

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) 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 BEING DONE.
- THE EXISTING TOPOGRAPHY AS SHOWN ON THIS PLAN WAS DEVELOPED FROM THE FINAL CONSTRUCTION PLANS (F-03-87).
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM - HOWARD COUNTY MONUMENT NOS. 30FA AND 30GA WERE USED FOR THIS PROJECT.
- WATER IS PUBLIC. HOWARD COUNTY CONTRACT #24-4064-0.
- SEWER IS PUBLIC. HOWARD COUNTY CONTRACT #24-4064-0.
- STORMWATER MANAGEMENT OBLIGATIONS ARE FULFILLED BY POND#1(MICROPOOL -ED(P-1)) UNDER F-03-87 PROVIDING WATER QUALITY AND CHANNEL PROTECTION CONTROLS FOR THIS PLAN. LEVEL SPREADERS FOR REAR ROOF DRAINAGE IS PROVIDED PER DETAILS ON THIS PLAN.
- EXISTING UTILITIES ARE BASED ON HOWARD COUNTY CONTRACT DRAWINGS AND SUPPLEMENTAL FIELD SURVEY INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONFIRM THE EXISTING UTILITIES WITHIN THE LIMITS OF CONSTRUCTION.
- THE FLOODPLAIN STUDY FOR THIS PROJECT WAS PREPARED BY RODGERS CONSULTING, INC. DECEMBER 2002 AND APPROVED ON 5/12/03.
- THE WETLANDS DELINEATION STUDY FOR THIS PROJECT WAS PREPARED BY MCCARTHY & ASSOCIATES, INC. DATED NOVEMBER 2000 AND WAS APPROVED PER SKETCH PLAN S-01-20.
- THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY THE TRAFFIC GROUP DATED JANUARY 24, 2002.
- THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT EXCEPT AS SHOWN ON AN APPROVED ROAD CONSTRUCTION DRAWING OR SITE DEVELOPMENT PLAN. THE FOREST CONSERVATION OBLIGATION FOR THIS SDP HAS BEEN MET UNDER F-03-87.
- FINAL HOUSE LOCATIONS TO BE ESTABLISHED UNDER THE SDP. SHALL BE A MINIMUM OF 10' FROM ANY EASEMENTS.
- THE WAIVER PETITION, WP-01-117, WAS APPROVED ON AUGUST 1, 2001 TO WAIVE SECTION 16.115 AND 16.116(A) TO ALLOW WORK IN THE FLOODPLAIN AND IN THE STREAM BUFFER FOR THE CONSTRUCTION OF A PUBLIC ACCESS PLACE CROSSING TO SERVE 15 PROPOSED RESIDENTIAL R-20 ZONED LOTS, AND SECTION 15-120(C)(4) TO ALLOW SFA LOTS TO FRONT ON A PRIVATE ROAD GREATER THAN 200 FEET IN LENGTH (APPLIES TO ROAD IN FRONT OF PROPOSED LOTS 89 - 101). APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS: (1) CONSTRUCT THE CROSSING USING THE BOTTOMLESS CULVERT PROPOSED WITH THE WAIVER DOCUMENTATION. (2) LIMIT THE DISTURBANCE TO THE ENVIRONMENTAL AREAS TO THE MINIMUM EXTEND NECESSARY FOR CONSTRUCTION OF THE STREAM CROSSING. (3) IN PREPARATION OF THE FOREST CONSERVATION PLAN PROPOSAL, PROVIDE AFForestation WITHIN THE UNWOODED AREA OF THE PRIORITY STREAM BUFFER SHOWN ON THE STREAM CROSSING EXHIBIT.
- A WAIVER OF DESIGN MANUAL, VOLUME I, SECTION 5.2.4.1 TO ALLOW POND TOP OF CUT TO BE LOCATED LESS THAN THE REQUIRED 25' MINIMUM DISTANCE FROM A RIGHT-OF-WAY WAS APPROVED ON AUGUST 7, 2002. APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS: (1) INTERNAL POND LANDSCAPING IS REQUIRED FOR OPEN SPACE LOTS 89 AND 113 AS PER THE 2000 MARYLAND STORMWATER MANAGEMENT DESIGN MANUAL, VOLUMES I AND II. EACH POND PERIMETER SHALL, AT A MINIMUM, MEET THE REQUIREMENTS OF THE HOWARD COUNTY LANDSCAPE MANUAL, TYPE B LANDSCAPE BUFFER. (2) STATE ON THE EXHIBIT THAT THE DESIGN MANUAL WAIVER REQUEST IS ON SHEETS 5, 6, AND 7 OF THE PRELIMINARY PLAN P-02-17 (3). THE PROPOSED ALIGNMENT OF THE WATER AND SEWER EASEMENT ACROSS LOTS 138-140 AND LOTS 162-163 COMBINED WITH THE PROPOSED STORM DRAIN EASEMENT RESULTS IN AN UNACCEPTABLE ENCUMBRANCE OF USABLE LOT SPACE FOR THESE LOTS. AN APPROVAL OF THIS DESIGN MANUAL WAIVER REQUEST CANNOT RESULT IN THE LOT LAYOUTS AS PROPOSED. ALTERNATIVE LOCATIONS OF THE STORM DRAIN SYSTEM AND ASSOCIATED EASEMENT MUST BE SHOWN ON THE PRELIMINARY PLANS P-02-17 TO REDUCE THE LOT ENCUMBRANCES OF LOTS 88-89 AND LOTS 15-16.
- THE WAIVER PETITION, WP-03-78 WAS APPROVED ON JUNE 26, 2003 TO WAIVE SECTION 16.116(a) TO ALLOW GRADING AND DISTURBANCE WITHIN 75 FEET OF A PERENNIAL STREAM FOR THE PURPOSE OF RELOCATING THE ALIGNMENT OF 60' LF OF AN EXISTING AT&T EASEMENT.

APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:

- COMPLY WITH ATTACHED REQUIREMENT FROM THE SOIL CONSERVATION DISTRICT FOR MITIGATION OF THE DISTURBANCE CAUSED BY THE RELOCATION OF THE AT&T LINE AND EASEMENT. THIS ENLARGEMENT OF THE FOREST CONSERVATION EASEMENT APPLIES TO THE CROSSING OF WETHERED DRIVE OVER THE STREAM BEHIND LOT 145.
- THE MITIGATION (AN EXPANDED PLANTING AREA ON THE FOC ADJACENT TO THE BOTTOMLESS ARCH CULVERT) REQUIRED BY THE SOIL CONSERVATION DISTRICT IS NOT TO BE CONSTRUCTED AS OFF-SITE PLANTING MITIGATION FOR ANY OTHER SITE NOR AS A FOREST CONSERVATION BANK FOR ANY OTHER PROPERTY.
- THE PROPOSED ALIGNMENT OF THE AT&T FIBER OPTIC CABLE MUST BE COORDINATED WITH WATER, SEWER, AND OTHER PUBLIC UTILITIES, AS REQUIRED BY THE ATTACHED COMMENTS FROM DED.

- THIS PLAN IS SUBJECT TO THE AMENDED 5TH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS PER COUNCIL BILL 45-2003 AND THE ZONING REGULATIONS AS AMENDED BY 08-75-2003. DEVELOPMENT OR CONSTRUCTION OF THIS PARCEL MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER PETITION APPLICATION, OR BUILDING/GRADING PERMIT (1-10-04 zoning).
- 95% COMPACTION REQUIRED IN FILL AREA PER AASHTO-180 SPECIFICATIONS.
- A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
- FINANCIAL SURETY FOR THE REQUIRED # OF TREES IN THE AMOUNT OF \$12,450 IS PART OF THE BUILDERS GRADING PERMIT APPLICATION FOR BUILDING. OTHER LANDSCAPE REQUIREMENTS ARE BONDED UNDER A DEVELOPER'S AGREEMENT WITH F-03-87.
- PER SECTION 112.D(1)(E) OF ZONING ORDINANCE THE MAXIMUM LENGTH ALLOWED WITHOUT SPECIAL CONSIDERATION OF DETAIL IS 120 FEET. THE DEPARTMENT OF PLANNING AND ZONING PREVIOUSLY HAS APPROVED A GREATER LENGTH UP TO A MAXIMUM OF 185 FEET UNDER S-01-20.
- OWNER OF PARCEL "B" TO BE RESPONSIBLE FOR MAINTENANCE OF PRIVATE RETAINING WALLS.
- A DECISION AND ORDER FOR ADMINISTRATIVE ADJUSTMENT TO INCREASE THE 40-FT. MAXIMUM BUILDING HEIGHT UP TO 43.7 FEET FOR THE PROPOSED APARTMENT BUILDINGS WAS ISSUED ON AUGUST 29, 2003 (AA CASE # 03-17), SUBJECT TO THE FOLLOWING CONDITIONS:
 - THE PETITIONER SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND COUNTY LAWS AND REGULATIONS.
 - THE GRANTED ADMINISTRATIVE ADJUSTMENT SHALL APPLY SOLELY TO THE PROPOSED APARTMENT BUILDING UNITS AS DEPICTED ON THE PLAN SUBMITTED BY THE PETITIONER ON JULY 10, 2003 AND NOT TO ANY OTHER STRUCTURE, ADDITION, BUILDING OR USE.
 - THE PETITIONER SHALL SUBMIT A COPY OF THIS DECISION AND ORDER TO THE DIVISION OF LAND DEVELOPMENT IN ASSOCIATION WITH SDP-04-007, AND ALSO WITH THE BUILDING PERMIT APPLICATION(S) FOR THE APARTMENT BUILDINGS.
- THE NUMBER OF APARTMENT UNITS TO BE HANDICAPPED ACCESSIBLE HAS BEEN DETERMINED BY SITE IMPRACTICALITY STUDY SUMMARIZED IN MEMORANDUM FROM LEMAY ERIKSSON ARCHITECTS TO THE PLANS EXAMINER DATED OCTOBER 17, 2003.
- THE WAIVER PETITION, WP-04-148 WAS APPROVED ON July 11, 2004 TO WAIVE SECTION 16.121(C)(4)(v) TO PERMIT THE UTILIZATION OF THE CLUB HOUSE AND POOL. AMENDMENTS REQUIRED WITHIN THE PROJECT TO FULFILL THE ADDITIONAL RECREATION OPEN SPACE REQUIREMENTS OF 400 SF/UNIT. PREVIOUS PROJECT APPROVALS REQUIRED 175 SF/UNIT OF RECREATION OPEN SPACE.

28. This RA-15 zoned project is not subject to provision of MHH as required in 2004 zoning regulations section 16.2E because of prior approval of S-01-20.

SITE ANALYSIS DATA

- TOTAL PROJECT AREA = 76.43 AC.
- AREA OF THIS SDP SUBMISSION = 1.6 ± AC.
- LIMIT OF DISTURBANCE = 1.6 ± AC.
- ZONING = RA-15
- PROPOSED USE IS RESIDENTIAL (APARTMENT UNITS)
- TOTAL NUMBER OF UNITS ALLOWED FOR PROJECT PER F-03-87 = 405
- TOTAL NUMBER OF UNITS PROPOSED WITH THIS SDP = 42 UNITS
- REQUIRED PARKING CALCULATIONS:
 - REQUIRED # 2 SPACES/UNIT = 2 x (42) = 84 SPACES
 - TOTAL PARKING PROVIDED = 84 SPACES, INCLUDING 2 HANDICAPPED ACCESSIBLE SPACES. (5 SPACES PROVIDED FROM PHASE I, II, & III SDP-04-07)
- OPEN SPACE REQUIREMENTS FOR THIS PHASE IS PROVIDED WITHIN LOT 126.
- RECREATIONAL OPEN SPACE REQUIREMENTS FOR THIS PHASE IS PROVIDED ON PARCEL 'B' AND PARCEL 'A'. SEE OPEN SPACE CALCULATION CHART.
- DPZ FILE REFERENCES:
 - S-01-20, P-02-10, P-02-17, P-03-03, SDP-04-06, SDP-04-07
 - P-04-02, F-03-87, F-03-100, WP-01-117, WP-03-78, AA03-17
 - F-04-135 (PLAT #16590).

OPEN SPACE CALCULATIONS

TOTAL AREA OF PHASE IV = 5.1 AC.
 TOTAL OPEN SPACE REQUIRED @ 25% = 1.27 AC.
 TOTAL OPEN SPACE PROVIDED = 3.44 AC. (P/O LOT 126, PLAT #16358)
 RECREATIONAL OPEN SPACE:
 42 APARTMENTS @ 175 SF/UNIT = 7,350 SF OR 0.17 AC.
 TOTAL PROVIDED = 0.23 AC (0.01 AC PROVIDED WITHIN PHASE IV. THE OTHER 0.22 ACRES IS EXCESS PROVIDED ON SDP-04-07 CREDITED TO THIS PHASE.)

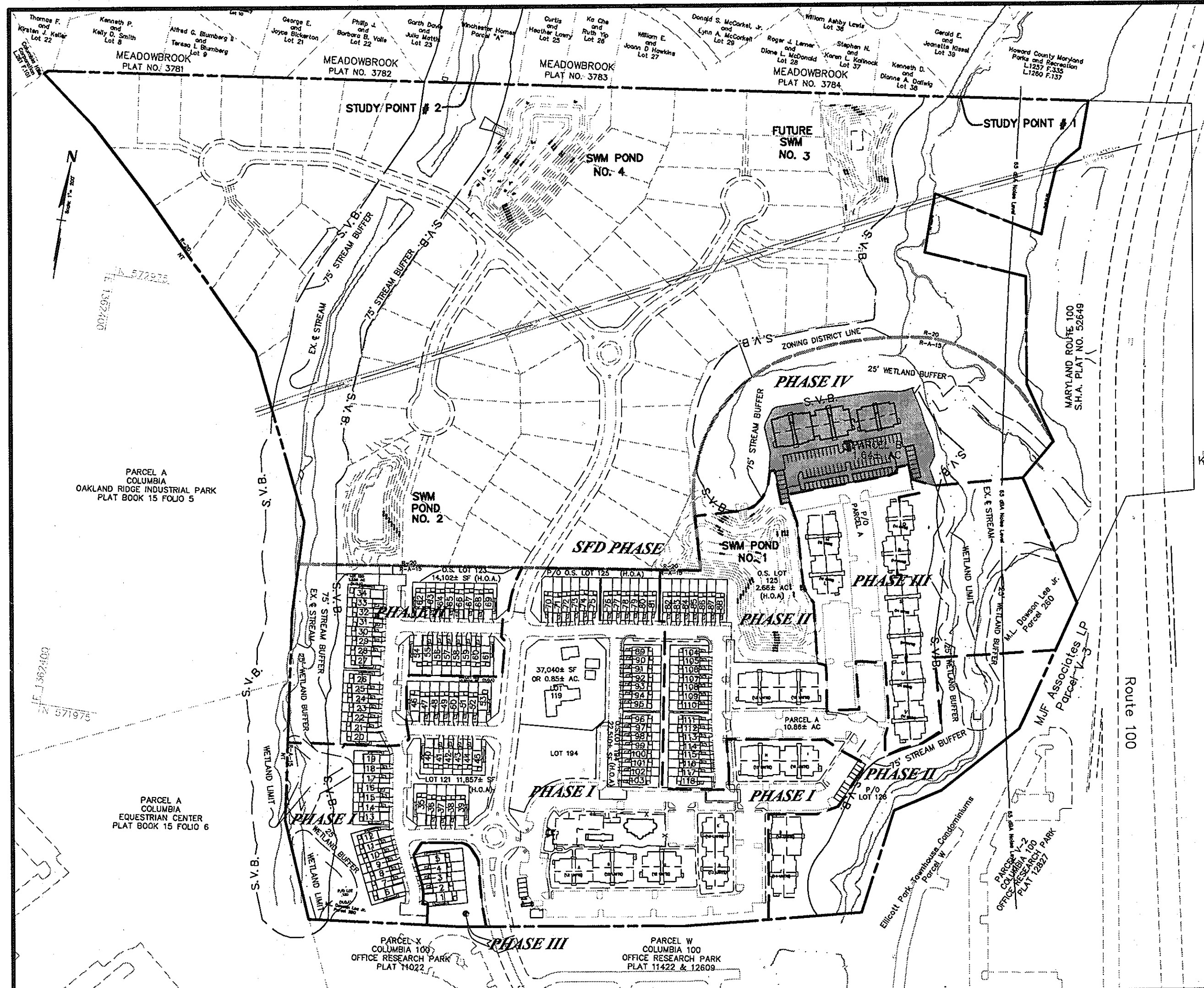
NOTE: PER THE AMENDED 5TH ADDITION OF THE SUBDIVISION REGULATIONS A TOTAL OF 400 SF/UNIT OF RECREATION OPEN SPACE IS REQUIRED. THIS ADDITIONAL AREA IS FULFILLED IN ACCORDANCE WITH WP-04-148. SEE GENERAL NOTE # 27.

Montjoy

PHASE IV APARTMENTS

ELECTION DISTRICT NO.2 HOWARD COUNTY, MARYLAND

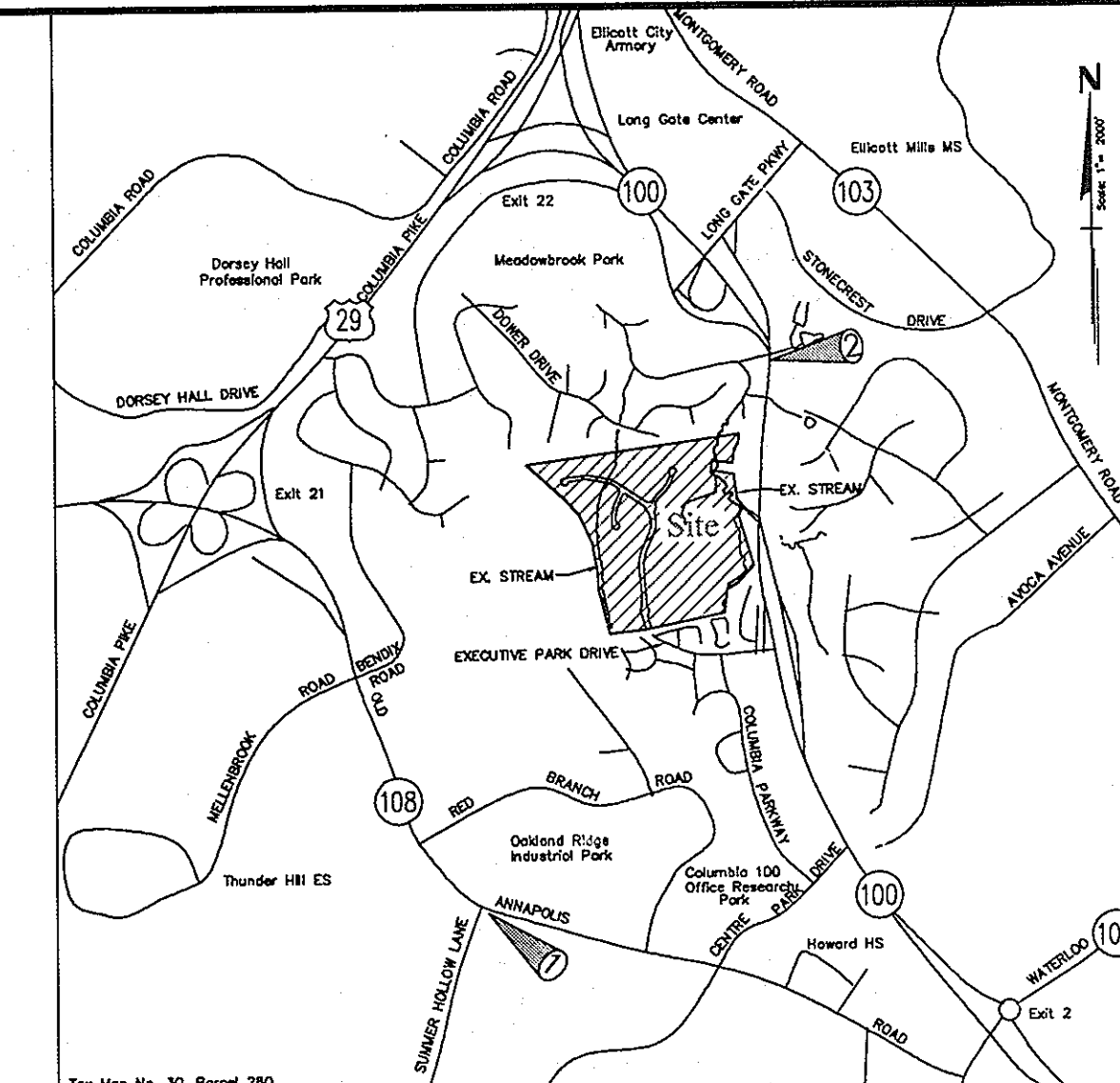
SITE DEVELOPMENT PLAN



LOCATION MAP
SCALE: 1"=200'

LEGEND

- SOILS CLASSIFICATION: AbC1
- SOILS DELINEATION: Dotted line
- EXISTING CONTOURS: Solid line
- PROPOSED CONTOURS: Dashed line
- LIMIT OF WETLANDS: Wavy line
- EXISTING WOODS LINE: Solid line with trees
- PROPOSED WOODS LINE: Dashed line with trees
- EXISTING STRUCTURE: Solid line with rectangle
- LIMITS OF DISTURBANCE: Dotted line
- STABILIZED CONSTRUCTION ENTRANCE: Solid line with hatching
- SILT FENCE: Solid line with 'SF'
- SUPER SILT FENCE: Solid line with 'SSF'
- EX. EARTH DIKE: Solid line with hatching
- INLET PROTECTION: Solid line with rectangle
- ENTRANCE LOCATION: Triangle
- EXISTING LIGHT POLE LOCATION (PUBLIC STREETS PER F-03-87): Star
- PROP. SWM CREDIT, UTILITY AND FOREST CONSERVATION EASEMENT: Patterned area
- PROP. SWM CREDIT EASEMENT: Patterned area



Vicinity Map
Scale: 1" = 2000'

SHEET INDEX		
NO.	DESCRIPTION	INDEX NO.
1	COVER SHEET	CS-1
2	BUILDING FOOTPRINTS	CS-2
3	SITE DEVELOPMENT AND GRADING PLAN	SG-1
4	LANDSCAPE NOTES & DETAILS	LS-1
5	SEDIMENT & EROSION CONTROL NOTES & DETAILS	SC-1
6	RETAINING WALL NOTES AND DETAILS	W-1
7	RETAINING WALL NOTES AND DETAILS	W-2

SWM SUMMARY FOR PHASE IV (Apartments)

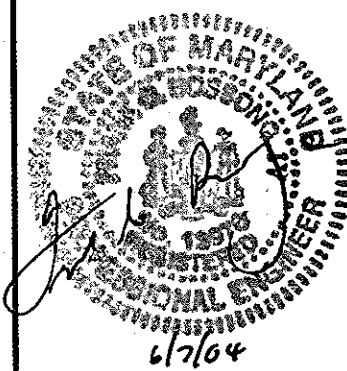
SWM REQUIREMENTS FOR	SWM PROVIDED UTILIZING	SWM PROVIDED UNDER
Rev	Rev for study points provided by grass swales & sheet flow to buffer credits for by-pass areas**	PLAN F-03-87*, F-03-100* & SDP-04-120
WQv	WQv provided within pond #1 (Micropool-ED) and sheet flow to buffer credit for by-pass areas**	PLAN F-03-87* & SDP-04-120
Cpv	Cpv provided within pond #1 (Micropool-ED)	PLAN F-03-87*

* Refer to associated SWM Computation for specific detailed information.
 ** Level spreaders (to be constructed under the Site Development Plan) are utilized to maintain sheet flow to buffer credit in by-pass areas that do not drain to the SWM ponds.

BENCH MARKS (NAD83)	
BENCHMARK NO. 1---HO. CO. NO. 30FA HOWARD CO. STD. STAMPED DISC LOCATED SW CORNER OF RT. 108 AND SUMMER HOLLOW LANE. N 568621.336, E 1361563.983 ELEV. 441.619	BENCHMARK NO. 2---HO. CO. NO. 30CA HOWARD CO. STD. STAMPED DISC LOCATED ON THE EAST SIDE OF THE N.B.L. OF RT. 100 N 575083.465, E 1364681.801 ELEV. 380.087

PERMIT INFORMATION CHART

Subdivision Name	Section/Area	Lot/Parcel No.
MONTJOY	PHIV-APARTMENTS	PARCEL 'B'
Plot No. or L/F	Grid #	Zoning
#16553thru #16558	12	R-A-15 R-20
Water Code	Tax Map No.	Elect. Distr.
F-09	30	2nd
	Sewer Code	Census Tract
	5750639	602302



APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature] 7/6/04
 Chief, Development Engineering Division
[Signature] 7/27/04
 Chief, Division of Land Development
[Signature] 7/28/04
 for Director

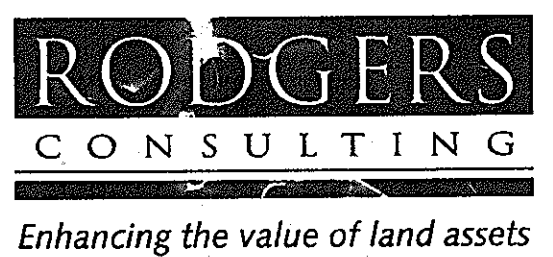
NOTE: THIS SURVEY IS IN THE MARYLAND STATE PLANE COORDINATE SYSTEM BASED ON GPS OBSERVATIONS INCORPORATING THE FOLLOWING HOWARD COUNTY, MARYLAND CONTROL STATIONS:

STATION 30FA N.568621.336' E.1361563.983'
 STATION 37GB N.553452.921' E.1368503.167'
 STATION 30CA N.575083.465' E.1364681.801'
 STATION 30CB N.576541.342' E.1361211.298'
 STATION 30AA N.567750.958' E.1364842.598'

DATE	REVISION	DATE	BY	DATE
	BASE DATA		CADD	
	DESIGNED		PFB, YSL	
	DRAWN		YSL	
	REVIEWED		PFB	
	RELEASE FOR			
	REVISIONS PER COUNTY REVIEW COMMENTS	06/09/04		
	REVISIONS FOR BID SET	04/02/04		
	SUBMITTED FOR REVIEW	03/09/04		

Developer/Owner:
Stringtown Investment, LLC
 6820 Elm Street
 Suite 200
 McLean, Va. 22101
 Mr. Russell Dickens
 (703) 734-9730

SITE DEVELOPMENT PLAN
COVER SHEET

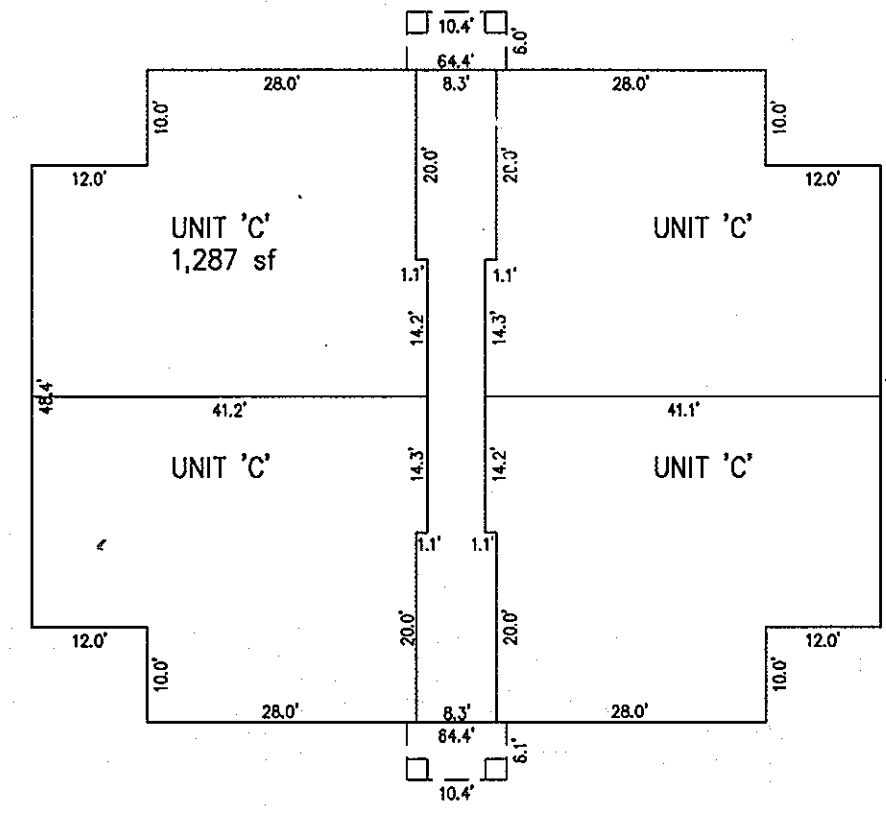


Rodgers Consulting, Inc.
 9260 Gailher Road
 Gaithersburg, MD 20877
 301.948.4700
 301.948.6256 (fax)
 301.253.6609
 www.rodgers.com

PHASE IV - APARTMENTS SDP
Montjoy
 ELECTION DISTRICT NO. #2
 HOWARD COUNTY, MARYLAND
 TAX MAP: 30 GRID: 12 PARCEL B

SCALE: AS SHOWN
 JOB NO: 643G
 DATE: 12-03
 INDEX NO: CS-1
 SHEET NO: 1 OF 7

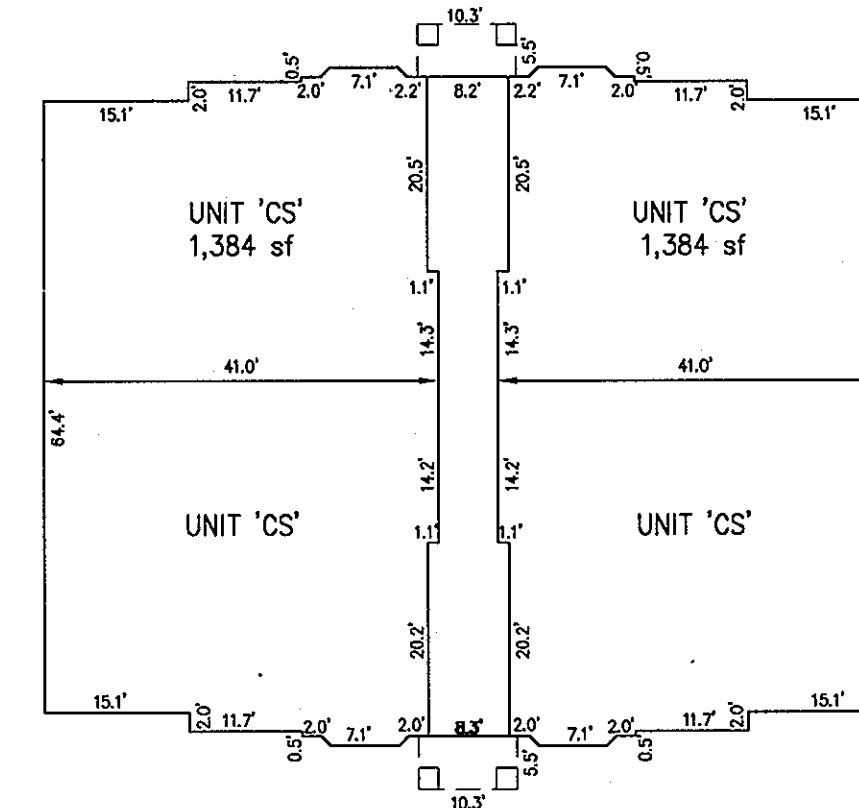
DPZ FILES: S-01-20, WP-01-117, P-02-10, P-02-17, P-03-03, P-04-02, F-03-87, SDP-04-07
 6/7/2004 11:22:49 AM EDT SDP-04-120



FIRST FLOOR - PLAN VIEW



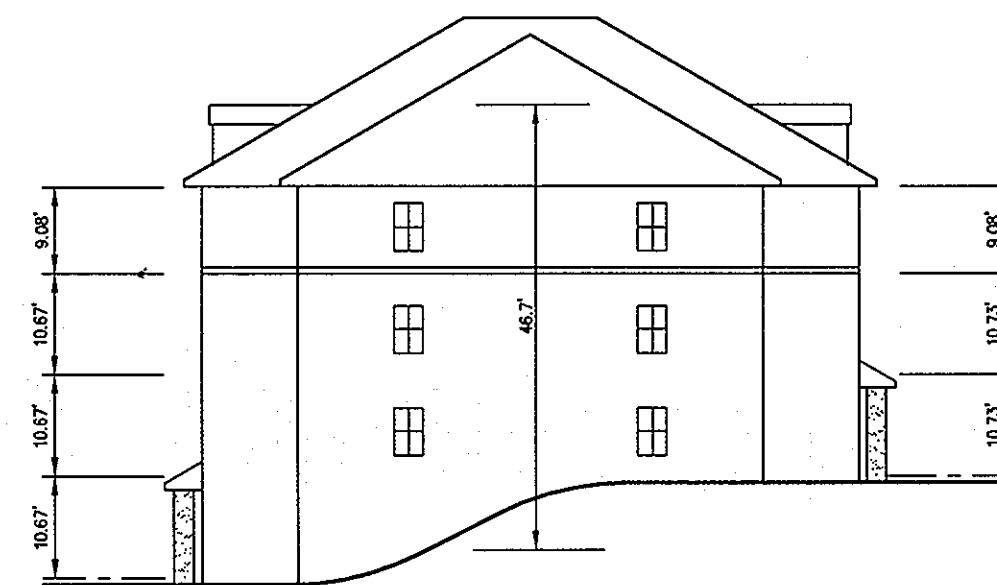
FRONT ELEVATION



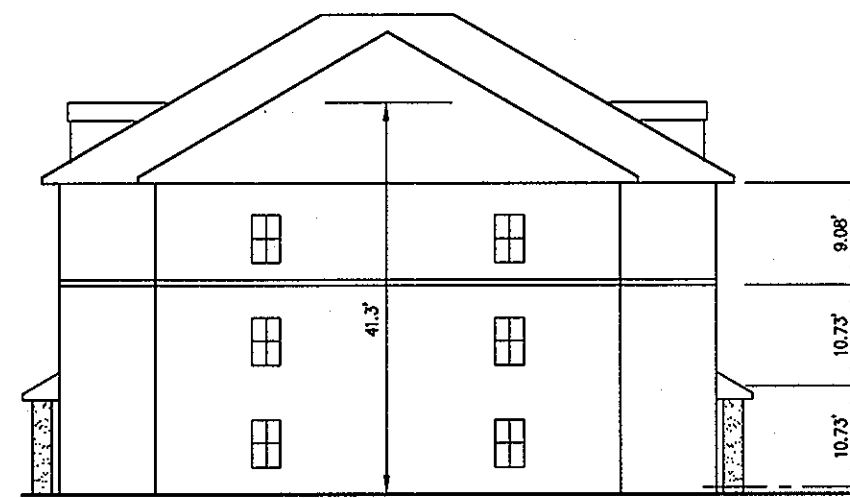
FIRST FLOOR - PLAN VIEW



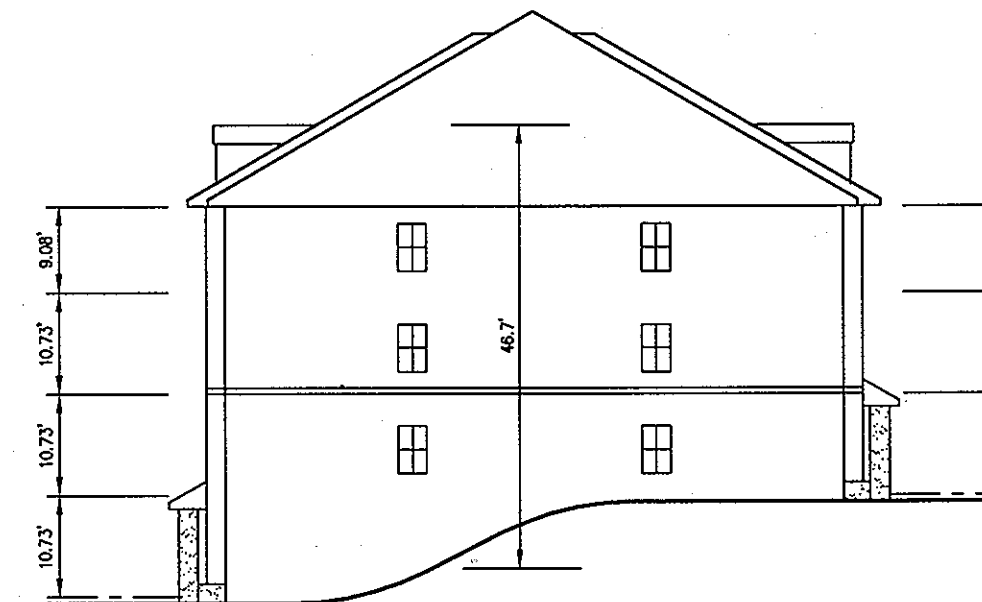
FRONT ELEVATION



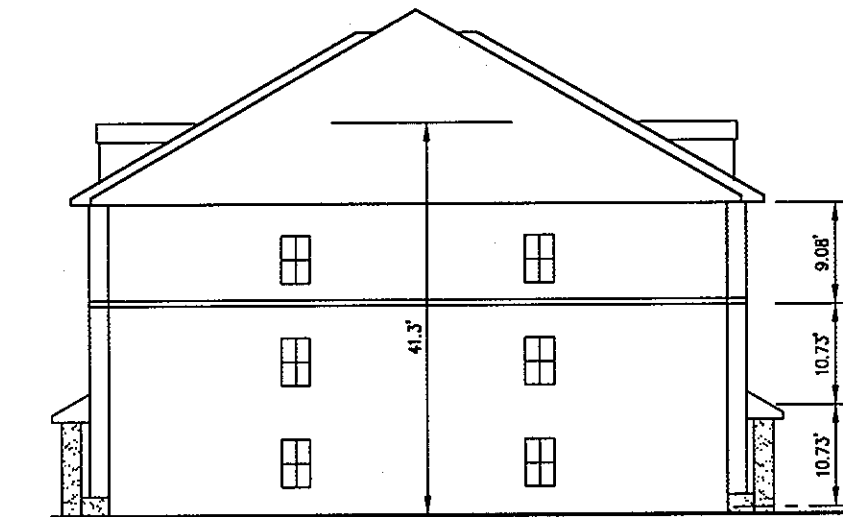
SIDE ELEVATION - 3/4 SPLIT



SIDE ELEVATION



SIDE ELEVATION - 3/4 SPLIT



SIDE ELEVATION

BUILDING TYPE 'C' FOOTPRINTS

SCALE: 1"=20'

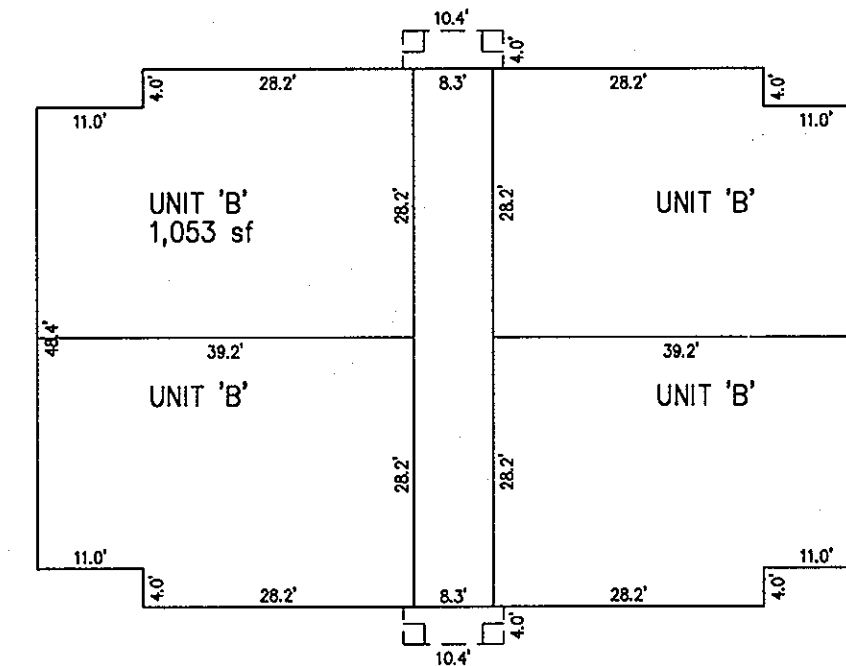
NOTE: TYPICAL UNIT SQUARE FOOTAGE GIVEN IS GROSS FLOOR AREA

BUILDING TYPE 'CS' FOOTPRINTS

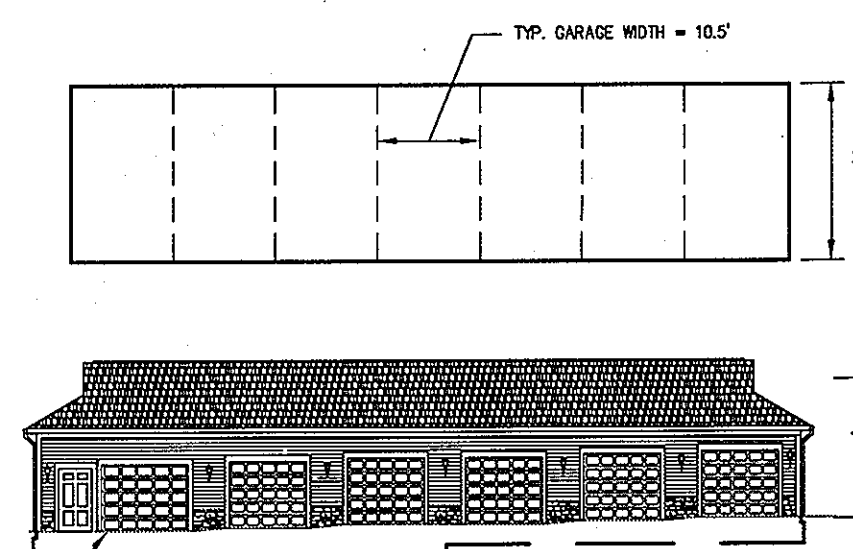
SCALE: 1"=20'



FRONT ELEVATION

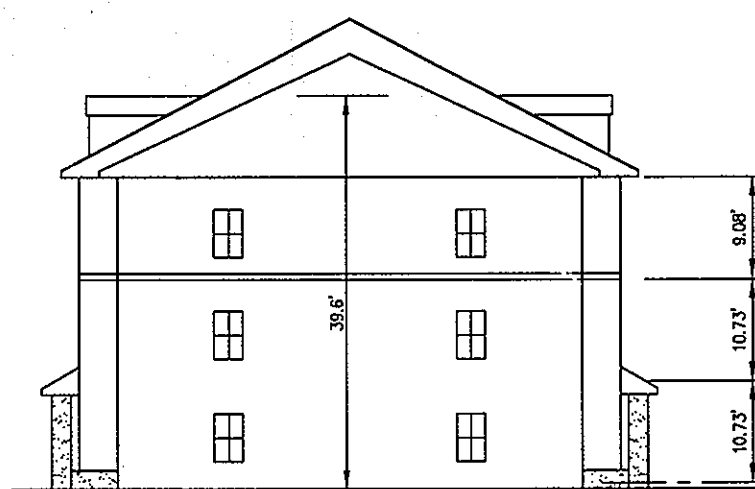


FIRST FLOOR - PLAN VIEW

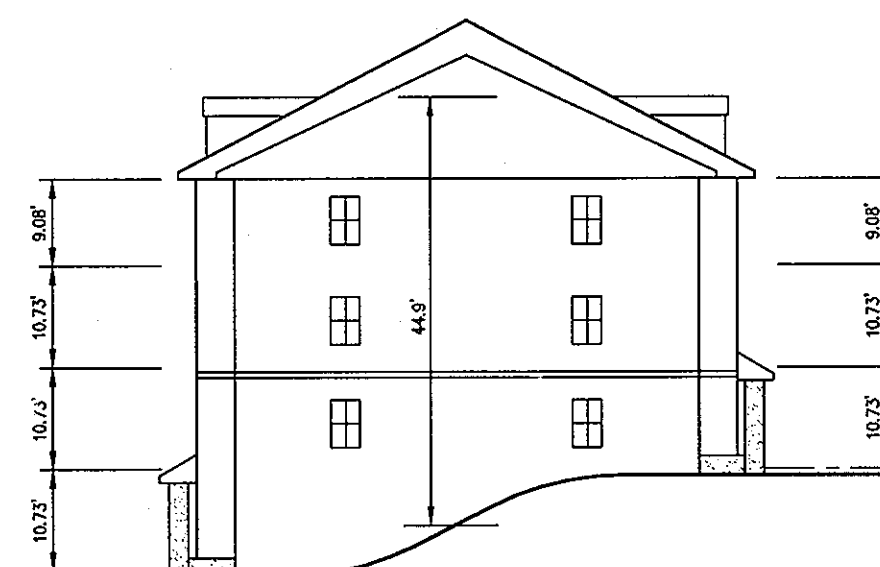


TYPICAL GARAGE UNIT

SCALE: 1"=20'



SIDE ELEVATION




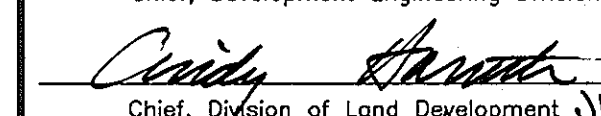
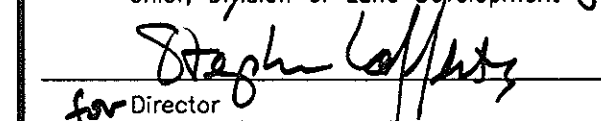
SIDE ELEVATION - 3/4 SPLIT

BUILDING TYPE 'B' FOOTPRINTS

SCALE: 1"=20'

ARCHITECTURAL INFORMATION FROM LEMAY-ERICKSON ARCHITECTS RESTON, VIRGINIA

APPROVED: DEPARTMENT OF PLANNING AND ZONING

 7/6/04
 Chief, Development Engineering Division
 7/27/04
 Chief, Division of Land Development
 7/28/04
 Director

DATE	REVISION	DATE	BY	DATE
	BASE DATA		CADD	
	DESIGNED			
	DRAWN		CoV	
	REVIEWED		PFB	
	RELEASE FOR			
	FINAL 3/14/04	06/29/04		
	REVISIONS TO ADDRESS COUNTY COMMENTS	06/29/04		
	REVISIONS FOR BID SET	04/02/04		
	SUBMITTED FOR REVIEW	03/09/04		

Developer/Owner:
Stringtown Investment, LLC
 6820 Elm Street
 Suite 200
 McLean, Va. 22101
 Mr. Russell Dickens
 (703) 734 - 9730

SITE DEVELOPMENT PLAN
BUILDING FOOTPRINTS



Rodgers Consulting, Inc.
 9260 Gaither Road
 Gaithersburg, MD 20877
 301.948.4700
 301.948.6256 (fax)
 301.253.6609
 www.rodgers.com

PHASE IV - APARTMENTS SDP

Montjoy

ELECTION DISTRICT NO. #2
 HOWARD COUNTY, MARYLAND
 TAX MAP: 30 GRID-12 PARCEL B

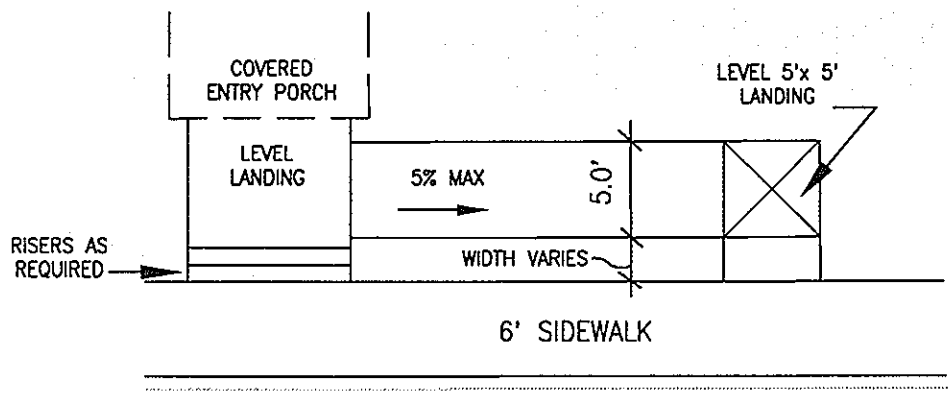
DPZ FILES: S-01-20, WP-01-117, P-02-10, P-02-17, P-03-03, P-04-02, P-03-07, SDP-04-07



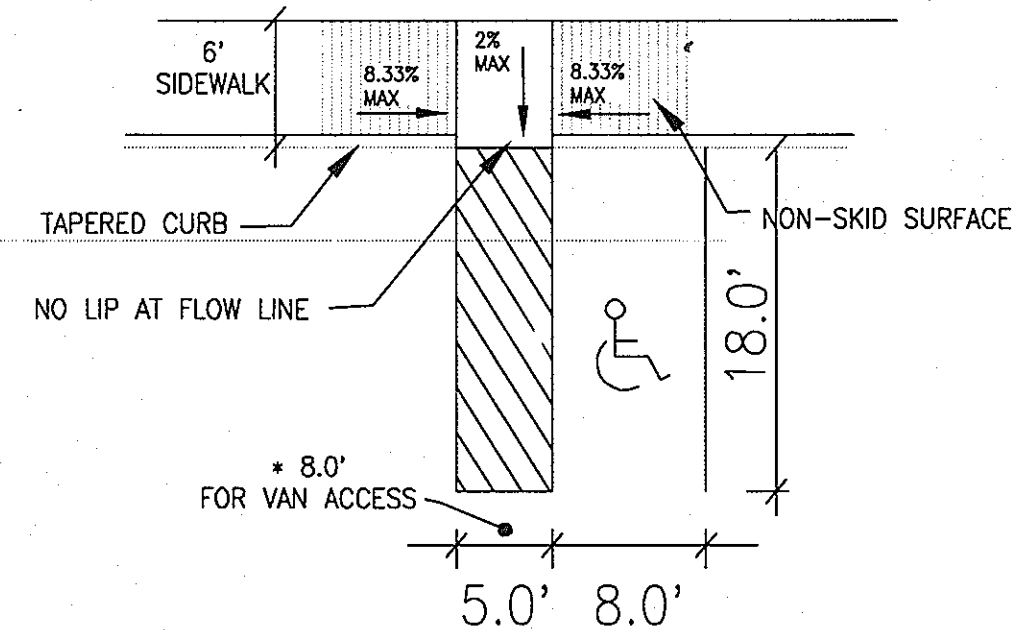
SCALE: 1"=20'
 JOB No. 643G
 DATE: 12-03
 INDEX No. CS-2
 SHEET No. 2 OF 7

SHC DATA (CONTR. No. 24-4064-D)

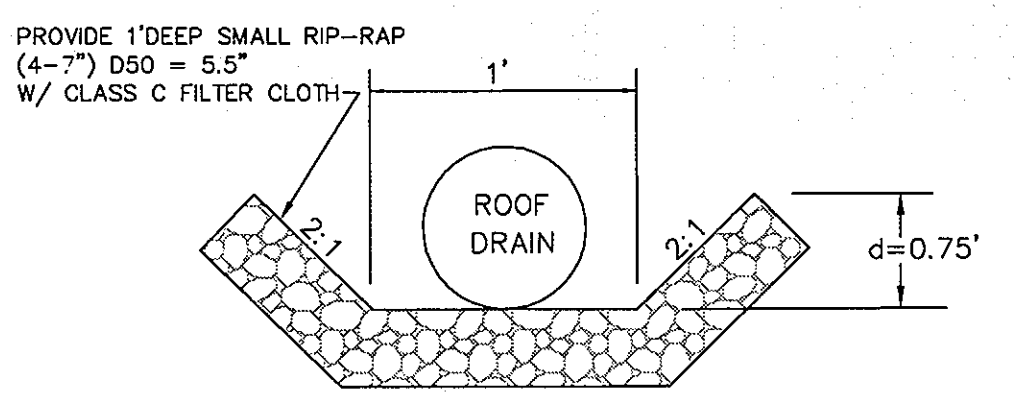
BLDG.	SHC INV.	MIN. SERVICE EL.	REMARKS
N	397.74	402.00	
O	388.23	401.29	
P	395.97	400.47	



TYPICAL ACCESS RAMP DETAIL NOT TO SCALE

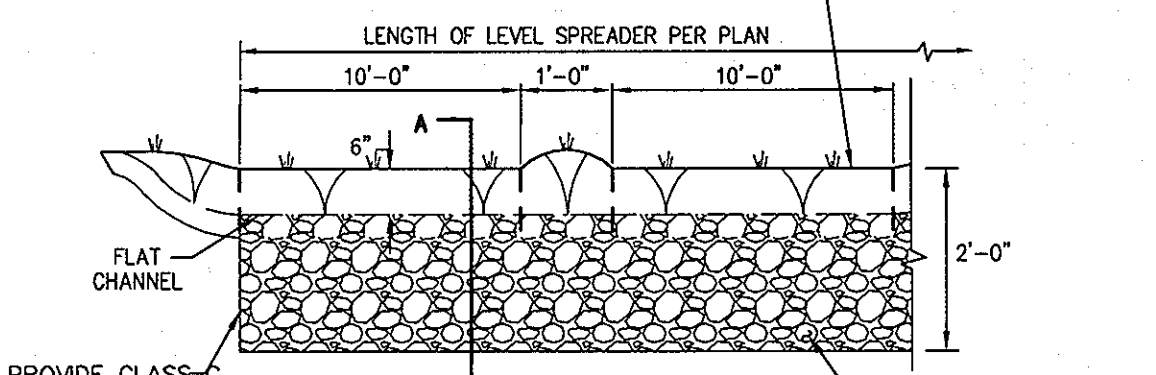


TYPICAL HANDICAP PARKING DETAIL NOT TO SCALE

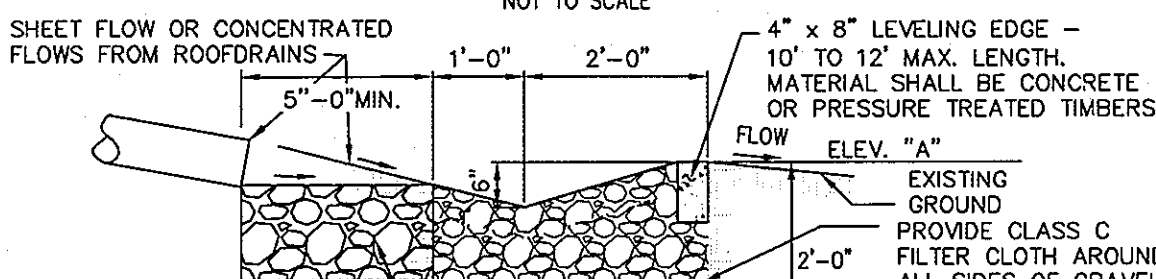


ROOF DRAIN OUTFALL PROTECTION CROSS SECTION N.T.S.

4" x 8" LEVELING EDGE MATERIAL SHALL BE CONCRETE OR PRESSURE TREATED TIMBERS



LEVEL SPREADER DETAIL - ELEVATION NOT TO SCALE



LEVEL SPREADER DETAIL - SECTION A NOT TO SCALE

LEVEL SPREADER ELEV. TABLE	
NO.	ELEV. (SEE DETAIL ABOVE)
1	383.0
2	392.0
3	400.25

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division 7/6/04
Chief, Division of Land Development 7/27/04
Director 7/28/04

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

Jim Myers 6-17-04
 USDC - NATURAL RESOURCES CONSERVATION SERVICE
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John R. Robertson 6-17-04
 HOWARD SCD

DEVELOPER'S CERTIFICATE

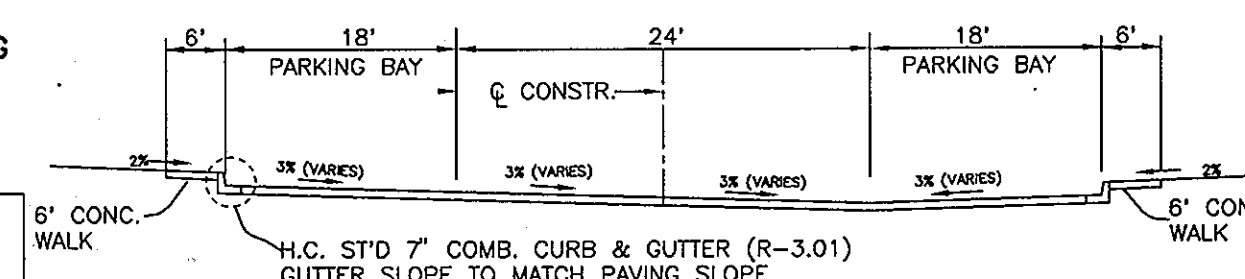
"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE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

Paul Myers 6/8/04
 SIGNATURE OF DEVELOPER (PRINT NAME BELOW SIGNATURE) DATE

ENGINEER'S CERTIFICATE

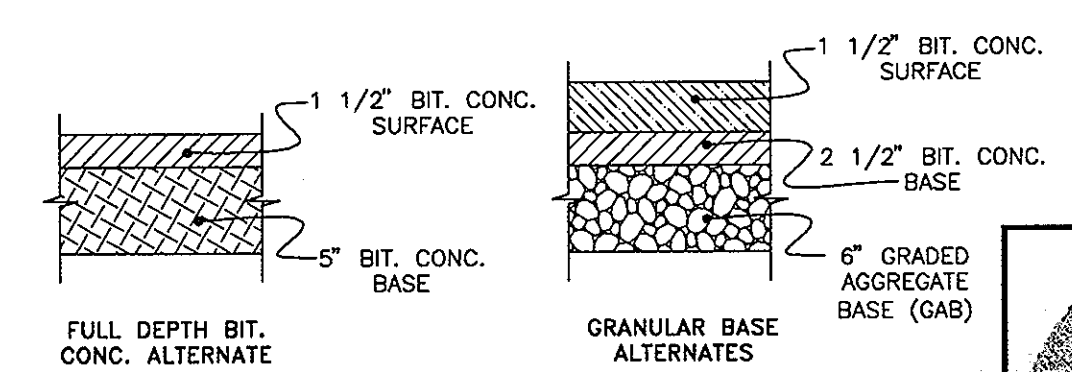
"I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT"

Joel Myers 6/2/04
 SIGNATURE OF ENGINEER (PRINT NAME BELOW SIGNATURE) DATE



WALKING STICK ROAD TYPICAL ROADWAY SECTION (PRIVATE ACCESS STREET)

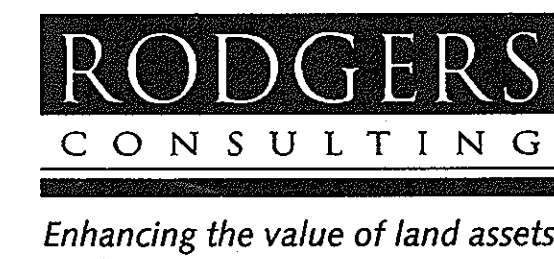
NOTE: SEDIMENT CONTROLS PROPOSED UNDER F-03-87 AS SHOWN WILL BE UTILIZED FOR IMPLEMENTATION OF THIS PLAN



SECTION NUMBER	ROAD AND STREET CLASSIFICATION
P-2	RESIDENTIAL ZONES LOCAL, CUL-DE-SACS STS. ALLEYS AND PRIVATE ROADS SERVING INDIVIDUAL LOTS TRAVELWAYS APARTMENTS AND COMMERCIAL - INDUSTRIAL ZONES WITH NO MORE THAN 10 HEAVY TI JACKS PER D.F.

DATE	REVISION	DATE	BY	DATE	Developer/Owner:
	BASE DATA		CADD		Stringtown Investment, LLC 9260 Gailers Road Suite 200 McLean, Va. 22101 Mr. Russell Dickens (703) 734 9730
	DESIGNED		PFB,RC		
	DRAWN		CoV		
	REVIEWED		PFB		
	RELEASE FOR				

SITE DEVELOPMENT PLAN GRADING & SEDIMENT CONTROL

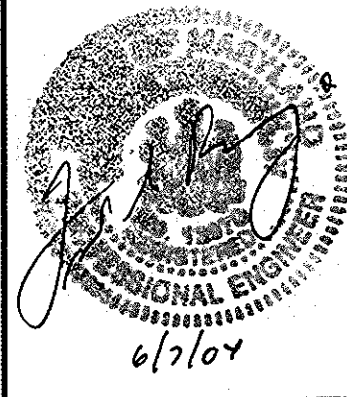


Rodgers Consulting, Inc.
 9260 Gailers Road
 Gaithersburg, MD 20877
 301.948.4700
 301.948.6256 (fax)
 301.253.6609
 www.rodgers.com

PHASE IV - APARTMENTS SDP

Montjoy
 ELECTION DISTRICT NO. #2
 HOWARD COUNTY, MARYLAND
 TAX MAP: 30 GRID:12 PARCEL B

DP2 FILES:S-01-20,WP-01-117,P-02-10,P-02-11,P-03-03,P-04-02,P-03-87,SDP-04-07
 N:\MD-Howard\Mount Joy\dwg\SDP\B436-PH4\03-SDP_Grading.dwg 6/4/2004 1:56:17 PM EDT



PLANTING SCHEDULE				
SYMBOL	BOTANICAL NAME (COMMON NAME)	QTY	SIZE	ROOT
LARGE SHADE TREES				
	ACER RUBUM (RED MAPLE)	8	2 1/2"-3" cal	B&B
	QUERCUS ROBUR 'FASTIGIATA' (COLUMNAR ENGLISH OAK)	5	2 1/2"-3" cal	B&B
	QUERCUS RUBRA (RED OAK)	11	2 1/2"-3" cal	B&B
	TILIA CORDATA (LITTLE LEAF LINDEN)	9	2 1/2"-3" cal	B&B
SMALL TREES & EVERGREENS				
	CUPRESSOCYPARIS LEYLANDII (LEYLAND CYPRESS)	10	6'-8" ht	B&B
	PINUS STROBUS (WHITE PINE)	5	6'-8" ht	B&B
SHRUBS				
	ILEX CRENATA 'GREEN LUSTER' (GREEN LUSTER HOLLY)	7	24"-30" ht	B&B
	FORSYTHIA SUSPENSIVA V. SIEBOLDII (SIEBOLD FORSYTHIA)	3	30"-36" ht	B&B

NOTE: LETTER INDICATES TREE APPLICABLE TO CORRESPONDING SCHEDULE BELOW.

= UTILITY EASEMENTS

**SCHEDULE A (FROM APPROVED PRELIMINARY PLAN)
PERIMETER LANDSCAPE EDGES**

PERIMETER #	1	2	3	4
PROPOSED USE	PARKING	MFA	MFA	PARKING
ADJACENT USE	HIGHWAY	HIGHWAY	SFD	SFD
LANDSCAPE TYPE	B	B	C	E
LINEAR FEET OF PERIMETER	150'	95'	420'	130'
CREDIT FOR EX. VEGETATION	0'	0'	270'	90'
NET PERIMETER	150'	95'	150'	40'
NO. OF PLANTS PROP/REQ'D RATE:				
SHADE TREES	3 @ 1/50 I.F.	2 @ 1/50 I.F.	4 @ 1/40 I.F.	1 @ 1/40 I.F.
EVERGREEN TREES	4 @ 1/40	3 @ 1/40 I.F.	8 @ 1/20 I.F.	0
SHRUBS	0	0	0	10 @ 1/4 I.F.

**SCHEDULE B
PARKING LOT INTERNAL LANDSCAPING**

Number of Parking Spaces	84
Number of Trees Required @ 1/10 spaces	9
Number of Trees Provided:	
Shade Trees	9
Other Trees (2:1 substitution)	0

**SCHEDULE C
RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING**

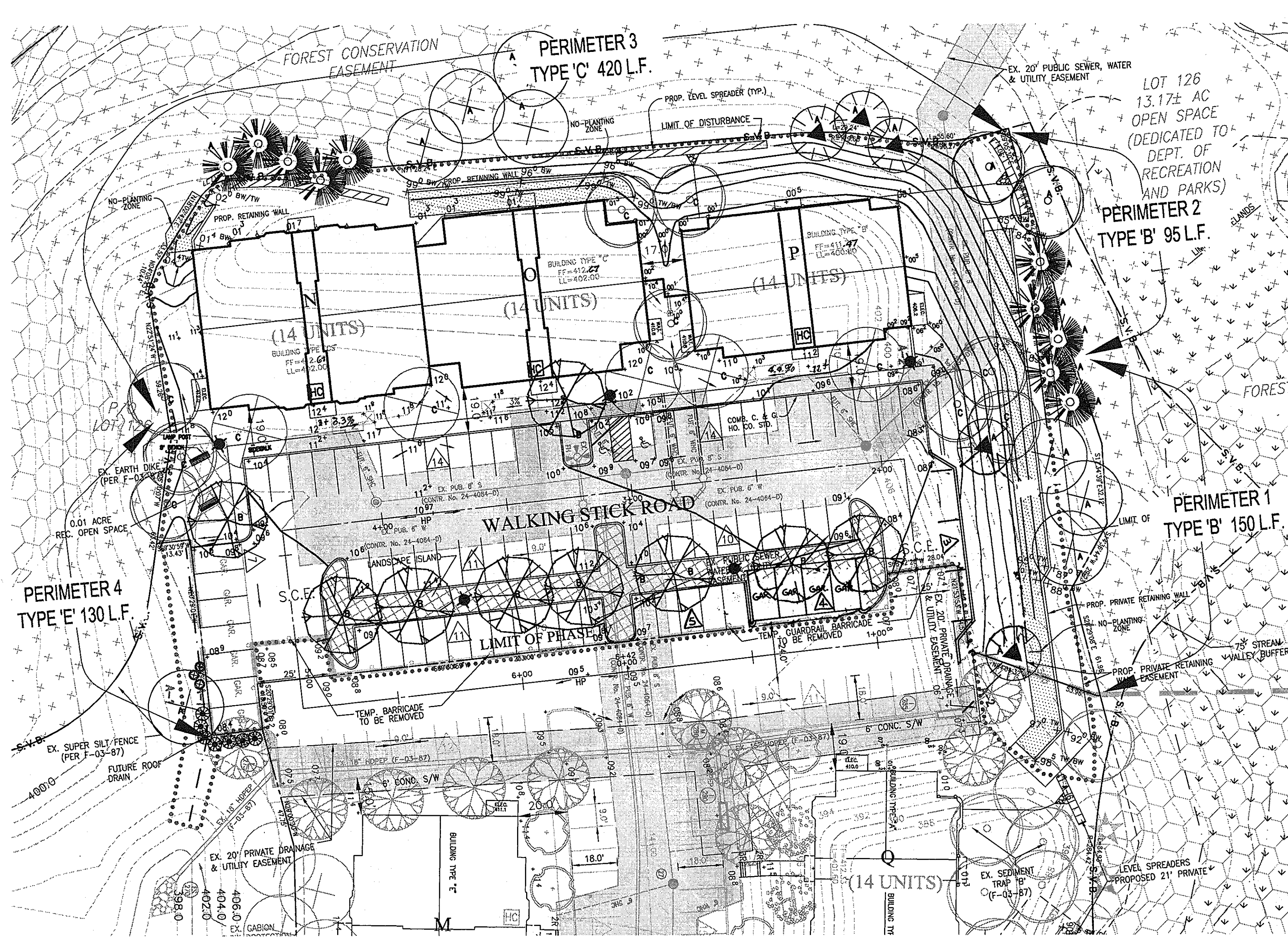
Number of Dwelling Units	42
Number of trees Required @ 1/3 DU	14
Number of Trees Provided:	
Shade Trees	14
Other Trees (2:1 substitution)	0

SURETY CALCULATION-SCHEDULES A, B & C

SHADE TREES	33 @ \$300 ea	\$ 9,900
ORNAMENTAL/EVERGREENS	15 @ \$150 ea	\$ 2,250
SHRUBS	10 @ \$30 ea	\$ 300
TOTAL		\$12,450

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division Date: 7/6/04
Chief, Division of Land Development Date: 7/27/04
Director Date: 7/28/04

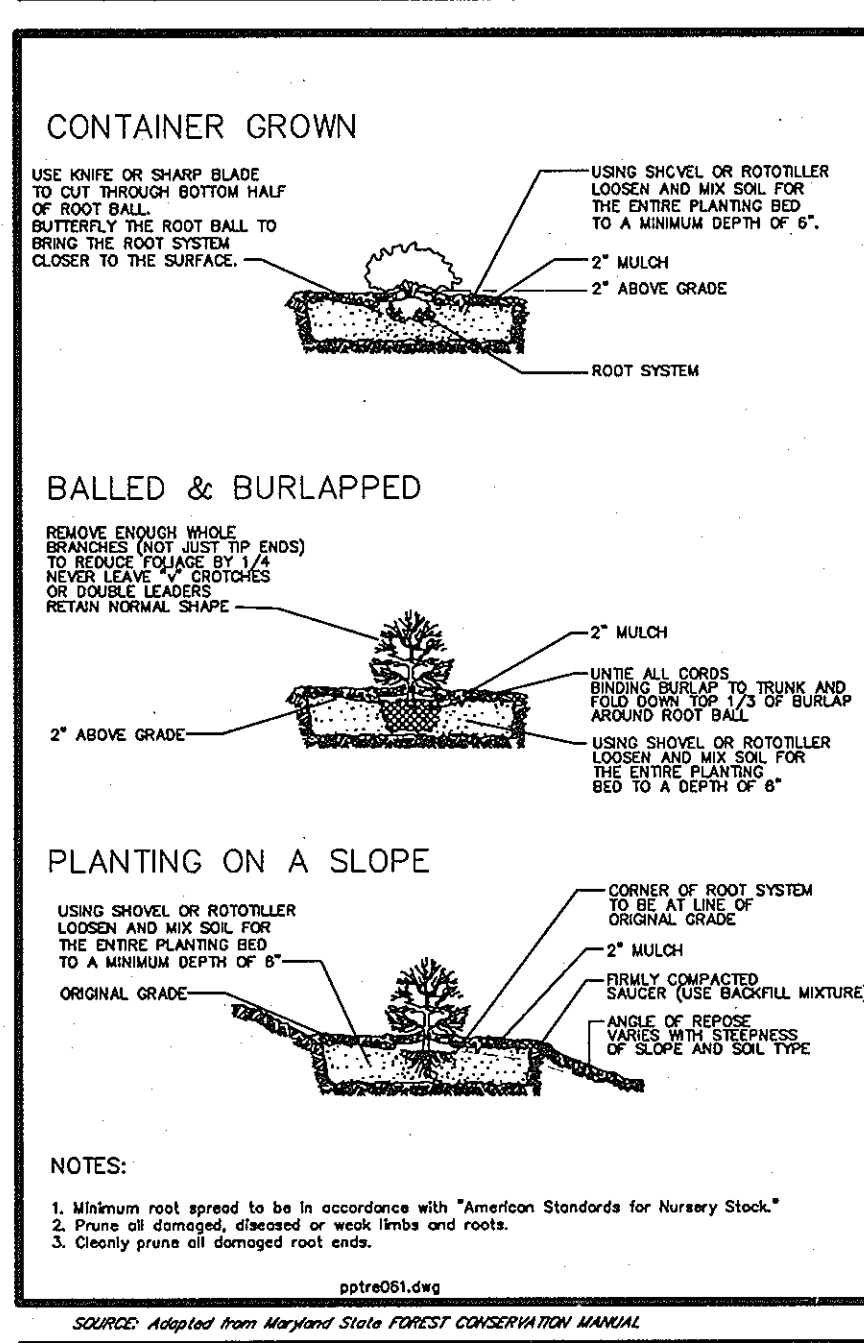


Landscape Notes:

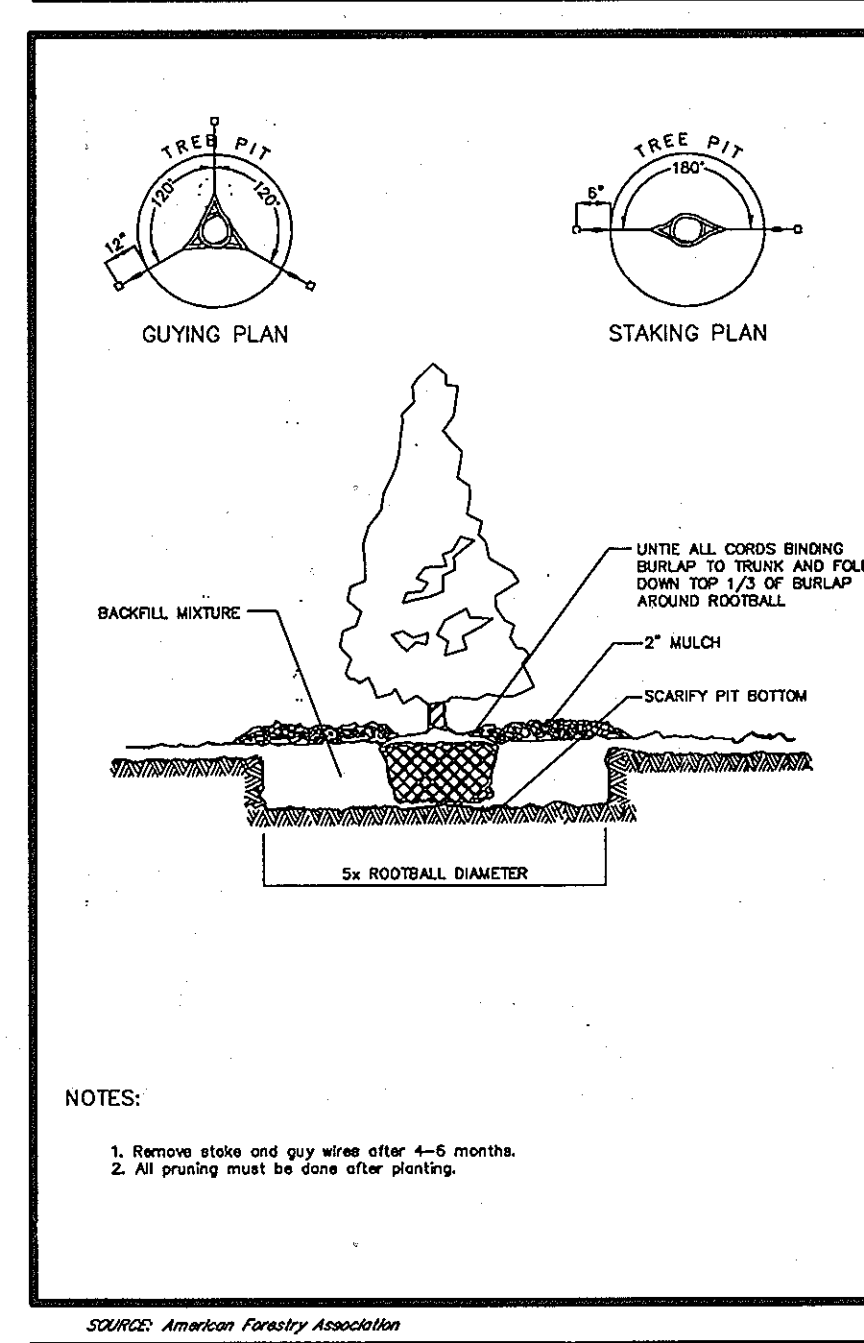
ALL PLANTING SHALL BE DONE IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL AS ADOPTED 1/4/93 AND AMENDED 3/2/98.

- Plants shall conform to current "American Standards for Nursery Stock" by American Association of Nurserymen (AANS), particularly with regards to site, growth, and size of ball and density of branch structure. Contractor to insure conformance to national and local building codes and ordinances.
- All plants (B&B or container) shall be properly identified by weatherproof labels securely attached hereto before delivery to project site. Labels shall identify plants by name, species and size. Labels shall not be removed until the final inspection by the owners representative.
- Any material and/or work may be rejected by the owners representative if it does not meet the requirements of the specifications. The contractor shall remove all rejected materials from the site.
- The contractor shall furnish all plants in quantities and sizes to complete the work as specified in plant schedule. The landscape contractor shall be responsible to verify all plant quantities on the plans prior to commencement of work. Quantities in the plant schedule are for the contractors convenience only and do not constitute the final contract.
- Substitutions in plant species or size shall not be permitted except with the written approval of the owners representative.
- Plants shall be located as shown on the drawings and by scaling or as designated in the field by the owners representative. All locations are to be approved by the owners representative before excavation.
- Contractor shall locate and mark all underground utility lines and irrigation systems prior to excavating plant beds or pits. All utility easement areas where no planting shall take place shall also be marked on the site, prior to locating and digging the tree pits. If utility lines are encountered in excavation of tree pits, other locations for the trees shall be selected by the owners representative. Such changes shall be made by the contractor without additional compensation. No changes of location shall be made without the approval of the owners representative.
- All equipment and tools shall be placed so as not to interfere or hinder the pedestrian and vehicular traffic flow.
- During planting operations, excess and waste materials shall be promptly and frequently removed from the site.
- All plant shrub beds are to be dug to a minimum of 24" deep and all existing soil, construction debris, roots and other foreign material are to be removed and discarded off site. All plant shrub beds are to be excavated to the width shown on the plans.
- All tree pits are to be excavated to a minimum depth to allow the tree root ball to be a minimum of 4" higher than finish grade. The tree root ball is to rest on undisturbed soil, or a compacted bed must be prepared for the tree root ball to rest on and which will not subside causing the tree to sink below finish grade. All tree pits are to be a minimum of 12" larger on every side of the tree root ball.
- The planter beds are to be entirely cleaned out to the undisturbed soil level. All existing soil, construction debris, roots and other foreign material are to be removed and discarded offsite.
- The topsoil to be used to fill the tree pits, shrub beds and planters is to be plant specific. The topsoil for the trees, shrubs and planters shall consist of a maximum 2/3 existing topsoil from the site, which is cleaned and free of clay, a minimum of 1/3 peat moss, or other approved organic material or imported new loamy topsoil and 10% cow manure. All of these materials are to be mixed prior to placing in the planter or backfilling when planting.
- The contractor is responsible to ensure that all tree pits, shrub beds and planter are well drained. No landscape contractor without cost to the owner will replace all plant material, which is affected by poor drainage.
- All lawn areas are to be seeded with grass seed appropriate for each of the sunlight conditions, which exist on the site.
- All lawn areas are to be tilled to a depth of 6" and all foreign material removed which will inhibit the healthy growth of the lawn. All old grass and grass roots are to be removed from the site. New topsoil of a minimum 4" is to be placed over the areas to be sodded. The grass areas are to be fine graded to ensure that no undulations occur in the lawn. The lawns are to be graded in such a way as to appear perfectly well tailored and even. The lawn topsoil is to be rolled and lightly irrigated prior to placing of the seed. The seed is not to be laid on frozen or soaked soil.
- The existing trees are to be protected during the preparation of the lawn areas. The roots of the trees are to be undisturbed during the cleaning of the topsoil.
- The trees and shrubs are to be handled with the best care and attention to ensure that the plants are not bruised, broken, torn, damaged in any way which will affect the plants general appearance and well being.
- The trees and shrubs are to be planted with the accepted standards of the American Association of Nurserymen. The plants are to be properly watered and backfilled during the planting. All care must be taken to ensure that the plants are upright, a plant's best side is exposed to the point of the plants greatest visibility.
- The trees must be staked in accordance with acceptable nursery practice to ensure that they are secure in the ground and will grow straight and uniform. The trees are to be wrapped if the contractor deems it necessary to protect the trees from sun scald or insect attack.
- The Landscape Contractor is to provide a 1-year guarantee for all plant material and other work done on site.
- Large growing plants are not to be planted in front of windows, under building overhangs, or in drainage swales. Shrubs planted near H.V.A.C units are to be located so that shrubs at maturity will maintain 1 foot airspace between shrub and plant.
- Contractor to slightly adjust plant locations in the field as necessary to be clear of drainage swales and utilities. Finished planting beds shall be graded so as not to impede drainage away from buildings.
- Trees in public rights of way shall be located at least 3 feet from sidewalks. When the distance between the curb and the sidewalk is less than 6 feet, trees shall be planted 3 feet from sidewalk in the direction away from the road. (See root sections, below)
- Quantities as shown on the plan shall govern over plant list quantities. Contractor to verify plant list totals with quantities shown on plan.
- Groups of shrubs shall be placed in a continuous raised mulch bed with smooth continuous lines. All mulched bed edges shall be curvilinear in shape following the contour of the plant mass. Trees located within 4 feet of shrub beds shall show some mulch bed.

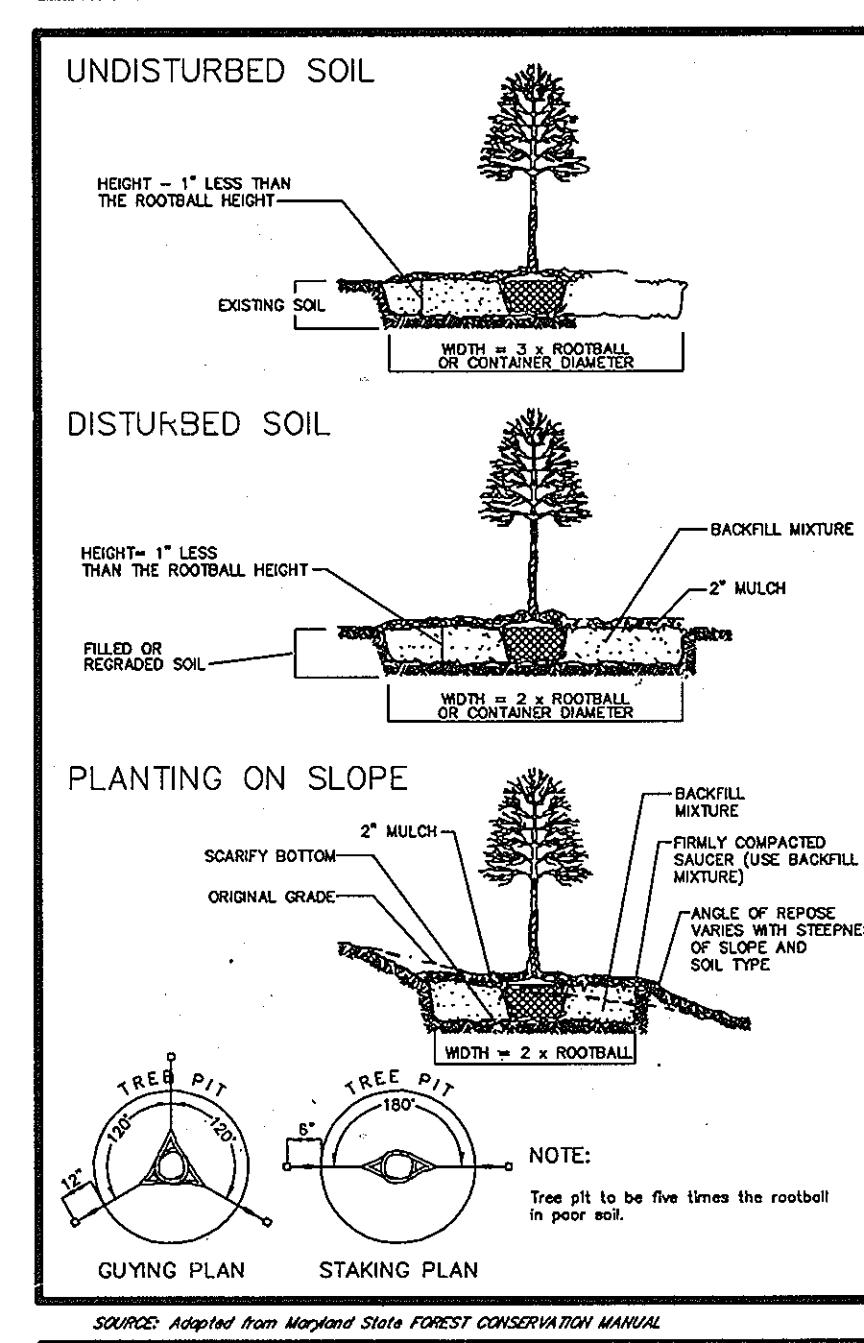
SHRUB PLANTING



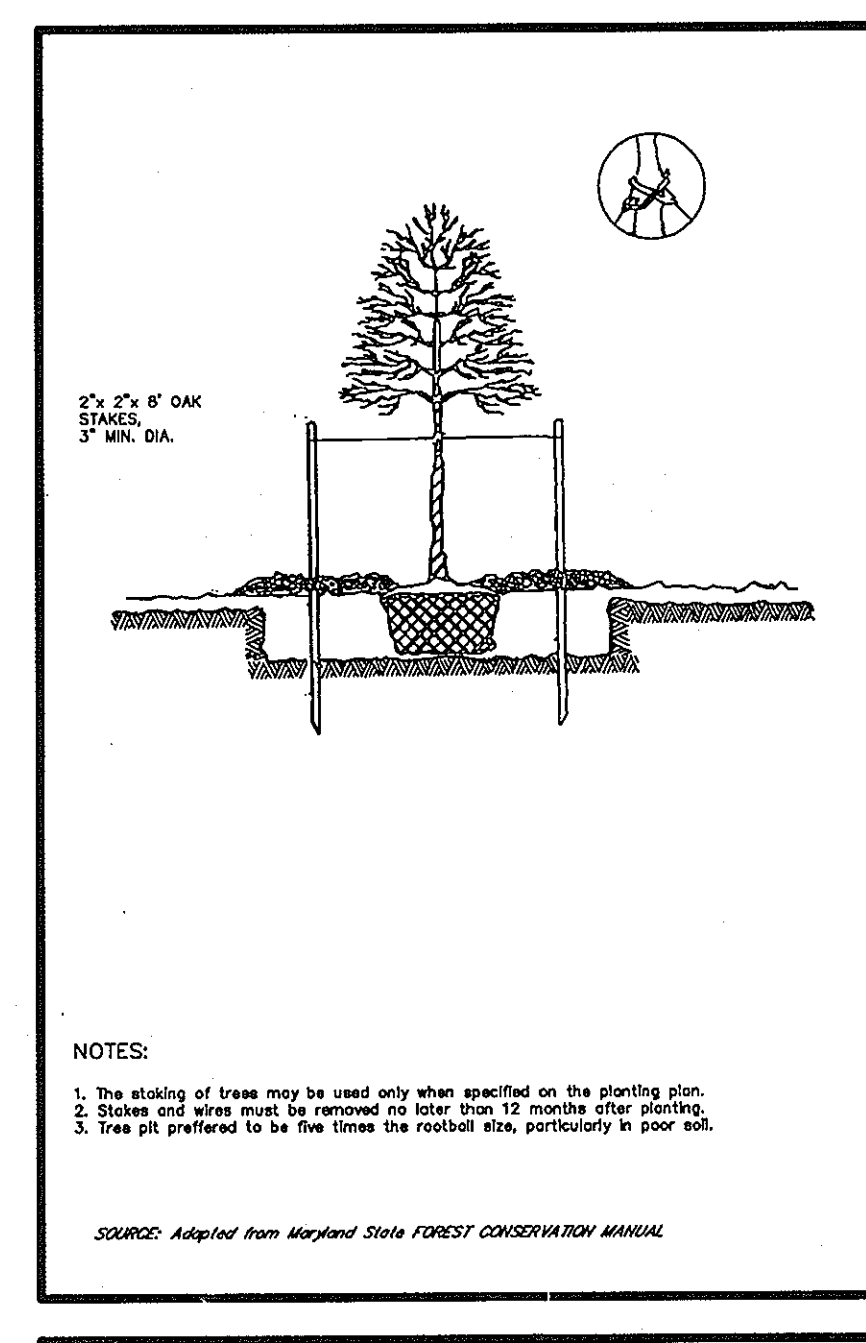
EVERGREEN TREE PLANTING



**DECIDUOUS TREE PLANTING
CONTAINER GROWN AND BALLED & BURLAPPED STOCK**



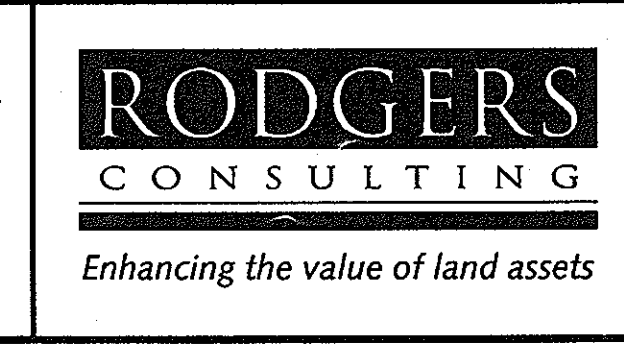
STAKED TREE SPECIFICATION (2)



DATE	REVISION	DATE	BY	DATE
	BASE DATA		CADD	
	DESIGNED		PF,RC	
	DRAWN		CoV	
	REVIEWED		PFB	
	RELEASE FOR			

Developer/Owner:
Stringtown Investment, LLC
 6820 Elm Street
 Suite 200
 McLean, Va. 22101
 Mr. Russell Dickens
 (703) 734 9730

**SITE DEVELOPMENT PLAN
LANDSCAPE PLAN**

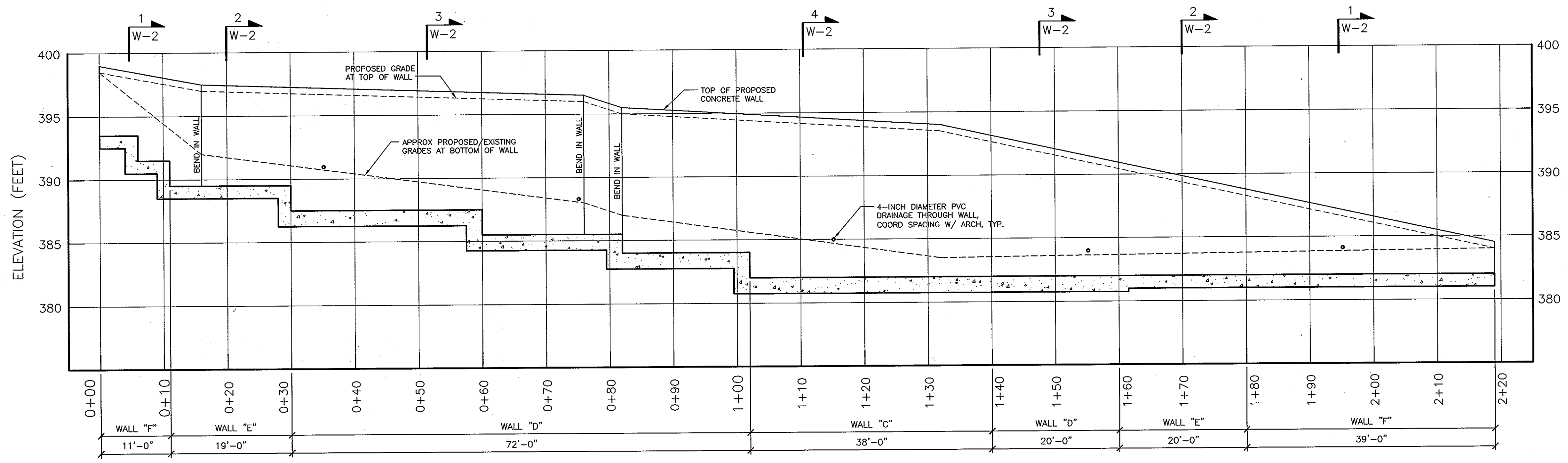


Rodgers Consulting, Inc.
 9260 Galthier Road
 Gaithersburg, MD 20877
 301.948.4700
 301.948.6256 (fax)
 301.253.6609
 www.rodgers.com

PHASE IV - APARTMENTS SDP
Montjoy
 ELECTION DISTRICT NO. #2
 HOWARD COUNTY, MARYLAND
 TAX MAP: 30 GRID:12 PARCEL B
 DPZ FILES: S-01-20, WF-01-117, P-02-10, P-02-17, P-03-03, P-04-02, P-03-07, SD7-04-07

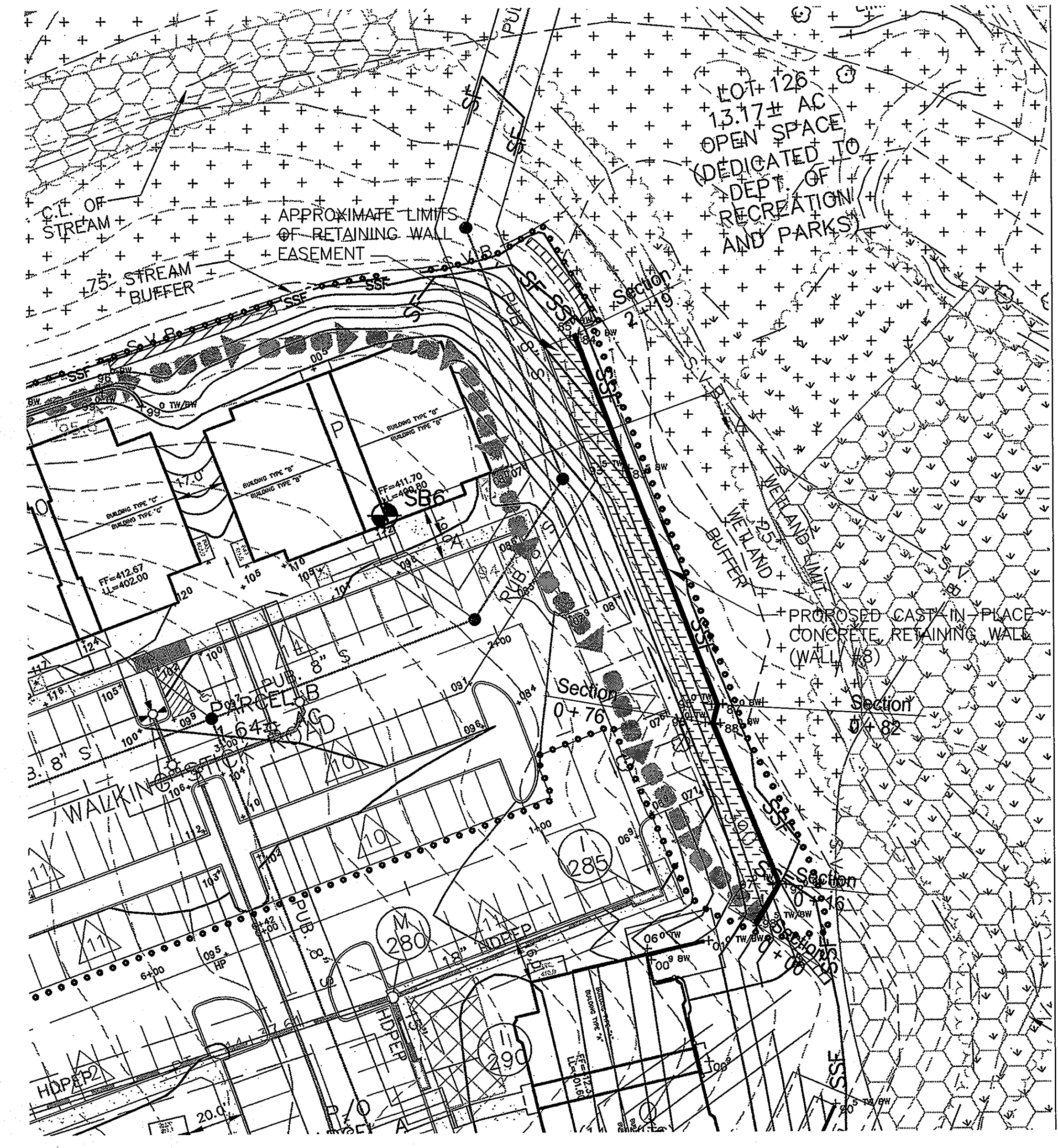
SCALE: 1" = 30'
 JOB No. 643G
 DATE: 2/03
 INDEX No. LS-1
 SHEET No. 4 OF 7

DATE: 7/7/2004 11:18:38 AM EDT
 SDP-04-120

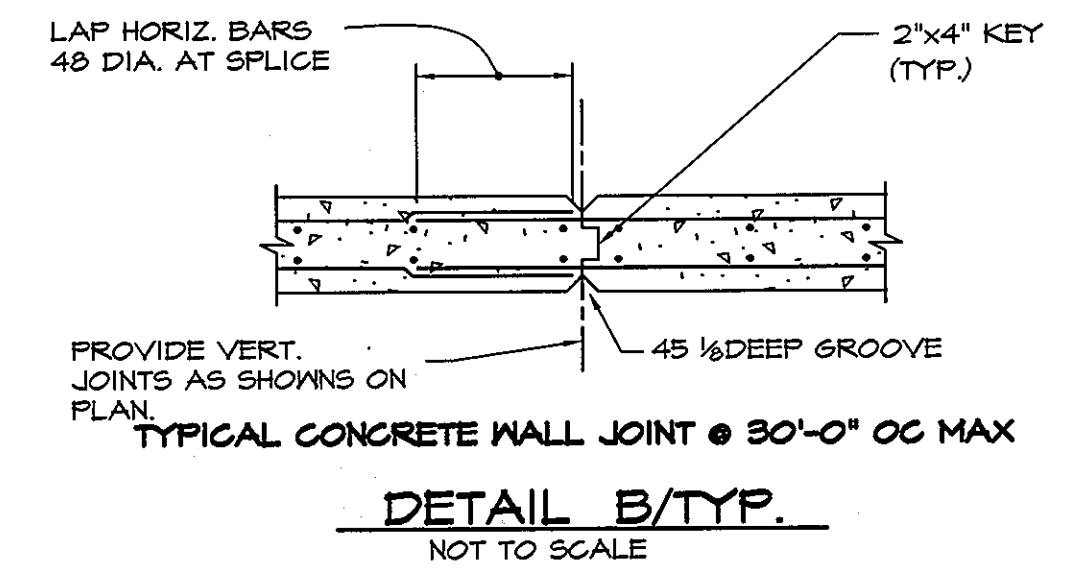
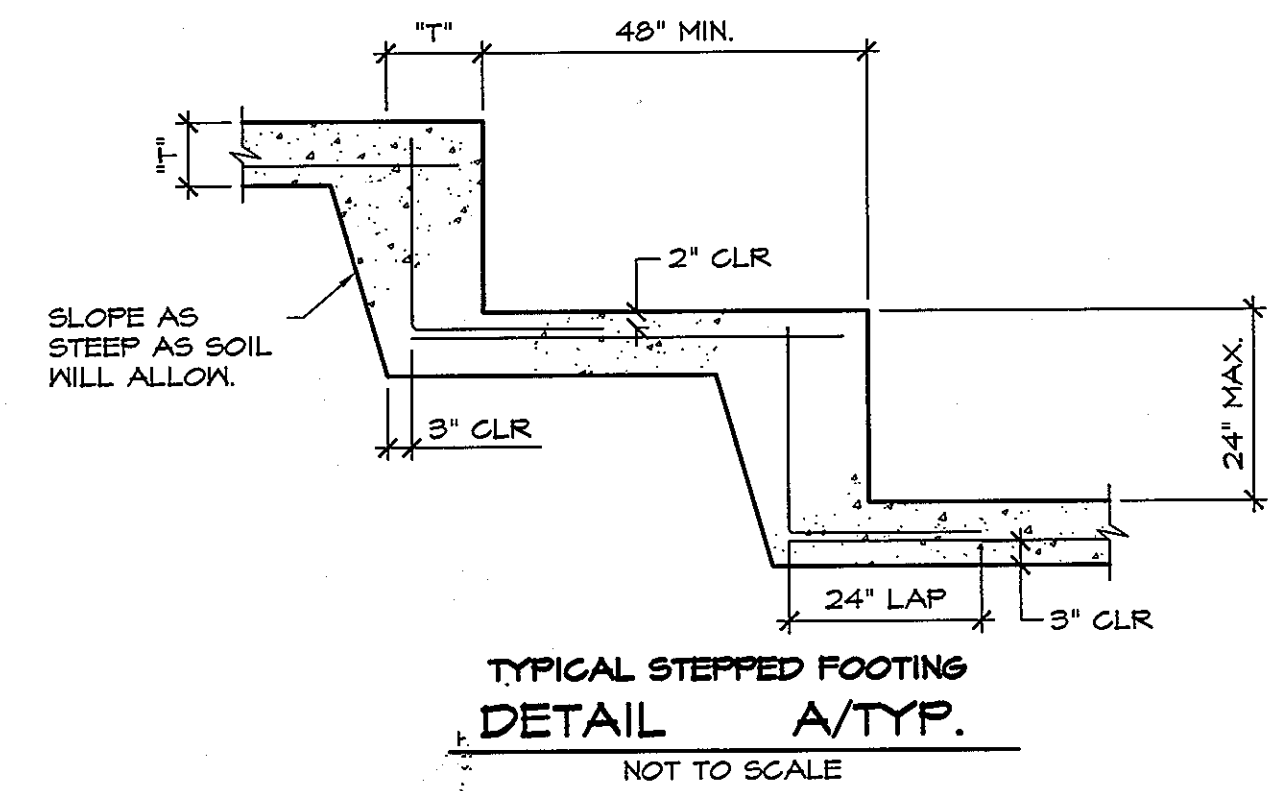


RETAINING WALL #8 - PROFILE

HORIZONTAL SCALE: 1" = 10'
VERTICAL SCALE: 1" = 5'



PARTIAL SITE PLAN
SCALE: 1" = 30'-0"



GEOTECHNICAL AND SUBSURFACE GENERAL NOTES

- MATERIALS**
- A. Controlled Fill
Controlled Fill soils to be placed behind the stone drainage layer in the concrete walls should be soils meeting the requirements of AASHTO A-4 or more granular.
 - B. Filter Fabric
Filter Fabric should be non-woven, polypropylene geotextile, 140 N manufactured by Nicolon Mirafi Group or approved equivalent.
- EXECUTION**
- A. Sequence of Construction (Buffer Protection)
 1. The contractor should install the silt fence to establish the limit of disturbance (L.O.D.) as shown on the construction plans. The L.O.D. and all buffers must be maintained throughout wall construction.
 2. The wall can likely be constructed from the backside using relatively compact equipment. At no time should any materials or construction equipment be stored outside the L.O.D. Equipment traffic should be confined to areas such that buffers are not disturbed.
 3. Penetration testing should be performed on the leveling pad subgrade prior to the placement of stone and compaction testing should be performed on each lift of reinforced and controlled backfill as specified below.
 - B. Excavation
 1. The contractor should excavate to the lines and grades shown on the construction drawings. Under no circumstances should the excavation lines and grades be exceeded, except with owner's approval. The contractor should protect the excavation from sloughing by placing a membrane over the face of the excavation.
 2. Excavations should be sloped or otherwise supported in accordance with Occupation Safety and Health Administration (OSHA) and other local and state regulations.
 - C. Foundation Subgrade Preparation
 1. Foundation soil should be excavated as required for installation of leveling pad, geogrid and other elements and as shown on the construction drawings.
 2. Foundation soil should be examined by the Engineer to assure that the actual foundation soil strength meets or exceeds assumed design strength. Soils not meeting required strength should be removed and replaced with controlled, compacted material.
 3. Over-excavated areas should be filled with select and approved material and compacted to 95 percent of maximum dry density in accordance with the Standard Proctor, ASTM D-698.
 4. Allowable bearing pressure for natural and controlled, compacted fill soils should be as specified in Part 5.
 5. The exposed foundation subgrade should be proofrolled with a loaded dump truck. Any soft or unstable areas identified during proofrolling should be overexcavated and backfilled with Controlled Fill.
 6. Any fills required to establish sloping surfaces in front of the walls should consist of Controlled Fill and should be placed, compacted and field tested in accordance with the requirements specified herein.
 - D. Fill Placement
 1. Wall backfill material should be placed in no more than 8-inch lifts and compacted to 95 percent of the Standard Proctor (ASTM D-698).
 2. Backfill should be placed, spread, and compacted in such a manner that minimizes the development of wrinkles in and/or movement of the geogrid.
 3. Only hand-operated compaction equipment should be allowed within 4 feet of the wall face.
 4. Backfill should be placed from the wall outward to insure that the geogrid remains taut.
 5. Tracked construction equipment should not be operated behind or above the wall.
 6. Rubber-tired equipment may pass over the geogrid reinforcement at slow speeds, less than 10 MPH. Sudden braking and sharp turning should be avoided.
 7. Place filter fabric between the unit core fill and the reinforced backfill as shown on plans. The filter fabric should be embedded a minimum of two feet into the reinforced fill.
 8. The finished sloping surface on the toe side of retaining walls should be protected by installing the permanent erosion control blanket and seeding in accordance with project requirements.
 - E. DRAINAGE
 1. Drainage fill should be placed behind the wall to the limits shown. The drainage fill should be a minimum of 12-inches thick. The drainage fill should be ASTM #57 stone. The drainage fill should be wrapped in filter fabric (Mirafi 140N or equal) as shown on the drawings.
 2. Positive drainage should be maintained during and after construction. Wall backfill soils that become wet during construction should be dried to optimum moisture content or removed.
- CONSTRUCTION OBSERVATION AND TESTING**
- A. Retaining walls shall only be constructed under the observation of a Registered Professional Engineer and a (NICET, WACEL, or equivalent) certified soils technician.
 - B. The required bearing pressure beneath the footing of the wall shall be verified in the field by a certified soils technician. Testing documentation must be provided to the county inspector prior to the start of construction. The required test procedure shall be the Dynamic Cone Penetrometer (DCP) Test ASTM SIP-399.
 - C. The suitability of fill material shall be confirmed by the on-site soils technician. Each 8-inch lift must be compacted to a minimum of 95% of the Standard Proctor Density and the testing reports shall be made available to the county inspector upon completion of construction.
 - D. For walls over 10'-0" in height, one (1) soil boring is required every 100' along the length of the wall, copies of the boring reports shall be provided to the inspector prior to the start of construction.
- DESIGN CRITERIA**
1. Required minimum allowable foundation bearing pressure is 2,500 psf.
 2. Design internal friction angle = 30 degrees.
 3. Design moist unit weight = 125 pcf.
 4. Retaining walls are not designed to resist hydrostatic pressure.
 5. Foundation soil internal friction angle = 30 degrees and cohesion = 0 psf.

APPROVED: DEPARTMENT OF PLANNING & ZONING

[Signature] 7/6/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 7/27/04
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 7/28/04
DIRECTOR DATE

W-1

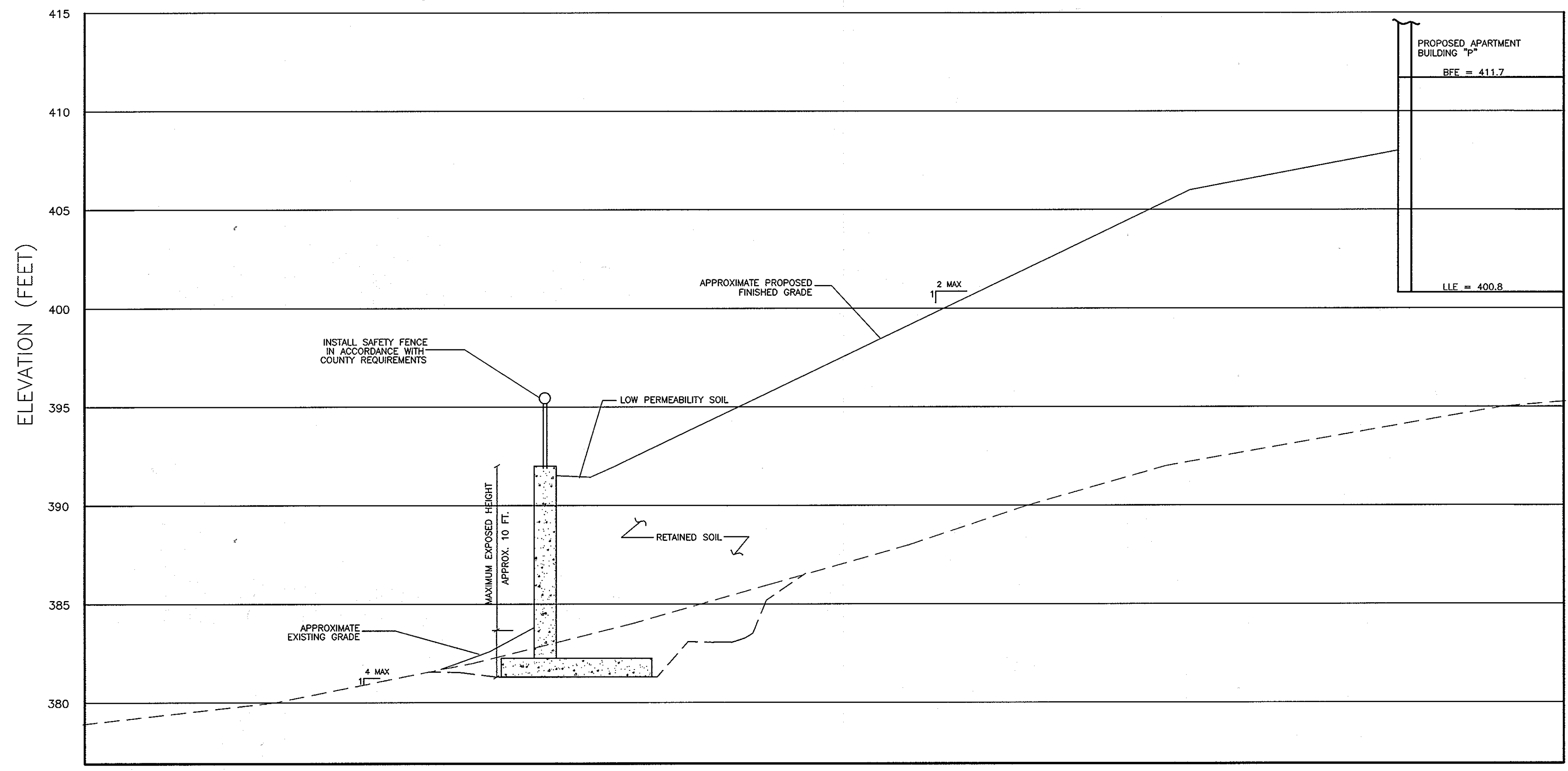
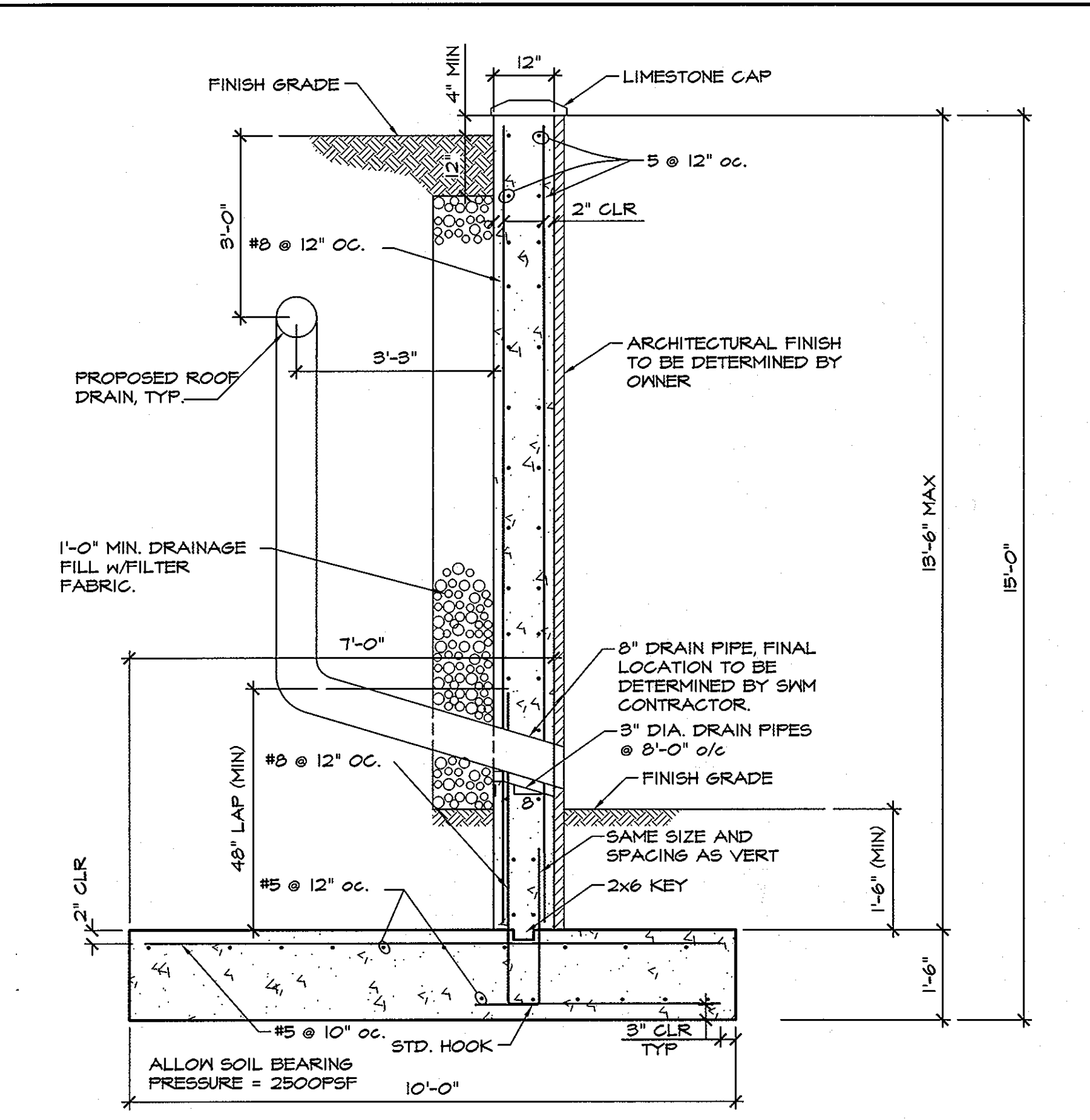
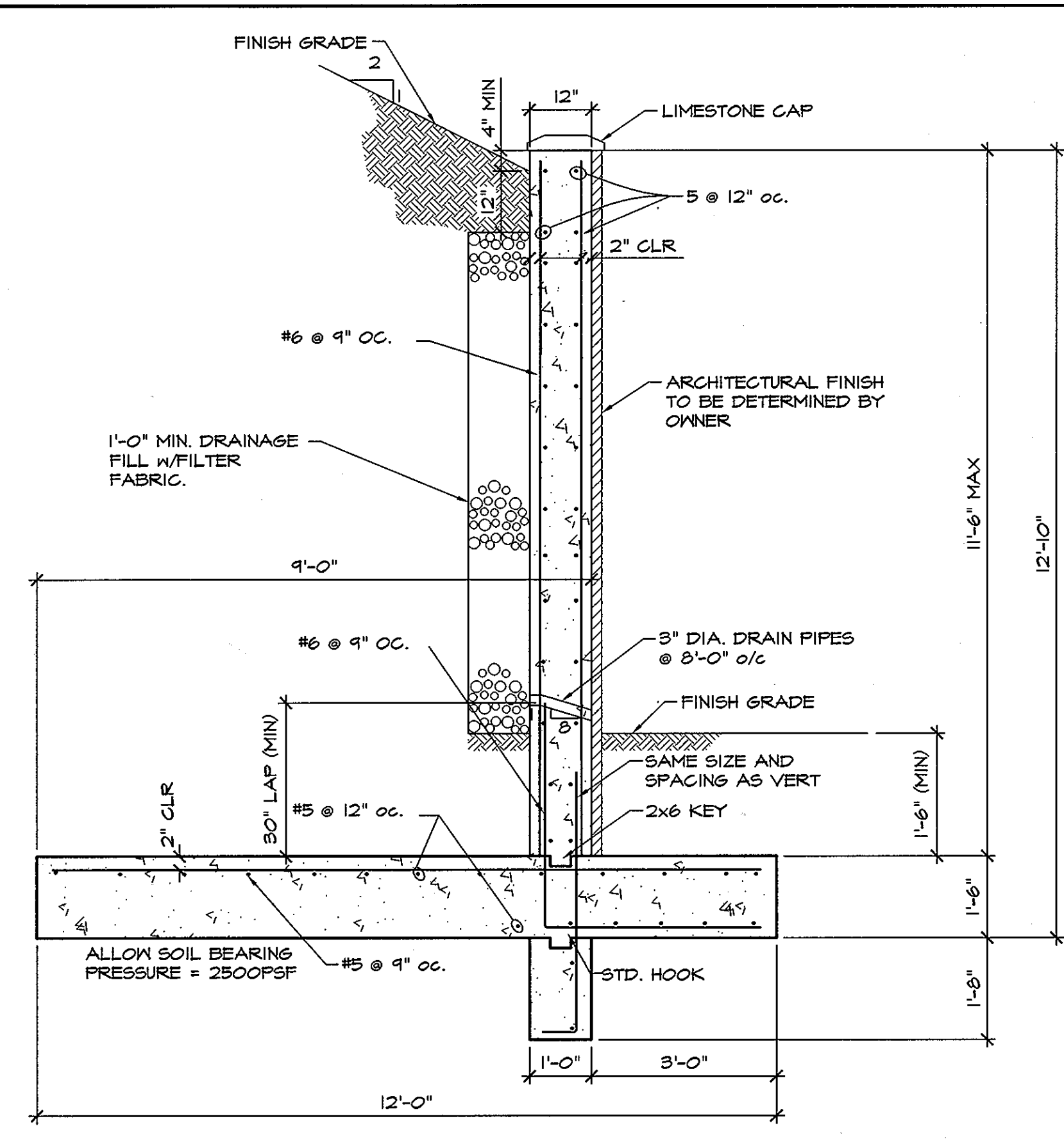
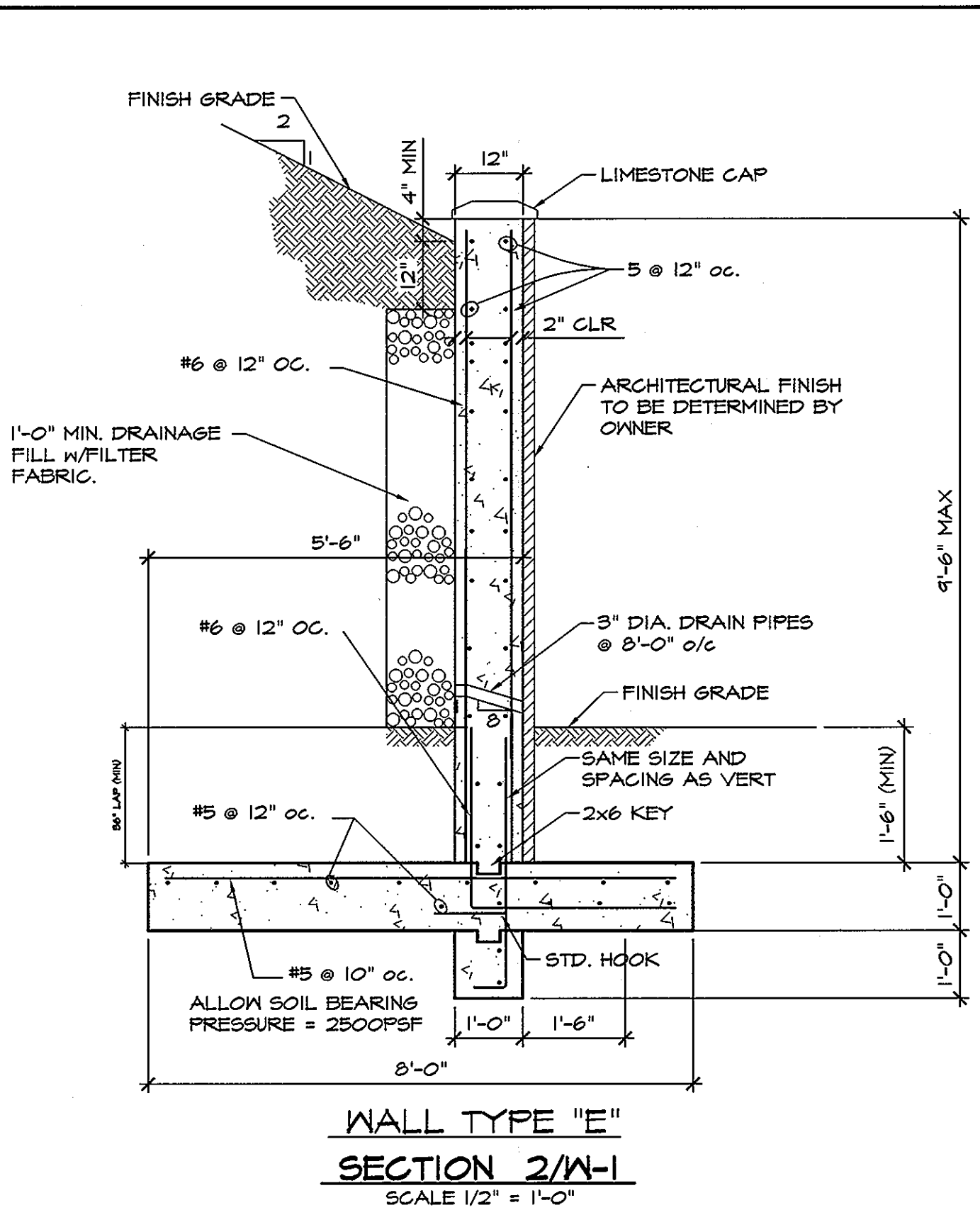
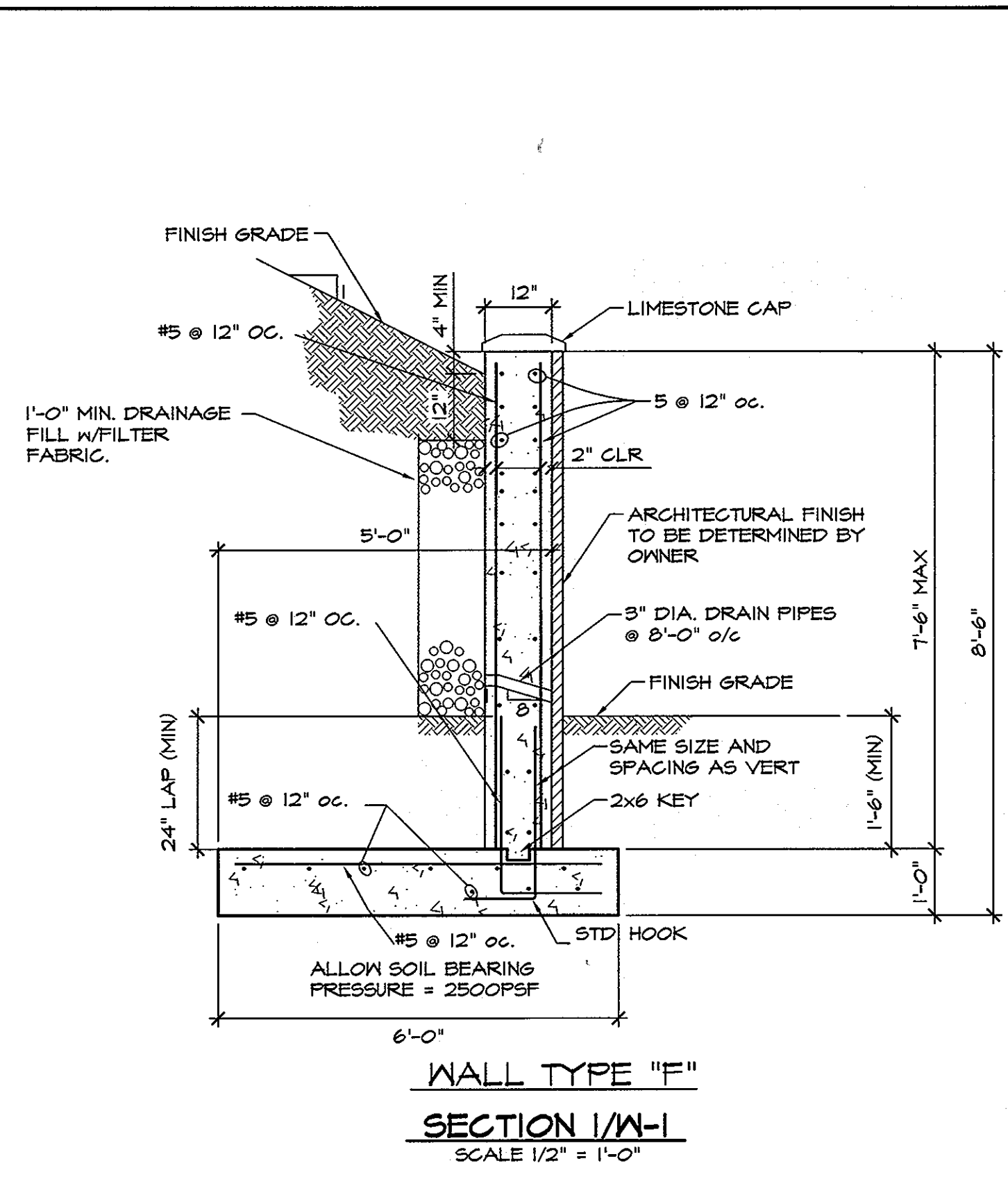
GEO-TECHNOLOGY ASSOCIATES, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
MORRIS & FITCHIE ASSOCIATES, INC.
ENGINEERS, ARCHITECTS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS

9000 Junction Drive, Suite 9
Annapolis Junction, MD 20701
(410) 792-8440 • (201) 470-4470
Fax: (410) 792-7395

MONTJOY FARM
 PHASE IV - APARTMENTS SDP
 COLUMBIA, HOWARD COUNTY, MARYLAND
 RETAINING WALL PLANS, PROFILES & SECTIONS

DATE	REVISIONS	JOB NO.: 13591
		SCALE: AS SHOWN
		DATE: 03-08-04
		DRAWN BY: JGB
		DESIGN BY: JGB
		REVIEW BY: BES
		SHEET: 6 OF 7

SDP.04.120 12233.03MT JOY-WALLS



WALL TYPE "D"
SECTION 3/W-1
SCALE 1/2" = 1'-0"

WALL TYPE "C"
SECTION 4/W-1
SCALE 1/2" = 1'-0"

- STRUCTURAL NOTES**
- BUILDING CODES**
 - ALL CONSTRUCTION SHALL CONFORM WITH THE IBC 2000 BUILDING CODE AND ALL SUBSEQUENT SUPPLEMENTS.
 - IN ADDITION, ALL CONSTRUCTION SHALL CONFORM WITH THE GOVERNING LOCAL BUILDING CODE.
 - MISCELLANEOUS**
 - SHOP DRAWINGS FOR ALL STRUCTURAL ELEMENTS SHOWN ON THE CONTRACT DOCUMENTS MUST BE SUBMITTED BY THE CONTRACTOR OR OWNER FOR REVIEW BY THE ENGINEER. IF THE CONTRACTOR OR OWNER FAILS TO SUBMIT THE SHOP DRAWINGS, THE ENGINEER WILL NOT BE RESPONSIBLE FOR STRUCTURAL CERTIFICATION AND DESIGN OF THE PROJECT. THE SHOP DRAWINGS SHALL INDICATE ANY DEVIATIONS OR OMISSIONS FROM THE CONTRACT DOCUMENTS. THE GENERAL CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS PRIOR TO SUBMISSION AND MAKE ALL CORRECTIONS DEEMED NECESSARY.
 - THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS SHOWN ON THE CONTRACT DRAWINGS BEFORE PROCEEDING WITH CONSTRUCTION. ALL DISCREPANCIES AND OMISSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.
 - THE CONTRACTOR SHALL NOT SUBMIT REPRODUCTIONS OF THE STRUCTURAL CONTRACT DOCUMENTS AS SHOP DRAWINGS.
 - SCALES SHOWN ON THE STRUCTURAL CONTRACT DRAWINGS ARE FOR GENERAL INFORMATION ONLY. DIMENSIONAL INFORMATION SHALL NOT BE OBTAINED BY SCALING THE DRAWINGS.
 - RETAINING WALLS**
 - FOOTINGS FOR ALL RETAINING WALLS HAVE BEEN DESIGNED FOR AN ASSUMED NET ALLOWABLE SOIL BEARING PRESSURE OF 2500 PSF. THE ALLOWABLE SOIL BEARING PRESSURE SHALL BE FIELD VERIFIED BY A REGISTERED GEOTECHNICAL ENGINEER AND APPROVED PRIOR TO PLACING FOOTINGS. SHOULD THE ACTUAL SOIL BEARING PRESSURE BE LESS THAN 2500 PSF, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER.
 - RETAINING WALLS HAVE BEEN DESIGNED WITH BACKFILL MATERIAL HAVING THE FOLLOWING CHARACTERISTICS:
 - γ_{soil} = 125 PCF
 - φ_{int} = 30 DEGREES
 - c_{soil} = 0
 - COHESION = 0
 IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO INSURE THE BACK FILL MATERIAL MEETS THESE CHARACTERISTICS.
 - RETAINING WALLS HAVE BEEN DESIGNED FOR THE FOLLOWING MINIMUM FACTORS OF SAFETY:
 - SLIDING 1.5
 - OVERTURNING 2.0
 - CONSTRUCTION OF ALL RETAINING WALLS SHALL BE PERFORMED UNDER THE SUPERVISION OF A REGISTERED GEOTECHNICAL ENGINEER. SEE GEOTECHNICAL AND SUBSURFACE GENERAL NOTES ON PD-9 FOR ADDITIONAL INFORMATION.

- CAST IN PLACE CONCRETE**
 - ALL CONCRETE CONSTRUCTION SHALL CONFORM TO THE "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 309)" AND TO THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318)".
 - IN ADDITION TO THE ABOVE, ALL CONCRETE WORK SHALL CONFORM TO THE FOLLOWING:
 - RECOMMENDED PRACTICE FOR HOT WEATHER CONCRETING (ACI 309)
 - RECOMMENDED PRACTICE FOR COLD WEATHER CONCRETING (ACI 306)
 - RECOMMENDED PRACTICE FOR CONCRETE FORMWORK (ACI 347)
 - ALL CONCRETE EXPOSED TO PUBLIC VIEW SHALL CONFORM TO THE REQUIREMENTS FOR ARCHITECTURAL CONCRETE CONTAINED IN ACI 308.
 - ALL CONCRETE UNLESS NOTED OTHERWISE SHALL BE STONE AGGREGATE CONCRETE HAVING A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI. ALL CONCRETE EXPOSED TO WEATHER SHALL HAVE AN AIR ENTRAINMENT OF 8% +/- .1%. NO ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL BE PERMITTED. MAXIMUM AGGREGATE SIZE SHALL BE 1", AND MAXIMUM SLUMP SHALL BE 4". 3" FOR SLABS ON GRADE. ALL CONCRETE EXCEPT FOOTINGS SHALL CONTAIN A WATER REDUCING ADMIXTURE. PORTLAND CEMENT SHALL CONFORM TO ASTM C 150 AND NORMAL WEIGHT AGGREGATES SHALL CONFORM TO ASTM C 88.
 - ALL REINFORCING BARS SHALL BE NEM BILLET STEEL CONFORMING TO ASTM A 615 GRADE 60. LAP ALL REINFORCING BARS A MINIMUM OF 36 BAR DIAMETERS UNLESS OTHERWISE INDICATED.
 - ALL REINFORCING SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH THE CRSI "MANUAL OF STANDARD PRACTICE" ACI 318' DETAILS AND DETAILING OF CONCRETE REINFORCEMENT", ACI SP 16 "DETAILING MANUAL".
 - ALL CONCRETE MIX DESIGNS, INCLUDING CEMENT CONTENT, WATER CEMENT RATIO, FINE AND COARSE AGGREGATE CONTENT AND ALL ADMIXTURES, SHALL BE REVIEWED BY ENGINEER PRIOR TO PLACING FIRST CONCRETE.
 - ALL CONCRETE SHALL BE SAMPLED AND TESTED BY THE TESTING AGENCY. THE CONTRACTOR SHALL NOTIFY THE TESTING AGENCY 48 HOURS PRIOR TO THE PLACING OF ANY CONCRETE.
- MINIMUM COVER FOR ALL REINFORCING SHALL BE AS FOLLOWS UNLESS OTHERWISE INDICATED:**
 - FOOTINGS: 4 INCHES
 - WALLS BELOW GRADE: 2 INCHES

APPROVED: DEPARTMENT OF PLANNING & ZONING

[Signature] 7/16/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE

[Signature] 7/21/04
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE

[Signature] 7/28/04
DIRECTOR
DATE

HORIZONTAL SCALE: 1/4" = 1'-0"
VERTICAL SCALE: 1/4" = 1'-0"

W-2

GEO-TECHNOLOGY ASSOCIATES, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

MORRIS & RITCHIE ASSOCIATES, INC.
ENGINEERS, ARCHITECTS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS

MONTJOY FARM
PHASE IV - APARTMENTS SDP
COLUMBIA, HOWARD COUNTY, MARYLAND

RETAINING WALL PLANS, PROFILES & SECTIONS

DATE	REVISIONS	JOB NO.: 13591
		SCALE: AS SHOWN
		DATE: 03-08-04
		DRAWN BY: JGB
		DESIGN BY: JGB
		REVIEW BY: BES
		SHEET: 7 OF 7

SDP.04.120 P:\PROJ\12233.03MT JOY-WALLS