

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

COUNTY OF JAMES CITY, VIRGINIA

**COPY**

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 Environmental Division, 101-E Mounts Bay Road, Williamsburg, VA 23185.

THIS DECLARATION OF COVENANTS, made this 16<sup>th</sup> day of MARCH, 2010, between New Town Associates, LLC, and all successors in interest, ("COVENANTOR(S)"), owner(s) of the following property:

Parcel Identification Number: 3822400025  
 Legal Description: PAR-C BLK-20 S-6 NEW TOWN  
 Project or Subdivision Name: New Town, Section 6, Block 20, Parcel C TPMG Building  
 Document/Instrument No. 030005069 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.
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.

*Instrument # 100006139*  
*Recorded on Mar. 29, 2010*

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)  
New Town ASSOCIATES LLC  
BY [Signature]  
\_\_\_\_\_  
Signature  
LAWRENCE SALZMAN, MANAGING DIRECTOR  
\_\_\_\_\_  
Print Name and Title

ACKNOWLEDGMENT

COMMONWEALTH OF VIRGINIA  
CITY/COUNTY OF Henrico, to wit:

I hereby certify that on this 16<sup>th</sup> day of March, 2010, before the subscribed, a Notary Public for the Commonwealth of Virginia, personally appeared Lawrence Salzman and did acknowledge the foregoing instrument to be his/her Act.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal this 16<sup>th</sup> day of March, 2010.



Connie Louise Robertson  
\_\_\_\_\_  
Notary Public

Notary Registration Number: 7296669  
My Commission expires: Nov. 30, 2013

Approved by: [Signature]  
\_\_\_\_\_  
Asst. County Attorney

This Declaration of Covenants prepared by:

Signature: [Signature] Print Name and Title: DEREK ROBERTSON

Address: 5406 Discovery Park Blvd, #114, Williamsburg, VA 23188

Phone Number: 757-220-5577

Drainage1\_pre.doc  
(Revised 9-5-08)

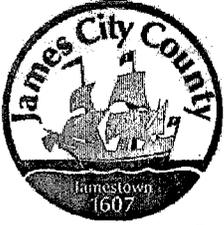
**DATE: OCTOBER 25, 2011**

**SUBJECT: NEW TOWN SECTION 6 BLOCK 20 PARCEL C TPMG BLDG**

**TO: JCC STORMWATER DIVISION**

**FROM: AMY PARKER- JCC DEVELOPMENT MANAGEMENT**





**James City County Environmental Division  
Stormwater Management/BMP Record Drawing &  
Construction Certification Review  
Tracking Form**

Project Name: New Town Section 6, Block 20, Parcel C, TPME  
 County Plan No.: SP-0112-2009  
 Stormwater Management Facility: \_\_\_\_\_  
 BMP Phase #:  I  II  III  
 Information Package Received. Date/By: \_\_\_\_\_  
 Completeness Check:  
 Record Drawing Date/By: 6/2/11  
 Construction Certification Date/By: 6/2/11 + 9/29/11  
 RD/CC Standard Forms (Required for all BMPs after Feb 1<sup>st</sup> 2001 Only)  
 Insp/Maint Agreement # / Date: 100006139 3/16/10  
 BMP Maintenance Plan Location: NOT IN PLAN  
 Other: \_\_\_\_\_  
 Standard E&SC Note on Approved Plan Requiring RD/CC or County comment in plan review  
 Yes  No Location: \_\_\_\_\_  
 Assign County BMP ID Code #: Code: PC-260  
 Preliminary Input/Log into Division's "As-Built Tracking Log"  
 Add Location to GIS Map. Obtain basic site information (GPIN, Owner, Address, etc.)  
 Preliminary Log into Access Database (BMP ID #, Plan No., GPIN, Project Name, etc.)  
 Active Project File Review (correspondence, H&H, design computations, etc.)  
 Initial As-Built File setup (File label, folder, copy plan/details/design information, etc.)  
 Inspector Check of RD/CC (forward to Inspector using transmittal for cursory review).  
 Pre-Inspection Drawing Review of Approved Plan (Quick look prior to Field Inspection).  
 Final Inspection (FI) Performed Date: 6/17/11  
 Record Drawing (RD) Review Date: 6/17/11  
 Construction Certification (CC) Review Date: 6/17/11  
 Actions:  
 No comments.  
 Comments. Letter Forwarded. Date: \_\_\_\_\_  
 Record Drawing (RD)  
 Construction Certification (CC)  
 Construction-Related (CR)  
 Site Issues (SI)  
 Other : \_\_\_\_\_  
 Second Submission: 9/29/11 (storm pipe)  
 Reinspection (if necessary): \_\_\_\_\_  
 Acceptable for SWM Purposes (RD/CC/CR/Other). Ok to proceed with bond release.  
 Complete "Surety Request Form".  
 Check/Clean active file of any remaining material and finish "As-Built" file.  
 Add to County BMP Inventory/Inspection schedule (Phase I, II or III).  
 Copy Final Inspection Report into County BMP Inspection Program file.  
 Obtain Digital Photographs of BMP and save into County BMP Inventory.  
 Request mylar/reproducible from As-Built plan preparer.  
 Complete "As-built Tracking Log".  
 Last check of BMP Access Database (County BMP Inventory).  
 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  
 Chief Engineer: [Signature]

Date: 10/14/11  
 Date: 10/26/11

\*\*\* See separate checklist, if needed.

## Amy Parker

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**From:** Amy Parker  
**Sent:** Friday, July 15, 2011 7:18 AM  
**To:** Derek Robertson; Randy Taylor  
**Cc:** William Cain  
**Subject:** TPMG dry swale and storm certifications

Good Morning Guys,

I completed the final inspection for the dry swale located along the rear of the TPMG project. Though the AB/CC indicate the grades are quite different from the approved plan, it seems to be tied into the existing drainage from the parking lot and appears to be functioning properly. I met with Bill Cain (chief engineer) about this and he agreed that, though the grades are different from those on the approved plan, the dry swale appears to be fine. The only item that needs addressed for the facility is stabilization and removal of any silt fence.

If you can get some grass established along the slopes and bottom of the swale I can release that portion of the bond.

Derek, I know we've been in discussions about the storm certification portion. When you get that to me, I'll review and hopefully release the full bond amount.

Please feel free to call me with questions. Thanks!

**Amy Parker**  
Environmental Inspector II



Division of Engineering and Resource Protection  
101-E Mounts Bay Road  
Williamsburg, VA 23185  
P: 757-253-6851  
F: 757-259-4032

jccEgov.com



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: TPMG NEWTOWN  
Structure/BMP Name: \_\_\_\_\_  
Project Location: JAMES CITY COUNTY, VA (NEWTOWN)  
BMP Location: \_\_\_\_\_  
County Plan No.: \_\_\_\_\_

Project Type:  Residential  Business  Office  Commercial  Industrial  Institutional  Public  Roadway  Other \_\_\_\_\_  
Tax Map/Parcel No.: \_\_\_\_\_  
BMP ID Code (if known): \_\_\_\_\_  
Zoning District: \_\_\_\_\_  
Land Use: \_\_\_\_\_  
Site Area (sf or acres): \_\_\_\_\_

Brief Description of Stormwater Management/BMP Facility:

STORM WATER PIPING DI-2B R14 92.24  
*FOR STRUCTURE AT WESTERN MOST PORTION OF SITE*

Nearest Visible Landmark to SWM/BMP Facility: \_\_\_\_\_

Nearest Vertical Ground Control ( if known ):

ICC Geodetic Ground Control  USGS  Temporary  Arbitrary  Other

Station Number or Name: \_\_\_\_\_

Datum or Reference Elevation: \_\_\_\_\_

Control Description: \_\_\_\_\_

Control Location from Subject Facility: \_\_\_\_\_

**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**

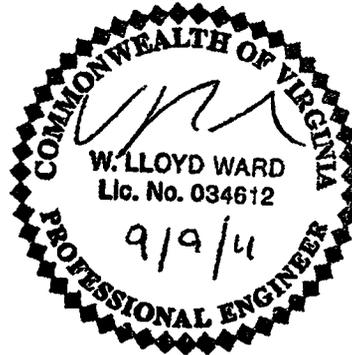
Firm Name: \_\_\_\_\_  
Mailing Address: \_\_\_\_\_  
Business Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_

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.

**Construction Certification**

Firm Name: ECS MID-ATLANTIC  
Mailing Address: 108 WILKIN ROAD  
STE 1, WILLIAMSBURG, VA 23188  
Business Phone: 757-229-6677  
Fax: 757-229-9978  
Name: W. Lloyd Ward, P.E.  
Title: VP / SUCR MGR  
Signature: [Handwritten Signature]  
Date: 9/9/11

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.



\_\_\_\_\_  
( Seal )  
Virginia Registered Professional Engineer  
or Certified Land Surveyor

\_\_\_\_\_  
( Seal )  
Virginia Registered  
Professional Engineer



**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: 2010 1  
Facility Monitored by County Representative during Construction:  Yes  No  Unknown  
Name of Site Work Contractor Who Constructed Facility: TOANO CONTRACTORS  
Name of Professional Firm Who Routinely Monitored Construction: \_\_\_\_\_  
Date of Completion for SWM/BMP Facility: 06-01-2011  
Date of Record Drawing/Construction Certification Submittal: 06-01-2011

*( 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: LEECLOR PROPERTIES, LLC  
Mailing Address: 5400 DISCOVERY PARK BLVD STE 104  
Business Phone: 220-5571 Fax: 565-0416  
Contact Person: DEREK ROBERTSON Title: N/A  
GARRICK BLOUNT

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: LANDTECH RESOURCES, INC.  
Mailing Address: 205-E BULLFANTS BLVD  
WILLIAMSBURG VIRGINIA  
Business Phone: 565-1677  
Fax: 565-0782  
Responsible Plan Preparer: KENNETH JENKINS  
Title: ENGINEER  
Plan Name: NEW TOWN S-6 BLK 20 PAR. C TRNG BLDG  
Firm's Project No. 09-197  
Plan Date: REV 2-5-10  
Sheet No.'s Applicable to SWM/BMP Facility: CB / C9 / CS / / /

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

Name: TOANO CONTRACTORS  
Mailing Address: 8589 RICHMOND ROAD TOANO VA 23068  
Business Phone: 757-342-7602  
Fax: 757-666-8874  
Contact Person: RANDY TAYLOR  
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: LANDTECH RESOURCES, INC  
Mailing Address: 205-E BULIFANTS  
BLVD WILLIAMSBURG VA 23188  
Business Phone: 565-1677  
Fax: 565-0782

Name: KENNETH JENKINS  
Title: ENGINEER

Signature: Kenneth M. Jenkins  
Date: 6/2/11

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.

**Construction Certification**

Firm Name: LANDTECH RESOURCES, INC  
Mailing Address: 205-E BULIFANTS  
BLVD WILLIAMSBURG VA 23188  
Business Phone: 565-1677  
Fax: 565-0782

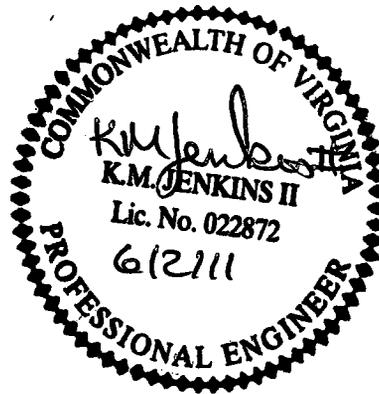
Name: KENNETH JENKINS  
Title: ENGINEER

Signature: Kenneth M. Jenkins  
Date: 6/2/11

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.



\_\_\_\_\_  
( Seal )  
Virginia Registered Professional Engineer  
or Certified Land Surveyor



\_\_\_\_\_  
( 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.

**X** 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.

**X** 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.

**A** 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.
- N/A 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.
- N/A 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.
- N/A 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.
- N/A 21. No visual signs of erosion or channel degradation immediately downstream of facility.
- N/A 22. Any other information formally requested by the Environmental Division specific to the constructed SWM/BMP facility.

N/A

STORMWATER MANAGEMENT / BMP FACILITIES  
RECORD DRAWING CHECKLIST

( 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. )

- \_\_\_ A1. All requirements of Section II, Minimum Standards, apply to Group A facilities.
- \_\_\_ A2. Principal spillway consists of reinforced concrete pipe with O-Ring gaskets for watertight joint construction.
- \_\_\_ A3. Sediment forebays or pretreatment devices provided at inlets to pond. Generally 4 to 6 ft. deep.
- \_\_\_ 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.
- \_\_\_ A5. Adequate fixed vertical sediment depth markers installed in the forebay(s) for future sediment monitoring purposes.
- \_\_\_ 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.
- \_\_\_ 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).
- \_\_\_ A8. No trees are present within a zone 15 feet around the embankment toe and 25 feet from the principal spillway structure.
- \_\_\_ A9. Wet permanent pool, typically 3 to 6 feet deep, is provided and maintains level within facility.
- \_\_\_ A10. Low flow orifice has a non-clogging mechanism.
- \_\_\_ A11. A pond drain pipe with valve was provided.
- \_\_\_ A12. Pond side slopes are not steeper than 3H:1V, unless approved plan allowed for steeper slope.
- \_\_\_ A13. End walls above barrels (outlet pipe) greater than 48 inch in diameter are fenced to prevent a fall hazard.

N/A

**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 )

- \_\_\_\_\_ B1.    Same requirements as Group A Wet Ponds.
- \_\_\_\_\_ B2.    Minimum 2:1 length to width flow path provided across the facility.
- \_\_\_\_\_ B3.    Micropool provided at or around outlet from BMP (generally 3 to 6 ft. deep).
- \_\_\_\_\_ 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.
- \_\_\_\_\_ B5.    Adequate wetland buffer provided (Typically 25 ft. outward from maximum design water surface elevation and 15 ft. setback to structures).
- \_\_\_\_\_ B6.    No more than one-half (½) of the wetland surface area is planted.
- \_\_\_\_\_ B7.    Topsoil or wetland mulch provided to support vigorous growth of wetland plants.
- \_\_\_\_\_ B8.    Planting zones staked or flagged in field and locations subsequently established by appropriate field surveying methods for record drawing presentation.

N/A

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 )

- \_\_\_\_\_ C1.    All requirements of Section II, Minimum Standards, apply to Group C facilities as applicable.
- \_\_\_\_\_ C2.    Facility is not located on fill slopes or on natural ground in excess of six (6) percent.
- \_\_\_\_\_ 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.
- \_\_\_\_\_ 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.
- \_\_\_\_\_ C5.    Sides of infiltration practice lined with filter fabric.
- \_\_\_\_\_ 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.
- \_\_\_\_\_ C7.    Stabilization and acceptable vegetative cover established over contributing drainage area prior to conveyance of stormwater to the facility.
- \_\_\_\_\_ 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.
- \_\_\_\_\_ C9.    Minimum twenty-five (25) foot separation down gradient from any structure.
- \_\_\_\_\_ C10.    Stormwater outfalls provided for overflow associated with larger design storms.
- \_\_\_\_\_ C11.    No visual signs of erosion or channel degradation immediately downstream of facility.
- \_\_\_\_\_ C12.    Facility does not currently cause any apparent surface or subsurface water problems to downgrade properties.
- \_\_\_\_\_ C13.    Observation well provided.
- \_\_\_\_\_ 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 )

- \_\_\_\_\_ D1.    All requirements of Section II, Minimum Standards, apply to Group D facilities.
- \_\_\_\_\_ D2.    Sediment pretreatment devices provided.
- \_\_\_\_\_ 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.
- \_\_\_\_\_ 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.
- \_\_\_\_\_ 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.
- \_\_\_\_\_ D6.    No visible signs of accumulated silt/sediment were present in the facility following construction or alternately, accumulated silt/sediment was properly removed .
- \_\_\_\_\_ D7.    Filtering system is off-line from storm drainage conveyance system.
- \_\_\_\_\_ D8.    Overflow outlet has adequate erosion protection.
- \_\_\_\_\_ D9.    Deflector, diversion, flow splitter or regulator structure provided to divert the water quality volume to the filtering structure.
- \_\_\_\_\_ D10.    Minimum four (4) inch perforated underdrain provided in a clean aggregate envelope layer beneath the facility.
- \_\_\_\_\_ 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.
- \_\_\_\_\_ D12.    Stabilization and acceptable vegetative cover established over contributing drainage area prior to conveyance of stormwater to the facility.
- \_\_\_\_\_ D13.    No visual signs of erosion or channel degradation immediately downstream of facility.
- \_\_\_\_\_ 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.
- \_\_\_\_\_ E4.    Open channel side slopes are no steeper than 2H:1V at any location. Preferred channel sideslope is 3H:1V or flatter. **1V:1H**
- ~~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).
- ~~XX~~ E6.    For E-2 BMPs (Dry Swales), an underdrain system was provided.
- ~~XX~~ 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.
- ~~XX~~ 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.
- ~~XX~~ 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.

N/A.

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 )

- \_\_\_\_\_ F1. All requirements of Section II, Minimum Standards, apply to Group F facilities.
- \_\_\_\_\_ F2. Basin bottom has positive slope and drainage from all basin inflow points to the riser (or outflow) location.
- \_\_\_\_\_ F3. Timber wall BMP used in intermittent stream only. (ie. Prohibited in perennial streams.)
- \_\_\_\_\_ F4. Forebay provided approximately 20 ft. upstream of the facility. Forebays generally 4 to 6 feet in depth.
- \_\_\_\_\_ F5. A reverse slope pipe, vertical stand pipe or mini-barrel and riser was provided to prevent clogging.
- \_\_\_\_\_ F6. Principal spillway and outlet barrel provided consisting of reinforced concrete pipe with O-Ring gaskets for watertight joint construction.
- \_\_\_\_\_ F7. Mini-barrel and riser, if used, contains a removable trash rack to reduce clogging.
- \_\_\_\_\_ 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.
- \_\_\_\_\_ F9. Timbers properly reinforced or concrete footing provided if soil conditions were prohibitive.
- \_\_\_\_\_ F10. Timber wall cross members extended to a minimum depth of two (2) feet below ground elevation.
- \_\_\_\_\_ F11. Protection against erosion and scour from the low flow orifice and weir-flow trajectory provided.
- \_\_\_\_\_ F12. Stilling basin or standard outlet protection provided at principal spillway outlet.
- \_\_\_\_\_ 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.
- \_\_\_\_\_ F14. No visual signs of undercutting of timber walls or clogging of the low orifice were present.
- \_\_\_\_\_ F15. No visual signs of erosion or channel degradation immediately downstream of facility.
- \_\_\_\_\_ 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.

N/A

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 )

- \_\_\_\_\_ G1.    All requirements of Section II, Minimum Standards, apply to Group G facilities as applicable.
- \_\_\_\_\_ 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.
- \_\_\_\_\_ G3.    Dedicated open space areas are in undisturbed common areas, conservation easements or are protected by other enforceable instruments that ensures perpetual protection.
- \_\_\_\_\_ G4.    Provisions included to clearly specify how the natural vegetated areas utilized as dedicated open space will be managed and field identified (marked).
- \_\_\_\_\_ G5.    Adequate protection measures were implemented during construction to protect the defined dedicated open space areas.
- \_\_\_\_\_ 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. )*

- XX** SD1.    All requirements of Section II, Minimum Standards, apply to Storm Drainage Systems.
- XX** SD2.    Horizontal location of all pipe and structures relative to the SWM/BMP facility.
- XX** SD3.    Type, top elevation and invert elevation of all access type structures (inlets, manholes, etc.).
- XX** SD4.    ~~Material type~~, size or diameter, ~~class~~, invert elevations, lengths and slopes for all pipe segments.
- NA** 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 .)*

- \_\_\_\_\_ O1.    All requirements of Section II, Minimum Standards, apply to this section.
- \_\_\_\_\_ O2.    Certification criteria to be determined on a case-by-case basis by the Environmental Division specific to the proposed SWM/BMP facility.

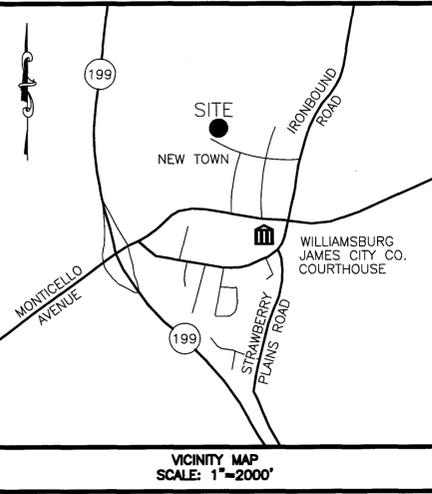
**N/A**

**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\SWMPProg\BMP\CertifRDCC\_fillable.wpd



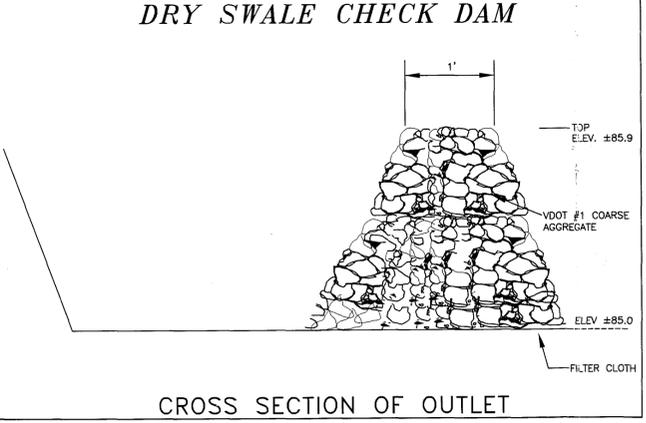
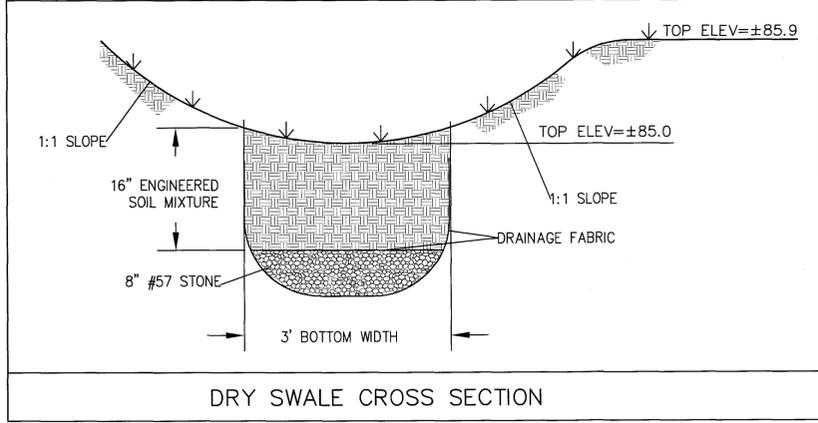
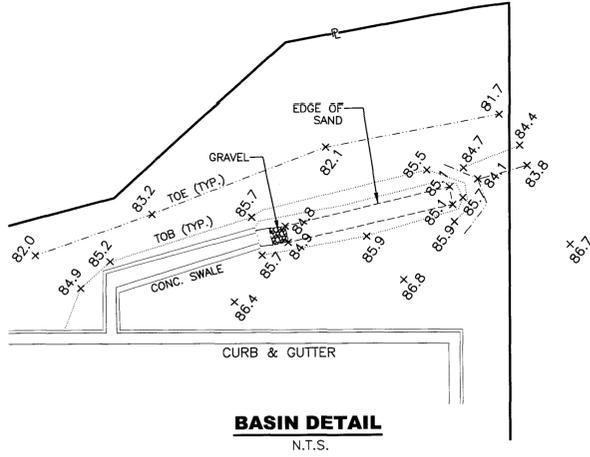
# DRAINAGE AS-BUILTS FOR NEW TOWN, SECTION 6, BLOCK 20, PARCEL C, TPMG BUILDING

JAMES CITY COUNTY

VIRGINIA

Environmental Division  
JUN 02 2011  
RECEIVED

DRAINAGE AS-BUILTS FOR  
 NEW TOWN, SECTION 6, BLOCK 20,  
 PARCEL C, TPMG BUILDING  
 JAMES CITY COUNTY  
 VIRGINIA



**SITE INFORMATION:**  
 PARCEL I.D. #3910100157  
 ZONING DISTRICT: MU

**EXISTING ADDRESS:**  
 5424 DISCOVERY PARK BOULEVARD  
 JAMES CITY COUNTY, VIRGINIA

**GENERAL NOTES:**

- 1) A TITLE REPORT HAS NOT BEEN FURNISHED TO THIS FIRM.
- 2) THIS FIRM MADE NO ATTEMPT TO VERIFY UNDERGROUND UTILITIES EXCEPT THOSE SHOWN.
- 3) ELEVATIONS SHOWN ARE RELATIVE TO THE APPROVED SITE PLAN.
- 4) PROPERTY LINES ARE SHOWN PER APPROVED SITE PLAN.
- 5) ALL CURB & OTHER IMPROVEMENTS SHOWN ARE PROPOSED OR UNDER CONSTRUCTION.

**RECORD DRAWING CERTIFICATION:**  
 I HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE THAT THIS RECORD DRAWING REPRESENTS THE ACTUAL CONDITION OF THE STORMWATER MANAGEMENT FACILITIES SHOWN HEREON APPEAR TO CONFORM WITH THE PROVISIONS OF THE APPROVED DESIGN PLAN, SPECIFICATIONS AND STORMWATER MANAGEMENT PLAN, EXCEPT AS SPECIFICALLY NOTED.

*Kenneth M. Jenkins*  
 KENNETH M. JENKINS, LIC NO. 22872  
 DATE 6/2/11

NO.	DATE	REVISION / COMMENT / NOTE



**LandTech Resources, Inc.**  
 Surveying • GPS • Engineering  
 205 Bullfants Blvd., Ste. C, Williamsburg, VA 23188  
 Phone: (757) 565-1877 Fax: (757) 565-0782  
 web: landtechresources.com

**OWNER/DEVELOPER**  
 LEEBCOR PROPERTIES, LLC  
 5400 DISCOVERY PARK BLVD., STE #104  
 WILLIAMSBURG, VA 23188  
 (757) 220-5577  
 (757) 565-0416 FAX  
 CONTACT: DEREK ROBERTSON/GARRICK BLOUNT

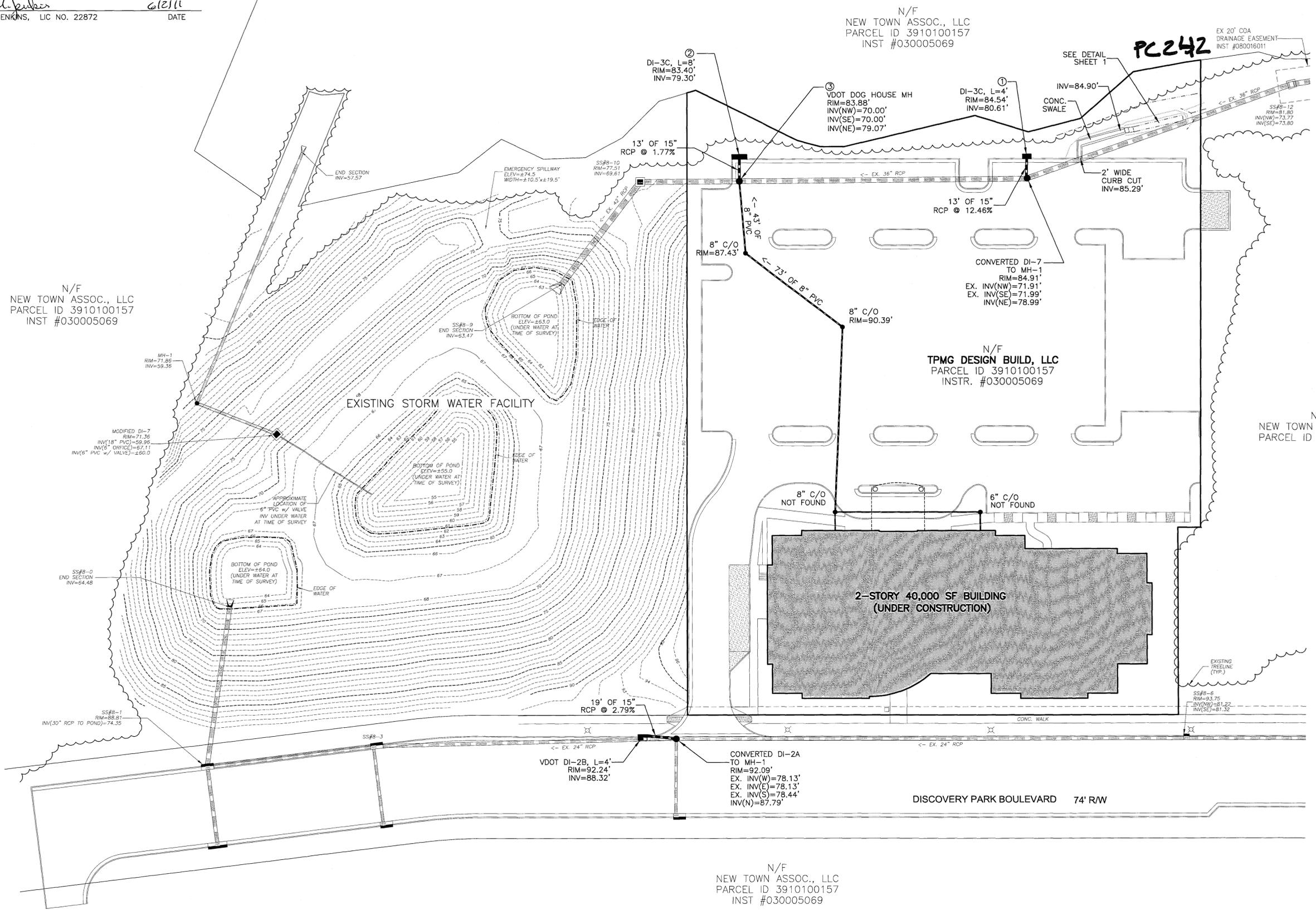
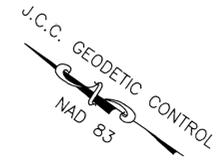
**RECORD DRAWING**  
 JCC-SP-0112-2009

SCALE: AS NOTED  
 DATE: 06-01-2011  
 JOB: 09-197  
 DRAWN BY: WSF  
 SHEET: 1 OF 2

**RECORD DRAWING CERTIFICATION:**

I HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE THAT THIS RECORD DRAWING REPRESENTS THE ACTUAL CONDITION OF THE STORMWATER MANAGEMENT FACILITIES SHOWN HEREON APPEAR TO CONFORM WITH THE PROVISIONS OF THE APPROVED DESIGN PLAN, SPECIFICATIONS AND STORMWATER MANAGEMENT PLAN, EXCEPT AS SPECIFICALLY NOTED.

*Kenneth M. Jenkins*  
 KENNETH M. JENKINS, LIC NO. 22872 DATE 6/2/11



N/F  
 NEW TOWN ASSOC., LLC  
 PARCEL ID 3910100157  
 INST #030005069

N/F  
 NEW TOWN ASSOC., LLC  
 PARCEL ID 3910100157  
 INST #030005069

N/F  
 TPMG DESIGN BUILD, LLC  
 PARCEL ID 3910100157  
 INSTR. #030005069

N/F  
 NEW TOWN ASSOC., LLC  
 PARCEL ID 3822400024

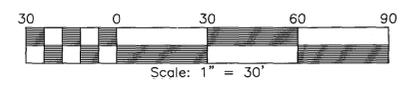
N/F  
 NEW TOWN ASSOC., LLC  
 PARCEL ID 3910100157  
 INST #030005069

**DRAINAGE AS-BUILTS FOR**  
**NEW TOWN, SECTION 6, BLOCK 20,**  
**PARCEL C, TPMG BUILDING**  
 JAMES CITY COUNTY VIRGINIA

NO.	DATE	REVISION / COMMENT / NOTE



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 205 Bullfants Blvd., Ste. F, Williamsburg, VA 23188  
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 web: landtechresources.com



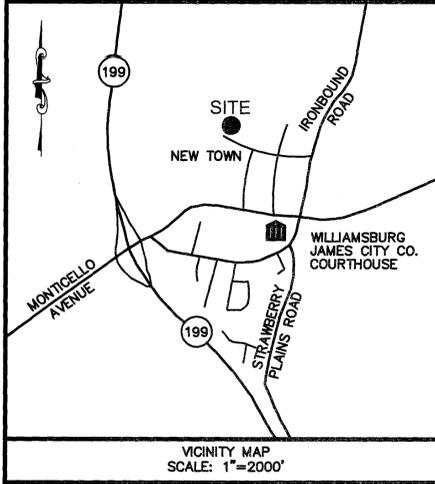
**LEGEND**

- ◆ FIRE HYDRANT
- BLOW OFF ASSEMBLY
- ⊕ WATER VALVE
- ⊗ LIGHT POLE
- ⊕ WATER METER
- ⊕ SIGN

**RECORD DRAWING**  
 JCC-SP-0112-2009

SCALE: 1"=30'  
 DATE: 06-01-2011  
 JOB: 09-197  
 DRAWN BY: WSF  
 SHEET: 2 OF 2

SP-0112-2009



# SITE PLAN OF NEW TOWN, SECTION 6, BLOCK 20, PARCEL C TPMG BUILDING

JAMES CITY COUNTY VIRGINIA  
JCC-SP-0112-2009

RECEIVED  
FEB 2010  
Planning Department

Environmental Division  
MAR 10 2010  
RECEIVED

COUNTY OF JAMES CITY FINAL SITE PLAN	
APPROVALS	DATE
Fire Dept. J.B. Her	2/23/10
Health Dept. 21710	2/18/10
VOOT. B.A. Weller	2/23/10
Planning CMJ	2/23/10
Environ. SUT Her	2/23/10
Zoning Adm. M25	2/23/10
JCSA Deller	2/23/10
County Eng.	
REA	
Other Jc Her	2/23/10

## TABLE OF CONTENTS

SHEET NO.	SHEET NO.
C1	COVER SHEET
C2	ENVIRONMENTAL INVENTORY
C3	LAYOUT PLAN
C4	PHASE I EROSION & SEDIMENT CONTROL PLAN
C5	GRADING PLAN/PHASE II EROSION & SEDIMENT CONTROL PLAN
C6	UTILITY PLAN
C7	LIGHTING PLAN
C8	DETAIL SHEET
C9	DETAIL SHEET
L1	LANDSCAPE PLAN
L2	LANDSCAPE NOTES

### STATISTICAL INFORMATION

ZONE	"MU"—MIXED USE WITH PROFFERS
DISTRICT	BERKELEY
TAX MAP NO.	3822400025
ADDRESS	5424 DISCOVERY PARK BOULEVARD
PROPOSED USE	MEDICAL OFFICE BUILDING (20 PRACTITIONERS)
WATER	PUBLIC
SEWER	PUBLIC
SITE AREA	2.49± ACRES
DISTURBED AREA	2.3± ACRES
BUILDING FLOOR AREA	40,000 SF
BUILDING FOOTPRINT AREA	20,000 SF
PAVED AREA	1.33 ACRES
IMPERVIOUS AREA	1.79 ACRES (72%)
GREEN AREA	0.70 ACRES (28%)
BUILDING HEIGHT	32'
PARKING SPACES	
REQUIRED:	160 (SECTION 24-59(b) - 1 SPACE/250 SF OF OFFICE SPACE)
PROVIDED:	160 (145 ON-SITE SPACES & 15 ON-STREET SPACES)(46 SPACES DEDICATED TO PHYSICAL THERAPY SUITE)
H/C REQUIRED:	14 (5 H/C PARKING SPACES + 9 PHYSICAL THERAPY H/C PARKING SPACES)
H/C PROVIDED:	14 (4 ACCESSIBLE 5 H/C PARKING SPACES)

- NOTES:
- PER FEMA COMMUNITY PANEL NUMBER 51095C0140C DATED 9/28/07 THE SITE APPEARS TO BE IN FLOOD ZONE "X".
  - TOPOGRAPHIC SURVEY SHOWN HEREON IS BASED ON FIELD SURVEY BY LANDTECH RESOURCES INC. - DECEMBER 2009.
  - PARCEL BOUNDARY SHOWN HEREON IS BASED ON AUTOCAD FILE PROVIDED BY OWNER/DEVELOPER NOVEMBER 2009 AND HAS NOT BEEN FIELD VERIFIED BY LANDTECH RESOURCES, INC.
  - THE EXISTENCE AND LOCATION (HORIZONTAL AND VERTICAL) OF EXISTING UTILITIES ARE NOT GUARANTEED AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
  - A LAND DISTURBING PERMIT AND SILTATION AGREEMENT WITH SURETY ARE REQUIRED FOR THIS PROJECT.
  - THIS PROJECT IS LOCATED IN JAMES CITY COUNTY SUB WATERSHED 206 AND CATCHMENT 206-202-1 OF THE POWHATAN CREEK WATERSHED.
  - THE PROFESSIONAL ENGINEER WHOSE SEAL IS AFFIXED HEREON SHALL ACT AS THE "RESPONSIBLE LAND DISTURBER" FOR THE PLAN REVIEW PHASE OF THIS PROJECT. ONCE THE PLANS ARE APPROVED BY THE COUNTY THE OWNER/DEVELOPER SHALL PROVIDE THE COUNTY WITH THE NAME OF THE "RESPONSIBLE LAND DISTURBER" FOR THE CONSTRUCTION PHASE OF THE PROJECT.
  - PER "SOIL SURVEY OF JAMES CITY AND YORK COUNTIES AND THE CITY OF WILLIAMSBURG VIRGINIA" THE ON-SITE SOIL CONSISTS OF CRAVEN (11C) AND EMPORIA (15E).
  - THIS SITE DRAINS TO THE EXISTING BMP LOCATED TO THE NORTH OF THE SITE.
  - THE SITE IS CURRENTLY ZONED MIXED USE WITH PROFFERS. FOR PROFFERS REFERENCE JCC CASE NO. Z-0005-2004 AND MP-02-1997 APPROVED BY THE BOARD OF SUPERVISORS ON OCTOBER 14, 2004.
  - ALL NEW SIGNS SHALL BE IN ACCORDANCE WITH ARTICLE II, DIVISION 3 OF THE JAMES CITY ZONING ORDINANCE AND MUST RECEIVE A SIGN PERMIT FROM THE COUNTY ZONING OFFICE.
  - EVERYTHING BEYOND THE RIGHT-OF-WAY LINE WILL BE CONSIDERED PRIVATE AND NOT MAINTAINED BY VDOT.
  - THE OWNER WILL BE REQUIRED TO OBTAIN A VSMP PERMIT FROM THE VIRGINIA DEPARTMENT OF CONSERVATION AND RECREATION IF THE DISTURBED AREA IS GREATER THAN 2,500 SF. THIS PERMIT WILL REQUIRE A STORMWATER POLLUTION PREVENTION PLAN.
  - A STANDARD INSPECTION/MAINTENANCE AGREEMENT IS REQUIRED TO BE EXECUTED WITH THE COUNTY DUE TO THE PROPOSED STORMWATER CONVEYANCE SYSTEMS AND STORMWATER MANAGEMENT/BMP FACILITIES ASSOCIATED WITH THIS PROJECT.
  - ALL DRAINAGE EASEMENTS DESIGNATED ON THIS PLAN SHALL REMAIN PRIVATE.
  - THIS SITE PLAN RECEIVED PRELIMINARY APPROVAL FROM THE NEW TOWN DRB ON 12/17/09.
  - ALL NEW UTILITIES SHALL BE PLACED UNDERGROUND.
  - THIS SITE PLAN RECEIVED PRELIMINARY APPROVAL FROM THE JAMES CITY COUNTY PLANNING COMMISSION ON 1/13/10. THE WAIVER TO SECTION 24-55(b)(2) FOR OFF-SITE PARKING WAS ALSO APPROVED.
  - THIS SITE PLAN RECEIVED FINAL APPROVAL FROM THE NEW TOWN DRB ON 2/5/10.

A WAIVER TO SEC.24-527(a), SETBACK REQUIREMENTS FROM A PLANNED OR EXISTING PUBLIC ROAD RIGHT-OF-WAY, WAS GRANTED BY THE JAMES CITY COUNTY PLANNING COMMISSION ON JUNE 5, 2006 FOR DISCOVERY PARK BOULEVARD PROVIDED PROPOSALS ARE IN ACCORDANCE WITH THE NEW TOWN DESIGN REVIEW GUIDELINES.

NO.	DATE	REVISION / COMMENT / NOTE
2	2/5/10	REV PER JCC LTR DTD 1/27/10
1	1/7/10	REV PER JCC LTR DTD 1/5/10

**OWNER/DEVELOPER**  
LEEBCOR PROPERTIES, LLC  
5400 DISCOVERY PARK BLVD., STE #104  
WILLIAMSBURG, VA. 23188  
(757) 220-5577  
(757) 565-0416 FAX  
CONTACT: DEREK ROBERTSON/GARRICK BLOUNT

**LandTech Resources, Inc.**  
Surveying • Engineering • GPS

205 Bulfinch Blvd., Ste E, Williamsburg, VA 23188  
Phone: (757) 565-1677 Fax: (757) 565-0782  
web: landtechresources.com

COMMONWEALTH OF VIRGINIA  
K.M. JENKINS II  
Lic. No. 022872  
2/5/10  
PROFESSIONAL ENGINEER

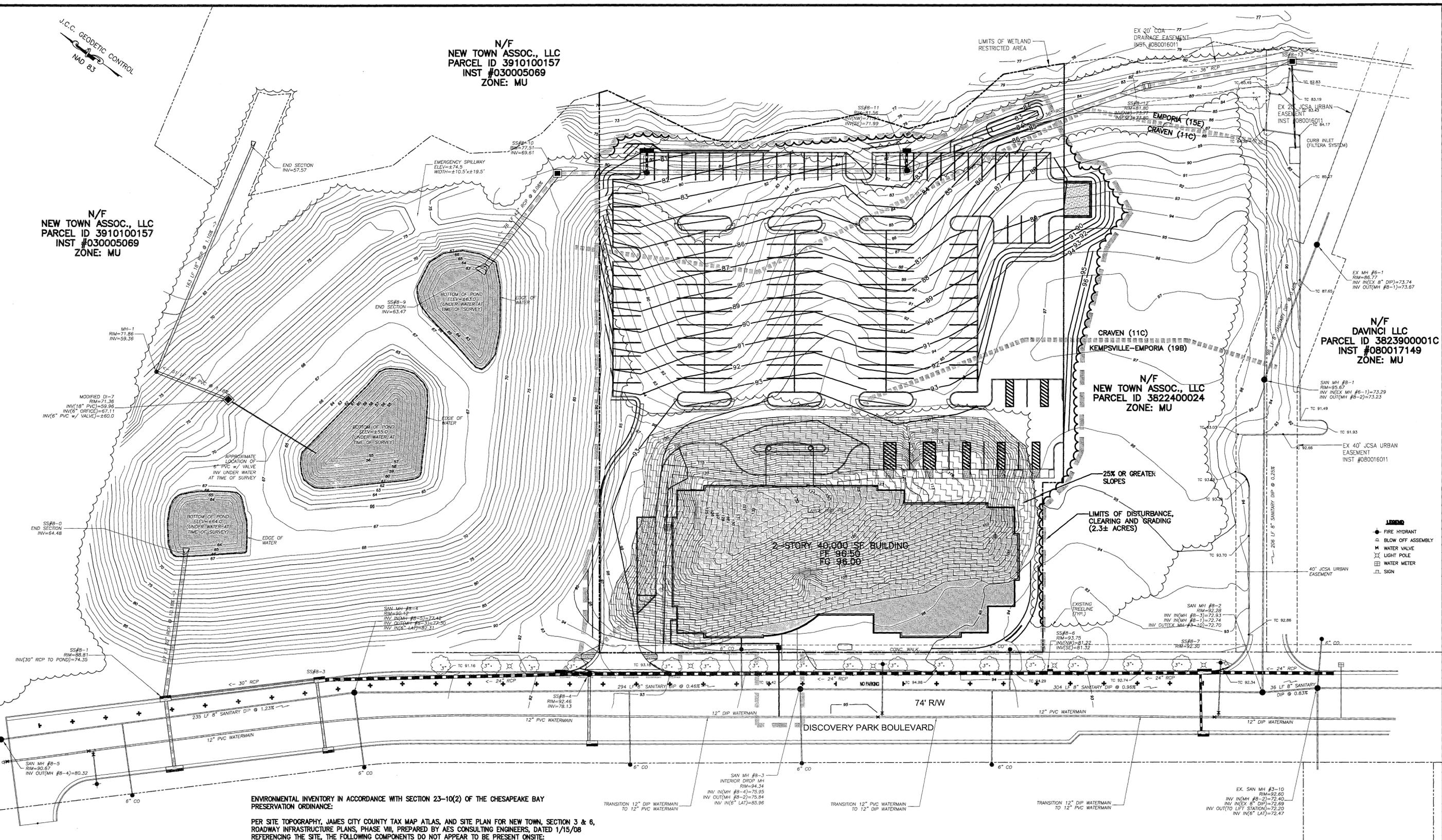
JOB: 09-197  
DWG NO: 09-197CS  
DATE: 12/14/09  
DRAWN BY: KMJ  
SHEET: C1 OF 11

BEFORE DIGGING CALL "MISS UTILITY"  
OF VIRGINIA AT 1 - 800 - 552 - 7001

J.C.C. GEODETIC CONTROL  
NAD 83

N/F  
NEW TOWN ASSOC., LLC  
PARCEL ID 3910100157  
INST #030005069  
ZONE: MU

N/F  
NEW TOWN ASSOC., LLC  
PARCEL ID 3910100157  
INST #030005069  
ZONE: MU



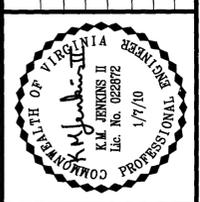
N/F  
DAVINCI LLC  
PARCEL ID 3823900001C  
INST #080017149  
ZONE: MU

N/F  
NEW TOWN ASSOC., LLC  
PARCEL ID 3822400024  
ZONE: MU

**SITE PLAN OF NEW TOWN, SECTION 6  
BLOCK 20, PARCEL C TPMG BUILDING  
5424 DISCOVERY PARK BOULEVARD  
ENVIRONMENTAL INVENTORY**

Virginia  
James City County

NO.	DATE	REVISION / COMMENT / NOTE
1	1/7/10	REV PER JCC LTR DTD 1/5/10



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ENVIRONMENTAL INVENTORY IN ACCORDANCE WITH SECTION 23-10(2) OF THE CHESAPEAKE BAY PRESERVATION ORDINANCE:

PER SITE TOPOGRAPHY, JAMES CITY COUNTY TAX MAP ATLAS, AND SITE PLAN FOR NEW TOWN, SECTION 3 & 6, ROADWAY INFRASTRUCTURE PLANS, PHASE VIII, PREPARED BY AES CONSULTING ENGINEERS, DATED 1/15/08 REFERENCING THE SITE, THE FOLLOWING COMPONENTS DO NOT APPEAR TO BE PRESENT ONSITE:

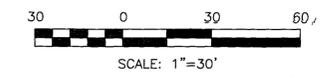
1. TIDAL WETLANDS;
2. TIDAL SHORES;
3. NONTIDAL WETLANDS CONNECTED BY SURFACE FLOW AND CONTIGUOUS TO TIDAL WETLANDS OR WATER BODIES WITH PERENNIAL FLOW (i.e. RPA WETLANDS);
4. A 100-FOOT BUFFER AREA LOCATED ADJACENT TO AND LANDWARD OF THE COMPONENTS LISTED IN ITEMS 1. THROUGH 3. ABOVE, AND ALONG BOTH SIDES OF ANY WATER BODY WITH PERENNIAL FLOW;
5. NONTIDAL WETLANDS NOT INCLUDED IN ITEM 3 (i.e. RMA WETLANDS);
6. 100-YEAR FLOODPLAINS AS DESIGNATED BY CHAPTER 24 OF THE COUNTY CODE; AND

PER SITE TOPOGRAPHY, JAMES CITY COUNTY TAX MAP ATLAS, AND SITE PLAN FOR NEW TOWN, SECTION 3 & 6, ROADWAY INFRASTRUCTURE PLANS, PHASE VIII, PREPARED BY AES CONSULTING ENGINEERS, DATED 1/15/08 REFERENCING THE SITE, THE FOLLOWING COMPONENTS ARE PRESENT ONSITE:

7. SLOPES 25 PERCENT OR GREATER ARE FOUND ON THE SIDESLOPES OF THE EXISTING SOIL STOCKPILE. APPROXIMATE IMPACTED AREA 33,425 SF.

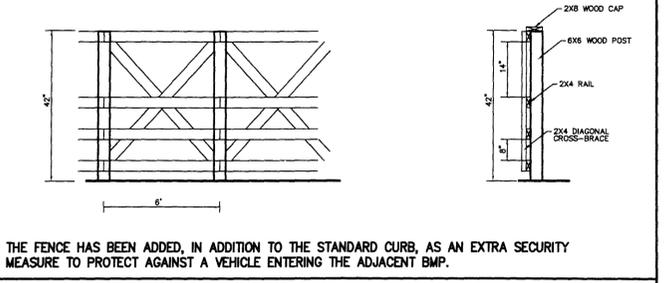
N/F  
NEW TOWN ASSOC., LLC  
PARCEL ID 3910100157  
INST #030005069  
ZONE: MU

BEFORE DIGGING CALL "MISS UTILITY"  
OF VIRGINIA AT 1 - 800 - 552 - 7001

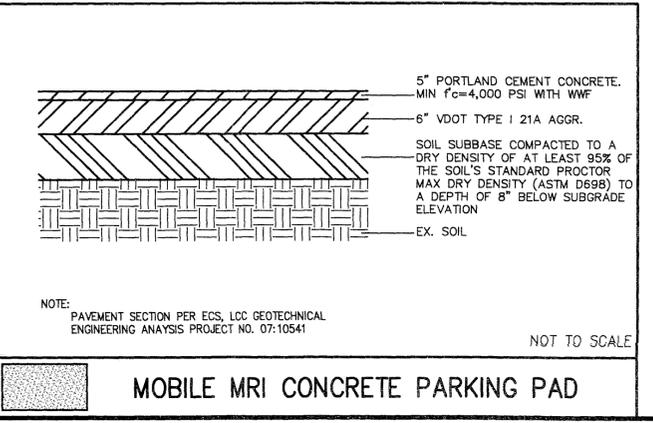
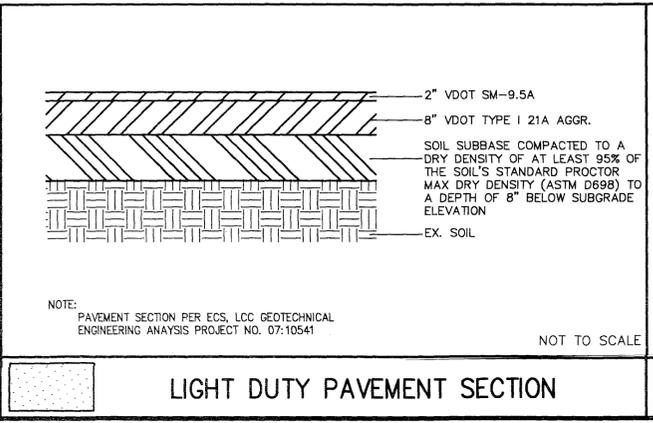
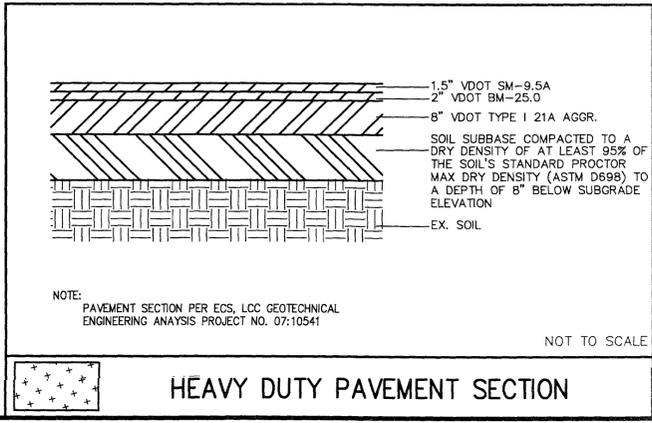
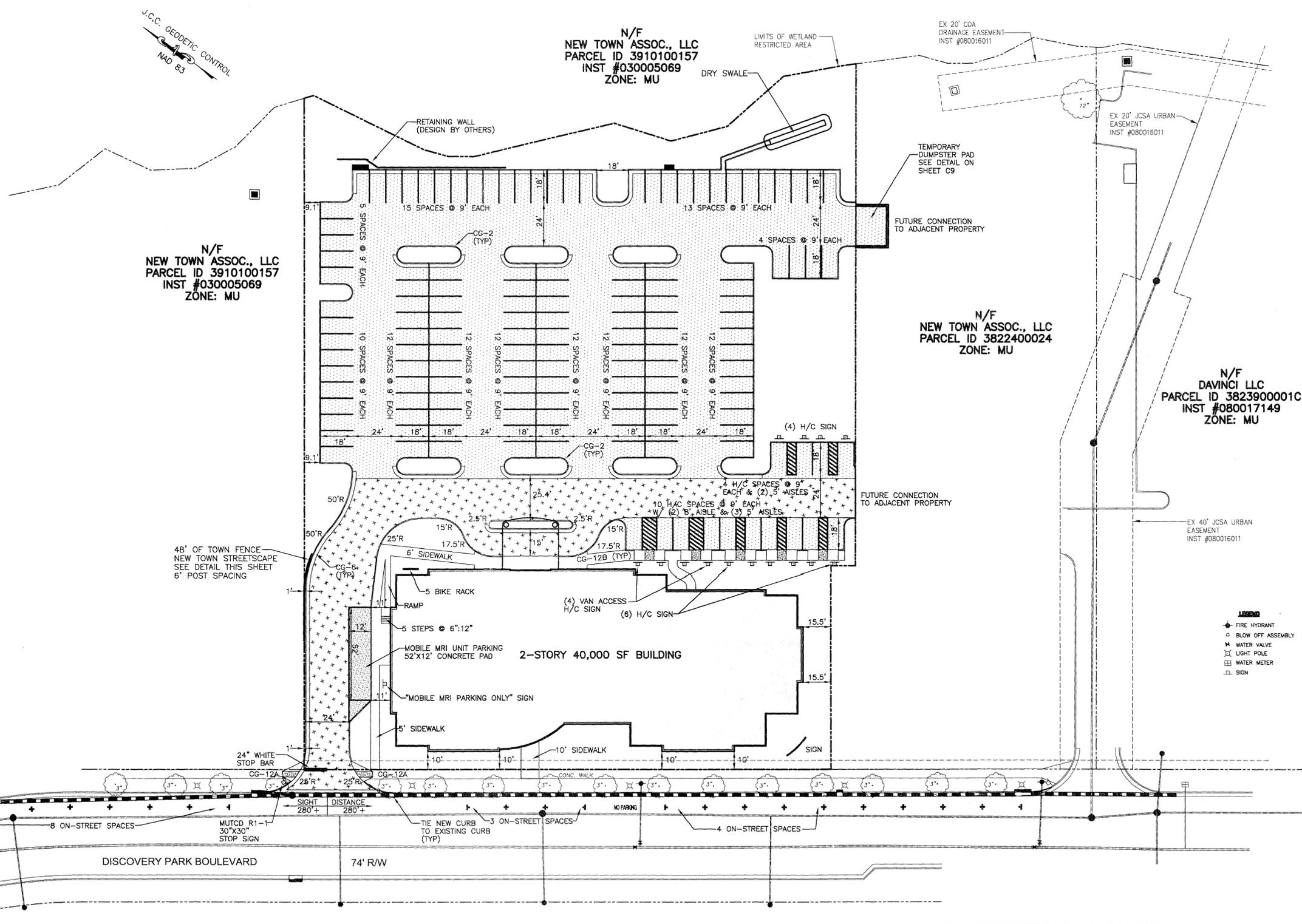
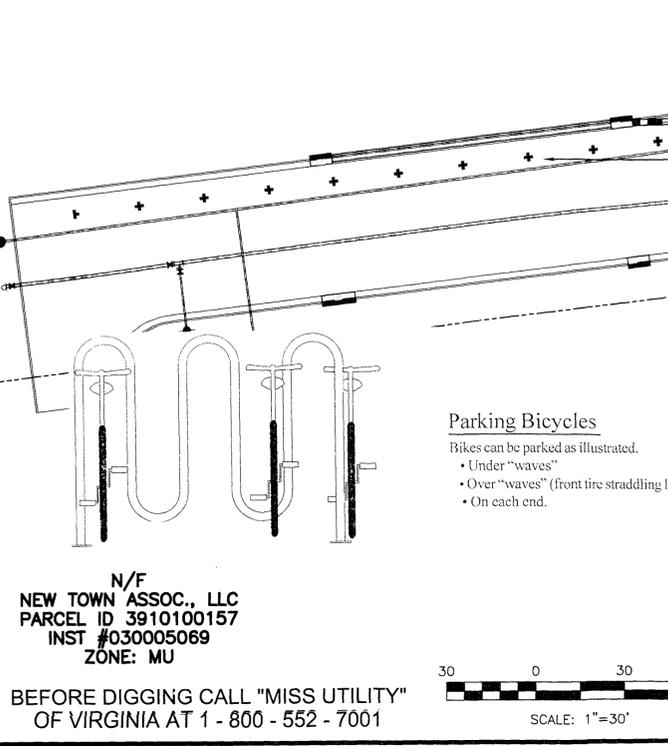
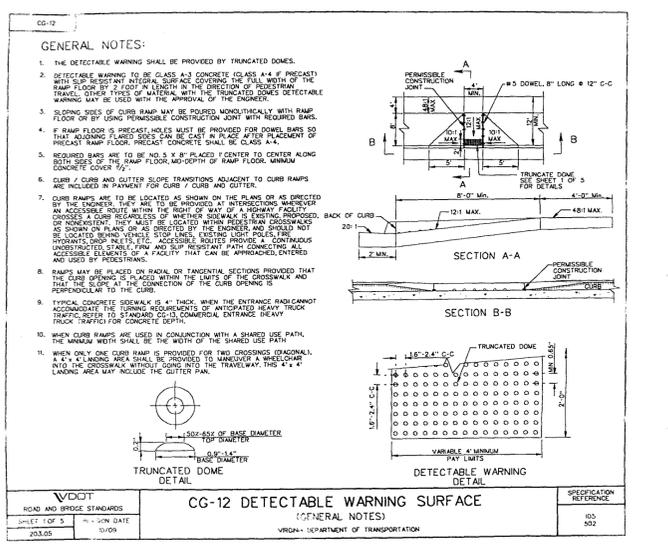


SCALE: 1" = 30'  
DATE: 12/14/09  
JOB: 09-197  
DRAWN BY: KMJ  
SHEET: C2 OF 11

- NOTES:
- 1) EXTERIOR SIGNS WITHIN THE DISTRICT SHALL COMPLY WITH THE REGULATIONS FOR EXTERIOR SIGNS IN ARTICLE II, DIVISION 3 OF THE JAMES CITY COUNTY ZONING ORDINANCE.
  - 2) ALL STRUCTURES WILL MEET THE REQUIREMENTS OF THE BUILDING CODE AND APPROVAL OF THE BUILDING OFFICIAL.
  - 3) ALL DIMENSIONS ARE TO EDGE OF PAVEMENT OR FACE OF CURB, UNLESS OTHERWISE NOTED.
  - 4) SEE ARCHITECTURAL PLANS FOR BUILDING DIMENSIONS.
  - 5) SIDEWALKS TO BE CONSTRUCTED PER HRPDC DETAIL CL\_09.
  - 6) ALL EDGE OF PAVEMENT RADII ARE 5' UNLESS OTHERWISE NOTED.
  - 7) THE BUILDING'S ACCESSIBLE ROUTE SHALL MEET THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT.
  - 8) PARKING SPACES SHALL BE MARKED WITH 4" WHITE LINES & HANDICAP SPACES SHALL BE MARKED WITH 4" BLUE LINES.
  - 9) HANDICAPPED PARKING SPACES SHALL BE PER ADA STRIPING REQUIREMENTS AND DELINEATED BY 4" BLUE LINES (BENNETT'S PAINT BLUE WAVE Q13-28T OR EQUAL).
  - 10) THE TEMPORARY DUMPSTER PAD WILL BE RELOCATED TO ANOTHER LOCATION WHEN PARCEL ID 3822400024 IS DEVELOPED. THE DUMPSTER PAD WILL BE SHARED BY PARCELS ID 3822400024 AND 3822400025.
  - 11) THE BIKE RACK SHALL BE 5 BIKE WAVE BIKE RACK (MODEL NO. B116-1005) BY HIGHLAND PRODUCTS GROUP LLC OR APPROVED EQUAL.
  - 12) CONTRACTOR TO REFERENCE ECS LLC REPORT OF SUBSURFACE EXPLORATION AND GEOTECHNICAL ENGINEERING ANALYSIS, DATED 1/20/10, PROJECT NO. 07:10541.



**TOWN FENCE NEW TOWN-STREETScape**



**SITE PLAN OF NEW TOWN, SECTION 6  
BLOCK 20, PARCEL C TPMG BUILDING  
5424 DISCOVERY PARK BOULEVARD  
LAYOUT PLAN**

Virginia  
James City County

NO.	REVISION / COMMENT / NOTE	DATE
2	REV PER JCC LTR DTD 1/27/10	1/27/10
1	REV PER JCC LTR DTD 1/5/10	1/5/10



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web: landtechresources.com

SCALE: 1" = 30'  
DATE: 12/14/09  
JOB: 09-197  
DRAWN BY: KJM  
SHEET: C3 OF 11

J.C.C. GEODETIC CONTROL  
NAD 83

N/F  
NEW TOWN ASSOC., LLC  
PARCEL ID 3910100157  
INST #030005069  
ZONE: MU

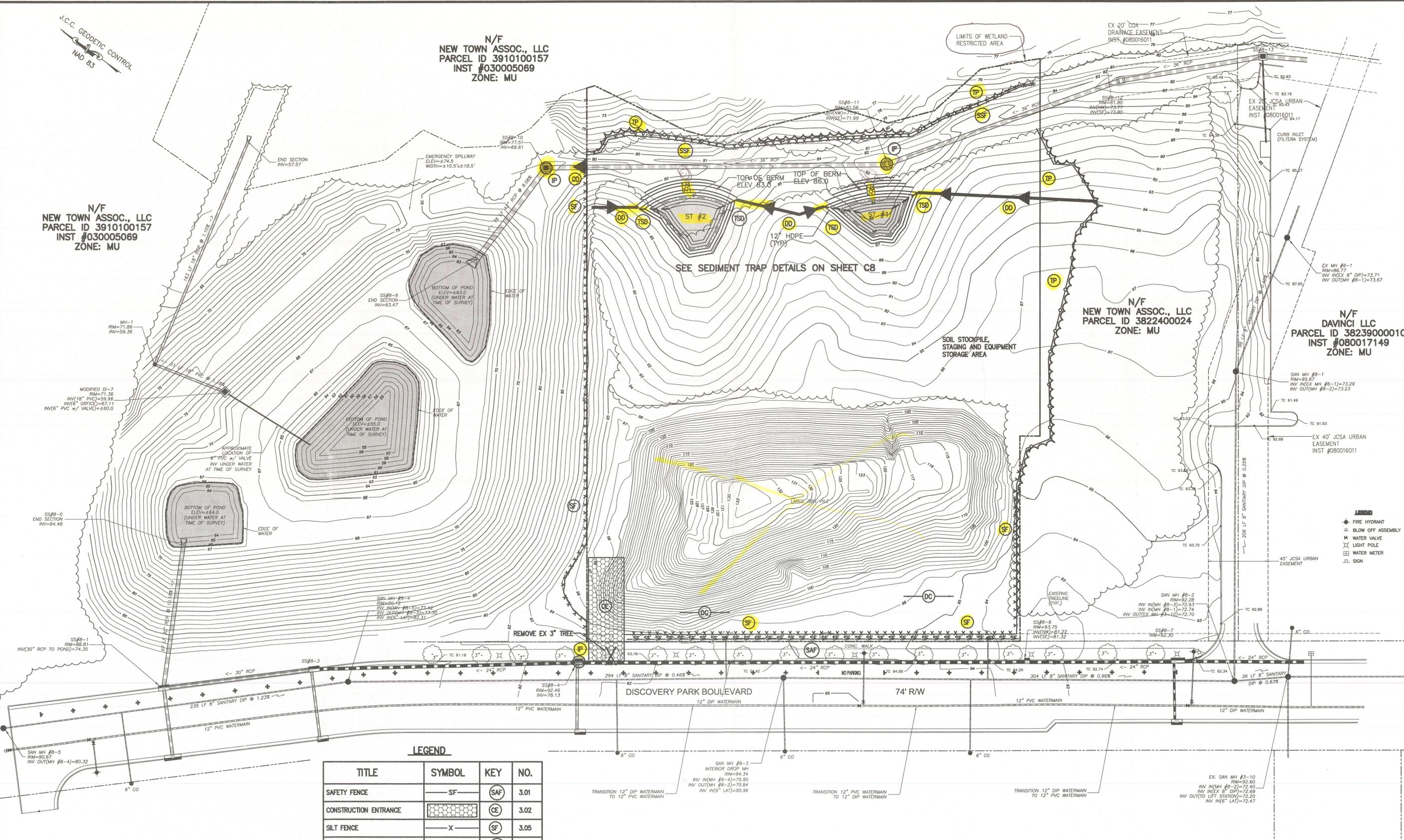
N/F  
NEW TOWN ASSOC., LLC  
PARCEL ID 3910100157  
INST #030005069  
ZONE: MU

N/F  
NEW TOWN ASSOC., LLC  
PARCEL ID 3822400024  
ZONE: MU

N/F  
DAVINCI LLC  
PARCEL ID 3823900001C  
INST #080017149  
ZONE: MU

N/F  
NEW TOWN ASSOC., LLC  
PARCEL ID 3910100157  
INST #030005069  
ZONE: MU

BEFORE DIGGING CALL "MISS UTILITY"  
OF VIRGINIA AT 1 - 800 - 552 - 7001

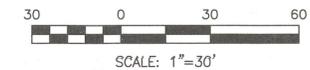


**LEGEND**

TITLE	SYMBOL	KEY	NO.
SAFETY FENCE	SF	SAF	3.01
CONSTRUCTION ENTRANCE	[Hatched Box]	CE	3.02
SILT FENCE	X	SF	3.05
SUPER SILT FENCE	X	SSF	3.05
INLET PROTECTION	[Circle with Diagonal Lines]	IP	3.07
DIVERSION DIKE	[Arrow]	DD	3.09
SEDIMENT TRAP	ST	ST	3.13
TEMPORARY SLOPE DRAIN	[Dashed Line]	TSD	3.15
CHECK DAM	[Triangle]	CD	3.20
TREE PRESERVATION AND PROTECTION	0	TP	3.38
DUST CONTROL	DC	DC	3.39

**MAINTENANCE**  
IN GENERAL, ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED DAILY AND AFTER SIGNIFICANT RAINFALL. THE FOLLOWING ITEMS WILL BE CHECKED IN PARTICULAR:

1. THE SILT FENCE WILL BE CHECKED REGULARLY FOR SEDIMENT CLEANOUT.
2. THE GRAVEL INLET PROTECTION WILL BE CHECKED REGULARLY FOR A SEDIMENT BUILDUP WHICH WILL PREVENT DRAINAGE. IF THE GRAVEL IS CLOGGED BY SEDIMENT, IT SHALL BE REMOVED AND CLEANED OR REPLACED.



**SITE PLAN OF NEW TOWN, SECTION 6  
BLOCK 20, PARCEL C TPMG BUILDING**  
5424 DISCOVERY PARK BOULEVARD  
PHASE I EROSION & SEDIMENT CONTROL PLAN

NO.	DATE	REVISION / COMMENT / NOTE
1	1/7/10	REV. PER JCC LTR DTD 1/5/10



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Phone: (757) 565-7677 Fax: (757) 565-0792  
web: landtechresources.com

SCALE: 1" = 30'  
DATE: 12/14/09  
JOB: 09-197  
DRAWN BY: KMJ  
SHEET: C4 OF 11

Virginia  
James City County

J.C.C. GEODETIC CONTROL  
NAD 83

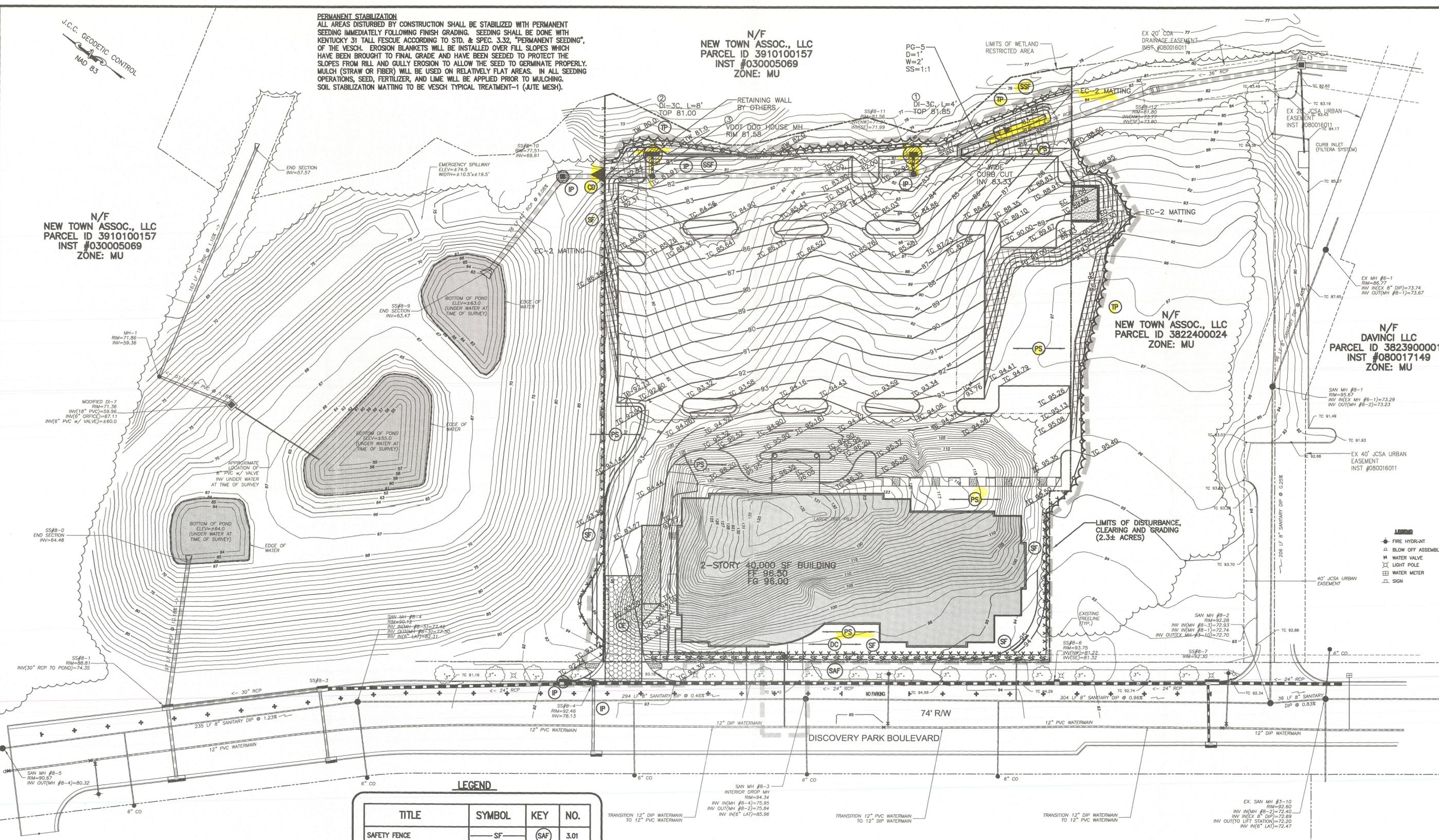
**PERMANENT STABILIZATION**  
ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE STABILIZED WITH PERMANENT SEEDING IMMEDIATELY FOLLOWING FINISH GRADING. SEEDING SHALL BE DONE WITH KENTUCKY 31 TALL FESCUE ACCORDING TO STD. & SPEC. 3.32, "PERMANENT SEEDING", OF THE VESCH. EROSION BLANKETS WILL BE INSTALLED OVER FILL SLOPES WHICH HAVE BEEN BROUGHT TO FINAL GRADE AND HAVE BEEN SEED TO PROTECT THE SLOPES FROM RILL AND GULLY EROSION TO ALLOW THE SEED TO GERMINATE PROPERLY. MULCH (STRAW OR FIBER) WILL BE USED ON RELATIVELY FLAT AREAS. IN ALL SEEDING OPERATIONS, SEED, FERTILIZER, AND LIME WILL BE APPLIED PRIOR TO MULCHING. SOIL STABILIZATION MATTING TO BE VESCH TYPICAL TREATMENT-1 (JUTE MESH).

N/F  
NEW TOWN ASSOC., LLC  
PARCEL ID 3910100157  
INST #030005069  
ZONE: MU

N/F  
NEW TOWN ASSOC., LLC  
PARCEL ID 3910100157  
INST #030005069  
ZONE: MU

N/F  
NEW TOWN ASSOC., LLC  
PARCEL ID 3822400024  
ZONE: MU

N/F  
DAVINCI LLC  
PARCEL ID 382390001C  
INST #080017149  
ZONE: MU



TITLE	SYMBOL	KEY	NO.
SAFETY FENCE	SF	(SAF)	3.01
CONSTRUCTION ENTRANCE	CE	(CE)	3.02
SILT FENCE	X	(SF)	3.05
SUPER SILT FENCE	X	(SSF)	3.05
INLET PROTECTION	IP	(IP)	3.07
CHECK DAM	CD	(CD)	3.20
PERMANENT SEEDING	PS	(PS)	3.32
TREE PRESERVATION AND PROTECTION	TP	(TP)	3.38
DUST CONTROL	DC	(DC)	3.39

**PROPOSED SEQUENCE OF CONSTRUCTION**

- SCHEDULE PRECONSTRUCTION CONFERENCE WITH JCC ENVIRONMENTAL DIVISION.
- INSTALL SAFETY FENCE, SILT FENCE, SUPER SILT FENCE, CONSTRUCTION ENTRANCE, DIVERSION DIKES, TREE PROTECTION, SEDIMENT TRAPS, DUST CONTROL, CHECK DAM AND INLET PROTECTION AS DEPICTED ON SHEET C4 PRIOR TO CLEARING AND GRADING.
- CLEAR DESIGNATED AREA.
- INSTALL STORM SEWER SYSTEM AND INLET PROTECTION.
- ROUGH GRADE BUILDING PAD AND PARKING LOT. APPLY TOPSOIL AND FINAL STABILIZATION TO ALL DISTURBED AREAS EXCLUDING BUILDING PAD AND PARKING LOT.
- REMOVE SEDIMENT TRAPS AND DIVERSION DIKES AFTER PROPOSED STORM SEWER SYSTEM IS OPERATIONAL.
- INSTALL STONE BASE TO DRIVE AISLES AND PARKING SPACES IMMEDIATELY AFTER STEP #6.
- INSTALL SANITARY SEWER SERVICE.
- INSTALL WATER SERVICE.
- CONSTRUCT BUILDING.
- INSTALL CURBING.
- INSTALL ASPHALT TO ENTRANCES, DRIVE AISLES AND PARKING SPACES.
- CONSTRUCT DRY SWALE.
- REMOVE ALL TEMPORARY E & S MEASURES ONCE ALL DISTURBED AREAS ASSOCIATED WITH THE PROJECT ARE STABILIZED AND AFTER RECEIVING APPROVAL TO DO SO BY THE JAMES CITY COUNTY ENVIRONMENTAL DIVISION.

**MAINTENANCE**

IN GENERAL, ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED DAILY AND AFTER SIGNIFICANT RAINFALL. THE FOLLOWING ITEMS WILL BE CHECKED IN PARTICULAR:

- THE SILT FENCE WILL BE CHECKED REGULARLY FOR SEDIMENT CLEANOUT.
- THE GRAVEL INLET PROTECTION WILL BE CHECKED REGULARLY FOR A SEDIMENT BUILDUP WHICH WILL PREVENT DRAINAGE. IF THE GRAVEL IS CLOGGED BY SEDIMENT, IT SHALL BE REMOVED AND CLEANED OR REPLACED.
- THE SEEDED AREAS WILL BE CHECKED REGULARLY TO ENSURE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RESEED AS NEEDED.



N/F  
NEW TOWN ASSOC., LLC  
PARCEL ID 3910100157  
INST #030005069  
ZONE: MU

BEFORE DIGGING CALL "MISS UTILITY"  
OF VIRGINIA AT 1 - 800 - 552 - 7001

**SITE PLAN OF NEW TOWN, SECTION 6  
BLOCK 20, PARCEL C TPMG BUILDING  
5424 DISCOVERY PARK BOULEVARD  
GRADING PLAN/PHASE II EROSION & SEDIMENT CONTROL PLAN**

NO.	DATE	REVISION / COMMENT / NOTE
1	1/7/10	REV PER JCC LTR DTD 1/5/10



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web: landtechresources.com

SCALE: 1" = 30'  
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JOB: 09-197  
DRAWN BY: KMJ  
SHEET: C5 OF 11

Virginia  
James City County



J.C.C. GEODETIC CONTROL  
NAD 83

N/F  
NEW TOWN ASSOC., LLC  
PARCEL ID 3910100157  
INST #030005069  
ZONE: MU

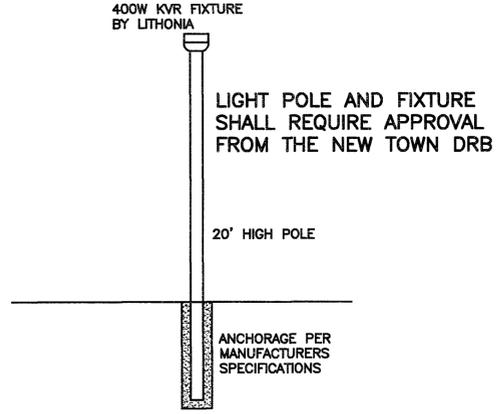
EX 20' COA  
DRAINAGE EASEMENT  
INST #080016011

N/F  
NEW TOWN ASSOC., LLC  
PARCEL ID 3822400024  
ZONE: MU

N/F  
DAVINCI LLC  
PARCEL ID 382390001C  
INST #080017149  
ZONE: MU

N/F  
NEW TOWN ASSOC., LLC  
PARCEL ID 3910100157  
INST #030005069  
ZONE: MU

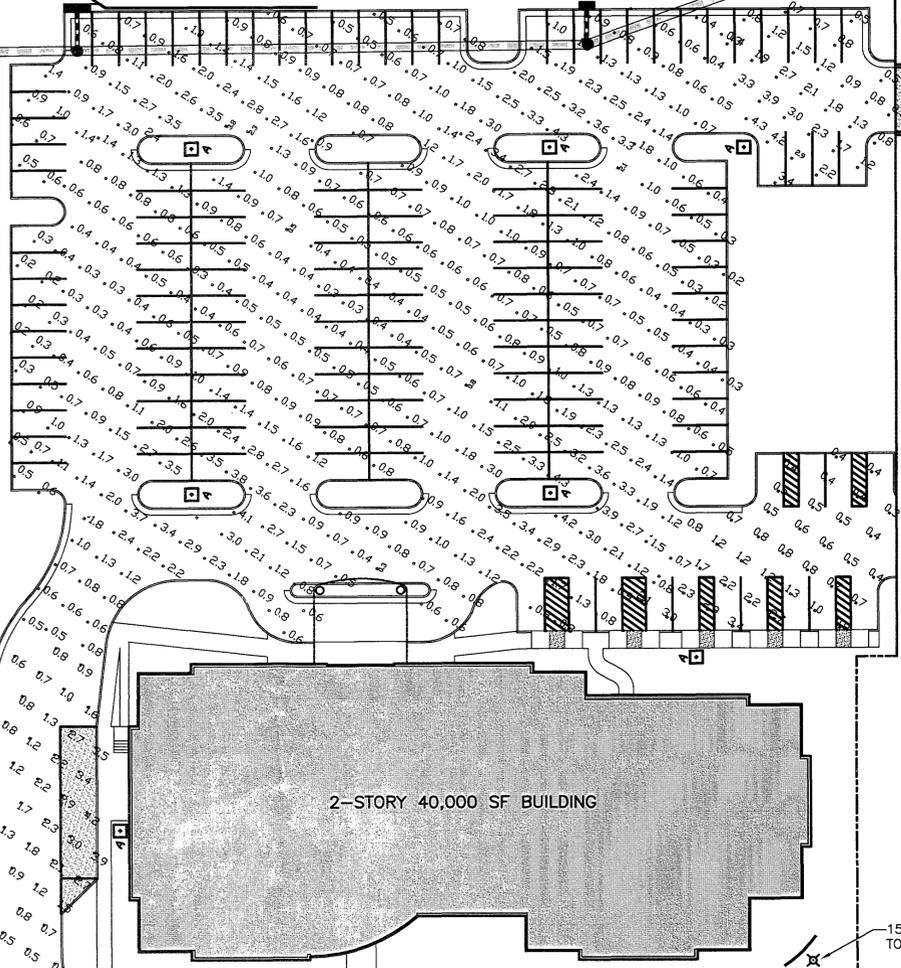
N/F  
NEW TOWN ASSOC., LLC  
PARCEL ID 3910100157  
INST #030005069  
ZONE: MU



OTHER EQUIVALENT LIGHT POLES & FIXTURES MAY BE USED AS LONG AS THE REQUIREMENTS OF SECTION 24-57 OF THE JAMES CITY COUNTY ZONING ORDINANCE ARE MET AND ARE APPROVED BY THE NEW TOWN DRB.

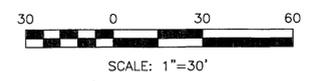
**LIGHTING POLE DETAIL**

FIXTURES SHALL BE FULL CUT-OFF.  
PARKING LOT LUMINARIES SHALL BE MOUNTED ON LIGHT POLES HORIZONTALLY AND SHALL BE RECESSED FIXTURES WITH NO BULBS, LENS, OR GLOBE EXTENDING BELOW THE CASING.  
ALL EXTERNAL LIGHTING SHALL HAVE RECESSED FIXTURES WITH NO BULB, LENS, OR GLOBE EXTENDING BELOW THE CASING, AND SHALL BE DIRECTED DOWNWARD SO AS NOT TO PRODUCE GLARE ON ADJACENT PROPERTY.



- FIRE HYDRANT
- BLOW OFF ASSEMBLY
- ⊕ WATER VALVE
- ⊗ LIGHT POLE
- ⊞ WATER METER
- ⊠ SIGN

DISCOVERY PARK BOULEVARD 74' R/W



BEFORE DIGGING CALL "MISS UTILITY" OF VIRGINIA AT 1 - 800 - 552 - 7001

SITE PLAN OF NEW TOWN, SECTION 6  
 BLOCK 20, PARCEL C TPMG BUILDING  
 5424 DISCOVERY PARK BOULEVARD  
 LIGHTING PLAN

NO.	DATE	REVISION / COMMENT / NOTE
1	1/7/10	REV PER JCC LTR DTD 1/5/10



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SCALE: 1" = 30'  
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 JOB: 09-197  
 DRAWN BY: KMJ  
 SHEET: C7 OF 11

Virginia  
 James City County

**GENERAL EROSION AND SEDIMENT CONTROL NOTES**

JAMES CITY COUNTY ENVIRONMENTAL DIVISION

REVISED 7/8/01

THE PURPOSE OF THE EROSION CONTROL MEASURES SHOWN ON THESE PLANS SHALL BE TO PRECLUDE THE TRANSPORT OF ALL WATERBORNE SEDIMENTS RESULTING FROM CONSTRUCTION ACTIVITIES FROM ENTERING ONTO ADJACENT PROPERTIES OR STATE WATERS. IF FIELD INSPECTION REVEALS THE INADEQUACY OF THE PLAN TO CONFINE SEDIMENTS TO THE PROJECT SITE ALL APPROPRIATE MODIFICATIONS WILL BE MADE TO CORRECT ANY PLAN DEFICIENCIES. IN ADDITION TO THESE NOTES, ALL PROVISIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS WILL APPLY TO THIS PROJECT.

1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, 3RD EDITION, 1992. THE CONTRACTOR SHALL BE THOROUGHLY FAMILIAR WITH ALL APPLICABLE MEASURES CONTAINED THEREIN THAT MAY BE PERTINENT TO THIS PROJECT, INCLUDING MINIMUM STANDARDS 1 THROUGH 19. IF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS FOUND TO BE INADEQUATE IN THE FIELD, THE MINIMUM STANDARDS WILL APPLY IN ADDITION TO THE PROVISIONS OF THE APPROVED PLAN.

2. AS A PREREQUISITE TO APPROVAL OF AN EROSION AND SEDIMENT CONTROL PLAN FOR LAND ACTIVITIES, THE NAME OF A RESPONSIBLE LAND-DISTURBER SHALL BE PROVIDED. THE RESPONSIBLE LAND-DISTURBER SHALL BE AN INDIVIDUAL WHO HOLDS A VALID CERTIFICATE OF COMPETENCE ISSUED BY THE VIRGINIA DEPARTMENT OF CONSERVATION AND IS DEFINED AS THE PERSON IN CHARGE OF AND RESPONSIBLE FOR CARRYING OUT THE LAND-DISTURBING ACTIVITY. PERMITS OR PLANS WITHOUT THIS INFORMATION ARE DEEMED INCOMPLETE AND WILL NOT BE APPROVED UNTIL PROPER NOTIFICATION IS RECEIVED. ALSO, IF THE PERSON DESIGNATED AS RESPONSIBLE LAND-DISTURBER CHANGES BETWEEN THE TIME OF PLAN APPROVAL AND THE SCHEDULED PRECONSTRUCTION MEETING, THE ENVIRONMENTAL DIVISION SHALL BE INFORMED OF THE CHANGE, IN WRITING, 24 HOURS IN ADVANCE OF THE RECONSTRUCTION MEETING.

3. A PRECONSTRUCTION MEETING SHALL BE HELD ON-SITE BETWEEN THE COUNTY, THE DEVELOPER, THE PROJECT ENGINEER, THE RESPONSIBLE LAND-DISTURBER AND THE CONTRACTOR PRIOR TO ISSUANCE OF THE LAND DISTURBING PERMIT. THE CONTRACTOR SHALL SUBMIT A SEQUENCE OF CONSTRUCTION TO THE COUNTY FOR APPROVAL PRIOR TO THE PRECONSTRUCTION MEETING. THE DESIGNATED RESPONSIBLE LAND-DISTURBER IS REQUIRED TO ATTEND THE RECONSTRUCTION MEETING FOR THE PROJECT.

4. ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS SHALL BE PROTECTED BY A TEMPORARY CONSTRUCTION ENTRANCE TO PREVENT TRACKING OF MUD ONTO PUBLIC RIGHT-OF-WAY. AN ENTRANCE PERMIT FROM VDOT IS REQUIRED PRIOR TO ANY CONSTRUCTION ACTIVITIES WITHIN STATE RIGHT-OF-WAYS. WHERE SEDIMENT IS TRANSPORTED ONTO A PUBLIC ROAD SURFACE, THE ROAD SHALL BE THOROUGHLY CLEANED AT THE END OF EACH DAY (STD. & SPEC. 3.02).

5. SEDIMENT BASINS AND TRAPS (STD. & SPEC. 3.13 AND 3.14), PERIMETER DIKES (STD. & SPEC. 3.09 AND 3.12), SEDIMENT FILTER BARRIERS (STD. & SPEC. 3.05) AND OTHER MEASURES INTENDED TO TRAP SEDIMENT ON-SITE MUST BE CONSTRUCTED AS A FIRST STEP IN GRADING AND MUST BE MADE FUNCTIONAL PRIOR TO ANY UPSLOPE LAND DISTURBANCE TAKING PLACE. EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS MUST BE SEDED AND MULCHED IMMEDIATELY AFTER INSTALLATION. PERIODIC INSPECTIONS OF THE EROSION CONTROL MEASURES BY THE OWNER OR OWNER'S REPRESENTATIVE SHALL BE MADE TO ASSESS THEIR CONDITIONS. ANY NECESSARY MAINTENANCE OF THE MEASURES SHALL BE ACCOMPLISHED IMMEDIATELY AND SHALL INCLUDE THE REPAIR OF MEASURES DAMAGED BY ANY SUBCONTRACTOR INCLUDING THOSE OF THE PUBLIC UTILITY COMPANIES.

6. SURFACE FLOWS OVER CUT AND FILL SLOPES SHALL BE CONTROLLED BY EITHER REDIRECTING FLOWS FROM TRANSVERSING THE SLOPES OF BY INSTALLING MECHANICAL DEVICES TO SAFELY LOWER WATER DOWNSLOPE WITHOUT CAUSING EROSION. A TEMPORARY FILL DIVERSION (STD. & SPEC. 3.10) AND SLOPE DRAIN (STD. & SPEC. 3.15) SHALL BE INSTALLED PRIOR TO THE END OF EACH WORKING DAY.

7. SEDIMENT CONTROL MEASURES MAY REQUIRE MINOR FIELD ADJUSTMENTS AT TIME OF CONSTRUCTION TO ENSURE THEIR INTENDED PURPOSE IS ACCOMPLISHED. ENVIRONMENTAL DIVISION APPROVAL WILL BE REQUIRED FOR OTHER DEVIATIONS FROM THE APPROVED PLAN.

8. THE CONTRACTOR SHALL PLACE SOIL STOCKPILES AT THE LOCATIONS SHOWN ON THE PLAN. SOIL STOCKPILES SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. OFF-SITE WASTE OR BORROW AREAS SHALL BE APPROVED BY THE ENVIRONMENTAL DIVISION PRIOR TO THE IMPORT OF ANY BORROW OR EXPORT OF ANY WASTE TO OR FROM THE PROJECT SITE.

9. THE CONTRACTOR SHALL COMPLETE DRAINAGE FACILITIES WITHIN 30 DAYS FOLLOWING COMPLETION OF ROUGH GRADING AT ANY POINT WITHIN THE PROJECT. THE INSTALLATION OF DRAINAGE FACILITIES SHALL TAKE PRECEDENCE OVER ALL UNDERGROUND UTILITIES. OUTFALL DITCHES FROM DRAINAGE STRUCTURES SHALL BE STABILIZED IMMEDIATELY AFTER CONSTRUCTION OF THE SAME (STD. & SPEC. 3.18). THIS INCLUDES INSTALLATION OF EROSION CONTROL STONE OR PAVED DITCHES WHERE REQUIRED. ANY DRAINAGE OUTFALLS REQUIRED FOR A STREET MUST BE COMPLETED BEFORE STREET GRADING OR UTILITY INSTALLATION BEGINS.

10. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.

11. NO MORE THAN 300 FEET OF SANITARY SEWER, STORM DRAIN, WATER OR UNDERGROUND UTILITY LINES ARE TO BE OPEN AT ONE TIME. FOLLOWING INSTALLATION OF ANY PORTION OF THESE ITEMS, ALL DISTURBED AREAS ARE TO BE IMMEDIATELY STABILIZED (I.E., THE SAME DAY).

12. IF DISTURBED AREA STABILIZATION IS TO BE ACCOMPLISHED DURING THE MONTHS OF DECEMBER, JANUARY OR FEBRUARY, STABILIZATION SHALL CONSIST OF MULCHING (STD. & SPEC. 3.35). SEEDING WILL THEN TAKE PLACE AS SOON AS THE SEASON PERMITS.

13. THE TERM SEEDING, FINAL VEGETATIVE COVER OR STABILIZATION ON THIS PLAN SHALL MEAN THE SUCCESSFUL GERMINATION AND ESTABLISHMENT OF A STABLE GRASS COVER FROM A PROPERLY PREPARED SEEDBED CONTAINING THE SPECIFIED AMOUNTS OF SEED, LIME AND FERTILIZER (STD. & SPEC. 3.32). IRRIGATION SHALL BE REQUIRED AS NECESSARY TO ENSURE ESTABLISHMENT OF GRASS COVER.

14. ALL SLOPES STEEPER THAN 3H:1V SHALL REQUIRE THE USE OF EROSION CONTROL BLANKETS AND MATTINGS TO AID IN THE ESTABLISHMENT OF A VEGETATIVE COVER. INSTALLATION SHALL BE IN ACCORDANCE WITH STD. & SPEC. 3.35, MULCHING; STD. & SPEC. 3.36, SOIL STABILIZATION BLANKETS; AND MATTING AND MANUFACTURERS INSTRUCTIONS. NO SLOPES SHALL BE CREATED STEEPER THAN 2H:1V.

15. INLET PROTECTION (STD. & SPEC. 3.07 AND 3.08) SHALL BE PROVIDED FOR ALL STORM DRAIN AND CULVERT INLETS FOLLOWING CONSTRUCTION OF THE SAME.

16. TEMPORARY LINERS, SUCH AS POLYETHYLENE SHEETS, SHALL BE PROVIDED FOR ALL PAVED DITCHES UNTIL THE PERMANENT CONCRETE LINER IS INSTALLED.

17. PAVED DITCHES SHALL BE REQUIRED WHEREVER ACCELERATED EROSION IS EVIDENT. PARTICULAR ATTENTION SHALL BE PAID TO THOSE AREAS WHERE GRADES EXCEED 3 PERCENT.

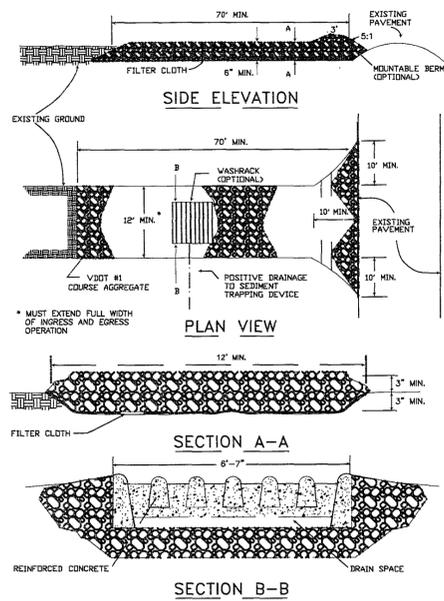
18. TEMPORARY EROSION CONTROL MEASURES SUCH AS SILT FENCE ARE NOT TO BE REMOVED UNTIL ALL DISTURBED AREAS ARE STABILIZED. TRAPPED SEDIMENT SHALL BE SPREAD, SEDED, AND MULCHED. AFTER THE PROJECT AND STABILIZATION ARE COMPLETE, ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS.

19. NO SEDIMENT TRAP OR SEDIMENT BASIN SHALL BE REMOVED UNTIL A) AT LEAST 75 PERCENT OF THE LOTS WITHIN THE DRAINAGE AREA TO THE TRAP OR BASIN HAVE BEEN SOLD TO A THIRD PARTY (UNRELATED TO THE DEVELOPER) FOR THE CONSTRUCTION OF HOMES AND/OR B) 80 PERCENT OF THE SINGLE FAMILY LOTS WITHIN THE DRAINAGE AREA TO THE TRAP OR BASIN HAVE BEEN COMPLETED AND THE SOIL 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 THE EXPRESS AUTHORIZATION OF THE JAMES CITY ENVIRONMENTAL DIVISION.

20. RECORD DRAWINGS (AS-BUILTS) AND CONSTRUCTION CERTIFICATIONS ARE BOTH REQUIRED FOR NEWLY CONSTRUCTED OR MODIFIED STORMWATER MANAGEMENT/BMP FACILITIES. CERTIFICATION ACTIVITIES SHALL BE ADEQUATELY COORDINATED AND PERFORMED BEFORE, DURING AND FOLLOWING CONSTRUCTION IN ACCORDANCE WITH THE CURRENT VERSION OF THE JAMES CITY COUNTY ENVIRONMENTAL DIVISION, STORMWATER MANAGEMENT/BMP FACILITIES, RECORD DRAWINGS AND CONSTRUCTION CERTIFICATION, STANDARD FORMS & INSTRUCTIONS.

21. DESIGN AND CONSTRUCTION OF PRIVATE-TYPE SITE DRAINAGE SYSTEMS OUTSIDE VDOT RIGHTS-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.

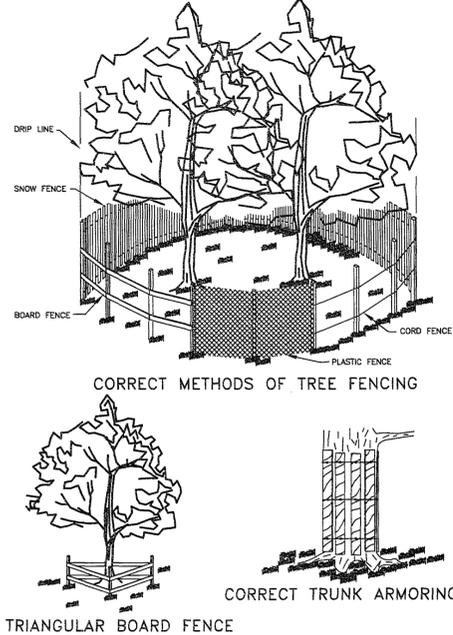
**STONE CONSTRUCTION ENTRANCE**



SOURCE: ADAPTED FROM 1983 Maryland Standards for Soil Erosion and Sediment Control, and Va. DSWC

PLATE 3.02-1

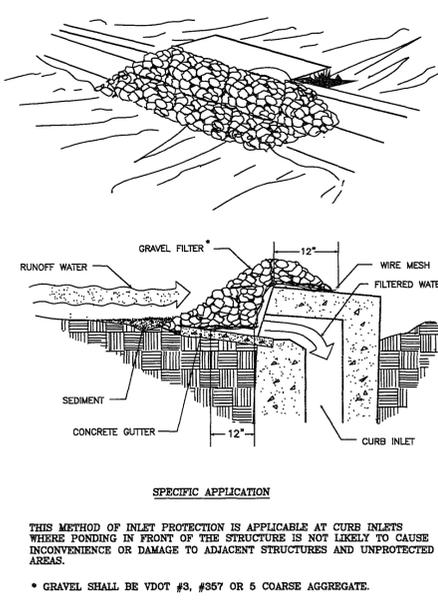
**FENCING AND ARMORING**



SOURCE: VA. DSWC

PLATE 3.58-2

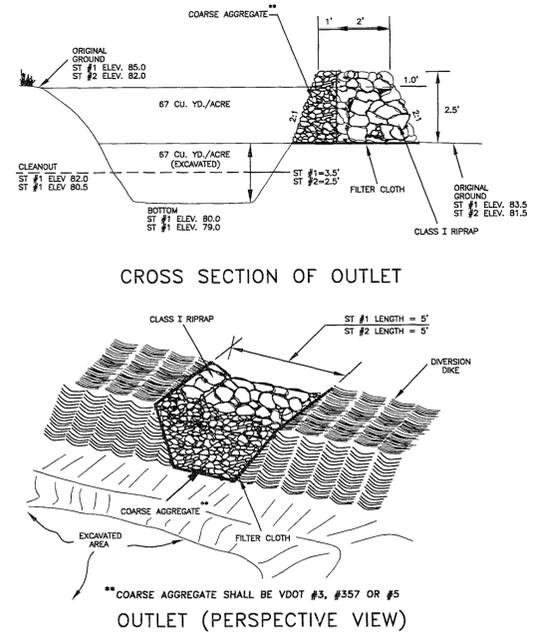
**GRAVEL CURB INLET SEDIMENT FILTER**



SOURCE: VA. DSWC

PLATE 3.07-6

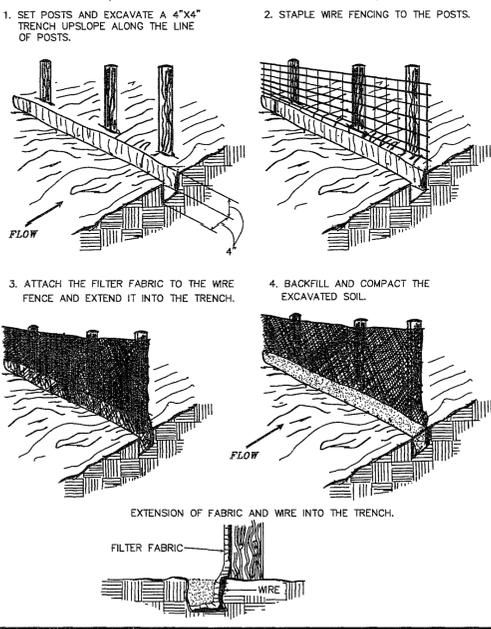
**TEMPORARY SEDIMENT TRAP**



SOURCE: VA. DSWC

PLATE 3.13-2

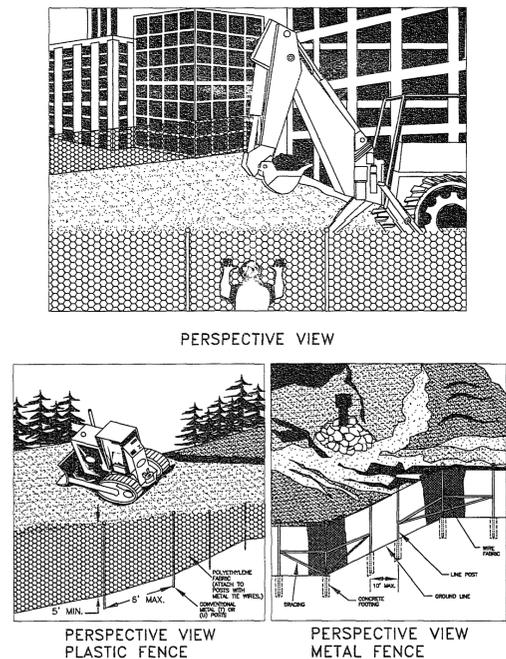
**CONSTRUCTION OF A SILT FENCE (WITH WIRE SUPPORT)**



SOURCE: Adapted from Installation of Straw and Fabric Filter Barriers for Sediment Control, Sherrod & Trant

PLATE 3.05-1

**SAFETY FENCE**



SOURCE: CONVED PLASTICS VDOT ROAD AND BRIDGE STANDARDS VA. DSWC

PLATE 3.1-1 SOURCE: VA. DSWC

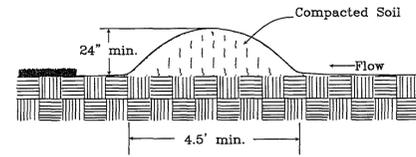
**TABLE 3.32-D SITE SPECIFIC SEEDING MIXTURES FOR COASTAL PLAIN AREA**

	TOTAL LBS. PER ACRE
MINIMUM CARE LAWN - KENTUCKY 31 OR TURF-TYPE TALL FESCUE OR - COMMON BERMUDAGRASS **	125-200 LBS. 75 LBS.
HIGH-MAINTENANCE LAWN - KENTUCKY 31 OR TURF-TYPE TALL FESCUE OR - HYBRID BERMUDAGRASS (SEED) **	40 LBS. (UNHULLED) 30 LBS. (HALLED)
GENERAL SLOPE (3:1 OR LESS) - KENTUCKY 31 FESCUE - RED TOP GRASS - SEASONAL NURSE CROP *	128 LBS. 2 LBS. 20 LBS. 150 LBS.
LOW MAINTENANCE SLOPE (STEEPER THAN 3:1) - KENTUCKY 31 TALL FESCUE - COMMON BERMUDAGRASS ** - RED TOP GRASS - SEASONAL NURSE CROP * - SERICEA LESPEDEZA **	93-108 LBS. 0-15 LBS. 2 LBS. 20 LBS. 20 LBS. 150 LBS.

\* USE SEASONAL NURSE CROP IN ACCORDANCE WITH SEEDING DATES AS STATED BELOW:  
FEBRUARY, MARCH THROUGH APRIL ..... ANNUAL RYE  
MAY 1ST THROUGH AUGUST ..... FOXTAIL MILLET  
SEPTEMBER, OCTOBER THROUGH NOVEMBER 15TH ..... ANNUAL RYE  
NOVEMBER 16TH THROUGH JANUARY ..... WINTER RYE

\*\* MAY THROUGH OCTOBER, USE HULLED SEED. ALL OTHER SEEDING PERIODS, USE UNHULLED SEED. WEEPING LOVEGRASS MAY BE ADDED TO ANY SLOPE OR LOW-MAINTENANCE MIX DURING WARM SEEDING PERIODS; ADD 10-20 LBS./ACRE IN MIXES.

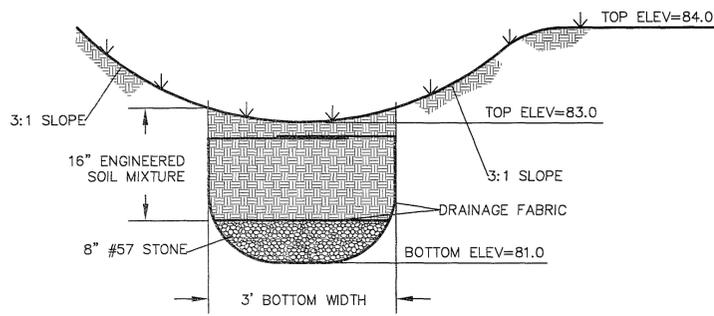
**TEMPORARY DIVERSION DIKE**



SOURCE: VA. DSWC

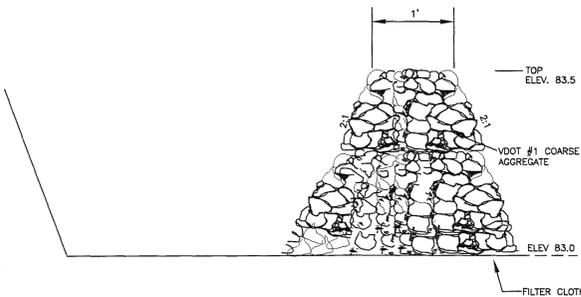
PLATE 3.07-2

THE ENGINEERED SOIL MIX SHALL CONTAIN A PLANTING SOIL MIXTURE 50% SAND, 30% LEAF COMPOST (FULLY COMPOSTED, NOT PARTIALLY ROTTED LEAVES), AND 20% TOPSOIL. TOPSOIL SHALL BE SANDY LOAM OR LOAMY SAND OF UNIFORM COMPOSITION, CONTAINING NO MORE THAN 5% CLAY, FREE OF STONES, STUMPS, ROOTS OR SIMILAR OBJECTS GREATER THAN ONE INCH, BRUSH, OR ANY OTHER MATERIAL OR SUBSTANCE WHICH MAY BE HARMFUL TO PLANT GROWTH, OR A HINDRANCE TO PLANT GROWTH OR MAINTENANCE.



DRY SWALE CROSS SECTION

**DRY SWALE CHECK DAM**



CROSS SECTION OF OUTLET

**SITE PLAN OF NEW TOWN, SECTION 6**  
**BLOCK 20, PARCEL C TPMG BUILDING**  
**5424 DISCOVERY PARK BOULEVARD**  
**DETAIL SHEET**

Virginia

James City County

NO.	DATE	REVISION / COMMENT / NOTE
1	1/7/10	REV PER JCC LTR DTD 1/5/10



**LandTech Resources, Inc.**  
 Surveying • Engineering • GPS  
 205 Bullfants Blvd., Ste E, Williamsburg, VA 23188  
 Phone: (757) 565-4637 Fax: (757) 565-0782  
 web: landtechresources.com

SCALE: 1" = 20'  
 DATE: 12/14/09  
 JOB: 09-197  
 DRAWN BY: KJM  
 SHEET: 08 OF 11

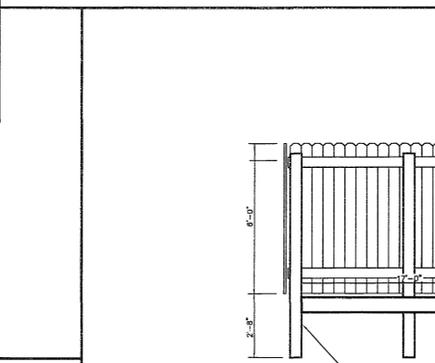
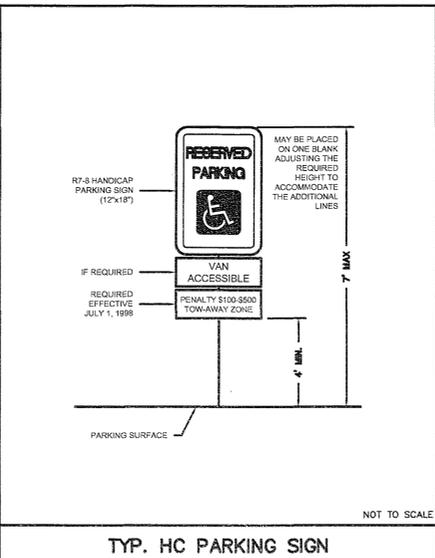
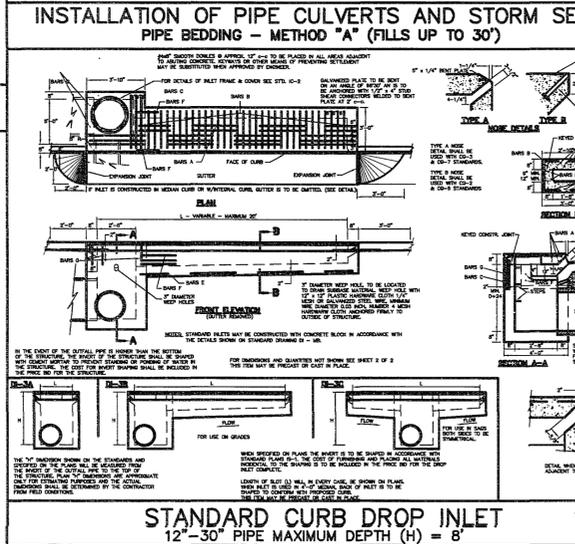
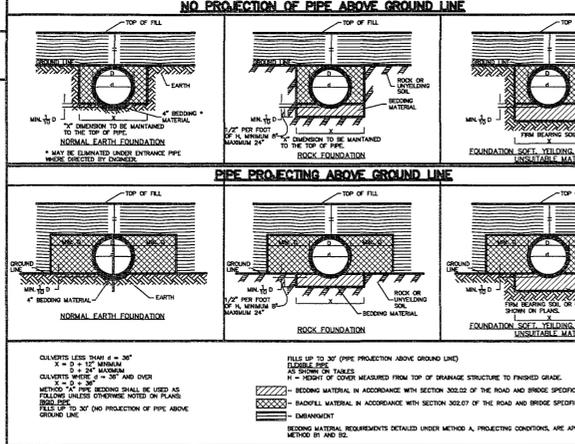
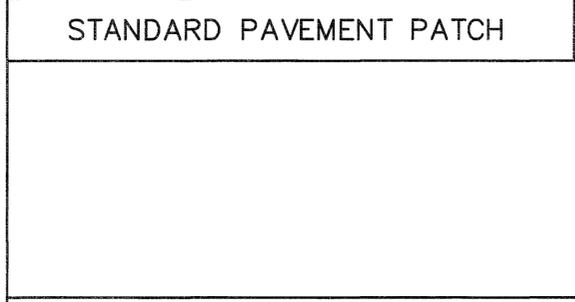
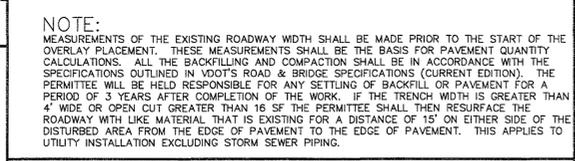
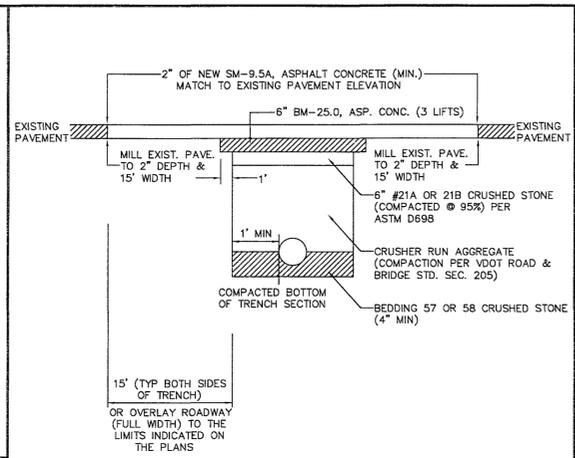
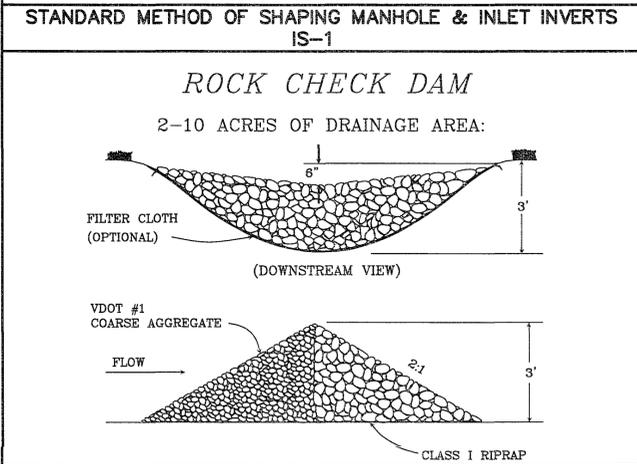
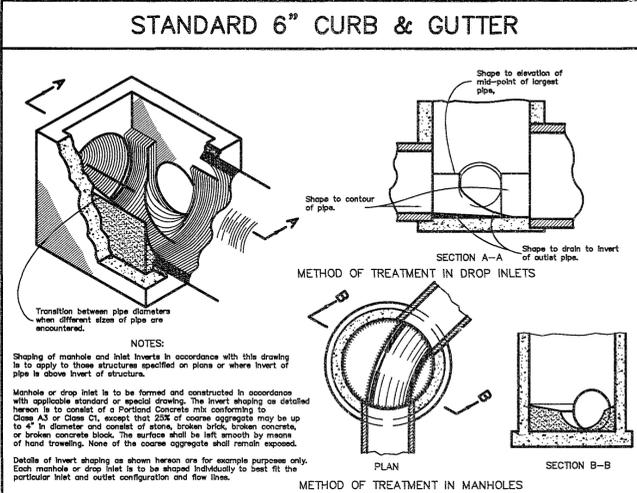
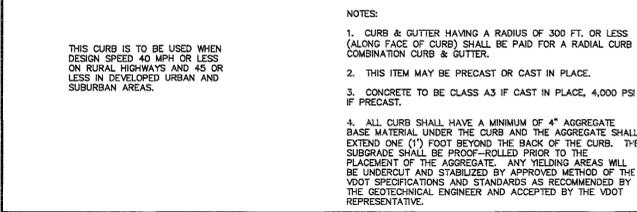
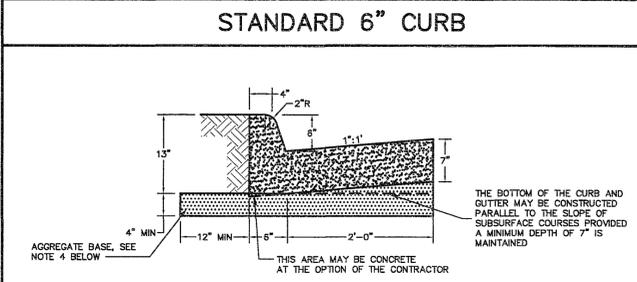
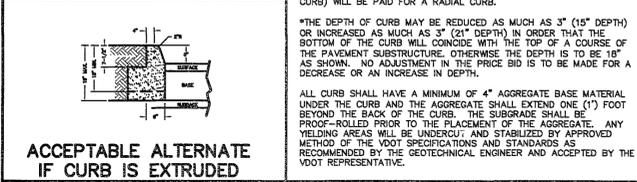
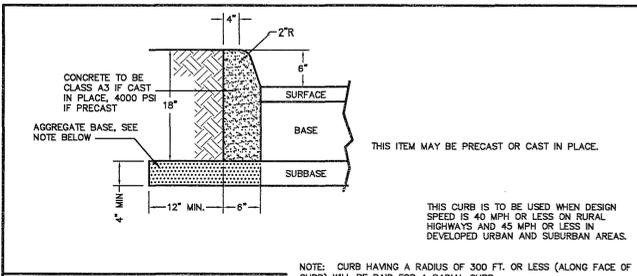


TABLE OF QUANTITIES

TYPE	L	AREA OF SLOT	REINFORCING STEEL						WEIGHT	
			BARS A	BARS B	BARS C	BARS D	BARS E	BARS F		
DI-3A	2'-8"	1.15	2.28	11	5'-2"	3	3'-2"	3	1'-0"	22
	4'	1.83	2.59	11	6'	2	6'-7"	3	11'-8"	64
	6'	2.75	3.02	5	3'-6"	6	6'-7"	3	3'-2"	111
	8'	3.67	3.46	5	5'-0"	10	5'-7"	3	5'-8"	158
DI-3B	10'	4.58	3.90	5	7'-6"	14	6'-7"	3	3'-2"	204
	12'	5.50	4.34	5	8'-6"	18	6'-7"	3	3'-2"	251
	14'	6.42	4.78	5	11'-8"	22	6'-7"	3	3'-2"	298
	16'	7.33	5.22	5	13'-0"	26	6'-7"	3	3'-2"	345
DI-3C	18'	8.25	5.66	5	15'-0"	30	6'-7"	3	3'-2"	391
	20'	9.17	6.09	5	17'-6"	34	6'-7"	3	3'-2"	438
	8'	2.75	3.01	10	11'-0"	4	6'-7"	5	5'-7"	111
	10'	4.58	3.89	10	3'-9"	12	6'-7"	5	5'-7"	205
DI-3D	12'	5.50	4.33	10	4'-9"	16	6'-7"	5	5'-7"	252
	14'	6.42	4.77	10	6'-0"	20	6'-7"	5	5'-7"	298
	16'	7.33	5.21	10	6'-9"	24	6'-7"	5	5'-7"	345
	18'	8.25	5.65	10	7'-9"	28	6'-7"	5	5'-7"	392
20'	9.17	6.09	10	8'-9"	32	6'-7"	5	5'-7"	439	

\* DENOTES LENGTH OF ONE (1) BAR

NOTES:

ALL REINFORCING BARS TO BE NO. 6

ALL CAST IN PLACE CONCRETE TO BE CLASS A3. FOR ACCEPTABLE ALTERNATE SEE PRECAST STANDARD DESIGNS.

CONCRETE QUANTITIES SHOWN ARE FOR DEPTH (H) OF 5'-2" WITHOUT PIPES. THE AMOUNT DISPLACED BY PIPES MUST BE DEDUCTED TO OBTAIN TRUE QUANTITIES. FOR ALLEYS OF DIFFERENT DEPTHS ADD OR SUBTRACT 0.32 CU. YD.

Yield of CONCRETE FOR EACH FOOT OF DIFFERENCE IN DEPTH.

LENGTH OF ANGLE IRON AS SHOWN ON SHEET 1 IS L + 15" @ 4.10 LBS. PER FT.

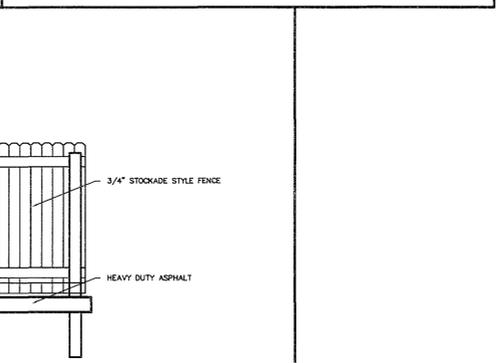
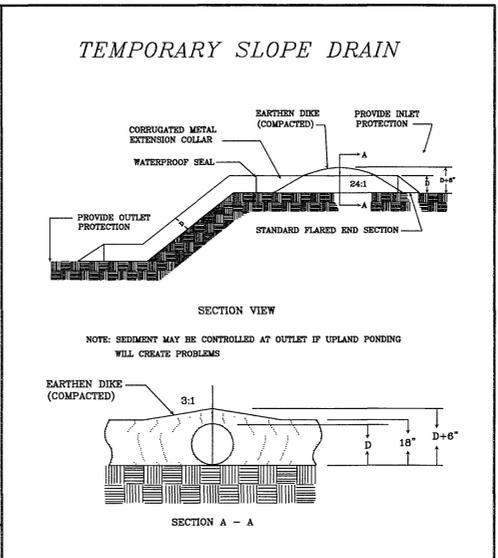
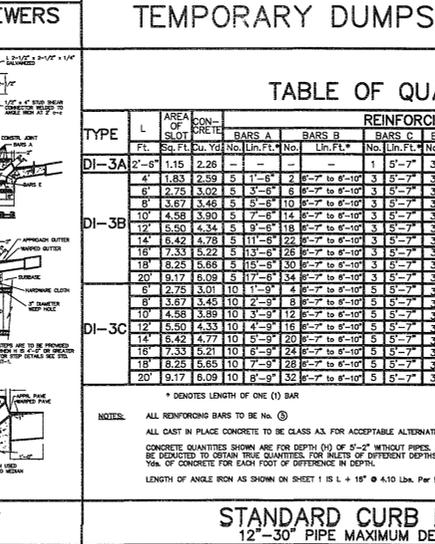


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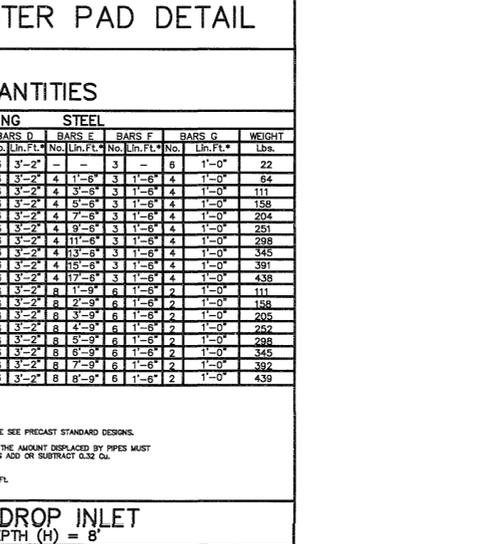
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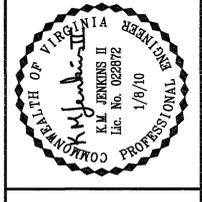
JCSA GENERAL NOTES FOR WATER DISTRIBUTION AND SANITARY SEWER SYSTEMS: (Revised March 2006)

- 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.
- The Contractor/Developer shall acquire a Certificate to Construct Water and Sanitary Facilities prior to commencement of construction of any water or sanitary sewer facilities.
- 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.
- The Developer's representative 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.
- Pipe lines and services shall be installed after grading to within 6-inches of final grade and prior to placement of base material.
- 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.
- 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.
- Any field modifications or changes to the approved plans shall be verified and checked by the Engineer of Record and accepted by JCSA prior to any field modifications or changes. All approved changes and field modifications shall be accurately indicated on the record drawings.
- All lots 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 Developer or builder and installed by JCSA.
- Any required easements, permits and approvals shall be acquired by the Developer prior to commencement of water main and/or sanitary sewer construction.
- 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.
- 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.
- 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.
- Any existing unused well(s) shall be abandoned in accordance with State Private Well Regulations and James City County Code.
- Bedding of JCSA utilities shall be in accordance with HRPDC Detail EW\_01.
- 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.
- 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 restraints. Fire hydrants shall be restrained at least one full joint of pipe in each direction on the mainline.
- 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.
- Any proposed backflow prevention device and/or grease trap must be inspected by the JCSA Utility Special Projects Coordinator at (757) 259-4138.
- 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 building 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).
- 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.
- 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.
- Fire hydrants to be installed within existing or proposed VDOT right-of-ways shall be located in accordance with VDOT Requirements.
- 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.
- 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.

SITE PLAN OF NEW TOWN, SECTION 6  
BLOCK 20, PARCEL C TPMG BUILDING  
5424 DISCOVERY PARK BOULEVARD  
DETAIL SHEET

NO.	DATE	REVISION / COMMENT / NOTE
1	1/7/10	REV PER JCC LTR DTD 1/5/10

DATE: 12/14/09  
JOB: 09-197  
DRAWN BY: KJM  
SHEET: C9 OF 11



SCALE: 1" = 20'  
DATE: 12/14/09  
JOB: 09-197  
DRAWN BY: KJM  
SHEET: C9 OF 11

LandTech Resources, Inc.  
Surveying • Engineering • GPS

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Phone: (757) 565-1637 Fax: (757) 565-0782  
web: landtechresources.com

Virginia

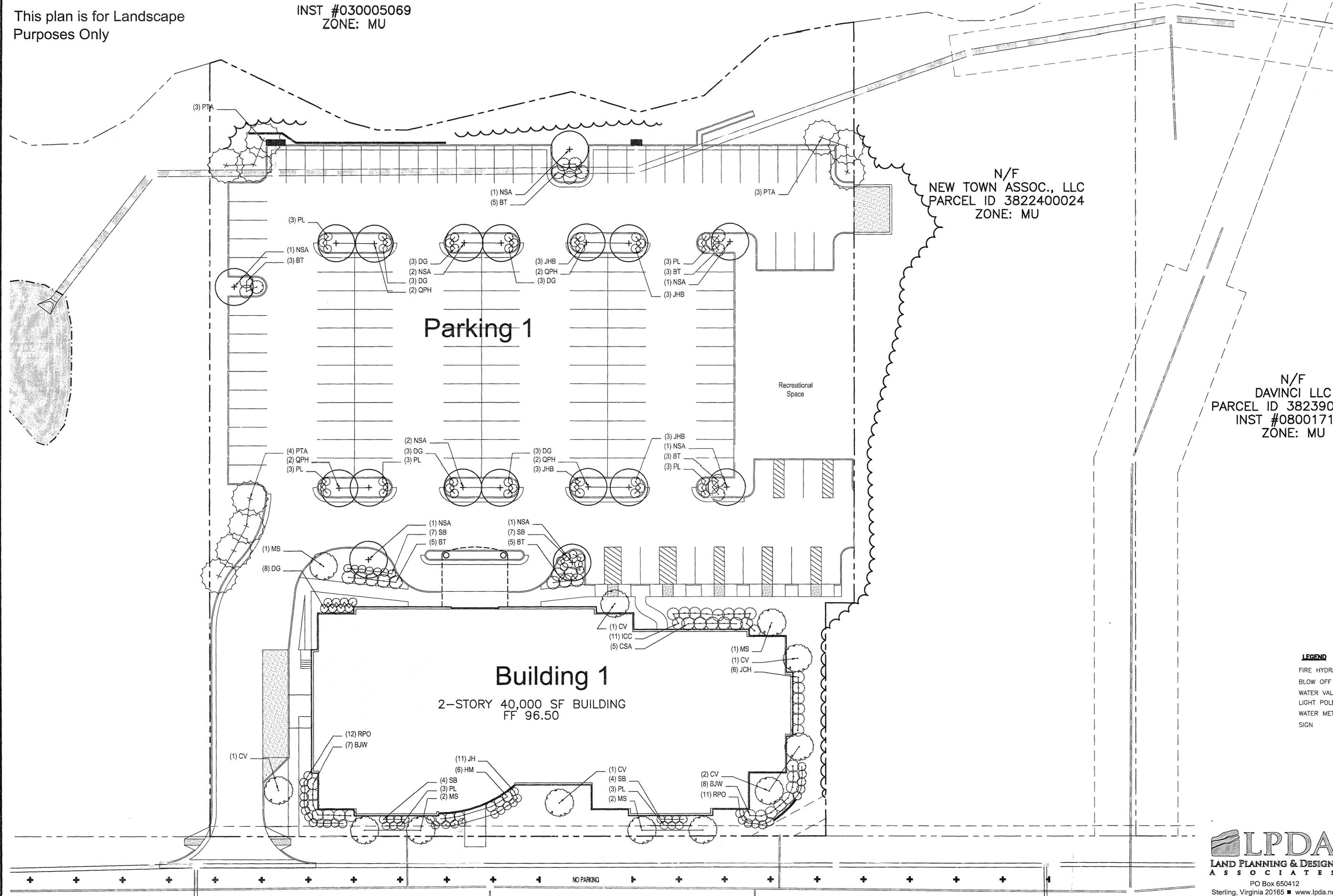
James City County

This plan is for Landscape Purposes Only

INST #030005069  
ZONE: MU

N/F  
NEW TOWN ASSOC., LLC  
PARCEL ID 3822400024  
ZONE: MU

N/F  
DAVINCI LLC  
PARCEL ID 382390  
INST #0800171  
ZONE: MU



SITE PLAN OF NEW TOWN, SECTION 6  
BLOCK 20, PARCEL C TPMG BUILDING  
5424 DISCOVERY PARK BOULEVARD  
LANDSCAPE PLAN

NO.	DATE	REVISION / COMMENT / NOTE
1	1/7/10	REV PER JCC LTR DTD 1/5/10



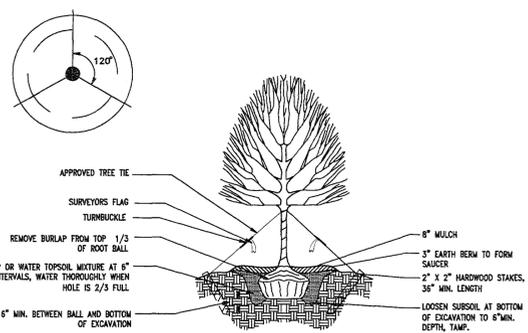
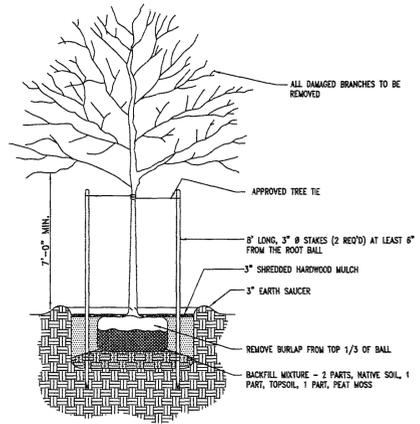
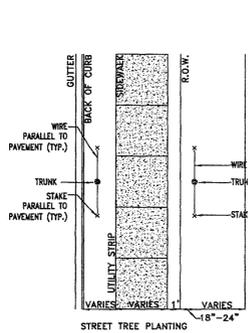
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Phone: (757) 568-7677 Fax: (757) 565-0782  
web: landtechresources.com

**LEGEND**  
FIRE HYDR  
BLOW OFF  
WATER VAL  
LIGHT POLE  
WATER MET  
SIGN

**LPDA**  
LAND PLANNING & DESIGN  
ASSOCIATES  
PO Box 650412  
Sterling, Virginia 20165 ■ www.lpda.net  
703-437-7907 ■ Fax 434-296-2109

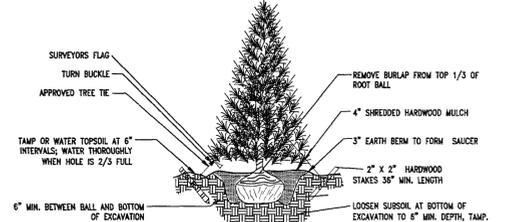
SCALE: 1" = 20'  
DATE: 12/14/09  
JOB: 09-197  
DRAWN BY: AMS  
SHEET: L1 OF 11

Virginia  
James City County

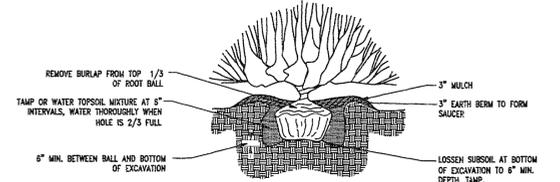


**L1 STREET / PARKING LOT TREE PLANTING**  
THIS DETAIL IS TO BE USED WHEN THE TREE IS ADJACENT TO ANY PEDESTRIAN CIRCULATION AREA

**L2 CANOPY TREE PLANTING**



**L3 EVERGREEN TREE PLANTING**



**L4 DECIDUOUS SHRUB PLANTING**



**L5 EVERGREEN SHRUB PLANTING**

**Landscape Specifications**

- PLANT MATERIAL SHALL CONFORM IN SIZE AND GRADE TO AMERICAN STANDARDS FOR NURSERY STOCK. PLANT MATERIALS SHALL BE OF STANDARD QUALITY OF THEIR SPECIES OR VARIETY. PLANTS SHALL BE CAREFULLY LABELED AND OF SIZES NOTED. RIGHT IS RESERVED TO REJECT PLANTS CONSIDERED AS UNSATISFACTORY. REJECTED PLANTS SHALL BE REMOVED FROM SITE. PLANTS SHOULD NOT BE PRUNED PRIOR TO DELIVERY. HEADING-BACK PLANTS TO MEET SIZES INDICATED IN DRAWING SCHEDULE WILL NOT BE PERMITTED.
- GRASS SEED - BLUEGRASS MIXTURE SHALL BE USED IN MOST AREAS. THE MIXTURE IS TO BE 20-60% CERTIFIED MERION, 20-40% CERTIFIED KENBUE OR CERTIFIED SOUTH DAKOTA, 0-40% CERTIFIED ADELPHI, CERTIFIED FYLKIING OR CERTIFIED PENSTAR AND 0-20% CREEPING RED FESCUE SUCH AS CERTIFIED PENNLAWN OR CERTIFIED JAMESTOWN. UNLESS OTHERWISE SPECIFIED, ALL DISTURBED AREAS ARE TO BE SEEDED.
- PLANT PIT SOIL MIX
  - POTTING SOIL
    - 1/3 TOPSOIL
    - 1/3 COURSE SAND
    - 1/3 PINE BARK, COMPOST SLEDGE, OR EQUAL.
  - FERTILIZER
    - 10-6-4 AT 5 POUNDS PWER 100 S.F. OF BED AREA
- PLANTS AND TREES
  - CONTRACTOR SHALL STAKE THE LOCATION OF EACH TREE AND SHRUB IN ACCORDANCE WITH THE LOCATIONS SHOWN ON THE DRAWING. STAKING AND LAYOUT SHALL BE DONE SUFFICIENTLY IN ADVANCE OF PLANTING OPERATION TO PERMIT THE CONTRACTING OFFICER TO CHECK, REVISE IF DESIRED, AND APPROVE THE LOCATIONS BEFORE DIGGING OPERATIONS BEGIN.
  - EXCAVATE PLANTING BEDS AND POCKETS TO A DEPTH REQUIRED FOR PLANTING.
- MULCHING
  - MULCH TOP OF ROOT BALL AND SAUCER WITHIN 48 HOURS TO A MINIMUM DEPTH OF 2" AND TO A DEPTH NOT TO EXCEED 3".
  - ALL SHADE AND FLOWERING TREES SHALL BE MULCHED WITH 3 INCHES THICK (SETTLED AND COVERING AN AREA TWELVE INCHES GREATER THAN THE DIAMETER OF PIT.
- GUYING AND STAKING
  - ALL TREES 2 1/2" IN CALIPER OR OVER, SHALL BE STAKED. ALL TREES LESS THAN 2 1/2" CALIPER SHALL BE STAKED BY USING 2 BRACING STAKES EQUALLY SPACED ABOUT THE TREE AT LEAST 12" FROM THE TRUNK AND IN THE CASE OF B & B TREES AT LEAST 6" OUTSIDE THE PERIMETER OF THE ROOT BALL
  - ALL STREET TREES ARE TO BE STAKED PLACING THE STAKES PARALLEL TO THE SIDEWALK AS NOT TO CONFLICT WITH PEDESTRIAN MOVEMENTS.
- ANY ROCK OR OTHER UNDERGROUND OBSTRUCTION SHALL BE REMOVED TO DEPTH NECESSARY TO PERMIT PLANTING ACCORDING TO SPECIFICATION.
- PLANTS SHALL BE TREATED AT THE TIME OF PLANTING WITH ANTI-DESICCANT AS SPECIFIED IN FULL ACCORDANCE WITH THE DIRECTIONS FURNISHED BY THE MANUFACTURER.
- IN GENERAL, CONTRACTOR SHALL THOROUGHLY WATER ALL PLANTED AREAS AFTER PLANTING AND IN DRY WEATHER. USE ENOUGH WATER TO THOROUGHLY SOAK ALL TREE PITS BEFORE PLANTING. CONTRACTOR SHALL MAKE NECESSARY ARRANGEMENTS IN ADVANCE OF START OF WORK TO INSURE THAT AN ADEQUATE SUPPLY OF WATER AND WATERING EQUIPMENT ARE AVAILABLE WHEN REQUIRED.
- GUYING SHALL BE DONE WITH THREE GUYS EQUALLY ABOUT EACH TREE. EACH GUY SHALL CONSIST OF TWO STANDS OF WIRE ATTACHED TO THE TREE TRUNK AT AN ANGLE OF ABOUT 45 DEGREES AT ABOUT TWO-FIFTHS OF THE HEIGHT OF THE TREE AND ANCHORED AT THE GROUND EITHER TO GUYING STAKES WHICH HAVE BEEN DRIVEN INTO THE GROUND AT AN ANGLE AWAY FROM THE TREE OR TO DEADMEN PLACED AT LEAST 18" BELOW FINISHED GRADE.
- PLANT MAINTENANCE
  - MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER EACH PLANT IS PLANTED AND SHALL CONTINUE FOR 90 DAYS AFTER THE LAST PLANT HAS BEEN INSTALLED.
  - ALL PLANTS SHALL BE KEPT IN A GROWING, HEALTHY CONDITION BY WATERING, PRUNING, SHEARING, SPRAYING, TIGHTENING OF GUYS, STRAIGHTENING OF PLANTS WHICH LEAN OR SAG, LIFTING PLANTS WHICH DEVELOP MORE THAN NORMAL SETTLEMENT, WEEDING, AND BY ANY OTHER NECESSARY OPERATION OF MAINTENANCE. KEEP ALL PLANTING AREAS FREE OF WEEDS AND UNDESIRABLE GRASSES.
  - DURING THE MAINTENANCE PERIOD, PLANTS IN AN UNHEALTHY OR BADLY IMPAIRED CONDITION SHALL BE REMOVED AND REPLACED IMMEDIATELY USING SPECIFIED MATERIAL
- ACCEPTANCE AND GUARANTEE
 

ANY PLANT REQUIRED UNDER THIS CONTRACT THAT IS DEAD OR WITHOUT SATISFACTORY GROWTH, AS DETERMINED BY THE CONTRACTING OFFICER, SHALL BE REMOVED AND REPLACED BY THE NEXT SPECIFIED PLANTING SEASON. ANY REPLACEMENTS SHALL BE PLANTS OF THE SAME KIND AND SIZE AS SPECIFIED AND REPLANTED IN THE SAME LOCATION FROM WHICH THE DEAD PLANT WAS REMOVED AND SHALL BE REPLACED AT NO ADDITIONAL COST.

**Schedule A Plant Schedule - Parking and Building**  
TPMG, James City County, Virginia

Deciduous Canopy Trees						
Code	Quantity	Botanical Name	Common Name	Size Caliper or Height	Condition	Comments
NSA	14	Nyssa sylvatica	Black Gum	2.5" cal.	B&B	Strong Central Leader
QPH	12	Quercus phellos	Willow Oak	2.5" cal.	B&B	
	14	Subtotal				
Small Deciduous Trees						
Code	Quantity	Botanical Name	Common Name	Size Caliper or Height	Condition	Comments
CV	6	Crataegus viridis 'Winter King'	Winter King Green Hawthorn	2" cal.	B&B	
MS	6	Magnolia stellata	Star Magnolia	2" cal.	B&B	
	12	Subtotal				
Evergreen Trees						
Code	Quantity	Botanical Name	Common Name	Size Caliper or Height	Condition	Comments
PTA	10	Pinus taeda	Loblolly Pine	8' ht.	B&B	
	10	Subtotal				
Evergreen Shrubs						
Code	Quantity	Botanical Name	Common Name	Size Caliper or Height	Condition	Comments
BJW	15	Berberis julianae	Wintergreen Barberry	18" Min.	Cont.	
ICC	11	Ilex crenata 'Compacta'	Compacta Holly	18" Min.	Cont.	
JCH	6	Juniperus chinensis 'Hetzii Columnaris'	Hetzii Columnar Juniper	18" Min.	Cont.	
JH	11	Juniperus horizontalis	Creeeping Juniper	18" Min.	Cont.	
JHB	12	Juniperus horizontalis 'Wilton'	Wilton Juniper	18" Min.	Cont.	
PL	24	Prunus laurocerasus 'Otto Luykens'	Cherry Laurel	18" Min.	Cont.	
	79	Subtotal				
Deciduous Shrubs						
Code	Quantity	Botanical Name	Common Name	Size Caliper or Height	Condition	Comments
BT	24	Berberis thunbergii 'Rose Glow'	Rose Glow Japanese Barberry	22" Min.	Cont.	
CSA	5	Comus sericea	Redosier Dogwood	22" Min.	Cont.	
DG	20	Deutzia gracilis 'Nikko'	Slender Deutzia	22" Min.	Cont.	
HM	6	Hydrangea macrophylla 'Forever Pink'	Forever Pink Bigleaf Hydrangea	22" Min.	Cont.	
RPO	23	Rhododendron periclymenoides	Pink Azalea	22" Min.	Cont.	
SB	22	Spiraea x bumalda	Bumald Spirea	22" Min.	Cont.	
	100	Subtotal				

**Schedule B - Foundation Planting**

Building	Width (FT.)	Area (SF)	TREE RATIO	NO. OF TREES (ORN.) REQUIRED	NO. OF TREES (ORN.) PROVIDED	SHRUB RATIO	NO. OF SHRUBS REQUIRED	NO. OF SHRUBS PROVIDED
①	10	7206	1:200	12	12	5:200	121	123

**Schedule C - Parking Area Planting**

PARKING PROVIDED	TREES RATIO NO. OF SPACES	NO. OF TREES REQUIRED	NO. OF TREES PROVIDED	SHRUBS RATIO NO. OF SPACES	NO. OF SHRUBS REQUIRED	NO. OF SHRUBS PROVIDED
139	1:5	28	28	2:5	56	56



PO Box 650412  
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BEFORE DIGGING CALL "MISS UTILITY" OF VIRGINIA AT 1 - 800 - 552 - 7001

This plan is for Landscape Purposes Only

SITE PLAN OF NEW TOWN, SECTION 6  
 BLOCK 20, PARCEL C TPMG BUILDING  
 5424 DISCOVERY PARK BOULEVARD  
 LANDSCAPE NOTES

Virginia  
 James City County  
 REV PER JCC LTR DTD 1/5/10  
 1/7/10  
 DEC 09  
 Z1

REVISION / COMMENT / NOTE  
 DATE  
 NO.

SCALE: 1" = 20'  
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 DRAWN BY: AMS  
 SHEET: L2 OF 11

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 Phone: (757) 565-1677 Fax: (757) 565-0782  
 web: landtechresources.com

Environmental Division

DEC 23 2009

**Erosion and Sediment  
Control Narrative**

RECEIVED

for

**New Town, Section 6,  
Block 20, Parcel C TPMG Building**

RECEIVED  
DEC 2009  
Planning Department

December 22, 2009

Project Number 09-197

**LandTech Resources, Inc.**  
205 Bulifants Blvd., Ste. E, Williamsburg, VA  
Phone 757-565-1677 Fax 757-565-0782

**Erosion and Sediment  
Control Narrative**

for

**New Town, Section 6,  
Block 20, Parcel C TPMG Building**

**December 22, 2009**

**Project Number 09-197**



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## **PROJECT DESCRIPTION**

The project consists of the construction of one office building totaling 40,000 sf and parking lot on Parcel C, Block 20, Section 6 of New Town in James City County, Virginia. The site is 2.49 acres with a total of 1.79 acres to be covered by impervious surfaces after construction is complete. The total disturbed area is approximately 2.3 acres

## **EXISTING CONDITIONS**

Currently the rear half of the site is open and the front half is wooded. The parcel slopes from the front to rear at approximately 6%. The entire northern boundary of the site is adjacent to wetlands and buffers. The front half of the parcel contains an soil stockpile that will be removed before the site can be developed.

## **ADJACENT AREAS**

The site is bounded on the north by wetlands, on the east by Parcel D, on the west by undeveloped land of New Town and on the south by Discovery Park Blvd.

## **OFF-SITE AREA**

There are no off-site areas proposed to be disturbed in association with this project. However, if it becomes necessary to disturb off-site areas, a revised erosion and sediment control plan will be prepared and submitted to the county for review and approval.

## **SOILS**

### **Craven-Uchee complex (11C)**

This complex consists of moderately well drained Craven soils and well drained Uchee soils.

Typically, the surface layer of the Craven soils is dark grayish brown fine sandy loam about 4 inches thick. The subsurface layer is pale olive fine sandy loam 5 inches thick. The subsoil extends to a depth of 42 inches. It is yellowish brown clay in the upper part and yellowish brown sandy clay loam mottled with gray in the middle and lower parts. The substratum extends to a depth of at least 72 inches. It is brownish yellow fine sandy loam mottled with gray in the upper part and gray loamy fine sand with yellow mottles in the lower part.

Typically, the surface layer of the Uchee soils is dark grayish brown loamy fine sand about 5 inches thick. The subsurface layer is light yellowish brown and very pale brown loamy fine sand 19 inches thick. The subsoil extends to a depth of 56 inches. It is strong brown sandy clay loam above a depth of 36 inches and strong brown sandy clay loam and clay mottled with gray and from 36 to 56 inches. The substratum from 56 to at least 65 inches is variegated red, brown, and gray stratified sandy loam and sandy clay loam.

In the Craven soils, permeability is slow; and in the Uchee soils, it is moderate in the upper part of the subsoil and moderately slow in the lower part. The erosion hazard is severe and the subsoil has moderate shrink-swell potential.

### **Emporia complex (15E)**

This complex consists of areas of deep, steep, well drained Emporia soils and areas of similar soils that formed over layers of fossil shells.

Typically, the surface layer of Emporia soils is dark grayish brown fine sandy loam about 4 inches thick. The subsurface layer is pale brown loam 5 inches thick. The subsoil extends to a depth of 50 inches. It is yellowish brown loam with mostly strong brown mottles in the upper part; yellowish brown, firm sandy clay loam with strong brown and gray mottles in the middle part; and mottled gray and brown, firm sandy clay loam in the lower part. The substratum is variegated brown, red, and gray, firm sandy clay loam to a depth of at least 75 inches.

In these Emporia soils, permeability is moderate in the upper part of the subsoil and moderately slow in the lower part. The erosion hazard is severe and the subsoil has moderate shrink-swell potential.

### **Kempsville-Emporia fine sandy loam (19B)**

This complex consists of deep, gently sloping, well drained soils that are so intermingled that it is not practical to separate them at the scale used in mapping.

Typically, the surface layer of this Kempsville soil is dark grayish brown fine sandy loam about 4 inches thick. The subsurface layer is light yellowish brown fine sandy loam 10 inches thick. The subsoil extends to a depth of 55 inches. It is yellowish brown and strong brown fine sandy loam and sandy clay loam to a depth of 32 inches. Below this, the subsoil is mottled fine sandy loam that is somewhat firm and compacted over yellowish brown sandy clay loam. The substratum is yellowish brown fine sandy loam to a depth of at least 68 inches.

Typically, the surface layer of Emporia soils is dark grayish brown fine sandy loam about 4 inches thick. The subsurface layer is pale brown loam 9 inches thick. The subsoil extends to a depth of 58 inches. It is yellowish brown loam with mostly strong brown mottles in the upper part; yellowish brown, firm sandy clay loam with strong brown and gray mottles in the middle part; and mottled gray and brown, firm sandy clay loam in the lower part. The substratum is variegated gray, brown and red firm sandy clay loam to a depth of at least 75 inches.

Permeability of the Kempsville soil is moderate. In the Emporia soil, permeability is moderate in the upper part of the subsoil and moderately slow in the lower part. The erosion hazard is moderate. The subsoil of the Kempsville soil has low shrink-swell potential, and that of the Emporia soil has moderate shrink-swell potential.

## **CRITICAL EROSION AREAS**

The critical erosion area associated with this site is the existing ravine and wetlands located along the northern boundary of the parcel. To prevent sediment from contaminating this area, it is imperative that the contractor install all erosion and sediment control measures shown on these plans before any land disturbing activities commence. Regular inspection and maintenance is also required for all erosion and sediment control measures to keep them functioning as designed.

## **EROSION AND SEDIMENT CONTROL MEASURES**

Unless otherwise indicated, all structural and vegetative erosion and sediment control practices shall be constructed and maintained according to minimum standards and specifications of the latest edition of Virginia Erosion and Sediment Control Handbook (VESCH). The minimum standards shall be adhered to unless otherwise waived or approved by variance.

### **STRUCTURAL PRACTICES**

#### **Safety Fence – 3.01**

Safety fence shall be installed as depicted on the plans to prohibit the access to the site by the public.

#### **Temporary Stone Construction Entrance – 3.02**

A construction entrance shall be provided at all points of ingress and egress to reduce the amount of mud transported onto paved public roads by motor vehicles and runoff.

#### **Silt Fence – 3.05**

Silt fence shall be placed around the limits of clearing to intercept and detain small amounts of sediment from disturbed areas during construction operations.

#### **Storm Drain Inlet Protection – 3.07**

Storm drain protection is installed at all drainage inlets to prevent sediment from entering the storm drainage systems prior to permanent stabilization for the disturbed areas.

#### **Diversion Dike – 3.09**

Diversion dikes shall be installed to divert storm runoff upslope drainage areas away from unprotected disturbed areas and slopes to a stabilized outlet.

### **Sediment Trap – 3.13**

Two sediment traps shall be installed to detain sediment-laden runoff from the disturbed areas long enough to allow the majority of the sediment to settle out.

### **Tree Preservation and Protection – 3.38**

Tree preservation and protection shall be installed along the perimeter of the disturbed site to protect desirable trees from mechanical and other injury during land disturbing and construction activity.

### **Dust Control – 3.39**

Dust control will be applied as depicted on the plans to prevent surface and air movement of dust from exposed soil surfaces and reduce the presence of airborne substances which may present health hazards, traffic safety problems or harm animal or plant life.

## **VEGETATIVE PRACTICES**

### **Permanent Seeding – 3.32**

All denuded areas, which will be left dormant for extended periods of time, shall be seeded with permanent vegetation immediately following grading. Selection of the seed mixture will depend on the time of year it is applied.

## **MANAGEMENT STRATEGIES**

- Sediment trapping measures will be installed as the first step in grading and will be seeded and mulched immediately following installation.
- Temporary seeding or other stabilization will follow immediately after grading.
- The contractor shall be responsible for the installation and maintenance of all erosion and sediment control practices depicted on the Plans.
- After achieving adequate stabilization, the temporary controls will be cleaned and removed. Any areas disturbed in the removal process shall be graded, top soiled, and seeded accordingly.

## **PERMANENT STABILIZATION**

All areas disturbed by construction shall be stabilized with permanent seeding immediately following finish grading. Seeding shall be accomplished with Kentucky 31 Tall Fescue according to Standards and Specifications 3.32, Permanent Seeding of the VESCH. Soil stabilization blankets will be installed over slopes, which have been brought to final grade and have been seeded to protect the slopes from rill and gully erosion and to allow seed to germinate

properly. Mulch (straw or fiber) will be used on relatively flat areas. In all seeding operations, seed, fertilizer and lime will be applied prior to mulching.

## **STORMWATER MANAGEMENT**

This project is for the construction of one office building totaling 40,000 sf and parking lot. The current site is partially wooded and contains 2.49 acres, which drains via sheet flow to a ravine located along the rear property line. After development the site will contain approximately 1.79 impervious acres. The site will drain to an existing BMP located on the adjacent parcel to the west of the site. The stormwater runoff from the proposed site development will be conveyed to the existing BMP via an existing storm sewer pipe system located along the northern property line of the parcel. The site also contains a dry swale LID feature to provide additional stormwater quality treatment.

## **CALCULATIONS**

Appendix A contains onsite drainage design.

Appendix B contains LID design calculations.

Appendix C contains sediment trap design calculations.

## **MAINTENANCE**

In general, all erosion and sediment control measures will be checked daily and after each significant rainfall. The following items will be checked in particular:

### **Safety Fence – 3.01**

The safety fence shall be checked regularly for weather-related or other damage. Any necessary repairs must be made immediately.

### **Temporary Stone Construction Entrance – 3.02**

The entrance shall be maintained in a condition, which will prevent tracking or flow of mud onto public rights-of-way. This may require periodic dressing with additional stone or the washing and reworking of existing stone as conditions demand. All materials spilled, dropped, washed, or tracked from vehicles onto roadways or into storm drains must be removed immediately. The use of water trucks to remove materials dropped, washed, or tracked onto roadways will not be permitted under any circumstances.

### **Silt Fence – 3.05**

Silt Fence shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. Any required repairs shall be made immediately.

Close attention shall be paid to the repair of damaged silt fence resulting from end runs and undercutting.

Should the fabric on a silt fence decompose or become ineffective prior to the end of the expected usable life and the barrier still be necessary, the fabric shall be replaced promptly.

Sediment deposits should be removed after each storm event. They must be removed when deposits reach approximately one-half the height of the barrier.

Any sediment deposits remaining in place after the silt fence is no longer required shall be dressed to conform with the existing grade, prepared and seeded.

### **Storm Drain Inlet Protection – 3.07**

The structure shall be inspected after each rain and repairs made as needed.

Sediment shall be removed and the trap restored to its original dimensions when the sediment has accumulated to one-half the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.

Structures shall be removed and the area stabilized when the remaining drainage area has been properly stabilized.

### **Diversion Dike – 3.09**

The measure shall be inspected after every storm and repairs made to the dike, flow channel, outlet or sediment trapping facility, as necessary. Once every two weeks, whether a storm event has occurred or not, the measure shall be inspected and repairs made if needed. Damages caused by construction traffic or other activity must be repaired before the end of each working day.

### **Sediment Trap – 3.13**

Sediment shall be removed and the trap restored to its original dimensions when the sediment has accumulated to one half the design volume of the wet storage. Sediment removal from the basin shall be deposited in a suitable area and in such a manner that it will not erode and cause sedimentation problems.

Filter stone shall be regularly checked to ensure that filtration performance is maintained. Stone choked with sediment shall be removed and cleaned or replaced.

The structure shall be checked regularly to ensure that it is structurally sound and has not been damaged by erosion or construction equipment. The height of the stone outlet shall be checked to ensure that its center is at least 1 foot below the top of the embankment.

### **Permanent Seeding – 3.32**

The seeded/mulched areas should be checked regularly to ensure that a good stand is established and maintained. Areas should be fertilized, mulched and re-seeded as needed. When it is clear

that plants have not germinated on an area or have died, these areas must be re-seeded immediately to prevent erosion damage. However, it is extremely important to determine for what reason germination did not take place and make any corrective action necessary prior to re-seeding the area.

- Fertilizer shall be applied using approved fertilization methods and equipment.
- Formulations and application rates shall conform to the guidelines given in VESCH.
- Maintain a ground cover or organic mulch around trees that is adequate to prevent erosion, protect roots, and hold water.

**APPENDIX A**



JOB 09-197

SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_

CALCULATED BY KMS DATE 12/14/09

CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

SCALE \_\_\_\_\_

DA- 1

$c = .72$   
 $A = 1.09 \text{ Ac.}$

Rest (Road)  
Grass

$C$	$A$	$CA$
.90	.75	.68
.30	.34	.10
	1.09	.78

OVERLAND FLOW

$L = \text{---} \text{ ft.}$   
 $S = \text{---} \%$   
 $T_c = \text{---} \text{ min.}$

CHANNEL FLOW

$H = \text{---} \text{ ft.}$   
 $L = \text{---} \text{ ft.}$   
 $T_c = \text{---} \text{ min.}$

$T_c = 5 \text{ min.}$

$i_{10} = 7.2 \text{ in/hr}$

$Q = CAi = (.72)(1.09 \text{ Ac.})(7.2 \text{ in/hr})(C_f 1.0)$

$C_f$  for storms 25 yr+  
(VDOT Manual Pg. 1-11)

$Q = 5.65 \text{ cfs}$

$Q_{DI} = CAI = (.72)(1.09)(4.0) = 3.14 \text{ cfs}$

Comp's Downstream in this sector.

# Inlet Report

## DI #1

### Curb Inlet

Location = Sag ✓  
Curb Length (ft) = 4.00  
Throat Height (in) = 6.00  
Grate Area (sqft) = -0-  
Grate Width (ft) = -0-  
Grate Length (ft) = -0-

### Gutter

Slope, Sw (ft/ft) = 0.083  
Slope, Sx (ft/ft) = 0.072  
Local Depr (in) = 2.00  
Gutter Width (ft) = 2.00  
Gutter Slope (%) = -0-  
Gutter n-value = -0-

### Calculations

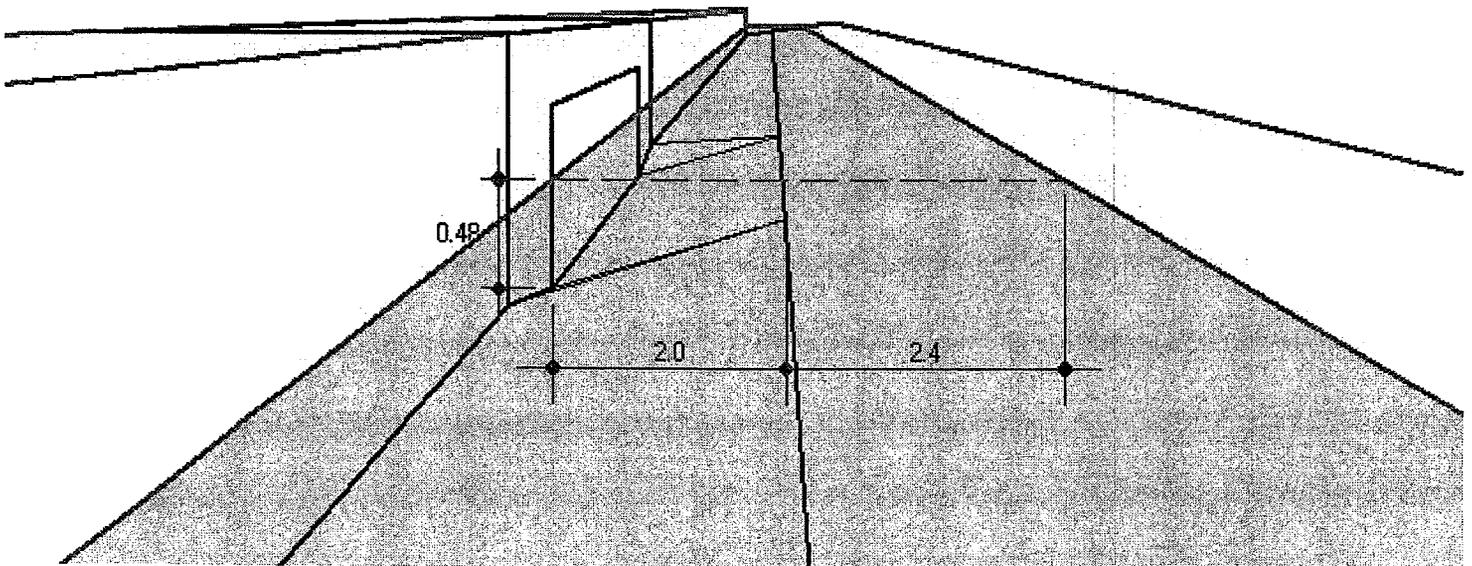
Compute by: Known Q  
Q (cfs) = 3.14

*Compute from side*

### Highlighted

Q Total (cfs) = 3.14  
Q Capt (cfs) = 3.14  
Q Bypass (cfs) = -0-  
Depth at Inlet (in) = 5.80  
Efficiency (%) = 100  
Gutter Spread (ft) = 4.40  
Gutter Vel (ft/s) = -0-  
Bypass Spread (ft) = -0-  
Bypass Depth (in) = -0-

All dimensions in feet



JOB 09-197

SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_

CALCULATED BY KMS DATE 12/15/09

CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

SCALE \_\_\_\_\_

DA- 2

c= .86  
A= .80 Ac.

OVERLAND FLOW

L=      ft.  
S=      %  
Tc=      min.

CHANNEL FLOW

H=      ft.  
L=      ft.  
Tc=      min.  
Tc= 5 min.

i<sub>10</sub>= 7.2 in/hr

$Q = CAI = (.86)(.80 \text{ Ac.})(7.2 \text{ in/hr})(C_f 1.0)$

C<sub>f</sub> for storms 25 yr+  
(VDOT Manual Pg. 1-11)

Q= 4.95 cfs

$Q_{PI} = CAI = (.86)(.80)(4.0) = 2.75 \text{ cfs}$

Roof/Road  
Grass

C	A	CA
.90	.74	.67
.30	.06	.02
	.80	.69

# Inlet Report

## DI #2

### Curb Inlet

Location = Sag ✓  
Curb Length (ft) = 8.00  
Throat Height (in) = 6.00  
Grate Area (sqft) = -0-  
Grate Width (ft) = -0-  
Grate Length (ft) = -0-

### Gutter

Slope, Sw (ft/ft) = 0.080  
Slope, Sx (ft/ft) = 0.070  
Local Depr (in) = 2.00  
Gutter Width (ft) = 2.00  
Gutter Slope (%) = -0-  
Gutter n-value = -0-

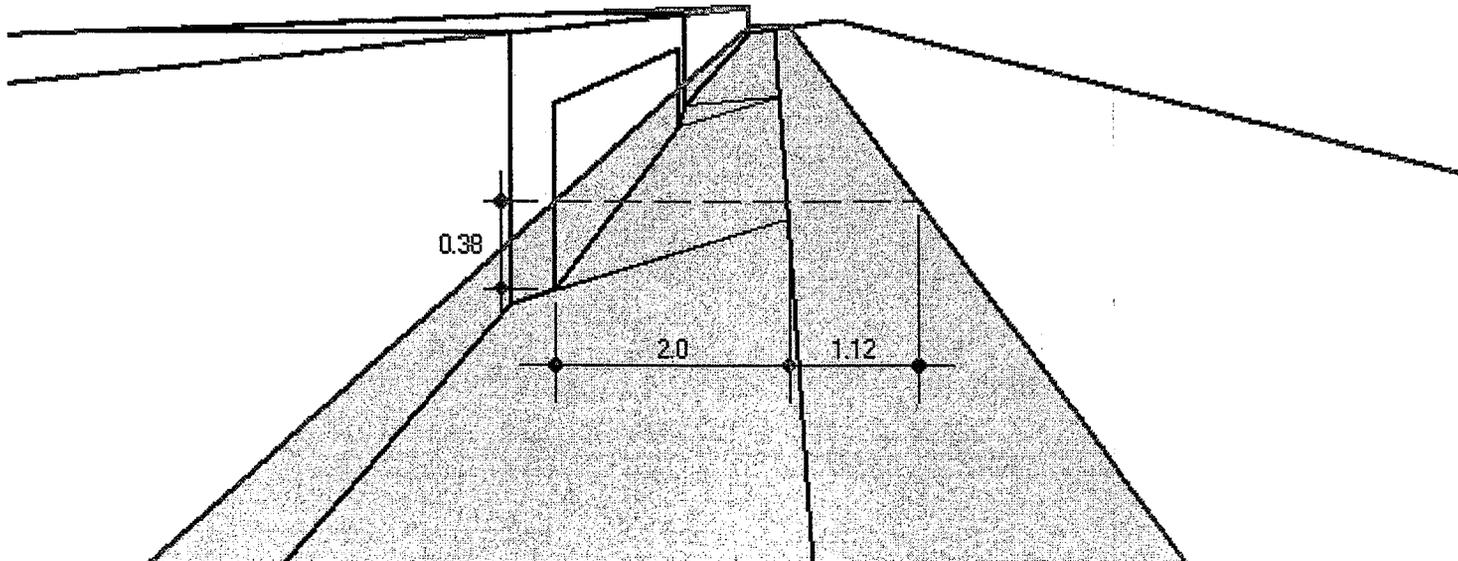
### Calculations

Compute by: Known Q  
Q (cfs) = 2.75 *4.79 in*

### Highlighted

Q Total (cfs) = 2.75  
Q Capt (cfs) = 2.75  
Q Bypass (cfs) = -0-  
Depth at Inlet (in) = 4.62  
Efficiency (%) = 100  
Gutter Spread (ft) = 3.12  
Gutter Vel (ft/s) = -0-  
Bypass Spread (ft) = -0-  
Bypass Depth (in) = -0-

All dimensions in feet



Landtech Resources, Inc.

Storm Drainage Design

Phone: (757) 565-1677 Fax: (757) 565-0782

Project Manager: Kenny Jenkins  
 Project Engineer: Kenny Jenkins

For Tc Accumulation, Use VELOCITY (1) from Pipe Slope or (2)  $V=Q/A : 1$

Project Number: 09-197

Project: TPMG Building

Year Storm: 10

Structure	Rational Formula: $Q = CiA$				Mannings Formula										
	Area "A" (ac)	Coefficient "C"	CA	Runoff, Q (cfs)	UPstream	DOWN-stream	Length (ft)	Slope %	Diameter (in)	Velocity (ft/sec)	Based on Q/A	Based on pipe Slope	Capacity (cfs)	Flow Time (min)	Mannings' N
From	1.09	0.7	0.78	5.46	77.85	77.75	10	1.00%	15	4.45	5.26	6.46	0.03	0.013	To
ES			0.78	5.46											

ES

Project Number: 09-197

Project: TPMG Building

Date: 12.15.09

		Performance Checks																																									
		STRUCTURE LOSSES					& Intermediate Computations																																				
		Bend Losses					ENTRANCE																																				
		EXIT					TOTAL (ft)																																				
		HGL @ FROM					HGL																																				
1	From Structure	0.715%	Slope (%)	0.071	Fall (ft)	0.31	Velocity Head $V^2/2g$ (ft)	Y	Invert Shaped?	Y	Surface Flow?	0	Angle (deg)	0.000	@ To (ft)	0.000	@ From (ft)	0.077	@ To (ft)	0.000	@ From (ft)	0.108	EXIT (ft)	0.070	TOTAL	78.89	@ FROM	81.35	Rim Flowline (Max. Allow. Elevation)	2.46	"Freeboard" (ft)	79.29	Elev. top of pipe @ From	1-ES	Structure #: FROM-TO	5.03	TC plus Pipe Flow Time	78.85	Elevation at 80% Full Flow	HGL	Too Shallow?	14.1	Computed Pipe Dia.
		Tailwater Elevation at Outfall point # ES):																						78.75																			

Lana Iech Resources, Inc.

Storm Drainage Design

Phone: (757) 565-1677 Fax: (757) 565-0782

Project Manager: Kenny Jenkins  
 Project Engineer: Kenny Jenkins

For Tc Accumulation, Use VELOCITY (1) from Pipe Slope or (2)  $V=Q/A$  : 1

Project Number: 09-197

Project: TPMG Building

Year Storm: 10

Structure		Rational Formula: $Q = CiA$						Mannings Formula									
From	To	CA		Tc (min)		Rain (in/hr)	Runoff, Q (cfs)		Length (ft)		Slope %	Diameter (in)	Velocity (ft/sec)		Capacity (cfs)	Flow Time (min)	Mannings
		Incremental	Cumulative	Incremental	Cumulative		Incremental	Cumulative	UPstream	DOWN-stream			Based on Q/A	Based on pipe Slope			
2	ES	0.69	0.69	5	5.00	6.96	4.79	4.79	77.00	76.85	1.07%	15	3.90	5.45	6.69	0.04	0.013

ES

Project Number: 09-197

Project: TPMG Building

Date: 12.15.09

STRUCTURE LOSSES		Performance Checks	
Bend Losses		& Intermediate Computations	
From Structure		HGL	
2			
0.549%	Slope (%)		
0.077	Fall (ft)		
0.24	Velocity Head $V^2/2g$ (ft)		
Y	Invert Shaped?		
Y	Surface Flow?		
0	Angle (deg)		
0.000	@ To (ft)		
0.000	@ From (ft)		
0.059	@ To (ft)		
0.000	@ From (ft)		
0.083	EXIT (ft)		
0.054	TOTAL (ft)		
78.00	@ FROM	HGL	
80.50	Rim Flowline (Max. Allow. Elevation)		
2.50	"Freeboard" (ft)		
78.44	Elev., top of pipe @ From		
2-ES	Structure #s: FROM-TO		
5.04	TC plus Pipe Flow Time		
78.00	Elevation at 80% Full Flow		
80% D	Too Shallow?		
13.2	Computed Pipe Dia.		

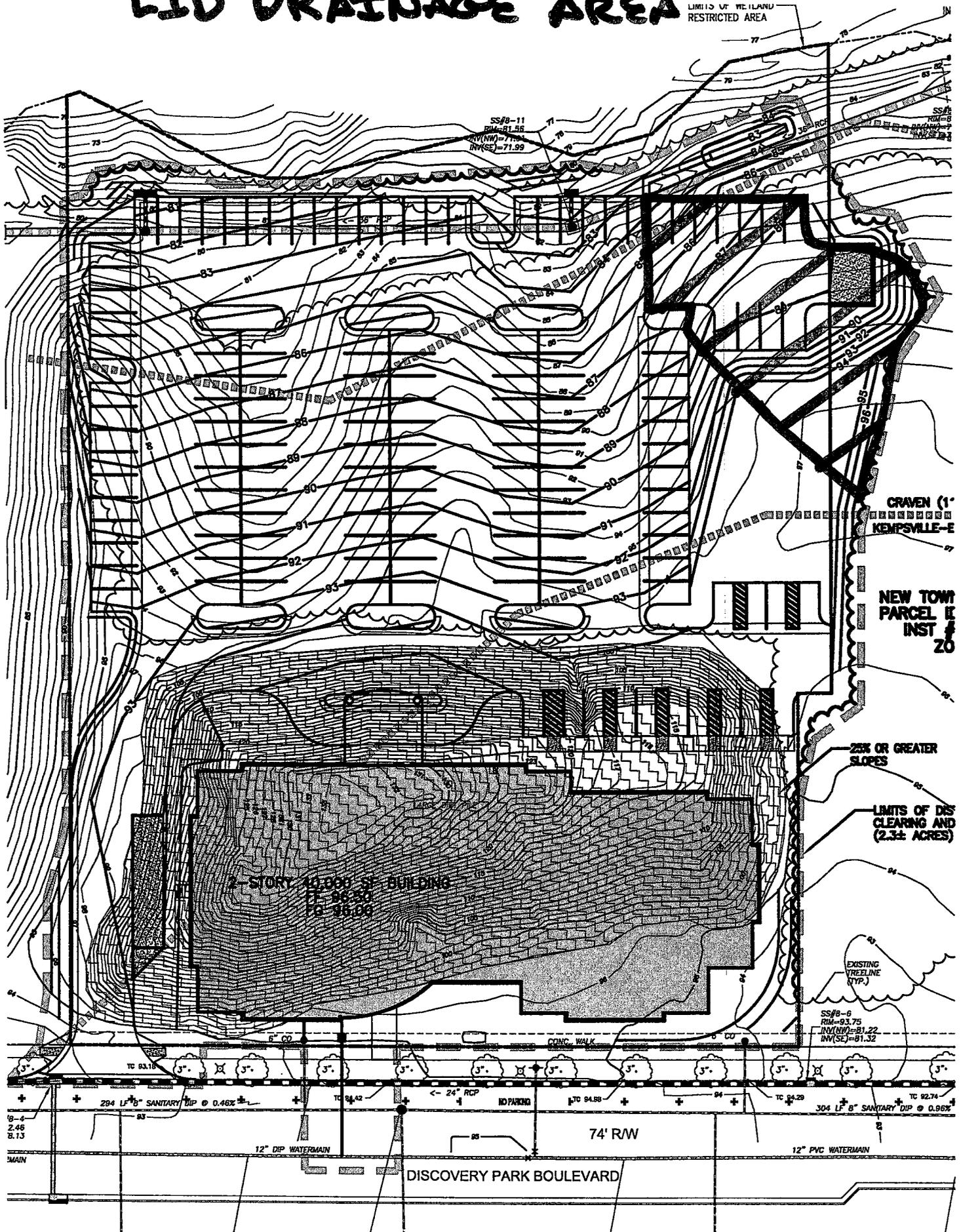
Tailwater Elevation at Outfall point # ES):

77.85

**APPENDIX B**

# LID DRAINAGE AREA

LIMITS OF THE LID  
RESTRICTED AREA



# LandTech Resources, Inc.

Surveying • Engineering • GPS

201 Bulifants Blvd., Suite A, Williamsburg, VA 23188

Phone: (757) 565-1677 Fax: (757) 565-0782

web: landtechresources.com

PROJECT NAME TPMG Building

PROJECT NO. 09-197

SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_

CALCULATED BY KMS DATE 12/15/09

SCALE \_\_\_\_\_

## DESIGN DRY SWALE

Impervious Area = 4,125 sf

Treatment - 0.5 inches of runoff per impervious area

$$\text{Treatment Volume} = \frac{4,125 \text{ sf} \times 0.5 \text{ in}}{12 \text{ in}} = 172 \text{ cf}$$

### Dry Swale Volumes

Elev	Δ Elev	SA	Storage	Accum Storage
83.0		97		0
	1.0		217	
84.0		337		217

Treatment Volume of 172 cf stored at Elev 83.79

~~NEED SLOPE OF FUMES~~  
~~SHOULD BE REVERSE FROM~~  
~~PARKING LOT TO PRO-ROAD~~  
~~EM-ROAD OVERS. WHEN ROAD = FUMES !!~~

**APPENDIX C**



# LandTech Resources, Inc.

Surveying • Engineering • GPS

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Phone: (757) 565-1677 Fax: (757) 565-0782

web: landtechresources.com

PROJECT NAME TPMG Building

PROJECT NO. 09-197

SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_

CALCULATED BY KMS DATE 12/16/09

SCALE \_\_\_\_\_

## DESIGN SEDIMENT TRAP No. 1

$$\text{Area} = 0.82 \text{ ac}$$

$$\text{Initial Storage} = 0.82 \text{ ac} \times 134 \text{ cy/ac} = 110 \text{ cyd}$$

$$\text{Dry Storage} = 55 \text{ cyd}$$

$$\text{Wet Storage} = 55 \text{ cyd}$$

Calculate Wet storage:

$$V_1 = 55 \text{ cyd} = 1,485 \text{ cf}$$

$$D_1 = 3.5'$$

$$V_1 = .85 \times A_1 \times D_1$$

$$1,485 \text{ cf} = .85 \times A_1 \times 3.5'$$

$$A_1 = 500 \text{ sf} \quad \text{Elev } 88.5$$

Calculate Dry storage:

$$V_2 = 55 \text{ cyd} = 1,485 \text{ cf}$$

$$D_2 = 1.5'$$

$$A_1 = 500 \text{ sf}$$

$$V_2 = \frac{A_1 + A_2}{2} \times D_2 \Rightarrow 1,485 = \frac{500 + A_2}{2} \times 1.5$$

$$A_2 = 1480 \text{ sf} \quad \text{Elev } 88.0$$

$$L = 6 \times 0.82 = 5'$$

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201 Bullfants Blvd., Suite A, Williamsburg, VA 23188

Phone: (757) 565-1677 Fax: (757) 565-0782

web: landtechresources.com

PROJECT NAME TPMG Building

PROJECT NO. 09-197

SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_

CALCULATED BY KMS DATE 12/16/09

SCALE \_\_\_\_\_

## DESIGN SEDIMENT TRAP No 2

$$\text{Area} = 0.71 \text{ ac}$$

$$\text{Initial Storage} = 0.71 \text{ ac} \times 134 \text{ cyd/ac} = 96 \text{ cyd}$$

$$\text{Dry Storage} = 48 \text{ cyd}$$

$$\text{Wet Storage} = 48 \text{ cyd}$$

Calculate Wet Storage:

$$V_1 = 48 \text{ cyd} = 1,296 \text{ cf}$$

$$D_1 = 2.5'$$

$$V_1 = .83 \times A_1 \times D_1$$

$$1,296 \text{ cf} \times .83 \times A_1 \times 2.5'$$

$$A_1 = 610 \text{ sf} \text{ Elev } 80.5$$

Calculate Dry Storage

$$V_2 = 48 \text{ cyd} = 1,296 \text{ cf}$$

$$D_2 = 1.5'$$

$$A_1 = 610 \text{ sf}$$

$$V_2 = \frac{A_1 + A_2}{2} \times D_2 \Rightarrow 1,296 = \frac{610 + A_2}{2} \times 1.5$$

$$A_2 = 1,110 \text{ sf} \text{ Elev } 82.0$$

$$L = 6 + 0.71 = 5'$$



**James City County Environmental Division  
Stormwater Management / BMP Inspection Report  
Detention and Retention Pond Facilities**

County BMP ID Code (if known): PC-260  
 Name of Facility: Dry Swale TPMG BMP No.: 1 of 1 Date: 6/17/11  
 Location: TPMG - 5400 Discovery Pk. Blvd.  
 Name of Owner: TPMG Design Build LLC  
 Name of Inspector: Amy Parker  
 Type of Facility: Dry Swale  
 Weather Conditions: Sunny Type:  Final Inspection  County BMP Inspection Program  Owner Inspection

If an inspection item is not applicable, mark NA, otherwise mark the appropriate column.

- O.K. - The item checked is in adequate condition and the maintenance program is currently satisfactory. No action required.
- Routine - The item checked requires attention, but does not present an immediate threat to the function/integrity of the BMP.
- Urgent - The item checked requires immediate attention to keep the BMP operational and to prevent damage to the facility.

Provide an explanation and details in the comment column, if routine or urgent are marked.

Facility Item	O.K.	Routine	Urgent	Comments
<b>Embankments and Side Slopes:</b>				
Grass Height			✓	
Vegetation Condition				
Tree Growth	✓			
Erosion	✓			
Trash & Debris		✓		
Seepage				
Fencing or Benches				
<b>Interior Landscaping/Planted Areas:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Constructed Wetland/Shallow Marsh <input type="checkbox"/> Naturally Established Vegetation				
Vegetated Conditions				/
Trash & Debris				
Floating Material				
Erosion				
Sediment				
Dead Plant				
Aesthetics				
Other				
Notes:				

Facility Item	O.K.	Routine	Urgent	Comments
<b>Water Pools:</b> <input type="checkbox"/> Permanent Pool (Retention Basin) <input type="checkbox"/> Shallow Marsh (Detention Basin) <input checked="" type="checkbox"/> None, Dry (Detention Basin) <i>swale</i>				
Shoreline Erosion				/
Algae				
Trash & Debris				
Sediment				
Aesthetics				
Other				
<b>Inflows (Describe Types/Locations):</b>				
Condition of Structure				
Erosion	✓			
Trash and Debris		✓		
Sediment		✓		
Outlet Protection				
Other				
<b>Principal Flow Control Structure - Riser, Intake, etc. (Describe Type):</b>				
Condition of Structure				/
Corrosion				
Trash and Debris				
Sediment				
Vegetation				
Other				
<b>Principal Outlet Structure - Barrel, Conduit, etc. :</b>				
Condition of Structure				/
Settlement				
Trash & Debris				
Erosion/Sediment				
Outlet Protection				
Other				
<b>Emergency Spillway (Overflow):</b>				
Vegetation				
Lining				
Erosion				
Trash & Debris				
Other				
Notes:				

