METROPOLITAN ST. LOUIS SEWER DISTRICT

WW-2 AND WW-3 WARSON WOODS SANITARY RELIEF

LEGEND

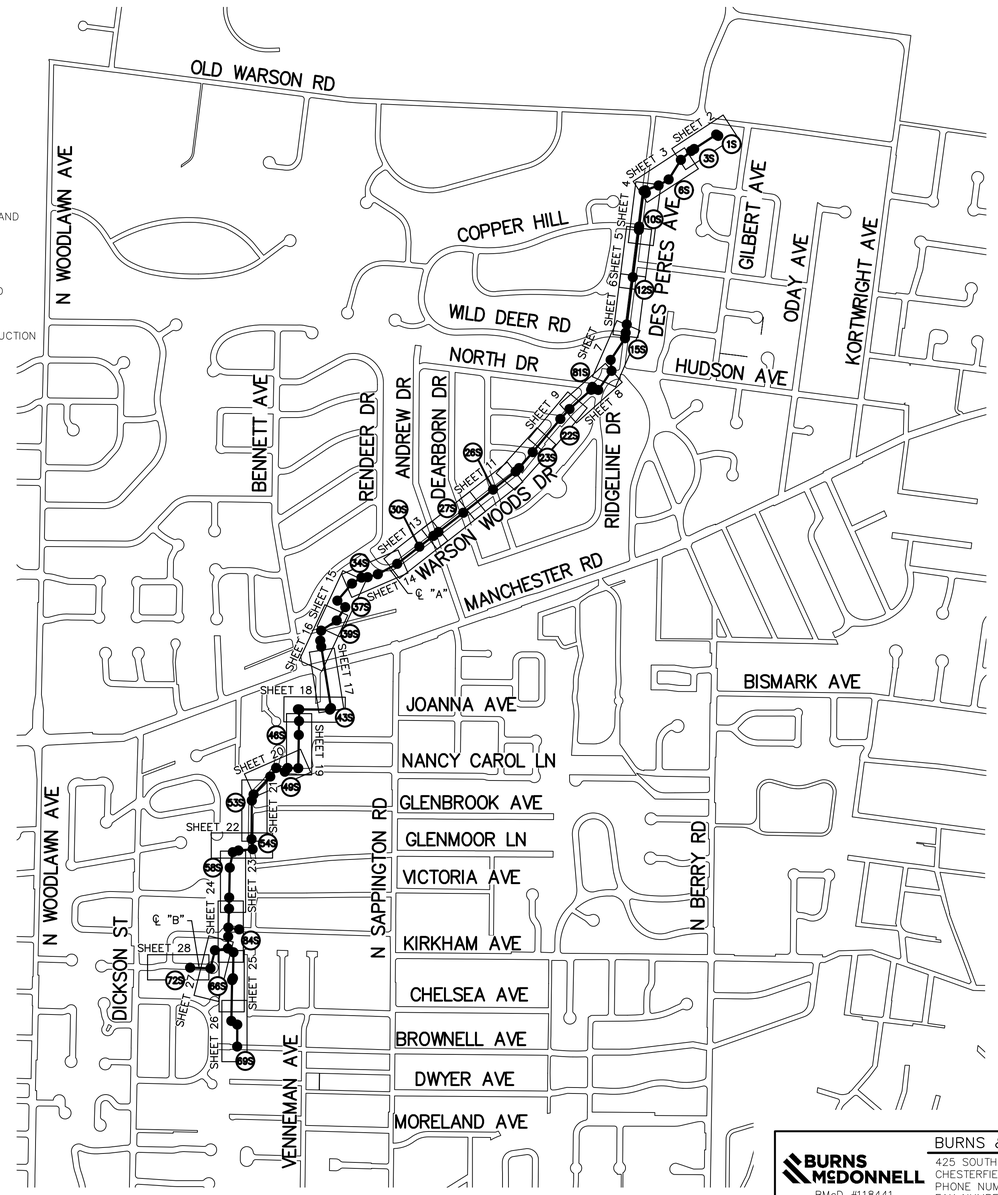
EXISTING		NEW
○	MANHOLE	●
⊡	INLET MANHOLE	◘
□	INLET	■
▭	DOUBLE INLET	▬
◯	MANHOLE DESIGNATOR	◯
⬡	INLET OR STRUCTURE DESIGNATOR	⬢
◇	OUTLET OR FES DESIGNATOR	◇
⬚	JUNCTION CHAMBER DESIGNATOR	□
	PIPE 6" THRU 18"	
	PIPE 21" THRU 108"	
x x	FENCE	x x
2"G	UNDERGROUND UTILITIES	
	FLOWLINE OF CREEK OR DITCH	
	GUARD RAIL	
+	TREE	
☼	BUSH	
	HEDGE ROW	
GV	UTILITY METER OR VALVE	
PP	POWER POLE	
PP	POWER POLE & GUY	
	STREET SIGN	
	FIRE HYDRANT	
	LIGHT STANDARD	
	MAIL BOX	
VENT	HOUSE VENT	
	TRAFFIC SIGNAL	
	UTILITY BOX	
	CONTROL POINT/TRAVERSE POINT	
	CONTROL POINT DESIGNATOR	
	TRAVERSE POINT DESIGNATOR	
	TEST HOLE	
	CAPPED LATERAL	

ABBREVIATIONS

ASPH	ASPHALT
(C)	CALCULATED
CONC	CONCRETE
ESMT	EASEMENT
EX	EXISTING
FF	FINISHED FLOOR
TBA	TO BE ABANDONED
TBAF	TO BE ABANDONED AND FILLED
TBR	TO BE REMOVED
TBR&R	TO BE REMOVED AND REPLACED
TCE	TEMPORARY CONSTRUCTION EASEMENT
UIP	USE IN PLACE

NOTE:

UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS. THEREFORE; THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS NOT PRESENTLY KNOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE ALL UTILITIES LOCATED IN THE FIELD PRIOR TO EXCAVATION OR CONSTRUCTION.



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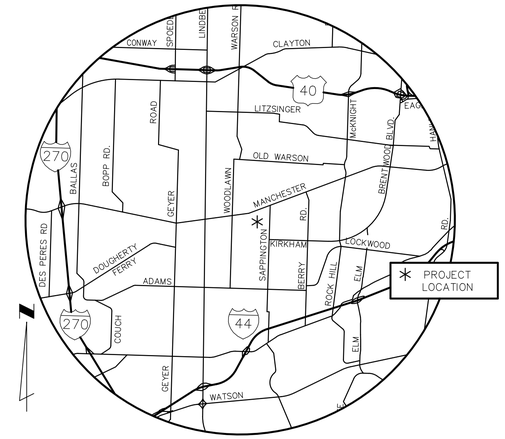

LOCATION MAP
NOT TO SCALE

INDEX

SHEET NO.	DESCRIPTION
1	COVER SHEET
2–28	PLAN AND PROFILE

MSD BENCHMARK
HORIZONTAL AND VERTICAL CONTROL WAS ESTABLISHED USING "TRIMBLE R8" GPS EQUIPMENT, USING THE MODOT CONTINUOUSLY OPERATING MIDWEST RTK NETWORK. HORIZONTAL CONTROL IS REPORTED IN NAD–83 AND VERTICAL CONTROL IS REPORTED IN NAVD–88. FIELD WORK WAS PERFORMED DURING THE MONTH OF MARCH, 2020.

PROJECT BENCHMARKS

BM 12302–01
"O" IN OPEN ON TOP OF FIRE HYDRANT. LOCATED IN FRONT OF #705 BROWNELL AVE. APPROXIMATELY 164 FEET EAST OF THE CENTERLINE OF CHELSEA AVENUE AND 17 FEET NORTH OF THE CENTERLINE OF BROWNELL AVENUE.
ELEVATION 607.92

BM 12302–02
"SQUARE" CUT AT THE SOUTHWEST CORNER OF CONCRETE WALL. LOCATED IN FRONT OF #10039 MANCHESTER RD. APPROXIMATELY 232 FEET EAST OF THE CENTERLINE OF BENNETT AVENUE AND 60 FEET NORTH OF THE CENTERLINE OF MANCHESTER ROAD.
ELEVATION 554.21

BM 12302–03
"SQUARE" CUT AT THE SOUTHEAST CORNER OF HEADWALL. LOCATED IN FRONT OF #1222 DES PERES AVENUE. APPROXIMATELY 16 FEET EAST OF THE CENTERLINE OF DES PERES AVENUE AND 608 FEET SOUTH OF THE CENTERLINE OF WARSON RD.
ELEVATION 486.91

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REV.	DATE	DESCRIPTION	BY
A	8/20	60% DESIGN COMPLETION SUBMITTAL	CWK

METROPOLITAN ST. LOUIS SEWER DISTRICT
2350 MARKET STREET
ST. LOUIS, MO 63103
(314) 768–6200

WW–2 AND WW–3 WARSON WOODS SANITARY RELIEF
12302–015.1
GLENDALE, ROCK HILL, WARSON WOODS, LADUE, KIRKWOOD – ST. LOUIS COUNTY, MISSOURI

Engineer Seal

CURT W. KIMMEL, P.E.
PROFESSIONAL ENGINEER
P.E. No. 2009001097
Date:

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425 SOUTH WOODS MILL ROAD
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PHONE NUMBER (314) 682–1500
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LICENSEE NO 000165
BMcD #118441

Asst Dir Engr
Dir Engr
Drawn W.K.
Checked M.P.T.
Date AUGUST, 2020
Sheet No 1 of 28

PRELIMINARY

BASE MAPS: 21–L–1, 21–L–4, 22–L–1, 22–M–2, 22–M–3

12302–[C1]

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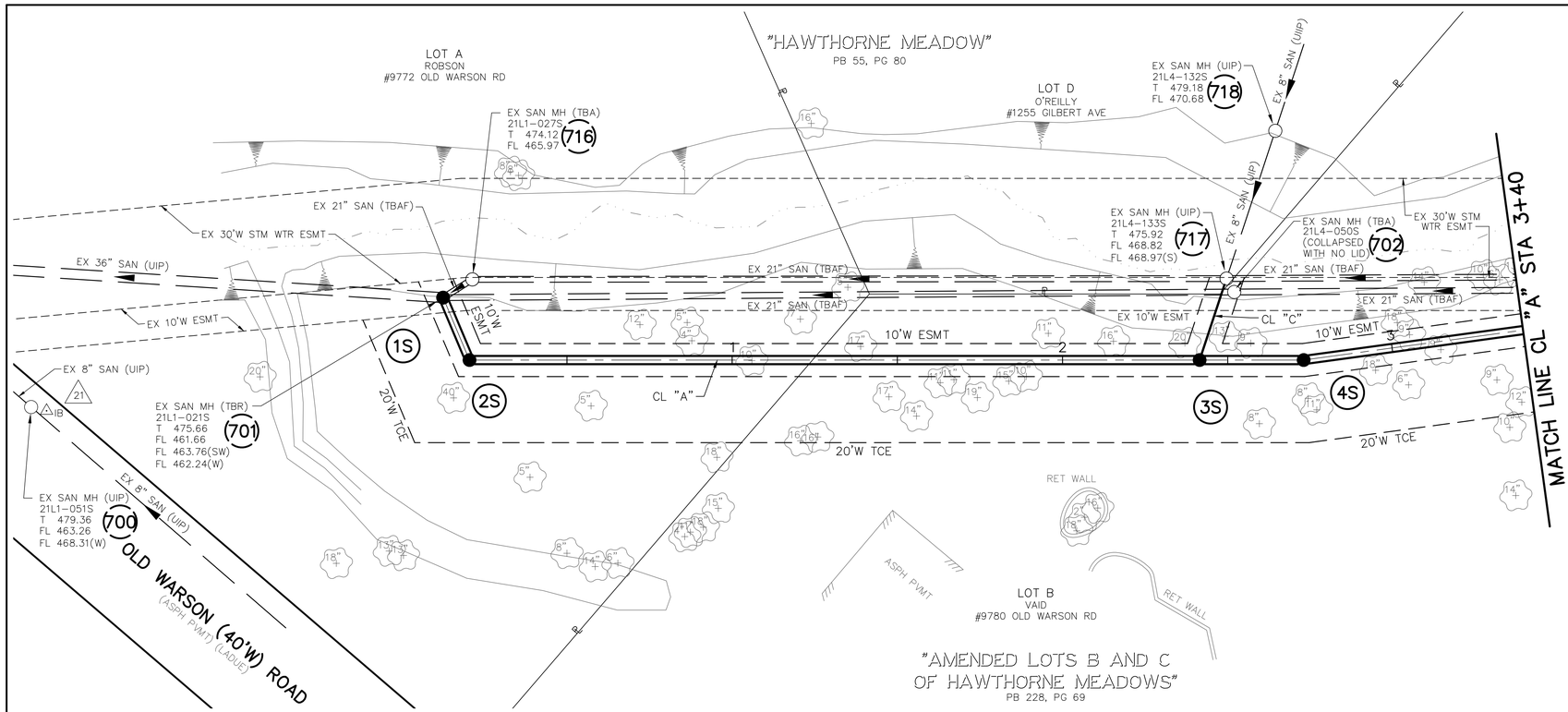
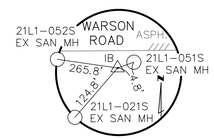


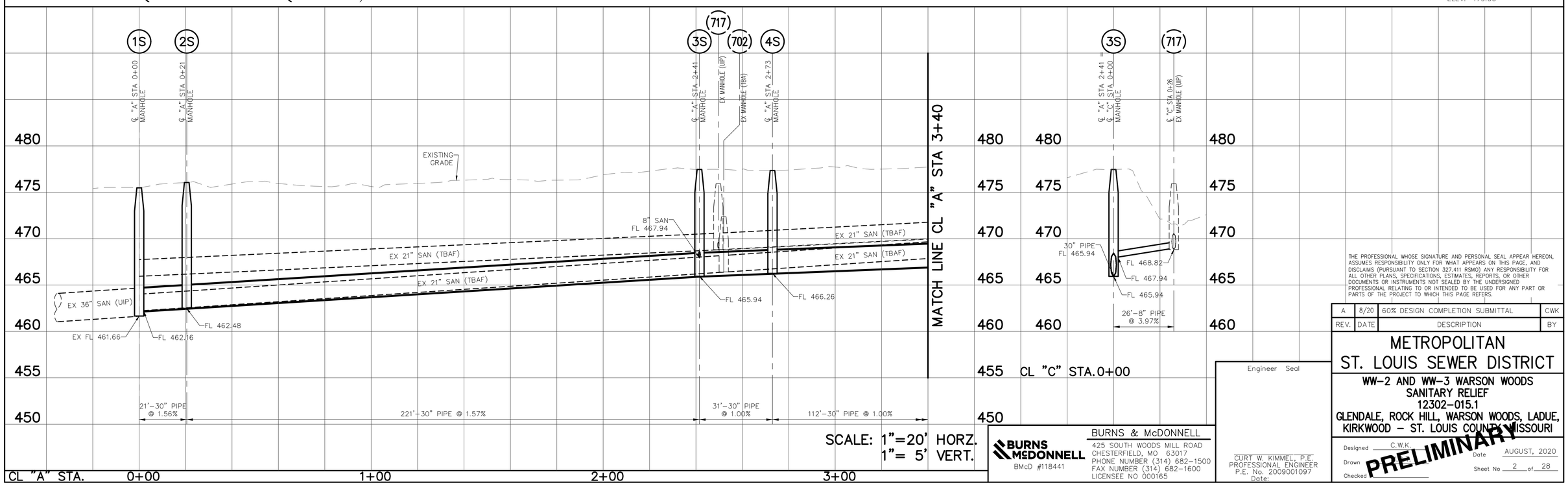


REFERENCE TIE
CONTROL POINT #21
ELEV.=479.90

POINT TABLE				
CONTROL POINT #	MSD ID #	NORTHING	EASTING	DESCRIPTION
21		1012768.44	855475.32	IRON ROD

EXISTING STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
700	700	21L1-051S	1012770.06	855479.86	EX SAN MH
701	701	21L1-021S	1012674.01	855393.69	EX SAN MH
716	716	21L1-027S	1012664.55	855389.32	EX SAN MH
717	717	21L4-133S	1012539.26	855198.52	EX SAN MH
718	718	21L4-132S	1012493.75	855210.68	EX SAN MH

NEW STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
701	1S	21L1-021S	1012674.01	855393.69	MANHOLE
	2S		1012685.45	855376.67	MANHOLE
	3S		1012564.35	855191.82	MANHOLE
	4S		1012547.09	855165.48	MANHOLE



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12302-015.1
GLENDALE, ROCK HILL, WARSON WOODS, LADUE, KIRKWOOD – ST. LOUIS COUNTY, MISSOURI

Engineer Seal

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LICENSEE NO 000165

Designed C.W.K.
Drawn
Checked
PRELIMINARY
Date AUGUST, 2020
Sheet No 2 of 28

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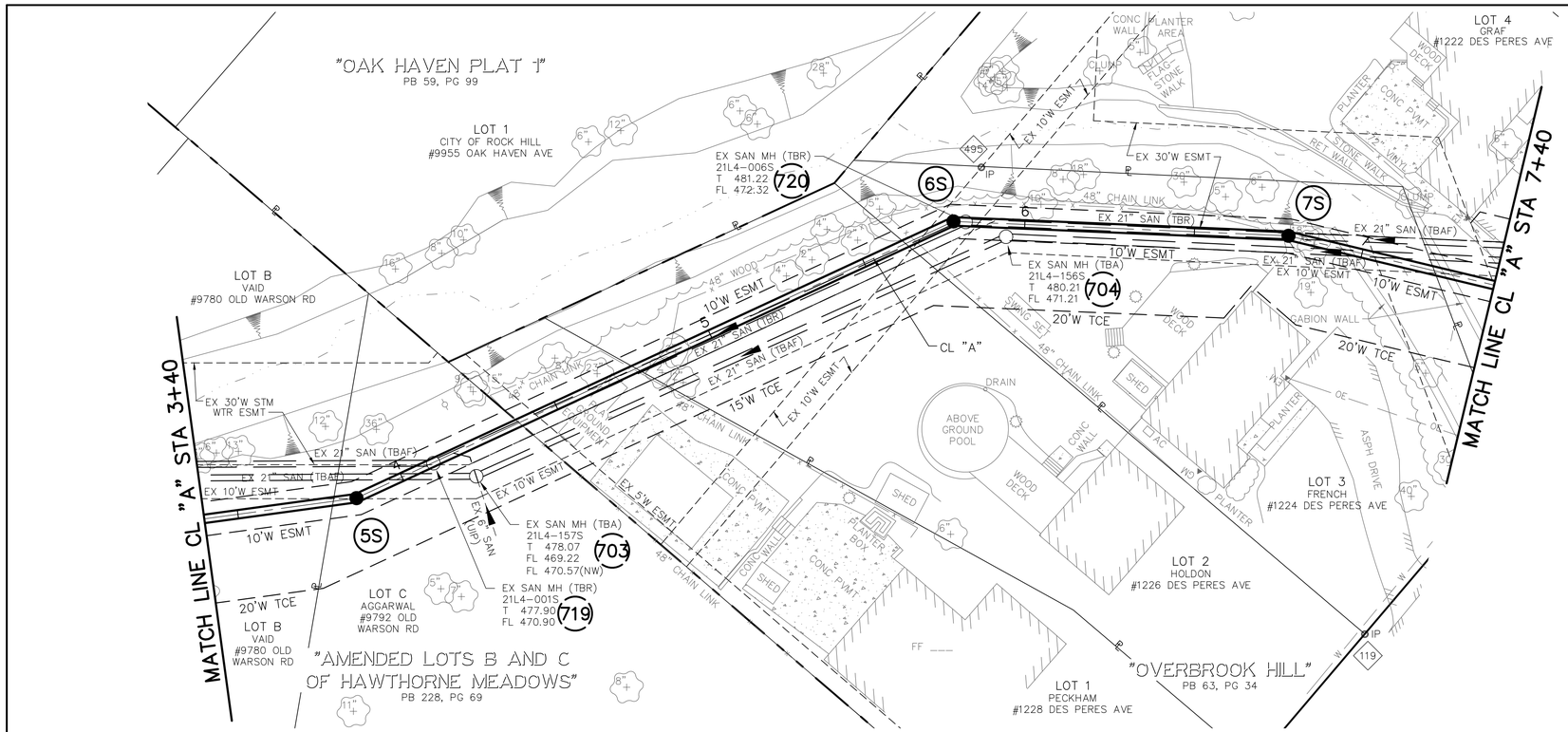
BASE MAP: 21-L-1, 21-L-4

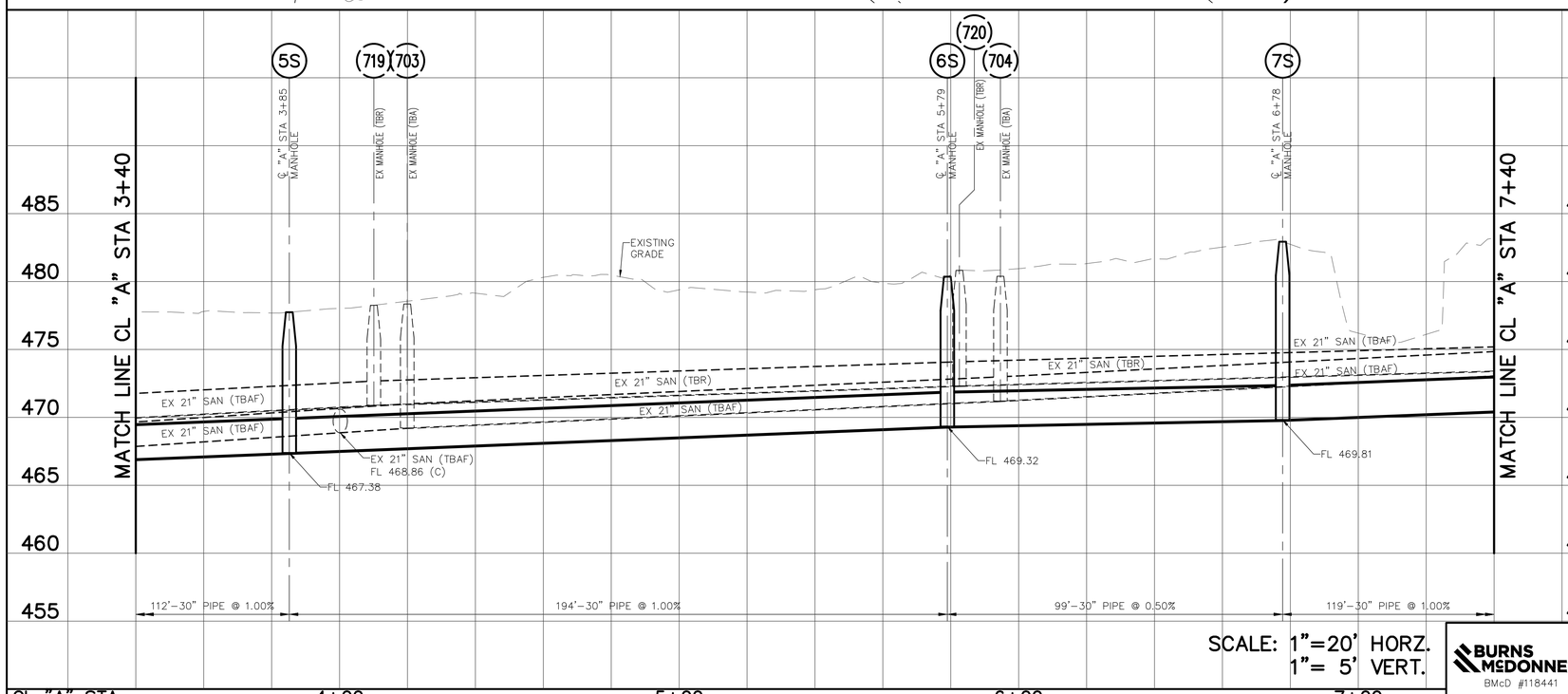
12302-[P1]



POINT TABLE				
CONTROL POINT #	MSD ID #	NORTHING	EASTING	DESCRIPTION
119		1012344.24	854810.44	IRON PIPE
495		1012291.14	854980.22	IRON PIPE

EXISTING STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
703	703	21L4-157S	1012448.74	855054.78	EX SAN MH
704	704	21L4-156S	1012304.27	854962.95	EX SAN MH
719	719	21L4-001S	1012452.43	855067.45	EX SAN MH
720	720	21L4-006S	1012307.14	854975.30	EX SAN MH

NEW STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
	5S		1012473.46	855080.77	MANHOLE
	6S		1012308.97	854978.36	MANHOLE
	7S		1012258.45	854893.52	MANHOLE



SCALE: 1"=20' HORZ.
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ST. LOUIS SEWER DISTRICT

WW-2 AND WW-3 WARSON WOODS
SANITARY RELIEF
12302-015.1
GLENDALE, ROCK HILL, WARSON WOODS, LADUE,
KIRKWOOD – ST. LOUIS COUNTY, MISSOURI

Engineer Seal

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Designed C.W.K.
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Sheet No 3 of 28

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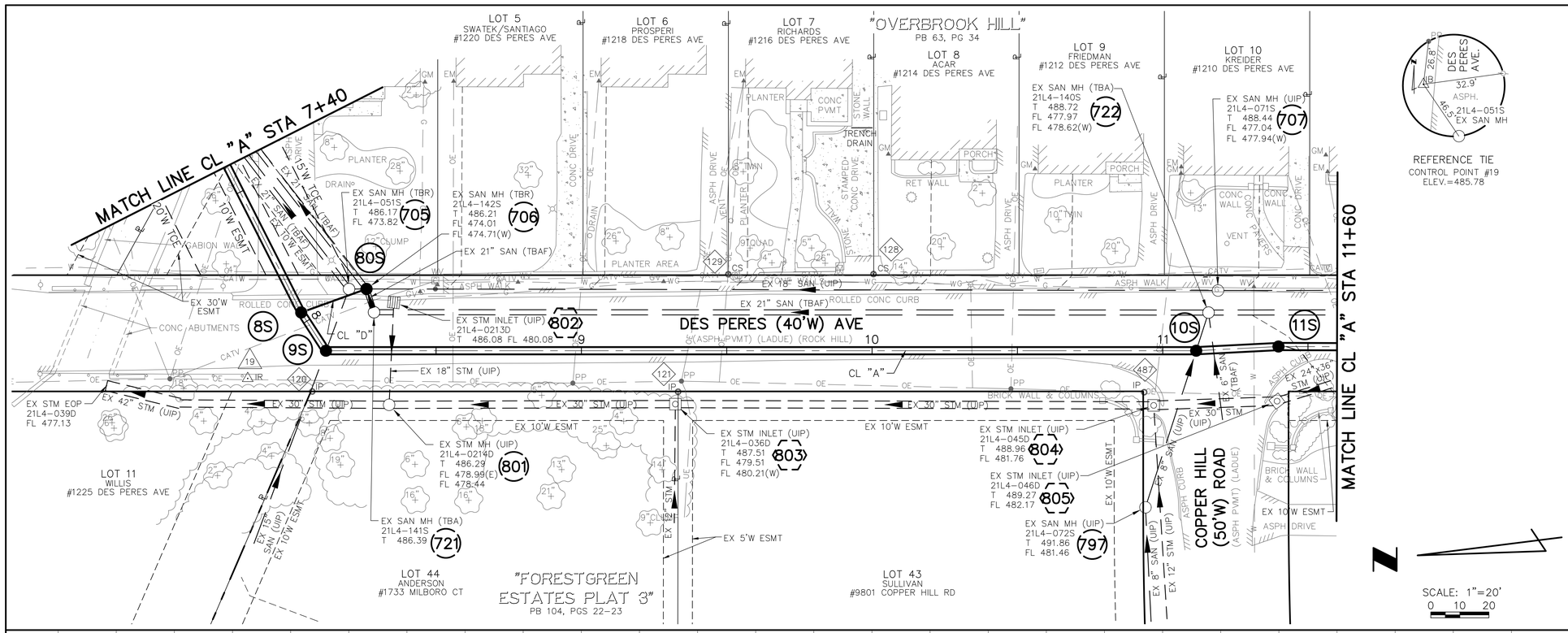
BASE MAP: 21-L-4

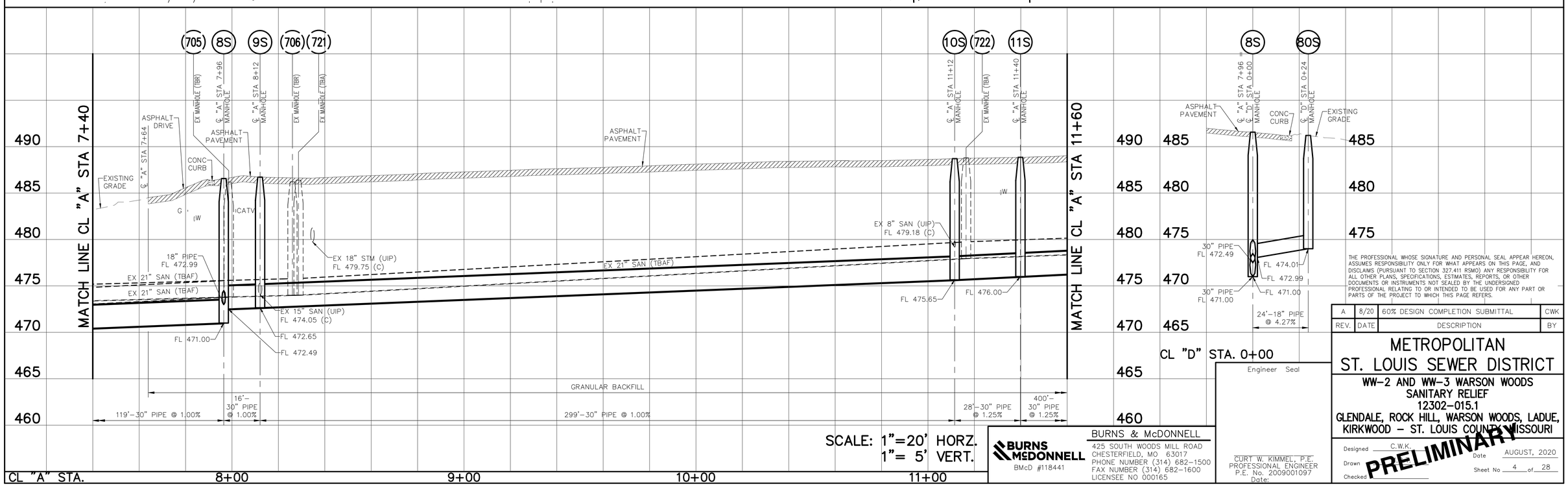
12302-[P2]



POINT TABLE				
CONTROL POINT #	MSD ID #	NORTHING	EASTING	DESCRIPTION
19		1012239.43	854761.55	IRON ROD
120		1012217.95	854754.34	IRON PIPE
121		1012093.08	854738.62	IRON PIPE
128		1012021.35	854770.44	SPINDLE
129		1012070.91	854776.57	SPINDLE
487		1011934.00	854718.54	IRON PIPE

EXISTING STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
705	705	21L4-051S	1012201.04	854787.73	EX SAN MH
706	706	21L4-142S	1012195.05	854787.03	EX SAN MH
707	707	21L4-071S	1011904.45	854750.10	EX SAN MH
721	721	21L4-141S	1012193.49	854778.75	EX SAN MH
722	722	21L4-140S	1011908.62	854742.97	EX SAN MH
797	797	21L4-072S	1011938.48	854679.18	EX SAN MH
801	801	21L4-0214D	1012192.29	854746.51	EX STM MH
802	802	21L4-0213D	1012186.30	854781.29	EX STM INLET
803	803	21L4-036D	1012094.54	854734.51	EX STM INLET
804	804	21L4-045D	1011931.32	854713.63	EX STM INLET
805	805	21L4-046D	1011889.01	854709.81	EX STM INLET

NEW STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
	8S		1012218.35	854781.77	MANHOLE
	9S		1012211.54	854767.67	MANHOLE
	10S		1011914.47	854730.47	MANHOLE
	11S		1011886.20	854728.39	MANHOLE
706	80S	21L4-142S	1012195.05	854787.03	MANHOLE



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METROPOLITAN ST. LOUIS SEWER DISTRICT

WW-2 AND WW-3 WARSON WOODS SANITARY RELIEF
12302-015.1
GLENDALE, ROCK HILL, WARSON WOODS, LADUE, KIRKWOOD – ST. LOUIS COUNTY, MISSOURI

Engineer Seal

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FAX NUMBER (314) 682-1600
LICENSEE NO 000165

BURNS McDONNELL
BMcD #118441

Designed C.W.K.
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Date AUGUST, 2020
Sheet No 4 of 28

BASE MAP: 21-L-4

12302-[P3]

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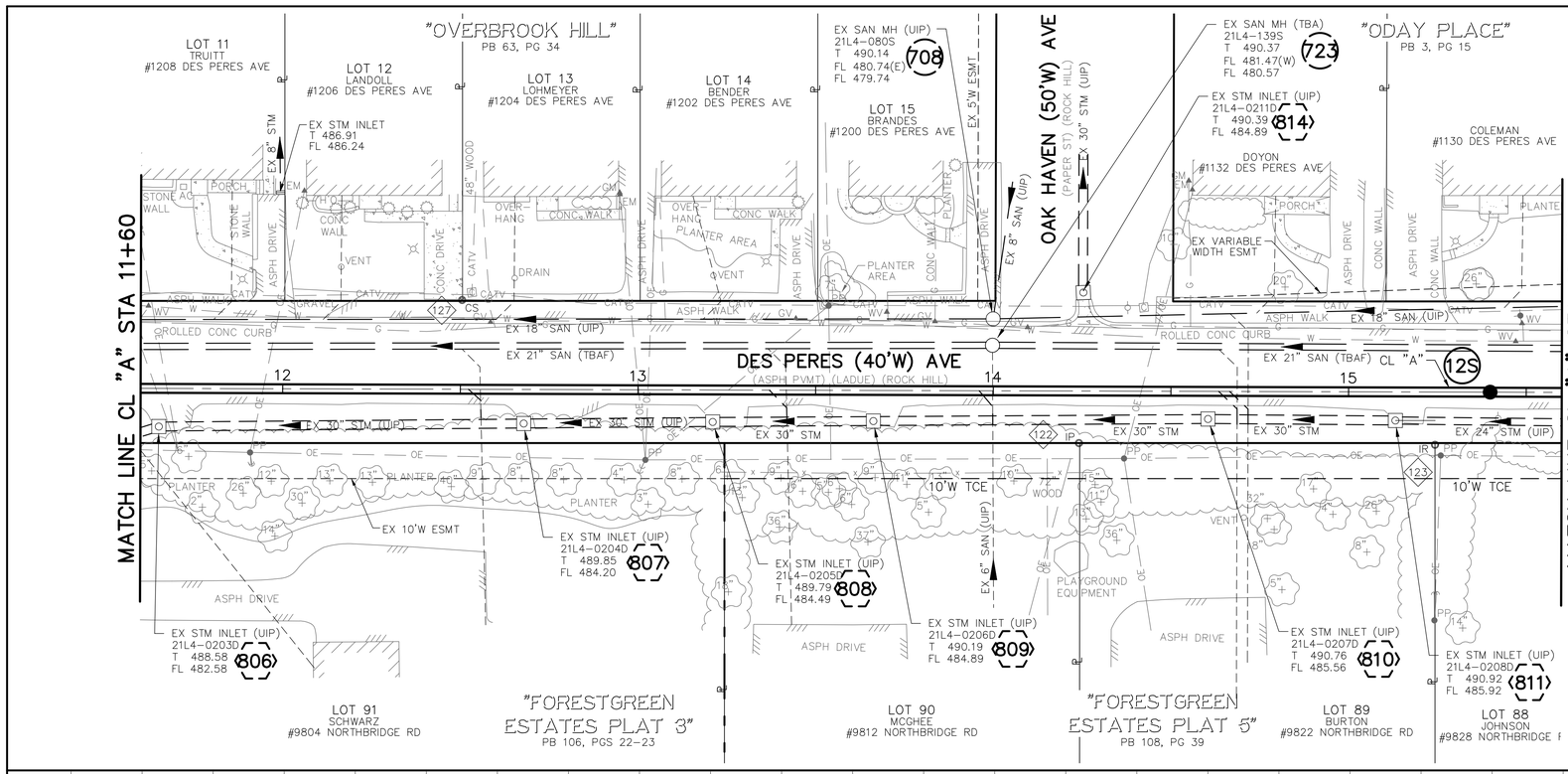
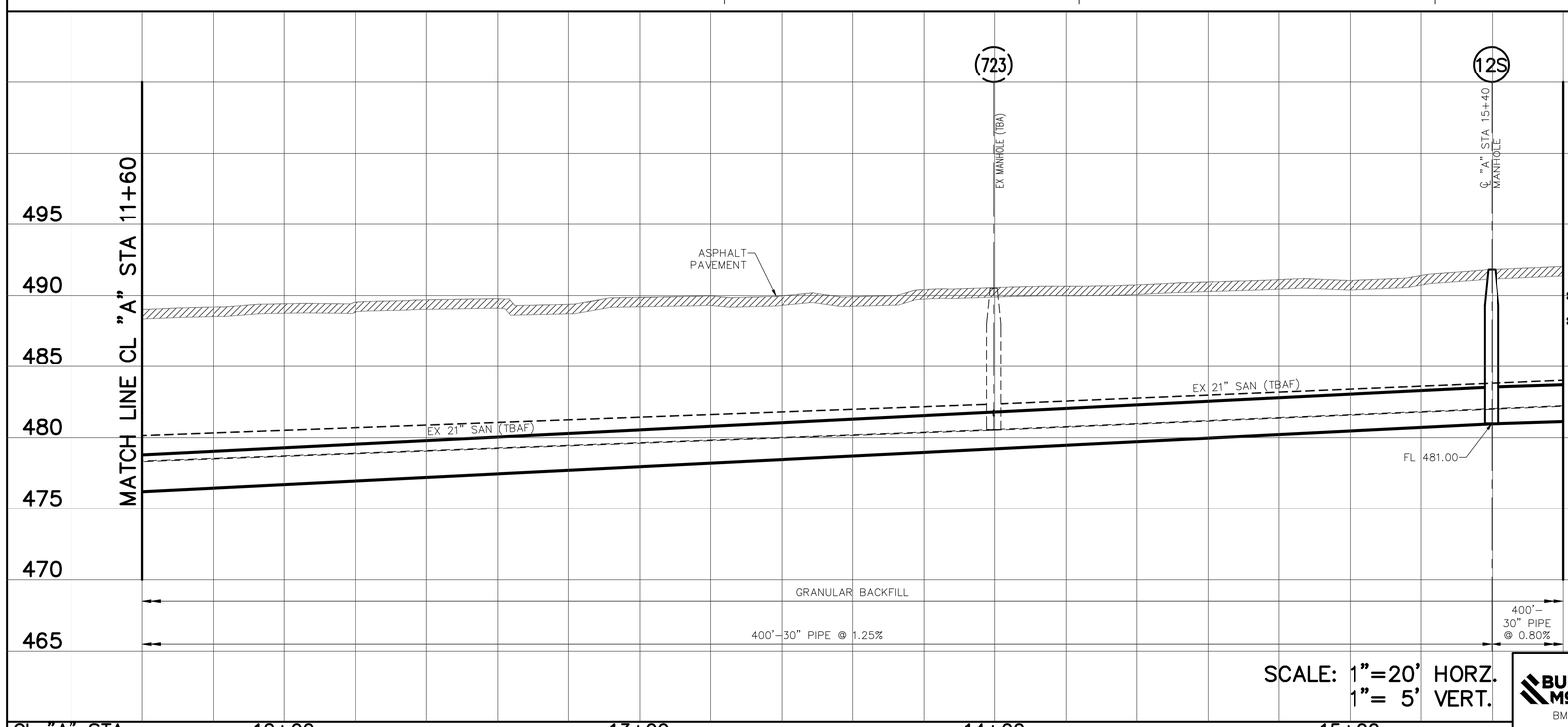


POINT TABLE				
CONTROL POINT #	MSD ID #	NORTHING	EASTING	DESCRIPTION
122		1011606.06	854677.75	IRON PIPE
123		1011506.68	854664.82	IRON ROD
127		1011773.34	854739.27	SPINDLE

EXISTING STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
708	708	21L4-080S	1011625.69	854715.42	EX SAN MH
723	723	21L4-139S	1011626.80	854708.08	EX SAN MH
806	806	21L4-0203D	1011862.47	854714.53	EX STM INLET
807	807	21L4-0204D	1011760.46	854702.62	EX STM INLET
808	808	21L4-0205D	1011707.61	854696.44	EX STM INLET
809	809	21L4-0206D	1011662.71	854691.07	EX STM INLET
810	810	21L4-0207D	1011569.18	854679.95	EX STM INLET
811	811	21L4-0208D	1011516.90	854672.98	EX STM INLET
814	814	21L4-0211D	1011599.42	854720.24	EX STM INLET

NEW STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
	12S		1011489.44	854677.58	MANHOLE



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Sheet No 5 of 28

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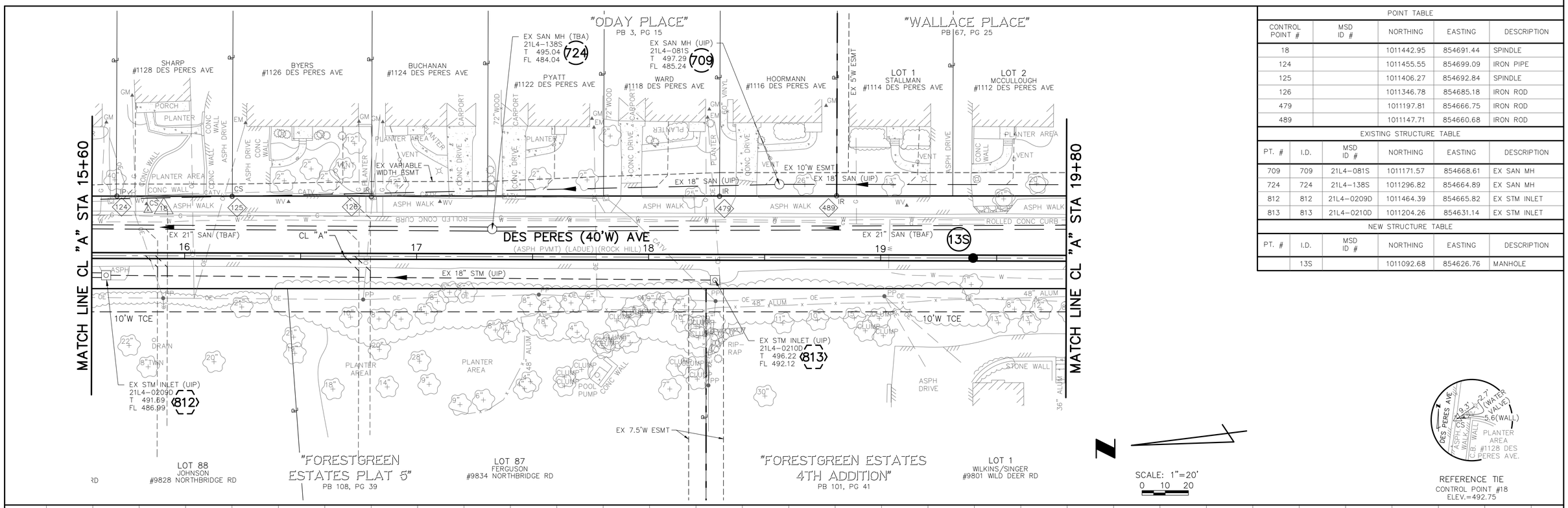
BASE MAP: 21-L-4

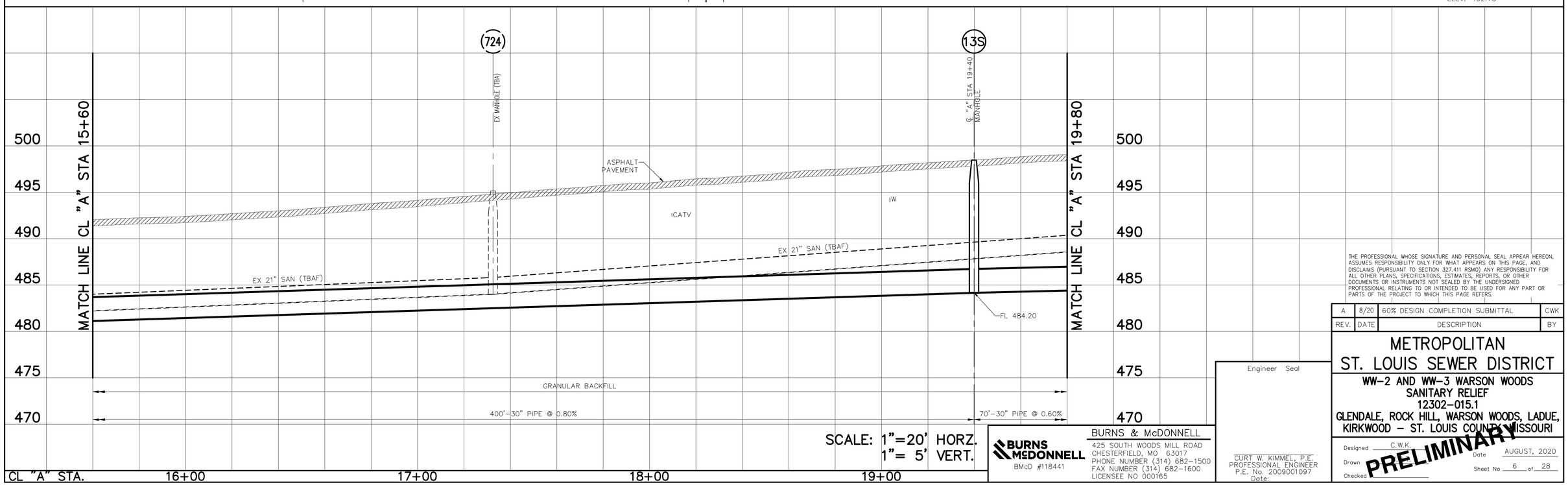
12302-[P4]



POINT TABLE				
CONTROL POINT #	MSD ID #	NORTHING	EASTING	DESCRIPTION
18		1011442.95	854691.44	SPINDLE
124		1011455.55	854699.09	IRON PIPE
125		1011406.27	854692.84	SPINDLE
126		1011346.78	854685.18	IRON ROD
479		1011197.81	854666.75	IRON ROD
489		1011147.71	854660.68	IRON ROD

EXISTING STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
709	709	21L4-081S	1011171.57	854668.61	EX SAN MH
724	724	21L4-138S	1011296.82	854664.89	EX SAN MH
812	812	21L4-0209D	1011464.39	854665.82	EX STM INLET
813	813	21L4-0210D	1011204.26	854631.14	EX STM INLET

NEW STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
	13S		1011092.68	854626.76	MANHOLE



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Designed C.W.K.
Drawn
Checked

PRELIMINARY

Date AUGUST, 2020
Sheet No 6 of 28

BASE MAP: 21-L-4

12302-[P5]

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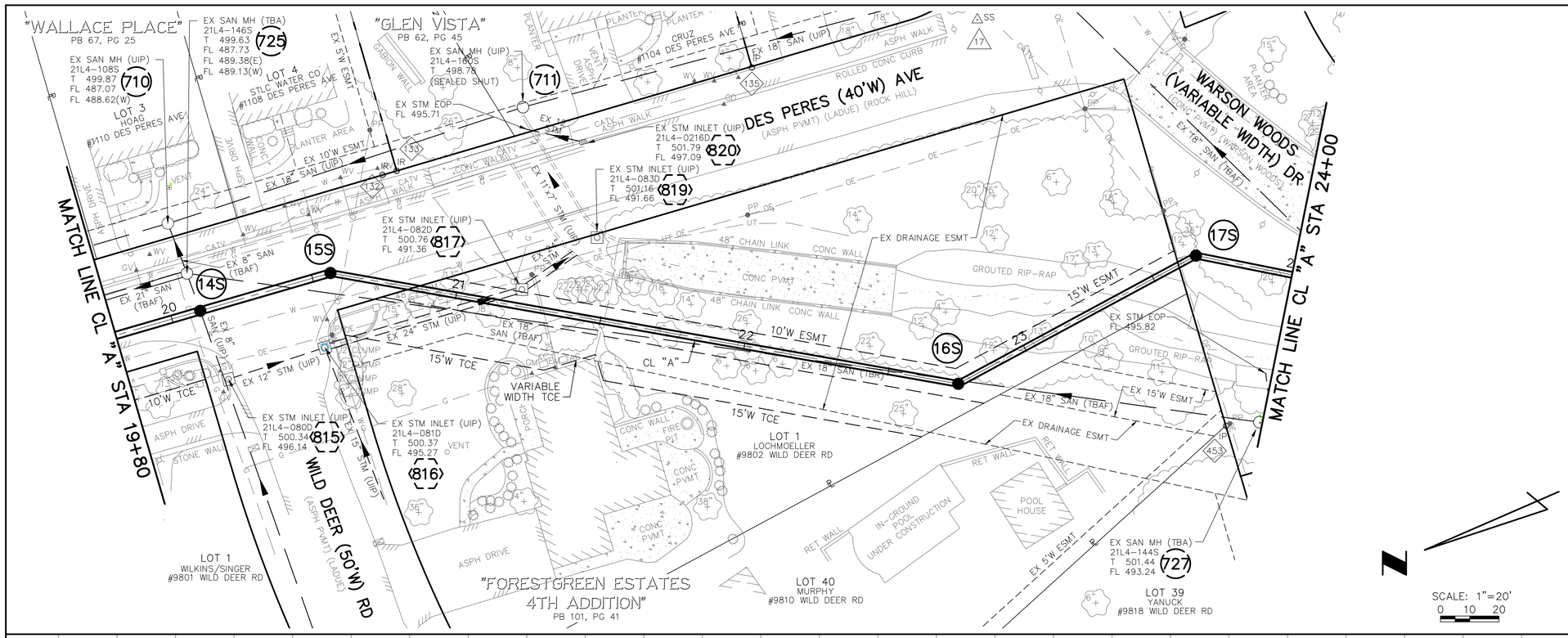
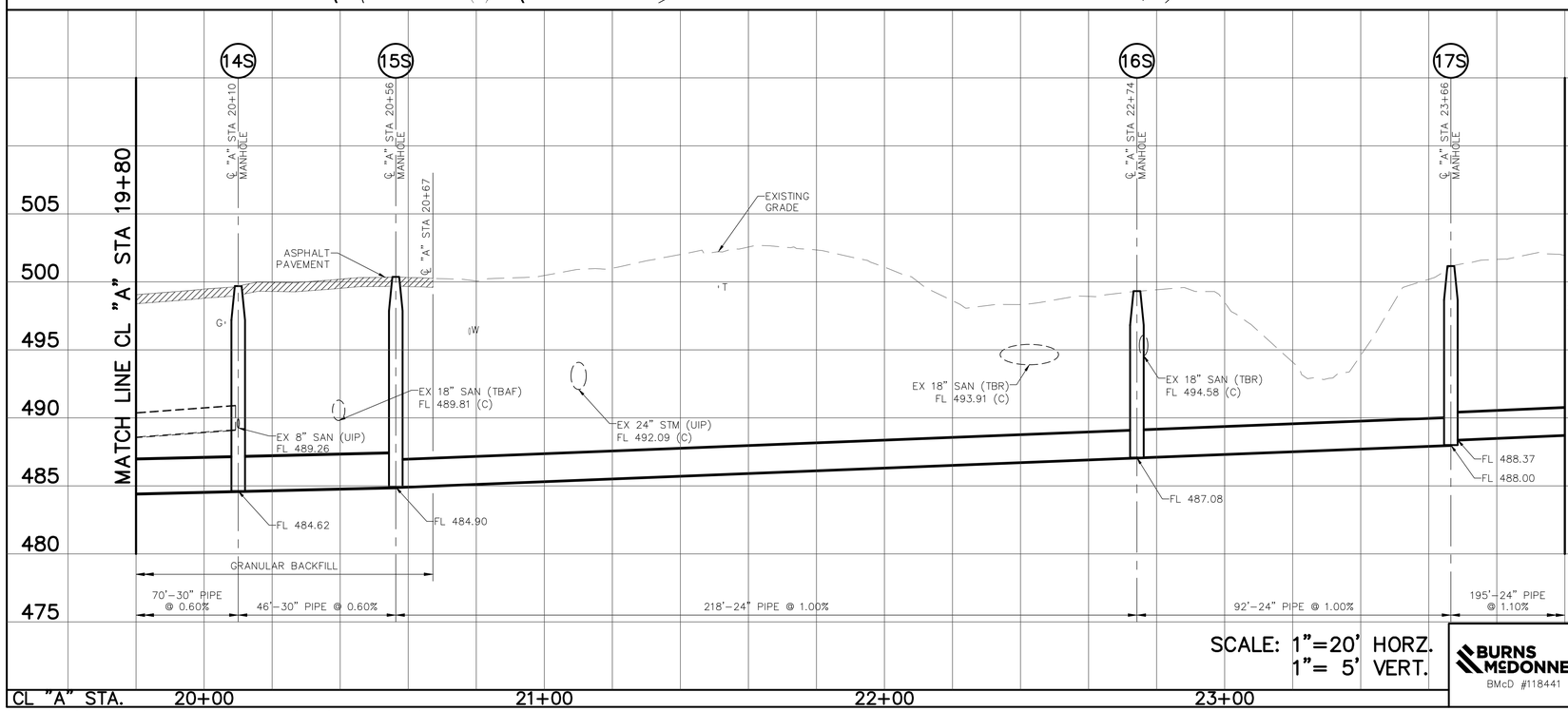


REFERENCE TIE
CONTROL POINT #17
ELEV.=503.14

POINT TABLE				
CONTROL POINT #	MSD ID #	NORTHING	EASTING	DESCRIPTION
17		1010739.88	854603.13	CUT CROSS
132		1010947.41	854635.59	IRON ROD
133		1010942.43	854634.94	IRON ROD
135		1010817.04	854618.94	IRON PIPE
453		1010717.27	854441.94	IRON PIPE

EXISTING STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
710	710	21L4-108S	1011021.28	854649.65	EX SAN MH
711	711	21L4-160S	1010894.18	854637.68	EX SAN MH
725	725	21L4-146S	1011022.11	854631.40	EX SAN MH
727	727	21L4-144S	1010706.37	854438.58	EX SAN MH
815	815	21L4-080D	1011023.53	854592.56	EX STM INLET
816	816	21L4-081D	1010989.04	854589.37	EX STM INLET
817	817	21L4-082D	1010919.35	854580.66	EX STM INLET
819	819	21L4-083D	1010888.70	854586.69	EX STM INLET
820	820	21L4-0216D	1010879.09	854617.69	EX STM INLET

NEW STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
	14S		1011023.06	854617.84	MANHOLE
	15S		1010977.11	854611.95	MANHOLE
	16S		1010795.51	854491.65	MANHOLE
	17S		1010703.54	854499.43	MANHOLE



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A	8/20	60% DESIGN COMPLETION SUBMITTAL	CWK

METROPOLITAN ST. LOUIS SEWER DISTRICT

WW-2 AND WW-3 WARSON WOODS SANITARY RELIEF
12302-015.1
GLENDALE, ROCK HILL, WARSON WOODS, LADUE, KIRKWOOD – ST. LOUIS COUNTY, MISSOURI

Engineer Seal

CURT W. KIMMEL, P.E.
PROFESSIONAL ENGINEER
P.E. No. 2009001097
Date:

BURNS & McDONNELL
BMcD #118441
425 SOUTH WOODS MILL ROAD
CHESTERFIELD, MO 63017
PHONE NUMBER (314) 682-1500
FAX NUMBER (314) 682-1600
LICENSEE NO 000165

Designed C.W.K.
Drawn
Checked
PRELIMINARY
Date AUGUST, 2020
Sheet No 7 of 28

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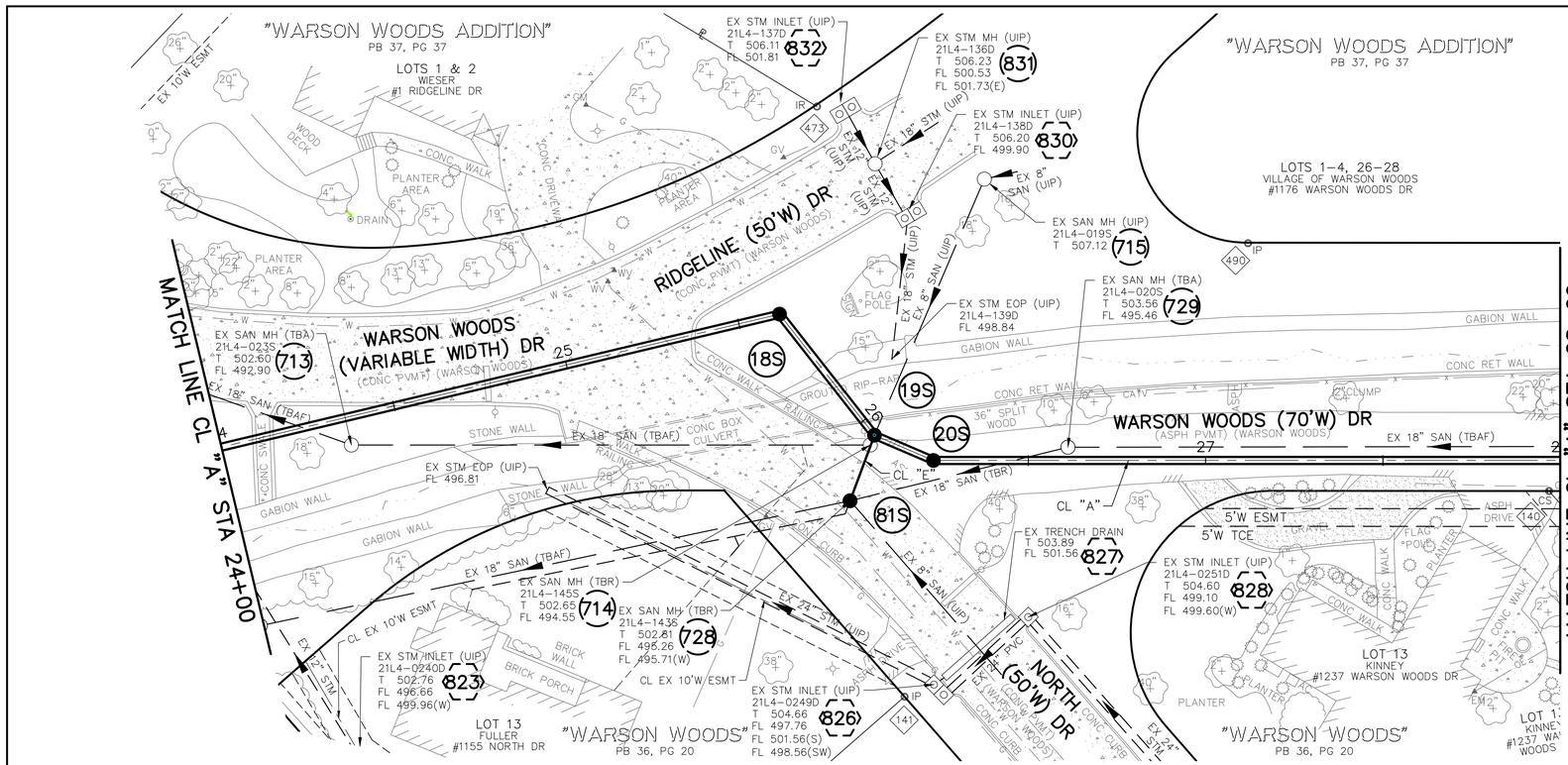
BASE MAP: 21-L-4

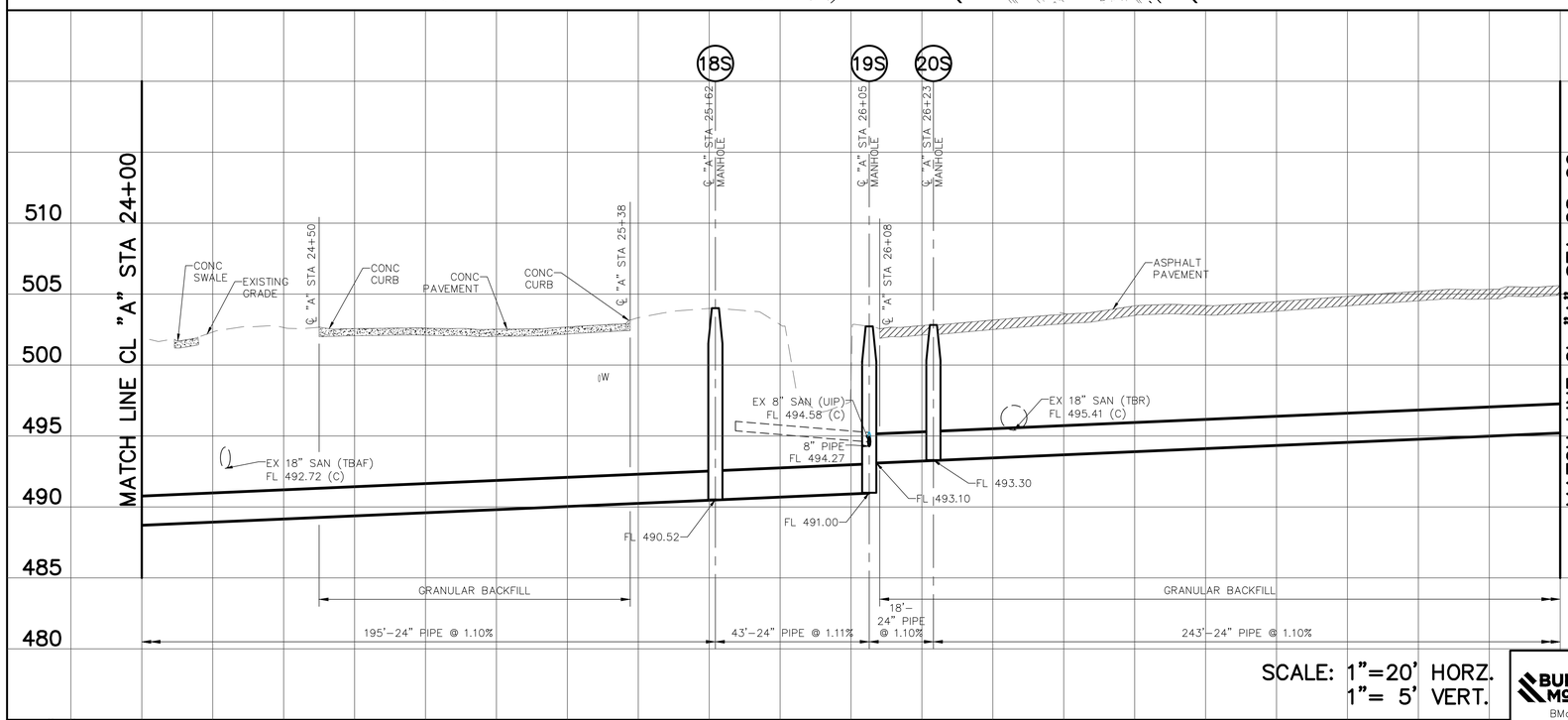
12302-[P6]



POINT TABLE				
CONTROL POINT #	MSD ID #	NORTHING	EASTING	DESCRIPTION
140		1010436.01	854192.75	SPINDLE
141		1010600.32	854289.70	IRON PIPE
473		1010492.55	854418.99	IRON ROD
490		1010440.37	854302.65	IRON PIPE

EXISTING STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
713	713	21L4–023S	1010651.21	854453.34	EX SAN MH
714	714	21L4–145S	1010553.78	854344.20	EX SAN MH
715	715	21L4–019S	1010476.41	854370.15	EX SAN MH
728	728	21L4–143S	1010569.32	854337.98	EX SAN MH
729	729	21L4–020S	1010517.13	854302.20	EX SAN MH
823	823	21L4–0240D	1010715.08	854393.16	EX STM INLET
826	826	21L4–0249D	1010592.26	854285.80	EX STM INLET
828	828	21L4–0251D	1010560.34	854278.64	EX STM INLET
830	830	21L4–138D	1010499.59	854379.55	EX STM INLET
831	831	21L4–136D	1010493.69	854396.03	EX STM MH
832	832	21L4–137D	1010489.90	854412.84	EX STM INLET

NEW STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
	18S		1010543.29	854387.87	MANHOLE
	19S		1010550.94	854345.16	MANHOLE
	20S		1010545.19	854328.01	MANHOLE
728	21L4–143S		1010569.32	854337.98	MANHOLE



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12302–015.1
GLENDALE, ROCK HILL, WARSON WOODS, LADUE, KIRKWOOD – ST. LOUIS COUNTY, MISSOURI

Designed C.W.K.
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Checked
PRELIMINARY
Date AUGUST, 2020
Sheet No 8 of 28

Engineer Seal

CURT W. KIMMEL, P.E.
PROFESSIONAL ENGINEER
P.E. No. 2009001097
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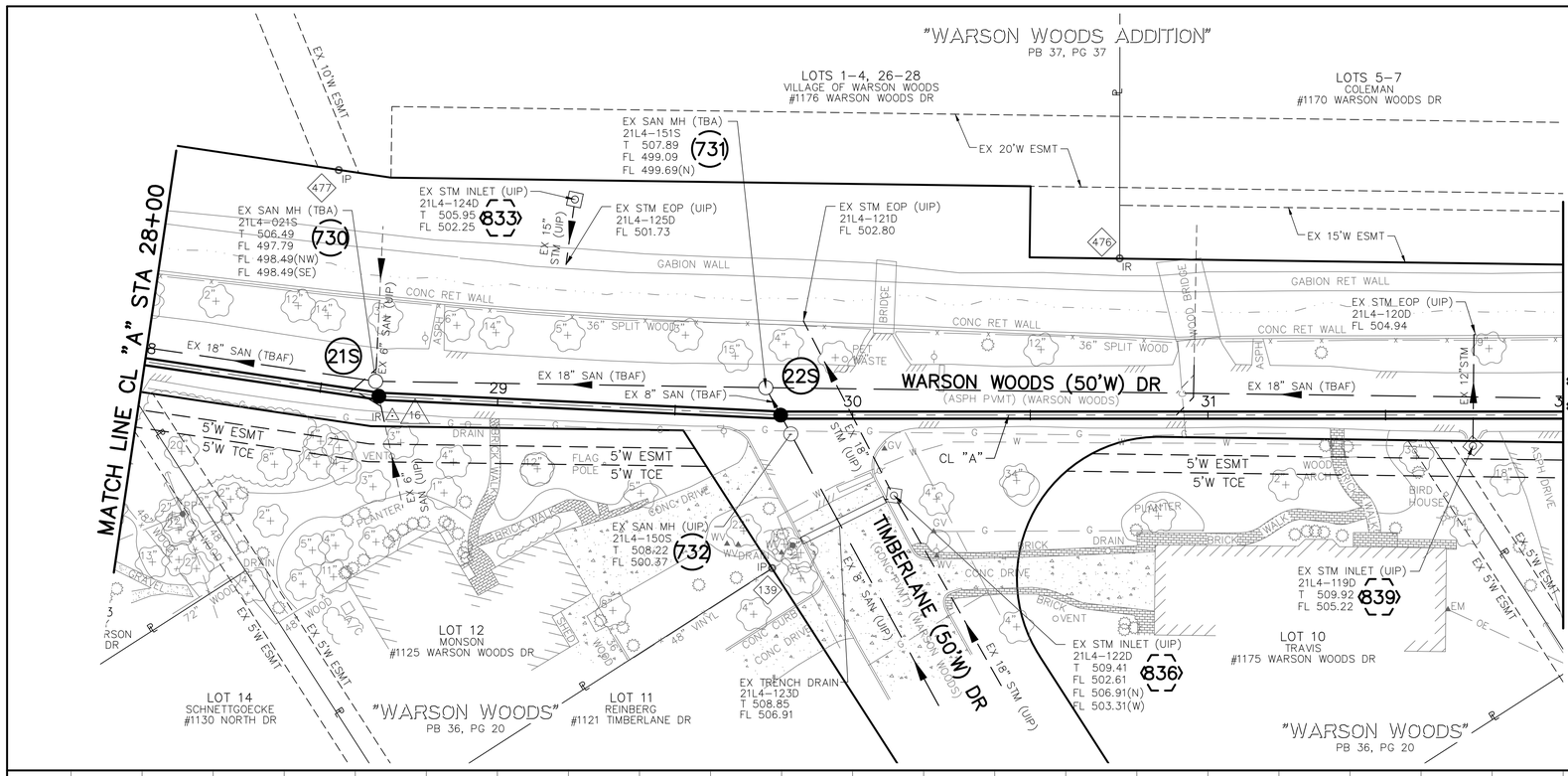
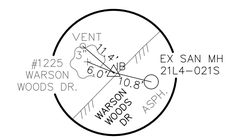
BASE MAP: 21–L–4

12302–[P7]



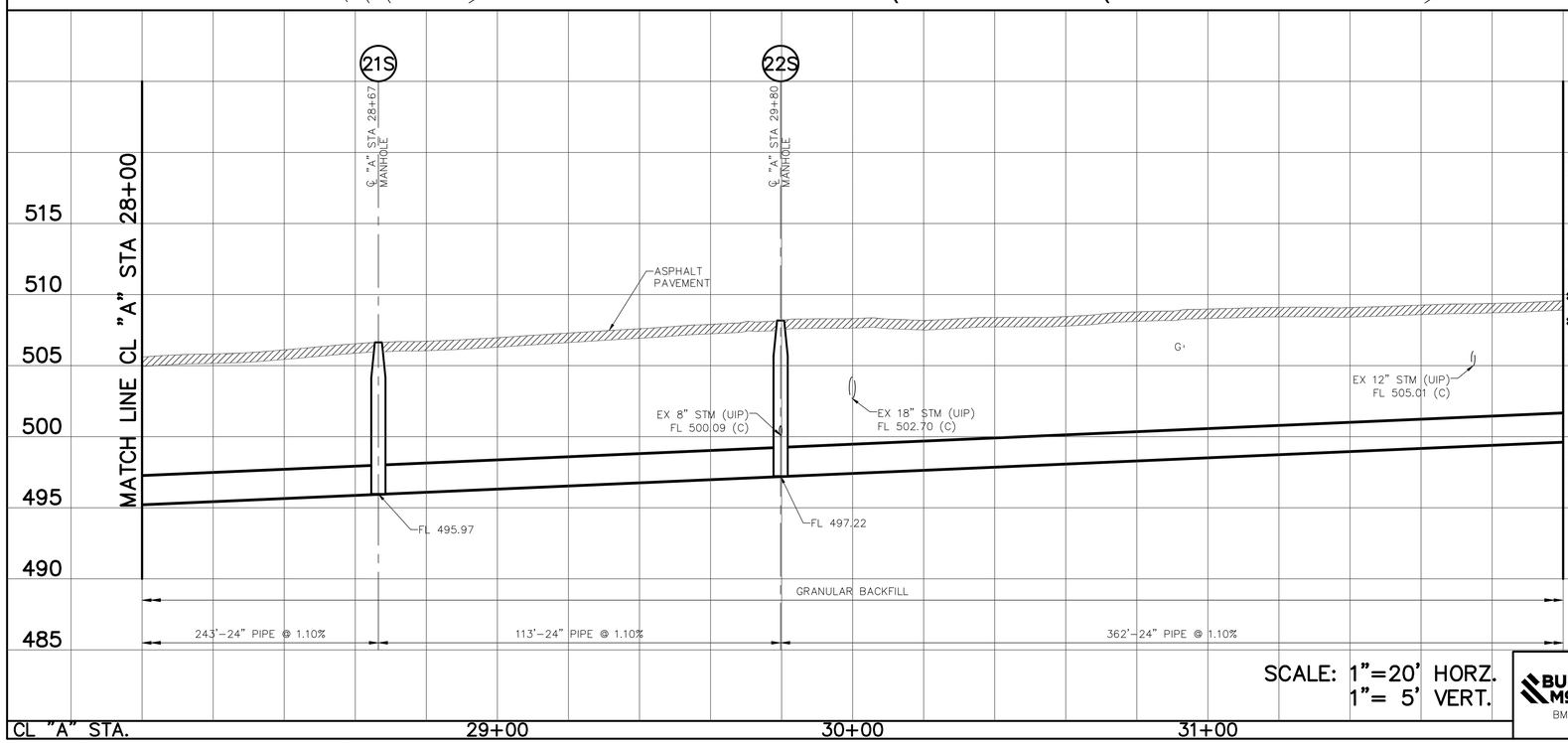


REFERENCE TIE
CONTROL POINT #16
ELEV.=506.84

POINT TABLE				
CONTROL POINT #	MSD ID #	NORTHING	EASTING	DESCRIPTION
16		1010383.80	854139.81	IRON ROD
139		1010329.15	854038.46	IRON PIPE
476		1010198.20	854042.75	IRON ROD
477		1010351.09	854202.61	IRON PIPE

EXISTING STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
730	730	21L4–021S	1010381.18	854150.30	EX SAN MH
731	731	21L4–151S	1010298.00	854078.60	EX SAN MH
732	732	21L4–150S	1010300.93	854064.09	EX SAN MH
833	833	21L4–124D	1010305.34	854153.67	EX STM INLET
836	836	21L4–122D	1010289.74	854032.19	EX STM INLET
839	839	21L4–119D	1010155.66	853938.55	EX STM INLET

NEW STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
	21S		1010383.18	854146.50	MANHOLE
	22S		1010299.74	854069.99	MANHOLE



SCALE: 1"=20' HORZ.
1"= 5' VERT.

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Designed C.W.K.
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Date AUGUST, 2020
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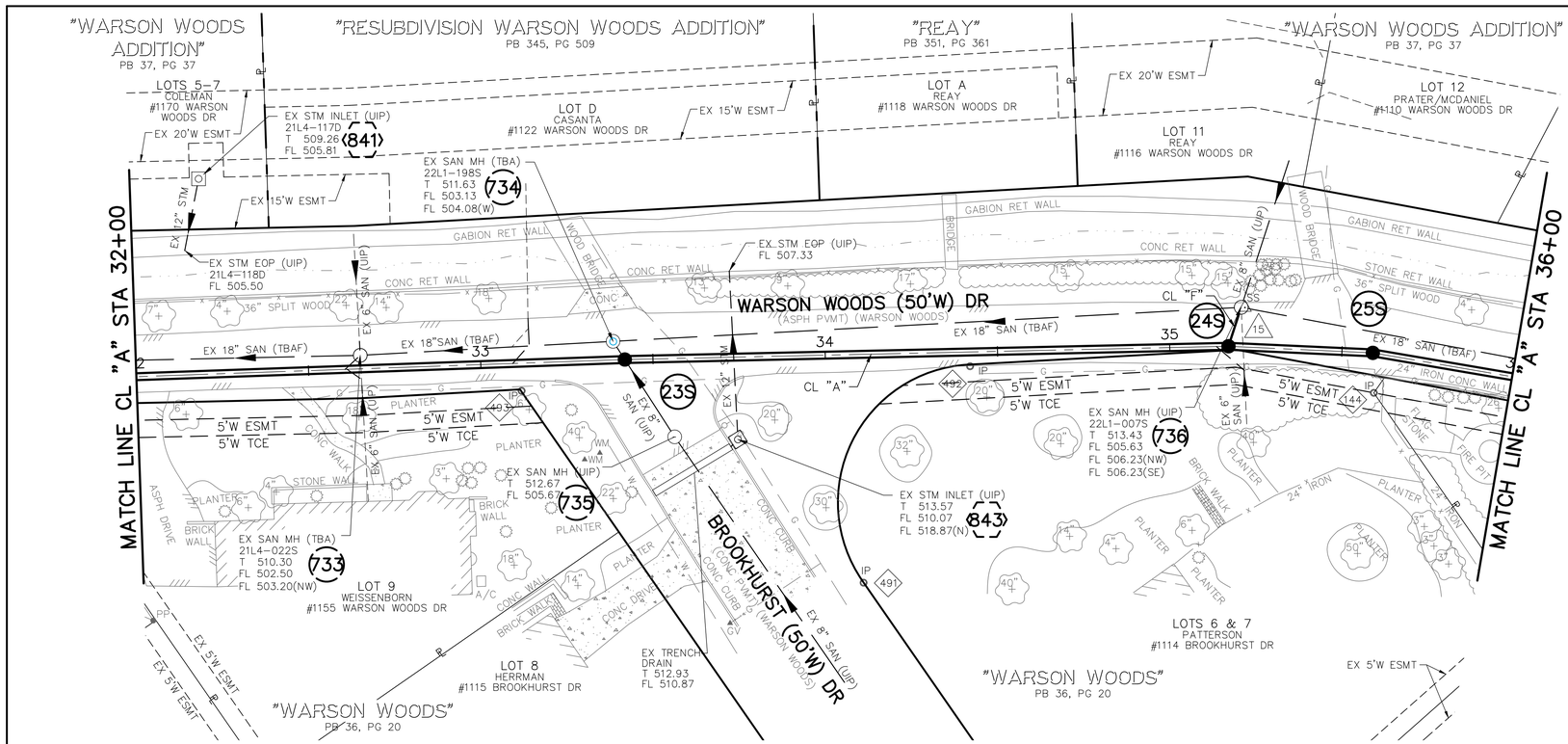
BASE MAP: 21–L–4

12302–[P8]

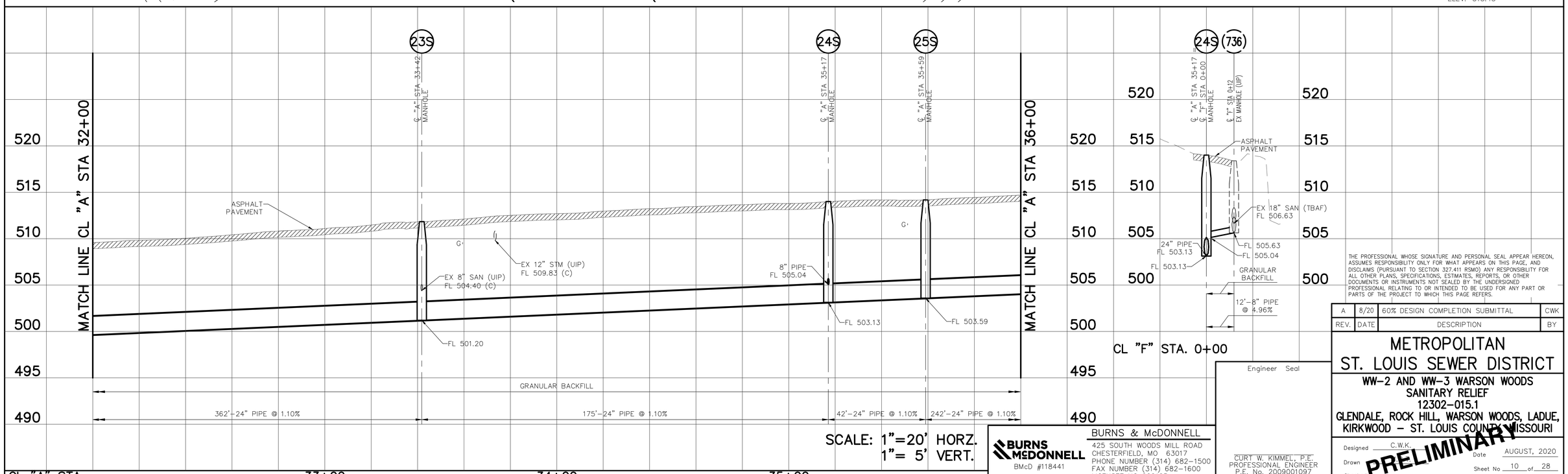


POINT TABLE				
CONTROL POINT #	MSD ID #	NORTHING	EASTING	DESCRIPTION
15		1009877.53	853729.28	CUT CROSS
144		1009866.17	853685.90	IRON PIPE
491		1010013.22	853743.63	IRON PIPE
492		1009948.32	853769.80	IRON PIPE
493		1010050.04	853851.29	IRON PIPE

EXISTING STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
733	733	21L4-022S	1010078.06	853890.19	EX SAN MH
734	734	22L1-198S	1010020.69	853844.29	EX SAN MH
735	735	--	1010025.84	853811.72	EX SAN MH
736	736	22L1-007S	1009878.31	853730.06	EX SAN MH
841	841	21L4-117D	1010078.85	853959.63	EX STM INLET
843	843	--	1010012.68	853798.92	EX STM INLET

NEW STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
	23S		1010021.67	853838.08	MANHOLE
	24S		1009888.60	853724.10	MANHOLE
	25S		1009858.66	853694.74	MANHOLE

REFERENCE TIE
CONTROL POINT #15
ELEV.=513.43



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12302-015.1
GLENDALE, ROCK HILL, WARSON WOODS, LADUE, KIRKWOOD – ST. LOUIS COUNTY, MISSOURI

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Sheet No 10 of 28

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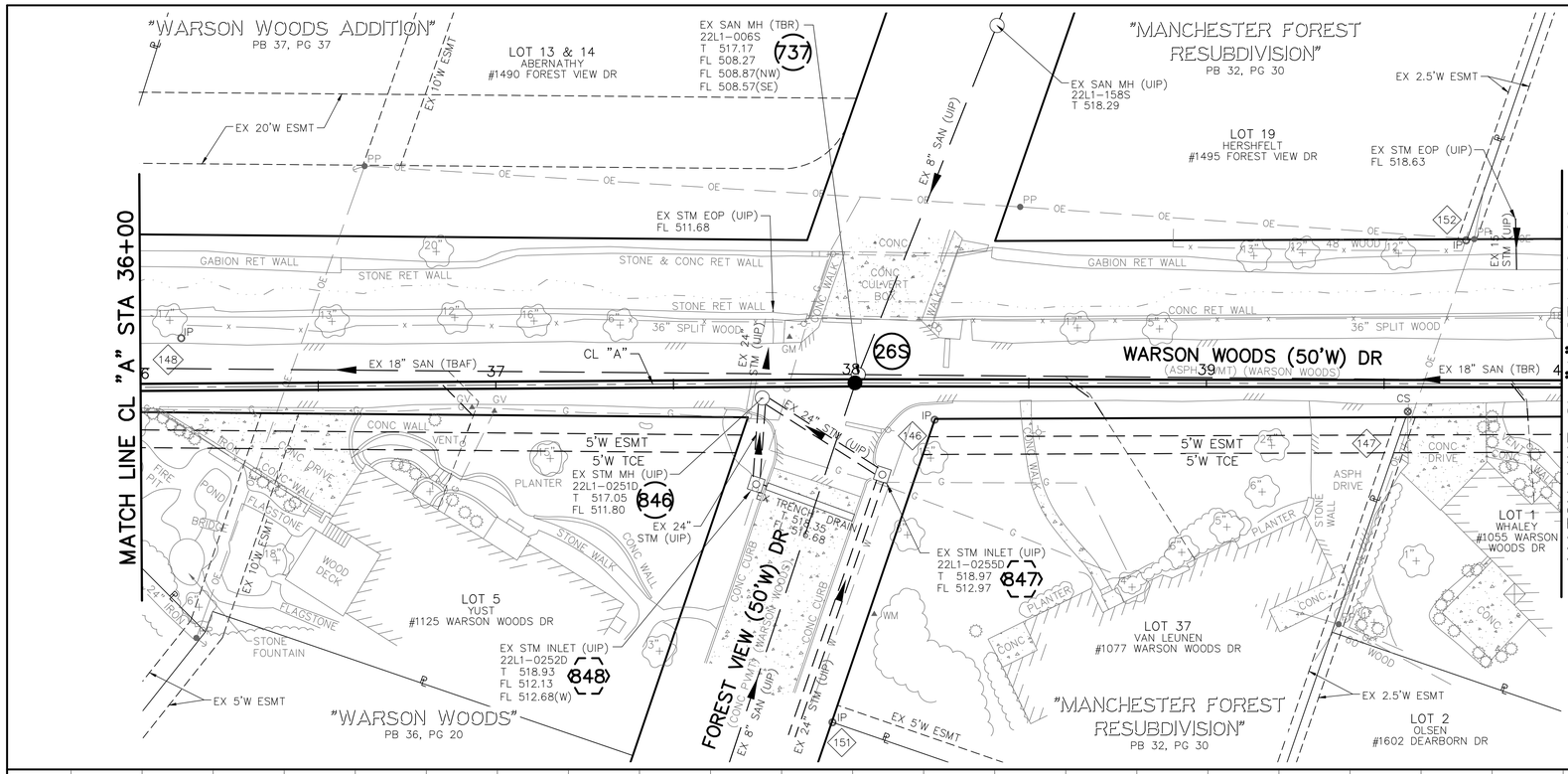
BASE MAP: 21-L-4, 22-L-1

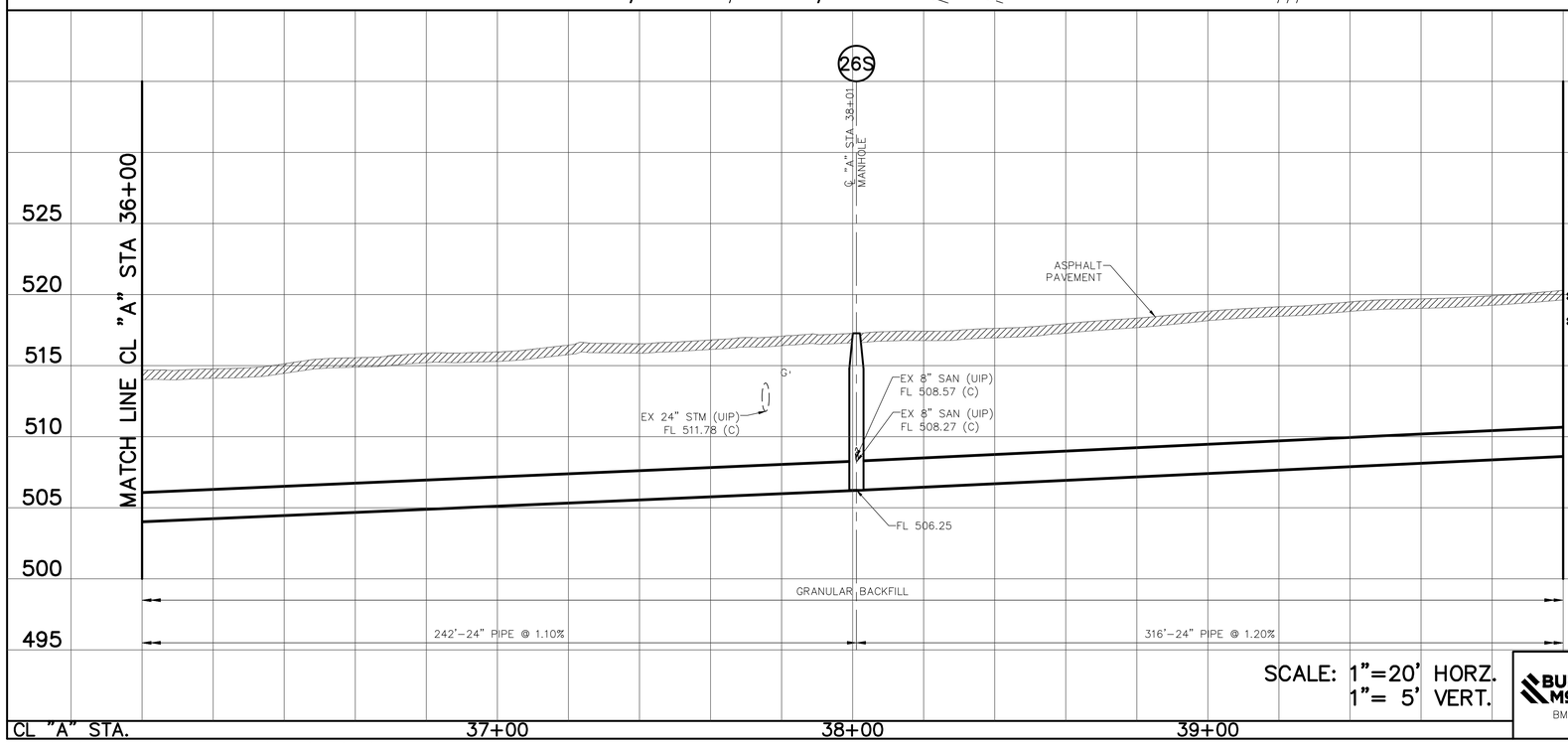
12302-[P9]



POINT TABLE				
CONTROL POINT #	MSD ID #	NORTHING	EASTING	DESCRIPTION
146		1009702.39	853481.10	IRON PIPE
147		1009618.39	853377.75	SPINDLE
151		1009787.12	853451.21	IRON PIPE
152		1009570.39	853394.58	IRON PIPE

EXISTING STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
737	737	22L1-006S	1009705.66	853505.88	EX SAN MH
846	846	22L1-0251D	1009727.50	853523.06	EX STM MH
847	847	22L1-0255D	1009723.62	853483.18	EX STM INLET
848	848	22L1-0252D	1009747.66	853509.45	EX STM INLET

NEW STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
	26S		1009708.06	853505.17	MANHOLE



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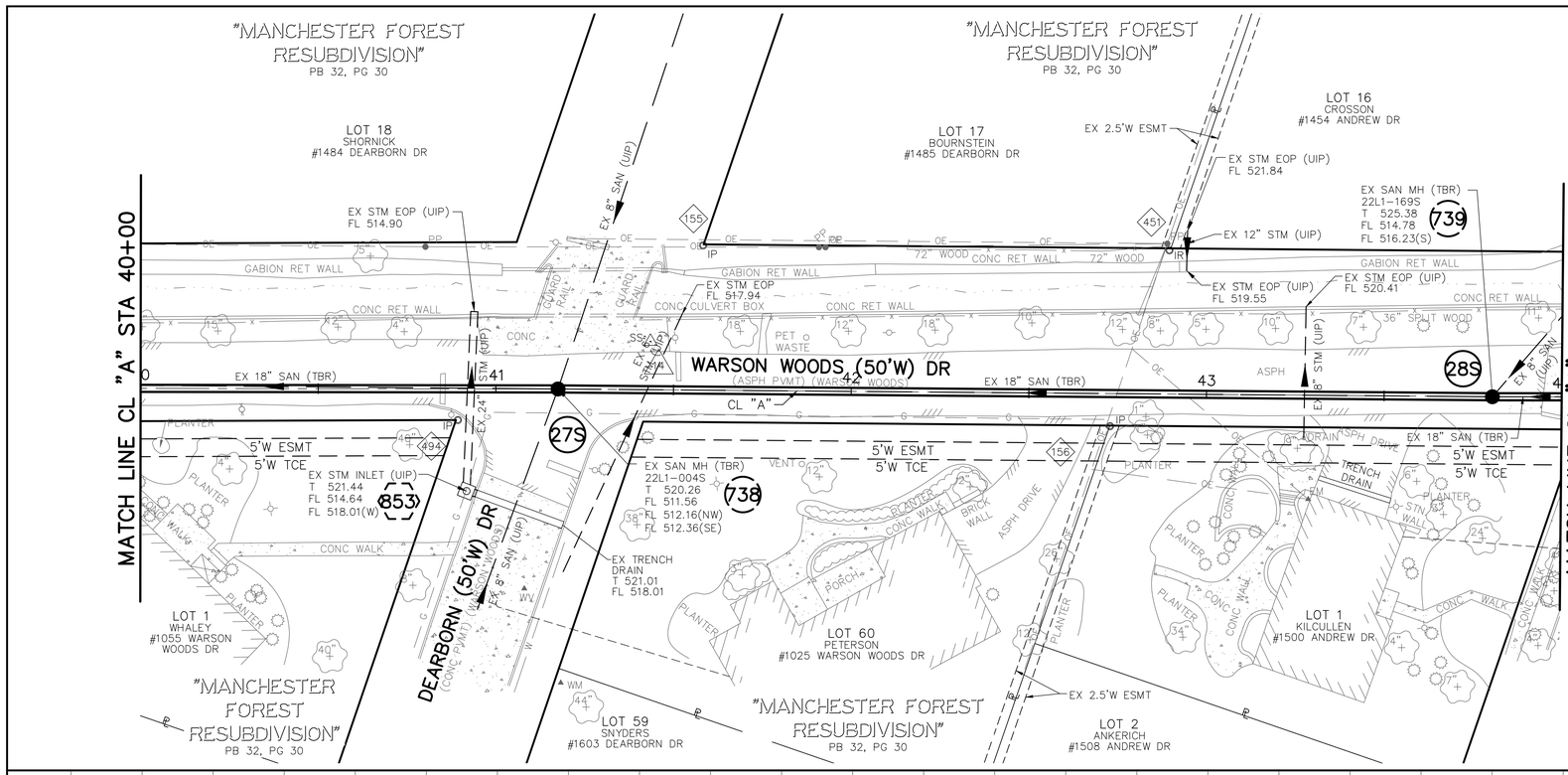
BASE MAP: 22-L-1

12302-[P10]



POINT TABLE

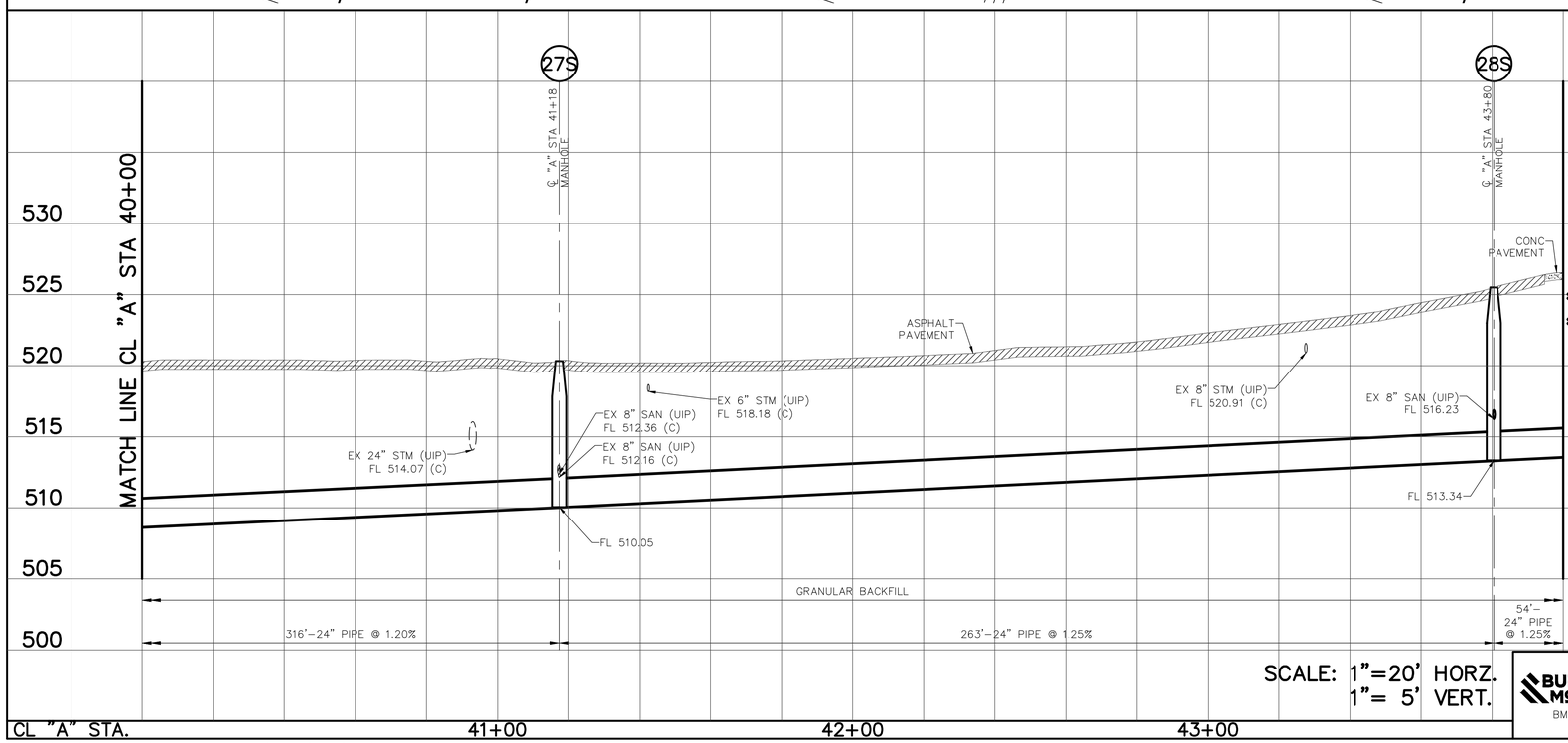
CONTROL POINT #	MSD ID #	NORTHING	EASTING	DESCRIPTION
14		1009486.59	853243.67	CUT CROSS
155		1009456.17	853248.69	IRON PIPE
156		1009425.53	853127.17	IRON PIPE
451		1009376.28	853144.56	IRON ROD
494		1009537.42	853272.68	IRON PIPE

EXISTING STRUCTURE TABLE

PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
738	738	22L1-004S	1009513.16	853255.89	EX SAN MH
739	739	22L1-169S	1009352.62	853047.62	EX SAN MH
853	853	--	1009551.66	853258.44	EX STM INLET

NEW STRUCTURE TABLE

PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
738	27S	22L1-004S	1009513.16	853255.89	MANHOLE
739	28S	22L1-169S	1009352.62	853047.62	MANHOLE



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Sheet No 12 of 28

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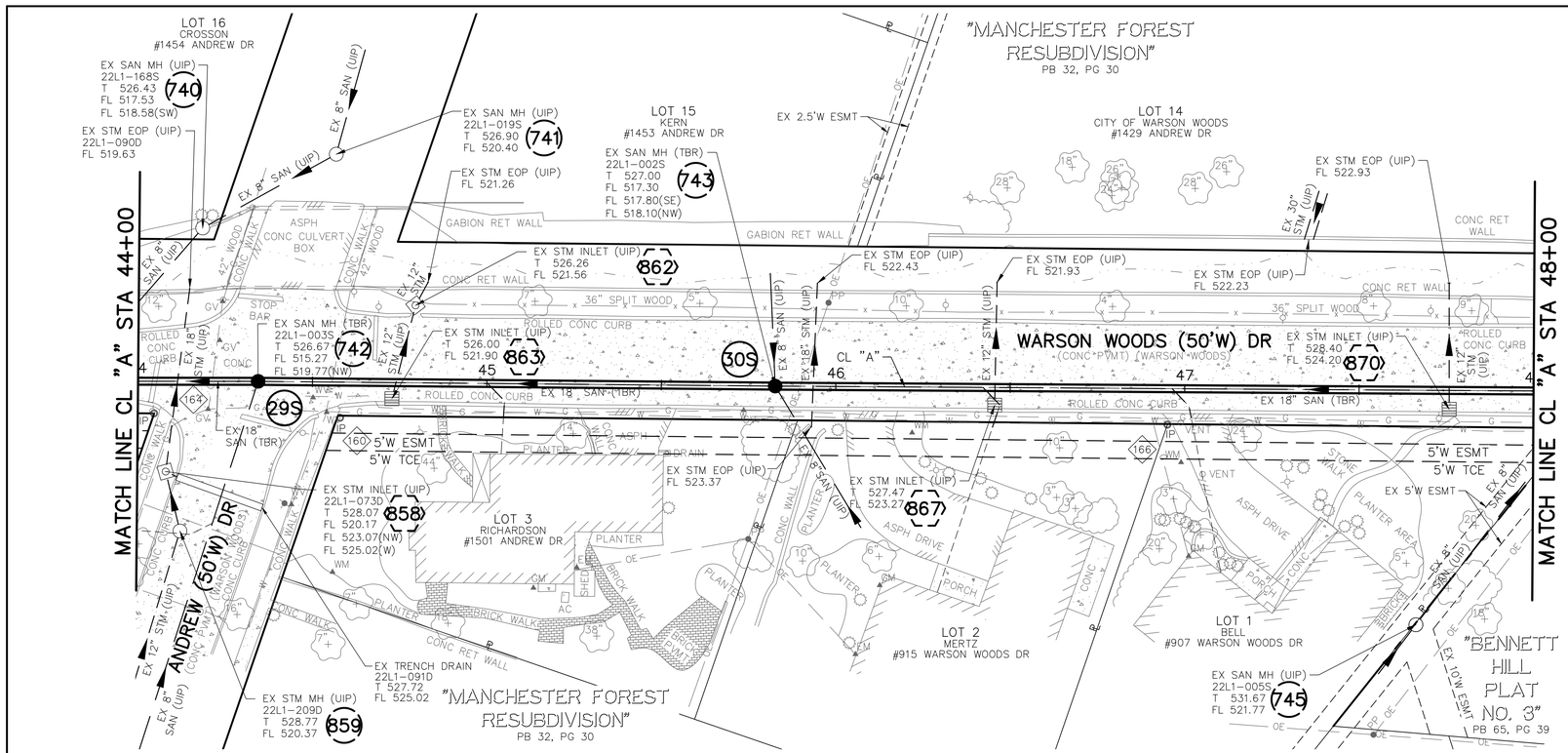
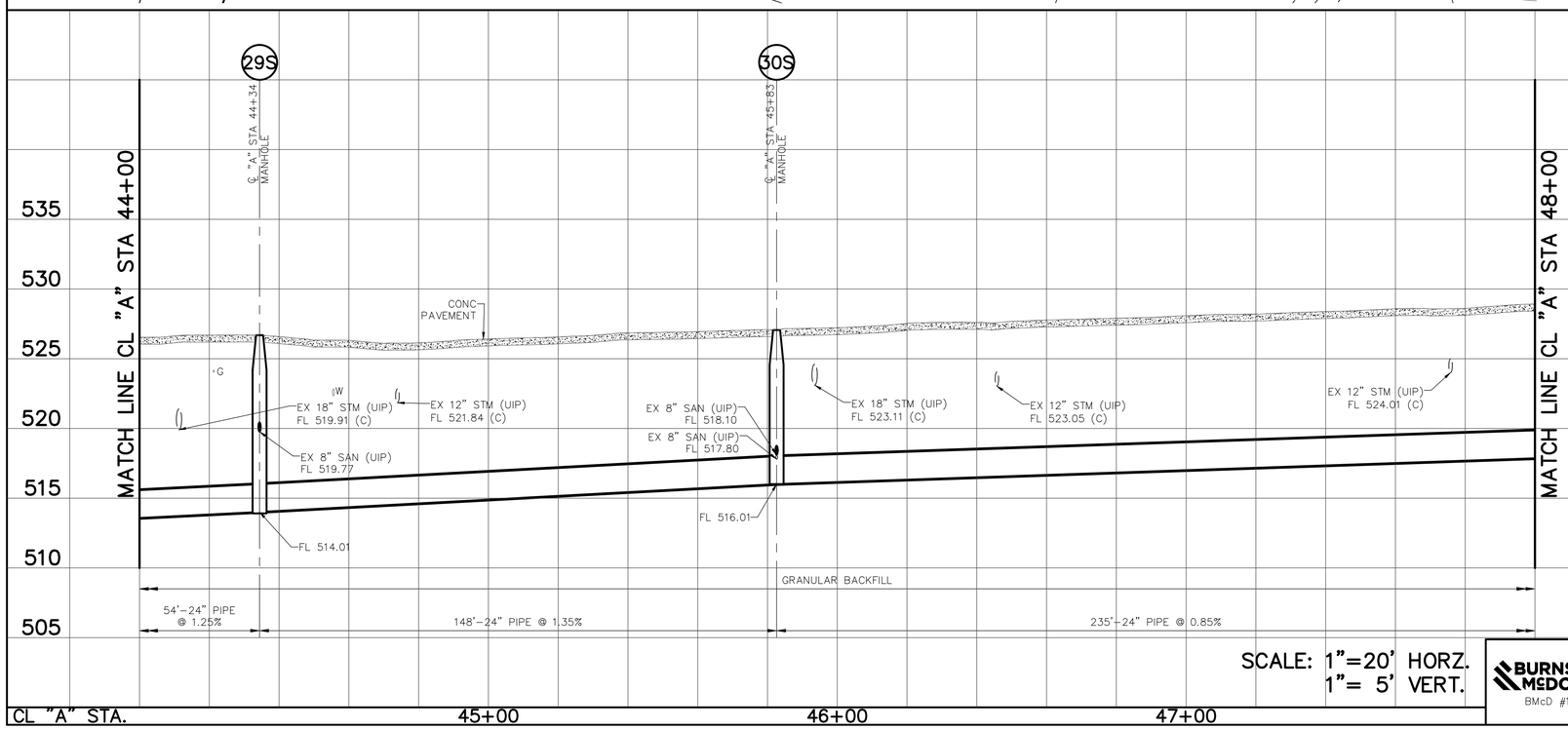
BASE MAP: 22-L-1

12302-[P11]



POINT TABLE					
CONTROL POINT #		MSD ID #	NORTHING	EASTING	DESCRIPTION
160			1009313.09	852980.22	IRON ROD
164			1009344.98	853022.95	IRON PIPE
166			1009156.28	852792.40	IRON ROD
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
740	740	22L1-168S	1009294.57	853044.76	EX SAN MH
741	741	22L1-019S	1009254.30	853027.68	EX SAN MH
742	742	22L1-003S	1009319.37	853005.13	EX SAN MH
743	743	22L1-002S	1009228.99	852887.68	EX SAN MH
745	745	22L1-005S	1009169.49	852700.96	EX SAN MH
858	858	22L1-073D	1009356.06	853010.04	EX STM INLET
859	859	22L1-209D	1009366.95	852996.30	EX STM MH
862	862	--	1009274.40	852983.06	EX STM INLET
863	863	--	1009299.62	852971.90	EX STM INLET
867	867	--	1009194.47	852834.80	EX STM INLET
870	870	--	1009115.01	852731.56	EX STM INLET
NEW STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
742	29S	22L1-003S	1009319.37	853005.13	MANHOLE
743	30S	22L1-002S	1009228.99	852887.68	MANHOLE



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REV.	DATE	DESCRIPTION	BY
A	8/20	60% DESIGN COMPLETION SUBMITTAL	CWK

METROPOLITAN ST. LOUIS SEWER DISTRICT

WW-2 AND WW-3 WARSON WOODS SANITARY RELIEF
12302-015.1
GLENDALE, ROCK HILL, WARSON WOODS, LADUE, KIRKWOOD – ST. LOUIS COUNTY, MISSOURI

Engineer Seal

CURT W. KIMMEL, P.E.
PROFESSIONAL ENGINEER
P.E. No. 2009001097
Date:

BURNS & McDONNELL
BMcD #118441
425 SOUTH WOODS MILL ROAD
CHESTERFIELD, MO 63017
PHONE NUMBER (314) 682-1500
FAX NUMBER (314) 682-1600
LICENSEE NO 000165

Designed C.W.K.
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Checked
Date AUGUST, 2020
Sheet No 13 of 28

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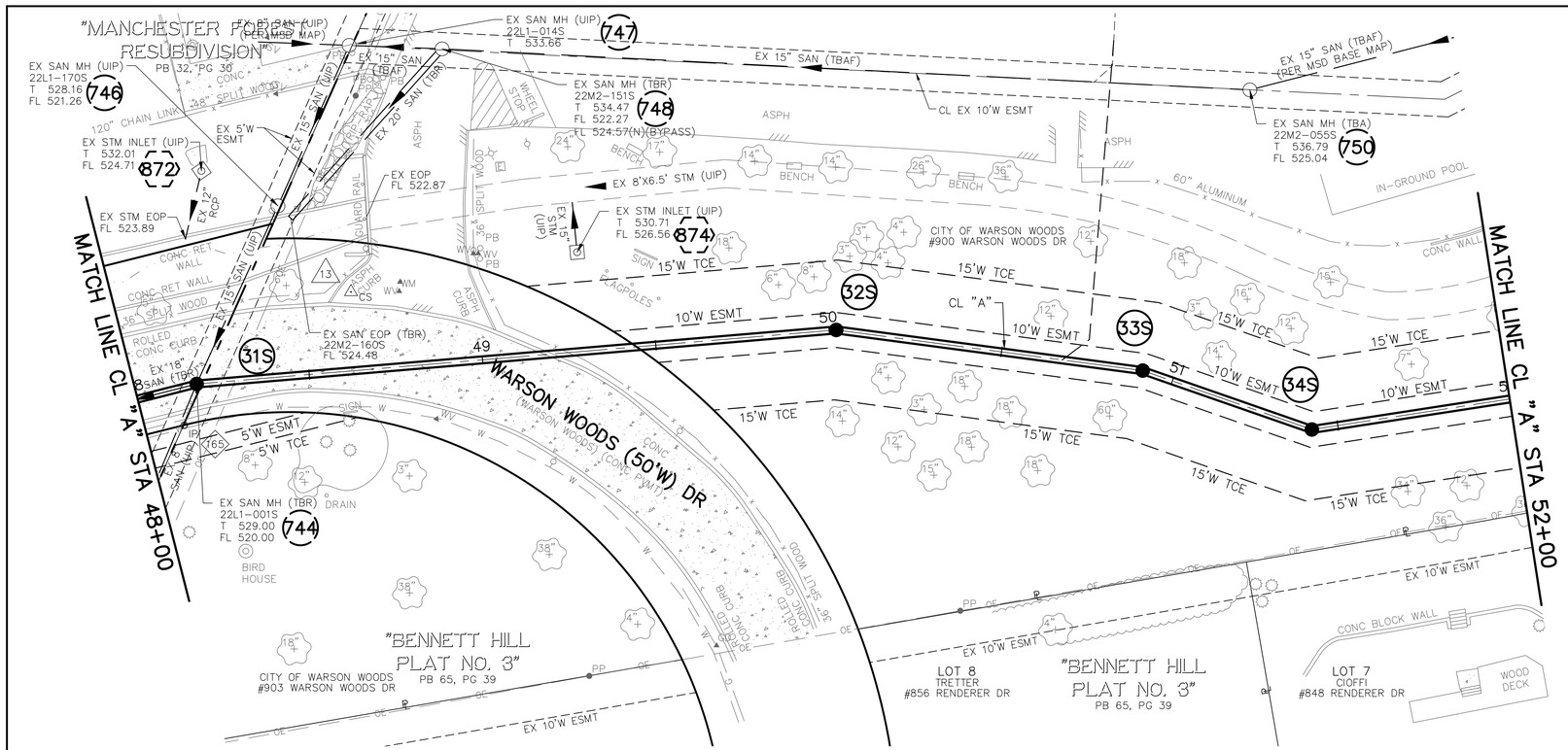
BASE MAP: 22-L-1

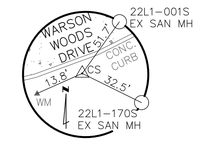
12302-[P12]



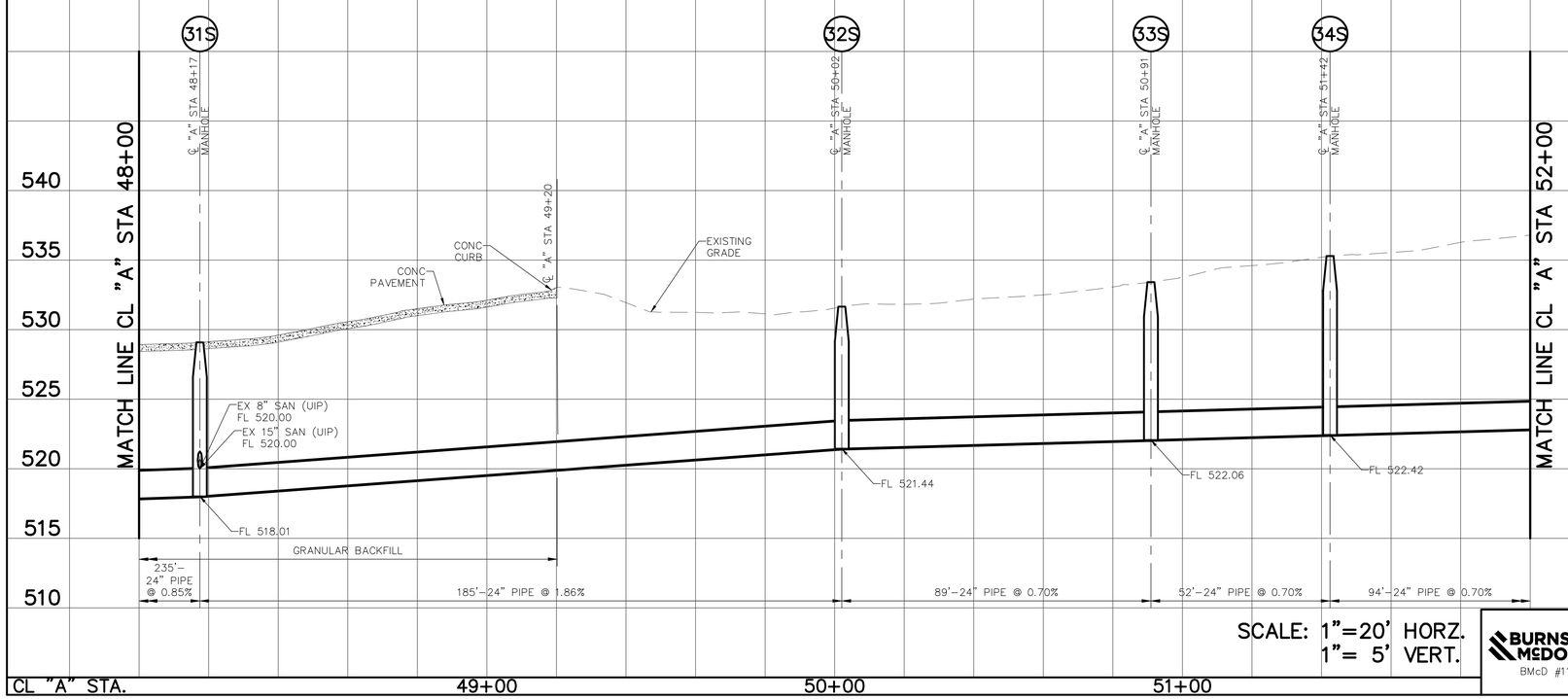
POINT TABLE				
CONTROL POINT #	MSD ID #	NORTHING	EASTING	DESCRIPTION
13		1009043.28	852671.73	SPINDLE
165		1009097.55	852700.45	IRON ROD

EXISTING STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
744	744	22L1-001S	1009085.24	852701.93	EX SAN MH
746	746	22L1-170S	1009028.91	852700.85	EX SAN MH
747	747	22L1-014S	1008978.39	852700.42	EX SAN MH
748	748	22M2-151S	1008968.68	852675.50	EX SAN MH
750	750	22M2-055S	1008887.18	852457.70	EX SAN MH
872	872	--	1009028.42	852725.03	EX STM INLET
874	874	--	1009006.93	852616.62	EX STM INLET

NEW STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
744	31S	22L1-001S	1009085.24	852701.93	MANHOLE
	32S		1008997.85	852539.36	MANHOLE
	33S		1008973.56	852453.86	MANHOLE
	34S		1008969.77	852402.50	MANHOLE



REFERENCE TIE
CONTROL POINT #13
ELEV.=531.05



SCALE: 1"=20' HORZ.
1"= 5' VERT.

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METROPOLITAN
ST. LOUIS SEWER DISTRICT

WW-2 AND WW-3 WARSON WOODS
SANITARY RELIEF
12302-015.1
GLENDALE, ROCK HILL, WARSON WOODS, LADUE, KIRKWOOD - ST. LOUIS COUNTY, MISSOURI

Engineer Seal

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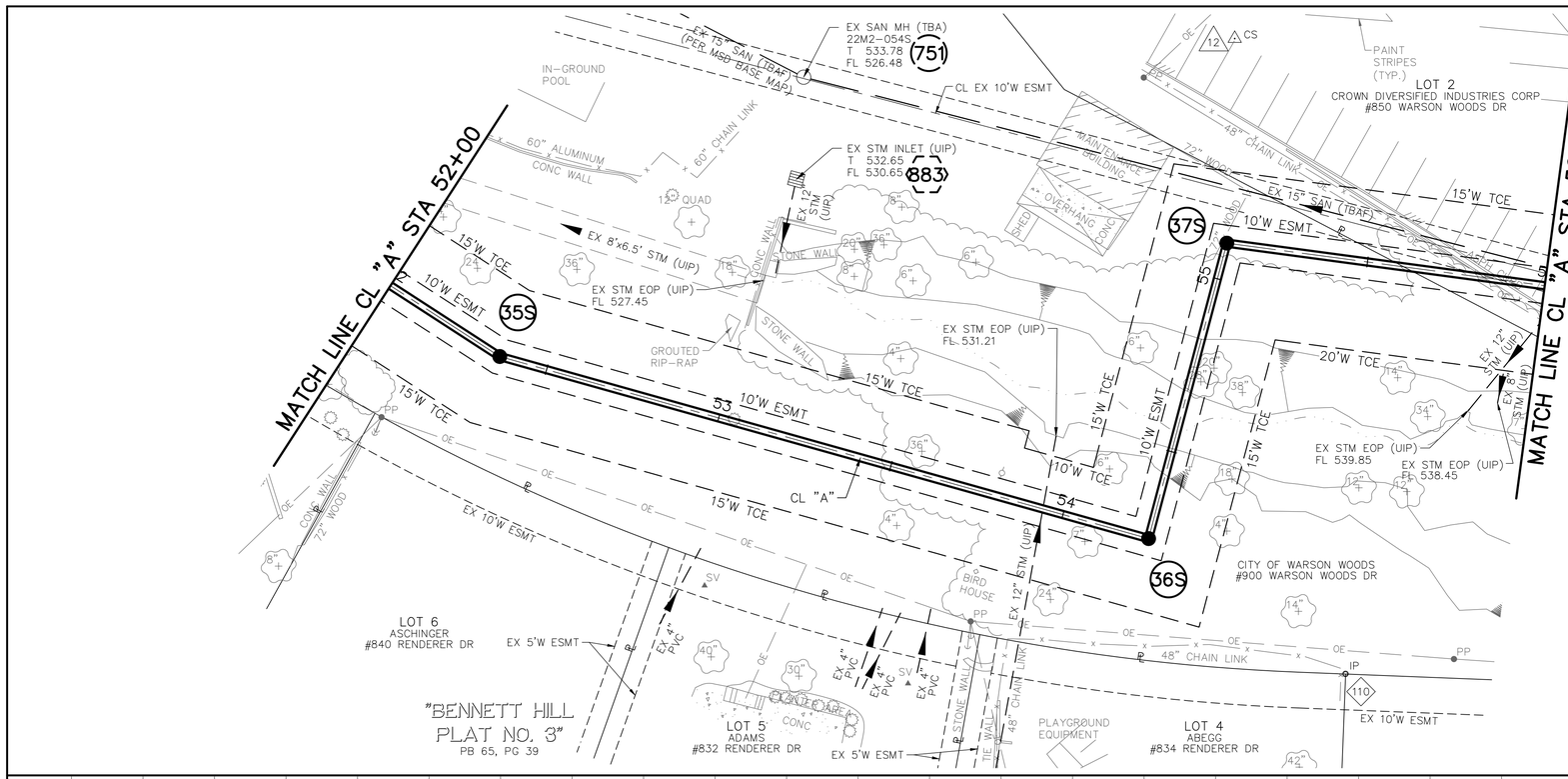
BASE MAP: 22-L-1, 22-M-2

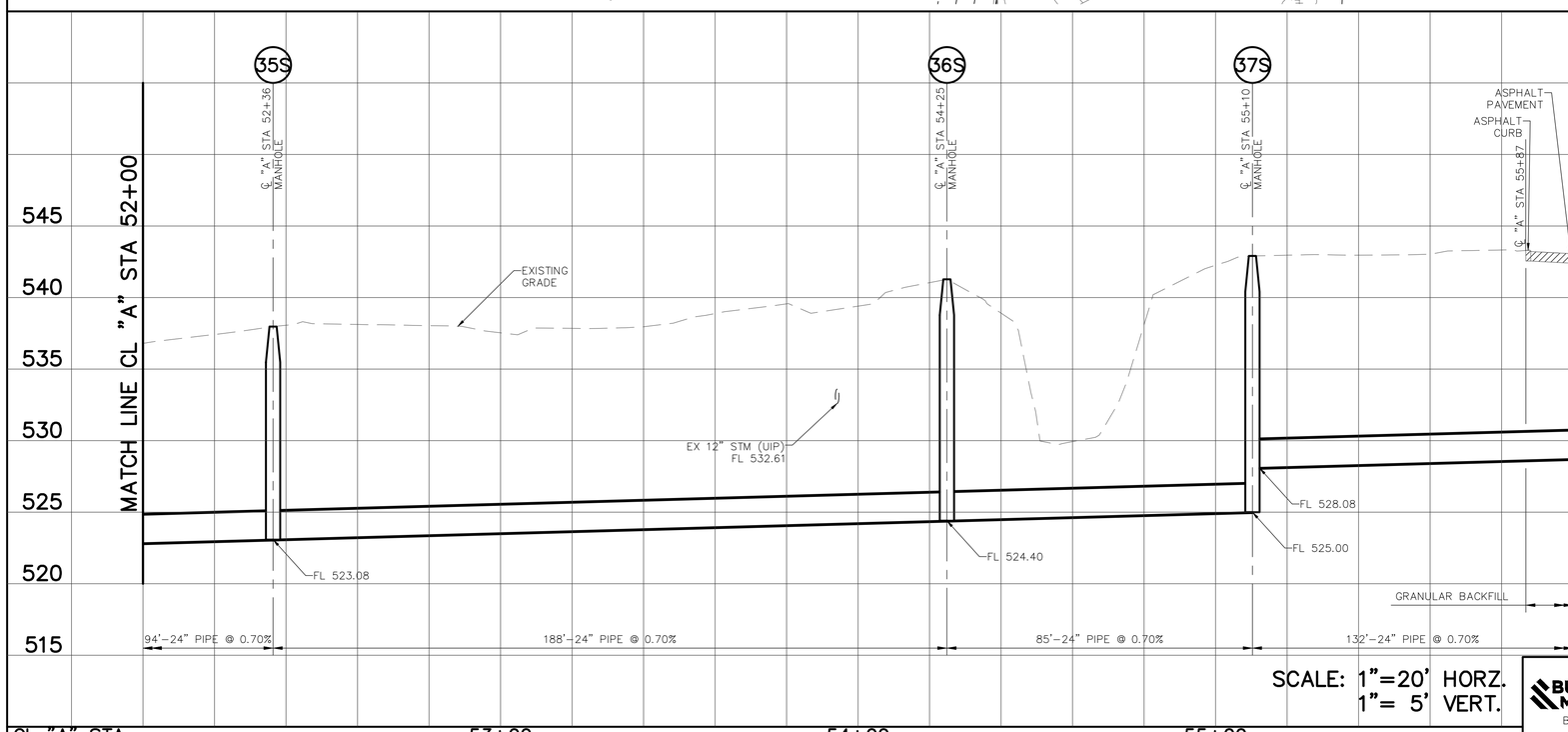
12302-[P13]



POINT TABLE				
CONTROL POINT #	MSD ID #	NORTHING	EASTING	DESCRIPTION
12		1008695.84	852317.21	SPINDLE
110		1008742.42	852143.03	IRON PIPE

EXISTING STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
751	751	22M2-054S	1008809.77	852358.11	EX SAN MH
883	883	--	1008823.66	852333.04	EX STM INLET

NEW STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
	35S		1008919.72	852323.00	MANHOLE
	36S		1008776.48	852200.51	MANHOLE
	37S		1008721.89	852266.25	MANHOLE



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12302-015.1
GLENDALE, ROCK HILL, WARSON WOODS, LADUE, KIRKWOOD – ST. LOUIS COUNTY, MISSOURI

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Engineer Seal
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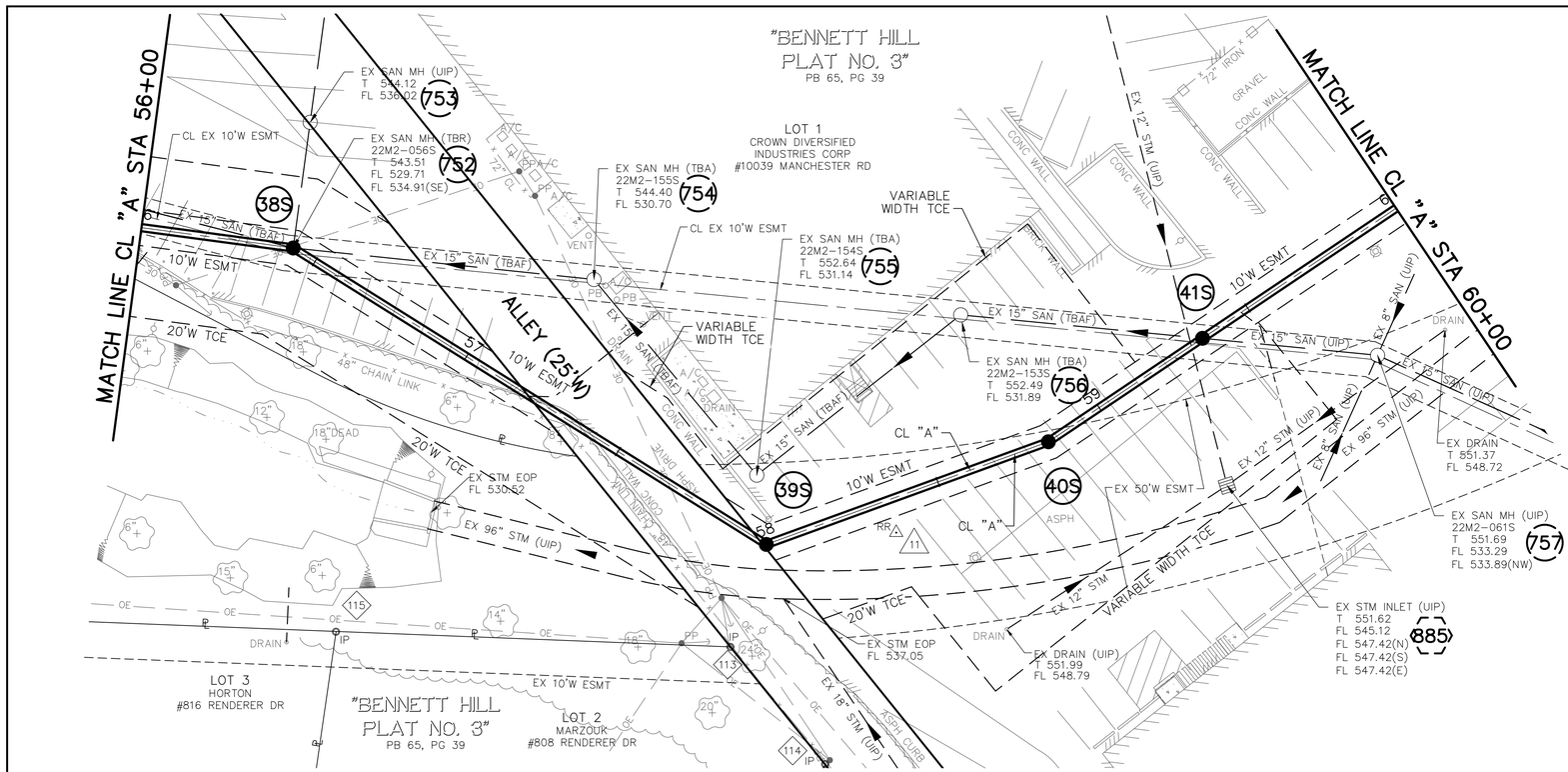
BASE MAP: 22-M-2

12302-[P14]



REFERENCE TIE
CONTROL POINT #11
ELEV.=552.36

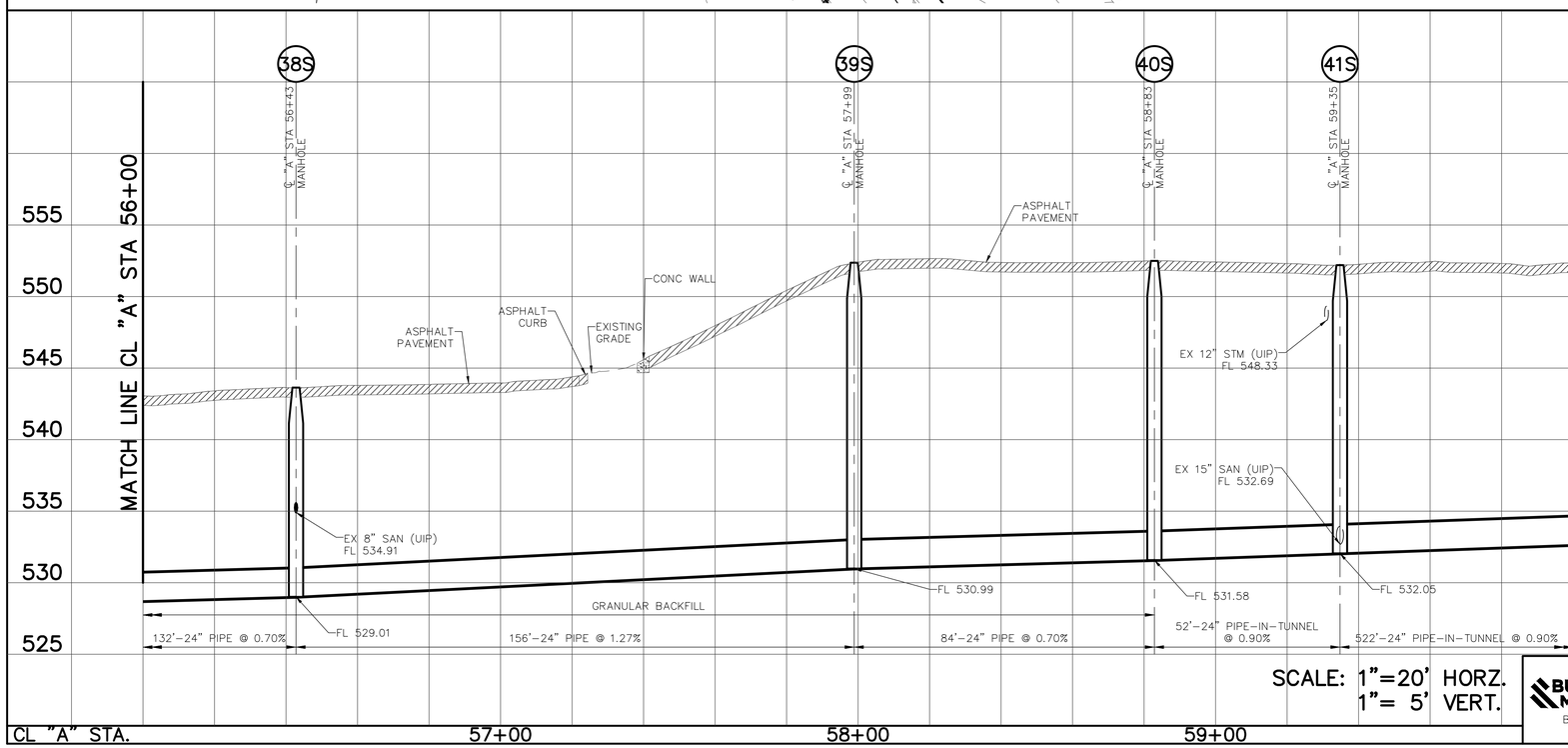
SCALE: 1"=20'
0 10 20

REFERENCE TIE
CONTROL POINT #200
ELEV.=505.21

POINT TABLE				
CONTROL POINT #	MSD ID #	NORTHING	EASTING	DESCRIPTION
11		1008490.56	852051.98	RR SPIKE
113		1008546.06	852042.47	IRON PIPE
114		1008535.81	852001.62	IRON PIPE
115		1008644.38	852092.72	IRON PIPE

EXISTING STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
752	752	22M2-056S	1008610.13	852195.08	EX SAN MH
753	753	--	1008591.05	852224.96	EX SAN MH
754	754	22M2-155S	1008537.51	852151.73	EX SAN MH
755	755	22M2-154S	1008519.19	852082.95	EX SAN MH
756	756	22M2-153S	1008448.60	852099.62	EX SAN MH
757	757	22M2-061S	1008347.57	852040.34	EX SAN MH
885	885	--	1008401.05	852025.04	EX STM INLET

NEW STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
752	38S	22M2-056S	1008610.13	852195.08	MANHOLE
	39S		1008524.92	852064.26	MANHOLE
	40S		1008441.26	852057.12	MANHOLE
	41S		1008390.01	852065.24	MANHOLE



SCALE: 1"=20' HORZ.
1"= 5' VERT.

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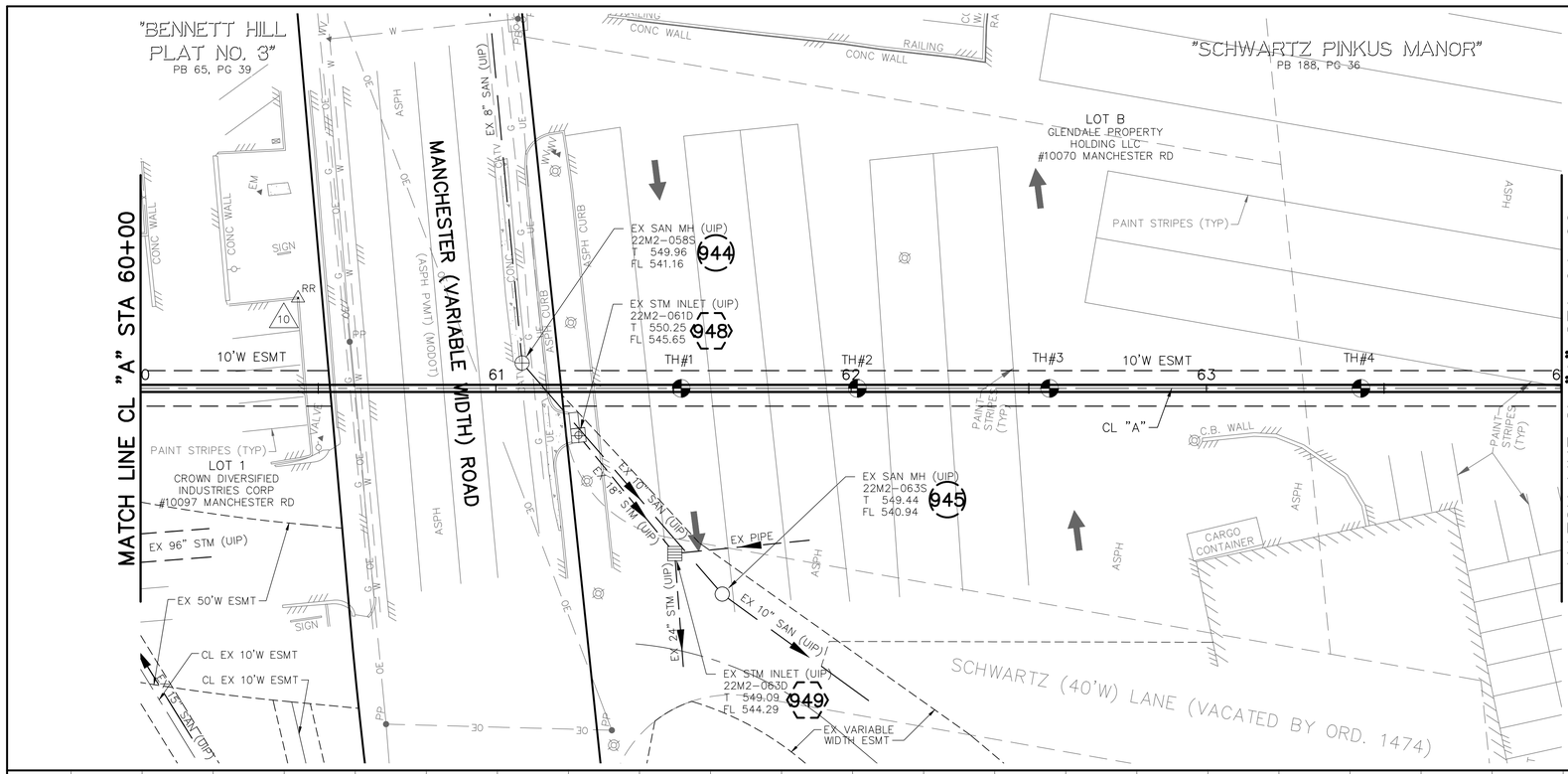
BASE MAP: 21-L-4, 22-M-2

12302-[P15]

POINT TABLE				
CONTROL POINT #	MSD ID #	NORTHING	EASTING	DESCRIPTION
10		1008285.80	852107.46	RR SPIKE

EXISTING STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
944	944	22M2-058S	1008220.65	852099.33	EX SAN MH
945	945	22M2-063S	1008154.84	852043.94	EX SAN MH
948	948	22M2-061D	1008201.70	852081.59	EX STM INLET
949	949	22M2-063D	1008169.81	852053.11	EX STM INLET



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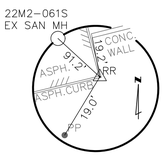

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CONTROL POINT #10
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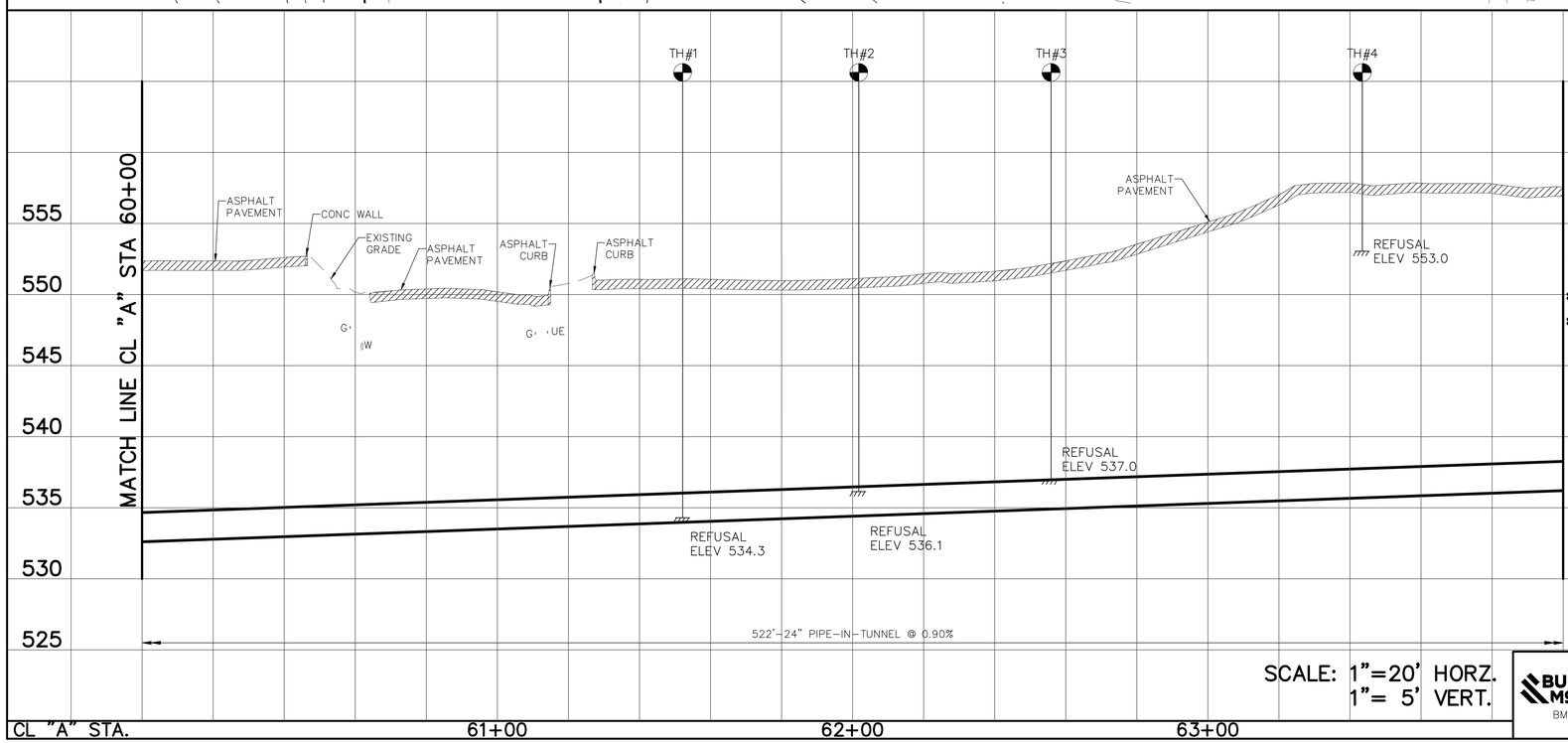

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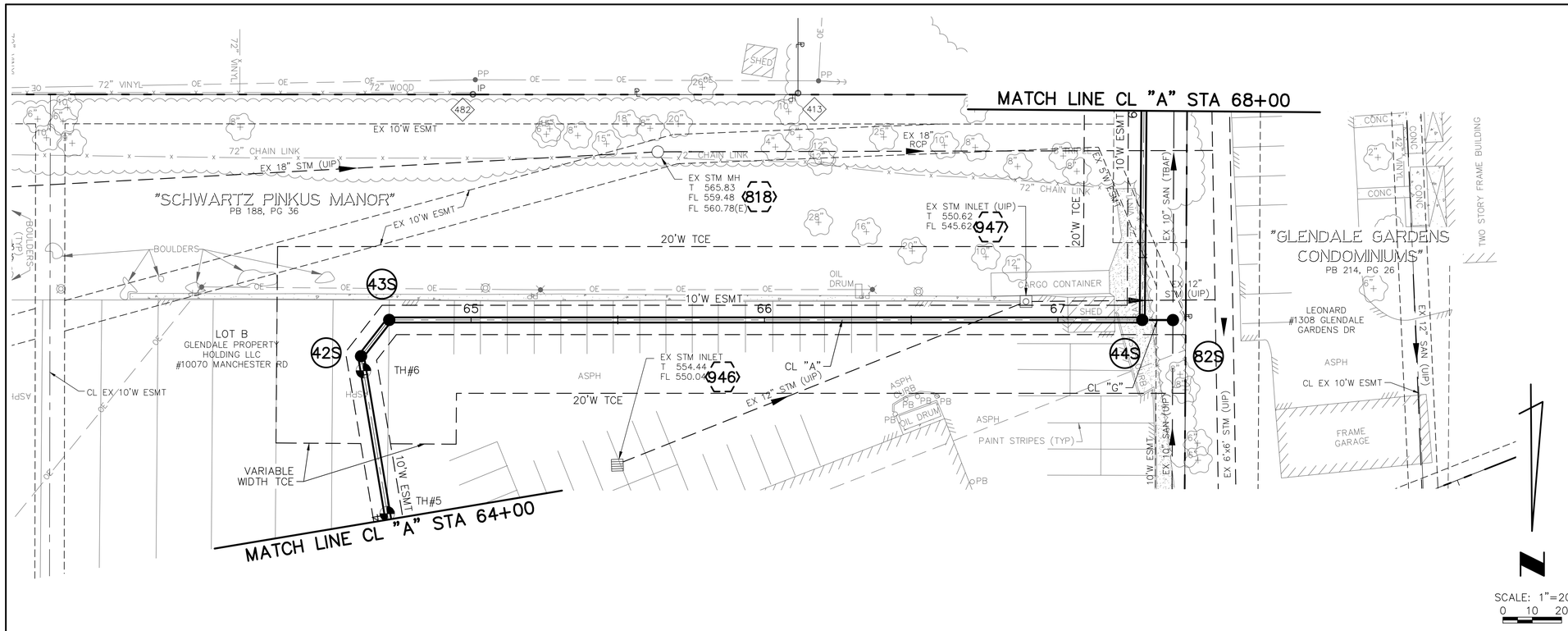
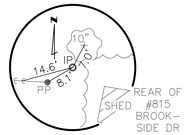
BASE MAP: 22-M-2

12302-[P16]



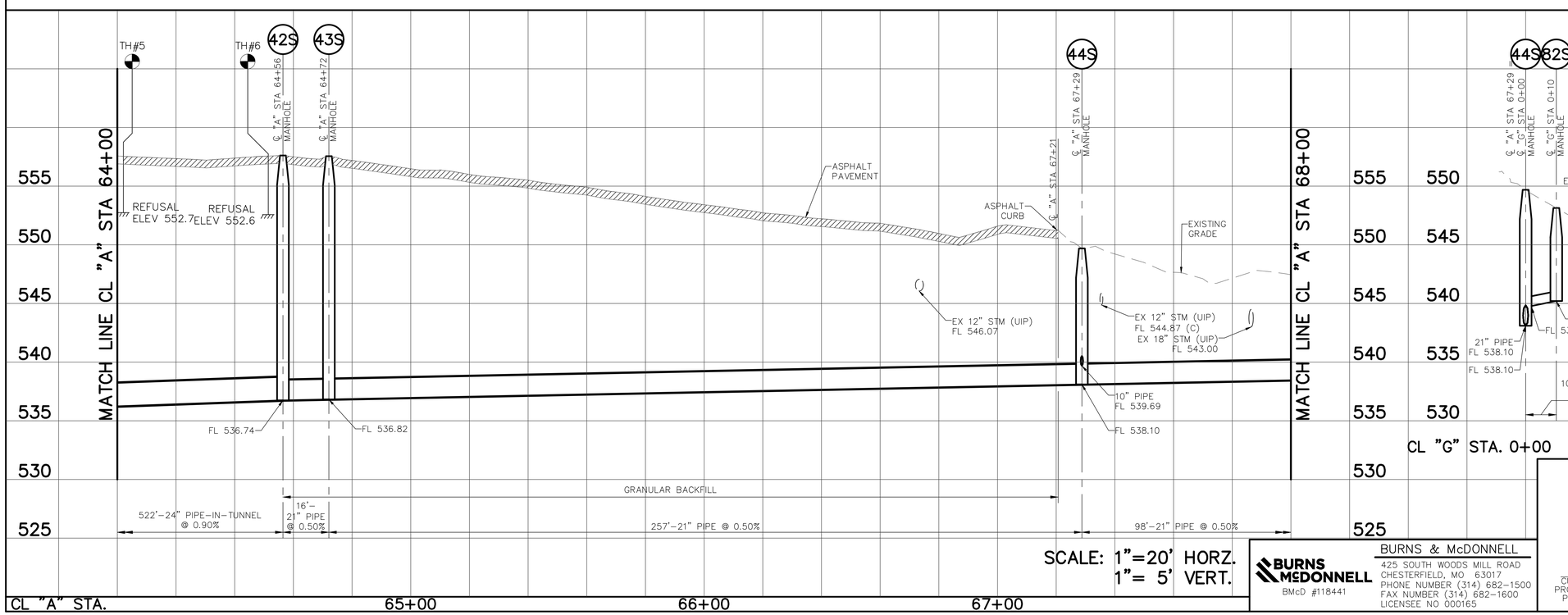


REFERENCE TIE
CONTROL POINT #413
ELEV.=559.78

POINT TABLE				
CONTROL POINT #	MSD ID #	NORTHING	EASTING	DESCRIPTION
413		1007786.36	851997.28	IRON PIPE
482		1007785.87	852108.09	IRON PIPE

EXISTING STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
818	818	--	1007805.97	852045.24	EX STM MH
946	946	--	1007912.60	852059.88	EX STM INLET
947	947	--	1007857.99	851920.16	EX STM INLET

NEW STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
	42S		1007874.77	852146.94	MANHOLE
	43S		1007862.50	852137.23	MANHOLE
	44S		1007864.57	851880.59	MANHOLE
	82S		1007864.71	851870.15	MANHOLE



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BASE MAP: 22-M-2

12302-[P17]

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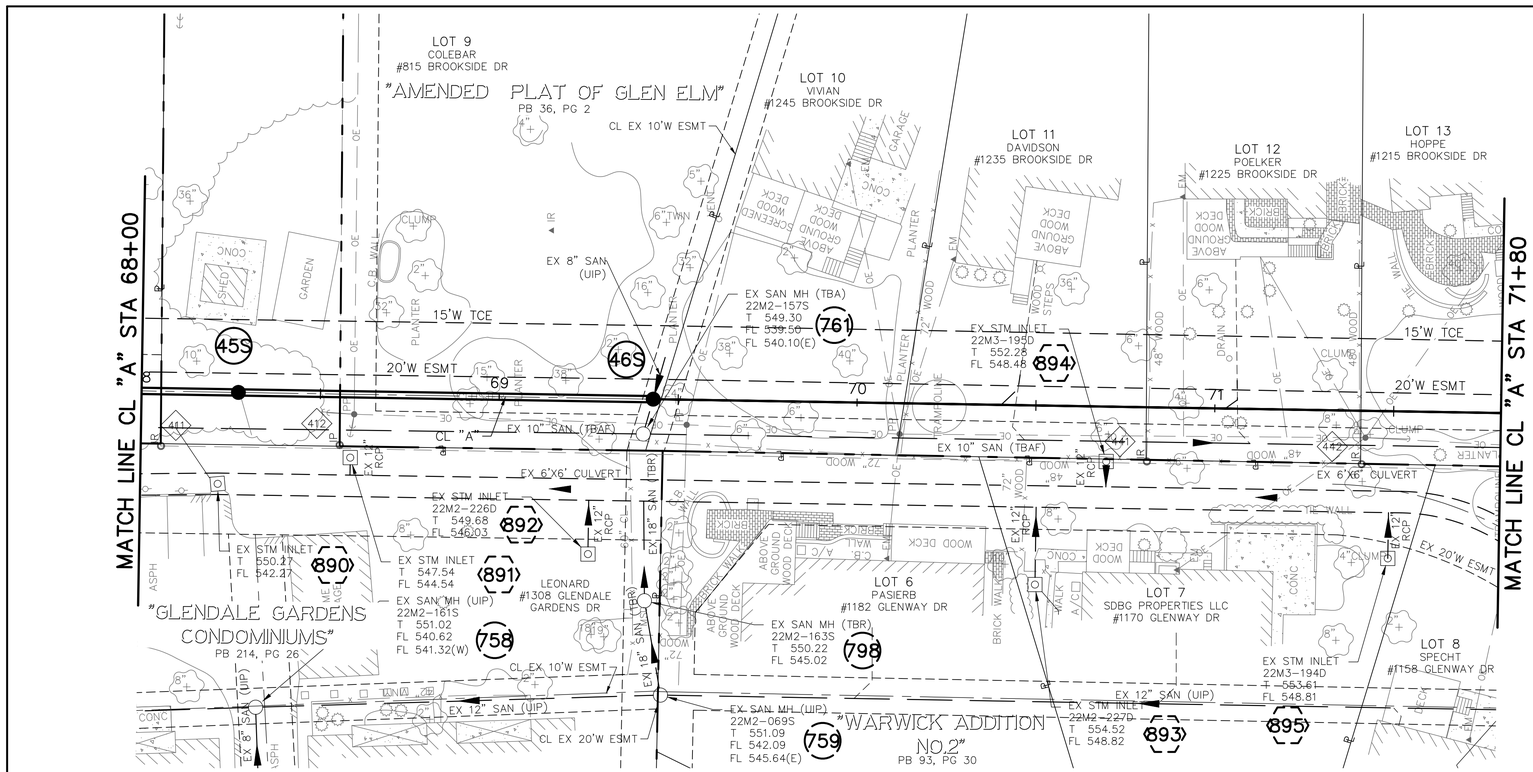
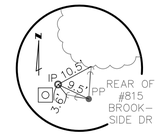




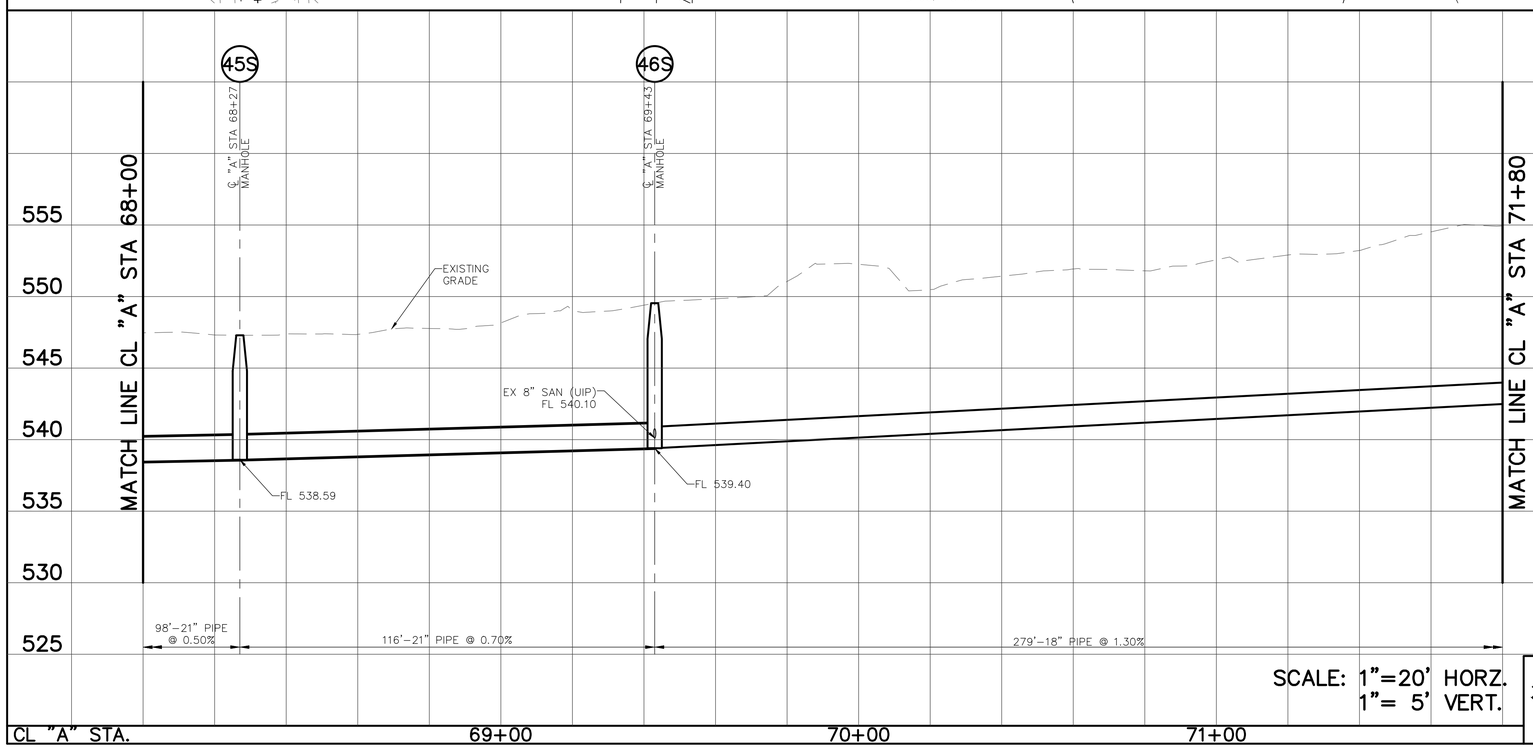
REFERENCE TIE
CONTROL POINT #412
ELEV.=546.97

SCALE: 1"=20'
0 10 20

POINT TABLE				
CONTROL POINT #	MSD ID #	NORTHING	EASTING	DESCRIPTION
411		1007787.91	851864.04	IRON ROD
412		1007737.97	851864.31	IRON PIPE
441		1007512.37	851859.70	IRON ROD
442		1007452.34	851858.91	IRON ROD

EXISTING STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
758	758	22M2-161S	1007761.47	851790.98	EX SAN MH
759	759	22M2-069S	1007648.32	851794.38	EX SAN MH
761	761	22M2-157S	1007653.14	851867.38	EX SAN MH
798	798	22M2-163S	1007652.79	851820.75	EX SAN MH
890	890	--	1007772.07	851853.45	EX STM INLET
891	891	--	1007735.02	851860.77	EX STM INLET
892	892	22M2-226D	1007668.58	851833.81	EX STM INLET
893	893	22M2-227D	1007543.65	851825.28	EX STM INLET
894	894	22M3-195D	1007523.73	851859.68	EX STM INLET
895	895	22M3-194D	1007445.04	851832.59	EX STM INLET

NEW STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
	45S		1007766.28	851878.99	MANHOLE
	46S		1007650.35	851877.10	MANHOLE



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P.E. No. 2009001097
Date:

BURNS & McDONNELL
BMcD #118441
425 SOUTH WOODS MILL ROAD
CHESTERFIELD, MO 63017
PHONE NUMBER (314) 682-1500
FAX NUMBER (314) 682-1600
LICENSEE NO 000165

Designed C.W.K.
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Date AUGUST, 2020
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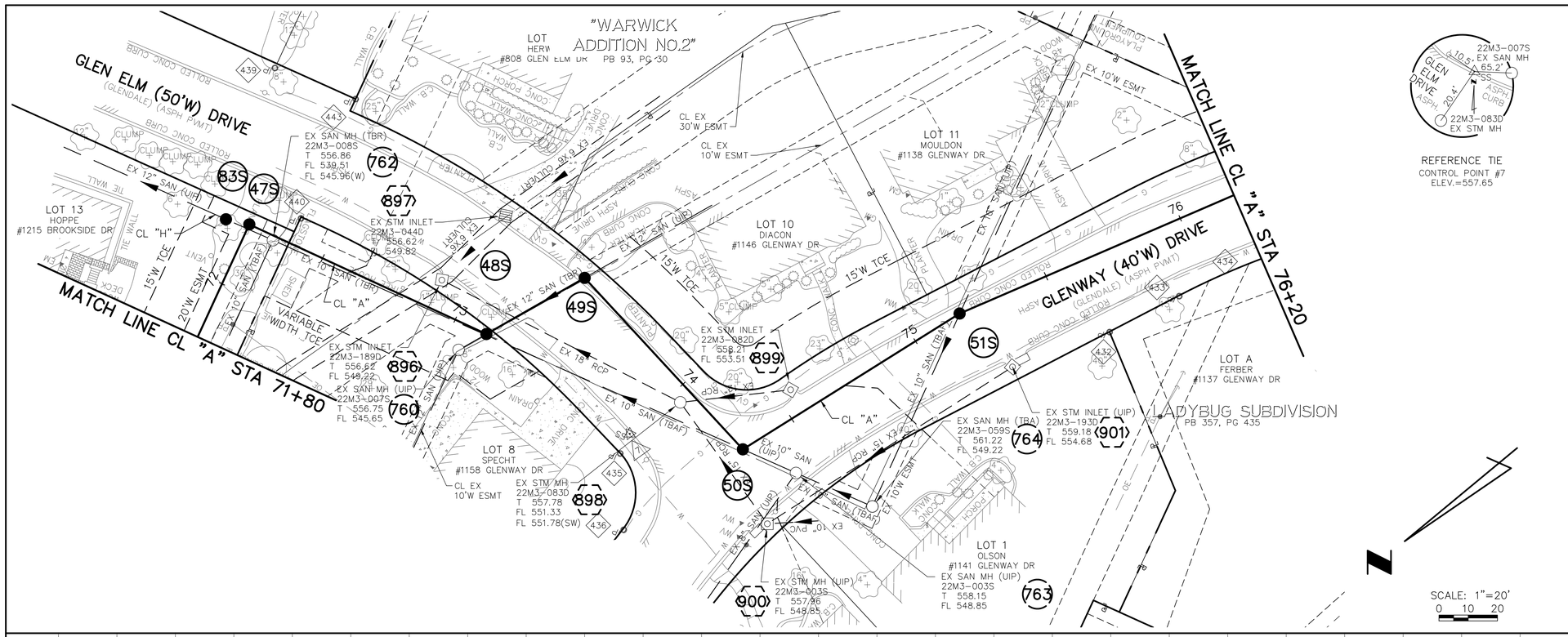
Plotted on: 8/17/20 @ 02:52:18AM by mtoolen

BASE MAP: 22-M-2, 22-M-3

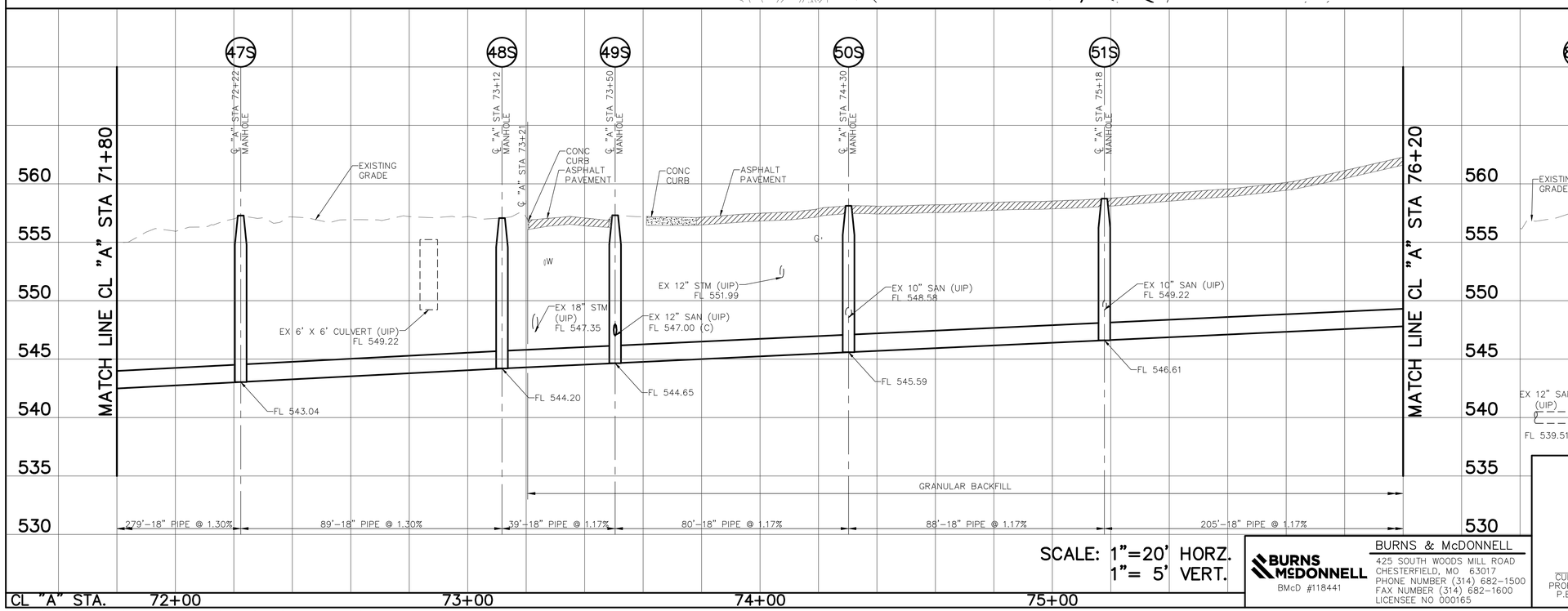
12302-[P18]



POINT TABLE				
CONTROL POINT #	MSD ID #	NORTHING	EASTING	DESCRIPTION
7		1007384.34	851724.55	CUT CROSS
432		1007286.46	851588.26	IRON PIPE
433		1007265.63	851571.39	IRON PIPE
435		1007391.82	851724.83	IRON PIPE
436		1007415.26	851713.25	IRON PIPE
439		1007318.47	851886.03	IRON PIPE
440		1007362.00	851857.17	IRON PIPE
443		1007317.12	851856.51	IRON PIPE

EXISTING STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
760	760	22M3-007S	1007381.57	851789.71	EX SAN MH
762	762	22M3-008S	1007372.72	851862.95	EX SAN MH
763	763	22M3-003S	1007373.76	851667.10	EX SAN MH
764	764	22M3-059S	1007373.75	851638.56	EX SAN MH
896	896	22M3-189D	1007361.99	851804.56	EX STM INLET
897	897	22M3-044D	1007333.06	851793.44	EX STM INLET
898	898	22M3-083D	1007367.52	851713.05	EX STM MH
899	899	22M3-082D	1007348.42	851680.24	EX STM INLET
900	900	22M3-003S	1007393.61	851669.09	EX STM MH
901	901	22M3-193D	1007310.73	851613.88	EX STM INLET

NEW STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
	47S		1007371.02	851872.54	MANHOLE
	48S		1007372.78	851783.19	MANHOLE
	49S		1007341.68	851760.15	MANHOLE
	50S		1007373.65	851687.00	MANHOLE
	51S		1007301.29	851637.80	MANHOLE
	83S		1007372.63	851880.57	MANHOLE



SCALE: 1"=20' HORZ.
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METROPOLITAN ST. LOUIS SEWER DISTRICT

WW-2 AND WW-3 WARSON WOODS SANITARY RELIEF
12302-015.1
GLENDALE, ROCK HILL, WARSON WOODS, LADUE, KIRKWOOD – ST. LOUIS COUNTY, MISSOURI

BURNS & McDONNELL
425 SOUTH WOODS MILL ROAD
CHESTERFIELD, MO 63017
PHONE NUMBER (314) 682-1500
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LICENSEE NO 000165

BMcD #118441

Engineer Seal

CURT W. KIMMEL, P.E.
PROFESSIONAL ENGINEER
P.E. No. 2009001097
Date:

Designed C.W.K.
Drawn
Checked

PRELIMINARY

Date AUGUST, 2020
Sheet No 20 of 28

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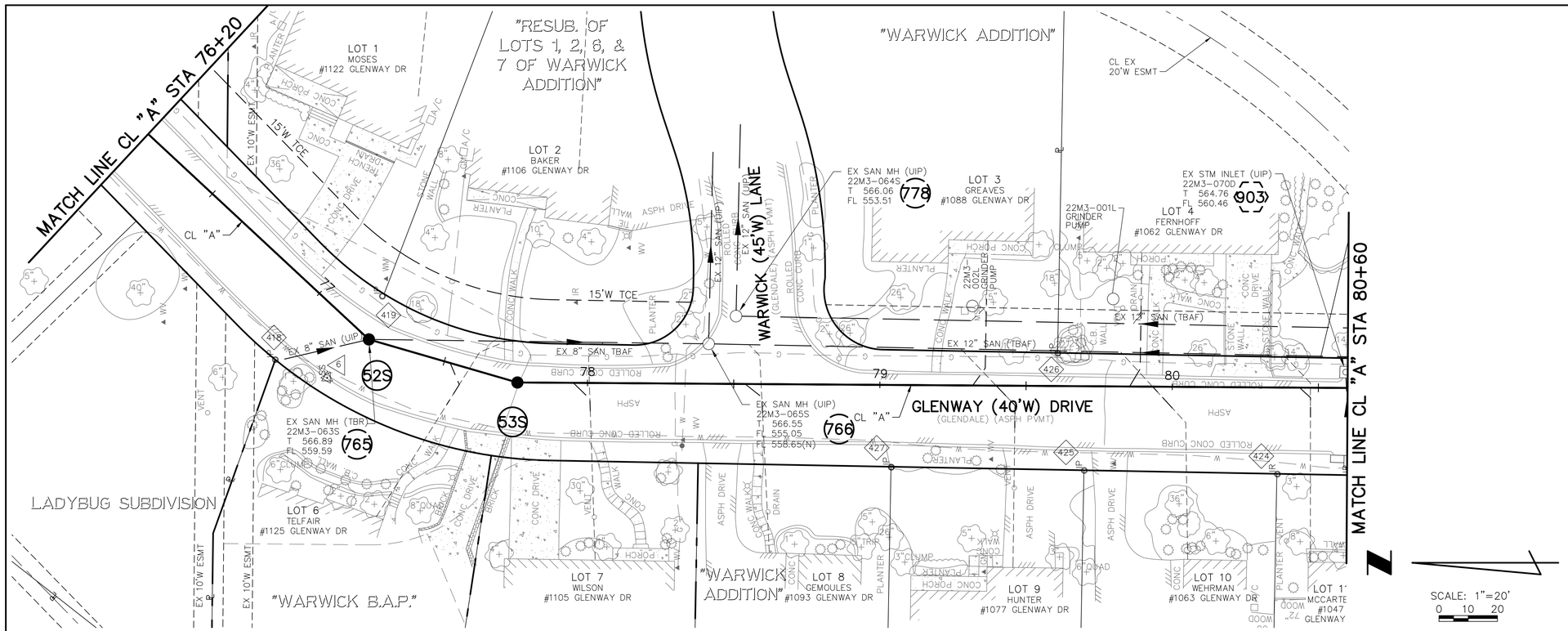
BASE MAP: 22-M-3

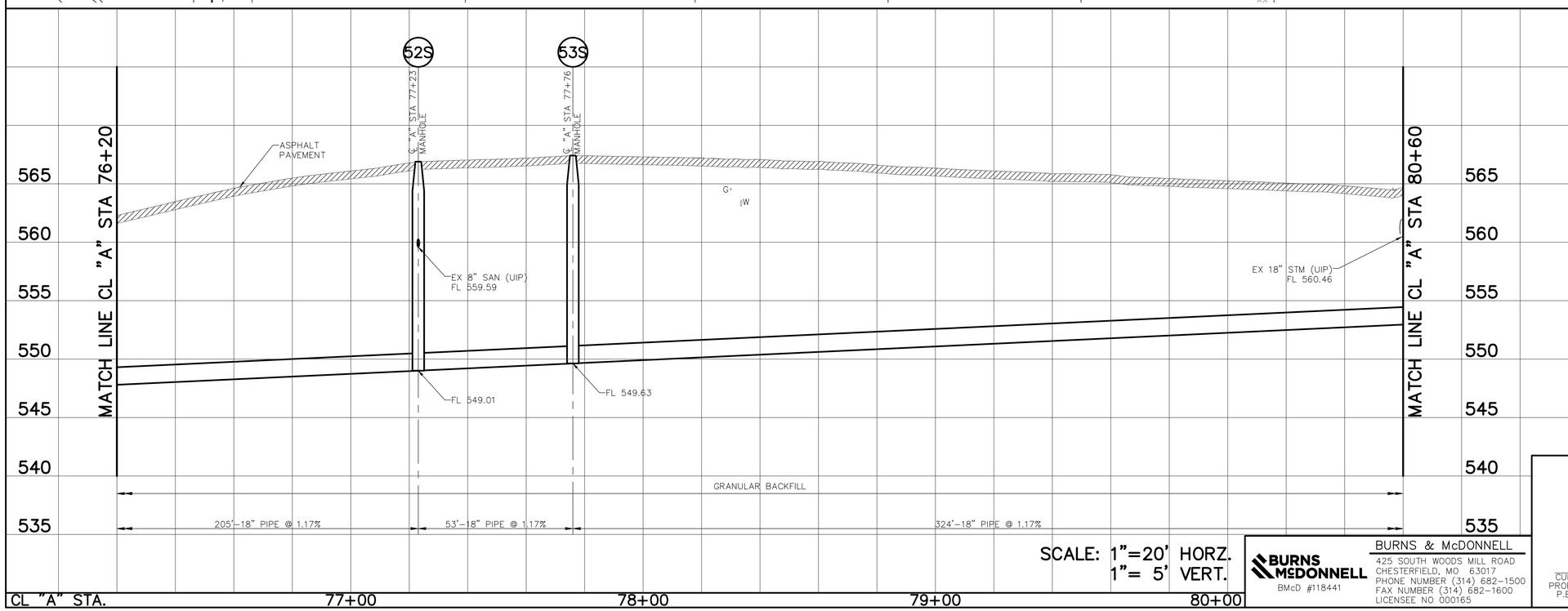
12302-[P19]



POINT TABLE				
CONTROL POINT #	MSD ID #	NORTHING	EASTING	DESCRIPTION
6		1007165.24	851484.84	CUT CROSS
418		1007182.97	851491.01	IRON PIPE
419		1007146.35	851512.72	IRON PIPE
424		1006840.19	851451.87	IRON ROD
425		1006906.27	851453.12	IRON PIPE
426		1006915.33	851493.22	IRON PIPE
427		1006972.27	851454.23	IRON PIPE

EXISTING STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
765	765	22M3-063S	1007150.97	851497.94	EX SAN MH
766	766	22M3-065S	1007034.75	851496.44	EX SAN MH
778	778	22M3-064S	1007025.38	851505.92	EX SAN MH
903	903	22M3-070D	1006816.83	851486.75	EX STM INLET

NEW STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
765	52S	22M3-063S	1007150.97	851497.94	MANHOLE
	53S		1007100.18	851483.21	MANHOLE



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METROPOLITAN ST. LOUIS SEWER DISTRICT

WW-2 AND WW-3 WARSON WOODS SANITARY RELIEF
12302-015.1
GLENDALE, ROCK HILL, WARSON WOODS, LADUE, KIRKWOOD – ST. LOUIS COUNTY, MISSOURI

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Sheet No 21 of 28

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Engineer Seal

CURT W. KIMMEL, P.E.
PROFESSIONAL ENGINEER
P.E. No. 2009001097
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BURNS & McDONNELL
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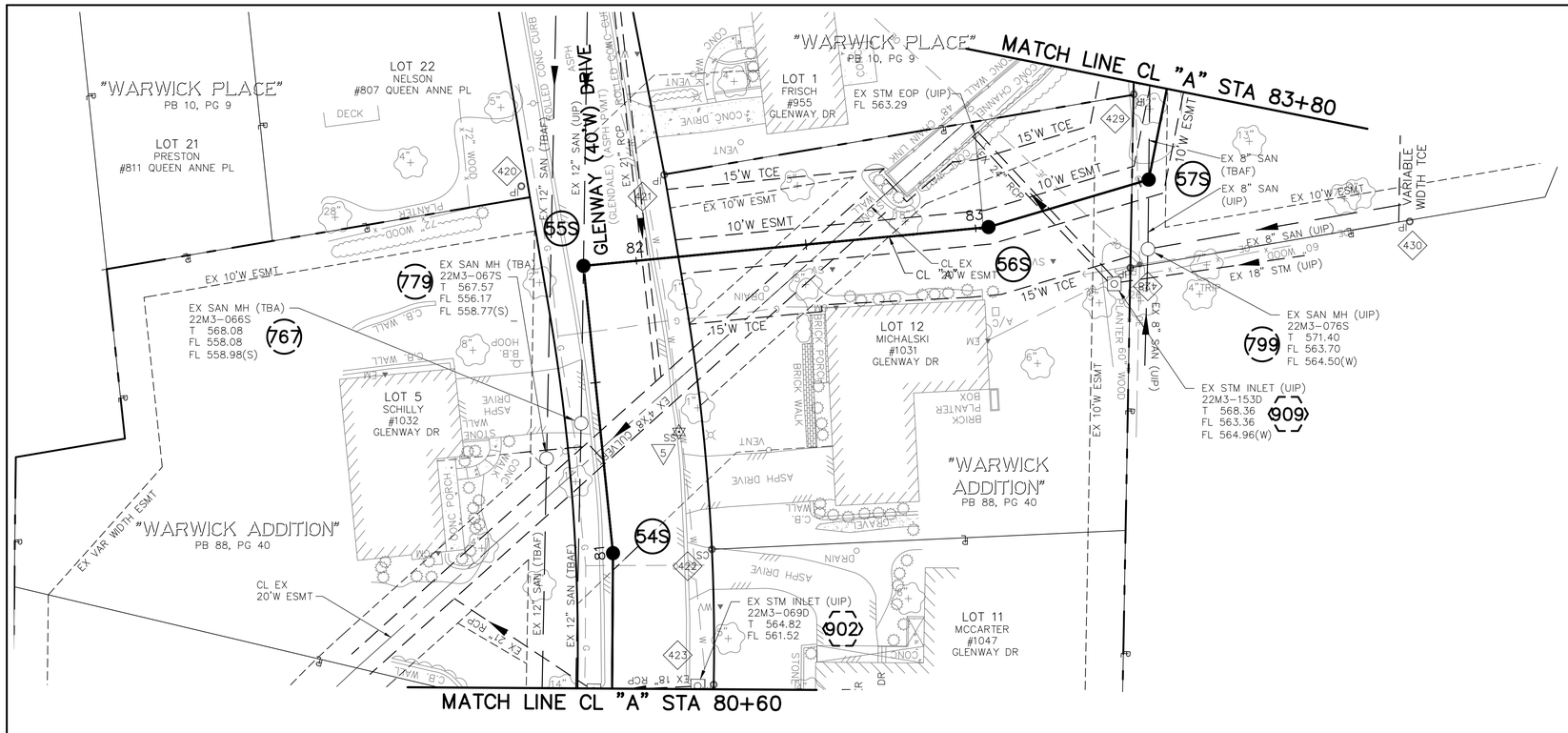
BASE MAP: 22-M-3

12302-[P20]

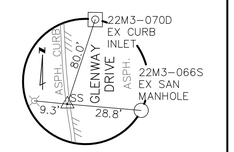


POINT TABLE				
CONTROL POINT #	MSD ID #	NORTHING	EASTING	DESCRIPTION
5		1006740.87	851461.74	CUT CROSS
420		1006668.83	851507.98	IRON PIPE
421		1006665.50	851466.08	IRON PIPE
422		1006775.33	851452.06	SPINDLE
423		1006815.00	851451.56	IRON ROD
428		1006692.75	851329.27	IRON PIPE
429		1006641.88	851328.28	IRON ROD
430		1006679.17	851247.31	IRON PIPE

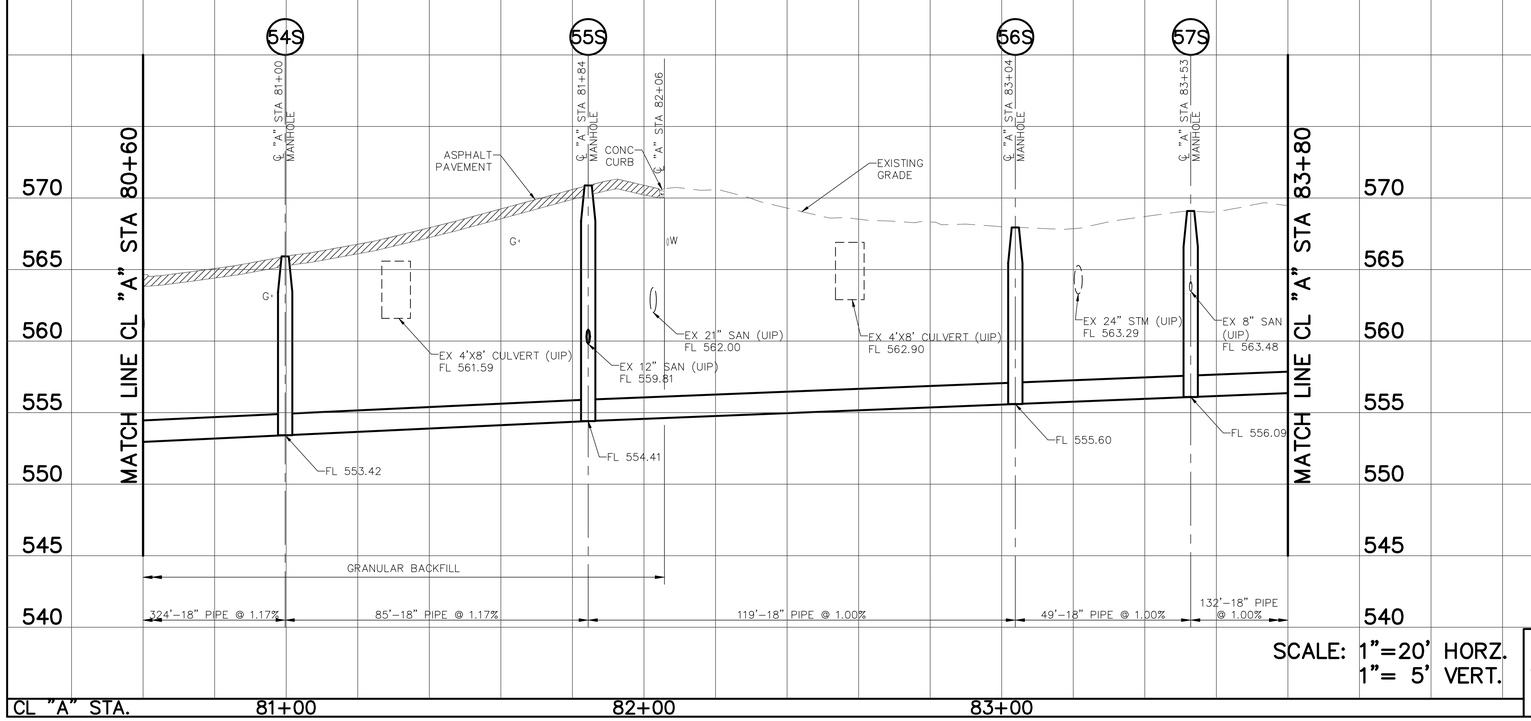
EXISTING STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
767	767	22M3-066S	1006738.36	851490.42	EX SAN MH
779	779	22M3-067S	1006748.68	851500.57	EX SAN MH
799	799	22M3-076S	1006687.26	851324.13	EX SAN MH
902	902	22M3-069D	1006815.43	851456.24	EX STM INLET
909	909	22M3-153D	1006697.49	851334.01	EX STM INLET

NEW STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
	54S		1006776.45	851481.08	MANHOLE
	55S		1006692.20	851489.75	MANHOLE
	56S		1006680.83	851370.90	MANHOLE
	57S		1006666.90	851323.90	MANHOLE

SCALE: 1"=20'
0 10 20



REFERENCE TIE
CONTROL POINT #5
ELEV.=567.61



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METROPOLITAN
ST. LOUIS SEWER DISTRICT

WW-2 AND WW-3 WARSON WOODS
SANITARY RELIEF
12302-015.1
GLENDALE, ROCK HILL, WARSON WOODS, LADUE,
KIRKWOOD – ST. LOUIS COUNTY, MISSOURI

Engineer Seal

CURT W. KIMMEL, P.E.
PROFESSIONAL ENGINEER
P.E. No. 2009001097
Date:

BURNS & McDONNELL
425 SOUTH WOODS MILL ROAD
CHESTERFIELD, MO 63017
PHONE NUMBER (314) 682-1500
FAX NUMBER (314) 682-1600
LICENSEE NO 000165

BMcD #118441

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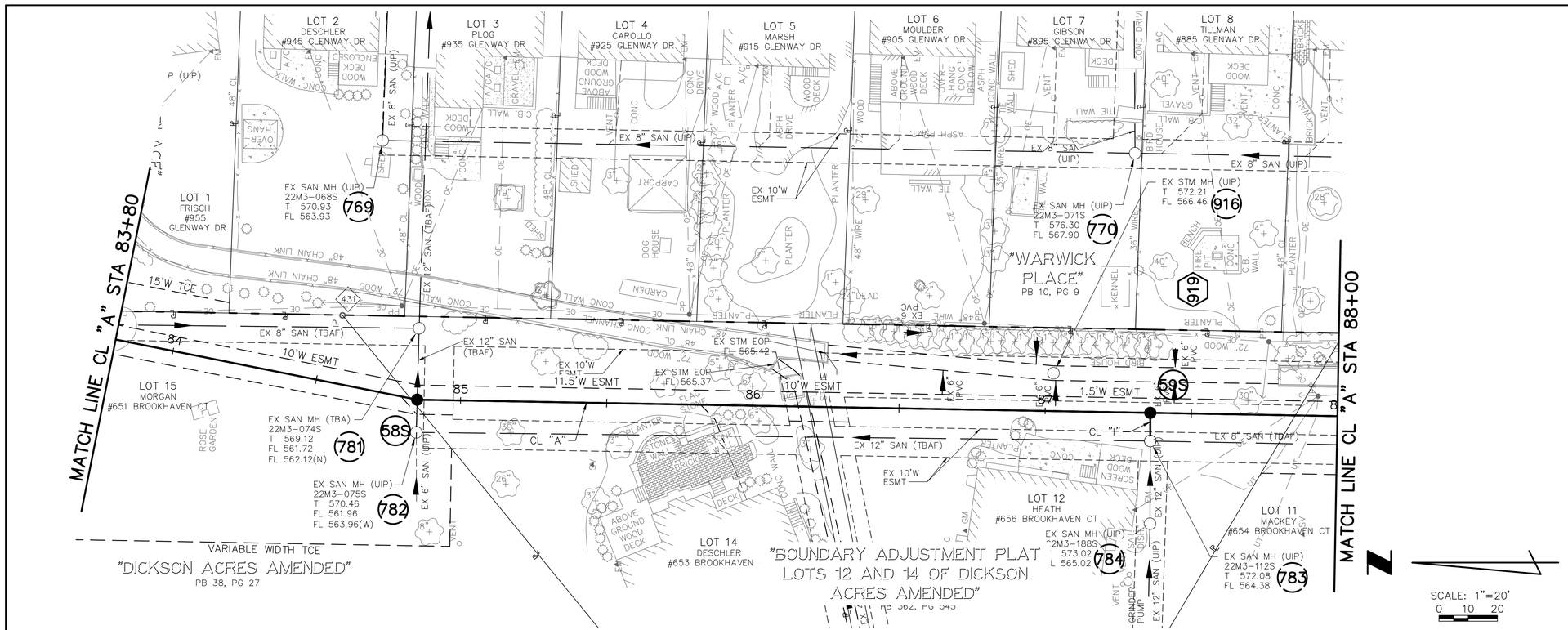
BASE MAP: 22-M-3

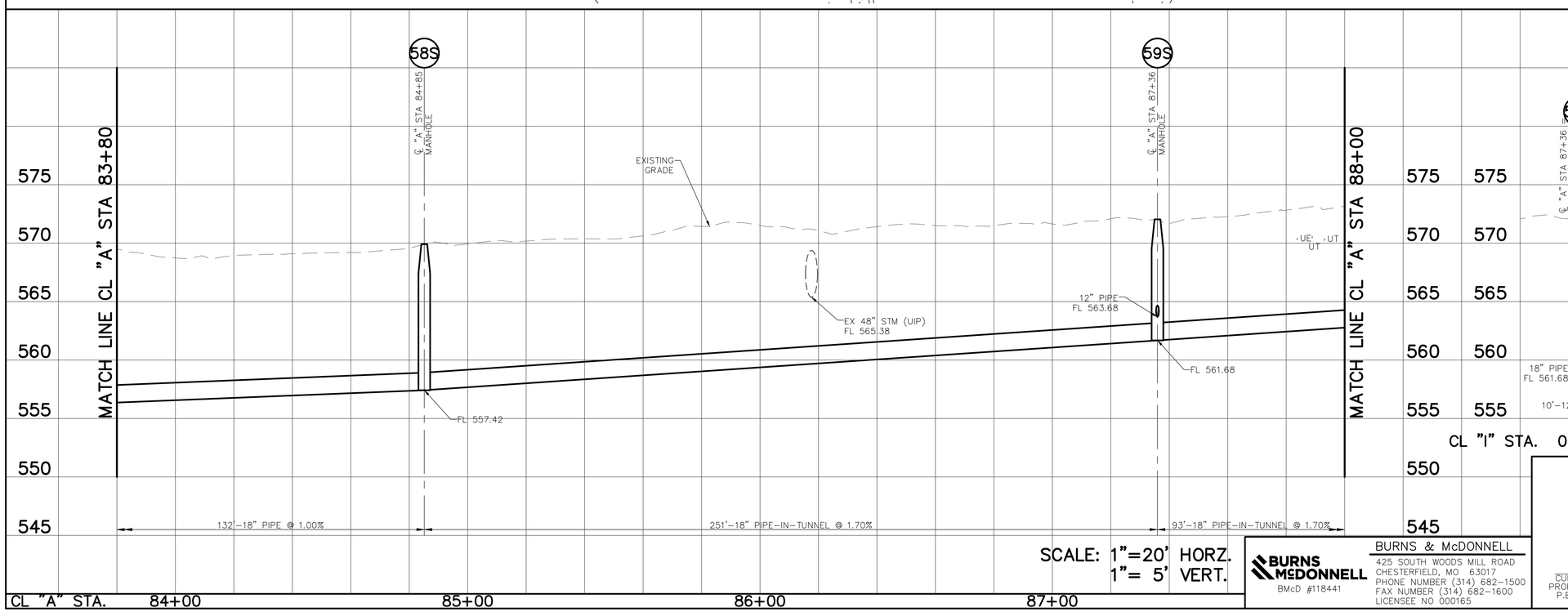
12302-[P21]



POINT TABLE				
CONTROL POINT #	MSD ID #	NORTHING	EASTING	DESCRIPTION
431		1006562.66	851326.84	IRON PIPE

EXISTING STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
769	769	22M3-068S	1006548.92	851386.66	EX SAN MH
770	770	22M3-071S	1006291.57	851382.31	EX SAN MH
781	781	22M3-074S	1006536.46	851322.41	EX SAN MH
782	782	22M3-075S	1006537.44	851286.82	EX SAN MH
783	783	22M3-112S	1006286.40	851283.86	EX SAN MH
784	784	22M3-188S	1006286.46	851255.56	EX SAN MH
916	916	--	1006319.47	851307.07	EX STM MH

NEW STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
	58S		1006537.13	851297.99	MANHOLE
	59S		1006286.37	851293.49	MANHOLE



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METROPOLITAN ST. LOUIS SEWER DISTRICT

WW-2 AND WW-3 WARSON WOODS SANITARY RELIEF
12302-015.1
GLENDALE, ROCK HILL, WARSON WOODS, LADUE, KIRKWOOD - ST. LOUIS COUNTY, MISSOURI

Engineer Seal

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PROFESSIONAL ENGINEER
P.E. No. 2009001097
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BURNS & McDONNELL
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Date AUGUST, 2020
Sheet No 23 of 28

BASE MAP: 22-M-3

12302-[P22]

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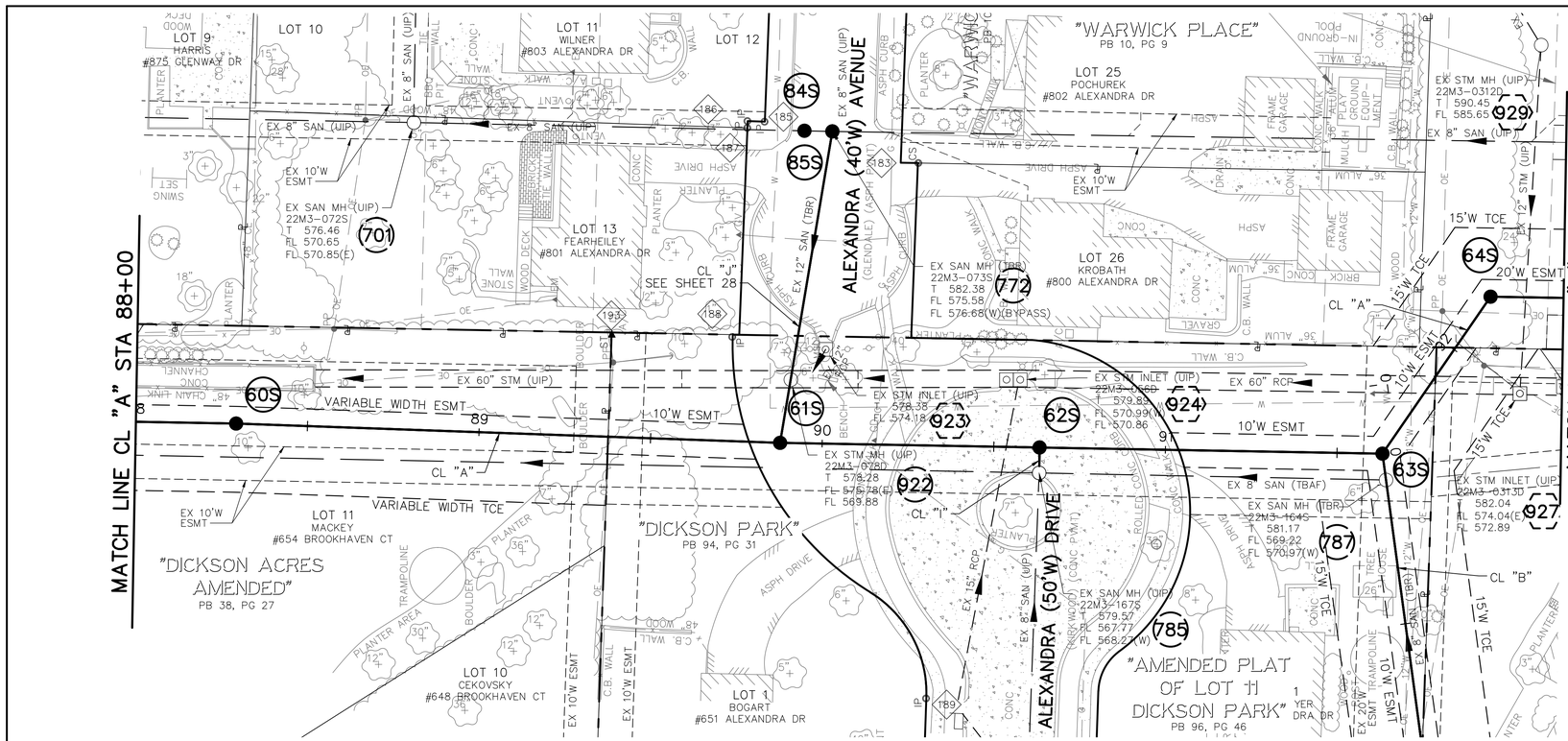
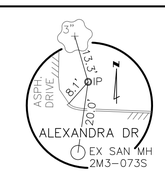




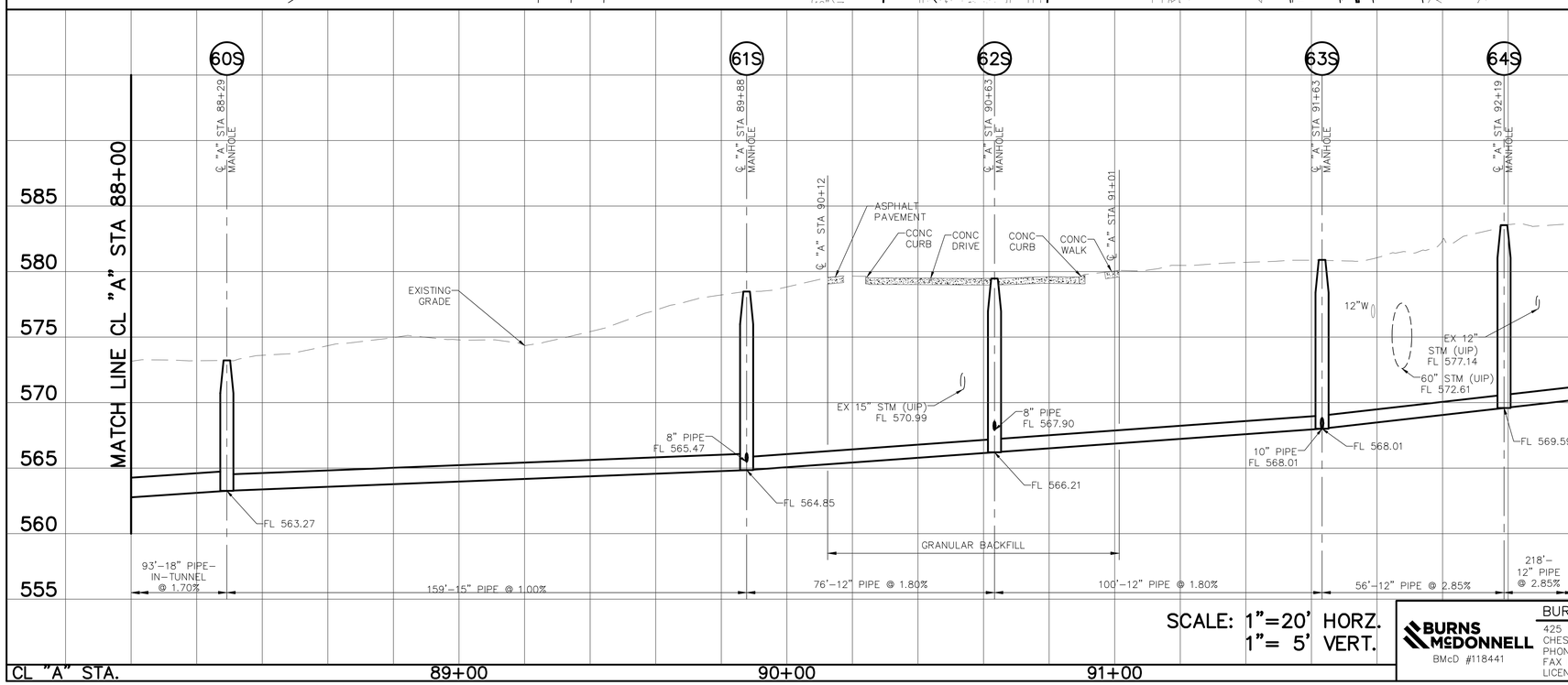
REFERENCE TIE
CONTROL POINT #185
ELEV.=582.14

SCALE: 1"=20'
0 10 20

POINT TABLE				
CONTROL POINT #	MSD ID #	NORTHING	EASTING	DESCRIPTION
183		1005994.43	851367.70	SPINDLE
185		1006039.23	851379.75	IRON PIPE
186		1006044.22	851379.93	IRON PIPE
187		1006044.27	851377.92	IRON PIPE
188		1006048.64	851317.06	IRON PIPE
189		1005992.20	851211.77	IRON PIPE
193		1006083.66	851317.63	OS

EXISTING STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
701	701	22M3-072S	1006141.37	851379.50	EX SAN MH
772	772	22M3-073S	1006019.47	851376.90	EX SAN MH
785	785	22M3-167S	1005959.25	851277.44	EX SAN MH
787	787	22M3-164S	1005858.20	851275.38	EX SAN MH
922	922	22M3-078D	1006031.54	851304.61	EX STM MH
923	923	--	1006021.42	851313.42	EX STM INLET
924	924	22M3-056D	1005964.76	851304.59	EX STM INLET
927	927	22M3-0313D	1005819.22	851300.55	EX STM INLET
929	929	22M3-0312D	1005813.00	851402.06	EX STM MH

NEW STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
	60S		1006193.14	851291.82	MANHOLE
	61S		1006034.70	851286.20	MANHOLE
	62S		1005959.12	851284.85	MANHOLE
	63S		1005859.24	851283.06	MANHOLE
	64S		1005827.75	851328.77	MANHOLE
	84S		1006027.60	851377.10	MANHOLE
772	85S	22M3-073S	1006019.47	851376.93	MANHOLE



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METROPOLITAN ST. LOUIS SEWER DISTRICT

WW-2 AND WW-3 WARSON WOODS SANITARY RELIEF
12302-015.1
GLENDALE, ROCK HILL, WARSON WOODS, LADUE, KIRKWOOD - ST. LOUIS COUNTY, MISSOURI

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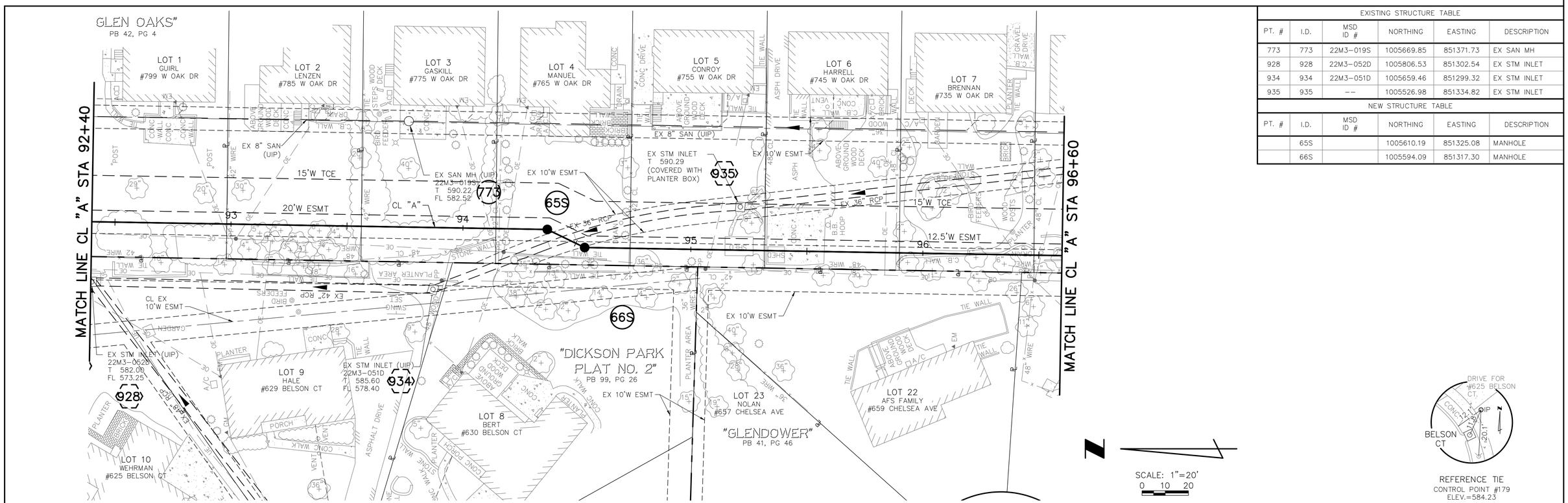
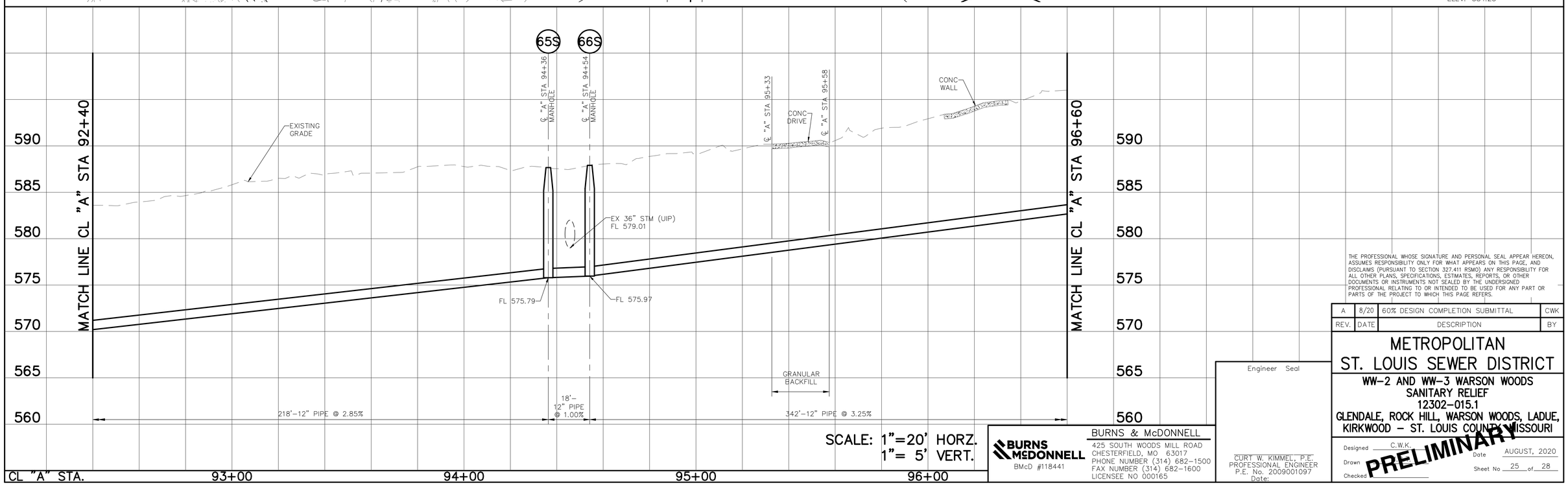
BASE MAP: 22-M-3

12302-[P23]

EXISTING STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
773	773	22M3–019S	1005669.85	851371.73	EX SAN MH
928	928	22M3–052D	1005806.53	851302.54	EX STM INLET
934	934	22M3–051D	1005659.46	851299.32	EX STM INLET
935	935	––	1005526.98	851334.82	EX STM INLET

NEW STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
	65S		1005610.19	851325.08	MANHOLE
	66S		1005594.09	851317.30	MANHOLE





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12302–015.1
GLENDALE, ROCK HILL, WARSON WOODS, LADUE, KIRKWOOD – ST. LOUIS COUNTY, MISSOURI

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Designed C.W.K.
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PRELIMINARY
Date AUGUST, 2020
Sheet No 25 of 28

BASE MAP: 22–M–3

12302–[P24]

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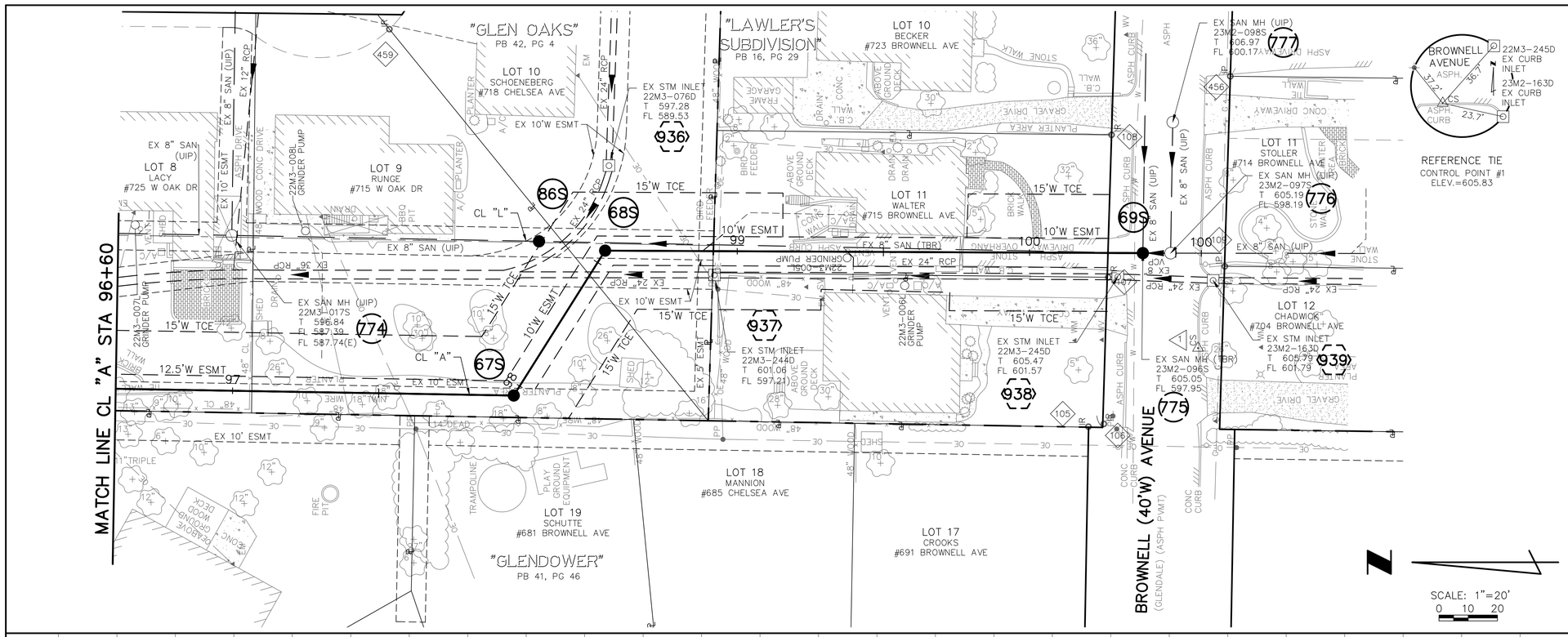
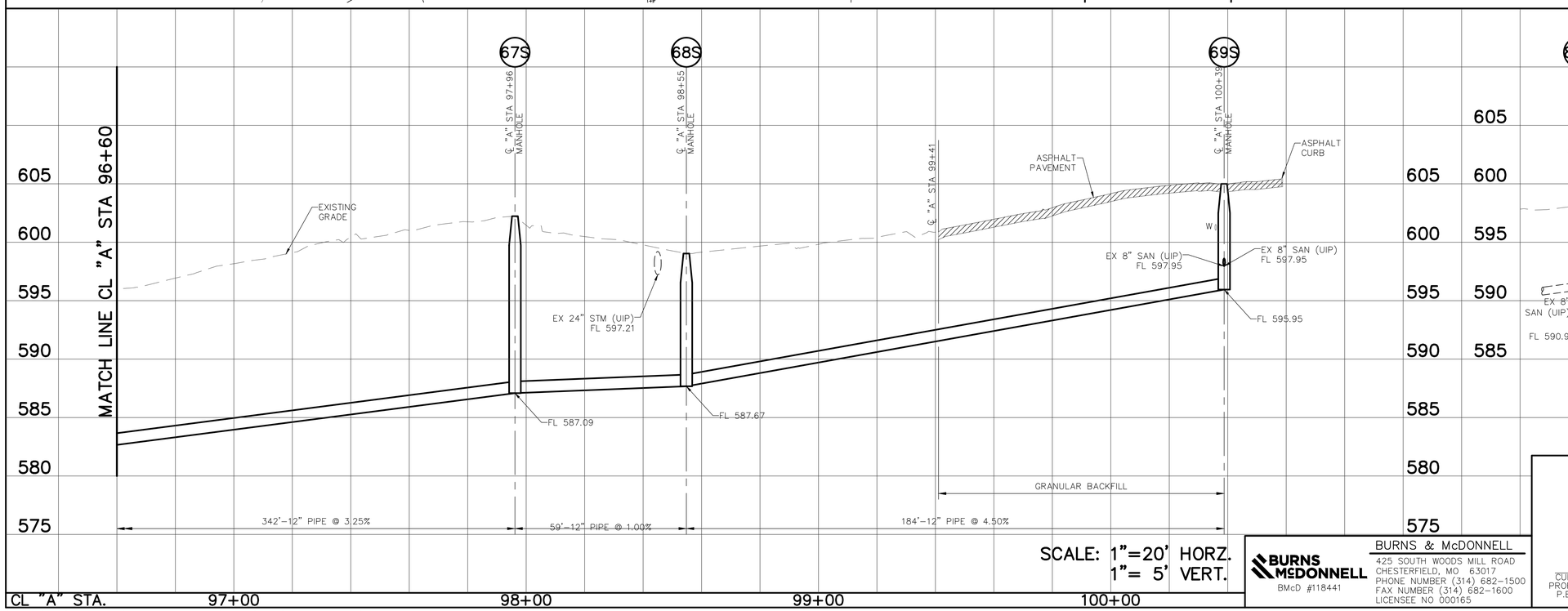


POINT TABLE				
CONTROL POINT #	MSD ID #	NORTHING	EASTING	DESCRIPTION
1		1005018.10	851327.73	SPINDLE
105		1005055.60	851300.82	IRON ROD
106		1005050.31	851301.78	IRON ROD
107		1005048.82	851351.98	IRON ROD
108		1005047.69	851400.72	IRON ROD
109		1005008.95	851355.73	IRON PIPE
456		1005007.06	851420.77	IRON PIPE
459		1005294.71	851436.90	IRON ROD

EXISTING STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
774	774	22M3-017S	1005348.62	851366.32	EX SAN MH
775	775	23M2-096S	1005036.97	851360.24	EX SAN MH
776	776	23M2-097S	1005027.48	851360.23	EX SAN MH
777	777	23M2-098S	1005026.75	851405.09	EX SAN MH
936	936	22M3-076D	1005219.60	851390.19	EX STM INLET
937	937	22M3-244D	1005183.52	851352.76	EX STM INLET
938	938	22M3-245D	1005045.54	851352.12	EX STM INLET
939	939	23M2-163D	1005012.95	851350.90	EX STM INLET

NEW STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
	67S		1005252.18	851311.50	MANHOLE
	68S		1005220.92	851361.09	MANHOLE
775	69S	23M2-096S	1005036.97	851360.24	MANHOLE
	86S		1005243.53	851364.27	MANHOLE



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REV.	DATE	DESCRIPTION	BY
A	8/20	60% DESIGN COMPLETION SUBMITTAL	CWK

METROPOLITAN ST. LOUIS SEWER DISTRICT

WW-2 AND WW-3 WARSON WOODS SANITARY RELIEF
12302-015.1
GLENDALE, ROCK HILL, WARSON WOODS, LADUE, KIRKWOOD – ST. LOUIS COUNTY, MISSOURI

Designed C.W.K.
Drawn
Checked
Date AUGUST, 2020
Sheet No 26 of 28

PRELIMINARY

Engineer Seal

CURT W. KIMMEL, P.E.
PROFESSIONAL ENGINEER
P.E. No. 2009001097
Date:

BURNS & McDONNELL
BMcD #118441
425 SOUTH WOODS MILL ROAD
CHESTERFIELD, MO 63017
PHONE NUMBER (314) 682-1500
FAX NUMBER (314) 682-1600
LICENSEE NO 000165

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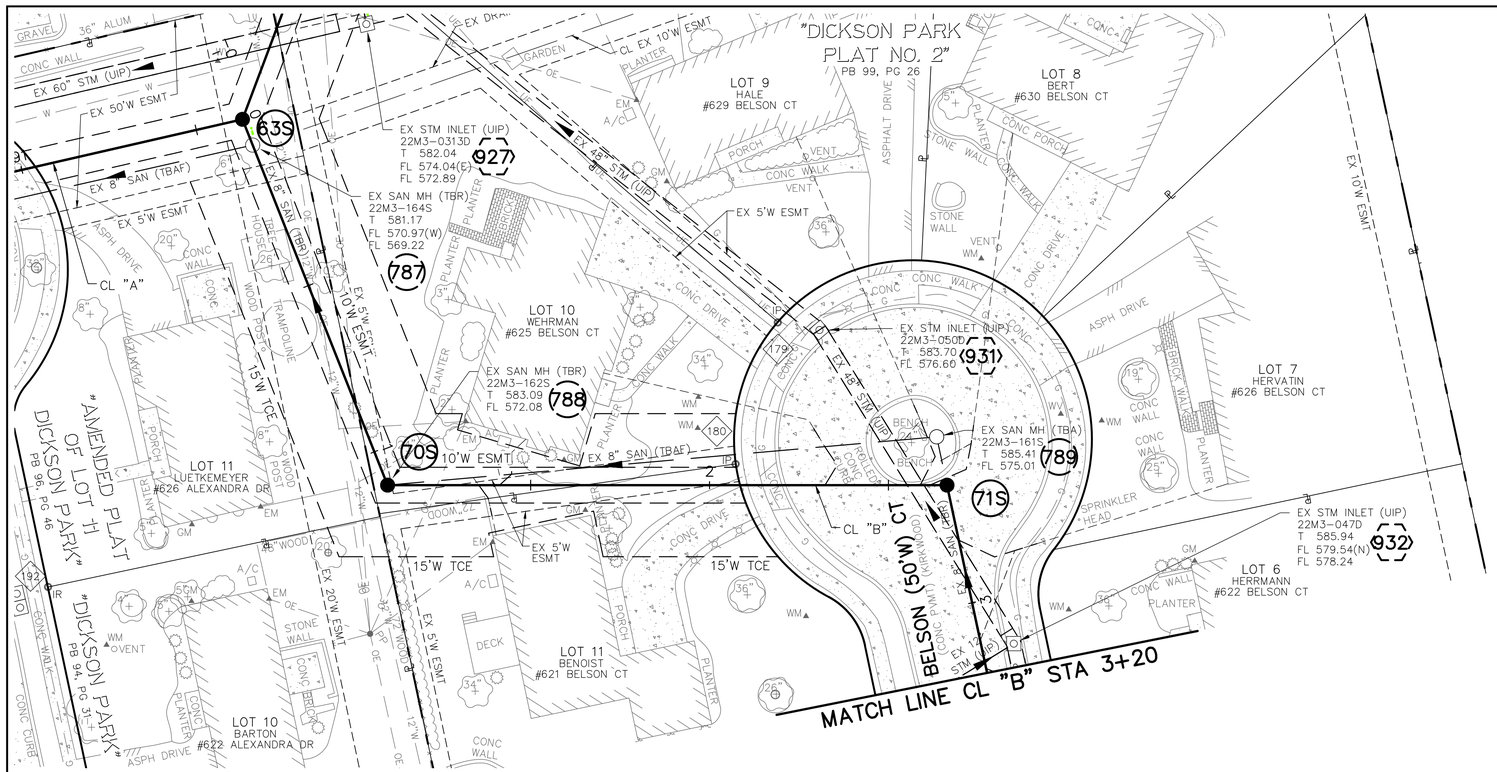
BASE MAP: 22-M-3, 23-M-2

12302-[P25]



SCALE: 1"=20'
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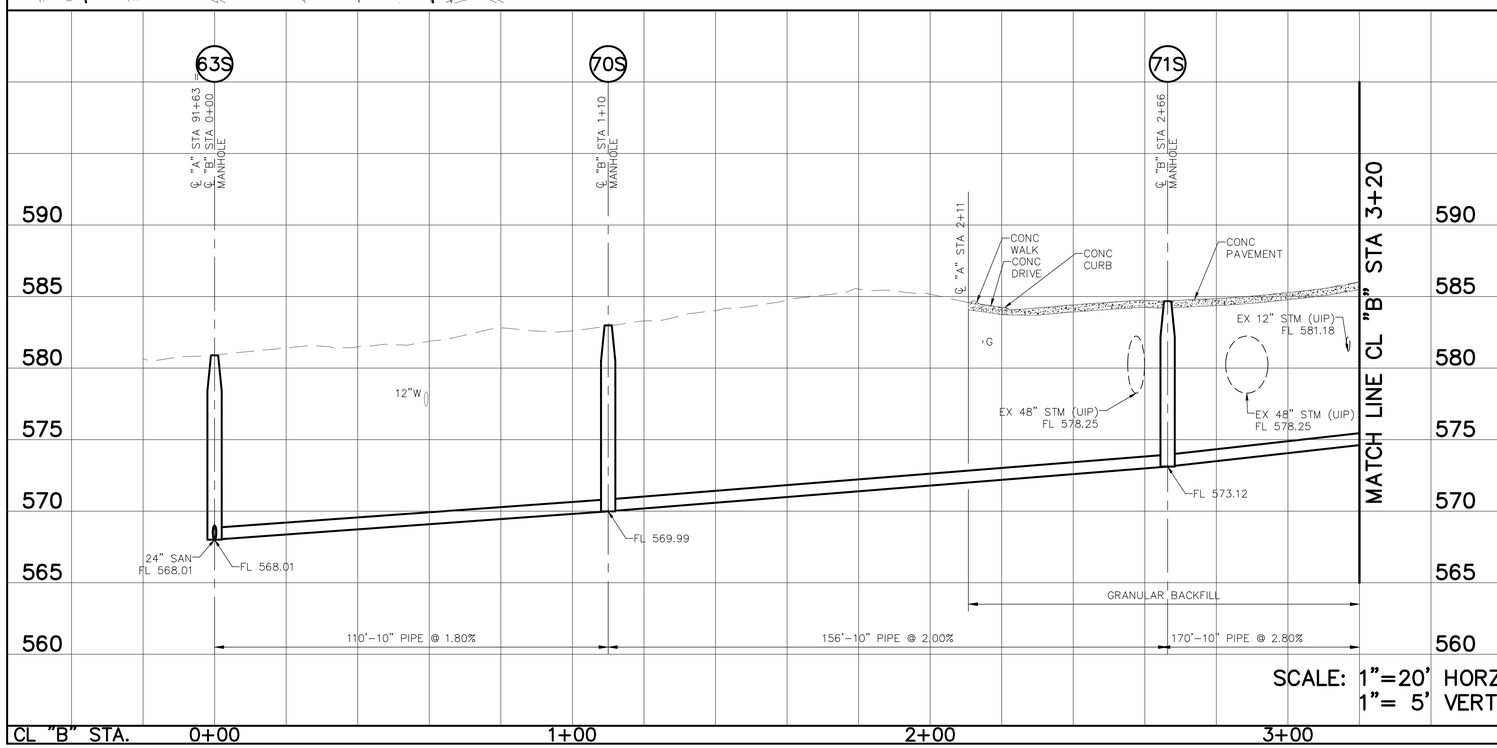
POINT TABLE				
CONTROL POINT #	MSD ID #	NORTHING	EASTING	DESCRIPTION
179		1005727.72	851191.90	IRON PIPE
180		1005748.69	851156.32	IRON PIPE
192		1005943.47	851169.28	IRON ROD

EXISTING STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
787	787	22M3-164S	1005858.20	851275.38	EX SAN MH
788	788	22M3-162S	1005844.52	851174.04	EX SAN MH
789	789	22M3-161S	1005692.31	851150.16	EX SAN MH
927	927	22M3-0313D	1005819.22	851300.55	EX STM INLET
931	931	22M3-050D	1005716.92	851187.03	EX STM INLET
932	932	22M3-047D	1005685.34	851088.85	EX STM INLET

NEW STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
	63S		1005859.24	851283.06	MANHOLE
788	70S	22M3-162S	1005844.52	851174.03	MANHOLE
	71S		1005692.77	851136.35	MANHOLE



SCALE: 1"=20' HORZ.
1"= 5' VERT.

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WW-2 AND WW-3 WARSON WOODS SANITARY RELIEF
12302-015.1
GLENDALE, ROCK HILL, WARSON WOODS, LADUE, KIRKWOOD – ST. LOUIS COUNTY, MISSOURI

Engineer Seal

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Designed C.W.K.
Drawn
Checked
PRELIMINARY
Date AUGUST, 2020
Sheet No 27 of 28

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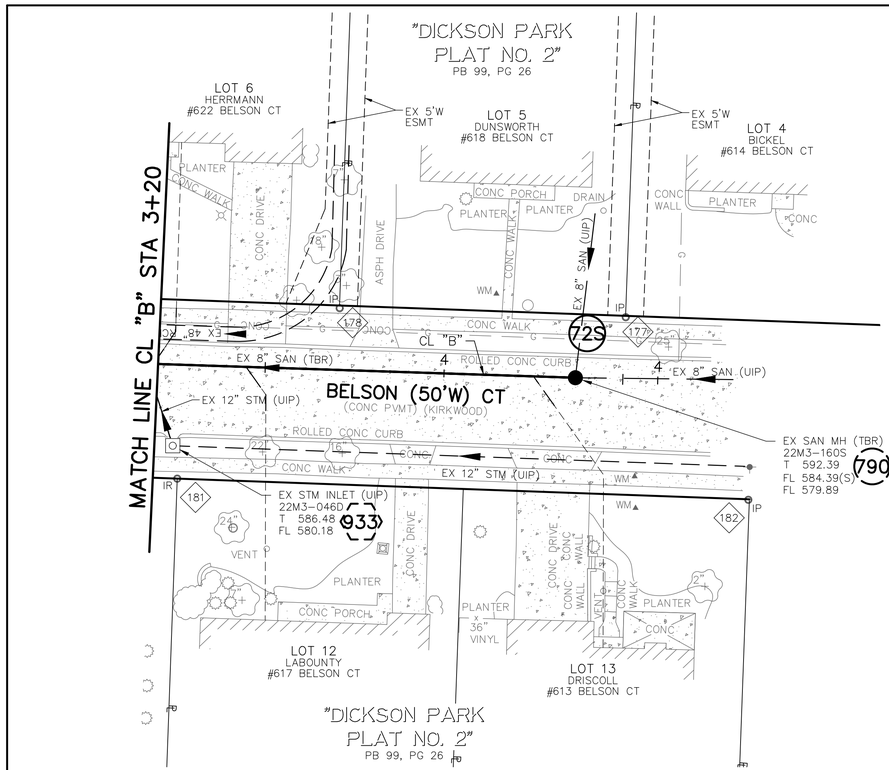
BASE MAP: 22-M-3

12302-[P26]

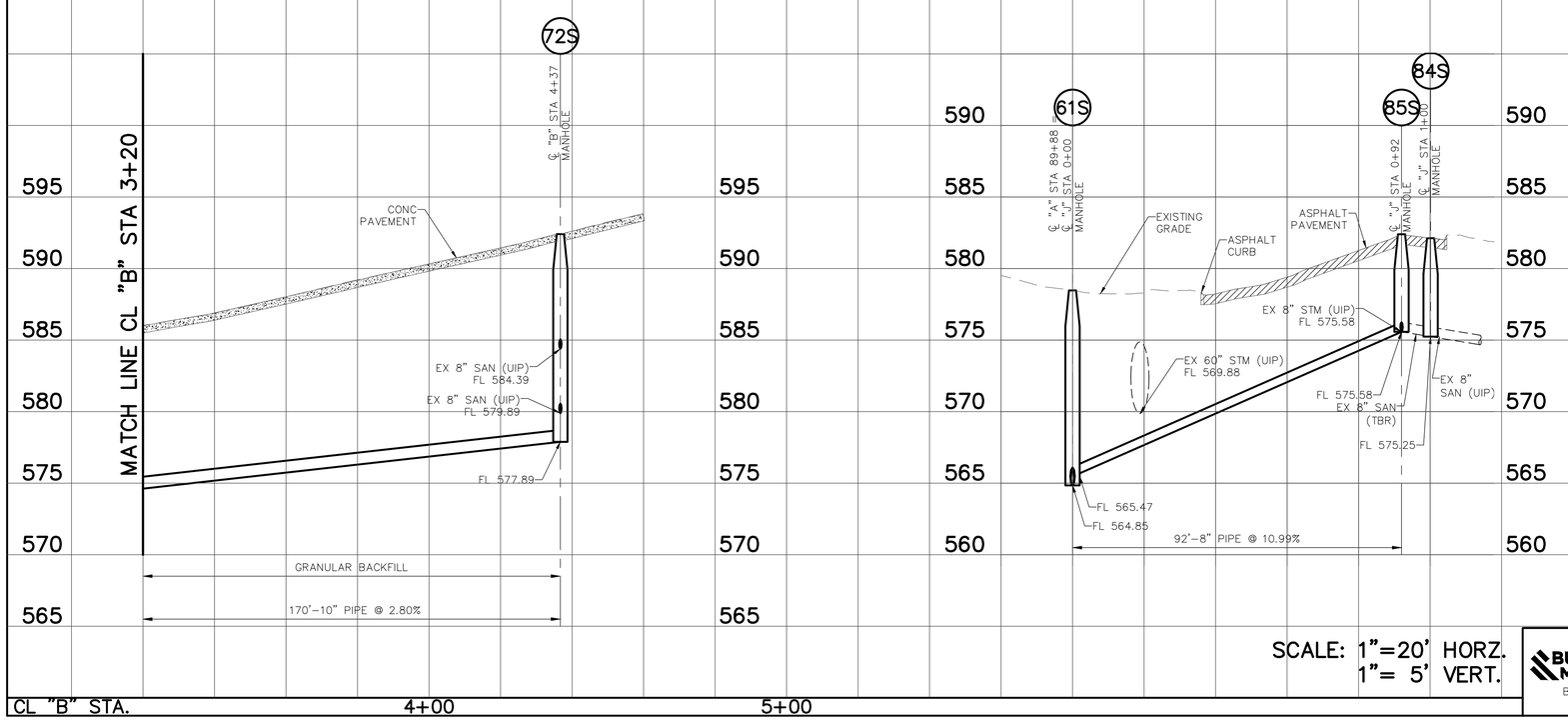


POINT TABLE				
CONTROL POINT #	MSD ID #	NORTHING	EASTING	DESCRIPTION
177		1005681.47	850952.00	IRON PIPE
178		1005678.94	851031.96	IRON PIPE
181		1005726.60	851077.35	IRON ROD
182		1005732.51	850917.74	IRON PIPE

EXISTING STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
790	790	22M3-160S	1005698.40	850966.08	EX SAN MH
933	933	22M3-046D	1005717.40	851078.61	EX STM INLET

NEW STRUCTURE TABLE					
PT. #	I.D.	MSD ID #	NORTHING	EASTING	DESCRIPTION
790	72S	22M3-160S	1005698.40	850966.08	MANHOLE

SCALE: 1"=20'
0 10 20



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CL "B" STA. 4+00 5+00

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Designed C.W.K.
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Sheet No 28 of 28

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BASE MAP: 22-M-3

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