NEOCOM I INDUSTRIAL PARK – NO. 1

LOCATED IN PART OF OUTLOT 569,
CITY OF MASSILLON, COUNTY OF
STARK, STATE OF OHIO.

MAY, 1999

PREPARED BY:

HAMMONTREE & ASSOCIATES, LTD
ENGINEERS, PLANNERS & SURVEYORS
NORTH CANTON, OHIO

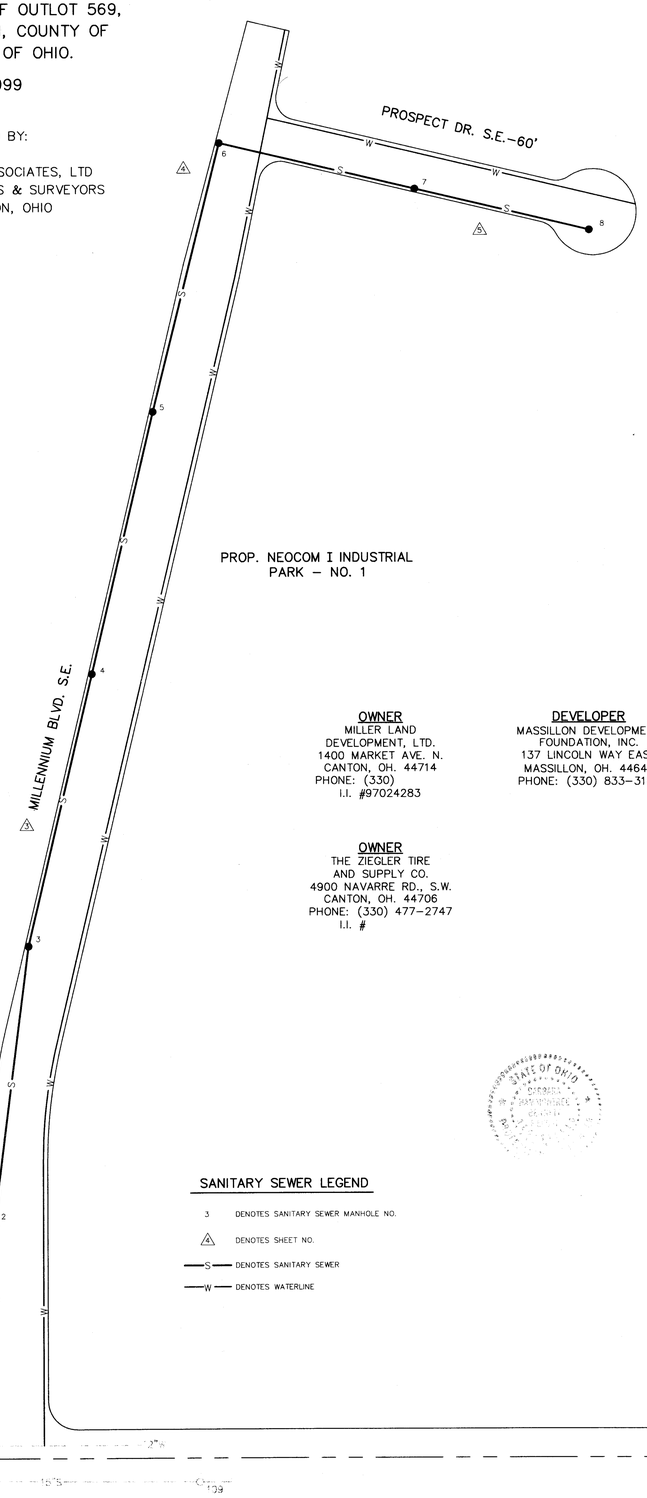
INDEX OF SHEETS

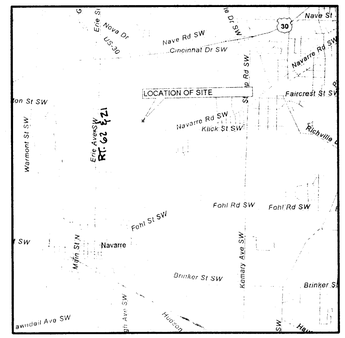
1. COVER SHEET
2. TYPICAL SECTIONS, ESTIMATED QUANTITIES & NOTES
3. MILLENNIUM BLVD.
   STA. 10+00 TO STA. 24+00
4. MILLENNIUM BLVD.
   STA. 24+00 TO STA. 30+35.72
5. PROSPECT DRIVE
   STA. 50+00 TO STA. 55+00
6. BASELINE "A"
   STA. 67+50 TO STA. 72+10
7. INTERSECTION DETAILS
   MILLENNIUM BLVD. & NAVARRE RD.
8. INTERSECTION DETAILS
   MILLENNIUM BLVD. & PROSPECT DR.

9–16. CROSS SECTIONS – MILLENNIUM BLVD.

17–19. CROSS SECTIONS – PROSPECT DRIVE

20. STORM WATER POLLUTION PREVENTION PLAN (OVERALL VIEW)
21. STORM WATER POLLUTION PREVENTION PLAN (ENTRANCE DETENTION BASIN)
22. STORM WATER POLLUTION PREVENTION DETAILS (NORTH DETENTION BASIN)
23. STORM WATER POLLUTION PREVENTION NOTES & DETAILS
24. MASSILLON STANDARD DETAILS
25. MASSILLON STANDARD DETAILS
26. MASSILLON STANDARD DETAILS
27. PRELIMINARY PLAT
28. FINAL PLAT





VICINITY MAP
1" = 3000'

OWNER
MILLER LAND
DEVELOPMENT, LTD.
1400 MARKET AVE. N.
CANTON, OH. 44714
PHONE: (330)
I.I. #97024283

DEVELOPER
MASSILLON DEVELOPMENT
FOUNDATION, INC.
137 LINCOLN WAY EAST
MASSILLON, OH. 44646
PHONE: (330) 833–3146

OWNER
THE ZIEGLER TIRE
AND SUPPLY CO.
4900 NAVARRE RD., S.W.
CANTON, OH. 44706
PHONE: (330) 477–2747
I.I. #

APPROVED _____ DATE _____
VILLAGE OF NAVARRE
FOR ACCEPTANCE OF EFFLUENT ONLY

APPROVED _____ DATE _____
STARK COUNTY SANITARY ENGINEER

APPROVED _____ DATE _____
MASSILLON CITY ENGINEER

APPROVED _____ DATE _____
CONSUMERS OHIO WATER COMPANY

STATE OF OHIO
DONALD T. MINGER
No. 47311
REGISTERED
PROFESSIONAL ENGINEER

SANITARY SEWER LEGEND

3 DENOTES SANITARY SEWER MANHOLE NO.
4 DENOTES SHEET NO.
—S— DENOTES SANITARY SEWER
—W— DENOTES WATERLINE

O.D.O.T. STANDARD DRAWING LIST		
DRAWING NO.	DATE	
BP–4.1	2–21–92	DRIVEWAYS
CB 2–2–A & B	5–1–79	CATCH BASIN
CB 2–3	5–1–79	CATCH BASIN
HW–4	4–1–80	HEADWALL
MC–1	6–13–69	ROADWAY ITEMS

2 WORKING DAYS
BEFORE YOU DIG
CALL TOLL FREE 800–362–2764
OHIO UTILITIES PROTECTION SERVICE

REFERENCE #331011054

0 100 200 400

ISSUED
MAY 17 1999
HAMMONTREE & ASSOC., LTD.

DESIGNED BY: MLD CHECKED BY: BHB
DRAWN BY: DTM REVIEWED BY: BHB
F.B. 418 PAGE: 17
COPYRIGHT: 1999 DATE: 5/5/99
R:\MASNEOLI\EL_CO.DWG

REVISION BY: ____ DATE: ____ DESCRIPTION: ____
REVISION BY: ____ DATE: ____ DESCRIPTION: ____
REVISION BY: ____ DATE: ____ DESCRIPTION: ____
REVISION BY: ____ DATE: ____ DESCRIPTION: ____
REVISION BY: ____ DATE: ____ DESCRIPTION: ____

SCALES:
HORIZ: 1"= 100'

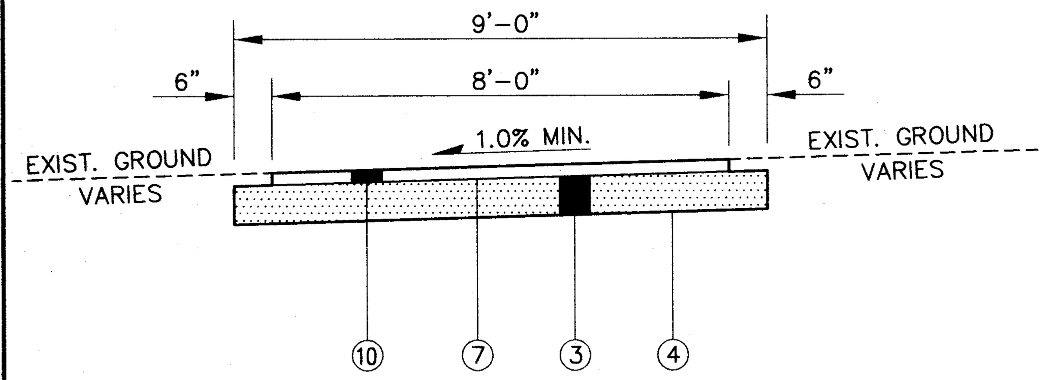
COVER SHEET
NEOCOM I INDUSTRIAL PARK – NO. 1
PART OF O.L. 569 IN THE CITY OF MASSILLON,
STARK COUNTY, OHIO

HAMMONTREE & ASSOCIATES, LTD.
ENGINEERS, PLANNERS, SURVEYORS
CANTON ORLANDO PITTSBURGH AKRON
5233 STONEHAM ROAD, NORTH CANTON, OHIO 44720
PHONE: CANTON:(330)/499–8817 AKRON:(330)/633–7274
TOLL FREE: 1–800–394–8817 FAX: (330)/499–0149

99 SD 04

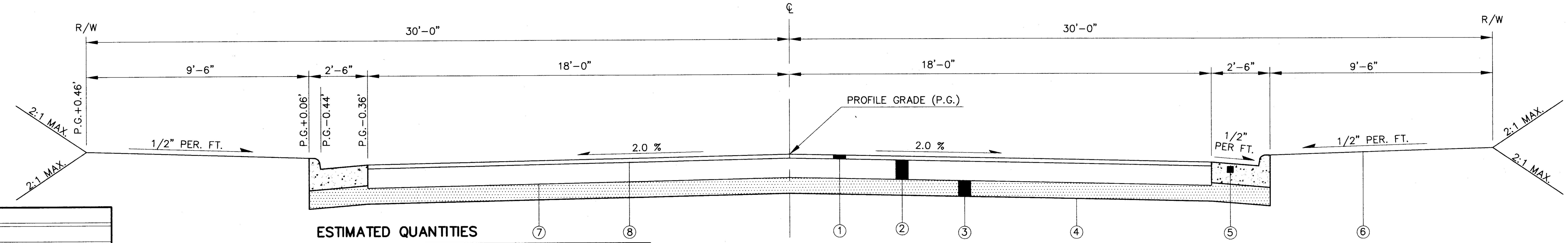
ALL PURPOSE TRAIL TYPICAL SECTION

SCALE: 3/8"=1'



60' R/W TYPICAL SECTION

SCALE: 3/8"=1'



ESTIMATED QUANTITIES

ITEM*	QUAN.	UNIT	DESCRIPTION
			EARTHWORK & ROADS
201	LUMP	LUMP	CLEARING & GRUBBING
203	8,916	CU. YD.	EXCAVATION INCLUDING EMBANKMENT CONSTRUCTION (ROADS ONLY) ①
203	14,708	SQ. YD.	SUBGRADE COMPACTION
301	2,756	CU. YD.	7-1/2" BITUMINOUS AGGREGATE BASE
304	2,515	CU. YD.	AGGREGATE BASE
404	556	CU. YD.	1-1/2" ASPHALT CONCRETE
407	5,334	GAL.	TACK COAT (0.4 GAL./SQ. YD.)
408	5,334	GAL.	PRIME COAT (0.4 GAL./SQ. YD.)
604	5	EACH	MONUMENT ASSEMBLIES
609	5,166	LIN. FT.	MASSILLON STANDARD CONCRETE CURB AND GUTTER (8" THICKNESS)
609	3,047	LIN. FT.	CURB, TYPE 6
625	760	LIN. FT.	4" PVC UTILITY CONDUIT
625	380	LIN. FT.	2" PVC UTILITY CONDUIT
651	7,883	CU. YD.	TOPSOIL STOCKPILED
659	7,715	SQ. YD.	SEEDING AND MULCHING
			SANITARY
14	2,812	LIN. FT.	8" P.V.C. GRAVITY SEWER PIPE, ASTM D-3034
14A	2	EACH	6" ON 8" WYE W/6" 45° BEND, ASTM D-3034
14C	346	LIN. FT.	6" P.V.C. GRAVITY SEWER PIPE, ASTM D-3034
16	8	EACH	SANITARY SEWER MANHOLE, MASSILLON STANDARD, (100.0 VERT. FT.)
16A	2	EACH	DROP ATTACHMENT, (19.5 VERT. FT.)
			DRAINAGE
203	LUMP	SUM	EXCAVATION FOR DETENTION BASINS
203	LUMP	SUM	EARTHWORK FOR WETLAND MITIGATION
207②	20,000	SQ. YD.	TEMPORARY SEEDING & MULCHING
207②	3,100	LIN. FT.	TEMPORARY DIVERSION
207②	38	EACH	INLET PROTECTION
207②	2,500	LIN. FT.	FILTER FABRIC FENCE
207②	28	CU. YD.	2" STONE FOR CONSTRUCTION ENTRANCE
207②	10	CU. YD.	4"-8" STONE FOR ROCK CHECK DAM
601	16.7	CU. YD.	ROCK CHANNEL PROTECTION, TYPE "B" W/FILTER
601	3.6	CU. YD.	ROCK CHANNEL PROTECTION, TYPE "C" W/FILTER
602	3.4	CU. YD.	CONCRETE MASONRY (8 EA. HW-4 HEADWALL)
603	200	LIN. FT.	8" TYPE "B" CONDUIT (707.43)
603	67	LIN. FT.	8" TYPE "C" CONDUIT (707.43)
603	596	LIN. FT.	12" TYPE "B" CONDUIT (706.02)
603	488	LIN. FT.	15" TYPE "B" CONDUIT (706.02)
603	82	LIN. FT.	18" TYPE "B" CONDUIT (706.02)
603	60	LIN. FT.	18" TYPE "C" CONDUIT (706.02) OR (707.33)
603	591	LIN. FT.	24" TYPE "B" CONDUIT (706.02)
603	20	LIN. FT.	24" TYPE "C" CONDUIT (706.02) OR (707.33)
603	596	LIN. FT.	30" TYPE "B" CONDUIT (706.02)
603	10	LIN. FT.	30" TYPE "C" CONDUIT (706.02) OR (707.33)
603	738	LIN. FT.	36" TYPE "B" CONDUIT (706.02)
603	144	LIN. FT.	42" TYPE "B" CONDUIT (706.02)
603	450	LIN. FT.	54" TYPE "B" CONDUIT (706.02)
604	23	EACH	STANDARD CATCH BASIN, MASSILLON, TYPE "A"
604	1	EACH	CATCH BASIN, 2-2-A (O.D.O.T.)
604	8	EACH	CATCH BASIN, 2-2-B (O.D.O.T.)
604	6	EACH	CATCH BASIN, 2-3 (O.D.O.T.)
604	8	EACH	MANHOLE, NO. 3 (O.D.O.T.)
SPEC	1	EACH	GAS LINE LOWERING

* ITEM NUMBERS FOR EARTHWORK & ROADS, DRAINAGE & WATER REFER TO STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, CONSTRUCTION & MATERIAL SPECIFICATIONS, JANUARY 1, 1997.
ITEM NUMBERS FOR SANITARY REFER TO STARK COUNTY SANITARY ENGINEERING DEPARTMENT, ITEM SPECIFICATIONS.

① EARTHWORK SUMMARY (ROADS ONLY WITH 1' OF TOPSOIL REMOVED)
EXC. = 8,916 CU. YD.
EMB. + 15% = 6,793 CU. YD.
EXCESS = 2,123 CU. YD.

② SEE SHEET #20 – STORM WATER POLLUTION PREVENTION PLAN.

ESTIMATED QUANTITIES

ITEM*	QUAN.	UNIT	DESCRIPTION
			WATER
638	2,536	LIN. FT.	12" WATERLINE, JOINTS AND FITTINGS
638	2	EACH	12" MJ GATE VALVE
638	1	EACH	12" CAP
638	1	EACH	12"x12" MJ TEE
638	1	EACH	12"x12" TAPPING SLEEVE AND VALVE
638	1	EACH	12" TO 6" MJ REDUCER
638	9	EACH	6" HYDRANT ASSEMBLY, COMPLETE
638	257	LIN. FT.	10" WATERLINE, JOINTS AND FITTINGS
638	3	EACH	10" MJ GATE VALVE
638	3	EACH	12"x10" MJ TEE
638	18	LIN. FT.	8" WATERLINE, JOINTS AND FITTINGS
638	1	EACH	8" MJ GATE VALVE
638	1	EACH	12"x8" MJ TEE
			TRAFFIC CONTROL
642	65	LIN. FT.	STOP LINE, TYPE 2
			ALL PURPOSE TRAIL
203	2,685	SQ. YD.	SUBGRADE COMPACTION
304	448	CU. YD.	AGGREGATE BASE
404	133	CU. YD.	2" ASPHALT CONCRETE
408	955	GAL.	PRIME COAT (0.4 GAL./SQ. YD.)
651	600	CU. YD.	TOPSOIL STOCKPILED

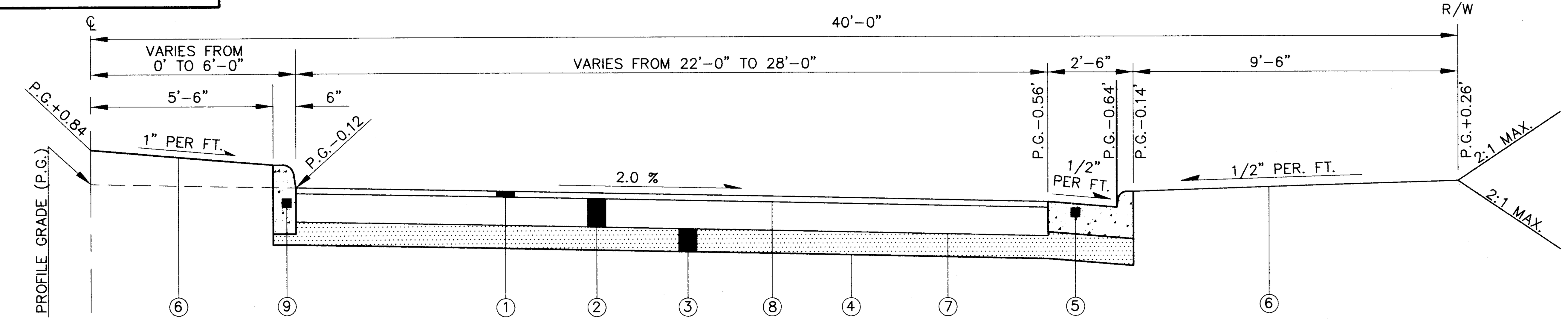
① ITEM 404 — 1-1/2" ASPHALT CONCRETE
② ITEM 301 — 7-1/2" BITUMINOUS AGGREGATE BASE (2 LIFTS)
③ ITEM 304 — 6" AGGREGATE BASE (MIN., MAY VARY BASED ON SOIL CONDITIONS)
④ ITEM 203.13 — COMPACTED SUBGRADE
⑤ ITEM 609 — MASSILLON STANDARD CONCRETE CURB AND GUTTER (8" THICKNESS)
⑥ ITEM 659 — SEEDING AND MULCHING
⑦ ITEM 408 — PRIME COAT TO BE APPLIED AT THE RATE OF 0.4 GAL./SQ. YD.
⑧ ITEM 407 — TACK COAT TO BE APPLIED AT THE RATE OF 0.4 GAL./SQ. YD. (IF REQUIRED)
⑨ ITEM 609 — O.D.O.T. TYPE 6 CONCRETE CURB
⑩ ITEM 404 — 2" ASPHALT CONCRETE

APPROVED ______________________ DATE ________
STARK COUNTY SANITARY ENGINEER

APPROVED ______________________ DATE ________
MASSILLON CITY ENGINEER

80' R/W TYPICAL HALF SECTION

SCALE: 3/8"=1'



GENERAL NOTES

CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES.

ALL SUBGRADE COMPACTION AND ALL 304 AGGREGATE BASE SHALL BE INSPECTED AND APPROVED AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO PLACEMENT OF ANY 304 AGGREGATE BASE OR 301 BITUMINOUS AGGREGATE BASE.

ALL TRENCHES BENEATH THE PROPOSED PAVEMENT OR EXISTING PAVEMENT SHALL BE COMPACTED IN LIFTS. IN A MANNER, AND WITH MATERIAL SPECIFIED BY THE MASSILLON ENGINEERING DEPARTMENT OR ANY APPLICABLE, O.D.O.T. SPECIFICATIONS.

THE COMPLETE RIGHT-OF-WAY IS TO BE GRADED AS SHOWN ON THE TYPICAL SECTION. DURING CONSTRUCTION OF THE ROAD, THE DEVELOPER SHALL BE RESPONSIBLE FOR MAINTAINING THE TYPICAL SECTION BETWEEN THE PAVEMENT AND THE RIGHT-OF-WAY LINE.

PRIOR TO THE COMMENCEMENT OF ANY PROJECT, A PRE-CONSTRUCTION MEETING WILL BE HELD AT THE CITY ENGINEER'S OFFICE. AT THIS TIME, THE PROJECT WILL BE DISCUSSED IN REGARD TO PROCEDURE, MATERIALS, INSPECTION, ETC...

THE DEVELOPER/CONTRACTOR SHALL TAKE THE NECESSARY STEPS TO PREVENT SOIL EROSION AND DOWNWASH OF GRITS AND SEDIMENTS AS REQUIRED BY THE CITY OF MASSILLON ENGINEER AND/OR THE STARK COUNTY SOIL & WATER CONSERVATION DISTRICT.

INSPECTIONS – SEE CITY OF MASSILLON SUBDIVISION REGULATIONS, SEC. 1111.03

CONSTRUCTION RESPONSIBILITIES – SEE CITY OF MASSILLON REGULATIONS, SEC. 1111.04

CITY OF MASSILLON WILL FURNISH AND INSTALL REQUIRED SIGNS AT THE EXPENSE OF THE DEVELOPER. THE CONTRACTOR IS TO INSTALL REQUIRED PAVEMENT MARKING.

NAVARRE RD. STORM AND SANITARY SEWER CROSSING: THE CONTRACTOR SHALL HAVE THE OPTION TO BORE THE STORM SEWER AND SANITARY SEWER OR USE OPEN CUT. IF THE OPEN CUT OPTION IS USED, A TRAFFIC MAINTENANCE PLAN MUST BE SUBMITTED TO THE CITY OF MASSILLON ENGINEER AND MUST BE APPROVED BEFORE CONSTRUCTION COMMENCES. THE MAXIMUM DAYS THE ROAD SHALL BE OPEN IS 3. ONE LANE OF TRAFFIC MUST BE MAINTAINED AT ALL TIMES. NAVARRE ROAD MAY BE WIDENED DURING OPEN CUT PROCEDURES TO ACCOMMODATE TRUCK TRAFFIC.

IF THE BORE OPTION IS USED, A STORM SEWER BORING DETAIL MUST BE SUBMITTED TO THE CITY OF MASSILLON ENGINEER AND APPROVED.

SANITARY SEWER NOTES

PRIOR TO START OF CONSTRUCTION, THE CONTRACTOR SHALL CONTACT MR. JOHN HAUBERT OF THE SANITARY ENGINEER'S OFFICE (330/438-9309) TO SCHEDULE A PRECONSTRUCTION MEETING. A MINIMUM OF 72 HOURS NOTICE IS REQUIRED TO SCHEDULE THIS MEETING.

ALL SANITARY SEWERS & APPURTENANCES SHALL BE CONSTRUCTED ACCORDING TO STARK COUNTY SANITARY ENGINEERING DEPARTMENT SPECIFICATIONS IN EFFECT AT TIME OF CONSTRUCTION.

ALL SANITARY SEWER LATERALS TO BE 6" DIAMETER.

ROOF DRAINS, FOUNDATION DRAINS & OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.

MINIMUM COVER OVER SANITARY SEWER SHALL BE 4 FT.

ALL SANITARY SERVICE SEWERS SHALL EXTEND A MINIMUM OF 12 FEET BEYOND THE RIGHT-OF-WAY. THE END OF THE SERVICE SEWER SHALL BE PLUGGED AND A LOCATION MARKER PROVIDED.

NO CHANGES TO SANITARY SERVICE LOCATIONS SHALL BE MADE WITHOUT THE APPROVAL OF THE SANITARY ENGINEER.

AS AN ALTERNATE TO PVC GRAVITY SEWER, SHOWN IN QUANTITIES VITRIFIED CLAY PIPE SEWER, EXTRA STRENGTH, ASTM C-700 MAY BE USED.

ALL SANITARY SEWERS, 8" DIAMETER AND LARGER, MUST PASS INTERNAL TELEVISION INSPECTION. THE CONTRACTOR SHALL PROVIDE COMPLETE INTERNAL INSPECTION VIDEOTAPE TO THE SANITARY ENGINEERING DEPARTMENT. THE VIDEOTAPING PROCEDURE MUST BE IN ACCORDANCE WITH STARK COUNTY SANITARY ENGINEERING DEPARTMENT SPECIFICATIONS.

THE CONTRACTOR SHALL NOTIFY ALL PROPERTY OWNERS ALONG THE ROUTE OF THE SANITARY SEWER AT LEAST TWO DAYS PRIOR TO START OF CONSTRUCTION.

BULKHEADS MUST BE ERECTED IN THE EXISTING MANHOLES WHERE THE TAPS FOR THE NEW SEWERS ARE MADE AND REMAIN IN PLACE UNTIL THE UNTIL THE NEW SEWERS ARE COMPLETE, TESTED AND APPROVED.

MINIMUM VERTICAL CLEARANCE BETWEEN SANITARY SEWER & WATERLINE IS 18 INCHES. MINIMUM VERTICAL CLEARANCE BETWEEN SANITARY SEWER & STORM SEWER IS 12 INCHES.

JOINT SPECIFICATIONS SHALL MEET ASTM-3212.

MANHOLE SPECIFICATIONS SHALL MEET ASTM C-478 AND C-443.

BEDDING SPECIFICATIONS SHALL MEET ASTM D-2321, CLASS II.

SANITARY SEWERS ARE TO BE AIR TESTED, 100 GAL./INCH OF DIA./DAY MAXIMUM.

THE ALLOWABLE DEFLECTION RATE SHALL NOT EXCEED 5%.

BORE LENGTHS FOR SEWER PIPE IN CASING PIPE ARE ESTIMATED LENGTHS. THE BORE UNDER THE PAVEMENT SHALL EXTEND 3' BEYOND THE PAVEMENT EDGE. NO CUTTING OR UNDERMINING OF THE PAVEMENT WILL BE ALLOWED. BORE AND RECEIVING PITS SHALL BE SHEETED WITH STEEL SHEETING THAT SHALL BE PULLED AFTER CONSTRUCTION.

WATER LINE NOTES

MINIMUM COVER OVER 12" WATER LINE = 4'.

MAINTAIN MINIMUM 4' HORIZONTAL SEPARATION BETWEEN WATER AND STORM SEWER LINES.

MAINTAIN MINIMUM 10' HORIZONTAL SEPARATION BETWEEN WATER AND STORM AND SANITARY SEWER LINES.

MAINTAIN MINIMUM 18" VERTICAL SEPARATION BETWEEN WATER AND SANITARY SEWER LINES.

WATER MAIN MATERIALS SHALL CONFORM TO AWWA C151 FOR DUCTILE IRON PIPE AND AWWA C900 FOR PVC PIPE.

WATER MAIN PRESSURE TESTING SHALL CONFORM TO AWWA C600.

WATER MAIN DISINFECTION SHALL CONFORM TO AWWA C651.

THE PROPOSED FACILITIES WILL MAINTAIN A MINIMUM 35 PSI PRESSURE DELIVERED TO THE CURB STOP DURING NORMAL OPERATING CONDITIONS.

BOOSTER PUMPS ARE NOT PERMITTED ON SERVICE CONNECTIONS. THE WATER SYSTEM MAY GRANT SPECIAL PERMISSION FOR BUILDINGS SIX STORIES OR HIGHER.

CONTRACTOR TO USE CONSUMERS OHIO WATER SERVICE DETAILS AND SPECIFICATIONS.

STORM SEWER NOTES

STANDARD CATCH BASINS IN THIS PLAN REFER TO CITY OF MASSILLON, TYPE "A" CATCH BASIN.

FOR ODOT 2-2B AND 2-3 CATCH BASINS, USE NEENAH R-4852 OR EQUAL, FRAME AND GRATE.

FOR STORM MANHOLES, REFER TO ENCLOSED CITY OF MASSILLON STANDARDS ON SHEETS 13, 14 & 15.

STORM SEWER WITHIN 5' OF THE BACK OF CURB, BENEATH CURB AND GUTTER AND PAVEMENT SHALL BE REINFORCED CONCRETE PIPE, TYPE "B" (706.02).

OUTSIDE OF THE SPECIFIED AREA REINFORCED CONCRETE PIPE, TYPE "C" (706.02) OR CORRUGATED POLYETHYLENE SMOOTH LINED PIPE TYPE "C" (707.33) CAN BE USED.

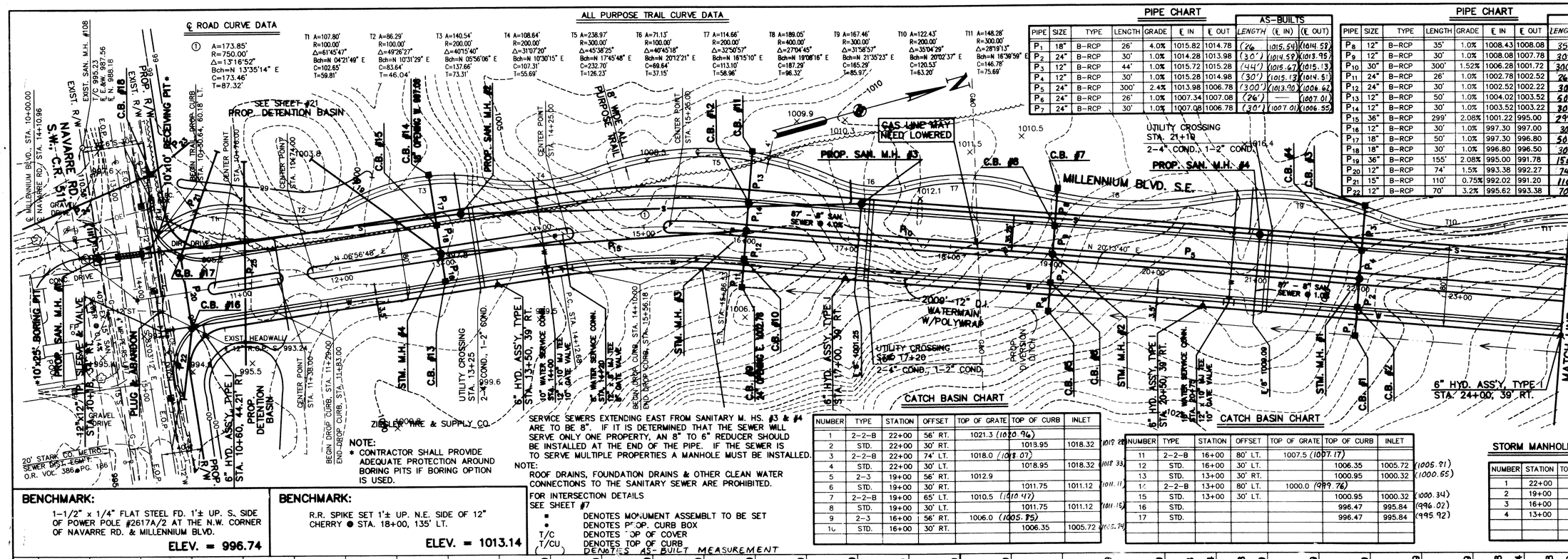
REVISION BY:____ DATE:____ DESCRIPTION:____
REVISION BY:____ DATE:____ DESCRIPTION:____
REVISION BY:____ DATE:____ DESCRIPTION:____
REVISION BY:____ DATE:____ DESCRIPTION:____
REVISION BY:____ DATE:____ DESCRIPTION:____

DESIGNED BY: MLD CHECKED BY: BHB
DRAWN BY: DTM REVIEWED BY: BHB
F.B. 418 PAGE: 17
COPYRIGHT: 1999 DATE: 5/7/99
R:\MASNEOLD\LD_TS.DWG

SCALE: AS SHOWN

TYPICAL SECTION, ESTIMATED QUANTITIES & NOTES
NEOCOM I INDUSTRIAL PARK – NO. 1
PART OF O.L. 569 IN THE CITY OF MASSILLON, STARK COUNTY, OHIO

HAMMONTREE & ASSOCIATES, LTD.
ENGINEERS, PLANNERS, SURVEYORS
CANTON ORLANDO PITTSBURGH AKRON
5233 STONEHAM ROAD, NORTH CANTON, OHIO 44720
PHONE: CANTON:(330)/499-8817 AKRON:(330)/633-7274
TOLL FREE: 1-800-394-8817 FAX: (330)/499-0149



PIPE	SIZE	TYPE	LENGTH	GRADE	℄ IN	℄ OUT	AS-BUILTS LENGTH	AS-BUILTS (℄ IN)	AS-BUILTS (℄ OUT)
P_1	18"	B-RCP	26'	4.0%	1015.82	1014.78	(26	1015.54)	(1014.58)
P_2	24"	B-RCP	30'	1.0%	1014.28	1013.98	(30')	(1014.59)	(1013.95)
P_3	12"	B-RCP	44'	1.0%	1015.72	1015.28	(44')	(1015.67)	(1015.13)
P_4	12"	B-RCP	30'	1.0%	1015.28	1014.98	(30')	(1015.13)	(1014.51)
P_5	24"	B-RCP	300'	2.4%	1013.98	1006.78	(300')	(1013.90)	(1006.62)
P_6	24"	B-RCP	26'	1.0%	1007.34	1007.08	(26')	—	(1007.01)
P_7	24"	B-RCP	30'	1.0%	1007.08	1006.78	(30')	(1007.01)	(1006.55)

PIPE	SIZE	TYPE	LENGTH	GRADE	℄ IN	℄ OUT	AS-BUILTS LENGTH	AS-BUILTS (℄ IN)	AS-BUILTS (℄ OUT)
P_8	12"	B-RCP	35'	1.0%	1008.43	1008.08	35'	1008.27	1007.95
P_9	12"	B-RCP	30'	1.0%	1008.08	1007.78	30'	1007.98	1007.83
P_{10}	30"	B-RCP	300'	1.52%	1006.28	1001.72	300'	1005.97	1001.32
P_{11}	24"	B-RCP	26'	1.0%	1002.78	1002.52	26'	1002.55	1002.34
P_{12}	24"	B-RCP	30'	1.0%	1002.52	1002.22	30'	1002.24	1001.94
P_{13}	12"	B-RCP	50'	1.0%	1004.02	1003.52	50'	1003.09	1003.61
P_{14}	12"	B-RCP	30'	1.0%	1003.52	1003.22	30'	1003.61	1003.11
P_{15}	36"	B-RCP	299'	2.08%	1001.22	995.00	299'	1001.15	995.04
P_{16}	12"	B-RCP	30'	1.0%	997.30	997.00	30'	997.45	996.66
P_{17}	18"	B-RCP	50'	1.0%	997.30	996.80	50'	997.36	996.84
P_{18}	18"	B-RCP	30'	1.0%	996.80	996.50	30'	996.84	996.16
P_{19}	36"	B-RCP	155'	2.08%	995.00	991.78	156'	995.04	991.55
P_{20}	12"	B-RCP	74'	1.5%	993.38	992.27	74'	993.12	992.02
P_{21}	15"	B-RCP	110'	0.75%	992.02	991.20	110'	991.77	991.05
P_{22}	12"	B-RCP	70'	3.2%	995.62	993.38	70'	995.38	993.32

BENCHMARK:
1-1/2" x 1/4" FLAT STEEL FD. 1'± UP. S. SIDE OF POWER POLE #2617A/2 AT THE N.W. CORNER OF NAVARRE RD. & MILLENNIUM BLVD.
ELEV. = 996.74

BENCHMARK:
R.R. SPIKE SET 1'± UP. N.E. SIDE OF 12" CHERRY ● STA. 18+00, 135' LT.
ELEV. = 1013.14

NOTE:
* CONTRACTOR SHALL PROVIDE ADEQUATE PROTECTION AROUND BORING PITS IF BORING OPTION IS USED.

SERVICE SEWERS EXTENDING EAST FROM SANITARY M. HS. #3 & #4 ARE TO BE 8". IF IT IS DETERMINED THAT THE SEWER WILL SERVE ONLY ONE PROPERTY, AN 8" TO 6" REDUCER SHOULD BE INSTALLED AT THE END OF THE PIPE. IF THE SEWER IS TO SERVE MULTIPLE PROPERTIES A MANHOLE MUST BE INSTALLED.

NOTE:
ROOF DRAINS, FOUNDATION DRAINS & OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.

FOR INTERSECTION DETAILS SEE SHEET #7

■ DENOTES MONUMENT ASSEMBLT TO BE SET
● DENOTES PROP. CURB BOX
T/C DENOTES TOP OF COVER
T/CU DENOTES TOP OF CURB
( ) DENOTES AS-BUILT MEASUREMENT

CATCH BASIN CHART

NUMBER	TYPE	STATION	OFFSET	TOP OF GRATE	TOP OF CURB	INLET
1	2-2-B	22+00	56' RT.	1021.3 (1020.96)		
2	STD.	22+00	30' RT.		1018.95	1018.32
3	2-2-B	22+00	74' LT.	1018.0 (1018.07)		
4	STD.	22+00	30' LT.		1018.95	1018.32
5	2-3	19+00	56' RT.	1012.9		
6	STD.	19+00	30' RT.		1011.75	1011.12
7	2-2-B	19+00	65' LT.	1010.5 (1010.47)		
8	STD.	19+00	30' LT.		1011.75	1011.12
9	2-3	16+00	56' RT.	1006.0 (1005.85)		
10	STD.	16+00	30' RT.		1006.35	1005.72

CATCH BASIN CHART

NUMBER	TYPE	STATION	OFFSET	TOP OF GRATE	TOP OF CURB	INLET
11	2-2-B	16+00	80' LT.	1007.5 (1007.17)		
12	STD.	16+00	30' LT.		1006.35	1005.72
13	STD.	13+00	30' RT.		1000.95	1000.32
14	2-2-B	13+00	80' LT.	1000.0 (999.76)		
15	STD.	13+00	30' LT.		1000.95	1000.32
16	STD.				996.47	995.84
17	STD.				996.47	995.84

STORM MANHOLE CHART

NUMBER	STATION	TOP OF COVER
1	22+00	1019.93
2	19+00	1012.73
3	16+00	1007.33
4	13+00	1001.93

REVISION BY:	DATE:	DESCRIPTION:
REVISION BY: SPL	DATE: 2/9/00	DESCRIPTION: AS-BUILTS
REVISION BY: MLD	DATE: 10/8/99	DESCRIPTION: SAN. AS-BUILTS
REVISION BY: MLD	DATE: 5/25/99	DESCRIPTION: PER CITY ENGINEER COMMENTS
REVISION BY: MLD	DATE: 5/25/99	DESCRIPTION: PER SANITARY ENGINEER COMMENTS

DESIGNED BY: MLD CHECKED BY: BHB
DRAWN BY: DTM REVIEWED BY: BHB
F.B. 418 PAGE: 17
COPYRIGHT: 1999 DATE: 5/7/99
K:\MARKCLD\LD_PF1.DWG

SCALES:
HORIZ: 1" = 50'
VERT: 1" = 5'

PLAN & PROFILE
MILLENNIUM BLVD. – STA. 10+00 TO STA. 24+00
NEOCOM I INDUSTRIAL PARK – NO. 1
PART OF O.L. 569 IN THE CITY OF MASSILLON, STARK COUNTY, OHIO

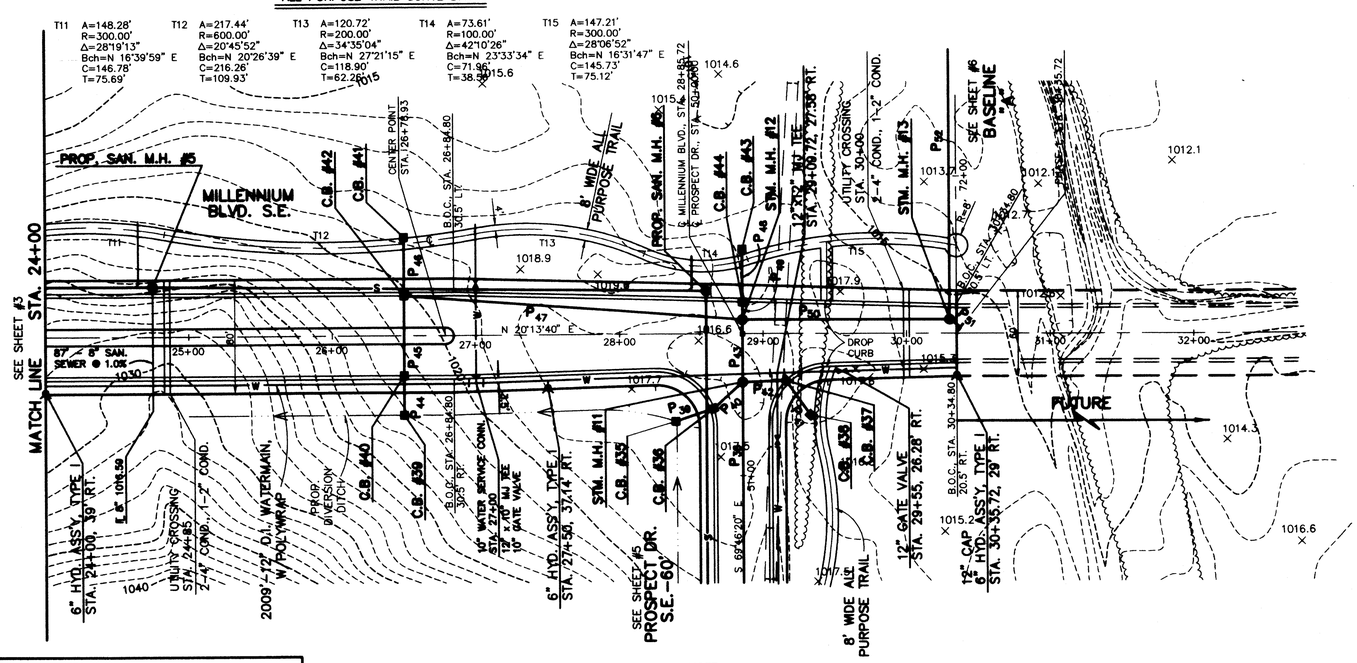
® HAMMONTREE & ASSOCIATES, LTD.
ENGINEERS, PLANNERS, SURVEYORS
CANTON ORLANDO PITTSBURGH AKRON
5233 STONEHAM ROAD, NORTH CANTON, OHIO 44720
PHONE: CANTON:(330)/499-8817 AKRON:(330)/633-7214
TOLL FREE: 1-800-394-8817 FAX: (330)/499-0148

65/20

99 SD 04

ALL PURPOSE TRAIL CURVE DATA

T11	A=148.28' R=300.00' Δ=28°19'13" Bch=N 16°39'59" E C=146.78' T=75.69'	T12	A=217.44' R=600.00' Δ=20°45'52" Bch=N 20°26'39" E C=216.26' T=109.93'	T13	A=120.72' R=200.00' Δ=34°35'04" Bch=N 27°21'15" E C=118.90' T=62.26'
T14	A=73.61' R=100.00' Δ=42°10'26" Bch=N 23°33'34" E C=71.96' T=38.58'	T15	A=147.21' R=300.00' Δ=28°06'52" Bch=N 16°31'47" E C=145.73' T=75.12'		



CATCH BASIN CHART

NUMBER	TYPE	STATION	OFFSET	TOP OF GRATE	TOP OF CURB	INLET
39	2-2-B	26+50	56' RT.	1020.1 (1019.95)		
40	STD.	26+50	30' RT.		1020.62	1019.99 (1019.98)
41	2-2-B	26+50	71' LT.	1019.0 (1019.12)		
42	STD.	26+50	30' LT.		1020.62	1019.99 (1019.86)
43	STD.	28+85.72	59.26' LT.	1016.0 (1015.95)		
44	STD.	28+85.72	24.26' LT.		1017.70	1017.07 (1017.09)

STORM MANHOLE CHART

NUMBER	STATION	OFFSET	TOP OF COVER	
12	28+85.72	10' LT.	1017.53	(1017.45)
13	30+30	10' LT.	1016.09	(1016.28)

PIPE CHART

PIPE	SIZE	TYPE	LENGTH	GRADE	℄ IN	℄ OUT	AS-BUILTS (LENGTH)	AS-BUILTS (℄ IN)	AS-BUILTS (℄ OUT)
P44	15"	B-RCP	26'	1.0%	1017.02	1016.76	26'	1017.25	1016.68
P45	15"	B-RCP	60'	1.0%	1016.76	1016.16	60'	1016.68	1016.26
P46	12"	B-RCP	41'	1.0%	1016.82	1016.41	41'	1017.02	1016.51
P47	15"	B-RCP	237'	1.42%	1016.16	1012.80	237'	1016.26	1012.64
P48	12"	B-RCP	35'	1.0%	1013.54	1013.19	35'	1013.55	1013.19
P49	12"	B-RCP	14'	1.0%	1013.19	1013.05	14'	1013.19	1012.97
P50	42"	B-RCP	144'	0.75%	1010.55	1009.47	144'	1010.42	1009.27
P51	36"	B-RCP	STUB	0.25%		1009.47	STUB	STUB	1009.27

BENCHMARK:

R.R. SPIKE SET 1'± UP S.W. SIDE OF 36" OAK @ STA. 28+75, 200' LT.

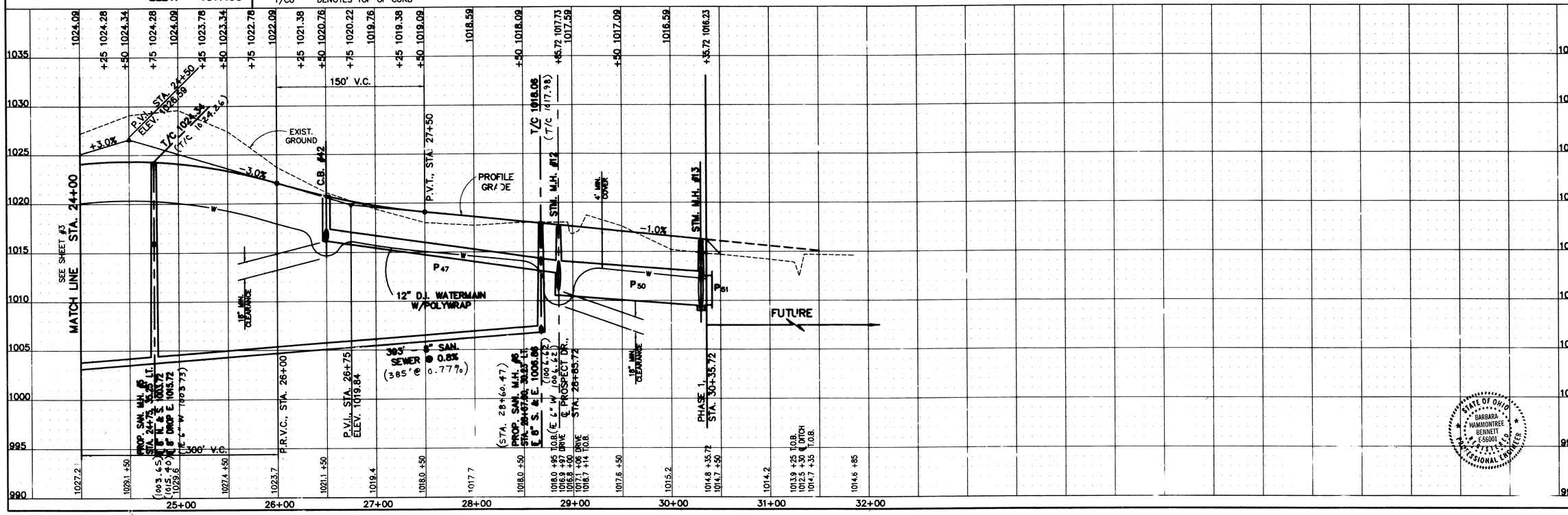
ELEV. = 1017.63

( ) DENOTES AS-BUILT MEASUREMENT
■ DENOTES MONUMENT ASSEMBLY TO BE SET
● DENOTES PROP. CURB BOX
T/C DENOTES TOP OF COVER
T/CU DENOTES TOP OF CURB

NOTE:
ROOF DRAINS, FOUNDATION DRAINS & OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.

FOR INTERSECTION DETAILS SEE SHEET #8

SERVICE SEWER EXTENDING EAST FROM SANITARY M. H. #5 IS TO BE 8". IF IT IS DETERMINED THAT THE SEWER WILL SERVE ONLY ONE PROPERTY, AN 8" TO 6" REDUCER SHOULD BE INSTALLED AT THE END OF THE PIPE. IF THE SEWER IS TO SERVE MULTIPLE PROPERTIES A MANHOLE MUST BE INSTALLED.



DESIGNED BY: MLD CHECKED BY: BHB
DRAWN BY: DTM REVIEWED BY: BHB
F.B. 418 PAGE: 17
COPYRIGHT: 1999 DATE: 5/7/99
R:\MASHEOLD\LD_PP2.DWG

REVISION BY: SPL DATE: 2/9/00 DESCRIPTION: AS-BUILTS
REVISION BY: MLD DATE: 10/8/99 DESCRIPTION: SAN. AS-BUILTS
REVISION BY: MLD DATE: 5/25/99 DESCRIPTION: PER CITY ENGINEER COMMENTS
REVISION BY: MLD DATE: 5/25/99 DESCRIPTION: PER SANITARY ENGINEER COMMENTS

SCALES:
HORIZ: 1"=50'
VERT: 1"=5'

PLAN & PROFILE
MILLENNIUM BLVD. - STA. 24+00 TO STA. 30+35.72

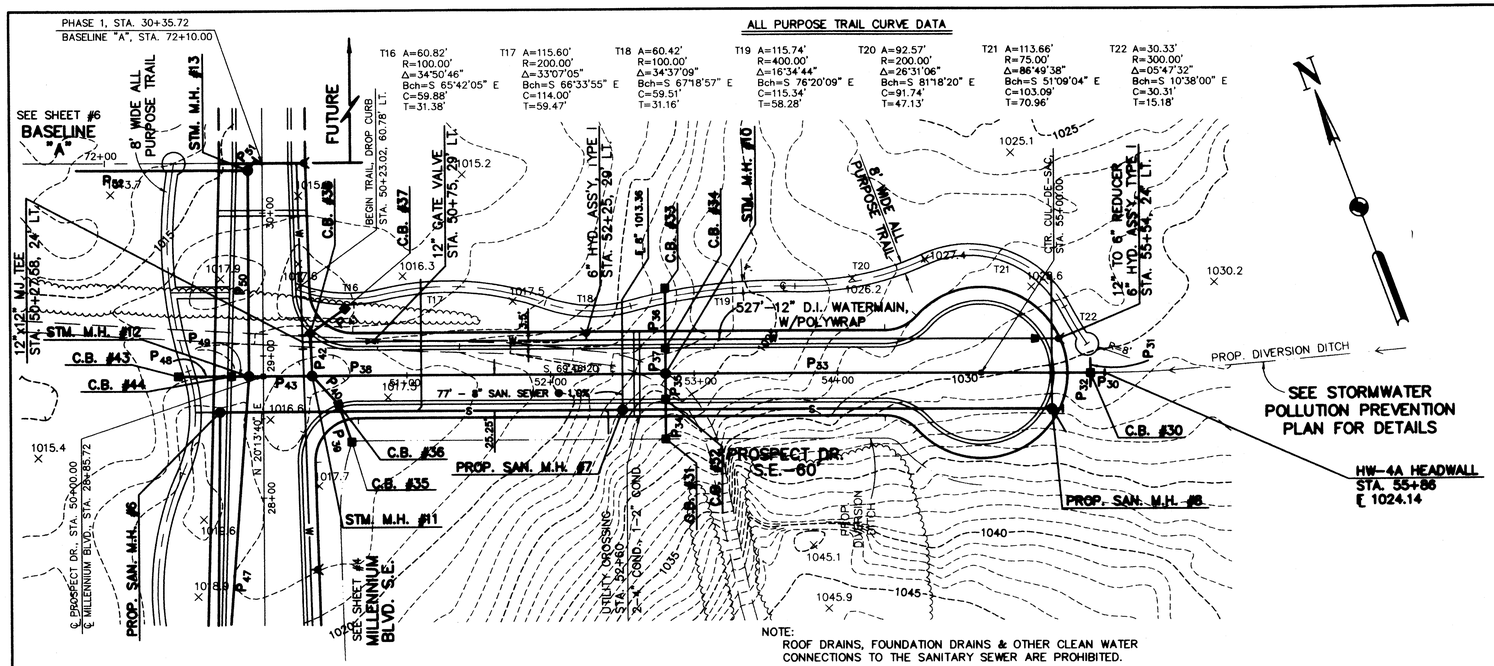
NEOCOM I INDUSTRIAL PARK - NO. 1

PART OF O.L. 569 IN THE CITY OF MASSILLON, STARK COUNTY, OHIO

HAMMONTREE & ASSOCIATES, LTD.
ENGINEERS, PLANNERS, SURVEYORS
CANTON ORLANDO PITTSBURGH AKRON
5233 STONEHAM ROAD, NORTH CANTON, OHIO 44720
PHONE: CANTON:(330)/499-8817 AKRON:(330)/633-7274
TOLL FREE: 1-800-364-8817 FAX: (330)/499-0148

STATE OF OHIO BARBARA HAMMONTREE BENNETT E-56001 REGISTERED PROFESSIONAL ENGINEER

65/20



ALL PURPOSE TRAIL CURVE DATA

T16 A=60.82' R=100.00' Δ=34°50'46" Bch=S 65°42'05" E C=59.88' T=31.38'	T17 A=115.60' R=200.00' Δ=33°07'05" Bch=S 66°33'55" E C=114.00' T=59.47'	T18 A=60.42' R=100.00' Δ=34°37'09" Bch=S 67°18'57" E C=59.51' T=31.16'	T19 A=115.74' R=400.00' Δ=16°34'44" Bch=S 76°20'09" E C=115.34' T=58.28'	T20 A=92.57' R=200.00' Δ=26°31'06" Bch=S 81°18'20" E C=91.74' T=47.13'	T21 A=113.66' R=75.00' Δ=86°49'38" Bch=S 51°09'04" E C=103.09' T=70.96'	T22 A=30.33' R=300.00' Δ=05°47'32" Bch=S 10°38'00" E C=30.31' T=15.18'

CATCH BASIN CHART

NUMBER	TYPE	STATION	OFFSET	TOP OF GRATE	TOP OF CURB	INLET
30	2-3	55+76		1028.5 (1028.68)		
31	2-3	52+80	46' RT.	1023.0 (1023.35)		
32	STD.	52+80	20' RT.		1022.99	1022.36 (1022.40)
33	2-3	52+80	60' LT.	1022.0 (1021.47)		
34	STD.	52+80	20' LT.		1022.99	1022.36 (1022.43)
35	2-2-B	50+61.45	46.76' RT.	1016.5 (1016.17)		
36	STD.				1017.16	1016.53 (1016.65)
37	2-3	50+57.14	47.09' LT.	1016.5 (1016.44)		
38	STD.				1016.95	1016.32 (1016.35)

STORM MANHOLE CHART

NUMBER	STATION	TOP OF COVER	
10	52+80	1022.93	(1022.90)
11	50+34	1017.05	(1017.47)

PIPE CHART

PIPE	SIZE	TYPE	LENGTH	GRADE	℄ IN	℄ OUT	AS-BUILTS (LENGTH)	(℄ IN)	(℄ OUT)
P30	24"	C	10'	1.0%	1024.14	1024.04	10'	STUB	1024.08
P31	24"	C	10'	1.2%	024.16	1024.04	10'	STUB	1024.08
P32	30"	C	10'	1.0%	1023.64	1023.54	10'	STUB	1023.58
P33	30"	B-RCP	296'	2.0%	1023.54	1017.62	296'	1023.58	1017.23
P34	24"	B-RCP	26'	1.0%	1018.58	1018.32	26'	1019.25	1017.90
P35	24"	B-RCP	20'	1.0%	1018.32	1018.12	20'	1017.90	1017.65
P36	24"	B-RCP	40'	1.0%	1018.72	1018.32	40'	1018.34	1017.93
P37	24"	B-RCP	20'	1.0%	1018.32	1018.12	20'	1017.93	1017.61
P38	36"	B-RCP	246'	2.2%	1017.12	1011.71	246'	1016.81	1011.52
P39	15"	B-RCP	26'	0.5%	1013.82	1013.69	26'	1014.07	1013.35
P40	15"	B-RCP	29'	0.8%	1013.69	1013.46	29'	1013.35	1013.02
P41	24"	B-RCP	26'	0.5%	1013.00	1012.87	26'	1013.14	1012.75
P42	24"	B-RCP	31'	0.5%	1012.87	1012.71	31'	1012.75	1012.52
P43	36"	B-RCP	44'	1.5%	1011.71	1011.05	44'	1011.52	1011.42

BENCHMARK:

R.R. SPIKE SET 1'± UP N.E. SIDE OF 12" ASPEN
● STA. 54+30, 75' RT.

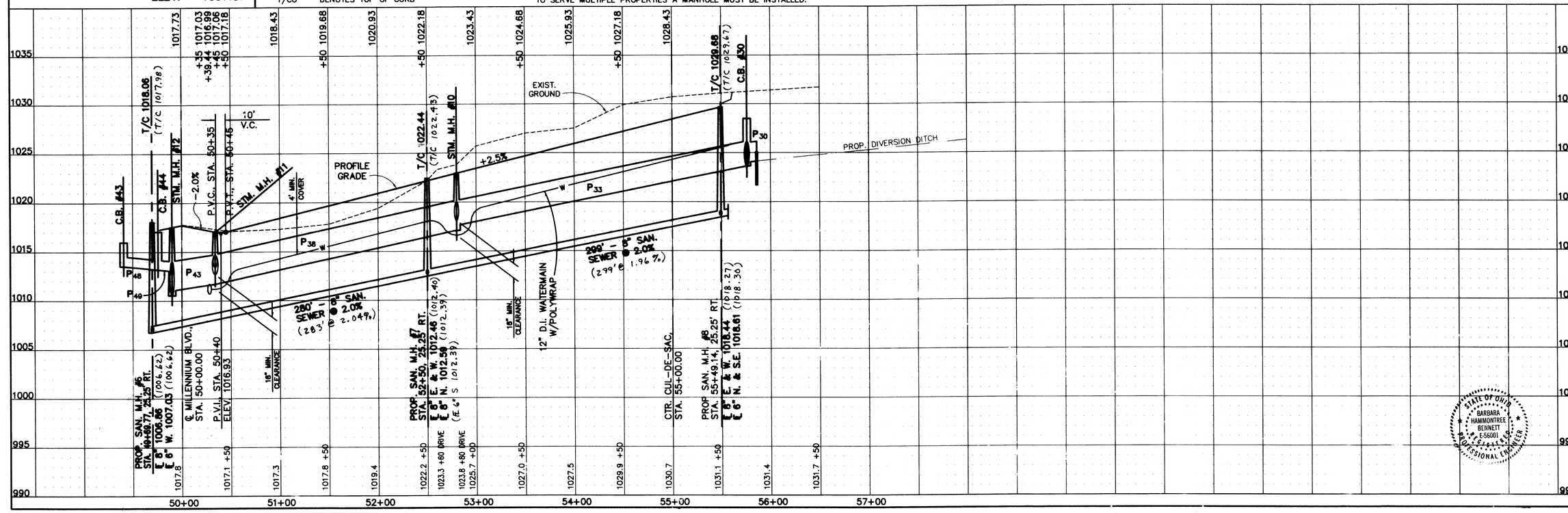
ELEV. = 1037.87

( ) DENOTES AS-BUILT MEASUREMENT
■ DENOTES MONUMENT ASSEMBLY TO BE SET
● DENOTES PROP. CURB BOX
T/C DENOTES TOP OF COVER
T/CU DENOTES TOP OF CURB

NOTE:
ROOF DRAINS, FOUNDATION DRAINS & OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.

FOR INTERSECTION DETAILS
SEE SHEET #8

SERVICE SEWER EXTENDING NORTH FROM SANITARY M. H. #7 IS TO BE 8". IF IT IS DETERMINED THAT THE SEWER WILL SERVE ONLY ONE PROPERTY, AN 8" TO 6" REDUCER SHOULD BE INSTALLED AT THE END OF THE PIPE. IF THE SEWER IS TO SERVE MULTIPLE PROPERTIES A MANHOLE MUST BE INSTALLED.



STATE OF OHIO
BARBARA HAMMONTREE BENNETT
E-56001
REGISTERED PROFESSIONAL ENGINEER

REVISION BY: ___ DATE: ___ DESCRIPTION: ___
REVISION BY: SPL DATE: 2/9/00 DESCRIPTION: AS-BUILTS
REVISION BY: MLD DATE: 10/8/99 DESCRIPTION: SAN. AS-BUILTS
REVISION BY: MLD DATE: 5/25/99 DESCRIPTION: PER CITY ENGINEER COMMENTS
REVISION BY: MLD DATE: 5/25/99 DESCRIPTION: PER SANITARY ENGINEER COMMENTS

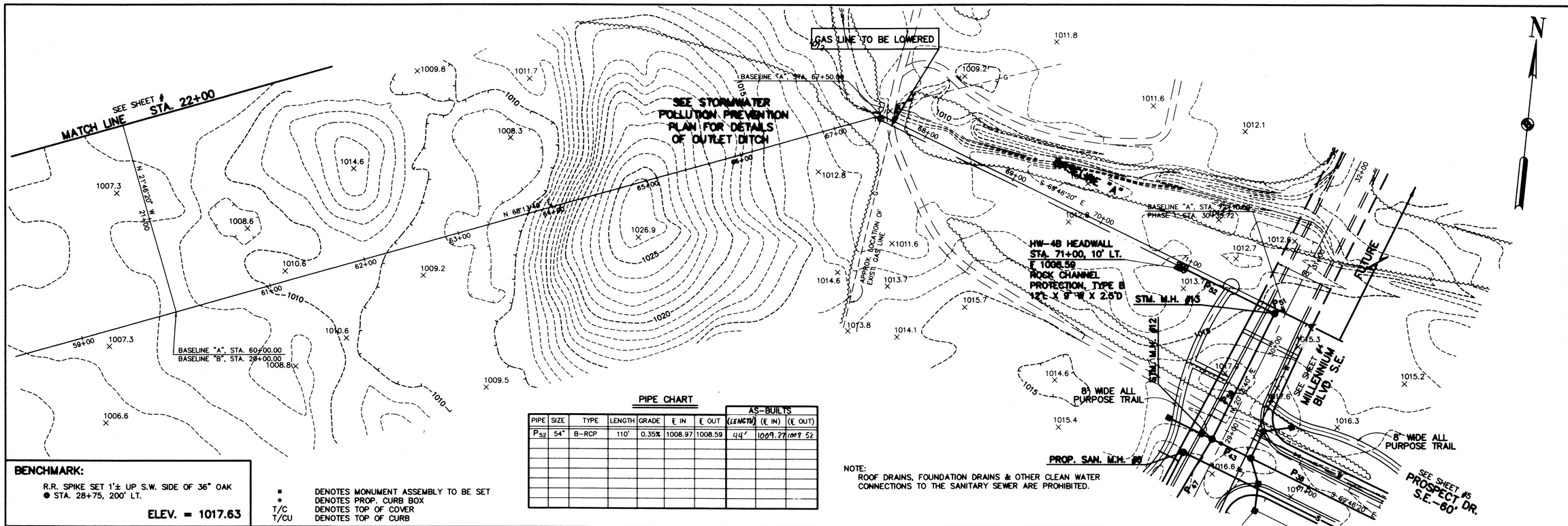
DESIGNED BY: MLD CHECKED BY: BHB
DRAWN BY: DTM REVIEWED BY: BHB
F.B.418 PAGE: 17
COPYRIGHT: 1999 DATE: 5/7/99
R:\AUTOCAD\LD_PR3.DWG

SCALES:
HORIZ: 1"=50'
VERT: 1"=5'

PLAN & PROFILE
PROSPECT DR. - STA. 50+00 TO STA. 55+00
NEOCOM I INDUSTRIAL PARK - NO. 1
PART OF O.L. 569 IN THE CITY OF MASSILLON, STARK COUNTY, OHIO

® HAMMONTREE & ASSOCIATES, LTD.
ENGINEERS, PLANNERS, SURVEYORS
CANTON ORLANDO PITTSBURGH AKRON
8233 STONEHAM ROAD, NORTH CANTON, OHIO 44720
PHONE: CANTON:(330)/499-8817 AKRON:(330)/633-7274
TOLL FREE: 1-800-394-8817 FAX: (330)/499-0149

65/20



BENCHMARK:

R.R. SPIKE SET 1'± UP S.W. SIDE OF 36" OAK
● STA. 28+75, 200' LT.

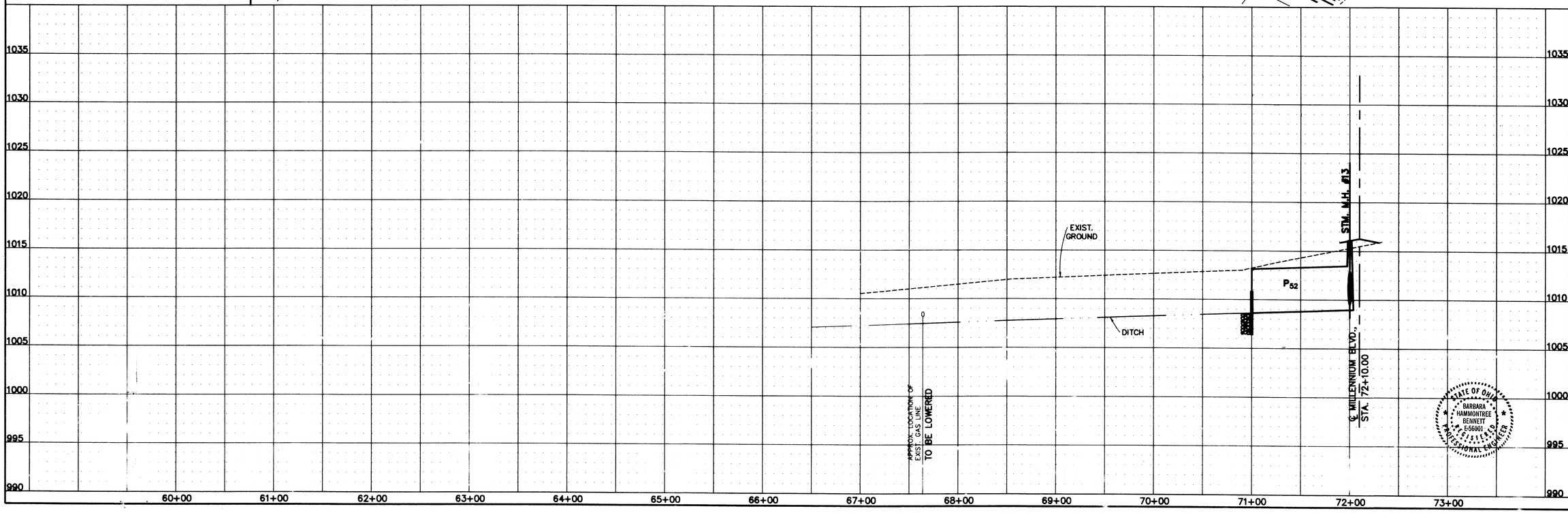
ELEV. = 1017.63

■ DENOTES MONUMENT ASSEMBLY TO BE SET
• DENOTES PROP. CURB BOX
T/C DENOTES TOP OF COVER
T/CU DENOTES TOP OF CURB

PIPE CHART

PIPE	SIZE	TYPE	LENGTH	GRADE	℄ IN	℄ OUT	AS-BUILTS (LENGTH)	AS-BUILTS (℄ IN)	AS-BUILTS (℄ OUT)
P_{52}	54"	B-RCP	110'	0.35%	1008.97	1008.59	44'	1009.27	1008.52

NOTE:
ROOF DRAINS, FOUNDATION DRAINS & OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.



STATE OF OHIO
BARBARA HAMMONTREE BENNETT
E-56601
REGISTERED
PROFESSIONAL ENGINEER

REVISION BY: MLD DATE: 5/25/99 DESCRIPTION: PER CITY ENGINEER COMMENTS
REVISION BY: MLD DATE: 5/25/99 DESCRIPTION: PER SANITARY ENGINEER COMMENTS
REVISION BY: BHB REVISION BY: 5PL DATE: 2/9/00 DESCRIPTION: AS-BUILTS
REVISION BY: BHB

DESIGNED BY: MLD CHECKED BY: BHB
DRAWN BY: DTM REVIEWED BY: BHB
F.B. 418 PAGE: 17
COPYRIGHT: 1999 DATE: 5/7/99
R:\MARCOLLO_PPST1.DWG

SCALES:
HORIZ: 1"=50'
VERT: 1"=5'

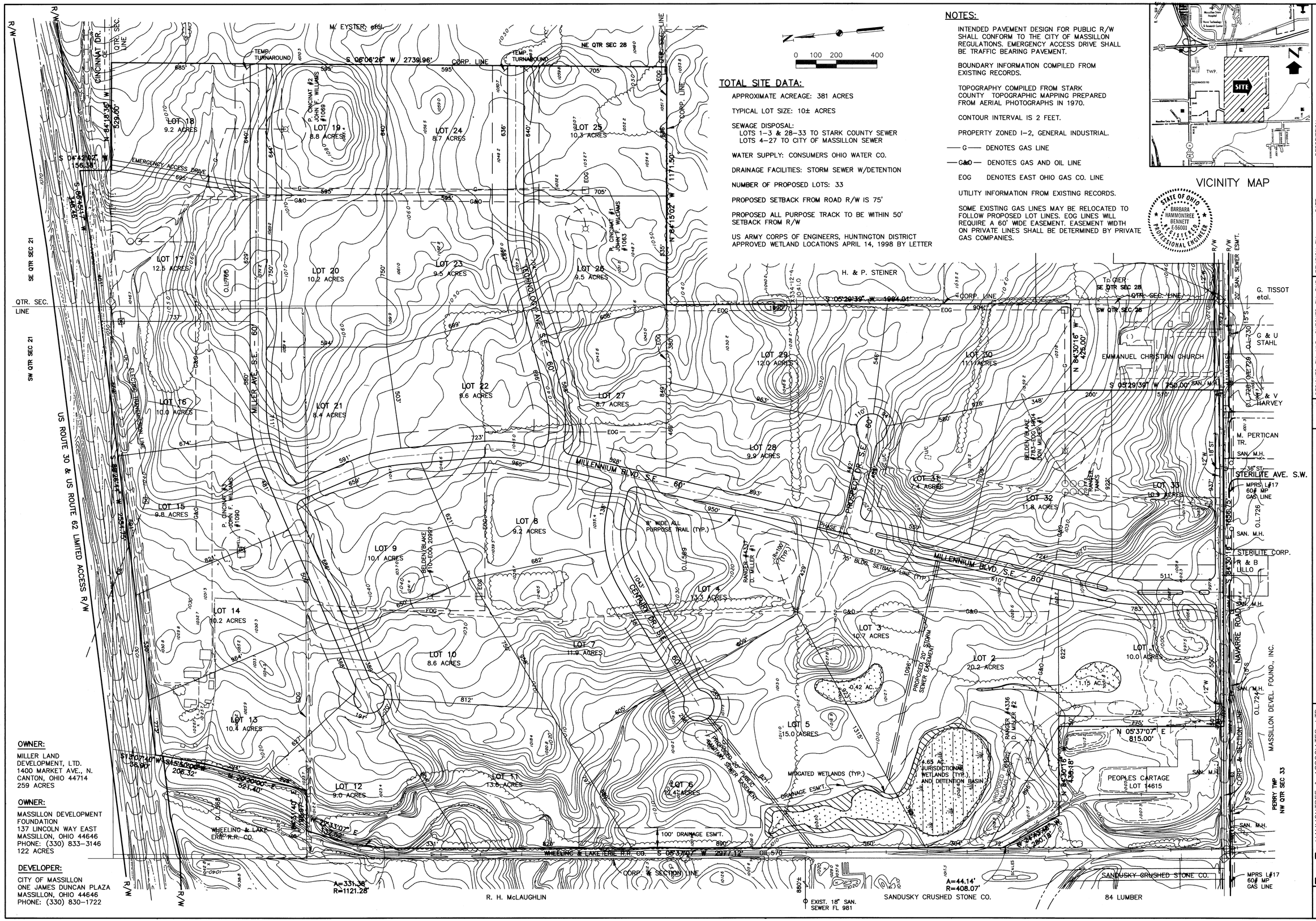
PLAN & PROFILE
BASELINE "A" – STA. 67+50.00 TO STA. 72+10.00

NEOCOM I INDUSTRIAL PARK – NO. 1

PART OF O.L. 569 IN THE CITY OF MASSILLON, STARK COUNTY, OHIO

® HAMMONTREE & ASSOCIATES, LTD.
ENGINEERS, PLANNERS, SURVEYORS
CANTON ORLANDO PITTSBURGH AKRON
5233 STONEHAM ROAD, NORTH CANTON, OHIO 44720
PHONE: CANTON:(330)/499-9817 AKRON:(330)/633-7274
TOLL FREE: 1-800-364-9817 FAX: (330)/499-0149

45/20



NOTES:

INTENDED PAVEMENT DESIGN FOR PUBLIC R/W SHALL CONFORM TO THE CITY OF MASSILLON REGULATIONS. EMERGENCY ACCESS DRIVE SHALL BE TRAFFIC BEARING PAVEMENT.

BOUNDARY INFORMATION COMPILED FROM EXISTING RECORDS.

TOPOGRAPHY COMPILED FROM STARK COUNTY TOPOGRAPHIC MAPPING PREPARED FROM AERIAL PHOTOGRAPHS IN 1970.

CONTOUR INTERVAL IS 2 FEET.

PROPERTY ZONED I-2, GENERAL INDUSTRIAL.

—— G —— DENOTES GAS LINE

—— G&O —— DENOTES GAS AND OIL LINE

EOG DENOTES EAST OHIO GAS CO. LINE

UTILITY INFORMATION FROM EXISTING RECORDS.

SOME EXISTING GAS LINES MAY BE RELOCATED TO FOLLOW PROPOSED LOT LINES. EOG LINES WILL REQUIRE A 60' WIDE EASEMENT. EASEMENT WIDTH ON PRIVATE LINES SHALL BE DETERMINED BY PRIVATE GAS COMPANIES.

TOTAL SITE DATA:

APPROXIMATE ACREAGE: 381 ACRES

TYPICAL LOT SIZE: 10± ACRES

SEWAGE DISPOSAL:
LOTS 1-3 & 28-33 TO STARK COUNTY SEWER
LOTS 4-27 TO CITY OF MASSILLON SEWER

WATER SUPPLY: CONSUMERS OHIO WATER CO.

DRAINAGE FACILITIES: STORM SEWER W/DETENTION

NUMBER OF PROPOSED LOTS: 33

PROPOSED SETBACK FROM ROAD R/W IS 75'

PROPOSED ALL PURPOSE TRACK TO BE WITHIN 50' SETBACK FROM R/W

US ARMY CORPS OF ENGINEERS, HUNTINGTON DISTRICT APPROVED WETLAND LOCATIONS APRIL 14, 1998 BY LETTER

VICINITY MAP

STATE OF OHIO
BARBARA HAMMONTREE BENNETT
E-56001
REGISTERED PROFESSIONAL ENGINEER

OWNER:
MILLER LAND DEVELOPMENT, LTD.
1400 MARKET AVE., N.
CANTON, OHIO 44714
259 ACRES

OWNER:
MASSILLON DEVELOPMENT FOUNDATION
137 LINCOLN WAY EAST
MASSILLON, OHIO 44646
PHONE: (330) 833-3146
122 ACRES

DEVELOPER:
CITY OF MASSILLON
ONE JAMES DUNCAN PLAZA
MASSILLON, OHIO 44646
PHONE: (330) 830-1722

REVISION BY:	DATE:	DESCRIPTION:	
REVISION BY:	DATE:	DESCRIPTION:	
REVISION BY:	DATE:	DESCRIPTION:	
REVISION BY:	DATE:	DESCRIPTION:	
REVISION BY:	DATE:	DESCRIPTION:	

DESIGNED BY: MLD CHECKED BY: BHB
DRAWN BY: LJP REVIEWED BY: BHB
F.B.____ PAGE.____
COPYRIGHT: 1999 DATE: 3/25/99
J:\DWG\MASNAVLD\LDPREUM

SCALE: 1"=200'

PRELIMINARY PLAT

NEOCOM I INDUSTRIAL PARK - NO. 1

O.L. 569 & 765 IN THE CITY OF MASSILLON, STARK COUNTY, OHIO

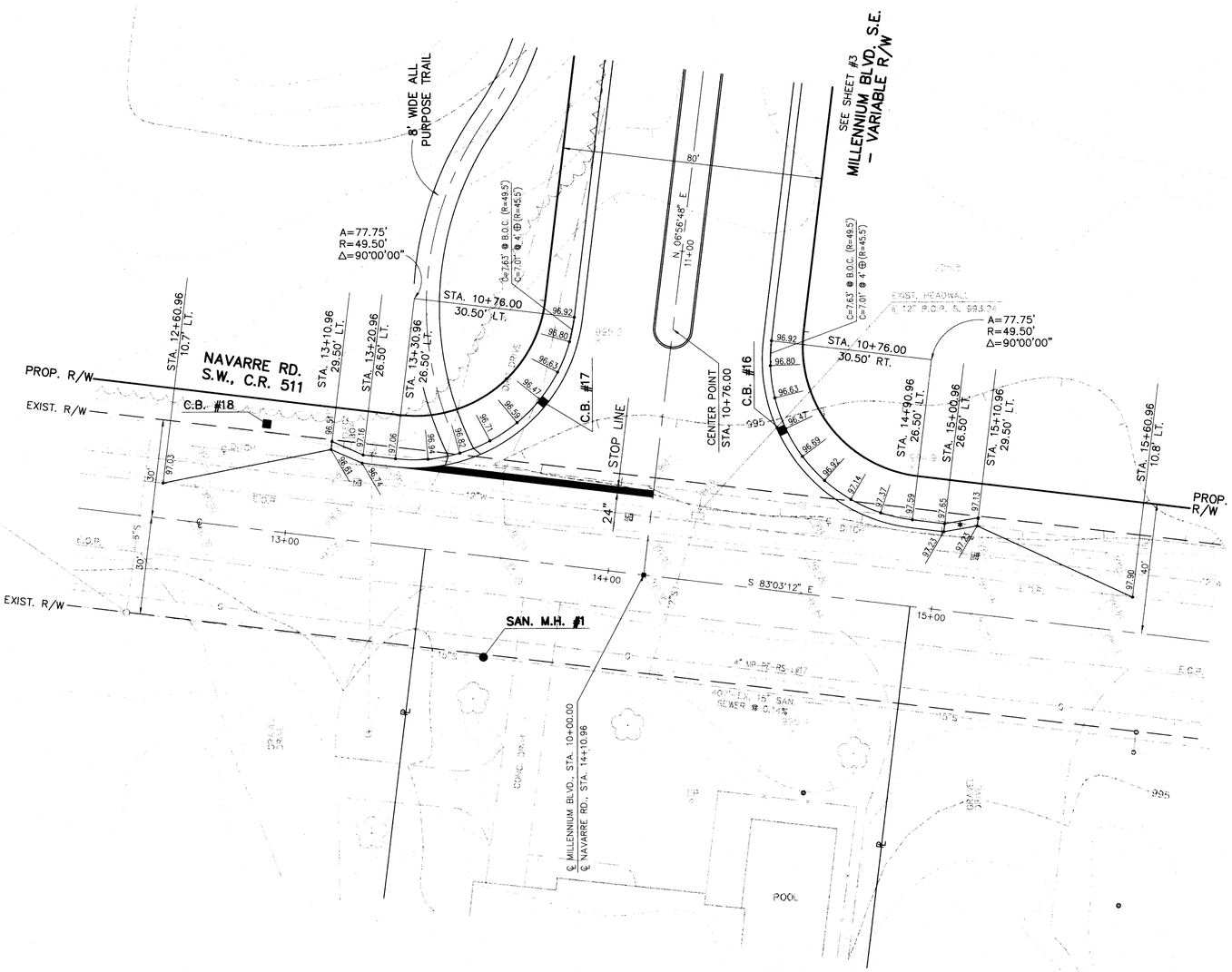
® HAMMONTREE & ASSOCIATES, LTD.
ENGINEERS, PLANNERS, SURVEYORS
CANTON ORLANDO PITTSBURGH AKRON
5233 STONEHAM ROAD, NORTH CANTON, OHIO 44720
PHONE: CANTON:(330)499-8817 AKRON:(330)633-7274
TOLL FREE: 1-800-394-8817 FAX: (330)499-0149

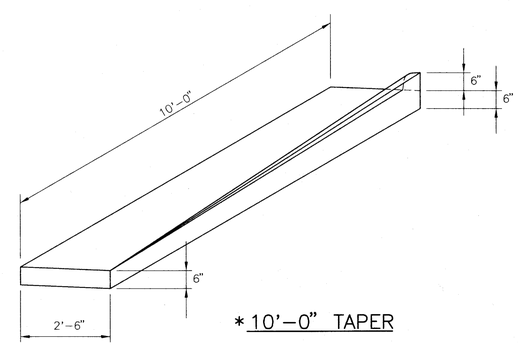
1/1

9950 04

B.O.C. DENOTES BACK OF CURB.
4' ⊕ DENOTES 4' OFFSET FOR CURB STAKES.
CHORD DISTANCES ON FILLETS ARE 10' @ B.O.C. (R=49.5') & 9.19' @ 4' ⊕ B.O.C. (R=45.5') UNLESS NOTED.

N





*10'-0" TAPER

CURB & GUTTER DETAIL

N.T.S.

0 10 20 40

REVISION BY: ____	DATE: ____	DESCRIPTION: ____	
REVISION BY: ____	DATE: ____	DESCRIPTION: ____	
REVISION BY: ____	DATE: ____	DESCRIPTION: ____	
REVISION BY: ____	DATE: ____	DESCRIPTION: ____	
REVISION BY: ____	DATE: ____	DESCRIPTION: ____	

DESIGNED BY: MLD CHECKED BY: BHB
DRAWN BY: DTM REVIEWED BY: BHB
F.B. 418 PAGE: 17
COPYRIGHT: 1999 DATE: 5/7/99
R:\MASSILLON_INT1.DWG

SCALES:
HORIZ: 1"=20'

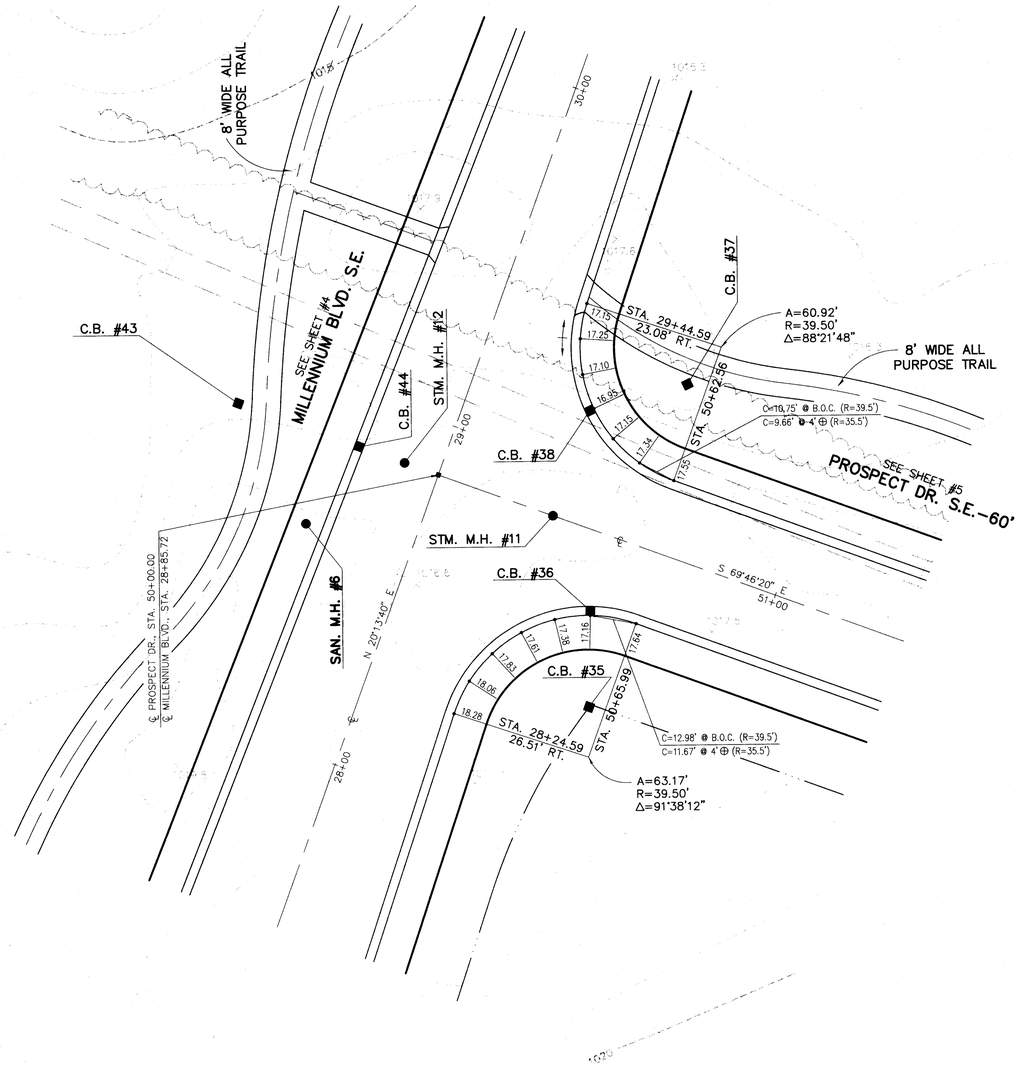
INTERSECTION DETAILS
MILLENNIUM BLVD. & NAVARRE RD.

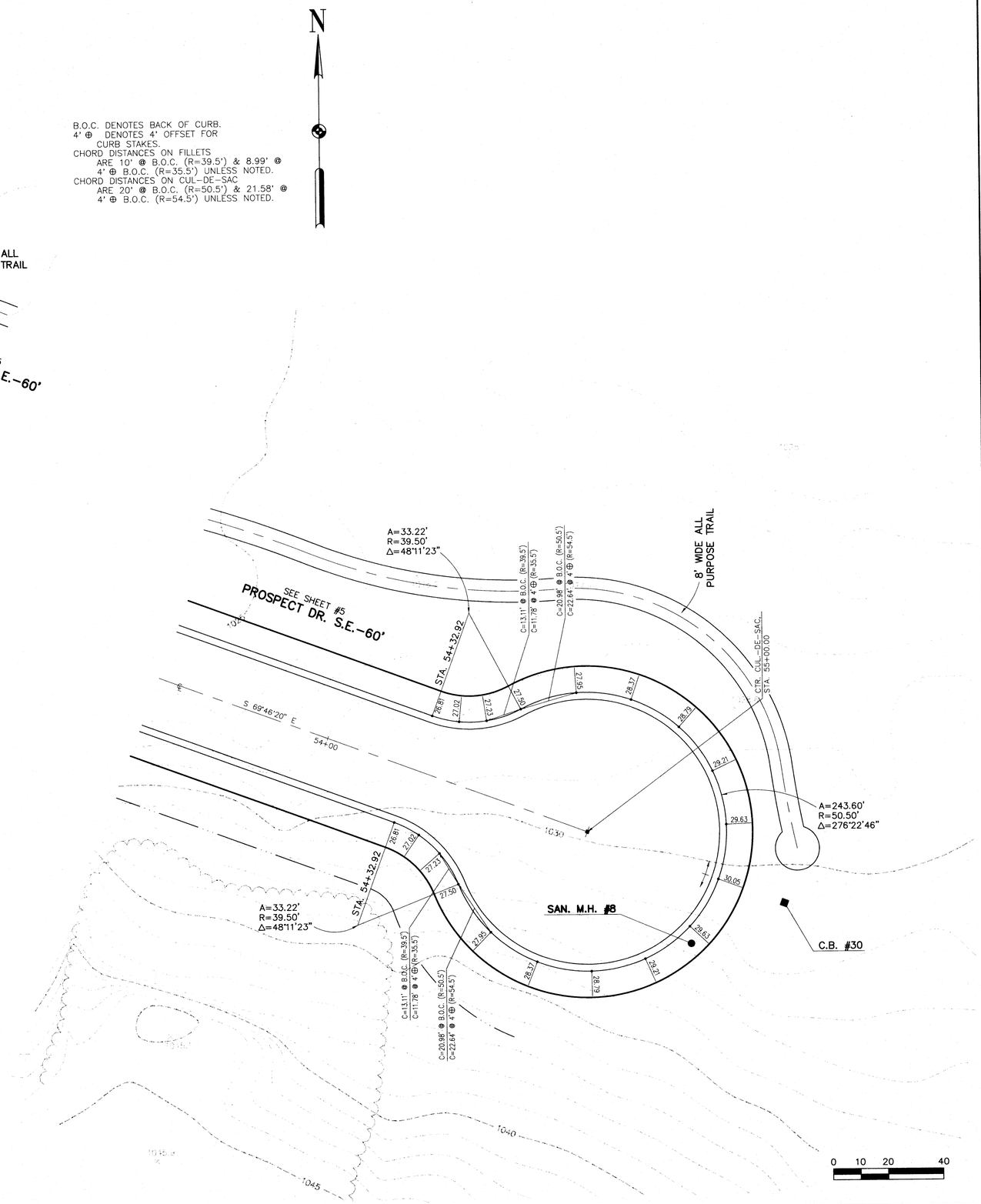
NEOCOM I INDUSTRIAL PARK – NO. 1

PART OF O.L. 569 IN THE CITY OF MASSILLON, STARK COUNTY, OHIO

® HAMMONTREE & ASSOCIATES, LTD.
ENGINEERS, PLANNERS, SURVEYORS
CANTON ORLANDO PITTSBURGH AKRON
5233 STONEHAM ROAD, NORTH CANTON, OHIO 44720
PHONE: CANTON:(330)/499-8817 AKRON:(330)/633-7274
TOLL FREE: 1-800-394-8817 FAX: (330)/499-0149

B.O.C. DENOTES BACK OF CURB.
4' ⊕ DENOTES 4' OFFSET FOR CURB STAKES.
CHORD DISTANCES ON FILLETS ARE 10' @ B.O.C. (R=39.5') & 8.99' @ 4' ⊕ B.O.C. (R=35.5') UNLESS NOTED.
CHORD DISTANCES ON CUL-DE-SAC ARE 20' @ B.O.C. (R=50.5') & 21.58' @ 4' ⊕ B.O.C. (R=54.5') UNLESS NOTED.





DESIGNED BY: MLD CHECKED BY: BHB
DRAWN BY: DTM REVIEWED BY: BHB
F.B. 418 PAGE: 17
COPYRIGHT: 1999 DATE: 5/7/99
R:\MASNEOLD_INT2.DWG

REVISION BY:	DATE:	DESCRIPTION:
REVISION BY:	DATE:	DESCRIPTION:
REVISION BY:	DATE:	DESCRIPTION:
REVISION BY:	DATE:	DESCRIPTION:
REVISION BY:	DATE:	DESCRIPTION:

SCALES:
HORIZ: 1"=20'

1

INTERSECTION DETAILS
MILLENNIUM BLVD. & PROSPECT DR.

NEOCOM I INDUSTRIAL PARK – NO. 1

PART OF O.L. 569 IN THE CITY OF MASSILLON,
STARK COUNTY, OHIO

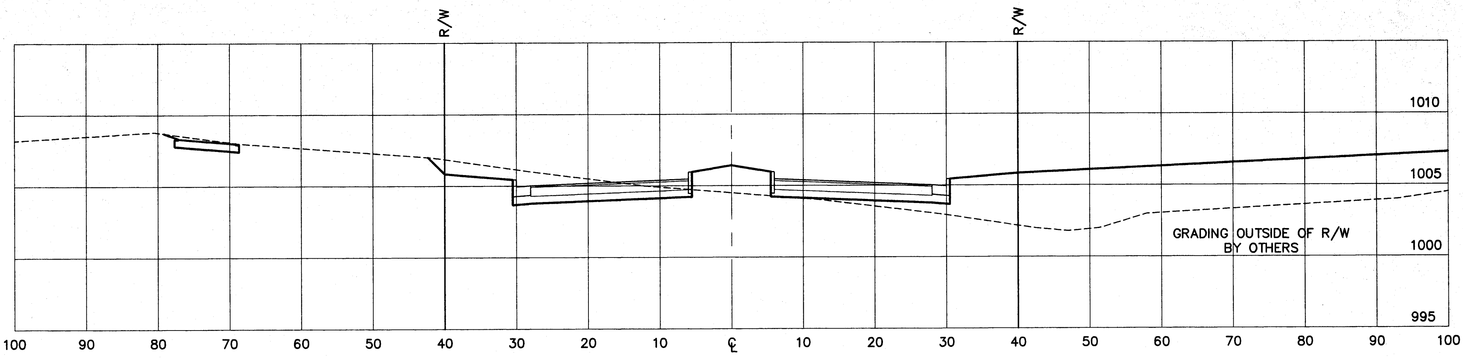
® HAMMONTREE & ASSOCIATES, LTD.
ENGINEERS, PLANNERS, SURVEYORS
CANTON ORLANDO PITTSBURGH AKRON
5233 STONEHAM ROAD, NORTH CANTON, OHIO 44720
PHONE: CANTON:(330)/499-8817 AKRON:(330)/633-7274
TOLL FREE: 1-800-394-8817 FAX: (330)/499-0149

NEOCOM I INDUSTRIAL PARK – NO. 1
MILLENNIUM BLVD.
STA. 10+11 TO STA. 12+50

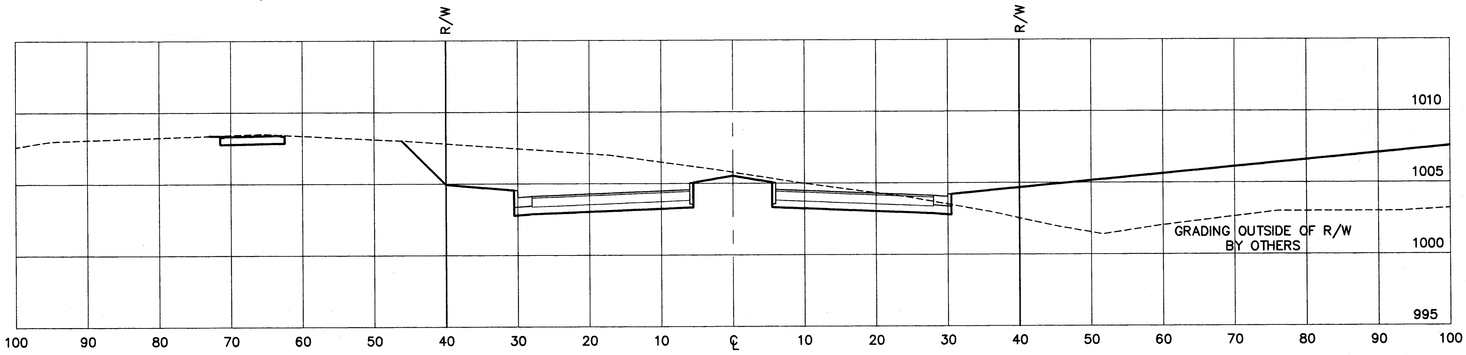
HORZ: 1"=10'
VERT: 1"=5'

HAMMONTREE & ASSOCIATES, LTD.
CONSULTING ENGINEERING & SURVEYING
CANTON & AKRON, OHIO

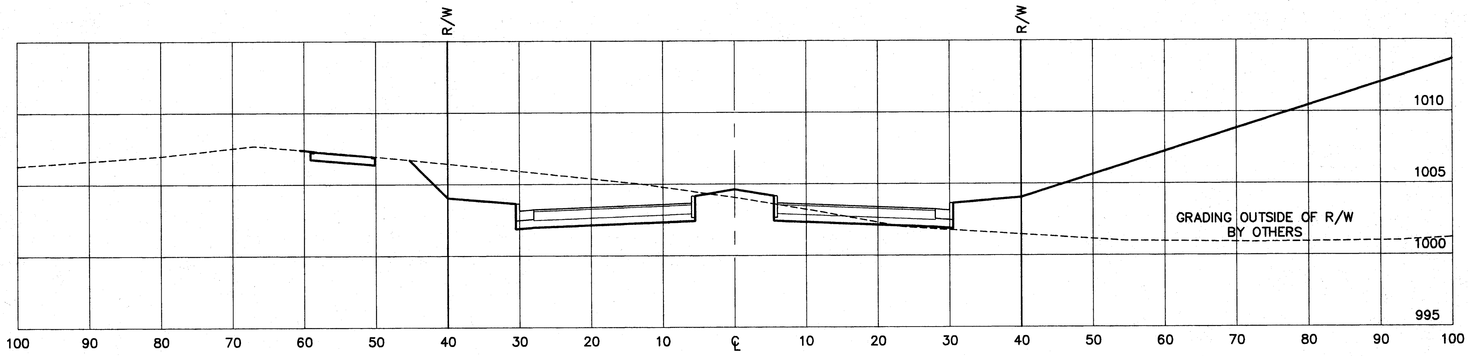
R:\MASNEOLD\LD_CROSS.DWG



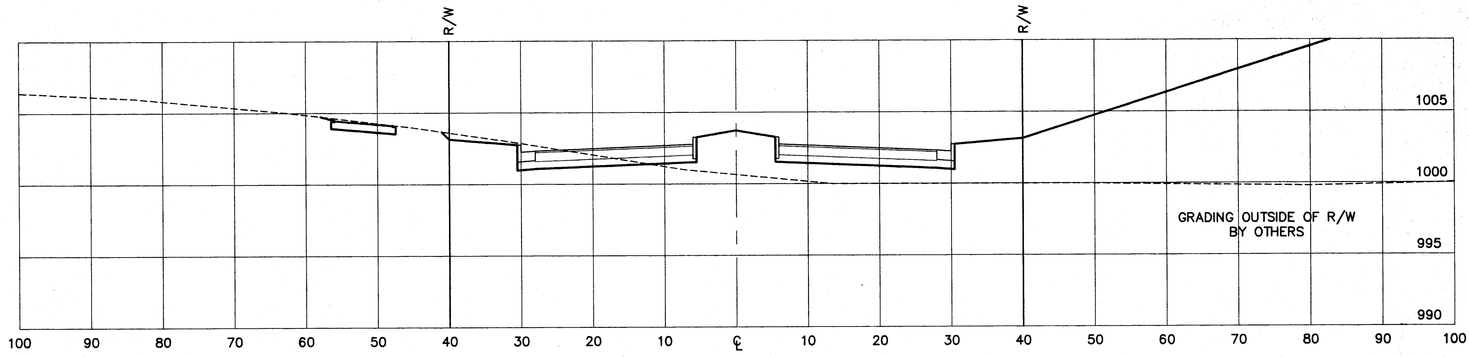
STA. 15+50



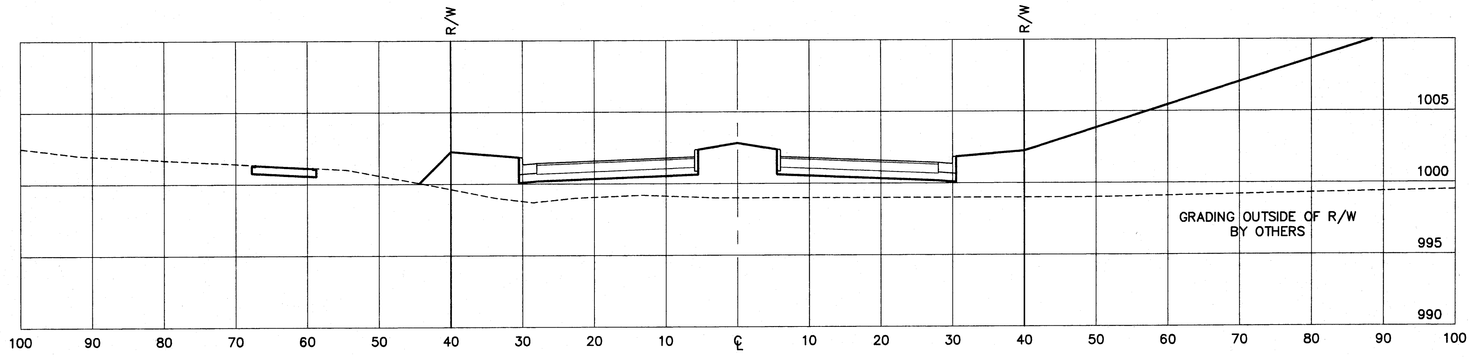
STA. 15+00



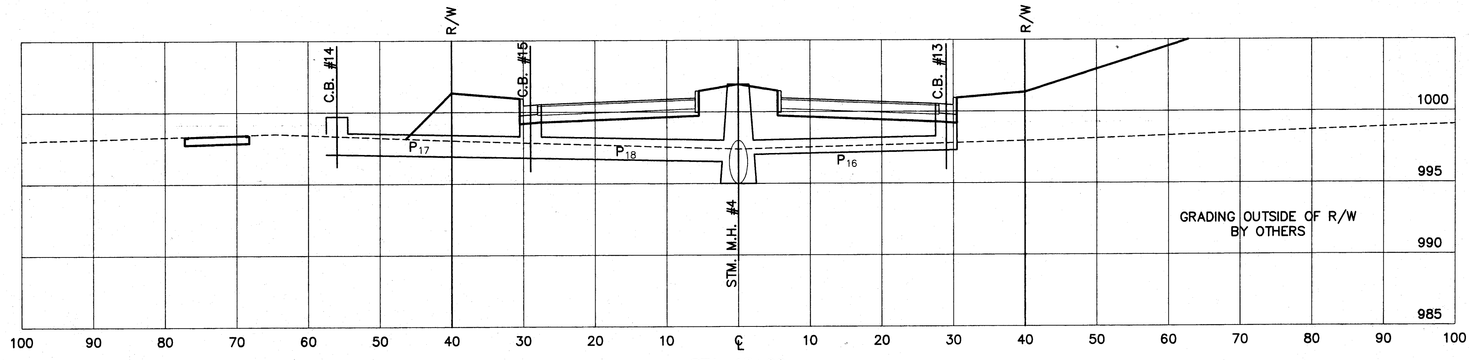
STA. 14+50



STA. 14+00



STA. 13+50



STA. 13+00

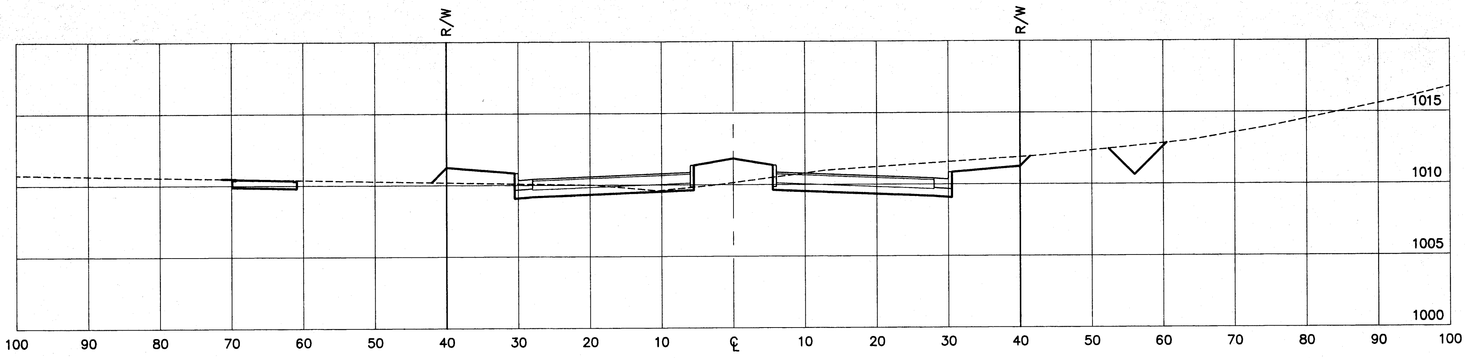
SHEET 10 OF 28

HAMMONTREE & ASSOCIATES, LTD.
CONSULTING ENGINEERING & SURVEYING
CANTON & AKRON, OHIO

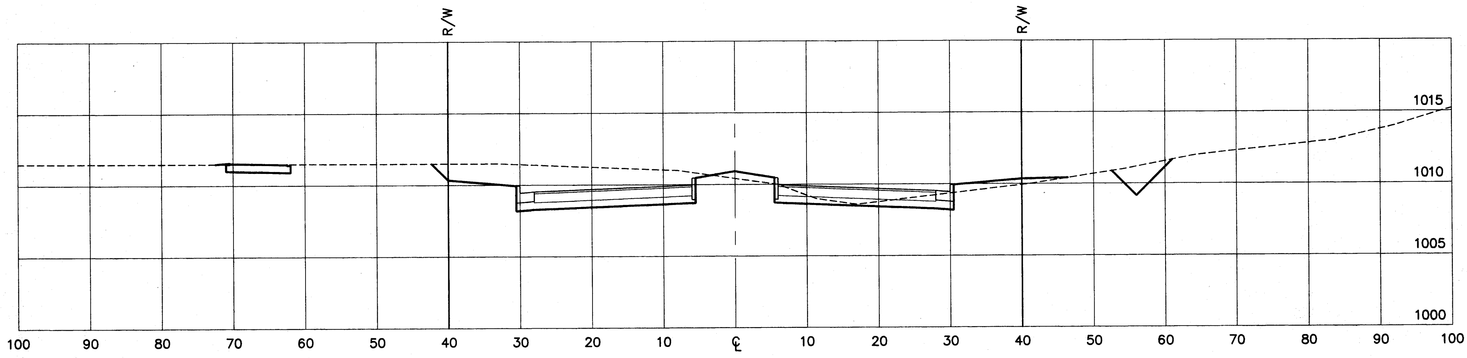
NEOCOM I INDUSTRIAL PARK – NO. 1
MILLENNIUM BLVD.
STA. 13+00 TO STA. 15+50

HORIZ: 1"=10'
VERT: 1"=5'

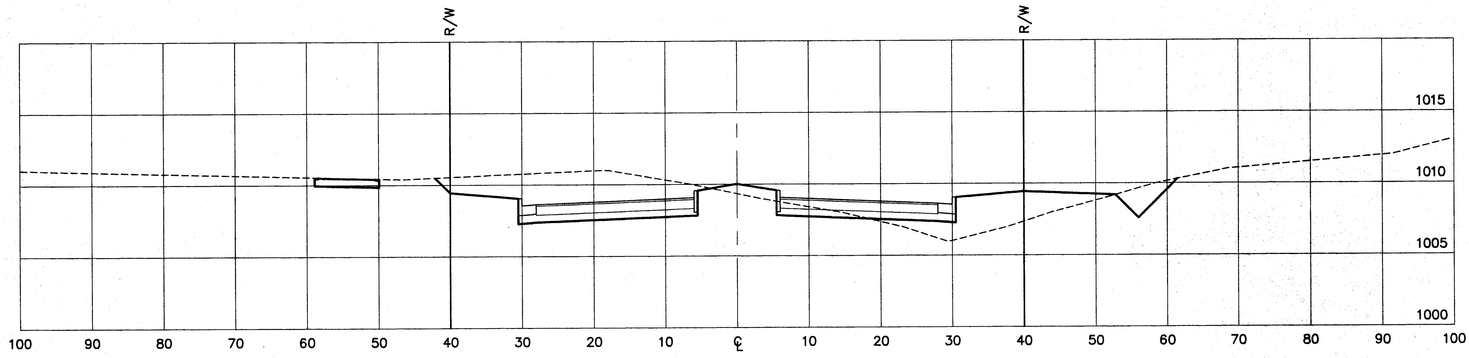
R:\MASNEOLD\LD_CROSS.DWG



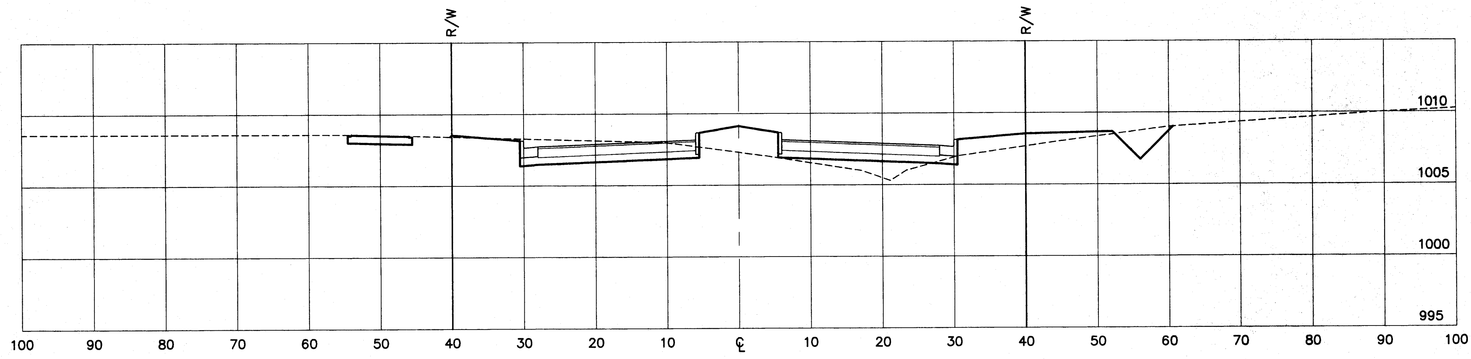
STA. 18+50



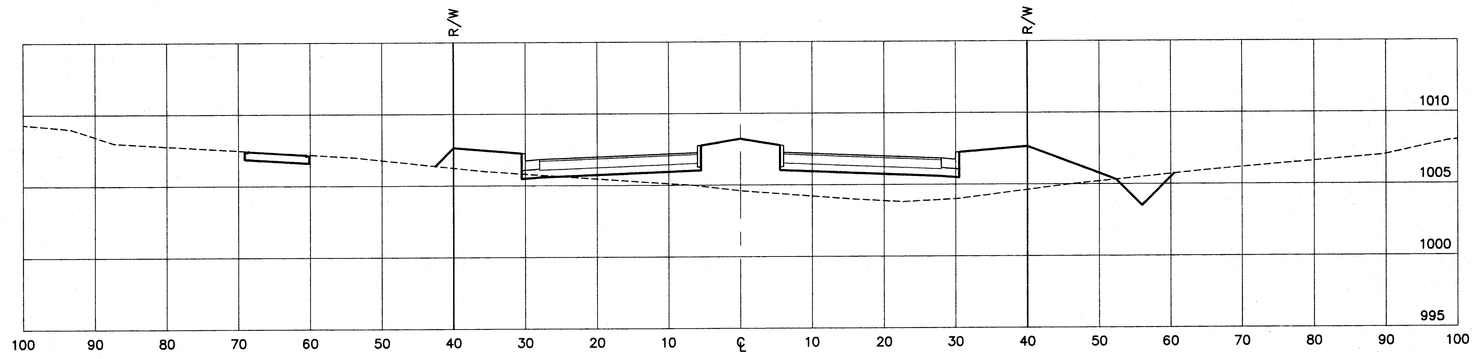
STA. 18+00



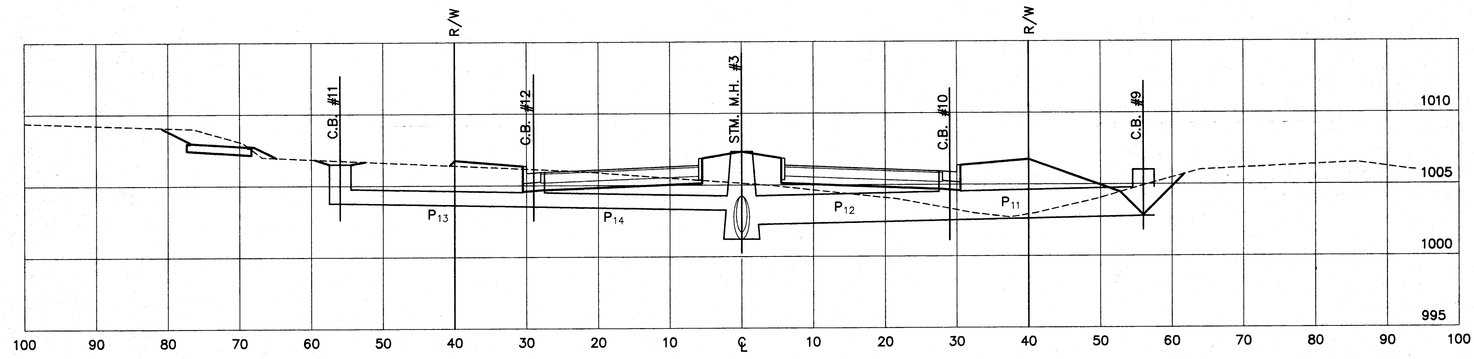
STA. 17+50



STA. 17+00



STA. 16+50



STA. 16+00

SHEET 11 OF 28

HAMMONTREE & ASSOCIATES, LTD.
CONSULTING ENGINEERING & SURVEYING
CANTON & AKRON, OHIO

NEOCOM I INDUSTRIAL PARK – NO. 1
MILLENNIUM BLVD.
STA. 16+00 TO STA. 18+50

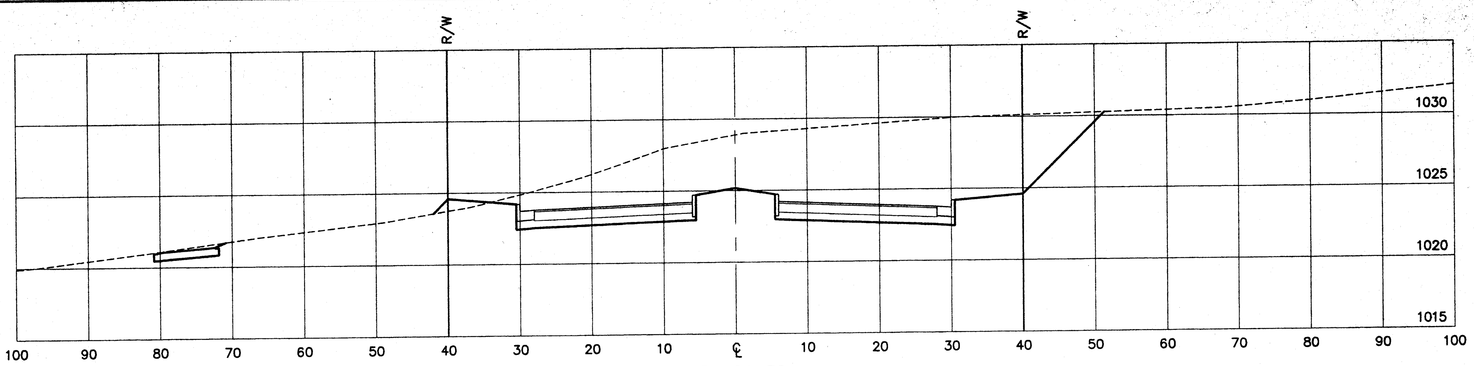
HORIZ: 1"=10'
VERT: 1"=5'

R:\MASNEOLD\LD_CROSS.DWG

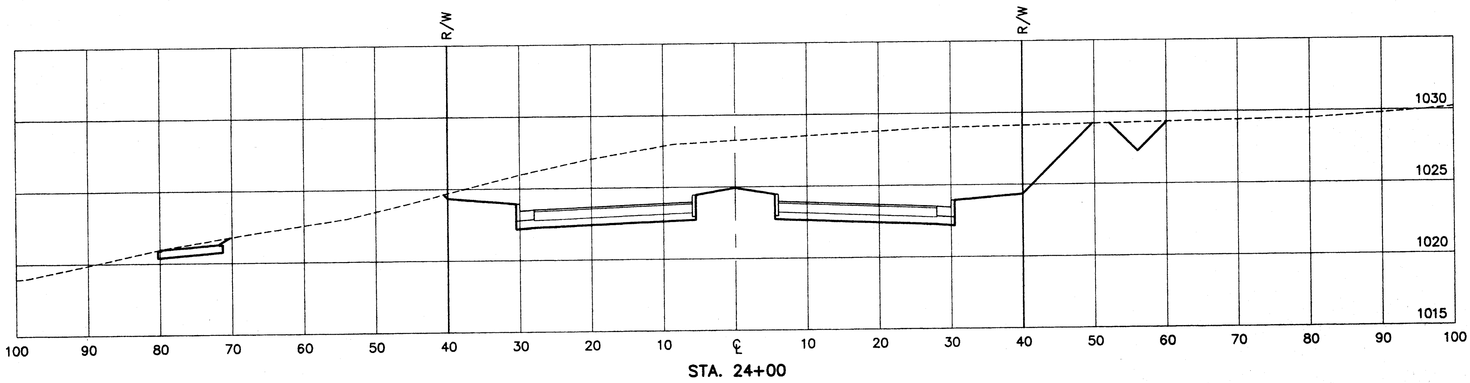
NEOCOM I INDUSTRIAL PARK – NO. 1
MILLENNIUM BLVD.
STA. 19+00 TO STA. 21+50
HORIZ: 1"=10'
VERT: 1"=5'

HAMMONTREE & ASSOCIATES, LTD.
CONSULTING ENGINEERING & SURVEYING
CANTON & AKRON, OHIO

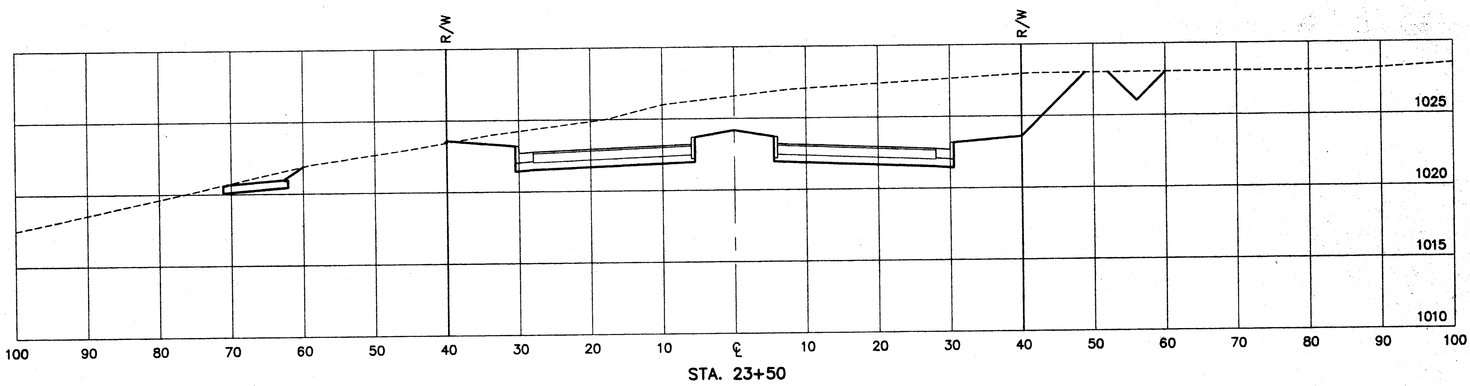
R:\MASNEOLD\LD_CROSS.DWG



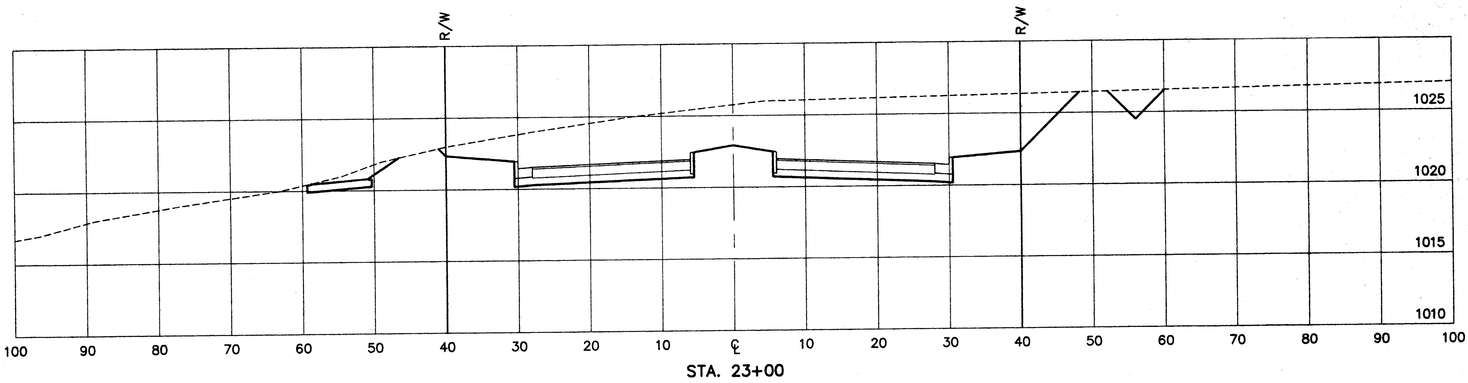
STA. 24+50



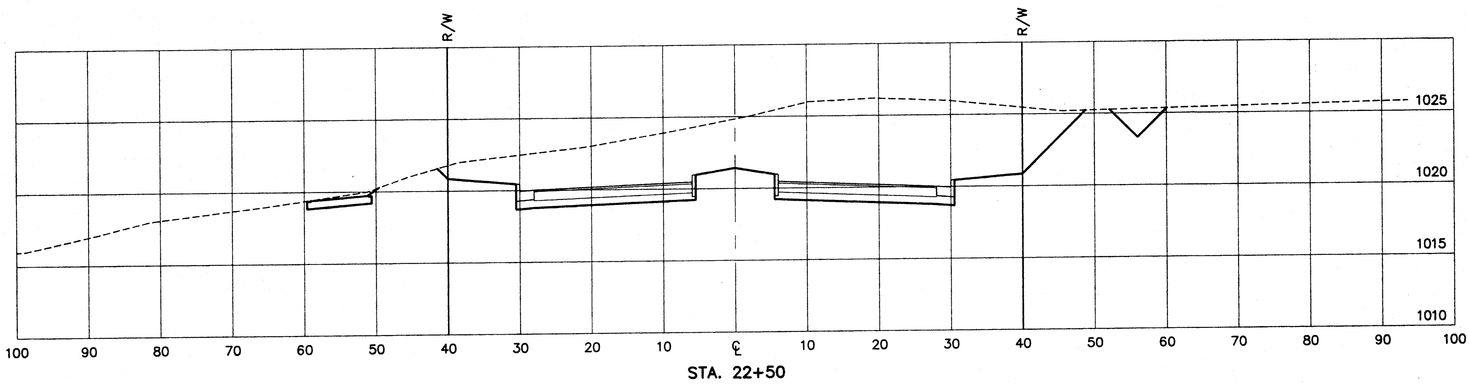
STA. 24+00



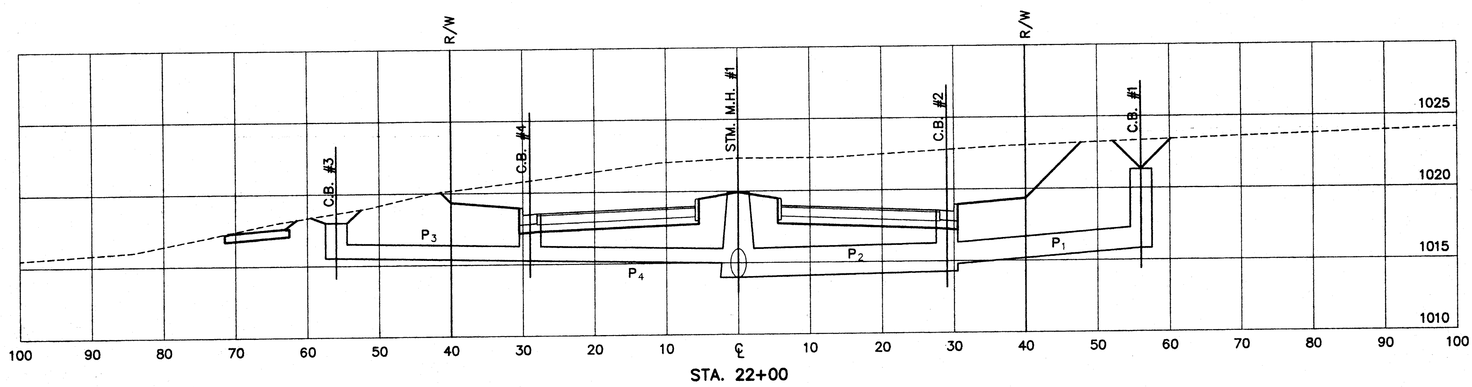
STA. 23+50



STA. 23+00



STA. 22+50



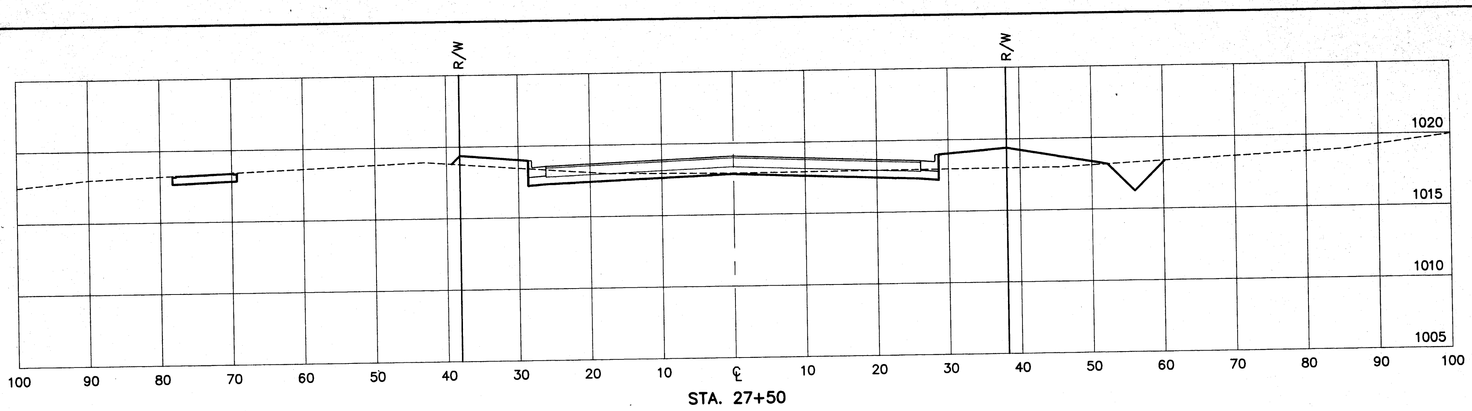
STA. 22+00

SHEET 13 OF 28

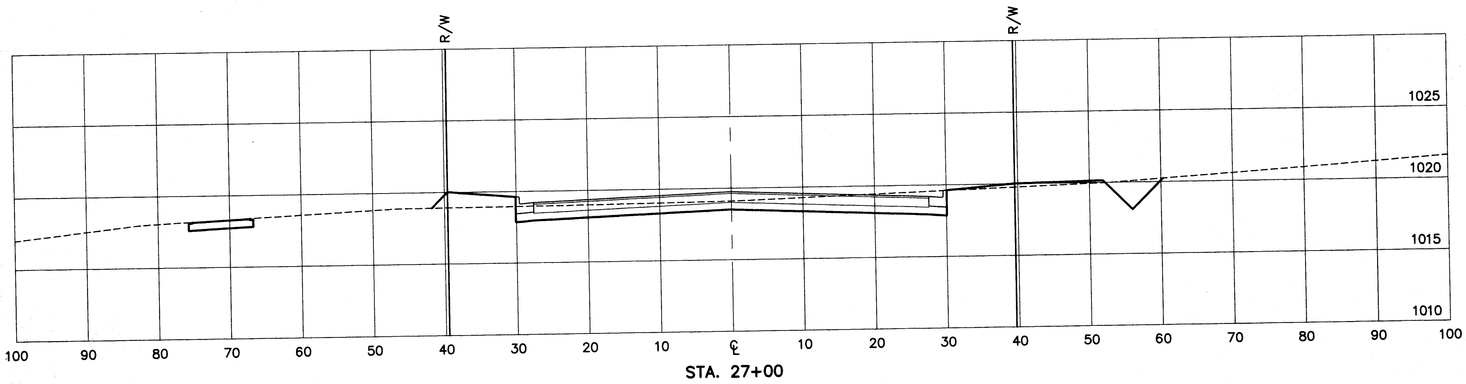
HAMMONTREE & ASSOCIATES, LTD.
CONSULTING ENGINEERING & SURVEYING
CANTON & AKRON, OHIO

NEOCOM I INDUSTRIAL PARK – NO. 1
MILLENNIUM BLVD.
STA. 22+00 TO STA. 24+50
HORIZ: 1"=10'
VERT: 1"=5'

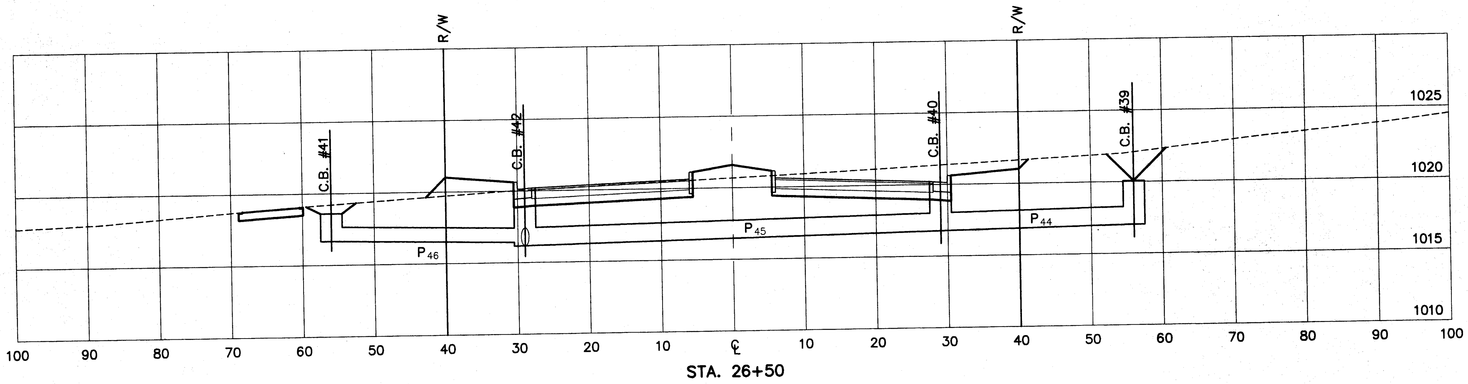
R:\MASNEOLD\LD_CROSS.DWG



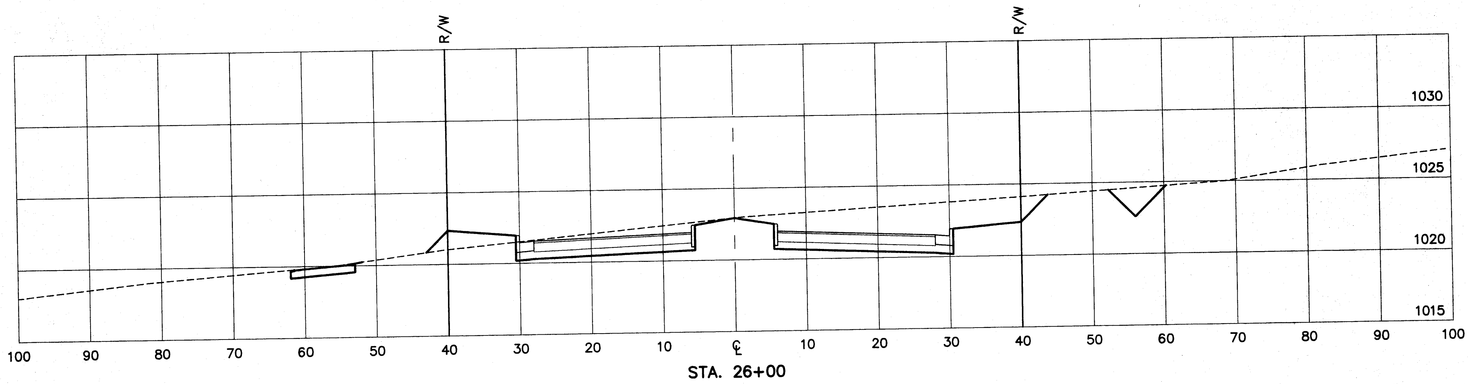
STA. 27+50



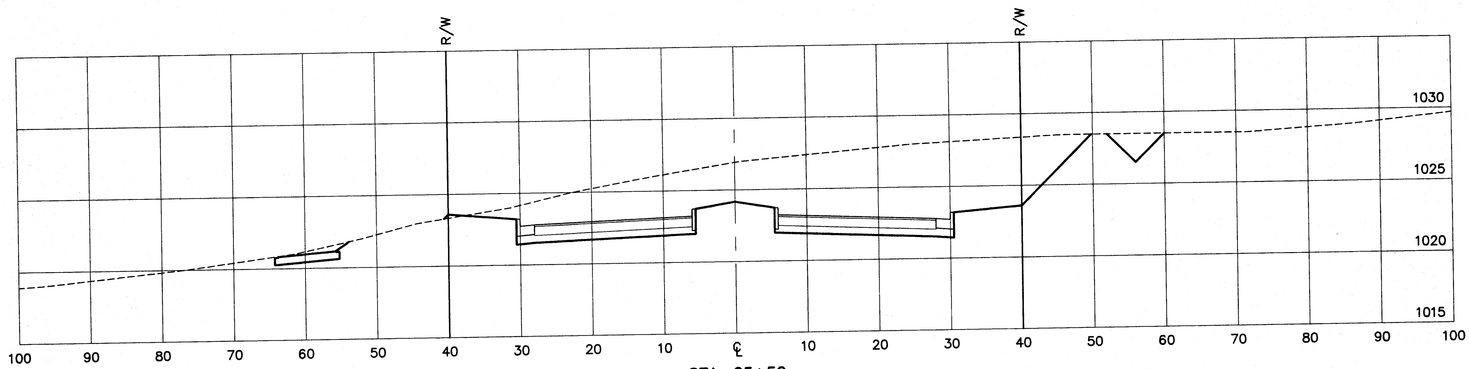
STA. 27+00



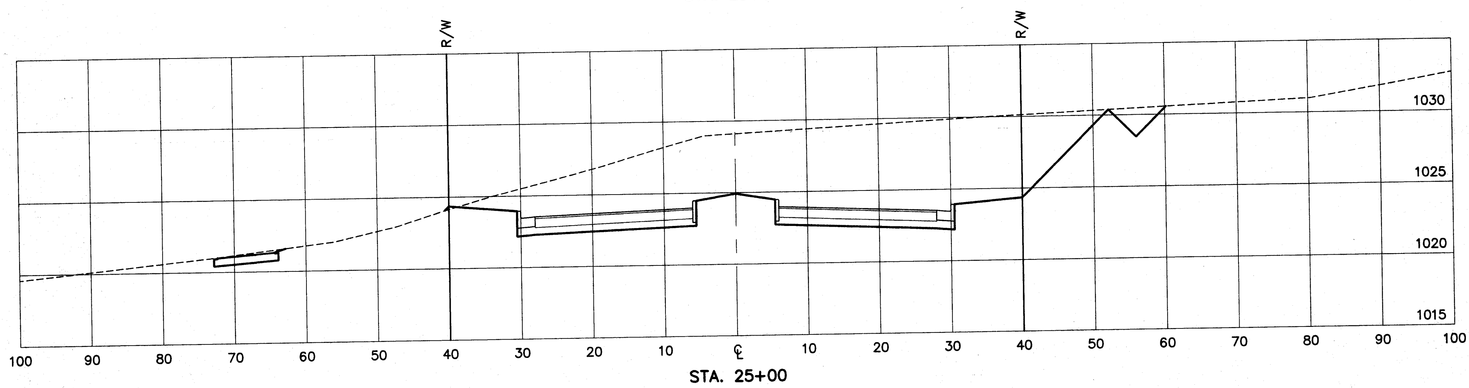
STA. 26+50



STA. 26+00



STA. 25+50



STA. 25+00

SHEET 14 OF 28

HAMMONTREE & ASSOCIATES, LTD.
CONSULTING ENGINEERING & SURVEYING
CANTON & AKRON, OHIO

NEOCOM I INDUSTRIAL PARK – NO. 1
MILLENNIUM BLVD.
STA. 25+00 TO STA. 27+50

HORIZ: 1"=10'
VERT: 1"=5'

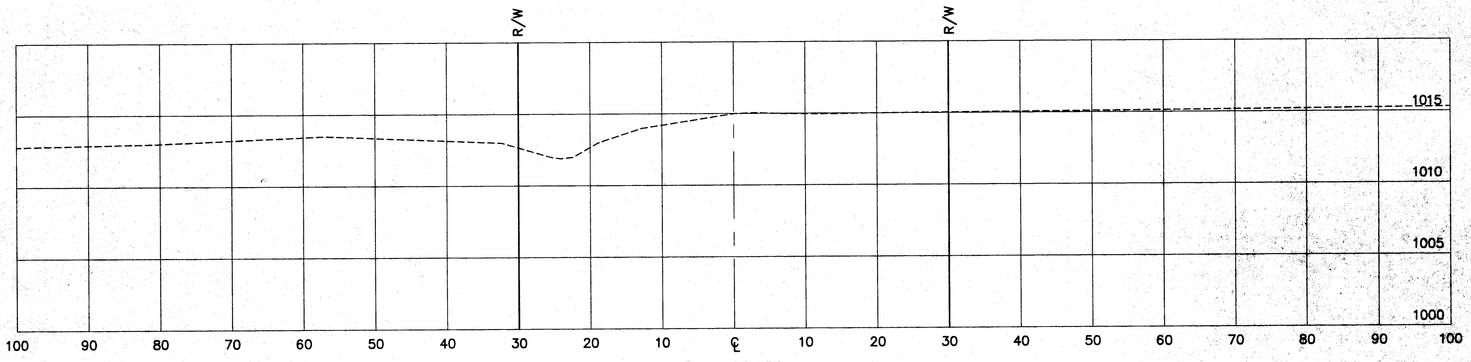
R:\MASNEOLD\LD_CROSS.DWG

NEOCOM I INDUSTRIAL PARK – NO. 1
MILLENNIUM BLVD.
STA. 28+00 TO STA. 30+50
HORIZ: 1"=10'
VERT: 1"=5'

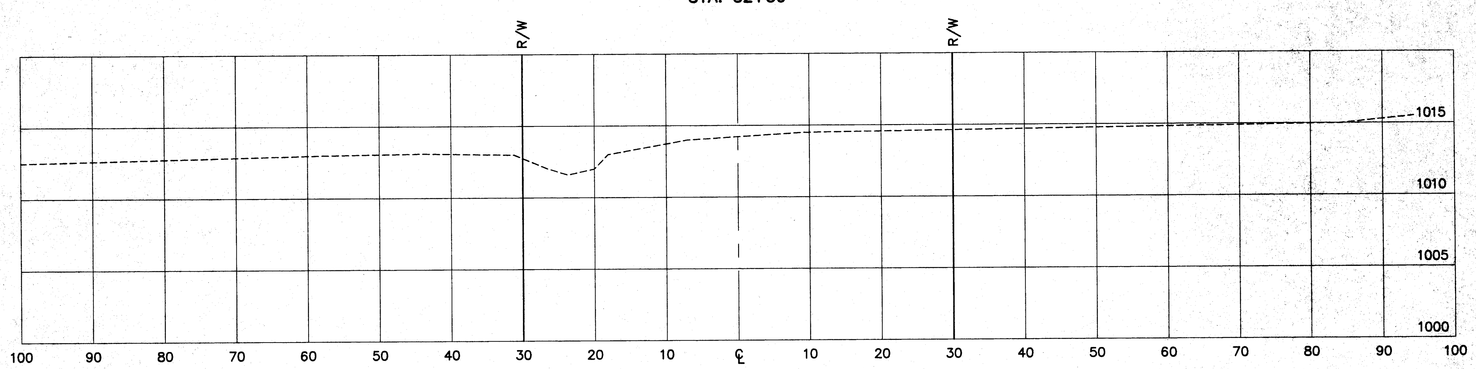
HAMMONTREE & ASSOCIATES, LTD.
CONSULTING ENGINEERING & SURVEYING
CANTON & AKRON, OHIO

R:\MASNEOLD\LD_CROSS.DWG

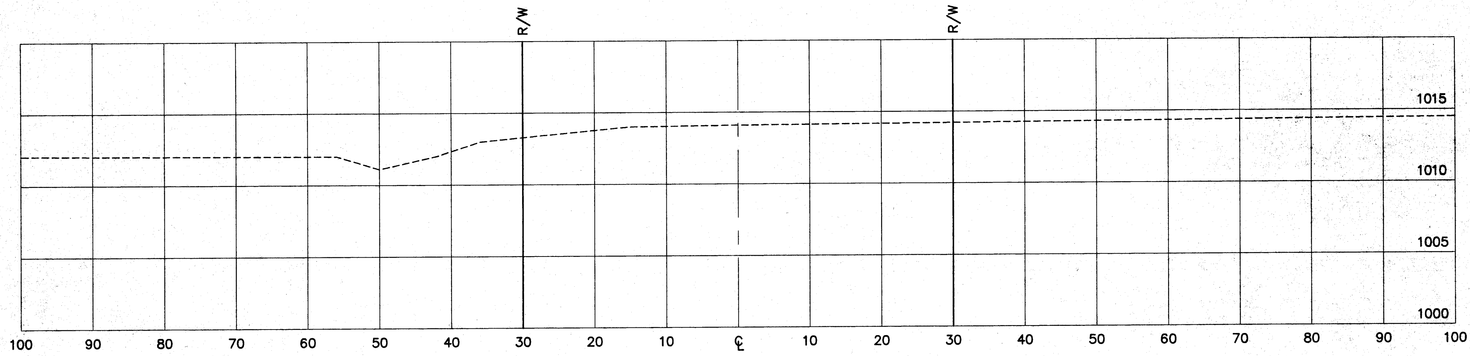
SHEET 15 OF 28



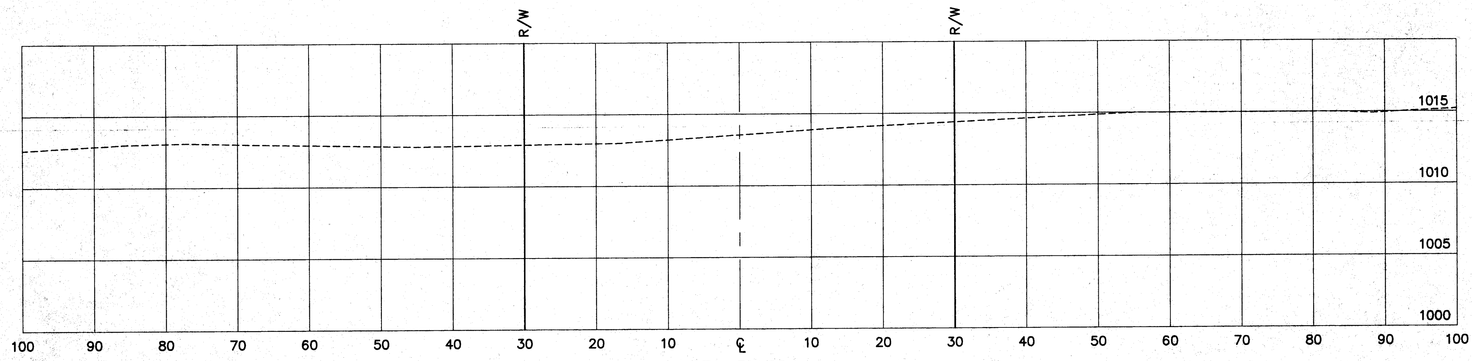
STA. 32+50



STA. 32+00



STA. 31+50



STA. 31+00

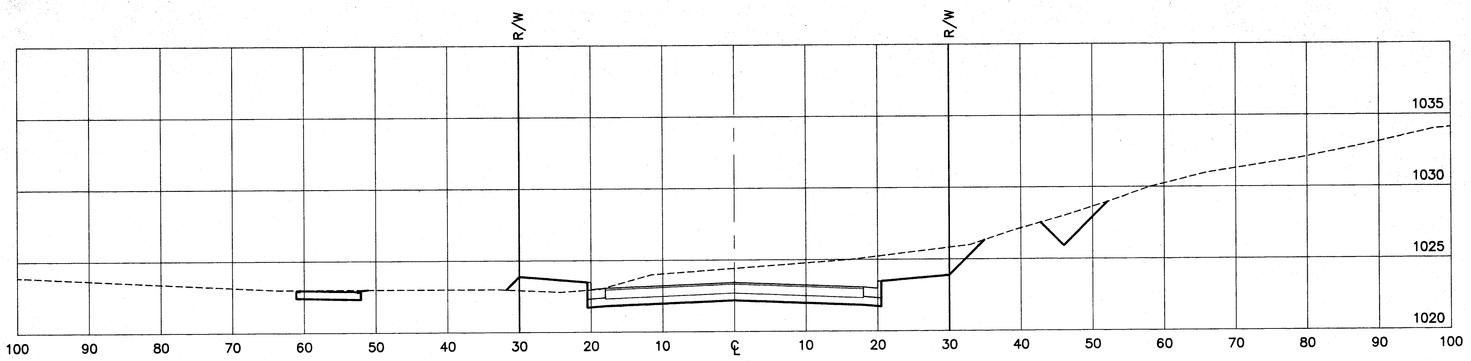
SHEET 16 OF 28

HAMMONTREE & ASSOCIATES, LTD.
CONSULTING ENGINEERING & SURVEYING
CANTON & AKRON, OHIO

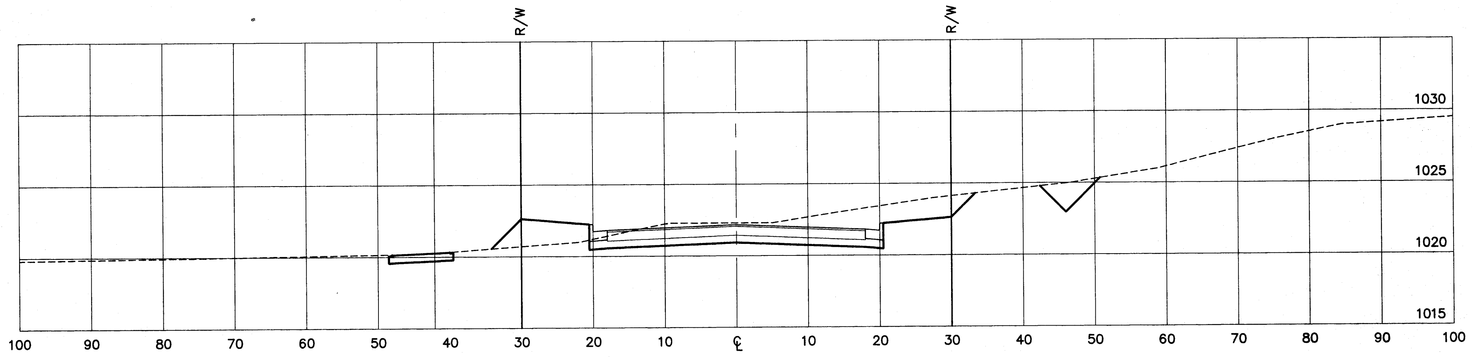
NEOCOM I INDUSTRIAL PARK – NO. 1
MILLENNIUM BLVD.
STA. 31+00 TO STA. 32+50

HORIZ: 1"=10'
VERT: 1"=5'

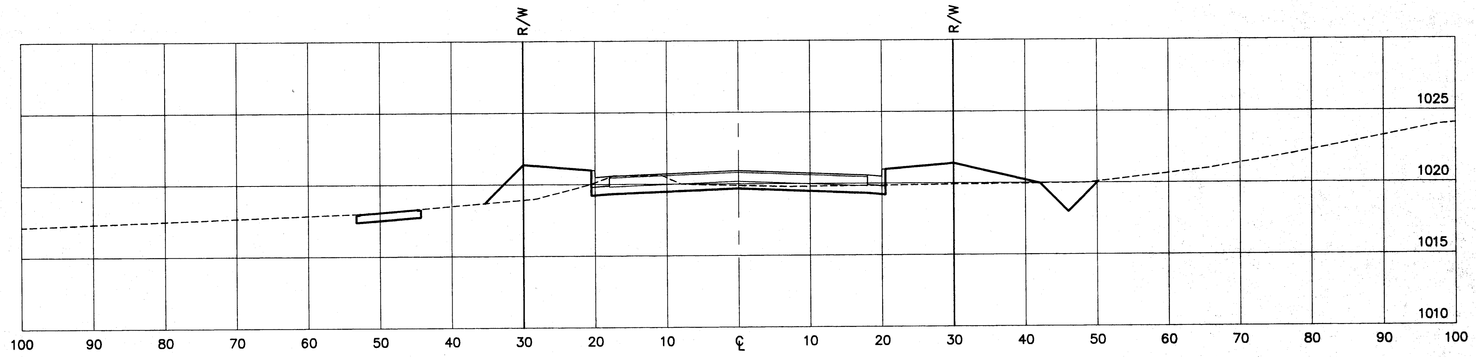
R:\MASNEOLD\LD_CROSS.DWG



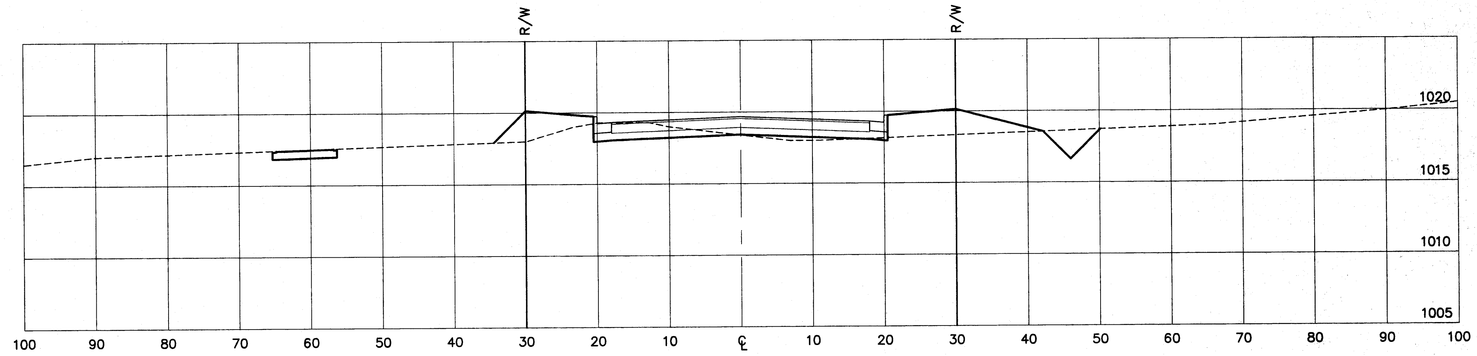
STA. 53+00



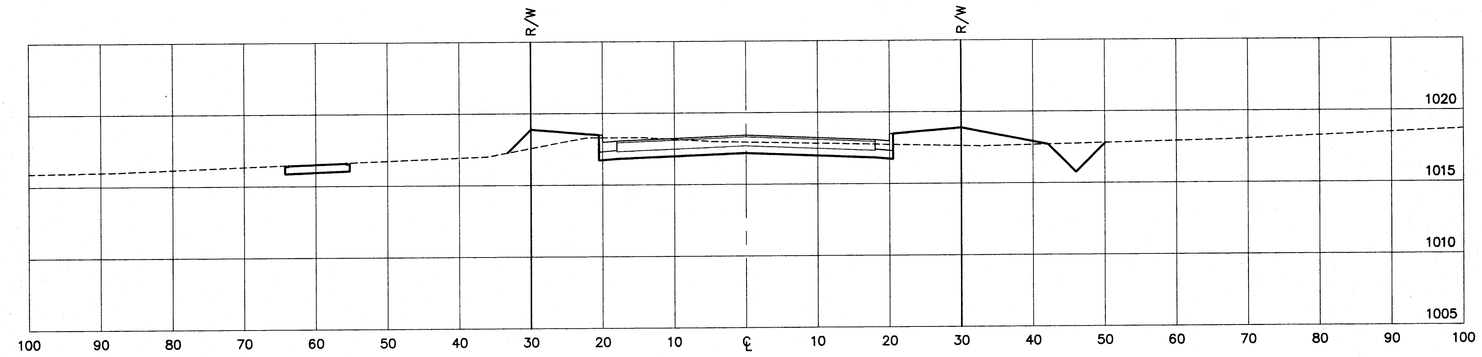
STA. 52+50



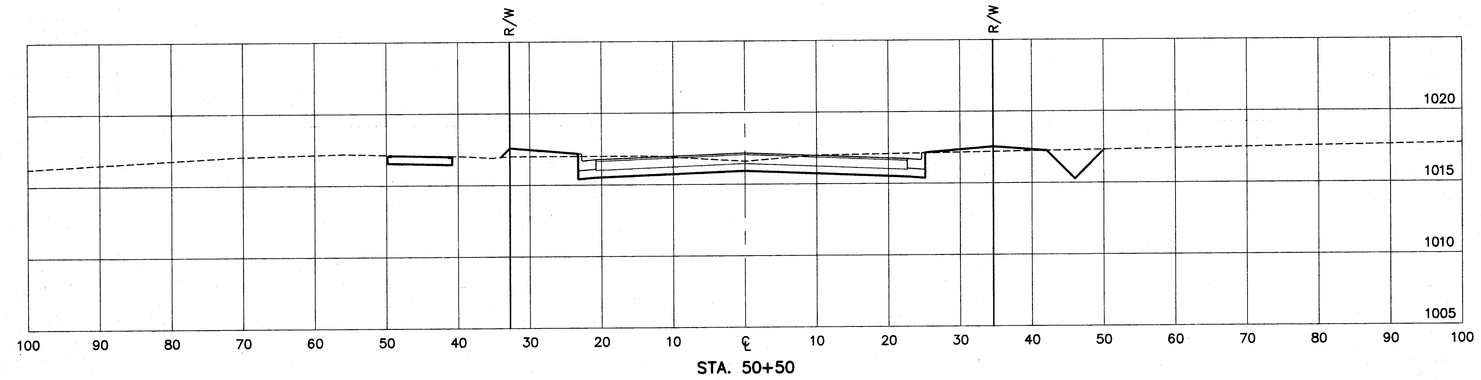
STA. 52+00



STA. 51+50



STA. 51+00



STA. 50+50

SHEET 17 OF 28

HAMMONTREE & ASSOCIATES, LTD.
CONSULTING ENGINEERING & SURVEYING
CANTON & AKRON, OHIO

NEOCOM I INDUSTRIAL PARK – NO. 1
PROSPECT DR.
STA. 50+50 TO STA. 53+00

HORIZ: 1"=10'
VERT: 1"=5'

R:\MASNEOLD\LD_CROSS.DWG

NEOCOM I INDUSTRIAL PARK – NO. 1
PROSPECT DR.
STA. 53+50 TO STA. 56+00
HORIZ: 1"=10'
VERT: 1"=5'

HAMMONTREE & ASSOCIATES, LTD.
CONSULTING ENGINEERING & SURVEYING
CANTON & AKRON, OHIO

R:\WASHGOLD\LD_CROSS.DWG

NEOCOM I INDUSTRIAL PARK – NO. 1
PROSPECT DR.
STA. 56+50 TO STA. 56+50
HORIZ: 1"=10'
VERT: 1"=5'

HAMMONTREE & ASSOCIATES, LTD.
CONSULTING ENGINEERING & SURVEYING
CANTON & AKRON, OHIO

R:\WASNEOLD\D_CROSS.DWG

NOTES:

BOUNDARY INFORMATION COMPILED FROM EXISTING RECORDS.

TOPOGRAPHY COMPILED FROM STARK COUNTY TOPOGRAPHIC MAPPING PREPARED FROM AERIAL PHOTOGRAPHS IN 1970.

CONTOUR INTERVAL IS 2 FEET.

PROPERTY ZONED I-2, GENERAL INDUSTRIAL.

PERMANENT DRAINAGE FACILITIES: STORM SEWER, DITCHES & DETENTION

SOME EXISTING GAS LINES MAY BE RELOCATED TO FOLLOW PROPOSED LOT LINES. EOG LINES WILL REQUIRE A 60' WIDE EASEMENT. EASEMENT WIDTH ON PRIVATE LINES SHALL BE DETERMINED BY PRIVATE GAS COMPANIES.

US ARMY CORPS OF ENGINEERS, HUNTINGTON DISTRICT APPROVED WETLAND LOCATIONS APRIL 14, 1998 BY LETTER; EPA PERMIT # OHR107916.

DIRECTIONS FOR WETLAND MIGRATION

1. SUBMITTAL FOR MITIGATION MADE TO U.S. CORPS OF ENGINEERS ON 4/13/99. AS OF 5/6/99 CORPS HAS NOT GRANTED FINAL APPROVAL. MITIGATION SHALL NOT COMMENCE UNTIL HAMMONTREE AND ASSOCIATES, LTD. AUTHORIZES CONTRACTOR AND IS IN RECEIPT OF CORPS WRITTEN PERMISSION.
2. ENCIRCLE PART OF THE PERIMETER OF 4.65 ACRE WETLAND AREA WITH SILT FENCE IN LOCATIONS SHOWN.
3. REMOVE SOIL THROUGHOUT AREA TO BE MITIGATED TO ELEVATION 1005±.
4. REMOVE UPPER 2 FEET OF SOIL IN 0.92 ACRE AND 1.15 ACRE WETLAND AND PLACE IN AREA TO BE MITIGATED. COMPACTION IS NOT NECESSARY. FINAL ELEVATION OF MITIGATED AREA SHALL BE 1006.
5. CONSTRUCT EARTH ROCK CHECK DAMS IN LOCATIONS AS SHOWN.
6. OWNER TO MONITOR PROGRESS OF ESTABLISHMENT OF WETLAND ONCE A YEAR FOR FIVE YEARS.

SITE INFORMATION

OHIO EPA STORM WATER GENERAL PERMIT NUMBER: OHR107916

SITE DESCRIPTION – EXISTING – FARMLAND

PROPOSED – INDUSTRIAL PARK

TOTAL AREA OF SITE – 381 AC.
AREA OF SITE TO UNDERGO EXCAVATION – 127 AC. (LOTS & ROADS – PHASE I)

PRE-CONSTRUCTION RUNOFF COEFFICIENT – 0.3
POST-CONSTRUCTION RUNOFF COEFFICIENT – 0.8

SCHEDULE OF MAJOR CONSTRUCTION – PHASE I
COMMENCEMENT – SPRING 1999
COMPLETION – FALL 1999 (ROADS), FALL 2000 (LOTS)

RECEIVING STREAM AND SURFACE WATERS
WEST DETENTION – FILTERED WATER TO WETLANDS TO UNNAMED TRIBUTARY TO TUSCARAWAS RIVER
SOUTH DETENTION – STORM SEWER TO UNNAMED TRIBUTARY TO SOUTH TO TUSCARAWAS RIVER

EXISTING SOILS ON SITE – PHASE I

CdB	CANFIELD SILT LOAM, 2 TO 6 PERCENT SLOPES
CdC2	CANFIELD SILT LOAM, 6 TO 12 PERCENT SLOPES
Ch	CARLISLE MUCK
Ly	LURAY SILT LOAM
Se	SEBRING SILT LOAM, TILL SUBSTRATUM
WuC2	WOOSTER SILT LOAM, 6 TO 12 PERCENT SLOPES, MODERATELY ERODED
WuD2	WOOSTER SILT LOAM, 12 TO 18 PERCENT SLOPES, MODERATELY ERODED

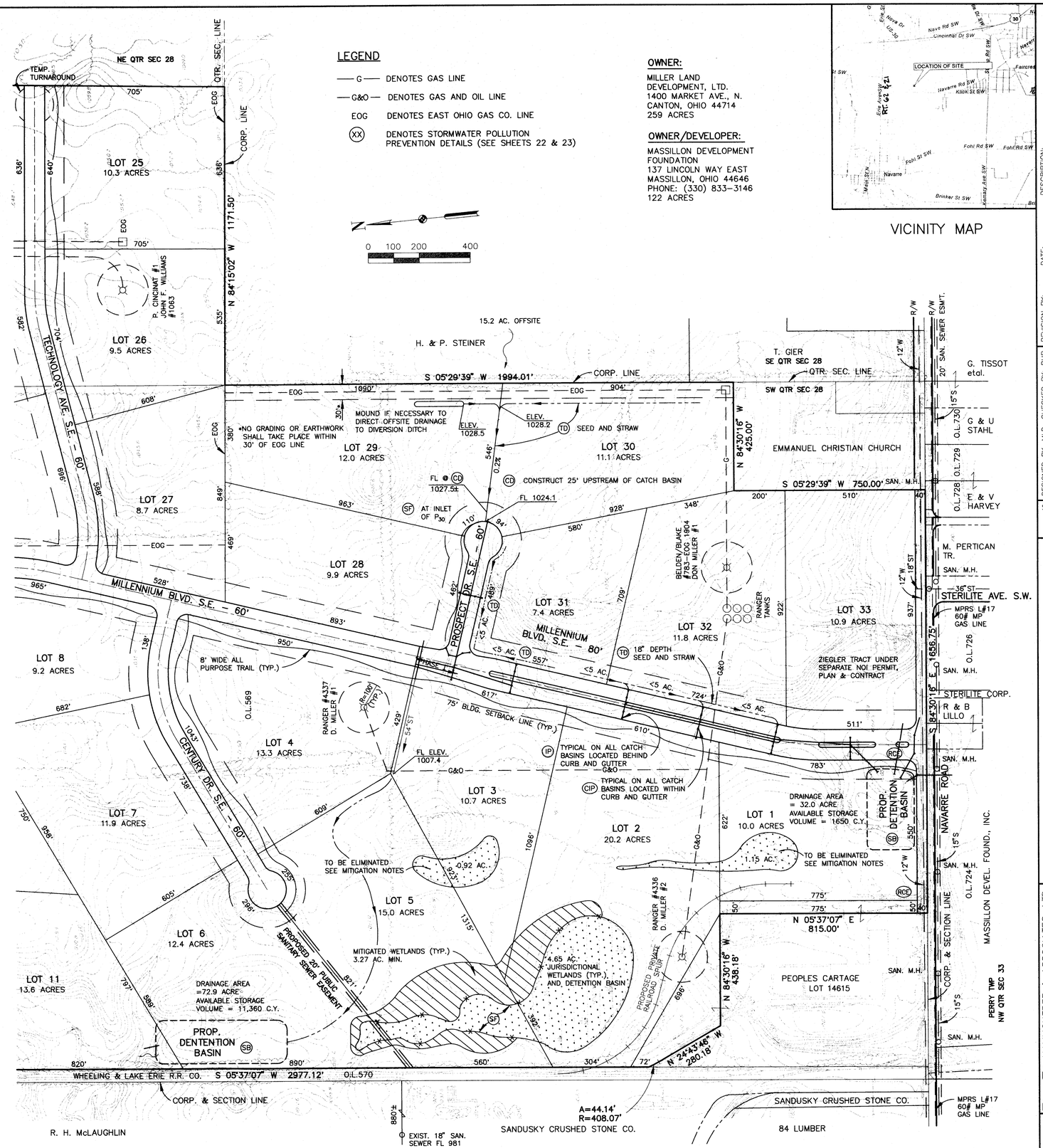
LEGEND

—G— DENOTES GAS LINE
—G&O— DENOTES GAS AND OIL LINE
EOG DENOTES EAST OHIO GAS CO. LINE
(XX) DENOTES STORMWATER POLLUTION PREVENTION DETAILS (SEE SHEETS 22 & 23)

OWNER:
MILLER LAND DEVELOPMENT, LTD.
1400 MARKET AVE., N.
CANTON, OHIO 44714
259 ACRES

OWNER/DEVELOPER:
MASSILLON DEVELOPMENT FOUNDATION
137 LINCOLN WAY EAST
MASSILLON, OHIO 44646
PHONE: (330) 833-3146
122 ACRES

VICINITY MAP



REVISION BY:	DATE:	DESCRIPTION:
REVISION BY:	DATE:	DESCRIPTION:
REVISION BY:	DATE:	DESCRIPTION:
REVISION BY:	DATE:	DESCRIPTION:
REVISION BY:	DATE:	DESCRIPTION:

DESIGNED BY: M.D CHECKED BY: BHB
DRAWN BY: LJP REVIEWED BY: BHB
F.B. ___ PAGE: ___
COPYRIGHT: 1999 DATE: 5/7/99
J:\DWG\MASNEOLD\LG_SWSP

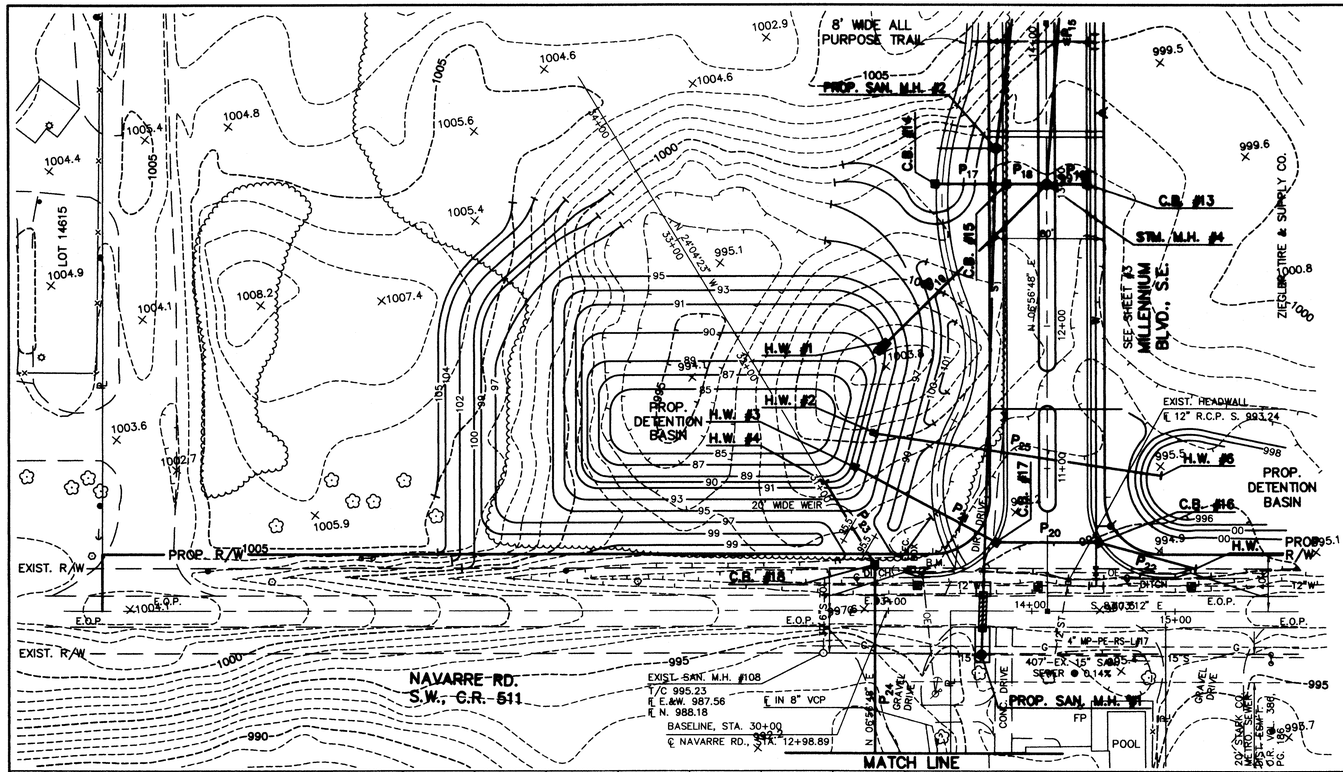
SCALE: 1"=200'

STORMWATER POLLUTION PREVENTION PLAN

NEOCOM I INDUSTRIAL PARK – NO. 1

PART OF O.L. 569 IN THE CITY OF MASSILLON, STARK COUNTY, OHIO

HAMMONTREE & ASSOCIATES, LTD.
ENGINEERS, PLANNERS, SURVEYORS
CANTON ORLANDO PITTSBURGH AKRON
5233 STONEHAM ROAD, NORTH CANTON, OHIO 44720
PHONE: CANTON:(330)499-8817 AKRON:(330)633-7274
TOLL FREE: 1-800-394-8817 FAX: (330)499-0149



PIPE CHART

PIPE	SIZE	TYPE	LENGTH	GRADE	℄ IN	℄ OUT	AS-BUILTS (LENGTH)	(℄ IN)	(℄ OUT)
P_{23}	8"	C-PVC	67'	1.0%	990.00	989.33	67'	990.01	989.40
P_{24}	12"	B-RCP	150'	1.0%	989.33	987.83	150'	989.37	987.69
P_{25}	8"	B-PVC	200'	1.0%	995.00	993.00	200'	994.90	992.88

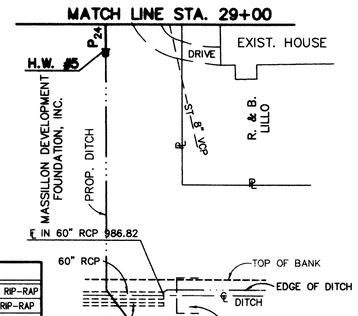
HEADWALL CHART

NUMBER	TYPE	FLOWLINE	PROTECTION
1	HW-4	991.78	12' L. x 6' W. GROUTED RIP-RAP
2	HW-4	993.00	5' L. x 4' W. GROUTED RIP-RAP
3	HW-4	991.20	5' L. x 4' W. GROUTED RIP-RAP
4	HW-4	990.00	
5	HW-4	987.63	5' L. x 4' W. x 1.5' D., TYPE C
6	HW-4	995.00	DUMPED ROCK

NOTE:
ROOF DRAINS, FOUNDATION DRAINS & OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.

FOR INTERSECTION DETAILS
SEE SHEET #7

■ DENOTES MONUMENT ASSEMBLT TO BE SET
• DENOTES PROP. CURB BOX
T/C DENOTES TOP OF COVER
T/CU DENOTES TOP OF CURB

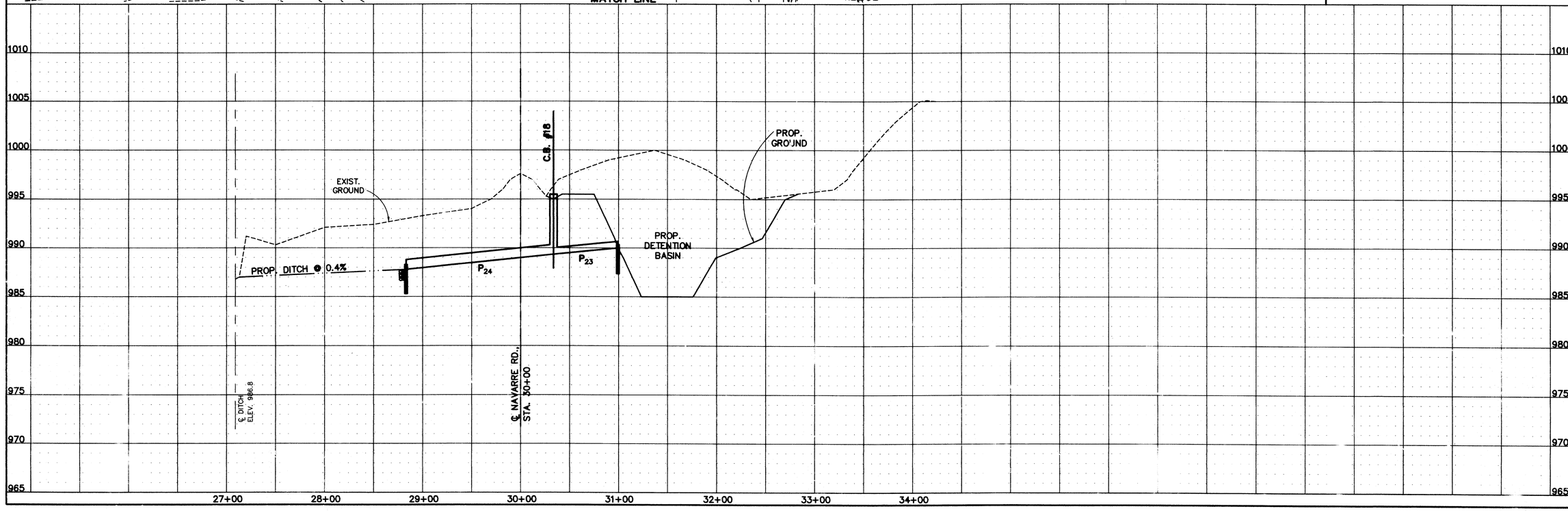


CATCH BASIN CHART

NUMBER	TYPE	STATION	OFFSET	TOP OF GRATE	WINDOW ELEV.	INLET
18	2-2-A	30+33.57		995.5 (995.46)	995.0	

BENCHMARK:
1-1/2" x 1/4" FLAT STEEL FD. 1'± UP. S. SIDE OF POWER POLE #2617A/2 AT THE N.W. CORNER OF NAVARRE RD. & MILLENNIUM BLVD.

ELEV. = 996.74



DESIGNED BY: MLD CHECKED BY: BHB
DRAWN BY: DTM REVIEWED BY: BHB
F.B. 418 PAGE: 17
COPYRIGHT: 1999 DATE: 5/7/99
R:\MASHEQUA\JD_PDTS.DWG

REVISION BY: MLD DATE: 5/25/99 DESCRIPTION: PER CITY ENGINEER COMMENTS
REVISION BY: SPL DATE: 2/9/00 DESCRIPTION: AS-BUILTS
REVISION BY: DATE: DESCRIPTION:
REVISION BY: DATE: DESCRIPTION:
REVISION BY: DATE: DESCRIPTION:

SCALES:
HORIZ: 1"=50'
VERT: 1"=5'

STORM WATER POLLUTION PREVENTION PLAN
ENTRANCE DETENTION BASIN
NEOCOM I INDUSTRIAL PARK – NO. 1
PART OF O.L. 569 IN THE CITY OF MASSILLON, STARK COUNTY, OHIO

HAMMONTREE & ASSOCIATES, LTD.
ENGINEERS, PLANNERS, SURVEYORS
CANTON ORLANDO PITTSBURGH AKRON
5233 STONEHAM ROAD, NORTH CANTON, OHIO 44720
PHONE: CANTON:(330)/499-8817 AKRON:(330)/833-7274
TOLL FREE: 1-800-394-8817 FAX: (330)/499-0149

65/20

1. PERMANENT SEEDING SHALL NOT BE CONSIDERED ESTABLISHED FOR AT LEAST 1 FULL YR. FROM THE TIME OF PLANTING. SEEDED AREAS SHALL BE INSPECTED FOR FAILURE AND VEGETATION RE-ESTABLISHED AS NEEDED. DEPENDING ON SITE CONDITIONS, IT MAY BE NECESSARY TO IRRIGATE, FERTILIZE, OVER SEED, OR RE-ESTABLISH PLANTINGS IN ORDER TO PROVIDE PERMANENT VEGETATION FOR ADEQUATE EROSION CONTROL.

2. MAINTENANCE FERTILIZATION RATES SHALL BE ESTABLISHED BY SOIL TEST RECOMMENDATIONS OR BY USING THE RATES SHOWN IN THE FOLLOWING TABLE.

MAINTENANCE FOR PERMANENT SEEDINGS FERTILIZATION AND MOWING

MIXTURE	FORMULA	LB./AC.	LB./1,000 FT.²	TIME	MOWING
CREEPING RED FESCUE RYEGRASS KENTUCKY BLUEGRASS	10-10-10	500	12	FALL, YEARLY OR AS NEEDED.	NOT CLOSER THAN 3"
TALL FECUE	10-10-10	500	12		NOT CLOSER THAN 4"
DWARF FESCUE	10-10-10	500	12		NOT CLOSER THAN 2"
CROWN VETCH FESCUE	0-20-20	400	10	SPRING, YEARLY FOLLOWING ESTABLISH-MENT AND EVERY 4-7 YR. THEREAFTER	DO NOT MOW
FLAT PEA FESCUE	0-20-20	400	10		DO NOT MOW

NOTE: FOLLOWING SOIL TEST RECOMMENDATIONS IS PREFERRED TO FERTILIZER RATES SHOWN ABOVE.

MAINTENANCE OF PERMANENT SEEDING

(S)

PERMANENT SEEDING

SEED MIX	SEEDING RATE LB./AC.	SEEDING RATE LB./1,000 FT.²	NOTES:
GENERAL USE			
CREEPING RED FESCUE	20-40	1/2-1	
DOMESTIC RYEGRASS	10-20	1/4-1/2	
KENTUCKY BLUEGRASS	10-20	1/4-1/2	
TALL FESCUE	40	1	
DWARF FESCUE	40	1	
STEEP BANKS OR CUT SLOPES			
TALL FESCUE	40	1	
CROWN VETCH	10	1/4	DO NOT SEED LATER THAN AUGUST.
TALL FESCUE	20	1/2	
FLAT PEA	20	1/2	DO NOT SEED LATER THAN AUGUST.
TALL FESCUE	20	1/2	
ROAD DITCHES AND SWALES			
TALL FESCUE	40	1	
DWARF FESCUE	90	2 1/4	
KENTUCKY BLUEGRASS	5		
LAWNS			
KENTUCKY BLUEGRASS	60	1 1/2	
PERENNIAL RYEGRASS	60	1 1/2	
KENTUCKY BLUEGRASS	60	1 1/2	FOR SHADED AREAS.
CREEPING RED FESCUE	60	1 1/2	

NOTE: OTHER APPROVED SEED SPECIES MAY BE SUBSTITUTED.

PERMANENT SEEDING

(S)

TEMPORARY SEEDING SPECIES SELECTION

SEEDING DATES	SPECIES	LB./1,000 FT.²	PER ACRE
MARCH 1 TO AUGUST 15	OATS	3	4 BUSHEL
	TALL FESCUE	1	40 LB.
	ANNUAL RYEGRASS	1	40 LB.
	PERENNIAL RYGRASS	1	40 LB.
	TALL FESCUE	1	40 LB.
	ANNUAL RYEGRASS	1	40 LB.
AUGUST 16 TO NOVEMBER 1	RYE	3	2 BUSHEL
	TALL FESCUE	1	40 LB.
	ANNUAL RYEGRASS	1	40 LB.
	WHEAT	3	2 BUSHEL
	TALL FESCUE	1	40 LB.
	ANNUAL RYEGRASS	1	40 LB.
	PERENNIAL RYEGRASS	1	40 LB.
	TALL FESCUE	1	40 LB.
	ANNUAL RYEGRASS	1	40 LB.
NOVEMBER 1 TO SPRING SEEDING	USE MULCH ONLY, SODDING PRACTICES OR DORMANT SEEDING.		

NOTE: OTHER APPROVED SEED SPECIES MAY BE SUBSTITUTED.

1. STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS AND SEDIMENT TRAPS SHALL BE INSTALLED AND STABILIZED WITH TEMPORARY SEEDING PRIOR TO GRADING THE REST OF THE CONSTRUCTION SITE.

2. TEMPORARY SEED SHALL BE APPLIED BETWEEN CONSTRUCTION OPERATIONS ON SOIL THAT WILL NOT BE GRADED OR RE-WORKED FOR 45 DAYS OR MORE. THESE IDLE AREAS SHOULD BE SEEDED AS SOON AS POSSIBLE AFTER GRADING OR SHALL BE SEEDED WITHIN 7 DAYS. SEVERAL APPLICATIONS OF TEMPORARY SEEDING ARE NECESSARY ON TYPICAL CONSTRUCTION PROJECTS.

3. THE SEED BED SHOULD BE PULVERIZED AND LOOSE TO ENSURE THE SUCCESS OF ESTABLISHING VEGETATION. HOWEVER, TEMPORARY SEEDING SHALL NOT BE POSTPONED IF IDEAL SEED BED PREPARATION IS NOT POSSIBLE.

4. SOIL AMENDMENTS - APPLICATIONS OF TEMPORARY VEGETATION SHALL ESTABLISH ADEQUATE STANDS OF VEGETATION WHICH MAY REQUIRE THE USE OF SOIL AMENDMENTS. SOIL TESTS SHOULD BE TAKEN ON THE SITE TO PREDICT THE NEED FOR LIME AND FERTILIZER.

5. SEEDING METHOD - SEED SHALL BE APPLIED UNIFORMLY WITH A CYCLONE SEEDER, DRILL, CULTIPACKER SEEDER, OR HYDROSEEDER. WHEN FEASIBLE, SEED THAT HAS BEEN BROADCAST SHALL BE COVERED BY RAKING OR DRAGGING AND THEN LIGHTLY TAMPED INTO PLACE USING A ROLLER OR OF CULTIPACKER. IF HYDROSEEDING IS USED, THE SEED AND FERTILIZER WILL BE MIXED ON-SITE AND THE SEEDING SHALL BE DONE IMMEDIATELY AND WITHOUT INTERRUPTION.

TEMPORARY SEEDING

(TS)

SPECIFICATIONS FOR SEDIMENT BASINS

(SB)

1. SEDIMENT BASINS SHALL BE CONSTRUCTED AND OPERATIONAL BEFORE UPSLOPE LAND DISTURBANCE BEGINS.

2. SITE PREPARATION -- THE AREA UNDER THE EMBANKMENT SHALL BE CLEARED, GRUBBED, AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED AS NEEDED TO FACILITATE SEDIMENT CLEAN OUT. GULLIES AND SHARP BREAKS SHALL BE SLOPED TO NO STEEPER THAN 1:1. THE SURFACE OF THE FOUNDATION AREA WILL BE THOROUGHLY SCARIFIED BEFORE PLACEMENT OF THE EMBANKMENT MATERIAL.

3. EMBANKMENT -- THE FILL MATERIAL SHALL BE FREE OF ALL SOD, ROOTS, FROZEN SOIL, STONES OVER 6 INCHES IN DIAMETER, AND OTHER OBJECTIONABLE MATERIAL. THE PLACING AND SPREADING OF THE FILL MATERIAL SHALL BE STARTED AT THE LOWEST POINT OF THE FOUNDATION AND THE FILL SHALL BE BROUGHT UP IN APPROXIMATELY 6 INCH HORIZONTAL LAYERS OR OF SUCH THICKNESS THAT THE REQUIRED COMPACTION CAN BE OBTAINED WITH THE EQUIPMENT USED. CONSTRUCTION EQUIPMENT SHALL BE OPERATED OVER EACH LAYER IN A WAY THAT WILL RESULT IN THE REQUIRED COMPACTION. SPECIAL EQUIPMENT SHALL BE USED WHEN THE REQUIRED COMPACTION CANNOT BE OBTAINED WITHOUT IT. THE MOISTURE CONTENT OF FILL MATERIAL SHALL BE SUCH THAT THE REQUIRED DEGREE OF COMPACTION CAN BE OBTAINED WITH THE EQUIPMENT USED.

4. PIPE SPILLWAY -- THE PIPE CONDUIT BARREL SHALL BE PLACED ON A FIRM FOUNDATION TO THE LINES AND GRADES SHOWN ON THE PLANS, CONNECTIONS BETWEEN THE RISER AND BARREL, THE HEADWALL CONNECTIONS AND BARREL AND ALL PIPE JOINTS SHALL BE WATERTIGHT. SELECTED BACK FILL MATERIAL SHALL BE PLACED AROUND THE CONDUIT IN LAYERS AND EACH LAYER SHALL BE COMPACTED TO AT LEAST THE SAME DENSITY AS THE ADJACENT EMBANKMENT. ALL COMPACTING WITHIN 2 FT. OF THE PIPE SPILLWAY WILL BE ACCOMPLISHED WITH HAND OPERATED TAMPING EQUIPMENT.

5. TEMPORARY OUTLET PROTECTION -- THE OUTLET PIPE OPENING SHALL BE BLOCKED BY HAL BALES, SILT FENCE AND/OR DUMPED ROCK FILL. A COMBINATION OF THESE STRUCTURES MAY BE USED TO FILTER AND CONSTRICT THE FLOW DURING CONSTRUCTION.

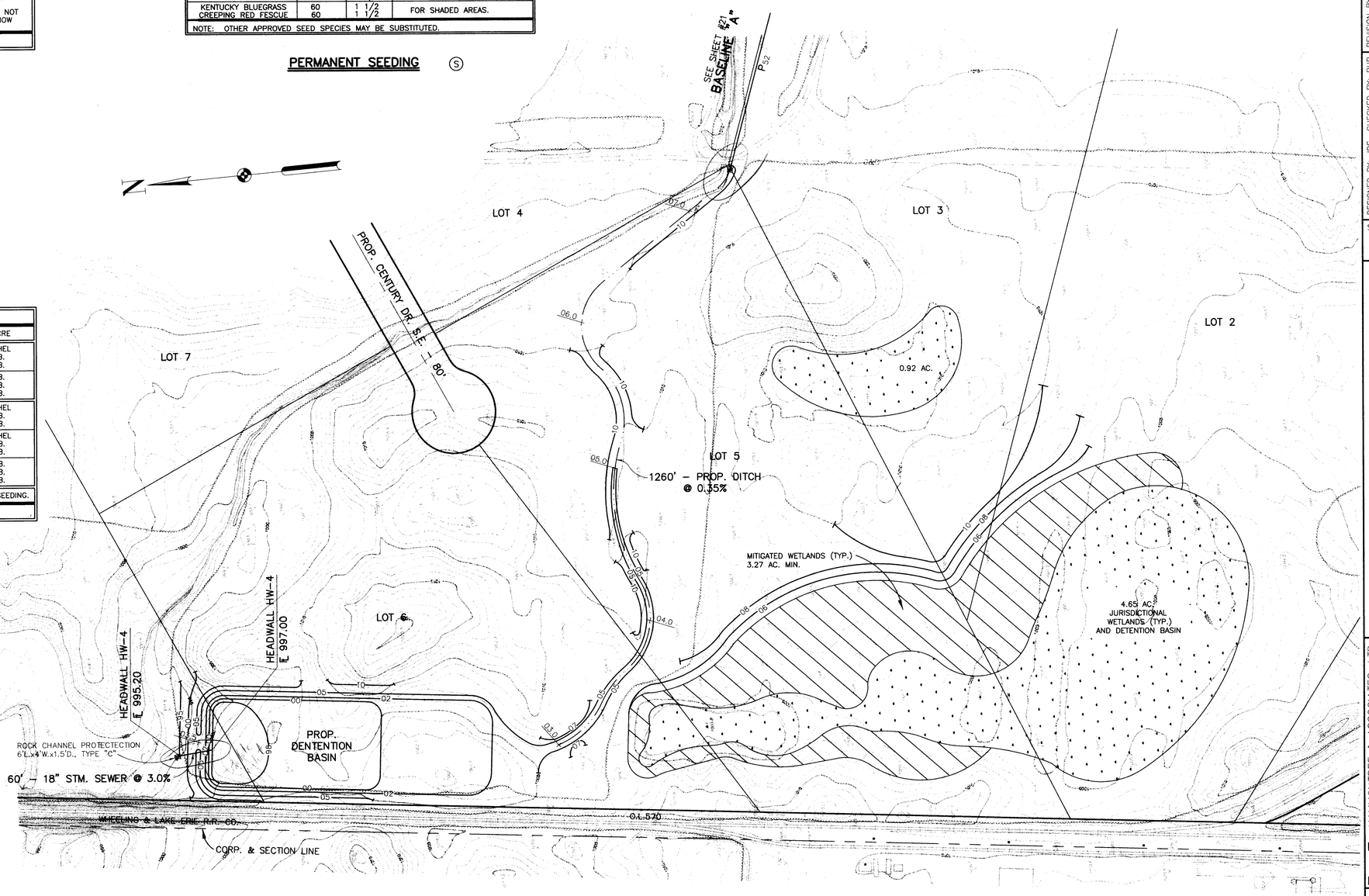
6. TRASH RACKS -- BOTH THE TOP OF THE RISER AND THE DEWATERING ORIFICE SHALL BE FITTED WITH TRASH RACKS FIRMLY FASTENED TO THE RISER PIPE.

7. EMERGENCY SPILLWAY -- ACCURATE CONSTRUCTION OF THE SPILLWAY ELEVATION AND WIDTH IS CRITICAL AND SHALL BE WITHIN A TOLERANCE OF 0.2 FT.

8. SEED AND MULCH -- THE SEDIMENT BASIN SHALL BE STABILIZED IMMEDIATELY FOLLOWING ITS CONSTRUCTION. IN NO CASE SHALL THE EMBANKMENT OR THE EMERGENCY SPILLWAY REMAIN BARE FOR MORE THAN 7 DAYS.

9. SEDIMENT CLEANOUT -- SEDIMENT SHALL BE REMOVED AND THE SEDIMENT BASIN RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS FILLED ONE HALF THE POND'S ORIGINAL DEPTH OR AS INDICATED ON THE PLANS. SEDIMENT REMOVED FROM THE BASIN SHALL BE PLACED SO THAT IT WILL NOT ERODE.

10. FINAL REMOVAL - TEMPORARY MEASURES FOR SEDIMENT BASINS SHALL BE REMOVED AFTER THE UPSTREAM DRAINAGE AREA IS STABILIZED OR AS INDICATED IN THE PLANS. DEWATERING AND REMOVAL SHALL NOT CAUSE SEDIMENT TO BE DISCHARGED. THE SEDIMENT BASIN SITE AND SEDIMENT REMOVED FROM THE BASIN SHALL BE STABILIZED.



REVISION BY: ____ DATE: ____ DESCRIPTION: ____
REVISION BY: ____ DATE: ____ DESCRIPTION: ____
REVISION BY: ____ DATE: ____ DESCRIPTION: ____
REVISION BY: ____ DATE: ____ DESCRIPTION: ____
REVISION BY: ____ DATE: ____ DESCRIPTION: ____

DESIGNED BY: JDS CHECKED BY: BHB
DRAWN BY: DTM REVIEWED BY: BHB
F.B. ____ PAGE: ____
COPYRIGHT: 1999 DATE: 3/25/99
J:\DWG\MASNEO\DLUL_SWPP2

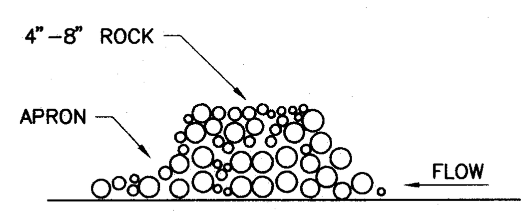
SCALE: 1"=100'

STORMWATER POLLUTION PREVENTION DETAILS
NORTH DETENTION BASIN

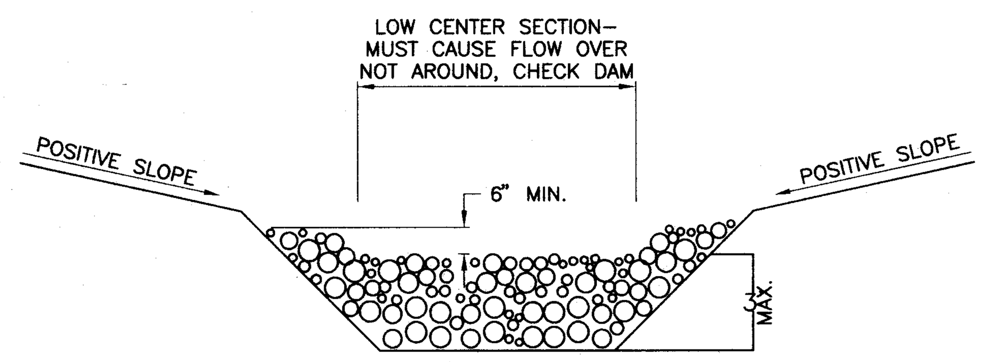
NEOCOM I INDUSTRIAL PARK - NO. 1

PART OF O.L. 569 IN THE CITY OF MASSILLON, STARK COUNTY, OHIO

HAMMONTREE & ASSOCIATES, LTD.
ENGINEERS, PLANNERS, SURVEYORS
CANTON ORLANDO PITTSBURGH AKRON
5233 STONEHAM ROAD, NORTH CANTON, OHIO 44720
PHONE: CANTON:(330)499-8817 AKRON:(330)633-7274
TOLL FREE: 1-800-394-8817 FAX: (330)499-0149



PROFILE

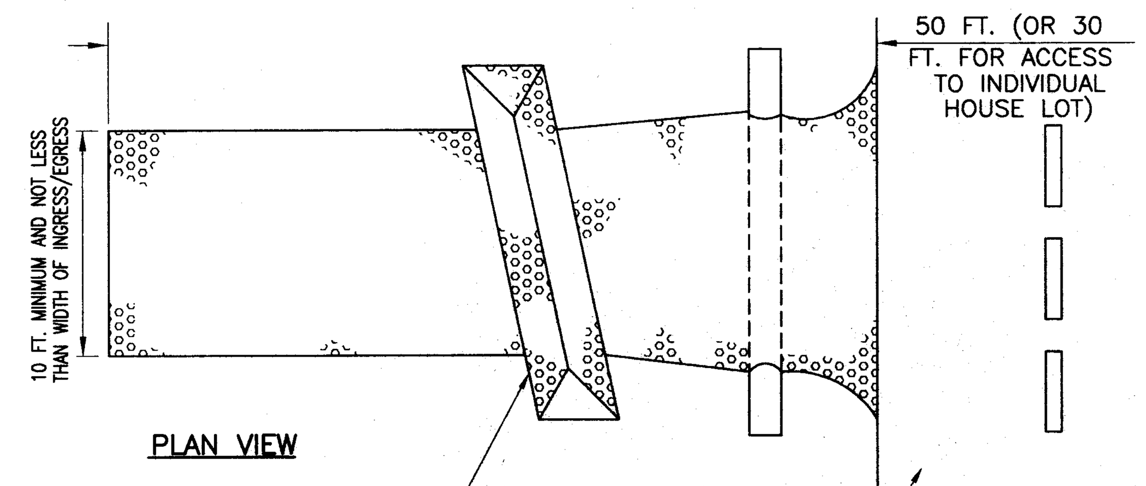


CROSS SECTION

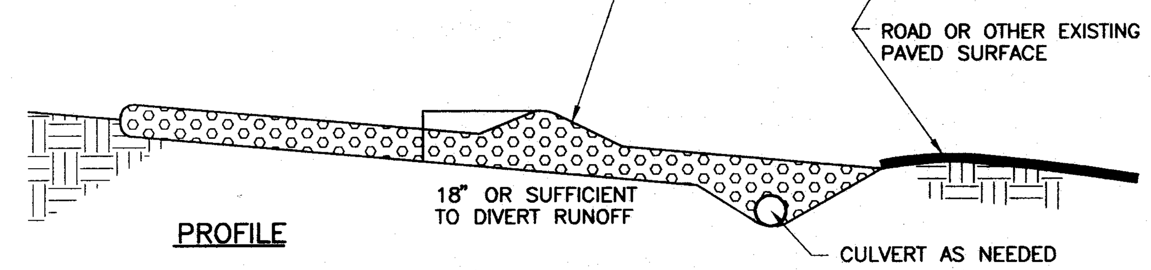
1. THE CHECK DAM SHALL BE CONSTRUCTED OF 4 IN. TO 8 IN. DIAMETER STONE, PLACED SO THAT IT COMPLETELY COVERS THE WIDTH OF THE CHANNEL.
2. THE TOP OF THE CHECK DAM SHALL BE CONSTRUCTED SO THAT THE CENTER IS APPROXIMATELY 6 IN. LOWER THAN THE OUTER EDGES, SO WATER WILL FLOW ACROSS THE CENTER AND NOT AROUND THE ENDS.
3. THE MAXIMUM HEIGHT OF THE CHECK DAM AT THE CENTER OF THE WEIR SHALL NOT EXCEED 3 FT.
4. SPACING BETWEEN DAMS SHALL BE AS SHOWN IN THE PLANS OR BY THE FOLLOWING TABLE:

CHECK DAM SPACING				
DAM HEIGHT (FT.)	CHANNEL SLOPE			
	< 5%	5–10%	10–15%	15–20%
1	65 FT.	30 FT.	20 FT.	15 FT.
2	130 FT.	65 FT.	40 FT.	30 FT.
3	200 FT.	100 FT.	65 FT.	50 FT.

CHECK DAM (CD)



PLAN VIEW

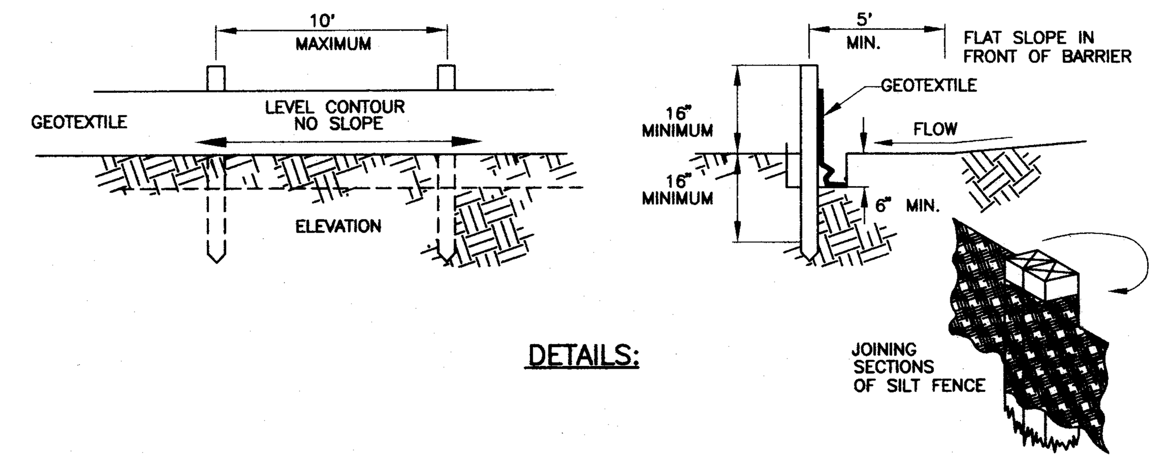


PROFILE

1. STONE SIZE – TWO-INCH STONE SHALL BE USED, OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH – THE CONSTRUCTION ENTRANCE SHALL BE AS LONG AS REQUIRED TO STABILIZE HIGH TRAFFIC AREAS BUT NOT LESS THAN 50 FT. (EXCEPT ON SINGLE RESIDENCE LOT WHERE A 30-FT. MINIMUM LENGTH APPLIES.
3. THICKNESS – THE STONE LAYER SHALL BE AT LEAST 6 IN. THICK.
4. WIDTH – THE ENTRANCE SHALL BE AT LEAST 10 FT. WIDE, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. BEDDING – A GEOTEXTILE SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE. IT SHALL HAVE A GRAB TENSILE STRENGTH OF AT LEAST 200 LB. AND A MULLEN BURST STRENGTH OF AT LEAST 190 LB.
6. CULVERT – A PIPE OR CULVERT SHALL BE CONSTRUCTED UNDER THE ENTRANCE IF NEEDED TO PREVENT SURFACE WATER FLOWING ACROSS THE ENTRANCE FROM BEING DIRECTED OUT ONTO PAVED SURFACES.
7. WATER BAR – A WATER BAR SHALL BE CONSTRUCTED AS PART OF THE CONSTRUCTION ENTRANCE IF NEEDED TO PREVENT SURFACE RUNOFF FROM FLOWING THE LENGTH OF THE CONSTRUCTION ENTRANCE AND OUT ONTO PAVED SURFACES.
8. MAINTENANCE – TOP DRESSING OF ADDITIONAL STONE WALL SHALL BE APPLIED AS CONDITIONS DEMAND. MUD SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADS, OR ANY SURFACE WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS, SHALL BE REMOVED IMMEDIATELY. REMOVAL SHALL BE ACCOMPLISHED BY SCRAPING OR SWEEPING.
9. CONSTRUCTION ENTRANCES SHALL NOT BE RELIED UPON TO REMOVE MUD FROM VEHICLES AND PREVENT OFF-SITE TRACKING. VEHICLES THAT ENTER AND LEAVE THE CONSTRUCTION SITE SHALL BE RESTRICTED FROM MUDDY AREAS.

CONSTRUCTION ENTRANCE (RCE)

N.T.S.



DETAILS:

NOTES:

1. SILT FENCE SHALL BE CONSTRUCTED BEFORE UPSLOPE LAND DISTRUBANCE BEGINS.
2. ALL SILT FENCE SHALL BE PLACED AS CLOSE TO THE CONTOUR AS POSSIBLE SO THAT WATER WILL NOT CONCENTRATE AT LOW POINTS IN THE FENCE AND SO THAT SMALL SWALES OR DEPRESSIONS WHICH MAY CARRY SMALL CONCENTRATED FLOWS TO THE SILT FENCE ARE DISSIPATED ALONG ITS LENGTH.
3. TO PREVENT WATER PONDED BY THE SILT FENCE FROM FLOWING AROUND THE ENDS, EACH END SHALL BE CONSTRUCTED UPSLOPE SO THAT THE ENDS ARE AT A HIGHER ELEVATION.
4. WHERE POSSIBLE, SILT FENCE SHALL BE PLACED ON THE FLATTEST AREA AVAILABLE.
5. WHERE POSSIBLE, VEGETATION SHALL BE PRESERVED FOR 5 ft. (OR AS MUCH AS POSSIBLE) UPSLOPE FROM THE SILT FENCE. IF VEGETATION IS REMOVED, IT SHALL BE RE-ESTABLISHED WITHIN 7 DAYS FROM THE INSTALLATION OF THE FENCE.
6. SOIL STOCKPILES OR OTHER SOURCES OF SEDIMENT SHALL HAVE SILT FENCE PROTECTION.
7. THE SILT FENCE SHALL BE PLACED IN A TRENCH CUT A MINIMUM OF 6" DEEP. THE TRENCH SHALL BE CUT WITH A TRENCHER, CABLE LAYING MACHINE, OR OTHER SUITABLE DEVICE WHICH WILL ENSURE AN ADEQUATELY UNIFORM TRENCH DEPTH.
8. THE SILT FENCE SHALL BE PLACED WITH THE STAKES ON THE DOWNSLOPE SIDE OF THE GEOTEXTILE AND SO THAT 8" OF CLOTH ARE BELOW THE GROUND SURFACE. EXCESS MATERIAL SHALL LAY ON THE BOTTOM OF THE 6" DEEP TRENCH. THE TRENCH SHALL BE BACKFILLED AND COMPACTED.
9. SEAMS BETWEEN SECTION OF SILT FENCE SHALL BE OVERLAPPED WITH THE END STAKES OF EACH SECTION WRAPPED TOGETHER BEFORE DRIVING INTO THE GROUND.
10. MAINTENANCE-- SILT FENCE SHALL ALLOW RUNOFF TO PASS ONLY AS DIFFUSE FLOW THROUGH THE GEOTEXTILE. IF RUNOFF OVERTOPS THE SILT FENCE, FLOWS UNDER OR AROUND THE ENDS, OR IN ANY OTHER WAY BECOMES A CONCENTRATED FLOW, ONE OF THE FOLLOWING SHALL BE PERFORMED, AS APPROPRIATE:
1) THE LAYOUT OF THE SILT FENCE SHALL BE CHANGED,
2) ACCUMULATED SEDIMENT SHALL BE REMOVED,
3) OTHER PRACTICES SHALL BE INSTALLED.

CRITERIA FOR SILT FENCE MATERIALS

1. FENCE POSTS – THE LENGTH SHALL BE A MINIMUM OF 32" LONG. WOOD POST WILL BE 2" X 2" HARDWOOD OF SOUND QUALITY. THE MAXIMUM SPACING BETWEEN POSTS SHALL BE 10 FT.
2. SILT FENCE FABRIC (SEE CHART BELOW):

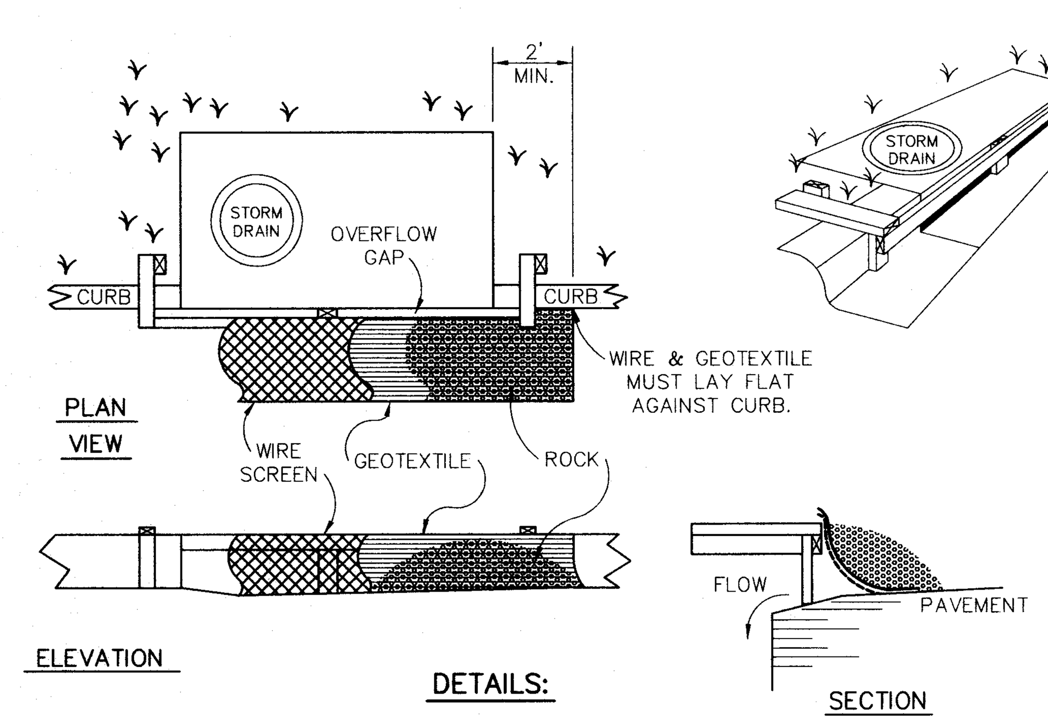
FABRIC PROPERTIES	VALUES	TEST METHOD
GRAB TENSILE STRENGTH	90 LB. MINIMUM	ASTM D 1682
MULLEN BURST STRENGTH	190 P.S.I. MINIMUM	ASTM D 3786
SLURRY FLOW RATE	0.3 GAL./MIN./FT.^{2} MAXIMUM	
EQUIVALENT OPENING SIZE	40–80	US STD. SIEVE CW-02215
ULTRAVIOLET RADIATION STABILITY	90% MINIMUM	ASTM-G-26

SILT FENCE (SF)

N.T.S.

EROSION CONTROL NOTES

1. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE, OR IN PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
2. SILT FENCES ARE TO BE CONSTRUCTED IN FRONT OF ALL STORM INLETS, HEADWALLS AND PIPE OUTLETS.
3. SILT FENCES ARE TO BE CONSTRUCTED ON THE OUTSIDE OF ALL FILL AREAS. AFTER 15 DAYS, TEMPORARY SEEDING WILL BE REQUIRED ON ALL FILL AREAS.
4. TEMPORARY SEEDING SHALL CONSIST OF 3-5 POUNDS OF RYE GRASS PER 1000 SQUARE FEET.
5. TOPSOIL STOCKPILES TO BE ENCIRCLED BY SILT FENCE AND/OR TEMPORARY SEEDING.
6. OTHER EROSION CONTROL ITEMS MAY BE NECESSARY DUE TO ENVIRONMENTAL CONDITIONS.
7. REGULAR INSPECTION AND MAINTENANCE OF ALL EROSION CONTROL MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. A COPY OF THE SOIL EROSION CONTROL PLAN SHOULD BE KEPT AT THE CONSTRUCTION SITE AT ALL TIMES.
8. ALL EROSION CONTROL PRACTICES MUST MEET THE STANDARDS AND SPECIFICATIONS OF THE OHIO DEPARTMENT OF NATURAL RESOURCES, RAINWATER AND LAND DEVELOPMENT MANUAL, SECOND EDITION, 1996.
9. AT THE END OF EACH DAY THE CONTRACTOR SHALL CLEAN EXISTING ROADWAYS OF MATERIALS (SOIL, MUD ETC.) WHICH WERE DEPOSITED DUE TO THE CONSTRUCTION OF THE PROJECT. A STABILIZED PAD OF CRUSHED STONE SHALL BE LOCATED AT ALL POINTS WHERE TRAFFIC ENTERS AND LEAVES THE CONSTRUCTION SITE.
10. RUNOFF WATER CARRYING SEDIMENT SHALL NOT BE PERMITTED TO FLOW ON TO ANY ADJACENT PROPERTIES OR ON TO ADJACENT PUBLIC RIGHT OF WAYS. ALL OFF SITE AND ON SITE EROSION AND SEDIMENT DAMAGE SHALL BE THE TOTAL RESPONSIBILITY OF THE GENERAL CONTRACTOR, AND SHALL BE CORRECTED IMMEDIATELY.
11. CONTRACTOR TO INSTALL FILTER FABRIC FENCE AT VARIOUS LOCATIONS ON THE PROPERTY AS SHOWN ON STORMWATER POLLUTION PREVENTION PLAN.
12. SOIL EROSION CONTROL STRUCTURES SHALL BE INSPECTED ONCE EVERY 7 DAYS AND WITHIN 24 HOURS OF A 1/2" OR GREATER RAINFALL. THE CONTRACTOR SHALL KEEP A WRITTEN LOG OF ALL INSPECTIONS AND DOCUMENT CORRECTIVE ACTIONS.
13. DISTURBED AREAS WHICH WILL REMAIN UNWORKED FOR A PERIOD OF 45 DAYS OR MORE SHALL BE STABILIZED WITH SEEDING AND MULCHING OR OTHER APPROPRIATE MEANS WITHIN 7 DAYS.
14. EROSION CONTROL BLANKETS WITH MATTING WILL BE USED ON DITCHES GREATER THAN 1.5%.
15. NO SOLID OR LIQUID WASTE SHALL BE DISCHARGED INTO STORM WATER RUNOFF.
16. BUILDER IS RESPONSIBLE FOR EROSION CONTROL ON INDIVIDUAL LOTS. BUILDER TO FILE INDIVIDUAL LOT NOTICE OF INTENT (NOI) WITH OHIO EPA.
17. THE DETENTION BASINS ON LOT 1 AND NORTH OF THE WETLANDS SHALL BE USED AS A SILT BASIN DURING CONSTRUCTION. CONTRACTOR MAY OVER EXCAVATE BOTTOM OF BASIN. THE ALTERNATIVE IS TO REMOVE THE SILT AT THE END OF CONSTRUCTION TO MAINTAIN THE BOTTOM OF BASIN ELEVATIONS AS SHOWN ON THE PLANS.

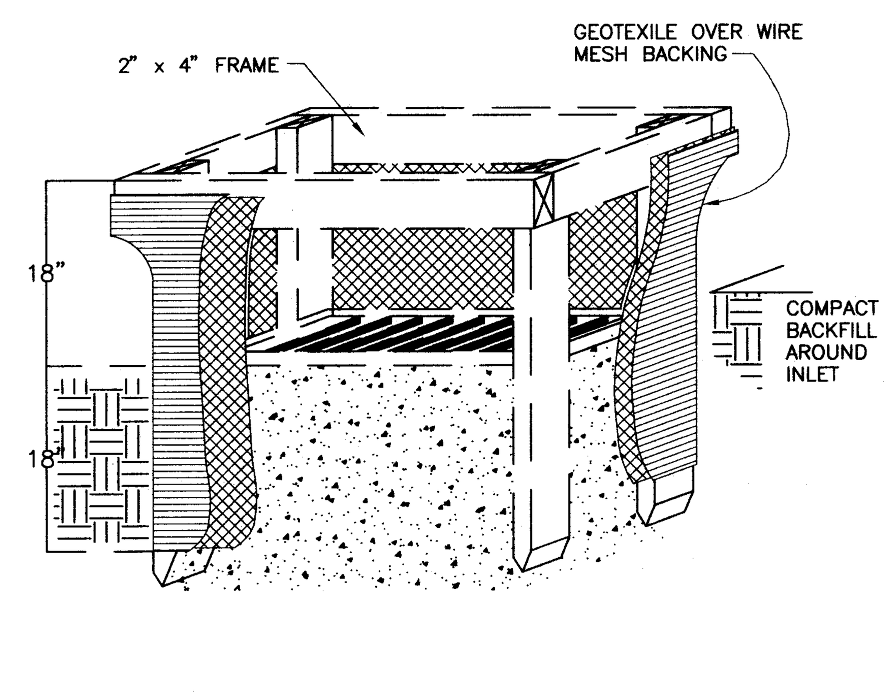


DETAILS:

NOTES:

1. INLET PROTECTION SHALL BE CONSTRUCTED EITHER BEFORE UPSLOPE LAND DISTURBANCE BEGINS OR BEFORE THE STORM DRAIN BECOMES OPERATIONAL.
2. THE WOODEN FRAME IS TO BE CONSTRUCTED OF 2-BY-4 IN. CONSTRUCTION-GRADE LUMBER. THE END SPACERS SHALL BE A MINIMUM OF 1 FT. BEYOND BOTH ENDS OF THE THROAT OPENING. THE ANCHORS SHALL BE NAILED TO 2-BY-4 IN. STAKES DRIVEN ON THE OPPOSITE SIDE OF THE CURB.
3. THE WIRE MESH SHALL BE OF SUFFICIENT STRENGTH TO SUPPORT FABRIC AND STONE. IT SHALL BE A CONTINUOUS PIECE WITH A MINIMUM WIDTH OF 30 IN. AND 4 FT. LONGER THAN THE THROAT LENGTH OF THE INLET, 2 FT. ON EACH SIDE.
4. GEOTEXILE CLOTH SHALL HAVE AN EQUIVALENT OPENING SIZE (EOS) OF 20-40 SIEVE AND BE RESISTANT TO SUNLIGHT. IT SHALL BE AT LEAST THE SAME SIZE AS THE WIRE MESH.
5. THE WIRE MESH AND GEOTEXTILE CLOTH SHALL BE FORMED TO THE CONCRETE GUTTER AND AGAINST THE FACE OF THE CURB ON BOTH SIDES OF THE INLET AND SECURELY FASTENED TO THE 2-BY-4 IN. FRAME.
6. TWO-INCH STONE SHALL BE PLACED OVER THE WIRE MESH AND GEOTEXTILE IN SUCH A MANNER AS TO PREVENT WATER FROM ENTERING THE INLET UNDER OR AROUND THE GEOTEXTILE CLOTH.

CURB INLET PROTECTION (CIP)

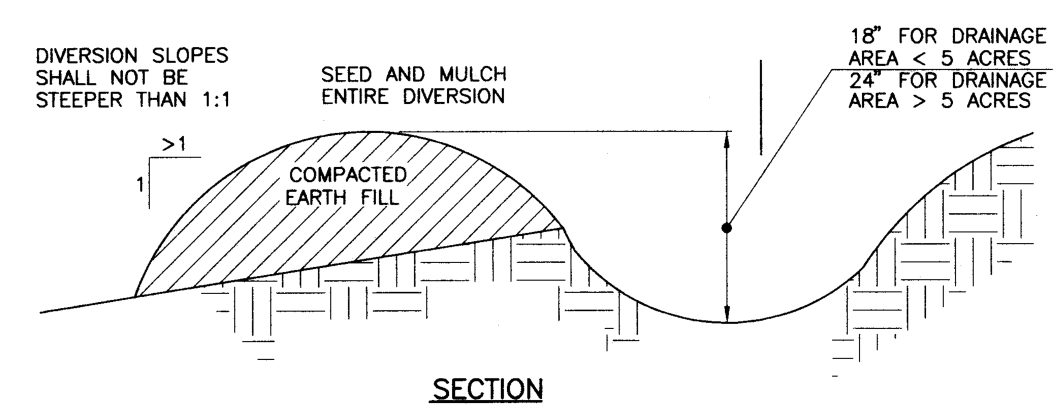


1. INLET PROTECTION SHALL BE CONSTRUCTED EITHER BEFORE UPSLOPE LAND DISTURBANCE BEGINS OR BEFORE THE STORM DRAIN BECOMES OPERATIONAL.
2. THE EARTH AROUND THE INLET SHALL BE EXCAVATED COMPLETELY TO A DEPTH AT LEAST 18 IN.
3. THE WOODEN FRAME SHALL BE CONSTRUCTED OF 2 IN BY 4 IN. CONSTRUCTION GRADE LUMBER. THE 2 IN. BY 4 IN. POSTS SHALL BE DRIVEN 18 IN. INTO THE GROUND AT FOUR CORNERS OF THE INLET AND THE TOP PORTION OF 2 IN. BY 4 IN. FRAME ASSEMBLED USING THE OVERLAP JOINT SHOWN. THE TOP OF THE FRAME SHALL BE AT LEAST 6 IN. BELOW ADJACENT ROADS IF PONDED WATER WOULD POSE A SAFETY HAZARD TO TRAFFIC.
4. WIRE MESH SHALL BE OF SUFFICIENT STRENGTH TO SUPPORT FABRIC WITH WATER FULLY IMPOUNDED AGAINST IT. IT SHALL BE STRETCHED TIGHTLY AROUND THE FRAME AND FASTENED SECURELY TO THE FRAME.
5. GEOTEXTILE SHALL HAVE AN EQUIVALENT OPENING SIZE OF 20 – 40 SIEVE AND BE RESISTANT TO SUNLIGHT. IT SHALL BE STRETCHED TIGHTLY AROUND THE FRAME AND FASTENED SECURELY. IT SHALL EXTEND FROM THE TOP OF THE FRAME TO 18 IN. BELOW THE INLET NOTCH ELEVATION. THE GEOTEXTILE SHALL OVERLAP ACROSS ON SIDE OF THE INLET SO THE ENDS OF THE CLOTH ARE NOT FASTENED TO THE SAME POST.
6. BACKFILL SHALL BE PLACED AROUND THE INLET IN COMPACTED 6 IN. LAYERS UNTIL THE EARTH IS EVEN WITH NOTCH ELEVATION ON ENDS AND TOP ELEVATION ON SIDES.
7. A COMPACTED EARTH DIKE OR A CHECK DAM SHALL BE CONSTRUCTED IN THE DITCH LINE BELOW THE INLET IF THE INLET IS NOT IN A DEPRESSION AND IF RUNOFF BYPASSING THE INLET WILL NOT FLOW TO A SETTLING POND. THE TOP OF EARTH DIKES SHALL BE AT LEAST 6 IN. HIGHER THAN THE TOP OF THE FRAME.

INLET PROTECTION IN SWALES, DITCH LINES OR YARD INLETS

N.T.S.

(IP)



SECTION

1. DIVERSION SHALL BE COMPACTED BY TRAVERSING WITH TRACHED EARTH-MOVING EQUIPMENT.
2. DIVERSIONS SHALL NOT BE BREACHED OR LOWERED TO ALLOW CONSTRUCTION TRAFFIC TO CROSS; INSTEAD THE TOP WIDTH MAY BE MADE WIDER AND SIDE SLOPES MADE FLATTER THAN SPECIFIED ABOVE.
3. DIVERSIONS SHALL BE STABILIZED WITH VEGETATION AND CHECK DAMS OR THE FOLLOWING TREATMENTS.

TEMPORARY DIVERSION STABILIZATION TREATMENT			
DIVERSION SLOPE	< 2 ACRES	2-5 ACRES	5-10 ACRES
0-3%	SEED AND STRAW	SEED AND STRAW	SEED AND STRAW
3-5%	SEED AND STRAW	SEED AND STRAW	MATTING
5-8%	SEED AND STRAW	MATTING	MATTING
8-20%	SEED AND STRAW	MATTING	ENGINEERED

NOTE: DIVERSIONS WITH STEEPER SLOPES OR GREATER DRAINAGE AREAS ARE BEYOND THE SCOPE OF THIS STANDARD AND MUST BE DESIGNED FOR STABILITY.
SEED, STRAW AND MATTING USED SHALL MEET THE SPECIFICATIONS FOR TEMPORARY SEEDING, MULCHING AND MATTING.

TEMPORARY DIVERSION (TD)

N.T.S.

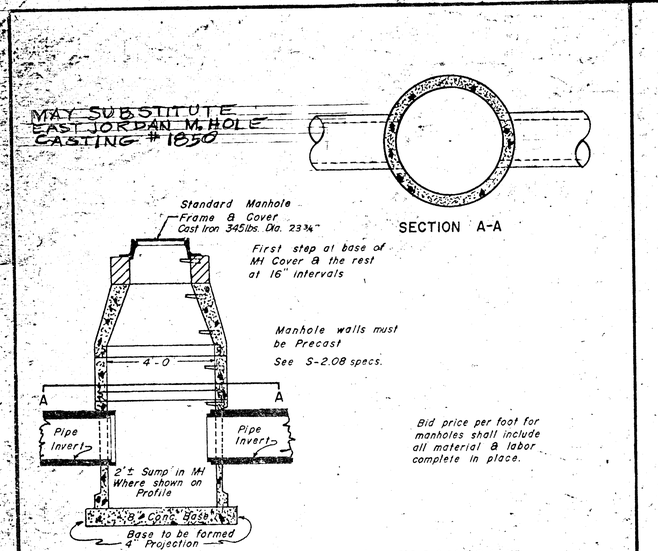
REVISION BY:____ DATE:____ DESCRIPTION:____
REVISION BY:____ DATE:____ DESCRIPTION:____
REVISION BY:____ DATE:____ DESCRIPTION:____
REVISION BY:____ DATE:____ DESCRIPTION:____
REVISION BY:____ DATE:____ DESCRIPTION:____

DESIGNED BY: MLD CHECKED BY: BHB
DRAWN BY: LJP REVIEWED BY: BHB
F.B.____ PAGE:____
COPYRIGHT: 1999 DATE: 5/13/99
J:\DWG\MASNEOLD\LD_SW3PD

SCALE: 1"=200'

STORMWATER POLLUTION PREVENTION NOTES & DETAILS
NEOCOM I INDUSTRIAL PARK – NO. 1
PART OF O.L. 569 IN THE CITY OF MASSILLON, STARK COUNTY, OHIO

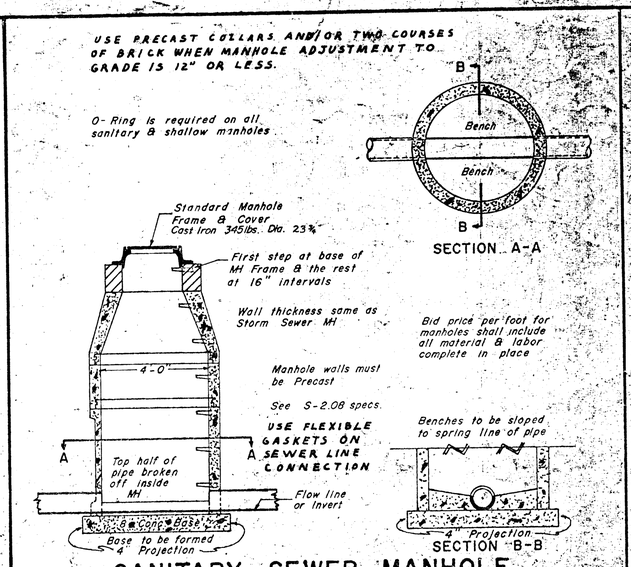
HAMMONTREE & ASSOCIATES, LTD.
ENGINEERS, PLANNERS, SURVEYORS
CANTON ORLANDO PITTSBURGH AKRON
5233 STONEHAM ROAD, NORTH CANTON, OHIO 44720
PHONE: CANTON:(330)/499-8817 AKRON:(330)/633-7274
TOLL FREE: 1-800-394-8817 FAX: (330)/499-0149



Bid price per foot for manholes shall include all material & labor complete in place.

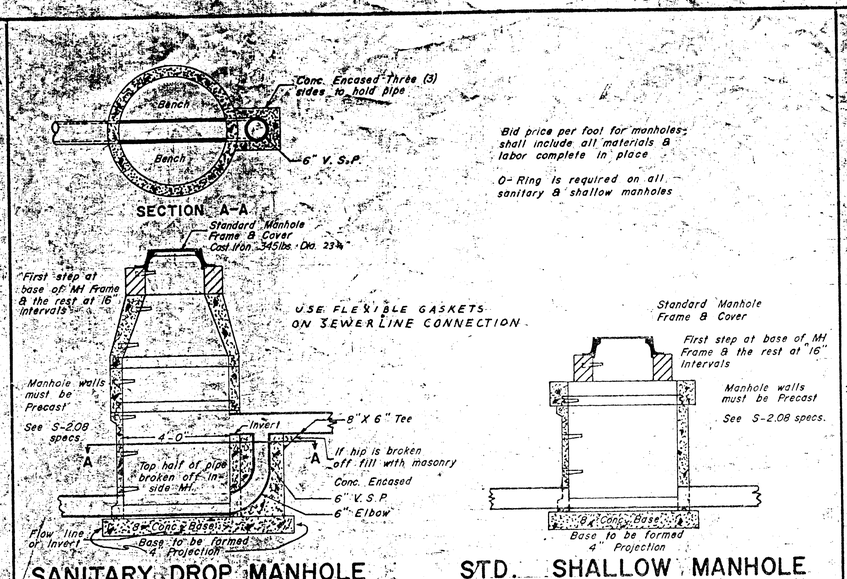
STORM SEWER MANHOLE

CITY OF MASSILLON STANDARD



Bid price per foot for manholes shall include all material & labor complete in place

SANITARY SEWER MANHOLE

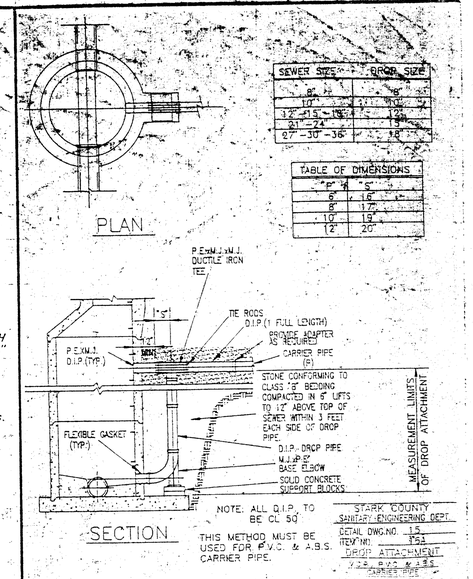


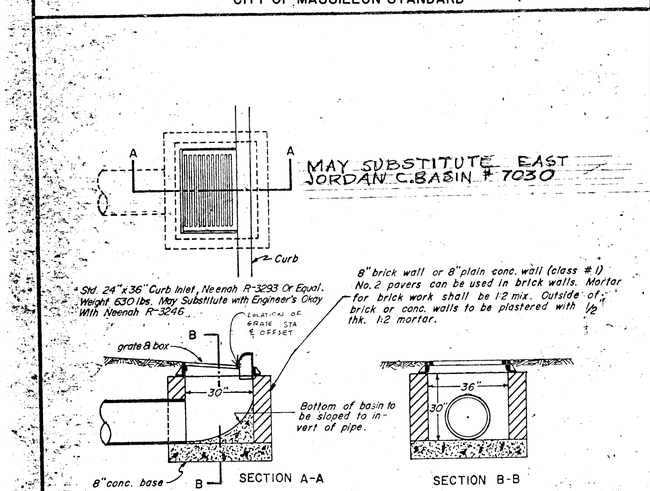
Bid price per foot for manholes shall include all materials & labor complete in place

O-Ring is required on all sanitary & shallow manholes

SANITARY DROP MANHOLE

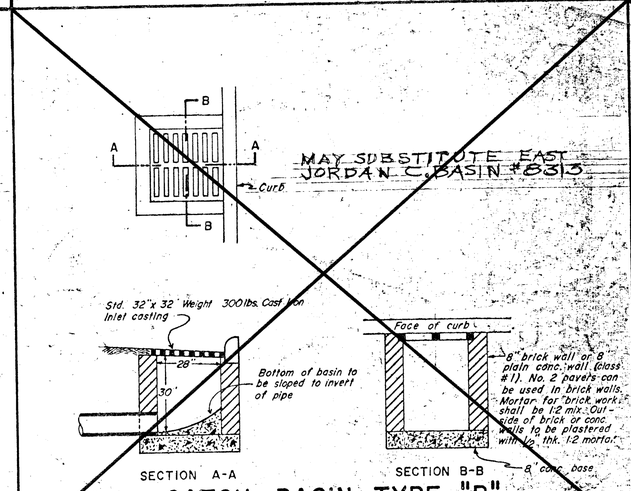
STD. SHALLOW MANHOLE



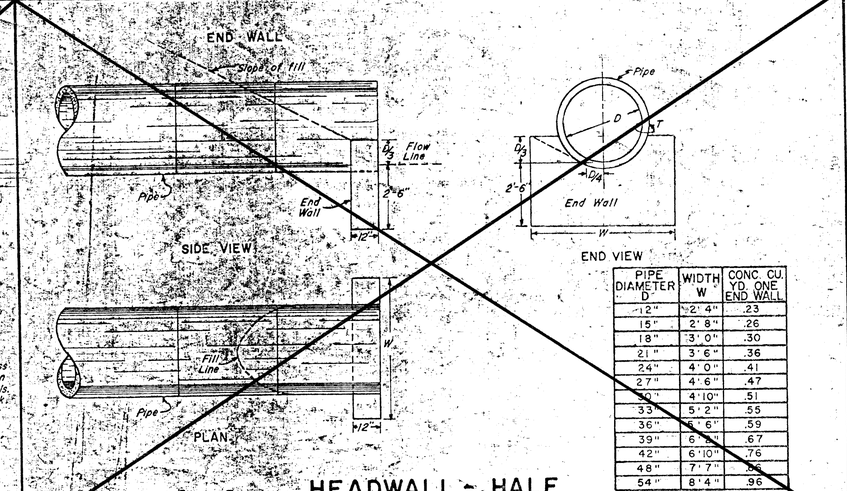


CATCH BASIN TYPE "A"

CITY OF MASSILLON STANDARD



CATCH BASIN TYPE "B"



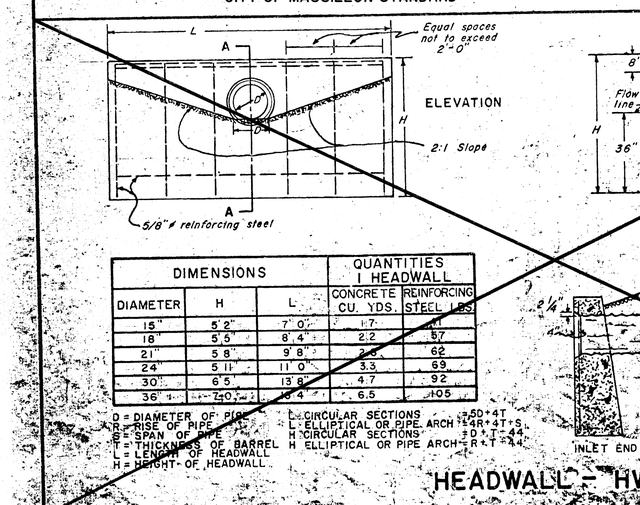
PIPE DIAMETER D	WIDTH W	CONC. CU. YD. ONE END WALL
12"	2' 4"	.23
15"	2' 8"	.26
18"	3' 0"	.30
21"	3' 6"	.36
24"	4' 0"	.41
27"	4' 6"	.47
30"	4' 10"	.51
33"	5' 2"	.55
36"	5' 6"	.59
39"	6' 0"	.67
42"	6' 10"	.76
48"	7' 7"	.85
54"	8' 4"	.96

HEADWALL - HALF

REINFORCING STEEL BARS shall be 5/8 inch round.

FOUNDATION Where the soil borings indicate a bearing capacity of less than 2600 pounds per square foot it will be necessary to increase the width of the footing.

PIPE DIAM D	H	a	b	c	BAR d	L_2	h_2
42"	4'-11"	3'-3"	1'-6"	2'-6"	#5	3'-7"	3'-1"
48"	5'-5"	3'-6"	1'-6"	2'-9"	#5	4'-4"	3'-4"
54"	5'-11"	3'-9"	1'-6"	3'-0"	#6	5'-2"	3'-8"
60"	6'-6"	4'-0"	1'-6"	3'-3"	#5	5'-11"	3'-11"
72"	7'-7"	4'-6"	1'-7"	3'-9"	#7	7'-5"	4'-5"
84"	8'-8"	5'-0"	1'-10"	4'-3"	#8	9'-0"	5'-0"



NOTES

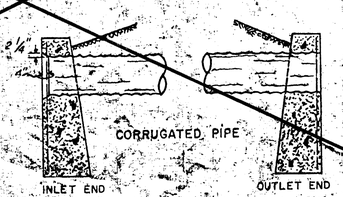
REINFORCING STEEL BARS shall be 5/8 inch round.

FOUNDATION Where the soil borings indicate a bearing capacity of less than 2600 pounds per square foot, it will be necessary to increase the width of the base.

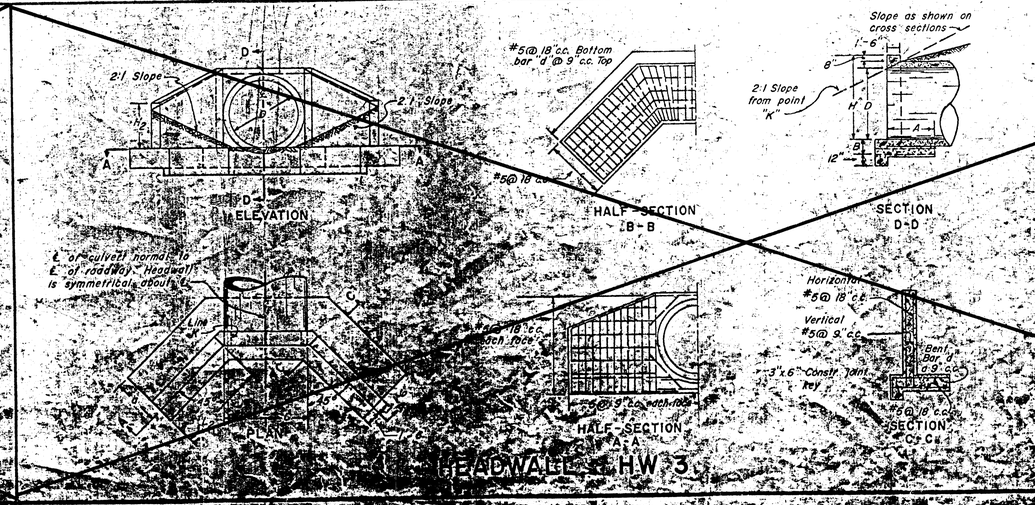
DIMENSIONS			QUANTITIES I HEADWALL	
DIAMETER	H	L	CONCRETE CU. YDS.	REINFORCING STEEL LBS
15"	5'2"	7'0"	1.7	41
18"	5'5"	8'4"	2.2	57
21"	5'8"	9'8"	2.8	62
24"	5'11"	11'0"	3.3	69
30"	6'5"	13'8"	4.7	92
36"	7'0"	16'4"	6.5	105

D = DIAMETER OF PIPE
R = RISE OF PIPE
S = SPAN OF PIPE
T = THICKNESS OF BARREL
L = LENGTH OF HEADWALL
H = HEIGHT OF HEADWALL

L = CIRCULAR SECTIONS = 5D + 4T
L = ELLIPTICAL OR PIPE ARCH = 4R + 4T + S
H = CIRCULAR SECTIONS = D + T + 4
H = ELLIPTICAL OR PIPE ARCH = R + T + 4



HEADWALL - HW 1



HEADWALL - HW 3

REV. 2-26-97

CITY OF MASSILLON

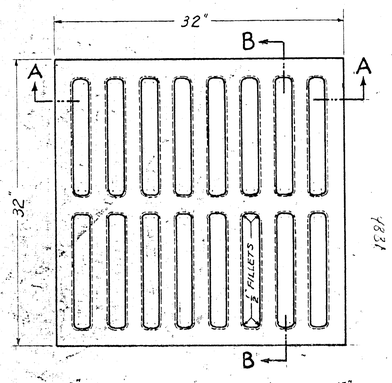
CITY STANDARDS

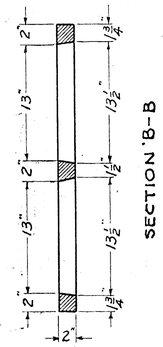
APPROVED BY CITY ENGINEER	DEPT. OF PUBLIC SERVICE ENGINEERING DIVISION
DRN. BY T.L. RIDGLEY DATE 11/24/72	SCALE ⅜" = 1' SHEET 24 OF 28

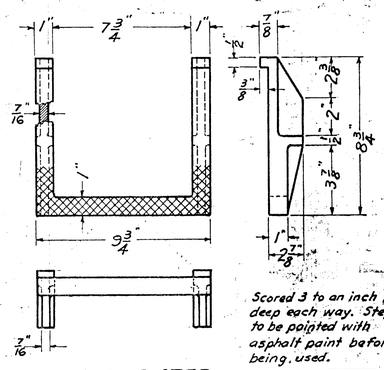
FILE NO. M-581 ACC. NO. 2370

NOTE:

1. Bearing parts of frame & cover shall be machined to provide a firm & even seat for any position of the cover.
2. Material for frame & cover to be of cast iron of good quality - A.S.T.M. class 30 or better.
3. Castings to be free from blowholes or other defects.
4. They shall be cleaned of all scale & grease and receive (2) two coats of bituminous paint.







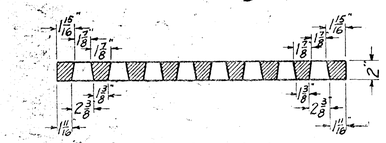
MANHOLE STEP

MATERIAL: CAST IRON

SCALE - 3" = 1'-0"

Scored 3 to an inch 1/16" deep each way. Steps to be painted with asphalt paint before being used.

Manhole steps to be included in bid price per vert. foot of manholes.



SECTION A-A

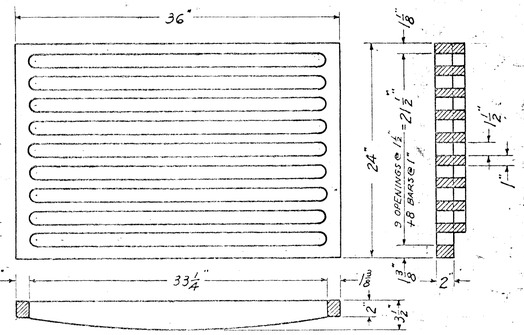
MAY USE NEENAH R-4861 (31"x23") PAGE 216 IN NEENAH AN ALTERNATE R-3246

TYPE "B" INLET

MATERIAL - CAST IRON

WEIGHT - 300 LBS.

SCALE: 1 1/2" = 1'-0"



CURB INLET GRATE

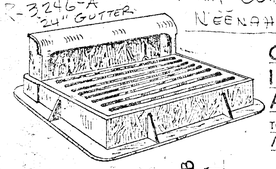
MATERIAL - CAST IRON

WEIGHT -

SCALE: 1 1/2" = 1'-0"

NOTE MAY SUBSTITUTE NEENAH R-3246-36x17 1/2 OPENING

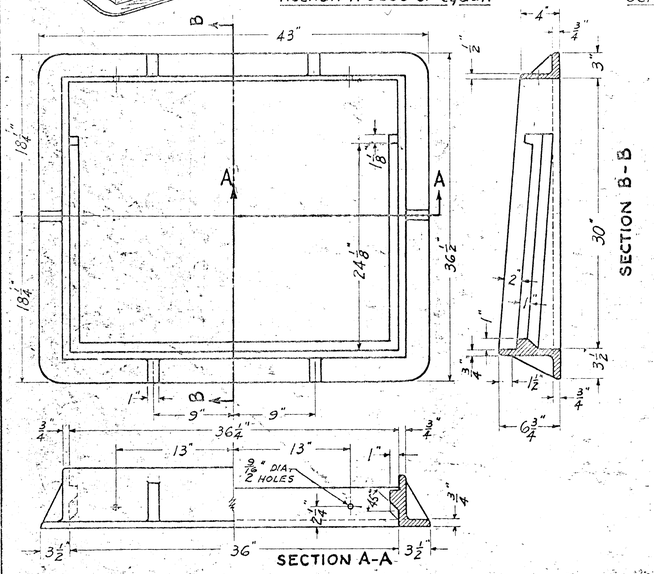
R-3246-A 24" GUTTER



CURB INLET ASSEMBLY

TOTAL WEIGHT - 650 LBS.

Neenah R-3293 or equal.

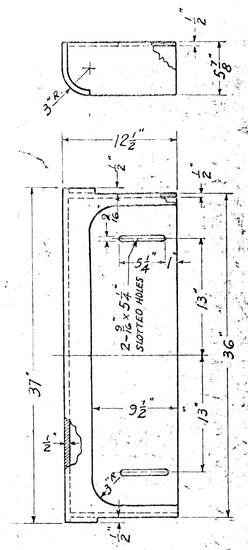


CURB INLET FRAME

MATERIAL - CAST IRON

WEIGHT -

SCALE: 1 1/2" = 1'-0"

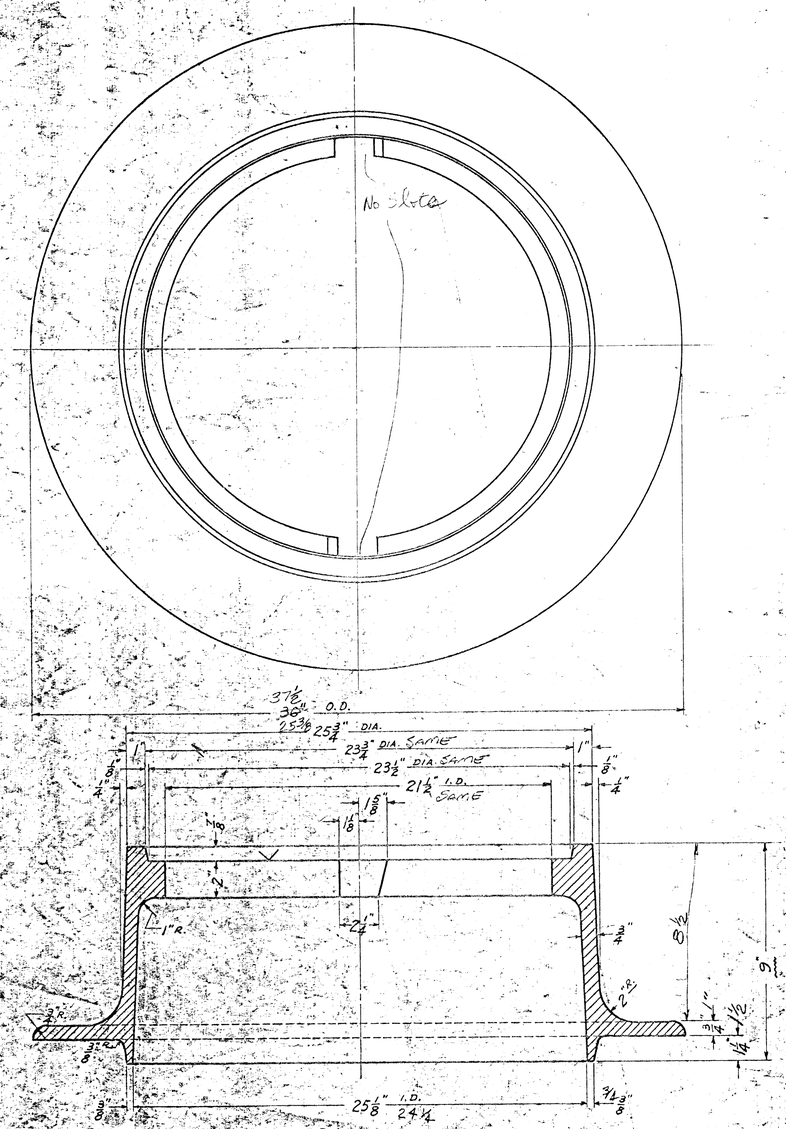


CURB INLET BOX

MATERIAL - CAST IRON

WEIGHT -

SCALE: 1 1/2" = 1'-0"



MANHOLE FRAME

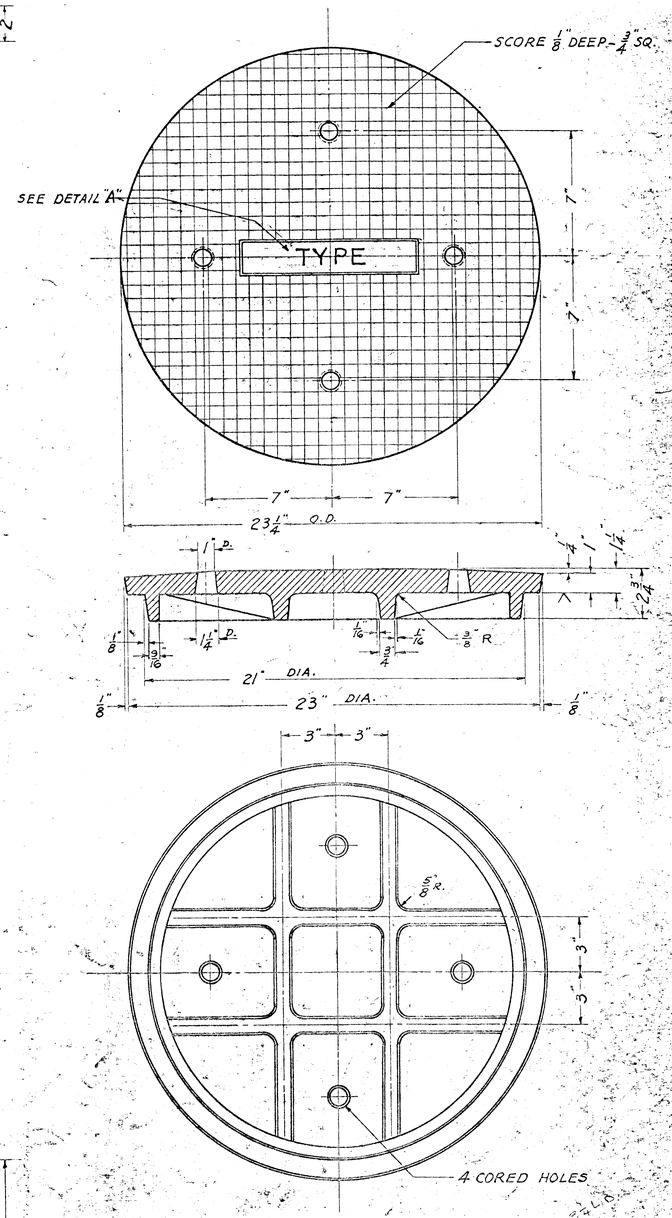
MATERIAL - CAST IRON

WEIGHT - 345 LBS.

SCALE - 3" = 1'-0"

SEE JORDAN 1850 2015 SAN 4 HOLE

SEE NEENAH - R-1789-B TO LIGHT



Sanitary & storm covers & frames identical except for above lettering on plate.

DETAIL "A"

MANHOLE COVER

MATERIAL - CAST IRON

WEIGHT - 154 LBS.

SCALE - 3" = 1'-0"

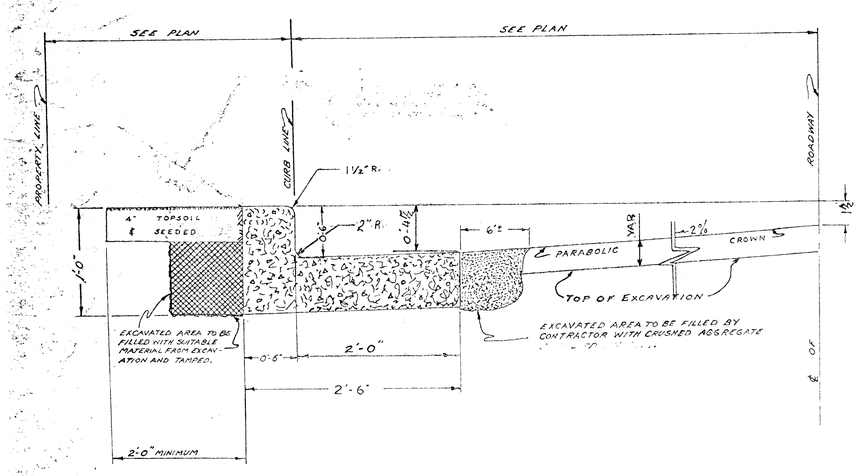
NEENAH NF-13248 OR EQUAL

NOTE: WT FRAME = 338#
COVER = 128#

R-1924-1 4 HOLE

CITY OF MASSILLON, OHIO	
CITY STANDARDS	
APPROVED: CITY ENGINEER	DEPARTMENT OF PUBLIC SERVICE ENGINEERING DIVISION
DWN. BY W.H.H. 11-21-65	SCALE: AS SHOWN
CHKD. BY R.G.H. 11-22-65	SHEET 25 OF 28

FILE NO. M-578 ACC. NO. 2367



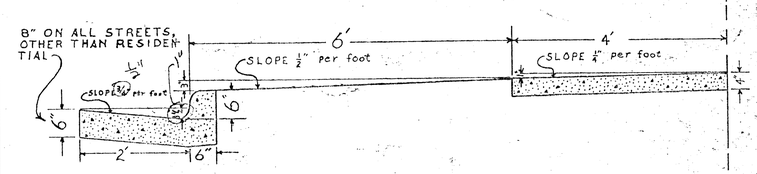
MASSILLON STANDARD CURB & GUTTER DETAIL

DR. BY: O. DEBOS - 2-5-65

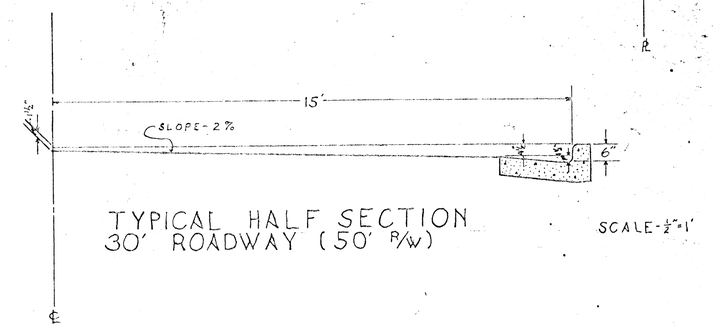
1. CONTRACTOR SHALL CHECK DETAIL DRAWINGS FOR MINIMUM GRADE & BACKFILL REQUIREMENTS.
2. ALL COMBINATION CONCRETE CURB & GUTTER TO BE MASSILLON STANDARD EXCEPT WHERE VARIATIONS ARE TO BE EXTENDED OR MET. - SEE SPECIFICATION BOOK & PLANS.
3. EXCAVATION FOR COMBINATION CONCRETE CURB & GUTTER SHALL BE INCLUDED IN THE COST PER LINEAL FOOT OF SAID CURB & GUTTER.
4. ALL COMBINATION CONCRETE CURB & GUTTER TO BE CONSTRUCTED BEFORE EXCAVATION IS STARTED, WHEN EXCAVATION DOES NOT EXCEED 1'-0" IN DEPTH.
5. ROADWAY EXCAVATION TO BE 2" TO 4" BELOW FINISH GRADE OF STREET AT THE DISCRETION OF THE CITY ENGINEER.
6. ALL CATCH BASINS & MANHOLES TO BE ADJUSTED TO GRADE WHERE NECESSARY.
7. ALL CONCRETE TO BE 1:2:4-6 BAG MIX 28 DAY - 3000 P.S.I. COMPRESIVE STRENGTH MAX. SLUMP TO BE 4".
8. CONTRACTOR SHALL PAY INSPECTOR(S) AT THE RATE OF TIME AND ONE HALF OF REGULAR RATE AFTER 4:30 P.M. MONDAY ~~THUR~~ FRIDAY. SATURDAYS ALL DAY AT TIME AND ONE HALF.
9. ALL MATERIALS USED WILL BE NEW - NO SALVAGED MATERIAL WILL BE ACCEPTED EXCEPT CASTINGS.
10. IF CONTRACTOR EXCAVATES DEEPER THAN NECESSARY FOR CURB & GUTTER, CONTRACTOR WILL FURNISH CRUSHER RUN GRAVEL & TAMP BEFORE CURB & GUTTER IS CONSTRUCTED.
11. #4 IF SUB GRADE IS UNSUITABLE, CONTRACTOR WILL EXCAVATE & REPLACE SUCH MATERIAL TAMPED CRUSHER RUN GRAVEL, AT THE DISCRETION OF THE INSPECTOR OR CITY ENGINEER. THIS FILL TO BE PLACED IN 6" LAYERS OR LESS; SAID FILL TO BE COMPACTED TO 95% MAXIMUM LABORATORY DRY WEIGHT BEFORE ANY ADDITIONAL LAYERS ARE ADDED, CONTRACTOR WILL BE PAID FOR EXTRA GRAVEL & EXCAVATION. THIS COMPACTION TO BE DONE BEFORE FORMS ARE PLACED.
12. ALL EXTRA PAY ITEMS WILL HAVE THE APPROVAL OF THE BOARD OF CONTROL BEFORE EXTRA ITEMS ARE INSTALLED.
13. CONTRACTOR TO REMOVE PIPE UNDER DRIVES AND RETURN TO PROPERTY OWNER OR DISPOSE OF, THIS PIPE REMOVAL AND DISPOSAL TO BE INCLUDED IN CURB PRICE.
14. CONTRACTOR TO BACK FILL CURB IMMEDIATELY AFTER CURB HAS BEEN IN PLACE FOR 48 HOURS.
15. CONTRACTOR SHALL NOTIFY ENGINEER WHEN HE IS IN NEED OF CONSTRUCTION STAKES AND THIS OFFICE WILL COMPLY WITH IN A PERIOD OF 48 HOURS.
16. CIRCLE CURB WHEN RADIUS IS 175 FT. OR LESS
17. HOLES FOR DOWNSPOUTS TO BE INCLUDED IN COST PER LIN. FT. OF CURB & GUTTER.
18. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES BEFORE ANY WORK IS BEGUN. THE CITY OF MASSILLON IS NOT RESPONSIBLE FOR ANY LOST TIME DO TO UTILITY RELOCATION.

GENERAL NOTES

O. DEBOS - 2-23-65

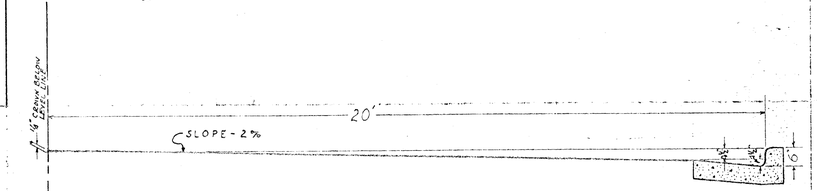


TYPICAL SECTION-WALK AND CURB SCALE-¾"=1'



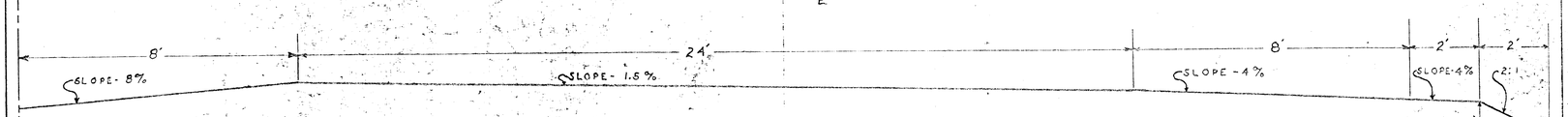
TYPICAL HALF SECTION
30' ROADWAY (50' R/W)

SCALE-½"=1'

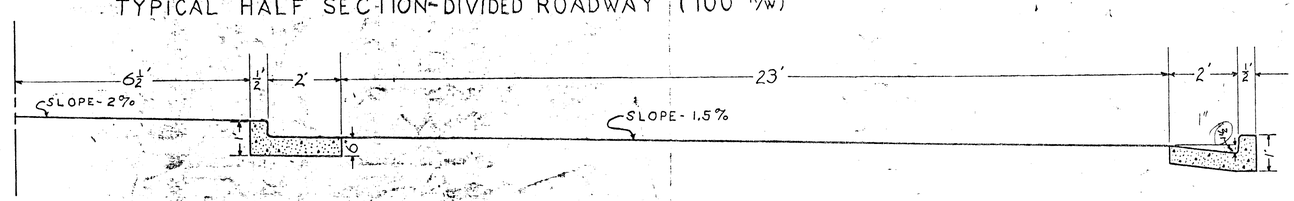


TYPICAL HALF SECTION
40' ROADWAY (60' R/W)

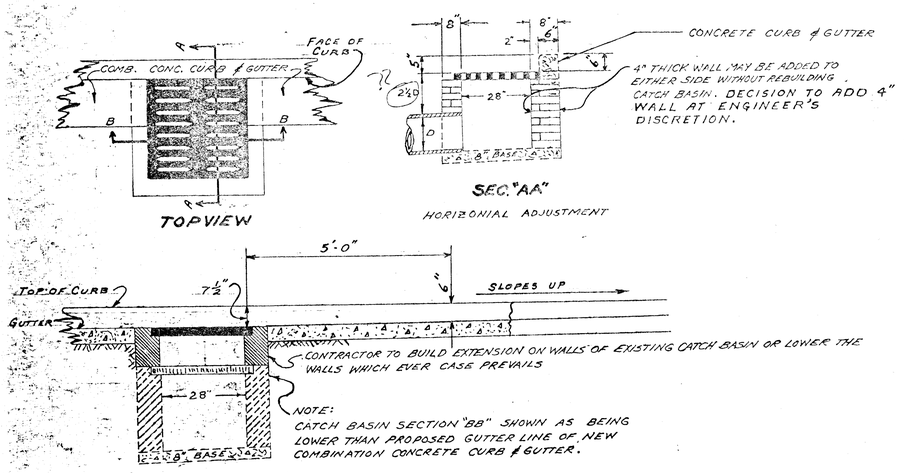
SCALE-½"=1'



TYPICAL HALF SECTION-DIVIDED ROADWAY (100' R/W)



TYPICAL HALF SECTION-DIVIDED ROADWAY (100' R/W - WITH CURB)



CONTRACTOR TO GET FINIAL APPROVAL OF THE INSPECTOR BEFORE CASTING IS SET ON TOP OF BASIN.

ADJUSTMENT OF CATCH BASIN

DR. BY: O. DEBOS - 2-23-65

CONSTRUCTION DETAILS CONCERNING COMBINATION CONCRETE CURB & GUTTER		
APPROVED: Harry M. Pipe CITY ENGINEER	DEPARTMENT OF PUBLIC SERVICE ENGINEERING DIVISION	
DRAWN BY: O. R. DEBOS CHECKED BY: B. R. SHUMAN	NOT TO SCALE	DATE: FEB. 24, 1965
REVISION DATES: AUGUST, 1967 E.J.B.		

FILE NO. M-568 ACC. NO. 2346

I HEREBY CERTIFY THAT THIS PLAT OF NEOCOM I INDUSTRIAL PARK – NO. 1 LOCATED IN THE CITY OF MASSILLON, COUNTY OF STARK AND STATE OF OHIO AND BEING PART OF OUTLOT 569, REPRESENTS A SURVEY MADE BY ME WHICH BALANCES AND CLOSES, THAT THE MONUMENTS SHOWN HEREON EXIST OR SHALL BE SET AS SHOWN AND THAT ALL DIMENSIONAL AND GEOMETRIC DETAILS ARE CORRECT.

HAMMONTREE & ASSOCIATES, LIMITED

CHARLES F. HAMMONTREE, P.S. 7263 DATE

KNOW ALL MEN BY THESE PRESENTS, THAT THE UNDERSIGNED OWNERS OF THE LAND SHOWN ON THIS PLAT, MILLER LAND DEVELOPMENT, LTD. AND THE ZIEGLER TIRE AND SUPPLY COMPANY, DO HEREBY ACKNOWLEDGE THE MAKING OF THE SAME TO BE THEIR FREE ACT AND DEED AND DO HEREBY DEDICATE THE STREETS AND PUBLIC EASEMENTS SHOWN HEREON TO PUBLIC USE FOREVER.

WITNESS OWNERS

MILLER LAND DEVELOPMENT, LTD.

DONALD M. MILLER, MANAGER DATE

STATE OF OHIO
COUNTY OF STARK

BEFORE ME, A NOTARY PUBLIC, IN AND FOR SAID COUNTY AND STATE, PERSONALLY APPEARED THE ABOVE SIGNED OWNERS OF THE LAND SHOWN ON THIS PLAT, WHO ACKNOWLEDGE THAT THEY DID SIGN THE FOREGOING INSTRUMENT AND THAT IT WAS THEIR FREE ACT AND DEED ACCORDING TO LAW. IN TESTIMONY WHEREOF, I HAVE HEREUNTO SUBSCRIBED MY NAME AND AFFIXED MY SEAL AT _____, OHIO, THIS_____ DAY OF_____, 199____.

MY COMMISSION EXPIRES NOTARY PUBLIC

THE ZIEGLER TIRE AND SUPPLY CO.

HAROLD D. ZIEGLER, JR., PRESIDENT DATE

STATE OF OHIO
COUNTY OF STARK

BEFORE ME, A NOTARY PUBLIC, IN AND FOR SAID COUNTY AND STATE, PERSONALLY APPEARED THE ABOVE SIGNED OWNERS OF THE LAND SHOWN ON THIS PLAT, WHO ACKNOWLEDGE THAT THEY DID SIGN THE FOREGOING INSTRUMENT AND THAT IT WAS THEIR FREE ACT AND DEED ACCORDING TO LAW. IN TESTIMONY WHEREOF, I HAVE HEREUNTO SUBSCRIBED MY NAME AND AFFIXED MY SEAL AT _____, OHIO, THIS_____ DAY OF_____, 199____.

MY COMMISSION EXPIRES NOTARY PUBLIC

APPROVED BY THE CITY OF MASSILLON PLANNING COMMISSION THIS_____ DAY OF_____, 19____.

CHAIRMAN SECRETARY

ACCEPTED BY THE CITY COUNCIL OF MASSILLON, OHIO, BY ORDINANCE NO. _____PASSED THIS_____DAY OF_____, 19____.

PRESIDENT CLERK

LOT NUMBERS _____
ASSIGNED BY MASSILLON CITY ENGINEER.

MASSILLON CITY ENGINEER

ENTERED FOR TRANSFER THIS_____DAY OF_____, 19____.

STARK COUNTY AUDITOR

RECEIVED FOR RECORD THIS _____ DAY OF _____, 19 _____.
RECORDED IN PLAT BOOK _____, PAGE _____.

STARK COUNTY RECORDER

NEOCOM I INDUSTRIAL PARK – NO. 1

LOCATED IN THE CITY OF MASSILLON, COUNTY OF STARK, STATE OF OHIO AND BEING PART OF OUTLOT 569

APRIL, 1999

0 LOTS

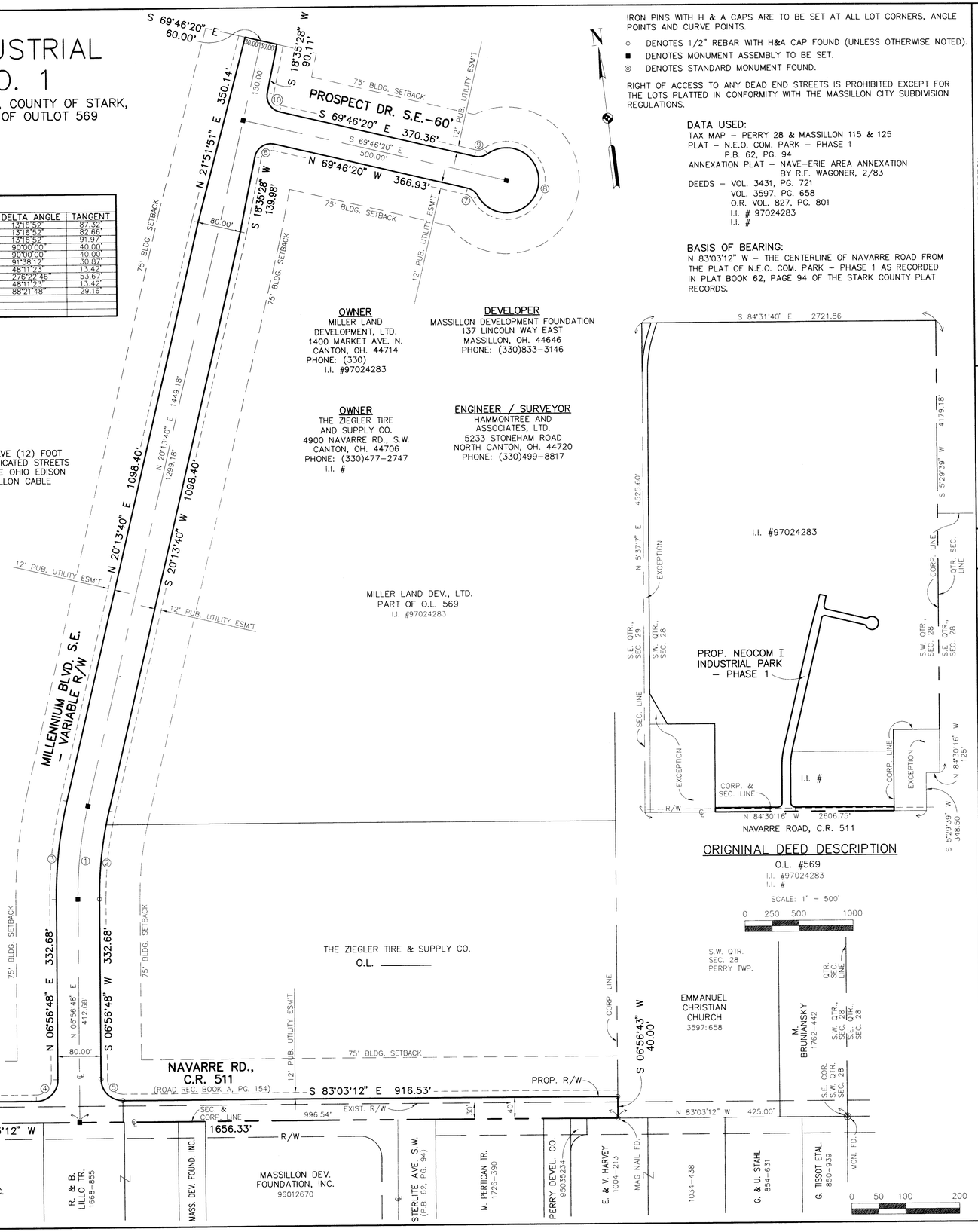
CURVE DATA

CURVE#	RADIUS	LENGTH	CHORD	CHORD BEARING	DELTA ANGLE	TANGENT
1	750.00'	173.85'	173.46'	N 13°35'14" E	13°16'52"	87.32'
2	710.00'	164.58'	164.21'	S 13°35'14" W	13°16'52"	82.66'
3	790.00'	183.12'	182.71'	N 13°35'14" E	13°16'52"	91.97'
4	40.00'	62.83'	56.57'	N 51°56'48" E	90°00'00"	40.00'
5	40.00'	62.83'	56.57'	S 38°03'12" E	90°00'00"	40.00'
6	30.00'	47.98'	43.03'	S 64°24'34" W	91°38'12"	30.87'
7	30.00'	25.23'	24.49'	N 45°40'39" W	48°11'23"	13.42'
8	60.00'	289.42'	80.00'	S 20°13'40" W	276°22'46"	53.67'
9	30.00'	25.23'	24.49'	N 86°07'58" E	48°11'23"	13.42'
10	30.00'	46.27'	41.82'	S 25°35'26" E	88°21'48"	29.16'

ACREAGE SUMMARY

ROADS = 5.952 AC.

NOTE:
IT IS HEREBY EXPRESSLY UNDERSTOOD THAT THE TWELVE (12) FOOT WIDE PUBLIC UTILITY EASEMENT WHICH ABUTS THE DEDICATED STREETS WITHIN THIS ALLOTMENT SHALL BE RESERVED FOR THE OHIO EDISON COMPANY, AMERITECH, THE EAST GAS COMPANY, MASSILLON CABLE TV INC. AND ANY OTHERS THAT MAY BE REQUIRED.



IRON PINS WITH H & A CAPS ARE TO BE SET AT ALL LOT CORNERS, ANGLE POINTS AND CURVE POINTS.

○ DENOTES 1/2" REBAR WITH H&A CAP FOUND (UNLESS OTHERWISE NOTED).
■ DENOTES MONUMENT ASSEMBLY TO BE SET.
◎ DENOTES STANDARD MONUMENT FOUND.

RIGHT OF ACCESS TO ANY DEAD END STREETS IS PROHIBITED EXCEPT FOR THE LOTS PLATTED IN CONFORMITY WITH THE MASSILLON CITY SUBDIVISION REGULATIONS.

DATA USED:
TAX MAP – PERRY 28 & MASSILLON 115 & 125
PLAT – N.E.O. COM. PARK – PHASE 1
P.B. 62, PG. 94
ANNEXATION PLAT – NAVE–ERIE AREA ANNEXATION
BY R.F. WAGONER, 2/83
DEEDS – VOL. 3431, PG. 721
VOL. 3597, PG. 658
O.R. VOL. 827, PG. 801
I.I. # 97024283
I.I. #

BASIS OF BEARING:
N 83°03'12" W – THE CENTERLINE OF NAVARRE ROAD FROM THE PLAT OF N.E.O. COM. PARK – PHASE 1 AS RECORDED IN PLAT BOOK 62, PAGE 94 OF THE STARK COUNTY PLAT RECORDS.

REVISION BY: ____ DATE: ____ DESCRIPTION: ____
REVISION BY: ____ DATE: ____ DESCRIPTION: ____
REVISION BY: ____ DATE: ____ DESCRIPTION: ____
REVISION BY: ____ DATE: ____ DESCRIPTION: ____
REVISION BY: ____ DATE: ____ DESCRIPTION: ____

DESIGNED BY: MLD CHECKED BY: BHB
DRAWN BY: DTM REVIEWED BY: BHB
F.B. 418 PAGE: 17
COPYRIGHT: 1999 DATE: 4/12/99
R:\MASNEO\DLG_FP.DWG

SCALES:
HORIZ: 1"=100'

FINAL PLAT
NEOCOM I INDUSTRIAL PARK – NO. 1
PART OF O.L. 569 IN THE CITY OF MASSILLON, STARK COUNTY, OHIO

HAMMONTREE & ASSOCIATES, LTD.
ENGINEERS, PLANNERS, SURVEYORS
CANTON ORLANDO PITTSBURGH AKRON
5233 STONEHAM ROAD, NORTH CANTON, OHIO 44720
PHONE: CANTON:(330)499-8817 AKRON:(330)633-7274
TOLL FREE: 1-800-394-8817 FAX: (330)499-0149