Fort Martin - Woodside Double Circuit 500 kV

General Information

Proposing entity name	Company Specific Information
Does the entity who is submitting this proposal intend to be the Designated Entity for this proposed project?	Company Specific Information
Joint proposal ID	919
Company proposal ID	Company Specific Information
PJM Proposal ID	896
Project title	Fort Martin - Woodside Double Circuit 500 kV
Project description	Convert the 500kV single circuit 502 Junction - Woodside 500kV project under development (PJM Baseline Upgrade ID b3800.102) to a double circuit configuration between Fort Martin and the NEETMA/APS interconnection point in Frederick County, VA, to accommodate Circuit 1 (b3800.102: 502 Junction – Black Oak – Woodside 500kV) and Circuit 2 (Fort Martin – Sandy Creek – Woodside 500kV).
Email	Company Specific Information
Project in-service date	12/2031
Tie-line impact	Yes
Interregional project	No
Is the proposer offering a binding cap on capital costs?	No
Additional benefits	Company Specific Information

Project Components

1. Sandy Creek 500kV Substation
2. 502 Junction - NEETMA/APS Handoff

3. Woodside 500kV Substation upgrades
4. 01-106J (Bruce Mills 138kV Switchyard) substation upgrade
5. Fort Martin substation upgrade
6. Doubs substation upgrade
7. Brighton terminal equipment upgrades
8. b.3800.102 NEET/FE Interconnection - Woodside 500kV
9. Sandy Creek - 01-106J 138kV
10. 01-106J - Brandonville/01-106J - Albringht #2 138kV

Greenfield Substation Component

Component title	Sandy Creek 500kV Substation
Project description	Company Specific Information
Substation name	Sandy Creek
Substation description	AC Air Insulated Substation (AIS): New proposed 500-138kV Substation. New 500kV ring switchyard with three (3) line terminals, three (3) 500kV, 5000A, 63kAIC breakers, one (1) 500-138kV, 485 MVA transformer bank.
Nominal voltage	AC
Nominal voltage	500

Transformer Information

	Name	Capacity (MVA)
Transformer	500-138Kv Xfrm #1	485

	High Side	Low Side	Tertiary
Voltage (kV)	500	138	

Major equipment description	AC Air Insulated Substation (AIS): New proposed 500-138kV Substation. New 500kV ring switchyard with three (3) line terminals, three (3) 500kV, 5000A, 63kAIC breakers, one (1) 500-138kV, 485 MVA transformer bank.	
	Normal ratings	Emergency ratings
Summer (MVA)	485.000000	619.000000
Winter (MVA)	569.000000	654.000000
Environmental assessment	Environmental constraints were evaluated within the proposed substation parcel and are manageable through avoidance, minimization, and mitigation strategies. The proposed parcel contains one NWI-mapped wetland. According to FEMA, no portion of the proposed substation parcel contains any 100-year floodplains or regulated floodways. No major watercourses are located within the proposes parcel. However, it is assumed any overland flow will drain to Big Sandy Creek and its downstream tributaries. No fatal flaws have been identified for the Project. Based on publicly available data, no previously recorded archaeological sites, cemeteries, or architectural resources were recorded within the immediate vicinity of the proposed substation parcel. Additionally, no historic districts located within the immediate vicinity of the Site. Three federally listed species (3 endangered and 1 proposed) have known ranges within the vicinity of the site. No critical habitat was identified within the vicinity of the proposed substation parcel. If suitable habitat is identified or regulations change, agency coordination & species-specific surveys will occur. The project intends to follow suggested tree removal windows & general time of year restrictions to avoid/minimize impacts to species such as federally listed bats and migratory birds, among others. Industry standard construction BMPs & avoidance and minimization measures will be used to prevent unanticipated impacts to natural resources to the maximum extent practicable. There are no environmental concerns with the proposed project that cannot be addressed through agency coordination and mitigation. No ‘Major Federal Action’ that would invoke NEPA is anticipated to result from the proposed project. See Attachment 8 – Permitting Plan.	

Outreach plan	The proposer is committed to informing the public about the project to the greatest extent practicable while working with all interested stakeholders including landowners through a robust public outreach program to address and respond to community concerns. A well-designed public outreach program can have numerous benefits, including fostering cooperative relationships with landowners and other stakeholders, expediting the regulatory permitting process, and assisting with project development. In general, the purpose of the community outreach plan is to gain community support for the project. In the affected communities, the proposer's public outreach plan will educate the public and relevant stakeholders on specific project details to enable timely regulatory approvals and construction activities. Elements of the public outreach plan will include the following: 1) Identify potential issues at an early stage by engagement with key community stakeholders at the outset; 2) Broaden the community engagement process to identify potential and relevant community benefits that can facilitate community support for the proposed project; 3) Develop a broad base of community support for the proposed project before the regulatory agencies; and 4) Develop a comprehensive administrative record documenting the community outreach process that can be presented to the regulatory agency or, in the event of a legal challenge, to the appropriate court. The outreach plan proposes to dedicate considerable time and resources in engaging the community, and specifically the affected community during the planning process to identify highly sensitive areas in order to develop a project that has the least amount of cultural, environmental, and social impacts. The plans will reflect avoidance of impacts rather than mitigation. However, in some cases, if avoidance is not possible, then the proposer will involve landowners and other stakeholders in providing appropriate and practical mitigation measures. Public outreach activities by the proposer will begin following project award.
Land acquisition plan	See Attachment 9.
Construction responsibility	Company Specific Information
Benefits/Comments	Company Specific Information
Component Cost Details - In Current Year $	
Engineering & design	Company Specific Information
Permitting / routing / siting	Company Specific Information
ROW / land acquisition	Company Specific Information
Materials & equipment	Company Specific Information
Construction & commissioning	Company Specific Information
Construction management	Company Specific Information

Overheads & miscellaneous costs	Company Specific Information
Contingency	Company Specific Information
Total component cost	$70,121,689.00
Component cost (in-service year)	$79,336,254.00

Transmission Line Upgrade Component

Component title	502 Junction - NEETMA/APS Handoff
Project description	Company Specific Information
Impacted transmission line	502 Junction - Black Oak - Woodside 500kV
Point A	502 Junction
Point B	Black Oak
Point C	Woodside
Terrain description	A detailed inspection of the USGS topographic map reveals relatively consistent, moderately sloped terrain, with elevation within the proposed Project ranging from a high of 2,894 ft above sea level to a low of 574 ft above sea level. The Project is located within 7 Level IV ecoregions (Northern Shale Valleys, Northern Sandstone Ridges, Northern Dissected Ridges and Knobs, Forested Hills and Mountains, Uplands and Valleys of Mixed Land Use, Monongahela Transition Zone, and Pittsburgh Low Plateau). According to the NLCD, the Project area largely consists of cultivated cropland, deciduous forest, wetlands, hay/pasture, mixed forest, shrub/scrub, open water, and developed, open space.
Existing Line Physical Characteristics	
Operating voltage	500
Conductor size and type	3x bundled 1780 kcmil ACSR 84/19 Chukar
Hardware plan description	Approved 502 Junction - Woodside 500 kV project (PJM Baseline Upgrade ID b3800.102) has not been constructed so no existing hardware will be impacted.
Tower line characteristics	Approved 502 Junction - Woodside 500kV project (PJM Baseline Upgrade ID b3800.102) has not been constructed so no existing hardware will be impacted.

Proposed Line Characteristics

	Designed	Operating
Voltage (kV)	500.000000	500.000000
	Normal ratings	Emergency ratings
Summer (MVA)	5101.000000	5332.000000
Winter (MVA)	6110.000000	6330.000000
Conductor size and type	3x1780 KCMIL ACSS/MA3 54/19 Chukar	
Shield wire size and type	2x0.575 48ct OPGW	
Rebuild line length	100	
Rebuild portion description	The entire circuit shall be upgraded to a double circuit from a single circuit from the point where the Fort Martin - Sandy Creek circuit joins the 502 Junction - Black Oak circuit until the point at which the Sandy Creek - Woodside circuit transitions to single circuit towers. See Attachment 4 for more information on location of double circuit structures.	
Right of way	Existing right-of-way to be used for upgrading the single circuit to a double circuit. ROW Adjustments may be required in specific locations to mitigate engineering and/or operational risks.	
Construction responsibility	Company Specific Information	
Benefits/Comments	Company Specific Information	
Component Cost Details - In Current Year $		
Engineering & design	Company Specific Information	
Permitting / routing / siting	Company Specific Information	
ROW / land acquisition	Company Specific Information	
Materials & equipment	Company Specific Information	
Construction & commissioning	Company Specific Information	

Construction management	Company Specific Information
Overheads & miscellaneous costs	Company Specific Information
Contingency	Company Specific Information
Total component cost	$340,176,779.00
Component cost (in-service year)	$384,878,801.00

Substation Upgrade Component

Component title	Woodside 500kV Substation upgrades
Project description	Company Specific Information
Substation name	Woodside
Substation zone	APS
Substation upgrade scope	Expand the 500kV breaker and a half switchyard by adding (2) 500kV breakers to create (1) bay and (1) line position. Install (2) 500kV capacitor banks.

Transformer Information

None

New equipment description	Add (2) 500kV, 5000A, 63kAIC breakers to create (1) additional line position. Add (2) 500kV, 450 MVAR capacitor banks.
Substation assumptions	Woodside substation is currently underdevelopment and has not begun construction. Proposed expansion will be incorporated into ongoing engineering and design.
Real-estate description	Proposed expansion will not require new real estate.
Construction responsibility	Company Specific Information
Benefits/Comments	Company Specific Information

Component Cost Details - In Current Year $

Engineering & design	Company Specific Information

Permitting / routing / siting	Company Specific Information
ROW / land acquisition	Company Specific Information
Materials & equipment	Company Specific Information
Construction & commissioning	Company Specific Information
Construction management	Company Specific Information
Overheads & miscellaneous costs	Company Specific Information
Contingency	Company Specific Information
Total component cost	$26,146,668.00
Component cost (in-service year)	$29,582,554.00

Substation Upgrade Component

Component title	01-106J (Bruce Mills 138kV Switchyard) substation upgrade
Project description	Company Specific Information
Substation name	01-106J (Bruce Mills 138kV Switchyard)
Substation zone	APS
Substation upgrade scope	Expand the existing 138kV substation by adding (4) 138kV breakers.

Transformer Information

None

New equipment description	Add (4) 138kV, 5000A, 63kAIC breakers.
Substation assumptions	Assumes required equipment upgrades occur in existing footprint or on adjacent incumbent owned property.
Real-estate description	No aerial imagery or parcel data was available at time of submission.
Construction responsibility	Company Specific Information

Benefits/Comments	Company Specific Information
Component Cost Details - In Current Year $	
Engineering & design	Company Specific Information
Permitting / routing / siting	Company Specific Information
ROW / land acquisition	Company Specific Information
Materials & equipment	Company Specific Information
Construction & commissioning	Company Specific Information
Construction management	Company Specific Information
Overheads & miscellaneous costs	Company Specific Information
Contingency	Company Specific Information
Total component cost	$4,556,250.00
Component cost (in-service year)	$4,556,250.00

Substation Upgrade Component

Component title	Fort Martin substation upgrade
Project description	Company Specific Information
Substation name	Fort Martin
Substation zone	APS
Substation upgrade scope	Expand the existing 500kV double breaker double bus (DBDB) switchyard by adding (2) 500kV breakers to create (1) new bay with (1) new line position. Replace (9) existing 500kV breakers.

Transformer Information

None

New equipment description	Add (2) 500kV, 5000A, 63kAIC breakers. Replace (9) existing 500kV breakers with 500kV, 5000A, 63kAIC breakers.

Substation assumptions	Assumes that fence line must be expanded to west to accommodate upgrades.
Real-estate description	Based on publicly available parcel data and imagery, upgrades are expected to fit on transmission-owner owned property.
Construction responsibility	Company Specific Information
Benefits/Comments	Company Specific Information
Component Cost Details - In Current Year $	
Engineering & design	Company Specific Information
Permitting / routing / siting	Company Specific Information
ROW / land acquisition	Company Specific Information
Materials & equipment	Company Specific Information
Construction & commissioning	Company Specific Information
Construction management	Company Specific Information
Overheads & miscellaneous costs	Company Specific Information
Contingency	Company Specific Information
Total component cost	$4,976,484.00
Component cost (in-service year)	$4,976,484.00

Substation Upgrade Component

Component title	Doubs substation upgrade
Project description	Company Specific Information
Substation name	Doubs
Substation zone	APS
Substation upgrade scope	Transmission owner to upgrade terminal equipment.

Transformer Information

None

New equipment description	Transmission owner to upgrade terminal equipment.
Substation assumptions	No substation layout changes expected.
Real-estate description	Based on publicly available parcel data and imagery, upgrades are expected to fit on incumbent owned property.
Construction responsibility	Company Specific Information
Benefits/Comments	Company Specific Information

Component Cost Details - In Current Year $

Engineering & design	Company Specific Information
Permitting / routing / siting	Company Specific Information
ROW / land acquisition	Company Specific Information
Materials & equipment	Company Specific Information
Construction & commissioning	Company Specific Information
Construction management	Company Specific Information
Overheads & miscellaneous costs	Company Specific Information
Contingency	Company Specific Information
Total component cost	$5,854,688.00
Component cost (in-service year)	$5,854,688.00

Substation Upgrade Component

Component title	Brighton terminal equipment upgrades
Project description	Company Specific Information

Substation name	Brighton
Substation zone	PEPCO
Substation upgrade scope	Transmission owner to upgrade terminal equipment.

Transformer Information

None

New equipment description	Transmission owner to upgrade terminal equipment.
Substation assumptions	Assumes required equipment upgrades occur in existing footprint.
Real-estate description	Based on publicly available parcel data and imagery, upgrades are expected to fit fully within existing fenceline on incumbent owned property.
Construction responsibility	Company Specific Information
Benefits/Comments	Company Specific Information
Component Cost Details - In Current Year $	
Engineering & design	Company Specific Information
Permitting / routing / siting	Company Specific Information
ROW / land acquisition	Company Specific Information
Materials & equipment	Company Specific Information
Construction & commissioning	Company Specific Information
Construction management	Company Specific Information
Overheads & miscellaneous costs	Company Specific Information
Contingency	Company Specific Information
Total component cost	$2,927,344.00
Component cost (in-service year)	$2,927,344.00

Greenfield Transmission Line Component

Component title	b.3800.102 NEET/FE Interconnection - Woodside 500kV	
Project description	Company Specific Information	
Point A	b3800.102 NEET/FE Handoff	
Point B	Woodside	
Point C		
	Normal ratings	Emergency ratings
Summer (MVA)	5101.000000	5332.000000
Winter (MVA)	6110.000000	6330.000000
Conductor size and type	3 bundled 1780 KCMIL ACSS/MA3 84/19 Chukar	
Nominal voltage	AC	
Nominal voltage	500	
Line construction type	Overhead	
General route description	The approximately 17-mile route in Frederick County, Virginia travels eastward from the MARL NEET/FE handoff, paralleling the existing Mt. Storm to Doubs 500kV corridor where feasible.	
Terrain description	A detailed inspection of the USGS topographic map reveals relatively consistent, moderately sloped terrain, with elevation within the Project ranging from a high of 1,262 ft above sea level to a low of 590 ft above sea level. The Project is located within 2 Level IV ecoregions (Northern Limestone/Dolomite Valleys and Northern Shale Valleys). According to the NLCD, the Project area largely consists of cultivated cropland, deciduous forest, hay/pasture, shrub/scrub, and developed, open space.	
Right-of-way width by segment	The route will have a 200 ft ROW width. The proposed ROW will be an expansion of existing transmission line corridors for approximately 20% of the route length, the remainder will be greenfield ROW.	
Electrical transmission infrastructure crossings	See Attachment 4 (Google Earth .kmz file) for crossing locations.	

Civil infrastructure/major waterway facility crossing plan	See Attachment 5 (Crossing Plan) and Attachment 4 (Google Earth .kmz file).
Environmental impacts	Environmental constraints were evaluated within the vicinity of the proposed project route and are manageable through avoidance, minimization, and mitigation strategies incorporated at the onset of the routing/siting process. The proposed route crosses numerous aquatic resources, including wetlands, lakes/ponds, and streams but most features could be spanned & avoided with minimal impacts. According to FEMA, multiple 100-year floodplains are crossed by the route. This represent total amount of features crossed by the route & impacts from the Project would be significantly less. No major watercourses are crossed by the Project which would require agency authorizations for navigable water or State Scenic River crossings. No fatal flaws have been identified for the Project. Multiple previously recorded archaeological sites, cemeteries, & architectural resources were recorded within the route. However, no historic districts are crossed by the proposed route. Four federally listed species (2 endangered and 2 proposed) have known ranges along the proposed route. No critical habitat for any federally listed species intersects the route. If suitable habitat is identified or regulations change, agency coordination & species-specific surveys will occur. The project intends to follow suggested tree removal windows & general time of year restrictions to avoid/minimize impacts to species such as federally listed bats and migratory birds, among others. Industry standard construction BMPs & avoidance and minimization measures will be used to prevent unanticipated impacts to natural resources to the maximum extent practicable. There are no environmental concerns with the proposed project that cannot be addressed through agency coordination, mitigation, & an in-depth routing/siting process. No ‘Major Federal Action’ that would invoke NEPA is anticipated to result from the proposed route. See Attachment 8 – Permitting Plan.
Tower characteristics	The proposed structures will mostly be single circuit 500kV lattice self-supporting or guyed-v towers in a horizontal conductor configuration. Delta configuration may be required in some locations. All angle structures will be self-supporting. See structure drawing set included in Attachment 10.
Construction responsibility	Company Specific Information
Benefits/Comments	Company Specific Information
Component Cost Details - In Current Year $	
Engineering & design	Company Specific Information
Permitting / routing / siting	Company Specific Information
ROW / land acquisition	Company Specific Information
Materials & equipment	Company Specific Information
Construction & commissioning	Company Specific Information

Construction management	Company Specific Information
Overheads & miscellaneous costs	Company Specific Information
Contingency	Company Specific Information
Total component cost	$99,094,841.00
Component cost (in-service year)	$112,116,718.00

Greenfield Transmission Line Component

Component title	Sandy Creek - 01-106J 138kV
Project description	Company Specific Information
Point A	Sandy Creek
Point B	01-106J
Point C	

	Normal ratings	Emergency ratings
Summer (MVA)	1025.000000	1056.000000
Winter (MVA)	1102.000000	1129.000000

Conductor size and type	2 bundled 1272 KCMIL ACSS/MA3 54/19 Pheasant
Nominal voltage	AC
Nominal voltage	138
Line construction type	Overhead
General route description	The approximately 1-mile route parallels the Hazelton to Lake Lynn 138 kV.

Terrain description	A detailed inspection of the USGS topographic map reveals relatively consistent, moderately sloped terrain, with elevation within the Project ranging from a high of 1,836 ft above sea level to a low of 1,787 ft above sea level. The Project is located entirely within the Uplands and Valleys of Mixed Land Use Level IV ecoregion. According to the NLCD, the Project area largely consists of cultivated cropland, deciduous forest, and developed, open space.
Right-of-way width by segment	The route will have a 100 ft ROW width. The proposed ROW will be greenfield.
Electrical transmission infrastructure crossings	See Attachment 4 (Google Earth .kmz file) for crossing locations.
Civil infrastructure/major waterway facility crossing plan	See Attachment 5 (Crossing Plan) and Attachment 4 (Google Earth .kmz file).
Environmental impacts	Environmental constraints were evaluated within the vicinity of the proposed project route and are manageable through avoidance, minimization, and mitigation strategies incorporated at the onset of the routing/siting process. The proposed route crosses numerous aquatic resources, including wetlands, lakes/ponds, and streams but most features could be spanned & avoided with minimal impacts. According to FEMA, one 100-year floodplain is crossed by the route. This represents total amount of features crossed by the route & impacts from the Project would be significantly less. No major watercourses are crossed by the Project which would require agency authorizations for navigable water or State Scenic River crossings. No fatal flaws have been identified for the Project. No previously recorded archaeological sites, cemeteries, & architectural resources were recorded within the route. Also, no historic districts are crossed by the proposed route. Three federally listed species (2 endangered and 1 proposed) have known ranges along the proposed route. No critical habitat for any federally listed species intersects the route. If suitable habitat is identified or regulations change, agency coordination & species-specific surveys will occur. The project intends to follow suggested tree removal windows & general time of year restrictions to avoid/minimize impacts to species such as federally listed bats and migratory birds, among others. Industry standard construction BMPs & avoidance and minimization measures will be used to prevent unanticipated impacts to natural resources to the maximum extent practicable. There are no environmental concerns with the proposed project that cannot be addressed through agency coordination, mitigation, & an in-depth routing/siting process. No ‘Major Federal Action’ that would invoke NEPA is anticipated to result from the proposed route. See Attachment 8 – Permitting Plan.
Tower characteristics	The proposed structures will be single circuit 138kV steel monopole in a vertical conductor configuration utilizing braced post insulators or 138kV steel 3-Pole dead ends in horizontal conductor configuration for the transmission crossing. All structures will be self-supporting. See structure drawing set included in Attachment 10.
Construction responsibility	Company Specific Information
Benefits/Comments	Company Specific Information
Component Cost Details - In Current Year $	

Engineering & design	Company Specific Information
Permitting / routing / siting	Company Specific Information
ROW / land acquisition	Company Specific Information
Materials & equipment	Company Specific Information
Construction & commissioning	Company Specific Information
Construction management	Company Specific Information
Overheads & miscellaneous costs	Company Specific Information
Contingency	Company Specific Information
Total component cost	$5,573,578.00
Component cost (in-service year)	$6,305,991.00

Greenfield Transmission Line Component

Component title	01-106J - Brandonville/01-106J - Albringht #2 138kV	
Project description	Company Specific Information	
Point A	Brandonville	
Point B	01-106J	
Point C	Albringht	
	Normal ratings	Emergency ratings
Summer (MVA)	1025.000000	1056.000000
Winter (MVA)	1102.000000	1129.000000
Conductor size and type	2 bundled 1272 KCMIL ACSS/MA3 54/19 Pheasant	
Nominal voltage	AC	

Nominal voltage	138
Line construction type	Overhead
General route description	The approximately 2-mile route parallels the Hazelton to Lake Lynn 138 kV.
Terrain description	A detailed inspection of the USGS topographic map reveals relatively consistent, moderately sloped terrain, with elevation within the Project ranging from a high of 1,939 ft above sea level to a low of 1,521 ft above sea level. The Project is located entirely within the Uplands and Valleys of Mixed Land Use Level IV ecoregion. According to the NLCD, the Project area largely consists of cultivated cropland, deciduous forest, and developed, open space.
Right-of-way width by segment	The route will have a 100 ft ROW width. The proposed ROW will be greenfield.
Electrical transmission infrastructure crossings	See Attachment 4 (Google Earth .kmz file) for crossing locations.
Civil infrastructure/major waterway facility crossing plan	See Attachment 5 (Crossing Plan) and Attachment 4 (Google Earth .kmz file).
Environmental impacts	Environmental constraints were evaluated within the vicinity of the proposed project route and are manageable through avoidance, minimization, and mitigation strategies incorporated at the onset of the routing/siting process. The proposed route crosses one aquatic resource, including wetlands, lakes/ponds, and streams but the identified feature could be spanned & avoided with minimal impacts. According to FEMA, one 100-year floodplain is crossed by the route. This represent total amount of features crossed by the route & impacts from the Project would be significantly less. No major watercourses are crossed by the Project which would require agency authorizations for navigable water or State Scenic River crossings. No fatal flaws have been identified for the Project. No previously recorded archaeological sites, cemeteries, & architectural resources were recorded within the vicinity of the route. Also, no historic districts are crossed by the proposed route. Three federally listed species (2 endangered and 1 proposed) have known ranges along the proposed route. No critical habitat for any federally listed species intersects the route. If suitable habitat is identified or regulations change, agency coordination & species-specific surveys will occur. The project intends to follow suggested tree removal windows & general time of year restrictions to avoid/minimize impacts to species such as federally listed bats and migratory birds, among others. Industry standard construction BMPs & avoidance and minimization measures will be used to prevent unanticipated impacts to natural resources to the maximum extent practicable. There are no environmental concerns with the proposed project that cannot be addressed through agency coordination, mitigation, & an in-depth routing/siting process. No ‘Major Federal Action’ that would invoke NEPA is anticipated to result from the proposed route. See Attachment 8 – Permitting Plan.
Tower characteristics	The proposed structures will be single circuit 138kV steel monopole in a vertical conductor configuration utilizing braced post insulators. All structures will be self-supporting. See structure drawing set included in Attachment 10.

Construction responsibility	Company Specific Information
Benefits/Comments	Company Specific Information
Component Cost Details - In Current Year $	
Engineering & design	Company Specific Information
Permitting / routing / siting	Company Specific Information
ROW / land acquisition	Company Specific Information
Materials & equipment	Company Specific Information
Construction & commissioning	Company Specific Information
Construction management	Company Specific Information
Overheads & miscellaneous costs	Company Specific Information
Contingency	Company Specific Information
Total component cost	$12,272,072.00
Component cost (in-service year)	$13,884,722.00

Congestion Drivers

None

Existing Flowgates

None

New Flowgates

Company Specific Information

Financial Information

Capital spend start date	01/2026
Construction start date	01/2030
Project Duration (In Months)	71

Additional Comments

None