

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

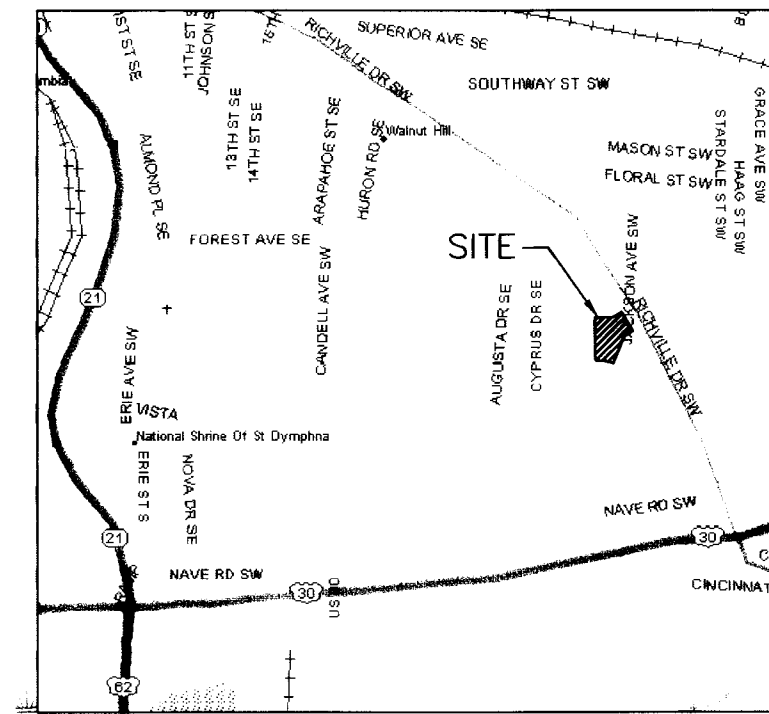
UTILITY LOCATION NOTE

LOCATION OF ALL UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND ARE BASED ON FIELD LOCATIONS OF ALL VISIBLE STRUCTURES SUCH AS CATCH BASINS, MANHOLES, WATER AND GAS GATES, ETC., TOGETHER WITH INFORMATIONAL DATA OBTAINED FROM PLANS AND RECORDS SUPPLIED BY VARIOUS UTILITY COMPANIES AND GOVERNMENT AGENCIES. ALL CONTRACTORS SHOULD NOTIFY IN WRITING ALL UTILITY COMPANIES AND GOVERNMENT AGENCIES PRIOR TO ANY EXCAVATION WORK OR CALL O.U.P.S. AT 1-800-362-2764.

POINT	NORTHING	EASTING
PT1	11207.88	9291.11
PT2	11969.84	9326.23
PT3	11120.38	9620.94
PT4	11607.80	9849.45
S-1	11125.47	9475.51
S-2	11521.10	9534.51
S-3	11750.20	9566.01
S-4	11776.91	9757.94

SANITARY SEWER NOTES

- ALL SANITARY SEWERS AND APPURTENANCES SHALL BE CONSTRUCTED ACCORDING TO MASSILLON CITY ENGINEERING DEPARTMENT SPECIFICATIONS IN EFFECT AT THE TIME OF CONSTRUCTION.
- ROOF DRAINS, FOUNDATION DRAINS AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.
- MINIMUM COVER OVER ALL SANITARY SEWERS MUST BE 4.0 FEET.
- 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 VIDEOTAPE PROCEDURE MUST BE IN ACCORDANCE WITH CITY OF MASSILLON SANITARY ENGINEERING DEPARTMENT SPECIFICATIONS.
- PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE CITY OF MASSILLON ENGINEERING DEPT., (330-830-1722) TO SCHEDULE A PRE-CONSTRUCTION MEETING. A MINIMUM OF 3 DAYS NOTICE IS REQUIRED TO SCHEDULE THIS MEETING.
- SANITARY SEWER MAY BE ANY OF THE FOLLOWING MATERIALS, HOWEVER THE COMPLETE SYSTEM MUST BE UNIFORM IN PIPE MATERIAL:
 - V.C.P. EXTRA STRENGTH A.S.T.M. C-700 WITH COMPRESSION TYPE JOINTS IN CONFORMANCE WITH A.S.T.M. C-425.
 - A.B.S. COMPOSITE PIPE A.S.T.M. D-2680 WITH CHEMICALLY WELDED PREMIUM JOINTS ASTM D-2680.
 - P.V.C. PIPE A.S.T.M. D-3034, S.D.R. 35 MAXIMUM WITH GASKETED PREMIUM JOINTS ASTM D-3212. BEDDING PER ASTM-2321.
- A BULKHEAD SHALL BE CONSTRUCTED IN THE EXISTING MANHOLE AT THE ENTRANCE OF THE PROPOSED SEWER PIPE AND REMAIN IN PLACE UNTIL THE NEW SEWER LINE IS COMPLETE, TESTED AND APPROVED BY THE MASSILLON CITY ENGINEER, AT WHICH TIME THE BULKHEAD SHALL BE REMOVED.
- MANHOLE AND TRENCHES SHALL BE PER MASSILLON DETAILS DRAWINGS.
- CONTRACTOR MUST CONSTRUCT ALL WATER LINES AS NECESSARY TO MAINTAIN A MINIMUM OF 18" VERTICAL CLEARANCE & 10' HORIZONTAL CLEARANCE WITH THE SANITARY SEWER AND A MINIMUM OF 12" VERTICAL CLEARANCE WITH THE STORM SEWER.
- A DEFLECTION TEST SHALL BE REQUIRED FOR ALL FLEXIBLE PIPE OF 8-INCH DIAMETER AND LARGER. THE TEST SHALL BE CONDUCTED AT LEAST 30 DAYS AFTER COMPLETION OF BACKFILL AND SHALL BE IN ACCORDANCE WITH CITY OF MASSILLON SANITARY ENGINEERING DEPARTMENT SPECIFICATIONS. THE ALLOWABLE DEFLECTION RATE SHALL NOT EXCEED FIVE (5%) PERCENT. TESTING SHALL BE IN ACCORDANCE WITH ASTM D-3034.
- ALL SANITARY SEWERS MUST PASS A LOW PRESSURE AIR TEST, WHICH SHALL BE CONDUCTED IN ACCORDANCE WITH CITY OF MASSILLON SANITARY ENGINEERING DEPARTMENT SPECIFICATIONS. THE MAXIMUM ALLOWABLE TEST LEAKAGE SHALL BE 100 GAL/INCH OF DIAMETER/MILE/DAY.
- MANHOLE CONSTRUCTION SHALL MEET THE REQUIREMENTS OF ASTM C-478 AND C-443. ALL MANHOLES SHALL BE AIR/VACUUM TESTED IN ACCORDANCE WITH AND MEET ALL THE REQUIREMENTS OF ASTM C1244.



VICINITY MAP

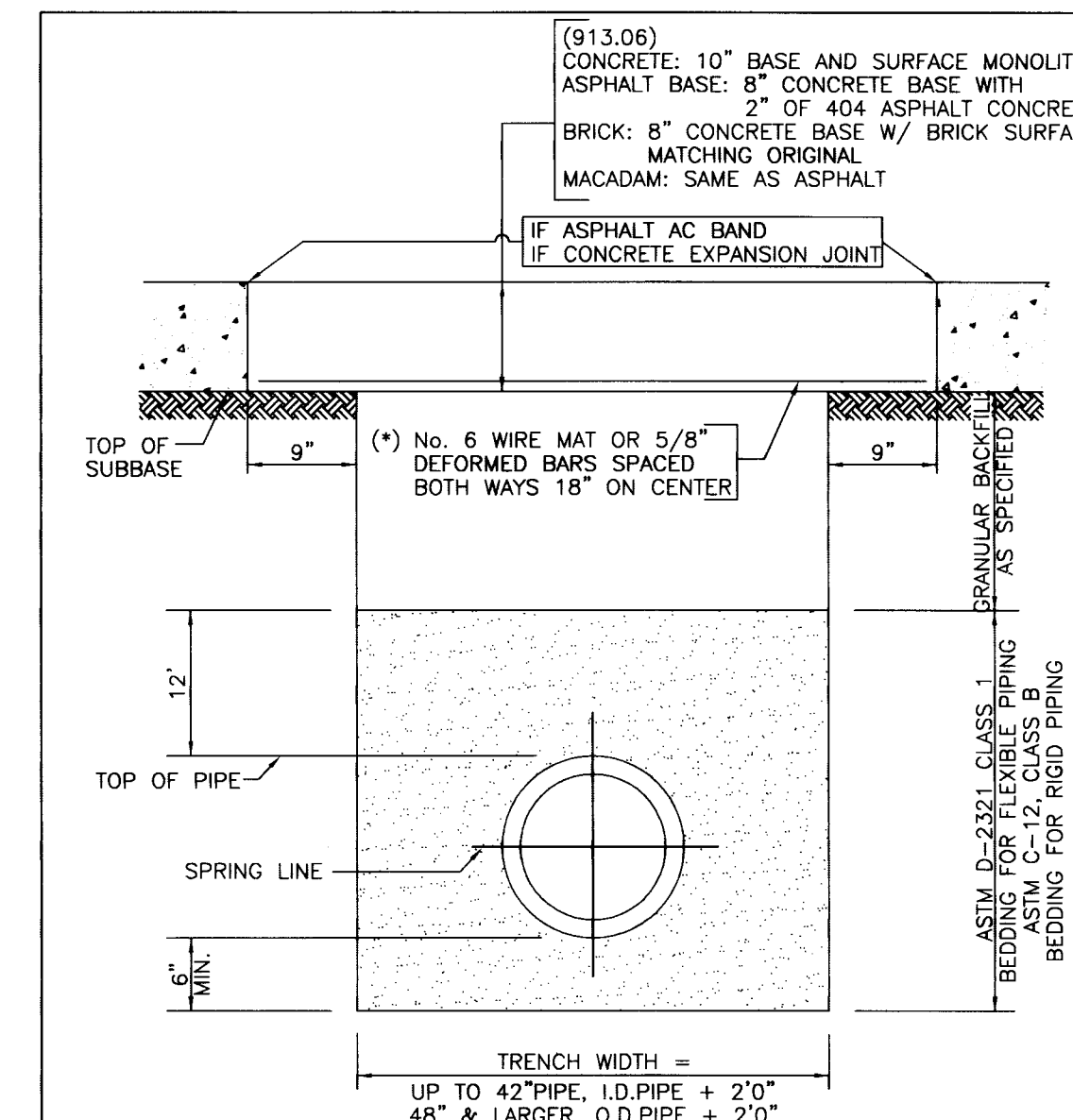
BENCH MARK
60d SPIKE FOUND 0.5' UP NORTH SIDE OF A TWIN 15" OAK TREE; 42' S 12' W OF THE 5/8" IRON BAR FOUND WITH 'DEIBEL' 6673 PLASTIC YELLOW CAP.
ELEV 1074.625

BENCH MARK
60d SPIKE FOUND 1.2' UP SOUTH SIDE OF A 12" OAK TREE; 32.8' N 10' W OF THE S.W. CORNER OF THE N.W. QTR. OF SECTION 22, T-10(PERRY), R-9.
ELEV 1079.735

ESTIMATED SANITARY SEWER QUANTITIES

ITEM	QTY.	UNIT	DESCRIPTION
603	1017	LF	6" SANITARY SEWER PIPE (LATERALS)
603	805	LF	8" SANITARY SEWER PIPE
603	10	EACH	8" x 6" WYES
603	14	EACH	SANITARY CLEANOUT
604	3	EACH	SANITARY MANHOLE TYPE 'A' (COMPLETE)(29.77 VF)
604	1	EACH	SANITARY MANHOLE CONSTRUCTED ON-LINE

PAVEMENT REPLACEMENT, TRENCHING, BEDDING AND ALL RESTORATION ITEMS ARE TO BE INCLUDED IN THE UNIT PRICE BID FOR SANITARY SEWER PIPE.



NOTES

(*) MUST BE USED WHEN WIDTH OF TRENCH IS GREATER THAN 3' AT THE SUBBASE LEVEL

CONCRETE BASE SHALL BE OF 1:2:4, 6 BAG MIX, PORTLAND CEMENT CONCRETE USING HIGH EARLY STRENGTH CEMENT AND IT MUST BE CURED AT LEAST 48 HRS.

OPEN CUT DETAIL
N.T.S.

() DENOTES AS-BUILT DIMENSIONS CONTAINED IN FIELD BOOK

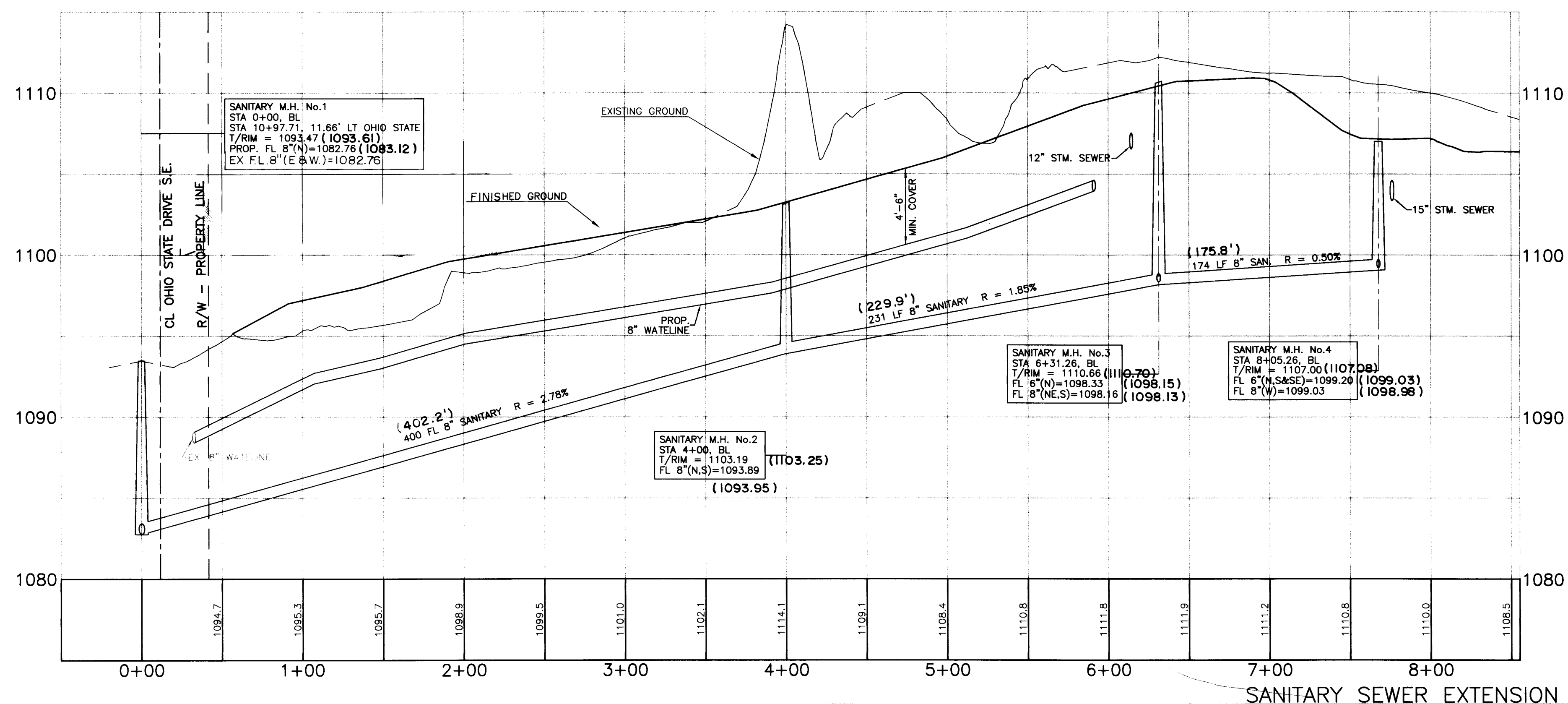
I HEREBY CERTIFY THAT THESE IMPROVEMENTS HAVE BEEN COMPLETED AS INDICATED BY THE "AS-BUILT" DIMENSIONS SHOWN ON THESE PLANS

THIS DAY OF 20

BRYAN J. ASHMAN : REG. ENGR. No. E-043804

APPROVALS

Approved by the Massillon City Engineer
this 20th day of April, 2021.
Massillon City Engineer



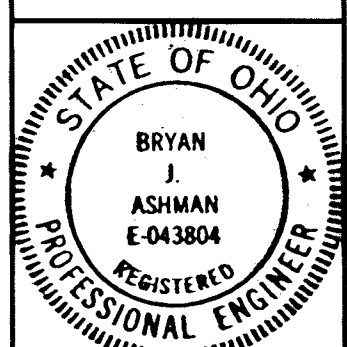
SCALE	1"=50'-0"	VERT. 1"=5'-0"
HOR.	1"=50'-0"	VERT. 1"=5'-0"
DATE:	APRIL 12, 2021	
FIELD BOOK No.	N/A	
SHEET	3	OF 3

BRYAN J. ASHMAN
JEROLD E. GEB

COOPER & ASSOCIATES, P.L.L.
ENGINEERS AND SURVEYORS

PHONE (330) 452-5731
FAX No. (330) 452-9110

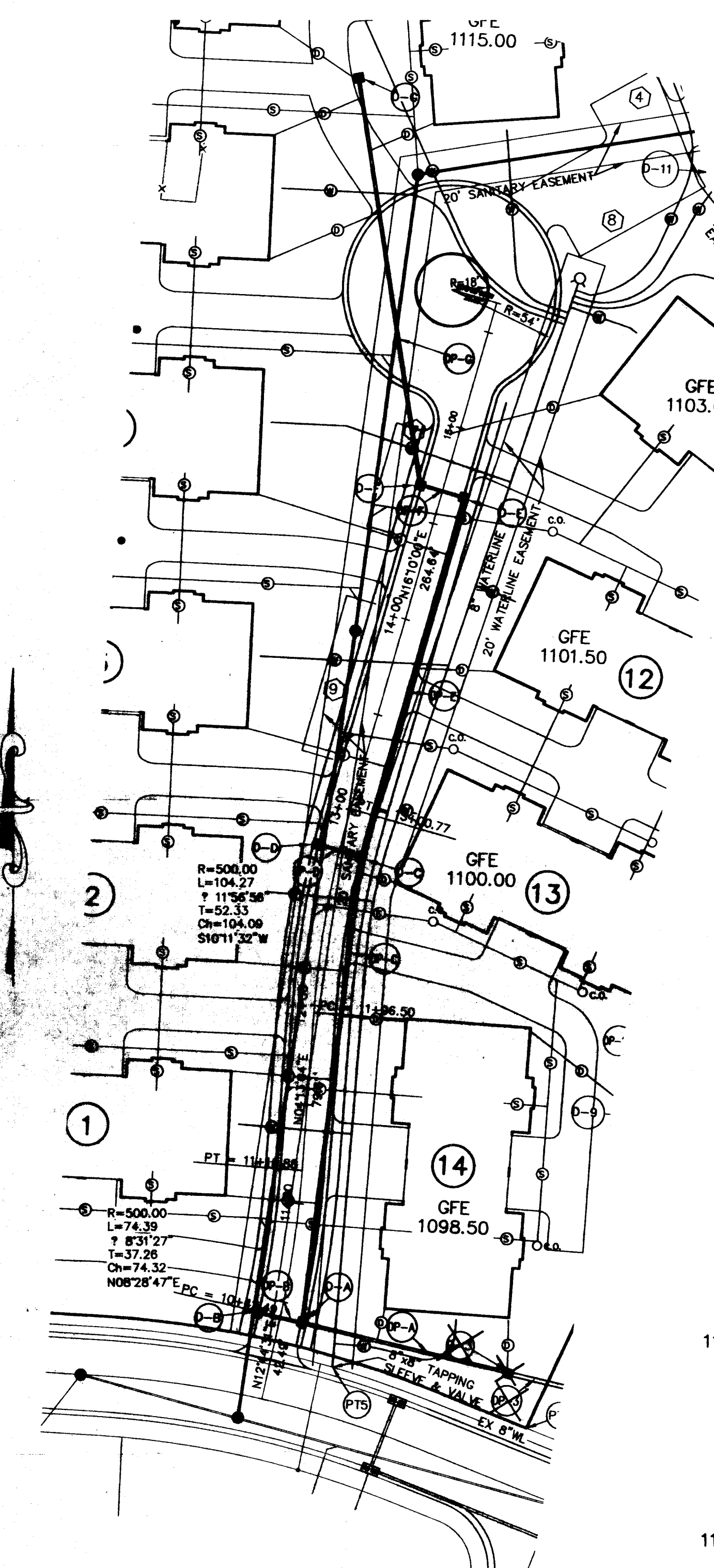
SANITARY SEWER EXTENSION
UNIVERSITY COMMONS
CITY OF MASSILLON
STARK COUNTY, OHIO
FOR : P.R.M.D.C. LTD.



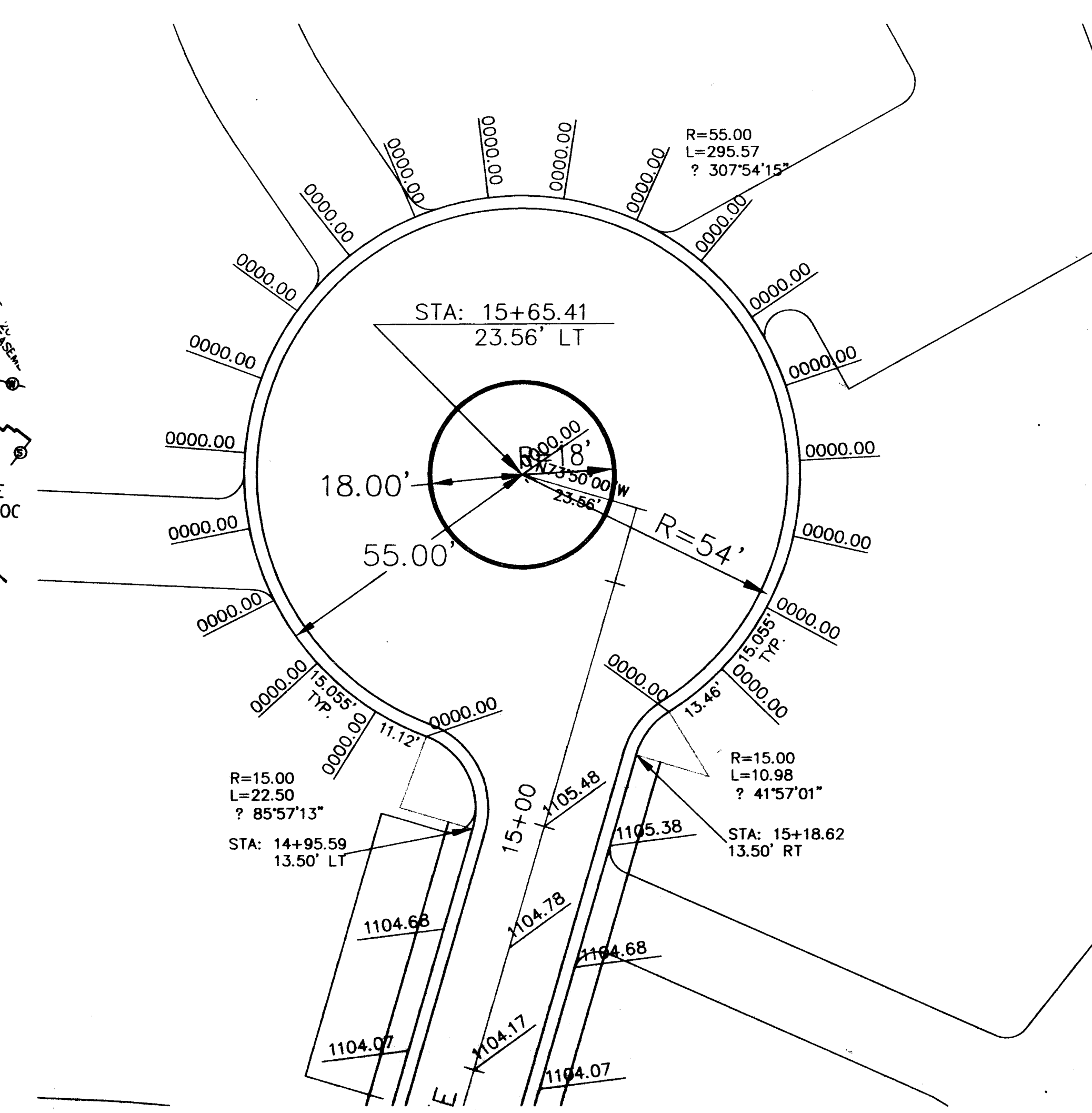
PLAN REVIEW MEETING	4/29/21	BBB
DESCRIPTION	DATE	BY
REVISIONS		
DATE		
BY		

PROJ# 01138

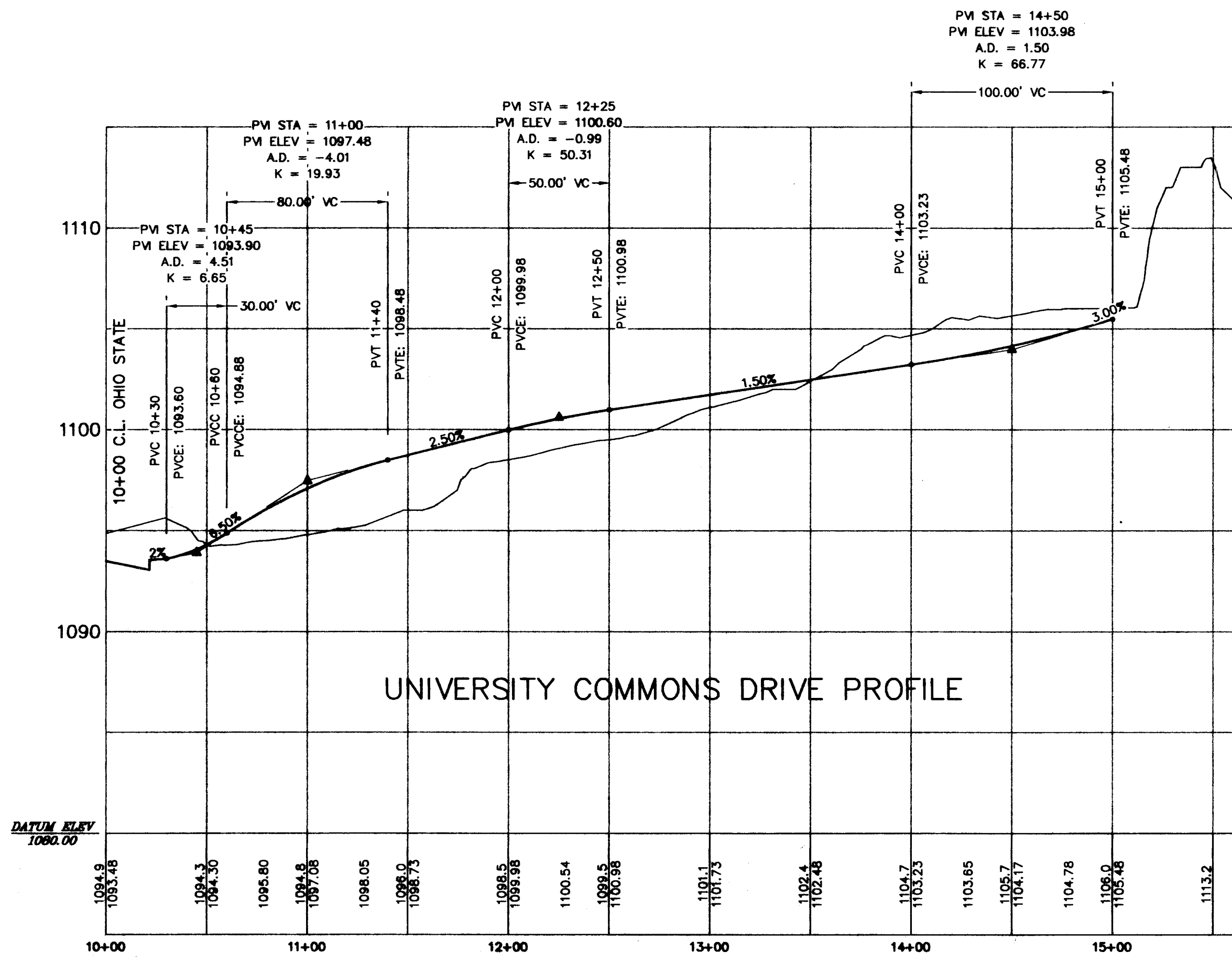
99 SD 05



UNIVERSITY COMMONS DRIVE PLAN
SCALE 1" = 50'



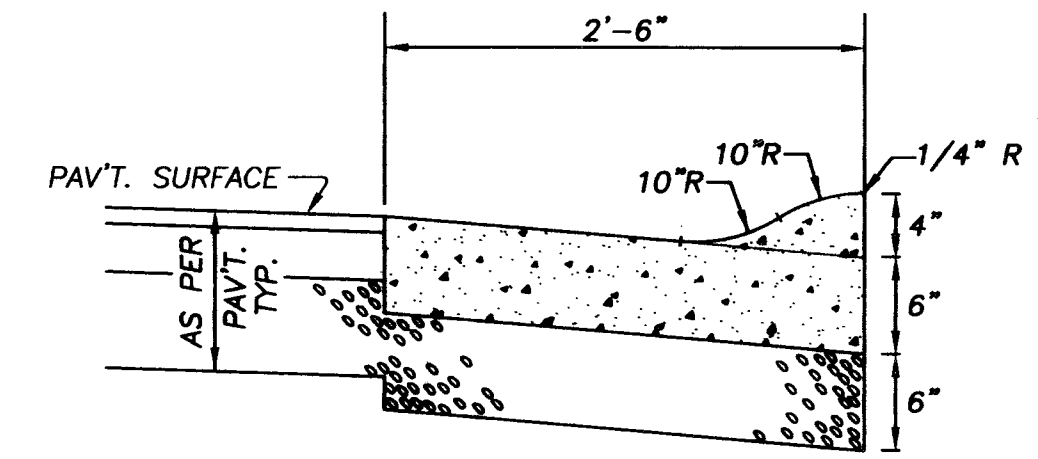
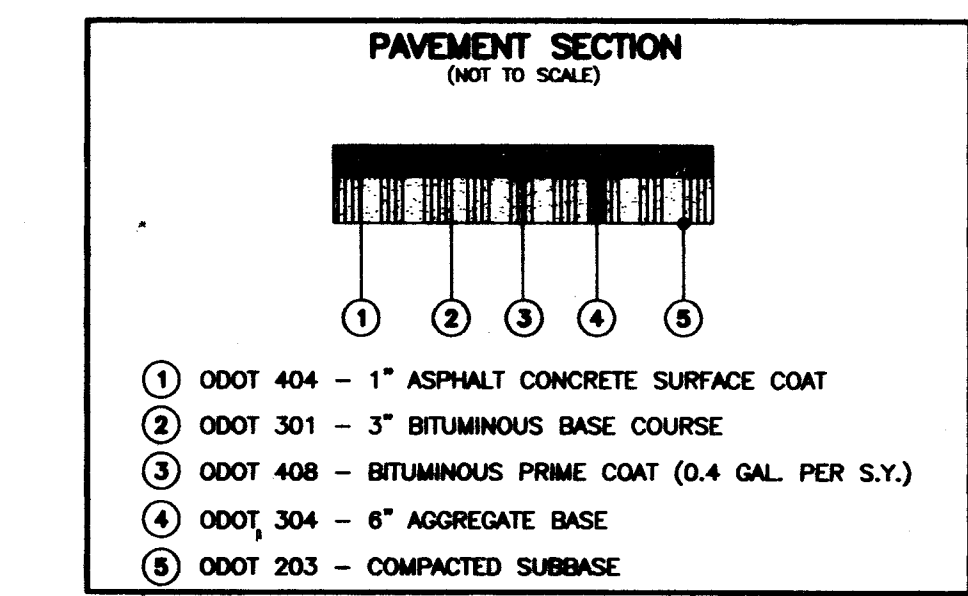
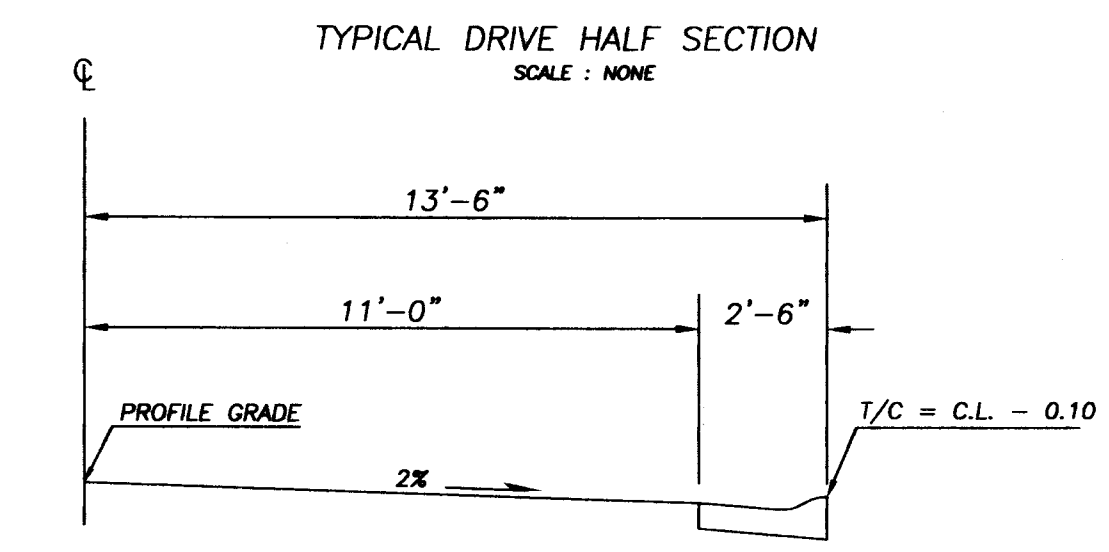
PAVEMENT DETAIL
SCALE 1" = 20'



UNIVERSITY COMMONS DRIVE PROFILE

PROPOSED STORM STRUCTURE DATA	
D-3: ODOT 2-2-B T/GRATE = 1092.75 F.L. 6" (N) = 1090.20 F.L. 24" (E&W) = 1088.70	D-E: TYPE 'A' STA 14+67, 13.5'RT T/CURB = 1104.47 (1104.55) F.L. 6" (NE) = 1101.35 F.L. 15" (W) = 1100.60 (1100.44) F.L. 18" (S) = 1100.35 (1100.36)
D-A: TYPE 'A' STA 10+42, 13.5'RT T/CURB = 1093.85 (1093.97) F.L. 6" (NE) = 1090.81 F.L. 12" (W) = 1090.31 (1089.95) F.L. 18" (N) = 1089.81 (1089.70) F.L. 24" (E) = 1089.31 (1089.33)	D-F: TYPE 'A' STA 14+67, 13.5'LT T/CURB = 1104.47 (1104.60) F.L. 6" (W) = 1101.97 F.L. 12" (N) = 1101.47 (1101.41) F.L. 15" (E) = 1101.22 (1101.11)
D-B: TYPE 'A' STA 10+42, 13.5'LT T/CURB = 1093.85 (1093.89) F.L. 6" (NW) = 1091.35 F.L. 12" (E) = 1090.85 (1090.77)	D-G: ODOT 2-2-B T/GRATE = 1112.25 (1112.32) F.L. 6" (NW) = 1110.25 F.L. 12" (S) = 1109.75 (1109.82)
D-C: TYPE 'A' STA 12+79, 13.5'RT T/CURB = 1101.31 (1101.35) F.L. 6" (E) = 1098.31 F.L. 12" (W) = 1097.81 (1097.43) F.L. 18" (N) = 1097.31 (1097.58) F.L. 18" (S) = 1097.31 (1097.38)	
D-D: TYPE 'A' STA 12+79, 13.5'LT T/CURB = 1101.31 (1101.39) F.L. 6" (W) = 1098.81 F.L. 12" (E) = 1098.31 (1098.25)	

NOTE: TYPE 'A' CB SHALL USE NEENAH R-3246 CASTING OR
EJOW 7030 WITH TYPE M3 GRATE.

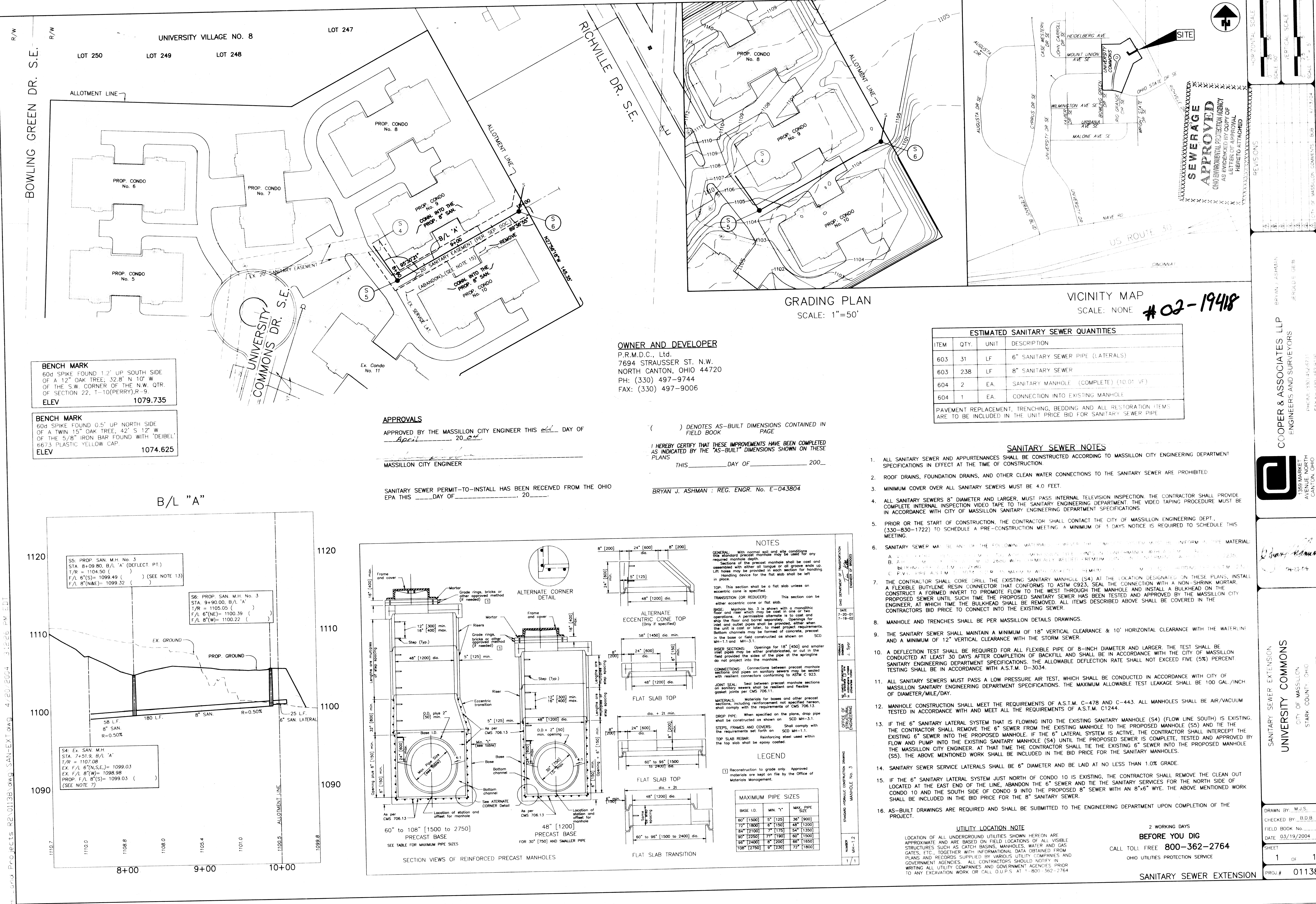


TYPE 3 CONCRETE
CURB AND GUTTER DETAIL
SCALE: 1"=1'

BENCH MARK
60d SPIKE FOUND 1.2' UP SOUTH SIDE
OF A 12" OAK TREE; 32.8' N 10' W
OF THE S.W. CORNER OF THE N.W. QTR.
OF SECTION 22, T-10(PERRY), R-9.
ELEV 1079.735

BENCH MARK
60d SPIKE FOUND 0.5' UP NORTH SIDE
OF A TWIN 15" OAK TREE; 42' S 12' W
OF THE S.W. CORNER OF THE N.W. QTR.
OF SECTION 22, T-10(PERRY), R-9.
ELEV 1074.625

SCALE: 1"=50'		DATE: October 15, 2001		FIELD BOOK NO. N/A		SHEET 1 OF 1	
BRYAN J. ASHMAN JEROLD E. GEIB							
COOPER & ASSOCIATES, P.L.L. ENGINEERS AND SURVEYORS 1359 MARKET AVENUE, NORTH CANTON, OHIO 44714 PHONE (330) 452-5731 FAX (330) 452-9110							
CENTER DRIVE UNIVERSITY COMMONS CITY OF MASSILLON STARK COUNTY, OHIO FOR: P.R.M.D.C. LTD.							
University Village Phase 7							
DESCRIPTION		DATE		BY		REVISIONS	
DRAWN BY: C.H.B.		CHK'D BY:					
UNIVERSITY COMMONS DRIVE							
PROJECT 01138							



BENCH MARK
60d SPIKE FOUND 1.2' UP SOUTH SIDE OF A 12" OAK TREE, 32.8' N 10' W OF THE S.W. CORNER OF THE N.W. QTR. OF SECTION 22, T-10(PERRY), R-9.
ELEV 1079.735

BENCH MARK
60d SPIKE FOUND 0.5' UP NORTH SIDE OF A TWIN 15" OAK TREE, 42' S 12' W OF THE S/W. CORNER OF THE N.W. QTR. OF SECTION 22, T-10(PERRY), R-9.
ELEV 1074.625

APPROVALS
APPROVED BY THE MASSILLON CITY ENGINEER THIS 20 DAY OF April, 2004

MASSILLON CITY ENGINEER

SANITARY SEWER PERMIT-TO-INSTALL HAS BEEN RECEIVED FROM THE OHIO EPA THIS 20 DAY OF April, 2004

OWNER AND DEVELOPER
P.R.M.D.C., Ltd.
7694 STRAUSSER ST. N.W.
NORTH CANTON, OHIO 44720
PH: (330) 497-9744
FAX: (330) 497-9006

() DENOTES AS-BUILT DIMENSIONS CONTAINED IN FIELD BOOK PAGE
I HEREBY CERTIFY THAT THESE IMPROVEMENTS HAVE BEEN COMPLETED AS INDICATED BY THE "AS-BUILT" DIMENSIONS SHOWN ON THESE PLANS
THIS 20 DAY OF April, 2004

BRYAN J. ASHMAN : REG. ENGR. No. E-043804

ESTIMATED SANITARY SEWER QUANTITIES			
ITEM	QTY.	UNIT	DESCRIPTION
603	31	LF	6" SANITARY SEWER PIPE (LATERALS)
603	238	LF	8" SANITARY SEWER
604	2	EA.	SANITARY MANHOLE (COMPLETE) (10.01 VF)
604	1	EA.	CONNECTION INTO EXISTING MANHOLE
PAVEMENT REPLACEMENT, TRENCHING, BEDDING AND ALL RESTORATION ITEMS ARE TO BE INCLUDED IN THE UNIT PRICE BID FOR SANITARY SEWER PIPE			

SANITARY SEWER NOTES

- ALL SANITARY SEWER AND APPURTENANCES SHALL BE CONSTRUCTED ACCORDING TO MASSILLON CITY ENGINEERING DEPARTMENT SPECIFICATIONS IN EFFECT AT THE TIME OF CONSTRUCTION.
- ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.
- MINIMUM COVER OVER ALL SANITARY SEWERS MUST BE 4.0 FEET.
- ALL SANITARY SEWERS 8" DIAMETER AND LARGER, MUST PASS INTERNAL TELEVISION INSPECTION. THE CONTRACTOR SHALL PROVIDE COMPLETE INTERNAL INSPECTION VIDEO TAPE TO THE SANITARY ENGINEERING DEPARTMENT. THE VIDEO TAPING PROCEDURE MUST BE IN ACCORDANCE WITH CITY OF MASSILLON SANITARY ENGINEERING DEPARTMENT SPECIFICATIONS.
- PRIOR OR THE START OF CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE CITY OF MASSILLON ENGINEERING DEPT., (330-830-1722) TO SCHEDULE A PRE-CONSTRUCTION MEETING. A MINIMUM OF 5 DAYS NOTICE IS REQUIRED TO SCHEDULE THIS MEETING.
- SANITARY SEWER MANHOLE SHALL BE AN OF THE FOLLOWING MATERIALS: (1) PRECAST CONCRETE, (2) CAST IN PLACE CONCRETE, (3) POLYETHYLENE GLASS REINFORCED PLASTIC (FRP), (4) POLYETHYLENE GLASS REINFORCED PLASTIC (FRP) WITH A MINIMUM OF 10% FIBER CONTENT. THE CONTRACTOR SHALL SUBMIT A MATERIAL SAMPLE TO THE CITY OF MASSILLON ENGINEERING DEPARTMENT FOR APPROVAL. THE MATERIAL SHALL BE SUBMITTED TO THE CITY OF MASSILLON ENGINEERING DEPARTMENT AT LEAST 30 DAYS PRIOR TO THE START OF CONSTRUCTION. THE MATERIAL SHALL BE SUBMITTED TO THE CITY OF MASSILLON ENGINEERING DEPARTMENT AT LEAST 30 DAYS PRIOR TO THE START OF CONSTRUCTION. THE MATERIAL SHALL BE SUBMITTED TO THE CITY OF MASSILLON ENGINEERING DEPARTMENT AT LEAST 30 DAYS PRIOR TO THE START OF CONSTRUCTION.
- THE CONTRACTOR SHALL CORE DRILL THE EXISTING SANITARY MANHOLE (S4) AT THE LOCATION DESIGNATED ON THESE PLANS. INSTALL A FLEXIBLE BUTYLENE RESIN CONNECTOR THAT CONFORMS TO ASTM C923. SEAL THE CONNECTION WITH A NON-SHRINK MORTAR. THE CONTRACTOR SHALL CONSTRUCT A FORMED INVERT TO PROMOTE FLOW TO THE WEST THROUGH THE MANHOLE AND INSTALL A BULKHEAD ON THE PROPOSED SEWER UNTIL SUCH TIME THE PROPOSED SANITARY SEWER HAS BEEN TESTED AND APPROVED BY THE MASSILLON CITY ENGINEER. AT THAT TIME THE BULKHEAD SHALL BE REMOVED. ALL ITEMS DESCRIBED ABOVE SHALL BE COVERED IN THE CONTRACTORS BID PRICE TO CONNECT INTO THE EXISTING SEWER.
- MANHOLE AND TRENCHES SHALL BE PER MASSILLON DETAILS DRAWINGS.
- THE SANITARY SEWER SHALL MAINTAIN A MINIMUM OF 18" VERTICAL CLEARANCE & 10' HORIZONTAL CLEARANCE WITH THE WATERLINE AND A MINIMUM OF 12" VERTICAL CLEARANCE WITH THE STORM SEWER.
- A DEFLECTION TEST SHALL BE REQUIRED FOR ALL FLEXIBLE PIPE OF 8-INCH DIAMETER AND LARGER. THE TEST SHALL BE CONDUCTED AT LEAST 30 DAYS AFTER COMPLETION OF BACKFILL AND SHALL BE IN ACCORDANCE WITH THE CITY OF MASSILLON SANITARY ENGINEERING DEPARTMENT SPECIFICATIONS. THE ALLOWABLE DEFLECTION RATE SHALL NOT EXCEED FIVE (5%) PERCENT TESTING SHALL BE IN ACCORDANCE WITH A.S.T.M. D-3034.
- ALL SANITARY SEWERS MUST PASS A LOW PRESSURE AIR TEST, WHICH SHALL BE CONDUCTED IN ACCORDANCE WITH CITY OF MASSILLON SANITARY ENGINEERING DEPARTMENT SPECIFICATIONS. THE MAXIMUM ALLOWABLE TEST LEAKAGE SHALL BE 100 GAL./INCH OF DIAMETER/MILE/DAY.
- MANHOLE CONSTRUCTION SHALL MEET THE REQUIREMENTS OF A.S.T.M. C-478 AND C-443. ALL MANHOLES SHALL BE AIR/VACUUM TESTED IN ACCORDANCE WITH AND MEET ALL THE REQUIREMENTS OF A.S.T.M. C1244.
- IF THE 6" SANITARY LATERAL SYSTEM THAT IS FLOWING INTO THE EXISTING SANITARY MANHOLE (S4) (FLOW LINE SOUTH) IS EXISTING, THE CONTRACTOR SHALL REMOVE THE 6" SEWER FROM THE EXISTING MANHOLE. IF THE 6" LATERAL SYSTEM IS ACTIVE, THE CONTRACTOR SHALL INTERCEPT THE EXISTING 6" SEWER INTO THE PROPOSED MANHOLE. IF THE 6" LATERAL SYSTEM IS ACTIVE, THE CONTRACTOR SHALL INTERCEPT THE EXISTING 6" SEWER INTO THE EXISTING SANITARY MANHOLE (S4) UNTIL THE PROPOSED SEWER IS COMPLETE, TESTED AND APPROVED BY THE MASSILLON CITY ENGINEER. AT THAT TIME THE CONTRACTOR SHALL TIE THE EXISTING 6" SEWER INTO THE PROPOSED MANHOLE (S5). THE ABOVE MENTIONED WORK SHALL BE INCLUDED IN THE BID PRICE FOR THE SANITARY MANHOLES.
- SANITARY SEWER SERVICE LATERALS SHALL BE 6" DIAMETER AND BE LAID AT NO LESS THAN 1.0% GRADE.
- IF THE 6" SANITARY LATERAL SYSTEM JUST NORTH OF CONDO 10 IS EXISTING, THE CONTRACTOR SHALL REMOVE THE CLEAN OUT LOCATED AT THE EAST END OF THE LINE, ABANDON THE 6" SEWER AND TIE THE SANITARY SERVICES FOR THE NORTH SIDE OF CONDO 10 AND THE SOUTH SIDE OF CONDO 9 INTO THE PROPOSED 8" SEWER WITH AN 8"x6" WYE. THE ABOVE MENTIONED WORK SHALL BE INCLUDED IN THE BID PRICE FOR THE 8" SANITARY SEWER.
- AS-BUILT DRAWINGS ARE REQUIRED AND SHALL BE SUBMITTED TO THE ENGINEERING DEPARTMENT UPON COMPLETION OF THE PROJECT.

UTILITY LOCATION NOTE

LOCATION OF ALL UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND ARE BASED ON FIELD LOCATIONS OF ALL VISIBLE STRUCTURES SUCH AS CATCH BASINS, MANHOLES, WATER AND GAS LINES, ETC., TOGETHER WITH INFORMATIONAL DATA OBTAINED FROM PLANS AND RECORDS SUPPLIED BY VARIOUS UTILITY COMPANIES AND GOVERNMENT AGENCIES. ALL CONTRACTORS SHOULD NOTIFY ANY UTILITY COMPANIES AND GOVERNMENT AGENCIES PRIOR TO ANY EXCAVATION WORK OR CALL O.U.P.S. AT 1-800-362-2764

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

SANITARY SEWER EXTENSION

COOPER & ASSOCIATES LLP
ENGINEERS AND SURVEYORS
BRYAN J. ASHMAN
JEROLD J. BISHOP
1355 MARKET AVENUE, NORTH CANTON, OHIO 44704
PHONE: (330) 497-9744
FAX: (330) 497-9006

UNIVERSITY COMMONS
CITY OF MASSILLON
STARK COUNTY, OHIO
FOR: P.R.M.D.C. LTD.

DRAWN BY: M.J.S.
CHECKED BY: B.D.B.
FIELD BOOK No. _____
DATE: 03/19/2004
SHEET 1 OF 1
PROJ.# 01138