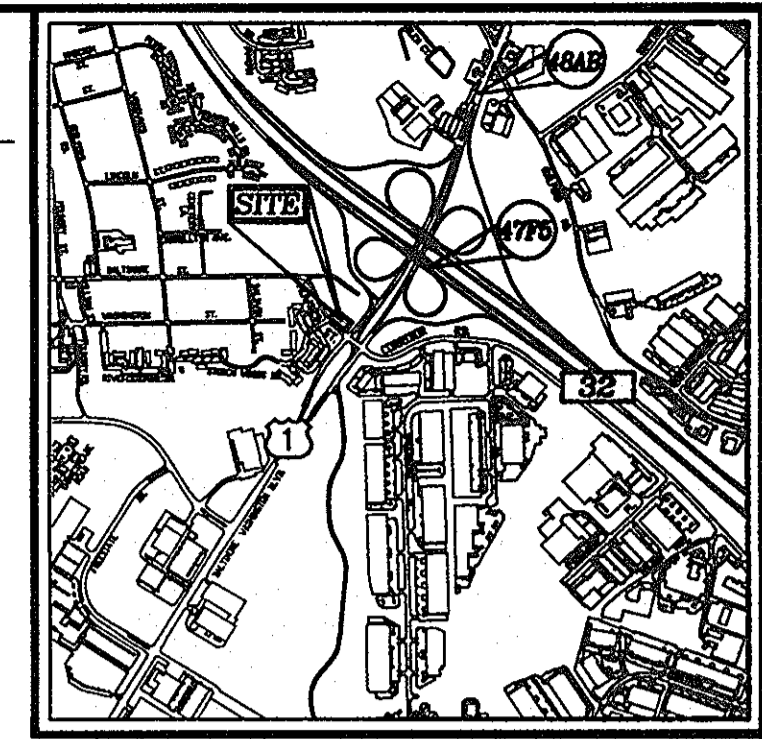


# ENVIRONMENTAL CONCEPT PLAN TOTARO PROPERTY LOTS 1 & 2 LIBER 9070, FOLIO 598

**SITE DATA**  
 LOCATION: TAX MAP 47, GRID 12, PARCEL 119  
 DEED REFERENCE: L9070 F.598  
 6TH ELECTION DISTRICT  
 EXISTING ZONING: R-SC  
 PER THE COMPREHENSIVE ZONING PLAN DATED 2/02/04.  
 GROSS AREA OF PARCEL: 0.6329 AC  
 AREA OF RIGHT OF WAY: 0.0000 AC  
 AREA OF FLOODPLAIN: N/A  
 AREA OF STEEP SLOPES: N/A  
 NET AREA OF PROJECT: 0.6329 AC  
 NUMBER OF RESIDENTIAL LOTS PROPOSED: 2 LOTS  
 AREA OF PROPOSED RESIDENTIAL LOTS: 27,863 SF (0.6350 AC)  
 AREA OF SMALLEST BUILDABLE LOT PROPOSED: 10,107 SF  
 NUMBER OF PROPOSED OPEN SPACE LOTS: 0  
 NUMBER OF NON-BUILDABLE BULK PARCELS: 0

**SITE GRADING DATA**  
 LIMITS OF DISTURBANCE 25,353 SF OR 0.582 AC  
 AREA TO BE PAVED OR COVERED 6,538 SF OR 0.150 AC  
 AREA TO BE VEGETATIVELY STABILIZED 18,815 SF OR 0.432 AC

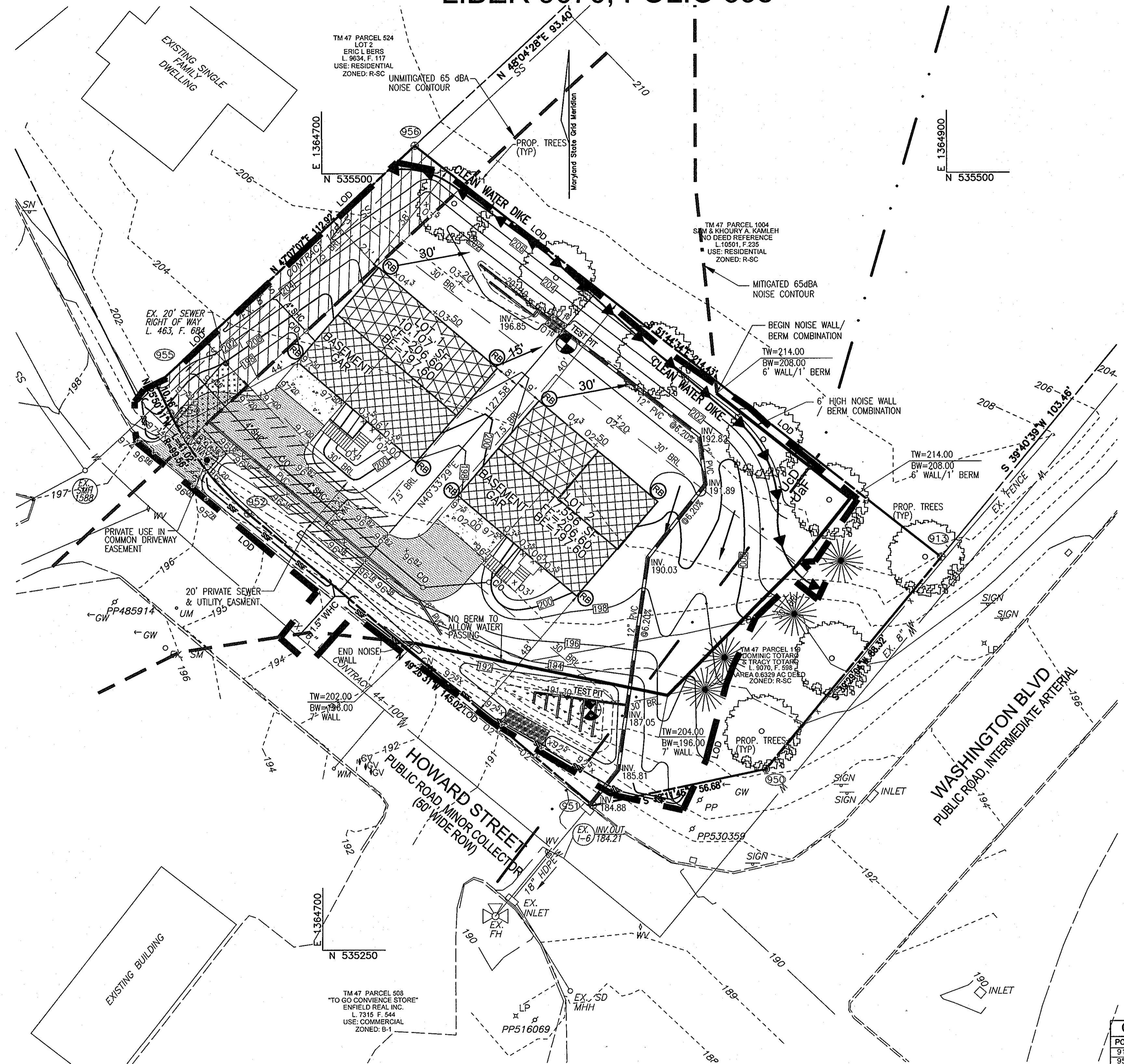
**BENCHMARKS**  
 HOWARD COUNTY BENCHMARK - 47F5 (CONC. MONUMENT)  
 N:535985.024 E:1365653.51 EL:235.045  
 HOWARD COUNTY BENCHMARK - 48A8 (CONC. MONUMENT)  
 N:536384.453 E:1366415.81 EL:225.70



**VICINITY MAP**  
 SCALE: 1"=2000'  
 ADC MAP/GRID NUMBER: 5053 / K9

**GENERAL NOTES**

1. THE PROJECT BOUNDARY IS BASED ON A FIELD RUN BOUNDARY SURVEY PREPARED BY ROBERT H. VOGEL ENGINEERING, INC. DATED 1/26/06
2. THE TOPOGRAPHY SHOWN HEREON IS BASED ON FIELD RUN TOPOGRAPHY PERFORMED BY ROBERT H. VOGEL ENGINEERING, INC. DATED 1/26/06
3. WATER AND SEWER SERVICE FOR THIS PROJECT WILL BE PUBLIC. WATER AND SEWER SERVICE WILL BE GRANTED UNDER THE PROVISIONS OF SECTION 18.122B OF THE HOWARD COUNTY CODE.
4. THIS SITE IS NOT LOCATED IN A HISTORIC DISTRICT.
5. NO STREAMS OR STREAM BUFFERS EXIST ON SITE.
6. NO 100-YEAR FLOODPLAIN EXIST ON SITE.
7. THERE ARE NO WETLANDS ON THIS SITE.
8. SUBJECT PROPERTY ZONED R-SC PER 2/02/04 COMPREHENSIVE ZONING PLAN AMENDED BY THE COMPREHENSIVE LITE AMENDMENT DATED 07/28/06.
9. THIS PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS (COUNCIL BILL 45-2003).
10. DRIVEWAY(S) SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
  - a) WIDTH - 12 FEET (14 FEET SERVING MORE THAN ONE RESIDENCE).
  - b) SURFACE - 6 INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CLIP COATING.
  - c) GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% CHANGE AND MINIMUM OF 45-FOOT DEPTH TURNING RADIUS.
  - d) STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING).
  - e) DRAINAGE ELEMENTS-CAPABLE OF SAFELY PASSING 100-YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE.
  - f) STRUCTURE CLEARANCES-MINIMUM 12 FEET.
  - g) MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.
11. DPZ FILE NUMBERS: N/A ORIGINAL SUBDIVISION DATES TO 1960
12. THERE IS NO EXISTING HOUSE OR CONSTRUCTION IN THIS PROPERTY.
13. STORM WATER MANAGEMENT ADDRESSED FOR SITE USING 2007 MARYLAND STORMWATER DESIGN MANUAL (CHAPTER 5).
  - A. CHANNEL PROTECTION VOLUME (CPV) IS NOT REQUIRED (P<sub>e</sub> FOR ENTIRE SITE IS EQUAL TO OR UNDER 1.0')
  - B. WATER QUALITY VOLUME (WQV) AND RECHARGE VOLUME (REV) TO BE PROVIDED BY ROOFTOP DISCONNECT (N-1), MICRO BIOTRETION FACILITIES (M-6), PERMEABLE CONCRETE (A-2) AND RAIN BARRELS (M-1). (DETAILED SHEET 2 OF 2).
14. FOREST STAND DELINEATION PREPARED BY ROBERT H. VOGEL ENGINEERING, INC. DATED MARCH 2011. A WAIVER FOR THE REQUIREMENTS TO PROVIDE FOREST CONSERVATION IS BEING SUBMITTED WITH THIS PLAN.
15. A NOISE STUDY WAS PREPARED BY ROBERT H. VOGEL ENGINEERING, INC. DATED FEBRUARY 2011.
16. APPROVAL OF THIS ECP DOES NOT CONSTITUTE AN APPROVAL OF ANY SUBSEQUENT AND ASSOCIATED SUBDIVISION AND/OR SITE DEVELOPMENT PLAN. REVIEW OF THIS PROJECT FOR COMPLIANCE WITH THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE HOWARD COUNTY ZONING REGULATIONS SHALL OCCUR AT THE SUBDIVISION AND/OR SITE PLAN STAGES.
17. TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO BURIAL/CEMETERY LOCATIONS ON SITE.
18. THERE ARE NO STEEP SLOPES LOCATED ONSITE.



**LEGEND:**

	EXISTING CONTOUR		EXISTING SOIL
	PROPOSED CONTOUR		PROPOSED STORM DRAIN
	PROPOSED SPOT ELEVATION		PROPOSED UNDERDRAIN
	EXISTING SPOT ELEVATION		PROPOSED CLEAN WATER DIKE (MOUNTABLE)
	EXISTING CURB AND GUTTER		PROPOSED RAIN BARREL
	PROPOSED CURB AND GUTTER		AREA TO RAIN BARREL
	EXISTING UTILITY POLE		AREA TO RAIN BARREL W/ DISCONNECT
	EXISTING LIGHT POLE		PROPOSED PEROUS PAVEMENT
	EXISTING MAILBOX		PROPOSED CONCRETE
	EXISTING SIGN		PROPOSED MICRO BIOTRETION FACILITY
	EXISTING SANITARY MANHOLE		20' PRIVATE SEWER EASEMENT
	EXISTING SANITARY LINE		PRIVATE USE IN COMMON DRIVEWAY EASEMENT
	EXISTING CLEANOUT		LIMIT OF DISTURBANCE
	EXISTING FIRE HYDRANT		SUPER SILT FENCE
	EXISTING WATER LINE		
	EXISTING TREE LINE		
	EXISTING FENCE		
	PROPERTY LINE		
	RIGHT-OF-WAY LINE		
	EXISTING SEWER EASEMENT		
	PROPOSED LANDSCAPE		

**SWM NARRATIVE**

THE STORMWATER MANAGEMENT PROVIDED ON THIS SITE WAS DESIGNED TO PRESERVE THE NATURAL RESOURCES OF THE SITE TO THE MAXIMUM EXTENT POSSIBLE. STRUCTURAL PRACTICES HAVE BEEN MINIMIZED WHILE RAIN BARRELS, ROOFTOP DISCONNECTS, PEROUS PAVEMENT AND MICROBIOTRETION HAS BEEN UTILIZED THROUGHOUT THE SITE. THE ADDITION OF IMPERVIOUS AREAS WAS MINIMIZED BY USING PEROUS PAVEMENT IN RELATIVELY FLAT AREAS. SEDIMENT CONTROL FOR THESE LOTS WILL BE ACHIEVED BY USING SUPER SILT FENCE WHICH WILL MINIMIZE DISTURBANCE AND PRESERVE NATURAL SHEETFLOW. THERE WERE NO ENVIRONMENTAL FEATURES (SUCH AS STREAMS OR WETLANDS) FOUND ON THIS SITE.

**OWNER**

DOMINIC TOTARO  
 TRACY TOTARO  
 12309 CAROL DR  
 FULTON, MD 20759  
 301-674-6383

**FOREST STAND ANALYSIS TABLE**

KEY	TYPE OF COMMUNITY	AREA	SOILS INFORMATION				EXISTING VEGETATION	STAND CHARACTERISTICS			F. FOREST AREA IN SEN. ENV.
			1. SOILS TYPES	2. TYPICAL FOREST COVER FOR SOILS TYPE	3. WOODLAND SUITABILITY INDEX	4. HABITAT		1. SIZE (HA)	2. AGE (YRS)	3. COND.	
AF-1	ABANDONED FIELD	0.60 AC	U <sub>6</sub>	N/A	12	1	GRASSES, MAPLE	12'-22'	15-20	POOR	0.00 AC

**FOREST STAND TOTALS**

STAND AF-1	0.60 ACRES
<b>TOTAL</b>	<b>0.60 ACRES (ENTIRE SITE)</b>

**SOILS LEGEND**

SYMBOL	NAME/DESCRIPTION	TYPE
U <sub>6</sub>	UDORTHERTS HIGHWAY, 0 TO 65 PERCENT SLOPES	D
U <sub>6D</sub>	URBAN LAND-CHILLUM-BELTSVILLE COMPLEX, 5 TO 15 PERCENT SLOPES	D

**SWM DRAINAGE AREA INFO**

FACILITY	AREA	% IMP	ESD <sub>v</sub> REQ	ESD <sub>v</sub> PROV	FACILITY TYPE
MBR #1	4594 SF	33%	72 CF	78 CF	MICRO BIOTRETION
MBR #2	13690 SF	21%	175 CF	250 CF	MICRO BIOTRETION

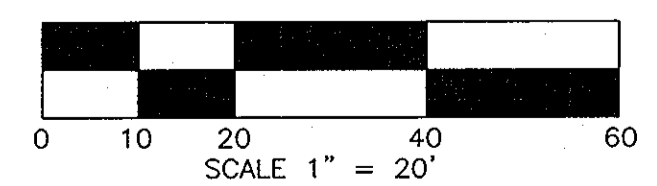
**COORDINATE LIST**

POINT	NORTHING	EASTING
913	535376.201	1364898.118
950	535308.036	1364841.958
951	535296.441	1364785.476
952	535330.735	1364678.298
954	535422.988	1364651.424
955	535432.134	1364646.996
956	535508.974	1364729.739

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 9/1/11  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*[Signature]* 9/1/11  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE



**SHEET INDEX**

SHT NO.	DESCRIPTION
1 OF 2	SUPPLEMENTAL INFORMATION AND FOREST CONSERVATION PLAN
2 OF 2	SIGHT DISTANCE ANALYSIS, SWM DA MAP & DETAILS

NO.	REVISION	DATE

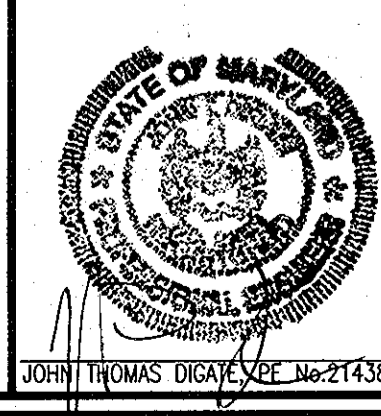
**ENVIRONMENTAL CONCEPT PLAN**

**TOTARO PROPERTY**  
 LOTS 1 & 2  
 LIBER 9070, FOLIO 598

6TH ELECTION DISTRICT  
 TAX MAP: 47 GRID: 12  
 DPZ REF'S: 281072m

ZONING: R-SC  
 PARCELS: 119  
 HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL ENGINEERING, INC.**  
 ENGINEERS • SURVEYORS • PLANNERS  
 8407 MAIN STREET  
 ELLICOTT CITY, MD 21043  
 TEL: 410.461.7666  
 FAX: 410.461.8961

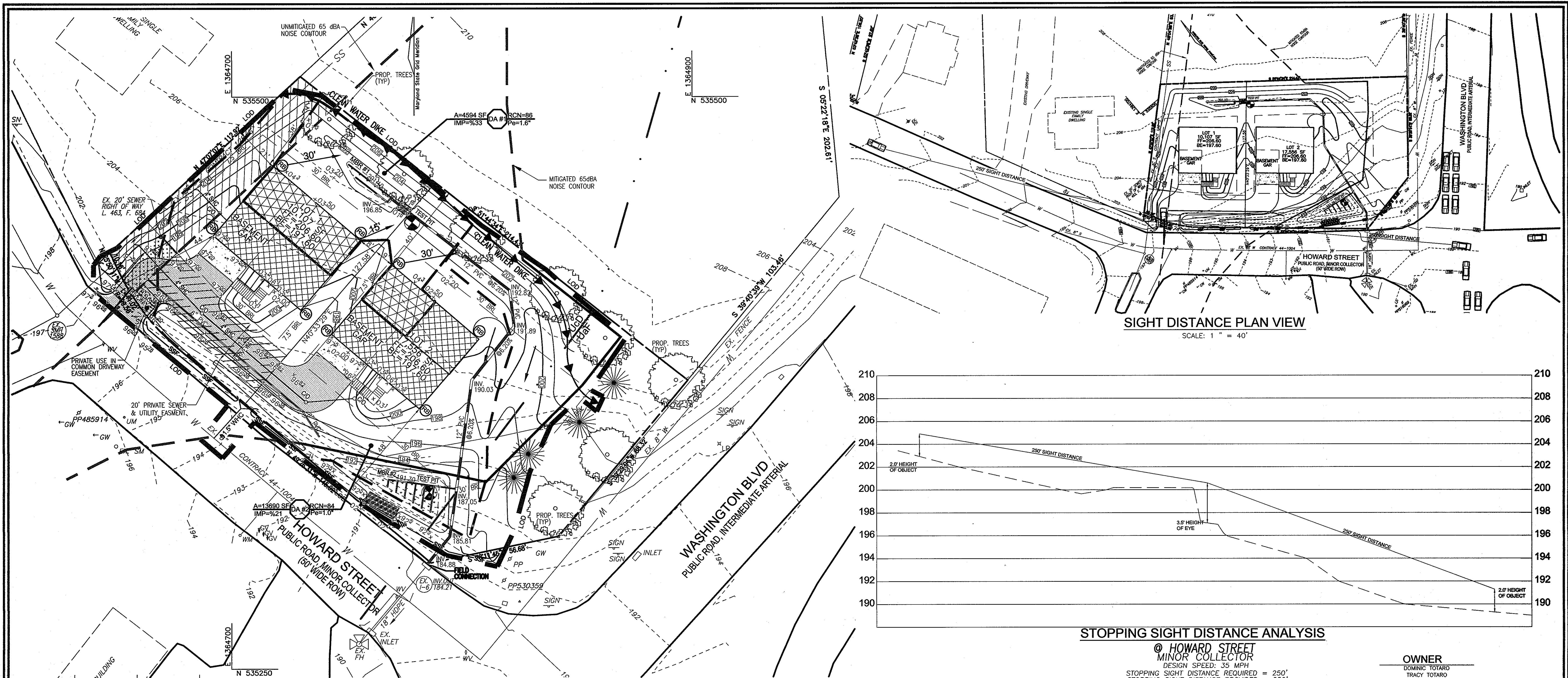


**PROFESSIONAL CERTIFICATE**

DESIGN BY: JTD  
 DRAWN BY: JTD  
 CHECKED BY: RHV  
 DATE: JULY 2011  
 SCALE: 1"=20'  
 W.O. NO.: 05-28

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. 14221438 EXPIRATION DATE 12-16-2012

1 SHEET OF 2



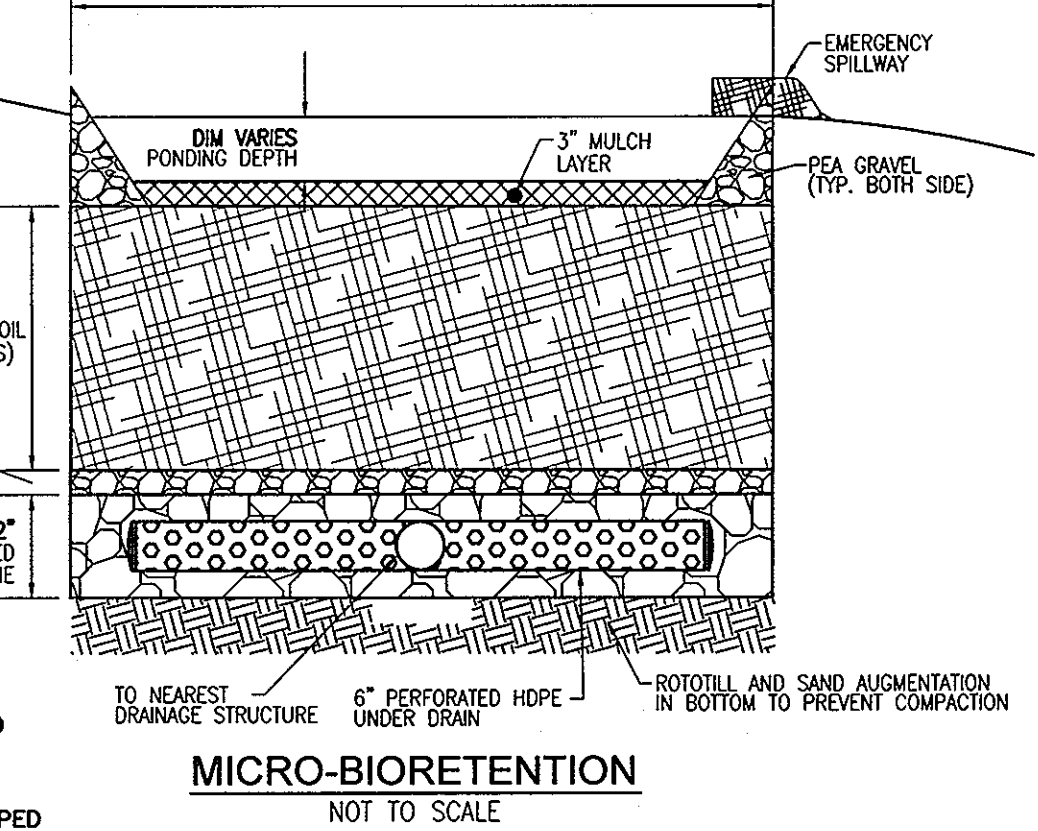
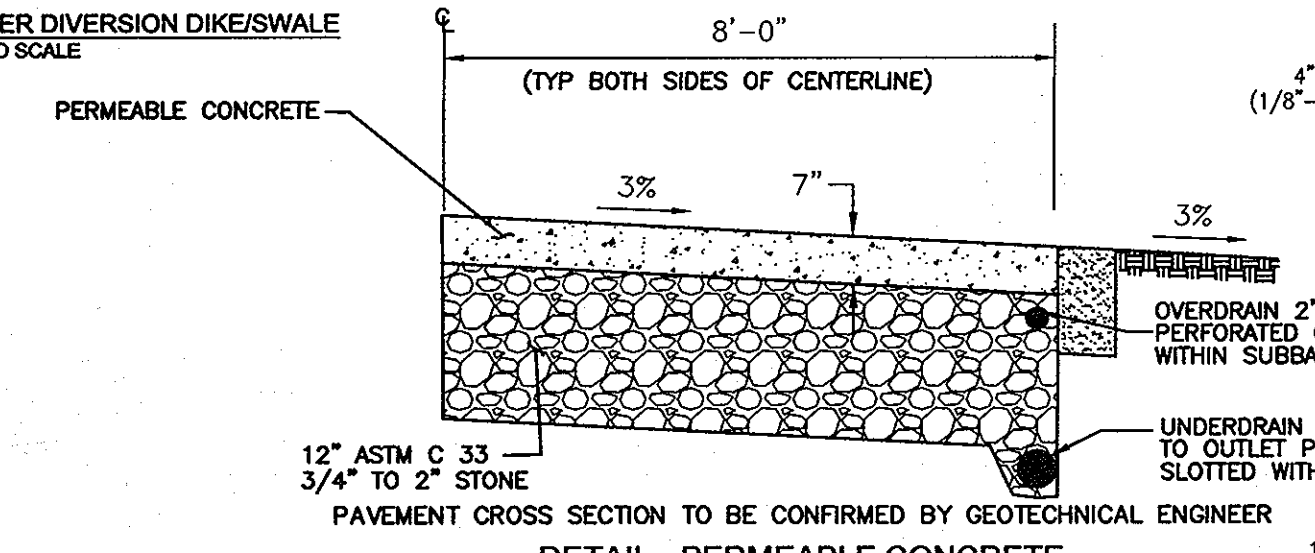
**SWM DRAINAGE AREA MAP**  
SCALE: 1" = 20'

**STOPPING SIGHT DISTANCE ANALYSIS**

© HOWARD STREET  
MINOR COLLECTOR  
DESIGN SPEED: 35 MPH  
STOPPING SIGHT DISTANCE REQUIRED = 250'  
STOPPING SIGHT DISTANCE PROVIDED = 250'  
SCALE: 1" = 40' HORIZ.  
1" = 4' VERT.

**OWNER**  
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301-674-6383

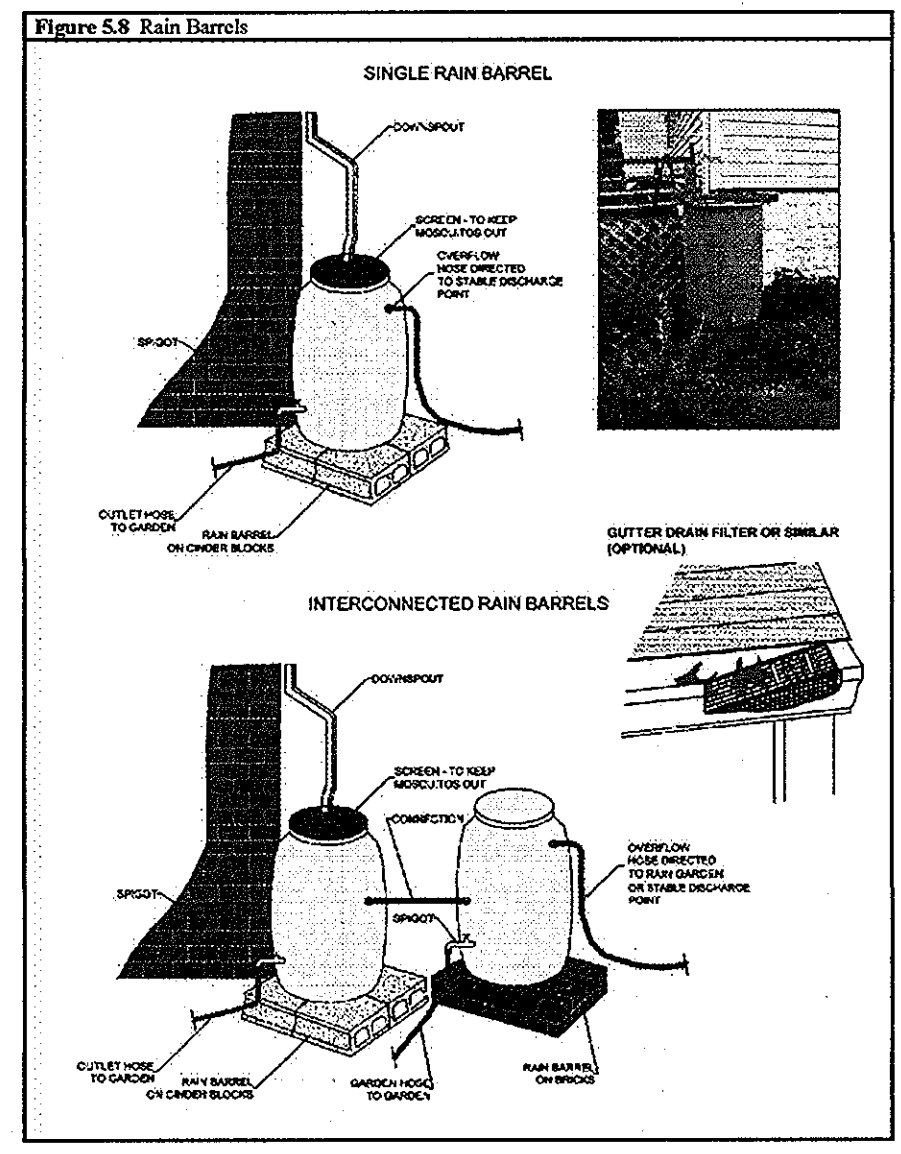
- NOTES:**
- CLEANWATER DIVERSION DIKE/SWALE IS DESIGNED TO KEEP CLEAN STORMWATER RUNOFF FROM BEING TREATED IN PROPOSED FACILITIES.
  - THE DIKE/SWALE IS A PERMANENT FEATURE AND MUST BE MOUNTABLE FOR LAWN MOWING PURPOSES.
  - THE DIKE/SWALE WILL MAINTAIN POSITIVE DRAINAGE AT A MINIMUM OF 2% AND A MAXIMUM OF 6% TO AVOID EROSION VELOCITIES.
  - THE DIKE/SWALE WILL BE STABILIZED USING HOWARD COUNTY'S STANDARD PERMANENT SEEDING NOTES.



**OPERATION AND MAINTENANCE SCHEDULE FOR MICROBIORETENTION AREAS**

- ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER AND SOIL LAYER IS REQUIRED. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUME II, TABLE A.4.1 AND 2.
- SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, TREATMENT OF ALL DISEASED TREES AND SHRUBS AND REPLACEMENT OF ALL DEFICIENT STAKES AND WIRES.
- MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.
- SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.

- LEGEND:**
- EXISTING CONTOUR
  - PROPOSED CONTOUR
  - PROPOSED SPOT ELEVATION
  - EXISTING CURB AND GUTTER
  - PROPOSED CURB AND GUTTER
  - EXISTING UTILITY POLE
  - EXISTING LIGHT POLE
  - EXISTING MAILBOX
  - EXISTING SIGN
  - EXISTING SANITARY MANHOLE
  - EXISTING SANITARY LINE
  - EXISTING CLEANOUT
  - EXISTING FIRE HYDRANT
  - EXISTING WATER LINE
  - EXISTING TREENLINE
  - EXISTING FENCE
  - PROPERTY LINE
  - RIGHT-OF-WAY LINE
  - EXISTING SEWER EASEMENT
  - PROPOSED LANDSCAPE
  - EXISTING SOIL
  - PROPOSED STORM DRAIN
  - PROPOSED RAIN BARREL
  - AREA TO RAIN BARREL
  - AREA TO RAIN BARREL W/ DISCONNECT
  - PROPOSED PERVIOUS PAVEMENT
  - PROPOSED CONCRETE
  - PROPOSED MICRO BIORETENTION FACILITY
  - 20' PRIVATE SEWER EASEMENT
  - PRIVATE USE IN COMMON DRIVEWAY EASEMENT
  - PROPOSED SUPER SILT FENCE
  - LIMIT OF DISTURBANCE
  - SWM AREA
  - PROPOSED CLEAN WATER DIKE (MOUNTABLE)



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*John J. P.* 8/11/11  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

*John J. P.* 8/01/11  
CHIEF, DIVISION OF LAND DEVELOPMENT

NO.	REVISION	DATE

**ENVIRONMENTAL CONCEPT PLAN**  
**SWM DA MAP & DETAILS**  
**TOTARO PROPERTY**  
**LOTS 1 & 2**  
**LIBER 9070, FOLIO 598**

6TH ELECTION DISTRICT  
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2 SHEET OF 2