


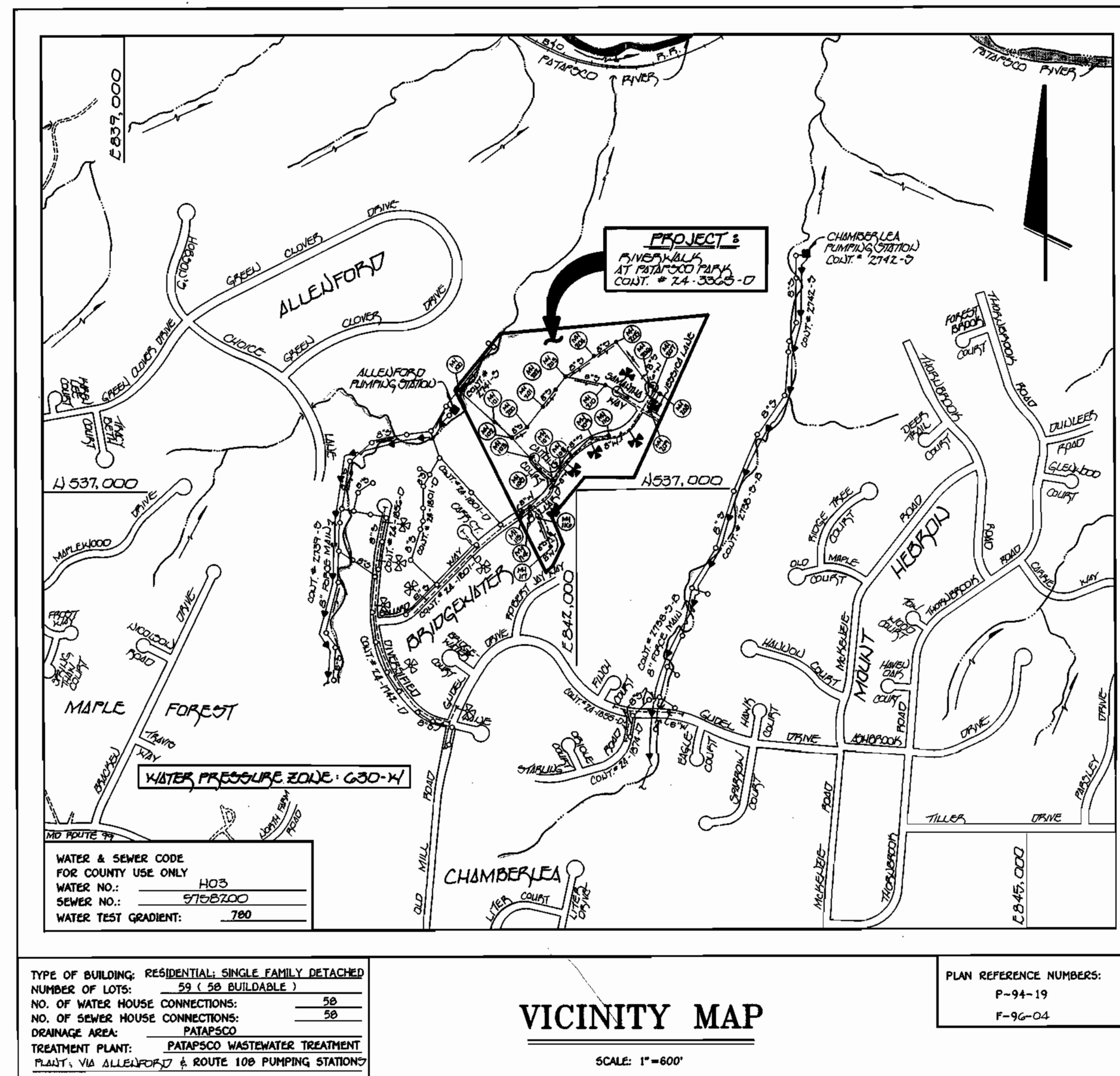
3365 ws/1 Riverwalk @ Patapsco Pk. lots 6-64

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 ARE INVERT ELEVATIONS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL POLES BY 2'-0" MINIMUM.
- 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 (1991 AMENDMENTS). THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB SITE.
- 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 & ELECTRIC CO. - CONTRACTOR SERVICES - 850-4620
 - BALTIMORE GAS & ELECTRIC CO. - UNDER GROUND DAMAGE CONTROL - 787-9068
 - MISS UTILITY - 1-800-257-7777
 - COLONIAL PIPELINE CO. - 795-1990
 - BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS - 313-4900
- 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 THE LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
- ALL SEWER MAINS SHALL BE D.I.P. OR P.V.C. UNLESS OTHERWISE NOTED.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- T.B. DENOTES TEST BORING.
- MANHOLES SHOWN WITH 12" AND 18" WALLS ARE FOR BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVERS, STANDARD DETAIL G 5.52.
- WHERE WATERTIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS.
- HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT THE CELLAR CANNOT BE SERVED.
- ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING, UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS.
- MANHOLES LOCATED WITHIN THE PROPOSED ROADWAY SHALL HAVE STANDARD HEAVY TRAFFIC MANHOLE FRAMES AND COVERS, STANDARD DETAIL G5.51.
- WATER MAINS AND WATER HOUSE CONNECTION LINES MUST BE PLACED AS TO HAVE ONE (1) FOOT SEPARATION FROM THE SEWER MAIN OR SEWER HOUSE CONNECTION AS THEY PASS ABOUT IT.
- ALL WATER MAINS SHALL 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 ELEVATION SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE RESTRAINED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS (W1.11 AND W2.13). 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 D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH AWWA SPECIFICATIONS C-153; DUCTILE IRON COMPACT FITTINGS, 3-INCH THROUGH 12-INCH FOR WATER AND OTHER LIQUIDS.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, @ (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 18.11(a) OF THE HOWARD COUNTY CODE.

QUANTITIES				
ITEM	ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	SUPPLIER
8" SEWER	3,909 L.F.	3538 L.F.	P.V. PIPE SDR 35	MUNICIPAL CONTRACTORS SALES, INC.
8" SEWER D.I.P.	693 L.F.	693	CL 52	GRIFFIN PIPE PRODUCTS CO.
MANHOLES	29 EACH	29 EACH	SANITARY MANHOLE	ATLANTIC CONCRETE PRODUCTS, INC.
4" SEWER	1,846 L.F.	1852 L.F.	PVC SDR 35	"
8" WATER	2,427 L.F.	2420 L.F.	TYSON JOINT DUCTILE IRON	GRIFFIN PIPE PRODUCTS CO.
6" WATER	337 L.F.	326 L.F.	"	"
4" WATER	295 L.F.	295 L.F.	"	"
PIPE HYDRANTS	7 EACH	7 EACH	K&I	MUNICIPAL CONTRACTORS SALES, INC.
1" W.V.C.	317 L.F.	342 L.F.	TYPE K COPPER	"
3/4" W.V.C.	1,091 L.F.	2018 L.F.	"	"
AIR RELEASE	1 EACH	1 EACH	AIR RELEASE	ATLANTIC CONCRETE PRODUCTS, INC.
8" x 8" CAPS	1 EACH	1 EACH	DIP	MUNICIPAL CONTRACTORS SALES, INC.
8" x 8" TEE	1 EACH	1 EACH	"	"
8" VALVE	4 EACH	4 EACH	RESILIENT SEAL	GRIFFIN PIPE PRODUCTS CO.
8" 1/2" HD	1 EACH	1 EACH	COMPACT FITTING	GRIFFIN PIPE PRODUCTS CO.
8" 1/2" HD	4 EACH	2 EACH	COMPACT FITTING	GRIFFIN PIPE PRODUCTS CO.
8" x 6" TEE	7 EACH	7 EACH	"	"
8" x 4" TEE	2 EACH	2 EACH	RESILIENT SEAL	MUNICIPAL CONTRACTORS SALES, INC.
8" x 6" REDUCER	1 EACH	1 EACH	D.I.P.	GRIFFIN PIPE PRODUCTS CO.
8" PLUG & BUTTRESS	3 EACH	3 EACH	D.I.P.	"
6" VALVE	7 EACH	7 EACH	RESILIENT SEAL	MUNICIPAL CONTRACTORS SALES, INC.
6" x 4" TEE	1 EACH	1 EACH	M.I. GATE VALVE	GRIFFIN PIPE PRODUCTS CO.
6" 1/2" HD	1 EACH	1 EACH	"	"
6" PLUG & BUTTRESS	1 EACH	1 EACH	"	"
4" VALVE	3 EACH	3 EACH	RESILIENT SEAL	MUNICIPAL CONTRACTORS SALES, INC.
4" 1/2" HD	1 EACH	1 EACH	"	"
4" PLUG & BUTTRESS	1 EACH	1 EACH	"	"
4" x 3" REDUCER	2 EACH	2 EACH	"	"
5" BLDG. OFF	2 EACH	2 EACH	BLOW OFF	"
			FRAME COVER	"

NAME OF UTILITY CONTRACTOR: FALL STON UTILITIES
SURVEY & DRAFTING DIVISION AS-BUILT DATE



CONTRACT No. 24-3365-D
RIVERWALK AT PATAPSCO PARK
 LOT NOS. 6-64
WATER AND SEWER MAIN EXTENSIONS
 HOWARD COUNTY, MARYLAND
 DEPARTMENT OF PUBLIC WORKS

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

Patricia Engler 12/14/95
 LIBS01 NATURAL RESOURCES CONSERVATION DISTRICT DATE

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

APPROVED
John R. Peltzer 12/14/95
 HOWARD SOIL CONSERVATION DISTRICT DATE

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF HOWARD COUNTY DESIGN MANUAL & STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AS SHOWN ON THESE PLANS (02) F96-04.

Paul W. Keibel FOR: 12/13/95
 SIGNATURE OF DEVELOPER DATE
 LAWSON GROUP, INC.

CONTRACT NO. 24-3365-D
 RIVERWALK AT PATAPSCO PARK
 LOT NOS. 6-64
 WATER AND SEWER MAIN EXTENSIONS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND	Fisher, Collins & Carter, Inc. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS CEASTOWNAL SQUARE OFFICE PARK 10272 BALTIMORE NATIONAL PIKE ELLICOTT CITY, MARYLAND 21042 (410) 461-2855	DES: M.I.M. DRWN: J.H.M./M.J.M. CHK: P.W.K. DATE: 12/13/95	<table border="1"> <tr> <th>NO.</th> <th>REVISION</th> <th>DATE</th> </tr> <tr> <td>1</td> <td>REVISE QUANTITIES BLOCK TO ADD ONE (1) MANHOLE</td> <td>7/95</td> </tr> </table>	NO.	REVISION	DATE	1	REVISE QUANTITIES BLOCK TO ADD ONE (1) MANHOLE	7/95	TITLE SHEET	RIVERWALK AT PATAPSCO PARK LOT NOS. 6-64 CONTRACT NO. 24-3365-D SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE AS SHOWN SHEET 1 OF 7
NO.	REVISION	DATE											
1	REVISE QUANTITIES BLOCK TO ADD ONE (1) MANHOLE	7/95											

3365 WS/2 Riverwalk @ Patapsco Pk.

MH TABULATION CHART

MH	Road Station	Distance	Slope	Rim Elevation
100				330.50
101				322.00
102				360.00
103	L.P. STA. 1+28; CAITLIUS COURT	7' BEHIND CURB		401.35
105	1+47 CAITLIUS COURT	7' LT.	-3.00%	406.12
107	15+87 BALLARD WAY	7' LT.	+5.72%	409.91
108	16+47 BALLARD WAY	7' LT.	+6.88%	415.91
109	19+30 BALLARD WAY	8' LT.	+4.12%	427.09
110	20+44 BALLARD WAY	7' LT.	+6.45%	432.74
111	21+32 BALLARD WAY	7' LT.	+7.39%	436.98
112	23+57 BALLARD WAY	3' LT.	+2.79%	451.99
113	24+90 BALLARD WAY	5' LT.	-1.00%	453.45
114	13+91 BALLARD WAY	5' LT.	+1.04%	404.47
115	12+89 BALLARD WAY	4' LT.	-1.75%	404.06
116				407.15
117				420.00

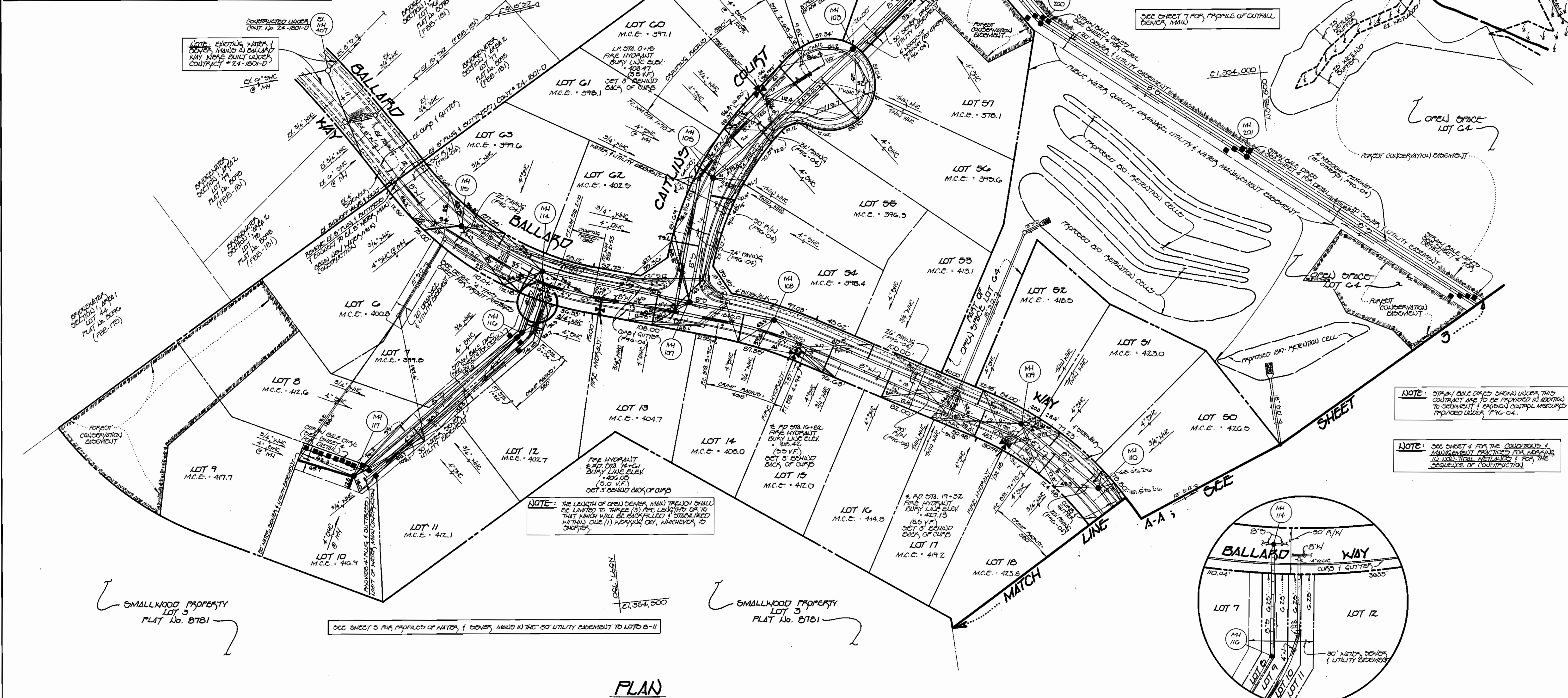
N.T. DENOTES WATER TIGHT MH FRAME & COVER

SEE SHEET C FOR PROFILES OF WATER & SEWER MAINS IN CAITLIUS COURT

SEE SHEET 5 FOR PROFILES OF WATER & SEWER MAINS IN BALLARD WAY

SEE SHEET 7 FOR PROFILE OF OUTFALL SEWER MAIN

SEE SHEET 6 FOR PROFILES OF WATER & SEWER MAINS IN THE 30' UTILITY EASEMENT TO LOTS 6-11



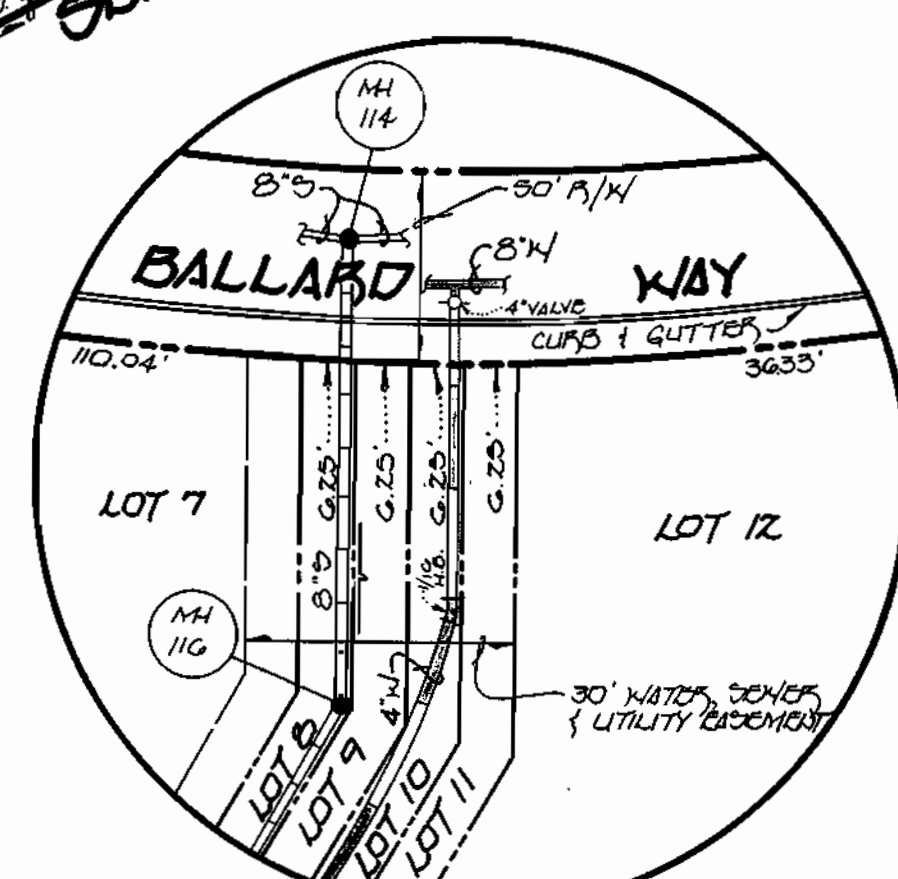
NOTE: EXISTING WATER & SEWER MAINS IN BALLARD WAY WERE BUILT UNDER CONTRACT # 24-1801-D

NOTE: THE CONTRACTOR SHALL PLACE EXCAVATED MATERIAL ON THE UPHILL SIDE OF THE TRENCH

NOTE: STIPPLED CALL OUTS SHOWN UNDER THIS CONTRACT ARE TO BE PROVIDED IN ADDITION TO EROSION CONTROL MEASURES PROVIDED UNDER 196-04.

NOTE: SEE SHEET 4 FOR THE CONDITIONS & MANAGEMENT PRACTICES FOR HEAVY (15-100 TYPICAL) METALS (FOR THE SEQUENCE OF CONSTRUCTION)

NOTE: THE LENGTH OF OPEN SEWER MAIN TRENCH SHALL BE LIMITED TO THREE (3) FEET LENGTH OR TO THAT WHICH WILL BE ACCEPTED & STABILIZED WITHIN ONE (1) WORKING DAY, WHICHEVER IS SHORTER.



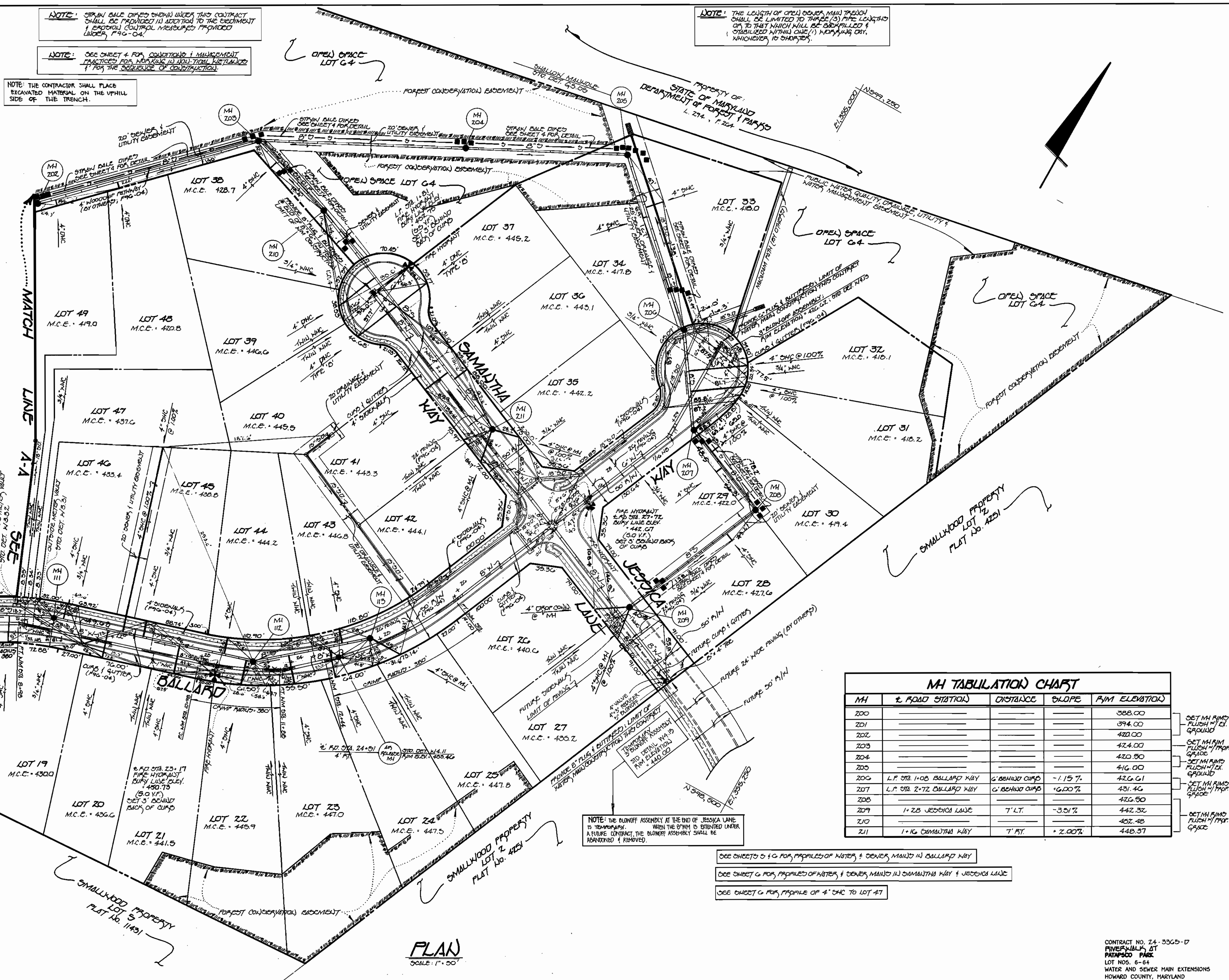
PLAN
SCALE: 1" = 50'

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Robert A. Berman CHIEF, BUREAU OF UTILITIES DATE: 12-5-95	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND [Signature] CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE:	Fisher, Collins & Carter, Inc. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS CENTENNIAL SQUARE OFFICE PARK 10272 BALTIMORE NATIONAL PIKE BELLGATE CITY, MARYLAND 21038 (410) 461-2850 [Seal] TERRELL A. FISHER	DES: J.M.H. DRWN: J.M.H. CHK: P.W.K. DATE:	LA: [Symbol] REVISE SEWER MAIN ALIGNMENT FROM MH 102 TO MATCHLINE BY NO. REVISION DATE:	PLAN VIEW WATER & SEWER MAINS 600' SCALE MAP NO. 17 BLOCK NO. 2 AND 3	RIVERWALK AT PATAPSCO PARK LOT NOS. 6-64 CONTRACT NO. 24-3365-D SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE AS SHOWN SHEET 2 OF 7 SMTS.DWG
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3365 ws/3 River walk @ Patapsco Park.

SHC INVERTS @ PROPERTY LINE CHART

STATION	LOT	ELEVATION
MH 102 TO MH 103		
0+84 LT.	57	372.59
0+89 FT.	58	374.10
MH 103 TO MH 105		
0+45 LT.	56	390.15
0+70 FT.	59 (@100%)	389.54
1+34 LT.	55	390.94
1+60 FT.	60	391.75
@ MH 105 FT.	G1 (SHC @ MH)	392.65
MH 105 TO MH 107		
0+20 LT.	54	392.69
0+76 FT.	G2 (DHC)	397.14
MH 107 TO MH 108		
0+60 FT.	14	402.50
MH 108 TO MH 109		
0+70 FT.	15	406.45
1+10 LT.	53	407.77
1+40 FT.	16	409.20
2+40 LT.	52	412.97
2+50 FT.	17	413.65
MH 109 TO MH 110		
0+40 LT.	51	417.41
0+50 FT.	18	418.21
1+00 LT.	50	420.97
MH 110 TO MH 111		
0+45 FT.	19	424.01
MH 111 TO MH 112		
0+10 LT.	46	427.51
0+60 FT.	20	431.09
0+77 LT.	47 (@100%)	433.54
1+00 LT.	45	435.21
1+40 FT.	21	435.89
1+90 LT.	44	438.03
2+15 FT.	22	440.33
MH 112 TO MH 113		
0+40 FT.	23	441.15
0+85 FT.	24	441.52
1+00 LT.	43	441.29
@ MH 113 FT.	Z5 (SHC @ MH)	442.05
MH 107 TO MH 14		
0+35 LT.	13 (DHC)	399.14
MH 114 TO MH 115		
0+12 LT.	7	394.26
0+35 FT.	G3	394.27
@ MH 115 LT.	C	395.25
MH 114 TO MH 116		
0+60 LT.	12	396.98
MH 116 TO MH 117		
1+55 LT.	11	406.32
1+65 FT.	8	406.09
@ MH 117 FT.	9 (SHC @ MH)	412.13
@ MH 117 LT.	10 (SHC @ MH)	411.17
MH 202 TO MH 203		
0+20 FT.	49 (DHC)	413.70
0+90 FT.	48 (DHC)	415.20
MH 205 TO MH 206		
0+60 LT.	33	412.87
0+70 FT.	34	412.64
MH 206 TO MH 207		
0+46 LT.	32 (@100%)	414.05
0+68 FT.	31 (@100%)	414.11
MH 207 TO MH 208		
0+30 LT.	30 (@100%)	415.47
0+50 FT.	29	416.07
MH 208 TO MH 209		
0+40 LT.	28	422.47
@ MH 209 LT.	Z7 (SHC @ MH) @ 100%	431.20
@ MH 209 FT.	Z8 (PROP. COND.) @ MH	433.25
MH 209 TO MH 210		
0+30 FT.	36	423.32
MH 210 TO MH 211		
0+91 FT.	39 (DHC)	441.02
1+30 FT.	40 (TYPE 'B' DHC)	440.10
1+30 LT.	37 (TYPE 'B' DHC)	439.84
2+22 FT.	41	437.74
2+82 LT.	38	437.53
@ MH 211 LT.	35 (SHC @ MH) @ 100%	438.13
@ MH 211 FT.	42 (SHC @ MH)	438.57



MH TABULATION CHART

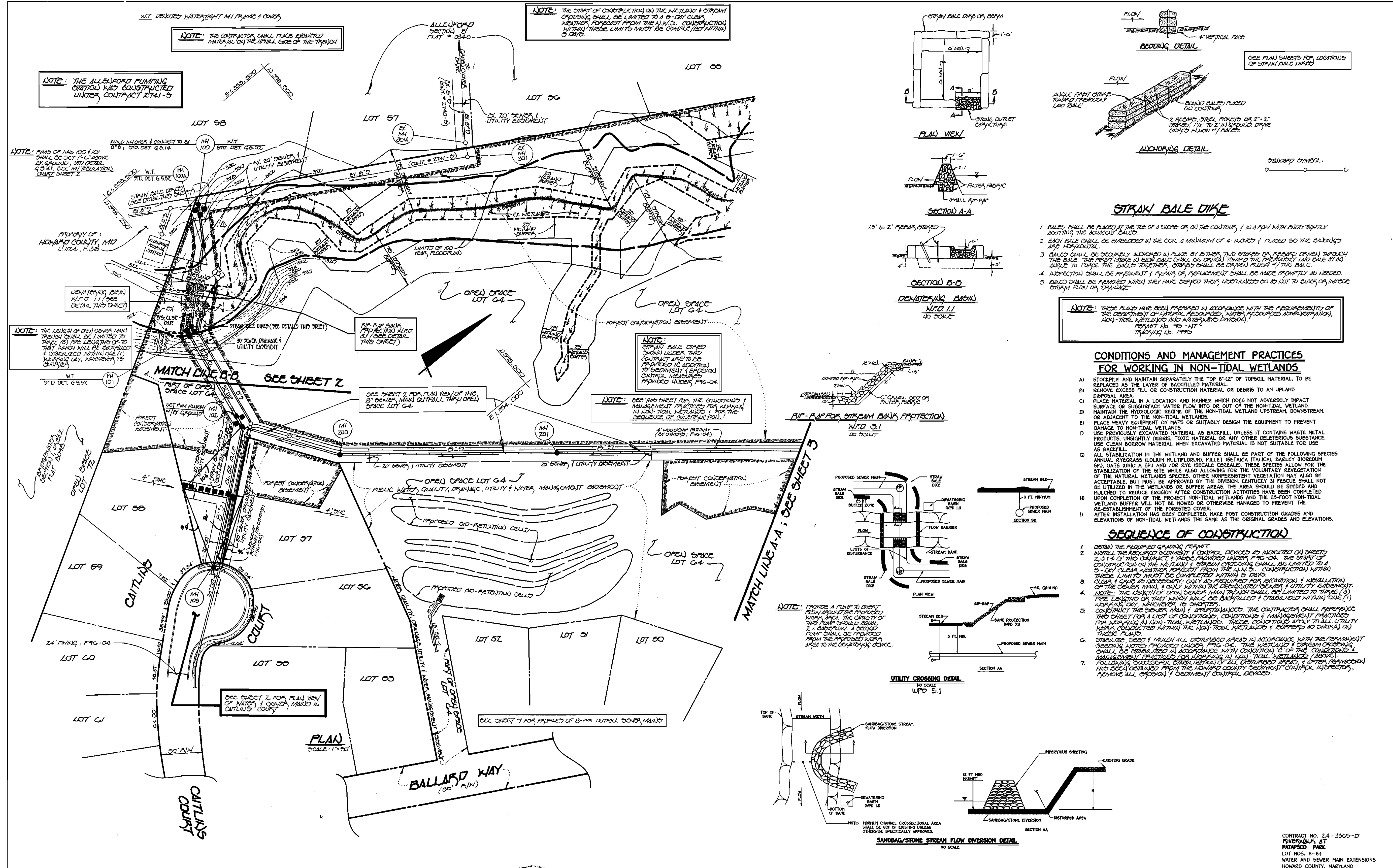
MH	± ROAD STATION	DISTANCE	SLOPE	RIM ELEVATION
200				388.00
201				394.00
202				420.00
203				424.00
204				420.50
205				416.00
206	L.P. STA. 1+08 BALLARD WAY	G' BEHIND CURB	-1.15%	426.61
207	L.P. STA. 2+72 BALLARD WAY	G' BEHIND CURB	1.00%	431.46
208				426.50
209	1+28 JESSICA LANE	7' LT.	-3.51%	442.32
210				452.48
211	1+16 SAMASTHA WAY	7' FT.	+2.00%	448.37

SEE SHEET 7 FOR PROFILE OF 8" DIA. OUTFALL SEWER MAIN

SEE SHEETS 5 & 6 FOR PROFILES OF WATER & SEWER MAINS IN BALLARD WAY
 SEE SHEET 6 FOR PROFILES OF WATER & SEWER MAINS IN SAMASTHA WAY & JESSICA LANE
 SEE SHEET 6 FOR PROFILE OF 4" DHC TO LOT 47

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Chief, Bureau of Utilities	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND Chief, Development Engineering Division	Fisher, Collins & Carter, Inc. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS CENTRAL SQUARE OFFICE PARK 10272 BALTHAMORE NATIONAL PIKE BELLGATE CITY, MARYLAND 21042 (410) 461-2855	DES: M.J.M. DRAWN: J.M.M. CHK: P.W.K. DATE:	PLAN VIEW WATER & SEWER MAINS	CONTRACT NO. 24-3365-D RIVERWALK AT PATAPSCO PARK PAVED PAVEMENT LOT NOS. 6-64 WATER AND SEWER MAIN EXTENSIONS HOWARD COUNTY, MARYLAND	SCALE AS SHOWN SHEET 3 OF 7
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3365 WS/4 Riverwalk @ Patapsco Pk.



NOTE: THE START OF CONSTRUCTION ON THE WETLAND & STREAM OPENING SHALL BE LIMITED TO A 5-DAY CLEAR WEATHER FORECAST FROM THE U.S.D.C. (CONSTRUCTION) WITHIN THESE LIMITS MUST BE COMPLETED WITHIN 5 DAYS.

NOTE: THE CONTRACTOR SHALL PLACE EXCAVATED MATERIAL ON THE UPHILL SIDE OF THE TRENCH.

NOTE: THE ALLENFORD PUMPING STATION WAS CONSTRUCTED UNDER CONTRACT 2741-5

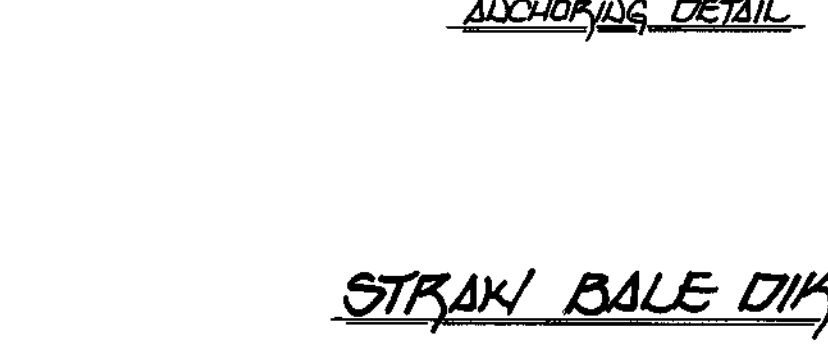
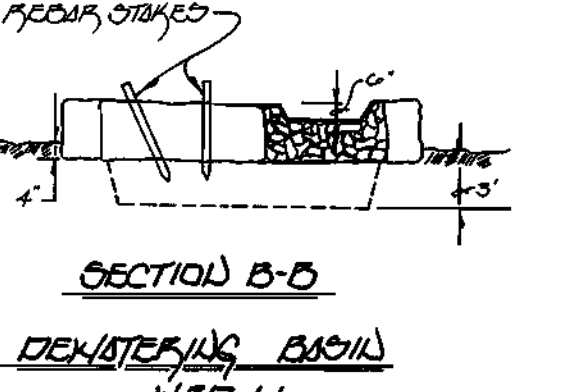
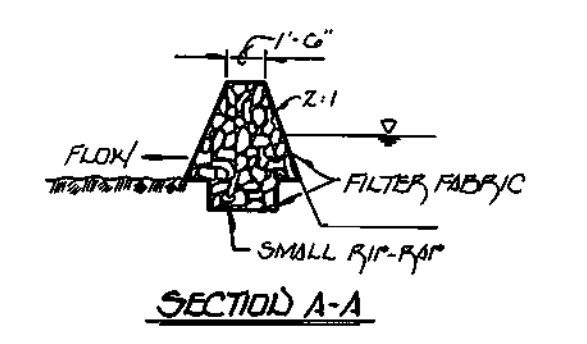
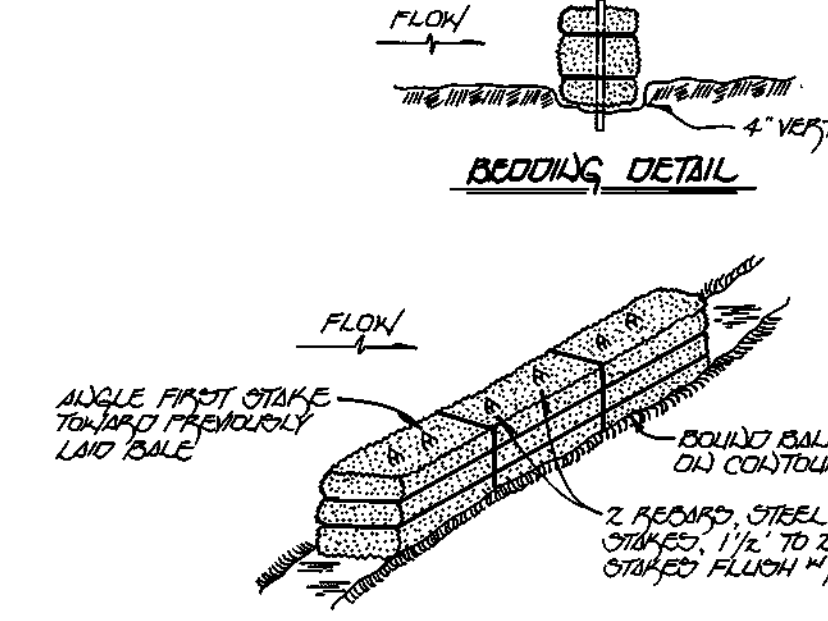
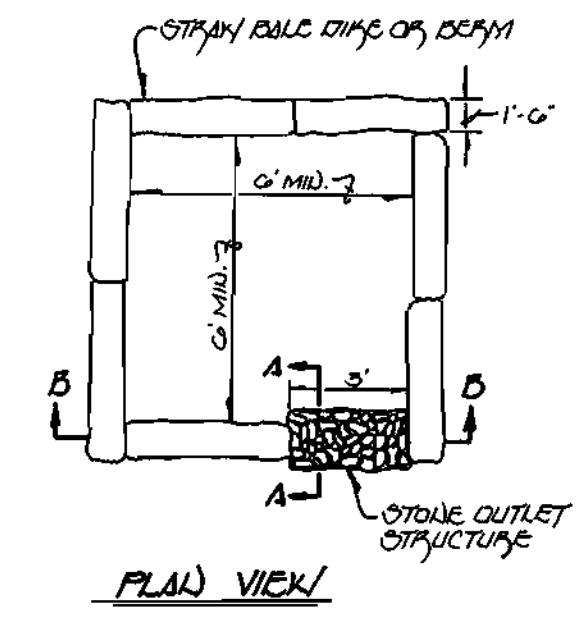
NOTE: FMS OF MH 100 & 101 SHALL BE OCT 1'-0" ABOVE EX. GRADE, STD DETAIL 6-5.41. SEE MAIN TRENCHING & CONCRETE SHEET 2.

NOTE: THE LENGTH OF OPEN OWNER MAIN TRENCH SHALL BE LIMITED TO THREE (3) FT. LENGTHS OF THAT WHICH WILL BE BACKFILLED & STABILIZED WITHIN ONE (1) MONTH OF CONSTRUCTION.

NOTE: STREAM BALE DIKES SHOWN UNDER THIS CONTRACT ARE TO BE PROVIDED IN ADDITION TO DECIMENT & EROSION CONTROL MEASURES PROVIDED UNDER FRG-04.

NOTE: SEE THIS SHEET FOR THE CONDITIONS & MANAGEMENT PRACTICES FOR WORKING IN NON-TIDAL WETLANDS & FOR THE SEQUENCE OF CONSTRUCTION.

NOTE: PROVIDE A PUMP TO DUMP FLOW AROUND THE PROPOSED WORK AREA. THE CAPACITY OF THIS PUMP SHOULD EQUAL 2 X AVERAGE FLOW. A SECOND PUMP SHALL BE PROVIDED FROM THE PROPOSED WORK AREA TO THE DEWATERING DEVICE.



- STRAY BALE DIKE**
- BALES SHALL BE PLACED AT THE TOE OF A CUTSLOPE OR ON THE CONTOUR, & IN A ROW WITH BALE TIGHTLY ADJUTING THE ADJACENT BALE.
 - EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4-INCHES & PLACED SO THE BALE'S LONG AXIS IS HORIZONTAL.
 - BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR REBAR DRIVEN THROUGH THE BALE. THE FIRST STAKE SHALL BE DRIVEN TOWARD THE PERMANENTLY LAID BALE AT AN ANGLE TO FORCE THE BALE TOGETHER. STAKES SHALL BE DRIVEN FLUSH W/ THE BALE.
 - INSPECTION SHALL BE FREQUENT & REPAIRS OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
 - BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS OR DO NOT BLOCK OR IMPED STORM FLOW OR DRAINAGE.

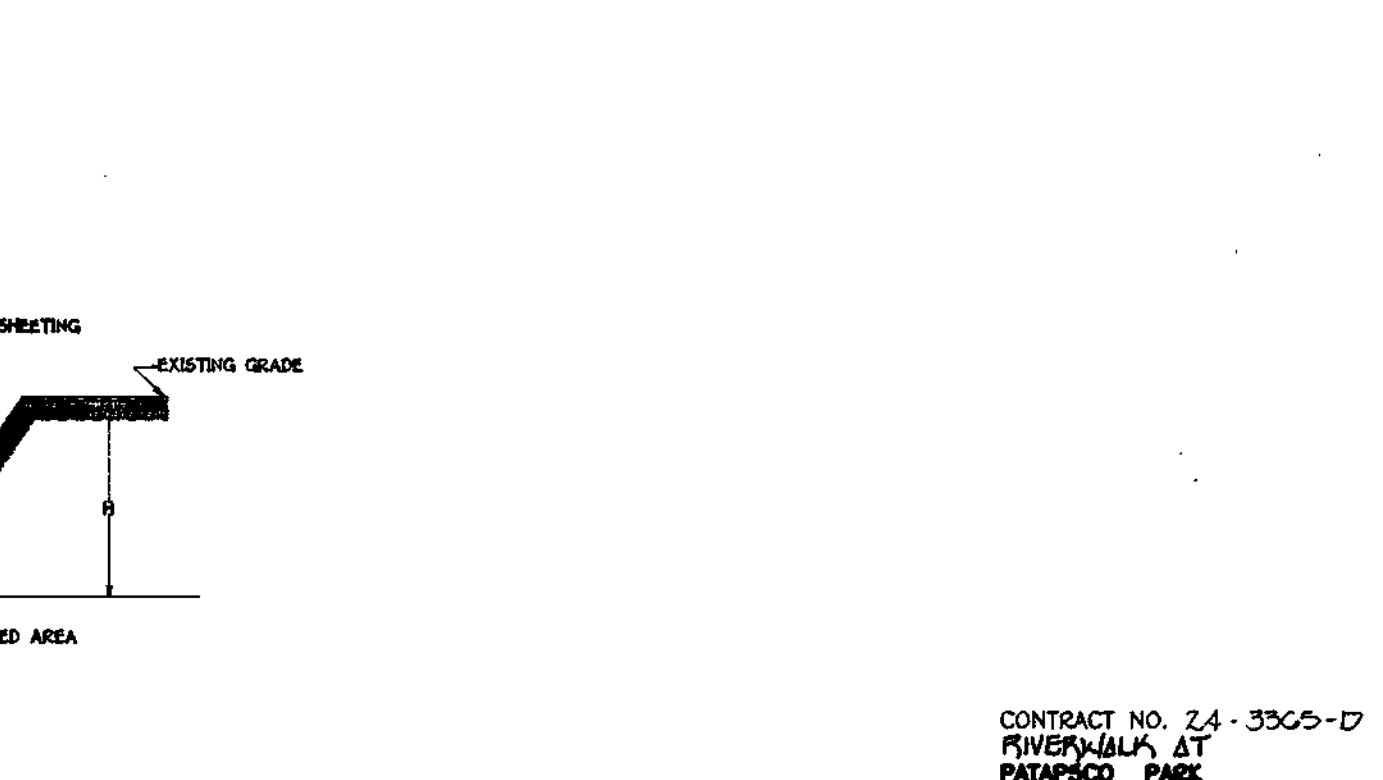
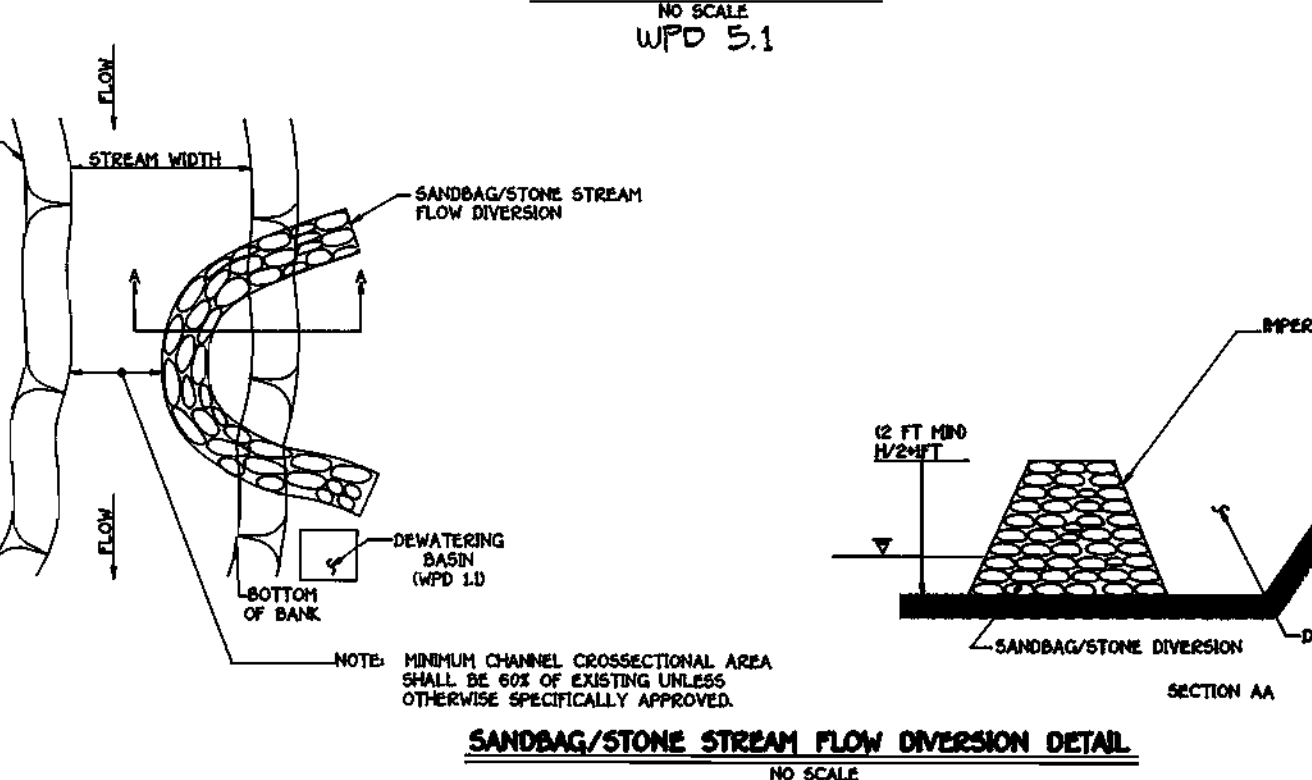
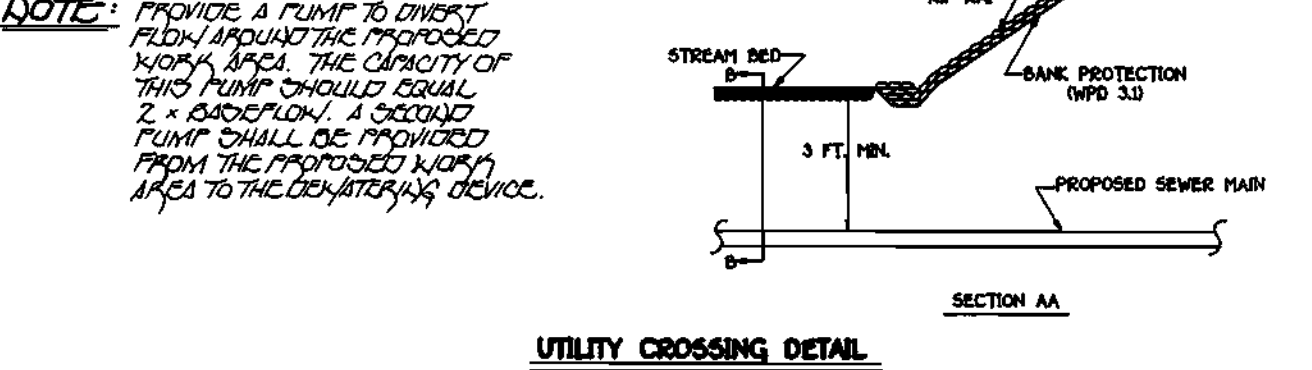
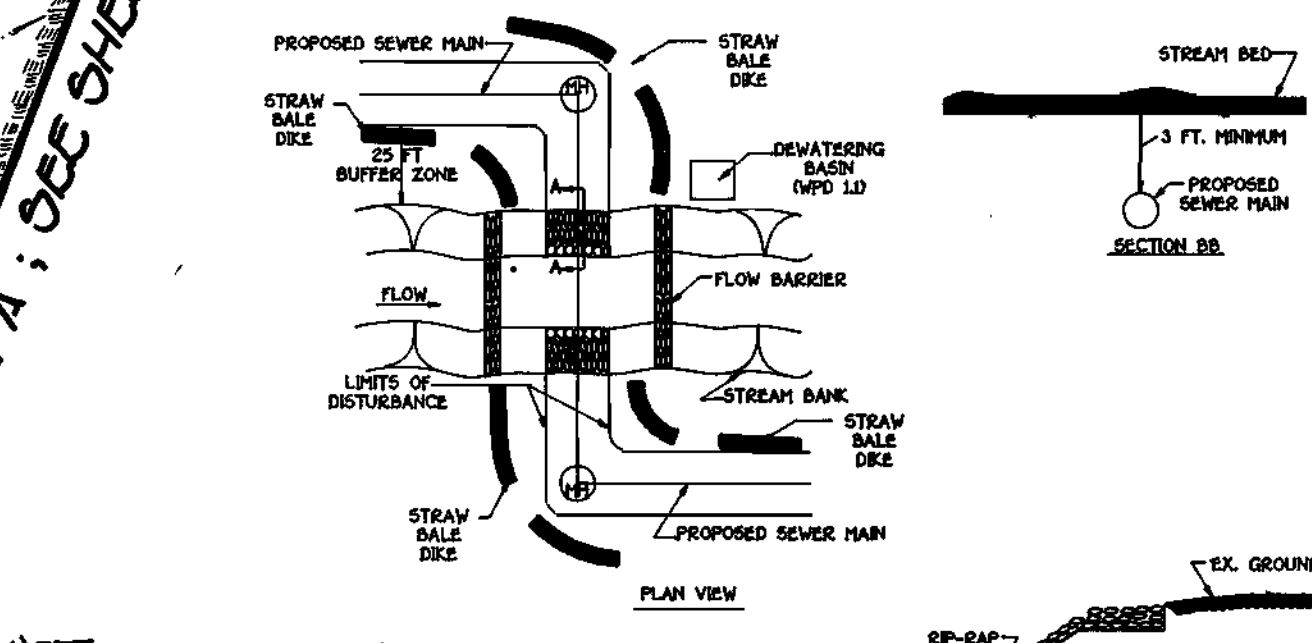
NOTE: THESE PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE DEPARTMENT OF NATURAL RESOURCES, WATER RESOURCES ADMINISTRATION, NON-TIDAL WETLANDS AND WATERWAYS DIVISION, PERMIT NO. 95-107 TRAILING NO. 1995

CONDITIONS AND MANAGEMENT PRACTICES FOR WORKING IN NON-TIDAL WETLANDS

- STOCKPILE AND MAINTAIN SEPARATELY THE TOP 6"-12" OF TOPSOIL MATERIAL TO BE REPLACED AS THE LAYER OF BACKFILLED MATERIAL.
- REMOVE EXCESS FILL OR CONSTRUCTION MATERIAL OR DEBRIS TO AN UPLAND DISPOSAL AREA.
- PLACE MATERIAL IN A LOCATION AND MANNER WHICH DOES NOT ADVERSELY IMPACT SURFACE OR SUBSURFACE WATER FLOW INTO OR OUT OF THE NON-TIDAL WETLAND.
- MAINTAIN THE WETLANDS BUFFER OF THE NON-TIDAL WETLAND UPSTREAM, DOWNSTREAM, OR ADJACENT TO THE NON-TIDAL WETLANDS.
- PLACE HEAVY EQUIPMENT ON MATS OR SUITABLY DESIGN THE EQUIPMENT TO PREVENT DAMAGE TO NON-TIDAL WETLANDS.
- USE PREVIOUSLY EXCAVATED MATERIAL AS BACKFILL UNLESS IT CONTAINS WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL OR ANY OTHER DELETERIOUS SUBSTANCE. USE CLEAN BORROW MATERIAL WHEN EXCAVATED MATERIAL IS NOT SUITABLE FOR USE AS BACKFILL.
- ALL STABILIZATION IN THE WETLAND AND BUFFER SHALL BE PART OF THE FOLLOWING SPECIES: ANNUAL RYEGRASS (LOLIUM MULTIFLORUM), HILLET (SETARIA ITALICA), BARLEY (HORDEUM SP.), OATS (UNOLA SP.) AND FOR RYE (SECALE CEREALE). THESE SPECIES ALLOW FOR THE STABILIZATION OF THE SITE WHILE ALSO ALLOWING FOR THE VOLUNTARY REVEGETATION OF THE NATURAL WETLANDS SPECIES. OTHER NONPERSISTENT VEGETATION MAY ALSO BE ACCEPTABLE, BUT MUST BE APPROVED BY THE DIVISION. KENTUCKY 31 RESCUE SHALL NOT BE UTILIZED IN THE WETLANDS OR BUFFER AREAS. THE AREA SHOULD BE SEEDED AND MULCHED TO REDUCE EROSION AFTER CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED.
- UPON COMPLETION OF THE PROJECT NON-TIDAL WETLANDS AND THE 25-FOOT NON-TIDAL WETLAND BUFFER WILL NOT BE MOVED OR OTHERWISE MANAGED TO PREVENT THE RE-ESTABLISHMENT OF THE FORESTED COVER.
- AFTER INSTALLATION HAS BEEN COMPLETED, MAKE POST CONSTRUCTION GRADES AND ELEVATIONS OF NON-TIDAL WETLANDS THE SAME AS THE ORIGINAL GRADES AND ELEVATIONS.

SEQUENCE OF CONSTRUCTION

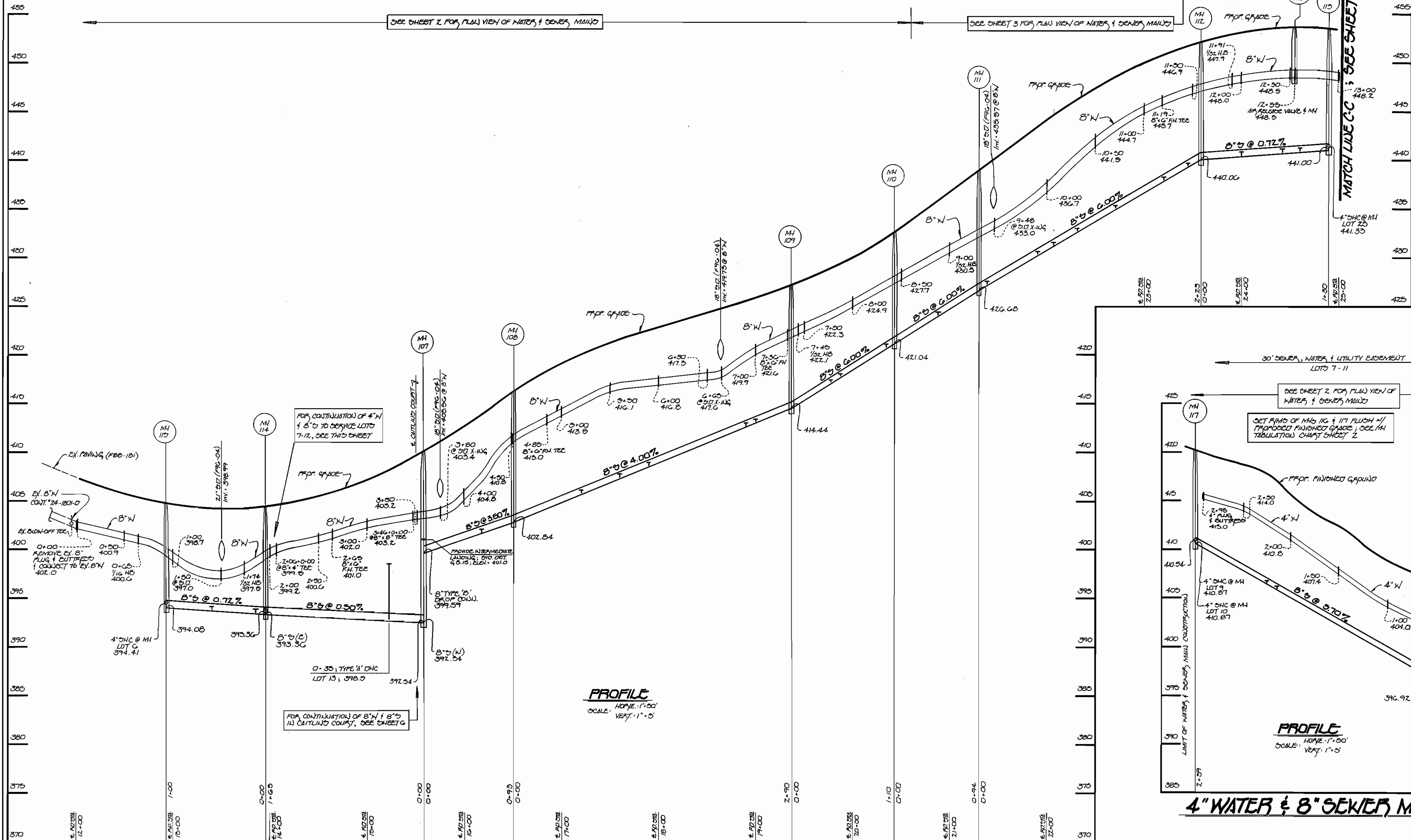
- OBTAIN THE REQUIRED GRADING PERMIT.
- INSTALL THE REQUIRED DECIMENT & CONTROL DEVICES AS INDICATED ON SHEETS 2, 3 & 4 OF THIS CONTRACT, & THOSE PROVIDED UNDER FRG-04. THE START OF CONSTRUCTION ON THE WETLAND (STREAM OPENING) SHALL BE LIMITED TO A 5-DAY CLEAR WEATHER FORECAST FROM THE U.S.D.C. (CONSTRUCTION) WITHIN THESE LIMITS MUST BE COMPLETED WITHIN 5 DAYS.
- CELEB & GARD AS NECESSARY, ONLY AS REQUIRED FOR EXCAVATION & INSTALLATION OF THE OWNER MAIN, & ONLY WITHIN THE DESIGNATED SEWER & UTILITY EVIDENCE OF THE LENGTH OF OPEN OWNER MAIN TRENCH SHALL BE LIMITED TO THREE (3) FT. LENGTHS OF THAT WHICH WILL BE BACKFILLED & STABILIZED WITHIN ONE (1) MONTH OF CONSTRUCTION.
- WORKING DAY, WHICHEVER IS SHORTER.
- CONSTRUCT THE OWNER MAIN & STREAM OPENING. THE CONTRACTOR SHALL REFER TO THIS SHEET FOR A LIST OF CONDITIONS, CONDITIONS & MANAGEMENT PRACTICES FOR WORKING IN NON-TIDAL WETLANDS. THESE CONDITIONS APPLY TO ALL UTILITY MAINS, CONDUCTED WITHIN THE NON-TIDAL WETLANDS & BUFFERS AS SHOWN ON THESE PLANS.
- STABILIZE, SEED & MULCH ALL DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT BEDDING NOTES PROVIDED UNDER FRG-04. THE WETLANDS & STREAM OPENING SHALL BE STABILIZED IN ACCORDANCE WITH CONDITION 9 OF THE CONDITIONS & MANAGEMENT PRACTICES FOR WORKING IN NON-TIDAL WETLANDS (SEE SHEET 2).
- FOLLOWING COMPLETION OF ALL DISTURBED AREAS, & AFTER PERMITS HAD BEEN OBTAINED FROM THE HOWARD COUNTY DECIMENT CONTROL INSPECTOR, REMOVE ALL DECIMENT & DECIMENT CONTROL DEVICES.



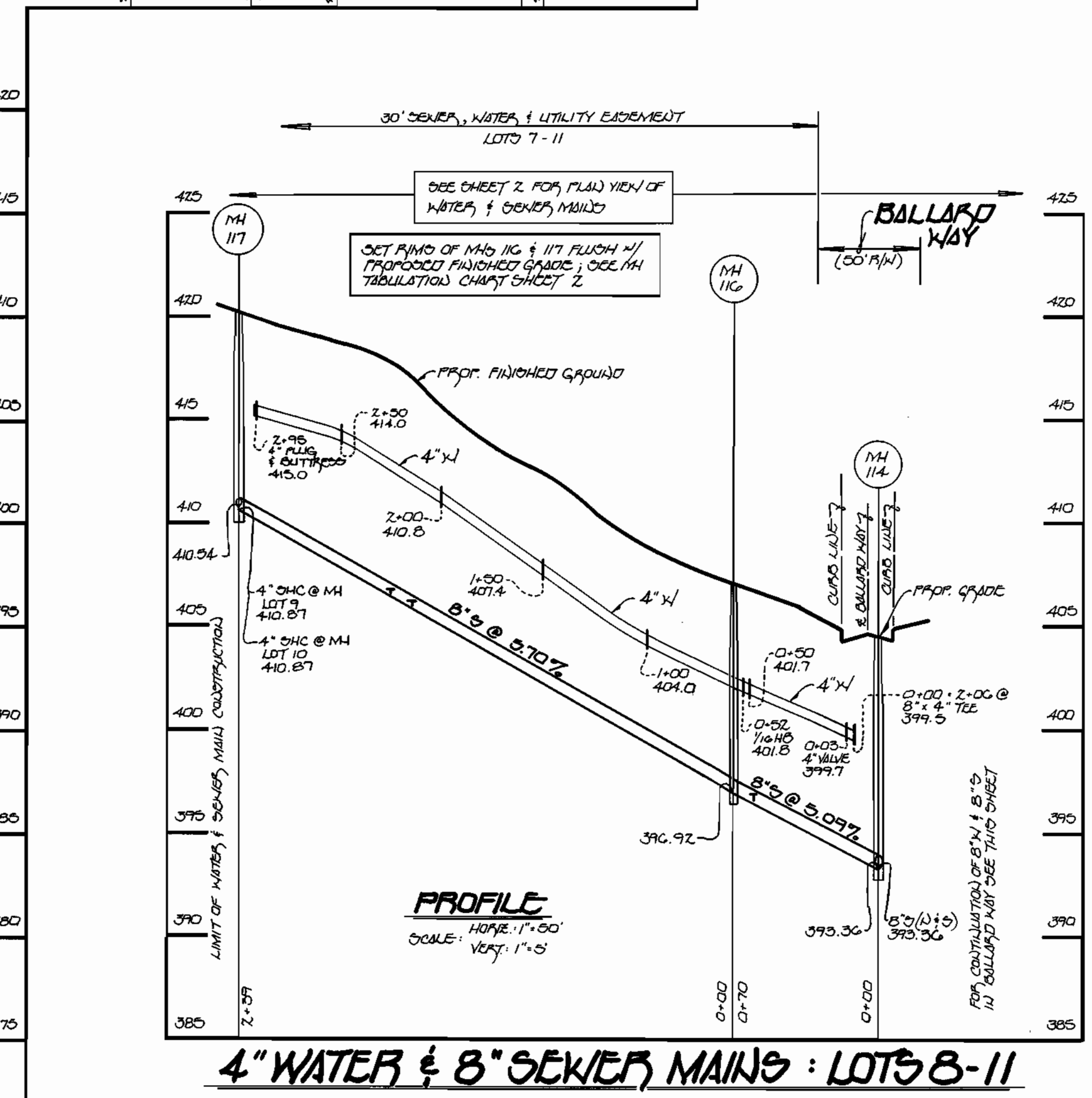
DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Chief, Bureau of Utilities Date: 12-5-95	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND Chief, Development Engineering Division Date: 12/10/95	Fisher, Collins & Carter, Inc. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS CENTENNIAL SQUARE OFFICE PARK 10272 BALTIMORE NATIONAL PIKE BELLICOTT CITY, MARYLAND 21042 (410) 461-2855	DES: M.J.M. DRAW: J.M.M. CHK: P.W.K. DATE: 12/10/95 REVISION: 1 REVISION: REVISION DATE:	WATER & SEWER MAINS PLAN VIEW & DETAILS 600' SCALE MAP NO. 17 BLOCK NO. 2 AND 3	RIVERWALK AT PATAPSCO PARK LOT NOS. 6-64 CONTRACT NO. 24-3365-D SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE AS SHOWN SHEET 4 OF 7
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3365 WS/5 Riverwalk @ Patapsco Pk.

BALLARD WAY
(50' R/W)



NOTE: THE LENGTH OF OPEN SEWER MAIN TRENCH SHALL BE LIMITED TO THREE (3) PIPE LENGTHS OR THAT WHICH WILL BE BACKFILLED & STABILIZED WITHIN ONE (1) MONTH'S TIME, WHICHEVER IS SHORTER.



8" WATER & 8" SEWER MAINS : BALLARD WAY

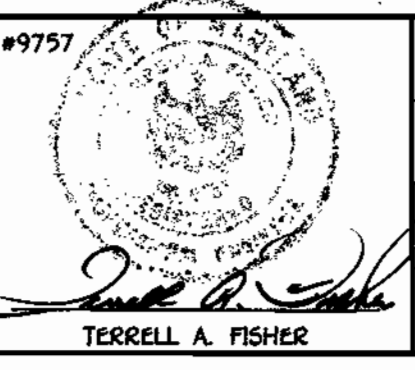
4" WATER & 8" SEWER MAINS : LOTS 8-11

CONTRACT NO. 24-3365-D
RIVERWALK AT PATAPSCO PARK
LOT NOS. 6-64
WATER AND SEWER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
12.5.95
DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND
12/16/95
DATE

Fisher, Collins & Carter, Inc.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK
10272 BALTIMORE NATIONAL PIKE
BELLGROVE CITY, MARYLAND 21042
(410) 421-2855



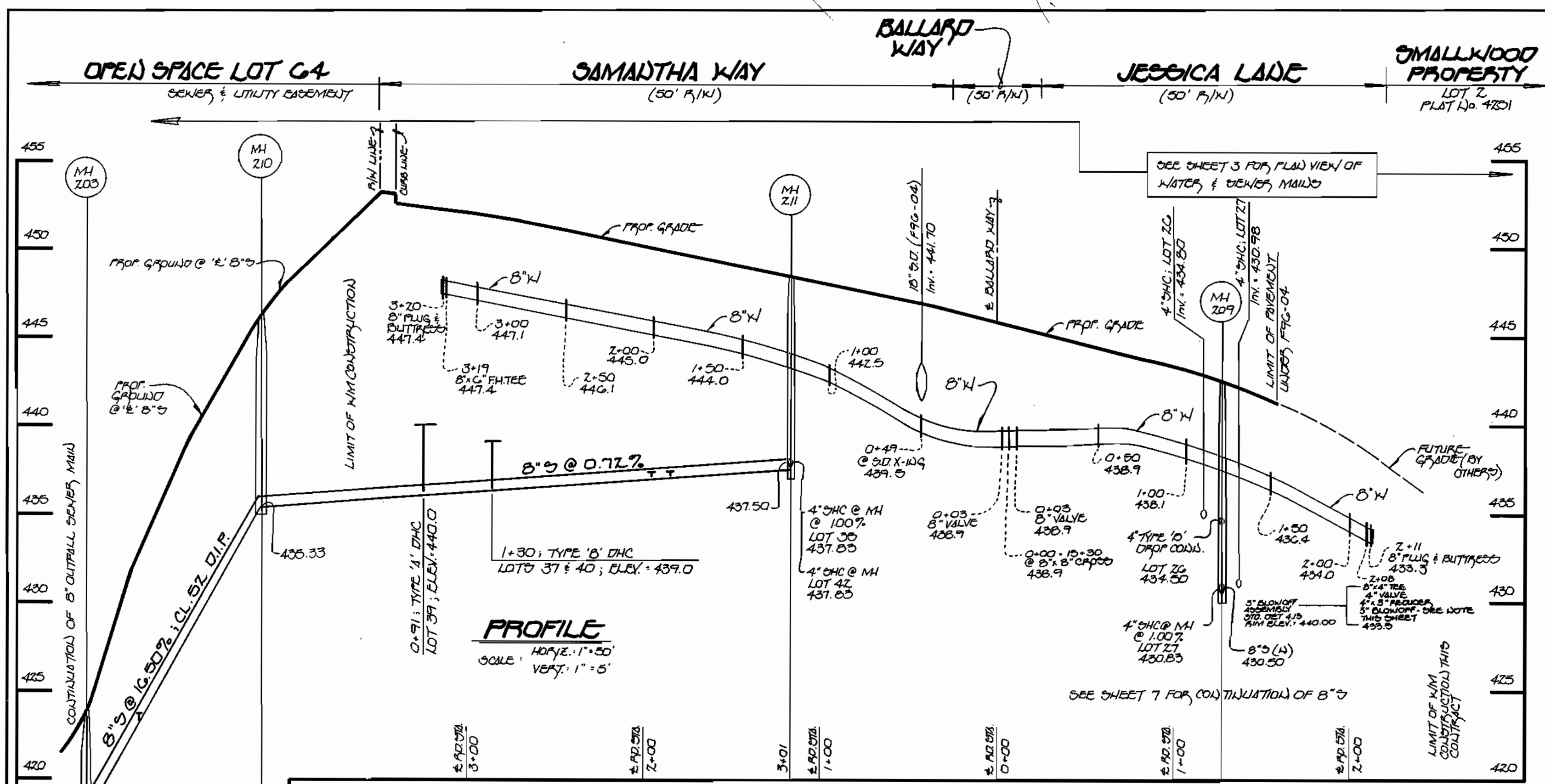
DES: M.J.M.			
DRWN: J.M.M.			
CHK: P.W.K.			
DATE:			
BY: NO.		REVISION	DATE

WATER & SEWER MAINS
PROFILES
600' SCALE MAP NO. 17 BLOCK NO. 2 AND 3

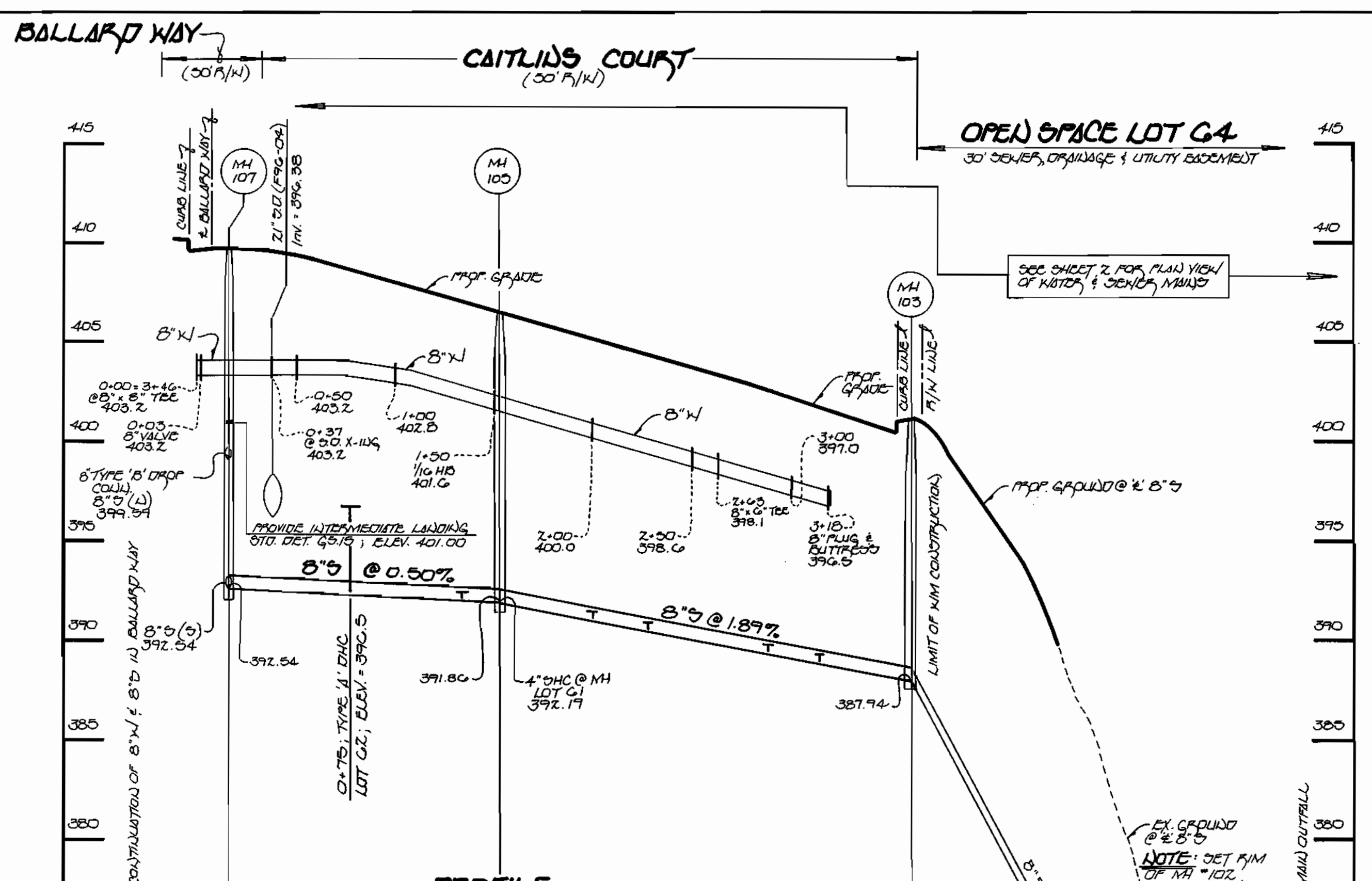
RIVERWALK AT PATAPSCO PARK
LOT NOS. 6-64
CONTRACT NO. 24-3365-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 5 OF 7
SMTS.DWG

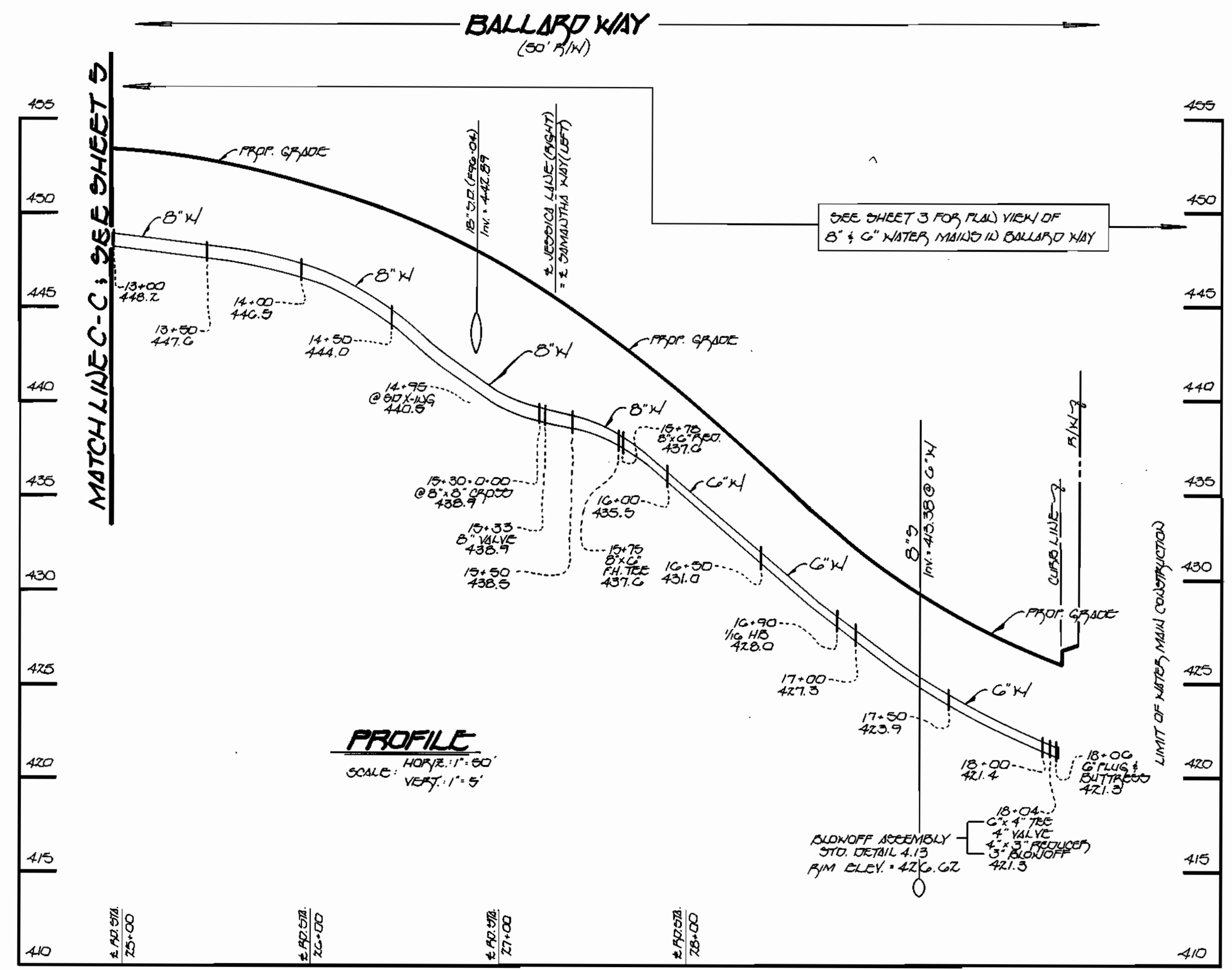
3365 ws/6 Riverwalk @ Patapsco Pk.



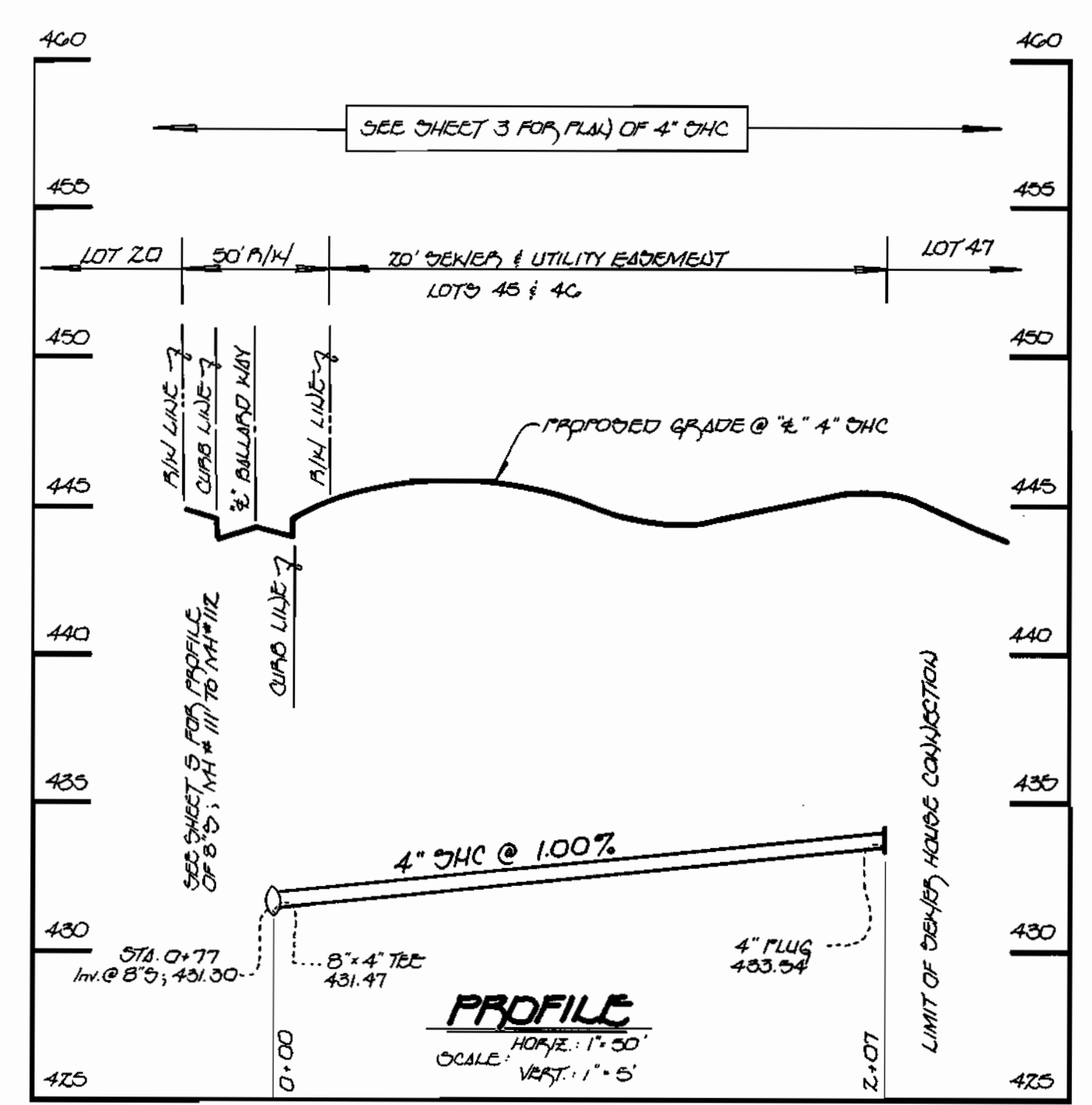
WATER & SEWER MAINS: JESSICA LANE & SAMANTHA WAY



WATER & SEWER MAINS: CAITLIN'S COURT TO OPEN SPACE LOT G4



8" & 6" WATER MAINS: BALLARD WAY



4" DHC TO LOT 47

NOTE: THE LENGTH OF OPEN SEWER MAIN THROUGH SHALL BE LIMITED TO THREE (3) PIPE LENGTHS OF THAT WHICH WILL BE EXCAVATED & STABILIZED WITHIN ONE (1) WORKING DAY, WHICHEVER IS SHORTER.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Robert S. Sawyer 12-5-95
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND
12/10/95
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Fisher, Collins & Carter, Inc.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK
10276 BALTIMORE NATIONAL PIKE
CLLICOFF CITY, MARYLAND 21042
(410) 461-2800



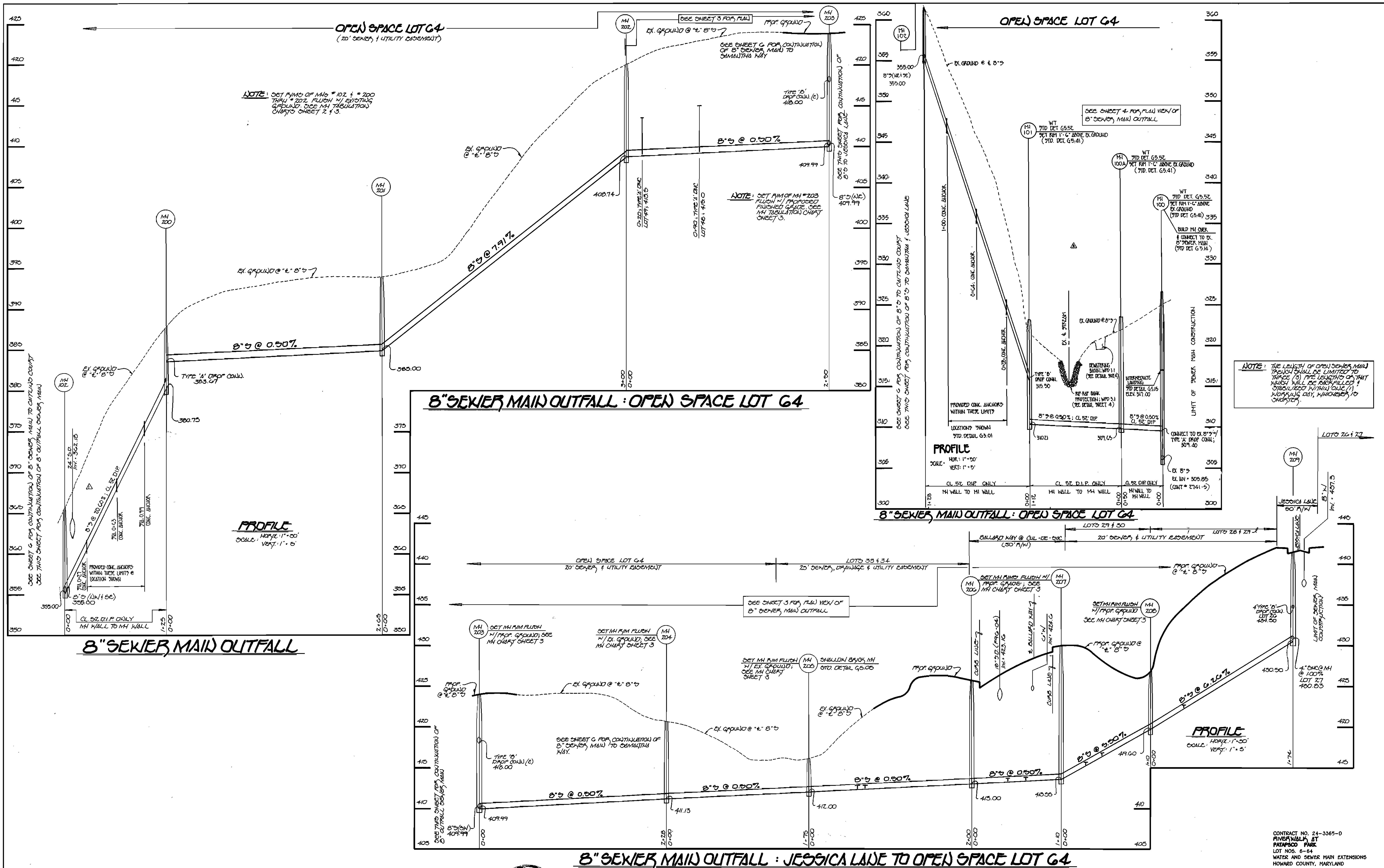
DES: M.J.M.				
DRWN: J.M.M.				
CHK: P.W.K.				
DATE:	L.A. Δ	REVISE SEWER MAIN PROFILE FROM MH 102 TO MH 103	7/94	
BY NO.		REVISION		

WATER & SEWER MAINS
PROFILES
600' SCALE MAP NO. 17 BLOCK NO. 2 AND 3

RIVERWALK AT PATAPSCO PARK
LOT NOS. 6-64
CONTRACT NO. 24-3365-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 6 OF 7
SHTS.DWG

3365 ws/7 Riverwalk @ Patapsco Pk.



<p>DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND</p> <p><i>[Signature]</i> CHIEF, BUREAU OF UTILITIES</p> <p>12-5-98 DATE</p>	<p>DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND</p> <p><i>[Signature]</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION</p> <p>12/1/98 DATE</p>	<p>Fisher, Collins & Carter, Inc. #9757 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS CENTREVIEW SQUARE OFFICE BUILDING 10276 BANTIMORE NATIONAL PLACE ELICOTT CITY, MARYLAND 21042 (410) 461-2888</p> <p><i>[Signature]</i> TERRELL A. FISHER</p>	<p>DES: M.J.M. DRAWN: J.M.M. CHK: P.W.K. DATE:</p>	<table border="1"> <thead> <tr> <th>LA</th> <th>NO.</th> <th>REVISION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>LA</td> <td>1</td> <td>REVISE SEWER MAIN PROFILE FROM MH 100 TO MH 102</td> <td>7/96</td> </tr> <tr> <td>LA</td> <td>2</td> <td>REVISE SEWER MAIN PROFILE BETWEEN MH 102 TO MH 200</td> <td>7/96</td> </tr> </tbody> </table>	LA	NO.	REVISION	DATE	LA	1	REVISE SEWER MAIN PROFILE FROM MH 100 TO MH 102	7/96	LA	2	REVISE SEWER MAIN PROFILE BETWEEN MH 102 TO MH 200	7/96	<p>PROFILES WATER & SEWER MAINS</p> <p>600' SCALE MAP NO. 17 BLOCK NO. 2 AND 3</p>	<p>RIVERWALK AT PATAPSCO PARK LOT NOS. 6-64 CONTRACT NO. 24-3365-D SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND</p> <p>SCALE AS SHOWN SHEET 7 OF 7</p>
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