During/after large rainfall events (>2”) in first year after construction: Check inlet for erosion, mulch for even distribution, and make sure water is draining out of the area. As needed (maybe every ~3-5 years): Remove sediment from forebay when it reaches half depth.

Project Summary: This project is managed by the Elizabeth River Project on a cooperative grant from the City of Norfolk. The project is divided into three sections. Section 1 is at 925 Ingleside Rd, the location of the Ingleside Church. The work from the north side of the building and the parking currently enters a shallow ditch that leads around towards Gatling Road and then into the Ingleside Road City-managed ditch. All of the designs will be bid out for more work. Section 2 of the project, between Karlin Road and Stage Ave, two dry wells will be installed to improve infiltration. This water will exit onto the gutter on Stage Ave via a pipe that is not functioning, so the pipe will be removed along with some broken asphalt, and a stormwater system will be created to convey the flow. Section 3 is between N Ingleside and Ladd Ave. Here, the ditch will be widened and a storm culvert will be added.

Owners:
- Ingleside Church
- City of Norfolk
- City of Virginia Beach
- City of Norfolk (Disposal Utility Department)

Admirals Landing
475 Water Street, Suite C103A
Portsmouth, VA 23704
Phone: 757-399-7487

The proposed development is located within a no-risk flood area as demonstrated by a 1% Annual Chance Flood (Zone A) as shown on map 5101040076H dated 10/23/2018. The proposed development is not located within a noise and/or accident potential zone as per the current Joint Land Use Study (JLUS) form filed with the Planning Department.

The project is located at 925 Ingleside Rd, which is within the Coastal Resilience Overlay (CRO) and the flood zones are X and AR. All other BMPs are located within the Master Plan.

**LIMITS OF DISTURBANCE:**
- .8 acres, 1% existing and proposed impervious

**SITE SUMMARY**
- Center of Project: 36.849169, -76.236727
- Existing Use: Lawn, roadside ditch
- Proposed Use: Stormwater management facility, roadside ditch

**EXISTING CONDITIONS**
- Location: 925 Ingleside Rd
- Details of Project: Stormwater management facility

**CONSTRUCTION SEQUENCE**
1. Stormwater management facility:
   - The contractor shall call Miss Utility 72 hours prior to any excavation work. The contractor will verify the location and depth of the sewer line via test pit before construction begins. Contact to be scheduled.
   - The contractor shall contact the City of Norfolk, Bureau of Environmental Services (664-4368) at least 48 hours prior to any land disturbance so that a land disturbance permit can be issued and a stormwater inspector (823-4089) to be present at pre-construction meeting.
   - The contractor shall call Miss Utility 72 hours prior to any excavation work. The contractor will verify the location and depth of the sewer line via test pit before construction begins. Contact to be scheduled.
   - 3. The contractor shall call Miss Utility 72 hours prior to any excavation work. The contractor will verify the location and depth of the sewer line via test pit before construction begins. Contact to be scheduled.
   - 4. The contractor shall call Miss Utility 72 hours prior to any excavation work. The contractor will verify the location and depth of the sewer line via test pit before construction begins. Contact to be scheduled.
   - 5. The contractor shall call Miss Utility 72 hours prior to any excavation work. The contractor will verify the location and depth of the sewer line via test pit before construction begins. Contact to be scheduled.
   - 6. The contractor shall call Miss Utility 72 hours prior to any excavation work. The contractor will verify the location and depth of the sewer line via test pit before construction begins. Contact to be scheduled.
   - 7. The contractor shall call Miss Utility 72 hours prior to any excavation work. The contractor will verify the location and depth of the sewer line via test pit before construction begins. Contact to be scheduled.
   - 8. Install stabilized construction entrance, temporary stockpile area, and associated erosion and sediment control devices as shown in construction drawings and outlined in the construction specifications.
   - 9. Stabilized construction entrances shall be provided at exits from all temporary construction access points onto main paved areas.
   - 10. Dirt tracked onto existing pavement must be cleaned up by the end of the work day or before the next rain event (whichever is sooner).
   - 11. Grade site to meet proposed elevations. Unless otherwise specified, all slopes are to be 3:1 or flatter.
   - 12. Stabilize graded slopes with matting. Promptly provide permanent stabilization in accordance with the planting plan.
   - 13. Excavate the dry well areas, minimizing the disturbed area. Haul excess soil offsite, add gravel and pipe as indicated on the design. Plant with the species as shown on the planting plan.
   - 15. Remove all temporary erosion and sediment control measures in accordance with the Virginia Erosion and Sediment Control Handbook. Do not remove erosion control measures until the entire site has been permanently stabilized.

**STORMWATER MANAGEMENT FACILITY**
- The following paragraphs apply to the construction:
  - Construction of a stormwater management facility will require the ponding of water for a time period that is to be determined by the City of Norfolk.
  - The ponding of water will be required for a period of time that is to be determined by the City of Norfolk.
  - The ponding of water will be required for a period of time that is to be determined by the City of Norfolk.

**WATER QUALITY STORAGE PROVIDED:**
- 3540cf

**CONSTRUCTION SITE DESIGNATION:**
- Character District: Suburban
- Zoning: The majority of the project is within the Coastal Resilience Overlay (CRO) and the flood zones are X and AR.

**MISS UTILITY NOTE**
- Information concerning existing underground utilities was obtained from available records. The contractor shall contact the Miss Utility at least 48 hours prior to any excavation work. The contractor shall verify the location and depth of the sewer line via test pit before construction begins. Contact to be scheduled.
Excavation and Restoration in the Right of Way:

1. All work within the Right of Way shall comply with the City of Norfolk Design Standards: http://www.norfolk.gov/index.aspx?NID=362

2. Bond amount must include 100% total cost of ROW installation including streetlights, infrastructure work being done on the private property side. An additional amount may be required.

3. Any deviation from the City's ROW Excavation & Restoration Manual that is being requested must be marked on the plans. Also, a detailed list of the deviations must be requested.


5. Utility poles must be relocated at your project's cost. A copy of the work order for pole relocations must accompany right-of-way permits.

6. Utility poles that are not straight must be permitted. If approved by Right-of-Way, when the contractors work requires the sawcutting and/or replacement of the utility poles, the contractors will be responsible for sawcutting and replacement of the utility poles. A review meeting with Right of Way is required. Please provide a list and drawings of all utilities needing relocation to Right-of-Way Division at or before 30% submittal.

7. A review meeting with Right of Way is required. Please contact Public Works at pwrow@norfolk.gov for an appointment.

8. All work within the Right of Way is subject to inspection by the Public Works Right-of-Way Division. Please contact Public Works at pwrow@norfolk.gov for an appointment.

9. All work within the Right of Way is subject to inspection by the Public Works Right-of-Way Division.

10. The time on the plans for each utility or service within the Right of Way shall be the time of first service. If the container is placed on private property a permit from the Health Department is required.

11. In some cases, chain link fence is acceptable. A review by Right of Way is required to determine the type of fence. Please contact Public Works at pwrow@norfolk.gov.

12. All work within the Right of Way is subject to inspection by the Public Works Right-of-Way Division.
1. Cleanout from underdrain every 100’.
2. All stone and gravel shall be cleaned and washed.
3. Hand dig around water and sewer lines to determine location and depth. Mark water and sewer lines to ensure they are not damaged during construction.
Sheet Notes:
1. All stone and gravel shall be sieved and washed.
2. Hand dig around water and sewer lines to determine location and depth. Mark water and sewer lines to ensure they are not damaged during construction.

Legend:
- Right of Way Line
- Gas Line
- Water Line
- Overhead Electric
- Storm Line
- Telecom Line
- Top of Ditch Line
- Center of Ditch Line
- Asphalt Line
- Water Meter
- Storm Valve
- Filter Fabric
- Existing Soil
- Plants
- Top Soil
- Amended Soil
- Proposed Contours
- Proposed Drainage Area
- Filter Fabric
Sheet Notes
1. Contractors shall protect any tree that could be injured during construction.
2. All disturbed areas shall be stabilized.
Erosion and Sediment Control Narrative:

Project Description: The project is a retrofit along Ingleside Road. The project consists of amended grass channels, two stage ditch, gravel wetland, filter strip, and dry wells. Some of the ditches will be widened to allow for high water quantity and ease of maintenance. The limit of disturbance is 35600 sf.

Existing Site Conditions: The project is located on the property of Ingleside Church and on the Right of Way along Ingleside Road.

ESC Measures: All proposed erosion and sediment control measures shall be in accordance with the latest edition of the VA Erosion and Sediment Control Handbook.

Soils: The Web Soil Survey shows that the project is located within the Augusta-Urban land complex, 0 to 2 percent slopes.

General ESC Notes:
1. All erosion and sediment control measures shall be installed and maintained in continuous compliance with the latest edition of the Virginia Erosion and Sediment Control Handbook.
2. Temporarily stockpile exposed existingobilized areas under the direction of public safety, and in the absence of a stockpile, shall be covered with plastic sheeting and/or vegetation.
3. All utilities, such as storm drain, public water, sanitary sewer, electric power, and gas lines, which are not in paved areas and are not undergoing active grading, shall be temporarily or permanently stabilized within 3 days of initial disturbance.
4. At the completion of the project, and once the project is no longer under construction, the site shall be inspected to ensure that all erosion and sediment control measures are in place and are continued in continuous compliance with the Virginia Erosion and Sediment Control Handbook.
5. Sites shall be inspected weekly, and the next day after each rain event. Any accumulated sediment shall be removed and disposed of in a suitable area and shall be temporarily or permanently stabilized.
6. Borrow material must be disposed of at a permitted facility with a permitted E&SC plan.

General Stabilization Notes:
A. Three (3) calendar days as to the surface of all perimeter dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and
B. Seven (7) calendar days as to all other disturbed or graded areas on project site not under active grading.

Additional Notes:

1. If significant rainfall is anticipated during construction, the silt fence barriers below the final outfall may need to be substituted with high-flow filter logs or straw bale barriers.
2. If a slope greater than 3:1 horizontal to 1 vertical (3:1) is to be constructed, Temporary Slope Stabilization Mats (TSS Matting) with the seed and mulch application or sod should be applied.
3. All systems shall be inspected weekly, and the next day after each rain event. Any accumulated sediment shall be removed and disposed of in a suitable area and shall be temporarily or permanently stabilized.
4. Borrow material must be disposed of at a permitted facility with an approved E&SC plan.

Alternates:
If Contractor prefers to use a different method than those prescribed in these plans to accomplish the necessary erosion and sediment control, or temporary runoff control functions, those means and methods may be proposed and approved by the Engineer of Record.
1. All disturbed areas shall be stabilized with permanent seeding immediately following final grading. Permanent seeding shall be done in accordance with VESCH Spec 3.32.

**Planting Notes for Submerged Gravel Wetland**

1. **Seeding and Planting Methods**
   - Seeding and planting should begin immediately upon completion of the structure while the soil is still friable and before invasive weeds emerge. Plan seeding and planting before the basin(s) fills or allow the basin(s) to drain to a few inches before seeding. Broadcast seed evenly over each unit by hand seeding or hydroseeding.
   - Scattering rates are generally 0.7 to 1.0 lb per 1,000 sq ft. The use of a seed filler (kitty litter) can be used to raise the mix to 1.0 lb per 1,000 sq ft (i.e., 0.3 lb of filler mixed with 0.7 lb of seed), which can be broadcast evenly over the area.
   - Grasses or rye provide temporary vegetation to protect the soil in storm water management facilities and can be established immediately. Grass seed can be planted directly in the basin or broadcast after the basin has been drained and all water removed.
   - The use of such native species as Elymus virginicus (Virginia Wildrye) can create an intermediate cover that can lead to long-term, native vegetation.
   - Use straw, compost, or soil to control erosion and protect emerging seedlings from extreme temperatures and drying out. Mulch should be sparse in order to allow sunlight to reach the ground.
   - Irrigating seeded areas is beneficial until seedlings become established.

2. **First Growing Season Maintenance**
   - When canopy (overall vegetation) reaches a height of 18"-24", use a mower or string trimmer to trim the meadow to a height of 8". This will reduce competition by fast-growing weeds for sunlight, water, and nutrients needed by slower growing, perennial natives.
   - Mowing should not be done with a lawn mower as the mower height will be too low and native seedlings will be killed. If bioengineering or containerized woody material are used on the site, mowing should be above the new growth of these materials. Mowing should cease by mid-September. Problem weeds should be spot sprayed with an approved herbicide (such as Rodeo®) or hand pulled.

3. **Second and Subsequent Growing Season Maintenance**
   - Prior to new spring growth reaching a height of 2" (i.e., shortly after forsythia or redbud blooms), trim any material standing from the previous year close to the ground (approximately 2"). This will allow the soil to warm up quickly which will stimulate emergence and growth of native seedlings. It will also reduce the likelihood of these seedlings being invaded by weeds. If bioengineering or containerized woody material were used on the site, any seedlings that were part of the mix, the site should not be trimmed after the establishment year. Problem weeds should be spot sprayed or hand pulled. Special Circumstances Second Growing Season: If you notice a heavy infestation of ragweed or foxtail in the second growing season, trim the meadow to a height of 8". If bioengineering or containerized woody material were used, trimming should be above or around new growth of the plants. Trimming should cease after mid-September.

4. **Soil Amendment Notes:**
   - Follow the specifications in VA DEQ Stormwater Design Specifications No. 4 Soil Compost Amendment, except use 10% biochar by volume.