0.01	J-20	J-22
P-23	63	16	Ductile Iron	120.0	399.20	0.6370	0.01	J-22	J-23
P-24	40	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-23	J-24 (FH)
P-25	30	16	Ductile Iron	120.0	347.59	0.5547	0.00	J-23	J-25
P-26	46	8	Ductile Iron	120.0	13.60	0.0868	0.00	J-25	J-26
P-27	8	16	Ductile Iron	120.0	333.99	0.5330	0.00	J-25	J-27
P-28	29	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-27	J-28 (FH)
P-29	93	16	Ductile Iron	120.0	333.99	0.5330	0.01	J-27	J-29
P-30	93	16	Ductile Iron	120.0	331.79	0.5294	0.01	J-29	J-30
P-31	32	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-30	J-31 (FH)
P-32	12	16	Ductile Iron	120.0	331.79	0.5294	0.00	J-30	J-45
P-33	14	16	Ductile Iron	120.0	313.29	0.4999	0.00	J-45	J-32
P-33A	20	16	Ductile Iron	120.0	334.30	0.5334	0.00	J-33	J-32
P-34	23	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-33	J-34 (FH)
P-35	118	8	Ductile Iron	120.0	21.01	0.1341	0.00	J-32	J-35 (FH)
P-36	42	8	Ductile Iron	120.0	21.01	0.1341	0.00	J-35 (FH)	J-36
P-37	50	8	Ductile Iron	120.0	5.30	0.0338	0.00	J-36	J-37
P-37A	43	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-37	J-37(FH)
P-38	110	8	Ductile Iron	120.0	26.31	0.1679	0.00	J-36	J-38
P-39	138	8	Ductile Iron	120.0	28.51	0.1820	0.00	J-38	J-39
P-39A	48	8	Ductile Iron	120.0	51.61	0.3294	0.00	J-39	J-39 (FH)
P-40	115	8	Ductile Iron	120.0	51.61	0.3294	0.01	J-39 (FH)	J-23
P-41	159	12	Ductile Iron	120.0	18.50	0.0525	0.00	J-45	J-40
P-42	93	12	Ductile Iron	120.0	18.50	0.0525	0.00	J-40	J-42
P-47	34	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-48(FH)
P-48	158	8	Ductile Iron	120.0	3.50	0.0223	0.00	J-41	J-47
P-48A	79	8	Ductile Iron	120.0	18.50	0.1181	0.00	J-41	J-42
P-49	204	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-47	J-48
P-49A	32	6	Ductile Iron	120.0	3.50	0.0397	0.00	J-47A	J-47
P-50	16	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-49
P-52	335	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-49	J-51
P-52A	18	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-51	J-51(FH)
P-53	72	16	Ductile Iron	120.0	426.00	0.6798	0.01	J-4	J-52
P-54	42	16	Ductile Iron	120.0	425.40	0.6788	0.01	J-52	J-7
P-69A	60	12	Ductile Iron	110.0	20.28	0.0575	0.00	J-1	J-1A(FH)
P-69B	149	12	Ductile Iron	110.0	20.28	0.0575	0.00	J-1A(FH)	J-59(FH)
P-72	55	12	Ductile Iron	110.0	32.78	0.0930	0.00	J-59(FH)	J-61
P-73A	168	12	Ductile Iron	110.0	126.78	0.3596	0.01	J-61	J-61(FH)
P-73B	242	12	Ductile Iron	110.0	126.78	0.3596	0.02	J-61(FH)	J-62
P-74	99	8	Ductile Iron	110.0	147.28	0.9400	0.07	J-62	J-63

P-86	104	8	Ductile Iron	110.0	18.59	0.1186	0.00	J-74	J-70
P-86A	235	12	Ductile Iron	110.0	487.87	1.3840	0.21	J-70	J-75
P-87	21	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-75	J-76(FH)
P-88	721	6	Ductile Iron	90.0	18.59	0.2109	0.06	J-74	J-77
P-92	95	12	Ductile Iron	110.0	592.47	1.6807	0.12	J-75	J-89
P-92A	626	12	Ductile Iron	110.0	592.47	1.6807	0.82	J-89	J-80(FH)
P-93	477	12	Ductile Iron	110.0	755.43	2.1430	0.98	J-80(FH)	J-84
P-95	33	12	Ductile Iron	110.0	162.96	0.4623	0.00	J-80(FH)	J-85
P-159	172	24	Ductile Iron	110.0	569.17	0.4037	0.01	J-63	J-106(FH)
P-160	195	24	Ductile Iron	110.0	569.17	0.4037	0.01	J-106(FH)	J-70
P-161	526	24	Ductile Iron	110.0	319.49	0.2266	0.01	J-86(FH)	J-107(FH)
P-162	269	24	Ductile Iron	110.0	319.49	0.2266	0.00	J-107(FH)	J-63
P-172	227	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-53	J-112(FH)
P-173	211	8	Ductile Iron	120.0	57.40	0.3664	0.02	J-53	J-113(FH)
P-188	2,981	16	Ductile Iron	110.0	182.40	0.2911	0.11	J-84	J-117
P-189	685	8	Ductile Iron	90.0	100.85	0.6437	0.35	J-117	J-79(F-FH)
P-190	326	24	Ductile Iron	120.0	100.71	0.0714	0.00	J-70	J-78(FH)
P-191	1,043	8	Ductile Iron	90.0	182.40	1.1642	1.61	J-77	J-79(F-FH)
P-192	89	8	Ductile Iron	120.0	163.81	1.0456	0.07	J-78(FH)	J-77
P-193	701	24	Ductile Iron	110.0	81.55	0.0578	0.00	J-117	J-81(FH)
P-194	423	12	Ductile Iron	110.0	81.55	0.2313	0.01	J-81(FH)	J-118
P-195	1,375	8	Ductile Iron	110.0	81.55	0.5205	0.33	J-118	J-119
P-196	35	8	Ductile Iron	110.0	81.55	0.5205	0.01	J-119	J-79(F-FH)
P-199	448	12	Ductile Iron	110.0	327.48	0.9290	0.20	J-84	J-120
P-200	595	12	Ductile Iron	110.0	258.03	0.7320	0.17	J-120	J-83
P-201	13	16	Ductile Iron	120.0	334.30	0.5334	0.00	J-33	GPV-6
P-202	11	16	Ductile Iron	120.0	334.30	0.5334	0.00	GPV-6	J-96
P-205	21	16	Ductile Iron	120.0	334.30	0.5334	0.00	J-96	J-109
P-207	7	16	Ductile Iron	120.0	267.90	0.4275	0.00	J-42(FH)	J-53
P-208	97	16	Ductile Iron	120.0	334.30	0.5334	0.01	J-109	J-43
P-209	124	16	Ductile Iron	120.0	267.90	0.4275	0.01	J-43	J-42(FH)
P-210	178	16	Ductile Iron	120.0	210.50	0.3359	0.01	J-53	J-44
P-212	200	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-44(FH)
P-213	100	16	Ductile Iron	120.0	210.50	0.3359	0.00	J-44	J-121
P-215	193	8	Ductile Iron	120.0	9.70	0.0619	0.00	J-121	J-58 (F-FH)
P-216	19	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-122(FH)
P-217	22	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-121	J-123(FH)
P-218	143	16	Ductile Iron	120.0	145.20	0.2317	0.00	J-121	J-124
P-220	169	16	Ductile Iron	120.0	139.30	0.2223	0.00	J-124	J-125
P-221	115	8	Ductile Iron	120.0	5.00	0.0319	0.00	J-125	J-54 (F-FH)
P-222	21	8	Ductile Iron	120.0	5.90	0.0377	0.00	J-124	J-126
P-223	142	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-126	J-127(FH)
P-224	174	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-126	J-55 (F-FH)
P-225	295	16	Ductile Iron	120.0	134.30	0.2143	0.01	J-125	J-59 (F-FH)
P-226	221	16	Ductile Iron	120.0	73.90	0.1179	0.00	J-59 (F-FH)	J-128
P-227	222	8	Ductile Iron	120.0	6.95	0.0444	0.00	J-128	J-129(FH)
P-228	169	16	Ductile Iron	120.0	66.95	0.1068	0.00	J-128	J-130
P-229	231	8	Ductile Iron	120.0	19.50	0.1245	0.00	J-130	J-56 (F-FH)
P-230	116	16	Ductile Iron	120.0	47.45	0.0757	0.00	J-130	J-131
P-231	65	8	Ductile Iron	120.0	27.00	0.1723	0.00	J-131	J-60 (F-FH)
P-232	211	16	Ductile Iron	120.0	20.45	0.0326	0.00	J-131	J-132
P-233	246	8	Ductile Iron	120.0	6.95	0.0444	0.00	J-132	J-57 (F-FH)
P-234	34	16	Ductile Iron	120.0	13.50	0.0215	0.00	J-132	J-133
P-235	88	8	Ductile Iron	120.0	13.50	0.0862	0.00	J-133	J-134(FH)
P-236	151	16	Ductile Iron	120.0	0.00	0.0000	0.00	J-133	J-135(FH)

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Full Build-out – Peak Hour Demand (PHD)

Scenario: Full Build-out - Peak Hour Demand
Current Time Step: 0.000Hr
FlexTable: Junction Table

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	37.00	295.38	188.64	65.6
J-1A(FH)	37.00	0.00	188.64	65.6
J-2 (FH)	45.00	0.00	188.39	62.0
J-3	46.00	123.39	188.32	61.6
J-4	47.00	0.00	188.21	61.1
J-5 (FH)	47.00	0.00	188.20	61.1
J-6	48.00	45.09	188.20	60.7
J-7	48.00	0.00	188.10	60.6
J-8	49.00	3.78	188.10	60.2
J-9	49.00	0.00	188.10	60.2
J-10	49.00	3.78	188.10	60.2
J-11 (FH)	49.00	0.00	188.10	60.2
J-12	49.00	0.00	188.10	60.2
J-13	48.00	2.97	188.10	60.6
J-14 (FH)	48.00	0.00	188.10	60.6
J-15 (FH)	46.00	0.00	188.10	61.5
J-16	48.00	0.00	188.05	60.6
J-17	47.00	1.62	188.05	61.0
J-18 (FH)	48.00	0.00	188.05	60.6
J-19 (FH)	48.00	53.46	188.05	60.6
J-20	48.00	0.00	188.00	60.6
J-21 (FH)	48.00	0.00	188.00	60.6
J-22	49.00	5.13	187.94	60.1
J-23	49.00	0.00	187.89	60.1
J-24 (FH)	49.00	0.00	187.89	60.1
J-25	49.00	0.00	187.87	60.1
J-26	49.00	36.72	187.86	60.1
J-27	49.00	0.00	187.86	60.1
J-28 (FH)	49.00	0.00	187.86	60.1
J-29	49.00	5.94	187.81	60.1
J-30	48.00	0.00	187.75	60.5
J-31 (FH)	48.00	0.00	187.75	60.5
J-32	48.00	0.00	187.74	60.5
J-33	48.00	0.00	187.72	60.5
J-34 (FH)	48.00	0.00	187.72	60.5
J-35 (FH)	49.00	0.00	187.75	60.0
J-36	49.00	0.00	187.75	60.0
J-37	49.00	14.31	187.75	60.0
J-37(FH)	47.00	0.00	187.75	60.9
J-38	49.00	5.94	187.77	60.0
J-39	50.00	62.37	187.80	59.6
J-39 (FH)	49.00	0.00	187.82	60.1
J-40	45.00	0.00	187.74	61.8
J-41	29.00	40.50	187.73	68.7
J-42	28.00	0.00	187.74	69.1
J-42(FH)	27.00	0.00	180.22	66.3
J-43	27.00	179.28	180.27	66.3
J-44	28.00	0.00	180.18	65.8
J-44(FH)	28.00	0.00	180.18	65.8
J-45	48.00	0.00	187.74	60.5
J-47	25.00	0.00	187.73	70.4
J-47A	25.00	9.45	187.73	70.4
J-48	22.00	0.00	187.73	71.7
J-48(FH)	19.00	0.00	187.73	73.0
J-49	22.00	0.00	187.73	71.7
J-51	18.00	0.00	187.73	73.4
J-51(FH)	19.00	0.00	187.73	73.0

J-52	47.00	1.62	188.14	61.1
J-53	38.00	0.00	180.22	61.5
J-54 (F-FH)	38.00	13.50	180.11	61.5
J-55 (F-FH)	38.00	0.00	180.13	61.5
J-56 (F-FH)	34.00	52.65	180.05	63.2
J-57 (F-FH)	31.00	18.76	180.06	64.5
J-58 (F-FH)	30.00	26.19	180.15	65.0
J-59 (F-FH)	27.00	163.08	180.08	66.2
J-59(FH)	36.00	33.75	188.65	66.0
J-60 (F-FH)	27.00	72.90	180.05	66.2
J-61	37.00	253.80	188.65	65.6
J-61(FH)	38.00	0.00	188.73	65.2
J-62	38.00	55.35	188.84	65.3
J-63	32.00	276.48	189.29	68.1
J-70	27.00	102.60	189.38	70.3
J-74	27.00	0.00	189.39	70.3
J-75	23.00	282.42	190.74	72.6
J-76(FH)	24.00	0.00	190.74	72.1
J-77	22.00	0.00	189.80	72.6
J-78(FH)	22.00	170.37	189.39	72.4
J-79(F-FH)	23.00	0.00	199.94	76.6
J-80(FH)	32.00	0.00	196.68	71.2
J-81(FH)	83.00	0.00	202.16	51.6
J-83	46.00	0.00	200.56	66.9
J-84	31.00	0.00	202.85	74.4
J-85	33.00	440.00	196.66	70.8
J-86(FH)	40.00	0.00	189.22	64.6
J-89	24.00	0.00	191.52	72.5
J-96	48.00	0.00	180.34	57.3
J-106(FH)	36.00	0.00	189.33	66.3
J-107(FH)	36.00	0.00	189.26	66.3
J-109	47.00	0.00	180.33	57.7
J-112(FH)	28.00	0.00	180.22	65.9
J-113(FH)	45.00	154.98	180.08	58.4
J-117	52.00	0.00	202.17	65.0
J-118	37.00	0.00	202.07	71.4
J-119	13.00	0.00	200.00	80.9
J-120	36.00	187.50	201.62	71.7
J-121	30.44	150.12	180.15	64.8
J-122(FH)	46.00	0.00	180.18	58.1
J-123(FH)	46.00	0.00	180.15	58.0
J-124	33.74	0.00	180.13	63.3
J-125	37.52	0.00	180.11	61.7
J-126	48.00	15.93	180.13	57.2
J-127(FH)	53.00	0.00	180.13	55.0
J-128	28.00	0.00	180.07	65.8
J-129(FH)	52.00	18.76	180.07	55.4
J-130	34.00	0.00	180.07	63.2
J-131	36.00	0.00	180.06	62.3
J-132	34.00	0.00	180.06	63.2
J-133	32.00	0.00	180.06	64.1
J-134(FH)	22.00	36.45	180.06	68.4
J-135(FH)	28.00	0.00	180.06	65.8

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Scenario: Full Build-out - Peak Hour Demand
Current Time Step: 0.000Hr
FlexTable: Pipe Table

Label	Length (Scaled) (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (Absolute) (gpm)	Velocity (ft/s)	Headloss (ft)	Start Node	Stop Node
P-1	297	16	Ductile Iron	110.0	1,559.31	2.4882	0.58	J-1	J-86(FH)
P-1A	1,046	8	Ductile Iron	120.0	696.69	4.4468	11.35	J-83	J-86(FH)
P-2	211	16	Ductile Iron	120.0	1,318.68	2.1042	0.25	J-1	J-2 (FH)
P-3	56	16	Ductile Iron	120.0	1,318.68	2.1042	0.07	J-2 (FH)	J-3
P-4	112	16	Ductile Iron	120.0	1,195.29	1.9073	0.11	J-3	J-4
P-5	40	8	Ductile Iron	120.0	45.09	0.2878	0.00	J-4	J-5 (FH)
P-6	76	8	Ductile Iron	120.0	45.09	0.2878	0.01	J-5 (FH)	J-6
P-8	149	8	Ductile Iron	120.0	10.53	0.0672	0.00	J-7	J-8
P-9	31	8	Ductile Iron	120.0	6.75	0.0431	0.00	J-8	J-9
P-10	77	8	Ductile Iron	120.0	3.78	0.0241	0.00	J-9	J-10
P-11	91	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-10	J-11 (FH)
P-12	16	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-9	J-12
P-13	120	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-12	J-13
P-14	25	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-13	J-14 (FH)
P-15	49	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-12	J-15 (FH)
P-16	55	16	Ductile Iron	120.0	1,138.05	1.8160	0.05	J-7	J-16
P-17	70	12	Ductile Iron	120.0	55.08	0.1563	0.00	J-16	J-17
P-18	82	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-17	J-18 (FH)
P-19	56	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-18 (FH)	J-19 (FH)
P-20	58	16	Ductile Iron	120.0	1,082.97	1.7281	0.05	J-16	J-20
P-21	30	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-20	J-21 (FH)
P-22	75	16	Ductile Iron	120.0	1,082.97	1.7281	0.06	J-20	J-22
P-23	63	16	Ductile Iron	120.0	1,077.84	1.7199	0.05	J-22	J-23
P-24	40	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-23	J-24 (FH)
P-25	30	16	Ductile Iron	120.0	938.50	1.4976	0.02	J-23	J-25
P-26	46	8	Ductile Iron	120.0	36.72	0.2344	0.00	J-25	J-26
P-27	8	16	Ductile Iron	120.0	901.78	1.4390	0.00	J-25	J-27
P-28	29	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-27	J-28 (FH)
P-29	93	16	Ductile Iron	120.0	901.78	1.4390	0.06	J-27	J-29
P-30	93	16	Ductile Iron	120.0	895.84	1.4295	0.05	J-29	J-30
P-31	32	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-30	J-31 (FH)
P-32	12	16	Ductile Iron	120.0	895.84	1.4295	0.01	J-30	J-45
P-33	14	16	Ductile Iron	120.0	845.89	1.3498	0.01	J-45	J-32
P-33A	20	16	Ductile Iron	120.0	902.61	1.4403	0.01	J-33	J-32
P-34	23	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-33	J-34 (FH)
P-35	118	8	Ductile Iron	120.0	56.72	0.3620	0.01	J-32	J-35 (FH)
P-36	42	8	Ductile Iron	120.0	56.72	0.3620	0.00	J-35 (FH)	J-36
P-37	50	8	Ductile Iron	120.0	14.31	0.0913	0.00	J-36	J-37
P-37A	43	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-37	J-37(FH)
P-38	110	8	Ductile Iron	120.0	71.03	0.4534	0.02	J-36	J-38
P-39	138	8	Ductile Iron	120.0	76.97	0.4913	0.03	J-38	J-39
P-39A	48	8	Ductile Iron	120.0	139.34	0.8894	0.03	J-39	J-39 (FH)
P-40	115	8	Ductile Iron	120.0	139.34	0.8894	0.06	J-39 (FH)	J-23
P-41	159	12	Ductile Iron	120.0	49.95	0.1417	0.00	J-45	J-40
P-42	93	12	Ductile Iron	120.0	49.95	0.1417	0.00	J-40	J-42
P-47	34	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-48(FH)
P-48	158	8	Ductile Iron	120.0	9.45	0.0603	0.00	J-41	J-47
P-48A	79	8	Ductile Iron	120.0	49.95	0.3188	0.01	J-41	J-42
P-49	204	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-47	J-48
P-49A	32	6	Ductile Iron	120.0	9.45	0.1072	0.00	J-47A	J-47
P-50	16	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-49
P-52	335	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-49	J-51
P-52A	18	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-51	J-51(FH)
P-53	72	16	Ductile Iron	120.0	1,150.20	1.8354	0.07	J-4	J-52
P-54	42	16	Ductile Iron	120.0	1,148.58	1.8328	0.04	J-52	J-7
P-69A	60	12	Ductile Iron	110.0	54.75	0.1553	0.00	J-1	J-1A(FH)
P-69B	149	12	Ductile Iron	110.0	54.75	0.1553	0.00	J-1A(FH)	J-59(FH)
P-72	55	12	Ductile Iron	110.0	88.50	0.2511	0.00	J-59(FH)	J-61
P-73A	168	12	Ductile Iron	110.0	342.30	0.9710	0.08	J-61	J-61(FH)
P-73B	242	12	Ductile Iron	110.0	342.30	0.9710	0.11	J-61(FH)	J-62
P-74	99	8	Ductile Iron	110.0	397.65	2.5381	0.45	J-62	J-63

P-86	104	8	Ductile Iron	110.0	49.87	0.3183	0.01	J-74	J-70
P-86A	235	12	Ductile Iron	110.0	1,317.26	3.7368	1.35	J-70	J-75
P-87	21	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-75	J-76(FH)
P-88	721	6	Ductile Iron	90.0	49.87	0.5659	0.41	J-74	J-77
P-92	95	12	Ductile Iron	110.0	1,599.68	4.5380	0.78	J-75	J-89
P-92A	626	12	Ductile Iron	110.0	1,599.68	4.5380	5.16	J-89	J-80(FH)
P-93	477	12	Ductile Iron	110.0	2,039.68	5.7861	6.17	J-80(FH)	J-84
P-95	33	12	Ductile Iron	110.0	440.00	1.2482	0.02	J-80(FH)	J-85
P-159	172	24	Ductile Iron	110.0	1,536.76	1.0899	0.04	J-63	J-106(FH)
P-160	195	24	Ductile Iron	110.0	1,536.76	1.0899	0.05	J-106(FH)	J-70
P-161	526	24	Ductile Iron	110.0	862.63	0.6118	0.05	J-86(FH)	J-107(FH)
P-162	269	24	Ductile Iron	110.0	862.63	0.6118	0.02	J-107(FH)	J-63
P-172	227	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-53	J-112(FH)
P-173	211	8	Ductile Iron	120.0	154.98	0.9892	0.14	J-53	J-113(FH)
P-188	2,981	16	Ductile Iron	110.0	492.47	0.7858	0.68	J-84	J-117
P-189	685	8	Ductile Iron	90.0	272.28	1.7379	2.22	J-117	J-79(F-FH)
P-190	326	24	Ductile Iron	120.0	272.22	0.1931	0.00	J-70	J-78(FH)
P-191	1,043	8	Ductile Iron	90.0	492.47	3.1433	10.14	J-77	J-79(F-FH)
P-192	89	8	Ductile Iron	120.0	442.59	2.8250	0.42	J-78(FH)	J-77
P-193	701	24	Ductile Iron	110.0	220.18	0.1562	0.01	J-117	J-81(FH)
P-194	423	12	Ductile Iron	110.0	220.18	0.6246	0.09	J-81(FH)	J-118
P-195	1,375	8	Ductile Iron	110.0	220.18	1.4054	2.08	J-118	J-119
P-196	35	8	Ductile Iron	110.0	220.18	1.4054	0.05	J-119	J-79(F-FH)
P-199	448	12	Ductile Iron	110.0	884.19	2.5083	1.23	J-84	J-120
P-200	595	12	Ductile Iron	110.0	696.69	1.9764	1.05	J-120	J-83
P-201	13	16	Ductile Iron	120.0	902.61	1.4403	0.01	J-33	GPV-6
P-202	11	16	Ductile Iron	120.0	902.61	1.4403	0.01	GPV-6	J-96
P-205	21	16	Ductile Iron	120.0	902.61	1.4403	0.01	J-96	J-109
P-207	7	16	Ductile Iron	120.0	723.33	1.1542	0.00	J-42(FH)	J-53
P-208	97	16	Ductile Iron	120.0	902.61	1.4403	0.06	J-109	J-43
P-209	124	16	Ductile Iron	120.0	723.33	1.1542	0.05	J-43	J-42(FH)
P-210	178	16	Ductile Iron	120.0	568.35	0.9069	0.05	J-53	J-44
P-212	200	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-44(FH)
P-213	100	16	Ductile Iron	120.0	568.35	0.9069	0.03	J-44	J-121
P-215	193	8	Ductile Iron	120.0	26.19	0.1672	0.00	J-121	J-58 (F-FH)
P-216	19	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-122(FH)
P-217	22	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-121	J-123(FH)
P-218	143	16	Ductile Iron	120.0	392.04	0.6256	0.02	J-121	J-124
P-220	169	16	Ductile Iron	120.0	376.11	0.6002	0.02	J-124	J-125
P-221	115	8	Ductile Iron	120.0	13.50	0.0862	0.00	J-125	J-54 (F-FH)
P-222	21	8	Ductile Iron	120.0	15.93	0.1017	0.00	J-124	J-126
P-223	142	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-126	J-127(FH)
P-224	174	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-126	J-55 (F-FH)
P-225	295	16	Ductile Iron	120.0	362.61	0.5786	0.03	J-125	J-59 (F-FH)
P-226	221	16	Ductile Iron	120.0	199.53	0.3184	0.01	J-59 (F-FH)	J-128
P-227	222	8	Ductile Iron	120.0	18.76	0.1198	0.00	J-128	J-129(FH)
P-228	169	16	Ductile Iron	120.0	180.77	0.2884	0.01	J-128	J-130
P-229	231	8	Ductile Iron	120.0	52.65	0.3361	0.02	J-130	J-56 (F-FH)
P-230	116	16	Ductile Iron	120.0	128.12	0.2044	0.00	J-130	J-131
P-231	65	8	Ductile Iron	120.0	72.90	0.4653	0.01	J-131	J-60 (F-FH)
P-232	211	16	Ductile Iron	120.0	55.22	0.0881	0.00	J-131	J-132
P-233	246	8	Ductile Iron	120.0	18.76	0.1198	0.00	J-132	J-57 (F-FH)
P-234	34	16	Ductile Iron	120.0	36.45	0.0582	0.00	J-132	J-133
P-235	88	8	Ductile Iron	120.0	36.45	0.2327	0.00	J-133	J-134(FH)
P-236	151	16	Ductile Iron	120.0	0.00	0.0000	0.00	J-133	J-135(FH)

Full Build-out – PHD + Sprinkler + ISO @ Block 17
(Phase 2)

Scenario: Full Build-out - PHD + ISO @ 17 (Phase 2)
Current Time Step: 0.000Hr
FlexTable: Junction Table

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	37.00	295.38	122.77	37.1
J-1A(FH)	37.00	0.00	122.84	37.1
J-2 (FH)	45.00	0.00	120.79	32.8
J-3	46.00	123.39	120.26	32.1
J-4	47.00	0.00	119.26	31.3
J-5 (FH)	47.00	0.00	119.26	31.3
J-6	48.00	45.09	119.26	30.8
J-7	48.00	0.00	118.27	30.4
J-8	49.00	3.78	118.27	30.0
J-9	49.00	0.00	118.27	30.0
J-10	49.00	3.78	118.27	30.0
J-11 (FH)	49.00	0.00	118.27	30.0
J-12	49.00	0.00	118.27	30.0
J-13	48.00	2.97	118.27	30.4
J-14 (FH)	48.00	0.00	118.27	30.4
J-15 (FH)	46.00	0.00	118.27	31.3
J-16	48.00	0.00	117.80	30.2
J-17	47.00	1.62	117.80	30.6
J-18 (FH)	48.00	0.00	117.80	30.2
J-19 (FH)	48.00	53.46	117.79	30.2
J-20	48.00	0.00	117.31	30.0
J-21 (FH)	48.00	0.00	117.31	30.0
J-22	49.00	5.13	116.68	29.3
J-23	49.00	0.00	116.15	29.1
J-24 (FH)	49.00	0.00	116.15	29.1
J-25	49.00	0.00	115.94	29.0
J-26	49.00	36.72	115.94	29.0
J-27	49.00	0.00	115.89	28.9
J-28 (FH)	49.00	0.00	115.89	28.9
J-29	49.00	5.94	115.27	28.7
J-30	48.00	0.00	114.65	28.8
J-31 (FH)	48.00	0.00	114.65	28.8
J-32	48.00	0.00	114.48	28.8
J-33	48.00	0.00	114.33	28.7
J-34 (FH)	48.00	833.33	113.99	28.5
J-35 (FH)	49.00	0.00	114.77	28.5
J-36	49.00	0.00	114.87	28.5
J-37	49.00	14.31	114.87	28.5
J-37(FH)	47.00	0.00	114.87	29.4
J-38	49.00	5.94	115.16	28.6
J-39	50.00	62.37	115.54	28.4
J-39 (FH)	49.00	0.00	115.72	28.9
J-40	45.00	92.07	114.55	30.1
J-41	29.00	40.50	114.55	37.0
J-42	28.00	0.00	114.55	37.4
J-42(FH)	27.00	833.33	101.48	32.2
J-43	27.00	179.28	101.96	32.4
J-44	28.00	0.00	101.15	31.6
J-44(FH)	28.00	833.33	98.13	30.3
J-45	48.00	0.00	114.57	28.8
J-47	25.00	0.00	114.55	38.7
J-47A	25.00	9.45	114.55	38.7
J-48	22.00	0.00	114.55	40.0
J-48(FH)	19.00	0.00	114.55	41.3
J-49	22.00	0.00	114.55	40.0
J-51	18.00	0.00	114.55	41.8
J-51(FH)	19.00	0.00	114.55	41.3

J-52	47.00	1.62	118.64	31.0
J-53	38.00	0.00	101.47	27.5
J-54 (F-FH)	38.00	13.50	101.06	27.3
J-55 (F-FH)	38.00	34.56	101.08	27.3
J-56 (F-FH)	34.00	52.65	101.00	29.0
J-57 (F-FH)	31.00	18.76	101.01	30.3
J-58 (F-FH)	30.00	26.19	101.10	30.8
J-59 (F-FH)	27.00	163.08	101.03	32.0
J-59(FH)	36.00	33.75	123.02	37.6
J-60 (F-FH)	27.00	72.90	101.01	32.0
J-61	37.00	253.80	123.09	37.2
J-61(FH)	38.00	0.00	123.51	37.0
J-62	38.00	55.35	124.12	37.3
J-63	32.00	276.48	126.14	40.7
J-70	27.00	102.60	126.60	43.1
J-74	27.00	0.00	126.63	43.1
J-75	23.00	282.42	132.40	47.3
J-76(FH)	24.00	0.00	132.40	46.9
J-77	22.00	0.00	128.00	45.9
J-78(FH)	22.00	170.37	126.61	45.3
J-79(F-FH)	23.00	0.00	161.68	60.0
J-80(FH)	32.00	0.00	153.54	52.6
J-81(FH)	83.00	0.00	169.05	37.2
J-83	46.00	0.00	164.32	51.2
J-84	31.00	0.00	171.33	60.7
J-85	33.00	440.00	153.52	52.1
J-86(FH)	40.00	0.00	125.67	37.1
J-89	24.00	0.00	135.18	48.1
J-96	48.00	0.00	102.48	23.6
J-106(FH)	36.00	0.00	126.36	39.1
J-107(FH)	36.00	0.00	125.98	38.9
J-109	47.00	0.00	102.39	24.0
J-112(FH)	28.00	0.00	101.47	31.8
J-113(FH)	45.00	26.24	101.46	24.4
J-117	52.00	0.00	169.06	50.6
J-118	37.00	0.00	168.75	57.0
J-119	13.00	0.00	161.86	64.4
J-120	36.00	187.50	167.90	57.1
J-121	30.44	329.40	101.11	30.6
J-122(FH)	46.00	0.00	101.15	23.9
J-123(FH)	46.00	0.00	101.11	23.8
J-124	33.74	0.00	101.09	29.1
J-125	37.52	0.00	101.07	27.5
J-126	48.00	15.93	101.08	23.0
J-127(FH)	53.00	0.00	101.08	20.8
J-128	28.00	0.00	101.03	31.6
J-129(FH)	52.00	18.76	101.02	21.2
J-130	34.00	0.00	101.02	29.0
J-131	36.00	0.00	101.02	28.1
J-132	34.00	0.00	101.02	29.0
J-133	32.00	0.00	101.02	29.9
J-134(FH)	22.00	36.45	101.01	34.2
J-135(FH)	28.00	0.00	101.02	31.6

Scenario: Full Build-out - PHD + ISO @ 17 (Phase 2)
Current Time Step: 0.000Hr
FlexTable: Pipe Table

Label	Length (Scaled) (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (Absolute) (gpm)	Velocity (ft/s)	Headloss (ft)	Start Node	Stop Node
P-1	297	16	Ductile Iron	110.0	3,735.40	5.9606	2.90	J-1	J-86(FH)
P-1A	1,046	8	Ductile Iron	120.0	1,350.22	8.6181	38.64	J-83	J-86(FH)
P-2	211	16	Ductile Iron	120.0	3,995.86	6.3762	1.99	J-1	J-2 (FH)
P-3	56	16	Ductile Iron	120.0	3,995.86	6.3762	0.53	J-2 (FH)	J-3
P-4	112	16	Ductile Iron	120.0	3,872.46	6.1793	1.00	J-3	J-4
P-5	40	8	Ductile Iron	120.0	45.09	0.2878	0.00	J-4	J-5 (FH)
P-6	76	8	Ductile Iron	120.0	45.09	0.2878	0.01	J-5 (FH)	J-6
P-8	149	8	Ductile Iron	120.0	.10.53	0.0672	0.00	J-7	J-8
P-9	31	8	Ductile Iron	120.0	6.75	0.0431	0.00	J-8	J-9
P-10	77	8	Ductile Iron	120.0	3.78	0.0241	0.00	J-9	J-10
P-11	91	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-10	J-11 (FH)
P-12	16	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-9	J-12
P-13	120	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-12	J-13
P-14	25	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-13	J-14 (FH)
P-15	49	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-12	J-15 (FH)
P-16	55	16	Ductile Iron	120.0	3,815.22	6.0879	0.48	J-7	J-16
P-17	70	12	Ductile Iron	120.0	55.08	0.1563	0.00	J-16	J-17
P-18	82	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-17	J-18 (FH)
P-19	56	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-18 (FH)	J-19 (FH)
P-20	58	16	Ductile Iron	120.0	3,760.14	6.0000	0.49	J-16	J-20
P-21	30	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-20	J-21 (FH)
P-22	75	16	Ductile Iron	120.0	3,760.14	6.0000	0.63	J-20	J-22
P-23	63	16	Ductile Iron	120.0	3,755.01	5.9919	0.53	J-22	J-23
P-24	40	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-23	J-24 (FH)
P-25	30	16	Ductile Iron	120.0	3,361.79	5.3644	0.21	J-23	J-25
P-26	46	8	Ductile Iron	120.0	36.72	0.2344	0.00	J-25	J-26
P-27	8	16	Ductile Iron	120.0	3,325.07	5.3058	0.05	J-25	J-27
P-28	29	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-27	J-28 (FH)
P-29	93	16	Ductile Iron	120.0	3,325.07	5.3058	0.62	J-27	J-29
P-30	93	16	Ductile Iron	120.0	3,319.13	5.2963	0.62	J-29	J-30
P-31	32	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-30	J-31 (FH)
P-32	12	16	Ductile Iron	120.0	3,319.13	5.2963	0.08	J-30	J-45
P-33	14	16	Ductile Iron	120.0	3,177.11	5.0697	0.09	J-45	J-32
P-33A	20	16	Ductile Iron	120.0	3,487.71	5.5653	0.15	J-33	J-32
P-34	23	8	Ductile Iron	120.0	833.33	5.3190	0.35	J-33	J-34 (FH)
P-35	118	8	Ductile Iron	120.0	310.60	1.9825	0.29	J-32	J-35 (FH)
P-36	42	8	Ductile Iron	120.0	310.60	1.9825	0.10	J-35 (FH)	J-36
P-37	50	8	Ductile Iron	120.0	14.31	0.0913	0.00	J-36	J-37
P-37A	43	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-37	J-37(FH)
P-38	110	8	Ductile Iron	120.0	324.91	2.0738	0.29	J-36	J-38
P-39	138	8	Ductile Iron	120.0	330.85	2.1117	0.38	J-38	J-39
P-39A	48	8	Ductile Iron	120.0	393.22	2.5098	0.18	J-39	J-39 (FH)
P-40	115	8	Ductile Iron	120.0	393.22	2.5098	0.43	J-39 (FH)	J-23
P-41	159	12	Ductile Iron	120.0	142.02	0.4029	0.01	J-45	J-40
P-42	93	12	Ductile Iron	120.0	49.95	0.1417	0.00	J-40	J-42
P-47	34	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-48(FH)
P-48	158	8	Ductile Iron	120.0	9.45	0.0603	0.00	J-41	J-47
P-48A	79	8	Ductile Iron	120.0	49.95	0.3188	0.01	J-41	J-42
P-49	204	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-47	J-48
P-49A	32	6	Ductile Iron	120.0	9.45	0.1072	0.00	J-47A	J-47
P-50	16	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-49
P-52	335	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-49	J-51
P-52A	18	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-51	J-51(FH)
P-53	72	16	Ductile Iron	120.0	3,827.37	6.1073	0.63	J-4	J-52
P-54	42	16	Ductile Iron	120.0	3,825.76	6.1047	0.36	J-52	J-7
P-69A	60	12	Ductile Iron	110.0	555.83	1.5768	0.07	J-1	J-1A(FH)
P-69B	149	12	Ductile Iron	110.0	555.83	1.5768	0.17	J-1A(FH)	J-59(FH)
P-72	55	12	Ductile Iron	110.0	589.58	1.6725	0.07	J-59(FH)	J-61
P-73A	168	12	Ductile Iron	110.0	843.38	2.3925	0.42	J-61	J-61(FH)
P-73B	242	12	Ductile Iron	110.0	843.38	2.3925	0.61	J-61(FH)	J-62
P-74	99	8	Ductile Iron	110.0	898.73	5.7364	2.02	J-62	J-63
P-86	104	8	Ductile Iron	110.0	95.60	0.6102	0.03	J-74	J-70

P-86A	235	12	Ductile Iron	110.0	2,891.63	8.2029	5.80	J-70	J-75
P-87	21	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-75	J-76(FH)
P-88	721	6	Ductile Iron	90.0	95.60	1.0848	1.37	J-74	J-77
P-92	95	12	Ductile Iron	110.0	3,174.05	9.0041	2.79	J-75	J-89
P-92A	626	12	Ductile Iron	110.0	3,174.05	9.0041	18.36	J-89	J-80(FH)
P-93	477	12	Ductile Iron	110.0	3,614.05	10.2523	17.79	J-80(FH)	J-84
P-95	33	12	Ductile Iron	110.0	440.00	1.2482	0.02	J-80(FH)	J-85
P-159	172	24	Ductile Iron	110.0	3,560.40	2.5250	0.21	J-63	J-106(FH)
P-160	195	24	Ductile Iron	110.0	3,560.40	2.5250	0.24	J-106(FH)	J-70
P-161	526	24	Ductile Iron	110.0	2,385.19	1.6916	0.31	J-86(FH)	J-107(FH)
P-162	269	24	Ductile Iron	110.0	2,385.19	1.6916	0.16	J-107(FH)	J-63
P-172	227	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-53	J-112(FH)
P-173	211	8	Ductile Iron	120.0	26.24	0.1675	0.01	J-53	J-113(FH)
P-188	2,981	16	Ductile Iron	110.0	941.74	1.5027	2.27	J-84	J-117
P-189	685	8	Ductile Iron	90.0	520.69	3.3234	7.38	J-117	J-79(F-FH)
P-190	326	24	Ductile Iron	120.0	675.77	0.4793	0.02	J-70	J-78(FH)
P-191	1,043	8	Ductile Iron	90.0	941.74	6.0109	33.68	J-77	J-79(F-FH)
P-192	89	8	Ductile Iron	120.0	846.14	5.4007	1.38	J-78(FH)	J-77
P-193	701	24	Ductile Iron	110.0	421.06	0.2986	0.02	J-117	J-81(FH)
P-194	423	12	Ductile Iron	110.0	421.06	1.1944	0.29	J-81(FH)	J-118
P-195	1,375	8	Ductile Iron	110.0	421.06	2.6875	6.90	J-118	J-119
P-196	35	8	Ductile Iron	110.0	421.06	2.6875	0.18	J-119	J-79(F-FH)
P-199	448	12	Ductile Iron	110.0	1,537.72	4.3622	3.43	J-84	J-120
P-200	595	12	Ductile Iron	110.0	1,350.22	3.8303	3.58	J-120	J-83
P-201	13	16	Ductile Iron	120.0	2,654.38	4.2356	0.06	J-33	GPV-6
P-202	11	16	Ductile Iron	120.0	2,654.38	4.2356	0.05	GPV-6	J-96
P-205	21	16	Ductile Iron	120.0	2,654.38	4.2356	0.09	J-96	J-109
P-207	7	16	Ductile Iron	120.0	1,641.77	2.6198	0.01	J-42(FH)	J-53
P-208	97	16	Ductile Iron	120.0	2,654.38	4.2356	0.43	J-109	J-43
P-209	124	16	Ductile Iron	120.0	2,475.10	3.9495	0.48	J-43	J-42(FH)
P-210	178	16	Ductile Iron	120.0	1,615.52	2.5779	0.31	J-53	J-44
P-212	200	8	Ductile Iron	120.0	833.33	5.3190	3.02	J-44	J-44(FH)
P-213	100	16	Ductile Iron	120.0	782.19	1.2481	0.05	J-44	J-121
P-215	193	8	Ductile Iron	120.0	26.19	0.1672	0.00	J-121	J-58 (F-FH)
P-216	19	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-122(FH)
P-217	22	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-121	J-123(FH)
P-218	143	16	Ductile Iron	120.0	426.60	0.6807	0.02	J-121	J-124
P-220	169	16	Ductile Iron	120.0	376.11	0.6002	0.02	J-124	J-125
P-221	115	8	Ductile Iron	120.0	13.50	0.0862	0.00	J-125	J-54 (F-FH)
P-222	21	8	Ductile Iron	120.0	50.49	0.3223	0.00	J-124	J-126
P-223	142	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-126	J-127(FH)
P-224	174	8	Ductile Iron	120.0	34.56	0.2206	0.01	J-126	J-55 (F-FH)
P-225	295	16	Ductile Iron	120.0	362.61	0.5786	0.03	J-125	J-59 (F-FH)
P-226	221	16	Ductile Iron	120.0	199.53	0.3184	0.01	J-59 (F-FH)	J-128
P-227	222	8	Ductile Iron	120.0	18.76	0.1198	0.00	J-128	J-129(FH)
P-228	169	16	Ductile Iron	120.0	180.77	0.2884	0.01	J-128	J-130
P-229	231	8	Ductile Iron	120.0	52.65	0.3361	0.02	J-130	J-56 (F-FH)
P-230	116	16	Ductile Iron	120.0	128.12	0.2044	0.00	J-130	J-131
P-231	65	8	Ductile Iron	120.0	72.90	0.4653	0.01	J-131	J-60 (F-FH)
P-232	211	16	Ductile Iron	120.0	55.22	0.0881	0.00	J-131	J-132
P-233	246	8	Ductile Iron	120.0	18.76	0.1198	0.00	J-132	J-57 (F-FH)
P-234	34	16	Ductile Iron	120.0	36.45	0.0582	0.00	J-132	J-133
P-235	88	8	Ductile Iron	120.0	36.45	0.2327	0.00	J-133	J-134(FH)
P-236	151	16	Ductile Iron	120.0	0.00	0.0000	0.00	J-133	J-135(FH)

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Full Build-out – PHD + Sprinkler + ISO @ Block 18
(Phase 3)

Scenario: Full Build-out - PHD + ISO @ Block 18 (Phase 3)
Current Time Step: 0.000Hr
FlexTable: Junction Table

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	37.00	0.00	180.60	62.1
J-1A(FH)	37.00	0.00	180.66	62.2
J-2 (FH)	45.00	0.00	179.44	58.2
J-3	46.00	58.05	179.13	57.6
J-4	47.00	0.00	178.53	56.9
J-5 (FH)	47.00	0.00	178.53	56.9
J-6	48.00	45.09	178.52	56.5
J-7	48.00	0.00	177.94	56.2
J-8	49.00	0.00	177.94	55.8
J-9	49.00	0.00	177.94	55.8
J-10	49.00	0.00	177.94	55.8
J-11 (FH)	49.00	0.00	177.94	55.8
J-12	49.00	0.00	177.94	55.8
J-13	48.00	2.97	177.94	56.2
J-14 (FH)	48.00	0.00	177.94	56.2
J-15 (FH)	46.00	0.00	177.94	57.1
J-16	48.00	0.00	177.66	56.1
J-17	47.00	1.62	177.66	56.5
J-18 (FH)	48.00	0.00	177.66	56.1
J-19 (FH)	48.00	53.46	177.66	56.1
J-20	48.00	0.00	177.37	56.0
J-21 (FH)	48.00	0.00	177.37	56.0
J-22	49.00	2.16	177.00	55.4
J-23	49.00	0.00	176.69	55.2
J-24 (FH)	49.00	0.00	176.69	55.2
J-25	49.00	0.00	176.57	55.2
J-26	49.00	36.72	176.56	55.2
J-27	49.00	0.00	176.54	55.2
J-28 (FH)	49.00	0.00	176.54	55.2
J-29	49.00	0.00	176.17	55.0
J-30	48.00	0.00	175.81	55.3
J-31 (FH)	48.00	0.00	175.81	55.3
J-32	48.00	0.00	175.71	55.3
J-33	48.00	0.00	175.62	55.2
J-34 (FH)	48.00	0.00	175.62	55.2
J-35 (FH)	49.00	0.00	175.86	54.9
J-36	49.00	0.00	175.92	54.9
J-37	49.00	14.31	175.92	54.9
J-37(FH)	47.00	0.00	175.92	55.8
J-38	49.00	5.94	176.08	55.0
J-39	50.00	62.37	176.30	54.6
J-39 (FH)	49.00	0.00	176.41	55.1
J-40	45.00	0.00	175.76	56.6
J-41	29.00	0.00	175.76	63.5
J-42	28.00	0.00	175.76	63.9
J-42(FH)	27.00	31.86	162.85	58.8
J-43	27.00	0.00	163.42	59.0
J-44	28.00	0.00	162.04	58.0
J-44(FH)	28.00	(N/A)	(N/A)	(N/A)
J-45	48.00	0.00	175.76	55.3
J-47	25.00	0.00	175.76	65.2
J-47A	25.00	0.00	175.76	65.2
J-48	22.00	0.00	175.76	66.5
J-48(FH)	19.00	0.00	175.76	67.8
J-49	22.00	0.00	175.76	66.5
J-51	18.00	0.00	175.76	68.3
J-51(FH)	19.00	0.00	175.76	67.8

J-52	47.00	0.00	178.16	56.7
J-53	38.00	0.00	162.82	54.0
J-54 (F-FH)	38.00	(N/A)	(N/A)	(N/A)
J-55 (F-FH)	38.00	(N/A)	(N/A)	(N/A)
J-56 (F-FH)	34.00	(N/A)	(N/A)	(N/A)
J-57 (F-FH)	31.00	(N/A)	(N/A)	(N/A)
J-58 (F-FH)	30.00	(N/A)	(N/A)	(N/A)
J-59 (F-FH)	27.00	(N/A)	(N/A)	(N/A)
J-59(FH)	36.00	33.75	180.80	62.6
J-60 (F-FH)	27.00	(N/A)	(N/A)	(N/A)
J-61	37.00	33.75	180.86	62.2
J-61(FH)	38.00	0.00	181.07	61.9
J-62	38.00	0.00	181.37	62.0
J-63	32.00	0.00	182.25	65.0
J-70	27.00	0.00	182.47	67.3
J-74	27.00	0.00	182.49	67.3
J-75	23.00	0.00	185.00	70.1
J-76(FH)	24.00	0.00	185.00	69.7
J-77	22.00	0.00	183.04	69.7
J-78(FH)	22.00	0.00	182.48	69.4
J-79(F-FH)	23.00	0.00	196.51	75.1
J-80(FH)	32.00	0.00	192.75	69.5
J-81(FH)	83.00	0.00	199.45	50.4
J-83	46.00	0.00	198.39	65.9
J-84	31.00	0.00	200.37	73.3
J-85	33.00	440.00	192.73	69.1
J-86(FH)	40.00	0.00	181.96	61.4
J-89	24.00	0.00	186.02	70.1
J-96	48.00	0.00	166.68	51.3
J-106(FH)	36.00	0.00	182.36	63.3
J-107(FH)	36.00	0.00	182.15	63.2
J-109	47.00	0.00	163.86	50.6
J-112(FH)	28.00	(N/A)	(N/A)	(N/A)
J-113(FH)	45.00	26.24	162.82	51.0
J-117	52.00	0.00	199.46	63.8
J-118	37.00	0.00	199.34	70.2
J-119	13.00	0.00	196.58	79.4
J-120	37.45	187.50	199.28	70.0
J-121	30.44	150.12	161.82	56.8
J-122(FH)	0.00	833.33	161.75	70.0
J-123(FH)	0.00	833.33	161.49	69.9
J-124	33.74	0.00	161.74	55.4
J-125	37.52	(N/A)	(N/A)	(N/A)
J-126	0.00	0.00	161.43	69.8
J-127(FH)	0.00	833.33	159.28	68.9
J-128	0.00	(N/A)	(N/A)	(N/A)
J-129(FH)	0.00	(N/A)	(N/A)	(N/A)
J-130	0.00	(N/A)	(N/A)	(N/A)
J-131	0.00	(N/A)	(N/A)	(N/A)
J-132	0.00	(N/A)	(N/A)	(N/A)
J-133	0.00	(N/A)	(N/A)	(N/A)
J-134(FH)	0.00	(N/A)	(N/A)	(N/A)
J-135(FH)	0.00	(N/A)	(N/A)	(N/A)

Scenario: Full Build-out - PHD + ISO @ Block 18 (Phase 3)
Current Time Step: 0.000Hr
FlexTable: Pipe Table

Label	Length (Scaled) (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (Absolute) (gpm)	Velocity (ft/s)	Headloss (ft)	Start Node	Stop Node
P-1	297	16	Ductile Iron	110.0	2,484.20	3.9640	1.36	J-1	J-86(FH)
P-1A	1,046	8	Ductile Iron	90.0	638.13	4.0730	16.43	J-83	J-86(FH)
P-2	211	16	Ductile Iron	120.0	2,990.92	4.7726	1.16	J-1	J-2 (FH)
P-3	56	16	Ductile Iron	120.0	2,990.92	4.7726	0.31	J-2 (FH)	J-3
P-4	112	16	Ductile Iron	120.0	2,932.87	4.6800	0.59	J-3	J-4
P-5	40	8	Ductile Iron	120.0	45.09	0.2878	0.00	J-4	J-5 (FH)
P-6	76	8	Ductile Iron	120.0	45.09	0.2878	0.01	J-5 (FH)	J-6
P-8	149	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-7	J-8
P-9	31	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-8	J-9
P-10	77	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-9	J-10
P-11	91	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-10	J-11 (FH)
P-12	16	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-9	J-12
P-13	120	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-12	J-13
P-14	25	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-13	J-14 (FH)
P-15	49	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-12	J-15 (FH)
P-16	55	16	Ductile Iron	120.0	2,884.81	4.6033	0.28	J-7	J-16
P-17	70	12	Ductile Iron	120.0	55.08	0.1563	0.00	J-16	J-17
P-18	82	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-17	J-18 (FH)
P-19	56	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-18 (FH)	J-19 (FH)
P-20	58	16	Ductile Iron	120.0	2,829.73	4.5154	0.29	J-16	J-20
P-21	30	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-20	J-21 (FH)
P-22	75	16	Ductile Iron	120.0	2,829.73	4.5154	0.37	J-20	J-22
P-23	63	16	Ductile Iron	120.0	2,827.57	4.5119	0.31	J-22	J-23
P-24	40	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-23	J-24 (FH)
P-25	30	16	Ductile Iron	120.0	2,520.67	4.0222	0.12	J-23	J-25
P-26	46	8	Ductile Iron	120.0	36.72	0.2344	0.00	J-25	J-26
P-27	8	16	Ductile Iron	120.0	2,483.95	3.9636	0.03	J-25	J-27
P-28	29	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-27	J-28 (FH)
P-29	93	16	Ductile Iron	120.0	2,483.95	3.9636	0.36	J-27	J-29
P-30	93	16	Ductile Iron	120.0	2,483.95	3.9636	0.36	J-29	J-30
P-31	32	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-30	J-31 (FH)
P-32	12	16	Ductile Iron	120.0	2,483.95	3.9636	0.05	J-30	J-45
P-33	14	16	Ductile Iron	120.0	2,483.95	3.9636	0.05	J-45	J-32
P-33A	20	16	Ductile Iron	120.0	2,708.22	4.3215	0.09	J-33	J-32
P-34	23	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-33	J-34 (FH)
P-35	118	8	Ductile Iron	120.0	224.27	1.4315	0.16	J-32	J-35 (FH)
P-36	42	8	Ductile Iron	120.0	224.27	1.4315	0.06	J-35 (FH)	J-36
P-37	50	8	Ductile Iron	120.0	14.31	0.0913	0.00	J-36	J-37
P-37A	43	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-37	J-37(FH)
P-38	110	8	Ductile Iron	120.0	238.58	1.5228	0.16	J-36	J-38
P-39	138	8	Ductile Iron	120.0	244.52	1.5607	0.22	J-38	J-39
P-39A	48	8	Ductile Iron	120.0	306.89	1.9588	0.11	J-39	J-39 (FH)
P-40	115	8	Ductile Iron	120.0	306.89	1.9588	0.27	J-39 (FH)	J-23
P-41	159	12	Ductile Iron	120.0	0.00	0.0000	0.00	J-45	J-40
P-42	93	12	Ductile Iron	120.0	0.00	0.0000	0.00	J-40	J-42
P-47	34	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-48(FH)
P-48	158	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-41	J-47
P-48A	79	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-41	J-42
P-49	204	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-47	J-48
P-49A	32	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-47A	J-47
P-50	16	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-49
P-52	335	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-49	J-51
P-52A	18	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-51	J-51(FH)
P-53	72	16	Ductile Iron	120.0	2,887.78	4.6080	0.37	J-4	J-52
P-54	42	16	Ductile Iron	120.0	2,887.78	4.6080	0.22	J-52	J-7
P-69A	60	12	Ductile Iron	110.0	506.72	1.4374	0.06	J-1	J-1A(FH)
P-69B	149	12	Ductile Iron	110.0	506.72	1.4374	0.15	J-1A(FH)	J-59(FH)
P-72	55	12	Ductile Iron	110.0	540.47	1.5332	0.06	J-59(FH)	J-61
P-73A	168	12	Ductile Iron	110.0	574.22	1.6289	0.21	J-61	J-61(FH)
P-73B	242	12	Ductile Iron	110.0	574.22	1.6289	0.30	J-61(FH)	J-62
P-74	99	8	Ductile Iron	110.0	574.22	3.6651	0.88	J-62	J-63
P-86	104	8	Ductile Iron	110.0	58.43	0.3730	0.01	J-74	J-70

P-86A	235	12	Ductile Iron	110.0	1,846.13	5.2371	2.53	J-70	J-75
P-87	21	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-75	J-76(FH)
P-88	721	6	Ductile Iron	90.0	58.43	0.6631	0.55	J-74	J-77
P-92	95	12	Ductile Iron	110.0	1,846.13	5.2371	1.02	J-75	J-89
P-92A	626	12	Ductile Iron	110.0	1,846.13	5.2371	6.73	J-89	J-80(FH)
P-93	477	12	Ductile Iron	110.0	2,286.13	6.4853	7.62	J-80(FH)	J-84
P-95	33	12	Ductile Iron	110.0	440.00	1.2482	0.02	J-80(FH)	J-85
P-159	172	24	Ductile Iron	110.0	2,420.29	1.7165	0.10	J-63	J-106(FH)
P-160	195	24	Ductile Iron	110.0	2,420.29	1.7165	0.12	J-106(FH)	J-70
P-161	526	24	Ductile Iron	110.0	1,846.07	1.3092	0.19	J-86(FH)	J-107(FH)
P-162	269	24	Ductile Iron	110.0	1,846.07	1.3092	0.10	J-107(FH)	J-63
P-172	227	8	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-53	J-112(FH)
P-173	211	8	Ductile Iron	120.0	26.24	0.1675	0.01	J-53	J-113(FH)
P-188	2,981	16	Ductile Iron	110.0	574.16	0.9162	0.91	J-84	J-117
P-189	685	8	Ductile Iron	90.0	317.45	2.0262	2.95	J-117	J-79(F-FH)
P-190	326	24	Ductile Iron	120.0	515.73	0.3658	0.01	J-70	J-78(FH)
P-191	1,043	8	Ductile Iron	90.0	574.16	3.6647	13.47	J-77	J-79(F-FH)
P-192	89	8	Ductile Iron	120.0	515.73	3.2918	0.55	J-78(FH)	J-77
P-193	701	24	Ductile Iron	110.0	256.71	0.1821	0.01	J-117	J-81(FH)
P-194	423	12	Ductile Iron	110.0	256.71	0.7282	0.12	J-81(FH)	J-118
P-195	1,375	8	Ductile Iron	110.0	256.71	1.6385	2.76	J-118	J-119
P-196	35	8	Ductile Iron	110.0	256.71	1.6385	0.07	J-119	J-79(F-FH)
P-199	448	12	Ductile Iron	110.0	825.63	2.3421	1.09	J-84	J-120
P-200	595	12	Ductile Iron	110.0	638.13	1.8102	0.89	J-120	J-83
P-201	13	16	Ductile Iron	120.0	2,708.22	4.3215	0.06	J-33	GPV-6
P-202	11	16	Ductile Iron	120.0	2,708.22	4.3215	0.05	GPV-6	J-96
P-205	21	8	Ductile Iron	120.0	2,708.22	17.2860	2.82	J-96	J-109
P-207	7	16	Ductile Iron	120.0	2,676.36	4.2707	0.03	J-42(FH)	J-53
P-208	97	16	Ductile Iron	120.0	2,708.22	4.3215	0.44	J-109	J-43
P-209	124	16	Ductile Iron	120.0	2,708.22	4.3215	0.57	J-43	J-42(FH)
P-210	178	16	Ductile Iron	120.0	2,650.12	4.2288	0.78	J-53	J-44
P-212	200	8	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-44	J-44(FH)
P-213	100	16	Ductile Iron	120.0	1,816.79	2.8990	0.22	J-44	J-121
P-215	193	8	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-121	J-58 (F-FH)
P-216	19	8	Ductile Iron	120.0	833.33	5.3190	0.29	J-44	J-122(FH)
P-217	22	8	Ductile Iron	120.0	833.33	5.3190	0.33	J-121	J-123(FH)
P-218	143	16	Ductile Iron	120.0	833.33	1.3297	0.07	J-121	J-124
P-220	169	16	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-124	J-125
P-221	115	8	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-125	J-54 (F-FH)
P-222	21	8	Ductile Iron	120.0	833.33	5.3190	0.32	J-124	J-126
P-223	142	8	Ductile Iron	120.0	833.33	5.3190	2.15	J-126	J-127(FH)
P-224	174	8	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-126	J-55 (F-FH)
P-225	295	16	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-125	J-59 (F-FH)
P-226	221	16	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-59 (F-FH)	J-128
P-227	222	8	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-128	J-129(FH)
P-228	169	16	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-128	J-130
P-229	231	8	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-130	J-56 (F-FH)
P-230	116	16	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-130	J-131
P-231	65	8	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-131	J-60 (F-FH)
P-232	211	16	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-131	J-132
P-233	246	8	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-132	J-57 (F-FH)
P-234	34	16	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-132	J-133
P-235	88	8	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-133	J-134(FH)
P-236	151	16	Ductile Iron	120.0	(N/A)	(N/A)	(N/A)	J-133	J-135(FH)

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Full Build-out – PHD + Sprinkler + ISO @ Block 19
(future phase)

Scenario: Full Build-out - PHD + ISO @ 19 (Future)
Current Time Step: 0.000Hr
FlexTable: Junction Table

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	37.00	295.38	130.52	40.5
J-1A(FH)	37.00	0.00	130.57	40.5
J-2 (FH)	45.00	0.00	128.76	36.2
J-3	46.00	123.39	128.29	35.6
J-4	47.00	0.00	127.41	34.8
J-5 (FH)	47.00	0.00	127.41	34.8
J-6	48.00	45.09	127.41	34.4
J-7	48.00	0.00	126.54	34.0
J-8	49.00	3.78	126.54	33.5
J-9	49.00	0.00	126.54	33.5
J-10	49.00	3.78	126.54	33.5
J-11 (FH)	49.00	0.00	126.54	33.5
J-12	49.00	0.00	126.54	33.5
J-13	48.00	2.97	126.54	34.0
J-14 (FH)	48.00	0.00	126.54	34.0
J-15 (FH)	46.00	0.00	126.54	34.8
J-16	48.00	0.00	126.12	33.8
J-17	47.00	1.62	126.12	34.2
J-18 (FH)	48.00	0.00	126.12	33.8
J-19 (FH)	48.00	53.46	126.12	33.8
J-20	48.00	0.00	125.70	33.6
J-21 (FH)	48.00	0.00	125.70	33.6
J-22	49.00	5.13	125.14	32.9
J-23	49.00	0.00	124.68	32.7
J-24 (FH)	49.00	0.00	124.68	32.7
J-25	49.00	0.00	124.50	32.7
J-26	49.00	36.72	124.50	32.7
J-27	49.00	0.00	124.45	32.6
J-28 (FH)	49.00	0.00	124.45	32.6
J-29	49.00	5.94	123.91	32.4
J-30	48.00	0.00	123.36	32.6
J-31 (FH)	48.00	0.00	123.36	32.6
J-32	48.00	0.00	123.21	32.5
J-33	48.00	0.00	123.08	32.5
J-34 (FH)	48.00	0.00	123.08	32.5
J-35 (FH)	49.00	0.00	123.46	32.2
J-36	49.00	0.00	123.55	32.3
J-37	49.00	14.31	123.55	32.3
J-37(FH)	47.00	0.00	123.55	33.1
J-38	49.00	5.94	123.80	32.4
J-39	50.00	62.37	124.13	32.1
J-39 (FH)	49.00	0.00	124.29	32.6
J-40	45.00	0.00	123.29	33.9
J-41	29.00	40.50	123.28	40.8
J-42	28.00	0.00	123.29	41.2
J-42(FH)	27.00	0.00	106.80	34.5
J-43	27.00	179.28	107.55	34.8
J-44	28.00	0.00	105.70	33.6
J-44(FH)	28.00	0.00	105.70	33.6
J-45	48.00	0.00	123.29	32.6
J-47	25.00	0.00	123.28	42.5
J-47A	25.00	9.45	123.28	42.5
J-48	22.00	0.00	123.28	43.8
J-48(FH)	19.00	0.00	123.28	45.1
J-49	22.00	0.00	123.28	43.8
J-51	18.00	0.00	123.28	45.6
J-51(FH)	19.00	0.00	123.28	45.1

J-52	47.00	1.62	126.86	34.6
J-53	38.00	0.00	106.76	29.7
J-54 (F-FH)	38.00	874.64	102.60	28.0
J-55 (F-FH)	38.00	867.89	101.50	27.5
J-56 (F-FH)	34.00	52.65	104.44	30.5
J-57 (F-FH)	31.00	18.76	104.45	31.8
J-58 (F-FH)	30.00	847.72	102.09	31.2
J-59 (F-FH)	27.00	163.08	104.47	33.5
J-59(FH)	36.00	33.75	130.72	41.0
J-60 (F-FH)	27.00	72.90	104.45	33.5
J-61	37.00	253.80	130.78	40.6
J-61(FH)	38.00	0.00	131.16	40.3
J-62	38.00	55.35	131.71	40.5
J-63	32.00	276.48	133.54	43.9
J-70	27.00	102.60	133.95	46.3
J-74	27.00	0.00	133.98	46.3
J-75	23.00	282.42	139.21	50.3
J-76(FH)	24.00	0.00	139.21	49.8
J-77	22.00	0.00	135.24	49.0
J-78(FH)	22.00	170.37	133.97	48.4
J-79(F-FH)	23.00	0.00	166.13	61.9
J-80(FH)	32.00	0.00	158.54	54.7
J-81(FH)	83.00	0.00	172.89	38.9
J-83	46.00	0.00	168.52	53.0
J-84	31.00	0.00	174.98	62.3
J-85	33.00	440.00	158.51	54.3
J-86(FH)	40.00	0.00	133.12	40.3
J-89	24.00	0.00	141.75	50.9
J-96	48.00	0.00	108.34	26.1
J-106(FH)	36.00	0.00	133.73	42.3
J-107(FH)	36.00	0.00	133.40	42.1
J-109	47.00	0.00	108.20	26.5
J-112(FH)	28.00	0.00	106.76	34.1
J-113(FH)	45.00	26.24	106.75	26.7
J-117	52.00	0.00	172.90	52.3
J-118	37.00	0.00	172.62	58.7
J-119	13.00	0.00	166.29	66.3
J-120	36.00	187.50	171.81	58.8
J-121	30.44	150.12	105.10	32.3
J-122(FH)	46.00	0.00	105.70	25.8
J-123(FH)	46.00	0.00	105.10	25.6
J-124	33.74	0.00	104.69	30.7
J-125	37.52	0.00	104.50	29.0
J-126	48.00	15.93	104.33	24.4
J-127(FH)	53.00	0.00	104.33	22.2
J-128	28.00	0.00	104.46	33.1
J-129(FH)	52.00	18.76	104.46	22.7
J-130	34.00	0.00	104.46	30.5
J-131	36.00	0.00	104.46	29.6
J-132	34.00	0.00	104.46	30.5
J-133	32.00	0.00	104.46	31.3
J-134(FH)	22.00	36.45	104.45	35.7
J-135(FH)	28.00	0.00	104.46	33.1

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Scenario: Full Build-out - PHD + ISO @ 19 (Future)
Current Time Step: 0.000Hr
FlexTable: Pipe Table

Label	Length (Scaled) (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (Absolute) (gpm)	Velocity (ft/s)	Headloss (ft)	Start Node	Stop Node
P-1	297	16	Ductile Iron	110.0	3,527.27	5.6284	2.61	J-1	J-86(FH)
P-1A	1,046	8	Ductile Iron	120.0	1,287.79	8.2197	35.40	J-83	J-86(FH)
P-2	211	16	Ductile Iron	120.0	3,740.52	5.9687	1.76	J-1	J-2 (FH)
P-3	56	16	Ductile Iron	120.0	3,740.52	5.9687	0.47	J-2 (FH)	J-3
P-4	112	16	Ductile Iron	120.0	3,617.13	5.7718	0.88	J-3	J-4
P-5	40	8	Ductile Iron	120.0	45.09	0.2878	0.00	J-4	J-5 (FH)
P-6	76	8	Ductile Iron	120.0	45.09	0.2878	0.01	J-5 (FH)	J-6
P-8	149	8	Ductile Iron	120.0	10.53	0.0672	0.00	J-7	J-8
P-9	31	8	Ductile Iron	120.0	6.75	0.0431	0.00	J-8	J-9
P-10	77	8	Ductile Iron	120.0	3.78	0.0241	0.00	J-9	J-10
P-11	91	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-10	J-11 (FH)
P-12	16	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-9	J-12
P-13	120	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-12	J-13
P-14	25	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-13	J-14 (FH)
P-15	49	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-12	J-15 (FH)
P-16	55	16	Ductile Iron	120.0	3,559.89	5.6805	0.42	J-7	J-16
P-17	70	12	Ductile Iron	120.0	55.08	0.1563	0.00	J-16	J-17
P-18	82	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-17	J-18 (FH)
P-19	56	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-18 (FH)	J-19 (FH)
P-20	58	16	Ductile Iron	120.0	3,504.81	5.5926	0.43	J-16	J-20
P-21	30	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-20	J-21 (FH)
P-22	75	16	Ductile Iron	120.0	3,504.81	5.5926	0.55	J-20	J-22
P-23	63	16	Ductile Iron	120.0	3,499.68	5.5844	0.46	J-22	J-23
P-24	40	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-23	J-24 (FH)
P-25	30	16	Ductile Iron	120.0	3,130.01	4.9945	0.18	J-23	J-25
P-26	46	8	Ductile Iron	120.0	36.72	0.2344	0.00	J-25	J-26
P-27	8	16	Ductile Iron	120.0	3,093.29	4.9359	0.05	J-25	J-27
P-28	29	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-27	J-28 (FH)
P-29	93	16	Ductile Iron	120.0	3,093.29	4.9359	0.55	J-27	J-29
P-30	93	16	Ductile Iron	120.0	3,087.35	4.9265	0.54	J-29	J-30
P-31	32	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-30	J-31 (FH)
P-32	12	16	Ductile Iron	120.0	3,087.35	4.9265	0.07	J-30	J-45
P-33	14	16	Ductile Iron	120.0	3,037.40	4.8468	0.08	J-45	J-32
P-33A	20	16	Ductile Iron	120.0	3,324.45	5.3048	0.13	J-33	J-32
P-34	23	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-33	J-34 (FH)
P-35	118	8	Ductile Iron	120.0	287.05	1.8322	0.25	J-32	J-35 (FH)
P-36	42	8	Ductile Iron	120.0	287.05	1.8322	0.09	J-35 (FH)	J-36
P-37	50	8	Ductile Iron	120.0	14.31	0.0913	0.00	J-36	J-37
P-37A	43	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-37	J-37(FH)
P-38	110	8	Ductile Iron	120.0	301.36	1.9235	0.25	J-36	J-38
P-39	138	8	Ductile Iron	120.0	307.30	1.9614	0.33	J-38	J-39
P-39A	48	8	Ductile Iron	120.0	369.67	2.3595	0.16	J-39	J-39 (FH)
P-40	115	8	Ductile Iron	120.0	369.67	2.3595	0.39	J-39 (FH)	J-23
P-41	159	12	Ductile Iron	120.0	49.95	0.1417	0.00	J-45	J-40
P-42	93	12	Ductile Iron	120.0	49.95	0.1417	0.00	J-40	J-42
P-47	34	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-48(FH)
P-48	158	8	Ductile Iron	120.0	9.45	0.0603	0.00	J-41	J-47
P-48A	79	8	Ductile Iron	120.0	49.95	0.3188	0.01	J-41	J-42
P-49	204	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-47	J-48
P-49A	32	6	Ductile Iron	120.0	9.45	0.1072	0.00	J-47A	J-47
P-50	16	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-49
P-52	335	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-49	J-51
P-52A	18	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-51	J-51(FH)
P-53	72	16	Ductile Iron	120.0	3,572.04	5.6999	0.55	J-4	J-52
P-54	42	16	Ductile Iron	120.0	3,570.42	5.6973	0.32	J-52	J-7
P-69A	60	12	Ductile Iron	110.0	508.63	1.4429	0.06	J-1	J-1A(FH)
P-69B	149	12	Ductile Iron	110.0	508.63	1.4429	0.15	J-1A(FH)	J-59(FH)
P-72	55	12	Ductile Iron	110.0	542.38	1.5386	0.06	J-59(FH)	J-61
P-73A	168	12	Ductile Iron	110.0	796.18	2.2586	0.38	J-61	J-61(FH)
P-73B	242	12	Ductile Iron	110.0	796.18	2.2586	0.55	J-61(FH)	J-62
P-74	99	8	Ductile Iron	110.0	851.53	5.4351	1.83	J-62	J-63

P-86	104	8	Ductile Iron	110.0	91.22	0.5823	0.03	J-74	J-70
P-86A	235	12	Ductile Iron	110.0	2,741.62	7.7774	5.25	J-70	J-75
P-87	21	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-75	J-76(FH)
P-88	721	6	Ductile Iron	90.0	91.22	1.0351	1.25	J-74	J-77
P-92	95	12	Ductile Iron	110.0	3,024.04	8.5786	2.55	J-75	J-89
P-92A	626	12	Ductile Iron	110.0	3,024.04	8.5786	16.78	J-89	J-80(FH)
P-93	477	12	Ductile Iron	110.0	3,464.04	9.8268	16.45	J-80(FH)	J-84
P-95	33	12	Ductile Iron	110.0	440.00	1.2482	0.02	J-80(FH)	J-85
P-159	172	24	Ductile Iron	110.0	3,367.49	2.3882	0.19	J-63	J-106(FH)
P-160	195	24	Ductile Iron	110.0	3,367.49	2.3882	0.22	J-106(FH)	J-70
P-161	526	24	Ductile Iron	110.0	2,239.48	1.5882	0.28	J-86(FH)	J-107(FH)
P-162	269	24	Ductile Iron	110.0	2,239.48	1.5882	0.14	J-107(FH)	J-63
P-172	227	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-53	J-112(FH)
P-173	211	8	Ductile Iron	120.0	26.24	0.1675	0.01	J-53	J-113(FH)
P-188	2,981	16	Ductile Iron	110.0	898.83	1.4343	2.08	J-84	J-117
P-189	685	8	Ductile Iron	90.0	496.96	3.1720	6.77	J-117	J-79(F-FH)
P-190	326	24	Ductile Iron	120.0	637.24	0.4519	0.01	J-70	J-78(FH)
P-191	1,043	8	Ductile Iron	90.0	898.83	5.7371	30.90	J-77	J-79(F-FH)
P-192	89	8	Ductile Iron	120.0	807.61	5.1548	1.27	J-78(FH)	J-77
P-193	701	24	Ductile Iron	110.0	401.87	0.2850	0.02	J-117	J-81(FH)
P-194	423	12	Ductile Iron	110.0	401.87	1.1400	0.27	J-81(FH)	J-118
P-195	1,375	8	Ductile Iron	110.0	401.87	2.5651	6.33	J-118	J-119
P-196	35	8	Ductile Iron	110.0	401.87	2.5651	0.16	J-119	J-79(F-FH)
P-199	448	12	Ductile Iron	110.0	1,475.29	4.1851	3.18	J-84	J-120
P-200	595	12	Ductile Iron	110.0	1,287.79	3.6532	3.28	J-120	J-83
P-201	13	16	Ductile Iron	120.0	3,324.45	5.3048	0.09	J-33	GPV-6
P-202	11	16	Ductile Iron	120.0	3,324.45	5.3048	0.07	GPV-6	J-96
P-205	21	16	Ductile Iron	120.0	3,324.45	5.3048	0.14	J-96	J-109
P-207	7	16	Ductile Iron	120.0	3,145.17	5.0187	0.04	J-42(FH)	J-53
P-208	97	16	Ductile Iron	120.0	3,324.45	5.3048	0.65	J-109	J-43
P-209	124	16	Ductile Iron	120.0	3,145.17	5.0187	0.75	J-43	J-42(FH)
P-210	178	16	Ductile Iron	120.0	3,118.92	4.9768	1.06	J-53	J-44
P-212	200	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-44(FH)
P-213	100	16	Ductile Iron	120.0	3,118.92	4.9768	0.60	J-44	J-121
P-215	193	8	Ductile Iron	120.0	847.72	5.4108	3.01	J-121	J-58 (F-FH)
P-216	19	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-122(FH)
P-217	22	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-121	J-123(FH)
P-218	143	16	Ductile Iron	120.0	2,121.08	3.3846	0.42	J-121	J-124
P-220	169	16	Ductile Iron	120.0	1,237.25	1.9743	0.18	J-124	J-125
P-221	115	8	Ductile Iron	120.0	874.64	5.5827	1.90	J-125	J-54 (F-FH)
P-222	21	8	Ductile Iron	120.0	883.82	5.6412	0.35	J-124	J-126
P-223	142	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-126	J-127(FH)
P-224	174	8	Ductile Iron	120.0	867.89	5.5396	2.84	J-126	J-55 (F-FH)
P-225	295	16	Ductile Iron	120.0	362.61	0.5786	0.03	J-125	J-59 (F-FH)
P-226	221	16	Ductile Iron	120.0	199.53	0.3184	0.01	J-59 (F-FH)	J-128
P-227	222	8	Ductile Iron	120.0	18.76	0.1198	0.00	J-128	J-129(FH)
P-228	169	16	Ductile Iron	120.0	180.77	0.2884	0.01	J-128	J-130
P-229	231	8	Ductile Iron	120.0	52.65	0.3361	0.02	J-130	J-56 (F-FH)
P-230	116	16	Ductile Iron	120.0	128.12	0.2044	0.00	J-130	J-131
P-231	65	8	Ductile Iron	120.0	72.90	0.4653	0.01	J-131	J-60 (F-FH)
P-232	211	16	Ductile Iron	120.0	55.22	0.0881	0.00	J-131	J-132
P-233	246	8	Ductile Iron	120.0	18.76	0.1198	0.00	J-132	J-57 (F-FH)
P-234	34	16	Ductile Iron	120.0	36.45	0.0582	0.00	J-132	J-133
P-235	88	8	Ductile Iron	120.0	36.45	0.2327	0.00	J-133	J-134(FH)
P-236	151	16	Ductile Iron	120.0	0.00	0.0000	0.00	J-133	J-135(FH)

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Full Build-out – PHD + Sprinkler + ISO @ Block 20
(future phase)

Scenario: Full Build-out - PHD + ISO @ 20 (Future Phase)
Current Time Step: 0.000Hr
FlexTable: Junction Table

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	37.00	295.38	130.16	40.3
J-1A(FH)	37.00	0.00	130.22	40.3
J-2 (FH)	45.00	0.00	128.40	36.1
J-3	46.00	123.39	127.93	35.4
J-4	47.00	0.00	127.04	34.6
J-5 (FH)	47.00	0.00	127.04	34.6
J-6	48.00	45.09	127.04	34.2
J-7	48.00	0.00	126.17	33.8
J-8	49.00	3.78	126.17	33.4
J-9	49.00	0.00	126.17	33.4
J-10	49.00	3.78	126.17	33.4
J-11 (FH)	49.00	0.00	126.17	33.4
J-12	49.00	0.00	126.17	33.4
J-13	48.00	2.97	126.17	33.8
J-14 (FH)	48.00	0.00	126.17	33.8
J-15 (FH)	46.00	0.00	126.17	34.7
J-16	48.00	0.00	125.75	33.6
J-17	47.00	1.62	125.75	34.1
J-18 (FH)	48.00	0.00	125.74	33.6
J-19 (FH)	48.00	53.46	125.74	33.6
J-20	48.00	0.00	125.32	33.5
J-21 (FH)	48.00	0.00	125.32	33.5
J-22	49.00	5.13	124.76	32.8
J-23	49.00	0.00	124.29	32.6
J-24 (FH)	49.00	0.00	124.29	32.6
J-25	49.00	0.00	124.11	32.5
J-26	49.00	36.72	124.11	32.5
J-27	49.00	0.00	124.06	32.5
J-28 (FH)	49.00	0.00	124.06	32.5
J-29	49.00	5.94	123.51	32.2
J-30	48.00	0.00	122.97	32.4
J-31 (FH)	48.00	0.00	122.97	32.4
J-32	48.00	0.00	122.82	32.4
J-33	48.00	0.00	122.68	32.3
J-34 (FH)	48.00	0.00	122.68	32.3
J-35 (FH)	49.00	0.00	123.07	32.0
J-36	49.00	0.00	123.16	32.1
J-37	49.00	14.31	123.16	32.1
J-37(FH)	47.00	0.00	123.16	32.9
J-38	49.00	5.94	123.41	32.2
J-39	50.00	62.37	123.74	31.9
J-39 (FH)	49.00	0.00	123.90	32.4
J-40	45.00	0.00	122.90	33.7
J-41	29.00	40.50	122.89	40.6
J-42	28.00	0.00	122.89	41.1
J-42(FH)	27.00	0.00	106.32	34.3
J-43	27.00	179.28	107.08	34.6
J-44	28.00	0.00	105.21	33.4
J-44(FH)	28.00	0.00	105.21	33.4
J-45	48.00	0.00	122.90	32.4
J-47	25.00	0.00	122.89	42.4
J-47A	25.00	9.45	122.89	42.4
J-48	22.00	0.00	122.89	43.6
J-48(FH)	19.00	0.00	122.89	44.9
J-49	22.00	0.00	122.89	43.6
J-51	18.00	0.00	122.89	45.4
J-51(FH)	19.00	0.00	122.89	44.9

J-52	47.00	1.62	126.49	34.4
J-53	38.00	0.00	106.28	29.5
J-54 (F-FH)	38.00	41.31	103.37	28.3
J-55 (F-FH)	38.00	867.89	100.66	27.1
J-56 (F-FH)	34.00	52.65	102.39	29.6
J-57 (F-FH)	31.00	18.76	102.40	30.9
J-58 (F-FH)	30.00	26.19	104.61	32.3
J-59 (F-FH)	27.00	996.41	102.58	32.7
J-59(FH)	36.00	33.75	130.37	40.8
J-60 (F-FH)	27.00	72.90	102.39	32.6
J-61	37.00	253.80	130.43	40.4
J-61(FH)	38.00	0.00	130.82	40.2
J-62	38.00	55.35	131.37	40.4
J-63	32.00	276.48	133.21	43.8
J-70	27.00	102.60	133.62	46.1
J-74	27.00	0.00	133.65	46.1
J-75	23.00	282.42	138.90	50.1
J-76(FH)	24.00	0.00	138.90	49.7
J-77	22.00	0.00	134.91	48.8
J-78(FH)	22.00	170.37	133.63	48.3
J-79(F-FH)	23.00	0.00	165.93	61.8
J-80(FH)	32.00	0.00	158.31	54.6
J-81(FH)	83.00	0.00	172.71	38.8
J-83	46.00	0.00	168.33	52.9
J-84	31.00	0.00	174.82	62.2
J-85	33.00	440.00	158.29	54.2
J-86(FH)	40.00	0.00	132.79	40.1
J-89	24.00	0.00	141.45	50.8
J-96	48.00	0.00	107.87	25.9
J-106(FH)	36.00	0.00	133.40	42.1
J-107(FH)	36.00	0.00	133.06	42.0
J-109	47.00	0.00	107.73	26.3
J-112(FH)	28.00	0.00	106.28	33.9
J-113(FH)	45.00	26.24	106.28	26.5
J-117	52.00	0.00	172.73	52.2
J-118	37.00	0.00	172.44	58.6
J-119	13.00	0.00	166.09	66.2
J-120	36.00	187.50	171.63	58.7
J-121	30.44	150.12	104.61	32.1
J-122(FH)	46.00	0.00	105.21	25.6
J-123(FH)	46.00	0.00	104.61	25.4
J-124	33.74	0.00	103.85	30.3
J-125	37.52	0.00	103.37	28.5
J-126	48.00	15.93	103.49	24.0
J-127(FH)	53.00	0.00	103.49	21.8
J-128	28.00	0.00	102.41	32.2
J-129(FH)	52.00	852.10	98.92	20.3
J-130	34.00	0.00	102.41	29.6
J-131	36.00	0.00	102.41	28.7
J-132	34.00	0.00	102.40	29.6
J-133	32.00	0.00	102.40	30.5
J-134(FH)	22.00	36.45	102.40	34.8
J-135(FH)	28.00	0.00	102.40	32.2

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Scenario: Full Build-out - PHD + ISO @ 20 (Future Phase)
Current Time Step: 0.000Hr
FlexTable: Pipe Table

Label	Length (Scaled) (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (Absolute) (gpm)	Velocity (ft/s)	Headloss (ft)	Start Node	Stop Node
P-1	297	16	Ductile Iron	110.0	3,536.88	5.6438	2.62	J-1	J-86(FH)
P-1A	1,046	8	Ductile Iron	120.0	1,290.68	8.2381	35.55	J-83	J-86(FH)
P-2	211	16	Ductile Iron	120.0	3,752.32	5.9875	1.77	J-1	J-2 (FH)
P-3	56	16	Ductile Iron	120.0	3,752.32	5.9875	0.47	J-2 (FH)	J-3
P-4	112	16	Ductile Iron	120.0	3,628.93	5.7907	0.88	J-3	J-4
P-5	40	8	Ductile Iron	120.0	45.09	0.2878	0.00	J-4	J-5 (FH)
P-6	76	8	Ductile Iron	120.0	45.09	0.2878	0.01	J-5 (FH)	J-6
P-8	149	8	Ductile Iron	120.0	10.53	0.0672	0.00	J-7	J-8
P-9	31	8	Ductile Iron	120.0	6.75	0.0431	0.00	J-8	J-9
P-10	77	8	Ductile Iron	120.0	3.78	0.0241	0.00	J-9	J-10
P-11	91	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-10	J-11 (FH)
P-12	16	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-9	J-12
P-13	120	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-12	J-13
P-14	25	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-13	J-14 (FH)
P-15	49	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-12	J-15 (FH)
P-16	55	16	Ductile Iron	120.0	3,571.69	5.6993	0.42	J-7	J-16
P-17	70	12	Ductile Iron	120.0	55.08	0.1563	0.00	J-16	J-17
P-18	82	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-17	J-18 (FH)
P-19	56	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-18 (FH)	J-19 (FH)
P-20	58	16	Ductile Iron	120.0	3,516.61	5.6114	0.43	J-16	J-20
P-21	30	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-20	J-21 (FH)
P-22	75	16	Ductile Iron	120.0	3,516.61	5.6114	0.56	J-20	J-22
P-23	63	16	Ductile Iron	120.0	3,511.48	5.6032	0.47	J-22	J-23
P-24	40	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-23	J-24 (FH)
P-25	30	16	Ductile Iron	120.0	3,140.69	5.0116	0.18	J-23	J-25
P-26	46	8	Ductile Iron	120.0	36.72	0.2344	0.00	J-25	J-26
P-27	8	16	Ductile Iron	120.0	3,103.97	4.9530	0.05	J-25	J-27
P-28	29	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-27	J-28 (FH)
P-29	93	16	Ductile Iron	120.0	3,103.97	4.9530	0.55	J-27	J-29
P-30	93	16	Ductile Iron	120.0	3,098.03	4.9435	0.55	J-29	J-30
P-31	32	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-30	J-31 (FH)
P-32	12	16	Ductile Iron	120.0	3,098.03	4.9435	0.07	J-30	J-45
P-33	14	16	Ductile Iron	120.0	3,048.08	4.8638	0.08	J-45	J-32
P-33A	20	16	Ductile Iron	120.0	3,336.24	5.3236	0.13	J-33	J-32
P-34	23	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-33	J-34 (FH)
P-35	118	8	Ductile Iron	120.0	288.16	1.8393	0.25	J-32	J-35 (FH)
P-36	42	8	Ductile Iron	120.0	288.16	1.8393	0.09	J-35 (FH)	J-36
P-37	50	8	Ductile Iron	120.0	14.31	0.0913	0.00	J-36	J-37
P-37A	43	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-37	J-37(FH)
P-38	110	8	Ductile Iron	120.0	302.47	1.9306	0.25	J-36	J-38
P-39	138	8	Ductile Iron	120.0	308.41	1.9685	0.33	J-38	J-39
P-39A	48	8	Ductile Iron	120.0	370.78	2.3666	0.16	J-39	J-39 (FH)
P-40	115	8	Ductile Iron	120.0	370.78	2.3666	0.39	J-39 (FH)	J-23
P-41	159	12	Ductile Iron	120.0	49.95	0.1417	0.00	J-45	J-40
P-42	93	12	Ductile Iron	120.0	49.95	0.1417	0.00	J-40	J-42
P-47	34	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-48(FH)
P-48	158	8	Ductile Iron	120.0	9.45	0.0603	0.00	J-41	J-47
P-48A	79	8	Ductile Iron	120.0	49.95	0.3188	0.01	J-41	J-42
P-49	204	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-47	J-48
P-49A	32	6	Ductile Iron	120.0	9.45	0.1072	0.00	J-47A	J-47
P-50	16	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-49
P-52	335	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-49	J-51
P-52A	18	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-51	J-51(FH)
P-53	72	16	Ductile Iron	120.0	3,583.84	5.7187	0.55	J-4	J-52
P-54	42	16	Ductile Iron	120.0	3,582.22	5.7161	0.32	J-52	J-7
P-69A	60	12	Ductile Iron	110.0	510.81	1.4491	0.06	J-1	J-1A(FH)
P-69B	149	12	Ductile Iron	110.0	510.81	1.4491	0.15	J-1A(FH)	J-59(FH)
P-72	55	12	Ductile Iron	110.0	544.56	1.5448	0.06	J-59(FH)	J-61
P-73A	168	12	Ductile Iron	110.0	798.36	2.2648	0.38	J-61	J-61(FH)
P-73B	242	12	Ductile Iron	110.0	798.36	2.2648	0.55	J-61(FH)	J-62
P-74	99	8	Ductile Iron	110.0	853.71	5.4491	1.84	J-62	J-63

P-86	104	8	Ductile Iron	110.0	91.43	0.5835	0.03	J-74	J-70
P-86A	235	12	Ductile Iron	110.0	2,748.55	7.7971	5.28	J-70	J-75
P-87	21	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-75	J-76(FH)
P-88	721	6	Ductile Iron	90.0	91.43	1.0374	1.26	J-74	J-77
P-92	95	12	Ductile Iron	110.0	3,030.97	8.5982	2.56	J-75	J-89
P-92A	626	12	Ductile Iron	110.0	3,030.97	8.5982	16.86	J-89	J-80(FH)
P-93	477	12	Ductile Iron	110.0	3,470.97	9.8464	16.51	J-80(FH)	J-84
P-95	33	12	Ductile Iron	110.0	440.00	1.2482	0.02	J-80(FH)	J-85
P-159	172	24	Ductile Iron	110.0	3,376.40	2.3945	0.19	J-63	J-106(FH)
P-160	195	24	Ductile Iron	110.0	3,376.40	2.3945	0.22	J-106(FH)	J-70
P-161	526	24	Ductile Iron	110.0	2,246.21	1.5930	0.28	J-86(FH)	J-107(FH)
P-162	269	24	Ductile Iron	110.0	2,246.21	1.5930	0.14	J-107(FH)	J-63
P-172	227	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-53	J-112(FH)
P-173	211	8	Ductile Iron	120.0	26.24	0.1675	0.01	J-53	J-113(FH)
P-188	2,981	16	Ductile Iron	110.0	900.82	1.4374	2.09	J-84	J-117
P-189	685	8	Ductile Iron	90.0	498.06	3.1790	6.80	J-117	J-79(F-FH)
P-190	326	24	Ductile Iron	120.0	639.02	0.4532	0.01	J-70	J-78(FH)
P-191	1,043	8	Ductile Iron	90.0	900.82	5.7497	31.02	J-77	J-79(F-FH)
P-192	89	8	Ductile Iron	120.0	809.39	5.1662	1.27	J-78(FH)	J-77
P-193	701	24	Ductile Iron	110.0	402.76	0.2856	0.02	J-117	J-81(FH)
P-194	423	12	Ductile Iron	110.0	402.76	1.1425	0.27	J-81(FH)	J-118
P-195	1,375	8	Ductile Iron	110.0	402.76	2.5707	6.35	J-118	J-119
P-196	35	8	Ductile Iron	110.0	402.76	2.5707	0.16	J-119	J-79(F-FH)
P-199	448	12	Ductile Iron	110.0	1,478.18	4.1933	3.19	J-84	J-120
P-200	595	12	Ductile Iron	110.0	1,290.68	3.6614	3.30	J-120	J-83
P-201	13	16	Ductile Iron	120.0	3,336.24	5.3236	0.09	J-33	GPV-6
P-202	11	16	Ductile Iron	120.0	3,336.24	5.3236	0.07	GPV-6	J-96
P-205	21	16	Ductile Iron	120.0	3,336.24	5.3236	0.14	J-96	J-109
P-207	7	16	Ductile Iron	120.0	3,156.96	5.0375	0.04	J-42(FH)	J-53
P-208	97	16	Ductile Iron	120.0	3,336.24	5.3236	0.65	J-109	J-43
P-209	124	16	Ductile Iron	120.0	3,156.96	5.0375	0.75	J-43	J-42(FH)
P-210	178	16	Ductile Iron	120.0	3,130.72	4.9957	1.07	J-53	J-44
P-212	200	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-44(FH)
P-213	100	16	Ductile Iron	120.0	3,130.72	4.9957	0.60	J-44	J-121
P-215	193	8	Ductile Iron	120.0	26.19	0.1672	0.00	J-121	J-58 (F-FH)
P-216	19	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-122(FH)
P-217	22	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-121	J-123(FH)
P-218	143	16	Ductile Iron	120.0	2,954.41	4.7143	0.77	J-121	J-124
P-220	169	16	Ductile Iron	120.0	2,070.59	3.3040	0.47	J-124	J-125
P-221	115	8	Ductile Iron	120.0	41.31	0.2637	0.01	J-125	J-54 (F-FH)
P-222	21	8	Ductile Iron	120.0	883.82	5.6412	0.35	J-124	J-126
P-223	142	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-126	J-127(FH)
P-224	174	8	Ductile Iron	120.0	867.89	5.5396	2.84	J-126	J-55 (F-FH)
P-225	295	16	Ductile Iron	120.0	2,029.28	3.2381	0.79	J-125	J-59 (F-FH)
P-226	221	16	Ductile Iron	120.0	1,032.86	1.6481	0.17	J-59 (F-FH)	J-128
P-227	222	8	Ductile Iron	120.0	852.10	5.4388	3.50	J-128	J-129(FH)
P-228	169	16	Ductile Iron	120.0	180.77	0.2884	0.01	J-128	J-130
P-229	231	8	Ductile Iron	120.0	52.65	0.3361	0.02	J-130	J-56 (F-FH)
P-230	116	16	Ductile Iron	120.0	128.12	0.2044	0.00	J-130	J-131
P-231	65	8	Ductile Iron	120.0	72.90	0.4653	0.01	J-131	J-60 (F-FH)
P-232	211	16	Ductile Iron	120.0	55.22	0.0881	0.00	J-131	J-132
P-233	246	8	Ductile Iron	120.0	18.76	0.1198	0.00	J-132	J-57 (F-FH)
P-234	34	16	Ductile Iron	120.0	36.45	0.0582	0.00	J-132	J-133
P-235	88	8	Ductile Iron	120.0	36.45	0.2327	0.00	J-133	J-134(FH)
P-236	151	16	Ductile Iron	120.0	0.00	0.0000	0.00	J-133	J-135(FH)

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Full Build-out – PHD + Sprinkler + ISO @ Block 21
(future phase)

Scenario: Full Build-out - PHD + ISO @ 21 (Future Phase)
Current Time Step: 0.000Hr
FlexTable: Junction Table

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	37.00	295.38	131.39	40.8
J-1A(FH)	37.00	0.00	131.45	40.9
J-2 (FH)	45.00	0.00	129.66	36.6
J-3	46.00	123.39	129.20	36.0
J-4	47.00	0.00	128.33	35.2
J-5 (FH)	47.00	0.00	128.33	35.2
J-6	48.00	45.09	128.33	34.8
J-7	48.00	0.00	127.48	34.4
J-8	49.00	3.78	127.48	34.0
J-9	49.00	0.00	127.48	34.0
J-10	49.00	3.78	127.48	34.0
J-11 (FH)	49.00	0.00	127.48	34.0
J-12	49.00	0.00	127.48	34.0
J-13	48.00	2.97	127.48	34.4
J-14 (FH)	48.00	0.00	127.48	34.4
J-15 (FH)	46.00	0.00	127.48	35.3
J-16	48.00	0.00	127.06	34.2
J-17	47.00	1.62	127.06	34.6
J-18 (FH)	48.00	0.00	127.06	34.2
J-19 (FH)	48.00	53.46	127.06	34.2
J-20	48.00	0.00	126.64	34.0
J-21 (FH)	48.00	0.00	126.64	34.0
J-22	49.00	5.13	126.10	33.4
J-23	49.00	0.00	125.64	33.2
J-24 (FH)	49.00	0.00	125.64	33.2
J-25	49.00	0.00	125.46	33.1
J-26	49.00	36.72	125.46	33.1
J-27	49.00	0.00	125.42	33.1
J-28 (FH)	49.00	0.00	125.42	33.1
J-29	49.00	5.94	124.88	32.8
J-30	48.00	0.00	124.35	33.0
J-31 (FH)	48.00	0.00	124.35	33.0
J-32	48.00	0.00	124.20	33.0
J-33	48.00	0.00	124.07	32.9
J-34 (FH)	48.00	0.00	124.07	32.9
J-35 (FH)	49.00	0.00	124.44	32.6
J-36	49.00	0.00	124.53	32.7
J-37	49.00	14.31	124.53	32.7
J-37(FH)	47.00	0.00	124.53	33.5
J-38	49.00	5.94	124.78	32.8
J-39	50.00	62.37	125.10	32.5
J-39 (FH)	49.00	0.00	125.26	33.0
J-40	45.00	0.00	124.28	34.3
J-41	29.00	40.50	124.27	41.2
J-42	28.00	0.00	124.27	41.7
J-42(FH)	27.00	0.00	107.99	35.0
J-43	27.00	179.28	108.72	35.4
J-44	28.00	0.00	106.91	34.1
J-44(FH)	28.00	0.00	106.91	34.1
J-45	48.00	0.00	124.28	33.0
J-47	25.00	0.00	124.27	42.9
J-47A	25.00	9.45	124.27	42.9
J-48	22.00	0.00	124.27	44.2
J-48(FH)	19.00	0.00	124.27	45.5
J-49	22.00	0.00	124.27	44.2
J-51	18.00	0.00	124.27	46.0
J-51(FH)	19.00	0.00	124.27	45.5

J-52	47.00	1.62	127.79	35.0
J-53	38.00	0.00	107.95	30.3
J-54 (F-FH)	38.00	0.00	105.12	29.0
J-55 (F-FH)	38.00	867.89	102.38	27.9
J-56 (F-FH)	34.00	52.65	104.13	30.3
J-57 (F-FH)	31.00	18.76	104.14	31.6
J-58 (F-FH)	30.00	26.19	106.32	33.0
J-59 (F-FH)	27.00	996.41	104.32	33.5
J-59(FH)	36.00	33.75	131.59	41.4
J-60 (F-FH)	27.00	72.90	104.14	33.4
J-61	37.00	253.80	131.65	41.0
J-61(FH)	38.00	0.00	132.03	40.7
J-62	38.00	55.35	132.57	40.9
J-63	32.00	276.48	134.38	44.3
J-70	27.00	102.60	134.78	46.6
J-74	27.00	0.00	134.81	46.6
J-75	23.00	282.42	139.98	50.6
J-76(FH)	24.00	0.00	139.98	50.2
J-77	22.00	0.00	136.05	49.3
J-78(FH)	22.00	170.37	134.80	48.8
J-79(F-FH)	23.00	0.00	166.64	62.1
J-80(FH)	32.00	0.00	159.10	55.0
J-81(FH)	83.00	0.00	173.32	39.1
J-83	46.00	0.00	169.00	53.2
J-84	31.00	0.00	175.40	62.5
J-85	33.00	440.00	159.08	54.5
J-86(FH)	40.00	0.00	133.97	40.7
J-89	24.00	0.00	142.50	51.3
J-96	48.00	0.00	109.50	26.6
J-106(FH)	36.00	0.00	134.57	42.6
J-107(FH)	36.00	0.00	134.24	42.5
J-109	47.00	0.00	109.36	27.0
J-112(FH)	28.00	0.00	107.95	34.6
J-113(FH)	45.00	26.24	107.94	27.2
J-117	52.00	0.00	173.34	52.5
J-118	37.00	0.00	173.06	58.9
J-119	13.00	0.00	166.79	66.5
J-120	36.00	187.50	172.25	58.9
J-121	30.44	150.12	106.32	32.8
J-122(FH)	46.00	0.00	106.91	26.4
J-123(FH)	46.00	0.00	106.32	26.1
J-124	33.74	0.00	105.57	31.1
J-125	37.52	0.00	105.12	29.2
J-126	48.00	15.93	105.22	24.8
J-127(FH)	53.00	0.00	105.22	22.6
J-128	28.00	0.00	104.16	32.9
J-129(FH)	52.00	852.10	100.66	21.1
J-130	34.00	0.00	104.15	30.4
J-131	36.00	0.00	104.15	29.5
J-132	34.00	0.00	104.15	30.3
J-133	32.00	0.00	104.15	31.2
J-134(FH)	22.00	36.45	104.14	35.5
J-135(FH)	28.00	0.00	104.15	32.9

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Scenario: Full Build-out - PHD + ISO @ 21 (Future Phase)
Current Time Step: 0.000Hr
FlexTable: Pipe Table

Label	Length (Scaled) (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (Absolute) (gpm)	Velocity (ft/s)	Headloss (ft)	Start Node	Stop Node
P-1	297	16	Ductile Iron	110.0	3,503.21	5.5901	2.58	J-1	J-86(FH)
P-1A	1,046	8	Ductile Iron	120.0	1,280.58	8.1736	35.03	J-83	J-86(FH)
P-2	211	16	Ductile Iron	120.0	3,711.01	5.9216	1.73	J-1	J-2 (FH)
P-3	56	16	Ductile Iron	120.0	3,711.01	5.9216	0.46	J-2 (FH)	J-3
P-4	112	16	Ductile Iron	120.0	3,587.62	5.7247	0.86	J-3	J-4
P-5	40	8	Ductile Iron	120.0	45.09	0.2878	0.00	J-4	J-5 (FH)
P-6	76	8	Ductile Iron	120.0	45.09	0.2878	0.01	J-5 (FH)	J-6
P-8	149	8	Ductile Iron	120.0	10.53	0.0672	0.00	J-7	J-8
P-9	31	8	Ductile Iron	120.0	6.75	0.0431	0.00	J-8	J-9
P-10	77	8	Ductile Iron	120.0	3.78	0.0241	0.00	J-9	J-10
P-11	91	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-10	J-11 (FH)
P-12	16	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-9	J-12
P-13	120	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-12	J-13
P-14	25	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-13	J-14 (FH)
P-15	49	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-12	J-15 (FH)
P-16	55	16	Ductile Iron	120.0	3,530.38	5.6334	0.41	J-7	J-16
P-17	70	12	Ductile Iron	120.0	55.08	0.1563	0.00	J-16	J-17
P-18	82	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-17	J-18 (FH)
P-19	56	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-18 (FH)	J-19 (FH)
P-20	58	16	Ductile Iron	120.0	3,475.30	5.5455	0.42	J-16	J-20
P-21	30	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-20	J-21 (FH)
P-22	75	16	Ductile Iron	120.0	3,475.29	5.5455	0.55	J-20	J-22
P-23	63	16	Ductile Iron	120.0	3,470.17	5.5373	0.46	J-22	J-23
P-24	40	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-23	J-24 (FH)
P-25	30	16	Ductile Iron	120.0	3,103.27	4.9519	0.18	J-23	J-25
P-26	46	8	Ductile Iron	120.0	36.72	0.2344	0.00	J-25	J-26
P-27	8	16	Ductile Iron	120.0	3,066.55	4.8933	0.05	J-25	J-27
P-28	29	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-27	J-28 (FH)
P-29	93	16	Ductile Iron	120.0	3,066.55	4.8933	0.54	J-27	J-29
P-30	93	16	Ductile Iron	120.0	3,060.61	4.8838	0.53	J-29	J-30
P-31	32	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-30	J-31 (FH)
P-32	12	16	Ductile Iron	120.0	3,060.61	4.8838	0.07	J-30	J-45
P-33	14	16	Ductile Iron	120.0	3,010.66	4.8041	0.08	J-45	J-32
P-33A	20	16	Ductile Iron	120.0	3,294.93	5.2577	0.13	J-33	J-32
P-34	23	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-33	J-34 (FH)
P-35	118	8	Ductile Iron	120.0	284.27	1.8144	0.24	J-32	J-35 (FH)
P-36	42	8	Ductile Iron	120.0	284.27	1.8144	0.09	J-35 (FH)	J-36
P-37	50	8	Ductile Iron	120.0	14.31	0.0913	0.00	J-36	J-37
P-37A	43	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-37	J-37(FH)
P-38	110	8	Ductile Iron	120.0	298.58	1.9058	0.25	J-36	J-38
P-39	138	8	Ductile Iron	120.0	304.52	1.9437	0.32	J-38	J-39
P-39A	48	8	Ductile Iron	120.0	366.89	2.3418	0.16	J-39	J-39 (FH)
P-40	115	8	Ductile Iron	120.0	366.89	2.3418	0.38	J-39 (FH)	J-23
P-41	159	12	Ductile Iron	120.0	49.95	0.1417	0.00	J-45	J-40
P-42	93	12	Ductile Iron	120.0	49.95	0.1417	0.00	J-40	J-42
P-47	34	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-48(FH)
P-48	158	8	Ductile Iron	120.0	9.45	0.0603	0.00	J-41	J-47
P-48A	79	8	Ductile Iron	120.0	49.95	0.3188	0.01	J-41	J-42
P-49	204	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-47	J-48
P-49A	32	6	Ductile Iron	120.0	9.45	0.1072	0.00	J-47A	J-47
P-50	16	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-49
P-52	335	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-49	J-51
P-52A	18	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-51	J-51(FH)
P-53	72	16	Ductile Iron	120.0	3,542.53	5.6528	0.54	J-4	J-52
P-54	42	16	Ductile Iron	120.0	3,540.91	5.6502	0.32	J-52	J-7
P-69A	60	12	Ductile Iron	110.0	503.17	1.4274	0.06	J-1	J-1A(FH)
P-69B	149	12	Ductile Iron	110.0	503.17	1.4274	0.14	J-1A(FH)	J-59(FH)
P-72	55	12	Ductile Iron	110.0	536.92	1.5231	0.06	J-59(FH)	J-61
P-73A	168	12	Ductile Iron	110.0	790.72	2.2431	0.38	J-61	J-61(FH)
P-73B	242	12	Ductile Iron	110.0	790.72	2.2431	0.54	J-61(FH)	J-62
P-74	99	8	Ductile Iron	110.0	846.07	5.4003	1.81	J-62	J-63

P-86	104	8	Ductile Iron	110.0	90.72	0.5790	0.03	J-74	J-70
P-86A	235	12	Ductile Iron	110.0	2,724.28	7.7282	5.19	J-70	J-75
P-87	21	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-75	J-76(FH)
P-88	721	6	Ductile Iron	90.0	90.72	1.0294	1.24	J-74	J-77
P-92	95	12	Ductile Iron	110.0	3,006.70	8.5294	2.52	J-75	J-89
P-92A	626	12	Ductile Iron	110.0	3,006.70	8.5294	16.61	J-89	J-80(FH)
P-93	477	12	Ductile Iron	110.0	3,446.70	9.7776	16.30	J-80(FH)	J-84
P-95	33	12	Ductile Iron	110.0	440.00	1.2482	0.02	J-80(FH)	J-85
P-159	172	24	Ductile Iron	110.0	3,345.19	2.3724	0.19	J-63	J-106(FH)
P-160	195	24	Ductile Iron	110.0	3,345.19	2.3724	0.22	J-106(FH)	J-70
P-161	526	24	Ductile Iron	110.0	2,222.64	1.5763	0.27	J-86(FH)	J-107(FH)
P-162	269	24	Ductile Iron	110.0	2,222.64	1.5763	0.14	J-107(FH)	J-63
P-172	227	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-53	J-112(FH)
P-173	211	8	Ductile Iron	120.0	26.24	0.1675	0.01	J-53	J-113(FH)
P-188	2,981	16	Ductile Iron	110.0	893.88	1.4264	2.06	J-84	J-117
P-189	685	8	Ductile Iron	90.0	494.22	3.1545	6.70	J-117	J-79(F-FH)
P-190	326	24	Ductile Iron	120.0	632.79	0.4488	0.01	J-70	J-78(FH)
P-191	1,043	8	Ductile Iron	90.0	893.88	5.7054	30.58	J-77	J-79(F-FH)
P-192	89	8	Ductile Iron	120.0	803.16	5.1264	1.26	J-78(FH)	J-77
P-193	701	24	Ductile Iron	110.0	399.65	0.2834	0.02	J-117	J-81(FH)
P-194	423	12	Ductile Iron	110.0	399.65	1.1337	0.27	J-81(FH)	J-118
P-195	1,375	8	Ductile Iron	110.0	399.65	2.5509	6.26	J-118	J-119
P-196	35	8	Ductile Iron	110.0	399.65	2.5509	0.16	J-119	J-79(F-FH)
P-199	448	12	Ductile Iron	110.0	1,468.08	4.1646	3.15	J-84	J-120
P-200	595	12	Ductile Iron	110.0	1,280.58	3.6327	3.25	J-120	J-83
P-201	13	16	Ductile Iron	120.0	3,294.93	5.2577	0.09	J-33	GPV-6
P-202	11	16	Ductile Iron	120.0	3,294.93	5.2577	0.07	GPV-6	J-96
P-205	21	16	Ductile Iron	120.0	3,294.93	5.2577	0.14	J-96	J-109
P-207	7	16	Ductile Iron	120.0	3,115.65	4.9716	0.04	J-42(FH)	J-53
P-208	97	16	Ductile Iron	120.0	3,294.93	5.2577	0.64	J-109	J-43
P-209	124	16	Ductile Iron	120.0	3,115.65	4.9716	0.74	J-43	J-42(FH)
P-210	178	16	Ductile Iron	120.0	3,089.41	4.9298	1.04	J-53	J-44
P-212	200	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-44(FH)
P-213	100	16	Ductile Iron	120.0	3,089.41	4.9298	0.58	J-44	J-121
P-215	193	8	Ductile Iron	120.0	26.19	0.1672	0.00	J-121	J-58 (F-FH)
P-216	19	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-122(FH)
P-217	22	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-121	J-123(FH)
P-218	143	16	Ductile Iron	120.0	2,913.10	4.6484	0.75	J-121	J-124
P-220	169	16	Ductile Iron	120.0	2,029.28	3.2381	0.45	J-124	J-125
P-221	115	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-125	J-54 (F-FH)
P-222	21	8	Ductile Iron	120.0	883.82	5.6412	0.35	J-124	J-126
P-223	142	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-126	J-127(FH)
P-224	174	8	Ductile Iron	120.0	867.89	5.5396	2.84	J-126	J-55 (F-FH)
P-225	295	16	Ductile Iron	120.0	2,029.28	3.2381	0.79	J-125	J-59 (F-FH)
P-226	221	16	Ductile Iron	120.0	1,032.86	1.6481	0.17	J-59 (F-FH)	J-128
P-227	222	8	Ductile Iron	120.0	852.10	5.4388	3.50	J-128	J-129(FH)
P-228	169	16	Ductile Iron	120.0	180.77	0.2884	0.01	J-128	J-130
P-229	231	8	Ductile Iron	120.0	52.65	0.3361	0.02	J-130	J-56 (F-FH)
P-230	116	16	Ductile Iron	120.0	128.12	0.2044	0.00	J-130	J-131
P-231	65	8	Ductile Iron	120.0	72.90	0.4653	0.01	J-131	J-60 (F-FH)
P-232	211	16	Ductile Iron	120.0	55.22	0.0881	0.00	J-131	J-132
P-233	246	8	Ductile Iron	120.0	18.76	0.1198	0.00	J-132	J-57 (F-FH)
P-234	34	16	Ductile Iron	120.0	36.45	0.0582	0.00	J-132	J-133
P-235	88	8	Ductile Iron	120.0	36.45	0.2327	0.00	J-133	J-134(FH)
P-236	151	16	Ductile Iron	120.0	0.00	0.0000	0.00	J-133	J-135(FH)

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Full Build-out – PHD + Sprinkler + IS0 @ Block 22
(future phase)

Scenario: Full Build-out - PHD + ISO @ 22 (Future Phase)
Current Time Step: 0.000Hr
FlexTable: Junction Table

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	37.00	295.38	130.83	40.6
J-1A(FH)	37.00	0.00	130.89	40.6
J-2 (FH)	45.00	0.00	129.08	36.4
J-3	46.00	123.39	128.62	35.7
J-4	47.00	0.00	127.75	34.9
J-5 (FH)	47.00	0.00	127.74	34.9
J-6	48.00	45.09	127.74	34.5
J-7	48.00	0.00	126.88	34.1
J-8	49.00	3.78	126.88	33.7
J-9	49.00	0.00	126.88	33.7
J-10	49.00	3.78	126.88	33.7
J-11 (FH)	49.00	0.00	126.88	33.7
J-12	49.00	0.00	126.88	33.7
J-13	48.00	2.97	126.88	34.1
J-14 (FH)	48.00	0.00	126.88	34.1
J-15 (FH)	46.00	0.00	126.88	35.0
J-16	48.00	0.00	126.46	33.9
J-17	47.00	1.62	126.46	34.4
J-18 (FH)	48.00	0.00	126.46	33.9
J-19 (FH)	48.00	53.46	126.46	33.9
J-20	48.00	0.00	126.04	33.8
J-21 (FH)	48.00	0.00	126.04	33.8
J-22	49.00	5.13	125.49	33.1
J-23	49.00	0.00	125.02	32.9
J-24 (FH)	49.00	0.00	125.02	32.9
J-25	49.00	0.00	124.85	32.8
J-26	49.00	36.72	124.84	32.8
J-27	49.00	0.00	124.80	32.8
J-28 (FH)	49.00	0.00	124.80	32.8
J-29	49.00	5.94	124.26	32.6
J-30	48.00	0.00	123.72	32.8
J-31 (FH)	48.00	0.00	123.72	32.8
J-32	48.00	0.00	123.57	32.7
J-33	48.00	0.00	123.44	32.6
J-34 (FH)	48.00	0.00	123.44	32.6
J-35 (FH)	49.00	0.00	123.81	32.4
J-36	49.00	0.00	123.90	32.4
J-37	49.00	14.31	123.90	32.4
J-37(FH)	47.00	0.00	123.90	33.3
J-38	49.00	5.94	124.15	32.5
J-39	50.00	62.37	124.48	32.2
J-39 (FH)	49.00	0.00	124.64	32.7
J-40	45.00	0.00	123.65	34.0
J-41	29.00	40.50	123.64	40.9
J-42	28.00	0.00	123.64	41.4
J-42(FH)	27.00	0.00	107.23	34.7
J-43	27.00	179.28	107.97	35.0
J-44	28.00	0.00	106.17	33.8
J-44(FH)	28.00	0.00	106.17	33.8
J-45	48.00	0.00	123.65	32.7
J-47	25.00	0.00	123.64	42.7
J-47A	25.00	9.45	123.64	42.7
J-48	22.00	0.00	123.64	44.0
J-48(FH)	19.00	0.00	123.64	45.3
J-49	22.00	0.00	123.64	44.0
J-51	18.00	0.00	123.64	45.7
J-51(FH)	19.00	0.00	123.64	45.3

J-52	47.00	1.62	127.20	34.7
J-53	38.00	0.00	107.19	29.9
J-54 (F-FH)	38.00	13.50	104.03	28.6
J-55 (F-FH)	38.00	34.56	104.86	28.9
J-56 (F-FH)	34.00	833.33	97.76	27.6
J-57 (F-FH)	31.00	18.76	101.17	30.4
J-58 (F-FH)	30.00	26.19	105.59	32.7
J-59 (F-FH)	27.00	163.08	102.58	32.7
J-59(FH)	36.00	33.75	131.04	41.1
J-60 (F-FH)	27.00	906.23	100.03	31.6
J-61	37.00	253.80	131.10	40.7
J-61(FH)	38.00	0.00	131.48	40.4
J-62	38.00	55.35	132.02	40.7
J-63	32.00	276.48	133.84	44.1
J-70	27.00	102.60	134.25	46.4
J-74	27.00	0.00	134.28	46.4
J-75	23.00	282.42	139.48	50.4
J-76(FH)	24.00	0.00	139.48	50.0
J-77	22.00	0.00	135.53	49.1
J-78(FH)	22.00	170.37	134.27	48.6
J-79(F-FH)	23.00	0.00	166.31	62.0
J-80(FH)	32.00	0.00	158.74	54.8
J-81(FH)	83.00	0.00	173.04	39.0
J-83	46.00	0.00	168.69	53.1
J-84	31.00	0.00	175.13	62.4
J-85	33.00	440.00	158.72	54.4
J-86(FH)	40.00	0.00	133.43	40.4
J-89	24.00	0.00	142.02	51.1
J-96	48.00	0.00	108.76	26.3
J-106(FH)	36.00	0.00	134.03	42.4
J-107(FH)	36.00	0.00	133.70	42.3
J-109	47.00	0.00	108.62	26.7
J-112(FH)	28.00	58.05	107.16	34.2
J-113(FH)	45.00	26.24	107.18	26.9
J-117	52.00	0.00	173.06	52.4
J-118	37.00	0.00	172.78	58.7
J-119	13.00	0.00	166.47	66.4
J-120	36.00	187.50	171.96	58.8
J-121	30.44	150.12	105.60	32.5
J-122(FH)	46.00	0.00	106.17	26.0
J-123(FH)	46.00	0.00	105.60	25.8
J-124	33.74	0.00	104.87	30.8
J-125	37.52	0.00	104.03	28.8
J-126	48.00	15.93	104.86	24.6
J-127(FH)	53.00	0.00	104.86	22.4
J-128	28.00	0.00	101.61	31.8
J-129(FH)	52.00	852.10	98.12	20.0
J-130	34.00	0.00	101.25	29.1
J-131	36.00	0.00	101.17	28.2
J-132	34.00	0.00	101.17	29.1
J-133	32.00	0.00	101.17	29.9
J-134(FH)	22.00	36.45	101.17	34.3
J-135(FH)	28.00	0.00	101.17	31.7

Scenario: Full Build-out - PHD + ISO @ 22 (Future Phase)
Current Time Step: 0.000Hr
FlexTable: Pipe Table

Label	Length (Scaled) (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (Absolute) (gpm)	Velocity (ft/s)	Headloss (ft)	Start Node	Stop Node
P-1	297	16	Ductile Iron	110.0	3,518.62	5.6146	2.60	J-1	J-86(FH)
P-1A	1,046	8	Ductile Iron	120.0	1,285.20	8.2031	35.27	J-83	J-86(FH)
P-2	211	16	Ductile Iron	120.0	3,729.91	5.9518	1.75	J-1	J-2 (FH)
P-3	56	16	Ductile Iron	120.0	3,729.91	5.9518	0.46	J-2 (FH)	J-3
P-4	112	16	Ductile Iron	120.0	3,606.52	5.7549	0.87	J-3	J-4
P-5	40	8	Ductile Iron	120.0	45.09	0.2878	0.00	J-4	J-5 (FH)
P-6	76	8	Ductile Iron	120.0	45.09	0.2878	0.01	J-5 (FH)	J-6
P-8	149	8	Ductile Iron	120.0	10.53	0.0672	0.00	J-7	J-8
P-9	31	8	Ductile Iron	120.0	6.75	0.0431	0.00	J-8	J-9
P-10	77	8	Ductile Iron	120.0	3.78	0.0241	0.00	J-9	J-10
P-11	91	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-10	J-11 (FH)
P-12	16	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-9	J-12
P-13	120	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-12	J-13
P-14	25	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-13	J-14 (FH)
P-15	49	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-12	J-15 (FH)
P-16	55	16	Ductile Iron	120.0	3,549.28	5.6636	0.42	J-7	J-16
P-17	70	12	Ductile Iron	120.0	55.08	0.1563	0.00	J-16	J-17
P-18	82	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-17	J-18 (FH)
P-19	56	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-18 (FH)	J-19 (FH)
P-20	58	16	Ductile Iron	120.0	3,494.20	5.5757	0.43	J-16	J-20
P-21	30	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-20	J-21 (FH)
P-22	75	16	Ductile Iron	120.0	3,494.20	5.5757	0.55	J-20	J-22
P-23	63	16	Ductile Iron	120.0	3,489.07	5.5675	0.46	J-22	J-23
P-24	40	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-23	J-24 (FH)
P-25	30	16	Ductile Iron	120.0	3,120.39	4.9792	0.18	J-23	J-25
P-26	46	8	Ductile Iron	120.0	36.72	0.2344	0.00	J-25	J-26
P-27	8	16	Ductile Iron	120.0	3,083.67	4.9206	0.05	J-25	J-27
P-28	29	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-27	J-28 (FH)
P-29	93	16	Ductile Iron	120.0	3,083.67	4.9206	0.54	J-27	J-29
P-30	93	16	Ductile Iron	120.0	3,077.73	4.9111	0.54	J-29	J-30
P-31	32	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-30	J-31 (FH)
P-32	12	16	Ductile Iron	120.0	3,077.73	4.9111	0.07	J-30	J-45
P-33	14	16	Ductile Iron	120.0	3,027.78	4.8314	0.08	J-45	J-32
P-33A	20	16	Ductile Iron	120.0	3,313.83	5.2879	0.13	J-33	J-32
P-34	23	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-33	J-34 (FH)
P-35	118	8	Ductile Iron	120.0	286.05	1.8258	0.25	J-32	J-35 (FH)
P-36	42	8	Ductile Iron	120.0	286.05	1.8258	0.09	J-35 (FH)	J-36
P-37	50	8	Ductile Iron	120.0	14.31	0.0913	0.00	J-36	J-37
P-37A	43	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-37	J-37(FH)
P-38	110	8	Ductile Iron	120.0	300.36	1.9171	0.25	J-36	J-38
P-39	138	8	Ductile Iron	120.0	306.30	1.9551	0.33	J-38	J-39
P-39A	48	8	Ductile Iron	120.0	368.67	2.3531	0.16	J-39	J-39 (FH)
P-40	115	8	Ductile Iron	120.0	368.67	2.3531	0.38	J-39 (FH)	J-23
P-41	159	12	Ductile Iron	120.0	49.95	0.1417	0.00	J-45	J-40
P-42	93	12	Ductile Iron	120.0	49.95	0.1417	0.00	J-40	J-42
P-47	34	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-48(FH)
P-48	158	8	Ductile Iron	120.0	9.45	0.0603	0.00	J-41	J-47
P-48A	79	8	Ductile Iron	120.0	49.95	0.3188	0.01	J-41	J-42
P-49	204	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-47	J-48
P-49A	32	6	Ductile Iron	120.0	9.45	0.1072	0.00	J-47A	J-47
P-50	16	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-49
P-52	335	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-49	J-51
P-52A	18	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-51	J-51(FH)
P-53	72	16	Ductile Iron	120.0	3,561.43	5.6829	0.55	J-4	J-52
P-54	42	16	Ductile Iron	120.0	3,559.81	5.6804	0.32	J-52	J-7
P-69A	60	12	Ductile Iron	110.0	506.67	1.4373	0.06	J-1	J-1A(FH)
P-69B	149	12	Ductile Iron	110.0	506.67	1.4373	0.15	J-1A(FH)	J-59(FH)
P-72	55	12	Ductile Iron	110.0	540.42	1.5330	0.06	J-59(FH)	J-61
P-73A	168	12	Ductile Iron	110.0	794.22	2.2530	0.38	J-61	J-61(FH)
P-73B	242	12	Ductile Iron	110.0	794.22	2.2530	0.55	J-61(FH)	J-62
P-74	99	8	Ductile Iron	110.0	849.57	5.4226	1.82	J-62	J-63

P-86	104	8	Ductile Iron	110.0	91.04	0.5811	0.03	J-74	J-70
P-86A	235	12	Ductile Iron	110.0	2,735.39	7.7597	5.23	J-70	J-75
P-87	21	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-75	J-76(FH)
P-88	721	6	Ductile Iron	90.0	91.04	1.0331	1.25	J-74	J-77
P-92	95	12	Ductile Iron	110.0	3,017.81	8.5609	2.54	J-75	J-89
P-92A	626	12	Ductile Iron	110.0	3,017.81	8.5609	16.72	J-89	J-80(FH)
P-93	477	12	Ductile Iron	110.0	3,457.81	9.8091	16.39	J-80(FH)	J-84
P-95	33	12	Ductile Iron	110.0	440.00	1.2482	0.02	J-80(FH)	J-85
P-159	172	24	Ductile Iron	110.0	3,359.47	2.3825	0.19	J-63	J-106(FH)
P-160	195	24	Ductile Iron	110.0	3,359.47	2.3825	0.22	J-106(FH)	J-70
P-161	526	24	Ductile Iron	110.0	2,233.42	1.5839	0.27	J-86(FH)	J-107(FH)
P-162	269	24	Ductile Iron	110.0	2,233.42	1.5839	0.14	J-107(FH)	J-63
P-172	227	8	Ductile Iron	120.0	58.05	0.3705	0.02	J-53	J-112(FH)
P-173	211	8	Ductile Iron	120.0	26.24	0.1675	0.01	J-53	J-113(FH)
P-188	2,981	16	Ductile Iron	110.0	897.05	1.4314	2.07	J-84	J-117
P-189	685	8	Ductile Iron	90.0	495.98	3.1657	6.75	J-117	J-79(F-FH)
P-190	326	24	Ductile Iron	120.0	635.64	0.4508	0.01	J-70	J-78(FH)
P-191	1,043	8	Ductile Iron	90.0	897.05	5.7257	30.78	J-77	J-79(F-FH)
P-192	89	8	Ductile Iron	120.0	806.01	5.1446	1.26	J-78(FH)	J-77
P-193	701	24	Ductile Iron	110.0	401.07	0.2844	0.02	J-117	J-81(FH)
P-194	423	12	Ductile Iron	110.0	401.07	1.1378	0.27	J-81(FH)	J-118
P-195	1,375	8	Ductile Iron	110.0	401.07	2.5600	6.30	J-118	J-119
P-196	35	8	Ductile Iron	110.0	401.07	2.5600	0.16	J-119	J-79(F-FH)
P-199	448	12	Ductile Iron	110.0	1,472.70	4.1777	3.17	J-84	J-120
P-200	595	12	Ductile Iron	110.0	1,285.20	3.6458	3.27	J-120	J-83
P-201	13	16	Ductile Iron	120.0	3,313.83	5.2879	0.09	J-33	GPV-6
P-202	11	16	Ductile Iron	120.0	3,313.83	5.2879	0.07	GPV-6	J-96
P-205	21	16	Ductile Iron	120.0	3,313.83	5.2879	0.14	J-96	J-109
P-207	7	16	Ductile Iron	120.0	3,134.55	5.0018	0.04	J-42(FH)	J-53
P-208	97	16	Ductile Iron	120.0	3,313.83	5.2879	0.65	J-109	J-43
P-209	124	16	Ductile Iron	120.0	3,134.55	5.0018	0.74	J-43	J-42(FH)
P-210	178	16	Ductile Iron	120.0	3,050.26	4.8673	1.02	J-53	J-44
P-212	200	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-44(FH)
P-213	100	16	Ductile Iron	120.0	3,050.26	4.8673	0.57	J-44	J-121
P-215	193	8	Ductile Iron	120.0	26.19	0.1672	0.00	J-121	J-58 (F-FH)
P-216	19	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-122(FH)
P-217	22	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-121	J-123(FH)
P-218	143	16	Ductile Iron	120.0	2,873.95	4.5859	0.73	J-121	J-124
P-220	169	16	Ductile Iron	120.0	2,823.46	4.5054	0.84	J-124	J-125
P-221	115	8	Ductile Iron	120.0	13.50	0.0862	0.00	J-125	J-54 (F-FH)
P-222	21	8	Ductile Iron	120.0	50.49	0.3223	0.00	J-124	J-126
P-223	142	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-126	J-127(FH)
P-224	174	8	Ductile Iron	120.0	34.56	0.2206	0.01	J-126	J-55 (F-FH)
P-225	295	16	Ductile Iron	120.0	2,809.96	4.4838	1.45	J-125	J-59 (F-FH)
P-226	221	16	Ductile Iron	120.0	2,646.88	4.2236	0.97	J-59 (F-FH)	J-128
P-227	222	8	Ductile Iron	120.0	852.10	5.4388	3.50	J-128	J-129(FH)
P-228	169	16	Ductile Iron	120.0	1,794.78	2.8639	0.36	J-128	J-130
P-229	231	8	Ductile Iron	120.0	833.33	5.3190	3.49	J-130	J-56 (F-FH)
P-230	116	16	Ductile Iron	120.0	961.45	1.5342	0.08	J-130	J-131
P-231	65	8	Ductile Iron	120.0	906.23	5.7843	1.15	J-131	J-60 (F-FH)
P-232	211	16	Ductile Iron	120.0	55.22	0.0881	0.00	J-131	J-132
P-233	246	8	Ductile Iron	120.0	18.76	0.1198	0.00	J-132	J-57 (F-FH)
P-234	34	16	Ductile Iron	120.0	36.45	0.0582	0.00	J-132	J-133
P-235	88	8	Ductile Iron	120.0	36.45	0.2327	0.00	J-133	J-134(FH)
P-236	151	16	Ductile Iron	120.0	0.00	0.0000	0.00	J-133	J-135(FH)

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Full Build-out – PHD + Sprinkler + ISO @ Block 23
(future phase)

Scenario: Full Build-out - PHD + ISO @ 23 (Future Phase)
Current Time Step: 0.000Hr
FlexTable: Junction Table

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	37.00	295.38	132.55	41.3
J-1A(FH)	37.00	0.00	132.60	41.4
J-2 (FH)	45.00	0.00	130.85	37.1
J-3	46.00	123.39	130.40	36.5
J-4	47.00	0.00	129.55	35.7
J-5 (FH)	47.00	0.00	129.55	35.7
J-6	48.00	45.09	129.54	35.3
J-7	48.00	0.00	128.71	34.9
J-8	49.00	3.78	128.71	34.5
J-9	49.00	0.00	128.71	34.5
J-10	49.00	3.78	128.71	34.5
J-11 (FH)	49.00	0.00	128.71	34.5
J-12	49.00	0.00	128.71	34.5
J-13	48.00	2.97	128.71	34.9
J-14 (FH)	48.00	0.00	128.71	34.9
J-15 (FH)	46.00	0.00	128.71	35.8
J-16	48.00	0.00	128.31	34.7
J-17	47.00	1.62	128.30	35.2
J-18 (FH)	48.00	0.00	128.30	34.7
J-19 (FH)	48.00	53.46	128.30	34.7
J-20	48.00	0.00	127.89	34.6
J-21 (FH)	48.00	0.00	127.89	34.6
J-22	49.00	5.13	127.36	33.9
J-23	49.00	0.00	126.91	33.7
J-24 (FH)	49.00	0.00	126.91	33.7
J-25	49.00	0.00	126.74	33.6
J-26	49.00	36.72	126.74	33.6
J-27	49.00	0.00	126.69	33.6
J-28 (FH)	49.00	0.00	126.69	33.6
J-29	49.00	5.94	126.17	33.4
J-30	48.00	0.00	125.65	33.6
J-31 (FH)	48.00	0.00	125.65	33.6
J-32	48.00	0.00	125.50	33.5
J-33	48.00	0.00	125.37	33.5
J-34 (FH)	48.00	0.00	125.37	33.5
J-35 (FH)	49.00	0.00	125.74	33.2
J-36	49.00	0.00	125.82	33.2
J-37	49.00	14.31	125.82	33.2
J-37(FH)	47.00	0.00	125.82	34.1
J-38	49.00	5.94	126.07	33.3
J-39	50.00	62.37	126.38	33.0
J-39 (FH)	49.00	0.00	126.54	33.5
J-40	45.00	0.00	125.58	34.9
J-41	29.00	40.50	125.57	41.8
J-42	28.00	0.00	125.57	42.2
J-42(FH)	27.00	0.00	109.56	35.7
J-43	27.00	179.28	110.28	36.0
J-44	28.00	0.00	108.50	34.8
J-44(FH)	28.00	0.00	108.50	34.8
J-45	48.00	0.00	125.58	33.6
J-47	25.00	0.00	125.57	43.5
J-47A	25.00	9.45	125.57	43.5
J-48	22.00	0.00	125.57	44.8
J-48(FH)	19.00	0.00	125.57	46.1
J-49	22.00	0.00	125.57	44.8
J-51	18.00	0.00	125.57	46.5
J-51(FH)	19.00	0.00	125.57	46.1

J-52	47.00	1.62	129.02	35.5
J-53	38.00	0.00	109.52	30.9
J-54 (F-FH)	38.00	13.50	106.36	29.6
J-55 (F-FH)	38.00	34.56	107.19	29.9
J-56 (F-FH)	34.00	0.00	104.07	30.3
J-57 (F-FH)	31.00	18.76	103.70	31.5
J-58 (F-FH)	30.00	26.19	107.92	33.7
J-59 (F-FH)	27.00	996.41	104.91	33.7
J-59(FH)	36.00	33.75	132.74	41.9
J-60 (F-FH)	27.00	906.23	102.67	32.7
J-61	37.00	253.80	132.80	41.4
J-61(FH)	38.00	0.00	133.17	41.2
J-62	38.00	55.35	133.70	41.4
J-63	32.00	276.48	135.48	44.8
J-70	27.00	102.60	135.88	47.1
J-74	27.00	0.00	135.91	47.1
J-75	23.00	282.42	140.99	51.1
J-76(FH)	24.00	0.00	140.99	50.6
J-77	22.00	0.00	137.13	49.8
J-78(FH)	22.00	170.37	135.89	49.3
J-79(F-FH)	23.00	0.00	167.30	62.4
J-80(FH)	32.00	0.00	159.85	55.3
J-81(FH)	83.00	0.00	173.90	39.3
J-83	46.00	0.00	169.63	53.5
J-84	31.00	0.00	175.94	62.7
J-85	33.00	440.00	159.82	54.9
J-86(FH)	40.00	0.00	135.08	41.1
J-89	24.00	0.00	143.48	51.7
J-96	48.00	0.00	111.04	27.3
J-106(FH)	36.00	0.00	135.67	43.1
J-107(FH)	36.00	0.00	135.35	43.0
J-109	47.00	0.00	110.90	27.6
J-112(FH)	28.00	0.00	109.52	35.3
J-113(FH)	45.00	26.24	109.51	27.9
J-117	52.00	0.00	173.91	52.7
J-118	37.00	0.00	173.63	59.1
J-119	13.00	0.00	167.46	66.8
J-120	36.00	187.50	172.83	59.2
J-121	30.44	150.12	107.93	33.5
J-122(FH)	46.00	0.00	108.50	27.0
J-123(FH)	46.00	0.00	107.93	26.8
J-124	33.74	0.00	107.20	31.8
J-125	37.52	0.00	106.36	29.8
J-126	48.00	15.93	107.19	25.6
J-127(FH)	53.00	0.00	107.19	23.4
J-128	28.00	0.00	104.43	33.1
J-129(FH)	52.00	18.76	104.43	22.7
J-130	34.00	0.00	104.07	30.3
J-131	36.00	0.00	103.82	29.3
J-132	34.00	0.00	103.70	30.2
J-133	32.00	0.00	103.68	31.0
J-134(FH)	22.00	869.78	102.24	34.7
J-135(FH)	28.00	0.00	103.68	32.7

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Scenario: Full Build-out - PHD + ISO @ 23 (Future Phase)
Current Time Step: 0.000Hr
FlexTable: Pipe Table

Label	Length (Scaled) (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (Absolute) (gpm)	Velocity (ft/s)	Headloss (ft)	Start Node	Stop Node
P-1	297	16	Ductile Iron	110.0	3,471.31	5.5391	2.53	J-1	J-86(FH)
P-1A	1,046	8	Ductile Iron	120.0	1,271.01	8.1126	34.55	J-83	J-86(FH)
P-2	211	16	Ductile Iron	120.0	3,671.86	5.8592	1.70	J-1	J-2 (FH)
P-3	56	16	Ductile Iron	120.0	3,671.86	5.8592	0.45	J-2 (FH)	J-3
P-4	112	16	Ductile Iron	120.0	3,548.47	5.6623	0.85	J-3	J-4
P-5	40	8	Ductile Iron	120.0	45.09	0.2878	0.00	J-4	J-5 (FH)
P-6	76	8	Ductile Iron	120.0	45.09	0.2878	0.01	J-5 (FH)	J-6
P-8	149	8	Ductile Iron	120.0	10.53	0.0672	0.00	J-7	J-8
P-9	31	8	Ductile Iron	120.0	6.75	0.0431	0.00	J-8	J-9
P-10	77	8	Ductile Iron	120.0	3.78	0.0241	0.00	J-9	J-10
P-11	91	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-10	J-11 (FH)
P-12	16	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-9	J-12
P-13	120	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-12	J-13
P-14	25	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-13	J-14 (FH)
P-15	49	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-12	J-15 (FH)
P-16	55	16	Ductile Iron	120.0	3,491.23	5.5709	0.40	J-7	J-16
P-17	70	12	Ductile Iron	120.0	55.08	0.1563	0.00	J-16	J-17
P-18	82	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-17	J-18 (FH)
P-19	56	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-18 (FH)	J-19 (FH)
P-20	58	16	Ductile Iron	120.0	3,436.15	5.4830	0.41	J-16	J-20
P-21	30	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-20	J-21 (FH)
P-22	75	16	Ductile Iron	120.0	3,436.15	5.4830	0.53	J-20	J-22
P-23	63	16	Ductile Iron	120.0	3,431.02	5.4749	0.45	J-22	J-23
P-24	40	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-23	J-24 (FH)
P-25	30	16	Ductile Iron	120.0	3,067.81	4.8953	0.17	J-23	J-25
P-26	46	8	Ductile Iron	120.0	36.72	0.2344	0.00	J-25	J-26
P-27	8	16	Ductile Iron	120.0	3,031.09	4.8367	0.05	J-25	J-27
P-28	29	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-27	J-28 (FH)
P-29	93	16	Ductile Iron	120.0	3,031.09	4.8367	0.52	J-27	J-29
P-30	93	16	Ductile Iron	120.0	3,025.15	4.8272	0.52	J-29	J-30
P-31	32	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-30	J-31 (FH)
P-32	12	16	Ductile Iron	120.0	3,025.15	4.8272	0.07	J-30	J-45
P-33	14	16	Ductile Iron	120.0	2,975.20	4.7475	0.08	J-45	J-32
P-33A	20	16	Ductile Iron	120.0	3,255.78	5.1952	0.13	J-33	J-32
P-34	23	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-33	J-34 (FH)
P-35	118	8	Ductile Iron	120.0	280.59	1.7909	0.24	J-32	J-35 (FH)
P-36	42	8	Ductile Iron	120.0	280.59	1.7909	0.08	J-35 (FH)	J-36
P-37	50	8	Ductile Iron	120.0	14.31	0.0913	0.00	J-36	J-37
P-37A	43	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-37	J-37(FH)
P-38	110	8	Ductile Iron	120.0	294.90	1.8823	0.24	J-36	J-38
P-39	138	8	Ductile Iron	120.0	300.84	1.9202	0.32	J-38	J-39
P-39A	48	8	Ductile Iron	120.0	363.21	2.3183	0.16	J-39	J-39 (FH)
P-40	115	8	Ductile Iron	120.0	363.21	2.3183	0.37	J-39 (FH)	J-23
P-41	159	12	Ductile Iron	120.0	49.95	0.1417	0.00	J-45	J-40
P-42	93	12	Ductile Iron	120.0	49.95	0.1417	0.00	J-40	J-42
P-47	34	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-48(FH)
P-48	158	8	Ductile Iron	120.0	9.45	0.0603	0.00	J-41	J-47
P-48A	79	8	Ductile Iron	120.0	49.95	0.3188	0.01	J-41	J-42
P-49	204	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-47	J-48
P-49A	32	6	Ductile Iron	120.0	9.45	0.1072	0.00	J-47A	J-47
P-50	16	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-49
P-52	335	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-49	J-51
P-52A	18	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-51	J-51(FH)
P-53	72	16	Ductile Iron	120.0	3,503.38	5.5903	0.53	J-4	J-52
P-54	42	16	Ductile Iron	120.0	3,501.76	5.5877	0.31	J-52	J-7
P-69A	60	12	Ductile Iron	110.0	495.93	1.4068	0.06	J-1	J-1A(FH)
P-69B	149	12	Ductile Iron	110.0	495.93	1.4068	0.14	J-1A(FH)	J-59(FH)
P-72	55	12	Ductile Iron	110.0	529.68	1.5026	0.06	J-59(FH)	J-61
P-73A	168	12	Ductile Iron	110.0	783.48	2.2226	0.37	J-61	J-61(FH)
P-73B	242	12	Ductile Iron	110.0	783.48	2.2226	0.53	J-61(FH)	J-62
P-74	99	8	Ductile Iron	110.0	838.83	5.3540	1.78	J-62	J-63

P-86	104	8	Ductile Iron	110.0	90.05	0.5747	0.03	J-74	J-70
P-86A	235	12	Ductile Iron	110.0	2,701.28	7.6630	5.11	J-70	J-75
P-87	21	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-75	J-76(FH)
P-88	721	6	Ductile Iron	90.0	90.05	1.0218	1.22	J-74	J-77
P-92	95	12	Ductile Iron	110.0	2,983.70	8.4641	2.48	J-75	J-89
P-92A	626	12	Ductile Iron	110.0	2,983.70	8.4641	16.37	J-89	J-80(FH)
P-93	477	12	Ductile Iron	110.0	3,423.70	9.7123	16.09	J-80(FH)	J-84
P-95	33	12	Ductile Iron	110.0	440.00	1.2482	0.02	J-80(FH)	J-85
P-159	172	24	Ductile Iron	110.0	3,315.61	2.3514	0.19	J-63	J-106(FH)
P-160	195	24	Ductile Iron	110.0	3,315.61	2.3514	0.21	J-106(FH)	J-70
P-161	526	24	Ductile Iron	110.0	2,200.30	1.5604	0.27	J-86(FH)	J-107(FH)
P-162	269	24	Ductile Iron	110.0	2,200.30	1.5604	0.14	J-107(FH)	J-63
P-172	227	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-53	J-112(FH)
P-173	211	8	Ductile Iron	120.0	26.24	0.1675	0.01	J-53	J-113(FH)
P-188	2,981	16	Ductile Iron	110.0	887.30	1.4159	2.03	J-84	J-117
P-189	685	8	Ductile Iron	90.0	490.58	3.1313	6.61	J-117	J-79(F-FH)
P-190	326	24	Ductile Iron	120.0	626.88	0.4446	0.01	J-70	J-78(FH)
P-191	1,043	8	Ductile Iron	90.0	887.30	5.6634	30.17	J-77	J-79(F-FH)
P-192	89	8	Ductile Iron	120.0	797.25	5.0887	1.24	J-78(FH)	J-77
P-193	701	24	Ductile Iron	110.0	396.71	0.2813	0.01	J-117	J-81(FH)
P-194	423	12	Ductile Iron	110.0	396.71	1.1254	0.26	J-81(FH)	J-118
P-195	1,375	8	Ductile Iron	110.0	396.71	2.5321	6.18	J-118	J-119
P-196	35	8	Ductile Iron	110.0	396.71	2.5321	0.16	J-119	J-79(F-FH)
P-199	448	12	Ductile Iron	110.0	1,458.51	4.1375	3.11	J-84	J-120
P-200	595	12	Ductile Iron	110.0	1,271.01	3.6056	3.20	J-120	J-83
P-201	13	16	Ductile Iron	120.0	3,255.78	5.1952	0.08	J-33	GPV-6
P-202	11	16	Ductile Iron	120.0	3,255.78	5.1952	0.07	GPV-6	J-96
P-205	21	16	Ductile Iron	120.0	3,255.78	5.1952	0.14	J-96	J-109
P-207	7	16	Ductile Iron	120.0	3,076.50	4.9092	0.04	J-42(FH)	J-53
P-208	97	16	Ductile Iron	120.0	3,255.78	5.1952	0.63	J-109	J-43
P-209	124	16	Ductile Iron	120.0	3,076.50	4.9092	0.72	J-43	J-42(FH)
P-210	178	16	Ductile Iron	120.0	3,050.26	4.8673	1.02	J-53	J-44
P-212	200	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-44(FH)
P-213	100	16	Ductile Iron	120.0	3,050.26	4.8673	0.57	J-44	J-121
P-215	193	8	Ductile Iron	120.0	26.19	0.1672	0.00	J-121	J-58 (F-FH)
P-216	19	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-122(FH)
P-217	22	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-121	J-123(FH)
P-218	143	16	Ductile Iron	120.0	2,873.95	4.5859	0.73	J-121	J-124
P-220	169	16	Ductile Iron	120.0	2,823.46	4.5054	0.84	J-124	J-125
P-221	115	8	Ductile Iron	120.0	13.50	0.0862	0.00	J-125	J-54 (F-FH)
P-222	21	8	Ductile Iron	120.0	50.49	0.3223	0.00	J-124	J-126
P-223	142	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-126	J-127(FH)
P-224	174	8	Ductile Iron	120.0	34.56	0.2206	0.01	J-126	J-55 (F-FH)
P-225	295	16	Ductile Iron	120.0	2,809.96	4.4838	1.45	J-125	J-59 (F-FH)
P-226	221	16	Ductile Iron	120.0	1,813.55	2.8939	0.48	J-59 (F-FH)	J-128
P-227	222	8	Ductile Iron	120.0	18.76	0.1198	0.00	J-128	J-129(FH)
P-228	169	16	Ductile Iron	120.0	1,794.78	2.8639	0.36	J-128	J-130
P-229	231	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-130	J-56 (F-FH)
P-230	116	16	Ductile Iron	120.0	1,794.78	2.8639	0.25	J-130	J-131
P-231	65	8	Ductile Iron	120.0	906.23	5.7843	1.15	J-131	J-60 (F-FH)
P-232	211	16	Ductile Iron	120.0	888.55	1.4179	0.12	J-131	J-132
P-233	246	8	Ductile Iron	120.0	18.76	0.1198	0.00	J-132	J-57 (F-FH)
P-234	34	16	Ductile Iron	120.0	869.78	1.3879	0.02	J-132	J-133
P-235	88	8	Ductile Iron	120.0	869.78	5.5516	1.44	J-133	J-134(FH)
P-236	151	16	Ductile Iron	120.0	0.00	0.0000	0.00	J-133	J-135(FH)

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Full Build-out – PHD + Sprinkler + ISO @ Block 24
(future phase)

Scenario: Full Build-out - PHD + ISO @ 24 (Future Phase)
Current Time Step: 0.000Hr
FlexTable: Junction Table

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	37.00	295.38	133.10	41.6
J-1A(FH)	37.00	0.00	133.15	41.6
J-2 (FH)	45.00	0.00	131.41	37.4
J-3	46.00	123.39	130.97	36.8
J-4	47.00	0.00	130.13	36.0
J-5 (FH)	47.00	0.00	130.13	36.0
J-6	48.00	45.09	130.12	35.5
J-7	48.00	0.00	129.30	35.2
J-8	49.00	3.78	129.30	34.7
J-9	49.00	0.00	129.30	34.7
J-10	49.00	3.78	129.30	34.7
J-11 (FH)	49.00	0.00	129.30	34.7
J-12	49.00	0.00	129.30	34.7
J-13	48.00	2.97	129.30	35.2
J-14 (FH)	48.00	0.00	129.30	35.2
J-15 (FH)	46.00	0.00	129.30	36.0
J-16	48.00	0.00	128.90	35.0
J-17	47.00	1.62	128.90	35.4
J-18 (FH)	48.00	0.00	128.90	35.0
J-19 (FH)	48.00	53.46	128.90	35.0
J-20	48.00	0.00	128.49	34.8
J-21 (FH)	48.00	0.00	128.49	34.8
J-22	49.00	5.13	127.96	34.2
J-23	49.00	0.00	127.52	34.0
J-24 (FH)	49.00	0.00	127.52	34.0
J-25	49.00	0.00	127.35	33.9
J-26	49.00	36.72	127.34	33.9
J-27	49.00	0.00	127.30	33.9
J-28 (FH)	49.00	0.00	127.30	33.9
J-29	49.00	5.94	126.78	33.7
J-30	48.00	0.00	126.26	33.9
J-31 (FH)	48.00	0.00	126.26	33.9
J-32	48.00	0.00	126.12	33.8
J-33	48.00	0.00	125.99	33.7
J-34 (FH)	48.00	0.00	125.99	33.7
J-35 (FH)	49.00	0.00	126.36	33.5
J-36	49.00	0.00	126.44	33.5
J-37	49.00	14.31	126.44	33.5
J-37(FH)	47.00	0.00	126.44	34.4
J-38	49.00	5.94	126.68	33.6
J-39	50.00	62.37	126.99	33.3
J-39 (FH)	49.00	0.00	127.15	33.8
J-40	45.00	0.00	126.20	35.1
J-41	29.00	40.50	126.19	42.0
J-42	28.00	0.00	126.19	42.5
J-42(FH)	27.00	0.00	110.30	36.0
J-43	27.00	179.28	111.02	36.3
J-44	28.00	0.00	109.26	35.2
J-44(FH)	28.00	0.00	109.26	35.2
J-45	48.00	0.00	126.20	33.8
J-47	25.00	0.00	126.19	43.8
J-47A	25.00	9.45	126.19	43.8
J-48	22.00	0.00	126.19	45.1
J-48(FH)	19.00	0.00	126.19	46.4
J-49	22.00	0.00	126.19	45.1
J-51	18.00	0.00	126.19	46.8
J-51(FH)	19.00	0.00	126.19	46.4

J-52	47.00	1.62	129.60	35.7
J-53	38.00	0.00	110.26	31.3
J-54 (F-FH)	38.00	13.50	107.14	29.9
J-55 (F-FH)	38.00	34.56	107.96	30.3
J-56 (F-FH)	34.00	833.33	100.54	28.8
J-57 (F-FH)	31.00	833.33	99.96	29.8
J-58 (F-FH)	30.00	26.19	108.69	34.0
J-59 (F-FH)	27.00	163.08	105.72	34.1
J-59(FH)	36.00	33.75	133.29	42.1
J-60 (F-FH)	27.00	906.23	102.64	32.7
J-61	37.00	253.80	133.35	41.7
J-61(FH)	38.00	0.00	133.72	41.4
J-62	38.00	55.35	134.24	41.6
J-63	32.00	276.48	136.01	45.0
J-70	27.00	102.60	136.40	47.3
J-74	27.00	0.00	136.43	47.3
J-75	23.00	282.42	141.48	51.3
J-76(FH)	24.00	0.00	141.48	50.8
J-77	22.00	0.00	137.65	50.0
J-78(FH)	22.00	170.37	136.42	49.5
J-79(F-FH)	23.00	0.00	167.62	62.6
J-80(FH)	32.00	0.00	160.21	55.5
J-81(FH)	83.00	0.00	174.17	39.4
J-83	46.00	0.00	169.93	53.6
J-84	31.00	0.00	176.20	62.8
J-85	33.00	440.00	160.18	55.0
J-86(FH)	40.00	0.00	135.61	41.4
J-89	24.00	0.00	143.95	51.9
J-96	48.00	0.00	111.77	27.6
J-106(FH)	36.00	0.00	136.19	43.3
J-107(FH)	36.00	0.00	135.87	43.2
J-109	47.00	0.00	111.63	28.0
J-112(FH)	28.00	0.00	110.26	35.6
J-113(FH)	45.00	26.24	110.26	28.2
J-117	52.00	0.00	174.19	52.9
J-118	37.00	0.00	173.91	59.2
J-119	13.00	0.00	167.77	67.0
J-120	36.00	187.50	173.11	59.3
J-121	30.44	150.12	108.69	33.9
J-122(FH)	46.00	0.00	109.26	27.4
J-123(FH)	46.00	0.00	108.69	27.1
J-124	33.74	0.00	107.97	32.1
J-125	37.52	0.00	107.15	30.1
J-126	48.00	15.93	107.97	25.9
J-127(FH)	53.00	0.00	107.97	23.8
J-128	28.00	0.00	104.76	33.2
J-129(FH)	52.00	18.76	104.76	22.8
J-130	34.00	0.00	104.04	30.3
J-131	36.00	0.00	103.79	29.3
J-132	34.00	0.00	103.67	30.1
J-133	32.00	0.00	103.67	31.0
J-134(FH)	22.00	36.45	103.67	35.3
J-135(FH)	28.00	0.00	103.67	32.7

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Scenario: Full Build-out - PHD + ISO @ 24 (Future Phase)
Current Time Step: 0.000Hr
FlexTable: Pipe Table

Label	Length (Scaled) (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (Absolute) (gpm)	Velocity (ft/s)	Headloss (ft)	Start Node	Stop Node
P-1	297	16	Ductile Iron	110.0	3,456.02	5.5147	2.51	J-1	J-86(FH)
P-1A	1,046	8	Ductile Iron	120.0	1,266.42	8.0833	34.32	J-83	J-86(FH)
P-2	211	16	Ductile Iron	120.0	3,653.09	5.8292	1.68	J-1	J-2 (FH)
P-3	56	16	Ductile Iron	120.0	3,653.09	5.8292	0.45	J-2 (FH)	J-3
P-4	112	16	Ductile Iron	120.0	3,529.70	5.6323	0.84	J-3	J-4
P-5	40	8	Ductile Iron	120.0	45.09	0.2878	0.00	J-4	J-5 (FH)
P-6	76	8	Ductile Iron	120.0	45.09	0.2878	0.01	J-5 (FH)	J-6
P-8	149	8	Ductile Iron	120.0	10.53	0.0672	0.00	J-7	J-8
P-9	31	8	Ductile Iron	120.0	6.75	0.0431	0.00	J-8	J-9
P-10	77	8	Ductile Iron	120.0	3.78	0.0241	0.00	J-9	J-10
P-11	91	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-10	J-11 (FH)
P-12	16	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-9	J-12
P-13	120	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-12	J-13
P-14	25	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-13	J-14 (FH)
P-15	49	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-12	J-15 (FH)
P-16	55	16	Ductile Iron	120.0	3,472.46	5.5410	0.40	J-7	J-16
P-17	70	12	Ductile Iron	120.0	55.08	0.1563	0.00	J-16	J-17
P-18	82	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-17	J-18 (FH)
P-19	56	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-18 (FH)	J-19 (FH)
P-20	58	16	Ductile Iron	120.0	3,417.38	5.4531	0.41	J-16	J-20
P-21	30	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-20	J-21 (FH)
P-22	75	16	Ductile Iron	120.0	3,417.38	5.4531	0.53	J-20	J-22
P-23	63	16	Ductile Iron	120.0	3,412.25	5.4449	0.44	J-22	J-23
P-24	40	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-23	J-24 (FH)
P-25	30	16	Ductile Iron	120.0	3,050.81	4.8682	0.17	J-23	J-25
P-26	46	8	Ductile Iron	120.0	36.72	0.2344	0.00	J-25	J-26
P-27	8	16	Ductile Iron	120.0	3,014.09	4.8096	0.04	J-25	J-27
P-28	29	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-27	J-28 (FH)
P-29	93	16	Ductile Iron	120.0	3,014.09	4.8096	0.52	J-27	J-29
P-30	93	16	Ductile Iron	120.0	3,008.15	4.8001	0.52	J-29	J-30
P-31	32	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-30	J-31 (FH)
P-32	12	16	Ductile Iron	120.0	3,008.15	4.8001	0.07	J-30	J-45
P-33	14	16	Ductile Iron	120.0	2,958.20	4.7204	0.08	J-45	J-32
P-33A	20	16	Ductile Iron	120.0	3,237.02	5.1653	0.13	J-33	J-32
P-34	23	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-33	J-34 (FH)
P-35	118	8	Ductile Iron	120.0	278.82	1.7797	0.23	J-32	J-35 (FH)
P-36	42	8	Ductile Iron	120.0	278.82	1.7797	0.08	J-35 (FH)	J-36
P-37	50	8	Ductile Iron	120.0	14.31	0.0913	0.00	J-36	J-37
P-37A	43	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-37	J-37(FH)
P-38	110	8	Ductile Iron	120.0	293.13	1.8710	0.24	J-36	J-38
P-39	138	8	Ductile Iron	120.0	299.07	1.9089	0.31	J-38	J-39
P-39A	48	8	Ductile Iron	120.0	361.44	2.3070	0.15	J-39	J-39 (FH)
P-40	115	8	Ductile Iron	120.0	361.44	2.3070	0.37	J-39 (FH)	J-23
P-41	159	12	Ductile Iron	120.0	49.95	0.1417	0.00	J-45	J-40
P-42	93	12	Ductile Iron	120.0	49.95	0.1417	0.00	J-40	J-42
P-47	34	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-48(FH)
P-48	158	8	Ductile Iron	120.0	9.45	0.0603	0.00	J-41	J-47
P-48A	79	8	Ductile Iron	120.0	49.95	0.3188	0.01	J-41	J-42
P-49	204	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-47	J-48
P-49A	32	6	Ductile Iron	120.0	9.45	0.1072	0.00	J-47A	J-47
P-50	16	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-49
P-52	335	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-49	J-51
P-52A	18	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-51	J-51(FH)
P-53	72	16	Ductile Iron	120.0	3,484.61	5.5604	0.53	J-4	J-52
P-54	42	16	Ductile Iron	120.0	3,482.99	5.5578	0.31	J-52	J-7
P-69A	60	12	Ductile Iron	110.0	492.46	1.3970	0.06	J-1	J-1A(FH)
P-69B	149	12	Ductile Iron	110.0	492.46	1.3970	0.14	J-1A(FH)	J-59(FH)
P-72	55	12	Ductile Iron	110.0	526.21	1.4927	0.06	J-59(FH)	J-61
P-73A	168	12	Ductile Iron	110.0	780.01	2.2127	0.37	J-61	J-61(FH)
P-73B	242	12	Ductile Iron	110.0	780.01	2.2127	0.53	J-61(FH)	J-62
P-74	99	8	Ductile Iron	110.0	835.36	5.3319	1.77	J-62	J-63

P-86	104	8	Ductile Iron	110.0	89.73	0.5727	0.03	J-74	J-70
P-86A	235	12	Ductile Iron	110.0	2,690.26	7.6317	5.07	J-70	J-75
P-87	21	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-75	J-76(FH)
P-88	721	6	Ductile Iron	90.0	89.73	1.0181	1.22	J-74	J-77
P-92	95	12	Ductile Iron	110.0	2,972.68	8.4329	2.47	J-75	J-89
P-92A	626	12	Ductile Iron	110.0	2,972.68	8.4329	16.26	J-89	J-80(FH)
P-93	477	12	Ductile Iron	110.0	3,412.68	9.6810	16.00	J-80(FH)	J-84
P-95	33	12	Ductile Iron	110.0	440.00	1.2482	0.02	J-80(FH)	J-85
P-159	172	24	Ductile Iron	110.0	3,301.43	2.3414	0.19	J-63	J-106(FH)
P-160	195	24	Ductile Iron	110.0	3,301.43	2.3414	0.21	J-106(FH)	J-70
P-161	526	24	Ductile Iron	110.0	2,189.60	1.5529	0.27	J-86(FH)	J-107(FH)
P-162	269	24	Ductile Iron	110.0	2,189.60	1.5529	0.14	J-107(FH)	J-63
P-172	227	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-53	J-112(FH)
P-173	211	8	Ductile Iron	120.0	26.24	0.1675	0.01	J-53	J-113(FH)
P-188	2,981	16	Ductile Iron	110.0	884.14	1.4108	2.02	J-84	J-117
P-189	685	8	Ductile Iron	90.0	488.84	3.1202	6.57	J-117	J-79(F-FH)
P-190	326	24	Ductile Iron	120.0	624.05	0.4426	0.01	J-70	J-78(FH)
P-191	1,043	8	Ductile Iron	90.0	884.14	5.6433	29.97	J-77	J-79(F-FH)
P-192	89	8	Ductile Iron	120.0	794.42	5.0706	1.23	J-78(FH)	J-77
P-193	701	24	Ductile Iron	110.0	395.30	0.2803	0.01	J-117	J-81(FH)
P-194	423	12	Ductile Iron	110.0	395.30	1.1214	0.26	J-81(FH)	J-118
P-195	1,375	8	Ductile Iron	110.0	395.30	2.5231	6.14	J-118	J-119
P-196	35	8	Ductile Iron	110.0	395.30	2.5231	0.16	J-119	J-79(F-FH)
P-199	448	12	Ductile Iron	110.0	1,453.92	4.1245	3.09	J-84	J-120
P-200	595	12	Ductile Iron	110.0	1,266.42	3.5926	3.18	J-120	J-83
P-201	13	16	Ductile Iron	120.0	3,237.02	5.1653	0.08	J-33	GPV-6
P-202	11	16	Ductile Iron	120.0	3,237.02	5.1653	0.07	GPV-6	J-96
P-205	21	16	Ductile Iron	120.0	3,237.02	5.1653	0.13	J-96	J-109
P-207	7	16	Ductile Iron	120.0	3,057.74	4.8792	0.04	J-42(FH)	J-53
P-208	97	16	Ductile Iron	120.0	3,237.02	5.1653	0.62	J-109	J-43
P-209	124	16	Ductile Iron	120.0	3,057.74	4.8792	0.71	J-43	J-42(FH)
P-210	178	16	Ductile Iron	120.0	3,031.50	4.8373	1.00	J-53	J-44
P-212	200	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-44(FH)
P-213	100	16	Ductile Iron	120.0	3,031.50	4.8373	0.56	J-44	J-121
P-215	193	8	Ductile Iron	120.0	26.19	0.1672	0.00	J-121	J-58 (F-FH)
P-216	19	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-122(FH)
P-217	22	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-121	J-123(FH)
P-218	143	16	Ductile Iron	120.0	2,855.19	4.5560	0.72	J-121	J-124
P-220	169	16	Ductile Iron	120.0	2,804.70	4.4754	0.83	J-124	J-125
P-221	115	8	Ductile Iron	120.0	13.50	0.0862	0.00	J-125	J-54 (F-FH)
P-222	21	8	Ductile Iron	120.0	50.49	0.3223	0.00	J-124	J-126
P-223	142	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-126	J-127(FH)
P-224	174	8	Ductile Iron	120.0	34.56	0.2206	0.01	J-126	J-55 (F-FH)
P-225	295	16	Ductile Iron	120.0	2,791.20	4.4539	1.43	J-125	J-59 (F-FH)
P-226	221	16	Ductile Iron	120.0	2,628.12	4.1937	0.96	J-59 (F-FH)	J-128
P-227	222	8	Ductile Iron	120.0	18.76	0.1198	0.00	J-128	J-129(FH)
P-228	169	16	Ductile Iron	120.0	2,609.35	4.1637	0.72	J-128	J-130
P-229	231	8	Ductile Iron	120.0	833.33	5.3190	3.49	J-130	J-56 (F-FH)
P-230	116	16	Ductile Iron	120.0	1,776.02	2.8340	0.24	J-130	J-131
P-231	65	8	Ductile Iron	120.0	906.23	5.7843	1.15	J-131	J-60 (F-FH)
P-232	211	16	Ductile Iron	120.0	869.78	1.3879	0.12	J-131	J-132
P-233	246	8	Ductile Iron	120.0	833.33	5.3190	3.72	J-132	J-57 (F-FH)
P-234	34	16	Ductile Iron	120.0	36.45	0.0582	0.00	J-132	J-133
P-235	88	8	Ductile Iron	120.0	36.45	0.2327	0.00	J-133	J-134(FH)
P-236	151	16	Ductile Iron	120.0	0.00	0.0000	0.00	J-133	J-135(FH)

Full Build-out – PHD + Sprinkler + ISO @ Block 25
(future phase)

Scenario: Full Build-out - PHD + ISO @ 25 (Future Phase)
Current Time Step: 0.000Hr
FlexTable: Junction Table

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	37.00	295.38	133.10	41.6
J-1A(FH)	37.00	0.00	133.15	41.6
J-2 (FH)	45.00	0.00	131.41	37.4
J-3	46.00	123.39	130.97	36.8
J-4	47.00	0.00	130.13	36.0
J-5 (FH)	47.00	0.00	130.13	36.0
J-6	48.00	45.09	130.12	35.5
J-7	48.00	0.00	129.30	35.2
J-8	49.00	3.78	129.30	34.7
J-9	49.00	0.00	129.30	34.7
J-10	49.00	3.78	129.30	34.7
J-11 (FH)	49.00	0.00	129.30	34.7
J-12	49.00	0.00	129.30	34.7
J-13	48.00	2.97	129.30	35.2
J-14 (FH)	48.00	0.00	129.30	35.2
J-15 (FH)	46.00	0.00	129.30	36.0
J-16	48.00	0.00	128.90	35.0
J-17	47.00	1.62	128.90	35.4
J-18 (FH)	48.00	0.00	128.90	35.0
J-19 (FH)	48.00	53.46	128.90	35.0
J-20	48.00	0.00	128.49	34.8
J-21 (FH)	48.00	0.00	128.49	34.8
J-22	49.00	5.13	127.96	34.2
J-23	49.00	0.00	127.52	34.0
J-24 (FH)	49.00	0.00	127.52	34.0
J-25	49.00	0.00	127.35	33.9
J-26	49.00	36.72	127.34	33.9
J-27	49.00	0.00	127.30	33.9
J-28 (FH)	49.00	0.00	127.30	33.9
J-29	49.00	5.94	126.78	33.7
J-30	48.00	0.00	126.26	33.9
J-31 (FH)	48.00	0.00	126.26	33.9
J-32	48.00	0.00	126.12	33.8
J-33	48.00	0.00	125.99	33.7
J-34 (FH)	48.00	0.00	125.99	33.7
J-35 (FH)	49.00	0.00	126.36	33.5
J-36	49.00	0.00	126.44	33.5
J-37	49.00	14.31	126.44	33.5
J-37(FH)	47.00	0.00	126.44	34.4
J-38	49.00	5.94	126.68	33.6
J-39	50.00	62.37	126.99	33.3
J-39 (FH)	49.00	0.00	127.15	33.8
J-40	45.00	0.00	126.20	35.1
J-41	29.00	40.50	126.19	42.0
J-42	28.00	0.00	126.19	42.5
J-42(FH)	27.00	0.00	110.30	36.0
J-43	27.00	179.28	111.02	36.3
J-44	28.00	0.00	109.26	35.2
J-44(FH)	28.00	0.00	109.26	35.2
J-45	48.00	0.00	126.20	33.8
J-47	25.00	0.00	126.19	43.8
J-47A	25.00	9.45	126.19	43.8
J-48	22.00	0.00	126.19	45.1
J-48(FH)	19.00	0.00	126.19	46.4
J-49	22.00	0.00	126.19	45.1
J-51	18.00	0.00	126.19	46.8
J-51(FH)	19.00	0.00	126.19	46.4

J-52	47.00	1.62	129.60	35.7
J-53	38.00	0.00	110.26	31.3
J-54 (F-FH)	38.00	13.50	107.14	29.9
J-55 (F-FH)	38.00	34.56	107.96	30.3
J-56 (F-FH)	34.00	0.00	104.04	30.3
J-57 (F-FH)	31.00	833.33	98.97	29.4
J-58 (F-FH)	30.00	26.19	108.69	34.0
J-59 (F-FH)	27.00	163.08	105.72	34.1
J-59(FH)	36.00	33.75	133.29	42.1
J-60 (F-FH)	27.00	72.90	103.53	33.1
J-61	37.00	253.80	133.35	41.7
J-61(FH)	38.00	0.00	133.72	41.4
J-62	38.00	55.35	134.24	41.6
J-63	32.00	276.48	136.01	45.0
J-70	27.00	102.60	136.41	47.3
J-74	27.00	0.00	136.43	47.3
J-75	23.00	282.42	141.48	51.3
J-76(FH)	24.00	0.00	141.48	50.8
J-77	22.00	0.00	137.65	50.0
J-78(FH)	22.00	170.37	136.42	49.5
J-79(F-FH)	23.00	0.00	167.62	62.6
J-80(FH)	32.00	0.00	160.21	55.5
J-81(FH)	83.00	0.00	174.17	39.4
J-83	46.00	0.00	169.93	53.6
J-84	31.00	0.00	176.20	62.8
J-85	33.00	440.00	160.18	55.0
J-86(FH)	40.00	0.00	135.61	41.4
J-89	24.00	0.00	143.95	51.9
J-96	48.00	0.00	111.77	27.6
J-106(FH)	36.00	0.00	136.19	43.3
J-107(FH)	36.00	0.00	135.87	43.2
J-109	47.00	0.00	111.63	28.0
J-112(FH)	28.00	0.00	110.26	35.6
J-113(FH)	45.00	26.24	110.26	28.2
J-117	52.00	0.00	174.19	52.9
J-118	37.00	0.00	173.91	59.2
J-119	13.00	0.00	167.77	67.0
J-120	36.00	187.50	173.11	59.3
J-121	30.44	150.12	108.69	33.9
J-122(FH)	46.00	0.00	109.26	27.4
J-123(FH)	46.00	0.00	108.69	27.1
J-124	33.74	0.00	107.97	32.1
J-125	37.52	0.00	107.15	30.1
J-126	48.00	15.93	107.97	25.9
J-127(FH)	53.00	0.00	107.97	23.8
J-128	28.00	0.00	104.76	33.2
J-129(FH)	52.00	18.76	104.76	22.8
J-130	34.00	0.00	104.04	30.3
J-131	36.00	0.00	103.54	29.2
J-132	34.00	0.00	102.68	29.7
J-133	32.00	0.00	102.62	30.6
J-134(FH)	22.00	869.78	101.18	34.3
J-135(FH)	28.00	833.33	102.54	32.2

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Scenario: Full Build-out - PHD + ISO @ 25 (Future Phase)
Current Time Step: 0.000Hr
FlexTable: Pipe Table

Label	Length (Scaled) (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (Absolute) (gpm)	Velocity (ft/s)	Headloss (ft)	Start Node	Stop Node
P-1	297	16	Ductile Iron	110.0	3,456.01	5.5147	2.51	J-1	J-86(FH)
P-1A	1,046	8	Ductile Iron	120.0	1,266.42	8.0833	34.32	J-83	J-86(FH)
P-2	211	16	Ductile Iron	120.0	3,653.09	5.8292	1.68	J-1	J-2 (FH)
P-3	56	16	Ductile Iron	120.0	3,653.09	5.8292	0.45	J-2 (FH)	J-3
P-4	112	16	Ductile Iron	120.0	3,529.70	5.6323	0.84	J-3	J-4
P-5	40	8	Ductile Iron	120.0	45.09	0.2878	0.00	J-4	J-5 (FH)
P-6	76	8	Ductile Iron	120.0	45.09	0.2878	0.01	J-5 (FH)	J-6
P-8	149	8	Ductile Iron	120.0	10.53	0.0672	0.00	J-7	J-8
P-9	31	8	Ductile Iron	120.0	6.75	0.0431	0.00	J-8	J-9
P-10	77	8	Ductile Iron	120.0	3.78	0.0241	0.00	J-9	J-10
P-11	91	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-10	J-11 (FH)
P-12	16	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-9	J-12
P-13	120	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-12	J-13
P-14	25	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-13	J-14 (FH)
P-15	49	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-12	J-15 (FH)
P-16	55	16	Ductile Iron	120.0	3,472.46	5.5410	0.40	J-7	J-16
P-17	70	12	Ductile Iron	120.0	55.08	0.1563	0.00	J-16	J-17
P-18	82	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-17	J-18 (FH)
P-19	56	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-18 (FH)	J-19 (FH)
P-20	58	16	Ductile Iron	120.0	3,417.38	5.4531	0.41	J-16	J-20
P-21	30	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-20	J-21 (FH)
P-22	75	16	Ductile Iron	120.0	3,417.38	5.4531	0.53	J-20	J-22
P-23	63	16	Ductile Iron	120.0	3,412.25	5.4449	0.44	J-22	J-23
P-24	40	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-23	J-24 (FH)
P-25	30	16	Ductile Iron	120.0	3,050.81	4.8682	0.17	J-23	J-25
P-26	46	8	Ductile Iron	120.0	36.72	0.2344	0.00	J-25	J-26
P-27	8	16	Ductile Iron	120.0	3,014.09	4.8096	0.04	J-25	J-27
P-28	29	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-27	J-28 (FH)
P-29	93	16	Ductile Iron	120.0	3,014.09	4.8096	0.52	J-27	J-29
P-30	93	16	Ductile Iron	120.0	3,008.15	4.8001	0.52	J-29	J-30
P-31	32	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-30	J-31 (FH)
P-32	12	16	Ductile Iron	120.0	3,008.15	4.8001	0.07	J-30	J-45
P-33	14	16	Ductile Iron	120.0	2,958.20	4.7204	0.08	J-45	J-32
P-33A	20	16	Ductile Iron	120.0	3,237.02	5.1653	0.13	J-33	J-32
P-34	23	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-33	J-34 (FH)
P-35	118	8	Ductile Iron	120.0	278.82	1.7797	0.23	J-32	J-35 (FH)
P-36	42	8	Ductile Iron	120.0	278.82	1.7797	0.08	J-35 (FH)	J-36
P-37	50	8	Ductile Iron	120.0	14.31	0.0913	0.00	J-36	J-37
P-37A	43	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-37	J-37(FH)
P-38	110	8	Ductile Iron	120.0	293.13	1.8710	0.24	J-36	J-38
P-39	138	8	Ductile Iron	120.0	299.07	1.9089	0.31	J-38	J-39
P-39A	48	8	Ductile Iron	120.0	361.44	2.3070	0.15	J-39	J-39 (FH)
P-40	115	8	Ductile Iron	120.0	361.44	2.3070	0.37	J-39 (FH)	J-23
P-41	159	12	Ductile Iron	120.0	49.95	0.1417	0.00	J-45	J-40
P-42	93	12	Ductile Iron	120.0	49.95	0.1417	0.00	J-40	J-42
P-47	34	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-48(FH)
P-48	158	8	Ductile Iron	120.0	9.45	0.0603	0.00	J-41	J-47
P-48A	79	8	Ductile Iron	120.0	49.95	0.3188	0.01	J-41	J-42
P-49	204	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-47	J-48
P-49A	32	6	Ductile Iron	120.0	9.45	0.1072	0.00	J-47A	J-47
P-50	16	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-49
P-52	335	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-49	J-51
P-52A	18	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-51	J-51(FH)
P-53	72	16	Ductile Iron	120.0	3,484.61	5.5604	0.53	J-4	J-52
P-54	42	16	Ductile Iron	120.0	3,482.99	5.5578	0.31	J-52	J-7
P-69A	60	12	Ductile Iron	110.0	492.46	1.3970	0.06	J-1	J-1A(FH)
P-69B	149	12	Ductile Iron	110.0	492.46	1.3970	0.14	J-1A(FH)	J-59(FH)
P-72	55	12	Ductile Iron	110.0	526.21	1.4927	0.06	J-59(FH)	J-61
P-73A	168	12	Ductile Iron	110.0	780.01	2.2127	0.37	J-61	J-61(FH)
P-73B	242	12	Ductile Iron	110.0	780.01	2.2127	0.53	J-61(FH)	J-62
P-74	99	8	Ductile Iron	110.0	835.36	5.3319	1.77	J-62	J-63

P-86	104	8	Ductile Iron	110.0	89.73	0.5727	0.03	J-74	J-70
P-86A	235	12	Ductile Iron	110.0	2,690.26	7.6317	5.07	J-70	J-75
P-87	21	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-75	J-76(FH)
P-88	721	6	Ductile Iron	90.0	89.73	1.0181	1.22	J-74	J-77
P-92	95	12	Ductile Iron	110.0	2,972.68	8.4329	2.47	J-75	J-89
P-92A	626	12	Ductile Iron	110.0	2,972.68	8.4329	16.26	J-89	J-80(FH)
P-93	477	12	Ductile Iron	110.0	3,412.68	9.6810	16.00	J-80(FH)	J-84
P-95	33	12	Ductile Iron	110.0	440.00	1.2482	0.02	J-80(FH)	J-85
P-159	172	24	Ductile Iron	110.0	3,301.43	2.3414	0.19	J-63	J-106(FH)
P-160	195	24	Ductile Iron	110.0	3,301.43	2.3414	0.21	J-106(FH)	J-70
P-161	526	24	Ductile Iron	110.0	2,189.60	1.5529	0.27	J-86(FH)	J-107(FH)
P-162	269	24	Ductile Iron	110.0	2,189.60	1.5529	0.14	J-107(FH)	J-63
P-172	227	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-53	J-112(FH)
P-173	211	8	Ductile Iron	120.0	26.24	0.1675	0.01	J-53	J-113(FH)
P-188	2,981	16	Ductile Iron	110.0	884.14	1.4108	2.02	J-84	J-117
P-189	685	8	Ductile Iron	90.0	488.84	3.1202	6.57	J-117	J-79(F-FH)
P-190	326	24	Ductile Iron	120.0	624.05	0.4426	0.01	J-70	J-78(FH)
P-191	1,043	8	Ductile Iron	90.0	884.14	5.6433	29.97	J-77	J-79(F-FH)
P-192	89	8	Ductile Iron	120.0	794.42	5.0706	1.23	J-78(FH)	J-77
P-193	701	24	Ductile Iron	110.0	395.30	0.2803	0.01	J-117	J-81(FH)
P-194	423	12	Ductile Iron	110.0	395.30	1.1214	0.26	J-81(FH)	J-118
P-195	1,375	8	Ductile Iron	110.0	395.30	2.5231	6.14	J-118	J-119
P-196	35	8	Ductile Iron	110.0	395.30	2.5231	0.16	J-119	J-79(F-FH)
P-199	448	12	Ductile Iron	110.0	1,453.92	4.1245	3.09	J-84	J-120
P-200	595	12	Ductile Iron	110.0	1,266.42	3.5926	3.18	J-120	J-83
P-201	13	16	Ductile Iron	120.0	3,237.02	5.1653	0.08	J-33	GPV-6
P-202	11	16	Ductile Iron	120.0	3,237.02	5.1653	0.07	GPV-6	J-96
P-205	21	16	Ductile Iron	120.0	3,237.02	5.1653	0.13	J-96	J-109
P-207	7	16	Ductile Iron	120.0	3,057.74	4.8792	0.04	J-42(FH)	J-53
P-208	97	16	Ductile Iron	120.0	3,237.02	5.1653	0.62	J-109	J-43
P-209	124	16	Ductile Iron	120.0	3,057.74	4.8792	0.71	J-43	J-42(FH)
P-210	178	16	Ductile Iron	120.0	3,031.50	4.8373	1.00	J-53	J-44
P-212	200	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-44(FH)
P-213	100	16	Ductile Iron	120.0	3,031.50	4.8373	0.56	J-44	J-121
P-215	193	8	Ductile Iron	120.0	26.19	0.1672	0.00	J-121	J-58 (F-FH)
P-216	19	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-122(FH)
P-217	22	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-121	J-123(FH)
P-218	143	16	Ductile Iron	120.0	2,855.19	4.5560	0.72	J-121	J-124
P-220	169	16	Ductile Iron	120.0	2,804.70	4.4754	0.83	J-124	J-125
P-221	115	8	Ductile Iron	120.0	13.50	0.0862	0.00	J-125	J-54 (F-FH)
P-222	21	8	Ductile Iron	120.0	50.49	0.3223	0.00	J-124	J-126
P-223	142	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-126	J-127(FH)
P-224	174	8	Ductile Iron	120.0	34.56	0.2206	0.01	J-126	J-55 (F-FH)
P-225	295	16	Ductile Iron	120.0	2,791.20	4.4539	1.43	J-125	J-59 (F-FH)
P-226	221	16	Ductile Iron	120.0	2,628.12	4.1937	0.96	J-59 (F-FH)	J-128
P-227	222	8	Ductile Iron	120.0	18.76	0.1198	0.00	J-128	J-129(FH)
P-228	169	16	Ductile Iron	120.0	2,609.35	4.1637	0.72	J-128	J-130
P-229	231	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-130	J-56 (F-FH)
P-230	116	16	Ductile Iron	120.0	2,609.35	4.1637	0.50	J-130	J-131
P-231	65	8	Ductile Iron	120.0	72.90	0.4653	0.01	J-131	J-60 (F-FH)
P-232	211	16	Ductile Iron	120.0	2,536.45	4.0474	0.86	J-131	J-132
P-233	246	8	Ductile Iron	120.0	833.33	5.3190	3.72	J-132	J-57 (F-FH)
P-234	34	16	Ductile Iron	120.0	1,703.12	2.7177	0.07	J-132	J-133
P-235	88	8	Ductile Iron	120.0	869.78	5.5516	1.44	J-133	J-134(FH)
P-236	151	16	Ductile Iron	120.0	833.33	1.3297	0.08	J-133	J-135(FH)

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Full Build-out – PHD + Sprinkler + ISO @ Block 26
(future phase)

Scenario: Full Build-out - PHD + ISO @ 26 (Future Phase)
Current Time Step: 0.000Hr
FlexTable: Junction Table

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	37.00	295.38	133.10	41.6
J-1A(FH)	37.00	0.00	133.15	41.6
J-2 (FH)	45.00	0.00	131.41	37.4
J-3	46.00	123.39	130.97	36.8
J-4	47.00	0.00	130.13	36.0
J-5 (FH)	47.00	0.00	130.13	36.0
J-6	48.00	45.09	130.12	35.5
J-7	48.00	0.00	129.30	35.2
J-8	49.00	3.78	129.30	34.7
J-9	49.00	0.00	129.30	34.7
J-10	49.00	3.78	129.30	34.7
J-11 (FH)	49.00	0.00	129.30	34.7
J-12	49.00	0.00	129.30	34.7
J-13	48.00	2.97	129.30	35.2
J-14 (FH)	48.00	0.00	129.30	35.2
J-15 (FH)	46.00	0.00	129.30	36.0
J-16	48.00	0.00	128.90	35.0
J-17	47.00	1.62	128.90	35.4
J-18 (FH)	48.00	0.00	128.90	35.0
J-19 (FH)	48.00	53.46	128.90	35.0
J-20	48.00	0.00	128.49	34.8
J-21 (FH)	48.00	0.00	128.49	34.8
J-22	49.00	5.13	127.96	34.2
J-23	49.00	0.00	127.52	34.0
J-24 (FH)	49.00	0.00	127.52	34.0
J-25	49.00	0.00	127.35	33.9
J-26	49.00	36.72	127.34	33.9
J-27	49.00	0.00	127.30	33.9
J-28 (FH)	49.00	0.00	127.30	33.9
J-29	49.00	5.94	126.78	33.7
J-30	48.00	0.00	126.26	33.9
J-31 (FH)	48.00	0.00	126.26	33.9
J-32	48.00	0.00	126.12	33.8
J-33	48.00	0.00	125.99	33.7
J-34 (FH)	48.00	0.00	125.99	33.7
J-35 (FH)	49.00	0.00	126.36	33.5
J-36	49.00	0.00	126.44	33.5
J-37	49.00	14.31	126.44	33.5
J-37(FH)	47.00	0.00	126.44	34.4
J-38	49.00	5.94	126.68	33.6
J-39	50.00	62.37	126.99	33.3
J-39 (FH)	49.00	0.00	127.15	33.8
J-40	45.00	0.00	126.20	35.1
J-41	29.00	40.50	126.19	42.0
J-42	28.00	0.00	126.19	42.5
J-42(FH)	27.00	0.00	110.30	36.0
J-43	27.00	179.28	111.02	36.3
J-44	28.00	0.00	109.26	35.2
J-44(FH)	28.00	0.00	109.26	35.2
J-45	48.00	0.00	126.20	33.8
J-47	25.00	0.00	126.19	43.8
J-47A	25.00	9.45	126.19	43.8
J-48	22.00	0.00	126.19	45.1
J-48(FH)	19.00	0.00	126.19	46.4
J-49	22.00	0.00	126.19	45.1
J-51	18.00	0.00	126.19	46.8
J-51(FH)	19.00	0.00	126.19	46.4

J-52	47.00	1.62	129.60	35.7
J-53	38.00	0.00	110.26	31.3
J-54 (F-FH)	38.00	13.50	107.14	29.9
J-55 (F-FH)	38.00	34.56	107.96	30.3
J-56 (F-FH)	34.00	0.00	104.04	30.3
J-57 (F-FH)	31.00	833.33	98.97	29.4
J-58 (F-FH)	30.00	26.19	108.69	34.0
J-59 (F-FH)	27.00	163.08	105.72	34.1
J-59(FH)	36.00	33.75	133.29	42.1
J-60 (F-FH)	27.00	72.90	103.53	33.1
J-61	37.00	253.80	133.35	41.7
J-61(FH)	38.00	0.00	133.72	41.4
J-62	38.00	55.35	134.24	41.6
J-63	32.00	276.48	136.01	45.0
J-70	27.00	102.60	136.41	47.3
J-74	27.00	0.00	136.43	47.3
J-75	23.00	282.42	141.48	51.3
J-76(FH)	24.00	0.00	141.48	50.8
J-77	22.00	0.00	137.65	50.0
J-78(FH)	22.00	170.37	136.42	49.5
J-79(F-FH)	23.00	0.00	167.62	62.6
J-80(FH)	32.00	0.00	160.21	55.5
J-81(FH)	83.00	0.00	174.17	39.4
J-83	46.00	0.00	169.93	53.6
J-84	31.00	0.00	176.20	62.8
J-85	33.00	440.00	160.18	55.0
J-86(FH)	40.00	0.00	135.61	41.4
J-89	24.00	0.00	143.95	51.9
J-96	48.00	0.00	111.77	27.6
J-106(FH)	36.00	0.00	136.19	43.3
J-107(FH)	36.00	0.00	135.87	43.2
J-109	47.00	0.00	111.63	28.0
J-112(FH)	28.00	0.00	110.26	35.6
J-113(FH)	45.00	26.24	110.26	28.2
J-117	52.00	0.00	174.19	52.9
J-118	37.00	0.00	173.91	59.2
J-119	13.00	0.00	167.77	67.0
J-120	36.00	187.50	173.11	59.3
J-121	30.44	150.12	108.69	33.9
J-122(FH)	46.00	0.00	109.26	27.4
J-123(FH)	46.00	0.00	108.69	27.1
J-124	33.74	0.00	107.97	32.1
J-125	37.52	0.00	107.15	30.1
J-126	48.00	15.93	107.97	25.9
J-127(FH)	53.00	0.00	107.97	23.8
J-128	28.00	0.00	104.76	33.2
J-129(FH)	52.00	18.76	104.76	22.8
J-130	34.00	0.00	104.04	30.3
J-131	36.00	0.00	103.54	29.2
J-132	34.00	0.00	102.68	29.7
J-133	32.00	0.00	102.62	30.6
J-134(FH)	22.00	869.78	101.18	34.3
J-135(FH)	28.00	833.33	102.54	32.2

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Scenario: Full Build-out - PHD + ISO @ 26 (Future Phase)
Current Time Step: 0.000Hr
FlexTable: Pipe Table

Label	Length (Scaled) (ft)	Diameter (in)	Material	Hazen-Williams C	Flow (Absolute) (gpm)	Velocity (ft/s)	Headloss (ft)	Start Node	Stop Node
P-1	297	16	Ductile Iron	110.0	3,456.01	5.5147	2.51	J-1	J-86(FH)
P-1A	1,046	8	Ductile Iron	120.0	1,266.42	8.0833	34.32	J-83	J-86(FH)
P-2	211	16	Ductile Iron	120.0	3,653.09	5.8292	1.68	J-1	J-2 (FH)
P-3	56	16	Ductile Iron	120.0	3,653.09	5.8292	0.45	J-2 (FH)	J-3
P-4	112	16	Ductile Iron	120.0	3,529.70	5.6323	0.84	J-3	J-4
P-5	40	8	Ductile Iron	120.0	45.09	0.2878	0.00	J-4	J-5 (FH)
P-6	76	8	Ductile Iron	120.0	45.09	0.2878	0.01	J-5 (FH)	J-6
P-8	149	8	Ductile Iron	120.0	10.53	0.0672	0.00	J-7	J-8
P-9	31	8	Ductile Iron	120.0	6.75	0.0431	0.00	J-8	J-9
P-10	77	8	Ductile Iron	120.0	3.78	0.0241	0.00	J-9	J-10
P-11	91	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-10	J-11 (FH)
P-12	16	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-9	J-12
P-13	120	8	Ductile Iron	120.0	2.97	0.0190	0.00	J-12	J-13
P-14	25	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-13	J-14 (FH)
P-15	49	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-12	J-15 (FH)
P-16	55	16	Ductile Iron	120.0	3,472.46	5.5410	0.40	J-7	J-16
P-17	70	12	Ductile Iron	120.0	55.08	0.1563	0.00	J-16	J-17
P-18	82	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-17	J-18 (FH)
P-19	56	12	Ductile Iron	120.0	53.46	0.1517	0.00	J-18 (FH)	J-19 (FH)
P-20	58	16	Ductile Iron	120.0	3,417.38	5.4531	0.41	J-16	J-20
P-21	30	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-20	J-21 (FH)
P-22	75	16	Ductile Iron	120.0	3,417.38	5.4531	0.53	J-20	J-22
P-23	63	16	Ductile Iron	120.0	3,412.25	5.4449	0.44	J-22	J-23
P-24	40	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-23	J-24 (FH)
P-25	30	16	Ductile Iron	120.0	3,050.81	4.8682	0.17	J-23	J-25
P-26	46	8	Ductile Iron	120.0	36.72	0.2344	0.00	J-25	J-26
P-27	8	16	Ductile Iron	120.0	3,014.09	4.8096	0.04	J-25	J-27
P-28	29	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-27	J-28 (FH)
P-29	93	16	Ductile Iron	120.0	3,014.09	4.8096	0.52	J-27	J-29
P-30	93	16	Ductile Iron	120.0	3,008.15	4.8001	0.52	J-29	J-30
P-31	32	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-30	J-31 (FH)
P-32	12	16	Ductile Iron	120.0	3,008.15	4.8001	0.07	J-30	J-45
P-33	14	16	Ductile Iron	120.0	2,958.20	4.7204	0.08	J-45	J-32
P-33A	20	16	Ductile Iron	120.0	3,237.02	5.1653	0.13	J-33	J-32
P-34	23	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-33	J-34 (FH)
P-35	118	8	Ductile Iron	120.0	278.82	1.7797	0.23	J-32	J-35 (FH)
P-36	42	8	Ductile Iron	120.0	278.82	1.7797	0.08	J-35 (FH)	J-36
P-37	50	8	Ductile Iron	120.0	14.31	0.0913	0.00	J-36	J-37
P-37A	43	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-37	J-37(FH)
P-38	110	8	Ductile Iron	120.0	293.13	1.8710	0.24	J-36	J-38
P-39	138	8	Ductile Iron	120.0	299.07	1.9089	0.31	J-38	J-39
P-39A	48	8	Ductile Iron	120.0	361.44	2.3070	0.15	J-39	J-39 (FH)
P-40	115	8	Ductile Iron	120.0	361.44	2.3070	0.37	J-39 (FH)	J-23
P-41	159	12	Ductile Iron	120.0	49.95	0.1417	0.00	J-45	J-40
P-42	93	12	Ductile Iron	120.0	49.95	0.1417	0.00	J-40	J-42
P-47	34	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-48(FH)
P-48	158	8	Ductile Iron	120.0	9.45	0.0603	0.00	J-41	J-47
P-48A	79	8	Ductile Iron	120.0	49.95	0.3188	0.01	J-41	J-42
P-49	204	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-47	J-48
P-49A	32	6	Ductile Iron	120.0	9.45	0.1072	0.00	J-47A	J-47
P-50	16	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-48	J-49
P-52	335	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-49	J-51
P-52A	18	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-51	J-51(FH)
P-53	72	16	Ductile Iron	120.0	3,484.61	5.5604	0.53	J-4	J-52
P-54	42	16	Ductile Iron	120.0	3,482.99	5.5578	0.31	J-52	J-7
P-69A	60	12	Ductile Iron	110.0	492.46	1.3970	0.06	J-1	J-1A(FH)
P-69B	149	12	Ductile Iron	110.0	492.46	1.3970	0.14	J-1A(FH)	J-59(FH)
P-72	55	12	Ductile Iron	110.0	526.21	1.4927	0.06	J-59(FH)	J-61
P-73A	168	12	Ductile Iron	110.0	780.01	2.2127	0.37	J-61	J-61(FH)
P-73B	242	12	Ductile Iron	110.0	780.01	2.2127	0.53	J-61(FH)	J-62
P-74	99	8	Ductile Iron	110.0	835.36	5.3319	1.77	J-62	J-63

P-86	104	8	Ductile Iron	110.0	89.73	0.5727	0.03	J-74	J-70
P-86A	235	12	Ductile Iron	110.0	2,690.26	7.6317	5.07	J-70	J-75
P-87	21	6	Ductile Iron	120.0	0.00	0.0000	0.00	J-75	J-76(FH)
P-88	721	6	Ductile Iron	90.0	89.73	1.0181	1.22	J-74	J-77
P-92	95	12	Ductile Iron	110.0	2,972.68	8.4329	2.47	J-75	J-89
P-92A	626	12	Ductile Iron	110.0	2,972.68	8.4329	16.26	J-89	J-80(FH)
P-93	477	12	Ductile Iron	110.0	3,412.68	9.6810	16.00	J-80(FH)	J-84
P-95	33	12	Ductile Iron	110.0	440.00	1.2482	0.02	J-80(FH)	J-85
P-159	172	24	Ductile Iron	110.0	3,301.43	2.3414	0.19	J-63	J-106(FH)
P-160	195	24	Ductile Iron	110.0	3,301.43	2.3414	0.21	J-106(FH)	J-70
P-161	526	24	Ductile Iron	110.0	2,189.60	1.5529	0.27	J-86(FH)	J-107(FH)
P-162	269	24	Ductile Iron	110.0	2,189.60	1.5529	0.14	J-107(FH)	J-63
P-172	227	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-53	J-112(FH)
P-173	211	8	Ductile Iron	120.0	26.24	0.1675	0.01	J-53	J-113(FH)
P-188	2,981	16	Ductile Iron	110.0	884.14	1.4108	2.02	J-84	J-117
P-189	685	8	Ductile Iron	90.0	488.84	3.1202	6.57	J-117	J-79(F-FH)
P-190	326	24	Ductile Iron	120.0	624.05	0.4426	0.01	J-70	J-78(FH)
P-191	1,043	8	Ductile Iron	90.0	884.14	5.6433	29.97	J-77	J-79(F-FH)
P-192	89	8	Ductile Iron	120.0	794.42	5.0706	1.23	J-78(FH)	J-77
P-193	701	24	Ductile Iron	110.0	395.30	0.2803	0.01	J-117	J-81(FH)
P-194	423	12	Ductile Iron	110.0	395.30	1.1214	0.26	J-81(FH)	J-118
P-195	1,375	8	Ductile Iron	110.0	395.30	2.5231	6.14	J-118	J-119
P-196	35	8	Ductile Iron	110.0	395.30	2.5231	0.16	J-119	J-79(F-FH)
P-199	448	12	Ductile Iron	110.0	1,453.92	4.1245	3.09	J-84	J-120
P-200	595	12	Ductile Iron	110.0	1,266.42	3.5926	3.18	J-120	J-83
P-201	13	16	Ductile Iron	120.0	3,237.02	5.1653	0.08	J-33	GPV-6
P-202	11	16	Ductile Iron	120.0	3,237.02	5.1653	0.07	GPV-6	J-96
P-205	21	16	Ductile Iron	120.0	3,237.02	5.1653	0.13	J-96	J-109
P-207	7	16	Ductile Iron	120.0	3,057.74	4.8792	0.04	J-42(FH)	J-53
P-208	97	16	Ductile Iron	120.0	3,237.02	5.1653	0.62	J-109	J-43
P-209	124	16	Ductile Iron	120.0	3,057.74	4.8792	0.71	J-43	J-42(FH)
P-210	178	16	Ductile Iron	120.0	3,031.50	4.8373	1.00	J-53	J-44
P-212	200	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-44(FH)
P-213	100	16	Ductile Iron	120.0	3,031.50	4.8373	0.56	J-44	J-121
P-215	193	8	Ductile Iron	120.0	26.19	0.1672	0.00	J-121	J-58 (F-FH)
P-216	19	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-44	J-122(FH)
P-217	22	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-121	J-123(FH)
P-218	143	16	Ductile Iron	120.0	2,855.19	4.5560	0.72	J-121	J-124
P-220	169	16	Ductile Iron	120.0	2,804.70	4.4754	0.83	J-124	J-125
P-221	115	8	Ductile Iron	120.0	13.50	0.0862	0.00	J-125	J-54 (F-FH)
P-222	21	8	Ductile Iron	120.0	50.49	0.3223	0.00	J-124	J-126
P-223	142	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-126	J-127(FH)
P-224	174	8	Ductile Iron	120.0	34.56	0.2206	0.01	J-126	J-55 (F-FH)
P-225	295	16	Ductile Iron	120.0	2,791.20	4.4539	1.43	J-125	J-59 (F-FH)
P-226	221	16	Ductile Iron	120.0	2,628.12	4.1937	0.96	J-59 (F-FH)	J-128
P-227	222	8	Ductile Iron	120.0	18.76	0.1198	0.00	J-128	J-129(FH)
P-228	169	16	Ductile Iron	120.0	2,609.35	4.1637	0.72	J-128	J-130
P-229	231	8	Ductile Iron	120.0	0.00	0.0000	0.00	J-130	J-56 (F-FH)
P-230	116	16	Ductile Iron	120.0	2,609.35	4.1637	0.50	J-130	J-131
P-231	65	8	Ductile Iron	120.0	72.90	0.4653	0.01	J-131	J-60 (F-FH)
P-232	211	16	Ductile Iron	120.0	2,536.45	4.0474	0.86	J-131	J-132
P-233	246	8	Ductile Iron	120.0	833.33	5.3190	3.72	J-132	J-57 (F-FH)
P-234	34	16	Ductile Iron	120.0	1,703.12	2.7177	0.07	J-132	J-133
P-235	88	8	Ductile Iron	120.0	869.78	5.5516	1.44	J-133	J-134(FH)
P-236	151	16	Ductile Iron	120.0	833.33	1.3297	0.08	J-133	J-135(FH)

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg

Full Build-out – PHD + Fire Flow
(500 gpm from each hydrant, non-simultaneously)

Scenario: Full Build-out - PHD + Fire Flow (500 gpm)
Current Time Step: 0.000Hr
Fire Flow Node FlexTable: Fire Flow Report

Label	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Satisfies Fire Flow Constraints?	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)
J-1	500.00	(N/A)	(N/A)	20.0	(N/A)
J-1A(FH)	500.00	3,153.13	True	20.0	30.2
J-2 (FH)	500.00	3,082.38	True	20.0	27.0
J-3	500.00	(N/A)	(N/A)	20.0	(N/A)
J-4	500.00	(N/A)	(N/A)	20.0	(N/A)
J-5 (FH)	500.00	3,035.01	True	20.0	23.1
J-6	500.00	(N/A)	(N/A)	20.0	(N/A)
J-7	500.00	(N/A)	(N/A)	20.0	(N/A)
J-8	500.00	(N/A)	(N/A)	20.0	(N/A)
J-9	500.00	(N/A)	(N/A)	20.0	(N/A)
J-10	500.00	(N/A)	(N/A)	20.0	(N/A)
J-11 (FH)	500.00	2,308.49	True	20.0	20.0
J-12	500.00	(N/A)	(N/A)	20.0	(N/A)
J-13	500.00	(N/A)	(N/A)	20.0	(N/A)
J-14 (FH)	500.00	2,337.24	True	20.0	20.0
J-15 (FH)	500.00	2,562.19	True	20.0	20.0
J-16	500.00	(N/A)	(N/A)	20.0	(N/A)
J-17	500.00	(N/A)	(N/A)	20.0	(N/A)
J-18 (FH)	500.00	2,990.02	True	20.0	24.1
J-19 (FH)	500.00	2,990.01	True	20.0	23.5
J-20	500.00	(N/A)	(N/A)	20.0	(N/A)
J-21 (FH)	500.00	2,975.27	True	20.0	23.5
J-22	500.00	(N/A)	(N/A)	20.0	(N/A)
J-23	500.00	(N/A)	(N/A)	20.0	(N/A)
J-24 (FH)	500.00	2,940.54	True	20.0	22.4
J-25	500.00	(N/A)	(N/A)	20.0	(N/A)
J-26	500.00	(N/A)	(N/A)	20.0	(N/A)
J-27	500.00	(N/A)	(N/A)	20.0	(N/A)
J-28 (FH)	500.00	2,932.99	True	20.0	23.1
J-29	500.00	(N/A)	(N/A)	20.0	(N/A)
J-30	500.00	(N/A)	(N/A)	20.0	(N/A)
J-31 (FH)	500.00	2,897.15	True	20.0	23.4
J-32	500.00	(N/A)	(N/A)	20.0	(N/A)
J-33	500.00	(N/A)	(N/A)	20.0	(N/A)
J-34 (FH)	500.00	2,888.12	True	20.0	23.9
J-35 (FH)	500.00	2,908.41	True	20.0	21.3
J-36	500.00	(N/A)	(N/A)	20.0	(N/A)
J-37	500.00	(N/A)	(N/A)	20.0	(N/A)
J-37(FH)	500.00	2,400.12	True	20.0	20.0
J-38	500.00	(N/A)	(N/A)	20.0	(N/A)
J-39	500.00	(N/A)	(N/A)	20.0	(N/A)
J-39 (FH)	500.00	2,928.00	True	20.0	21.3
J-40	500.00	(N/A)	(N/A)	20.0	(N/A)
J-41	500.00	(N/A)	(N/A)	20.0	(N/A)
J-42	500.00	(N/A)	(N/A)	20.0	(N/A)
J-42(FH)	500.00	2,604.49	True	20.0	31.3
J-43	500.00	(N/A)	(N/A)	20.0	(N/A)
J-44	500.00	(N/A)	(N/A)	20.0	(N/A)
J-44(FH)	500.00	2,578.90	True	20.0	20.2
J-45	500.00	(N/A)	(N/A)	20.0	(N/A)
J-47	500.00	(N/A)	(N/A)	20.0	(N/A)
J-47A	500.00	2,532.43	True	20.0	20.0
J-48	500.00	(N/A)	(N/A)	20.0	(N/A)
J-48(FH)	500.00	2,308.37	True	20.0	20.0

J-49	500.00	(N/A)	(N/A)	20.0	(N/A)
J-51	500.00	(N/A)	(N/A)	20.0	(N/A)
J-51(FH)	500.00	2,024.52	True	20.0	20.0
J-52	500.00	(N/A)	(N/A)	20.0	(N/A)
J-53	500.00	2,603.13	True	20.0	26.5
J-54 (F-FH)	500.00	2,547.50	True	20.0	20.1
J-55 (F-FH)	500.00	2,404.71	True	20.0	20.0
J-56 (F-FH)	500.00	2,329.99	True	20.0	20.0
J-57 (F-FH)	500.00	2,343.65	True	20.0	20.0
J-58 (F-FH)	500.00	2,551.06	True	20.0	20.0
J-59 (F-FH)	500.00	2,514.02	True	20.0	30.8
J-59(FH)	500.00	3,164.67	True	20.0	29.7
J-60 (F-FH)	500.00	2,491.95	True	20.0	26.9
J-61	500.00	(N/A)	(N/A)	20.0	(N/A)
J-61(FH)	500.00	3,177.87	True	20.0	28.2
J-62	500.00	(N/A)	(N/A)	20.0	(N/A)
J-63	500.00	(N/A)	(N/A)	20.0	(N/A)
J-70	500.00	(N/A)	(N/A)	20.0	(N/A)
J-74	500.00	(N/A)	(N/A)	20.0	(N/A)
J-75	500.00	(N/A)	(N/A)	20.0	(N/A)
J-76(FH)	500.00	3,409.36	True	20.0	28.9
J-77	500.00	(N/A)	(N/A)	20.0	(N/A)
J-78(FH)	500.00	(N/A)	(N/A)	20.0	(N/A)
J-79(F-FH)	500.00	4,046.93	True	20.0	20.0
J-80(FH)	500.00	4,211.82	True	20.0	33.7
J-81(FH)	500.00	3,703.17	True	20.0	20.0
J-83	500.00	(N/A)	(N/A)	20.0	(N/A)
J-84	500.00	(N/A)	(N/A)	20.0	(N/A)
J-85	500.00	(N/A)	(N/A)	20.0	(N/A)
J-86(FH)	500.00	3,235.76	True	20.0	29.5
J-89	500.00	(N/A)	(N/A)	20.0	(N/A)
J-96	500.00	(N/A)	(N/A)	20.0	(N/A)
J-106(FH)	500.00	(N/A)	(N/A)	20.0	(N/A)
J-107(FH)	500.00	(N/A)	(N/A)	20.0	(N/A)
J-109	500.00	2,640.42	True	20.0	22.7
J-112(FH)	500.00	2,551.31	True	20.0	20.0
J-113(FH)	500.00	2,244.23	True	20.0	20.0
J-117	500.00	(N/A)	(N/A)	20.0	(N/A)
J-118	500.00	(N/A)	(N/A)	20.0	(N/A)
J-119	500.00	(N/A)	(N/A)	20.0	(N/A)
J-120	500.00	(N/A)	(N/A)	20.0	(N/A)
J-121	500.00	(N/A)	(N/A)	20.0	(N/A)
J-122(FH)	500.00	2,578.61	True	20.0	22.0
J-123(FH)	500.00	2,564.93	True	20.0	21.9
J-124	500.00	(N/A)	(N/A)	20.0	(N/A)
J-125	500.00	(N/A)	(N/A)	20.0	(N/A)
J-126	500.00	(N/A)	(N/A)	20.0	(N/A)
J-127(FH)	500.00	2,190.27	True	20.0	20.0
J-128	500.00	(N/A)	(N/A)	20.0	(N/A)
J-129(FH)	500.00	2,063.46	True	20.0	20.0
J-130	500.00	(N/A)	(N/A)	20.0	(N/A)
J-131	500.00	(N/A)	(N/A)	20.0	(N/A)
J-132	500.00	(N/A)	(N/A)	20.0	(N/A)
J-133	500.00	(N/A)	(N/A)	20.0	(N/A)
J-134(FH)	500.00	2,491.95	True	20.0	27.5
J-135(FH)	500.00	2,491.43	True	20.0	29.2

L:\201\67006_Rocketts Landing\Calc\CRP Updated Model Files\BWS Model Files\20150302 Master Plan Model.wtg