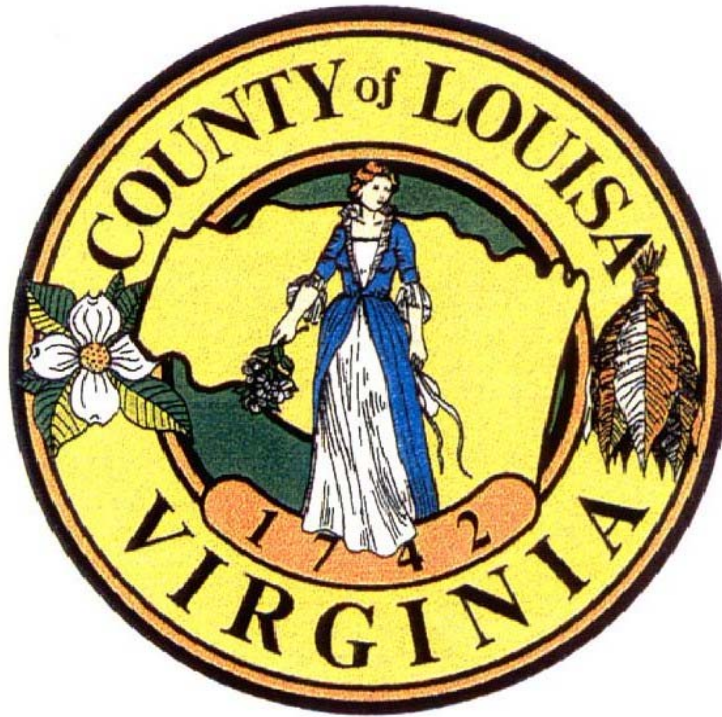




COUNTY OF LOUISA, VIRGINIA

**REQUEST FOR QUOTE (RFQ)
FOR
TRENCH DRAIN INSTALLATION AT THE HOLLY
GROVE REFUSE AND RECYCLING CENTER**

RFQ# GS-11-25

JUNE 1, 2011

**REQUEST FOR QUOTE
(RFQ)**

Issue Date: Wednesday, June 1, 2011

RFQ# GS-11-25

Title: Trench Drain Installation at the Holly Grove Refuse and Recycling Center

Issuing Agency: County of Louisa, Virginia

Attn: April Lowe

PO Box 160

Louisa, VA 23093

Location Where Work Will Be Performed: 25 Copper Line Road

Bumpass, VA 23024

Period of Contract: From June 27, 2011 Through July 15, 2011

Renewable: N/A

Quotes Will Be Received Until: Friday, June 17, 2011, by 2:00 p.m., local time prevailing

Direct All Inquiries for Information To: April Lowe, Purchasing Officer

Post Office Box 160

1 Woolfolk Avenue

Louisa, VA 23093

(540) 967-3499

alowe@louisa.org

**IF QUOTES ARE MAILED, SEND DIRECTLY TO ISSUING AGENCY SHOWN ABOVE. IF
QUOTES ARE HAND DELIVERED, DELIVER TO:**

County of Louisa
Louisa County Administration Building
Attn: April Lowe
Finance Department, 2nd Floor
1 Woolfolk Avenue
Louisa, Virginia 23093
(540) 967-3499

Note: This public body does not discriminate against faith-based organizations in accordance with the *Code of Virginia*, § 2.2-4343.1 or against a bidder or offeror because of race, religion, color, sex, national origin, age, disability, or any other basis prohibited by state law relating to discrimination in employment.

REQUEST FOR QUOTE TITLE PAGE

REQUEST NUMBER: GS-11-25 **ISSUE DATE:** 05/31/11

TITLE: Trench Drain Installation at the Holly Grove Refuse and Recycling Center

In compliance with this Request for Quote and to all the conditions imposed herein, by signing below, Bidder:

- (1) Offers and agrees to furnish the goods/services in accordance with the attached signed quote;
- (2) Agrees that upon Louisa County's written acceptance of Bidder's response to the Request for Quote, a valid and binding contract for services exists between Bidder and Louisa County;
- (3) Agrees that the Contract Documents will consist of, and *only* of, the Request for Quote, the County of Louisa, Master Contract General Conditions Agreement and Bidder's response to the Request for Quote;
- (4) Certifies and warrants that the individual signing on Bidder's behalf is authorized to bind the Bidder in any and all contractual matters relating to this Request for Quote;
- (5) Certifies and warrants that neither Bidder, nor the individual signing on Bidder's behalf, has any business or personal relationships with any other persons, including Louisa County employees, or companies that are in conflict with the Commonwealth of Virginia's Conflict of Interest Act, or the County of Louisa, Master Contract General Conditions Agreement; and,
- (6) Certifies and warrants that the Bidder is properly licensed for providing the goods/services specified in the Request for Quote and has the appropriate License or Certificate and classification(s) required to perform the work included in the scope of the bid documents, prior to submitting the bid, in accordance with Title 54.1, Chapter 11 of the Code of Virginia. If a bidder shall fail to obtain the required license prior to submission of his quote, he shall be deemed to be in violation of § 54.1-1115 of the *Code of Virginia* (1950), as amended, and his quote will not be considered.

Sign in ink and type or print requested information.

Legal Name and Address of Firm:

_____	Date: _____
_____	By: _____
_____	(Signature)
_____	Name: _____
FEI/FIN/SSN: _____	(Please Print)
Fax Number: _____	Title: _____
E-mail Address: _____	Telephone Number: _____

Please provide the following if applicable to this RFQ:
Virginia Contractor License # _____ SCC ID # _____

Bidder shall ascertain prior to submitting a response that all Addenda issued have been received and shall **acknowledge receipt and inclusion of all Addenda here:**

Addendum #: _____	Date Issued: _____
Addendum #: _____	Date Issued: _____
Addendum #: _____	Date Issued: _____

Information the Bidder deems Proprietary is included in this response in the separate section of the quote identified immediately below.

This Title Page MUST be Submitted as Part of your Quote

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I. PURPOSE:

The County of Louisa is seeking quotes from responsive and responsible bidders to provide a drainage system for capturing compactor trash liquids that will be discharged directly to the leachate containment tank at the Holly Grove Refuse and Recycling Center.

II. STATEMENT OF NEEDS/ SCOPE OF SERVICES:

The contractor shall provide all travel, labor, supervision, tools, materials and equipment necessary to provide services including, but not limited to the following. All work shall be performed during the normal operating hours of 8:00 a.m. until 6:00 p.m., Monday through Saturday.

- A. Saw-cut existing concrete slab.
- B. Install trench drain system as specified and as shown on the attached sketches.
- C. Install 4" ductile iron pipe system as specified and as shown on the attached sketches.
- D. Connect new 4" ductile iron piping to existing DI.
- E. Patch Concrete.
- F. Provide pedestrian, vehicle and existing equipment protection as necessary.
- G. Provide haul away of construction debris and clean-up.
- H. Provide for a two-phase project to allow un-impaired operations of the site. See the attached proposed phasing plan.

III. BIDDER'S INSTRUCTION:

A. QUOTE PREPARATION:

1. Contractors may view the site at their convenience during the normal operating hours of 8:00 a.m. until 6:00 p.m., Monday through Saturday. The Holly Grove Refuse and Recycling Center is located at 25 Copper Line Road, Bumpass, VA 23024. The contractor is required to inspect the job and existing conditions before bidding. Failure to visit the site will in no way relieve the bidder from the necessity of completing the Scope of Services noted in this RFQ.
2. All questions pertaining to the bid should be received no later than Monday, June 13, 2011, at 5:00 p.m. All questions shall be in writing and directed to April Lowe at alowe@louisa.org or via fax at (540) 967-3439. A formal clarification will be sent out in writing on Tuesday, June 14, 2011, to all known potential bidders.
3. The Bidder must submit a Quote, which demonstrates and provides evidence that the Bidder has the capabilities, professional expertise, and experience to provide the necessary services as described in this RFQ. The Bidder shall ensure that all information required herein is submitted with the quote. All information provided should be verifiable by documentation requested by the County of Louisa. Failure to provide all information, inaccuracy or misstatement may be sufficient cause for rejection of the quote or rescission of an award.
4. Quotes shall be signed by the authorized representative of the Bidder.
5. Quotes should be prepared simply and economically, providing a straightforward, concise, detailed description of capabilities to satisfy the requirements of the RFQ.
6. All expenses for making quotes to the County shall be incurred by the Bidder.

7. Bidder must be authorized to transact business in Virginia as a domestic or foreign business entity as required by the State Corporation Commission, if such is required by law. Such status shall be maintained during the term of a contract. A contract entered into by a business in violation of the requirements is voidable at the option of the public body.

B. BID SUBMISSION: The following documents must be received in our office via hard copy no later than the closing date and time stated below:

1. Signed original of the completed Request for Quote Title Page
2. Signed Appendix A “County of Louisa, Master Contract General Conditions Agreement.”
3. Completed Appendix B “Quote Price Sheet”
4. A list of client references of similar service contracts, including at least three (3) customers. These references must include name, address, and telephone number.
5. A copy of any applicable Federal, State, or Local license required to legally perform the service, or sell the goods specified in the RFQ shall be attached to the quote.

The RFQ number and closing date must be clearly marked on the outside of the envelope.

This solicitation will close on Friday, June 17, 2011, at 2:00 p.m., local time prevailing.

Return the quote to:

Mail to: (US Mail)
County of Louisa
PO Box 160
Louisa, VA 23093
Attn: April Lowe
(540) 967-3499

or Hand Delivery (FEDEX, UPS, etc.)
County of Louisa
Louisa County Administration Building
Finance Department, 2nd Floor
1 Woolfolk Avenue
Louisa, VA 23093
Attn: April Lowe
(540) 967-3499

C. SUBMISSION OF PROPRIETARY INFORMATION: All information submitted to the County in response to this solicitation will constitute public information and will be available to the public for inspection upon request pursuant to the Virginia Freedom of Information Act (FOIA).

Pursuant to Virginia Code Section 2.2-4342 and County of Louisa Code Section 60-24, a Bidder/Offeror may request an exception to disclosure for trade secrets or proprietary information as such is defined under Virginia Code Section 59.1-336, part of the Uniform Trade Secrets Act.

In order to claim this exemption, the Bidder/Offeror shall perform ALL of the following:
(i) include a written request indicating Bidder/Offeror’s desire to invoke the protections of Virginia Code Section 2.2-4342 with submitted proposal materials/data; (ii) specifically identify the data or other materials to be protected by clearly labeling each

page containing applicable data as PROPRIETARY; and (iii) to the County's satisfaction, articulate the rationale for why protection for the particular data or materials is necessary. The classification of an entire bid or proposal document, line item prices and/or total bid or proposal prices as proprietary or trade secrets is not acceptable.

Without waiving sovereign immunity or any other available defenses, the County asserts that failure to meet all of these requirements will result in the data or materials being open for inspection in response to a valid inquiry under FOIA and will serve to waive any right of the Bidder/Offeror to assert a claim against the County for disclosure of trade secrets or proprietary information.

Bidder/Offeror shall be responsible for intervening and defending, at its expense, any demands made upon the County by third parties for production of any such items.

- D. RECEIPT OF BIDS/LATE QUOTES:** It is the Bidders responsibility to ensure that his/her quote is received prior to or at the specific time and the place designated in the solicitation. **Quotes received after the date and time specified shall not be considered.**

Quotes will be opened at the time and place stated in the advertisement, and their contents made public for the information of bidders and others interested who may be present either in person or by representative. The County personnel whose duty it is to open the quotes will decide when the specified time has arrived.

No responsibility will be attached to any County personnel for the premature opening of a quote not properly addressed and identified on the outside of a sealed envelope.

IV. METHOD OF SELECTION:

After the quotes have been opened, the County shall prepare a list of those contractors who have submitted quotes and met the qualifications listed in this offering. Award shall be given based on the lowest responsive and responsible bidder. The County of Louisa may cancel this RFQ in whole or in part or reject any or all quotes at any time prior to award. Should the County determine that a bidder is not qualified; the bidder shall be notified in writing of that determination and the reason. The award document will be a contract incorporating by reference all requirements, terms, and conditions of the solicitation of this offer.

V. COUNTY OF LOUISA MASTER CONTRACT GENERAL CONDITIONS AGREEMENT

See Appendix A. Louisa County does not accept changes to the County of Louisa, Master Contract General Conditions Agreement, and any attempt by the Bidder to make such changes is in itself reason for a bid to be declared as non-responsive to the RFQ and rejected by the County.

VI. QUOTE PRICE SHEET

See Appendix B

VII. SKETCHES (SK-1 through SK-3)

See Attached.

VIII. SPECIFICATIONS (SP1 through SP-12)

See Attached.

APPENDIX A



COUNTY OF LOUISA, VIRGINIA
MASTER CONTRACT
GENERAL CONDITIONS AGREEMENT

CONTRACTOR:

DATE:



MASTER CONTRACT GENERAL CONDITIONS AGREEMENT

THIS MASTER CONTRACT GENERAL CONDITIONS AGREEMENT (the “Master Agreement”), made and entered into this ____ day of _____, by and between THE COUNTY OF LOUISA, a Local Governmental Agency (of which entities shall hereinafter be referred to as “Owner”) and _____, a _____ corporation/partnership/ sole proprietorship [*strike through what does not apply*] (hereinafter referred to as “Contractor”).

WITNESSETH:

WHEREAS, either entity referred to as Owner may from time to time contract with third parties to perform certain construction work and furnish certain materials (the “Work”) on various projects (the “Project(s)"); and

WHEREAS, the applicable Owner may engage Contractor to perform a portion of the Work under such contracts entered into by it; and

WHEREAS, the parties hereto desire to enter into this Master Agreement to set forth the general conditions of contracts between them for Projects in order to expedite the contracting process at the time of future Projects.

NOW THEREFORE, in consideration of the mutual covenants herein and other good and valuable consideration, the receipt and sufficiency of which is hereby confirmed, the parties hereto agree as follows:

GENERAL

1. This Master Agreement shall only be given effect with regard to a particular contract between Contractor and one of the entities referred to as Owner if it is explicitly made a part of the Contract by the terms of the Contractor Agreement, by which the applicable Owner engages Contractor for a particular Project. In order to standardize the incorporation of this Master Agreement into the Contract between the parties, the form “stamp” attached hereto as Exhibit A may be used to incorporate the terms of this Master Agreement into each Contract to which such stamp is affixed. This provision shall not prohibit incorporation of this Master Agreement in the absence of the attached stamp, or through an alternative stamp or language agreed to by the parties.

2. This Master Agreement shall not be deemed or construed to obligate either entity referred to as Owner to engage Contractor nor to obligate Contractor to accept contracting work from either entity referred to as Owner. Additionally, this Master Agreement shall not be deemed or construed to make either entity referred to as Owner liable for the contractual obligations of the other entity referred to as Owner. The liable entity shall be the entity referenced as Owner in the particular Contract.

1. CONFLICTS

1.1 Priorities. In the event of conflicts or discrepancies between the Contract Documents, Invitation for Bid (IFB) or Request for Quotation (RFQ), (as such term is defined in the Contractor Agreement), interpretations will be based on the following priorities: (i) the Contract Agreement, (ii) this Master Agreement, (iii) Addenda, with those of a later date having precedence over those of an earlier date, (iv) the Prime Contract (as such term is defined in the Contractor Agreement), with subsequent addenda, including Modifications and Supplementary Conditions, having precedence over the original documents, and (v) Drawings and/or Specifications. In case of an inconsistency between Drawings and/or Specifications or within other documents not clarified by an Addendum, the more specific provision will take precedence over the less specific, the more stringent will take precedence over the less stringent, the more expensive item will take precedence over the less expensive, and the better quality or greater quantity of work shall be provided. On all Drawings (if applicable), figures shall take precedence over scaled dimensions. Scaled dimensions shall be relied upon by the Contractor at the Contractor's own risk (if applicable). Notwithstanding the foregoing or any other provision of this Master Agreement to the contrary, in no event shall Contractor have greater rights with regard to any item or matter under the Contract than Owner has, and is able to successfully enforce, with regard to the comparable item or matter under the Prime Contract.

1.2 Inconsistencies and Omissions. Should inconsistencies or omissions appear in the Contract Documents, Invitation for Bid (IFB) or Request for Quotation (RFQ), the Contractor shall notify Owner of same in writing within three (3) business days of the Contractor's discovery thereof. Upon receipt of Contractor's notice of such an inconsistency or omission, Owner shall instruct the Contractor as to the measures to be taken, if any, and the Contractor shall comply with Owner's instructions.

2. PERFORMANCE AND PAYMENT BONDS

2.1 Bonds. Owner shall have the right to require the furnishing by Contractor of performance and/or payment bonds, in form and from a surety acceptable to Owner, in the full amount of each Contract, with the expense of such bond(s) being assigned pursuant to the Contract Agreement.

2.2 Additional Security. If Contractor has not been required to furnish bonds, Owner may at any time instruct Contractor in writing to provide performance and/or payment bonds within ten (10) days, in a form and from a surety acceptable to Owner, in an amount up to the then current full value of the Contract. In such event, Owner will reimburse Contractor for the amount of the bond cost. In the event Contractor cannot provide such bonds, Owner may require other security as it deems appropriate, at its sole discretion, or it may terminate the Contract for default, pursuant to Article 13 of this Master Agreement.

3. PAYMENT

3.1 Progress Payments. Progress payments of the Contract Price (as such term is defined in the Contract Agreement) shall be due Contractor, subject to the conditions precedent established by Section 3.3, in the amount of the Contractor's Work (as such term is defined in the Contract Agreement) then completed and approved, less the percentage for retainage (if applicable) provided for in the Contract Agreement, unless a greater rate of retainage (if applicable) is required under the Prime Contract. If a greater rate of retainage (if applicable) is required under the Prime Contract, the parties shall use the greater rate. For the purpose of determining the amount of progress payments, Contractor shall furnish Owner, before its first application for progress payment, a Schedule of Values satisfactory to Owner, at Owner's sole discretion. If Owner disapproves of Contractor's Schedule of Values, Owner shall establish a reasonable breakdown, which shall serve as the basis for progress payments. Acceptance of progress payments under this Section 3.1 by Contractor shall constitute a waiver of any and all claims by the Contractor against the Owner, the Architect, the Engineer the Surety, the premises or any payment bond unless such claims are expressly reserved on the face of the application for payment, a copy of which is attached hereto as Exhibit B. Inclusion of any reservation of claims in a cover letter submitting the

application for payment shall not be sufficient to reserve such claim under this Section 3.1. The application for payment shall also include an affidavit and release/waiver of all claims and liens (if applicable) as described in Section 3.3 and in the form used by the Owner, unless a different form is required by the Owner.

3.2 Stored Materials. Unless otherwise provided in the Prime Contract, progress payments shall include the value of Stored Materials that Owner has approved. "Stored Materials" shall include materials and equipment not yet incorporated into Contractor's Work but delivered to and suitably stored at the site or at some other location agreed upon in writing. Approval of payment for Stored Materials shall be based on submission by Contractor of evidence satisfactory to Owner to protect Owner's interest in such Stored Materials, including transport to the site.

3.3 Conditions Precedent to Payment. It is specifically understood and agreed that Owner shall not process, nor pay, applications for progress payments from Contractor nor pay any other amount to Contractor unless and until each of the following conditions precedent to payment are met: (i) such applications include the Owner Job Number clearly thereon, (ii) Contractor shall provide, in a form satisfactory to Owner, partial lien waivers, release of claims and/or affidavits, as may be required by Owner, from Contractor and its subcontractors and suppliers for all prior payments and the payment then applied for. Owner's payment despite one or more of the foregoing conditions precedent not being satisfied shall not constitute a waiver of Owner's right to insist of any other condition precedent or all conditions precedent at some later time.

3.4 Time of Payment. Contractor shall submit progress payment applications in a form satisfactory to Owner no later than the day of each payment period provided for in the Contract Agreement, indicating work completed and, to the extent allowed under Section 3.2, Stored Materials stored during the preceding payment period. Applications for payment that exceed the percentage of Contractor's Work in place will be placed on hold for thirty (30) days.

3.5 Failure of Contractor to Make Payment. Contractor shall ensure that all its subcontractors, employees, and suppliers are paid all amounts due in connection with the Contract. Owner may withhold any progress payments until Contractor submits evidence satisfactory to Owner that all amounts due in connection with a Contract have been paid. Further, in its sole discretion, Owner may pay any and all persons that have not received payment from Contractor due in connection with a Contract, whether or not a lien has been filed. If Owner is required to pay or indemnify any person hereunder, Contractor shall immediately reimburse Owner for the full amount of such cost. Contractor shall also immediately reimburse Owner for any amounts paid under Owner's payment bond in connection with a Contract or other Owner payments relating to a failure of Contractor to make payment, and indemnify Owner for failure of Contractor to make payment, and indemnify Owner for any other costs associated therewith, including Owner's attorney's fees.

3.6 Payment Not Acceptance. Payment to Contractor is specifically agreed not to constitute or imply acceptance by Owner of any portion of Contractor's work.

3.7 Transfer of Title. All material and work covered by progress payments received by Contractor shall become the property of Owner or, if the Prime Contract so provides, the property of the Owner. This provision does not affect Contractor's sole responsibility and liability for all such materials and work until final acceptance by Owner or the date set forth in the Prime Contract for the transfer of liability for property, whichever is later.

3.8 Right to Withhold Payment. Owner may withhold amounts otherwise due under a Contract or due under any other contractual arrangement between the parties to compensate Owner for costs Owner has incurred or may incur for which Contractor may be responsible hereunder or otherwise. Appropriate adjustments to such withholding shall be made when the exact amounts owed hereunder are determined.

3.9 Final Payment. Final payment shall be made after completion of all work, acceptance by the Owner and compliance with all Contract obligations, all of which shall be conditions precedent to the making of final payment to the Contractor. Owner shall be entitled to proof of the Contractor's payment for labor, material and services used before any payment is due. The Contractor shall submit payroll affidavits if required. Material paid for shall belong to Owner, but shall remain in the care, custody and control of the Contractor and be stored at the Contractor's risk. The Contractor shall be responsible at all times for its labor and/or materials until accepted by the Owner. The Contractor shall furnish a Contractor Reconciliation Form, guarantees, final payment application and all other documents required by the Prime Contract for the Contractor's work, including releases of all claims and liens (if applicable) as a condition precedent to final payment. Any liquidated damages withheld by the Owner shall be asserted against the Contractor for any delay(s) attributable to the Contractor's fault.

Contractor acknowledges the importance of timely payment application to successful Project closeout. In consideration of this requirement, Contractor expressly agrees to submit its Final Payment Application and all required documentation within 30 days of its last work on the Project. Contractor further agrees that failure to submit its Final Payment Application within 90 days of its last work on the Project shall constitute a waiver of further payment.

Acceptance of final payment by Contractor shall constitute a full waiver and release by Contractor of all claims against Owner arising out of or relating to this Agreement.

4.0 SCHEDULE OF WORK

4.1 Schedule. Owner may require a schedule for this Project using CPM schedule techniques, simple bar charts, narrative, and/or other methodologies. The Contractor agrees to promptly provide the Owner a schedule properly depicting activities, including their costs and duration, at no additional cost to Owner. All such data shall be provided within seven (7) days of Owner's notice and request. Owner may at its option withhold making payments to the Contractor until the Contractor has provided said information.

4.2 Time Is Of The Essence. Time is of the essence in the Contractor's proper performance of its obligations under this Contract Agreement. Owner shall have the right to direct the manner in which the Contractor performs its work. The Contractor shall proceed with the performance of the work at such time and in such sequence as Owner may direct and/or as required by the Project Schedule, which may be updated and revised from time to time by Owner as working conditions require, including overtime performance as necessary. If overtime is required solely to accelerate project completion, it shall be authorized in writing and paid for by Owner. Payments due may be withheld to insure timely progress and completion of work. The Contractor shall be liable for all losses and damages incurred by Owner (including consequential damages) due to any inexcusable delay of the Contractor in the performance of the work.

4.3 Extensions of Time. The Contractor shall be entitled to an extension of time for performing and completing the work covered by this Contract upon the same terms and conditions under which and extension of time is allowable under the Prime Contract, but only to the extent that an extension of time is actually granted by the Owner or its representative under the Prime Contract. Notice of the excusable delay shall be given to Owner in writing as soon as possible after the beginning of said delay, but in any case, such notice must be given to Owner in no more than one half (1/2) of the time allowed under the provisions of the Prime Contract. If the Contractor fails to give such notice in a timely manner, then any entitlement to a time extension otherwise due the Contractor shall be deemed to be waived. The Owner's decision with regard to the delay, including any assessment of liquidated damages, shall be binding upon and chargeable to the Contractor, subject only to the disputes procedure provided in the Prime Contract.

4.4 Priority of Work. Contractor will coordinate Contractor's Work with the Work of Owner and other subcontractors to prevent or mitigate delays and interferences in the completion of any part or all of the Work. Owner shall have the right to decide the time, order and priority in which various portions of

the Work shall be performed and all other matters relative to the timely and orderly conduct of Contractor's Work. Owner shall not be responsible for any costs or damages related to the coordination of Contractor's Work with the Work of Owner and other subcontractors.

5. CONTRACTOR LIABILITY

5.1 Scope. Contractor shall be liable to Owner for all costs and other damages Owner incurs as a result of Contractor's failure to perform a Contract in accordance with its terms. Contractor's failure to perform shall include the failure of its suppliers, Materialmen, and/or subcontractors of any tier to perform. Contractor's liability shall include, but not limited to: (i) damages and other delay costs payable by the Owner; (ii) Owner's increased costs, such as extended overhead and increased costs resulting from Contractor-caused delays or improper Contractor's Work; (iii) warranty and rework costs; (iv) liability to third parties; (v) excess costs of re-procurement; and (vi) attorney's fees and related costs of resolving disputes related to Contractor's failure to perform.

5.2 Use of Equipment Owned by Others. If Contractor or any of its agents, employees, suppliers or lower-tier subcontractors use any machinery, equipment, tools, scaffolding, hoists, lifts or similar items belonging to or under control of Owner or other subcontractors or suppliers, Contractor assumes all risks of such use. Contractor shall be liable to and shall indemnify Owner for any loss or damage, including personal injury or death, which may arise from such use, except where such loss or damage shall be due solely to the negligence of Owner, its employees or other contractors.

5.3 Supervision and Work Inspection. The contractor shall have a competent and designated person in charge and outside for each mowing/landscape crew at all times.

5.4 Damages by the Contractor. Any damages to property or grounds as a result of Contractor operations shall be repaired/replaced within two (2) weeks of the date of damage by the Contractor, at no cost to the Owner. All incidents of damage by the Contractor and any discoveries of damage shall be reported to the Owner's contact person. If said damages are not repaired/replaced within (2) weeks of the date of damage, the Owner reserves the right to repair/replace the damages at its expense, and deduct such costs from the payment due the Contractor.

6. CHANGES AND CLAIMS

6.1 Changes. Owner may without notice to any sureties, direct changes in Contractor's Work at any time. Any changes to the Contractor's Work shall be in writing and Contractor shall perform the Contractor's Work, as changed, without delay. Contractor shall submit a price quotation within seven (7) days to Owner for changes requested in its quotation to Owner, which estimate shall be the maximum amount due Contractor for such changes. The costs of such changes shall be the direct cost to Contractor to perform same, plus a percent of such direct cost (the "Profit Percentage") representing overhead and profit. The amount of the Profit Percentage shall be established in the Contract Agreement for each Project.

6.2 Claims. Any claims for adjustment in the Contract Price, time for completion or other Contract provisions, shall be submitted to Owner, in writing, in sufficient time for Owner to review claims in accordance with the Prime Contract, but in no event later than 14 days after such costs are incurred or the cause of such adjustment is known or should be known to Contractor.

6.3 Claims Relating to Owner. As a precondition to any action against Owner, Contractor agrees to exhaust through Owner the remedies available under the Prime Contract, including suit for breach of contract against Owner. If Contractor has a claim or dispute, Contractor may proceed in accordance with the Section of this Master Agreement entitled "CHOICE OF LAW/VENUE". Contractor agrees to furnish all documents, statements, witnesses and other information required by Owner for reconciliation of claim. No dispute shall interfere with the progress of construction and the Contractor shall continue with Contractor's Work as directed.

7. INSPECTION AND ACCEPTANCE

7.1 Inspection of Work. Contractor shall provide appropriate facilities at all reasonable times for inspection by Owner of Contractor's Work and materials provided under a Contract, whether at the Project site or at any place where Contractor's Work or materials may be in preparation, manufacture, storage or installation. The Contractor will establish a firm schedule for recurring ground maintenance actions for each location. This schedule must be provided to Louisa County Department of Facilities Management before payment of the first month's invoice will be made. This schedule will be utilized to conduct random site checks to ensure contractor adherence to these specifications. Contractor must notify the Louisa County Department of Facilities Management in the event that they are not able to adhere to the established schedule during any particular week.

7.2 Correction of Defective Work. Contractor shall promptly replace or correct any work or materials which Owner shall reject as failing to conform to the requirements of a Contract no later than 72 hours from the date of notification by the Owner. If Contractor does not do so within this time frame, Owner shall have the right to replace or correct same and Contractor shall be liable to Owner for the cost thereof. If, in the opinion of Owner, it is not expedient to correct or replace all or any part of rejected work or materials, then Owner, at its option, may deduct from the payment due, or to become due, to Contractor, such amounts as, in Owner's judgment, will represent the higher of: (i) the difference between the fair value of the rejected work and materials and the value thereof, if it complied with the Contract, or (ii) the cost of correction.

7.3 Remedy for Wrongful Rejection. Contractor's remedy for wrongful rejection of work by Owner shall be limited to Owner's remedy for same under the Prime Contract, if any.

7.4 Acceptance. The Contractor's Work shall be accepted according to the terms of the Prime Contract. However, unless otherwise agreed in writing, entrance and use by Owner shall not constitute acceptance of the Contractor's Work.

8. SUBMITTALS

8.1 Timely Submission. Contractor shall timely prepare and submit to Owner all shop drawings, manufacturer's literature, MSDS data, samples and material lists as may be necessary to describe completely the details and construction of Contractor's Work. Such submittals shall be made in sufficient time so as not to delay performance of the Project. Any deviation from the Contract Documents shall be clearly identified in the submittals, and so stated, in writing, in separate correspondence. Approval of such submittals shall not relieve the Contractor of its obligation to perform Contractor's Work in strict accordance with the Contract Documents, nor of its responsibility for the proper matching and fitting of Contractor's Work with contiguous work and the work of other trades.

8.2 Status. If requested by Owner, Contractor shall furnish periodic progress reports on Contractor's Work including information on the status of materials and equipment under a Contract, which may be in the course of preparation or manufacture.

8.3 Liability. Responsibility for submission of appropriate shop drawings, samples, product literature, etc., is that of the Contractor. All submittals must be identified by submittal numbers corresponding to the Contractor's submittal log. In the event that a particular item is not identified on the log, the submittal may be identified without submittal number. Failure to obtain approved submittals may result in the rejection of installed work. The Contractor is liable for all costs associated with correction of their Work as a result of failure to obtain approved submittals prior to execution of Work.

9. CLEANUP

Unless Owner otherwise directs or agrees, Contractor shall, at its own expense, clean and remove from the Project all rubbish and debris resulting from the performance of Contractor's Work and, at the completion of Contractor's Work, in each area of the Project, perform such cleaning as may be required. Such removal shall be done in a manner that will not impede the progress of the Project.

10. LAWS, PERMITS, FEES AND PATENTS

10.1 Compliance. Contractor shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the performance of Contractor's Work on the Project. Contractor shall secure and pay for all permits and government fees, licenses, and arrange inspections necessary for the proper execution and completion of Contractor's Work. Contractor shall comply with Federal, State and Local tax laws, Social Security Acts, Unemployment Compensation Acts, Worker's Compensation Acts, equal employment opportunity laws, minority business enterprise laws, women's business enterprise laws, disadvantaged business enterprise laws, and Occupational Safety and health regulations insofar as applicable to the performance of Contractor's Work. Contractor shall be duly licensed to operate under the laws of the applicable jurisdictions.

10.2 Hold Harmless. Contractor agrees to hold Owner harmless against the payment of any and all losses, costs, expenses, contributions, taxes or premiums which may become due or payable under Federal, State or Local laws arising out of Contractor's failure to comply with the laws outlined in Section 10.1 above, including any interest or penalties. Contractor waives any and all claims for additional compensation because of any increase in taxes, contributions or premiums unless Owner agrees to such increases incurred by Contractor.

10.3 Patents and Royalties. Contractor agrees to pay all royalties and license fees owed by reason of performance of Contractor's Work on the Project. Contractor agrees to defend all suits or claims for infringement of any patent rights, due to the inclusion of patented materials in the Contractor's Work, that may be brought against Owner, and agrees to indemnify Owner for all loss, costs and expenses, including attorney's fees, on account thereof.

11. HEALTH AND SAFETY

11.1 Responsibility of Contractor. As relates to the Contractor's work, Contractor is responsible for the safety of the general public and workers engaged on or in the vicinity of the Project. Contractor agrees to comply with all Federal, State, Municipal and Local laws, ordinances, rules, regulations, codes, standards, orders, notices, and requirements concerning safety, as shall be applicable to the Work including among others, the Federal Occupational Safety and Health Act of 1970, as amended, and all standards, rules, regulations and orders which have been or shall be adopted or issued thereunder, and with the safety standards Owner establishes during the progress of the Work.

11.2 Stoppages Ordered by Owner. When so ordered by Owner, Contractor shall stop any part of the Contractor's Work, which Owner deems unsafe until corrective measures, satisfactory to Owner have been taken, and Contractor agrees that it shall not have, nor make any claim for damages growing out of such stoppages. Should Contractor neglect to take such corrective measures, Owner may do so at the cost and expense of Contractor and may deduct the cost thereof from any payment due or to become due to Contractor. Failure on the part of Owner to stop unsafe practices shall not be deemed acceptance or acquiescence by Owner of Contractor's means or methods or construction and shall in no way relieve Contractor of its responsibility therefore.

11.3 Hold Harmless. Contractor agrees to hold Owner harmless for all damages, costs and attorneys' fees arising out of, or relating to, Contractor's violation of any of the foregoing health and safety requirements, or for any accident involving Contractor's Work or work of their subcontractor's.

12. TERMINATION FOR CONVENIENCE

Owner shall have the right to terminate a Contract, without cause, for its convenience, when Owner determines that it is in its own best interests to so terminate the Contract. If a Contractor is terminated for convenience, Contractor shall comply with all of Owner's termination instructions and shall be entitled to receive payment for the portion of Contractor's Work actually completed and accepted, and a reasonable overhead and profit (to in no event exceed the Profit Percentage) in connection with such work, except that if the Prime Contract is also terminated for convenience or otherwise, termination settlement and costs to Contractor shall be as so provided in the Prime Contract, and in the amount actually received by Contractor from Owner for such portion of Contractor's Work. Contractor shall not be entitled to any recovery of profit or unabsorbed overhead in connection with portions of Contractor's Work not actually performed or future work.

13. SUBCONTRACTOR'S FAILURE OR INABILITY TO PERFORM

13.1 Causes for Termination. If, in the opinion of Owner, Contractor shall at any time: (i) refuse or fail to provide sufficient properly skilled workmen or materials of the proper quality; (ii) fail in any respect to prosecute Contractor's Work according to the current schedule; (iii) cause, by any action or omission, the stoppage or delay of or interference with, the Work of Owner or of any other builder or subcontractor; (iv) submit a false or misleading lien or claim waiver; (v) fail to make payments to its subcontractors, employees and suppliers; (vi) file a petition under the Bankruptcy code, make an assignment for the benefit of creditors or become insolvent; or (vii) otherwise fail to comply with all provisions of its Contract Documents then, after providing written notice to Contractor of such failure or default and the passage of twenty-four (24) hours from Contractor's receipt of such notice without such failure or default being fully remedied or cured, Owner, at its option may:

(a) take such steps as are necessary to remedy or cure the failure or default (without voiding or modifying the other provisions of the Contract and without notices to the sureties), in which case the Contractor shall be liable to Owner for all consequent costs, plus interest, and reasonable attorney's fees thereof;

(b) terminate the Contractor for default; or

(c) seek specific performance of Contractor's obligations under the Contract, it being agreed by Contractor that specific performance may be necessary to avoid irreparable harm to Owner.

13.2 Demand for Assurances. In the event Owner becomes concerned about Contractor's ability to continue performance under the Contract, Owner may demand that Contractor provide reasonable assurances of its ability for timely future performance of the Contract. Failure to comply with such a demand within ten (10) days of Contractor's receipt thereof shall entitle Owner to terminate the Contract for default.

13.3 Owner's Rights Upon Termination for Default. In the event of termination for default, Owner may, at its option: (i) enter on the premises and take possession, for the purpose of completing Contractor's Work, of all materials and equipment of Contractor; (ii) require Contractor to assign to Owner any or all of Contractor's subcontracts and purchase order involving the Project; or (iii) either by itself or through others complete Contractor's Work by whatever method Owner may deem expedient. In the event of termination for default, Contractor shall not be entitled to receive any further payment until Contractor's Work shall be fully completed and accepted by the Owner. At such time, if the unpaid balance of the Contract Price to be paid exceeds the expense incurred by Owner to so complete Contractor's Work and all attorneys' fees incurred by Owner as a result of such termination for default, such excess shall be paid by Owner to Subcontractor. However, if the expense incurred by Owner to so

complete Contractor's Work exceeds the unpaid balance of the Contract Price, then Contractor shall pay Owner such excess expense and all attorneys' fees incurred by Owner as a result of such termination for default.

13.4 Recourse Against Owner. If Owner wrongfully terminates Contractor, Owner shall be liable to Contractor for the costs Owner would have paid to Contractor if Owner had terminated Contractor for convenience. Contractor's aforesaid remedy shall be exclusive. Nothing hereunder shall prevent Owner from withholding monies from Contractor under other provisions of the Contract Documents.

13.5 Force Majeure. The performance of the Contract by either party shall be subject to acts of God, war, government regulation, natural disaster, strikes, civil disorder, curtailment of transportation or supply facilities or other emergency beyond the control and not of the making of either party, making it impossible to perform the obligations set forth in the Contract in accordance therewith. In the event such circumstances occur, if performance is totally impossible, either party may terminate the Contract without liability therefore. If partial performance is possible under the Contract, reasonable extensions of time for said performance shall be allowed.

14. WARRANTY

14.1 Scope of Warranty. Contractor warrants to the Owner that all materials and equipment furnished shall be new, unless otherwise specified, and that Contractor's Work shall be of good quality, free from faults and defects and in strict conformance with the Contract Documents. All materials and work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. This warranty shall be in addition to, and not in limitation of, any other warranty or remedy required by law or by the Contract Documents.

14.2 Term. Contractor will warrant the Work to the Owner as stated under the Prime Contract. If the Prime Contract does not state a specific warranty period, the Contractor warrants Contractor's Work for a period of one (1) year from the date of Substantial Completion of the entire Project. In no event shall Contractor's warranty period be less than or terminate earlier than Owner's warranty provision under the Prime Contract.

15. INSURANCE

15.1 Policies. Before commencing Contractor's Work, Contractor shall procure and maintain at its own expense until final acceptance of Contractor's Work by Owner, upon all of its operations and the operation of any of its subcontractors, suppliers or materialism on the Project, the following policies of insurance (and any additional policies or coverages required of the Owner under the Prime Contract) with insurers licensed to do business in the jurisdiction wherein the Project is located and acceptable to Owner and under forms of policies satisfactory to Owner and containing waivers of subrogation in favor of Owner:

(a) Worker's Compensation and Employer's Liability. Contractor shall procure and maintain Worker's Compensation and Employer's Liability Insurance covering all of its employees in conformance with the laws of any state, district or territory of the United States of America in which Contractor's Work is to be performed, except that such insurance shall not have a limit of liability less than the following:

- (i) Bodily Injury by accident, \$500,000 for each accident;
- (ii) Bodily Injury by disease, \$500,000 policy limit;
- (iii) Bodily Injury by disease, \$500,000 for each employee.

(b) Public Liability Insurance. Contractor shall procure and maintain Public Liability Insurance in an amount not less than \$1,000,000 for any occurrence involving bodily injury, and not less than \$1,000,000 for any occurrence involving property damage. This coverage shall include contractual liability, broad from property damage, independent Contractor and personal injury in support of the section of this Master Agreement entitled "IDEMNIFICATION".

This policy shall be endorsed to include Owner as additional insured's during the term of the Contract and shall state that this insurance is primary insurance as regards any other insurance carried by Owner. Insurance coverage is Primary and Non-Contributory to any other insurance of the above mentioned entities.

(c) **Comprehensive Automobile Liability.** Contractor shall procure and maintain Comprehensive Automobile Liability Insurance with the following limits:

Combined Single Limit of \$1,000,000 per occurrence, including bodily injury and property damage. This policy shall be on a standard form written to cover all owned, hired and non-owned automobiles.

15.2 **Notice and Right to Pay Premiums.** Contractor shall provide Owner with copies of certificates of insurance coverage for all required coverages and proof of payment of all premiums. Insurance policies shall provide for notification to Owner of non-payment of any premium and shall give Owner the right to make the premium payment thereunder within a reasonable time. Any premium payments made by Owner shall be deducted from amounts due Contractor under the Contract. Insurance policies shall provide for thirty (30) days prior written notice to Owner of cancellation or modification.

16. **INDEMNIFICATION**

16.1 **Contractor's Performance.** To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner (including its affiliates, parents and subsidiaries), the Owner's architect, engineer, and all other contractors and subcontractors involved in the Project and all of their officers, directors, agents and employees from and against all claims, damages, loss and expenses, including but not limited to attorney's fees, arising out of or resulting from the performance of the Contractor's Work provided that: (i) any such claim, damage, loss or expense is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Contractor's Work itself) including the loss of use resulting therefrom, to the extent caused or alleged to be caused in whole or in any part by any negligent act or omission of the Contractor or anyone directly or indirectly employed by the Contractor or anyone for whose acts the Contractor may be liable, regardless of whether it is caused in part by the party indemnified hereunder; and (ii) such obligation shall not be construed to negate, or abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this Section.

16.2 **No Limitation Upon Liability.** In any/all claims against the Owner (including its affiliates, parents and subsidiaries) and other contractors or subcontractors involved in a Project, or any of their officers, directors, agents or employees, by any employees of the Contractor, anyone directly or indirectly employed by the Contractor or anyone for whose acts the Contractor may be liable, the indemnification obligation under Section 16.1 shall not be limited in any way by benefits payable by or for the Contractor under Worker's or Workmen's Compensation Acts, disability benefits acts or other employee benefit acts or by the amount of general liability insurance carried or required to be carried hereunder by Contractor.

The indemnity provisions in this Section 16 and the remainder of this Master Agreement are entered into based on the agreement that additional consideration will be given on each Contract for the indemnification provisions contained herein.

16.3 **Indemnity Obligations After Project Completion.** The indemnity obligations herein shall survive the termination of the Contractor for any reason and shall survive both or either of the Contractor's and Owner's completion of the Work on the Project. In all instances, this indemnity obligation shall survive irrespective of whether the Contractor's insurance coverage, as required by the Master Agreement, has been maintained, changed, cancelled, or otherwise terminated since the termination of the Contract or since the Contractor's and/or Owner's completion of Work under the Project. It is strongly recommended that Contractor maintain its insurance with this requirement in mind.

17. LABOR POLICY

17.1 Project Personnel. Contractor and its subcontractors or suppliers shall not employ anyone engaged in Contractor's work whose employment is objected to by Owner.

17.2 Immigration Reform and Control Act Of 1986. By signing of this Master Contract, Contractor certifies that they do not and will not during the performance of this contract employ illegal alien workers or otherwise violate the provisions of the Federal Immigration Reform and Control Act of 1986, as amended and Section 40.1-11.1, Code of Virginia, which prohibits the employment of illegal aliens and (ii) will follow the provisions of Federal and State employment and wage hour laws.

17.3 Work Stoppage. Should any workers performing Contractor's Work engage in a strike or any other work stoppage or cease to work due to picketing or a labor dispute of any kind, said circumstances shall be deemed failure to perform the Contractor's Work on the part of the Contractor, entitling Owner to terminate the Contract for default.

17.4 Equal Employment Opportunity. Contractor shall not discriminate against any employee or employment applicant because of race, sex, color, religion, national origin, faith based organizational status or any other class or category prohibited by Federal, State or local laws or regulations. Contractor shall allow access to its books, records, and accounts by representatives of Owner for purpose of investigations to ascertain compliance with the foregoing provision. Those requirements shall be in addition to any similar provision of Equal Employment Opportunity in the Prime Contract. If Contractor fails to comply with the foregoing provisions, the Contract may be terminated for default. Notwithstanding the foregoing, the Owner shall not be deemed or construed to be responsible to oversee Contractor's compliance with the foregoing equal employment opportunity requirements, nor shall Owner be deemed or construed to be responsible for Contractor's failure to comply with such requirements.

17.5 Drug-Free Workplace. During the performance of this contract, the contractor agrees to (i) provide a drug-free workplace for the contractor's employees; (ii) post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition; (iii) state in all solicitations or advertisements for employees placed by or on behalf of the contractor that the contractor maintains a drug-free workplace; and (iv) include the provisions of the foregoing clauses in every subcontract or purchase order of over \$10,000 so that the provisions will be binding upon each subcontractor or vendor.

For the purposes of this section, "drug-free workplace" means a site for the performance of work done in connection with a specific contract awarded to a contractor, the employees of who are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession or use of any controlled substance or marijuana during the performance of the contract.

17.6 Anti-Discrimination. All Contractor's must conform to the provisions of the Federal Civil Rights Act of 1964, as amended, as well as the Virginia Fair Employment Act of 1975, as amended, where applicable, the Virginia with Disabilities Act, The Americans with Disabilities Act, and Section 2.2-4359 of the Virginia Public Procurement Act which provides:

In every contract over \$10,000 the provision in (a) and (b) below apply:

- (a) During the performance of this contract, the Contractor agrees as follows:
 - (i) The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, faith based organizational status, sex or national origin, except where religion, sex or national origin is a bona fide

occupational qualification reasonably necessary to the normal operation of the Contractor. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notice setting forth the provisions of this non-discrimination clause.

- (ii) The Contractor, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, will state that such Contractor is an equal opportunity employer.
- (iii) Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this Section.
- (b) The Contractor will include the provision of (a) above in every Contractor purchase order over \$10,000 so that the provisions will be binding upon each subcontractor and vendor.

18. ASSIGNMENT AND SUBCONTRACTING

18.1 Assignment. Contractor agrees that it will not transfer, assign or delegate the Contract, or any payment due thereunder, without the prior written consent of Owner, which consent shall not be unreasonably withheld.

18.2 Subcontractors. Contractor agrees that all of its subcontractors and lower-tier suppliers will be subject to all terms and conditions of the Contract and the Contract Documents. Owner's consent to any subcontracting by Contractor shall not be deemed to create any contractual relationship between Owner and any subcontractor or supplier to whom Contractor's Work or any portion thereof is subcontracted to.

19. LIENS

At no time shall the Contractor permit any mechanics or similar lien to attach to Louisa County premises on account of labor, material or other claims furnished to the Contractor in connection with Work performed for the County of Louisa. If at any time, there shall be evidence of any lien or claim which if established Owner might become liable for, or which should in any event be charged to Contractor, Owner shall have the right: (i) to require Contractor to have same discharged, by posting a bond with the appropriate authorities, or otherwise, within five (5) days of notice; (ii) to retain, out of any payment due or thereafter to become due, an amount sufficient to indemnify the Owner against said lien or claim, including bond premiums and attorneys' fees, and to apply the same in such manner as Owner deems necessary to secure protection and/or satisfy such claims and liens. Should there be an insufficient unpaid balance to cover the costs incurred in discharging such a lien or claim, Contractor shall reimburse Owner the differences between the payments due Contractor and the costs incurred prior to final payment. Contractor shall provide Owner a release of liens and claims, in a form satisfactory to Owner, for all work performed under the Contract, as well as any other evidence Owner may require to demonstrate that there are not other liens or claims whatsoever outstanding against the Project.

20. CHOICE OF LAW/VENUE

20.1 Choice of Law. This Master Agreement and any Contracts entered into pursuant to this Master Agreement shall be construed and enforced in accordance with the laws of the Commonwealth of Virginia.

20.2 Consent to Jurisdiction. The Contractor expressly consents to the exclusive jurisdiction of the Courts of the Commonwealth of Virginia. The Contractor shall comply with applicable federal, state and local laws and regulations. The Contractor shall not raise and hereby expressly waives any jurisdictional defense related to any action brought in the Courts of the Commonwealth of Virginia relating to any matters arising out of and/or related to this Agreement. Additionally, subject to Section 21.3, Contractor shall not initiate any action other than in the State Courts of the Commonwealth of Virginia, specifically excluding the Federal Courts. Pursuant to this Section 21.2, Contractor also waives any right it may have to remove an action related to this Master Agreement of Federal Court.

20.3 Venue/Forum Selection. Exclusive venue for all actions arising out of or related to this Master Agreement shall be in Louisa County, Virginia. Pursuant to this clause, the Contractor and Owner expressly agree that Louisa County, Virginia, shall be the exclusive forum for the initiation and initial resolution of all actions arising out of or related to this Master Agreement or any Contract between the parties. The parties' choice of the above referenced forum shall prohibit the initiation and/or removal of any action in or to a Federal Court.

20.4 Waiver of Jury Trial. The parties expressly waive all rights to a trial by jury in any action arising out of or related to this Master Agreement.

20.5 Work Continuation and Payment. Unless the parties mutually agree otherwise, Contractor shall carry on Contractor's Work pending any action arising out of or related to this Master Agreement or any Contract between the parties. If Contractor carries on Contractor's Work and otherwise complies with the Contract, Owner shall continue to make progress payments in accordance with the Contract. This provision in no way limits Owner's right to terminate a Contract pursuant to the terms of this Master Agreement.

21. NOTICES

All notices hereunder required to be in writing shall be deemed duly given if delivered in person, by certified mail, return receipt requested, by registered mail, postage prepaid, by facsimile or by e-mail (electronic mail): if to Owner at 105 Woolfolk Avenue, PO Box 1980, Louisa, VA 23093, Attn: Mr. Kevin Linhares, fax number: (540) 967-5818, and if to Contractor, at

Attn: _____. The party to receive notices and that places notices are to be sent for either Owner or Contractor may be changed by notice given pursuant to the provisions of this Section. Notices given by facsimile or e-mail shall be deemed given as of the time and date shown to have been transmitted by the applicable facsimile transmission report or the e-mail header, provided however, that such facsimiles and/or e-mails delivered after 5:00 p.m. on a Friday shall be deemed delivered at 8:00 a.m. the following Monday morning.

22. ADVERTISING

Contractor shall not place any signs, billboards or posters on any portion of the site, building property or fences (temporary or permanent) surrounding the same, except upon prior written permission received from Owner, and then only of a size, material, color and type and at a location approved by Owner.

23. AUTHORIZED REPRESENTATIVE

The Owner and Contractor shall each designate in the Contract Agreement a person who shall be their authorized representative on-site and off-site with regard to the Project. Such authorized representatives shall be the only persons to issue and receive instruction, orders or directions, except in an emergency.

24. SEVERABILITY AND WAIVER

The partial or complete invalidity of any one or more provisions of Contract shall not affect the validity or continuing force and effect of any other provision. The failure of Owner to insist, in any one or more instances, upon the performance of any of the terms, covenants or conditions of a Contract, or to exercise any right thereunder, shall not be construed as a waiver or relinquishment of such term, covenant, condition or rights as respects further performance of the Contractor.

25. TITLES

The titles given to the Sections of this Master Agreement are for ease of reference only and shall not be relied upon or cited for any other purpose.

26. COUNTY ATTORNEY APPROVAL

This Master Agreement, in its standard form, has been reviewed and approved as to form by the Louisa County Attorney. Any alterations to this Master Agreement by the Architect or Engineer are invalid without subsequent review and approval as to form by the Louisa County Attorney.

IN WITNESS WHEREOF, the parties by their duly authorized representative, have hereunto executed this Master Agreement, on the day and year above written.

OWNER:

County Of Louisa
PO Box 160
Louisa, Virginia 23093

Attest/Witness:

By:_____

Name: Robert Dubé

Title: County Administrator

CONTRACTOR:

Attest/Witness:

By:_____

Name:

Title:



EXHIBIT A

MASTER CONTRACTOR AGREEMENT INCOPORATION STAMP

The Master Contractor General Conditions Agreement in force between the parties at the time of this Contract, including all amendments thereto, is incorporated herein by reference as if fully set forth herein.

Owner

Company: County of Louisa
Authorized Signer: Robert Dubé
Address 1: PO Box 160
Address: Louisa, Virginia 23093
Phone: 540-967-0401

Contractor

Company: _____
Authorized Signer: _____
Address 1: _____
Address 2: _____
Phone: _____

APPENDIX B
QUOTE PRICE SHEET

Trench Drain Installation at the Holly Grove Refuse and Recycling Center
RFQ # GS-11-25

COST

Quote shall be submitted as a lump sum cost, inclusive of the complete scope of services and specifications as presented in the Request for Quote.

\$ _____

Date: _____

Submitted by (Print Name & Title): _____

Signature: _____

Company: _____

Address: _____

Telephone: _____ Fax: _____

TRANSFER
STATION #3
@ 661 & 602

SCALE 1" = 20'

BERM FOR
SHIELDING
AND LANDSCAPING
(USE EXCESS
MATERIAL FROM
SITEWORK)

DV

COMPACTOR #1

COMPACTOR #2

TRENCH
DRAIN

TRENCH
DRAIN

F.F. 330.5

4" DUCTILE PIPE

SHED

EQ-A
18" DEEP
10' WIDE
20' LONG

30" TWIN
(TO R)

330

INV. IN 325.0
N 46°46'00"

INV. OUT 324.5

INV. IN 324.39

PULL DITCH
FOR POSITIVE
DRAINAGE
(2:1 SIDE SLOPES)

INV. IN 322.05

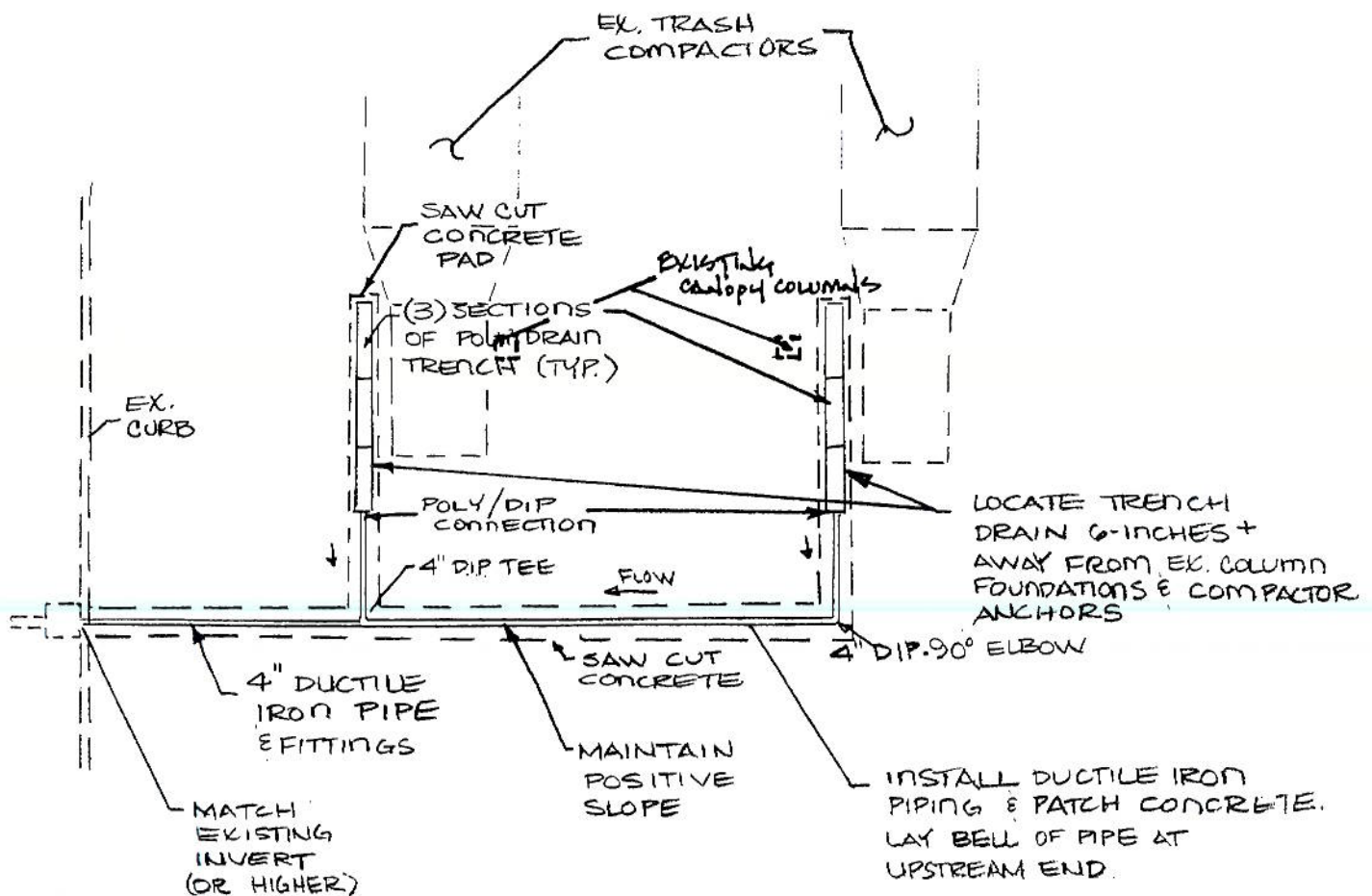
18" RCP

15" CMP POOR CONDITION
(TO BE ABANDONED)

SK-1

Designer KW Date 11-01-10 Checker _____ Date _____
 Title COMPACTOR TRENCH DRAIN Job No. _____
 Subject _____ Sheet No. _____ of _____

TRANSFER STATION # 3
 @ ROUTE 661 & ROUTE 602



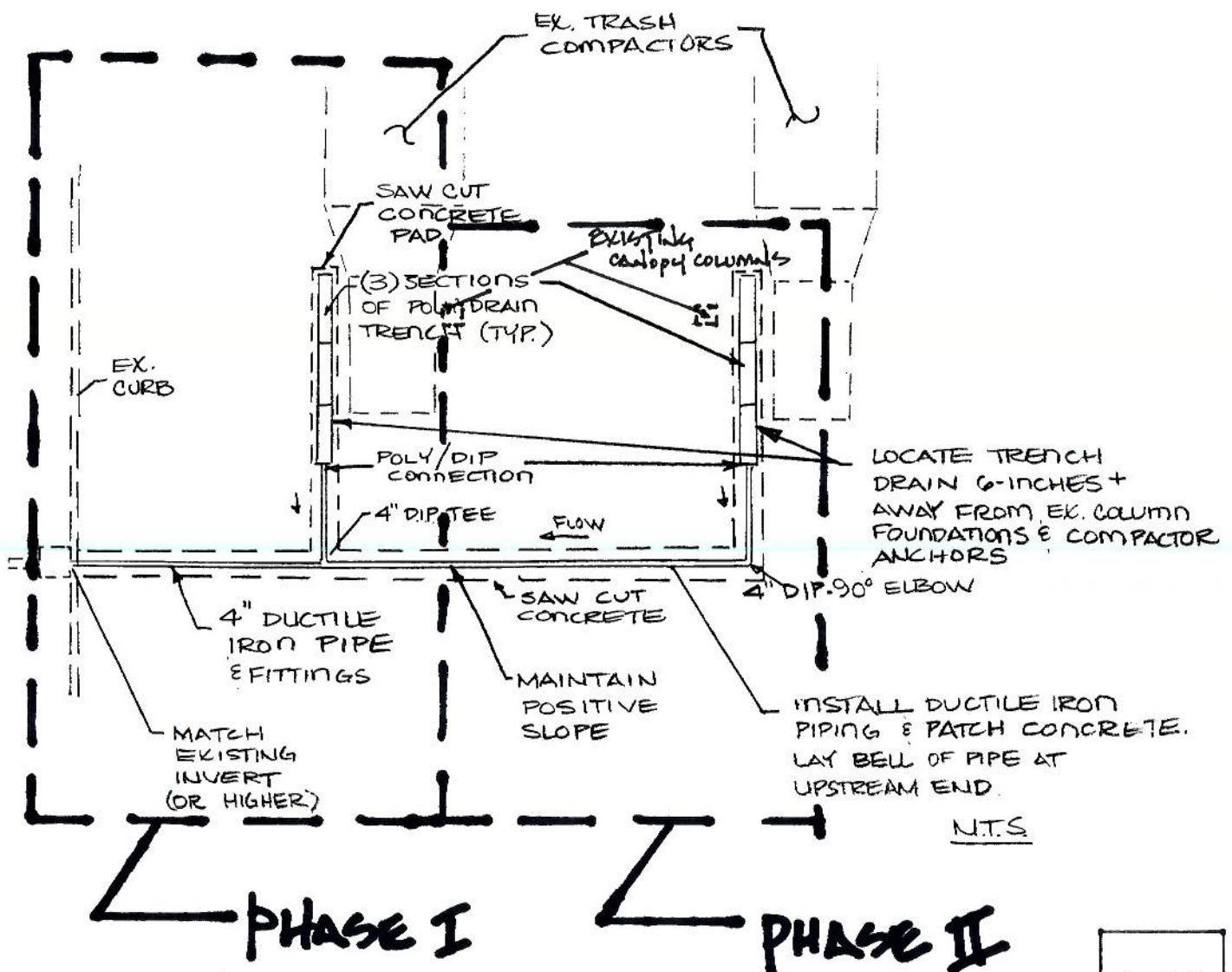
N.T.S.



Designer Km Date 11-01-10 Checker _____ Date _____
Title COMPACTOR TRENCH DRAIN Job No. _____
Subject _____ Sheet No. _____ of _____

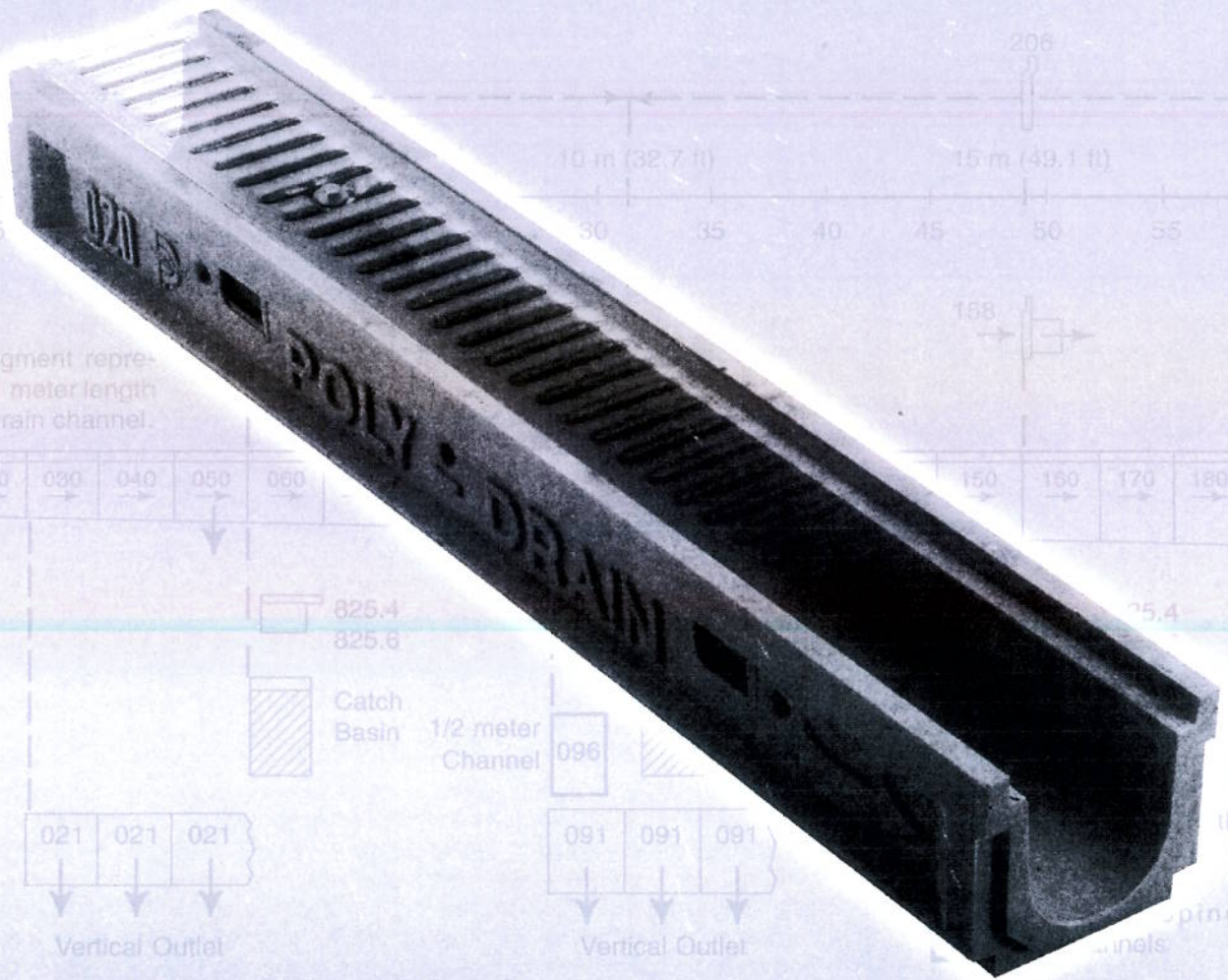
TRANSFER STATION #3
@ ROUTE 661 & ROUTE 602

PHASING PLAN



PolyDrain®

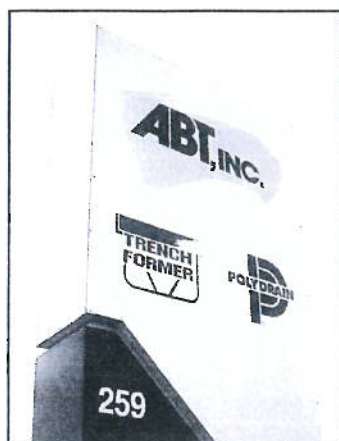
Pre-Engineered Surface Drainage Manual



www.abtdrains.com

Today's Hydraulic Solutions





ABT, Inc. manufactures PolyDrain trench drains; the standard for pre-engineered trench drains. Over the years the PolyDrain name has become synonymous with trench drain design. Architects and engineers, recognizing the benefits of pre-engineered polymer concrete trench drains, specify PolyDrain for a wide variety of applications. Included among these applications are food processing plants,

airports, highways, loading docks, garden centers and chemical processing plants. PolyDrain polymer concrete trench drain assures the specifier of the precision and accuracy required to satisfy hydraulic or chemical resistant demands. PolyDrain offers design flexibility, as well as ease of installation. In addition, expensive labor and material costs associated with hand-forming methods are eliminated.

PolyDrain channels are one meter (39.19) long. Standard channels have a 0.6% built in slope. The 30 standard channels are positioned sequentially in numerical order from 010 to 300, creating a continuously sloped channel run. Channel runs can be designed with intersections or miters and fabricated onsite utilizing commercial grade cutting tools. With PolyDrain, runs of almost any length are possible by varying outlet placements, integrating non-sloping channels and using PolyWall Sidewall Extensions for increased depth.

Polymer Concrete vs. Conventional Concrete

	Polymer Concrete	Portland Cement Concrete
Minimum Compressive Strength ASTM-C579	80 MPA (12,000 PSI) 20 MPA (3,000 PSI)	
Minimum Tensile Strength ASTM-C307	10 MPA (1,200 PSI) 1.4 MPA (200 PSI)	
Minimum Bending Strength ASTM-C580	20 MPA (2,000 PSI) 4.5 MPA (650 PSI)	
Moisture Absorption ASTM-C140	0.2% 5%	
Freeze-Thaw ASTM-C668	1,600 Cycles – No Weight Loss 750 Cycles – 25% Weight Loss	

PolyDrain Formulations

ABT offers two compositional formulations for PolyDrain channels, depending on the effluent and chemical environment. Both offer superior strength and durability as well as marked cost advantages over alternative materials.

Standard PolyDrain channels are manufactured from **PolyDyn**®, an advanced formulation of selected quartz aggregates and inert mineral fillers bonded together in a high-grade polyester resin. This formulation is suitable for use in both exterior and interior applications.

When a higher level of chemical resistance is required, ABT offers PolyDrain in a special formulation called **PolyChampion**®, which has the same quartz and mineral fillers as the PolyDyn formulation, but with a premium grade vinyl ester resin binder. This formulation will withstand a broader range of corrosive salts, fuels, acids and alkalis.

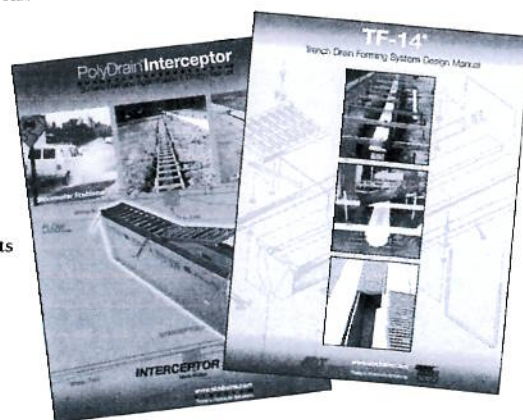
Comparative Analysis

Fluid	Polymer Concrete PolyDyn	PolyChampion	Portland Cement
Water	✓	✓	Permeable
Gasoline	✓	✓	Permeable
Diesel Fuel	✓	✓	Permeable
Aviation Fuel	✓	✓	Permeable
Hydraulic Oil	✓	✓	Permeable
Fuel Oil	✓	✓	Permeable
Hydraulic Fluid	✓	✓	Permeable
Motor Oil	✓	✓	Permeable
Sea Water	✓	✓	Permeable
Acids	✓	✓	Corrodes
Road Salts	✓	✓	Corrodes

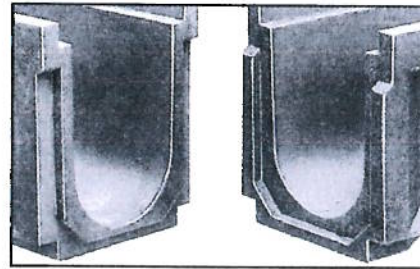
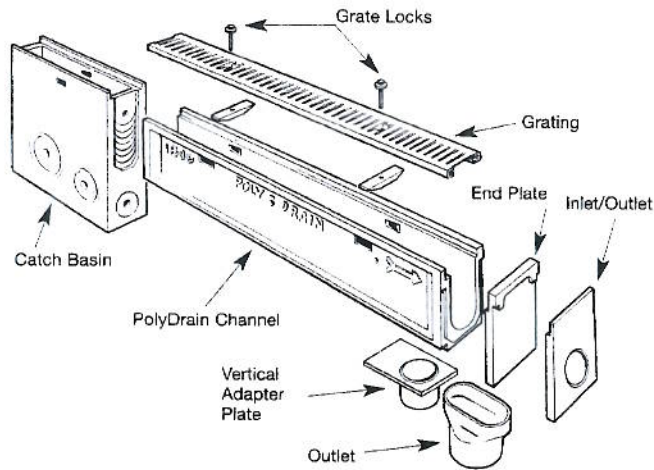
Polymer Concrete is resistant to salt, oil, gas, sewage, most acids and many alkalis. This makes it excellent for chemical transport, washdown and food processing, as well as many other applications.

Portland Cement Concrete is subject to deterioration of varying degrees under any of these conditions.

Other quality drainage products by ABT, Inc.



Typical PolyDrain System

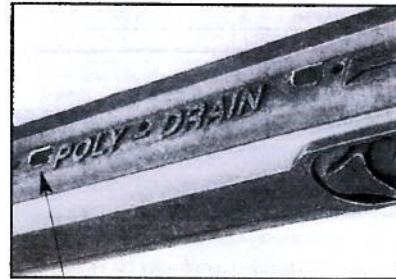
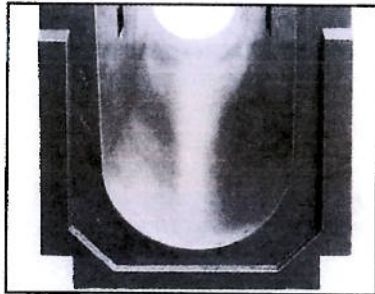


Interlocking Joints

PolyDrain channels have interlocking tongue-and-groove joints that serve two important functions. First they aid in maintaining proper channel alignment during the pour. Second, they assist in securing channel connections to prevent fluid migration out of the system. ABT maintains a line of sealants that can be applied to channels when a sealed system is required.

Pre-Sloped Radius Channels

Standard PolyDrain channels have a built-in 0.6% slope with a smooth radius bottom and a narrow cross section. These features provide excellent hydraulic efficiency and when hydraulically loaded can achieve flow velocities of 3.5 feet per second.

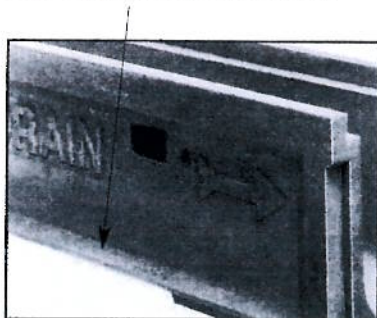


PolyLock Inserts

PolyDrain channels feature RedDot® polyethylene inserts or GreenDot® polypropylene inserts. These, together with the grate locking devices comprise the PolyLock grate lock-down system. RedDot inserts also provide vibration dampening that helps keep grates secure under traffic conditions.

Anchoring Ribs

PolyDrain channels are formed with full-length anchoring ribs on each side of the channel at the base of the side wall. These anchoring ribs provide a positive mechanical lock with surrounding concrete.



DISCLAIMER

The customer and the customer's architects, engineers, consultants and other professionals are completely responsible for the selection, installation, and maintenance of any product purchased from ABT, and EXCEPT AS EXPRESSLY PROVIDED IN ABT'S STANDARD WARRANTIES, ABT MAKES NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE SUITABILITY, DESIGN, MERCHANTABILITY, OR FITNESS OF THE PRODUCT FOR CUSTOMER'S APPLICATION. Copies of ABT's standard warranties are available upon request.

PolyDrain®, PolyDyn®, PolyChampion®, GreenDot®, RedDot®, and PolyWall® are registered trademarks of ABT, Inc.®

400 Series Grates

Solid Covers

Part No.	Load Class	Material*	Length m (in)	Weight kg (lb)	Locking Device
404	A	Galvanized steel	1.0 (39.19)	2.7 (6)	810A
405	A	Galvanized steel	0.5 (19.60)	1.4 (3)	810A
406	A	Galvanized steel embossed	1.0 (39.19)	2.7 (6)	810A
407	A	Galvanized steel embossed	0.5 (19.60)	1.4 (3)	810A
444	A	18-8 Stainless steel	1.0 (39.19)	3.2 (7)	840A
445	A	18-8 Stainless steel	0.5 (19.60)	1.8 (4)	840A
446	A	18-8 Stainless steel embossed	1.0 (39.19)	3.2 (7)	840A
447	A	18-8 Stainless steel embossed	0.5 (19.60)	1.8 (4)	840A

Perforated Heel-Proof Grates

Part No.	Load Class	Material*	Length m (in)	Weight kg (lb)	Locking Device
410	A	Galvanized steel	1.0 (39.19)	2.7 (6)	810A
411	A	Galvanized steel	0.5 (19.60)	1.4 (3)	810A
452	A	18-8 Stainless steel	1.0 (39.19)	2.7 (6)	840A
453	A	18-8 Stainless steel	0.5 (19.60)	1.4 (3)	840A

Reinforced Perforated Heel-Proof Grates

Part No.	Load Class	Material*	Length m (in)	Weight kg (lb)	Locking Device
412	A-B	Galvanized steel	1.0 (39.19)	3.6 (8)	810A
413	A-B	Galvanized steel	0.5 (19.60)	1.8 (4)	810A
454	A-B	18-8 Stainless steel	1.0 (39.19)	3.6 (8)	840A
455	A-B	18-8 Stainless steel	0.5 (19.60)	1.8 (4)	840A

Load Class A-B-C perforated grating available on special order basis

Slotted Steel Grates

Part No.	Load Class	Material*	Length m (in)	Weight kg (lb)	Locking Device
420	A-B	Galvanized steel	1.0 (39.19)	2.7 (6)	811A
421	A-B	Galvanized steel	0.5 (19.60)	1.4 (3)	811A
440	A-B	18-8 Stainless steel	1.0 (39.19)	2.7 (6)	841A
441	A-B	18-8 Stainless steel	0.5 (19.60)	1.4 (3)	841A
442.19	A-B-C-D	Stainless steel	1.0 (39.19)	3.6 (8)	841A
443.10	A-B-C-D	Stainless steel	.5 (19.6)	1.8 (4)	841A

Reinforced Slotted Steel Grates

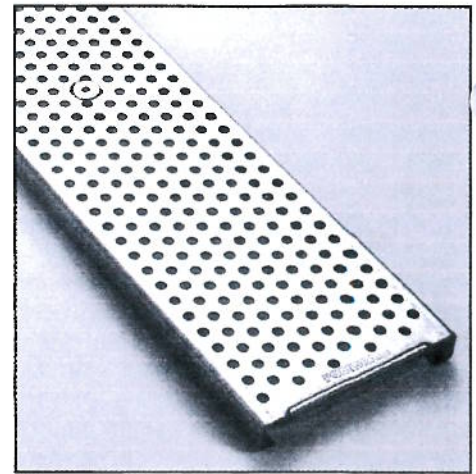
Part No.	Load Class	Material*	Length m (in)	Weight kg (lb)	Locking Device
422	A-B-C	Galvanized steel	1.0 (39.19)	3.6 (8)	811A
423	A-B-C	Galvanized steel	0.5 (19.60)	1.8 (4)	811A
423.10	A-B-C-D	Galvanized steel	0.5 (19.60)	1.8 (4)	811A
442	A-B-C	18-8 Stainless steel	1.0 (39.19)	3.6 (8)	841A
443	A-B-C	18-8 Stainless steel	0.5 (19.60)	1.8 (4)	841A

*Special coatings available on all grates

Load Classifications

Load Class	Description	Design Load psi maximum	Grate Options
A	Bicycles, golf carts	60	All grates
B	Automobiles, light trucks, light aircraft (less than 5 mph)	175	412, 413, 454, 455, 420, 421, 440, 441, 422, 423, 442, 443
C	Pneumatic tire vehicles (high speed), highways	325	422.19, 500, 502, 503, 504, 505, 512, 513, 514, 515
D	Severe point loads, hard tire fork lifts	575	512AF, 513AF, 514AF, 515AF, 522, 524, 532, 534, 512MFFAF
E	Commercial aircraft	775	513AF, 515AF, 522, 524, 532, 534
F	Snowplow	775	532, 534

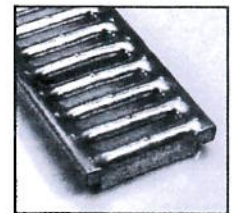
For variations on load suitability contact our technical sales support team at 800-438-6057.



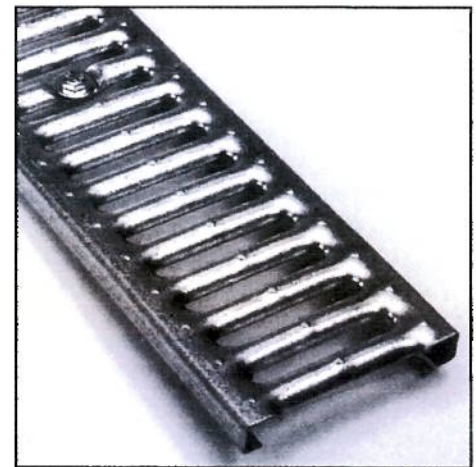
410



406



422



420

Grate Testing Procedure

Grate/cover is placed in a support fixture in a load testing machine. A steel rod, 100 mm (4") in diameter by 305 mm (12") in length, is placed longitudinally at the weakest point of the grate/cover (column, shear or beam). Load is applied to the rod until grate/cover failure occurs. The minimum failure load is then used to compute the Load Class formula listed with the drawing. Thus, Load Class as designated in the table is based on the worst case service load carrying capacity per linear foot of grate/cover. Test assumes a minimum of contact area. Actual applications may involve a larger load contact patch, thereby reducing stress.



502



503



504



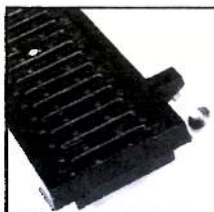
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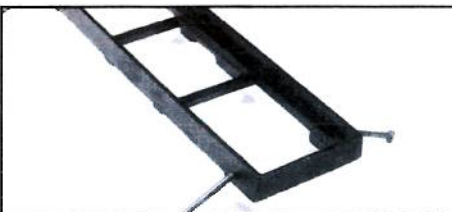
512AF



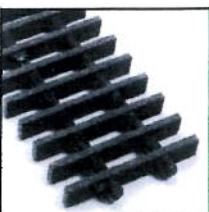
513AF



532



510MFFAF



720



722

500 Series Grates

Ductile Iron Solid Cover

Part No.	Load Class	Material**	Length m (in)	Weight kg (lb)	Locking Device
500*	A-B-C-D	Ductile iron	0.5 (19.60)	5.4 (12)	811C

*500 cover is also compatible with 510 frame

Slotted Grates

Part No.	Load Class	Material**	Length m (in)	Weight kg (lb)	Locking Device
502	A-B-C-D	Ductile iron	0.5 (19.60)	3.6 (8)	811B
503	A-B-C-D-E	Ductile iron	0.5 (19.60)	6.0 (11)	811B

Longitudinally Slotted Grates

Part No.	Load Class	Material**	Length m (in)	Weight kg (lb)	Locking Device
504	A-B-C-D	Ductile iron	0.5 (19.60)	4.5 (10)	811C

Ornamental Ductile Iron Grate

Part No.	Load Class	Material**	Length m (in)	Weight kg (lb)	Locking Device
505	A-B-C-D-E	Ductile iron ornamental	0.5 (19.60)	4.5 (10)	811C

510AF Frame & Grate Assemblies

Part No.	Load Class	Material**	Length m (in)	Weight kg (lb)	Locking Device
512AF	A-B-C-D	Ductile iron frame and 502	0.5 (19.60)	6.8 (15)	815B
513AF	A-B-C-D-E	Ductile iron frame and 503	0.5 (19.60)	8.5 (18)	815B
514AF	A-B-C-D	Ductile iron frame and 504	0.5 (19.60)	7.7 (17)	815C
515AF	A-B-C-D-E	Ductile iron frame and 505	0.5 (19.60)	7.7 (17)	815B

520 Frame & Grate Assemblies

Part No.	Load Class	Material**	Length m (in)	Weight kg (lb)	Locking Device
522	A-B-C-D-E	Gray iron (class 30) and 502 style	0.5 (19.60)	12.7 (28)	815E
524	A-B-C-D-E	Gray iron (class 30) frame and 504 style ductile	0.5 (19.60)	10.4 (23)	815F

530 Frame & Grate Assemblies

Part No.	Load Class	Material**	Length m (in)	Weight kg (lb)	Locking Device
532	A-B-C-D-E	Gray iron (class 30) and 502	0.5 (19.60)	13.6 (30)	815B
534	A-B-C-D-E	Gray iron (class 30) frame, ductile iron longitudinally-slotted grate	0.5 (19.60)	11.3 (25)	815F

510MFF Fabrication/End Frame

Part No.	Load Class	Material**	Length m (in)	Weight kg (lb)	Locking Device
510MFF	N/A	Ductile iron	0.5 (19.60)	4.1 (9)	N/A

**All ductile iron grates and frames available with galvanized coating. All ductile and cast grates have compatible anchor frames.

700 Series Grates

Vinyl Ester Chemical Resistant FRP Slotted Grates

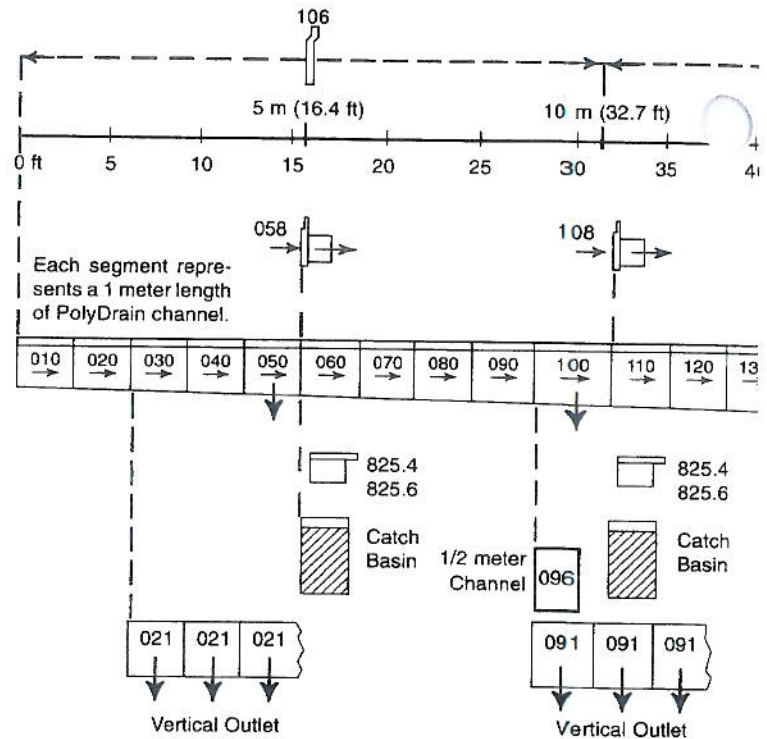
Part No.	Load Class	Material	Length m (in)	Weight kg (lb)	Locking Device
720	A-B	Vinyl ester (bars on 1" centers)	1.0 (39.19)	1.8 (4)	887
721	A-B	Vinyl ester (bars on 1" centers)	0.5 (19.60)	0.9 (2)	887
722	A-B-C	Vinyl ester (bars on 0.6" centers)	1.0 (39.19)	2.7 (6)	887
723	A-B-C	Vinyl ester (bars on 0.6" centers)	0.5 (19.60)	1.4 (3)	887

Key to special compliance grates

♿ Meets Americans with Disabilities Act (ADA) Requirements

The PolyDrain Trench Drain System consists of 30 interlocking sloped channels and 4 non-sloped channels. Special non-sloping channels can be inserted at specified intervals in order to extend channel runs. Catch basins, horizontal outlet plates, closed end plates and vertical outlet plate adapters can be installed at designated locations. Closed end plates terminate channel runs. To determine number of channels required simply divide footage by 3.27.

NOTE: Always begin at the appropriate outlet channel, working towards the shallow end.



Channel Specifications

Use this chart to estimate flow capacities and invert elevations. Excavation depth may be estimated by adding slab thickness to Maximum Channel Depth, or as recommended by Structural Engineer.

When using the Model 510, 520 or 530 Series frame and grate systems, add 31 mm (1.2") to the overall depths.

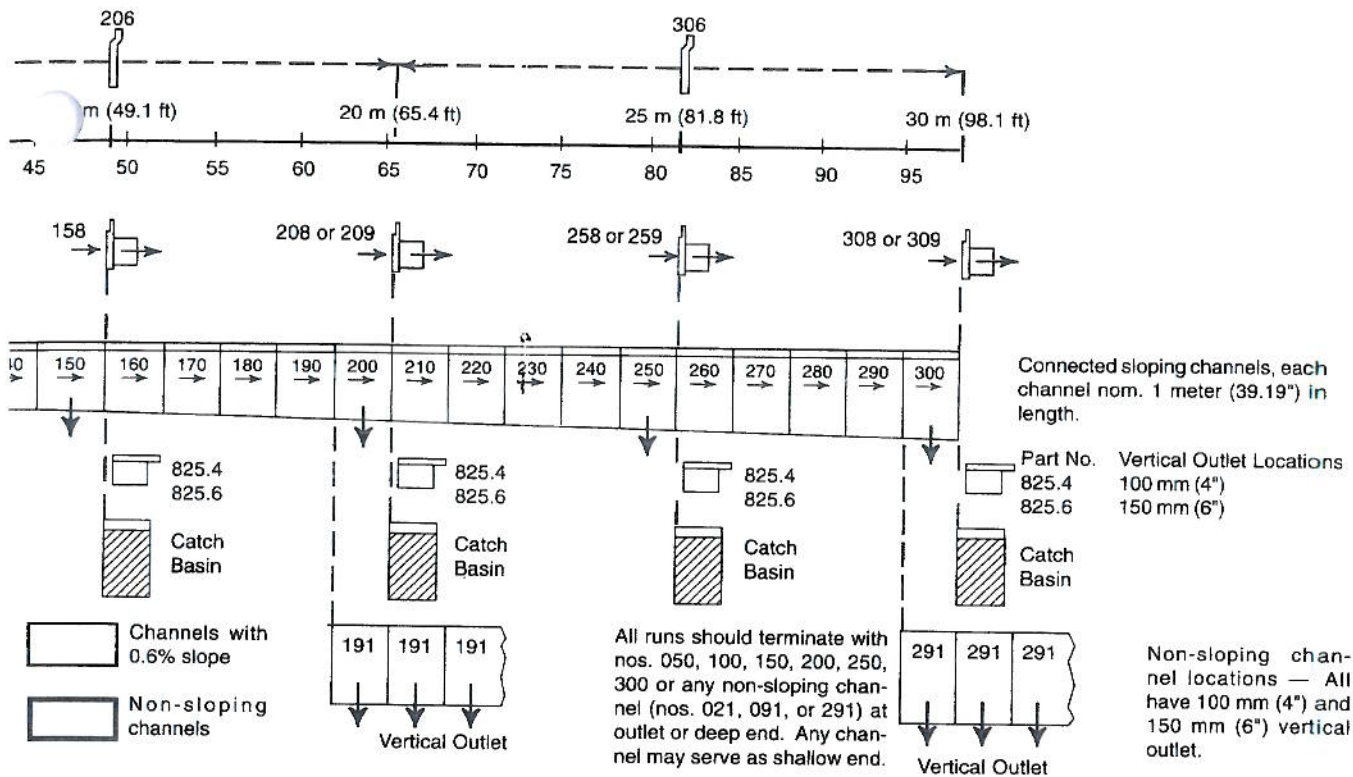
NOTES:

Subtract 25 mm (1") from minimum and maximum depths shown to obtain invert elevations.

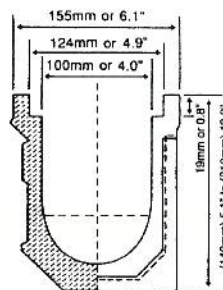
Red part numbers indicate non-sloping channels.

Excludes grate lip, $n = 0.010$, average channel depth.

Part No.	Channel Only				Channel With PolyWall I			
	Overall Channel Depth cm (in)		Maximum Flow Rate lpm (gpm)	Weight kg (lbs)	Overall Channel Depth cm (in)		Maximum Flow Rate lpm (gpm)	Weight kg (lbs)
	Minimum	Maximum			Minimum	Maximum		
010	12.9 (5.1)	13.5 (5.3)	403.8 (106.7)	14.1 (31.1)	30.9 (12.2)	31.5 (12.4)	1476.1 (389.9)	37.6 (82.9)
020	13.5 (5.3)	14.1 (5.6)	438.3 (115.8)	14.9 (32.8)	31.5 (12.4)	32.1 (12.6)	1512.4 (399.5)	38.4 (84.6)
021	14.1 (5.6)	14.1 (5.6)	—	14.5 (32.0)	32.1 (12.6)	32.1 (12.6)	—	38.0 (83.8)
030	14.1 (5.6)	14.7 (5.8)	473.1 (125.0)	15.2 (33.6)	32.1 (12.6)	32.7 (12.9)	1548.7 (409.1)	38.7 (85.4)
040	14.7 (5.8)	15.3 (6.0)	508.0 (134.2)	15.5 (34.3)	32.7 (12.9)	33.3 (13.1)	1584.9 (418.7)	39.0 (86.1)
050	15.3 (6.0)	15.9 (6.3)	543.0 (143.5)	15.3 (33.8)	33.3 (13.1)	33.9 (13.3)	1621.2 (428.3)	38.8 (85.6)
060	15.9 (6.3)	16.5 (6.5)	578.2 (152.7)	16.0 (35.2)	33.9 (13.3)	34.5 (13.6)	1657.6 (437.9)	39.5 (87.0)
070	16.5 (6.5)	17.1 (6.7)	613.5 (162.1)	16.4 (36.2)	34.5 (13.6)	35.1 (13.8)	1693.9 (447.5)	39.9 (88.0)
080	17.1 (6.7)	17.7 (7.0)	648.9 (171.4)	16.8 (37.0)	35.1 (13.8)	35.7 (14.0)	1730.2 (457.1)	40.3 (88.8)
090	17.7 (7.0)	18.3 (7.2)	684.3 (180.8)	17.2 (38.0)	35.7 (14.0)	36.3 (14.3)	1766.5 (466.7)	40.7 (89.8)
091	18.3 (7.2)	18.3 (7.2)	—	17.0 (37.4)	36.3 (14.3)	36.3 (14.3)	—	40.5 (89.2)
096	18.3 (7.2)	18.3 (7.2)	—	9.1 (20.1)	36.3 (14.3)	36.3 (14.3)	—	32.6 (71.9)
100	18.3 (7.2)	18.9 (7.4)	719.9 (190.2)	17.1 (37.6)	36.3 (14.3)	36.9 (14.5)	1802.9 (476.3)	40.6 (89.4)
110	18.9 (7.4)	19.5 (7.7)	755.5 (199.6)	18.1 (39.8)	36.9 (14.5)	37.5 (14.8)	1839.2 (485.9)	41.5 (91.6)
120	19.5 (7.7)	20.1 (7.9)	791.2 (209.0)	18.4 (40.6)	37.5 (14.8)	38.1 (15.0)	1875.6 (495.5)	41.9 (92.4)
130	20.1 (7.9)	20.7 (8.2)	826.9 (218.5)	19.2 (42.4)	38.1 (15.0)	38.7 (15.2)	1912.0 (505.1)	42.7 (94.2)
140	20.7 (8.2)	21.3 (8.4)	862.7 (227.9)	19.4 (42.8)	38.7 (15.2)	39.3 (15.5)	1948.4 (514.7)	42.9 (94.6)
150	21.3 (8.4)	21.9 (8.6)	898.6 (237.4)	19.3 (42.6)	39.3 (15.5)	39.9 (15.7)	1984.7 (524.3)	42.8 (94.4)
160	21.9 (8.6)	22.5 (8.9)	934.4 (246.9)	20.0 (44.2)	39.9 (15.7)	40.5 (15.9)	2021.1 (533.9)	43.5 (96.0)
170	22.5 (8.9)	23.1 (9.1)	970.4 (256.3)	20.5 (45.1)	40.5 (15.9)	41.1 (16.2)	2057.5 (543.5)	44.0 (96.9)
180	23.1 (9.1)	23.7 (9.3)	1006.3 (265.8)	20.9 (46.1)	41.1 (16.2)	41.7 (16.4)	2093.9 (553.2)	44.4 (97.9)
190	23.7 (9.3)	24.3 (9.6)	1042.3 (275.4)	21.2 (46.8)	41.7 (16.4)	42.3 (16.7)	2130.3 (562.8)	44.7 (98.6)
191	24.3 (9.6)	24.3 (9.6)	—	21.1 (46.6)	42.3 (16.7)	42.3 (16.7)	—	44.6 (98.4)
200	24.3 (9.6)	24.9 (9.8)	1078.3 (284.9)	21.3 (46.9)	42.3 (16.7)	42.9 (16.9)	2166.8 (572.4)	44.8 (98.7)
210	24.9 (9.8)	25.5 (10.0)	1114.4 (294.4)	22.0 (48.6)	42.9 (16.9)	43.5 (17.1)	2203.2 (582.0)	45.5 (100.4)
220	25.5 (10.0)	26.1 (10.3)	1150.5 (303.9)	22.6 (49.8)	43.5 (17.1)	44.1 (17.4)	2239.6 (591.6)	46.1 (101.6)
230	26.1 (10.3)	26.7 (10.5)	1186.6 (313.5)	22.7 (50.0)	44.1 (17.4)	44.7 (17.6)	2276.0 (601.3)	46.2 (101.8)
240	26.7 (10.5)	27.3 (10.7)	1222.7 (323.0)	23.4 (51.5)	44.7 (17.6)	45.3 (17.8)	2312.5 (610.9)	46.9 (103.3)
250	27.3 (10.7)	27.9 (11.0)	1258.9 (332.6)	22.9 (50.5)	45.3 (17.8)	45.9 (18.1)	2348.9 (620.5)	46.4 (102.3)
260	27.9 (11.0)	28.5 (11.2)	1295.0 (342.1)	23.7 (52.4)	45.9 (18.1)	46.5 (18.3)	2385.3 (630.1)	47.2 (104.2)
270	28.5 (11.2)	29.1 (11.5)	1331.2 (351.7)	24.0 (53.0)	46.5 (18.3)	47.1 (18.5)	2421.8 (639.8)	47.5 (104.8)
280	29.1 (11.5)	29.7 (11.7)	1367.4 (361.2)	24.7 (54.5)	47.1 (18.5)	47.7 (18.8)	2458.2 (649.4)	48.2 (106.3)
290	29.7 (11.7)	30.3 (11.9)	1403.6 (370.8)	24.9 (54.9)	47.7 (18.8)	48.3 (19.0)	2494.7 (659.0)	48.4 (106.7)
291	30.3 (11.9)	30.3 (11.9)	—	24.2 (53.4)	48.3 (19.0)	48.3 (19.0)	—	47.7 (105.2)
300	30.3 (11.9)	30.9 (12.2)	1439.9 (380.4)	25.3 (55.6)	48.3 (19.0)	48.9 (19.3)	2531.2 (668.7)	48.7 (107.4)

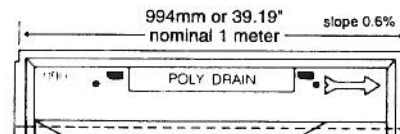


Channel With PolyWall II				Part No.
Overall Channel Depth cm (in)		Maximum Flow Rate lpm (gpm)	Weight kg (lbs)	
Minimum	Maximum			
48.9 (19.3)	49.5 (19.5)	2567.6 (678.3)	46.3 (106.5)	010
49.5 (19.5)	50.1 (19.7)	2604.1 (687.9)	47.1 (108.2)	020
50.1 (19.7)	50.1 (19.7)	—	46.7 (107.4)	021
50.1 (19.7)	50.7 (20.0)	2640.5 (697.6)	47.4 (109.0)	030
50.7 (20.0)	51.3 (20.2)	2677.0 (707.2)	47.7 (109.7)	040
51.3 (20.2)	51.9 (20.4)	2713.5 (716.8)	47.5 (109.2)	050
51.9 (20.4)	52.5 (20.7)	2750.0 (726.5)	48.2 (110.6)	060
52.5 (20.7)	53.1 (20.9)	2786.4 (736.1)	48.6 (111.6)	070
53.1 (20.9)	53.7 (21.1)	2822.9 (745.7)	49.0 (112.4)	080
53.7 (21.1)	54.3 (21.4)	2859.4 (755.4)	39.4 (113.4)	090
54.3 (21.4)	54.3 (21.4)	—	49.2 (112.8)	091
54.3 (21.4)	54.3 (21.4)	—	41.3 (95.5)	096
54.3 (21.4)	54.9 (21.6)	2895.9 (765.0)	49.3 (113.0)	100
54.9 (21.6)	55.5 (21.9)	2932.4 (774.7)	50.3 (115.2)	110
55.5 (21.9)	56.1 (22.1)	2968.9 (784.3)	50.6 (116.0)	120
56.1 (22.1)	56.7 (22.3)	3005.4 (793.9)	51.4 (117.8)	130
56.7 (22.3)	57.3 (22.6)	3041.9 (803.6)	51.6 (118.2)	140
57.3 (22.6)	57.9 (22.8)	3078.4 (813.2)	51.5 (118.0)	150
57.9 (22.8)	58.5 (23.0)	3114.9 (822.9)	52.3 (119.6)	160
58.5 (23.0)	59.1 (23.3)	3151.4 (832.5)	52.7 (120.5)	170
59.1 (23.3)	59.7 (23.5)	3187.9 (842.1)	53.1 (121.5)	180
59.7 (23.5)	60.3 (23.7)	3224.4 (851.8)	53.4 (122.2)	190
60.3 (23.7)	60.3 (23.7)	—	53.3 (122.0)	191
60.3 (23.7)	60.9 (24.0)	3260.9 (861.4)	53.5 (122.3)	200
60.9 (24.0)	61.5 (24.2)	3297.4 (871.1)	54.2 (124.0)	210
61.5 (24.2)	62.1 (24.4)	3333.9 (880.7)	54.8 (125.2)	220
62.1 (24.4)	62.7 (24.7)	3370.4 (890.4)	54.9 (125.4)	230
62.7 (24.7)	63.3 (24.9)	3406.9 (900.0)	55.6 (126.9)	240
63.3 (24.9)	63.9 (25.2)	3443.4 (909.7)	55.1 (125.9)	250
63.9 (25.2)	64.5 (25.4)	3480.0 (919.3)	55.9 (127.8)	260
64.5 (25.4)	65.1 (25.6)	3516.5 (929.0)	56.2 (128.4)	270
65.1 (25.6)	65.7 (25.9)	3553.0 (938.6)	56.9 (129.9)	280
65.7 (25.9)	66.3 (26.1)	3589.5 (948.2)	57.1 (130.3)	290
66.3 (26.1)	66.3 (26.1)	—	56.4 (128.8)	291
66.3 (26.1)	66.9 (26.3)	3626.0 (957.9)	57.4 (131.0)	300

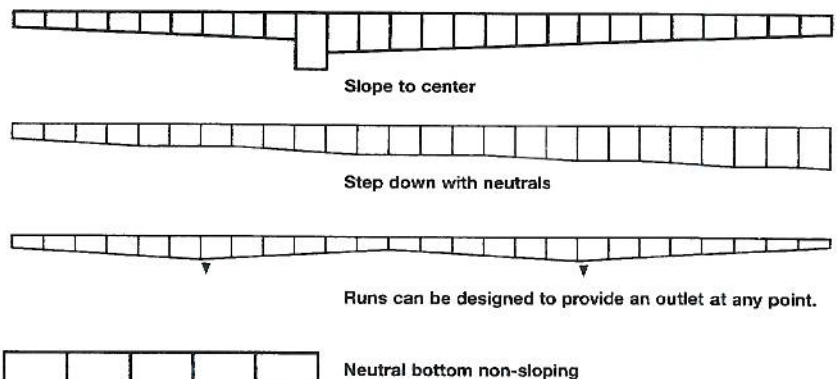


Minimum overall depth (No. 010)	128 mm or 5.1"
Maximum overall depth (No. 300)	309 mm or 12.2"
Inside top width (all channels)	100 mm or 4.0"
Maximum cross section flow area	25,400 mm ² or 39.9 sq. in.
Length of slope system	30 m or 98.1 feet
Channel bottom thickness	20 mm or 1.0" (nom.)

PolyDrain systems can be extended to greater lengths by insertion of any number of non-slope channels (No. 021, 091, 096, 191, and 291) at the appropriate locations, or by the addition of PolyWall sidewall extensions.

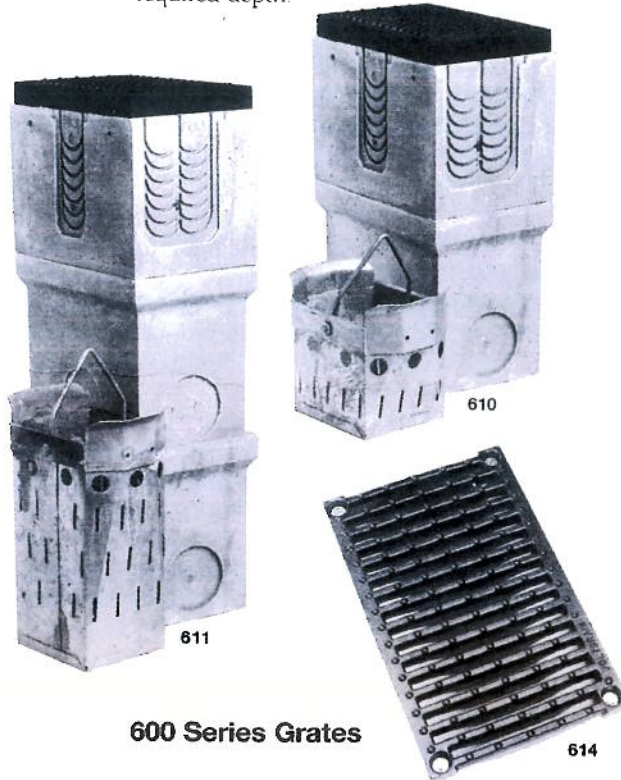


Run Variations



610-611 Large Catch Basins

PolyDrain's 610 and 611 Large Catch Basins are designed to accept large volumes of fluids. Removable stainless or galvanized steel trash buckets are available and a cast iron grate and frame is included. Catch basins are 19.6" long and 12.8" wide and have pre-formed cutouts for insertion of channels and 150 mm (6") outlets on all four sides of the basin, although other pipe sizes can be fitted to the catch basin as required. PolyDrain Large Catch Basins have a stackable design which allows for installation to any required depth.



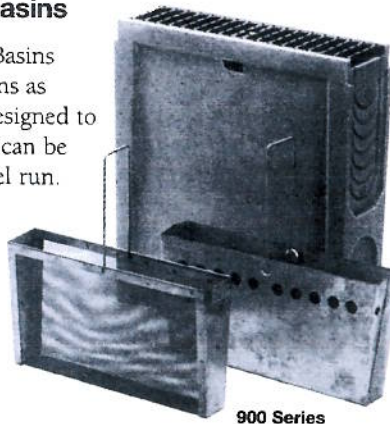
600 Series Grates

Slotted Grates For 600 Series Catch Basins

Part No.	Load Class	Material	Length m (in)	Weight kg (lb)	Locking Device
604	A-B-C-D	Gray iron (class 30)	0.48 (18.87)	24.9 (55)	828
614	A-B-C-D-E	Ductile iron	0.48 (18.87)	39.5 (87)	828

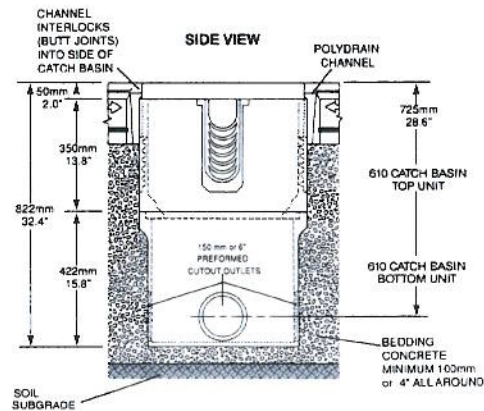
900 Series Small Catch Basins

PolyDrain's 900 Series Catch Basins have the same outside dimensions as standard PolyDrain channels. Designed to accept sidewall extensions, they can be positioned any place in a channel run. The 900 Series Catch Basins are available with easy-to-remove stainless or galvanized steel trash buckets and can accept the full range of lockable inlay or frame-and-grate systems. Available with foul air traps when required.

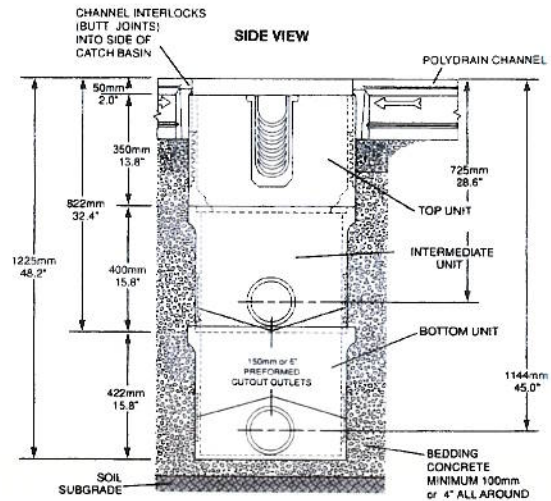


900 Series

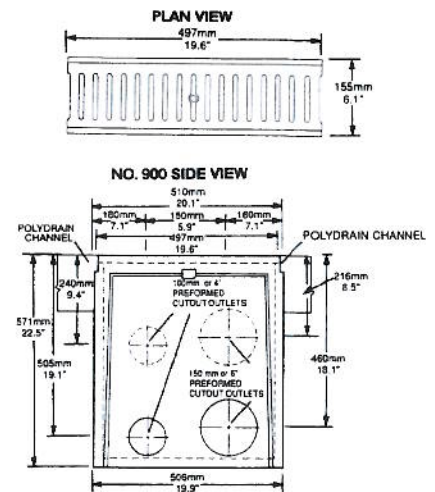
610 Large Catch Basin



611 Large Catch Basin

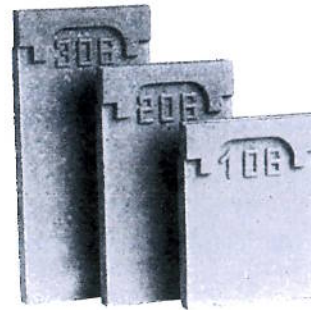


900 Series Small Catch Basins

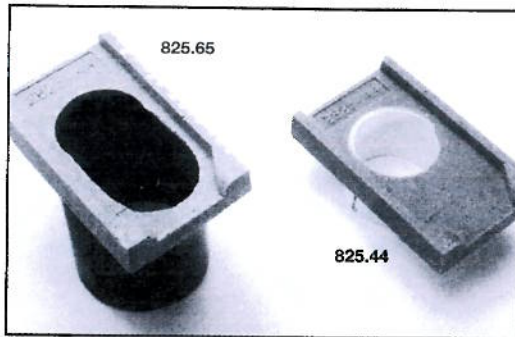


Inlets and Outlets

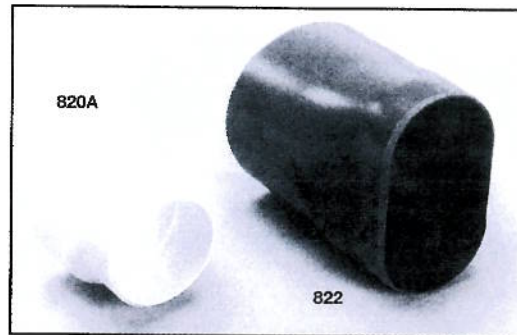
All 100 mm (4") horizontal plates have inlet or outlet capability. As outlets, they fit the downstream end of every fifth channel, or as inlets, the upstream end of the following channel. All 100 mm (4") plates are made with a PVC sleeve to accept either SCH40 or SDR35 pipe. 150 mm (6") outlet plates are made with a special adapter flume. Vertical outlet plates fit over the cutouts on each of the outlet channels.



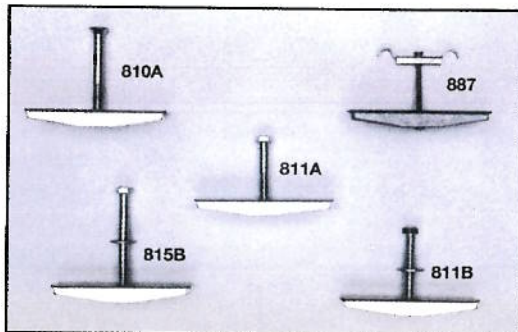
Closed End Plates



Vertical Outlet Plates

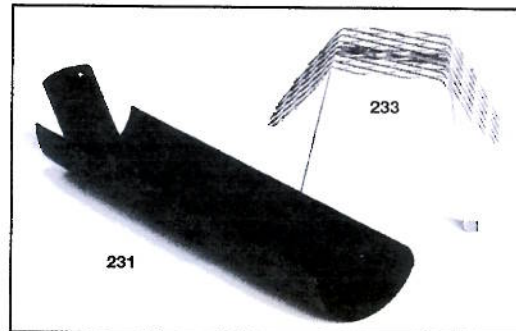


PVC Connectors



Locking Devices

Grate locking devices are recommended for all applications involving vehicular traffic, or where vandalism may be a problem. Locking devices are provided in zinc-plated and stainless steel. The bolt is threaded into the lock toggle through the hole provided in the grate prior to grate installation. As the bolt is tightened, the toggle cams into place for hands-free installation.



Shovel Head

Designed to conform to the PolyDrain channel bottom.

100 mm (4") Strainer

The strainer is designed to intercept leaves and similar type trash to prevent it from entering the sewer system. Fits all 100 mm (4") vertical channel outlets.



PolySeal

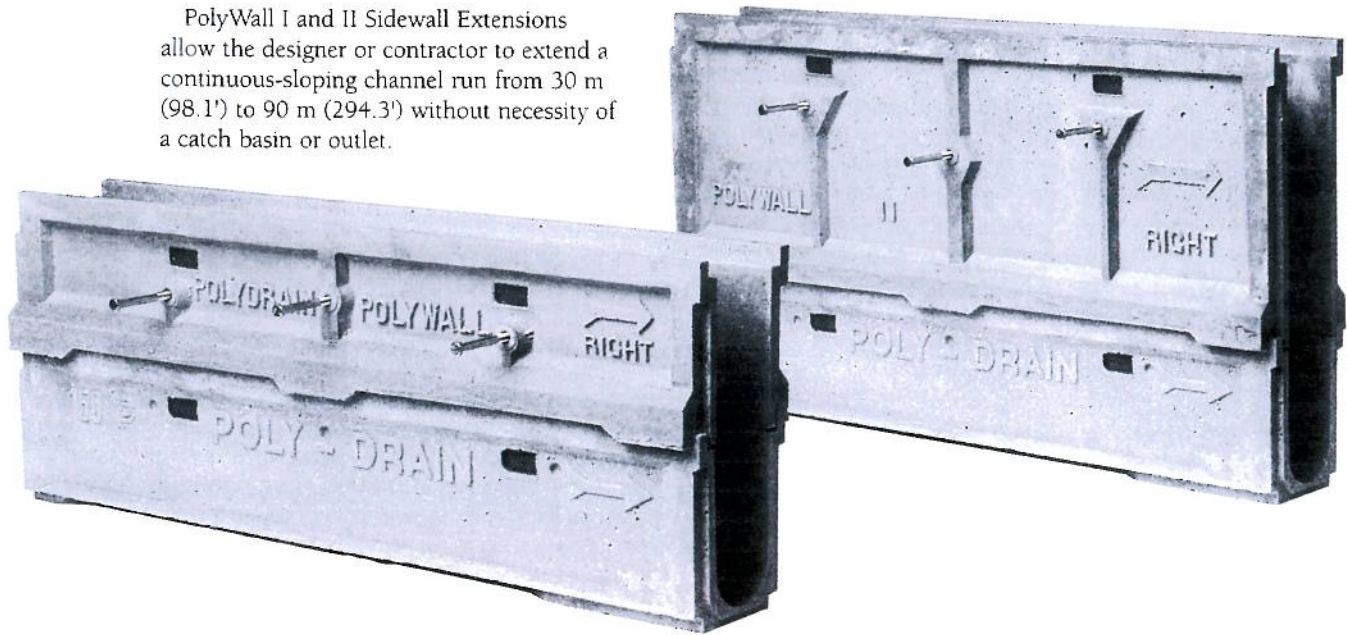
PolySeal 1 is a single-part polyurethane in a standard paper caulk tube, and is used as a general purpose sealant for gray water applications.

PolySeal 2 is a two-part epoxy in a double tube with a static mixing nozzle. PolySeal 2 maintains a permanent flexibility and offers chemical resistant properties.

PolySeal 3 is a two-part vinyl ester sealant which sets hard in about 30 minutes. It is recommended for sealing all joints in a PolyChampion installation. It is also ideal for bonding all PolyDrain fabrications and mitres.

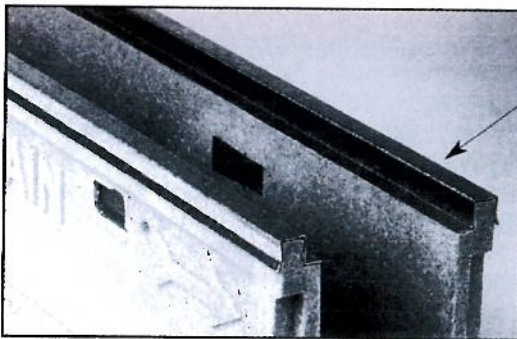
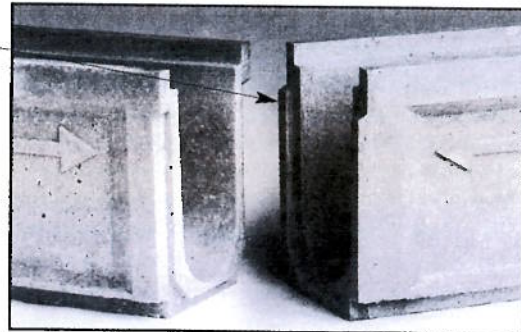
PolyWall Sidewall Extensions

PolyWall I and II Sidewall Extensions allow the designer or contractor to extend a continuous-sloping channel run from 30 m (98.1') to 90 m (294.3') without necessity of a catch basin or outlet.



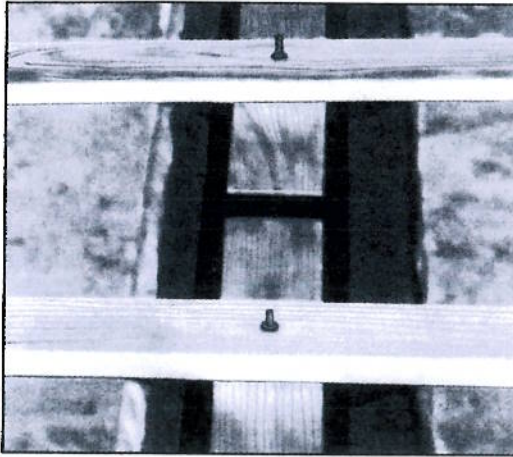
Gender Mender Outlet Channel

A series of specially modified channels that addresses the difficulties encountered when two sloping channels converge where a vertical outlet is required. For every outlet channel (050, 100, 150, 200, 250 and 300), a Gender Mender channel is molded with a female interlocking joint at the low point. This feature provides proper channel alignment and eliminates field fabrication for these center draining configurations.



Overlay Rails (Must Use Reinforced Grate)

Overlay Rails are made of galvanized or stainless steel and are applied to any standard channels. They cover and protect the channel edge in medium-duty traffic applications. When visual aesthetics are important, the Overlay Rails enhance the appearance of the PolyDrain channels.



Suspended Installation

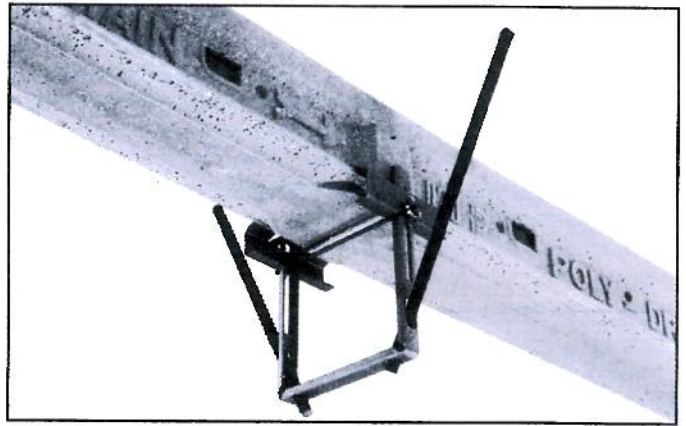
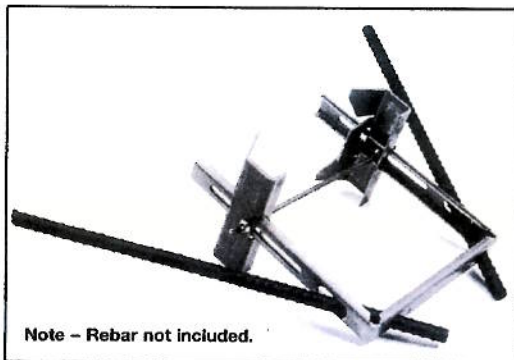
This method is best suited for retrofit installations. The existing slab serves to suspend channel sections, or in a new construction using forming boards for the same purpose.

Using 2" x 4" boards of sufficient length to span the trench, and 6" long threaded bolts or all thread bolts with toggle bars, secure channels to the boards.

With channels properly positioned, place and consolidate concrete under and around the channels, then finish to the proper grade.

PolyClip Installation Aids

PolyClip was developed to speed channel installation and make the joining of the channels more secure before the pour. PolyClip consists of: two special securing brackets (one for either side of the channel); a "no-float" U-shaped leg that serves to maintain proper height and keep channels from floating during the pour; and a securing bolt to keep the entire appliance attached to the channel.



PolyClip Installation

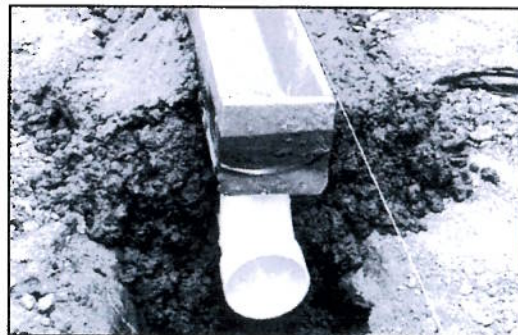
PolyClips are installed at the channel joints. Height adjustment is made by loosening the wingnut and sliding brackets up or down on the U-legs. Tightening the wingnut fixes the height while at the same time drawing the channels together for a tight joint. Channels can then be secured to the subgrade either by pouring a non-structural anchoring slab or by driving two rebar "nails" through preformed holes in the U-leg.

Bedding Slurry Method

Place a low-slump (1"-2") concrete in the trench to a depth that will ensure at least 4" of concrete under the channels. (Patties of stiff concrete can be substituted for continuous slurry.) Position channels in the slurry, ensuring that the concrete comes above the anchoring ribs. Re-check channel alignment and grade before the concrete stiffens.

After the bedding slurry sets, concrete can be placed and consolidated around the channels and finished to the proper grade.

Standard cold joint details and procedures must be followed on bedding slurry pour to prevent floor expansion from damaging channels.



Suggested Specification (Short Form)

Section 02725 — Precast Trench Drain and Catch Basin System

Part 2 — Products

A. Acceptable manufacturers:

1. Surface drain system:

- a. Base: PolyDrain; manufactured by ABT, Inc.,
PO Box 837, 259 Murdock Rd., Troutman,
NC 28166; 1-800-438-6057.

B. Components:

1. Drain trench: Fabricated of polyester polymer concrete, 155 mm (6.1") wide, 100 mm (4") ID with radiused bottom, having following attributes:
 - a. Lengths: Nominal 0.5 meter (19.6") and 1.0 meter (39.19").
 - b. Bottoms: Sloped to provide 0.6% slope.
 - c. Anchoring ribs: Full length.
 - d. Grate locking slots: Blind, vibration damping, thermoplastic.
 - e. Interlocking ends.
 - f. Available to 90 m (294'), continuous slope using sidewall extensions.

Specifier: If corrosive products will be transported with this system, change polyester to vinylester and add compatible sealant. See the *PolyDrain Chemical Resistance Guide* for suitable material specification information.

2. Grates:

- a. Perforated heel-proof, steel.
- b. Slotted steel.
- c. Ductile iron anchor frames.
- d. Grey iron anchor frames.
- e. Fiberglass.

3. Accessories:

- a. End plates.
- b. Outlet plates.
- c. Strainer.
- d. Locking devices.
- e. Sealant.
- f. Polywall sidewall extensions.
- g. Installation devices.
- h. Catch basins.

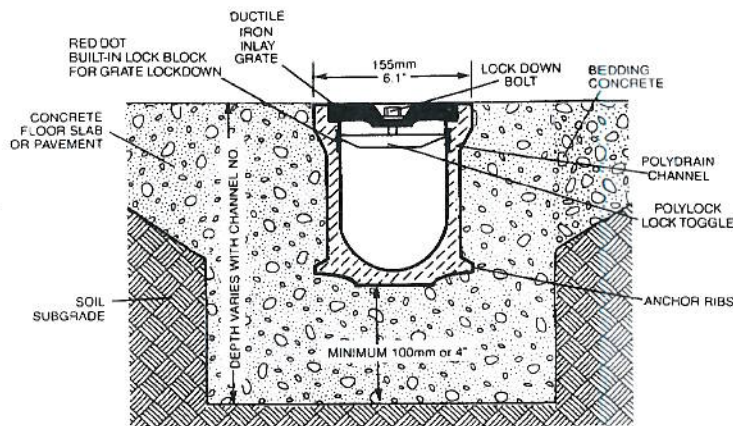
Specifier: Select grate type from catalog and enter part number. Assume that selected type meets loading requirements. Select proper accessories, insert model numbers. Always use cast anchor frames for hard tire loadings. Delete items not used.

Part 3 — Execution

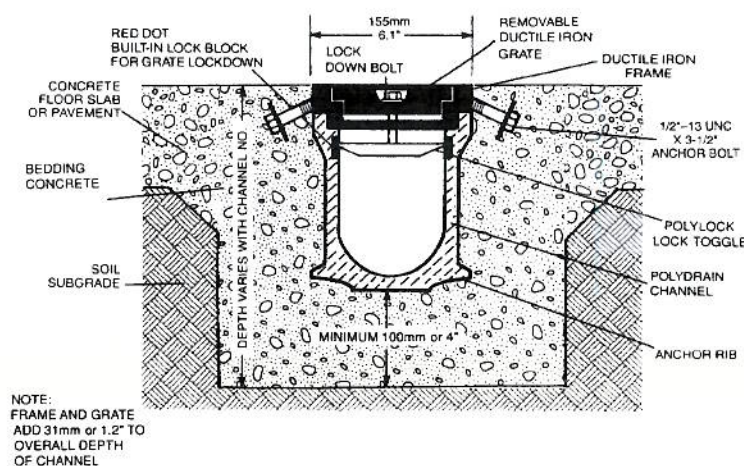
3.02 Preparation

- A. Where sealant is required, roughen surface, and acetone wash area to receive sealant.

**Cross-Sectional View
Channel with In-lay Type Grate**



**Cross-Sectional View
Channel with Frame and Grate**



3.03 Installation

- A. In accord with manufacturer's instructions.
- B. Utilize manufacturer's approved installation device to assure proper joints, drawn tightly together by device.
- C. The trench drain and its encapsulating concrete should be isolated from the expansion and contraction stress of the adjacent slabs.

For comprehensive long-form specifications and details in print or digital format, call 800-438-6057.

ABT, INC.

PO Box 837 ■ 259 Murdock Road ■ Troutman, NC 28166 ■ TEL 704-528-9806 ■ FAX 704-528-5478
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