#### AGREEMENT BETWEEN THE CITY OF ALEXANDRIA, FAIRFAX COUNTY, AND THE CITY OF ALEXANDRIA, VIRGINIA SANITATION AUTHORITY REGARDING COST SHARE FOR WEST SIDE WET WEATHER FACILITIES

THIS AGREEMENT is entered into this \_\_\_\_\_ day of \_\_\_\_\_2017 by and between CITY OF ALEXANDRIA, a municipal corporation of Virginia ("City"), FAIRFAX COUNTY, VIRGINIA ("County"), and THE CITY OF ALEXANDRIA, VIRGINIA SANITATION AUTHORITY doing business as Alexandria Renew Enterprises ("Alexandria Renew"). The City, County, and Alexandria Renew are collectively referred to as the "Parties," and individually as "Party."

## RECITALS

- A. Alexandria Renew provides wastewater treatment and conveyance to the City under the Sewerage Service Agreement between the City of Alexandria, Virginia Sanitation Authority and the City of Alexandria, Virginia dated 1<sup>st</sup> day of September, 1954 as amended June 25, 1974 (collectively referred to as the "Alexandria Service Agreement"). The City owns and operates both a combined sewer system and a separate sewer system.
- B. Alexandria Renew provides wastewater treatment and conveyance to the County under the Amended and Restated Service Agreement between the City of Alexandria, Virginia Sanitation Authority and the Board of Supervisors of Fairfax County, Virginia dated 1<sup>st</sup> day of October 1998 ("Fairfax County Service Agreement"). The County owns and operates a separate sewer system. (Collectively the Alexandria and Fairfax County Services Agreements may be called "Service Agreements").
- C. The Virginia Department of Environmental Quality ("VDEQ") has issued Virginia Pollutant Discharge Elimination System ("VPDES") Permit No. VA0087068 to the City, including effluent limitations and monitoring requirements, for the City's Combined Sewer System ("CSS"). This VPDES permit requires the City to develop, periodically update, and implement a Long Term Control Plan ("LTCP") to reduce combined sewer overflows. The City has submitted to VDEQ a LTCP Update dated December 2016 that includes a recommended plan to design and construct an

06/21/17 Draft Sent to Alexandria City Council for Review

approximately 1.6 million gallon storage and conveyance tunnel to reduce overflows from CSO 003 and 004. The recommended plan includes a LTCPU Implementation Schedule indicating that planning of the project will commence in 2017.

- D. DEQ has issued VPDES Permit No. VA0025160, including effluent limitations and monitoring requirements, and General Permit Registration No. VAN010059 for the Alexandria Renew Enterprises Water Resources Recovery Facility ("WRRF") to Alexandria Renew requiring it to "...commence an engineering evaluation of options/alternatives to study the need, feasibility and possible means of minimizing the occurrence of wet weather overflows at the Hooff's Run Junction Chamber. Annual progress reports detailing the alternatives explored and criteria utilized during the evaluations shall be due on or before 31 December 2015 and 31 December 2016. The final study and any proposed plan and implementation schedule should be compatible with the City of Alexandria's Long Term Control Plan Update, due 23 August 2016, as required for its Combined Sewer System permit VA0087068 and shall be submitted to DEQ-NRO for review and approval on or before 31 December 2017 or one year from date of DEQ approval of the City's final LTCPU, whichever occurs later."
- E. Together the City, County, and Alexandria Renew have developed a coordinated plan to address both the City's LTCPU needs for the City's combined sewer system, and Alexandria Renew's need to minimize SSOs caused by wet weather flows from both of the City's combined and separate sewer systems and the County's separate sewer system by constructing the West Side Wet Weather Facilities ("WSWWF").
- F. The purpose of this Agreement is to memorialize the framework for cost sharing between the City and the County relating to the WSWWF as described in the schematic representation of the planned WSWWF attached as Exhibit 4 and the list of the multiple new facilities that preliminary studies indicate will need to be constructed and operated as part of the new WSWWF attached as Exhibit 5. The Parties anticipate that these facilities will be further defined and potentially augmented during subsequent planning, design, and implementation. The

Agreement also addresses the Parties' desire to ensure continued cooperation and coordination during the planning, design and implementation process.

H. The WSWWF will require approval by the VDEQ prior to construction.

Now, therefore, in consideration of the undertakings set forth hereafter, the City, County, and Alexandria Renew, each pursuant to due and proper authority, agree to the following, which shall govern the Parties' actions with respect to the matters addressed herein.

#### **Specific Provisions**

- DEQ Approval. This Agreement is contingent on VDEQ's approval of the WSWWF as proposed herein. If VDEQ disapproves the WSWWF, or alternatively approves the WSWWF with conditions or revisions that materially affect its cost or design, then the Parties will work together in good faith to revise or replace this Agreement. If the Parties are unsuccessful in achieving a mutually agreeable revision or replacement in a timely manner, then this Agreement shall be terminated. In such case, the Parties shall remain responsible for addressing their respective obligations to address peak wet weather flows that would have been addressed by the WSWWF.
- 2. Construction and Operation. This Agreement memorializes the agreement of the Parties with respect to the cost allocation for construction and operation of the WSWWF, as well as the City's and County's respective capacity rights arising from the new facilities, but it does not address which Party will actually construct, own, operate or become the permittee for the WSWWF. The parties anticipate that the City and Alexandria Renew will separately negotiate a bilateral agreement related to construction, ownership, operation and permitting ("Bilateral Agreement"). The Bilateral Agreement will also determine how Alexandria Renew and the City will allocate between them the costs of WSWWF attributable to the City. For the purposes of this Agreement, all financial obligations in this Agreement (including,

#### 06/21/17 Draft Sent to Alexandria City Council for Review

but not limited to, capital costs and operation and maintenance costs) which are attributable to the "City" shall be paid either by Alexandria Renew or the City pursuant to further allocation by the Bilateral Agreement. The Bilateral Agreement shall require the optimization of operation of the WSWWF in order to provide the additional systemwide capacity contemplated by this Agreement consistent with maintaining compliance with the Alexandria Renew VPDES permit and optimizing the collection and treatment system as a whole. Because the result of that negotiation will affect the County, the Parties agree that the County will have the right to review and approve any aspects of the bilateral agreement that affect the County's interests, as well as any related agreements that will be required as a result of this negotiation (e.g., if the City owns some or all of the WSWWF, then the WSWWF will not be covered by the existing service agreements as joint use facilities and may require a separate agreement). Such approval shall be timely, in writing, and not to be unreasonably withheld.

- 3. **Cost Share and Capacity Allocations.** Capital costs for, and capacity rights arising out of the WSWWF will be allocated using the following categories:
  - a. Facilities to address City-only needs under the LTCPU will be the sole cost and responsibility of the City.
  - b. Facilities to address City's and County's needs that relate generally to the total allocation of plant capacity in the Alexandria Renew WRRF and all costs of land and right-of-way acquisitions will be split with the County paying for and receiving capacity rights to 60% of these facilities, and the City paying for and receiving capacity rights to 40% of these facilities. The items in this category are intended to accommodate peak wet weather flow rates and those items that are independent of the volumetric size of the tunnel.
  - c. Facilities that directly relate to overall storage needs, which will be addressed in part by building a storage tunnel for wet weather flows, will be split based on tunnel storage volume with the County paying for and

#### 06/21/17 Draft Sent to Alexandria City Council for Review

receiving system capacity rights equivalent to an additional 0.3 million gallons (MG) of storage (above and beyond the County's existing capacity allocation in the system) and the City paying for and receiving capacity rights to the remainder of tunnel storage volume, which number shall be finalized when the final size of the tunnel has been determined in accordance with the Construction and Financing Agreement between the City and Alexandria Renew. By way of example, if the total tunnel storage volume is determined to be 1.6 MG, the County cost share will be 0.3/1.6 = 18.75%, and the City cost share will be 81.25%. The City represents to the other Parties that the final size of the tunnel may not eliminate the need for CSO 3, and as a consequence, the City may need to activate CSO 3 when wet weather flows exceed the capacity of the WSWWF. As set forth in Paragraph 9 below, the City shall remain solely responsible for all compliance obligations associated with the City's CSS, including this CSO and related VPDES permit.

- Planning, Design, Construction Management, and Administration costs will be paid by the City and County in proportion to the combined construction costs of items 3.a, b and c above.
- e. Exhibit 1 provides a breakdown of the cost share allocation based on the conceptual level costs developed as part of the City's LTCPU. The costs reflected in the cost share allocation are subject to change based on additional planning and design and on construction bids. Prior to award of the construction or design-build contract, the party responsible for construction of the WSWWF ("Constructing Party") will update Exhibit 1 based on pricing from the contractor and will provide a copy to the non-constructing parties. If the total costs to the County increase by more than thirty (30) percent, the Parties will re-assess the cost share allocation presented herein and, by mutual agreement, either validate or revise it.

- 4. Net Costs and Final Reconciliation. Each Party will pay its share of the agreed-upon costs for the WSWWF as such costs are incurred. Within ninety (90) days of final completion of construction of the WSWWF, the Constructing Party will prepare a final reconciliation report of net cost and payments by the Parties and the Parties will make final payment reconciliation within thirty (30) days of receipt of the report. Exhibit 2 shows an example of reconciliation of final net cost.
- 5. **Future Capital Costs.** Capital costs associated with future repair or replacement of the WSWWF (provided such repair or replacement is not caused by the negligent acts or omissions of one of the Parties) will be shared by the City and County in the same manner as allocated in item 3 above.
- 6. **Operation and Maintenance Costs.** Operation and Maintenance costs at Alexandria Renew are generally paid in proportion to the actual flow delivered to Alexandria Renew each year. In order to simplify and efficiently assess the operation and maintenance costs of the WSWWF, costs incurred for facilities on Alexandria Renew property will be assessed on this same basis. Operation and Maintenance costs for the entire length of the storage tunnel (inside and outside of the Alexandria Renew property, excluding shafts 2 and 3), as well as any facilities off Alexandria Renew property, will be the sole responsibility of the City. Exhibit 3 shows an example of the breakdown of the annual operating cost allocation.
- 7. Sale or Use of Acquired Property. If the City or Alexandria Renew aquires any property under this Agreement for the purpose of constructing the WSWWF and later sells that property, any proceeds from the sale shall be remitted to the County in proportion to the amount of its contribution to the acquisition of the property. If the property or any portion of the facilities identified in this Agreement is put to use by either the City or Alexandria Renew for a purpose other than, or in addition to, what is identified in this Agreement, then the County shall be compensated in an amount equal to its contribution to the acquisition of the property and/or facilities. However, to the extent such purpose or additional use is a joint use/purpose, the County and City shall pay their appropriate pro-rata shares of the property and/or facilities for the

additional/modified use/purpose other than that provided for in their respective Service Agreements.

## **General Provisions**

- Nothing contained in this Agreement, and no action taken or omitted pursuant to this Agreement is intended or may be construed to create any partnership entity, joint venture, or association. No rights are provided to third parties.
- 9. Nothing in this Agreement imposes any obligation on the County with respect to the City's CSS or the VPDES permit associated with the City's CSS. The City shall remain solely responsible for all compliance obligations associated with the City's CSS and related VPDES permit.
- 10. The Parties agree to informally, and in good faith, pursue resolution of any dispute arising out of this Agreement and, if necessary, to submit such dispute to formal mediation. The Parties agree that any dispute arising out of this Agreement that they are unable to resolve by mediation shall be submitted for resolution by a court of competent jurisdiction of the Commonwealth of Virginia.
- 11. If any provisions of this Agreement are found to be void or otherwise unenforceable by a court of competent jurisdiction, the remaining provisions shall be unaffected and shall remain in full force and effect.
- 12. The Parties represent that they have the authority to enter into this Agreement and that the individuals signing this Agreement on their behalf have been granted the requisite power and authority by public resolution in a duly advertised public meeting to bind the Parties to its provisions.
- 13. This Agreement shall apply to and shall be binding upon the Parties hereto, as well as their elected officials, appointees, officers, directors, employees, agents, successors, and assigns, and to the extent permitted by applicable law, all persons whether natural or corporate acting under, through, or for them.

06/21/17 Draft Sent to Alexandria City Council for Review

- 14. This Agreement, including its Exhibits, constitutes the entire Agreement between the Parties with respect to the the cost allocation for the design, permitting, construction, maintenance and operation of the WSWWF.
- 15. This Agreement is intended to complement, and not conflict with the Service Agreements. Nothing in this Agreement will be interpreted to modify or amend the Services Agreements, and no such modification or amendment will be effective without the mutual agreement of the signatories to those Service Agreements.
- 16. No modification, termination, or waiver of any provision of this Agreement will be binding upon a Party unless in writing and signed by the Party against whom enforcement is sought. All Parties have participated in the preparation of this Agreement and have received advice of legal counsel; this Agreement will not be construed against any Party based on the identity of the drafter of this Agreement.
- 17. This Agreement will be governed by and construed in accordance with the laws of the Commonwealth of Virginia.
- 18. The Parties to this Agreement retain the right to amend this Agreement with the mutual approval of all three Parties, and any such amendment will be in writing.
- 19. The terms and conditions of this Agreement may be enforced as a contract by specific performance by any Party hereto. All rights and remedies available to the Parties at law and equity in accordance with the laws of the Commonwealth of Virginia are preserved.
- 20. In implementing their respective responsibilities under this Agreement, the Parties shall comply with applicable laws.
- 21. All notices or other communications required or permitted under this Agreement will be in writing directed to a Party at its address set forth below. A Party may designate a new address by written notice to the other Parties. All notices will be effective and be deemed delivered upon receipt as evidenced by a signed certified mail receipt, signed overnight delivery receipt, or signed acceptance of hand delivery receipt.

**City of Alexandria** Attn: Director, Transportation and Environmental Services

301 King Street, Suite 4100 Alexandria, VA 22314

> With a copy to: Alexandria City Attorney 301 King St., Room 1300 Alexandria, VA 22314

#### **Alexandria Renew Enterprises**

Attn: Chief Executive Officer 1500 Eisenhower Ave Alexandria, VA 22314

> With a copy to: Jonathan Rak McGuireWoods LLP 1750 Tysons Boulevard, Suite 1800 Tysons Corner, VA 22102-4215

#### **Fairfax County**

Attn: County Executive 12000 Government Center Parkway Suite 552 Fairfax Virginia 22035

> With a copies to: Fairfax County Attorney 12000 Government Center Parkway Suite 549 Fairfax, Virginia 22035

Director Fairfax County Wastewater Planning and Monitoring Division 12000 Government Center Parkway Suite 358 Fairfax, Virginia 22035

## [SIGNATURES APPEAR ON THE FOLLOWING PAGES]

06/21/17 Draft Sent to Alexandria City C	Council for Review
Agreed and Approved by Resolution:	City of Alexandria
	By: Printed Name:Mark. J. Jinks, City Manager Date:
Approved as to form: By: City Attorney	Date:
City/County of Commonwealth/State of Sworn to and subscribed before me this _	day of, 2017, by
Witness my hand and official seal.	

My Commission Expires

Notary Public

Alexandria Renew Enterprises		
By: Printed Name: Date:		
Date:		
day of	, 2017, by	
	By: Printed Name: Date: Date:	

My Commission Expires

Notary Public

06/21/17 Draft Sent to Alexandria City C	Council for Review		
Agreed and Approved by Resolution: Fairfax County			
	By:		
	Printed Name:		
	Date:		
Approved as to form:			
Ву:	Date:		
City/County of			
Commonwealth/State of			
Sworn to and subscribed before me this _	day of	, 2017, by	
Witness my hand and official seal.			

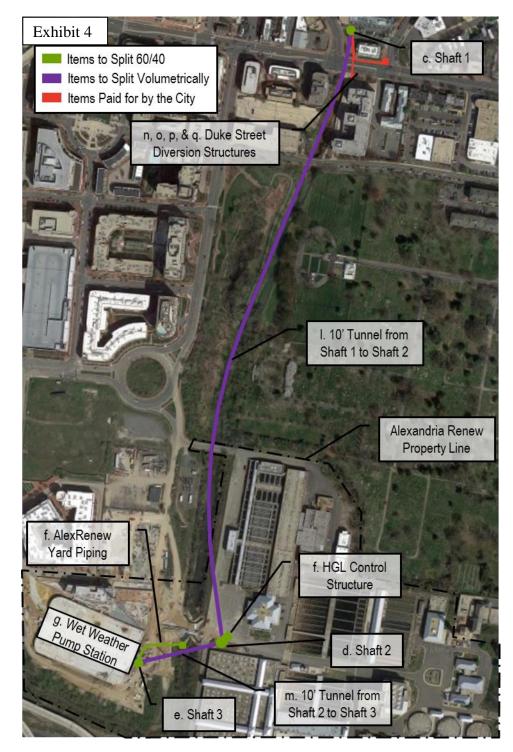
My Commission Expires

Notary Public

E	khibit 1	City of Alexandria, V Department of Transportation and E	•	Services		
		Long Term Control Progr. West Side Wet Weather				
		Preliminary Capital Cost				
		Greeley and Hanser June 2017	n LLC			
		Item	Estimated Costs <sup>(1)(2)</sup>	Escalated to Midpoint <sup>(5)</sup>	County Costs	City Costs
Tu	nnel and Facilitie		00313	mapoint	County Costs	Only Costs
	o Split 60/40	3			60%	40%
a.	Site Preparation		\$351,000	\$408,000	\$244,800	\$163,2
b.	Geotechnical Ins	trumentation	\$886,000	\$1,029,000	\$617,400	\$411,6
c.	Shaft 1 Construe	tion (@Daingerfied Rd) - 25' Dia.	\$4,552,000	\$5,288,000	\$3,172,800	\$2,115,2
d.	Shaft 2 Construe	tion (@ ARenew WRRF) - 35' Dia.	\$8,146,000	\$9,463,000	\$5,677,800	\$3,785,2
e.	Shaft 3 Construe	tion (@ ARenew WRRF) - 15' Dia.	\$2,969,000	\$3,449,000	\$2,069,400	\$1,379,6
f.	HGL Control Str	ucture and AlexRenew Yard Piping (includes relocated CSO-004)	\$2,849,000	\$3,309,000	\$1,985,400	\$1,323,6
g.	Wet Weather Po	imp Station (25-year)	\$10,846,000	\$12,599,000	\$7,559,400	\$5,039,6
h.	Electrical and Po		\$527,000	\$612,000	\$367,200	\$244,8
i.	Instrumentation	and Controls	\$351,000	\$408,000	\$244,800	\$163,2
j.	Site Restoration	(4)	\$176,000	\$204,000	\$122,400	\$81,6
k.	Front end impro	vements to the treatment plant <sup>(4)</sup>	\$2,127,000 \$33,780,000	\$2,471,000 \$39,240,000	\$1,482,600 \$23,544,001	\$988,4 \$15,696,0
erns t	o Split Volumetrica	alty			19%	81%
I.	10' Tunnel from	Daingerfield Rd (Shaft 1) to Commonwealth Interceptor (Shaft 2)	\$29,276,000	\$34,008,000	\$6,376,500	\$27,631,5
m	6' Tunnel from C (Shaft 3)	ommonwealth Interceptor (Shaft 2) to Nutrient Management Facility	\$5,476,000	\$6,361,000	\$1,192,688	\$5,168,3
	(onlart o)		\$34,752,000	\$40,369,000	\$7,569,188	\$32,799,8
ems F	Paid for by the Cit	2			0%	100%
n.	CSO-003 Divers	ion Structure	\$424,000	\$493,000	\$0	\$493,0
о.	Duke Street Dive	ersion and Associated 48" Piping for existing CSO-004	\$595,000	\$691,000	\$0	\$691,0
p.	CSO-003 Sluice	Gate (52"Wx64"H) w/ manual operator	\$190,000	\$221,000	\$0	\$221,0
q.	48" RCP Diversi	on Sewer, CSO-003	\$251,000	\$292,000	\$0	\$292,0
r.	Odor Control Un		\$1,751,000	\$2,034,000	\$0	\$2,034,0
S.		s, Controls and Accessories	\$2,896,000	\$3,364,000	\$0	\$3,364,0
t.	Dewatering Pur	•	\$605,000	\$703,000	\$0	\$703,0
		g - 42'x80'(for VCF, Odor Control, Dewatering Pumps, Shaft 2)	\$1,530,000	\$1,777,000	\$0	\$1,777,0
v.	Vent/ Odor Cont	rol Bldg and Facilities @ Shaft 1 - 20'x20' (Excl. Odor Control Unit)	\$570,000 \$8,812,000	\$662,000 \$10,237,000	\$0 \$0	\$662,0 \$10,237,0
		ESTIMATED CONSTRUCTION COSTS	\$77,344,000	\$89,846,000	\$31,114,000 (35%)	\$58,733,000 (659
					60%	40%
Ne	t Land Costs (1/	3 Acre @ \$125/SF) <sup>(3)</sup>	\$1,815,000	\$1,930,000	\$1,158,000	\$772,0
. Pla	anning, Design, (	CM, Administration, and Permitting @ 30% of Construction Cost	\$23,204,000	\$26,224,000	<b>35%</b> \$9,221,274.70	<b>65%</b> \$17,002,725.
-		ESTIMATED CAPITAL COSTS <sup>(4)</sup>	\$102,363,000	\$118,000,000	\$41,494,000 (35%)	\$76,508,000 (65
ote: Es	timated costs inclu	de Contractor Overhead Costs @ 35% and Construction Contingency	@ 30%.			
Es	timated costs base	ed on ENR Index of 10692.17 (May 2017) acquiring the cost of the entire property for the duration of construction		e completed minu	s the area occupied by	/ Shaft 1.
		improvements to the AlexRenew WRRF in order to upgrade the plant fro tion Update (Task Order 16-2005) report.	m 108 MGD to 1	16 MGD as descri	ibed in Section 5.2.1.3	of the Wet Weath
	-	ction assumed to be June 25, 2022. Mid-point for the administrative and	land acquisition			

			ental Services		
		Long Term Control Program Upda West Side Wet Weather Faciliti			
		Example of Capital Cost Reconcilia	ation		
		Greeley and Hansen LLC			
		June 2017			
		Item	Actual Costs	County Costs	City Costs
	unnel and Facilities				
	Innel and Facilities				
	to Split 60/40		\$429.400		
a.	Site Preparation	umontation	\$428,400		
b.	Geotechnical Instr		\$926,100		
C.		ion (@ Daingerfied Rd) - 20' Dia.	\$6,081,200		
d.		ion (@ ARenew WRRF) - 30' Dia.	\$10,882,450 \$3,690,430		
e. f.		ion (@ ARenew WRRF) - 15' Dia. :ture and AlexRenew Yard Piping (includes relocated CSO-004)	\$3,690,430 \$2,812,650		
			\$2,812,650		
g. h.	Electrical and Pov	np Station (25-year)	\$13,480,930 \$581,400		
i.	Instrumentation ar		\$428,400		
	Site Restoration		\$214,200		
J. k.		ements to the treatment plant <sup>(2)</sup>	\$2,718,100	60%	40%
κ.	i tont end improve		\$42,244,260	\$25,346,556.00	\$16,897,704.00
ems	to Split Volumetricall	Y			
I.		aingerfield Rd (Shaft 1) to Commonwealth Interceptor (Shaft 2) ommonwealth Interceptor (Shaft 2) to Nutrient Management Facility	\$32,307,600		
m	(Shaft 3)		\$6,997,100	19%	81%
_			\$39,304,700	\$7,369,631	\$31,935,069
ems	Paid for by the City				
n.		on Structure	\$517,650		
о.	Duke Street Diver	sion and Associated 48" Piping for existing CSO-004	\$587,350		
p.		Gate (52"Wx64"H) w/ manual operator	\$198,900		
q.		n Sewer, CSO-003	\$233,600		
r.	Odor Control Unit	(2)	\$2,135,700		
s.		Controls and Accessories	\$3,195,800		
t.	Dewatering Pump		\$738,150		
u.	- · ·	- 42'x80'(for VCF, Odor Control, Dewatering Pumps, Shaft 2)	\$1,688,150		
v.		ol Bldg and Facilities @ Shaft 1 - 20'x20' (Excl. Odor Control Unit)	\$695,100	0%	100%
			\$9,990,400	\$0	\$9,990,40
		CONSTRUCTED COSTS	\$91,539,000	\$32,716,187 (36%)	\$58,823,173 (64%
		CONSTRUCTED COSTS	φσ1,000,000		
	and Purchase Cost		\$2,722,500	60% \$1,633,500	40% \$1,089,00
La	and Sale Cost		\$1,796,850	\$1,078,110	\$718,74
N	et Land Costs (1/3	Acre) <sup>(1)</sup>	\$925,650	\$555,390	\$370,26
		Administration and Demolition 2	A07 (00 000	36%	64%
. PI	anning, Design, CN	M, Administration, and Permitting Cost	\$27,462,000	\$9,881,620	\$17,580,38
ote:		CAPITAL COSTS <sup>(2)</sup>	\$119,927,000	\$43,154,000 (36%)	\$76,774,000 (64%
Re		equiring the cost of the entire property for the duration of construction as the area occupied by Shaft 1.	nd selling it		
11		provements to the AlexRenew WRRF in order to upgrade the plant from d in Section 5.2.1.3 of the Wet Weather Management Evaluation Upda t.			

F	ľv	hibit 3	City of Alexandria, Virginia			
	<i>λ</i>		Department of Transportation and Environm	nental Services		
			Long Term Control Program Up	date		
			West Side Wet Weather Facili			
			Operation and Maintenance Cost Share Deter	mination Examp	le	
			Greeley and Hansen LLC			
			June 2017			
				Annual O&M		
			Item	Costs	County Costs	City Costs
А. Т	Fur	nel and Facilities				
		andria Renew Prop	perty			
f.		HGL Control Struc	ture and AlexRenew Yard Piping (includes relocated CSO-004)	\$22,126		
g	<b>j</b> .	Wet Weather Purr	np Station (25-year)	\$415,767		
	h. Electrical Power and Supply		\$20,196			
i.		Instrumentation an	d Controls	\$13,464		
r.		Odor Control Unit		\$67,122		
s	S.	Climber Screens,	Controls and Accessories	\$111,012		
t.		Dewatering Pumps	5	\$23,199		
u	J.	Vent/Odor Control	Bldg and Facilities	\$58,641	Annual Average Flow	Annual Average Flo
d	d. Shaft 2 (@ ARenew WRRF) - 30' Dia.		\$312,279	22.0	20.5	
е	ə.	. Shaft 3 (@ ARenew WRRF) - 15' Dia.		\$113,817	52%	48%
			Subtotal	\$1,157,623	\$599,240	\$558, 383
Off A	lex	andria Renew Prop	perty			
v	1.	Vent/ Odor Control Bldg and Facilities @ Shaft 1		\$21,846		
n	n.	CSO-003 Diversion Structure		\$16,269		
р	<ul> <li>CSO-003 Sluice Gate (52"Wx64"H) w/ manual operator</li> </ul>		\$7,293			
o	<b>)</b> .	Duke Street Divers	sion and Associated 48" Piping for existing CSO-004	\$2,255		
с	<b>.</b>	Shaft 1 (@Dainge	rfied Rd) - 20' Dia.	\$174,504		
I.		10' Tunnel from Da	aingerfield Rd (Shaft 1) to CI (Shaft 2)	\$1,122,264		
n	n.	10' Tunnel from Cl	(Shaft 2) to NMF (Shaft 3)	\$209,913	0%	100%
			Subtotal	\$1,554,344	\$0	\$1,554,344
			EXAMPLE OPERATION AND MAINTENANCE COSTS	\$2,711,966	\$599,240	\$2,112,726



## Exhibit 5

## Facilities to be constructed and operated with the West Side Wet Weather Facilities

Preliminary studies include West Side Wet Weather Facilities as follows:

- Site Preparation this includes the contractors mobilization costs as well as preparing the site for the construction of the facilities associated with the West Side Wet Weather Facilities.
- Geotechnical Instrumentation an allowance to monitor geotechnical conditions during tunneling, including ground subsidence and vibrations.
- Shaft 1 this is the upstream drop shaft. It is anticipated to be 20-ft in diameter and approximately 70-ft deep.
- Shaft 2 this is the intermediate drop shaft that will receive flows from HGL control structure and convey them into the tunnel. It is anticipated to be 30-ft in diameter and approximately 90-ft deep.
- Shaft 3 this is the downstream shaft that will receive flows from the tunnel. It is anticipated to be 15-ft in diameter and approximately 100-ft deep.
- 6) HGL Control Structure and Alexandria Renew Yard Piping this consists of the hydraulic grade line control structure. The Alexandria Renew yard piping is piping necessary to convey flows from the HGL control structure to Shaft 2 and to convey flows from the wet weather pump station to the relocated CSO-004.
- 7) Wet Weather Pump Station this represents new pumps that will be located in the Nutrient Management Facility. The pump station will be used to hold the hydraulic grade line of the interceptor system at an elevation in order to prevent basement backups.
- Electrical and Power Supply the wet weather pump station and facilities building, including the climber screens, dewatering pumps, and odor control unit will require electricity and a power supply.
- Instrumentation and Controls instrumentation and controls will be required in order to operate the West Side Wet Weather Facilities as intended.

- Site Restoration following the construction of the West Side Wet Weather Facilities, all areas impacted by construction will be restored to their current conditions.
- Front End Improvements to the treatment plant upgrades will be made to the front end of the plant in order to increase the treatment capacity from 108 MGD to 116MGD.
- 12) 10' Tunnel from Daingerfield Rd (Shaft 1) to Commonwealth Interceptor (Shaft 2) this is anticipated to be a 10-foot diameter storage tunnel.
- 13) 10' Tunnel from Commonwealth Interceptor (Shaft 2) to the Nutrient Management Facility (Shaft 3) – this is anticipated to be a 10-foot diameter storage tunnel that will be used to convey flows from CSO-003, CSO-004, and the HGL Control Structure to the Wet Weather Pump Station.
- 14) CSO-003 Diversion Structure this is a CSO diversion structure that will divert combined sewer overflows from the existing CSO-003 overflow pipe to Shaft 1.
- 15) Duke Street Diversion this is a CSO diversion structure that will divert all combined sewer overflows from the existing CSO-004 overflow pipe to Shaft 1.
- 16) CSO-003 Sluice Gate this is anticipated to be a 52" x 64" sluice gate that will be installed in the CSO-003 diversion structure. It is necessary to prevent CSO-003 flows from entering the tunnel when the tunnel has reached its capacity.
- 17) 48" RCP Diversion Structure, CSO-003 this is a 48-in diameter reinforced concrete pipe that will convey flows from the CSO-003 diversion structure to Shaft 1.
- 18) Odor Control Unit this consists of two (2) odor control units that will control odors emanating from the tunnel. It is anticipated one odor control unit will be located in the vicinity of Shaft 1 and the other odor control unit will be located on the AlexandriaRenew plant site within the new Facilities Building.
- 19) Climber Screens, Controls, and Accessories this item consists of climber screens that will screen out large debris from entering the wet weather pump station and damaging the facility as well as the controls and accessories

associated with it. These screens will be located in Shaft 2 and will be approximately 90-ft deep.

- 20) Dewatering Pumps these are pumps that will dewater the tunnel back to the head of the AlexandriaRenew WRRF following a rain event when the WRRF has enough capacity to accept the flows. These pumps are preliminarily sized at 2 million gallons per day and will be located in Shaft 2.
- 21) Facilities Building this is a new building that will be located on top of Shaft 2. It will house the climber screens, dewatering pumps, and one of the odor control units. This will also be an access point for entering and performing maintenance or cleaning of the tunnel.
- 22) Vent/Odor Control Building and Facilities this is a new structure that will be constructed in the vicinity of Shaft 1 to provide odor control as well as acting as a venting structure for the tunnel system.