

GENERAL NOTES

- 1) THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
- 2) BOUNDARY IS BASED ON A FIELD RUN MONUMENTED SUBURBAN BOUNDARY SURVEY PERFORMED BY JOHN A. MILDBERG IN MARCH, 2006.
- 3) THE EXISTING TOPOGRAPHY SHOWN ONSITE IS BASED ON AN AERIAL TOPOGRAPHIC SURVEY PERFORMED BY WINGS AERIAL MAPPING CO., INC. FLOWN ON OR ABOUT JANUARY, 2006.
- 4) THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE NAD 83 PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 16E1 AND 0012 WERE USED FOR THIS PROJECT.
- 5) WATER IS PUBLIC. THE CONTRACT NUMBER IS 24-4550-D. THE DRAINAGE AREA IS LITTLE PATUXENT.
- 6) SEWER IS PUBLIC. THE CONTRACT NUMBER IS 24-4550-D. THE DRAINAGE AREA IS LITTLE PATUXENT.
- 7) STORMWATER MANAGEMENT QUALITY AND QUANTITY CONTROL IS PROVIDED BY SWMF#2 (EXTENDED DETENTION FACILITY WITH MICROPOOL AND OFFLINE RECHARGE CHAMBER) CONSTRUCTED UNDER PHASE 1, SECTION (F-08-060) AND SWMF#3 (EXTENDED DETENTION FACILITY WITH MICRO-POOL) CONSTRUCTED UNDER PHASE 2, SECTION 1 (F-08-084). BOTH FACILITIES SHALL BE PRIVATELY OWNED AND MAINTAINED.
- 8) EXISTING UTILITIES SHOWN ARE BASED ON CONTRACT DRAWINGS, AERIAL AND FIELD SURVEYED LOCATIONS.
- 9) THERE ARE NO WETLANDS, STREAMS, THEIR REQUIRED BUFFERS OR 100-YEAR FLOODPLAIN LOCATED WITHIN THE LIMITS OF VILLAGES AT TURF VALLEY, PHASE 3.
- 10) NOISE STUDY WAS PREPARED BY POLYSONICS DATED NOVEMBER, 2007 AND REVISED IN MAY, 2008. THE 65 dBA NOISE CONTOUR LINE DRAWN ON THIS SUBDIVISION PLAN IS ADVISORY AS REQUIRED BY THE HOWARD COUNTY DESIGN MANUAL, CHAPTER 5, REVISED FEBRUARY, 1992 AND CANNOT BE CONSIDERED TO EXACTLY LOCATE THE 65 dBA NOISE EXPOSURE. THE 65 dBA NOISE LINE WAS ESTABLISHED BY HOWARD COUNTY TO ALERT DEVELOPERS, BUILDERS AND FUTURE RESIDENTS THAT AREAS BEYOND THIS THRESHOLD MAY EXCEED GENERALLY ACCEPTED NOISE LEVELS ESTABLISHED BY THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.
- 11) NO GEOTECHNICAL REPORT IS REQUIRED FOR VILLAGES AT TURF VALLEY, PHASE 3.
- 12) THE SUBJECT PROPERTY IS ZONED PGCC PER THE 2-2-2004 COMPREHENSIVE ZONING PLAN AND THE "COMP LITE" ZONING AMENDMENTS EFFECTIVE 7-28-2006.
- 13) TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO BURIAL GROUNDS, CEMETERIES OR HISTORIC STRUCTURES LOCATED ON THIS SITE.
- 14) THIS PROJECT IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
- 15) THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.
- 16) DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
 - A) WIDTH - 12' (16' SERVING MORE THAN ONE RESIDENCE).
 - B) SURFACE - 6" OF COMPACT CRUSHER RUN BASE WITH TAR AND CHIP COATING (1.5" MIN.).
 - C) GEOMETRY - MAX. 15% GRADE, MAX. 10% GRADE CHANGE & MIN. 45' TURNING RADIUS.
 - D) STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOAD)
 - E) DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOODPLAIN WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY.
 - F) STRUCTURE CLEARANCES - MINIMUM 12 FEET.
 - G) MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.
- 17) LANDSCAPING FOR THIS SUBDIVISION IS PROVIDED IN ACCORDANCE WITH A CERTIFIED LANDSCAPE PLAN INCLUDED WITH THIS ROAD CONSTRUCTION PLAN SET IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCING HAS BEEN POSTED AS PART OF THE DPW DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$11,250.00 (\$5,700.00 FOR 19 SHADE TREES, \$5,550.00 FOR 37 EVERGREENS).
- 18) THIS PROJECT IS EXEMPT FROM HOWARD COUNTY FOREST CONSERVATION REQUIREMENTS UNDER SECTION 16.1202(d)(1)(v) OF THE COUNTY CODE SINCE IT IS A PLANNED UNIT DEVELOPMENT WHICH HAD PRELIMINARY DEVELOPMENT PLAN APPROVAL AND 50% OR MORE OF THE LAND WAS RECORDED AND SUBSTANTIALLY DEVELOPED BEFORE 12-31-1992.
- 19) THERE ARE NO EXISTING STRUCTURES LOCATED WITHIN THE LIMITS OF VILLAGES AT TURF VALLEY, PHASE 3.
- 20) RESERVATION OF PUBLIC UTILITY EASEMENTS
DEVELOPER RESERVES UNTO ITSELF, ITS SUCCESSORS AND ASSIGNS, ALL EASEMENTS SHOWN ON THIS PLAN FOR WATER, SEWER, STORM DRAINAGE, OTHER PUBLIC UTILITIES, LOCATED IN, ON, OVER AND THROUGH LOTS 114-172 AND OPEN SPACE LOTS 173-176, ANY CONVEYANCES OF THE AFORESAID LOTS/PARCELS SHALL BE SUBJECT TO THE EASEMENTS HEREIN RESERVED, WHETHER OR NOT EXPRESSLY STATED IN THE DEED(S) CONVEYING LOT(S)/PARCELS. UPON COMPLETION OF THE PUBLIC UTILITIES THE COUNTY SHALL ACCEPT THE EASEMENTS AND RECORD THE DEED(S) OF EASEMENT IN THE LAND RECORDS OF HOWARD COUNTY.
- 21) THIS SUBDIVISION IS SUBJECT TO SECTION 18.122B OF THE HOWARD COUNTY CODE. PUBLIC WATER AND/OR SEWER SERVICE HAS BEEN GRANTED UNDER THE TERMS AND PROVISIONS, THEREOF, EFFECTIVE 11-13-13, ON WHICH DATE DEVELOPER AGREEMENT #24-4550-D WAS FILED AND ACCEPTED.
- 22) 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.
- 23) THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- 24) STREET LIGHT PLACEMENT AND TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III (1983) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)", A MINIMUM SPACING OF 20 FEET SHALL BE MAINTAINED BETWEEN ANY STREETLIGHT AND ANY TREE.
- 25) TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO PLACEMENT OF ANY ASPHALT.
- 26) ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-3/4" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE)-3" LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
- 27) THIS PROJECT IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE ZONING REGULATIONS EFFECTIVE APRIL 13, 2004. PER SECTION 120(h)(1), PLANNING BOARD APPROVAL IS REQUIRED FOR THE SITE DEVELOPMENT PLAN FOR THIS PROJECT.
- 28) ALL PROPOSED ALLEYS SERVING UNITS WITH REAR LOAD GARAGES (LOTS 131-149, 155-163 & 167-172) ARE PRIVATE. THEY WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION.
- 29) THIS PROJECT IS SUBJECT TO THE TRAFFIC STUDY PREPARED BY THE TRAFFIC GROUP, INC. UNDER S-86-13, AND UPDATED IN MARCH 2004.
- 30) PARKING REQUIREMENTS AS PER ZONING SECTION 133.D(3) AND TABLE 2.11 OF DMV III: 2 SPACES PER DWELLING UNIT + 0.3 SPACES PER DWELLING UNIT FOR OVERHEAD
- 31) REQUIRED: 59 UNITS x 23 = 136
PROVIDED: 59 UNITS x 4 (DRIVEWAYS & GARAGES) + 16 SPACES (COVERED OVERCAME) = 352
- 32) THE VILLAGES AT TURF VALLEY SUBDIVISION (PHASES 1-4) CONSTITUTED 220 TOTAL UNITS (145 SPA, 33 STD, AND 42 CONDOMINIUM), WHICH MEETS THE SKETCH PLAN MILESTONE DATE OF JANUARY 1, 2001 THROUGH JUNE 30, 2002 FOR BOTH PHASE I (A) (131 UNITS) AND I (B) (110 UNITS) AS ESTABLISHED BY THE REVISED PHASING PLAN DATED JUNE 21, 2000. UNDER P-06-013, 42 CONDOMINIUM UNITS WERE APPROVED BUT WERE USED FOR OAKMONT AT TURF VALLEY (F-02-082). THESE 42 CONDOMINIUM UNITS WERE NOT PREVIOUSLY INCLUDED WITH THE OAKMONT AT TURF VALLEY (F-02-82) PLANS. IN ORDER TO RECEIVE BUILDING ALLOCATIONS, THESE 42 CONDOMINIUM UNITS WERE SHOWN AND APPROVED ON THE PRELIMINARY PLAN FOR THE VILLAGES AT TURF VALLEY (F-08-013). THE SECOND AMENDMENT TO THE TURF VALLEY MULTI-USE FINAL DEVELOPMENT PLAN WAS RECORDED ON NOVEMBER 30, 2007 (PLATS 19578-19580), INCREASING THE PROJECTED UNITS IN THE OAKMONT AT TURF VALLEY AREA FROM 150 TO 200. AS A RESULT, THOSE 42 UNITS ARE NO LONGER A PART OF THE VILLAGES AT TURF VALLEY WHICH LEAVES UNIT TOTAL AT 178. HOWEVER, WITH THE APPROVAL OF WP-08-009 AN ADDITIONAL 21 UNITS WERE ADDED TO THE VILLAGES AT TURF VALLEY. THE FINAL UNIT TOTAL FOR THIS SUBDIVISION COMES TO 199.
- 33) NOISE WALLS SHALL BE PRIVATELY OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION.

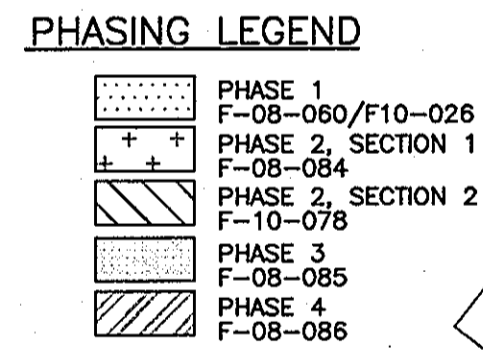
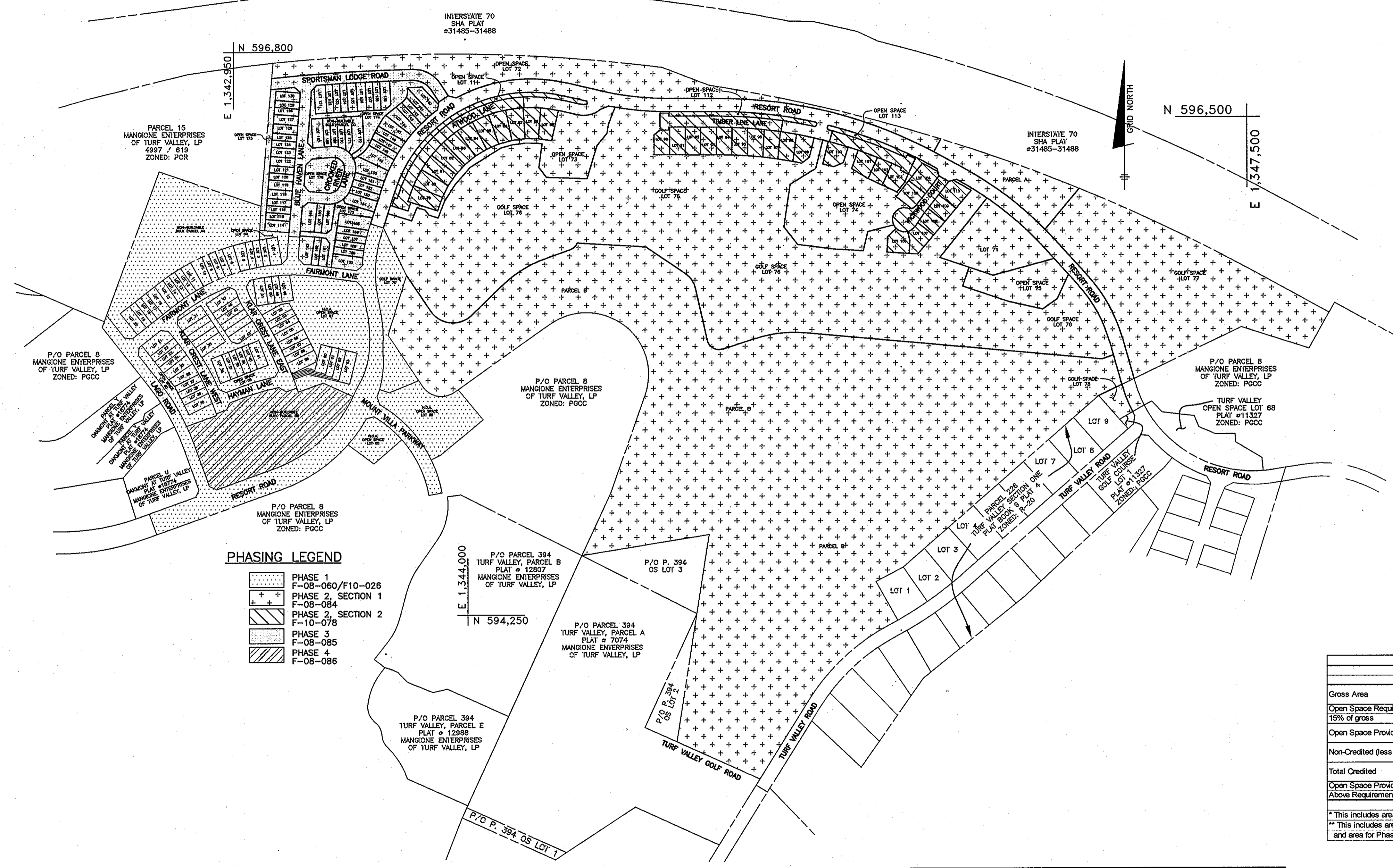
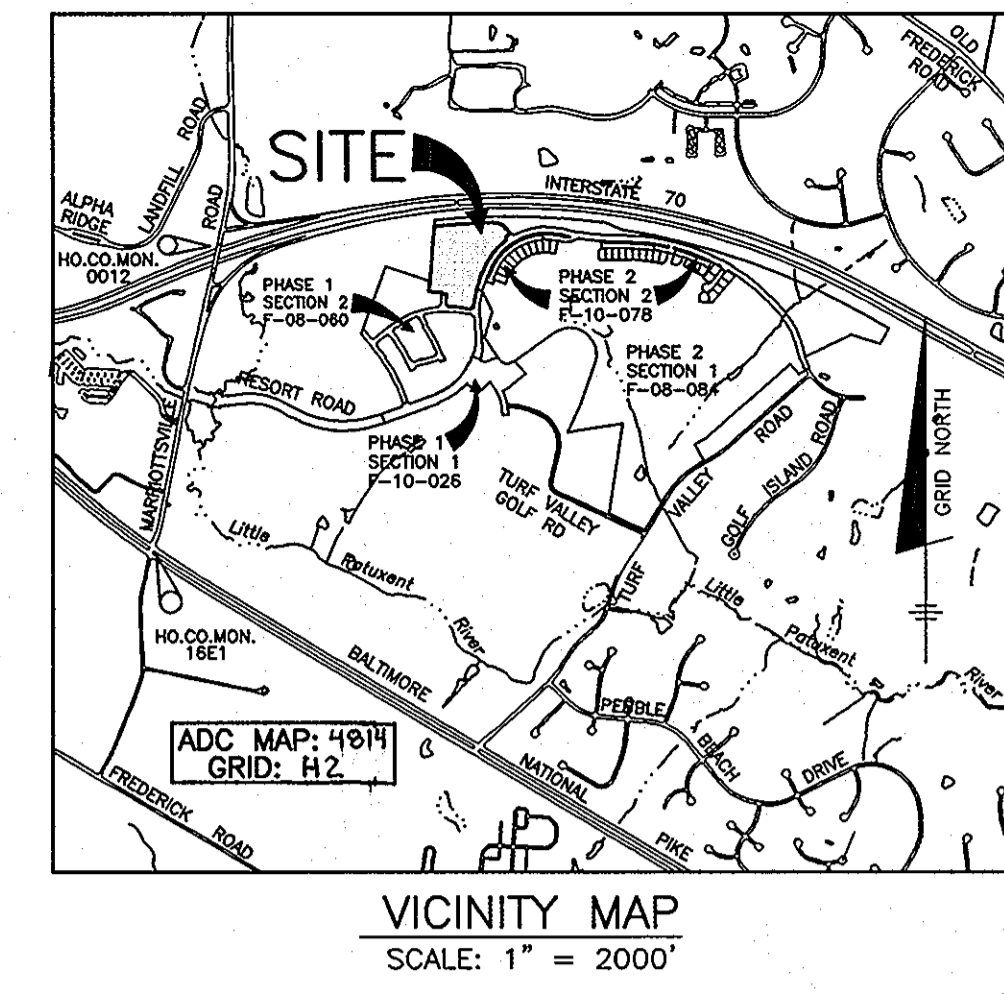
VILLAGES AT TURF VALLEY

PHASE 3

ROADS, STORMWATER MANAGEMENT AND STORM DRAIN CONSTRUCTION PLANS

BENCHMARKS NAD'83 HORIZONTAL
 HO. CO. #16E1 (AKA: 3438001)
 STAMPED BRASS DISK SET ON TOP OF A 3' DEEP COLUMN OF CONCRETE.
 N 593250.960' E 1340192.70'
 ELEVATION: 463.981'

HO. CO. #0012 (AKA: 3439001)
 STAMPED BRASS DISK SET ON TOP OF A 3' DEEP COLUMN OF CONCRETE.
 N 596502.760' E 1340884.37'
 ELEVATION: 486.298'



PLAN VIEW
SCALE: 1" = 300'

VILLAGES AT TURF VALLEY PHASING CHART

PHASE	S.F.A.	S.F.D.	CONDOMINIUM	TOTAL
1 (F10-026)	0	0	0	0
1 (F-08-060)	63	0	0	63
2 (F-08-084)	0	0	42	42
2 (F-10-078)	0	32	0	32
3 (F-08-085)	59	0	0	59
4 (F-08-086)	23	0	1	23
WANT SHOP (SDP-08-098)	0	0	1 (Access. Apt.)	1
TOTAL	145	32	43	220

SHEET INDEX

NO.	TITLE SHEET
1	ROAD PLAN AND PROFILE - BLUE HAVEN LANE/CROOKED RIVER LANE
2	ROAD PLAN AND PROFILE - SPORTSMAN LODGE ROAD
3	CURB RETURN FILLET PROFILES
4	GRADING, SEDIMENT AND EROSION CONTROL PLAN
5	SEDIMENT AND EROSION CONTROL NOTES AND DETAILS
6	LANDSCAPE AND STREET TREE PLAN
7	STORM DRAIN PROFILES & DETAILS
8	STORM DRAIN DRAINAGE AREA MAP
9	STREET LIGHT, SIGNAGE AND STRIPING PLAN
10	NOISE WALL PLAN AND PROFILE
11	

BULK REGULATIONS:

PERMITTED USES: ALL USES AS PER TURF VALLEY PGCC DISTRICT, MULTI-USE SUBDISTRICT FINAL DEVELOPMENT PLAN, SECOND AMENDMENT, PLATS 19578-19580. (48 USES OBTAINED FROM RESIDENTIAL USES TO SEPARATELY STORES)

PERMITTED HEIGHT: SINGLE-FAMILY DETACHED AND ATTACHED - 34 FEET
 APARTMENT BUILDINGS - 60 FEET
 OTHER ACCESSORY STRUCTURES - 15 FEET

MAXIMUM DENSITY FOR TOTAL PGCC DISTRICT IS 2.0 DWELLING UNITS PER ACRE.

MAXIMUM UNITS PER STRUCTURE:
 1. SINGLE FAMILY ATTACHED 8 UNITS PER STRUCTURE
 2. APARTMENTS LESS THAN 40 FEET IN HEIGHT 24 UNITS PER STRUCTURE
 3. APARTMENTS 40 FEET OR GREATER IN HEIGHT 120 UNITS PER STRUCTURE

MINIMUM LOT SIZE REQUIREMENTS:
 SINGLE FAMILY DETACHED 6,000 SQ.FT.
 EXCEPT ZERO LOT LINE DWELLINGS 4,000 SQ.FT.
 SINGLE FAMILY SEMI-DETACHED 4,000 SQ.FT.
 MINIMUM LOT SIZE PROPOSED (SINGLE FAMILY ATTACHED) 3,520 SQ. FT. (LOTS 124-125 AND LOTS 126-128)

MAXIMUM BUILDING LENGTH FOR RESIDENTIAL STRUCTURE = 120 FEET, UNLESS APPROVED BY PLANNING BOARD TO A MAXIMUM OF 300 FEET.

PERMITTED SETBACKS:

FROM ARTERIAL ROADS:
 RESIDENTIAL STRUCTURES - 50 FEET
 ACCESSORY USES - 30 FEET
 PARKING - 25 FEET

FROM COLLECTORS AND LOCAL STREETS:
 RESIDENTIAL AND NON-RESIDENTIAL STRUCTURES - 30 FEET FROM A 60 FT. ROW
 20 FEET FROM A 50 FT. ROW

ACCESSORY USES:
 FROM NON-PGCC ADJACENT PROPERTIES:
 FROM RESIDENTIAL DISTRICTS - 25 FEET
 FROM ALL OTHER DISTRICTS - 30 FEET

FROM LOT LINES WITHIN PGCC MULTI-USE SUBDISTRICT:
 ZERO LOT LINE AND ALL OTHER USES - SIDE 0 FEET
 A MINIMUM OF 15 FEET MUST BE PROVIDED BETWEEN STRUCTURES
 RESIDENTIAL - REAR 20 FEET
 SINGLE-FAMILY DETACHED - SIDE 7.5 FEET

BETWEEN ATTACHED DWELLING UNITS AND APARTMENT BUILDINGS:
 FACE TO FACE - 30 FEET
 FACE TO SIDE/REAR TO SIDE - 30 FEET
 SIDE TO SIDE - 15 FEET
 REAR TO REAR - 40 FEET
 REAR TO FACE - 100 FEET

THERE IS A 60% MAXIMUM LOT COVERAGE REQUIREMENT FOR SFA LOTS AND NO SPECIFIED COVERAGE REQUIREMENT FOR APARTMENTS.

SITE ANALYSIS DATA CHART

GENERAL SITE DATA

- 1) PRESENT ZONING: PGCC
- 2) APPLICABLE DPZ FILE REFERENCES: S-86-13, P-06-13, S-03-001, SP-05-074 WP-05-074, WP-08-009, F-08-080, F-08-084, F-10-026, F-10-078, RESIDENTIAL
- 3) PROPOSED USE OF SITE:
- 4) PROPOSED WATER AND SEWER SYSTEMS: PUBLIC

AREA TABULATION

- 1) GROSS TRACT AREA: 11.38 AC.±
- 2) AREA WITHIN 100-YEAR FLOODPLAIN: 0.00 AC.±
- 3) TOTAL AREA OF 25% OR GREATER STEEP SLOPES: 0.00 AC.±
 AREA NOT IN FLOODPLAIN (FOR NTA CALC): 0.00 AC.±
- 4) NET TRACT AREA: 11.38 AC.±
- 5) TOTAL NUMBER OF LOTS ALLOWED PER ZONING: N/A
- 6) TOTAL NUMBER OF RESIDENTIAL UNITS/LOTS PROPOSED ON THIS SUBMISSION: 59
- 7) AREA OF BUILDABLE LOTS: 6.574 AC.
 AREA OF OPEN SPACE LOTS: 2.11± AC.
 AREA OF NON-BUILDABLE BULK PARCELS: 0.00± AC.
 AREA OF PUBLIC RIGHT-OF-WAY: 2.40± AC.

OPEN SPACE CALCULATIONS

	Phase 1	Phase 2	Phase 2	Phase 2	Phase 3	Total
Gross Area	6.25	27.76	157.69	NA	NA	191.69
Open Space Required	0.94	4.16	23.64	NA	NA	28.74
15% of gross						
Open Space Provided	2.68	6.95	69.82	1.09	2.11	71.65
Non-Credited (less than 35' in width)	0.00	0.66	0.35	1.09	1.55	3.65
Total Credited	2.68	6.09	69.47	0.00	0.56	67.70
Open Space Provided Above Requirement	1.64	0.93	35.83	0.00	0.56	38.96

* This includes area for Phase 4 (Non-Buildable Bulk Parcel BB)
 ** This includes area for Phase 2, Section 2 (Non-Buildable Bulk Parcels DD, EE & FF) and area for Phase 3 (Non-Buildable Bulk Parcel CC)

APPROVED: DEPARTMENT OF PUBLIC WORKS
 [Signature] 4/27/10
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 [Signature] 4/28/10
 CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] 4/28/10
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

NO. DATE REVISION

BENCHMARK ENGINEERING, INC.
 ENGINEERS & LAND SURVEYORS & PLANNERS
 8480 BALTIMORE NATIONAL PIKE SUITE 418A ELK LANE CITY, MARYLAND 21043
 (P) 410-465-8105 (F) 410-465-6644
 60 THOMAS JOHNSON DRIVE & FREDERICK, MARYLAND 21702
 (P) 301-371-3505 (F) 301-371-3506
 WWW.BE-ENGINEERING.COM

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer in the State of Maryland, License No. 21445, expires 12-31-2010.

OWNER:
 MANGIONE ENTERPRISES OF TURF VALLEY, LIMITED PARTNERSHIP
 1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21093
 410-825-8400

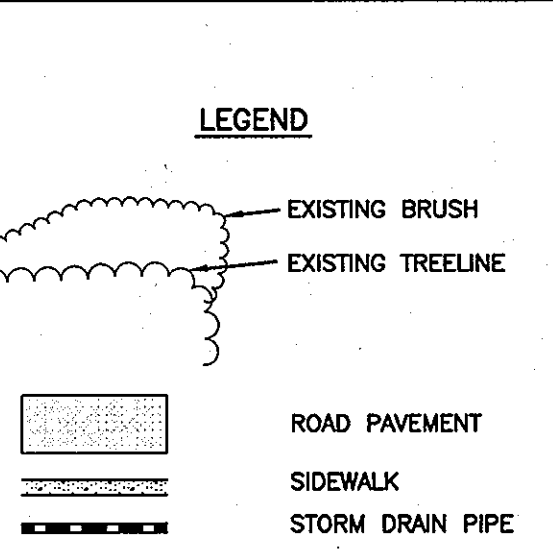
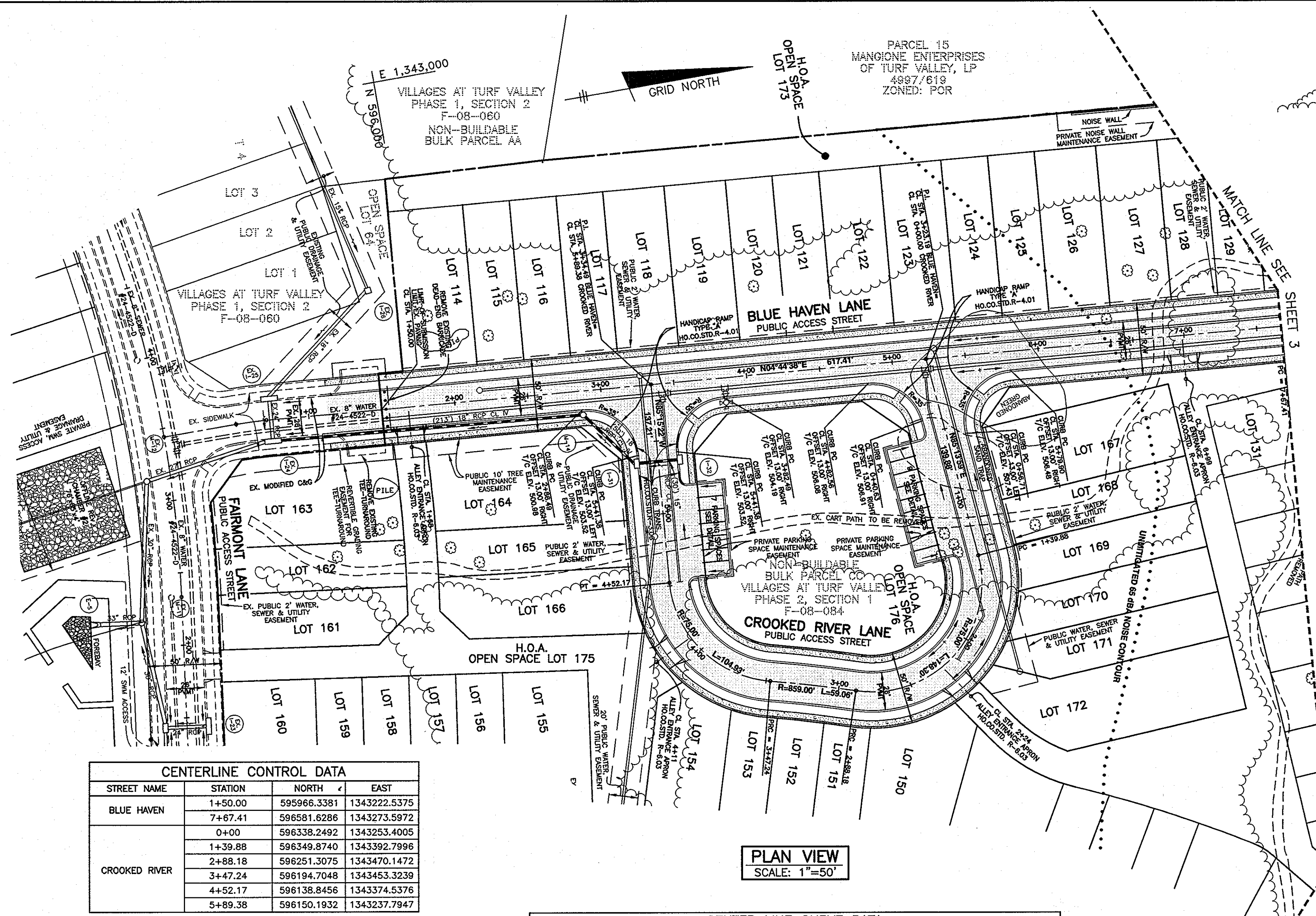
DEVELOPER:
 MANGIONE ENTERPRISES OF TURF VALLEY, LIMITED PARTNERSHIP
 1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21093
 410-825-8400

VILLAGES AT TURF VALLEY PHASE 3
 LOTS 114 thru 172 AND OPEN SPACE LOTS 173 thru 176

TAX MAP: 16, PARCEL: P/O 8, GRID: 17
 ZONED: PGCC
 ELECTION DISTRICT NO. 3 - HOWARD COUNTY, MARYLAND

TITLE SHEET

DATE: MARCH, 2010 BEI PROJECT NO. 1915
 SCALE: AS SHOWN SHEET 1 OF 11



CENTERLINE CONTROL DATA

STREET NAME	STATION	NORTH	EAST
BLUE HAVEN	1+50.00	595966.3381	1343222.5375
	7+67.41	596581.6286	1343273.5972
	0+00	596338.2492	1343253.4005
CROOKED RIVER	1+39.88	596349.8740	1343392.7996
	2+88.18	596251.3075	1343470.1472
	3+47.24	596194.7048	1343453.3239
	4+52.17	596138.8456	1343374.5376
	5+89.38	596150.1932	1343237.7947

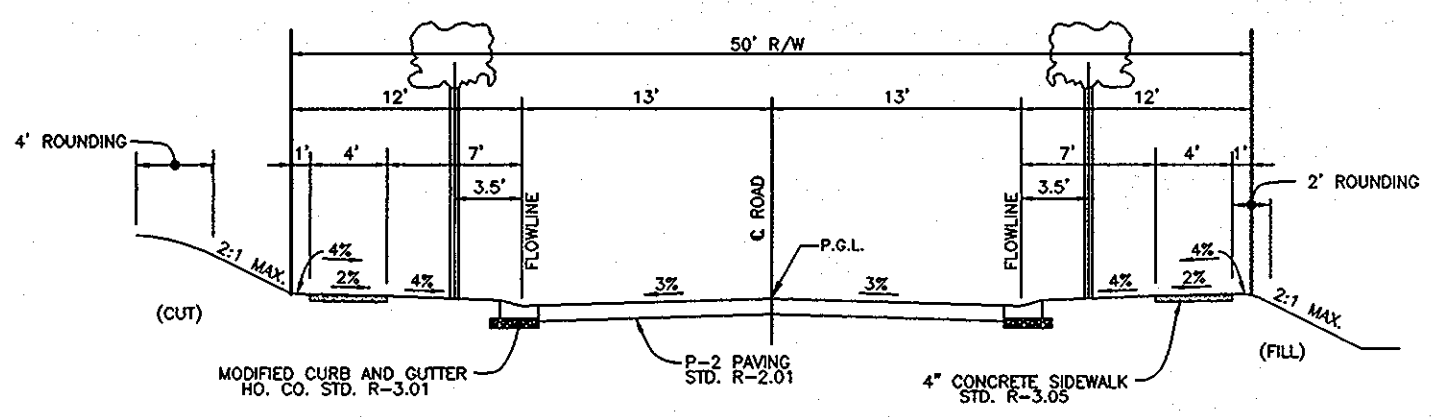
ROAD CHART

STREET NAME	PAVING LIMITS	CLASSIFICATION	DESIGN SPEED	PAVING TYPE
SPORTSMAN LODGE	0+51.41 TO 8+69.90	PUBLIC ACCESS STREET	25 MPH	P-2
BLUE HAVEN	1+50.00 TO 8+57.16	PUBLIC ACCESS STREET	25 MPH	P-2
CROOKED RIVER	0+00.00 TO 5+89.38	PUBLIC ACCESS STREET	25 MPH	P-2

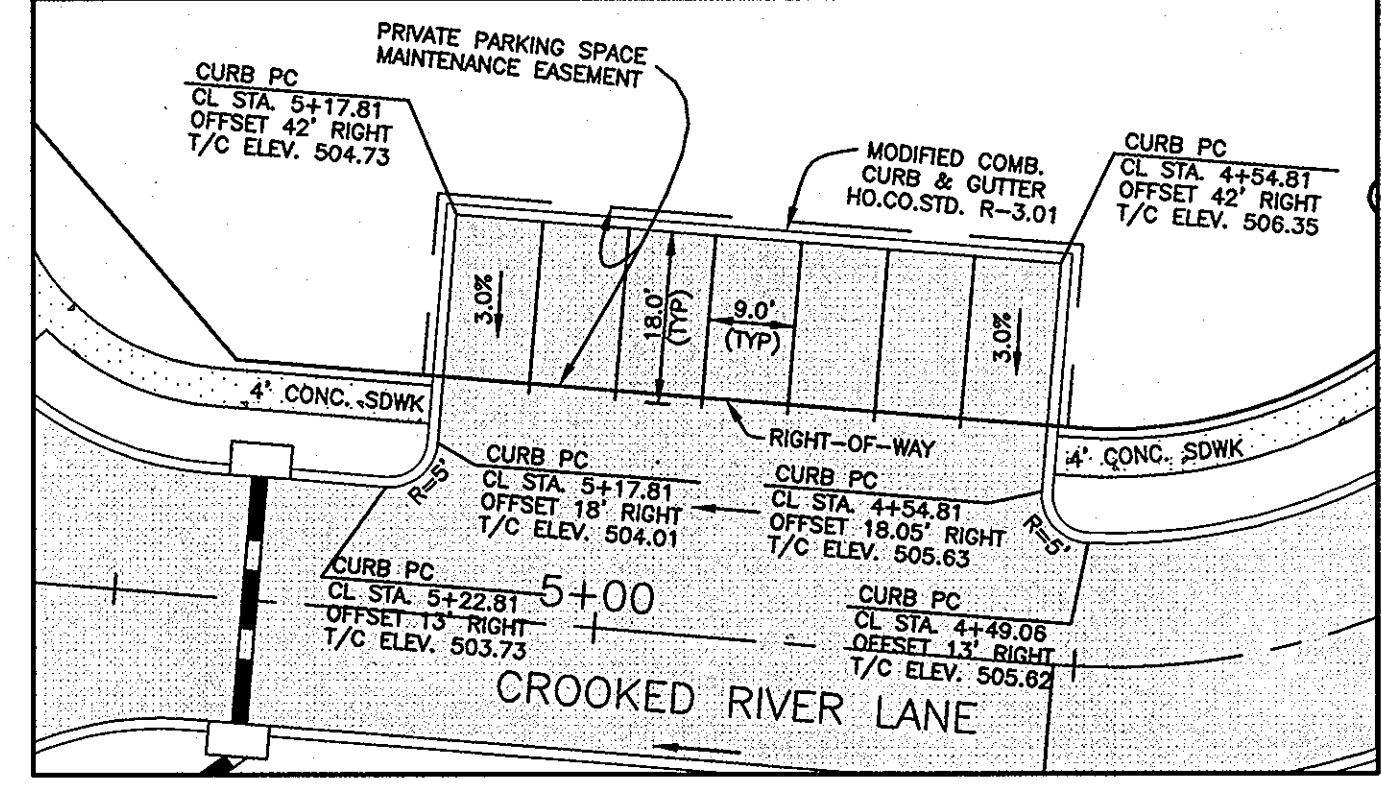
CENTER LINE CURVE DATA

STREET NAME	STATION	RADIUS	ARC	DELTA	TANGENT	CHORD
CROOKED RIVER	1+39.88 TO 2+88.18	75.00'	148.30'	113°17'22"	113.94'	S38°07'20"E 125.29'
	2+88.18 TO 3+47.24	859.00'	59.06'	0°56'22"	29.54'	S16°33'10"W 59.05'
	3+47.24 TO 4+52.17	75.00'	104.93'	80°09'38"	63.11'	S54°37'49"W 96.58'
BLUE HAVEN	7+67.41 TO 8+35.12	400.00'	67.71'	09°41'58"	33.94'	S00°06'21"E 67.63'

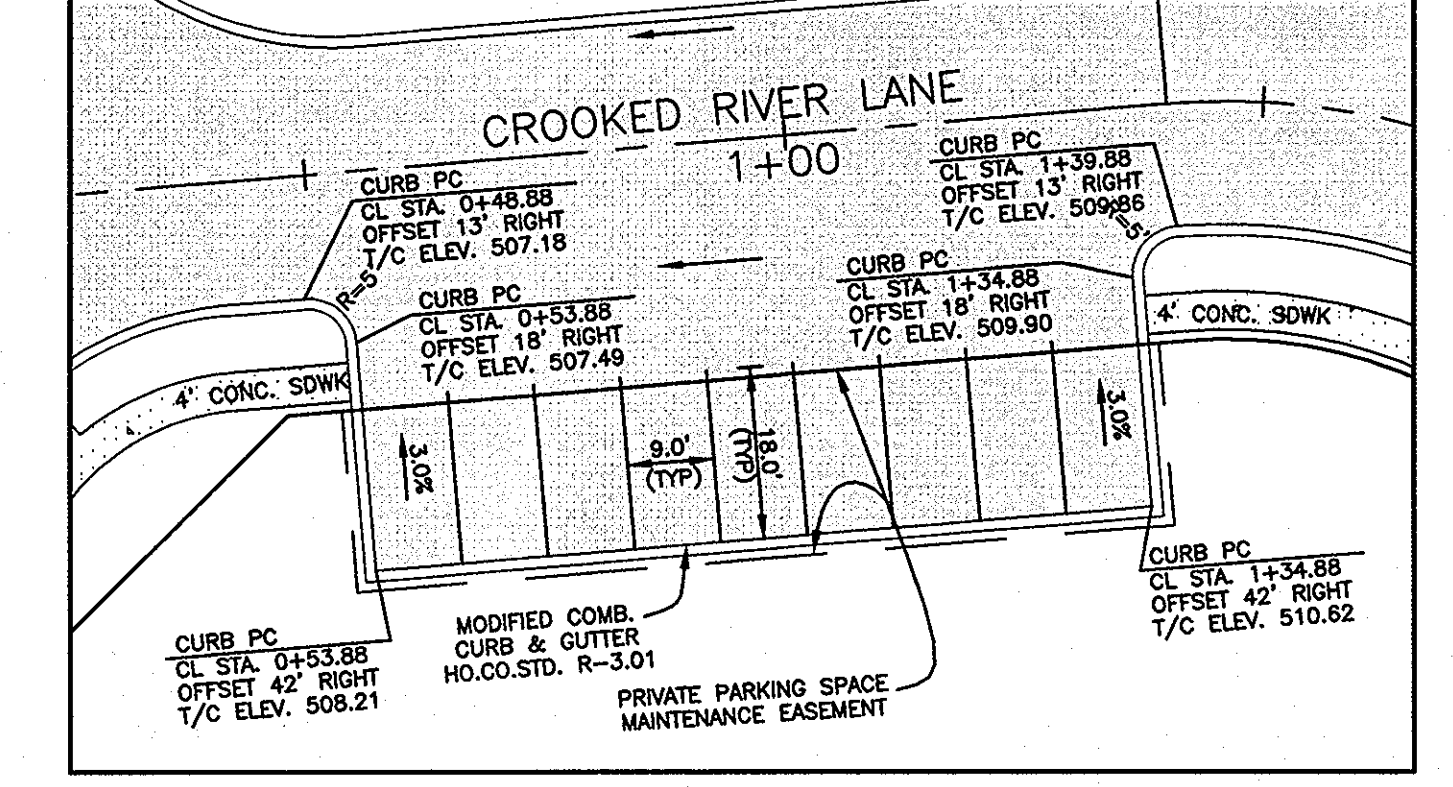
PLAN VIEW
SCALE: 1"=50'



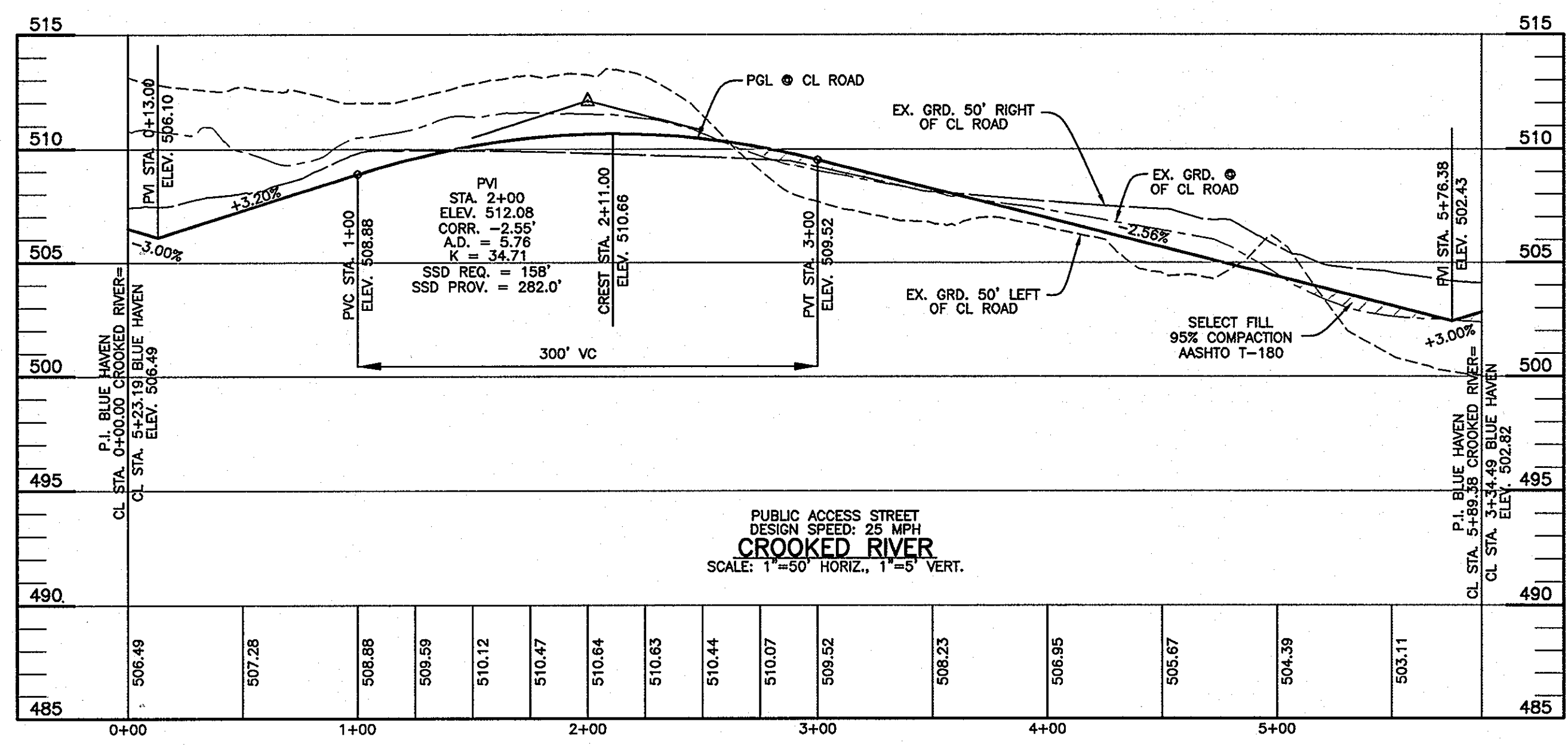
**CROOKED RIVER LANE
BLUE HAVEN LANE**
TYPICAL ROADWAY SECTION
(PUBLIC ACCESS STREET - LESS THEN 1000 ADT)
DESIGN SPEED: 25 MPH
SCALE: 1"=10'



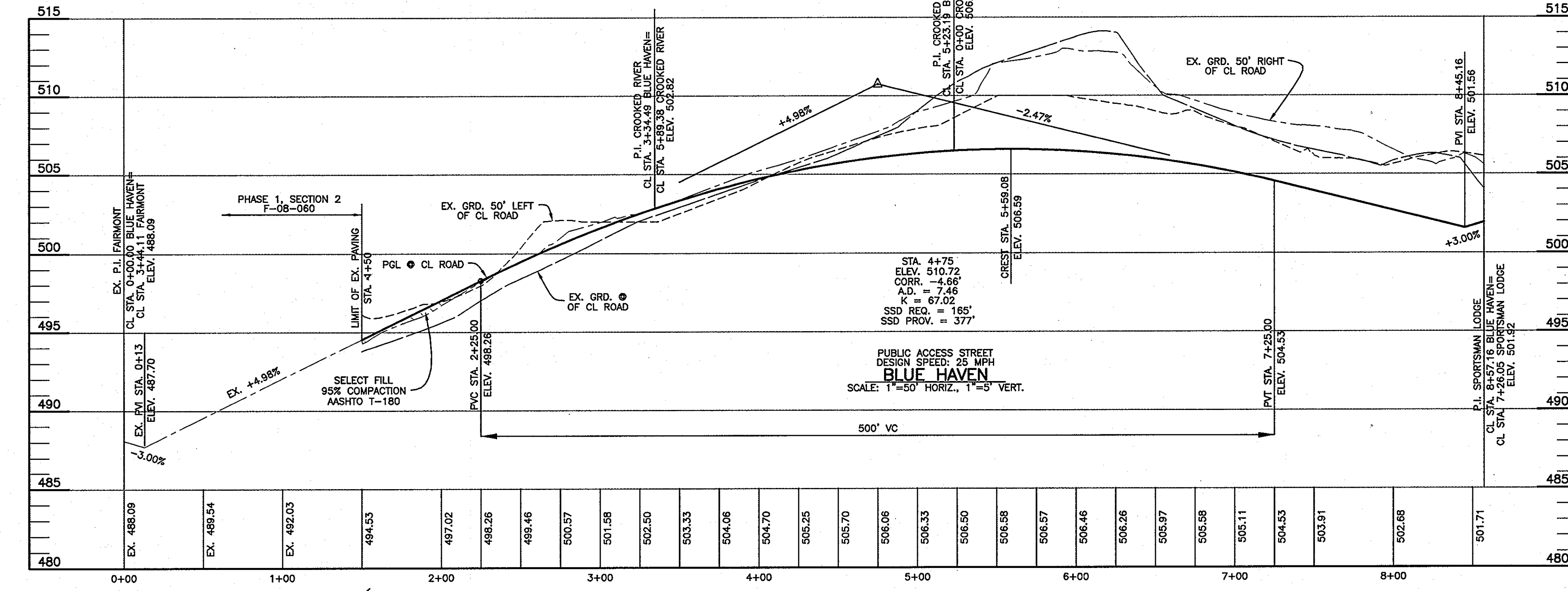
PARKING DETAIL
SCALE: 1"=20'



PARKING DETAIL
SCALE: 1"=20'



PUBLIC ACCESS STREET
DESIGN SPEED: 25 MPH
CROOKED RIVER
SCALE: 1"=50' HORIZ., 1"=5' VERT.



PUBLIC ACCESS STREET
DESIGN SPEED: 25 MPH
BLUE HAVEN
SCALE: 1"=50' HORIZ., 1"=5' VERT.

APPROVED: DEPARTMENT OF PUBLIC WORKS
Wita Roman 4-27-10
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Victor Shelton 4/29/10
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

John DeWitt 4/29/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

NO.	DATE	REVISION

BENCHMARK ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE & SUITE 418 A ELICOTT CITY, MARYLAND 21043
(P) 410-465-9108 (F) 410-465-6544
60 THOMAS JOHNSON DRIVE & FREDERICK, MARYLAND 21702
(P) 301-371-3505 (F) 301-371-3508
WWW.BEI-CIVILENGINEERING.COM

Professional Certification, I hereby certify that these documents were prepared or reviewed by me, and that I am a duly licensed professional engineer in the State of Maryland, License No. 12-21-2010.

OWNER:
MANGIONE ENTERPRISES OF TURF VALLEY, LIMITED PARTNERSHIP
1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21093
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DEVELOPER:
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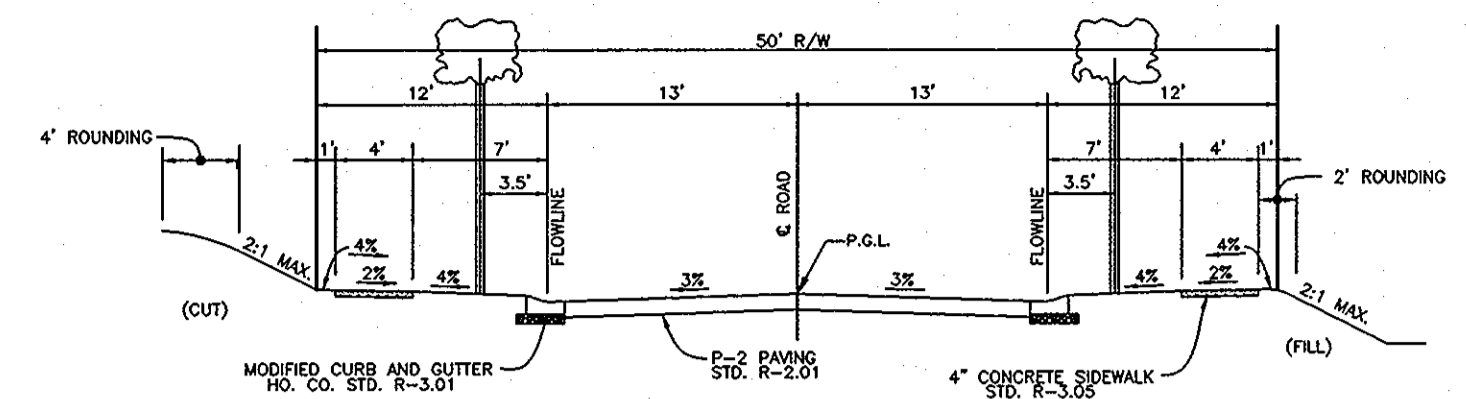
VILLAGES AT TURF VALLEY PHASE 3
LOTS 114 thru 172 AND
OPEN SPACE LOTS 173 thru 176

TAX MAP: 16, PARCEL: P/O & GRID: 17
ZONED: PGCC
ELECTION DISTRICT NO. 3 - HOWARD COUNTY, MARYLAND

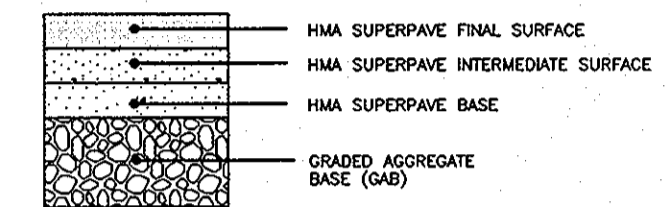
ROAD PLAN AND PROFILE
BLUE HAVEN LANE / CROOKED RIVER LANE

DATE: MARCH, 2010
SCALE: AS SHOWN

BEI PROJECT NO. 1915
SHEET 2 OF 11

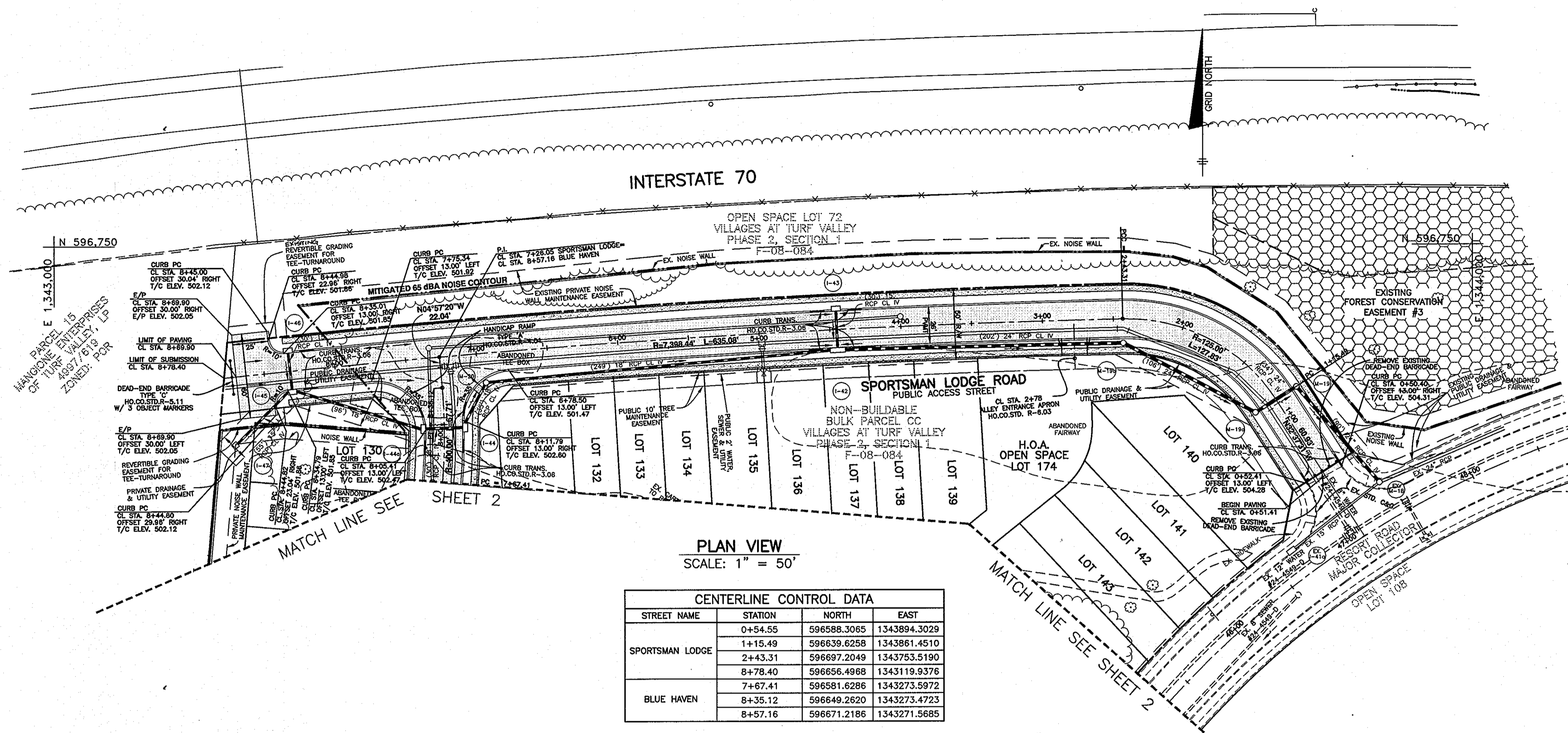


SPORTSMAN LODGE ROAD
TYPICAL ROADWAY SECTION
(PUBLIC ACCESS STREET - LESS THAN 1000 ADT)
DESIGN SPEED: 25 MPH
SCALE: 1"=10'



SECTION NUMBER	ROAD AND STREET CLASSIFICATION	CALIFORNIA BEARING RATIO (CBR)							
		PAVEMENT MATERIAL (INCHES)		3 TO <5	5 TO <7	>=7	3 TO <5	5 TO <7	>=7
P-2	PARKING DRIVE AISLES, RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 10 HEAVY TRUCKS PER DAY LOCAL ROADS: ACCESS PLACE, ACCESS STREET CUL-DE-SAC, RESIDENTIAL	HMA SUPERPAVE FINAL SURFACE		1.5	1.5	1.5	1.5	1.5	1.5
		9.5 MM PG 64-22, LEVEL 1 (LOW ESAL)		1.0	1.0	1.0	1.0	1.0	1.0
		HMA SUPERPAVE INTERMEDIATE SURFACE		2.0	2.0	2.0	3.5	2.0	2.0
		9.5 MM PG 64-22, LEVEL 1 (LOW ESAL)		2.0	2.0	2.0	3.5	2.0	2.0
		HMA SUPERPAVE BASE		8.0	4.0	3.0	4.0	4.0	4.0
		19.0 MM PG 64-22, LEVEL 1 (LOW ESAL)		8.0	4.0	3.0	4.0	4.0	4.0
		GRADED AGGREGATE BASE (GAB)		8.0	4.0	3.0	4.0	4.0	4.0

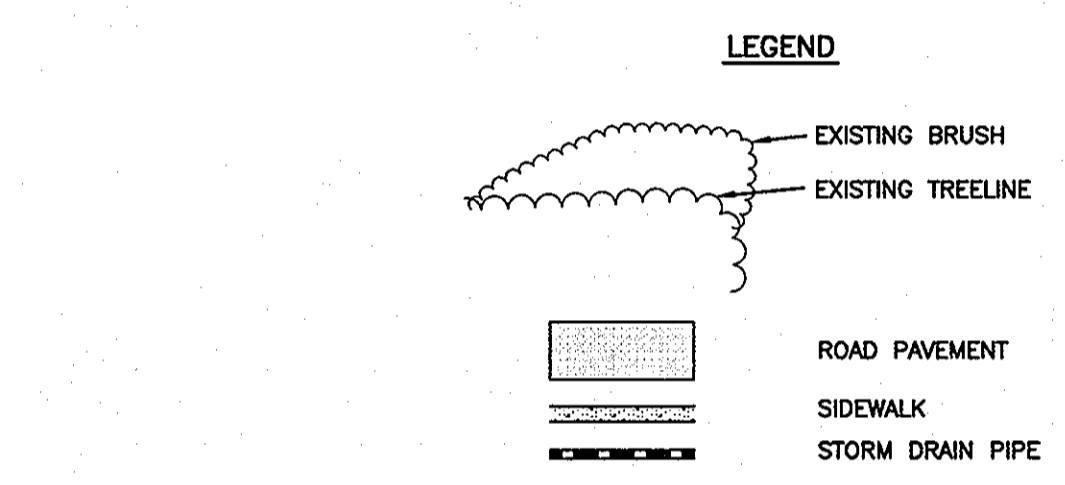
P-2 PAVING DETAIL



PLAN VIEW
SCALE: 1" = 50'

CENTERLINE CONTROL DATA			
STREET NAME	STATION	NORTH	EAST
SPORTSMAN LODGE	0+54.55	596588.3065	1343894.3028
	1+15.49	596639.6258	1343861.4510
	2+43.31	596697.2049	1343753.5190
	8+78.40	596656.4988	1343119.9376
BLUE HAVEN	7+67.41	596581.6286	1343273.5972
	8+35.12	596649.2620	1343273.4723
	8+57.16	596671.2186	1343271.5685

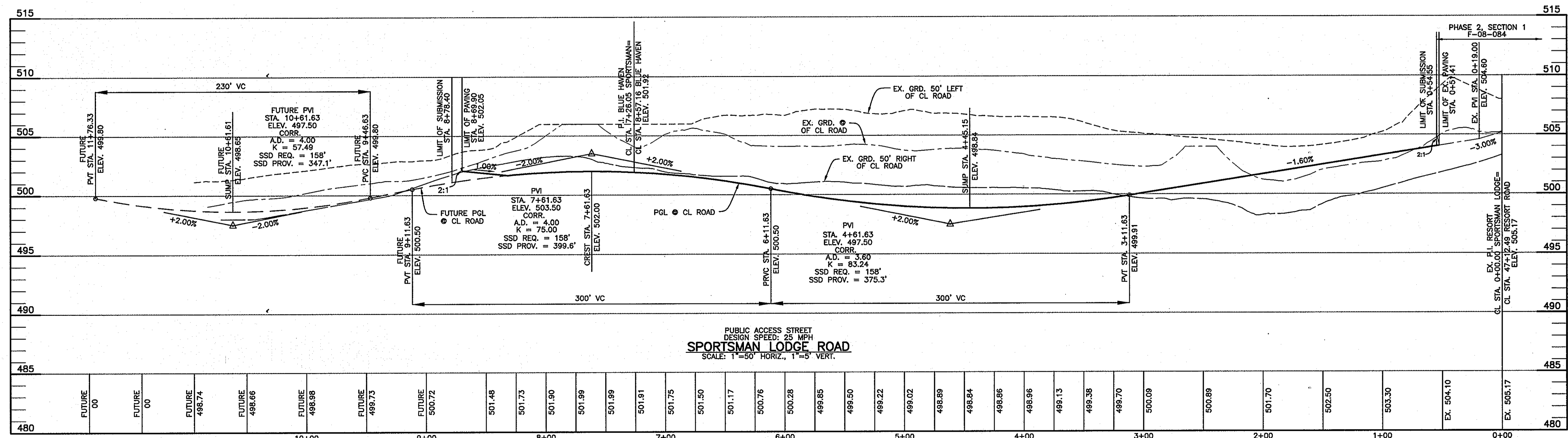
CENTER LINE CURVE DATA						
STREET NAME	STATION	RADIUS	ARC	DELTA	TANGENT	CHORD
SPORTSMAN LODGE	1+15.49 TO 2+43.31	125.00'	127.83'	58°35'31"	70.14'	S61°55'16"E 122.33'
	2+43.31 TO 8+78.40	7398.44'	635.08'	04°55'06"	317.74'	S86°19'26"W 634.89'



APPROVED: DEPARTMENT OF PUBLIC WORKS
[Signature] 4/27/10
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
[Signature] 4/21/10
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 4/21/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



SPORTSMAN LODGE ROAD
DESIGN SPEED: 25 MPH
SCALE: 1"=50' HORIZ., 1"=5' VERT.

NO.	DATE	REVISION

BENCHMARK ENGINEERING, INC.
ENGINEERS & LAND SURVEYORS & PLANNERS
8460 BALTIMORE NATIONAL PIKE SUITE 418 ELLEWOOD CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6844
60 THOMAS JOHNSON DRIVE FREDERICK, MARYLAND 21702
(P) 301-371-3505 (F) 301-371-3506
WWW.BE-CIVILENGINEERING.COM

Professional Certification, I hereby certify that these documents were prepared or supervised by me, and that I am a duly licensed professional engineer in the State of Maryland, License No. 21435, expiring 12-31-2016.

[Signature] 3-9-10
PROFESSIONAL ENGINEER

OWNER: MANGIONE ENTERPRISES OF TURF VALLEY, LIMITED PARTNERSHIP
1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21083
410-825-8400

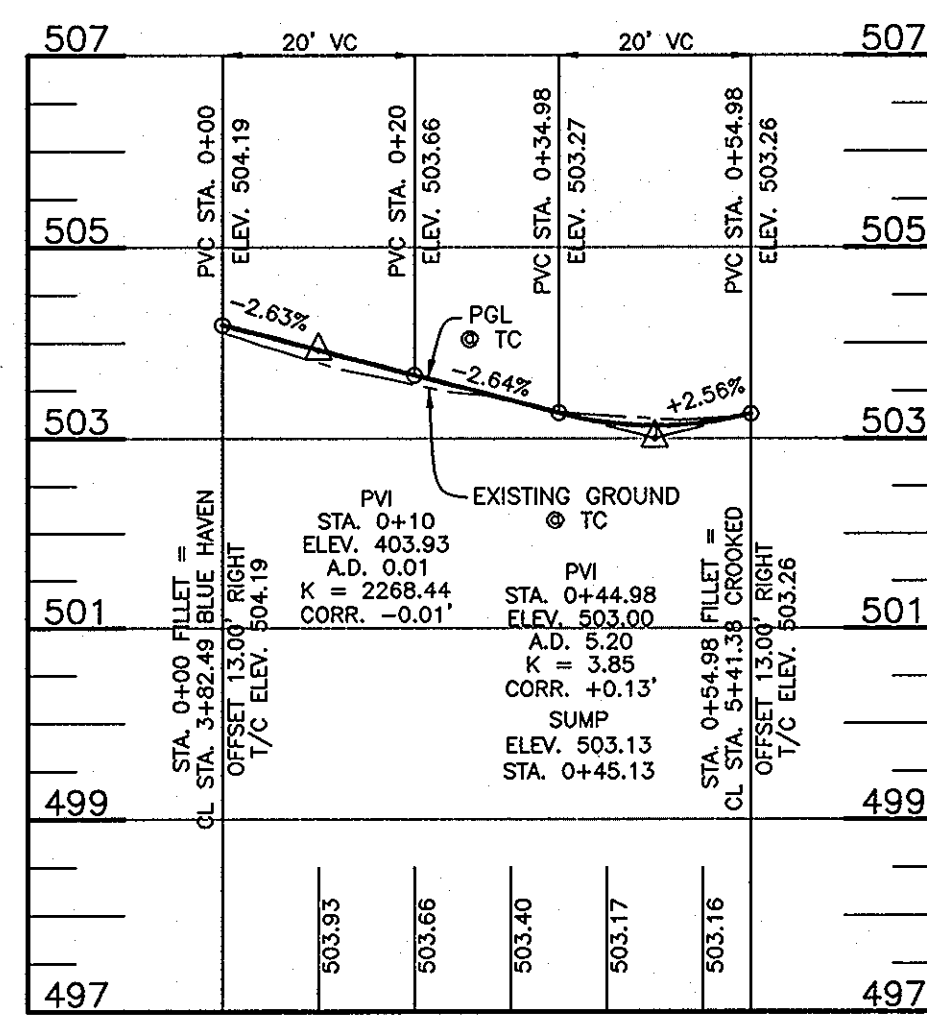
DEVELOPER: MANGIONE ENTERPRISES OF TURF VALLEY, LIMITED PARTNERSHIP
1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21083
410-825-8400

VILLAGES AT TURF VALLEY PHASE 3
LOTS 114 thru 172 AND OPEN SPACE LOTS 173 thru 176

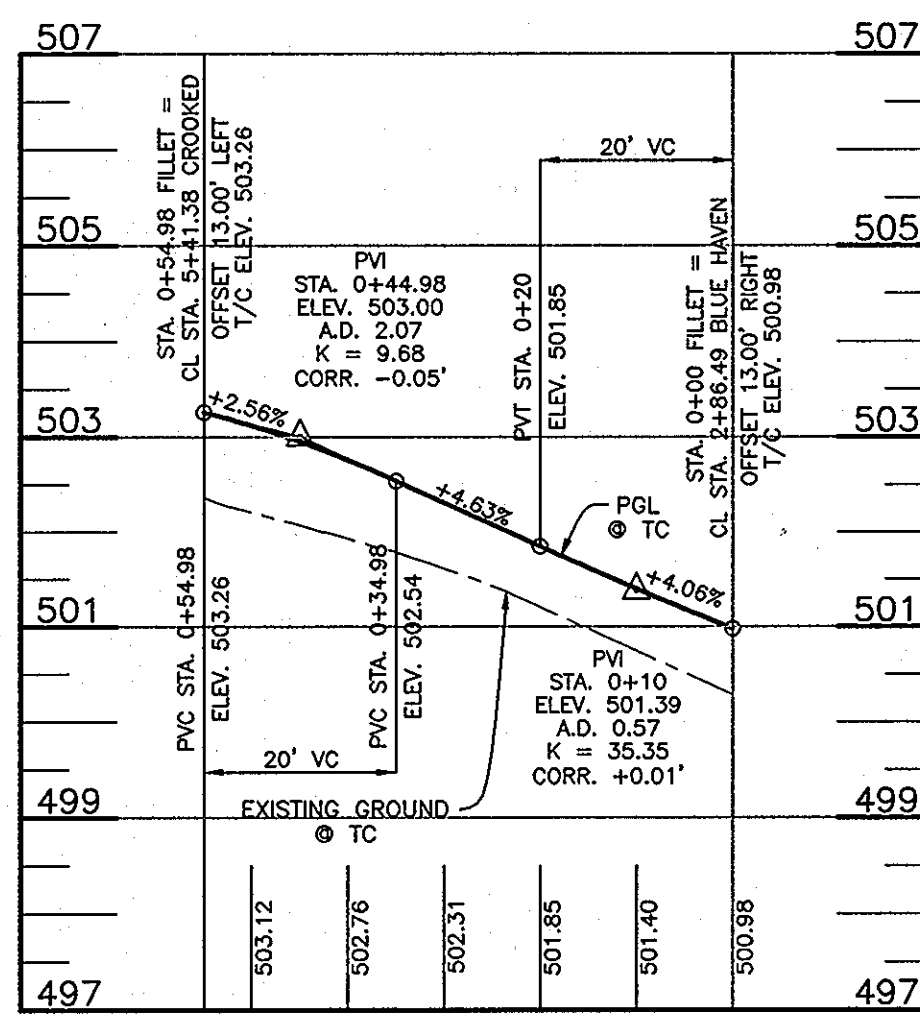
TAX MAP: P/O 8, GRID: 17
ZONING: PGCC
ELECTION DISTRICT NO. 3 - HOWARD COUNTY, MARYLAND

ROAD PLAN AND PROFILE SPORTSMAN LODGE ROAD

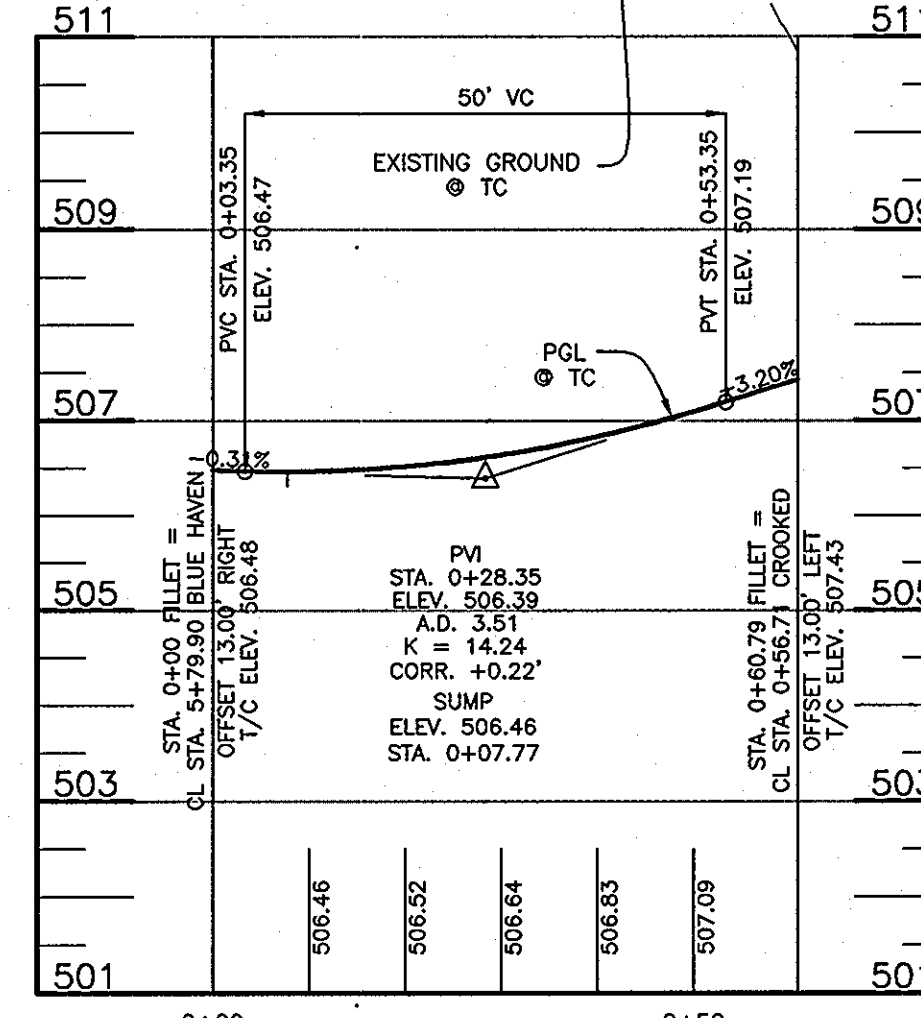
DATE: MARCH, 2010 BEI PROJECT NO. 1915
SCALE: AS SHOWN SHEET 3 OF 11



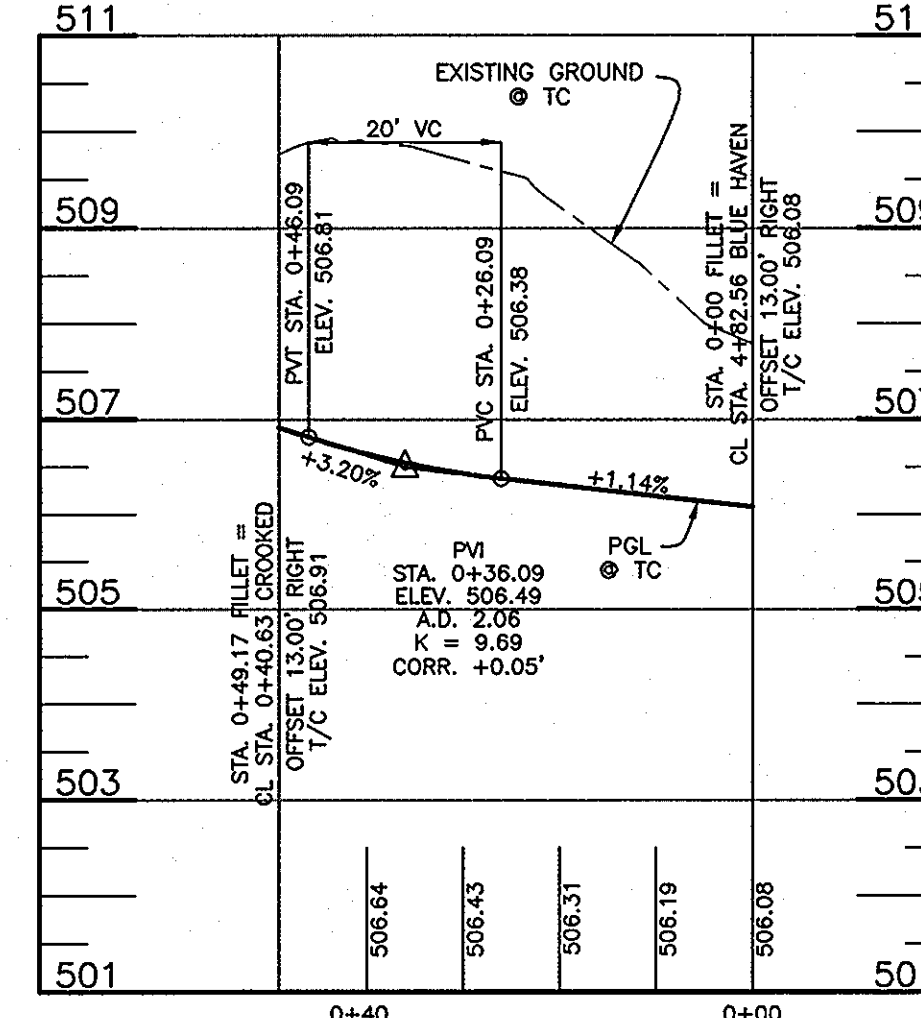
FILLET PROFILE
NORTH CORNER
BLUE HAVEN/CROOKED RIVER
SCALE: 1"=20' HORIZ., 1"=2' VERT.



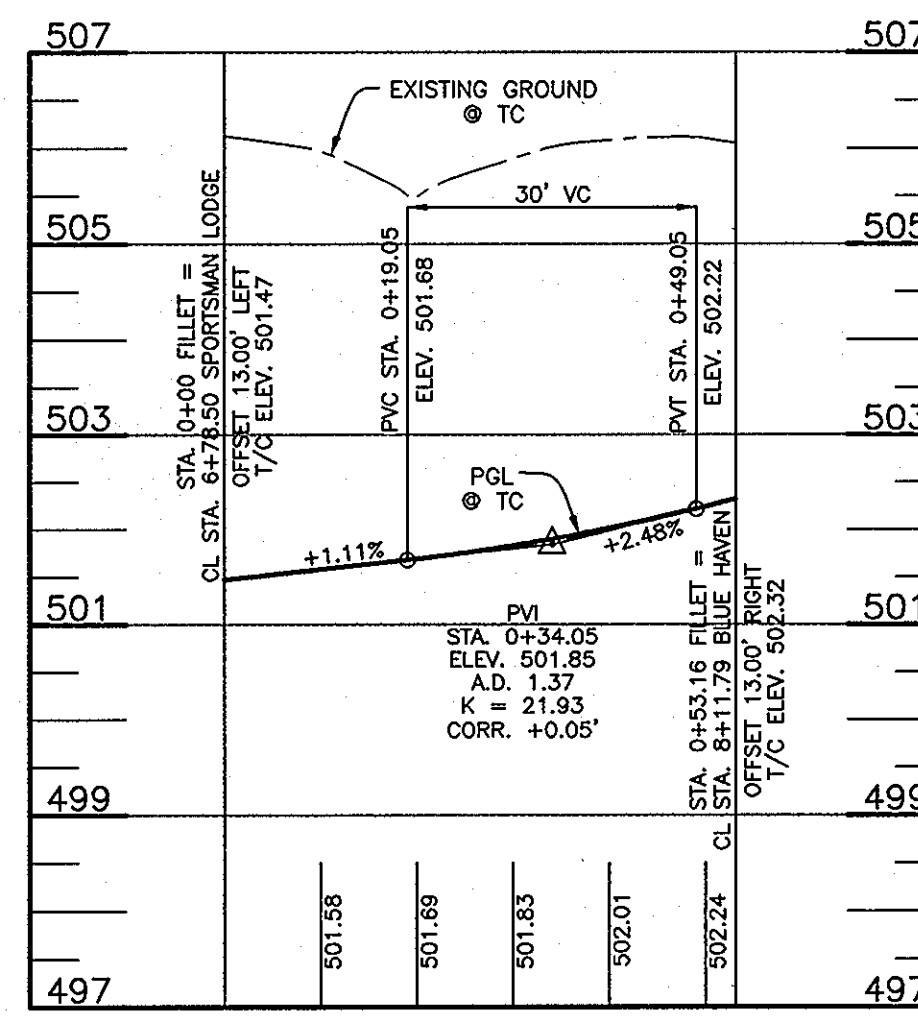
FILLET PROFILE
SOUTH CORNER
BLUE HAVEN/CROOKED RIVER
SCALE: 1"=20' HORIZ., 1"=2' VERT.



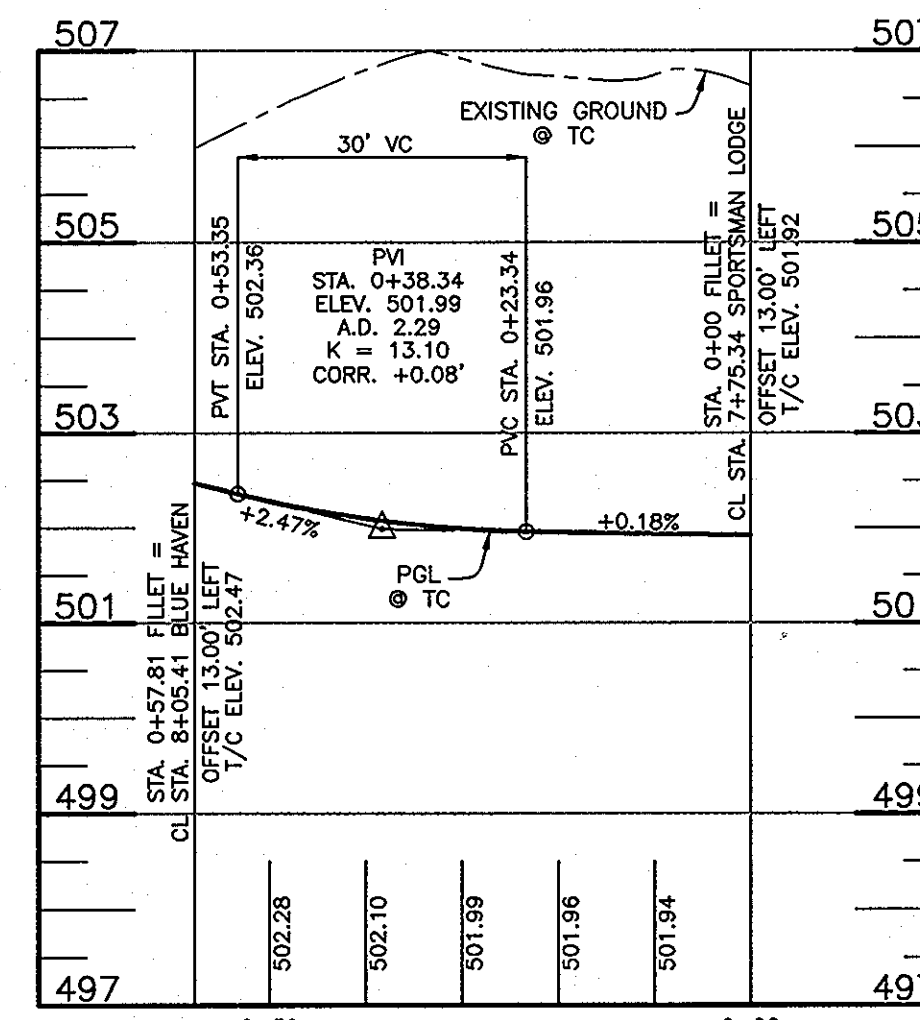
FILLET PROFILE
NORTH CORNER
BLUE HAVEN/CROOKED RIVER
SCALE: 1"=20' HORIZ., 1"=2' VERT.



FILLET PROFILE
SOUTH CORNER
BLUE HAVEN/CROOKED RIVER
SCALE: 1"=20' HORIZ., 1"=2' VERT.



FILLET PROFILE
EAST CORNER
SPORTSMAN LODGE/BLUE HAVEN
SCALE: 1"=20' HORIZ., 1"=2' VERT.



FILLET PROFILE
WEST CORNER
SPORTSMAN LODGE/BLUE HAVEN
SCALE: 1"=20' HORIZ., 1"=2' VERT.

APPROVED: DEPARTMENT OF PUBLIC WORKS
[Signature] 4-27-10
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
[Signature] 4/28/10
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

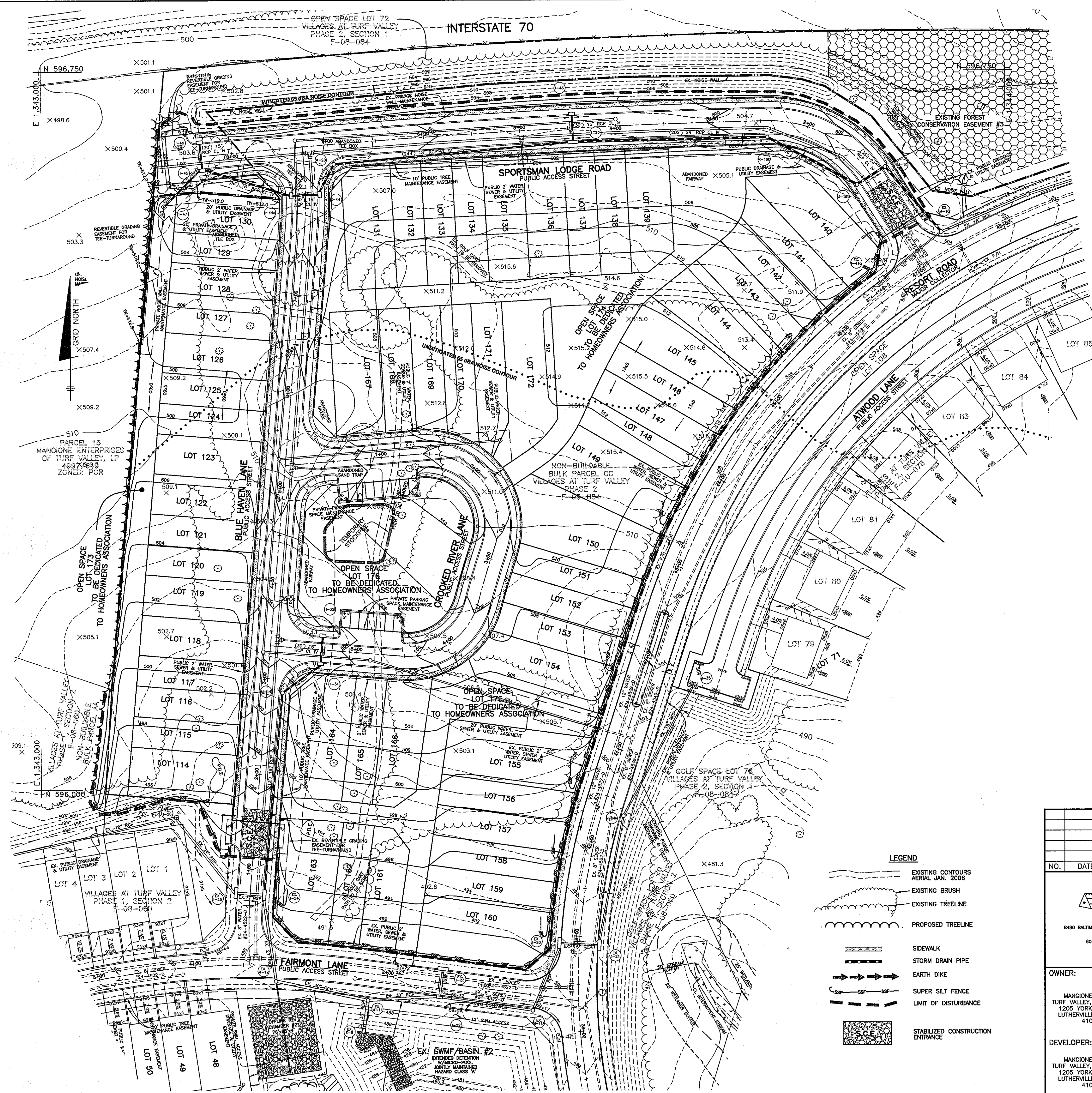
[Signature] 4/29/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

NO.	DATE	REVISION

BENCHMARK
ENGINEERS • LAND SURVEYORS • PLANNERS
ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE SUITE 418 A ELICOTT CITY, MARYLAND 21043
(P) 410-463-1108 (F) 410-463-6844
60 THOMAS JOHNSON DRIVE A FREDERICK, MARYLAND 21702
(P) 301-371-3505 (F) 301-371-3508
WWW.BE-CIVILENGINEERING.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. 21443. Expiration Date: 12-21-2010.

OWNER: MANGIONE ENTERPRISES OF TURF VALLEY, LIMITED PARTNERSHIP 1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21093 410-825-8400	VILLAGES AT TURF VALLEY PHASE 3 LOTS 114 thru 172 AND OPEN SPACE LOTS 173 thru 176
DEVELOPER: MANGIONE ENTERPRISES OF TURF VALLEY, LIMITED PARTNERSHIP 1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21093 410-825-8400	TAX MAP: 16, PARCEL: P/O 8, GRID: 17 ZONED: PGCC ELECTION DISTRICT NO. 3 - HOWARD COUNTY, MARYLAND
CURB RETURN FILLET PROFILES	
DATE: MARCH, 2010	BEI PROJECT NO. 1915
SCALE: AS SHOWN	SHEET 4 OF 11



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 SOIL CONSERVATION DISTRICT.
Donald Mason 3/9/10
 ENGINEER - DONALD A. MASON, P.E. # 21443 DATE

DEVELOPER'S CERTIFICATE
 I HEREBY 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 SOIL CONSERVATION DISTRICT.
John R. Roberts 3/30/10
 DEVELOPER DATE

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John R. Roberts 3/30/10
 HOWARD SCD DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS
John R. Roberts 4-27-10
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
John R. Roberts 4/28/10
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

- LEGEND**
- EXISTING CONTOURS AERIAL JAN. 2006
 - EXISTING BRUSH
 - EXISTING TREELINE
 - PROPOSED TREELINE
 - SIDEWALK
 - STORM DRAIN PIPE
 - EARTH DIKE
 - SUPER SILT FENCE
 - LIMIT OF DISTURBANCE
 - STABILIZED CONSTRUCTION ENTRANCE

NO.	DATE	REVISION

BENCHMARK
ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.
 8400 BALTIMORE NATIONAL PIKE SUITE 418 ELICOTT CITY, MARYLAND 21043
 (P) 410-465-6105 (F) 410-465-6844
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 (P) 301-371-3508 (F) 301-371-3506
 WWW.BE-ENGINEERING.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.
Donald Mason No. 21443
 PROFESSIONAL ENGINEER
 3/9/10

<p>OWNER: MANGIONE ENTERPRISES OF TURF VALLEY, LIMITED PARTNERSHIP 1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21093 410-825-8400</p>	<p>VILLAGES AT TURF VALLEY PHASE 3 LOTS 114 thru 172 AND OPEN SPACE LOTS 173 thru 176</p> <p>TAX MAP: 16, PARCEL: P10 8, GRID: 17 ELECTION DISTRICT NO. 3 - HOWARD COUNTY, MARYLAND</p>
<p>DEVELOPER: MANGIONE ENTERPRISES OF TURF VALLEY, LIMITED PARTNERSHIP 1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21093 410-825-8400</p>	<p>GRADING, SEDIMENT AND EROSION CONTROL PLAN</p> <p>DATE: MARCH, 2010 SHEET PROJECT NO. 1915 SCALE: 1" = 50' SHEET 5 OF 11</p>

SEDIMENT CONTROL NOTES

TOPSOIL SPECIFICATIONS

30.0 DUST CONTROL

SEQUENCE OF CONSTRUCTION

- 1. 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, (313-1855).

- I. Topsoil salvaged from the existing site may be used provided that it meets the standards 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 USDA-SCS in cooperation with Maryland Agricultural Experimental Station.

- Controlling dust blowing and movement on construction sites and roads. Purpose: To prevent blowing and movement of dust from exposed soil surfaces, reduce on and off-site damage, health hazards, and improve traffic safety.

- NOTIFY SEDIMENT CONTROL DIVISION 48 HOURS PRIOR TO START OF CONSTRUCTION
1. OBTAIN GRADING PERMIT. (DAY 1)
2. INSTALL STABILIZED CONSTRUCTION ENTRANCE AND SUPER SILT FENCES. (DAY 2-10)

Table with 2 columns: Description and Value. Includes rows for TOTAL AREA OF SITE (11.38 ACRES), AREA DISTURBED (11.67 ACRES), AREA TO BE ROOFED OR PAVED (2.40 ACRES), etc.

TEMPORARY SEEDBED PREPARATIONS

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED DURING A SHORT-TERM VEGETATIVE COVER IS NEEDED. SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

VI. Topsoil Application
I. When topsoiling, maintain needed erosion and sediment control practices such as diversions, grade stabilization structures, earth dikes, slope silt fence and sediment traps and basins.

Controlling dust blowing and movement on construction sites and roads. Purpose: To prevent blowing and movement of dust from exposed soil surfaces, reduce on and off-site damage, health hazards, and improve traffic safety.

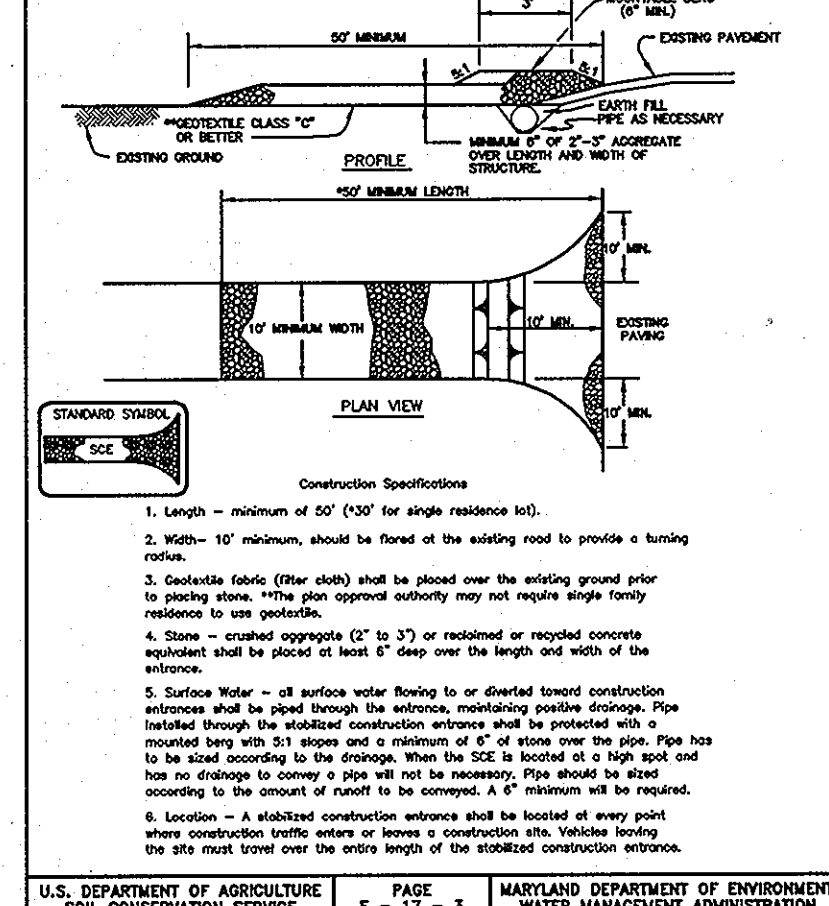
PERMANENT SEEDBED PREPARATIONS

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED. SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

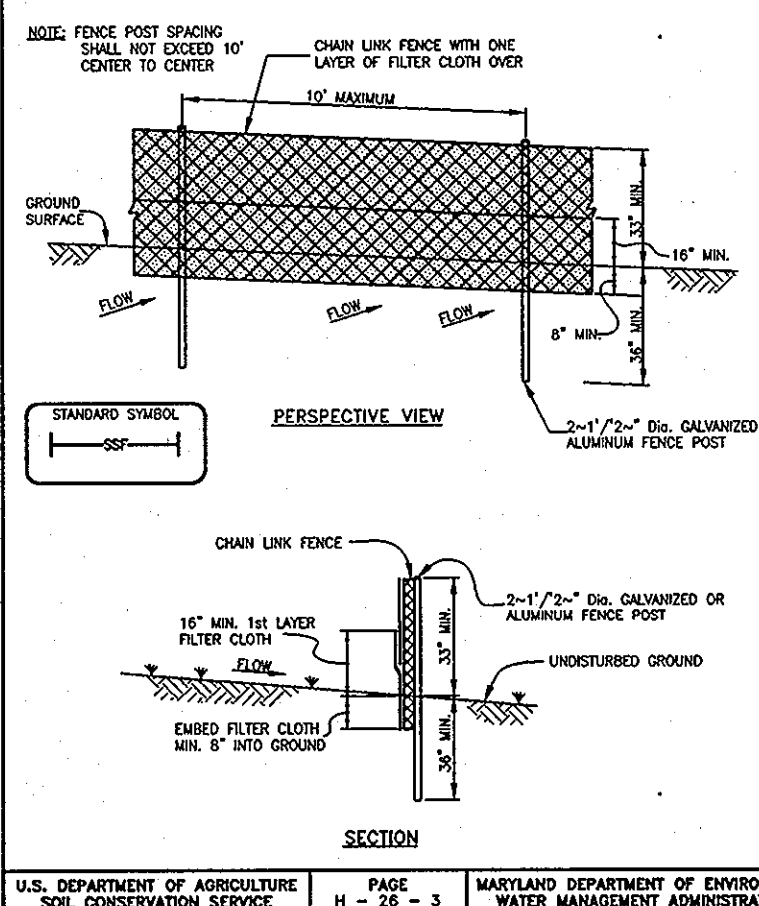
Composted Sludge Material for use as a soil conditioner for sites having distributed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:

Controlling dust blowing and movement on construction sites and roads. Purpose: To prevent blowing and movement of dust from exposed soil surfaces, reduce on and off-site damage, health hazards, and improve traffic safety.

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



DETAIL 33 - SUPER SILT FENCE



SUPER SILT FENCE

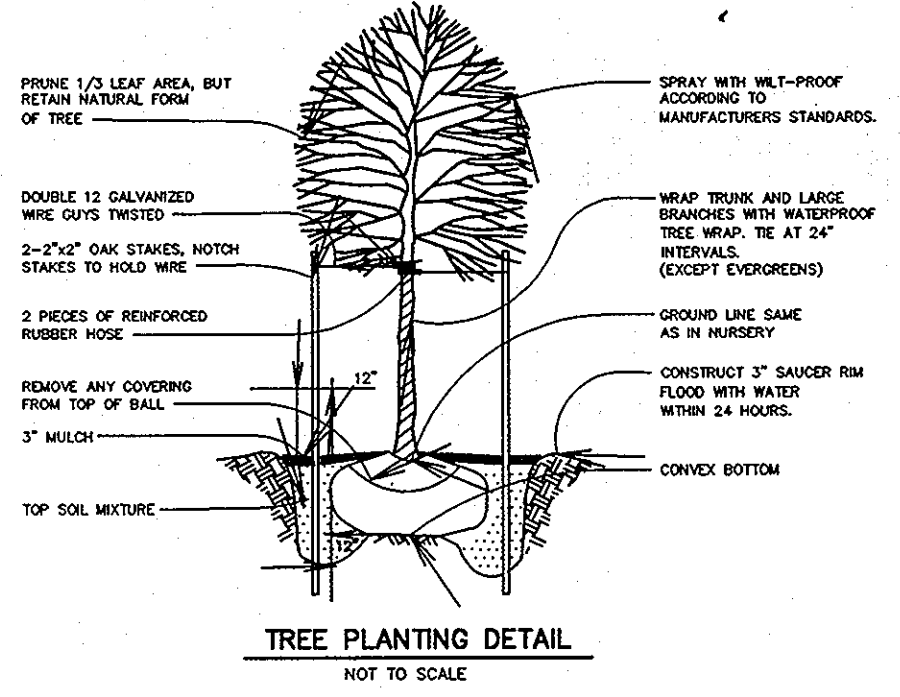
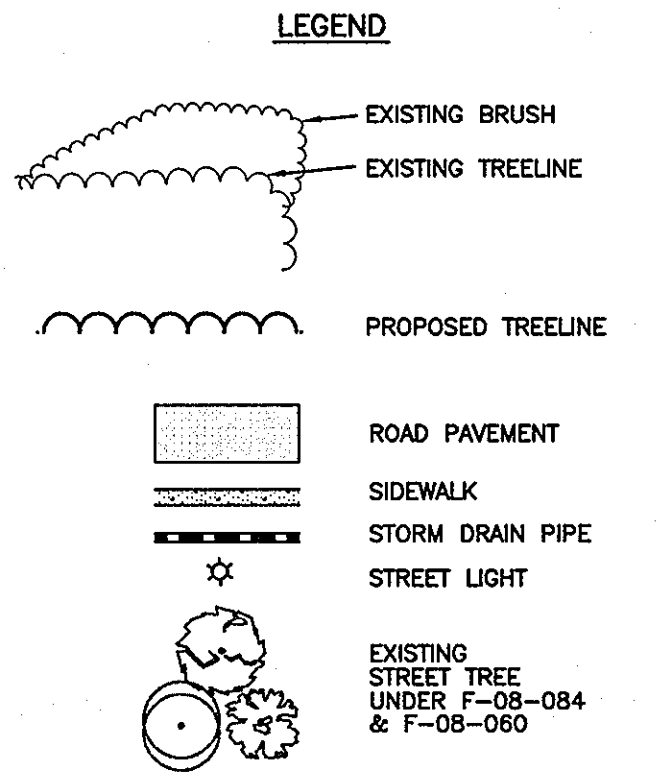
Table with 2 columns: Description and Value. Includes sections for CONSTRUCTION SPECIFICATIONS and SUPER SILT FENCE DESIGN CRITERIA with various slope and length parameters.

ENGINEER'S CERTIFICATE and DEVELOPER'S CERTIFICATE sections with signatures and dates for Donald M. Mason and John R. Roberts.

Professional stamp for BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS, INC. and project information for VILLAGES AT TURF VALLEY PHASE 3.

INTERSTATE 70

OPEN SPACE LAZZ
VILLAGES AT TURF VALLEY
PHASE 2, SECTION 1
F-08-084



STREET TREE SCHEDULE table with columns: ROAD NAME, PERIMETER, TREES REQ., SIZE.

PUBLIC STREET TREE PLANTING LIST table with columns: SYMBOL, QUANTITY, NAME, REMARKS, DESCRIPTION.

SCHEDULE A PERIMETER LANDSCAPE EDGE table with columns: CATEGORY, SFA REAR TO ROADWAY, SFA SIDE TO ROADWAY, etc.

LANDSCAPE PLANTING LIST table with columns: SYMBOL, QUANTITY, NAME, REMARKS, DESCRIPTION.

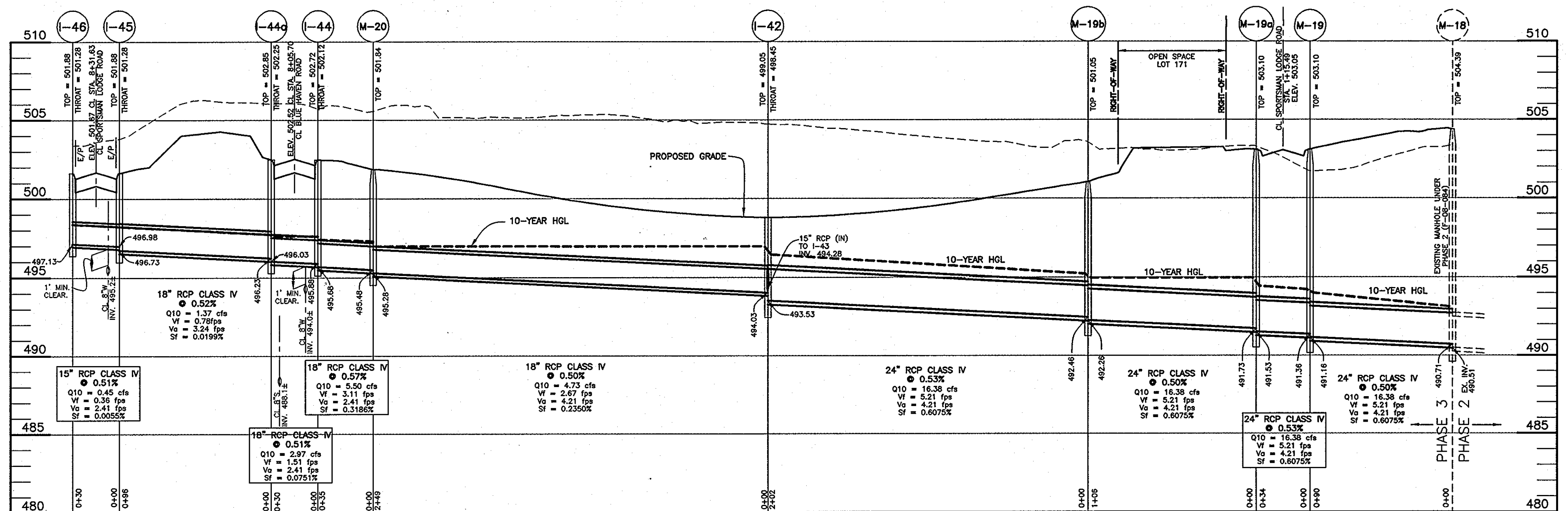
DEVELOPER'S/BUILDER'S CERTIFICATE with signature of Louis Mangione and date 3/5/10.

APPROVED: DEPARTMENT OF PUBLIC WORKS and DEPARTMENT OF PLANNING AND ZONING with signatures and dates.

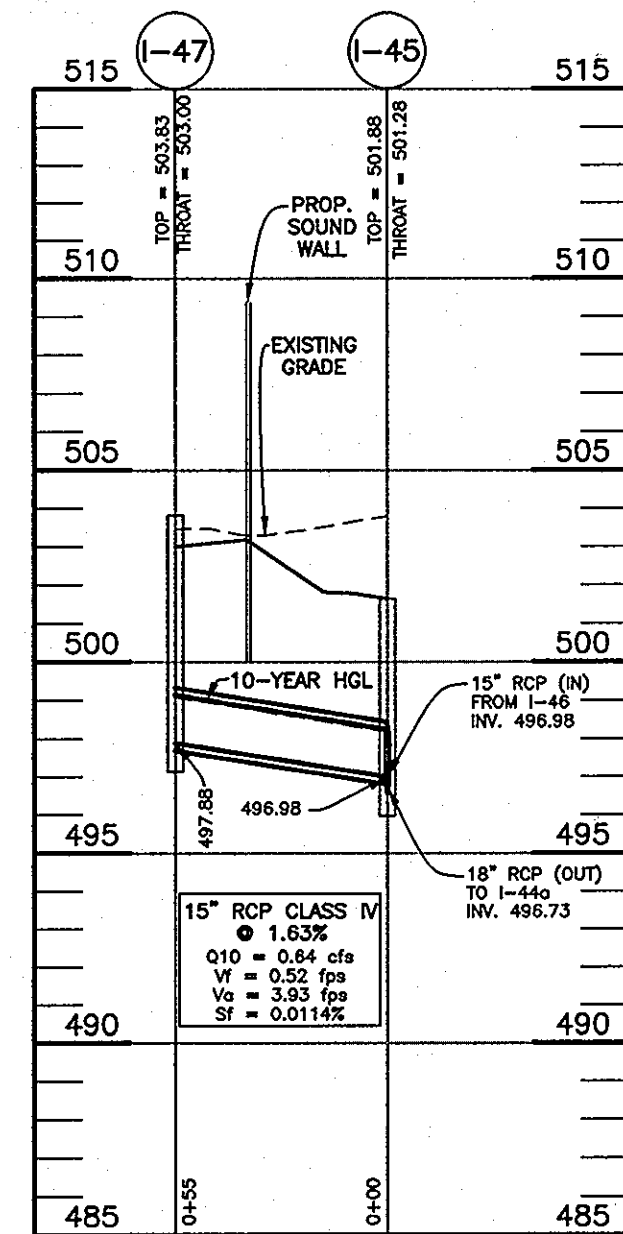
RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING SINGLE FAMILY ATTACHED. NUMBER OF UNITS 59. SHADE TREES REQUIRED 59* (1:1 UNIT). * TO BE DEFERRED TO SITE DEVELOPMENT PLAN.

- LANDSCAPE NOTES: 1. STREET TREES TO BE CENTERED BETWEEN THE CURB AND SIDEWALK... 2. SEE TREE PLANTING DETAIL - THIS SHEET. 3. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE... 4. AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HEREWITH LISTED AND APPROVED FOR THIS SITE... 5. THE OWNER, TENANTS AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING... 6. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPER'S AGREEMENT...

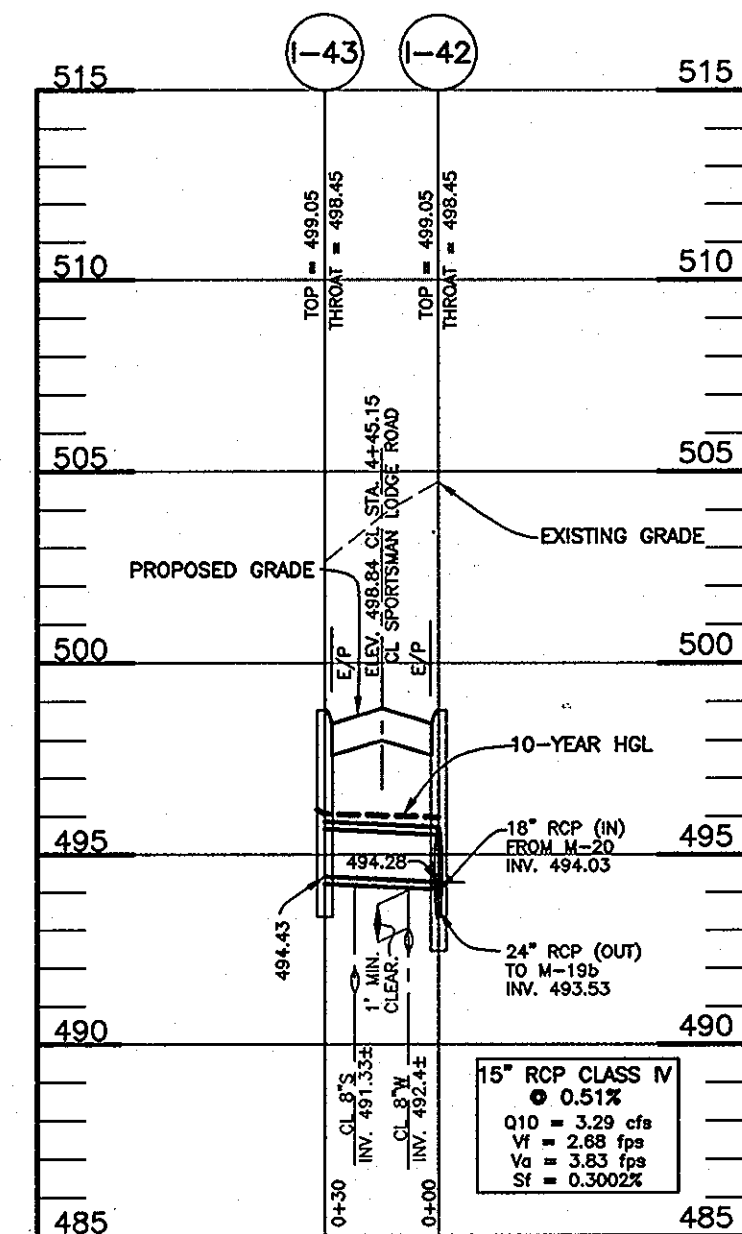
PLAN VIEW SCALE: 1"=50'



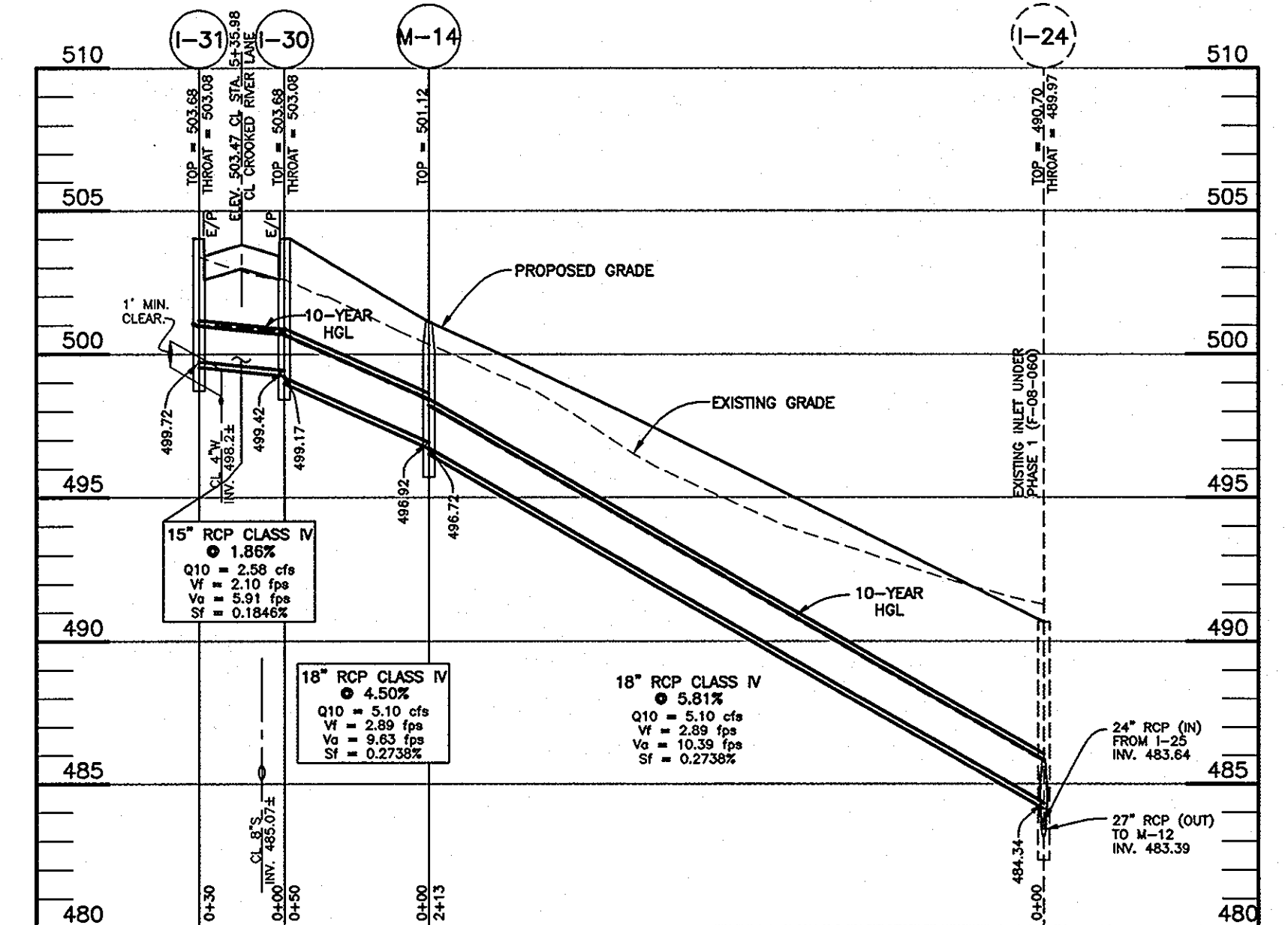
STORM DRAIN PROFILE M-18 TO I-46
SCALE: HORIZONTAL 1"=50'; VERTICAL 1"=5'



STORM DRAIN PROFILE I-47 TO I-45
SCALE: HORIZONTAL 1"=50'; VERTICAL 1"=5'



STORM DRAIN PROFILE I-43 TO I-42
SCALE: HORIZONTAL 1"=50'; VERTICAL 1"=5'



STORM DRAIN PROFILE I-24 TO I-32
SCALE: HORIZONTAL 1"=50'; VERTICAL 1"=5'

PIPE SCHEDULE			
PIPE SIZE	LENGTH	TYPE	MAINTENANCE
15"	90'	RCP CLASS IV	PUBLIC
18"	687'	RCP CLASS IV	PUBLIC
24"	432'	RCP CLASS IV	PUBLIC
15"	55'	RCP CLASS IV	PRIVATE

STRUCTURE SCHEDULE								
NO.	TYPE	LOCATION	PIPE INV. IN	PIPE INV. OUT	TOP ELEV.	THROAT ELEV.	HO. CO. STD.	OWNERSHIP
INLETS								
I-30	A-5	CL STA. 5+35.98 CROOKED RIVER LANE OFFSET 13.00' LEFT	499.42	499.17	503.68	503.08	D-4.02 (width=2.5')	PUBLIC
I-31	A-5	CL STA. 5+35.98 CROOKED RIVER LANE OFFSET 13.00' LEFT	---	499.72	503.68	503.08	D-4.02 (width=2.5')	PUBLIC
I-42	A-10	CL STA. 4+45.15 SPORTSMAN LODGE ROAD OFFSET 13.00' LEFT	493.53	493.53	499.05	498.45	D-4.03 (width=3.0')	PUBLIC
I-43	A-5	CL STA. 4+45.15 SPORTSMAN LODGE ROAD OFFSET 13.00' RIGHT	---	494.43	499.05	498.45	D-4.02 (width=2.5')	PUBLIC
I-44	A-10	CL STA. 8+06.89 OFFSET 13.43' RIGHT BLUE HAVEN LANE	495.88	495.68	502.72	502.12	D-4.03 (width=2.5')	PUBLIC
I-44a	A-5	CL STA. 8+06.27 OFFSET 13.43' LEFT BLUE HAVEN LANE	496.23	496.03	502.85	502.25	D-4.03 (width=2.5')	PUBLIC
I-45	A-5	CL STA. 8+31.63 SPORTSMAN LODGE ROAD OFFSET 13.00' LEFT	496.98	496.73	501.88	501.28	D-4.02 (width=2.5')	PUBLIC
I-46	A-5	CL STA. 8+31.63 SPORTSMAN LODGE ROAD OFFSET 13.00' RIGHT	---	497.13	501.88	501.28	D-4.02 (width=2.5')	PUBLIC
I-47	'D' INLET	CL STA. 8+75.58 SPORTSMAN LODGE ROAD OFFSET 48.22' LEFT	---	497.88	503.83	503.00	D-4.11	PRIVATE
MANHOLES								
M-19	4'-0" MANHOLE	CL STA. 1+15.49 SPORTSMAN LODGE ROAD OFFSET 17.10' RIGHT	491.36	491.16	503.10	NA	G-5.11 & G-5.12	PUBLIC
M-19a	4'-0" MANHOLE	CL STA. 1+15.49 SPORTSMAN LODGE ROAD OFFSET 17.10' LEFT	491.73	491.53	503.10	NA	G-5.11 & G-5.12	PUBLIC
M-19b	4'-0" MANHOLE	CL STA. 2+43.31 SPORTSMAN LODGE ROAD OFFSET 17.10' LEFT	492.46	492.26	501.05	NA	G-5.11 & G-5.12	PUBLIC
M-20	4'-0" MANHOLE	CL STA. 6+94.83 SPORTSMAN LODGE ROAD OFFSET 21.02' LEFT	495.48	495.28	501.84	NA	G-5.11 & G-5.12	PUBLIC
M-14	4'-0" MANHOLE	CL STA. 2+86.49 BLUE HAVEN LANE OFFSET 16.50' RIGHT	496.92	496.72	501.12	NA	G-5.11 & G-5.12	PUBLIC

- STRUCTURE LOCATION FOR MANHOLES IS AT THE CENTER OF THE MANHOLE.
- STRUCTURE LOCATION FOR INLETS IS AT THE MIDPOINT OF THE INLET.
- STRUCTURE ELEVATION AND LOCATION FOR ENDSCTIONS IS AT THE MIDPOINT OF THE END OF STRUCTURE.
- PRECAST STRUCTURES MEETING HS-20 LOADING MAY BE USED.

APPROVED: DEPARTMENT OF PUBLIC WORKS
William R. [Signature] 4-27-10
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
[Signature] 4/27/10
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION
[Signature] 4/27/10
 DATE

NO.	DATE	REVISION

BENCHMARK
ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.
 8400 BALTIMORE NATIONAL PIKE & SUITE 418 A ELICOTT CITY, MARYLAND 21043
 (P) 410-465-9108 (F) 410-465-6644
 60 THOMAS JOHNSON DRIVE & FREDERICK, MARYLAND 21702
 (P) 301-371-3505 (F) 301-371-3508
 WWW.BE-CVLENGENRNG.COM

Professional Certification. I hereby certify that these documents were prepared by (prepared by) me, and that I am a duly licensed professional engineer in the State of Maryland. Date: 12-21-2010.

[Signature]
 PROFESSIONAL ENGINEER
 No. 21445
 3/9/10

OWNER:
 MANGIONE ENTERPRISES OF TURF VALLEY, LIMITED PARTNERSHIP
 1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21093
 410-825-8400

DEVELOPER:
 MANGIONE ENTERPRISES OF TURF VALLEY, LIMITED PARTNERSHIP
 1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21093
 410-825-8400

VILLAGES AT TURF VALLEY
PHASE 3
 LOTS 114 thru 172 AND
 OPEN SPACE LOTS 173 thru 176

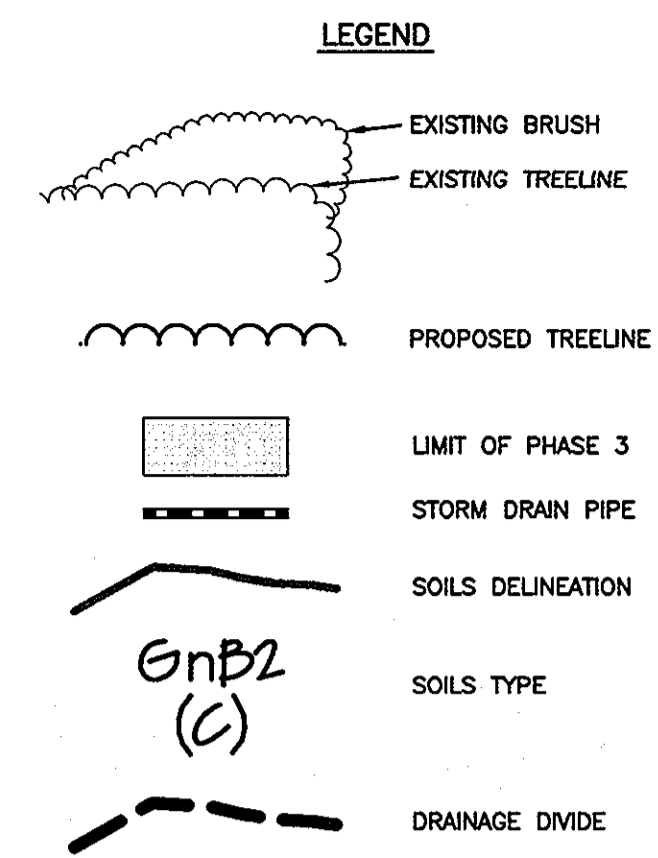
TAX MAP: 16, PARCEL: P/O 8, GRID: 17
 ELECTION DISTRICT NO. 3 - HOWARD COUNTY, MARYLAND

STORM DRAIN PROFILES AND DETAILS

DATE: MARCH, 2010 BEI PROJECT NO. 1915
 SCALE: AS SHOWN SHEET 8 OF 11

MAP SYMBOL	SOIL GROUP	SOIL TYPE
Ba*	D	BAILE SILT LOAM
CgB2	B	CHESTER GRAVELLY SILT LOAM, 3 TO 8 % SLOPES, MODERATELY ERODED
CgC2	B	CHESTER GRAVELLY SILT LOAM, 8 TO 15 % SLOPES, MODERATELY ERODED
ChA	B	CHESTER SILT LOAM, 0 TO 3 % SLOPES
ChB2	B	CHESTER SILT LOAM, 3 TO 8 % SLOPES, MODERATELY ERODED
ChC2	B	CHESTER SILT LOAM, 8 TO 15 % SLOPES, MODERATELY ERODED
ChC3	B	CHESTER SILT LOAM, 8 TO 15 % SLOPES, SEVERELY ERODED
CuB	B	COMUS SILT LOAM, LOCAL ALLUVIUM, 3 TO 8 % SLOPES
EnC2	B	ELSNBORO LOAM, 8 TO 15 % SLOPES, MODERATELY ERODED
GIA	B	GLENELG LOAM, 0 TO 3 % SLOPES
GIC2	B	GLENELG LOAM, 8 TO 15 % SLOPES, MODERATELY ERODED
GIC3	B	GLENELG LOAM, 8 TO 15 % SLOPES, SEVERELY ERODED
GnB2*	C	GLENVILLE SILT LOAM, 3 TO 8 % SLOPES, MODERATELY ERODED
Ha*	D	HATBORO SILT LOAM
Kn*	D	KINKORA SILT LOAM
MgB2	B	MANOR GRAVELLY LOAM, 3 TO 8 % SLOPES, MODERATELY ERODED
MgC2	B	MANOR GRAVELLY LOAM, 8 TO 15 % SLOPES, MODERATELY ERODED
MgC3	B	MANOR GRAVELLY LOAM, 8 TO 15 % SLOPES, SEVERELY ERODED
MIB2	B	MANOR LOAM, 3 TO 8 % SLOPES, MODERATELY ERODED
MIC3	B	MANOR LOAM, 8 TO 15 % SLOPES, SEVERELY ERODED
MID2	B	MANOR LOAM, 15 TO 25 % SLOPES, MODERATELY ERODED
MID3	B	MANOR LOAM, 15 TO 25 % SLOPES, SEVERELY ERODED
ME	B	MANOR LOAM, 25 TO 45 PERCENT SLOPES

* INDICATES HYDRIC SOILS
TAKEN FROM: SOIL SURVEY HOWARD COUNTY, MARYLAND, ISSUED 500, 1968, MAP NO. 9



STORM DRAIN DATA

INLET NO.	AREA (AC)	L' FACTOR	I ₁₀ (in/hr)	Q ₁₀ (cfs)	% IMPERVIOUS
EX. I-20	1.58	0.44	6.60	4.61	0.74
EX. I-23	1.98	0.45	6.60	5.90	0.74
EX. I-24	1.16	0.50	6.60	3.81	0.77
EX. I-25	0.78	0.50	6.60	2.58	0.78
EX. I-26	2.42	0.26	6.60	4.11	0.45
EX. I-30	1.04	0.41	6.60	2.81	0.72
EX. I-31	0.41	0.53	6.60	1.44	0.79
EX. I-41a	0.17	0.75	6.60	0.84	0.93
I-42	1.82	0.76	6.60	9.16	0.94
I-43	0.79	0.55	6.60	2.89	0.73
I-44	1.34	0.36	6.60	3.18	0.69
I-44A	0.47	0.47	6.60	1.46	0.75
I-45	0.10	0.67	6.60	0.43	0.88
I-46	0.10	0.60	6.60	0.39	0.63
I-47	0.32	0.30	6.60	0.64	0.65

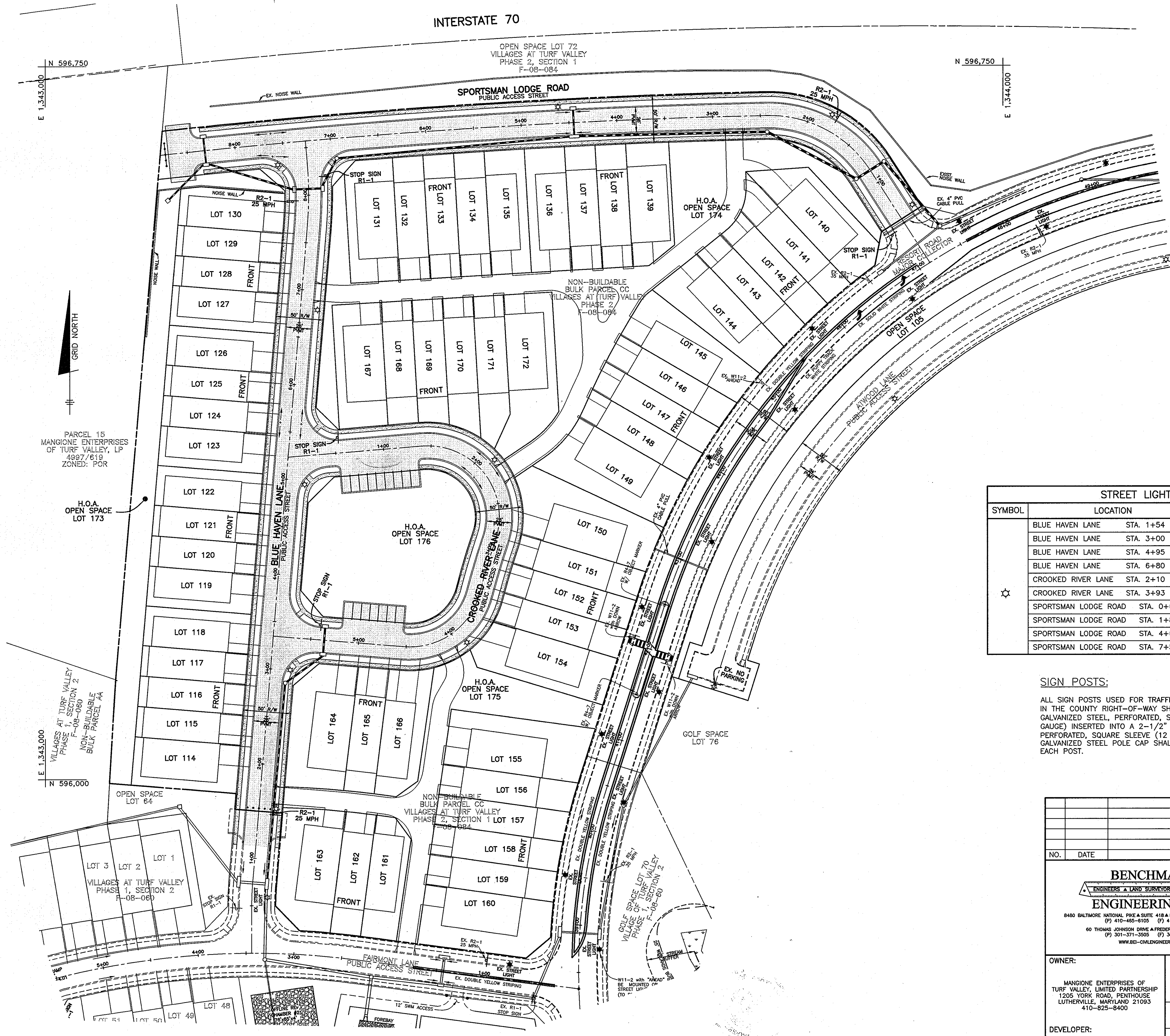
STORM DRAIN COMPUTATIONS AND REPORT PROVIDED UNDER PHASE 1, SECTION 2 (F-08-060) AND PHASE 2, SECTION 1 (F-08-084) PLANS.

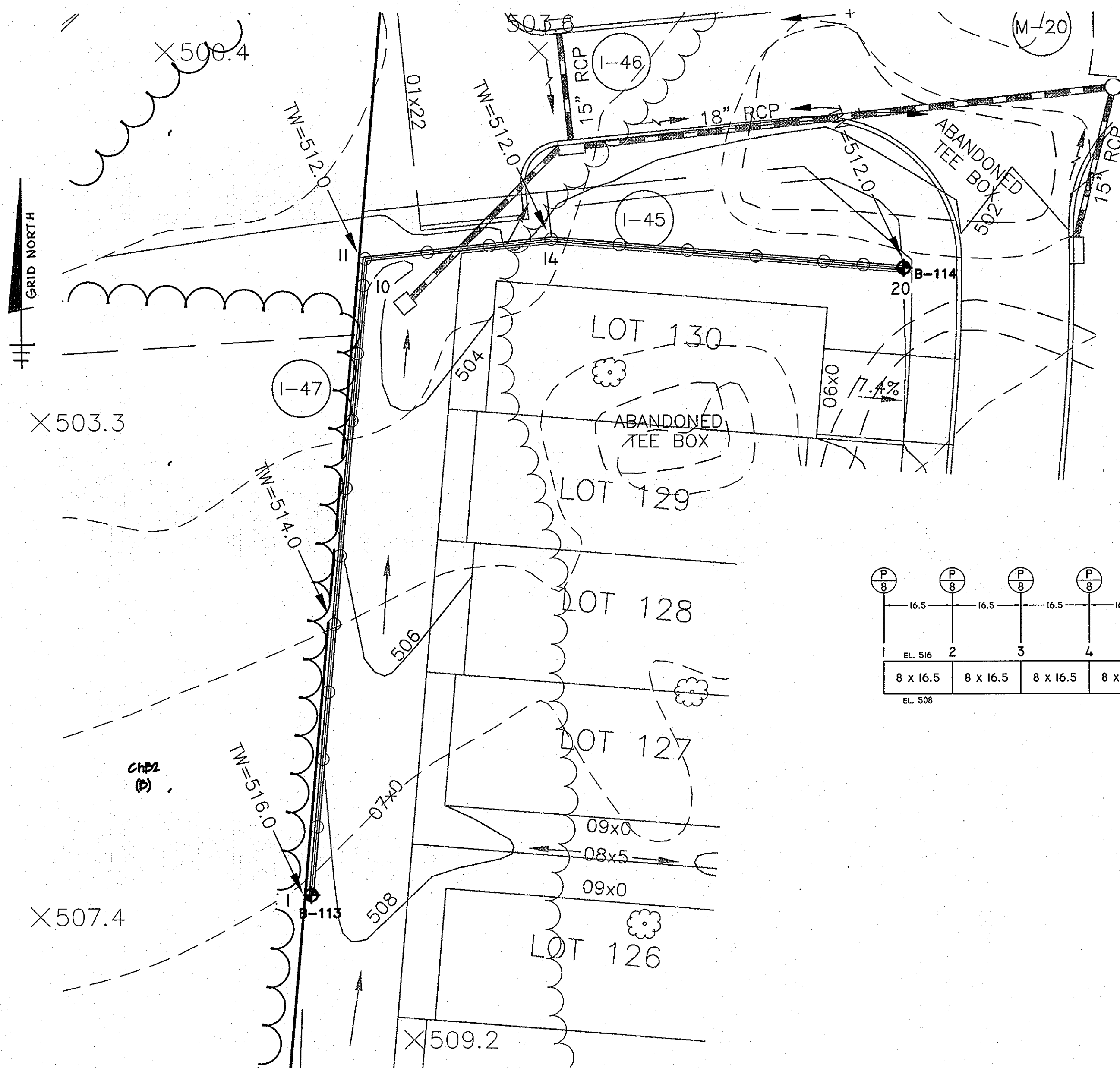
APPROVED: DEPARTMENT OF PUBLIC WORKS
[Signature] 4-27-10
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
[Signature] 4/25/10
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

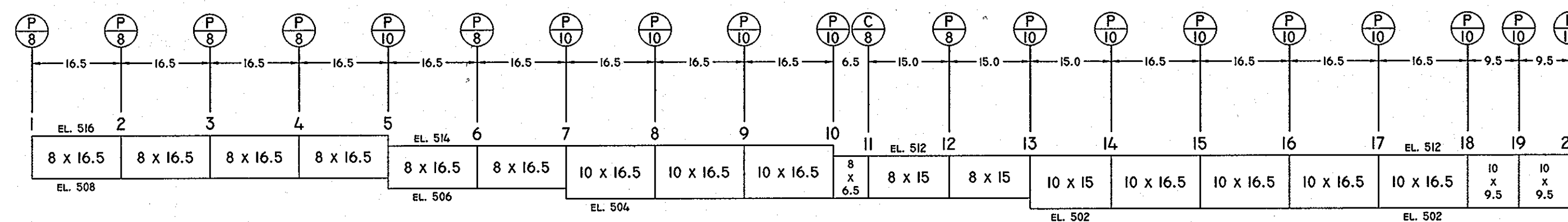
[Signature] 4/28/10
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

NO.	DATE	REVISION
BENCHMARK ENGINEERING, INC. <small>ENGINEERS • LAND SURVEYORS • PLANNERS</small> 6480 BALTIMORE NATIONAL FIRE & SUITE 418 A ELICOTT CITY, MARYLAND 21043 (P) 410-466-6100 (F) 410-465-8844 60 THOMAS JOHNSON DRIVE & FREDERICK, MARYLAND 21702 (P) 301-371-3505 (F) 301-371-3506 WWW.BE1-ENGINEERING.COM		
OWNER: MANGIONE ENTERPRISES OF TURF VALLEY, LIMITED PARTNERSHIP 1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21083 410-825-8400		
DEVELOPER: MANGIONE ENTERPRISES OF TURF VALLEY, LIMITED PARTNERSHIP 1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21083 410-825-8400		
VILLAGES AT TURF VALLEY PHASE 3 LOTS 114 thru 172 AND OPEN SPACE LOTS 173 thru 176		
TAX MAP: 16, PARCEL: P0 8, GRID: 17 ZONED: F00C ELECTION DISTRICT NO. 3 - HOWARD COUNTY, MARYLAND		
STORM DRAIN DRAINAGE AREA MAP		
DATE: MARCH, 2010	BEI PROJECT NO. 1915	
SCALE: 1" = 50'	SHEET 9 OF 11	





PLAN VIEW
SCALE: 1"=20'



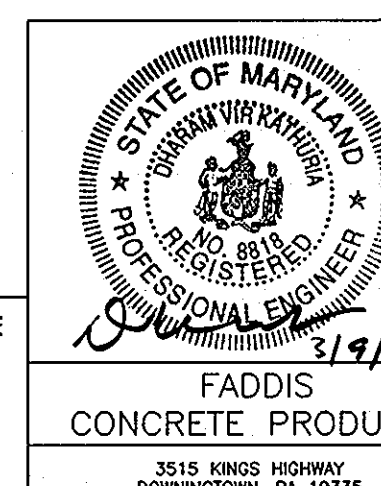
PROFILE
1"=20' HORIZ, 1"=20' VERT.

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. 8878
Expiration Date: 10/17/10

APPROVED: DEPARTMENT OF PUBLIC WORKS
Walter Z. Smith 4-27-10
DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Walter Z. Smith 4/27/10
DATE

APPROVED: DEPARTMENT OF ENGINEERING
Walter Z. Smith 4/27/10
DATE



THIS DRAWING AND ALL INFORMATION WITHIN MAY NOT BE REPRODUCED OR DISTRIBUTED FOR ANY OTHER PURPOSE EXCEPT FOR THE STATED PROJECT. THIS DRAWING MAY NOT BE ALTERED IN ANY WAY WITHOUT THE EXPRESSED WRITTEN CONSENT OF FADDIS CONCRETE PRODUCTS.

BY	DESCRIPTION	DATE

DATE	SCALE	DR. BY	CHK. BY	DRAWING NO.
5/13/08	---	JML		TV2-01

OWNER:
MANGIONE ENTERPRISES OF TURF VALLEY, LIMITED PARTNERSHIP
1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21093
410-825-8400

DEVELOPER:
MANGIONE ENTERPRISES OF TURF VALLEY, LIMITED PARTNERSHIP
1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21093
410-825-8400

VILLAGES AT TURF VALLEY
PHASE 3
LOTS 114 thru 172
OPEN SPACE LOTS 173 thru 176

TAX MAP: 16, PARCEL: P10 8, GRID: 17
ELECTION DISTRICT NO. 3 - HOWARD COUNTY, MARYLAND - ZONED: PGCC

NOISE WALL
PLAN AND PROFILE

DATE: MARCH, 2010	BEI PROJECT NO. 1915
SCALE: AS SHOWN	SHEET 11 OF 11