

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

PUBLIC WATER & SEWER EXTENSION

GOLDEN BELL

LOTS 1-47

6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT NO. 24-1995-D

BENCH MARKS

BM #1 ELEV. 363.15
604 SET IN 12" TREE, 215+/-
SOUTHEAST OF OLD MONTGOMERY
ROAD ALONG WESTERNMOST
PROPERTY LINE

BM #2 ELEV. 379.73
604 SET IN 18" TREE, 580+/-
EAST OF MARYLAND ROUTE 108
AND 570+/- SOUTHEAST OF
OLD MONTGOMERY ROAD

BM #3 ELEV. 384.01
HO. CO. MONUMENT #2544002
CONCRETE MONUMENT SET 0.1'
BELOW SURFACE, 44+/- NORTH
OF C&E #234001

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. data.
- All pipe elevations shown are \ominus invert elevations.
- Clear all utilities by a minimum of 6".
- 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, 1989 amendments. 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 \boxtimes 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 personal satisfaction. Any damage to existing facilities due to the contractor's negligence shall be repaired at the contractor's expense.
- The 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.	758-1250
Bureau of Utilities, Ho.Co. Department of Public Works	992-2366
C & P Telephone Co.	1-800-257-7777
- 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.
- The 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.
- 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 elevation shown on the drawings. All fire hydrants shall be strapped and buttressed with concrete in accordance with the 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 setting, unless otherwise noted on the plans or in the Specifications.
- All service clamps are to have stainless straps.
- All D.I.P. fittings shall be in accordance with A.W.W.A. specifications C-153 Ductile Iron Compact Fittings, 3" through 12" for water and other liquids.
- All sewer mains shall be C.S.P.X., R.C.S.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.
- Force mains shall be D.I.P. only.
- 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 GS-52. Where watertight manhole frame and cover is used, set top of frame 1'-5" above finished grade unless otherwise noted on the drawings.
- House(s) with the symbol "C.N.S." indicates that the cellar cannot be served.

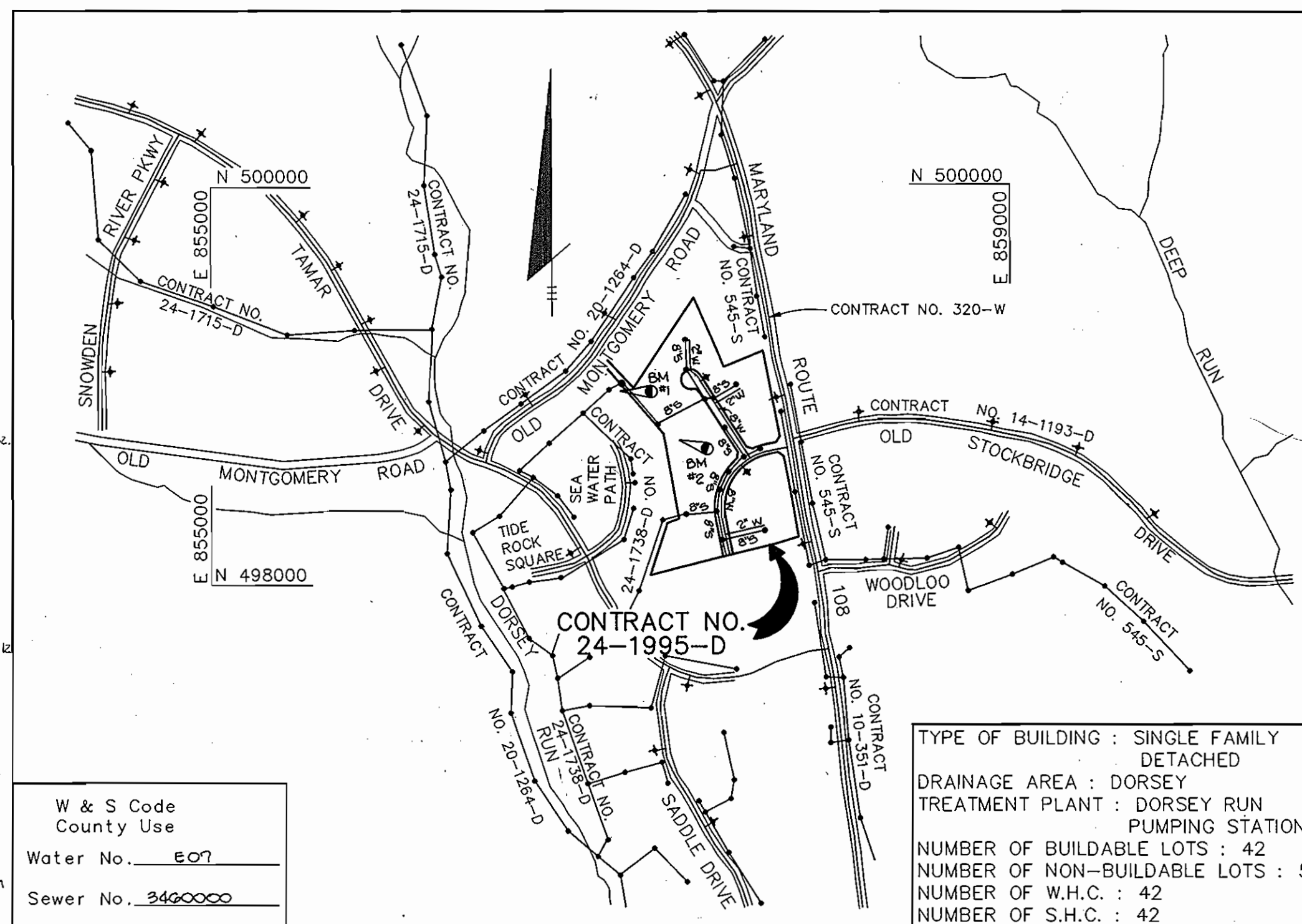
S&C LOT 1: 13' FROM NORTH EAST CORNER OF INLET 6,
22' FROM SOUTH EAST CORNER OF INLET 6.
S&C LOT 2: 62' FROM MANHOLE 7, 21' FROM CLEANOUT LOT 3
S&C LOT 3: 51' FROM MANHOLE 7, 21' FROM CLEANOUT
S&C LOT 4: 21' FROM CLEANOUT LOT 2
S&C LOT 4: 33' FROM MANHOLE 7, 21' FROM CLEANOUT LOT 3
S&C LOT 4: 26' FROM MANHOLE 6, 33' FROM CLEANOUT @ LOT 4
S&C LOT 4: 26' FROM MANHOLE 6, 33' FROM CLEANOUT @ LOT 4
S&C LOT 4: 13' FROM FIRE HYDRANT NO. 1, 21' FROM SOUTH
EAST CORNER OF INLET 24
S&C LOT 5: 17' FROM NORTH EAST CORNER OF INLET 23,
21' FROM SOUTH EAST CORNER OF INLET 13
S&C LOT 20: 50' FROM MANHOLE 3
S&C LOT 22: 18' FROM MANHOLE 4, 21' FROM CLEANOUT @ LOT 23
S&C LOT 23: 20' FROM MANHOLE 4, 21' FROM CLEANOUT @ LOT 22
S&C LOT 24: 41' FROM MANHOLE 4, 20' FROM CLEANOUT @ LOT 23
S&C LOT 25: 20' FROM MANHOLE 2, 20' FROM MANHOLE 3
S&C LOT 26: 43' FROM MANHOLE 2, 20' FROM MANHOLE 2
S&C LOT 27: 64' FROM MANHOLE 2, 24' FROM MANHOLE 1
S&C LOT 28: 101' FROM MANHOLE 1, 61' FROM MANHOLE 2
S&C LOT 29: 42' FROM CLEANOUT LOT 25, 132' FROM MANHOLE 3
S&C LOT 31: 41' FROM MANHOLE 3, 22' FROM CLEANOUT @ LOT 32
S&C LOT 34: 22' FROM MANHOLE 3, 20' FROM CLEANOUT @ LOT 33
S&C LOT 35: 46' FROM CLEANOUT @ LOT 34, 43' FROM MANHOLE 3
S&C LOT 36: 57' FROM CLEANOUT 36, 41' FROM M.H. 8
S&C LOT 37: 30' FROM M.H. 8, 21' FROM CLEANOUT LOT 34
S&C LOT 38: 24' FROM M.H. 8, 64' FROM CLEANOUT LOT 36
S&C LOT 39: 26' FROM M.H. 8, 60' FROM CLEANOUT LOT 37
S&C LOT 16: 24' FROM INLET 10, 13' FROM CLEANOUT LOT 15
S&C LOT 15: 41' FROM M.H. 13, 13' FROM CLEANOUT LOT 16
S&C LOT 10: 51' FROM M.H. 13, 13' FROM CLEANOUT LOT 16
S&C LOT 5: 61' FROM S&C LOT 7, 25' FROM M.H. 15
S&C LOT 20: 35' VALVE, MORNING CALM WAY 52x34x30, 46' FROM M.H. 15
S&C LOT 3: 34' FROM M.H. 15, 61' FROM CLEANOUT LOT 5
S&C LOT 15: 23' FROM CLEANOUT LOT 15, 18' FROM M.H. 11
S&C LOT 19: 23' FROM CLEANOUT LOT 18, 15' FROM M.H. 11
S&C LOT 6: 23' FROM M.H. 16, 27' FROM S&C LOT 7
S&C LOT 7: 61' FROM S&C LOT 6, 66' FROM M.H. 16,
66' FROM S&C LOT 6, 10' FROM M.H. 6

Item	Quantities		Material Supplier
	Estimated	As Built	
8" WATER	1202 LF	1156'	ATLANTIC STATES
6" WATER	104 LF	72'	ATLANTIC STATES
8" VALVES	1 EA.	1	MULLER
6" VALVES	3 EA.	2	MUSLER
FIRE HYDRANTS	3 EA.	3	MUSLER
12" x 8" TS&V	1 EA.	1	MUSLER
4" W.C.	1254 LF	1260'	CAMBRIDGE LEE
8" SEWER	1807 LF	1826'	J.M. MANUFACTURING
8" SEWER (DIP)	984 LF	754'	ATLANTIC STATES
MANHOLES	10 EA.	10	ATLANTIC STATES
4" S.H.C.	1099 LF	1170'	J.M. MANUFACTURING
2" WATER	429 LF	420'	CAMBRIDGE LEE
2" VALVES	3 EA.	3	MUSLER
3/4" BALL VALVES	11 EA.	11	MUSLER

AS-BUILT / WATER

W&C LOT 1: 35' FROM I-3, 52' FROM I-3
W&C LOT 2: 101' FROM I-3, 60' FROM M.H. 1
W&C LOT 3: 21' FROM VALVE BOX LOT 1, 42' FROM M.H. 1
W&C LOT 4: 41' FROM VALVE BOX LOT 1, 36' FROM M.H. 7
W&C LOT 21: 50' FROM VALVE BOX LOT 4, 45' FROM M.H. 7
W&C LOT 22: 61' FROM I-3, 20' FROM M.H. 1
W&C LOT 23: 25' FROM M.H. 4, 50' FROM I-3, NORTHWEST CORNER
W&C LOT 24: 40' FROM I-3, NORTHWEST CORNER
W&C LOT 25: 43' FROM I-3, SOUTH WEST CORNER, 50' FROM M.H. 3
W&C LOT 26: 20' FROM M.H. 3, 24' FROM I-2, NORTHWEST CORNER
W&C LOT 27: 35' FROM M.H. 2, 36' FROM I-1
W&C LOT 28: 45' FROM M.H. 6, 40' FROM I-1
W&C LOT 29: 28' FROM M.H. 5, 24' FIRE HYDRANT NO. 1, GOLDEN BEUL WAY
W&C LOT 30: 50' FROM I-3, SOUTH WEST CORNER, 31' FROM M.H. 4
W&C LOT 31: 58' FROM I-3, SOUTH EAST CORNER, 43' FROM M.H. 3
W&C LOT 32: 12' FROM I-2, NORTH EAST CORNER, 10' FROM I-2, SOUTH EAST CORNER
W&C LOT 33: 21' FROM M.H. 5, 25' FROM VALVE BOX LOT 39
W&C LOT 34: 12' FROM M.H. 5, 10' FROM VALVE BOX LOT 38
W&C LOT 34: 23' FROM M.H. 5, 35' FROM VALVE BOX LOT 35

W&C LOT 35: 30' FROM M.H. 5, 30' FROM VALVE BOX LOT 32
W&C LOT 36: 34' FROM M.H. 8, 50' FROM M&C LOT 32
W&C LOT 37: 30' FROM 2" WATER VALVE ON GOLDEN BEUL WAY 52x34x30, 11' FROM W&C LOT 36
W&C LOT 38: 30' FROM 2" WATER VALVE AT 52x34x30, 11' FROM W&C LOT 37
W&C LOT 39: 30' FROM M.H. 15, 45' FROM 2" VALVE AT 52x34x30 MORNING CALM WAY
W&C LOT 40: 41' FROM M.H. 15, 70' FROM M.H. 15
W&C LOT 41: 54' FROM M.H. 12, 34' FROM W&C LOT 18
W&C LOT 42: 34' FROM W&C LOT 17, 21' FROM M.H. 12
W&C LOT 43: 5' FROM M.H. 12, 47' FROM W&C LOT 20
W&C LOT 20: 47' FROM W&C LOT 19, 52' FROM M.H. 12
W&C LOT 19: 10' FROM M.H. 5, 50' FROM M.H. 15
W&C LOT 15: 30' FROM M.H. 15, 30' FROM 2" VALVE AT 52x34x30
W&C LOT 16: 47' FROM 2" VALVE AT 52x34x30, 5+57', 28' FROM NORTH EAST CORNER OF I-10
W&C LOT 14: 65' FROM M.H. 13, 65' FROM M.H. 15
W&C LOT 13: 10' FROM M.H. 14, 27' FROM W&C LOT 12
W&C LOT 12: 27' FROM W&C LOT 15, 30' FROM M.H. 4
W&C LOT 11: 75' FROM M.H. 4, 68' FROM M.H. 15
W&C LOT 8: 58' FROM I-3, 63' FROM W&C LOT 7
W&C LOT 7: 64' FROM M.H. 15, 57' FROM W&C LOT 8
W&C LOT 5: 51' FROM W&C LOT 1, 15' FROM M.H. 15
2" VALVE AT 52x34x30 FROM M.H. 13, 32' FROM M.H. 15
CORNER OF I-10, MORNING CALM WAY
6" FIRE HYDRANT VALVE AT 52x34x30 MORNING CALM WAY
WAY 15' FROM M.H. 7, 70' FROM S.E. CORNER I-10
2" VALVE AT 52x34x30 MORNING CALM WAY
15' FROM M.H. 15, 40' FROM M.H. 12



VICINITY MAP
SCALE: 1"=600'

Sediment control measures for this contract will be implemented in accordance with Section 219 of the Specifications and as shown on F-20-124

John L. Robertson 5/9/91
HOWARD SOIL CONSERVATION DISTRICT

Review for Howard Soil Conservation District and meet technical requirements.

John L. Robertson 5-9-90
S.O. SOIL CONSERVATION SERVICE DATE

This plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

John L. Robertson 5/9/91
HOWARD SOIL CONSERVATION DISTRICT

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James Z. ... 5/11/90
DIRECTOR OF PUBLIC WORKS DATE

Robert M. ... 5-7-90
CHIEF, BUREAU OF UTILITIES DATE

... 5/11/90
CHIEF, BUREAU OF ENGINEERING DATE

... 5/11/90
CHIEF, LAND DEVELOPMENT DATE

RIEMER MUEGGE & ASSOCIATES, INC.
3105 NORTH RIDGE ROAD
ELLCOTT CITY, MARYLAND
(301) 461-2690

Arthur E. Muegge #8707
PROFESSIONAL ENGINEER

DES: DAM	WAD	Δ	REVISED GENERAL NOTE #16	8-6-90
DRN: DAM	MAD	2	REVISED 8" SEWER DIP QUANTITY	10-6-90
CHK: J.D.P.				
DATE: 2-9-90	BY: NO.		REVISION	DATE

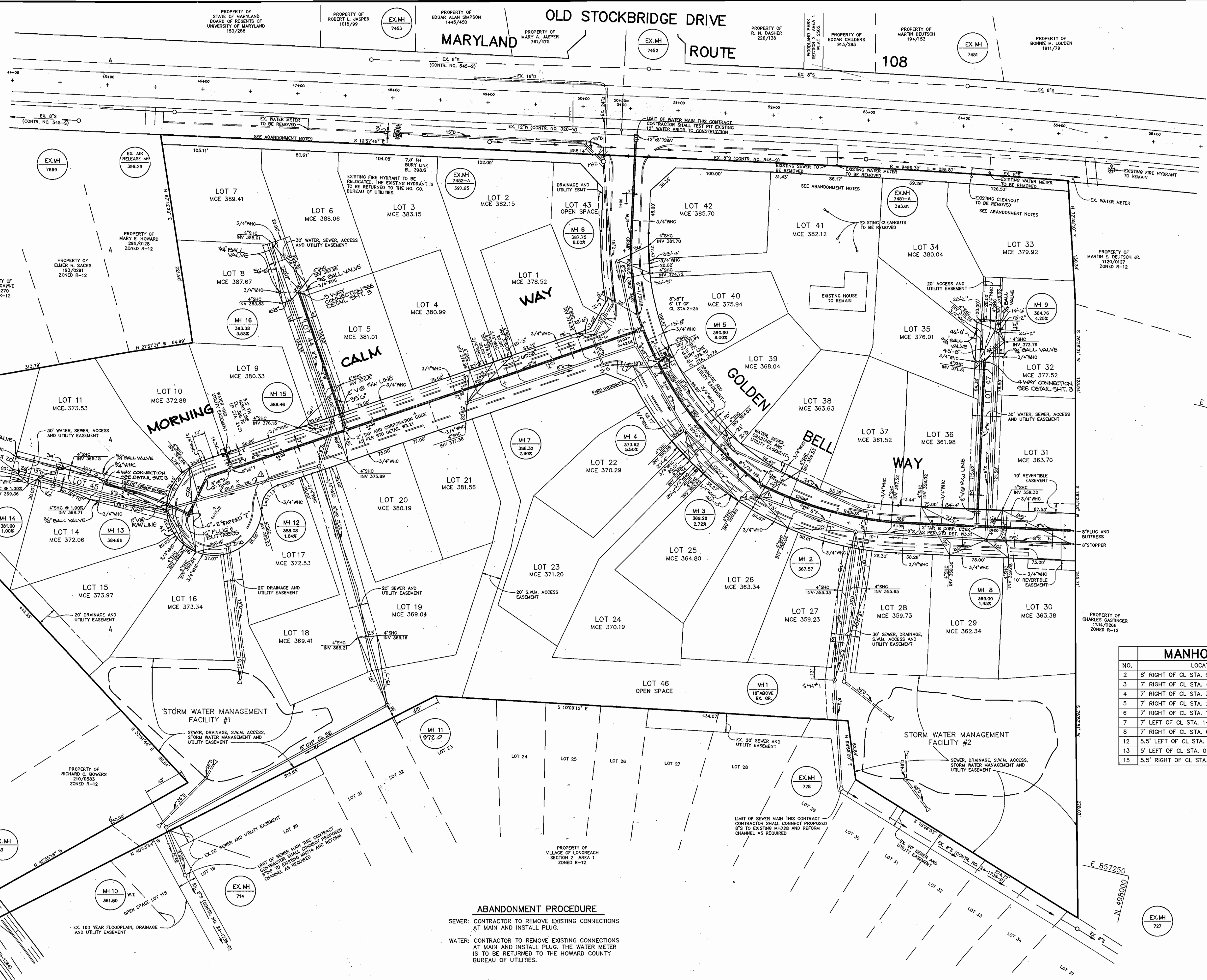
TITLE SHEET

600' SCALE MAP NO. 37 BLOCK NO. 8

GOLDEN BELL
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT NO. 24-1995-D

SCALE AS SHOWN

SHEET 1 OF 4



MANHOLE TABLE	
NO.	LOCATION
2	8' RIGHT OF CL STA. 5+58 GOLDEN BELL WAY
3	7' RIGHT OF CL STA. 4+54 GOLDEN BELL WAY
4	7' RIGHT OF CL STA. 3+51 GOLDEN BELL WAY
5	7' RIGHT OF CL STA. 2+49 GOLDEN BELL WAY
6	7' RIGHT OF CL STA. 1+60 GOLDEN BELL WAY
7	7' LEFT OF CL STA. 1+95 RISING SUN WAY
8	7' RIGHT OF CL STA. 6+94 GOLDEN BELL WAY
12	5.5' LEFT OF CL STA. 3+63 RISING SUN WAY
13	5' LEFT OF CL STA. 0+10 LOT 45
15	5.5' RIGHT OF CL STA. 3+34 RISING SUN WAY

ABANDONMENT PROCEDURE
 SEWER: CONTRACTOR TO REMOVE EXISTING CONNECTIONS AT MAIN AND INSTALL PLUG.
 WATER: CONTRACTOR TO REMOVE EXISTING CONNECTIONS AT MAIN AND INSTALL PLUG. THE WATER METER IS TO BE RETURNED TO THE HOWARD COUNTY BUREAU OF UTILITIES.

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

James J. Sullivan shilko
 DIRECTOR OF PUBLIC WORKS DATE

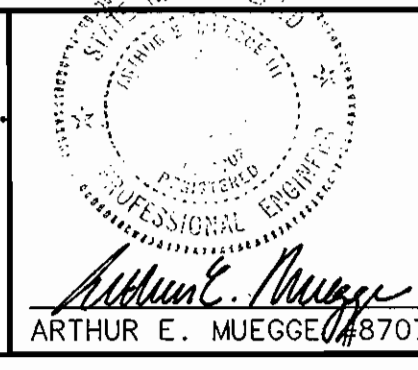
Robert M. Berman 5-7-90
 CHIEF, BUREAU OF UTILITIES DATE

William S. Papp Sullivan
 CHIEF, BUREAU OF ENGINEERING DATE

Paul D. Deppa 5/11/90
 CHIEF, LAND REVENUE DATE

RIEMER MUEGGE & ASSOCIATES, INC.
 3105 NORTH RIDGE ROAD
 ELLICOTT CITY, MARYLAND
 (301) 461-2690

Arthur E. Muegge
 ARTHUR E. MUEGGE 4/8/90



DES: DAM	WAD	△	LABEL R.I.P. CL. 8" PIPE, MOVE MANHOLE #3	
DRN: DAM	MAD	□	MOVED MH # 11	10-0-92
CHK: J.D.P.				
DATE: 3/8/90	BY: NO.	REVISION	DATE	

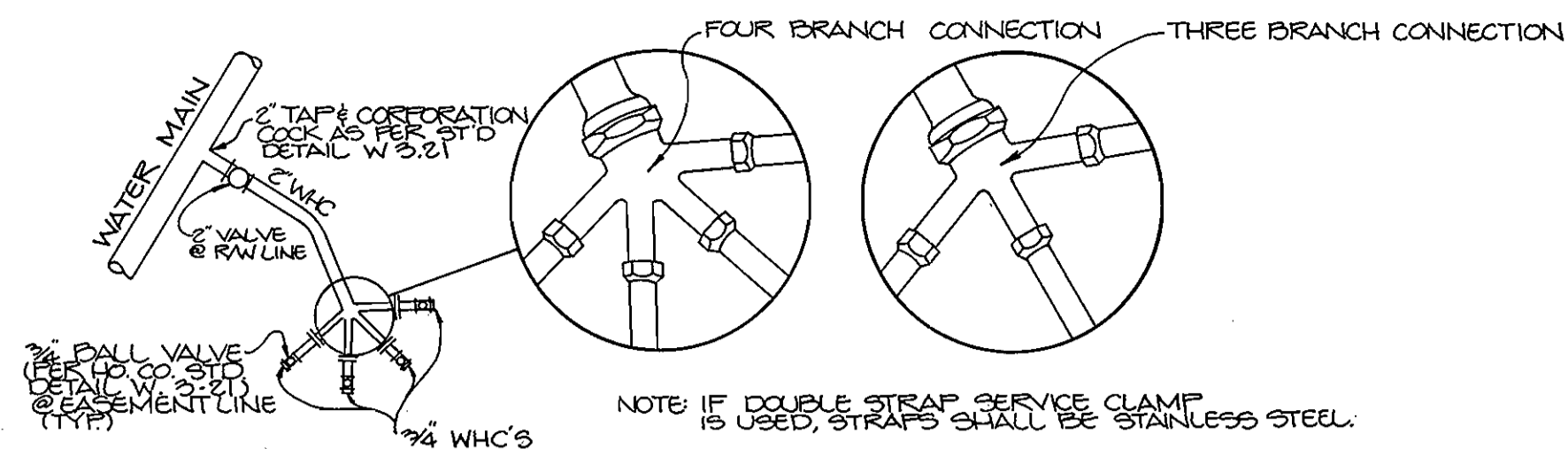
PLAN OF WATER AND SEWER MAINS

600' SCALE MAP NO. 37 BLOCK NO. 8

GOLDEN BELL
 6th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 CONTRACT NO. 24-1995-D

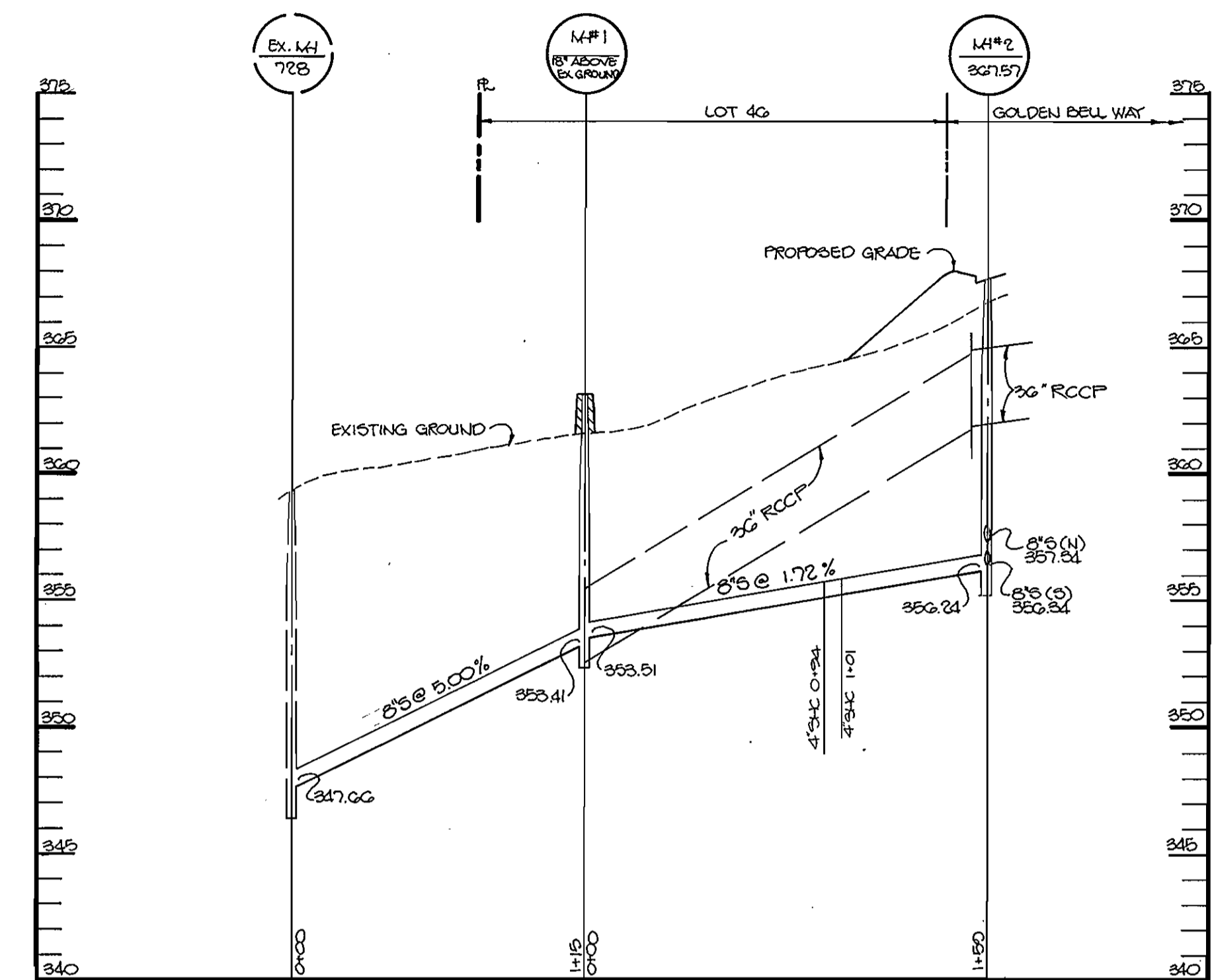
SCALE: 1" = 50'
 SHEET 2 OF 4

AS-BUILT 8-20-93

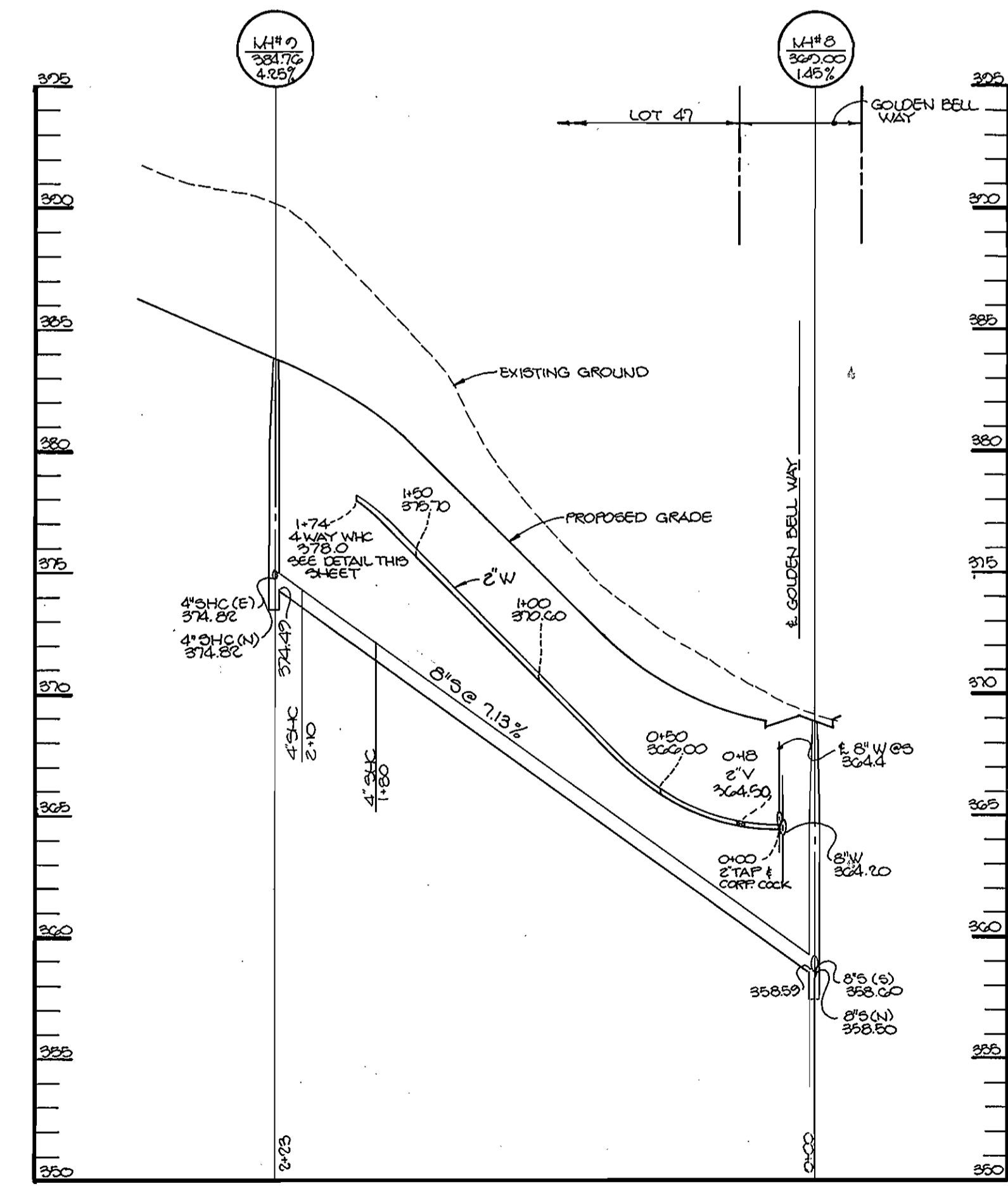


3-WAY & 4-WAY WHC DETAIL

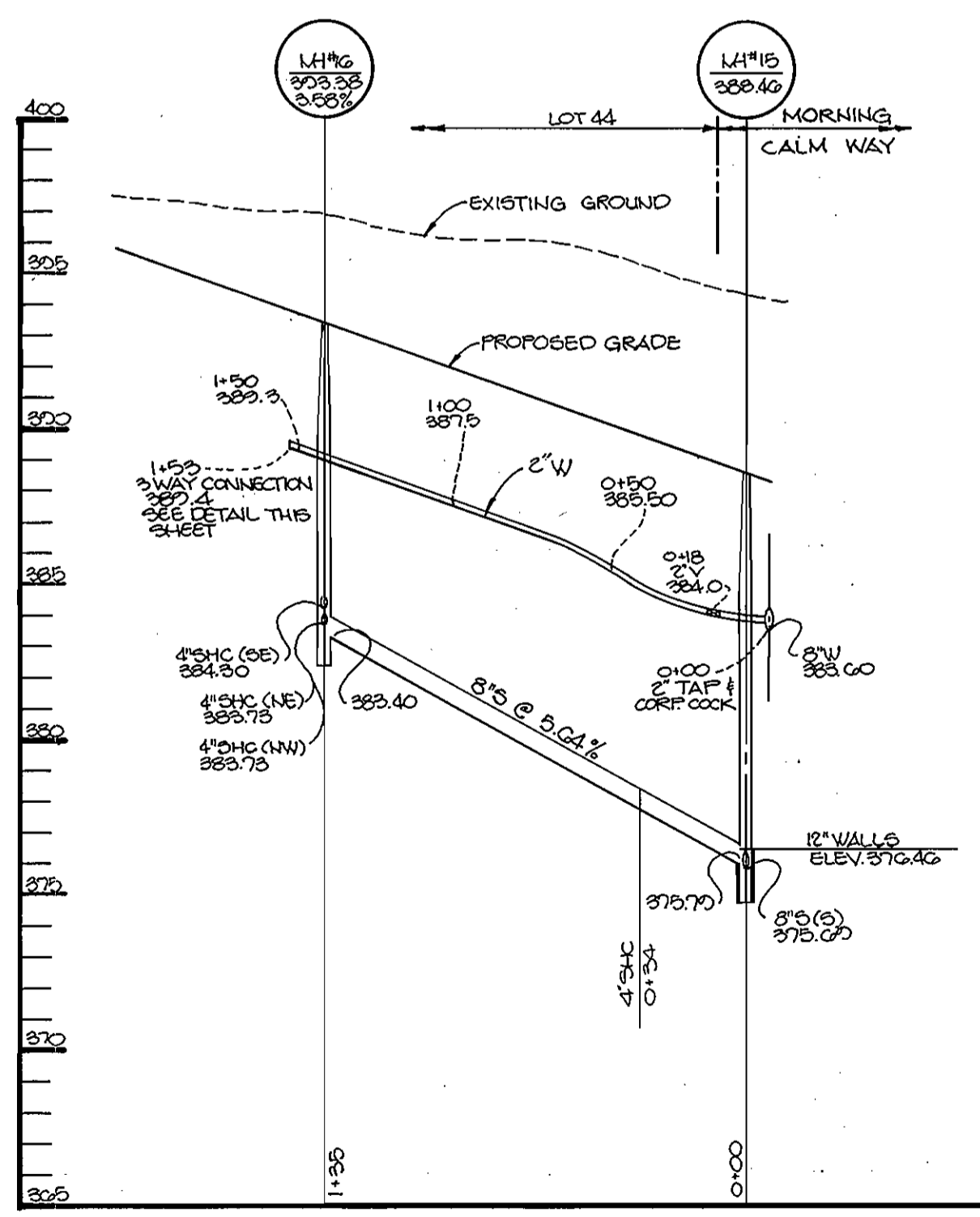
LOTS 32-35, 6-8 & 11-14
NO SCALE



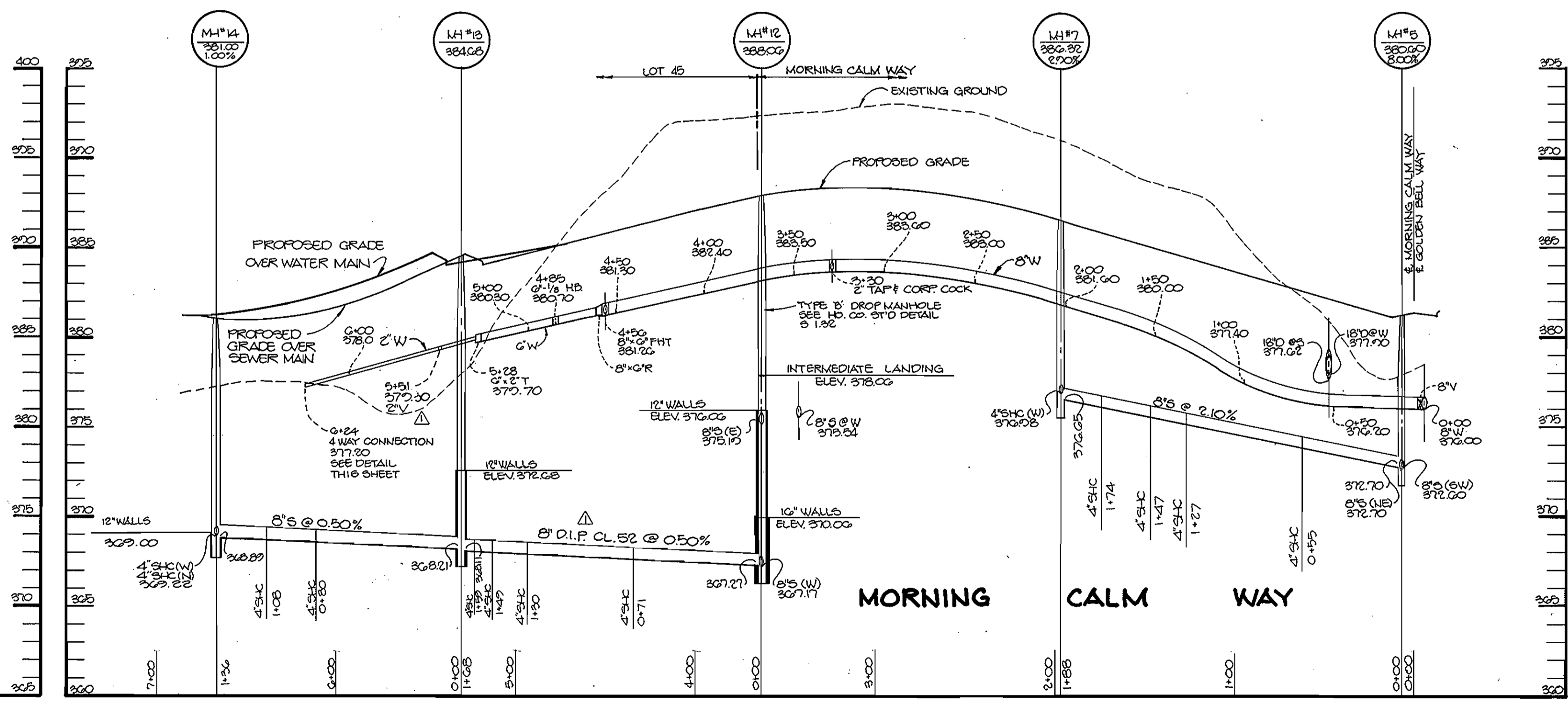
PROFILE
SCALE: HOR: 1"=50'
VERT: 1"=5'



PROFILE
SCALE: HOR: 1"=50'
VERT: 1"=5'



PROFILE
SCALE: HOR: 1"=50'
VERT: 1"=5'



PROFILE
SCALE: HOR: 1"=50'
VERT: 1"=5'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James J. [Signature] 5/1/90
DIRECTOR OF PUBLIC WORKS DATE

Robert M. [Signature] 5-7-90
CHIEF, BUREAU OF UTILITIES DATE

Richard [Signature] 5-11-90
CHIEF, BUREAU OF ENGINEERING DATE

Charles [Signature] 5/11/90
CHIEF, LAND DEVELOPMENT DATE

RIEMER MUEGGE & ASSOCIATES, INC.
3105 NORTH RIDGE ROAD
ELLCOTT CITY, MARYLAND
(301) 461-2690

ARTHUR E. MUEGGE #8707

DES: M.A.D.	MAD	SHOW 2" VALVES @ STA. 5+51, LABEL D.I.P. CL. 52 PIPE	6-6-90
DRN: M.A.D.			
CHK: J.D.P.			
DATE: 2-2-90	BY NO.	REVISION	DATE

PROFILES OF
WATER AND SEWER MAINS

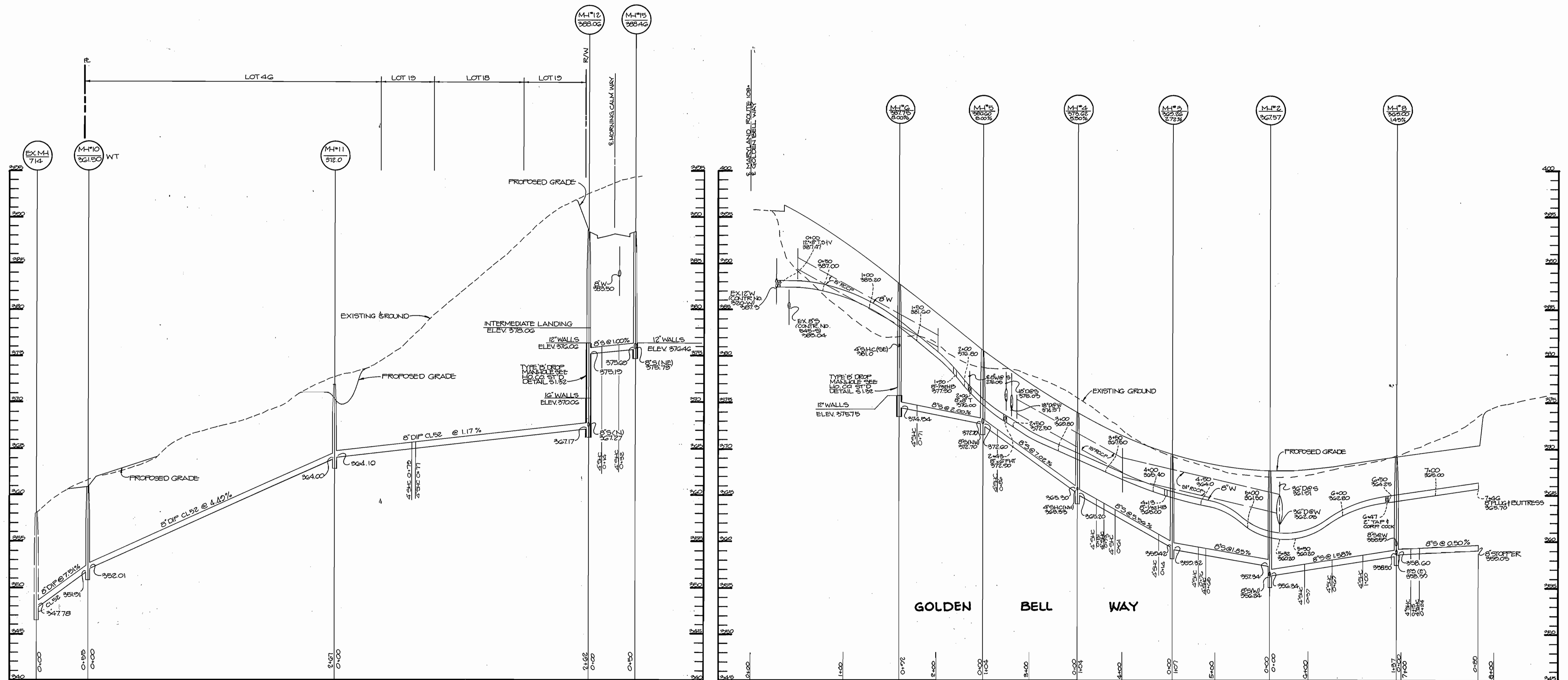
600' SCALE MAP NO. 37 BLOCK NO. 8

GOLDEN BELL
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT NO. 24-1995-D

SCALE AS SHOWN

SHEET 3 OF 4

199



SEWER PROFILE

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

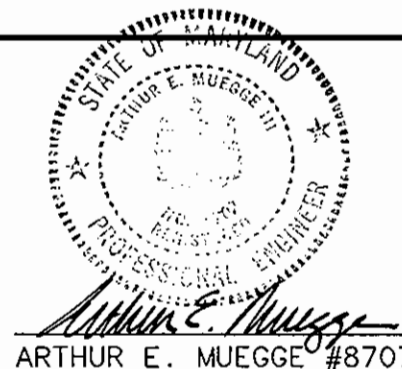
PROFILE

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

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James J. Sullivan 5/11/90
DIRECTOR OF PUBLIC WORKS DATE
Robert M. Briggins 5-7-90
CHIEF, BUREAU OF UTILITIES DATE

RIEMER MUEGGE & ASSOCIATES, INC.
3105 NORTH RIDGE ROAD
ELLCOTT CITY, MARYLAND
(301) 461-2690



DES: M.A.D.	MAD	1	MOVED MH #11	10-6-90
DRN: J.V.				
CHK: J.D.P.				
DATE: 2-9-90	BY	NO.	REVISION	DATE

PROFILES OF
WATER AND SEWER MAINS

GOLDEN BELL
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT NO. *24-1995-D

SCALE
AS
SHOWN
SHEET
4 OF 4