



CERTIFICATE OF AUTHENTICITY

THIS IS TO CERTIFY THAT THE FOLLOWING ELECTRONIC RECORDS ARE TRUE AND ACCURATE REPRODUCTIONS OF THE ORIGINAL RECORDS OF JAMES CITY COUNTY GENERAL SERVICES DEPARTMENT- STORMWATER DIVISION; WERE SCANNED IN THE REGULAR COURSE OF BUSINESS PURSUANT TO GUIDELINES ESTABLISHED BY THE LIBRARY OF VIRGINIA AND ARCHIVES; AND HAVE BEEN VERIFIED IN THE CUSTODY OF THE INDIVIDUAL LISTED BELOW.

BMP NUMBER: 88019

DATE VERIFIED: December 3, 2021

QUALITY ASSURANCE TECHNICIAN: Charles E. Lovett II

Charles E. Lovett II

LOCATION: WILLIAMSBURG, VIRGINIA

NOTES: CERTIFY & UPLOAD

1. Maintenance Agreement



COUNTY OF JAMES CITY, VIRGINIA

DECLARATION OF COVENANTS
INSPECTION/MAINTENANCE OF DRAINAGE SYSTEM

Engineering and Resource
Protection Division
101-E Mounts Bay Road
Williamsburg, VA 23185
757-253-6670
jamescitycountyva.gov

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

THIS DECLARATION OF COVENANTS, made this 23 day of June, 20 15,
between DPP West, LLC, and all successors in interest,
("COVENANTOR(S)"), owner(s) of the following property:

Parcel Identification Number(s): 3824300021C

Legal Description(s): PARCEL 21-C NEW TOWN S-3 & S-6

Project or Subdivision Name: New Town Assiated Living Facility

Document/Instrument No(s): 140019317

or Deed Book _____, Page No. _____,

and the County of James City, Virginia ("COUNTY.")

WITNESSETH:

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

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

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

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

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

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

Prepared by (Name, Address & Phone):

Derek Robertson
5425 Discovery Park Blvd., Ste 201
Williamsburg, VA 23188
757-941-4300

Return to:

JCC Attorney's Office
101-D Mount's Bay Road
Williamsburg, VA 23185
(757) 253-6612

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

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

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

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

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

COVENANTOR(S)


Signature

Derek Robertson - Member DPP West, LLC
Print Name and Title

ACKNOWLEDGMENT

COMMONWEALTH OF VIRGINIA
CITY/COUNTY OF James City, to wit:

I hereby certify that on this 23rd day of June, 20 15, before the subscribed, a Notary Public for the Commonwealth of Virginia, personally appeared Derek Robertson and did acknowledge the foregoing instrument to be his/her Act.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal this 23rd day of June, 20 15.




Notary Public

Notary Registration Number: 7014335

My Commission expires: 12/31/18

Approved as to form:


County Attorney

Recorded: 6/26/15

2. Deeds/Easements/ Agreements/Property Records

3. Construction Certificate



Stormwater Conveyance and Stormwater Management / BMP Facilities Record Drawing and Construction Certification Forms

Note: In accordance with the Subdivision and Zoning ordinances of the County Code, plans of development have requirements to ensure that at the completion of the project and prior to release of surety, certified record drawings (as-builts) and construction certifications by a registered Professional Engineer, must be provided for constructed stormwater conveyance/drainage system and stormwater management/Best Management Practice (BMP) facilities. In addition, Sections 8-25 and 8-26 of Article II of Chapter 8 of the County Code, require the submission of construction record drawings and construction certifications for permanent stormwater management/BMP facilities and permanent stormwater conveyance systems such as inlets, pipes and channels. In addition, for stormwater management/BMP facilities involving the construction of an impounding structure or dam embankment, certification is required by a professional engineer who performed inspections during construction of the facility.

Section 1 - Site Information:

Project Name: New Town Assisted Living Facility

Structure/BMP Name: N/A

Project Location: 5501 Discovery Park Boulevard

BMP Location: N/A

County Plan No.: JCC SP-0086-2016 VAHU6 HUC Code: JL31

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

Tax Map/Parcel No.: 3824300021C

County BMP ID Code (if known): _____

Zoning District: MU Mixed Use

Land Use: Assisted Living

Site Area (sf or acres): 196,618 S.F.

Brief Description of Stormwater Conveyance and/or Stormwater Management/BMP Facility:

On site stormwater conveyance system.

Engineering & Resource Protection
JUN 15 2017

RECEIVED

Nearest Visible Landmark to SWM/BMP Facility: Discovery Park Blvd.

Nearest Vertical Ground Control (if known):

☐ JCC Geodetic Ground Control ☐ USGS ☐ Temporary ☐ Arbitrary ☐ Other

Station Number or Name: N/A

Datum or Reference Elevation: _____

Control Description: _____

Control Location from Subject Facility: _____

**Stormwater Conveyance and Stormwater Management/BMP Facilities
Record Drawing and Construction Certification Forms**

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Section 2 – Construction Information

Section 2A - Stormwater Conveyance System Construction Information (Pipes, Channels, etc.):

Pre-Construction Meeting Held: ☐ Yes ☐ No ☒ Unknown
Approx. Construction Start Date for System: _____
System Milestone Inspection(s) by County Representative during Construction: ☐ Yes ☐ No ☒ Unknown
Name of Site Work Contractor Who Constructed System: LARS
Name of Professional Firm Who Monitored Construction: _____
Date of Completion of System: _____
Date of Record Drawing/Construction Certification Submittal: _____

Section 2B - Stormwater Management / BMP Facility Construction Information:

Pre-Construction Meeting Held for Construction of SWM/BMP Facility: ☐ Yes ☐ No ☒ Unknown
Approx. Construction Start Date for SWM/BMP Facility: _____
Facility Monitored by County Representative during Construction: ☐ Yes ☐ No ☒ Unknown
Name of Site Work Contractor Who Constructed Facility: _____
Name of Professional Firm Who Monitored Construction: _____
Date of Completion for SWM/BMP Facility: _____
Date of Record Drawing/Construction Certification Submittal: _____

(Note: Record drawings and construction certifications are required within thirty (30) days of the completion of the stormwater conveyance system and/or stormwater management/ BMP facility construction. Record drawings and construction certifications must be reviewed and approved by the VESCP/VSMP authority prior to final inspection, acceptance, and surety release or reduction.)

Section 3 - Owner/Designer/Contractor Information:

Owner/Developer: *(Note: Site owner, operator, applicant or permittee responsible for development of the project.)*

Name: Robertson Liebler

Mailing Address: 5388 Discovery Park Blvd., Suite 120-B

Williamsburg, VA. 23188

Business Phone: 757-941-4300

Fax: 757-208-0311

Email: _____

Contact Person: Derek Robertson

Title: Owner

Design Professional: *(Note: Professional Engineer, Certified Land Surveyor or other qualified professional responsible for the design and preparation of plans and specifications for the stormwater conveyance system and/or stormwater management/BMP facility.)*

Firm Name: Landtech Resources Inc.

Mailing Address: 3925 Midlands Road Williamsburg, VA 23188

Business Phone/Fax: 757-565-1677

Email: william@landtechresources.com

Name of Responsible Plan Preparer: Matthew H. Connolly

Title: President

Plan Name: New Town Assisted Living Facility

Firm's Project No. 14-290

Plan/Revision Date: 9/21/2015

Plan Sheet No.'s Applicable: C406 / _____ / _____ / _____ / _____ / _____ / _____

**Stormwater Conveyance and Stormwater Management / BMP Facilities
Record Drawing and Construction Certification Forms**

Page 3

Site/Utility Contractor: *(Note: Contractor directly responsible for construction of the stormwater conveyance system and/or stormwater management/BMP facility.)*

Firm Name: LARS

Mailing Address: 5360 Discovery Park Blvd. Suite 201

Business Phone/Fax: 757-941-4300

Email: _____

Contact Person: Jordan Anglin

Site Foreman/Supervisor: _____

Specialty Subcontractors and Purpose: _____

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 drawing, for the stormwater conveyance system for the project including any stormwater management/BMP facilities. A Registered Professional Engineer is responsible for the inspection, monitoring, and certification of stormwater conveyance systems and/or stormwater management / BMP facilities during its construction. See next page for the "simple" County provided certification form that can be used by qualified professionals to provide this information.)*



STANDARD CERTIFICATION FORM

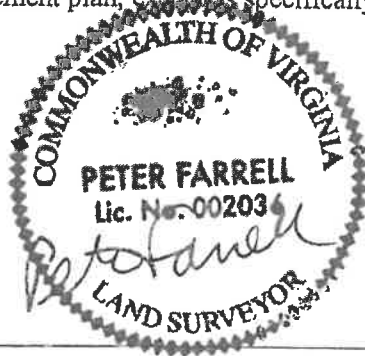
Record Drawing Certification

Firm Name: Landtech Resources Inc.
Mailing Address: 3925 Midlands Road
Williamsburg VA 23188
Business Phone: 757-565-1677
Fax: _____
Name: Peter Farrell
Title: Land Surveyor
Signature: _____
Date: 5/4/2017

I hereby certify to the best of my knowledge and belief that this record drawing represents the actual condition of the,

- ☒ Stormwater conveyance system
☐ Stormwater management / BMP facility

and the facility appears to conform to the provisions of the approved design plan, specifications, and stormwater management plan, except as specifically noted here.



(Seal)

Virginia Registered Professional Engineer or Certified
Land Surveyor

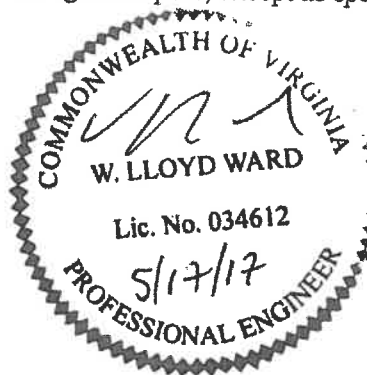
Construction Certification

Firm Name: ECS MID-ATLANTIC LLC
Mailing Address: 1643 MEADOWS TRAIL
WILLIAMSBURG, VA 23185
Business Phone: 757-229-6677
Fax: 757-229-9978
Name: W. Lloyd Ward, P.E.
Title: VP / BRANCH MANAGER
Signature: _____
Date: 5/17/17

I hereby certify to the best of my knowledge and belief that this,

- ☒ Stormwater conveyance system
☐ Stormwater management / BMP facility

was monitored and constructed in accordance with the provisions of the approved plan, specifications, and stormwater management plan, except as specifically noted here.



(Seal)

Virginia Registered Professional Engineer

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

- ☐ Pre-Construction Meeting - Provides an opportunity to review SWM/BMP facility construction, maintenance and operation plans and addresses 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 Engineering and Resource Protection Division is requested. Usually, this requirement can be met simultaneously with Erosion and Sediment Control preconstruction meetings held for the project.
- ☐ The Record Drawing shall be prepared by a Registered Professional Engineer or Certified Land Surveyor for the drainage system of the project including any Best Management Practices.
- ☐ **Construction Certification** - Construction of stormwater management / BMP facilities which contain impoundments, embankments and related engineered appurtenances including subgrade preparation, compacted soils, structural fills, liners, geotextiles, 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 VESCP/VSMP authority 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 VESCP/VSMP authority 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 VESCP/VSMP authority.
- ☐ 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 Engineering and Resource Protection Division prior to final inspection, acceptance and bond/surety release.

Dual Purpose Facilities (Temporary Sediment Basin & BMP) - 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.

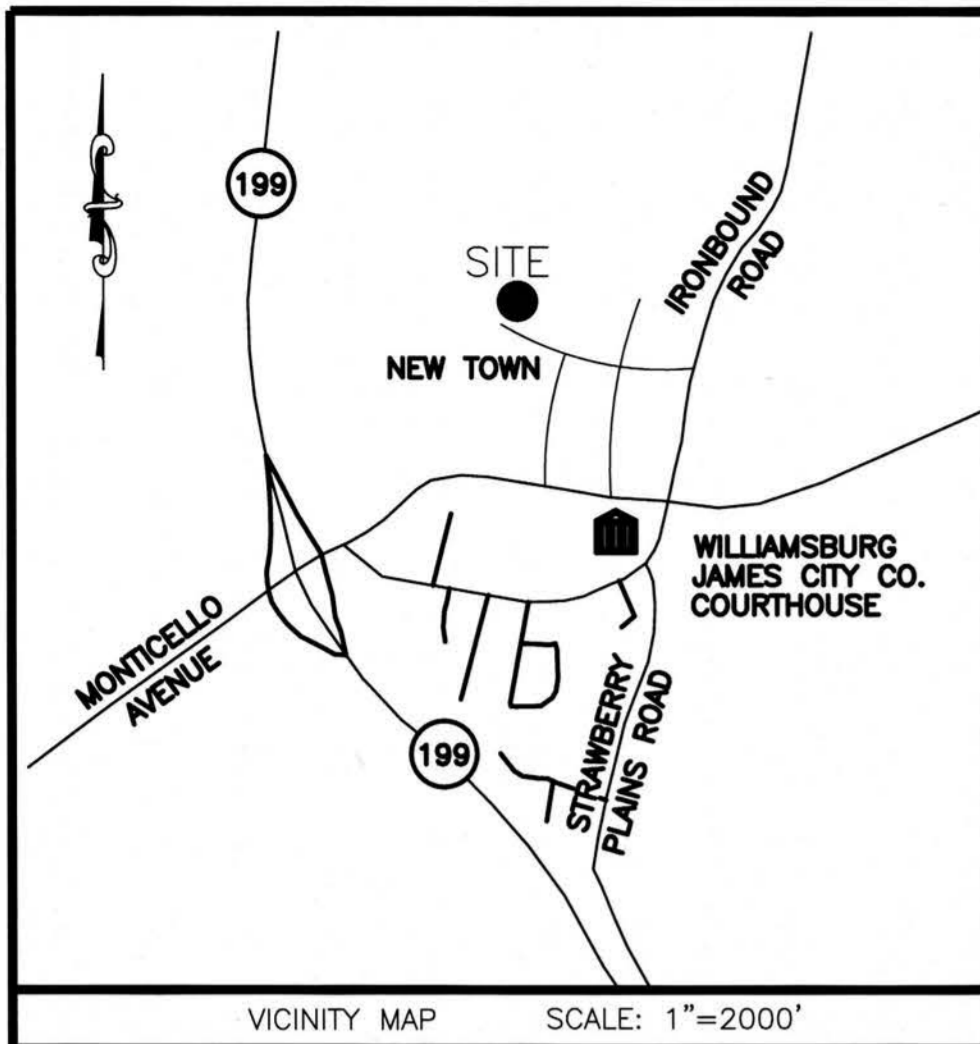
Interim or final record drawing and construction certifications are not required for temporary sediment basins which are designed and constructed in accordance with current minimum standards and specifications for temporary sediment basins per the Virginia Erosion and Sediment Control Handbook (VESCH); 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 Engineering and Resource Protection 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.)

- ☐ In accordance with Sections 8-25 and 8-27 of the Chapter 8 of the County Code, an *internal closed-circuit television (CCTV)* post installation inspection, performed by the operator, is required as part of the asbuilt and construction certification process. CCTV inspections shall follow standards and specifications developed by the VSMP authority administrator.
- ☐ Record Drawings shall provide, at a minimum, all information as shown within these requirements, in accordance with standard industry practice, and in accordance with applicable **RECORD DRAWING CHECKLISTS** specific to the type of SWM/BMP facility being constructed. Other additional record data may be formally requested by the VESCP/VSMP authority. *(Note: Refer to the Virginia BMP Clearinghouse website and the current edition of the Virginia Stormwater Management Handbook for representative record drawing and construction certification checklists for the specific type of stormwater management/BMP facility being used. If none are available, the VSMP authority can provide this information if specifically requested.)*
- ☐ 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 reproducible.

- 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's BMP database and GIS system, it is requested that the record drawings also be submitted to the VESCP/VSMP authority on a CD-ROM in an acceptable electronic file format such as *.pdf, *.dxf, *.dwg, etc. or in a standard scanned and readable format. The electronic file requirement can be discussed and coordinated with Engineering and Resource Protection Division staff at the time of final submission.

4. Record Drawings (As Builts)



AMENDED SITE PLAN OF NEW TOWN ASSISTED LIVING FACILITY

JAMES CITY COUNTY

JAMESTOWN DISTRICT

VIRGINIA



PLANNING DIVISION

MAR 17 2017

RECEIVED

APR 10 2017

RECEIVED

STATISTICAL INFORMATION

ZONE	MU - MIXED USE WITH PROFFERS ASSOCIATED WITH CASE MP-5-04 & Z-5-04.
DISTRICT	JAMESTOWN DISTRICT
PARCEL I.D.	PARCEL I.D. #3824300021C
EXISTING ADDRESS	5525 DISCOVERY PARK BOULEVARD
WATER	PUBLIC-JCSA (INSIDE PSA)
SEWER	PUBLIC-JCSA (INSIDE PSA)
TOTAL SITE AREA	±196,618 S.F. / ±4.514 ACRES (PARCEL 21-C)
PRE-DEVELOPMENT COVER	
WOODS	108,697 S.F. / 2.495 AC. (55%)
TURF	87,612 S.F. / 2.011 AC. (44%)
IMPERVIOUS	309 S.F. / 0.008 AC. (1%)
POST-DEVELOPMENT COVER	
WOODS	24,600 S.F. / 0.558 AC. (13%)
TURF	90,083 S.F. / 2.075 AC. (45%)
IMPERVIOUS	81,935 S.F. / 1.881 AC. (42%)
DISTURBED AREA	4.25 ACRES
BUILDING AREA	NOT TO EXCEED 74,000 S.F. (INCLUDING BASEMENT)
1ST & 2ND STORY SAME	85 BEDS
BUILDING HEIGHT	45' - 50'
PARKING SPACES	71 PROVIDED 48 ON SITE 23 ALONG DISCOVERY PARK BLVD 3 H/C REQUIRED 4 H/C PROVIDED (ALL ARE VAN ACCESSIBLE)

TABLE OF CONTENTS

SHEET NO.	SHEET TITLE
C001	COVER
C100	EXISTING CONDITIONS / ENVIRONMENTAL INVENTORY
C200	DEMOLITION / EROSION & SEDIMENT CONTROL PLAN
C300	LAYOUT PLAN
C400	GRADING PLAN
C401	PROPOSED DRAINAGE MAP
C402	STORM SEWER LAYOUT
C500	UTILITY PLAN
C501	UTILITY PROFILES
C700	LANDSCAPE PLAN
C701	LANDSCAPE PLAN NOTES / DETAILS
C800	LIGHTING PLAN
C801	LIGHTING PLAN NOTES / DETAILS
C900	NOTES / DETAILS
C901	NOTES / DETAILS
C902	NOTES / DETAILS
C903	NOTES / DETAILS

**BEFORE DIGGING CALL "MISS UTILITY"
OF VIRGINIA AT 811**

NOTES:

- PER FEMA F.I.R.M. #51095C0136D DATED 12-16-2015 THIS PARCEL APPEARS TO LIE IN ZONE X.
- TOPOGRAPHIC SURVEY SHOWN HEREON IS BASED ON A FIELD SURVEY PERFORMED BY LANDTECH RESOURCES 09-01-2014; A TITLE REPORT WAS NOT PROVIDED TO THIS FIRM FOR THE PREPARATION OF THIS SURVEY AND SITE PLAN.
- THE EXISTENCE AND LOCATION (HORIZONTAL AND VERTICAL) OF EXISTING UTILITIES ARE NOT GUARANTEED AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
- 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.
- THERE ARE NO ANTICIPATED OFFSITE LAND DISTURBING AREA ASSOCIATED WITH THE DEVELOPMENT OF THIS SITE.
- THE OWNER WILL BE REQUIRED TO OBTAIN A VSMP PERMIT FROM THE VIRGINIA DEPARTMENT OF CONSERVATION & RECREATION IF THE DISTURBED AREA IS GREATER THAN 2,500 SF. THIS PERMIT WILL REQUIRE A STORMWATER POLLUTION PREVENTION PLAN.
- STORMWATER RUNOFF FROM THE SITE DRAINS TO AN EXISTING BMP NORTHEAST OF SITE.
- A LAND DISTURBING PERMIT AND SILTATION AGREEMENT, WITH SURETY ARE REQUIRED FOR THIS PROJECT.
- THE SITE'S HYDROLOGIC UNIT CODE IS JL31.
- THE SITE IS LOCATED IN THE POWHATAN CREEK WATERSHED.
- A STANDARD INSPECTION/MAINTENANCE AGREEMENT IS REQUIRED TO BE EXECUTED WITH THE COUNTY DUE TO THE PROPOSED STORMWATER CONVEYANCE SYSTEM.
- IF A GENERAL VIRGINIA POLLUTANT DISCHARGE ELIMINATION SYSTEM (VPDES) PERMIT FOR DISCHARGES OF STORMWATER ASSOCIATED WITH INDUSTRIAL ACTIVITY IS REQUIRED, IT IS THE OWNER'S RESPONSIBILITY TO REGISTER AND COMPLY WITH THE PROVISIONS OF THE GENERAL PERMIT IN ACCORDANCE WITH CURRENT REQUIREMENTS OF THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY AND 9 VAC 25-151-10 ET SEQ. CONTACT THE TIDEWATER REGIONAL OFFICE OF THE DEQ AT (757) 518-2000 OR THE CENTRAL OFFICE AT (804) 698-4000 FOR FURTHER DETAILS.
- IF BUILDING PLANS CHANGE SUCH THAT THE LOCATIONS OF PUBLIC ENTRANCES ARE MODIFIED, A SITE PLAN AMENDMENT MAY BE REQUIRED BEFORE THE CODES COMPLIANCE DIVISION WILL ISSUE PERMITS.
- CHANGES IN THE PROPOSED USE OF BUILDINGS MAY RESULT IN ADDITIONAL PARKING BEING REQUIRED.
- ALL OBJECTIONABLE AND DELETERIOUS MATERIAL IS TO BE REMOVED FROM THE SITE AND DISPOSED OF IN A STATE APPROVED FACILITY MEETING THE REQUIREMENTS OF ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.
- A VDOT LAND USE PERMIT WILL BE REQUIRED FOR ANY WORK IN THE VDOT RIGHT OF WAY.
- THE STORMWATER CONVEYANCE SYSTEMS AS PROPOSED FOR THIS PROJECT WILL REQUIRE SUBMISSION, REVIEW, AND APPROVAL OF A RECORD DRAWING (AS-BUILT) AND CONSTRUCTION CERTIFICATION PRIOR TO RELEASE OF THE POSTED BOND/SURETY. CONTRACTOR SHALL ENSURE THIS ACTIVITY IS ADEQUATELY COORDINATED AND PERFORMED BEFORE, DURING AND FOLLOWING CONSTRUCTION IN ACCORDANCE WITH CURRENT COUNTY GUIDELINES.
- THE OWNER CAN SUBSTITUTE SIMILAR SIZE AND TYPES OF TREES AND SHRUBS BASED ON AVAILABILITY AT THE TIME OF PLANTING; OWNER MUST CONSULT WITH JCC LANDSCAPE PLANNER PRIOR TO ANY CHANGES.
- A BUILDING PERMIT IS REQUIRED FOR THIS SITE PLAN.
- ALL PRIVATE ENTRANCES SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT VDOT STANDARDS AND SPECIFICATIONS. IT IS THE DEVELOPER'S RESPONSIBILITY TO INSURE THAT BUILDERS HAVE PROPERLY INSTALLED ALL CONCRETE ENTRANCES AND ENTRANCE CULVERTS.
- ANY EXISTING UNUSED WELLS SHALL BE ABANDONED IN ACCORDANCE WITH STATE PRIVATE WELL REGULATIONS AND JAMES CITY COUNTY CODE.
- 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.
- JCC PLANNING COMMISSION GRANTED A UNIVERSAL WAIVER TO THE 50' FRONT SETBACK REQUIREMENT ON JUNE 5, 2006 FOR STRUCTURES ALONG DISCOVERY PARK BLVD. PROVIDED THAT PROPOSALS ARE IN ACCORDANCE WITH THE NEW TOWN DESIGN GUIDELINES.
- VDOT SHALL NOT BE RESPONSIBLE FOR MAINTAINING ANY SIDEWALK OUTSIDE OF THE STATE MAINTAINED RIGHT-OF-WAY LIMITS.
- PRIVATELY OWNED UTILITIES (EG WATER & SEWER LINES, FIRE MAINS) SHOWN ON THIS PLAN ARE REGULATED BY THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE AND ENFORCED BY THE CODE AND COMPLIANCE DEPARTMENT. THESE PRIVATELY OWNED UTILITIES MUST COMPLY FULLY WITH THE INTERNATIONAL PLUMBING CODE, THE NATIONAL FIRE PREVENTION ASSOCIATION STANDARD 24 AND THE INTERNATIONAL FIRE CODE. CONTRACTORS WORKING FROM THIS SITE PLAN ARE CAUTIONED NOT TO INSTALL OR CONCEAL PRIVATELY OWNED SITE UTILITIES WITHOUT OBTAINING REQUIRED PERMITS AND INSPECTIONS.
- AN OFF STREET PARKING WAIVER WAS GRANTED BY THE PLANNING DIRECTOR IN ACCORDANCE WITH SEC. 24-55 OF THE ZONING ORDINANCE.
- THIS SITE WILL DRAIN TO AN EXISTING OFFSITE BMP; SEE JCC SP-007-08, BMP ID #PC242.

THIS SITE PLAN AMENDMENT ADDRESSES
CHANGES MADE TO THE SITE LAYOUT
PLAN DURING THE CONSTRUCTION PORTION
OF THIS PROJECT.

THIS SITE PLAN AMENDMENT WAS
APPROVED BY THE NEW TOWN DESIGN
REVIEW BOARD ON JANUARY 20, 2017.

COUNTY OF JAMES CITY FINAL SITE PLAN	
APPROVALS	DATE
Fire Dept.	KD/sb 1/24/17
Health Dept.	
VOGT	EC/sb 4/5/17
Planning	DLW/JEP 3/23/17
Environ.	PH/sb 4/9/17
Zoning Admin.	DW/sb 2/3/17
JCSA	
County Eng.	
REA	Landtype SW/sb 1/23/17
Other	BSP - TC/sb 2/9/17

OWNER/DEVELOPER



CONTACT: DEREK ROBERTSON (OWNER)
5388 DISCOVERY PARK BLVD., SUITE 120-B
WILLIAMSBURG, VA. 23188
757-941-4300 (P)
757-208-0311 (F)

JCC SP-0010-2017

AMENDMENT TO SP-0083-2014

NO.	DATE	REVISION / COMMENT / NOTE
1	03/09/2017	REVISED LIGHTING PLAN AND DETAILS

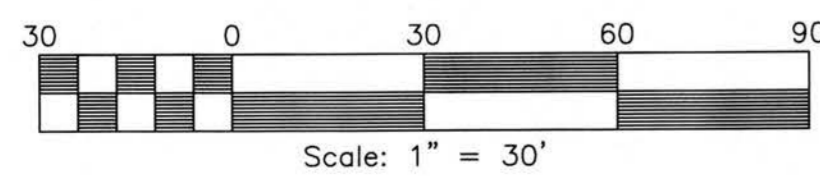
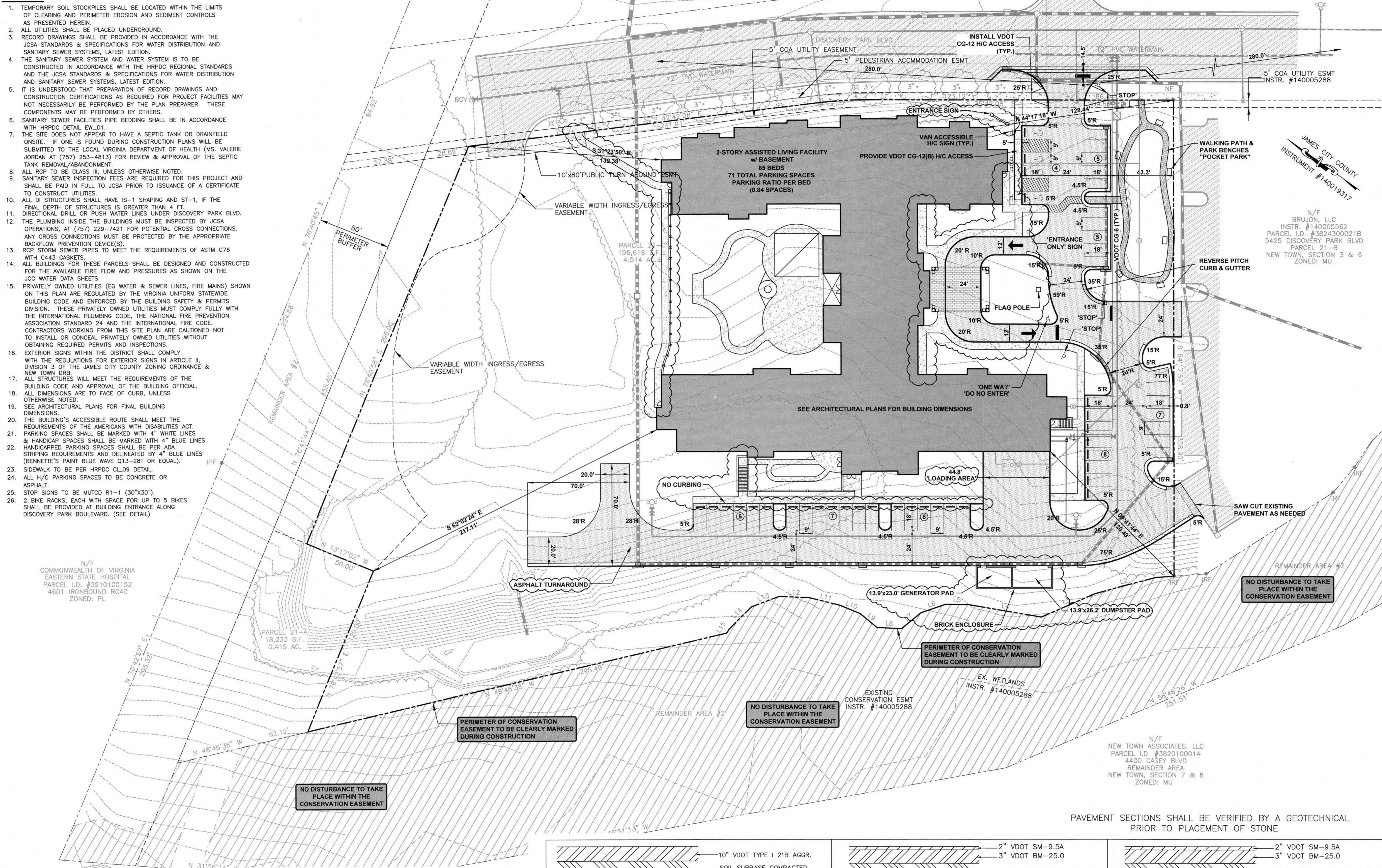
LRI
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Ph: (757) 565-1677 Fax: (757) 565-0782
web: landtechresources.com



JOB: 14-290
DWG NO: 14-290-DESIGN
DATE: 02-20-2017
DRAWN BY: WSF
C001
SHEET: 1 OF 17

1. TEMPORARY SOIL STOCKPILES SHALL BE LOCATED WITHIN THE LIMITS OF CLEARING AND PERIMETER EROSION AND SEDIMENT CONTROLS AS PRESENTED HEREIN.
2. ALL UTILITIES SHALL BE PLACED UNDERGROUND.
3. RECORD DRAWINGS SHALL BE PROVIDED IN ACCORDANCE WITH THE JCSA STANDARDS & SPECIFICATIONS FOR WATER DISTRIBUTION AND SANITARY SEWER SYSTEMS, LATEST EDITION.
4. THE SANITARY SEWER SYSTEM AND WATER SYSTEM IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE HRPCD REGIONAL STANDARDS AND THE JCSA STANDARDS & SPECIFICATIONS FOR WATER DISTRIBUTION AND SANITARY SEWER SYSTEMS, LATEST EDITION.
5. IT IS UNDERSTOOD THAT PREPARATION OF RECORD DRAWINGS AND CONSTRUCTION CERTIFICATIONS AS REQUIRED FOR PROJECT FACILITIES MAY NOT NECESSARILY BE PERFORMED BY THE PLAN PREPARER. THESE COMPONENTS MAY BE PERFORMED BY OTHERS.
6. SANITARY SEWER FACILITIES PIPE BEDDING SHALL BE IN ACCORDANCE WITH HRPCD DETAIL EW_01.
7. THE SITE DOES NOT APPEAR TO HAVE A SEPTIC TANK OR DRAINFIELD ON-SITE. IF ONE IS FOUND DURING CONSTRUCTION PLANS WILL BE SUBMITTED TO THE LOCAL VIRGINIA DEPARTMENT OF HEALTH (MS. VALERIE JORDAN AT (757) 253-4813) FOR REVIEW & APPROVAL OF THE SEPTIC TANK REMOVAL/ABANDONMENT.
8. ALL RCP TO BE CLASS III, UNLESS OTHERWISE NOTED.
9. SANITARY SEWER INSPECTION FEES ARE REQUIRED FOR THIS PROJECT AND SHALL BE PAID IN FULL TO JCSA PRIOR TO ISSUANCE OF A CERTIFICATE TO CONSTRUCT UTILITIES.
10. ALL STRUCTURES SHALL HAVE IS-1 SHAPING AND ST-1, IF THE FINAL DEPTH OF STRUCTURES IS GREATER THAN 4 FT.
11. DIRECTIONAL DRILL OR PUSH WATER LINES UNDER DISCOVERY PARK BLVD.
12. THE PLUMBING INSIDE THE BUILDINGS MUST BE INSPECTED BY JCSA OPERATIONS, AT (757) 229-7421 FOR POTENTIAL CROSS CONNECTIONS. ANY CROSS CONNECTIONS MUST BE PROTECTED BY THE APPROPRIATE BACKFLOW PREVENTION DEVICE(S).
13. RUSTY IRON SEWER PIPES TO MEET THE REQUIREMENTS OF ASTM C76 WITH C443 GASKETS.
14. ALL BUILDINGS FOR THESE PARCELS SHALL BE DESIGNED AND CONSTRUCTED FOR THE AVAILABLE FIRE FLOW AND PRESSURES AS SHOWN ON THE JCC WATER DATA SHEETS.
15. PRIVATELY OWNED UTILITIES (EG WATER & SEWER LINES, FIRE MAINS) SHOWN ON THIS PLAN ARE REGULATED BY THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE AND ENFORCED BY THE BUILDING SAFETY & PERMITS DIVISION. THESE PRIVATELY OWNED UTILITIES MUST COMPLY FULLY WITH THE INTERNATIONAL PLUMBING CODE, THE NATIONAL FIRE PREVENTION ASSOCIATION STANDARD 24 AND THE INTERNATIONAL FIRE CODE. CONTRACTORS WORKING FROM THIS SITE PLAN ARE CAUTIONED NOT TO INSTALL OR CONCEAL PRIVATELY OWNED UTILITIES WITHOUT OBTAINING REQUIRED PERMITS AND INSPECTIONS.
16. 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 & NEW TOWN DRB.
17. ALL STRUCTURES WILL MEET THE REQUIREMENTS OF THE BUILDING CODE AND APPROVAL OF THE BUILDING OFFICIAL.
18. ALL DIMENSIONS ARE TO FACE OF CURB, UNLESS OTHERWISE NOTED.
19. SEE ARCHITECTURAL PLANS FOR FINAL BUILDING DIMENSIONS.
20. THE BUILDING'S ACCESSIBLE ROUTE SHALL MEET THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT.
21. PARKING SPACES SHALL BE MARKED WITH 4" WHITE LINES & HANDICAP SPACES SHALL BE MARKED WITH 4" BLUE LINES.
22. HANDICAPPED PARKING SPACES SHALL BE PER ADA STRIPING REQUIREMENTS AND DELINEATED BY 4" BLUE LINES (BENNETT'S PAINT BLUE WAVE Q13-28T OR EQUAL).
23. SIDEWALK TO BE PER HRPCD CI_09 DETAIL.
24. ALL H/C PARKING SPACES TO BE CONCRETE OR ASPHALT.
25. STOP SIGNS TO BE MUTCD R1-1 (30"x30").
26. 2 BIKE RACKS, EACH WITH SPACE FOR UP TO 5 BIKES SHALL BE PROVIDED AT BUILDING ENTRANCE ALONG DISCOVERY PARK BOULEVARD. (SEE DETAIL)



GRAVEL TURNAROUND SECTION

ENTRANCE & DRIVE AISLE SECTION

PARKING AREA SECTION

SITE PLAN OF NEW TOWN ASSIST- LIVING FACILITY

JAMES CITY COUNTY

JAMESTOWN DISTRICT

VIRGINIA

[illegible]

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Ph: (757) 565-1677 Fax: (757) 565-0782
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SCALE: 1" = 30'

DATE: 02-20-2017

JOB: 14-290

DRAWN BY: WSE

C300

SHEET: 4 OF 17

- DA - A

0.39 AC. TOTAL
0.22 AC. (TURF)
0.17 AC. (IMPERVIOUS)
Tc = 5 MIN.
WIEGHTED C = 0.56

DA - B

0.74 AC. TOTAL
0.39 AC. (TURF)
0.35 AC. (IMPERVIOUS)
Tc = 5 MIN.
WIEGHTED C = 0.58

DA - C

0.11 AC. TOTAL
0.02 AC. (TURF)
0.09 AC. (IMPERVIOUS)
Tc = 5 MIN.
WIEGHTED C = 0.79

DA - D

0.11 AC. TOTAL
0.02 AC. (TURF)
0.09 AC. (IMPERVIOUS)
Tc = 5 MIN.
WIEGHTED C = 0.79

DA - E

0.12 AC. TOTAL
0.02 AC. (TURF)
0.10 AC. (IMPERVIOUS)
Tc = 5 MIN.
WIEGHTED C = 0.80

DA - F

0.14 AC. TOTAL
0.01 AC. (TURF)
0.13 AC. (IMPERVIOUS)
Tc = 5 MIN.
WIEGHTED C = 0.86

DA - G

0.18 AC. TOTAL
0.03 AC. (TURF)
0.15 AC. (IMPERVIOUS)
Tc = 5 MIN.
WIEGHTED C = 0.80

DA - H

0.17 AC. TOTAL
0.06 AC. (TURF)
0.11 AC. (IMPERVIOUS)
Tc = 5 MIN.
WIEGHTED C = 0.76

DA - I

0.26 AC. TOTAL
0.06 AC. (TURF)
0.20 AC. (IMPERVIOUS)
Tc = 5 MIN.
WIEGHTED C = 0.68

DA - J

0.10 AC. TOTAL
0.05 AC. (TURF)
0.05 AC. (IMPERVIOUS)
Tc = 5 MIN.
WIEGHTED C = 0.60

DA - K

0.16 AC. TOTAL
0.06 AC. (TURF)
0.10 AC. (IMPERVIOUS)
Tc = 5 MIN.
WIEGHTED C = 0.72

DA - L

0.05 AC. TOTAL
0.02 AC. (TURF)
0.03 AC. (IMPERVIOUS)
Tc = 5 MIN.
WIEGHTED C = 0.66

DA - M

0.23 AC. TOTAL
0.07 AC. (TURF)
0.16 AC. (IMPERVIOUS)
Tc = 5 MIN.
WIEGHTED C = 0.85

DA - N

0.13 AC. TOTAL
0.02 AC. (TURF)
0.11 AC. (IMPERVIOUS)
Tc = 5 MIN.
WIEGHTED C = 0.81

DA - O

0.19 AC. TOTAL
0.07 AC. (TURF)
0.12 AC. (IMPERVIOUS)
Tc = 5 MIN.
WIEGHTED C = 0.69

DA - P

0.37 AC. TOTAL
0.09 AC. (TURF)
0.28 AC. (IMPERVIOUS)
Tc = 5 MIN.
WIEGHTED C = 0.83

DA - Q

0.15 AC. TOTAL
0.06 AC. (TURF)
0.09 AC. (IMPERVIOUS)
Tc = 5 MIN.
WIEGHTED C = 0.74

DA - R

0.15 AC. TOTAL
0.06 AC. (TURF)
0.09 AC. (IMPERVIOUS)
Tc = 5 MIN.
WIEGHTED C = 0.74

DA - S

0.15 AC. TOTAL
0.06 AC. (TURF)
0.09 AC. (IMPERVIOUS)
Tc = 5 MIN.
WIEGHTED C = 0.74

DA - T

0.09 AC. TOTAL
0.01 AC. (TURF)
0.08 AC. (IMPERVIOUS)
Tc = 5 MIN.
WIEGHTED C = 0.83
-
- JAMES CITY COUNTY
INSTRUMENT #140019317
- N/F
BRUJON, LLC
INSTR. #140005562
PARCEL I.D. #3824300021B
5425 DISCOVERY PARK BLVD
PARCEL 21-B
NEW TOWN, SECTION 3 & 6
ZONED: MU
- N/F
COMMONWEALTH OF VIRGINIA
EASTERN STATE HOSPITAL
PARCEL I.D. #3910100152
4601 IRONBOUND ROAD
ZONED: PL
- N/F
NEW TOWN ASSOCIATES, LLC
PARCEL I.D. #3820100014
4400 CASEY BLVD
REMAINDER AREA
NEW TOWN, SECTION 7 & 8
ZONED: MU
-
- SITE PLAN OF
NEW TOWN ASSISTED
LIVING FACILITY

JAMES CITY COUNTY
JAMESTOWN DISTRICT
VIRGINIA

NO.	DATE	REVISION / COMMENT / NOTE

COMMONWEALTH OF VIRGINIA
Matthew H. Connolly
Lic. No. 48347
02/20/17
PROFESSIONAL ENGINEER

LRI
LANDTECH
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ENGINEERING • SURVEYING • GPS

3925 Midlands Road, Williamsburg, VA 23188
Ph: (757) 565-1677 Fax: (757) 565-0782
web: landtechresources.com

SCALE: 1" = 30'

DATE: 02-20-2017

JOB: 14-290

DRAWN BY: WSF

C401
PROPOSED
DRAINAGE MAP

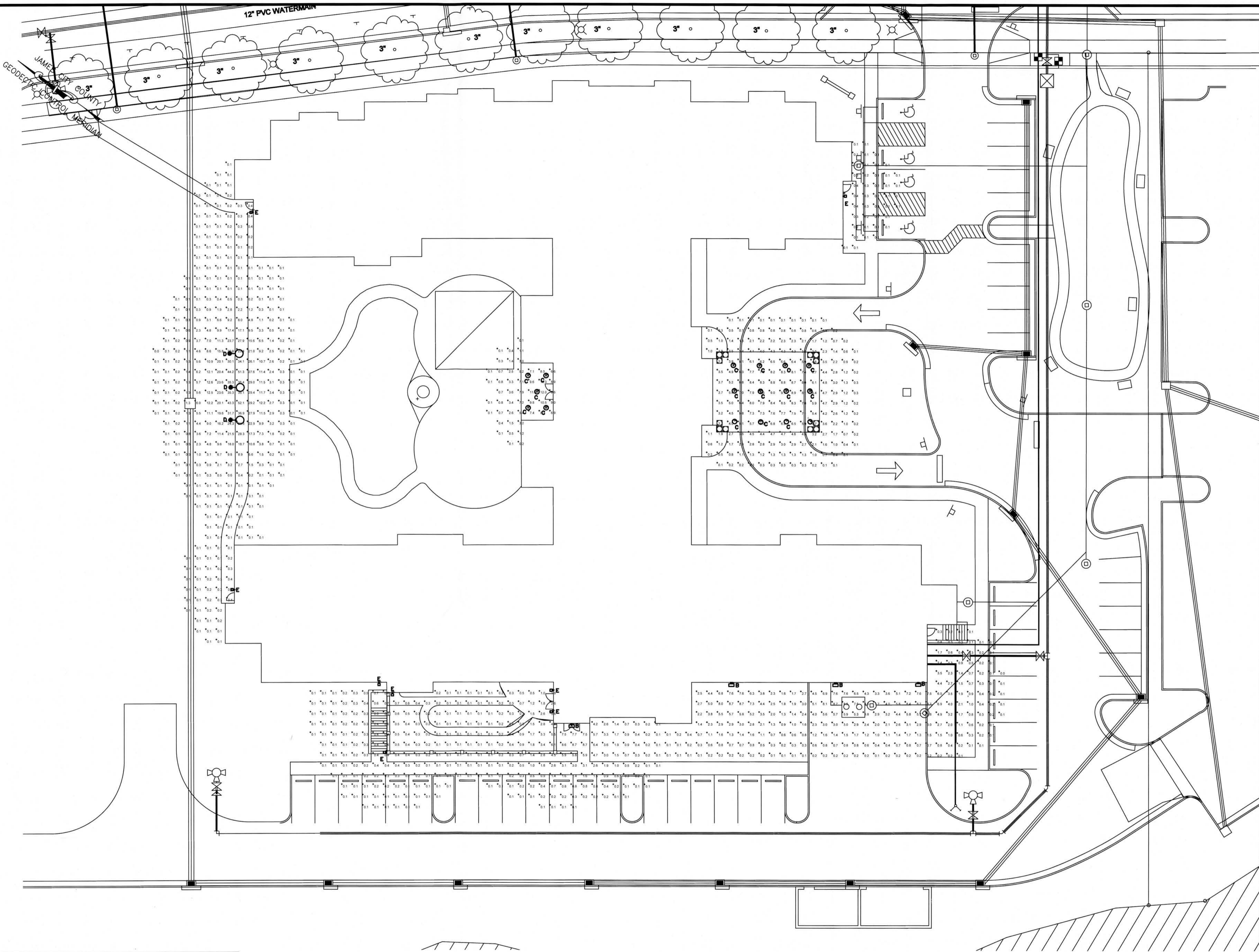
SHEET: 6 OF 16

LIGHTING NOTES

1. THE LIGHTING PLAN IS INTENDED SOLELY FORTHE PURPOSE OF FIXTURE SELECTION AND PLACEMENT AND DEPICTING ASSOCIATED LUMINANCE LEVELS.
2. THE CONTRACTOR AND/OR ELECTRICAL ENGINEER SHALL BE RESPONSIBLE FOR: SOURCE OF POWER; CIRCUITY; WIRE SIZE; CONDUIT LAYOUT; AND ANY OTHER ELECTRICAL REQUIREMENTS
3. CONTRACTOR SHAL ENSURE THE LIGHT FIXTURE, POLE, POLE BASE, AND CONCRETE BASE ARE COMPATIBLE.
4. INSTALATION OF POLES AND LIGHTING FIXTURES SHALL BE IN ACCORDANCE WITH MANUFACTURES INSTRUCTIONS.
5. THE CONTRACTOR SHALL ENSURE THAT THE POLE DIAMETER, GAUGE, AND CONCRETE BASE MEET OR EXCEED THE MINIMUM LOAD REQUIREMENTS BASED ON FIXTURE COUNT, REGIONAL WIND LOAD STATISTICS, ADDITIONAL BANNERS / POLE ARMS, AND THE FIXTURE SPECIFICATIONS.
6. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES PRIOR TO THE BEGINNING OF WORK AND AVOIDING THEM DURING INSTALIATION OPERATIONS.
7. ALONG ALL PLANTING STRIPS AND WITHIN ALL SIGHT DISTANCE TRIANGLES, THE AREA BETWEEN 2 AND 7 FEET ABOVE GROUND SHALL BE MAINTAINED AS A CLEAR ZONE TO PRESERVE SIGHT LINES AND ACCOMMODATE PEDESTRIANS.

ADDITIONAL NOTED REQUIRED BY JAMES CITY COUNTY

1. POST APPROVAL ALTERATIONS TO LIGHTING PLANS OR INTENDED SUBSTITUTIONS FOR SPECIFIED LIGHTING EQUIPMENTON THE APPROVED PLANS SHALL BE SUBMITTED TO THE COUNTY FOR REVIEW AND APPRVAL PRIOR TO INSTALIATION. REQUESTS FOR SUBSTITUTIONS SHALLBE ACCOMPANIED BY A LIGHTING PLAN THAT MEETS ALL REQUIREMENTS OF THIS SECTION AND WHICH DEMONSTRATES THAT PROPOSED SUBSTITUTION WILL RESULT IN A LIGHTING DESIGN THAT EQUALS OR EXCEEDS THE QUALITY OF THE APPROVED PLAN.
2. THE COUNTY MAY CONDUCT A POST-INSTALLATION INSPECTION TO VERIFY COMPLIANCE WITH THE REQUIREMENTS OF THIS SECTION AND THE APPROVED LIGHTING PLAN.
3. INSTALATION OF THE LIGHTNING FIXTURES SHALL BE IN ACCORDANCE WITH SEC. 24-133 OF THE ZONING ORDINANCE.



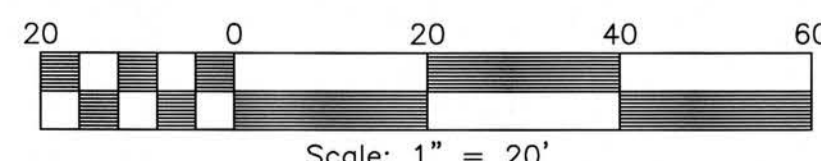
LIGHTING FIXTURE SCHEDULE

SYM	QUANTITY	CATALOG NUMBER	DESCRIPTION	LAMPS	LUMENS/LAMP	NOTES
B	4	MRW 100M MD	ARCHITECTURAL SCONCE WITH MEDIUM THROW DISTRIBUTION WITH CLEAR, FLAT GLASS LENS, COATED COATED LAMP.	(1)100W-MH	7900	
C	17	LE6 226 UNV/RS10/2PL-CW	6" DOWN LIGHT WITH (2) 26W TRT	(2)26W-TRT	860	
D	3	SR135-ACW	36" ARM EXTRUDED ARM MOUNTED LED	(1)76W-LED	8698	①
E	8	B4101-GRA-A-D	MEDIUM MANOR WALL MOUNT FIXTURE WITH 100W INCANDESCENT LAMP	(1)100W-INC.	480	

① POLE MOUNTED AT 8'-0" AFG

HIGHGROUND
SERVICES, INC.
Automating the Industrial World
227 28th St.,
Newport News, VA 23607
Tel 757-245-6321
Fax 757-245-6320
info@highgroundservices.com

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3925 Midlands Road Williamsburg, VA 23188
Ph: (757) 565-1877 Fax: (757) 565-0782
web: landtechresources.com



SITE PLAN OF
NEW TOWN ASSISTED
LIVING FACILITY

NO.	DATE	REVISION / COMMENT / NOTE
1	03-09-2017	REVISED LIGHTING PLAN AND DETAILS

COMMONWEALTH OF VIRGINIA
Matthew H. Connolly
Lic. No. 48347
03/09/2017
PROFESSIONAL ENGINEER

LRI
LANDTECH
RESOURCES, INC.
ENGINEERING • SURVEYING • GPS
3925 Midlands Road Williamsburg, VA 23188
Ph: (757) 565-1877 Fax: (757) 565-0782
web: landtechresources.com

SCALE: 1" = 20'
DATE: 02-20-2017
JOB: 14-290
DRAWN BY: WSF

C800
LIGHTING PLAN
NOTES / DETAILS

Visit our website www.luminis.com, complete I.E.S. formatted data table, and refer to page 5 for additional information.

SR1335 SERIES
SCIROCCO - LED

LUMINAIRE SELECTION

MODEL#	LED LIGHT SELECTION (4000K/5000K)	VOLTAGE	FINISH
	INPUT WATTS DELIVERED LUMENS		
Type II	18W 2690	<input type="checkbox"/> 120V	<input type="checkbox"/> WH White
	34W 4770	<input type="checkbox"/> 277V	<input type="checkbox"/> BLT Alk black
	68W 7904	<input type="checkbox"/> 277V	<input type="checkbox"/> SST Bronze
Type III	18W 2760	<input type="checkbox"/> 120V	<input type="checkbox"/> SST White
	34W 4395	<input type="checkbox"/> 277V	<input type="checkbox"/> TSS Titanium gray
	76W 8697	<input type="checkbox"/> 277V	<input type="checkbox"/> 601 Gun metal
Type IV	18W 2920	<input type="checkbox"/> 120V	<input type="checkbox"/> CHT Champagne
	38W 4493	<input type="checkbox"/> 277V	<input type="checkbox"/> 60T Steel Gray
	75W 8487	<input type="checkbox"/> 277V	
Type V	18W 2665	<input type="checkbox"/> 120V	
	36W 4243	<input type="checkbox"/> 277V	
	69W 7937	<input type="checkbox"/> 277V	
OPTIONAL COLORS			
<input type="checkbox"/> CS Custom color			
<input type="checkbox"/> RAL RAL color			
(Refer to color chart)			
APSER LED LIGHT SELECTION <th data-kind="ghost"></th> <th data-kind="ghost"></th> <th data-kind="ghost"></th>			
	INPUT WATTS DELIVERED LUMENS		
Type I	17W 358	<input type="checkbox"/> 120V	
	34W 776	<input type="checkbox"/> 277V	
MODEL			
<input type="checkbox"/> SR1335-1W180-0-4			
<input type="checkbox"/> SR1335-2W180-0-4			

NOTE: Above wattage values are based on 277V, tested at 25°C/77°F ambient temperature.
Wattage may vary by approx. +/- 10% for other voltages or changes in ambient temperature.
Luminaires output will remain constant.

OPTIONS

ELECTRICAL	MOUNTING	ACCESSORIES
<input type="checkbox"/> FS Fuses	<input type="checkbox"/> ACA Pole mount attachment with 45° support	<input type="checkbox"/> BLC Back light control
<input type="checkbox"/> PH Photocell	<input type="checkbox"/> ACA Double pole mount attachment with 45° support	<input type="checkbox"/> SPC Silver braided power cord with adjustable length (max. 50' in length)
<input type="checkbox"/> SP Single pole bracket 100V	<input type="checkbox"/> ACW Wall mount attachment with 45° support	<input type="checkbox"/> SC Safety cable extends 18" over mounting cable (with stem mounting only)
<input type="checkbox"/> KZA Alternate CCT K LED	<input type="checkbox"/> APA Pole mount shepherd arm attachment	<input type="checkbox"/> SSC Stabilizer cables
<input type="checkbox"/> K1 3000K CCT 80 CRI (Photocell 0.98)	<input type="checkbox"/> XAPX Double pole mount shepherd arm attachment at 180°	
<input type="checkbox"/> K3 3500K CCT 80 CRI (Photocell 0.98)	<input type="checkbox"/> ZAPC Double pole mount straight arm attachment at 180°	
<input type="checkbox"/> K5 5000K CCT 80 CRI (Photocell 1.0)	<input type="checkbox"/> APS Post two shepherd arm attachment	
	<input type="checkbox"/> CATS Gateway suspension attachment	
	<input type="checkbox"/> W Wall mount shepherd arm attachment	
	<input type="checkbox"/> T Wall mount straight arm attachment	
	<input type="checkbox"/> TTH 36" Flush-mountable stem with 45° swivel (other lengths available, please specify)	

NOTES

- If no voltage is specified, luminaires are factory prepared by default for 120V. For other voltages, please specify with catalog number, or consult factory.
- Fuses and photocell options are normally installed with poles when specified with Luminis luminaires. (Except for other types of mounting.)
- BLC Back Light Control - Type I Distribution.

LUMINIS.

LUMINIS | Toll free 866-586-5847 Fax 514-683-8872
260 Labrosse, Pointe-Claire (QC) Canada H9L 5L5

Luminis may be altered for design improvement or discontinued without prior notice.

LUMINIS.COM

Jan 2007 (Rev 1)

| 2

SR135 SERIES
SCIROCCO - LED

POLE MOUNT

ACP*

1" X 3" extended aluminum extended arm pole mounting adaptor designed to fit with 4 to 5" dia. poles, 1/2" dia. 48" standard natural stainless steel not support. (EP-A-03)

APC

1" X 3" extended aluminum side pole mounting straight adaptor (EP-A-03)

APA*

1.5/8" Dia. shepherd aluminum side pole mount. (EP-A-03)

ZACP*

Double pole mount attachment with 48" support at 180°

ZAPC

Double pole mount straight attachment at 180°

ZAPA*

Double pole mount shepherd arm attachment at 180°

APS

1.5/8" Dia. shepherd aluminum post-top mount with a cast aluminum tenon to fit with a 3.5/4" I.D. pole. (EP-A-05)

MATCHING POLE SELECTION

Ø 4"	Ø 5"	Ø 4"	Tapered Pole	Ø 4"	Height
PA4A10	PA4A30	PS10	PS10	PSB10	10 Ft. (3.0 M)
PA4A12	PA4A32	PS12	PS12	PSB12	12 Ft. (3.6 M)
PA4A14	PA4A34	PS14	PS14	PSB14	14 Ft. (4.2 M)
PA4A16	PA4A36	PS16	PS16	PSB16	16 Ft. (4.8 M)
PA4A18	PA4A38	PS18	PS18	PSB18	18 Ft. (5.5 M)
PA4A20	PA4A40	PS20	PS20	PSB20	20 Ft. (6.0 M)
*****	*****	PTA25	PTA25	PTA 25 Ft. (7.6 M)	

For additional pole details, please refer to separate code specification sheet.
 all in 10mm Ø10-120mm

LUMINIS.

NOTE 1 For Pole with ACP, ZACP, APA or ZAPA attachment requires a 30" (762) beam extension over pole nominal height.
 Factory installed.

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Page 1 of 2

Fixture Type:

Catalog No.

Qty

Ordering Guide

Example: B4101 ABS A D

Product Code	B4101	Medium Motor Wall Mount
Finish	ABS ACP Antique Brass ARD Antique Red ASI Antique Silver BLK Black BRN Bronze BRZ Bronze CHX Chrome CHX Chrome CHX Chrome RBZ Rustic Bronze SRT Shadow Red VCP Verde Copper VCN Verde VTC Vintage Copper WQZ Weathered WHI White	
Panel/Globe	C Clear Acrylic (standard) C Textured Acrylic E Acrylic Glass Textured B Clear Acrylic M Clear Polycarbonate G Prismatic Polycarbonate D Bronze Tone Acrylic F Clear Polycarbonate J Clear Tempered Glass K Clear Glass X Clear Seeded Glass P Frosted Glass H Opalescent L Heavy Glass White (select)	
Lamping	D Medium Base	

Specifications

CONSTRUCTION: Cast aluminum hex cage with open bottom. Cast aluminum wall bracket. Cast aluminum hex roof secured with thumb screws. Cast aluminum finial attached to roof.

FINISH: Resistant TGIC thermoset powdercoat paint is electrostatically applied to every flange. Specially formulated for Philips Outdoor Lighting, it provides UV protection, and the highest temperature rating in the industry. In addition to the standard color choices shown, a spectrum of custom colors is available.

PANEL/LENSE/GLOBE: Set of 8 Clear Acrylic (CA) panels (standard). Higher wattages may be used only with glass panels installed.

LAMPING: 100W maximum A19 lamp per medium base socket. Lamp is not included. Higher wattages may be used only with glass panels installed.

Page 1 of 2

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 Philips Lighting Company 200 Franklin Square Drive, Somerset, NJ 08873 | 1-800-488-2121 | www.philips.com

8' TO 30' ROUND TAPEDED EMBEDDED (DIRECT BURIAL) POLES

ANCHOR BASE AND BOLT DETAIL

The diagram illustrates the anchor base and bolt detail for a round tapered embedded pole. It shows a cross-section of the pole with a wire inlet hole at the top. The pole is labeled as "ROUND EMBEDDED (DIRECT BURIAL) STANDARD". A "1-1/2\" DIA GROMMETTED WIRE INLET HOLE" is shown. The "WIRE INLET HOLE 1\" FROM GRADE" is indicated. The "EMBEDDED LENGTH" is shown. Two tables are provided:

A	B*
BOTTOM DIAMETER	EMBEDDED LENGTH
4"	3'
5"	4'
6"	4'
7"	5'
8"	5'

* S minimum embedment length for Conductor meter.

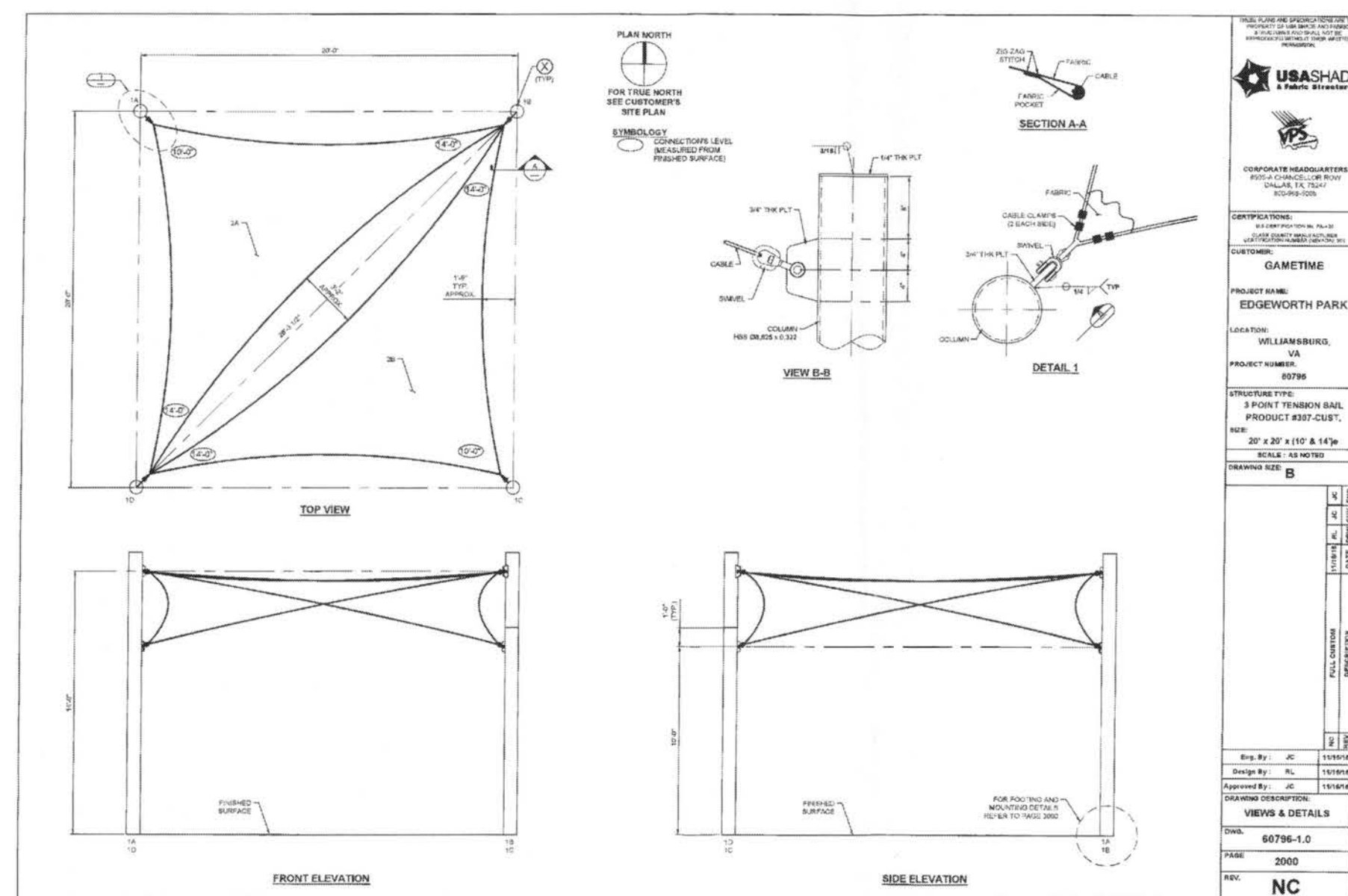
DIMENSIONAL AND LOAD DATA

TYPICAL WEIGHT AND ALLOWABLE SIZE OF LUMINAIRES*		DIMENSIONS OF POLES						
NOMINAL HOISTING HEIGHT	TYPICAL LUMINAIRE WEIGHT (LBS.)	EFFECTIVE PROJECTED AREA IN SQUARE FEET AT:	EXPOSED SHIRT LENGTH	TOP BASE	WALL	MODEL NUMBER**		
		70' 80' 90' 100' 110' MPR						
8'	75	16.1 14.4 11.1 8.8 7.1	7'8" 10'8" 3"	4"	125"	0708-3040ATE		
10'	75	14.3 10.6 8.1 6.3 5.0	9'8" 12'8" 3"	4"	125"	0908-3040ATE		
12'	75	11.0 8.0 6.0 4.5 3.5	11'8" 14'8" 3"	4"	125"	1108-3040ATE		
12'	75	18.5 13.8 10.5 8.3 6.6	11'8" 15'8" 3"	5"	125"	1108-3050ATE		
14'	75	8.5 6.0 4.4 3.2 2.4	13'8" 16'8" 3"	4"	125"	1308-3040ATE		
14'	75	14.8 10.8 8.2 6.3 5.0	13'8" 17'8" 3"	5"	125"	1308-3050ATE		
16'	75	7.1 5.0 3.5 2.4 1.7	15'8" 18'8" 3"	4"	125"	1508-3040ATE		
16'	75	12.0 8.6 6.4 4.8 3.8	15'8" 19'8" 3"	5"	125"	1508-3050ATE		
18'	75	15.3 11.1 8.4 6.5 5.1	15'8" 19'8" 3"	5"	156"	1508-3050STE		
18'	75	9.7 6.7 4.9 3.6 2.7	17'8" 21'8" 3"	5"	125"	1708-3050ATE		
18'	150	12.2 8.7 6.4 4.9 3.8	17'8" 21'8" 3"	5"	156"	1708-3050STE		
18'	150	19.1 14.1 10.8 8.5 6.9	17'8" 21'8" 3"	6"	156"	1708-46050STE		
20'	75	8.2 5.5 3.8 2.6 1.9	19'8" 23'8" 3"	5"	125"	1908-3050ATE		
20'	75	10.4 7.2 5.1 3.7 2.8	19'8" 23'8" 3"	5"	156"	1908-3050STE		
25'	150	10.5 7.1 5.1 3.8 2.9	24'8" 28'8" 4"	6"	156"	2408-46050STE		
25'	150	13.5 9.4 6.9 5.3 4.2	24'8" 28'8" 4"	6"	188"	2408-66060STE		
30'	150	11.1 7.5 5.3 4.0 2.9	29'8" 34'8" 4"	7"	156"	2908-46070STE		
30'	150	16.7 12.0 9.1 7.0 5.5	29'8" 34'8" 4"	8"	156"	2908-68080STE		

* EPC calculations are based on a 1.3 Gps Factor. Variations from those listed above, verifiable upon loading at the factory. Self-support performance of lighting poles is dependent upon the pole being properly anchored in accordance with adequate design. Values shown are design or other recommendations for foundations.
 ** Model number does not include mounting controls or fixture designation.

A-2.12 Valmont Industries, Inc. • 2005 Eaton Avenue • Farmington, Minnesota 55924-7932 (800)899-7527 • valmontstructures.com

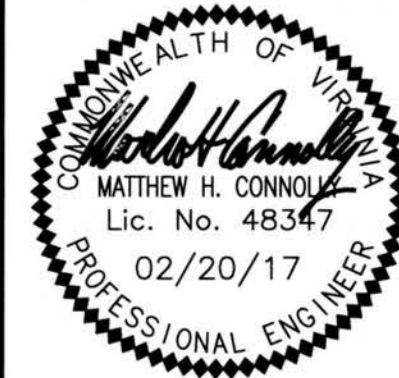
LRI
LANDTECH
RESOURCES, INC.
 ENGINEERING • SURVEYING • GPS
 3925 Midland Road • Williamsburg, VA 23198
 Ph: (757) 365-1677 Fax: (757) 365-0782
 web: landtechresources.com



JAMES CITY COUNTY

JAMESTOWN DISTRICT

VIRGINIA

[illegible]

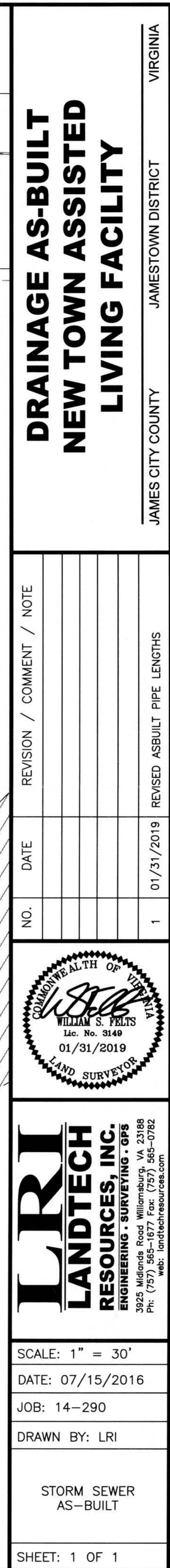
LLRI
LANDTECH
RESOURCES, INC.
ENGINEERING • SURVEYING • GPS
19925 Midlands Road Williamsburg, VA 23188
Ph: (757) 565-1677 Fax: (757) 565-0782

SCALE: 1" = 30'
DATE: 02-20-2017
JOB: 14-290
DRAWN BY: WSF

C903

NOTES & DETAILS

SHEET: 17 OF 17

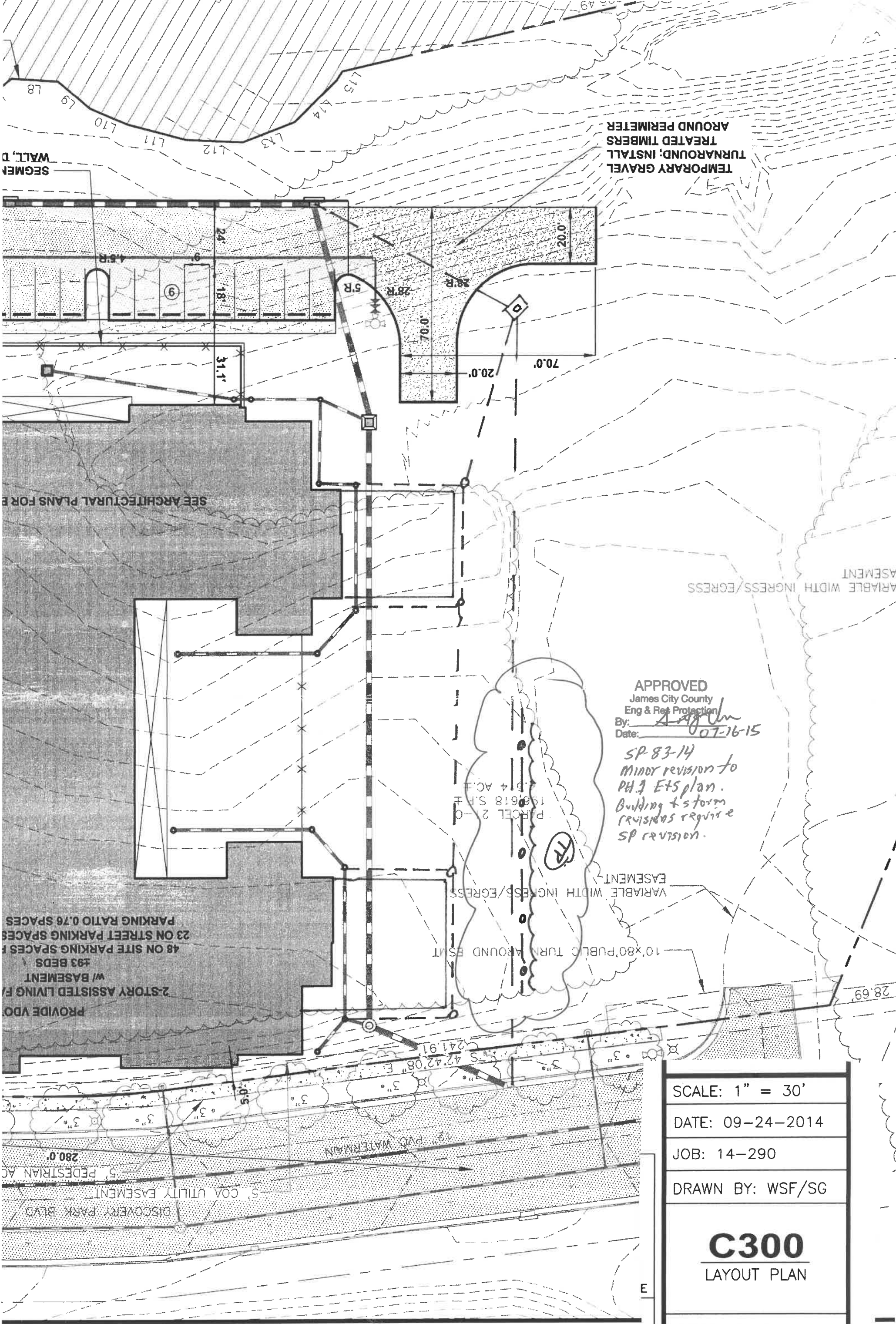


SHEET: 1 OF 1

RECORD DRAWING SP-0086-2016

5. Construction Drawings

6. Design Calculations



TEMPORARY GRAVEL
TURNAROUND; INSTALL
TREATED TIMBERS
AROUND PERIMETER

VARIABLE WIDTH INGRESS/EGRESS
EASEMENT

APPROVED
James City County
Eng & Ret Protection
By: *[Signature]*
Date: 07-16-15

SP 83-14
Minor revision to
PH 1 ETS plan.
Building & storm
revisions require
SP revision.

PARCEL 21-0
190618 S.F.
4.514 AC.F.

10'x80' PUBLIC TURN AROUND EASEMENT
VARIABLE WIDTH INGRESS/EGRESS
EASEMENT

PROVIDE VDO
2-STORY ASSISTED LIVING F
193 BEDS
48 ON SITE PARKING SPACES
23 ON STREET PARKING SPACES
PARKING RATIO 0.76 SPACES

DISCOVERY PARK BLVD
5' COA UTILITY EASEMENT
5' PEDESTRIAN AC
280.0'

SCALE: 1" = 30'
DATE: 09-24-2014
JOB: 14-290
DRAWN BY: WSF/SG
C300 LAYOUT PLAN
SHEET: 4 OF 16

LRI

LANDTECH RESOURCES, INC.

Stormwater Narrative Record Drawing

For

**Edgeworth Park
Assisted Living Facility**

JCC SP-0086-2016

James City County, Virginia

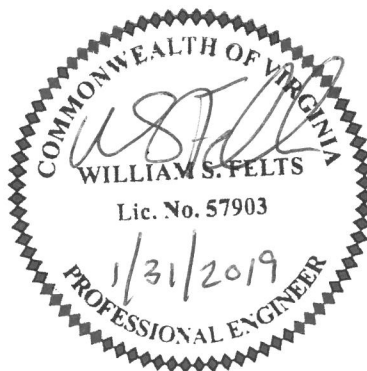
Preparation Date:

January 31, 2019

Revision Date(s):

N/A

LRI Project No. 14-290



ENGINEERING • SURVEYING • GPS

3925 Midlands Road Williamsburg, VA 23188

Ph.: (757) 565-1677 Fax: (757) 565-0782

Web: landtechresources.com

**Stormwater Narrative
Record Drawing**

Storm Sewer Pipe.....1

Appendices

Appendix A – Storm Sewer System Plan View

Appendix B – HGL Calculations

Storm Sewer Pipe

The following calculations represent the built conditions of the storm sewer piping installed within the Edgeworth Park assisted living facility as well as proposed piping for the adjacent proposed office building. The drainage areas provided for the storm sewer system on the assisted living facility correspond to the original design documents for the facility, while the drainage areas provided for the proposed office building complex can be found within the provided calculations for the recently submitted site plan.

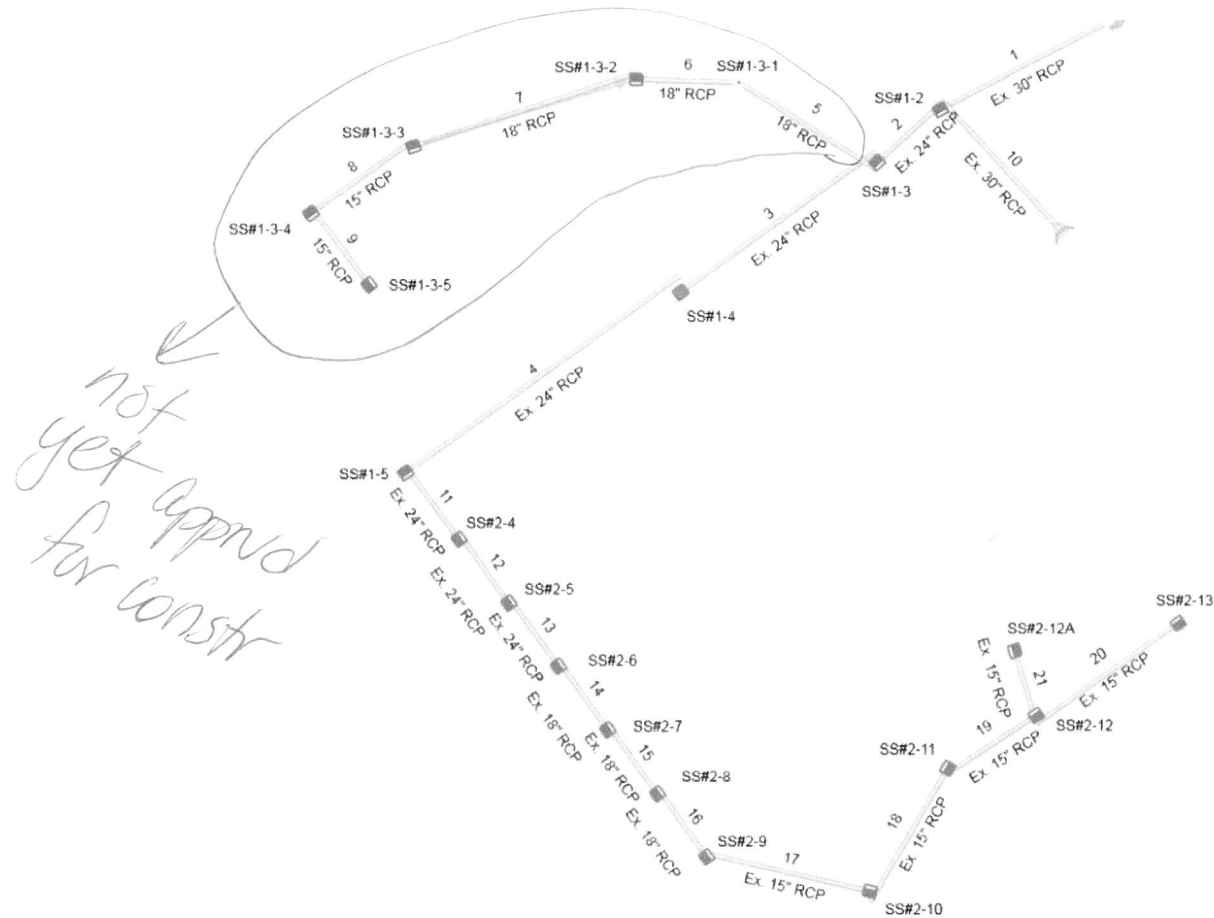
Appendix A
Storm Sewer Plan View

Plan View

Stormwater Studio 2019 v 3.0.0.2

Project Name: Edgeworth Park

01-31-2019



Appendix B
HGL Calculations

Storm Sewer Tabulation

Stormwater Studio 2019 v 3.0.0.0

Project Name: Edgeworth Park

01-31-2019

Line ID	Length (ft)	Drng Area		Rational (C)	C x A		Tc		Intensity (in/hr)	Total Q (cfs)	Capacity (cfs)	Velocity (ft/s)	Line		Invert Elev		HGL Elev		Surface Elev		Line No
		Incr (ac)	Total (ac)		Incr	Total	Inlet (min)	Syst (min)					Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
Ex. 30" RCP	101.31	0.15	3.99	0.66	0.10	2.81	5.0	12.11	5.68	15.99	128.01	4.62	30	9.74	64.48	74.35	73.00	75.69	68.00	88.81	1
Ex. 24" RCP	46.92	0.42	3.84	0.70	0.29	2.72	5.0	11.97	5.71	15.50	27.63	7.24	24	1.49	74.69	75.39	75.89	76.78	88.81	88.80	2
Ex. 24" RCP	126.90	0.80	2.77	0.61	0.49	1.93	5.0	11.43	5.81	11.20	12.90	3.57	24	0.33	75.20	75.63	77.35	77.63	88.80	89.43	3
Ex. 24" RCP	182.70	0.34	1.97	0.64	0.22	1.44	5.0	10.45	6.01	8.65	13.51	2.89	24	0.36	75.73	76.39	77.87	78.11	89.43	80.79	4
18" RCP	90.00	0.00	0.65	0.00	0.00	0.49	0.0	8.63	6.43	3.17	7.43	4.04	18	0.50	79.73	80.18	80.42	80.86	88.80	90.50	5
18" RCP	56.27	0.17	0.65	0.62	0.11	0.49	5.0	8.17	6.54	3.23	8.63	3.55	18	0.68	80.28	80.66	81.16	81.35	90.50	90.00	6
18" RCP	128.11	0.17	0.48	0.79	0.13	0.39	5.0	6.85	6.90	2.68	7.31	3.36	18	0.48	80.76	81.38	81.54	82.01	90.00	88.25	7
15" RCP	68.76	0.15	0.31	0.82	0.12	0.25	5.0	6.10	7.13	1.81	6.37	3.06	15	0.97	81.48	82.15	82.18	82.69	88.25	86.00	8
15" RCP	53.02	0.16	0.16	0.82	0.13	0.13	5.0	5.00	7.49	0.98	8.87	2.29	15	1.89	82.25	83.25	82.87	83.65	86.00	87.00	9
Ex. 30" RCP	97.97	0.00	0.00	0.00	0.00	0.00	5.0	5.00	7.49	21.30	45.58	7.43	30	1.24	74.79	76.00	76.10	77.54	0.00	90.00	10
Ex. 24" RCP	49.80	0.11	1.63	0.79	0.09	1.22	5.0	10.14	6.08	7.43	10.63	2.51	24	0.22	76.41	76.52	78.23	78.27	0.00	81.05	11
Ex. 24" RCP	47.10	0.11	1.52	0.79	0.09	1.14	5.0	9.83	6.15	6.98	12.33	2.40	24	0.30	76.54	76.68	78.34	78.37	81.05	81.32	12
Ex. 24" RCP	46.60	0.12	1.41	0.80	0.10	1.05	5.0	9.49	6.22	6.52	12.40	2.31	24	0.30	76.70	76.84	78.44	78.47	81.32	81.56	13
Ex. 18" RCP	46.50	0.14	1.29	0.86	0.12	0.95	5.0	9.29	6.27	5.97	6.16	3.38	18	0.34	76.91	77.07	78.47	78.62	81.56	81.80	14
Ex. 18" RCP	46.80	0.09	1.15	0.77	0.07	0.83	5.0	9.06	6.32	5.26	6.14	2.98	18	0.34	77.09	77.25	78.77	78.88	81.80	82.07	15
Ex. 18" RCP	46.10	0.18	1.06	0.80	0.14	0.76	5.0	8.81	6.38	4.87	6.56	2.76	18	0.39	77.28	77.46	78.98	79.08	82.07	82.30	16
Ex. 15" RCP	91.80	0.17	0.88	0.69	0.12	0.62	5.0	8.39	6.49	4.01	13.99	4.05	15	4.69	77.60	81.91	79.13	82.71	82.30	85.91	17
Ex. 15" RCP	85.10	0.26	0.71	0.76	0.20	0.50	5.0	7.91	6.61	3.31	15.16	6.74	15	5.51	82.51	87.20	82.93	87.93	85.91	91.51	18
Ex. 15" RCP	57.40	0.10	0.45	0.60	0.06	0.30	5.0	7.39	6.75	2.05	4.67	1.95	15	0.52	87.05	87.35	88.21	88.25	91.51	91.45	19
Ex. 15" RCP	95.20	0.16	0.16	0.68	0.11	0.11	5.0	5.00	7.49	0.82	3.86	1.18	15	0.36	87.45	87.79	88.34	88.36	91.45	91.63	20
Ex. 15" RCP	40.10	0.19	0.19	0.71	0.13	0.13	5.0	5.00	7.49	1.01	4.78	1.26	15	0.55	87.43	87.65	88.33	88.34	91.45	91.99	21

Notes: IDF File = 14-290 JCC.idf, Return Period = 10-yrs.

Project File: Storm Sewer System.sws

Composite C Worksheet

Stormwater Studio 2019 v 3.0.0.0

Project Name: Edgeworth Park

01-31-2019

Line No	Description	Drainage Area (ac)	Runoff Coeff (C)	C x A	Composite (C)	Structure ID
1	Impervious	0.090	0.90	0.081		SS#1-2
	Turf	0.060	0.30	0.018		
	Totals	0.150 ✓		0.099	0.66	
2	Impervious	0.280	0.90	0.252		SS#1-3 2-1
	Turf	0.140	0.30	0.042		
	Totals	0.420 29		0.294	0.70	
3	Impervious	0.410	0.90	0.369		SS#1-4 2-2
	Turf	0.390	0.30	0.117		
	Totals	0.800 14		0.486	0.61	
4	Impervious	0.190	0.90	0.171		SS#1-5 2-3
	Turf	0.150	0.30	0.045		
	Totals	0.340 39		0.216	0.64	
6	Impervious	0.090	0.90	0.081		SS#1-3-2
	Turf	0.080	0.30	0.024		
	Totals	0.170		0.105	0.62	
7	Impervious	0.140	0.90	0.126		SS#1-3-3
	Turf	0.030	0.30	0.009		
	Totals	0.170		0.135	0.79	
8	Impervious	0.130	0.90	0.117		SS#1-3-4
	Turf	0.020	0.30	0.006		
	Totals	0.150		0.123	0.82	
9	Impervious	0.140	0.90	0.126		SS#1-3-5
	Turf	0.020	0.30	0.006		
	Totals	0.160		0.132	0.82	

Composite C Worksheet

Project Name: Edgeworth Park

Stormwater Studio 2019 v 3.0.0.0

01-31-2019

Line No	Description	Drainage Area (ac)	Runoff Coeff (C)	C x A	Composite (C)	Structure ID
11	Per Plan	0.110	0.79	0.087		SS#2-4
	Totals	0.110 ✓		0.087	0.79	
12	Per Plan	0.110	0.79	0.087		SS#2-5
	Totals	0.110 ✓		0.087	0.79	
13	Per Plan	0.120	0.80	0.096		SS#2-6
	Totals	0.120 ✓		0.096	0.80	
14	Per Plan	0.140	0.86	0.120		SS#2-7
	Totals	0.140 ✓		0.120	0.86	
15	Per Plan	0.090	0.77	0.069		SS#2-8
	Totals	0.090 ✓		0.069	0.77	
16	Per Plan	0.180	0.80	0.144		SS#2-9
	Totals	0.180 ✓		0.144	0.80	
17	Per Plan	0.170	0.69	0.117		SS#2-10
	Totals	0.170 ✓		0.117	0.69	
18	Per Plan	0.260	0.76	0.198		SS#2-11
	Totals	0.260 ✓		0.198	0.76	

Composite C Worksheet

Project Name: Edgeworth Park

Stormwater Studio 2019 v 3.0.0.0

01-31-2019

Line No	Description	Drainage Area (ac)	Runoff Coeff (C)	C x A	Composite (C)	Structure ID
19	Per Plan	0.100	0.60	0.060		SS#2-12
	Totals	0.100 ✓		0.060	0.60	
20	Per Plan	0.160	0.68	0.109		SS#2-13
	Totals	0.160 ✓		0.109	0.68	
21	Per Plan	0.190	0.71	0.135		SS#2-12A
	Totals	0.190 ✓		0.135	0.71	

Project File: Storm Sewer System.sws



LANDTECH RESOURCES, INC.

Storm Sewer Calculations

for

New Town Assisted Living Facility**Site Plan Amendment**

In

James City County, Virginia

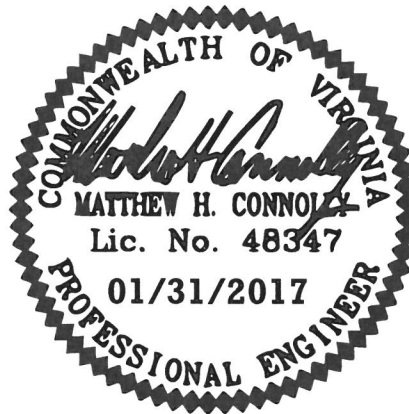
January 31, 2017

Project Number 14-290

PLANNING DIVISION

MAR 17 2017

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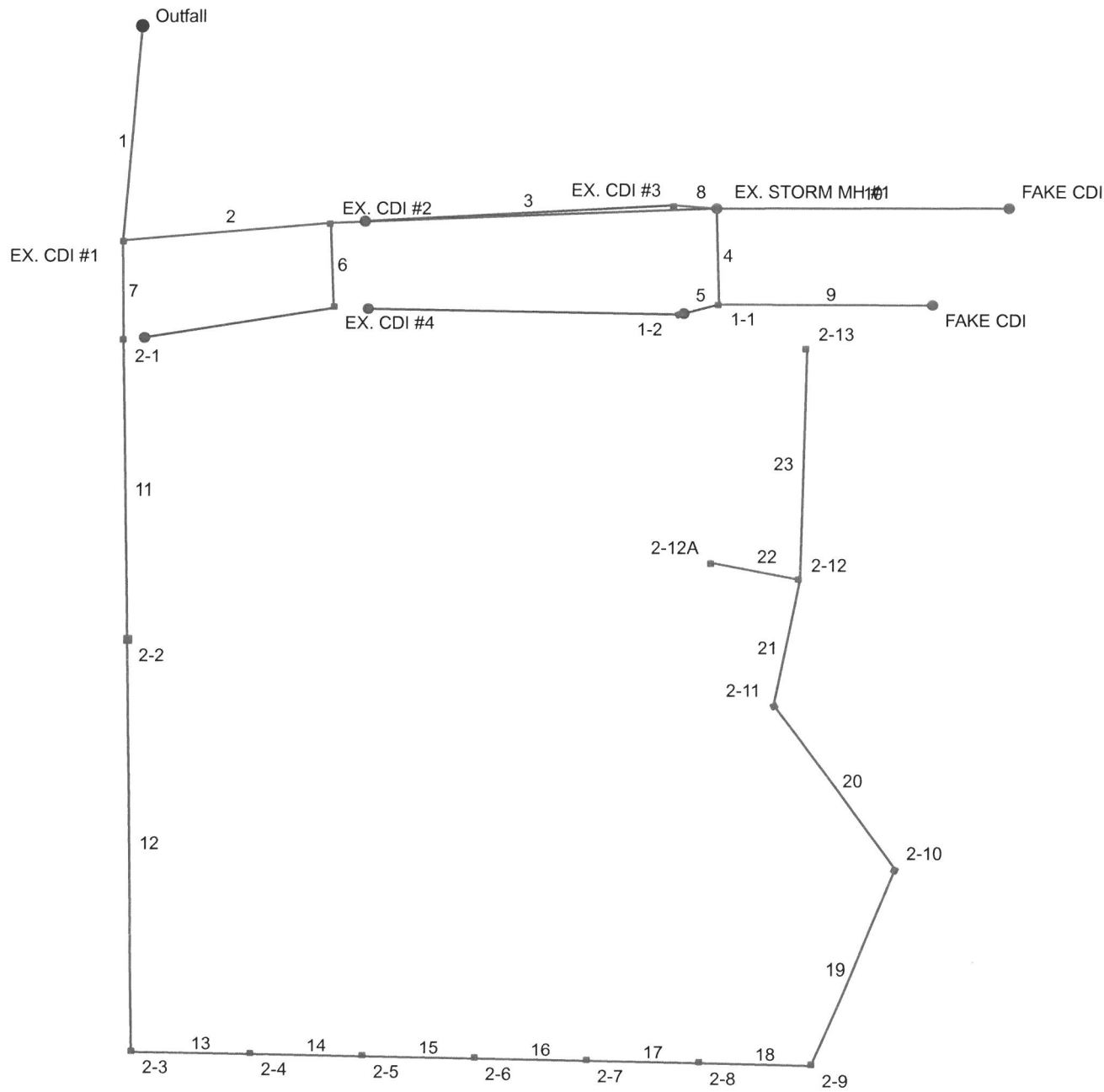


Matthew H. Connolly, L.S., P.E.
President
mconnolly@landtechresources.com

William S. Felts, L.S.
Vice President
william@landtechresources.com

ENGINEERING • SURVEYING • GPS
3925 Midlands Road Williamsburg, VA 23188
Ph.: (757) 565-1677 Fax: (757) 565-0782
Web: landtechresources.com

Hydraflow Storm Sewers Extension for AutoCAD® Civil 3D® 2009 Plan



Inlet Report

Line No	Inlet ID	Q = CIA	Q carry	Q capt	Q byp	Junc type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp line No
		(cfs)	(cfs)	(cfs)	(cfs)		Ht (in)	L (ft)	area (sqft)	L (ft)	W (ft)	So (ft/ft)	W (ft)	Sw (ft/ft)	Sx (ft/ft)	n	Depth (ft)	Spread (ft)	Depth (ft)	Spread (ft)	Depr (in)	
1	EX. CDI #1	0.83	0.00	0.83	0.00	Comb	6.0	8.00	3.88	2.95	2.00	Sag	2.00	0.080	0.020	0.013	0.07	0.92	0.12	1.16	2.0	Off
2	EX. CDI #2	0.83	0.00	0.83	0.00	Comb	6.0	6.00	0.00	2.50	1.66	0.010	2.00	0.080	0.020	0.013	0.21	4.30	0.23	3.22	2.0	1
3	EX. STORM MH	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
4	1-1	0.25	0.00	0.25	0.00	Comb	6.0	6.00	0.00	2.50	1.67	4.999	2.00	0.080	0.020	0.013	0.04	0.52	0.04	0.52	0.0	5
5	1-2	0.79	0.00	0.79	0.00	Comb	6.0	4.00	0.00	2.50	1.67	0.020	2.00	0.080	0.020	0.013	0.18	3.05	0.20	1.93	2.0	6
6	EX. CDI #4	1.24	0.00	1.24	0.00	Comb	6.0	6.00	0.00	2.66	1.66	0.010	2.00	0.080	0.020	0.013	0.23	5.65	0.26	4.77	2.0	7
7	2-1	2.08	0.00	2.08	0.00	Comb	6.0	9.00	1.94	2.50	1.67	Sag	2.00	0.080	0.020	0.013	0.20	4.17	0.25	4.17	2.0	Off
8	EX. CDI #3	0.83	0.00	0.83	0.00	Comb	5.5	4.00	0.00	2.50	1.67	0.010	2.00	0.080	0.020	0.013	0.21	4.30	0.23	3.22	2.0	2
9	FAKE CDI	6.25*	0.00	6.25	0.00	Genr	0.0	0.00	0.00	0.00	0.00	Sag	2.00	0.050	0.020	0.013	0.30	12.00	0.30	12.00	0.0	Off
10	FAKE CDI	11.31*	0.00	11.31	0.00	Genr	0.0	0.00	0.00	0.00	0.00	Sag	2.00	0.050	0.020	0.013	0.30	12.00	0.30	12.00	0.0	Off
11	2-2	3.22	0.00	3.22	0.00	DrGr	0.0	0.00	3.00	0.69	2.00	Sag	2.00	0.020	0.020	0.013	0.34	36.11	0.34	36.11	0.0	Off
12	2-3	1.64	0.00	1.64	0.00	Comb	6.0	6.00	1.16	2.50	1.67	Sag	2.00	0.080	0.021	0.013	0.16	2.06	0.21	2.06	2.0	11
13	2-4	0.65	0.00	0.65	0.00	Comb	6.0	4.00	2.00	2.50	1.67	0.005	2.00	0.080	0.021	0.013	0.21	4.52	0.24	3.49	2.0	Off
14	2-5	0.65	0.00	0.65	0.00	Comb	6.0	4.00	2.00	2.50	1.67	0.005	2.00	0.080	0.025	0.013	0.21	4.16	0.24	3.09	2.0	13
15	2-6	0.72	0.00	0.72	0.00	Comb	6.0	4.00	2.00	2.50	1.67	0.005	2.00	0.080	0.021	0.013	0.22	4.86	0.25	3.87	2.0	14
16	2-7	0.90	0.00	0.90	0.00	Comb	6.0	4.00	2.00	2.50	1.67	0.005	2.00	0.080	0.021	0.013	0.24	5.57	0.27	4.73	2.0	15
17	2-8	0.56	0.00	0.56	0.00	Comb	6.0	4.00	2.00	2.50	1.67	0.005	2.00	0.080	0.021	0.013	0.20	4.05	0.23	2.92	2.0	16
18	2-9	1.08	0.00	1.08	0.00	Comb	6.0	4.00	2.00	2.50	1.67	0.004	2.00	0.080	0.050	0.013	0.27	4.20	0.33	3.27	2.0	17
19	2-10	0.88	0.00	0.88	0.00	Comb	6.0	4.00	1.94	2.50	1.67	Sag	2.00	0.080	0.070	0.013	-0.01	-0.08	0.14	0.91	2.0	18
20	2-11	1.48	0.00	1.48	0.00	Comb	6.0	6.00	2.00	2.50	1.67	0.050	2.00	0.080	0.020	0.013	0.19	3.55	0.21	2.27	2.0	19
21	2-12	0.45	0.00	0.45	0.00	Comb	6.0	6.00	1.94	2.50	1.67	Sag	2.00	0.080	0.020	0.013	0.04	0.54	0.09	0.87	2.0	20
22	2-12A	0.97	0.00	0.97	0.00	Comb	6.0	5.00	1.94	2.50	1.67	Sag	2.00	0.080	0.020	0.013	0.10	1.29	0.15	1.45	2.0	21
23	2-13	0.82	0.00	0.82	0.00	Comb	6.0	6.00	1.94	2.50	1.67	Sag	2.00	0.080	0.020	0.013	0.08	1.04	0.13	1.26	2.0	21

Project File: Storm Sewer System Revised.stm

Number of lines: 23

Run Date: 01-31-2017

NOTES: Inlet N-Values = 0.016 ; Intensity = 55.61 / (Inlet time + 10.00) ^ 0.74; Return period = 10 Yrs. ; * Indicates Known Q added. All curb inlets are Horiz throat.

Line No.	Drng Area	Total Area	Runoff Coeff	Total CxA	Inlet Time	i Inlet	Total Runoff	Known Q	Line Rise	Line Span	Line Length	n-val Pipe	Line Slope	Vel Ave	Flow Rate	Capac Full	Invert Up	Invert Dn	Gnd/Rim El Up	Gnd/Rim El Dn	HGL Up	
	(ac)	(ac)	(C)		(min)	(in/hr)	(cfs)	(cfs)	(in)	(in)	(ft)		(%)	(ft/s)	(cfs)	(cfs)	(ft)	(ft)	(ft)	(ft)	(ft)	
1	0.15	3.99	0.74	2.78	5.0	7.50	15.33	0.00	30	30	95.00	0.013	10.39	7.42	32.89	132.19	74.35	64.48	88.81	64.48	76.27 j	
2	0.15	0.71	0.74	0.53	5.0	7.50	3.74	0.00	30	30	93.00	0.013	1.41	6.62	21.30	48.67	76.00	74.69	90.00	88.81	77.54 j	
3	0.00	0.33	0.00	0.25	0.0	0.00	1.81	0.00	24	24	172.00	0.013	1.24	7.41	19.37	25.17	78.13	76.00	92.09	90.00	79.69	
4	0.05	0.18	0.66	0.14	5.0	7.50	1.01	0.00	18	18	43.00	0.013	2.47	5.12	7.26	16.49	79.50	78.44	92.77	92.09	80.53 j	
5	0.13	0.13	0.81	0.11	5.0	7.50	0.79	0.00	15	15	18.00	0.013	0.39	2.55	0.79	4.03	87.26	87.19	92.34	92.77	87.64	
6	0.23	0.23	0.72	0.17	5.0	7.50	1.24	0.00	18	18	38.00	0.013	4.45	4.88	1.24	22.15	80.50	78.81	90.07	90.00	80.93	
7	0.37	3.13	0.75	2.15	5.0	7.50	11.90	0.00	24	24	45.00	0.013	1.11	5.35	11.90	23.84	75.29	74.79	88.80	88.81	76.51 j	
8	0.15	0.15	0.74	0.11	5.0	7.50	0.83	0.00	15	15	19.00	0.013	2.79	4.00	0.83	10.79	88.32	87.79	92.24	92.09	88.69	
9	0.00	0.00	0.00	0.00	0.0	0.00	0.00	6.25	24	24	95.00	0.013	0.31	3.98	6.25	12.50	80.09	79.80	0.00	92.77	81.09	
10	0.00	0.00	0.00	0.00	0.0	0.00	0.00	11.31	24	24	130.00	0.013	1.00	5.05	11.31	22.62	79.43	78.13	0.00	92.09	80.62 j	
11	0.74	2.76	0.58	1.87	5.0	7.50	10.57	0.00	24	24	131.94	0.013	0.33	4.63	10.57	13.06	75.83	75.39	89.75	88.80	77.19	
12	0.39	2.02	0.56	1.44	5.0	7.50	8.44	0.00	24	24	183.06	0.013	0.34	3.96	8.44	13.16	76.55	75.93	81.60	89.75	77.72	
13	0.11	1.63	0.79	1.22	5.0	7.50	7.25	0.00	24	24	53.00	0.013	0.32	2.95	7.25	12.81	76.82	76.65	81.90	81.60	78.22	
14	0.11	1.52	0.79	1.13	5.0	7.50	6.82	0.00	24	24	50.00	0.013	0.34	3.13	6.82	13.19	77.09	76.92	82.15	81.90	78.34	
15	0.12	1.41	0.80	1.05	5.0	7.50	6.39	0.00	24	24	50.00	0.013	0.34	3.33	6.39	13.19	77.36	77.19	82.41	82.15	78.48	
16	0.14	1.29	0.86	0.95	5.0	7.50	5.85	0.00	18	18	50.00	0.013	0.34	3.95	5.85	6.12	77.63	77.46	82.66	82.41	78.80	
17	0.09	1.15	0.83	0.83	5.0	7.50	5.16	0.00	18	18	50.00	0.013	0.34	3.50	5.16	6.12	77.90	77.73	82.88	82.66	79.04	
18	0.18	1.06	0.80	0.76	5.0	7.50	4.75	0.00	18	18	50.00	0.013	0.34	3.40	4.75	6.12	78.17	78.00	83.16	82.88	79.25	
19	0.17	0.88	0.69	0.61	5.0	7.50	3.92	0.00	15	15	94.00	0.013	4.38	3.98	3.92	13.52	82.39	78.27	87.00	83.16	83.18 j	
20	0.26	0.71	0.76	0.50	5.0	7.50	3.23	0.00	15	15	91.00	0.013	5.14	4.53	3.23	14.64	87.17	82.49	92.68	87.00	87.89	
21	0.10	0.45	0.60	0.30	5.0	7.50	1.99	0.00	15	15	57.00	0.013	0.33	3.09	1.99	3.73	87.46	87.27	92.27	92.68	88.11	
22	0.19	0.19	0.68	0.13	5.0	7.50	0.97	0.00	15	15	40.50	0.013	0.37	1.38	0.97	3.93	87.71	87.56	92.86	92.27	88.35	
23	0.16	0.16	0.68	0.11	5.0	7.50	0.82	0.00	15	15	102.00	0.013	0.33	1.43	0.82	3.73	87.90	87.56	92.44	92.27	88.39	

Project File: Storm Sewer System Revised.stm

Number of lines: 23

Date: 01-31-2017

NOTES: Intensity = 55.61 / (Inlet time + 10.00) ^ 0.74 -- Return period = 10 Yrs. ; ** Critical depth

HGL Dn (ft)	
73.00	
76.27	
77.54	
79.69	
87.57	
79.05	
76.27	
88.03	
80.80	
79.69	
76.75	
77.36	
78.18	
78.30	
78.43	
78.63	
78.92	
79.14	
79.51	
83.18	
87.92	
88.33	
88.33	
Project File: Storm Sewer System Revised.stm	
Number of lines: 23	
Date: 01-31-2017	
NOTES: ** Critical depth	

LRI

SP-0083-2014

LANDTECH RESOURCES, INC.

Erosion and Sediment Control Narrative & Storm Sewer Calculations

Engineering & Resource Protection
JUN 5 2015

for

PLANNING DIVISION

JUN 04 2015

RECEIVED

RECEIVED

New Town Assisted Living Facility

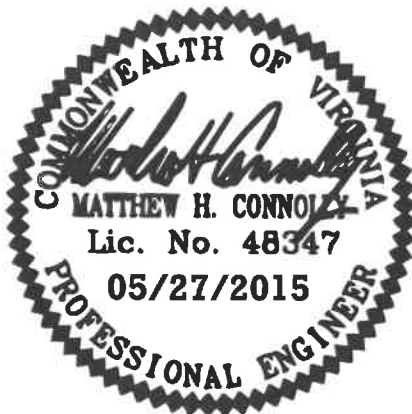
In

James City County, Virginia

March 29, 2015

Revision 1: May 6, 2015

Revision 2: May 27, 2015



Project Number 14-290

SP-83-14
FINAL
COMPS

Matthew H. Connolly, L.S., P.E.
President
mconnolly@landtechresources.com

William S. Felts, L.S.
Vice President
william@landtechresources.com

ENGINEERING • SURVEYING • GPS
3925 Midlands Road Williamsburg, VA 23188
Ph.: (757) 565-1677 Fax: (757) 565-0782
Web: landtechresources.com

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Section 1 Erosion and Sediment Control Narrative

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1a. PROJECT DESCRIPTION & EXISTING CONDITIONS:

This project is located in the New Town development within James City County, Virginia. The parcel is a portion of parcel 3910100157 (currently listed address 4201 Ironbound Road) and can be found at the north-northwestern end of Discover Park Boulevard. No development has taken place on the property yet and hence no impervious cover exists onsite. The southwesterly limits of the property contain several areas of steep slopes in addition to a conservation easement, both of which will need to be taken into consideration during construction. The site appears to lie outside the RPA and within FEMA flood zone 'X'.

The proposed development for this project is an Assisted Living Facility totaling, upon final completion will contain approximately 70,000 square feet gross floor area. Seventy one parking spaces will be provided to serve the facility. After development the parcel will contain a total of 1.665 acres of impervious surfaces. Stormwater runoff generated by the increase in impervious area is to be handled by existing BMP PC242 found to the immediate northeast just past Discovery Park Blvd, as the site will remain under this facilities design threshold of 60% there will no further stormwater design or improvement required on this parcel.

1b. ADJACENT AREAS:

Eastern State Hospital adjoins to the north, New Town common area to the west and a newly developed office building to the south.

1c. OFF-SITE AREA:

Off-site work for this project will be limited to the connection of two proposed driveways to two existing driveways located on the adjacent parcel to the south of the site; this proposed course of action has been approved by said parcel's owner and submitted to James City County. Along with the connection of the driveways, minimal grading will occur in the existing curb islands roughly 6 feet past the southern property line, also approved by the property owner.

1d. SOILS:

i. Craven-Uchee complex (11C)

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

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 gray 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 red from 36 to 56 inches. The substratum from 56 inches 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. The subsoil of both soils has moderate shrink-swell potential.

ii. Emporia complex (15E)

This complex consists of deep, steep, well drained Emporia soils and areas of similar soils that formed over layers of fossil shells. The complex is on side slopes along rivers, creeks, and drainageways.

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.

Permeability is moderate in the upper part of the subsoil and moderately slow in the lower part. Available water capacity is moderate. Surface runoff is very rapid. The erosion hazard is severe. The subsoil has moderate shrink-swell potential.

iii. Kempsville-Emporia fine sandy loams (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. Areas of this complex are on medium to broad upland ridges and side slopes.

Typically, the surface layer of the 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 subsoils extend 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 compact 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 this 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.

The permeability of the Kempsville soil is moderate. In the Emporia soil, permeability is moderate in the upper part of the subsoil and moderately slow to slow in the lower part. Surface runoff is medium. 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.

1e. CRITICAL EROSION AREAS:

This site contains several areas with slopes greater than 25 percent to the west as shown on the civil plans. These slopes shall be stabilized immediately following grading.

1f. 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.

i. STRUCTURAL PRACTICES

Temporary Stone Construction Entrance – 3.02

A construction entrance shall be provided at the point 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.

Inlet Protection – 3.07

A sediment filter shall be placed around any storm drain inlet made operational before permanent stabilization shall be provided in order to prevent sediment from entering storm drainage systems prior to permanent stabilization of the disturbed area.

Culvert Inlet Protection – 3.08

Culvert inlet protection is installed at all culvert inlets to prevent sediment from entering, accumulating in and being transferred by a culvert and associated drainage systems prior to permanent stabilization for the disturbed project areas

Temporary Diversion Dike – 3.09

Diversion dikes shall be installed to divert sediment-laden runoff from the disturbed area to a sediment trap at the low point of the disturbed area.

Temporary Sediment Trap – 3.13

A sediment trap shall be to detain sediment-laden runoff from the disturbed area long enough to allow the majority of the sediment to settle out. One existing sediment trap onsite shall be expanded and another constructed.

ii. 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.

Soil Stabilization Blankets & Matting – 3.36

A protective covering (blanket) or a soil stabilization mat shall be installed on areas of steep slopes where erosion hazard is high and planting is likely to be too slow in providing adequate cover. Blankets are designed to aid in controlling erosion on critical areas by providing a microclimate which protects young vegetation and promotes its establishment.

iii. 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 immediate 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.

iv. 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.

v. 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:

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 fences 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 to 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.

Culvert Inlet Protection – 3.08

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

Aggregate shall be replaced or cleaned when inspection reveals that clogged voids are causing ponding, which interfere with on-site construction.

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

Temporary structures shall be removed when they have served their useful purpose but not before the upslope area has been permanently stabilized.

Temporary Diversion Dike – 3.09

The diversion dike shall be inspected after every storm and repairs made to the dike, flow channel, outlet or sediment trap, 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.

Temporary 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.

Soil Stabilization Blankets & Matting – 3.36

All soil stabilization blankets and matting should be inspected periodically following installation, particularly after rainstorms to check for erosion and undermining. Any dislocation or failure should be repaired immediately. If washouts or breakage occurs, reinstall the material after repairing damage to the slope or ditch. Continue to monitor these areas until which time they become permanently stabilized; at that time an annual inspection should be adequate.

Section 2

Stormwater Management

STORMWATER MANAGEMENT

Stormwater from this site will drain to an onsite stormwater pipe system which will direct stormwater runoff to the existing BMP northeast of this property (JCC SP-007-08; BMP ID #PC242). This BMP was constructed to service this property for up to 60% impervious cover. The designed impervious cover for this project is 36% and will be treated by the aforementioned BMP facility.

The onsite stormwater conveyance system was designed with the outfall leading into the offsite BMP having an existing water elevation of 73.00'. This would be the case during the 10-year design storm event.

For the analysis of this project the pipe system upstream of our site was assumed to be flowing at 50% of the existing pipe capacity, this is represented by lines 9 & 10. The flows added to the system at this point are minimal as all the stormwater runoff from this site is directed around the proposed building and emptied into an existing CDI along Discovery Park Blvd, this CDI is represented as 2-1. The existing CDI represented as 1-1 will have the top removed and realigned with the curb in the new entrance. CDI 1-1 and 1-2 will catch the existing runoff from Discovery Park Blvd with minimal to no additional flows into these 2 CDI's than was entering into the existing CDI (1-1) prior to development.



LANDTECH RESOURCES, INC.

**Appendix A
Storm Sewer
Calculations**

Line No.	Drng Area	Total Area	Runoff Coeff	Total CxA	Inlet Time	i Inlet	Total Runoff	Known Q	Line Rise	Line Span	Line Length	n-val Pipe	Line Slope	Vel Ave	Flow Rate	Capac Full	Invert Up	Invert Dn	Gnd/Rim El Up	Gnd/Rim El Dn	HGL Up	HGL Dn
	(ac)	(ac)	(C)		(min)	(in/hr)	(cfs)	(cfs)	(in)	(in)	(ft)		(%)	(ft/s)	(cfs)	(cfs)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
1	0.15	4.24	0.74	2.94	5.0	7.50	11.33	0.00	30	30	95.00	0.013	10.39	6.77	28.89	132.19	74.35	64.48	88.81	64.48	76.15 j	73.00
2	0.15	0.65	0.74	0.47	5.0	7.50	3.31	0.00	30	30	93.00	0.013	1.41	6.84	20.87	48.67	76.00	74.69	90.00	88.81	77.53	76.15
3	0.00	0.33	0.00	0.25	0.0	0.00	1.81	0.00	24	24	172.00	0.013	1.24	7.45	19.37	25.17	78.13	76.00	92.09	90.00	79.69	77.53
4	0.05	0.18	0.66	0.14	5.0	7.50	1.01	0.00	18	18	43.00	0.013	2.47	5.12	7.26	16.49	79.50	78.44	92.77	92.09	80.53 j	79.69
5	0.13	0.13	0.81	0.11	5.0	7.50	0.79	0.00	15	15	18.00	0.013	0.39	2.55	0.79	4.03	87.26	87.19	92.34	92.77	87.64	87.57
6	0.17	0.17	0.65	0.11	5.0	7.50	0.83	0.00	18	18	38.00	0.013	4.45	4.33	0.83	22.15	80.50	78.81	90.07	90.00	80.85	79.01
7	0.27	3.44	0.63	2.36	5.0	7.50	9.14	0.00	24	24	45.00	0.013	1.11	4.68	9.14	23.84	75.29	74.79	88.80	88.81	76.36 j	76.15
8	0.15	0.15	0.74	0.11	5.0	7.50	0.83	0.00	15	15	19.00	0.013	2.79	4.00	0.83	10.79	88.32	87.79	92.24	92.09	88.69	88.03
9	0.00	0.00	0.00	0.00	0.0	0.00	0.00	6.25	24	24	95.00	0.013	0.31	3.98	6.25	12.50	80.09	79.80	0.00	92.77	81.09	80.80
10	0.00	0.00	0.00	0.00	0.0	0.00	0.00	11.31	24	24	130.00	0.013	1.00	5.05	11.31	22.62	79.43	78.13	0.00	92.09	80.62 j	79.69
11	0.00	3.17	0.00	2.19	0.0	0.00	8.53	0.00	24	24	55.00	0.013	0.33	4.40	8.53	12.94	75.57	75.39	93.50	88.80	76.75	76.58
12	0.61	2.77	0.31	1.83	24.7	4.03	7.36	0.00	24	24	217.00	0.013	0.33	3.80	7.36	13.03	76.39	75.67	84.50	93.50	77.45	77.03
13	0.00	0.48	0.00	0.39	0.0	0.00	2.30	0.00	12	12	28.00	0.009	10.71	8.97	2.30	16.84	83.00	80.00	87.00	84.50	85.14	80.25
14	0.08	0.08	0.38	0.03	5.0	7.50	0.23	0.00	12	12	100.00	0.009	5.00	1.15	0.23	11.50	88.00	83.00	93.25	87.00	88.20 j	85.25
15	0.40	0.40	0.90	0.36	5.0	7.50	2.70	0.00	12	12	52.88	0.009	1.00	5.06	2.70	5.15	76.96	76.43	93.00	93.50	77.66	77.03
16	0.40	0.40	0.90	0.36	5.0	7.50	2.70	0.00	12	12	53.14	0.009	0.43	3.44	2.70	3.38	77.42	77.19	93.00	87.00	85.40	85.25
17	0.36	1.68	0.65	1.25	5.0	7.50	7.62	0.00	24	24	81.00	0.013	0.33	3.31	7.62	13.06	76.76	76.49	82.11	84.50	78.05	77.96
18	0.18	1.32	0.87	1.01	5.0	7.50	6.39	0.00	24	24	109.00	0.013	0.33	2.90	6.39	13.00	77.22	76.86	82.52	82.11	78.43	78.34
19	0.18	1.14	0.80	0.86	5.0	7.50	5.64	0.00	24	24	116.00	0.013	0.33	3.32	5.64	12.95	77.70	77.32	83.16	82.52	78.67	78.51
20	0.26	0.96	0.76	0.71	5.0	7.50	4.77	0.00	15	15	94.00	0.013	4.88	4.59	4.77	14.27	82.39	77.80	87.34	83.16	83.26 j	78.97
21	0.11	0.70	0.68	0.52	5.0	7.50	3.52	0.00	15	15	91.00	0.013	5.14	4.49	3.52	14.64	87.17	82.49	92.40	87.34	87.92 j	83.26
22	0.10	0.59	0.60	0.44	5.0	7.50	3.06	0.00	15	15	57.00	0.013	0.33	3.39	3.06	3.73	87.46	87.27	92.27	92.40	88.32	88.13
23	0.26	0.26	0.83	0.22	5.0	7.50	1.62	0.00	15	15	45.00	0.013	0.33	1.60	1.62	3.73	87.71	87.56	92.86	92.27	88.61	88.59

Project File: Storm Sewer System Revised.stm

Number of lines: 24

Date: 05-06-2015

NOTES: Intensity = 55.61 / (Inlet time + 10.00) ^ 0.74 -- Return period = 10 Yrs. ; ** Critical depth

Line No.	Drng Area (ac)	Total Area (ac)	Runoff Coeff (C)	Total CxA	Inlet Time (min)	i Inlet (in/hr)	Total Runoff (cfs)	Known Q (cfs)	Line Rise (in)	Line Span (in)	Line Length (ft)	n-val Pipe	Line Slope (%)	Vel Ave (ft/s)	Flow Rate (cfs)	Capac Full (cfs)	Invert Up (ft)	Invert Dn (ft)	Gnd/Rim EI Up (ft)	Gnd/Rim EI Dn (ft)	HGL Up (ft)	HGL Dn (ft)
24	0.23	0.23	0.72	0.17	5.0	7.50	1.24	0.00	15	15	102.00	0.013	0.33	1.41	1.24	3.73	87.90	87.56	92.44	92.27	88.63	88.59

Project File: Storm Sewer System Revised.stm

Number of lines: 24

Date: 05-06-2015

NOTES: Intensity = 55.61 / (Inlet time + 10.00) ^ 0.74 – Return period = 10 Yrs. ; ** Critical depth

Inlet Report

Line No	Inlet ID	Q = CIA (cfs)	Q carry (cfs)	Q capt (cfs)	Q byp (cfs)	Junc type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp line No
							Ht (in)	L (ft)	area (sqft)	L (ft)	W (ft)	So (ft/ft)	W (ft)	Sw (ft/ft)	Sx (ft/ft)	n	Depth (ft)	Spread (ft)	Depth (ft)	Spread (ft)	Depr (in)	
1	EX. CDI #1	0.83	0.00	0.83	0.00	Comb	6.0	8.00	3.88	2.95	2.00	Sag	2.00	0.080	0.020	0.013	0.07	0.92	0.12	1.16	2.0	Off
2	EX. CDI #2	0.83	0.00	0.83	0.00	Comb	6.0	6.00	0.00	2.50	1.66	0.010	2.00	0.080	0.020	0.013	0.21	4.30	0.23	3.22	2.0	1
3	EX. STORM MH	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.0	Off
4	1-1	0.25	0.00	0.25	0.00	Comb	6.0	6.00	0.00	2.50	1.67	4.999	2.00	0.080	0.020	0.013	0.04	0.52	0.04	0.52	0.0	5
5	1-2	0.79	0.00	0.79	0.00	Comb	6.0	4.00	0.00	2.50	1.67	0.020	2.00	0.080	0.020	0.013	0.18	3.05	0.20	1.93	2.0	6
6	EX. CDI #4	0.83	0.00	0.83	0.00	Comb	6.0	6.00	0.00	2.66	1.66	0.010	2.00	0.080	0.020	0.013	0.21	4.30	0.23	3.17	2.0	7
7	2-1	1.28	0.00	1.28	0.00	Comb	6.0	9.00	1.94	2.50	1.67	Sag	2.00	0.080	0.020	0.013	0.13	1.67	0.18	1.74	2.0	Off
8	EX. CDI #3	0.83	0.00	0.83	0.00	Comb	5.5	4.00	0.00	2.50	1.67	0.010	2.00	0.080	0.020	0.013	0.21	4.30	0.23	3.22	2.0	2
9	FAKE CDI	6.25*	0.00	6.25	0.00	Genr	0.0	0.00	0.00	0.00	0.00	Sag	2.00	0.050	0.020	0.013	0.30	12.00	0.30	12.00	0.0	Off
10	FAKE CDI	11.31*	0.00	11.31	0.00	Genr	0.0	0.00	0.00	0.00	0.00	Sag	2.00	0.050	0.020	0.013	0.30	12.00	0.30	12.00	0.0	Off
11	2-2	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.013	0.00	0.00	0.00	0.00	0.0	Off
12	2-3	0.76	0.00	0.76	0.00	DrGrt	0.0	0.00	3.00	2.00	2.00	Sag	2.00	0.330	0.330	0.013	0.10	2.61	0.10	2.61	0.0	Off
13	ROOF LEADER	0.00	0.00	0.00	0.00	MH	0.0	0.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.013	0.00	0.00	0.00	0.00	0.0	Off
14	3-1 (COURTYARD	0.23	0.00	0.23	0.00	DrGrt	0.0	0.00	2.33	2.00	2.00	Sag	2.00	0.330	0.330	0.013	0.04	2.27	0.04	2.27	0.0	Off
15	ROOF LEADER	2.70	0.00	2.70	0.00	Genr	0.0	0.00	0.00	0.00	0.00	Sag	2.00	0.050	0.020	0.013	0.30	12.00	0.30	12.00	0.0	Off
16	ROOF LEADER	2.70	0.00	2.70	0.00	Genr	0.0	0.00	0.00	0.00	0.00	Sag	2.00	0.050	0.020	0.013	0.30	12.00	0.30	12.00	0.0	Off
17	2-4	1.75	0.00	1.75	0.00	Comb	6.0	6.00	1.94	2.50	1.67	Sag	2.00	0.080	0.020	0.013	0.17	2.67	0.22	2.67	2.0	12
18	2-5	1.17	0.00	1.17	0.00	Comb	6.0	4.00	2.00	2.50	1.67	0.004	2.00	0.080	0.025	0.013	0.27	6.24	0.30	5.53	2.0	17
19	2-6	1.08	0.00	1.08	0.00	Comb	6.0	4.00	2.00	2.50	1.67	0.004	2.00	0.080	0.050	0.013	0.27	4.20	0.33	3.27	2.0	18
20	2-7	1.48	0.00	1.48	0.00	Comb	6.0	4.00	1.94	2.50	1.67	Sag	2.00	0.080	0.070	0.013	0.05	0.67	0.20	1.30	2.0	19
21	2-8	0.56	0.00	0.56	0.00	Comb	6.0	6.00	2.00	2.50	1.67	0.050	2.00	0.080	0.020	0.013	0.13	1.68	0.15	1.43	2.0	20
22	2-9	0.45	0.00	0.45	0.00	Comb	6.0	6.00	1.94	2.50	1.67	Sag	2.00	0.080	0.020	0.013	0.04	0.54	0.09	0.87	2.0	21
23	2-9A	1.62	0.00	1.62	0.00	Comb	6.0	5.00	1.94	2.50	1.67	Sag	2.00	0.080	0.020	0.013	0.16	2.17	0.21	2.17	2.0	22

Project File: Storm Sewer System Revised.stm

Number of lines: 24

Run Date: 05-06-2015

NOTES: Inlet N-Values = 0.016 ; Intensity = 55.61 / (Inlet time + 10.00) ^ 0.74; Return period = 10 Yrs. ; * Indicates Known Q added. All curb inlets are Horiz throat.

Inlet Report

Line No	Inlet ID	Q = CIA (cfs)	Q carry (cfs)	Q capt (cfs)	Q byp (cfs)	Junc type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp line No
							Ht (in)	L (ft)	area (sqft)	L (ft)	W (ft)	So (ft/ft)	W (ft)	Sw (ft/ft)	Sx (ft/ft)	n	Depth (ft)	Spread (ft)	Depth (ft)	Spread (ft)	Depr (in)	
24	2-10	1.24	0.00	1.24	0.00	Comb	6.0	6.00	1.94	2.50	1.67	Sag	2.00	0.080	0.020	0.013	0.13	1.67	0.18	1.74	2.0	22

Project File: Storm Sewer System Revised.stm

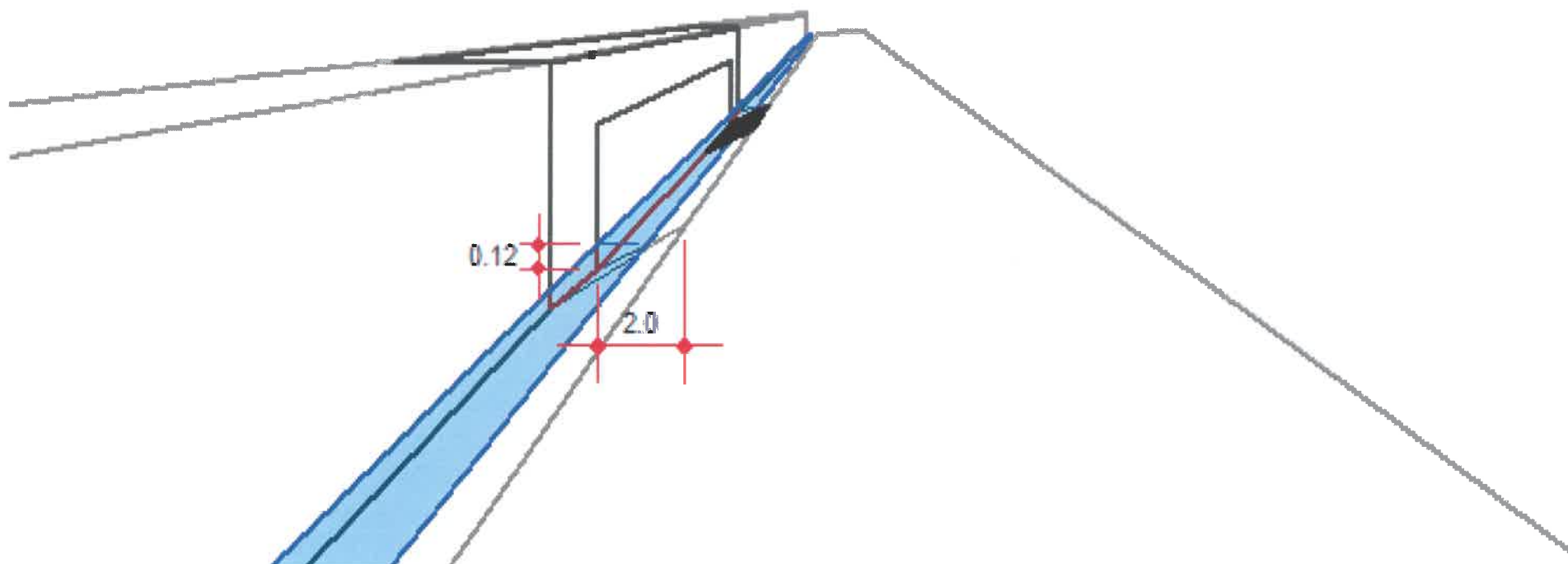
Number of lines: 24

Run Date: 05-06-2015

NOTES: Inlet N-Values = 0.016 ; Intensity = 55.61 / (Inlet time + 10.00) ^ 0.74; Return period = 10 Yrs. ; * Indicates Known Q added. All curb inlets are Horiz throat.

All dimensions in feet

Line 1 - Combination (Sweeper) Inlet in Sag - EX. CDI #1



Line #	Q				Inlet			Gutter				Depth		Spread		Byp
	Catch (cfs)	Carry (cfs)	Capt (cfs)	Byp (cfs)	Length (ft)	Depr (in)	Throat (in)	Width (ft)	Slope (ft/ft)	Sw (ft/ft)	Sx (ft/ft)	Gutter (ft)	Inlet (ft)	Gutter (ft)	Inlet (ft)	
1	0.83	0.00	0.83	0.00	Sweep	2.0	6.0	2.00	Sag	0.080	0.020	0.07	0.12	0.92	1.16	Sag

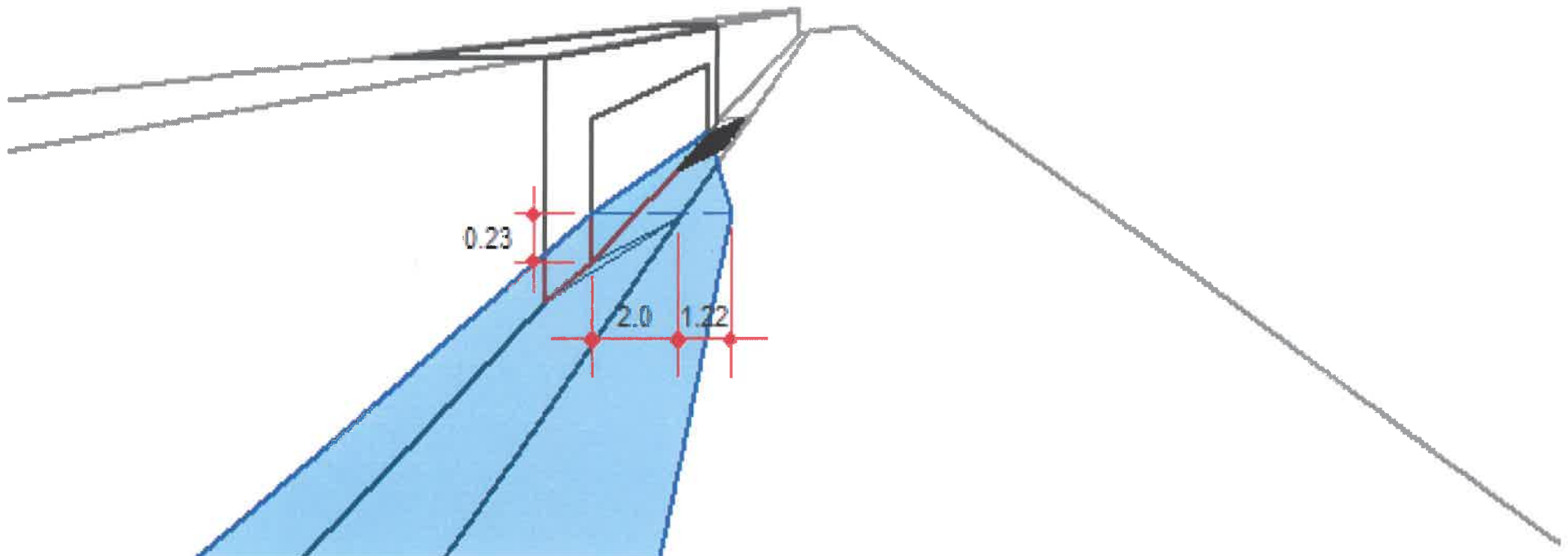
Project File:

No. Lines: 24

Run Date: 05-06-2015

All dimensions in feet

Line 2 - Combination (Sweeper) Inlet on Grade - EX. CDI #2



Line #	Q				Inlet			Gutter				Depth		Spread		Byp Line (ft)
	Catch (cfs)	Carry (cfs)	Capt (cfs)	Byp (cfs)	Length (ft)	Depr (in)	Throat (in)	Width (ft)	Slope (ft/ft)	Sw (ft/ft)	Sx (ft/ft)	Gutter (ft)	Inlet (ft)	Gutter (ft)	Inlet (ft)	
2	0.83	0.00	0.83	0.00	Sweep	2.0	6.0	2.00	0.010	0.080	0.020	0.21	0.23	4.30	3.22	1

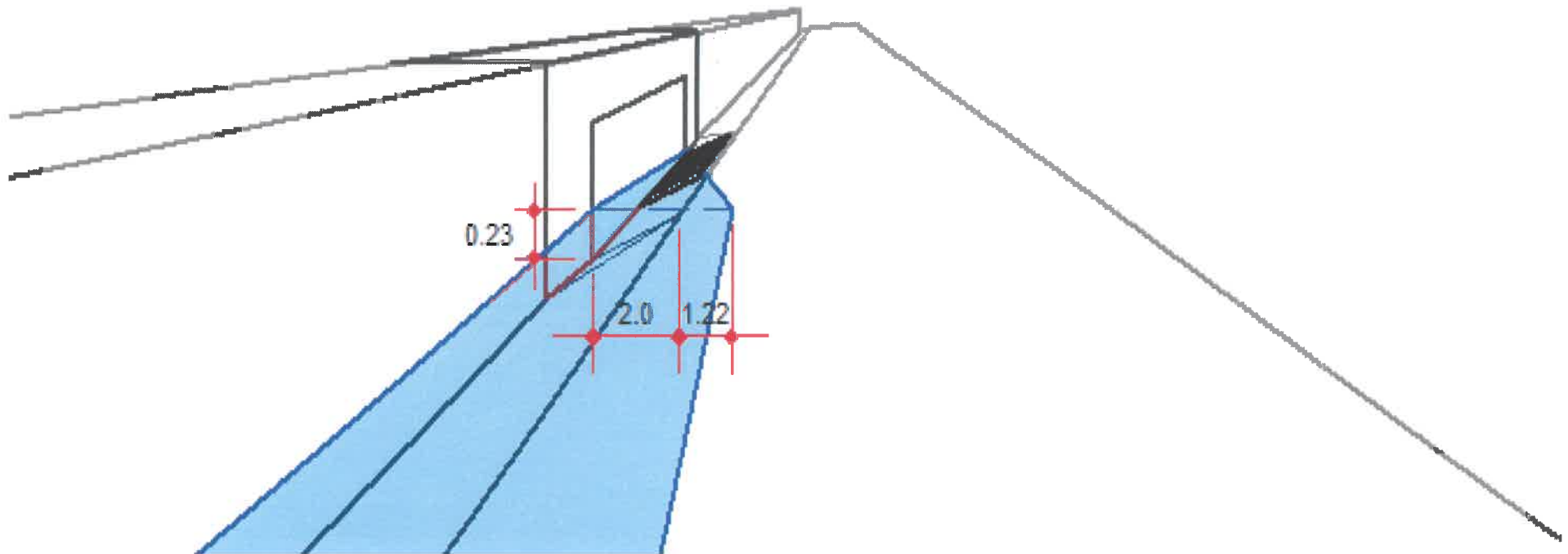
Project File:

No. Lines: 24

Run Date: 05-06-2015

All dimensions in feet

Line 8 - Combination (Sweeper) Inlet on Grade - EX. CDI #3



Line #	Q				Inlet			Gutter				Depth		Spread		Byp Line (ft)
	Catch (cfs)	Carry (cfs)	Capt (cfs)	Byp (cfs)	Length (ft)	Depr (in)	Throat (in)	Width (ft)	Slope (ft/ft)	Sw (ft/ft)	Sx (ft/ft)	Gutter (ft)	Inlet (ft)	Gutter (ft)	Inlet (ft)	
8	0.83	0.00	0.83	0.00	Sweep	2.0	5.5	2.00	0.010	0.080	0.020	0.21	0.23	4.30	3.22	2

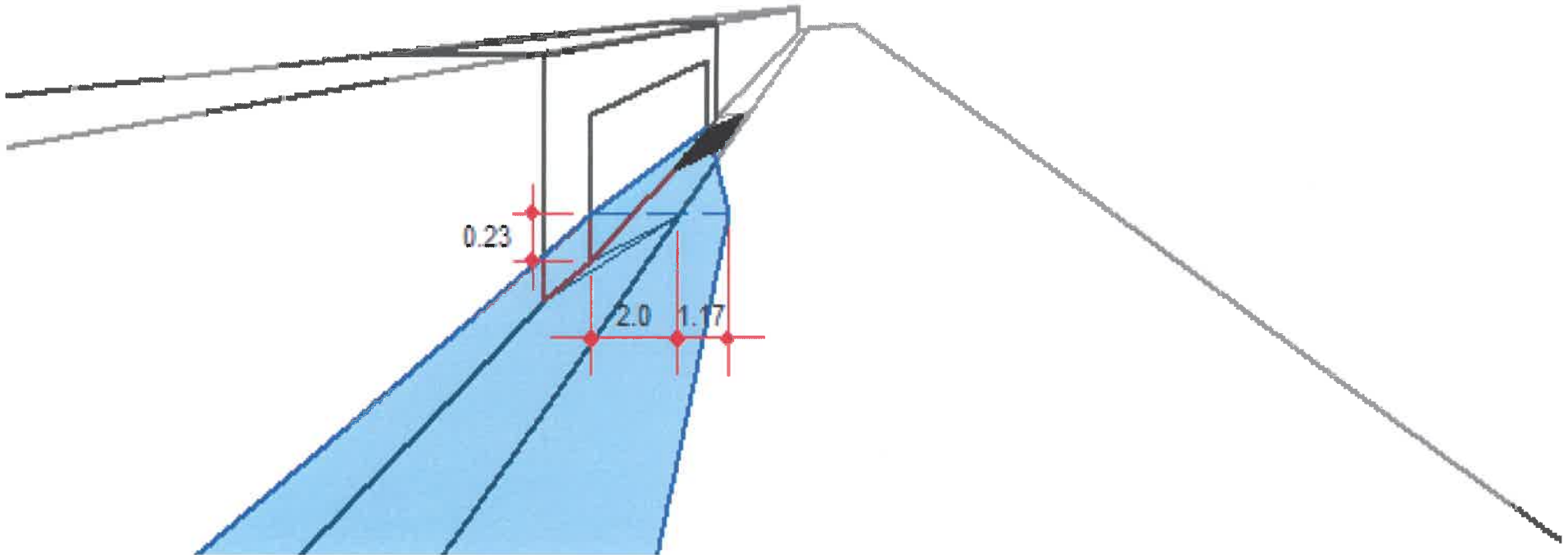
Project File:

No. Lines: 24

Run Date: 05-06-2015

All dimensions in feet

Line 6 - Combination (Sweeper) Inlet on Grade - EX. CDI #4



Line #	Q				Inlet			Gutter				Depth		Spread		Byp Line (ft)
	Catch (cfs)	Carry (cfs)	Capt (cfs)	Byp (cfs)	Length (ft)	Depr (in)	Throat (in)	Width (ft)	Slope (ft/ft)	Sw (ft/ft)	Sx (ft/ft)	Gutter (ft)	Inlet (ft)	Gutter (ft)	Inlet (ft)	
6	0.83	0.00	0.83	0.00	Sweep	2.0	6.0	2.00	0.010	0.080	0.020	0.21	0.23	4.30	3.17	7

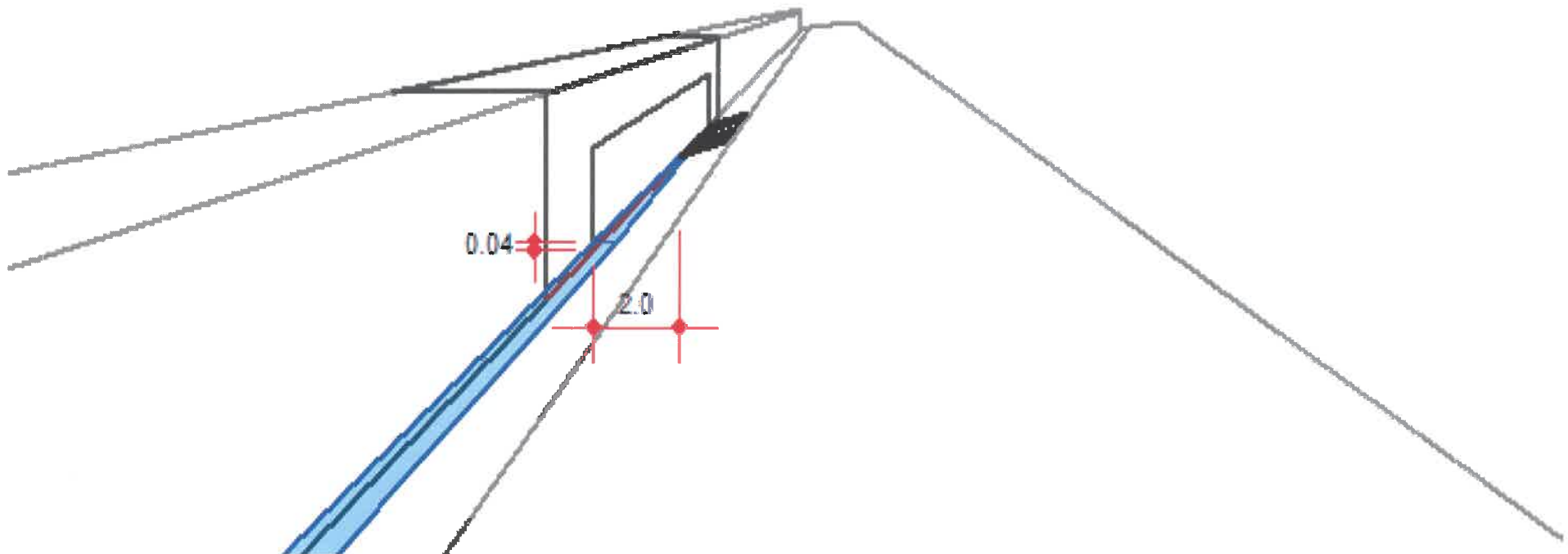
Project File:

No. Lines: 24

Run Date: 05-06-2015

All dimensions in feet

Line 4 - Combination (Sweeper) Inlet on Grade - 1-1



Line #	Q				Inlet			Gutter				Depth		Spread		Byp
	Catch (cfs)	Carry (cfs)	Capt (cfs)	Byp (cfs)	Length (ft)	Depr (in)	Throat (in)	Width (ft)	Slope (ft/ft)	Sw (ft/ft)	Sx (ft/ft)	Gutter (ft)	Inlet (ft)	Gutter (ft)	Inlet (ft)	Line (ft)
4	0.25	0.00	0.25	0.00	Sweep	0.0	6.0	2.00	4.999	0.080	0.020	0.04	0.04	0.52	0.52	5

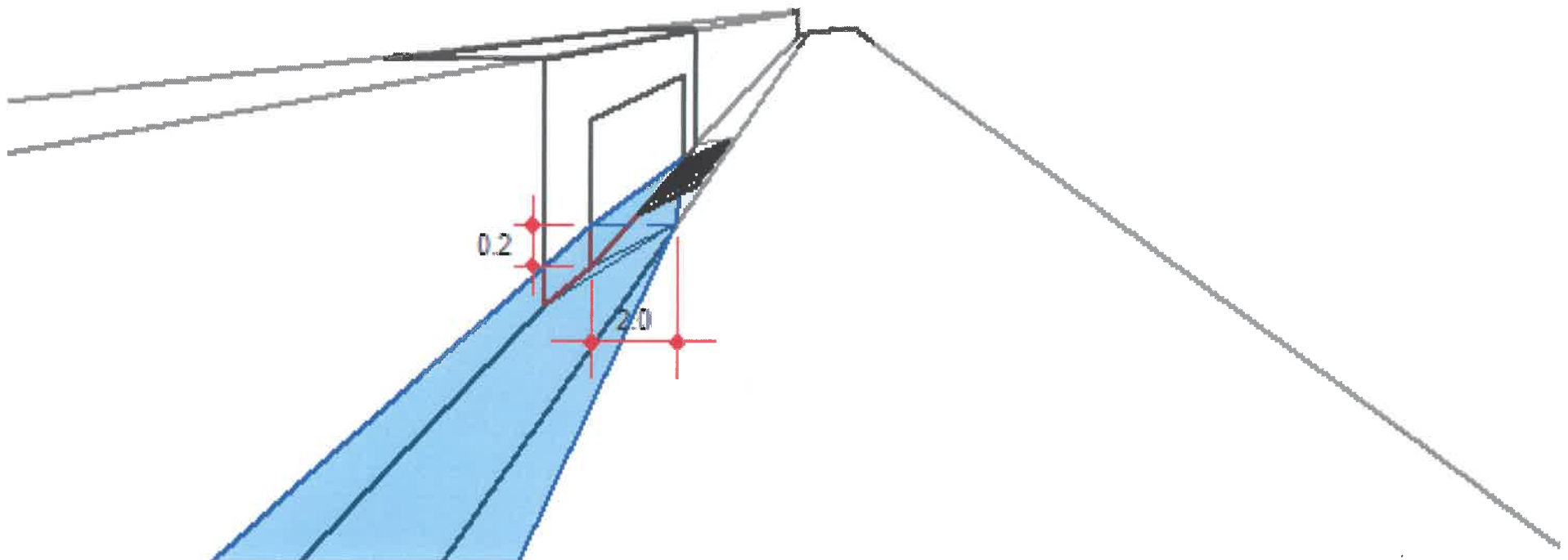
Project File:

No. Lines: 24

Run Date: 05-06-2015

All dimensions in feet

Line 5 - Combination (Sweeper) Inlet on Grade - 1-2



Line #	Q				Inlet			Gutter				Depth		Spread		Byp Line (ft)
	Catch (cfs)	Carry (cfs)	Capt (cfs)	Byp (cfs)	Length (ft)	Depr (in)	Throat (in)	Width (ft)	Slope (ft/ft)	Sw (ft/ft)	Sx (ft/ft)	Gutter (ft)	Inlet (ft)	Gutter (ft)	Inlet (ft)	
5	0.79	0.00	0.79	0.00	Sweep	2.0	6.0	2.00	0.020	0.080	0.020	0.18	0.20	3.05	1.93	6

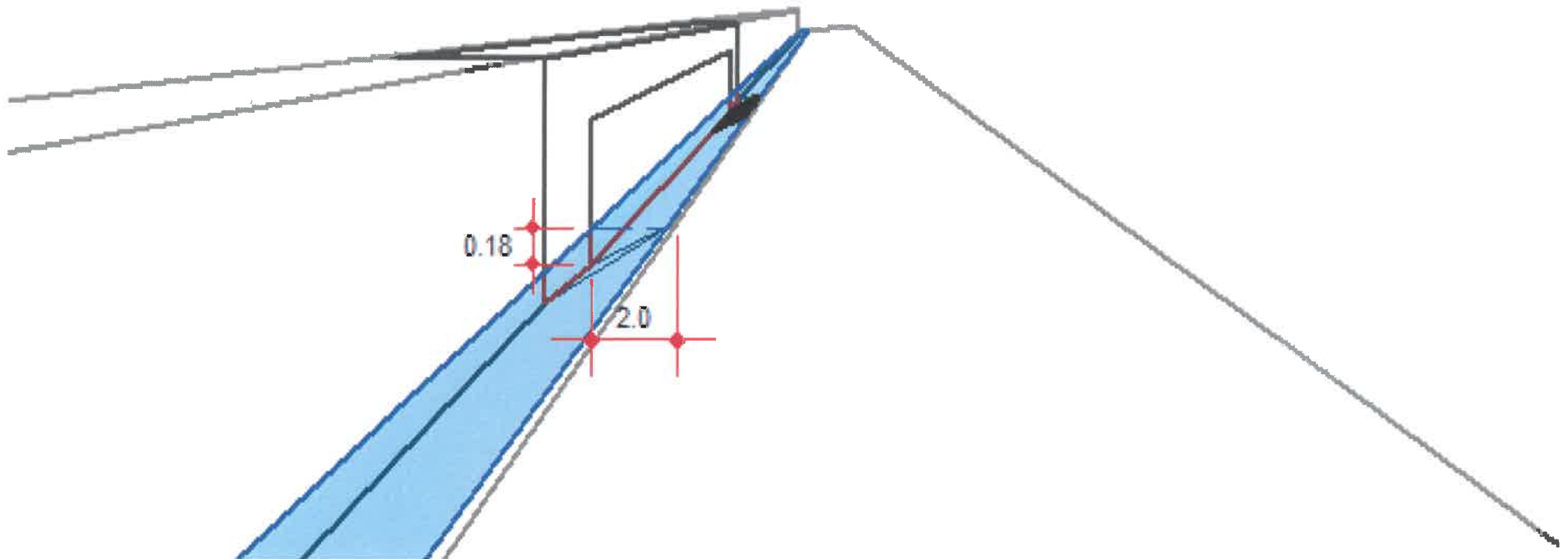
Project File:

No. Lines: 24

Run Date: 05-06-2015

All dimensions in feet

Line 7 - Combination (Sweeper) Inlet in Sag - 2-1



Line #	Q				Inlet			Gutter				Depth		Spread		Byp
	Catch (cfs)	Carry (cfs)	Capt (cfs)	Byp (cfs)	Length (ft)	Depr (in)	Throat (in)	Width (ft)	Slope (ft/ft)	Sw (ft/ft)	Sx (ft/ft)	Gutter (ft)	Inlet (ft)	Gutter (ft)	Inlet (ft)	
7	1.28	0.00	1.28	0.00	Sweep	2.0	6.0	2.00	Sag	0.080	0.020	0.13	0.18	1.67	1.74	Sag

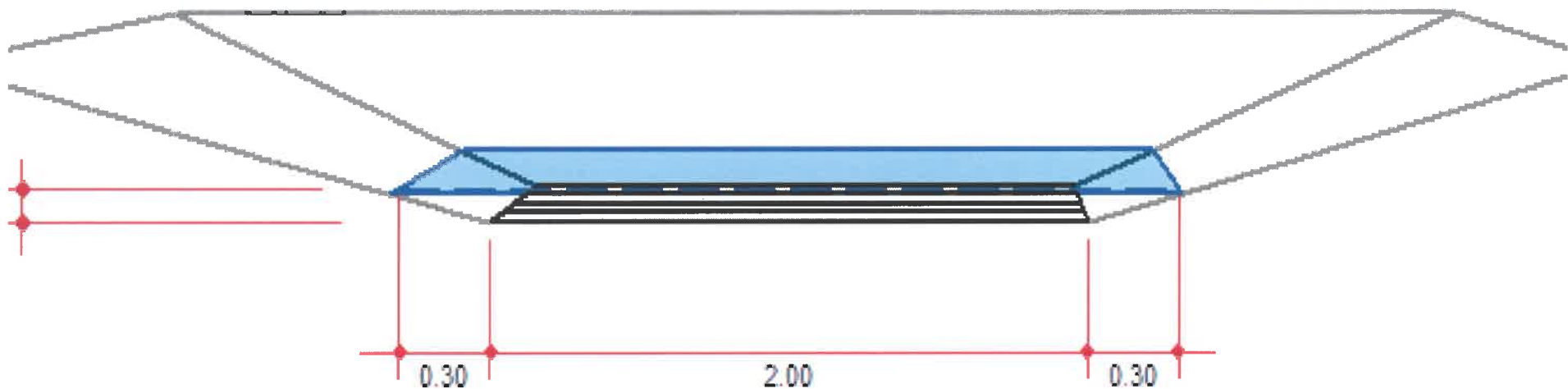
Project File:

No. Lines: 24

Run Date: 05-06-2015

All dimensions in feet

Line 12 - Drop Grate Inlet in Sag - 2-3



Line #	Q				Inlet			Gutter				Depth		Spread		Byp
	Catch (cfs)	Carry (cfs)	Capt (cfs)	Byp (cfs)	Length (ft)	Depr (in)	Area (sqft)	Width (ft)	Slope (ft/ft)	Sw (ft/ft)	Sx (ft/ft)	Gutter (ft)	Inlet (ft)	Gutter (ft)	Inlet (ft)	
12	0.76	0.00	0.76	0.00	2.00	3.00	2.00	Sag	0.330	0.330	0.10	0.10	2.61	2.61	Sag

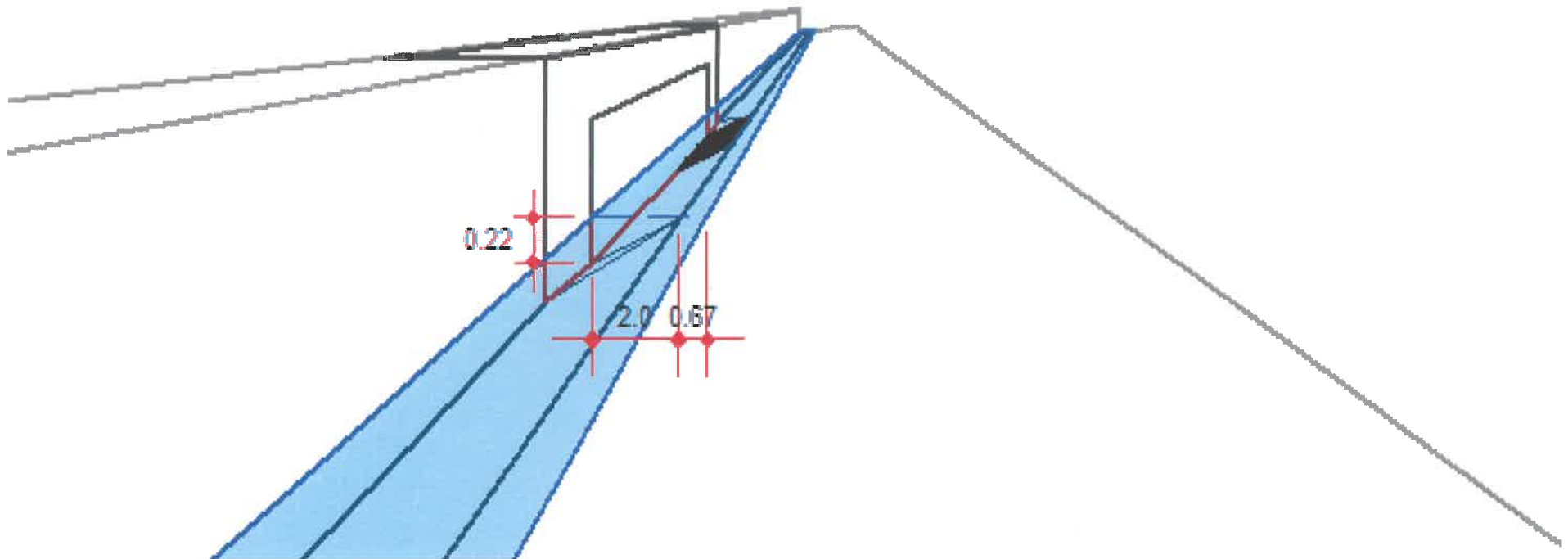
Project File:

No. Lines: 24

Run Date: 05-06-2015

All dimensions in feet

Line 17 - Combination (Sweeper) Inlet in Sag - 2-4



Line #	Q				Inlet			Gutter				Depth		Spread		Byp
	Catch (cfs)	Carry (cfs)	Capt (cfs)	Byp (cfs)	Length (ft)	Depr (in)	Throat (in)	Width (ft)	Slope (ft/ft)	Sw (ft/ft)	Sx (ft/ft)	Gutter (ft)	Inlet (ft)	Gutter (ft)	Inlet (ft)	
17	1.75	0.00	1.75	0.00	Sweep	2.0	6.0	2.00	Sag	0.080	0.020	0.17	0.22	2.67	2.67	Sag

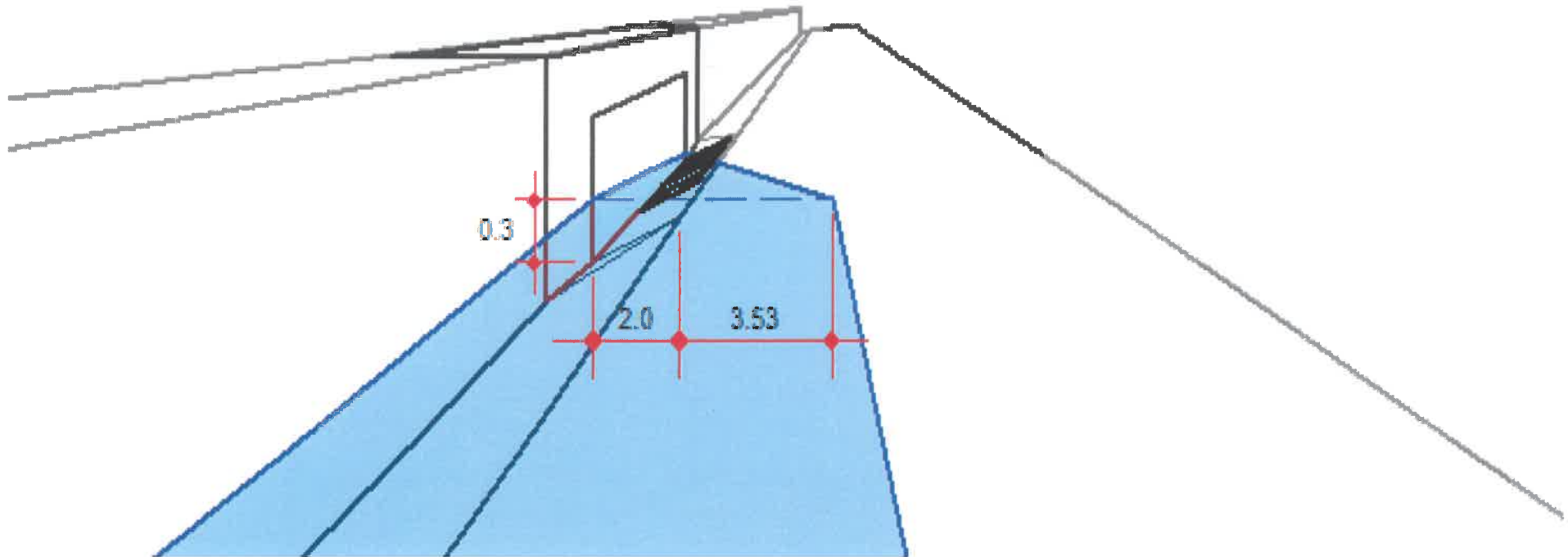
Project File:

No. Lines: 24

Run Date: 05-06-2015

All dimensions in feet

Line 18 - Combination (Sweeper) Inlet on Grade - 2-5



Line #	Q				Inlet			Gutter				Depth		Spread		Byp Line (ft)
	Catch (cfs)	Carry (cfs)	Capt (cfs)	Byp (cfs)	Length (ft)	Depr (in)	Throat (in)	Width (ft)	Slope (ft/ft)	Sw (ft/ft)	Sx (ft/ft)	Gutter (ft)	Inlet (ft)	Gutter (ft)	Inlet (ft)	
18	1.17	0.00	1.17	0.00	Sweep	2.0	6.0	2.00	0.004	0.080	0.025	0.27	0.30	6.24	5.53	17

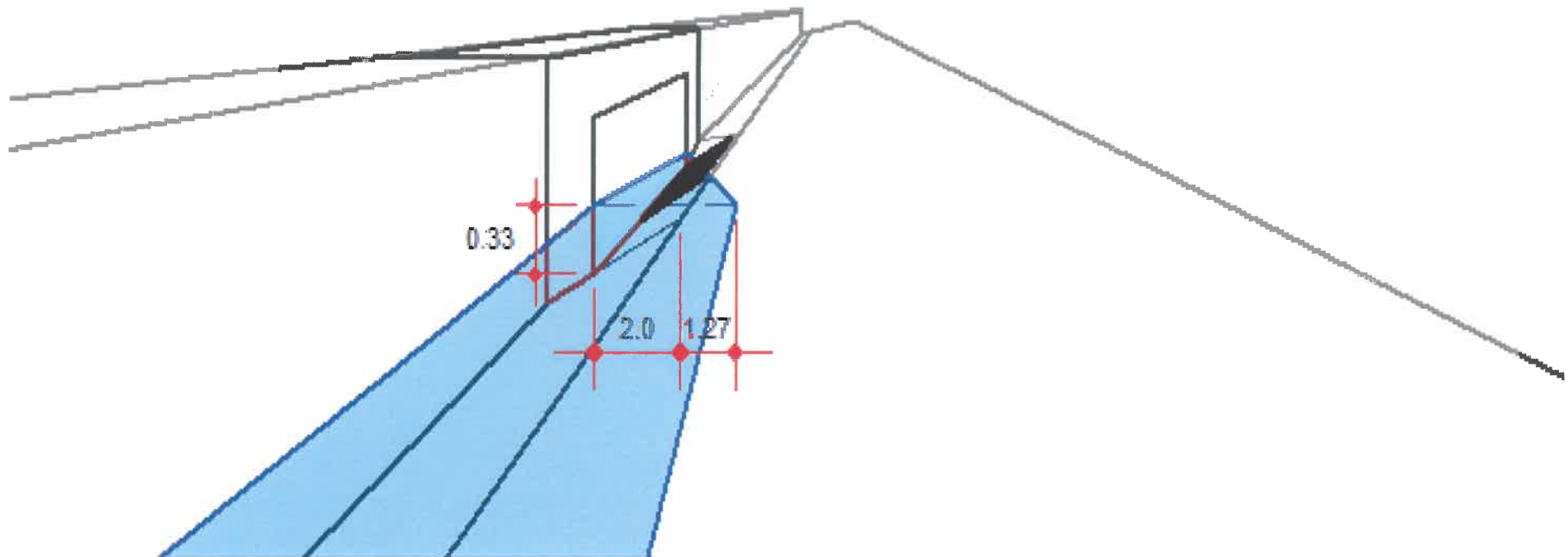
Project File:

No. Lines: 24

Run Date: 05-06-2015

All dimensions in feet

Line 19 - Combination (Sweeper) Inlet on Grade - 2-6



Line #	Q				Inlet			Gutter				Depth		Spread		Byp Line (ft)
	Catch (cfs)	Carry (cfs)	Capt (cfs)	Byp (cfs)	Length (ft)	Depr (in)	Throat (in)	Width (ft)	Slope (ft/ft)	Sw (ft/ft)	Sx (ft/ft)	Gutter (ft)	Inlet (ft)	Gutter (ft)	Inlet (ft)	
19	1.08	0.00	1.08	0.00	Sweep	2.0	6.0	2.00	0.004	0.080	0.050	0.27	0.33	4.20	3.27	18

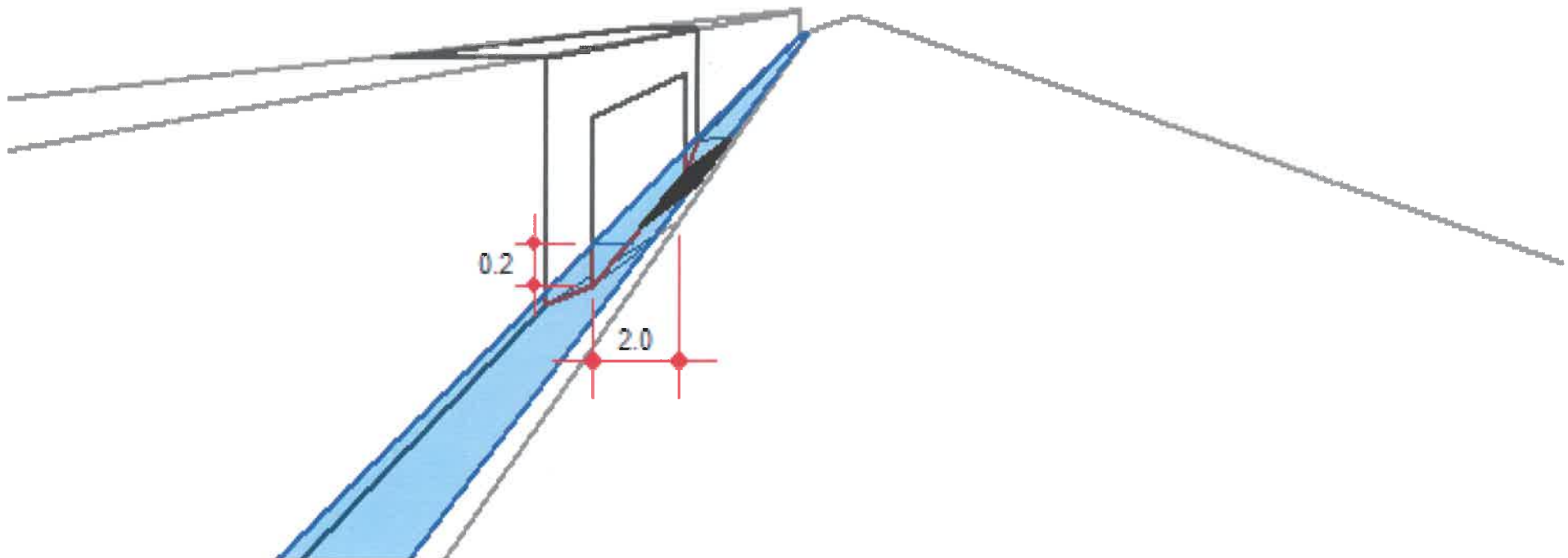
Project File:

No. Lines: 24

Run Date: 05-06-2015

All dimensions in feet

Line 20 - Combination (Sweeper) Inlet in Sag - 2-7



Line #	Q				Inlet			Gutter				Depth		Spread		Byp
	Catch (cfs)	Carry (cfs)	Capt (cfs)	Byp (cfs)	Length (ft)	Depr (in)	Throat (in)	Width (ft)	Slope (ft/ft)	Sw (ft/ft)	Sx (ft/ft)	Gutter (ft)	Inlet (ft)	Gutter (ft)	Inlet (ft)	Line (ft)
20	1.48	0.00	1.48	0.00	Sweep	2.0	6.0	2.00	Sag	0.080	0.070	0.05	0.20	0.67	1.30	Sag

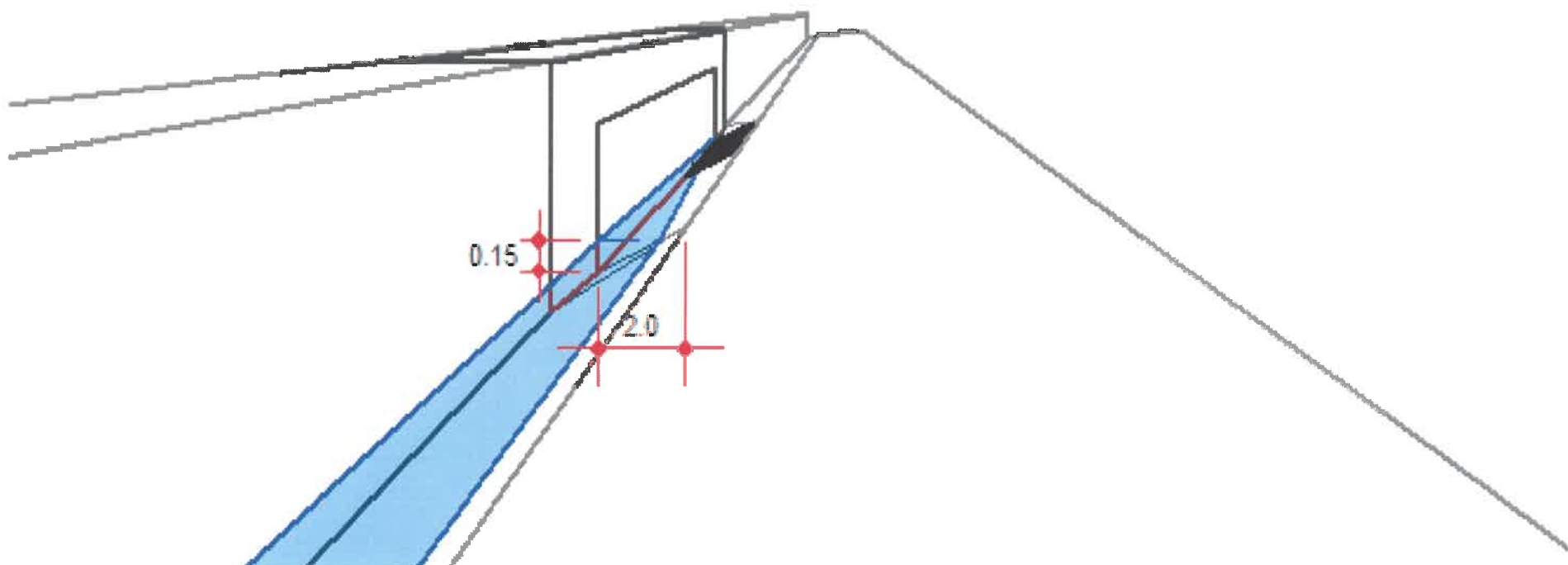
Project File:

No. Lines: 24

Run Date: 05-06-2015

All dimensions in feet

Line 21 - Combination (Sweeper) Inlet on Grade - 2-8



Line #	Q				Inlet			Gutter				Depth		Spread		Byp
	Catch (cfs)	Carry (cfs)	Capt (cfs)	Byp (cfs)	Length (ft)	Depr (in)	Throat (in)	Width (ft)	Slope (ft/ft)	Sw (ft/ft)	Sx (ft/ft)	Gutter (ft)	Inlet (ft)	Gutter (ft)	Inlet (ft)	
21	0.56	0.00	0.56	0.00	Sweep	2.0	6.0	2.00	0.050	0.080	0.020	0.13	0.15	1.68	1.43	20

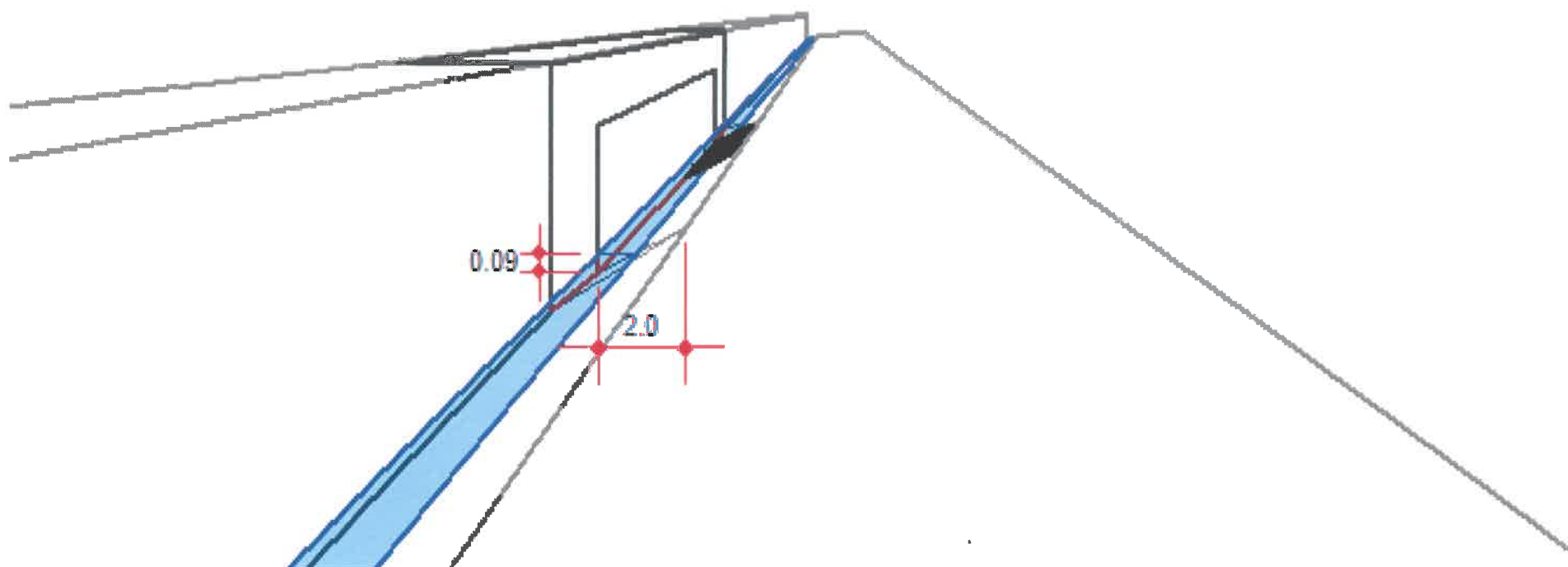
Project File:

No. Lines: 24

Run Date: 05-06-2015

All dimensions in feet

Line 22 - Combination (Sweeper) Inlet in Sag - 2-9



Line #	Q				Inlet			Gutter				Depth		Spread		Byp
	Catch (cfs)	Carry (cfs)	Capt (cfs)	Byp (cfs)	Length (ft)	Depr (in)	Throat (in)	Width (ft)	Slope (ft/ft)	Sw (ft/ft)	Sx (ft/ft)	Gutter (ft)	Inlet (ft)	Gutter (ft)	Inlet (ft)	
22	0.45	0.00	0.45	0.00	Sweep	2.0	6.0	2.00	Sag	0.080	0.020	0.04	0.09	0.54	0.87	Sag

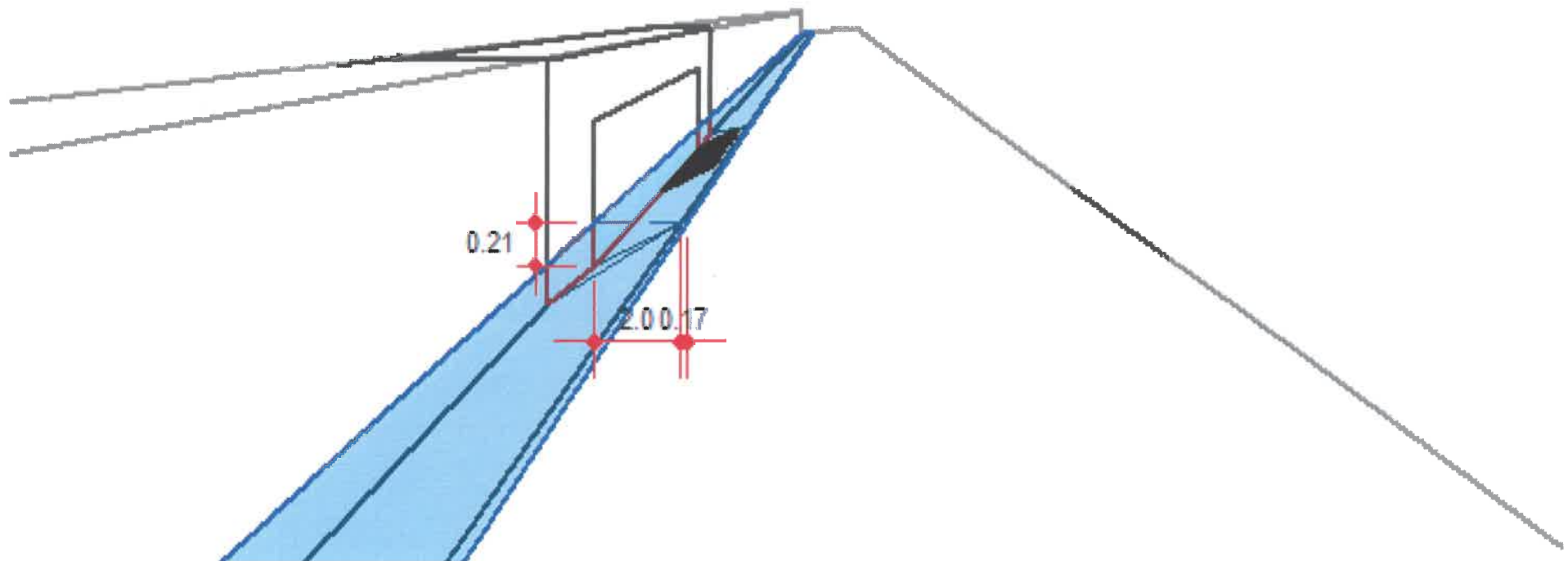
Project File:

No. Lines: 24

Run Date: 05-06-2015

All dimensions in feet

Line 23 - Combination (Sweeper) Inlet in Sag - 2-9A



Line #	Q				Inlet			Gutter				Depth		Spread		Byp
	Catch (cfs)	Carry (cfs)	Capt (cfs)	Byp (cfs)	Length (ft)	Depr (in)	Throat (in)	Width (ft)	Slope (ft/ft)	Sw (ft/ft)	Sx (ft/ft)	Gutter (ft)	Inlet (ft)	Gutter (ft)	Inlet (ft)	
23	1.62	0.00	1.62	0.00	Sweep	2.0	6.0	2.00	Sag	0.080	0.020	0.16	0.21	2.17	2.17	Sag

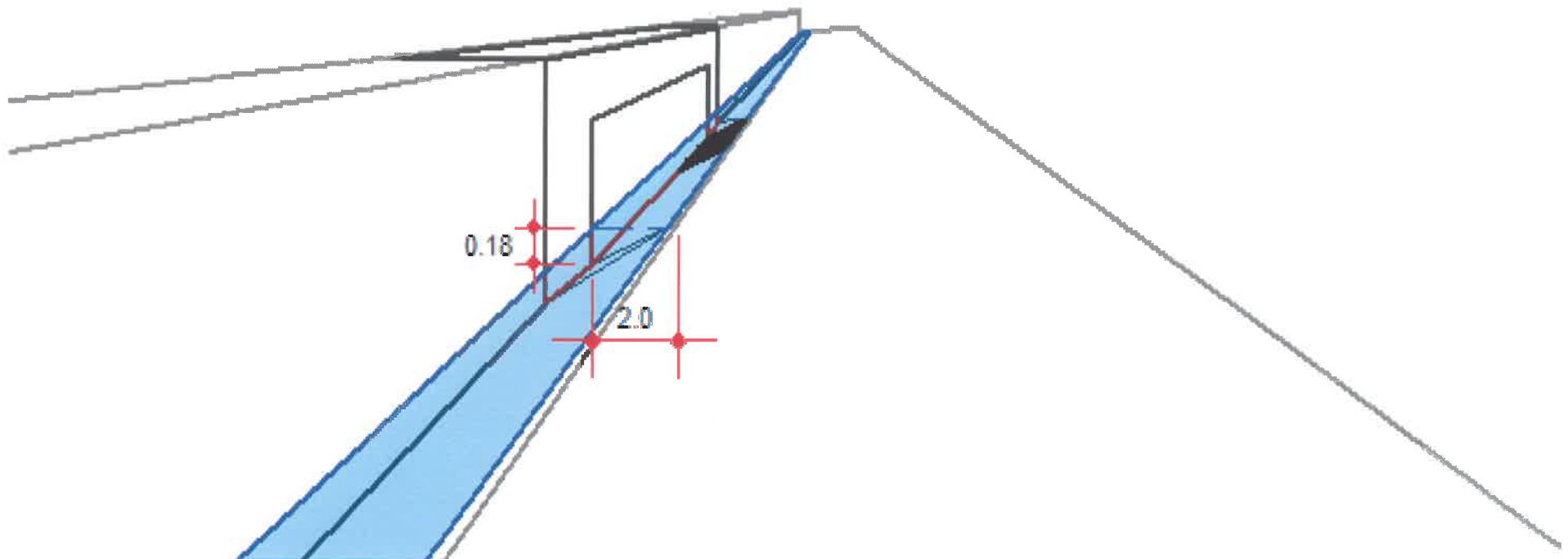
Project File:

No. Lines: 24

Run Date: 05-06-2015

All dimensions in feet

Line 24 - Combination (Sweeper) Inlet in Sag - 2-10



Line #	Q				Inlet			Gutter				Depth		Spread		Byp
	Catch (cfs)	Carry (cfs)	Capt (cfs)	Byp (cfs)	Length (ft)	Depr (in)	Throat (in)	Width (ft)	Slope (ft/ft)	Sw (ft/ft)	Sx (ft/ft)	Gutter (ft)	Inlet (ft)	Gutter (ft)	Inlet (ft)	
24	1.24	0.00	1.24	0.00	Sweep	2.0	6.0	2.00	Sag	0.080	0.020	0.13	0.18	1.67	1.74	Sag

Project File:

No. Lines: 24

Run Date: 05-06-2015

7. Reports

8. Correspondence

**Development Management**

101-A Mounts Bay Road

P.O. Box 8784

Williamsburg, VA 23187-8784

P: 757-253-6671

F: 757-253-6822

Development.management@jamescitycountyva.gov

jamescitycountyva.gov

Building Safety and Permits

757-253-6620

Engineering and Resource Protection

757-253-6670

Planning

757-253-6685

Zoning Enforcement

757-253-6671

October 5, 2015

Mr. William Felts
LandTech Resources, Inc.
3925 Midlands Road
Williamsburg, VA 23188

RE: SP-0083-2014, New Town Sec. 3&6 Block 21 Assisted Living Facility

Dear Mr. Felts,

I am pleased to inform you that your site plan received final approval on October 5, 2015. Enclosed is one stamped final approval drawing for your files. The other approved copy has been delivered to the Building Safety and Permits Division to complete your building permit application.

Please note that the approval letters for reviewing agencies include instructions and information that the applicant and owner should be aware of as the construction moves forward. Please view these letters on CaseTrak at the following address:

<http://first.jamescitycountyva.gov/CaseTrak/searchdetail.aspx?caseid=64462>.

Final approval of the site plan shall expire five years after the date of approval. During that period all permits shall be obtained or the development shall be put into use. When the permits have been issued, the site plan approval shall run concurrently with the permits term of validity for only those uses and improvements covered by the permits. All work shall be completed in the manner and location indicated upon the approved plan. Modifications shall be approved in advance by the Zoning Administrator.

Sincerely,

Jason E. Purse
Zoning Administrator



Stormwater and Resource Protection Division
General Services Department
107 Tewning Road
Williamsburg, VA 23188
P: 757-259-1460
F: 757-259-4120
Stormwater@jamescitycountyva.gov
jamescitycountyva.gov

April 15, 2019

Mr. Jordan Anglin
VP of Operations
LaRS Group, Inc
5360 Discovery Park Blvd, Suite 201
Williamsburg, Virginia 23188
Via email: jordan@larsgroup.com

Re: New Town Assisting Living
SP-0086-2016
Storm System AsBuilt Review

Dear Jordan:

The Stormwater & Resource Protection Division has received a record drawing (asbuilt), construction certification, and CCTV reports for the storm system associated with the above referenced project. Record Drawings (asbuilts), construction certifications, and videos are required for stormwater conveyance and attenuation systems. Certifying to the construction of these systems and components indicates that all items were constructed in accordance with the associated plans and specifications. These submitted items must meet established program requirements of the County Stormwater & Resource Protection Division.

Based on our review of the resubmitted documents and concurrent field inspection as performed on 4/12/19 the following items must be addressed prior to the release of surety and for the Division to proceed with the closing out of the project.

Record Drawing & Construction Certification:

1. Record Drawing and Calculations.
 - a. Several pipe lengths noted on the record drawing do not match the lengths listed in the revised calculations. Drawing and Calculations should match.
 - b. Drainage areas listed in revised calculations for lines 2-4 do not match the approved plan. As stated in the drainage narrative, approved plan areas should match record drawing areas.
 - c. Several structure numbers associated with the Assisted Living project site are presented differently in the revised calculations. List all associated structure numbers in the drawing and calculations.
 - d. The Division acknowledges the inclusion of the proposed storm system associated with future development, but notes that the storm system expansion is not yet approved and changes to the system are possible.
2. Construction Certification. Section 2A addressing construction timeline of this system was incomplete. "Unknown" may be used for system milestone inspection, but other items should have dates/ months (i.e. May 2016). **This comment not addressed.**

Construction - Related Items:

3. EX CDI#4. Water stains are present at interface of top unit and structure. Ensure watertight connection. **Provide information regarding type of field corrective action taken.**
4. SS#2-2. Remove the silt fence from the perimeter of the structure, fill and compact along the edges of the structure, and ensure structure is cleaned and watertight. **Post holes of silt fence were not appropriately backfilled and compacted. Sinkholes are evident at all corners of unit. Additionally, matting was placed across the grate and is inhibiting flow, as well as possibly contributing to sinkhole issues.**
5. Northwest portion of site. Stabilize remainder of parcel at northwest side of development. Currently, this area contains remains of gravel access road, wash rack, and spotty grass coverage. Several rills/ gullies are present due to runoff through unstabilized area. Grading and seeding/ matting are needed. **The majority of this area has been stabilized, however rills are still evident. The material (silt/ gravel) continuing to erode from this area is contaminating CDI 2-3 (record drawing label). Additional overseeding is required to ensure stabilization.**
6. Existing trap. This trap must be closed and area graded per approved plan. Existing berm at rear of trap, along rear property line, will require grading work so as not to impound water on project site. **Entirety of trap was not closed and portion of berm has been left in place. Water is currently impounded in this area. The proposed development of the proposed subdivided parcel does not include a trap in this area, thus entire trap and berm must be appropriately addressed for project close-out.**
7. Silt Fence. Remove remnant silt fence from rear of trap area.
8. Tee Turn Around Area (rear of site). Replace inlet protection at last DI (noted as SS#2-3) and remove all accumulated sediment in that area. Establish tee turn around per approved plan.
 - a. **Tee Turn Around has not been established per plan. The gravel turn around must be flush with the remaining edge of curb, thus backfilling of gravel may be required. Currently, the exposed 2-3" drop at the edge of the gutter pan near CDI 2-3 is a traffic and tripping hazard.**
 - b. **Accumulated sediment and contaminated materials must be removed prior to establishment of turn around.**
 - c. **Gutter erosion and sediment control measure (gutter buddy) was not replaced and is not functioning as required.**

Once this work has been completed, please submit a revised hardcopy of the record drawing, calculations, and construction certification. Staff will reinspect the site. Should it be confirmed by staff that all items have been satisfactorily completed, a digital submittal of the record drawing will be requested. Once all required information has been provided, staff will then proceed with final release of the surety and/or closing out the project.

Should you have any comments or questions, please contact me at your convenience at 757-253-6702 or via email at Deirdre.Wells@JamesCityCountyVA.gov.

Sincerely,



Deirdre P. Wells, P.E., CFM
Chief Civil Engineer
Stormwater & Resource Protection

cc: Peter Farrell (LRI) – via email
Jake Liebler (JSG) – via email
Amy Parker (JCC) – via email

Projects\AsBuilts\03StormSystems\NewTown\SRP_041519_NEWTOWNASSTLIVING_SP-0086-2016_STORM03



Stormwater and Resource Protection Division
General Services Department
107 Tewning Road
Williamsburg, VA 23188
P: 757-259-1460
F: 757-259-4120
Stormwater@jamescitycountyva.gov
jamescitycountyva.gov

January 17, 2019

Mr. Jordan Anglin
VP of Operations
LaRS Group, Inc
5360 Discovery Park Blvd, Suite 201
Williamsburg, Virginia 23188
Via email: jordan@larsgroup.com

Re: New Town Assisting Living
SP-0086-2016
Storm System AsBuilt Review

Dear Jordan:

The Stormwater & Resource Protection Division has received a record drawing (asbuilt), construction certification, and CCTV reports for the storm system associated with the above referenced project. Record Drawings (asbuilts), construction certifications, and videos are required for stormwater conveyance and attenuation systems. Certifying to the construction of these systems and components indicates that all items were constructed in accordance with the associated plans and specifications. These submitted items must meet established program requirements of the County Stormwater & Resource Protection Division.

Based on our review of the project, record drawing submittal, video review, and concurrent field inspection as performed on 1/19/19 the following items must be addressed prior to the release of surety and for the Division to proceed with the closing out of the project.

Record Drawing & Construction Certification:

1. Record Drawing.
 - a. SS#2-11. This structure does not show asbuilt elevations. Please include on drawing.
 - b. Verify the installed pipe lengths and accurately reflect on the record drawing. The CCTV reports do not match the lengths indicated on the record drawing.
 - c. Revised Calculations. As several pipes were installed at a lower-than-plan-approved slope, revised calculations are necessary to ensure pipe adequacy and structure containment. Several pipes are nearly flat, causing concern.
2. Construction Certification. Section 2A addressing construction timeline of this system was incomplete. "Unknown" may be used for system milestone inspection, but other items should have dates/ months (i.e. May 2016).

3. CCTV. The following is a **partial list** of CCTV issues based on the submitted videos and reports. As noted in the 1/16/19 email, there are several notable issues with the submitted CCTV information. This partial list is presented now so that you may relay information to your CCTV subcontractor. Once a full submittal is made to the Division, a second listing of punch list issues will be generated.
- a. SS2-3—SS2-2. 8.90'(1:04) gap at invert of joint, L.F on CCTV doesn't match as-builts
 - b. SS2-4—SS2-3. 24.50'(3:37) gap at invert of joint, 41.10'(4:25) gap at invert of joint, 48.40'(4:50) gap at invert of joint, 72.30'(5:57) gap at invert of joint, L.F of pipe run is longer than L.F on as-builts
 - c. SS2-4—SS2-4A. No SS2-4A manhole on plans, 28.00'(10:14) gap at invert of joint gasket exposed, 44.50'(11:28) large gap at invert of joint
 - d. SS2-6—SS2-7. L.F. on CCTV doesn't match as-builts
 - e. SS2-7—SS2-8. L.F. on CCTV doesn't match as-builts
 - f. SS2-8—SS2-9. Video doesn't call out next run of pipe and continues thru other manholes, 106.30'(12:34) gap at invert or joint gasket is rolled, L.F. on CCTV doesn't match as-builts
 - g. SS2-9A—SS2-9. No SS2-9A manhole on plans
 - h. SS2-9—SS2-4. pipe run not constant with as-builts
 - i. SS2-9—SS2-8. pipe run CCTV twice?
 - j. SS2-10—SS2-9. 16.30'(4:25) possible gasket rolled at invert of joint

Construction - Related Items:

- 4. SS#2-11. The front right corner (facing structure) requires parge/ caulk.
- 5. EX CDI#4. Water stains are present at interface of top unit and structure. Ensure watertight connection.
- 6. SS#2-2. Remove the silt fence from the perimeter of the structure, fill and compact along the edges of the structure, and ensure structure is cleaned and watertight.
- 7. Northwest portion of site. Stabilize remainder of parcel at northwest side of development. Currently, this area contains remains of gravel access road, wash rack, and spotty grass coverage. Several rills/ gullies are present due to runoff through unstabilized area. Grading and seeding/ matting are needed.
- 8. Existing trap. This trap must be closed and area graded per approved plan. Existing berm at rear of trap, along rear property line, will require grading work so as not to impound water on project site.
- 9. North front corner of building. Currently, this sloped area has only spotty vegetation cover and erodes during rain events. Area requires stabilization.
- 10. Pipe Remnant. Remove pipe remnant from northwest portion of site.
- 11. Tee Turn Around Area (rear of site). Replace inlet protection at last DI (noted as SS#2-3) and remove all accumulated sediment in that area. Establish tee turn around per approved plan.

Once this work has been completed and the CCTV footage issues resolved, please submit a revised hardcopy of the record drawing and construction certification. Staff will reinspect the site. Should it be confirmed by staff that all items have been satisfactorily completed, a digital submittal of the record drawing will be requested. Once all required information has been provided, staff will then proceed with final release of the surety and/or closing out the project.

9. Inspections

Should you have any comments or questions, please contact me at your convenience at 757-253-6702 or via email at Deirdre.Wells@JamesCityCountyVA.gov.

Sincerely,

A handwritten signature in cursive script that reads "Deirdre P. Wells".

Deirdre P. Wells, P.E., CFM
Chief Civil Engineer
Stormwater & Resource Protection

cc: Peter Farrell (LRI) – via email
Jake Liebler (JSG) – via email
Amy Parker (JCC) – via email

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10. Permitting

11. Miscellaneous

(ex. photos)

12. Project Development Documents