

PLAN
SCALE: 1" = 20'

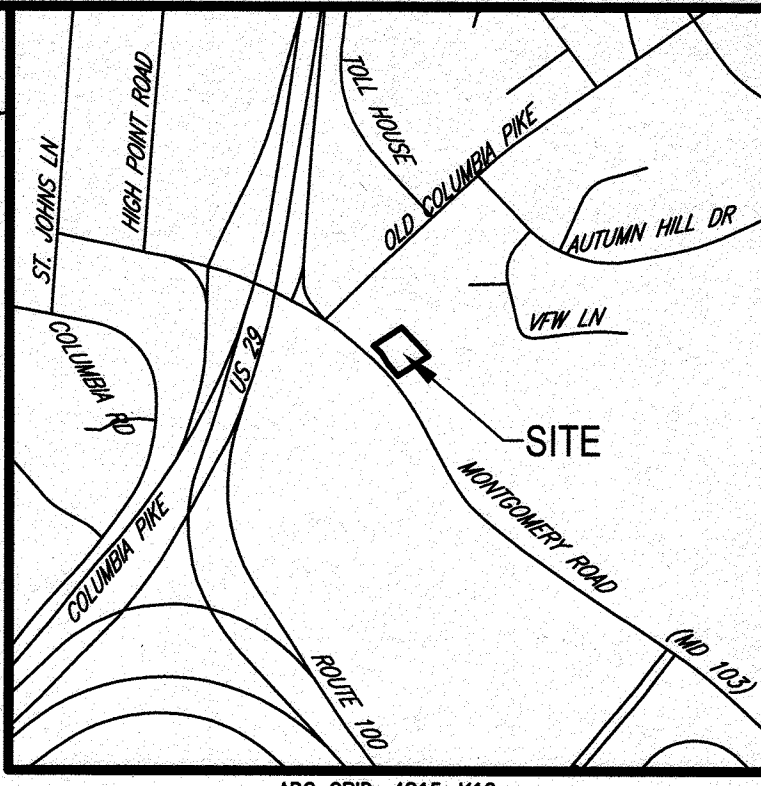
GENERAL NOTES:

- OWNER/DEVELOPER: AK GHOURI LLC
5915 CLEAR RIDGE ROAD
ELKBRIDGE, MD. 21075-5970
KHALID AZAM
410-336-9925
- PROPERTY AREA: 35,373 SF 0.812 AC.
- SITE AREA/LOD: 15,325 SF 0.352 AC.±
- EXISTING BUILDING: 2,146 SF
- PROPOSED BUILDING: 1,076 SF (TOTAL 3,222)
- ZONING: B-2 BUSINESS GENERAL
- SETBACKS FOR B-2:

REQUIRED	PROVIDED	
PUBLIC STREET BUILDING SETBACK	30'	82'±
PARKING SETBACK	10'	81'±
RESIDENTIAL ZONE BUILDING SETBACK	30'	30'±
PARKING SETBACK	30'	47.3'±
- DEED REF: 12584/429
- TAX ACCOUNT NO.: 02-239248
- WATERSHED: LITTLE PATUXANT RIVER (02131105)
DNR 12 DIGIT - (021309061017)
- NO FLOODPLAIN (PER FEMA FLOODMAP 240270090D DATED NOV. 6, 2013). STREAMS: STREAM BANK BUFFERS, WETLANDS, FORESTED AREAS, STEEP SLOPES OR SPECIMEN TREES ON PROPERTY. (SITE VERIFICATION: PATRICK C. RICHARDSON JR. MD. PE #16597)
- HIGHLY ERODIBLE SOILS: NONE
- TAX MAP: 24 GRID, 24 PARCEL: 444
- PROPERTY BOUNDARY INFORMATION TAKEN FROM DEEDS OF RECORD.
- THE PURPOSE OF THIS PLAN IS FOR NEW SITE DEVELOPMENT.
- PARKING USE:

REQUIRED	PROVIDED
EXISTING MOTOR VEHICLE FUELING FACILITY WITH PROPOSED CONVENIENCE STORE	12 SPACES
5 SPACES PER 1,000 SF @ 2,228 SF	2 SPACES
CAR WASH	TOTAL REQUIRED 14 SPACES
	TOTAL PROVIDED 14 SPACES (INCLUDING 1 HC)
- APPROVAL OF THIS EOP DOES NOT CONSTITUTE APPROVAL OF SUBSEQUENT AND ASSOCIATED PLANS. REVIEW OF THIS PROJECT FOR COMPLIANCE WITH HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS SHALL OCCUR AT THE SUBDIVISION PLAN STAGE. THE APPLICANT AND CONSULTANT SHOULD EXPECT ADDITIONAL AND MORE DETAIL REVIEW COMMENTS (INCLUDING COMMENTS THAT MAY ALTER THE OVERALL SITE DESIGN) AS THIS PROJECT PROGRESSES THROUGH THE PLAN REVIEW PROCESS.
- A STANDARD EROSION & SEDIMENT CONTROL PLAN WILL BE USED. LIMIT OF DISTURBANCE IS 15,325 SF WHICH IS LESS THAN 30,000 SF.
- EARTHWORKS SUMMED (CUT+60 + FILL-50) IS 510 CY WHICH IS LESS THAN 1,000 CY.
- SITE HISTORY: S0P-97-063 (PREVIOUSLY APPROVED)
- THE PROPOSED COMMERCIAL REDEVELOPMENT IS EXEMPT FROM COMPLIANCE WITH FOREST CONSERVATION ACT. THE SITE NET TRACT AREA IS <40,000 SF.

NATURAL RESOURCES AND THE CORRESPONDING REGULATORY AUTHORITIES	
FEDERAL	
WETLANDS	NO
MAJOR WATERWAYS	NO
FLOODPLAINS	NO
STATE	
TIDAL AND NONTIDAL WETLANDS	NO
WETLANDS OF SPECIAL STATE CONCERN	NO
WETLAND BUFFERS	NO
STREAM BUFFERS	NO
PERENNIAL STREAMS	NO
FLOODPLAINS	NO
FORESTS	NO
FOREST BUFFERS	NO
CRITICAL AREAS	NO
LOCAL	
STEEP SLOPES	NO
HIGHLY ERODIBLE SOILS	NO
ENHANCED STREAM BUFFERS	NO
TOPOGRAPHY/SLOPES	SEE PLAN
SPRINGS	NO
SEEPS	NO
INTERMITTENT STREAMS	NO
VEGETATIVE COVER	SEE PLAN
SOILS	SEE PLAN
BEDROCK/GEOLOGY	SEE PLAN
EXISTING DRAINAGE AREAS	SEE PLAN



LOCATION MAP
SCALE: 1" = 1,000'

LEGEND

---	PROPERTY/BOUNDARY LINE
- - - -	EASEMENT
---	EX. CURB
---	EX. TREE LINE
---	EX. SHULDS
---	EX. FIRE HYDRANT
---	EX. LIGHT (STREET/BOLLARD)
---	EX. MINOR CONTOURS
---	EX. MAJOR CONTOURS
---	EX. WATER
---	EX. SEWER
---	EX. STORMDRAIN
---	EX. INLET
---	SOIL LINE
---	LIMIT OF DISTURBANCE (LOD)

EXISTING DRAINAGE AREA COMPS - SHEET FLOW

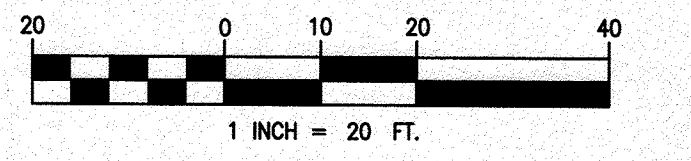
REFERENCE POINT	DRAINAGE AREA	AREA (AC/SM)	TIME OF CONC. (HR)	RCN	*Q ₁ (CFS)	*Q ₂ (CFS)	*Q ₁₀ (CFS)	*Q ₁₀₀ (CFS)
EX. SWALE @ SE PL	A	0.138 AC 0.00022 SM	0.10	75	0.15	0.23	0.50	N/A
EX. TRENCH @ SE SITE	B	0.239 AC 0.00037 SM	0.10	94	0.75	0.95	1.58	N/A
EX. TRENCH @ NW SITE	C	0.374 AC 0.00058 SM	0.10	92	1.08	1.38	2.35	N/A
EX. INLET @ NW SITE	D	0.126 AC 0.00020 SM	0.10	74	0.13	0.20	0.44	N/A

EXISTING DRAINAGE AREA SUMMARY TABLE - CHANNEL FLOW

REFERENCE POINT & TR-20 XSECT	ASSOCIATED DRAINAGE AREAS	**Q ₁ (CFS)	**Q ₂ (CFS)	**Q ₁₀ (CFS)	**Q ₁₀₀ (CFS)
POI / 007	A, B, C, D	1.91	2.47	4.27	N/A

SHEET INDEX:

EXISTING CONDITIONS PLAN	1
ENVIRONMENTAL SITE DESIGN - PROPOSED CONDITIONS	2
ENVIRONMENTAL SITE DESIGN - PROFILES & SECTIONS	3



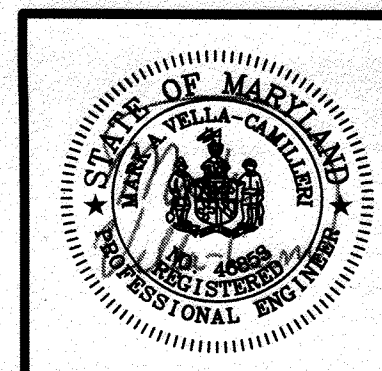
DISTURBED AREA:
16,000 SF or 0.367 Ac.±

DESIGN AND DRAWINGS ARE BASED ON MARYLAND COORDINATE SYSTEM (MCS).
HORIZONTAL--MAD 83(2011), VERTICAL--MAD 88.

R Richardson ENGINEERING

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Timonium, Maryland 21093
Phone: 410-560-1502; info@richardsonengineering.net

ENVIRONMENTAL CONCEPT PLAN
EXISTING CONDITIONS FOR
EXXON CAR WASH & SERVICE STATION
4235 MONTGOMERY RD. 21043
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
ZONING B-2 TAX MAP 24 GRID 24 PARCEL 444



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 NUMBER 4883, EXPIRATION DATE: 06-11-2023.

REVISIONS

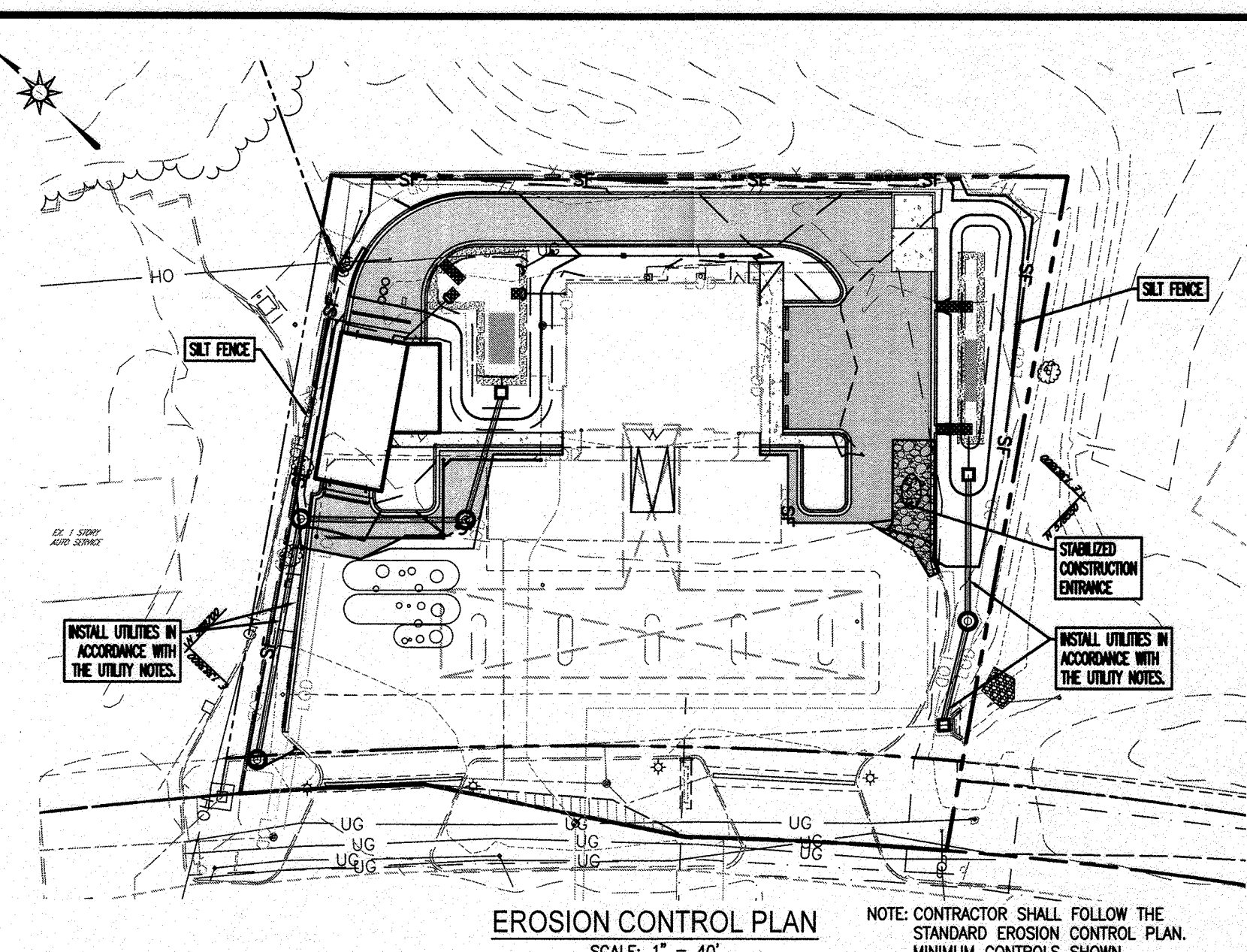
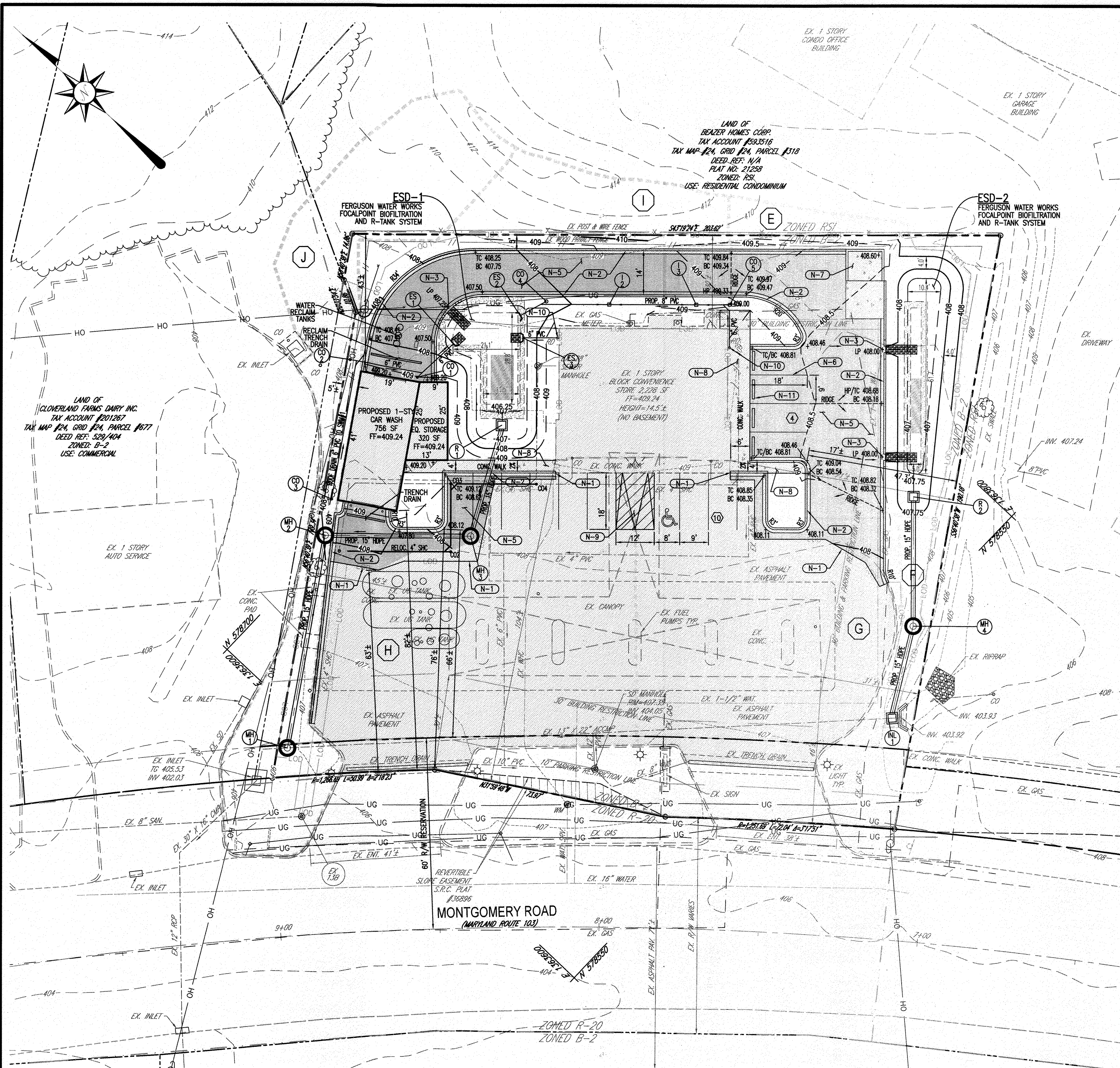
DATE	JOB NO.	SHEET NO.
4-12-2023	19054	1 OF 3

APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 4.1.24

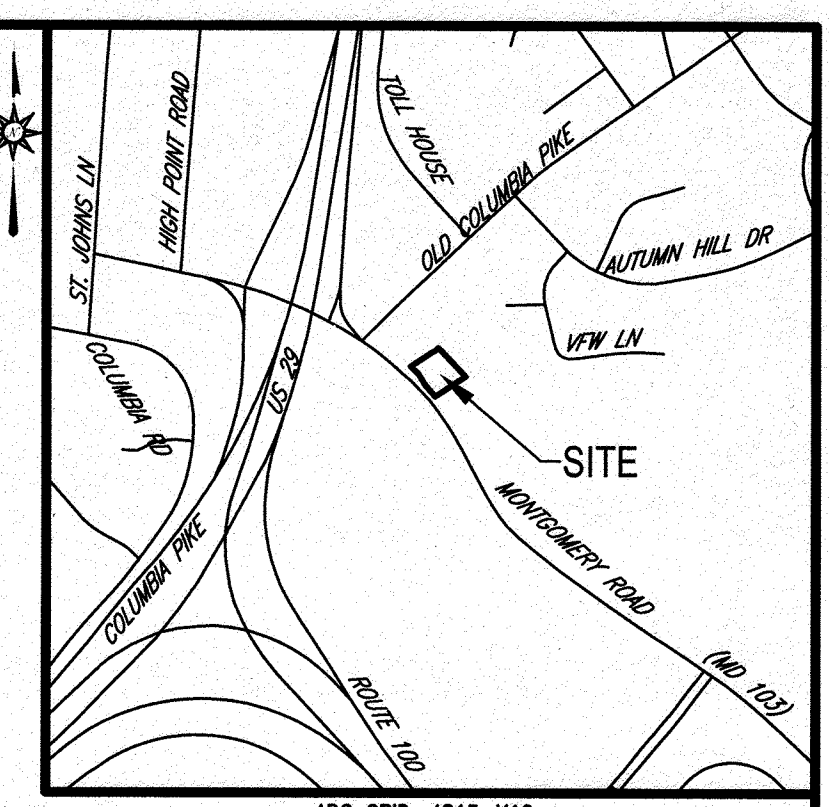
SOIL TABLE:

SOILS SERIES	DESCRIPTION	SEPTIC SYSTEM LIMITATIONS	HOME SITE LIMITATIONS W/BASEMENT	HYDRIC SOILS	SOILS GROUP	ERODIBILITY K FACTOR
LoB	LEGORE-MONTALTO-URBAN LAND COMPLEX 0 TO 8% SLOPES	VERY LIMITED	NOT LIMITED	NO	C	NOT RATED

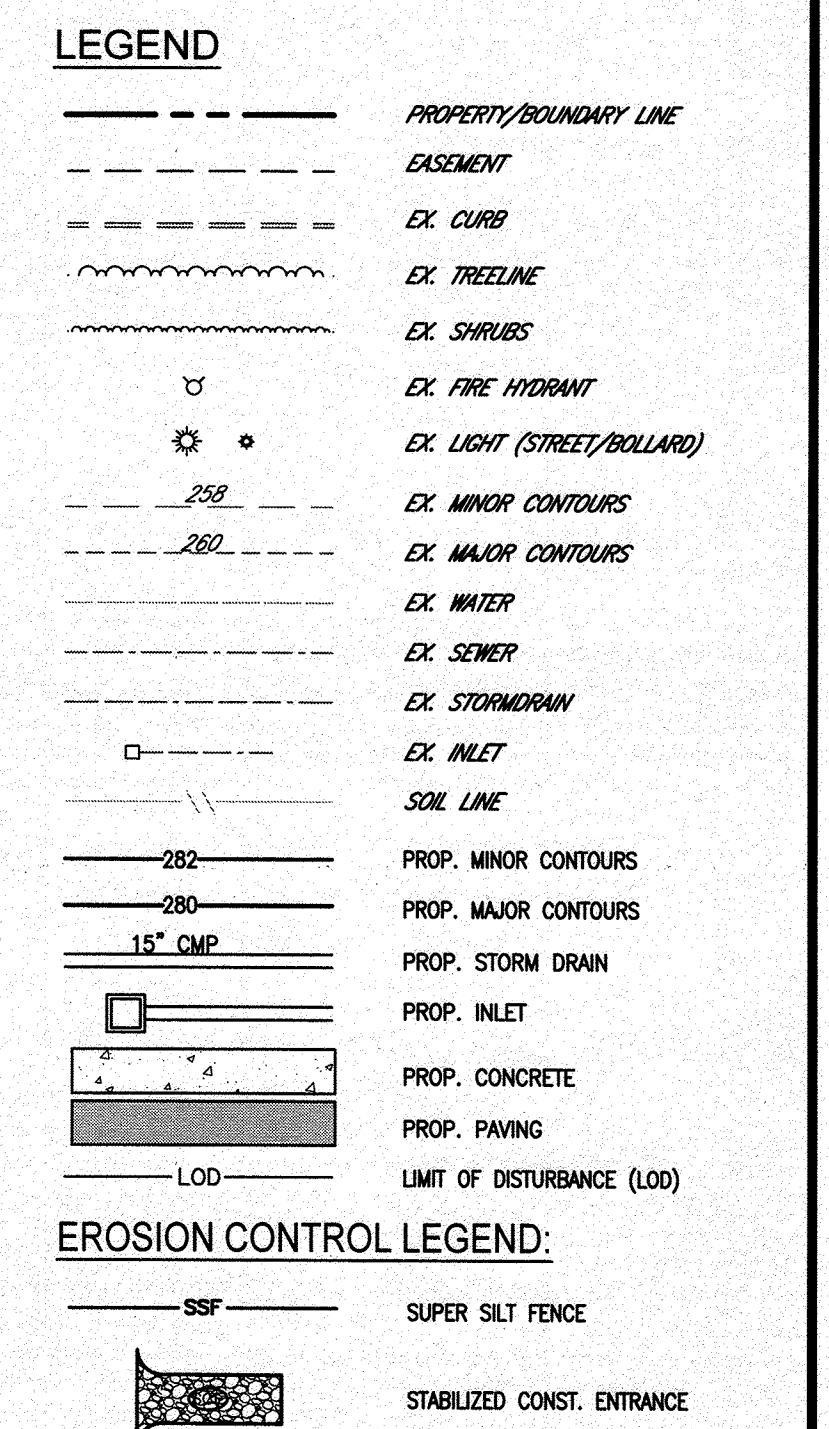
NOTE: THE CORRECTNESS OR COMPLETENESS OF EXISTING INFORMATION SHOWN ON THE DRAWINGS IS NOT WARRANTED OR GUARANTEED. THE CONTRACTOR SHALL VERIFY THE LOCATION OF UTILITIES AND UNDERGROUND FACILITIES, BY TEST FITS OR OTHER METHODS APPROVED BY THE OWNER'S REPRESENTATIVE, AS REQUIRED TO VERIFY EXACT LOCATIONS AND DEPTHS WITHIN THE LIMIT OF DISTURBANCE. ALL DISCREPANCIES BETWEEN INFORMATION SHOWN ON THE DRAWINGS AND THAT VERIFIED IN THE FIELD SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING CONSTRUCTION.



- CONSTRUCTION NOTES:**
- N-1 MATCH EXISTING CONDITIONS.
 - N-2 NEW CURB AND GUTTER.
 - N-3 NEW 2' CURB OPENING.
 - N-4 NEW NOSE DOWN CURB.
 - N-5 NEW FULL-DEPTH PAVEMENT.
 - N-6 NEW PAVEMENT MARKINGS.
 - N-7 NEW DUMPSTER ENCLOSURE W/ CONCRETE PAD.
 - N-8 NEW CONCRETE WALK.
 - N-9 NEW ASPHALT OVERLAY RAMP.
 - N-10 NEW ROOF LEADER CONNECTION & BOOT WITH SURFACE BYPASS.
 - N-11 NEW WHEEL STOP.
- SITE ANALYSIS:**
- GROSS SITE AREA: 0.812 Ac.
 - STREAM BUFFER: 0.0 Ac.
 - FLOODPLAIN: 0.0 Ac.
 - FORESTED AREA: 0.0 Ac.
 - FOREST BUFFER: 0.0 Ac.
 - WETLANDS: 0.0 Ac.
 - WETLANDS BUFFER: 0.0 Ac.
 - ERODIBLE SOILS: 0.0 Ac.
 - 15% OR GREATER SLOPES: 0.0 Ac.
 - LIMIT OF DISTURBANCE (LOD): 0.352 Ac.**
 - GREEN AREA: 0.151 Ac.
 - IMPERVIOUS: 0.201 Ac.
 - (**=STANDARD EROSION AND SEDIMENT CONTROL PLAN WILL BE USED)



LOCATION MAP
SCALE: 1" = 1,000'



DAILY STABILIZATION NOTE:
CONTRACTOR SHALL ONLY DISTURB THAT AREA WHICH CAN BE COMPLETED AND STABILIZED BY THE END OF EACH WORKING DAY. STABILIZATION SHALL BE AS FOLLOWS:

1. FOR AREAS TO BE PAVED, THE APPLICATION OF STONE BASE.
2. FOR AREAS TO BE VEGETATIVELY STABILIZED:
 - a. PERMANENT SEED AND SOIL STABILIZATION MIXTURES OR SOD FOR ALL STEEP SLOPES, CHANNELS OR SWALES.
 - b. PERMANENT SEED AND MULCH FOR ALL OTHER AREAS.

ANY AREAS WHICH CANNOT BE STABILIZED BY THE END OF EACH WORKING DAY MUST HAVE SILT FENCE INSTALLED ON THE DOWNSLOPE SIDE.

UTILITY NOTES:

1. CONTRACTOR SHOULD ONLY OPEN THAT SECTION OF TRENCH THAT CAN BE BACKFILLED AND STABILIZED EACH DAY. IF THE TRENCH MUST REMAIN OPEN LONGER THAN ONE DAY, SILT FENCE SHALL BE PLACED BELOW (DOWN SLOPE) THE TRENCH.
2. PLACE ALL EXCAVATED MATERIAL ON THE UPHILL SIDE OF THE TRENCH.
3. ANY SEDIMENT CONTROL DISTURBED BY UTILITY CONSTRUCTION SHALL BE REPAIRED IMMEDIATELY.
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL CITY, COUNTY, STATE, AND FEDERAL STANDARDS WITH RESPECT TO "EXCAVATION" AND "CONFINED SPACES".

PROPOSED DRAINAGE AREA COMPS - SHEET FLOW

REFERENCE POINT	DRAINAGE AREA	AREA (AC/SM)	TIME OF CONC. (HR)	RCN	*Q ₁ (CFS)	*Q ₂ (CFS)	*Q ₁₀ (CFS)	*Q ₁₀₀ (CFS)
ESD-2	E	0.141 AC 0.00022 SM	0.10	88	0.33	0.44	0.79	N/A
EX. SWALE @ SE FL	F	0.013 AC 0.00002 SM	0.10	74	0.01	0.02	0.04	N/A
EX. TRENCH @ SE SITE	G	0.183 AC 0.00025 SM	0.10	97	0.59	0.73	1.17	N/A
EX. TRENCH @ NW SITE	H	0.203 AC 0.00032 SM	0.10	98	0.77	0.94	1.49	N/A
ESD-1	I	0.231 AC 0.00036 SM	0.10	87	0.52	0.69	1.26	N/A
EX. INLET @ HW SITE	J	0.126 AC 0.00020 SM	0.10	74	0.13	0.20	0.44	N/A

*NOTE: FLOWRATES DETERMINED FROM TR-55 (SEE APPENDIX 'D' OF SWM REPORT)

PROPOSED DRAINAGE AREA SUMMARY TABLE - CHANNEL FLOW

REFERENCE POINT	ASSOCIATED DRAINAGE AREAS	**Q ₁ (CFS)	**Q ₂ (CFS)	**Q ₁₀ (CFS)	**Q ₁₀₀ (CFS)
TR-20 XSECT	E, F, G, H, I, J	1.34	1.68	2.78	N/A

*NOTE: FLOWRATES DETERMINED FROM TR-20 (SEE APPENDIX 'E' OF SWM REPORT)

EXISTING vs PROPOSED FLOWRATE COMPARISON

STUDY POINT	EXISTING CONDITIONS ** (CFS)	PROPOSED CONDITIONS ** (CFS)	NET FLOWRATE DIFFERENTIAL ** (CFS)	NOTES/REMARKS
POI	Q ₁ =1.91 Q ₂ =4.27	Q ₁ =1.34 Q ₂ =1.68	ΔQ ₁ =-0.57 ΔQ ₂ =-1.49	NOT ADVERSELY IMPACTED @ POI (THE EXISTING INLET LOCATED OUTSIDE THE NORTHWEST CORNER OF SITE).

*NOTE: FLOWRATES DETERMINED FROM TR-20 (SEE APPENDIX 'E' OF SWM REPORT)

DESIGN NARRATIVE
THE DESIGN FOR THIS ECP INCLUDES CONSTRUCTION OF A AUTO SERVICE GARAGE AND CAR WASH BUILDING ADDITION. UPON ASSESSING THIS SITE FOR NATURAL RESOURCE PROTECTION AND ENHANCEMENT, IT IS CLEAR THAT THE USE OF ESD PRACTICES IS NECESSARY TO ENHANCE THE DEVELOPMENT THROUGH THE TREATMENT OF RUNOFF FOR IMPERVIOUS SURFACES SINCE REDUCTION OF IMPERVIOUS SURFACES WAS NOT POSSIBLE. EXISTING AND PROPOSED SITE DRAINAGE REMAIN UNCHANGED. RUNOFF IS CONVEYED VIA SURFACE FLOW AND PIPE FLOW TO PRIVATE ONSITE ESD FACILITIES.

A TWO ESD PRACTICES WILL BE USED TO CAPTURE AND TREAT NEARLY ALL NEW IMPERVIOUS AREAS FOR STORMWATER MANAGEMENT. CONSIDERING THAT THE SITE IS COMPRISED ENTIRELY OF 'C' SOILS, HAS LITTLE ROOM FOR SURFACE FACILITIES, HAS A SHALLOW OUTFALL POINT, THE ESD APPLICATIONS THAT ARE BEST SUITED FOR THIS PARTICULAR PROJECT IS AN ENHANCED FILTER 'ACF'-FOCAL POINT' FILTER FACILITY WITH A RECHARGE 'RV' FACILITY UNDER THE ESDV STORAGE.

SEDMENT CONTROL DEVICES WILL BE IMPLEMENTED AROUND THE LIMITS OF THIS DEVELOPMENT. THE INSTALLATION OF THE STORMWATER ESD PRACTICES MAY OCCUR SEPARATELY FROM THE CONSTRUCTION OF THE BUILDING ADDITION AND MAY UTILIZE SEPARATE SEDIMENT CONTROL DEVICES, AND/OR DAILY STABILIZATION. THESE MEASURES WILL REMAIN UNTIL SITE CONSTRUCTION IS COMPLETE AND STABILIZED.

THERE ARE NO SPECIMEN TREES, CHAMPION TREES OR TREES 75% THE DIAMETER OF STATE CHAMPION TREES OR FORESTED AREAS ONSITE.

STORMWATER MANAGEMENT INFORMATION:
SITE AREA (LOD) 0.367 Ac (16,000 SF)
ULTIMATE IMPERVIOUS WITHIN LOD 0.201 Ac (8,750 SF) (54.8%)
EXISTING IMPERVIOUS WITHIN LOD 0.109 Ac (5,000 SF) (29.7%)
EXISTING IMPERVIOUS > 40% SITE = NEW DEVELOPMENT

NEW DEVELOPMENT:
REQUIRED P_e ('C' SOILS)
ULTIMATE IMPERVIOUS IN LOD (54.8%, ROUND UP TO 55%) 1.8 IN.

TARGET ESDV $P_e \times R_v \times A$
WHERE:
P_e = 1.8 IN.
R_v = 0.05 + 0.009(S)
0.05 + 0.009(54.8) = 0.5432
A = 16,000 SF

TARGET ESDV = (1.8 x 0.5432 x 16,000) / 12 = 1,304 CF

AREA REQUIRED TO BE TREATED (A_t) = 8,760 SF

RECHARGE VOLUME REQUIREMENTS (R_v)
R_v = [(S)(R_v)(A)]/12
WHERE:
S = SOIL SPECIFIC RECHARGE FACTOR; HSG 'C' = 0.13
R_v = RUNOFF COEFFICIENT = 0.5432 (PREVIOUSLY CALCULATED)
A = SITE AREA OR LOD = 16,000 SF, OR 0.367 ACRES

R_v = [(0.13)(0.5432)(8,760)]/12 = 0.0021597 AC-FT = 95 CF

ENVIRONMENTAL SITE DESIGN SUMMARY TABLE

PRACTICE	DIMENSIONS	TRIBUTARY AREA	IMPERVIOUS AREA	VOLUME REQUIRED, ESDV, (CF)	TEMP. STORAGE VOLUME PROVIDED (CF)	TOTAL STORAGE VOLUME PROVIDED (CF)	MAXIMUM RUNOFF TO FACILITY (CF)	FILTERED VOLUME AT FACILITY (CF)	RECHARGE VOL. REQUIRED (CF)	RECHARGE VOL. PROVIDED (CF)	ESD VOLUME CREDITED, ESDV (CF)	TARGET P _e	EQUIV. P _e PROVIDED	NOTES
ESD #1 FOCALPOINT BIOFILTRATION SYSTEM	FP AREA=100 SF FP DEPTH=1.50 FT PONDING=9 IN	10,041 SF 0.231 AC	5,467 SF 0.126 AC	813	1,620 (ESD CALC. TEMP. STORAGE VOLUME)	1,182 (ESD CALC. TOTAL VOLUME PROVIDED)	1,175 (ESD CALC. MAX. RUNOFF TO FACILITY)	989 (ESD CALC. FILTERED VOLUME)	-	(PENDING SOIL BORINGS)	989 XXX (W/ REV)	1.8*	2.19* XXX (W/ REV)	INDIVIDUAL ESDV REQUIREMENTS MET 989 CF >= 813 CF
ESD #2 FOCALPOINT BIOFILTRATION SYSTEM	FP AREA=50 SF FP DEPTH=1.50 FT PONDING=9 IN	5,207 SF 0.120 AC	3,387 SF 0.077 AC	494	1,893 (ESD CALC. TEMP. STORAGE VOLUME)	689 (ESD CALC. TOTAL VOLUME PROVIDED)	78 (ESD CALC. MAX. RUNOFF TO FACILITY)	625 (ESD CALC. FILTERED VOLUME)	-	(PENDING SOIL BORINGS)	625 XXX (W/ REV)	1.8*	2.29* XXX (W/ REV)	INDIVIDUAL ESDV REQUIREMENTS MET 625 CF >= 494 CF
TOTALS			8,834 SF 0.203 AC						95		1,614	1.8*		OVERALL SITE ESDV REQUIREMENTS MET 1,614 CF >= 1,304 CF

STORMWATER MANAGEMENT STORAGE REQUIREMENTS

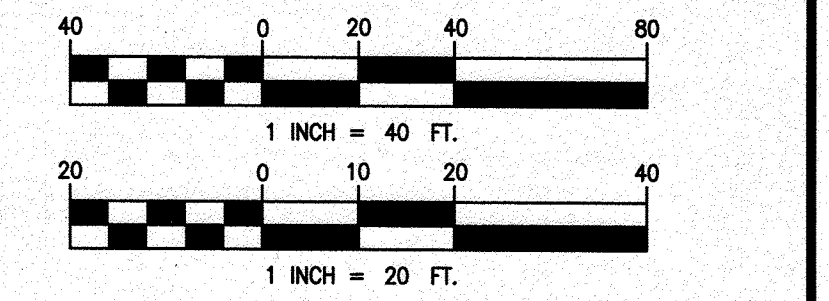
REQUIREMENT	VOLUME REQUIRED (CF)	VOLUME PROVIDED (CF)	EX. DISCHARGE (CFS)	PR. DISCHARGE (CFS)	NOTES
A _t	-	-	-	-	A _t REQUIRED = 8,760 SF A _t PROVIDED = 8,834 SF A _t REQUIREMENT IS SATISFIED
ESD _v	1,304	1,614	N/A	N/A	ESD _v REQUIREMENT IS SATISFIED
R _v	95	-	N/A	N/A	R _v REQUIREMENT IS CALCULATED WITHIN ESD _v
C _{pv}	N/A	N/A	N/A	N/A	C _{pv} REQUIREMENT IS CALCULATED WITHIN ESD _v
Q ₁₀	N/A	N/A	4.27	2.78	Q ₁₀ DECREASES @ POC - REQUIREMENT SATISFIED
Q ₁₀₀	N/A	N/A	N/A	N/A	N/A

ENVIRONMENTAL SITE DESIGN SUMMARY NOTES:

1. SHOW SURFACE AREA OR L x W, ESDV, PONDING DEPTH, FILTER MEDIA THICKNESS OR OTHER RELEVANT DESIGN DATA.
2. DESIGN ESDV FOR THE PRACTICE'S DRAINAGE AREA.
3. TEMPORARY STORAGE VOLUME = VOLUME / 0.25.
4. TOTAL STORAGE VOLUME IS THE STORAGE VOLUME PHYSICALLY PROVIDED IN THE PRACTICE ABOVE THE INVERT OF THE UNDERDRAIN/TANK.
5. MAXIMUM RUNOFF TO FACILITY = (2.6 IN x R_v x DA)/12.
6. FILTERED VOLUME AT FACILITY = [(STP)(A)]/12 MEASURED IN EXISTING SITE CONDITIONS.
7. RECHARGE VOLUME REQUIRED = [(STP)(A)]/12 MEASURED IN EXISTING SITE CONDITIONS.
8. RECHARGE VOLUME PROVIDED = STONE VOLUME UNDER DRAIN/RV-TANK x 0.4 VOID RATIO.
9. RECHARGE VOLUME PROVIDED IS CALCULATED WITHIN ESDV. DO NOT DOUBLE COUNT.
10. ESD VOLUME CREDITED, ESDV = MINIMUM VALUE OF TOTAL STORAGE VOLUME, TEMP. STORAGE VOLUME, MAXIMUM RUNOFF, OR FILTERED VOLUME.
11. TARGET P_e = P_e BASED ON OVERALL SITE REQUIREMENTS.
12. EQUIVALENT P_e PROVIDED = (ESD VOLUME CREDITED x 12) / (R_v x PRACTICE'S DRAINAGE AREA)

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 NUMBER 46853, EXPIRATION DATE: 06-11-2023.

DISTURBED AREA:
16,000 SF or 0.367 Ac.±



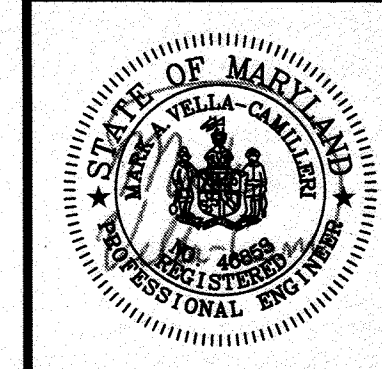
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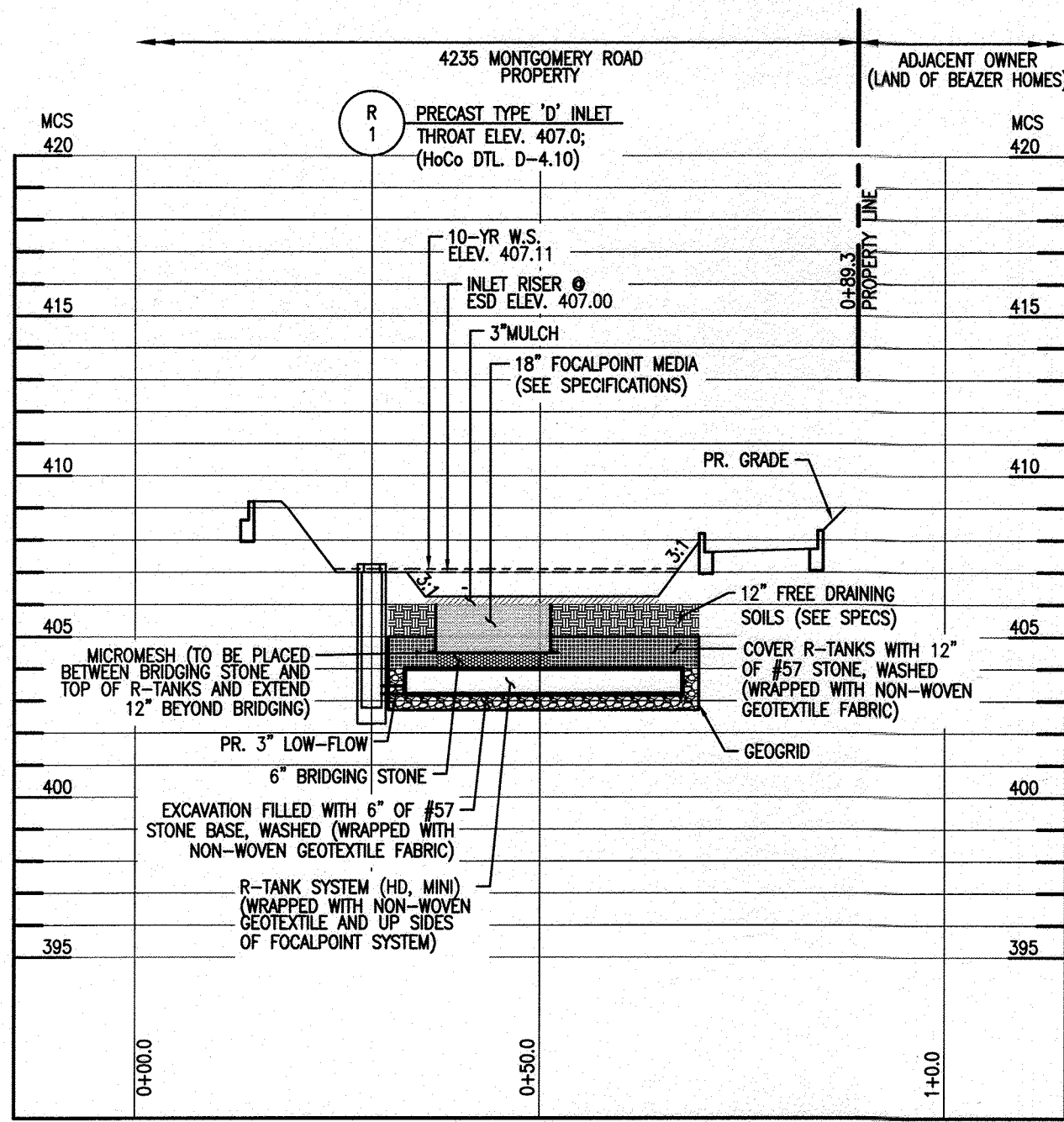
Richardson ENGINEERING
7 Deneison Street
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ENVIRONMENTAL CONCEPT PLAN
ENVIRONMENTAL SITE DESIGN - PROPOSED CONDITIONS FOR
EXXON CAR WASH & SERVICE STATION
4235 MONTGOMERY RD. 21043
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
ZONING B-2 TAX MAP 24 GRID 24 PARCEL 444

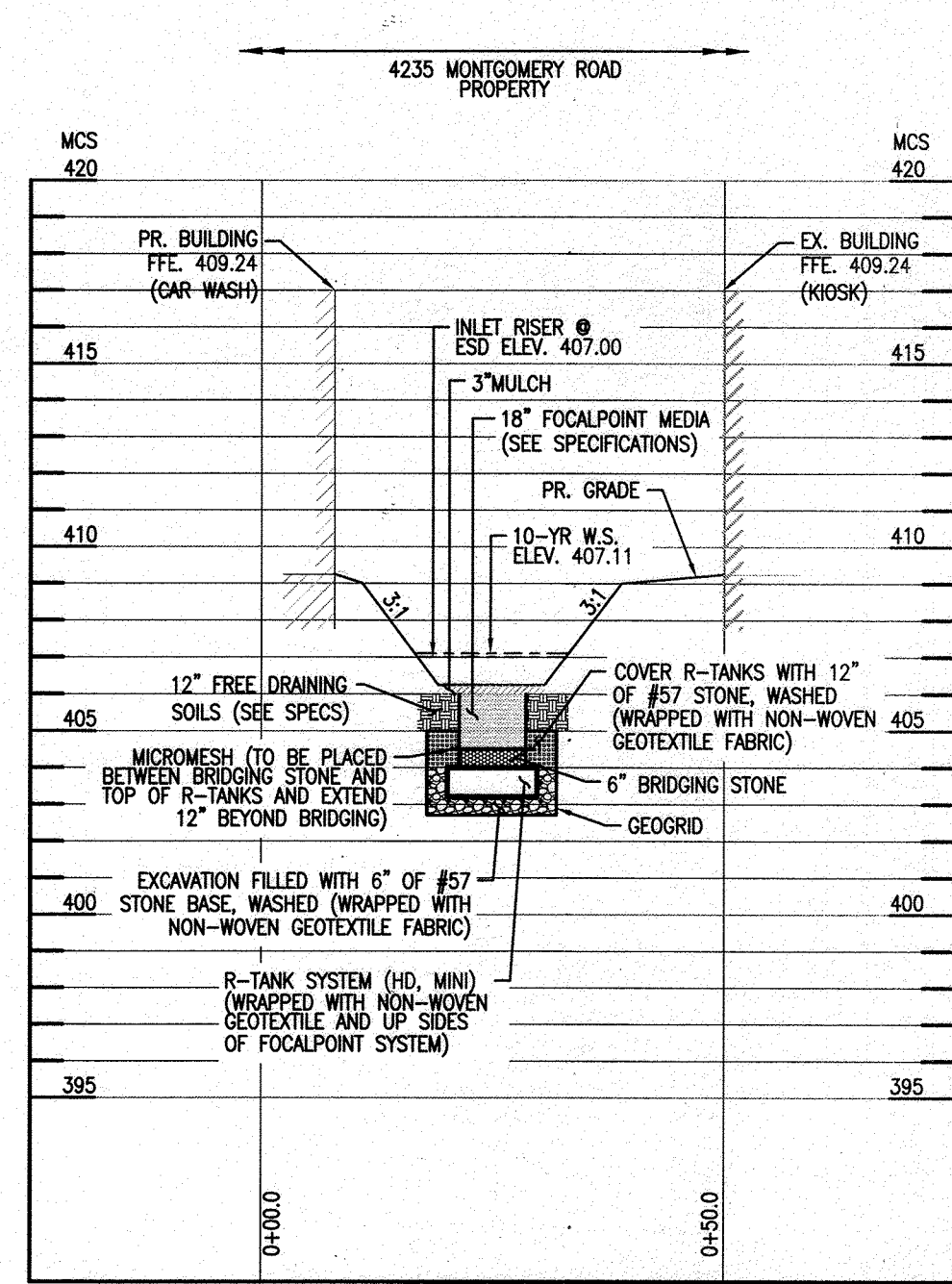
DRAWN BY: CLB & MAV
CHECKED BY: MAV
DATE: 4-12-2023
JOB NO.: 19054
SCALE: 1" = 20'
SHEET NO.: 2 OF 3

THE STATE OF MARYLAND DEPARTMENT OF NATURAL RESOURCES (MDNR) MARYLAND ENVIRONMENTAL RESOURCES AND LAND INFORMATION NETWORK (MELIN) GEOGRAPHIC INFORMATION SYSTEM (GIS) DATA SHOWS THE PROPERTY IS NOT HISTORIC OR WITHIN A HISTORIC DISTRICT. THE PROPERTY LIES NEAR TWO HISTORIC SITES. TO THE SOUTH AT 4244 MONTGOMERY ROAD IS THE ELLICOTT CITY ARMY NATIONAL GUARD ARMY (H0-1128). TO THE EAST AT 4239 MONTGOMERY ROAD IS REX FAMILY HOUSE SITE (H0-903).

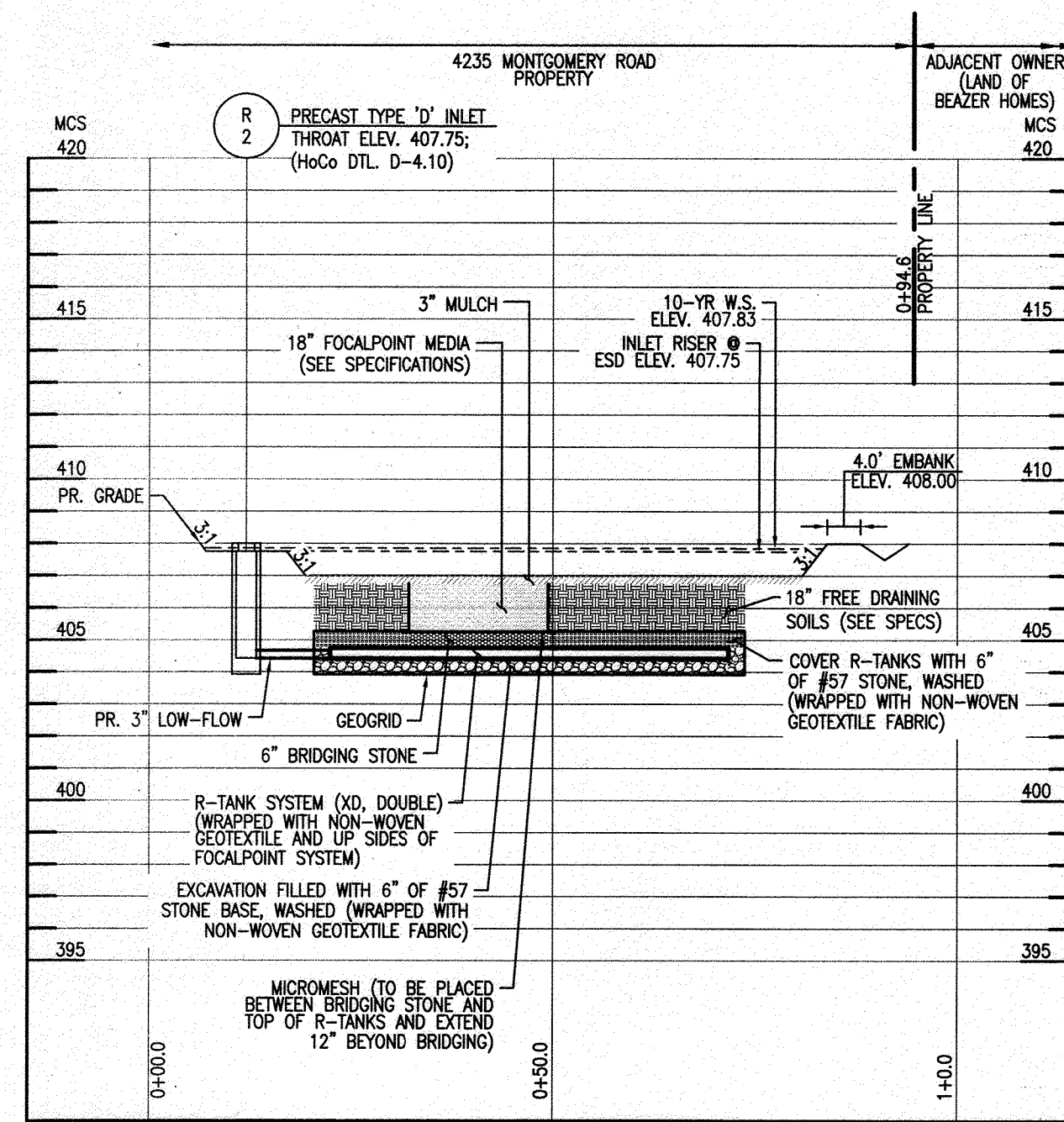




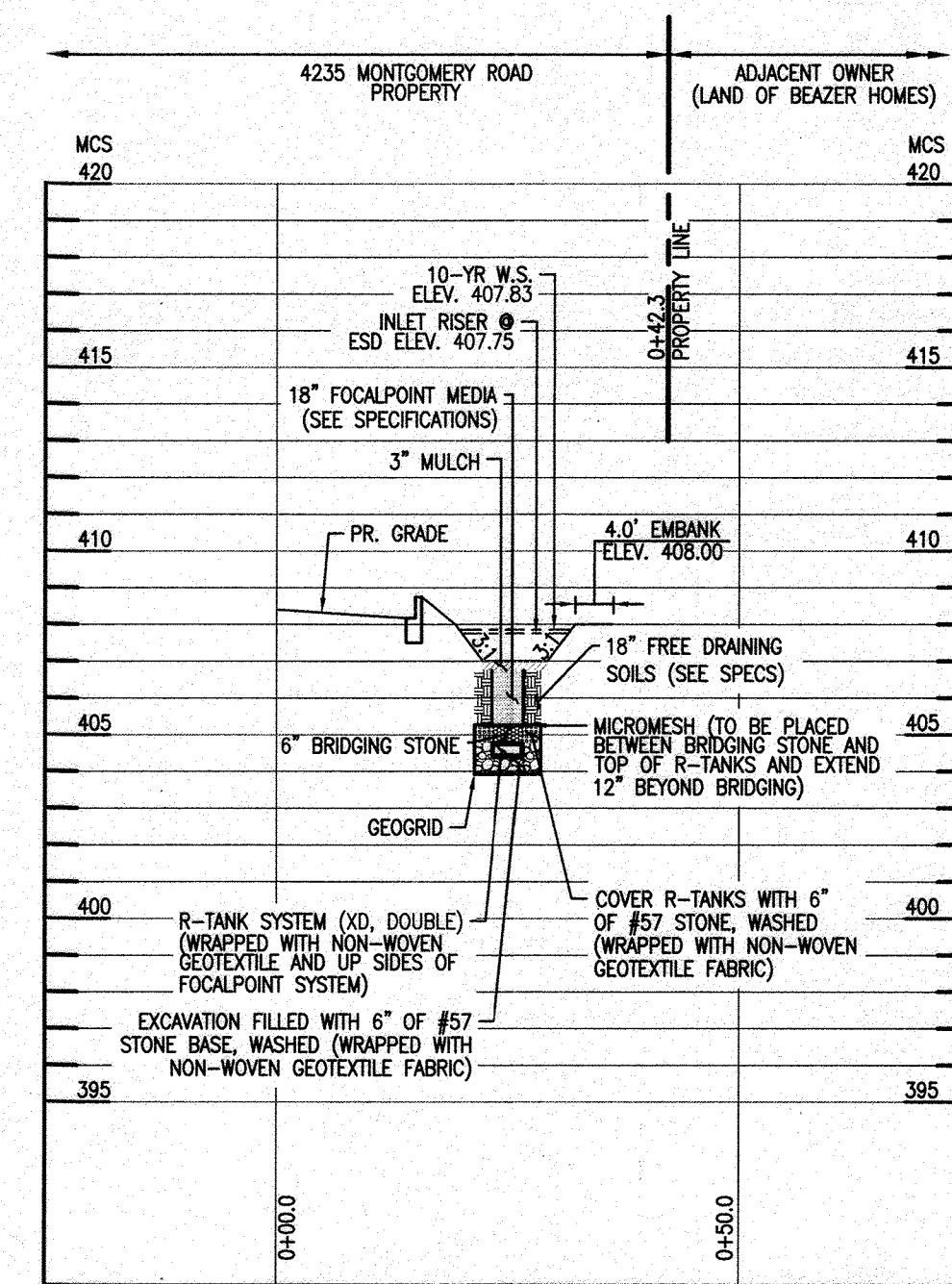
ESD-1
CROSS SECTION A-A
HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=5'



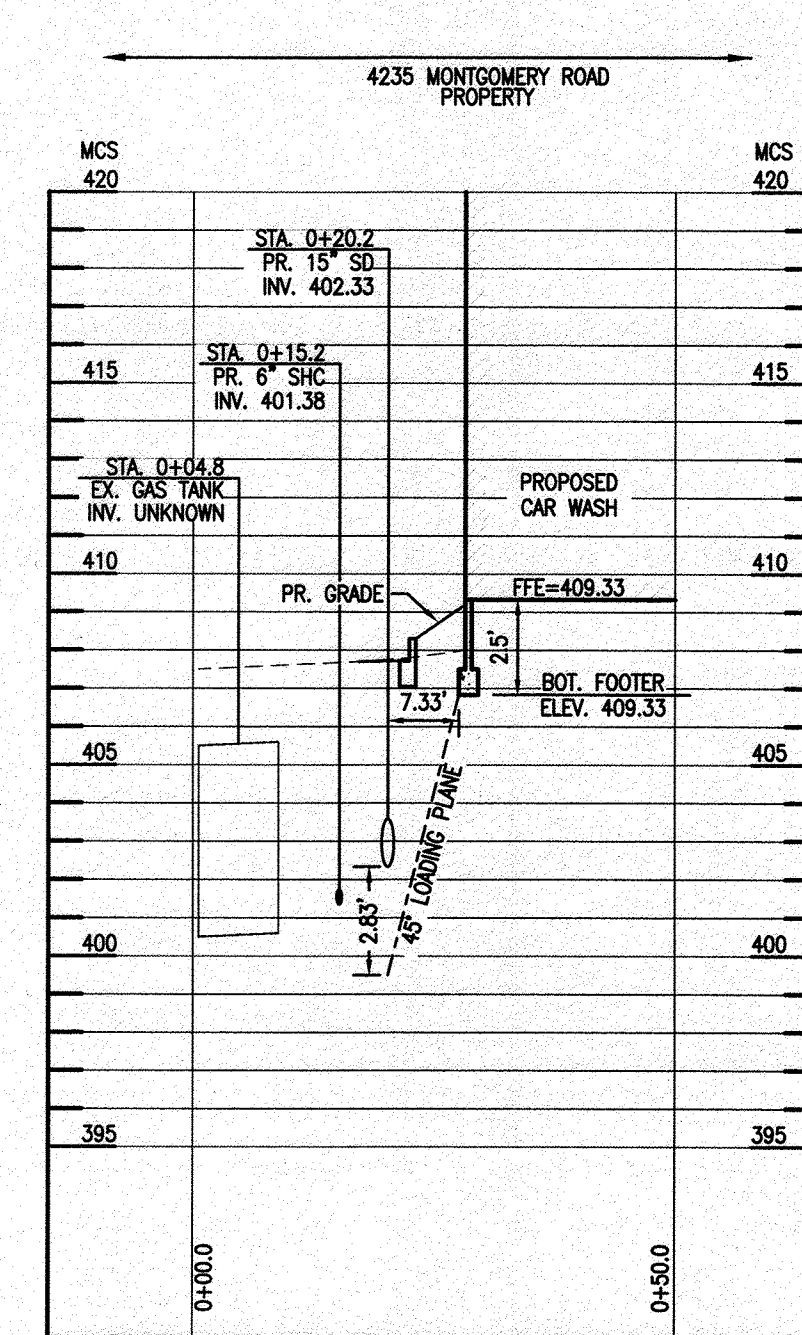
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HORIZONTAL SCALE: 1"=20'
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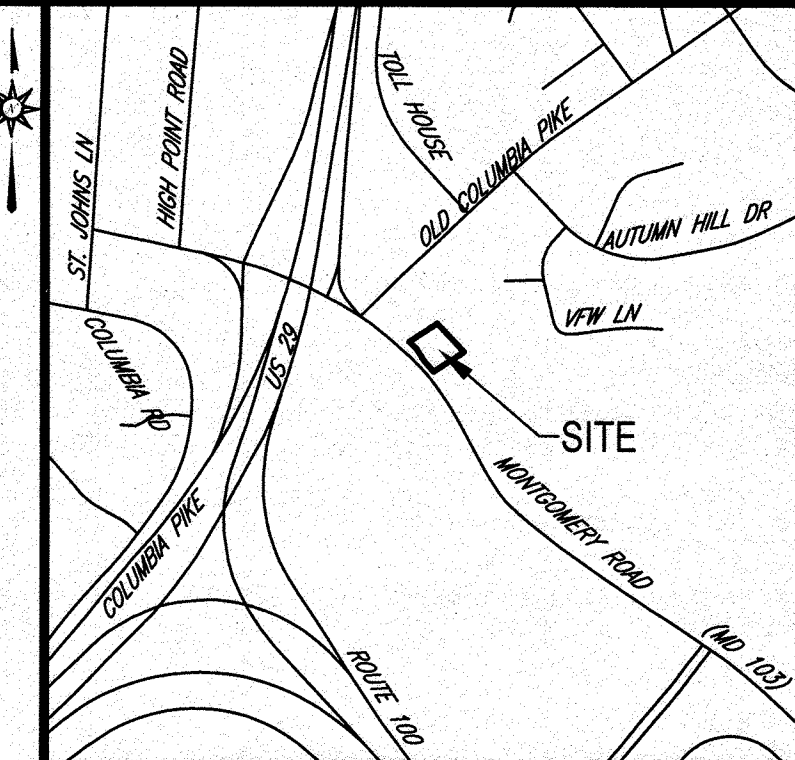
ESD-2
CROSS SECTION C-C
HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=5'



ESD-2
CROSS SECTION D-D
HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=5'



CAR WASH LOADING EXHIBIT
CROSS SECTION E-E
HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=5'



LOCATION MAP
SCALE: 1" = 1,000'

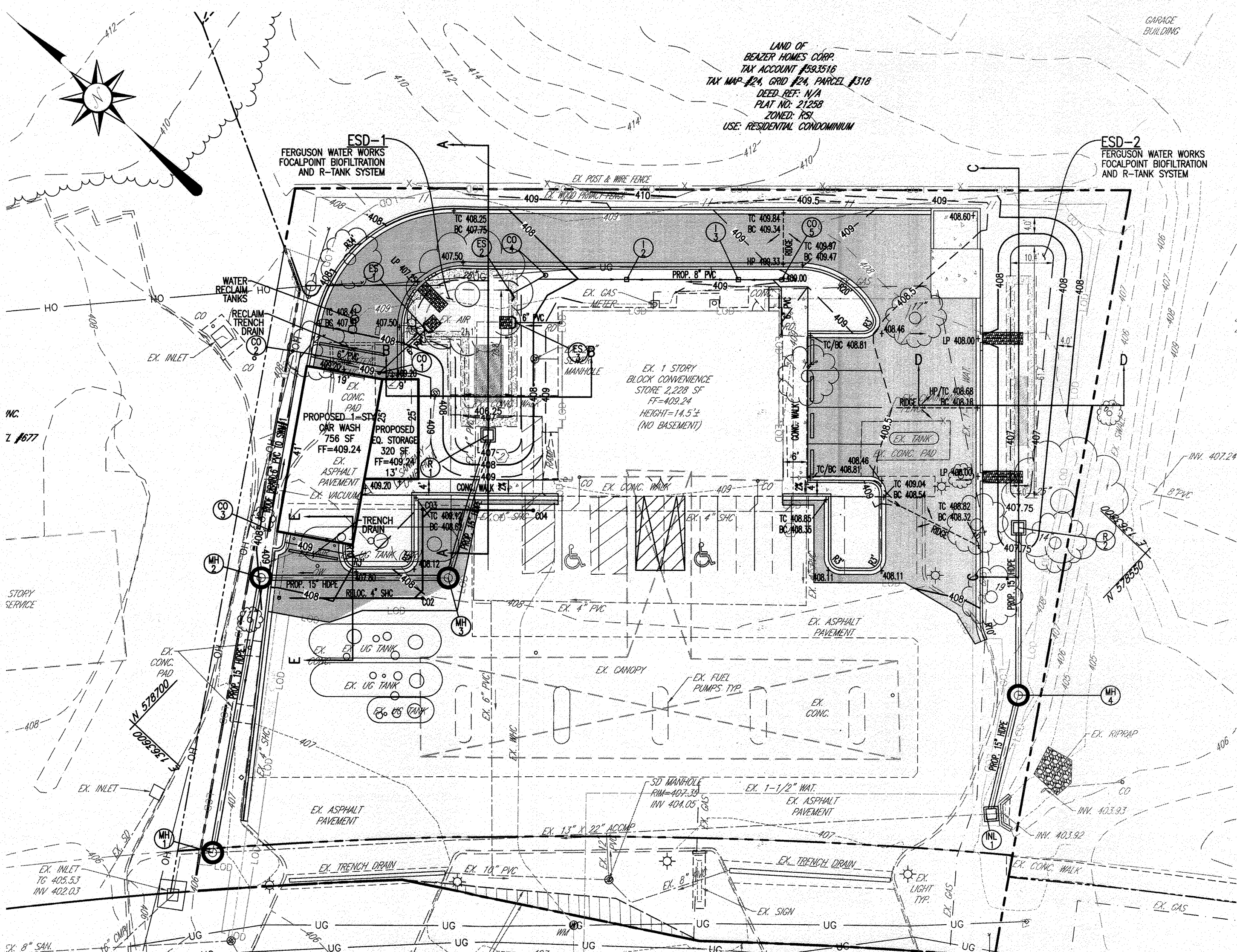
LEGEND

---	PROPERTY/BOUNDARY LINE
---	EASEMENT
---	EX. CURB
---	EX. TREE LINE
---	EX. SHRIEBLS
---	EX. FIRE HYDRANT
---	EX. LIGHT (STREET/BOLLARD)
---	EX. MINOR CONTOURS
---	EX. MAJOR CONTOURS
---	EX. WATER
---	EX. SEWER
---	EX. STORMDRAIN
---	EX. INLET
---	SOIL LINE
---	PROP. MINOR CONTOURS
---	PROP. MAJOR CONTOURS
---	PROP. STORM DRAIN
---	PROP. INLET
---	PROP. CONCRETE
---	PROP. PAVING
---	LIMIT OF DISTURBANCE (LOD)

UTILITY PROFILE NOTES

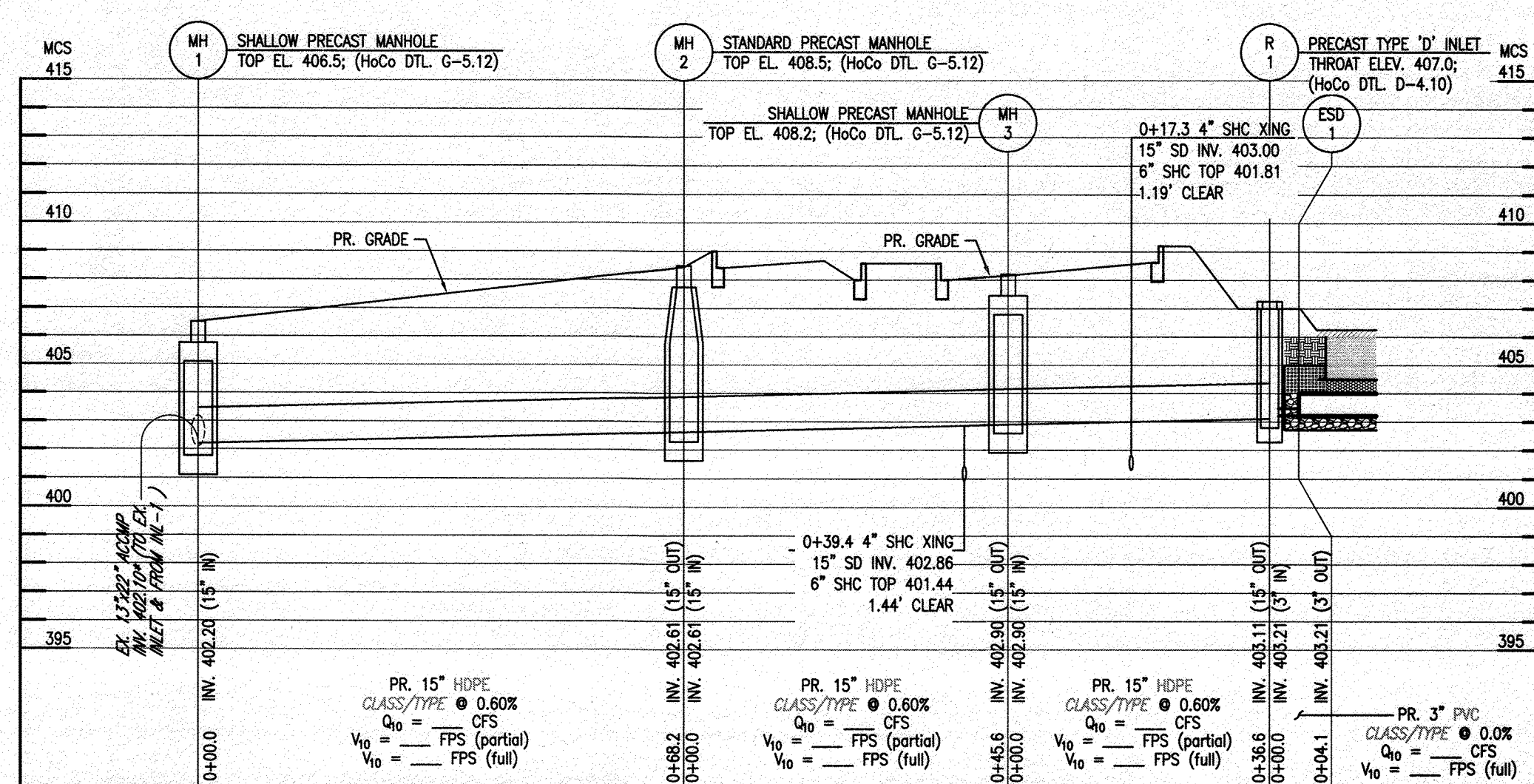
- MINIMUM 12" VERTICAL CLEARANCE BETWEEN SEWER UTILITIES.
- MINIMUM 6" VERTICAL CLEARANCE BETWEEN ALL OTHER UTILITIES.
- APPROXIMATE LOCATION OF EXISTING UTILITIES. SHOWN FOR INFO. ONLY.

*NOTE: EXISTING ELEVATIONS SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION. CONTRACTOR SHALL REPORT FINDINGS TO ENGINEER.

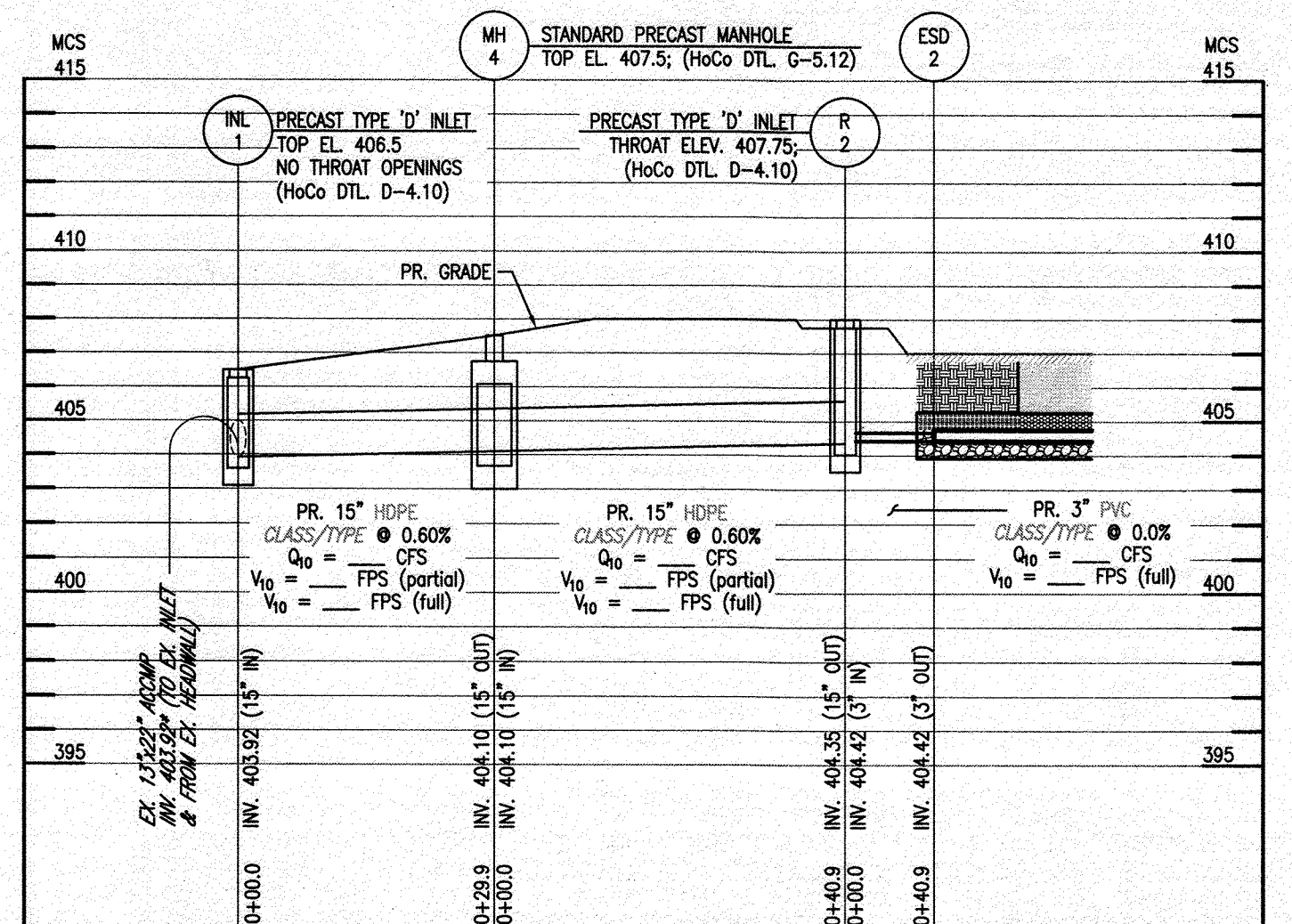


PLAN
SCALE: 1" = 20'

ESD #1 (FOCALPOINT & RTANK BIOFILTRATION SYSTEM)		ESD #2 (FOCALPOINT & RTANK BIOFILTRATION SYSTEM)	
EMBANKMENT ELEV.	407.25	EMBANKMENT ELEV.	408.00
OVERFLOW ELEV.	407.00	OVERFLOW ELEV.	407.75
SURFACE ELEV.	406.25	SURFACE ELEV.	407.00
SURFACE AREA (IRREGULAR)	430 SF	SURFACE AREA (IRREGULAR)	472 SF
UNDERGROUND R-TANK INV.	403.21	UNDERGROUND R-TANK INV.	404.42
BOTTOM OF EXCAVATION ELEV.	402.71	BOTTOM OF EXCAVATION ELEV.	403.92
FOCALPOINT FILTER AREA	100 SF	FOCALPOINT FILTER AREA	50 SF
FILTER DEPTH (MULCH+MEDIA+STONE)	2.25 FT	FILTER DEPTH (MULCH+MEDIA+STONE)	2.25 FT
PONDING DEPTH	9 IN	PONDING DEPTH	9 IN



STORMWATER MANAGEMENT PROFILE 'A'
ESD-1 OUTFALL
HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=5'

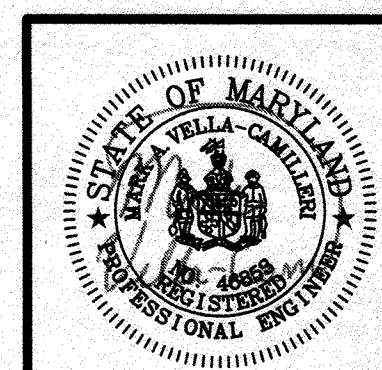


STORMWATER MANAGEMENT PROFILE 'B'
ESD-2 OUTFALL
HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=5'

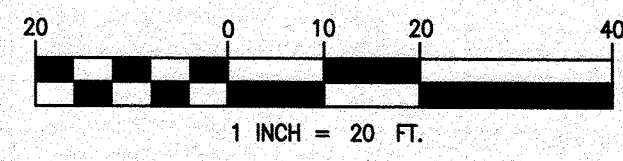
APPROVED: Department of PLANNING AND ZONING
4-1-24
CHIEF DEVELOPMENT ENGINEERING DIVISION
CHIEF DIVISION OF LAND DEVELOPMENT

NOTE: THE CORRECTNESS OR COMPLETENESS OF EXISTING INFORMATION SHOWN ON THE DRAWINGS IS NOT WARRANTED OR GUARANTEED. THE CONTRACTOR SHALL VERIFY THE LOCATION OF UTILITIES AND UNDERGROUND FACILITIES, BY TEST PITS OR OTHER METHODS APPROVED BY THE OWNER'S REPRESENTATIVE, AS REQUIRED TO VERIFY EXACT LOCATIONS AND DEPTHS WITHIN THE LIMIT OF DISTURBANCE. ALL DISCREPANCIES BETWEEN INFORMATION SHOWN ON THE DRAWINGS AND THAT VERIFIED IN THE FIELD SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING CONSTRUCTION.

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 NUMBER 46853, EXPIRATION DATE: 06-11-2023.



DISTURBED AREA:
16,000 SF or 0.367 Ac.±



DESIGN AND DRAWINGS ARE BASED ON MARYLAND COORDINATE SYSTEM (MCS), HORIZONTAL-WAD 83(2011), VERTICAL-WAD 88.

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**ENVIRONMENTAL CONCEPT PLAN
ENVIRONMENTAL SITE DESIGN PROFILES & SECTIONS
FOR
EXXON CAR WASH
& SERVICE STATION**

4235 MONTGOMERY RD. 21043
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
ZONING B-2 TAX MAP 24 GRID 24 PARCEL 444

REVISIONS

DRAWN BY:	CHECKED BY:	SCALE:
CLB & MAV	MAV	1" = 20'
DATE:	JOB NO.:	SHEET NO.:
4-12-2023	19054	3 OF 3