
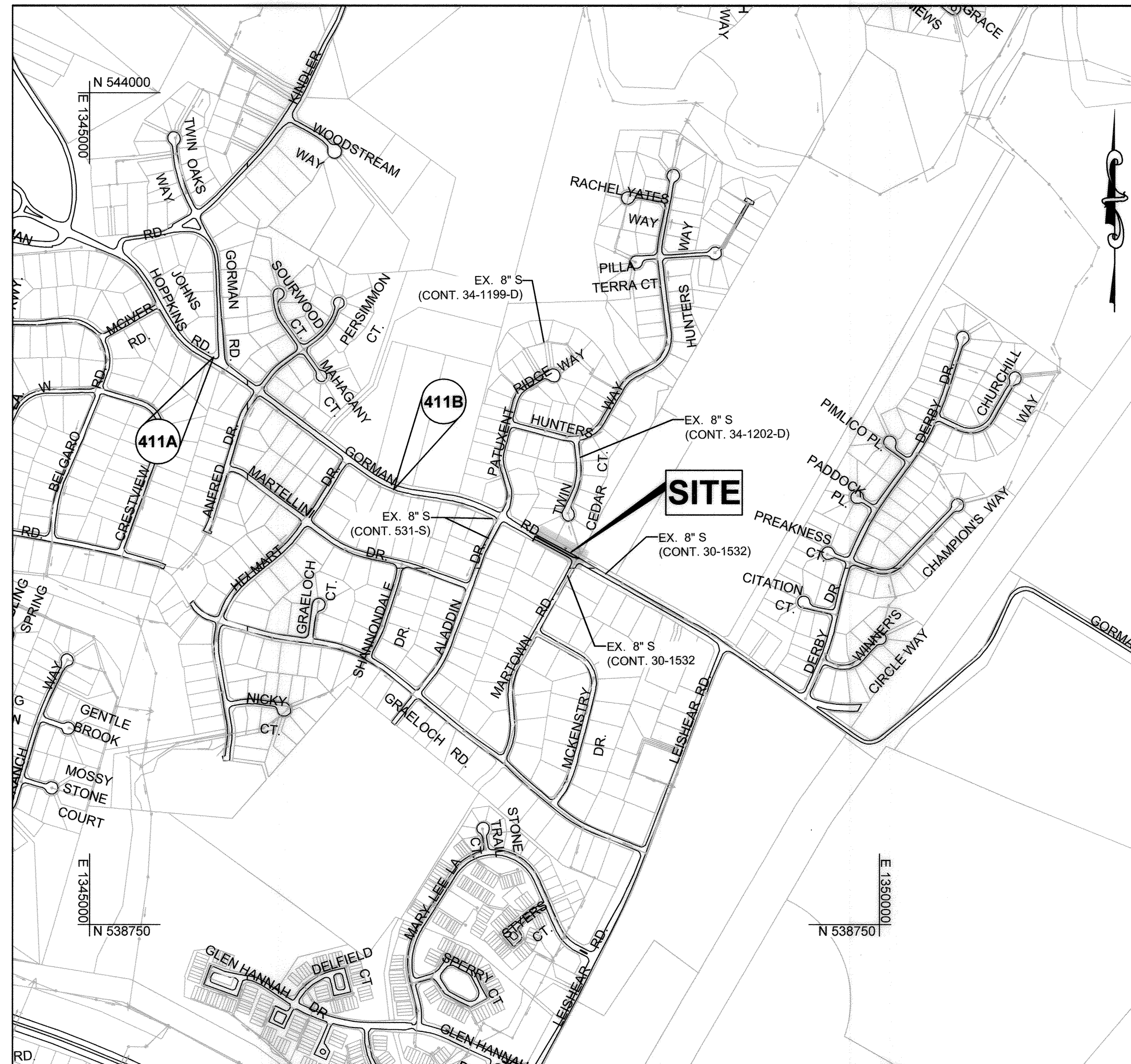


10489 GORMAN ROAD SEWER EXTENSION CAPITAL PROJECT NO. S6699 CONTRACT NO. 30-5103 HOWARD COUNTY, MARYLAND

GENERAL NOTES

- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES AND SERVICES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED ON 02/14/2019 BY KCI TECHNOLOGIES, INC.
- HORIZONTAL AND VERTICAL SURVEY CONTROLS:
THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM NAD 83/11 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 411A AND 411B. ALL VERTICAL CONTROLS ARE BASED ON NAVD 88. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE 411A AND 411B.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 12". CLEAR ALL POLES BY 5'-0" MINIMUM OR TUNNEL AS REQUIRED UNLESS OTHERWISE NOTED. THE OWNER HAS CONTACTED THE UTILITY COMPANIES AND HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS REQUIRED. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR THE BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONIES OWED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
- FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (LATEST EDITION). THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
- ALL EXISTING UTILITIES SHALL BE TEST PITTED / LOCATED AS NECESSARY AND IN ADVANCE OF THE PROPOSED CONSTRUCTION, IN ORDER TO PROPERLY MAKE ALL REQUIRED UTILITY CROSSINGS AND / OR CONNECTIONS. ANY DISCREPANCIES OR UTILITY CONFLICTS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER. WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL  AT THE LOCATION OF THE TEST PIT. A NOTE OR NOTES CONTAINING THE RESULTS OF THE TEST PIT OR PITS IS INCLUDED ON THE DRAWINGS OR IN THE SPECIFICATIONS. LOCATIONS OF OTHER EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN NOTED SHALL BE LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
AT&T.....1-800-252-1133
BG&E (CONSTRUCTION SERVICES).....410-637-8713
BG&E (EMERGENCY).....410-685-0123
BUREAU OF UTILITIES (DPW).....410-313-4900
COLONIAL PIPELINE CO.410-795-1390
MISS UTILITY1-800-257-7777
STATE HIGHWAY ADMINISTRATION410-531-5533
VERIZON1-800-743-0033 / 410-224-9210
- TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
- CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410)313-7450 AT LEAST FIVE WORKING DAYS BEFORE ANY OPEN CUT OF ANY COUNTY ROAD OR BORING/JACKING OPERATION IN COUNTY ROADS FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(a) OF THE HOWARD COUNTY CODE.
- THE CONTRACTOR SHALL PROVIDE SURVEY CONSTRUCTION STAKEOUT FOR ALL NECESSARY LINES. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY LINES, GRADES AND ELEVATIONS, AND CUT SHEETS SHALL BE PREPARED BASED ON THE LINES AND GRADES SHOWN ON THE CONTRACT DRAWINGS.
- SPOIL FROM TRENCHING OPERATIONS SHALL BE PLACED ON THE UPHILL SIDE OF THE TRENCH.
- THE CONTRACTOR SHALL USE THE AREA DESIGNATED ON THE PLANS AS THE STAGING / STORAGE AREA. THE WORK SHALL BE CONDUCTED UNDER STRICT ADHERENCE TO SECTION 308 - EROSION AND SEDIMENT CONTROL OF THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV. PRECONSTRUCTION CONTOURS SHALL BE RESTORED ONCE THE UTILITY HAS BEEN INSTALLED.



VICINITY MAP

SCALE: 1" = 600'





























INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	SEWER PLAN AND PROFILE
3	EROSION AND SEDIMENT CONTROL NOTES AND DETAILS
4	EROSION AND SEDIMENT CONTROL NOTES

QUANTITIES






ITEM	UNIT	ESTIMATE	AS-BUILT	MANUFACTURER
8" PVC SDR35 SEWER	L.F.	312	304	DIAMOND PIPE
4' DIA PRECAST MANHOLE	EA.	1	2	CONTRACTORS PRECAST
4" PVC SHC	L.F.	50	36	DIAMOND PRECAST
10" PVC SDR-35 INSIDE DROP	L.F.	5	5	NORTH AMERICAN

NAME OF UTILITY CONTRACTOR: UTILITIES UNLIMITED	
CHECKBOX	
AS-BUILT DATE	FEBRUARY 2020
SURVEY AND DRAFTING DIVISION	

LEGEND

EXISTING	
	DECIDUOUS TREE
	CONIFEROUS TREE
	BUSH
	HEDGE
	UTILITY POLE
	GUY
	LIGHT POST
	MAIL BOX
	TELECOM PEDESTAL
	WATER WELL
	WATER METER / CURB STOP
	SEWER CLEAN-OUT
	SIGN
	TRAVERSE POINT
	FIRE HYDRANT
	WATER VALVE
	SEWER MANHOLE
	STORM DRAIN MANHOLE
	WATER MAIN
	SEWER MAIN
	STORM DRAIN
	OVERHEAD WIRE
	UNDERGROUND ELECTRIC
	CABLE TV
	FENCE
	PROPERTY BOUNDARY
	MAJOR CONTOUR
	MINOR CONTOUR

PROPOSED

	SEWER MANHOLE		SEWER MAIN
	SHC WITH CLEAN-OUT		FLOW ARROW
	SOIL BORING		

PURPOSE STATEMENT:

IN RESPONSE TO PROPERTY OWNER REQUEST, CONTRACT NO. 30-5103 WILL PROVIDE AN 8" SEWER MAIN INCLUDING A 4" SEWER HOUSE CONNECTION TO SERVE 10489 GORMAN ROAD.

SANITARY SEWER MAIN NOTES

- ALL SEWER MAINS SHALL BE P.V.C. UNLESS OTHERWISE NOTED.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- FORCE MAINS SHALL BE D.I.P. ONLY.
- MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVER, STANDARD DETAIL G5.52. WHERE WATERTIGHT MANHOLE FRAMES AND COVERS ARE USED, SET TOP FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT THE CELLAR CANNOT BE SERVED.

TYPE OF BUILDING:	RESIDENTIAL
NUMBER OF PARCELS:	1
NUMBER OF SEWER HOUSE CONNECTIONS:	1
PRESSURE ZONE:	N/A
TEST GRADIENT:	N/A
TEST PRESSURE:	N/A
DRAINAGE AREA:	MIDDLE PATUXENT
TREATMENT PLANT:	LPWRP

CONTROL NOTE	
THE HORIZONTAL AND VERTICAL DATUM SHOWN HEREON ARE BASED ON GPS OBSERVATIONS FROM HOWARD COUNTY GEODETIC SURVEY CONTROL POINTS.	
NAD 1983 / 2011 (HORIZONTAL)	
NAVD 1988 (VERTICAL)	
411A N 542333.82	411B N 541494.29
E 1345783.95	E 1346924.86
ELEV. 400.24	ELEV. 402.05

OWNER'S/DEVELOPER'S CERTIFICATION

"I/WE CERTIFY THAT ALL CLEARING, GRADING, CONSTRUCTION OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT PRIOR TO THE BEGINNING OF THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE."

Zachary C. Knight 7-6-2019
OWNERS/DEVELOPERS SIGNATURE DATE

ZACHARY C. KNIGHT
PRINTED NAME & TITLE

DESIGN CERTIFICATION

"I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

Guhua Wang 07/11/2019
DESIGNERS SIGNATURE DATE

GUIHUA WANG
PRINTED NAME
MD REGISTRATION NO. 31363
P.E./L.S. OR R.L.A. (CIRCLE ONE)

NOTE:

THE WORK SITE SHALL BE CONTROLLED IN ACCORDANCE WITH THE HOWARD SOIL CONSERVATION DISTRICT STANDARD EROSION AND SEDIMENT CONTROL PLAN FOR MINOR EARTH DISTURBANCE, AND ADHERE TO THE LIMITATIONS, CONDITIONS AND REQUIREMENTS THEREIN. A COPY OF THE STANDARD PLAN SHALL BE ON-SITE FOR REFERENCE DURING WORKING HOURS.

AS-BUILT REPLACEMENT SHEET

KCI TECHNOLOGIES PROJECT NO. 131802366.14

Mar 05, 2020 - 2:38pm User: kavin.jackson M:\2019\131802366.14\Drawings\AS-Built\CAD Files\01_11 Title Sheet_ASBuilt.dwg

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND	
<i>[Signature]</i> DIRECTOR OF PUBLIC WORKS	<i>[Signature]</i> 7/16/2019 CHIEF, BUREAU OF ENGINEERING
<i>[Signature]</i> CHIEF, BUREAU OF UTILITIES	<i>[Signature]</i> 7-17-19 CHIEF, UTILITY DESIGN DIVISION

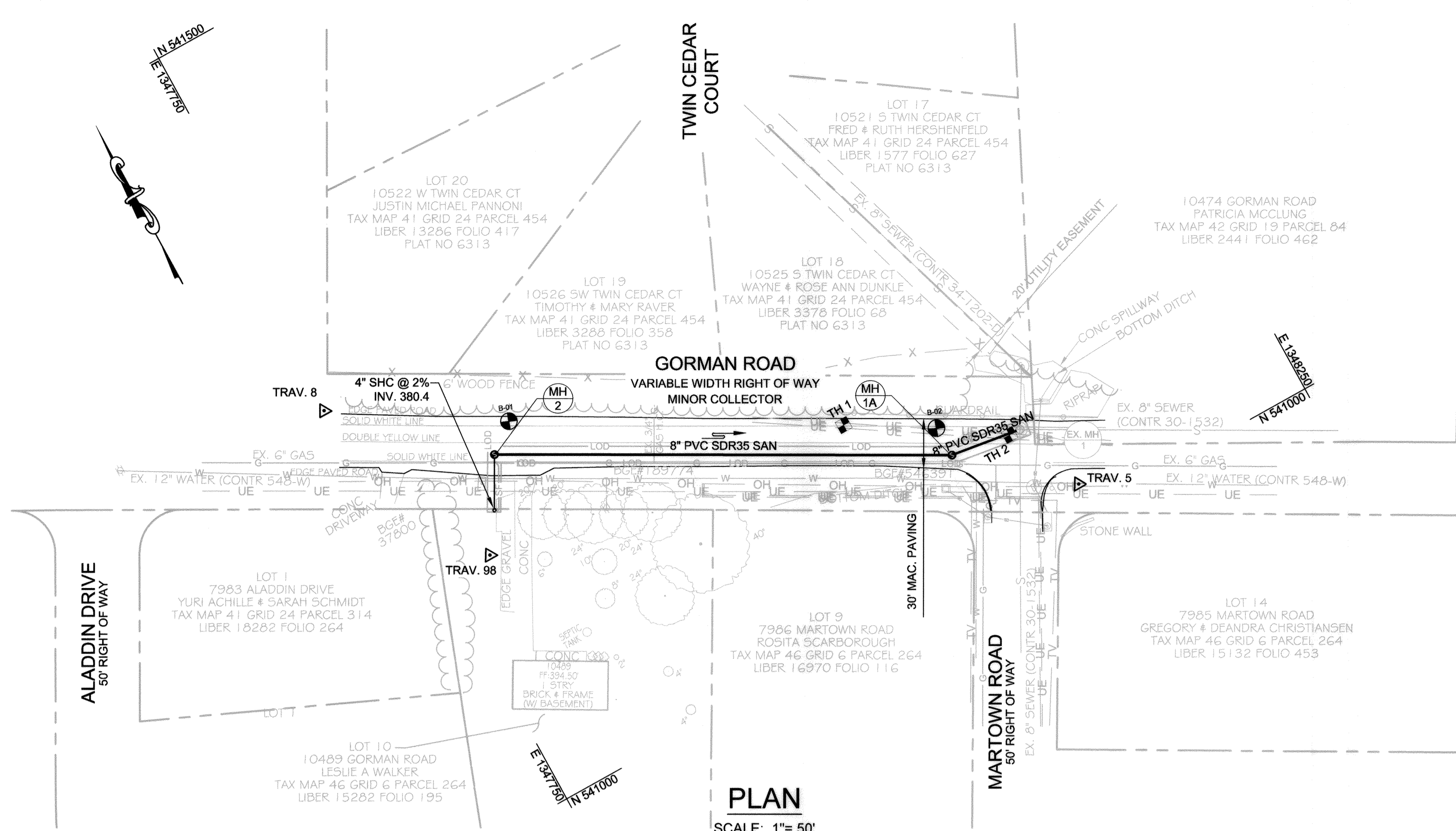
KCI TECHNOLOGIES
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CONSTRUCTION MANAGERS
936 Ridgebrook Road
Sparks, MD 21152
Phone: (410) 316-7800
Fax: (410) 316-7817
www.kci.com

STATE OF MARYLAND
[Professional Seal]
GUHUA WANG
NO. 31363
PROFESSIONAL ENGINEER
03/05/2020

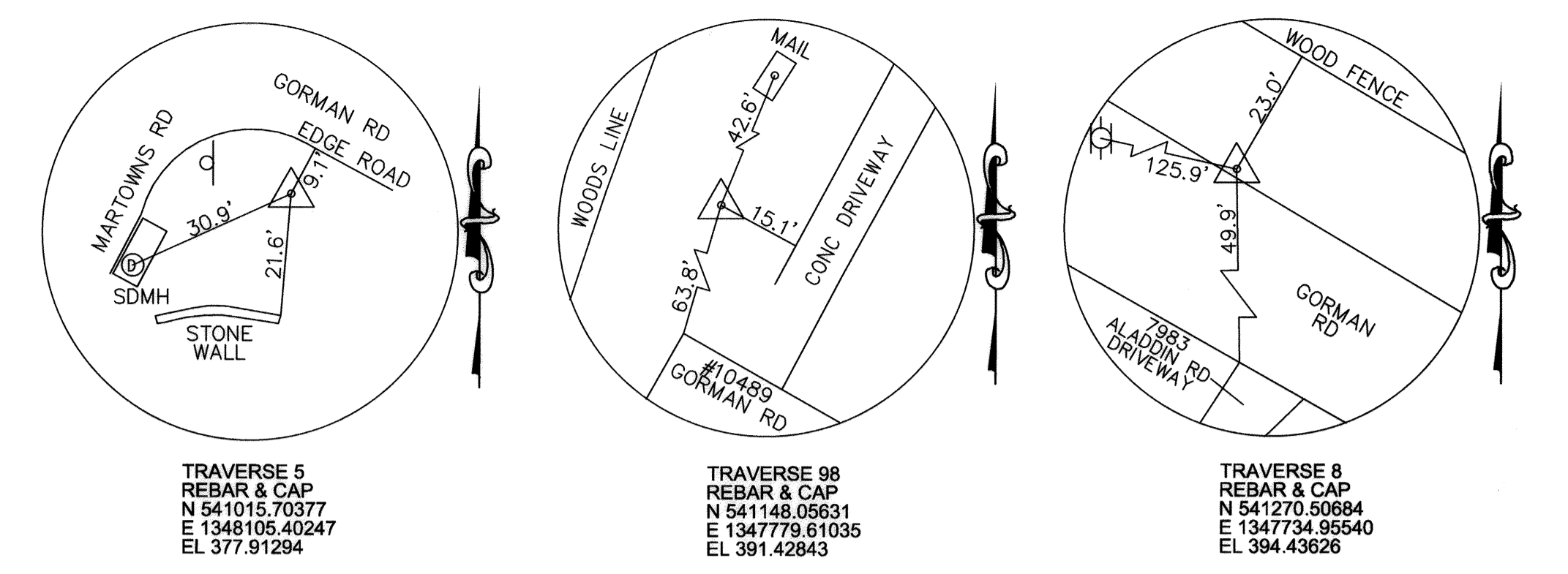
DES: KFJ	
DRN: KFJ	
CHK: JR	
DATE: MARCH 2020	
BY: KFJ	AS-BUILT, RECORD DRAWING
NO.	REVISION
	DATE: 600' SCALE MAP NO. 46

TITLE SHEET	
DATE: 600' SCALE MAP NO. 46	BLOCK NO. 6

10489 GORMAN ROAD SEWER EXTENSION	
CAPITAL PROJECT No. S6699 CONTRACT No. 30-5103	
ELECTION DISTRICT NO. 6	HOWARD COUNTY, MARYLAND
SCALE AS SHOWN	SHEET 1 OF 4



PLAN
SCALE: 1"= 50'



STRUCTURE STAKE-OUT SCHEDULE

DESCRIPTION	NORTHING	EASTING
2	541198.83	1347810.90
1A	541087.06	1348048.02
EX. MH 1	541080.77	1348090.64

SOIL BORING SCHEDULE

DESCRIPTION	NORTHING	EASTING	ELEVATION
B-01	541211.86	1347827.91	390.70
B-02	541085.38	1348047.57	380.36

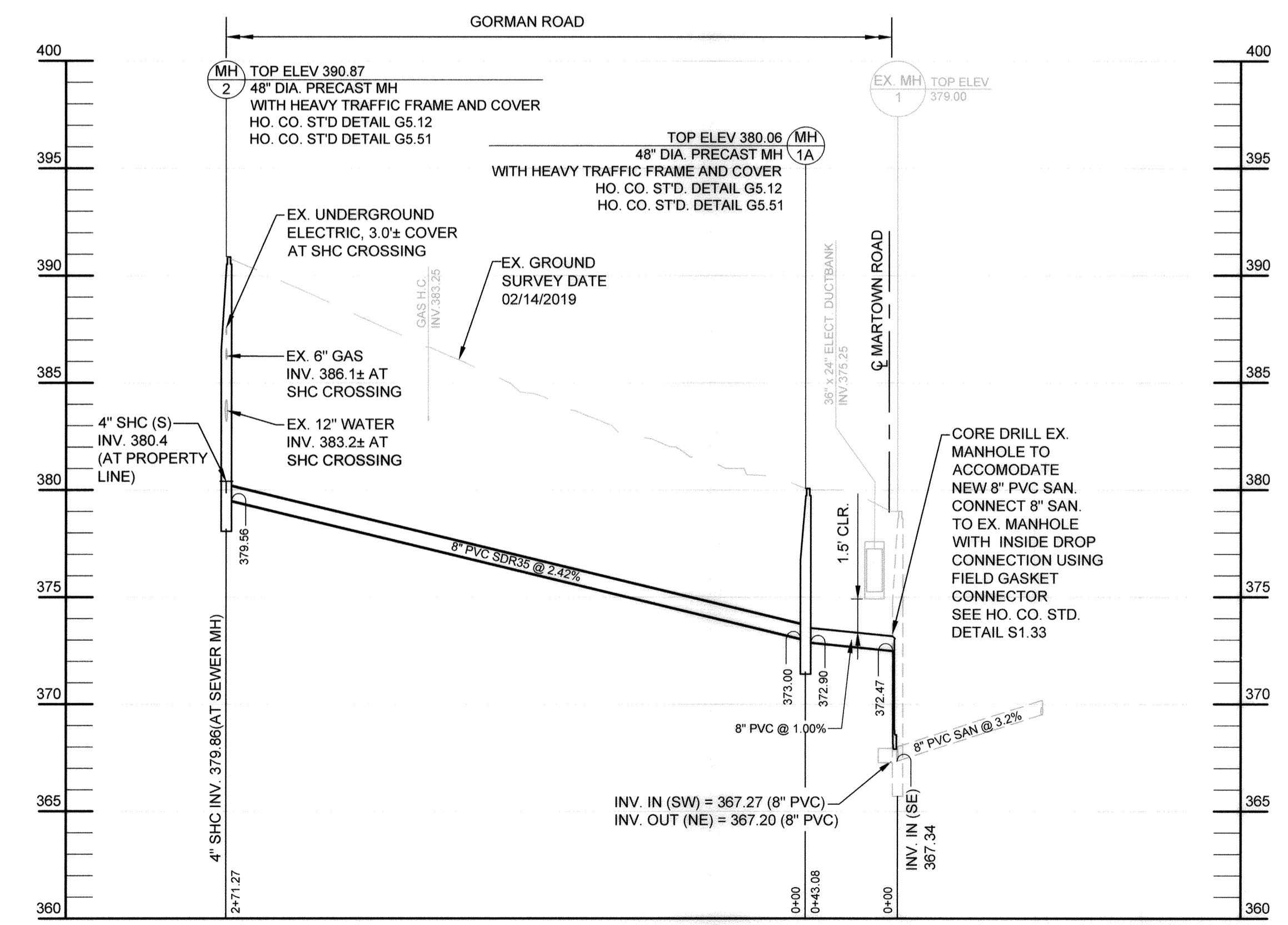
SEWER HOUSE CONNECTION SCHEDULE

SERVICE ADDRESS	BUILDING TYPE	SHC TYPE	PROP. SHC SIZE	SHC SLOPE	MINIMUM CELLAR ELEV. (FT.)	APPROX. LENGTH OF PROP. SHC (LF.)
10489 GORMAN ROAD	RESIDENTIAL	SHC	4"	2%	385.50	50'

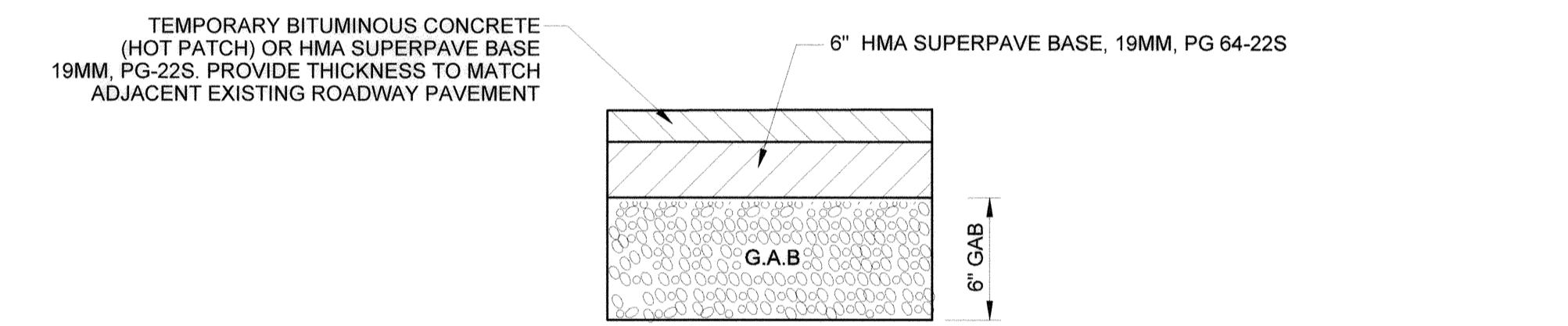
STANDARD DETAILS:
S-2.11 SEWER HOUSE CONNECTION
S-2.22 SEWER HOUSE CONNECTION CLEANOUT IN VEGETATED AREA

GORMAN ROAD SEWER HOUSE CONNECTION AS-BUILT LOCATION TABLE

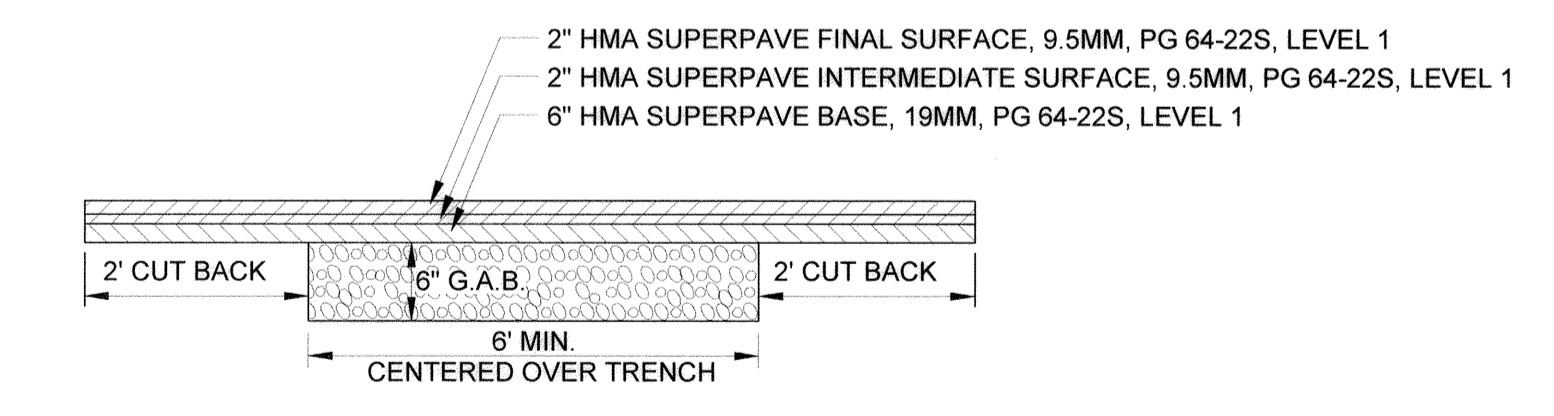
ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
10489 GORMAN ROAD	MH 1A TO EX. MH 1	CO TO BGE POLE #37800 = 44'



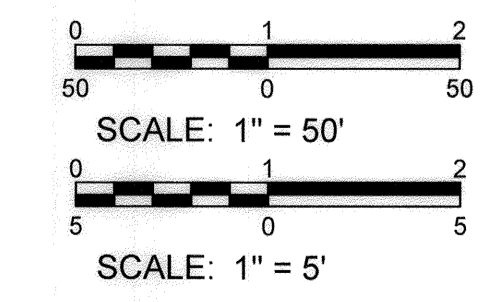
PROFILE
SCALE: HORIZ. 1"=50'
VERT. 1"=5'



DETAIL 1 - TEMPORARY UTILITY TRENCH PAVING RESTORATION
NOT TO SCALE
FOR TRENCH DETAIL REFER TO HOWARD COUNTY STANDARD DETAIL G-2.12



DETAIL 2 - PERMANENT UTILITY TRENCH PAVING RESTORATION
NOT TO SCALE
REFER TO HOWARD COUNTY STANDARD DETAIL G-4.01 FOR ADDITIONAL NOTES
FOR TRENCH DETAIL REFER TO HOWARD COUNTY STANDARD DETAIL G-2.12



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 01/16/2020.

KCI TECHNOLOGIES
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PLANNERS
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Fax: (410) 316-7817
www.kci.com

DES: Kfj			
DRN: Kfj			
CHK: JR			
DATE: MARCH 2020	BY: NO.	AS-BUILT, RECORD DRAWING	3/5/20
	REVISION		

SEWER PLAN AND PROFILE

600' SCALE MAP NO. 46
BLOCK NO. 6

10489 GORMAN ROAD SEWER EXTENSION

CAPITAL PROJECT No. S6699
CONTRACT No. 30-5103
ELECTION DISTRICT NO. 6
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 2 OF 4

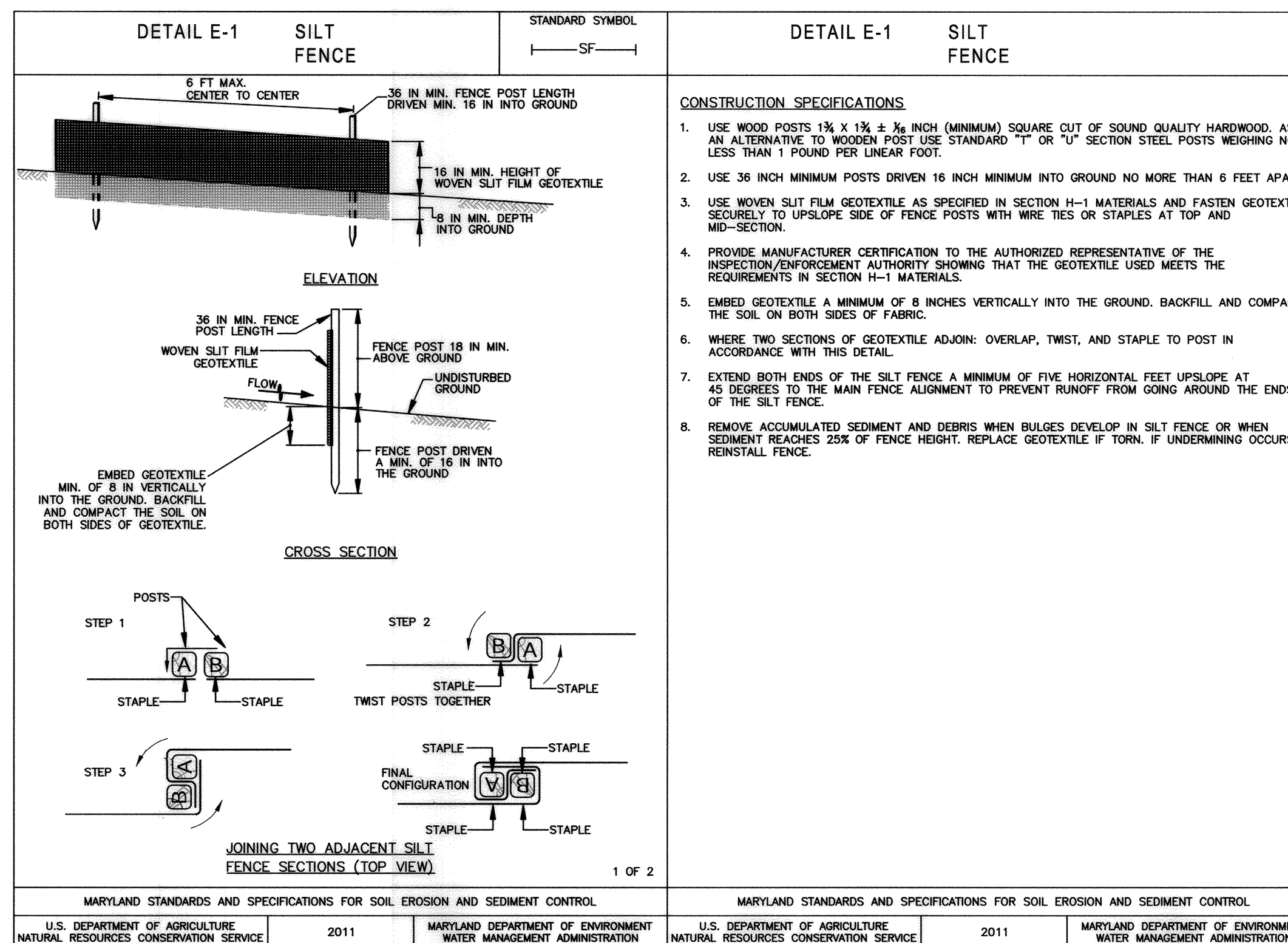
**HOWARD SOIL CONSERVATION DISTRICT (HSCD)
STANDARD SEDIMENT CONTROL NOTES**

- 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:	0.05	Acres
Area Disturbed:	0.032	Acres
Area to be roofed or paved:	0.031	Acres
Area to be vegetatively stabilized:	0.001	Acres
Total Cut:	267	Cu. Yds.
Total Fill:	267	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, 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.



SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMIT.
- LAYOUT ALIGNMENT AT SITE. (2 DAYS)
- 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)
- EXCAVATE TRENCH TO THE GRADE SPECIFIED ON THE PROFILE, INSTALL SEWER MAIN AND BACKFILL AND STABILIZE TRENCH AND RESURFACE WITH BITUMINOUS PAVING AS APPROPRIATE (30 DAYS). TRENCHES FOR THE CONSTRUCTION OF UTILITIES ARE LIMITED TO 3 LENGTHS OF PIPE OR THAT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER. 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. AT THE END OF EACH WORKING DAY ALL DISTURBED PAVING AREAS WITHIN THE EXISTING ROAD SHALL BE REPLACED WITH PERMANENT SUBGRADE AND BASE ASPHALT, THEN TEMPORARILY PATCHED, SEE TEMPORARY PAVING DETAIL ON SHEET 2 OF 4.
- UPON COMPLETION OF PIPE INSTALLATION 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)

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 01/16/2020.

AS-BUILT
DATE 03-05-2020

KCI TECHNOLOGIES PROJECT No. - 131802366-14

July 11, 2019 - 10:30am User: Kevin Jackson
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DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS DATE 7/12/19
CHIEF, BUREAU OF UTILITIES DATE 2-12-19

CHIEF, BUREAU OF ENGINEERING DATE 7/16/2019
CHIEF, UTILITY DESIGN DIVISION DATE 7/16/19

ENGINEERS
PLANNERS
SCIENTISTS
CONSTRUCTION MANAGERS

KCI
TECHNOLOGIES

936 Ridgeway Road
Sparks, MD 21152
PHONE: (410) 316-7800
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www.kci.com

STATE OF MARYLAND
GUTHRIE WALKER
PROFESSIONAL ENGINEER
No. 31363
07/11/2019

DES: Kfj			
DRN: Kfj			
CHK: JR			
DATE: JULY 2019	BY	NO.	REVISION

EROSION & SEDIMENT CONTROL NOTES AND DETAILS

600' SCALE MAP NO. 48 BLOCK NO. 6

10489 GORMAN ROAD
SEWER EXTENSION

CAPITAL PROJECT No. S6699
CONTRACT No. 30-5103

ELECTION DISTRICT NO. 6 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 3 OF 4

B-4-2 STANDARDS AND SPECIFICATIONS

FOR

SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

Definition

The process of preparing the soils to sustain adequate vegetative stabilization.

Purpose

To provide a suitable soil medium for vegetative growth.

Conditions Where Practice Applies

Where vegetative stabilization is to be established.

Criteria

- A. Soil Preparation
1. Temporary Stabilization
a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment...

B-4-3 STANDARDS AND SPECIFICATIONS

FOR

SEEDING AND MULCHING

Definition

The application of seed and mulch to establish vegetative cover.

Purpose

To protect disturbed soils from erosion during and at the end of construction.

Conditions Where Practice Applies

To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.

Criteria

- A. Seeding
1. Specifications
a. All seed must meet the requirements of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory...

- c. Wood cellulose fiber used as mulch must be applied at a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to attain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
3. Anchoring
a. Perform mulch anchoring immediately following application of mulch to minimize loss by wind or water...

B-4-4 STANDARDS AND SPECIFICATIONS

FOR

TEMPORARY STABILIZATION

Definition

To stabilize disturbed soils with vegetation for up to 6 months.

Purpose

To use fast growing vegetation that provides cover on disturbed soils.

Conditions Where Practice Applies

Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.

Criteria

- 1. Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths.
2. For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding.

Temporary Seeding Summary

Table with columns: No., Species, Application Rate (lb/ac), Seeding Dates, Seeding Depths, Fertilizer Rate (10-20-20), Lime Rate. Includes rows for ANNUAL RYEGRASS, BARLEY, OATS, FOXTAIL, and MILLET.

NOTES:

- 1/ Seeding rates for the warm-season grasses are in pounds of Pure Live Seed (PLS). Actual planting rates shall be adjusted to reflect percent seed germination and purity, as tested.
2/ For sandy soils, plant seeds at twice the depth listed above.
3/ The planting dates listed are averages for each Zone and may require adjustment to reflect local conditions, especially near the boundaries of the zone.

B-4-5 STANDARDS AND SPECIFICATIONS

FOR

PERMANENT STABILIZATION

Definition

To stabilize disturbed soils with permanent vegetation.

Purpose

To use long-lived perennial grasses and legumes to establish permanent ground cover on disturbed soils.

Conditions Where Practice Applies

Exposed soils where ground cover is needed for 6 months or more.

Criteria

- A. Seed Mixtures
1. General Use
a. Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardness Zone (from Figure B.3) and based on the site condition or purpose found in Table B.2. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary...

AS-BUILT
DATE 03-05-2020

- c. For sites having disturbed area over 5 acres, use and show the rates recommended by the soil testing agency.
d. For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 1/2 pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary.
2. Turfgrass Mixtures
a. Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.

Notes:
Select turfgrass varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland"

Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line

Ideal Times of Seeding for Turf Grass Mixtures

- Western MD: March 15 to June 1, August 1 to October 1 (Hardiness Zones: 5b, 6a)
Central MD: March 1 to May 15, August 15 to October 15 (Hardiness Zone: 6b)
Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15 (Hardiness Zones: 7a, 7b)

- d. Till areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones and debris over 1 1/2 inches in diameter. The resulting seedbed must be in such condition that future mowing of grasses will pose no difficulty.
e. If soil moisture is deficient, supply new seedlings with adequate water for plant growth (1/2 to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedlings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

Permanent Seeding Summary

Table with columns: No., Species, Application Rate (lb/ac), Seeding Dates, Seeding Depths, Fertilizer Rate (10-20-20) (N, P2O5, K2O), Lime Rate. Includes rows for TALL FESCUE, PERENNIAL RYEGRASS, WHITE CLOVER.

B. Sod: To provide quick cover on disturbed areas (2:1 grade or flatter).

1. General Specifications

- a. Class of turfgrass sod must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector.
b. Sod must be machine cut at a uniform soil thickness of 3/4 inch, plus or minus 1/8 inch, at the time of cutting. Measurement for thickness must exclude top growth and thatch. Broken pads and torn or uneven ends will not be acceptable.

2. Sod Installation

- a. During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.
b. Lay the first row of sod in a straight line with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.

3. Sod Maintenance

- a. In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day to prevent wilting.
b. After the first week, sod watering is required as necessary to maintain adequate moisture content.

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July 11, 2019 - 10:36am User: Kevin Jackson... M:\2019\131802366\Drawings\SES of Erosion Sed. Ctrl Notes.dwg

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 01/16/2020.

KCI TECHNOLOGIES logo and contact information: 936 Ridgebrook Road, Sparks, MD 21152, Phone: (410) 316-7800, Fax: (410) 316-7817, www.kci.com

Professional Engineer Seal for Kevin Jackson, License No. 31363, State of Maryland, expires 01/16/2020.

Table with columns: DES, DRN, CHK, DATE, BY, NO., REVISION, DATE. Includes entries for KJ, JR, and July 2019.

EROSION & SEDIMENT CONTROL NOTES
600' SCALE MAP NO. 46, BLOCK NO. 6

10489 GORMAN ROAD SEWER EXTENSION
CAPITAL PROJECT No. S6699 CONTRACT No. 30-5103
ELECTION DISTRICT NO. 6 HOWARD COUNTY, MARYLAND
SCALE AS SHOWN SHEET 4 of 4