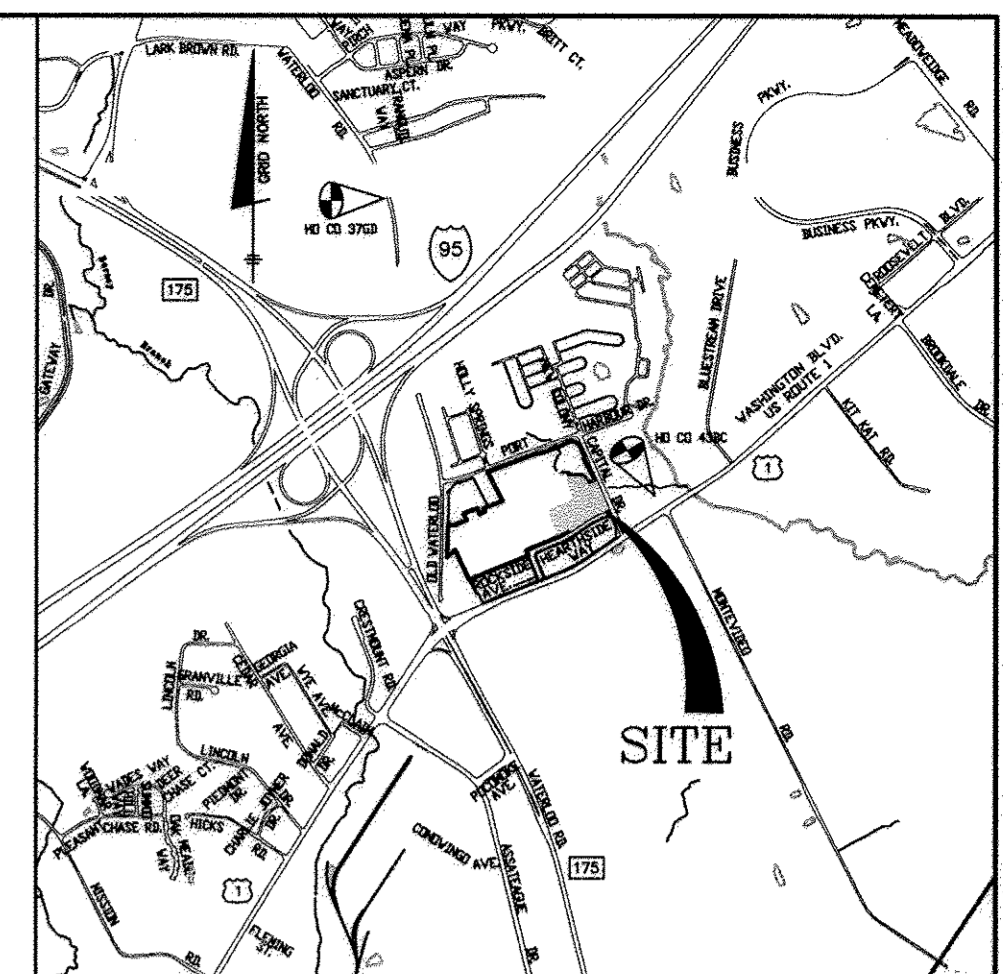


# PUBLIC WATER AND SEWER MAIN EXTENSIONS HOWARD SQUARE PHASE 7 LOTS 348-430 AND OPEN SPACE LOT 431 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT NO. 14-4907-D



ADC MAP: 24 GRID: D-7

VICINITY MAP

SCALE: 1" = 200'

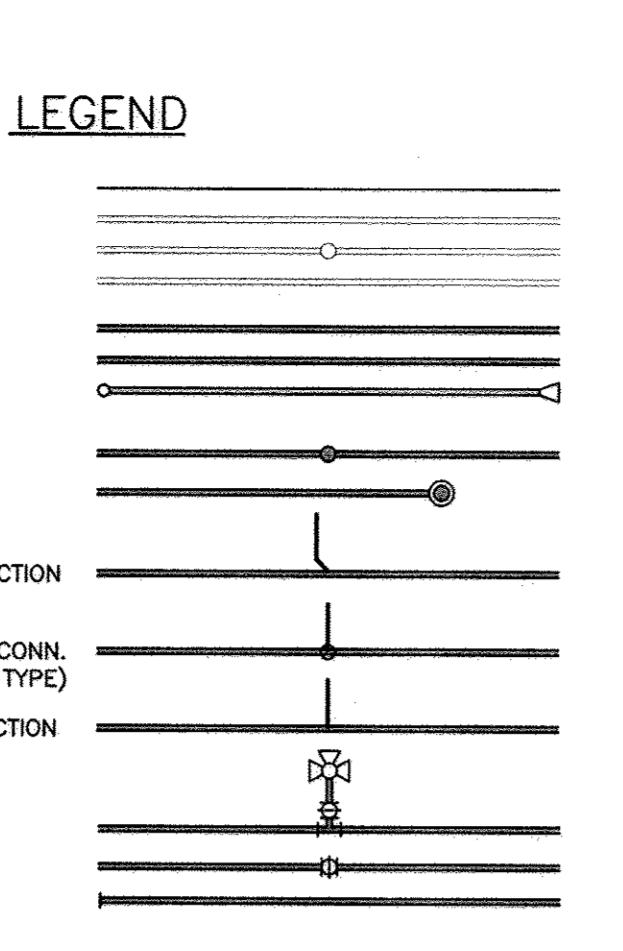
### AS-BUILT

By *[Signature]* Date 2/7/17

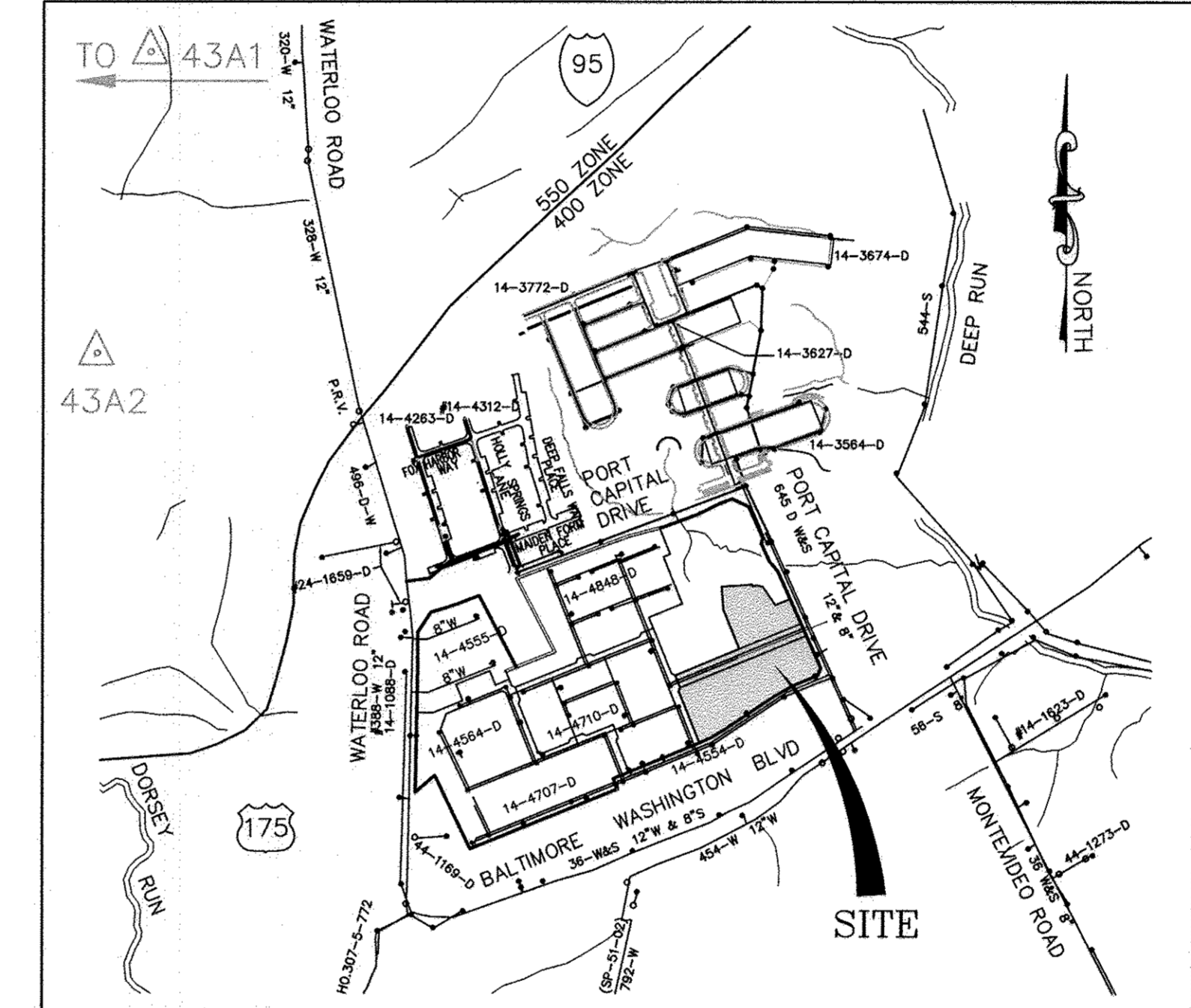
NOTE: A DESIGN MANUAL WAIVER WAS APPROVED PER LETTER DATED APRIL 18, 2016, TO WAIVE HO. CO. WATER & SEWER DESIGN MANUAL, VOLUME II, SECTION 5.4.1.B.5, WHICH REQUIRES A MINIMUM 10 FOOT HORIZONTAL CLEARANCE BETWEEN ANY PERMANENT STRUCTURE AND THE EDGE OF A PUBLIC UTILITY BASEMENT. APPROVAL IS SUBJECT TO THE FOLLOWING:

- 1. THE W&S DRAWING (14-4907-D) AND SDP MUST BE REDLINED TO SHOW THE LOCATION OF THE PROPOSED DECK, ALONG WITH TYPICAL DECK DETAILS. DETAILS SHOULD INCLUDE NOTES 2-5 LISTED BELOW.
2. PROPOSED DECKS SHALL BE A MAXIMUM SIZE OF 10 FEET DEEP FROM THE UNIT.
3. THE FOUNDATION FOR EACH DECK POST SHALL BE A MINIMUM OF 5 FEET FROM ANY WATER METER, OR SEWER CLEANOUT, OR PUBLIC WATER/SEWER APPURTENANCE.
4. THE CONSTRUCTION OF ACCESS STEPS, FROM/TWO EXTERIOR GRADE SHALL NOT BE PERMITTED.
5. THE APPROVAL PROVIDED HEREIN IS LIMITED TO ONLY HOWARD SQUARE, PHASE 7: SDP-15-036 LOTS 348 THRU 430. A SEPARATE WAIVER SHALL BE REQUIRED FOR PROPOSED DECKS ELSEWHERE WITHIN THE DEVELOPMENT. SHOULD PROPOSED DECKS NOT MEET THE HOWARD COUNTY WATER & SEWER DESIGN MANUAL, VOLUME II REQUIREMENTS.

Table with columns: ITEMS, ESTIMATED QUANTITIES, QUANTITIES, AS-BUILT TYPE, MANUF./SUPPLIER. Lists various pipe materials (PVC, HDPE, cast iron), valves, and fittings with their respective quantities and suppliers.



SEWER SERVICE AS-BUILT LOCATION TABLE and WATER SERVICE AS-BUILT LOCATION TABLE. Large tables listing lot numbers, street addresses, and location dimensions for existing and proposed sewer and water mains.



Summary statistics table for the project. Includes rows for: TYPE OF BUILDING, NUMBER OF UNITS, TOTAL NUMBER OF UNITS, DRAINAGE AREA, TREATMENT PLANT, WATER ZONE, TEST GRADIENT, NUMBER OF SFC'S, NUMBER OF TSHC'S, NUMBER OF WHC'S, and TOTAL NUMBER OF WHC'S.

NOTE: USE HO. CO. STD. DETAILS W-3.32 FOR TWIN AND W-3.28 FOR SINGLE OUTSIDE METER SETTINGS

NOTE: ALL JOINTS AND CONNECTIONS LOCATED WITHIN STRUCTURAL FILL AREAS SHALL BE MECHANICALLY RESTRAINED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (LATEST EDITION)

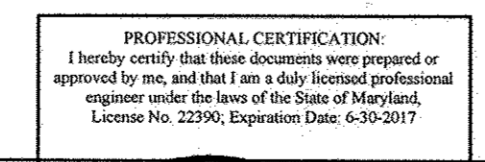
LOCATION PLAN SCALE: 1" = 600'

SHEET INDEX table listing sheet numbers and descriptions: 1. TITLE SHEET PUBLIC WATER & SEWER MAINS, 2. PLAN VIEW PUBLIC WATER & SEWER MAINS, 3. PROFILE VIEWS PUBLIC WATER & SEWER MAINS, 4. PROFILE VIEWS PUBLIC WATER & SEWER MAINS.

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE SOIL CONSERVATION DISTRICT. Includes date 7/13/15 and signature of John E. Rosta.

PLAN REFERENCE NUMBERS: SDP-15-036, F-15-062, SDP-14-043, F-14-077, SDP-11-054, S-06-010, F-08-013, F-09-007, SDP-08-046, SDP-08-078, SDP-92-79, WP-92-165, WP-93-044, WP-93-094, WP-94-047, WP-06-114, WP-07-052, WP-08-020, WP-07-129, GP-08-024

OWNER/DEVELOPER: ATAPCO HOWARD SQUARE II STATUTORY TRUST, 10 E. Baltimore St. Suite 1600, Baltimore, MD 21202, (410) 347-7189



PROFESSIONAL CERTIFICATION: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 22390, Expiration Date: 6-30-2017.

BENCHMARK ENGINEERING, INC., 8480 BOWEN NATIONAL PIKE, SUITE 310, ELLICOTT CITY, MARYLAND 21043, (P) 410-485-6105 (F) 410-485-6644, WWW.BE-ENGINEERING.COM

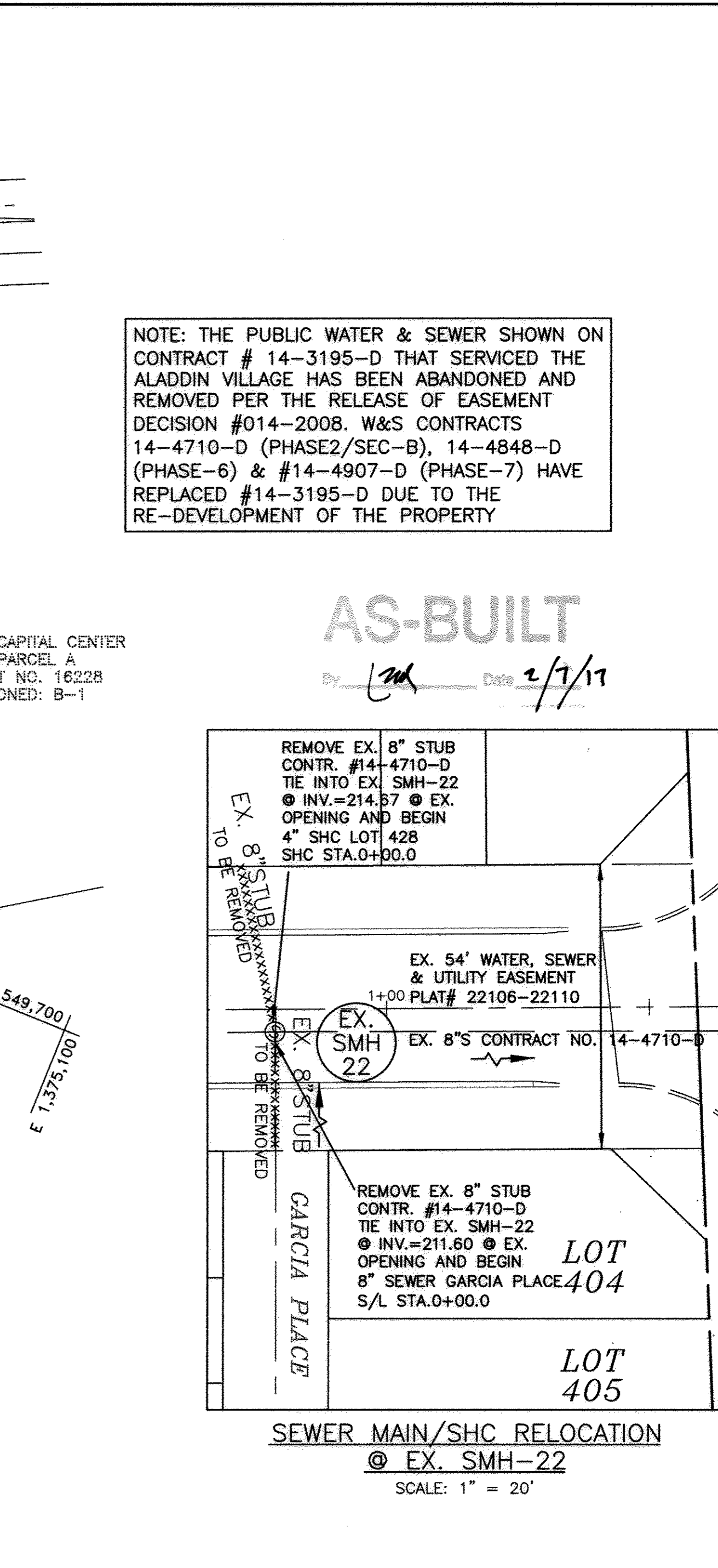
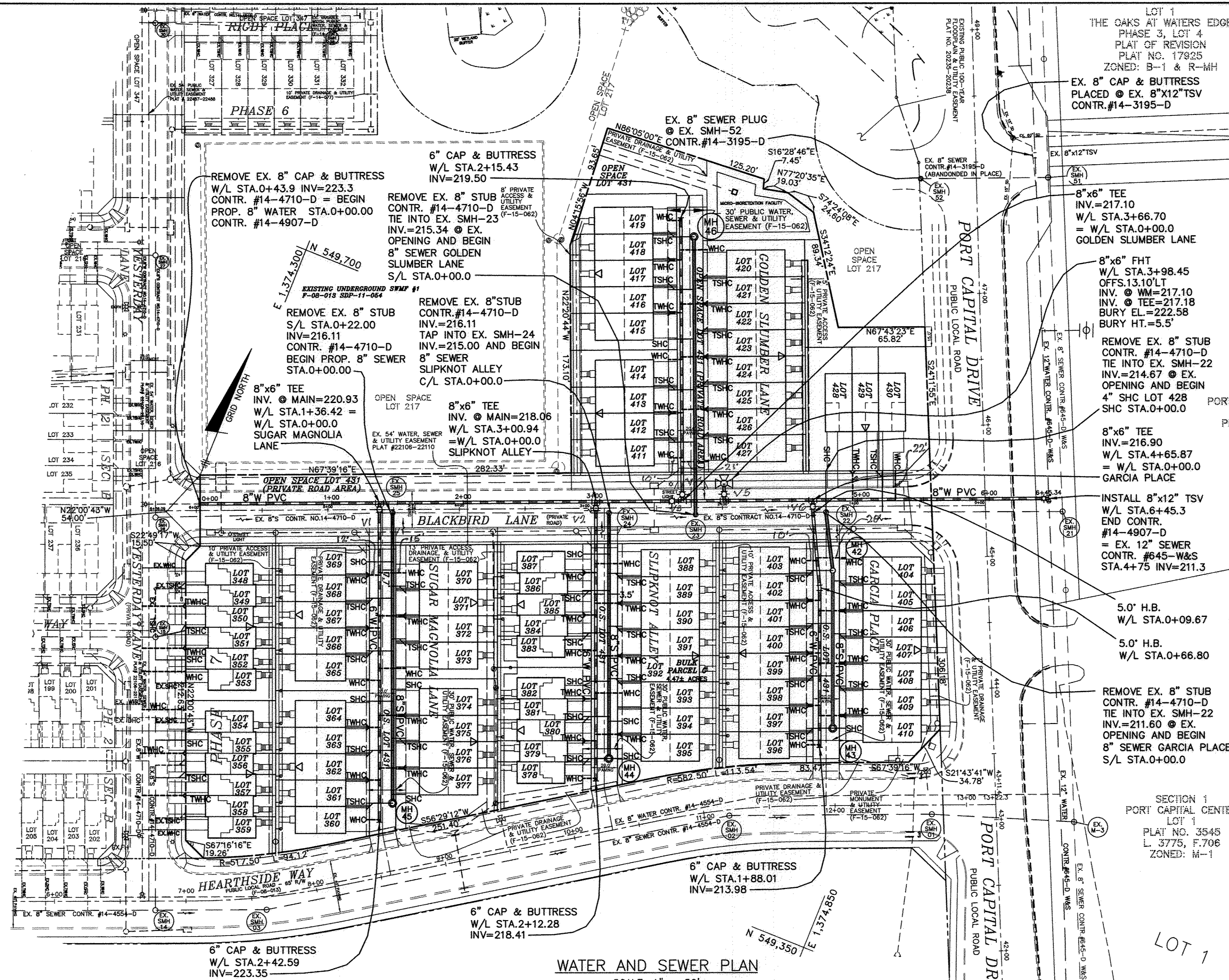
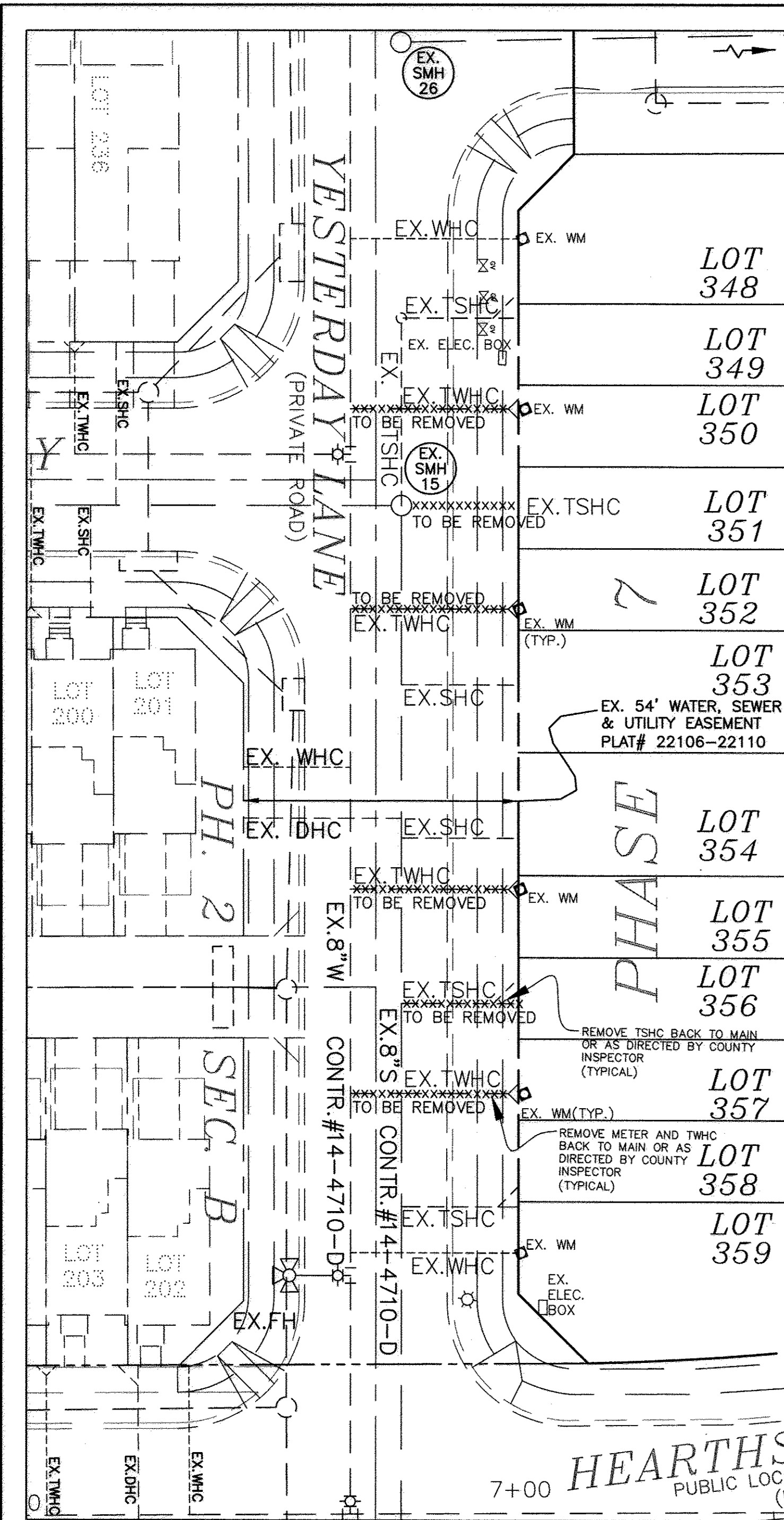
DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND. Includes signature of Chief, Bureau of Utilities and date 7-22-15.

DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND. Includes signature of Chief, Development Engineering Division and date 7-22-15.

DESIGN RECORD table with columns: DES, DRN, CHK, DATE, BY, NO., REVISIONS, DATE. Includes a revision for 'ADD DESIGN MANUAL WAIVER APPROVAL NOTE TO PLAN' dated 6-27-16.

PUBLIC WATER AND SEWER TITLE SHEET AND DETAILS. BLOCKS: 3 & 9. SCALE: 600 SCALE MAPS: 43.

HOWARD SQUARE PHASE 7 LOTS 348-430 & OPEN SPACE LOT 431 TAX MAP 43, PARCEL G, GRIDS 3 & 9 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT No. 14-4907-D SCALE: AS SHOWN SHEET NO. 1 OF 4

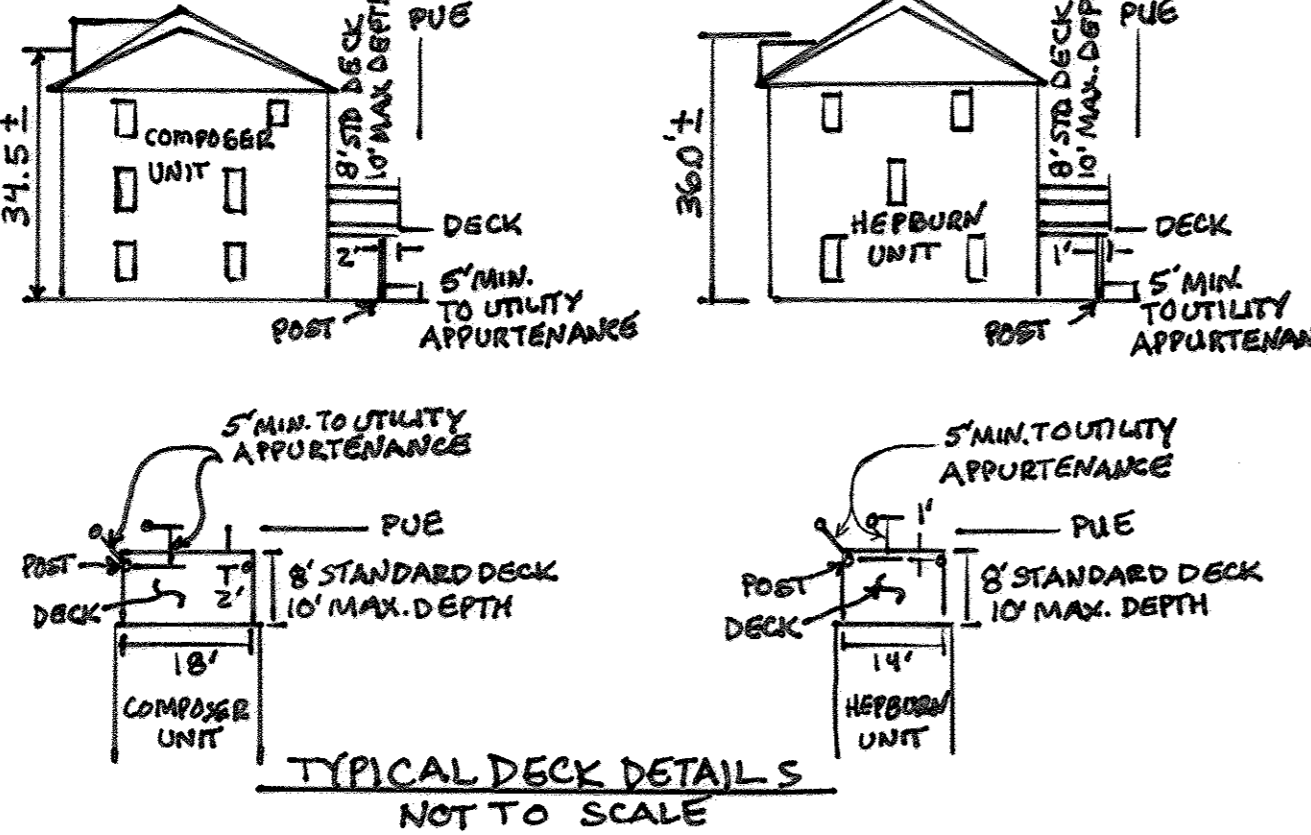


NOTE: THE PUBLIC WATER & SEWER SHOWN ON CONTRACT # 14-3195-D THAT SERVICED THE ALADDIN VILLAGE HAS BEEN ABANDONED AND REMOVED PER THE RELEASE OF EASEMENT DECISION #014-2008. W&S CONTRACTS 14-4710-D (PHASE2/SEC-B), 14-4848-D (PHASE-6) & #14-4907-D (PHASE-7) HAVE REPLACED #14-3195-D DUE TO THE RE-DEVELOPMENT OF THE PROPERTY

AS-BUILT

2/7/17

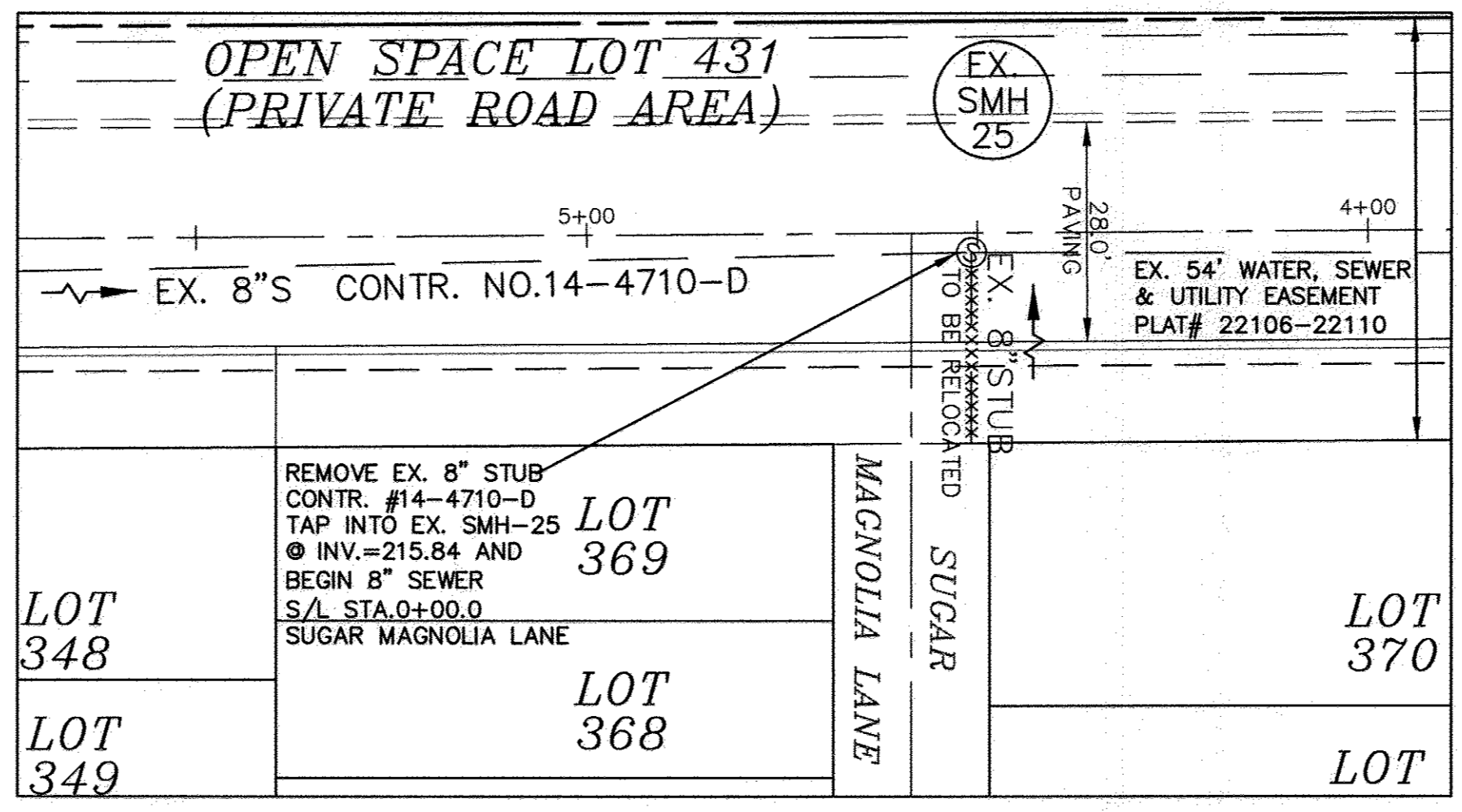
WHC & SHC ABANDONMENT YESTERDAY LANE SCALE: 1" = 20'



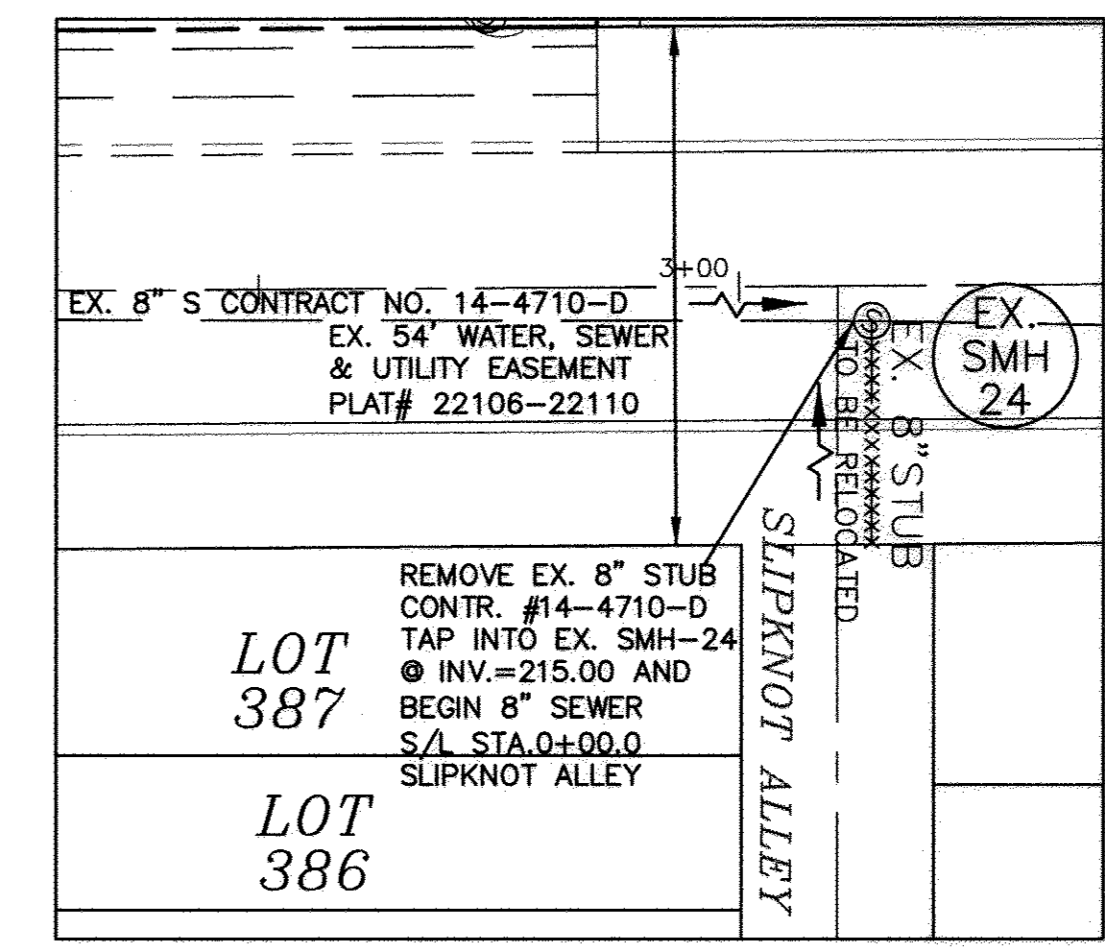
NOTE: HOUSE CONNECTIONS TO BE SIZED ACCORDINGLY:  
SINGLE WHC = 1-1/2"  
TWIN WHC = 1-1/2"  
SINGLE SHC = 4"  
TWIN SHC = 6"x4"

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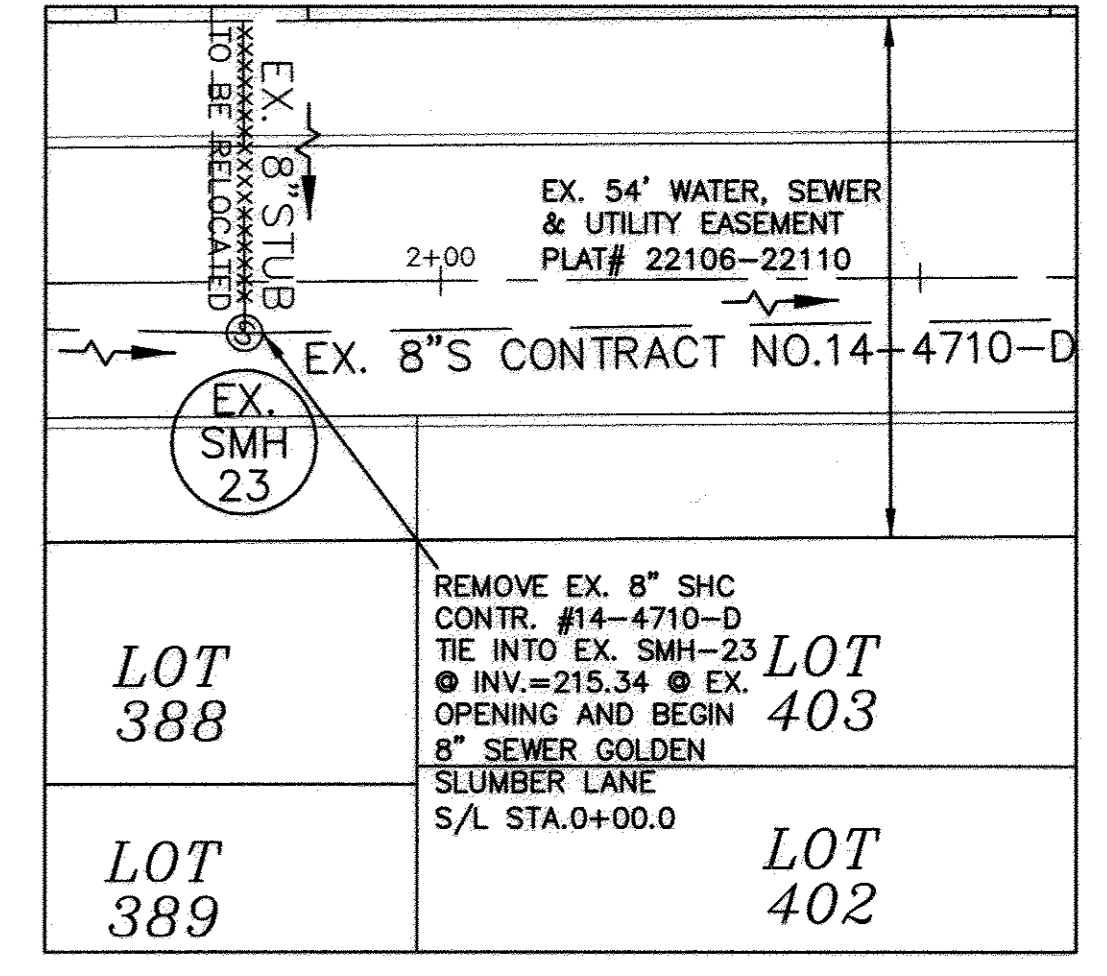
NOTE: ALL WATER HOUSE CONNECTIONS ARE TO BE 1.5" WITH A 1" METER (OUTSIDE SETTING).



SEWER MAIN RELOCATION @ EX. SMH-25 SCALE: 1" = 20'



SEWER MAIN RELOCATION @ EX. SMH-24 SCALE: 1" = 20'

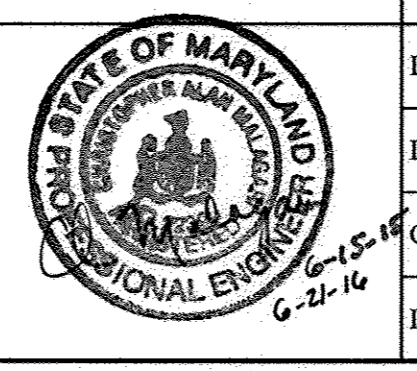


SEWER MAIN RELOCATION @ EX. SMH-23 SCALE: 1" = 20'

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING  
HOWARD COUNTY, MARYLAND

BENCHMARK ENGINEERING, INC.  
8480 BALTIMORE NATIONAL PIKE  
SUITE 200  
ELICOTT CITY, MARYLAND 21043  
(P) 410-485-6105 (F) 410-485-6644  
WWW.BE-ONLINEENGINEERING.COM

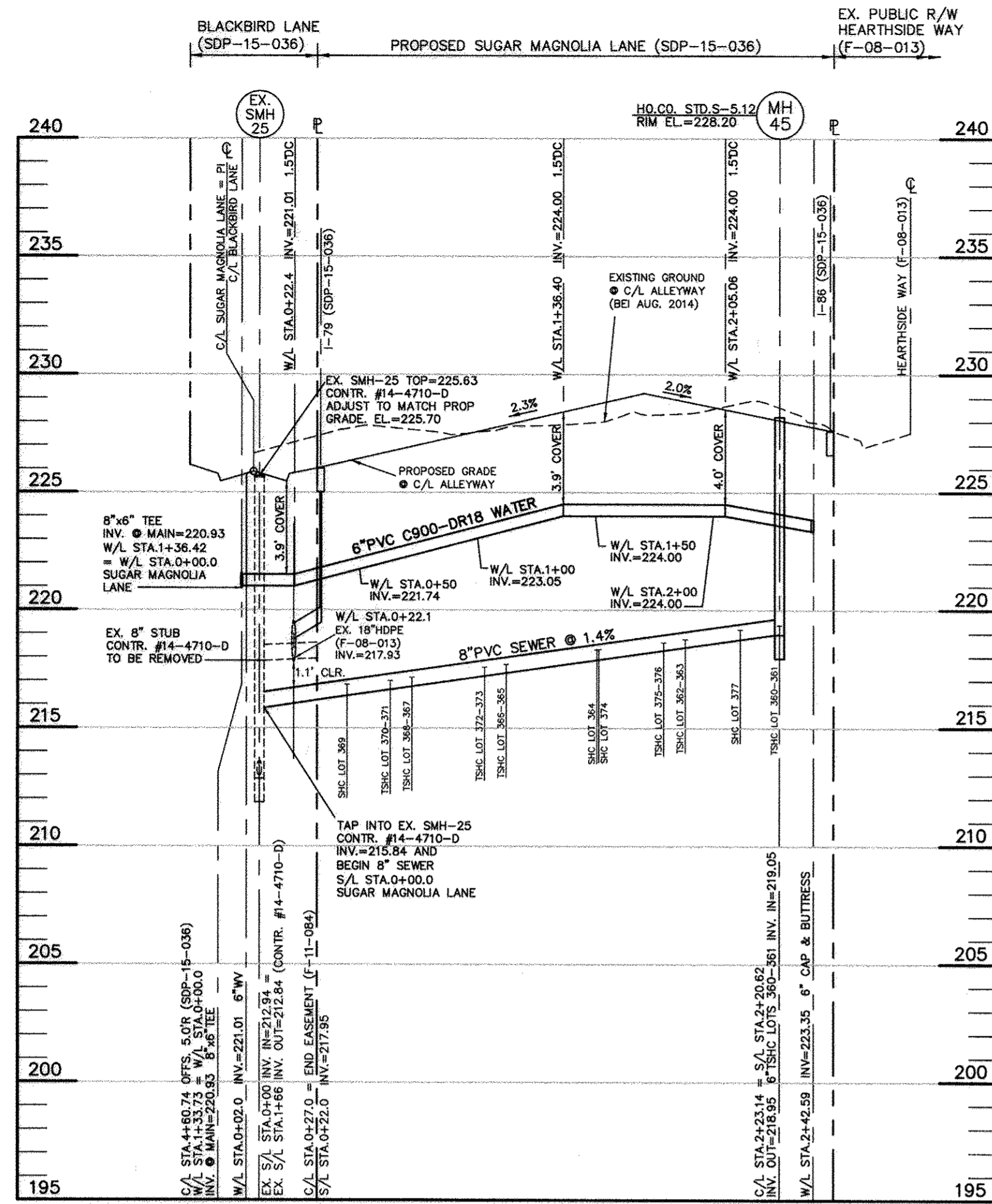


DES:	MCR
DRN:	MCR
CHK:	CAM
DATE:	5/20/2015
BY:	NO.
NO.	1
REVISIONS:	ADD TYPICAL DECK DETAIL TO PLAN
DATE:	6-21-16

PUBLIC WATER AND SEWER PLAN VIEW  
600 SCALE MAPS: 43  
BLOCKS: 3 & 9

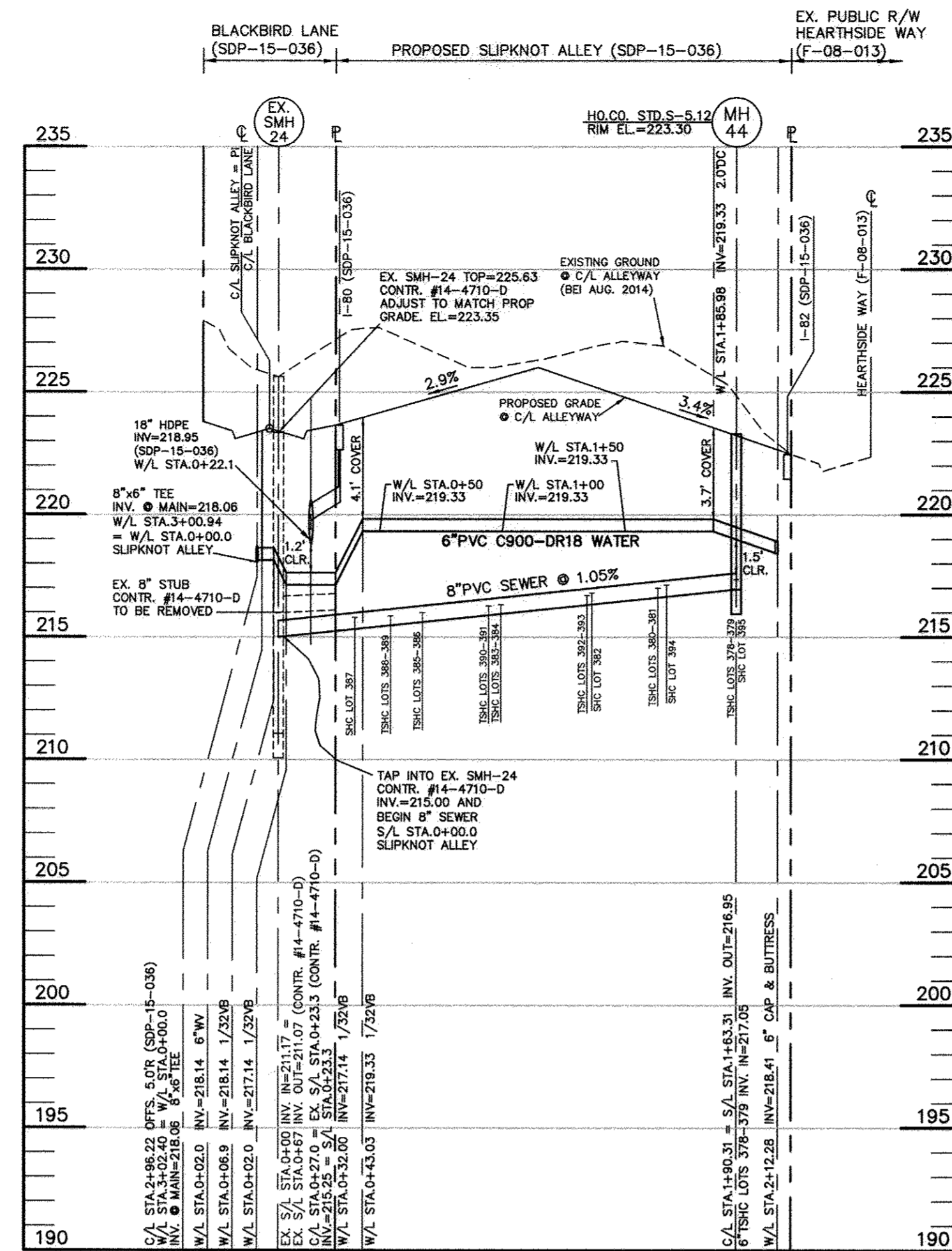
HOWARD SQUARE PHASE 7  
LOTS 348-430 & OPEN SPACE LOT 431  
TAX MAP #3, PARCEL G, GRIDS 3 & 9  
FIRST ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
CONTRACT No.14-4907-D  
SCALE: AS SHOWN  
SHEET NO. 2 OF 4





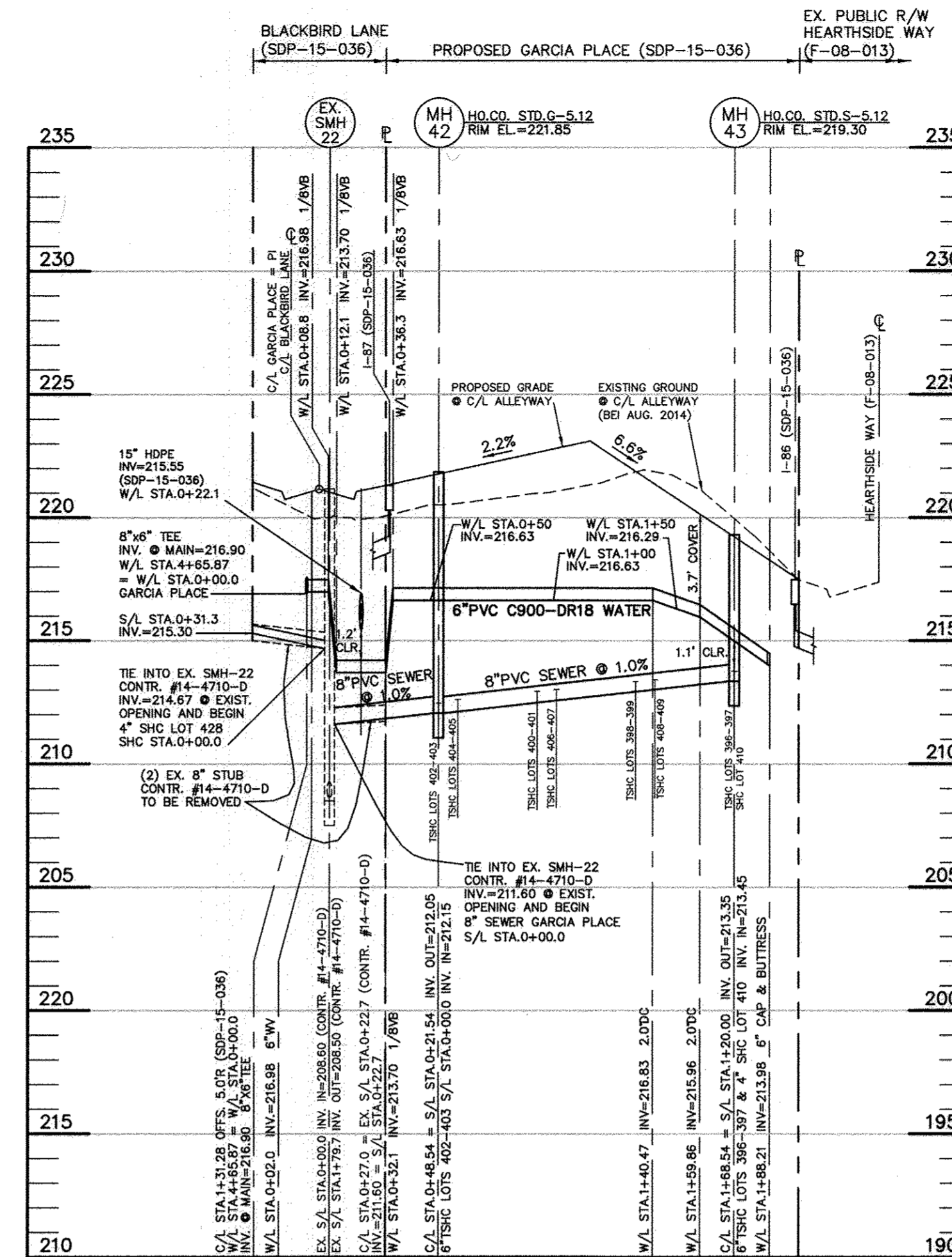
UTILITY PROFILE - SUGAR MAGNOLIA LANE

HORIZONTAL SCALE: 1" = 50'  
VERTICAL SCALE: 1" = 5'



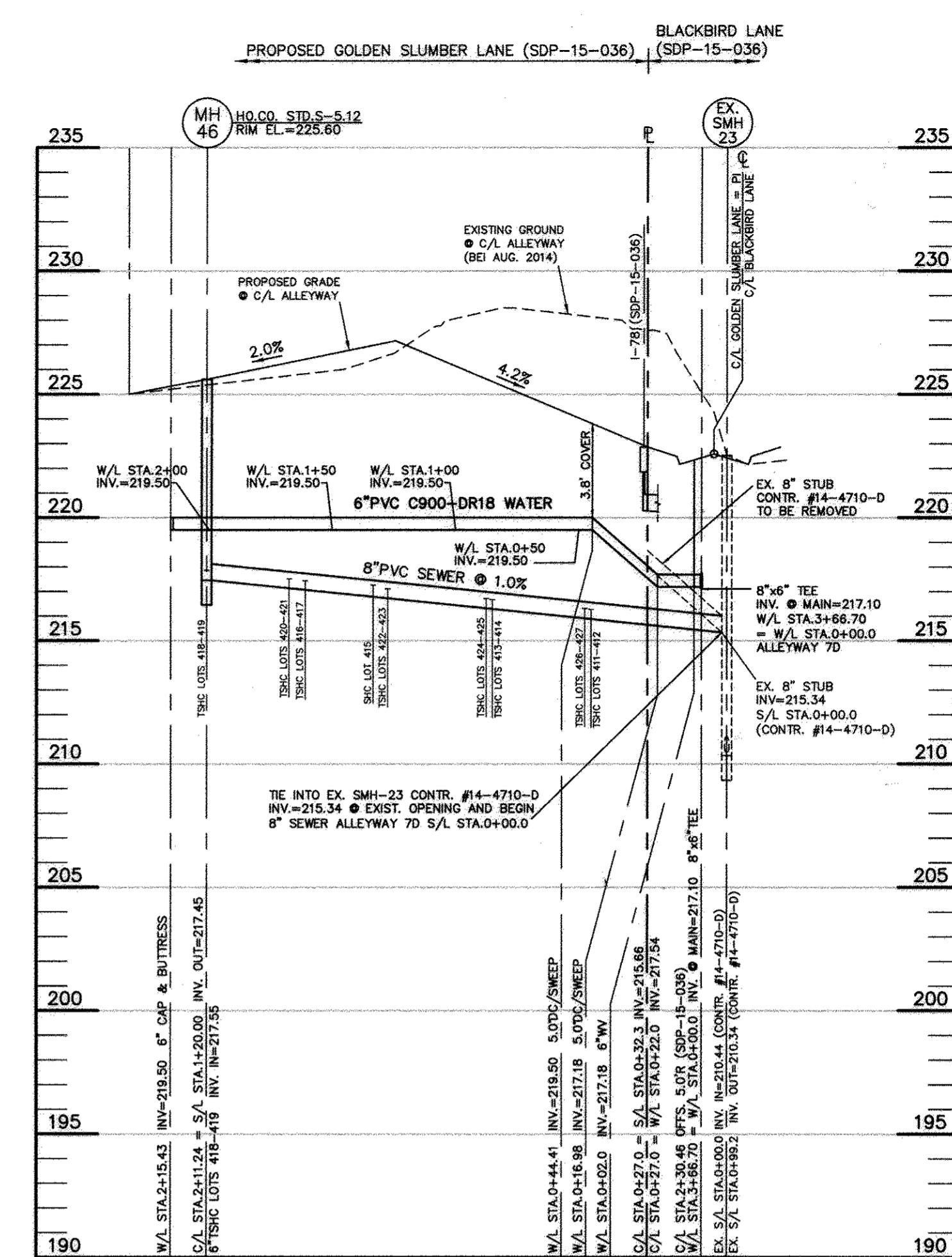
UTILITY PROFILE - SLIPKNOT ALLEY

HORIZONTAL SCALE: 1" = 50'  
VERTICAL SCALE: 1" = 5'



UTILITY PROFILE - GARCIA PLACE

HORIZONTAL SCALE: 1" = 50'  
VERTICAL SCALE: 1" = 5'



UTILITY PROFILE - GOLDEN SLUMBER LANE

HORIZONTAL SCALE: 1" = 50'  
VERTICAL SCALE: 1" = 5'

SEWER MANHOLE - STRUCTURE SCHEDULE									
NO.	TYPE	LOCATION	INVERT IN	SHC INV.	SHC INV.	INVERT OUT	TOP ELEV.	HO.CO. STD.	REMARKS
EX. MH-14	STD. 4.0' DOORHOUSE	YESTERDAY LANE	(2) 221.40	-	-	221.3	232.7	0-5.15	EX. #14-4710-D & #14-4554-D
EX. MH-15	STD. 4.0' PRE-CAST	YESTERDAY LANE / HEARTHSTONE WAY	222.55	222.55	222.55	228.9	228.9	S-1.31	EX. CONTR. #14-4710-D
EX. MH-21	STD. 4.0' DOORHOUSE	PORT CAPITAL DRIVE / BLACKBIRD LANE	202.1	-	-	202.0	215.5	0-5.15	EX. CONTR. #14-4710-D & #645-WS
EX. MH-22	STD. 4.0' TROP	BLACKBIRD LANE / ALLEYWAY 7C	208.60	211.60(8'-7")	214.67(8'-4.38)	208.50	220.90	S-1.32	EX. CONTR. #14-4710-D
EX. MH-23	STD. 4.0' TROP	BLACKBIRD LANE / ALLEYWAY 7D	210.44	215.34(8'-7")	-	210.34	222.53	S-1.32	EX. CONTR. #14-4710-D
EX. MH-24	STD. 4.0' TROP	BLACKBIRD LANE / ALLEYWAY 7B	211.17	(OLD) 216.00	215.00(8'-7")	211.07	226.63	S-1.32	EX. CONTR. #14-4710-D
EX. MH-25	STD. 4.0' TROP	BLACKBIRD LANE / ALLEYWAY 7A	212.84	(OLD) 217.84	(NEW) 215.84	212.84	226.63	S-1.32	EX. CONTR. #14-4710-D
EX. MH-26	STD. 4.0' PRE-CAST	BLACKBIRD LANE / YESTERDAY LANE	214.80	-	-	214.70	226.50	0-5.12	EX. CONTR. #14-4710-D
MH-42	STD. 4.0' PRE-CAST	GARCIA PLACE C/L STA.0+48.54 OFFS. 5.0'L	212.15	212.15(TSHC)	-	212.05	221.85	0-5.12	-
MH-43	STD. 4.0' PRE-CAST	GARCIA PLACE C/L STA.1+68.54 OFFS. 5.0'L	213.45	213.45(TSHC)	213.45(SHC)	213.35	219.30	0-5.12	-
MH-44	STD. 4.0' PRE-CAST	SLIPKNOT ALLEY C/L STA.1+90.31 OFFS. 3.5'L	-	217.05(TSHC)	-	216.95	223.30	0-5.12	-
MH-45	STD. 4.0' PRE-CAST	SUGAR MAGNOLIA LANE C/L STA.2+23.14 OFFS. 7.7'L	-	219.05(TSHC)	-	218.95	228.20	0-5.12	-
MH-46	STD. 4.0' PRE-CAST	GOLDEN SLUMBER LANE C/L STA.2+11.24 OFFS. 3.3'R	-	217.55(TSHC)	-	217.45	225.80	0-5.12	-

NOTES:  
1. STRUCTURE LOCATION FOR MANHOLES IS AT THE CENTER OF THE STRUCTURE.

APPURTENANCE	WATERLINE STATION	LOCATION	OFFSET	COMMENT
POB = 8" TSV	0+00.00 = EX.7+05.5	YESTERDAY LANE STA.9+50.85	5.0 RT.	HEARTHSTONE WAY STA.10+01.0
8" TEE	0+48.87	YESTERDAY LANE STA.9+04.01	5.0 RT.	-
PRE HYDRANT	0+48.87 (13.10 LT.)	YESTERDAY LANE STA.9+04.01	18.1 RT.	BURY HT. = 6.0'
8" TEE = PI	2+08.04 = 2+68.94	YESTERDAY LANE STA.7+42.84	5.0 RT.	SINGERS WAY STA.9+20.82
8" TEE = PI	2+88.74 = 0+00.0	YESTERDAY LANE STA.6+57.11	5.0 RT.	BLACKBIRD LANE STA.0+05 BK
8" TEE = PI	4+49.20	YESTERDAY LANE STA.5+01.69	5.0 RT.	-
PRE HYDRANT	4+49.20 (13.10 LT.)	YESTERDAY LANE STA.4+01.69	18.1 RT.	BURY HT. = 6.0'
8" TEE = PI	4+88.20 = 5+82.03	YESTERDAY LANE STA.4+52.69	5.0 RT.	SUMMIT ROCK ROAD STA.6+21.03
8" CAP & BUTTRISS	5+32.20	YESTERDAY LANE STA.4+18.69	5.0 RT.	8" CAP & BUTT. END = P/L
8" TEE = PI = STUB	0+00.00 = 0+43.08BK	BLACKBIRD LANE STA.6+38.1	5.0 RT.	PI - YESTERDAY LANE
8" CAP & BUTTRISS	0+43.08BK = 0+00.0	BLACKBIRD LANE STA.5+37.2	5.0 RT.	POB
8" TEE = PI	1+38.42 = 0+00.00	BLACKBIRD LANE STA.4+60.74	5.0 RT.	PI - SUGAR MAGNOLIA LANE
8" TEE = PI	3+00.84 = 0+00.00	BLACKBIRD LANE STA.2+68.23	5.0 RT.	PI - SLIPKNOT ALLEY
8" TEE = PI	3+84.70	BLACKBIRD LANE STA.2+32.43	5.0 RT.	-
8" TEE = PI	3+66.70 = 0+00.00	BLACKBIRD LANE STA.2+30.43	5.0 RT.	PI - GOLDEN SLUMBER LANE
8" TEE = PI	3+88.45	BLACKBIRD LANE STA.1+98.68	5.0 RT.	-
PRE HYDRANT	3+98.45 (13.10 LT.)	BLACKBIRD LANE STA.1+98.68	18.1 LT.	BURY HT. = 5.5'
8" TEE = PI	4+65.87 = 0+00.00	BLACKBIRD LANE STA.1+26.09	5.0 RT.	PI - GARCIA PLACE
8" TEE = PI	6+43.34	BLACKBIRD LANE STA.0+48.28BK	5.0 RT.	END = EX. CONTR.#645-WS
8" TEE = PI	0+00.00 = 1+36.42	SUGAR MAGNOLIA LANE STA.0+05.08BK	2.3 RT.	PI - BLACKBIRD LANE
8" TEE = PI	0+02.00	SUGAR MAGNOLIA LANE STA.0+03.08BK	2.3 RT.	-
8" CAP & BUTTRISS	2+42.59	SUGAR MAGNOLIA LANE STA.2+37.6	2.3 RT.	8" CAP & BUTT. = END
8" TEE = PI	0+00.00 = 3+00.84	SLIPKNOT ALLEY STA.0+05.08BK	6.5 RT.	PI - BLACKBIRD LANE
8" TEE = PI	0+02.00	SLIPKNOT ALLEY STA.0+03.08BK	6.5 RT.	-
8" CAP & BUTTRISS	2+12.28	SLIPKNOT ALLEY STA.2+07.3	6.5 RT.	8" CAP & BUTT. = END
8" TEE = PI	0+00.00 = 4+65.87	GARCIA PLACE STA.0+05.08BK	5.0 RT.	PI - BLACKBIRD LANE
8" TEE = PI	0+02.00	GARCIA PLACE STA.0+03.08BK	5.0 RT.	-
8" CAP & BUTTRISS	1+58.21	GARCIA PLACE STA.1+53.0	5.0 RT.	8" CAP & BUTT. = END
8" TEE = PI	0+00.00 = 3+66.70	GOLDEN SLUMBER LANE STA.0+05.0	6.8 LT.	PI - BLACKBIRD LANE
8" TEE = PI	0+02.00	GOLDEN SLUMBER LANE STA.0+07.0	6.8 LT.	-
8" CAP & BUTTRISS	2+15.43	GOLDEN SLUMBER LANE STA.2+20.43	6.8 LT.	8" CAP & BUTT. = END

AS-BUILT

2/7/17

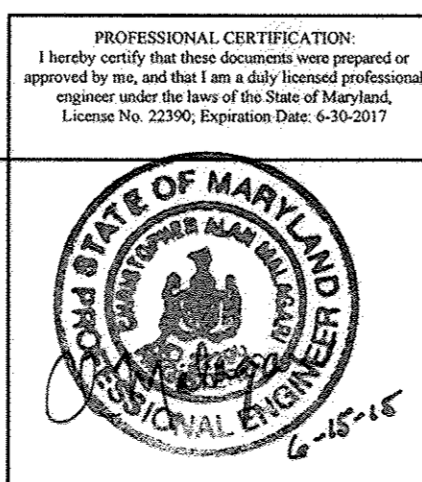
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DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING  
HOWARD COUNTY, MARYLAND

BENCHMARK  
ENGINEERS & LAND SURVEYORS & PLANNERS  
ENGINEERING, INC.



DES:	MCR			
DRN:	MCR			
CHK:	CAM			
DATE:	5/20/2015	BY:	NO.	

PUBLIC WATER AND SEWER  
PROFILE VIEWS

HOWARD SQUARE  
PHASE 7  
LOTS 348-430 & OPEN SPACE LOT 431  
TAX MAP 43, PARCEL G, GRIDS 3 & 9  
FIRST ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
CONTRACT No.14-4907-D

SCALE:  
AS SHOWN  
SHEET NO.  
4 OF 4