

CITY OF MASSILLON, OHIO

NOVA TECHNOLOGY PARK

IMPROVEMENTS

GRADING, SANITARY & STORM SEWER, CURB & GUTTER

GENERAL NOTES:

ALL CONSTRUCTION TO BE CITY OF MASSILLON SPECIFICATIONS AND STANDARDS, AND THE LATEST ADDITION OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, CONSTRUCTION AND MATERIAL SPECIFICATIONS.

A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH THE CONTRACTOR, CITY ENGINEER, E.E.O. OFFICER, AND SUB-CONTRACTORS.

THE E.E.O. OFFICER SHALL RECEIVE THE REQUIRED WEEKLY AND MONTHLY REPORT ON THIS PROJECT.

WHEN CONFLICT ARISES OVER THE INTERPRETATION OF NOTES AND DETAILS IN THE DRAWINGS, THE DRAWINGS TAKE PREFERENCE OVER THE GENERAL PROVISIONS AND SPECIFICATIONS THAT APPEAR IN THE CONTRACT.

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS HAVE BEEN OBTAINED BY DILIGENT FIELD CHECK AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, BUT THE CITY OF MASSILLON DOES NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS.

THE EAST OHIO GAS CO.
4725 SOUTHWAY ST. S.W.
CANTON, OHIO 44706

OHIO EDISON COMPANY
48 1ST ST. N.E.
MASSILLON, OHIO 44646

OHIO BELL TELEPHONE CO.
632 MCKINLEY AVE. N.W. RM. 61
CANTON, OHIO 44703

OHIO WATER SERVICE CO.
123 3RD ST. S.E.
MASSILLON, OHIO 44646

PAVEMENT REMOVAL AND REPLACEMENT ON ERIE ST AND VISTA AVE. WILL BE INCLUDED IN THE UNIT PRICE OF THE PIPE. REPLACEMENT ON ERIE ST AND VISTA AVE. WILL BE 2" 404 ON 10" CONCRETE BASE (300) WITH 9" SHOULDER. REMOVAL AND REPLACEMENT ON NAVE RD. SHALL BE 2" 404 ON 6" 301 ASPH. BASE TO BE INCLUDED IN PRICE OF PIPE.

WHERE THE PLANS PROVIDE FOR PROPOSED CONDUIT TO BE CONNECTED TO OR TO CROSS EITHER OVER OR UNDER AN EXISTING SEWER, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE THE EXISTING PIPE BOTH AS TO LINE AND GRADE BEFORE HE STARTS TO LAY THE PROPOSED CONDUIT. PAVEMENT FOR THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT 603 CONDUIT ITEMS.

THE CITY WILL FURNISH HORIZONTAL AND VERTICAL CONTROL, CONTRACTOR WILL PROVIDE HIS OWN CONSTRUCTION STAKING, UNDER THE LUMP SUM ITEM.

TRENCHES SHALL BE PROPERLY COMPACTED AND PERMANENT REPAIRS BEGUN UPON COMPLETION OF THE SEWER. THE CONTRACTOR SHALL MAINTAIN TEMPORARY REPAIRS, INCLUDING DUST CONTROL, ALL TRUCK COATS AND SEALING SHALL BE INCLUDED IN PIPE PRICES. ALL CUTS SHALL BE CLEAN, NEAT AND SHARP EDGES. ALL STREET REPAIR TO BE AS NOTED.

ALL COMPACTION OF SUBGRADE SHALL MEET ODOT'S SPECIFICATIONS.

CLOSING OF ERIE ST., VISTA AVE., AND NAVE RD. SHALL BE KEPT TO A MINIMUM. CONTRACTOR WILL COORDINATE THE CLOSING WITH THE STATE HOSPITAL OFFICIALS.

CLEARING AND GRUBBING TO BE A LUMP SUM ITEM.

ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED COMPLETE UNDER ITEM 201.

ALL MANHOLES SHALL BE PRECAST CONCRETE, SANITARY MANHOLES SHALL HAVE "O" RING, AND WITH A MINIMUM OF 10" OF ADJUSTING RING ON TOP OF CONE.

BACKFILL SHALL BE COMPACTED PER SPECIFICATIONS, IF UNSUITABLE GRANULAR BACKFILL MAY BE ORDERED BY THE ENGINEER. BACKFILL SHALL BE AT OPTIMUM MOISTURE. COST OF COMPACTION SHALL BE INCLUDED IN THE PIPE ITEM PRICE.

BUILDING FOUNDATIONS SHALL BE REMOVED 2' BELOW GRADE AND CONCRETE FLOORS SHALL BE BROKEN INTO PIECES NO LARGER THAN 2'.

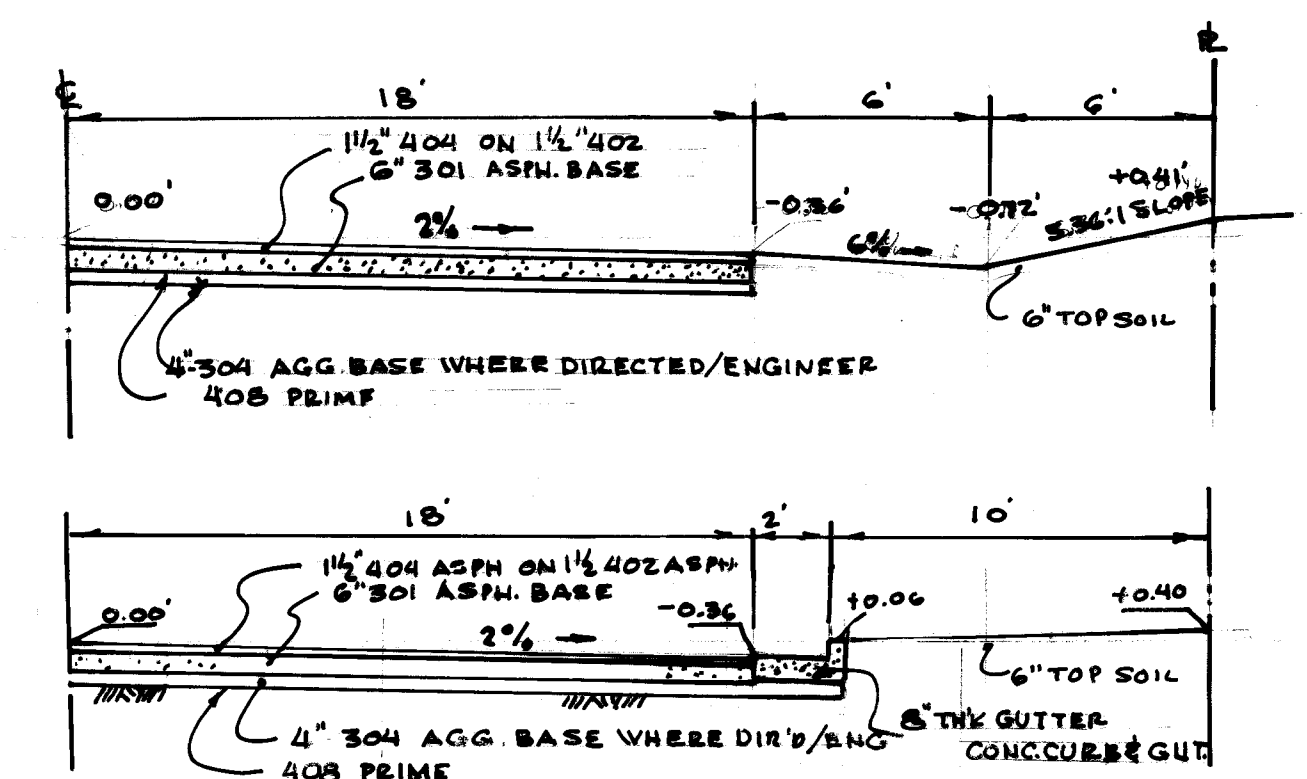
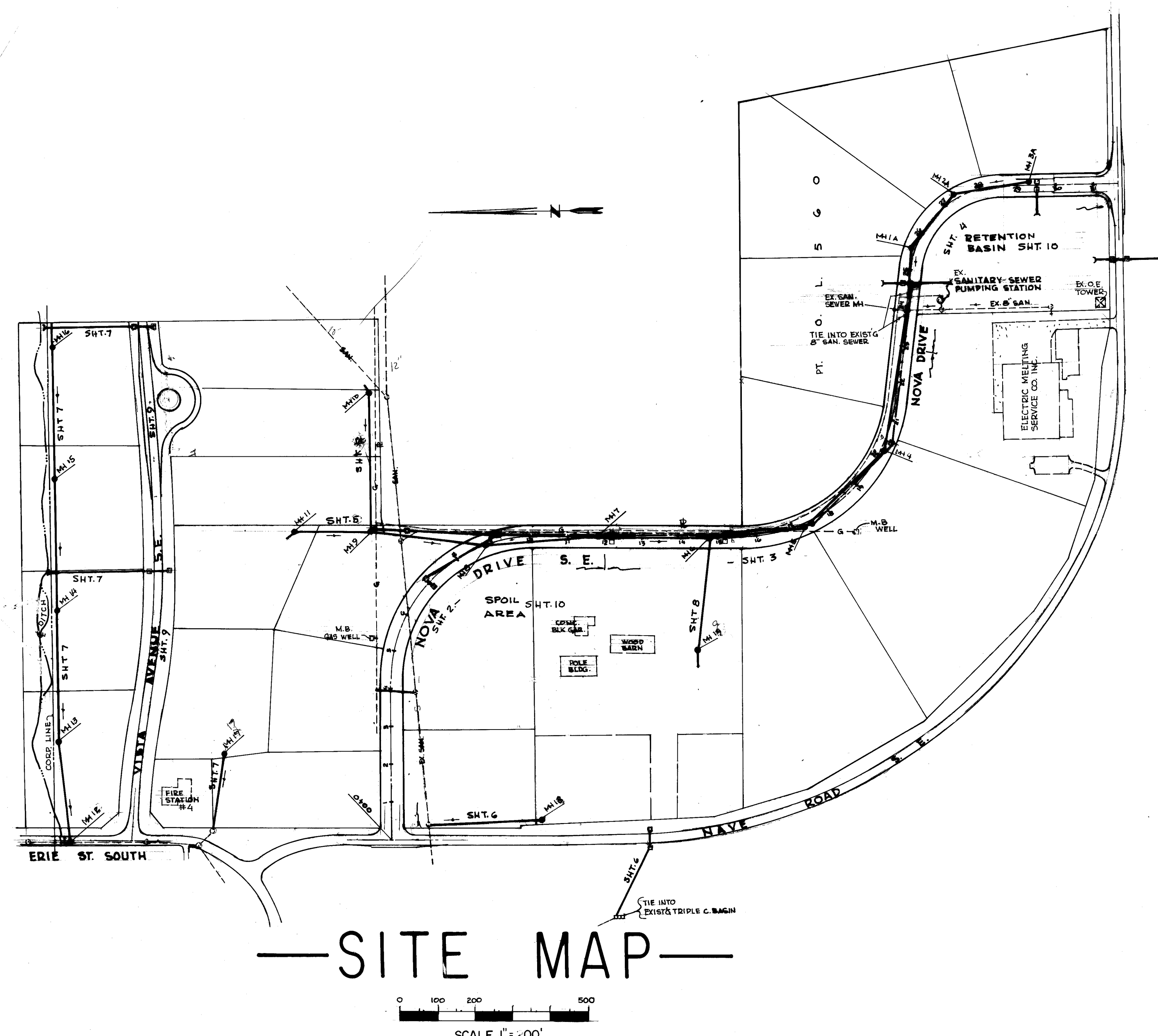
ALL SANITARY AND STORM MANHOLES WILL BE BID EACH, NOT BY THE VERTICAL FOOT.

PLUGS AND VYE POLES TO BE INCLUDED IN THE PRICE OF PIPE FOR ALL LATERALS.

NO PLASTIC PIPE WILL BE USED ON THIS PROJECT UNLESS SPECIFIED ON THE DRAWING OR APPROVED BY THE ENGINEER.

TREES - 134' MALUS RADIANT & RADIANT CRAB TREES SPACED EVERY 50 FT. BOTH SIDES ALONG NOVA DRIVE S.E., WEIGHT 18", SHAPE ROUND, FLOWER-SPRING DEEP PER ENGINEER DIRECTION.

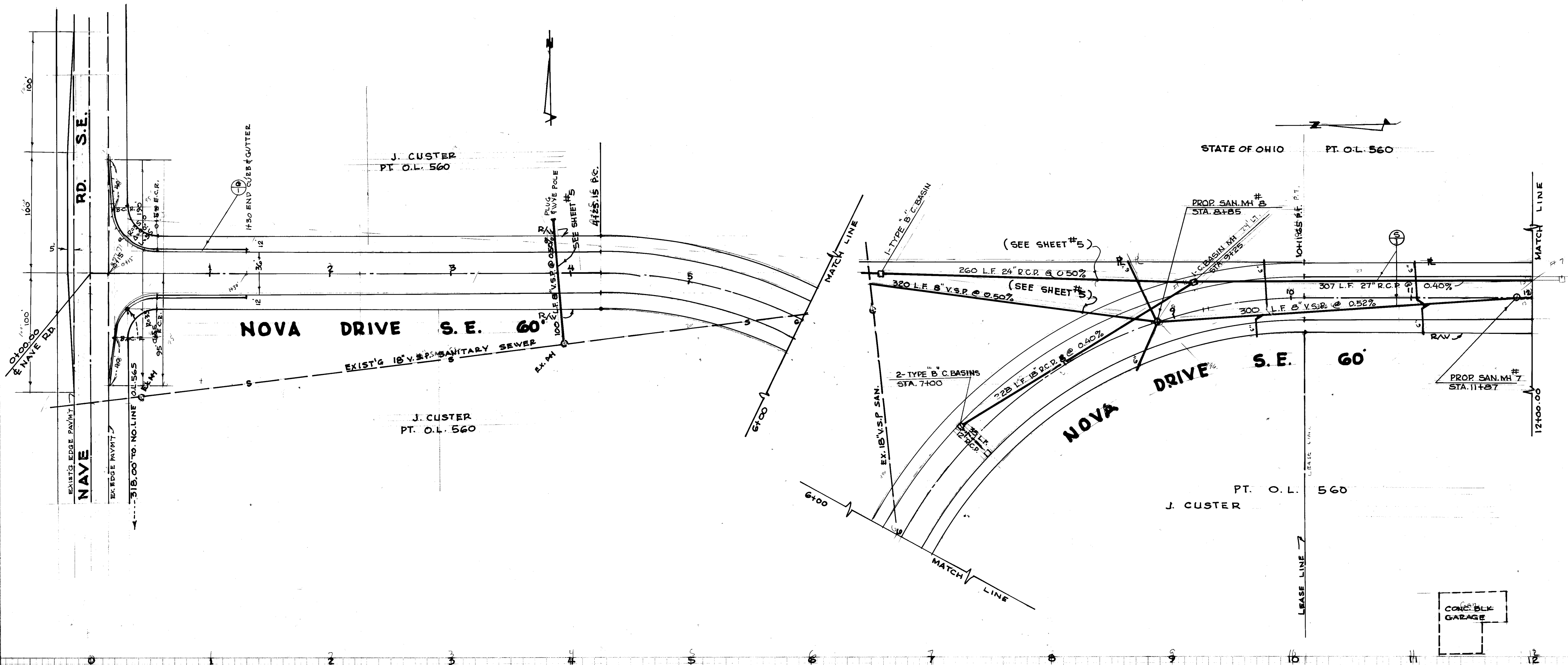
MAYOR _____ FRANCIS H. CICCHINELLI JR.
SAFETY SERVICE DIR. _____ BILL H. HAMIT
CITY ENGINEER _____ ROBERT WAGONER



PREPARED BY RON MCPHERSON
MASSILLON CITY ENGINEERING DEPARTMENT

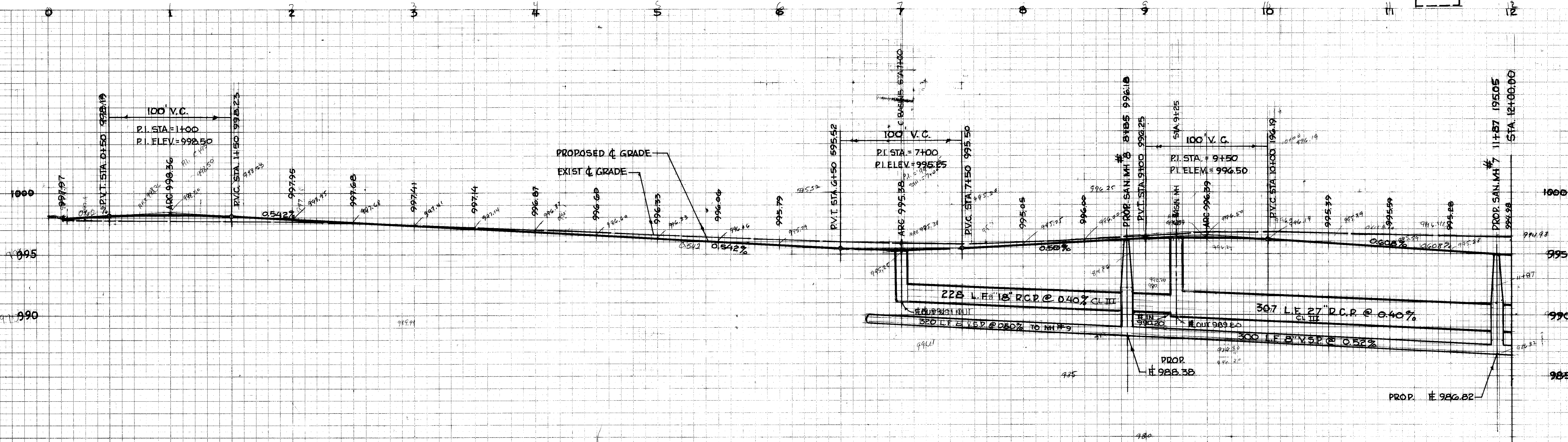
FINAL SURVEY	DATE
SURVEYED	BY
PLANNED	BY
NOTE BOOK	NO.
AREAS CHECKED	

ORIGINAL SURVEY	DATE
SURVEYED	BY
PLANNED	BY
NOTE BOOK	NO.
AREAS CHECKED	



ESTIMATED QUANTITIES						
STATION	FROM	TO	SIDE	609	604	603
				CURB & GUTTER L.F.	SANITARY MANHOLE EACH	6\"/>

CONT. QUANTITIES							
	STATION		603	603	604	604	603
	FROM	TO	18" R.C.P. STM. SEWER C.I. LF	27" R.C.P. STM. SEWER C.I. LF	TYPE "B" C. BASINS EA.	TYPE "B" C. BASINS MANHOLES EA	12" R.C.P. STM. SEWER C.I. LF
5-1	0+20	12+00	228	307	2	1	35
	TOTAL		228	307	2	1	35



CITY OF MASSILLON, OHIO

NOVA TECHNOLOGY PARK

NOVA DRIVE, PAVING, SANITARY & STORM SEWER, NAVE P.D. TO STA. 12+00

BY RON MCPHERSON & ROBERT VAGONER

CITY ENG. ROBERT VAGONER

SCALE 1"=50'

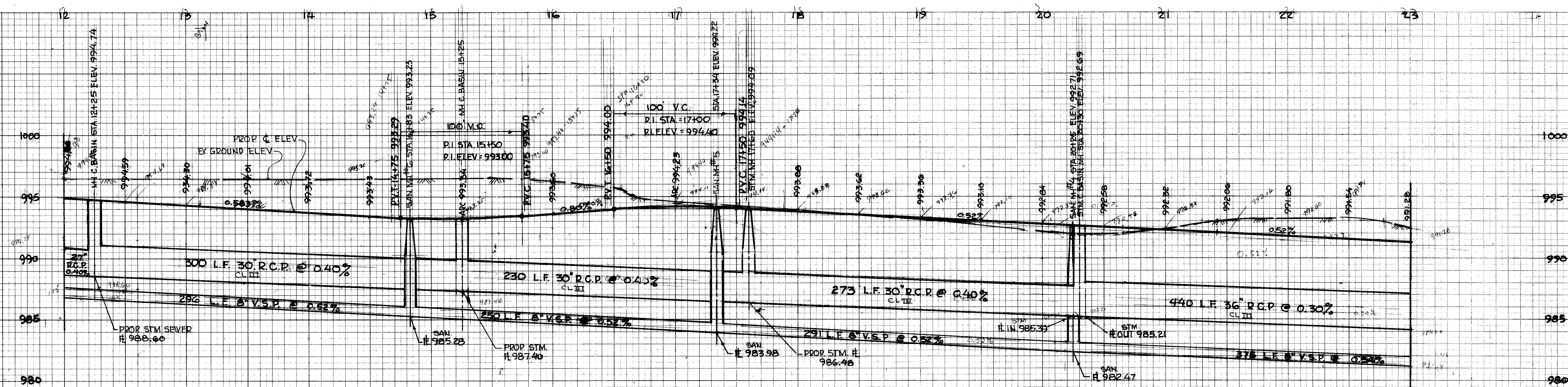
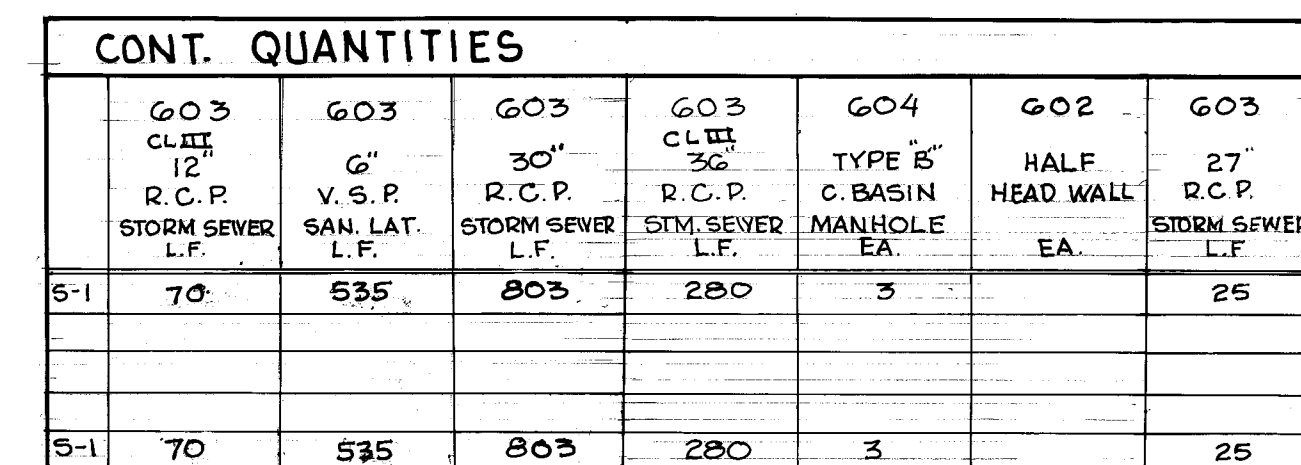
DATE OCT. 1988

DEPT. OF PUBLIC SERVICE

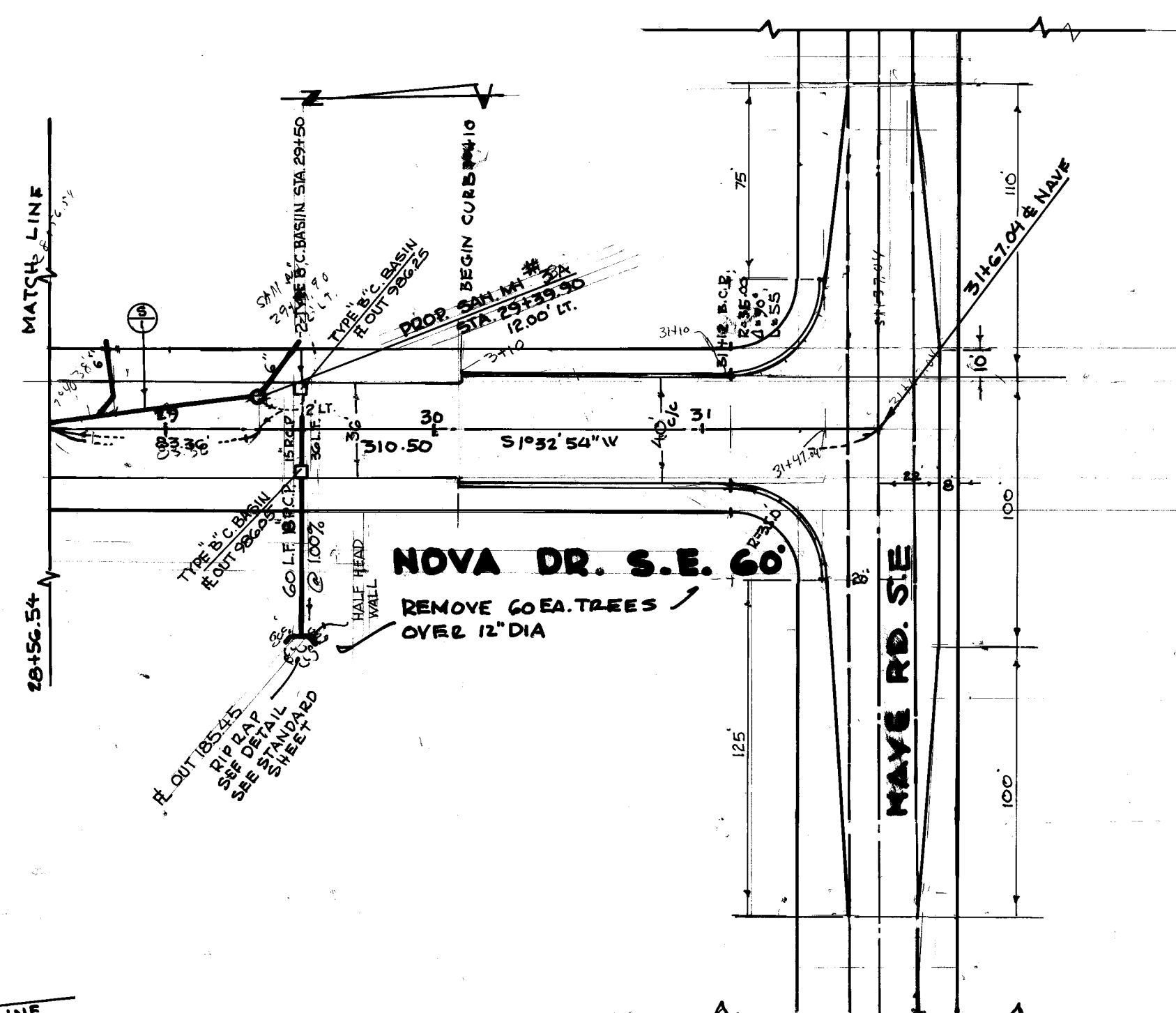
ENGINEERING DIVISION

2/11

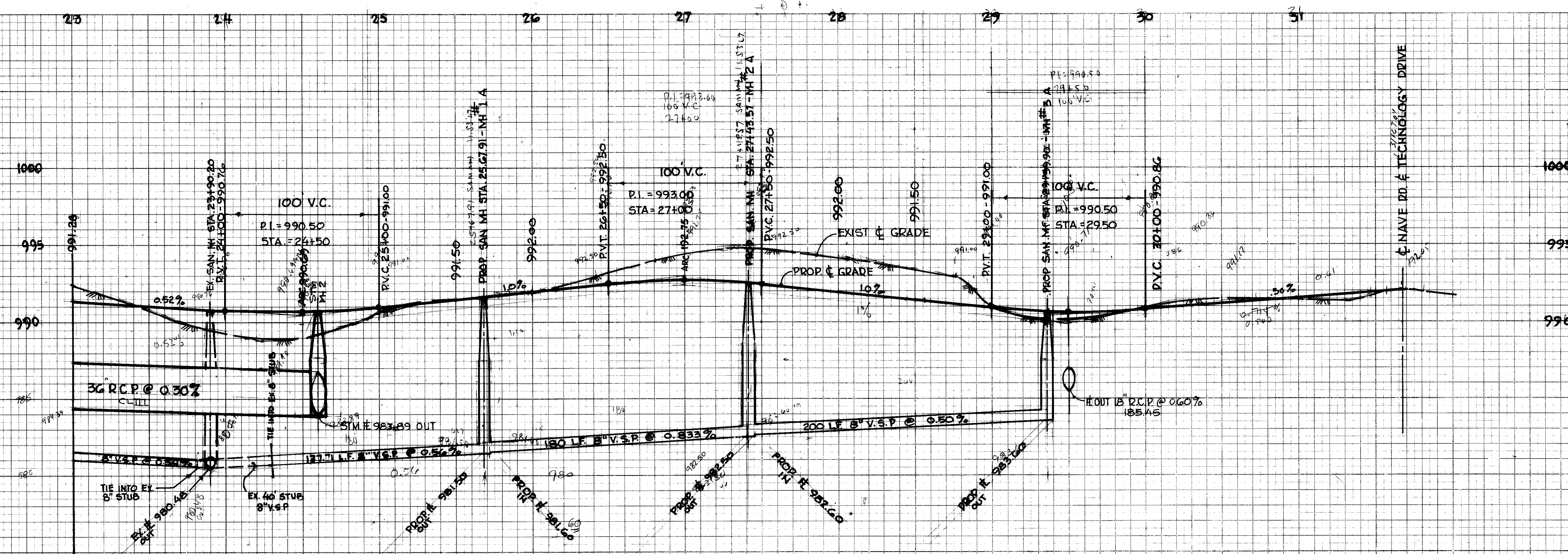
ORIGINAL SURVEY NOTE BOOK NO. _____ AREAS CHECKED _____	SURVEYED _____ PLOTTED _____ TEMPLATE _____ AREAS _____ NO. _____ AREAS CHECKED _____	BY _____ DATE _____
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NO.	DATE	BY	SURVEYED	PLOTTED	TEMPLATE	AREAS
NO.						

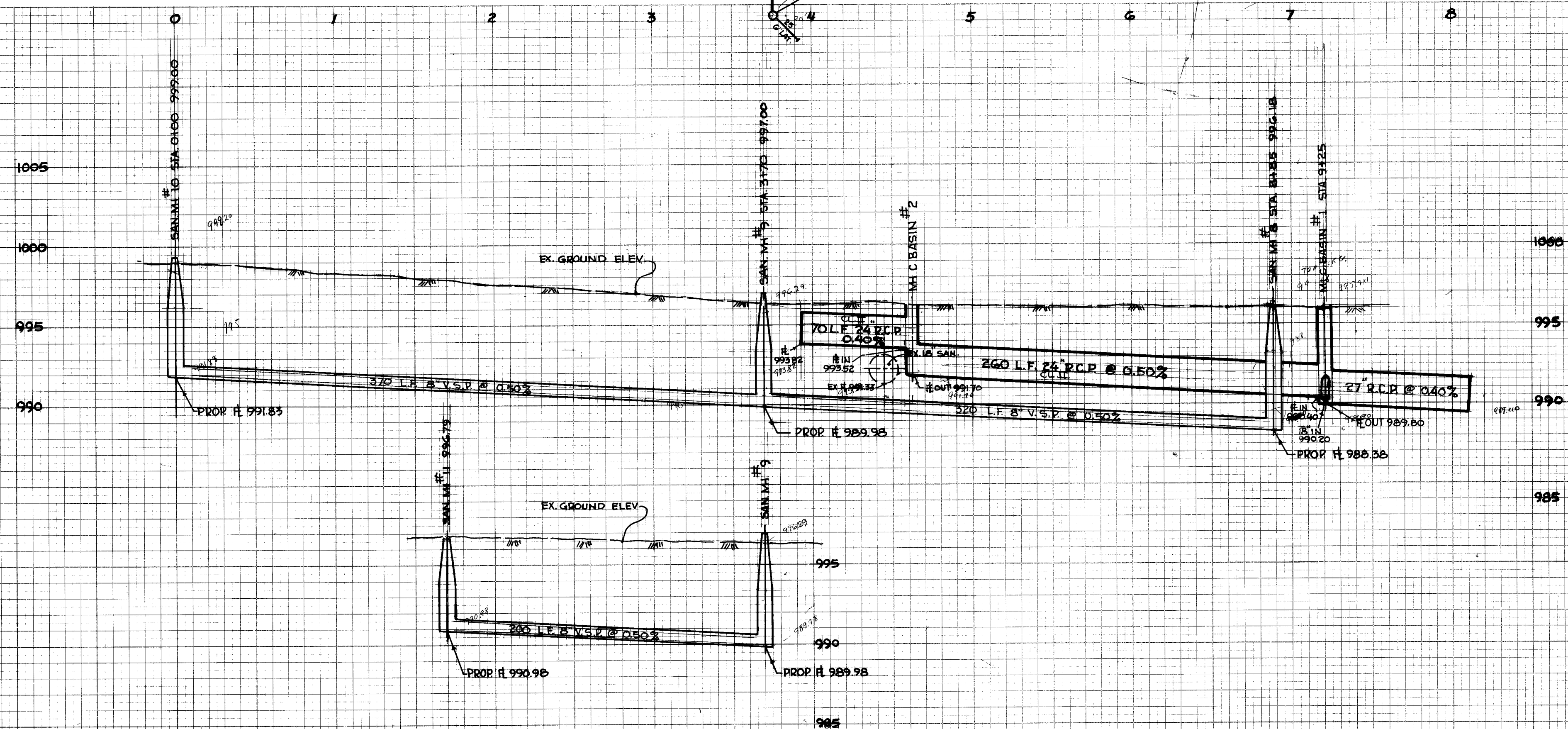
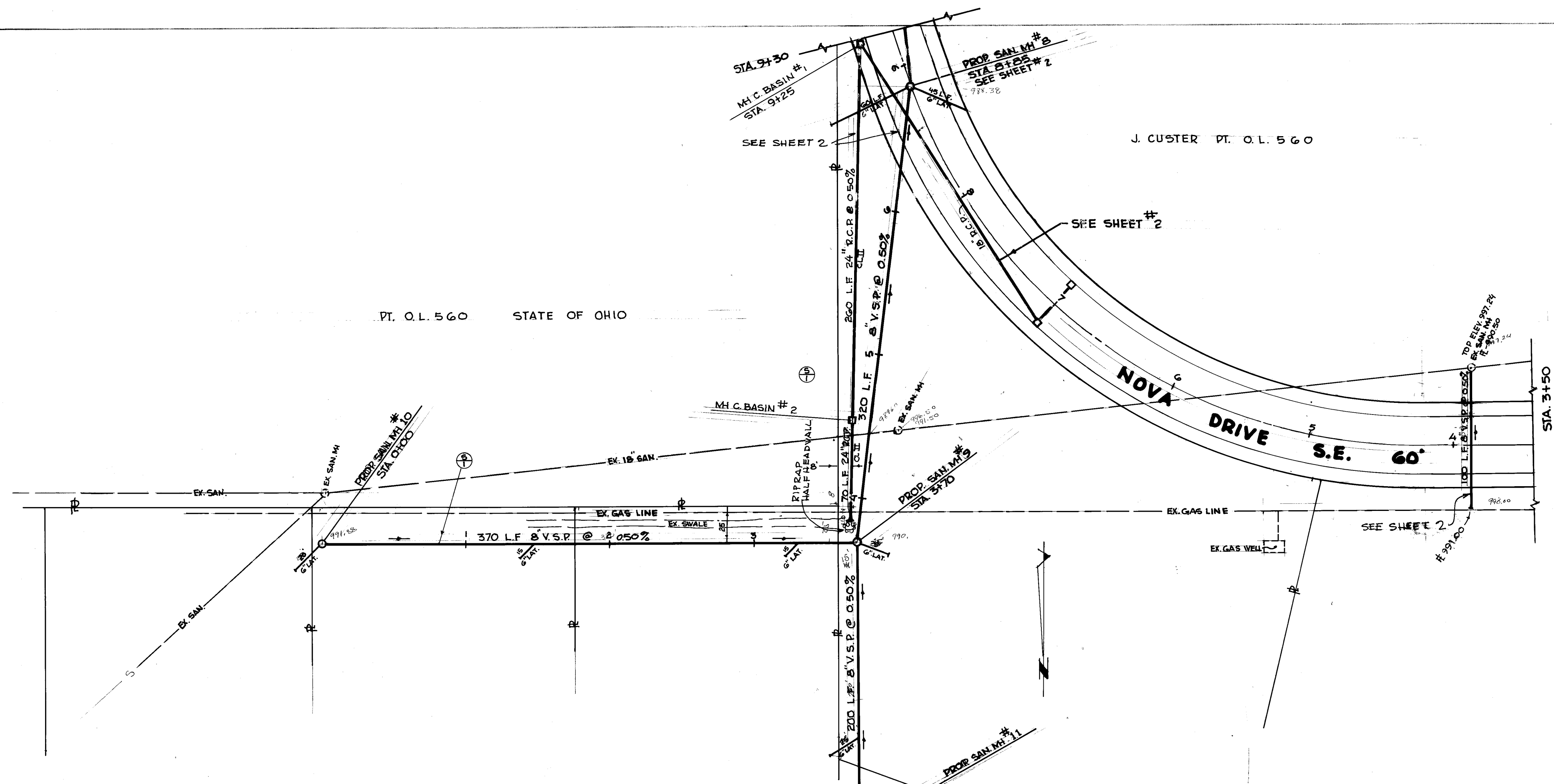


CONT. QUANTITIES						
	G03 CLIII 15' R.C.P. STORM SEWER L.F.	G04 TYPE "B" CATCH BASIN EA.	G02 HALF HEAD WALL EA.	G03 CLIII 10' R.C.P. STORM SEWER L.F.	G03 CLIII 36' R.C.P. STORM SEWER L.F.	G01 RIP RAP EA.
S-1	36'	4	3	135	260	1
S-1 TOTAL	36'	4	3	135	260	1



DATE	BY	SURVEYED	NOTED	PLANNED	AREAS CHECKED

DATE	BY	SURVEYED	NOTED	PLANNED	AREAS CHECKED

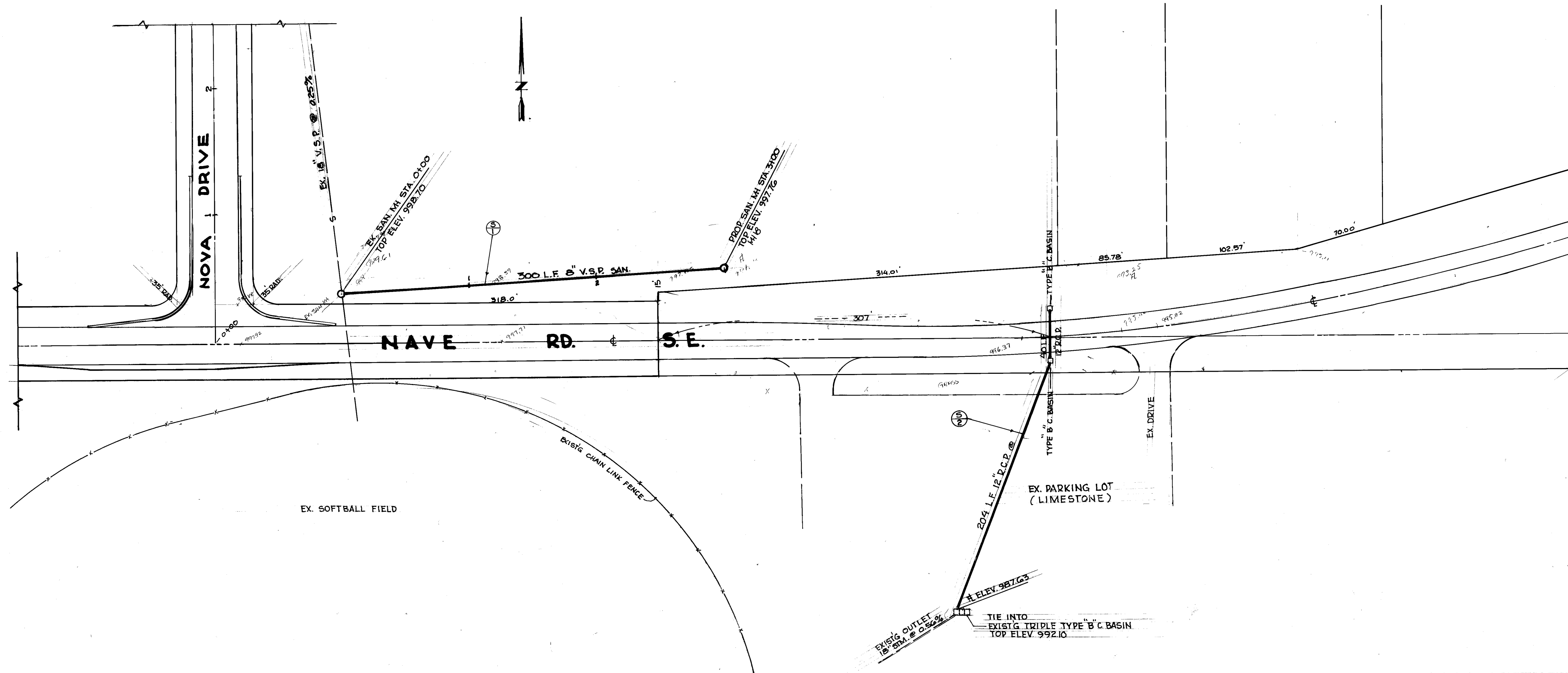


ESTIMATED QUANTITIES									
	STATION		604	604	603	603	603	602	602
	FROM	TO	SYM MH C.BASIN EA	SAN. MH'S C.BASIN EA.	8" V.S.P. SAN. SEWER L.F.	6" V.S.P. SAN. LAT L.F.	6" CL. L.T. 20" R.C.P. STM. SEWER L.F.	HALF HEAD WALL EA.	RIPRAP EA.
5-1	0+00	9+25	2	4	990	230	330	1	1
5-1	TOTAL		2	4	990	230	330	1	1

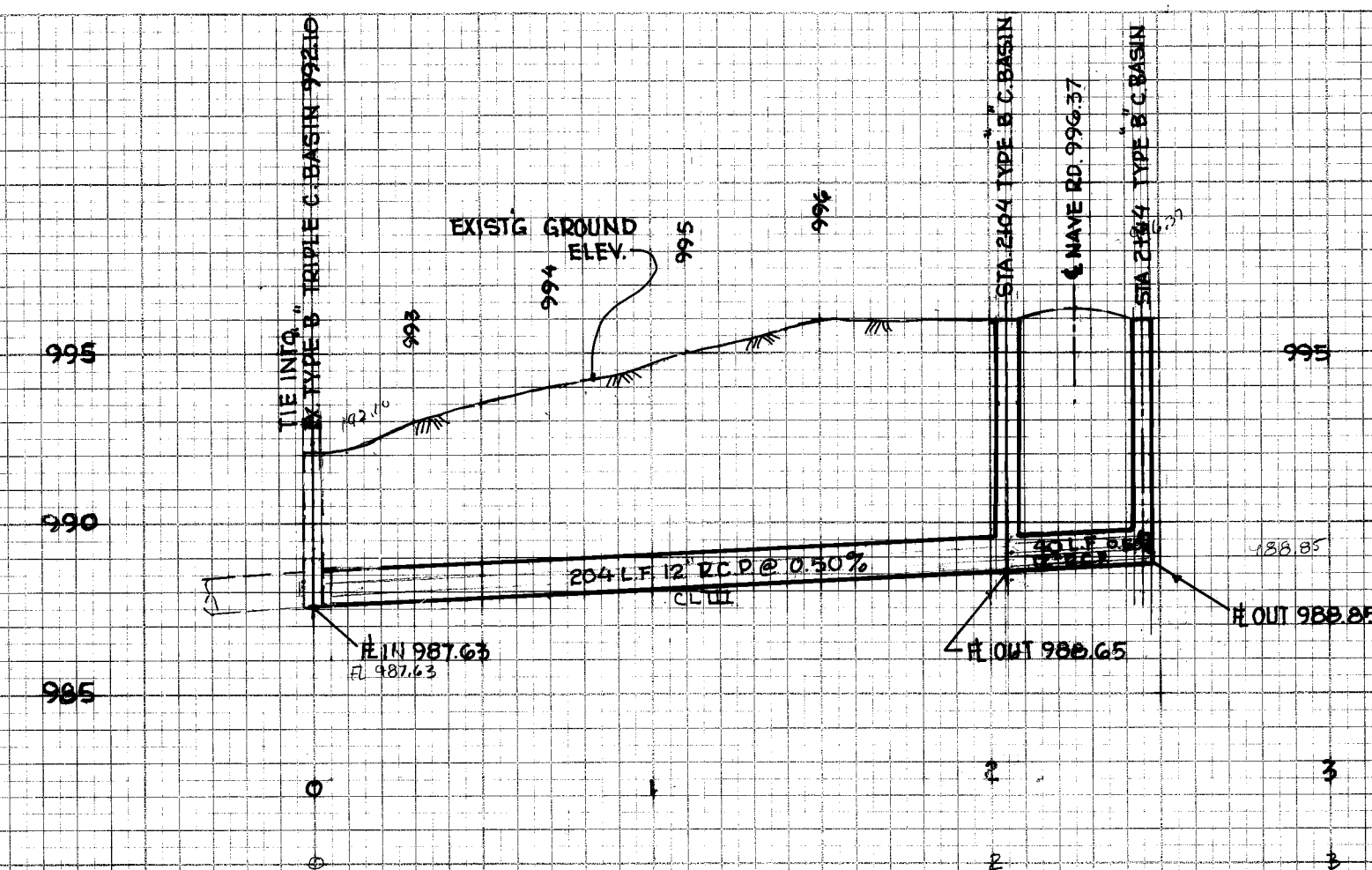
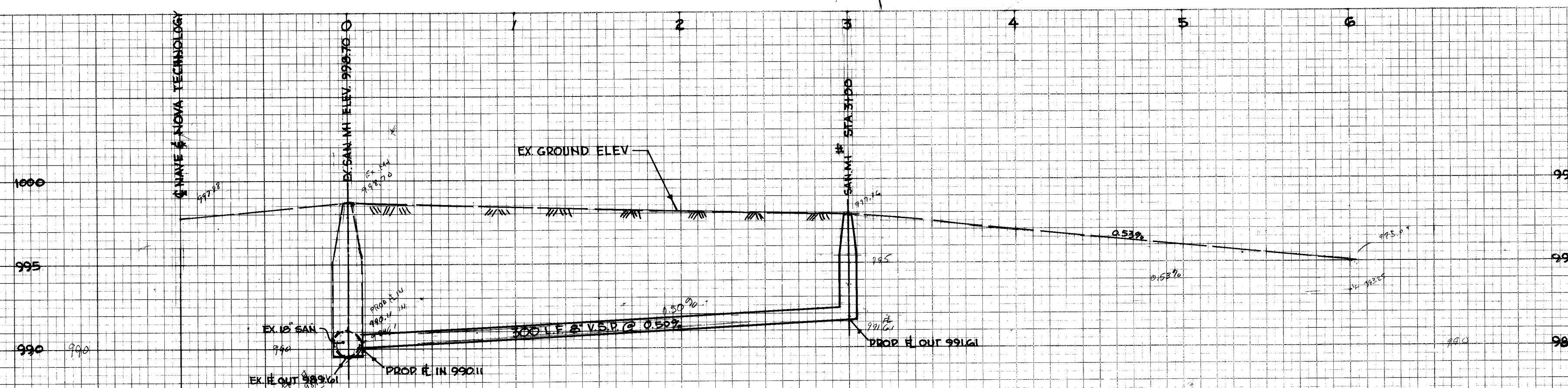
CITY OF MASSILLON, OHIO		
NOVA TECHNOLOGY PARK		
STORM & SANITARY SEWER NORTH OF NOVA DR.		
SCALE 1"=50'	DR. BY RON MCPHERSON	DEPT. OF PUBLIC SERVICE
DEC. 1988	CITY ENG. ROBERT WAGONER	ENGINEERING DIVISION

DATE	BY	NO.
FINAL SURVEY		
NOTE BOOK		
AREAS CHECKED		

DATE	BY	NO.
ORIGINAL SURVEY		
NOTE BOOK		
AREAS CHECKED		

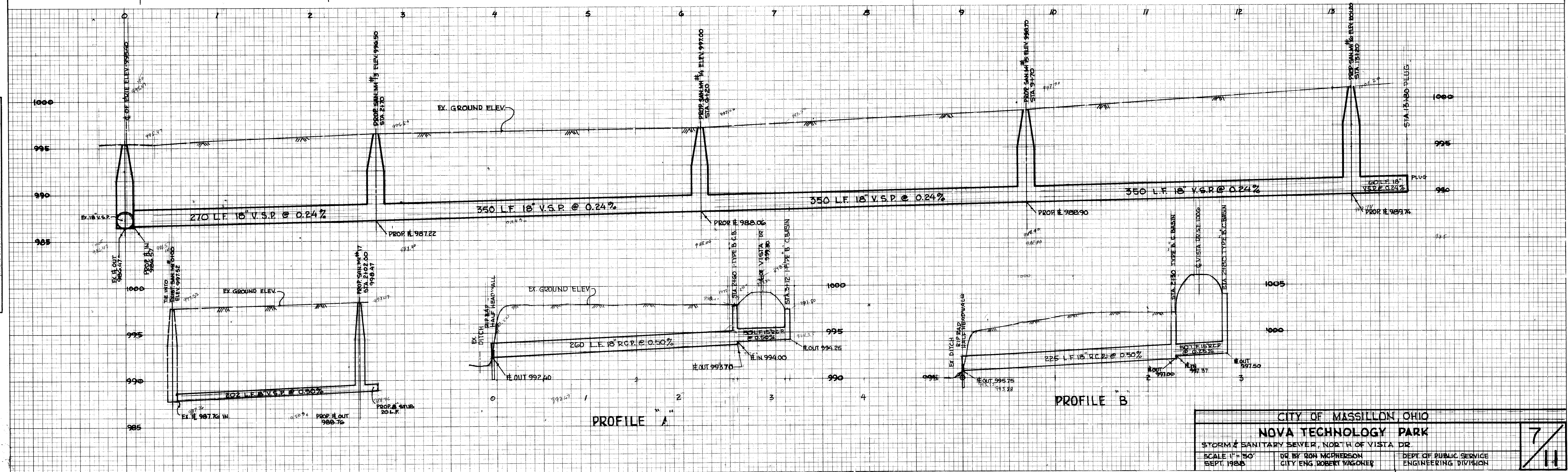


ESTIMATED QUANTITIES					
STATION		603	604	604	603
		8"		TYPE "B"	CL III
		V.S.P.	SANITARY	C. BASIN	12"
FROM	TO	SAN SEWER I. F.	MANHOLE E.A.	E.A.	R.C.P. STM. SEWER I. F.
5+1	0+00	3+00	1		
5+2	0+00	2+44		2	244
			</		



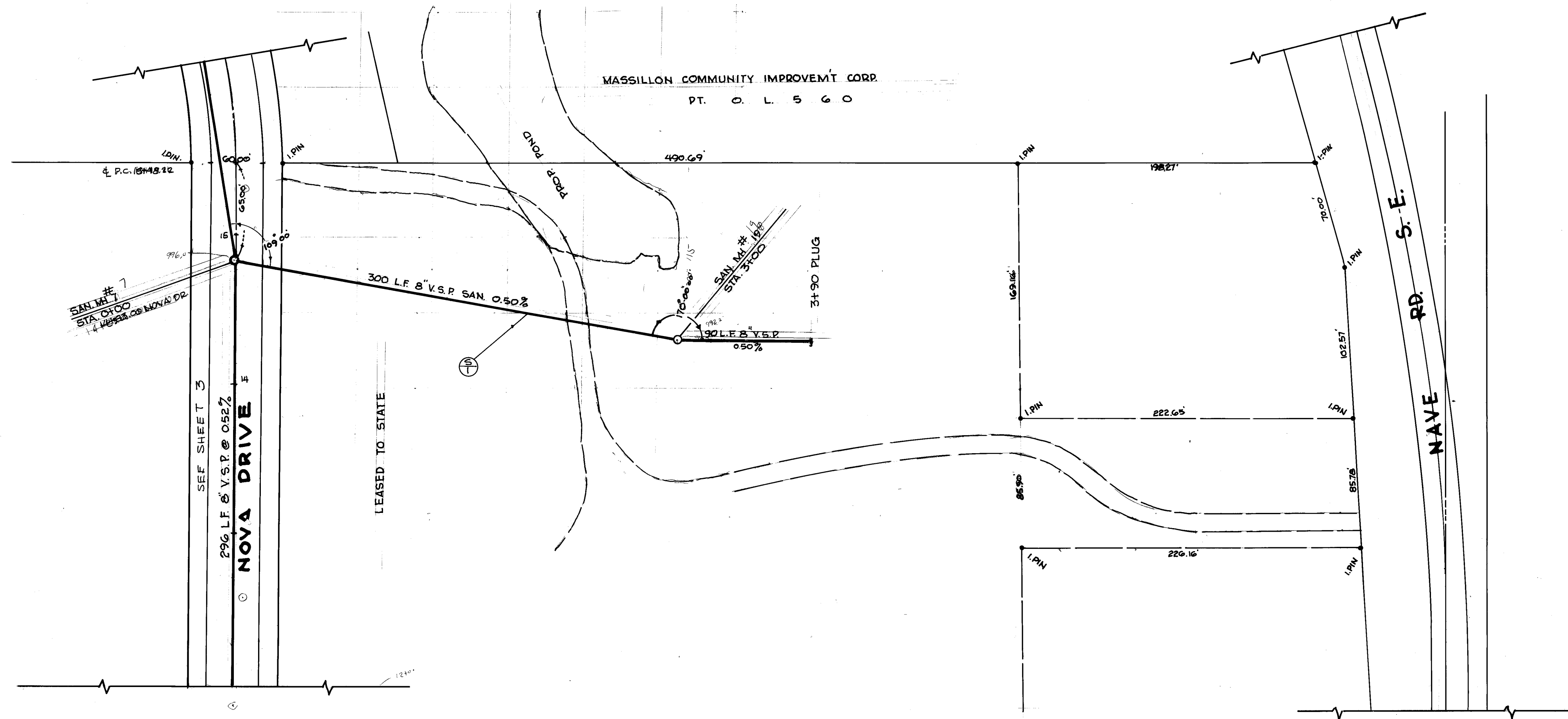
CITY OF MASSILLON, OHIO		6/11
NOVA TECHNOLOGY PARK		
STORM & SANITARY SEWER ALONG NAVE RD.		
SCALE 1"=50'	DR BY DON McDERMOTT	DEPT. OF PUBLIC SERVICE
CITY, 1988	CITY ENG. ROBERT WAGONER	ENGINEERING DIVISION

ORIGINAL SURVEY		BY _____	DATE _____
NOTE BOOK		SURVEYED _____	
NO. _____		PLOTTED _____	
		TEMPLATE _____	
		AREAS _____	
		NO. SHEETS _____	

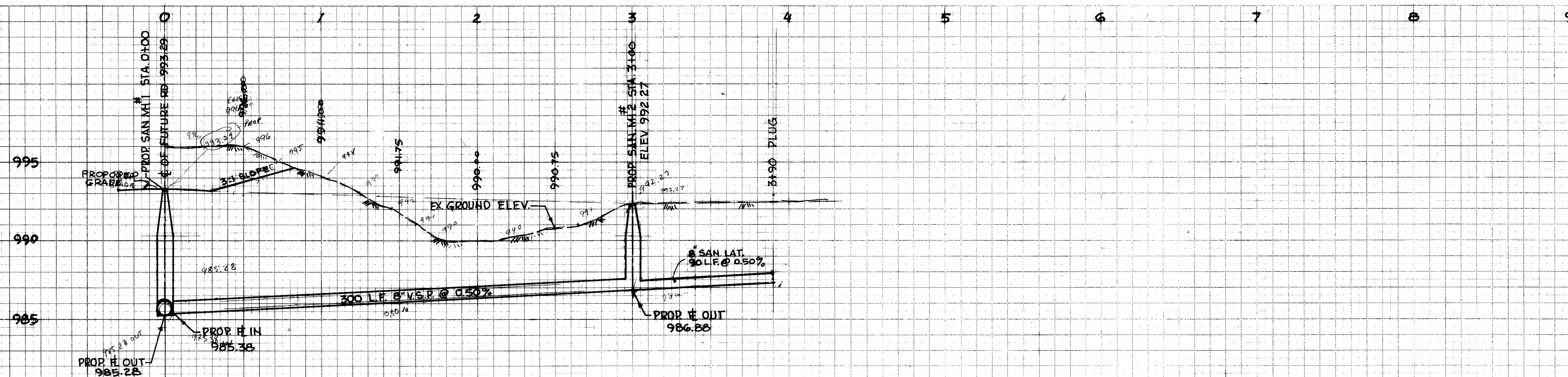


FINAL SURVEY	SURVEYED	DATE
	NOTED	BY
	PLANNED	
	TEMPERATURE	
	AREAS CHECKED	

ORIGINAL SURVEY	SURVEYED	DATE
	NOTED	BY
	PLANNED	
	TEMPERATURE	
	AREAS CHECKED	

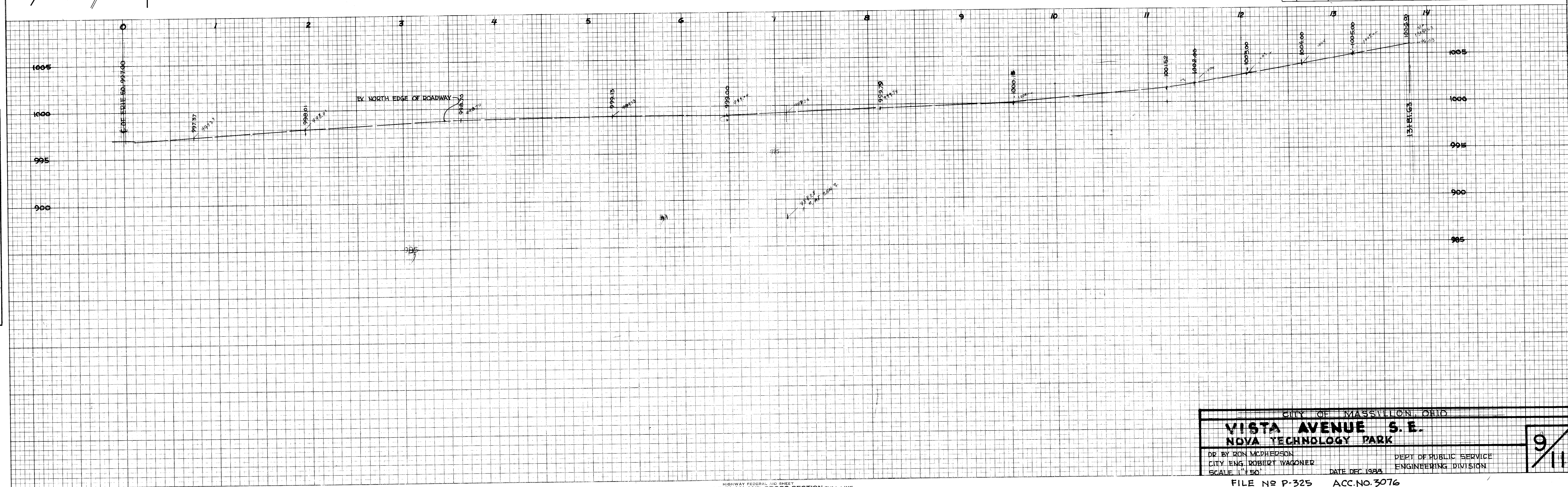
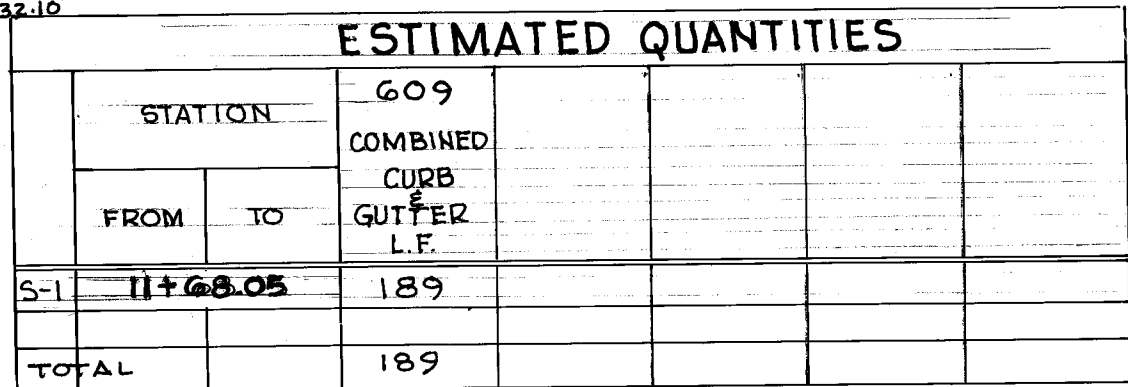


ESTIMATED QUANTITIES				
STATION		603	604	
		8' V. S. P.	SAN. SEWER	
FROM	TO	SAN. SEWER I. F.	MANHOLE E.A.	
5+1	0+00	3+90	1	
		390	1	



CITY OF MASSILLON, OHIO		
NOVA TECHNOLOGY PARK		
SANITARY SEWER, WEST OF NOVA DR. STA. 1+48.3		
SCALE 1"=50'	DR. BY RON MCPHERSON	DEPT. OF PUBLIC SERVICE
OCT. 1988	CITY ENG. ROBERT WAGONER	ENGINEERING DIVISION

ORIGINAL	BY _____	DATE _____
SURVEY		
PLOTTED		
TEMPLATE		
AREAS		
NOTE BOOK	AREAS CHECKED _____	NO. _____
NO.		



GENERAL SUMMARY

CALCULATIONS

ITEM	SHEET NUMBER											PROJECT TOTAL QUANT.	100 % CITY TOTAL QUANT.	ITEM	GRAND TOTAL QUANT.	UNIT	DESCRIPTION
	2	3	4	5	6	7	8	9	10	11							
			✓					✓						201	76	EA.	TREE OVER 12" DIA. REMOVAL (16 EA. VISTA; 60 EA. NOVA)
														201		LUMP SUM	CLEARING & GRUBBING
														202		LUMP SUM	GUARD RAIL REMOVED & REPLACED
							✓							202	1	EA.	BUILDING REMOVED BARN
										✓				202	1	EA.	BUILDING REMOVED CONC. BLK.
														203	9400	CU. YD.	EXCAVATION, ROADWAY & DETENTION BASIN
														203	17,436	C.Y.	EXCAVATION, TOP SOIL, REMOVE & STOCKPILE, PER ENGINEER
														203	12,800	S.Y.	SUBGRADE COMPACTION (INCL. PREP.)
														203	1350	C.Y.	EMBANKMENT, ROADWAY
														203	14,280	C.Y.	EMBANKMENT, TOP SOIL REPLACED (INCLUDING DETENTION BASIN)
														301	2413	C.Y.	ASPH. BASE 6" THICK
														304	1800	C.Y.	AGGREGATE BASE (PER ENGINEER'S DIRECTION)
														304	210	C.Y.	BEDDING (PER ENGINEER'S DIRECTION)
														402	603	C.Y.	ASPHALT CONCRETE 1 1/2" THICK
														404	759	C.Y.	ASPHALT CONCRETE 1 1/2" THICK
														407	380	GAL.	TACK COAT
														408	4,300	GAL.	PRIME COAT
														601	6	EA.	RIPRAP (BROKEN CONC. GROUTED PER DETAIL SHT. 7)
														603	4,436.71	L.F.	8" V.S.P. PIPE SANITARY MAIN
														603	1,220	L.F.	6" SANITARY LATERALS
														603	349	L.F.	12" R.C.P. CLASS III PIPE
														603	156	L.F.	15" R.C.P. CLASS III PIPE
														603	848	L.F.	18" R.C.P. CLASS III PIPE
														603	1380	L.F.	18" V.S.P. SANITARY PIPE
														603	307	L.F.	27" R.C.P. CLASS III PIPE
														603	803	L.F.	30" R.C.P. CLASS III PIPE
														603	540	L.F.	36" R.C.P. CLASS III PIPE
														603	330	L.F.	24" R.C.P. CLASS III PIPE
														604	1	EA.	CONSTRUCT NEW STORM MANHOLES (CITY STD.)
														604	20	EA.	CONSTRUCT NEW SANITARY MANHOLES (CITY STD.)
														604	6	EA.	COMBINED CATCH BASIN MANHOLE (TYPE B)
														605	20	EA.	WYES 8" X 6"
														608	6	EA.	WYES 18" X 6"
														604	14	EA.	TYPE "B" CATCH BASIN (CITY STD.)
														609	752	L.F.	COMBINED CURB & GUTTER (MASS STD.)
														614		LUMP SUM	TRAFFIC CONTROL
														616		LUMP SUM	CALCIUM CHLORIDE TRAFFIC & DUST CONTROL
														616		LUMP SUM	WATER CONTROL - DUST
														659	24	TON	COMMERCIAL FERTILIZER (12-12-12)
														659	26,600	S.Y.	SEEDING & MULCHING
														602	6	EA.	HALF HEADWALL
														623		LUMP SUM	CONSTRUCTION STAKING
														663	110	EA.	TREES, PLANTED

ASPHALT

ITEM 301 6" THICK ASPH. BASE
NOVA DR. WIDENING & CUL-DE-SAC
 $3147.04 \times 36' \times 0.125' = 14,695.38 \text{ C.Y.}$
27

NAVE RD. WIDENING & FILLETS
 $5259.48 \times 0.125' = 657.43 \text{ C.Y.}$
27

VISTA AVE. WIDENING & CUL-DE-SAC
 $11710 \times 0.125' = 1463.75 \text{ C.Y.}$
27

TOTAL ITEM 301 2412.29 C.Y. SAY 2413 C.Y.

ITEM 402 1 1/2"

NOVA DR.
 $3147.04 \times 36' \times 0.125' = 524.51 \text{ C.Y.}$
27

NAVE RD.
 $5259.48 \times 0.125' = 24.35 \text{ C.Y.}$
27

VISTA AVE.
 $11710 \times 0.125' = 54.21 \text{ C.Y.}$
27

TOTAL ITEM 402 603.07 C.Y. SAY 603 C.Y.

ITEM 404 1 1/2"

NOVA DR.
 $3147.04 \times 36' \times 0.125' = 524.51 \text{ C.Y.}$
27

NAVE RD.
 $5259.48 \times 0.125' = 24.35 \text{ C.Y.}$
27

VISTA AVE.
WIDENING & CUL-DE-SAC
 $11710 \times 0.125' = 54.21 \text{ C.Y.}$
27

RESURFACING 0+12 TO 13+81.63 x 24' WIDE
 $33,544.12 \times 0.125' = 155.30 \text{ C.Y.}$
27

TOTAL ITEM 404 758.37 C.Y. SAY 759 C.Y.

CITY OF MASSILLON, OHIO

GENERAL SUMMARY AND CALCULATION NOVA TECHNOLOGY PARK

DR. BY RON MCPHERSON DEPT. OF PUBLIC SERVICE
CITY ENG. ROBERT WAGONER ENGINEERING DIVISION
SCALE 1 DATE DEC. 1985