

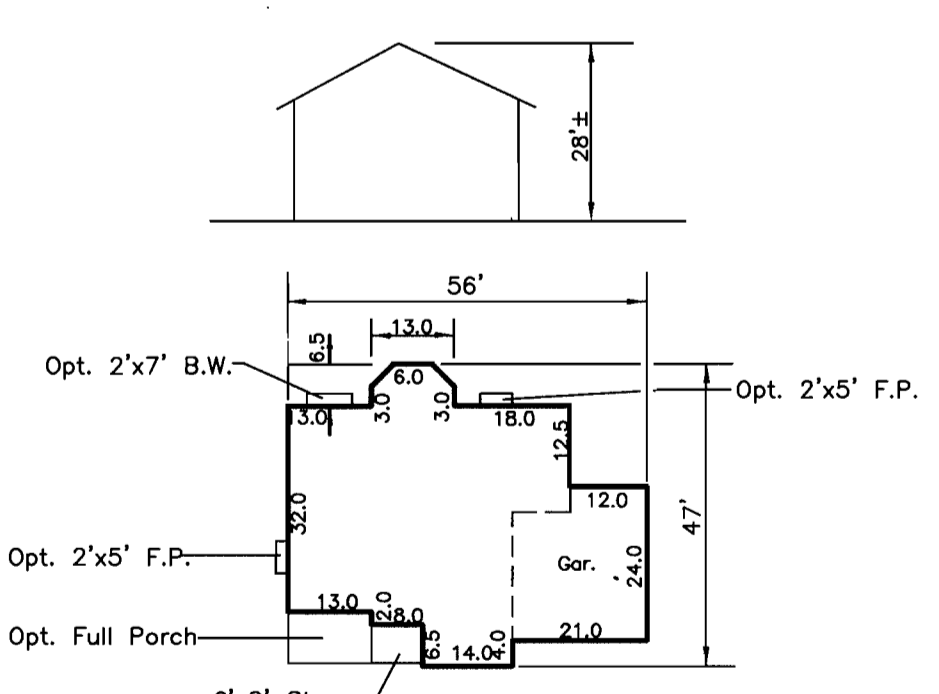
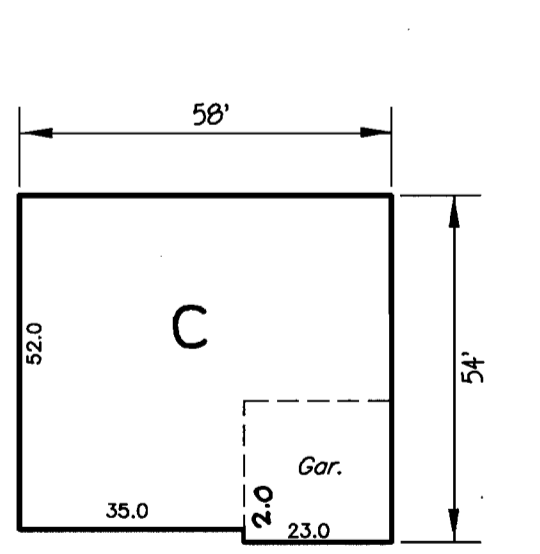
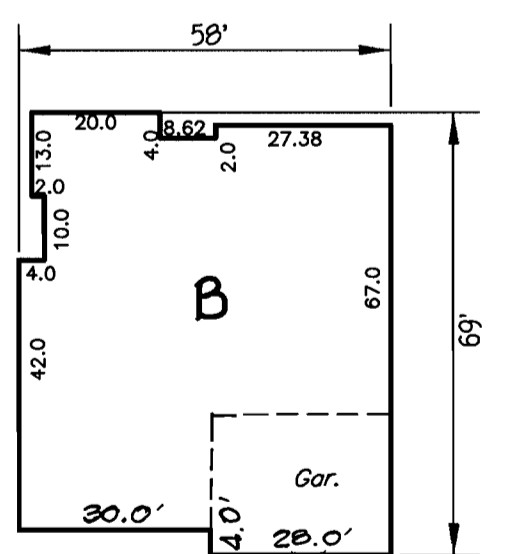
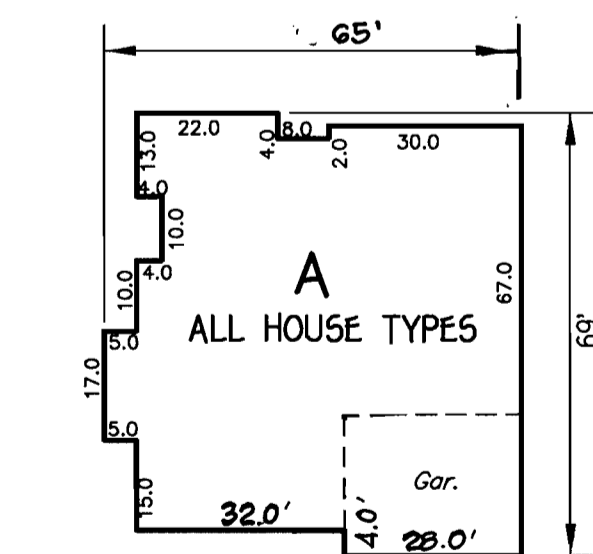
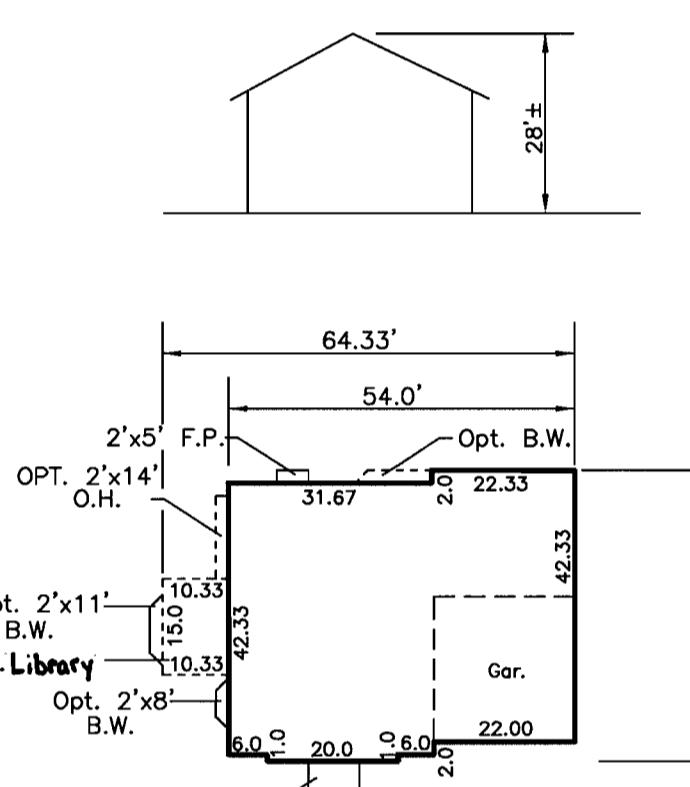
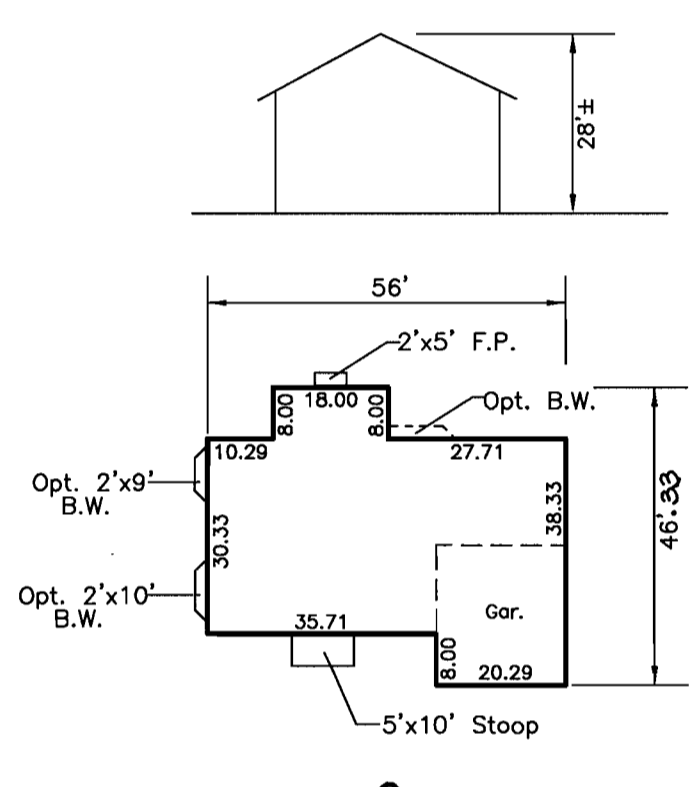
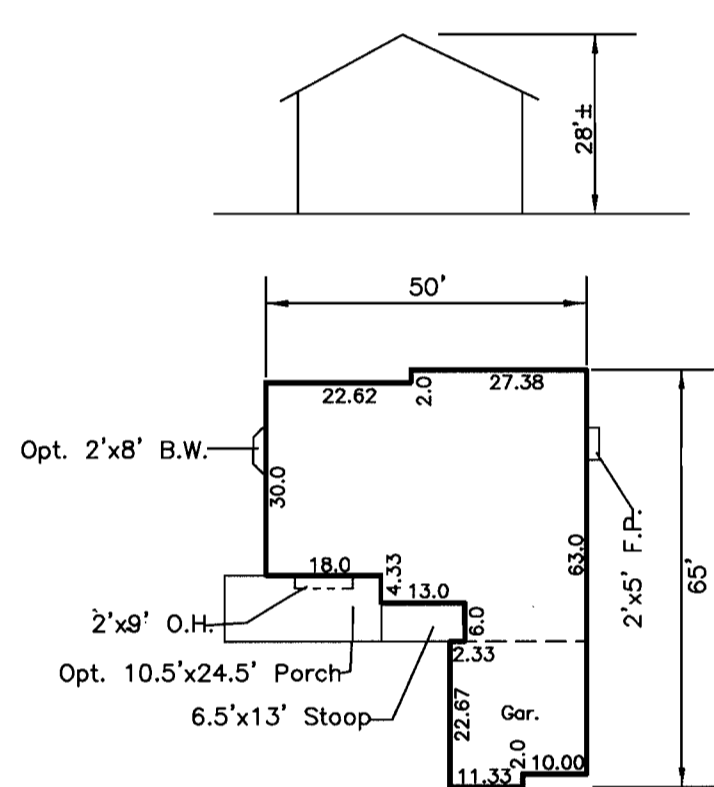
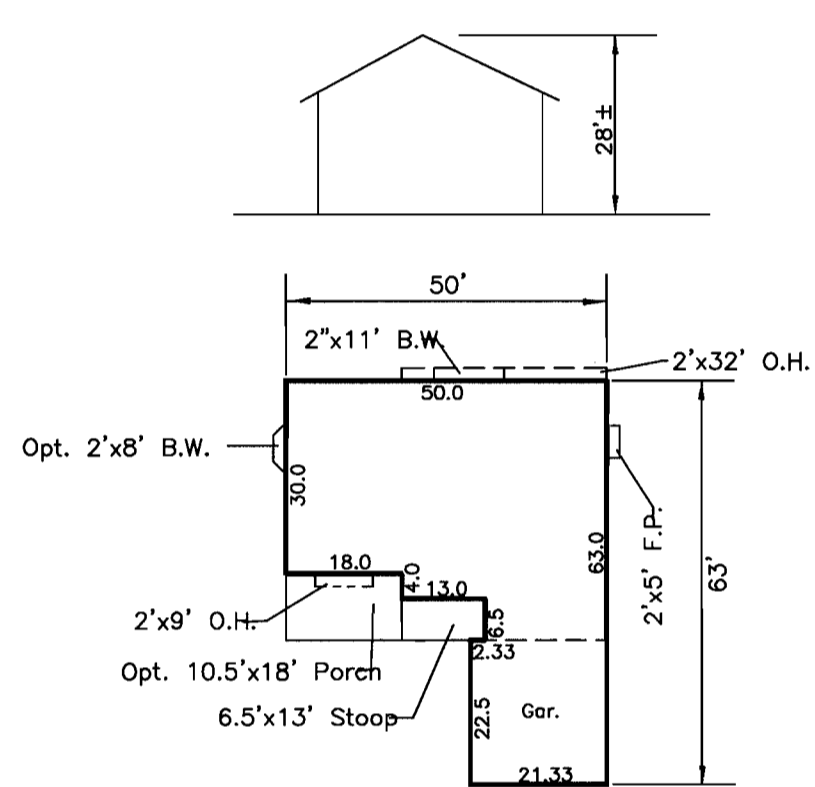
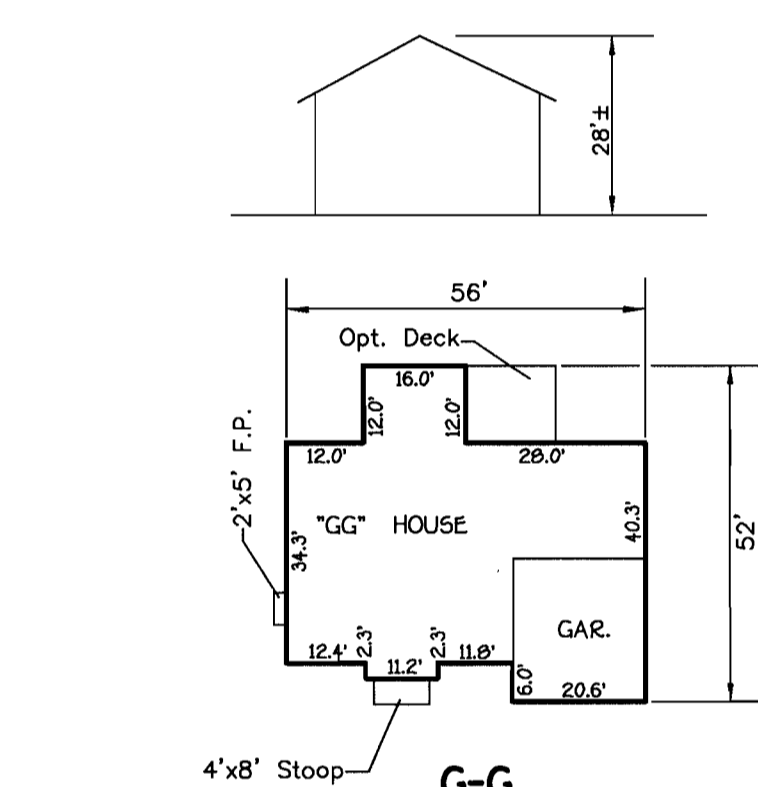
VICINITY MAP  
SCALE: 1" = 200'

**GENERAL NOTES**

- SUBJECT PROPERTY ZONED R-ED PER 10/18/93 COMPREHENSIVE REZONING PLAN.
- TOTAL AREA OF SITE: 1.050 ACRES
- TOTAL NUMBER OF LOTS SUBMITTED: 4
- THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION INSPECTION DIVISION AT (410)313-1800 AT LEAST (5) FIVE WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- THIS PROJECT IS SUBJECT TO HOWARD COUNTY FILES: P-01-16, S-00-12, WP-01-39, WP-00-87, WP-01-99, F-01-140, WAS CONT. \*34-3832-D.
- THIS PLAN IS BASED ON A FIELD RUN MONUMENTED BOUNDARY SURVEY PERFORMED ON OR ABOUT JUNE, 1999 BY DAFT McCLINE WALKER, INC. LOC. NEAR THE INTERSECTION OF GORMAN RD & SKYLARK BLVD.
- HORIZONTAL AND VERTICAL CONTROL DATUM IS BASED ON NAD 83, MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS.  
HOWARD COUNTY MONUMENT 47E4 N 535846.130 E 1355431.196  
HOWARD COUNTY MONUMENT 47D4 N 535409.459 E 1349362.707  
HOWARD COUNTY MONUMENT 47G2 N 532530.964 E 1352224.995  
HOWARD COUNTY MONUMENT 47GA N 532404.176 E 1351627.338  
HOWARD COUNTY MONUMENT 47GB N 529917.205 E 1353526.738
- ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
- THIS PLAN IS FOR HOUSE SITING AND GRADING ONLY. IMPROVEMENTS SHOWN WITHIN THE RIGHTS-OF-WAY OF THIS S.D.P. ARE NOT USED FOR CONSTRUCTION. FOR CONSTRUCTION SEE APPROVED ROAD CONSTRUCTION PLANS F-01-140 AND/OR APPROVED WATER AND SEWER PLANS CONTRACT NO. 34-3832-D.
- CONTRACTOR WILL CHECK SEWER HOUSE CONNECTION ELEVATION AT EASEMENT LINE PRIOR TO CONSTRUCTION.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISION OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED WITH THE DEVELOPER'S AGREEMENT UNDER F-01-140 AS PART OF THE GRADING PERMIT IN THE AMOUNT OF \$29,250 FOR 72 SHADE TREES AND 49 STREET TREES AND PERIMETER LANDSCAPING SHOWN IS TAKEN FROM APPROVED Rd DWG. F-01-140.
- STORMWATER MANAGEMENT WILL BE PROVIDED BY F-01-140.
- PERIMETER LANDSCAPING FOR LOTS 1 THRU 39 IS PROVIDED IN ACCORDANCE WITH A CERTIFIED LANDSCAPE PLAN ON FILE WITH THE APPROVED ROAD CONSTRUCTION DRAWINGS FOR THIS PROJECT IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
- THIS PLAN COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY RETENTION OF FOREST RESOURCES. THE TOTAL ACREAGE OF RETENTION IS 23.699 ACRES. FOREST CONSERVATION EASEMENT AREAS A-D SHOWN ON THE APPROVED ROAD CONSTRUCTION DRAWINGS FOR F-01-140 ARE FOR RETENTION. AREAS E-G ARE FOR FUTURE REFORESTATION AND TOTAL 2.192 ACRES.
- STORMWATER MANAGEMENT FOR THE DEVELOPMENT INCLUDING FUTURE DEVELOPMENT OF PARCEL A IS PROVIDED IN ACCORDANCE WITH THE 2000 MARYLAND DEPARTMENT OF ENVIRONMENT STORMWATER MANAGEMENT MANUAL. PORTIONS OF OPEN SPACE LOTS 36 & 39 ARE BEING USED AS NATURAL AREA CONSERVATION CREDIT AREA. TO RECEIVE THE CREDIT, THE PROPOSED CONSERVATION AREA:  
A) SHALL NOT BE DISTURBED DURING PROJECT CONSTRUCTION (E.G., CLEARED OR GRADED) EXCEPT FOR TEMPORARY IMPACTS ASSOCIATED WITH INCIDENTAL UTILITY CONSTRUCTION OR MITIGATION AND AFForestation PROJECTS.  
B) SHALL BE PROTECTED BY HAVING THE LIMITS OF DISTURBANCE CLEARLY SHOWN ON ALL CONSTRUCTION DRAWINGS AND DELIMITED IN THE FIELD EXCEPT AS PROVIDED FOR ABOVE.  
C) SHALL BE LOCATED WITHIN AN ACCEPTABLE CONSERVATION EASEMENT OR OTHER ENFORCEABLE INSTRUMENT THAT ENSURES PERPETUAL PROTECTION OF THE PROVIDED AREA. THE EASEMENT MUST CLEARLY SPECIFY HOW THE NATURAL AREA VEGETATION SHALL BE MANAGED AND BOUNDARIES WILL BE MARKED (NOTE, MANAGED TURF (E.G., PLAYGROUNDS, REGULARLY MAINTAINED OPEN AREAS) IS NOT AN ACCEPTABLE FORM OF VEGETATION MANAGEMENT), AND  
D) SHALL BE LOCATED ON THE DEVELOPED PROJECT.  
A CENTRAL PRIVATELY MAINTAINED STORMWATER WET POND IS BEING USED TO PROVIDE THE WATER QUALITY AND CHANNEL PROTECTION VOLUMES FOR THIS DEVELOPMENT.
- HOWARD COUNTY STANDARD DRIVEWAY DETAIL REFER TO DES. MAN. VOL. IX, R.G. 03 & R.G. 05
- SITE DEVELOPMENT PLAN IS FOR SINGLE FAMILY DETACHED UNITS.
- THIS PLAN IS GRANDFATHERED TO THE FOURTH EDITION OF THE SUBDIVISION REGULATIONS SINCE IT WAS SUBMITTED PRIOR TO NOVEMBER 15, 2001

**BENCH MARKS**

T.P. 102 ELEV. 346.19  
N. 536,018.069  
E. 1,355,974.017  
LOC. NEAR THE INTERSECTION OF GORMAN RD & SKYLARK BLVD.  
  
T.P. 1154 ELEV. 347.45  
N. 536,018.069  
E. 1,355,974.017  
LOC. NEAR 1-95 BRIDGE ALONG GORMAN ROAD



**ADDRESS CHART**

LOT NUMBER	STREET ADDRESS
16	9528 STAR MOON LANE
17	9524 STAR MOON LANE
28	9516 PURPLE CLOUD ROW
29	6521 PURPLE CLOUD ROW

**LEGEND**

SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
+	SPOT ELEVATION
-S-F-	SUPER SILT FENCE
W-O-W	PROPOSED WALKOUT
---	EXISTING TREE LINE
L.O.D.	LIMIT OF DISTURBANCE
●	EROSION CONTROL MATTING
○	EXISTING STREET TREE TAKEN FROM F-01-140

**INDEX CHART**

SHEET	DESCRIPTION
SHEET 1	TITLE SHEET, HOUSE TYPES, TEMPLATES
SHEET 2	SITE DEVELOPMENT PLAN
SHEET 3	SEDIMENT AND EROSION CONTROL PLAN
SHEET 4	DETAIL SHEET

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 10272 DALLHOPE NATIONAL FREE  
ELLCOTT CITY, MARYLAND 21042  
410-461-3293



**ENGINEER'S CERTIFICATE**  
I certify that this plan for erosion and sediment 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 Soil Conservation District.  
  
Signature of Engineer: *Earl D. Collins* Date: 12-18-01  
**EARL D. COLLINS**  
Professional Engineer  
  
**DEVELOPER'S CERTIFICATE**  
I/We certify that all development and construction will be done according to this plan, for sediment and erosion control and that any 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 Soil Conservation District.  
  
Signature of Developer: *James Greenfield* Date: 12-18-01  
**JAMES GREENFIELD**

Reviewed for HOWARD SCD and meets Technical Requirements.  
*Jim May* 1/30/02 Date  
USDA-Natural Resources Conservation Service  
This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.  
*John R. Robertson* 1/30/02 Date  
Howard SCD  
  
**OWNER/DEVELOPER**  
THE HOWARD RESEARCH & DEVELOPMENT CORP.  
10275 LITTLE PATUXENT PARKWAY  
COLUMBIA, MARYLAND 21044  
410-992-6000  
  
**BUILDER**  
COLUMBIA BUILDERS  
P.O. BOX 999  
COLUMBIA, MARYLAND 21044  
410-730-3940

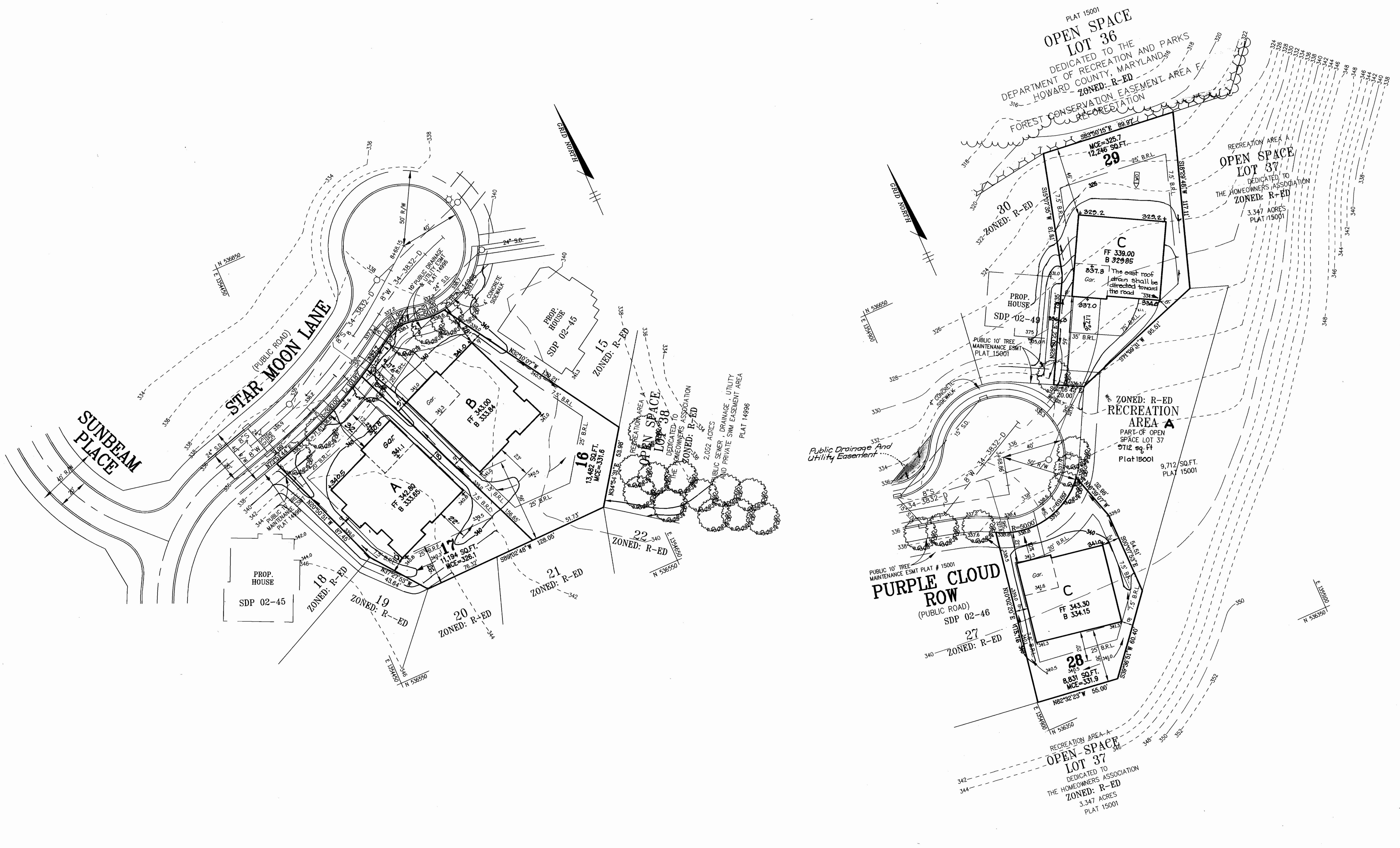
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*Cindy Kamuda* 2/4/02 Date  
Chief, Division of Land Development  
*John DeLuca* 2/1/02 Date  
Chief, Development Engineering Division  
*Paul Spurr* 2/4/02 Date  
Director - Department of Planning and Zoning

PROJECT	SECTION	LOTS NO.
EMERSON	1/1	16,17,28,29

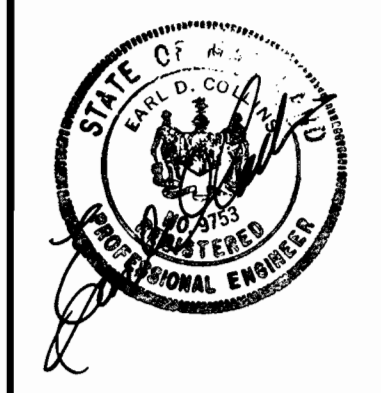
PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
14996 THRU 15002	2	R-ED	47	SIXTH	6068.02

WATER CODE	SEWER CODE
E-15	160,000

**SITE DEVELOPMENT PLAN**  
  
**EMERSON**  
SECTION 1 AREA 1  
LOTS 16,17,28 & 29  
  
TAX MAP No: 47 P/O PARCEL: 837  
SIXTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
SCALE: 1" = 30' DATE: DECEMBER, 2001  
SHEET 1 OF 4



**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENIAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE  
 ELKLOTT CITY, MARYLAND 21042  
 410-461-2255

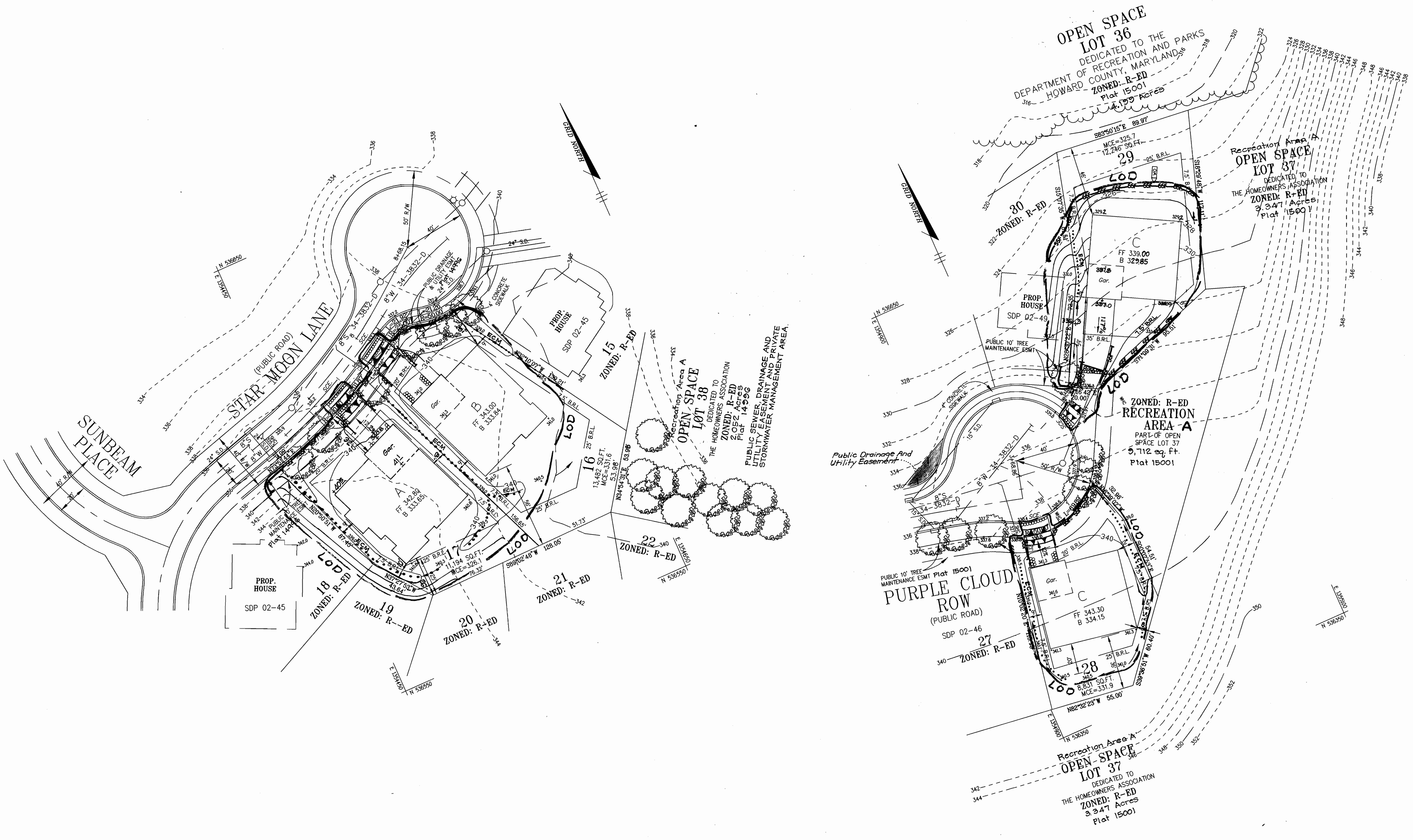


**ENGINEER'S CERTIFICATE**  
 "I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."  
 Signature of Engineer: *Earl D. Collins* Date: 12-13-01  
**EARL D. COLLINS**  
 DEVELOPER'S CERTIFICATE  
 "I/we certify that all development and construction will be done according to this plan, for sediment and erosion control and that any 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 Soil Conservation District."  
 Signature of Developer: *D. James Greenfield* Date: 12-13-01  
**D. JAMES GREENFIELD**

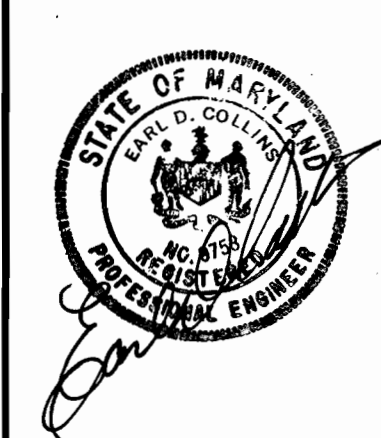
Reviewed for HOWARD SCD and meets Technical Requirements.  
 U.S. Fish & Wildlife Service Conservation Service Date: 1/30/02  
 U.S. Army Corps of Engineers Date: 1/30/02  
**OWNER/DEVELOPER**  
 THE HOWARD RESEARCH & DEVELOPMENT CORP.  
 10275 LITTLE PATUXENT PARKWAY  
 COLUMBIA, MARYLAND 21044  
 410-992-6000  
**BUILDER**  
 COLUMBIA BUILDERS  
 P.O. BOX 999  
 COLUMBIA, MARYLAND 21044  
 410-730-3940

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 Chief, Division of Land Development Date: 2/4/02  
 Chief, Development Engineering Division Date: 2/1/02  
 Director, Department of Planning and Zoning Date: 2/14/02  
 PROJECT: EMERSON SECTION I/1 LOTS NO. 16,17,28 & 29  
 PLAT: 14996 & 15002 BLOCK NO. 2 ZONE R-ED TAX/ZONE 47 ELEC. DIST. SIXTH CENSUS TR. 6068.02  
 WATER CODE E-15 SEWER CODE 160000

**SITE DEVELOPMENT PLAN**  
**EMERSON**  
 SECTION 1 AREA 1  
 LOTS 16,17,28 & 29  
 TAX MAP No: 47 P/O PARCEL: 837  
 SIXTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: 1" = 30' DATE: DECEMBER, 2001  
 SHEET 2 OF 4



FISHER, COLLINS & CARTER, INC.  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 10722 BALTIMORE NATIONAL PIKE  
 ELICOTT CITY, MARYLAND 21042  
 (410) 461-2855



**ENGINEER'S CERTIFICATE**  
 I certify that this plan for erosion and sediment 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 Soil Conservation District.  
 Signature of Engineer Earl D. Collins Date 12-13-01  
**EARL D. COLLINS**  
 DEVELOPER'S CERTIFICATE  
 I/We certify that all development and construction will be done according to this plan for sediment and erosion control and that any 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 Soil Conservation District.  
 Signature Developer B. James Greenfield Date 12-13-01  
**B. JAMES GREENFIELD**

Reviewed for HOWARD SCD and meets Technical Requirements.  
 Signature John M. Myers Date 1/30/02  
 U.S.D. Natural Resources Conservation Service  
 Signature John R. Robertson Date 1/30/02  
 HOWARD SCD  
**OWNER/DEVELOPER**  
 THE HOWARD RESEARCH & DEVELOPMENT CORP.  
 10275 LITTLE PATUXENT PARKWAY  
 COLUMBIA, MARYLAND 21044  
 410-992-6000  
**BUILDER**  
 COLUMBIA BUILDERS  
 P.O. BOX 999  
 COLUMBIA, MARYLAND 21044  
 410-730-3940

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 Signature Cindy Hannah Date 2/4/02  
 Chief, Division of Land Development  
 Signature John DeLuca Date 2/1/02  
 Chief, Development Engineering Division  
 Signature John DeLuca Date 2/4/02  
 Director, Department of Planning and Zoning  
 PROJECT EMERSON SECTION 1/1 LOTS NO. 16,17,28 & 29  
 PLAT 14996 BLOCK NO. 2 ZONE R-ED TAX/ZONE 47 ELEC. DIST. SIXTH CENSUS TR. 6068.02  
 WATER CODE E-15 SEWER CODE 160000

**SEDIMENT AND EROSION CONTROL PLAN**  
**EMERSON**  
 SECTION 1 AREA 1  
 LOTS 16,17,28 & 29  
 TAX MAP No: 47 P/O PARCEL: 837  
 SIXTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: 1"= 30' DATE: DECEMBER, 2001  
 SHEET 3 OF 4

**20.0 STANDARDS AND SPECIFICATIONS**

**VEGETATIVE STABILIZATION DEFINITION**

Using vegetation as cover for barren soil to protect it from forces that cause erosion.

Vegetative stabilization specifications are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and runoff to downstream areas, and improving wildlife habitat and visual resources.

**CONDITIONS WHERE PRACTICE APPLIES**

This practice shall be used on denuded areas as specified on the plans and may be used on highly erodible or critically eroding areas. This specification is divided into Temporary Seeding, to quickly establish vegetative cover for short duration (due to one year, and Permanent Seeding, for long term vegetative cover. Examples of applicable areas for Temporary Seeding are temporary soil structures, cleared areas before construction phases, earth fills, etc. and for Permanent Seeding are lawns, dunes, cut and fill slopes and other areas at final grade, former stockpile and staging areas, etc.

**EFFECTS ON WATER QUALITY AND QUANTITY**

Planting vegetation in water bodies will have a direct effect on water budget, especially on volumes and rates of runoff. Vegetation evaporation, transpiration, percolation and groundwater recharge. Vegetation, over time, will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth. Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by associating those substances present within the root zone. Sediment control devices must remain in place during grading, seeded preparation, seeding, mowing and vegetative establishment to prevent large quantities of sediment and associated chemicals and nutrients from washing into surface waters.

**SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS**

- Install erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins.
- Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.
- Schedule required soil tests to determine soil amendment composition and application rates for sites having disturbed areas over 5 acres.
- 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 over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analysis.
  - Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Fertilizer may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall be delivered to the site fully labeled according to the applicable state fertilizer laws and shall bear the name, trade name or trademark and warranty to the manufacturer.
  - Lime materials shall be ground limestone hydrated or burnt lime may be substituted which contains at least 50% total calcium (calcium oxide plus magnesium oxide). Limestone shall be ground to such fineness that at least 50% will pass through a #100 mesh sieve and 90-100% will pass through a #20 mesh sieve.
  - Incorporate lime and fertilizer into the top 3-5" of soil by disk or other suitable means.

- Seeded Preparation
  - Seeded preparation shall consist of loosening soil to a depth of 3" to 5" by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened it should not be rolled or dragged smooth, but left in the roughened condition. Sloped areas greater than 3:1 should be tracked leaving the surface in an irregular condition 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 3-5" of soil by disk or other suitable means.
- Permanent Seeding
  - Minimum soil conditions required for permanent vegetative establishment:
    - Soil pH shall be between 6.0 and 7.0.
    - Soil shall contain less than 500 parts per million (ppm) of soluble salts.
    - The soil shall contain less than 40% clay, but enough fine grained material (30% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if leonardite or serecia leonardites is to be planted, then a sandy soil (30% silt plus clay) would be acceptable.
    - Soil shall contain 1.5% minimum organic matter by weight.
    - Soil must contain minimum pore space to permit adequate root penetration.
    - If these conditions cannot be met by soils on site, adding topsoil is required.
  - Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3-5" to permit bonding of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding off the slope.
  - Apply soil amendments as per soil test or as included on the plans.
  - Soil amendments shall be applied to the top 3-5" of topsoil by disk or other suitable means. Lawn areas should be raked to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Where site conditions will not permit normal seeded preparation, loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface. Steep slopes (steeper than 3:1) should be tracked by a dozer leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The top 1-3" of soil should be loose and friable. Seeded loosening may not be necessary on newly disturbed areas.
- Seed Specifications
  - All seed must meet the requirements of the Maryland Seed Law. All seed shall be subject to re-testing by a recognized seed laboratory. All seed used shall have been tested within 6 months immediately preceding the date of sowing such material on this job.
  - Seed tags shall be made available to the contractor to verify type and rate of seed used.
  - Inoculant - The inoculant for treating legume seed in the seed mixtures shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the species. Inoculant shall not be used later than the date indicated on the container. Add fresh inoculant as directed on package. Use four times the recommended rate when hydroseeding. It is very important to keep inoculant as cool as possible until used. Temperatures above 75-80° F. can weaken bacteria and make the inoculant less effective.
- Methods of Seeding
  - Hydroseeding - Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or drop seeded, or a cutlifter seeder.
    - If fertilizer is being applied at the time of seeding, the application rates amounts will not exceed the following: Nitrogen maximum of 100 lbs. per acre total of soluble nitrogen; P205 (phosphorus) 200 lbs/acre; K2O (potassium) 200 lbs/acre.
    - Lime - Use only ground agricultural limestone (30 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 or seeding.
    - Seed and fertilizer shall be mixed on site and seeding shall be done immediately and without interruption.
  - Dry Seeding - This includes use of conventional drop or broadcast spreaders.
    - Seed spread dry shall be incorporated into the subsoil at the rates prescribed on the Temporary or Permanent Seeding Surveys or Tables 205 or 206. The seeded area shall then be rolled with a weighted roller to provide good seed to soil contact.
    - Where applied to steep slopes, seed shall be applied perpendicular to the slope.
  - Cutlifter Seeding - Mechanical seeders that apply and cover seed with soil.
    - Cutlifter seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seeded must be firm after planting.
    - Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.
- Mulch Specifications (in order of preference)
  - Straw shall consist of thoroughly threshed wheat, rice or oat straw, reasonable bright in color and shall not be musty, mold, chaffed, decayed, or excessively dusty and shall be free of noxious weed seeds as specified in the Maryland Seed Law.
  - Wood Cellulose Fiber Mulch (WCFF)
    - WCFF shall consist of specially prepared wood cellulose processed into a uniform fibrous physical state.
    - WCFF shall be deep green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniform spread slurry.
    - WCFF including dye shall contain no preservatives or growth inhibitors.
    - WCFF materials shall 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 seed, fertilizer and other additives to form a homogeneous slurry. The mulch material shall form a blotter-like ground cover, on application, having moisture absorption and percolation properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
    - WCFF material shall contain no elements or compounds at concentrations that will be phytotoxic.
    - WCFF must conform to the following physical requirements: fiber length to approximately 1/8" min., density approximately 1 gm./cc, range of 4:2 to 8:5, ash content 10% maximum and water holding capacity of 90% minimum.

- On-site straw mulch should be used in areas where one species of grass is desired.

**SEDIMENT CONTROL NOTES**

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSING AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (03-1059).
- 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 SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: a) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, Dikes, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1; b) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAP-BASINS SHALL BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12 OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. 50, 50D, SEC. 54), TEMPORARY SEEDING (SEC. 50A AND MULCHING (SEC. 50). TEMPORARY STABILIZATION WITH MULCH ALONE SHALL ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- 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	1.000 ACRES
AREA TO BE ROOFED OR PAVED	0.947 ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.053 ACRES
TOTAL CUT	2711 CU.YDS.
TOTAL FILL	0.021 CU.YDS.
OFFSITE WASTE/BORROW AREA LOCATION	N/A, CULVOS
- ANY SEDIMENT CONTROL PRACTICE WHICH DISTURBS AN ADJACENT ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBANCE OF 100 OR MORE SQUARE FEET, 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.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

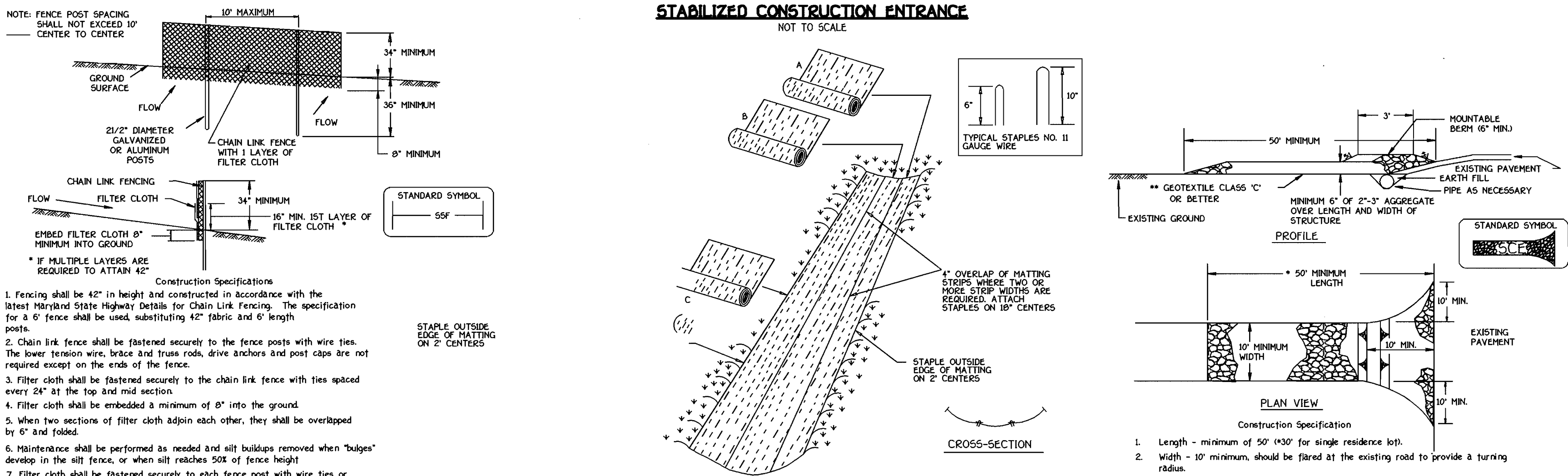
**TEMPORARY SEEDING NOTES**

- APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.
- SEEDBED PREPARATION:  
LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.
- SOIL AMENDMENTS:  
APPLY TWO TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./1000 SQ.FT.) AND 600 LBS. PER ACRE 0-20-20 FERTILIZER (14 LBS./1000 SQ.FT.) BEFORE SEEDING HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS. PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS./1000 SQ.FT.) AND 500 LBS. PER ACRE (11.5 LBS./1000 SQ.FT.) OF 10-20-20 FERTILIZER.
- SEEDING:  
FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 17 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS./ACRE OF WEEPIING LOVEGRASS (.07 LBS./1000 SQ.FT. FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28), PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE 50D.
- MULCHING:  
APPLY 1 TO 2 TONS PER ACRE (70 TO 90 LBS./1,000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHORING TOOL OR 210 GALLONS PER ACRE (5 GAL./1,000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT ACRES ON SLOPES 8 FEET OR HIGHER, USE 340 GALLONS PER ACRE (8 GAL./1,000 SQ.FT.) FOR ANCHORING.
- REFER TO THE 1990 MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

**PERMANENT SEEDING NOTES**

- ALL DISTURBED AREAS SHALL BE STABILIZED AS FOLLOWS:
- SEEDBED PREPARATION:  
LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.
- SOIL AMENDMENTS:  
APPLY TWO TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./1000 SQ.FT.) AND 600 LBS. PER ACRE 0-20-20 FERTILIZER (14 LBS./1000 SQ.FT.) BEFORE SEEDING HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS. PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS./1000 SQ.FT.) AND 500 LBS. PER ACRE (11.5 LBS./1000 SQ.FT.) OF 10-20-20 FERTILIZER.
- SEEDING:  
FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 100 LBS. PER ACRE (2.3 LBS./1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE, FOR THE PERIOD MAY 1 THROUGH JULY 31, SEED WITH 60 LBS./ACRE (1.4 LBS./1000 SQ.FT.) KENTUCKY 31 TALL FESCUE AND 2 LBS. PER ACRE (0.05 LBS./1,000 SQ.FT.) OF WEEPIING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 28, PROJECT SITE BY: OPTION (1) - TWO TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING; OPTION (2) - USE 50D; OPTION (3) - SEED WITH 100 LBS./ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH TWO TONS/ACRE WELL ANCHORED STRAW. ALL SLOPES SHOULD BE HYDROSEEDING.
- MULCHING:  
APPLY 1 TO 2 TONS PER ACRE (10 TO 90 LBS./1,000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING 200 GALLONS PER ACRE (5 GAL./1,000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT ACRES ON SLOPES 8 FEET OR HIGHER USE 340 GALLONS PER ACRE (8 GAL./1,000 SQ.FT.) FOR ANCHORING.
- MAINTENANCE:  
INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.
- \* FOR PUBLIC PONDS SUBSTITUTE CHEMUNG CROWNVECH AT 15 LBS./ACRE AND KENTUCKY 31 TALL FESCUE AT 40 LBS./ACRE AS THE SEEDING REQUIREMENT. OPTIMUM SEEDING DATE FOR THIS MIXTURE IS MARCH 1 TO APRIL 30.

**STABILIZED CONSTRUCTION ENTRANCE**



**EROSION CONTROL MATTING**

- Key-in the matting by placing the top ends of the matting in a narrow trench 6" to 10" deep. Backfill the trench and trim to conform to the channel cross-section. Secure with a row of staples about 4" down slope from the trench. Spacing between staples is 6".
  - Staple the 4" overlap in the channel center using an 18" spacing between staples.
  - Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.
  - Staples shall be spaced 2' apart with a row for each strip 2' outer rows, and 2 alternating rows down the center.
  - Where one roll of matting ends and another begins, the end of the top strip shall overlap the upper end of the lower strip by 4". Staple fashion. Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.
  - The discharge end of the matting line should be similarly secured with 2 double rows of staples.
- Note: If flow will enter from the edge of the matting then the area effected by the flow must be keyed-in.

**SEQUENCE OF CONSTRUCTION**

- OBTAIN GRADING PERMIT 7 DAYS
- INSTALL SEDIMENT AND EROSION CONTROL DEVICES AS SHOWN ON PLAN 7 DAYS
- CLEAR AND GRUB TO LIMITS OF DISTURBANCE 4 DAYS
- INSTALL TEMPORARY SEEDING 2 DAYS
- CONSTRUCT BUILDINGS 60 DAYS
- FINE GRADE SITE AND INSTALL PERMANENT SEEDING AND LANDSCAPE 14 DAYS
- REMOVE SEDIMENT CONTROL DEVICES AS UPLAND AREAS ARE STABILIZED AND PERMISSION IS GRANTED BY E/S CONTROL INSPECTOR. 7 DAYS

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL FEE  
ELLCOTT CITY, MARYLAND 21042  
410.484.3000

**ENGINEER'S CERTIFICATE**  
I certify that this plan for erosion and sediment 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 Soil Conservation District.

*Earl D. Collins*  
Signature of Engineer **EARL D. COLLINS** Date 12-18-01

**DEVELOPER'S CERTIFICATE**  
I/We certify that all development and construction will be done according to this plan, for sediment and erosion control and that any 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 Soil Conservation District.

*B. James Greenfield*  
Signature of Developer **B. JAMES GREENFIELD** Date 12-13-01

Approved for HOWARD SCD and meets Technical Requirements.

*John Meyers*  
Signature of Natural Resources Conservation Service Date 1/3/02

*John R. Robertson*  
Signature of HOWARD SOIL CONSERVATION DISTRICT Date 1/3/02

**OWNER/DEVELOPER**  
THE HOWARD RESEARCH & DEVELOPMENT CORP.  
10275 LITTLE PATUXENT PARKWAY  
COLUMBIA, MARYLAND 21044  
410-992-6000

**BUILDER**  
COLUMBIA BUILDERS  
COLUMBIA, MARYLAND 21044  
410-730-3940

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Wanda Samadina*  
Chief, Division of Land Development Date 2/4/02

*Charles J. Williams*  
Chief, Development Engineering Division Date 2/1/02

*John J. Kautz*  
Director, Department of Planning and Zoning Date 2/4/02

PROJECT: EMERSON SECTION: I/1 LOTS NO.: 16,17,28 & 29

PLAT: 14996 & 15002	BLOCK NO.: 2	ZONE: R-E-D	TAX/ZONE: 47	ELEC. DIST.: SIXTH	CENSUS TR.: 6068.02
WATER CODE: E-15	SEWER CODE: 160000				

**SEDIMENT, EROSION CONTROL NOTES & DETAILS**

**EMERSON**  
SECTION 1 AREA 1  
LOTS 16,17,28 & 29

TAX MAP No: 47 P/O PARCEL: 837  
SIXTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: DECEMBER, 2001  
SHEET 4 OF 4