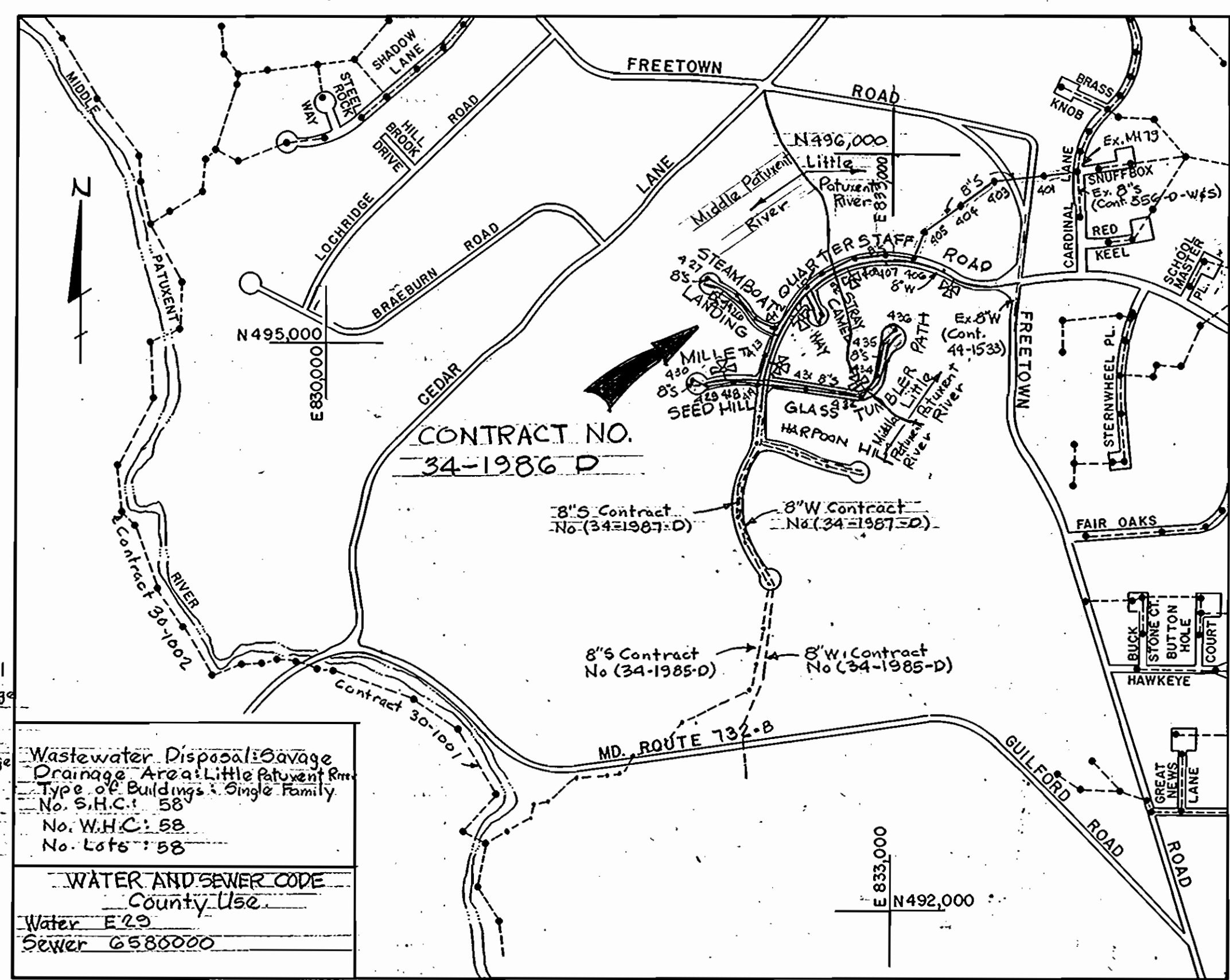


QUANTITIES			
ITEM	BID	AS-BUILT	MATERIAL/SUPPLIER
8" Water L.F.	3070	3091	GREEN PIPE PRODUCTS
1" W.H.C. L.F.	450	163	MUNICIPAL CONTRACTORS
8" Valve Ea.	7	8	MUNICIPAL CONTRACTORS
Fire Hydrants Ea.	7	7	MUNICIPAL CONTRACTORS
8" Sewer L.F.	3305	3099	MUNICIPAL CONTRACTORS
Manholes Ea.	21	21	ATLANTIC CONCRETE
6" S.H.C. L.F.	160	357	A.P. WHEE & SONS
4" S.H.C. L.F.	1310	1957	MUNICIPAL CONTRACTORS
3/4" W.H.C. L.F.	940	1290	MUNICIPAL CONTRACTORS
Drop Manholes Ea.	3	3	ATLANTIC CONCRETE
4" S.H. Drop Conn. V.F.	24	NOT RECD	
8" D.I.P. Sewer L.F.	905		GREEN PIPE PRODUCTS
6" Water L.F.	940	1017	GREEN PIPE PRODUCTS
6" Valve Ea.	8	8	MUNICIPAL CONTRACTORS
3" Blowoff Ea.	2	2	MUNICIPAL CONTRACTORS
6" PVC SHC L.F.	20		
6" PVC (inside drop MH)	20		
3/4" W.H.C. L.F.	40		

Notes
 1. Part of Parcel A and Lots 38 through 49 Glass Tumbler Path are in Little Patuxent Drainage Area. Middle Patuxent Drainage area fees are not applicable.
 2. The remaining lots and part of Parcel A are in the Middle Patuxent Drainage Area. As per our letter of August 4, 1989, diversion of flow from the Middle to the Little Patuxent Drainage Area was approved and these lots shall pay the Middle Patuxent Ad Valorem and In-Aid of Construction Charges.

Wastewater Disposal/Sewage Drainage Area: Little Patuxent River
 Type of Buildings: Single Family
 No. S.H.C.: 58
 No. W.H.C.: 58
 No. Lots: 58

WATER AND SEWER CODE
 County Use
 Water E 2.9
 Sewer G 386000



GENERAL NOTES

- 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. DATUM.
- 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.
- FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS USED HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION 1989 ADDENDUM. 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 VERIFIED BY THE CONTRACTOR TO HIS OWN SATISFACTION. ANY DAMAGE TO EXISTING FACILITIES DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
 - STATE HIGHWAY ADMINISTRATION - 531-5533
 - BALTIMORE GAS AND ELECTRIC CO. - CONTRACTOR SERVICES 850-4620
 - BALTIMORE GAS AND ELECTRIC CO. - UNDERGROUND DAMAGE CONTROL - 859-9004
 - BALTIMORE GAS AND ELECTRIC CO. - TROUBLE SHOOTING - 298-9001
 - MISS UTILITY - 1 - 559-0100
 - COLONIAL PIPELINE CO. - 795-1390/G.P. TELEPHONE CO. - 1 - 800-257-7777
 - BUREAU OF UTILITIES HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS - 992-2366.
- TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO A 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.
- ALL WATER MAINS TO BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
- ALL D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH ANMA SPECIFICATIONS C-158 DUCTILE IRON COMPACT FITTINGS, 3-INCH THROUGH 12-INCH FOR WATER AND OTHER LIQUIDS.
- 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 AND 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 STRAPPED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS. SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 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 SETTINGS, UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS.
- ALL W.H.C.'S. SHALL BE 3/4" UNLESS OTHERWISE NOTED.
- ALL SEWER MAINS SHALL BE C.S.P.X., D.I.P., V.C.P.X. 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.
- 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 G5.52 WHERE WATERTIGHT MANHOLE FRAME AND COVER IS USED. SET TOP OF FRAME 1.5' ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- STRAW BALE DIKE AND SILT FENCE ARE INTERCHANGEABLE.
- FOR MANHOLES IN OPEN SPACE OR OUTFALL, SET TOP OF FRAME 1.5' ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- ALL SEWER HOUSE CONNECTIONS SHALL BE 4" UNLESS OTHERWISE NOTED.

CONTRACT NO. 34-1986-D
VILLAGE OF HICKORY RIDGE
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT
 Signature: *James M. Helm* DATE: 3/16/90
 U.S. SOIL CONSERVATION SERVICE

This Development Plan is approved for Soil Erosion and Sediment Control by the Howard County Conservation District APPROVED
 Signature: *John L. Roberts* DATE: 3/16/90
 HOWARD COUNTY

Sediment Control Measures for this Contract will be implemented in accordance with Section 219 of the Standard Specifications, F-90-97.

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Signature: *James M. Helm* DATE: 3/16/90
 DIRECTOR OF PUBLIC WORKS
 Signature: *Robert M. Reinger* DATE: 3-12-90
 CHIEF BUREAU OF UTILITIES

WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS
 2315 ST. PAUL ST. BALTIMORE, MARYLAND
 Signature: *John J. Reardon* DATE: 3/16/90
 CHIEF BUREAU OF ENGINEERING
 Signature: *Charles D. Cammus* DATE: 3/16/90
 CHIEF LAND DEVELOPMENT DIVISION

DES: T.J.P.
 DRN: S.Y.A.
 CHK: R.B.N.
 DATE: 3/2/90

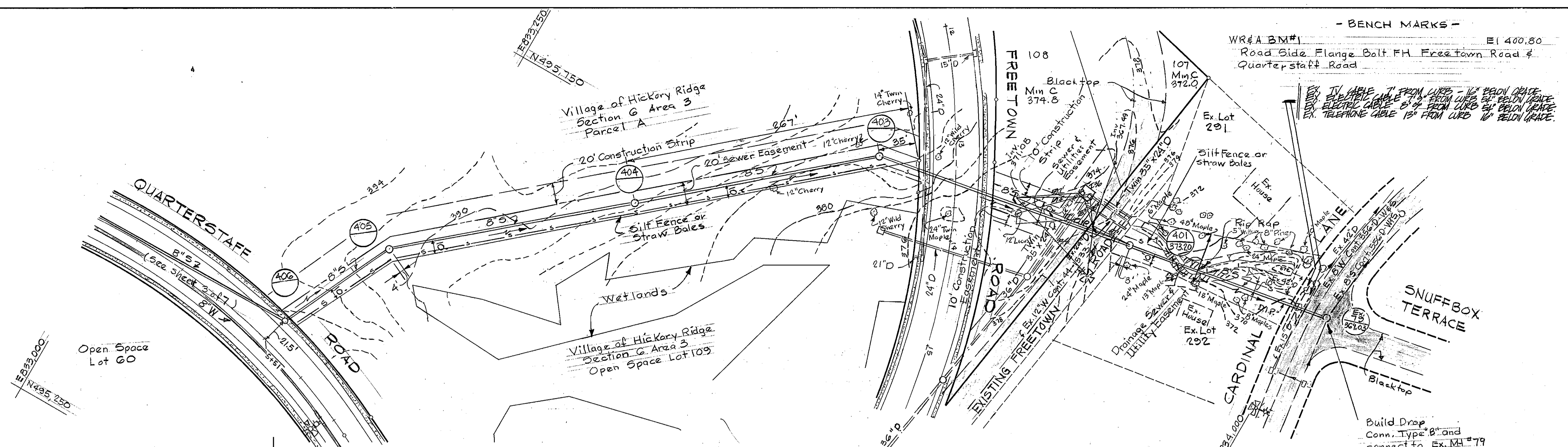
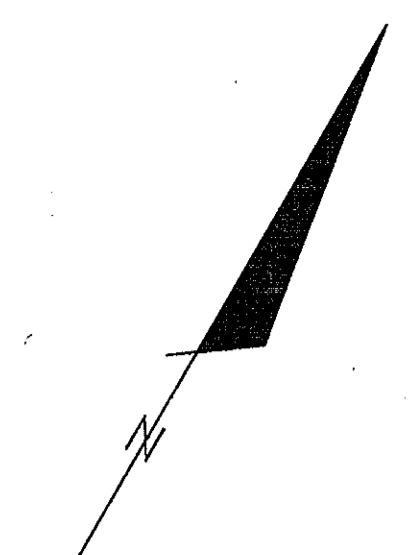
BY	NO.	REVISION	DATE
RLP	1	Change Pipe between 405 & 403 to D.I.P. Class 52	4/25
JBW	2	Added 6" 4" SHC / 3/4" W.H.C. to Quantity Table	5/20

VICINITY MAP AND GENERAL NOTES
 600' SCALE MAP NO. 35 BLOCK NO.

COLUMBIA VILLAGE OF HICKORY RIDGE SECTION 6 AREA 5
 ELECTION DIST. GENERAL WATER AS-BUILT CONTRACT NO. 34-1986-D
 SCALE AS SHOWN SHEET 1 OF 7

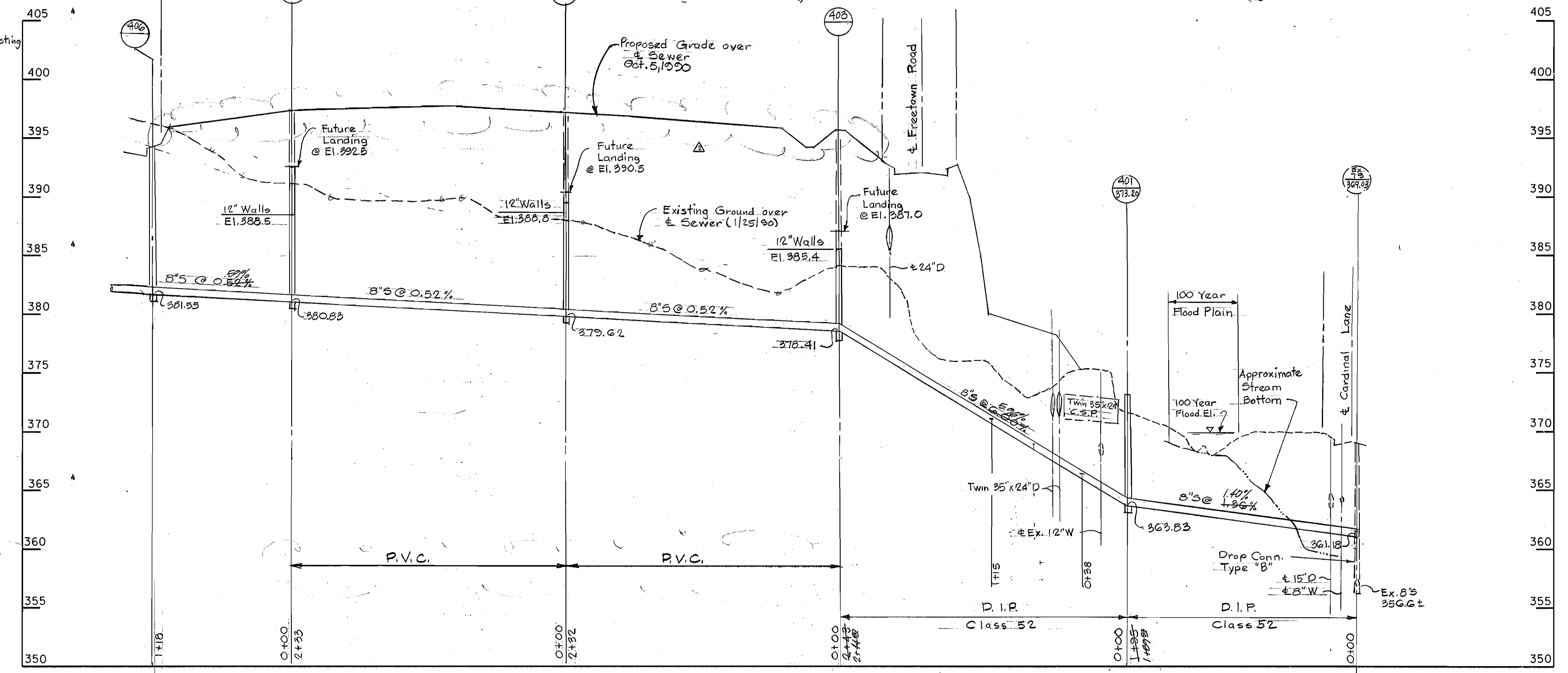
- BENCH MARKS -

WR&A BM#1 El 400.80
Road Side Flange Bolt FH Free town Road &
Quarterstaff Road



PLAN
SCALE: 1" = 50'

Note:
Build MH's 3, 4, & 5 to 1.5' above existing ground. Manholes shall be extended in future to meet future grade.



PROFILES
SCALE: HOR. 1" = 50'
VERT. 1" = 5'

95-494-823
35-495-823

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James M. ... 3/19/90
DIRECTOR OF PUBLIC WORKS - DATE

Robert M. ... 3-12-90
CHIEF - BUREAU OF UTILITIES - DATE

... 3-16-90
CHIEF - BUREAU OF ENGINEERING - DATE

... 3/16/90
CHIEF - LAND DEVELOPMENT DIVISION - DATE

WHITMAN, REQUARDT
AND ASSOCIATES
ENGINEERS

2315 ST. PAUL ST.
BALTIMORE, MARYLAND



DES: T.J.P.	RLP	1	Change Pipe between 405 & 403 to	4/23/90
DRN: S.Y.A.	RLP	Δ	Lowered Prop. Grade Over Sewer	11/27/90
CHK: R.B.N.				
DATE: 3/14/90				
BY:	NO.	REVISION		DATE

PLAN OF
WATER AND SEWER MAINS

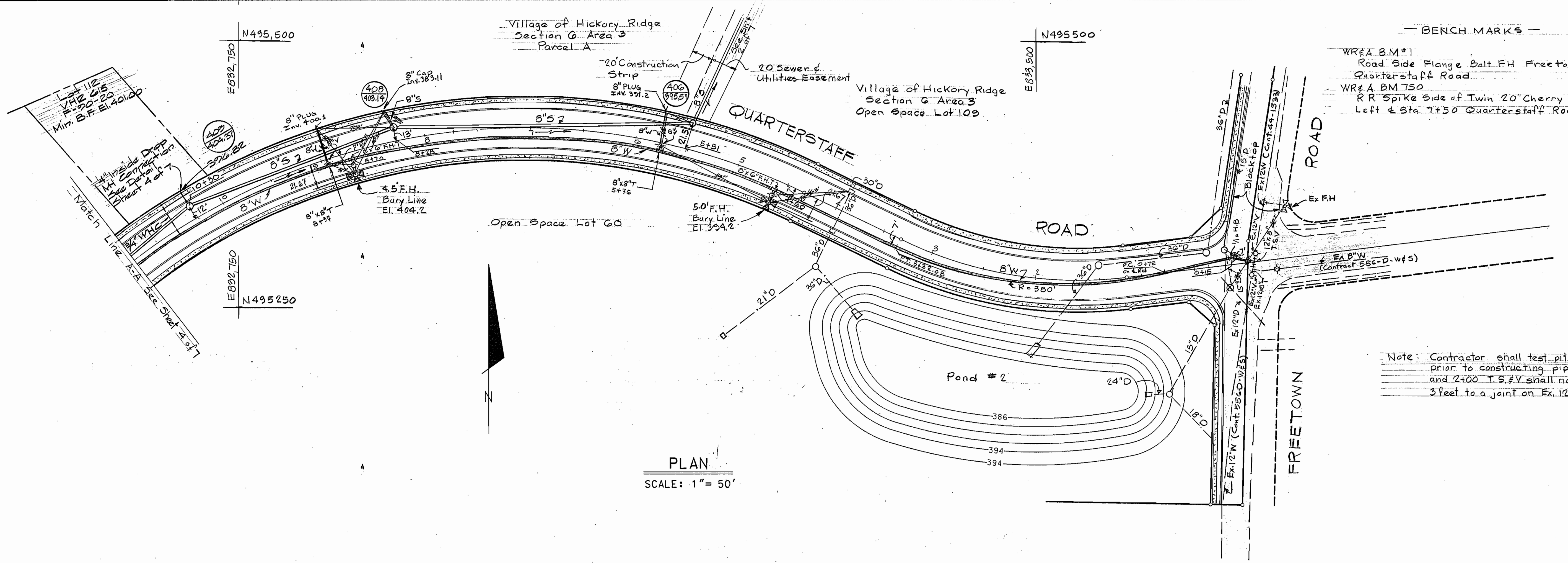
600' SCALE MAP NO. 35

BLOCK NO.

COLUMBIA
VILLAGE OF HICKORY RIDGE
SECTION 6 AREA 5
ELECTION DISTRICT NO. 5
SEWER - AS BUILT
CONTRACT NO. 34-1986-D

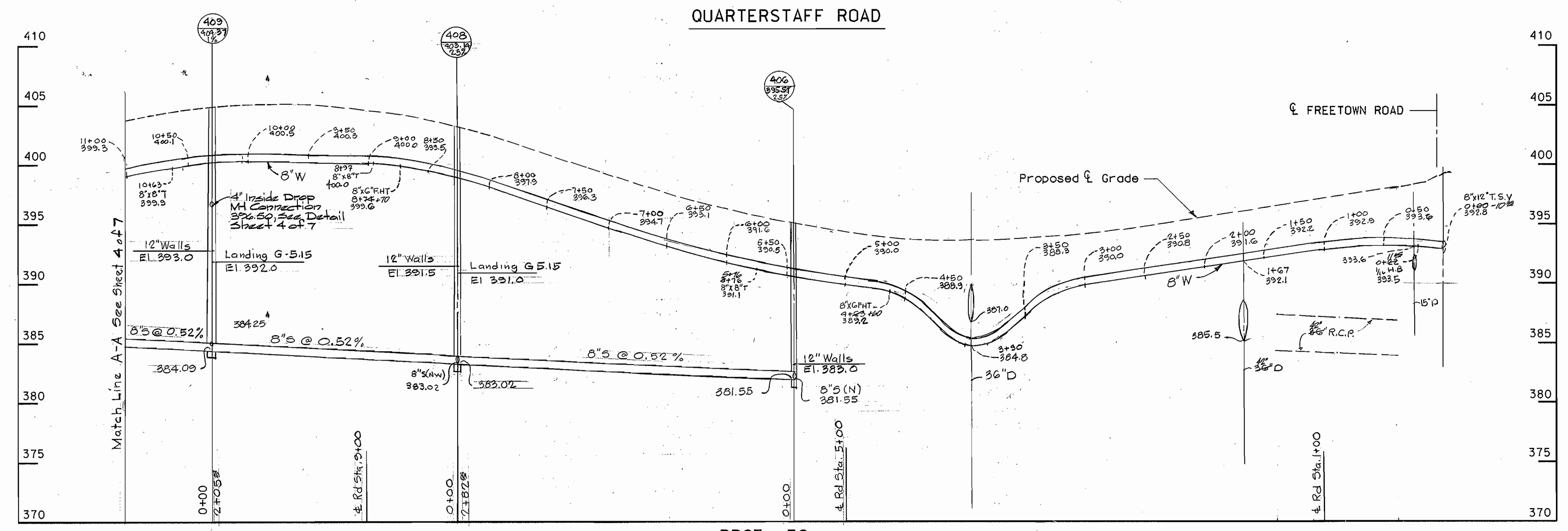
SCALE AS SHOWN

SHEET 2 OF 7



PLAN
SCALE: 1" = 50'

Note: Contractor shall test pit existing 12" pipe prior to constructing pipe between sta. 0+00 and 2+00. T.S.#V shall not be closer than 3 feet to a joint on Ex. 12"W.

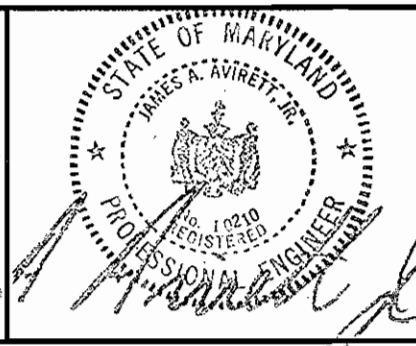


PROFILES
SCALE: HOR. 1" = 50'
VERT. 1" = 5'

85-494-833
85-455-833

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
James P. ... 3/1/90
Robert W. ... 3-12-90
CHIEF-BUREAU OF UTILITIES - DATE

WHITMAN, REQUARDT
AND ASSOCIATES
ENGINEERS
2315 ST. PAUL ST.
BALTIMORE, MARYLAND



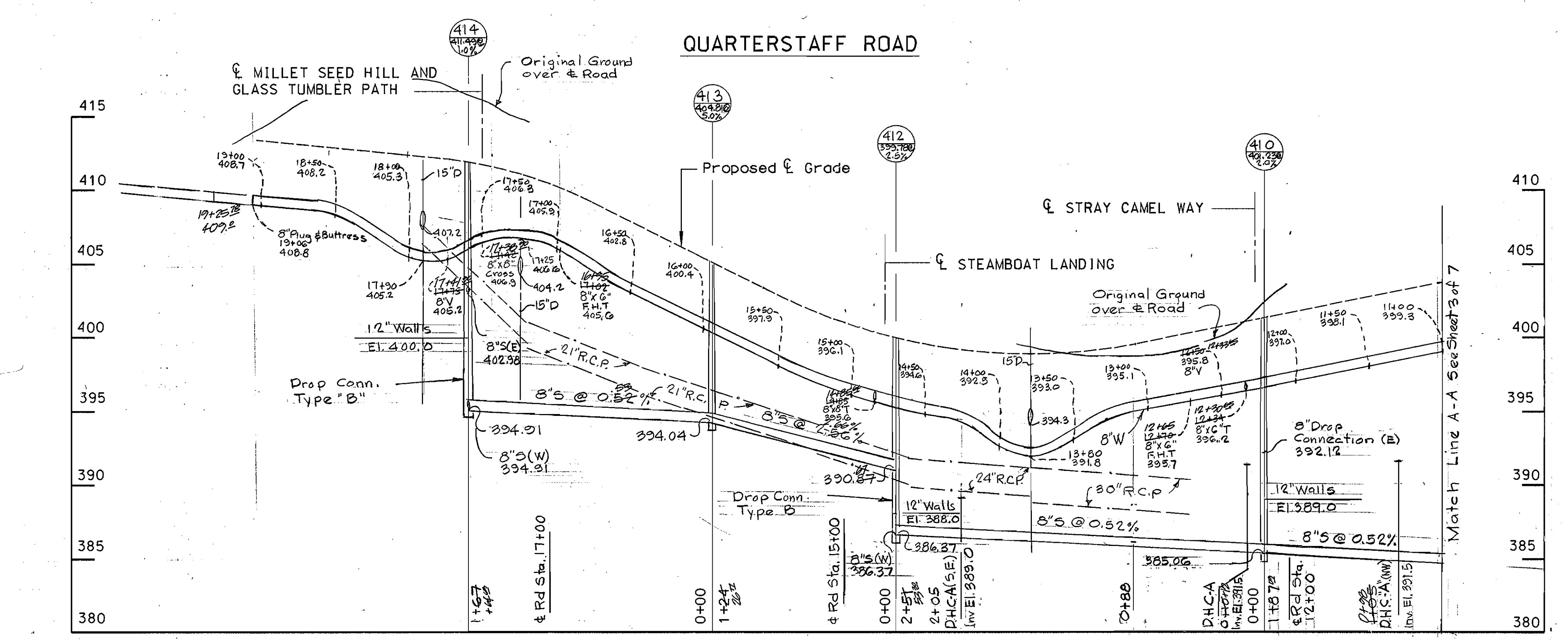
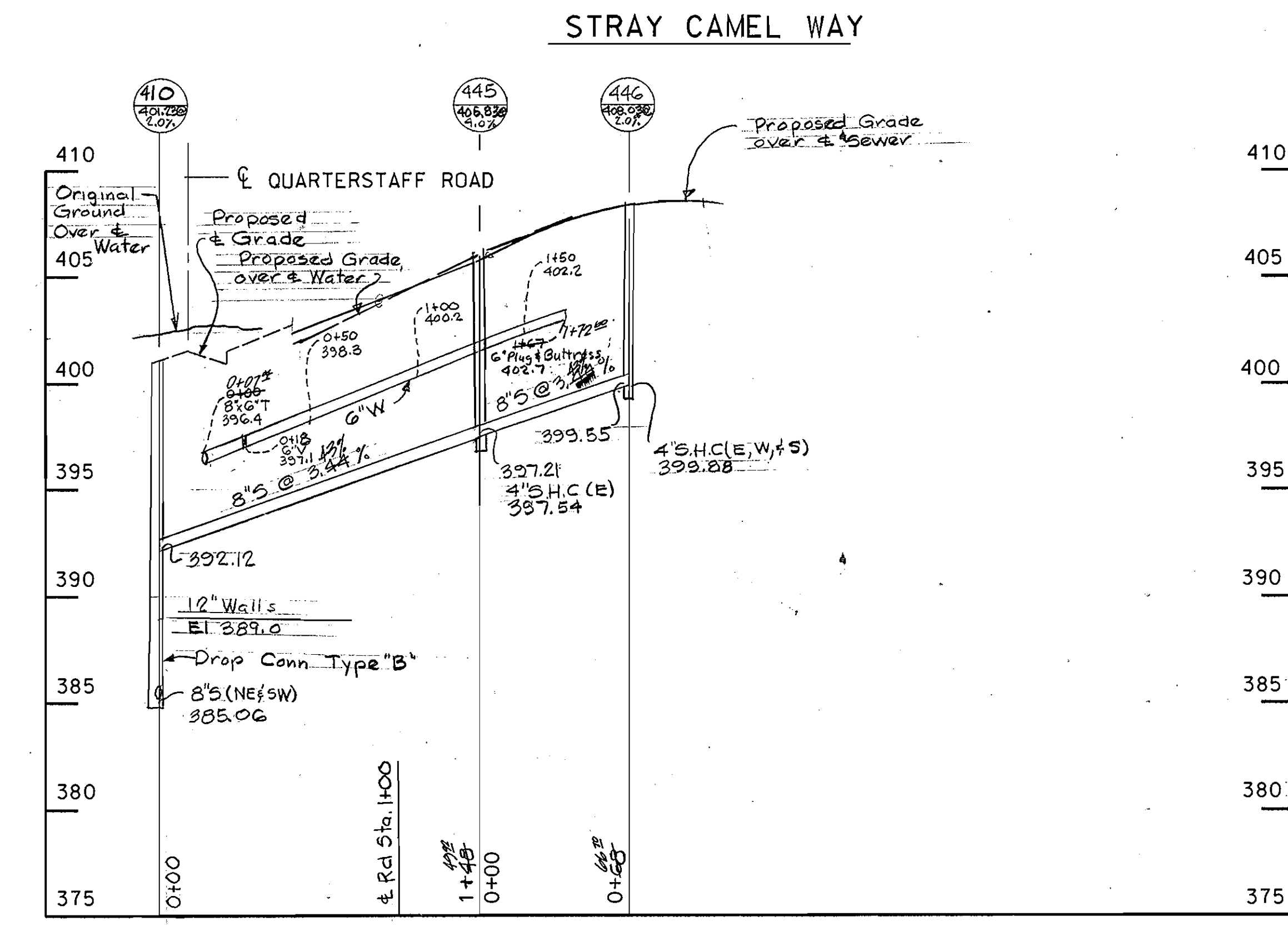
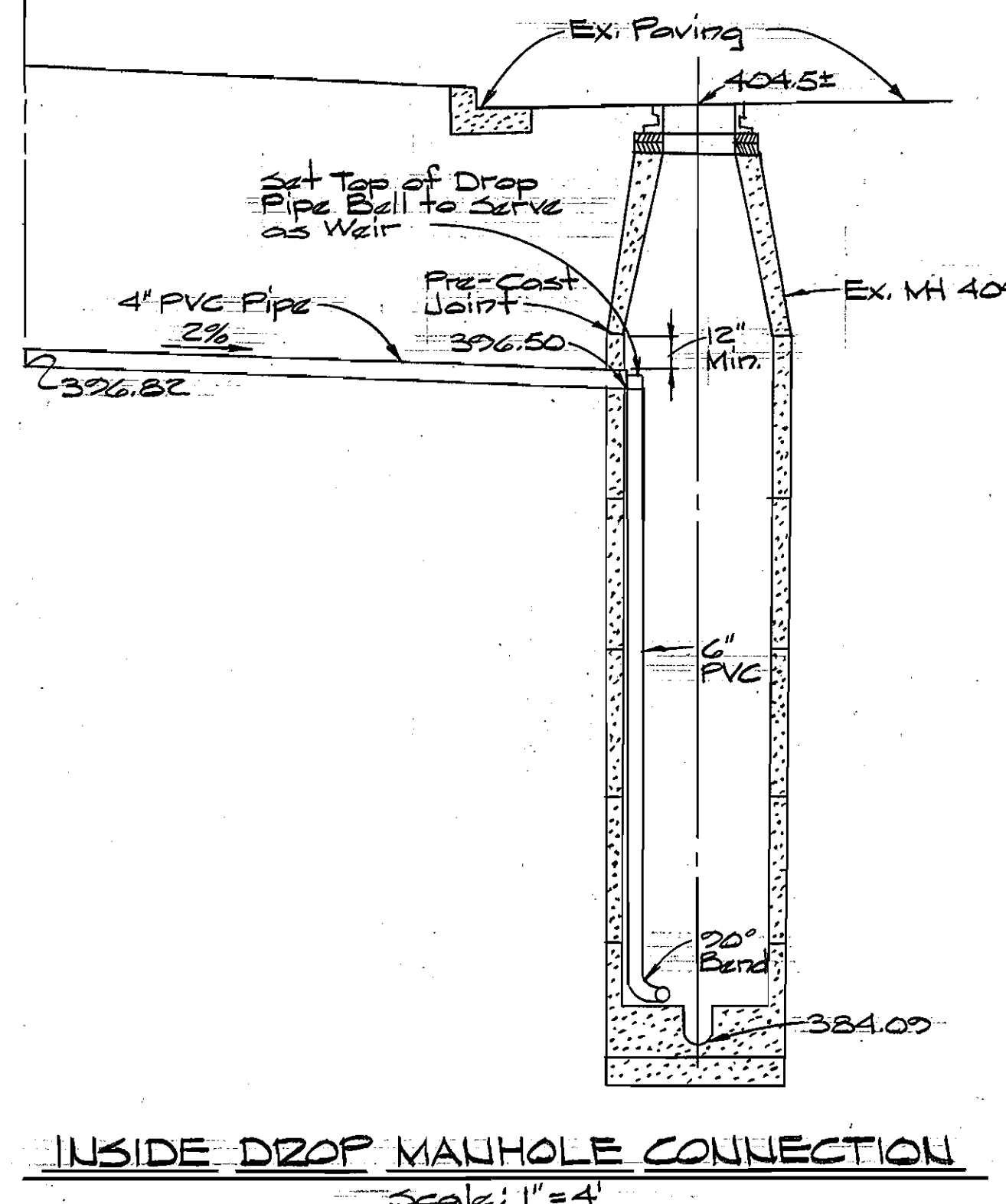
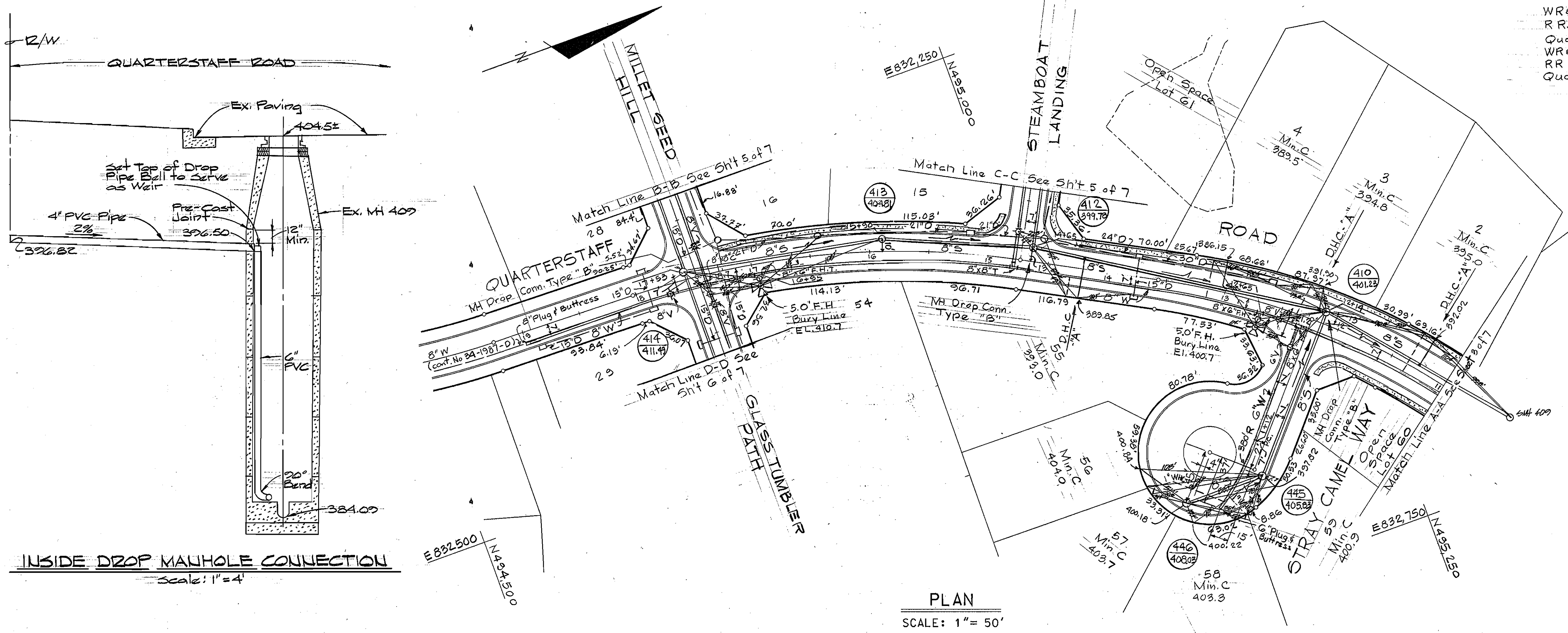
DES: T.J.P.	RLP Δ	Lowered Prop. Grade Over Sewer	1/8/79
DRN: S.Y.A.	JEW 2	Added Lot 112, 4" SHC, 3/4" WHC and 5/20	
CHK: R.B.N.		Reference to MH Detail Sheet 4 of 7	
DATE: 3/12/90	BY NO.	REVISION	DATE

PLAN OF
WATER AND SEWER MAINS
600' SCALE MAP NO. 35 BLOCK NO.

COLUMBIA
VILLAGE OF HICKORY RIDGE
SECTION 6 AREA 5
ELECTION DISTRICT NO. 5
SEWER HAS BUILTS WATER HAS BUILTS
CONTRACT NO. 34-1986-D

SCALE AS SHOWN
SHEET 31 OF 7

— BENCH MARKS —
 WR#A B.M.#1223 E.I. 403.51
 RR Spike Side 12" Pine Tree TO Right of Sta 12+23
 Quarterstaff Road
 WR#A B.M.#1850 E.I. 414.75
 RR Spike Side of 15" Oak Tree 75' Right of Sta 18+50
 Quarterstaff Road



DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 James J. [Signature] 3/19/90
 DIRECTOR OF PUBLIC WORKS - DATE
 Robert M. [Signature] 3-12-90
 CHIEF-BUREAU OF UTILITIES - DATE

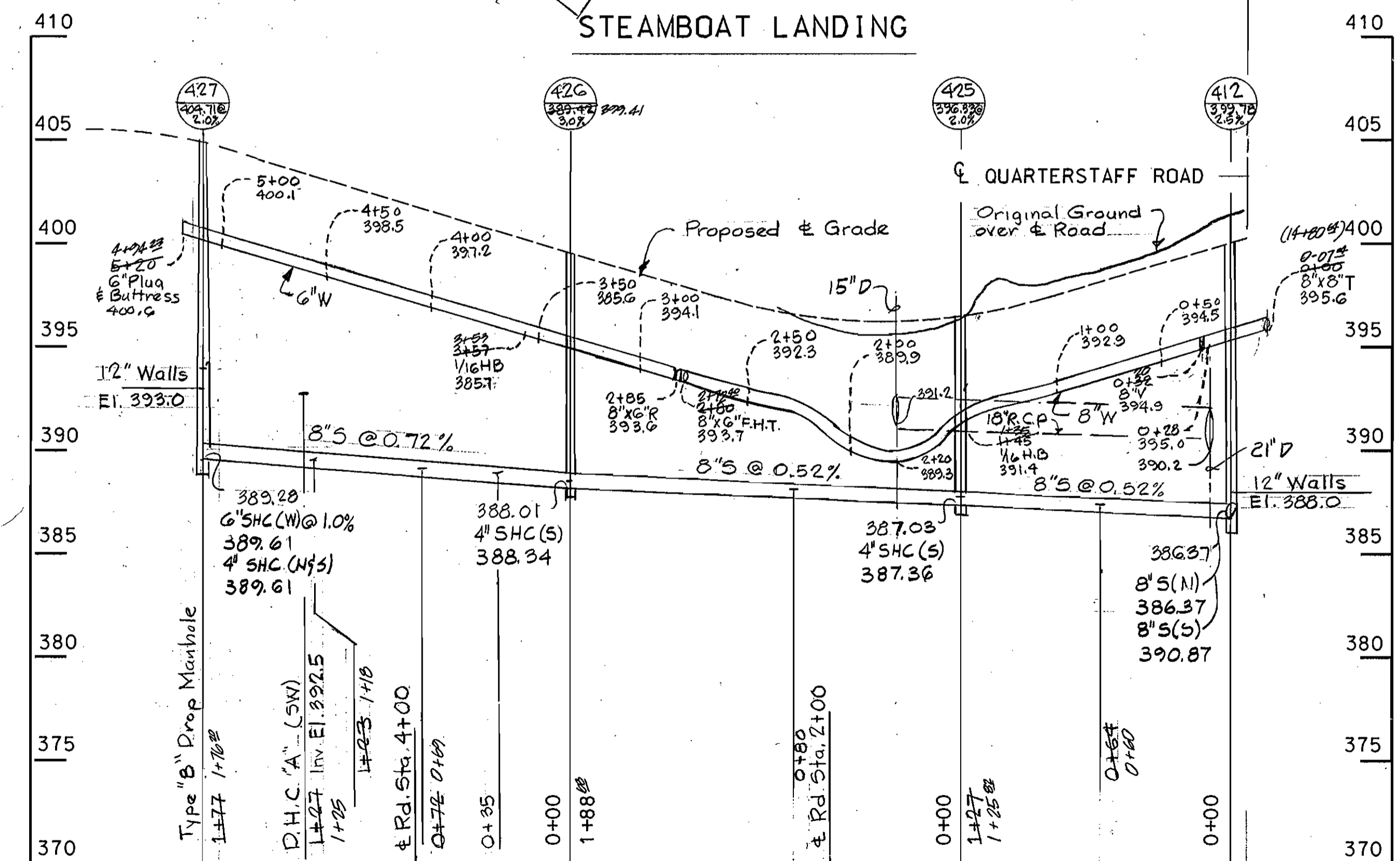
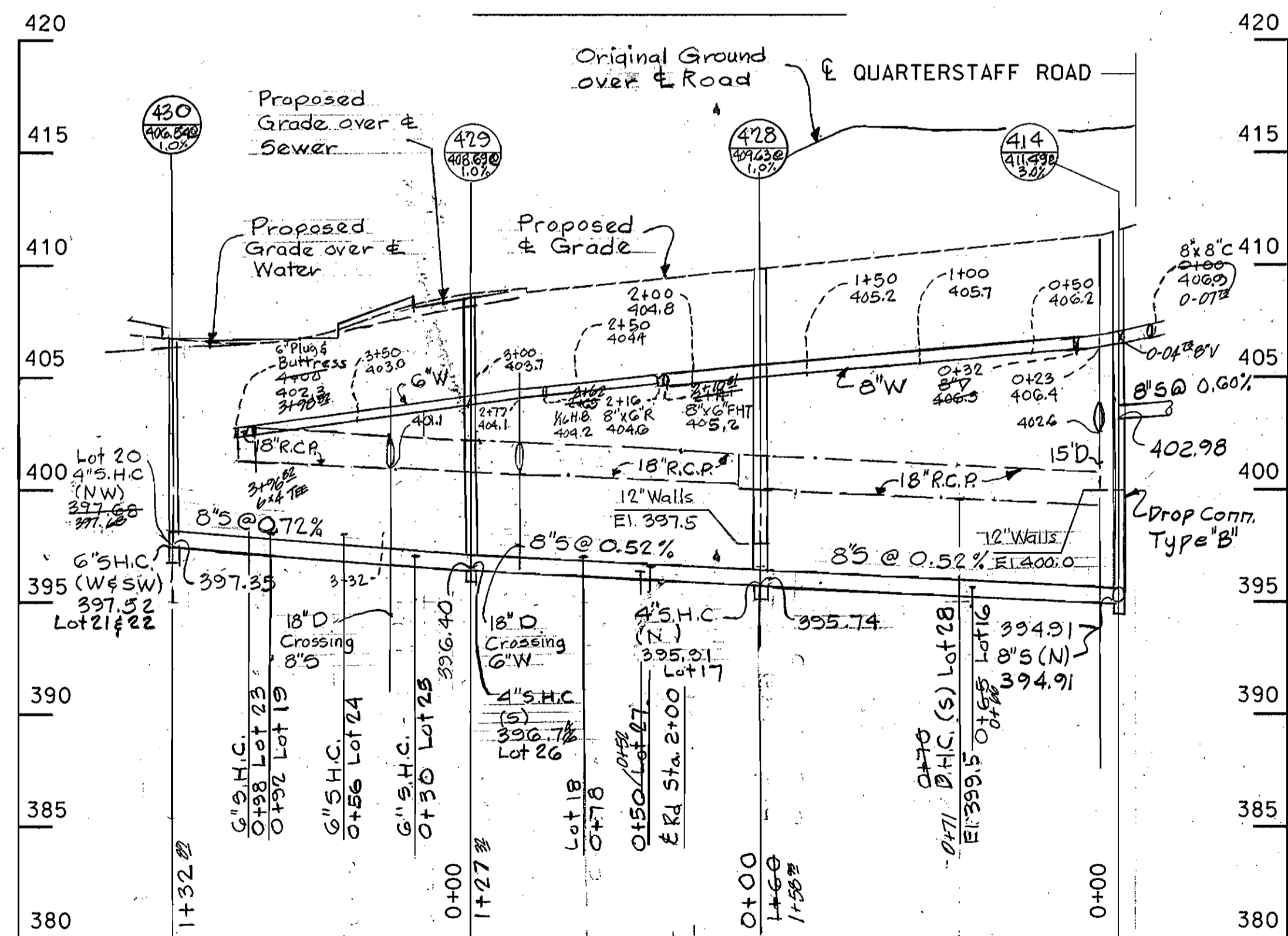
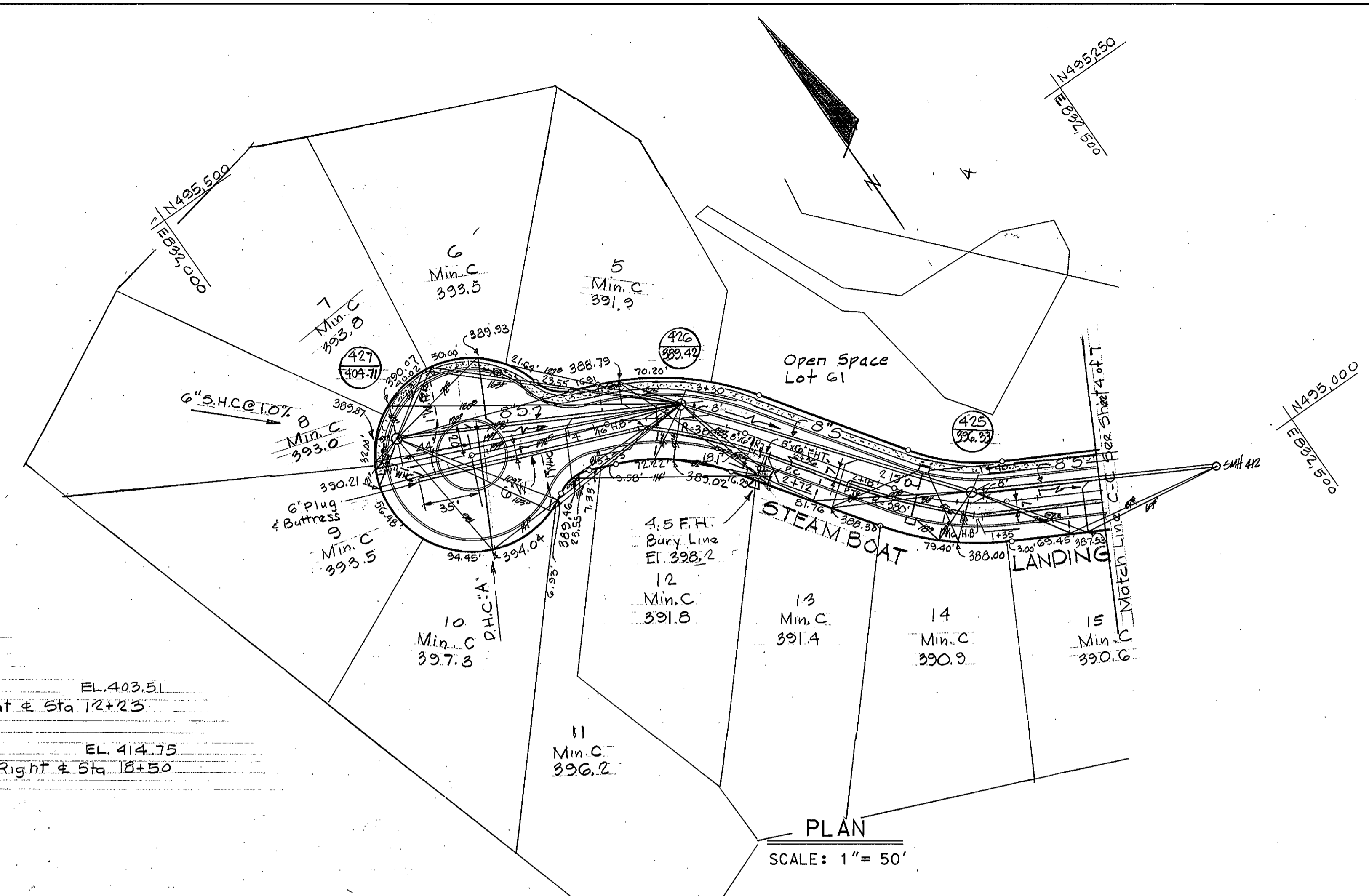
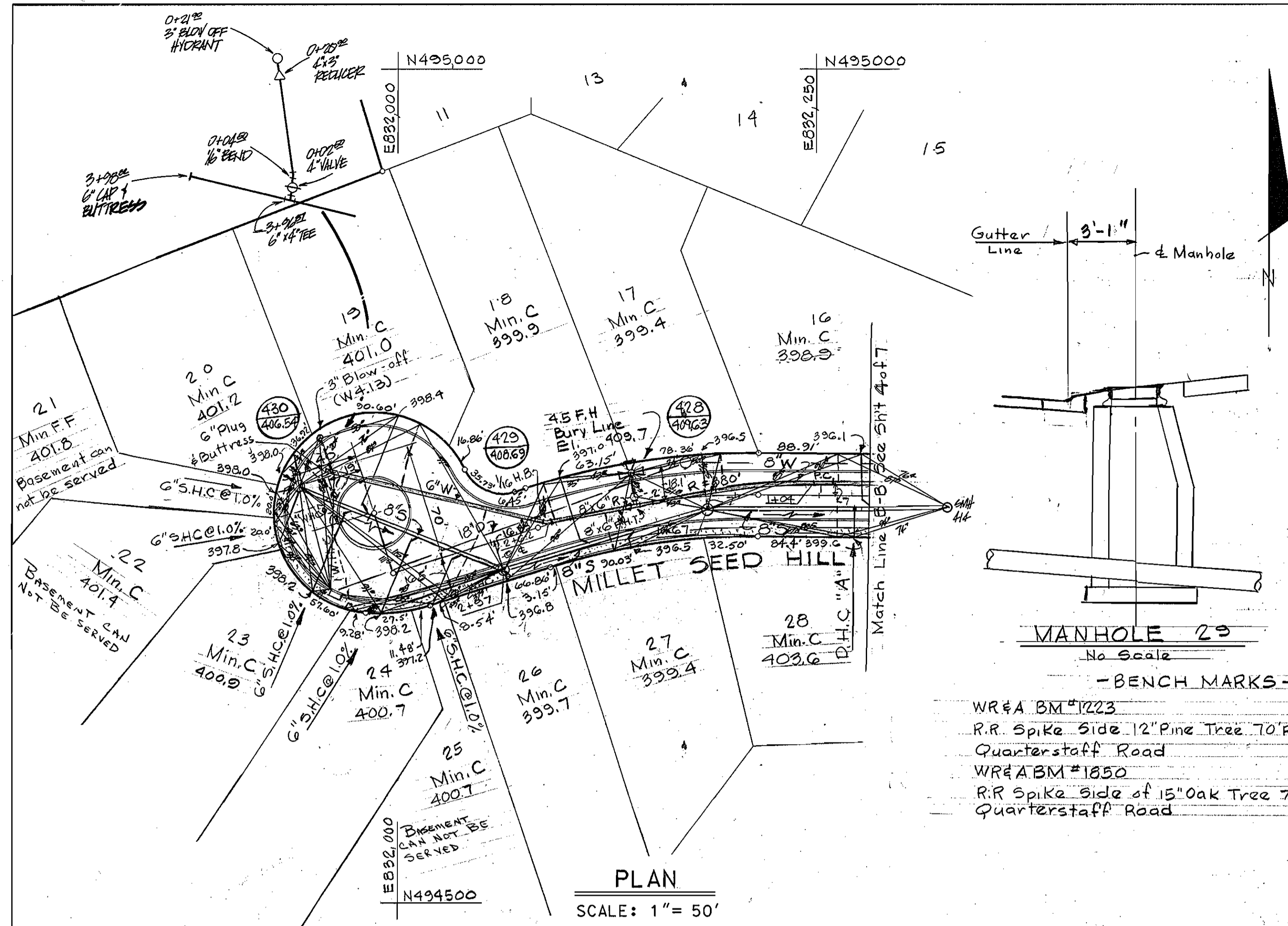
WHITMAN, REQUARDT
 AND ASSOCIATES
 ENGINEERS
 2315 ST. PAUL ST.
 BALTIMORE, MARYLAND



DES: T. J. P.	JBW	1	Added Detail - Inside Drop MH Conn.	5/20
DRN: S. Y. A.				
CHK: R. B. N.				
DATE: 3/2/90				
BY: [Signature]	NO.		REVISION:	DATE

PLAN OF
 WATER AND SEWER MAINS

COLUMBIA
 VILLAGE OF HICKORY RIDGE
 SECTION 6 AREA 5
 ELECTION DISTRICT NO. 5
 WATER & SEWER AS-BUILT
 CONTRACT NO. 34-1986-D



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James J. Chu 3-19-90
DIRECTOR OF PUBLIC WORKS - DATE

Robert R. Reimer 3-12-90
CHIEF-BUREAU OF UTILITIES - DATE

Whitman, Requardt and Associates Engineers
2315 ST. PAUL ST.
BALTIMORE, MARYLAND

WHITMAN, REQUARDT
AND ASSOCIATES
ENGINEERS

2315 ST. PAUL ST.
BALTIMORE, MARYLAND

DES: T.J.P. R.P. 1 Change Pipe between 405+403 to 4125
D.I.P. Class 52

DRN: S.Y.A.

CHK: R.B.N.

DATE: 3/2/90

PLAN OF
WATER AND SEWER MAINS

60' SCALE MAP NO. 35 BLOCK NO.

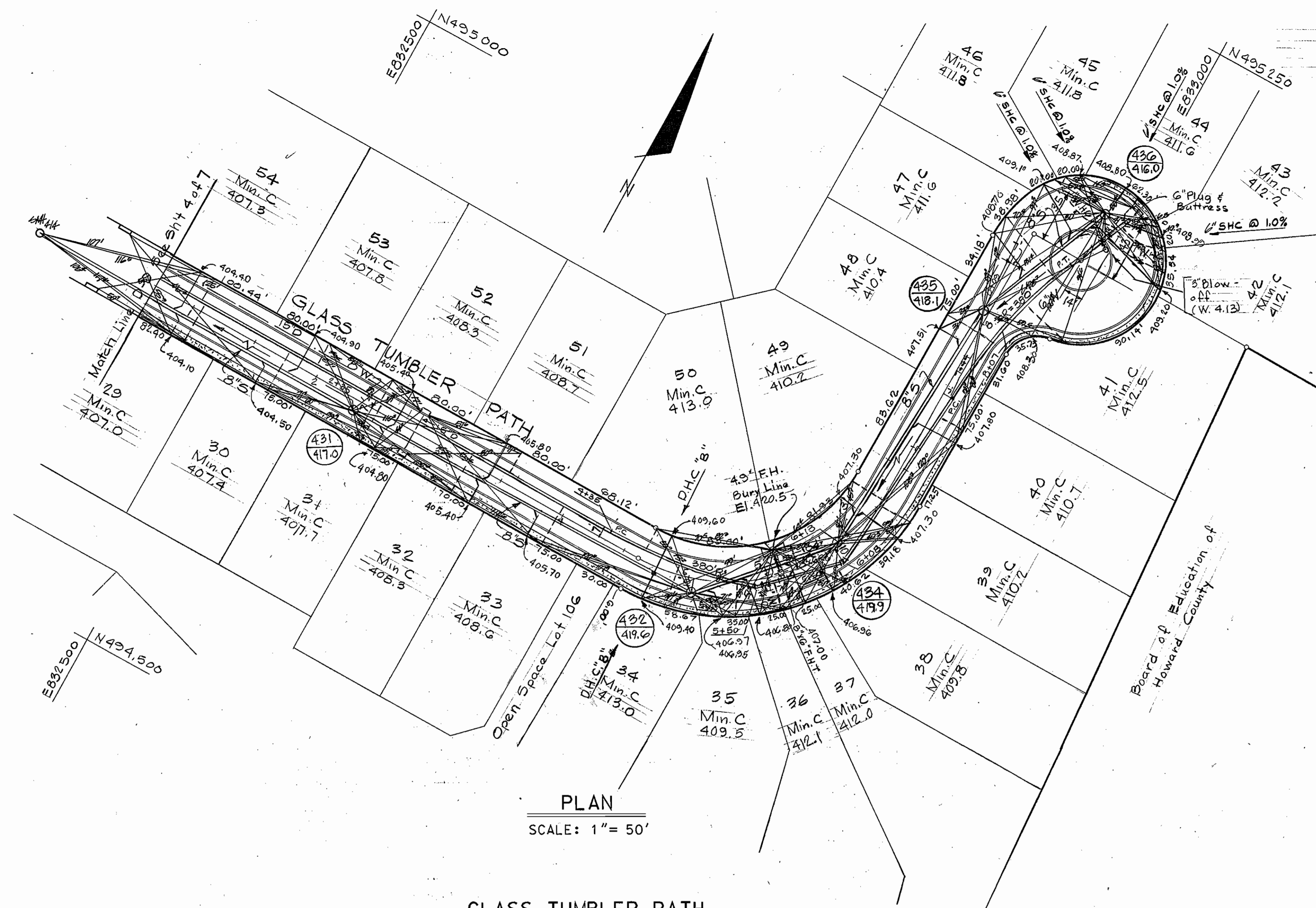
COLUMBIA
VILLAGE OF HICKORY RIDGE
SECTION 6 AREA 5
ELECTION DISTRICT NO. 5
WATER & SEWER "AS BUILT"
CONTRACT NO. 34-1986-D

SCALE AS SHOWN

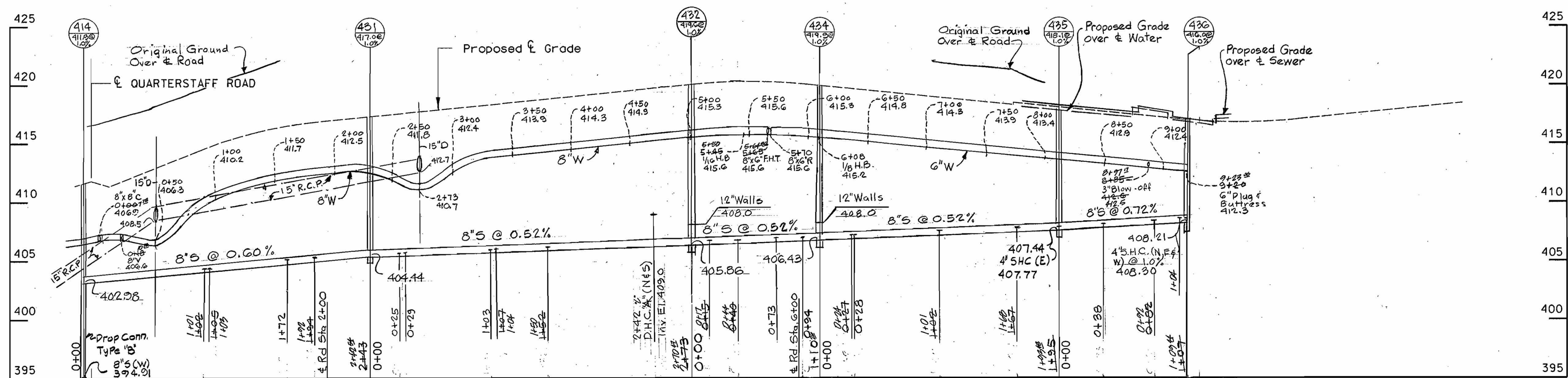
SHEET 54 OF 7

WR&A BM #1050 El. 414.75
 RR Spike Side of 15" Oak Tree 75' Right of Sta. 18+50
 Quarterstaff Road

NOTE:
 LOCATIONS OF WALLS FOR LOTS 42/43, 44
 CHANGED DUE TO STORM DRAIN INLET &
 STORM DRAIN MANHOLE IN WAY OF
 DESIGNED INSTALLATION.



GLASS TUMBLER PATH



35-424-833
 35-425-833

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND James P. [Signature] 3/19/90 DIRECTOR OF PUBLIC WORKS - DATE R. [Signature] 3-12-90 CHIEF-BUREAU OF UTILITIES - DATE	WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS 2315 ST. PAUL ST. BALTIMORE, MARYLAND		DES: T. J. P.	R/LP 1	Change Pipe between 405 & 403	4/25
			DRN: S. Y. A.		DIP Class 52	
			CHK: R. B. N.			
			DATE: 3/2/90	BY: [Signature]	REVISION:	DATE:

PLAN OF
 WATER AND SEWER MAINS

COLUMBIA
 VILLAGE OF HICKORY RIDGE
 SECTION 6 AREA 5
 ELECTION DISTRICT NO. 5
 WATER & SEWER HAS BUILT
 CONTRACT NO. 34-1986-D

SCALE
 AS
 SHOWN
 SHEET
 8 OF 7
 8 OF 7

STRAW BALE DIKE

STANDARD SYMBOL
SBD-1

CONSTRUCTION SPECIFICATIONS

- BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
- EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF (4) INCHES, AND PLACED SO THE BINDINGS ARE HORIZONTAL.
- BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
- INSPECTION SHALL BE FREQUENT AND REPAIR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
- BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPED STORM FLOW OR DRAINAGE.

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
COLLEGE PARK, MARYLAND

STRAW BALE DIKE

STANDARD DRAWING
SBD-1

STRAW BALE DIKE OR BERM

DESCRIPTION
The work shall consist of the construction of a dewatering basin for the purpose of receiving sediment-laden water pumped from a construction site to allow filtration before the water re-enters the waterway.

Material Specifications

- Riprap: Riprap shall consist of 4-8 inch washed stone or gravel.
- Filter Fabric: The filter cloth shall be a woven or nonwoven fabric consisting of continuous chain polymeric filaments or yarns of polyester. The fabric shall be inert to commonly encountered chemicals, hydrocarbons, mildew, and rot resistant. No. 6 stone (ASTM 37) may be used on the inner-face for filtering instead of fabric.
- Strawbaless: Strawbaless shall meet the criteria as specified in the Maryland Standards and Specifications for Soil Erosion and Sediment Control.

Construction Requirements

- The contractor shall install all sediment and erosion control devices as the first order of business.
- Excavated materials shall be stored such that sediments are prevented from entering the waterway; i.e., sediment perimeter controls may be necessary.
- Excavated subsoil and topsoil shall be kept separate and replaced in their natural order.
- Any dewatering of the construction area shall be filtered through a dewatering basin prior to entering the waterway.
- The dewatering basin shall be excavated to a minimum depth of 3 feet.
- Once the dewatering basin becomes filled to 1/2 of the excavated depth, accumulated sediment shall be removed and disposed of in a SCD approved disposal area outside the 100-year floodplain unless otherwise approved on the plans by the WPA.
- Sediment control devices are to remain in place until all disturbed areas are stabilized and the inspecting authority approves their removal. All ground contours shall be returned to their original condition unless specifically approved otherwise by the Administration.

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
COLLEGE PARK, MARYLAND

Dewatering Basins

Approved On: 1/24/90
Chief, Waterway Permits

WPD 1.1

EARTH DIKE

DESCRIPTION
STABILIZATION AS REQUIRED, ON STEEP SLOPES EXCAVATE TO PROVIDE REQUIRED FLOW WIDTH AT FLOW DEPTH

CROSS SECTION

CONSTRUCTION SPECIFICATIONS

- ALL DIKES SHALL BE COMPACTED BY EARTH-MOVING EQUIPMENT.
- ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
- TOP WIDTH MAY BE WIDER AND SIDE SLOPES MAY BE FLATTER IF DESIRED TO FACILITATE CROSSING BY CONSTRUCTION TRAFFIC.
- FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED SAFE OUTLET.
- EARTH DIKES SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF EROSION. RUNOFF SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE SUCH AS A SEDIMENT TRAP OR SEDIMENT BASIN WHERE EITHER THE DIKE CHANNEL OR THE DRAINAGE AREA ABOVE THE DIKE ARE NOT ADEQUATELY STABILIZED.
- STABILIZATION SHALL BE: (A) IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR SEED AND STRAW MULCH OR STRAW MULCH IF NOT IN SEEDING SEASON, (B) FLOW CHANNEL AS PER THE CHART BELOW.

TYPE OF CHANNEL	CHANNEL GRADE	DIKE A	DIKE B
1	5-3.0%	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0%	SEED AND STRAW MULCH	SEED USING JUTE, OR EXCELST; R; SOD; 2" STONE
3	5.1-8.0%	SEED WITH JUTE, OR SOD; 2" STONE	LINED RIP-RAP 4-8"
4	8.1-20%	LINED RIP-RAP 4-8"	ENGINEERING DESIGN

A. STONE TO BE 2 INCH STONE, OR RECYCLED CONCRETE EQUIVALENT, IN A LAYER AT LEAST 3 INCHES IN THICKNESS AND BE PRESSED INTO THE SOIL WITH CONSTRUCTION EQUIPMENT.
B. RIP-RAP TO BE 4-8 INCHES IN A LAYER AT LEAST 6 INCHES THICKNESS AND PRESSED INTO THE SOIL.
C. APPROVED EQUIVALENTS CAN BE SUBSTITUTED FOR ANY OF THE ABOVE MATERIALS.
7. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
COLLEGE PARK, MARYLAND

EARTH DIKE

STANDARD DRAWING
ED-1

RIP-RAP DETAIL

Notes:

- Erosion Control Fabric shall be Poly-Filter-X as manufactured by Corthage Mills, Inc., Erosion Control Division, 124 West 66th Street, Cincinnati, Ohio; Laurel Erosion Control Cloth as manufactured by Laurel Plastic Inc., Madison, Meisior, or equal.
- Rip-Rap shall be placed on each side & bank or as shown. Any disturbance to stream banks beyond these limits shall be protected with Rip-Rap at Contractor's expense.
- Gabions may be used in lieu of Rip-Rap.

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
COLLEGE PARK, MARYLAND

EARTH DIKE

STANDARD DRAWING
ED-1

SILT FENCE

CONSTRUCTION NOTES FOR PREFABRICATED SILT FENCE

- WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
- FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
- MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN BULGES DEVELOP IN THE SILT FENCE.

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
COLLEGE PARK, MARYLAND

SILT FENCE

STANDARD DRAWING
SF-1

STABILIZED CONSTRUCTION ENTRANCE

CONSTRUCTION SPECIFICATIONS

- Stone Size - Use 2" stone, or reclaimed or recycled concrete equivalent.
- Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
- Thickness - Not less than six (6) inches.
- Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
- Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter will not be required on a single family residence lot.
- Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mounded berm with 5:1 slopes will be permitted.
- Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
- Washing - Wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
- Periodic inspection and needed maintenance shall be provided after each rain.

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
COLLEGE PARK, Md.

STABILIZED CONSTRUCTION ENTRANCE

Standard Drawing
SCE-1

CONSTRUCTION SEQUENCE SEDIMENT CONTROL PROCEDURES

(FOR AREAS NOT PROTECTED BY ROAD CONSTRUCTION - SEDIMENT CONTROL DEVICES)

- Obtain Sediment Control Permit.
- Construct continuous sediment barrier for all Disturbed Areas* not protected by sediment traps.
- Clear, grub and strip as required. Protect stream from erosion of stored top soil, separate top soil from subsoil.
- Construct pipelines.
- All excavated material shall be stock piled on high side of trench.
- Restore erosion control structures disturbed by sewer and water construction.
- Stabilize disturbed area as construction progresses with temporary seeding and mulching (or permanent restoration).
- Complete permanent restoration.
- All sediment control devices shall remain in service until removal is approved by the S.C.S. inspector.
- Restoration (temporary or permanent) of an area between manholes or 400' watermain section shall follow within one week of pipelaying in this area.

* Disturbed Areas shall be restricted to 20' Easements.

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
COLLEGE PARK, MARYLAND

Culvert Pipe with Access Road

Approved On: 1/24/90
Chief, Waterway Permits

WPD 2.1

TEMPORARY ACCESS CULVERT

CONSTRUCTION SPECIFICATIONS

- Restrictions** - No construction or removal of a temporary access culvert will be permitted between October 1 through April 30 for all Class III and Class IV Trout Waters or between March 15 through June 15 for non-trout waterways.
- Culvert Strength** - All culverts shall be strong enough to support their cross sectional area under maximum expected loads.
- Culvert Size** - The size of the culvert pipe shall be the largest pipe diameter that will fit into the existing channel without major excavation of the waterway channel or without major approach fills. If a channel width exceeds 3 feet, additional pipes may be used until the cross sectional area of the pipes is greater than 60 percent of the cross sectional area of the existing channel. The minimum size culvert that may be used is a 12" diameter pipe.
- Culvert Length** - The culvert(s) shall extend a minimum of one foot beyond the upstream and downstream toe of the aggregate placed around the culvert. In no case shall the culvert exceed 40 feet in length.
- Filter Cloth** - Filter cloth shall be placed on the streambed and streambanks prior to placement of the pipe culvert(s) and aggregate. The filter cloth shall cover the streambed and extend a minimum six inches and a maximum one foot beyond the end of the culvert and bedding material. Filter cloth reduces settlement and improves crossing stability.
- Culvert Placement** - The invert elevation of the culvert shall be installed on the natural streambed grade to minimize interference with fish migration (free passage of fish).
- Culvert Protection** - The culvert(s) shall be covered with a minimum of one foot of aggregate. If multiple culverts are used they shall be separated by at least 12" of compacted aggregate fill. At a minimum, the bedding and fill material used in the construction of the temporary access culvert crossings shall conform with the aggregate requirements cited in Section I.B. 1. above.
- Stabilization** - All areas disturbed during culvert installation shall be stabilized within 14 calendar days of the disturbance in accordance with the Standard for "Critical Area Stabilization With Permanent Seeding."

U.S. DEPARTMENT OF AGRICULTURE
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Culvert Pipe with Access Road

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WPD 2.1

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James P. ... 3/19/90
DIRECTOR OF PUBLIC WORKS - DATE

Robert ... 3-12-90
CHIEF - BUREAU OF UTILITIES - DATE

W.O. 40485

WHITMAN, REQUARDT
AND ASSOCIATES
ENGINEERS

2315 ST. PAUL ST.
BALTIMORE, MARYLAND

DES: T.J.P.
DRU: R.A.F.
CHK: R.B.N.
DATE: 3/2/90

Professional Engineer Seal

SEDIMENT CONTROL
DETAILS

600' SCALE MAP NO. 35 BLOCK NO.

COLUMBIA
VILLAGE OF HICKORY RIDGE
SECTION 6 AREA 5
ELECTION DISTRICT NO. 5
CONTRACT NO. 34-1986-D

SCALE AS SHOWN
SHEET 7 OF 7

Final March 2, 1990