

Central OH STATCOM Installations & Station Upgrades

General Information

Proposing entity name	AEPSCT
Does the entity who is submitting this proposal intend to be the Designated Entity for this proposed project?	Yes
Company proposal ID	AEP_G
PJM Proposal ID	517
Project title	Central OH STATCOM Installations & Station Upgrades
Project description	Install 450 MVAR STATCOMs at Beatty Road 345kV, Hyatt 345kV and Hayden 345kV stations. Replace 765kV Breaker B, wave trap on the Flatlick line and adjust 765/345kV TRF 1 tap settings at Marysville. Replace 765kV Breaker A2 and associated equipment at Dumont. Replace 765kV Breakers K and K2, wave trap towards Marysville and install second 765/345kV Transformer at Sorenson. Reconfigure 765/345kV TRF #2 and move to B 765kV circuit breaker string at Jefferson.
Email	jmperez@aep.com
Project in-service date	05/2030
Tie-line impact	No
Interregional project	No
Is the proposer offering a binding cap on capital costs?	No
Additional benefits	

Project Components

1. Beatty Road 345kV Station
2. Hyatt 345kV Station
3. Hayden 345kV Station

4. Marysville 765kV Station
5. Sorenson 765kV Station
6. Jefferson 765kV Station
7. Dumont 765kV Station

Substation Upgrade Component

Component title	Beatty Road 345kV Station
Project description	Add 450 MVAR STATCOM and associated equipment at Beatty Road 345kV Station
Substation name	Beatty Road 345kV
Substation zone	205
Substation upgrade scope	Add 150 MVAR STATCOM and associated circuit breaker to the South Bus. Add 2X150 MVAR STATCOMs and associated circuit breaker to the North Bus.

Transformer Information

None	
New equipment description	3 STATCOMs: 150 MVAR 3 345kV Circuit Breakers: 5000A, 63kA
Substation assumptions	Assumes existing ground grid, AC cabinets, cable trench and control house are adequate and have enough space.
Real-estate description	There are no plans to expand the existing fence. The STATCOMs will be constructed in separate fenced yards, all constructed in AEP owned property.
Construction responsibility	AEP
Benefits/Comments	
Component Cost Details - In Current Year \$	
Engineering & design	Detailed cost breakdown
Permitting / routing / siting	Detailed cost breakdown
ROW / land acquisition	Detailed cost breakdown

Materials & equipment	Detailed cost breakdown
Construction & commissioning	Detailed cost breakdown
Construction management	Detailed cost breakdown
Overheads & miscellaneous costs	Detailed cost breakdown
Contingency	Detailed cost breakdown
Total component cost	\$197,481,188.60
Component cost (in-service year)	\$197,481,188.60
Substation Upgrade Component	
Component title	Hyatt 345kV Station
Project description	Install 450 MVAR STATCOM at Hyatt 345kV Station.
Substation name	Hyatt 345kV
Substation zone	205
Substation upgrade scope	Install 1X 150 MVAR STATCOM and associated circuit breaker on Bus #1 Install 2 X 150 MVAR STATCOMs and associated circuit breaker on Bus #2 Relocate Hayden 345kV Line to "J" 345kV CB String
Transformer Information	
None	
New equipment description	3 X 150 MVAR STATCOMs 3- 345kV 5000A, 63kA Circuit Breakers for STATCOMs 1-345kV 5000A, 63kA Circuit Breaker for Hayden Line
Substation assumptions	Assumes existing cable trench, AC panels and control house will be used. Assumes Hayden 345kV line can be relocated without any unforeseen issues. Assumes all improvements will be done within AEP property.
Real-estate description	The STATCOMs will not drive a need to upgrade the existing station fence as they will be their own separate fenced in yards within AEP property.
Construction responsibility	AEP

Benefits/Comments

Component Cost Details - In Current Year \$

Engineering & design	Detailed cost breakdown
Permitting / routing / siting	Detailed cost breakdown
ROW / land acquisition	Detailed cost breakdown
Materials & equipment	Detailed cost breakdown
Construction & commissioning	Detailed cost breakdown
Construction management	Detailed cost breakdown
Overheads & miscellaneous costs	Detailed cost breakdown
Contingency	Detailed cost breakdown
Total component cost	\$194,743,094.52
Component cost (in-service year)	\$194,743,094.52

Substation Upgrade Component

Component title	Hayden 345kV Station
Project description	Install 450 MVAR STATCOM at Hayden 345kV Station.
Substation name	Hayden 345kV
Substation zone	205
Substation upgrade scope	Install 300 MVAR STATCOM on Bus #1 Install 150 MVAR STATCOM on Bus #2 Re-terminate Roberts 345kV line to new position off Bus #2

Transformer Information

None	
New equipment description	3 X 150 MVAR STATCOMs 3- 345kV, 5000A, 63kA Circuit Breakers for STATCOMs 1- 345kV, 5000A 63 kA Circuit Breaker for the Roberts line (after re-termination)

Substation assumptions	Assumes existing cable trench, AC Yard panels and control house has adequate space. Assumes station fence will not be impacted and that Roberts line can be re-terminated in new CB position.
Real-estate description	All work expected to be done within AEP property. The Station fence is not expected to be impacted as the STATCOMs will be installed in their own fenced separate yards.
Construction responsibility	AEP
Benefits/Comments	
Component Cost Details - In Current Year \$	
Engineering & design	Detailed cost breakdown
Permitting / routing / siting	Detailed cost breakdown
ROW / land acquisition	Detailed cost breakdown
Materials & equipment	Detailed cost breakdown
Construction & commissioning	Detailed cost breakdown
Construction management	Detailed cost breakdown
Overheads & miscellaneous costs	Detailed cost breakdown
Contingency	Detailed cost breakdown
Total component cost	\$197,515,770.58
Component cost (in-service year)	\$197,515,770.58
Substation Upgrade Component	
Component title	Marysville 765kV Station
Project description	Replace 765kV Breaker B and wavetrap towards Flatlick. Adjust transformer tap settings of the existing 765/345kV TRF#1 at Marysville
Substation name	Marysville 765kV Station
Substation zone	205

Substation upgrade scope	Adjust transformer tap settings from 0.975 to 1.0 pu. Replace CB B with 5000A Breaker. Replace wave trap towards Flatlick.
Transformer Information	
None	
New equipment description	1-5000A,63kA Circuit Breaker 3- 765kV, 5000A single phase Wave Traps
Substation assumptions	Assumes no operational issues are created due to the tap change. For the physical work, the following assumptions were made. Additional station property is not needed. Wetland mitigation is not needed. Any and all necessary permitting will be available. All necessary outages will be available. All excavation will be hydrovac. Existing breaker foundations do not fit the new breakers. Maliszewski line traps are being addressed on a separate, previously approved baseline project.
Real-estate description	No expansion or land is expected to be needed for this component.
Construction responsibility	AEP
Benefits/Comments	Addresses 2032 thermals identified by PJM in their 2032 Summer GD analysis.
Component Cost Details - In Current Year \$	
Engineering & design	Detailed cost breakdown
Permitting / routing / siting	Detailed cost breakdown
ROW / land acquisition	Detailed cost breakdown
Materials & equipment	Detailed cost breakdown
Construction & commissioning	Detailed cost breakdown
Construction management	Detailed cost breakdown
Overheads & miscellaneous costs	Detailed cost breakdown
Contingency	Detailed cost breakdown
Total component cost	\$5,735,394.20
Component cost (in-service year)	\$5,735,394.20

Substation Upgrade Component

Component title	Sorenson 765kV Station		
Project description	Replace 765kV circuit breakers K and K2 with 5000A breakers. Replace wavetrapp towards Marysville with 5000A. Add second 765/345kV Transformer.		
Substation name	Sorenson 765kV Station		
Substation zone	205		
Substation upgrade scope	Replace 765kV circuit breakers K and K2 with 5000A breakers. Replace wavetrapp towards Marysville with 5000A. Add second 765/345kV Transformer.		
Transformer Information			
	Name	Capacity (MVA)	
Transformer	Sorenson 765/345kV TRF#5	2250	
	High Side	Low Side	Tertiary
Voltage (kV)	765	345	34.5
New equipment description	1-765/345kV, 2250 MVA Transformer 2-765kV, 5000A 50kA circuit breakers		
Substation assumptions	Assumes fence will need to be expanded. Assumes some 138kV lines will need relocated. Assumes components already approved as part of MISO Tranche 2.1 will be in place at Sorenson.		
Real-estate description	All work will be done within existing AEP property.		
Construction responsibility	AEP		
Benefits/Comments	Addresses 2032 thermals identified by PJM in their 2032 Summer GD analysis.		
Component Cost Details - In Current Year \$			
Engineering & design	Detailed cost breakdown		
Permitting / routing / siting	Detailed cost breakdown		
ROW / land acquisition	Detailed cost breakdown		

Materials & equipment	Detailed cost breakdown
Construction & commissioning	Detailed cost breakdown
Construction management	Detailed cost breakdown
Overheads & miscellaneous costs	Detailed cost breakdown
Contingency	Detailed cost breakdown
Total component cost	\$121,784,366.88
Component cost (in-service year)	\$121,784,366.88
Substation Upgrade Component	
Component title	Jefferson 765kV Station
Project description	Reconfigure 765kV Station at Jefferson by moving 765/345kV TRF #2 from its current electrical position to a breaker and a half position in the B string.
Substation name	Jefferson 765kV
Substation zone	205
Substation upgrade scope	Reconfigure 765kV Station at Jefferson by moving 765/345kV TRF #2 from its current electrical position to a breaker and a half position in the B string.
Transformer Information	
None	
New equipment description	1-765kV, 5000A, 50kA breaker
Substation assumptions	All work can be completed in the existing foot print. Control house space is adequate.
Real-estate description	No fence or property expansion needed for this component.
Construction responsibility	AEP
Benefits/Comments	Addresses 2032 thermals identified by PJM in their 2032 Summer GD analysis.

Component Cost Details - In Current Year \$

Engineering & design	Detailed cost breakdown
Permitting / routing / siting	Detailed cost breakdown
ROW / land acquisition	Detailed cost breakdown
Materials & equipment	Detailed cost breakdown
Construction & commissioning	Detailed cost breakdown
Construction management	Detailed cost breakdown
Overheads & miscellaneous costs	Detailed cost breakdown
Contingency	Detailed cost breakdown
Total component cost	\$12,779,366.84
Component cost (in-service year)	\$12,779,366.84

Substation Upgrade Component

Component title	Dumont 765kV Station
Project description	Replace breaker A2 with 5000A breaker. Replace switch A2S2 with 5000A switch. Update/upgrade relaying to change CTTL to >5400MVA for Sorenson line.
Substation name	Dumont 765kV
Substation zone	205
Substation upgrade scope	Replace breaker A2 with 5000A breaker. Replace switch A2S2 with 5000A switch. Update/upgrade relaying to change CTTL to >5400MVA for Sorenson line.

Transformer Information

None	
New equipment description	1-765kV, 5000A, 50kA breaker 5000A Switch
Substation assumptions	All work can be completed within existing fence and property. Adequate space in the control house.

Real-estate description	Fence/Property does not need expanded for this component.
Construction responsibility	AEP
Benefits/Comments	Addresses 2032 thermals identified by PJM in their 2032 Summer GD analysis.
Component Cost Details - In Current Year \$	
Engineering & design	Detailed cost breakdown
Permitting / routing / siting	Detailed cost breakdown
ROW / land acquisition	Detailed cost breakdown
Materials & equipment	Detailed cost breakdown
Construction & commissioning	Detailed cost breakdown
Construction management	Detailed cost breakdown
Overheads & miscellaneous costs	Detailed cost breakdown
Contingency	Detailed cost breakdown
Total component cost	\$6,567,141.32
Component cost (in-service year)	\$6,567,141.32

Congestion Drivers

None

Existing Flowgates

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-N11-WVD247106	247106	05VARNER	247106	05VARNER	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VD46	245840	05S SIDE	245840	05S SIDE	N/A	34.5	205	FERC 715 Voltage Drop	Excluded
2025W1-N11-SVD940610	940610	AE2-048 TAP	940610	AE2-048 TAP	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247083	247083	05NPHISS	247083	05NPHISS	N/A	138	205	N-1-1 Voltage Drop	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-AEP-VD45	245816	05FT.SHAW SS	245816	05FT.SHAW SS	N/A	34.5	205	FERC 715 Voltage Drop	Excluded
2025W1-N11-WVD247132	247132	05ELLISN	247132	05ELLISN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VD44	245816	05FT.SHAW SS	245816	05FT.SHAW SS	N/A	34.5	205	FERC 715 Voltage Drop	Excluded
2025W1-N11-WVD247108	247108	05SOWERS	247108	05SOWERS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VD43	245594	05SHAWNEE	245594	05SHAWNEE	N/A	69	205	FERC 715 Voltage Drop	Excluded
2025W1-N11-WVD247001	247001	05YELLOW CK2	247001	05YELLOW CK2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VD42	245594	05SHAWNEE	245594	05SHAWNEE	N/A	69	205	FERC 715 Voltage Drop	Excluded
2025W1-N11-WVD247000	247000	05YELLOW CK1	247000	05YELLOW CK1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247067	247067	05GOODHP	247067	05GOODHP	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD960800	960800	AF2-371 TAP	960800	AF2-371 TAP	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247019	247019	05NEVILLE SS	247019	05NEVILLE SS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VD51	245843	05SHAWNE R	245843	05SHAWNE R	N/A	69	205	FERC 715 Voltage Drop	Excluded
2025W1-AEP-VD50	245843	05SHAWNE R	245843	05SHAWNE R	N/A	69	205	FERC 715 Voltage Drop	Excluded
2025W1-AEP-VD49	245842	05SHAWNE R	245842	05SHAWNE R	N/A	34.5	205	FERC 715 Voltage Drop	Excluded
2025W1-AEP-VD48	245842	05SHAWNE R	245842	05SHAWNE R	N/A	34.5	205	FERC 715 Voltage Drop	Excluded
2025W1-AEP-VD47	245840	05S SIDE	245840	05S SIDE	N/A	34.5	205	FERC 715 Voltage Drop	Excluded
2025W1-N11-WVD247156	247156	05STEAMT	247156	05STEAMT	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247148	247148	05SBLMSS	247148	05SBLMSS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD290887	290887	05ROCKHOPPER	290887	05ROCKHOPPER	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247370	247370	05MUSKINGUM1	247370	05MUSKINGUM1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247336	247336	05APPLE V SS	247336	05APPLE V SS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VD56	246643	05WESTRV2B	246643	05WESTRV2B	N/A	69	205	FERC 715 Voltage Drop	Excluded
2025W1-N11-WVD247433	247433	05CHARGER	247433	05CHARGER	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VD55	245849	05STERLING1	245849	05STERLING1	N/A	34.5	205	FERC 715 Voltage Drop	Excluded
2025W1-N11-WVD247373	247373	05MUSKINGUM2	247373	05MUSKINGUM2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VD54	245849	05STERLING1	245849	05STERLING1	N/A	34.5	205	FERC 715 Voltage Drop	Excluded
2025W1-N11-WVD247303	247303	05WAKATOMIKA	247303	05WAKATOMIKA	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VD53	245844	05SHAWNER2EQ	245844	05SHAWNER2EQ	N/A	1	205	FERC 715 Voltage Drop	Excluded

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-N11-SVD290984	290984	05BOKESCRK	290984	05BOKESCRK	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247199	247199	05AMLIN	247199	05AMLIN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VD52	245844	05SHAWNER2EQ	245844	05SHAWNER2EQ	N/A	1	205	FERC 715 Voltage Drop	Excluded
2025W1-N11-SVD290978	290978	05PATTONVLSS	290978	05PATTONVLSS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247319	247319	05WOLFCK	247319	05WOLFCK	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD290925	290925	05PARSONS2	290925	05PARSONS2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247316	247316	05SALERNO	247316	05SALERNO	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247172	247172	05EBERSO	247172	05EBERSO	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247434	247434	05MUSKNG_DSZ	247434	05MUSKNG_DSZ	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM244258	244258	05PARSONS1	244258	05PARSONS1	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD246752	246752	05VASSEL	246752	05VASSEL	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM244283	244283	05MINERAL SS	244283	05MINERAL SS	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD246751	246751	05VASSEL	246751	05VASSEL	N/A	765	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM244338	244338	05POTH	244338	05POTH	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD246761	246761	05THREEC	246761	05THREEC	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD246753	246753	05VASSEL	246753	05VASSEL	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM244023	244023	05COLE	244023	05COLE	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM244198	244198	05LEMASTER	244198	05LEMASTER	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM244230	244230	05SUNDAY SS	244230	05SUNDAY SS	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD246716	246716	05PHILLIPI	246716	05PHILLIPI	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM244232	244232	05SHANNONRSS	244232	05SHANNONRSS	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD246526	246526	05GUERNSEY	246526	05GUERNSEY	N/A	765	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243915	243915	05BERRYWOOD	243915	05BERRYWOOD	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM244020	244020	05MINK	244020	05MINK	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM244022	244022	05COLE	244022	05COLE	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD246769	246769	05MINERR	246769	05MINERR	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD246765	246765	05OUTERB	246765	05OUTERB	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD246854	246854	05AUBURN2	246854	05AUBURN2	N/A	138	205	N-1-1 Voltage Drop	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-N11-WVD246851	246851	05CULBERTSON	246851	05CULBERTSON	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD246929	246929	05MADDOX	246929	05MADDOX	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD246907	246907	05W.CAMPUS	246907	05W.CAMPUS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD246950	246950	05TIMBER SW	246950	05TIMBER SW	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD246942	246942	05WARERD	246942	05WARERD	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD246888	246888	05BIERSR	246888	05BIERSR	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD246890	246890	05HOPETN	246890	05HOPETN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD246889	246889	05BIERSR	246889	05BIERSR	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD246993	246993	05PURDUE	246993	05PURDUE	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD246982	246982	05HUNT JT_BP	246982	05HUNT JT_BP	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD246999	246999	05SORENS	246999	05SORENS	N/A	765	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243523	243523	05HCREAN	243523	05HCREAN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243583	243583	05TRENT	243583	05TRENT	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WNC2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N-1-1 Non Converged	Included
2025W1-N11-SVD243522	243522	05HARRISON	243522	05HARRISON	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243584	243584	05VINE	243584	05VINE	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WNC1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N-1-1 Non Converged	Included
2025W1-N11-SVD243519	243519	05HALLRD	243519	05HALLRD	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243586	243586	05WHITER	243586	05WHITER	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WNC4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N-1-1 Non Converged	Included
2025W1-N11-SVD243518	243518	05GROVES1	243518	05GROVES1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243588	243588	05WILSON	243588	05WILSON	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WNC3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N-1-1 Non Converged	Included
2025W1-N11-SVD243527	243527	05HYATTX	243527	05HYATTX	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243579	243579	05STROUD	243579	05STROUD	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243526	243526	05HYATT	243526	05HYATT	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243580	243580	05SULVNT	243580	05SULVNT	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243525	243525	05HUNTLEY1	243525	05HUNTLEY1	N/A	138	205	N-1-1 Voltage Drop	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-N11-WVM243531	243581	05TAYLOR	243581	05TAYLOR	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD960840	960840	AF2-375 TAP	960840	AF2-375 TAP	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243524	243524	05HESS NORTH	243524	05HESS NORTH	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243532	243582	05TRABUE1	243582	05TRABUE1	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD960800	960800	AF2-371 TAP	960800	AF2-371 TAP	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243529	243529	05KENNY	243529	05KENNY	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243528	243528	05KARL ROAD	243528	05KARL ROAD	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243572	243577	05STELZR	243577	05STELZR	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM243590	243590	05WESTAR	243590	05WESTAR	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WNC5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N-1-1 Non Converged	Included
2025W1-N11-SVD243507	243507	05FIFTH	243507	05FIFTH	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243856	243856	05JUG ST 1-6	243856	05JUG ST 1-6	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243506	243506	05ELLIOTT 1	243506	05ELLIOTT 1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243876	243876	05ST.CXX	243876	05ST.CXX	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243502	243502	05E.BROAD	243502	05E.BROAD	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243902	243902	05HARDIN SW	243902	05HARDIN SW	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM243903	243903	05GUNN RD SW	243903	05GUNN RD SW	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243511	243511	05GAY	243511	05GAY	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243593	243593	05ZUBER	243593	05ZUBER	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243510	243510	05GAHANN	243510	05GAHANN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243765	243765	05FORD LIMA1	243765	05FORD LIMA1	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243509	243509	05FISHRD	243509	05FISHRD	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243854	243854	05REAVAR	243854	05REAVAR	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243508	243508	05ITALNV	243508	05ITALNV	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243855	243855	05JUG ST	243855	05JUG ST	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243516	243516	05GREIF	243516	05GREIF	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243513	243513	05GENOA	243513	05GENOA	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243591	243591	05SPRINGRDSS	243591	05SPRINGRDSS	N/A	138	205	N-1-1 Voltage Magnitude	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-N11-SVD24351	2243512	05DIAMONDISS	243512	05DIAMONDISS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM24359	243592	05YEARLG	243592	05YEARLG	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD24355	1243551	05OSU	243551	05OSU	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM24354	4843548	05MOUND ST	243548	05MOUND ST	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD29088	7290887	05ROCKHOPPER	290887	05ROCKHOPPER	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD24355	0243550	05OBETZ	243550	05OBETZ	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM24354	943549	05MULBRY	243549	05MULBRY	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM96080	0960800	AF2-371 TAP	960800	AF2-371 TAP	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD29088	6290886	05ANGUIN 3-4	290886	05ANGUIN 3-4	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD24354	9243549	05MULBRY	243549	05MULBRY	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM24355	0243550	05OBETZ	243550	05OBETZ	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD29094	6290946	05CHATFLD_BP	290946	05CHATFLD_BP	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD24354	8243548	05MOUND ST	243548	05MOUND ST	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM24355	243551	05OSU	243551	05OSU	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD29092	5290925	05PARSONS2	290925	05PARSONS2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD24356	2243562	05ROSS	243562	05ROSS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD24356	0243560	05ROBERT	243560	05ROBERT	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM24354	243542	05MIFFLIN	243542	05MIFFLIN	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD24355	3243553	05POLARS	243553	05POLARS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM24354	4243545	05MILTON SS	243545	05MILTON SS	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD24355	2243552	05PICKR8	243552	05PICKR8	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM24354	243547	05MORSE	243547	05MORSE	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM94061	0940610	AE2-048 TAP	940610	AE2-048 TAP	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD24354	7243547	05MORSE	243547	05MORSE	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM24355	243552	05PICKR8	243552	05PICKR8	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD29098	4290984	05BOKESCRK	290984	05BOKESCRK	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD24354	5243545	05MILTON SS	243545	05MILTON SS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM24355	3243553	05POLARS	243553	05POLARS	N/A	138	205	N-1-1 Voltage Magnitude	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-N11-WVD290978	290978	05PATTONVLSS	290978	05PATTONVLSS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243560	243560	05ROBERT	243560	05ROBERT	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243536	243536	05LS-II	243536	05LS-II	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243569	243569	05SCIPPO	243569	05SCIPPO	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243535	243535	05LINWRT	243535	05LINWRT	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243570	243570	05CLAYBN	243570	05CLAYBN	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243534	243534	05LICK	243534	05LICK	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243572	243572	05SHANON	243572	05SHANON	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD940610	940610	AE2-048 TAP	940610	AE2-048 TAP	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243532	243532	05KIRK	243532	05KIRK	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243574	243574	05SUNBURY SS	243574	05SUNBURY SS	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD927010	927010	AC1-188 TAP	927010	AC1-188 TAP	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243540	243540	05MCCOMB	243540	05MCCOMB	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243562	243562	05ROSS	243562	05ROSS	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243539	243539	05MARION RD	243539	05MARION RD	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243563	243563	05ROZELL	243563	05ROZELL	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243538	243538	05MALISX	243538	05MALISX	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243566	243566	05SAWMILL	243566	05SAWMILL	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243537	243537	05MALIS	243537	05MALIS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243568	243568	05SCIOTO	243568	05SCIOTO	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243542	243542	05MIFFLIN	243542	05MIFFLIN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243531	243531	05KIMBRY	243531	05KIMBRY	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243575	243575	05ST.CLR	243575	05ST.CLR	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD944230	944230	AF1-091 TAP	944230	AF1-091 TAP	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243576	243576	05ST.CLX	243576	05ST.CLX	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD944530	944530	AF1-118 TAP	944530	AF1-118 TAP	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243512	243512	05DIAMONDISS	243512	05DIAMONDISS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243511	243511	05GAY	243511	05GAY	N/A	138	205	N-1-1 Voltage Drop	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-N11-WVD24351	243516	05GREIF	243516	05GREIF	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24351	243513	05GENOA	243513	05GENOA	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24350	243508	05ITALNV	243508	05ITALNV	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24350	243507	05FIFTH	243507	05FIFTH	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24351	243510	05GAHANN	243510	05GAHANN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24350	243509	05FISHRD	243509	05FISHRD	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24350	243506	05ELLIOTT 1	243506	05ELLIOTT 1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24350	243502	05E.BROAD	243502	05E.BROAD	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24352	243528	05KARL ROAD	243528	05KARL ROAD	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24352	243527	05HYATTX	243527	05HYATTX	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24352	243529	05KENNY	243529	05KENNY	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24352	243524	05HESS NORTH	243524	05HESS NORTH	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24352	243523	05HCREAN	243523	05HCREAN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24352	243526	05HYATT	243526	05HYATT	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24352	243525	05HUNTLEY1	243525	05HUNTLEY1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24351	243518	05GROVES1	243518	05GROVES1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24352	243522	05HARRISON	243522	05HARRISON	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24351	243519	05HALLRD	243519	05HALLRD	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24348	243487	05CHK TAP Z	243487	05CHK TAP Z	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24348	243486	05CLINTX	243486	05CLINTX	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VD111	246643	05WESTRV2B	246643	05WESTRV2B	N/A	69	205	FERC 715 Voltage Drop	Excluded
2025W1-AEP-VD110	246643	05WESTRV2B	246643	05WESTRV2B	N/A	69	205	FERC 715 Voltage Drop	Excluded
2025W1-AEP-VD109	246643	05WESTRV2B	246643	05WESTRV2B	N/A	69	205	FERC 715 Voltage Drop	Excluded
2025W1-N11-WVD24348	243483	05CRCLVS	243483	05CRCLVS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24348	243482	05CENTBG	243482	05CENTBG	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24348	243485	05CLINTO	243485	05CLINTO	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24348	243484	05CITYCO	243484	05CITYCO	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24347	243479	05BROOKS	243479	05BROOKS	N/A	138	205	N-1-1 Voltage Drop	Included

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2025W1-N11-WVD243478	243478	05BRKSHR	243478	05BRKSHR	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243481	243481	05CANAL	243481	05CANAL	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243480	243480	05BUCKYST_BP	243480	05BUCKYST_BP	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243501	243501	05E.BEAV	243501	05E.BEAV	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243497	243497	05DELANO	243497	05DELANO	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243495	243495	05DAVIDS	243495	05DAVIDS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243499	243499	05DUBLIN CS	243499	05DUBLIN CS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243498	243498	05DLAWAR2	243498	05DLAWAR2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243492	243492	05CORWIN	243492	05CORWIN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243491	243491	05CORRID	243491	05CORRID	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243494	243494	05CTYPLN	243494	05CTYPLN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243493	243493	05CRVERD	243493	05CRVERD	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243488	243488	05CONESVILLE	243488	05CONESVILLE	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VD112	246643	05WESTRV2B	246643	05WESTRV2B	N/A	69	205	FERC 715 Voltage Drop	Excluded
2025W1-N11-WVD243460	243460	05ROBRT2	243460	05ROBRT2	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247960	247960	05SHAWTOWNSS	247960	05SHAWTOWNSS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243459	243459	05KIRK	243459	05KIRK	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247957	247957	05RADER ROAD	247957	05RADER ROAD	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243464	243464	05ADAMS	243464	05ADAMS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243461	243461	05ROBRT1	243461	05ROBRT1	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243456	243456	05CORRID	243456	05CORRID	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247930	247930	05FIDLSTX SS	247930	05FIDLSTX SS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243455	243455	05CONES	243455	05CONES	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247918	247918	05HENDERSON	247918	05HENDERSON	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243458	243458	05HYATT	243458	05HYATT	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247945	247945	05ELLIOTT 2	247945	05ELLIOTT 2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243457	243457	05HAYDEN	243457	05HAYDEN	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247931	247931	05VINE_GS_X	247931	05VINE_GS_X	N/A	138	205	N-1-1 Voltage Drop	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-N11-WVD247873	247873	05BRITTON	247873	05BRITTON	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247864	247864	05LOGTOWN	247864	05LOGTOWN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243454	243454	05BIXBY	243454	05BIXBY	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247896	247896	05BOLTON	247896	05BOLTON	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243453	243453	05BEATTY	243453	05BEATTY	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247893	247893	05FLAG CITY	247893	05FLAG CITY	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243475	243475	05BLEND0	243475	05BLEND0	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243474	243474	05BLACKL	243474	05BLACKL	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243476	243476	05BOLINSMLSS	243476	05BOLINSMLSS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243471	243471	05BETHEL	243471	05BETHEL	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243469	243469	05BEATTY	243469	05BEATTY	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243473	243473	05BIXBY	243473	05BIXBY	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243472	243472	05BEXLEY	243472	05BEXLEY	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243465	243465	05ADDISO	243465	05ADDISO	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247980	247980	05RUSTIC SS	247980	05RUSTIC SS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247979	247979	05NORFLD SS	247979	05NORFLD SS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243467	243467	05E.BROAD3	243467	05E.BROAD3	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247982	247982	05E.NEWCONSS	247982	05E.NEWCONSS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243466	243466	05ASTOR	243466	05ASTOR	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247981	247981	05CHANDLR SS	247981	05CHANDLR SS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247972	247972	05CONDIT SS	247972	05CONDIT SS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243363	243363	05REED	243363	05REED	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247566	247566	05LAMPING_BP	247566	05LAMPING_BP	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VD68	247769	05SHAWNE RSS	247769	05SHAWNE RSS	N/A	34.5	205	FERC 715 Voltage Drop	Excluded
2025W1-N11-WVD243361	243361	05RABER	243361	05RABER	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247562	247562	05LOCKBOURNE	247562	05LOCKBOURNE	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VD67	247769	05SHAWNE RSS	247769	05SHAWNE RSS	N/A	34.5	205	FERC 715 Voltage Drop	Excluded
2025W1-N11-WVD243367	243367	05ROCKCR	243367	05ROCKCR	N/A	138	205	N-1-1 Voltage Drop	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-N11-WVD247664	247664	05BLACK DIAM	247664	05BLACK DIAM	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243366	243366	05ROB PK12	243366	05ROB PK12	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247623	247623	05GROVES2	247623	05GROVES2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243334	243334	05MAGLEY	243334	05MAGLEY	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247501	247501	05MUSK_E_XFL	247501	05MUSK_E_XFL	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243330	243330	05LINCOLN1	243330	05LINCOLN1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247500	247500	05MUSK_D_XFL	247500	05MUSK_D_XFL	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243342	243342	05MILAN	243342	05MILAN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247513	247513	05BOUTWELL	247513	05BOUTWELL	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243338	243338	05MCKINLEY3	243338	05MCKINLEY3	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247509	247509	05HAYDEN	247509	05HAYDEN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247497	247497	05CLOUSE	247497	05CLOUSE	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247435	247435	05MUSKNG_ESZ	247435	05MUSKNG_ESZ	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VD71	290064	05LIMA PMPSS	290064	05LIMA PMPSS	N/A	34.5	205	FERC 715 Voltage Drop	Excluded
2025W1-AEP-VD70	290034	05MARA_LIMA	290034	05MARA_LIMA	N/A	34.5	205	FERC 715 Voltage Drop	Excluded
2025W1-AEP-VD69	290034	05MARA_LIMA	290034	05MARA_LIMA	N/A	34.5	205	FERC 715 Voltage Drop	Excluded
2025W1-N11-WVD243375	243375	05SKINNRLKSS	243375	05SKINNRLKSS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243372	243372	05SATURN	243372	05SATURN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243387	243387	05VANBUR	243387	05VANBUR	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247831	247831	05DALMATN SS	247831	05DALMATN SS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VD79	290894	05W.LIMA	290894	05W.LIMA	N/A	34.5	205	FERC 715 Voltage Drop	Excluded
2025W1-N11-WVD243384	243384	05TRIER	243384	05TRIER	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247829	247829	05AVIATION	247829	05AVIATION	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VD78	290297	05AIRFOIL	290297	05AIRFOIL	N/A	34.5	205	FERC 715 Voltage Drop	Excluded
2025W1-N11-WVD243390	243390	05WAYNED	243390	05WAYNED	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VD77	290297	05AIRFOIL	290297	05AIRFOIL	N/A	34.5	205	FERC 715 Voltage Drop	Excluded
2025W1-N11-WVD243389	243389	05WALLEN	243389	05WALLEN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247862	247862	05TUSCANY	247862	05TUSCANY	N/A	138	205	N-1-1 Voltage Drop	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-AEP-VD76	290066	05MAR_LIMA P	290066	05MAR_LIMA P	N/A	34.5	205	FERC 715 Voltage Drop	Excluded
2025W1-N11-WVD243379	243379	05STATES	243379	05STATES	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247790	247790	05DUNTONLAKE	247790	05DUNTONLAKE	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VD75	290066	05MAR_LIMA P	290066	05MAR_LIMA P	N/A	34.5	205	FERC 715 Voltage Drop	Excluded
2025W1-N11-WVD243378	243378	05SPY RUN2	243378	05SPY RUN2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247767	247767	05HAZELTON	247767	05HAZELTON	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VD74	290065	05AIRFOIL SS	290065	05AIRFOIL SS	N/A	34.5	205	FERC 715 Voltage Drop	Excluded
2025W1-N11-WVD243383	243383	05TILLMA	243383	05TILLMA	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247799	247799	05S.OLIVE SS	247799	05S.OLIVE SS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VD73	290065	05AIRFOIL SS	290065	05AIRFOIL SS	N/A	34.5	205	FERC 715 Voltage Drop	Excluded
2025W1-N11-WVD243381	243381	05SUMMIT	243381	05SUMMIT	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247791	247791	05ELK	247791	05ELK	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VD72	290064	05LIMA PMPSS	290064	05LIMA PMPSS	N/A	34.5	205	FERC 715 Voltage Drop	Excluded
2025W1-N11-WVD247679	247679	05LEE	247679	05LEE	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243377	243377	05SORENS	243377	05SORENS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247741	247741	05HYATT SW2	247741	05HYATT SW2	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD247728	247728	05VASSEL_XFL	247728	05VASSEL_XFL	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VD80	290894	05W.LIMA	290894	05W.LIMA	N/A	34.5	205	FERC 715 Voltage Drop	Excluded
2025W1-N11-WVD243391	243391	05WAYNET	243391	05WAYNET	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243070	243070	05OHIOCT	243070	05OHIOCT	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243086	243086	05S HICK	243086	05S HICK	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243080	243080	05RILEYC	243080	05RILEYC	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243082	243082	05ROCKHILL1	243082	05ROCKHILL1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243083	243083	05CAMPSS	243083	05CAMPSS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243084	243084	05RUTLAND1	243084	05RUTLAND1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243074	243074	05PHILO1	243074	05PHILO1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243075	243075	05POWELS	243075	05POWELS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243076	243076	05CONESPREPZ	243076	05CONESPREPZ	N/A	138	205	N-1-1 Voltage Drop	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-N11-WVD243079	243079	05REFORM	243079	05REFORM	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243089	243089	05SBALTM	243089	05SBALTM	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243091	243091	05S.CALDWELL	243091	05S.CALDWELL	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243103	243103	05SKENTO	243103	05SKENTO	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243104	243104	05SLANCS	243104	05SLANCS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243107	243107	05SPENCR	243107	05SPENCR	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243108	243108	05STRLN	243108	05STRLN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243094	243094	05SCOSHC	243094	05SCOSHC	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243096	243096	05SCUMBL	243096	05SCUMBL	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243098	243098	05SHARPR	243098	05SHARPR	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243099	243099	05SHAWNRR	243099	05SHAWNRR	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243048	243048	05N WALD	243048	05N WALD	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243050	243050	05NBELVL	243050	05NBELVL	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243051	243051	05NDELPH	243051	05NDELPH	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243034	243034	05MARQUI	243034	05MARQUI	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243038	243038	05MEIG1Z	243038	05MEIG1Z	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243039	243039	05MELMOR	243039	05MELMOR	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243044	243044	05MILLWO	243044	05MILLWO	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243030	243030	05LIMAOR	243030	05LIMAOR	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243031	243031	05LYNN Z	243031	05LYNN Z	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243033	243033	05THORNWD SS	243033	05THORNWD SS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243067	243067	05NWOODC	243067	05NWOODC	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243068	243068	05NZANEV	243068	05NZANEV	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243061	243061	05NLEXTN	243061	05NLEXTN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243062	243062	05NMUSKG	243062	05NMUSKG	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243063	243063	05N.NEWARK1	243063	05N.NEWARK1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243066	243066	05NW LIM	243066	05NW LIM	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243056	243056	05NEWCOM	243056	05NEWCOM	N/A	138	205	N-1-1 Voltage Drop	Included

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2025W1-N11-WVD243057	243057	05NEW LIBR1	243057	05NEW LIBR1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243058	243058	05NEWARK CTR	243058	05NEWARK CTR	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243059	243059	05N.FINDLAY1	243059	05N.FINDLAY1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243020	243020	05HILLVI	243020	05HILLVI	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243023	243023	05HOCKNG	243023	05HOCKNG	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243024	243024	05HOWARD1	243024	05HOWARD1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243025	243025	05JUNCTN	243025	05JUNCTN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243014	243014	05GRABILL	243014	05GRABILL	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243016	243016	05HANTHR	243016	05HANTHR	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243017	243017	05HAVILAND1	243017	05HAVILAND1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243018	243018	05HEATH	243018	05HEATH	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243007	243007	05FRAZEY	243007	05FRAZEY	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243011	243011	05FULTON	243011	05FULTON	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VD24	243978	05STERLING2	243978	05STERLING2	N/A	34.5	205	FERC 715 Voltage Drop	Excluded
2025W1-AEP-VD23	243978	05STERLING2	243978	05STERLING2	N/A	34.5	205	FERC 715 Voltage Drop	Excluded
2025W1-N11-SVD243588	243588	05WILSON	243588	05WILSON	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243516	243516	05GREIF	243516	05GREIF	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM290607	290607	05SORENSN_RM	290607	05SORENSN_RM	N/A	765	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243586	243586	05WHITER	243586	05WHITER	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243518	243518	05GROVES1	243518	05GROVES1	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM290608	290608	05MARYSVL_RS	290608	05MARYSVL_RS	N/A	765	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243584	243584	05VINE	243584	05VINE	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243519	243519	05HALLRD	243519	05HALLRD	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM290620	290620	05MARYSVL_RM	290620	05MARYSVL_RM	N/A	765	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243583	243583	05TRENT	243583	05TRENT	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243522	243522	05HARRISON	243522	05HARRISON	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM290621	290621	05MARYSVL_RF	290621	05MARYSVL_RF	N/A	765	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM290516	290516	05CELTIC	290516	05CELTIC	N/A	345	205	N-1-1 Voltage Magnitude	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-N11-SVD243591	1243591	05SPRINGRDSS	243591	05SPRINGRDSS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM290534	290534	05LUTZ	290534	05LUTZ	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243590	0243590	05WESTAR	243590	05WESTAR	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243513	1243513	05GENOA	243513	05GENOA	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM290573	7290573	05INNOVATION	290573	05INNOVATION	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM243527	2243527	05HYATTX	243527	05HYATTX	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243582	2243582	05TRABUE1	243582	05TRABUE1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243523	2243523	05HCREAN	243523	05HCREAN	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM290628	2290628	05BADGER	290628	05BADGER	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243581	1243581	05TAYLOR	243581	05TAYLOR	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243524	2243524	05HESS NORTH	243524	05HESS NORTH	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM290679	7290679	05BEACON	290679	05BEACON	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243580	0243580	05SULVNT	243580	05SULVNT	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243525	2243525	05HUNTLEY1	243525	05HUNTLEY1	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM290690	9290690	05GREENCHL12	290690	05GREENCHL12	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243579	9243579	05STROUD	243579	05STROUD	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243526	2243526	05HYATT	243526	05HYATT	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243574	4243574	05SUNBURY SS	243574	05SUNBURY SS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243531	3243531	05KIMBRY	243531	05KIMBRY	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM290887	3290887	05ROCKHOPPER	290887	05ROCKHOPPER	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243572	2243572	05SHANON	243572	05SHANON	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243532	3243532	05KIRK	243532	05KIRK	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM290925	2290925	05PARSONS2	290925	05PARSONS2	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243570	0243570	05CLAYBN	243570	05CLAYBN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243535	3243535	05LINWRT	243535	05LINWRT	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM290984	3290984	05BOKESCRK	290984	05BOKESCRK	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243569	9243569	05SCIPPO	243569	05SCIPPO	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243536	3243536	05LS-II	243536	05LS-II	N/A	138	205	N-1-1 Voltage Magnitude	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-N11-WVM29077	290779	05JORDEN	290779	05JORDEN	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243577	243577	05STELZR	243577	05STELZR	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM290809	290809	05HORIZON	290809	05HORIZON	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243576	243576	05ST.CLX	243576	05ST.CLX	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243528	243528	05KARL ROAD	243528	05KARL ROAD	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM290834	290884	05GREENCHL34	290884	05GREENCHL34	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243575	243575	05ST.CLR	243575	05ST.CLR	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243529	243529	05KENNY	243529	05KENNY	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM290838	290886	05ANGUIN 3-4	290886	05ANGUIN 3-4	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243568	243568	05SCIOTO	243568	05SCIOTO	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243537	243537	05MALIS	243537	05MALIS	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243566	243566	05SAWMILL	243566	05SAWMILL	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243538	243538	05MALISX	243538	05MALISX	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243563	243563	05ROZELL	243563	05ROZELL	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243539	243539	05MARION RD	243539	05MARION RD	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM243540	243540	05MCCOMB	243540	05MCCOMB	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD244560	244560	05ISABELLA	244560	05ISABELLA	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM288835	288835	05BLAIN_TAP	288835	05BLAIN_TAP	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD243309	243309	05HILLCR	243309	05HILLCR	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD244540	244540	05RHODES	244540	05RHODES	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243438	243485	05CLINTO	243485	05CLINTO	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM288936	288936	05CELTIC	288936	05CELTIC	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD243313	243313	05HUNT J	243313	05HUNT J	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD244338	244338	05POTH	244338	05POTH	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243486	243486	05CLINTX	243486	05CLINTX	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM289114	289114	05BIG PLAIN	289114	05BIG PLAIN	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD243314	243314	05HUNTR8	243314	05HUNTR8	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD244283	244283	05MINERAL SS	244283	05MINERAL SS	N/A	138	205	N-1-1 Voltage Drop	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-N11-WVM24343	243487	05CHK TAP Z	243487	05CHK TAP Z	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM28952	289528	05MALIS	289528	05MALIS	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD243315	243315	05ILLINO	243315	05ILLINO	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243304	243304	05GUARDN	243304	05GUARDN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243305	243305	05HACIEN	243305	05HACIEN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM28877	288778	05CYPRUS	288778	05CYPRUS	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD243306	243306	05HARPER	243306	05HARPER	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD244023	244023	05COLE	244023	05COLE	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243494	243494	05CTYPLN	243494	05CTYPLN	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM29024	290241	05SIFFORD	290241	05SIFFORD	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD244022	244022	05COLE	244022	05COLE	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243495	243495	05DAVIDS	243495	05DAVIDS	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM243497	243497	05DELANO	243497	05DELANO	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD244258	244258	05PARSONS1	244258	05PARSONS1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243488	243488	05CONESVILLE	243488	05CONESVILLE	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM290024	290024	05GOMER	290024	05GOMER	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD243316	243316	05INDUST PK1	243316	05INDUST PK1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD244232	244232	05SHANNONRSS	244232	05SHANNONRSS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243491	243491	05CORRID	243491	05CORRID	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM290113	290113	05WESTFALL	290113	05WESTFALL	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD243321	243321	05KENDAL	243321	05KENDAL	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD244230	244230	05SUNDAY SS	244230	05SUNDAY SS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243492	243492	05CORWIN	243492	05CORWIN	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM290230	290230	05CYPRUS12	290230	05CYPRUS12	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD243326	243326	05LAOTTO	243326	05LAOTTO	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD244198	244198	05LEMASTER	244198	05LEMASTER	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243493	243493	05CRVERD	243493	05CRVERD	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM290239	290239	05HUMBOLDT	290239	05HUMBOLDT	N/A	138	205	N-1-1 Voltage Magnitude	Included

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2025W1-N11-SVD243915	243915	05BERRYWOOD	243915	05BERRYWOOD	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243498	243498	05DLAWAR2	243498	05DLAWAR2	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM290315	290315	05EMPEROR Z1	290315	05EMPEROR Z1	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243903	243903	05GUNN RD SW	243903	05GUNN RD SW	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243499	243499	05DUBLIN CS	243499	05DUBLIN CS	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM290316	290316	05EMPEROR Z2	290316	05EMPEROR Z2	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243902	243902	05HARDIN SW	243902	05HARDIN SW	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243502	243502	05E.BROAD	243502	05E.BROAD	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM290328	290328	05COSGRAY	290328	05COSGRAY	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243876	243876	05ST.CXX	243876	05ST.CXX	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243506	243506	05ELLIOTT 1	243506	05ELLIOTT 1	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM290364	290364	05TRABUE2	290364	05TRABUE2	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM290254	290254	05INNOVATION	290254	05INNOVATION	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD244020	244020	05MINK	244020	05MINK	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM290313	290313	05CONESV_XFL	290313	05CONESV_XFL	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243592	243592	05YEARLG	243592	05YEARLG	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243511	243511	05GAY	243511	05GAY	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM243512	243512	05DIAMONDISS	243512	05DIAMONDISS	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243856	243856	05JUG ST 1-6	243856	05JUG ST 1-6	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243507	243507	05FIFTH	243507	05FIFTH	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM290377	290377	05BRIE	290377	05BRIE	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243855	243855	05JUG ST	243855	05JUG ST	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243508	243508	05ITALNV	243508	05ITALNV	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM290413	290413	05KILEVILLE	290413	05KILEVILLE	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243854	243854	05REAVAR	243854	05REAVAR	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243509	243509	05FISHRD	243509	05FISHRD	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM290459	290459	05MT PERRYSS	290459	05MT PERRYSS	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243593	243593	05ZUBER	243593	05ZUBER	N/A	138	205	N-1-1 Voltage Drop	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-N11-WVM243510	243510	05GAHANN	243510	05GAHANN	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM290499	290499	05SCHERERSS	290499	05SCHERERSS	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD243211	243211	05ALLEN	243211	05ALLEN	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM288579	288579	05FIESTA	288579	05FIESTA	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD243225	243225	05KEYSTN	243225	05KEYSTN	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD246385	246385	05JUGST 7-11	246385	05JUGST 7-11	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM288603	288603	05TASJAN	288603	05TASJAN	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD243228	243228	05MERIDN	243228	05MERIDN	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD246370	246370	05HUNTLEY2	246370	05HUNTLEY2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM288613	288613	05ROCKHOPPZ1	288613	05ROCKHOPPZ1	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD243231	243231	05ROB PK	243231	05ROB PK	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243161	243161	05ZANESV	243161	05ZANESV	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD246094	246094	05VINE_X	246094	05VINE_X	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM288618	288618	05NBY6 Z1	288618	05NBY6 Z1	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD243246	243246	05AUBUNC	243246	05AUBUNC	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD246021	246021	05W.LANCAST2	246021	05W.LANCAST2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM288619	288619	05NBY6 Z2	288619	05NBY6 Z2	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD246010	246010	05PHILO2	246010	05PHILO2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM288640	288640	05DUBLINX	288640	05DUBLINX	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD245964	245964	05N.NEWARK2	245964	05N.NEWARK2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD246312	246312	05BABBITT	246312	05BABBITT	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM288614	288614	05ROCKHOPPZ2	288614	05ROCKHOPPZ2	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD243232	243232	05SORENS	243232	05SORENS	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD246310	246310	05MEIGS SW1Z	246310	05MEIGS SW1Z	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM288615	288615	05S.ROCKHOPR	288615	05S.ROCKHOPR	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD243237	243237	05ADAM	243237	05ADAM	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD246308	246308	05NEWARKC_BP	246308	05NEWARKC_BP	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM288616	288616	05NBY6	288616	05NBY6	N/A	138	205	N-1-1 Voltage Magnitude	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-N11-WVD243241	243241	05ALBION	243241	05ALBION	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD246177	246177	05ANGUIN 1-2	246177	05ANGUIN 1-2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM288617	288617	05NBYS	288617	05NBYS	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD243242	243242	05ALLEN	243242	05ALLEN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM288643	288643	05KIBER	288643	05KIBER	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD243254	243254	05BURNWO	243254	05BURNWO	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD245962	245962	05DLAWAR3	245962	05DLAWAR3	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM288701	288701	05MILEPOST	288701	05MILEPOST	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD243263	243263	05COLUMBIA	243263	05COLUMBIA	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD245952	245952	05DLAWAR1	245952	05DLAWAR1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243474	243474	05BLACKKL	243474	05BLACKKL	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM288705	288705	05VASSEL2XFL	288705	05VASSEL2XFL	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD243267	243267	05COUNTY	243267	05COUNTY	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD245853	245853	05HESS SOUTH	245853	05HESS SOUTH	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243475	243475	05BLEND0	243475	05BLEND0	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM288718	288718	05GILES	288718	05GILES	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD243279	243279	05DIAMND	243279	05DIAMND	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243247	243247	05AUBURN1	243247	05AUBURN1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243251	243251	05BIXLER	243251	05BIXLER	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD244871	244871	05RIDGELY	244871	05RIDGELY	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243481	243481	05CANAL	243481	05CANAL	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM288729	288729	05SOUDER	288729	05SOUDER	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD244868	244868	05BRICE	244868	05BRICE	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243482	243482	05CENTBG	243482	05CENTBG	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM288776	288776	05CYPRUS34	288776	05CYPRUS34	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD244745	244745	05BABBIT 1-2	244745	05BABBIT 1-2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243483	243483	05CRCLVS	243483	05CRCLVS	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM243484	243484	05CITYCO	243484	05CITYCO	N/A	138	205	N-1-1 Voltage Magnitude	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-N11-SVD245769	245769	05ADKINS	245769	05ADKINS	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243476	243476	05BOLINSMLSS	243476	05BOLINSMLSS	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM288721	288721	05MACY	288721	05MACY	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD243284	243284	05DUPONT	243284	05DUPONT	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD245492	245492	05BABBIT 5-6	245492	05BABBIT 5-6	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243478	243478	05BRKSHR	243478	05BRKSHR	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM288724	288724	05CHENOWETH	288724	05CHENOWETH	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD243288	243288	05EGE	243288	05EGE	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD245491	245491	05BABBIT 3-4	245491	05BABBIT 3-4	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243479	243479	05BROOKS	243479	05BROOKS	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM288726	288726	05GREENCHPL	288726	05GREENCHPL	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD243291	243291	05ENGLER	243291	05ENGLER	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD245358	245358	05EMPEROR	245358	05EMPEROR	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243480	243480	05BUCKYST_BP	243480	05BUCKYST_BP	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM288727	288727	05CURLEYS	288727	05CURLEYS	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD243295	243295	05GARRETT N	243295	05GARRETT N	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243110	243110	05STIFFI	243110	05STIFFI	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243117	243117	05SULFRS	243117	05SULFRS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243122	243122	05SW LIM	243122	05SW LIM	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243145	243145	05WCOSHC	243145	05WCOSHC	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243146	243146	05WHEBRO	243146	05WHEBRO	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243147	243147	05WILDCRK SS	243147	05WILDCRK SS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243125	243125	05THAYER	243125	05THAYER	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243136	243136	05W LIMA	243136	05W LIMA	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243137	243137	05W.END FOS1	243137	05W.END FOS1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243144	243144	05WCAMBR	243144	05WCAMBR	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243148	243148	05WINDFL	243148	05WINDFL	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243149	243149	05W.LANCAST1	243149	05W.LANCAST1	N/A	138	205	N-1-1 Voltage Drop	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-N11-WVD243150	243150	05WMILLP	243150	05WMILLP	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243151	243151	05WMILLS	243151	05WMILLS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243158	243158	05WOOSTE	243158	05WOOSTE	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM270280	270280	AF1-227 MAIN	270280	AF1-227 MAIN	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD243160	243160	05WTRNWX	243160	05WTRNWX	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM270584	270584	AE1-091_POI	270584	AE1-091_POI	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM288569	288569	05BERMUDA	288569	05BERMUDA	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD243152	243152	05W.MOULTON	243152	05W.MOULTON	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243153	243153	05WMTVER	243153	05WMTVER	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243155	243155	05W.NEWTONSS	243155	05W.NEWTONSS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243157	243157	05WOODLA	243157	05WOODLA	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243472	243472	05BEXLEY	243472	05BEXLEY	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD243563	243563	05ROZELL	243563	05ROZELL	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD288726	288726	05GREENCHPL	288726	05GREENCHPL	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243473	243473	05BIXBY	243473	05BIXBY	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD243562	243562	05ROSS	243562	05ROSS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD288724	288724	05CHENOWETH	288724	05CHENOWETH	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243568	243568	05SCIOTO	243568	05SCIOTO	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD288729	288729	05SOUDER	288729	05SOUDER	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243566	243566	05SAWMILL	243566	05SAWMILL	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD288727	288727	05CURLEYS	288727	05CURLEYS	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243466	243466	05ASTOR	243466	05ASTOR	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD243559	243559	05RIO Z	243559	05RIO Z	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD288705	288705	05VASSEL2XFL	288705	05VASSEL2XFL	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243467	243467	05E.BROAD3	243467	05E.BROAD3	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD288701	288701	05MILEPOST	288701	05MILEPOST	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243469	243469	05BEATTY	243469	05BEATTY	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD243561	243561	05RODNEY SS	243561	05RODNEY SS	N/A	138	205	N-1-1 Voltage Drop	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-N11-WVD288721	288721	05MACY	288721	05MACY	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243471	243471	05BETHEL	243471	05BETHEL	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD243560	243560	05ROBERT	243560	05ROBERT	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD288718	288718	05GILES	288718	05GILES	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243458	243458	05HYATT	243458	05HYATT	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM243459	243459	05KIRK	243459	05KIRK	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM243460	243460	05ROBRT2	243460	05ROBRT2	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD288691	288691	05WHIPPLEDTCTC	288691	05WHIPPLEDTCTC	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243461	243461	05ROBRT1	243461	05ROBRT1	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD243570	243570	05CLAYBN	243570	05CLAYBN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243569	243569	05SCIPPO	243569	05SCIPPO	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD288776	288776	05CYPRUS34	288776	05CYPRUS34	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243571	243571	05SEAMAN	243571	05SEAMAN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243579	243579	05STROUD	243579	05STROUD	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD288990	288990	05HATHAWAYSS	288990	05HATHAWAYSS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VM52	246627	05WESTRVL5	246627	05WESTRVL5	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-N11-WVD243577	243577	05STELZR	243577	05STELZR	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD288975	288975	05GANGWER	288975	05GANGWER	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VM51	246627	05WESTRVL5	246627	05WESTRVL5	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-N11-WVD243581	243581	05TAYLOR	243581	05TAYLOR	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD289097	289097	05REDRUN	289097	05REDRUN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VM50	246627	05WESTRVL5	246627	05WESTRVL5	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-N11-WVD243580	243580	05SULVNT	243580	05SULVNT	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD288999	288999	05HATCH SS	288999	05HATCH SS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VM49	246627	05WESTRVL5	246627	05WESTRVL5	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-N11-WVD243574	243574	05SUNBURY SS	243574	05SUNBURY SS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD288936	288936	05CELTIC	288936	05CELTIC	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VM48	246627	05WESTRVL5	246627	05WESTRVL5	N/A	69	205	FERC 715 Voltage Magnitude	Excluded

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-N11-WVD243572	243572	05SHANON	243572	05SHANON	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD288875	288875	05LAMMER	288875	05LAMMER	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243576	243576	05ST.CLX	243576	05ST.CLX	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD288970	288970	05MCNUTT	288970	05MCNUTT	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243575	243575	05ST.CLR	243575	05ST.CLR	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD288963	288963	05MARKLE SW	288963	05MARKLE SW	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD288835	288835	05BLAIN_TAP	288835	05BLAIN_TAP	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD288778	288778	05CYPRUS	288778	05CYPRUS	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VM57	246627	05WESTRVL5	246627	05WESTRVL5	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-AEP-VM56	246627	05WESTRVL5	246627	05WESTRVL5	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-AEP-VM55	246627	05WESTRVL5	246627	05WESTRVL5	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-AEP-VM54	246627	05WESTRVL5	246627	05WESTRVL5	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-AEP-VM53	246627	05WESTRVL5	246627	05WESTRVL5	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-N11-WVD243583	243583	05TRENT	243583	05TRENT	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243582	243582	05TRABUE1	243582	05TRABUE1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD247019	247019	05NEVILLE SS	247019	05NEVILLE SS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243136	243136	05W LIMA	243136	05W LIMA	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD246907	246907	05W.CAMPUS	246907	05W.CAMPUS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243146	243146	05WHEBRO	243146	05WHEBRO	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD270584	270584	AE1-091_POI	270584	AE1-091_POI	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD246890	246890	05HOPETN	246890	05HOPETN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243149	243149	05W.LANCAST1	243149	05W.LANCAST1	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD288579	288579	05FIESTA	288579	05FIESTA	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243150	243150	05WMILLP	243150	05WMILLP	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD288569	288569	05BERMUDA	288569	05BERMUDA	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD247199	247199	05AMLIN	247199	05AMLIN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243107	243107	05SPENCR	243107	05SPENCR	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD270280	270280	AF1-227 MAIN	270280	AF1-227 MAIN	N/A	345	205	N-1-1 Voltage Drop	Included

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2025W1-N11-SVD247148	247148	05SBLMSS	247148	05SBLMSS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243108	243108	05STRLN	243108	05STRLN	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD247083	247083	05NPHISS	247083	05NPHISS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243122	243122	05SW LIM	243122	05SW LIM	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD270495	270495	AE1-146 TAP	270495	AE1-146 TAP	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD247067	247067	05GOODHP	247067	05GOODHP	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243125	243125	05THAYER	243125	05THAYER	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD270372	270372	AD1-106 TAP	270372	AD1-106 TAP	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD247497	247497	05CLOUSE	247497	05CLOUSE	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD247336	247336	05APPLE V SS	247336	05APPLE V SS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243099	243099	05SHAWNR	243099	05SHAWNR	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD247303	247303	05WAKATOMIKA	247303	05WAKATOMIKA	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243104	243104	05SLANCS	243104	05SLANCS	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD288613	288613	05ROCKHOPPZ1	288613	05ROCKHOPPZ1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD288603	288603	05TASJAN	288603	05TASJAN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD288614	288614	05ROCKHOPPZ2	288614	05ROCKHOPPZ2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD246716	246716	05PHILLIPI	246716	05PHILLIPI	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243455	243455	05CONES	243455	05CONES	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD288640	288640	05DUBLINX	288640	05DUBLINX	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD246523	246523	05HYATT SW1	246523	05HYATT SW1	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243456	243456	05CORRID	243456	05CORRID	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD288619	288619	05NBY6 Z2	288619	05NBY6 Z2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243457	243457	05HAYDEN	243457	05HAYDEN	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD288663	288663	05FIN DATAZ	288663	05FIN DATAZ	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD288643	288643	05KIBER	288643	05KIBER	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD246761	246761	05THREEC	246761	05THREEC	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243160	243160	05WTRNWY	243160	05WTRNWY	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD288616	288616	05NBY6	288616	05NBY6	N/A	138	205	N-1-1 Voltage Drop	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-N11-SVD246753	246753	05VASSEL	246753	05VASSEL	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM24315	243161	05ZANESV	243161	05ZANESV	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD28861	288615	05S.ROCKHOPR	288615	05S.ROCKHOPR	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD246752	246752	05VASSEL	246752	05VASSEL	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM24345	243453	05BEATTY	243453	05BEATTY	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD28861	288618	05NBY6 Z1	288618	05NBY6 Z1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD246751	246751	05VASSEL	246751	05VASSEL	N/A	765	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM24345	243454	05BIXBY	243454	05BIXBY	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD28861	288617	05NBY7	288617	05NBY7	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD246889	246889	05BIERSR	246889	05BIERSR	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD246888	246888	05BIERSR	246888	05BIERSR	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM24315	243152	05W.MOULTON	243152	05W.MOULTON	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD246851	246851	05CULBERTSON	246851	05CULBERTSON	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM24315	243155	05W.NEWTONSS	243155	05W.NEWTONSS	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD246765	246765	05OUTERB	246765	05OUTERB	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM24315	243157	05WOODLA	243157	05WOODLA	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD28861	288681	05NEWLBR_BP	288681	05NEWLBR_BP	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD28867	288672	05N.FINDLAY2	288672	05N.FINDLAY2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD247972	247972	05CONDIT SS	247972	05CONDIT SS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM24304	243044	05MILLWO	243044	05MILLWO	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD247945	247945	05ELLIOTT 2	247945	05ELLIOTT 2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM24305	243051	05NDELPH	243051	05NDELPH	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD247931	247931	05VINE_GS_X	247931	05VINE_GS_X	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM24305	243058	05NEWARK CTR	243058	05NEWARK CTR	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD247930	247930	05FIDLSTX SS	247930	05FIDLSTX SS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM24306	243062	05NMUSKG	243062	05NMUSKG	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM24301	243018	05HEATH	243018	05HEATH	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM24302	243023	05HOCKNG	243023	05HOCKNG	N/A	138	205	N-1-1 Voltage Magnitude	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-N11-SVD247980	247980	05RUSTIC SS	247980	05RUSTIC SS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243025	243025	05JUNCTN	243025	05JUNCTN	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD247979	247979	05NORFLD SS	247979	05NORFLD SS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243030	243030	05LIMAOR	243030	05LIMAOR	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD247896	247896	05BOLTON	247896	05BOLTON	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243063	243063	05N.NEWARK1	243063	05N.NEWARK1	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM243066	243066	05NW LIM	243066	05NW LIM	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD247679	247679	05LEE	247679	05LEE	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243079	243079	05REFORM	243079	05REFORM	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD247623	247623	05GROVES2	247623	05GROVES2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243080	243080	05RILEYC	243080	05RILEYC	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD247562	247562	05LOCKBOURNE	247562	05LOCKBOURNE	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243082	243082	05ROCKHILL1	243082	05ROCKHILL1	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD247509	247509	05HAYDEN	247509	05HAYDEN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243083	243083	05CAMPSS	243083	05CAMPSS	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD247791	247791	05ELK	247791	05ELK	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243070	243070	05OHIOCT	243070	05OHIOCT	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD247767	247767	05HAZELTON	247767	05HAZELTON	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243074	243074	05PHILO1	243074	05PHILO1	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD247741	247741	05HYATT SW2	247741	05HYATT SW2	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243075	243075	05POWELS	243075	05POWELS	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD247728	247728	05VASSEL_XFL	247728	05VASSEL_XFL	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243076	243076	05CONESPREPZ	243076	05CONESPREPZ	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD247873	247873	05BRITTON	247873	05BRITTON	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD247862	247862	05TUSCANY	247862	05TUSCANY	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM243068	243068	05NZANEV	243068	05NZANEV	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM243089	243089	05SBALTM	243089	05SBALTM	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD288618	288618	05NBY6 Z1	288618	05NBY6 Z1	N/A	138	205	N-1-1 Voltage Drop	Included

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2025W1-N11-WVM24292	242926	05MALIS	242926	05MALIS	N/A	765	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD28861	7288617	05NBY7	288617	05NBY7	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM24292	242928	05MARYSV	242928	05MARYSV	N/A	765	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD28861	6288616	05NBY6	288616	05NBY6	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM24293	242931	05BEVERL	242931	05BEVERL	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD28861	5288615	05S.ROCKHOPR	288615	05S.ROCKHOPR	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM24293	242935	05E LIMA	242935	05E LIMA	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM24793	047980	05RUSTIC SS	247980	05RUSTIC SS	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD28864	3288643	05KIBER	288643	05KIBER	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD28864	0288640	05DUBLINX	288640	05DUBLINX	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD28861	9288619	05NBY6 Z2	288619	05NBY6 Z2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD28861	4288614	05ROCKHOPPZ2	288614	05ROCKHOPPZ2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM24293	242939	05MARYSV	242939	05MARYSV	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD28861	3288613	05ROCKHOPPZ1	288613	05ROCKHOPPZ1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM24294	042940	05MUSKNG	242940	05MUSKNG	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD28860	3288603	05TASJAN	288603	05TASJAN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM24294	242941	05OHIOCT	242941	05OHIOCT	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM24294	242945	05SW LIM	242945	05SW LIM	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM24293	242989	05E LIMA	242989	05E LIMA	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM24299	242991	05E SIDE	242991	05E SIDE	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM24299	242995	05EASTOW	242995	05EASTOW	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM24299	242998	05EPOINT	242998	05EPOINT	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD28857	9288579	05FIESTA	288579	05FIESTA	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD28856	9288569	05BERMUDA	288569	05BERMUDA	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM24294	242949	05WMILLP	242949	05WMILLP	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD27028	0270280	AF1-227 MAIN	270280	AF1-227 MAIN	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM24297	242979	05CANNELV SS	242979	05CANNELV SS	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM24293	242986	05CROOKS	242986	05CROOKS	N/A	138	205	N-1-1 Voltage Magnitude	Included

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2025W1-N11-WVM24300	243001	05EZANEV	243001	05EZANEV	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM24300	243007	05FRAZEY	243007	05FRAZEY	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM24301	243016	05HANTHR	243016	05HANTHR	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD24630	246308	05NEWARKC_BP	246308	05NEWARKC_BP	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24617	246177	05ANGUIN 1-2	246177	05ANGUIN 1-2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24631	246310	05MEIGS SW1Z	246310	05MEIGS SW1Z	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24602	246021	05W.LANCAST2	246021	05W.LANCAST2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24601	246010	05PHILO2	246010	05PHILO2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24615	246155	05FORD LIMA2	246155	05FORD LIMA2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24609	246094	05VINE_X	246094	05VINE_X	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24597	245977	05GRISTMILL	245977	05GRISTMILL	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24599	245994	05GEMINI	245994	05GEMINI	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24598	245983	05GRISTMILL	245983	05GRISTMILL	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VD4	243213	05MARA_LUNAT	243213	05MARA_LUNAT	N/A	34.5	205	FERC 715 Voltage Drop	Excluded
2025W1-AEP-VD3	243213	05MARA_LUNAT	243213	05MARA_LUNAT	N/A	34.5	205	FERC 715 Voltage Drop	Excluded
2025W1-N11-WVD24652	246523	05HYATT SW1	246523	05HYATT SW1	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24649	246490	05PHILO_BP	246490	05PHILO_BP	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24638	246385	05JUGST 7-11	246385	05JUGST 7-11	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24637	246373	05SPY RUN1	246373	05SPY RUN1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24648	246481	05NMUSKG_BP	246481	05NMUSKG_BP	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24639	246399	05GLOBE MT Z	246399	05GLOBE MT Z	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24635	246352	05HAVILAND2	246352	05HAVILAND2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24631	246312	05BABBITT	246312	05BABBITT	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24637	246370	05HUNTLEY2	246370	05HUNTLEY2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24635	246354	05E.LEIPSIC1	246354	05E.LEIPSIC1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VM107	246643	05WESTRV2B	246643	05WESTRV2B	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-N11-WVD24551	245511	05INDUST PK2	245511	05INDUST PK2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VM106	246643	05WESTRV2B	246643	05WESTRV2B	N/A	69	205	FERC 715 Voltage Magnitude	Excluded

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2025W1-AEP-VM105	246627	05WESTRVL5	246627	05WESTRVL5	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-AEP-VM104	246627	05WESTRVL5	246627	05WESTRVL5	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-N11-WVD245476	245476	05ROB PK34	245476	05ROB PK34	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD245456	245456	05NEWBERY	245456	05NEWBERY	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD245492	245492	05BABBIT 5-6	245492	05BABBIT 5-6	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD245491	245491	05BABBIT 3-4	245491	05BABBIT 3-4	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD244991	244991	05HOWARD2	244991	05HOWARD2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD244967	244967	05ELLISON_BP	244967	05ELLISON_BP	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD245422	245422	05W.END FOS2	245422	05W.END FOS2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD245358	245358	05EMPEROR	245358	05EMPEROR	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD244936	244936	05MCKINLEY2	244936	05MCKINLEY2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD245952	245952	05DLAWAR1	245952	05DLAWAR1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD245905	245905	05NEW LIBR2	245905	05NEW LIBR2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD245964	245964	05N.NEWARK2	245964	05N.NEWARK2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD245962	245962	05DLAWAR3	245962	05DLAWAR3	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD245832	245832	05LINCOLN2	245832	05LINCOLN2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD245769	245769	05ADKINS	245769	05ADKINS	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD245875	245875	05HOWARD_BUC	245875	05HOWARD_BUC	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD245853	245853	05HESS SOUTH	245853	05HESS SOUTH	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD245632	245632	05ARBOLES	245632	05ARBOLES	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD245516	245516	05ROCKHILL2	245516	05ROCKHILL2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD244283	244283	05MINERAL SS	244283	05MINERAL SS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD244258	244258	05PARSONS1	244258	05PARSONS1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD290608	290608	05MARYSVL_RS	290608	05MARYSVL_RS	N/A	765	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD244338	244338	05POTH	244338	05POTH	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VM82	246643	05WESTRV2B	246643	05WESTRV2B	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-N11-WVD244198	244198	05LEMASTER	244198	05LEMASTER	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD290534	290534	05LUTZ	290534	05LUTZ	N/A	138	205	N-1-1 Voltage Drop	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-AEP-VM81	246643	05WESTRV2B	246643	05WESTRV2B	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-N11-WVD244183	244183	05LAFAY C SS	244183	05LAFAY C SS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD290516	290516	05CELTIC	290516	05CELTIC	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VM80	246643	05WESTRV2B	246643	05WESTRV2B	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-N11-WVD244232	244232	05SHANNONRSS	244232	05SHANNONRSS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD290607	290607	05SORENSN_RM	290607	05SORENSN_RM	N/A	765	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VM79	246643	05WESTRV2B	246643	05WESTRV2B	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-N11-WVD244230	244230	05SUNDAY SS	244230	05SUNDAY SS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD290573	290573	05INNOVATION	290573	05INNOVATION	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VM78	246643	05WESTRV2B	246643	05WESTRV2B	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-N11-WVD244020	244020	05MINK	244020	05MINK	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD290459	290459	05MT PERRYSS	290459	05MT PERRYSS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD290413	290413	05KILEVILLE	290413	05KILEVILLE	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD244023	244023	05COLE	244023	05COLE	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD290505	290505	05IRON TRI	290505	05IRON TRI	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD244022	244022	05COLE	244022	05COLE	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD290499	290499	05SCHERERSS	290499	05SCHERERSS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD290377	290377	05BRIE	290377	05BRIE	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD244935	244935	05MCKINLEY1	244935	05MCKINLEY1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD244871	244871	05RIDGELY	244871	05RIDGELY	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD244672	244672	05ROB PK_XFL	244672	05ROB PK_XFL	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD290779	290779	05JORDEN	290779	05JORDEN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD244566	244566	05LA RUE	244566	05LA RUE	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD290761	290761	05KEKIONGA	290761	05KEKIONGA	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD244868	244868	05BRICE	244868	05BRICE	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD290884	290884	05GREENCHL34	290884	05GREENCHL34	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD244745	244745	05BABBIT 1-2	244745	05BABBIT 1-2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD290809	290809	05HORIZON	290809	05HORIZON	N/A	138	205	N-1-1 Voltage Drop	Included

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2025W1-N11-WVD244489	244489	05FOGWELL	244489	05FOGWELL	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD290656	290656	05INVISIONSS	290656	05INVISIONSS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD244341	244341	05SOFTAIL SS	244341	05SOFTAIL SS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD290628	290628	05BADGER	290628	05BADGER	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD244560	244560	05ISABELLA	244560	05ISABELLA	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD290690	290690	05GREENCHL12	290690	05GREENCHL12	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD244540	244540	05RHODES	244540	05RHODES	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD290679	290679	05BEACON	290679	05BEACON	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD290621	290621	05MARYSVL_RF	290621	05MARYSVL_RF	N/A	765	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD290620	290620	05MARYSVL_RM	290620	05MARYSVL_RM	N/A	765	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243592	243592	05YEARLG	243592	05YEARLG	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD290239	290239	05HUMBOLDT	290239	05HUMBOLDT	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VM63	246642	05WESTRV2A	246642	05WESTRV2A	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-N11-WVD243591	243591	05SPRINGRDSS	243591	05SPRINGRDSS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD290230	290230	05CYPRUS12	290230	05CYPRUS12	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VM62	246642	05WESTRV2A	246642	05WESTRV2A	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-N11-WVD243614	243614	05BAER	243614	05BAER	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VM61	246628	05WESTRVL1	246628	05WESTRVL1	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-N11-WVD243593	243593	05ZUBER	243593	05ZUBER	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD290241	290241	05SIFFORD	290241	05SIFFORD	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VM60	246628	05WESTRVL1	246628	05WESTRVL1	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-N11-WVD243586	243586	05WHITER	243586	05WHITER	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD290113	290113	05WESTFALL	290113	05WESTFALL	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VM59	246628	05WESTRVL1	246628	05WESTRVL1	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-N11-WVD243585	243585	05WAVERL	243585	05WAVERL	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD290048	290048	05DUNTONLAKE	290048	05DUNTONLAKE	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VM58	246628	05WESTRVL1	246628	05WESTRVL1	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-N11-WVD243590	243590	05WESTAR	243590	05WESTAR	N/A	138	205	N-1-1 Voltage Drop	Included

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2025W1-N11-WVD290208	290208	05BECKWITH	290208	05BECKWITH	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243588	243588	05WILSON	243588	05WILSON	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD290172	290172	05HUGUENARD	290172	05HUGUENARD	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD289114	289114	05BIG PLAIN	289114	05BIG PLAIN	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243584	243584	05VINE	243584	05VINE	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD290024	290024	05GOMER	290024	05GOMER	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD289528	289528	05MALIS	289528	05MALIS	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VM67	246643	05WESTRV2B	246643	05WESTRV2B	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-AEP-VM66	246643	05WESTRV2B	246643	05WESTRV2B	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-AEP-VM65	246643	05WESTRV2B	246643	05WESTRV2B	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-AEP-VM64	246643	05WESTRV2B	246643	05WESTRV2B	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-N11-WVD243765	243765	05FORD LIMA1	243765	05FORD LIMA1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243902	243902	05HARDIN SW	243902	05HARDIN SW	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD290364	290364	05TRABUE2	290364	05TRABUE2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VM74	246643	05WESTRV2B	246643	05WESTRV2B	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-N11-WVD243890	243890	05WOODSR	243890	05WOODSR	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD290353	290353	05TARHE	290353	05TARHE	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VM73	246643	05WESTRV2B	246643	05WESTRV2B	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-N11-WVD243915	243915	05BERRYWOOD	243915	05BERRYWOOD	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VM72	246643	05WESTRV2B	246643	05WESTRV2B	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-N11-WVD243903	243903	05GUNN RD SW	243903	05GUNN RD SW	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VM71	246643	05WESTRV2B	246643	05WESTRV2B	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-N11-WVD243856	243856	05JUG ST 1-6	243856	05JUG ST 1-6	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD290315	290315	05EMPEROR Z1	290315	05EMPEROR Z1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VM70	246643	05WESTRV2B	246643	05WESTRV2B	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-N11-WVD243855	243855	05JUG ST	243855	05JUG ST	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD290313	290313	05CONESV_XFL	290313	05CONESV_XFL	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VM69	246643	05WESTRV2B	246643	05WESTRV2B	N/A	69	205	FERC 715 Voltage Magnitude	Excluded

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2025W1-N11-WVD24387	243877	05DAWKNS	243877	05DAWKNS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD29032	290328	05COSGRAY	290328	05COSGRAY	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VM68	246643	05WESTRV2B	246643	05WESTRV2B	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-N11-WVD24387	243876	05ST.CXX	243876	05ST.CXX	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD29031	290316	05EMPEROR Z2	290316	05EMPEROR Z2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD29025	290252	05SALTCRK SS	290252	05SALTCRK SS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD29024	290246	05S.TIFFN_BP	290246	05S.TIFFN_BP	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24385	243854	05REAYER	243854	05REAYER	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD29030	290306	05W.WATERT	290306	05W.WATERT	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24379	243797	05RUTLAND Z	243797	05RUTLAND Z	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD29025	290254	05INNOVATION	290254	05INNOVATION	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VM77	246643	05WESTRV2B	246643	05WESTRV2B	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-AEP-VM76	246643	05WESTRV2B	246643	05WESTRV2B	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-AEP-VM75	246643	05WESTRV2B	246643	05WESTRV2B	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-AEP-VM47	246627	05WESTRVL5	246627	05WESTRVL5	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-AEP-VM46	246627	05WESTRVL5	246627	05WESTRVL5	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-AEP-VM45	246627	05WESTRVL5	246627	05WESTRVL5	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-AEP-VM44	246627	05WESTRVL5	246627	05WESTRVL5	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-AEP-VM43	246626	05WESTRVL4	246626	05WESTRVL4	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-AEP-VM42	246626	05WESTRVL4	246626	05WESTRVL4	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-AEP-VM41	246626	05WESTRVL4	246626	05WESTRVL4	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-AEP-VM40	246626	05WESTRVL4	246626	05WESTRVL4	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-AEP-VM39	246626	05WESTRVL4	246626	05WESTRVL4	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-AEP-VM38	246626	05WESTRVL4	246626	05WESTRVL4	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-N11-WVD24354	243542	05MIFFLIN	243542	05MIFFLIN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24354	243540	05MCCOMB	243540	05MCCOMB	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24353	243537	05MALIS	243537	05MALIS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD24353	243536	05LS-II	243536	05LS-II	N/A	138	205	N-1-1 Voltage Drop	Included

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2025W1-N11-WVD243533	243539	05MARION RD	243539	05MARION RD	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243533	243538	05MALISX	243538	05MALISX	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243532	243532	05KIRK	243532	05KIRK	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243531	243531	05KIMBRY	243531	05KIMBRY	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243535	243535	05LINWRT	243535	05LINWRT	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243534	243534	05LICK	243534	05LICK	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243544	243544	05MILPRD	243544	05MILPRD	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VM37	246626	05WESTRVL4	246626	05WESTRVL4	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-N11-WVD243552	243558	05RIO	243558	05RIO	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VM36	246626	05WESTRVL4	246626	05WESTRVL4	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-AEP-VM35	246626	05WESTRVL4	246626	05WESTRVL4	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-AEP-VM34	246626	05WESTRVL4	246626	05WESTRVL4	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-N11-WVD243551	243551	05OSU	243551	05OSU	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243550	243550	05OBETZ	243550	05OBETZ	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243553	243553	05POLARS	243553	05POLARS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243552	243552	05PICKR8	243552	05PICKR8	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243547	243547	05MORSE	243547	05MORSE	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243545	243545	05MILTON SS	243545	05MILTON SS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243549	243549	05MULBRY	243549	05MULBRY	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD243548	243548	05MOUND ST	243548	05MOUND ST	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-AEP-VM33	246624	05GENOA 1	246624	05GENOA 1	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-AEP-VM32	246624	05GENOA 1	246624	05GENOA 1	N/A	69	205	FERC 715 Voltage Magnitude	Excluded
2025W1-N11-SVD290254	290254	05INNOVATION	290254	05INNOVATION	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243007	243007	05FRAZEY	243007	05FRAZEY	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM247501	247501	05MUSK_E_XFL	247501	05MUSK_E_XFL	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD242993	242993	05E.LEIPSIC2	242993	05E.LEIPSIC2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD290241	290241	05SIFFORD	290241	05SIFFORD	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243001	243001	05EZANEV	243001	05EZANEV	N/A	138	205	N-1-1 Voltage Drop	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-N11-WVM247500	247509	05HAYDEN	247509	05HAYDEN	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD242995	242995	05EASTOW	242995	05EASTOW	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD290239	290239	05HUMBOLDT	290239	05HUMBOLDT	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD242998	242998	05EPOINT	242998	05EPOINT	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM247513	247513	05BOUTWELL	247513	05BOUTWELL	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD242998	242998	05EPOINT	242998	05EPOINT	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD290230	290230	05CYPRUS12	290230	05CYPRUS12	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD242987	242987	05DEXTER	242987	05DEXTER	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM247562	247562	05LOCKBOURNE	247562	05LOCKBOURNE	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD243001	243001	05EZANEV	243001	05EZANEV	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD242986	242986	05CROOKS	242986	05CROOKS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243023	243023	05HOCKNG	243023	05HOCKNG	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD242987	242987	05DEXTER	242987	05DEXTER	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243018	243018	05HEATH	243018	05HEATH	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM247497	247497	05CLOUSE	247497	05CLOUSE	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD242989	242989	05E LIMA	242989	05E LIMA	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD290313	290313	05CONESV_XFL	290313	05CONESV_XFL	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243011	243011	05FULTON	243011	05FULTON	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM247500	247500	05MUSK_D_XFL	247500	05MUSK_D_XFL	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD242991	242991	05E SIDE	242991	05E SIDE	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD288835	288835	05BLAIN_TAP	288835	05BLAIN_TAP	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD290113	290113	05WESTFALL	290113	05WESTFALL	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD242986	242986	05CROOKS	242986	05CROOKS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM247623	247623	05GROVES2	247623	05GROVES2	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD243004	243004	05FINDLC	243004	05FINDLC	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD289528	289528	05MALIS	289528	05MALIS	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD242979	242979	05CANNELV SS	242979	05CANNELV SS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM247679	247679	05LEE	247679	05LEE	N/A	138	205	N-1-1 Voltage Magnitude	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-N11-WVD243006	243006	05FOSTOR	243006	05FOSTOR	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD289114	289114	05BIG PLAIN	289114	05BIG PLAIN	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD242963	242963	05HEDDSS	242963	05HEDDSS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM247728	247728	05VASSEL_XFL	247728	05VASSEL_XFL	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD288936	288936	05CELTIC	288936	05CELTIC	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM247741	247741	05HYATT SW2	247741	05HYATT SW2	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD288729	288729	05SOUDER	288729	05SOUDER	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD242940	242940	05MUSKNG	242940	05MUSKNG	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM247873	247873	05BRITTON	247873	05BRITTON	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD288727	288727	05CURLEYS	288727	05CURLEYS	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD242939	242939	05MARYSV	242939	05MARYSV	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM247896	247896	05BOLTON	247896	05BOLTON	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD288726	288726	05GREENCHPL	288726	05GREENCHPL	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD242931	242931	05BEVERL	242931	05BEVERL	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM247930	247930	05FIDLSTX SS	247930	05FIDLSTX SS	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD288724	288724	05CHENOWETH	288724	05CHENOWETH	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD242928	242928	05MARYSV	242928	05MARYSV	N/A	765	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM247931	247931	05VINE_GS_X	247931	05VINE_GS_X	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD242950	242950	05ACADEM	242950	05ACADEM	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD242949	242949	05WMILLP	242949	05WMILLP	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM247767	247767	05HAZELTON	247767	05HAZELTON	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD288778	288778	05CYPRUS	288778	05CYPRUS	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD242945	242945	05SW LIM	242945	05SW LIM	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM247791	247791	05ELK	247791	05ELK	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD288776	288776	05CYPRUS34	288776	05CYPRUS34	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD242941	242941	05OHIOCT	242941	05OHIOCT	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM247862	247862	05TUSCANY	247862	05TUSCANY	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD288721	288721	05MACY	288721	05MACY	N/A	138	205	N-1-1 Voltage Drop	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-N11-SVD242926	242926	05MALIS	242926	05MALIS	N/A	765	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM247945	247945	05ELLIOTT 2	247945	05ELLIOTT 2	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD288718	288718	05GILES	288718	05GILES	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM247972	247972	05CONDIT SS	247972	05CONDIT SS	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD288705	288705	05VASSEL2XFL	288705	05VASSEL2XFL	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM247979	247979	05NORFLD SS	247979	05NORFLD SS	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD288701	288701	05MILEPOST	288701	05MILEPOST	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243149	243149	05W.LANCAST1	243149	05W.LANCAST1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM246752	246752	05VASSEL	246752	05VASSEL	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD242933	242933	05RPMONE	242933	05RPMONE	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD290886	290886	05ANGUIN 3-4	290886	05ANGUIN 3-4	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243146	243146	05WHEBRO	243146	05WHEBRO	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM246753	246753	05VASSEL	246753	05VASSEL	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD242935	242935	05E LIMA	242935	05E LIMA	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD290884	290884	05GREENCHL34	290884	05GREENCHL34	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243145	243145	05WCOSHC	243145	05WCOSHC	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM246761	246761	05THREEC	246761	05THREEC	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD242936	242936	05FOSTOR	242936	05FOSTOR	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD290809	290809	05HORIZON	290809	05HORIZON	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243107	243107	05SPENCR	243107	05SPENCR	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM246765	246765	05OUTERB	246765	05OUTERB	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD242939	242939	05MARYSV	242939	05MARYSV	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD242928	242928	05MARYSV	242928	05MARYSV	N/A	765	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243150	243150	05WMILLP	243150	05WMILLP	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD242931	242931	05BEVERL	242931	05BEVERL	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD290620	290620	05MARYSVL_RM	290620	05MARYSVL_RM	N/A	765	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243079	243079	05REFORM	243079	05REFORM	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM246907	246907	05W.CAMPUS	246907	05W.CAMPUS	N/A	138	205	N-1-1 Voltage Magnitude	Included

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2025W1-N11-SVD290608	290608	05MARYSVL_RS	290608	05MARYSVL_RS	N/A	765	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM246922	246929	05MADDOX	246929	05MADDOX	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD290573	290573	05INNOVATION	290573	05INNOVATION	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD290779	290779	05JORDEN	290779	05JORDEN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243104	243104	05SLANCS	243104	05SLANCS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM246852	246851	05CULBERTSON	246851	05CULBERTSON	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD242940	242940	05MUSKNG	242940	05MUSKNG	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD290690	290690	05GREENCHL12	290690	05GREENCHL12	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243098	243098	05SHARPR	243098	05SHARPR	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM246838	246888	05BIERSR	246888	05BIERSR	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD242941	242941	05OHIOCT	242941	05OHIOCT	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD290679	290679	05BEACON	290679	05BEACON	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243094	243094	05SCOSHC	243094	05SCOSHC	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM246838	246889	05BIERSR	246889	05BIERSR	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD242942	242942	05SBERWI	242942	05SBERWI	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD290628	290628	05BADGER	290628	05BADGER	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243089	243089	05SBALTM	243089	05SBALTM	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM246890	246890	05HOPETN	246890	05HOPETN	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD242945	242945	05SW LIM	242945	05SW LIM	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD290534	290534	05LUTZ	290534	05LUTZ	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243074	243074	05PHILO1	243074	05PHILO1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM247019	247019	05NEVILLE SS	247019	05NEVILLE SS	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD242956	242956	05BALLHL	242956	05BALLHL	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD290516	290516	05CELTIC	290516	05CELTIC	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243070	243070	05OHIOCT	243070	05OHIOCT	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM247067	247067	05GOODHP	247067	05GOODHP	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD242963	242963	05HEDDSS	242963	05HEDDSS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD290499	290499	05SCHERERSS	290499	05SCHERERSS	N/A	138	205	N-1-1 Voltage Drop	Included

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2025W1-N11-SVD243068	243068	05NZANEV	243068	05NZANEV	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM247033	247083	05NPHISS	247083	05NPHISS	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD242974	242974	05BUCKLR	242974	05BUCKLR	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD290459	290459	05MT PERRYSS	290459	05MT PERRYSS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243063	243063	05N.NEWARK1	243063	05N.NEWARK1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM247148	247148	05SBLMSS	247148	05SBLMSS	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD242976	242976	05BUCYRC	242976	05BUCYRC	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD242947	242947	05WATERFORD	242947	05WATERFORD	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243076	243076	05CONESPREPZ	243076	05CONESPREPZ	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVD242949	242949	05WMILLP	242949	05WMILLP	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243075	243075	05POWELS	243075	05POWELS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM246999	246999	05SORENS	246999	05SORENS	N/A	765	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD242950	242950	05ACADEM	242950	05ACADEM	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD290316	290316	05EMPEROR Z2	290316	05EMPEROR Z2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM247435	247435	05MUSKNG_ESZ	247435	05MUSKNG_ESZ	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD290315	290315	05EMPEROR Z1	290315	05EMPEROR Z1	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD290413	290413	05KILEVILLE	290413	05KILEVILLE	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243062	243062	05NMUSKG	243062	05NMUSKG	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM247199	247199	05AMLIN	247199	05AMLIN	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD242977	242977	05CALDWE	242977	05CALDWE	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD290377	290377	05BRIE	290377	05BRIE	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243058	243058	05NEWARK CTR	243058	05NEWARK CTR	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM247370	247370	05MUSKINGUM1	247370	05MUSKINGUM1	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD242979	242979	05CANNELV SS	242979	05CANNELV SS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD290364	290364	05TRABUE2	290364	05TRABUE2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243044	243044	05MILLWO	243044	05MILLWO	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM247373	247373	05MUSKINGUM2	247373	05MUSKINGUM2	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD242984	242984	05CHATFL	242984	05CHATFL	N/A	138	205	N-1-1 Voltage Drop	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-N11-SVD290328	290328	05COSGRAY	290328	05COSGRAY	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243025	243025	05JUNCTN	243025	05JUNCTN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM247434	247434	05MUSKNG_DSZ	247434	05MUSKNG_DSZ	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243475	243475	05BLEND0	243475	05BLEND0	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243474	243474	05BLACKL	243474	05BLACKL	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM245853	245853	05HESS SOUTH	245853	05HESS SOUTH	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243473	243473	05BIXBY	243473	05BIXBY	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM245952	245952	05DLAWAR1	245952	05DLAWAR1	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243466	243466	05ASTOR	243466	05ASTOR	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM245994	245994	05GEMINI	245994	05GEMINI	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243461	243461	05ROBRT1	243461	05ROBRT1	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM246010	246010	05PHILO2	246010	05PHILO2	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243460	243460	05ROBRT2	243460	05ROBRT2	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM246021	246021	05W.LANCAST2	246021	05W.LANCAST2	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM246155	246155	05FORD LIMA2	246155	05FORD LIMA2	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243472	243472	05BEXLEY	243472	05BEXLEY	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM245962	245962	05DLAWAR3	245962	05DLAWAR3	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243471	243471	05BETHEL	243471	05BETHEL	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM245964	245964	05N.NEWARK2	245964	05N.NEWARK2	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243469	243469	05BEATTY	243469	05BEATTY	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM245977	245977	05GRISTMILL	245977	05GRISTMILL	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243467	243467	05E.BROAD3	243467	05E.BROAD3	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM245983	245983	05GRISTMILL	245983	05GRISTMILL	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243459	243459	05KIRK	243459	05KIRK	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243458	243458	05HYATT	243458	05HYATT	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM246177	246177	05ANGUIN 1-2	246177	05ANGUIN 1-2	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243457	243457	05HAYDEN	243457	05HAYDEN	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM246308	246308	05NEWARKC_BP	246308	05NEWARKC_BP	N/A	138	205	N-1-1 Voltage Magnitude	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-N11-SVD243456	243456	05CORRID	243456	05CORRID	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM246312	246312	05BABBITT	246312	05BABBITT	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243160	243160	05WTRNWX	243160	05WTRNWX	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM246526	246526	05GUERNSEY	246526	05GUERNSEY	N/A	765	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVD242926	242926	05MALIS	242926	05MALIS	N/A	765	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243153	243153	05WMTVER	243153	05WMTVER	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM246716	246716	05PHILLIPI	246716	05PHILLIPI	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM246751	246751	05VASSEL	246751	05VASSEL	N/A	765	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243455	243455	05CONES	243455	05CONES	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM246370	246370	05HUNTLEY2	246370	05HUNTLEY2	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243454	243454	05BIXBY	243454	05BIXBY	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM246385	246385	05JUGST 7-11	246385	05JUGST 7-11	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243453	243453	05BEATTY	243453	05BEATTY	N/A	345	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM246399	246399	05GLOBE MT Z	246399	05GLOBE MT Z	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243161	243161	05ZANESV	243161	05ZANESV	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM246523	246523	05HYATT SW1	246523	05HYATT SW1	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243499	243499	05DUBLIN CS	243499	05DUBLIN CS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243487	243487	05CHK TAP Z	243487	05CHK TAP Z	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243493	243493	05CRVERD	243493	05CRVERD	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243492	243492	05CORWIN	243492	05CORWIN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243491	243491	05CORRID	243491	05CORRID	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243488	243488	05CONESVILLE	243488	05CONESVILLE	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243498	243498	05DLAWAR2	243498	05DLAWAR2	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243497	243497	05DELANO	243497	05DELANO	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243495	243495	05DAVIDS	243495	05DAVIDS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243494	243494	05CTYPLN	243494	05CTYPLN	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243486	243486	05CLINTX	243486	05CLINTX	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-SVD243485	243485	05CLINTO	243485	05CLINTO	N/A	138	205	N-1-1 Voltage Drop	Included

FG #	Fr Bus No.	From Bus Name	To Bus No.	To Bus Name	CKT	Voltage	TO Zone	Analysis type	Status
2025W1-N11-WVM244540	244540	05RHODES	244540	05RHODES	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-WVM245759	245769	05ADKINS	245769	05ADKINS	N/A	345	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243480	243480	05BUCKYST_BP	243480	05BUCKYST_BP	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM245358	245358	05EMPEROR	245358	05EMPEROR	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243479	243479	05BROOKS	243479	05BROOKS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM245491	245491	05BABBIT 3-4	245491	05BABBIT 3-4	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243478	243478	05BRKSHR	243478	05BRKSHR	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM245492	245492	05BABBIT 5-6	245492	05BABBIT 5-6	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243476	243476	05BOLINSMLSS	243476	05BOLINSMLSS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM245516	245516	05ROCKHILL2	245516	05ROCKHILL2	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243484	243484	05CITYCO	243484	05CITYCO	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM244560	244560	05ISABELLA	244560	05ISABELLA	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243483	243483	05CRCLVS	243483	05CRCLVS	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM244745	244745	05BABBIT 1-2	244745	05BABBIT 1-2	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243482	243482	05CENTBG	243482	05CENTBG	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM244868	244868	05BRICE	244868	05BRICE	N/A	138	205	N-1-1 Voltage Magnitude	Included
2025W1-N11-SVD243481	243481	05CANAL	243481	05CANAL	N/A	138	205	N-1-1 Voltage Drop	Included
2025W1-N11-WVM244871	244871	05RIDGELY	244871	05RIDGELY	N/A	138	205	N-1-1 Voltage Magnitude	Included

New Flowgates

None

Financial Information

Capital spend start date 03/2026

Construction start date 05/2028

Project Duration (In Months) 50

Additional Comments

None