

PUBLIC WATER AND SEWER CONSTRUCTION PLANS TREYBURN PHASES 1 AND 2

2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT No. 24-3867-D

BENCH MARKS (NAD83)

HO. CO. No. 17EA ELEV. 373.36
 STAMPED BRASS DISK SET ON
 TOP OF CONCRETE (3' DEEP) COLUMN.
 LOCATED IN THE ISLAND IN FRONT OF MOUNT
 HEBRON HIGH SCHOOL, 33.7' SOUTH OF THE
 FLAG POLE AND 21.3' NORTH OF THE CURB
 AND 49.7' WEST OF A 15' WHITE PINE.
 N 594,357.7264' E 1,357,519.3741'

HO. CO. No. 17EB ELEV. 348.10
 STAMPED BRASS DISK SET ON
 TOP OF CONCRETE (3' DEEP) CYLINDRICAL BASE
 LOCATED 224' WEST OF THE ENTRANCE TO
 BETHANY FIRE STATION, 19' SOUTH OF THE
 CENTERLINE OF OLD FREDERICK ROAD AND
 38.6' EAST OF G&E POLE #474631.
 N 593,814.0053' E 1,335,731.8846'

GENERAL NOTES

PART 1 - GENERAL

- APPROXIMATE LOCATION OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SUPPLY. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.
- ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATA.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL POLES BY 2'-0" MINIMUM OR TUNNEL AS REQUIRED. THE OWNER HAS CONTACTED THE UTILITY COMPANIES AND HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON THE DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONEY 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 DETAIL FOR CONSTRUCTION (LATEST EDITION). THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
- 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. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG 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:
 - STATE HIGHWAY ADMINISTRATION.....410-531-5533
 - BALTIMORE GAS & ELECTRIC CO.410-850-4620
 - BALTIMORE GAS & ELECTRIC CO.410-787-9068
 - MISS UTILITY.....1-800-257-7777
 - COLONIAL PIPELINE CO.....410-795-1390
 - HOWARD CO. DEPT. OF PUBLIC WORKS.....410-313-4900
 - BUREAU OF UTILITIES.....1-800-446-5266
 - VERIZON.....1-800-446-5266
- TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO 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.
- PLACE REGULATION "MEN WORKING" AND WARNING SIGNS AS REQUIRED TO COMPLY WITH MARYLAND STATE HIGHWAY ADMINISTRATION MANUAL OF TRAFFIC CONTROL FOR HIGHWAY MAINTENANCE OPERATIONS.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410) 313-2450 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(g) OF THE HOWARD COUNTY CODE.

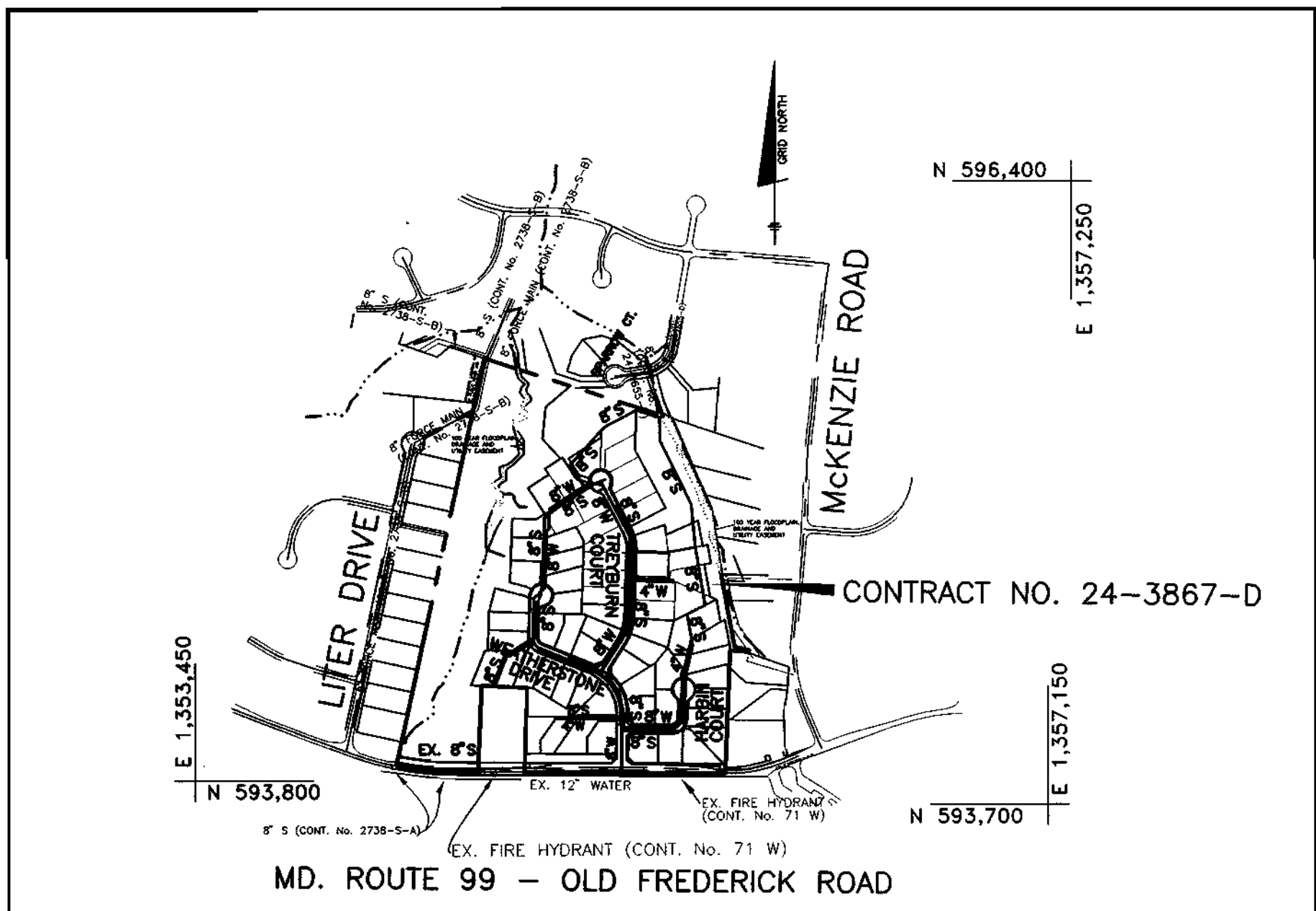
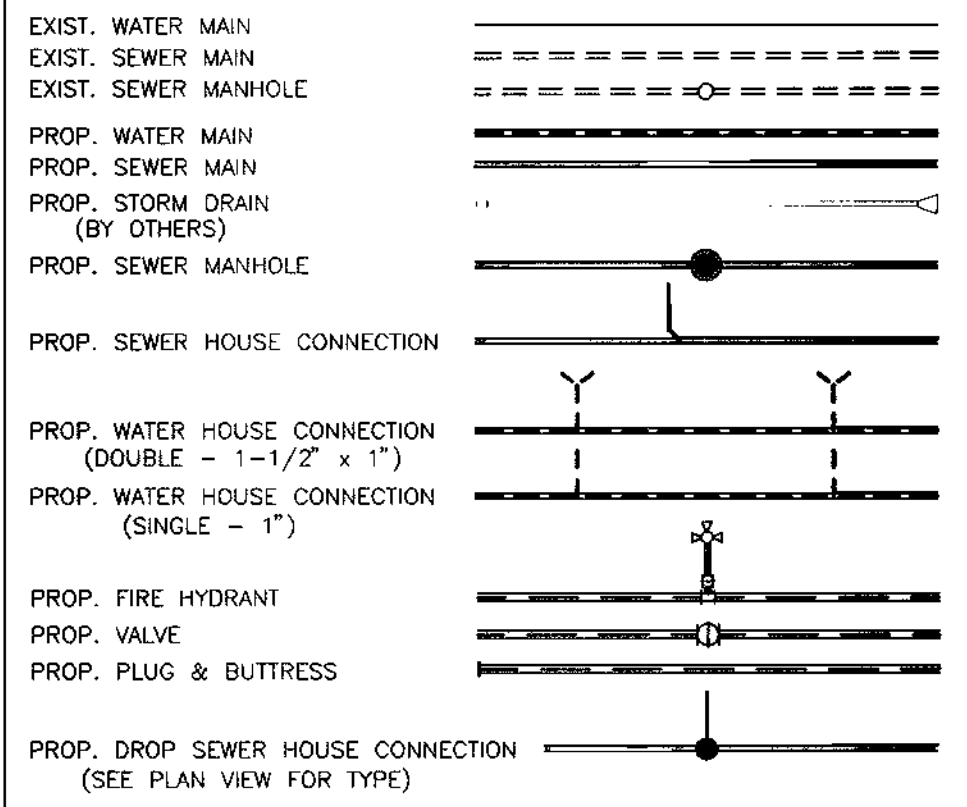
PART 2 - WATER

- ALL WATER MAINS TO BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3-1/2" COVER UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
- FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE RESTRAINED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS. SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND 1005 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING UNLESS OTHERWISE NOTED ON PLANS OR IN SPECIFICATIONS. ALL WATER HOUSE CONNECTIONS SHALL BE 1" CONNECTION WITH A 3/4" METER.

PART 3 - SEWER

- ALL SEWER MAINS SHALL BE DIP OR P.V.C. UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2' - 0" OF EXTERIOR MANHOLE WALL.
- 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 COVERS, STANDARD DETAIL 05.52. WHERE WATERTIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1" - ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.

LEGEND



WATER AND SEWER COUNTY CODE		TYPE OF BUILDING: SINGLE FAMILY DETACHED	
WATER CODE: H03	SEWER CODE: 5758000	NUMBER OF LOTS: PHASE 1: 44 BUILDABLE PHASE 2: 24 FUTURE LOTS	NUMBER OF SHC'S: 24 FUTURE SHC'S
TEST GRADIENT: 780		NUMBER OF WHC'S: 44	24 FUTURE WHC'S
		DRAINAGE AREA: PATAPSCO	
		TREATMENT PLANT: PATAPSCO WASTEWATER TREATMENT PLANT (via Chamberlea & Route 108 waste water pumping station)	

VICINITY MAP
SCALE: 1" = 600'

ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUF./SUPPLIER
8" WATER	2898 L.F.			
6" WATER	92 L.F.			
12" x 8" TS&V	1 EA.			
4" WATER	701 L.F.			
1 1/2" DRAIN	2 EA.			
FIRE HYDRANTS	6 EA.			
1" WHC	859 L.F.			
1-1/2" WHC	345 L.F.			
8" SEWER PVC	3045 L.F.			
8" SEWER D.I.P.	2173 L.F.			
MANHOLES	32 EA.			
4" SHC	1400 L.F.			
4" DHC	25 L.F.			

NAME OF UTILITY CONTRACTOR:
 SURVEY AND DRAFTING DIVISION AS-BUILT DATE:

HOWARD SOIL CONSERVATION DISTRICT:
 REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

J. L. Weinfeld 1/3/01
 NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John Robertson 1/3/01
 HOWARD SOIL CONSERVATION DISTRICT DATE

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY STANDARD SPECIFICATIONS AND AS PER ROAD CONSTRUCTION PLANS F-01-10

SHEET INDEX	
NO.	DESCRIPTION
1	TITLE SHEET
2-3	PLAN OF WATER AND SEWER MAINS
4	PROFILES OF WATER AND SEWER MAINS

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

John Robertson 1-2-01
 CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND

John Robertson 1/2/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

BENCHMARK ENGINEERING, INC.
 ENGINEERS - LAND SURVEYORS - PLANNERS

2490 BALTIMORE NATIONAL PIKE • SUITE 410 • ELICOTT CITY, MARYLAND 21043
 PHONE: 410-485-6105 FAX: 410-485-6644

DES: JMC
 DRN: JMC
 CHK: DAM
 DATE: 12/00

BY	NO.	REVISIONS	DATE

TITLE PAGE

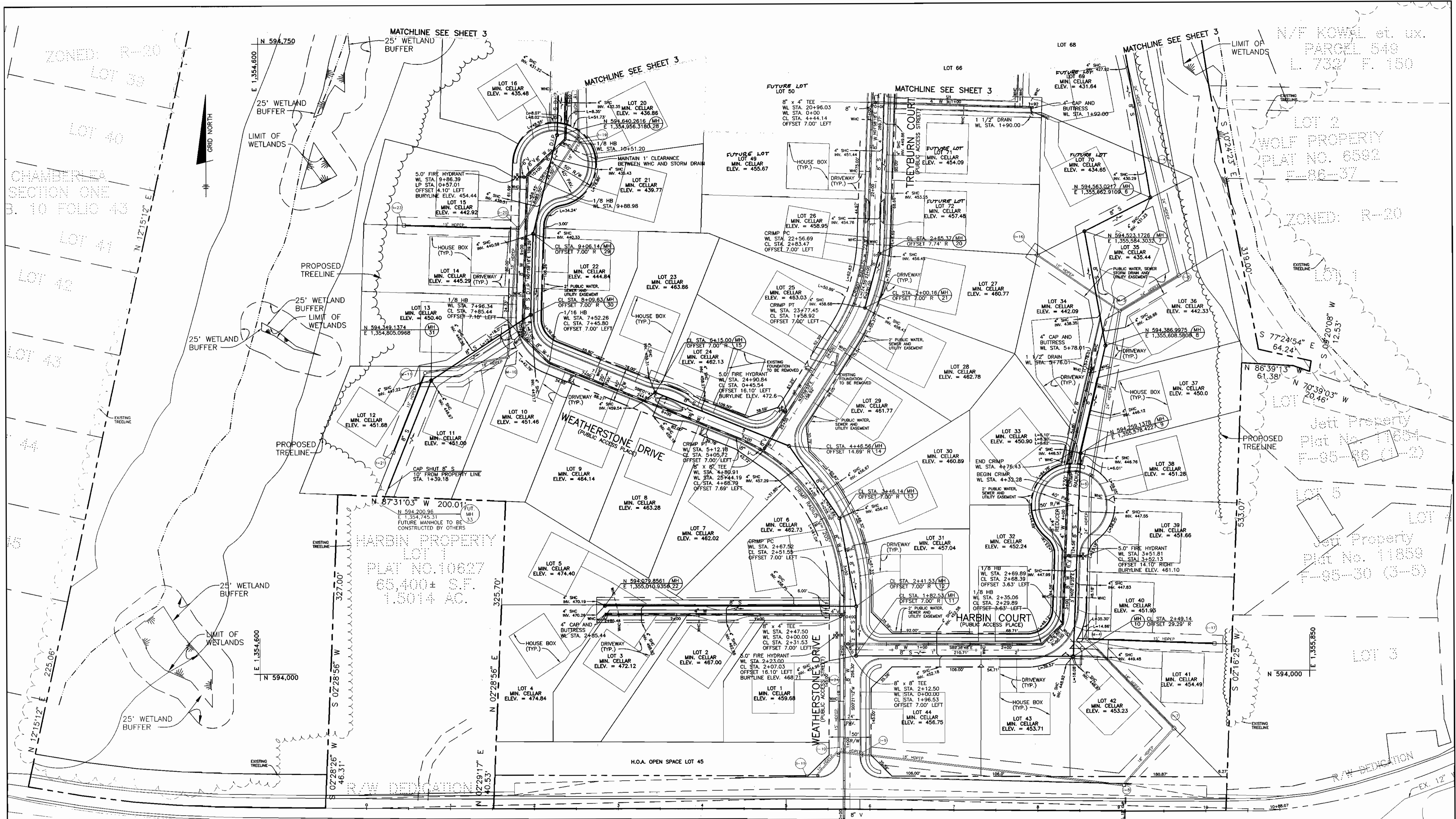
600 SCALE MAP NO. 17 BLOCK 9

TREYBURN
 PHASE 1, LOTS 1-48 AND
 NON-BUILDABLE PARCELS A-C (FUTURE LOTS)
 AND FUTURE PHASE 2, LOTS 49-72 (F-01-76)
 ELECTION DISTRICT NO. 2

SCALE:
 AS SHOWN

SHEET NO.
 1 OF 8

CONTRACT No. 24-3867-D



EX. 12" WATER (CONT. No. 71 W) EX. FIRE HYDRANT (CONT. No. 71 W)
 8" S (CONT. No. 2738-S-A) EX. 12" WATER (CONT. No. 71 W) EX. FIRE HYDRANT (CONT. No. 71 W)

MD ROUTE 99 - OLD FREDERICK ROAD
 (EX. MINOR ARTERIAL)

NOTE: WATER CONNECTION SHALL BE MADE BY OPEN CUTTING MS ROUTE 99. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING THE ROADWAY

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND

BENCHMARK
 ENGINEERS, INC.

DES: JMC
 DRN: JMC
 CHK: DAM
 DATE: 8/00

BY	NO.	REVISIONS	DATE

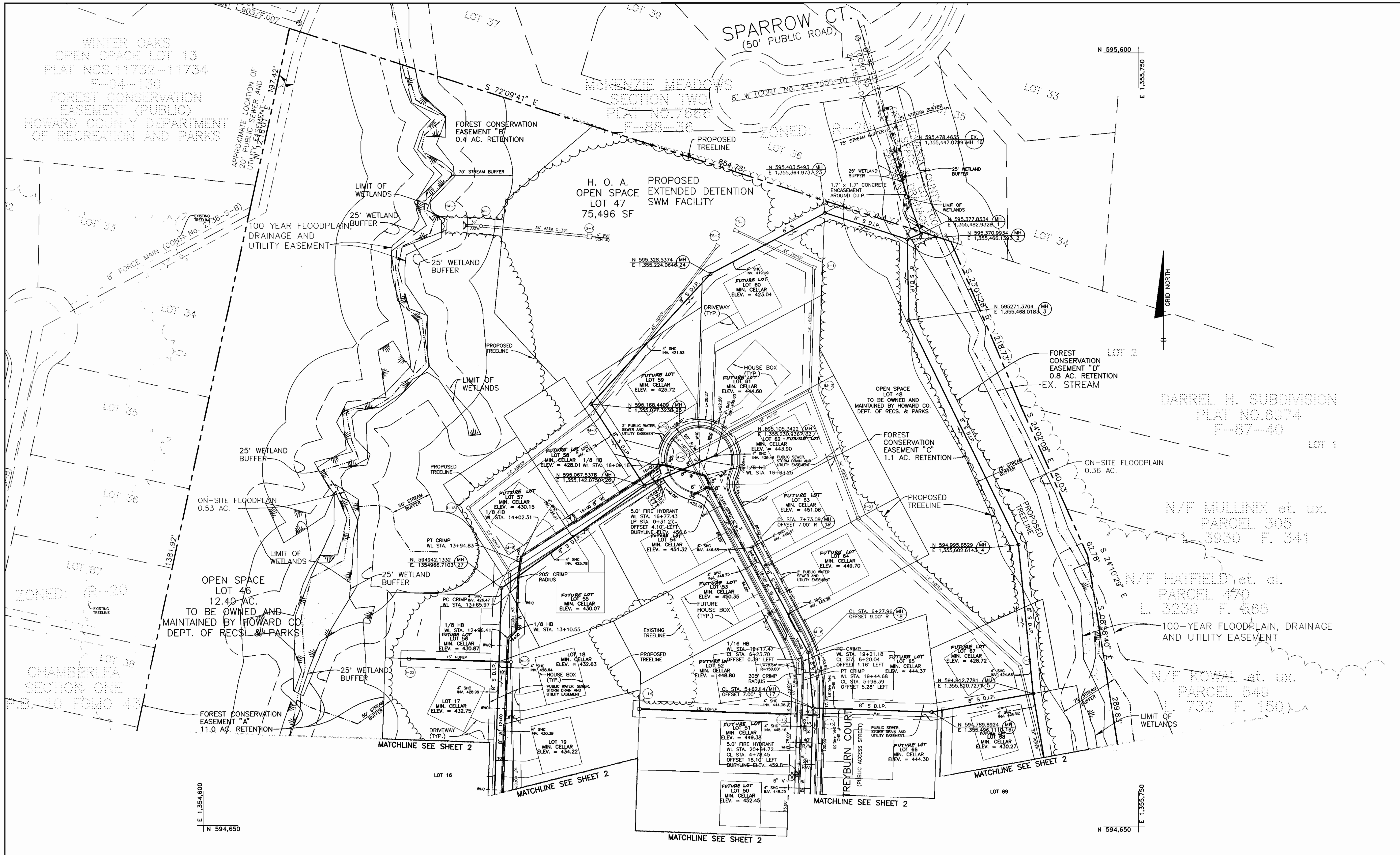
PLAN VIEW
 600 SCALE MAP NO. 17
 BLOCK 9

TREYBURN
 PHASE 1, LOTS 1-48 AND
 NON-BUILDABLE PARCELS A-C (FUTURE LOTS)
 AND FUTURE PHASE 2, LOTS 49-72 (F-01-76)
 ELECTION DISTRICT NO. 2

CONTRACT No. 24-3867-D

SCALE:
 1" = 50'
 SHEET NO.
 2 OF 8

Printed: DEC. 26, 2000
 Acad. Dwg. 804651



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert Dwyer
1-2-01
DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

Howard Drummond
DATE

BENCHMARK
ENGINEERS & LAND SURVEYORS PLANNERS

Donald Mann
11/26/00

2400 BALTIMORE NATIONAL PKWY. - SUITE 418 - ELLSWORTH CITY, MARYLAND 21043
PHONE: 410-485-8100 FAX: 410-485-8844

DES:	DAM				
DRN:	JMC				
CHK:	DAM				
DATE:	12/00				
BY NO.		REVISIONS		DATE	

PLAN VIEW

600 SCALE MAP NO. 17

BLOCK 9

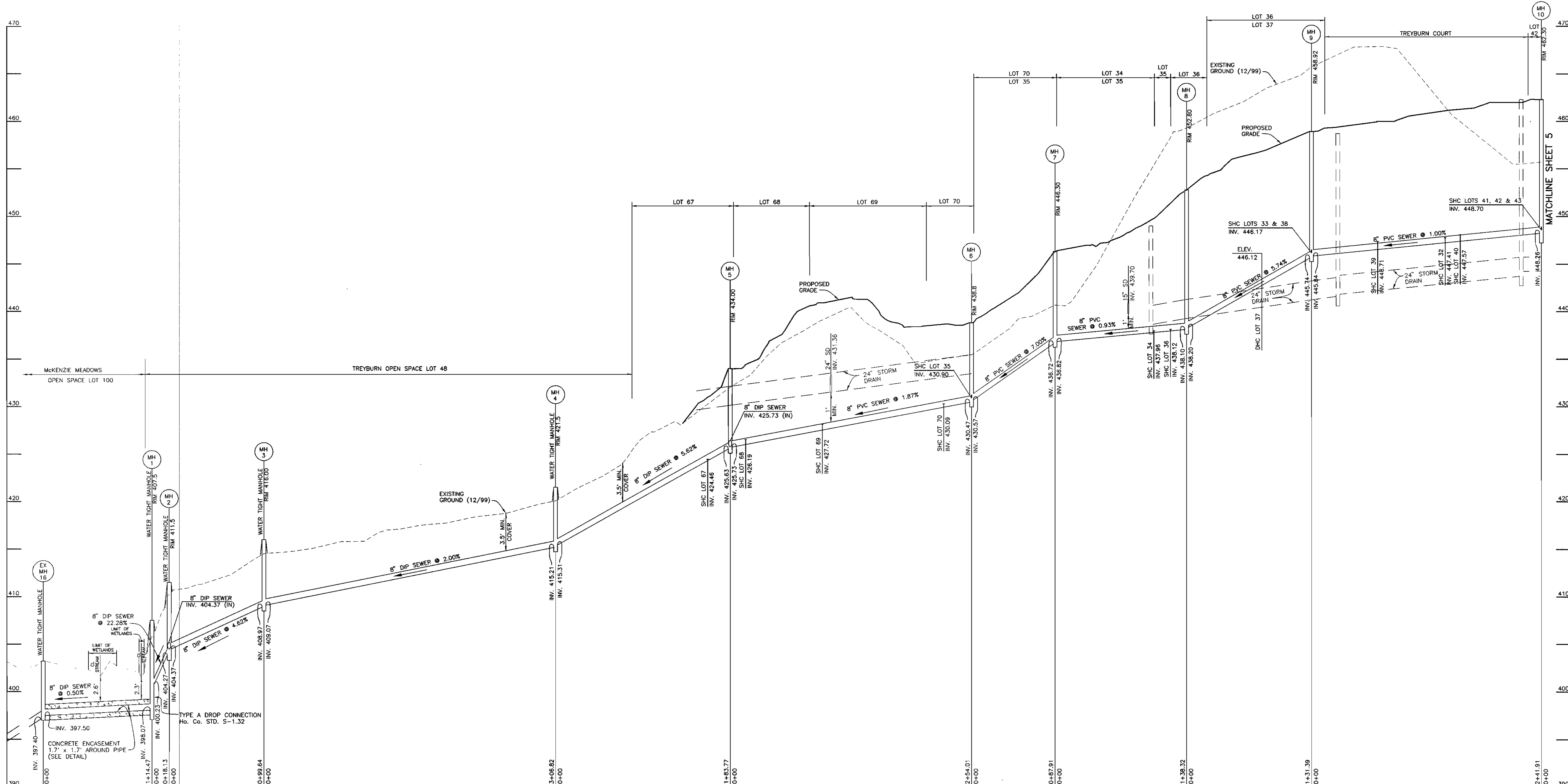
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ELECTION DISTRICT NO. 2

SCALE:
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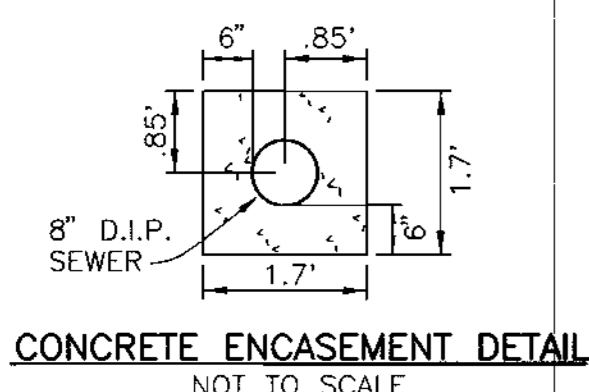
SHEET NO.
3 OF 8

CONTRACT No. 24-3867-D

Acad Dwg: 604852.DWG Plotted: DEC. 28, 2000



PUBLIC SEWER MAIN PROFILE
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



Acad. Dwg: 6045E1 Plotter: DEC. 26, 2000

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
Robert Benner 1-2-01
 CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND
Donald M. Mean 1/2/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

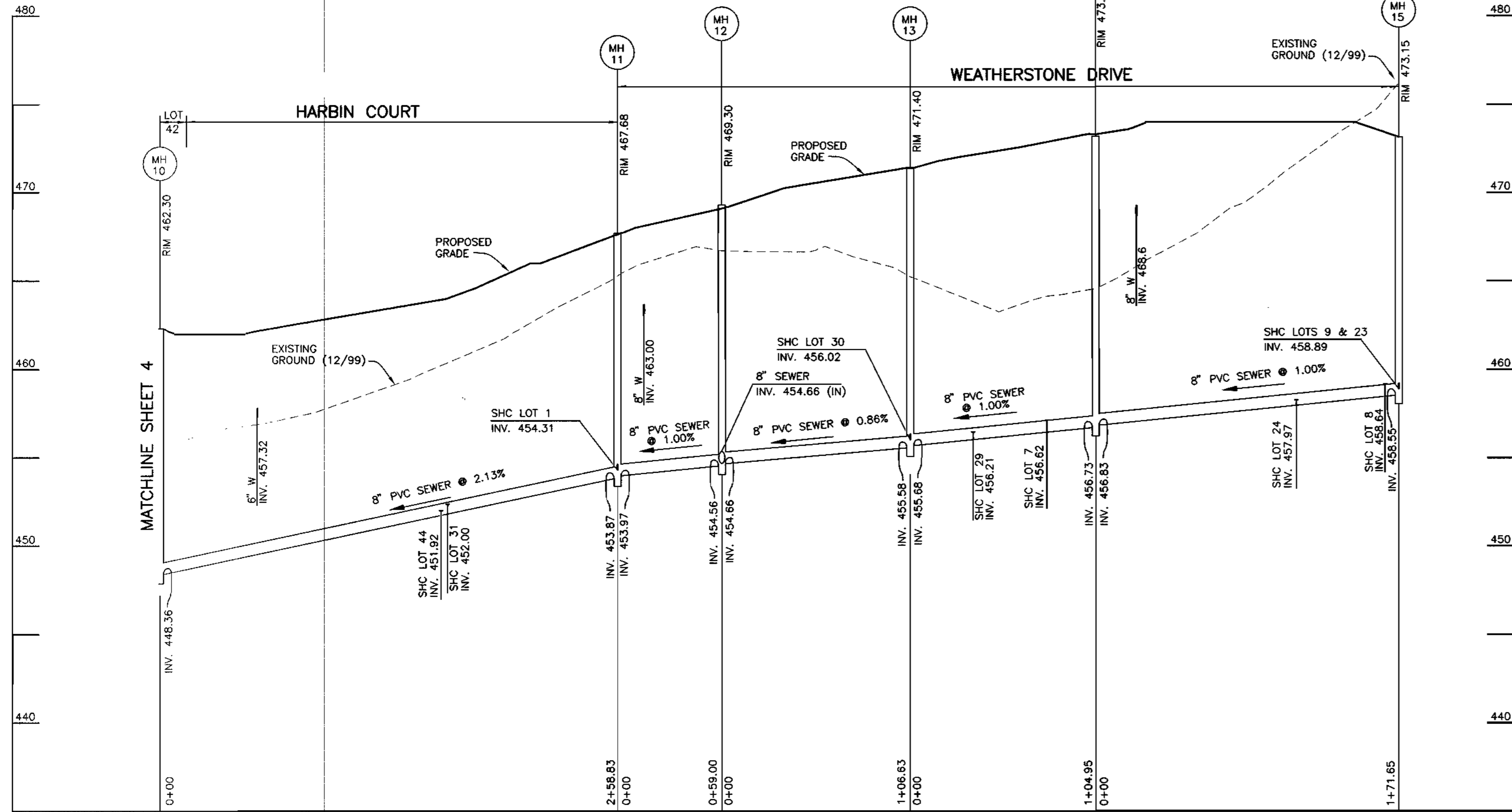
BENCHMARK
 ENGINEERS • LAND SURVEYORS • PLANNERS
ENGINEERING, INC.
 6400 BALTIMORE NATIONAL PIKE • SUITE 418 • ELICOTT CITY, MARYLAND 21043
 PHONE: 410-485-8105 FAX: 410-485-8844

Donald M. Mean
 1/16/01

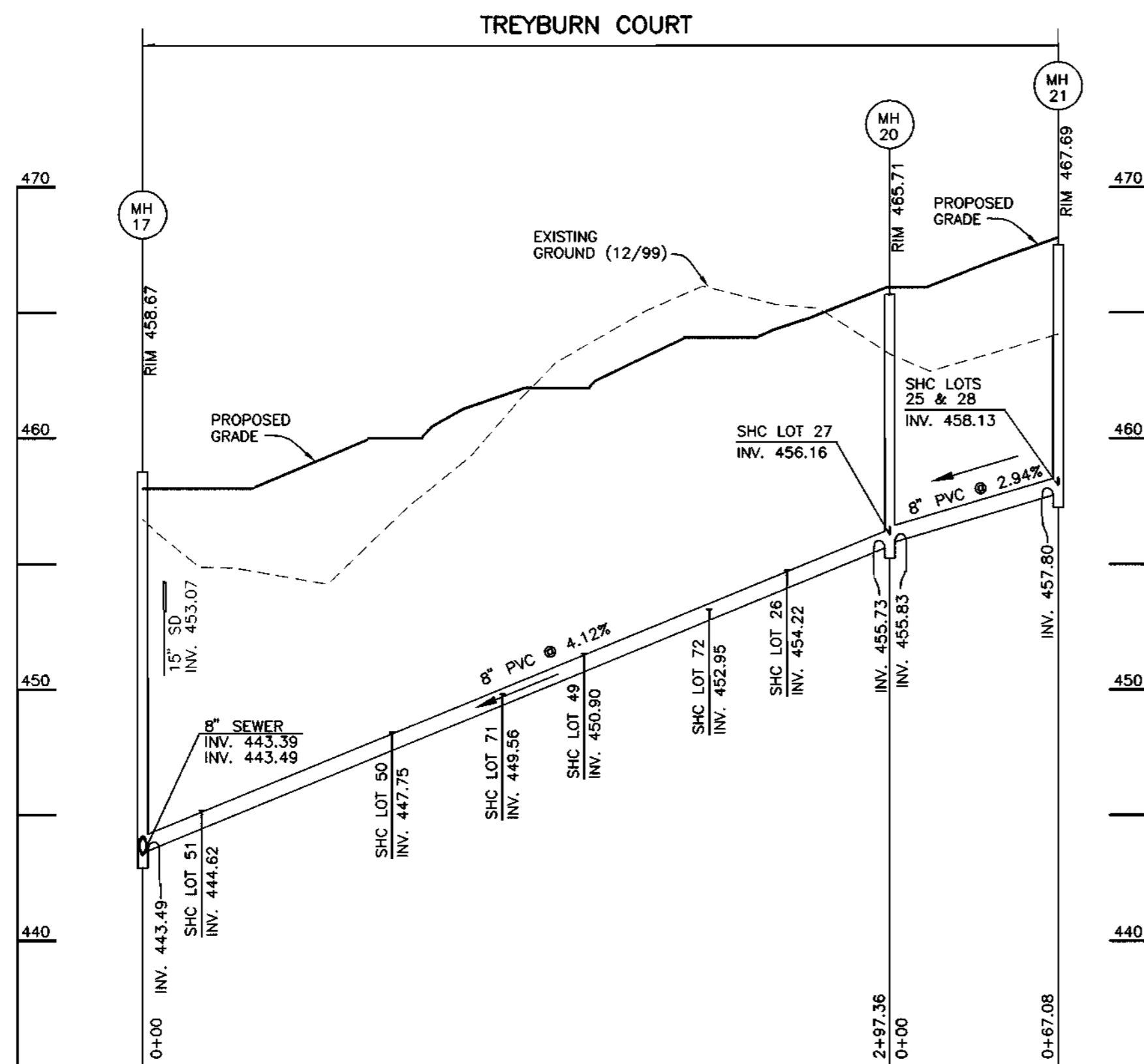
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DRN:	JMC			
CHK:	DAM			
DATE:	8/00			
BY:	NO.			
		REVISIONS	DATE	

SEWER MAIN PROFILE
 600 SCALE MAP NO. 17
 BLOCK 9

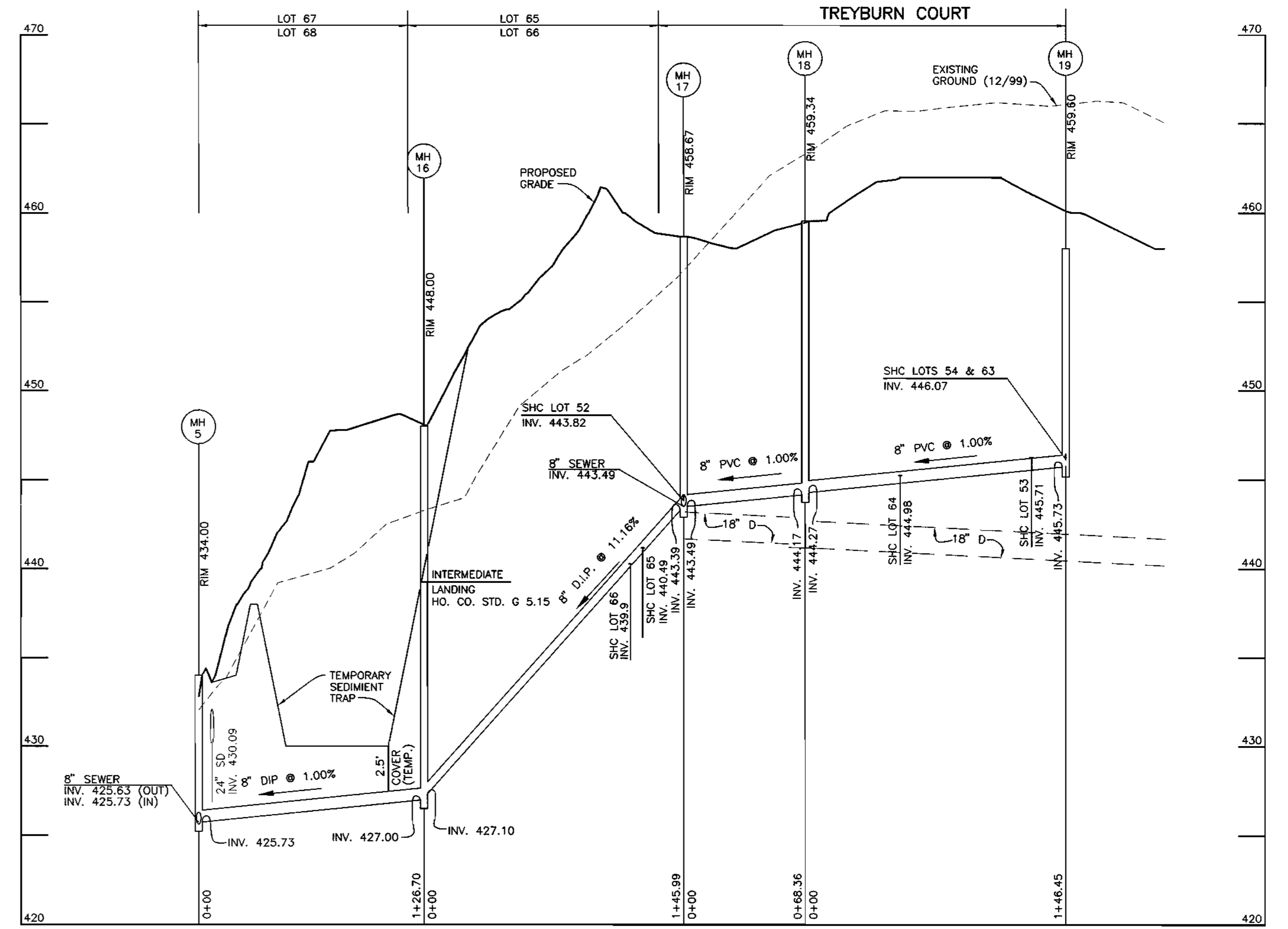
TREYBURN
 PHASE 1, LOTS 1-48 AND
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 AND FUTURE PHASE 2, LOTS 49-72 (F-01-76)
 ELECTION DISTRICT NO. 2
 CONTRACT No. 24-3867-D
 SHEET NO. 4 OF 8
 SCALE: AS SHOWN



PUBLIC SEWER MAIN PROFILE
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



PUBLIC SEWER MAIN PROFILE
 HORIZONTAL SCALE: 1" = 50'
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PUBLIC SEWER MAIN PROFILE
 HORIZONTAL SCALE: 1" = 50'
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Acad. Dwg: 604651 Plotted: DEC. 26, 2000

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND



Donald Mann
 11/26/00

DES:	JMC				
DRN:	JMC				
CHK:	DAM				
DATE:	8/00				
BY:	NO.				
		REVISIONS		DATE	

WATER AND SEWER
 MAIN PROFILES

600 SCALE MAP NO. 17

BLOCK 9

TREYBURN
 PHASE 1, LOTS 1-48 AND
 NON-BUILDABLE PARCELS A-C (FUTURE LOTS)
 AND FUTURE PHASE 2, LOTS 49-72 (F-01-76)
 ELECTION DISTRICT NO. 2

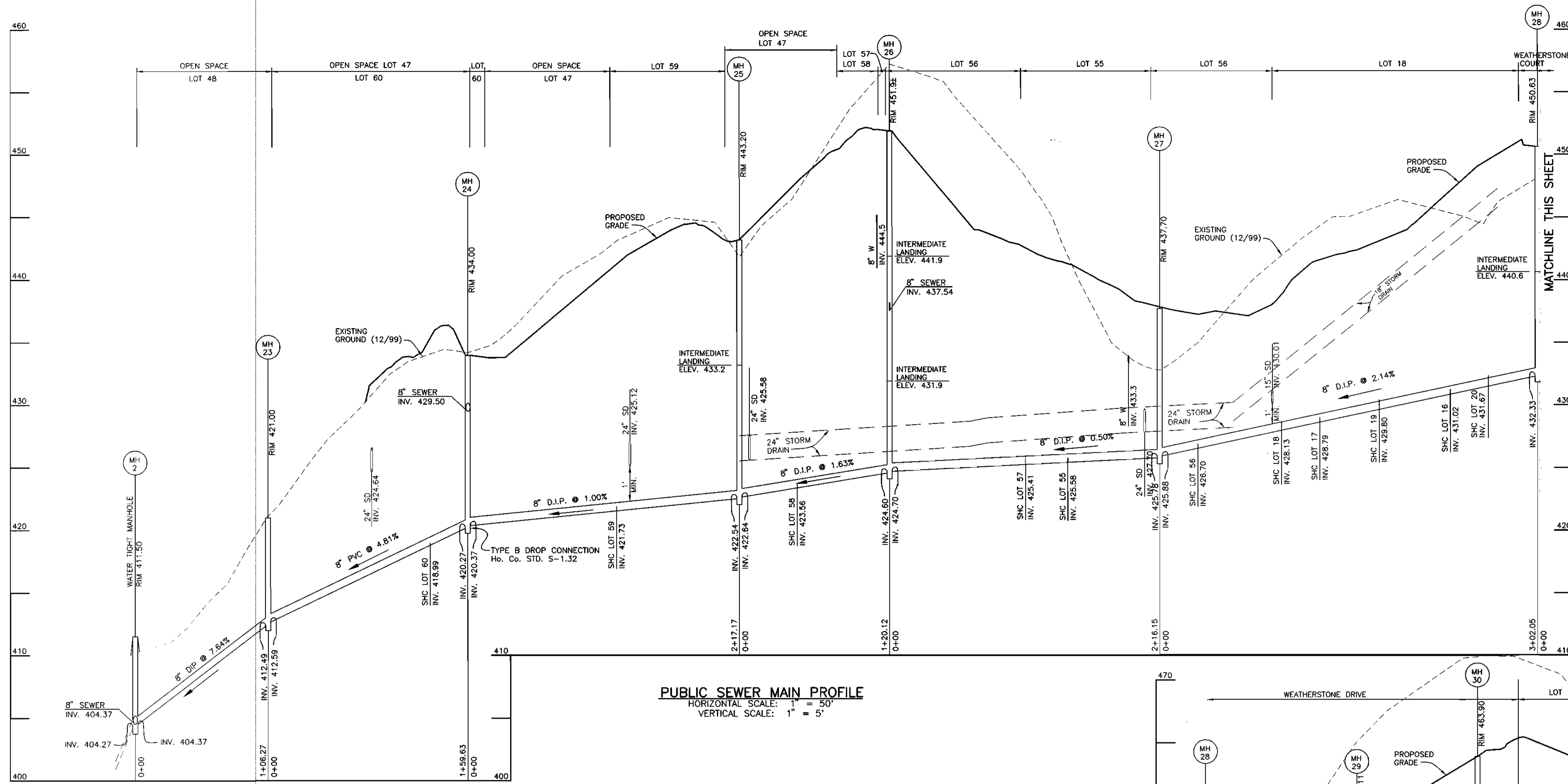
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 5 OF 8

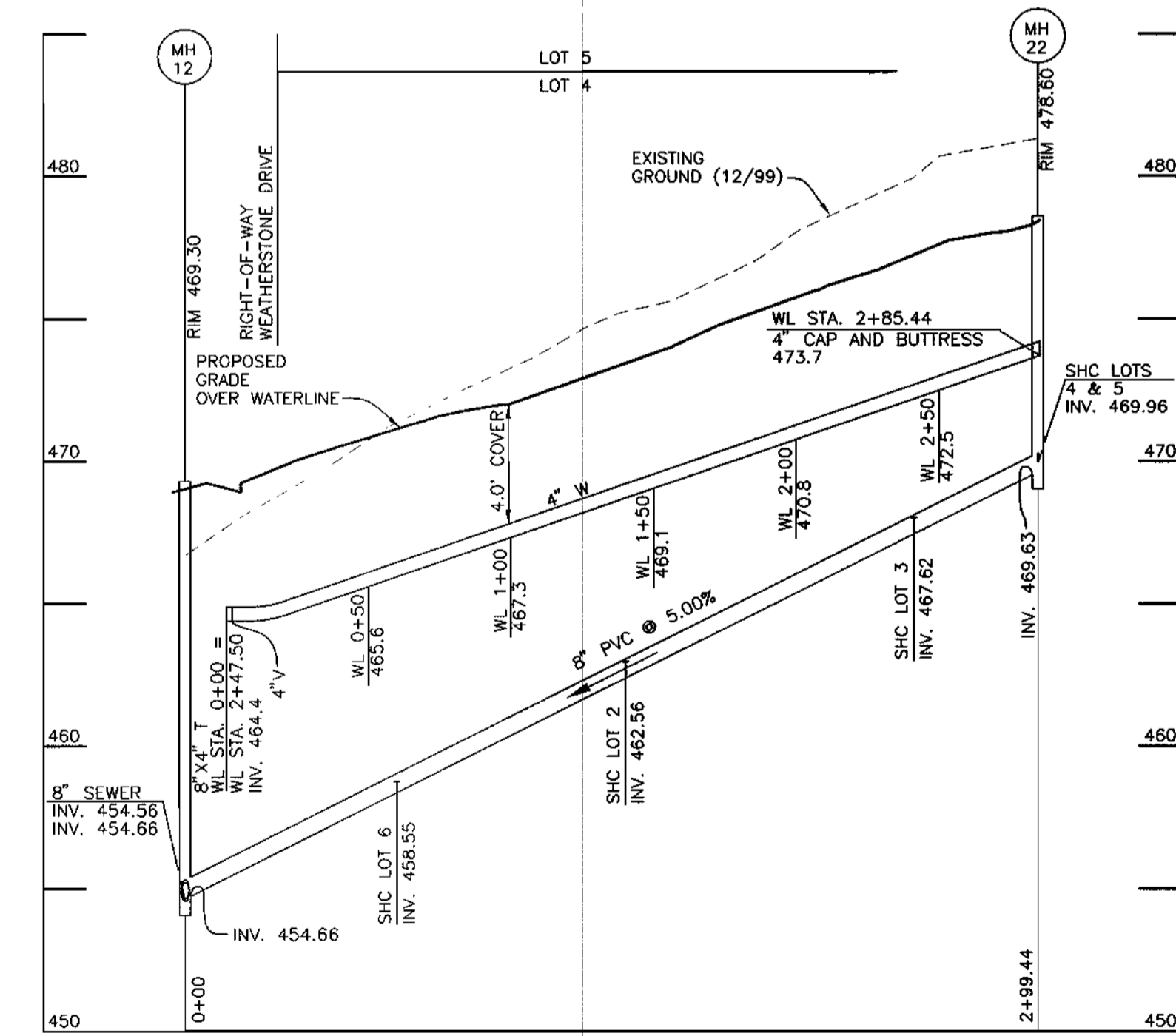
CONTRACT No. 24-3867-D

Robert Berman 1-2-01
 CHIEF, BUREAU OF UTILITIES DATE

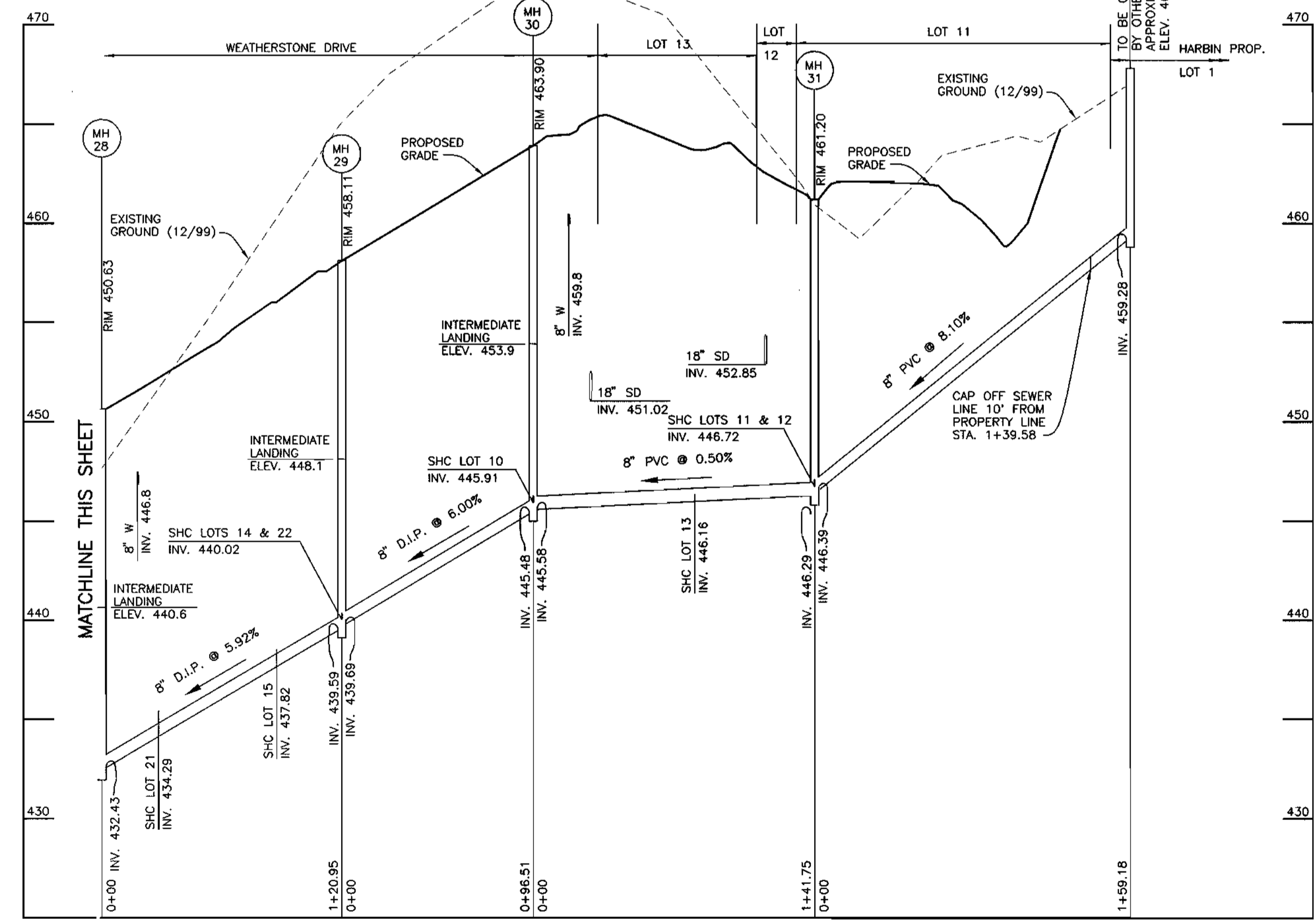
John J. ...
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



PUBLIC SEWER MAIN PROFILE
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



PUBLIC WATER MAIN AND SEWER MAIN PROFILE
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



PUBLIC SEWER MAIN PROFILE
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'

Plotter: DEC. 26, 2000

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND

BENCHMARK
 ENGINEERS, LAND SURVEYORS & PLANNERS

Donald Mean
 PROJECT ENGINEER

DES: DAM
 DRN: JMC
 CHK: DAM
 DATE: 8/00

WATER AND SEWER PROFILES

TREYBURN
 PHASE 1, LOTS 1-48 AND
 NON-BUILDABLE PARCELS A-C (FUTURE LOTS)
 AND FUTURE PHASE 2, LOTS 49-72 (F-01-76)
 ELECTION DISTRICT NO. 2

CONTRACT No. 24-3867-D

SCALE:
 AS SHOWN
 SHEET NO.
 6 OF 8

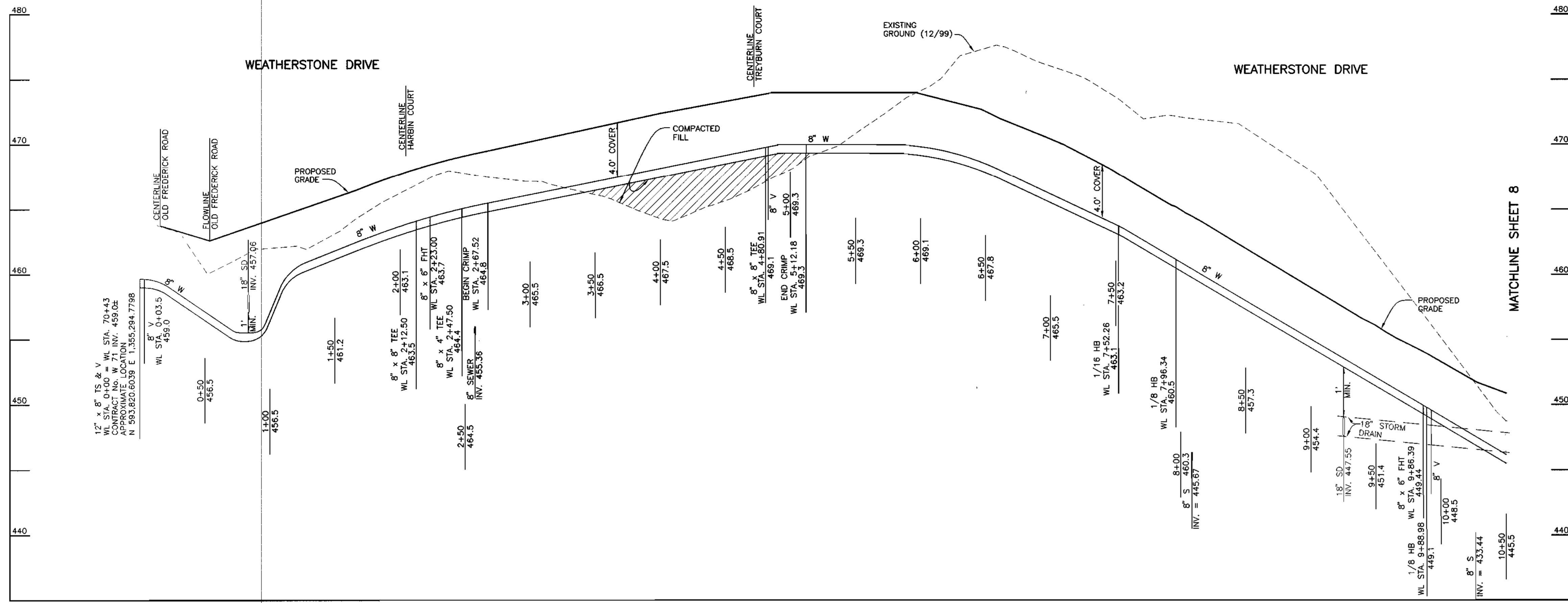
Robert J. Bennett 1-2-01
 CHIEF, BUREAU OF UTILITIES DATE

John J. Bennett 1/2/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

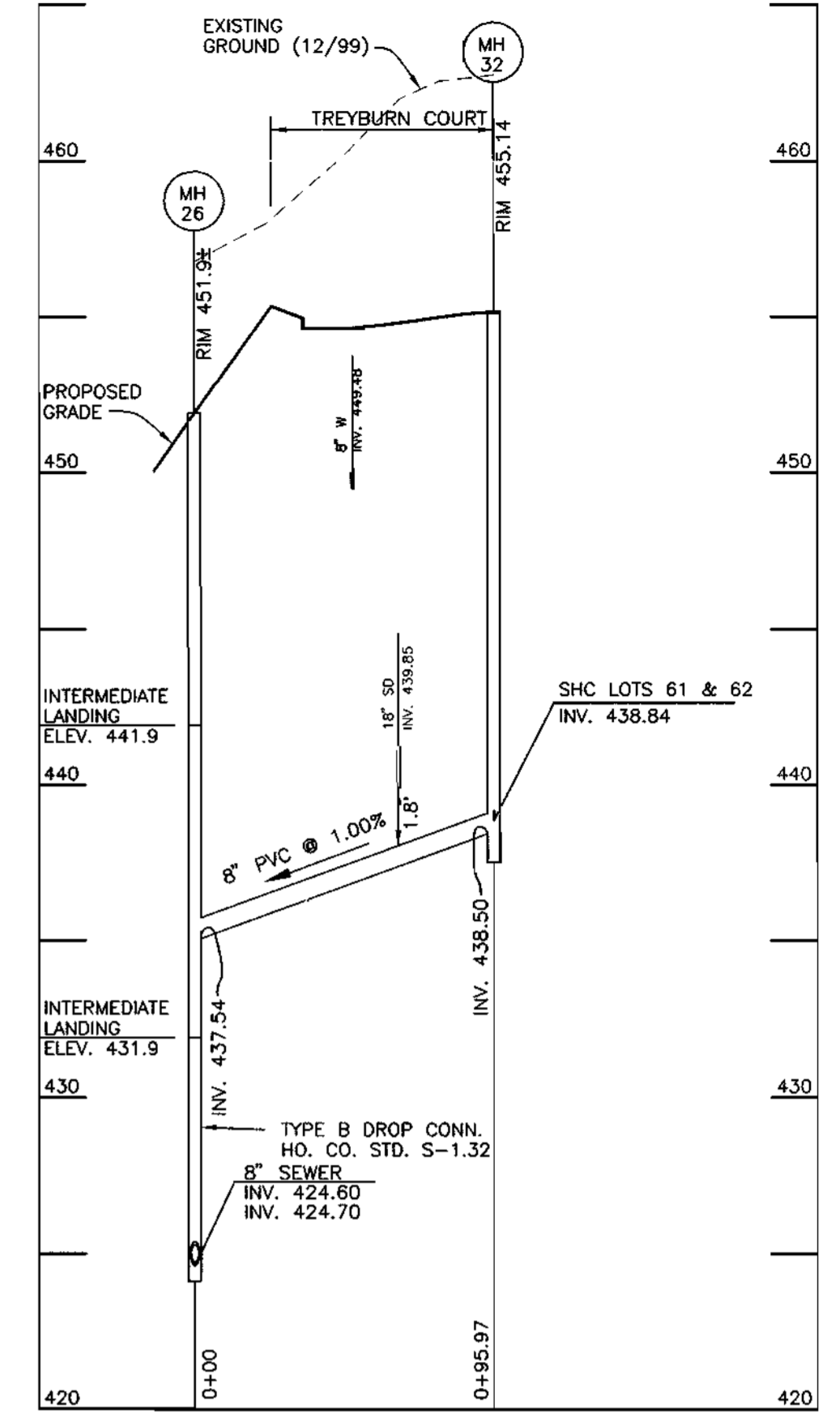
8400 BALTIMORE NATIONAL PIKE - SUITE 418 - ELLEWOOD CITY, MARYLAND 21043
 PHONE: 410-485-6100 FAX: 410-485-6044

600 SCALE MAP NO. 17

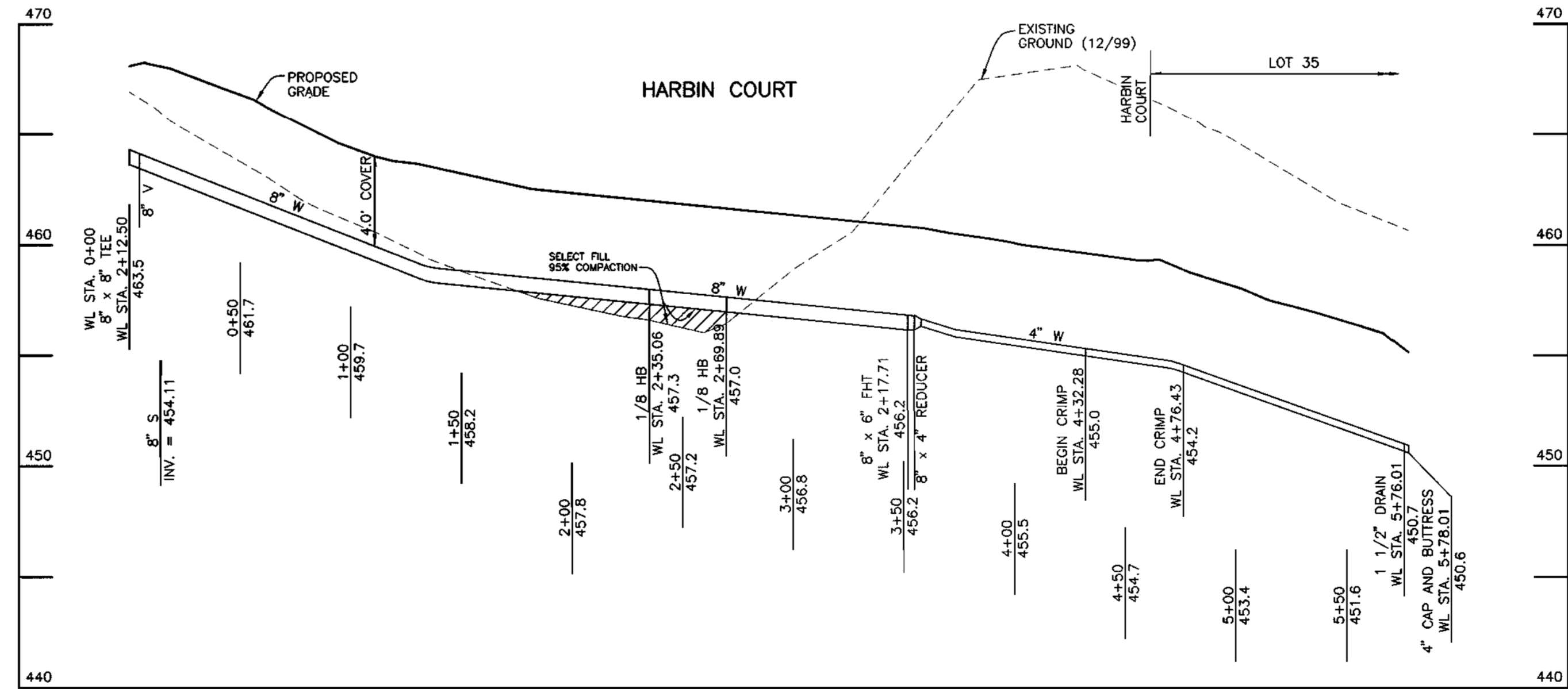
BLOCK 9



PUBLIC WATER MAIN PROFILE
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



PUBLIC SEWER MAIN PROFILE
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



PUBLIC WATER MAIN PROFILE
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Acad. Dwg: 654651 Plotfile: DEC. 26, 2000

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND



Donald Mean
 11/26/00

DES:	JMC			
DRN:	JMC			
CHK:	DAM			
DATE:	8/00			
BY:				
NO.				
REVISIONS:				
DATE:				

WATER AND SEWER
 MAIN PROFILES

TREYBURN
 PHASE 3, LOTS 1-48 AND
 NON-BUILDABLE PARCELS A-C (FUTURE LOTS)
 AND FUTURE PHASE 2, LOTS 49-72 (F-01-76)
 ELECTION DISTRICT NO. 2
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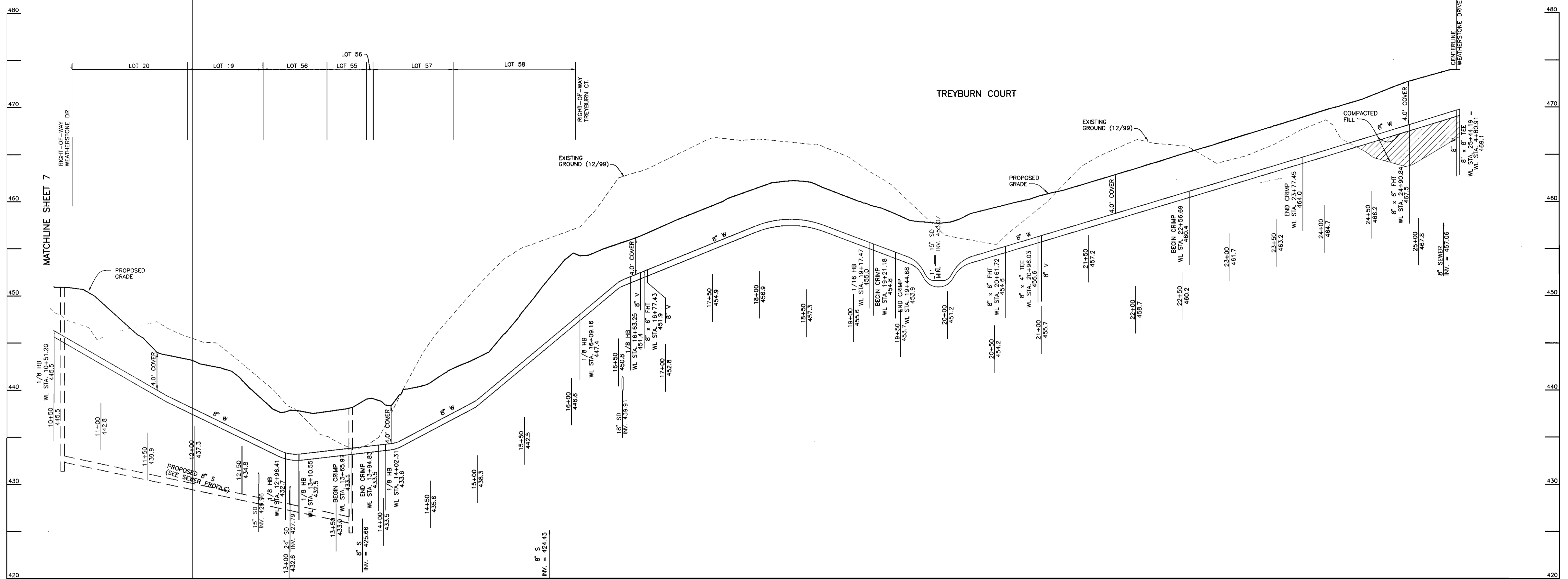
SCALE:
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 SHEET NO.
 7 OF 8

John Brigin 1-2-01
 CHIEF, BUREAU OF UTILITIES DATE

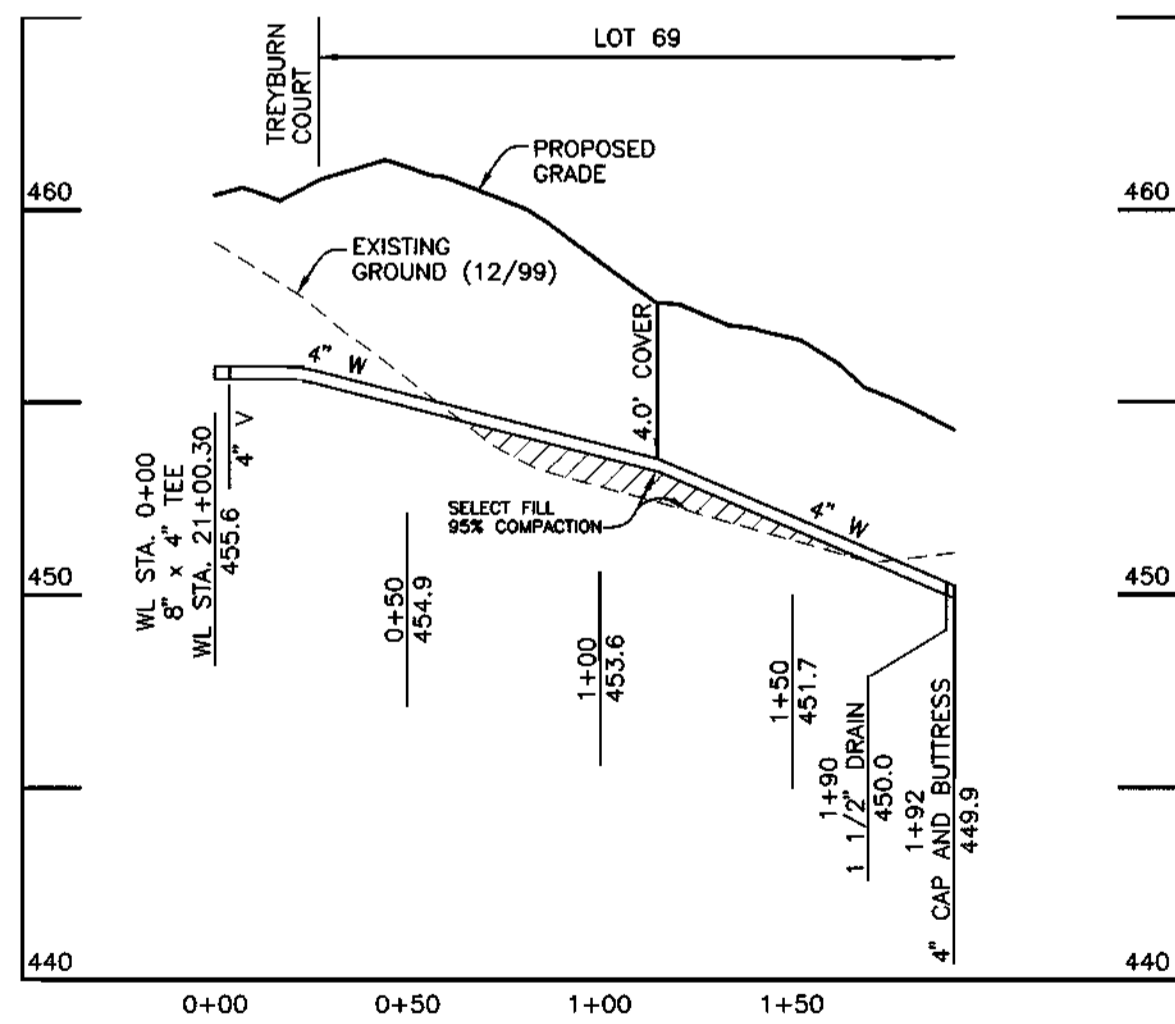
John Danman 1/6/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

8480 BALTIMORE NATIONAL PIKE • SUITE 418 • ELICOTT CITY, MARYLAND 21043
 PHONE: 410-485-6105 FAX: 410-485-6844

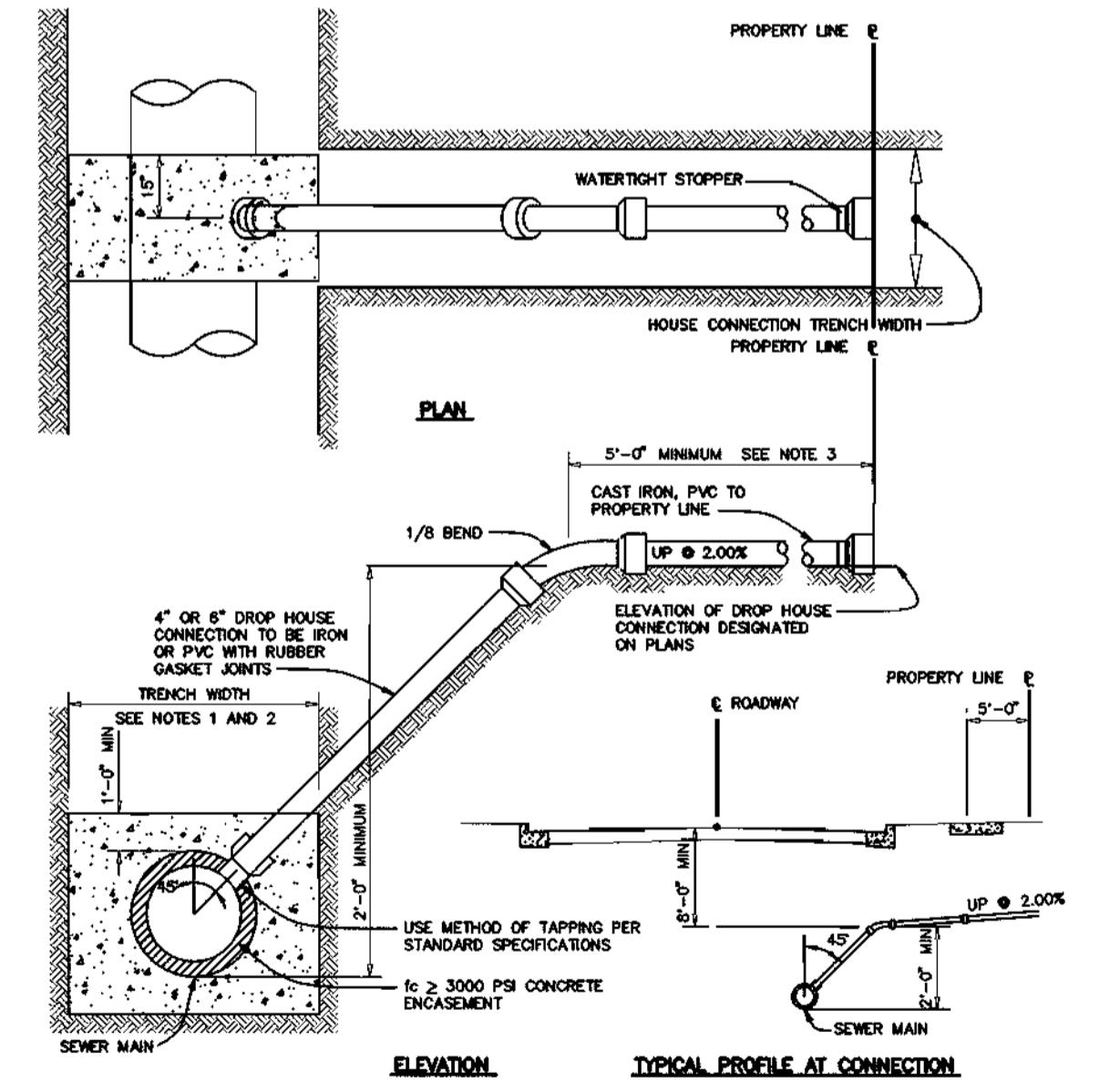
600 SCALE MAP NO. 17 BLOCK 9



PUBLIC WATER MAIN PROFILE
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



PUBLIC WATER MAIN PROFILE
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



NOTES:
 1. S.I.C. TO 8" THRU 12" SEWER MAIN USE SADDLE.
 2. S.I.C. TO PROPOSED SEWER MAINS USE TEES, SEE VOLUME IV, STANDARD DETAIL S2.12.
 3. S.I.C. AT PROPERTY LINE SHALL TERMINATE WITH MINIMUM PIPE LENGTH OF 5'-0". DETAIL IS NOT APPLICABLE FOR A SHORTER LENGTH THAN 5'-0" AT THE PROPERTY LINE.

4" & 6" DROP HOUSE CONNECTION TO SEWER MAIN
 NOT TO SCALE
 HOWARD COUNTY DESIGN MANUAL - VOL II
 WATER AND SEWER - APPENDIX 13

Acad Dwg: 604651 Plotter: DEC 26, 2000

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND

BENCHMARK ENGINEERING, INC.
 ENGINEERS - LAND SURVEYORS - PLANNERS

Donna M. ...
 PROFESSIONAL ENGINEER
 STATE OF MARYLAND
 No. 116260

DES:	JMC		
DRN:	JMC		
CHK:	DAM		
DATE:	8/00		
BY:	NO.	REVISIONS	DATE

WATER MAIN PROFILES

TREYBURN
 PHASE I, LOTS 1-48 AND
 NON-BUILDABLE PARCELS A-C (FUTURE LOTS)
 AND FUTURE PHASE 2, LOTS 44-72 (F-01-76)
 ELECTION DISTRICT NO. 2
 CONTRACT No. 24-3867-D

SCALE:
 AS SHOWN
 SHEET NO.
 8 OF 8

PUBLIC WATER AND SEWER CONSTRUCTION PLANS

TREYBURN

PHASES 1 AND 2

2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

CONTRACT No. 24-3867-D


BENCH MARKS (NAD83)

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 AND 49.7' WEST OF A 15" WHITE PINE.
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 N 593,814.0053' E 1,335,731.8846'

GENERAL NOTES

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- ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATA.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL POLES BY 2'-0" MINIMUM OR TUNNEL AS REQUIRED. THE OWNER HAS CONTACTED THE UTILITY COMPANIES AND HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON THE DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONEY 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 DETAIL FOR CONSTRUCTION (LATEST EDITION). THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
- 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. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG 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:
 - STATE HIGHWAY ADMINISTRATION.....410-531-5533
 - BALTIMORE GAS & ELECTRIC CO.410-850-4620
 - BALTIMORE GAS & ELECTRIC CO.410-787-9068
 - MISS UTILITY.....1-800-257-7777
 - COLONIAL PIPELINE CO.410-795-1390
 - HOWARD CO. DEPT. OF PUBLIC WORKS410-313-4900
 - BUREAU OF UTILITIES.....1-800-446-5266
 - VERIZON.....1-800-446-5266
- TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO 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.
- PLACE REGULATION "MEN WORKING" AND WARNING SIGNS AS REQUIRED TO COMPLY WITH MARYLAND STATE HIGHWAY ADMINISTRATION MANUAL OF TRAFFIC CONTROL FOR HIGHWAY MAINTENANCE OPERATIONS.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410) 313-2450 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(c) OF THE HOWARD COUNTY CODE.

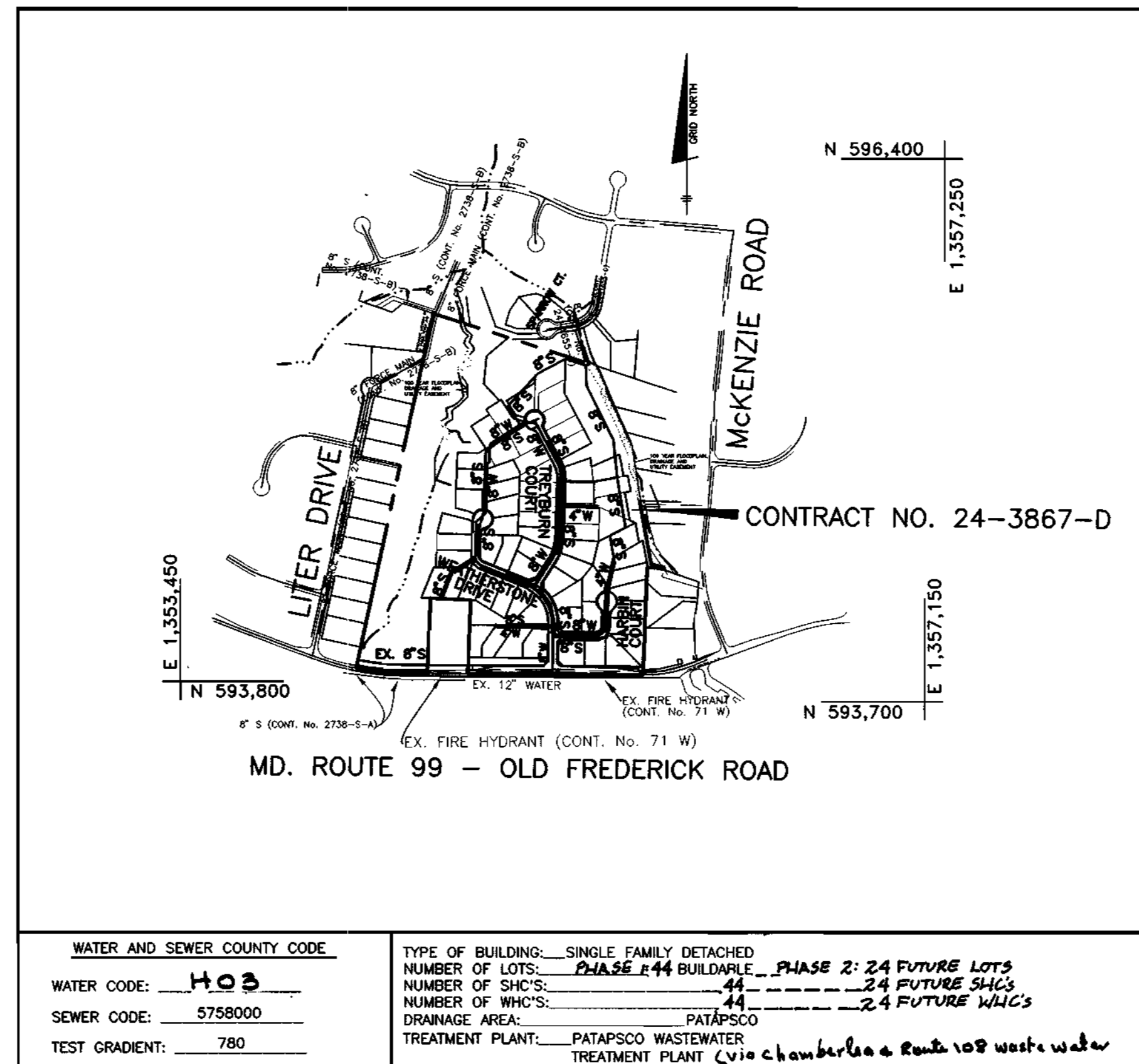
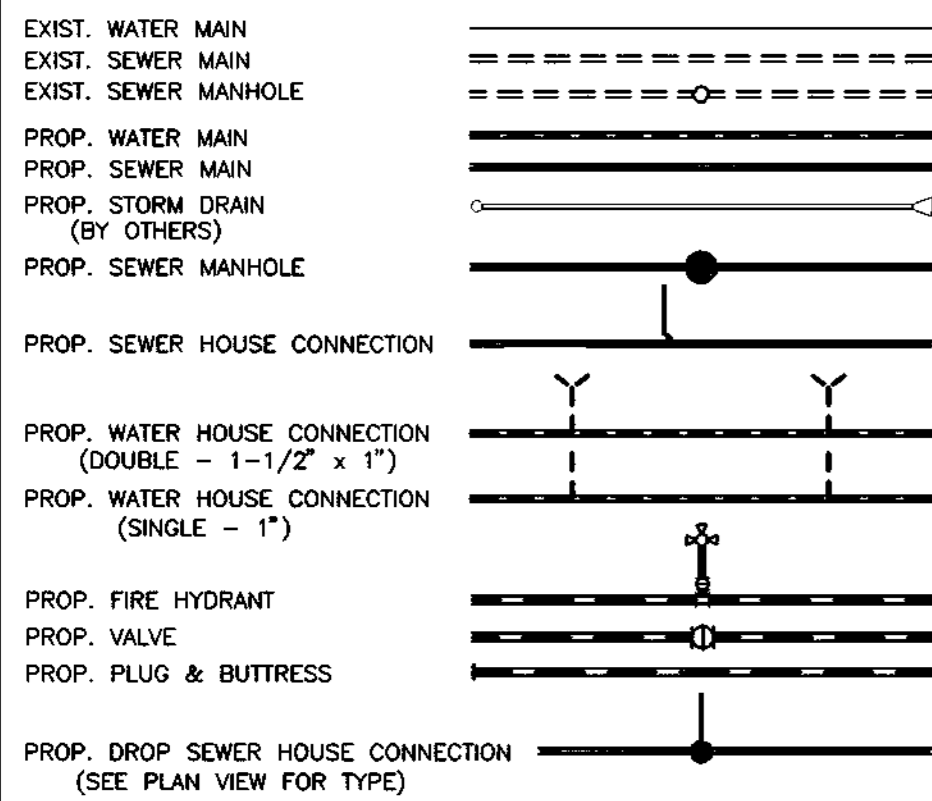
PART 2 - WATER

- ALL WATER MAINS TO BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-1/2" COVER UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
- FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE RESTRAINED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS. SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND 1005 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING UNLESS OTHERWISE NOTED ON PLANS OR IN SPECIFICATIONS. ALL WATER HOUSE CONNECTIONS SHALL BE 1" CONNECTION WITH A 3/4" METER.

PART 3 - SEWER

- ALL SEWER MAINS SHALL BE DIP OR P.V.C. UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2' - 0" OF EXTERIOR MANHOLE WALL.
- 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 WATER-TIGHT FRAME AND COVERS, STANDARD DETAIL 05.52. WHERE WATER-TIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1" - 6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.

LEGEND



WATER AND SEWER COUNTY CODE		TYPE OF BUILDING: SINGLE FAMILY DETACHED	
WATER CODE: <u>H03</u>	SEWER CODE: <u>5758000</u>	NUMBER OF LOTS: <u>PHASE 1: 44 BUILDABLE PHASE 2: 24 FUTURE LOTS</u>	NUMBER OF SHC'S: <u>44</u>
TEST GRADIENT: <u>780</u>	TREATMENT PLANT: <u>PATAPSCO WASTEWATER TREATMENT PLANT (via Chamberlayne Road 108 waste water Pumping Station)</u>	NUMBER OF WHO'S: <u>44</u>	NUMBER OF WHC'S: <u>24 FUTURE WHC'S</u>

HOWARD SOIL CONSERVATION DISTRICT:
 REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

J. A. Wainfield 1/3/01
 NATURAL RESOURCES CONSERVATION SERVICE

THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John Robertson 1/3/01
 HOWARD SOIL CONSERVATION DISTRICT

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY STANDARD SPECIFICATIONS AND AS PER ROAD CONSTRUCTION PLANS F-01-10

ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUF./SUPPLIER
8" WATER	2898 L.F.			
6" WATER	92 L.F.			
12"x8" TS&V	1 EA.			
4" WATER	701 L.F.			
1 1/2" DRAIN	2 EA.			
FIRE HYDRANTS	6 EA.			
1" WHC	140 L.F.			
8" SEWER PVC	3045 L.F.			
8" SEWER D.I.P.	2173 L.F.			
MANHOLES	32 EA.			
4" SHC	1400 L.F.			
4" DHC	25 L.F.			

NAME OF UTILITY CONTRACTOR:
 SURVEY AND DRAFTING DIVISION AS-BUILT DATE:

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
John Robertson 1-2-01
 CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND
John Robertson 1/2/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

BENCHMARK
 ENGINEERS - LAND SURVEYORS - PLANNERS
ENGINEERING, INC.
 8480 BALTIMORE NATIONAL PIKE - SUITE 410 - ELLSWORTH CITY, MARYLAND 21043
 PHONE: 410-465-6105 FAX: 410-465-6964

Donald Moon
 1/2/01

DES:	JMC			
DRN:	JMC			
CHK:	DAM			
DATE:	12/00	JMC	CHANGE IN QUANTITY OF WHC	12-15-01
BY:	NO.		REVISIONS	DATE

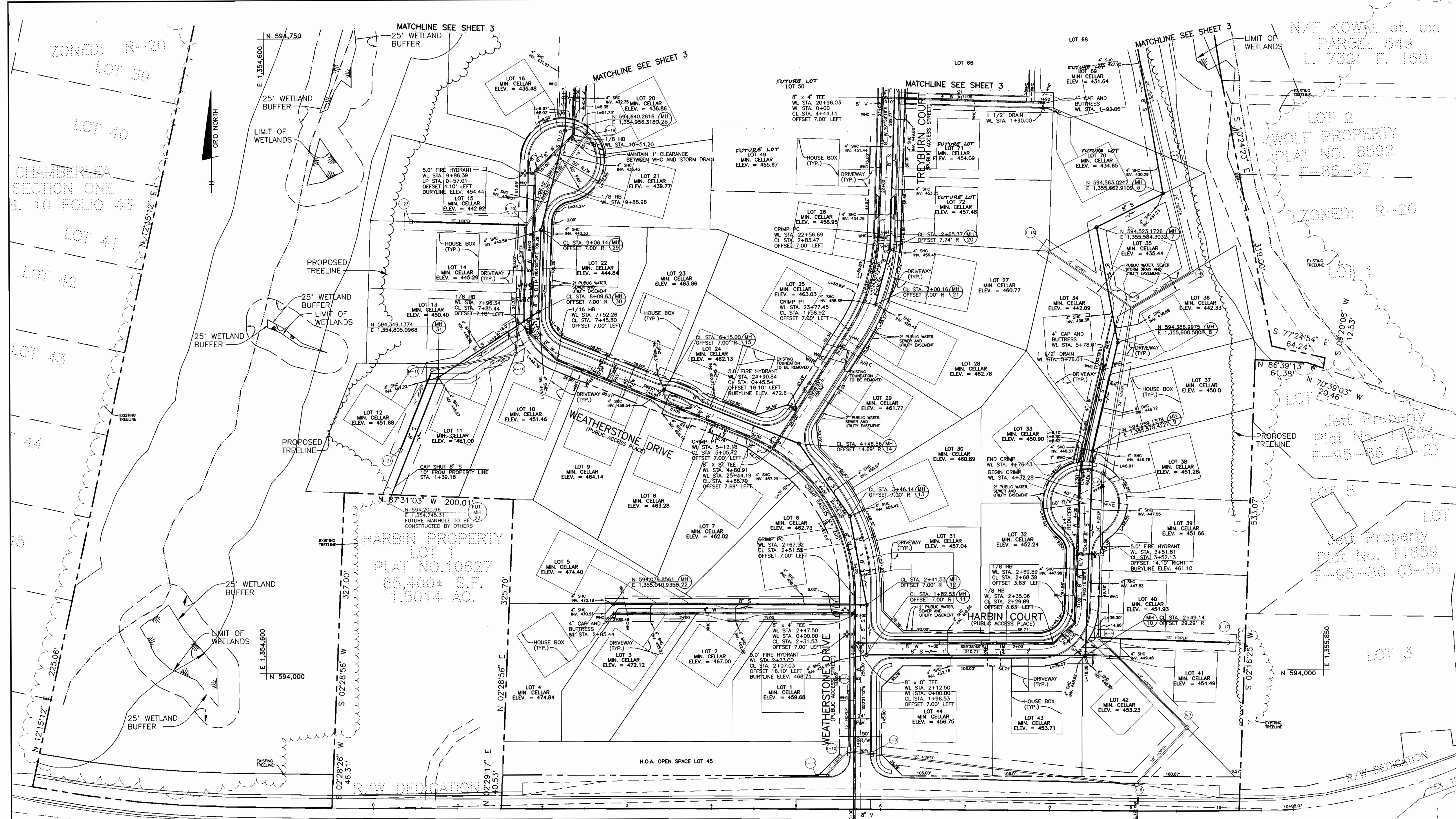
TITLE PAGE
 600 SCALE MAP NO. 17
 BLOCK 9

TREYBURN
 PHASE 1, LOTS 1-48 AND
 NON-BUILDABLE PARCELS A-C (FUTURE LOTS)
 AND FUTURE PHASE 2, LOTS 49-72 (F-01-76)
 ELECTION DISTRICT NO. 2
CONTRACT No. 24-3867-D

SCALE:
 AS SHOWN
 SHEET NO.
 1 OF 8

SHEET INDEX	
NO.	DESCRIPTION
1	TITLE SHEET
2-3	PLAN OF WATER AND SEWER MAINS
4	PROFILES OF WATER AND SEWER MAINS

Plotted: DECEMBER 26, 2000
 Acad Dwg.: 600051.DWG



MD ROUTE 99 - OLD FREDERICK ROAD
(EX. MINOR ARTERIAL)

NOTE: WATER CONNECTION SHALL BE MADE BY OPEN CUTTING MS ROUTE 99. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING THE ROADWAY

Plotted: DEC. 26, 2000

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Robert M. Bennett
CHIEF, BUREAU OF UTILITIES
1-2-01
DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
John J. ...
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE

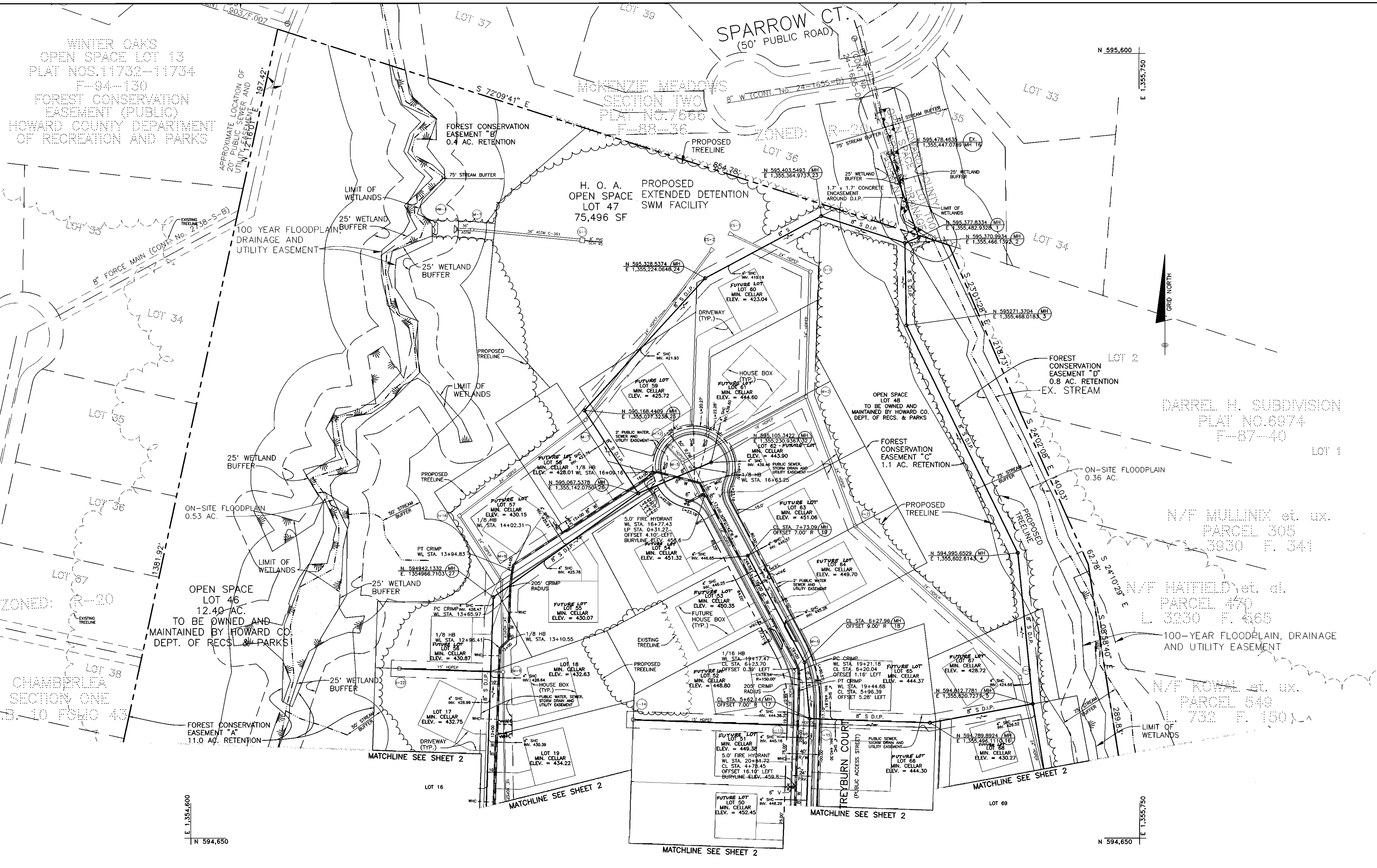
BENCHMARK
ENGINEERS - LAND SURVEYORS - PLANNERS
Donald M. ...
2400 BALTIMORE NATIONAL PIKE - SUITE 418 - ELLSWORTH CITY, MARYLAND 21043
PHONE: 410-665-9105 FAX: 410-665-9894

DES:	JMC				
DRN:	JMC				
CHK:	DAM				
DATE:	8/00	JTC	△	CHANGE SINGLE WHC TO DOUBLE WHC	12-15-01
BY:	NO.			REVISIONS	DATE

PLAN VIEW
600 SCALE MAP NO. 17
BLOCK 9

TREYBURN
PHASE 1, LOTS 1-48 AND
NON-BUILDABLE PARCELS A-C (FUTURE LOTS)
AND FUTURE PHASE 2, LOTS 49-72 (F-01-76)
ELECTION DISTRICT NO. 2
CONTRACT No. 24-3867-D

SCALE:
1" = 50'
SHEET NO.
2 OF 8



Acad. Dwg. 604652.DWG Plotted: DEC. 26, 2000

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Ralph B. Brown 1-2-01
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

Alan Drummond 1/26/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION

BENCHMARK
ENGINEERS - LAND SURVEYORS - PLANNERS

Donald Mann

2480 BALTIMORE NATIONAL PIKE - SUITE 418 - BELLSOUTH CITY, MARYLAND 21043
PHONE: 410-485-8105 FAX: 410-485-8844

DES:	DAM				
DRN:	JMC				
CHK:	DAM				
DATE:	12/00	JTC	Δ	CHANGE DOUBLE WHC TO SINGLE WHC 12-15-01	
BY:	NO.			REVISIONS	DATE

PLAN VIEW

600 SCALE MAP NO. 17

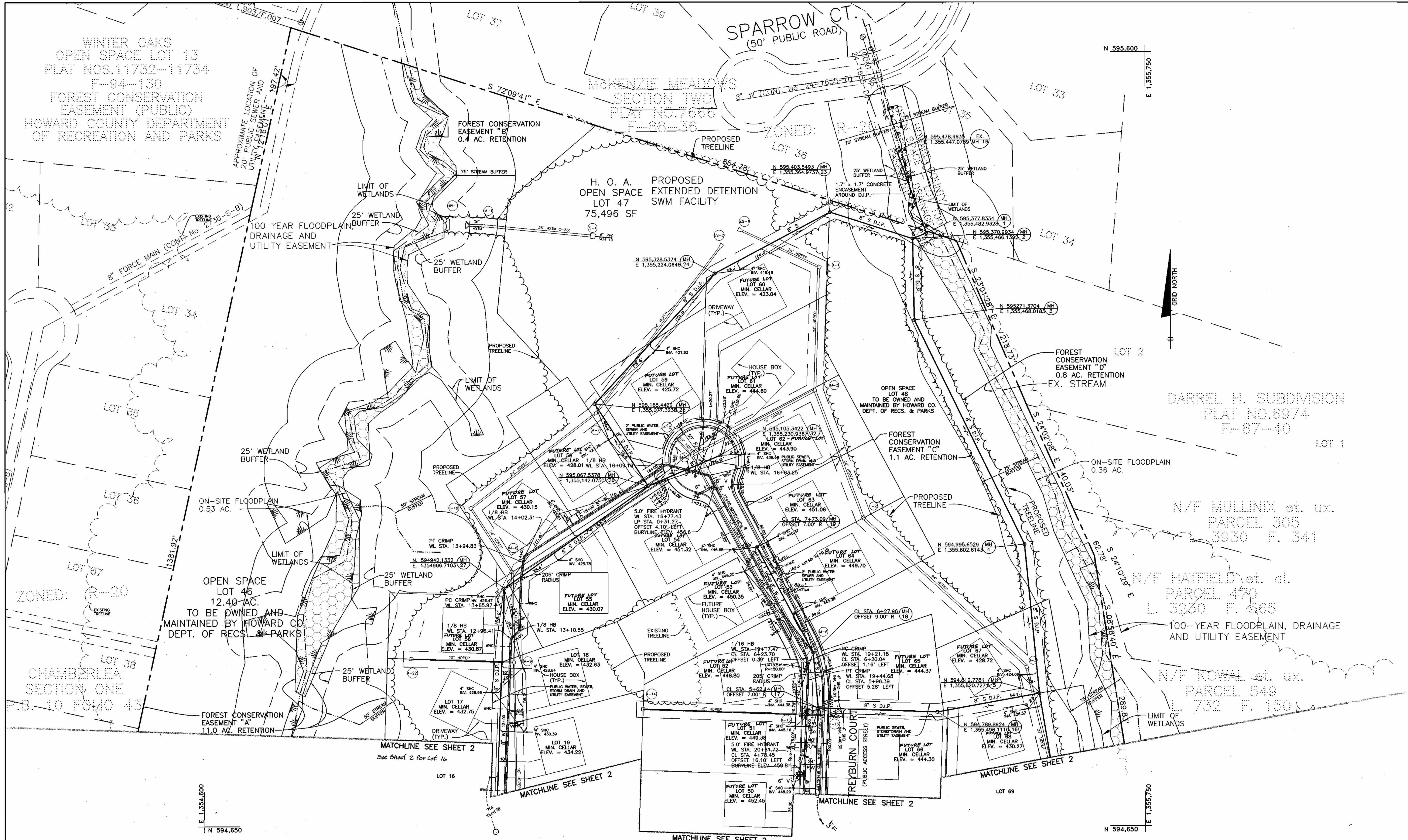
BLOCK 9

TREYBURN
PHASE 1, LOTS 1-48 AND
NOW-BUILDABLE PARCELS A-C (FUTURE LOTS)
AND FUTURE PHASE 2, LOTS 49-72 (F-01-76)
ELECTION DISTRICT NO. 2

CONTRACT No. 24-3867-D

SCALE:
1"=50'

SHEET NO.
3 OF 8



Acad Dwg: 604652.DWG Plotted: DEC. 26, 2000

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

BENCHMARK
ENGINEERS - LAND SURVEYORS - PLANNERS
ENGINEERING, INC.

Donald Mann
1/26/00

DES:	DAM		
DRN:	JMC		
CHK:	DAM	K.C.I.	ASBUILT DATA ADDED TO PLAN 02/06/00
		K.C.I.	ASBUILT DATA ADDED TO PLAN 02/05/02
DATE:	12/00	J.T.C.	CHANGE DOUBLE WHC TO SINGLE WHC 12-15-01
		BY NO.	REVISIONS

PLAN VIEW

TREYBURN
PHASE 1, LOTS 1-48 AND
NON-BUILDABLE PARCELS A-C (FUTURE LOTS)
AND FUTURE PHASE 2, LOTS 49-72 (F-01-76)
ELECTION DISTRICT NO. 2

SCALE:
1"=50'
SHEET NO.
3 OF 8

Ruth Berman 1-2-01
CHIEF, BUREAU OF UTILITIES

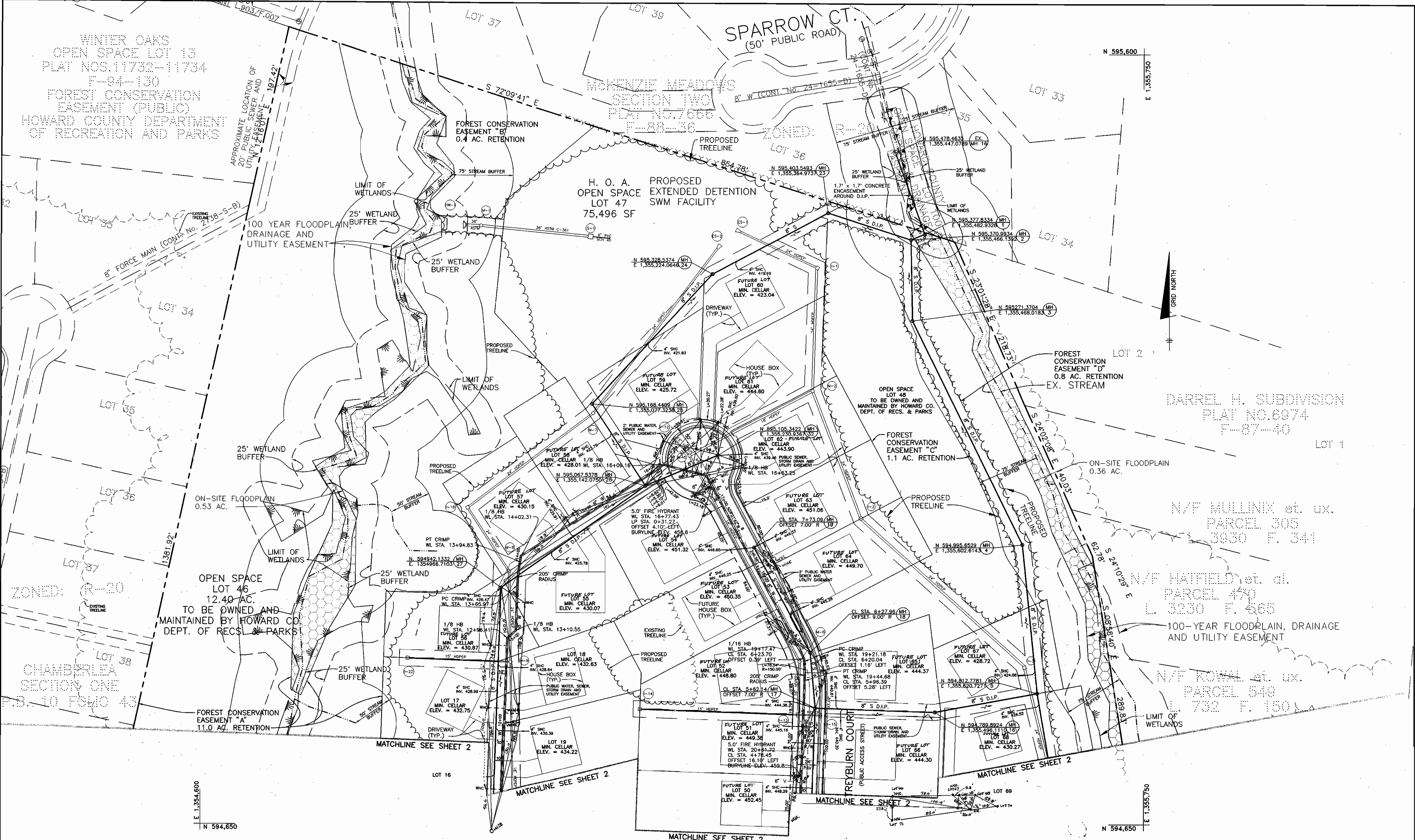
Donald Mann 1/26/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION

8400 BALTIMORE NATIONAL PRKE - SUITE 418 - ELLICOTT CITY, MARYLAND 21043
PHONE: 410-445-9100 FAX: 410-445-8844

600 SCALE MAP NO. 17 BLOCK 9

CONTRACT No. 24-3867-D

SEWER ASBUILT
02/05/02



Acad Dwg: 604652.DWG Plotted: DEC. 26, 2000

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert W. Berman 1-2-01
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

William M. Drummond 1/6/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION

BENCHMARK
ENGINEERS - LAND SURVEYORS - PLANNERS
ENGINEERING, INC.

Donald Mann

2400 BALTIMORE NATIONAL PIKE - SUITE 418 • ELICOTT CITY, MARYLAND 21043
PHONE: 410-465-9105 FAX: 410-465-9844

DES:	DAM			
DRN:	JMC			
CHK:	DAM	KCI	ASBUILT DATA ADDED TO PLAN	02/10/02
		KCI	ASBUILT DATA ADDED TO PLAN	02/06/02
DATE:	12/00	JTC	CHANGE DOUBLE WHS TO SINGLE WHC	12-15-01
		BY NO.	REVISIONS	DATE

1/26/02

PLAN VIEW

600 SCALE MAP NO. 17 BLOCK 9

TREYBURN
PHASE 1, LOTS 1-48 AND
NON-BUILDABLE PARCELS A-C (FUTURE LOTS)
AND FUTURE PHASE 2, LOTS 49-72 (F-01-76)
ELECTION DISTRICT NO. 2

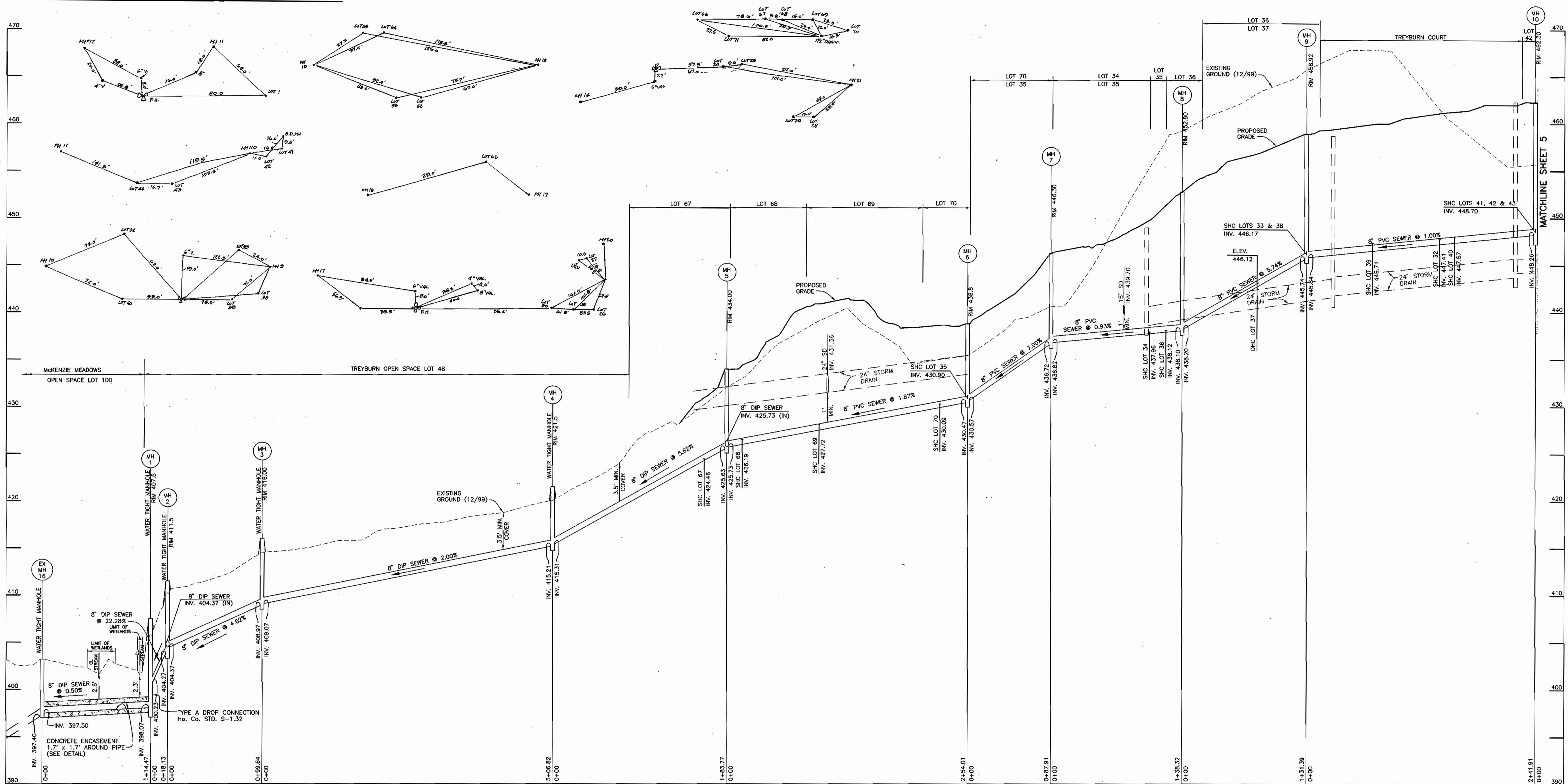
CONTRACT No. 24-3867-D

SCALE:
1"=50'

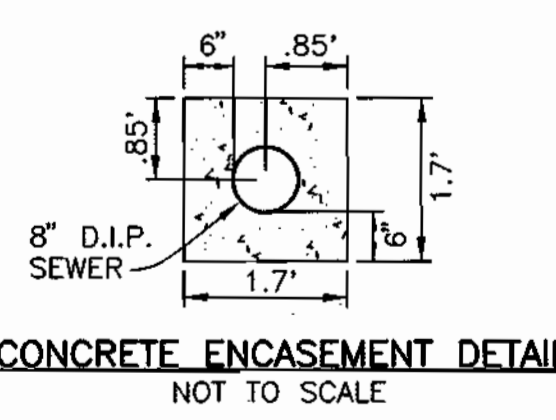
SHEET NO.
3A OF 8

WATER ASBUILT
02/10/02

WATER ASBUILT INSERTS AND DETAILS



PUBLIC SEWER MAIN PROFILE
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



Plotted: DEC. 26, 2000

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND R. J. ... CHIEF, BUREAU OF UTILITIES 1-2-01 DATE	DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND ... CHIEF, DEVELOPMENT ENGINEERING DIVISION 1/26/01 DATE
--	---

BENCHMARK ENGINEERING, INC.
 ENGINEERS • LAND SURVEYORS • PLANNERS
 8480 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-483-8100 FAX: 410-483-8044

Donald Mean
 PROFESSIONAL ENGINEER
 STATE OF MARYLAND
 11/26/00

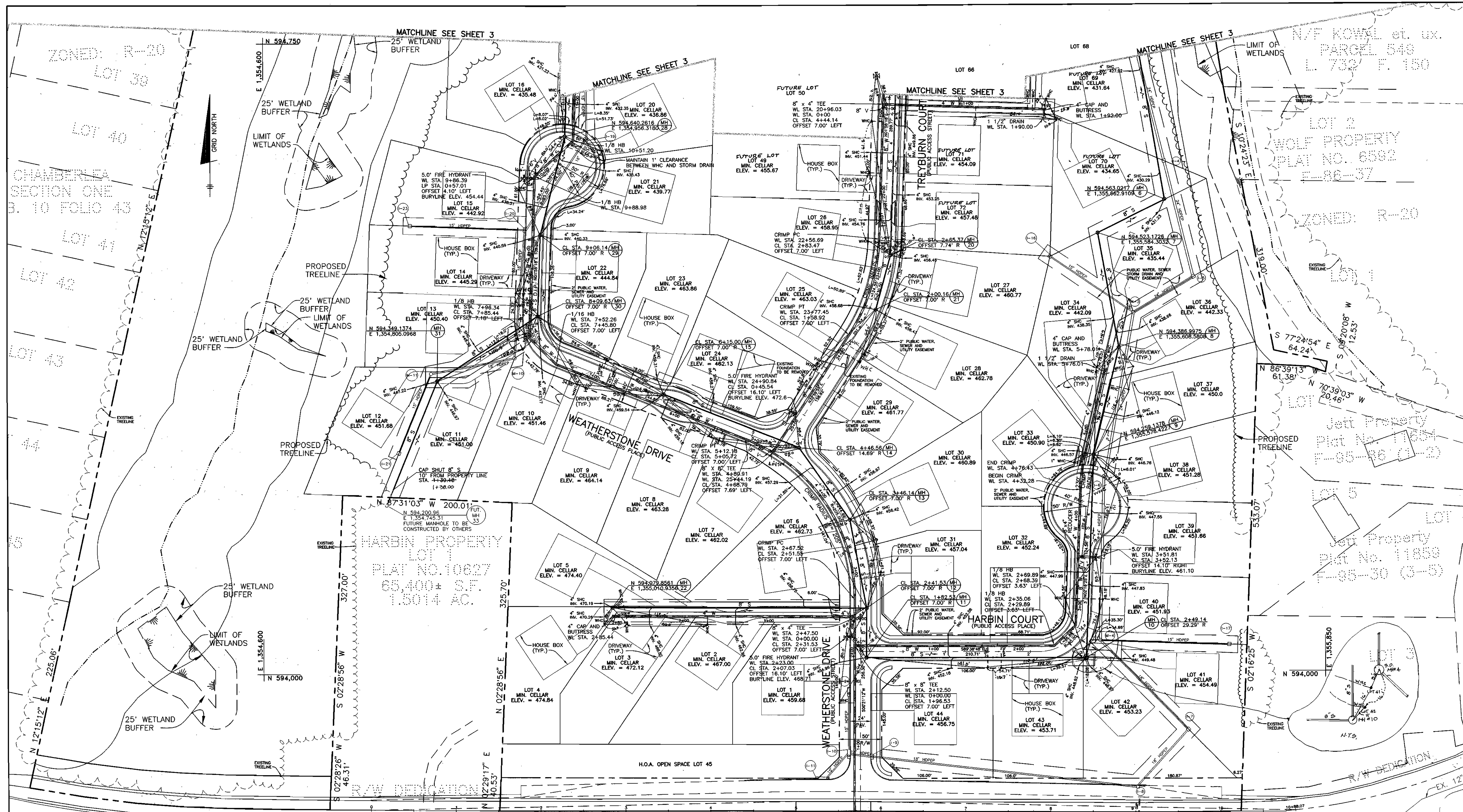
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DRN:	JMC			
CHK:	DAM			
DATE:	8/00	KCI	1	ASBUILT CONDITIONS ADDED TO PLAN 02/25/02
BY:		NO.		REVISIONS

SEWER MAIN PROFILE
 600 SCALE MAP NO. 17
 BLOCK 9

TREYBURN
 PHASE 1, LOTS 1-48 AND
 NON-BUILDABLE PARCELS A-C (FUTURE LOTS)
 AND FUTURE PHASE 2, LOTS 49-72 (F-01-76)
 ELECTION DISTRICT NO. 2

CONTRACT No. 24-3867-D

SCALE: AS SHOWN
 SHEET NO. 4 OF 8



EX. 12" WATER (CONT. No. 71 W) EX. FIRE HYDRANT (CONT. No. 71 W)
 8" S (CONT. No. 2738-S-A)

MD ROUTE 99 - OLD FREDERICK ROAD (EX. MINOR ARTERIAL)
 EX. 12" WATER (CONT. No. 71 W) EX. FIRE HYDRANT (CONT. No. 71 W)

NOTE: WATER CONNECTION SHALL BE MADE BY OPEN CUTTING MS ROUTE 99. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING THE ROADWAY

NOTE: SEE SHEETS 1/B, 5/B, 6/B AND 7/B FOR ADDITIONAL ASBUILT INSERTS AND DETAILS. WATER ASBUILT 09/10/02

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Robert M. Benjamin 1-2-01
 CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND
 [Signature] 1/6/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

BENCHMARK ENGINEERING, INC.
 ENGINEERS • LAND SURVEYORS • PLANNERS
 8400 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLSWORTH CITY, MARYLAND 21043
 PHONE: 410-485-8105 FAX: 410-485-8844

DES: JMC

DRN: JMC

CHK: DAM

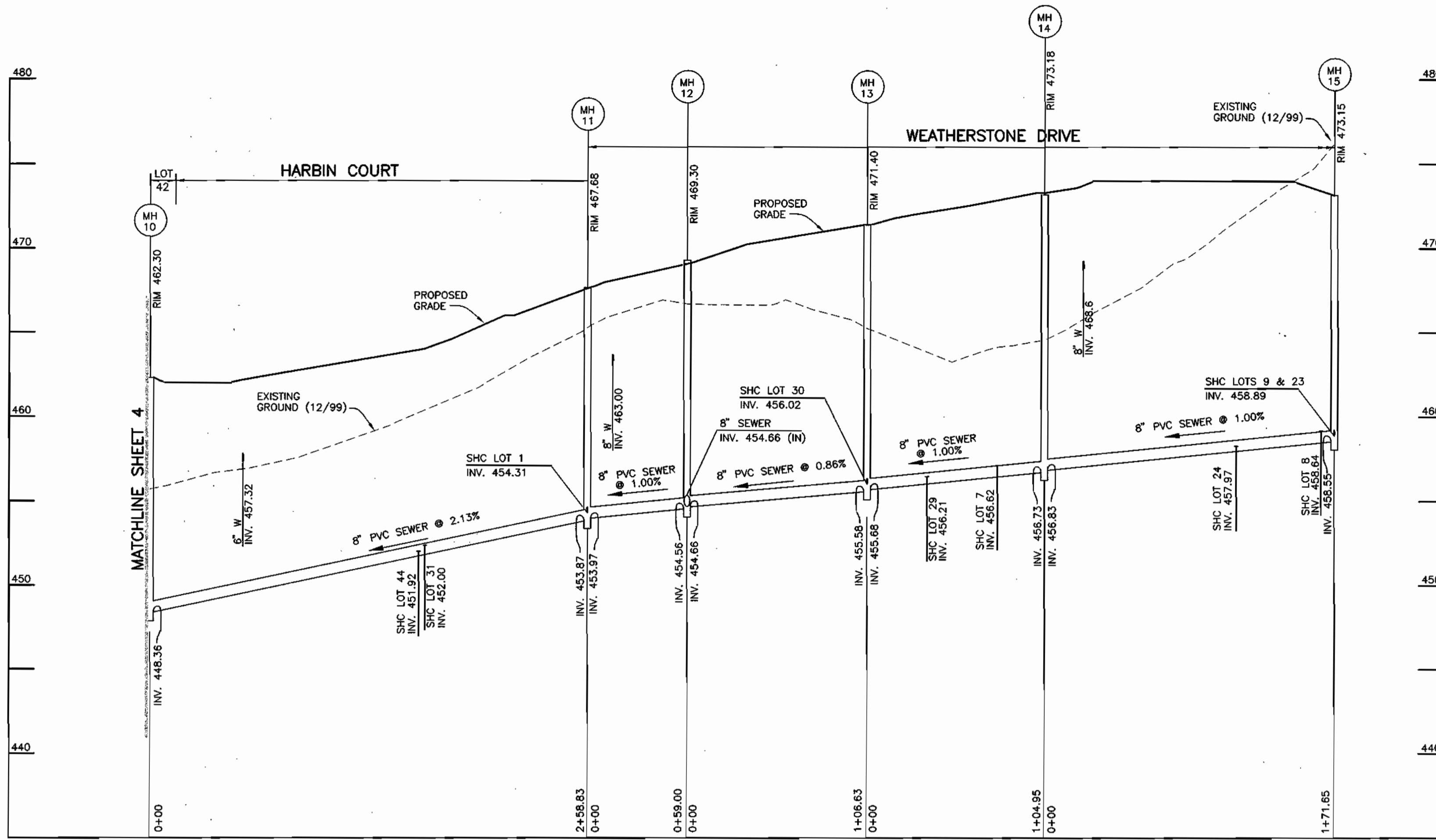
DATE: 8/00

KCI	ASBUILT CONDITIONS ADDED TO PLAN	09/10/02
KCI	ASBUILT CONDITIONS ADDED TO PLAN	09/10/02
JTC	CHANGE SINGLE WHC TO DOUBLE WHC	12-15-01
BY NO.	REVISIONS	DATE

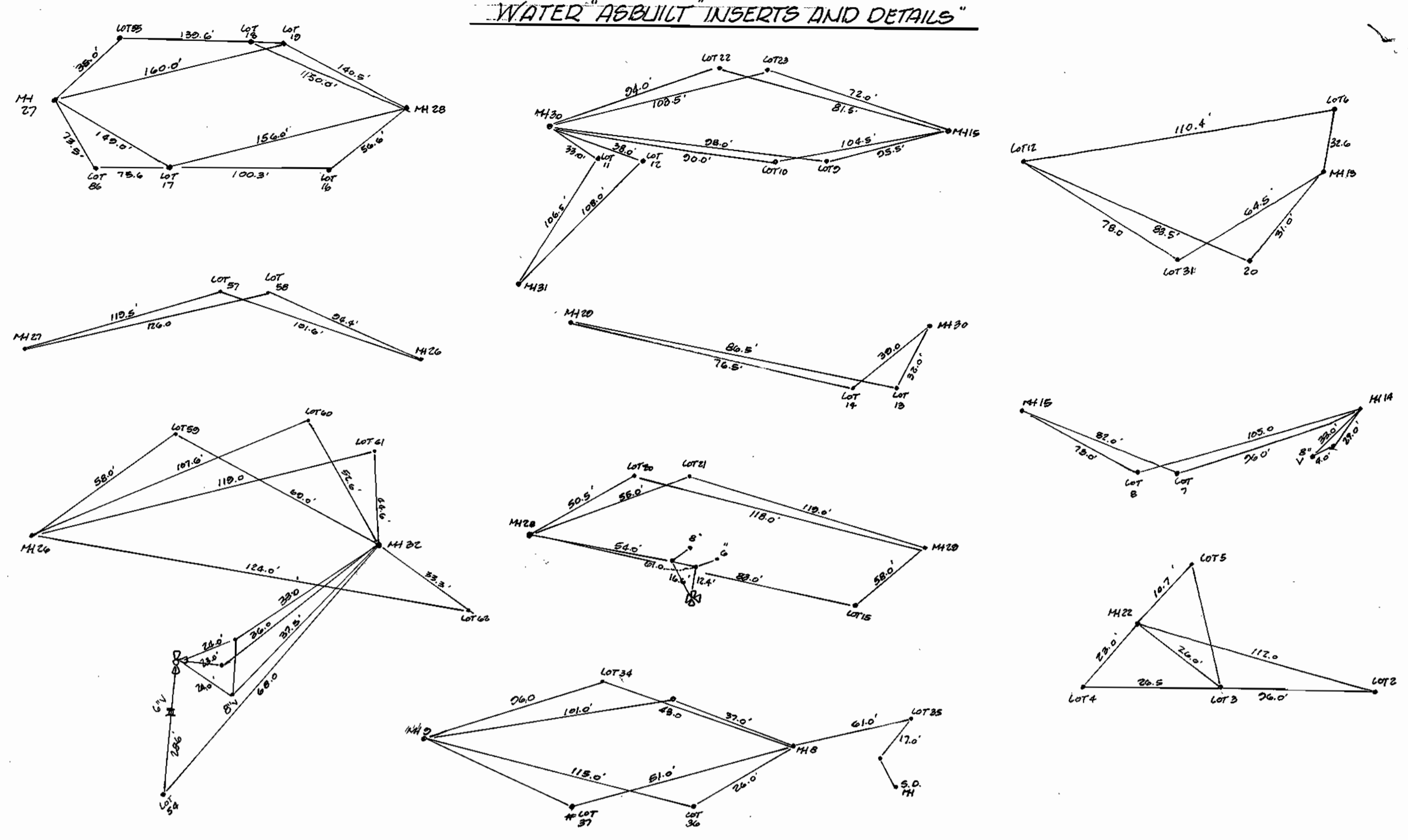
PLAN VIEW
 600 SCALE MAP NO. 17
 BLOCK 9

TREYBURN
 PHASE 1, LOTS 1-48 AND NON-BUILDABLE PARCELS A-C (FUTURE LOTS) AND FUTURE PHASE 2, LOTS 49-72 (F-0176)
 ELECTION DISTRICT NO. 2
 CONTRACT No. 24-3867-D
 SCALE: 1" = 50'
 SHEET NO. 2A OF 8

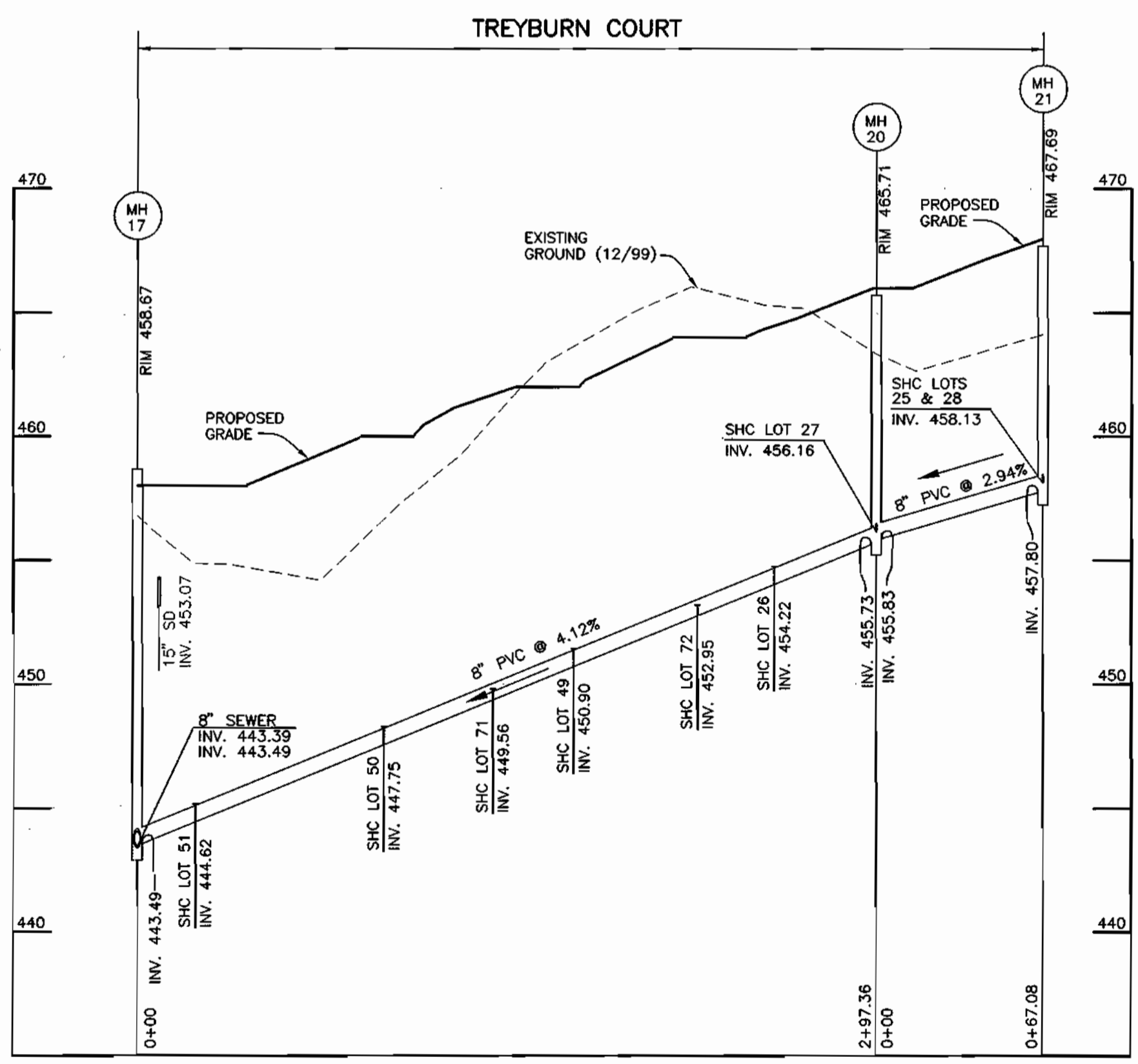
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 Acad. Desig. 6046E1



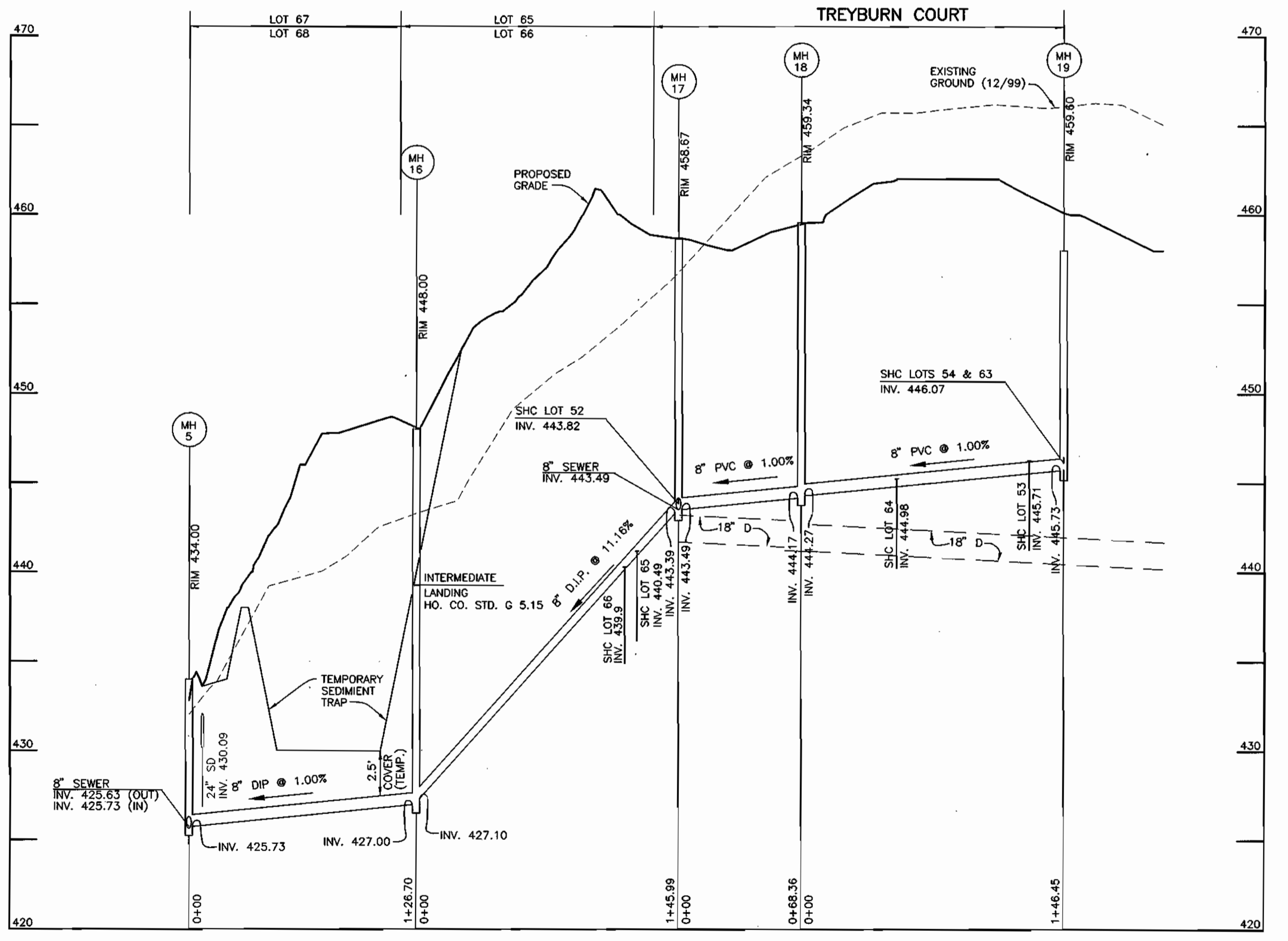
PUBLIC SEWER MAIN PROFILE
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



WATER ABSEULT INSERTS AND DETAILS



PUBLIC SEWER MAIN PROFILE
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



PUBLIC SEWER MAIN PROFILE
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'

Acad Dwg: 604651
 Plotted: DEC. 26, 2000

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND



DES:	JMC		
DRN:	JMC		
CHK:	DAM		
DATE:	8/00	K.C.I.	1
BY:	NO.	REVISIONS	DATE

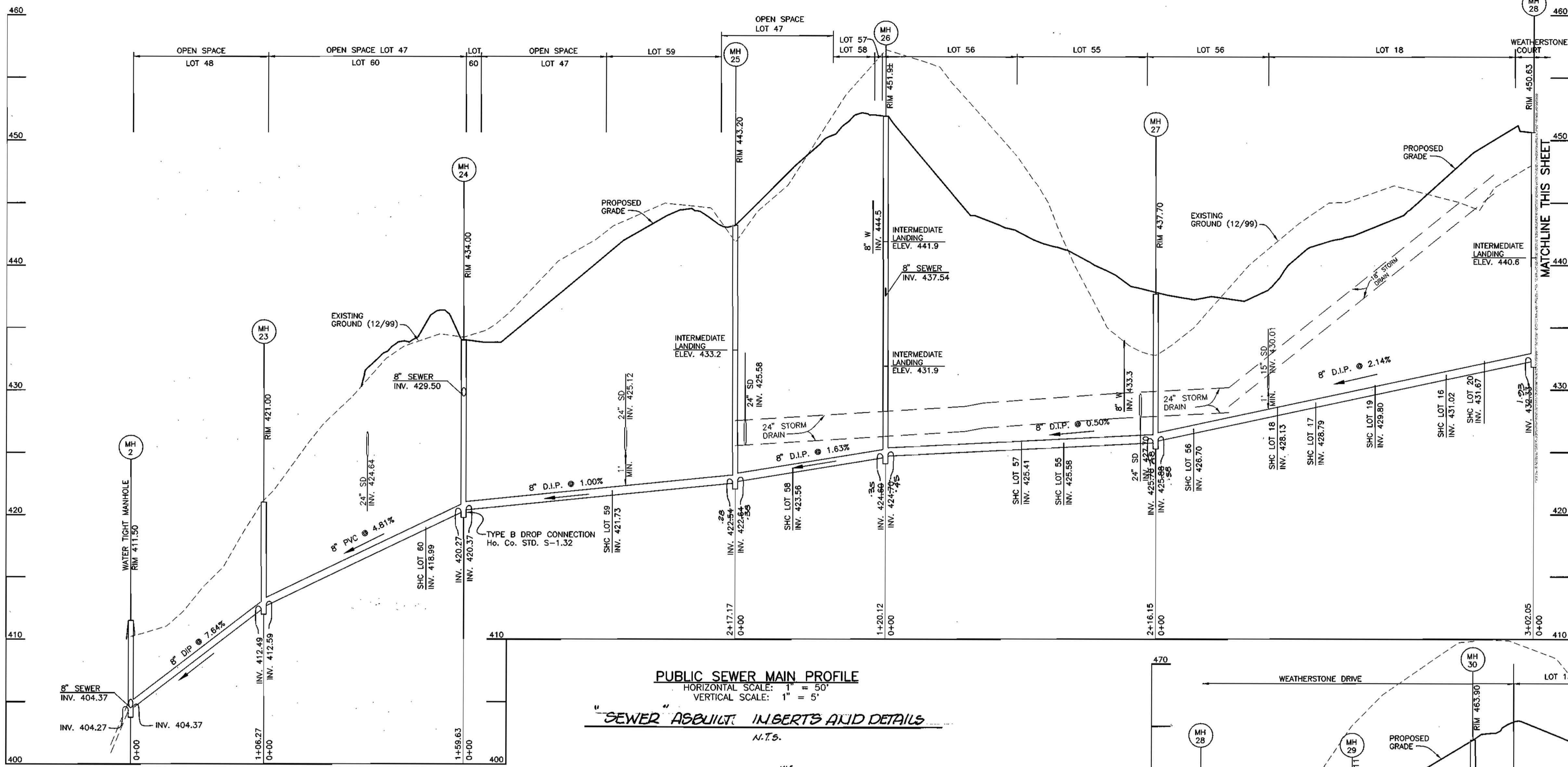
WATER AND SEWER
 MAIN PROFILES

TREBYRN
 PHASE 1, LOTS 1-48 AND
 NON-BUILDABLE PARCELS A-C (FUTURE LOTS)
 AND FUTURE PHASE 2, LOTS 49-72 (F-01-76)
 ELECTION DISTRICT NO. 2

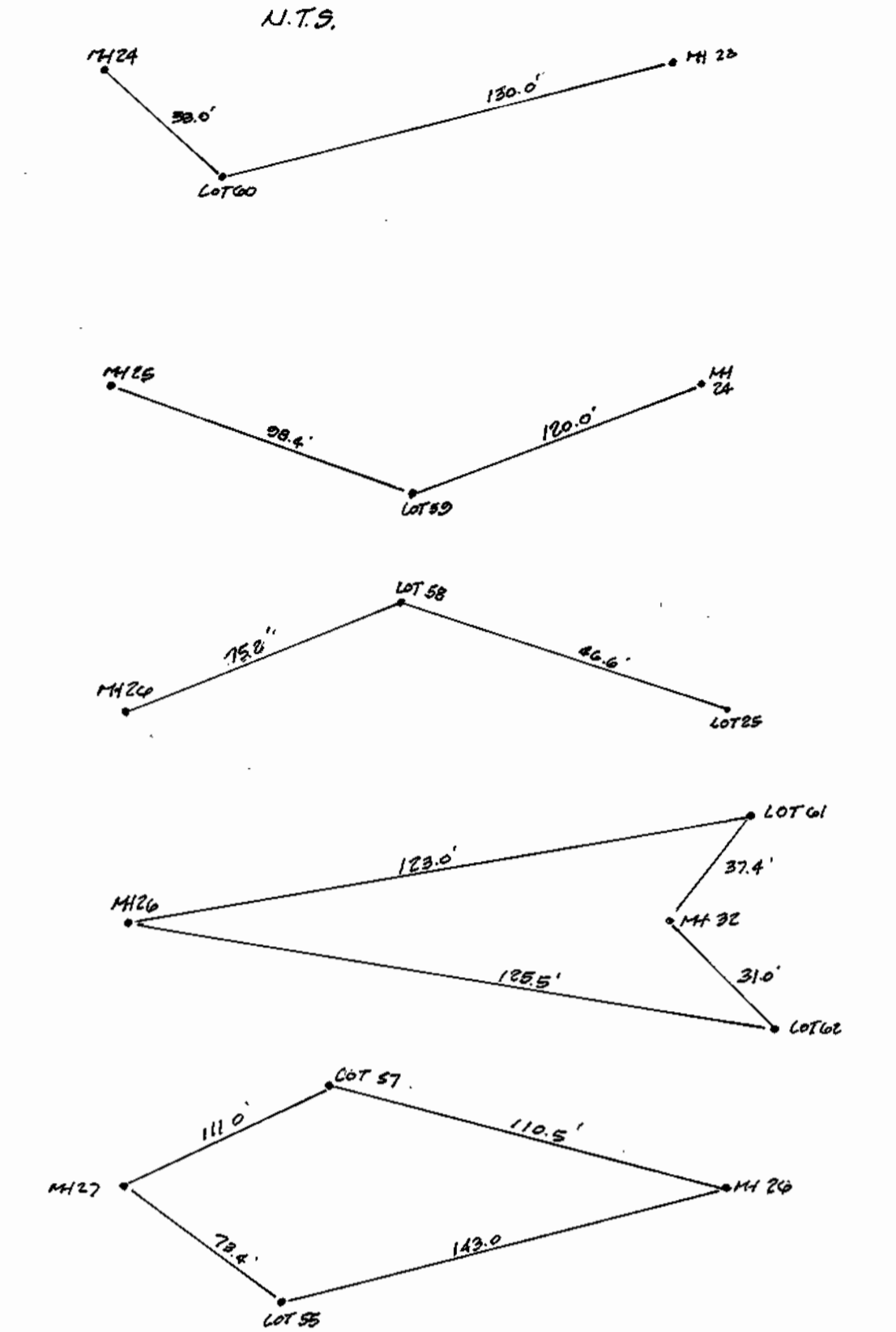
SCALE:
 AS SHOWN
 SHEET NO.
 5 OF 8

CONTRACT No. 24-3867-D

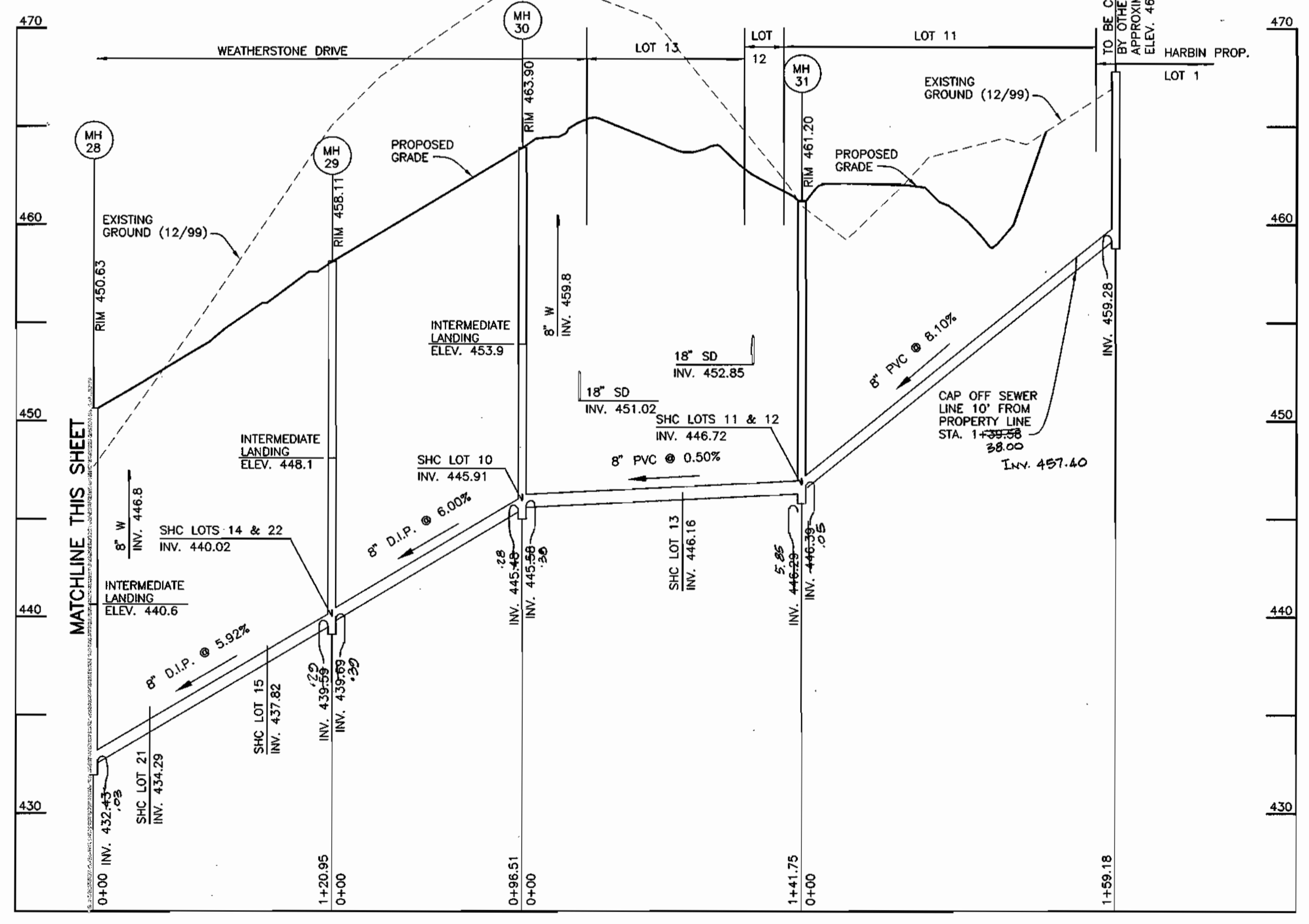
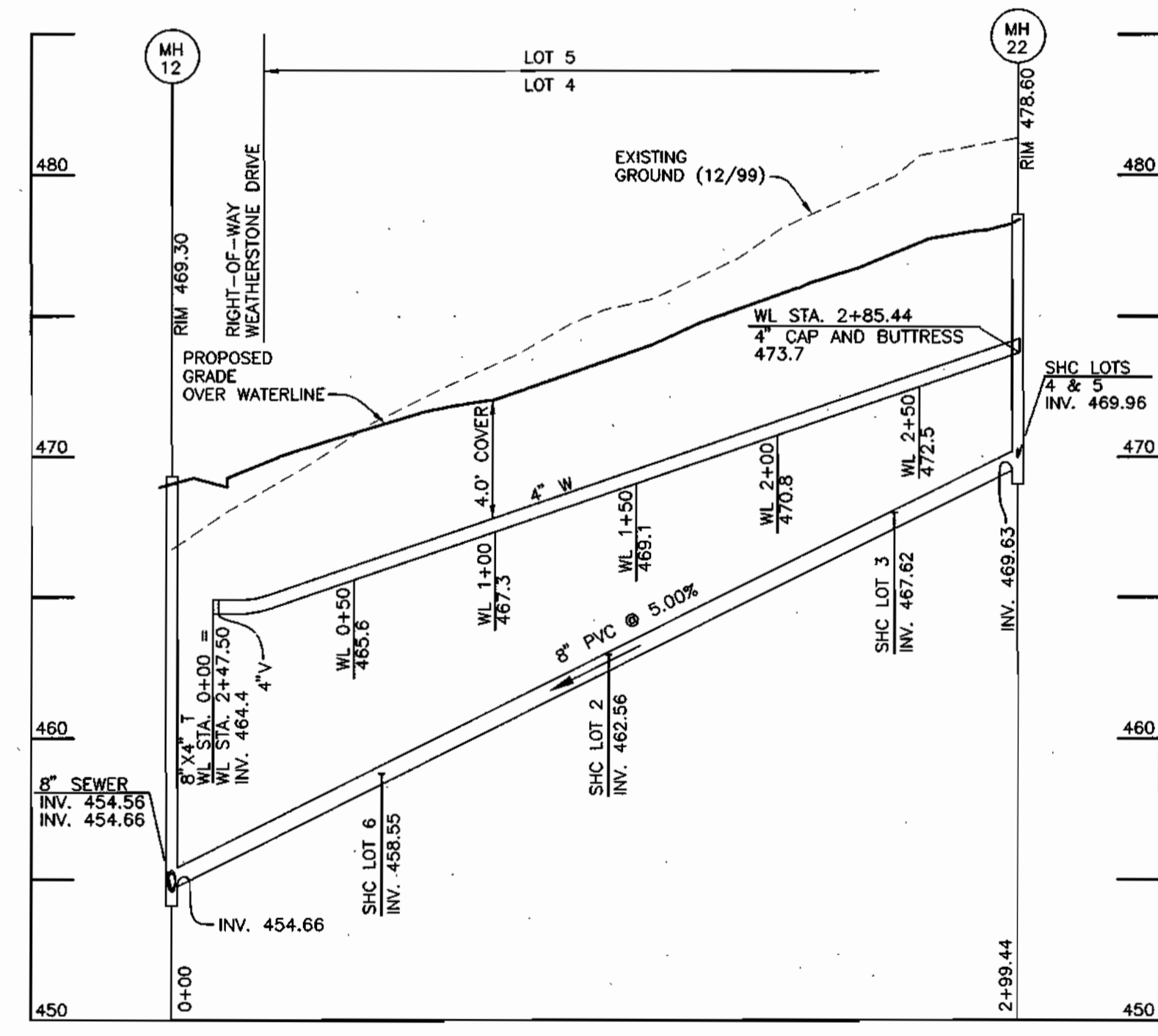
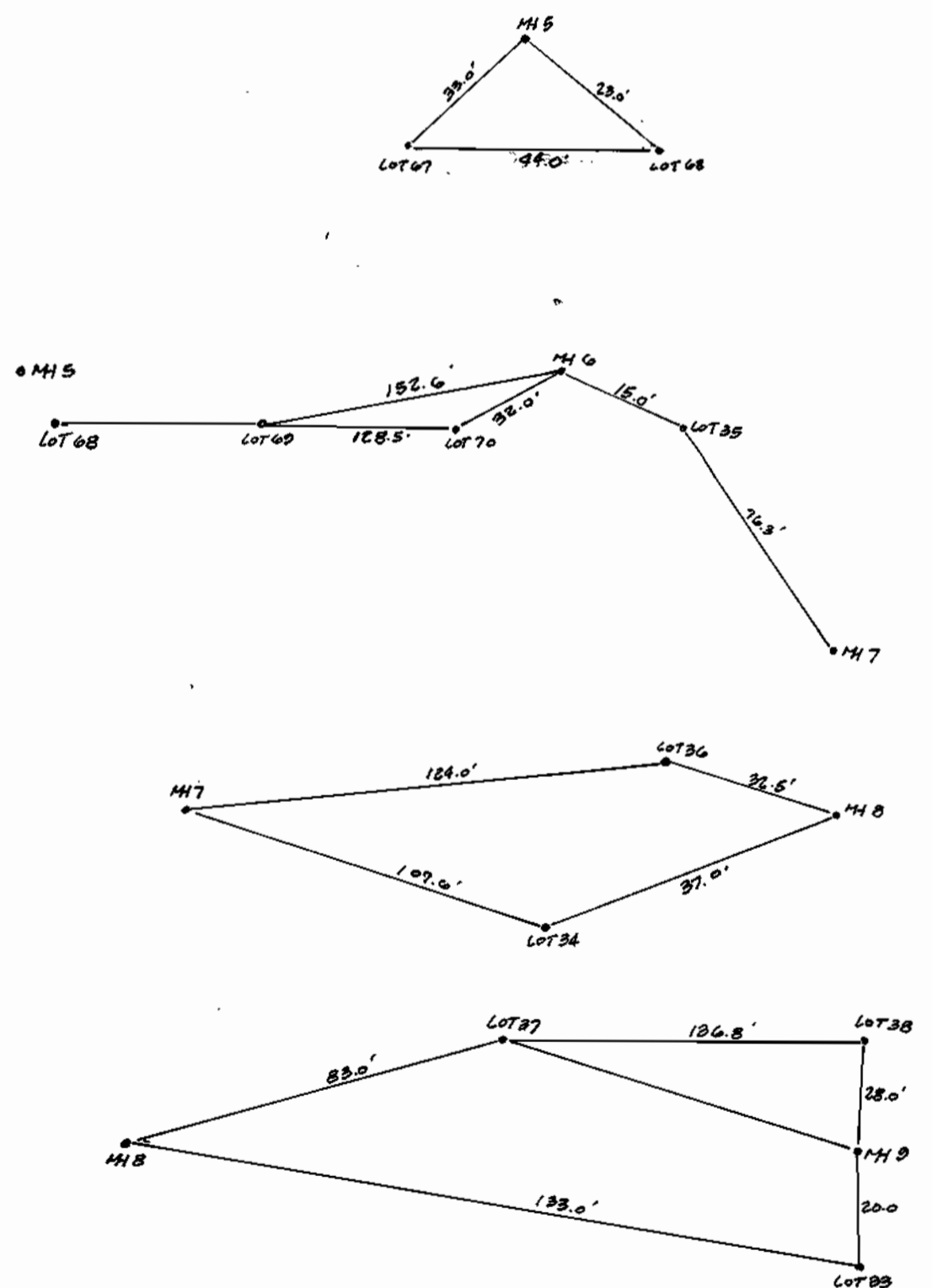
600 SCALE MAP NO. 17 BLOCK 9



"SEWER" ASBUILT INSERTS AND DETAILS
N.T.S.



PUBLIC SEWER MAIN PROFILE
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'
"SEWER" ASBUILT INSERTS AND DETAILS
N.T.S.



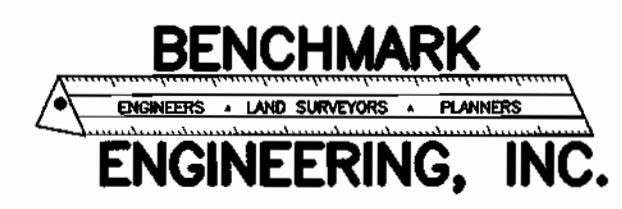
PUBLIC WATER MAIN AND SEWER MAIN PROFILE
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

PUBLIC SEWER MAIN PROFILE
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

Printed: DEC. 26, 2000

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND



Donald Moan
1/6/01

DES:	DAM				
DRN:	JMC				
CHK:	DAM				
DATE:	8/00	K.C.I.	ASBUILT DATA, AND INSERT DETAILS SHOWN ON PALS DRAWING		
BY:		NO.		REVISIONS	DATE

WATER AND SEWER PROFILES

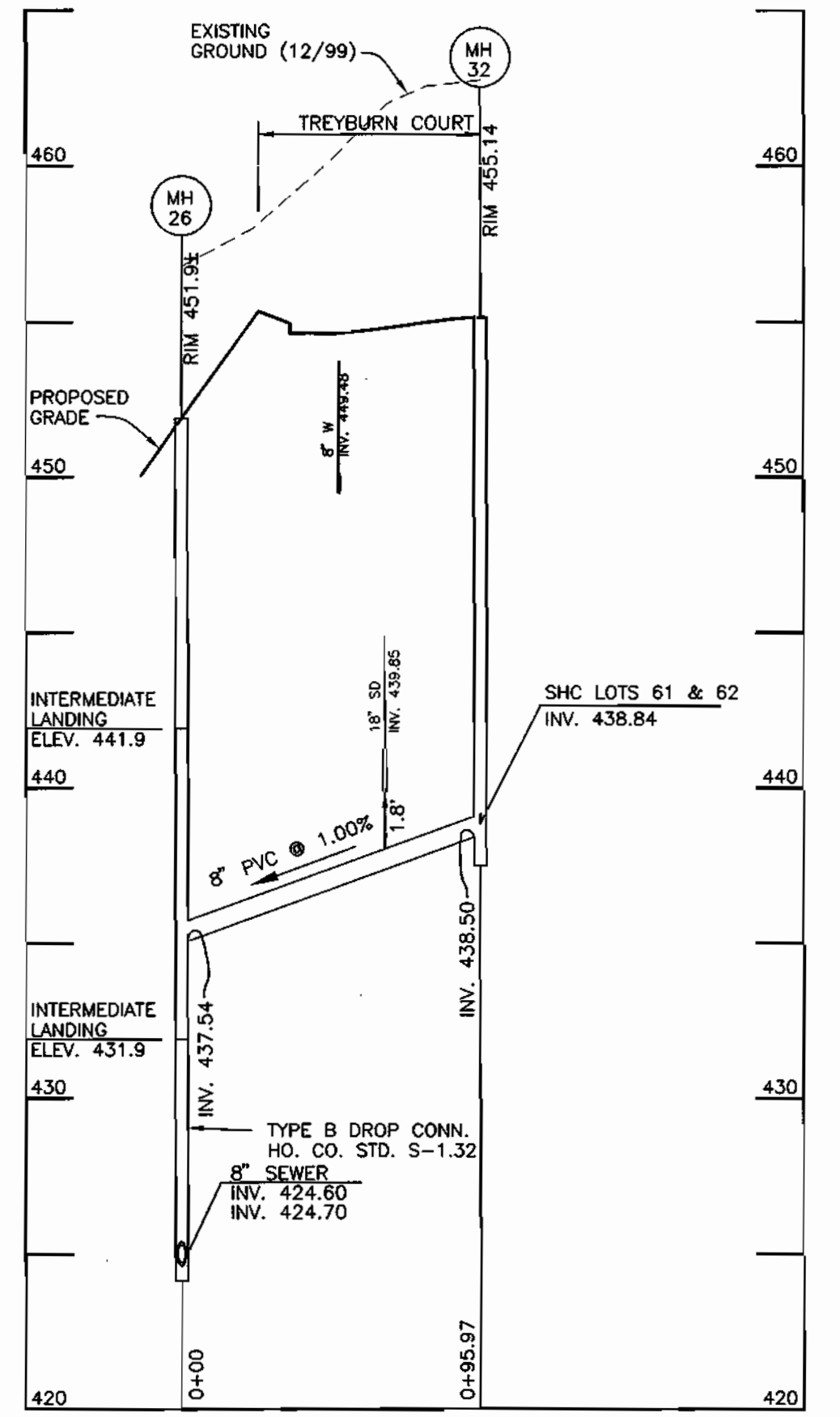
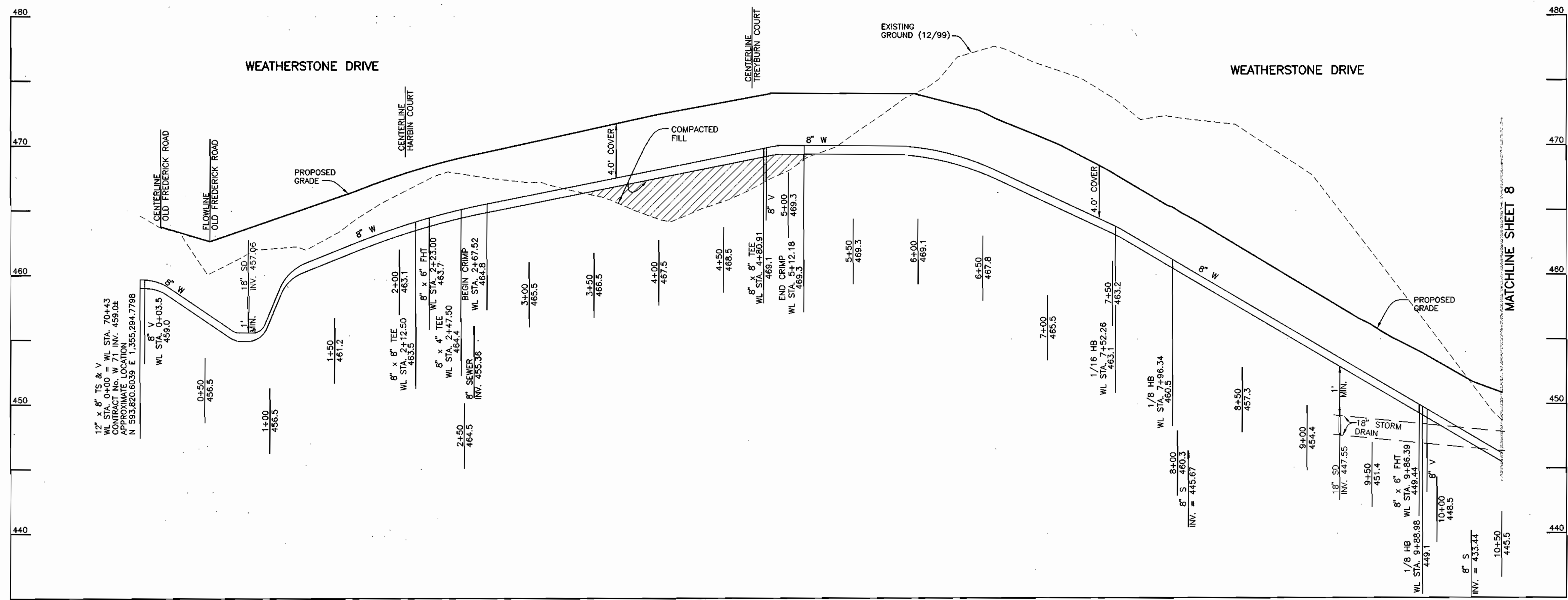
TREYBURN
PHASE 1, LOTS 1-48 AND
NON-BUILDABLE PARCELS A-C (FUTURE LOTS)
AND FUTURE PHASE 2, LOTS 49-72 (F-01-76)
ELECTION DISTRICT NO. 2

SCALE:
AS SHOWN
SHEET NO.
6 OF 8

CONTRACT No. 24-3867-D

600 SCALE MAP NO. 17

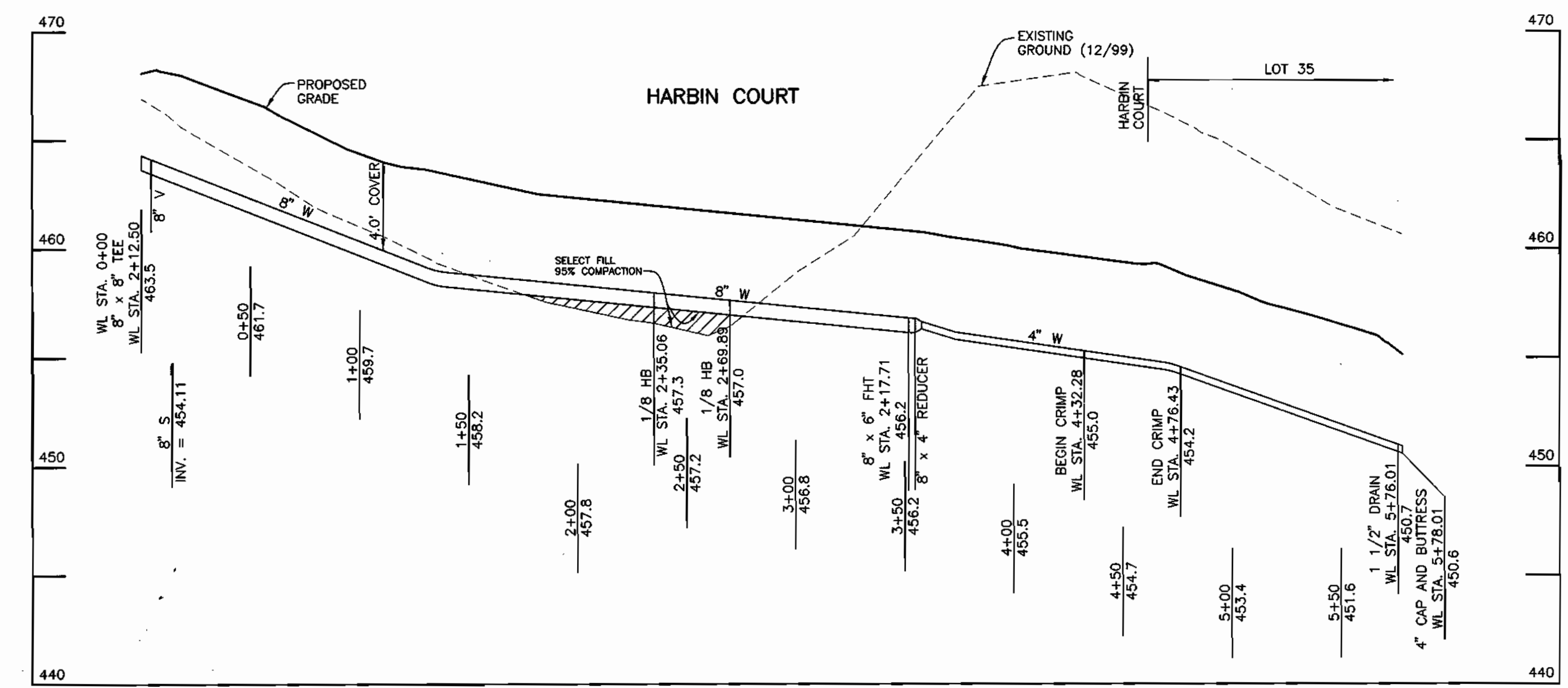
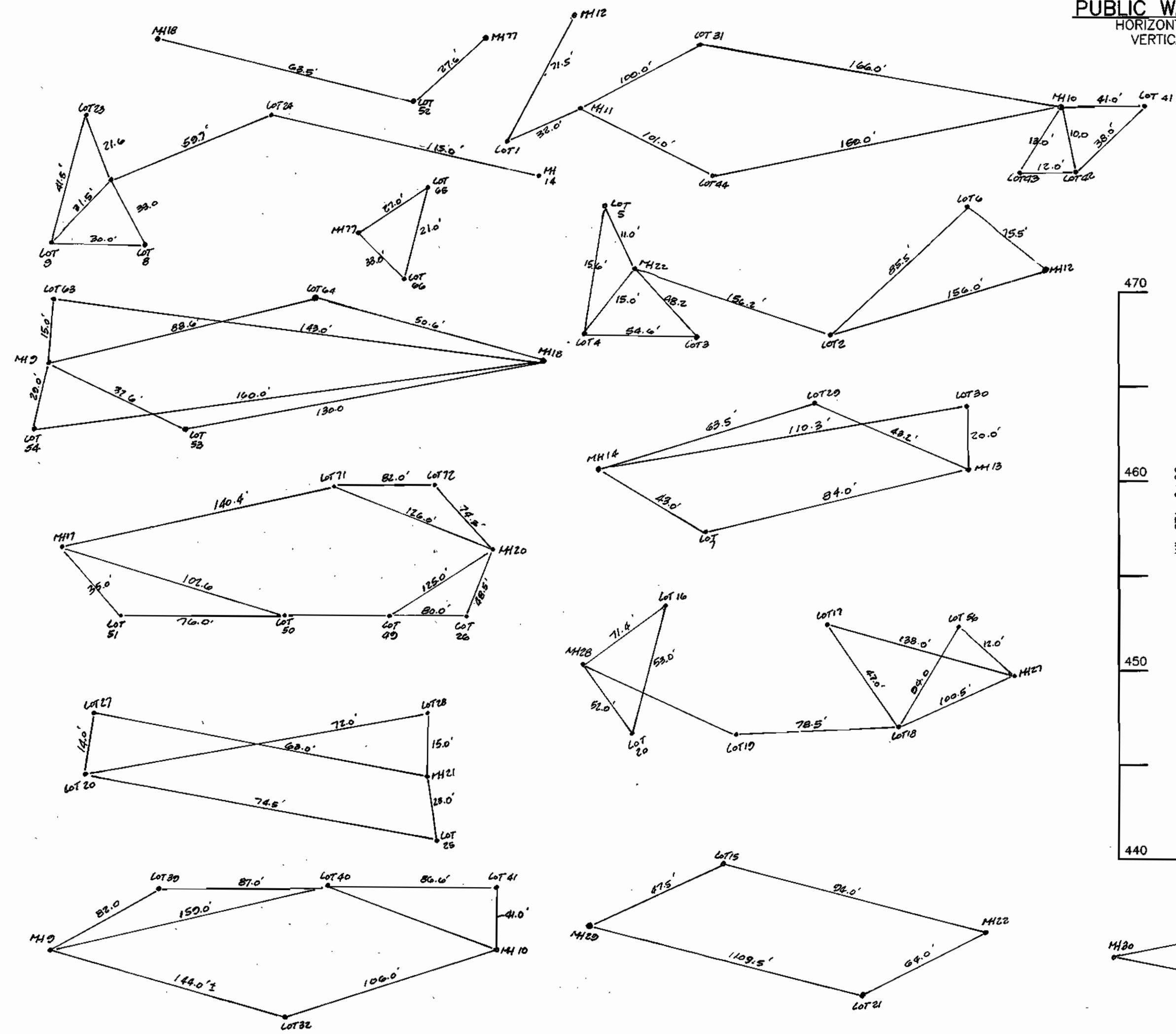
BLOCK 9



"SEWER ASBUILT INSERTS AND DETAILS"

PUBLIC WATER MAIN PROFILE
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

PUBLIC SEWER MAIN PROFILE
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



PUBLIC WATER MAIN PROFILE
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
R. B. B. Bureau of Utilities
12-01
DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
Donald Mann
1/2/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE

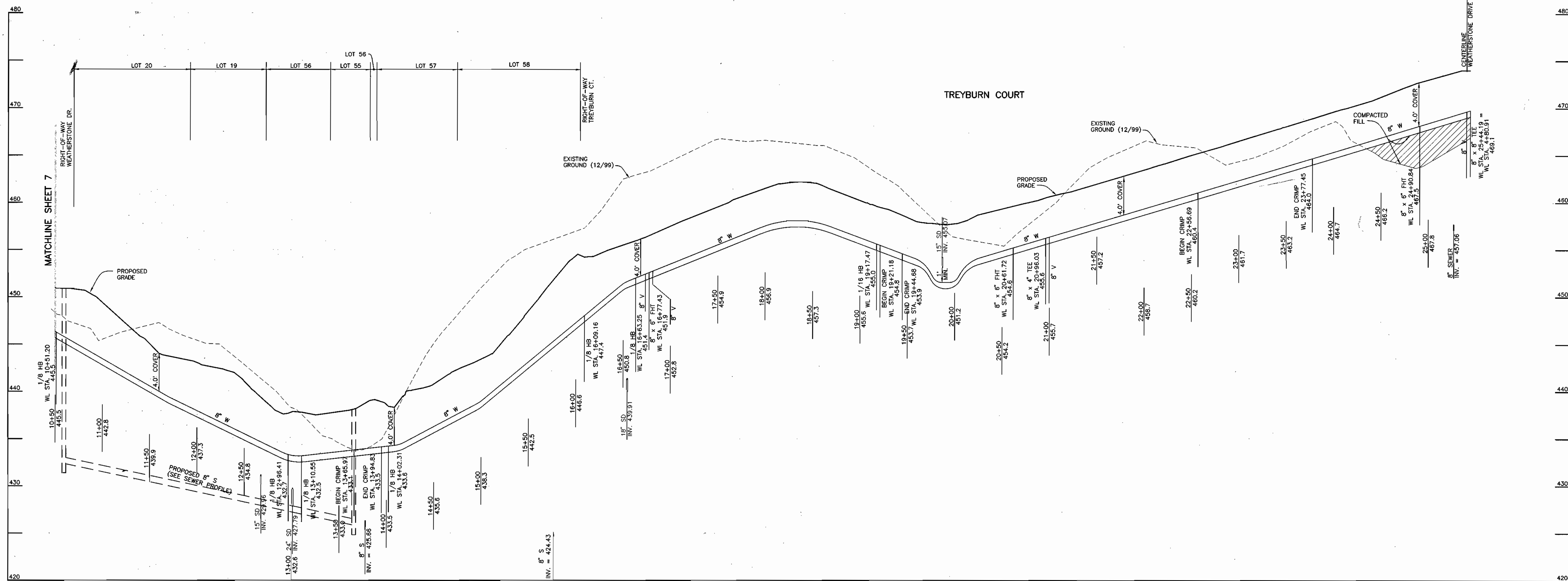
BENCHMARK
ENGINEERING, INC.
DONALD MANN
4400 BALTIMORE NATIONAL PIKE - SUITE 415 - BELTSVILLE CITY, MARYLAND 211043
PHONE: 410-485-0105 FAX: 410-485-9944
1/26/00

DES:	JMC				
DRN:	JMC				
CHK:	DAM				
DATE:	8/00	KCI	1	AS BUILT CONDITIONS ADDED TO PLAN	08/25/02
BY:	NO.	REVISIONS	DATE		

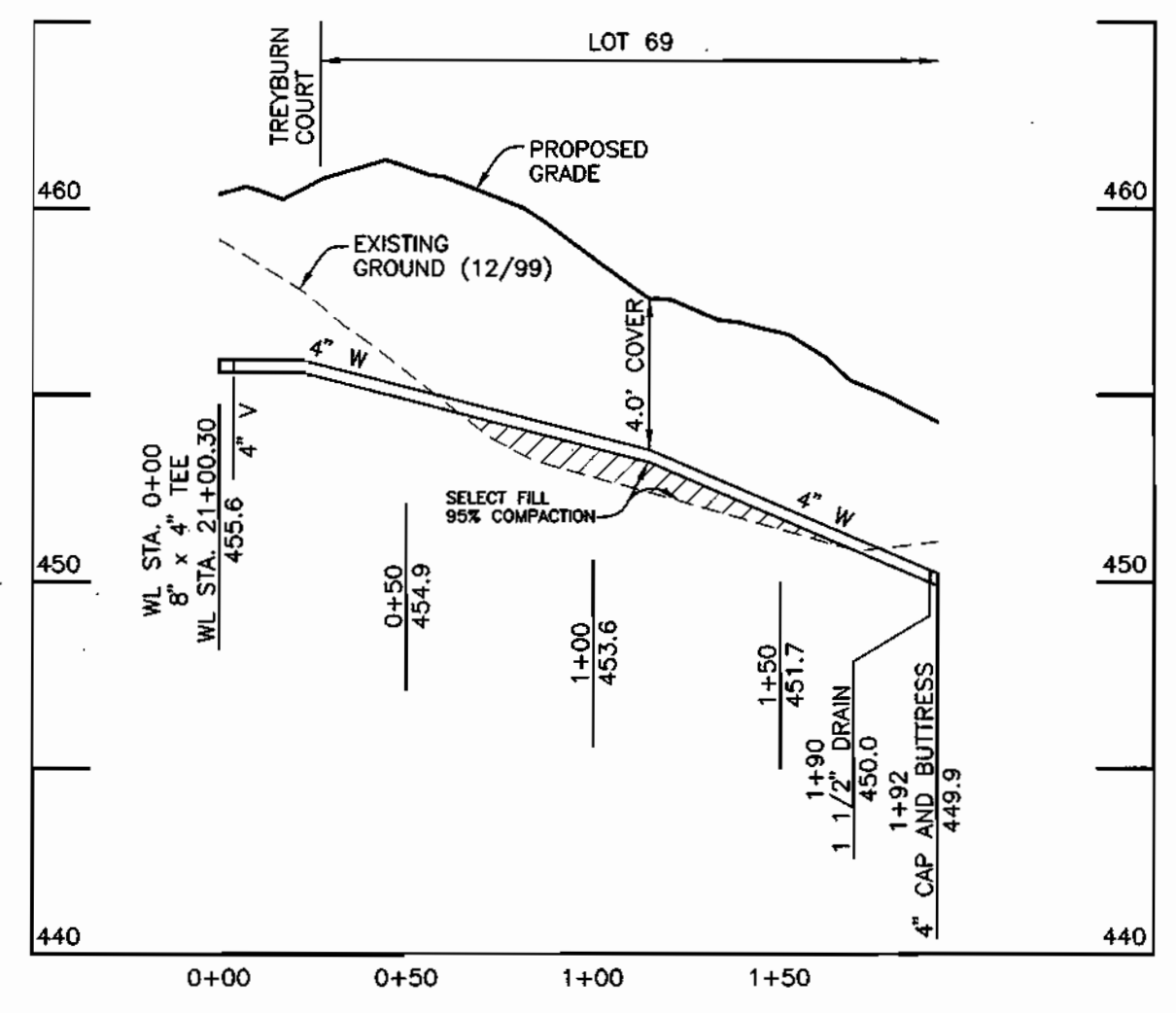
WATER AND SEWER
MAIN PROFILES
600 SCALE MAP NO. 17
BLOCK 9

TREYBURN
PHASE 3, LOTS 1-48 AND
NON-BUILDABLE PARCELS A-C (FUTURE LOTS)
AND FUTURE PHASE 2, LOTS 49-72 (F-01-76)
ELECTION DISTRICT NO. 2
CONTRACT No. 24-3867-D
SCALE: AS SHOWN
SHEET NO. 7 OF 8

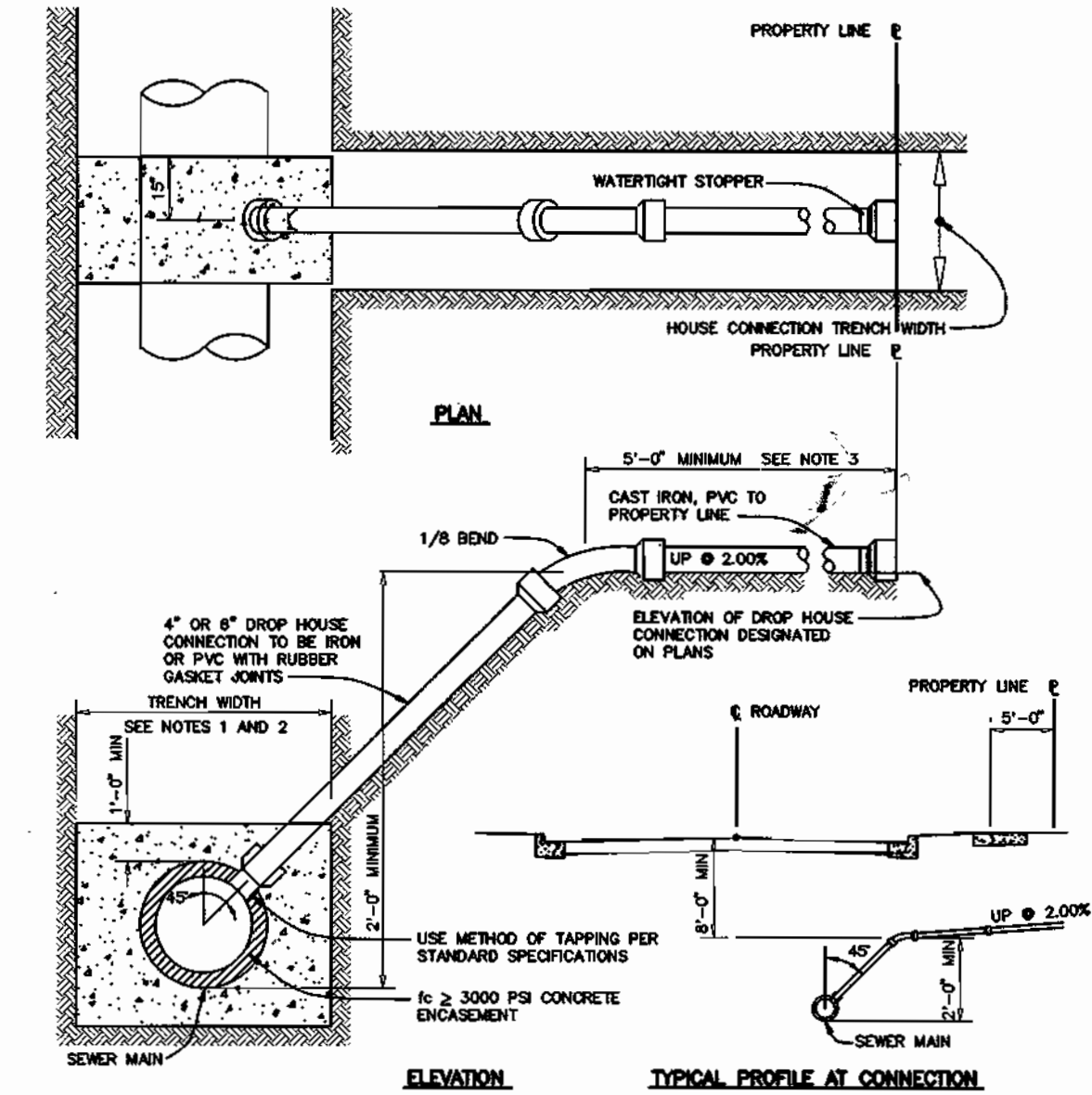
Plotted: DEC. 26, 2000



PUBLIC WATER MAIN PROFILE
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



PUBLIC WATER MAIN PROFILE
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



4" & 6" DROP HOUSE CONNECTION TO SEWER MAIN
 NOT TO SCALE
 HOWARD COUNTY DESIGN MANUAL - VOL II
 WATER AND SEWER - APPENDIX 13

Acad Dwg: 604651
 Plotted: DEC. 26, 2000

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Chief, Bureau of Utilities

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND
 Chief, Development Engineering Division

BENCHMARK ENGINEERING, INC.
 ENGINEERS • LAND SURVEYORS • PLANNERS
 6480 BALTIMORE NATIONAL PARK • SUITE 418 • ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-685-8105 FAX: 410-685-8844

Professional Engineer Seal for Ronald M. [Name]
 License No. [Number]

DES:	JMC				
DRN:	JMC				
CHK:	DAM				
DATE:	8/00				
BY:		NO.		REVISIONS	DATE

WATER MAIN PROFILES
 600 SCALE MAP NO. 17 BLOCK 9

TREYBURN
 PHASE I, LOTS 1-48 AND
 NON-BUILDABLE PARCELS A-C (FUTURE LOTS)
 AND FUTURE PHASE 2, LOTS 49-72 (F-01-78)
 ELECTION DISTRICT NO. 2
 CONTRACT No. 24-3867-D

SCALE:
 AS SHOWN
 SHEET NO.
 8 OF 8

PUBLIC WATER AND SEWER CONSTRUCTION PLANS

TREYBURN

PHASES 1 AND 2

2nd ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

CONTRACT No. 24-3867-D

BENCH MARKS (NAD83)
 HO. CO. No. 17EA ELEV. 373.36
 STAMPED BRASS DISK SET ON
 TOP OF CONCRETE (3" DEEP) COLUMN
 LOCATED IN THE ISLAND IN FRONT OF MOUNT
 HEBRON HIGH SCHOOL, 33.7' SOUTH OF THE
 FLAG POLE AND 21.3' NORTH OF THE CURB
 AND 49.7' WEST OF A 15" WHITE PINE.
 N 594,357.7264' E 1,357,519.3741'

HO. CO. No. 17EB ELEV. 348.10
 STAMPED BRASS DISK SET ON
 TOP OF CONCRETE (3" DEEP) CYLINDRICAL BASE
 LOCATED 224' WEST OF THE ENTRANCE TO
 BETHANY FIRE STATION, 19' SOUTH OF THE
 CENTERLINE OF OLD FREDERICK ROAD AND
 38.6' EAST OF C&E POLE #474631.
 N 593,814.0053' E 1,335,731.8846'

GENERAL NOTES

PART 1 - GENERAL

1. APPROXIMATE LOCATION OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SUPPLY. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
2. ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.
3. ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATA.
4. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
5. CLEAR ALL UTILITIES BY A MINIMUM OF 6'. CLEAR ALL POLES BY 2'-0" MINIMUM OR TUNNEL AS REQUIRED. THE OWNER HAS CONTACTED THE UTILITY COMPANIES AND HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON THE DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONEY OWED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
6. FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS USE HOWARD COUNTY DESIGN MANUAL VOLUME IV, STANDARD SPECIFICATIONS AND DETAIL FOR CONSTRUCTION (LATEST EDITION). THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
7. 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. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG 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:
 - STATE HIGHWAY ADMINISTRATION.....410-531-5533
 - BALTIMORE GAS & ELECTRIC CO. CONTRACTOR SERVICES.....410-850-4620
 - BALTIMORE GAS & ELECTRIC CO. UNDERGROUND DAMAGE CONTROL.....410-787-9068
 - MISS UTILITY.....1-800-257-7777
 - COLONIAL PIPELINE CO.....410-795-1390
 - HOWARD CO. DEPT. OF PUBLIC WORKS.....410-313-4900
 - BUREAU OF UTILITIES.....1-800-446-5266
 - VERIZON.....
8. TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO 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.
11. PLACE REGULATION "MEN WORKING" AND WARNING SIGNS AS REQUIRED TO COMPLY WITH MARYLAND STATE HIGHWAY ADMINISTRATION MANUAL OF TRAFFIC CONTROL FOR HIGHWAY MAINTENANCE OPERATIONS.
12. THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410) 513-2450 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(c) OF THE HOWARD COUNTY CODE.

PART 2 - WATER

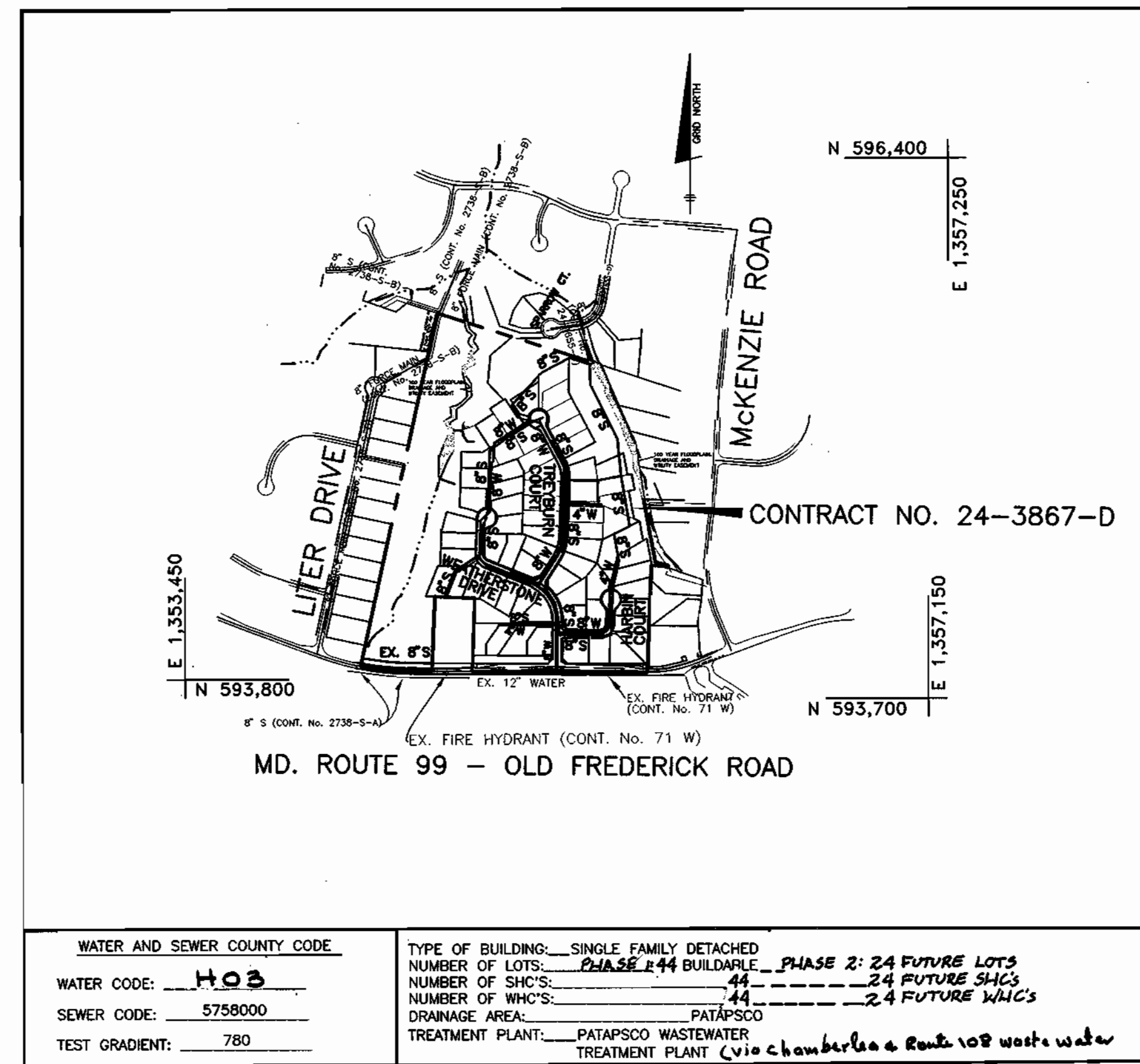
1. ALL WATER MAINS TO BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
2. TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-1/2" COVER UNLESS OTHERWISE NOTED.
3. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
4. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
5. FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE RESTRAINED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS. SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND 1005 OF THE STANDARD SPECIFICATIONS.
6. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
7. ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING UNLESS OTHERWISE NOTED ON PLANS OR IN SPECIFICATIONS. ALL WATER HOUSE CONNECTIONS SHALL BE 1" CONNECTION WITH A 3/4" METER.

PART 3 - SEWER

1. ALL SEWER MAINS SHALL BE DIP OR P.V.C. UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2' - 0" OF EXTERIOR MANHOLE WALL.
3. ALL MANHOLES SHALL BE 4' - 0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
4. FORCE MAINS SHALL BE D.I.P. ONLY.
5. MANHOLES SHOWN WITH 12" AND 18" WALLS ARE FOR BRICK MANHOLES ONLY.
6. MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATER-TIGHT FRAME AND COVERS, STANDARD DETAIL 65.52. WHERE WATER-TIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1" - 6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
7. HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.

SHEET INDEX

NO.	DESCRIPTION
1	TITLE SHEET
2-3	PLAN OF WATER AND SEWER MAINS
4	PROFILES OF WATER AND SEWER MAINS



WATER AND SEWER COUNTY CODE: **HOB**
 WATER CODE: **HOB**
 SEWER CODE: **5758000**
 TEST GRADIENT: **780**

TYPE OF BUILDING: SINGLE FAMILY DETACHED
 NUMBER OF LOTS: **PHASE 1: 44 BLDG. PHASE 2: 24 FUTURE LOTS**
 NUMBER OF SHC'S: **44**
 NUMBER OF WHC'S: **44**
 DRAINAGE AREA: **PATAPSCO**
 TREATMENT PLANT: **PATAPSCO WASTEWATER TREATMENT PLANT (via Chamberlea & Route 108 waste water Pumping Station)**

VICINITY MAP

SCALE: 1" = 600'

LEGEND

EXIST. WATER MAIN	
EXIST. SEWER MAIN	
EXIST. SEWER MANHOLE	
PROP. WATER MAIN	
PROP. SEWER MAIN	
PROP. STORM DRAIN (BY OTHERS)	
PROP. SEWER MANHOLE	
PROP. SEWER HOUSE CONNECTION	
PROP. WATER HOUSE CONNECTION (DOUBLE - 1-1/2" x 1")	
PROP. WATER HOUSE CONNECTION (SINGLE - 1")	
PROP. FIRE HYDRANT	
PROP. VALVE	
PROP. PLUG & BUTTRESS	
PROP. DROP SEWER HOUSE CONNECTION (SEE PLAN VIEW FOR TYPE)	

QUANTITIES

ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUF./SUPPLIER
8" WATER	2898 L.F.	2887	D.I.P.	CRIPPIN BELAR RODS/PIPE
6" WATER	92 L.F.	90	D.I.P.	" " " "
12" x 8" TS&V	1 EA.	1EA.	ORBITER	" " " "
4" WATER	701 L.F.	702	D.I.P.	" " " "
1 1/2" DRAIN	2 EA.	2EA.	BRASS	MUELLER BELAR RODS/PIPE
FIRE HYDRANTS	6 EA.	6EA.	CAST IRON	" " " "
1" WHC	1407 L.F.	1722	COPPER	READLIK " " " "
8" SEWER PVC	3045 L.F.	2049	P.V.C.	J.M. BELAR RODS/PIPE
8" SEWER D.I.P.	2173 L.F.	2019	D.I.P.	CRIPPIN " " " "
MANHOLES	32 EA.	36	PRECAST	ATLANTIS PRECAST
4" SHC P.V.C.	1400 L.F.	1045	P.V.C.	J.M. B.R.S.
4" DHC	25 L.F.	2	D.I.P.	CRIPPIN BRASS
4" SHC		389.0	D.I.P.	CRIPPIN BRASS

NAME OF UTILITY CONTRACTOR: **C.C.S.**
 SURVEY AND DRAFTING DIVISION AS-BUILT DATE:

HOWARD SOIL CONSERVATION DISTRICT:
 REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT
 AND MEETS TECHNICAL REQUIREMENTS

J.L. Wainfield 1/3/01
 NATURAL RESOURCES CONSERVATION SERVICE
 DATE

THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John Robertson 1/3/01
 HOWARD SOIL CONSERVATION DISTRICT
 DATE

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY STANDARD SPECIFICATIONS AND AS PER ROAD CONSTRUCTION PLANS F-01-10

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND

BENCHMARK
 ENGINEERING, INC.
 8400 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-465-6105 FAX: 410-465-0644



DES:	JMC		
DRN:	JMC		
CHK:	DAM	K.C.I.	ADJUSTS DATA ADDED TO PLANS 02/05/01
		K.C.I.	AS-BUILT DATA AND INSERTS DETAILS SHOWN THROUGHOUT PLANS
DATE:	12/00	J.T.C.	CHANGE IN QUANTITY OF WHC 12-15-01
		BY NO.	REVISIONS DATE

TITLE PAGE

TREYBURN
 PHASE 1, LOTS 1-48 AND
 NON-BUILDABLE PARCELS A-C (FUTURE LOTS)
 AND FUTURE PHASE 2, LOTS 49-72 (F-D-76)
 ELECTION DISTRICT NO. 2

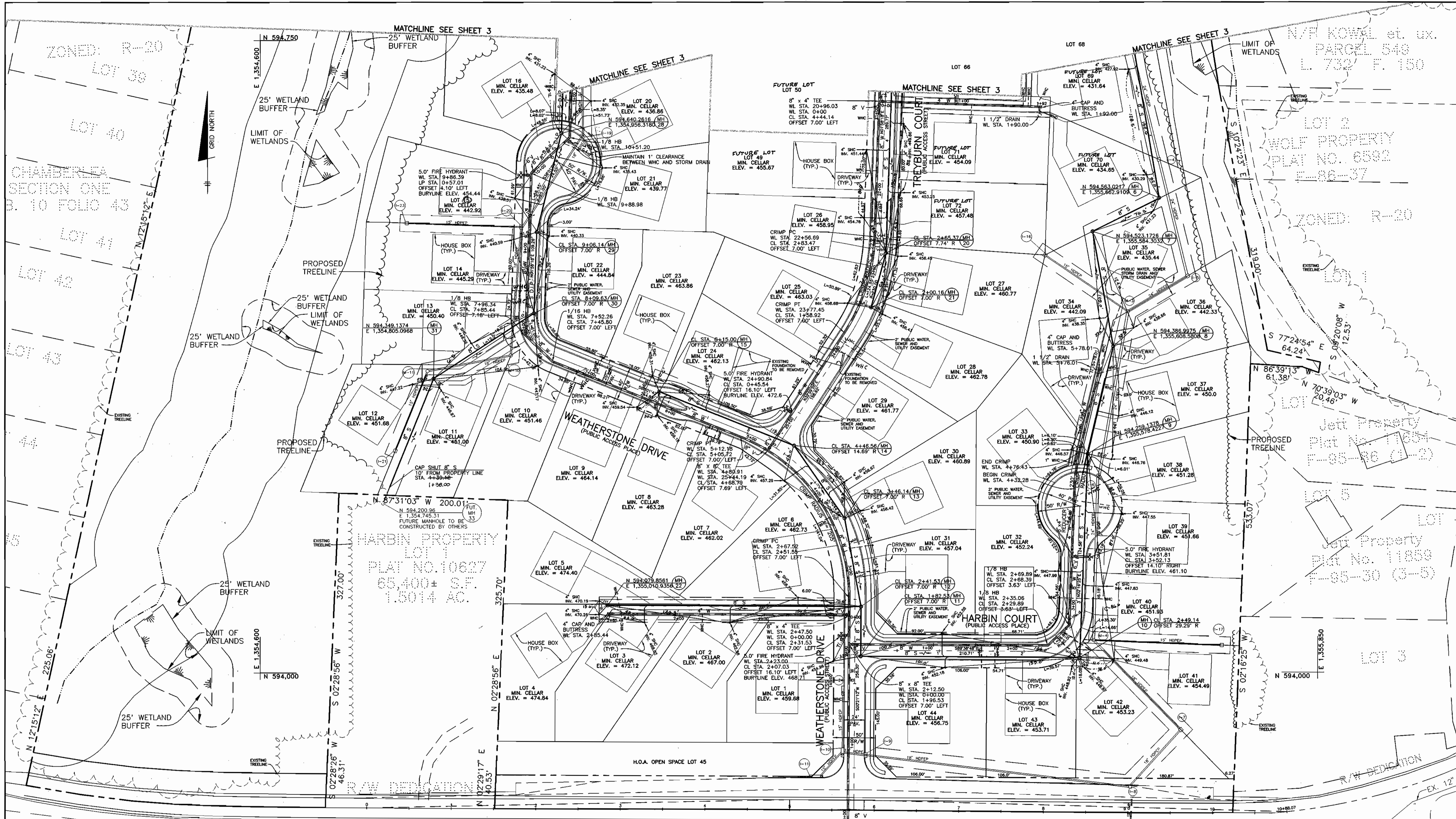
SCALE:
AS SHOWN

SHEET NO.
1 OF 8

CONTRACT No. 24-3867-D

600 SCALE MAP NO. 17

BLOCK 9



MD ROUTE 99 - OLD FREDERICK ROAD
(EX. MINOR ARTERIAL)

NOTE: WATER CONNECTION SHALL BE MADE BY OPEN CUTTING MS ROUTE 99. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING THE ROADWAY

NOTE: SEE SHEETS 4/6/5/6/G/8 AND 7/8 FOR ADDITIONAL ABUILT INBERTS AND DETAILS

SEWER ABUILT 09/05/02

PLAN VIEW

TREYBURN
PHASE 1, LOTS 1-48 AND
NON-BUILDABLE PARCELS A-C (FUTURE LOTS)
AND FUTURE PHASE 2, LOTS 49-72 (F-01-76)
ELECTION DISTRICT NO. 2

CONTRACT No. 24-3867-D

SCALE:
1" = 50'
SHEET NO.
2 OF 8

Printed: DEC. 26, 2000

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

BENCHMARK
ENGINEERS - LAND SURVEYORS - PLANNERS
ENGINEERING, INC.

Donald M. ...
Professional Engineer Seal

DES:	JMC		
DRN:	JMC		
CHK:	DAM	K.C.T.	ABUILT CONDITIONS ADDED TO PLAN 09/05/02
		K.R.I.	ABUILT CONDITIONS ADDED TO PLAN 08/01/02
DATE:	8/00	J.T.C.	CHANGE SINGLE WHC TO DOUBLE WHC 12-15-01
		BY:	NO.
		REVISIONS:	DATE

12" x 8" TS & V
WL STA. 0+00 =
WL STA. 70+43.5
CONTRACT No. W 71
INV. 459.02
APPROXIMATE LOCATION
N 503,820.6039
E 1,355,294.7798

600 SCALE MAP NO. 17
BLOCK 9