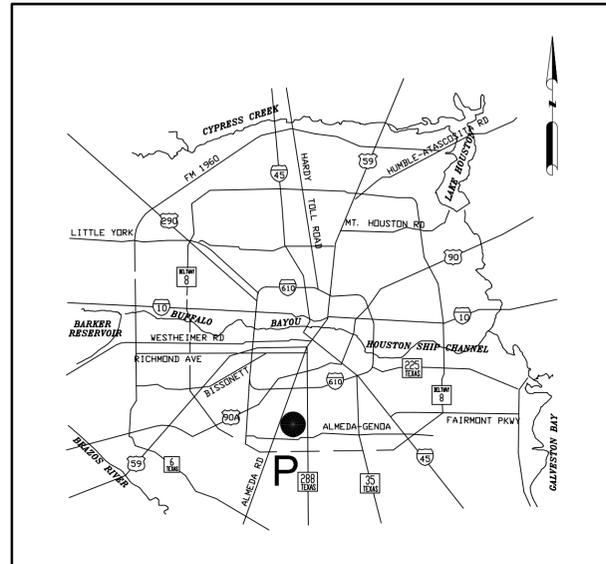


SIMSBROOK VILLAGE STORM SEWERS, SANITARY SEWERS, WATER LINES, PAVMENT AND SIMSBROOK DRIVE STREET EXTENSION AT 3330 SIMSBROOK DRIVE HOUSTON, TEXAS



LOCATION MAP



VICINITY MAP
KEY MAP NO. 572P
ZIP CODE: 77047
GMS NO. 5561b

INDEX OF SHEETS

SHEET NO. DESCRIPTION

- 1 COVER SHEET/INDEX
- 2 TOPOGRAPHIC SURVEY
- 3 CONSTRUCTION NOTES
- 4 SANITARY SEWER LAYOUT
- 5 WATER LINE LAYOUT
- 6 STORM SEWER LAYOUT
- 7 STORM SEWER CALCULATION
- 8 STREET SIGN PLAN
- 9 PLAN & PROFILE - SIMSBROOK DR. STA. 0+00 TO 4+00
- 10 PLAN & PROFILE - SIMSBROOK DR. STA. 4+00 TO 7+00 & 20' D.E. STA. 0+00 TO 2+00
- 11 PLAN & PROFILE - STAR GLORY LANE. STA. 0+00 TO 3+00
- 12 PLAN & PROFILE - TUBEROSE ST. STA. 0+00 TO 3+20
- 13 PLAN & PROFILE - TUBEROSE ST. STA. 3+20 TO 6+64.41
- 14 PLAN & PROFILE - WATERLOO DR. STA. 0+00 TO 3+70
- 15 PLAN & PROFILE - WATERLOO DR. STA. 3+70 TO 6+50
- 16 PLAN & PROFILE - PURPLE PASSION ST. STA. 0+00 TO 3+35.19
- 17 PLAN & PROFILE - MONSOON LILY ST. STA. 0+00 TO 3+40
- 18 PLAN & PROFILE - MONSOON LILY ST. STA. 3+40 TO 7+50
- 19 PLAN & PROFILE - 30' STM. S.E. & S.S.E. STA. 0+00 TO 3+00
- 20 PLAN & PROFILE - 20' S.S.E. STA. 0+00 TO 5+00
- 21 DETENTION POND PLAN
- 22 SWQMP CALCULATION & DETAILS
- 23 GRADING PLAN
- 24 SWPPP
- 25 SWPPP DETAILS
- 26 STORM SEWER DETAILS
- 27 SANITARY SEWER DETAILS 1
- 28 SANITARY SEWER DETAILS 2
- 29 WATER LINE DETAILS 1
- 30 WATER LINE DETAILS 2
- 31 PAVEMENT DETAILS 1
- 32 PAVEMENT DETAILS 2
- 33 PAVEMENT DETAILS 3
- 34 PAVEMENT DETAILS 4
- 35 PAVEMENT DETAILS 5
- 36 PAVEMENT DETAILS 6
- 37 HCFCD STORM SEWER AND RIPRAP DETAILS
- 38 CONCRETE CHANNEL LINING DETAILS
- 39 HCFCD SWPPP DETAILS
- 40 HCFCD REVIEW SHEET

ACCORDING TO MAP NO. 48201C1010M OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP FOR HARRIS COUNTY AND INCORPORATED AREAS, DATED MAY 2, 2019, THE SUBJECT TRACT IS SITUATED WITHIN: "X" ZONE (UNSHADED) AND "X" ZONE (SHADED) WITHIN THE LIMITS OF THE PROJECT.

I, BO WU, P.E., CERTIFY THAT THIS PROJECT IS NOT LOCATED INSIDE THE AREA WITH 100-YEAR FLOOD FREQUENCY.

CONTRACTOR SHALL NOTIFY THE CITY OF HOUSTON, HOUSTON PUBLIC WORKS OFFICE OF THE CITY ENGINEER, TELEPHONE No. 832-394-9098 48 HOURS BEFORE STARTING WORK ON THIS PROJECT.

CONSTRUCTION IN HARRIS COUNTY FLOOD CONTROL DISTRICT RIGHT-OF-WAY REQUIRES: SITE PLANS MUST BE APPROVED PRIOR TO OBTAINING THE REQUIRED HCFCD RIGHT-OF-WAY NOTIFICATION. BE ADVISED THAT THE HCFCD RIGHT-OF-WAY NOTIFICATION IS SEPARATE FROM THE SITE DEVELOPMENT PERMIT PACKAGE

- 1.) HCFCD RIGHT-OF-WAY NOTIFICATION (PERMIT)
 - 2.) HCFCD 48-HR PRE-CONSTRUCTION NOTICE
- BOTH ARE REQUIRED PRIOR TO ENTERING OR WORKING WITHIN HARRIS COUNTY FLOOD CONTROL DISTRICT RIGHT-OF-WAY. THE HCFCD RIGHT-OF-WAY NOTIFICATION AND 48-HR NOTICE MUST BE PROVIDED TO HCFCD AT dcid@hcfcd.hctx.net. TO APPLY FOR THE HCFCD RIGHT-OF-WAY NOTIFICATIONFOR, PLEASE GO TO [**http://apps.harriscountytx.gov/EPermits**](http://apps.harriscountytx.gov/EPermits) AND APPLY FOR THE HCFCD ROW UNDER ROW NOTIFICATION. FAILURE TO PROVIDE BOTH ITEMS COULD RESULTS IN PROJECT DELAYS.

**ONE-CALL NOTIFICATION SYSTEM
CALL BEFORE YOU DIG !!!**
811 (IN HOUSTON)
(NEW STATEWIDE NUMBER OUTSIDE HOUSTON)
1-800-344-8377

THIS PROJECT INCLUDES WORK TO BE PERFORMED IN THE CITY OF HOUSTON'S RIGHT OF WAY AND EASEMENTS. DRAWINGS MUST BE APPROVED AND PERMITTED PRIOR TO BEGINNING CONSTRUCTION.

CONTACT REQUIRED SECTIONS BELOW AS INDICATED

PERMITS 1002 Washington (2nd Floor)

<input checked="" type="checkbox"/> PAVING	832-394-9578
<input checked="" type="checkbox"/> STORM	832-394-9579
<input type="checkbox"/> ALLEY	832-394-8851
<input checked="" type="checkbox"/> STREET CUT/EXCAVATION	832-394-9101

PERMITS 1002 Washington (3rd Floor)

<input checked="" type="checkbox"/> SANITARY	832-394-8971
<input checked="" type="checkbox"/> WATER	832-394-8971

PLAT CPC 101 FORM #2022-2388 C3P

ILMS NO. 23063117

NO.	DATE	REVISION	APP.

B & P ENGINEERING, INC.
(TBPE F-6225)
10333 HARWIN DRIVE, STE. 375H
HOUSTON, TX 77036
TEL: (713) 859-3982

Bo Wu 9-10-2023

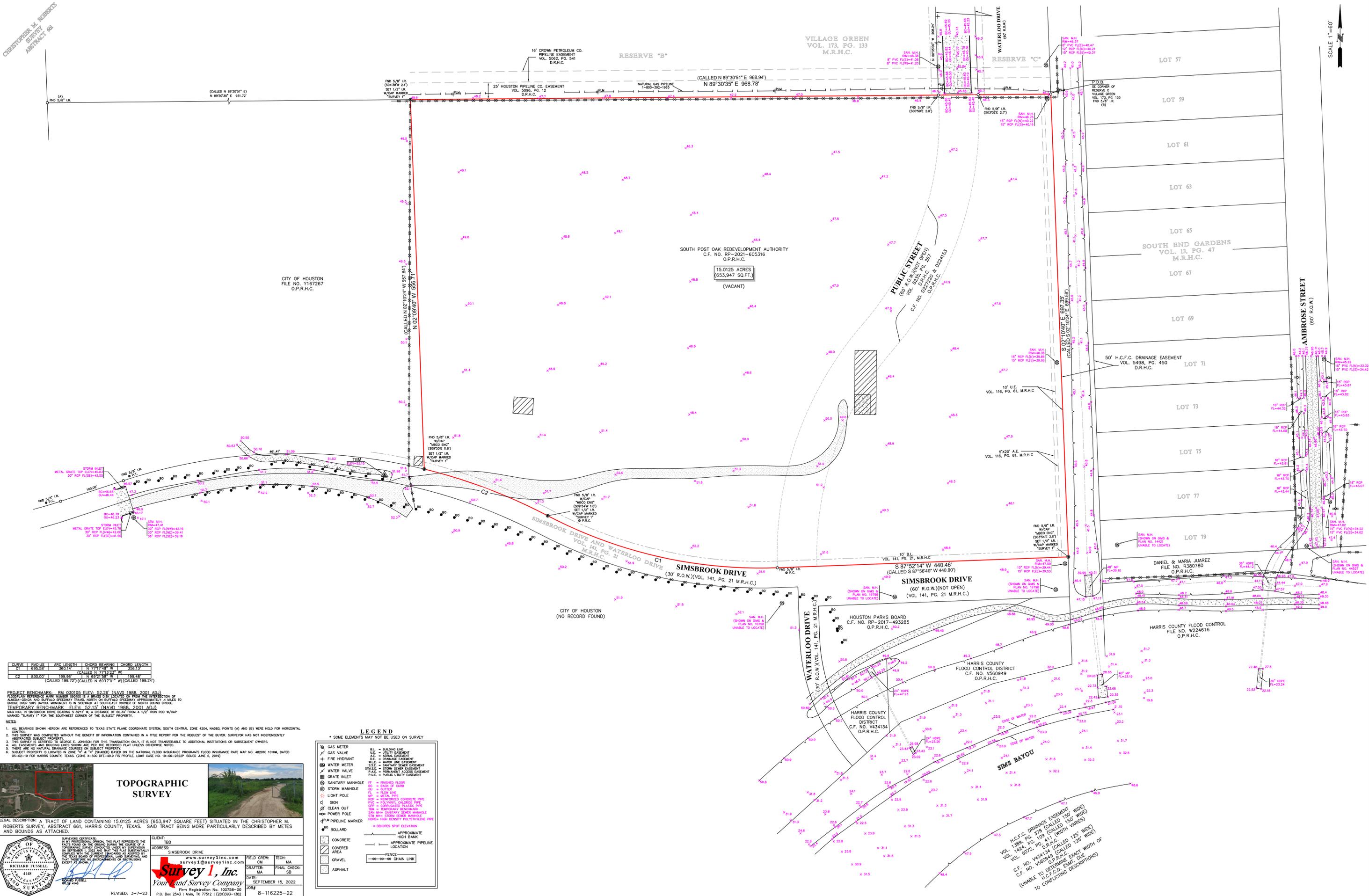
NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
TRAFFIC SIGNAL	
CITY ENGINEER	DATE
DIRECTOR OF	DATE
HOUSTON PUBLIC WORKS	

SHEET NO 1 OF 40 SHEETS

FOR CITY OF HOUSTON USE ONLY



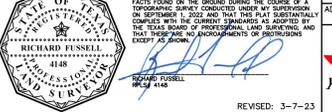
CURVE	BEARING	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C1	N 77°25' W	561.14	(CALLED N 77°25' W)	556.13
C2	N 89°30' E	199.98	(CALLED N 89°30' E)	199.48

PROJECT BENCHMARK: RM 030105 ELEV. 52.26' (NAVD 1988, 2001 ADJ.)
 FLOORPLAN REFERENCE MARK NUMBER 090100 IS A BRASS DISK LOCATED ON FROM THE INTERSECTION OF
 ALBUQUERQUE AND BUFFALO SPEEDWAY TRAVEL NORTH ON BUFFALO SPEEDWAY APPROXIMATELY 1/4 MILES TO
 BRIDGE OVER SMS BAYOU MONUMENT IS IN SIDEWALK AT SOUTHEAST CORNER OF NORTH BOUND BRIDGE.
 TEMPORARY BENCHMARK ELEV. 52.15' (NAVD 1988, 2001 ADJ.)
 WOOD NAIL IN SIMSBROOK DRIVE BEARING S 82°11' W A DISTANCE OF 60.34' FROM A 1/2" IRON ROD W/CAP
 MARKED SURVEY 'T' FOR THE SOUTHWEST CORNER OF THE SUBJECT PROPERTY.

- NOTES:
- ALL BEARINGS SHOWN HEREON ARE REFERENCED TO TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE 4204, NAD83, POINTS (A) AND (B) WERE HELD FOR HORIZONTAL CONTROL.
 - THIS SURVEY WAS COMPLETED WITHOUT THE BENEFIT OF INFORMATION CONTAINED IN A TITLE REPORT FOR THE REQUEST OF THE BUYER. SURVEYOR HAS NOT INDEPENDENTLY ABSTRACTED SUBJECT PROPERTY.
 - THIS SURVEY IS CERTIFIED TO GEORGE E. JOHNSON FOR THIS TRANSACTION ONLY. IT IS NOT TRANSFERABLE TO ADDITIONAL INSTITUTIONS OR SUBSEQUENT OWNERS.
 - ALL EASEMENTS AND BOUNDARY LINES SHOWN ARE FOR THE RECORDED PLAT UNLESS OTHERWISE NOTED.
 - THERE ARE NO NATURAL DRAINAGE COURSES ON SUBJECT PROPERTY.
 - SUBJECT PROPERTY IS LOCATED IN ZONE "X" (SHADED) BASED ON THE NATIONAL FLOOD INSURANCE PROGRAM'S FLOOD INSURANCE RATE MAP NO. 48202C 10104M, DATED 05-02-19 FOR HARRIS COUNTY, TEXAS. (ZONE "X" 500' DEE-49.9' FIS PROFILE, LOMR CASE NO. 19-06-2522P ISSUED JUNE 6, 2018)



LEGAL DESCRIPTION: A TRACT OF LAND CONTAINING 15.0125 ACRES (653,947 SQUARE FEET) SITUATED IN THE CHRISTOPHER M. ROBERTS SURVEY, ABSTRACT 681, HARRIS COUNTY, TEXAS. SAID TRACT BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS ATTACHED.



CLIENT: TBD
 ADDRESS: SIMSBROOK DRIVE
 SURVEY 1, INC.
 www.survey1inc.com
 survey1@survey1inc.com
 FIELD CREW: CM
 TECH: MA
 DRAFTER: MA
 FINAL CHECK: SB
 DATE: SEPTEMBER 15, 2022
 REVISIONS: 3--7-23
 P.O. Box 2543 | A.M., TX 77012 | (281)393-1362
 8-116225-22

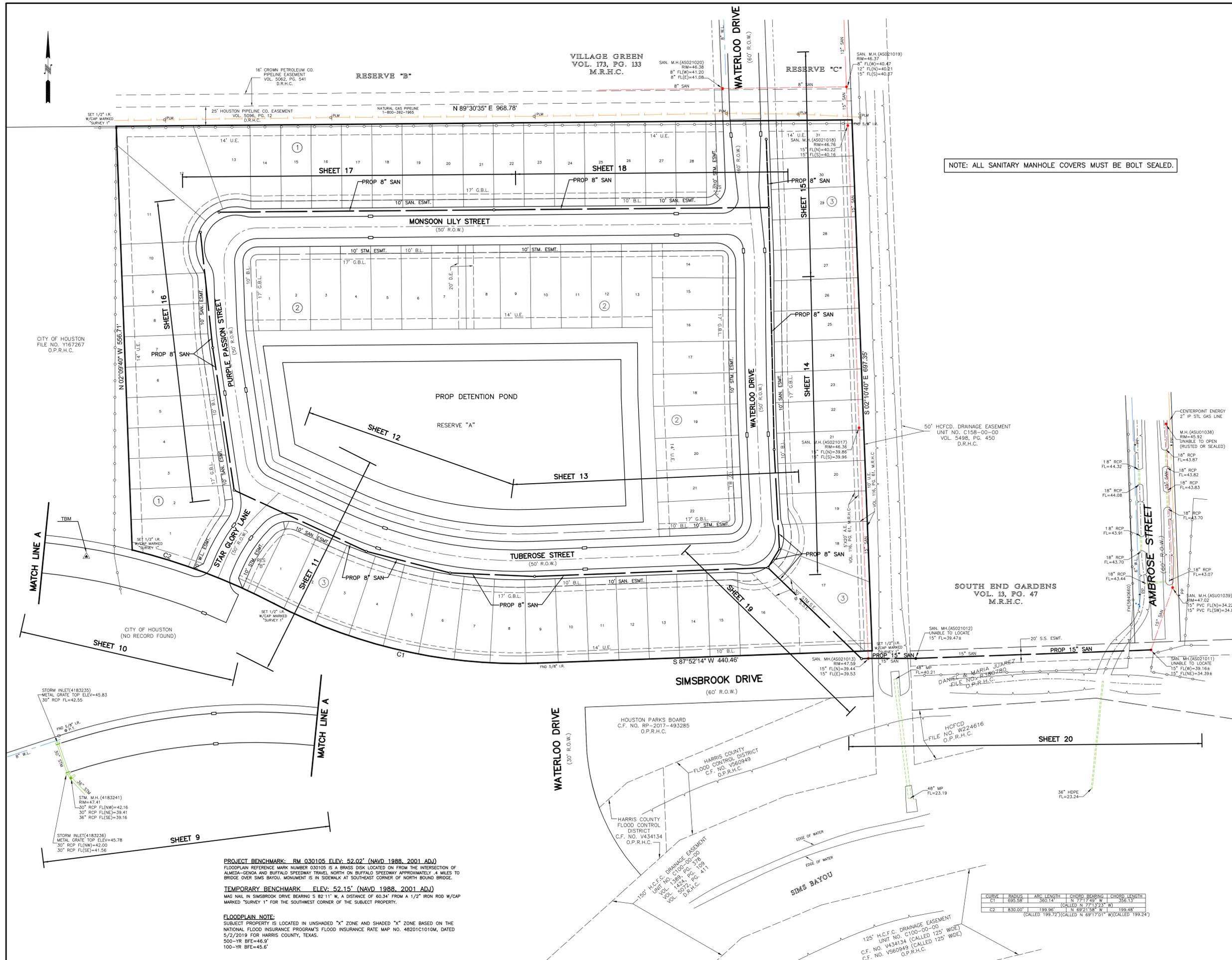
LEGEND

* SOME ELEMENTS MAY NOT BE USED ON SURVEY

⊕ GAS METER	BL = BUILDING LINE
⊕ GAS VALVE	BE = BIRTH EASEMENT
⊕ FIRE HYDRANT	AE = AERIAL EASEMENT
⊕ WATER METER	DE = DRAINAGE EASEMENT
⊕ WATER VALVE	SE = SERVICE EASEMENT
⊕ GRATE INLET	S.E.E. = STORM SEWER EASEMENT
⊕ SANITARY MANHOLE	P.A.E. = PERMANENT ACCESS EASEMENT
⊕ STORM MANHOLE	FILE = PUBLIC UTILITY EASEMENT
⊕ LIGHT POLE	FF = FINISHED FLOOR
⊕ SIGN	OU = OUTLET
⊕ CLEAN OUT	FL = FLOW LINE
⊕ POWER POLE	RF = REINFORCED CONCRETE PIPE
⊕ PIPELINE MARKER	PVC = POLYVINYL CHLORIDE PIPE
⊕ BOLLARD	SM = STORM SEWER MANHOLE
⊕ CONCRETE	HP = HIGH DENSITY POLYETHYLENE PIPE
⊕ COVERED AREA	X = DENOTES SPOT ELEVATION
⊕ GRAVEL	—○—○— = APPROXIMATE HIGH BANK
⊕ ASPHALT	—○—○— = APPROXIMATE PIPELINE LOCATION
	—○—○— = FENCE
	—○—○— = CHAIN LINK

H.C.F.C. DRAINAGE EASEMENT VOL. 1389, PG. 378 CALLED 150' WIDE VOL. 1494, PG. 108 CALLED 150' WIDE VOL. 5072, PG. 411 CALLED 125' WIDE C.F. NO. V43414 CALLED 125' WIDE C.F. NO. V560949 CALLED 125' WIDE (UNABLE TO DETERMINE EXACT WIDTH OF H.C.F.C. DRAINAGE EASEMENT TO COLLECTING DESCRIPTIONS)

NO.	DATE	REVISION	APP.



NOTE: ALL SANITARY MANHOLE COVERS MUST BE BOLT SEALED.

NOTICE:
 FOR YOUR SAFETY, YOU ARE REQUIRED BY TEXAS LAW TO CALL 811 AT LEAST 48 HOURS BEFORE YOU DIG SO THAT UNDERGROUND LINES CAN BE MARKED. THIS SIGNATURE DOES NOT FULFILL YOUR OBLIGATION TO CALL 811

VERIFICATION OF PRIVATE UTILITY LINES

Date _____
 CenterPoint Energy natural gas utilities shown. (Gas service lines are not shown). This signature not be used for conflict verification.
 Signature valid for six months.

Date _____
 CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY. (This signature verifies existing underground facilities - not to be used for conflict verification)
 Signature valid for six months.

Date _____
 Approved for AT&T Texas/SWB/T underground conduit facilities only. Signature valid for one year.

B & P ENGINEERING, INC.
 (TBPE F-6225)
 10333 HARWIN DRIVE, STE. 375H
 HOUSTON, TX 77036
 TEL: (713) 859-3982

Radhika 9-10-2023



SIMSBROOK VILLAGE
SANITARY SEWER LAYOUT

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
 HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORIZ: 1"=60'
SHEET NO. 4 OF 40	VERT: _____
DRAWING SCALE	

FOR CITY OF HOUSTON USE ONLY

PROJECT BENCHMARK: RM 030105 ELEV: 52.02' (NAVD 1988, 2001 ADJ)
 FLOODPLAIN REFERENCE MARK NUMBER 030105 IS A BRASS DISK LOCATED ON FROM THE INTERSECTION OF ALMEDA-GENOA AND BUFFALO SPEEDWAY TRAVEL NORTH ON BUFFALO SPEEDWAY APPROXIMATELY 4 MILES TO BRIDGE OVER SIMS BAYOU. MONUMENT IS IN SIDEWALK AT SOUTHWEST CORNER OF NORTH BOUND BRIDGE.

TEMPORARY BENCHMARK: ELEV: 52.15' (NAVD 1988, 2001 ADJ)
 MAG NAIL IN SIMSBROOK DRIVE BEARING S 82°11' W, A DISTANCE OF 60.34' FROM A 1/2" IRON ROD W/CAP MARKED "SURVEY 1" FOR THE SOUTHWEST CORNER OF THE SUBJECT PROPERTY.

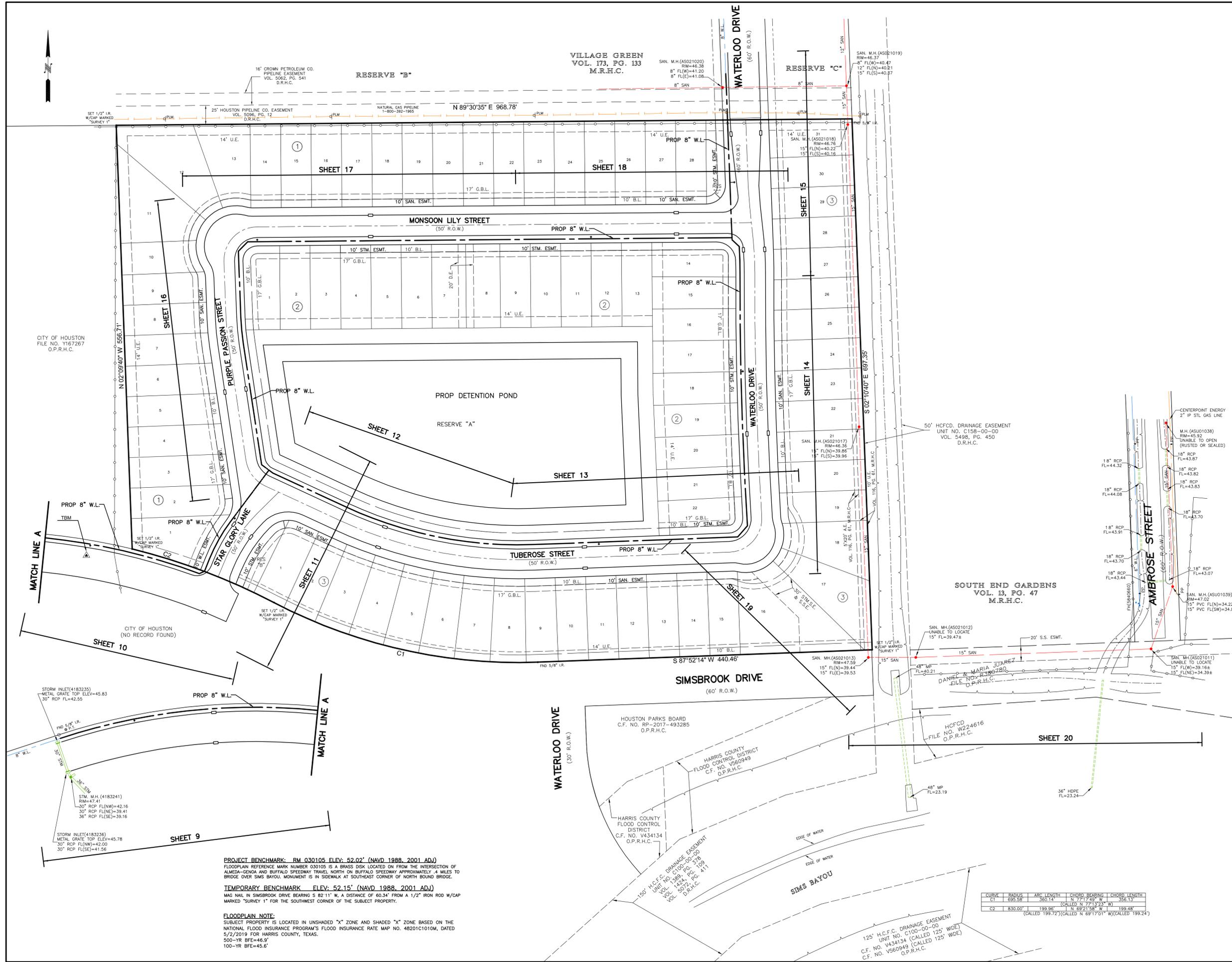
FLOODPLAIN NOTE:
 SUBJECT PROPERTY IS LOCATED IN UNSHADED "X" ZONE AND SHADED "X" ZONE BASED ON THE NATIONAL FLOOD INSURANCE PROGRAM'S FLOOD INSURANCE RATE MAP NO. 48201C1010M, DATED 5/2/2019 FOR HARRIS COUNTY, TEXAS.
 500-YR BFE=46.9'
 100-YR BFE=45.6'

CURVE	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C1	695.58'	380.14'	N 77°17'49" W	356.13'
C2	830.00'	199.96'	N 69°21'58" W	199.48'

(CALLED 199.72' (CALLED N 69°17'01" W) (CALLED 199.24')

125' H.C.F.C. DRAINAGE EASEMENT
 UNIT NO. C100-00-00
 C.F. NO. V434134 (CALLED 125' WIDE)
 C.F. NO. V560949 (CALLED 125' WIDE)
 O.P.R.H.C.

NO.	DATE	REVISION	APP.



NOTICE:
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Date _____
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 Signature valid for six months.

Date _____
 Approved for AT&T Texas/SWB/T underground conduit facilities only. Signature valid for one year.

B & P ENGINEERING, INC.
 (TBPE F-6225)
 10333 HARWIN DRIVE, STE. 375H
 HOUSTON, TX 77036
 TEL: (713) 859-3982

SIMSBROOK VILLAGE
WATER LINE LAYOUT

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
 HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORI: 1"=60'
SHEET NO. 5 OF 40	VERT:
DRAWING SCALE	

FOR CITY OF HOUSTON USE ONLY

CURVE	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C1	695.58'	380.14'	N 77°17'49" W	356.13'
C2	830.00'	199.96'	N 69°21'58" W	199.48'

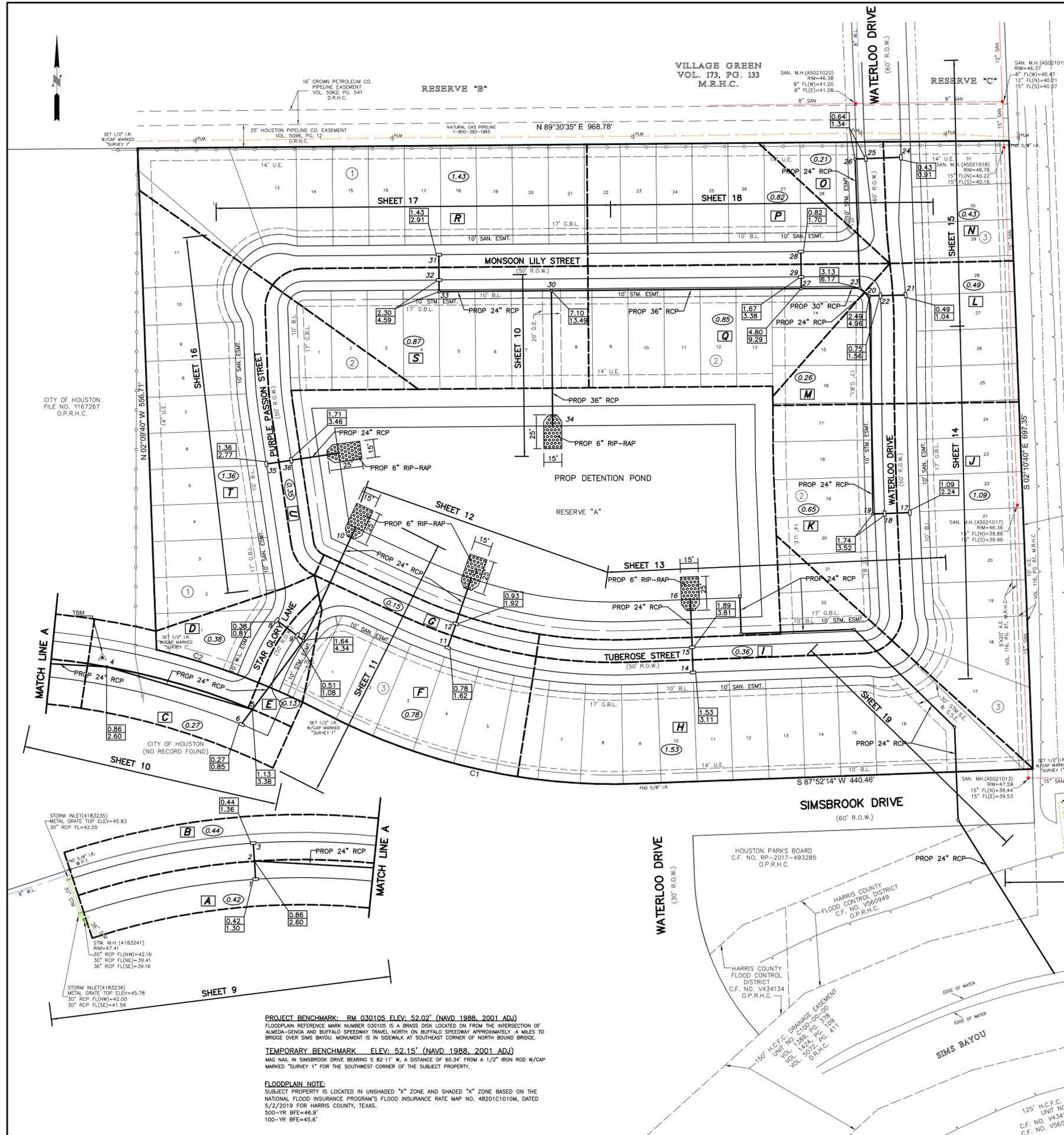
(CALLED 199.72' (CALLED N 69°17'01" W) (CALLED 199.24')

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TEMPORARY BENCHMARK: ELEV: 52.15' (NAVD 1988, 2001 ADJ)
 MAG NAIL IN SIMSBROOK DRIVE BEARING S 82°11' W, A DISTANCE OF 60.34' FROM A 1/2" IRON ROD W/CAP MARKED "SURVEY 1" FOR THE SOUTHWEST CORNER OF THE SUBJECT PROPERTY.

FLOODPLAIN NOTE:
 SUBJECT PROPERTY IS LOCATED IN UNSHADED "X" ZONE AND SHADED "X" ZONE BASED ON THE NATIONAL FLOOD INSURANCE PROGRAM'S FLOOD INSURANCE RATE MAP NO. 48201C1010M, DATED 5/2/2019 FOR HARRIS COUNTY, TEXAS.
 500-YR BFE=46.9'
 100-YR BFE=45.6'

NO.	DATE	REVISION	APP.



- LEGEND:**
- DRAINAGE AREA BOUNDARY
 - A DRAINAGE AREA NO.
 - 1.31 AREA (ACRES) WITHIN DRAINAGE AREA
 - 3.12
5.00 CUMULATIVE DRAINAGE AREA (ACRES)
CUMULATIVE FLOW (CFS) (2 YEAR STORM)
 - 2 INLET/MANHOLE NUMBER

COH DETENTION SUMMARY:

TOTAL SERVICE AREA (INCLUDING LEFT TURN)=16.2667 AC
 DISTURBED AREA=12.00 AC
 IMPERVIOUS AREA RATE=0.80
 DETENTION RATE REQUIRED=0.90 AC-FT/AC
 DETENTION VOLUME REQUIRED=12.00x0.9=10.80 AC-FT
 DETENTION VOLUME PROVIDED=11.35 AC-FT
 OUTFLOW RATE ALLOWED=11.39 CFS (HCFCO)
 OUTFLOW RATE PROVIDED=10.01 CFS (HCFCO)
 RESTRICTOR SIZE: 15 INCHES

NOTICE:
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 (TBPE F-6225)
 10333 HARWIN DRIVE, STE. 375H
 HOUSTON, TX 77036
 TEL: (713) 859-3982

Professional Engineer
 BO. WU
 34859
 REGISTERED
 PROFESSIONAL ENGINEER
 7-17-2023

SIMSBROOK VILLAGE
STORM SEWER LAYOUT

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
 HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORIZ: 1"=60'
	VERT:
SHEET NO. 6 OF 40	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

CURVE	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C1	695.58'	380.14'	N 77°17'49" W	356.13'
C2	830.00'	199.96'	N 69°21'58" W	199.48'

(CALLED 199.72' (CALLED N 69°17'01" W) (CALLED 199.24')

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 500-YR BFE=46.9'
 100-YR BFE=45.6'

CITY OF HOUSTON
 FILE NO. Y167267
 O.P.R.H.C.

CITY OF HOUSTON
 (NO RECORD FOUND)

HOUSTON PARKS BOARD
 C.F. NO. RP-2017-493285
 O.P.R.H.C.

HARRIS COUNTY FLOOD CONTROL DISTRICT
 C.F. NO. V560949
 O.P.R.H.C.

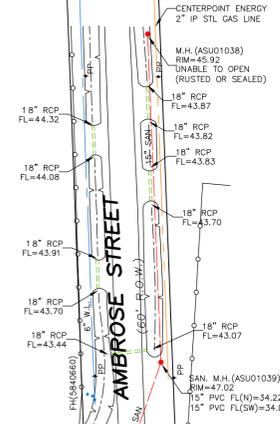
HARRIS COUNTY FLOOD CONTROL DISTRICT
 C.F. NO. V434134
 O.P.R.H.C.

H.C.F.C. DRAINAGE EASEMENT
 UNIT NO. C100-00-00
 VOL. 142, PG. 379.9
 VOL. 5972, PG. 411
 O.P.R.H.C.

125' H.C.F.C. DRAINAGE EASEMENT
 UNIT NO. C100-00-00
 VOL. NO. V434134 (CALLED 125' WIDE)
 C.F. NO. V560949 (CALLED 125' WIDE)
 O.P.R.H.C.

50' HCFCO, DRAINAGE EASEMENT
 UNIT NO. C158-00-00
 VOL. 5498, PG. 450
 D.R.H.C.

SOUTH END GARDENS
VOL. 13, PG. 47
M.R.H.C.



Storm Sewer Calculation with 2 Year Frequency
(b=48.35, d=9.07, e=0.7244 are used for rain intensity I=b/(d+TC))

Drainage Area No.	From MH/INLET	To MH/INLET	Drainage Area (acres)	Total Drainage Area (acres)	Runoff Coefficient C	Sum of CA	Time of Concn. Tc (Minutes)	Intensity I (in/hr)	Total Flow Q (cfs)	Reach Length (Feet)	Diameter or Rise (Inch)	Slope (%)	Manning's "n"	Design Capacity Oc (cfs)	Design Velocity (ft/s)	Actual Velocity (ft/s)	Hydraulic Gradient (%)	Change in Head (ft)	HGL US (Feet)	HGL DS (Feet)	NG or Gutter US (ft)	NG or Gutter DS (ft)
A	1	2	0.42	0.42	0.80	0.34	23.58	3.87	1.30	20	24	0.18	0.013	9.60	3.06	0.41	0.00	0.00	44.38	44.38	48.20	48.20
B	3	2	0.44	0.44	0.80	0.35	23.65	3.87	1.36	20	24	0.18	0.013	9.60	3.06	0.43	0.00	0.00	44.38	44.38	48.20	48.60
	2	4	0	0.88	0.80	0.69	24.74	3.77	2.60	195	24	0.18	0.013	9.60	3.06	0.83	0.01	0.02	44.38	44.36	48.60	49.20
	4	5	0	0.88	0.80	0.69	24.74	3.77	2.60	169	24	0.18	0.013	9.60	3.06	0.83	0.01	0.02	44.36	44.34	49.20	48.35
C	6	5	0.27	0.27	0.80	0.22	22.94	3.93	0.85	20	24	0.18	0.013	9.60	3.06	0.27	0.00	0.00	44.34	44.34	47.95	48.35
	5	7	0	1.13	0.80	0.90	25.22	3.74	3.38	96	24	0.18	0.013	9.60	3.06	1.07	0.02	0.02	44.34	44.32	48.35	48.15
D	8	9	0.38	0.38	0.55	0.21	23.43	3.88	0.81	28	24	0.18	0.013	9.60	3.06	0.26	0.00	0.00	44.32	44.32	47.82	47.82
E	9	7	0.13	0.51	0.55	0.28	23.88	3.84	1.08	9	24	0.18	0.013	9.60	3.06	0.34	0.00	0.00	44.32	44.32	47.82	48.15
	7	10	0	1.64	0.55	1.18	25.91	3.68	4.34	138	24	0.18	0.013	9.60	3.06	1.38	0.04	0.06	44.32	44.26	48.15	46.50
F	11	12	0.78	0.78	0.55	0.43	24.57	3.79	1.62	28	24	0.18	0.013	9.60	3.06	0.52	0.01	0.00	44.46	44.46	47.27	47.27
G	12	13	0.15	0.93	0.55	0.51	24.87	3.76	1.92	53	24	0.18	0.013	9.60	3.06	0.61	0.01	0.01	44.46	44.45	47.27	46.50
H	14	15	1.53	1.53	0.55	0.84	25.78	3.69	3.11	28	24	0.18	0.013	9.60	3.06	0.99	0.02	0.01	43.98	43.97	46.77	46.77
I	15	16	0.36	1.89	0.55	1.04	26.19	3.66	3.81	53	24	0.18	0.013	9.60	3.06	1.21	0.03	0.02	43.97	43.95	46.77	46.50
J	17	18	1.09	1.09	0.55	0.60	25.15	3.74	2.24	28	24	0.18	0.013	9.60	3.06	0.71	0.01	0.00	43.59	43.59	46.97	46.97
K	18	19	0.65	1.74	0.55	0.96	26.02	3.67	3.52	13	24	0.18	0.013	9.60	3.06	1.12	0.02	0.00	43.59	43.59	46.97	47.20
	19	20	0	1.74	0.55	0.96	26.02	3.67	3.52	242	24	0.18	0.013	9.60	3.06	1.12	0.02	0.05	43.59	43.54	47.20	47.25
L	21	22	0.49	0.49	0.55	0.27	23.82	3.85	1.04	28	24	0.18	0.013	9.60	3.06	0.33	0.00	0.00	43.54	43.54	46.92	46.92
M	22	20	0.26	0.75	0.55	0.41	24.51	3.79	1.56	12	24	0.18	0.013	9.60	3.06	0.50	0.00	0.00	43.54	43.54	46.92	47.25
	20	23	0	2.49	0.55	1.37	26.74	3.62	4.96	14	24	0.18	0.013	9.60	3.06	1.58	0.05	0.01	43.54	43.53	47.25	47.30
N	24	25	0.43	0.43	0.55	0.24	23.62	3.87	0.91	39	24	0.18	0.013	9.60	3.06	0.29	0.00	0.00	43.51	43.51	45.42	45.42
O	25	26	0.21	0.64	0.55	0.35	24.24	3.81	1.34	12	24	0.18	0.013	9.60	3.06	0.43	0.00	0.00	43.51	43.51	45.42	45.75
	26	23	0	0.64	0.55	0.35	24.24	3.81	1.34	143	24	0.18	0.013	9.60	3.06	0.43	0.00	0.00	43.51	43.51	45.75	47.30
	23	27	0	3.13	0.55	1.72	27.23	3.58	6.17	65	30	0.13	0.013	14.79	3.01	1.26	0.02	0.01	43.07	43.06	47.30	47.00
P	28	29	0.82	0.82	0.55	0.45	24.66	3.79	1.70	28	24	0.18	0.013	9.60	3.06	0.54	0.01	0.00	43.93	43.93	46.67	46.67
Q	29	27	0.85	1.67	0.55	0.92	25.95	3.68	3.38	13	24	0.18	0.013	9.60	3.06	1.08	0.02	0.00	43.93	43.93	47.67	47.00
	27	30	0	4.80	0.55	2.64	28.18	3.52	9.29	278	36	0.11	0.013	22.12	3.13	1.31	0.02	0.06	43.06	43.01	47.00	47.82
R	31	32	1.43	1.43	0.55	0.79	25.65	3.70	2.91	28	24	0.18	0.013	9.60	3.06	0.93	0.02	0.01	44.37	44.36	47.27	47.27
S	32	33	0.87	2.30	0.55	1.27	26.58	3.63	4.59	13	24	0.18	0.013	9.60	3.06	1.46	0.04	0.01	44.36	44.35	47.27	47.60
	33	30	0	2.30	0.55	1.27	26.58	3.63	4.59	125	24	0.18	0.013	9.60	3.06	1.46	0.04	0.05	44.35	44.30	47.60	47.82
	30	34	0	7.10	0.55	3.91	29.12	3.45	13.49	150	36	0.11	0.013	22.12	3.13	1.91	0.04	0.06	43.01	42.95	47.82	46.50
T	35	36	1.36	1.36	0.55	0.75	25.56	3.71	2.77	28	24	0.18	0.013	9.60	3.06	0.88	0.01	0.00	44.46	44.46	47.37	47.37
U	36	37	0.35	1.71	0.55	0.94	25.99	3.68	3.46	53	24	0.18	0.013	9.60	3.06	1.10	0.02	0.01	44.46	44.45	47.37	46.50

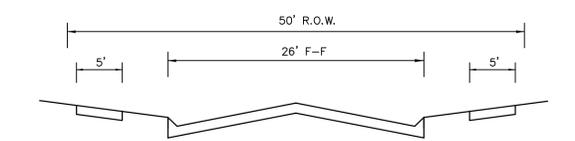
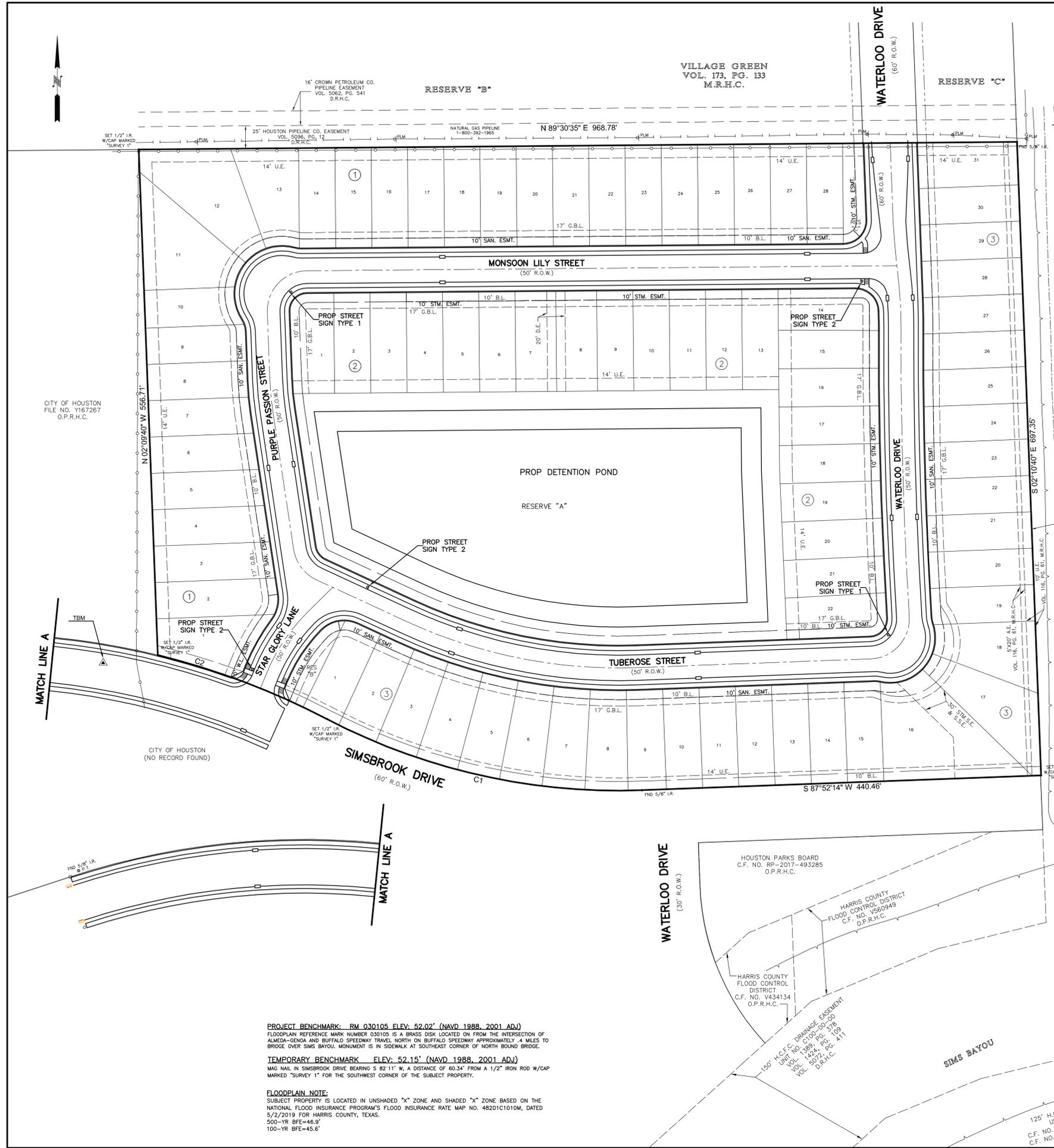
LEGEND:

-  — DRAINAGE AREA BOUNDARY
-  — DRAINAGE AREA NO.
-  — AREA (ACRES) WITHIN DRAINAGE AREA
-  — CUMULATIVE DRAINAGE AREA (ACRES)
— CUMULATIVE FLOW (CFS) (2 YEAR STORM)
-  — INLET/MANHOLE NUMBER

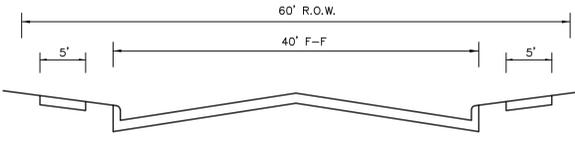
Storm Sewer Calculation with 100 Year Frequency
(b=60.66, d=4.44, e=0.5797 are used for rain intensity I=b/(d+TC))

Drainage Area No.	From MH/INLET	To MH/INLET	Drainage Area (acres)	Total Drainage Area (acres)	Runoff Coefficient C	Sum of CA	Time of Concn. Tc (Minutes)	Intensity I (in/hr)	Total Flow Q (cfs)	Reach Length (Feet)	Diameter or Rise (Inch)	Slope (%)	Manning's "n"	Design Capacity Oc (cfs)	Design Velocity (ft/s)	Actual Velocity (ft/s)	Hydraulic Gradient (%)	Change in Head (ft)	HGL US (Feet)	HGL DS (Feet)	NG or Gutter US (ft)	NG or Gutter DS (ft)
A	1	2	0.42	0.42	0.80	0.34	23.58	8.79	2.95	20	24	0.18	0.013	9.60	3.06	0.94	0.02	0.00	45.13	45.13	48.20	48.20
B	3	2	0.44	0.44	0.80	0.35	23.65	8.77	3.09	20	24	0.18	0.013	9.60	3.06	0.98	0.02	0.00	45.13	45.13	48.20	48.60
	2	4	0	0.88	0.80	0.69	24.74	8.58	5.90	195	24	0.18	0.013	9.60	3.06	1.88	0.07	0.14	45.13	44.99	48.60	49.20
	4	5	0	0.88	0.80	0.69	24.74	8.58	5.90	169	24	0.18	0.013	9.60	3.06	1.88	0.07	0.12	44.99	44.87	49.20	48.35
C	6	5	0.27	0.27	0.80	0.22	22.94	8.90	1.92	20	24	0.18	0.013	9.60	3.06	0.61	0.01	0.00	44.87	44.87	47.95	48.35
	5	7	0	1.13	0.80	0.90	25.22	8.50	7.89	96	24	0.18	0.013	9.60	3.06	2.45	0.11	0.11	44.87	44.76	48.35	48.15
D	8	9	0.38	0.38	0.55	0.21	23.43	8.81	1.84	28	24	0.18	0.013	9.60	3.06	0.59	0.01	0.00	44.76	44.76	47.82	47.82
E	9	7	0.13	0.51	0.55	0.28	23.88	8.73	2.45	9	24	0.18	0.013	9.60	3.06	0.78	0.01	0.00	44.76	44.76	47.82	48.15
	7	10	0	1.64	0.55	1.18	25.91	8.39	9.90	138	24	0.18	0.013	9.60	3.06	3.15	0.19	0.26	44.76	44.50	48.15	46.50
F	11	12	0.78	0.78	0.55	0.43	24.57	8.61	3.69	28	24	0.18	0.013	9.60	3.06	1.18	0.03	0.01	44.53	44.52	47.27	47.27
G	12	13	0.15	0.93	0.55	0.51	24.87	8.56	4.38	53	24	0.18	0.013	9.60	3.06	1.39	0.04	0.02	44.52	44.50	47.27	46.50
H	14	15	1.53	1.53	0.55	0.84	25.78	8.41	7.08	28	24	0.18	0.013	9.60	3.06	2.25	0.10	0.03	44.61	44.58	46.77	46.77
I	15	16	0.36	1.89	0.55	1.04	26.19	8.34	8.67	53	24	0.18	0.013	9.60	3.06	2.76	0.15	0.08	44.58	44.50	46.77	46.50
J	17	18	1.09	1.09	0.55	0.60	25.15	8.51	5.10	28	24	0.18	0.013	9.60	3.06	1.62	0.05	0.01	45.54	45.53	46.97	46.97
K	18	19	0.65	1.74	0.55	0.96	26.02	8.37	8.01	13	24	0.18	0.013	9.60	3.06	2.55	0.12	0.02	45.53	45.51	46.97	47.20
	19	20	0	1.74	0.55	0.96	26.02	8.37	8.01	242	24	0.18	0.013	9.60	3.06	2.55	0.12	0.29	45.51	45.22	47.20	47.25
L	21	22	0.49	0.49	0.55	0.27	23.82	8.74	2.36	28	24	0.18	0.013	9.60	3.06	0.75	0.01	0.00	45.22	45.22	46.92	46.92
M	22	20	0.26	0.75	0.55	0.41	24.51	8.62	3.56	12	24	0.18	0.013	9.60	3.06	1.13	0.02	0.00	45.22	45.22	46.92	47.25
	20	23	0	2.49	0.55	1.37	26.74	8.26	11.31	14	24	0.18	0.013	9.60	3.06	3.60	0.25	0.04	45.22	45.18	47.25	47.30
N	24	25	0.43	0.43	0.55	0.24	23.62	8.78	2.08	39	24	0.18	0.013	9.60	3.06	0.66	0.01	0.00	45.21	45.21	45.42	45.42
O	25	26	0.21	0.64	0.55	0.35	24.24	8.67	3.05	12	24	0.18	0.013	9.60	3.06	0.97	0.02	0.00	45.21	45.21	45.42	45.75
	26	23	0	0.64	0.55	0.35	24.24	8.67	3.05	143	24	0.18	0.013	9.60	3.06	0.97	0.02	0.03	45.21	45.18	45.75	47.30
	23	27	0	3.13	0.55	1.72	27.23	8.18	14.09	65	30	0.13	0.013	14.79	3.01	2.87	0.12					

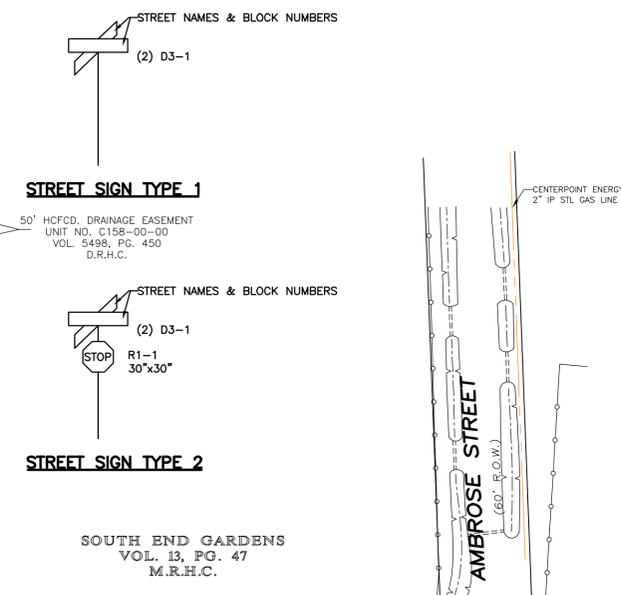
NO.	DATE	REVISION	APP.



TYPICAL CROSS SECTION FOR 50' R.O.W. STREET



TYPICAL CROSS SECTION FOR 60' R.O.W. STREET



STREET SIGN TYPE 1

STREET SIGN TYPE 2

NOTICE:
 FOR YOUR SAFETY, YOU ARE REQUIRED BY TEXAS LAW TO CALL 811 AT LEAST 48 HOURS BEFORE YOU DIG SO THAT UNDERGROUND LINES CAN BE MARKED. THIS SIGNATURE DOES NOT UNDERFILL YOUR OBLIGATION TO CALL 811

VERIFICATION OF PRIVATE UTILITY LINES

Date _____
 CenterPoint Energy natural gas utilities shown. (Gas service lines are not shown). This signature not be used for conflict verification.
 Signature valid for six months.

Date _____
 CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY. (This signature verifies existing underground facilities - not to be used for conflict verification)
 Signature valid for six months.

Date _____
 Approved for AT&T Texas/SWB/T underground conduit facilities only. Signature valid for one year.

B & P ENGINEERING, INC.
 (TBPE F-6225)
 10333 HARWIN DRIVE, STE. 375H
 HOUSTON, TX 77036
 TEL: (713) 859-3982

SIMSBROOK VILLAGE
STREET SIGN PLAN

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
 HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORIZ: 1"=60'
	VERT:
SHEET NO. 8 OF 40	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

PROJECT BENCHMARK: RM 030105 ELEV: 52.02' (NAVD 1988, 2001 ADJ)
 FLOODPLAIN REFERENCE MARK NUMBER 030105 IS A BRASS DISK LOCATED ON FROM THE INTERSECTION OF ALMEDA-GENOA AND BUFFALO SPEEDWAY TRAVEL NORTH ON BUFFALO SPEEDWAY APPROXIMATELY 4 MILES TO BRIDGE OVER SIMS BAYOU. MONUMENT IS IN SIDEWALK AT SOUTHEAST CORNER OF NORTH BOUND BRIDGE.

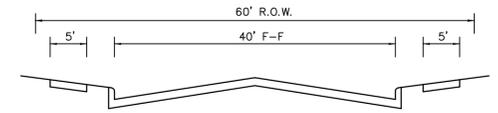
TEMPORARY BENCHMARK: ELEV: 52.15' (NAVD 1988, 2001 ADJ)
 MAG NAIL IN SIMSBROOK DRIVE BEARING S 82°11' W, A DISTANCE OF 60.34' FROM A 1/2" IRON ROD W/CAP MARKED "SURVEY 1" FOR THE SOUTHWEST CORNER OF THE SUBJECT PROPERTY.

FLOODPLAIN NOTE:
 SUBJECT PROPERTY IS LOCATED IN UNSHADED "X" ZONE AND SHADED "X" ZONE BASED ON THE NATIONAL FLOOD INSURANCE PROGRAM'S FLOOD INSURANCE RATE MAP NO. 48201C1010M, DATED 5/2/2019 FOR HARRIS COUNTY, TEXAS.
 500-YR BFE=46.9'
 100-YR BFE=45.6'

CURVE	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C1	695.58'	380.14'	N 77°17'49" W	356.13'
C2	830.00'	199.96'	N 69°21'58" W	199.48'

(CALLED 199.72' (CALLED N 69°17'01" W) (CALLED 199.24')

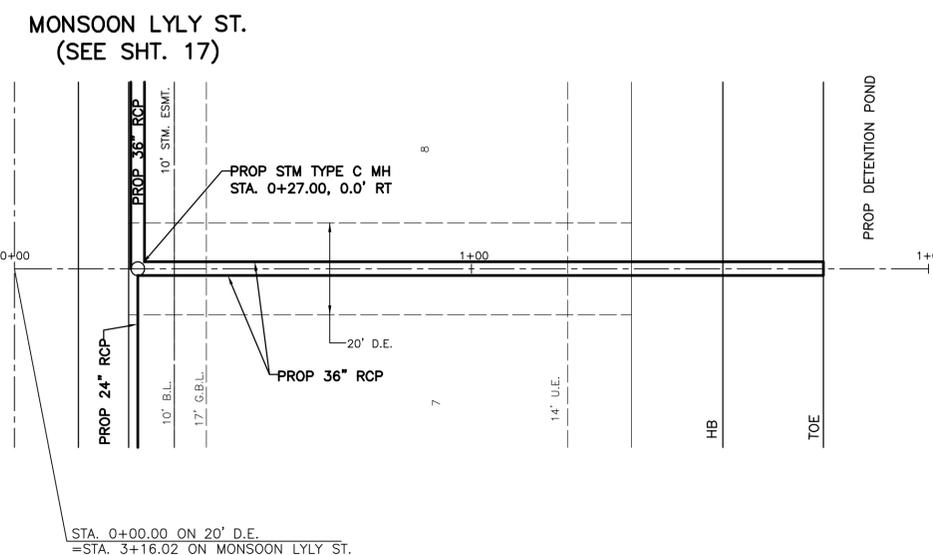
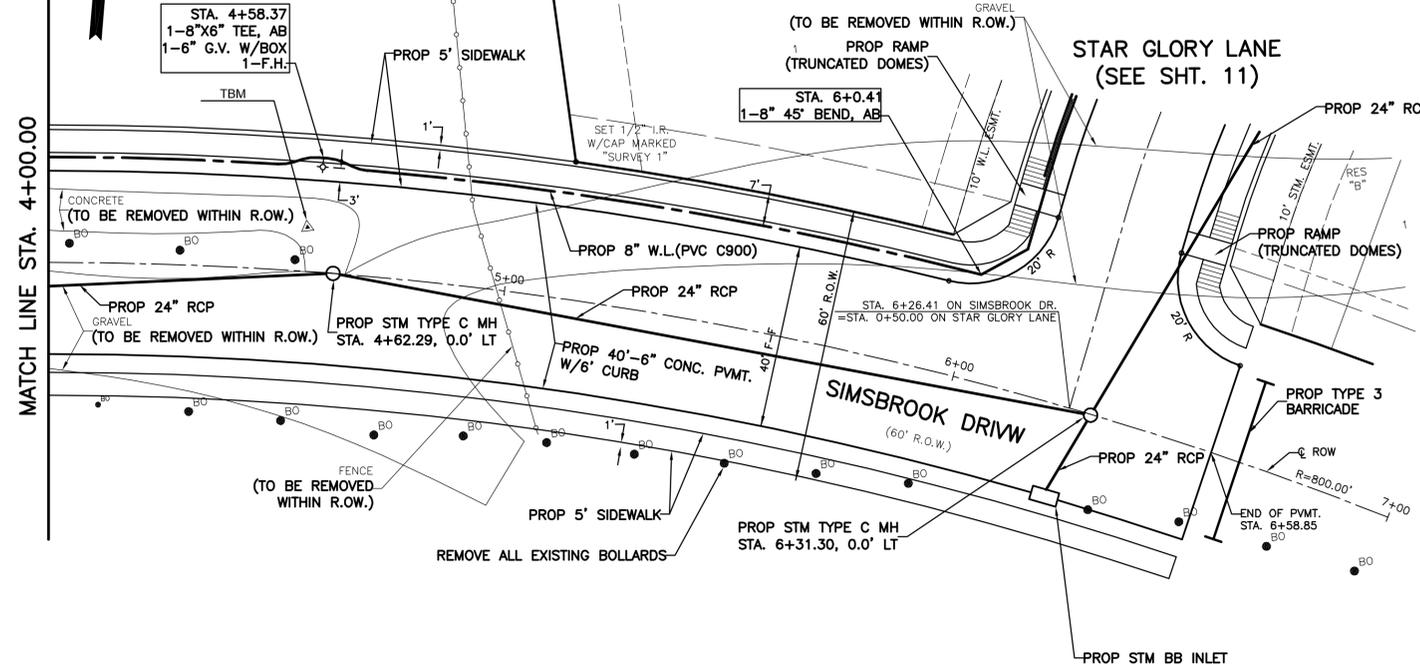
125' H.C.F.C. DRAINAGE EASEMENT
 UNIT NO. C100-00-00
 C.F. NO. V434134 (CALLED 125' WIDE)
 C.F. NO. V560949 (CALLED 125' WIDE)
 O.P.R.H.C.



TYPICAL CROSS SECTION FOR 60' R.O.W. STREET

DESIGN SPEED LIMIT: 35 MPH

NO.	DATE	REVISION	APP.



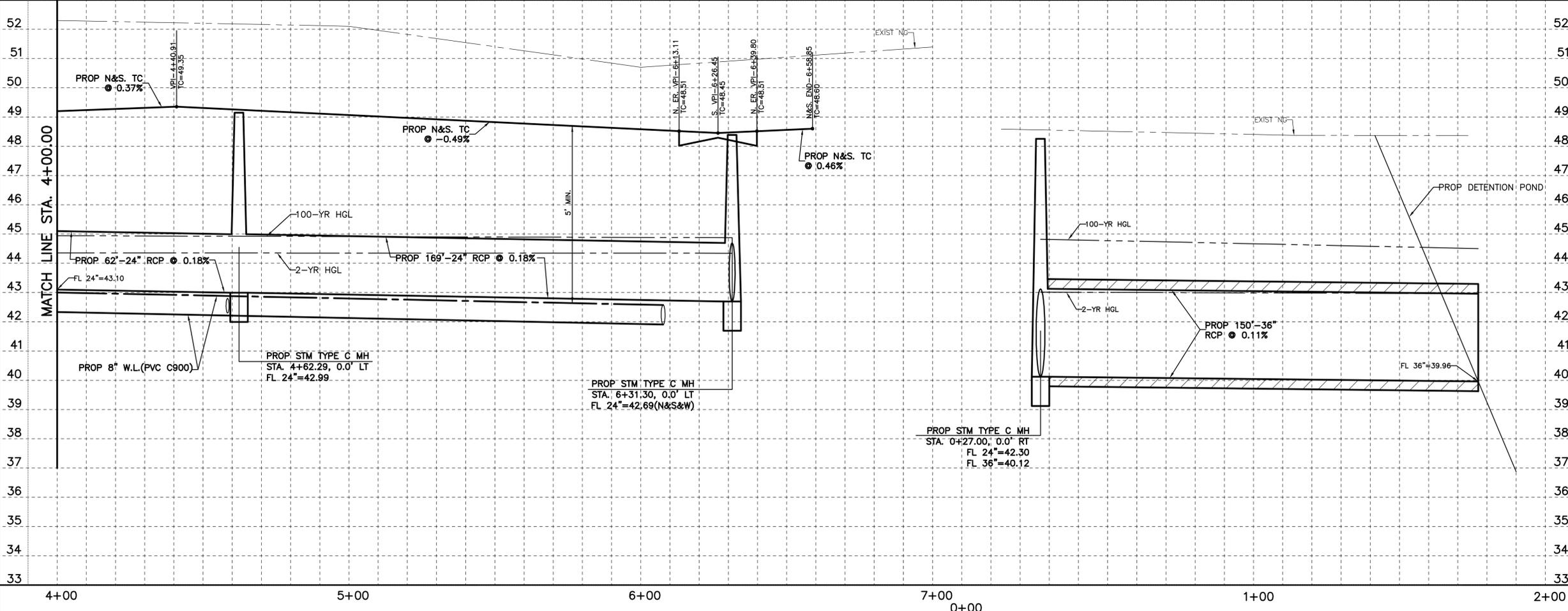
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VERIFICATION OF PRIVATE UTILITY LINES

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CenterPoint Energy natural gas utilities shown. (Gas service lines are not shown). This signature not be used for conflict verification.
Signature valid for six months.

Date _____
CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY. (This signature verifies existing underground facilities - not to be used for conflict verification)
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Date _____
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STATE OF TEXAS
BO WU
REGISTERED
PROFESSIONAL ENGINEER
9-10-2023

SIMSBROOK VILLAGE
PLAN & PROFILE
SIMSBROOK DRIVE
STA. 4+00 TO 7+00
20' D.E.
STA. 0+00 TO 2+00

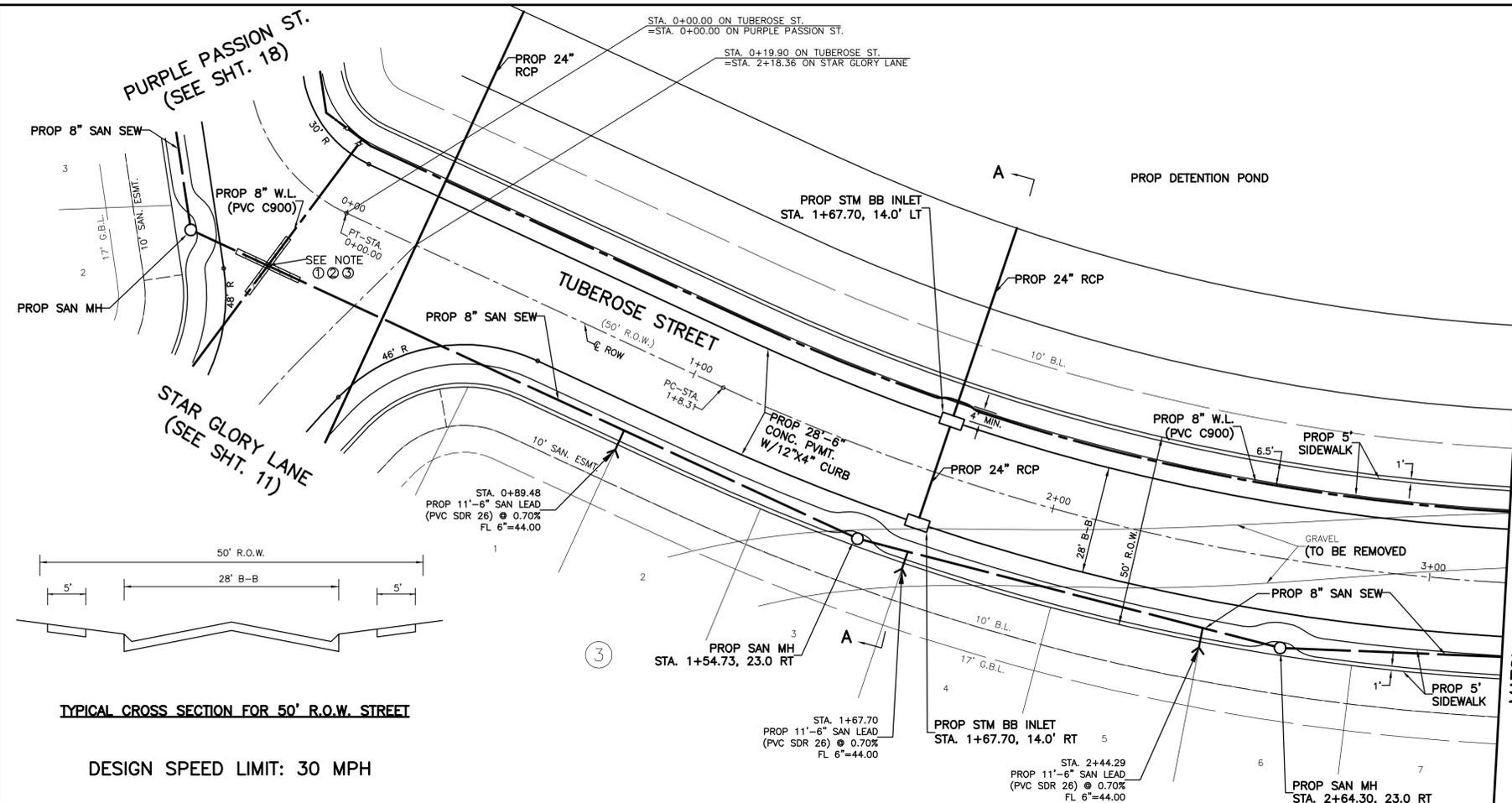
NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

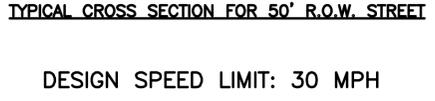
WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

FILE NO. _____ HORIZ: 1"=20'
VERT: 1"=2'

SHEET NO. 10 OF 40 DRAWING SCALE
FOR CITY OF HOUSTON USE ONLY



MATCH LINE STA. 3+20.00



- NOTE:
- PLACE 1 FULL SECTION (MIN. 18 FT) OF WATER LINE CENTERED AT SANITARY SEWER CROSSING. PROVIDE RESTRAINED JOINTS ON WATER LINE, SPACED AT LEAST 9 FT HORIZONTALLY FROM CENTERLINE OF SANITARY SEWER.
 - PLACE 1 FULL SECTION (MIN. 18 FT) OF SANITARY SEWER CENTERED AT WATER LINE CROSSING. PROVIDE RESTRAINED JOINTS ON SANITARY SEWER, SPACED AT LEAST 9 FT HORIZONTALLY FROM CENTERLINE OF WATER LINE.
 - EMBED SANITARY SEWER WITH CEMENT STABILIZED SAND FOR THE TOTAL LENGTH OF 1 PIPE SEGMENT PLUS 1 FT BEYOND THE JOINTS ON EACH END.
 - PLACE 1 FULL SECTION (MIN. 18 FT) OF MINIMUM 150 PSI SANITARY SEWER CENTERED AT WATER LINE CROSSING. PROVIDE RESTRAINED JOINTS ON SANITARY SEWER, SPACED AT LEAST 9 FT HORIZONTALLY FROM CENTERLINE OF WATER LINE.

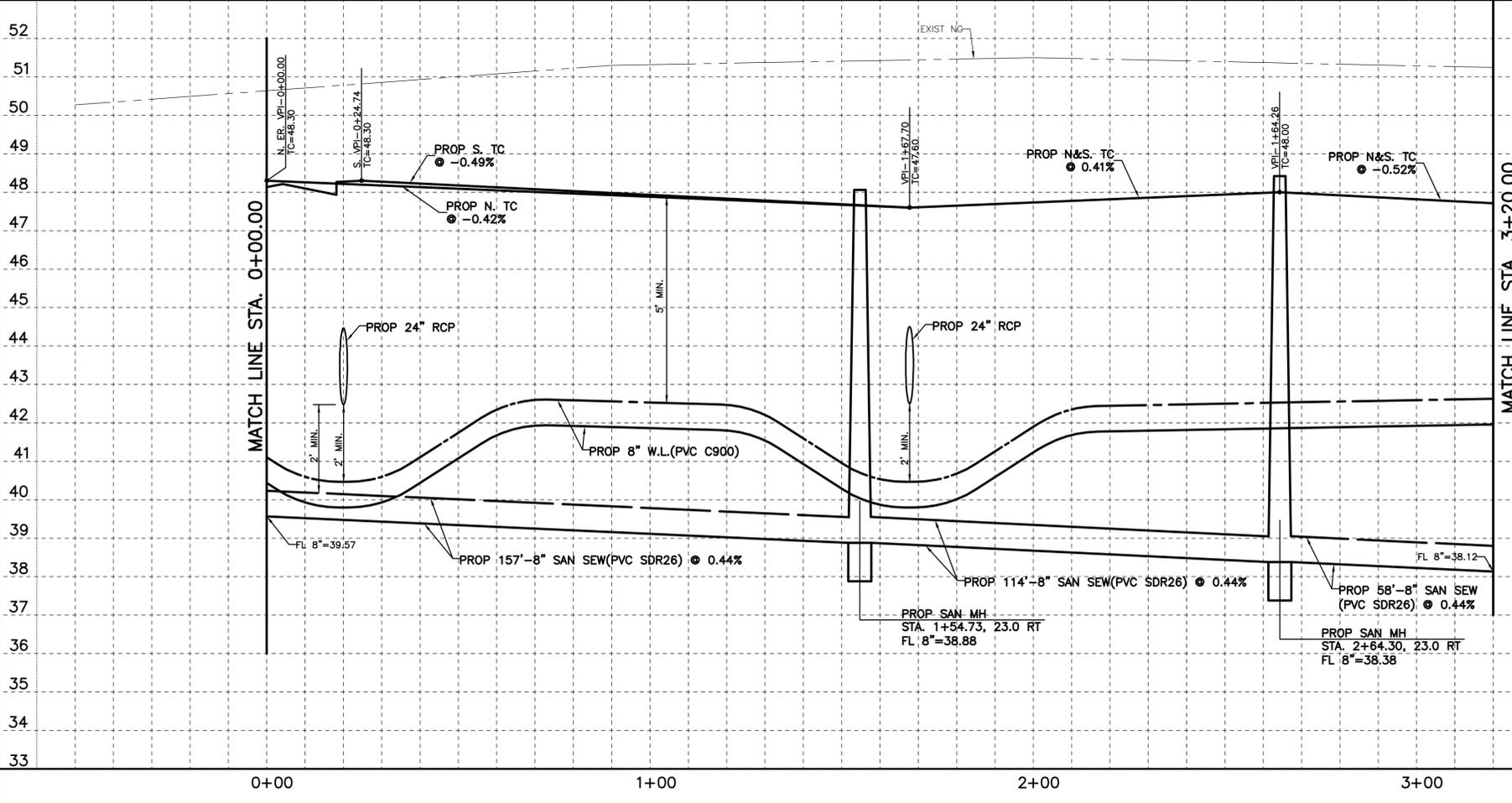
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VERIFICATION OF PRIVATE UTILITY LINES

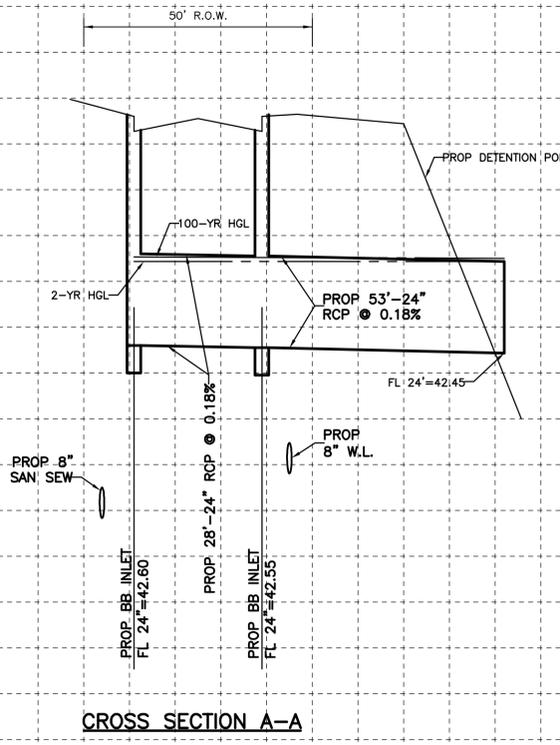
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Date _____
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Date _____
Approved for AT&T Texas/SWB/T underground conduit facilities only. Signature valid for one year.



MATCH LINE STA. 3+20.00



CROSS SECTION A-A

B & P ENGINEERING, INC.
(TBP E-6225)
10333 HARWIN DRIVE, STE. 375H
HOUSTON, TX 77036
TEL: (713) 859-3982

SIMSBROOK VILLAGE

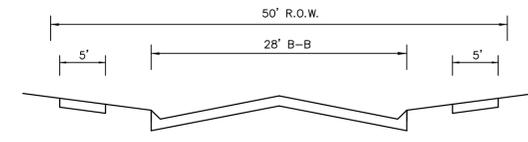
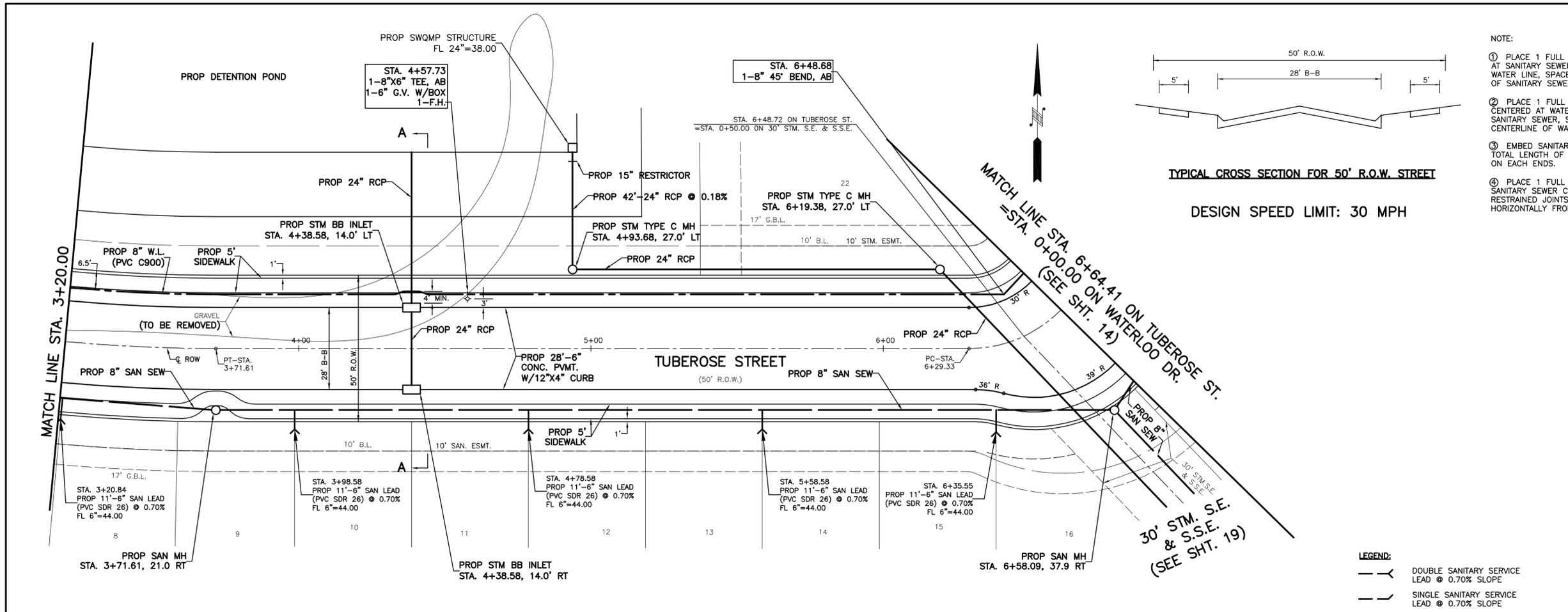
PLAN & PROFILE
TUBEROSE STREET
STA. 0+00 TO 3+20

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

FILE NO. _____ HORIZ: 1"=20'
SHEET NO. 12 OF 40 VERT: 1"=2'
DRAWING SCALE
FOR CITY OF HOUSTON USE ONLY



- NOTE:
- PLACE 1 FULL SECTION (MIN. 18 FT) OF WATER LINE CENTERED AT SANITARY SEWER CROSSING. PROVIDE RESTRAINED JOINTS ON WATER LINE, SPACED AT LEAST 9 FT HORIZONTALLY FROM CENTERLINE OF SANITARY SEWER.
 - PLACE 1 FULL SECTION (MIN. 18 FT) OF SANITARY SEWER CENTERED AT WATER LINE CROSSING. PROVIDE RESTRAINED JOINTS ON SANITARY SEWER, SPACED AT LEAST 9 FT HORIZONTALLY FROM CENTERLINE OF WATER LINE.
 - EMBED SANITARY SEWER WITH CEMENT STABILIZED SAND FOR THE TOTAL LENGTH OF 1 PIPE SEGMENT PLUS 1 FT BEYOND THE JOINTS ON EACH END.
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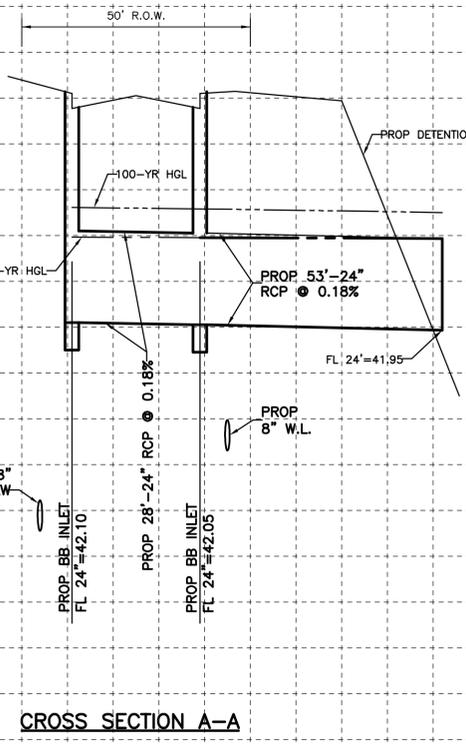
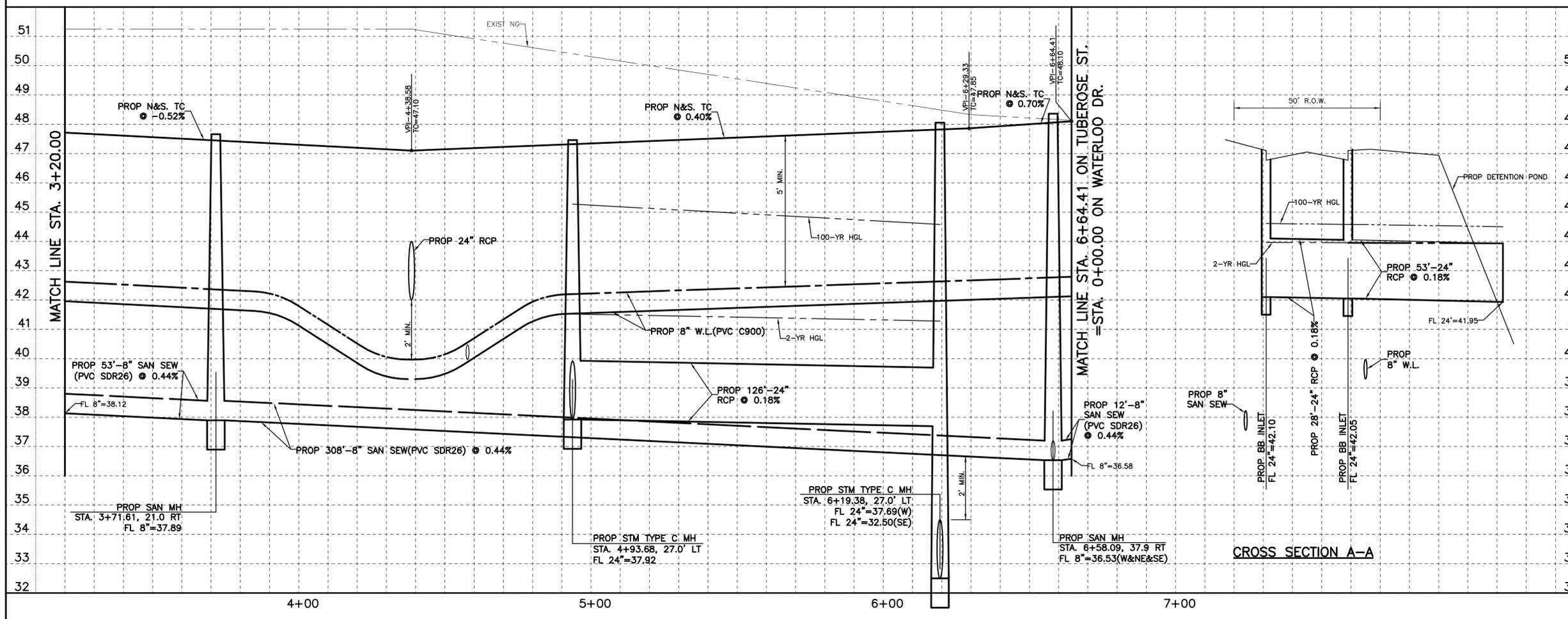
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NO.	DATE	REVISION	APP.



B & P ENGINEERING, INC.
 (TBPE F-6225)
 10333 HARWIN DRIVE, STE. 375H
 HOUSTON, TX 77036
 TEL: (713) 859-3982

STATE OF TEXAS
 BO WU
 24859
 REGISTERED PROFESSIONAL ENGINEER
 9-10-2023

SIMSBROOK VILLAGE

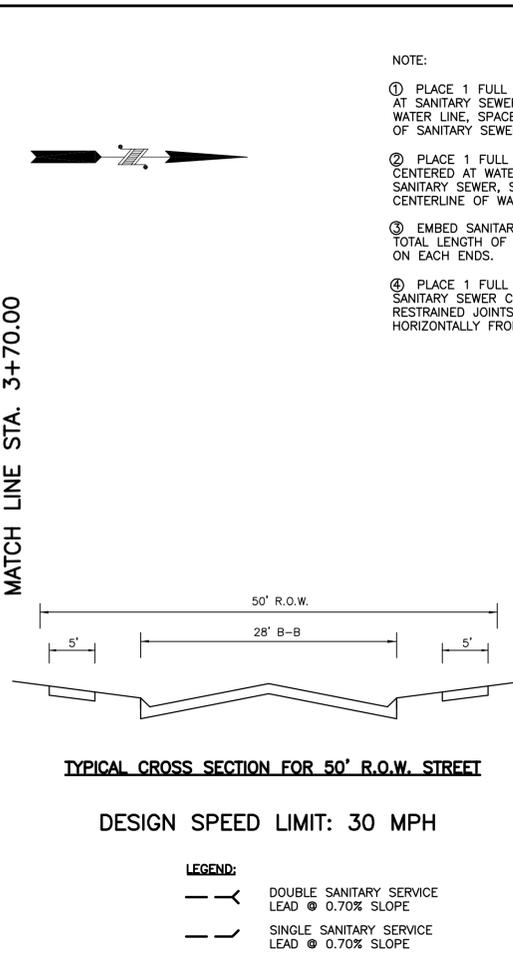
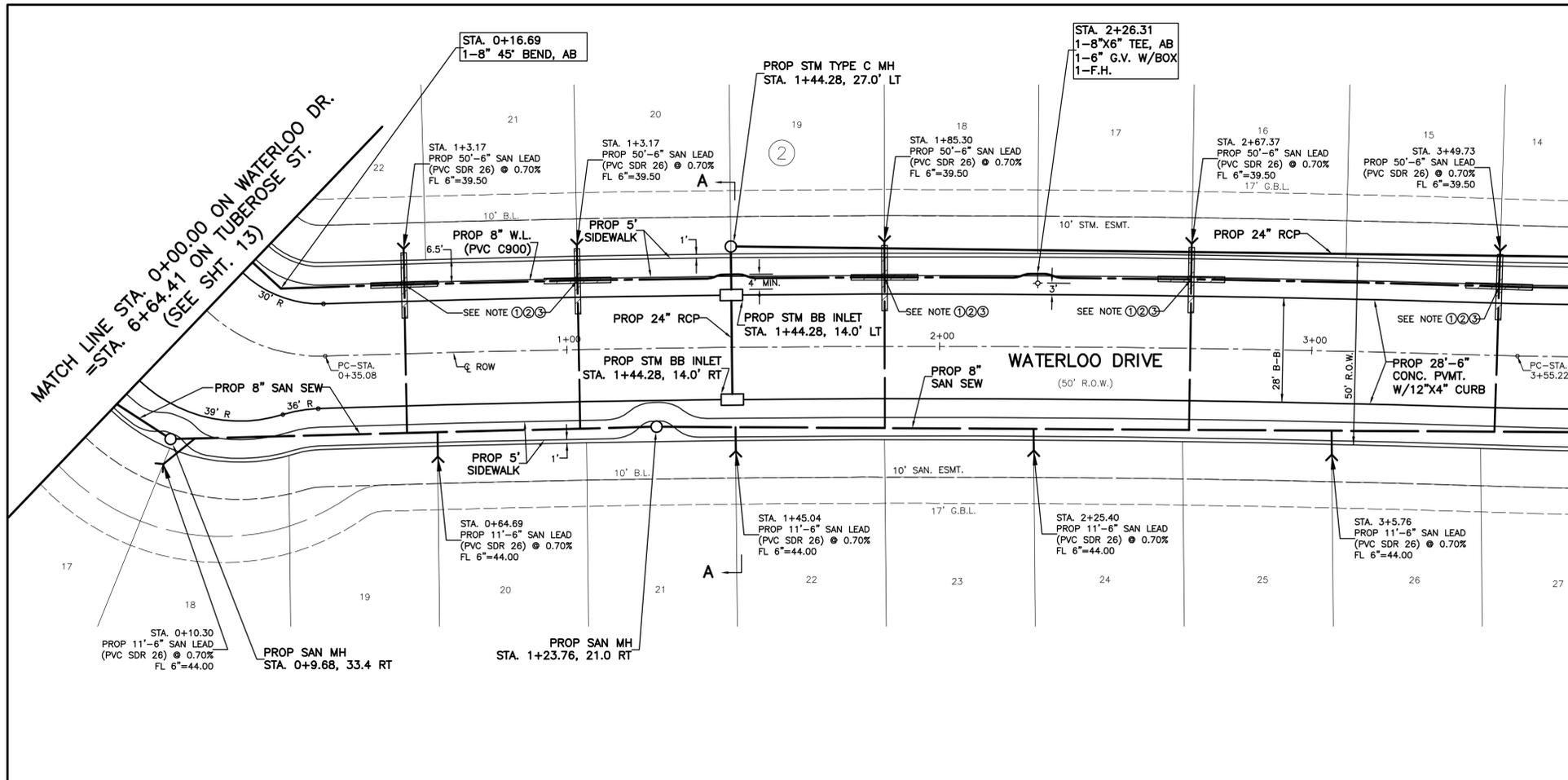
PLAN & PROFILE
TUBEROSE STREET
STA. 3+20 TO 6+64.41

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
 HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

FILE NO. _____ HORIZ: 1"=20'
 SHEET NO. 13 OF 40 VERT: 1=2'
 DRAWING SCALE
 FOR CITY OF HOUSTON USE ONLY



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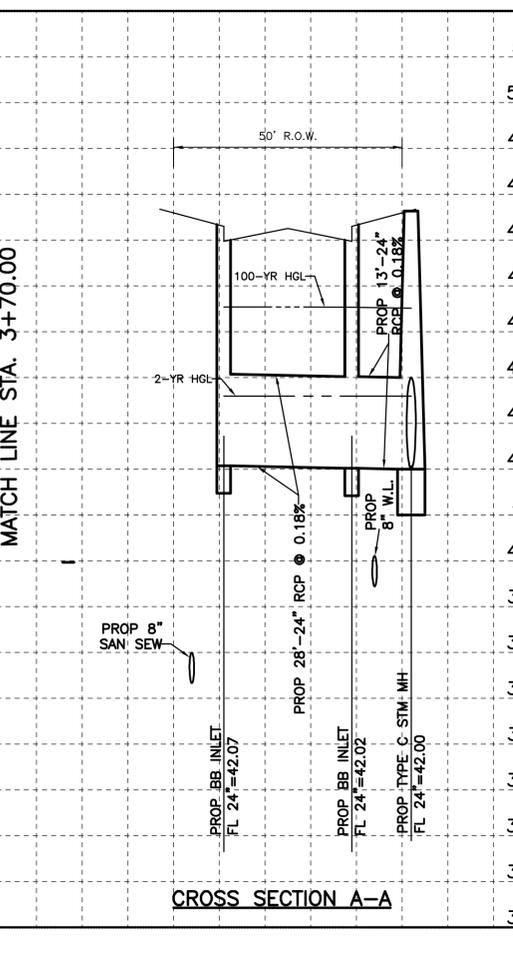
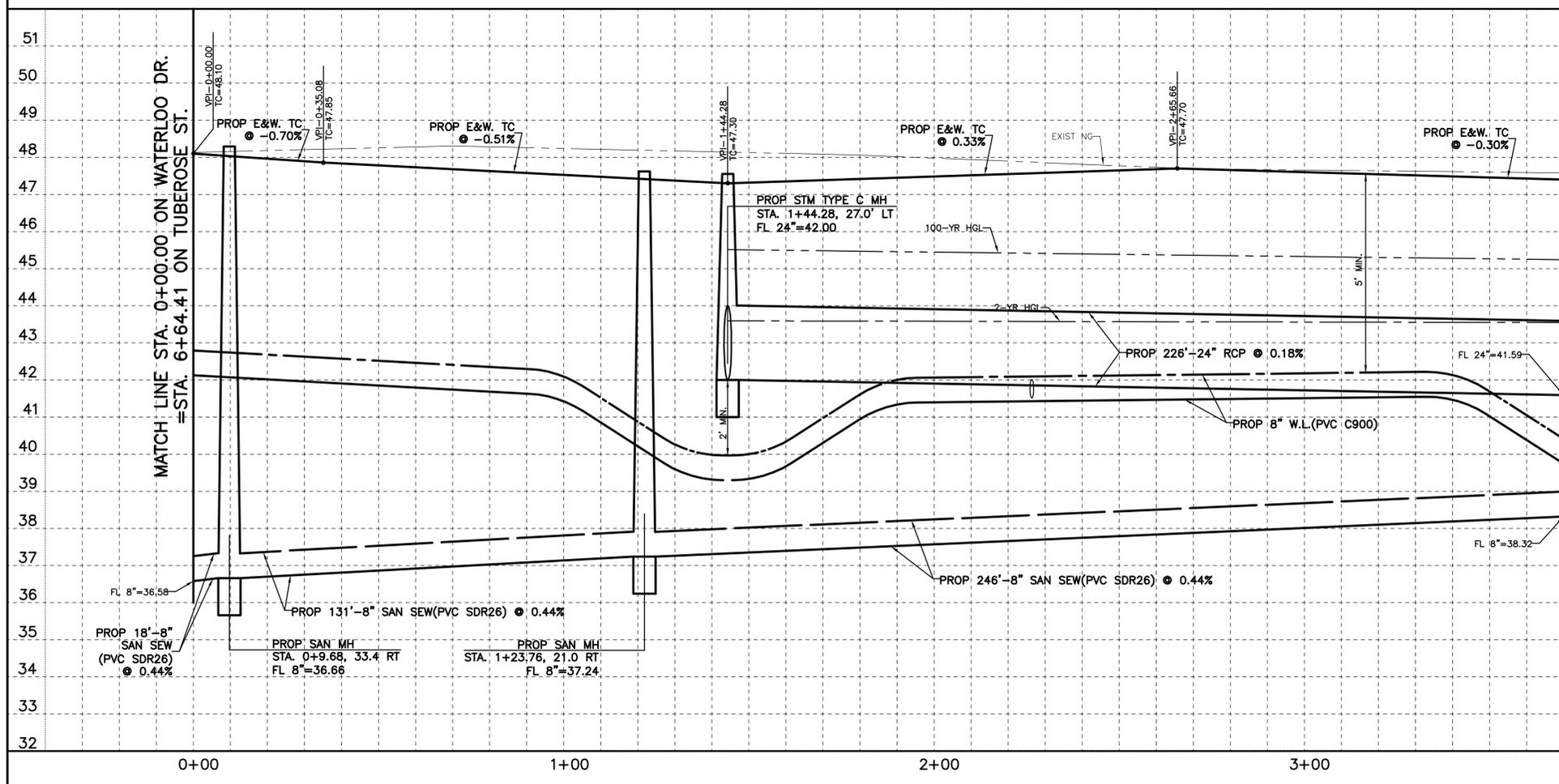
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Rathner 9-10-2023

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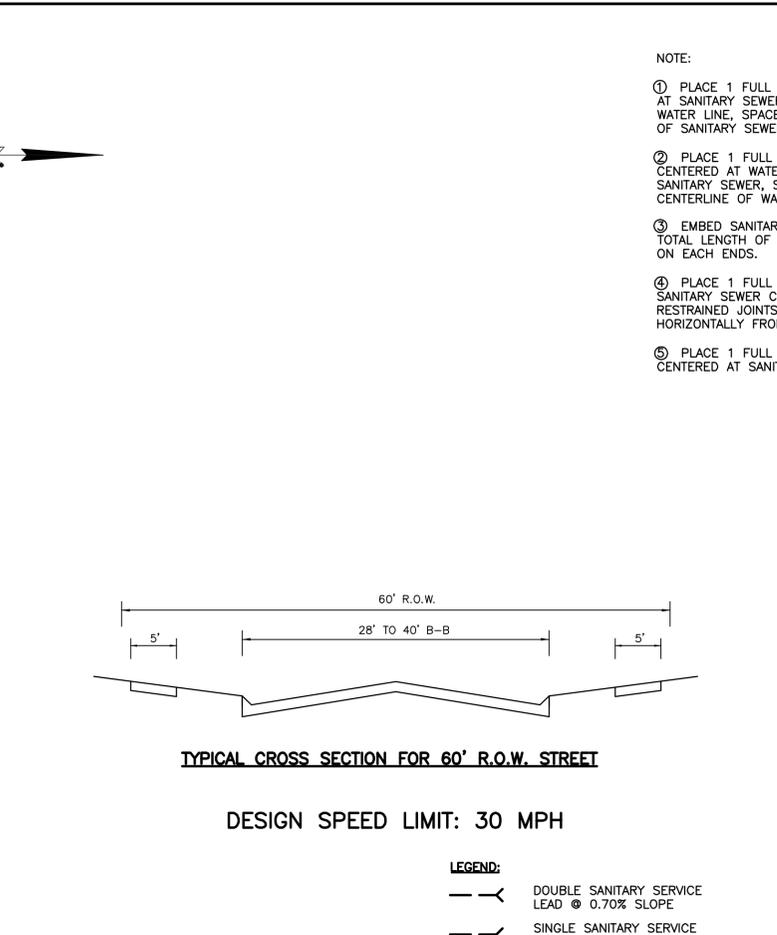
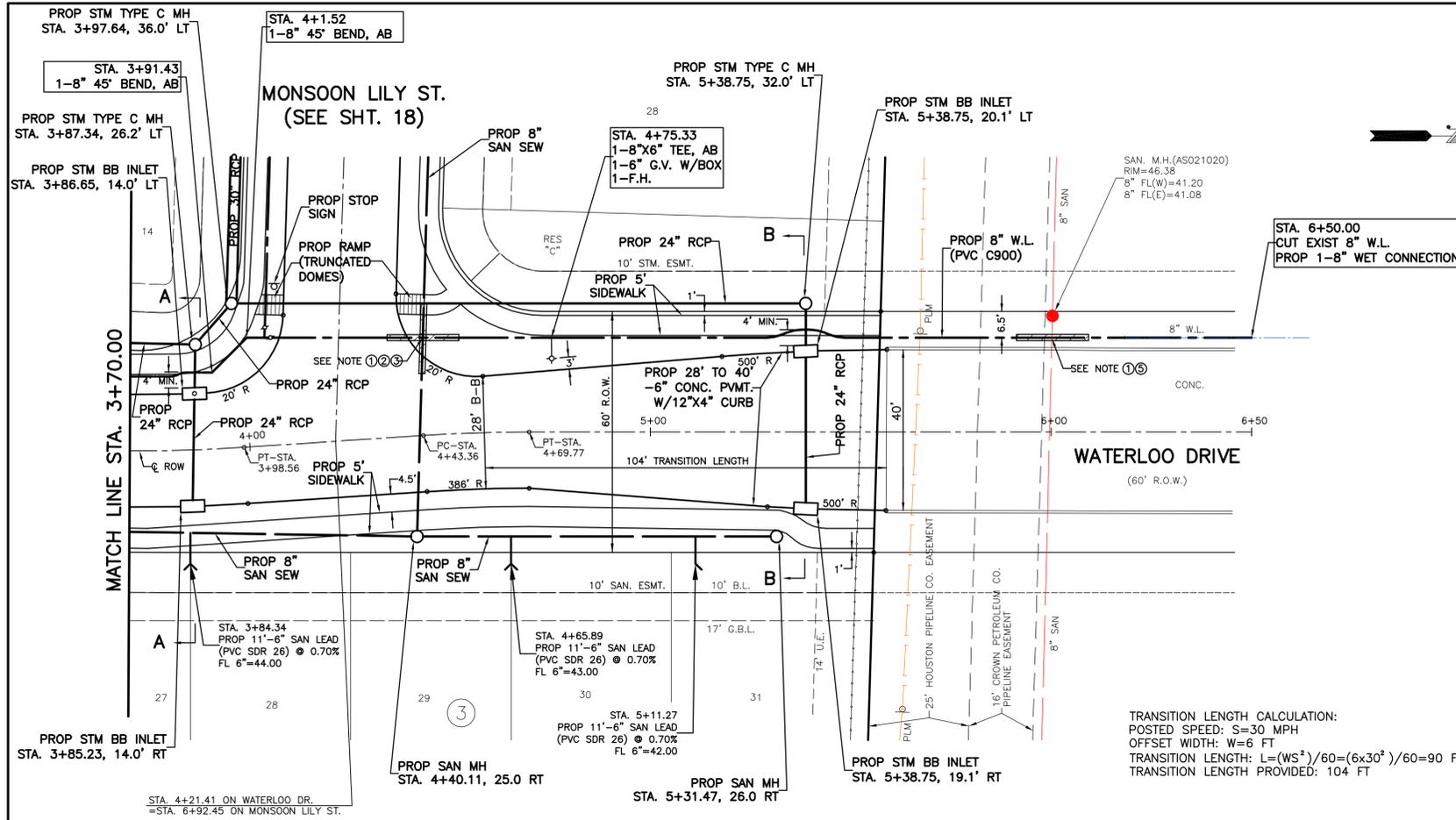
**PLAN & PROFILE
WATERLOO DRIVE
STA. 0+00 TO 3+70**

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

FILE NO. _____ HORIZ: 1"=20'
SHEET NO. 14 OF 40 VERT: 1"=2'
DRAWING SCALE _____
FOR CITY OF HOUSTON USE ONLY



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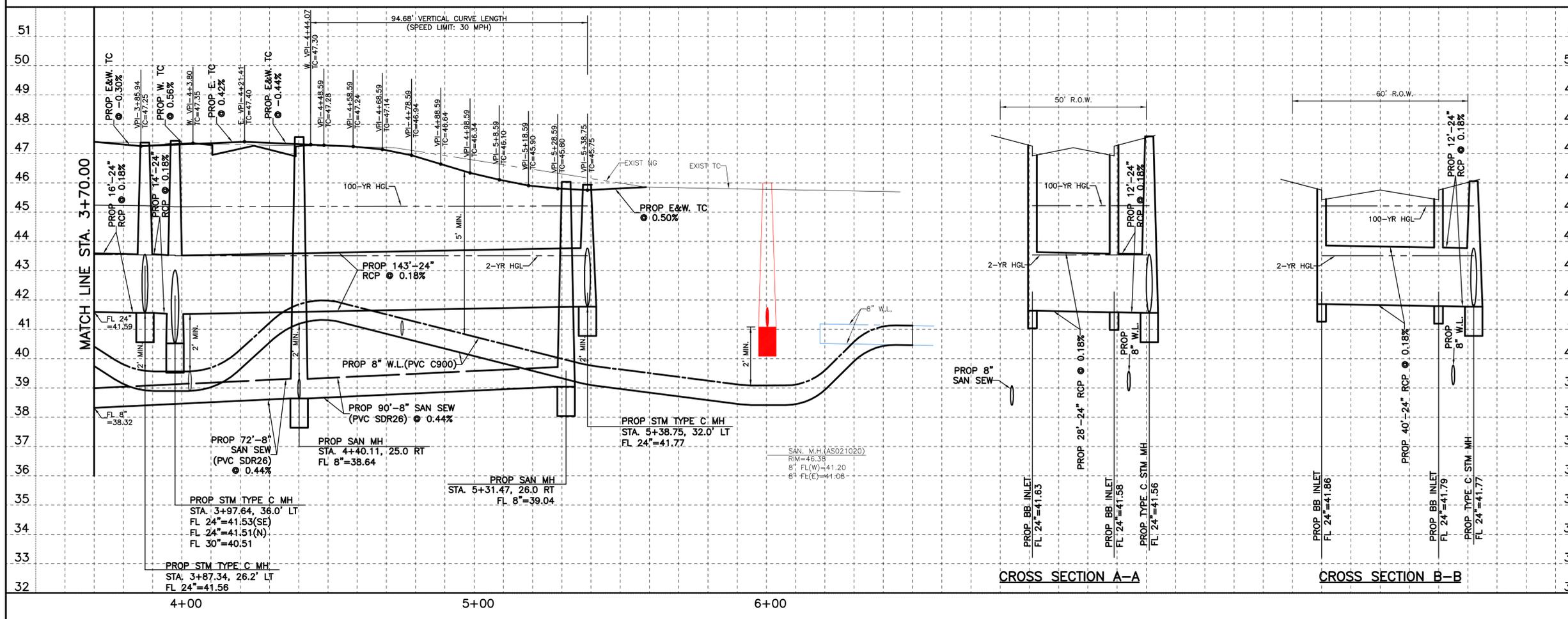
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SIMSBROOK VILLAGE

PLAN & PROFILE
WATERLOO DRIVE
STA. 3+70 TO 6+50

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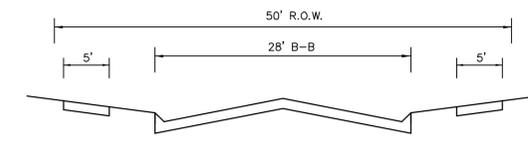
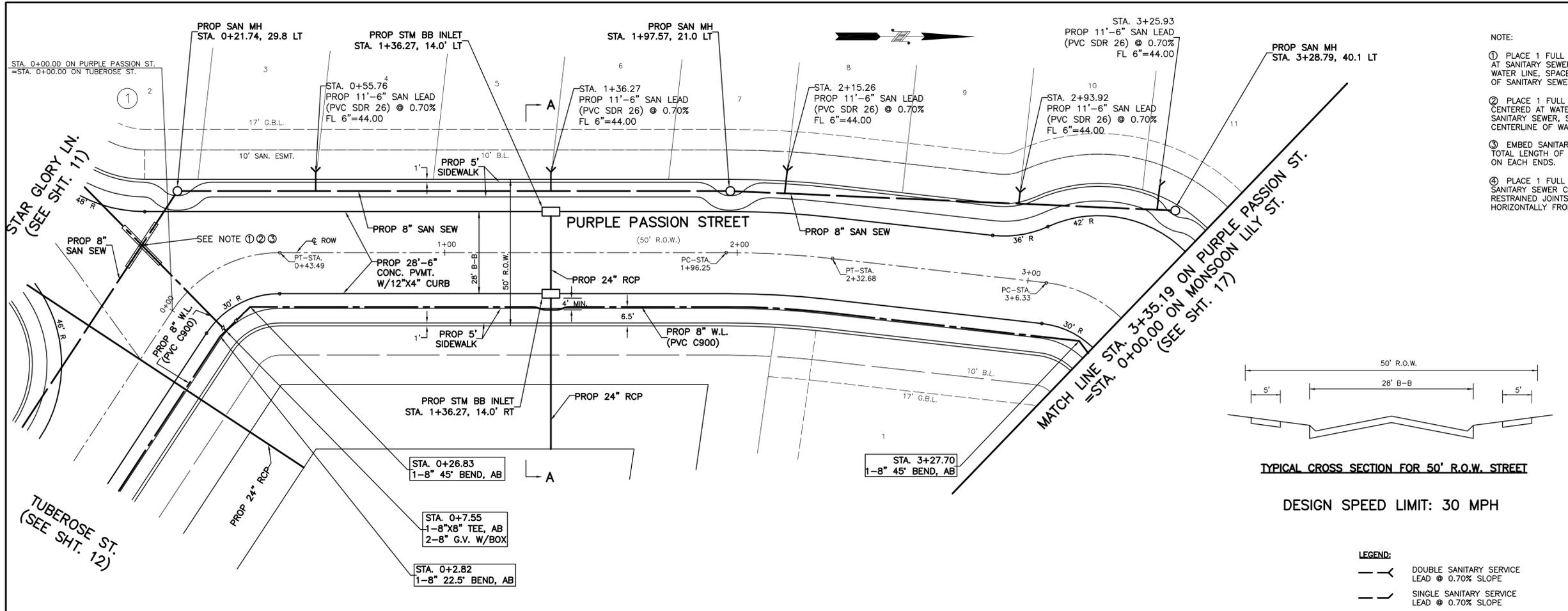
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

FILE NO. _____ HORIZ: 1"=20'
SHEET NO. 15 OF 40 VERT: 1"=2'
DRAWING SCALE _____
FOR CITY OF HOUSTON USE ONLY

NO.	DATE	REVISION	APP.





DESIGN SPEED LIMIT: 30 MPH

- LEGEND:**
- DOUBLE SANITARY SERVICE LEAD @ 0.70% SLOPE
 - SINGLE SANITARY SERVICE LEAD @ 0.70% SLOPE

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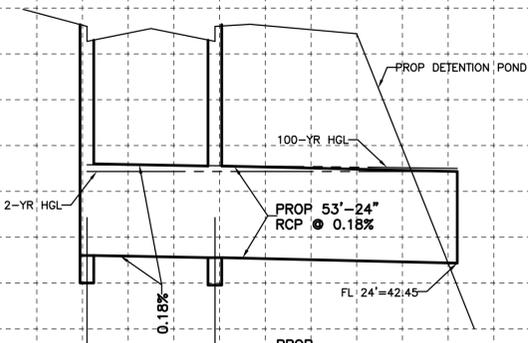
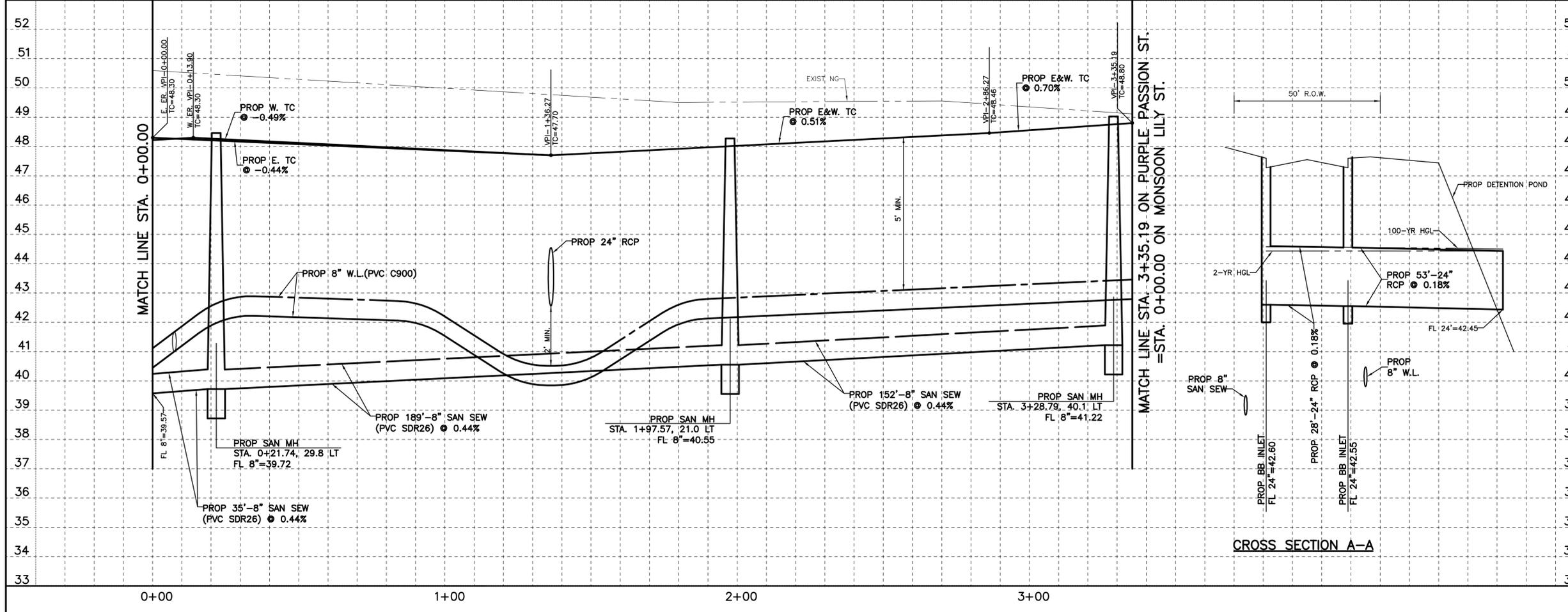
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SIMSBROOK VILLAGE

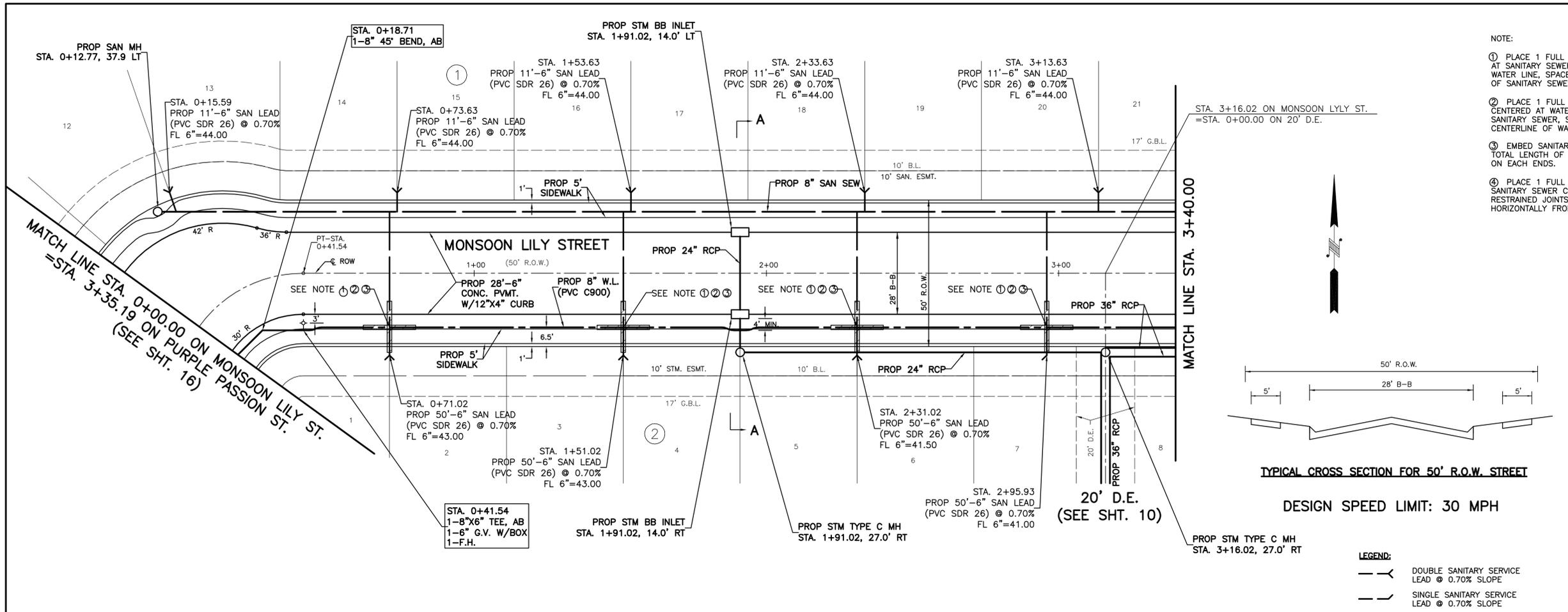
PLAN & PROFILE
PURPLE PASSION STREET
 STA. 0+00 TO 3+35.19

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CITY OF HOUSTON
 HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

FILE NO. _____ HORIZ: 1"=20'
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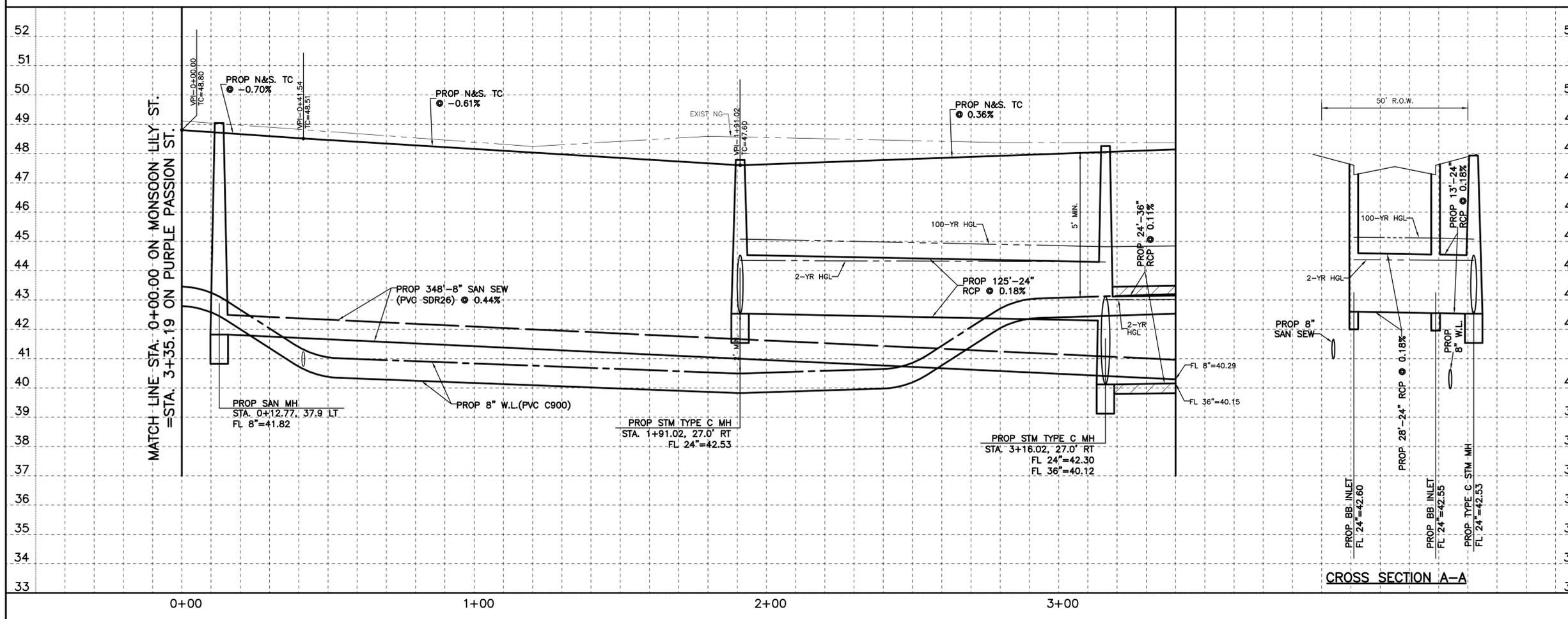
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SIMSBROOK VILLAGE

PLAN & PROFILE
MONSOON LILY STREET
STA. 0+00 TO 3+40

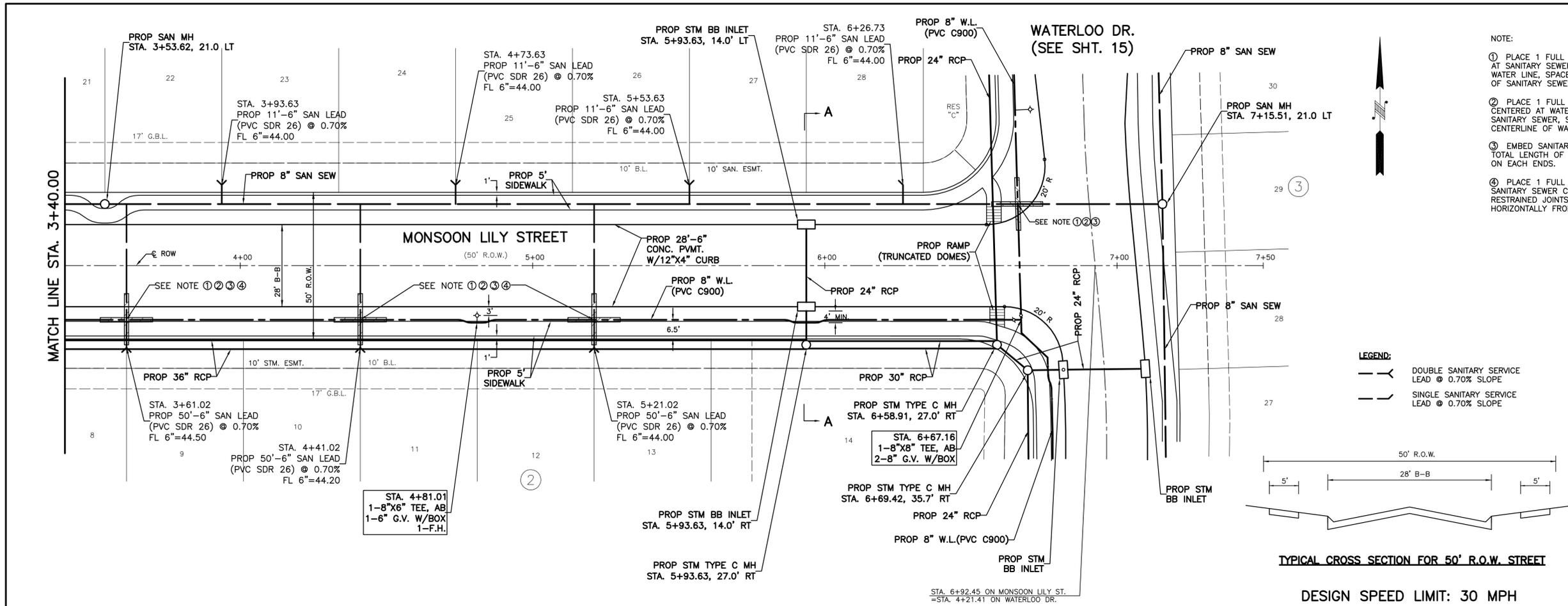
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HOUSTON PUBLIC WORKS

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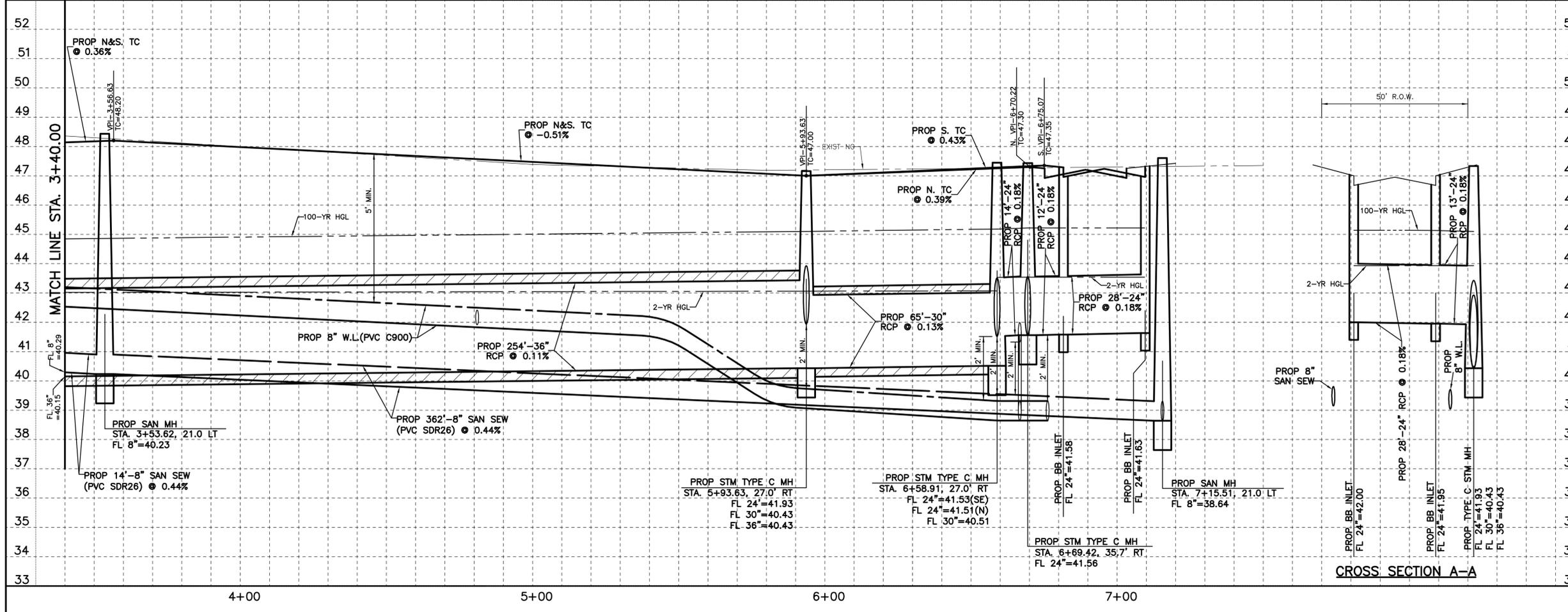
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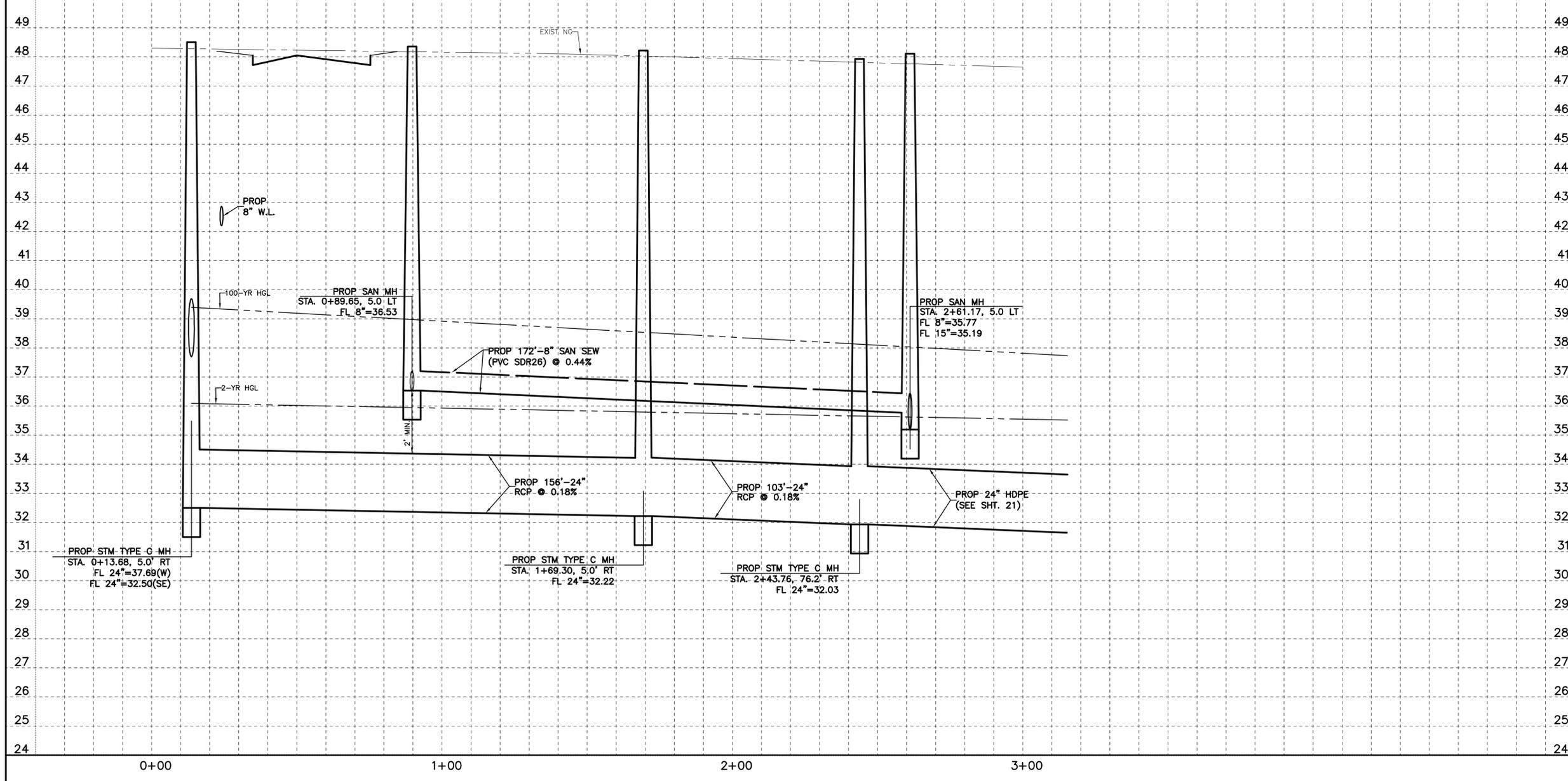
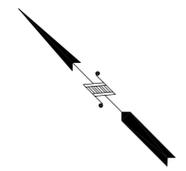
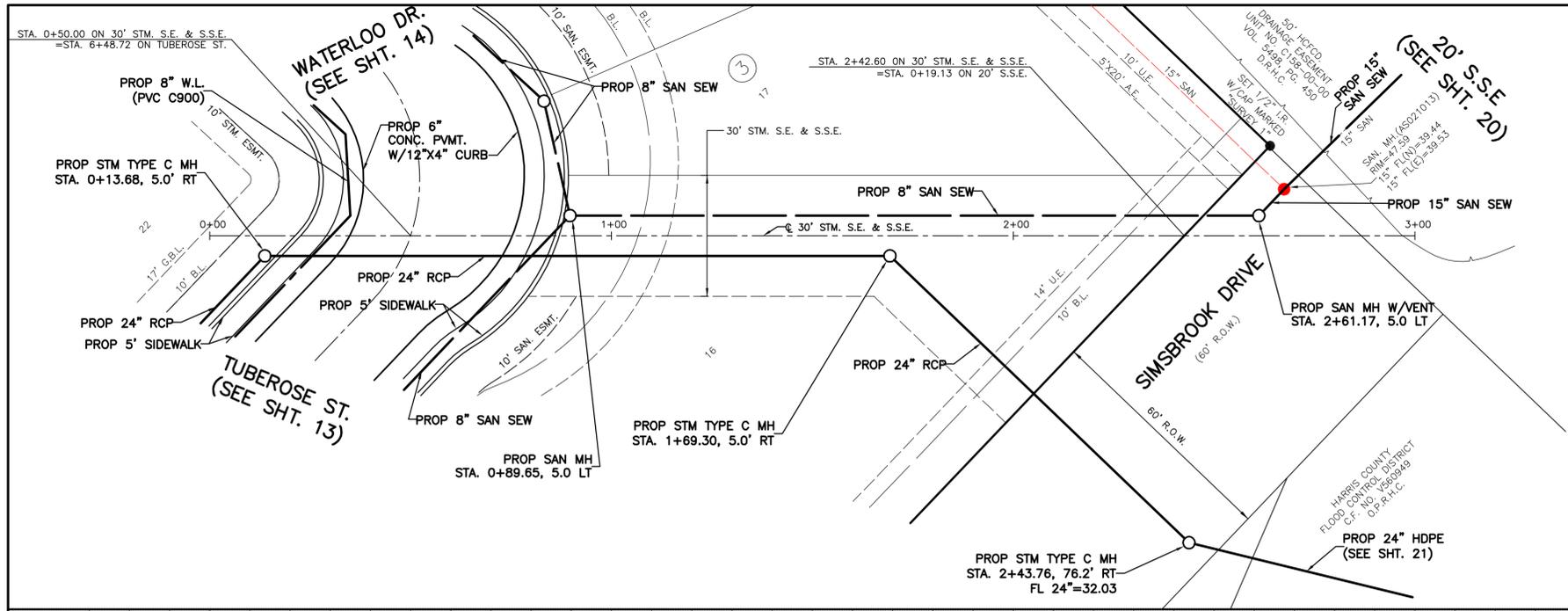
PLAN & PROFILE
MONSOON LILY STREET
STA. 3+40 TO 7+50

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CITY OF HOUSTON
 HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

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SIMSBROOK VILLAGE

PLAN & PROFILE
30' STM. S.E. & S.S.E.
STA. 0+00 TO 3+00

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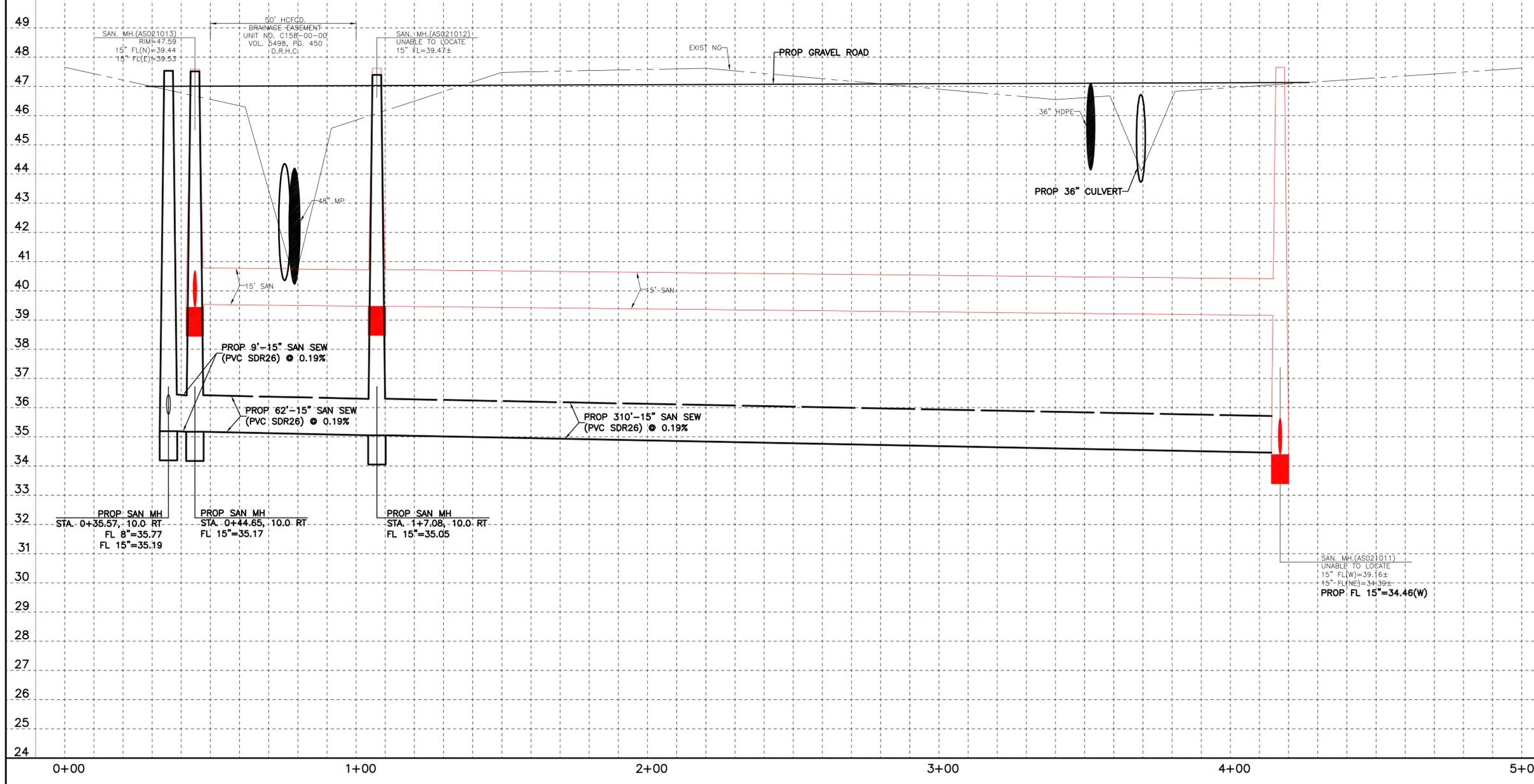
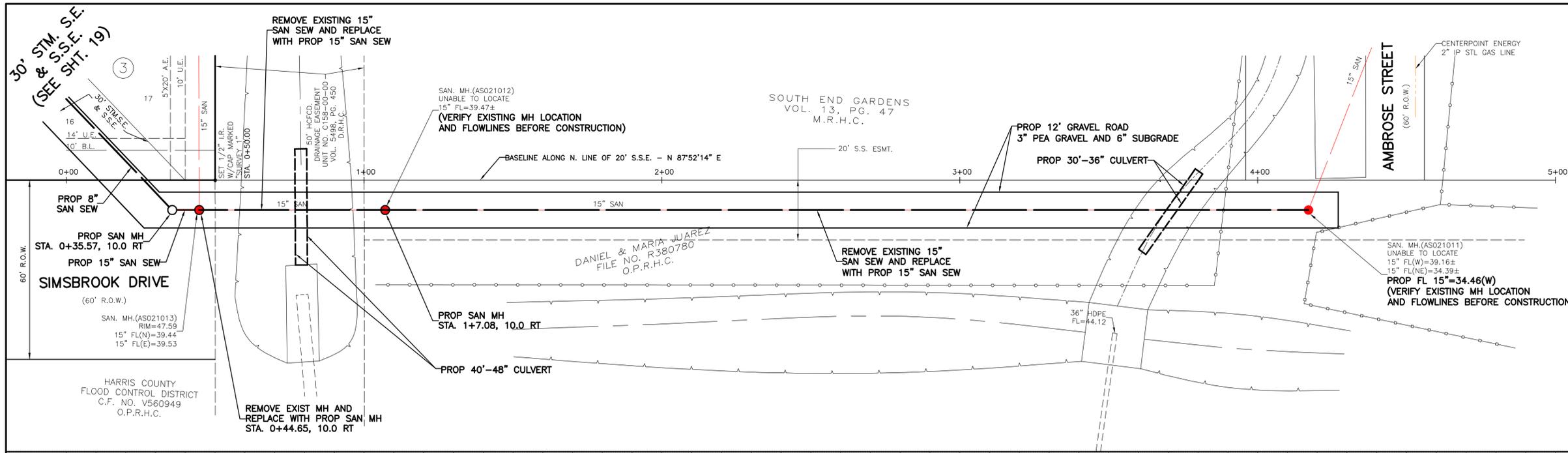
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HOUSTON PUBLIC WORKS

WATER _____ STORM WATER QUALITY _____
WASTE WATER _____ FACILITIES _____
STORM WATER _____ TRAFFIC & TRANSPORTATION/
STREET & BRIDGE _____

FILE NO. _____ HORIZ: 1"=20'
VERT: 1"=2'

SHEET NO. 19 OF 40 DRAWING SCALE _____
FOR CITY OF HOUSTON USE ONLY

NO.	DATE	REVISION	APP.

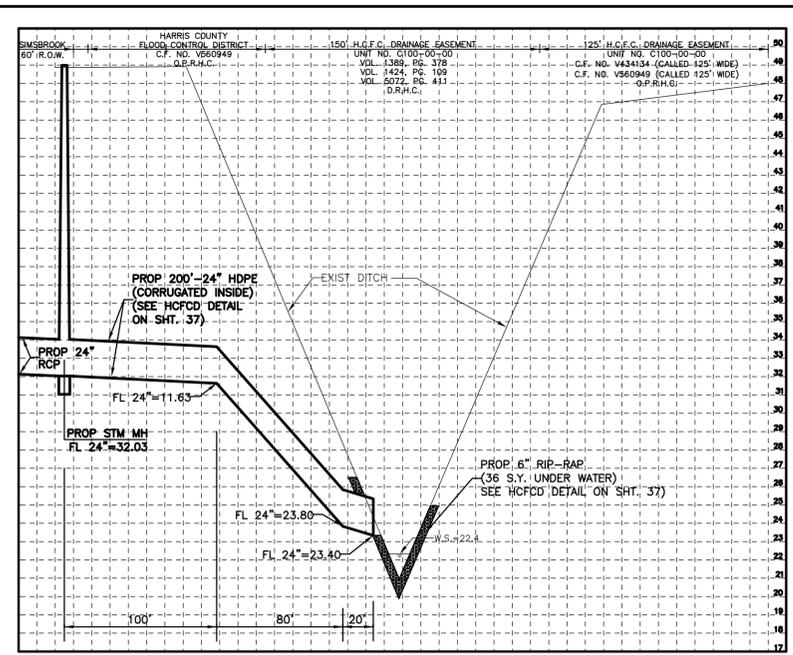
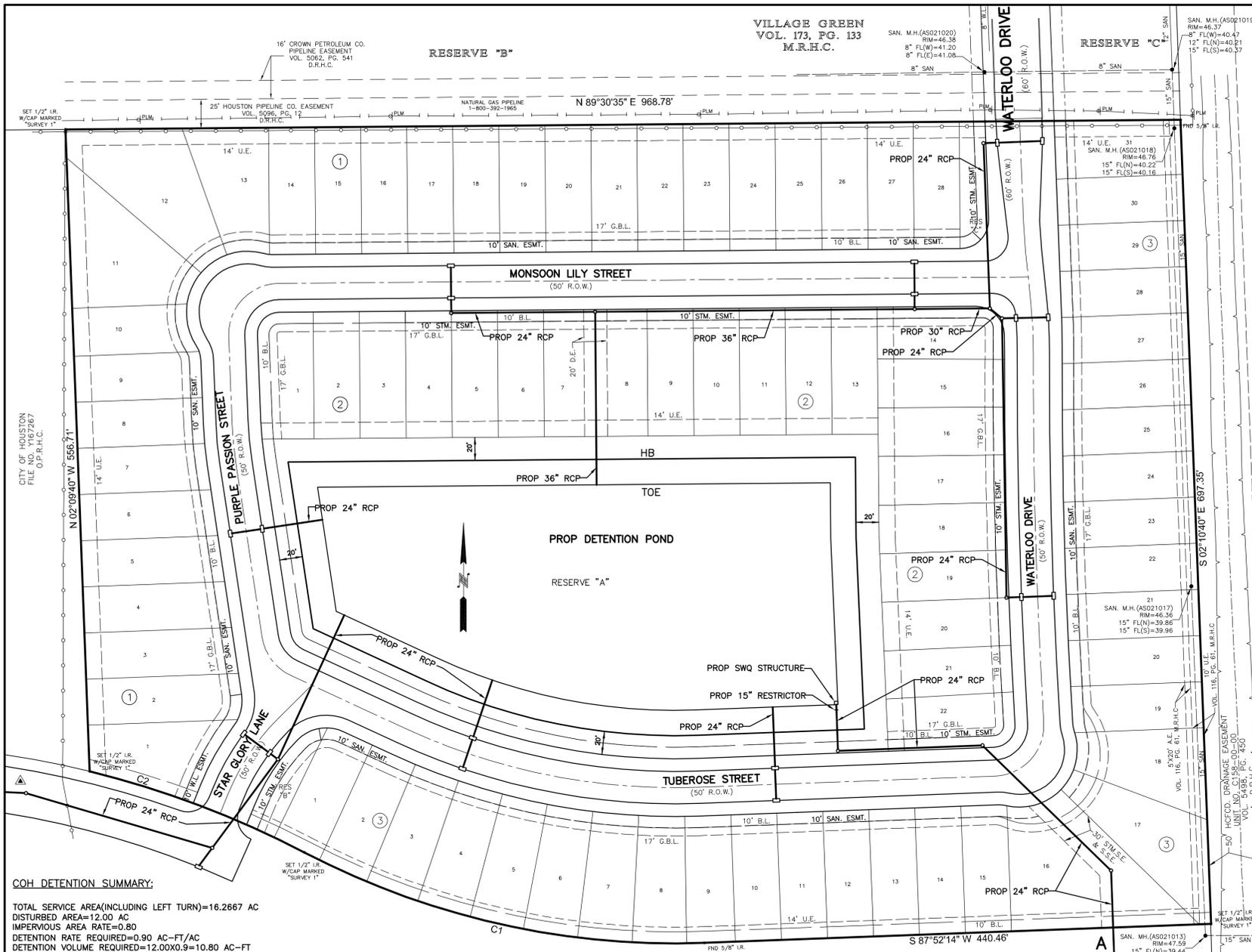


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SIMSBROOK VILLAGE							
PLAN & PROFILE 20' S.S.E. STA. 0+00 TO 5+00							
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CITY OF HOUSTON HOUSTON PUBLIC WORKS							
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">WATER</td> <td style="width: 50%;">STORM WATER QUALITY</td> </tr> <tr> <td>WASTE WATER</td> <td>FACILITIES</td> </tr> <tr> <td>STORM WATER</td> <td>TRAFFIC & TRANSPORTATION/ STREET & BRIDGE</td> </tr> </table>	WATER	STORM WATER QUALITY	WASTE WATER	FACILITIES	STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE	
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SHEET NO. 20 OF 40	DRAWING SCALE						
FOR CITY OF HOUSTON USE ONLY							

NO. DATE	REVISION
APP.	



OUTFALL CROSS SECTION A-A
(SCALE: HORIZONTAL: 1"=50', VERTICAL: 1"=5')

DETENTION BASIN SERVICE AREA:
SUBDIVISION AREA: 15.0125 AC.
OFFSITE DRAINAGE AREA: 1.2542 AC.
TOTAL SERVICE AREA
=15.0125+1.2542=16.2667 AC.

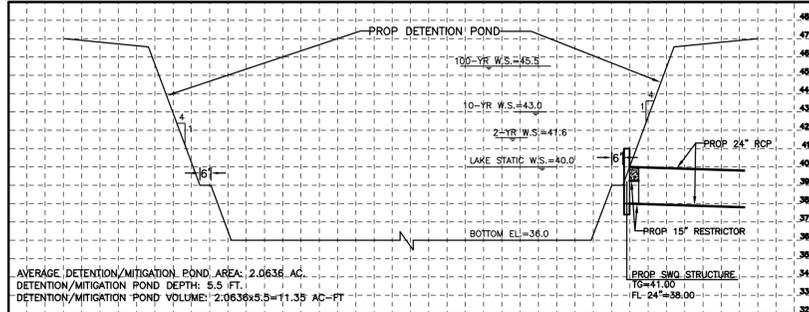
HCFC DETENTION SUMMARY TABLE:

PROJECT NAME: SIMSBROOK VILLAGE		DATE: 1-31-2022	
DETENTION BASIN SERVICE AREA	16.2667 AC.	acres	
OFFSITE DRAINAGE AREA	0	acres	
STORM EVENT	50% EXCEEDANCE (2-YEAR)	10% EXCEEDANCE (10-YEAR)	1% EXCEEDANCE (100-YEAR)
POST-DEVELOPMENT INFLOW	27.65 CFS	45.55 CFS	76.45 CFS
MAXIMUM ALLOWABLE OUTFLOW (PRE-DEVELOPMENT PEAK FLOW)	11.39 CFS	21.15 CFS	39.04 CFS
MAXIMUM OUTFLOW PROVIDED (PEAK FLOW FROM BASIN)	10.01 CFS	13.70 CFS	16.78 CFS
LOWEST NATURAL/FINISHED GROUND OR FINISHED FLOOR ELEVATION ESTIMATE	45.5'(LOWEST NG)/48.90' (F.F.E.)		
MAXIMUM ALLOWABLE WATER SURFACE	BASED ON 45.5'(LOWEST NG)		
DESIGN WATER SURFACE ELEVATION	41.60'	43.00'	45.50'
WATER SURFACE ELEVATION CALCULATED	41.60'	43.00'	45.50'
MINIMUM STORAGE REQUIRED (ac-ft)	2.76	5.37	10.57
DETENTION STORAGE PROVIDED (ac-ft)	2.98	5.77	11.35
STORAGE RATE PROVIDED (ac-ft/ac)	0.18	0.35	0.70
RESTRICTOR SIZE	15"		
OUTFLOW PIPE SIZE	24"		
OUTFLOW VELOCITY INTO CHANNEL (ft/sec)	3.21	4.36	5.34
WEIR DESCRIPTION, IF APPLICABLE (TYPE, SIZE, ELEVATION, ETC.)	N/A		
DRAIN TIME - 1% ONLY (hours)	10.1		
EMERGENCY OVERFLOW (TYPE, SIZE, ELEVATION, ETC.)	N/A		

COH DETENTION SUMMARY:

TOTAL SERVICE AREA (INCLUDING LEFT TURN)=16.2667 AC
DISTURBED AREA=12.00 AC
IMPERVIOUS AREA RATE=0.80
DETENTION RATE REQUIRED=0.90 AC-FT/AC
DETENTION VOLUME REQUIRED=12.00X0.9=10.80 AC-FT
DETENTION VOLUME PROVIDED=11.35 AC-FT
OUTFLOW RATE ALLOWED=11.39 CFS
OUTFLOW RATE PROVIDED=10.01 CFS
RESTRICTOR SIZE: 15 INCHES

CONSTRUCTION IN HARRIS COUNTY FLOOD CONTROL DISTRICT RIGHT-OF-WAY REQUIRES:
SITE PLANS MUST BE APPROVED PRIOR TO OBTAINING THE HCFC RIGHT-OF-WAY NOTIFICATION. BE ADVISED THAT THE HCFC RIGHT-OF-WAY NOTIFICATION IS SEPARATE FROM THE SITE DEVELOPMENT PERMIT PACKAGE
1.) HCFC RIGHT-OF-WAY NOTIFICATION (PERMIT)
2.) HCFC 48-HR PRE-CONSTRUCTION NOTICE
BOTH ARE REQUIRED PRIOR TO ENTERING OR WORKING WITHIN HARRIS COUNTY FLOOD CONTROL DISTRICT RIGHT-OF-WAY. THE HCFC RIGHT-OF-WAY NOTIFICATION AND 48-HR NOTICE MUST BE PROVIDED TO HCFC AT dcid@hcfcd.hctx.net.
TO APPLY FOR THE HCFC RIGHT-OF-WAY NOTIFICATION, PLEASE GO TO <http://apps.harriscountytx.gov/EPermits> AND APPLY FOR THE HCFC ROW UNDER ROW NOTIFICATION. FAILURE TO PROVIDE BOTH ITEMS COULD RESULT IN PROJECT DELAYS.



PROPOSED DETENTION POND CROSS SECTION
(SCALE: HORIZONTAL: 1"=50', VERTICAL: 1"=5')

STANDARD HCFC NOTES FOR CONSTRUCTION DRAWINGS

- OBTAIN AND COMPLY WITH ALL APPLICABLE CITY, COUNTY, STATE, AND FEDERAL PERMITS AND APPROVALS, WITH ASSISTANCE FROM ENGINEER, IF NECESSARY. OBTAIN PERMIT (CERTIFICATION) FROM HARRIS COUNTY ENGINEER TO ENTER HARRIS COUNTY FLOOD CONTROL DISTRICT RIGHT-OF-WAY.
- NOTIFY THE HARRIS COUNTY FLOOD CONTROL DISTRICT'S DEVELOPMENT COORDINATION AND INSPECTION DEPARTMENT IN WRITING AT LEAST 48 HOURS PRIOR TO CONSTRUCTION. SUBMIT THE HCFC 48 HOUR PRE-CONSTRUCTION NOTIFICATION FORM, A COPY OF THE APPROVED CONSTRUCTION DRAWINGS, AND A COPY OF THE CORPS OF ENGINEERS INDIVIDUAL SECTION 404 PERMIT OR COMPLIANCE WITH NATIONWIDE PERMIT, IF APPLICABLE, TO HCFC, 9900 NORTHWEST FREEWAY, HOUSTON, TEXAS 77092. ATTN: DEVELOPMENT COORDINATION AND INSPECTION DEPT. BY HAND DELIVERY, BY EMAIL DCID@hcfcd.org, OR FAX TO 713-684-4129 (FAX NUMBER).
- ENGINEER SHALL SUBMIT CERTIFICATION LETTER AND RECORD DRAWINGS TO THE HARRIS COUNTY FLOOD CONTROL DISTRICT'S DEVELOPMENT COORDINATION AND INSPECTION SECTION REQUESTING INSPECTION OF ITEMS CONSTRUCTED IN HARRIS COUNTY FLOOD CONTROL DISTRICT RIGHT-OF-WAY. PRIOR TO REQUESTING INSPECTION, THE DRAINAGE RIGHT-OF-WAY AND/OR EASEMENTS SHALL BE STAKED AND FLAGGED.
- PROTECT, MAINTAIN, AND RESTORE EXISTING BACKSLOPE DRAINAGE SYSTEMS.
- BACKSLOPE SWALE AND INTERCEPTOR STRUCTURE ELEVATIONS AND LOCATIONS SHOWN ON PLANS ARE APPROXIMATE. FINAL ELEVATIONS AND LOCATIONS SHALL BE FIELD VERIFIED BY THE ENGINEER PRIOR TO INSTALLATION.
- ESTABLISH TURF GRASS ON ALL DISTURBED AREAS WITHIN THE CHANNEL OR DETENTION RIGHT-OF-WAY, EXCEPT THE CHANNEL BOTTOM AND WHERE STRUCTURAL EROSION MEASURES ARE USED. MINIMUM ACCEPTANCE CRITERIA ARE 75% COVERAGE OF LIVE BERMUDA GRASS AND NO EROSION OR RILLS DEEPER THAN 4".
- PERFORM ALL ACTIVITIES WITHIN HARRIS COUNTY FLOOD CONTROL DISTRICT RIGHT-OF-WAY IN ACCORDANCE WITH THE MOST RECENT HARRIS COUNTY FLOOD CONTROL DISTRICT STANDARD SPECIFICATIONS BOOK.
- EXCAVATE CHANNEL FLOWLINE TO DESIGN ELEVATION AS SHOWN ON PLANS AND DOWNSTREAM, AS NECESSARY, TO ENSURE NO WATER REMAINS IN THE FACILITY (STORM SEWER, LATERAL CHANNEL, OR DRY BOTTOM DETENTION BASIN) DURING NORMAL WATER SURFACE CONDITIONS IN THE CHANNEL, SO THE FACILITY WILL FUNCTION AS INTENDED. FOR WET BOTTOM BOTTOM DETENTION BASINS, ENSURE NO WATER IS ABOVE THE DESIGN LEVEL IN THE WET BOTTOM DURING NORMAL WATER SURFACE CONDITIONS IN THE CHANNEL.
- MAINTAIN FLOW IN CHANNEL DURING CONSTRUCTION AND RESTORE CHANNEL TO ORIGINAL CONDITION.
- REMOVE ALL EXCAVATED MATERIAL FROM THE HARRIS COUNTY FLOOD CONTROL DISTRICT OR DRAINAGE RIGHT-OF-WAY. NO FILL IS TO BE PLACED WITHIN A DESIGNATED AREA WITHOUT FIRST OBTAINING A FILL PERMIT FROM THE APPROPRIATE JURISDICTIONAL AUTHORITY.

HCFC OUTFLOW RESTRICTION ANALYSIS
FOR LOW LEVEL RESTRICTOR:
1. ALLOWABLE DISCHARGE FOR 2-YR=16.2667X0.7=11.39 CFS
ALLOWABLE DISCHARGE FOR 10-YR=16.2667X1.3=21.15 CFS
ALLOWABLE DISCHARGE FOR 100-YR=16.2667X2.4=39.04 CFS
2. USING ORIFICE EQUATION AREA:
FOR 2-YR:
 $Q = C_d A \sqrt{2gH}$
 $11.39 = 0.6 \times A \times \sqrt{2 \times 32.2 \times H}$
 $A = 1.33 \text{ FT}^2$
FOR 10-YR:
 $21.15 = 0.6 \times A \times \sqrt{2 \times 32.2 \times H}$
 $A = 1.55 \text{ FT}^2$
FOR 100-YR:
 $39.04 = 0.6 \times A \times \sqrt{2 \times 32.2 \times H}$
 $A = 1.91 \text{ FT}^2$
3. ACTUAL OUTFLOW PROVIDED:
FOR 2-YR:
 $Q = (2.25H)^{1.48} = (2.25 \times 1.25 \times (41.60 - 40.00))^{1.48} = 10.01 \text{ CFS}$
FOR 10-YR:
 $Q = (2.25H)^{1.48} = (2.25 \times 1.25 \times (43.00 - 40.00))^{1.48} = 13.70 \text{ CFS}$
FOR 100-YR:
 $Q = (2.25H)^{1.48} = (2.25 \times 1.25 \times (45.50 - 40.00))^{1.48} = 16.78 \text{ CFS}$

NOTICE:
FOR YOUR SAFETY, YOU ARE REQUIRED BY TEXAS LAW TO CALL 811 AT LEAST 48 HOURS BEFORE YOU DIG SO THAT UNDERGROUND LINES CAN BE MARKED. THIS SIGNATURE DOES NOT FULFILL YOUR OBLIGATION TO CALL 811

VERIFICATION OF PRIVATE UTILITY LINES

CenterPoint Energy natural gas utilities shown. (Gas service lines are not shown). This signature not be used for conflict verification.
Signature valid for six months.

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY. (This signature verifies existing underground facilities - not to be used for conflict verification)
Signature valid for six months.

Approved for AT&T Texas/SWB/T underground conduit facilities only. Signature valid for one year.

B & P ENGINEERING, INC.
(TBP F-6225)
10333 HARWIN DRIVE, STE. 375H
HOUSTON, TX 77036
TEL: (713) 859-3982



SIMSBROOK VILLAGE
STORM SEWER LAYOUT

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

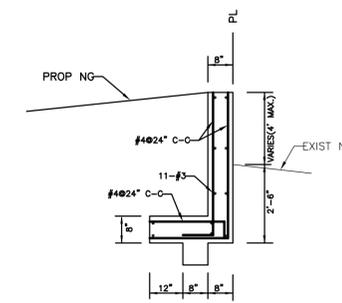
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORIZ: 1"=60'
SHEET NO. 21 OF 40	VERT: DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

NOTE:

1. FINISHED FLOOR ELEVATION OF SINGLE FAMILY HOUSE SHALL BE AT LEAST 48.90' AND AT LEAST 12" ABOVE SURROUNDING NATURAL GRADING. FILL UNDER PROPOSED SINGLE FAMILY HOUSE SLAB SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY PER ASTM D-689 AT 8" MAXIMUM LIFT.
2. IF PROPOSED NATURAL GRADING IS 18" HIGHER THAN EXISTING GRADING ADJACENT TO OTHER PROPERTIES, CONCRETE RETAINING WALL OR EQUIVALENT RETAINING WALL STRUCTURE SHALL BE USED.



CONCRETE RETAINING WALL DETAIL
(N.T.S.)

(IF CONTRACTOR SELECT DIFFERENT RETAINING WALL PRODUCTS, ALTERNATIVE PRODUCT REQUIRES THE REVIEW BY DESIGN ENGINEER)

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Date
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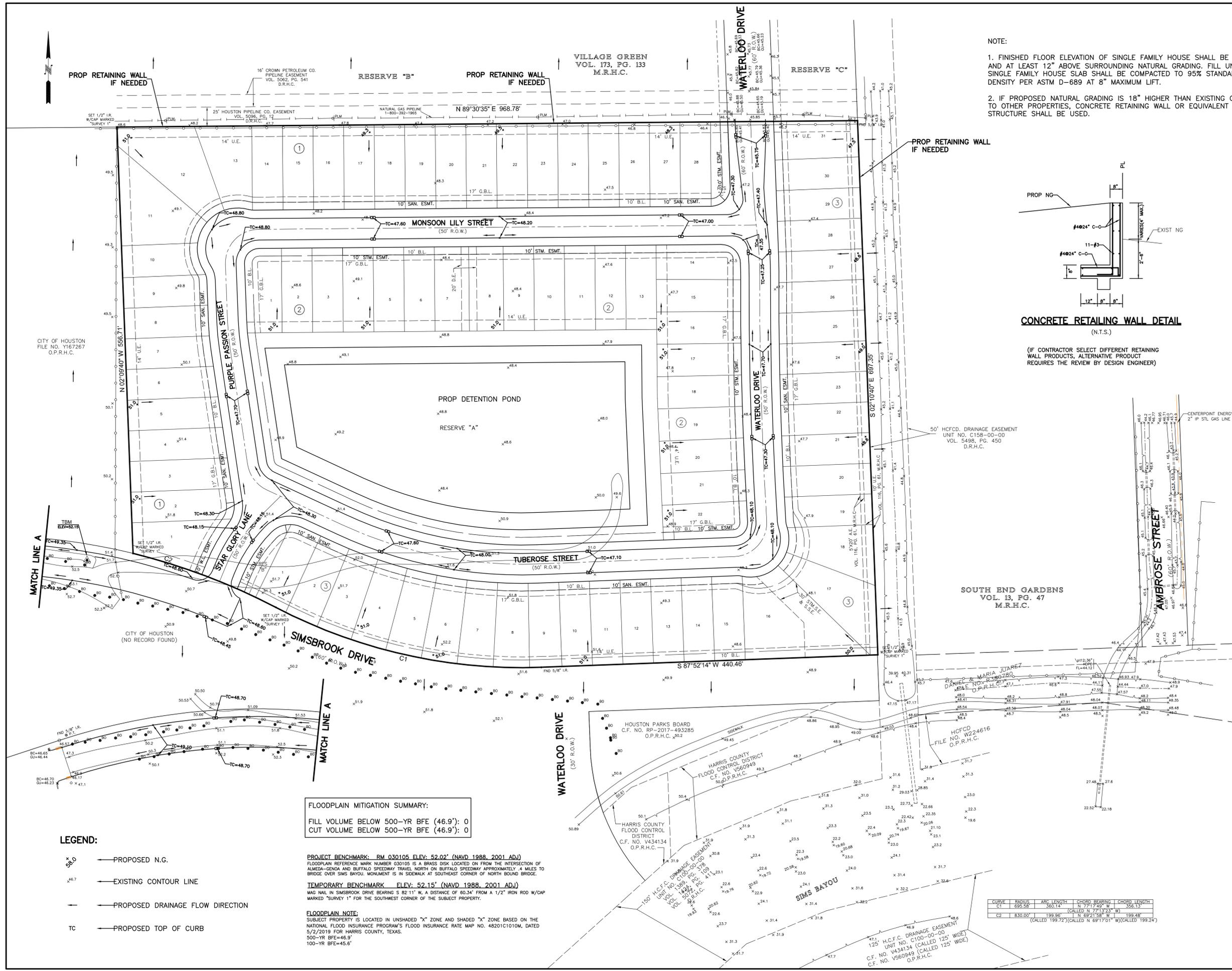
B & P ENGINEERING, INC.
(TBPE F-6225)
10333 HARWIN DRIVE, STE. 375H
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SIMSBROOK VILLAGE
GRADING PLAN

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORIZ: 1"=60'
SHEET NO. 23 OF 40	VERT:
DRAWING SCALE	
FOR CITY OF HOUSTON USE ONLY	



FLOODPLAIN MITIGATION SUMMARY:
FILL VOLUME BELOW 500-YR BFE (46.9'): 0
CUT VOLUME BELOW 500-YR BFE (46.9'): 0

- LEGEND:**
- PROPOSED N.G.
 - EXISTING CONTOUR LINE
 - PROPOSED DRAINAGE FLOW DIRECTION
 - PROPOSED TOP OF CURB

PROJECT BENCHMARK: RM 030105 ELEV: 52.02' (NAVD 1988, 2001 ADJ)
FLOODPLAIN REFERENCE MARK NUMBER 030105 IS A BRASS DISK LOCATED ON FROM THE INTERSECTION OF ALMEDA-GENOA AND BUFFALO SPEEDWAY TRAVEL NORTH ON BUFFALO SPEEDWAY APPROXIMATELY .4 MILES TO BRIDGE OVER SIMS BAYOU MONUMENT IS IN SIDEWALK AT SOUTHEAST CORNER OF NORTH BOUND BRIDGE.

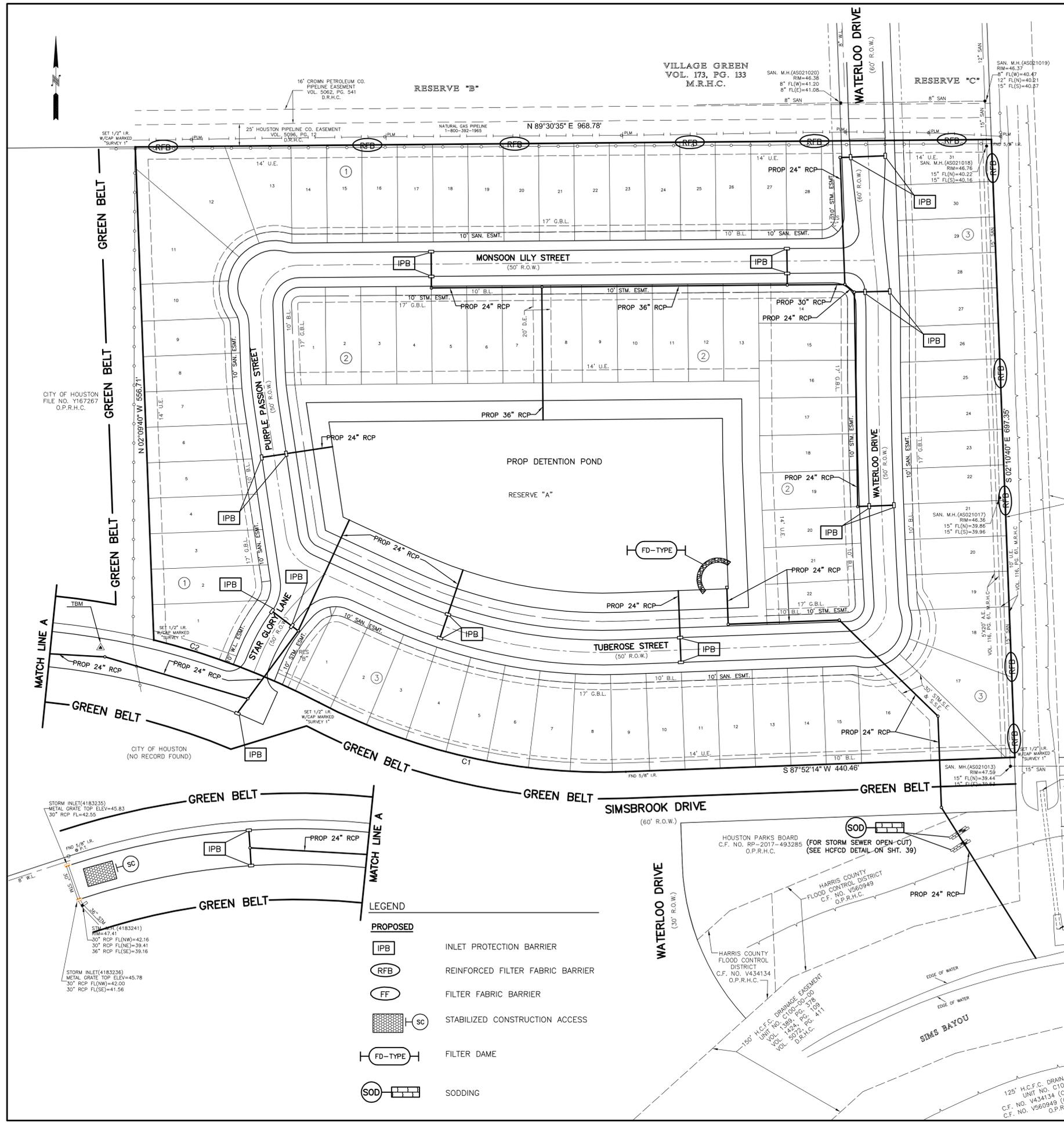
TEMPORARY BENCHMARK: ELEV: 52.15' (NAVD 1988, 2001 ADJ)
MAG NAIL IN SIMSBROOK DRIVE BEARING S 82°11' W, A DISTANCE OF 60.34' FROM A 1/2" IRON ROD W/CAP MARKED "SURVEY 1" FOR THE SOUTHWEST CORNER OF THE SUBJECT PROPERTY.

FLOODPLAIN NOTE:
SUBJECT PROPERTY IS LOCATED IN UNSHADED "X" ZONE AND SHADED "X" ZONE BASED ON THE NATIONAL FLOOD INSURANCE PROGRAM'S FLOOD INSURANCE RATE MAP NO. 48201C1010M, DATED 5/2/2019 FOR HARRIS COUNTY, TEXAS.
500-YR BFE=46.9'
100-YR BFE=45.6'

CURVE	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C1	695.58'	360.14'	N 77°17'49" W	356.13'
C2	830.00'	199.96'	N 69°21'58" W	199.48'

(CALLED 199.72' (CALLED N 69°17'01" W) (CALLED 199.24')

NO.	DATE	REVISION	APP.



SWPPP CONSTRUCTION NOTES

- CONTRACTOR SHALL IMPLEMENT PROTECTION DEVICES AND REINFORCED FILTER FABRIC BARRIER ALONG ROAD AND SIDE DITCHES AT LOCATIONS SHOWN ON THE TYPICAL STORM WATER POLLUTION PREVENTION (SWPP) PLANS TO KEEP SILT AND/OR EXCAVATED MATERIALS FROM ENTERING INTO THE STORM WATER INLETS AND DITCHES EVENTUALLY POLLUTING THE RECEIVING STORM.
- DURING THE EXCAVATION PHASE OF THE PROJECT, CONTRACTOR SHALL SCHEDULE THE WORK IN SHORT SEGMENTS SO THAT EXCAVATED MATERIAL CAN BE QUICKLY HAULED AWAY FROM THE SITE AND TO PREVENT IT FROM STAYING UNCOLLECTED ON THE EXISTING PAVEMENT. ANY LOOSE EXCAVATED MATERIAL, WHICH FALLS ON PAVEMENTS OR DRIVEWAYS, SHALL BE SWEEPED BACK INTO THE EXCAVATED AREA.
- CONTRACTOR SHALL CLEAN UP THE EXISTING STREET INTERSECTIONS AND DRIVEWAYS DAILY, AS NECESSARY, TO REMOVE ANY EXCESS MUD, SILT OR ROCK TRACKED FROM THE EXCAVATED AREA.
- CONTRACTOR SHALL FOLLOW GOOD HOUSEKEEPING PRACTICES DURING CONSTRUCTION OF THE PROJECT, ALWAYS CLEANING UP DIRT AND LOOSE MATERIAL AS CONSTRUCTION PROGRESSES.
- CONTRACTOR TO INSPECT AND MAINTAIN THE AREAS LISTED BELOW AT LEAST ONCE EVERY FOURTEEN (14) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT OF 0.5 INCHES OR GREATER.
 - DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN FINALLY STABILIZED.
 - AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION.
 - STRUCTURAL CONTROL MEASURES.
 - LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE.
- CONTRACTOR TO BE RESPONSIBLE TO MAINTAIN EXISTING DITCHES AND/OR CULVERTS FOR UNOBTSTRUCTED DRAINAGE AT ALL TIMES. WHERE SODDING IS DISTURBED BY EXCAVATION OR BACKFILLING OPERATIONS, SUCH AREAS SHALL BE REPLACED BY SEEDING OR SODDING. SLOPES 4:1 OR STEEPER SHALL BE REPLACED BY BLOCK SODDING.

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 10333 HARWIN DRIVE, STE. 375H
 HOUSTON, TX 77036
 TEL: (713) 859-3982

INTERIM REVIEW ONLY
 Document Incomplete. Not intended for permit or construction.
 Engineer: Bo Wu
 P.E. Serial No.: 84859
 Date: May, 2018

SIMSBROOK VILLAGE
SWPPP

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
 HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORI: 1"=60'
	VERT:
SHEET NO. 24 OF 40	DRAWING SCALE

FOR CITY OF HOUSTON USE ONLY

CITY OF HOUSTON
 FILE NO. Y167267
 O.P.R.H.C.

SOUTH END GARDENS
 VOL. 13, PG. 47
 M.R.H.C.

HOUSTON PARKS BOARD
 C.F. NO. RP-2017-493285
 O.P.R.H.C. (FOR STORM SEWER OPEN-CUT)
 (SEE HCFCO DETAIL ON SHT. 39)

HARRIS COUNTY FLOOD CONTROL DISTRICT
 C.F. NO. V434134
 O.P.R.H.C.

H.C.F.C. DRAINAGE EASEMENT
 UNIT NO. C100-00-00
 VOL. 142, PG. 379.9
 VOL. 5972, PG. 411
 O.P.R.H.C.

H.C.F.C. DRAINAGE EASEMENT
 UNIT NO. C100-00-00
 VOL. 142, PG. 379.9
 VOL. 5972, PG. 411
 O.P.R.H.C.

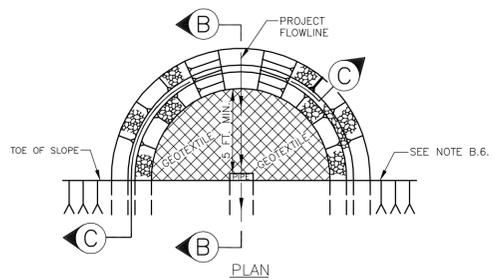
H.C.F.C. DRAINAGE EASEMENT
 UNIT NO. C100-00-00
 VOL. 142, PG. 379.9
 VOL. 5972, PG. 411
 O.P.R.H.C.

CURVE	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C1	695.58'	360.14'	N 77°17'49" W	356.13'
C2	830.00'	199.96'	N 69°21'58" W	199.48'

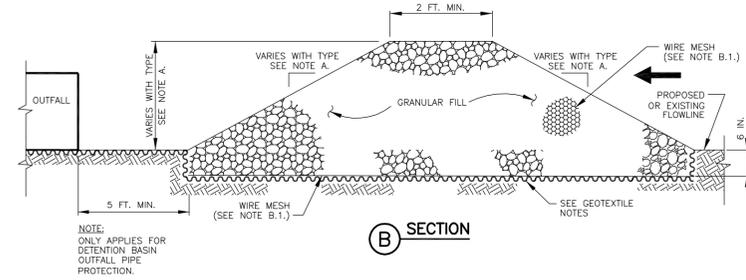
125' H.C.F.C. DRAINAGE EASEMENT
 UNIT NO. C100-00-00
 VOL. 142, PG. 379.9
 VOL. 5972, PG. 411
 O.P.R.H.C.

LEGEND

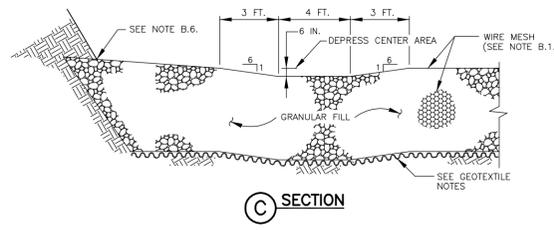
	PROPOSED	INLET PROTECTION BARRIER
	REINFORCED FILTER FABRIC BARRIER	
	FILTER FABRIC BARRIER	
	STABILIZED CONSTRUCTION ACCESS	
	FILTER DAME	
	SODDING	



FILTER DAM AT DETENTION BASIN OUTFALL PIPE



SECTION B

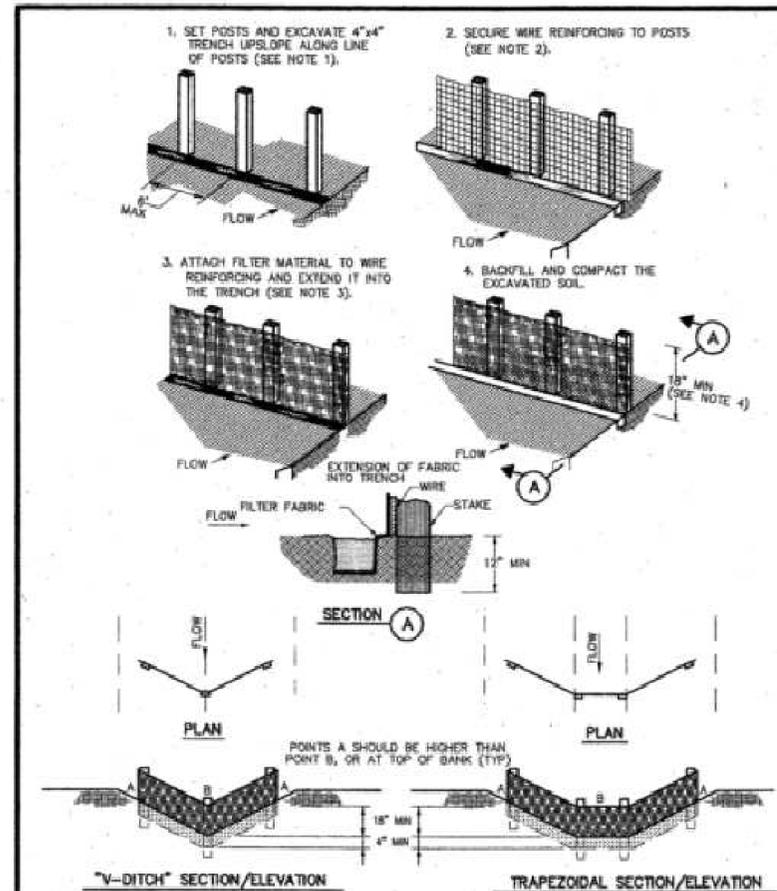


SECTION C



FILTER DAM NOTES:

- A. TYPES OF FILTER DAMS**
- TYPE 1 (NON-REINFORCED)
 - HEIGHT - 18-24 INCHES. MEASURE VERTICALLY FROM EXISTING GROUND TO TOP OF FILTER DAM.
 - TOP WIDTH - 2 FEET (MINIMUM)
 - SLOPES - 2:1 (MAXIMUM)
 - TYPE 2 (REINFORCED)
 - HEIGHT - 18-36 INCHES. MEASURE VERTICALLY FROM EXISTING GROUND TO TOP OF FILTER DAM.
 - TOP WIDTH - 2 FEET (MINIMUM)
 - SLOPES - 2:1 (MAXIMUM)
 - TYPE 3 (REINFORCED)
 - HEIGHT - 36-48 INCHES. MEASURE VERTICALLY FROM EXISTING GROUND TO TOP OF FILTER DAM.
 - TOP WIDTH - 2 FEET (MINIMUM)
 - SLOPES - 3:1 (MAXIMUM)
 - TYPE 4 (GABION)
 - HEIGHT - 30 INCHES (MINIMUM). MEASURE VERTICALLY FROM EXISTING GROUND TO TOP OF FILTER DAM.
 - TOP WIDTH - 2 FEET (MINIMUM)
 - TYPE 5. AS SHOWN ON THE PLANS.
- B. CONSTRUCT FILTER DAMS ACCORDING TO THE FOLLOWING CRITERIA UNLESS SHOWN OTHERWISE ON THE PLANS.**
- TYPE 2 AND 3 FILTER DAMS: SECURE WITH 20 GAUGE GALVANIZED WOVEN WIRE MESH WITH 1 INCH DIAMETER HEXAGONAL OPENINGS.
 - GRANULAR FILL:
 - PLACE ON MESH TO HEIGHT AND SLOPES SHOWN ON PLANS OR AS SPECIFIED BY THE ENGINEER.
 - 3-5 INCHES FOR ROCK FILTER DAM TYPES 1,2, AND 4 AND 4-8 INCHES FOR ROCK FILTER DAM TYPE 3. REFER TO GRANULAR FILL IN SPECIFICATION SECTION NO. 02378-RIPRAP AND GRANULAR FILL.
 - WIRE MESH: FOLD AT UPSTREAM SIDE OVER GRANULAR FILL AND TIGHTLY SECURE TO ITSELF ON THE DOWNSTREAM SIDE USING WIRE TIES OR HOG RINGS.
 - IN STREAMS: SECURE OR STAKE MESH TO STREAM BED PRIOR TO AGGREGATE PLACEMENT.
 - SEE SPECIFICATION SECTION NO. 02364-FILTER DAMS.
 - EMBED ONE FOOT MINIMUM INTO SLOPE AND AT SLOPE RAISE ONE FOOT HIGHER THAN CENTER OF DEPRESSED AREA.

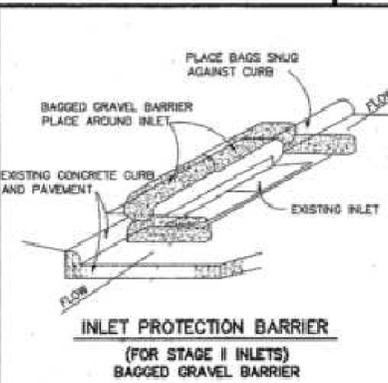


CONSTRUCTION NOTES:

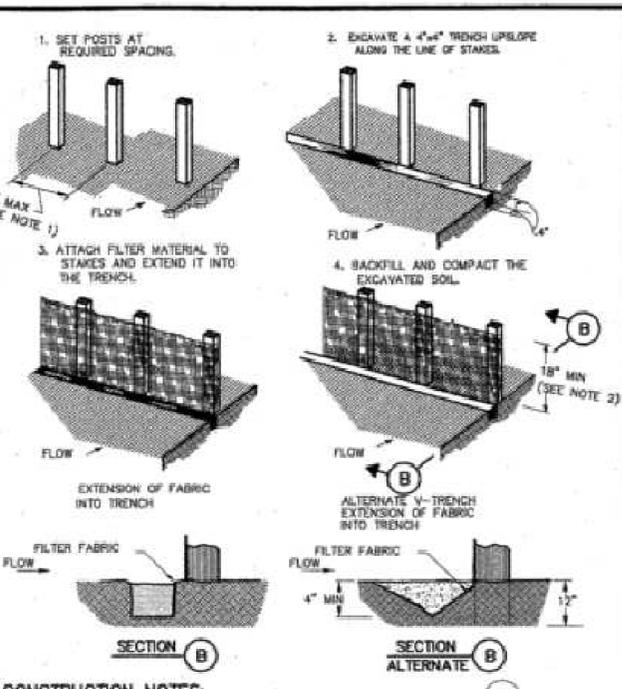
- SET 2 INCH BY 2 INCH WOODEN STAKES SPACED A MAX OF 6 FEET APART AND EMBEDDED A MIN OF 12 INCHES.
- WOVEN WIRE REINFORCING TO BE FASTENED SECURELY TO BARRIER POSTS WITH STAPLES.
- FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE REINFORCING, WITH TIES SPACED EVERY 24 INCHES AT TOP AND MIDSECTION.
- MINIMUM HEIGHT OF FILTER SHOULD BE 18 INCHES AND A MAXIMUM OF 36 INCHES ABOVE NATURAL GROUND.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED 6 INCHES AT THE POSTS, AND FOLDED.
- SEE COH STANDARD SPECIFICATION FOR FILTER FABRIC BARRIER.



REINFORCED FILTER FABRIC BARRIER



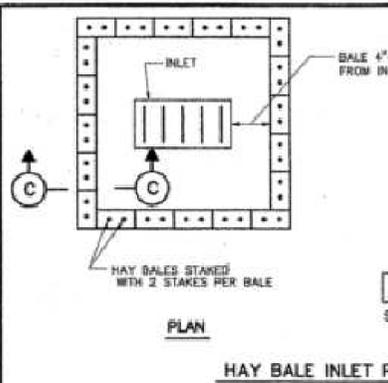
INLET PROTECTION BARRIER (FOR STAGE II INLETS) BAGGED GRAVEL BARRIER



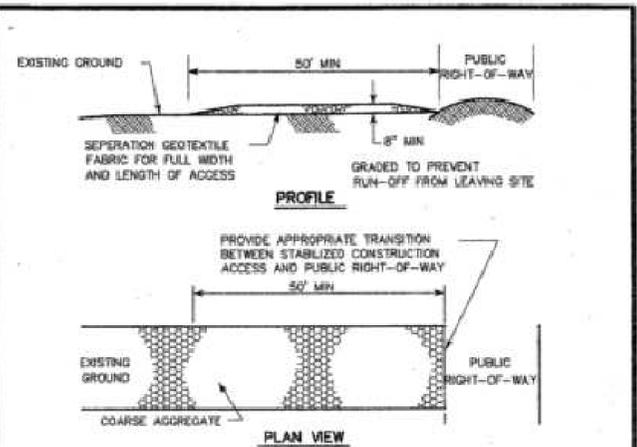
CONSTRUCTION NOTES:

- 2 INCH THICK BY 2 INCH WOODEN STAKES TO BE SET AT MAX SPACING OF 3 FEET AND EMBEDDED A MIN OF 8 INCHES. IF PREASSEMBLED BARRIER WITH SUPPORT NETTING IS USED, SPACING OF POST MAY BE INCREASED TO 6 FEET MAX.
- ATTACH FILTER FABRIC TO WOODEN STAKES. FILTER FABRIC BARRIER SHALL HAVE A MIN HEIGHT OF 18 INCHES AND MAX HEIGHT OF 36 INCHES ABOVE NATURAL GROUND.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHOULD BE OVERLAPPED 6 INCHES AT THE POSTS, AND FOLDED.
- SEE COH STANDARD SPECIFICATION FOR FILTER FABRIC BARRIER.

FILTER FABRIC BARRIER



HAY BALE INLET PROTECTION BARRIER

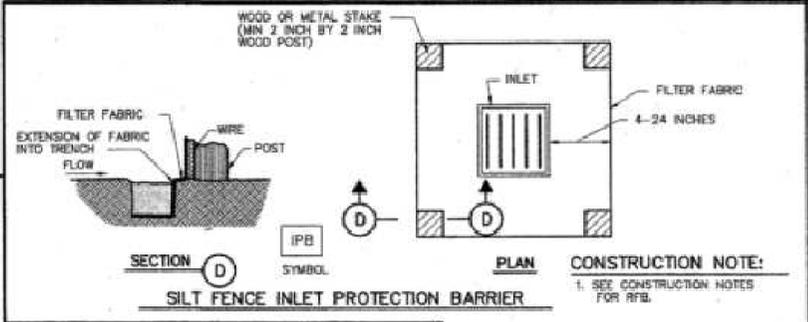


CONSTRUCTION NOTES:

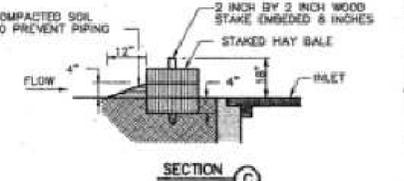
- LENGTH SHALL BE AS SHOWN ON THE CONSTRUCTION DRAWINGS, BUT NOT LESS THAN 50 FEET.
- THICKNESS SHALL BE NOT LESS THAN 8 INCHES.
- WIDTH SHALL BE NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
- STABILIZATION FOR OTHER AREAS SHALL HAVE THE SAME AGGREGATE THICKNESS AND WIDTH REQUIREMENTS AS THE STABILIZED CONSTRUCTION ACCESS, UNLESS OTHERWISE SHOWN ON THE CONSTRUCTION DRAWINGS.
- STABILIZED AREA MAY BE WIDENED OR LENGTHENED TO ACCOMMODATE A WASHING AREA. AN OUTLET SEDIMENT TRAP MUST BE PROVIDED FOR THE WASHING AREA.
- COH STANDARD SPECIFICATION FOR STABILIZED CONSTRUCTION ACCESS.
- STABILIZED CONSTRUCTION ACCESS SHALL BE MAINTAINED FREE OF SEDIMENT FOR THE DURATION OF THE PROJECT.



STABILIZED CONSTRUCTION ACCESS



SILT FENCE INLET PROTECTION BARRIER



IPB

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

STORM WATER POLLUTION PREVENTION PLAN DETAILS
(NOT TO SCALE)

APPROVED: [Signature] CITY ENGINEER
DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF. DATE: JULY-01-2016 DWG. NO.: 01571-01

B & P ENGINEERING, INC.
(TBP# F-6225)
10333 HARWIN DRIVE, STE. 375H
HOUSTON, TX 77036
TEL: (713) 859-3982

INTERIM REVIEW ONLY
Document Incomplete. Not intended for permit or construction.
Engineer: Bo Wu
P.E. Serial No.: 84859
Date: May, 2018

SIMSBROOK VILLAGE
SWPPP DETAILS

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

FILE NO. _____ HORIZ: N.T.S.
VERT: _____

SHEET NO. 25 OF 40 DRAWING SCALE
FOR CITY OF HOUSTON USE ONLY

APP.	
REVISION	
NO.	DATE

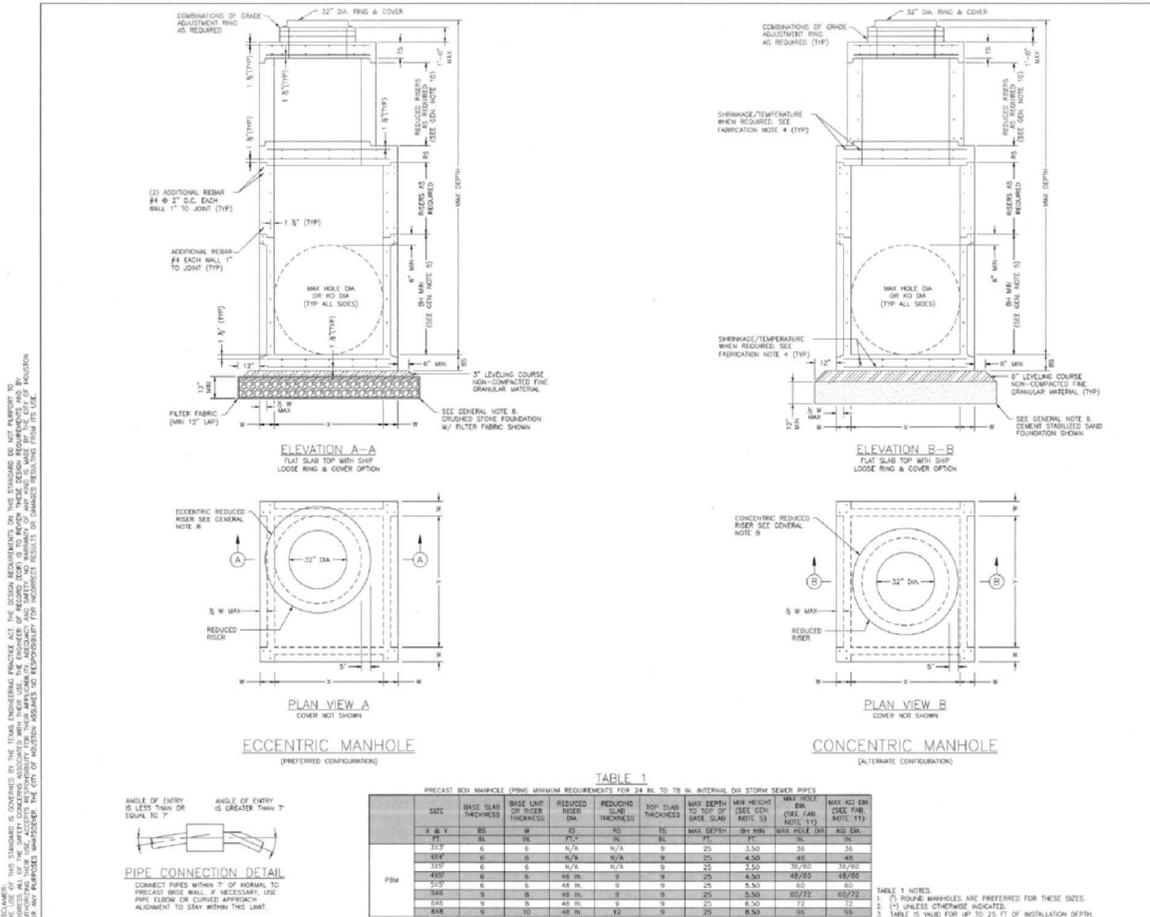
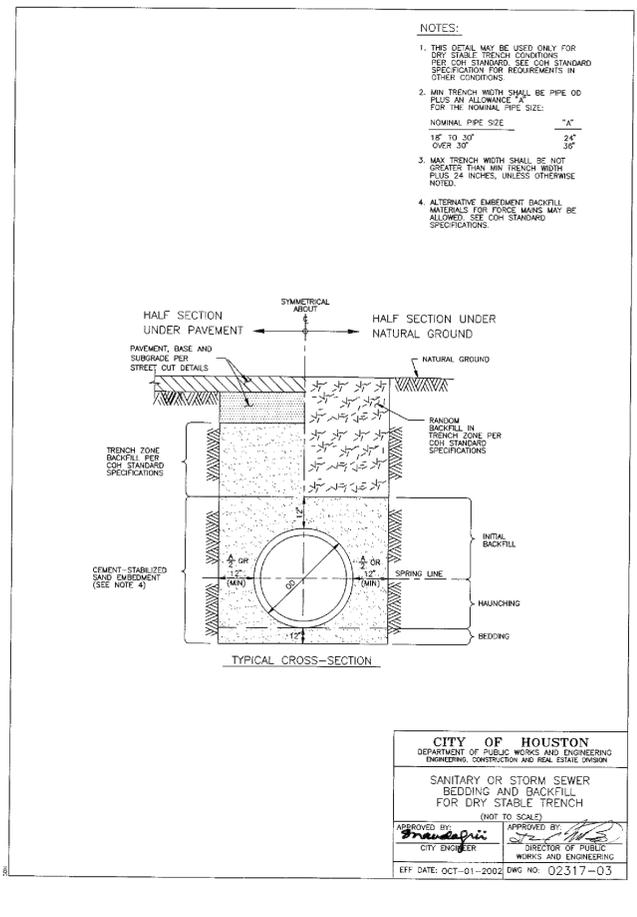


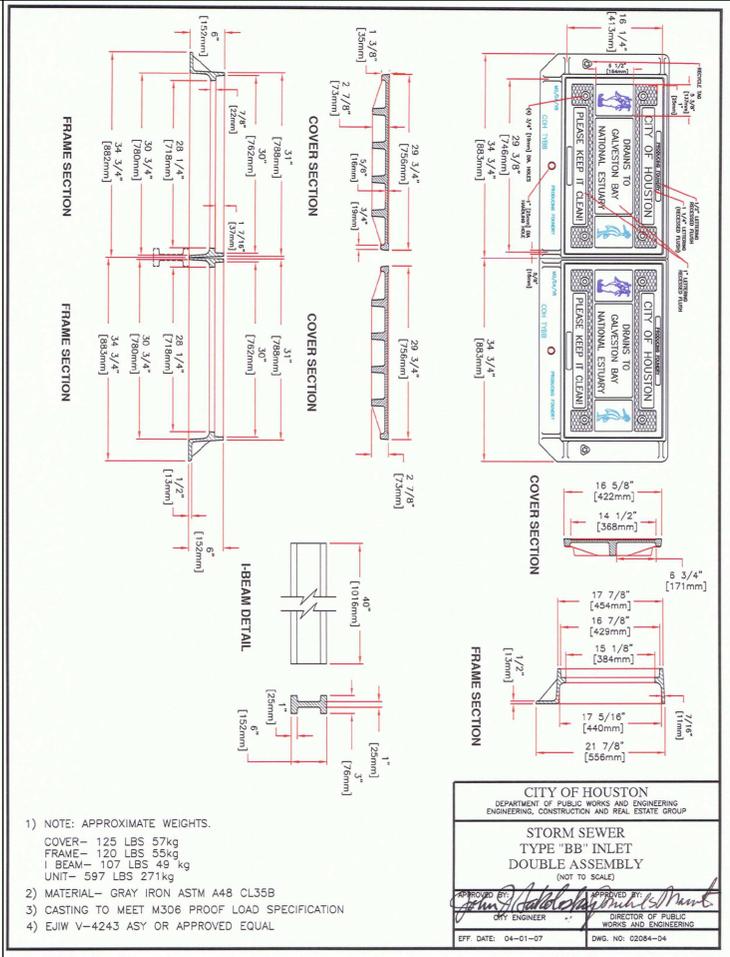
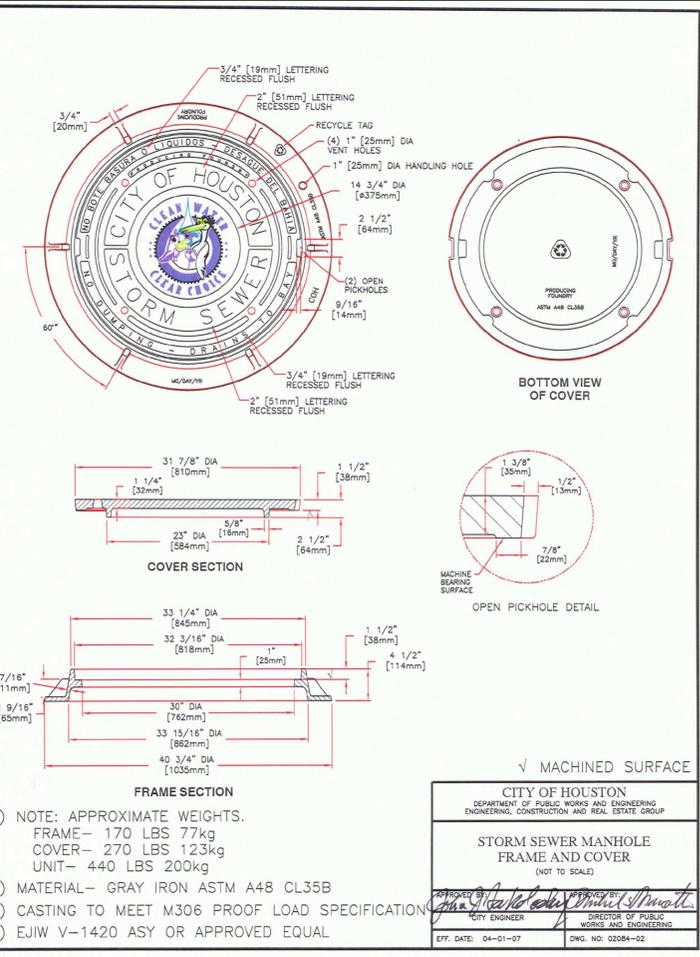
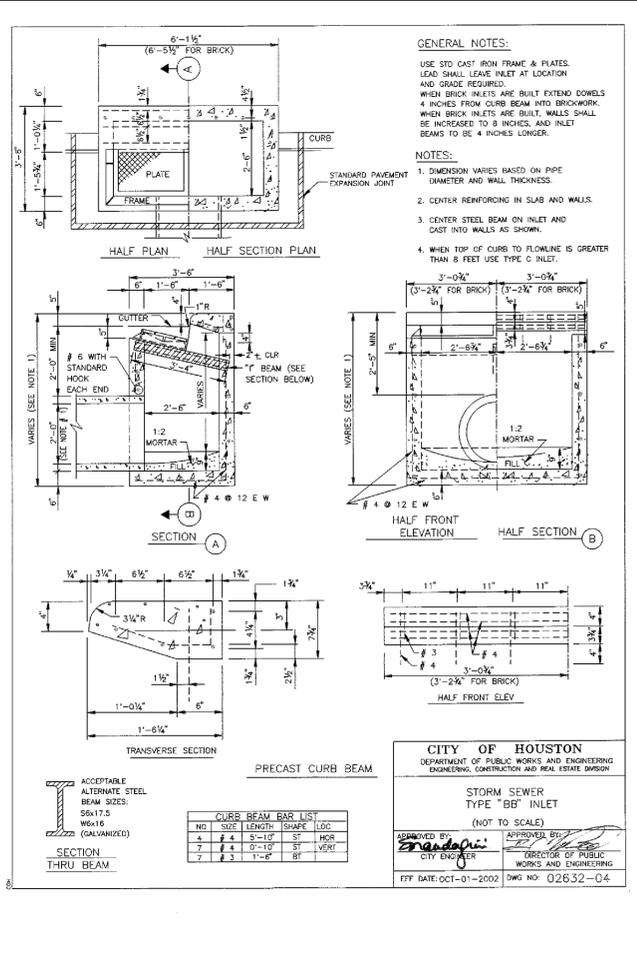
TABLE 1

PRECAST BOX MANHOLE (FROM MINIMUM REQUIREMENTS FOR 24 IN. TO 78 IN. INTERNAL DIA. STORM SEWER PIPE)

SIZE	BASE SLAB THICKNESS	REDUCED RISER DIA.	REDUCED RISER THICKNESS	REDUCED RISER DIA.	REDUCED RISER THICKNESS	TOP SLAB THICKNESS	MAX DEPTH TO TOP OF PIPE (SEE GEN. NOTE 1)	MAX DEPTH TO TOP OF PIPE (SEE GEN. NOTE 1)	MAX DEPTH TO TOP OF PIPE (SEE GEN. NOTE 1)	MAX DEPTH TO TOP OF PIPE (SEE GEN. NOTE 1)	MAX DEPTH TO TOP OF PIPE (SEE GEN. NOTE 1)
24"	6"	6"	6"	6"	6"	6"	3.50	3.50	3.50	3.50	3.50
30"	6"	6"	6"	6"	6"	6"	4.50	4.50	4.50	4.50	4.50
36"	6"	6"	6"	6"	6"	6"	5.50	5.50	5.50	5.50	5.50
42"	6"	6"	6"	6"	6"	6"	6.50	6.50	6.50	6.50	6.50
48"	6"	6"	6"	6"	6"	6"	7.50	7.50	7.50	7.50	7.50
54"	6"	6"	6"	6"	6"	6"	8.50	8.50	8.50	8.50	8.50
60"	6"	6"	6"	6"	6"	6"	9.50	9.50	9.50	9.50	9.50
66"	6"	6"	6"	6"	6"	6"	10.50	10.50	10.50	10.50	10.50
72"	6"	6"	6"	6"	6"	6"	11.50	11.50	11.50	11.50	11.50
78"	6"	6"	6"	6"	6"	6"	12.50	12.50	12.50	12.50	12.50

TABLE 1 NOTES:

- 1) PRECAST MANHOLES ARE PREFERRED FOR THESE SIZES.
- 2) UNLESS OTHERWISE INDICATED.
- 3) VALUE IS VALUE FOR UP TO 25 FT OF INSTALLATION DEPTH.



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STATE OF TEXAS
BO WU
94859
REGISTERED
PROFESSIONAL ENGINEER
Rathner 9-10-2023

SIMSBROOK VILLAGE

STORM DETAILS

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

FILE NO. _____

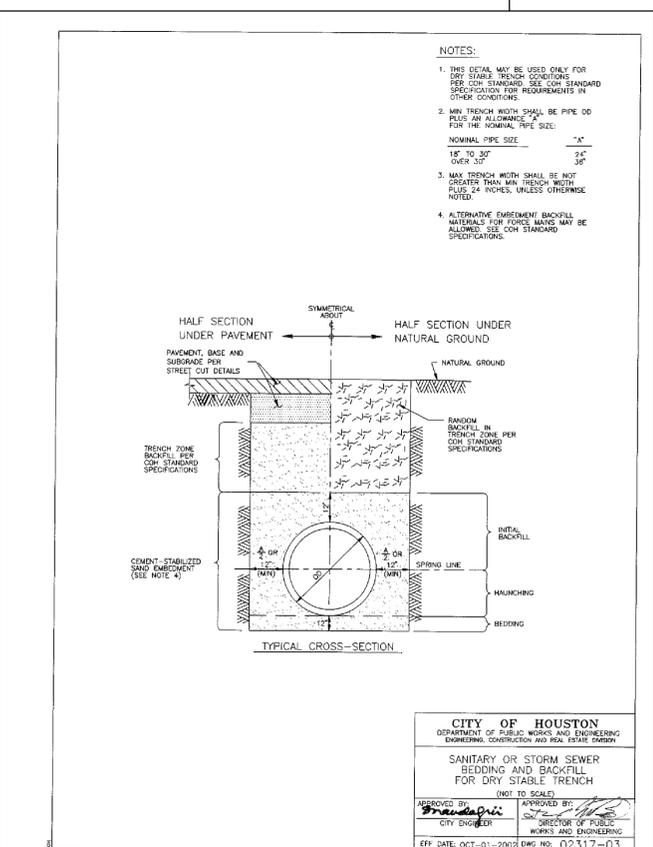
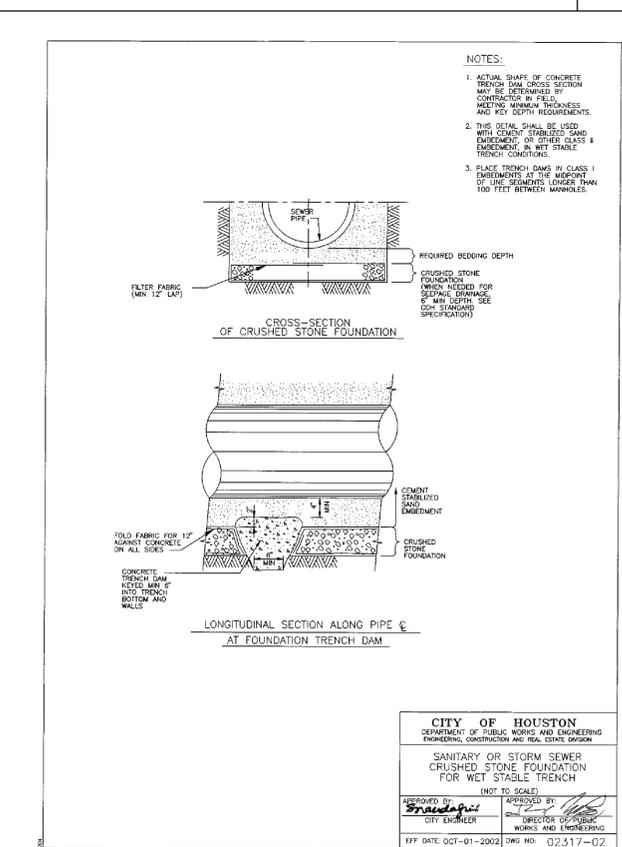
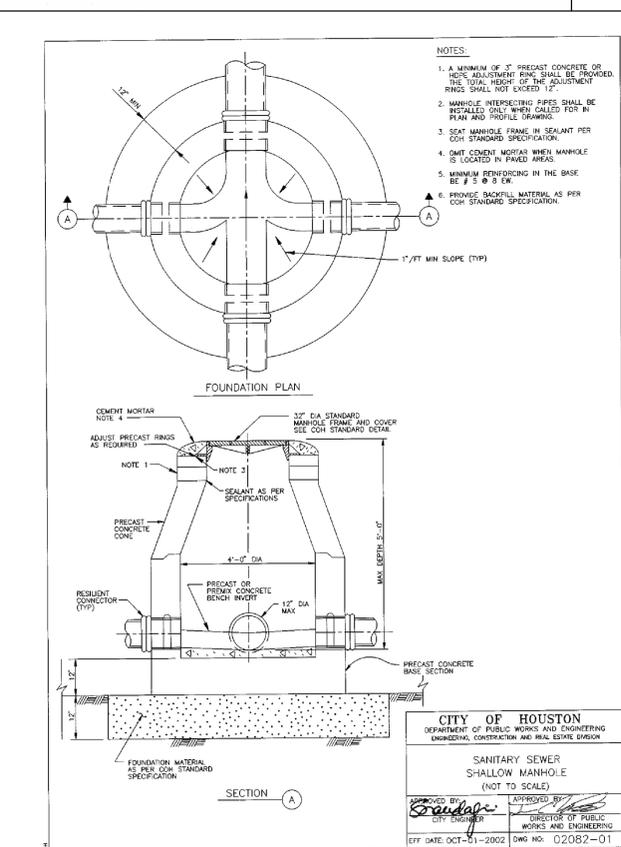
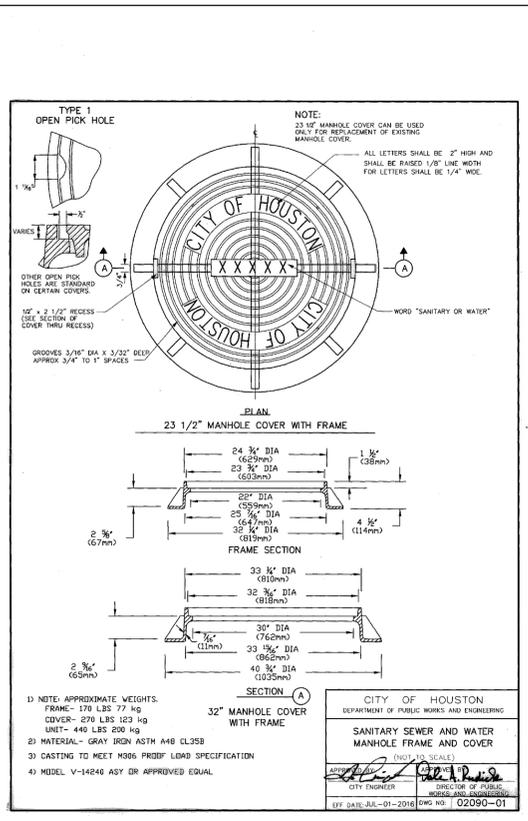
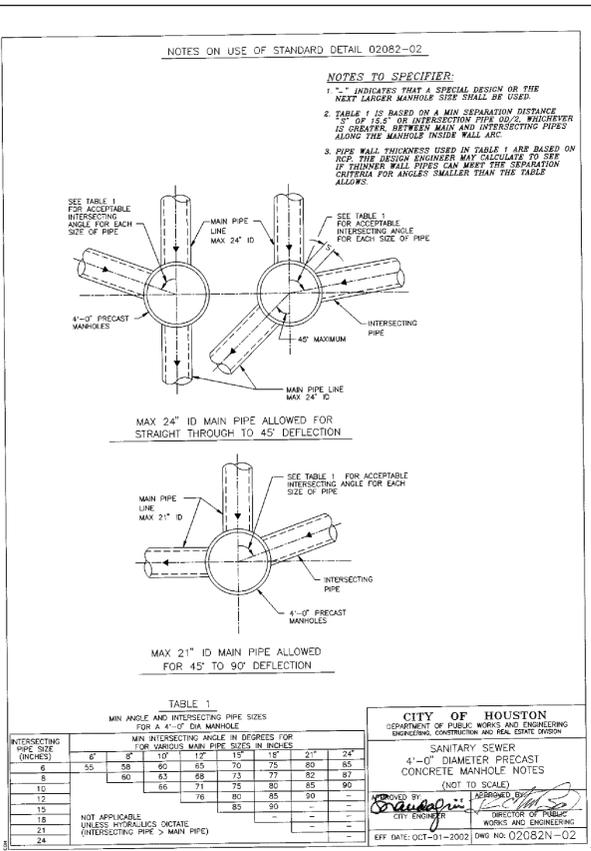
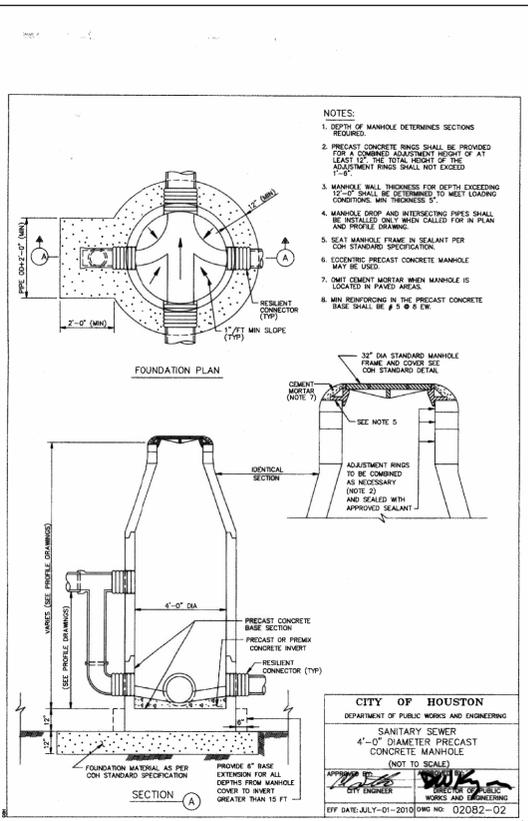
HORIZ: N.T.S.

VERT: _____

SHEET NO. 26 OF 40

DRAWING SCALE _____

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Engineer: Bo Wu
P.E. Serial No.: 84859
Date: May, 2018

SIMSBROOK VILLAGE

SANITARY DETAILS 1

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

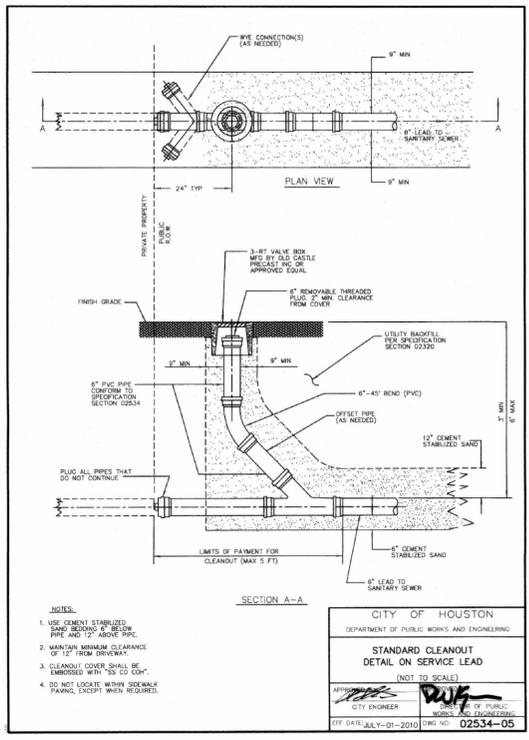
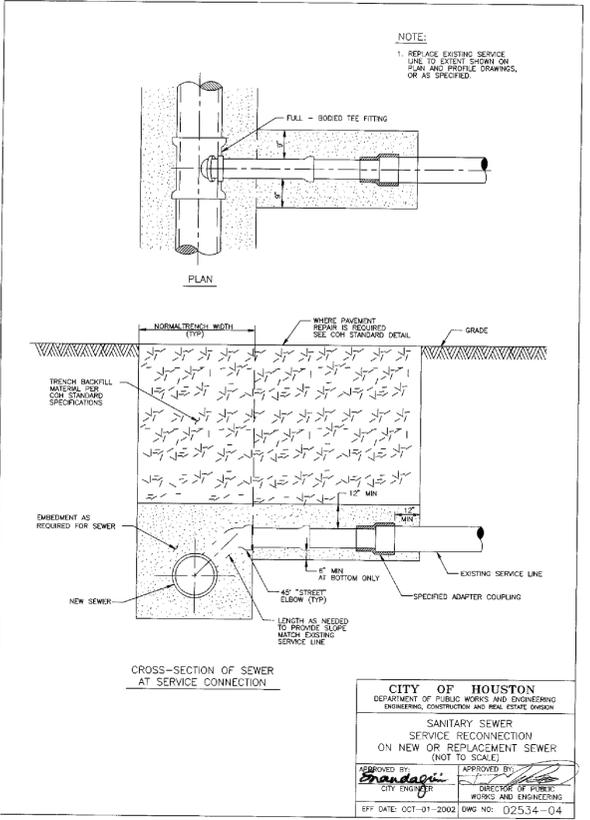
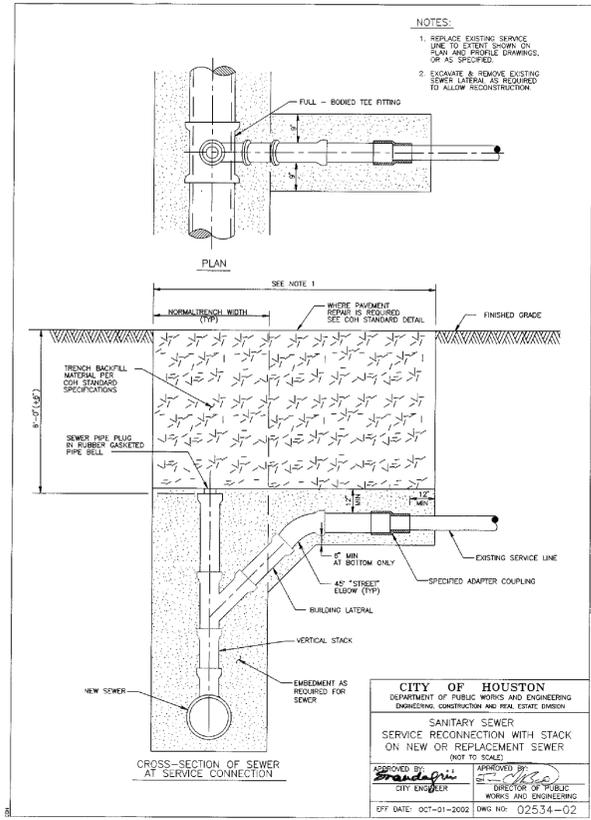
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

FILE NO. _____ HORIZ: N.T.S.
VERT: _____

SHEET NO. 27 OF 40 DRAWING SCALE _____
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NO.	DATE	REVISION	APP.



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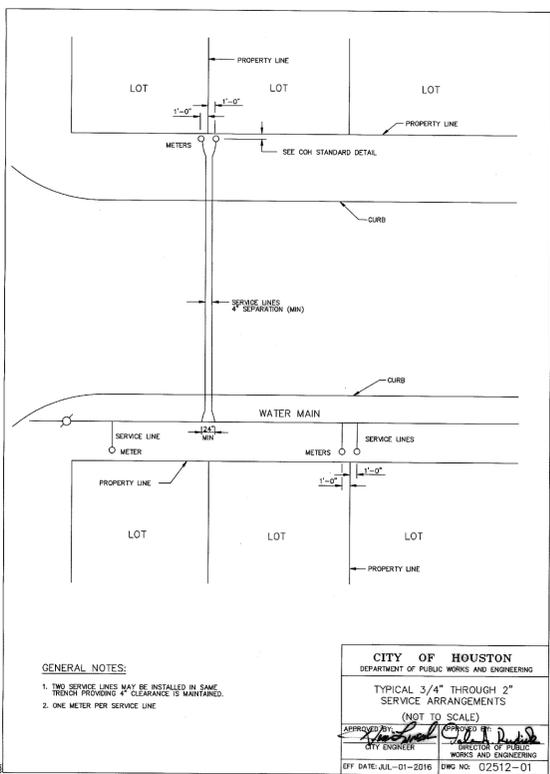
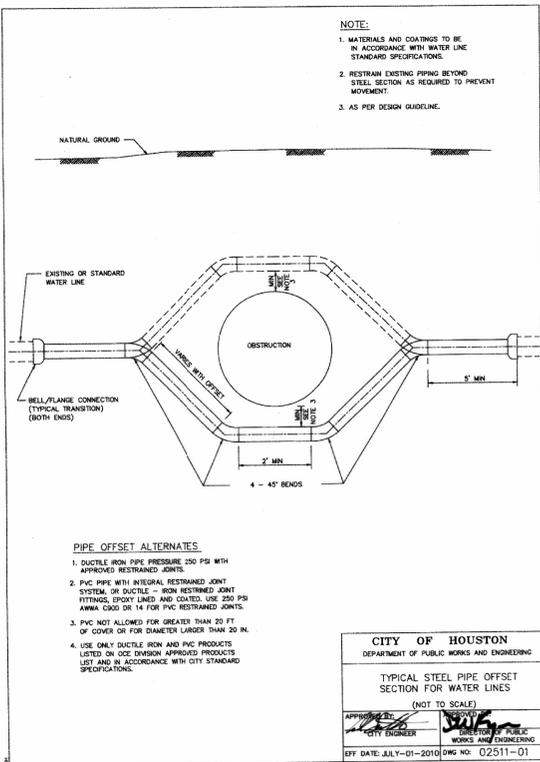
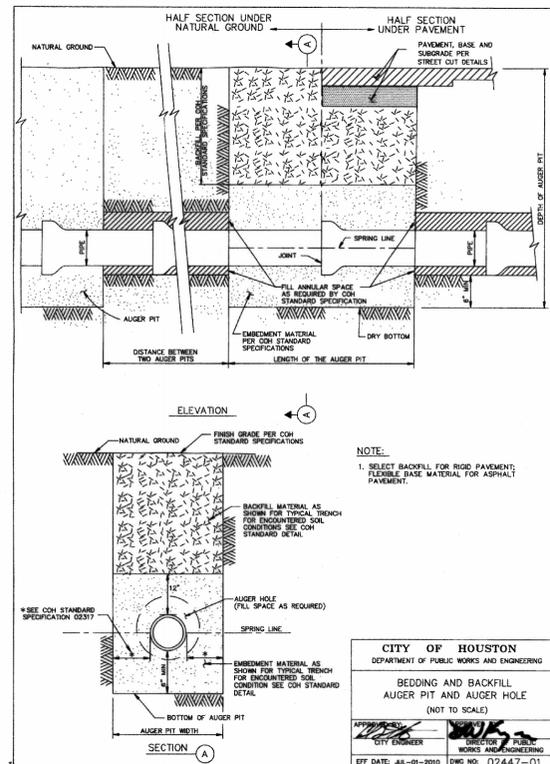
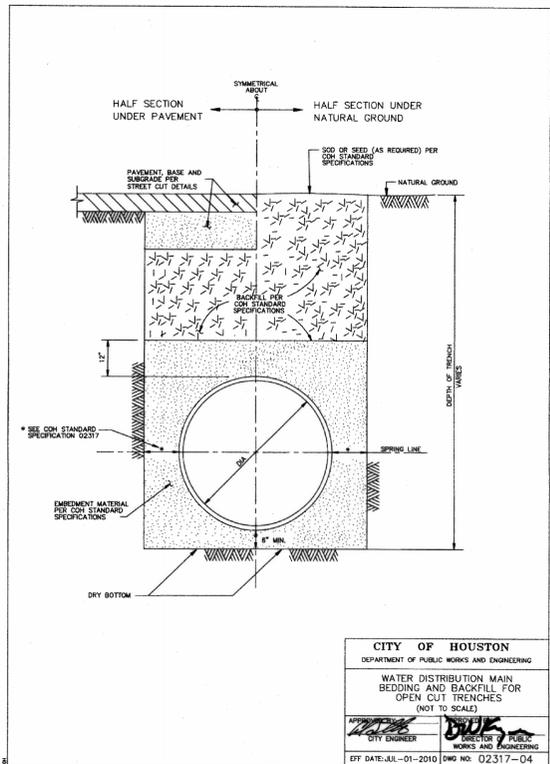
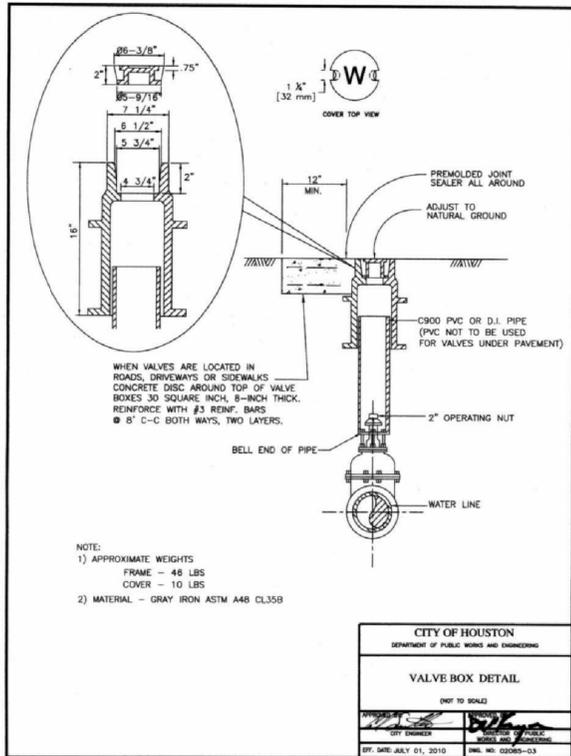
SIMSBROOK VILLAGE

SANITARY DETAILS 2

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORIZ: N.T.S. VERT:
SHEET NO. 28 OF 40	DRAWING SCALE
FOR CITY OF HOUSTON USE ONLY	



PIPE TAPPING SCHEDULE

WATER MAIN TYPE AND DIAMETER	SERVICE SIZE			
	3/4"	1"	1 1/2"	2"
4" CAST IRON OR DUCTILE IRON	DSS, WBS	DSS, WBS	DSS, WBS	DSS, WBS
4" ASBESTOS (EXISTING) CEMENT	WBS	WBS	DSS, WBS	DSS, WBS
4" PVC (AWWA C900)	DSS, WBS	DSS, WBS	DSS, WBS	DSS, WBS
6" AND 8" CAST IRON OR DUCTILE IRON	DSS, WBS	DSS, WBS	DSS, WBS	DSS, WBS
6" AND 8" ASBESTOS (EXISTING) CEMENT	DSS, WBS	DSS, WBS	DSS, WBS	DSS, WBS
6" AND 8" CAST IRON OR DUCTILE IRON	DSS, WBS	DSS, WBS	DSS, WBS	DSS, WBS
6" AND 8" PVC (AWWA C900)	DSS, WBS	DSS, WBS	DSS, WBS	DSS, WBS
12" CAST IRON OR DUCTILE IRON	DSS, WBS	DSS, WBS	DSS, WBS	DSS, WBS
12" ASBESTOS (EXISTING) CEMENT	DSS, WBS	DSS, WBS	DSS, WBS	DSS, WBS
12" PVC (AWWA C900)	DSS, WBS	DSS, WBS	DSS, WBS	DSS, WBS
16" AND 18" CAST IRON OR DUCTILE IRON	DWBS	DWBS	DWBS	DWBS
16" AND 18" ASBESTOS (EXISTING) CEMENT	DWBS	DWBS	DWBS	DWBS
16" AND 18" UP PVC (AWWA C900)	DWBS	DWBS	DWBS	DWBS

DSS - DUAL STRAP SADDLES
 WBS - WIDE BAND STRAP SADDLES
 DWBS - DUAL WIDE BAND STRAP SADDLES

SERVICE TAPS
 (NOT TO SCALE)
 CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
 EFF. DATE: JUL-01-2010 DWG NO. 02512-02

B & P ENGINEERING, INC.
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 Date: May, 2018

SIMSBROOK VILLAGE
WATER DETAILS 1

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
 HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

FILE NO. _____ HORIZ: N.T.S.
 SHEET NO. 29 OF 40 DRAWING SCALE _____
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NO.	DATE	REVISION	APP.

90° BEND
(45° BENDS SIMILAR)

TEE & PLUG

INSTALL POLYETHYLENE WRAP & 2" THICK CONCRETE

PIPE CROSS SECTION

PIPE SIZE	90° BEND	45° BEND	TEE/PLUG
4"	8 1/2	10	6 1/2
6"	12 1/2	14	10
8"	16 1/2	18	14
10"	20 1/2	22	18
12"	24 1/2	26	22

SOIL TYPE	SOIL BEARING STRENGTH S _u (lb/ft ²)	MULTIPLY "L" AND "H" BY
SOFT CLAY	1000	1.73
SILT	1500	1.41
SANDY SILT	3000	1.00
SAND	4000	0.87
SANDY CLAY	6000	0.71
HARD CLAY	9000	0.58

NOTES:

- DEPTH "H" MAY BE GREATER THAN SPECIFIED TO ALLOW WORKING SPACE.
- BLOCKING MUST BE PLACED AGAINST UNDISTURBED SOILS. WHERE THIS IS NOT POSSIBLE, THE FILL BETWEEN THE BEARING SURFACE AND UNDISTURBED SOIL MUST BE COMPACTED TO AT LEAST 90% STANDARD PROCTOR DENSITY.
- PROVIDE CONCRETE IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 03115 - CONCRETE FOR UTILITY CONSTRUCTION.
- BLOCKING DIMENSIONS SHOWN ARE BASED ON 3000 PSI SOIL BEARING STRENGTH AND 100 PSI INTERNAL WATER PRESSURE. FOR OTHER SOIL CONDITIONS, MULTIPLY DIMENSIONS "L" AND "H" BY THE APPROPRIATE CORRECTION FACTOR.

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
THRUST BLOCK DETAIL FOR WATER LINES
(4-INCH TO 12 INCH)
(NOT TO SCALE)

APPROVED: [Signature] CITY ENGINEER
DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFFECT DATE: JULY-01-2010 DWG NO. 02511-02

GENERAL NOTES:

- PROVIDE STEEL TAPPING SLEEVE AS PER WATER MAIN SPECIFICATIONS.
- WELDING SHALL BE AS NOTED IN WELD SYMBOLS.
- INSULATING KIT IN ACCORDANCE WITH WATER MAIN SPECIFICATIONS.
- REPAIR COATING AS PER WATER MAIN STANDARD SPECIFICATIONS.

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
STANDARD TAP TO EXISTING STEEL MAIN
(NOT TO SCALE)

APPROVED: [Signature] CITY ENGINEER
DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFFECT DATE: JULY-01-2010 DWG NO. 02512-04

NOTES:

- LOCATE FIRE HYDRANTS AT POINT OF INTERSECTION CURB RADIUS 3 FEET BEHIND CURB OR PROJECTED FUTURE CURB.
- ON OPEN-TOOTH ROADWAYS, SET THE FIRE HYDRANTS WITH IN 5 FEET OF RIGHTS-OF-WAY LINES.
- FIRE HYDRANT STEAMER NOZZLE SHALL FACE THE STREET.
- LOCATE HYDRANT VALVE IMMEDIATELY ADJACENT TO WATER LINE.

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
STANDARD FIRE HYDRANT DETAIL
(NOT TO SCALE)

APPROVED: [Signature] CITY ENGINEER
DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFFECT DATE: JULY-01-2010 DWG NO. 02520-01

GENERAL NOTES:

- PLACE GATE VALVE VERTICAL TO GROUND WITH END OF BRASS PLUG 3 INCHES FROM SURFACE.
- PLACE METER BOX CENTER AROUND GATE VALVE BOX WITH LONG SIDE PARALLEL TO VALVE.

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
PERMANENT BLOW-OFF-DETAIL
(NOT TO SCALE)

APPROVED: [Signature] CITY ENGINEER
DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFFECT DATE: JULY-01-2010 DWG NO. 02524-01

NOTES:

1 1/2" METER SET IS SAME AS 2" EXCEPT WHEEL VALVE IS NOT REQUIRED.

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
TYPICAL METER SETTINGS
(NOT TO SCALE)

APPROVED: [Signature] CITY ENGINEER
DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFFECT DATE: JULY-01-2010 DWG NO. 02525-01

LEGEND

- IRRIGATION METER
- DOMESTIC METER
- PRIVATE LINE
- IRRIGATION CURB STOP
- DOMESTIC CURB STOP
- EXISTING CURB STOP
- BRASS 90 DEGREE ELBOW
- BRASS TEE
- BRASS PIPE
- SERVICE LINE

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
SCHEMATIC IRRIGATION TEE OFF DOMESTIC 3/4" THRU 2"
(NOT TO SCALE)

APPROVED: [Signature] CITY ENGINEER
DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFFECT DATE: JULY-01-2010 DWG NO. 02525-14

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Engineer: Bo Wu
P.E. Serial No.: 84859
Date: May, 2018

SIMSBROOK VILLAGE

WATER DETAILS 2

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

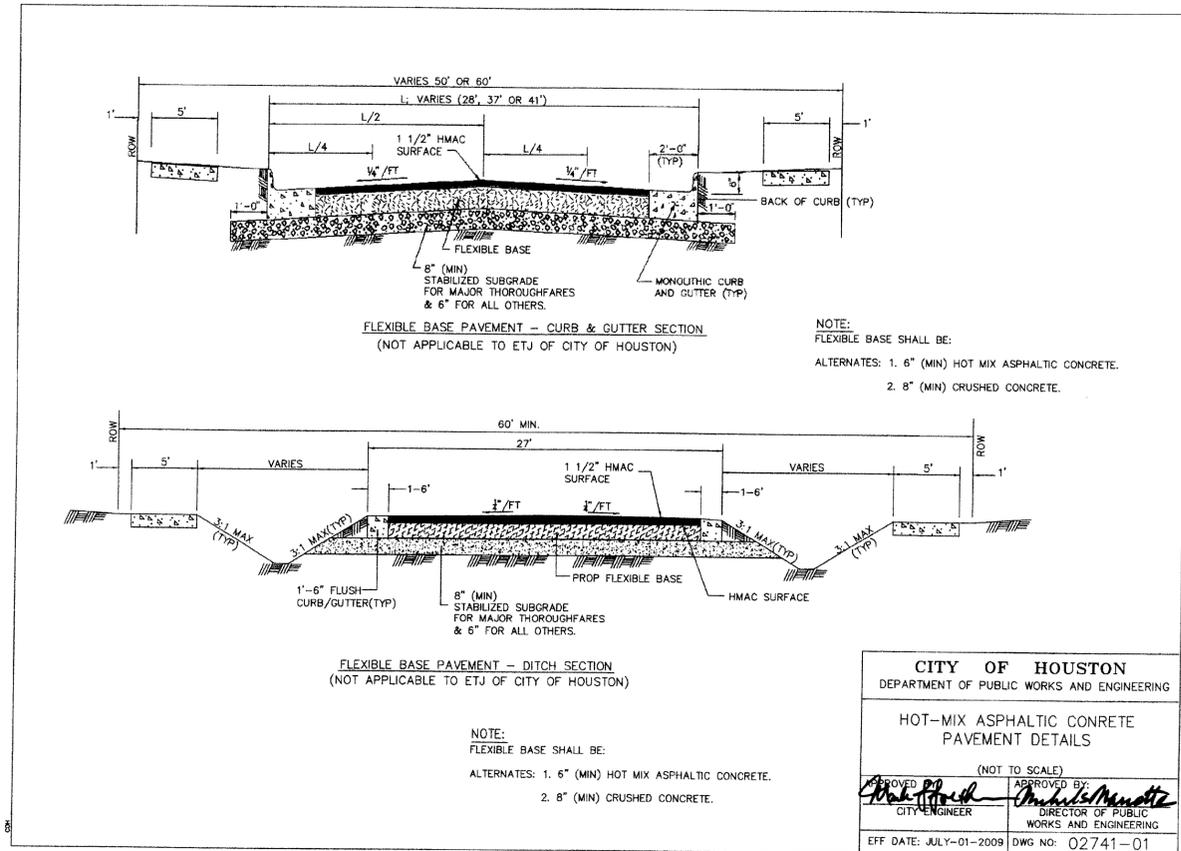
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

FILE NO. _____ HORIZ: N.T.S.
VERT: _____

SHEET NO. 30 OF 40 DRAWING SCALE _____

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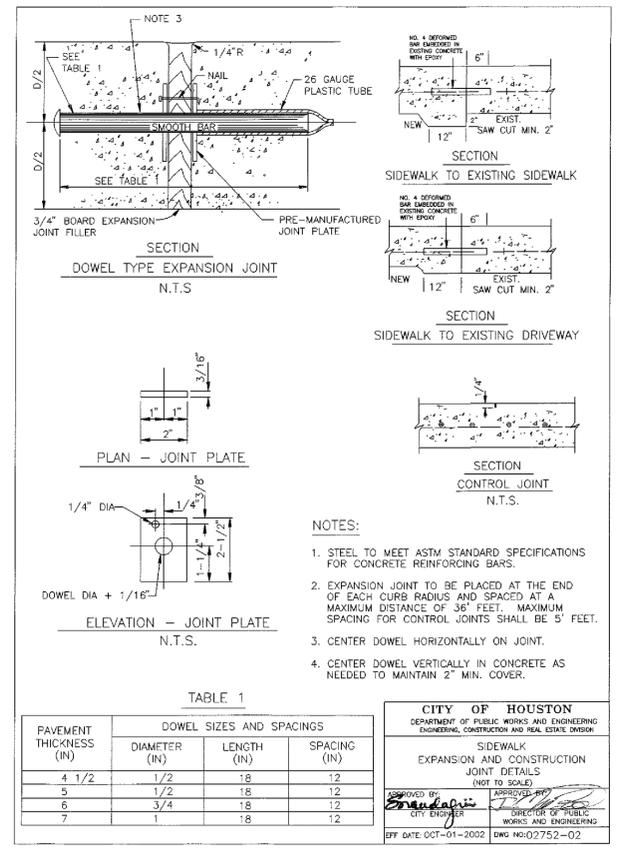
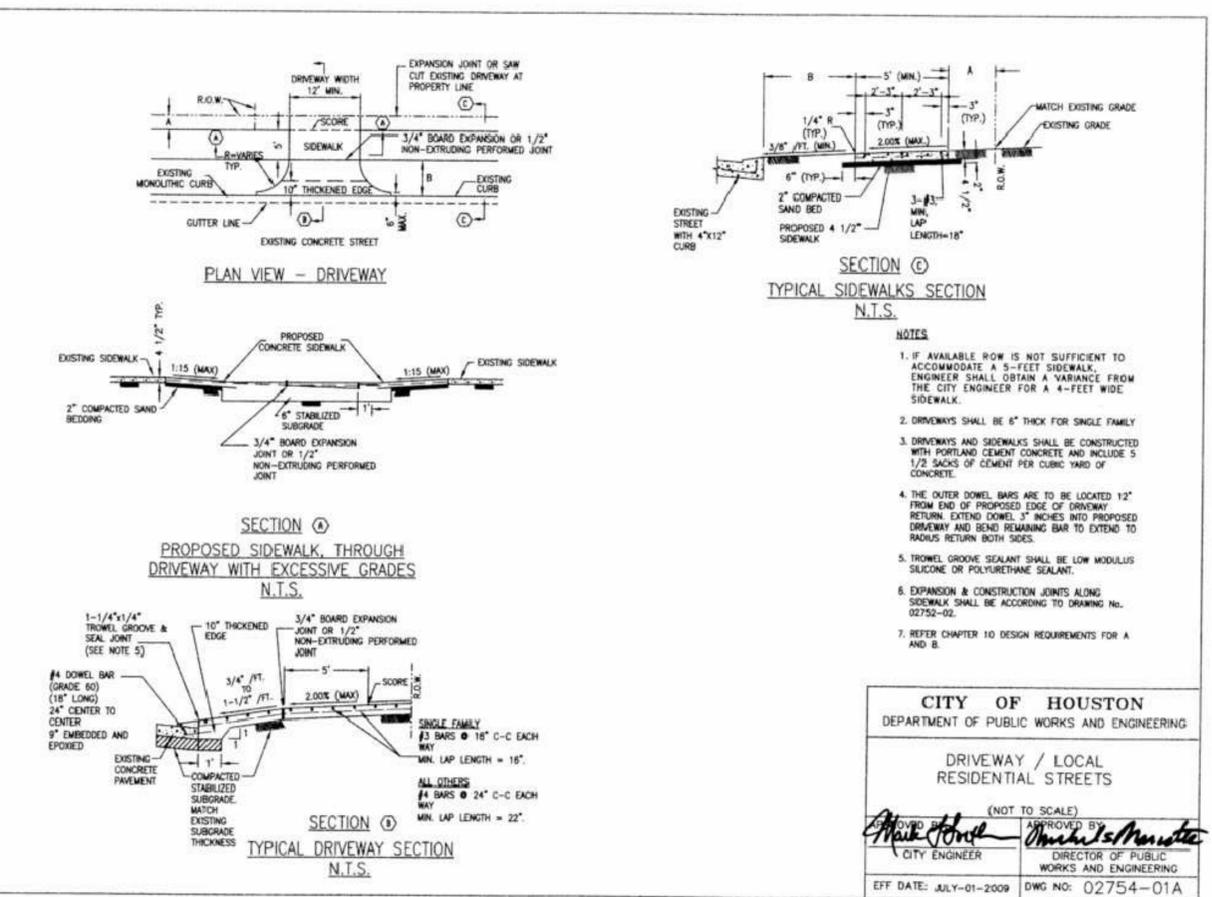
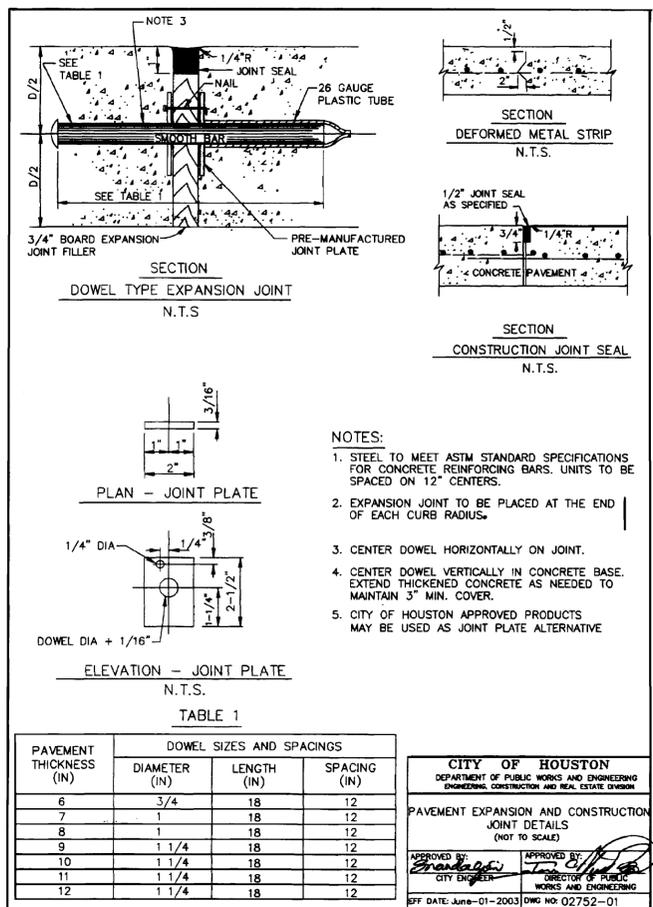


CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

HOT-MIX ASPHALTIC CONCRETE PAVEMENT DETAILS
(NOT TO SCALE)

APPROVED BY: *Mark Powell* CITY ENGINEER
APPROVED BY: *Michael M. Moutz* DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: JULY-01-2009 DWG NO: 02741-01



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SIMSBROOK VILLAGE
PAVEMENT DETAILS 2

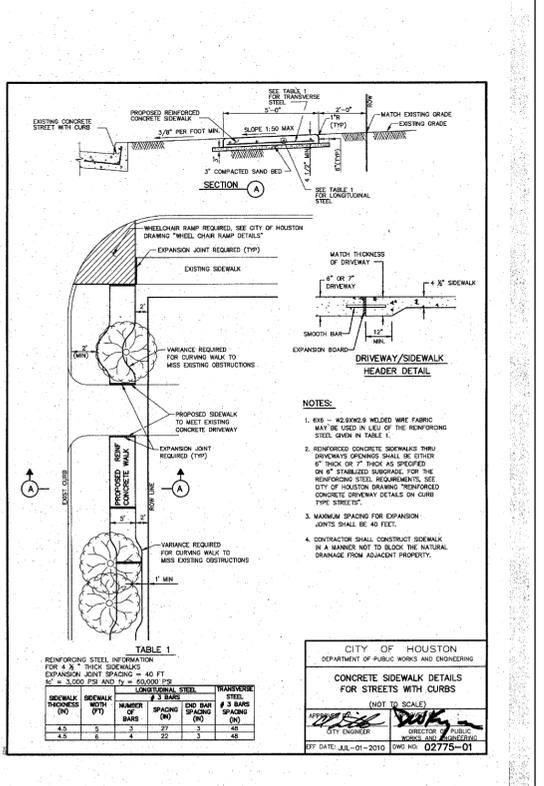
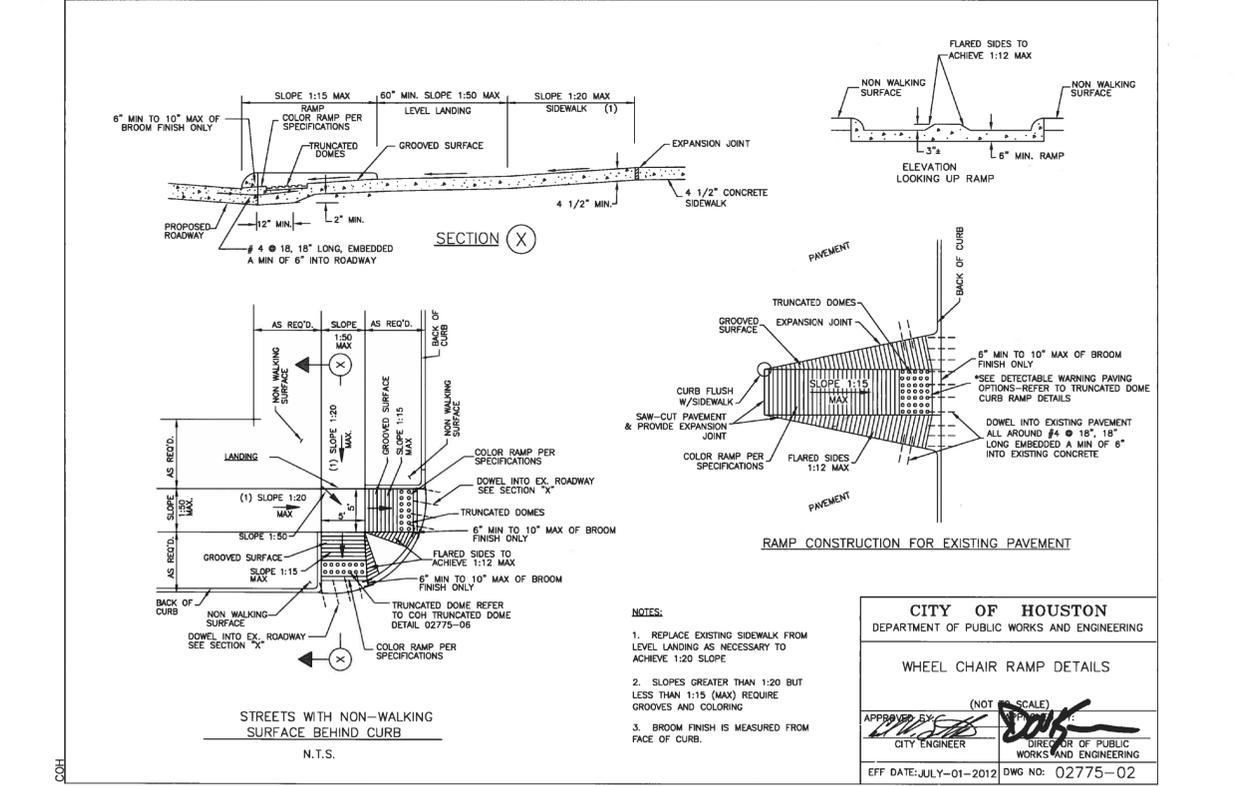
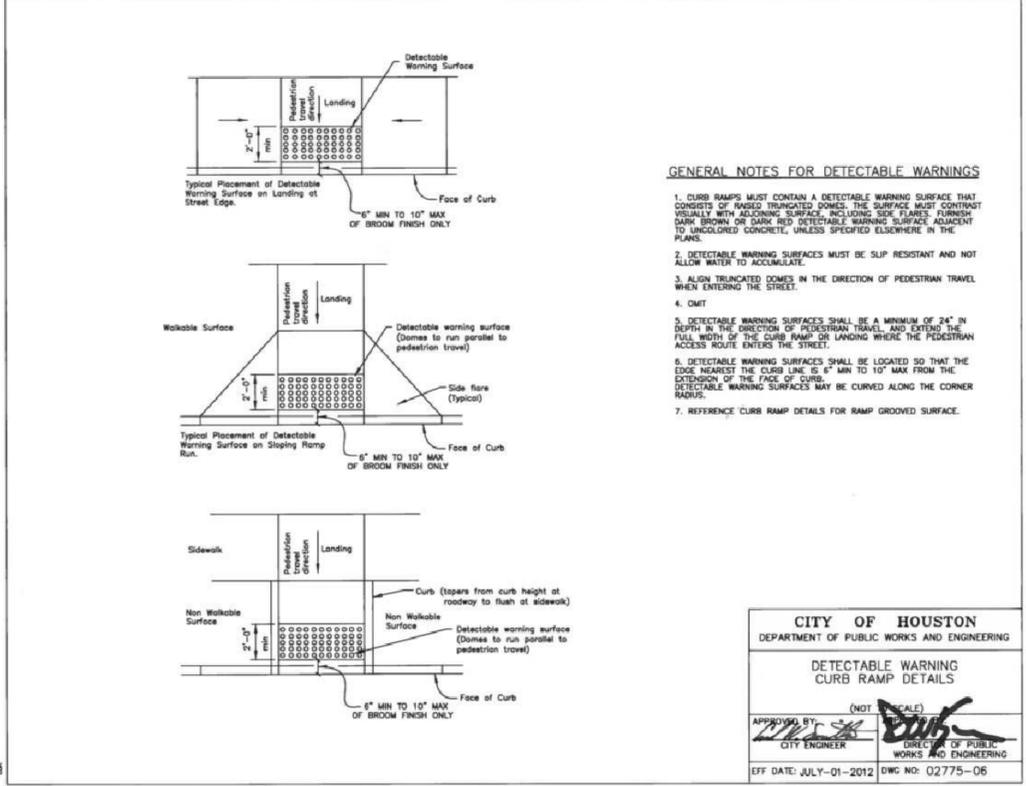
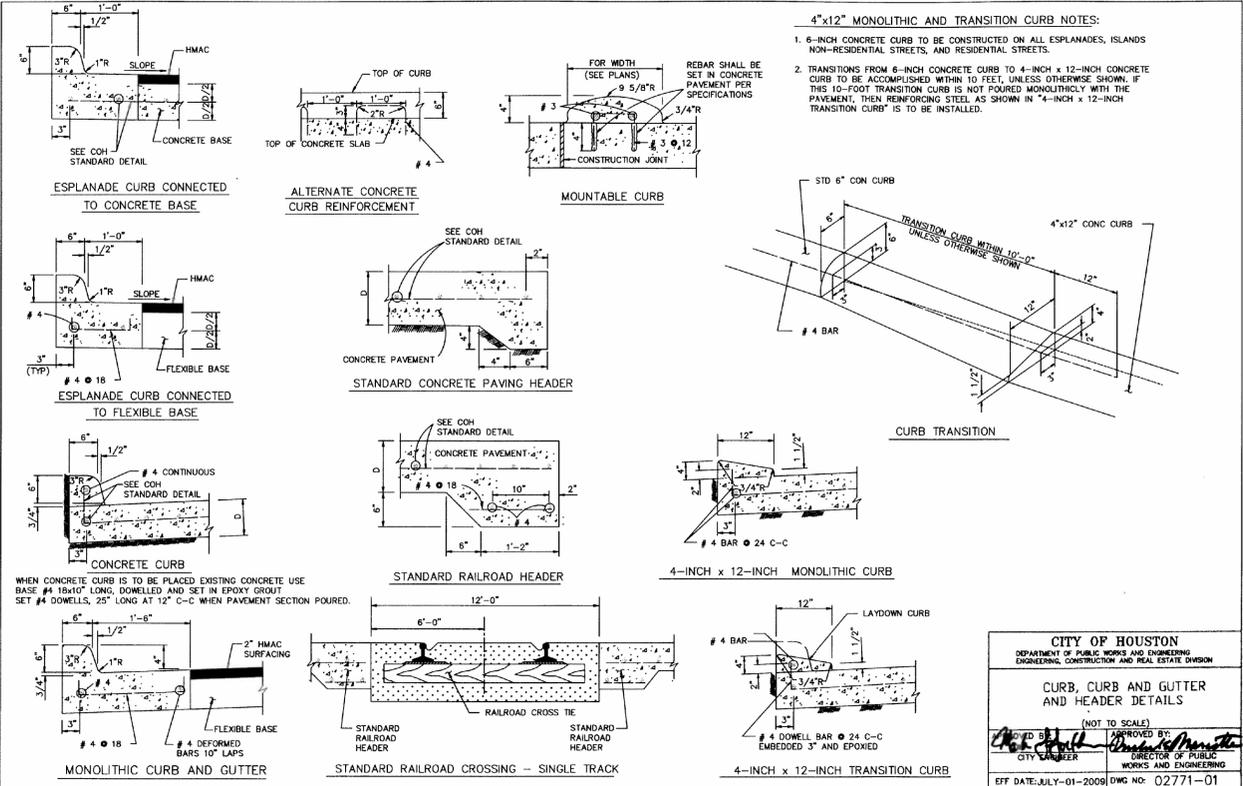
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CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

FILE NO. _____ HORIZ: N.T.S.
VERT: _____

SHEET NO. 32 OF 40 DRAWING SCALE _____
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9-10-2023

SIMSBROOK VILLAGE
PAVEMENT DETAILS 3

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE
FILE NO.	HORIZ: N.T.S.
	VERT:
SHEET NO. 33 OF 40	DRAWING SCALE
FOR CITY OF HOUSTON USE ONLY	

GENERAL NOTES

- THE EXISTING SIGNS LOCATED ON PUBLIC CONSTRUCTION SITE ARE THE PROPERTY OF THE CITY OF HOUSTON. THROUGHOUT THE PERIOD OF THE CONTRACT, THE CONTRACTOR SHALL PROTECT THESE SIGNS SUCH THAT THEY ARE NOT DAMAGED IN THE COURSE OF CONSTRUCTION ACTIVITY. SIGN PROTECTION SHALL INCLUDE THE PERIOD AFTER SIGNS ARE REMOVED FROM INSTALLATION AND STORED BY THE CONTRACTOR OR DELIVERED TO THE TRAFFIC OPERATIONS CENTER (2200 PATTERSON). THE GENERAL TRAFFIC SUPERINTENDENT (332-395-8726/8726) MUST BE NOTIFIED 48 HOURS IN ADVANCE PRIOR TO DELIVERY.
- AFTER SIGNS ARE REMOVED FROM INSTALLATION AND ARE BEING STORED BY THE CONTRACTOR, THE CONTRACTOR SHALL CONTACT THE TRAFFIC OPERATIONS DIVISION OF THE PUBLIC WORKS AND ENGINEERING DEPARTMENT (332-395-8726/8726) AND ARRANGE FOR A CONVENIENT TIME TO DELIVER ONLY CITY SIGNS AND POSTS IDENTIFIED BY TRAFFIC OPERATIONS DIVISION TO 2200 PATTERSON.
- PRIOR TO THE START OF CONSTRUCTION, ALL EXISTING SIGNS WITHIN THE AREA OF CONSTRUCTION WILL BE INVENTORIED AND DOCUMENTED JOINTLY BY THE CITY INSPECTOR AND THE CONTRACTOR. THIS DOCUMENT WILL BE JOINTLY SIGNED BY BOTH PARTIES REFLECTING THE SIGN TYPE, SIGN SIZE, SIGN CONDITION, SIGN LOCATION, REFLECTIVITY ADEQUACY, ETC. THE CONTRACTOR IS HELD ACCOUNTABLE FOR THESE SIGNS THROUGHOUT THE PROJECT AND AT THE PROJECTS COMPLETION.
- ALL GROUND MOUNTED STOP SIGNS, WARNING SIGNS, AND OTHER REGULATORY SIGNS SHALL USE AT A MINIMUM HIGH INTENSITY PRISMATIC REFLECTIVE SHEETING.
- ALL OVERHEAD SIGNS SHALL USE DIAMOND GRADE REFLECTIVE SHEETING.
- ALL OTHER SIGNS SHALL USE SUPER ENGINEER GRADE SHEETING.
- ALL SIGNS TO BE INSTALLED SHALL BE OF THE 3000, 5000 OR 6000 SERIES ALUMINUM WITH A YIELD STRENGTH OF 3003-H14 ALLOY.
- "T" DENOTES THICKNESS OF SIGN BLANKS.
- ALL HOLES SHALL BE 3/8" DIAMETER DRILLED OR PUNCHED AS SHOWN ON EACH BLANK DETAIL AND SHALL BE FREE OF BURRS AND / OR ROUGH EDGES.
- SIGN BLANK CORNERS TO BE ROUNDED AS SHOWN ON EACH DETAIL ON SHEET 01509-03.
- ALL SIGN BLANK ARE TO BE ETCHED, DEGREASED, AND HAVE AN ALDINE FINISH PRIOR TO APPLICATION OF LEGENDS.
- ALL DETAILS ARE NOT TO SCALE.
- ALL SIGNS SHALL BE MANUFACTURED AND INSTALLED IN CONFORMANCE TO THE LATEST TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) AND STANDARD HIGHWAY SIGNS LATEST EDITION.
- REINSTALLATION OF PREVIOUSLY EXISTING SIGNS, WHERE REQUIRED PER PLANS, SHALL BE AT THE CONTRACTOR'S EXPENSE.

TYPICAL GROUND SIGN INSTALLATION PERFORATED SQUARE METAL TUBING

CORNER BOLT

TABLE A

NOMINAL WASHER SIZE	INSIDE DIAMETER	OUTSIDE DIAMETER	MEAN DIAMETER	SECTION WIDTH
3/8"	0.322	0.314	0.563	0.076
1/2"	0.500	0.492	0.750	0.125

DIMENSIONS: ASME B18.21.1
MATERIAL: ALLOY STEEL PER ASME B18.211
FINISH: MECHANICAL ZINC PER ASME B665, CLASS 5, TYPE 2 (YELLOW)

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
GENERAL NOTES AND GROUND SIGN MOUNTING (NOT TO SCALE)
APPROVED BY: [Signature]
CITY ENGINEER
SEP-2016
DWC NO. 01509-01

BARRICADE NOTES

THE MOST RECENT EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND ITS REVISIONS, SHALL GOVERN THE CONSTRUCTION AND USE OF ALL ITEMS HEREIN DESCRIBED.

CHANNELIZATION DEVICES OTHER THAN BARRICADES SHOULD NORMALLY BE USED FOR CHANNELIZATION PURPOSES.

BARRICADES SHOULD NORMALLY BE PLACED PERPENDICULAR TO THE TRAVEL LANE OTHER CHANNELIZATION DEVICES SUCH AS CONES OR DRUMS SHOULD BE USED TO SUPPLEMENT BARRICADES AS TO MOST ADVANTAGEOUSLY WARN AND DIRECT TRAFFIC.

BARRICADES MAY BE DESIGNED AND CONSTRUCTED FROM WOOD OR ANY OTHER SUITABLE MATERIAL IN A MANNER APPROVED BY THE TRAFFIC OPERATIONS DIVISION OF THE PUBLIC WORKS AND ENGINEERING DEPARTMENT. THE DETAILS OF BAR WIDTH AND STRIPING, PANELS AND SPACING OF PANELS, MINIMUM LENGTH AND HEIGHT ALTERNATE DESIGNS ARE USED.

THE REFLECTORIZED WHITE AND REFLECTORIZED ORANGE (REFLECTORIZED RED) STRIPES FOR BARRICADES, DRUMS AND STRIPING PANELS SHALL BE CONSTRUCTED OF HIGH INTENSITY SHEETING AND SHALL BE MAINTAINED TO MEET THE APPLICABLE COLOR AND REFLECTIVITY REQUIREMENTS SET BY DOT.

THE CONTRACTOR SHALL MAINTAIN EACH BARRICADE IN A CLEAN AND GOOD CONDITION.

BARRICADES SHALL BE REMOVED UPON COMPLETION OF THE WORK AND/OR THE ELIMINATION OF THE HAZARD ON ANY SECTION.

TYPE III BARRICADE FOR END OF ROAD

DEMOUNTABLE TYPE III BARRICADE

DRUMS

CONES

VERTICAL PANELS (VP)

STRIPING FOR BARRICADE

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
BARRICADE STANDARD (NOT TO SCALE)
APPROVED BY: [Signature]
CITY ENGINEER
SEP-2016
DWC NO. 01580-01

D3 - STREET NAME SIGN

D3 W/ NO OUTLET SIGNAGE

D3 - STREET NAME SIGN

HEIGHT	SEE SIGN SIZES
LENGTH	30" MIN. * 48" MAX. ** 1" INCREMENTS OF LENGTH
THICKNESS	0.125"
SUBSTRATE	ALUMINUM ALLOY, 6052-H38 (ASTM B-209)
SIGN FACE MATERIALS	GREEN FILM OVER HIGH INTENSITY GRADE VP SHEETING
LEGENDS AND SYMBOLS	SERIES D (USUAL) SERIES C OR B FOR MAXIMUM LENGTH SIGN BLANK
COLOR	LETTERS - WHITE REFLECTIVE BORDER - WHITE REFLECTIVE BACKGROUND - GREEN REFLECTIVE

NOTES:

- TYPICAL SIGN PLATE SHOULD BE 42".
- SIGN PLATE LONGER THAN 48" MUST BE APPROVED BY THE CITY ENGINEER.
- ALL DIMENSIONS ARE IN INCHES.

D3 SIGNS GREATER THAN 42" PLATES IN LENGTH

D3 SIGNS LESS THAN OR EQUAL TO 42" PLATES IN LENGTH

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
STREET NAME SIGN AND SIGN MOUNTING (NOT TO SCALE)
APPROVED BY: [Signature]
CITY ENGINEER
SEP-2016
DWC NO. 01509-02

CITY OF HOUSTON Public Works and Engineering Department

Project # _____

Residential: Driveway with Concrete Curb

RIGHT SIDE
LEFT SIDE
LEFT CORNER

RIGHT CORNER
CIRCULAR

City of Houston Approval Stamp

B & P ENGINEERING, INC.
(TBPE F-6225)
10333 HARWIN DRIVE, STE. 375H
HOUSTON, TX 77036
TEL: (713) 859-3982

STATE OF TEXAS
BO WU
94859
PROFESSIONAL ENGINEER
Rathner 9-10-2023

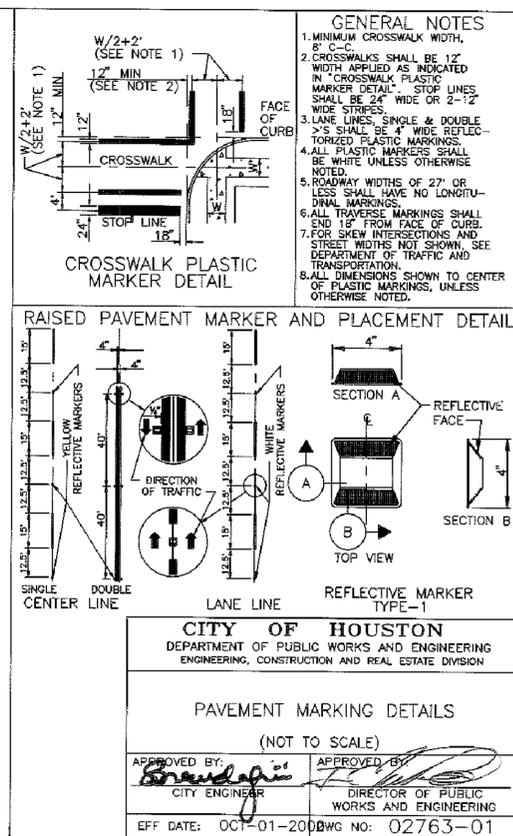
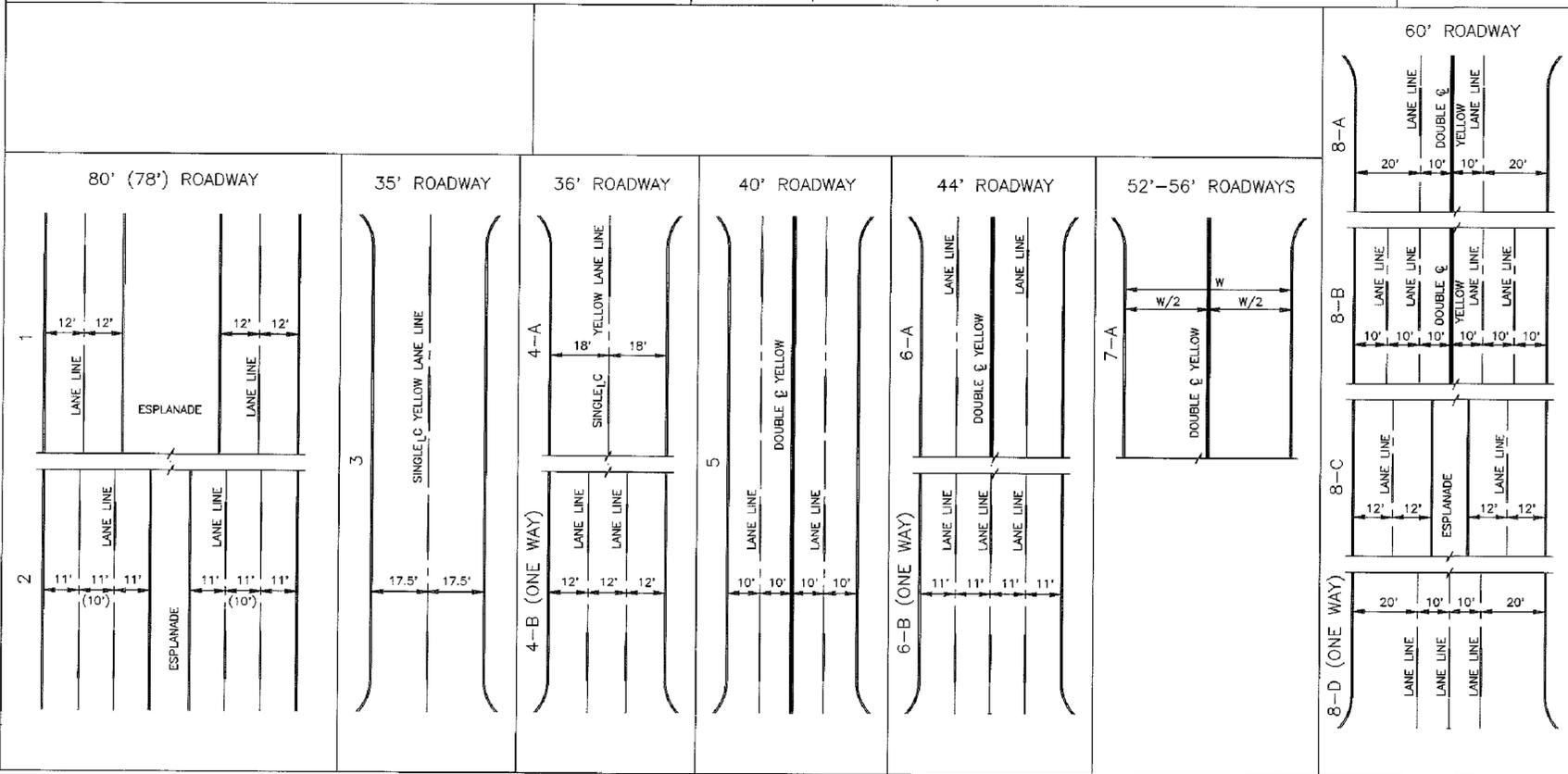
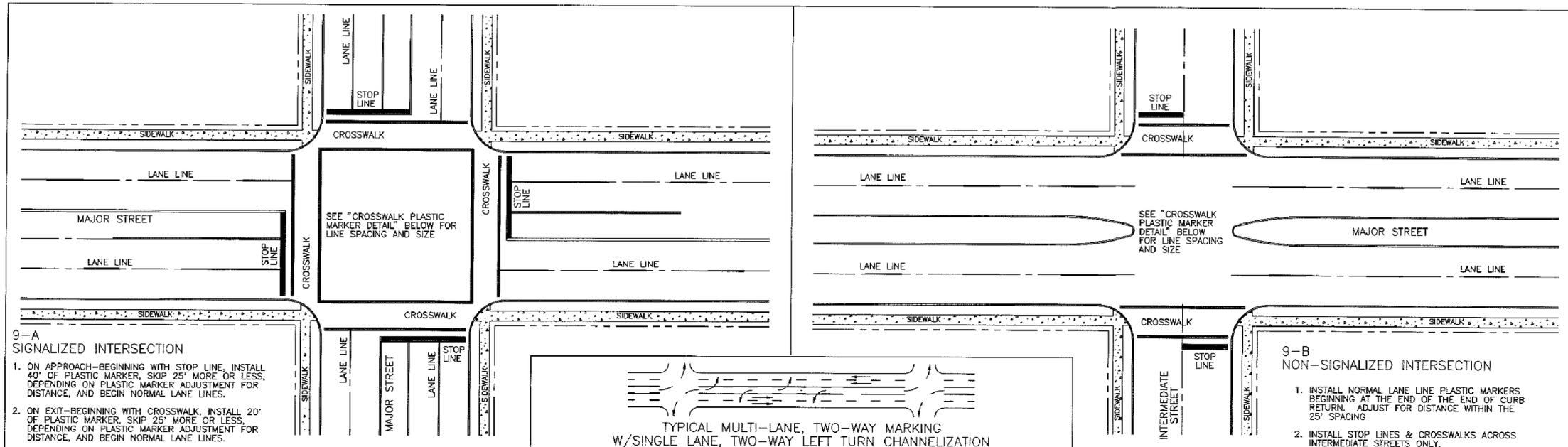
SIMSBROOK VILLAGE PAVEMENT DETAILS 4

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

FILE NO. _____ HORIZ: N.T.S.
SHEET NO. 34 OF 34 DRAWING SCALE _____
FOR CITY OF HOUSTON USE ONLY



B & P ENGINEERING, INC.
(TBPE F-6225)
10333 HARWIN DRIVE, STE. 375H
HOUSTON, TX 77036
TEL: (713) 859-3982

INTERIM REVIEW ONLY
Document Incomplete. Not intended for permit or construction.
Engineer: Bo Wu
P.E. Serial No.: 84859
Date: May, 2018

SIMSBROOK VILLAGE
PAVEMENT DETAILS 5

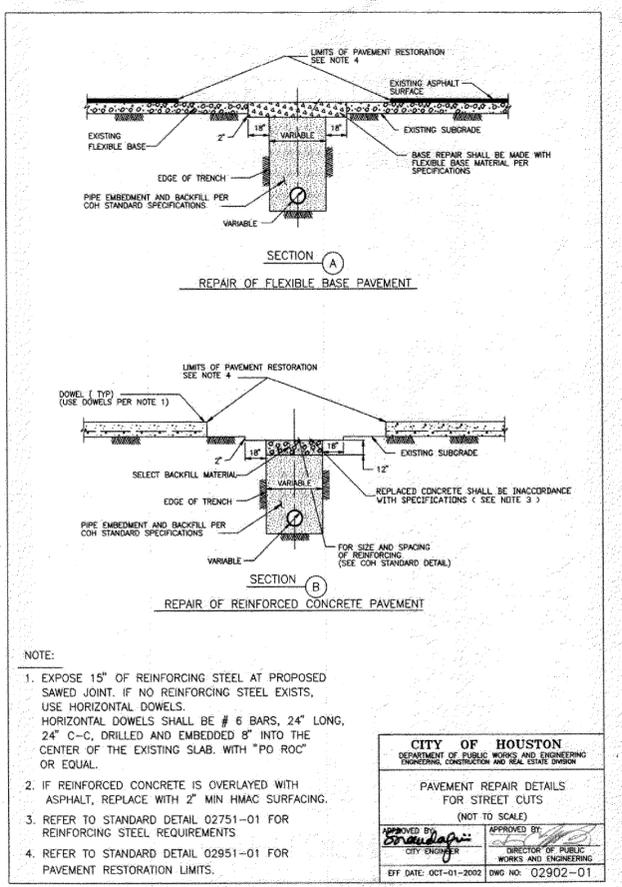
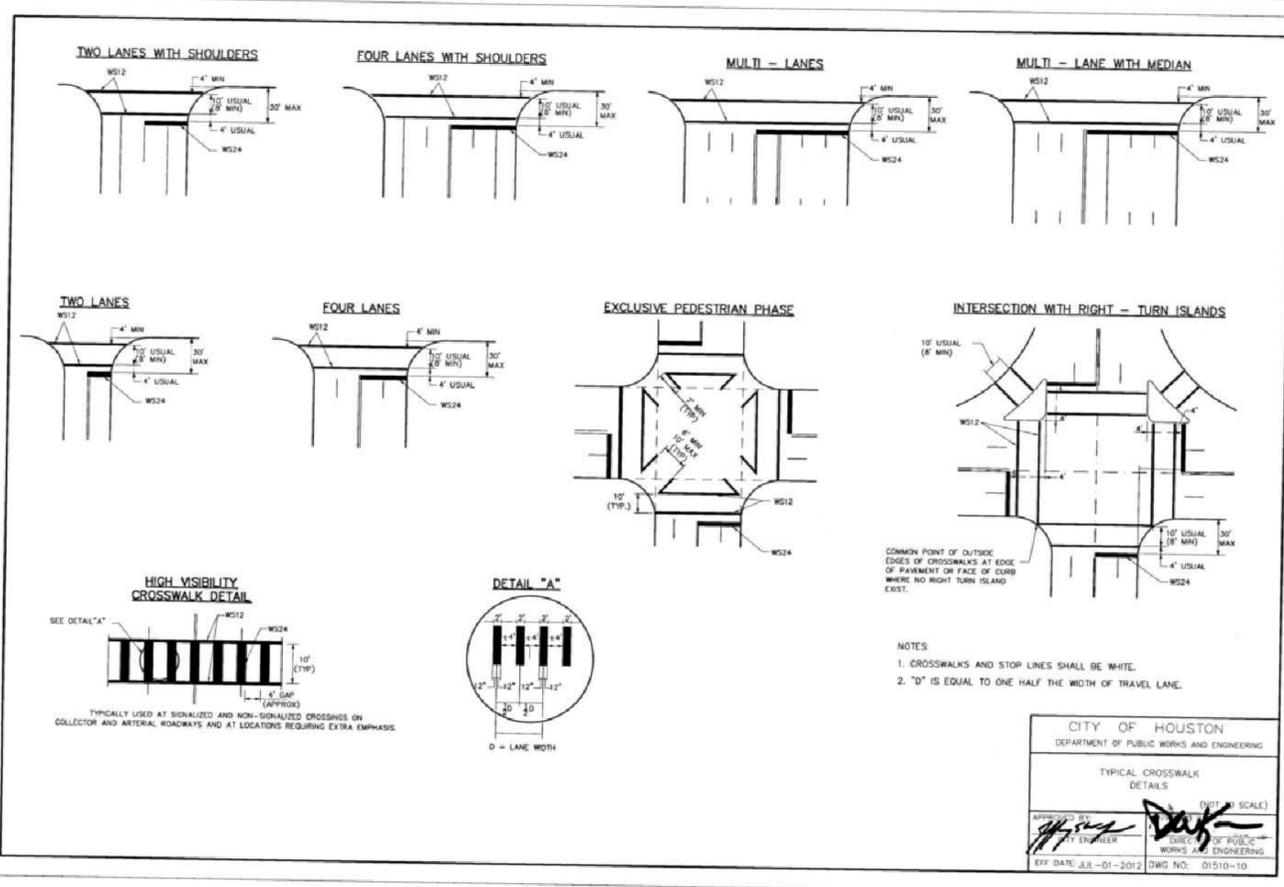
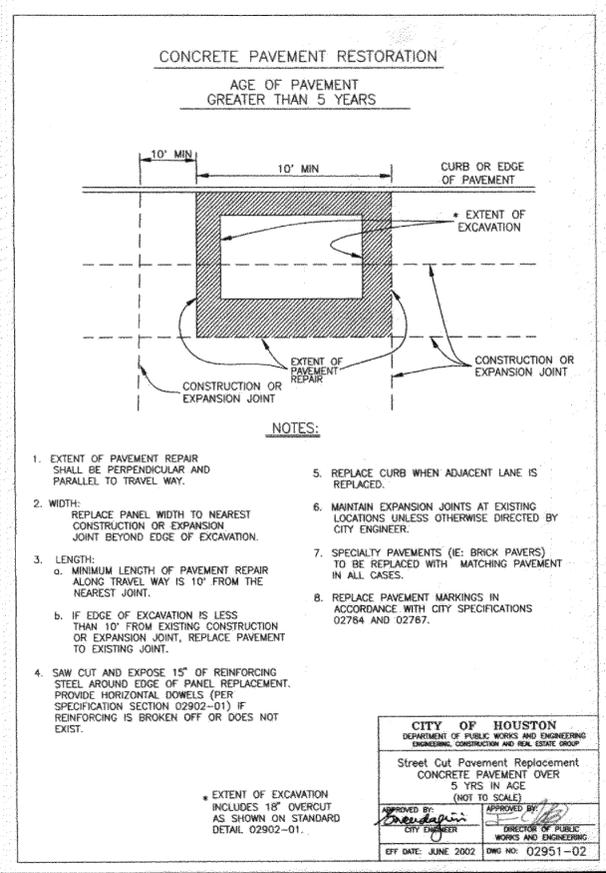
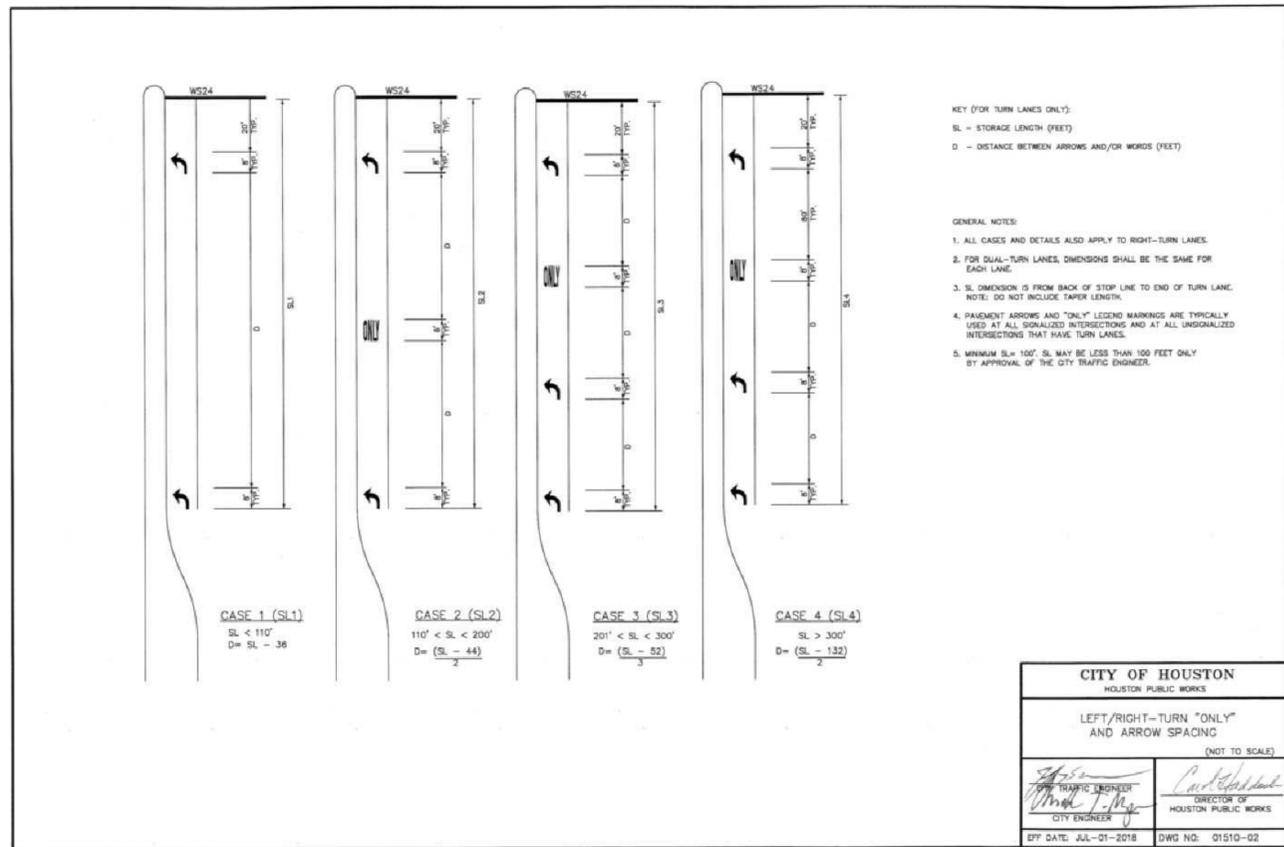
NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

FILE NO. _____ HORIZ: N.T.S.
VERT: _____

SHEET NO. 35 OF 40 DRAWING SCALE
FOR CITY OF HOUSTON USE ONLY



B & P ENGINEERING, INC.
 (TBPE F-6225)
 10333 HARWIN DRIVE, STE. 375H
 HOUSTON, TX 77036
 TEL: (713) 859-3982

STATE OF TEXAS
 BO WU
 84859
 REGISTERED PROFESSIONAL ENGINEER
Ralphe 9-10-2023

SIMSBROOK VILLAGE
PAVEMENT DETAILS 6

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

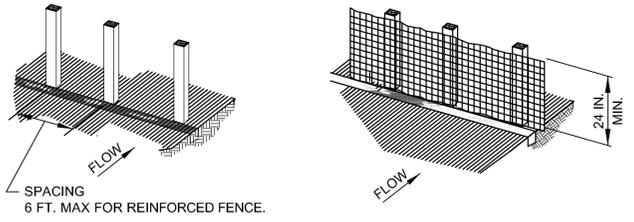
CITY OF HOUSTON
 HOUSTON PUBLIC WORKS

WATER	STORM WATER QUALITY
WASTE WATER	FACILITIES
STORM WATER	TRAFFIC & TRANSPORTATION/ STREET & BRIDGE

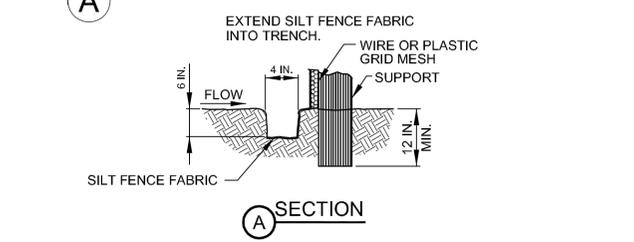
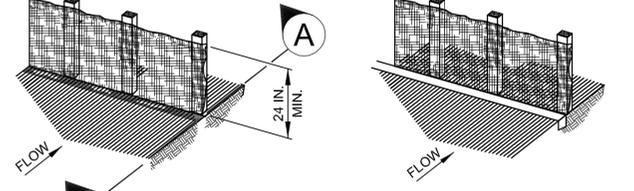
FILE NO. _____ HORIZ: N.T.S.
 VERT: _____

SHEET NO. 36 OF 40 DRAWING SCALE
 FOR CITY OF HOUSTON USE ONLY

1. SET SUPPORTS AND EXCAVATE 4 IN. X 6 IN. TRENCH UPSLOPE ALONG LINE OF SUPPORTS.
2. SECURE WIRE FENCING TO SUPPORTS.



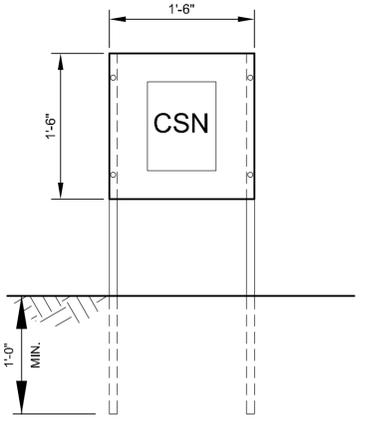
3. ATTACH SILT FENCE FABRIC TO WIRE FENCE AND EXTEND INTO THE TRENCH.
4. BACKFILL AND COMPACT THE EXCAVATED SOIL.



NOTE:
1. SEE SPECIFICATION SECTION NO. 02361-SILT FENCES.

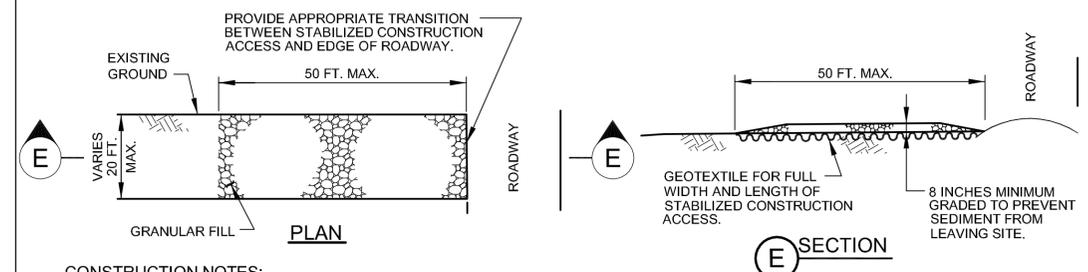
REINFORCED SILT FENCE SYMBOL

REINFORCED SILT FENCE



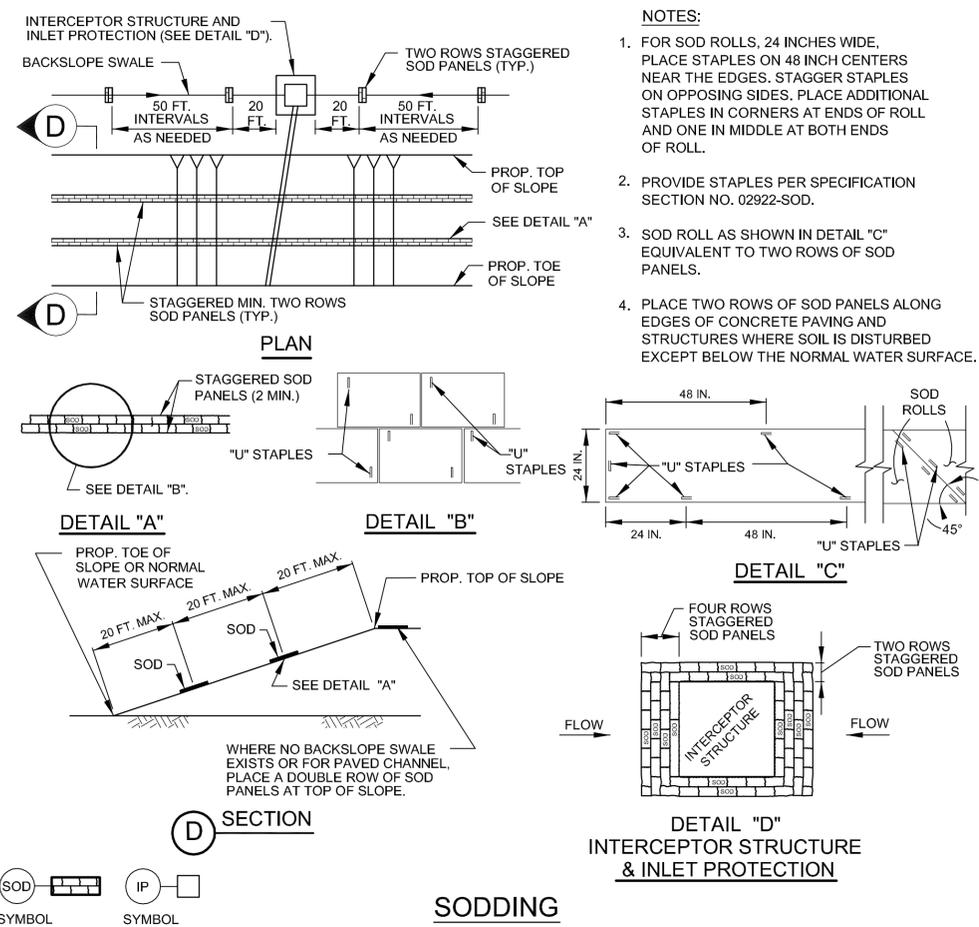
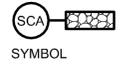
NOTE:
CONSTRUCT IN ACCORDANCE WITH HCFCF SPECIFICATION SECTION 01580 - PROJECT SIGNS.

**CSN HOLDER
SWPPP / BMP SIGN AND CONSTRUCTION
SITE NOTICE HOLDER DETAILS**



CONSTRUCTION NOTES:
1. SEE SPECIFICATION SECTION NO. 02365-STABILIZED CONSTRUCTION ACCESS.

STABILIZED CONSTRUCTION ACCESS

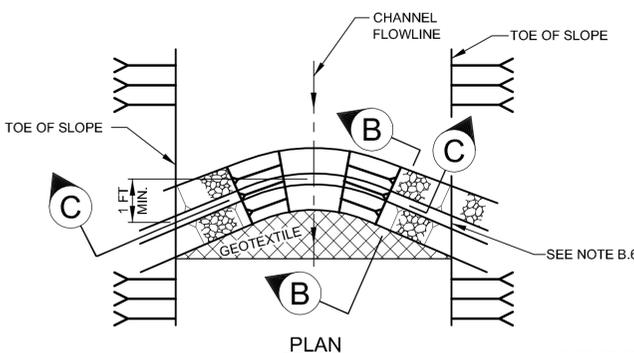


- NOTES:
1. FOR SOD ROLLS, 24 INCHES WIDE, PLACE STAPLES ON 48 INCH CENTERS NEAR THE EDGES. STAGGER STAPLES ON OPPOSING SIDES. PLACE ADDITIONAL STAPLES IN CORNERS AT ENDS OF ROLL AND ONE IN MIDDLE AT BOTH ENDS OF ROLL.
 2. PROVIDE STAPLES PER SPECIFICATION SECTION NO. 02922-SOD.
 3. SOD ROLL AS SHOWN IN DETAIL "C" EQUIVALENT TO TWO ROWS OF SOD PANELS.
 4. PLACE TWO ROWS OF SOD PANELS ALONG EDGES OF CONCRETE PAVING AND STRUCTURES WHERE SOIL IS DISTURBED EXCEPT BELOW THE NORMAL WATER SURFACE.

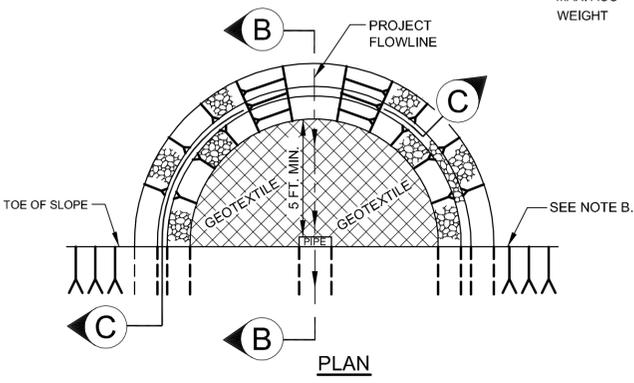
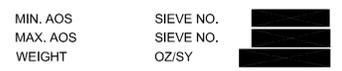
SODDING

FILTER DAM NOTES:

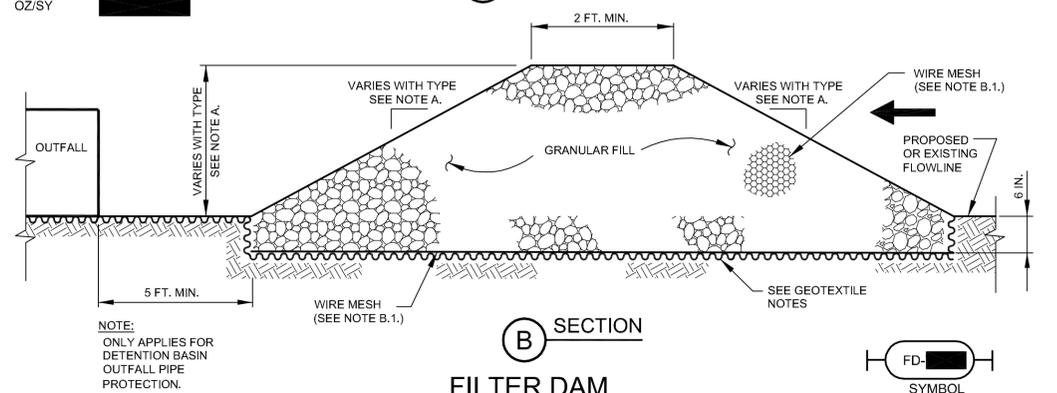
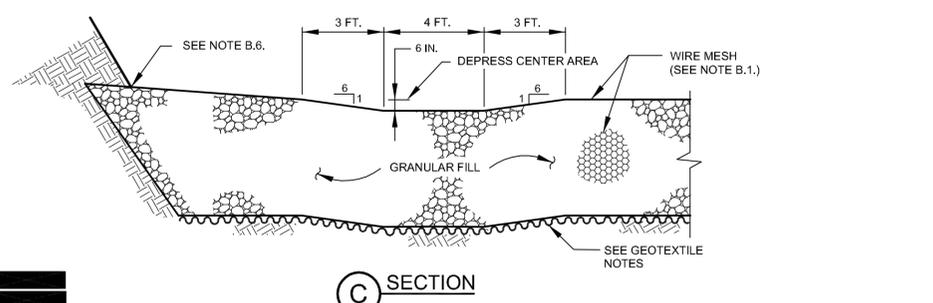
1. TYPE 1 - NOT USED BY HCFCF
 2. TYPE 2 (REINFORCED),
 - a. HEIGHT - 18-36 INCHES. MEASURE VERTICALLY FROM EXISTING GROUND TO TOP OF FILTER DAM.
 - b. TOP WIDTH - 2 FEET (MINIMUM).
 - c. SLOPES - 2:1 (MAXIMUM).
 3. TYPE 3 - NOT USED BY HCFCF
 4. TYPE 4 (GABION),
 - a. HEIGHT - 30 INCHES (MINIMUM). MEASURE VERTICALLY FROM EXISTING GROUND TO TOP OF FILTER DAM.
 - b. TOP WIDTH - 2 FEET (MINIMUM).
 5. TYPE 5 - AS SHOWN ON THE PLANS.
1. CONSTRUCT FILTER DAMS ACCORDING TO THE FOLLOWING CRITERIA UNLESS SHOWN OTHERWISE ON THE PLANS.
 2. TYPE 2 AND 3 FILTER DAMS: SECURE WITH 20 GAUGE GALVANIZED WOVEN WIRE MESH WITH 1 INCH DIAMETER HEXAGONAL OPENINGS.
 3. GRANULAR FILL:
 - a. PLACE ON MESH TO HEIGHT AND SLOPES SHOWN ON PLANS OR AS SPECIFIED BY THE ENGINEER.
 - b. 3-5 INCHES FOR ROCK FILTER DAM TYPES 2, AND 4.
 REFER TO GRANULAR FILL IN SPECIFICATION SECTION NO. 02378-RIPRAP AND GRANULAR FILL.
 4. WIRE MESH: FOLD AT UPSTREAM SIDE OVER GRANULAR FILL AND TIGHTLY SECURE TO ITSELF ON THE DOWNSTREAM SIDE USING WIRE TIES OR HOG RINGS.
 5. IN STREAMS: SECURE OR STAKE MESH TO STREAM BED PRIOR TO AGGREGATE PLACEMENT.
 6. SEE SPECIFICATION SECTION NO. 02364-FILTER DAMS.
 7. EMBED ONE FOOT MINIMUM INTO SLOPE AND AT SLOPE RAISE ONE FOOT HIGHER THAN CENTER OF DEPRESSED AREA.



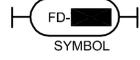
GEOTEXTILE NOTES:



FILTER DAM AT DETENTION BASIN OUTFALL PIPE



NOTE:
ONLY APPLIES FOR DETENTION BASIN OUTFALL PIPE PROTECTION.



THIS DETAIL SHEET HAS BEEN PREPARED FOR USE ON HCFCF PROJECTS OR PROJECTS TO BE MAINTAINED BY THE HCFCF WHEN COMPLETED BY OTHERS. AN ENGINEER WHO INCORPORATES THE DETAILS ON THIS SHEET BECOMES RESPONSIBLE FOR ITS USE IN THE END PRODUCT IN ACCORDANCE WITH RULE 137.33 (b) AND (c) OF THE TEXAS BOARD OF PROFESSIONAL ENGINEERS.



3-23-2023

ENGINEER - CONFIRM, CHANGE, OR FILL IN.

DATE	APPR			
DESCRIPTION				
REV				
PROJECT NO.				
SIMSBROOK VILLAGE				
STORMWATER POLLUTION PREVENTION DETAILS				
PREPARED:				
CHECKED:				
APPROVED:				
B & P ENGINEERING, INC. (TXPE F-82925) 10353 HARWIN DR. STE. 375H HOUSTON, TX 77036 TEL: (713) 659-2583 FAX: (281) 759-2583 3216				
HARRIS COUNTY FLOOD CONTROL DISTRICT 9900 Northwest Freeway Houston, Texas 77092				
DATE:	10-23-2018			
SCALE:	NTS			
SHEET NUMBER	39	OF	40	

1. PROPERTY DESCRIPTION

I. LOCATION INFORMATION
A. HARRIS COUNTY COMMISSIONER'S PRECINCT:
B. KEY MAP:
C. ADDRESS:

II. LEGAL DESCRIPTION
A. ACREAGE:
B. SUBDIVISION:
C. ADJACENT ROADS:

III. PLATTING
A. SUBDIVISION PLAT
B. STREETS PROPOSED

IV. JURISDICTIONS
CITY OF HOUSTON
ETJ, CITY OF HOUSTON
NO ETJ
UTILITY DISTRICT (NAME)

V. HCAD ACCOUNT NOS. (ALL)
044-116-000-0030, 044-116-000-0176

5. WORK IN HCFCD RIGHT-OF-WAY

I. TYPE OF WORK TO BE PERFORMED IN HCFCD ROW
A. BOND/NOTIFICATION INFORMATION
HCFCD WATERSHED
HCFCD UNIT No.
NUMBER OF OUTFALLS
UTILITY CROSSING
ROADWAY BRIDGE/CULVERT CROSSING
FILL ACTIVITY
REHABILITATION OF CHANNEL
MAINTENANCE
TEMPORARY CROSSING
TRAIL (LENGTH)
OTHER

II. USACE ENVIRONMENTAL PERMIT
US ARMY CORPS OF ENGINEERS NATIONWIDE PERMIT NUMBER(S)
US ARMY CORPS OF ENGINEERS INDIVIDUAL PERMITS
OTHER
NO PERMITS REQUIRED
EXPLAIN:

III. REFERENCE / BASIS OF DETERMINATION
ENVIRONMENTAL CONSULTANT REPORT
BY
REPORT TITLE
REPORT DATE
OTHER

NOTES:
I. - III. REQUIRED ON PROJECTS WITH WORK IN A HCFCD CHANNEL.
PLEASE REFERENCE SECTION 17 OF THE FLOOD CONTROL DISTRICT POLICY, CRITERIA, AND PROCEDURE MANUAL FOR MORE INFORMATION.

IV. HCFCD STANDARD NOTES: SEE SHEET
V. HCFCD STANDARD DETAILS: SEE SHEET
VI. HCFCD ACCESS PLAN: SEE SHEET
VII. REFER TO THE FOLLOWING PLAN SHEETS:
FOR EXISTING AND PROPOSED RIGHT(S) OF WAY INCLUDING DELINEATION AND RECORDING INFORMATION PER HCFCD POLICY, CRITERIA, & PROCEDURE MANUAL

2. SITE DETENTION DRAINAGE

I. PROPOSED DRAINAGE AREA
NEW DEVELOPMENT AREA:
RE-DEVELOPMENT AREA (AMOUNT INCREASED IMPERVIOUS AREA):
LOW IMPACT DEVELOPMENT (LID)
METHOD/DESCRIPTION

II. METHODOLOGY
HCFCD PCPM DETENTION METHOD USED:
METHOD 1 (LESS THAN 20 ACRES)
METHOD 2 (20 ACRES TO 640 ACRES)
METHOD 3 (GREATER THAN 640 ACRES)
OTHER

III. DETENTION VOLUME & OUTFALL
OUTFALL TO:
.65, H.C.F.C.D. CHANNEL, (H.C.F.C.D. UNIT NO.)
.75, EXISTING STORM SEWER (OWNER & OPERATOR)
1.00, ROADSIDE DITCH, (OWNER & ROAD NAME)
OTHER (OWNER & OPERATOR)

IV. STORMWATER DETENTION BASIN INFORMATION
A. HCFCD PCPM SUMMARY TABLE SEE SHEET

Table with 4 columns: DETENTION BASIN SERVICE AREA, 50% EXCEEDANCE (2-YEAR), 10% EXCEEDANCE (10-YEAR), 1% EXCEEDANCE (100-YEAR). Rows include STORM EVENT, MAXIMUM ALLOWABLE OUTFLOW, MAXIMUM OUTFLOW PROVIDED, LOWEST NATURAL FINISHED GROUND OR FINISHED FLOOR ELEVATION ESTIMATE, DESIGN WATER SURFACE ELEVATION, MINIMUM STORAGE REQUIRED, DETENTION STORAGE PROVIDED, STORAGE RATE PROVIDED, OUTFLOW VELOCITY INTO CHANNEL, DRAIN TIME, EMERGENCY OVERFLOW.

B. DETENTION BASIN TO BE MAINTAINED BY
C. DETENTION SERVICE AREA MAP ON SHEET
D. ADDITIONAL CRITERIA FOR PUMPED DETENTION BASINS
VOLUME OF PUMPED 1% EXCEEDANCE STORAGE VOLUME =
MAXIMUM DESIGN OUTFLOW VELOCITY INTO HCFCD CHANNEL =
DRAIN TIME FOR BASIN =

V. DETENTION PROVIDED IN OTHER PLANS:
HCFCD PROJECT No.
DATE SIGNED BY HCFCD:
PLAN TITLE
DETENTION POND SERVICE AREA MAP IS PROVIDED ON SHEET
ENGINEERING FIRM
DETENTION BASIN MAINTAINED BY:

VI. FLOW RESTRICTOR SIZE
OUTFALL PIPE SIZE:
RESTRICTOR PIPE SIZE:
RESTRICTOR PLATE DIMENSION:

VII. DETENTION PROVIDED BY
REGIONAL DETENTION BASIN SYSTEM (APPROVED H.C. PRJ NO.):

pt 1.8, 3.9 FOR PROJECTS LOCATED IN ANY FLOODPLAIN
Development constructed or placed in accordance with these plans will comply with all provisions of the designated Floodplain Administrator.
No net fill is allowed in the flood plain and no fill is allowed in the floodway.

OFFSITE SHEET FLOW: (100 YEAR)
OFFSITE SHEET FLOW MAPPING, TOTAL DISCHARGE CALCULATIONS, AND DESIGN ACCOMMODATIONS ARE SHOWN ON SHEET
TOTAL ACREAGE =
TOTAL DISCHARGE =
NOTE: ALL OFFSITE SHEET FLOW FROM ADJACENT PROPERTIES MUST BE IDENTIFIED AND PROPERLY ACCOUNTED FOR IN THE PROJECT. THE SIGNING ENGINEER HEREBY CERTIFIES THAT THESE AREAS HAVE BEEN ADDRESSED.

3. SWQ DISCHARGE INTO FCD FACILITY

I. SWPPP: CONSTRUCTION MEASURES. (Must complete)
DISTURBS >1AC. SITE PLAN & DETAILS ON SHEET(S)
DISTURBS <1AC. N/A

*II. APPLICABILITY FOR PERMANENT FEATURES. (Must complete)
EXEMPT NEW DEVELOPMENT:
EXEMPT REDEVELOPMENT:
EXEMPT GRANDFATHERED:
PROJECT'S DRAINAGE TIES DIRECTLY INTO AN EXISTING DRAINAGE SYSTEM PRIOR TO OCTOBER 1, 2001.

GENERAL:
PROJECT'S SWQ REQUIREMENTS FALL WITHIN THE JURISDICTION OF: CITY OF HOUSTON
STORMWATER QUALITY MANAGEMENT PLAN:
SITE PLAN ON SHEET(S)

III. PERMANENT SWQ FEATURES. (COMPLETE IF NOT EXEMPT)
VEGETATIVE CONTROLS USED: (FILTER STRIP, GRASSY SWALE, URBAN FORESTRY DETAILS AND CALCULATIONS APPEAR ON SHEET(S))
POND STRUCTURE USED (WET) DRY, WETLANDS) DETAILS AND CALCULATIONS APPEAR ON SHEET(S)
HYDRODYNAMIC TYPE SEPARATOR MODEL:
OTHER(S):

6. REPORTS/AGREEMENTS

I. HCFCD ACCEPTED REPORTS (ALL)
STORMWATER DRAINAGE DESIGN REPORT
REPORT TITLE
HCFCD PROJECT #
ENGINEERING FIRM
REPORT ACCEPTANCE DATE
GEOTECHNICAL INVESTIGATION REPORT
REPORT TITLE
HCFCD PROJECT #
ENGINEERING FIRM
REPORT ACCEPTANCE DATE
HCFCD APPROVED VARIANCE
DESCRIPTION OF VARIANCE
DOCUMENT ID #
VARIANCE ACCEPTANCE DATE

II. AGREEMENT TYPE & No.:
INTERLOCAL (ILA):
HCFCD MAINTENANCE
TURF ESTABLISHMENT
OTHER

4. FLOOD PLAIN STATUS

I. GENERAL INFORMATION
FIRM PANEL(S) FOR PROPERTY:
FIRM PANEL(S) DATE:
STATUS OF PROPERTY ON MAP
ENTIRELY LOCATED IN UNSHADED ZONE "X",
LOCATED PARTIALLY OR ENTIRELY IN ANY "A" ZONE OR SHADED ZONE "X",
DELINEATE FLOODPLAIN BOUNDARY ON CONSTRUCTION DRAWINGS
SITE REMOVED FROM FLOODPLAIN BY LOMR, LOMR-F, LOMA
ELEVATION INFORMATION
BENCHMARK USED
HARRIS COUNTY FLOODPLAIN REFERENCE MARK
BENCHMARK (FOR COASTAL AREAS)
DESCRIPTION OF BENCHMARK INCLUDING ELEVATION, DATUM AND YEAR OF ADJUSTMENT (2001 ADJ.)

II. FLOOD PLAIN DETERMINATION BASED ON GROUND ELEVATION
PROPERTY LIES ENTIRELY ABOVE THE BASE FLOOD LEVEL AND IN SHADED ZONE "X"
PROPERTY LIES PARTIALLY OR ENTIRELY BELOW THE BASE FLOOD LEVEL

III. FLOODPLAIN STORAGE SUMMARY
TOTAL VOLUME OF MATERIAL PROPOSED TO BE MOVED OR PLACED WITHIN THE FIRM DELINEATED FLOODPLAIN (FILL, BASE, CONCRETE, ASPHALT, ETC.):
TOTAL VOLUME OF MATERIAL PROPOSED TO BE REMOVED FROM THE FIRM DELINEATED FLOODPLAIN:
FILL AREA & VOLUME CALCULATIONS ARE SHOWN ON SHEET

HCFCD SIGNATURE BLOCK

PROJECT NAME: SIMSBROOK VILLAGE
ADDRESS: 3330 SIMSBROOK DRIVE
WAS ACCEPTED BY HARRIS COUNTY FLOOD CONTROL DISTRICT FOR THE PURPOSES LISTED BELOW:

HARRIS COUNTY FLOOD CONTROL DISTRICT

INTERPOSE NO OBJECTION
FOR ITEMS LOCATED OUTSIDE OF HCFCD RIGHT-OF-WAY
APPROVED:
FOR ITEMS LOCATED WITHIN EXISTING HCFCD RIGHT-OF-WAY
APPROVED:
FOR ITEMS LOCATED WITHIN PROPOSED HCFCD RIGHT-OF-WAY
NO REVIEW REQUIRED:
FINAL PERMITTING BY OTHERS

ADDITIONAL COMMENTS:

THE PROJECT WAS REVIEWED, HOWEVER, THIS DOES NOT MEAN THE ENTIRE PROJECT, INCLUDING ALL SUPPORTING DATA AND CALCULATIONS HAVE BEEN COMPLETELY CHECKED AND VERIFIED. THESE DRAWINGS ARE SIGNED, DATED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF TEXAS, WHICH THEREFORE CONVEYS THE ENGINEER'S RESPONSIBILITY AND ACCOUNTABILITY. THIS DOES NOT RELIEVE ANY PARTY FROM COMPLYING WITH APPROPRIATE FEDERAL, STATE AND LOCAL ENVIRONMENTAL RULES, LAWS, AND REGULATIONS AND ANY OTHER LEGALLY ADOPTED REGULATION OR ORDINANCE RELATED TO LAND DEVELOPMENT. IF THE CITY SIGNATURES ARE REQUIRED BY ORDINANCE, COUNTY PERMITS WILL NOT BE ISSUED UNTIL SUCH SIGNATURES ARE OBTAINED. PLAN APPROVAL EXPIRATION TO BE IN ACCORDANCE WITH LOCAL GOVERNMENT CODE CH. 245.

ENGINEER'S CERTIFICATION F-6225

I, BO WU, A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, DO HEREBY CERTIFY THAT THE INFORMATION PRESENTED ON THIS SHEET IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND THAT I AM NOT VIOLATING ANY PROVISION OF THE CURRENT TEXAS ENGINEERING PRACTICE ACT AND RULES CONCERNING THE PRACTICE OF ENGINEERING AND PROFESSIONAL ENGINEERING LICENSURE.

ANY VIOLATIONS WILL BE FORWARDED TO THE HARRIS COUNTY DISTRICT ATTORNEY'S OFFICE FOR PROSECUTION. THE COMPLETED PROJECT CONSISTS OF DRAWING SHEETS 1 THRU 40

Signature: BO WU
DATE: 3-23-2023



REVISIONS

NOTE: REVISION BLOCK IS TO BE USED ONLY FOR CHANGES MADE AFTER PLANS HAVE BEEN APPROVED BY HARRIS COUNTY FLOOD CONTROL.

Table with 5 columns: DATE, SHEET NO., DESCRIPTION, P.E. INITIAL, H.C.F.C.D APPROVED DATE. Includes SHEET NUMBER 40 OF 40.

HARRIS COUNTY FLOOD CONTROL DISTRICT REVIEW SHEET