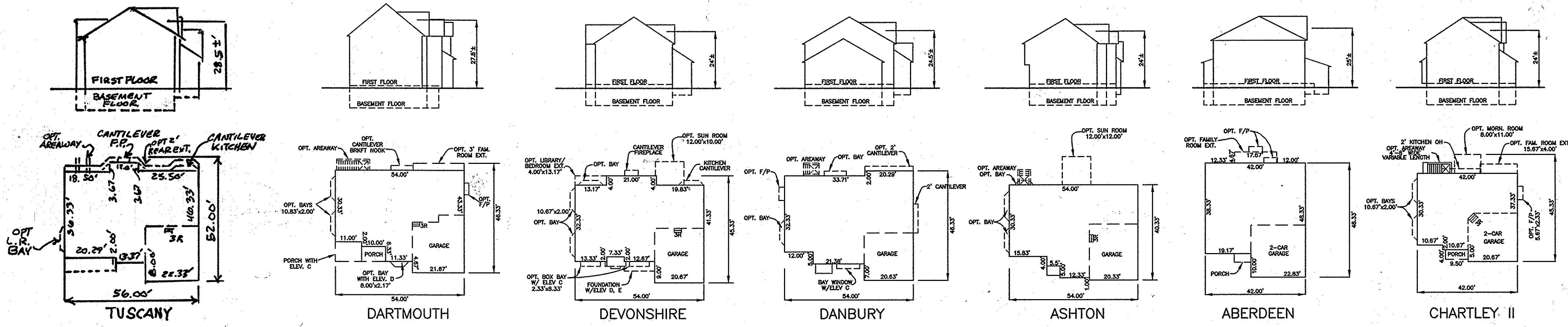
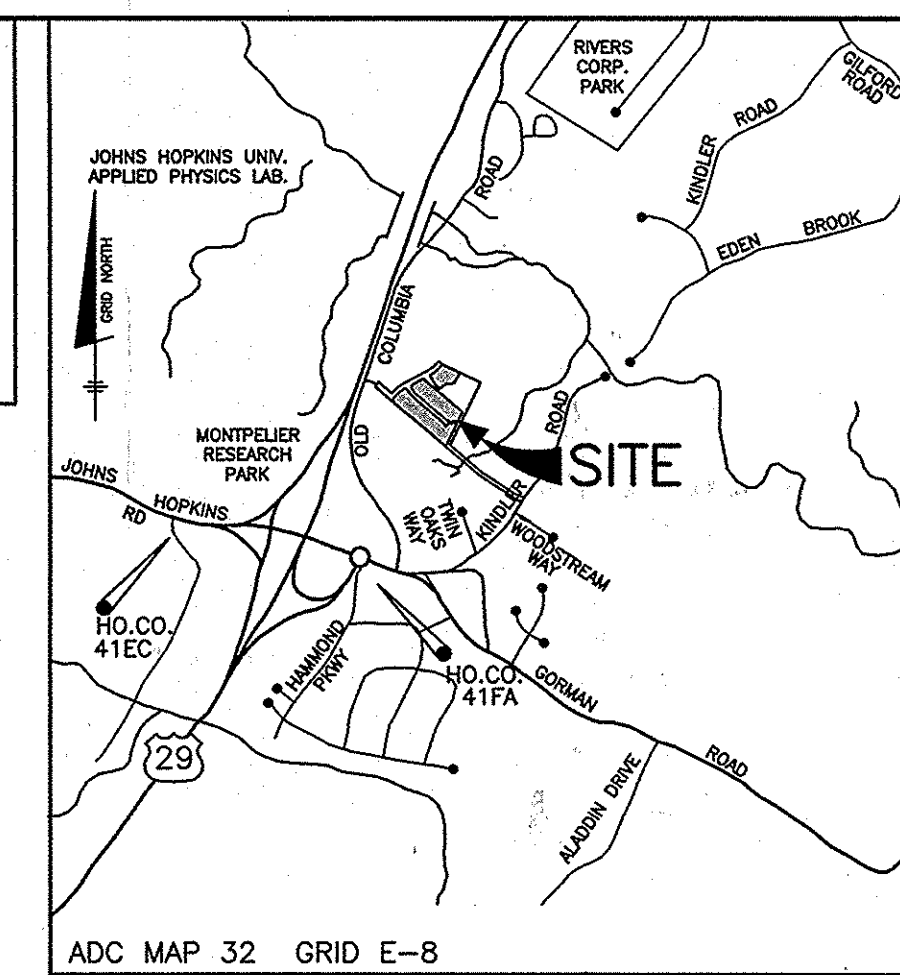


| SHEET INDEX | |
|-------------|---|
| NO. | DESCRIPTION |
| 1 | TITLE SHEET |
| 2 | SITE DEVELOPMENT AND GRADING PLAN |
| 3 | SITE DEVELOPMENT, GRADING PLAN AND SEDIMENT AND EROSION CONTROL DETAILS |
| 4 | SEDIMENT AND EROSION CONTROL PLAN AND NOTES |

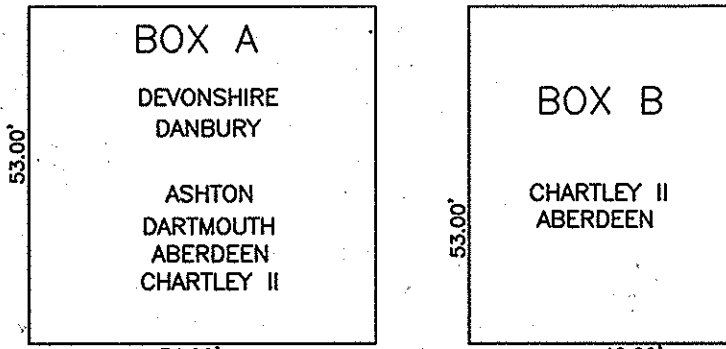
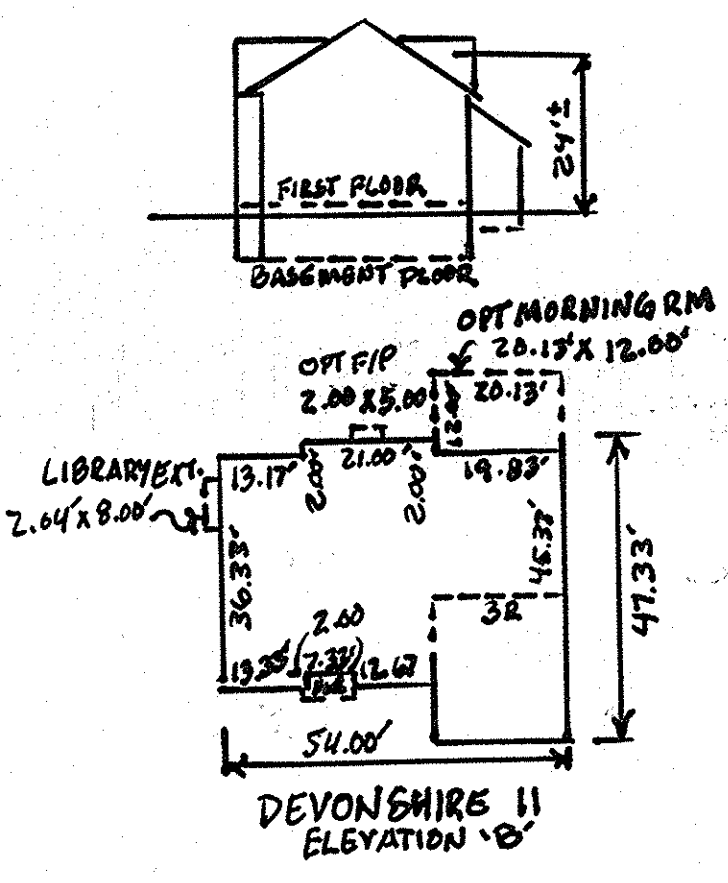
REVISED SITE DEVELOPMENT PLAN KINDLER OVERLOOK LOTS 1-19

| BENCH MARKS--(NAD'83) | |
|---|------------------|
| HO.CO. 41EC | ELEV. 430.34 |
| STAMPED DISC SET ON TOP OF 3' DEEP COLUMN OF CONCRETE | |
| N 543,588.8040 | E 1,342,628.7800 |
| HO.CO. 41FA | ELEV. 407.60 |
| STAMPED DISC SET ON TOP OF 3' DEEP COLUMN OF CONCRETE | |
| N 543,109.9350 | E 1,344,797.5200 |



HOUSE FOOTPRINTS
SCALE: 1" = 30'

| SEWER HOUSE CONNECTION CHART | | | |
|------------------------------|-------------|--------------|-------|
| LOT | INV. @ MAIN | INV. @ 12" W | MCE |
| LOT 1 | 357.3 | 358.0 | 362.2 |
| LOT 2 | 361.5 | 362.2 | 366.5 |
| LOT 3 | 364.0 | 364.7 | 368.9 |
| LOT 4 | MH-6 | 369.2 | 372.9 |
| LOT 5 | 370.0 | 370.7 | 374.7 |
| LOT 6 | 368.3 | 369.0 | 373.0 |
| LOT 7 | 366.9 | 367.6 | 371.6 |
| LOT 8 | 345.5 | 346.5 | 362.0 |
| LOT 9 | 365.1 | 365.3 | 369.3 |
| LOT 10 | 365.7 | 366.4 | 370.6 |
| LOT 11 | 369.2 | 369.7 | 373.6 |
| LOT 12 | 370.0 | 370.4 | 374.4 |
| LOT 13 | 370.4 | 370.8 | 374.8 |
| LOT 14 | 369.2 | 369.6 | 373.8 |
| LOT 15 | 365.6 | 366.0 | 370.0 |
| LOT 16 | 360.0 | 360.5 | 361.9 |
| LOT 17 | 356.6 | 357.2 | 361.9 |
| LOT 18 | 355.8 | 356.4 | 360.4 |
| LOT 19 | MH-11 | 358.8 | 363.0 |



GENERIC BOXES
SCALE: 1" = 30'

NOTE:
1. GENERIC BOXES ACCOMMODATE ALL OPTIONS SHOWN ON THIS PLAN UNLESS OTHERWISE NOTED. OTHER OPTIONS SHOWN IN ARCHITECTURAL PLANS DO NOT FIT WITHIN GENERIC BOXES.
2. STORMWATER MANAGEMENT HAS BEEN DESIGNED USING THE AREAS OF THE GENERIC BOXES. SHOULD A HOUSE TYPE REVISION BE REQUIRED THAT CAUSES THE HOUSE TO EXCEED THE AREA OF THE GENERIC BOX, THE STORMWATER MANAGEMENT WILL BE RE-EVALUATED AT THAT TIME.

| MINIMUM LOT SIZE CHART | | | |
|------------------------|------------|---------------|------------------|
| LOT# | GROSS AREA | PIPESTEM AREA | MINIMUM LOT SIZE |
| 8 | 15,954 SF | 1,398 SF | 14,556 SF |
| 19 | 16,312 SF | 2,284 SF | 14,028 SF |

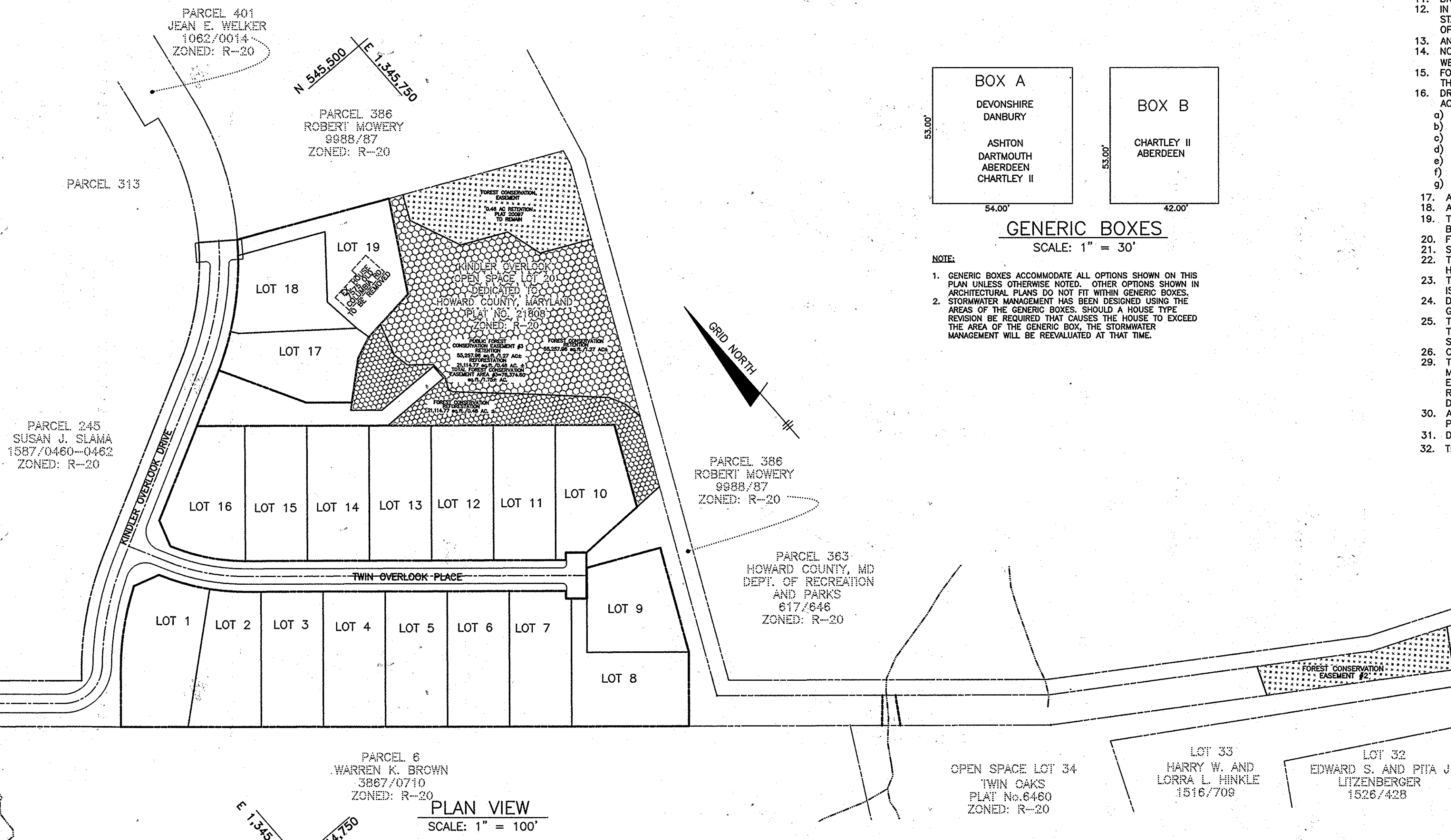
| SITE ANALYSIS DATA CHART | |
|--|--|
| A.) TOTAL PROJECT AREA | 6.34 AC. |
| B.) AREA OF THIS PLAN SUBMISSION | 6.34 AC. |
| C.) APPROXIMATE LIMIT OF DISTURBANCE | 4.97 AC. |
| D.) PRESENT ZONING: | R-20 |
| E.) PROPOSED USE OF SITE: | RESIDENTIAL SINGLE FAMILY DETACHED UNITS |
| F.) TOTAL NUMBER OF UNITS ALLOWED AS SHOWN ON FINAL PLATS: | 19 |
| G.) TOTAL NUMBER OF UNITS PROPOSED: | 19 |
| H.) APPLICABLE DPZ FILE REFERENCES: | SP-03-01 F-07-003 F-11-024 WP-02-112 PLAT 20096-20099 CONTRACT # 34-4090-D PLAT 21806-21811 DEED L12020 F.366 |
| I.) PROPOSED WATER AND SEWER SYSTEMS: | X PUBLIC PRIVATE |

APPROVED: DEPARTMENT OF PLANNING AND ZONING

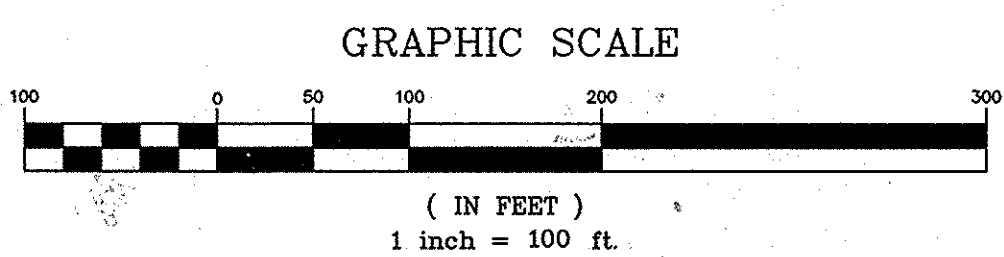
Kate L. DeLoach 10/2/14
CHIEF, DIVISION OF LAND DEVELOPMENT

Chad E. DeLoach 10.1.14
CHIEF, DEVELOPMENT ENGINEERING DIVISION

Barbara K. Long 10/2/14
DIRECTOR



PLAN VIEW
SCALE: 1" = 100'



| ADDRESS CHART | | | |
|---------------|---------------------------|-----|-----------------------------|
| LOT | STREET ADDRESS | LOT | STREET ADDRESS |
| 1 | 10702 TWIN OVERLOOK PLACE | 11 | 10723 TWIN OVERLOOK PLACE |
| 2 | 10706 TWIN OVERLOOK PLACE | 12 | 10719 TWIN OVERLOOK PLACE |
| 3 | 10710 TWIN OVERLOOK PLACE | 13 | 10715 TWIN OVERLOOK PLACE |
| 4 | 10714 TWIN OVERLOOK PLACE | 14 | 10711 TWIN OVERLOOK PLACE |
| 5 | 10718 TWIN OVERLOOK PLACE | 15 | 10707 TWIN OVERLOOK PLACE |
| 6 | 10722 TWIN OVERLOOK PLACE | 16 | 10703 TWIN OVERLOOK PLACE |
| 7 | 10726 TWIN OVERLOOK PLACE | 17 | 7595 KINDLER OVERLOOK DRIVE |
| 8 | 10730 TWIN OVERLOOK PLACE | 18 | 7591 KINDLER OVERLOOK DRIVE |
| 9 | 10734 TWIN OVERLOOK PLACE | 19 | 7587 KINDLER OVERLOOK DRIVE |
| 10 | 10727 TWIN OVERLOOK PLACE | | |

| PERMIT INFORMATION CHART | | | | |
|----------------------------------|---------------|-----------------------------|----------------------|-------------------|
| SUBDIVISION NAME: | SECTION/AREA: | LOT/PARCEL # | TAX MAP | ELECTION DISTRICT |
| KINDLER OVERLOOK | N/A | PARCEL 385, 386 (LOTS 1-19) | 41 | 6th |
| PLAT No. 21808-21811 20096-20099 | GRID No. 18 | ZONE R-20 | CENSUS TRACT 6068.02 | |

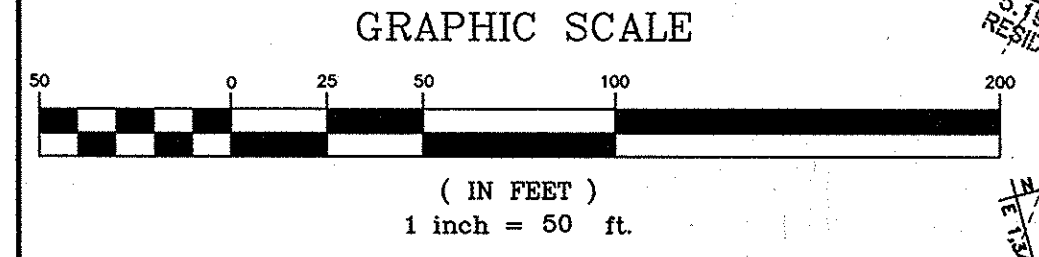
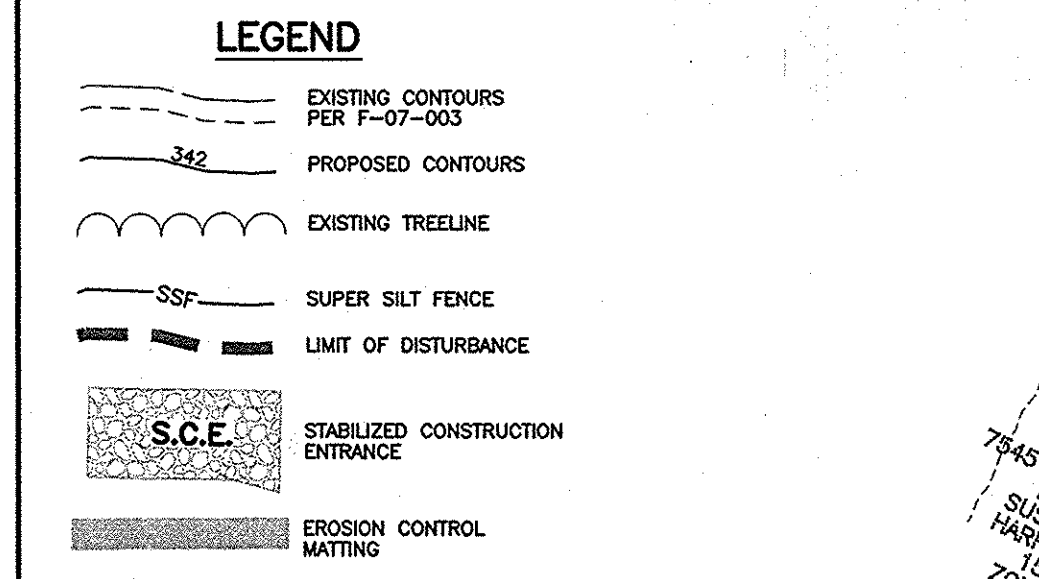
| NO. | DATE | REVISION |
|-----|----------|---|
| 3 | 5-4-16 | ADD DEVONSHIRE II ELEV. B. HOUSE FOOT PRINT |
| 2 | 6-1-15 | ADD TUSCANY HOUSE FOOT PRINT |
| 1 | 6/8/2014 | REDLINE SHEET SUBSTITUTION TO REVISE GENERIC BOXES AND ADD SPECIFIC HOUSES. |

BENCHMARK ENGINEERING, INC.
ENGINEERS & LAND SURVEYORS & PLANNERS

8480 BALTIMORE NATIONAL PIKE SUITE 418 ELICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
75 THOMAS JOHNSON DRIVE SUITE E & F FREDERICK, MARYLAND 21702
301-710-9888
WWW.BE-CVLENGINEERING.COM

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 28376 Expiration Date: 1-1-2015.

| | |
|---|--|
| OWNER/BUILDER: | PROJECT: |
| HB DEVELOPMENT, INC. 9695 NORFOLK AVENUE LAUREL, MARYLAND 20723 410-792-2565 | REVISED SITE DEVELOPMENT PLAN KINDLER OVERLOOK LOTS 1-19 SINGLE FAMILY DETACHED |
| LOCATION: TAX MAP: 41 GRID: 18 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND | PARCEL: 385 AND 386 ZONED: R-20 |
| TITLE: | TITLE SHEET |
| DATE: AUGUST, 2013 | PROJECT NO. 1328 |
| DESIGN: AAM | DRAFT: AAM |
| CHECK: CAM | SCALE: AS SHOWN |
| | SHEET 1 OF 4 |



SEDIMENT CONTROL NOTES

- A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION. (133-1650)
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL, REVISIONS THEREOF.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1; B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITH A THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SLOPES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND B. SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:

| | | |
|--------------------------------------|-------|-------|
| TOTAL AREA OF SITE (THIS SUBMISSION) | 6.34 | ACRES |
| AREA DISTURBED | 5.17 | ACRES |
| AREA TO BE ROOFED OR PAVED | 1.64 | ACRES |
| AREA TO BE VEGETATIVELY STABILIZED | 3.53 | ACRES |
| TOTAL CUT | 3798* | CY |
| TOTAL FILL | 4410* | CY |
| OFFSITE WASTE/BORROW AREA LOCATION | ** | |

* CUT/FILL QUANTITIES ARE FOR SEDIMENT CONTROL PURPOSES ONLY. CONTRACTOR SHALL PERFORM THEIR OWN EARTHWORK CALCULATIONS FOR SITE BALANCING.
 ** IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO IDENTIFY THE SPILL/BORROW SITE AND NOTIFY AND GAIN APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR OF THE SITE AND ITS GRADING PERMIT NUMBER AT THE TIME OF CONSTRUCTION.
 7. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
 8. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
 9. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
 10. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

PLAN VIEW
SCALE: 1" = 50'

THIS PLAN IS FOR SEDIMENT CONTROL PURPOSES ONLY

B-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

A. Soil Preparation

- Temporary Stabilization**
 - Seeded preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or ripper mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.
 - Apply fertilizer and lime as prescribed on the plans.
 - Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.
- Permanent Stabilization**
 - A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent stabilization are:
 - Soil pH between 6.0 and 7.0.
 - Soluble salts less than 500 parts per million (ppm).
 - Soil contains less than 40 percent clay but enough fine grained material (greater than 300 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: If loesslike soil is present, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.
 - Soil contains 1.5 percent minimum organic matter by weight.
 - Soil contains sufficient pore space to permit adequate root penetration.
 - Application of amendments or topsoil is required if on-site soils do not meet the above conditions.
 - Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.
 - Apply soil amendments on specified on the approved plan or as indicated by the results of a soil test.
 - Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake loose areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not permit normal seeded preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seeded loosening may be unnecessary on newly disturbed areas.

B. Topsoiling

- Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.
- Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by the United States Department of Agriculture.
- Topsoiling is limited to areas having 2:1 or flatter slopes where:
 - The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
 - The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
 - The original soil to be vegetated contains material toxic to plant growth.
 - The soil is so acidic that treatment with limestone is not feasible.
 - Areas having slopes steeper than 2:1 require special consideration and design.
- Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:
 - Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2 inches in diameter.
 - Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.
 - Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
- Topsoil Application**
 - Erosion and sediment control practices must be maintained when applying topsoil.
 - Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that seeding or sowing can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.
 - Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seeded preparation.

C. Soil Amendments (Fertilizer and Lime Specifications)

- Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
- Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
- Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
- Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

SEQUENCE OF CONSTRUCTION
(SINGLE LOT CONSTRUCTION)

NOTIFY SEDIMENT CONTROL DIVISION 48 HOURS PRIOR TO START OF CONSTRUCTION

DAY 1 1.) OBTAIN GRADING PERMIT AND REQUEST PRE-CONSTRUCTION MEETING.

DAY 2-6 2.) INSTALL DRIVEWAY CULVERT, THEN SEDIMENT CONTROLS THAT ARE NOTED ON THIS SDP.

DAY 7-10 3.) EXCAVATE FOR FOUNDATION, ROUGH GRADE AND STABILIZE IN ACCORDANCE WITH TEMPORARY SEEDBED NOTES.

DAY 11-80 4.) CONSTRUCT HOUSE, BACKFILL AND CONSTRUCT DRIVEWAY.

DAY 81-85 5.) FINAL GRADE AND STABILIZE IN ACCORDANCE WITH PERMANENT SEEDBED NOTES.

DAY 86-88 6.) WHEN THE LOT IS FULLY STABILIZED, CONSTRUCT ON-LOT STORMWATER FACILITY.

DAY 89-90 7.) WITH THE APPROVAL OF THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES AND STABILIZE ANY REMAINING DISTURBED AREAS.

NOTE:
 EROSION CONTROL MATTING SHALL BE PLACED IN SWALES WHERE DEEMED NECESSARY UNTIL VEGETATION IS ESTABLISHED OR SOIL SUD SHOULD BE USED.

ENGINEER'S CERTIFICATE

"I HEREBY CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY CONSERVATION DISTRICT."

Michael J. ... 7/15/14
ENGINEER DATE

DEVELOPER'S CERTIFICATE

"I WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD COUNTY CONSERVATION DISTRICT."

R. D. Boy 7/15/14
DEVELOPER DATE

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

John K. ... 7/15/14
HOWARD SCD DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Kate ... 10/24/14
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

John ... 10.1.14
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

David A. ... 7/14/14
DIRECTOR DATE

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

A. Seeding

- Specifications**
 - Seed must meet the requirements of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.4 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of seed and seed rate.
 - Mulch alone may be applied between the fall and spring seeding dates only if the ground is frozen. The appropriate seeding mixture must be applied when the ground thaws.
 - Inoculants: The inoculant for treating legume seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants must not be used later than the date indicated on the container. Add fresh inoculants as directed on the package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until use. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.
 - Soil or seed must not be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit desorption of phytotoxic materials.
- Application**
 - Dry Seeding: This includes use of conventional drop or broadcast spreaders.
 - Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.3, Permanent Seeding Table B.3, or site-specific seeding summaries.
 - Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with a weighted roller to provide good seed to soil contact.
 - Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.
 - Cultipacker seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.
 - Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
 - Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).
 - Fertilizer is being applied at the time of seeding, the application rates should not exceed the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P2O5 (phosphorus), 200 pounds per acre; K2O (potassium), 200 pounds per acre.
 - Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
 - Mix seed and fertilizer on site and seed immediately and without interruption.
 - When hydroseeding do not incorporate seed into the soil.
- Mulching**
 - Mulch Materials (in order of preference)
 - Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color. Straw is to be free of noxious weed seeds as specified in the Maryland Seed Law and not musty, moldy, decayed, or excessively dusty. Note: Use only sterile straw mulch in areas where one species of grass is desired.
 - Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into a uniform fibrous physical state.
 - WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
 - WCFM, including dye, must contain no germination or growth inhibiting factors.
 - WCFM materials are to be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with sand, fertilizer and other additives to form a homogeneous slurry. The mulch material must form a biotier-like ground mat on application, having moisture absorption and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
 - WCFM material must not contain elements or compounds at concentration levels that will be phytotoxic.
 - WCFM must conform to the following physical requirements: fiber length of approximately 10 millimeters, diameter approximately 1 millimeter, pH range of 4.0 to 8.5, ash content of 1.6 percent maximum and water holding capacity of 90 percent minimum.
 - Application:
 - Apply mulch to all seeded areas immediately after seeding.
 - When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches. Apply mulch to achieve an even distribution and depth so that the soil surface is not exposed. When using a mulch anchoring tool, increase the application rate to 2.5 tons per acre.
 - Wood cellulose fiber used as mulch must be applied at a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to obtain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
 - Performance mulch anchoring immediately following application of mulch to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon the size of the area and erosion hazard:
 - A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of 2 inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, it will create a rut.
 - Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. Mix the wood cellulose fiber with water at a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water. Synthetic binders such as Acrylic DLR (Acry-Tack), D-2, Petro-Tack, Terra-Tack, Terra-Tack 48 or other approved equal may be used. Follow application rates as specified by the manufacturer. Application of liquid binders needs to be heavier at the edges where wind catches mulch, such as in valleys and on crests of banks. Use asphalt binders is strictly prohibited.
 - Lightweight plastic netting may be applied over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4 to 15 feet wide and 300 to 3,000 feet long.

PERMANENT SEED MIXTURE

HARDINESS ZONE: 6b
TABLE B.3 SEED MIXTURE: 11

| NO. | SPECIES | APPLICATION RATE (LB/AC) | SEEDING DATES | FERTILIZER RATE (10-20-20) | | | LIME RATE |
|-----|---------------------|--------------------------|----------------------------|----------------------------|----------------|----------------|-----------------|
| | | | | N | P2O5 | K2O | |
| 11 | CREeping RED FESCUE | 30 | 3/1 to 5/1 & 8/18 to 10/15 | 45 LB PER ACRE | 90 LB PER ACRE | 90 LB PER ACRE | 2 TONS PER ACRE |
| | KENTUCKY BLUEGRASS | 30 | 3/1 to 5/1 & 8/18 to 10/15 | 1000 SF | 1000 SF | 1000 SF | 1000 SF |

Table B.1: Temporary Seeding for Site Stabilization

| Plant Species | Seeding Rate # | Seeding Depth # (inches) | Recommended Seeding Dates by Plant Hardiness Zone # | | | | |
|---|----------------|--------------------------|---|-----------------------------------|----------------------------------|------------------------------------|--|
| | | | 5b and 6a | 6b | 7a and 7b | 7c | |
| Cool-Season Grasses | | | | | | | |
| Annual Ryegrass (<i>Lolium perenne</i> ssp. <i>multiflorum</i>) | 40 | 1.0 | 0.5 | Mar 15 to May 31; Aug 1 to Sep 30 | Mar 1 to May 15; Aug 1 to Oct 15 | Feb 15 to Apr 30; Aug 15 to Nov 30 | |
| Bahay (<i>Heteropogon vulgaris</i>) | 96 | 2.2 | 1.0 | Mar 15 to May 31; Aug 1 to Sep 30 | Mar 1 to May 15; Aug 1 to Oct 15 | Feb 15 to Apr 30; Aug 15 to Nov 30 | |
| Oats (<i>Avena sativa</i>) | 72 | 1.7 | 1.0 | Mar 15 to May 31; Aug 1 to Sep 30 | Mar 1 to May 15; Aug 1 to Oct 15 | Feb 15 to Apr 30; Aug 15 to Nov 30 | |
| Wheat (<i>Triticum aestivum</i>) | 120 | 2.8 | 1.0 | Mar 15 to May 31; Aug 1 to Sep 30 | Mar 1 to May 15; Aug 1 to Oct 15 | Feb 15 to Apr 30; Aug 15 to Nov 30 | |
| Cereal Rye (<i>Secale cereale</i>) | 112 | 2.8 | 1.0 | Mar 15 to May 31; Aug 1 to Oct 31 | Mar 1 to May 15; Aug 1 to Nov 15 | Feb 15 to Apr 30; Aug 15 to Dec 15 | |
| Warm-Season Grasses | | | | | | | |
| Festuca Millet (<i>Syntherisma tenax</i>) | 30 | 0.7 | 0.5 | Jun 1 to Jul 31 | May 16 to Jul 31 | May 1 to Aug 14 | |
| Pasture Millet (<i>Pennisetum glaucum</i>) | 30 | 0.5 | 0.5 | Jun 1 to Jul 31 | May 16 to Jul 31 | May 1 to Aug 14 | |

NOTES:
 #1 Seeding rates for the warm-season grasses are in pounds of Pure Live Seed (PLS). Actual planting rates shall be adjusted to reflect percent germination and purity, as noted. Adjustments are usually not needed for the cool-season grasses.
 Seeding rates listed above are for temporary seedings, when planted alone. When planted as a nurse crop with permanent seed mixes, use 1/3 of the seeding rate listed above for barley, oats, and wheat. For multi-seeded grasses (annual ryegrass, pearl millet, fescue, etc.), do not exceed more than 5% dry weight of the overall permanent seed mix. Corn and rye grasses should not be used as a nurse crop, unless planting will occur in very late fall and seed the seeding dates for other temporary seedings. Cereal rye has allelopathic properties that inhibit the germination and growth of other plants. If it must be used as a nurse crop, seed at 1/3 of the rate listed above.
 Oats are the recommended nurse crop for warm-season grasses.
 #2 For sandy soils, plant seeds at twice the depth listed above.
 #3 The planting dates listed are averages for each Zone and may require adjustment to reflect local conditions, especially near the boundaries of the zone.

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7/15/14
 PROFESSIONAL ENGINEER
 STATE OF MARYLAND
 MADE A MILLER
 LICENSE NO. 28276
 EXPIRATION DATE: 1-1-2015

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

1 JUNE, 2014 REDLINE REVISION TO MODIFY GENERIC BOX AND ADD SPECIFIC HOUSES.

NO. DATE REVISION

OWNER/BUILDER: HB DEVELOPMENT, INC. 9695 NORFOLK AVENUE LAUREL, MARYLAND 20723 410-792-2565

PROJECT: REVISED SITE DEVELOPMENT PLAN KINDLER OVERLOOK LOTS 1-19 SINGLE FAMILY DETACHED

LOCATION: TAX MAP: 41 GRID: 18 PARCEL: 385 AND 395 ZONED: R-20

TITLE: SEDIMENT AND EROSION CONTROL PLAN AND NOTES

DATE: JULY, 2014 PROJECT NO. 1328

SCALE: AS SHOWN SHEET 4 OF 4

DESIGN: AAM DRAFT: AAM CHECK: CAM