TO: STORMWATER DIVISION

FROM: ENGINEERING AND RESOURCE PROTECTION

PROJECT: TIDEWATER AAA (PIPE ONLY, NO ONSITE BMP)

SP-42-11

RECEIVED ON
SEP 27 '12
Stormwater Division

General File

99157

Contents for Stormwater Management Facilities As-built Files

Each File is to contain:

- ☐ 1. Maintenance Agreement
- ☐ 2. Construction certification
- ☐ 3. As-Built plan
- ☐ 4. Design Calculations
- ☐ 6. Correspondence
- ☐ 7. Inspection records
- ☐ 8. Miscellaneous

Environmental Division

JUN 29 2012

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James City County, Virginia
Environmental Division

Stormwater Management / BMP Facilities
Record Drawing and Construction Certification Forms

(Note: In accordance with the requirements of the Chesapeake Bay Preservation Ordinance, Chapter 23, Section 23-10(4), BMP's shall be designed and constructed in accordance with the manual entitled James City County Guidelines for Design and Construction of Stormwater Management BMP's. Erosion and sediment control policy and approved plans generally require that at the completion of the project and prior to release of surety, an "as-built" plan prepared by a registered Professional Engineer or Certified Land Surveyor must be provided for the drainage system for the project, including any Best Management Practice (BMP) facilities. In addition, for BMP facilities involving the construction of an impounding structure or dam embankment, certification is required by a Professional Engineer who has inspected the structure during its construction. Currently there are over 20 water quality type BMP's accepted by the County.)

Section 1 - Site Information:

Project Name: AAA Customer Service Center
Structure/BMP Name: 6517 Richmond Road
Project Location: Lightfoot, Virginia
BMP Location: Pipe only
County Plan No.: SP - 42 - 11

Project Type:
- ☐ Residential
- ☐ Business
- ☑ Commercial
- ☐ Office
- ☐ Institutional
- ☐ Industrial
- ☐ Public
- ☐ Roadway
- ☐ Other _____

Tax Map/Parcel No.: (24-3)(9-2)
BMP ID Code (if known): _____
Zoning District:: _____
Land Use: _____
Site Area (sf or acres): 3.39 ac

Brief Description of Stormwater Management/BMP Facility:

_____

Nearest Visible Landmark to SWM/BMP Facility: _____

Nearest Vertical Ground Control (if known):
☐ JCC Geodetic Ground Control ☐ USGS ☐ Temporary ☐ Arbitrary ☐ Other
Station Number or Name: _____
Datum or Reference Elevation: _____
Control Description: _____
Control Location from Subject Facility: _____

DRAINS TO YC 059

99157_TIDEWATER_AAA_AUTO_SERVICE-3

Section 2 - Stormwater Management / BMP Facility Construction Information:

PreConstruction Meeting Held for Construction of SWM/BMP Facility: ☑ Yes ☐ No ☐ Unknown
Approx. Construction Start Date for SWM/BMP Facility: 9/6/2011
Facility Monitored by County Representative during Construction: ☐ Yes ☐ No ☐ Unknown
Name of Site Work Contractor Who Constructed Facility: _____
Name of Professional Firm Who Routinely Monitored Construction: ECS Mid-Atlantic, LLC
Date of Completion for SWM/BMP Facility: _____
Date of Record Drawing/Construction Certification Submittal: _____

(Note: Record Drawing and Construction Certifications are required within thirty (30) days of the completion of Stormwater Management and/or BMP facility construction. Record Drawings and Construction Certifications must be reviewed and approved by the James City County Environmental Division prior to final inspection, acceptance and bond or surety release.)

Section 3 - Owner / Designer / Contractor Information:

Owner/Developer: *(Note: Site Owner or Applicant responsible for development of the project.)*

Name: Tidewater AAA
Mailing Address: 4701 Columbus Street, Suite 201
Virginia Beach, Virginia 23462
Business Phone: (757) 473-8754 Fax: (757) 473-0674
Contact Person: John Fowler Title: _____

Design Professional: *(Note: Professional Engineer or Certified Land Surveyor responsible for the design and preparation of plans and specifications for the Stormwater Management / BMP facility.)*

Firm Name: AES Consulting Engineers
Mailing Address: 5248 Olde Towne Road, Suite 1
Williamsburg, Virginia 23188
Business Phone: (757) 253-0040
Fax: (757) 220-8994
Responsible Plan Preparer: Jason A. Grimes, P.E.
Title: _____
Plan Name: Tidewater AAA
Firm's Project No. 9353-09
Plan Date: 4/28/11
Sheet No.'s Applicable to SWM/BMP Facility: ____ / ____ / ____ / ____ / ____

BMP Contractor: *(Note: Site Work Contractor directly responsible for construction of the Stormwater Management / BMP facility.)*

Name: _____
Mailing Address: _____
Business Phone: _____
Fax: _____
Contact Person: _____
Site Foreman/Supervisor: _____
Specialty Subcontractors & Purpose (for BMP Construction Only):

Section 4 - Professional Certifications:

Certifying Professionals: *(Note: A Registered Professional Engineer or Certified Land Surveyor is responsible for preparation of a Record Drawing, sometimes referred to as an As-Built plan, for the drainage system for the project including any Stormwater Management/BMP Facilities. A Registered Professional Engineer is responsible for the inspection, monitoring and certification of Stormwater Management / BMP facilities during its construction.)*

Record Drawing and Construction Certifications for Stormwater Management / BMP Facilities

Record Drawing Certification

Firm Name: AES Consulting Engineers
Mailing Address: 5248 Olde Towne Road, Suite 1
Williamsburg, Virginia 23188
Business Phone: (757) 253-0040
Fax: (757) 220-8994

Name: Jason Grimes, P.E.
Title:
Signature:
Date: 6/27/12

I hereby certify to the best of my knowledge and belief that this record drawing represents the actual condition of the Stormwater Management / BMP facility. The facility appears to conform with the provisions of the approved design plan, specifications and stormwater management plan, except as specifically noted.

COMMONWEALTH OF VIRGINIA
JASON A. GRIMES
Lic. No. 40170
6/27/12
PROFESSIONAL ENGINEER

_____ (Seal)

Virginia Registered Professional Engineer
or Certified Land Surveyor

Construction Certification

Firm Name: ECS Mid-Atlantic, LLC
Mailing Address: 108 Ingram Road, Suite 1
Williamsburg, Virginia 23188
Business Phone: (757) 229-6677
Fax: (757) 229-9978

Name: B. Scott Gresham, P.E.
Title: Construction Services Manager
Signature:
Date: 6/27/12

I hereby certify to the best of my knowledge and belief that this Stormwater Management/BMP facility was monitored and constructed in accordance with the provisions of the approved design plan, specifications and stormwater management plan, except as specifically noted.

COMMONWEALTH OF VIRGINIA
6/27/12
B. SCOTT GRESHAM
Lic. No. 037785
PROFESSIONAL ENGINEER

_____ (Seal)

Virginia Registered
Professional Engineer

Section 5 - Record Drawing and Construction Certification Requirements and Instructions:

- ☑ PreConstruction Meeting - Provides an opportunity to review SWM / BMP facility construction, maintenance and operation plans and address any questions regarding construction and/or monitoring of the structure. The design engineer, certifying professionals (if different), Owner/Applicant, Contractor and County representative(s) are encouraged to attend the preconstruction meeting. Advanced notice to the Environmental Division is requested. Usually, this requirement can be met simultaneously with Erosion and Sediment Control preconstruction meetings held for the project.

- ☑ A fully completed ***STORMWATER MANAGEMENT / BMP FACILITIES, RECORD DRAWING and CONSTRUCTION CERTIFICATION FORM*** and ***RECORD DRAWING CHECKLIST***. All applicable sections shall be completed in their entirety and certification statements signed and sealed by the registered professional responsible for individual record drawing and/or construction certification.

- ☑ The Record Drawing shall be prepared by a Registered Professional Engineer or Certified Land Surveyor for the drainage system of the project including any Best Management Practices.

- ☑ Construction Certification. Construction of Stormwater Management / BMP facilities which contain impoundments, embankments and related engineered appurtenances including subgrade preparation, compacted soils, structural fills, liners, geosynthetics, filters, seepage controls, cutoffs, toe drains, hydraulic flow control structures, etc. shall be visually observed and monitored by a Registered Professional Engineer or his/her authorized representative. The Engineer must certify that the structure, embankment and associated appurtenances were built in accordance with the approved design plan, specifications and stormwater management plan and standard accepted construction practice and shall submit a written certification and/or drawings to the Environmental Division as required. Soil and compaction test reports, concrete test reports, inspection reports, logs and other required construction material or installation documentation may be required by the Environmental Division to substantiate the certification, if specifically requested. The Engineer shall have the authority and responsibility to make minor changes to the approved plan, in coordination with the assigned County inspector, in order to compensate for unsafe or unusual conditions encountered during construction such as those related to bedrock, soils, groundwater, topography, etc. as long as changes do not adversely affect the integrity of the structure(s). Major changes to the approved design plan or structure must be reviewed and approved by the original design professional and the James City County Environmental Division.

- ☑ Record Drawing and Construction Certifications are required within **thirty (30) days** of the completion of Stormwater Management / BMP facility construction. Submittals must be reviewed and accepted by James City County Environmental Division prior to final inspection, acceptance and bond/surety release.

  Dual Purpose Facilities - Completion of construction also includes an interim stage for Stormwater Management / BMP facilities which serve dual purpose as temporary sediment basins during construction and as permanent stormwater management / BMP facilities following construction, once development and stabilization are substantially complete. For these dual purpose facilities, construction certification is required once the temporary sediment basin phase of construction is complete. Final record drawing and construction certification of additional permanent components is required once permanent facility construction is complete.

  Interim Construction Certification is required for those dual purpose embankment-type facilities that are generally ten (10) feet or greater in dam height (*) and may not be converted, modified or begin function as a permanent SWM / BMP structure for a period generally ranging from six (6) to eighteen (18) months or more from issuance of a Land Disturbance permit for construction.

Interim or final record drawing and construction certifications are not required for temporary sediment basins which are designed and constructed in accordance with current minimum standards and specifications for temporary sediment basins per the Virginia Erosion and Sediment Control Handbook (VESCH); have a temporary service life of less than eighteen (18) months; and will be removed completely once associated disturbed areas are stabilized, unless a distinct hazard to the public's health, safety and welfare is determined by the Environmental Division due to the *size or presence of the structure or due to evidence of improper construction.*

(*Note: Dam Height as referenced above is generally defined as the vertical distance from the natural bed of the stream or waterway at the downstream toe of the embankment to the top of the embankment structure in accordance with 4VAC50-20-30, Virginia Impoundment Structure Regulations and the Virginia Dam Safety Program.)

☑ Record Drawings shall provide, at a minimum, all information as shown within these requirements and the attached **RECORD DRAWING CHECKLIST** specific to the type of SWM/BMP facility being constructed. Other additional record data may be formally requested by the James City County Environmental Division. *(Note: Refer to the current edition of the James City County Guidelines for Design and Construction of Stormwater Management BMP's manual for a complete list of acceptable BMP's. Currently there are over 20 acceptable water quality type BMP's accepted by the County.)*

☑ Record Drawings shall consist of blue/black line prints and a reproducible (mylar, sepia, diazo, etc.) set of the approved stormwater management plan including applicable plan views, profiles, sections, details, maintenance plans, etc. as related to the subject SWM / BMP facility. The set shall indicate **"RECORD DRAWING "** in large text in the lower right hand corner of each sheet with record elevations, dimensions and data drawn in a clearly annotated format and/or boxed beside design values. Approved design plan values, dimensions and data shall not be removed or erased. Drawing sheet revision blocks shall be modified as required to indicate record drawing status. Elevations to the nearest 0.1' are sufficiently accurate except where higher accuracy is needed to show positive drainage. Certification statements as shown in Section 4 of the Record Drawing and Construction Certification Form, ***or similar forms thereof,*** and professional signatures and seals, with dates matching that of the record drawing status in the revision or title block, are also required on all associated record drawing plans, prints or reproducibles.

☑ Submission Requirements. Initial and subsequent submissions for review shall consist of a minimum of one (1) blue/black line set for record drawings and one copy of the construction certification documents with appropriate transmittal. Under certain circumstances, it is understood that the record drawing and construction certification submissions may be performed by different professional firms. Therefore, record drawing submission may be in advance of construction certification or vice versa. Upon approval and prior to release of bond/surety, final submission shall include one (1) reproducible set of the record drawings, one (1) blue/black line set of the record drawings and one (1) copy of the construction certification. Also for current and/or future incorporation into the County BMP database and GIS system, it is requested that the record drawings also be submitted to the Environmental Division on a diskette or CD-ROM in an acceptable electronic file format such as *.dxf, *.dwg, etc. or in a standard scanned and readable format. The electronic file requirement can be discussed and coordinated with Environmental Division staff at the time of final submission.

STORMWATER MANAGEMENT / BMP FACILITIES
RECORD DRAWING CHECKLIST

(Key for Checklist is as follows: XX Acceptable N/A Not Applicable Inc Incomplete)

I. Methods and Presentation: *(Required for all Stormwater Management / BMP facilities.)*

XX 1. All constructed facilities meet approved design plans, unless otherwise shown. Record information or deviations from approved design plan shown in clearly annotated format and/or boxed beside design values.

XX 2. Elevations to the nearest 0.1' unless higher accuracy is needed to show positive drainage.

XX 3. All plan sheets labeled with "RECORD DRAWING" in large text in lower right hand corner (Approved County Plan Number and BMP ID Code can be included if known).

XX 4. All plan sheet revision blocks modified to indicate date and record drawing status.

XX 5. All plan sheets have certification statements and certifying professional's signature and seal.

II. Minimum Standards: *(Required for all Stormwater Management / BMP facilities, as applicable.)*

XX 1. All requirements of Section I (Methods and Presentation) apply to this section.

XX 2. Plan Views: Show general location, arrangement and dimensions. Location and alignment shall generally match approved design plans.

XX 3. Profile or elevations along top or berm of the facility. At a minimum, elevations are required at each end, at intervals not to exceed 50 feet and where low spots may be present. Top of embankment or berm elevations must be no less than design elevation plus any settlement allowances.

XX 4. Top widths, berm widths and embankment side slopes.

N/A 5. Show length, width and depth of facility or grading, contours or spot elevations as required to verify permanent pool and design storage volumes were met or were reasonably close to the approved design. Evaluation of as-built grading, contours, spot elevations, or cross-sections, may be necessary by the professional to ensure approved design configurations, depths and volumes were closely maintained. If grading or elevations are significantly different from the approved plan, the Environmental Division shall be contacted immediately to determine whether the variation is acceptable or whether further evidence will be required. Facilities which do not closely resemble approved plan grades, elevations or configurations may require regrading by the Contractor; check volumetric computations; and/or a check hydraulic routing to ensure approved design water surface elevations, discharges or freeboard were closely maintained.

N/A 6. Cross-section of the embankment through the principal spillway or outlet barrel. Must extend at least 100 ft. downstream of the pipe outlet or to recorded site property line, whichever is closer. Proper correlation is required between principal spillway (control structure) crest, emergency spillway crest, orifice and weirs and the top of the dam or facility. All elevations and dimensions must reasonably match the design plan or be sequentially relative to each other and the facility must reflect the required design storage volume(s) and/or design depth.

N/A 7. Profile or elevations along the entire centerline of the emergency spillway. Emergency spillway may be steeper, but no flatter or narrower than design.

N/A 8. Elevation of the principal spillway crest or outlet crest of the structure.

N/A	9.	Primary control structure (riser) diameter or dimensions, height, type of material and base size. Indicate provisions for access that are present such as steps, ladders, etc.
N/A	10.	Dimensions, locations and elevations of outlet orifices, weirs, slots and drains.
N/A	11.	Type and size of anti-vortex and trash rack device. Height, diameter, dimensions, bar spacings (if applicable) and elevations relative to the principal spillway crest. Indicate if lockable hatch is present or not.
N/A	12.	Type, location, size and number of anti-seep collars or documentation of other methods utilized for seepage control. **May need to obtain this information during construction.**
N/A	13.	Top of impervious core embankment, core trench limits and elevation of cut-off trench bottom. **May need to obtain this information during construction.**
N/A	14.	Elevation of the principal spillway barrel (outlet pipe) inlet and outlet invert.
N/A	15.	Outlet barrel diameter, length, slope, type and thickness class of material and type of flared end sections, headwall or endwall.
N/A	16.	Outfall protection dimension, type and depth of rock and if underlain filter fabric is present.
N/A	17.	BMP interior and periphery landscaping zones conform with arrangements and requirements of the approved design plan.
____	18.	Maintenance plan taken from approved design plan transposed onto record drawing set.
N/A	19.	Fencing location and type, if applicable to facility.
N/A	20.	BMP vicinity properly cleaned of stockpiles and construction debris.
XX	21.	No visual signs of erosion or channel degradation immediately downstream of facility.
XX	22.	Any other information formally requested by the Environmental Division specific to the constructed SWM/BMP facility.

(Key for Checklist is as follows: XX Acceptable N/A Not Applicable Inc Incomplete)

III. Group A - Wet Ponds *(Includes A-1 Small Wet Ponds; A-2 Wet Ponds; A-3 Wet Ext Det Ponds.)*

N/A A1. All requirements of Section II, Minimum Standards, apply to Group A facilities.

N/A A2. Principal spillway consists of reinforced concrete pipe with O-Ring gaskets for watertight joint construction.

N/A A3. Sediment forebays or pretreatment devices provided at inlets to pond. Generally 4 to 6 ft. deep.

N/A A4. Access for maintenance and equipment is provided to the forebay(s). Access corridors are at least 12 ft. wide, have a maximum slope of 15 percent and are adequately stabilized to withstand heavy equipment or vehicle use.

N/A A5. Adequate fixed vertical sediment depth markers installed in the forebay(s) for future sediment monitoring purposes.

N/A A6. Pond liner (if required) provided. Either clay liners, polyliners, bentonite liners or use of chemical soil additives based on requirements of the approved plan.

N/A A7. Minimum 6 percent slope safety bench extending a minimum of 15 feet outward from normal pool edge and/or an aquatic bench extending a minimum of 10 feet inward from the normal shoreline with a maximum depth of 12 inches below the normal pool elevation, if applicable, per the approved design plans. (Note: Safety benches may be waived if pond side slopes are no steeper than 4H:1V).

N/A A8. No trees are present within a zone 15 feet around the embankment toe and 25 feet from the principal spillway structure.

N/A A9. Wet permanent pool, typically 3 to 6 feet deep, is provided and maintains level within facility.

N/A A10. Low flow orifice has a non-clogging mechanism.

N/A A11. A pond drain pipe with valve was provided.

N/A A12. Pond side slopes are not steeper than 3H:1V, unless approved plan allowed for steeper slope.

N/A A13. End walls above barrels (outlet pipe) greater than 48 inch in diameter are fenced to prevent a fall hazard.

STORMWATER MANAGEMENT / BMP FACILITIES
RECORD DRAWING CHECKLIST

(Key for Checklist is as follows: XX Acceptable N/A Not Applicable Inc Incomplete)

IV. Group B - Wetlands *(Includes B-1 Shallow Marsh; B-2 Ext Det Shallow Wetlands; B-3 Pond Wetland System and B-4 Pocket Wetland)*

N/A B1. Same requirements as Group A Wet Ponds.

N/A B2. Minimum 2:1 length to width flow path provided across the facility.

N/A B3. Micropool provided at or around outlet from BMP (generally 3 to 6 ft. deep).

N/A B4. Wetland type landscaping provided in accordance with approved plan. Includes correct pondscaping zones, plant species, planting arrangements, wetland beds, etc. Wetland plants include 5 to 7 emergent wetland species. Individual plants at 18 inches on center in clumps.

N/A B5. Adequate wetland buffer provided (Typically 25 ft. outward from maximum design water surface elevation and 15 ft. setback to structures).

N/A B6. No more than one-half (½) of the wetland surface area is planted.

N/A B7. Topsoil or wetland mulch provided to support vigorous growth of wetland plants.

N/A B8. Planting zones staked or flagged in field and locations subsequently established by appropriate field surveying methods for record drawing presentation.

STORMWATER MANAGEMENT / BMP FACILITIES
RECORD DRAWING CHECKLIST

(Key for Checklist is as follows: XX Acceptable N/A Not Applicable Inc Incomplete)

V. Group C - Infiltration Practices

(Includes C-1 Infiltration Trench; C-2 Infiltration Trench; C-3 Infiltration Basin; and C-4 Infiltration Basin)

N/A C1. All requirements of Section II, Minimum Standards, apply to Group C facilities as applicable.

N/A C2. Facility is not located on fill slopes or on natural ground in excess of six (6) percent.

N/A C3. Pretreatment devices provided prior to entry into the infiltration facility. Acceptable pretreatment devices include sediment forebays, sediment basins, sediment traps, sump pits or inlets, grass channels, plunge pools or other acceptable measures.

N/A C4. Three (3) or more of the following pretreatment devices provided to protect long term integrity of structure: grass channel; grass filter strip; bottom sand layer; upper filter fabric layer; use of washed bank run gravel aggregate.

N/A C5. Sides of infiltration practice lined with filter fabric.

N/A C6. Facility was not used for erosion and sediment control purposes and sediment was prevented from entering the facility to the greatest extent possible during construction.

N/A C7. Stabilization and acceptable vegetative cover established over contributing drainage area prior to conveyance of stormwater to the facility.

N/A C8. Minimum one hundred (100) foot separation horizontally from any known water supply well and minimum one hundred (100) foot separation upslope from any building.

N/A C9. Minimum twenty-five (25) foot separation down gradient from any structure.

N/A C10. Stormwater outfalls provided for overflow associated with larger design storms.

N/A C11. No visual signs of erosion or channel degradation immediately downstream of facility.

N/A C12. Facility does not currently cause any apparent surface or subsurface water problems to downgrade properties.

N/A C13. Observation well provided.

N/A C14. Adequate, direct access provided to the facility for future maintenance, operation and inspection.

STORMWATER MANAGEMENT / BMP FACILITIES
RECORD DRAWING CHECKLIST

(Key for Checklist is as follows: XX Acceptable N/A Not Applicable Inc Incomplete)

VI. Group D - Filtering Systems *(Includes D-1 Bioretention Cells; D-2 Surface Sand Filters; D-3 Underground Sand Filters; D-4 Perimeter Sand Filters; D-5 Organic Filters; and D-6 Pocket Sand Filters)*

N/A D1. All requirements of Section II, Minimum Standards, apply to Group D facilities.

N/A D2. Sediment pretreatment devices provided.

N/A D3. For D-1 BMPs (Bioretention Cells), pretreatment consisting of a grass filter strip below level spreader (deflector); a gravel diaphragm; and mulch and planting soil layers were provided.

N/A D4. For D-1 BMPs (Bioretention Cells), plantings consist of native plant species; vegetation provided was based on zones of hydric tolerances; trees and understory of shrubs and herbaceous materials were provided; woody vegetation is absent from inflow locations; and trees are located around facility perimeter.

N/A D5. Facility was not used for erosion and sediment control purposes and sediment was prevented from entering the facility to the greatest extent possible during construction.

N/A D6. No visible signs of accumulated silt/sediment were present in the facility following construction or alternately, accumulated silt/sediment was properly removed .

N/A D7. Filtering system is off-line from storm drainage conveyance system.

N/A D8. Overflow outlet has adequate erosion protection.

N/A D9. Deflector, diversion, flow splitter or regulator structure provided to divert the water quality volume to the filtering structure.

N/A D10. Minimum four (4) inch perforated underdrain provided in a clean aggregate envelope layer beneath the facility.

N/A D11. Minimum fifty (50) foot separation from any slope fifteen (15) percent or greater. Minimum one hundred (100) foot separation horizontally from any known water supply well. Minimum one hundred (100) foot separation upslope and twenty-five (25) foot separation downslope from any building.

N/A D12. Stabilization and acceptable vegetative cover established over contributing drainage area prior to conveyance of stormwater to the facility.

N/A D13. No visual signs of erosion or channel degradation immediately downstream of facility.

N/A D14. Adequate, direct access provided to the pretreatment area and/or filter bed for future maintenance.

STORMWATER MANAGEMENT / BMP FACILITIES
AS-BUILT PLAN CHECKLIST

(Key for Checklist is as follows: XX Acceptable N/A Not Applicable Inc Incomplete)

VII. Group E - Open Channel Systems *(Includes E-1 Wet Swales (Check Dams); E-2 Dry Swales;and E-3 Biofilters)*

XX E1. All requirements of Section II, Minimum Standards, apply to Group E facilities as applicable.

XX E2. Open channel system has constructed longitudinal slope of less than four (4) percent.

XX E3. No visual signs of erosion in the open channel system's soil and/or vegetative cover.

XX E4. Open channel side slopes are no steeper than 2H:1V at any location. Preferred channel sideslope is 3H:1V or flatter.

XX E5. No visual signs of ponding are present at any location in the open channel system, except at rock check dam locations for E-1 systems (Wet Swales).

N/A E6. For E-2 BMPs (Dry Swales), an underdrain system was provided.

N/A E7. Treated timber or rock check dams provided as pretreatment devices for the open channel system.

N/A E8. Gravel diaphragm provided in areas where lateral sheet flow from impervious surfaces are directly connected to the open channel system.

N/A E9. Grass cover/stabilization in the open channel system appears adaptable to the specific soils and hydric conditions for the site and along the channel system.

XX E10. Open channel system areas with grass covers higher than four (4) to six (6) inches were properly mowed.

N/A E11. Facility was not used for erosion and sediment control purposes and sediment was prevented from entering the facility to the greatest extent possible during construction.

XX E12. No visible signs of accumulated silt/sediment were present in the facility following construction or alternately, accumulated silt/sediment was properly removed and no adverse affects to the function of the facility are anticipated.

N/A E13. For E-3 BMPs (Biofilters), the bottom width is six (6) feet maximum at any location.

N/A E14. For E-3 BMPs (Biofilters), sideslopes are 3H:1V maximum at any location.

N/A E15. For E-3 BMPs (Biofilters), the constructed channel slope is less than or equal to three (3) percent at any location.

N/A E16. For E-3 BMPs (Biofilters), the constructed grass channel is approximately equivalent to the constructed roadway length.

STORMWATER MANAGEMENT / BMP FACILITIES
RECORD DRAWING CHECKLIST

(Key for Checklist is as follows: XX Acceptable N/A Not Applicable Inc Incomplete)

VIII. Group F - Extended Dry Detention *(Includes F-1 Timber Walls; and F-2 Dry Extended Detention with Forebay)*

N/A F1. All requirements of Section II, Minimum Standards, apply to Group F facilities.

N/A F2. Basin bottom has positive slope and drainage from all basin inflow points to the riser (or outflow) location.

N/A F3. Timber wall BMP used in intermittent stream only. (ie. Prohibited in perennial streams.)

N/A F4. Forebay provided approximately 20 ft. upstream of the facility. Forebays generally 4 to 6 feet in depth.

N/A F5. A reverse slope pipe, vertical stand pipe or mini-barrel and riser was provided to prevent clogging.

N/A F6. Principal spillway and outlet barrel provided consisting of reinforced concrete pipe with O-Ring gaskets for watertight joint construction.

N/A F7. Mini-barrel and riser, if used, contains a removable trash rack to reduce clogging.

N/A F8. Low flow orifice, if used, has a minimum diameter of three (3) inches or two (2) inches if internal orifice control was utilized and a small, cage type external trash rack.

N/A F9. Timbers properly reinforced or concrete footing provided if soil conditions were prohibitive.

N/A F10. Timber wall cross members extended to a minimum depth of two (2) feet below ground elevation.

N/A F11. Protection against erosion and scour from the low flow orifice and weir-flow trajectory provided.

N/A F12. Stilling basin or standard outlet protection provided at principal spillway outlet.

N/A F13. Adequate, direct access provided to the facility. Access corridor to facility is at least ten (10) feet wide, slope is less than twenty (20) percent and appropriate stabilization provided for equipment and vehicle use. Access extends to forebay, standpipe and timber wall, as applicable.

N/A F14. No visual signs of undercutting of timber walls or clogging of the low orifice were present.

N/A F15. No visual signs of erosion or channel degradation immediately downstream of facility.

N/A F16. No visible signs of accumulated silt/sediment were present in the facility following construction or alternately, accumulated silt/sediment was properly removed and no adverse affects to the function of the facility are anticipated.

STORMWATER MANAGEMENT / BMP FACILITIES
RECORD DRAWING CHECKLIST

(Key for Checklist is as follows: XX Acceptable N/A Not Applicable Inc Incomplete)

IX. Group G - Open Spaces *(Includes All Open Space Types G-1; G-2; and G-3)*

N/A G1. All requirements of Section II, Minimum Standards, apply to Group G facilities as applicable.

N/A G2. Constructed impervious areas appear to conform with locations indicated on the approved plan and appear less than sixty (60) percent impervious in accordance with the requirements of the James City County Chesapeake Bay Preservation Ordinance.

N/A G3. Dedicated open space areas are in undisturbed common areas, conservation easements or are protected by other enforceable instruments that ensures perpetual protection.

N/A G4. Provisions included to clearly specify how the natural vegetated areas utilized as dedicated open space will be managed and field identified (marked).

N/A G5. Adequate protection measures were implemented during construction to protect the defined dedicated open space areas.

N/A G6. Dedicated open space areas were not disturbed during construction (ie. cleared, grubbed or graded).

STORMWATER MANAGEMENT / BMP FACILITIES
RECORD DRAWING CHECKLIST

(Key for Checklist is as follows: XX Acceptable N/A Not Applicable Inc Incomplete)

X. Storm Drainage Systems (Associated with BMP's Only)

(Includes all incidental stormwater drainage conveyance systems associated with SWM/BMP facilities such as onsite or offsite storm drains, open channels, inlets, manholes, junctions, outlet protections, deflectors, etc. These facilities are external to the treatment function of, but are directly associated with drainage to and/or from a constructed SWM/BMP facility. The intent of this portion of the certification is to accurately identify the type and quantity of inflow or outflow points associated with the facility for future reference. The Professional may use his/her own discretion to determine inclusive facilities to meet the intent of this section. As a general rule, storm drainage systems would include incidental facilities to the nearest access structure upslope or downslope from the normal physical limits of the facility or 800 feet of storm drainage conveyance system length, whichever is less.)

N/A SD1. All requirements of Section II, Minimum Standards, apply to Storm Drainage Systems.

N/A SD2. Horizontal location of all pipe and structures relative to the SWM/BMP facility.

N/A SD3. Type, top elevation and invert elevation of all access type structures (inlets, manholes, etc.).

N/A SD4. Material type, size or diameter, class, invert elevations, lengths and slopes for all pipe segments.

N/A SD5. Class, length, width and depth of riprap and outlet protections or dimensions of special energy dissipation structures.

XII. Other Systems

(Includes any non-typical, specialty, manufactured or innovative stormwater management/BMP practices or systems generally accepted for use as or in conjunction with other acceptable stormwater management / BMP practices. Requires evidence of prior satisfactory industry use and prior Environmental Division approval, waiver or exception .)

N/A O1. All requirements of Section II, Minimum Standards, apply to this section.

N/A O2. Certification criteria to be determined on a case-by-case basis by the Environmental Division specific to the proposed SWM/BMP facility.

STORMWATER MANAGEMENT / BMP FACILITIES
RECORD DRAWING CHECKLIST

XIII. References *(The James City County Record Drawing and Construction Certification Forms and Checklists for Stormwater Management / BMP facilities were developed using the following sources and references.)*

- ☐ Baltimore County, Maryland Soil Conservation District, As-Built Stormwater Management Pond Checklist.
- ☑ James City County, Virginia, Guidelines for Design and Construction of Stormwater Management BMP's (October 1999).
- ☑ James City County, Virginia, Stormwater Detention/Retention Basin Design Checklist and Erosion and Sediment Control and Stormwater Management Design Plan Checklists.
- ☐ James City County Stormwater Policy Framework, Final Report of the James City County BMP Policy Project, October 1998, The Center for Watershed Protection.
- ☐ Prince Georges County, Maryland, As-Built Requirements Retention or Detention Pond/Basin.
- ☐ Prince William County, Virginia, Stormwater Management Fact Sheet.
- ☐ Stafford County, Virginia, As-Built Plan Checklist.
- ☐ Stormwater Management Design Manual, NRCS Maryland Code No. 378, Pond Standards and Specifications.
- ☐ USEPA/Watershed Management Institute, Stormwater Management Inspection Forms.
- ☐ Virginia Impounding Structure Regulations (Dam Safety), Department of Conservation & Recreation, 1997.
- ☑ Virginia Erosion and Sediment Control Handbook, Third Edition 1992, Virginia Department of Conservation and Recreation, Division of Soil and Water Conservation.
- ☑ Virginia Stormwater Management Handbook, 1999 edition, Virginia Department of Conservation and Recreation, Division of Soil and Water Conservation.

File: Shared\SWMProg\BMP\Certif\RDCC_fillable.wpd

James City County Engineering and Resource Protection Division
Stormwater Management/BMP Record Drawing and Construction Certification Review Tracking Form

Project Name: Tidewater AAA
County Plan No. (List any amendments): SP-42-11
Stormwater Management Facility Type: N/A
BMP Phase #: ☐ I ☐ II ☐ III

- ☐ Information Package Submittal Date:
- ☐ Completeness Check:
  - ☑ Record Drawing Date/By: 6/27/12 Jason Grimes
  - ☑ Construction Certification Date/By: 6/27/12 Scott Gresham
  - ☑ RD/CC Standard Forms (Ensure that all forms for the BMP type are included)
  - ☑ Insp/Maint Agreement # / Date: 110006872 / 8/18/11
  - ☐ BMP Maintenance Plan Location: NO BMP - Pipe only, but do have
  - ☑ Special Considerations: N/A
- ☑ Standard E&SC Notes on Approved Plan Requiring RD/CC or County comment in plan review
  Location (sheet #): Sheet 7 — #21
- ☑ **County BMP ID Code #:** No onsite BMP - Drains to YC 059
- ☑ Log into Division's "As-Built Tracking Log"
- ☐ Obtain basic site information (GPIN, Owner, Address, etc.)
- ☐ Log into Access Database (BMP ID #, Plan No., GPIN, Project Name, etc.)
- ☑ Copy from Active Project File (correspondence, H&H, design computations, etc.).
- ☑ Create As-Built File using Project File information (File label, folder, copy plan/details/design information, etc.).
- ☑ Inspector Review of RD/CC (consult with Chief Engineer prior to completion of comments).
- ☑ Record Drawing Review against Approved Plan prior to Field Inspection.
- ☑ Final Site Inspection (FI) Performed Date: 7/11/12
- ☑ Record Drawing (RD) Review Date: 7/11/12
- ☑ Construction Certification (CC) Review Date: 7/11/12
- ☑ Actions:
  - ☒ No comments.
  - ☐ *Comments.* Letter Forwarded. Date:
  - ☐ Record Drawing (RD)
  - ☐ Construction Certification (CC)
  - ☐ Construction-Related (CR)
  - ☐ Site Issues (SI)
  - ☐ Other :
- ☑ Resubmittal (# and date): N/A
- ☑ Re-inspection (if necessary): N/A
- ☑ Drainage System Information Acceptable (RD/CC/System Info). Ok for bond release.
- ☑ Complete "Surety Request Form".
- ☑ Final Inspection of active file copying any relevant information to "As-Built" file.
- ☑ On County BMP Inventory (Phase I, II or III). N/A
- ☐ Copy Final Inspection Report into County BMP Inspection Program file.
- ☑ Provide Digital Photographs of BMP and save into County BMP Inventory. N/A
- ☑ Request mylar/reproducible from As-Built plan preparer. N/A
- ☑ Complete "As-built Tracking Log".
- ☑ Last check of BMP Access Database (County BMP Inventory). NOT REQ. per Scott (No BMP)
- ☐ Add BMP to JCC Hydrology & Hydraulic database (optional).
- ☐ Add BMP to Municipal BMP list (if a County-owned facility)
- ☐ Add BMP to PRIDE BMP ratings database.

Final Sign-Off

Inspector: Amy Parker Date: 7/23/12

Chief Engineer: _____ Date: _____

*** See separate checklist, if needed.

		3.	Joining Pipe per VDOT 302.03(a)2(d)								
			a. Rigid pipe sections shall have ends fully entered and inner surfaces flush and even	X							
			b. Joints shall be sealed to form a leak-resistant joint	X							
			c. Flexible pipe sections shall be firmly joined by approved coupling bands to form a leak-resistant joint								
			d. When pipes enter structure, the inside of the pipe/structure joint shall be flush and fully mortared	X							
			e. Lift holes in rigid pipe shall be plugged with a lift hole plug furnished by the manufacturer (302.03)								
		4.	Backfill shall be compacted in horizontal layers not more that six inches in thickness, loose measurement. VDOT 303.04(g)								
		5.	Compaction of backfill shall be in accordance with VTM-1 to the following densities:								
			a. 95% beneath pavement, walks and road shoulders								
			b. 90% in other unpaved areas								
		6.	Testing and Inspection								
			a. Each lift shall be tested for compaction on alternating sides of the pipe at intervals not to exceed 300 feet				ECS				
			b. Pipe shall be inspected before any backfill is placed. (VDOT 302.03(a)2c)								
		1.	Pipes and structures shall be free of sediment and debris								
		2.	All inlet protection measures removed		X						
		3.	All joints sealed		X						
		4.	Outlet protection installed and operational								
		5.	Configuration and dimensions of pipe system conforms with approved plans								

Additional Comments:

AES
CONSULTING ENGINEERS

Hampton Roads | Central Virginia | Middle Peninsula

5248 Olde Towne Road, Suite 1, Williamsburg, Virginia 23188
Phone (757) 253-0040 / Fax (757) 220-8994

aesva.com

Environmental Division
JUN 29 2012
RECEIVED

Letter of Transmittal

ATTN: **Bill Cain**

CO.: JCC E&RP

Address:

cc:

DATE	JOB NO.
6-29-12	9353-09

FROM: Jason Grimes

RE
Tidewater AAA
Asbuilt Drawings

WE ARE SENDING YOU THE FOLLOWING ITEMS:

☐ Attached
☐ Under separate cover via

☐ Original(s) ☐ Print(s) ☒ Plan(s) ☐ Specification(s)* ☐ Change Order

☐ Copy of letter(s) ☐ Other:

COPIES	DATE	No. of Pages	DESCRIPTION
2			Storm Record Drawings
1			Stormwater Certification

THESE ARE TRANSMITTED as checked below:

☒ For your approval ☐ For your signature ☐ For review and comment

☒ For your use ☐ As you requested ☐ As requested by:

☐ Other:

REMARKS:

VIA: ☒Hand Deliver ☐UPS Ground ☐UPS Next Day Air ☐USPS Mail ☐ Other:

If enclosures are not as noted, kindly notify us at once.

"THE STORM SEWER, SPOT SHOTS, DRAINAGE STRUCTURE LOCATIONS AND GRADES SHOWN ON THESE DRAWINGS, ARE ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF AND I CERTIFY THAT I, OR MY AGENT, HAVE MADE SUFFICIENT INSPECTION TO ENSURE THE ACCURACY OF THIS STATEMENT."

THOMAS C. SUBLETT DATE 12/14/11

COMMONWEALTH OF VIRGINIA
THOMAS C. SUBLETT
Lic. No. 1886
12/14/11
LAND SURVEYOR

Rev.	Date	Description	Revised By
4	2-28-12	DRAINAGE RECORD DRAWING	JFS
3	8/3/11	FINAL PLAN SET	JAG
2	7/18/11	REVISED PER JCC COMMENTS DATED 7/2/11	JAG
1	6/22/11	REVISED PER JCC COMMENTS DATED 5/20/11	JAG

AES CONSULTING ENGINEERS
5248 Olde Towne Road, Suite 1
Williamsburg, Virginia 23188
Phone: (757) 565-1677
Fax: (757) 220-9894
www.aesva.com
Hampton Roads | Central Virginia | Middle Peninsula

SITE PLAN
TIDEWATER AAA
STONEHOUSE DISTRICT JAMES CITY COUNTY VIRGINIA

RECEIVED JUN 29 2012

Project Contacts:	JAG
Project Number:	9353-09
Scale: 1"=30'	Date: 4/28/11
Sheet Title: DRAINAGE RECORD DRAWING	
Sheet Number	1 OF 1

GRAPHIC SCALE
30' 0' 30' 60'
SCALE: 1" = 30'

GRADE SWALE TO EXISTING INLET (GRADE @ 1%)

GRADE AROUND EXISTING INLET TO DRAIN

GRADE SWALE TO EXISTING INLET (GRADE @ 1%)

EX. CURB DI RIM=111.84 INV IN=103.69 INV OUT=103.42 D=8.42'

36" RCP
15" RCP

2.5'x2.5' DI RIM=112.16 INV=103.56
COMPACT EARTH AROUND EXISTING INLET

24" RCP
15" RCP

2.5'x2.5" DI RIM=112.91 INV=103.61

30" RCP

EXISTING 30' DRAINAGE EASEMENT DOC. NO. 080031304

EX. DI RIM=111.80 INV=104.23

EX. DI RIM=111.45 INV OUT=104.78
INV IN=104.81

15" RCP ~~134~~ LF 132 @ ~~1.26%~~ 3.0%

SS2 DI-3A TOP=~~114.13~~ 114.17 INV=~~107.79~~ (1) 107.85 (IN) 107.65 (OUT) D=~~6.34'~~ 6.52
(PROVIDE OPENING FOR PRELIMINARY GRADING TO DRAIN INTO STRUCTURE. TO BE SEALED PRIOR TO FINAL GRADING)

LIMIT OF SOIL RESPREAD

15" RCP 30 ~~50~~ LF @ ~~5.00%~~ 5.03%

SS3 DI-3A TOP=~~113.48~~ 113.51 INV IN=~~106.30~~ (4) 106.36 INV OUT=~~106.30~~ (EX. DI) 106.32 D=~~7.18'~~ 7.19
(PROVIDE OPENING FOR PRELIMINARY GRADING TO DRAIN INTO STRUCTURE. TO BE SEALED PRIOR TO FINAL GRADING)

ALTERNATIVE 2 OFFSITE IMPROVEMENTS

EX. DI-3A RIM=112.52 INV IN= 105.12 INV OUT=105.10

15" RCP 33 LF 30 @ ~~5.00%~~ 5.17%

4' WIDE SIDEWALK

SS9 DI-3A TOP=~~113.40~~ 113.39 INV OUT=~~106.75~~ (EX. DI-3A) 106.67 D=~~6.65'~~ 6.72

15" RCP ~~43 LF~~ 43 @ ~~5.00%~~ 4.65%

SS4 DI-3A TOP=~~114.33~~ 114.26 INV OUT=~~108.45~~ (3) 108.36 D=~~5.87'~~ 5.90
(PROVIDE OPENING FOR PRELIMINARY GRADING TO DRAIN INTO STRUCTURE. TO BE SEALED PRIOR TO FINAL GRADING)

EXISTING 30' INGRESS/EGRESS & DRAINAGE EASEMENT DOC. NO. 080031304

BARBED WIRE FENCE

LIMIT OF SOIL RESPREAD

24" RCP

3" PEAR

LOT #3 BEING A PORTION OF PARCEL "A" TMP 24-3-0100000003 INW 080031304

CURB DI RIM=113.50 INV=109.75

COMPACT EARTH AROUND EXISTING INLET

2.5'x2.5' DI RIM=114.16 INV(15" RCP)=107.86 INV(24" RCP)=107.26

15" RCP ~~142~~ LF 143 @ ~~4.03%~~ 3.91%

GRADE SWALE TO EXISTING INLET

N37°57'18"W 87.33'

N37°57'18"W 70.34'

VDOT MH-1 TOP=~~116.51~~ 116.47 INV=~~113.51~~ 113.44 D=~~3.00'~~ 3.03

8" HDPE ~~32~~ LF 31 @ ~~2.15%~~ -0.32%

YARD DRAIN TOP=~~117.25~~ 117.25 INV=~~114.20~~ 113.34

8" HDPE STORM DRAIN ROOF LEADERS

8" HDPE ~~48~~ LF 47 @ ~~1.44%~~ 0.21%

YARD DRAIN TOP=~~117.34~~ 117.16 INV=~~114.20~~ 113.54

SERVICE CENTER F.F.=117.50

214 117.55 FINISH FLR

PRIVATE 18' WIDE INVERT

N52°02'42"W 240.98'

S52°02'42"E 108.00'

ALTERNATIVE 1 OFFSITE IMPROVEMENTS

SAN CO RIM=117.30

8' CURB CUT

SAN CO RIM=115.62

SAN CO RIM=116.12

EXISTING 30' INGRESS/EGRESS EASEMENT DOC. NO. 070032304

SAN MH RIM=116.29 INV=110.49

EXISTING 20' INGRESS/EGRESS EASEMENT DOC. NO. 070032304

NOLAND BOULEVARD

STM MH RIM=115.39 INV(15" RCP STUB)=108.69 INV(24" RCP)=107.93

N/F SMITH MEMORIAL BAPTIST T.M. (24-3) (1-36) ZONED B1

END VDOT FOUND

3" PEAR

15" RCP STUB

REMOVE EXISTIN TRAFFIC BARRIERS AND INSTALL 15FT OF CG-2 CURB ALONG EXISTING EDGE OF PAVEMENT. NOSE DOWN CURB AND PROVIDE A 3FT CURB OPENING

EXISTING 30' INGRESS/EGRESS & DRAINAGE EASEMENT DOC. NO. 080031304

CURB DI RIM=115.43 INV=108.93

EXISTING 20' DRAINAGE EASEMENT DOC. NO. 080031304

SS1 DI-3A TOP=~~115.83~~ 115.78 INV OUT=~~112.09~~ (6) 112.04 D=~~3.75'~~ 3.74

S37°57'18"E 78.06'

S37°57'18"E 157.67'

15" RCP ~~55~~ LF 55 @ ~~1.09%~~ 1.56%

15" RCP ~~191~~ LF 191 @ ~~0.95%~~ 0.90%

BUSH ROW

2" BIRCH
2" BIRCH
2" BIRCH

4" PINE

3" PINE

POWER POLE

TEL PED

EXISTING 10' VIRGINIA ELECTRIC AND POWER COMPANY EASEMENT DOC. NO. 050004833

EX. CURB DI RIM=116.32 INV=109.42 D=6.90'

15" RCP ~~43~~ LF 43 @ ~~1.00%~~ 0.86%

TELECOMM MH

DITCH

18" VDH

SAN MH RIM=116.51 INV=109.21

SS6 DI-3A TOP=~~115.14~~ 115.08 INV IN=~~111.53~~ (7) 111.18 INV IN=~~109.93~~ (8) 109.99 INV OUT=~~109.85~~ (5) 109.79 D=~~5.36'~~ 5.29
(PROVIDE OPENING FOR PRELIMINARY GRADING TO DRAIN INTO STRUCTURE. TO BE SEALED PRIOR TO FINAL GRADING)

EX. SANITARY SEWER EASEMENT P.B. 10, PG. 58 D.B. 193, PG. 709

SAN MH RIM=117.30 INV=108.56

SS8 DI-3A TOP=~~115.50~~ 115.50 INV OUT=~~111.75~~ (6) 111.71 D=~~3.75'~~ 3.79
(PROVIDE OPENING FOR PRELIMINARY GRADING TO DRAIN INTO STRUCTURE. TO BE SEALED PRIOR TO FINAL GRADING)

RICHMOND ROAD (U.S. ROUTE 60)

COUNTY PROJECT SP-0042-2011 DRAINAGE RECORD DRAWING DATE 2-28-12

99157_TIDEWATER_AAA_AUTO_SERVICE-22

SP-0042-2011

SITE PLAN
FOR
TIDEWATER AAA

JAMES CITY COUNTY VIRGINIA

RECEIVED JUN 2011 Planning Department

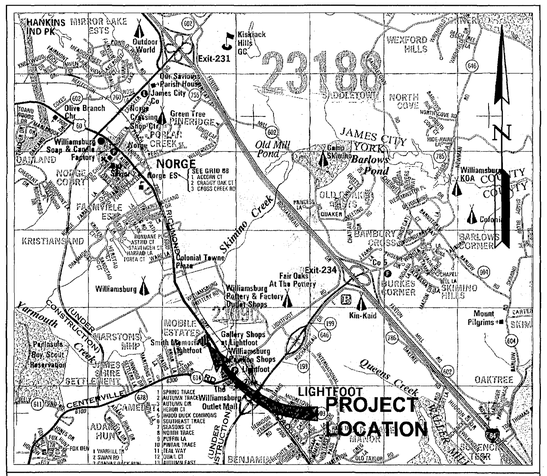
COUNTY OF JAMES CITY
FINAL SITE PLAN
APPROVALS

		DATE
Fire Dept.	ED / JA	5-3-11
Health Dept.		
VDOT	KC / JA	8-9-11
Planning	CTA	8-9-11
Environ.	SJP / JA	7-28-11
Zoning Adm.	TWB	8/9/11
JCSA	DAK / JA	7-25-11
County Eng.		
REA		
Other		

Rev.	Date	Description	Revised By
Rev.	6/20/11	REVISED PER JCC COMMENTS DATED 5/20/11	JAG

GENERAL NOTES:

1. TAX PARCEL ID NO.: A PORTION OF (24-3)(9-2)
2. THIS PROPERTY IS IN F.I.R.M. ZONE "X" AS SHOWN ON COMMUNITY PANEL #510201 0020 B, DATED 2/6/1991 OF THE FLOOD INSURANCE RATE MAPS FOR JAMES CITY COUNTY, VIRGINIA.
3. THIS SITE LIES IN SUBWATERSHED 105 OF THE YARMOUTH CREEK WATERSHED.
4. SITE TO BE SERVED BY PUBLIC WATER & SEWER OWNED BY THE JAMES CITY COUNTY SERVICE AUTHORITY, J.C.S.A.
5. ALL COMPONENTS OF THE WATER DISTRIBUTION AND SANITARY SEWER SYSTEM SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH THE LATEST EDITION OF THE JCSA DESIGN AND ACCEPTANCE CRITERIA FOR WATER DISTRIBUTION AND SANITARY SEWER SYSTEMS, THE HRPDC REGIONAL CONSTRUCTION STANDARDS (THIRD EDITION WITH AMENDMENTS DATED JANUARY 2003), AND THE COMMONWEALTH OF VIRGINIA DEPARTMENT OF HEALTH WATERWORKS AND SANITARY SEWERAGE REGULATIONS. THE CONTRACTOR SHALL USE ONLY NEW MATERIALS, PARTS, AND PRODUCTS ON ALL PROJECTS. ALL MATERIALS SHALL BE STORED SO AS TO ASSURE THE PRESERVATION OF THEIR QUALITY AND FITNESS FOR THE WORK. A COPY OF THE JCSA DESIGN AND ACCEPTANCE CRITERIA AND HRPDC REGIONAL CONSTRUCTION STANDARDS MUST BE KEPT ON-SITE BY THE CONTRACTOR DURING TIME OF INSTALLING, TESTING, AND CONVEYING FACILITIES TO JCSA.
6. CONTRACTOR SHALL NOTIFY MISS UTILITY (1-800-552-7001) A MINIMUM 48 HOURS PRIOR TO ANY EXCAVATION OR DEMOLITION.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF CONSTRUCTION EFFORTS WITH VIRGINIA NATURAL GAS, VIRGINIA POWER, COX COMMUNICATIONS, JAMES CITY SERVICE AUTHORITY, VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT), AND OTHERS THAT MAY BE REQUIRED.
8. THE CONTRACTOR SHALL SATISFY HIMSELF AS TO ALL SITE CONDITIONS PRIOR TO CONSTRUCTION.
9. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS PRIOR TO COMMENCEMENT OF WORK TO INCLUDE, BUT NOT LIMITED TO JAMES CITY COUNTY LAND DISTURBANCE, BUILDING, WATER & SEWER INSPECTION AND TAP FEES, UTILITY (JCSA), AND VDOT CE-7 PERMITS.
10. ALL PROPOSED UTILITIES SHALL BE PLACED UNDERGROUND.
11. ALL PARKING SPACES ARE TO BE PROVIDED WITH 4-INCH WHITE PAINTED STRIPING AND HANDICAP ACCESS AISLES WITH 1 FT. WIDE BLUE PAINTED HATCHING.
12. ALL PROPOSED SIGNAGE SHALL BE IN ACCORDANCE WITH ARTICLE II, DIVISION 3 OF THE JAMES CITY COUNTY ZONING ORDINANCE.
13. ANY EXISTING UNUSED WELLS SHALL BE ABANDONED IN ACCORDANCE WITH THE STATE HEALTH DEPARTMENT REGULATIONS AND JAMES CITY COUNTY CODE.
14. EXISTING WATER AND SANITARY SEWER CONNECTIONS SHALL BE ABANDONED IN ACCORDANCE WITH J.C.S.A. STANDARDS.
15. NO WETLANDS EXIST ON THIS SITE.
16. THIS SITE LIES WITHIN THE ROUTE 60 COMMUNITY CHARACTER CORRIDOR.
17. VDOT SHALL BE SAVED HARMLESS FROM THE MAINTENANCE RESPONSIBILITY OR LIABILITY ASSOCIATED WITH ANY FAILURE OF THE STORM WATER MANAGEMENT BASIN AND ITS OUTFLOW STRUCTURES.
18. PER JAMES CITY ZONING ORDINANCE SEC.24-525 THE MAXIMUM BUILDING HEIGHT IN MU ZONE IS 60'.
19. THE PROFESSIONAL WHOSE SEAL IS AFFIXED HEREON SHALL ACT AS THE "RESPONSIBLE LAND DISTURBER" FOR PURPOSES OF PLAN APPROVAL ONLY. PRIOR TO ISSUANCE OF THE LAND DISTURBING PERMIT, THE CONTRACTOR SHALL PROVIDE THE NAME OF A "RESPONSIBLE LAND DISTURBER" WHO SHALL ASSUME RESPONSIBILITY AS THE "RESPONSIBLE LAND DISTURBER" FOR THE CONSTRUCTION PHASE OF THE PROJECT. THE OWNER OR DEVELOPER SHALL PROVIDE WRITTEN NOTIFICATION SHOULD THE "RESPONSIBLE LAND DISTURBER" CHANGE DURING CONSTRUCTION.
20. THE PLUMBING INSIDE THE BUILDINGS MUST BE INSPECTED BY JCSA OPERATIONS, AT (757)229-7421 FOR POTENTIAL CROSS CONNECTIONS. ANY CROSS CONNECTIONS MUST BE PROTECTED BY THE APPROPRIATE BACKFLOW PREVENTION DEVICES.
21. ALL ROADS SHALL BE PRIVATE RIGHT-OF-WAYS AND SHALL NOT BE MAINTAINED BY THE VIRGINIA DEPARTMENT OF TRANSPORTATION OR JAMES CITY COUNTY.
22. STORM SEWER PIPE SHALL BE RCP CLASS III UNLESS OTHERWISE DESIGNATED.
23. STORM STRUCTURES SHALL CONFORM TO THE VDOT ROAD AND BRIDGE STANDARDS AND VDOT SPECIFICATIONS. ALL MANHOLES SHALL INCLUDE INLET SHAPING (IS-1) AND MANHOLES DEEPER THAN 4 FEET SHALL HAVE STEPS (ST-1). PIPE BEDDING SHALL BE IN ACCORDANCE WITH VDOT PB-1 AND MANUF. SPECS/GUIDELINES.
24. PRIVATELY OWNED UTILITIES SHOWN ON THIS PLAN ARE REGULATED BY THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE AND ENFORCED BY THE CODE AND COMPLIANCE DEPARTMENT. THESE PRIVATELY OWNED UTILITIES MUST COMPLY FULLY WITH THE INTERNATIONAL PLUMBING CODE, THE NATIONAL FIRE PREVENTION ASSOCIATION STANDARD 24 AND THE INTERNATIONAL FIRE CODE. CONTRACTORS WORKING FROM THIS SITE PLAN ARE CAUTIONED NOT TO INSTALL OR CONCEAL PRIVATELY OWNED SITE UTILITIES WITHOUT OBTAINING PERMITS AND INSPECTIONS.
25. IN ACCORDANCE WITH THE APPROVED PROFFER CONDITION #11 ALL MONUMENT SIGNS WILL BE OF CONSISTENT DESIGN.
26. THERE ARE NO OFFSITE LAND DISTURBING AREAS ANTICIPATED FOR THIS PROJECT.
27. THIS SITE PLAN MEETS THE REQUIREMENTS OF THE 2005 JCSA DESIGN AND ACCEPTANCE CRITERIA FOR WATER AND SANITARY SEWER SYSTEMS AS ADOPTED ON NOVEMBER 8, 2005. THE JCSA CRITERIA FORMALLY ADOPTS THE HRPDC REGIONAL CONSTRUCTION STANDARDS, THIRD EDITION.
28. THIS PROJECT IS BASED ON JAMES CITY COUNTY GEODETIC CONTROL NAD 83 (HORIZONTAL DATUM) AND NGVD 29 (VERTICAL DATUM) ESTABLISHED FROM JAMES CITY COUNTY MONUMENT 307.



VICINITY MAP
(APPROXIMATE SCALE: 1"=2,000')
COPYRIGHT ADC THE MAP PEOPLE PERMITTED USE NUMBER 21004223

COUNTY PROJECT NO.: SP-0042-2011
ORIGINAL SUBMITTAL DATE: 4/28/11

COMMONWEALTH OF VIRGINIA
JASON A. GRIMES
No. 040170
6/20/11
PROFESSIONAL ENGINEER

INDEX OF SHEETS:

SHEET NO.	SHEET DESCRIPTION
1	COVER SHEET
2	OVERALL DEVELOPMENT PLAN
3	ENVIRONMENTAL INVENTORY PLAN
4	SITE LAYOUT PLAN
5	GRADING & DRAINAGE PLAN
6	NOTES & DETAILS
7	NOTES & DETAILS
8	LANDSCAPE PLAN
9	LIGHTING PLAN

OWNER/DEVELOPER INFORMATION:

OWNER: TIDEWATER AAA

CONTACT: JOHN W. FOWLER
4701 COLUMBUS STREET, SUITE 201
VIRGINIA BEACH, VA 23462
PHONE NO.: (757) 473-8754
FAX NO.: (757) 473-0674

CERTIFIED RESPONSIBLE LAND DISTURBER:

JASON GRIMES, P.E.
AES CONSULTING ENGINEERS
5248 OLDE TOWNE ROAD, SUITE 1
WILLIAMSBURG, VIRGINIA. 23188
TELEPHONE: 757-253-0040

* FOR SITE PLAN REVIEW PROCESS ONLY. CONTRACTOR SHALL NAME RESPONSIBLE LAND DISTURBER FOR CONSTRUCTION PROCESS.

SITE DATA:

SITE ADDRESS:	6517 RICHMOND ROAD LIGHTFOOT, VIRGINIA 23188
ZONING:	MU-MIXED USE WITH PROFFERS (Z-06-04; MP-06-04)
PROJECT LIMITS:	147,812 S.F.±, 3.39 AC.±
BLDG. GROSS FLOOR AREA:	15,715 S.F.±, 0.36 AC.±
BUILDING HEIGHT:	23'
BUILDING FOOTPRINT:	14,900 S.F.±, 0.34 AC.±
TOTAL IMPERVIOUS AREA:	63,830 S.F.±, 1.47 AC.±
TOTAL DISTURBED AREA:	96,100 S.F.±, 2.21 AC.±
FLOOD HAZARD MAP:	THIS PROPERTY IS IN ZONE X AS SHOWN ON MAP NUMBER 51095C0110C, PANEL 0110C, DATED 09/28/2007 OF THE FLOOD INSURANCE RATE MAPS FOR JAMES CITY COUNTY, VIRGINIA. ZONE X IS DEFINED AS OUTSIDE THE 500 YR FLOOD PLAIN.
PARKING PROVIDED:	AUTO SERVICE AREA = 8,265 S.F. 1 SPACE PER 250 S.F. = 33 SPACES REQUIRED OFFICE AREA = 7,450 S.F. 1 SPACE PER 200 S.F. = 38 SPACES REQUIRED TOTAL REQUIRED = 71 SPACES (INCLUDES HANDICAP) TOTAL PROVIDED = 88 SPACES (INCLUDES 4 HANDICAP) + 3 TOW TRUCK SPACES

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SITE PLAN
TIDEWATER AAA
STONEHOUSE DISTRICT JAMES CITY COUNTY VIRGINIA

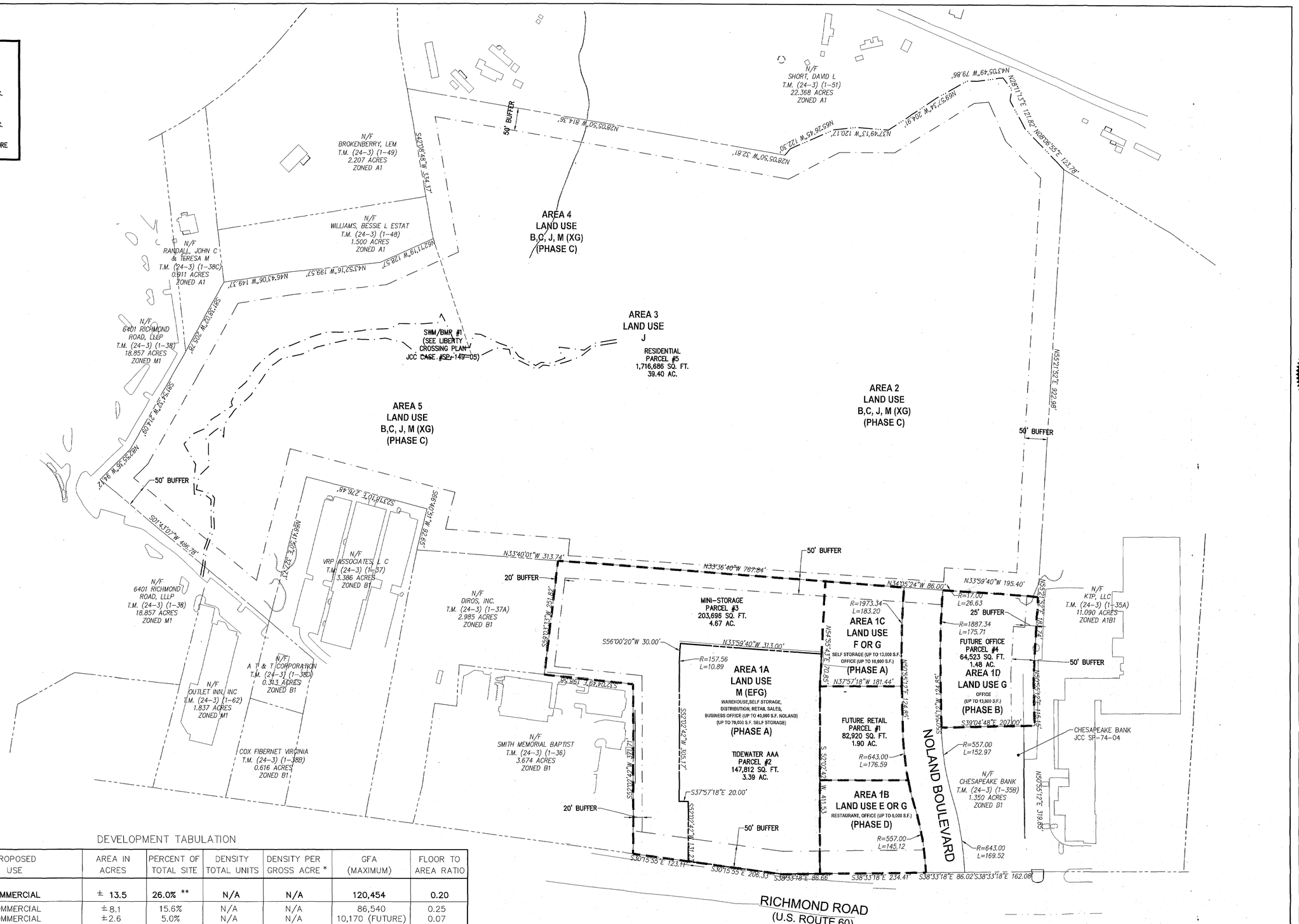
Project Contacts:	JAG
Project Number:	9353-09
Scale: AS NOTED	Date: 4/28/11
Sheet Title: COVER SHEET	

Sheet Number
1

AREA TABULATION

PARCEL #1 =	1.90 AC.
PARCEL #2 =	3.39 AC.
PARCEL #3 =	4.67 AC.
PARCEL #4 =	1.48 AC.
PARCEL #5 =	39.40 AC.
NOLAND R/W =	1.24 AC.
CHSAPEAKE BANK =	1.35 AC.
TOTAL =	53.43 AC.

NOTE:
PARCELS WILL BE CREATED BEFORE ISSUANCE OF BUILDING PERMITS.



DEVELOPMENT TABULATION

AREA NUMBER	AREA DESIGNATION	PROPOSED USE	AREA IN ACRES	PERCENT OF TOTAL SITE	DENSITY TOTAL UNITS	DENSITY PER GROSS ACRE *	GFA (MAXIMUM)	FLOOR TO AREA RATIO
1	M(FGE)	COMMERCIAL	± 13.5	26.0% **	N/A	N/A	120,454	0.20
1A	M(EFG)	COMMERCIAL	± 8.1	15.6%	N/A	N/A	86,540	0.25
1B	E OR G	COMMERCIAL	±2.6	5.0%	N/A	N/A	10,170 (FUTURE)	0.07
1C	F OR G	COMMERCIAL	±1.2	2.3%	N/A	N/A	11,936	0.25
1D	G	COMMERCIAL	±1.6	3.1%	N/A	N/A	11,808 (FUTURE)	0.20
2,3,4,5	B,C,J,M(XG)	RESIDENTIAL/ RECREATION COMMON OPEN SPACE	±38.5 (MAX)	74% (MAX)	244 (MAX)	6.30 (MAX)		
2	B,C,J,M(XG)	RESIDENTIAL/RECREATION	± 16.1	30.9%	138	8.6 DU/AC	N/A	
3	J	COMMON OPEN/RECREATION	± 9.4	18.2%	N/A	N/A	N/A	
4	B,C,J,M(XG)	RESIDENTIAL/RECREATION	± 5.8	11.1%	47	8.1 DU/AC	N/A	
5	B,C,J,M(XG)	RESIDENTIAL/RECREATION	± 7.2	13.8%	48	6.7 DU/AC	N/A	
		TOTALS	± 52.0	100.0	233	6.05	132,799	

Rev.	Date	Description	Revised By
1	6/20/11	REVISED PER JCC COMMENTS DATED 5/20/11	JAG

COMMONWEALTH OF VIRGINIA
JASON A. GAINES
No. 040770
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6/20/11

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SITE PLAN
TIDEWATER AAA
STONEHOUSE DISTRICT JAMES CITY COUNTY VIRGINIA

Project Contacts:	JAG
Project Number:	9353-09
Scale: 1"=100'	Date: 4/28/11
Sheet Title:	OVERALL DEVELOPMENT PLAN
Sheet Number	2

99157_TIDEWATER_AAA_AUTO_SERVICE-24

SOIL No.	SOIL NAME	HYDROLOGICAL GROUP	TYPICAL SLOPES	EROSION FACTOR (K)	EROSION FACTOR (T)
18B	KEMPSVILLE FINE SANDY LOAM	B	2-6%	0.24-0.32	3

INFORMATION TAKEN FROM "SOIL SURVEY OF JAMES CITY AND YORK COUNTIES AND THE CITY OF WILLIAMSBURG, VIRGINIA" ISSUED IN APRIL, 1985, BY THE UNITED STATES DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE IN COOPERATION WITH VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY.

SOIL SUSCEPTIBILITY TO EROSION CLASSIFICATION (K)
0.23 AND LOWER – LOW ERODIBILITY
0.23 TO 0.36 – MODERATE ERODIBILITY
0.36 AND UP – HIGH ERODIBILITY

SOILS BOUNDARY

NO PERENNIAL STREAMS HAVE BEEN FOUND TO EXIST WITHIN 100-FEET OF THIS DEVELOPMENT

SEQUENCE OF CONSTRUCTION

PHASE 1

1. PRIOR TO OBTAINING LAND DISTURBING PERMIT, THE CONTRACTOR SHALL OBTAIN A VSMP PERMIT (VIRGINIA STORMWATER MANAGEMENT PROGRAM) FROM DCR (VIRGINIA DEPARTMENT OF CONSERVATION AND RECREATION).
2. THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE JAMES CITY COUNTY ENVIRONMENTAL DIVISION INSPECTOR A MINIMUM OF 48 HOURS PRIOR TO BEGINNING ANY WORK AT THE SITE.
3. INSTALL CONSTRUCTION ENTRANCE SOUTH OF NOLAND BOULEVARD AND INSTALL PERIMETER EROSION AND SEDIMENT CONTROLS.
4. INSTALL SEDIMENT TRAP AND ASSOCIATED DIVERSION DIKES.
5. DIRECT RUNOFF TOWARDS SEDIMENT TRAPPING FEATURES WITH DIVERSIONS;
6. ESTABLISH TEMPORARY SOIL STOCKPILE. ESTABLISH ROUGH GRADES ON SITE, ENSURING RUNOFF IS DIRECTED TOWARDS TRAPS AND BASINS;
7. ONCE ROUGH GRADES HAVE BEEN ESTABLISHED, PROVIDE FINAL SILT FENCE, INSTALL STORM SEWER AND REMAINING UTILITIES PER PLAN.

FINAL PHASE

8. INSTALL INLET PROTECTION ON ALL STORM SEWER INLETS;
9. WITH SITE DRAINAGE DIRECTED TO THE STORM SYSTEM AND GRADED AREAS STABLIZED, RECIEVE WRITTEN PERMISSION FROM JCC ENVIRONMENTAL TO REMOVE THE SEDIMENT TRAPS.
10. ESTABLISH FINAL DRAINAGE PATTERNS, DIRECTING RUNOFF TOWARDS THE SITE INLETS;
11. SEED AND STABILIZE SURROUNDING SLOPES.
12. AT NO POINT DURING CONSTRUCTION SHALL ANY EROSION AND SEDIMENT CONTROL MEASURE BE REMOVED WITHOUT AUTHORIZATION TO DO SO BY THE JAMES CITY COUNTY ENVIRONMENTAL DIVISION.
13. SEED AND STABILIZE ANY REMAINING DISTURBED AREAS;
14. CONTRACTOR SHALL ENSURE SEDIMENT IS KEPT OUT OF DOWNSTREAM BMP AND STORMWATER FACILITIES.
15. AFTER THE COMPLETION OF CONSTRUCTION AND WITH THE WRITTEN APPROVAL OF THE JCC ENVIRONMENTAL INSPECTOR, REMOVE ALL REMAINING SEDIMENT CONTROL MEASURES.
16. APPLY FINAL SURFACE ASPHALT AT THE DIRECTION OF THE OWNER.

EROSION & SEDIMENT CONTROL NARRATIVE

DESCRIPTION

THIS PROJECT IS FOR THE CONSTRUCTION OF AN AUTO SERVICE CENTER OF TIDEWATER AAA, IN THE STONEHOUSE DISTRICT OF JAMES CITY COUNTY. THIS PROJECT CONSISTS OF THE CONSTRUCTION OF THE BASIC INFRASTRUCTURE OF THIS AUTO SERVICE CENTER. THIS INCLUDES THE CONSTRUCTION OF ROADWAYS, PARKING, STORM SYSTEM, PUBLIC SANITARY SEWER SYSTEM, PUBLIC WATER SYSTEM AND STORMWATER MANAGEMENT. THERE WILL BE TWO ENTRANCES TO THIS SITE AT RICHMOND ROAD AND NOLAND BOULEVARD. THE STORMWATER RUNOFF ASSOCIATED WITH THIS SITE WILL BE COLLECTED INTO A NETWORK OF STORM PIPES THAT WILL TIE INTO THE EXISTING STORM SYSTEM.

EXISTING SITE CONDITIONS

A MAJOR PORTION OF THE SITE IS UNDEVELOPED OPEN FIELD WITH A DITCH/STORM SYSTEM AT THE REAR OF THE SITE. THERE IS ALSO A 50 FOOT BUFFER WITH SMALL BUSHES AND SHRUBS ALONG RICHMOND ROAD.

ADJACENT PROPERTIES

THE SITE IS BORDERED BY NOLAND BOULEVARD TO THE NORTHWEST AND RICHMOND ROAD TO THE NORTHEAST.

OFF-SITE AREAS

THERE ARE NO AREAS OF PROPOSED OFF-SITE IMPROVEMENTS THAT ARE NOT SHOWN ON THESE PLANS.

CRITICAL AREAS

THERE ARE NO CRITICAL SLOPE AREAS ON THE SITE.

SOILS

THE PROJECT AREA IS COMPRISED OF KEMPSVILL FINE SANDY LOAM. SHEET 3 CONTAINS A TABLE OF THE ASSOCIATED SOIL CHARACTERISTICS FOR THIS SOIL TYPE.

EROSION AND SEDIMENT CONTROL MEASURES

FOR MAXIMUM EROSION AND SEDIMENT CONTROL PROTECTION, THE FOLLOWING MEASURES WILL BE UTILIZED AND INSTALLED IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK TO MINIMIZE THE TRANSPORTATION OF SEDIMENT:

STONE CONSTRUCTION ENTRANCE
DIVERSION DIKES
INLET PROTECTION
PERMANENT SEEDING
SILT FENCE
TREE PROTECTION

PERMANENT STABILIZATION

PERMANENT SEEDING WILL BE USED TO STABILIZE THE SITE PRIOR TO INSTALLING SEDIMENT BASINS AND UNDERGROUND FACILITIES.

STORMWATER RUNOFF CONSIDERATIONS

STORMWATER GENERATED FROM THE PROJECT SITE WILL FLOW INTO AN EXISTING PIPE NETWORK TO A DOWNSTREAM BMP. THE CONTRACTOR WILL BE RESPONSIBLE FOR KEEPING SEDIMENT OUT OF THE DOWNSTREAM BMP AND STORMWATER FACILITIES.

LEGEND

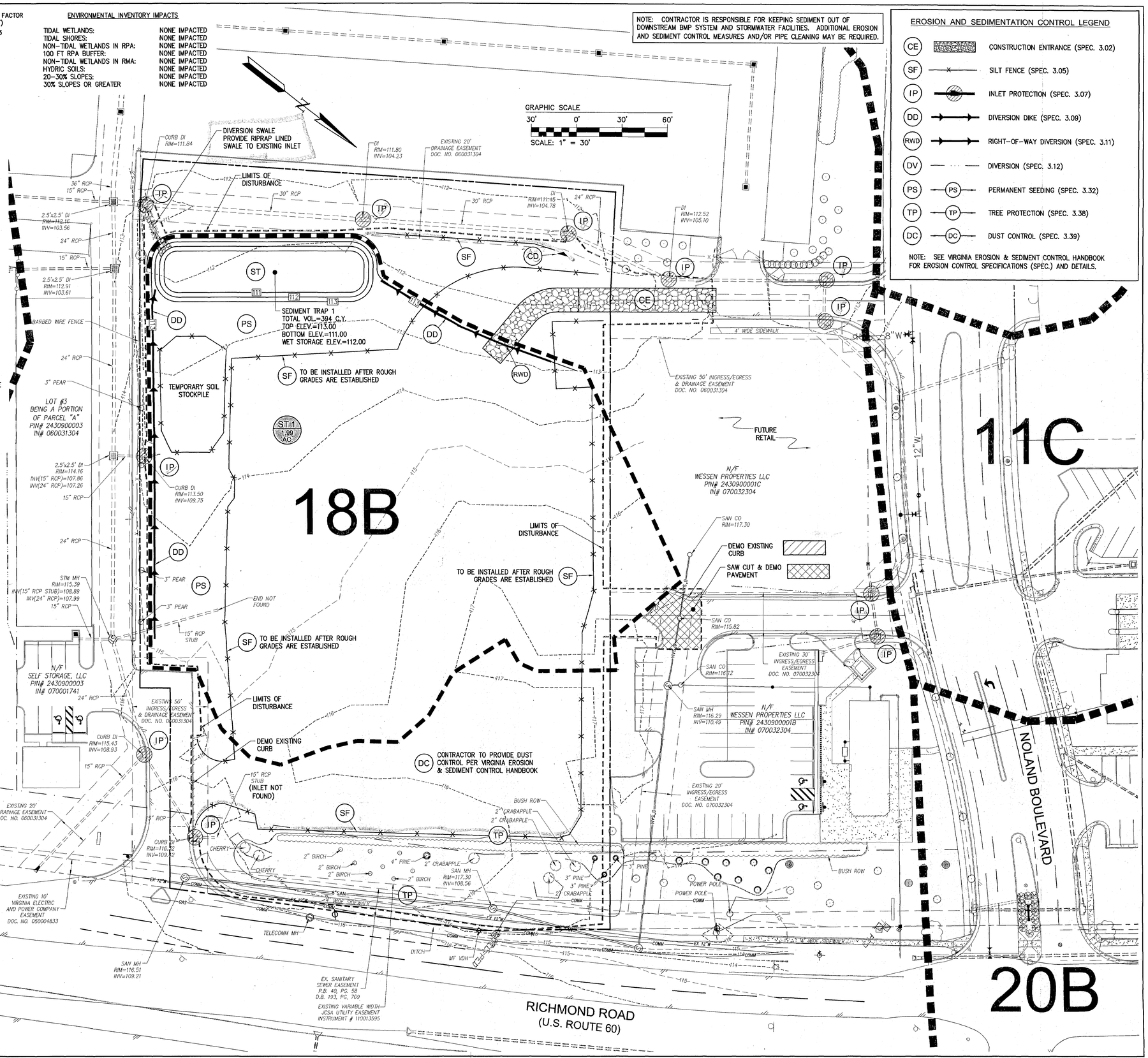
ITEM TO BE REMOVED

ITEM TO BE REMOVED

ENVIRONMENTAL INVENTORY IMPACTS

TIDAL WETLANDS:	NONE IMPACTED
TIDAL SHORES:	NONE IMPACTED
NON-TIDAL WETLANDS IN RPA:	NONE IMPACTED
100 FT RPA BUFFER:	NONE IMPACTED
NON-TIDAL WETLANDS IN RMA:	NONE IMPACTED
HYDRIC SOILS:	NONE IMPACTED
20-30% SLOPES:	NONE IMPACTED
30% SLOPES OR GREATER	NONE IMPACTED

NOTE: CONTRACTOR IS RESPONSIBLE FOR KEEPING SEDIMENT OUT OF DOWNSTREAM BMP SYSTEM AND STORMWATER FACILITIES. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES AND/OR PIPE CLEANING MAY BE REQUIRED.



EROSION AND SEDIMENTATION CONTROL LEGEND

- CE — CONSTRUCTION ENTRANCE (SPEC. 3.02)
- SF — SILT FENCE (SPEC. 3.05)
- IP — INLET PROTECTION (SPEC. 3.07)
- DD — DIVERSION DIKE (SPEC. 3.09)
- RWD — RIGHT-OF-WAY DIVERSION (SPEC. 3.11)
- DV — DIVERSION (SPEC. 3.12)
- PS — PERMANENT SEEDING (SPEC. 3.32)
- TP — TREE PROTECTION (SPEC. 3.38)
- DC — DUST CONTROL (SPEC. 3.39)

NOTE: SEE VIRGINIA EROSION & SEDIMENT CONTROL HANDBOOK FOR EROSION CONTROL SPECIFICATIONS (SPEC.) AND DETAILS.

Rev.	Date	Description	Revised By
2	7/18/11	REVISED PER JCC COMMENTS DATED 7/20/11	JAG
1	6/22/11	REVISED PER JCC COMMENTS DATED 5/20/11	JAG

COMMONWEALTH OF VIRGINIA
JASON A. GRIMES
No. 040170
7/18/11
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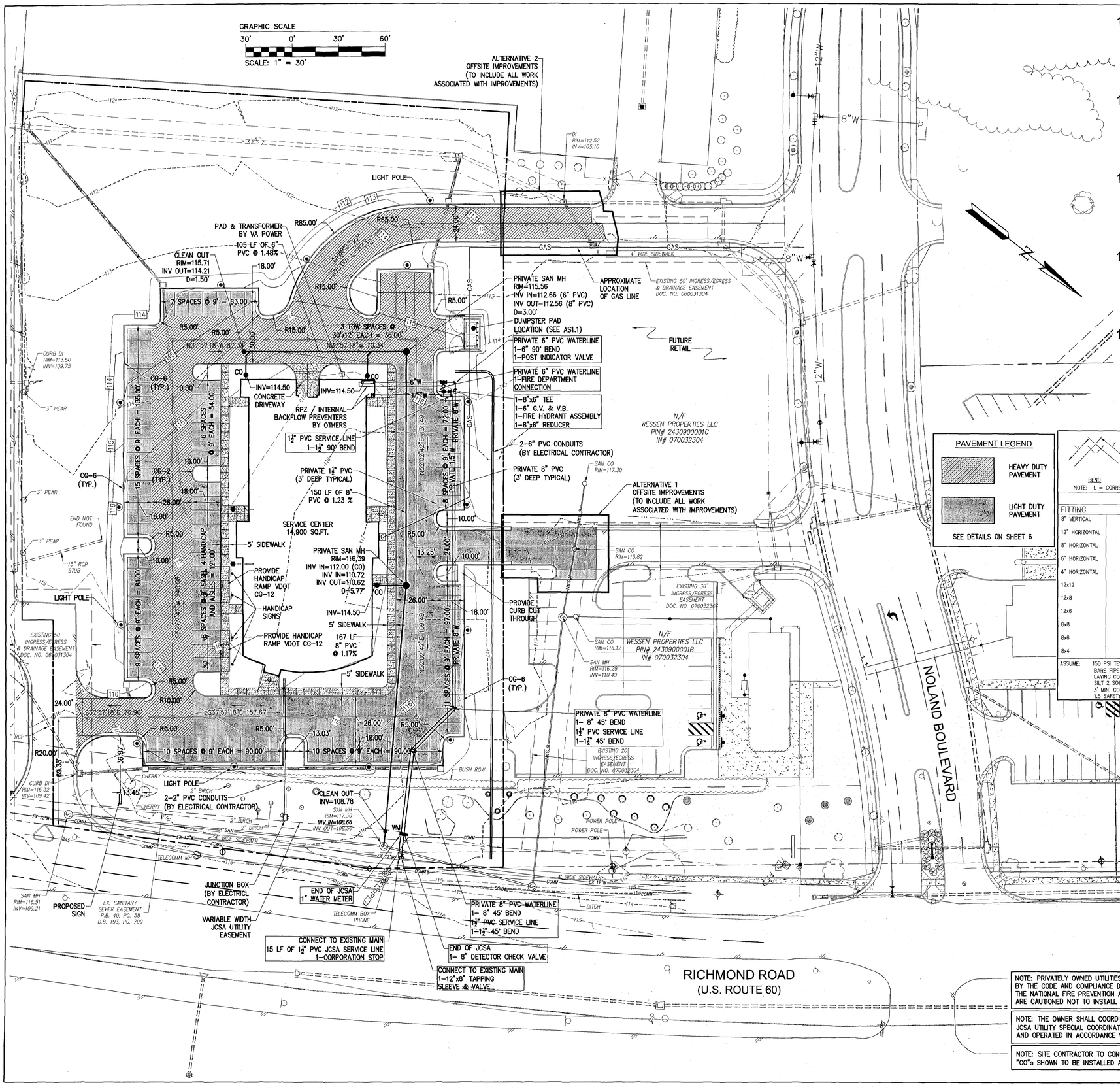
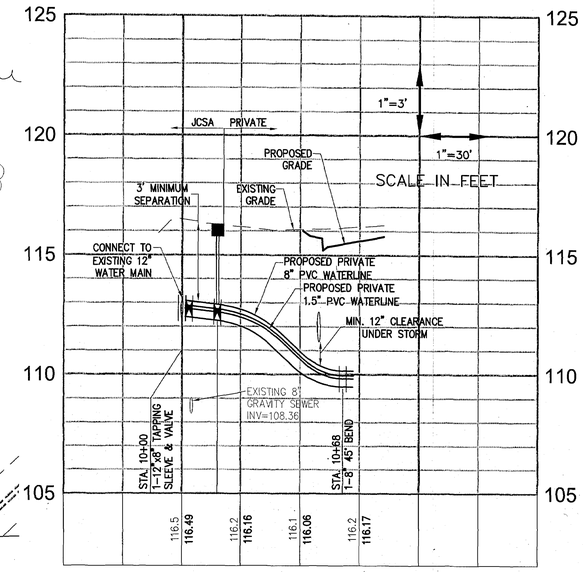
SITE PLAN
TIDEWATER AAA
STONEHOUSE DISTRICT JAMES CITY COUNTY VIRGINIA

Project Contacts:	JAG
Project Number:	9353-09
Scale: 1"=30'	Date: 4/28/11

Sheet Title:
ENVIRONMENTAL INVENTORY PLAN

Sheet Number
3





Rev.	Date	Description	Revised By
	6/20/11	REVISED PER JCC COMMENTS DATED 5/20/11	JAG

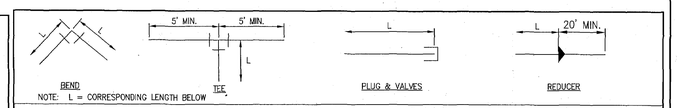
COMMONWEALTH OF VIRGINIA
JESSICA A. GAMES
No. 040170
PROFESSIONAL ENGINEER
6/20/11

PAVEMENT LEGEND

HEAVY DUTY PAVEMENT

LIGHT DUTY PAVEMENT

SEE DETAILS ON SHEET 6



NOTE: L = CORRESPONDING LENGTH BELOW

RESTRAINED JOINT LENGTHS

FITTING	11.25°	22.5°	45°	90°	PLUG/VALVE	REDUCER	TEE
8" VERTICAL	9'	19'	40'	–	–	–	–
12" HORIZONTAL	5'	10'	20'	45'	135'	–	–
8" HORIZONTAL	5'	10'	15'	35'	100'	–	–
6" HORIZONTAL	5'	5'	10'	25'	75'	–	–
4" HORIZONTAL	5'	5'	10'	20'	55'	–	–
12x12	–	–	–	–	–	–	104'
12x8	–	–	–	–	–	75'	48'
12x6	–	–	–	–	–	100'	11'
8x8	–	–	–	–	–	–	65'
8x6	–	–	–	–	–	40'	33'
8x4	–	–	–	–	–	70'	5'

ASSUME: 150 PSI TEST PRESSURE
BARE PIPE (NO POLYETHYLENE WRAP)
LAYING CONDITION 4
SILT 2 SOILS
3' MIN. COVER
1.5 SAFETY FACTOR

NOTE:
THE FOLLOWING DETAILS SHALL BE APPLIED TO THE UTILITIES SHOWN ON THESE PLANS:

HRPDC DETAILS

EW_01	PIPE BEDDING DETAIL (TYPE 3)
WD_01	SINGLE & DUAL CONNECTIONS
WD_06	FIRE HYDRANT SETTING (TYPE 1)
WD_09	TEMPORARY MANIFOLD FOR TEST & CHLORINATION
SS_07	SANITARY SEWER MANHOLE INVERT SHAPING
SS_08	CONNECTION INTO EXISTING MANHOLES
SS_11	SANITARY SERVICE LATERAL CLEAN OUT FRAME AND COVER
SS_12	SANITARY SERVICE LATERAL CLEAN OUT FRAME AND COVER
WS_01	STD. VALVE BOX AND FRAME COVER
WS_02	VALVE SETTING DETAIL
WS_03	MANUAL AIR VENT ASSEMBLY
WS_04	STEEL CASING DETAIL
WS_05	STANDARD THRUST BLOCKS

JCSA DETAILS

W 13.0	TYP. WATER METER INSTALLATION
W 17.0	DETECTOR CHECK VALVE INSTALLATION
JR.1	JOINT RESTRAINT TABLE

NOTE: PRIVATELY OWNED UTILITIES SHOWN ON THIS PLAN ARE REGULATED BY THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE AND ENFORCED BY THE CODE AND COMPLIANCE DEPARTMENT. THESE PRIVATELY OWNED UTILITIES MUST COMPLY FULLY WITH THE INTERNATIONAL PLUMBING CODE, THE NATIONAL FIRE PREVENTION ASSOCIATION STANDARD 24 AND THE INTERNATIONAL FIRE CODE. CONTRACTORS WORKING FROM THIS SITE PLAN ARE CAUTIONED NOT TO INSTALL OR CONCEAL PRIVATELY OWNED SITE UTILITIES WITHOUT OBTAINING PERMITS AND INSPECTIONS.

NOTE: THE OWNER SHALL COORDINATE AN INSPECTION OF THE BACKFLOW PREVENTION DEVICE WITH THOMAS FAUBER, JCSA UTILITY SPECIAL COORDINATOR, AT (757)259-4138. THE BACKFLOW PREVENTER SHALL BE TESTED, MAINTAINED AND OPERATED IN ACCORDANCE WITH JCSA STANDARDS.

NOTE: SITE CONTRACTOR TO CONNECT SANITARY SEWER 3-FT FROM BUILDING. "CO"s SHOWN TO BE INSTALLED AS PART OF BUILDING CONSTRUCTION.

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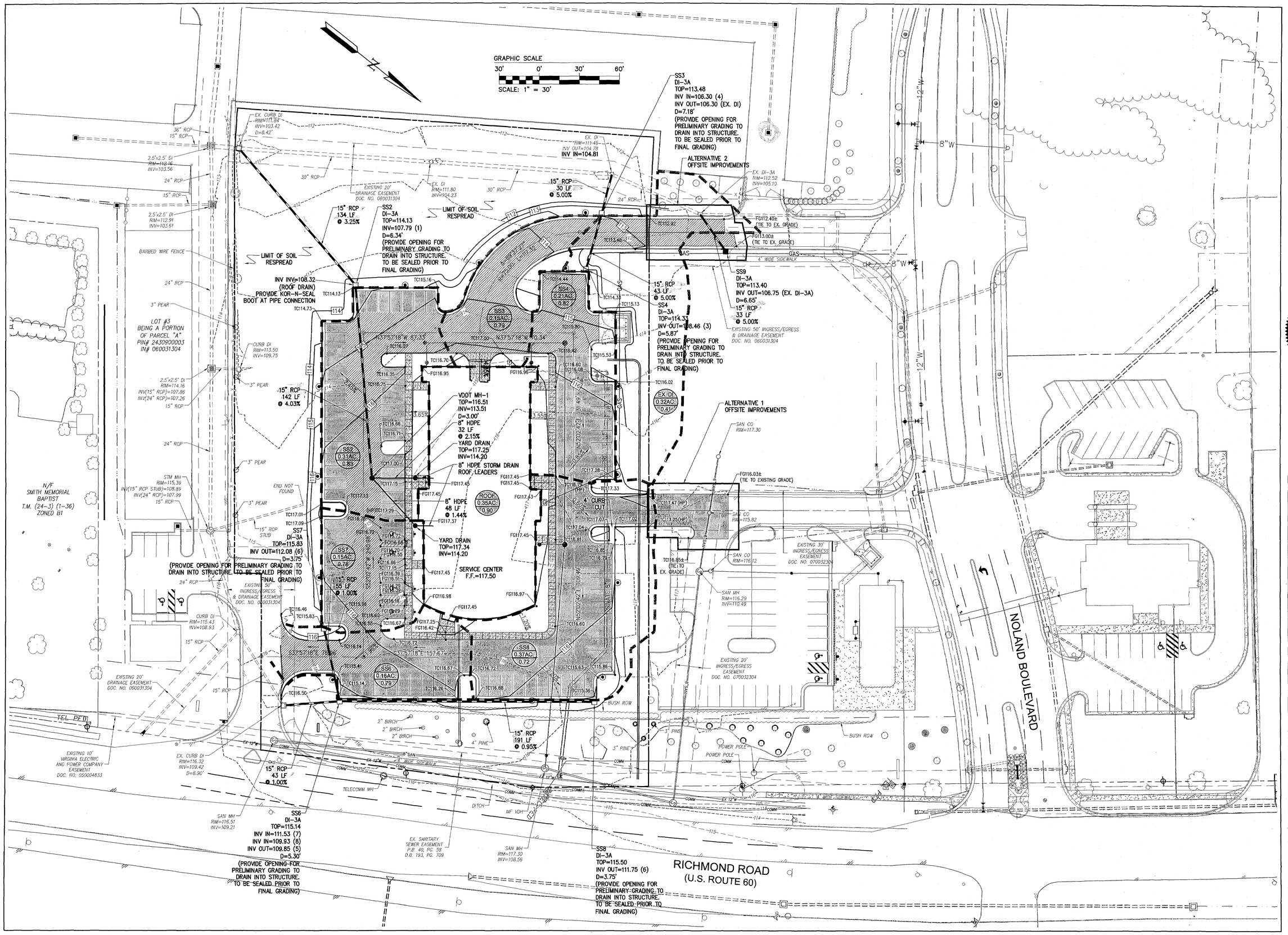
SITE PLAN
TIDEWATER AAA
STONEHOUSE DISTRICT JAMES CITY COUNTY VIRGINIA

Project Contacts:	JAG
Project Number:	9353-09
Scale: 1"=30'	Date: 4/28/11

Sheet Title:
SITE LAYOUT PLAN

Sheet Number
4

99157_TIDEWATER_AAA_AUTO_SERVICE-26



Rev.	Date	Description	Revised By
	6/20/11	REVISED PER JDC COMMENTS DATED 5/20/11	JAG

COMMONWEALTH OF VIRGINIA
JASON A. GRIMES
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6/20/11

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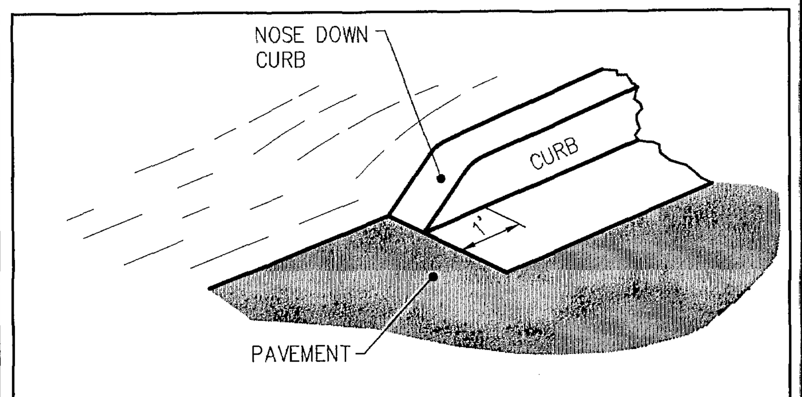
SITE PLAN
TIDEWATER AAA
STONEHOUSE DISTRICT JAMES CITY COUNTY VIRGINIA

Project Contacts:	JAG
Project Number:	9353-09
Scale: 1"=30'	Date: 4/28/11

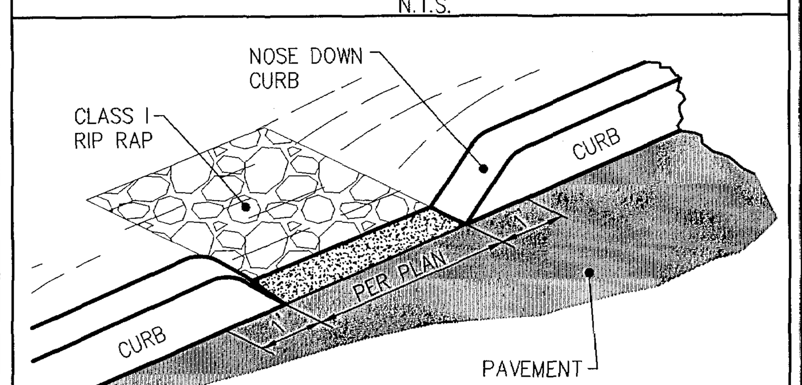
Sheet Title:
GRADING & DRAINAGE PLAN

Sheet Number
5

99157_TIDEWATER_AAA_AUTO_SERVICE-27



NOSE DOWN CURB
N.T.S.

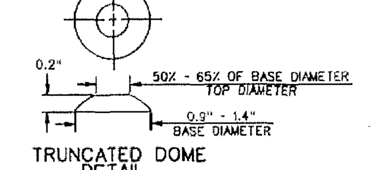


CURB CUT
N.T.S.

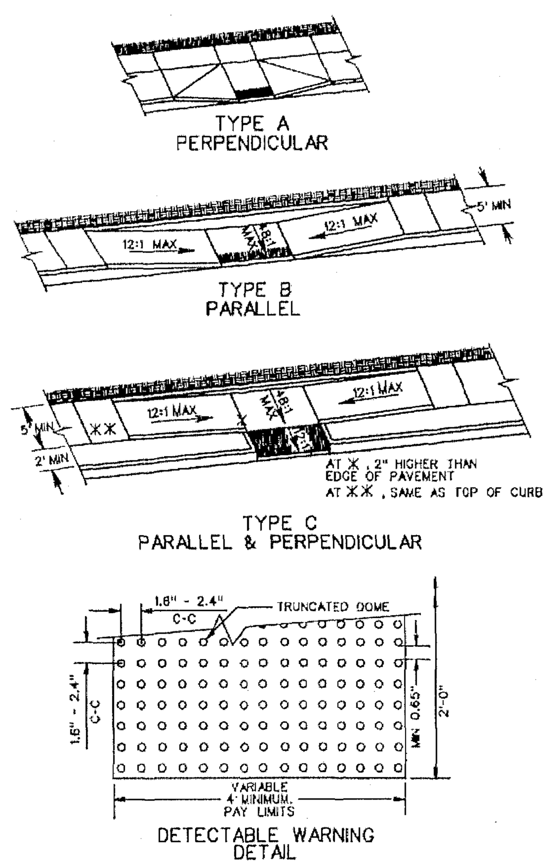
CG-12

GENERAL NOTES:

1. THE DETECTABLE WARNING SHALL BE PROVIDED BY TRUNCATED DOMES.
2. DETECTABLE WARNING TO BE CLASS A-3 CONCRETE (CLASS A-4 IF PRECAST) WITH SLIP RESISTANT INTEGRAL SURFACE COVERING THE FULL WIDTH OF THE RAMP FLOOR BY 2 FOOT IN LENGTH IN THE DIRECTION OF PEDESTRIAN TRAVEL. OTHER TYPES OF MATERIAL WITH THE TRUNCATED DOMES DETECTABLE WARNING MAY BE USED WITH THE APPROVAL OF THE ENGINEER.
3. SLOPING SIDES OF CURB RAMP MAY BE POURED MONOLITHICALLY WITH RAMP FLOOR OR BY USING PERMISSIBLE CONSTRUCTION JOINT WITH REQUIRED BARS.
4. IF RAMP FLOOR IS PRECAST, HOLES MUST BE PROVIDED FOR DOWEL BARS SO THAT ADJOINING FLARED SIDES CAN BE CAST IN PLACE AFTER PLACEMENT OF PRECAST RAMP FLOOR. PRECAST CONCRETE SHALL BE CLASS A-4.
5. REQUIRED BARS ARE TO BE NO. 5 X 8" PLACED 1' CENTER TO CENTER ALONG BOTH SIDES OF THE RAMP FLOOR, MID-DEPTH OF RAMP FLOOR. MINIMUM CONCRETE COVER 1½".
6. CURB / CURB AND GUTTER SLOPE TRANSITIONS ADJACENT TO CURB RAMPS ARE INCLUDED IN PAYMENT FOR CURB / CURB AND GUTTER.
7. CURB RAMPS ARE TO BE LOCATED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THEY ARE TO BE PROVIDED AT INTERSECTIONS WHEREVER AN ACCESSIBLE ROUTE WITHIN THE RIGHT OF WAY OF A HIGHWAY FACILITY CROSSES A CURB REGARDLESS OF WHETHER SIDEWALK IS EXISTING, PROPOSED, OR NONEXISTENT. THEY MUST BE LOCATED WITHIN PEDESTRIAN CROSSWALKS AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER, AND SHOULD NOT BE LOCATED BEHIND VEHICLE STOP LINES, EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC. ACCESSIBLE ROUTES PROVIDE A CONTINUOUS UNOBSTRUCTED, STABLE, FIRM AND SLIP RESISTANT PATH CONNECTING ALL ACCESSIBLE ELEMENTS OF A FACILITY THAT CAN BE APPROACHED, ENTERED AND USED BY PEDESTRIANS.
8. RAMPS MAY BE PLACED ON RADIAL OR TANGENTIAL SECTIONS PROVIDED THAT THE CURB OPENING IS PLACED WITHIN THE LIMITS OF THE CROSSWALK AND THAT THE SLOPE AT THE CONNECTION OF THE CURB OPENING IS PERPENDICULAR TO THE CURB.
9. TYPICAL CONCRETE SIDEWALK IS 4" THICK. WHEN THE ENTRANCE RADII CANNOT ACCOMMODATE THE TURNING REQUIREMENTS OF ANTICIPATED HEAVY TRUCK TRAFFIC, REFER TO STANDARD CG-13, COMMERCIAL ENTRANCE (HEAVY TRUCK TRAFFIC) FOR CONCRETE DEPTH.
10. WHEN CURB RAMPS ARE USED IN CONJUNCTION WITH A SHARED USE PATH, THE MINIMUM WIDTH SHALL BE THE WIDTH OF THE SHARED USE PATH



TRUNCATED DOME DETAIL



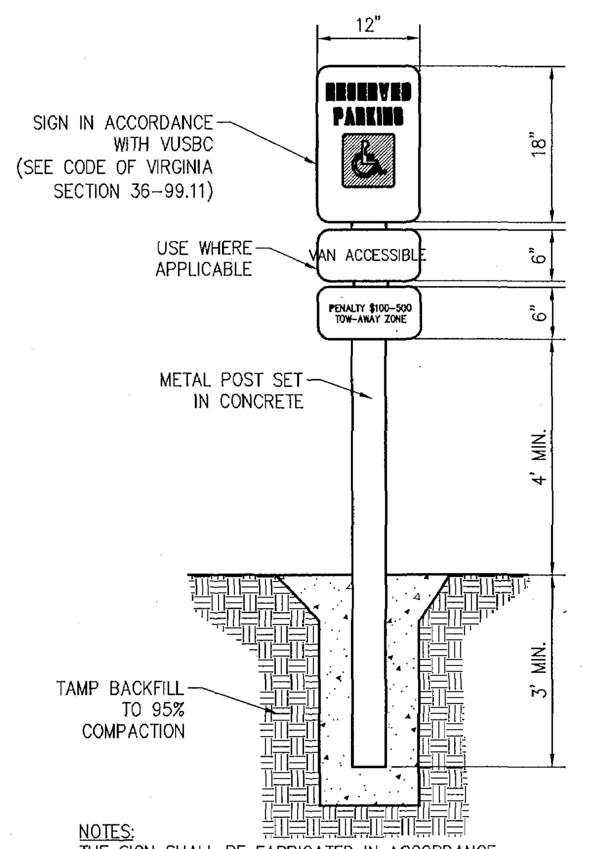
DETECTABLE WARNING DETAIL

SHEET 1 OF 4

REV. 7/05 | 203.05

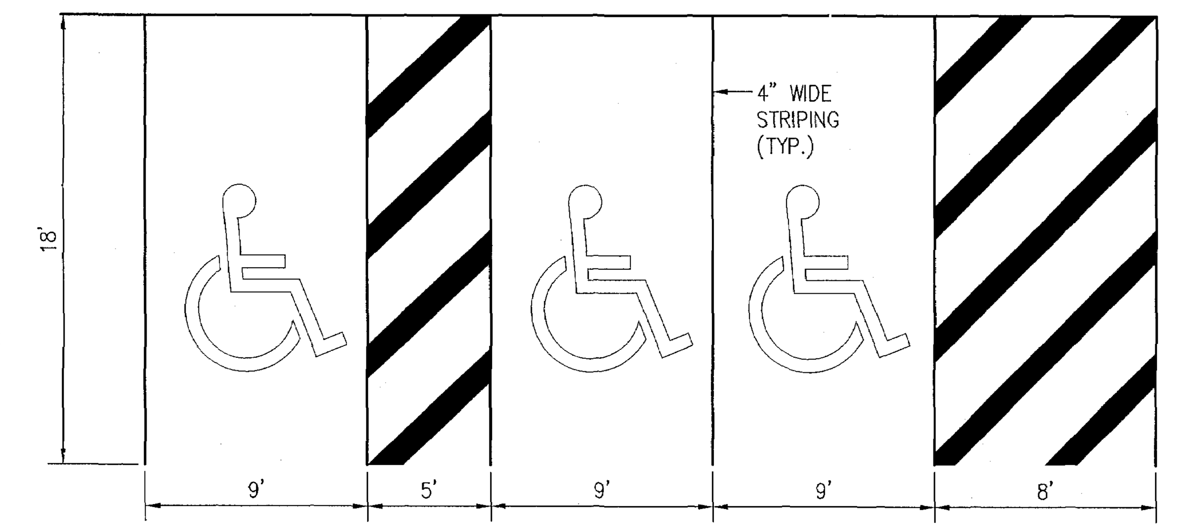
CG-12 DETECTABLE WARNING SURFACE GENERAL NOTES
VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION REFERENCE 105 502

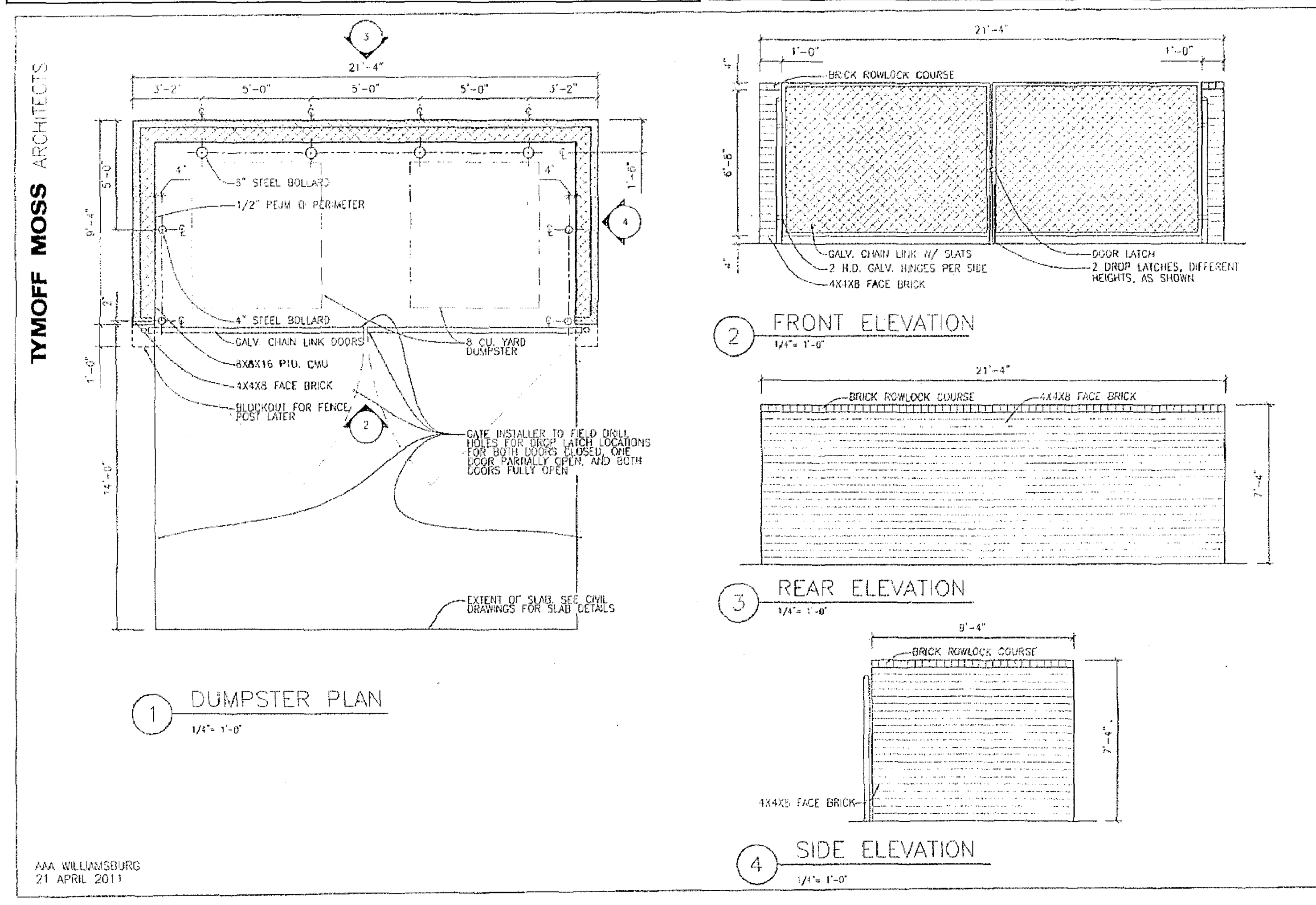


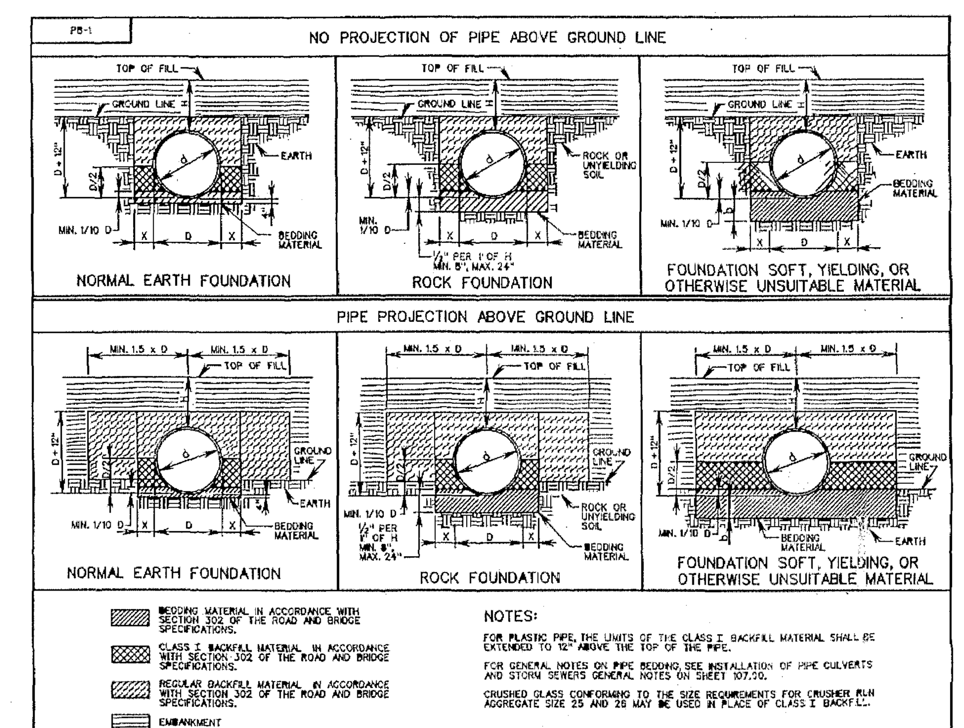
NOTES:
THE SIGN SHALL BE FABRICATED IN ACCORDANCE WITH SECTION 701 AND INSTALLED PER INSTALLATION DETAIL WSP-1 TYPE C OF THE VDOT ROAD AND BRIDGE STANDARDS AND SPECIFICATIONS.

HANDICAP SIGN DETAIL
N.T.S.



PARKING SPACE DETAIL
N.T.S.



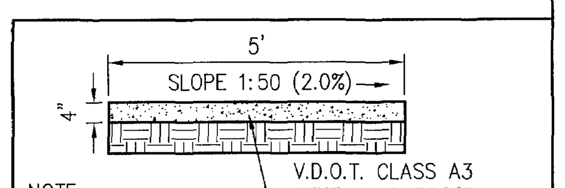


NOTES:
FOR PLASTIC PIPE, THE LIMITS OF THE CLASS I BACKFILL MATERIAL SHALL BE EXTENDED TO 12" ABOVE THE TOP OF THE PIPE.
FOR GENERAL NOTES ON PIPE BEDDING, SEE INSTALLATION OF PIPE CULVERTS AND STORM SEWERS GENERAL NOTES ON SHEET 107.00.
CRUSHED GLASS CONFORMING TO THE SIZE REQUIREMENTS FOR CRUSHER RUN AGGREGATE SIZE 25 AND 26 MAY BE USED IN PLACE OF CLASS I BACKFILL.

VDOT ROAD AND BRIDGE STANDARDS | SHEET 1 OF 4 | REVISION DATE | 107.01

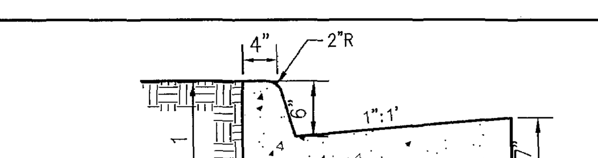
INSTALL. OF PIPE CULVERTS AND STORM SEWERS CIRC. PIPE BEDDING AND BACKFILL - METHOD "A"
VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION REFERENCE 302 303



NOTE:
HORIZONTAL CRACK CONTROL JOINTS SHALL BE 5' C/C.

SIDEWALK DETAIL
N.T.S.



THIS AREA MAY BE CONCRETE AT THE OPTION OF THE CONTRACTOR

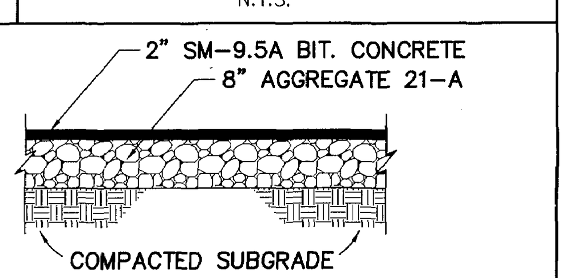
THE BOTTOM OF THE CURB AND GUTTER MAY BE CONSTRUCTED PARALLEL TO THE SLOPE OF SUB SURFACE COURSES PROVIDED A MINIMUM DEPTH OF 7" IS MAINTAINED.

COMBINATION CURB AND GUTTER HAVING A RADIUS OF 300' OR LESS (ALONG FACE OF CURB) SHALL BE PAID FOR AS A RADIAL COMBINATION CURB AND GUTTER.

THIS ITEM MAY BE PRECAST OR CAST IN PLACE.

CONCRETE TO BE CLASS A3 IF CAST IN PLACE, 4000 PSI IF PRECAST.

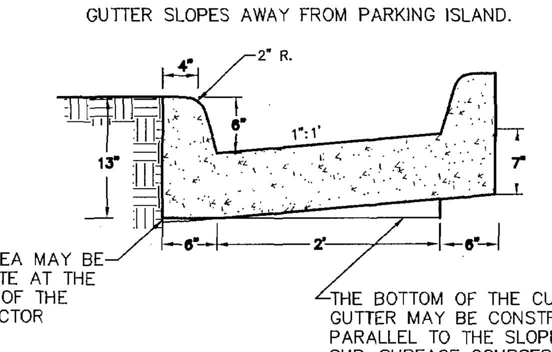
COMBINATION CURB AND GUTTER
N.T.S.



PAVEMENT SECTION IS BASED UPON GEOTECHNICAL RECOMMENDATIONS

LIGHT DUTY PAVEMENT SECTION
N.T.S.

GUTTER SLOPES AWAY FROM PARKING ISLAND.



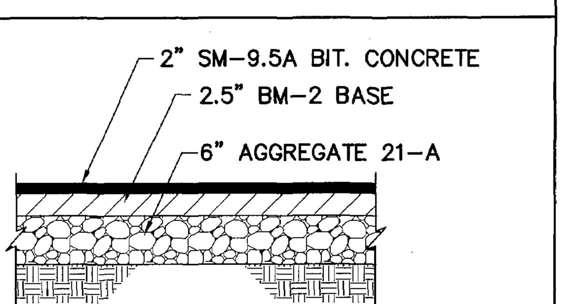
THIS AREA MAY BE CONCRETE AT THE OPTION OF THE CONTRACTOR

THE BOTTOM OF THE CURB AND GUTTER MAY BE CONSTRUCTED PARALLEL TO THE SLOPE OF SUB-SURFACE COURSES PROVIDED A MINIMUM DEPTH OF 7" IS MAINTAINED.

THIS ITEM MAY BE PRECAST OR CAST IN PLACE.

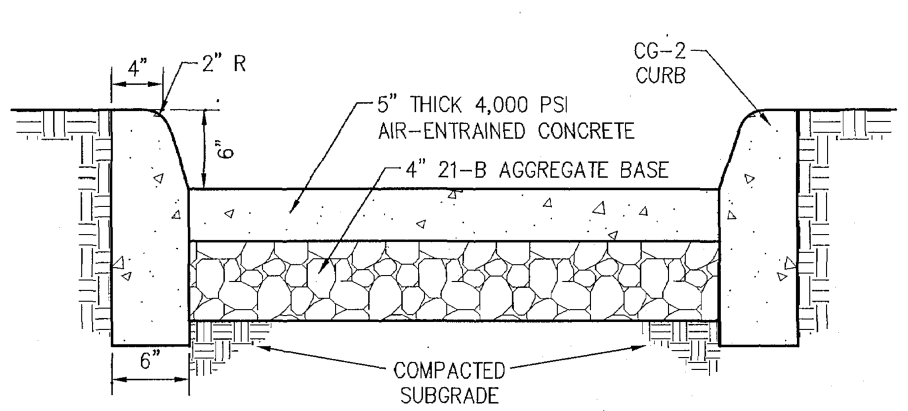
CONCRETE TO BE CLASS A3 IF CAST IN PLACE, 4000 PSI IF PRECAST.

CURB CUT THROUGH
N.T.S.



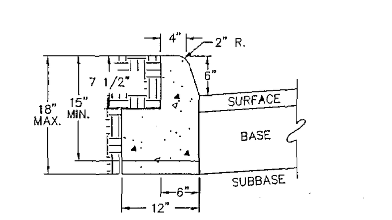
PAVEMENT SECTION IS BASED UPON GEOTECHNICAL RECOMMENDATIONS

HEAVY DUTY PAVEMENT SECTION
N.T.S.

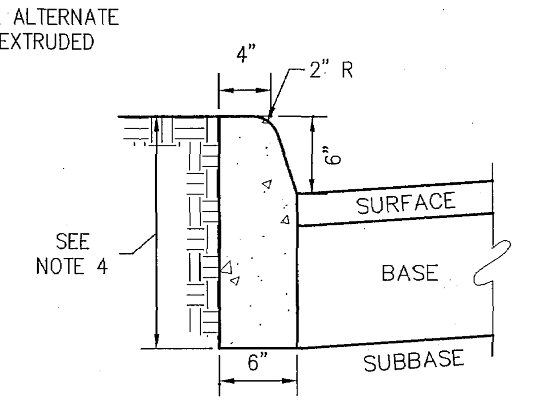


NOTES: CONTRACTOR TO PROVIDE CRACK CONTROL JOINTS AS GENERALLY SHOWN ON PLAN VIEW.

CONCRETE DRIVEWAY DETAIL
N.T.S.



ACCEPTABLE ALTERNATE IF CURB IS EXTRUDED



NOTES:

1. THIS ITEM MAY BE PRECAST OR CAST IN PLACE.
2. CONCRETE TO BE CLASS A3 IF CAST IN PLACE, 4000 PSI IF PRECAST.
3. CURB HAVING A RADIUS OF 300' OR LESS (ALONG FACE OF CURB) WILL BE PAID FOR AS RADIAL CURB.
4. THE DEPTH OF CURB MAY BE REDUCED AS MUCH AS 3" (15" DEPTH) OR INCREASED AS MUCH AS 3" (21" DEPTH) IN ORDER THAT THE BOTTOM OF THE CURB WILL COINCIDE WITH THE TOP OF A COURSE OF THE PAVEMENT SUBSTRUCTURE. OTHERWISE, THE DEPTH IS TO BE 18" AS SHOWN. NO ADJUSTMENT IN THE PRICE BID IS TO BE MADE FOR A DECREASE OR AN INCREASE IN DEPTH.
5. CG-2 IS TO BE USED ON ROADWAYS MEETING THE REQUIREMENTS FOR CG-6 AS SHOWN IN APPENDIX A OF THE VDOT ROAD DESIGN MANUAL.

STANDARD 6" CURB
N.T.S.

JCSA GENERAL NOTES FOR WATER DISTRIBUTION AND SANITARY SEWER SYSTEMS
NOTES ONLY APPLY TO JCSA CONTROLLED UTILITIES
(REVISED MARCH 2008)

A. ALL COMPONENTS OF THE WATER DISTRIBUTION AND SANITARY SEWER SYSTEM SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH THE LATEST EDITION OF THE JCSA DESIGN AND ACCEPTANCE CRITERIA FOR WATER DISTRIBUTION AND SANITARY SEWER SYSTEMS, THE HRPDC REGIONAL CONSTRUCTION STANDARDS (FOURTH EDITION WITH AMENDMENTS DATED OCTOBER 2006), AND THE COMMONWEALTH OF VIRGINIA DEPARTMENT OF HEALTH WATERWORKS AND SANITARY SEWERAGE REGULATIONS. THE CONTRACTOR SHALL USE ONLY NEW MATERIALS, PARTS, AND PRODUCTS ON ALL PROJECTS. ALL MATERIALS SHALL BE STORED SO AS TO ASSURE THE PRESERVATION OF THEIR QUALITY AND FITNESS FOR THE WORK. A COPY OF THE JCSA DESIGN AND ACCEPTANCE CRITERIA AND HRPDC REGIONAL CONSTRUCTION STANDARDS MUST BE KEPT ON-SITE BY THE CONTRACTOR DURING TIME OF INSTALLING, TESTING, AND CONVEYING FACILITIES TO JCSA.

B. THE CONTRACTOR~~/DEVELOPER~~ SHALL ACQUIRE A CERTIFICATE TO CONSTRUCT WATER AND SANITARY SEWER FACILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION OF ANY WATER OR SANITARY SEWER FACILITIES.

C. A PRECONSTRUCTION MEETING SHALL BE HELD BETWEEN JCSA, THE DEVELOPER, THE CONTRACTOR INCLUDING RELEVANT SUBCONTRACTOR(S), AND THE PROJECT ENGINEER PRIOR TO ISSUANCE OF A JCSA CERTIFICATE TO CONSTRUCT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SCHEDULE THIS MEETING WITH JCSA AND COORDINATE WITH THE OTHER ATTENDEES.

D. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL MATERIALS AND RECEIVE JCSA APPROVAL PRIOR TO COMMENCEMENT OF CONSTRUCTION. ALL MATERIALS ORDERED AND INSTALLED PRIOR TO JCSA'S REVIEW AND ACCEPTANCE WILL BE AT THE CONTRACTOR'S~~/DEVELOPER'S~~ RISK.

E. ~~PIPE LINES AND SERVICES SHALL BE INSTALLED AFTER GRADING TO WITHIN 6 INCHES OF FINAL GRADE AND PRIOR TO PLACEMENT OF BASE MATERIAL.~~

F. ALL WATER MAINS SHALL BE FULLY FLUSHED, PRESSURE TESTED, AND DISINFECTED AND SATISFACTORY BACTERIOLOGICAL SAMPLES OBTAINED, IN ACCORDANCE WITH JCSA DESIGN AND ACCEPTANCE CRITERIA. FLUSHING OF WATER MAINS SHALL BE SCHEDULED WITH THE JCSA INSPECTOR MINIMUM 3 BUSINESS DAYS PRIOR TO THE FLUSHING. CONTRACTOR SHALL PROVIDE THE REQUIRED DURATION AND VOLUME TO THE INSPECTOR. FLUSHING WILL BE SCHEDULED ONLY ON MONDAYS, UNLESS AUTHORIZED OTHERWISE BY JCSA, AND WILL BE ON A FIRST COME-FIRST SERVE BASIS.

G. ROUTINE PERIODIC INSPECTIONS DURING CONSTRUCTION WILL BE PROVIDED BY JCSA. THESE INSPECTIONS DO NOT RELIEVE THE DEVELOPER/CONTRACTOR/OWNER FROM HIS OBLIGATION AND RESPONSIBILITY FOR CONSTRUCTING A WATER DISTRIBUTION AND SANITARY SEWER SYSTEM IN STRICT ACCORDANCE WITH THE JCSA DESIGN AND ACCEPTANCE CRITERIA.

H. ANY FIELD MODIFICATIONS OR CHANGES TO THE APPROVED PLANS SHALL BE VERIFIED AND CHECKED BY THE ENGINEER OF RECORD AND APPROVED BY JCSA PRIOR TO ANY FIELD MODIFICATIONS OR CHANGES. ALL APPROVED CHANGES AND FIELD MODIFICATIONS SHALL BE ACCURATELY INDICATED ON THE RECORD DRAWINGS.

I. SITE SHALL BE PROVIDED WITH WATER SERVICE AND SANITARY SEWER CONNECTIONS. THE CONNECTIONS SHALL BE EXTENDED FROM THE MAIN TO THE PROPERTY LINE OR EASEMENT LINE, AND SHALL TERMINATE WITH A YOKE IN A METER BOX, OR AT THE CLEAN OUT, SET AT FINAL FINISHED GRADE. METERS ~~FOR ALL LOTS (UNITS)~~ SHALL BE PAID FOR BY THE CONTRACTOR AND INSTALLED BY JCSA.

J. ANY REQUIRED EASEMENTS, PERMITS AND APPROVALS SHALL BE ACQUIRED BY THE OWNER PRIOR TO COMMENCEMENT OF WATER MAIN AND/OR SANITARY SEWER CONSTRUCTION.

K. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LAWS, ORDINANCES, RULES, REGULATIONS AND ORDERS OF ANY PUBLIC BODY HAVING JURISDICTION. THE CONTRACTOR SHALL ERECT AND MAINTAIN, AS REQUIRED BY THE CONDITIONS AND PROGRESS OF THE WORK, ALL NECESSARY SAFEGUARDS FOR SAFETY AND PROTECTION. THE CONTRACTOR SHALL ALSO NOTIFY "MISS UTILITY" AT 1-800-552-7001 OR 811 PRIOR TO PERFORMING ANY UNDERGROUND EXCAVATION.

L. WATER METER BOX INSTALLATION SHALL MAINTAIN A MINIMUM 18-INCH HORIZONTAL EDGE-TO-EDGE CLEARANCE FROM DRIVEWAYS AND/OR DRIVE PATHS, SIDEWALKS, BIKE PATHS, CURBING AND ADJACENT WATER METER BOXES.

M. ONLY JCSA PERSONNEL ARE AUTHORIZED TO OPERATE VALVES ON EXISTING JCSA WATER MAINS AND SANITARY FORCE MAINS. ONCE A SYSTEM HAS BEEN HYDRAULICALLY ENERGIZED, JCSA WILL BE RESPONSIBLE FOR OPERATING THE VALVES. THE CONTRACTOR SHALL CONTACT JCSA OPERATIONS AT 757-229-7421 IF THERE IS AN EMERGENCY OR NEED TO OPEN/CLOSE A VALVE.

N. ANY EXISTING UNUSED WELL(S) SHALL BE ABANDONED IN ACCORDANCE WITH STATE PRIVATE WELL REGULATIONS AND JAMES CITY COUNTY CODE.

O. BEDDING OF JCSA UTILITIES SHALL BE IN ACCORDANCE WITH HRPDC DETAIL EW_01.

P. NO TREES, SHRUBS, STRUCTURES, FENCES, IRRIGATION MAINS, INVISIBLE PET FENCES OR OTHER OBSTACLES SHALL BE PLACED WITHIN AN EASEMENT WHICH WOULD RENDER THE EASEMENT INACCESSIBLE BY EQUIPMENT. SHRUBS SHALL BE A MINIMUM OF 5 FEET, AND TREES A MINIMUM OF 10 FEET, FROM THE CENTER OF WATER AND SANITARY SEWER PIPELINES.

Q. JOINT RESTRAINT SHALL BE PROVIDED IN ACCORDANCE WITH MINIMUM REQUIREMENTS OF JCSA DETAIL JR.1, UNLESS SHOWN OTHERWISE ON THE PLANS. ALL PRESSURE PIPELINES SHALL HAVE JOINT RESTRAINT. FIRE HYDRANTS SHALL BE RESTRAINED AT LEAST ONE FULL JOINT OF PIPE IN EACH DIRECTION ON THE MAINLINE.

R. PROPOSED WATER AND SANITARY SEWER SYSTEMS SHALL MAINTAIN A MINIMUM HORIZONTAL SEPARATION OF 5-FEET FROM OTHER UTILITIES AND STRUCTURES, INCLUDING BUT NOT LIMITED TO STORM SEWERS, STREET LIGHTS, ETC. WATER AND SANITARY SEWER FACILITIES SHALL HAVE A MINIMUM 10-FOOT HORIZONTAL EDGE-TO-EDGE SEPARATION.

S. ANY PROPOSED BACKFLOW PREVENTION DEVICE AND/OR GREASE TRAP MUST BE INSPECTED BY THE JCSA UTILITY SPECIAL PROJECTS COORDINATOR AT (757) 259-4138.

T. ~~THE CONTRACTOR/DEVELOPER SHALL ACQUIRE A CERTIFICATE TO CONSTRUCT WATER AND SANITARY SEWER FACILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION OF ANY WATER OR SANITARY SEWER FACILITIES.~~ PLUMBING INSIDE OF PROPOSED BUILDINGS MUST BE INSPECTED BY JCSA'S UTILITY SPECIAL PROJECTS COORDINATOR AT (757) 259-4138, FOR POTENTIAL CROSS CONNECTIONS. ANY CROSS CONNECTIONS MUST BE PROTECTED BY THE APPROPRIATE BACKFLOW PREVENTION DEVICE(S)".

U. EASEMENTS DENOTED AS "JCSA UTILITY EASEMENTS" ARE FOR THE EXCLUSIVE USE OF THE JAMES CITY SERVICE AUTHORITY AND THE PROPERTY OWNER. OTHER UTILITY SERVICE PROVIDERS DESIRING TO USE THESE EASEMENTS WITH THE EXCEPTION OF PERPENDICULAR UTILITY CROSSINGS MUST OBTAIN AUTHORIZATION FOR ACCESS AND USE FROM JCSA AND THE PROPERTY OWNER. ADDITIONALLY, JCSA SHALL NOT BE HELD RESPONSIBLE FOR ANY DAMAGE TO IMPROVEMENTS WITHIN THIS EASEMENT, FROM ANY CAUSE.

V. JCSA SHALL NOT BE HELD RESPONSIBLE FOR ANY PAVEMENT SETTLEMENT DUE TO PIPE BEDDING, BACKFILLING, BACKFILL MATERIALS OR COMPACTION FOR WATER OR SANITARY SEWER FACILITIES FOR THIS PROJECT.

W. ~~FIRE HYDRANTS TO BE INSTALLED WITHIN EXISTING OR PROPOSED VDOT RIGHT-OF-WAYS SHALL BE LOCATED IN ACCORDANCE WITH VDOT REQUIREMENTS.~~

X. PRIVATELY OWNED UTILITIES, (E.G., WATER AND SEWER LINES AND PRIVATE FIRE SERVICE MAINS), SHOWN ON THIS PLAN ARE REGULATED BY THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE, AND ENFORCED BY THE JAMES CITY COUNTY CODES COMPLIANCE DIVISION. THESE PRIVATELY OWNED UTILITIES MUST COMPLY FULLY WITH THE INTERNATIONAL PLUMBING CODE, THE NATIONAL FIRE PROTECTION ASSOCIATION STANDARD 24, AND THE VIRGINIA STATEWIDE FIRE PREVENTION CODE. CONTRACTORS WORKING FROM THIS SITE PLAN ARE CAUTIONED NOT TO INSTALL OR CONCEAL PRIVATELY OWNED SITE UTILITIES WITHOUT FIRST OBTAINING THE REQUIRED PERMITS AND INSPECTIONS.

Y. SANITARY SEWER LATERALS SHALL NOT CONNECT TO THE MAINLINE WITHIN 5-FEET OF A MANHOLE. LATERALS UPSTREAM AND WITHIN 5-FEET OF THE MANHOLE SHALL CONNECT DIRECTLY INTO THE MANHOLE WHERE NECESSARY.

Rev.	Date	Description	Revised By
	6/20/11	REVISED PER JCC COMMENTS DATED 5/2011	JAG

COMMONWEALTH OF VIRGINIA
JASON A. GRIMES
No. 040170
6/20/11
PROFESSIONAL ENGINEER

AES CONSULTING ENGINEERS
5248 Olde Towne Road, Suite 1
Williamsburg, Virginia 23188
Phone: (757) 253-0040
Fax: (757) 220-8994
www.aesva.com
Hampton Roads | Central Virginia | Middle Peninsula

SITE PLAN
TIDEWATER AAA
STONEHOUSE DISTRICT JAMES CITY COUNTY VIRGINIA

Project Contacts:	JAG
Project Number:	9353-09
Scale: AS NOTED	Date: 4/28/11

Sheet Title:
NOTES & DETAILS

Sheet Number
6

JAMES CITY COUNTY ENVIRONMENTAL DIVISION
STANDARD EROSION AND SEDIMENT CONTROL NOTES
REVISED OCTOBER 1, 2009

THE FOLLOWING STANDARD EROSION AND SEDIMENT CONTROL (E&SC) NOTES SHALL BECOME PART OF APPROVED EROSION AND SEDIMENT CONTROL PLANS FOR ALL PLAN OF DEVELOPMENT PROJECTS IN JAMES CITY COUNTY, VIRGINIA.

1. ALL THE PROVISIONS OF VIRGINIA EROSION AND SEDIMENT CONTROL LAW AND REGULATIONS, MINIMUM STANDARDS, HANDBOOKS, AND TECHNICAL BULLETINS AS PUBLISHED BY THE VIRGINIA SOIL & WATER CONSERVATION BOARD AND/OR THE VIRGINIA DEPARTMENT OF CONSERVATION AND RECREATION, DIVISION OF SOIL & WATER CONSERVATION SHALL APPLY TO THE PROJECT.

2. MINIMUM STANDARDS # 1 THROUGH # 19 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS (4VAC50-30-40) SHALL APPLY TO THE PROJECT.

3. THE OWNER OR APPLICANT SHALL BE RESPONSIBLE TO REGISTER FOR COVERAGE UNDER THE GENERAL PERMIT FOR DISCHARGE OF STORMWATER FROM CONSTRUCTION ACTIVITIES, IN ACCORDANCE WITH CURRENT REQUIREMENTS OF THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) AND THE VIRGINIA DEPARTMENT OF CONSERVATION AND RECREATION.

4. THE OWNER OR APPLICANT SHALL PROVIDE THE NAME OF AN INDIVIDUAL HOLDING A VALID RESPONSIBLE LAND DISTURBER (RLD) CERTIFICATE OF COMPETENCE WHO WILL BE RESPONSIBLE FOR THE LAND-DISTURBING ACTIVITY PRIOR TO ENGAGING IN THE LAND-DISTURBING ACTIVITY. THIS WILL BE NECESSARY PRIOR TO ISSUANCE OF A LAND-DISTURBING PERMIT FOR THE PROJECT. THE RLD IS REQUIRED TO ATTEND THE PRECONSTRUCTION CONFERENCE FOR THE PROJECT.

5. THE CONTRACTOR IS RESPONSIBLE TO CONTACT MISS UTILITY (DIAL 811 IN VA OR 1-800-552-7001) PRIOR TO ANY UTILITY OR SITE WORK EXCAVATIONS.

6. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PLANNED, DESIGNED, IMPLEMENTED, INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH). THE CONTRACTOR SHALL MAINTAIN, INSPECT AND REPAIR ALL EROSION AND SEDIMENT CONTROL MEASURES AS NEEDED THROUGHOUT THE LIFE OF THE PROJECT TO ENSURE CONTINUED ACCEPTABLE PERFORMANCE.

7. A PRECONSTRUCTION CONFERENCE (MEETING) SHALL BE HELD ON SITE BETWEEN THE COUNTY ENVIRONMENTAL DIVISION, THE OWNER-APPLICANT, THE RESPONSIBLE LAND-DISTURBER (RLD), THE CONTRACTOR AND OTHER RESPONSIBLE AGENCIES, AS APPLICABLE, PRIOR TO ISSUANCE OF A LAND-DISTURBING PERMIT. THE OWNER OR APPLICANT IS REQUIRED TO COORDINATE SCHEDULING OF THE PRECONSTRUCTION CONFERENCE BETWEEN ALL APPLICABLE PARTIES. THE CONTRACTOR SHALL SUBMIT A SEQUENCE OF CONSTRUCTION TO THE COUNTY ENVIRONMENTAL DIVISION FOR REVIEW AND APPROVAL PRIOR TO THE PRECONSTRUCTION MEETING.

8. ALL PERIMETER EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.

9. ADDITIONAL SAFETY FENCE OR DUST CONTROL MEASURES, IN ACCORDANCE WITH THE PROVISIONS OF MINIMUM STANDARDS & SPECS. 3.01 AND 3.39 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH), MAY BE REQUIRED TO BE IMPLEMENTED IN ADDITION TO THAT SHOWN ON THE APPROVED PLAN IN ORDER TO ENSURE ADEQUATE PROTECTION OF THE HEALTH, SAFETY AND WELFARE OF THE PUBLIC OR IF SITE CONDITIONS CHANGE, BECOME APPARENT OR ALTER SIGNIFICANTLY FOLLOWING THE DATE OF PLAN APPROVAL.

10. EROSION AND SEDIMENT CONTROL MEASURES MAY REQUIRE MINOR FIELD ADJUSTMENTS AT OR FOLLOWING TIME OF CONSTRUCTION TO ENSURE THEIR INTENDED PURPOSE IS ACCOMPLISHED, TO ENSURE ADEQUATE PROTECTION OF THE HEALTH, SAFETY AND WELFARE OF THE PUBLIC, OR IF SITE CONDITIONS CHANGE, BECOME APPARENT OR ALTER SIGNIFICANTLY FOLLOWING THE DATE OF PLAN APPROVAL. COUNTY ENVIRONMENTAL DIVISION APPROVAL SHALL BE REQUIRED FOR ANY DEVIATION OF EROSION AND SEDIMENT CONTROL MEASURES FROM THE APPROVED PLAN.

11. OFF-SITE WASTE OR BORROW AREAS SHALL BE APPROVED BY THE COUNTY ENVIRONMENTAL DIVISION PRIOR TO THE IMPORT OF ANY BORROW OR EXPORT OF ANY WASTE TO OR FROM THE PROJECT SITE.

12. CULVERT AND STORM DRAIN INLET PROTECTIONS, IN ACCORDANCE WITH THE PROVISIONS OF MINIMUM STANDARDS & SPECS. 3.07 & 3.08 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH), MAY BE REMOVED AT THE DISCRETION OF THE ASSIGNED COUNTY ENVIRONMENTAL DIVISION INSPECTOR SHOULD PLACEMENT OF THE MEASURE RESULT IN EXCESSIVE ROAD FLOODING OR TRAFFIC HAZARD OR RESULT IN THE REDIRECTION OF DRAINAGE ONTO OR TOWARD EXISTING LOTS, DRIVEWAYS OR STRUCTURES. DECISIONS SHALL BE MADE ON A CASE-BY-CASE BASIS BASED ON FIELD SITUATIONS ENCOUNTERED.

13. DRAINAGE FACILITIES SHALL BE INSTALLED AND FUNCTIONAL WITHIN 30 DAYS FOLLOWING COMPLETION OF ROUGH GRADING AT ANY POINT WITHIN THE PROJECT.

14. NO MORE THAN 300 FEET OF TRENCH MAY BE OPEN AT ONE TIME FOR UNDERGROUND UTILITY LINES, INCLUDING STORM WATER CONVEYANCES. ALL OTHER PROVISIONS OF MINIMUM STANDARD # 16 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS APPLY.

15. IF DISTURBED AREA STABILIZATION IS TO BE ACCOMPLISHED DURING THE MONTHS OF DECEMBER, JANUARY OR FEBRUARY, STABILIZATION SHALL CONSIST OF MULCHING IN ACCORDANCE WITH MINIMUM STANDARD & SPEC. 3.35 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH). SEEDING WILL THEN TAKE PLACE AS SOON AS THE SEASON PERMITS.

16. THE TERM SEEDING, FINAL VEGETATIVE COVER OR STABILIZATION ON THE APPROVED PLAN SHALL MEAN THE SUCCESSFUL GERMINATION AND ESTABLISHMENT OF A STABLE GRASS COVER FROM A PROPERLY PREPARED SEEDBED, IN ACCORDANCE WITH MINIMUM STANDARDS & SPECS. 3.29 THROUGH 3.37 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH), AS APPLICABLE. IRRIGATION, IF NECESSARY, SHALL COMPLY WITH ALL APPLICABLE OUTDOOR WATER USE RESTRICTIONS OF THE JAMES CITY SERVICE AUTHORITY.

17. TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL NOT BE REMOVED UNTIL ALL DISTURBED AREAS ARE STABILIZED. REMOVAL SHALL NOT OCCUR WITHOUT AUTHORIZATION BY THE COUNTY ENVIRONMENTAL DIVISION. DISTURBANCES ASSOCIATED WITH THE REMOVAL OF TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PROPERLY STABILIZED.

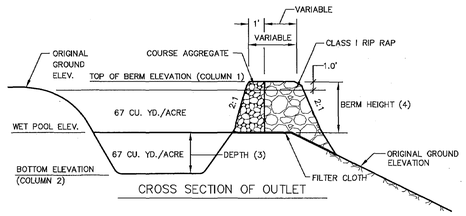
18. NO SEDIMENT TRAP OR SEDIMENT BASIN SHALL BE REMOVED UNTIL A) AT LEAST 75 PERCENT OF THE SINGLE-FAMILY LOTS WITHIN THE DRAINAGE AREA TO THE TRAP OR BASIN HAVE BEEN SOLD TO A THIRD PARTY FOR THE CONSTRUCTION OF HOMES (UNRELATED TO THE DEVELOPER); AND/OR, B) 60 PERCENT OF THE SINGLE-FAMILY LOTS WITHIN THE DRAINAGE AREA TO THE TRAP OR BASIN ARE COMPLETED AND STABILIZED. A BULK SALE OF THE LOTS TO ANOTHER BUILDER DOES NOT SATISFY THIS PROVISION. SEDIMENT TRAPS AND SEDIMENT BASINS SHALL NOT BE REMOVED WITHOUT AUTHORIZATION OF THE COUNTY ENVIRONMENTAL DIVISION.

19. APPLICABLE PROVISIONS OF THE COUNTY BMP MANUAL (JAMES CITY COUNTY GUIDELINES FOR DESIGN AND CONSTRUCTION OF STORMWATER MANAGEMENT BMPS) AND THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK (VSMH) APPLY TO THE PROJECT.

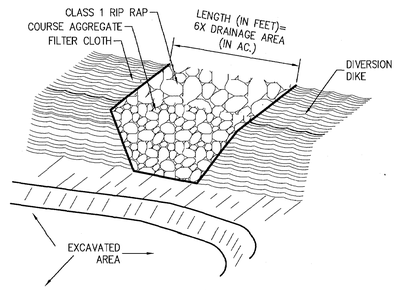
20. DESIGN AND CONSTRUCTION OF PRIVATE-TYPE STORM DRAINAGE SYSTEMS, OUTSIDE VDOT RIGHT-OF-WAY, SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT VERSION OF THE JAMES CITY COUNTY ENVIRONMENTAL DIVISION, STORMWATER DRAINAGE CONVEYANCE SYSTEMS (NON-BMP RELATED), GENERAL DESIGN AND CONSTRUCTION GUIDELINES.

21. RECORD DRAWINGS (ASBUILTS) AND CONSTRUCTION CERTIFICATIONS ARE REQUIRED FOR ALL STORMWATER FACILITIES INCLUDING STORMWATER MANAGEMENT/BMP FACILITIES AND STORM DRAINAGE CONVEYANCE SYSTEMS. RECORD DRAWINGS AND CONSTRUCTION CERTIFICATIONS MUST MEET ESTABLISHED PROGRAM REQUIREMENTS OF BOTH THE COUNTY ENVIRONMENTAL AND STORMWATER DIVISIONS.

22. ALL STORMWATER FACILITIES INCLUDING BMPS, STORM DRAINAGE PIPES, STORMWATER CONVEYANCES, INLETS, MANHOLES, OUTFALLS AND ROADSIDE AND OTHER OPEN CHANNELS SHALL BE INSPECTED BY THE COUNTY STORMWATER DIVISION AND GEOTECHNICAL ENGINEER IN ACCORDANCE WITH ESTABLISHED COUNTY STORMWATER DIVISION PROGRAM REQUIREMENTS.



CROSS SECTION OF OUTLET



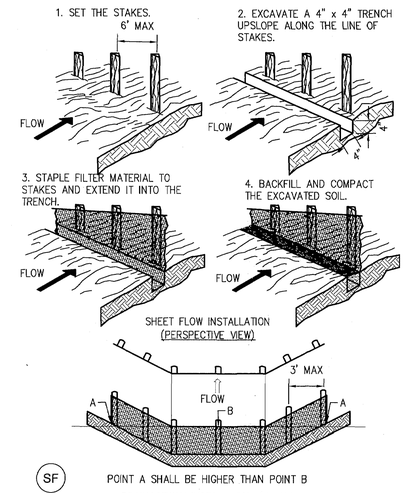
** COARSE AGGREGATE SHALL BE VDOT #3, #357 OR #5

OUTLET (PERSPECTIVE VIEW)

	TOP OF BERM	BOTTOM ELEV.	DEPTH	BERM HEIGHT	LENGTH	TOP WIDTH	DRAIN AREA	WET VOLUME	TOTAL VOLUME
SEDIMENT TRAP	(1)	(2)	(3)	(4)	(FT)	(FT)	(ACRES)	(CU. FT.)	(CU. FT.)
1	113.0	111.0	4'	2'	12.0	2.5	1.99	5,709	10,636

(ST) **SEDIMENT TRAP**

N.T.S.



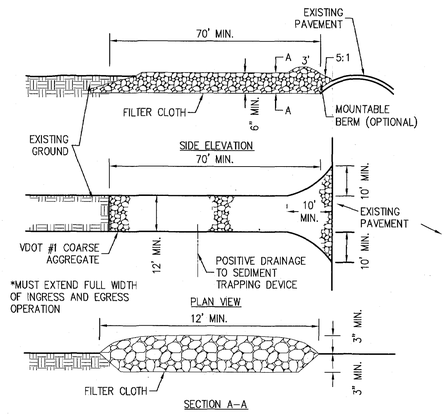
(SF) POINT A SHALL BE HIGHER THAN POINT B

SOURCE: VA. DSWC
PLATE. 3.05-2

DRAINAGEWAY INSTALLATION (FRONT ELEVATION)

CONSTRUCTION OF A SILT FENCE (WITHOUT WIRE SUPPORT)

N.T.S.

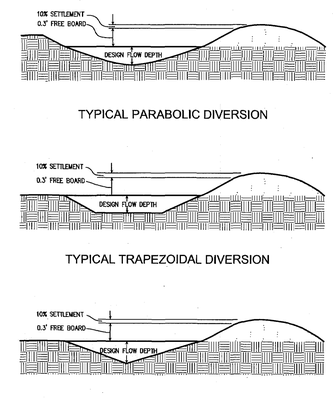


STONE CONSTRUCTION ENTRANCE

N.T.S.

(CE)

SOURCE: VA. DSWC
PLATE. 3.02-1



TYPICAL PARABOLIC DIVERSION

TYPICAL TRAPEZOIDAL DIVERSION

TYPICAL VEE-SHAPED DIVERSION

DIVERSIONS

N.T.S.

(DV)

SOURCE: VA. DSWC
PLATE. 3.12-1

Rev.	Date	Description	Revised By
2	7/18/11	REVISED PER JCC COMMENTS DATED 7/20/11	JAG
1	6/22/11	REVISED PER JCC COMMENTS DATED 5/26/11	JAG

COMMONWEALTH OF VIRGINIA
JASON A. GRIMES
No. 040170
PROFESSIONAL ENGINEER
7/18/11

AES CONSULTING ENGINEERS
5248 Olde Towne Road, Suite 1
Williamsburg, Virginia 23188
Phone: (757) 253-0040
Fax: (757) 220-8994
www.aesva.com
Hampton Roads | Central Virginia | Middle Peninsula

SITE PLAN
TIDEWATER AAA
STONEHOUSE DISTRICT JAMES CITY COUNTY VIRGINIA

Project Contacts:	JAG
Project Number:	9353-09
Scale: AS NOTED	Date: 4/28/11
Sheet Title: NOTES & DETAILS	
Sheet Number	7

PLANT SCHEDULE

DECIDUOUS TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
ZS	13	ZELKOVA SERRATA 'GREEN VASE'	SAWLEAF ZELKOVA	2-1/2" CAL.	B & B	SINGLE STEM
EVERGREEN TREES	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**	**ROOT**	**REMARKS**
IN	4	ILEX X 'NELLIE R STEVENS'	NELLIE STEVENS HOLLY	8'-10' HT.	B & B	DENSE, FULL
PT	6	PINUS TAEDA	LOBLOLLY PINE	8'-10' HT.	B & B	DENSE, FULL
ORNAMENTAL TREES	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**	**ROOT**	**REMARKS**
CB	6	CARPINUS BETULUS 'FASTIGIATA'	PYRAMIDAL EUROPEAN HORNBEAN	1-1/2" CAL.	B & B	SINGLE STEM
PY	2	PRUNUS X YEDOENSIS	YOSHINO CHERRY	1-1/2" CAL.	B & B	SINGLE STEM
SHRUBS	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**	**ROOT**	**REMARKS**
AG	72	ABELIA X GRANDIFLORA 'LITTLE RICHARD'	LITTLE RICHARD ABELIA	18"-24" HT./W.	CONT.	DENSE, FULL
IC	10	ILEX CORNUTA 'BURFORDII NANA'	DWARF BURFORD HOLLY	36" HT.	CONT.	DENSE, FULL
IG	11	ILEX GLABRA 'SHAMROCK'	INKBERRY	18"-24" HT./W.	CONT.	DENSE, FULL
JCS	7	JUNIPERUS CHINENSIS SARGENTII	SARGENT JUNIPER	18"-24" HT./W.	CONT.	DENSE, FULL
JC	40	JUNIPERUS CHINENSIS 'PARSONII'	PARSONI JUNIPER	18"-24" HT./W.	CONT.	DENSE, FULL
MC	10	MYRICA CERIFERA	WAX MYRTLE	18"-24" HT./W.	CONT.	DENSE, FULL
VC	36	VIBURNUM CARLESII 'COMPACTUM'	KOREAN SPICE VIBURNUM	22"-30" HT./W.	CONT.	DENSE, FULL
GROUND COVERS	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**ROOT**		**REMARKS**
ANN.	203 SF	– ANN.	ANNUALS (SELECTED BY OWNER)	–		
SOD	32,367 SF	– TURF	SOD (SELECTED BY OWNER)	–		
CV	292	COREOPSIS VERTICILLATA 'ZAGREB'	ZAGREB THREAD LEAF COREOPSIS	1 GAL@ 18" OC		DENSE, FULL
LM	167	LIRIOPE MUSCARI 'BIG BLUE'	BIG BLUE LILYTURF	1 GAL@ 18" OC		DENSE, FULL

GENERAL NOTES

1. ALL PLANT STOCK SHALL MEET THE MINIMUM STANDARDS & SPECIFICATIONS DESCRIBED IN THE "AMERICAN STANDARD FOR NURSERY STOCK," LATEST EDITION, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.

2. ALL PLANT MATERIAL SHALL BE INSTALLED AS SPECIFIED IN THE VNLA STANDARDIZED LANDSCAPE SPECIFICATIONS, LATEST EDITION.

3. THE CONTRACTOR SHALL SUPPLY ALL NEW PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE ALL PLANTING SHOWN ON THE DRAWINGS. WHERE DISCREPANCIES EXIST BETWEEN THE PLANS & THE PLANT LIST, THE PLANS SHALL TAKE PRECEDENCE.

3. GROUPINGS OF PLANTS SHALL BE MULCHED IN CONTINUOUS PLANT BEDS.

4. AREAS DISTURBED BY CONSTRUCTION, NOT OTHERWISE WITHIN PLANT BEDS OR COVERED IN SITE CONTRACT, ARE TO BE SODDED OR SEEDED WITH A STATE CERTIFIED TURF-TYPE TALL FESCUE VARIETY SELECTED FROM THE FOLLOWING LIST:

Biltmore, Bingo, Cochise III, Constitution, Coyote II, Crossfire II, Endeavor, Fidelity, Good-en, Grande, Greenkeeper WAF, Inferno, Kalahari, Magellan, Masterpiece, Onyx, Padre, Picasso, Penn 1901, Quest, Raptor, Rebel Exeda, Rembrandt, Rendition, SR 8250, SR 8300, Tarheel, Titanium, Watchdog, Wolfpack, WPEZE.

5. TREES SUPPORT STAKING IS OPTIONAL FOR TREES THAT ARE 1" CAL. OR 6' HT. OR LESS. ALL TREE STAKING SHALL BE REMOVED AFTER 1-2 GROWING SEASONS.

9. ALL TREES ARE TO BE PLANTED SO TOP OF ROOT BALL IS 3" ABOVE FINISH GRADE.

10. TREE SHALL BE INSTALLED PLUMB & STRAIGHT.

11. PRUNE ALL SUCKERS, RUBBING OR CROSSED BRANCHES, CODOMINANT LEADERS, NARROW CROTCH ANGLES, WATER SPROUTS, BROKEN BRANCHES.

12. DO NOT PRUNE CENTRAL LEADER OR BRANCH TIPS.

13. REMOVE TAGS, LABELS & PLASTIC SLEEVING.

14. DO NOT WRAP TRUNK.

15. IF PLANT MATERIAL IS CONTAINER-GROWN, REMOVE TOP OF WIRE BASKET, OR REMOVE CONTAINER & CUT CIRCLING ROOT; IF FIELD-GROWN, CUT ROPE SURROUNDING BOTTOM OF TREE TRUNK AFTER BACKFILLING BUT BEFORE MULCHING & REMOVE BURLAP FROM TOP 1/3 OF BALL ROOT.

16. REMOVE ALL STAKES, STRAPS, WIRES, RUBBER HOSES, ETC. AFTER 1-2 GROWING SEASONS.

17. PLANT SUBSTITUTIONS WILL NOT BE MADE WITHOUT THE WRITTEN CONSENT OF THE OWNER OR THE OWNER'S DESIGNATED REPRESENTATIVE PRIOR TO INSTALLATION.

18. ALL INSTALLED PLANT MATERIAL SHALL BE SUBJECT TO REGULAR MAINTENANCE, INCLUDING FERTILIZATION, PRUNING, REPLACEMENT, INSECT AND DISEASE CONTROL, WATERING, MULCHING, AND WEED CONTROL.

19. CONTRACTORS ARE RESPONSIBLE FOR LOCATING ALL UTILITIES PRIOR TO THE BEGINNING OF WORK AND AVOIDING THEM DURING LANDSCAPING OPERATIONS.

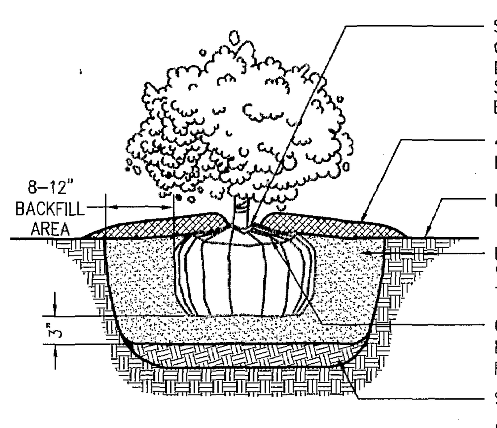
20. REMOVE TOP 4" OF SOIL FROM FINISH GRADE W/IN THE SOD COVERED AREAS SHOWN. BACKFILL W/ SELECT TOP SOIL; PARTIALLY BACKFILL, WATER TO SETTLE SOIL. FINISH BACKFILLING; TAMP LIGHTLY.

SELECT TOPSOIL SPECIFICATIONS

SELECT TOPSOIL SPECIFICATIONS	
Minimum Maximum Material Passing 2.00 mm (#10) Sieve	90%-100%
Clay	5% - 30%
Silt	10% -70%
Sand & Gravel	20% - 70%
Organic Matter	3% - 20%
pH	6.1 - 7.1
Extractible Phosphorous	30 kg per hectare
Exchangeable Potassium	150 kg per hectare

JAMES CITY COUNTY LANDSCAPE REQUIREMENTS

AREAS		TREES AND SHRUBS		
LANDSCAPE YARD	COUNTY REQ.	PLANTING RATIO	PLANTS REQUIRED	NEW PLANTS PROVIDED
PARKING LOT	91 SPACES	1 TREE AND 2 SHRUBS: 5 PARKING SPACES	19 TREES (50% 10 LG DECIDUOUS; 35% 7 EVERGREEN) 37 SHRUBS (35% 13 EVERGREEN)	19 TREES (13 LG DECIDUOUS, 6 EVERGREEN) 40 SHRUBS (40 EVERGREEN)
10' BLDG PERIMETER	5,937 SF	1 TREE OR 5 SHRUBS: 200 SQ.FT	30 TREES OR 149 SHRUBS	10 TREES AND 108 SHRUBS



SET TOP OF ROOTBALL 3" ABOVE FINISH GRADE; COVER EDGES OF ROOTBALL W/ SOIL, TAPERING DOWN TO SURROUNDING SOIL LINE; CUT ROPE SURROUNDING CROWN OF ROOTBALL AFTER BACKFILLING BUT BEFORE MULCHING.

4" HT. SAUCER, FILL WITH SHREDDED HARDWOOD MULCH

EXISTING/FINISH GRADE

BACKFILL W/ NATIVE TOP SOIL; PARTIALLY BACKFILL, WATER TO SETTLE SOIL; FINISH BACKFILLING; TAMP LIGHTLY

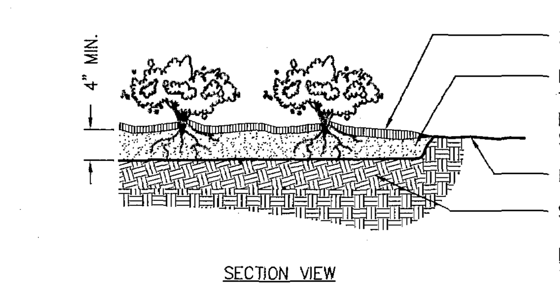
CUT CIRCLING ROOTS; SCARIFY SIDES BEFORE PLANTING; REMOVE BURLAP FROM TOP 1/3 OF BALL ROOT.

SCARIFY SUBSOIL TO 4" MIN. DEPTH

NOTES:
1. SPACE AS SHOWN ON PLAN OR AS INDICATED ON PLANT CHART.
2. WATER IMMEDIATELY AFTER PLANTING.

SHRUB PLANTING

NOT TO SCALE



3" HT. SHREDDED HARDWOOD MULCH

REMOVE TOP 4" OF SOIL FROM FINISH GRADE W/IN THE GROUND COVER PLANTING BED. BACKFILL W/ NATIVE TOP SOIL; PARTIALLY BACKFILL, WATER TO SETTLE SOIL. FINISH BACKFILLING; TAMP LIGHTLY

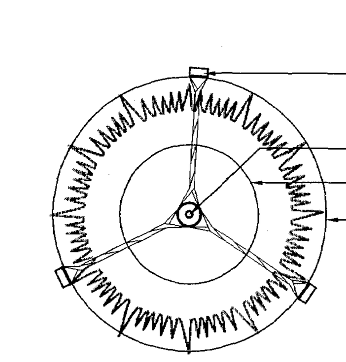
EXISTING/FINISH GRADE

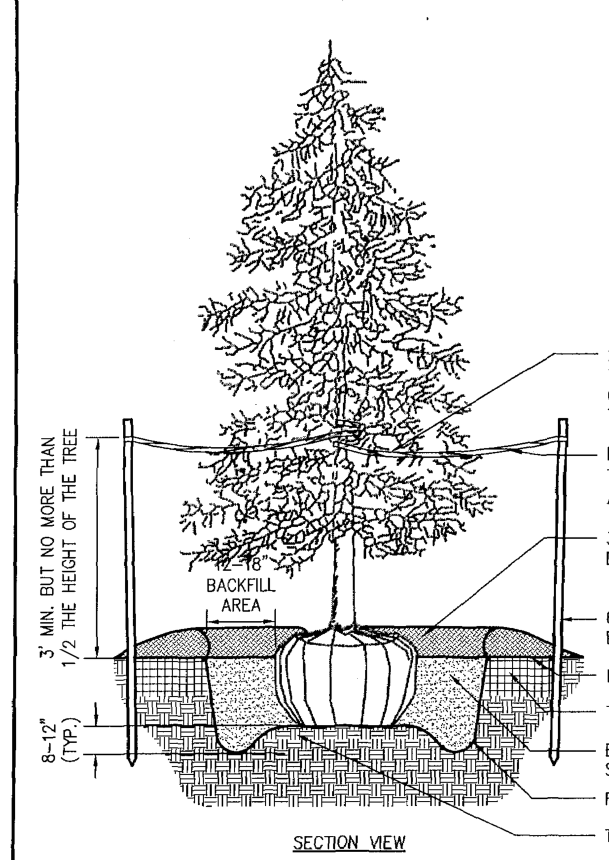
SCARIFY SUBGRADE TO 4" MIN. DEPTH

NOTES:
1. SPACE AS SHOWN ON PLAN OR AS INDICATED ON PLANT CHART.
2. WATER IMMEDIATELY AFTER PLANTING.

GROUND COVER PLANTING BED

NOT TO SCALE





2-3" WIDE WEBBING OR POLYETHYLENE STRAPS TWISTED LOOSELY AT THEIR MIDPOINT AND WRAPPED ONCE AROUND THE TREE TRUNK FLAT. ATTACHED TO THE STAKE WITH STAPLES.

LOOSELY TWIST EACH STRAP TO ALLOW FOR 4-6" OF TRUNK FLEXING (REMOVE ALL STRAPS AND STAKING AFTER 1-2 FULL GROWING SEASONS)

3" HT. SHREDDED HARDWOOD MULCH; KEPT AWAY FROM TRUNK. DO NOT COVER THE ROOT COLLAR WITH TOP SOIL OR MULCH.

6-8' WOOD STAKES, 3 PER TREE. STAKES TO BE SAME HEIGHT, DRIVEN IN ON A SLIGHT ANGLE.

EXISTING/FINISH GRADE

TILL 18" WIDTH AT TOP EDGE OF HOLE TO A 8-12" DEPTH

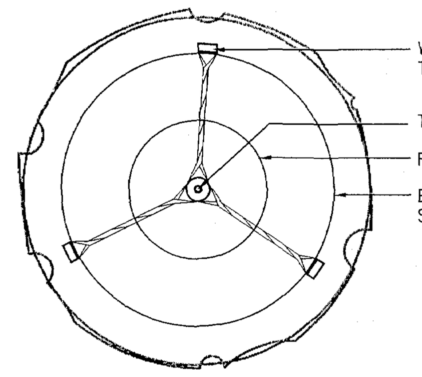
BACKFILL W/ NATIVE TOP SOIL; PARTIALLY BACKFILL, WATER TO SETTLE SOIL; FINISH BACKFILLING; TAMP LIGHTLY

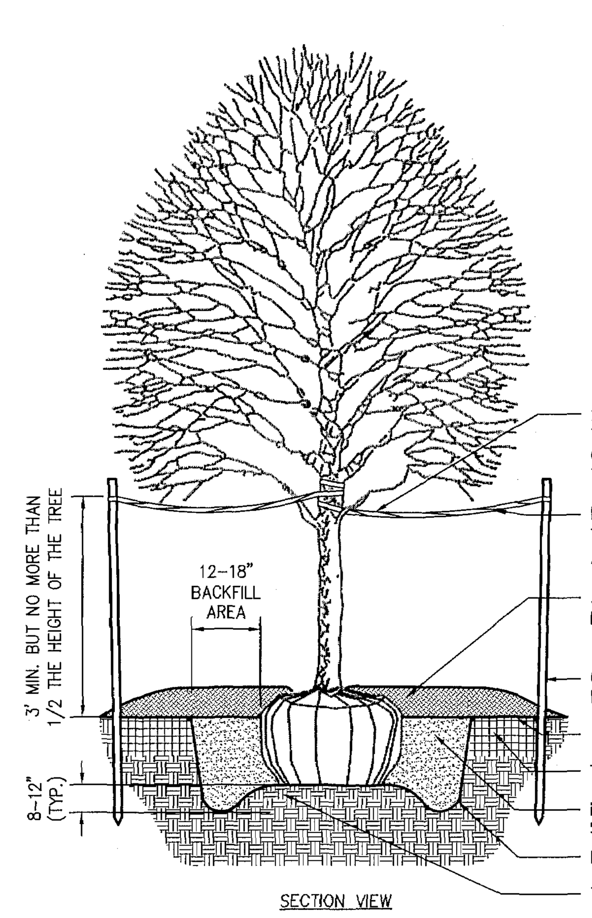
ROUGHEN HOLE WALLS AND BOTTOM

TRENCH AROUND PERIMETER OF MOUND TO DEPTH SHOWN.

EVERGREEN TREE PLANTING

NOT TO SCALE





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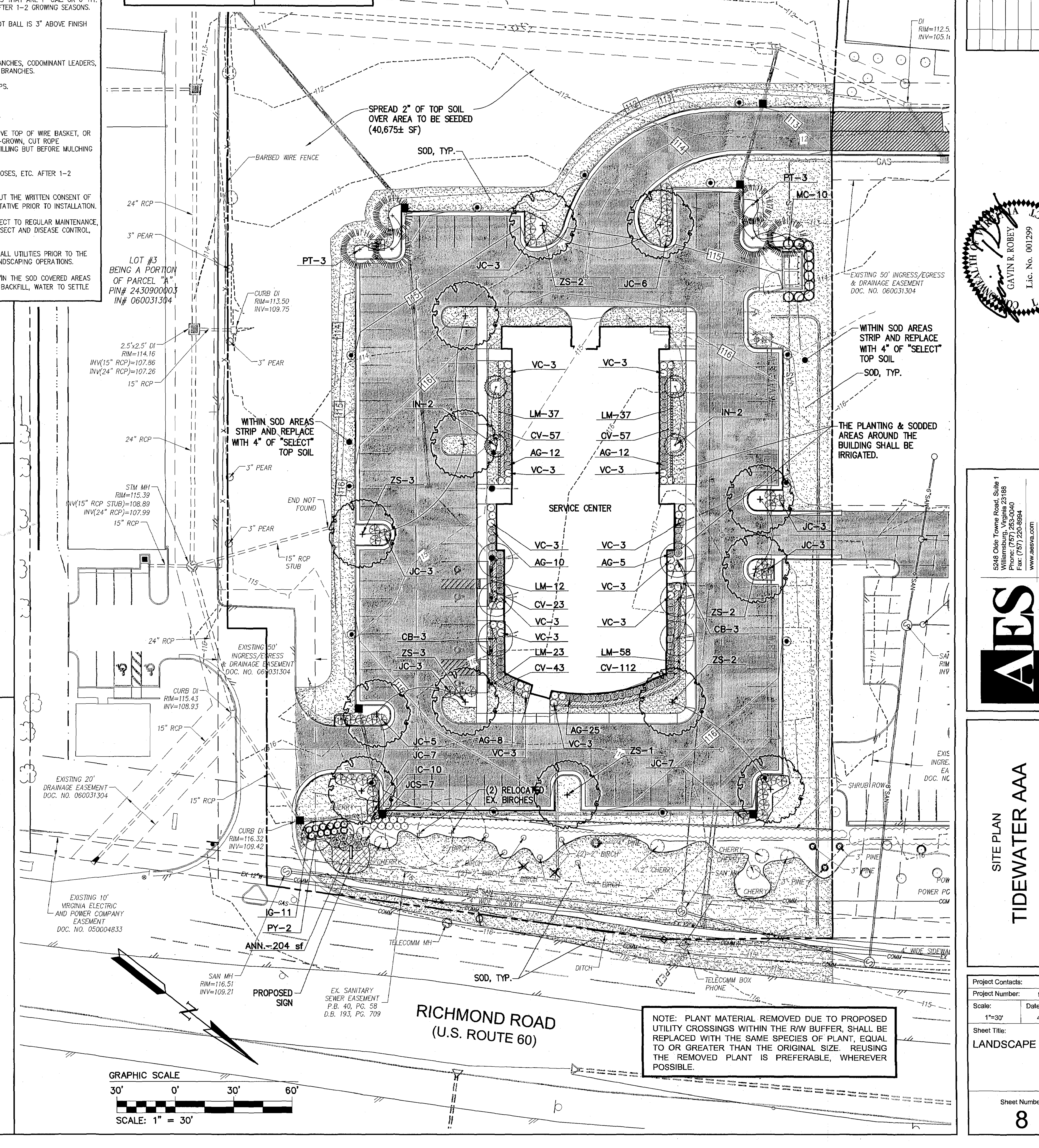
BACKFILL W/ NATIVE TOP SOIL; PARTIALLY BACKFILL, WATER TO SETTLE SOIL; FINISH BACKFILLING; TAMP LIGHTLY

ROUGHEN HOLE WALLS AND BOTTOM

TRENCH AROUND PERIMETER OF MOUND TO DEPTH SHOWN.

DECIDUOUS TREE PLANTING

NOT TO SCALE



NOTE: PLANT MATERIAL REMOVED DUE TO PROPOSED UTILITY CROSSINGS WITHIN THE R/W BUFFER, SHALL BE REPLACED WITH THE SAME SPECIES OF PLANT, EQUAL TO OR GREATER THAN THE ORIGINAL SIZE. REUSING THE REMOVED PLANT IS PREFERABLE, WHEREVER POSSIBLE.

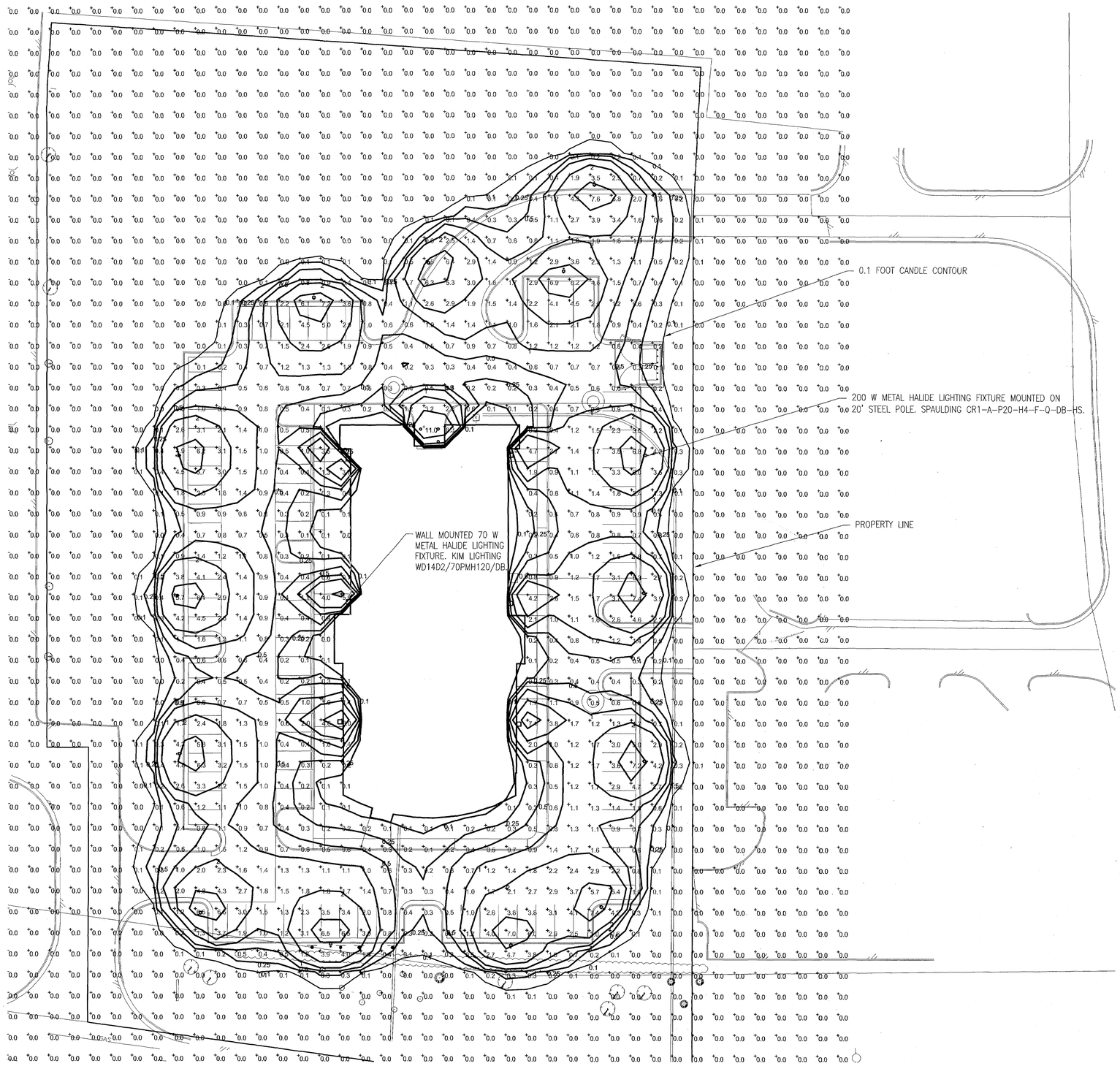
Rev.	Date	Description	Revised By
	6/20/11	REVISED PER JCC COMMENTS DATED 5/2011	JAG

COMMONWEALTH OF VIRGINIA — GAVIN R. ROBEY — Lic. No. 001299 — 6/20/11 — LANDSCAPE ARCHITECT

AES CONSULTING ENGINEERS
Hampton Roads | Central Virginia | Middle Peninsula
5248 Olde Towne Road, Suite 1
Williamsburg, Virginia 23188
Phone: (757) 253-0040
Fax: (757) 220-8994
www.aesva.com

SITE PLAN
TIDEWATER AAA
STONEHOUSE DISTRICT — JAMES CITY COUNTY — VIRGINIA

Project Contacts:	JAG
Project Number:	9353-09
Scale: 1"=30'	Date: 4/28/11
Sheet Title: LANDSCAPE PLAN	
Sheet Number	8



ELECTRICAL SITE PLAN

SCALE 1" = 25'

1"=25'-0" 25' 15' 5' 0 25' 50'

VANSANT & GUSLER, INC.
CONSULTING ENGINEERS
6330 NEWTOWN ROAD SUITE 400 NORFOLK, VA. 23502
Telephone: 757 461-6757 Fax: 757 461-8516

Rev.	Date	Description	Revised By

SITE PLAN
TIDEWATER AAA
STONEHOUSE DISTRICT JAMES CITY COUNTY VIRGINIA

Project Contacts:	JAG
Project Number:	9353-09
Scale: 1"=25'	Date: 4/28/11
Sheet Title: LIGHTING PLAN	
Sheet Number 9	

99157_TIDEWATER_AAA_AUTO_SERVICE-31

110018283

COPY

COUNTY OF JAMES CITY, VIRGINIA

DECLARATION OF COVENANTS
INSPECTION/MAINTENANCE OF DRAINAGE SYSTEM

Please type or print legibly in black ink. Covenantor(s) should submit this form to the JCC Engineering and Resource Protection Division, 101-E Mounts Bay Road, Williamsburg, VA 23185.

THIS DECLARATION OF COVENANTS, made this 16 day of August, 2011, between Hourigan Construction Corp., and all successors in interest, ("COVENANTOR(S)"), owner(s) of the following property:

Parcel Identification Number(s): 2430900002
Legal Description(s): 3.39 acres L2 subdivision of parcel A - Basic Properties, LLC

Project or Subdivision Name: ~~Parcel A~~ TIDEWATER AAA SP0042011-AAA CUSTOMER SERVICE CENTER
Document/Instrument No(s): Document # 110006872
or Deed Book _____, Page No. _____,
and the County of James City, Virginia ("COUNTY.")

WITNESSETH:

I (We), the COVENANTOR(S), with full authority to execute deeds, mortgages, other covenants, and all rights, titles and interests in the property described above, do hereby covenant with the COUNTY as follows:

1. The COVENANTOR(S) shall provide maintenance for the drainage system including any runoff control facilities, conveyance systems and associated easements, hereinafter referred to as the "SYSTEM," located on and serving the above-described property to ensure that the SYSTEM is and remains in proper working condition in accordance with approved design standards, and with the law and applicable executive regulations. The SYSTEM shall not include any elements located within any Virginia Department of Transportation rights-of-way.

2. If necessary, the COVENANTOR(S) shall levy regular or special assessments against all present or subsequent owners of property served by the SYSTEM to ensure that the SYSTEM is properly maintained.

3. The COVENANTOR(S) shall provide and maintain perpetual access from public right-of-ways to the SYSTEM for the COUNTY, its agent and its contractor.

4. The COVENANTOR(S) shall grant the COUNTY, its agent and its contractor a right of entry to the SYSTEM for the purpose of inspecting, monitoring, operating, installing, constructing, reconstructing, maintaining or repairing the SYSTEM.

5. If, after reasonable notice by the COUNTY, the COVENANTOR(S) shall fail to maintain the SYSTEM in accordance with the approved design standards and with the law and applicable executive regulations, the COUNTY may perform all necessary repair or maintenance work, and the COUNTY may assess the COVENANTOR(S) and/or all property served by the SYSTEM for the cost of the work and any applicable penalties.

Prepared by (Name, Address & Phone):
Larry Ramsay
4429 Bonney Road Suite 200
Virginia Beach, VA 23462
757-499-3434

Return to:
JCC Attorney's Office
101-C Mount's Bay Road
Williamsburg, VA 23185
(757) 253-6612

General file 99157

6. The COVENANTOR(S) shall indemnify and save the COUNTY harmless from any and all claims for damages to persons or property arising from the installation, construction, maintenance, repair, operation or use of the SYSTEM.

7. The COVENANTOR(s) shall promptly notify the COUNTY when the COVENANTOR(S) legally transfers any of the COVENANTOR(S) responsibilities for the SYSTEM. The COVENANTOR(S) shall supply the COUNTY with a copy of any document of transfer, executed by both parties.

8. The covenants contained herein shall run with the land and shall bind the COVENANTOR(S) and the COVENANTOR(S)' heirs, executors, administrators, successors and assignees, and shall bind all present and subsequent owners of property served by the SYSTEM.

9. This COVENANT shall be recorded in the County Land Records.

IN WITNESS WHEREOF, the COVENANTOR(S) has executed this DECLARATION OF COVENANTS as of the date first above written.

COVENANTOR(S)

Signature

Larry Ramsay, Project Manager

Print Name and Title

ACKNOWLEDGMENT

COMMONWEALTH OF VIRGINIA
CITY/~~COUNTY~~ OF VIRGINIA BEACH, to wit:

I hereby certify that on this 18 day of AUGUST, 20 11, before the subscribed, a Notary Public for the Commonwealth of Virginia, personally appeared LARRY RAMSAY and did acknowledge the foregoing instrument to be his/her Act.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal this 18th day of August, 20 11.

[SEAL]

RACHEL F. KILNER NOTARY PUBLIC My Comm. Expires March 31, 2014 318765 COMMONWEALTH OF VIRGINIA

Notary Public

Notary Registration Number: 318765

My Commission expires: March 31, 2014

Approved as to form:

County Attorney

VIRGINIA: CITY OF WILLIAMSBURG & COUNTY OF JAMES CITY
This document was admitted to record on 24 Aug 2011
at 9:21 AM/PM. The taxes imposed by Virginia Code
Section 58.1-801, 58.1-802 & 58.1-814 have been paid.

STATE TAX	LOCAL TAX	ADDITIONAL TAX
$ —	$ —	$ —

TESTE: BETSY B. WOOLRIDGE, CLERK

BY: Betsy B. Woolridge Clerk

Drainage1_pre_doc
(Revised 5-11)

No onsite BMP
Drains to YC-059

Project Name: Tidewater AAA
Location:
Project Number: SP-42-11
Date of Inspection:
Inspector(s): Amy Parker

Closed Storm Drain System Construction Inspection Checklist

Development Status (Active, Inactive,): Active

Stage of Construction Installation, etc):

	Item	X	Comments
1.	Type of closed pipe system		
	a. Round	X	
	b. Elliptical		
2.	Type of pipe material		
	a. Reinforced concrete pipe (RCP)	X	
	b. HPDE		
	d. Other		

B. Site Preparation

S = Satisfactory U = Unsatisfactory N/A = Not Applicable S

	Item	S	U	N/A	Comments
1.	Pipe and structures delivered and inspected prior to construction	X			
	a. Inspect for material, diameter, dimensions and condition	X			

C. Excavation/Grading

S = Satisfactory U = Unsatisfactory N/A = Not Applicable S

	Item	S	U	N/A	Comments
1.	Excavation and grading conform to plans				
	a. Trench bottom shaped to permit barrel of pipe to be in direct contact with soil or bedding	X			
	b. Areas excavated below established grade shall be backfilled with VDOT #25 or 26 aggregate (unless water is encountered - then #57 aggregate shall be used).	X			
2.	All earthwork shall be in conformance with VDOT Standard and Specification #303				

D. Installation

S = Satisfactory U = Unsatisfactory N/A = Not Applicable

	Item	S	U	N/A	Comments
1.	Bedding per VDOT 302.03(a)2(b)				
	a. Material shall be VDOT #25 or #26 aggregate or as specificied on the approved plans (unless water is encountered - then #57 aggregate shall be used).	X			
	b. Shall be lightly compacted and shaped so pipe is in full contact with bedding	X			
	c. Shall be shaped to accommodate the bell when bell and spigot pipe is used	X			
2.	Placing Pipe per VDOT 302.03(a)2c				
	a. Pipe shall be placed beginning at downstream end with bell or groove ends of rigid pipe facing upstream	X			