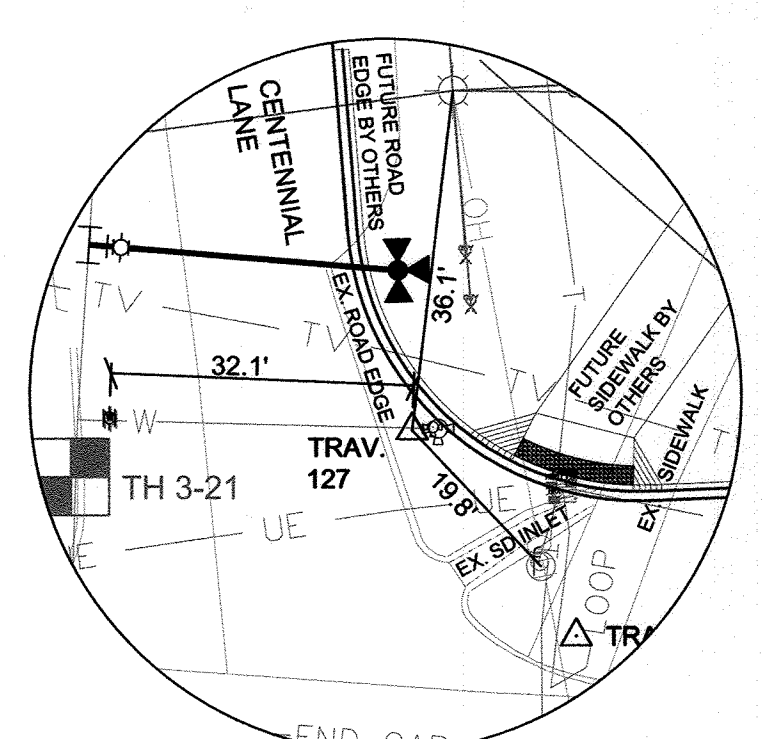
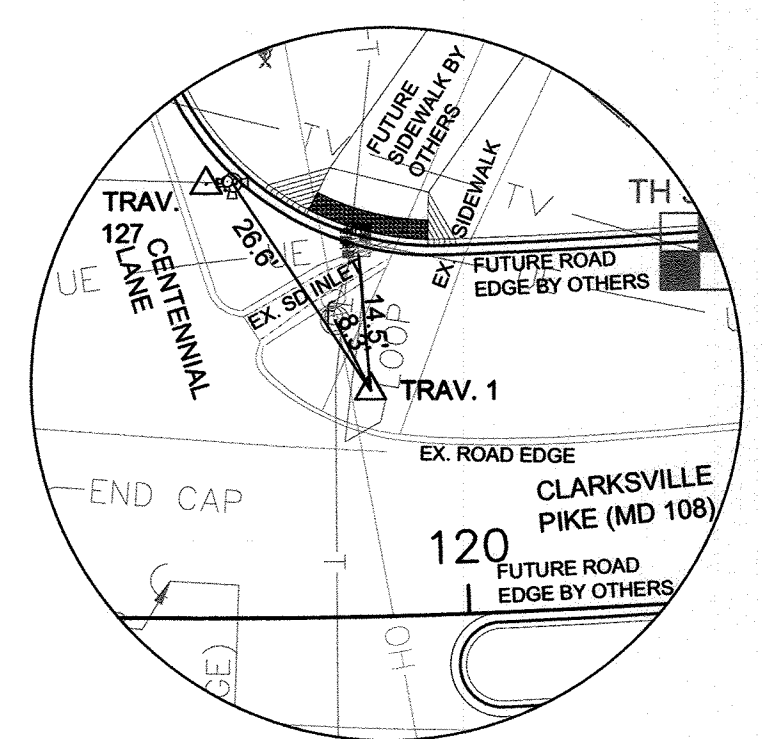


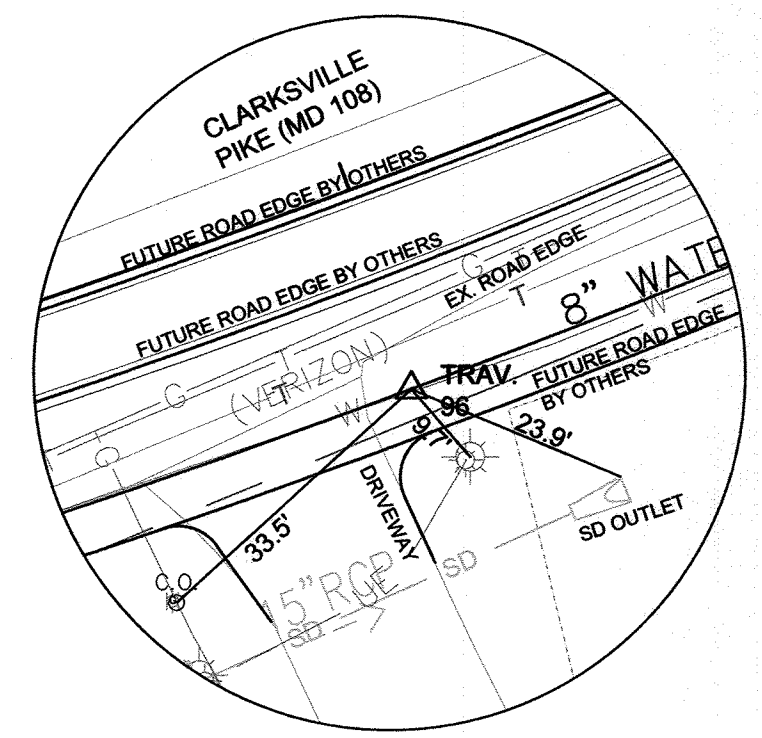
KCI TECHNOLOGIES PROJECT No.: 131802366.27



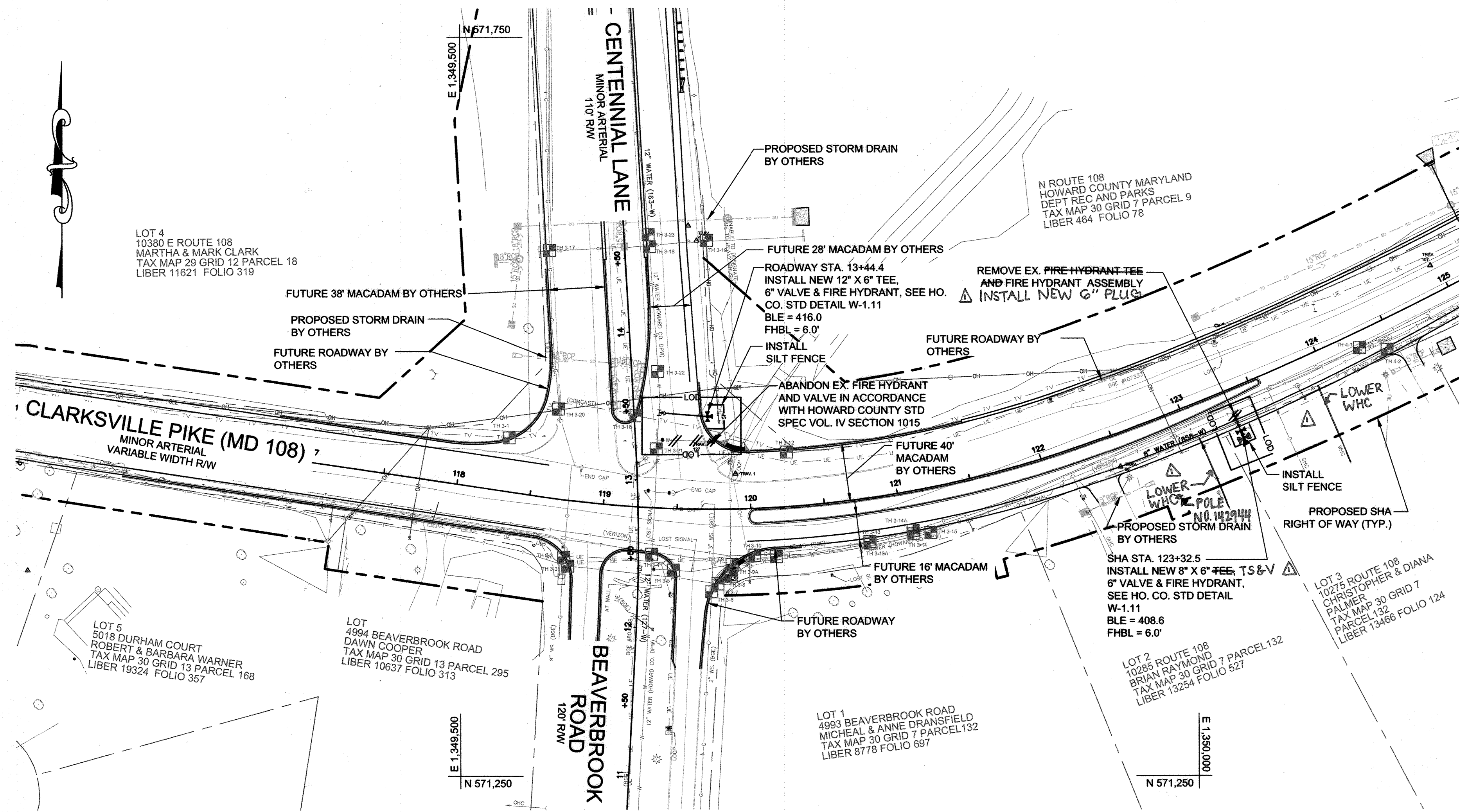
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 E 1349668.8738
 ELEV. 416.5800



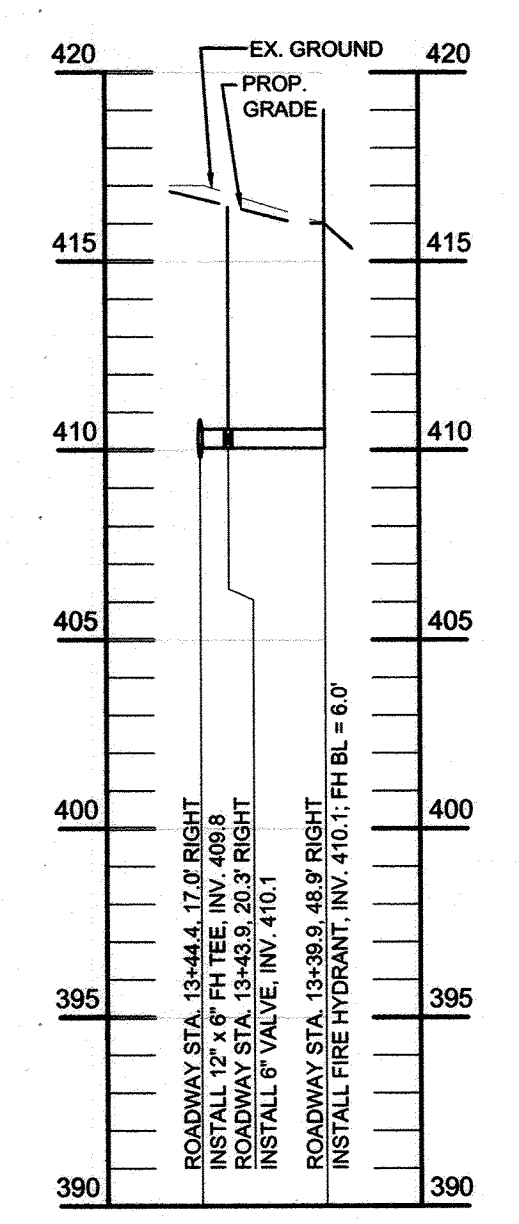
TRAVERSE 1
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 E 1349686.2460
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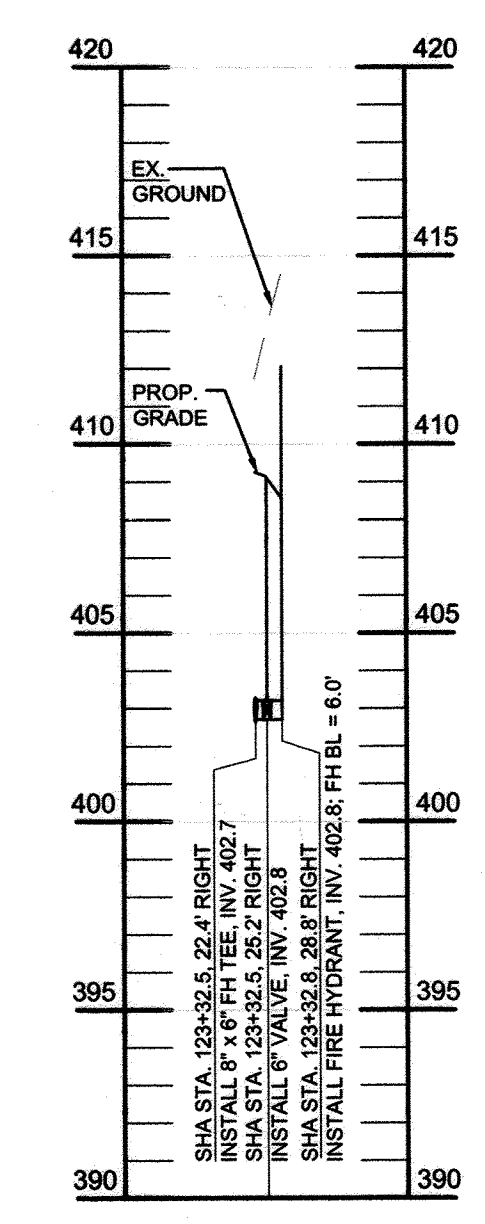
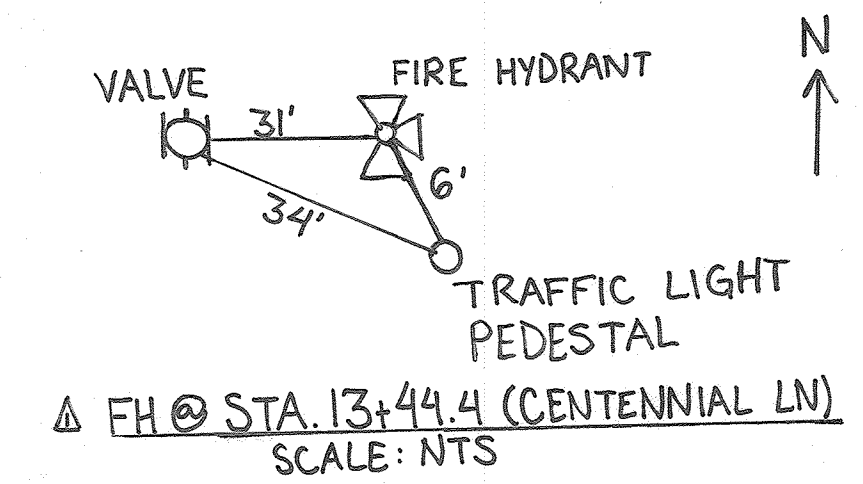
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 E 1349947.0618
 ELEV. 411.6900



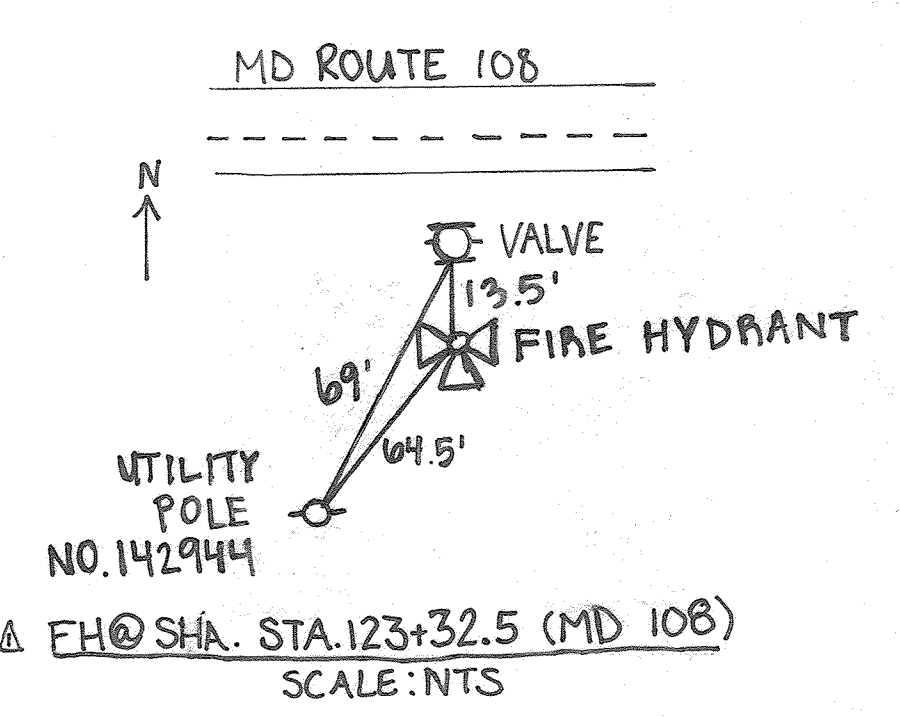
PLAN - FIRE HYDRANTS MD-108 AND CENTENNIAL LANE
 SCALE: 1"=50'



CENTENNIAL LANE FIRE HYDRANT (ROADWAY STA. 13+44.4) - PROFILE
 SCALE: 1"=50' (HORIZ)
 1"=5' (VERT)



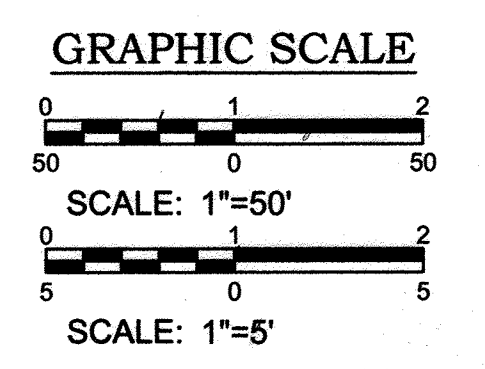
MD 108 FIRE HYDRANT (SHA STA. 123+32.5) - PROFILE
 SCALE: 1"=50' (HORIZ)
 1"=5' (VERT)



WATER MAIN STAKE-OUT SCHEDULE			
STATION	DESCRIPTION	EASTING	NORTHING
CENTENNIAL LANE FIRE HYDRANT - ROADWAY STA. 13+44.4			
ROADWAY STA. 13+44.4, 17.0' RIGHT	12" X 6" FH TEE	1349634.70	571495.73
ROADWAY STA. 13+43.9, 20.3' RIGHT	6" VALVE	1349638.05	571495.46
ROADWAY STA. 13+39.9, 48.9' RIGHT	FIRE HYDRANT	1349667.39	571493.02
MD 108 FIRE HYDRANT - SHA STA. 123+32.5			
SHA STA. 123+32.5, 22.4' RIGHT	12" X 6" FH TEE T S & V	1350026.05	571489.43
SHA STA. 123+32.5, 25.2' RIGHT	6" VALVE	1350026.91	571487.26
SHA STA. 123+32.8, 28.8' RIGHT	FIRE HYDRANT	1350028.68	571483.47

TEST HOLE SCHEDULE			
TEST HOLE NO.	UTILITY	MATERIAL	DEPTH
TH 3-1	CABLE TV	(2) 1 3/4" PL. CONDUITS	1.96'
TH 3-2	8" GAS	STEEL	3.66'
TH 3-3	FIBER OPTIC	(2) 2" PL. CONDUITS	6.66'
TH 3-4	10" WATER	CAST IRON	5.77'
TH 3-5	8" WATER	CAST IRON	5.77'
TH 3-6	2" GAS	STEEL	4.40'
TH 3-7	FIBER OPTIC	(2) 2" PL. CONDUITS	3.60'
TH 3-8	FIBER OPTIC	(2) 2" PL. CONDUITS	2.58'
TH 3-9	8" WATER	CAST IRON	5.86'
TH 3-9A	8" WATER	UNKNOWN	10' (NOT FOUND)
TH 3-10	3" GAS	STEEL	2.42'
TH 3-11	TELEPHONE	UNKNOWN	10' (NOT FOUND)
TH 3-12	CABLE TV	(2) 1 3/4" PL. CONDUITS	2.58'
TH 3-13	3" GAS	STEEL	4.07'
TH 3-13A	TELEPHONE	3" D.B. CABLE	3.15'
TH 3-13A	TELEPHONE	3" D.B. CABLE	3.55'
TH 3-14A	3" GAS	STEEL	3.87'
TH 3-15	8" WATER	CAST IRON	6.29'
TH 3-16	CABLE TV	(2) 1 3/4" PL. CONDUITS	3.08'
TH 3-17	8" GAS	STEEL	6.28'
TH 3-18	12" WATER	UNKNOWN	6.00' (NOT FOUND)
TH 3-19	FIBER OPTIC	2" PL. CONDUIT	4.65'
TH 3-20	8" GAS	PLASTIC	5.41'
TH 3-21	WATER	UNKNOWN	6.99' (NOT FOUND)
TH 3-22	WATER	UNKNOWN	4.75' (NOT FOUND)
TH 3-23	WATER	UNKNOWN	6.11' (NOT FOUND)
TH 4-1	3" GAS	STEEL	4.55'
TH 4-2	8" WATER	CAST IRON	5.49'

- NOTES:**
- CONTRACTOR TO COORDINATE FIRE HYDRANT RELOCATIONS WITH MD-SHA CONTRACTOR FOR MD RTE 108 ROAD IMPROVEMENTS.
 - CONTRACTOR TO VERIFY THE DEPTH AND LOCATION OF EXISTING WATER MAIN ALONG CENTENNIAL LANE AND CLARKSVILLE PIKE (MD RTE. 108).



AS-BUILT
 DATE 8/22/2022

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. 31383, Expiration Date 01/16/2022.

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

2/9/2021
 2-9-21

2/5/2021
 2/3/2021

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 ENGINEERS PLANNERS SCIENTISTS CONSTRUCTION MANAGERS
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 Sparks, MD 21152
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STATE OF MARYLAND
 PUBLIC ENGINEER
 01/14/2021

DES: JR	JER	AS-BUILT/RECORD DRAWINGS	8/22/22
DRN: JR			
CHK: GW			
DATE: JAN 2021	BY	NO.	REVISION

FIRE HYDRANT RELOCATION PLAN & PROFILE

DATE 800' SCALE MAP NO. 0030 BLOCK NO. 7

MD-108 FIRE HYDRANT RELOCATION

CAPITAL PROJECT No. W8602
 CONTRACT No. 44-5163

ELECTION DISTRICT NO. 2 & 5
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 2 OF 3

**HOWARD SOIL CONSERVATION DISTRICT (HSCD)
STANDARD SEDIMENT CONTROL NOTES**

- A pre-construction meeting must occur with the Howard County Department of Public Works, Construction Inspection Division (CID), 410-313-1855 after the future LOD and protected areas are marked clearly in the field. A minimum of 48 hour notice to CID must be given at the following stages:
 - Prior to the start of earth disturbance,
 - Upon completion of the installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading,
 - Prior to the start of another phase of construction or opening of another grading unit,
 - Prior to the removal or modification of sediment control practices.

Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made. Other related state and federal permits shall be referenced, to ensure coordination and to avoid conflicts with this plan.
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and revisions thereto.
- Following initial soil disturbance or re-disturbance, permanent or temporary stabilization is required within three (3) calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and seven (7) calendar days as to all other disturbed areas on the project site except for those areas under active grading.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for topsoil (Sec. B-4-2), permanent seeding (Sec. B-4-5), temporary seeding (Sec. B-4-4) and mulching (Sec. B-4-3). Temporary stabilization with mulch alone can only be applied between the fall and spring seeding dates if the ground is frozen. Incremental stabilization (Sec. B-4-1) specifications shall be enforced in areas with >15' of cut and/or fill. Stockpiles (Sec. B-4-8) in excess of 20 ft. must be benched with stable outlet. All concentrated flow, steep slope, and highly erodible areas shall receive soil stabilization matting (Sec. B-4-6).
- All sediment control structures are to remain in place, and are to be maintained in operative condition until permission for their removal has been obtained from the CID.
- Site Analysis:

Total Area of Site:	0.088	Acres	3833	SF.
Area Disturbed:	0.003	Acres	131	SF.
Area to be roofed or paved:	0.002	Acres	87	SF.
Area to be vegetatively stabilized:	0.001	Acres	44	SF.
Total Cut:	0.00	Cu. Yds.		
Total Fill:	0.00	Cu. Yds.		
Offsite waste/borrow area location:	CONTRACTOR COORDINATE			
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment control must be provided, if deemed necessary by the CID. The site and all controls shall be inspected by the contractor weekly; and the next day after each rain event. A written report by the contractor, made available upon request, is part of every inspection and should include:

- Inspection date
 - Inspection type (routine, pre-storm event, during rain event)
 - Name and title of inspector
 - Weather information (current conditions as well as time and amount of last recorded precipitation)
 - Brief description of project's status (e.g., percent complete) and/or current activities
 - Evidence of sediment discharges
 - Identification of plan deficiencies
 - Identification of sediment controls that require maintenance
 - Identification of missing or improperly installed sediment controls
 - Compliance status regarding the sequence of construction and stabilization requirements
 - Photographs
 - Monitoring/sampling
 - Maintenance and/or corrective action performed
 - Other inspection items as required by the General Permit for Stormwater Associated with Construction Activities (NPDES, MDE).
- Trenches for the construction of utilities is limited to three pipe lengths or that which can and shall be back-filled and stabilized by the end of each workday, whichever is shorter.
 - Any major changes or revisions to the plan or sequence of construction must be reviewed and approved by the HSCD prior to proceeding with construction. Minor revisions may be allowed by the CID per the list of HSCD-approved field changes.
 - Disturbance shall not occur outside the L.O.D. A project is to be sequenced so that grading activities begin on one grading unit (maximum acreage of 20 ac. per grading unit) at a time. Work may proceed to a subsequent grading unit when at least 50 percent of the disturbed area in the preceding grading unit has been stabilized and approved by the HSCD. Unless otherwise specified and approved by the HSCD, no more than 30 acres cumulatively may be disturbed at a given time.
 - Wash water from any equipment, vehicles, wheels, pavement, and other sources must be treated in a sediment basin or other approved washout structure.
 - Topsoil shall be stockpiled and preserved on-site for redistribution onto final grade.
 - All Silt Fence and Super Silt Fence shall be placed on-the-contour, and be imbricated at 25' minimum intervals, with lower ends curled uphill by 2' in elevation.
 - Stream channels must not be disturbed during the following restricted time periods (inclusive):
 - Use I and IP March 1 - June 15
 - Use III and IIIIP October 1 - April 30
 - Use IV March 1 - May 31
 - A copy of this plan, the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and associated permits shall be on-site and available when the site is active.

Rev. 7.2016

SEQUENCE OF CONSTRUCTION

- COORDINATE WITH CONTRACTOR FOR MD-SHA CONTRACT NO. H01495187, MD 108 AT CENTENNIAL LANE / BEAVERBROOK ROAD INTERSECTION IMPROVEMENTS.
- LAYOUT ALIGNMENT AT SITE. (1 DAY)
- REQUEST PRE-CONSTRUCTION MEETING ON-SITE WITH REPRESENTATIVE OF HOWARD COUNTY DPW CONSTRUCTION INSPECTION DIVISION. (1 DAY)
- IF NECESSARY, THE CONTRACTOR SHALL INSTALL SEDIMENT CONTROL DEVICES AT THE DIRECTION OF THE HOWARD DPW CID INSPECTOR.(1 DAY)
- THE CONTRACTOR SHALL MAINTAIN ACCESS TO THE ADJACENT PROPERTIES AND MAINTAIN TRAFFIC, THROUGH THE USE OF TRAFFIC SIGNS AND FLAGGING OPERATIONS, ON CENTENNIAL LANE AND MD 108 AT ALL TIMES.
- EXCAVATE TRENCH TO THE GRADE SHOWN ON THE PROFILE, INSTALL FIRE HYDRANTS AND LEAD PIPES AND BACKFILL AND STABILIZE TRENCH AND RESURFACE WITH BITUMINOUS PAVING AS APPROPRIATE (7 DAYS). AT THE END OF EACH WORK DAY, ALL VEGETATED AREAS DISTURBED DURING THE COURSE OF CONSTRUCTION SHALL BE TEMPORARILY STABILIZED IN ACCORDANCE WITH THE TEMPORARY SEEDING SUMMARY SHOWN ON SHEET 4 OF 4 AND THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, SECTION B-4-4.
- UPON COMPLETION OF PIPE INSTALLATION, PERMANENT PAVING AND INSPECTOR'S APPROVAL, PERMANENTLY STABILIZE ALL DISTURBED VEGETATED AREAS IN ACCORDANCE WITH STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION SHOWN ON SHEET 4 OF 4 AND THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, SECTION B-4-5. (1 DAY)
- CLEAN UP CONSTRUCTION SITE. (1 DAY)
- REMOVE SEDIMENT CONTROL DEVICES AFTER SEED/MULCH HAS COMPLETED VEGETATIVE ESTABLISHMENTS AND THE HOWARD COUNTY CID INSPECTOR APPROVES THE REMOVAL. (1 DAY)

<p>DETAIL E-1 SILT FENCE</p> <p>ELEVATION</p> <p>CROSS SECTION</p> <p>JOINING TWO ADJACENT SILT FENCE SECTIONS (TOP VIEW)</p>	<p>DETAIL E-1 SILT FENCE</p> <p>CONSTRUCTION SPECIFICATIONS</p> <ol style="list-style-type: none"> USE WOOD POSTS 1 1/2 X 1 1/2 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT. USE 3/8 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART. USE WOVEN SILT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND, BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE. 	<p>DETAIL E-9-3 CURB INLET PROTECTION</p> <p>ISOMETRIC</p> <p>SECTION A-A</p> <p>CONSTRUCTION SPECIFICATIONS</p> <ol style="list-style-type: none"> USE NOMINAL 2 INCH X 4 INCH LUMBER USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS. NAIL THE 2x4 WEIR TO 9 INCH LONG VERTICAL SPACERS (MAXIMUM 6 FEET APART). ATTACH A CONTINUOUS PIECE OF 3/4 INCH GALVANIZED HARDWARE CLOTH WITH A MINIMUM WIDTH OF 30 INCHES AND A MINIMUM LENGTH OF 4 FEET LONGER THAN THE THROAT OPENING, TO THE 2x4 WEIR, EXTENDING IT 2 FEET BEYOND THROAT ON EACH SIDE. PLACE A CONTINUOUS PIECE OF NONWOVEN GEOTEXTILE OF THE SAME DIMENSIONS AS THE HARDWARE CLOTH OVER THE INLET THROAT AND SECURELY ATTACH TO THE 2x4 WEIR. PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL TO 2x4 ANCHORS (MINIMUM 2 FEET LENGTH). EXTEND THE ANCHORS ACROSS THE INLET TOP AND HOLD IN PLACE BY SANDBAGS OR OTHER APPROVED ANCHORING METHOD. INSTALL END SPACERS A MINIMUM OF 1 FOOT BEYOND THE ENDS OF THE THROAT OPENING. FORM THE HARDWARE CLOTH AND THE GEOTEXTILE TO THE CONCRETE GUTTER AND FACE OF CURB TO SPAN THE INLET OPENING. COVER THE HARDWARE CLOTH AND GEOTEXTILE WITH CLEAN 3/4 TO 1 1/2 INCH STONE OR EQUIVALENT RECYCLED CONCRETE. AT NON-SUMP LOCATIONS, INSTALL A TEMPORARY SANDBAG OR ASPHALT BERM TO PREVENT INLET BYPASS. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.
<p>MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL</p> <p>U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION</p>		

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. 31363, Expiration Date 01/16/2022.

AS-BUILT
DATE 8/22/2022

KCI TECHNOLOGIES PROJECT NO.: 131802366.Z7

131802366.Z7 User: kci\jacob.k...
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131802366.Z7 User: kci\jacob.k...

<p>DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND</p> <p><i>[Signature]</i> 2/9/2021 DIRECTOR OF PUBLIC WORKS DATE</p> <p><i>[Signature]</i> 2-8-21 CHIEF, BUREAU OF UTILITIES DATE</p>		<p><i>[Signature]</i> 1-23-2021 CHIEF, BUREAU OF ENGINEERING DATE</p> <p><i>[Signature]</i> 1/21/2021 CHIEF, UTILITY DESIGN DIVISION DATE</p>	
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STATE OF MARYLAND
GUY W. WILSON
No. 31363
PROFESSIONAL ENGINEER
01/14/2021

DES: JR					
DRN: JR					
CHK: GW					
DATE: JAN 2021	BY	NO.	REVISION	DATE	

EROSION & SEDIMENT CONTROL NOTES AND DETAILS

600' SCALE MAP NO. 0030 BLOCK NO. 7

MD-108 FIRE HYDRANT RELOCATION

CAPITAL PROJECT No. W8602
CONTRACT No. 44-5163

ELECTION DISTRICT NO. 2 & 5 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 3 OF 3