

WATER TREATMENT PLANT CLARIFIER

FOR TOWN OF EMMITSBURG, MARYLAND

C.I.P. (4-1600-40-160-1)

TAX MAP 007, GRID 012, PARCEL 043

REISSUED FOR BID
ADDENDUM NO.3
FEBRUARY 6, 2024

GENERAL NOTES:

1. THE PROPOSED PROJECT IS TO ADD A WATER CLARIFICATION FACILITY TO PROVIDE PRE-TREATMENT SYSTEM FOR THE TOWN OF EMMITSBURG'S DRINKING WATER. THE PROPOSED FACILITIES SHALL INCLUDE A PREFAB METAL BUILDING, CONCRETE VALVE VAULT AND HOLDING TANK, GRAVEL PARKING LOT AND SECURITY FENCE. MINIMAL CLEARING SHALL BE FOLLOWED TO MINIMIZE IMPACTS TO SENSITIVE ENVIRONMENTAL FEATURES SUCH AS WETLANDS, STEEP SLOPES AND TREES.
2. SURVEY CONDUCTED BY RF. GAUSS & ASSOCIATES, INC. ON MAY 24, 2021. HORIZONTAL DATUM IS MSP NAD83/2011. VERTICAL DATUM IS NAVD 88.
3. PROPERTY IS ZONE: RESOURCE CONSERVATION (RC) AND IS LOCATED WITHIN UNINCORPORATED FREDERICK COUNTY.
4. THIS PROJECT WILL TEMPORARILY IMPACT WETLAND BUFFERS AND THE 100-YR FLOODPLAIN. WETLANDS DELINEATION PERFORMED BY WATERSHED ENVIRONMENTAL, LLC. ON APRIL 23, 2021. THE 100-YEAR FLOODPLAIN IS DELINEATED FROM FEMA'S NATIONAL FLOOD HAZARD LAYER DATASET, MAP PANEL 24021C0035D EFFECTIVE SEPTEMBER 19, 2007. A MDE WETLAND/WATERWAY LETTER OF AUTHORIZATION HAS BEEN ISSUED FOR THIS PROJECT. LOA#: 22-NT-3177/202261204

MDE NOTES - NOI REQUIREMENTS:

1. SOIL EROSION AND SEDIMENT CONTROL - THIS PROJECT HAS BEEN DESIGNED TO MINIMIZE DISTURBANCE AND MAXIMIZE THE AMOUNT OF GREEN SPACE. PROJECT SHALL DISTURB LESS THAN 1 AC. THEREFORE NOI IS NOT REQUIRED.
2. ESD DOCUMENTATION AND DESIGN - ALL ESD DOCUMENTATION IS AVAILABLE AND THE DESIGN IS IN ACCORDANCE WITH BEST MANAGEMENT PRACTICES.
3. PROTECTION OF NATURAL AREAS - SILT FENCE AND ORANGE SAFETY BARRIER FENCE WILL BE INSTALLED AT THE ONSET OF CONSTRUCTION ACTIVITIES, WHICH WILL MAINTAIN THE LIMIT OF DISTURBANCE. AFTER COMPLETION THE CLARIFIER BUILDING SHALL ALSO BE ENCLOSED BY A SECURITY FENCE TO PROVIDE FUTURE PROTECTION TO SURROUNDING AREAS.
4. CONSTRUCTION EQUIPMENT CONTROL - THE CONSTRUCTION EQUIPMENT WILL BE LIMITED TO THE CONSTRUCTION AREA BY SILT FENCE AND THE ORANGE SAFETY BARRIER FENCE.
5. SITE CLEARING EVALUATION - SITE CLEARING WILL BE LIMITED TO THE LIMIT OF DISTURBANCE WHICH HAS A FENCE AND SILT FENCE LOG PERIMETER.
6. PHASING FOR SITE AREA - THE PROPOSED WORK HAS BEEN PROPERLY SEQUENCED BY THESE PLANS FOR ALL WORK TO BE COMPLETED IN PROPER ORDER.
7. HIGH RISK SOIL IDENTIFICATION - THERE ARE NO HIGH RISK SOILS WITHIN THE LIMIT OF DISTURBANCE.
8. STEEP SLOPES - NO EXCESSIVELY STEEP SLOPES EXIST ON SITE.
9. DESIGNATION OF STABILIZATION - STABILIZE ALL DISTURBED AREA IN ACCORDANCE WITH THE NOTES PROVIDED ON SHEETS ESC-05 AND ESC-06.

STANDARD COUNTY NOTES:

1. A COMPLETE SET OF APPROVED PLANS AND A COPY OF THE GRADING PERMIT MUST BE ON SITE AND AVAILABLE FOR USE BY THE INSPECTOR, OR OTHER REPRESENTATIVES OF TOWN OF EMMITSBURG DIVISION OF PUBLIC WORKS.
2. THIS PROJECT WILL REQUIRE A THIRD PARTY QUALIFIED PROFESSIONAL TO BE PRESENT AT THE PRE-CONSTRUCTION MEETING SCHEDULED WITH TOWN OF EMMITSBURG PUBLIC WORKS AND THE FREDERICK COUNTY SOIL CONSERVATION DISTRICT.
3. ALL GRADING FOR THIS PROJECT SHALL BE THE FULL RESPONSIBILITY OF THE PROJECT OWNER.

ENGINEER'S CERTIFICATION:

I hereby certify that the plans have been designed in accordance with local ordinances, COMAR 26.17.01, and 2021 Maryland Standards and Specification for Soil Erosion and Sediment Control.

John C. Moore 20566
ENGINEER'S SIGNATURE P.E. NO.
JOHN C. MOORE 05/31/2023
PRINT NAME DATE

OWNER/ DEVELOPER'S CERTIFICATION:

I/We hereby certify that any clearing, grading, construction and/or development will be done pursuant to this plan and that any responsible personnel involved in this construction project will have a Certificate of Attendance at a Maryland Department of the Environment approved training program for the control of sediment and erosion before beginning the project. I/We also certify that the site will be inspected at the end of each working day, and that any needed maintenance will be completed so as to ensure that all sediment control practices are left in operational condition. I/We authorize the right of entry for periodic onsite evaluation by the Catocini/ Frederick Soil Conservation District Board or their authorized agents.

Najila Ahsan 11/20/2023
SIGNATURE OWNER/ DEVELOPER DATE
NAJILA AHSAN TOWN PLANNER
PRINT NAME TITLE

CERTIFICATION OF THE DISTURBED AREA QUANTITY

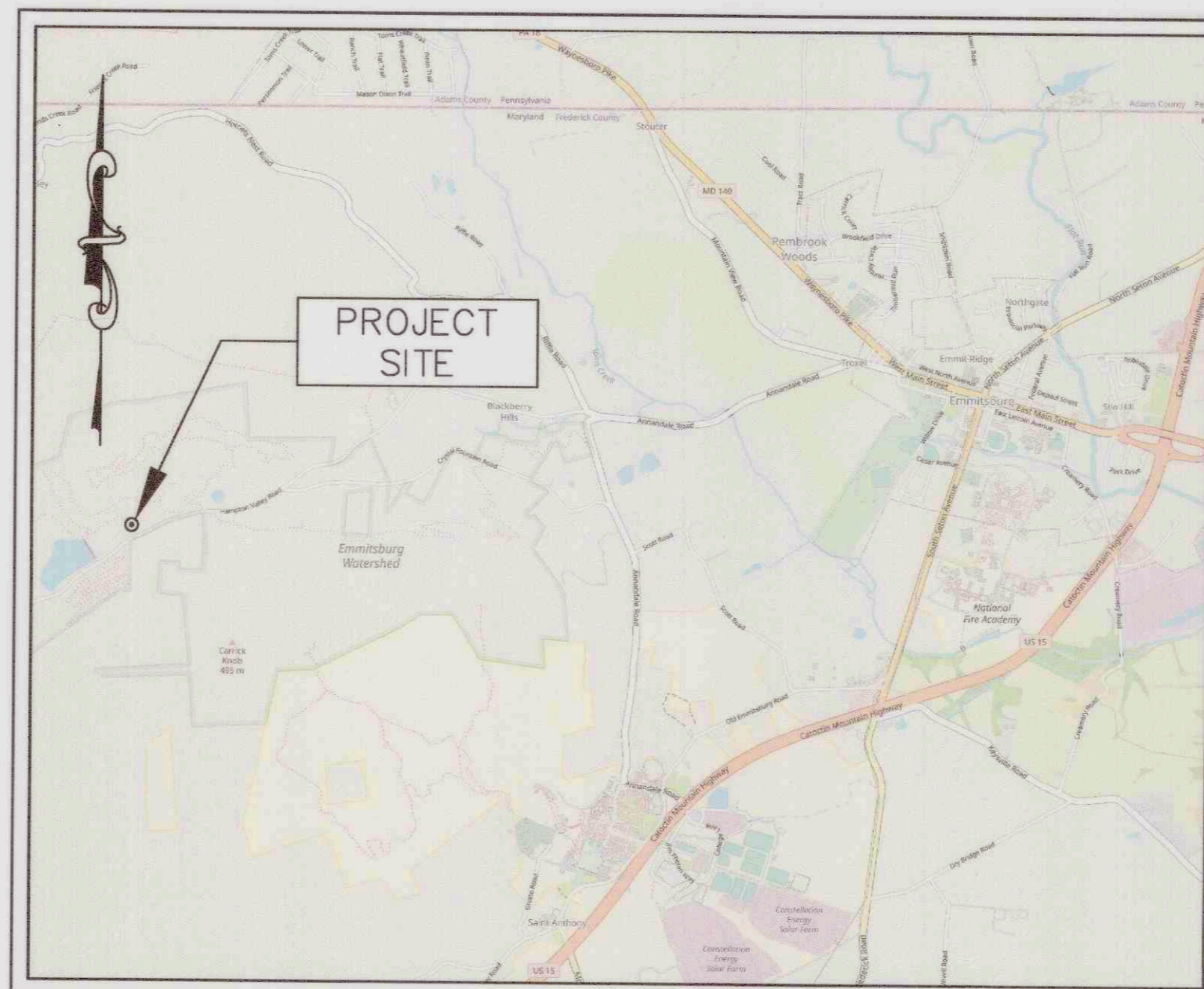
I hereby certify that the estimated total amount of area to be disturbed shown on these plans has been computed to 300 c.y. of excavation, 150 c.y. of fill and the total area to be disturbed as shown on these plans has been determined to be 11,090 square feet, or 0.26 acres.

John C. Moore 20566
ENGINEER'S SIGNATURE P.E. NO.
JOHN C. MOORE 05/31/2023
PRINT NAME DATE

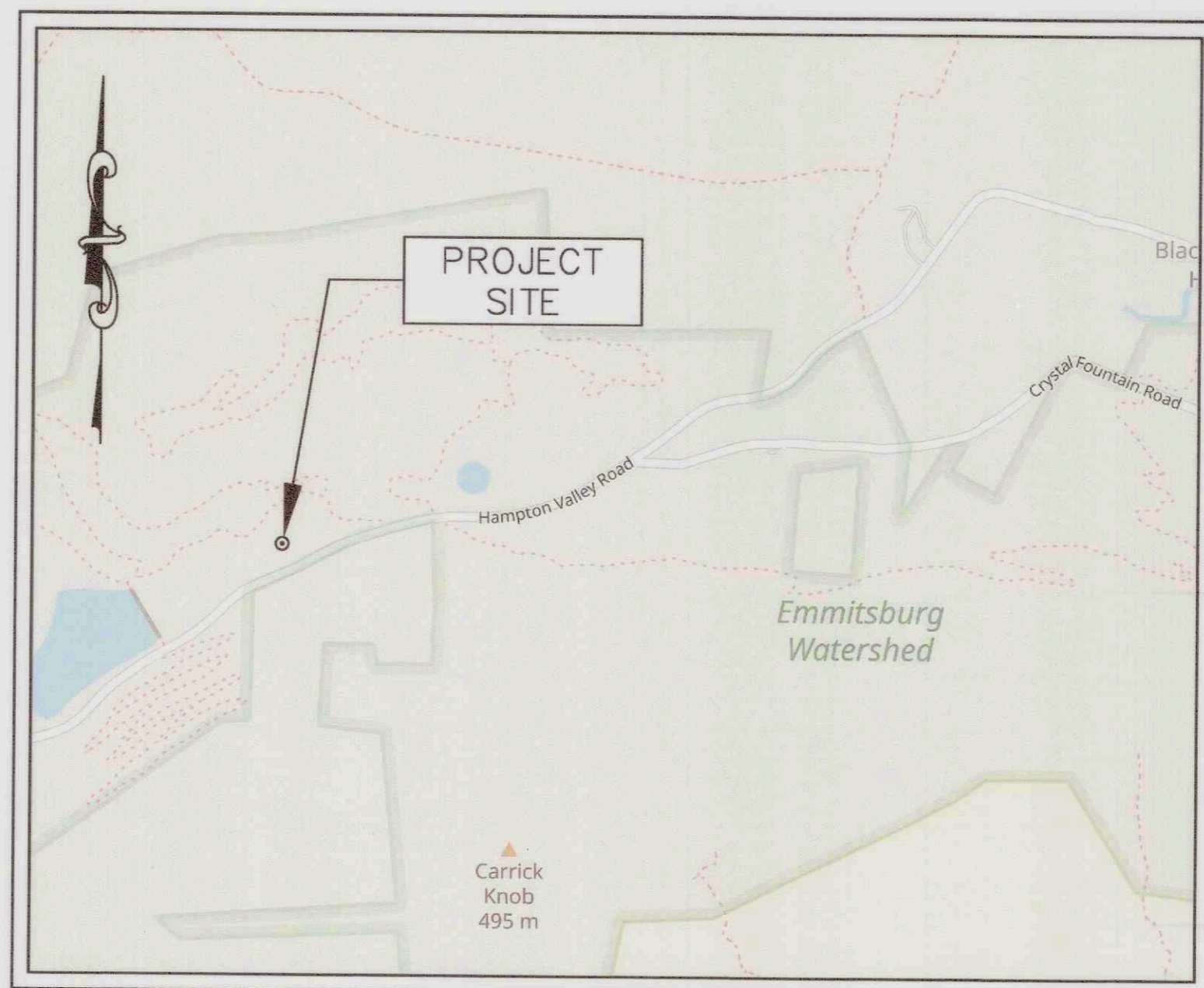
APPROVED
EMMITSBURG MAYOR
[Signature] 11/20/23
MAYOR SIGNATURE DATE

PUBLIC WATER NOTES:

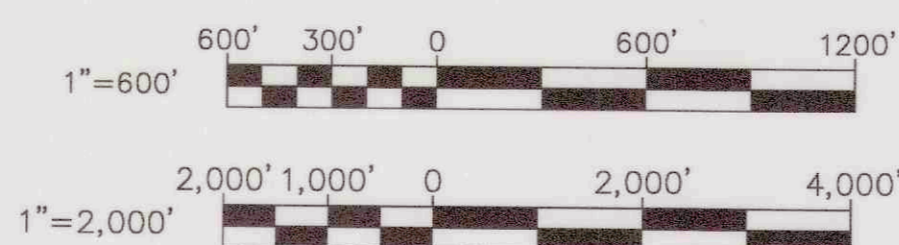
1. IN ACCORDANCE WITH CODE OF MARYLAND REGULATIONS (COMAR) 26.04.01.33, DIRECT AND INDIRECT ADDITIVES, SUPPLIERS OF WATER SHALL ONLY USE PRODUCTS (ANY MATERIALS THAT COME IN CONTACT WITH WATER INTENDED FOR USE IN PUBLIC WATER SUPPLY) THAT MEET THE APPLICABLE AMERICAN NATIONAL STANDARDS INSTITUTE/NSF INTERNATIONAL (ANSI/NSF) STANDARDS FOR DIRECT OR INDIRECT DRINKING WATER ADDITIVES. THE PRODUCTS CAN ALSO BE CERTIFIED BY AN ORGANIZATION ACCREDITED BY THE ANSI FOR SUCH TESTING (I.E. INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS RESEARCH AND TESTING, ONTARIO CA, UNDERWRITERS LABORATORY, NORTHBROOK IL, AND WATER QUALITY ASSOCIATION, LISLE IL).
2. IN COMPLIANCE WITH COMAR 09.20.01.03 AND THE SAFE DRINKING WATER ACT (SECTION 1417(A)(4)(B)), MATERIALS THAT COME IN CONTACT WITH WATER INTENDED FOR USE IN PUBLIC WATER SUPPLY SHALL COMPLY WITH THE REDUCTION OF LEAD IN DRINKING WATER ACT, WHICH WENT INTO EFFECT IN MARYLAND IN JANUARY 2012.



VICINITY MAP
SCALE: 1"=2,000'



LOCATION MAP
SCALE: 1"=600'



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STORMWATER MANAGEMENT NOTES:

1. ANTICIPATED STORMWATER MANAGEMENT WILL BE PROVIDED BY STRUCTURAL (RAIN GARDEN/GRAVEL WETLAND) AND NON-STRUCTURAL METHODS (DISCONNECTED ROOFTOPS AND NON-ROOFTOP AREAS)

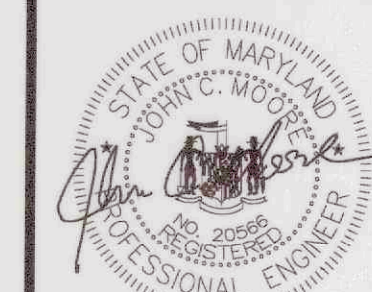
PARCEL AREA	AC	90.55
SITE AREA	AC	0.26
DISTURBANCE AREA	AC	0.21
EXISTING IMPERVIOUS	AC	0.0
PROPOSED IMPERVIOUS	AC	0.09
TOTAL IMPERVIOUS	AC	0.09
SITE Pe	INCHES	1.6
DEVELOPMENT TYPE	NEW DEVELOPMENT	
ESDv REQUIRED	CF	518
ESDv PROVIDED	CF	535
Pe ACHIEVED	INCHES	1.65

Frederick Soil Conservation District
Erosion and Sediment Control Plan Approval
By: *[Signature]*
District Manager or Designee
Date: 12/17/2023
Plan is valid for 2 years from date of approval

SCD approval for sediment and erosion control is in accordance with the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control and is contingent upon issuance of all applicable regulatory permits.

2. MDE WATERSHED: UPPER MONOCACY RIVER (MDE-8: 02140303)

FILE #:
A/P #:
DUE DATE:



PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AS A PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 20566 EXPIRATION DATE 09/09/2024
700 EAST PRATT STREET, SUITE 500
BALTIMORE, MARYLAND 21202
800.787.3755
RK&K

NO.	DESCRIPTION	DATE	BY
1	REISSUED FOR BID - ADDENDUM NO. 3	02/06/2024	

TOWN OF EMMITSBURG, MARYLAND
WATER PLANT CLARIFIER
CIP NO: 4-1600-40-160-1
HAMPTON VALLEY ROAD, EMMITSBURG ELECTION DISTRICT NO. 5, FREDERICK COUNTY, MARYLAND

ENGINEER	CHECKED BY
DD	JCM
DRAWN BY	DATE
WJG	2023
PROJECT NUMBER	20119

DRAWING NUMBER
G-01
SHEET NO. 01 OF 42

ABBREVIATIONS

Table of abbreviations including AB (Anchor Bolt), AC (Acre), ADJ (Adjustable, Adjacent), AFF (Above Finished Floor), ALT (Alternate, Alternative), ALUM (Aluminum), ANC (Anchor), APPROX (Approximate), ARCH (Architectural), ARV (Air Release Valve), ASSY (Assembly), ATS (Automatic Transfer Switch), AUTO (Automatic), AUX (Auxiliary), AWG (American Wire Gauge), B (Beam, Boring), BTOT (Back to Back), BF (Blind Flange), BHP (Brake Horsepower), BITUM (Bituminous), BK (Back), BLDG (Building), BLK (Block), BLKG (Blocking), BLT(S) (Bolt(s)), BM (Benchmark), BMP (Best Management Practices), BOF (Bottom of Footing), BOT (Bottom), BRG (Bearing), BRK (Brick), BS (Both Sides), BSMT (Basement), B&S (Bell and Spigot), BTU (British Thermal Unit), BTUH (British Thermal Unit-Hour), BTWN (Between), CAV (Combination Air Valve), C/EJ (Contraction/Expansion Joint), C/M (Civil/Mechanical), CFM (Cubic Feet per Minute), C&G (Curb and Gutter), CHB (Chord Bearing), CHKD (Checked), CHKDPL (Checked Plate), CHL (Chord Length), CI (Cast Iron), CIMH (Cast Iron Manhole), CIMHS (Cast Iron Manhole Steps), CIP (Cast Iron Pipe), C.I.P. (Cast in Place), CISP (Cast Iron Soil Pipe), CJ (Contraction Joint), CJT (Control Joint), CL (Class, Clearance, Clear), CLG (Ceiling), CLR (Clear, Clearance), CMP (Corrugated Metal Pipe), CMU (Concrete Masonry Unit), CO (Clean Out, Company), COL (Column), COMB (Combination), COMP (Compressor, Compressed), CONC (Concrete), CONN (Connection), CONST (Construction), CONT (Continuous, Continuation, Control), COR (Corner), CORR (Corridor, Corrugated), COV (Cover), CPLG (Coupling), CRS (Courses, Corrosion-Resistant Steel), CSJ (Construction Joint), CSK (Countersunk), CTOC (Center to Center), CTR(S) (Center(s)), CU (Cubic), CV (Check Valve), CUYD (Cubic Yard), D (Door, Drain, Damper), DBL (Double), DEG (Degree), DEPT (Department), DH (Door Height), DI (Drop Inlet, Ductile Iron), DIA (Diameter), DIM (Dimension), DIP (Ductile Iron Pipe), DISCH (Discharge), DIV (Division), DN (Down), DO (Door Opening), DPR (Damper), DR (Drain), DSP (Downspout), DWG(S) (Drawing(s)), DWL(S) (Dowel(s))

ABBREVIATIONS (CONTINUED)

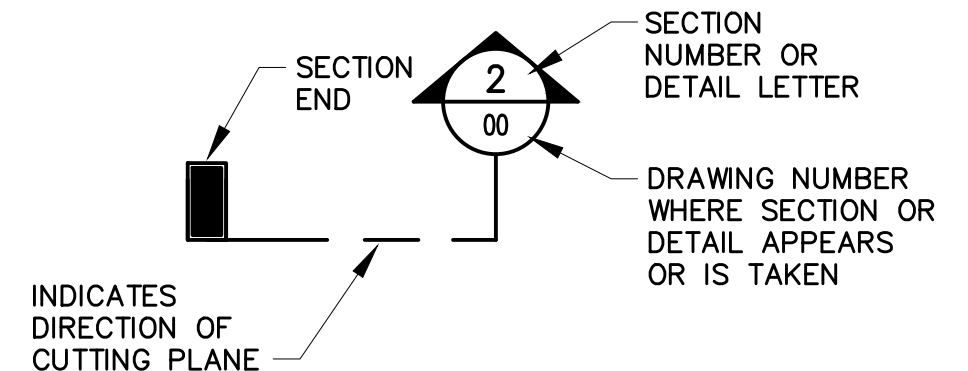
Continuation of abbreviations including E (East), EA (Each), ECC (Eccentric), EF (Each Face, Exhaust Fan), EJ (Expansion Joint), EL (Elevation), ELEV (Elevation), ELL (Elbow), EMER (Emergency), ENCL (Enclosure), ENT (Entrance), EOP (Edge of Pavement), EP (Electric Pole), EQ (Equal), EQUIP (Equipment), EW (Each Way), EWF (Each Way Each Face), EXH (Exhaust), EX (Existing), EXP (Expansion, Exposed), EXPJT (Expansion Joint), EXT (Extension, Exterior, External), FB (Face Brick), FCA (Flanged Coupling Adapter), FCO (Floor Cleanout), FD (Floor Drain), FE (Fire Extinguisher), FEC (Fire Extinguisher Cabinet), FF (Finished Floor), FTOF (Face to Face), FIG (Figure), FIN (Finish), FINOR (Finish Grade), FL (Floor, Flow Line), FLASH (Flashing), FLEX (Flexible), FLG (Flange, Flashing), FM (Force Main, Flow Meter), FND (Foundation), FOM (Face of Masonry), FRP (Fiberglass Reinforced Plastic or Polyester), FT (Feet, Foot), FTG (Footing), FWD (Forward), F&F (Flange & Flare), G (Gauge), GAB (Graded Aggregate Base), GAL (Gallon), GALV (Galvanized), GEN (General, Generator), GPM (Gallons per Minute), GR (Grade), GV (Gate Valve, Gravity Ventilator), GWP (Gypsum Wallboard), GYP (Gypsum), H (Access Hatch), HA (Hydraulic Actuator), HALCP (Hydraulic Actuator Local Control Panel), HAMCP (Hydraulic Actuator Main Control Panel), HB (Hose Bibb), HD (Head), HF (Hose Faucet), HGT (Height), HLU (Hand Lay-Up), HMA (Hot Mix Asphalt), HMC (Harnessed Mechanical Coupling), HMJ (Harnessed Mechanical Joint), HOA (Hand Off Auto), HORZ (Horizontal), HP (High Point, Horsepower), HR (Hour, Handrail), HSS (Hollow Structural Steel), HV (Hose Valve), HVAC (Heating, Ventilating and Air Conditioning), HW (Hot Water), HWY (Highway), ID (Inside Diameter, Inlet Damper), IF (Inside Face), IN (Inch, Inches), INC (Incorporated), INCL (Including), INCR (Increase, Increasing, Increaser), INSUL (Insulate, Insulation, Insulating), INV (Invert), K (Kips), KSI (Kips per Square Inch), KW (Kilowatt), KWH (Kilowatt Hour), L (Louver, Length), LB(S) (Pound(s)), LF (Linear Feet), LG (Length, Long), LIC (License), LIN (Lineal, Linear), LO (Louver Opening), LOC (Limit of Contract), LP (Low Point, Light Pole)

ABBREVIATIONS (CONTINUED)

Continuation of abbreviations including M (Motor), MAN (Manual), MAS (Masonry), MATL (Material), MAX (Maximum), MC (Mechanical Coupling), MCC (Motor Control Center), MECH (Mechanical), MED (Medium), MFR(S) (Manufacturer(s)), MG (Million Gallons), MGD (Million Gallons per Day), MH (Manhole), MIN (Minimum, Minute), MISC (Miscellaneous), MJ (Mechanical Joint), MJRG (Mechanical Joint Retainer Gland), MJTR (Mechanical Joint with Tie Rod), MK (Mark Number), MO (Masonry Opening, Motor Operated), MTL (Material), MVMCC (Medium Voltage Motor Control Center), N (North), NA (Not Applicable), NC (Normally Closed), N.C. (Not in Contract), NO (Normally Open), NO.(S) (Number(s)), NOM (Nominal), NPT (National Pipe Thread), NPW (Nonpotable Water), NTS (Not to Scale), OC (On Center), OH (Overhead), OPER (Operating), OPNG (Opening), OPP (Opposite, Opposing), P (Pump), PAV (Pavement), PCCP (Prestressed Concrete Cylinder Pipe), PCF (Pounds per Cubic Foot), PE (Plain End), PH (Pipe Hanger), PK (Pipe Nail), PL (Plate), PLYWD (Plywood), PNL(S) (Panel(s)), POL (Point on Line), PR (Pair), PREFAB (Prefabricated), PROP (Proposed), PS (Pipe Support), PSF (Pounds per Square Foot), PSI (Pounds per Square Inch), POINT (Point), PVC (Polyvinyl Chloride), P.V.C (Point of Vertical Curve), P.V.I (Point of Vertical Intersection), P.V.T (Point of Vertical Tangent), POTABLE WATER, QTR (Quarter), R (Radius, Riser), R&C (Rebar and Cap), RCP (Reinforced Concrete Pipe), RCCP (Reinforced Concrete Cylinder Pipe), RED (Reducer, Reducing), REF (Reference), REINF (Reinforced, Reinforcing), REM (Removable), REQD (Required), REV (Revision, Revised), RFF (Reinforced Fabric Fence), RG (Retainer Gland), RM (Room), ROW (Right-of-Way), RPM (Revolutions per Minute), R/W (Right-of-Way), S (South, Speaker), SAN (Sanitary), SCADA (Supervisory Control and Data Acquisition), SCE (Stabilized Construction Entrance), SCH (Schedule), SD (Storm Drain), SEC (Second), SECT (Section), SF (Square Foot, Supply Fan), SG (Sluice Gate), SHT (Sheet), SIM (Similar), SPA (Spacing, Spaces), SPEC(S) (Specification(s)), SQ (Square), SS (Stainless Steel, Sanitary Sewer), STA (Station), STD (Standard), STL (Steel), STOR (Storage)

ABBREVIATIONS (CONTINUED)

Continuation of abbreviations including STR (Structural), SUP (Supply), SUSP (Suspended), SV (Shutoff Valve), SYS (System), T&B (Top and Bottom), TBM (Temporary Bench Mark), TDH (Total Dynamic Head), TEL (Telephone), TEMP (Temperature, Temporary), THK (Thick, Thickness), TOC (Top of Concrete), TOG (Top of Grate), TOM (Top of Masonry), TOR (Top of Rim), TOS (Top of Steel), TRAV (Traverse), TS (Tube Steel), TYP (Typical), UH (Unit Heater), UNO (Unless Noted Otherwise), UNREINF (Unreinforced), UP (Utility Pole), USGS (United States Geological Survey), V (Valve, Volt), VAC (Vacuum), VCP (Vitrified Clay Pipe), VERT (Vertical), VT (Vitrified Terra Cotta), VTR (Vent Through Roof), W (West, Width, Water), W/ (With), WI (Wrought Iron), WL (Water Level), WM (Water Meter), W/O (Without), WT (Watertight), WV (Water Valve), WWF (Welded Wire Fabric), WZTC (Work Zone Traffic Control), X (By, Times), YD (Yard), & (And), L (Angle (Steel)), AT (At), CL (Centerline), C (Channel (Steel)), # (Number), % (Percent)



STRUCTURAL LEGEND table with columns for material type and visual representation. Includes WATERSTOP, REINFORCING STEEL, GROUNDLINE, NO. 57 STONE, BRICK, CONCRETE/CONCRETE FILL, OPENING, CENTERLINE, EXISTING STRUCTURE, and PROPOSED STRUCTURE.

GENERAL LEGEND

GENERAL LEGEND table with columns for item name and visual representation. Includes TRVERSE/CONTROL POINT, GUY POLE, ITEMS TO BE DEMOLISHED AND REMOVED, BITUMINOUS PAVEMENT, GRASS AREA, STONE SURFACE, DOOR, CONTOUR, INDEX CONTOUR, WATER SERVICE, OVERHEAD ELECTRIC, UNDERGROUND ELECTRIC, UNDERGROUND TELEPHONE, UNDERGROUND COMMUNICATION, 100' YEAR FLOODPLAIN, FLOODWAY, RIGHT-OF WAY, EASEMENT, CENTERLINE, FENCE, PROPERTY LINE, GUARDRAIL, FORCE MAIN, GRAVITY SEWER, STORM DRAIN, PRESENTLY ABANDONED, STREAM, DIRT ROAD, STONE ROAD, MACADAM ROAD, RAILROAD TRACKS, SANITARY SEWER MANHOLE, STORM SEWER MANHOLE, LIGHT POLE, UTILITY POLE, WATER METER, GAS VALVE, TREE, WOODS OR BRUSH, FIRE HYDRANT, BUILDING STRUCTURES, BENCH MARK, STANDARD PENETRATION TEST BORING, EXISTING UTILITY TO BE ABANDONED BY CONTRACTOR, EXISTING UTILITY TO BE ABANDONED BY OTHERS, NEW BITUMINOUS PAVEMENT, NEW GRASS AREA, STABILIZED CONSTRUCTION ENTRANCE, STORMWATER EASEMENT, DOOR, DUCTWORK TURNING VANES, DRAINAGE ARROW.



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. EXPIRATION DATE 09/06/2024. License No. 20266. 700 EAST PRATT STREET, SUITE 500 BALTIMORE, MARYLAND 21202 800.787.3795

Table with columns: NO., DESCRIPTION, REVISIONS, BY, DATE. Row 1: 1, REISSUED FOR BID - ADDENDUM NO. 3, [blank], [blank], 02/06/2024.

TOWN OF EMMITSBURG, MARYLAND WATER PLANT CLARIFIER CIP NO. 4-1600-40-160-1 HAMPTON VALLEY ROAD, EMMITSBURG ELECTION DISTRICT NO. 5, FREDERICK COUNTY, MARYLAND. ABBREVIATIONS AND LEGEND.

Table with columns: ENGINEER, CHECKED BY, DRAWN BY, DATE. Values: DD, JCM, DD, 2023. Below: RK&K PROJECT NUMBER 20119.

DRAWING NUMBER G-02 SHEET NO. 02 OF 42



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. 20986 EXPIRATION DATE 09/06/2024

NO.	DESCRIPTION	BY	DATE
1	REISSUED FOR BID - ADDENDUM NO. 3		02/06/2024

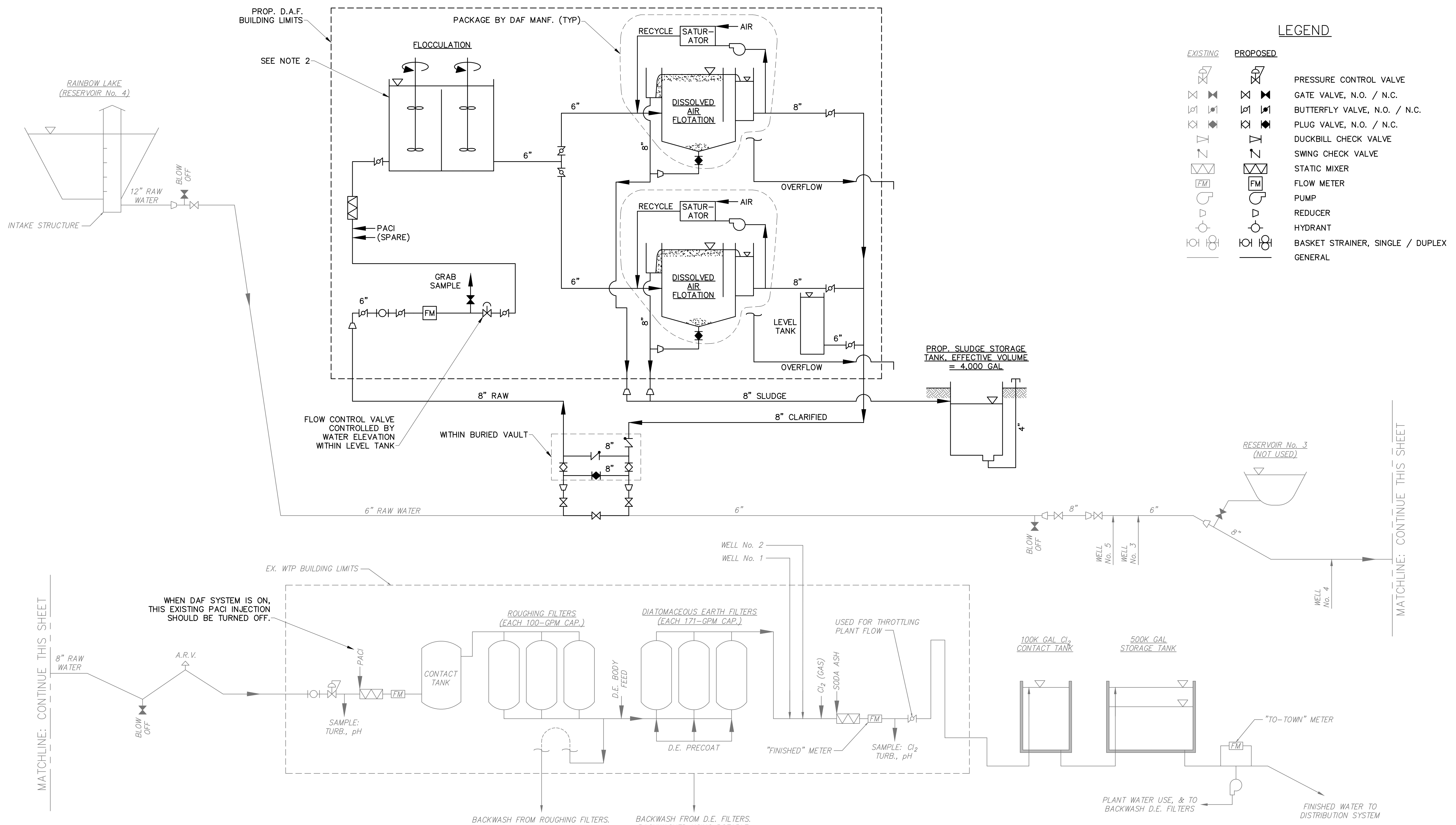
TOWN OF EMMITSBURG, MARYLAND
 WATER PLANT CLARIFIER
 CIP NO. 4-1600-40-160-1
 HAMPTON VALLEY ROAD, EMMITSBURG ELECTION DISTRICT No. 5, FREDERICK COUNTY, MARYLAND

ENGINEER	CHECKED BY
DD	JCM
DRAWN BY	DATE
DD	1/2024
RK&K PROJECT NUMBER	
20119	

DRAWING NUMBER
G-03
 SHEET NO. 03 OF 42

LEGEND

EXISTING	PROPOSED	
		PRESSURE CONTROL VALVE
		GATE VALVE, N.O. / N.C.
		BUTTERFLY VALVE, N.O. / N.C.
		PLUG VALVE, N.O. / N.C.
		DUCKBILL CHECK VALVE
		SWING CHECK VALVE
		STATIC MIXER
		FLOW METER
		PUMP
		REDUCER
		HYDRANT
		BASKET STRAINER, SINGLE / DUPLEX
		GENERAL



BACKWASH FROM ROUGHING FILTERS. BACKWASHED USING EFFLUENT FROM ROUGHING FILTERS. WHICH CAUSES RAW WATER FLOW TO AUTOMATICALLY REACH 230 GPM FOR 25± MIN.
 BACKWASH FROM D.E. FILTERS. BACKWASHED USING POTABLE WATER FROM PLANT SUPPLY PUMP.

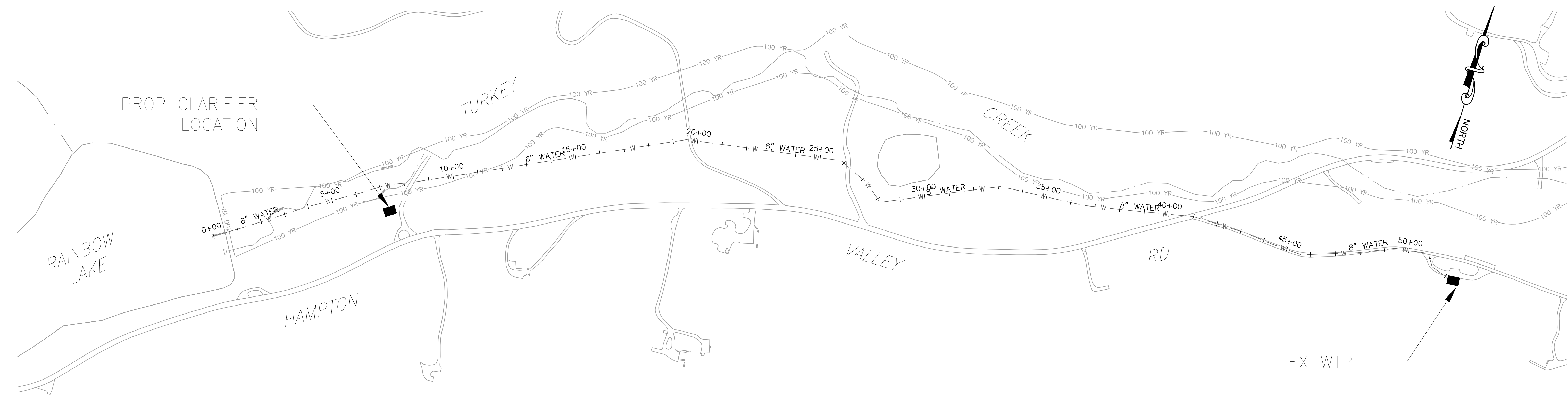
DESIGN INFORMATION:

- DESIGN FLOWRATE EACH DAF:
 - MIN. 62.5 GPM X 2 UNITS = 125 GPM
 - AVG. 125 GPM X 2 UNITS = 150 GPM
 - MAX. 150 GPM X 2 UNITS = 300 GPM
- FLOCCULATION: 6,000 GAL 2-STAGE CONTINUOUSLY STIRRED REACTOR TANK.
 DETENTION TIME: 10-MIN EACH STAGE, 20-MIN TOTAL
- WATER QUALITY:

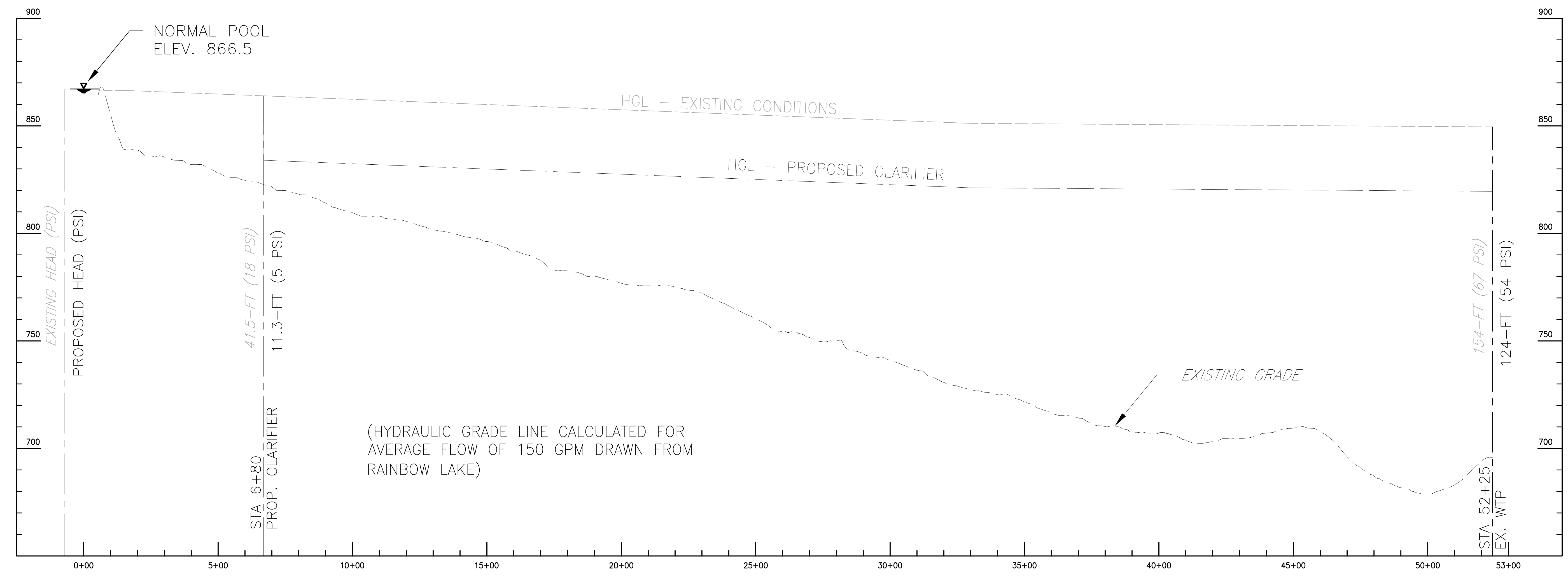
TURBIDITY:	INFLUENT (RAW):	≤10 NTU - 100 NTU
	EFFLUENT:	≤1.5 NTU
pH:	RAW WATER	6.0 - 7.5
ALKALINITY:	RAW WATER	15 - 35 mg/L CaCO ₃

\\orl.nsk.com\1\A\Chief\Projects\2020\2019_Emmitsburg\CAD\DWG\03.dwg Jan 23, 2024 - 8:15am Plot Scale: 1:1

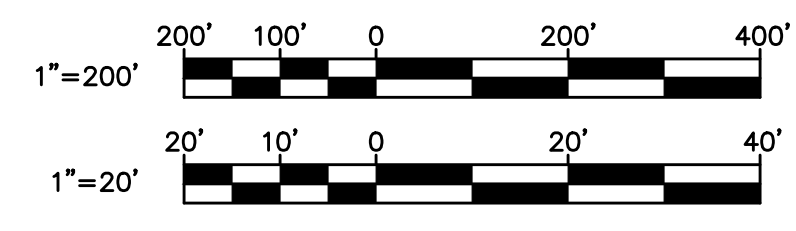
R:\21\1515 - \1\civil\projects\2020\2019 - Emmitsburg\0400\1\K&K\G-04.dwg Oct 17, 2023 - 10:56am Plot Scale: 1:1



RAW WATER MAIN
SCALE: 1" = 200'



HYDRAULIC PROFILE
SCALE: 1" = 20' V : 1" = 200' H



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. 20566 EXPIRATION DATE 09/06/2024
RK&K
 700 EAST PRATT STREET, SUITE 500
 BALTIMORE, MARYLAND 21202
 800.787.3755

NO.	DESCRIPTION	BY	DATE
1	REISSUED FOR BID - ADDENDUM NO. 3		02/06/2024

TOWN OF EMMITSBURG, MARYLAND
WATER PLANT CLARIFIER
 CIP NO: 4-1600-40-160-1
 HAMPTON VALLEY ROAD, EMMITSBURG ELECTION DISTRICT NO. 5, FREDERICK COUNTY, MARYLAND
HYDRAULIC PROFILES

ENGINEER	CHECKED BY
WJG	WJG
DRAWN BY	DATE
KMR	2023
RK&K PROJECT NUMBER	
20119	

DRAWING NUMBER
G-04
 SHEET NO. 04 OF 42