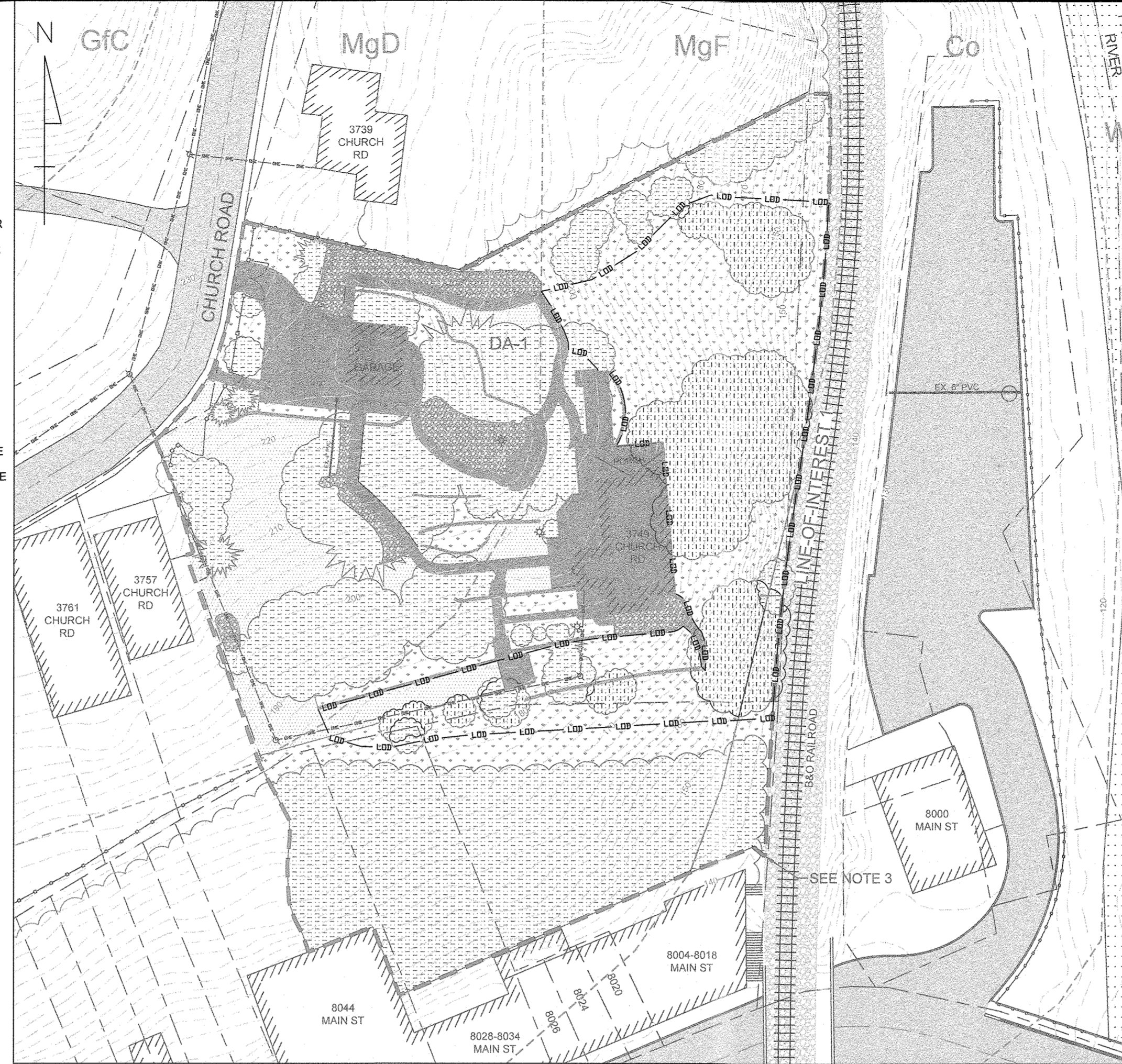


**EXISTING SITE PLAN**  
SCALE: 1" = 40'



**SWM - ORIGINAL SITE CONDITIONS**  
SCALE: 1" = 40'

**SWM LEGEND - ORIGINAL**

- IMPERVIOUS - PAVED/ROOF
- IMPERVIOUS - GRAVEL
- PERVIOUS - LAWN
- PERVIOUS - GRASS
- PERVIOUS - WOODS
- PERVIOUS - WOODS REMOVED
- DRAINAGE AREA BOUNDARY
- SOIL TYPE BOUNDARY
- LIMIT-OF-DISTURBANCE

**NOTES - EXISTING SITE**

- EXISTING CONTOURS, BUILDING OUTLINES, PAVEMENT BOUNDARIES, AND PARCELS ARE BASED ON GIS DATA AVAILABLE THROUGH HOWARD COUNTY MD GOV. A FIELD SURVEY AND TOPOGRAPHICAL SURVEY WAS NOT PERFORMED AND NO GUARANTEE IS MADE FOR THE ACCURACIES OF ELEVATIONS SHOWN ON THIS PLAN.
- EXISTING TREES (REMAINING AND REMOVED), TREE SIZES AND SPECIES, AND LOCAL BREAK LINES HAVE BEEN ESTIMATED BASED ON PHOTOGRAPHS, SATELLITE IMAGERY, AND ON-SITE OBSERVATIONS AND MEASUREMENTS TAKEN BETWEEN JANUARY 2020 AND APRIL 2021. NO GUARANTEE IS MADE FOR THEIR ACCURACY.
- EXISTING MASONRY RETAINING WALL AT THE SOUTH END OF SITE (BORDERING PROPERTIES ALONG MAIN STREET) APPEARS TO ACT AS LOCAL HIGH POINT AND EXISTING TRENCH DRAIN TOWARDS RAILROAD. THE EXISTING DITCH ALONG THE WESTERN EDGE OF THE RAILROAD IS ASSUMED TO HAVE A TRENCH DRAIN SYSTEM THAT DRAINS OUT TO THE EAST THROUGH AN EXISTING 8" PVC STORM DRAIN AND DOWN TO THE PATAPSCO RIVER.

**STORMWATER MANAGEMENT NARRATIVE**  
THIS ENVIRONMENTAL CONCEPT PLAN (ECP) IS INTENDED TO ADDRESS THE CITATIONS LISTED BELOW, WHICH WERE ISSUED ON FEB 11TH, 2020

CASE NUMBER: CE-20-012(b)  
CODE(S): 16.106(e)  
16.123(a)(c)

DESCRIPTION: GRADING/CLEARING OVER 5,000 SQUARE FEET WITHOUT AN APPROVED PLAN THAT ADDRESSES STORM-WATER MANAGEMENT AND EROSION & SEDIMENT CONTROL. APPLY AND RECEIVE APPROVAL OF AN ENVIRONMENTAL CONCEPT PLAN TO ADDRESS STORMWATER MANAGEMENT AND EROSION AND SEDIMENT CONTROL FOR GRADING/CLEARING OF THE PARCEL.

**ACTION REQUIRED:**

A STORMWATER ANALYSIS WAS PERFORMED FOR THE SITE BASED ON TR-55 GROUNDCOVER AND HYDROCAD STORMWATER MODELING AS IT VARIES FROM THE ORIGINAL SITE PLAN (PRIOR TO CITATION) AND REMOVAL OF EX. TREES AND PROPOSED SITE PLAN (PLANTING AND SWM PLANS). SOIL TYPES HAVE BEEN OBTAINED FROM DATA FROM THE NATIONAL RESOURCES CONSERVATION SERVICE (NRCS) AND TR-55 ANALYSIS WAS PERFORMED FOR THE SITE BASED ON THE HYDROLOGIC SOIL GROUP CLASSIFICATIONS (SEE TABLE BELOW). THE PEAK FLOWS AT THE LINE-OF-INTEREST AT THE EASTERN BOUNDARY OF THE SITE WERE ANALYZED IN HYDROCAD AND ARE SUMMARIZED IN THE SWM TABLE BELOW.

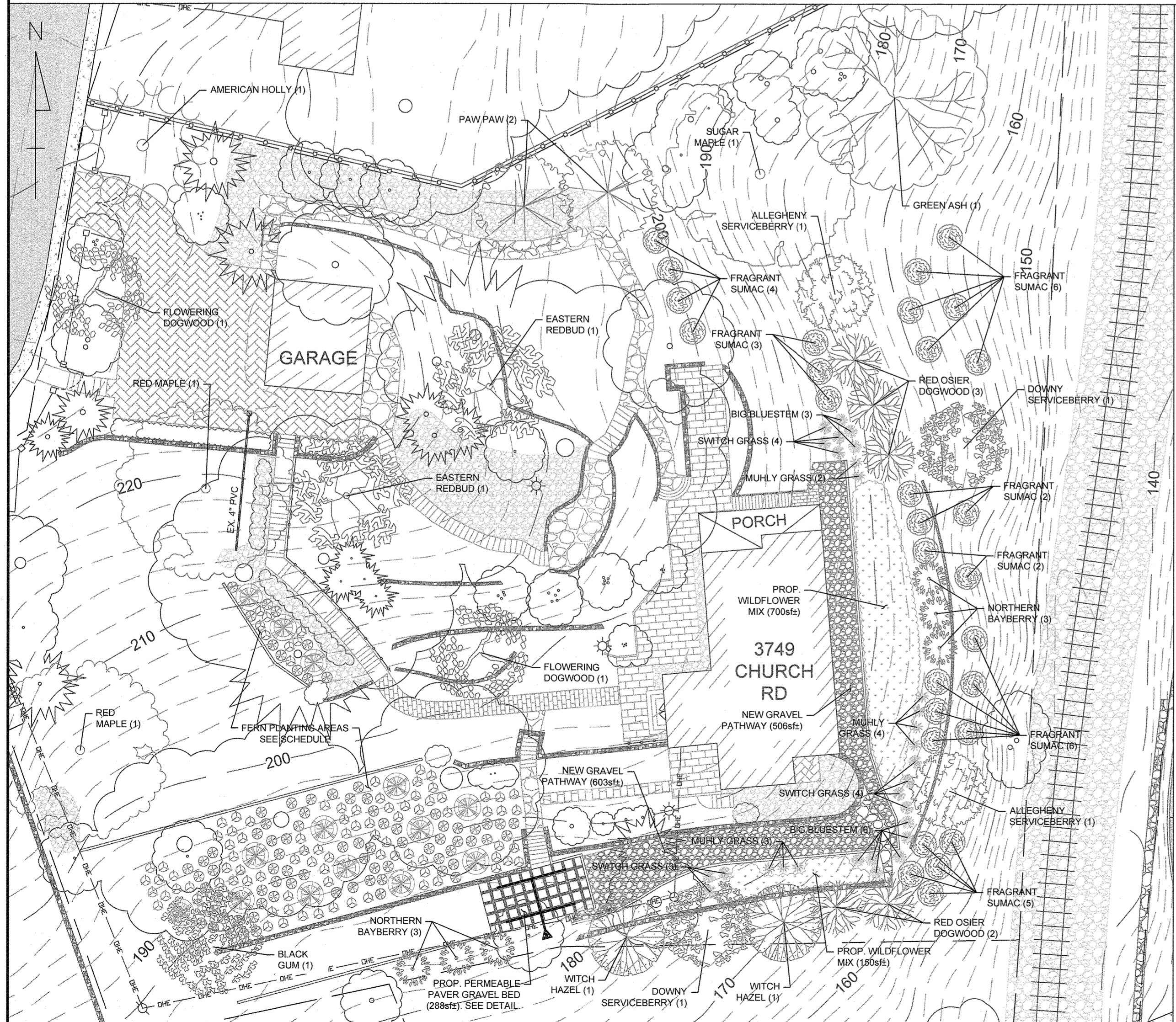
**ESD-BMP SUMMARY**

PERMEABLE PAVEMENT/GRAVEL BED	PAVER/GRAVEL BED WAS DESIGNED TO TREAT AND MITIGATE EXCESS RUNOFF AS A RESULT OF ROUGHLY 1100SF OF IMPERVIOUS GRAVEL AREA ADDED TO THE SITE PRIOR TO THE CITATION. THE LOCATION OF THE BMP WAS SELECTED FOR THE RELATIVELY FLAT GRADE, ITS ABILITY TO INTERCEPT AND CAPTURE UPSTREAM IMPERVIOUS AREA, AND ITS DISTANCE FROM ANY SIGNIFICANT STRUCTURAL FOUNDATIONS. LIKEWISE, AN EXISTING BLUESTONE PATIO AT THE LOCATION CAN BE RE-PURPOSED TO PROVIDE THE PERMEABLE PAVEMENT SURFACE FOR THE GRAVEL BASIN (SEE ENLARGED PLAN BELOW).
PERMEABLE PAVEMENT/GRAVEL BED	4435.5sf
IMPERVIOUS AREA	1292.7sf
IMPERVIOUSNESS	29%
SOILS	B
Pe REQUIRED	1.6in
IMPERVIOUS AREA REQUIRING TREATMENT (WAT)	1299.9sf
IMPERVIOUS AREA TREATED	1292.7sf
ESDv REQUIRED	163.7cf
ESDv FURNISHED	176.4cf

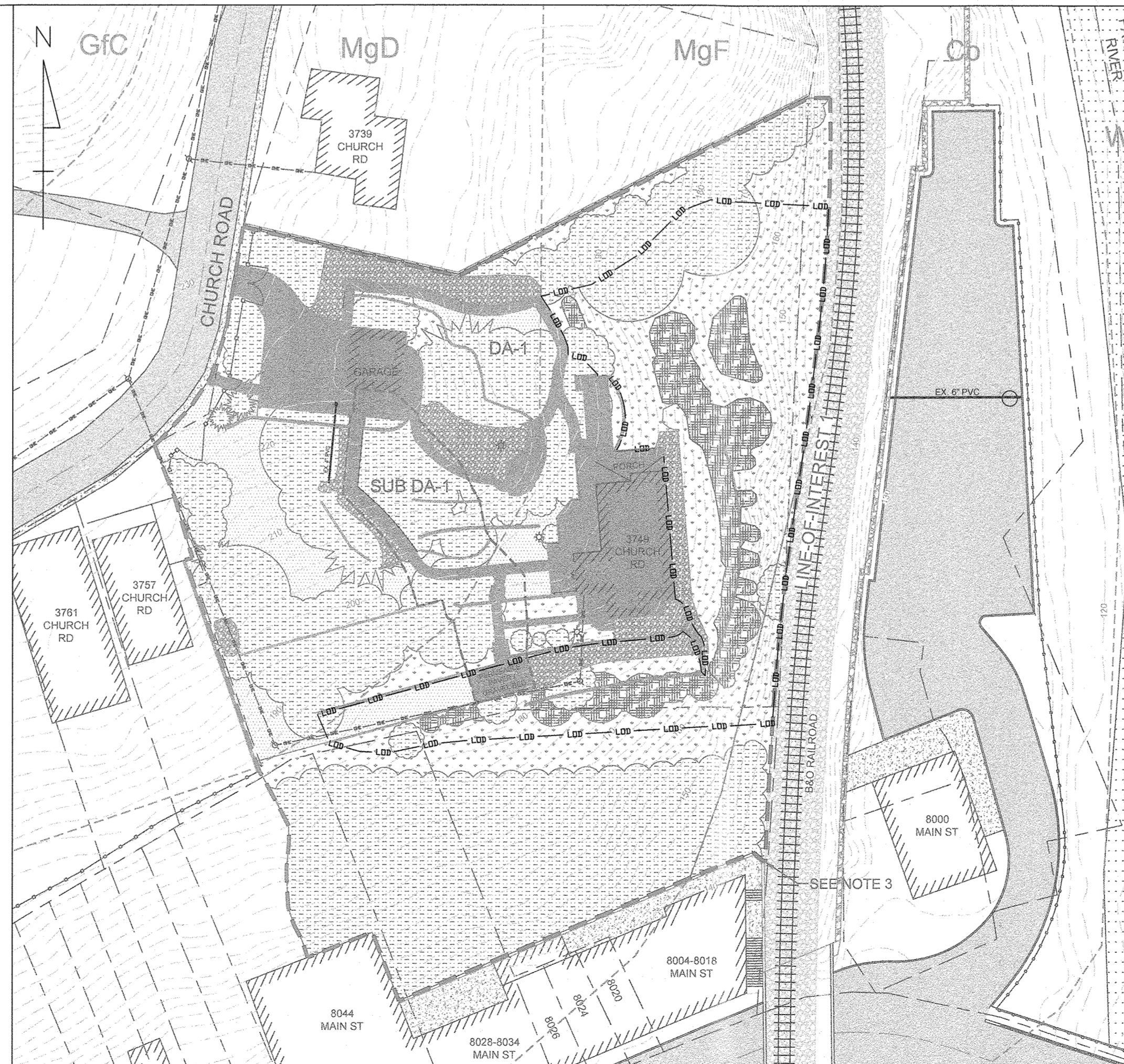
**STORMWATER MANAGEMENT SUMMARY TABLE**

	ORIGINAL		PROPOSED		TOTAL
	TOTAL	DA-1	SUB DA-1	TOTAL	
TOTAL DRAINAGE AREA (TO LOI-1)	63972.2sf	59536.7sf	4435.5sf	63972.2sf	
TOTAL IMPERVIOUS AREA	10616.9sf	10958.9sf	1292.7sf	11978.5sf	
IMPERVIOUSNESS	17.1%	17.2%	29.1%	18.6%	
WOODS/BRUSH AREA	45517.7sf	43130.0sf	2972.1sf	45802.1sf	
OPEN SPACE/LAWN AREA	5824.4sf	4119.6sf	176.8sf	4296.4sf	
RCN	63.4	62.9	69.3	63.3	
1-YEAR PEAK FLOW	0.52cfs	0.48cfs	0cfs	0.48cfs	
2-YEAR PEAK FLOW	1.12cfs	1.05cfs	0cfs	1.05cfs	
10-YEAR PEAK FLOW	3.65cfs	3.06cfs	0.41cfs	3.47cfs	
100-YEAR PEAK FLOW	10.24cfs	8.61cfs	0.89cfs	10.50cfs	

**SWM - PROPOSED SITE CONDITIONS**  
SCALE: 1" = 40'



**PROPOSED SITE PLAN**  
SCALE: 1" = 20'



**SWM - PROPOSED SITE CONDITIONS**  
SCALE: 1" = 40'

**SWM LEGEND - PROPOSED**

- IMPERVIOUS - PAVED/ROOF
- IMPERVIOUS - GRAVEL
- PERVIOUS - LAWN
- PERVIOUS - GRASS
- PERVIOUS - BRUSH/GRASS
- PERVIOUS - WOODS
- DRAINAGE AREA BOUNDARY
- SOIL TYPE BOUNDARY
- LIMIT-OF-DISTURBANCE

**SITE ANALYSIS DATA**

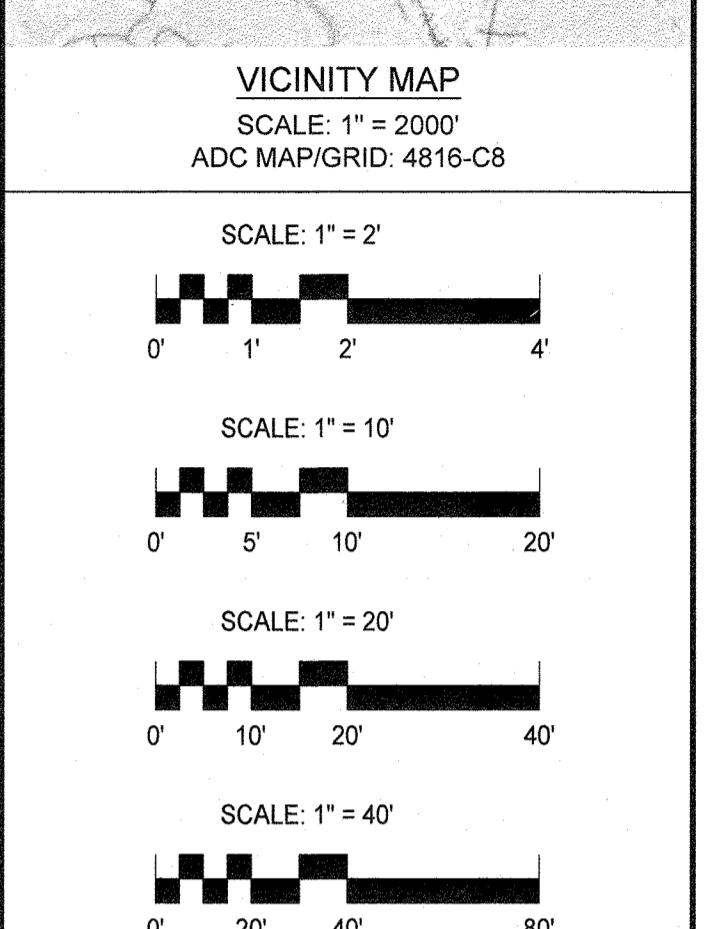
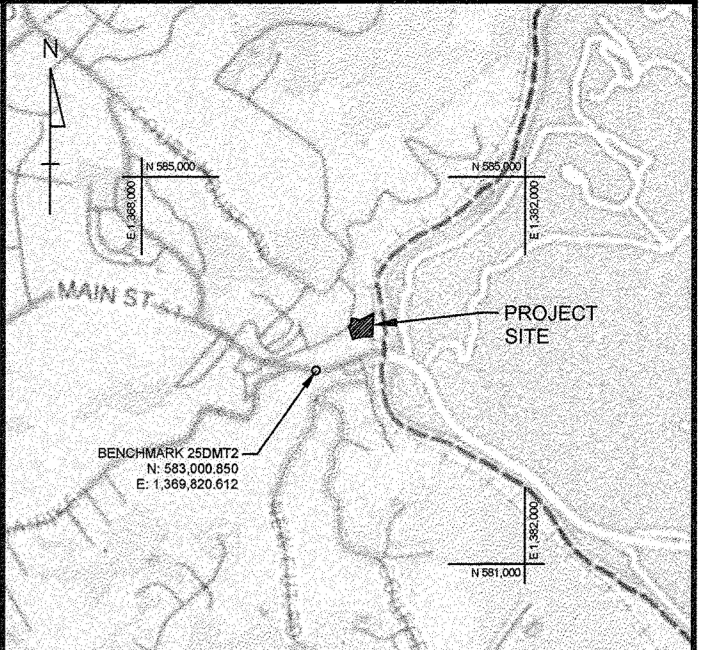
RESIDENTIAL (SINGLE-USE)	
PROPERTY AREA:	6538sf (1.099ac)
TOTAL LOD:	16812sf (0.386ac)
WETLANDS:	N/A
FLOODPLAINS:	N/A
FORESTS:	SEE SWM SUMMARY TABLE
STEEP SLOPES (>15%):	SEE EXISTING SITE PLAN
ERODIBLE SOILS:	N/A (SEE SOILS TABLE BELOW)

**PERMEABLE PAVEMENT / GRAVEL BED - ENLARGED PLAN**  
SCALE: 1" = 10'

**PERMEABLE PAVEMENT/ GRAVEL BED SECTION**  
HORIZONTAL SCALE: 1"=10'  
VERTICAL SCALE: 1"=2'

**NRCS SOILS DATA**

SOIL GROUP	HYDROLOGIC SOIL GROUP	K FACTOR	DESCRIPTION
Co	C	0.37	Codorus and Hatboro silt loams, 0-3% slopes
GfC	A	-	Gladstone-Urban land complex, 0-15% slopes
MgD	B	0.15	Manor-Bannertown sandy loams, 15-25% slopes, rocky
MgF	B	0.20	Manor-Bannertown sandy loams, 25-65% slopes, rocky
W	-	-	Water



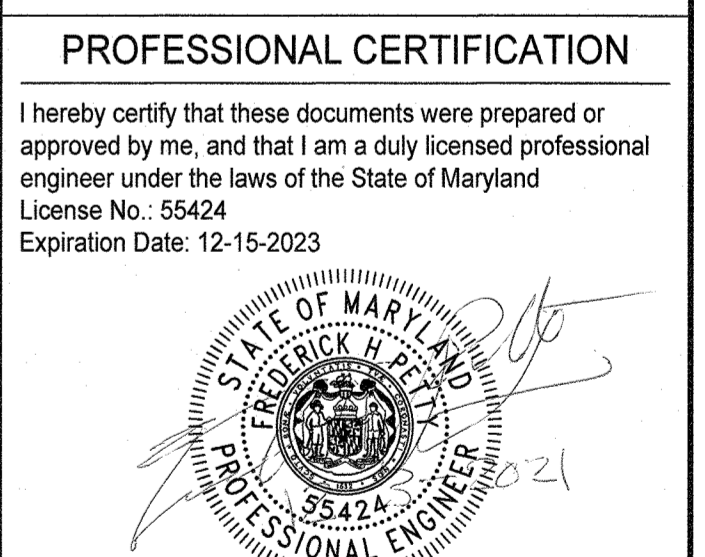
**REVISIONS**

No.	Description	Date:
-	-	-
-	-	-
-	-	-
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**NOTES**

**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.: 55424  
Expiration Date: 12-15-2023



DRAWN BY: FHP  
DATE: 12.02.2021  
PROJECT #: ECP-21-046  
PROJECT NAME: 3749 CHURCH ROAD  
PROJECT LOCATION: ELLICOTT CITY, MARYLAND  
TITLE: ENVIRONMENTAL CONCEPT PLAN  
SHEET NUMBER: ECP-1

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
CHIEF DEVELOPMENT ENGINEERING DIVISION  
CHIEF, DIVISION OF LAND DEVELOPMENT

DATE: 1/10/22  
DATE: 12/10/21