JAMES RIVER WATER AUTHORITY

INDIVIDUAL USACE PERMIT SUPPLEMENTAL INFORMATION AND ALTERNATIVE ANALYSIS

February 2020

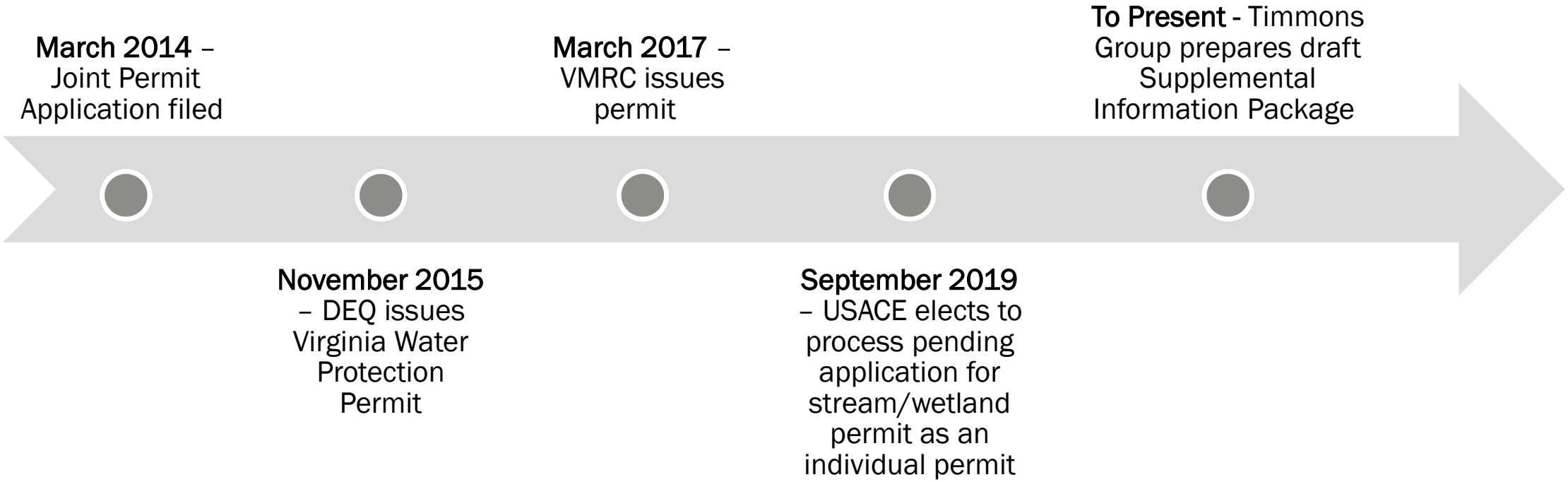
This presentation summarizes information from the preliminary draft Supplemental Information Package.

That draft remains under internal review and the information presented herein is subject to correction or revision.

Presentation Overview

- Environmental Permitting Background
- Draft Supplemental Information Package Contents
- Purpose and Need Statement
- Alternatives Analysis Requirement & Evaluation Criteria
- Summary of Alternatives Evaluated & Project Costs Overview
- Alternative Water Supplies & No Action / No Permit Alternative
- Least Environmentally Damaging Practicable Alternative (LEDPA) Determination
- Public Interest Review & Public Involvement
- Next Steps
- Questions & Answers

Environmental Permitting Background



Draft Supplemental Information Package Contents

- Project Information
- Purpose and Need Statement
- Alternatives Analysis
- Review of Environmental Impacts
- Mitigation (Avoidance, Minimization, and Compensation)
- Public Interest Factor Review
- Summary of Public Involvement
- Technical Appendices

Purpose and Need Statement

"The purpose of the proposed project is to provide a new and reliable raw water supply of sufficient quantity to meet the short- and long-term needs of Fluvanna and Louisa Counties for delivery to an existing interconnection point planned for use by Fluvanna and Louisa Counties."

Alternatives Analysis Requirement

- Legal Requirement
  - *USACE 404(b)(1) Guidelines*
  - *National Environmental Policy Act*
- Process
  - *Must evaluate a reasonable range of alternatives*
  - *Must assess comparative environmental impacts of each*

Corps generally may issue permit only for Least Environmentally Damaging Practicable Alternative (LEDPA)

Practicability Definition - 40 CFR § 230.10 (2)

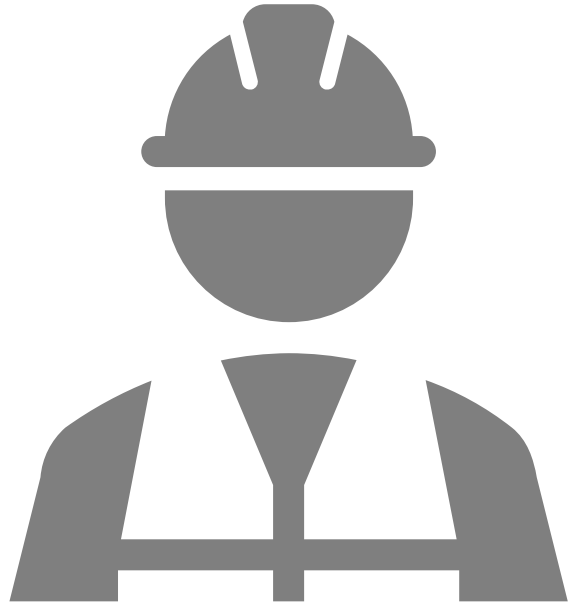
‘*An alternative is practicable if it is available and capable of being done after taking into consideration* ***cost, existing technology, and logistics*** *in light of overall project purposes. If it is otherwise a practicable alternative, an area not presently owned by the applicant which could reasonably be obtained, utilized, expanded or managed in order to fulfill the basic purpose of the proposed activity may be considered.’*

Alternatives Evaluation Criteria

- Fulfill Project Purpose
  - *Adequate Water Quantity*
  - *Reliable Public Water Supply*
  - *Short-Term Water Supply Needs*
  - *Long-Term Water Supply Needs*

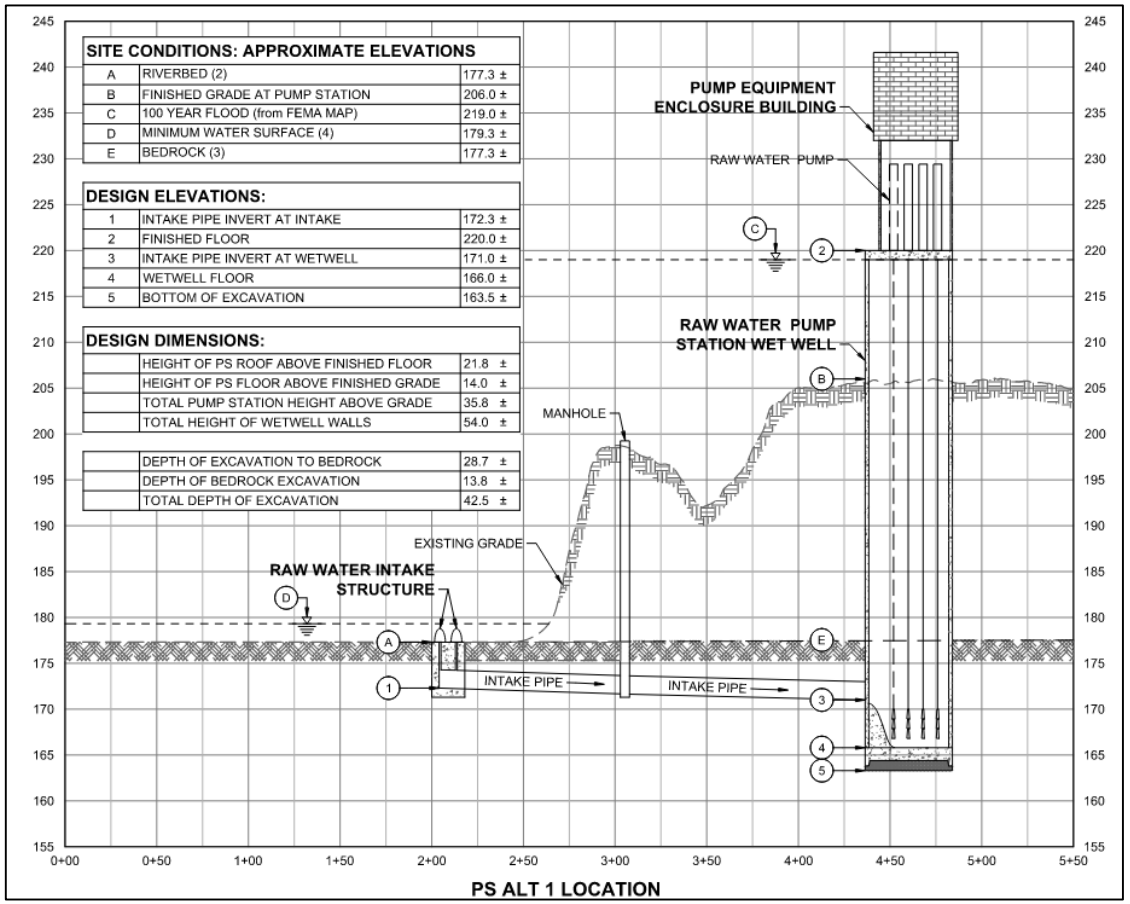
Alternatives Evaluation Criteria

- Construction Logistics
  - *Size and Configuration of Site*
  - *Site Access from Public Right-of-Way*
  - *Presence of Rock*
  - *Constructability*
  - *Railroad Crossings (where applicable)*
  - *Land and Easement Acquisition*



Alternatives Evaluation Criteria

- Site-Suitability Logistics
  - *Water Quality*
  - *Water Quantity*
  - *Suitable Location for Pump Station Near Water*
  - *Depth of Wet Well*
  - *River Bottom Depth at Intake Location*
  - *Access to Suitable Power Supply*
  - *Proximity to Homes*

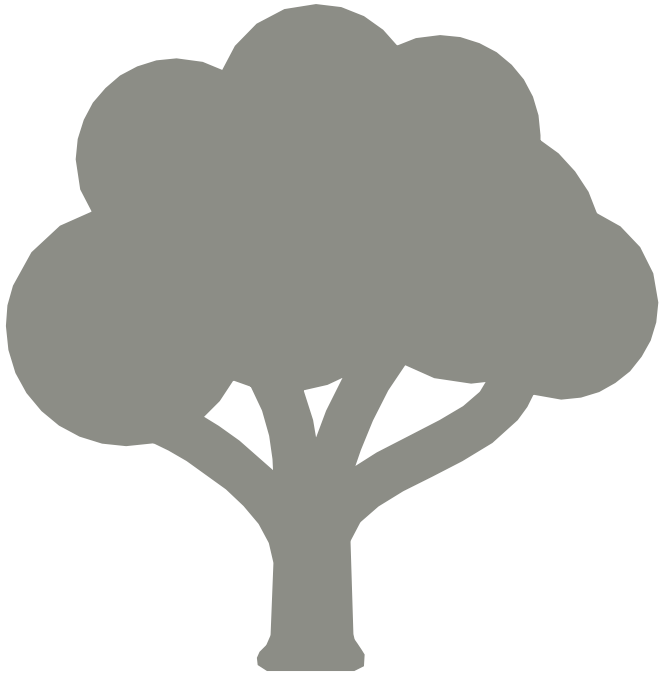


Alternatives Evaluation Criteria

- Costs
  - *Capital Construction Costs*
  - *Permitting / Mitigation Costs*
  - *Land / Easement Acquisition Costs*
  - *Financing Costs*
  - *Operations and Maintenance Costs*
  - *Other Alternative-Specific Costs*

Alternatives Evaluation Criteria

- Environmental Impacts
  - *Streams and Wetlands*
  - *Threatened and Endangered Species*
  - *Tree Clearing*
  - *Instream Beneficial Uses*
  - *Historical and Cultural Resources*
  - *Viewsheds*
  - *Temporary Construction/Noise*
  - *Environmental Justice*
  - *Secondary and Cumulative Impacts*



Cultural Resources
within 0.25 miles of alignments

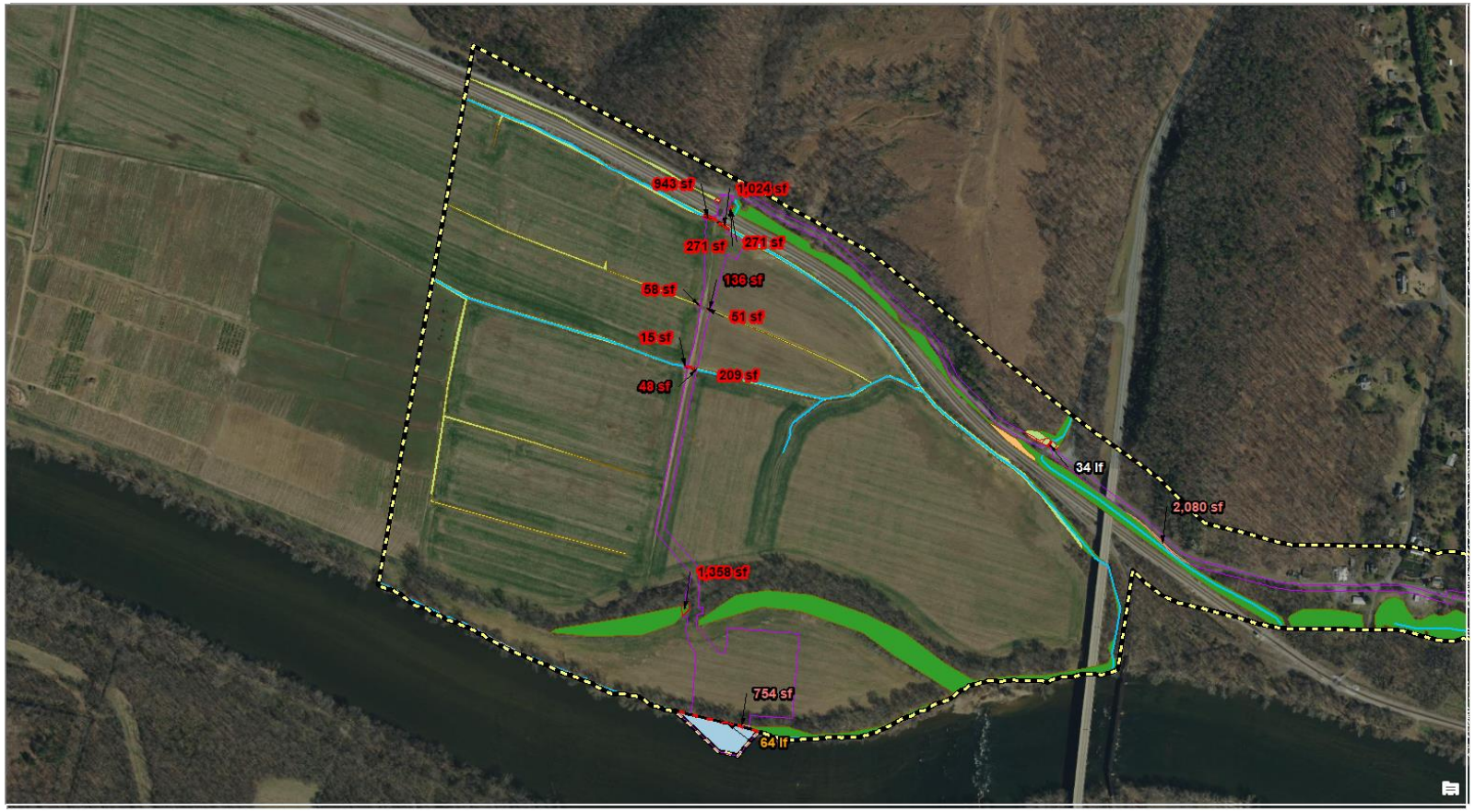
Alternative ID	Architectural Resources							Archaeological Resources		Total Resources
	Resource Not Evaluated	DHR Staff Determination			DHR Board Determined Eligible	NRHP Listing, VLR Listing	NHL Listing, NRHP Listing, VLR Listing	Not Evaluated	NRHP Listing, VLR Listing	
		Not Eligible	Potentially Eligible	Eligible						
1A	4			1		2		28		**35**
1B	4			1		3		15		**23**
1C	4	3		1		3		8	1	**20**
2A	18	4	1	6	1	3	1	18	1	**53**
2B	18	1	1	6	1	3	1	25		**56**
3	31		1	1		1		11		**45**
4	31		1	1		1		11		**45**
5A	31	1	1	1		1		15		**50**
5B	31	1	1	1		1		15		**50**
6	2		1	1		1		15		**20**
6-1	2		1	1		1		15		**20**
6-2	2		1	1		1		18		**23**

NHL - National Historic Landmark, NRHP - National Register of Historic Places, VLR - Virginia Landmarks Register

Source: V-CRIS Database

Alternatives Evaluation Criteria –

- Environmental Impacts
  - *Streams and Wetlands*
  - *Desktop Delineation*



Alternatives Evaluation Criteria

- Environmental Impacts
  - *Threatened and Endangered Species*
    - USFWS IPaC Database
    - DGIF Databases
    - Center for Conservation Biology

    Species of Interest
    - *Northern Long-Eared Bat*
    - *James Spiny Mussel*
    - *Atlantic Pigtoe (Critical Habitat)*

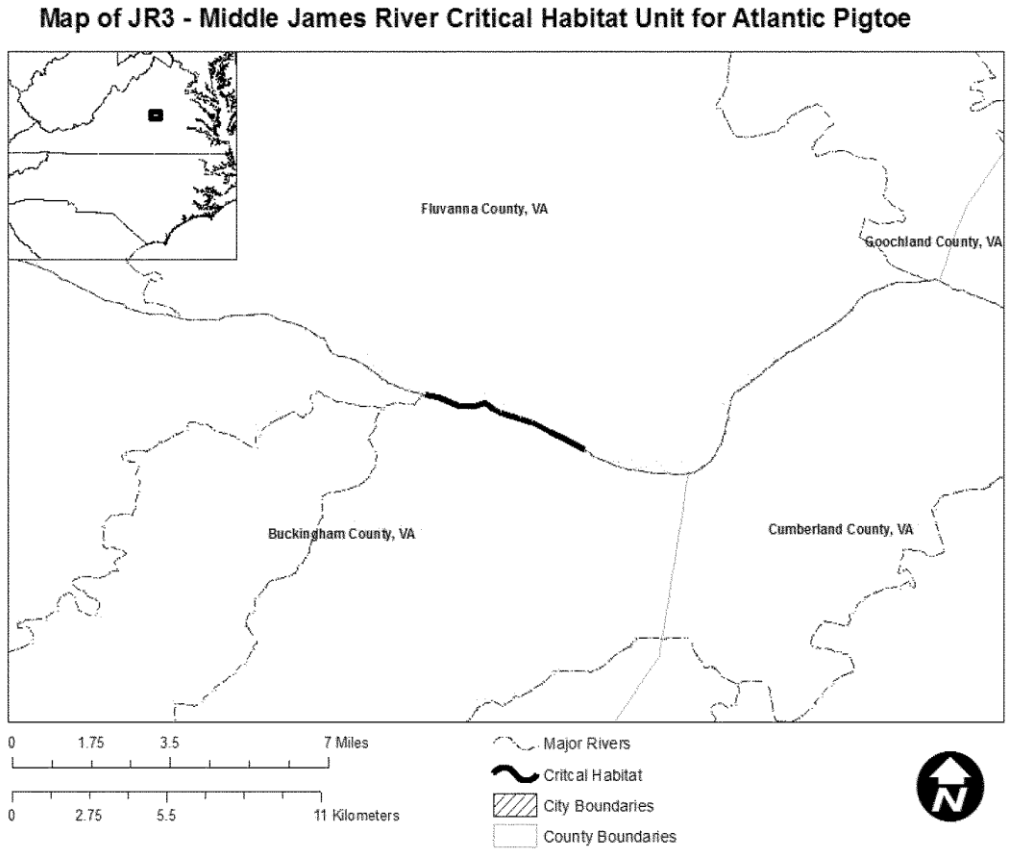
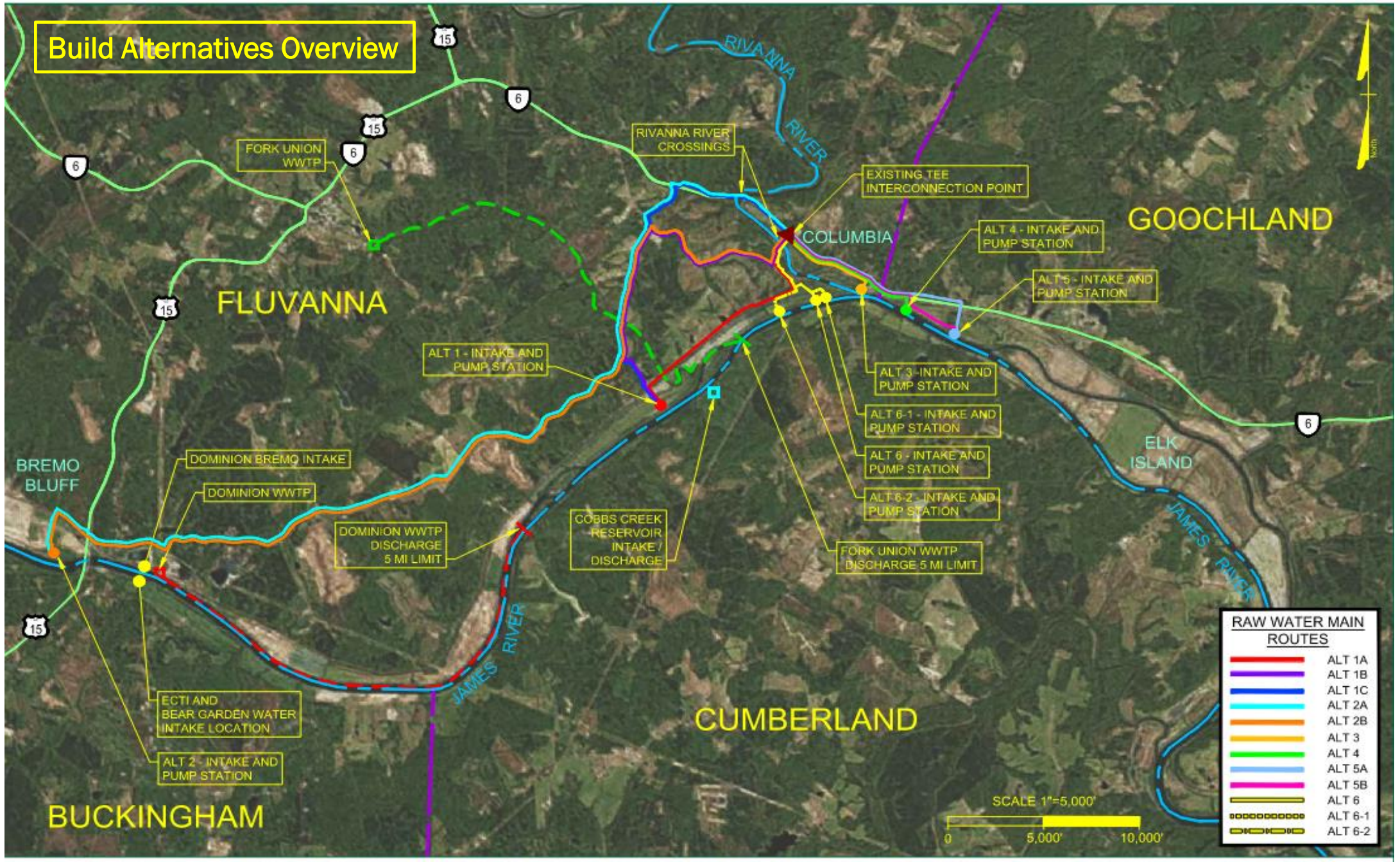


Image from federal register (50 CFR Part 17).

Summary of Alternatives Evaluated

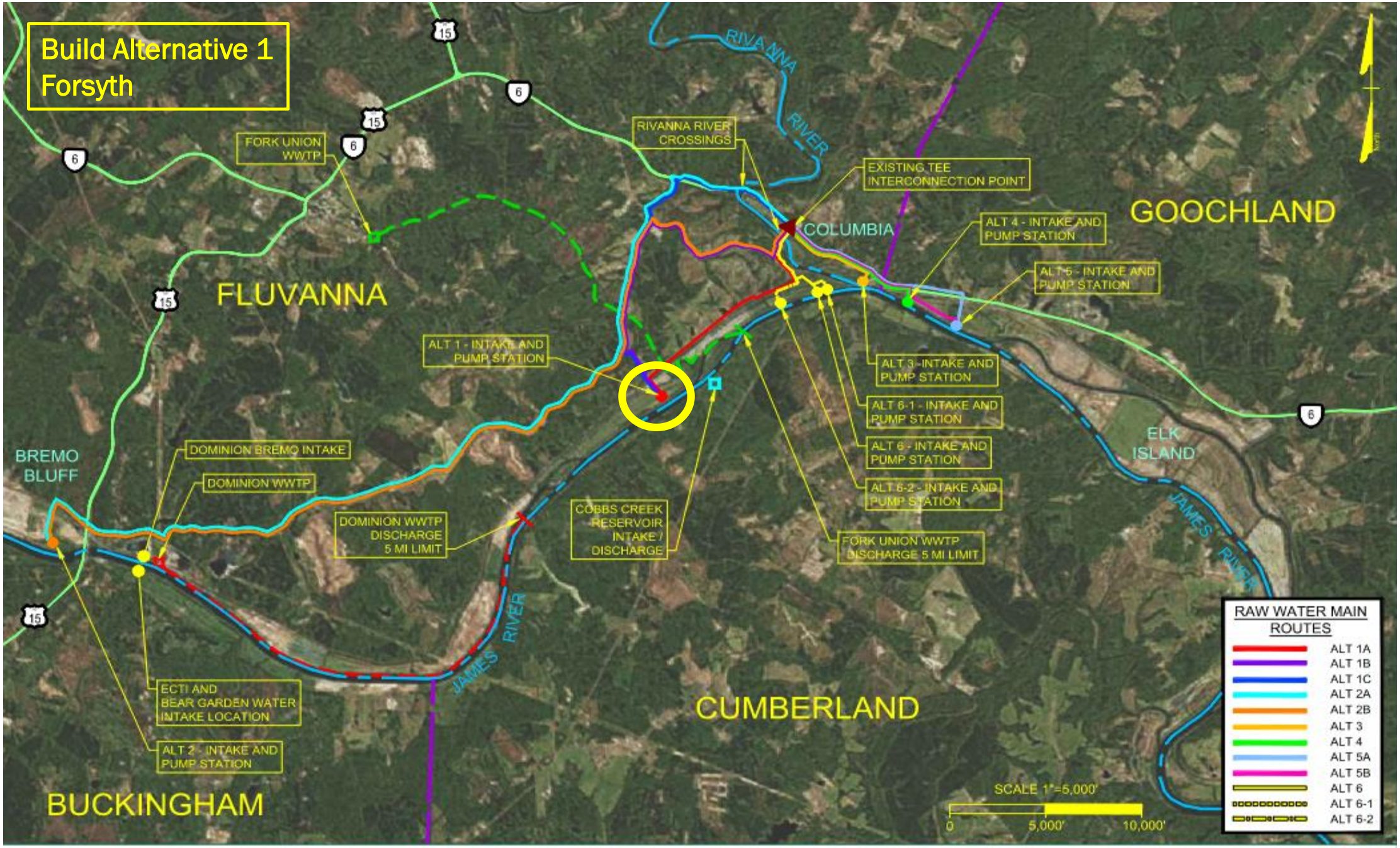
- Build Alternatives
  - *6 General Pump Station Locations - From Bremo Bluff to downstream of Columbia into Goochland County*
  - *12 Water Line Route Alternatives*
- 5 Alternative Water Sources
- No Action/No Permit Alternative



JRWA ALTERNATIVE INTAKE, PUMP STATION AND PIPELINE LOCATIONS

Alternative PS Locations

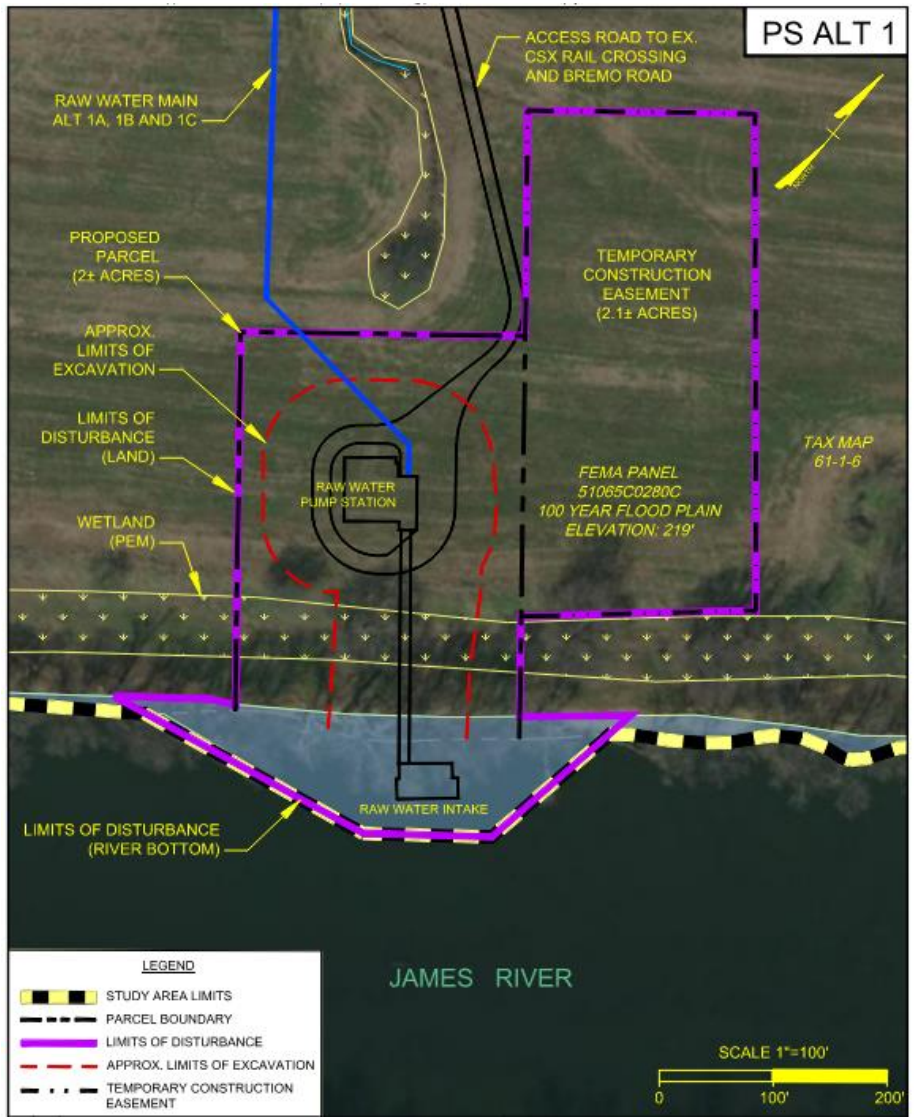
Alternative PS # - Name	General Location
1 - Forsyth	~2.3 miles upstream of James & Rivanna Confluence
2 - Bremo	~0.35 miles upstream of Rte 15 Bridge
3 - Columbia	At James & Rivanna Confluence
4 - Goochland 1	~1/2 miles downstream of Columbia Bridge
5 - Goochland 2	~1 mile downstream of Columbia Bridge
6 - Hammond 1	~0.4 miles upstream of James & Rivanna Confluence
6-1 - POF Farm	~0.4 miles upstream of James & Rivanna Confluence
6-2 - Hammond 2	~0.7 miles upstream of James & Rivanna Confluence



JRWA ALTERNATIVE INTAKE, PUMP STATION AND PIPELINE LOCATIONS

Build Alternative 1 – Pump Station

- Pump Station Location:
  - *Forsyth Property*
  - *Approx. 2.3 miles upstream of James & Rivanna River Confluence*
- Waterline Routes Evaluated:
  - *3 total*
  - *1A, 1B & 1C*
- Environmental Impacts



Build Alternative 1 - Water Line Alternatives

- Water Line Routes Evaluated: 3 total (1A, 1B & 1C)
- 1A – Follows south of CSX rail and crosses into Dominion easement to cross Rivanna south of Rte 6 to existing T interconnect
- 1B – Follows Bremo Road to Point of Fork Road and parallels Colonial Gas & Dominion easements to cross Rivanna south of Rte 6 to existing T interconnect
- 1C – Follows Bremo Road to Rte 6 and crosses Rivanna north of Rte 6 Bridge to existing T interconnect

Alternative Route	**1A Forsyth**	**1B Forsyth**	**1C Forsyth**
Pipeline Length (feet)	14,500	20,900	21,300
Pipeline Length (miles)	2.75	3.96	4.03
% Co-location w/ Existing Utility Corridors	19%	10%	0%
Pipeline Size (Inch Diameter)	24"	24"	24"
Estimated Easements Required	11	18	26

Build Alternative 1 - Environmental Impacts

- Temporary and Permanent Impacts Table

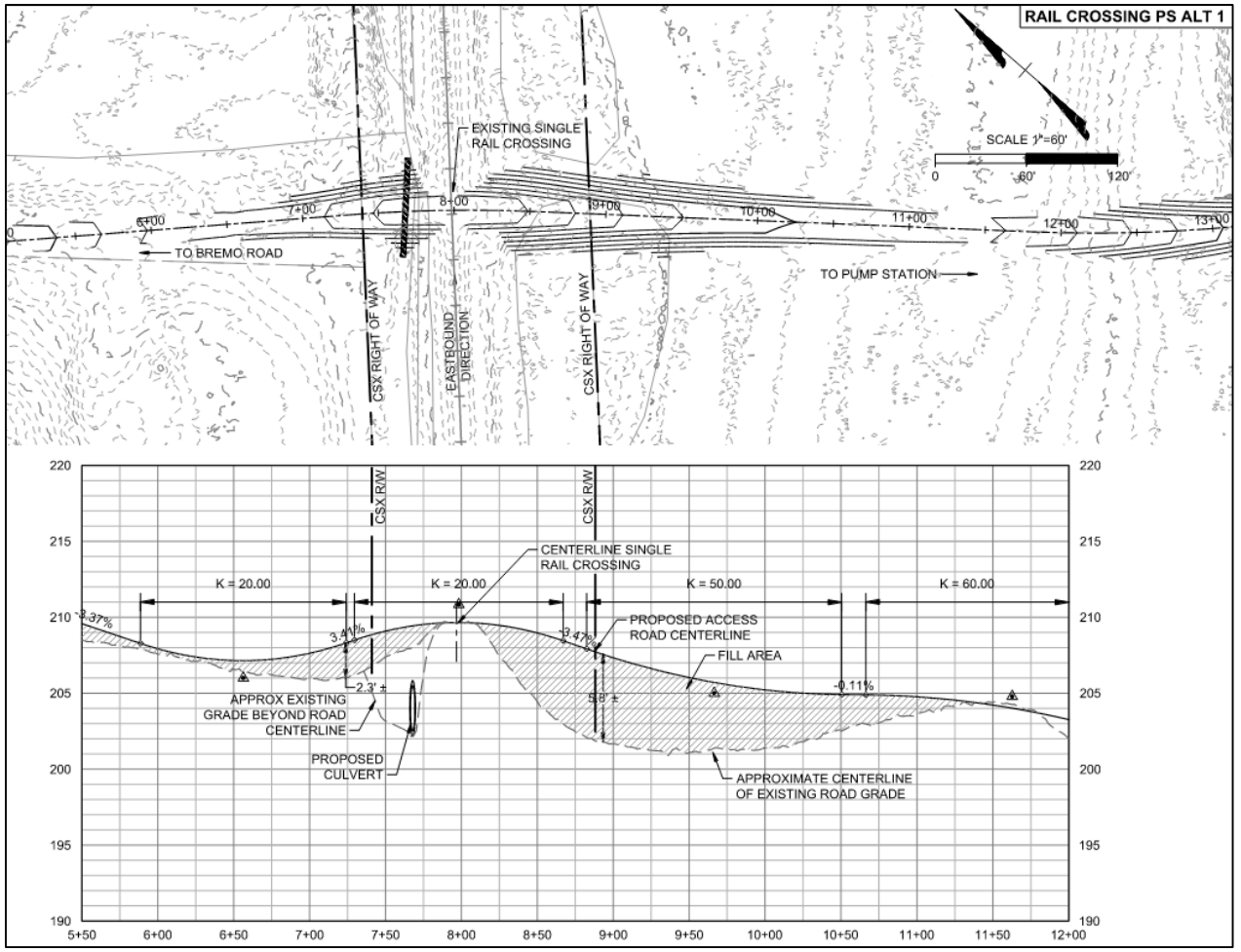
Alternative	1A Forsyth	1B Forsyth	1C Forsyth
Total Perm & Temp Wetland Impacts (Acres)	0.43	0.59	0.62
Total Perm & Temp Stream Impacts (Feet)	1,217	1,195	1,134
Permanent Wetland Impacts (Acres)	0.10	0.30	0.31
Permanent Stream Impacts (Feet)	287	287	287

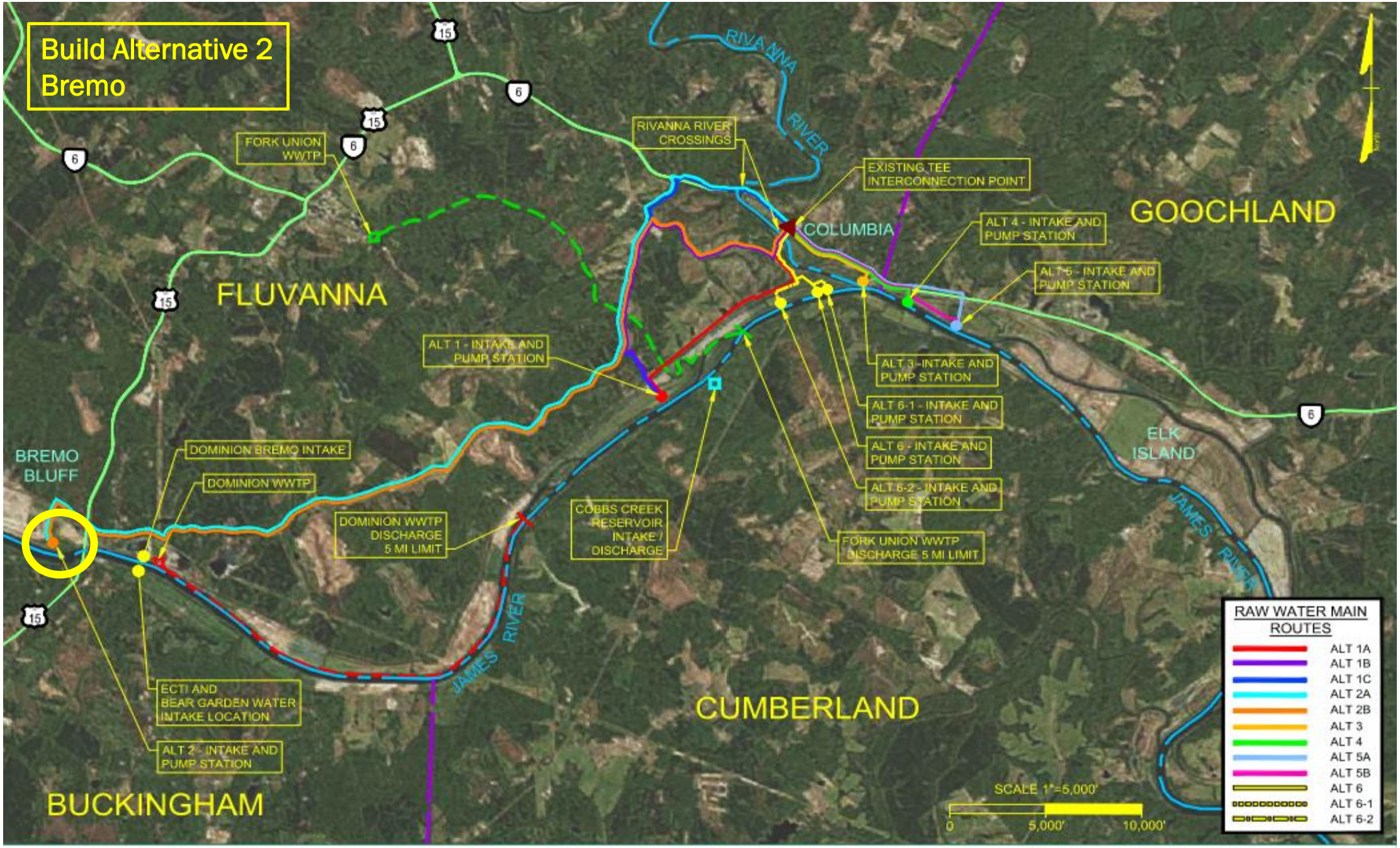
Other substantial impacts:

- Cultural Resources – 1A impacts the most previously recorded archaeological sites

Build Alternative 1 - Availability / Practicability

- Available and Practicable: NO
  - *Total Project Costs*
  - *CSX Coordination & Improvements in Right-of-Way*

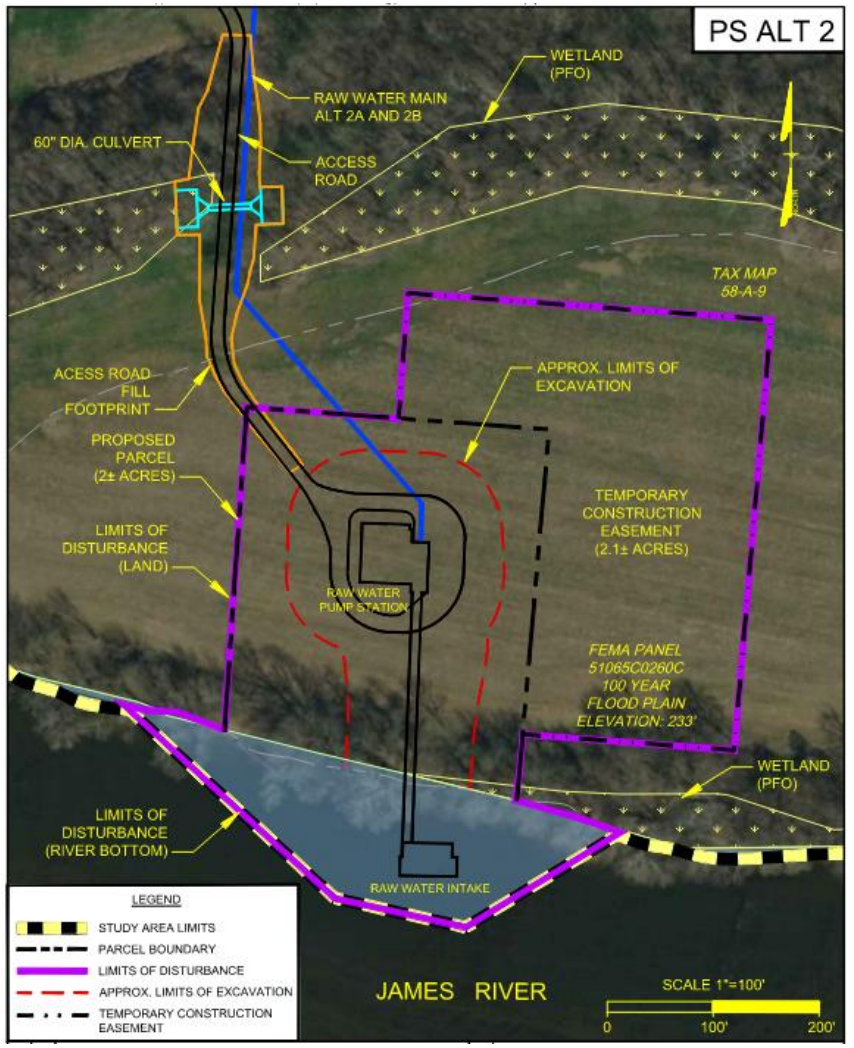




JRWA ALTERNATIVE INTAKE, PUMP STATION AND PIPELINE LOCATIONS

Build Alternative 2 – Pump Station

- Pump Station Location:
  - *Bremo Bluff*
  - *Approx. 0.35 miles upstream of US 15 Bridge*
- Waterline Routes Evaluated:
  - *2 total*
  - *2A & 2B*
- Environmental Impacts



Build Alternative 2 - Water Line Alternatives

- Water Line Routes Evaluated: 2 Total (2A & 2B)
- 2A – Follows Bremo Road to Rte 6 and crosses Rivanna north of Rte 6 Bridge to existing T interconnect
- 2B – Follows Bremo Road to Point of Fork Road and parallels Colonial Gas & Dominion easements to cross Rivanna south of Rte 6 to existing T interconnect

Alternative Route	**2A Bremo**	**2B Bremo**
Pipeline Length (feet)	55,500	55,200
Pipeline Length (miles)	10.51	10.45
% Co-location w/ Existing Utility Corridors	0%	4%
Pipeline Size (Inch Diameter)	30"	30"
Estimated Easements Required	81	73

Build Alternative 2 - Environmental Impacts

- Temporary and Permanent Impacts Table

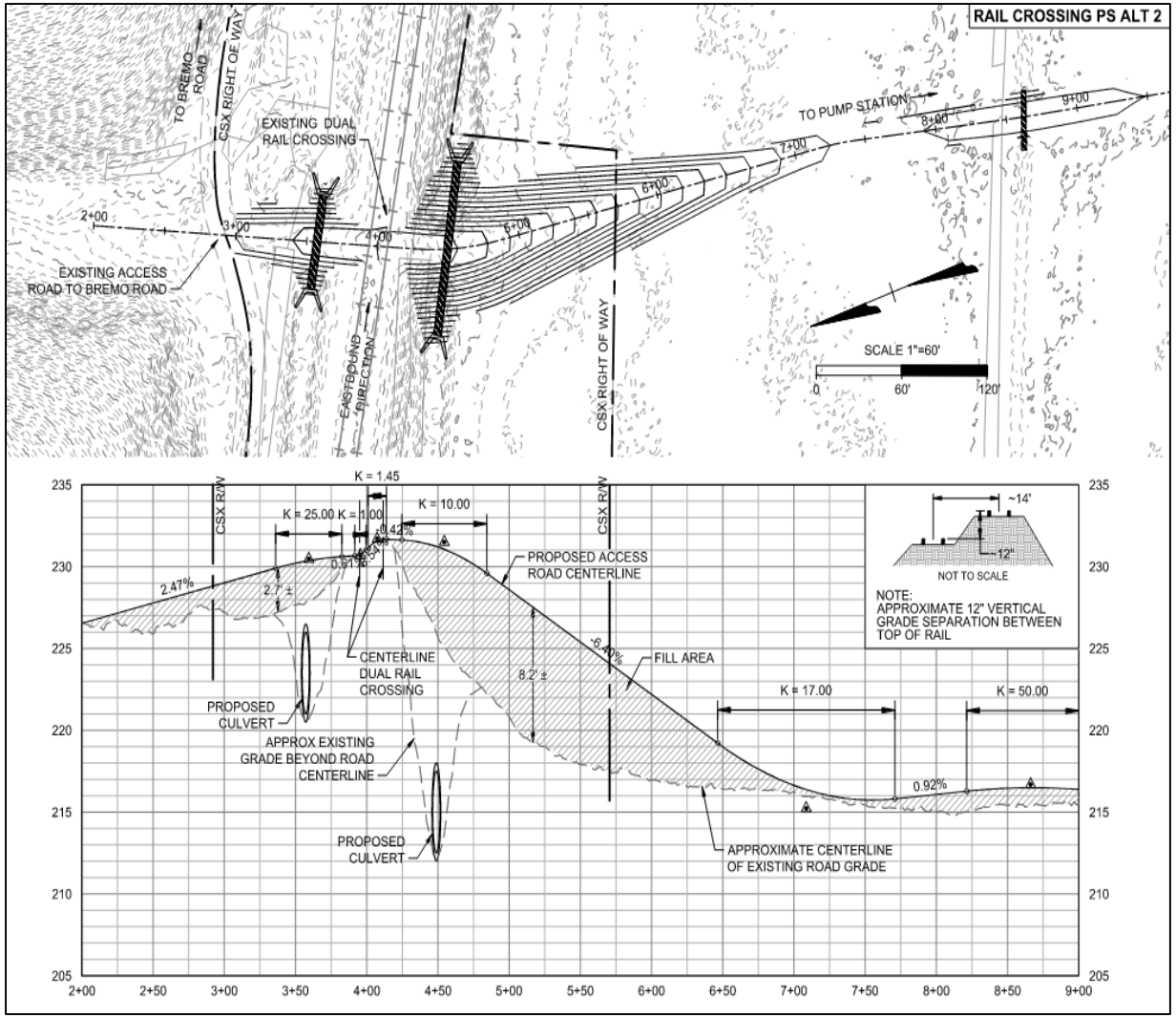
Alternative	2A Bremo	2B Bremo
Total Perm & Temp Wetland Impacts (Acres)	0.60	0.57
Total Perm & Temp Stream Impacts (Feet)	1,272	1,297
Permanent Wetland Impacts (Acres)	0.50	0.49
Permanent Stream Impacts (Feet)	377	341

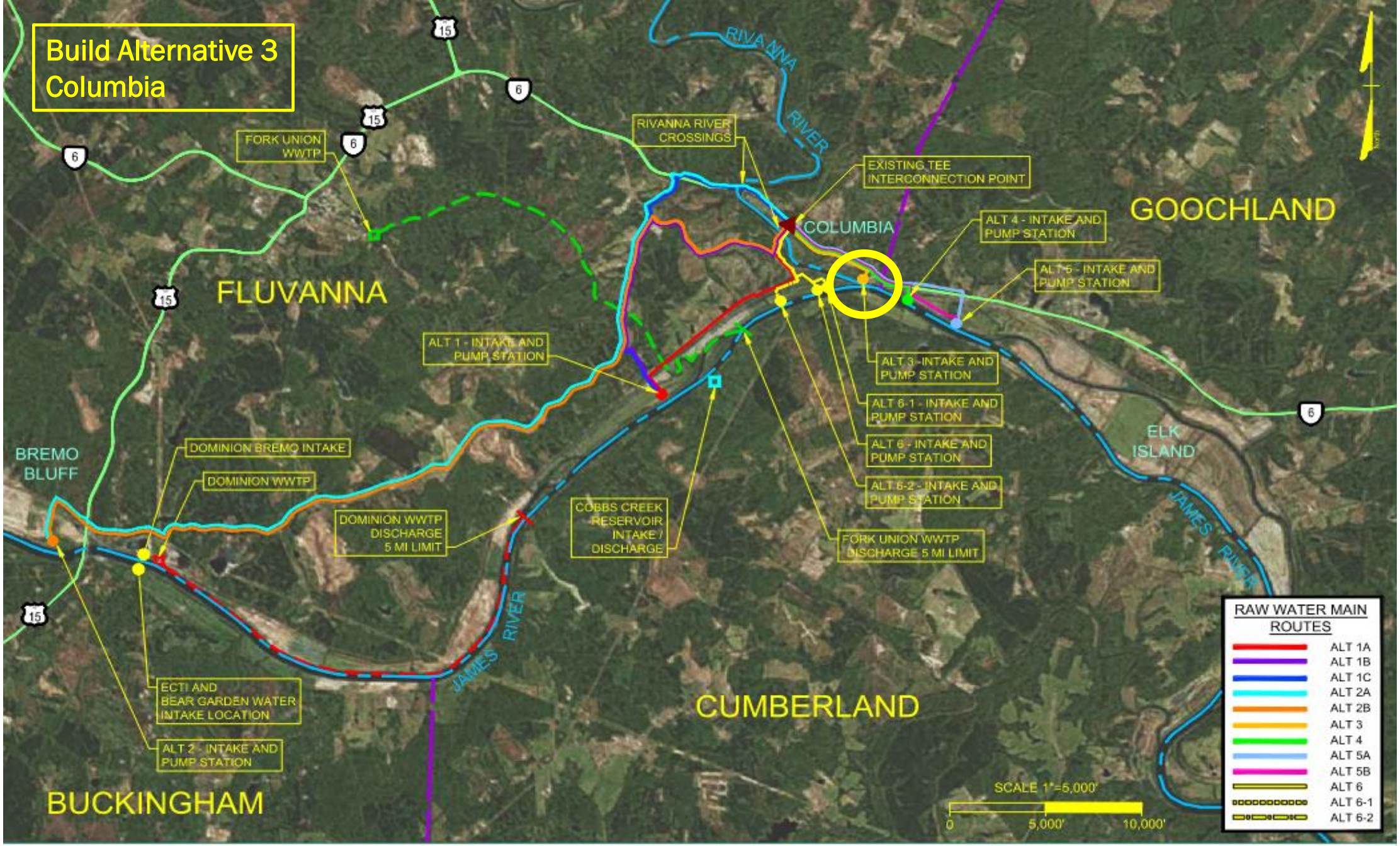
Other substantial impacts:

- T&E Species – Proposed Atlantic Pigtoe Critical Habitat

Build Alternative 2 - Availability / Practicability

- Available and Practicable: NO
  - *Project Costs*
    - Construction & Easements
  - *Dual Rail Crossing*
  - *CSX Coordination & Improvements in Right-of-Way*
  - *Construct in VDOT Road (Bremo Road) through Bremo*

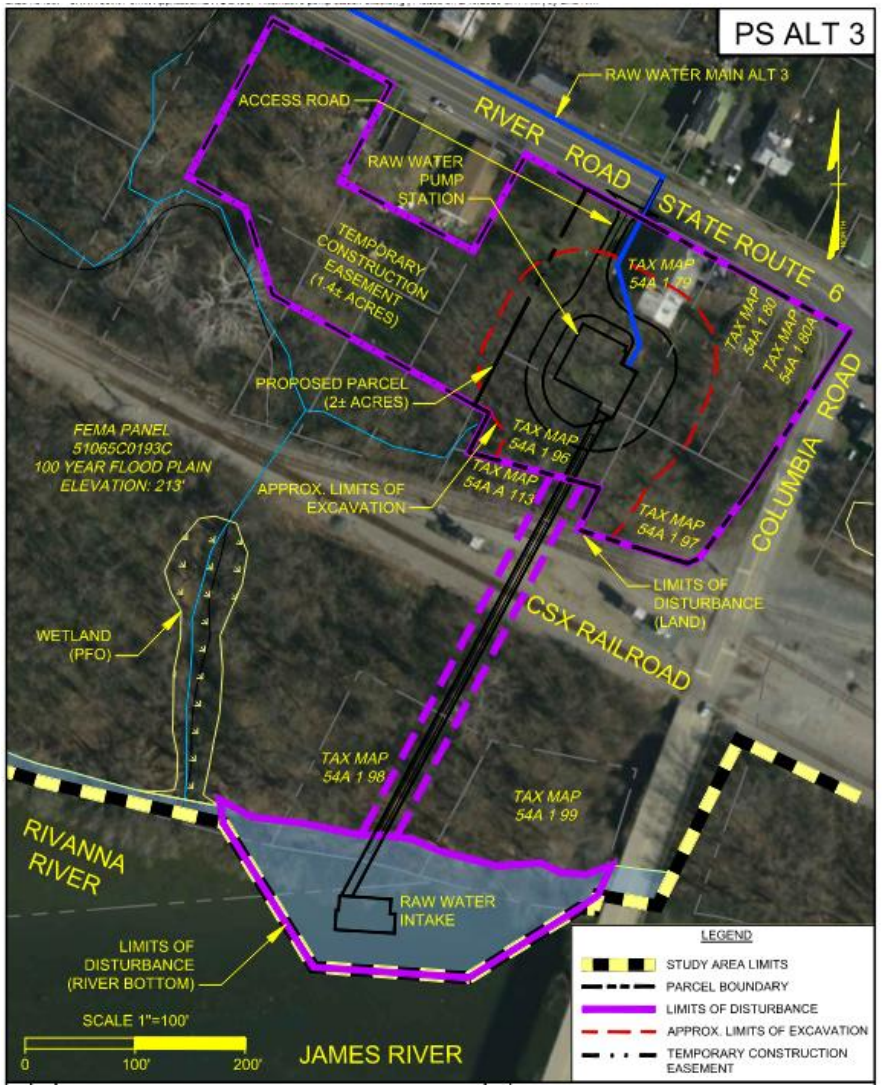




JRWA ALTERNATIVE INTAKE, PUMP STATION AND PIPELINE LOCATIONS

Build Alternative 3 – Pump Station

- Pump Station Location:
  - *Columbia Location*
  - *Adjacent to CSX Rail Line, Rte 6 & Columbia Road*
  - *At the James & Rivanna River Confluence*
  - *Multiple Property Owners Including Occupied Buildings*
  - *Columbia Historic District*
- Waterline Route Evaluated:
  - *1*
- Environmental Impacts



Build Alternative 3 - Water Line Alternative

- Water Line Routes Evaluated: 1
- Pipe will need to be constructed in VDOT Roadway through Columbia
- Follows Rte 6 west through Columbia to existing T interconnect

Alternative Route	**3 Columbia**
Pipeline Length (feet)	5,300
Pipeline Length (miles)	1.00
% Co-location w/ Existing Utility Corridors	0%
Pipeline Size (Inch Diameter)	24"
Estimated Easements Required	16

Build Alternative 3 - Environmental Impacts

- Temporary and Permanent Impacts Table

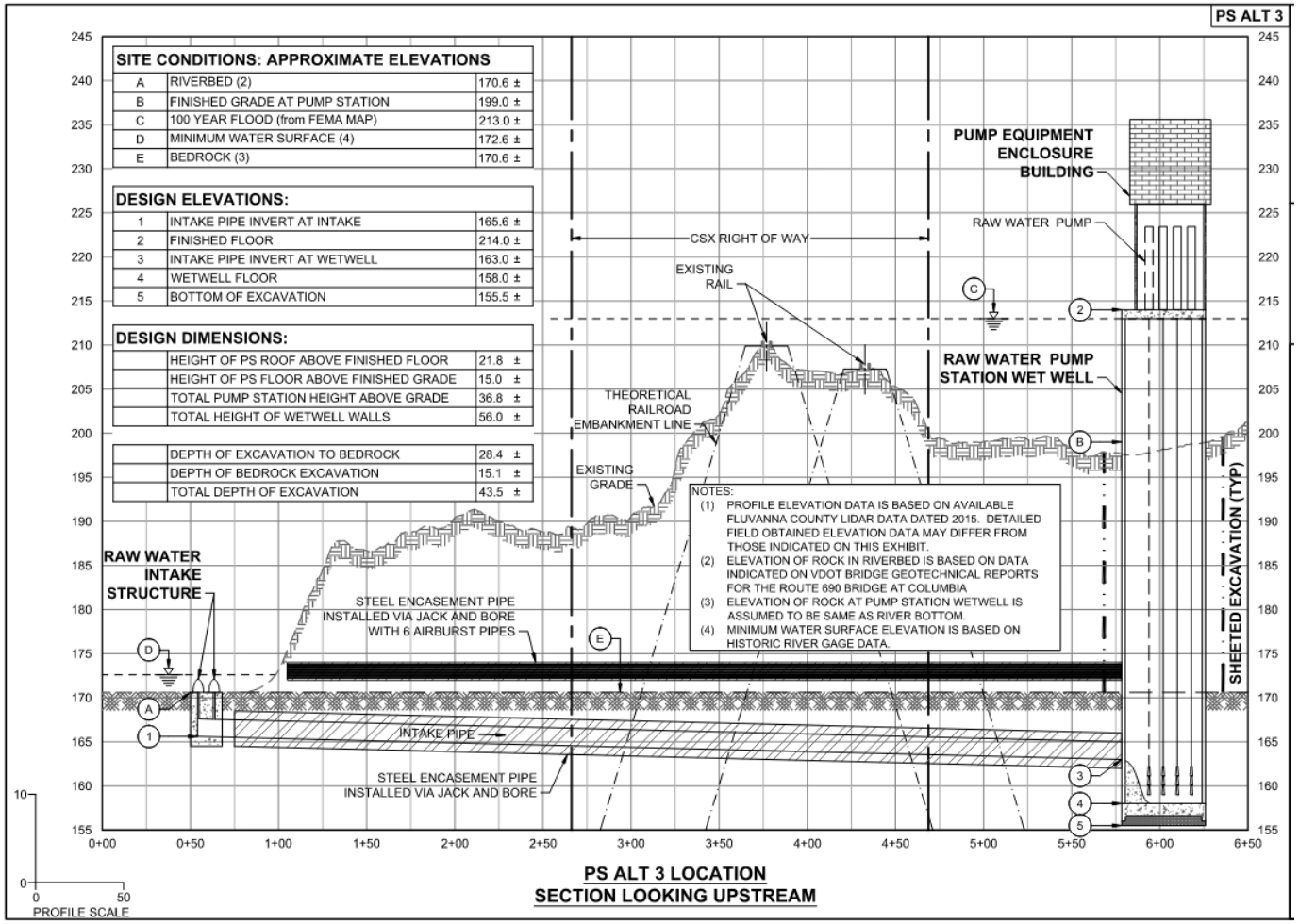
Alternative	**3 Columbia**
Total Perm & Temp Wetland Impacts (Acres)	0
Total Perm & Temp Stream Impacts (Feet)	378
Permanent Wetland Impacts (Acres)	0
Permanent Stream Impacts (Feet)	64

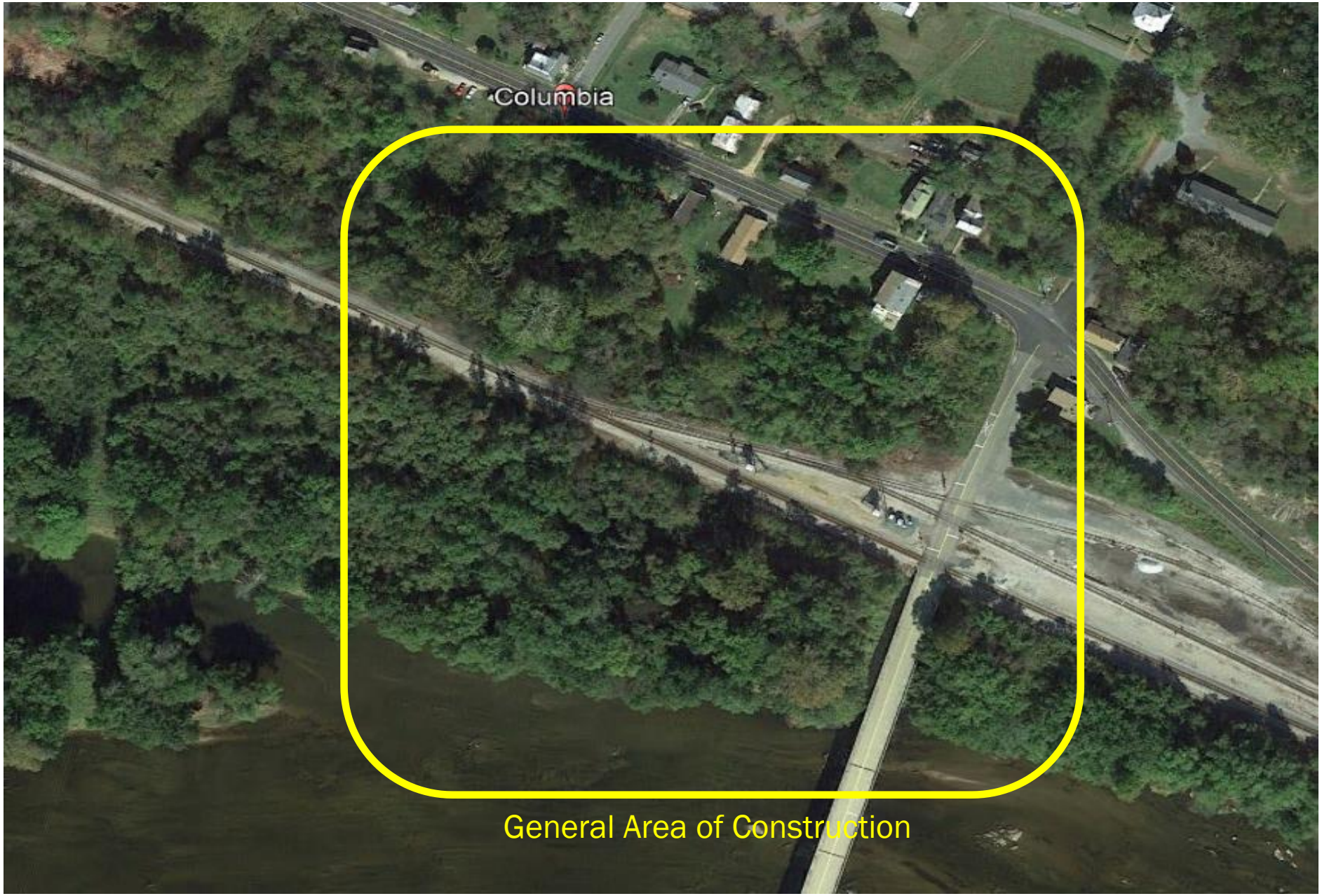
Other substantial impacts:

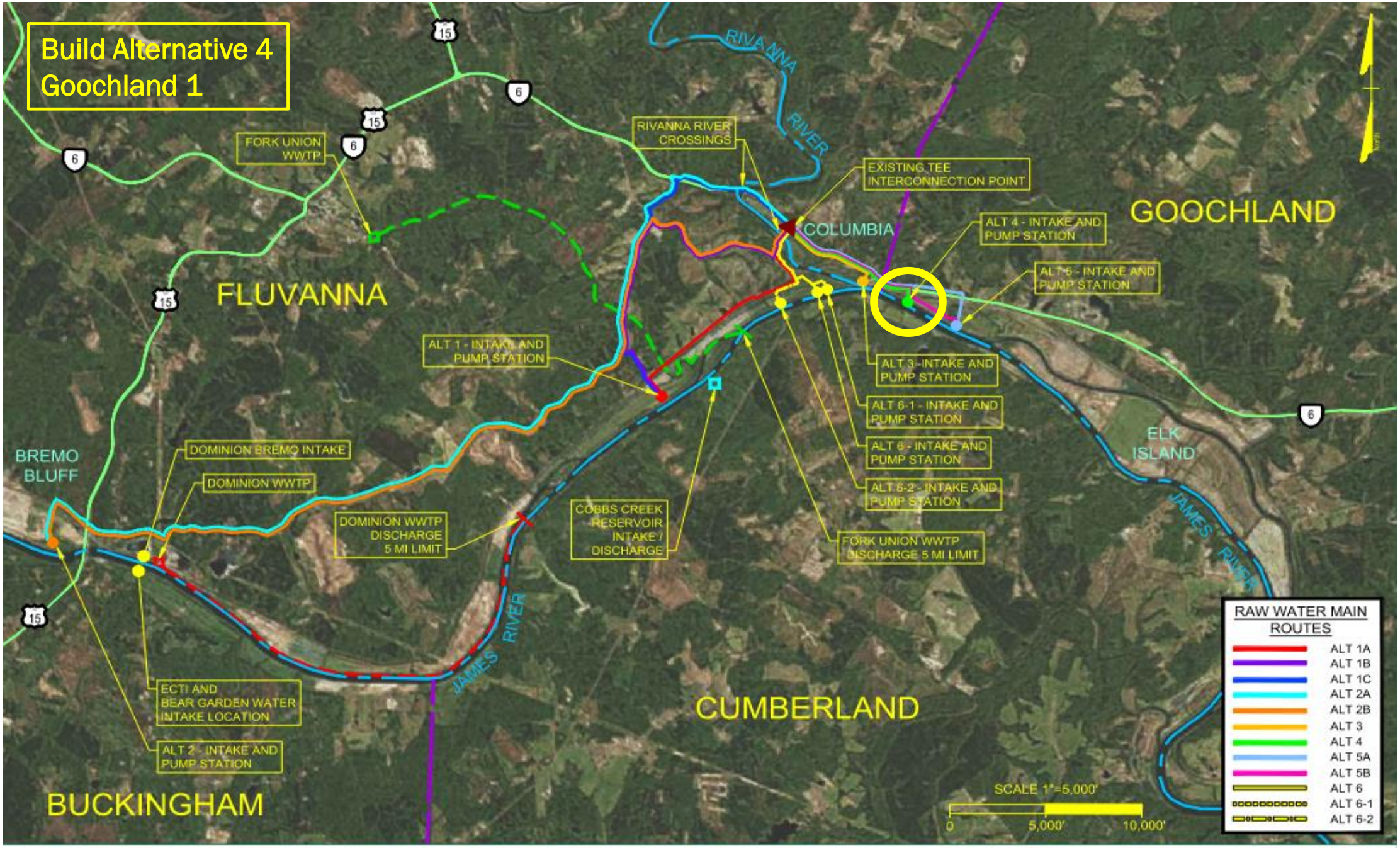
- Cultural Resources – pose greatest potential for visual impact to architectural resources

Build Alternative 3 - Availability / Practicability

- Available and Practicable: NO
  - *Constructability Issues*
    - Rock Bore for Intake
    - Adjacent to CSX & VDOT R/W
    - Construction Access for intake
  - *Total Project Costs*
  - *CSX Coordination*
  - *Construct in VDOT Road (Rte 6) through Columbia*
  - *Viewshed Impacts of PS in Historic District (~37' tall structure)*
  - *Future maintenance access to intake*
  - *Water Quality*



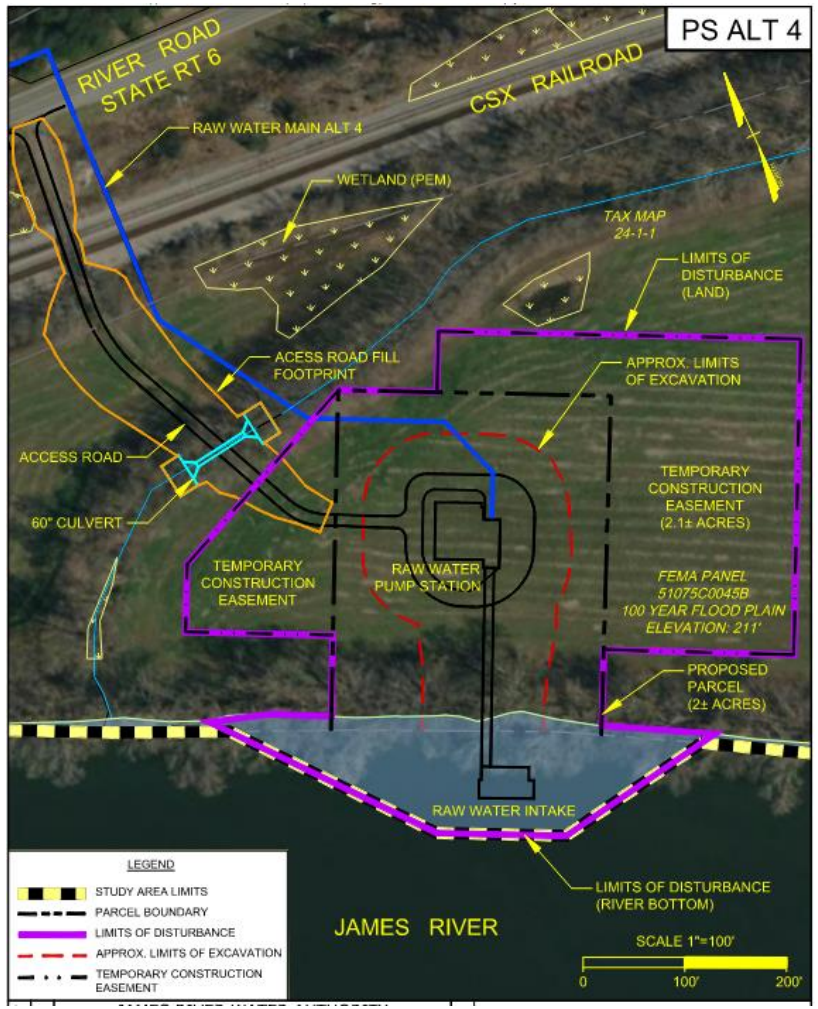

Columbia
General Area of Construction



JRWA ALTERNATIVE INTAKE, PUMP STATION AND PIPELINE LOCATIONS

Build Alternative 4 – Pump Station

- Pump Station Location:
  - *Goochland 1 Property*
  - *Approx. 1/2 mile downstream Columbia Bridge*
  - *Located in Goochland County*
- Waterline Routes Evaluated:
  - *1*
- Environmental Impacts



Build Alternative 4 - Water Line Alternative

- Water Line Routes Evaluated: 1
- Pipe will need to be constructed in VDOT Roadway through Columbia
- Follows Rte 6 west through Columbia to existing T interconnect

Alternative Route	**4 Goochland 1**
Pipeline Length (feet)	8,500
Pipeline Length (miles)	1.61
% Co-location w/ Existing Utility Corridors	0%
Pipeline Size (Inch Diameter)	24"
Estimated Easements Required	18

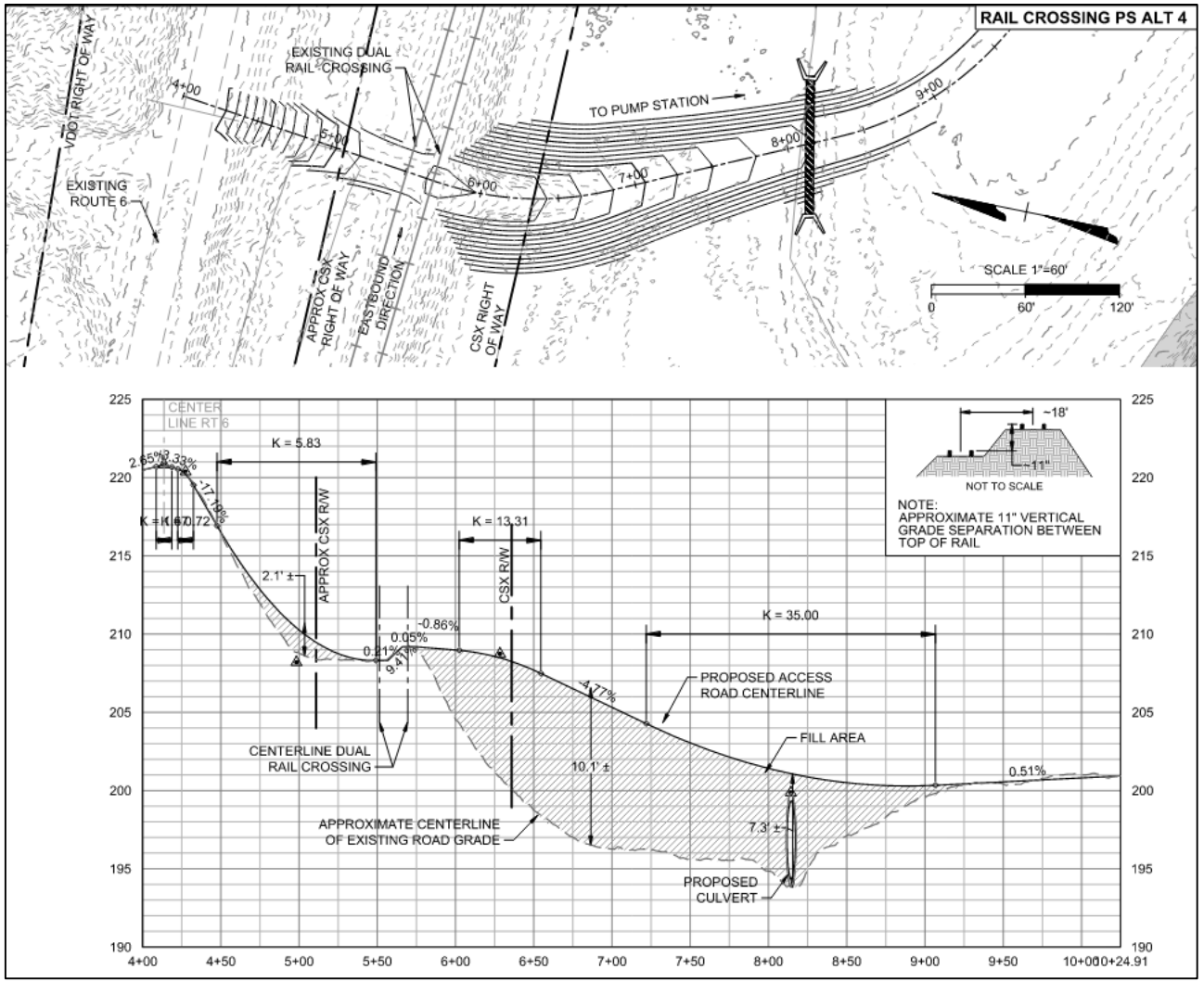
Build Alternative 4 - Environmental Impacts

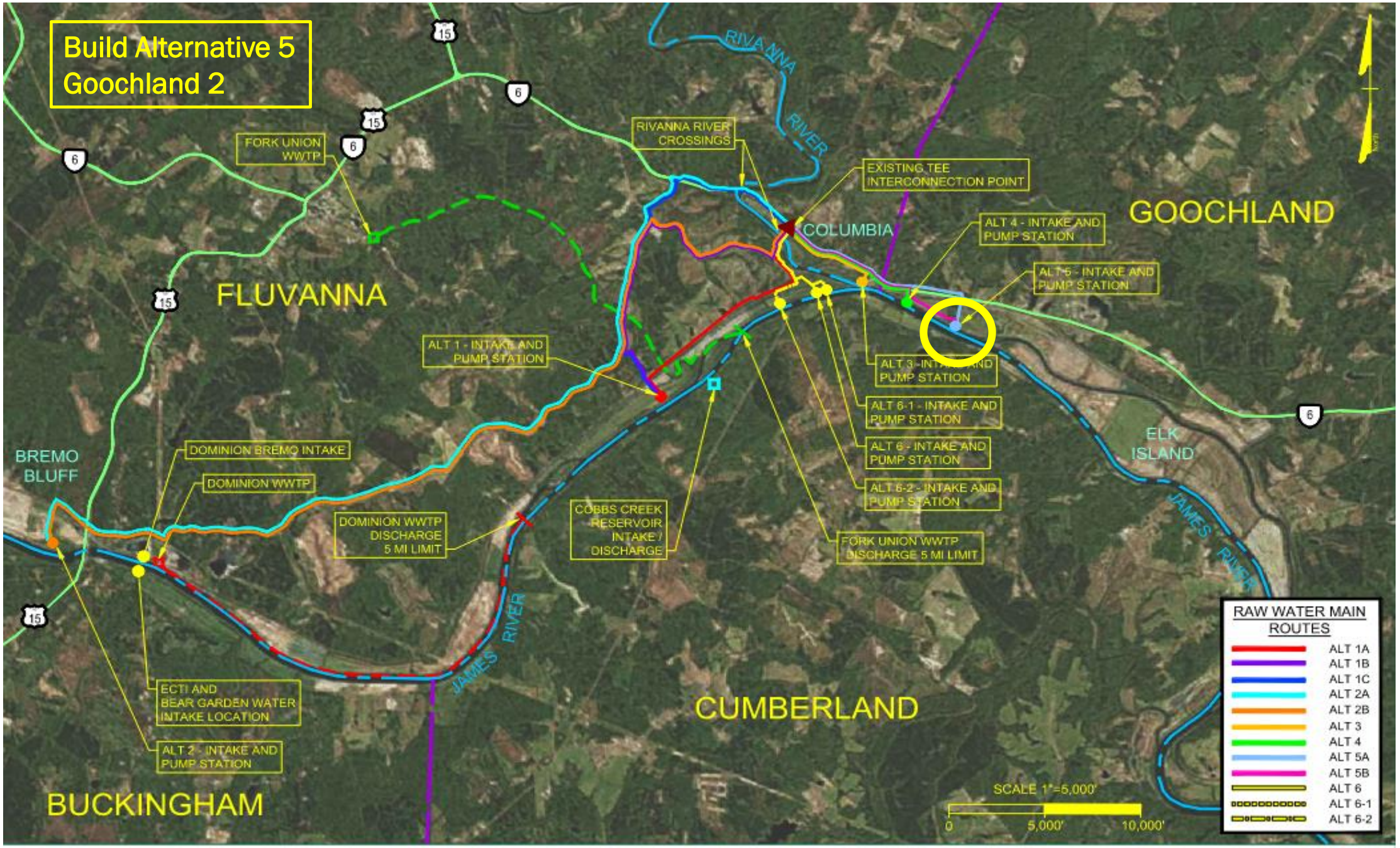
- Temporary and Permanent Impacts Table

Alternative	**4 Goochland 1**
Total Perm & Temp Wetland Impacts (Acres)	0.05
Total Perm & Temp Stream Impacts (Feet)	673
Permanent Wetland Impacts (Acres)	0.05
Permanent Stream Impacts (Feet)	163

Build Alternative 4 - Availability / Practicability

- Available and Practicable: NO
  - *Construction Costs*
  - *Constructability Issues*
  - *Private Dual Rail Crossing*
  - *CSX Coordination & Improvements in Right-of-Way*
  - *Construct in VDOT Road (Rte 6) through Columbia*
  - *Water quality*

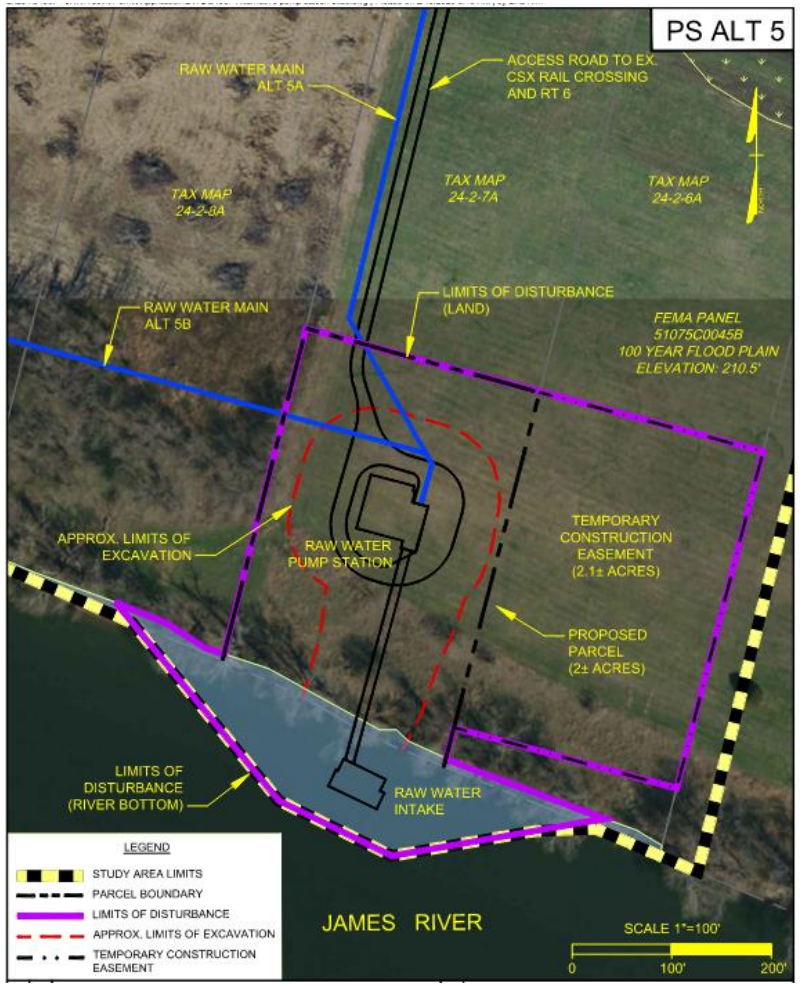




JRWA ALTERNATIVE INTAKE, PUMP STATION AND PIPELINE LOCATIONS

Build Alternative 5 – Pump Station

- Pump Station Location:
  - *Goochland 2 Property*
  - *Approx. 1 mile downstream of Columbia Bridge*
  - *Located in Goochland County*
- Waterline Routes Evaluated:
  - *2 (5A & 5B)*
- Environmental Impacts



Build Alternative 5 - Water Line Alternatives

- Water Line Routes Evaluated: 2 (5A & 5B)
- 5A – Will route north to cross CSX & Rte 6 and then west through Columbia to existing T interconnection
- 5B – Will route west parallel to James River and then north to cross CSX & Rte 6 to existing T interconnection
- Pipe will need to be constructed in VDOT Roadway through Columbia

Alternative Route	**5A Goochland 2**	**5B Goochland 2**
Pipeline Length (feet)	12,200	11,200
Pipeline Length (miles)	2.31	2.12
% Co-location w/ Existing Utility Corridors	0%	0%
Pipeline Size (Inch Diameter)	24"	24"
Estimated Easements Required	19	23

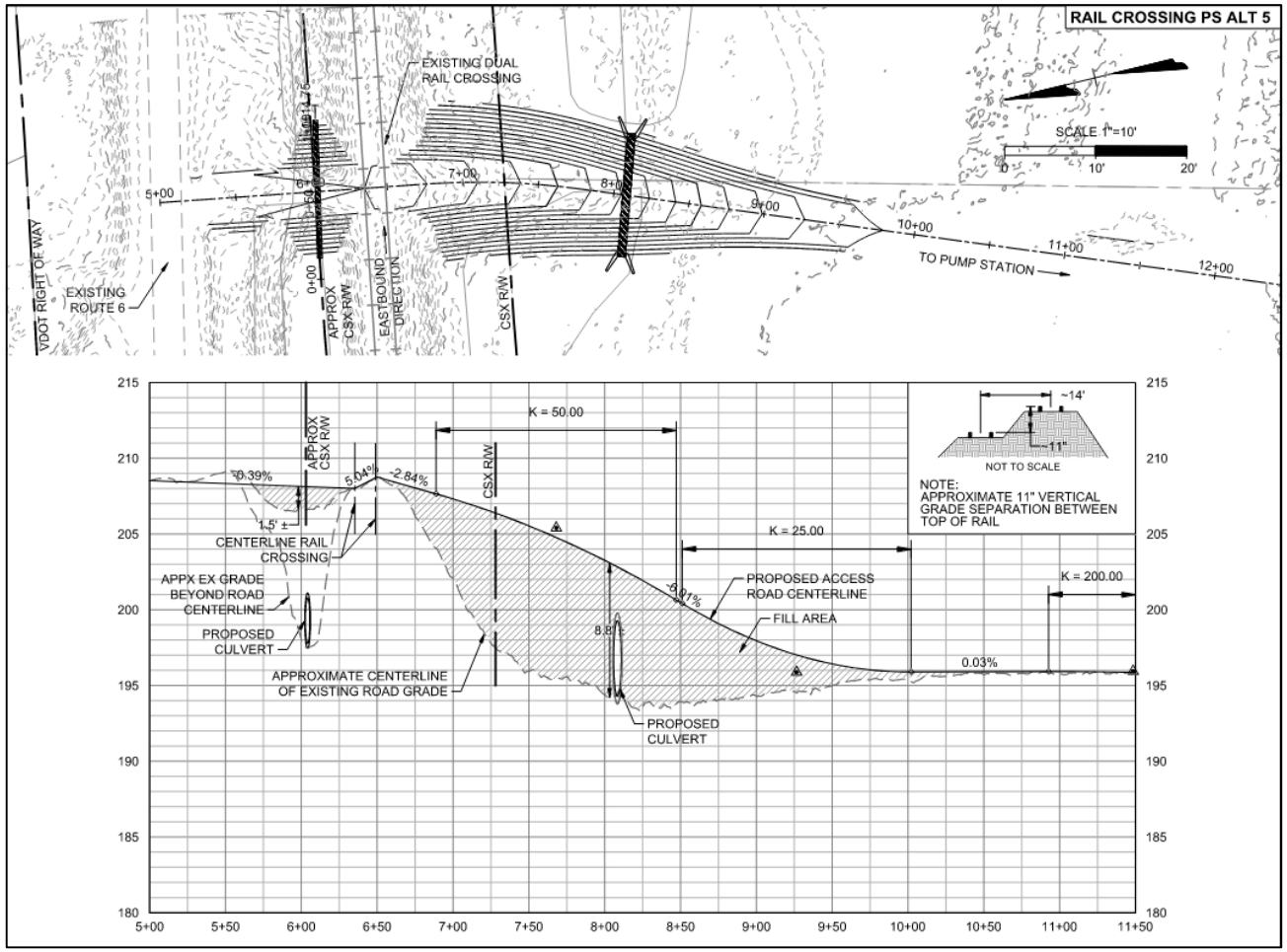
Build Alternative 5 - Environmental Impacts

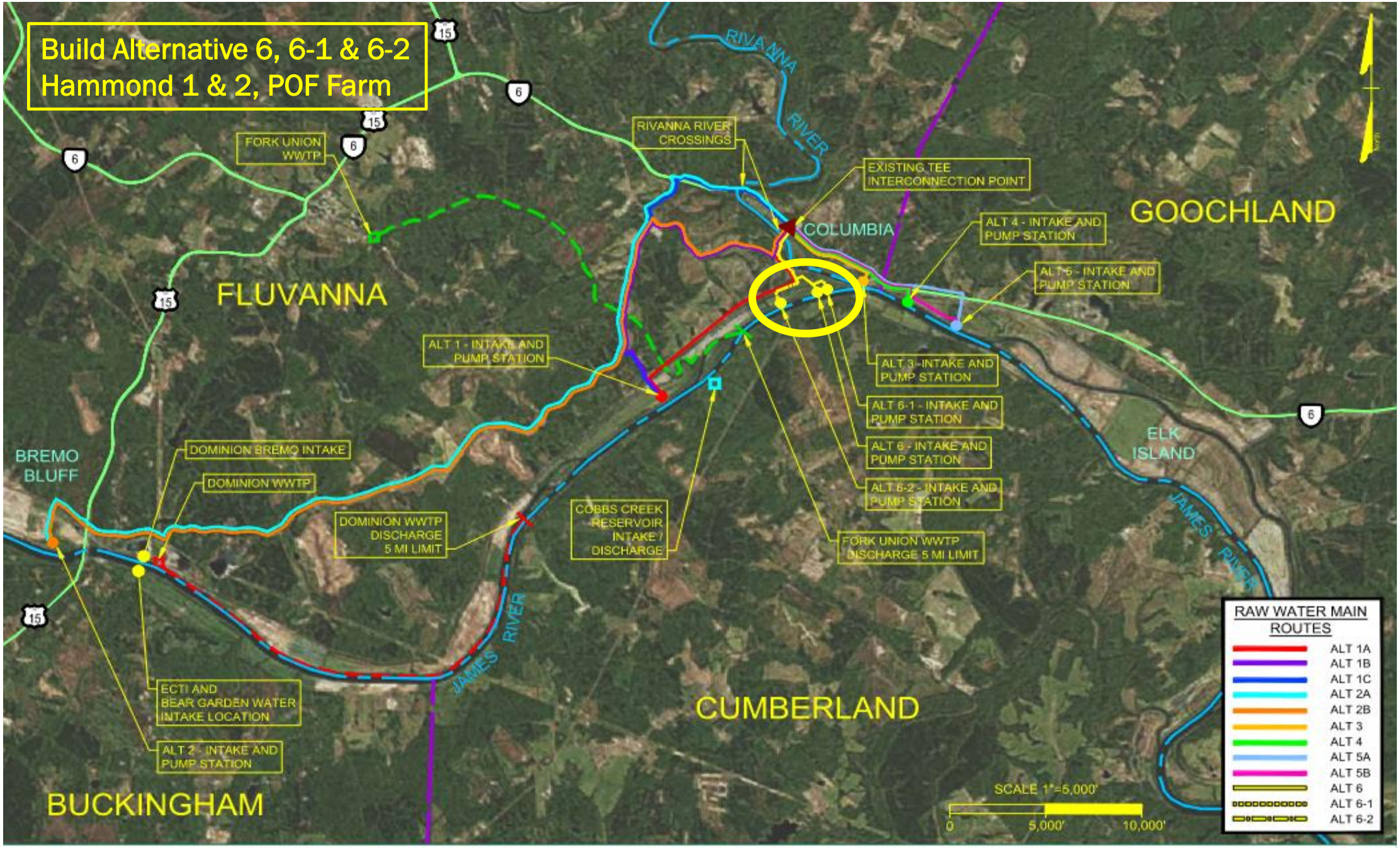
- Temporary and Permanent Impacts Table

Alternative	**5A Goochland 2**	**5B Goochland 2**
Total Perm & Temp Wetland Impacts (Acres)	0.32	0.20
Total Perm & Temp Stream Impacts (Feet)	642	638
Permanent Wetland Impacts (Acres)	0.30	0.20
Permanent Stream Impacts (Feet)	149	149

Build Alternative 5 - Availability / Practicability

- Available and Practicable: NO
  - *Construction Costs*
  - *Constructability Issues*
  - *Private Dual Rail Crossing*
  - *CSX Coordination & Improvements in Right-of-Way*
  - *Construct in VDOT (Rte 6) Road through Columbia*
  - *Water quality*

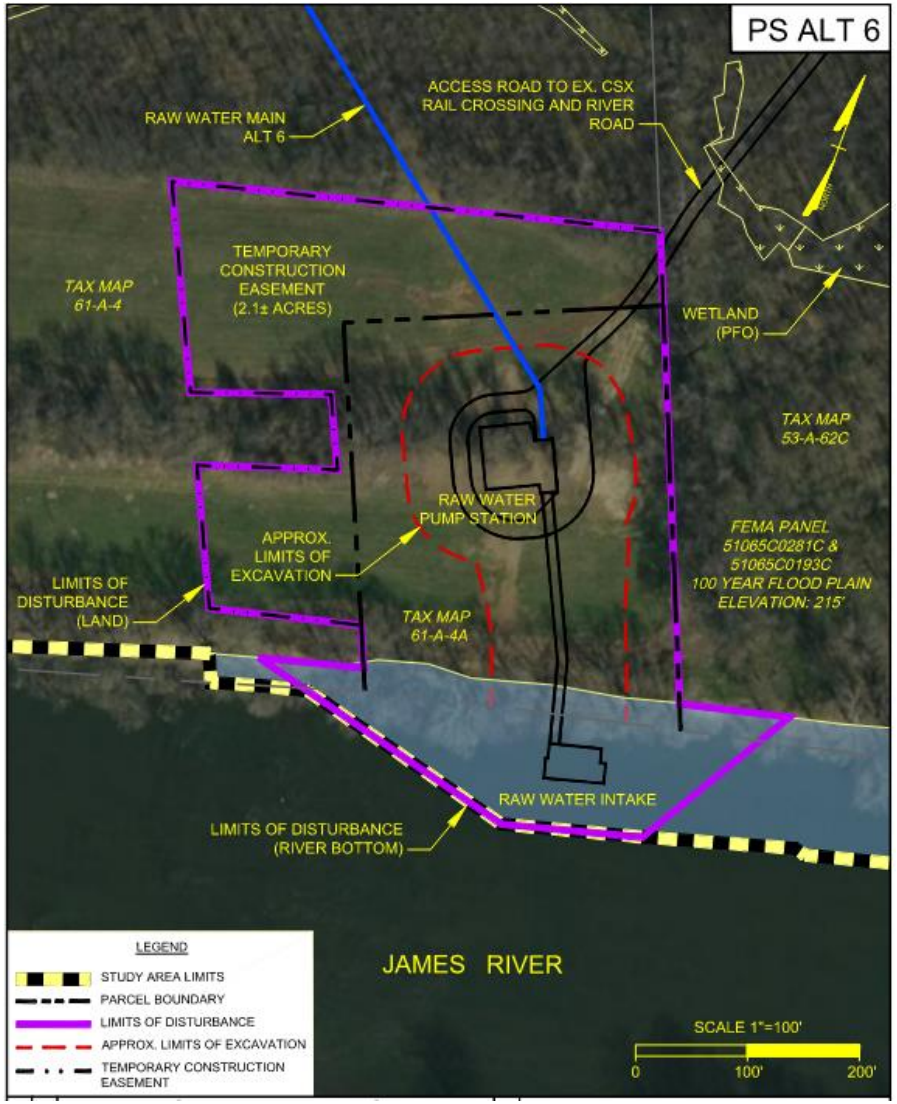




JRWA ALTERNATIVE INTAKE, PUMP STATION AND PIPELINE LOCATIONS

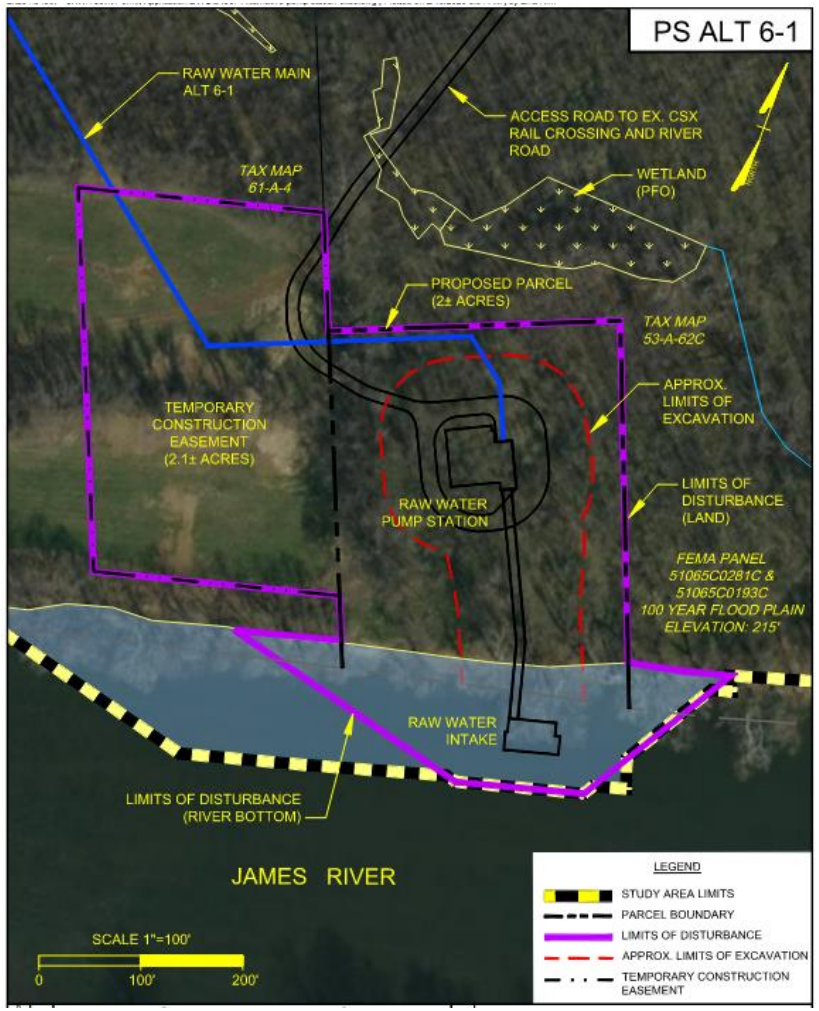
Build Alternative 6 – Pump Station
(Proposed Project Location)

- Pump Station Location:
  - *Hammond 1 Property (JRWA Owned)*
  - *Approx. 0.4 miles upstream of James & Rivanna River Confluence*
- Waterline Routes Evaluated:
  - *1 total*
- Environmental Impacts



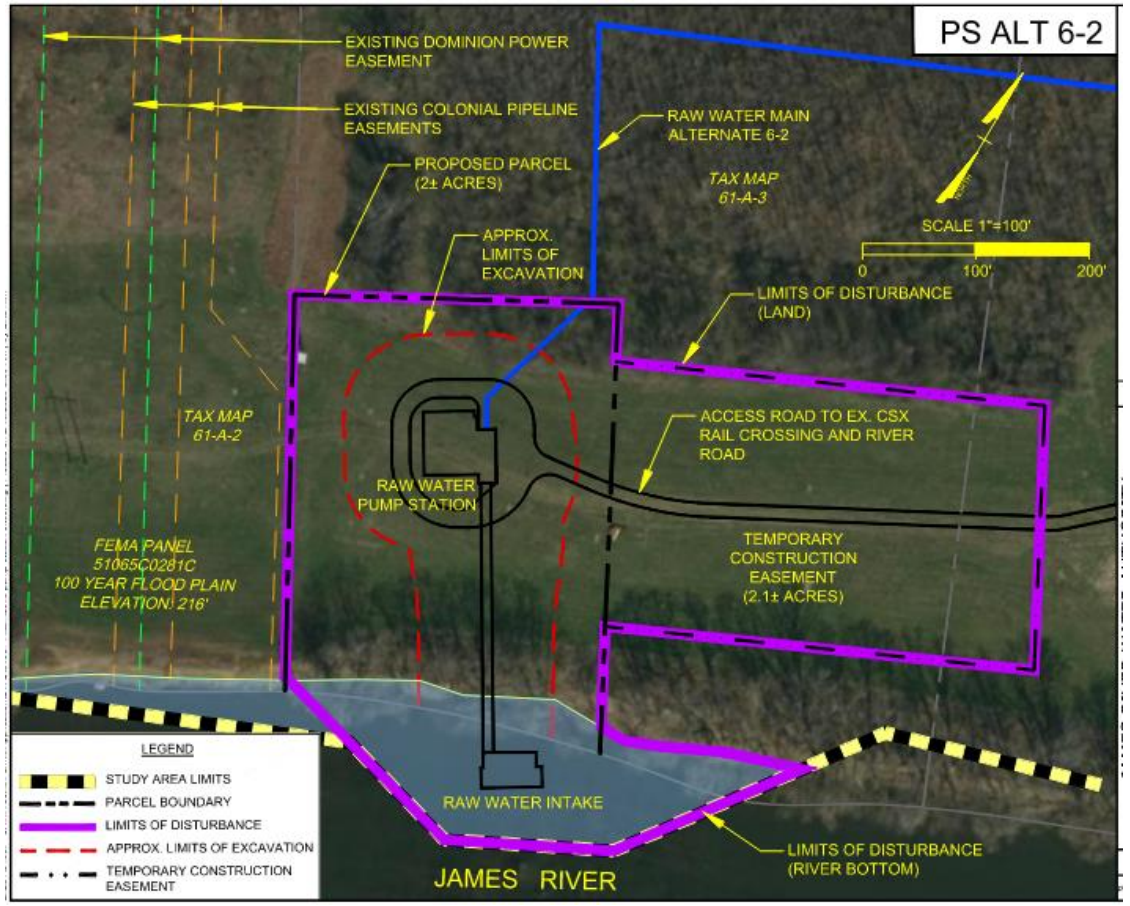
Build Alternative 6-1 – Pump Station

- Pump Station Location:
  - *Point of Fork Farm LP (POF Farm) Property*
  - *Approx. 0.4 miles upstream of James & Rivanna River Confluence*
- Waterline Routes Evaluated:
  - *1 total*
- Environmental Impacts



Build Alternative 6-2 – Pump Station

- Pump Station Location:
  - *Hammond 2 Property*
  - *Approx. 0.7 miles upstream of James & Rivanna River Confluence*
  - *Adjacent to Colonial Gas Pipeline River Crossing*
- Waterline Routes Evaluated:
  - *1 total*
- Environmental Impacts



Build Alternative 6, 6-1 & 6-2 - Water Line Alternatives

- Water Line Routes Evaluated: 3 slight variations due to PS locations (6, 6-1, 6-2)
- 6 & 6-1 follow the same routes. Routes northwest and crosses CSX line into Dominion easement and then routes northeast adjacent to Dominion and Colonial Gas Pipeline easement to cross Rivanna and tie to existing T interconnection.
- 6-2 routes northeast south of the CSX rail line and then northwest and crosses CSX line into Dominion easement and then routes northeast adjacent to Dominion and Colonial Gas Pipeline easement to cross Rivanna and tie to existing T interconnection.

Alternative Route	**6 Hammond 1**	**6-1 POF Farm**	**6-2 Hammond 2**
Pipeline Length (feet)	5,100	5,400	5,100
Pipeline Length (miles)	0.97	1.02	0.97
% Co-location w/ Existing Utility Corridors	60+%	60+%	60+%
Pipeline Size (Inch Diameter)	24"	24"	24"
Estimated Easements Required	5 (JRWA Owned)	6	6

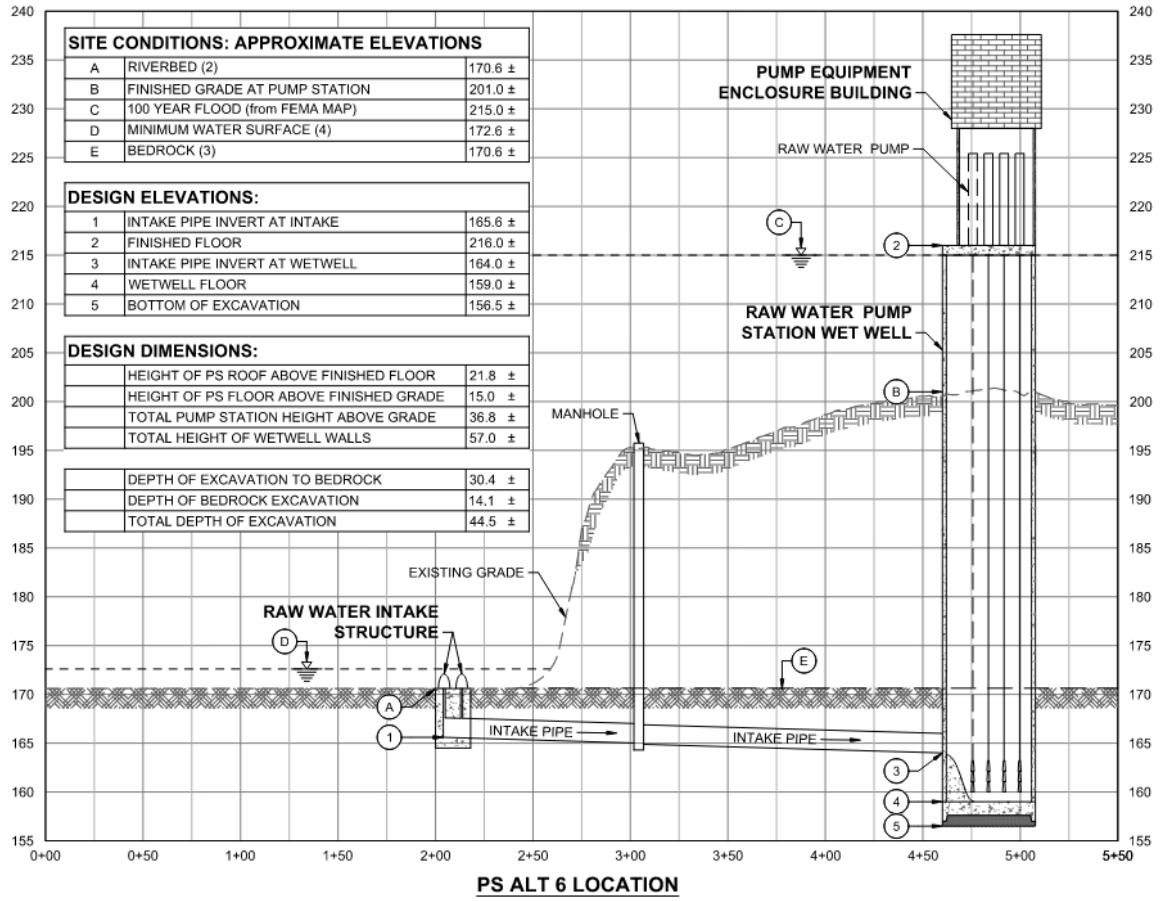
Build Alternative 6, 6-1 & 6-2 - Environmental Impacts

- Temporary and Permanent Impacts Table

Alternative	**6 Hammond 1**	**6-1 POF Farm**	**6-2 Hammond 2**
Total Perm & Temp Wetland Impacts (Acres)	0.04	0.04	0.05
Total Perm & Temp Stream Impacts (Feet)	944	944	944
Permanent Wetland Impacts (Acres)	0.03	0.03	0.03
Permanent Stream Impacts (Feet)	148	148	148

Build Alternative 6 – Availability / Practicability

- Available and Practicable : YES
  - *Lowest Construction Costs*
  - *Availability: Property Owner willing to sell JRWA PS parcel & easements*



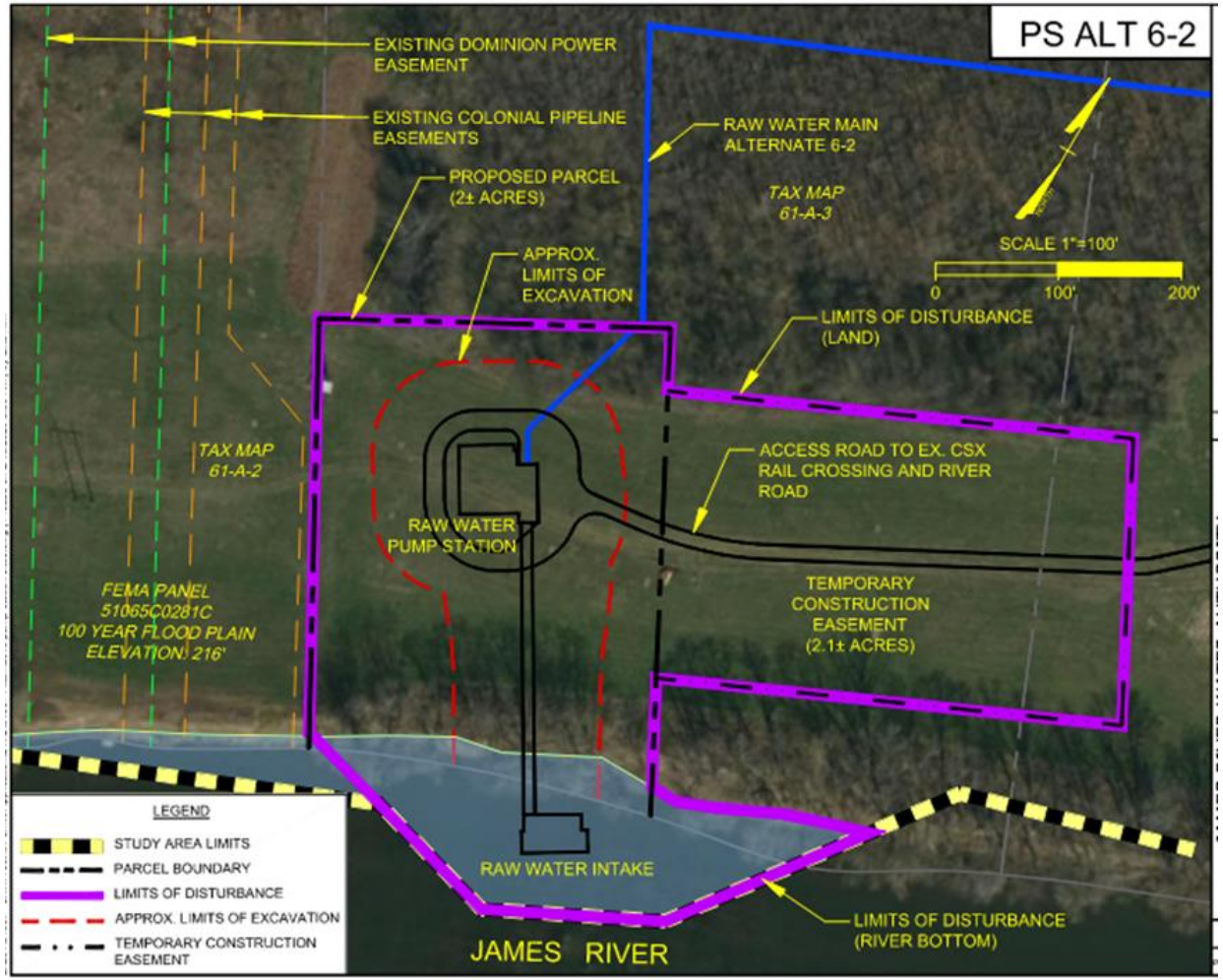
PS ALT 6 LOCATION

Build Alternative 6-1 - Availability / Practicability

- Available and Practicable: NO
  - *Availability: Point of Fork Farm LP Property Owner was not cooperative and JRWA moved the pump station upstream to the adjacent parcel*

Build Alternative 6-2 - Availability / Practicability

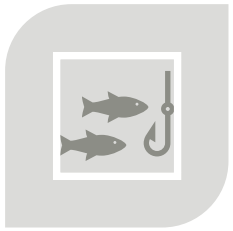
- Available and Practicable: NO
  - *Safety: Concern about construction in the James River adjacent to the existing river crossing for Colonial Gas Pipeline*



Alternative Project Costs Summary

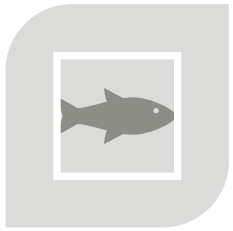
Alternative	1A Forsyth	1B Forsyth	1C Forsyth	2A Bremo	2B Bremo	3 Columbia	4 Goochland 1	5A Goochland 2	5B Goochland 2	6 Hammond 1	6-1 POF Farm	6-2 Hammond 2
Total Construction & Support	$18,165,000	$22,512,000	$23,736,000	$49,873,000	$48,781,000	$25,676,000	$23,632,000	$26,726,000	$25,119,000	$12,879,000	$13,068,000	$13,189,000
Property Acquisition	$986,000	$1,238,000	$1,361,000	$3,423,000	$3,301,000	$1,149,000	$667,000	$744,000	$884,000	$525,000	$562,000	$386,000
Environmental Costs	$282,210	$272,270	$282,330	$367,390	$342,380	$119,330	$162,070	$177,300	$171,140	$169,510	$169,510	$167,500
Cultural Resource Ph I Costs	$381,000	$300,000	$255,000	$329,000	$368,000	$258,000	$270,000	$282,000	$309,000	$291,000	$292,000	$310,000
Project Finance												
- 3% Loan Origination Fee	$594,401	$729,662	$769,030	$1,619,785	$1,583,767	$816,066	$741,937	$837,891	$794,509	$415,914	$422,759	$421,590
- 3.75% Int on 30-yr loan	$13,918,000	$17,085,000	$18,007,000	$37,928,000	$37,084,000	$19,108,000	$17,373,000	$19,619,000	$18,604,000	$9,739,000	$9,899,000	$9,872,000
Total Project Costs	**$34,327,000**	**$42,137,000**	**$44,410,000**	**$93,540,000**	**$91,460,000**	**$47,126,000**	**$42,846,000**	**$48,386,000**	**$45,882,000**	**$24,019,000**	**$24,413,000**	**$24,346,000**
% Increase	**43%**	**75%**	**85%**	**289%**	**281%**	**96%**	**78%**	**101%**	**91%**	**--**	**2%**	**1%**

Alternative Water Supplies



RIVANNA RIVER

- Does not meet project purpose (quantity/quality)



LAKE ANNA

- Not available
- Cost (distance)

COBB'S CREEK RESERVOIR

- Not available
- Buy-in Cost

GROUNDWATER

- Does not meet project purpose (quantity/quality)

PURCHASED WATER FROM NEIGHBORING COMMUNITIES

- Does not meet project purpose
- Not available

No Action / No Permit Alternative

- Every Applicant must evaluate “No Action” Alternative
- Assumes No Permit is issued to JRWA
- Eliminated because Project Purpose of providing Public Water Supply Cannot be met without a USACE Permit

LEDPA Determination Summary

Alternative	Practicable - Logistics	Practicable - Cost	Less Aquatic Impact	LEDPA
1 - Forsyth	No (CSX)	No ($34,327,000 – $44,410,00)	No	No
2 - Bremo	No (CSX, property acquisition)	No ($91,460,00 - $93,540,000)	No	No
3 - Columbia	No (constructability, water quality)	No ($47,126,000)	Yes	No
4 - Goochland 1	No (CSX, water quality)	No ($42,846,000)	No	No
5 - Goochland 2	No (CSX, water quality)	No ($45,882,000 – $48,386,000)	No	No
6 - Hammond 1	Yes	Yes ($24,019,000)	--	Yes
6-1 - POF Farm	No (not available)	Yes ($24,413,000)	No	No
6-2 - Hammond 2	No (petroleum pipeline)	Yes ($24,346,000)	No	No

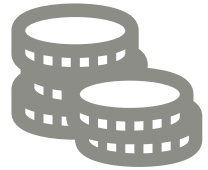
Proposed Project: Approach to Mitigation

Avoidance

- Multiple water main routes evaluated
- Avoid streams, wetlands, and other resources where practicable

Minimization

- Maximize use of colocation (CSC railroad, Dominion power line, Colonial Gas Pipeline)
- Existing access road
- Restoration of water main right-of-way

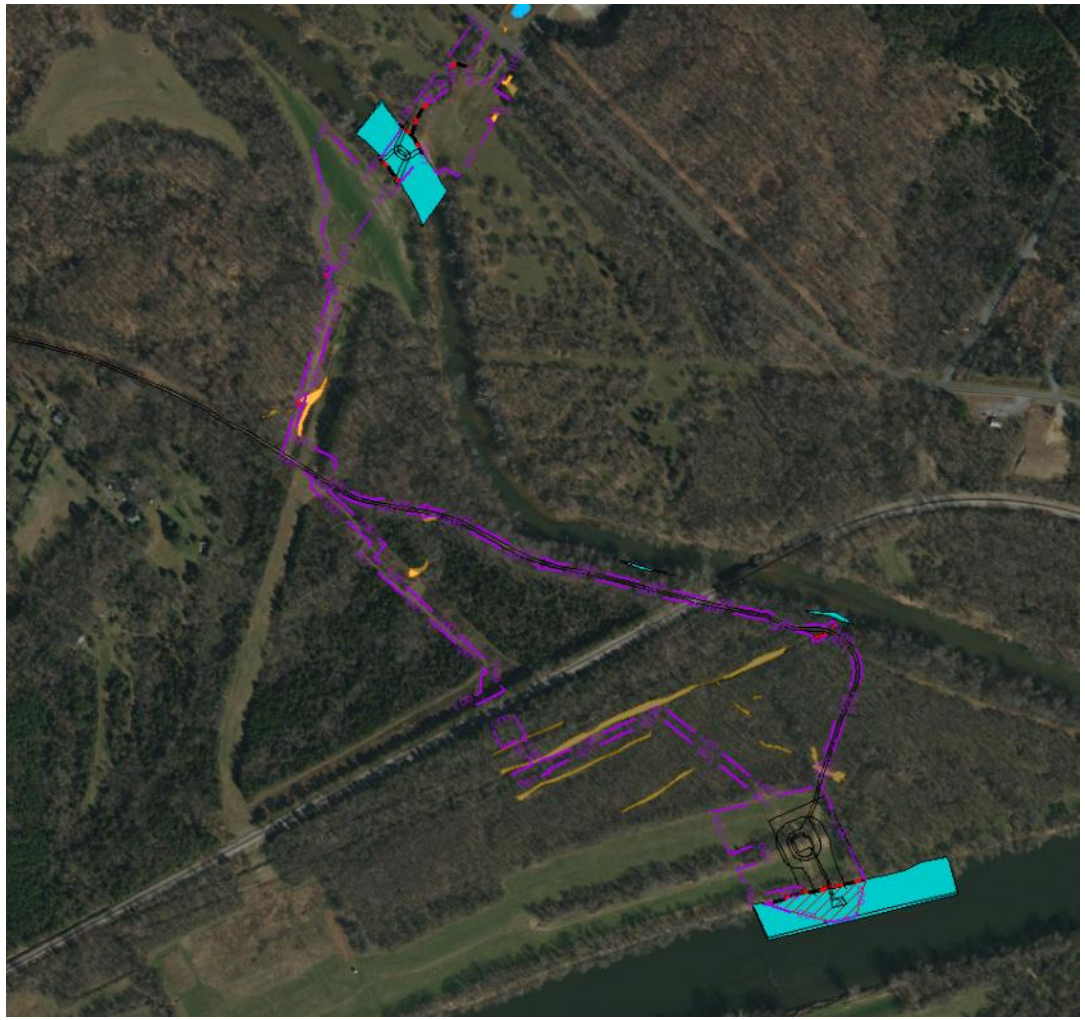


Compensation

- Stream and wetland mitigation credits for unavoidable impacts
- Treatment Plan for impacts to historic resources

Avoidance and Minimization - Aquatic Resources

- Avoidance
  - *Reviewed Wetland Delineation*
  - *Reviewed all Impact Locations*
    - Removed one impact location
- Minimization
  - *Adjusted LODs along Pipeline*
  - *Minimized Rivanna River Crossing*



Compensatory Mitigation Plan – Aquatic Resources

- Mitigation Ratios
  - *Wetlands*
    - Forested – 2:1
    - Scrub-Shrub – 1.5:1
    - Emergent – 1:1
    - Conversion – 1:1
  - *Stream*
    - Unified Stream Methodology – 0.9:1
    - Intake Impact excluded (64 lf) per DEQ review

Permanent Wetland Impacts (AC)	Proposed Wetland Credits
0.03	**0.05**

Permanent Stream Impacts (LF)	Proposed Stream Credits
148	**76**

Note: Numbers are subject to change based upon final adjustments.

Public Interest Review Factors

- Conservation
- Economics
- Aesthetics
- General Environmental Concerns
- Wetlands
- Historic Properties
- Fish and Wildlife Values
- Flood Hazards
- Floodplain Values
- Land Use
- Navigation
- Shore Erosion and Accretion
- Recreation
- Water Supply and Conservation
- Water Quality
- Energy Needs
- Safety
- Food and Fiber Production
- Mineral Needs
- Considerations of Property Ownership
- The Needs and Welfare of the People

Public Involvement

- Feb 4, 2014 Public Info Meeting for JRWA Permit Withdrawal Location, Spring Creek, Louisa
- Jun 10, 2014 Comp Plan Community Meeting, Fork Union
- Jun 12, 2014 Comp Plan Community Meeting, Palmyra
- Jun 17, 2014 Comp Plan Community Meeting, Lake Monticello
- Oct 20, 2014 Comp Plan Community Meeting, Troy
- Oct 21, 2014 Comp Plan Community Meeting, Palmyra
- Dec 16, 2014 Town Hall Meeting, Kents Store
- Apr 7, 2015 Town Hall Meeting, Kents Store
- Sep 10, 2015 Technical Review Committee Meeting, Palmyra
- Sep 10, 2015 Neighborhood Meeting, Palmyra
- Sep 23, 2015 Planning Commission Public Hearing, Palmyra
- Nov 10, 2015 Community Meeting, Fork Union
- Dec 2, 2015 BOS Public Hearing, Palmyra
- Jan 7, 2016 Technical Review Committee Meeting, Palmyra
- Jan 7, 2016 Neighborhood Meeting, Fork Union
- Numerous JRWA Monthly Meetings (not listed here)

Preferred Alternative/Proposed Project: Alternative 6

- Least Environmentally Damaging Practicable Alternative (LEDPA)
  - *Meets Project Purpose and Need*
  - *Only Alternative Practicable to Construct*
  - *Minimal Impact to Aquatic Resources*
- Mitigation
  - *Route avoids & minimizes impacts to the extent practicable*
- Public Interest Review Factors
  - *Great Public Benefit*
  - *Environmental Impacts Can Be Mitigated*
- Advantages
  - *Lowest Cost*
  - *Shortest Route*
  - *Most Co-location*
  - *Minimizes environmental impact*
- Disadvantages
  - *Third Party Opposition*

Next Steps in USACE Permit Process

Finalize Supplemental Information Materials and submit to the USACE

Respond to Additional Information Requests from USACE (if any)

Public Notice and Comment Period (usually 30 days)

Public Hearing (rare)

Complete Section 106 Historical Resources Consultation Process

Final Corps Permit Decision