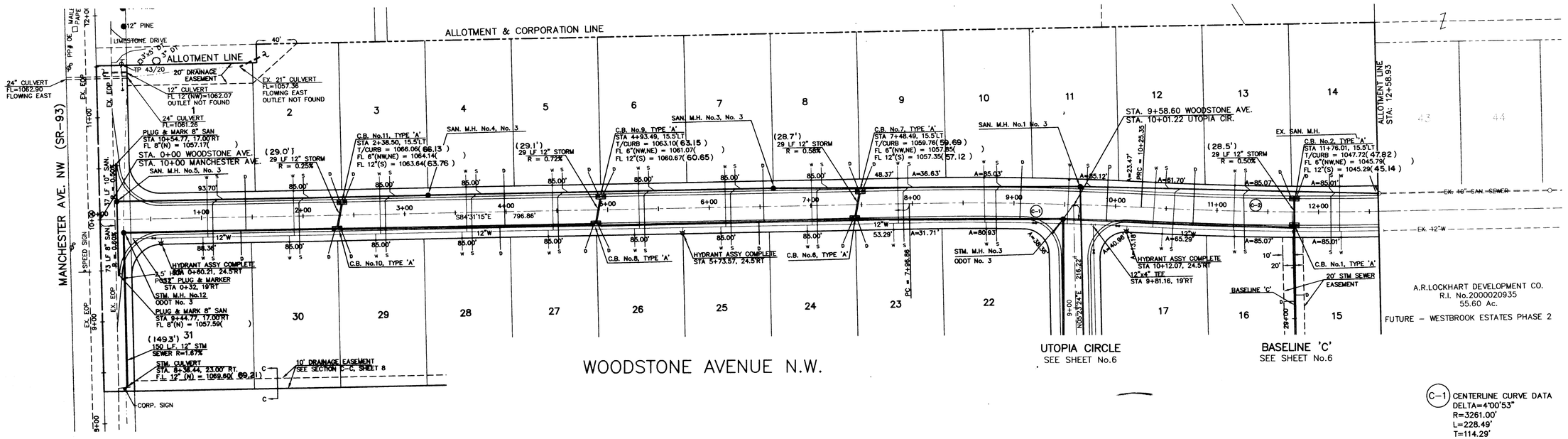


BENCHMARK 'A'
COTTON GIN GEAR SPIKE SET 12" UP THE EAST SIDE OF POWER POLE (NO NUMBER) – 2nd POLE NORTH OF THE NORTH PROPERTY LINE OF BEECH GROVE ELEM. SCHOOL LOC. ON THE WEST SIDE OF MANCHESTER AVE. (SR 93).
ELEV. = 1068.66

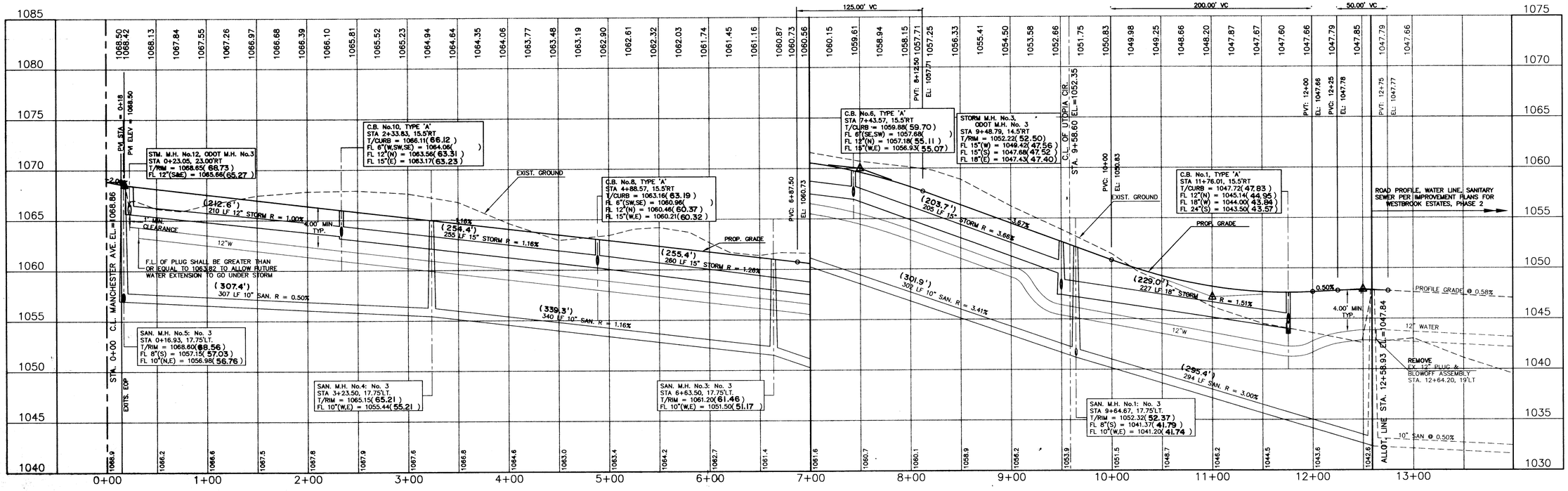
BENCHMARK 'B'
COTTON GIN SPIKE SET IN NORTHERN ROOT OF A 24" OAK TREE NEAR OR ON THE NORTH PROPERTY LINE OF BEECH GROVE ELEM. SCHOOL – 90'+/– NORTH OF THE NE CORNER OF THE SCHOOL BUILDING.
ELEV. = 1069.97

NOTES:
1. SIDEWALKS NOT REPRESENTED ON PLAN FOR CLARITY. SEE INTERSECTION DETAILS (SHEET 7) FOR HANDICAP RAMPS.

2. CONTRACTOR MUST CONSTRUCT ALL WATER LINES AND WATER SERVICE LINES SUCH THAT A MINIMUM OF 10' HORIZONTAL CLEARANCE, 18" VERTICAL CLEARANCE ABOVE SANITARY SEWER AND A MINIMUM OF 12" CLEARANCE BELOW STORM SEWER IS MAINTAINED.

(C-1) CENTERLINE CURVE DATA
DELTA=4°00'53"
R=3261.00'
L=228.49'
T=114.29'
C=228.45'
CB=S82°30'49"E

(C-2) CENTERLINE CURVE DATA
DELTA=4°06'14"
R=3261.00'
L=233.57'
T=116.84'
C=233.52'
CB=S88°02'09""E'



HORIZONTAL SCALE 1"=50'
VERTICAL SCALE 1"=5'

REVISIONS

REVISED C.L.	BJB	8/19/02
COMMENTS PER CONSUMERS WATER	BJB	5/10/02
COMMENTS PER CITY OF MASSILLON	BJB	3/1/02

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

PLAN AND PROFILE SHEET
WESTBROOK ESTATES – WEST

FOR: JACOB GLICK

DRAWN BY: C.H.B.
CHECKED BY: B.D.B.
FIELD BOOK No. 549
DATE 3/4/02
SHEET 5 OF 8
PROJ. #: 01142

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02 SD 05

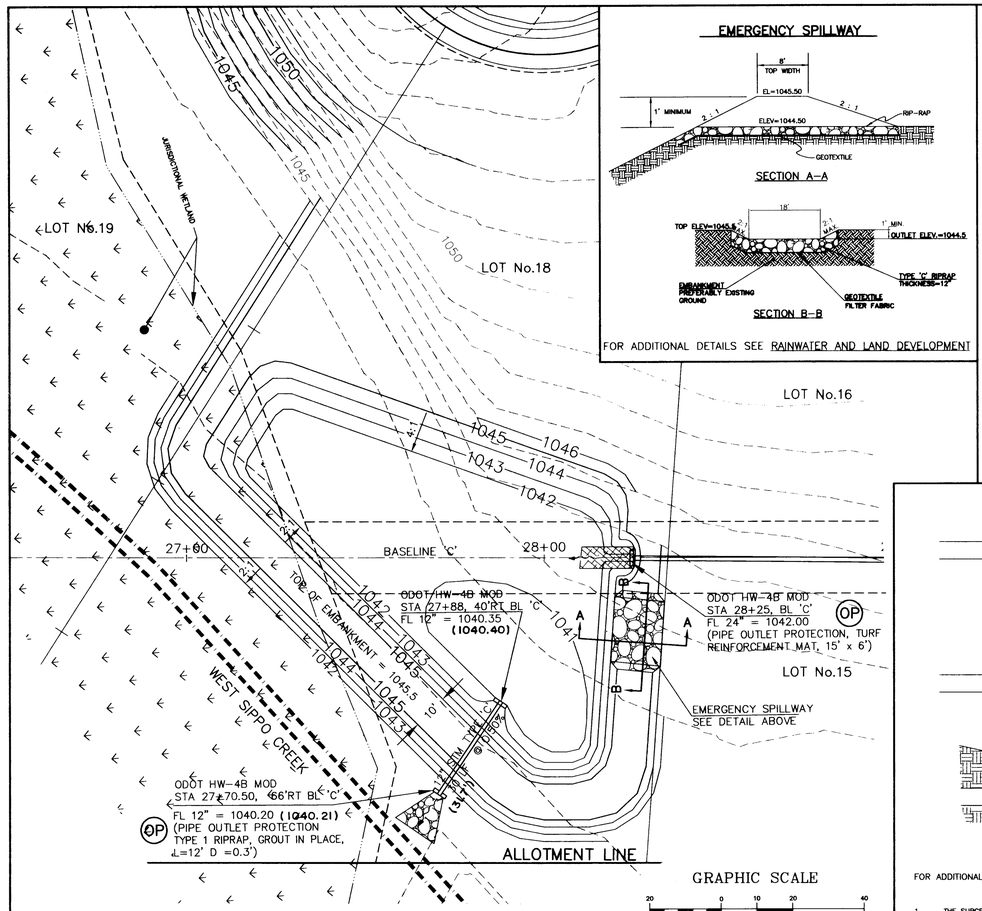
BENCHMARK 'A'	BENCHMARK 'B'
COTTON GIN GEAR SPIKE SET 12" UP THE EAST SIDE OF POWER POLE (NO NUMBER) – 2nd POLE NORTH OF THE NORTH PROPERTY LINE OF BEECH GROVE ELEM. SCHOOL LOC. ON THE WEST SIDE OF MANCHESTER AVE. (SR 93). **ELEV. = 1068.66**	COTTON GIN SPIKE SET IN NORTHERN ROOT OF A 24" OAK TREE NEAR OR ON THE NORTH PROPERTY LINE OF BEECH GROVE ELEM. SCHOOL – 90'+/– NORTH OF THE NE CORNER OF THE SCHOOL BUILDING. **ELEV. = 1069.97**

NOTES:

1. SIDEWALKS NOT REPRESENTED ON PLAN FOR CLARITY. SEE INTERSECTION DETAILS (SHEET 7) FOR HANDICAP RAMPS.

2. CONTRACTOR MUST CONSTRUCT ALL WATER LINES AND WATER SERVICE LINES SUCH THAT A MINIMUM OF 10' HORIZONTAL CLEARANCE, 18" VERTICAL CLEARANCE ABOVE SANITARY SEWER AND A MINIMUM OF 12" CLEARANCE BELOW STORM SEWER IS MAINTAINED.

3. DOWNSPOUTS FROM LOTS 18, 19 & 20 SHALL DISCHARGE TO REAR OF LOTS. THIS DISCHARGE SHALL CONSIST OF ONLY CLEAN STORM WATER CONNECTIONS (ROOF DRAINS & FOOTER DRAINS). THE OUTLETS SHALL BE PROTECTED BY A 3'x2' STRIP OF SLOPE STABILIZATION FABRIC (BON TERRA S1 OR APPROVED EQUAL) INSTALLED IN ACCORDANCE TO MANUFACTURER.

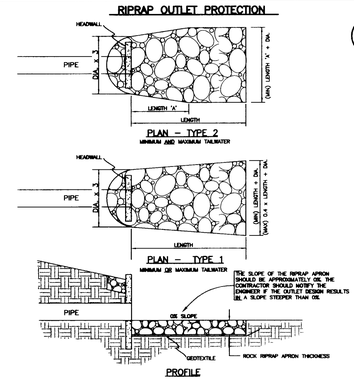


DETENTION BASIN

EMERGENCY SPILLWAY

FOR ADDITIONAL DETAILS SEE RAINWATER AND LAND DEVELOPMENT

RIPRAP OUTLET PROTECTION

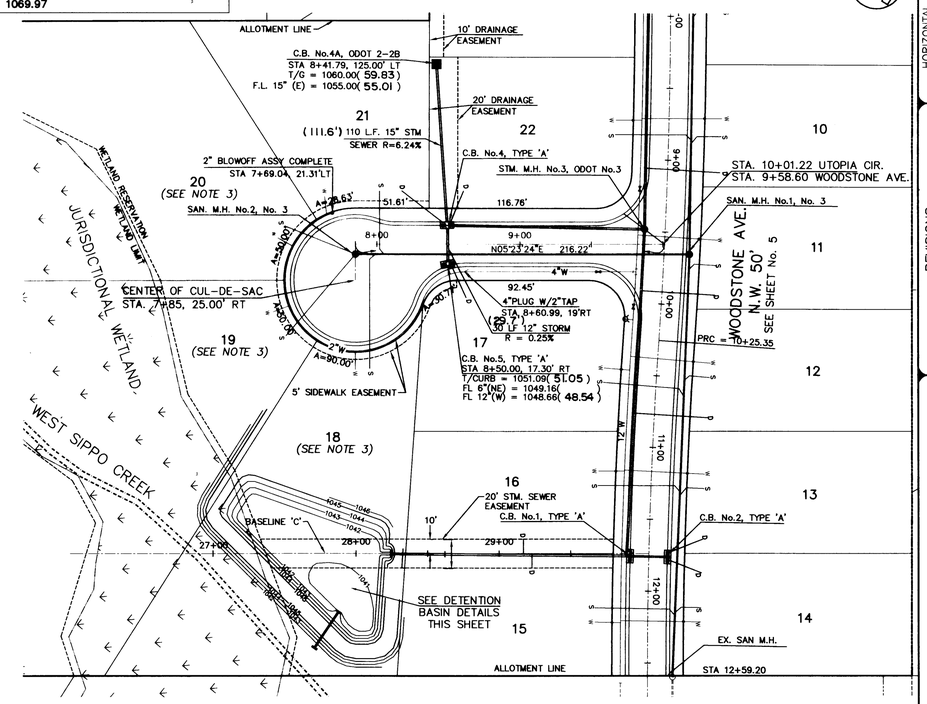


FOR ADDITIONAL DETAILS SEE RAINWATER AND LAND DEVELOPMENT

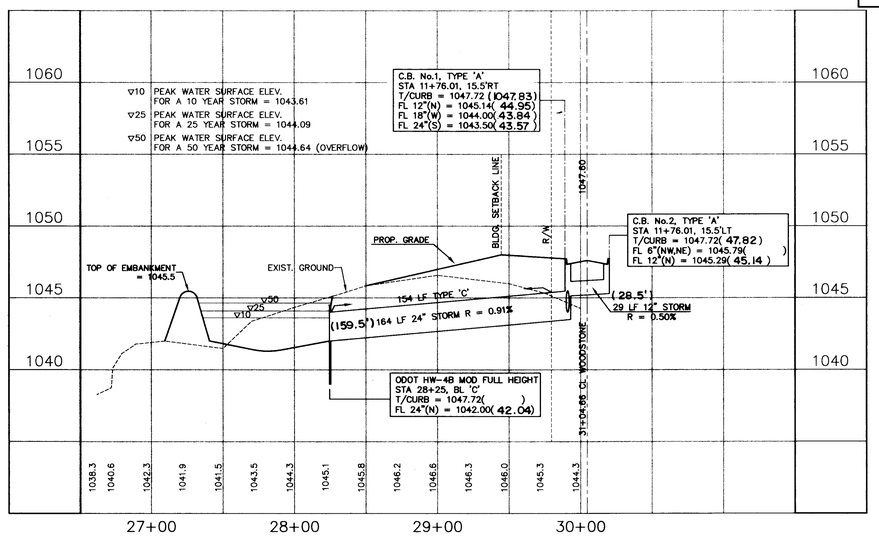
SPECIFICATIONS

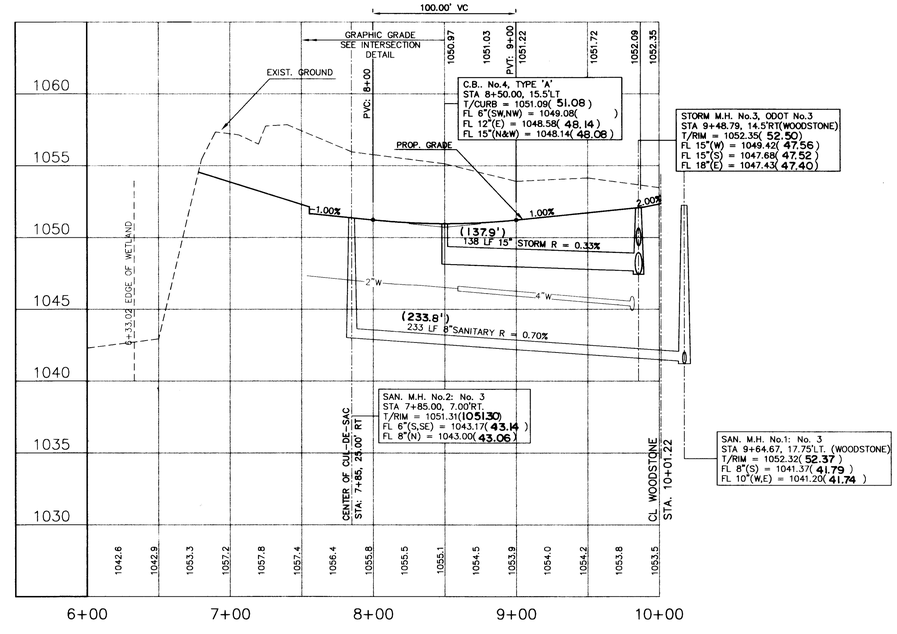
1. THE SUBGRADE FOR THE FILTER AND RIPRAP SHALL BE PREPARED TO THE REQUIRED LINES AND GRADES AS SHOWN ON THE CONSTRUCTION DRAWINGS FOR THE PROJECT.
2. THE RIPRAP SHALL CONFORM TO THE TYPE AND DIMENSIONS SHOWN ON THE PLAN.
3. GEOTEXTILE SHALL BE WOVEN OR NONWOVEN MONOFILAMENT YARN AND SHALL MEET THE FOLLOWING:
   - THICKNESS 20–60 MILS
   - GRAB STRENGTH 90–120 LB.
   - ASTM D–1777 AND ASTM D–1682
4. RIPRAP MAY BE PLACED BY EQUIPMENT BUT SHALL BE PLACED IN A MANNER TO PREVENT DAMAGE TO THE GEOTEXTILE.

TYPE OF ROCK OR RIPRAP	SIZE OF ROCK		THICKNESS
	50% BY WEIGHT	85% BY WEIGHT	
TYPE D	>6"	3–12"	12"
TYPE C	>12"	6–18"	18"
TYPE B	>18"	12–24"	30"
TYPE A	>24"	18–30"	36"



UTOPIA CIRCLE N.W.





UTOPIA CIRCLE N.W. & BASELINE 'C' & DETENTION BASIN DETAILS

HORIZONTAL SCALE 0 25 50 100 SCALE: 1"=50'

VERTICAL SCALE 0 2.5 5 10 SCALE: 1"=5'

REVISIONS

1	RD/SED C.L.	BRB	8/19/02
2	COMMENTS PER CONSUMERS WATER	BRB	5/16/02
3	COMMENTS PER CITY OF MASSILLON	BRB	5/1/02

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PLAN AND PROFILE SHEET & DETENTION BASIN
WESTBROOK ESTATES – WEST
FOR: JACOB GLICK

DRAWN BY: C.H.B.
CHECKED BY: B.D.B.
FIELD BOOK No. 549
DATE 3/4/02
SHEET 6 OF 8
PROJ. #: 01142

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WESTBROOK ESTATES - WEST

OUTLOT 772 IN THE CITY OF MASSILLON, SITUATED IN PART OF THE N.W. QUARTER OF SECTION 10, TOWNSHIP-12 (TUSCARAWAS TWP.), RANGE-10 STARK COUNTY, OHIO

FOR: JACOB GLICK

OWNER AND DEVELOPER

JACOB GLICK
4600 LINCOLN WAY WEST
MASSILLON, OHIO 44647
CONTACT: JACOB GLICK
PHONE: (330) 832-7897

PLAN APPROVALS

APPROVED BY THE CITY OF MASSILLON ENGINEER
THIS 14th DAY OF May, 2002.

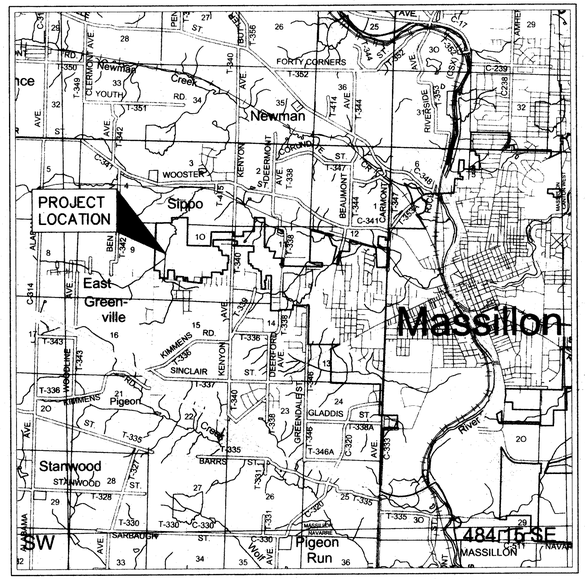
CITY OF MASSILLON ENGINEER

WATERLINE IS APPROVED BY CONSUMERS OHIO WATER COMPANY
THIS 16 DAY OF MAY, 2002

Donald Dryden
CONSUMERS OHIO WATER COMPANY

SANITARY SEWER PERMIT-TO-INSTALL HAS BEEN RECEIVED FROM THE OhioEPA
THIS ___DAY OF_____, 20___.

WATERLINE PERMIT-TO-INSTALL HAS BEEN RECEIVED FROM THE OhioEPA
THIS ___DAY OF _____, 20___.



LOCATION MAP

CONVENTIONAL SYMBOLS

- (D#) DENOTES STORM STRUCTURE NUMBER
- PD# DENOTES STORM PIPE NUMBER
- D DENOTES 6" STORM LATERAL, COMPLETE
- (S#) DENOTES SANITARY STRUCTURE NUMBER
- PS# DENOTES SANITARY PIPE NUMBER
- S DENOTES 6" SANITARY LATERAL, COMPLETE
- ——— DENOTES PROPOSED WATERLINE
- W DENOTES 1" WATER SERVICE AND CURB BOX COMPLETE
- —W— EXISTING WATERLINE
- —STM— EXISTING STORM SEWER
- —SAN— EXISTING SANITARY SEWER
- —G—G— EXISTING GAS LINE
- (100.00) DENOTES "AS-BUILT" DIMENSION OR ELEVATION

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

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OHIO ENVIRONMENTAL PROTECTION AGENCY
AS EVIDENCED BY COPY OF LETTER OF APPROVAL HERETO ATTACHED

ENGINEERS ESTIMATE		
TOTAL L.F. ROADWAY	1,504	$173,162.02
TOTAL L.F. SANITARY SEWER	1,561	$114,283.20
TOTAL L.F. STORM SEWER	1,890	$ 93,295.00

02-16684
Amount 942.84 Date 6/12/02
Check # 557 Date 6/6/02

SUPPLEMENTAL SPECIFICATIONS
X
X
X
X
X
X
X
X
X
X

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS				
CITY OF MASSILLON	O.D.O.T. STANDARD DRAWING LIST			CONSUMERS OHIO WATER COMPANY
DETAIL TITLE	TITLE	DRAWING No.	DATA	DETAIL TITLE
TRENCH DETAIL	HEADWALLS	HW-4B (MOD. FULL HT.)	4/1/80	TYPICAL BLOWOFF DETAIL
	MANHOLE (M.H. No.3)	MH-1.2	7/20/01	LONG SERVICE LINE TAP
	CATCH BASIN 2-2B	CB-1.1	7/20/01	SHORT SERVICE LINE TAP
				CONCRETE THRUST BLOCKING DETAIL
				TYP. FIRE HYDRANT ASSY. TYPE 1

INDEX OF SHEETS

1. TITLE SHEET
2. PROJECT SCHEMATIC
3. TYPICAL SECTIONS AND QUANTITIES
4. GENERAL NOTES
5. WOODSTONE AVE. - PLAN AND PROFILE
6. UTOPIA CIRCLE - PLAN AND PROFILE and DETENTION BASIN
7. INTERSECTION DETAILS
8. GRADING PLAN

1E-4E. STORMWATER POLLUTION PREVENTION PLANS

RECEIVED
JUN 12 2002
OHIO EPA NEDO

TITLE SHEET

REVISIONS
1. COMMENTS PER CITY OF MASSILLON BRB 5/1/02
2.
3.
4.
5.
6.

BRYAN J. ASHMAN
JEROLD E. GEIB

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STATE OF OHIO
BRYAN J. ASHMAN
E-043804
REGISTERED
PROFESSIONAL ENGINEER

TITLE SHEET
WESTBROOK ESTATES - WEST
FOR: JACOB GLICK

DRAWN BY: C.H.B.
CHECKED BY: B.D.B.
FIELD BOOK No. 549
DATE 3/4/02
SHEET 1 OF 8
PROJ.# 01142

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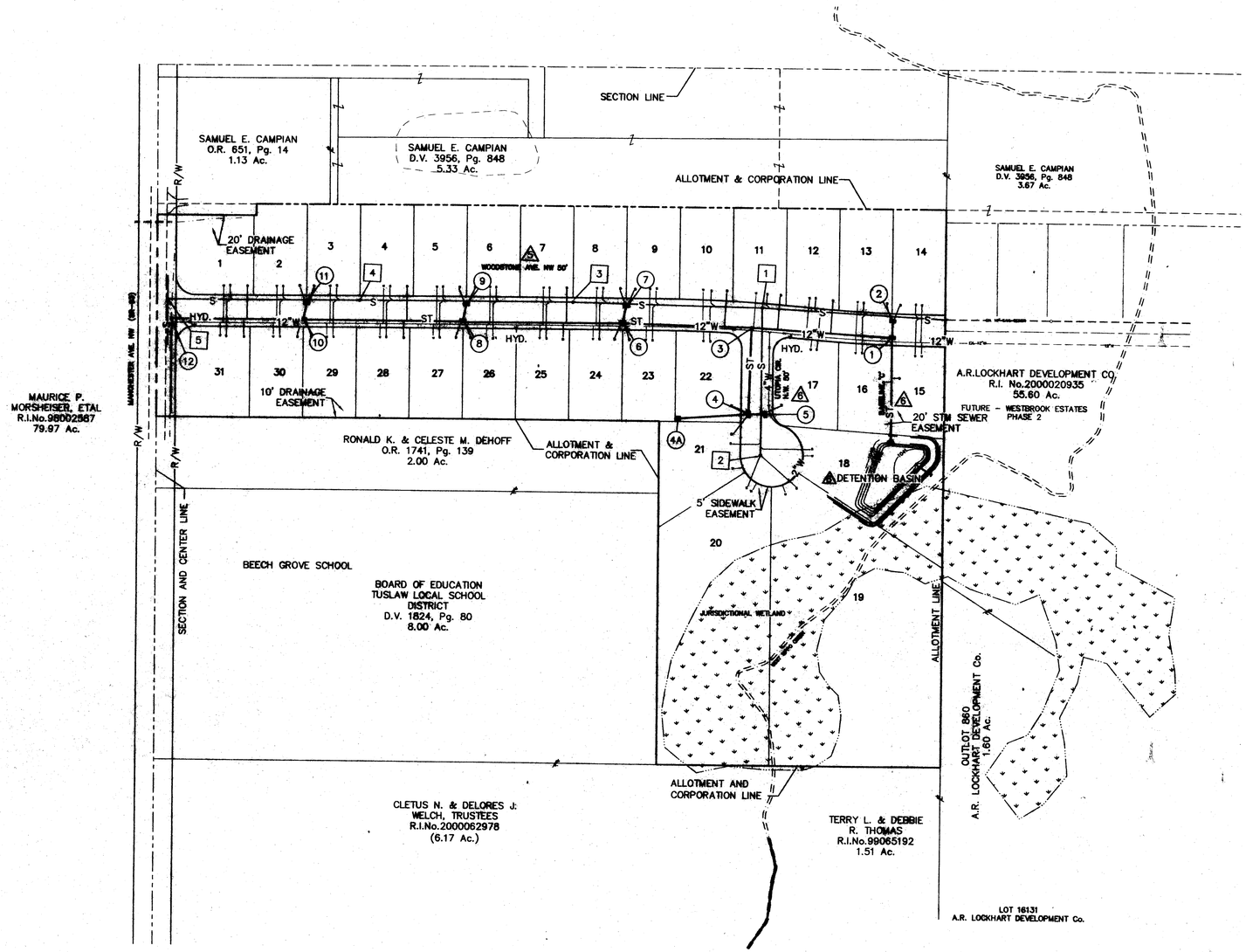

LEGEND

- S# SANITARY STRUCTURE NUMBER
- D# STORM STRUCTURE NUMBER
- # REFERENCE SHEET NUMBER

SEWERAGE APPROVED
OHIO ENVIRONMENTAL PROTECTION AGENCY
AS EVIDENCED BY COPY OF LETTER OF APPROVAL HERETO ATTACHED

HORIZONTAL SCALE
0 50 100 200
SCALE: 1" = 100'

REVISIONS

4	COMMENTS PER CONSUMERS WATER	BDB	5/16/02
3	COMMENTS PER CITY OF MASSILLON	BBB	5/1/02

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PROJECT SCHEMATIC
WESTBROOK ESTATES - WEST
FOR: JACOB GLICK

DRAWN BY: C.H.B.
CHECKED BY: B.D.B.
FIELD BOOK No. 549
DATE 3/4/02
SHEET 2 OF 8
PROJ # 01142

PROJECT SCHEMATIC

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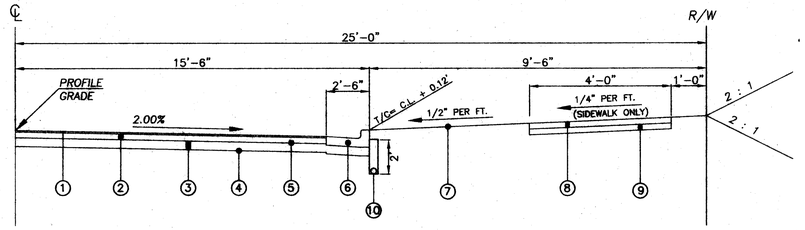
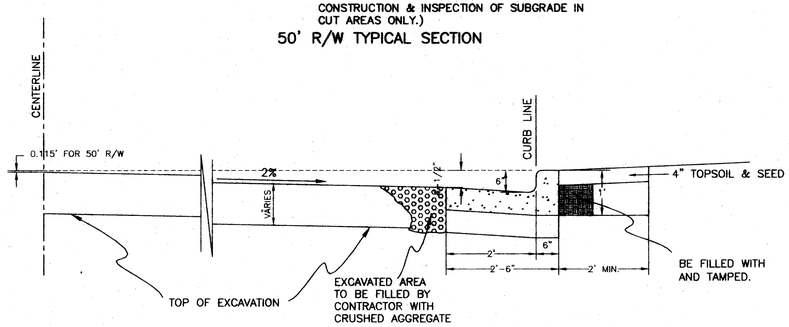


1. ITEM 404 1 ½" ASPHALT CONCRETE SURFACE
2. ITEM 301 4" BITUMINOUS AGGREGATE BASE
3. ITEM 304 6" AGGREGATE BASE
4. ITEM 203 COMPACTED SUBGRADE
5. ITEM 408 BITUMINOUS PRIME COAT
6. ITEM 609 MASSILLON STANDARD CURB AND GUTTER
7. ITEM 659 SEEDING AND MULCHING
8. ITEM 608 4" CONCRETE SIDEWALK (6" @ DRIVES)
9. ITEM 304 4" AGGREGATE BASE
10. ITEM 605 4" UNDERDRAIN (INSTALL ONLY IF DIRECTED BY CITY OF MASSILLON ENGINEER DURING CONSTRUCTION & INSPECTION OF SUBGRADE IN CUT AREAS ONLY.)

50' R/W TYPICAL SECTION



MASSILLON STANDARD CURB AND GUTTER DETAIL

NOTES

GRATE
FOR A "SINGLE" STRUCTURE, GRATE, FRAME AND BACK SHALL BE EAST JORDAN IRON WORKS CATALOG No. 7030 CURB INLET FRAME, GRATE AND BACK (OR EQUIVALENT). GRATE SHALL BE TYPE M2 AND BACK SHALL BE TYPE T1.

FOR A "DOUBLE" STRUCTURE, GRATE, FRAME AND BACK SHALL BE EAST JORDAN IRON WORKS CATALOG No. 7031 DOUBLE INLET FRAME, GRATE AND CURB BOX (OR EQUIVALENT). GRATE SHALL BE TYPE M2 AND BACK SHALL BE TYPE T1.

APPROVED EQUIVALENT
TYPE "A": NEENAH FOUNDRY CATALOG No. R-3246 CURB INLET FRAME, GRATE, CURB BOX. GRATE SHALL BE TYPE "C" AND CURB BOX SHALL HAVE A 2" RADIUS CURB FACE.
TYPE "A" DOUBLE: NEENAH FOUNDRY CATALOG No. R-3295-A DOUBLE UNIT INLET FRAME, GRATE AND CURB BOX. GRATE SHALL BE TYPE "C" AND CURB BOX SHALL HAVE A 2" RADIUS CURB FACE.

GRATES SHALL BE BICYCLE SAFE.

CASTINGS
THE DESIGN SHALL BE ESSENTIALLY THE SAME AND EQUALLY AS STRONG AS THE SPECIFIED CASTINGS. THE MINIMUM COMBINED WEIGHT OF THE FRAME, GRATE AND BACK SHALL BE 400 LBS.

BEARING AREAS
THE FRAME AND GRATE SHALL BE SO FITTED AND FINISHED AS TO PROVIDE A FIRM AND EVEN SEAT. NO PROJECTIONS SHALL EXIST ON BEARING AREAS OF EITHER CASTING AND THE GRATE SHALL SEAT WITHOUT ROCKING.

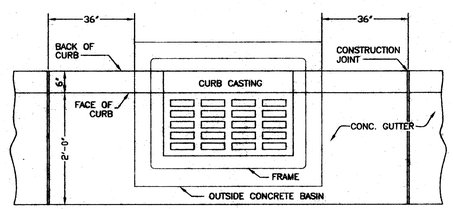
WALLS
WHEN USED IN PLACE OF CONCRETE, BRICK SIDE WALLS SHALL BE 8" NOMINAL THICKNESS WITH ½ INCH CEMENT MORTAR PLASTERED INSIDE AND OUT.

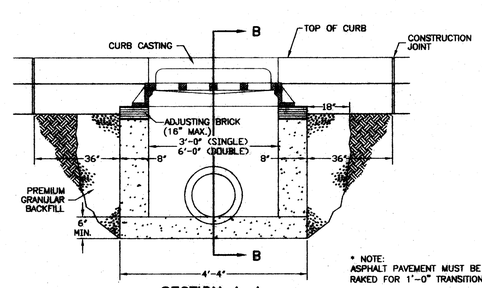
PRECAST CONSTRUCTION
CONCRETE SHALL MEET THE REQUIREMENTS OF CMS 706.13 WITH A MINIMUM OF 4% ENTRAINED AIR IN THE HARDENED CONCRETE. PRECAST WALLS SHALL HAVE A MINIMUM THICKNESS OF 8" AND REINFORCING SHALL BE SUFFICIENT TO PERMIT SHIPPING AND PLACEMENT WITHOUT DAMAGE.

OPENINGS
PIPE OPENINGS SHALL BE THE O.D. OF THE PIPE BEING SUPPLIED PLUS 2" WHEN FABRICATED OR FIELD CUT. THE INTERSTITIAL SPACE SHALL BE FILLED WITH GROUT PER CMS 601.

BLOCKOUT
PORTION BLOCKED OUT OF THE PAVEMENT SHALL BE PLACED AFTER THE CASTING HAS BEEN SET. PAYMENT SHALL BE INCLUDED AS PART OF THE ASPHALT PRICE.

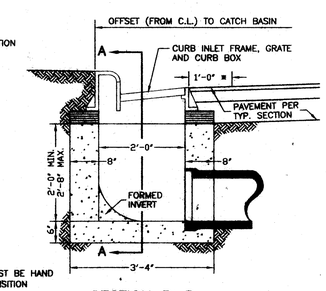
PAYMENT
ALL MATERIALS AND LABOR, INCLUDING EXCAVATION AND BACKFILLING, SHALL BE PAID FOR UNDER ITEM 604 – CATCH BASIN, TYPE "A" OR CATCH BASIN, TYPE "A" DOUBLE.





SECTION A–A

* NOTE:
ASPHALT PAVEMENT MUST BE HAND RAKED FOR 1'-0" TRANSITION



SECTION B–B

TYPE "A" CATCH BASIN

ITEM	DESCRIPTION	UNIT	QTY
ROADWAY CONSTRUCTION			
203	ROADWAY EMBANKMENT	CY	1310
203	ROADWAY EXCAVATION	CY	2780
203	SITE EMBANKMENT (INCLUDING DETENTION BASIN)	CY	3690
203	SITE EXCAVATION (INCLUDING DETENTION BASIN)	CY	2220
203	SUBGRADE COMPACTION	SY	5577
203	INTERCEPTION SWALE, SEE SHEET 8	LUMP	1
203	TRENCHING FOR UTILITIES	LF	3008
301	4" BITUMINOUS AGGREGATE BASE (50' R/W)	CY	527
304	6" AGGREGATE BASE	CY	930
304	4" AGGREGATE BASE	CY	146
404	1.5" ASPHALT CONCRETE SURFACE COURSE	CY	196
408	BITUMINOUS PRIME COAT @ 0.4 GAL/SY	GAL	1939
604	STD COUNTY MONUMENTS	EA	4
608	CONCRETE SIDEWALKS (4' WIDE); BY LOT OWNER	SF	11951
608	CONCRETE CURB RAMPS; BY LOT OWNER	EA	4
609	CONCRETE CURB AND GUTTER (MASSILLON STD.)	LF	3008
659	SEEDING AND MULCHING	SY	1716
WATERLINE			
638	1" COPPER TYPE K SERVICE LINE W/CURB BOX COMPLETE	EA	31
638	12" DCIP (PC350 W/ POLYWRAP)	LF	1232
638	12" GATE VALVE W/BOX	EA	3
638	12" PLUG & MARKER	EA	1
638	12"x4" MJ TEE	EA	1
638	12" PLUG & BLOWOFF ASSY. REMOVED	EA	1
638	2" BLOWOFF ASSY COMPLETE	EA	1
638	2" HDPE TUBING W/ MARKING TAPE & TRACER WIRE	LF	213
638	4" DCIP (CL 52)	LF	123
638	4" GATE VALVE W/BOX	EA	1
638	4" PLUG W/ 2" TAP	EA	1
638	HYDRANT ASSEMBLY COMPLETE (TYPE 1)	EA	3
SANITARY SEWER			
603	8" SANITARY SEWER (EXCLUDING PIPE INSIDE MANHOLES)	LF	299
603	10" SANITARY SEWER (EXCLUDING PIPE INSIDE MANHOLES)	LF	1262
603	6" SERVICE SEWER	LF	1169
604	8" PLUG AND MARKER	EA	2
603	8"x6" Y-BRANCH OR T-BRANCH	EA	2
14	CONNECTION INTO EXISTING SEWER	EA	1
603	10"x6" Y-BRANCH OR T-BRANCH	EA	27
604	(5) MANHOLES : ODOT MH No.3	VF	51
STORM SEWER			
207	EROSION CONTROL PER SWP3	LUMP	1
603	12" STORM SEWER: TYPE B	LF	506
603	12" STORM SEWER: TYPE C	LF	30
603	15" STORM SEWER: TYPE B	LF	967
603	18" STORM SEWER: TYPE B	LF	227
603	24" STORM SEWER: TYPE B	LF	10
603	24" STORM SEWER: TYPE C	LF	150
603	6" STORM LATERALS AND FITTINGS	LF	715
603	ADJUST EXISTING CULVERTS PER SHEET 8, NOTE 7	LUMP	1
604	CATCH BASIN: ODOT 2-2B	EA	1
604	CATCH BASIN: TYPE A	EA	10
604	HEADWALL (ODOT HW-4B MOD FULL HT) - 12" PIPE	EA	2
604	HEADWALL (ODOT HW-4B MOD FULL HT) - 24" PIPE	EA	1
604	STORM MANHOLE: ODOT MH No.3	EA	2

SEWERAGE APPROVED
OHIO ENVIRONMENTAL PROTECTION AGENCY
AS EVIDENCED BY COPY OF LETTER OF APPROVAL HERETO ATTACHED

ESTIMATED QUANTITIES NOTES

1.) ITEM NUMBERS SHOWN IN THE QUANTITY TABLE REFER TO SPECIFICATION ITEMS IN THE MOST RECENT EDITION OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION "CONSTRUCTION AND MATERIAL SPECIFICATIONS". THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING THE PROPOSED WORK IN ACCORDANCE WITH THESE REFERENCED SPECIFICATIONS.

TYPICAL SECTIONS, QUANTITIES AND MISCELLANEOUS DETAILS

REVISIONS

4		
3		
2		
1	COMMENTS PER CONSUMERS WATER	5/16/02 BDB
0	COMMENTS PER CITY OF MASSILLON	5/1/02 BDB

BRYAN J. ASHMAN
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TYPICAL SECTIONS, QUANTITIES AND MISCELLANEOUS DETAILS

WESTBROOK ESTATES – WEST

FOR: JACOB GLICK

DRAWN BY: C.H.B.
CHECKED BY: B.D.B.
FIELD BOOK No. 549
DATE 3/4/02
SHEET 3 OF 8
PROJ.# 01142

H:\Land Projects R2\01142\dwg\01142.DWG 05/16/2002 11:38:08 AM EDT

CITY OF MASSILLON GENERAL NOTES

1.) CONTRACTOR SHALL CHECK DETAIL DRAWINGS FOR MINIMUM GRADE AND BACKFILL REQUIREMENTS.

2.) ALL COMBINATION CONCRETE CURB AND GUTTER TO BE MASSILLON STANDARD EXCEPT WHERE VARIATIONS ARE TO BE EXTENDED OR MET – SEE SPECIFICATION BOOK AND PLANS.

3.) EXCAVATION FOR CONCRETE CURB AND GUTTER SHALL BE INCLUDED IN THE COST PER LINEAL FOOT OF SAID CURB AND GUTTER.

4.) ALL CATCH BASINS AND MANHOLES TO BE ADJUSTED TO GRADE WHERE NECESSARY.

5.) ALL CONCRETE TO BE 1:2: 4–6 BAG MIX. 28 DAY – 3000 PSI COMPRESSIVE STRENGTH: MAX. SLUMP TO BE 4".

6.) CONTRACTOR SHALL PAY CITY OF MASSILLON AT THE RATE OF TIME AND ONE–HALF OF REGULAR RATE AFTER 4:30 P.M. MONDAY THROUGH FRIDAY. SATURDAYS ALL DAY AT TIME AND ONE–HALF.

7.) ALL MATERIALS USED WILL BE NEW – NO SALVAGED MATERIAL WILL BE ACCEPTED EXCEPT CASINGS, AS APPROVED.

8.) IF CONTRACTOR EXCAVATES DEEPER THAN NECESSARY FOR CURB AND GUTTER, CONTRACTOR WILL FURNISH ODOT 304 AGGREGATE AND TAMP BEFORE CURB AND GUTTER IS CONSTRUCTED.

9.) IF SUBGRADE IS UNSUITABLE, CONTRACTOR WILL EXCAVATE AND REPLACE SUCH MATERIAL WITH 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% LABORATORY DRY WEIGHT BEFORE ADDITIONAL LAYERS ARE ADDED. CONTRACTOR WILL BE PAID FOR EXTRA GRAVEL AND EXCAVATION. THIS COMPACTION TO BE DONE BEFORE FORMS ARE PLACED.

10.) ALL EXTRA PAY ITEMS WILL HAVE THE APPROVAL OF THE BOARD OF CONTROL BEFORE EXTRA ITEMS ARE INSTALLED.

11.) CONTRACTOR TO BACKFILL CURB IMMEDIATELY AFTER CURB HAS BEEN IN PLACE FOR 48 HOURS.

12.) CONTRACTOR WILL NOTIFY ENGINEER WHEN HE IS IN NEED OF CONSTRUCTION STAKES AND THIS OFFICE WILL COMPLY WITHIN A PERIOD OF 48 HOURS.

13.) ALL STORM SEWER PIPES WITHIN PAVEMENT LIMITS SHALL BE REINFORCED CONCRETE PIPE (ODOT 706.02) AND SHALL BE TYPE 'B' CONDUIT IN ACCORDANCE WITH ODOT 603 CLASS 'B' BEDDING AND GRANULAR BACKFILL. ALL STORM SEWER OUTSIDE PAVEMENT LIMITS SHALL BE SMOOTH LINED CORRUGATED POLYETHYLENE (ODOT 944) OR REINFORCED CONCRETE PIPE (ODOT 706.02) AND SHALL BE TYPE 'C' CONDUIT IN ACCORDANCE WITH ODOT 603 WITH CLASS 'C' BEDDING AND SUITABLE SOIL BACKFILL.

14.) DOWNSPOUT HEADERS SHALL BE 6" PVC (SDR 21) PIPE (UNLESS OTHERWISE NOTED ON THE PLANS) AND SHALL BE DIRECTLY CONNECTED TO THE STORM SEWER WITH APPROVED TEE OR SADDLE CONNECTIONS. HEADERS SHALL EXTEND 12' INTO THE LOTS OR BEYOND FURTHEST UTILITY, WHICHEVER IS GREATER.

15.) CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES BEFORE ANY WORK IS BEGUN. THE CITY OF MASSILLON IS NOT RESPONSIBLE FOR ANY LOST TIME DUE TO UTILITY RELOCATION.

16.) MANHOLES AND CATCH BASINS SHALL BE CONSTRUCTED IN CONFORMANCE WITH MASSILLON CITY STANDARDS.

17.) CONTRACTOR SHALL CONTACT THE CITY OF MASSILLON ENGINEERING DEPARTMENT (GREG McCUE) AT (330)830–1722 AT LEAST 2 DAYS PRIOR TO THE INITIATION OF CONSTRUCTION TO SCHEDULE A PRE–CONSTRUCTION MEETING.

18.) STREET LIGHTING IS REQUIRED. DEVELOPER SHALL COORDINATE WITH ELECTRIC UTILITY COMPANY FOR POLE LOCATION AND TYPE. THE DEVELOPER SHALL INSTALL, AT HIS COST, STREET SIGNS REPRESENTING THE NAMES OF ALL STREETS AT ALL INTERSECTIONS. DEVELOPER ALSO RESPONSIBLE FOR STOP SIGNS AND DIRECTIONAL SIGNS AS NECESSARY. ALL SIGNS SHALL CONFORM WITH CITY OF MASSILLON REGULATIONS.

19.) WHEN SPECIFIED ON PLANS OR SPECIFICATIONS, CONTINGENCY ITEMS ARE TO BE PERFORMED ONLY UNDER THE DIRECTION OF THE CITY ENGINEER. THE CONTRACTOR SHALL NOT ORDER ANY CONTINGENCY MATERIAL OR PERFORM ANY WORK UNTIL DIRECTED BY THE ENGINEER. THE ACTUAL WORK LOCATION AND QUANTITIES FOR SUCH ITEMS SHALL BE DOCUMENTED BY THE CONTRACTOR AND THE ENGINEER. THE DEVELOPER IS RESPONSIBLE FOR THE COST OF SUCH ITEMS AND SHALL NOT BE PART OF THE BID DOCUMENT.

20a.) BEFORE ACCEPTANCE OF THE ROAD PAVEMENT SUBGRADES BY THE CITY OF MASSILLON ENGINEER, SUBGRADES SHALL BE TESTED IN ACCORDANCE WITH ODOT ITEM 203.13. IN LIEU OF SUBGRADE TESTING PER ITEM 203.13, PROOF ROLLING IN ACCORDANCE WITH ODOT ITEM 203.14 MAY BE SUBSTITUTED.

20b.) WHEREVER UNSTABLE SOIL SUBGRADE CONDITIONS ARE ENCOUNTERED THAT ARE UNSUITABLE PER ODOT 203 SPECIFICATIONS AND/OR DETERMINED BY THE CITY OF MASSILLON ENGINEERING DEPARTMENT, ADDITIONAL EXCAVATION AND SUBSEQUENT BACKFILLING SHALL BE DONE BY THE DEVELOPER'S CONTRACTOR AND PAID FOR BY THE DEVELOPER UNTIL SUCH CONDITIONS ARE CORRECTED AND APPROVED BY THE CITY OF MASSILLON ENGINEER.

20c.) SUBGRADE TESTING OR PROOF ROLLING MUST BE WITNESSED AND APPROVED BY THE CITY OF MASSILLON ENGINEERING DEPARTMENT PRIOR TO THE PLACEMENT OF THE PAVEMENT SUBBASE MATERIAL. CONTRACTOR SHALL CONTACT THE CITY ENGINEERING DEPARTMENT AT (330) 830–1722 TO SCHEDULE.

SANITARY SEWER NOTES

1.) SANITARY SEWERS AND APPURTENANCES SHALL BE CONSTRUCTED ACCORDING TO CITY OF MASSILLON ENGINEERING DEPARTMENT SPECIFICATIONS AND DETAILS IN EFFECT AT TIME OF CONSTRUCTION.

2.) ROOF DRAINS, FOUNDATION DRAINS AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.

3.) THE CONTRACTOR SHALL NOTIFY ALL PROPERTY OWNERS ALONG THE ROUTE OF THE SANITARY SEWER AT LEAST THREE (3) DAYS PRIOR TO START OF CONSTRUCTION.

4.) THE CONTRACTOR SHALL ALERT THE UTILITIES PROTECTION SERVICE AT LEAST 48 HOURS PRIOR TO START OF CONSTRUCTION.

5.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY MAINTAINING EXISTING SANITARY FLOW DURING THE CONSTRUCTION AND TESTING OF THE PROPOSED IMPROVEMENTS. THE CONTRACTOR'S METHODS FOR MAINTAINING FLOW MUST BE APPROVED BY THE CITY OF MASSILLON ENGINEERING DEPARTMENT AT THE PRE–CONSTRUCTION MEETING.

6.) ALL ROUGH GRADING TO WITHIN SIX (6) INCHES OF FINISHED GRADE SHALL BE COMPLETED WITHIN THE RIGHT–OF–WAY AND EASEMENTS PRIOR TO SANITARY SEWER CONSTRUCTION.

7.) BULKHEADS SHALL BE ERECTED IN EXISTING MANHOLES WHERE TAPS FOR NEW MAINLINE SEWERS ARE MADE AND SHALL REMAIN IN PLACE UNTIL THE NEW SEWERS ARE COMPLETE, TESTED AND APPROVED. IN CASES WHERE A BULKHEAD WOULD INTERRUPT THE FLOW FROM EXISTING SERVICE CONNECTIONS, THE BULKHEAD SHALL BE PLACED IN THE FIRST NEW MANHOLE UPSTREAM OF THE EXISTING MANHOLE.

8.) MINIMUM VERTICAL CLEARANCE BETWEEN SANITARY SEWER AND WATERLINE SHALL BE 18 INCHES. MINIMUM HORIZONTAL SEPARATION SHALL BE 10 FT.

9.) SANITARY SEWER SERVICE LATERALS SHALL BE 6–INCH DIAMETER AND BE LAID AT NO LESS THAN 1.0% GRADE.

10.) FOR NEW SUBDIVISION CONSTRUCTION, SEWER SERVICE LATERALS SHALL EXTEND 12' INTO THE LOTS OR BEYOND FURTHEST UTILITY, WHICHEVER IS GREATER, WHEN THE MAIN SEWER IS IN A STREET RIGHT–OF–WAY, AND SHALL TERMINATE AT THE EASEMENT LINE WHEN THE MAIN SEWER IS IN AN EASEMENT. FOR OTHER SEWER EXTENSIONS, SEWER SERVICE LATERALS SHALL TERMINATE AT THE RIGHT–OF –WAY LINE OR THE EASEMENT LINE, WHICHEVER IS APPLICABLE.

11.) SERVICE STACKS SHALL BE DUCTILE IRON PIPE REGARDLESS OF MAIN SEWER MATERIAL. A CAST IRON TEE SHALL BE INSTALLED IN THE MAIN SEWER. CONCRETE ENCASEMENT WILL NOT BE REQUIRED.

12.) MINIMUM COVER OVER SANITARY SEWER SHALL BE 4 FT.

13.) ACCEPTABLE SANITARY SEWER PIPE MATERIALS ARE AS FOLLOWS:

	SPECIFICATIONS		
MATERIAL DESCRIPTION	PIPE	JOINT	INSTALLATION
PVC SMOOTH EXTERIOR:	ASTM D–3034	ASTM D–3212	ASTM D–2321
PVC: CLOSED PROFILE (DUAL WALL)	ASTM F–794	ASTM D–3212	ASTM D–2321
PVC: CORRUGATED (DUAL WALL)			
PVC: RIBBED (OPEN PROFILE)			
PVC CORRUGATED EXTERIOR	ASTM F–949	ASTM D–3212	ASTM D–2321
VCP EXTRA STRENGTH	ASTM C–700	ASTM C–425	ASTM C–12
DCIP (CLASS 52)	AWWA C–151	AWWA C–110/C–111	AWWA C–151
ABS COMPOSITE	ASTM D–2680	ASTM D–2235	ASTM D–2680
PVC COMPOSITE	ASTM D–2680	ASTM D–2564	ASTM D–2680

14.) ALL SANITARY SEWERS, 8–INCH DIAMETER AND LARGER, MUST PASS AN INTERNAL TELEVISION INSPECTION. THE CONTRACTOR SHALL PROVIDE COMPLETE INTERNAL INSPECTION VIDEOTAPE TO THE CITY OF MASSILLON ENGINEERING DEPARTMENT. THE VIDEOTAPING PROCEDURE SHALL BE IN ACCORDANCE WITH CITY OF MASSILLON ENGINEERING DEPARTMENT SPECIFICATIONS.

15.) 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 ENGINEERING DEPARTMENT SPECIFICATIONS. THE ALLOWABLE DEFLECTION RATE SHALL NOT EXCEED FIVE (5%) PERCENT. TESTING SHALL BE IN ACCORDANCE WITH ASTM D–3034.

16.) ALL SANITARY SEWERS MUST PASS A LOW PRESSURE AIR TEST, WHICH SHALL BE CONDUCTED IN ACCORDANCE WITH ASTM F–1417 (PLASTIC PIPE) OR ASTM C–828 (CLAY PIPE). THE MAXIMUM ALLOWABLE TEST LEAKAGE SHALL BE 100 GAL/INCH OF DIAMETER/MILE/DAY.

17.) 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 C–1244.

18.) CONNECTIONS TO EXISTING MANHOLES SHALL BE CORE DRILLED, WITH BENCHES AND CHANNELS FORMED AND REPAIRED AS NECESSARY.

19.) ANY MANHOLE DROP ATTACHMENTS SHALL BE "OUTSIDE" TYPE.

20.) MANHOLE TOP OF CASTING ELEVATIONS MAY REQUIRE ADJUSTMENT DURING SITE GRADING. MANHOLE COVERS MAY NOT BE BURIED. UPON COMPLETION OF CONSTRUCTION AND RESTORATION, ALL MANHOLES, PROPOSED AND EXISTING, SHALL BE IN CONFORMANCE IN ALL RESPECTS WITH CITY OF MASSILLON ENGINEERING DEPARTMENT SPECIFICATIONS AND DETAILS.

21.) ALL SANITARY SEWER TRENCHES BENEATH PROPOSED OR EXISTING PAVEMENT SHALL BE COMPACTED IN LIFTS, IN A MANNER, AND WITH MATERIAL AS SPECIFIED BY THE CITY OF MASSILLON ENGINEERING DEPARTMENT AND ALL APPLICABLE O.D.O.T. SPECIFICATIONS.

WATERLINE NOTES

1.) THE WATER LINE SHALL BE INSTALLED SO THAT 4'–0" OF COVER, FROM GRADE TO THE TOP OF THE WATER LINE, IS MAINTAINED AS A MINIMUM.

2.) WATER LINE MATERIALS AND INSTALLATION PROCEDURES SHALL MEET OR EXCEED ALL APPLICABLE A.W.W.A. STANDARDS INCLUDING BUT NOT LIMITED TO C600 AND C651.

3.) THE CONTRACTOR SHALL CAREFULLY LAYOUT THE WATER LINE AND ALL RELATED FACILITIES TO INSURE THAT THEY ARE LOCATED WITHIN THE PUBLIC RIGHT–OF–WAY AND/OR DESIGNATED UTILITY EASEMENTS AS INDICATED.

4.) MEGALUG RETAINERS REQUIRED AT ALL FITTINGS.

5.) THE PROPOSED FACILITIES WILL MAINTAIN A MINIMUM PRESSURE OF 35 P.S.I. DELIVERED TO THE CURB STOP DURING NORMAL OPERATING CONDITIONS.

6.) BOOSTER PUMPS ARE NOT PERMITTED ON SERVICE CONNECTIONS. C.O.W.C. MAY GRANT SPECIAL PERMISSION FOR BUILDINGS SIX STORIES AND HIGHER.

7.) A TYPE 1 TRENCH SHALL BE USED AND BACKFILLED WITH EXCAVATED MATERIAL PROVIDED THAT SAID MATERIAL CONSISTS OF LOAM, CLAY, SAND, GRAVEL, OR OTHER SUITABLE MATERIAL. BACKFILLING FOR ROAD AND DRIVEWAY CUTS SHALL BE AS A MINIMUM PROPERLY COMPACTED O.D.O.T. 304 AGGREGATE OR AS SPECIFIED BY THE LOCAL JURISDICTION.

8.) WATER SERVICES SHALL EXTEND 12' INTO THE LOTS OR BEYOND FURTHEST UTILITY, WHICHEVER IS GREATER, WITH THE CURB BOX INSTALLED 0.50' WITHIN THE RIGHT–OF–WAY.

9.) CONTRACTOR MUST CONSTRUCT ALL WATER LINES AND WATER SERVICE LINES SUCH THAT A MINIMUM OF 10' HORIZONTAL CLEARANCE, 18" VERTICAL CLEARANCE ABOVE SANITARY SEWER AND A MINIMUM OF 12" VERTICAL CLEARANCE BELOW STORM SEWER IS MAINTAINED.

SEWERAGE
APPROVED
OHIO ENVIRONMENTAL PROTECTION AGENCY
AS EVIDENCED BY COPY OF
LETTER OF APPROVAL
HERETO ATTACHED

REVISIONS

1	COMMENTS FOR CITY OF MASSILLON	BDB	5/1/02

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GENERAL NOTES

WESTBROOK ESTATES – WEST

FOR: JACOB GLICK

DRAWN BY: C.H.B.
CHECKED BY: B.D.B.
FIELD BOOK No. 549
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SHEET 4 OF 8

PROJ.# 01142

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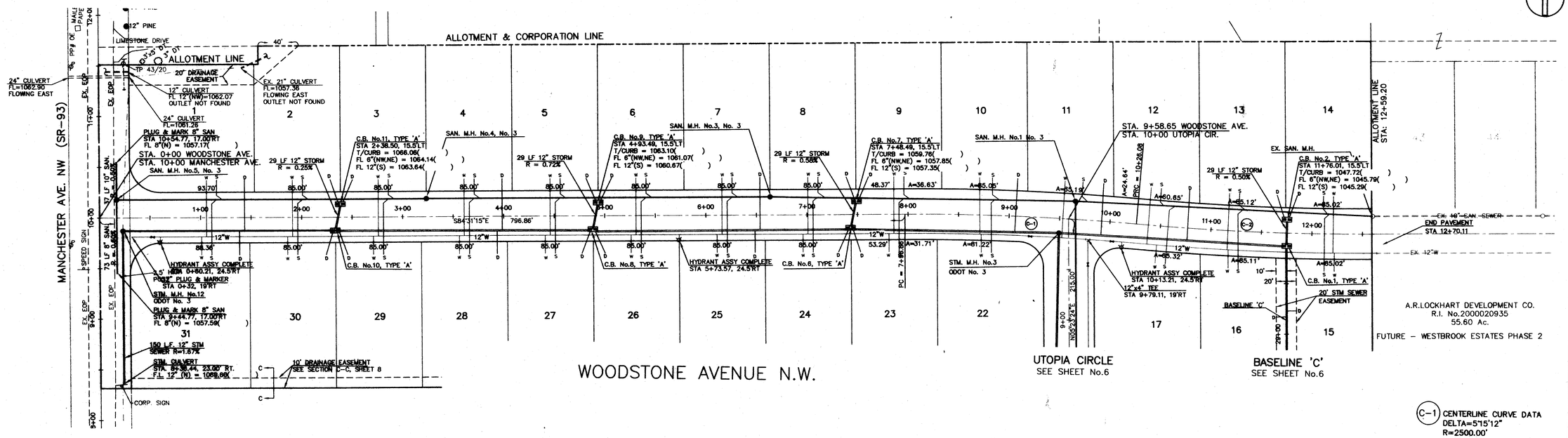


BENCHMARK 'A'
COTTON GIN GEAR SPIKE SET 12" UP THE EAST SIDE OF POWER POLE (NO NUMBER) - 2nd POLE NORTH OF THE NORTH PROPERTY LINE OF BEECH GROVE ELEM. SCHOOL LOC. ON THE WEST SIDE OF MANCHESTER AVE. (SR 93).
ELEV. = 1058.66

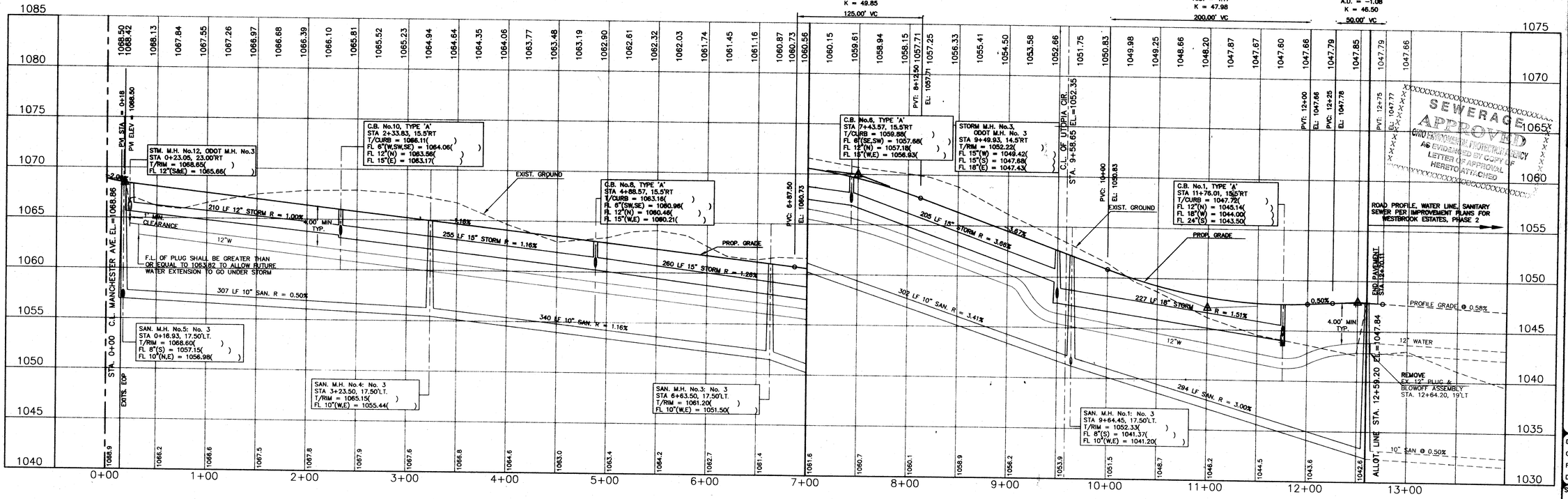
BENCHMARK 'B'
COTTON GIN SPIKE SET IN NORTHERN ROOT OF A 24" OAK TREE NEAR OR ON THE NORTH PROPERTY LINE OF BEECH GROVE ELEM. SCHOOL - 90'+/- NORTH OF THE NE CORNER OF THE SCHOOL BUILDING.
ELEV. = 1069.97

NOTES:
1. SIDEWALKS NOT REPRESENTED ON PLAN FOR CLARITY. SEE INTERSECTION DETAILS (SHEET 7) FOR HANDICAP RAMPS.

2. CONTRACTOR MUST CONSTRUCT ALL WATER LINES AND WATER SERVICE LINES SUCH THAT A MINIMUM OF 10' HORIZONTAL CLEARANCE, 18" VERTICAL CLEARANCE ABOVE SANITARY SEWER AND A MINIMUM OF 12" CLEARANCE BELOW STORM SEWER IS MAINTAINED.

(C-1) CENTERLINE CURVE DATA
DELTA=5°15'12"
R=2500.00'
L=229.22'
T=114.69'
C=229.14'
CB=N81°53'39"W

(C-2) CENTERLINE CURVE DATA
DELTA=5°20'34"
R=2500.00'
L=233.12'
T=116.64'
C=233.03'
CB=S81°56'20"E



HORIZONTAL SCALE 1"=50'
VERTICAL SCALE 1"=5'

REVISIONS

4		
3		
2		
1		
4	COMMENTS PER CONSULTANTS WATER	5/13/02
3	COMMENTS PER CITY OF MASSILLON	5/1/02

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BRYAN J. ASHMAN
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PLAN AND PROFILE SHEET
WESTBROOK ESTATES - WEST

FOR: JACOB GLICK

DRAWN BY: C.H.B.
CHECKED BY: B.D.B.
FIELD BOOK No. 549
DATE 3/4/02
SHEET 5 OF 8
PROJ. #: 01142

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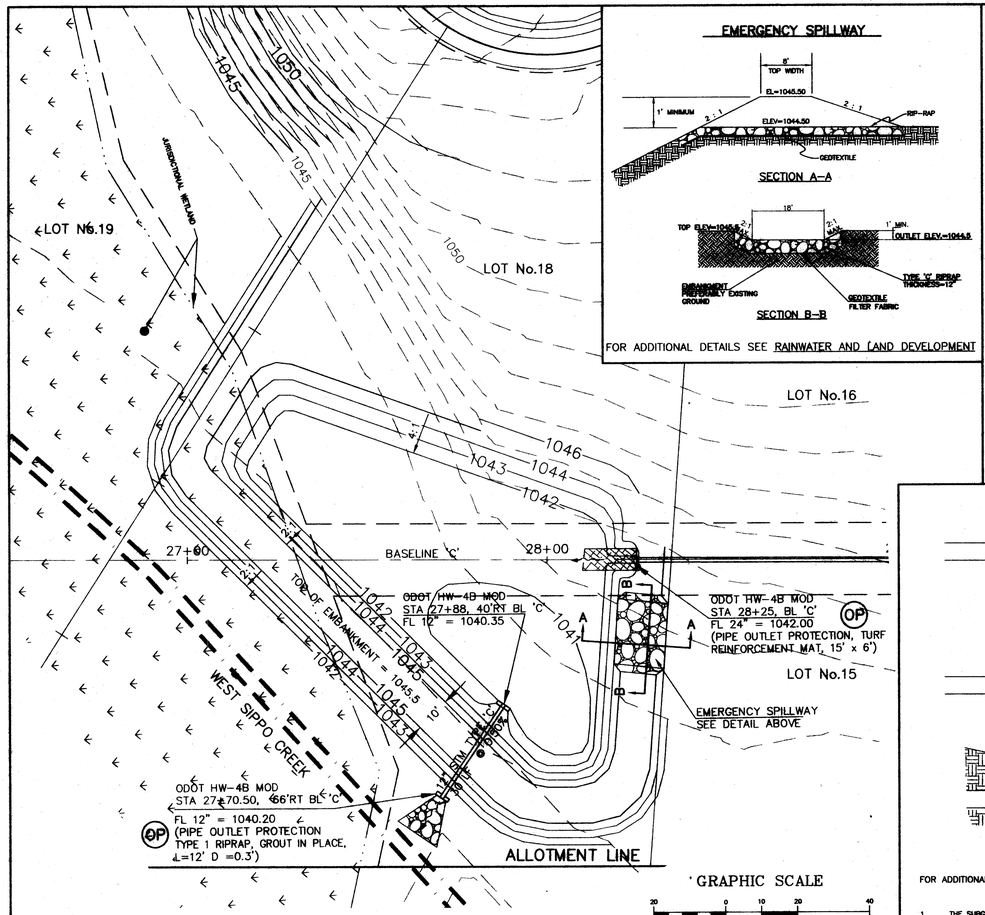
BENCHMARK 'A'	BENCHMARK 'B'
COTTON GIN GEAR SPIKE SET 12" UP THE EAST SIDE OF POWER POLE (NO NUMBER) – 2nd POLE NORTH OF THE NORTH PROPERTY LINE OF BEECH GROVE ELEM. SCHOOL LOC. ON THE WEST SIDE OF MANCHESTER AVE. (SR 93). ELEV. = 1068.66	COTTON GIN SPIKE SET IN NORTHERN ROOT OF A 24" OAK TREE NEAR OR ON THE NORTH PROPERTY LINE OF BEECH GROVE ELEM. SCHOOL – 90'+/- NORTH OF THE NE CORNER OF THE SCHOOL BUILDING. ELEV. = 1069.97

NOTES:

1. SIDEWALKS NOT REPRESENTED ON PLAN FOR CLARITY. SEE INTERSECTION DETAILS (SHEET 7) FOR HANDICAP RAMPS.

2. CONTRACTOR MUST CONSTRUCT ALL WATER LINES AND WATER SERVICE LINES SUCH THAT A MINIMUM OF 10' HORIZONTAL CLEARANCE, 18" VERTICAL CLEARANCE ABOVE SANITARY SEWER AND A MINIMUM OF 12" CLEARANCE BELOW STORM SEWER IS MAINTAINED.

3. DOWNSPOUTS FROM LOTS 18, 19 & 20 SHALL DISCHARGE TO REAR OF LOTS. THIS DISCHARGE SHALL CONSIST OF ONLY CLEAN STORM WATER CONNECTIONS (ROOF DRAINS & FOOTER DRAINS). THE OUTLETS SHALL BE PROTECTED BY A 3'x2' STRIP OF SLOPE STABILIZATION FABRIC (BON TERRA S1 OR APPROVED EQUAL) INSTALLED IN ACCORDANCE TO MANUFACTURER.



DETENTION BASIN

GRAPHIC SCALE

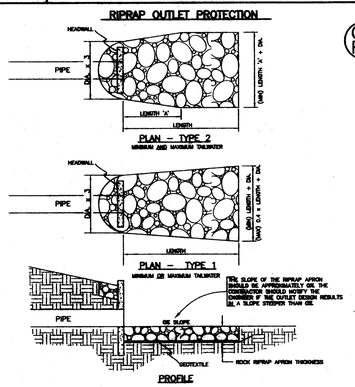
20 0 10 20 40

(IN FEET)
1 inch = 20 ft.

EMERGENCY SPILLWAY

FOR ADDITIONAL DETAILS SEE RAINWATER AND LAND DEVELOPMENT

RIPRAP OUTLET PROTECTION

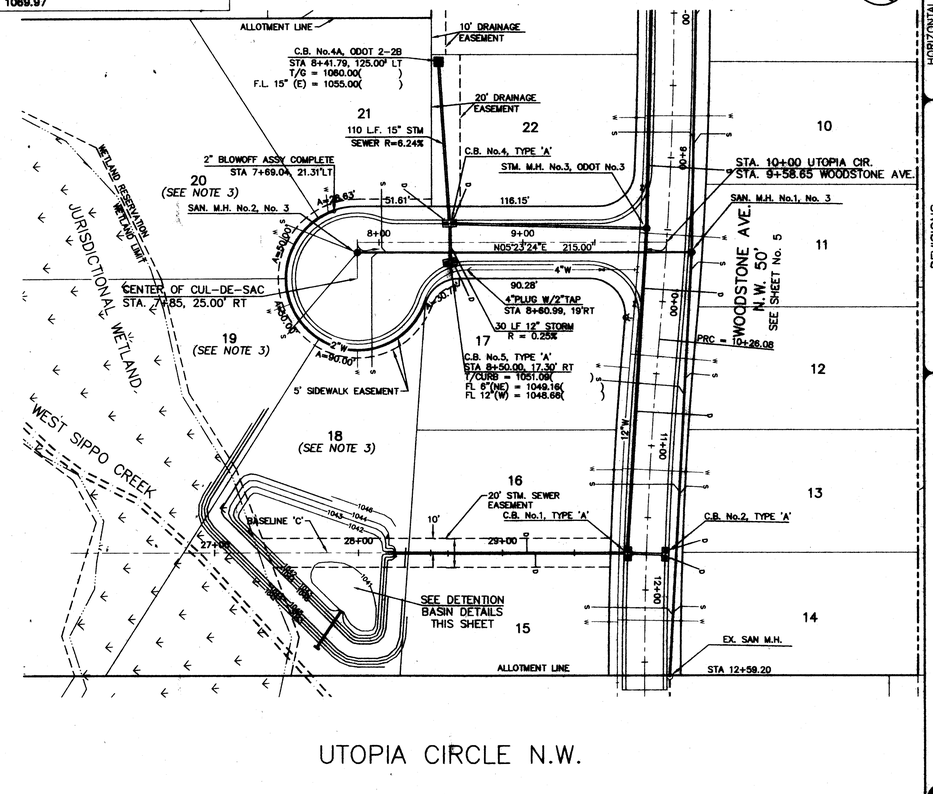


FOR ADDITIONAL DETAILS SEE RAINWATER AND LAND DEVELOPMENT

SPECIFICATIONS

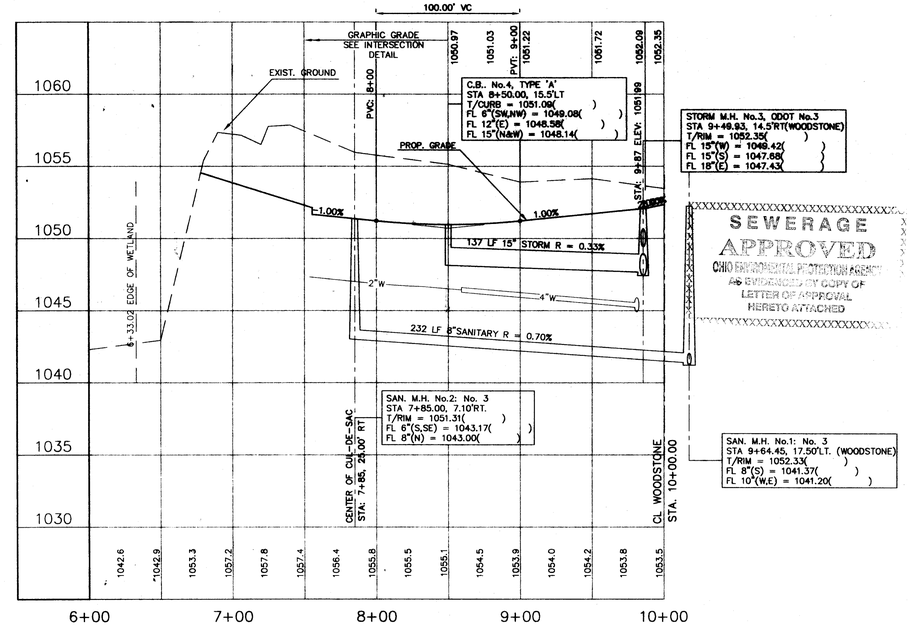
1. THE SUBGRADE FOR THE FILTER AND RIPRAP SHALL BE PREPARED TO THE REQUIRED LINES AND GRADES AS SHOWN ON THE CONSTRUCTION DRAWINGS FOR THE PROJECT.
2. THE RIPRAP SHALL CONFORM TO THE TYPE AND DIMENSIONS SHOWN ON THE PLAN.
3. GEOTEXTILE SHALL BE WOVEN OR NONWOVEN MONOFILAMENT YARN AND SHALL MEET THE FOLLOWING:
   - THICKNESS 20–60 MILS
   - GRAB STRENGTH 90–120 LB.
   - ASTM D–1777 AND ASTM D–1682
4. RIPRAP MAY BE PLACED BY EQUIPMENT BUT SHALL BE PLACED IN A MANNER TO PREVENT DAMAGE TO THE GEOTEXTILE.

TYPE OF ROCK OR RIPRAP	SIZE OF ROCK		THICKNESS
	50% BY WEIGHT	85% BY WEIGHT	
TYPE D	>6"	3–12"	12"
TYPE C	>12"	6–18"	18"
TYPE B	>18"	12–24"	30"
TYPE A	>24"	18–30"	36"



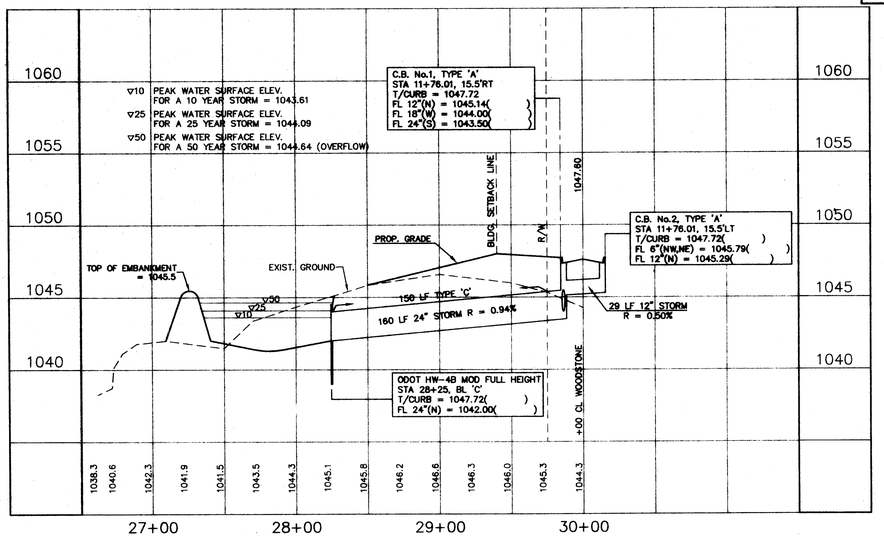
UTOPIA CIRCLE N.W.

LOW POINT ELEV = 1050.97
LOW POINT STA = 8+50
PVI STA = 8+50
PVI ELEV = 1050.72
A.D. = 2.00
K = 50.00
100.00' VC



UTOPIA CIRCLE N.W. & BASELINE 'C' & DETENTION BASIN DETAILS

BASELINE C



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HORIZONTAL SCALE 0 25 50 100 SCALE: 1"=50'
VERTICAL SCALE 0 2.5 5 10 SCALE: 1"=5'

REVISIONS

4		
3		
2		
1		
0	COMMENTS FOR CONSUMERS WATER	BDB 5/16/02
0	COMMENTS FOR CITY OF MASSILLON	BDB 5/1/02

PLAN AND PROFILE SHEET & DETENTION BASIN
WESTBROOK ESTATES – WEST

FOR: JACOB GLICK

DRAWN BY: C.H.B.
CHECKED BY: B.D.B.
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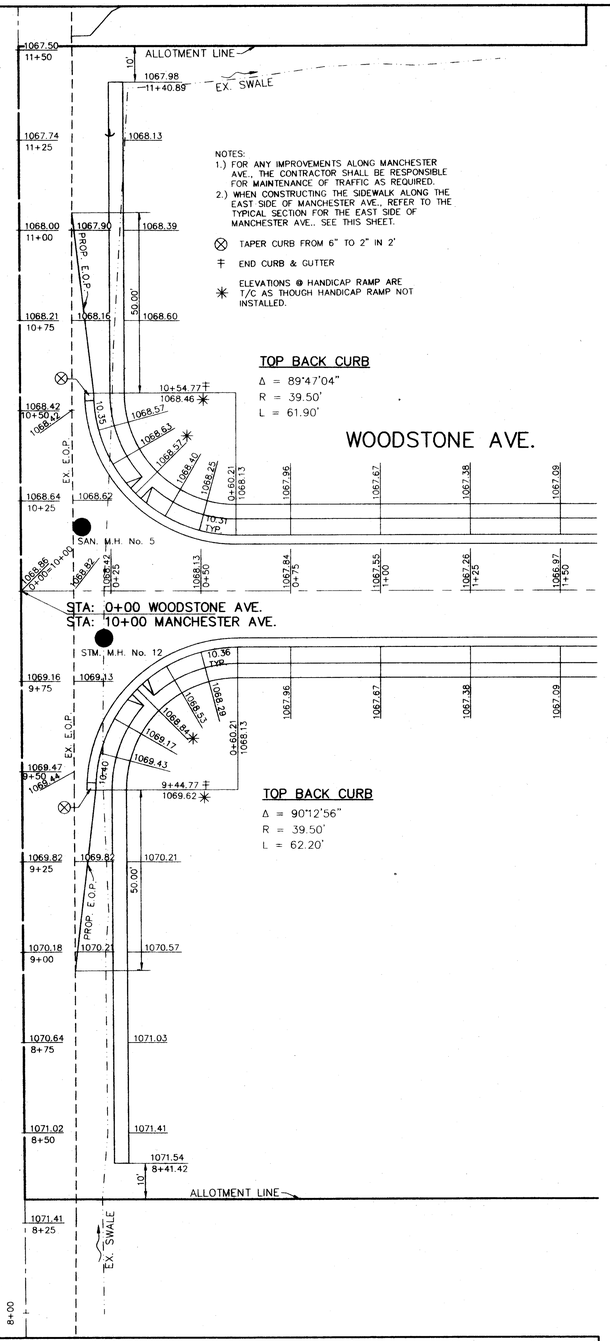
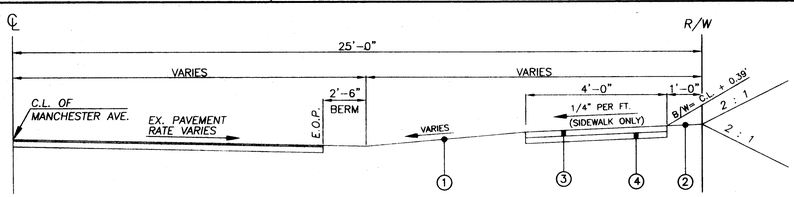


NOTES:
1.) FOR ANY IMPROVEMENTS ALONG MANCHESTER AVE., THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF TRAFFIC AS REQUIRED.
2.) WHEN CONSTRUCTING THE SIDEWALK ALONG THE EAST SIDE OF MANCHESTER AVE., REFER TO THE TYPICAL SECTION FOR THE EAST SIDE OF MANCHESTER AVE., SEE THIS SHEET.

⊗ TAPER CURB FROM 6" TO 2" IN 2'

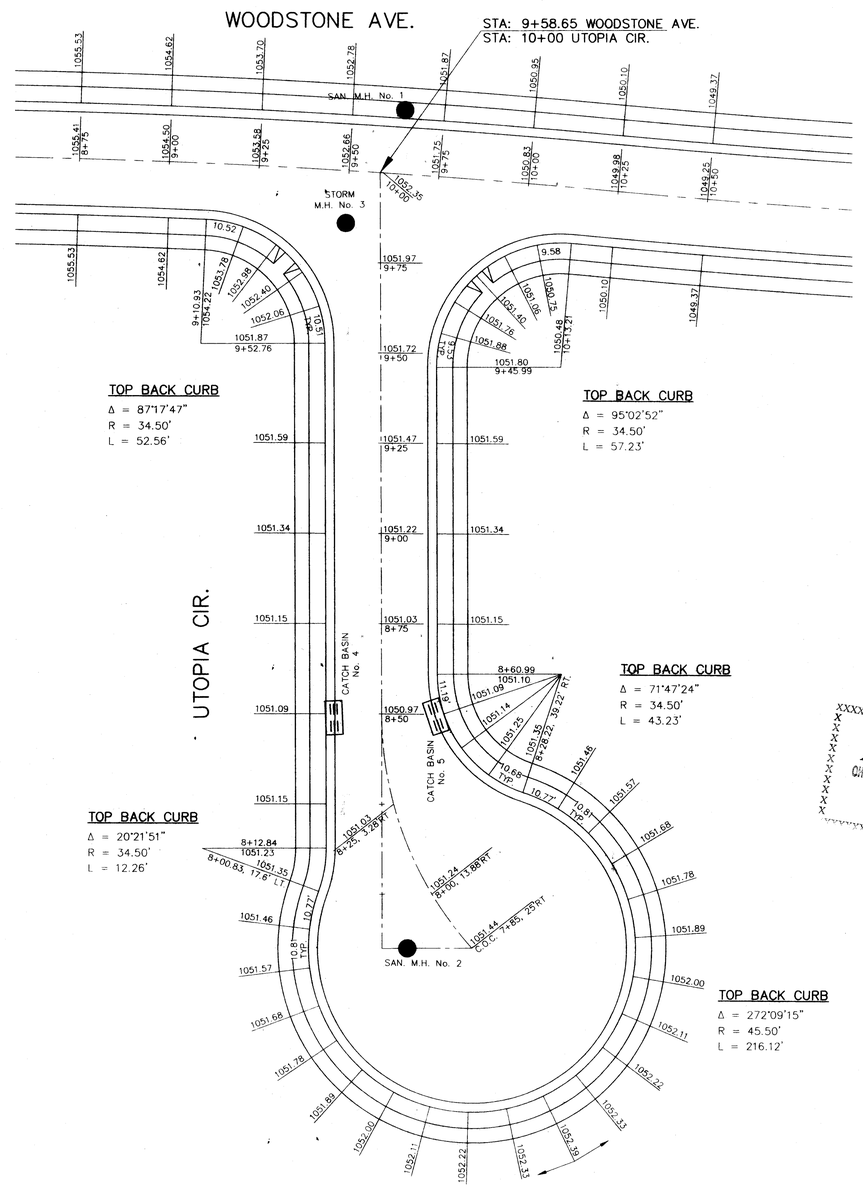
∓ END CURB & GUTTER

✳ ELEVATIONS @ HANDICAP RAMP ARE T/C AS THOUGH HANDICAP RAMP NOT INSTALLED.



① ITEM 659 SEEDING AND MULCHING
② ITEM 659 SEEDING AND MULCHING, GRADE = 1/2" PER FT.
③ ITEM 608 4" CONCRETE SIDEWALK
④ ITEM 304 4" AGGREGATE BASE

TYPICAL SECTION ALONG EAST SIDE OF MANCHESTER AVE.



SEWERAGE APPROVED
OHIO ENVIRONMENTAL PROTECTION AGENCY
EXTENDED BY COPY OF LETTER OF APPROVAL HERETO ATTACHED

INTERSECTION DETAILS

REVISIONS

1	COMMENTS PER CITY OF MASSILLON	BBB	5/1/02

HORIZONTAL SCALE
0 10 20 40
SCALE: 1" = 20'

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WESTBROOK ESTATES – WEST

FOR: JACOB GLICK

DRAWN BY: C.H.B.
CHECKED BY: B.D.B.
FIELD BOOK No. 549
DATE 3/4/02
SHEET 7 OF 8
PROJ.# 01142

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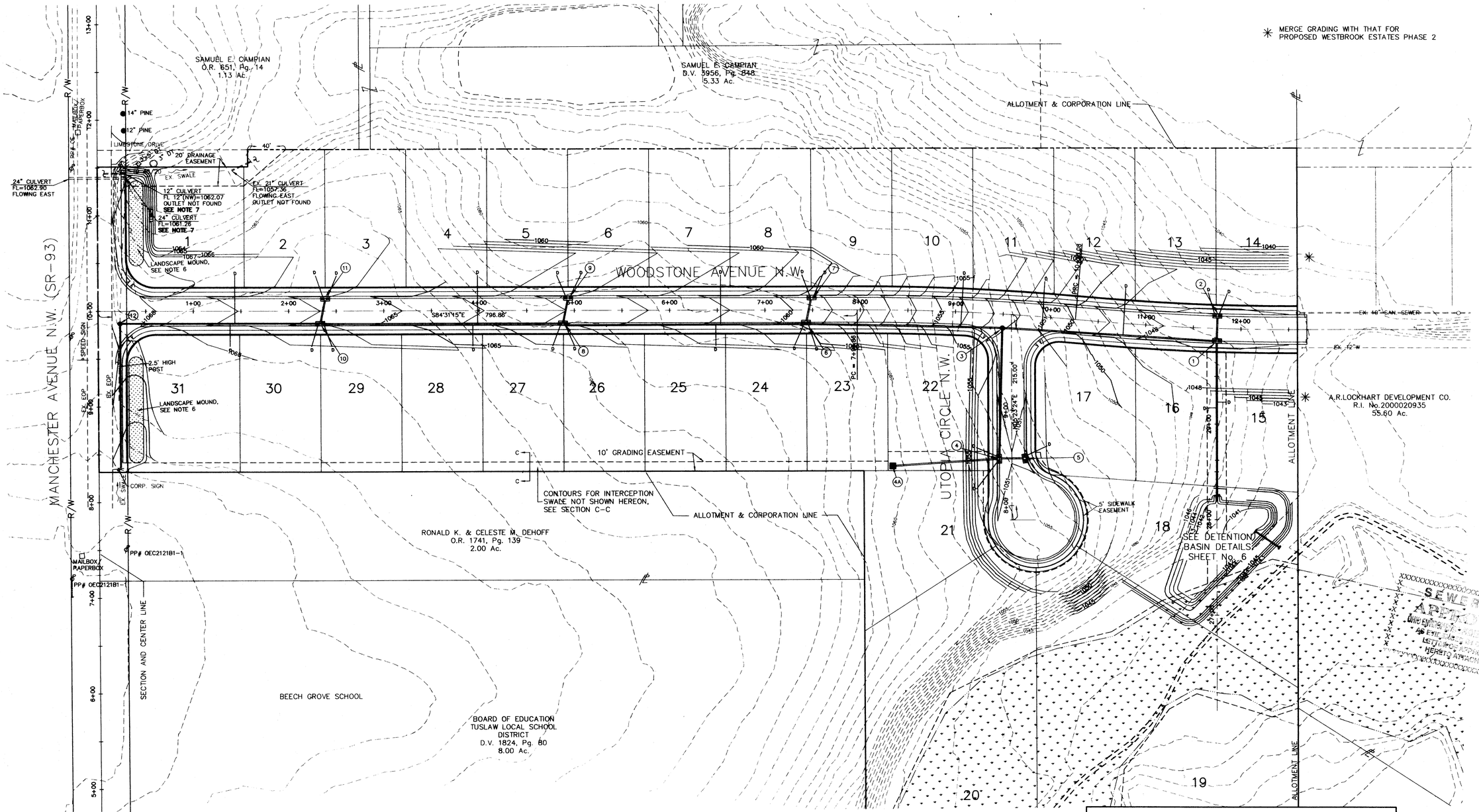


GENERAL NOTES:

1.) ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE CODES, ORDINANCES, AND STANDARD SPECIFICATIONS OF CITY OF MASSILLON AND THE STARK COUNTY ENGINEERING DEPARTMENT. IN LIEU OF ANY LOCAL SPECIFICATIONS, WORK SHALL BE PERFORMED IN CONFORMANCE WITH THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS MOST RECENT EDITION.

2.) IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO CONSTRUCT THE GRADING REPRESENTED ON THIS PLAN USING CONSTRUCTION MEANS AND METHODS THAT WILL PREVENT BODILY INJURY AND/OR DEATH. THE CONTRACTOR SHALL TAKE ANY NECESSARY SAFETY PRECAUTIONS TO COMPLY WITH THE SAFETY REQUIREMENTS OF THE CITY, STATE AND FEDERAL GOVERNMENTS.

3.) EMBANKMENT CONSTRUCTION AND SUBGRADE COMPACTION SHALL BE IN GENERAL CONFORMANCE WITH ODOT SPECIFICATIONS AND SHALL BE 95% STANDARD PROCTOR FOR GENERAL SITE GRADING.

4.) CONTOURS REPRESENTED ON THIS PLAN ARE TO THE PROPOSED FINISHED GRADE (PG):
   A. PAVEMENT SUBGRADE = PG - 11.5"(PAVEMENT)
   B. SITE SUBGRADE = PG - 3"(TOPSOIL)

5.) SEE THE STORM WATER POLLUTION PREVENTION PLANS FOR EROSION CONTROL MEASURES.

6.) TO THE EAST OF MANCHESTER AVE., CONTRACTOR SHALL CREATE A LANDSCAPE MOUND (USING EXCESS TOPSOIL) PER OWNERS DIRECTION.

7.) LOCATED AT THE N.W. CORNER OF THIS ALLOTMENT, EXTEND THE EXISTING 12" AND 24" CULVERT 35 L.F. KEEPING THE EXISTING RATE AND ALIGNMENT.

EARTHWORK SUMMARY

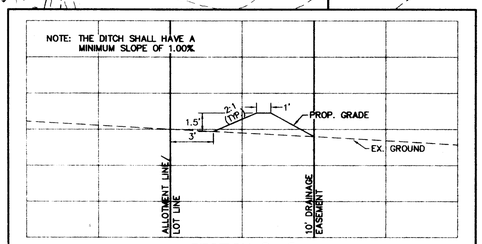
CUT = 5,000 C.Y.

FILL = 5,000 C.Y.

THE EARTHWORK SUMMARY IS TAKEN FROM EXISTING GROUND TO PROPOSED FINISHED GRADE.

BENCHMARK 'A'
COTTON GIN GEAR SPIKE SET 12" UP THE EAST SIDE OF POWER POLE (NO NUMBER) - 2nd POLE NORTH OF THE NORTH PROPERTY LINE OF BEECH GROVE ELEM. SCHOOL LOC. ON THE WEST SIDE OF MANCHESTER AVE. (SR 93).
ELEV. = 1068.66

BENCHMARK 'B'
COTTON GIN SPIKE SET IN NORTHERN ROOT OF A 24" OAK TREE NEAR OR ON THE NORTH PROPERTY LINE OF BEECH GROVE ELEM. SCHOOL - 90'+/- NORTH OF THE NE CORNER OF THE SCHOOL BUILDING.
ELEV. = 1069.97



SECTION C-C
INTERCEPTION SWALE
SCALE: N.T.S.

GRADING PLAN

HORIZONTAL SCALE
0 25 50 100
SCALE: 1" = 50'

REVISIONS

1	COMMENTS PER CITY OF MASSILLON	BRB 5/1/02

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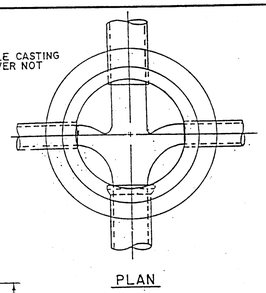
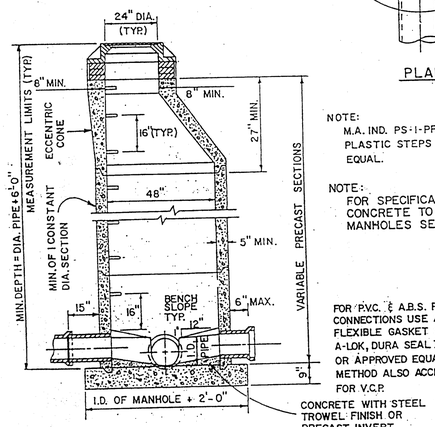
NOTE:
IF TOP STEP IS IN 24" DIA. OPENING IT MAY PROJECT NO MORE THAN 3½".

SEE DRAWINGS:
NO. 12 FOR GRADE ADJUSTMENT.
NO. 13 FOR CASTING DETAILS.





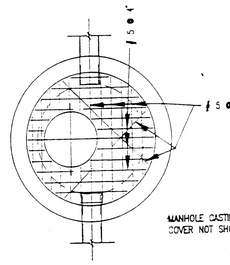
NOTE:
M.A. IND. PS-1-PF REINFORCED PLASTIC STEPS OR APPROVED EQUAL.

NOTE:
FOR SPECIFICATIONS REGARDING CONCRETE TO BE USED IN MANHOLES SEE ITEM NOS. 4 & 16

FOR P.V.C. & A.B.S. PIPE CONNECTIONS USE ASTM C-923 FLEXIBLE GASKET SUCH AS A-LOK, DURA SEAL III, KOR-N-SEAL OR APPROVED EQUAL. THIS METHOD ALSO ACCEPTABLE FOR V.C.P.

CONCRETE WITH STEEL TROWEL FINISH OR PRECAST INVERT CHANNELS & BENCH.

PRECAST MANHOLE TYPE "A"



MANHOLE I.D.
48" FOR SEWERS 8" THRU 21"
60" FOR SEWERS 24" THRU 36"

NOTE:
FOR SPECIFICATIONS REGARDING CONCRETE TO BE USED IN MANHOLES SEE ITEM NO'S. 4 & 16

NOTE:
IF TOP STEP IS IN 24" DIA. OPENING IT MAY PROJECT NO MORE THAN 3-1/2".

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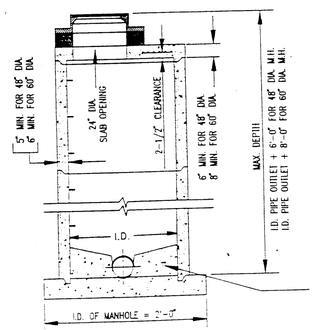

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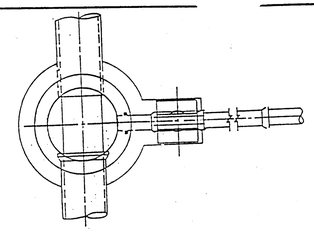
PRECAST MANHOLE SECTIONS SHALL MEET ASTM C478. MANHOLE JOINTS SHALL MEET ASTM C443.

CONCRETE WITH STEEL TROWEL FINISH OR PRECAST INVERT CHANNELS & BENCH.

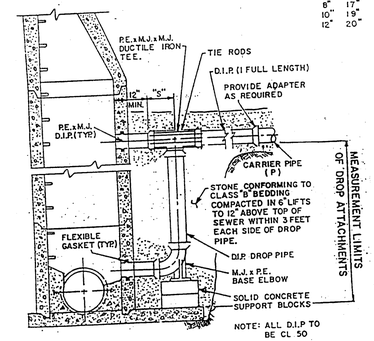
SHALLOW PRECAST MANHOLE



SEWER SIZE	DROP SIZE
8"	8"
10"	10"
12" - 15" - 18"	12"
21" - 24"	15"
27" - 30" - 36"	18"

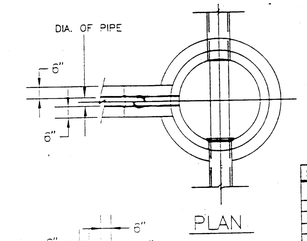
TABLE OF DIMENSIONS

"P"	"S"
6"	15"
8"	17"
10"	19"
12"	20"



THIS METHOD MUST BE USED FOR P.V.C. & A.B.S. CARRIER PIPE.

DROP ATTACHMENT



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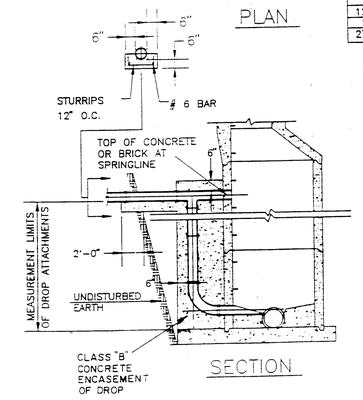

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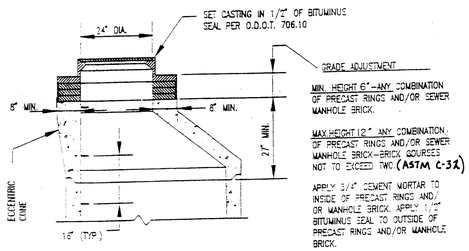
PRECAST MANHOLE SECTIONS SHALL MEET ASTM C478. MANHOLE JOINTS SHALL MEET ASTM C443.



MIN. HEIGHT 6" - ANY COMBINATION OF PRECAST RINGS AND/OR SEWER MANHOLE BRICK.

MAX HEIGHT 12" - ANY COMBINATION OF PRECAST RINGS AND/OR SEWER MANHOLE BRICK - BRICK COURSES NOT TO EXCEED TWO. (ASTM C-32)

APPLY 3/4" CEMENT MORTAR TO INSIDE OF PRECAST RINGS AND/OR MANHOLE BRICK. APPLY 1/2" BITUMINUS SEAL TO OUTSIDE OF PRECAST RINGS AND/OR MANHOLE BRICK.

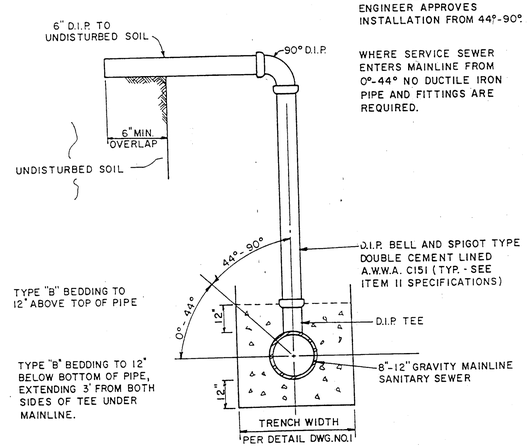
MANHOLE GRADE ADJUSTMENT DETAIL

NOTE:
THIS DETAIL APPLIES FOR ECCENTRIC CONE SECTION OR PRECAST FLAT SLAB TOP

STACKS SHALL BE INSTALLED WHERE SHOWN ON PLANS OR AS REQUIRED BY ENGINEER.

STACKS SHALL BE INSTALLED VERTICALLY UNLESS THE ENGINEER APPROVES INSTALLATION FROM 44°-90°.

WHERE SERVICE SEWER ENTERS MAINLINE FROM 0°-44° NO DUCTILE IRON PIPE AND FITTINGS ARE REQUIRED.

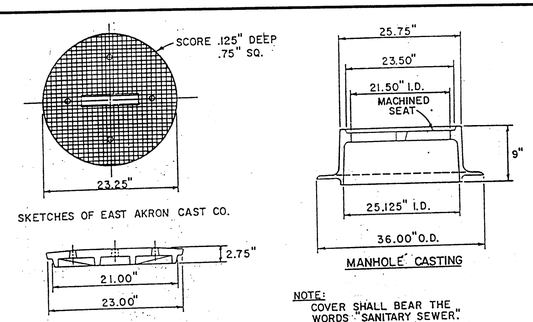


TYPE "B" BEDDING TO 12" ABOVE TOP OF PIPE

TYPE "B" BEDDING TO 12" BELOW BOTTOM OF PIPE, EXTENDING 3' FROM BOTH SIDES OF TEE UNDER MAINLINE.

SUITABLE ADAPTERS BETWEEN D.I.P. TEE AND MAINLINE SEWER SHALL BE USED.

SERVICE STACK 8"-12" MAINLINE



SKETCHES OF EAST AKRON CAST CO.

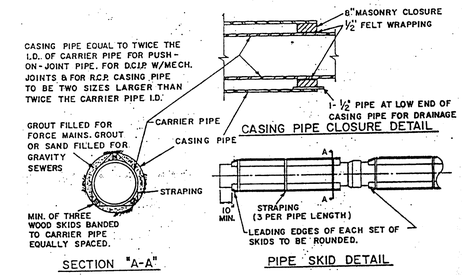
NOTE:
COVER SHALL BEAR THE WORDS "SANITARY SEWER" OR "SAN. SEWER"

NEENAH R-1924-1, EAST JORDAN IRON WORKS # 2015 W/TYPE C VENT COVER, EAST AKRON CASTING CO. CASTING NO. 155 COVER NO. 156 OR APPROVED EQUAL

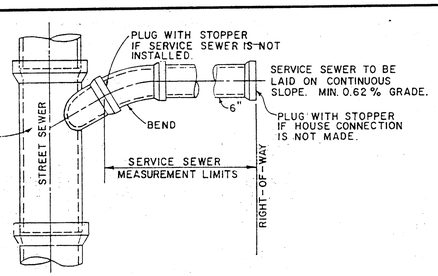
WATERPROOF CASTING AND COVER

WATERPROOF CASTING AND COVER SHALL BE NEENAH R-1916 C, EAST JORDAN IRON WORKS NO. 1058 PT OR APPROVED EQUAL.

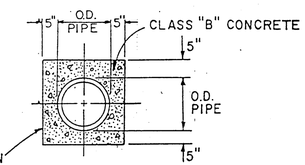
MANHOLE CASTING AND COVER



PIPE BORING

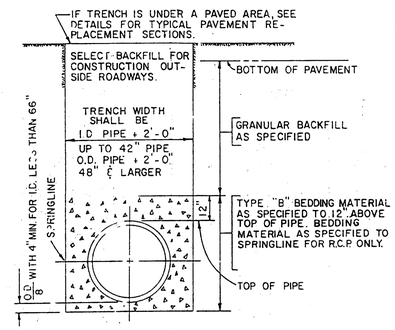


STANDARD SERVICE CONNECTION



NOTE:
WIDTH OF ENCASEMENT IN ROCK: I.D. PIPE + 1'-6" UP TO 42" PIPE. O.D. PIPE + 1'-6" 48" PIPE AND LARGER.

PIPE ENCASEMENT



BEDDING AND TRENCH DETAIL TYPE "B" BEDDING

NOTES:

- TRENCH BEDDING:
  RIGID PIPE TO MEET ASTM C-12 (A,B,C)
  FLEXIBLE PIPE TO MEET ASTM D-2321 (I,II,III)
- MANHOLE CONSTRUCTION TO MEET THE FOLLOWING:
  A. CONCRETE CONSTRUCTION C-478
  B. JOINTS - C-443
  C. FLEXIBLE GASKETS TO CONNECT TO SEWER LINES - ASTM C-923

SEWERAGE APPROVED
OHIO ENVIRONMENTAL PROTECTION AGENCY
AS EVIDENCED BY COPY OF LETTER OF APPROVAL HERETO ATTACHED

MASSILLON STANDARD SANITARY SEWER DETAILS

DESCRIPTION	DATE	BY
REVISIONS		

DWN BY ____ CHK'D BY ____

PROJ. #

SCALE HOR. ____ VERT. ____
DATE ____
FIELD BOOK NO. ____
SHEET ____ OF ____

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