

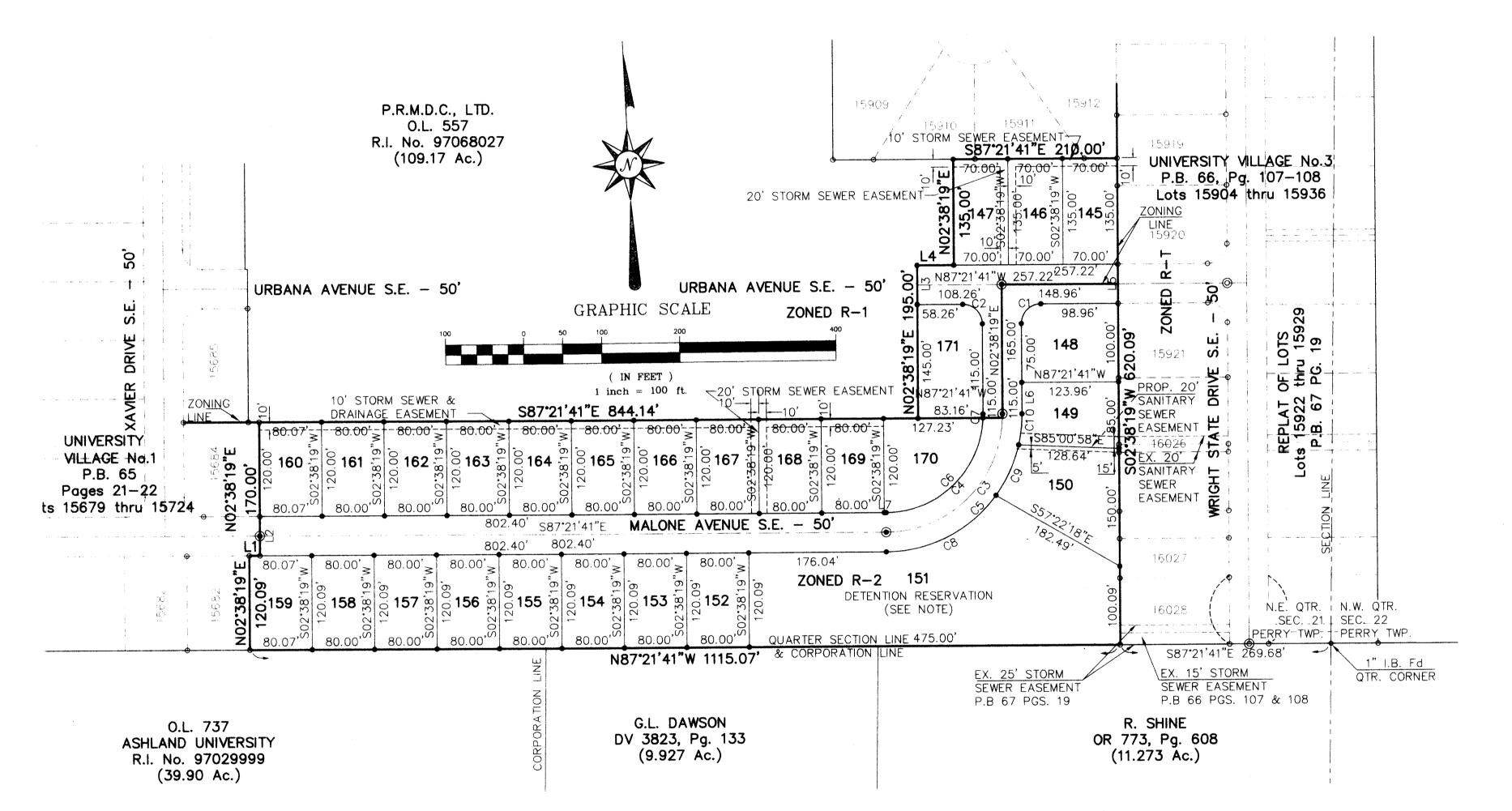
UNIVERSITY VILLAGE PHASE 5

LOCATED IN PART OF O.L. 557 IN THE CITY OF MASSILLON STARK COUNTY, OHIO

SCALE 1" = 100'

APRIL 2000

- OWNER/DEVELOPER -P.R.M.D.C. LTD., A LIMITED PARTNERSHIP C/O FRED TOBIN 7694 STRAUSSER ST. N.W. NORTH CANTON, OHIO 44720 PHONE 330-497-9744



DETENTION RESERVATION NOTE
ALL OF LOT No. 151 SHALL BE RESERVED FOR THE PURPOSES OF STORM WATER DETENTION UNTIL SUCH TIME AS IT IS
DETERMINED THAT STORM WATER DETENTION IS NO LONGER REQUIRED.

EASEMENTS AND RESTRICTIONS

AN EASEMENT, TEN FEET WIDE ON THE FRONT AND FIVE FEET WIDE ON THE SIDES AND BACK OF ALL LOTS, AND TEN FEET ON THE EXTERIOR BOUNDARY OF THIS ALLOTMENT IS HEREBY DEDICATED AND RESERVED IN THIS SUBDIVISION TO: COUNTY OF STARK, CITY OF MASSILLON, CONSUMERS OHIO WATER CO., EAST OHIO GAS COMPANY, OHIO EDISON COMPANY, OHIO BELL TELEPHONE COMPANY, MASSILLON CABLE COMPANY, AND ANY P.U.C.O. REGULATED UTILITY FOR THE PURPOSES OF CONSTRUCTION, ERECTION, AND/OR MAINTENANCE OF ANY TRANSMISSION LINES, PIPES, CABLES, CONDUITS, BURIED WIRES, SWALES OR OTHER APPURTENANCES FOR THE TRANSMISSION OF POWER, ELECTRIC, COMMUNICATIONS, STORM WATER, SANITARY SEWER WASTES, WATER, AND/OR ANY FUTURE DEVELOPED PUBLIC UTILITY. THIS EASEMENT GIVES ALL OF THE UTILITIES THE RIGHT TO REMOVE TREES AND LANDSCAPING WITHOUT LIABILITY AS REQUIRED TO MAINTAIN, OPERATE, OR CONSTRUCT THE FACILITIES.

LINE TABLE					
LINE	LENGTH	BEARING			
1	13.71	S87°21'41"E			
2	50.00	S02°38'19"W			
3	50.00	S02'38'19"W			
4	47.22	S87°21'41"E			
5	50.00	N02°38'19"E			
6	40.00	N02*38'19"E			
7	2.33	N87°21'41"W			

CURVE TABLE						
NUMBER	LENGTH	RADIUS	DELTA ANGLE	TANGENT	CHORD	BEARING
1	39.27	25.00	90°00'00"	25.00	35.36	S47°38'19"W
2	39.27	25.00	90°00'00"	25.00	35.36	N42°21'41"W
3	235.62	150.00	90°00'00"	150.00	212.13	N47°38'19"E
4	196.35	125.00	90°00'00"	125.00	176.78	N47°38'19"E
5	274.89	175.00	90°00'00"	175.00	247.49	N47°38'19"E
6	191.35	125.00	87°42'27"	120.10	173.21	N48°47'05"E
7	5.00	125.00	02°17'33"	2.50	5.00	N03°47'05"E
8	163.79	175.00	53°37'34"	88.45	157.88	N65°49'32"E
9	71.01	175.00	23°14'59"	36.00	70.53	N27°23'16"E
10	40.09	175.00	13°07'27"	20.13	40.00	N09°12'03"E

LOT NUM	MBER AND AREA TA	ABLE
LOT NUMBER	CITY LOT OR OUTLOT NUMBER	AREA (ACRES)
145		0.217
146		0.217
147		0.217
148		0.282
149		0.236
150		0.364
151		1.472
152		0.2205
153		0.2205
154		0.2205
155		0.2205
156		0.2205
157		0.2205
158		0.2205
159		0.2207
160		0.2206
161		0.2204
162		0.2204
163		0.2204
164		0.2204
165		0.2204
166		0.2204
167		0.2204
168		0.2204
169		0.2204
170		0.274
171		0.274
TOTAL		7.521

- L	EG	E	ND		
		IR	NC	BAR	

- IRON BAR TO BE SET AT ALL LOT CORNERS AND CURVE POINTS
- MONUMENT SET
- O IRON PIPE OR BAR FOUND
- (AS NOTED)
- MONUMENT FOUND

99266

JEROLD

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PHAS

UNIVERSITY

RECORD

RECORD PLAT

GENERAL NOTES

- CONTRACTOR SHALL CHECK DETAIL DRAWINGS FOR MINIMUM GRADE AND BACKFILL
- ALL COMBINATION CONCRETE CURB AND GUTTER TO BE MASSILLON STANDARD EXCEPT WHERE VARIATIONS ARE TO BE EXTENDED OR MET - SEE SPECIFICATION BOOK AND
- EXCAVATION FOR COMBINATION CONCRETE CURB AND GUTTER SHALL BE INCLUDED IN THE COST PER LINEAL FOOT OF SAID CURB AND GUTTER
- ALL COMBINATION CONCRETE CURB AND GUTTER TO BE CONSTRUCTED BEFORE EXCAV-
- VATION IS STARTED, WHEN EXCAVATION DOES NOT EXCEED 1'-0" IN DEPTH. ROADWAY EXCAVATION TO BE 2" TO 4" BELOW FINISHED GRADE OF STREET AT THE
- DISCRETION OF THE CITY ENGINEER. ALL CATCH BASINS AND MANHOLES TO BE ADJUSTED TO GRADE WHERE NECESSARY.
- ALL CONCRETE TO BE 1:2; 4-6 BAG MIX. 28 DAY 3000 PSI COMPRESSIVE STRENGTH; MAX. SLUMP TO BE 4".
- CONTRACTOR SHALL PAY INSPECTOR(S) AT THE RATE OF TIME AND ONE HALF OF REGULAR RATE AFTER 4:30 P.M. MONDAY THRU FRIDAY. SATURDAYS ALL DAY AT TIME
- ALL MATERIALS USED WILL BE NEW NO SALVAGED MATERIAL WILL BE ACCEPTED EXCEPT CASTINGS.
- IF CONTRACTOR EXCAVATES DEEPER THAN NECESSARY FOR CURB AND GUTTER. CONTRACTOR WILL FURNISH ODOT 304 AGGREGATE AND TAMP BEFORE CURB AND
- GUTTER IS CONSTRUCTED. 11. IF SUBGRADE IS UNSUITABLE, CONTRACTOR WILL EXCAVATE AND REPLACE SUCH MAT-ERIAL WITH CRUSHED 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 AND EXCAVATION. THIS COMPACTION
- TO BE DONE BEFORE FORMS ARE PLACED. ALL EXTRA PAY ITEMS WILL HAVE THE APPROVAL OF THE BOARD OF CONTROL BEFORE
- EXTRA ITEMS ARE INSTALLED. CONTRACTOR TO BACKFILL CURB IMMEDIATELY AFTER CURB HAS BEEN IN PLACE FOR
- CONTRACTOR WILL NOTIFY COOPER & ASSOCIATES WHEN HE IS IN NEED OF CONSTRUCTION
- STAKES AND THIS OFFICE WILL COMPLY WITHIN A PERIOD OF 48 HOURS. CIRCLE CURB WHEN RADIUS IS 175 FT. OR LESS.
- 16. ALL STORM SEWER PIPES WITHIN PAVEMENT LIMITS OR WITHIN 5' OF B/C LINE SHALL BE REINFORCED CONCRETE PIPE (ODOT 706.02) (* SEE BELOW) AND SHALL BE TYPE 'B' CONDUIT WITH GRANULAR BACKFILL TO WITHIN 1' OF FINISH GRADE IN ACCORDANCE WITH ODOT 603 CLASS B BEDDING AND GRANULAR BACKFILL; ALL STORM SEWERS NOT WITHIN 5' OF B/C 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 B BEDDING AND SUITABLE SOIL BACKFILL.
 - * OR SMOOTH LINED CORRUGATED POLYETHYLENE(ODOT 944)
- 17. STORM SEWER LATERALS SHALL BE PROVIDED TO EACH LOT. LATERALS 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 CONNECTION. HEADERS SHALL EXTEND 10' INTO THE LOT OR BEYOND FURTHEST UTLILTY LINE - WHICHEVER IS GREATER.
- 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.
- MANHOLES AND CATCH BASINS SHALL BE CONSTRUCTED IN CONFORMANCE WITH MASSILLON CITY STANDARDS (FILE No. S81) AVAILABLE FROM THE CITY ENGINEER.
- CONTRACTOR SHALL CONTACT CITY OF MASSILLON ENGINEERING DEPT. AT 330-830-1722 AT LEAST 3 DAYS PRIOR TO THE INITIATION OF CONSTRUCTION TO SCHEDULE A PRE-CONSTRUCTION MEETING.
- 21. STREET LIGHTING IS REQUIRED, DEVELOPER SHALL CO-ORDINATE WITH ELECTRIC UTILITY COMPANY FOR POLE LOCATION AND TYPE.
 - THE CITY SHALL INSTALL, AT THE DEVELOPER'S 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
- 22. THERE IS TO BE NO CONSTRUCTION TRAFFIC UTILIZING EXISTING ROADWAY WITHIN UNIVERSITY VILLAGE PHASE I. ALL CONSTRUCTION TRAFFIC MUST USE THE EXISTING CONSTRUCTION ROAD FROM RICHVILLE DRIVE.

ACCORDING TO CONSUMERS OHIO WATER COMPANY SPECIFICATIONS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION OF ALL

WATER MAINS AND THE SERVICE CONNECTIONS FROM ALL 2" WATER

MAINS. CONSUMER OHIO WATER COMPANY WILL BE RESPONSIBLE FOR

CONSTRUCTION OF ALL WATER SERVICE CONNECTIONS FROM 8" WATER

WATER MAIN MATERIALS SHALL CONFORM TO AWWA C15! FOR DUCTILE

NOTE - CONTRACTOR MUST CONSTRUCT ALL WATER LINES AND WATER

HORIZONTAL CLEARANCE BETWEEN SANITARY SEWER AND A MINIMUM

SERVICE LINES SUCH THAT A MINIMUM OF 18" VERTICAL AND 10'

OF 12" VERTICAL AND 4" HORIZONTAL BETWEEN STORM SEWER IS:

WATER MAINS SHALL BE INSTALLED AND PRESSURE TESTED IN ACCORDANCE

AND DETAILS IN EFFECT AT THE TIME OF CONSTRUCTION.

APPROVED BY CONSUMERS OHIO WATER COMPANY

THIS ______, DAY OF ______, 200___

CAST IRON PIPE.

WITH AWWA C600.

MAIN FAINED

DONALD ... SNYDER, COWC

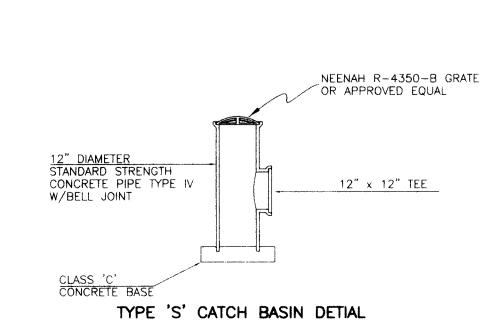
23. CONTRACTOR SHALL NOTIFY CITY ENGINEER'S OFFICE (830-1722) FOR APPROVAL (PROOF-ROLLING) OF SUBGRADE AT LEAST 24 HOURS PRIOR TO ANY PAVING.

SANITARY SEWER NOTES

- ACCORDING TO MASSILLON CITY ENGINEERING DEPARTMENT WATERLINE NOTES: SPECIFICATIONS IN EFFECT AT THE TIME OF CONSTRUCTION. ALL WATERLINES AND APPURTENANCES SHALL BE CONSTRUCTED
 - CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.

 - 4. MINIMUM COVER OVER ALL SANITARY SEWER MUST BE 3.0 FEET.
 - 5. ALL SANITARY SEWERS, 8" DIAMETER AND LARGER, MUST PASS INTERNAL TELEVISION INSPECTION. THE CONTRACTOR SHALL PROVIDE COMPLETE INTERNAL INSPECTION VIDEOTAPE TO THE
- PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL CONTACT WATER MAINS SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA C651. THE CITY OF MASSILLON ENGINEERING DEPT., (330-830-1722)
 - SANITARY SEWER MAY BE ANY OF THE FOLLOWING MATERIALS, HOWEVER THE COMPLETE SYSTEM MUST BE UNIFORM IN PIPE MATERIAL: A. V.C.P. EXTRA STRENGTH A.S.T.M. C-700 WITH COMPRESSION TYPE JOINTS IN CONFORMANCE WITH A.S.T.M. C-425.
 - C. 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.
 - UNTIL THE NEW SEWER LINE IS COMPLETE, TESTED AND APPROVED BY THE MASSILLON CITY ENGINEER, AT WHICH TIME THE BULKHEAD SHALL BE REMOVED.
 - 9. LEAKAGE LIMIT TEST TO BE 100 GAL/IN/MI/DAY.
 - MANHOLE AND TRENCHES SHALL BE PER MASSILLON DETAILS DRAWINGS.

FLAT SLAB DETAIL FOR TYPE 'A' CATCH BASIN OR APPROVED PRECAST 2' x 3' BOX W/EJIW 7035/7037 NOTE: ALTERNATE RECTANGULAR STRUCTURES ARE PERMITTED, AS APPROVED. TYPE 'A' STANDARD = 2' x 3' RECTANGULAR





1. ALL SANITARY SEWERS AND APPURTENANCES SHALL BE CONSTRUCTED

ROOF DRAINS, FOUNDATION DRAINS AND OTHER CLEAN WATER

FIRST FLOOR ELEVATION FOR BUILDING AT THE BUILDING SETBACK LINE SHALL BE A MINIMUM OF 6" ABOVE STREET CENTERLINE GRADE

SANITARY ENGINEERING DEPARTMENT. THE VIDEOTAPING PROCEDURE MUST BE IN ACCORDANCE WITH STARK COUNTY SANITARY ENGINEERING DEPARTMENT SPECIFICATIONS.

TO SCHEDULE A PRE-CONSTRUCTION MEETING. A MINIMUM OF 3 DAYS NOTICE IS REQUIRED TO SCHEDULE THIS MEETING.

B. A.B.S. COMPOSITE PIPE A.S.T.M. D-2680 WITH CHEMICALLY WELDED PREMIUM JOINTS ASTM D-2680.

8. A BULKHEAD SHALL BE CONSTRUCTED IN THE EXISTING MANHOLE AT THE ENTRANCE OF THE PROPOSED SEWER PIPE AND REMAIN IN PLACE

- 11. SANITARY SERVICE LATERALS SHALL EXTEND INTO THE LOT 10'

BEYOND R/W OR BEYOND FURTHEST UTILITY LINE - WHICHEVER IS GREATER.

50' R/W TYPICAL HALF SECTION GRADE FULL R/W 25'-0" 9'-6"15'-6" 13'-0" 4'-0" GRADE 1/2" PER FT. 1/4" PER F 2%

- 1-1/2" ASPHALT CONCRETE SURFACE
- 4" BITUMINOUS AGGREGATE BASE
- 6" AGGREGATE BASE (2-3" COURSES)
- COMPACTED SUBGRADE
- BITUMINOUS PRIME COAT(0.4 GAL/SY)
- MASSILLON STANDARD CURB AND GUTTER (ODOT TYPE 2)
- SEEDING AND MULCHING

6" PRECAST FLAT SLAB TOP FOR 48" DIAMETER

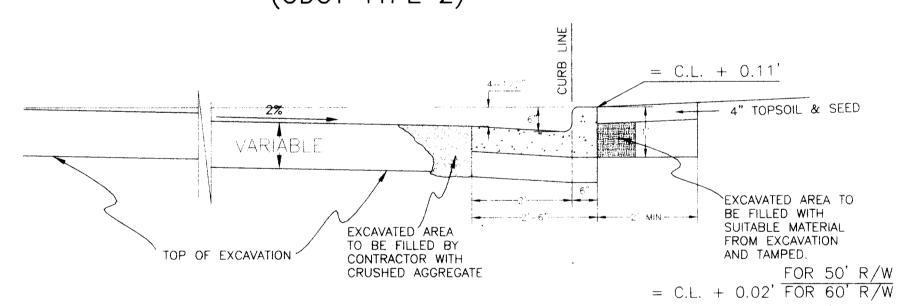
8" PRECAST FLAT SLAB TOP FOR 60"-72" DIAMETER (REINFORCED FOR HIGHWAY LOADING)

- 4" CONCRETE WALK (TO BE PERFORMED BY HOMEBUILDER)
- 4" AGGREGATE BASE UNDER WALK (TO BE PERFORMED BY HOMEBUILDER)

MASSILLON STANDARD CURB AND GUTTER DETAIL (ODOT TYPE 2)

CHO CHO CHO CÓCH

TYPE 'A' MODIFIED CATCH BASIN DETIAL



EJIW - 7035/7037 CURB INLET FRAME, GRATE &CURB BOX

ADJUSTING BRICK

FOR 30" PIPES & UNDER

*NOTE: FOR TYPE 'A' DOUBLE

MODIFIED CB, USE 72" DIA PRE CAST

CONCRETE MANHOLE SECTION. EAST JORDAN

7031 DOUBLE INLET FRAME & GRATE SHALL

BE CENTERED PER DIMENSIONS 'A' & 'B'.

C.Y. BITUMINOUS AGGREGATE BASE(4")
C.Y. 6" AGGREGATE BASE (2-3" COURSES 839 C.Y. 1-1/2" ASPHALT CONCRETE 177 GAL. PRIME COAT (0.04 GAL. PER SQ.YD. 1.699 C.Y. SEAL COAT COVER AGGREGATE(0.008 C.Y./SQ.YD. GAL. SEAL COAT BITUMINOUS MATERIAL (0.3 GAL./SQ. YD.) EACH STANDARD CITY MONUMENTS (ODOT STANDARD) L.F. ODOT TYPE 6 CURB 609 L.F. MASSILLON STANDARD CURB AND GUTTER S.Y. SEEDING AND MULCHING (ROADWAY) L.S. SEEDING AND MULCHING (OUTSIDE ROADWAY EACH CURB RAMP (TO BE PERFORMANCE BY HOMEBUILDER)
S.F. 4" CONCRETE WALK(TO BE PERFORMANCE BY HOMEBUILDER) C.Y. 4" AGG. BASE UNDER WALK(TO BE PERFORMANCE BY HOMEBUILDER) 140 SANITARY SEWER L.F. 6" SANITARY SEWER PIPE (LATERALS) L.F. 8" SANITARY SEWER PIPE 405 EACH 8" x 6" WYES (2) SANITARY MANHOLES (COMPLETE) V.F. (-) 8" DROP ATTACHMENT EACH 8" PLUG & MARKER EACH ADJUST MANHOLE RIMS TO PROPOSED GRADE STORM SEWER 12" STORM SEWER (15" STORM SEWER (18" STORM SEWER (SEE NOTE 16) TYPE 15" STORM SEWER (SEE NOTE 16) TYPE
24" STORM SEWER (SEE NOTE 16) TYPE 24" STORM SEWER (SEE NOTE 16) TYPE 30" STORM SEWER (SEE NOTE 16) TYPE L.F. 6" STORM SEWER (SEE NOTE 16 & 17) TYPE 829 L.F. 6" PVC DOWNSPOUT LATERAL EACH 18" PLUG & MARKER EACH CATCH BASIN TYPE 'A EACH CATCH BASIN TYPE 'A' (MOD. EACH CATCH BASIN TYPE 'S'
EACH CATCH BASIN TYPE 2-2-B CATCH BASIN TYPE 2-4-E STORM MANHOLE (COMPLET STORM SEWER CLEANOUT HEADWALL ODOT TYPE 4B (MOD. FULL HEIGHT) 2@24" DUMPED ROCK CHANNEL PROTECTION TYPE DUMPED ROCK CHANNEL PROTECTION TYPE 'C'MORTARED IN PLACE L.F. DETENTION BASIN CONCRETE CHANNEL WATERLINE 4" DUCTILE IRON PIPE, ANSI PRESSURE CLASS 350 814 8" DUCTILE IRON PIPE, ANSI PRESSURE CLASS 350 TYPE 'K' COPPER TUBING OR PVC W/TRACER WIRE OR 2" HDPE SDR9 PE 3409

EACH 8" x 8" MJ CROSS

EACH 8" x 8" MJ TEE 2" GATE VALVE W/BO 8" GATE VALVE W/BOX 2" CURB STOP 12" x 8" TAPPING SLEEVE WITH 8" VALVE 814 EACH 8" x 8" x 2" TAPPED 814 8" 11-1/4" BEND 814 EACH 8"-45° BEND 814 FACH EACH 814 814 814 2" BLOW OFF ASSEMBL 814 814 REMOVE 8" POJ PLUG W/2" TAP BLOW OFF 8" POJ PLUG & MARKER FIRE HYDRANT REMOVED AND RESET FIRE HYDRANT ASSEMBLY, COMPLET 1" WATER SERVICE CONNECTION W/CURB BOX 814

ESTIMATED QUANTITIES

DESCRIPTION

C.Y. EXCAVATION OUTSIDE ROADWAY
C.Y. EMBANKMENT OUTSIDE ROADWAY

C.Y. ROADWAY EXCAVATION NOT INCL. EMBANK. CONST

L.S. EROSION AND SEDIMENT CONTROL PER SWP3

S.Y. SUBGRADE COMPACTION

C.Y. ROADWAY EMBANKMENT

QTY.

UNIT

EARTHWORK

ROADWAY

APPROVED BY THE MASSILLON CITY ENGINEER Jams J. Boule

MASSILLON CITY ENGINEER

EACH 8" TE

ENGINEERS ESTIMATE \$ 152,600 TOTAL L.F. ROADWAY 1,460.25 \$ 32,000 TOTAL L.F. SANITARY SEWER \$ 115,000 TOTAL L.F. STORM SEWER

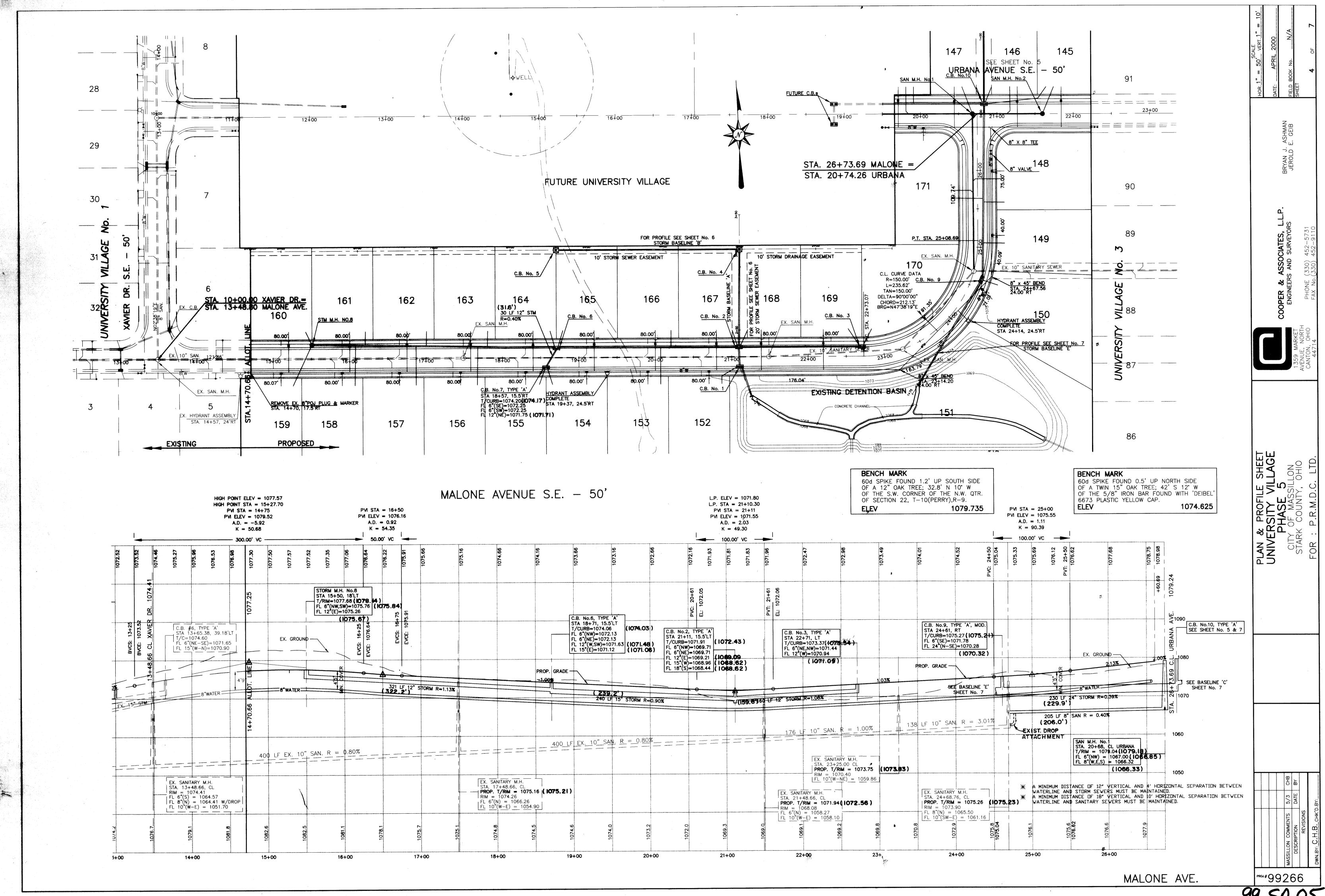
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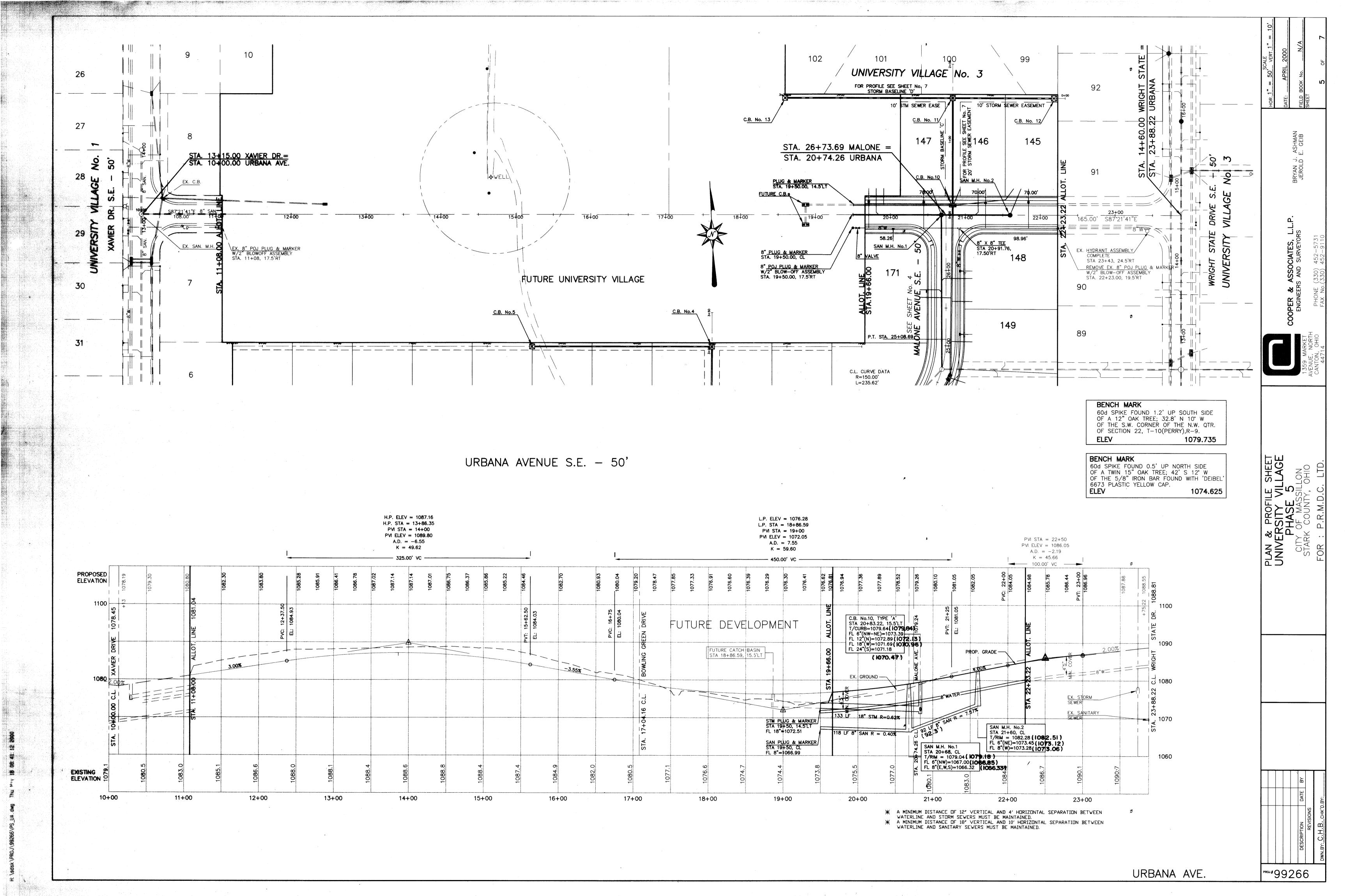
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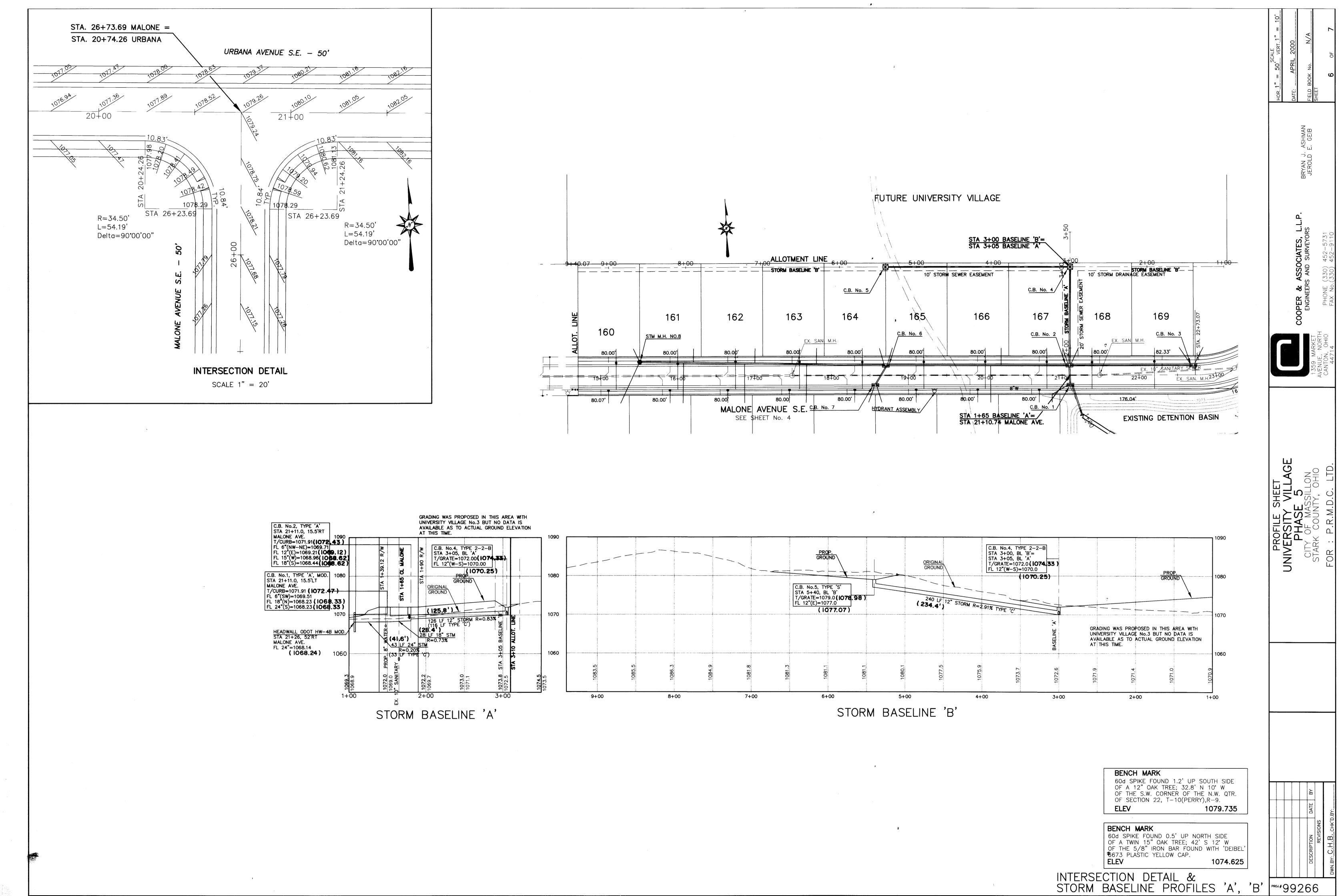
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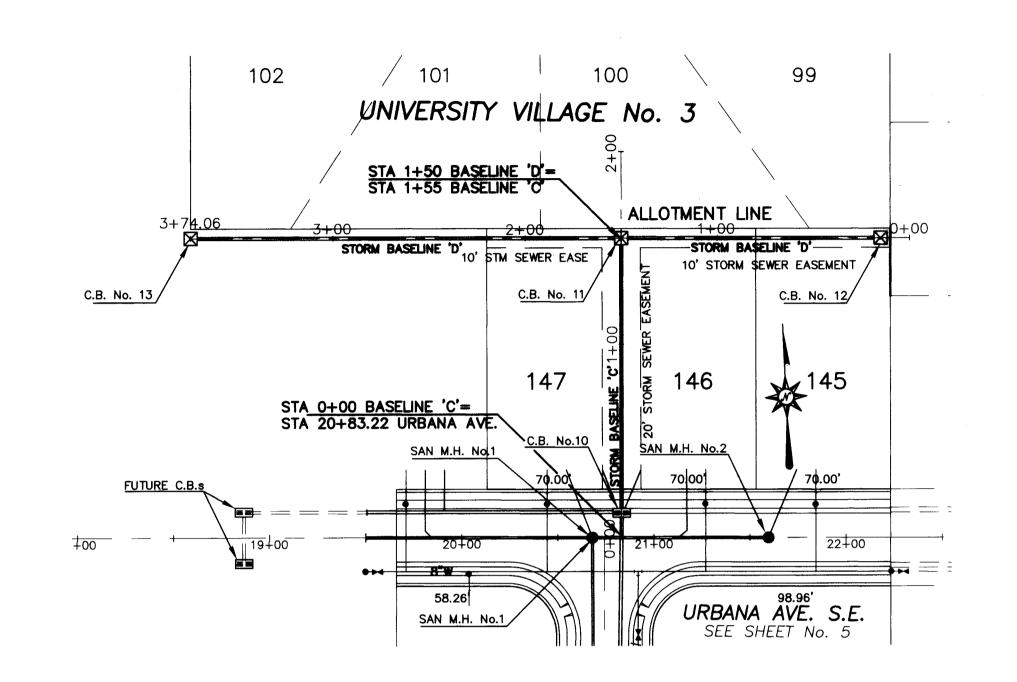
TYPICAL SECTION AND QUANTITIES

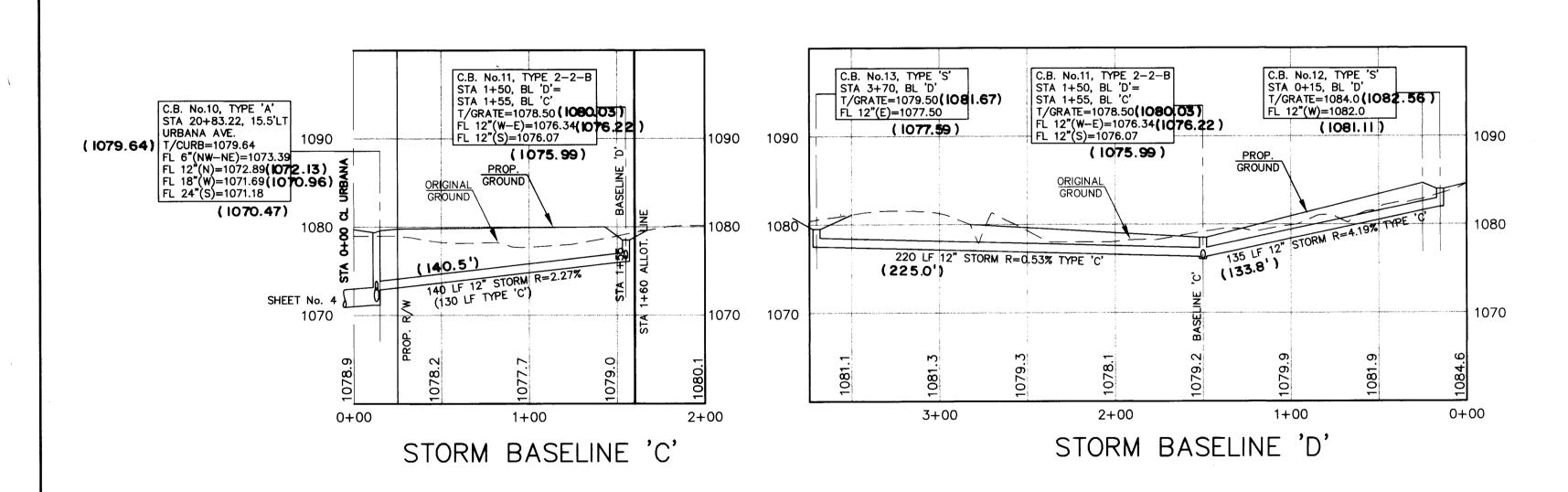
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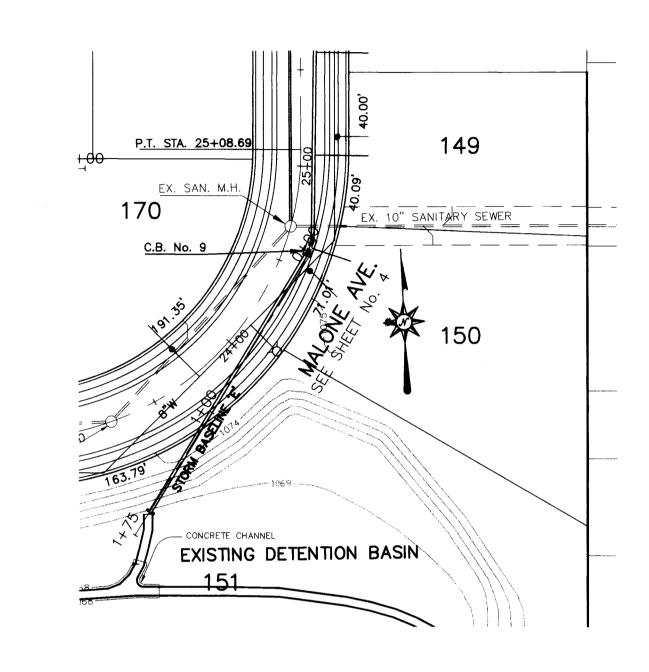


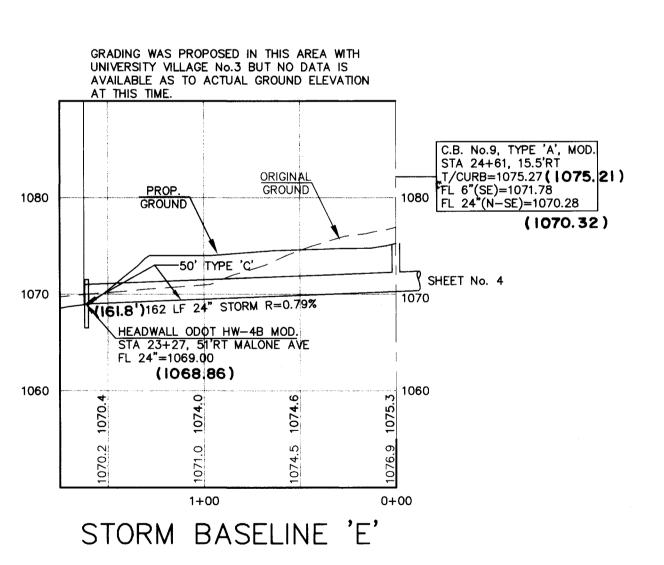












BENCH MARK

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

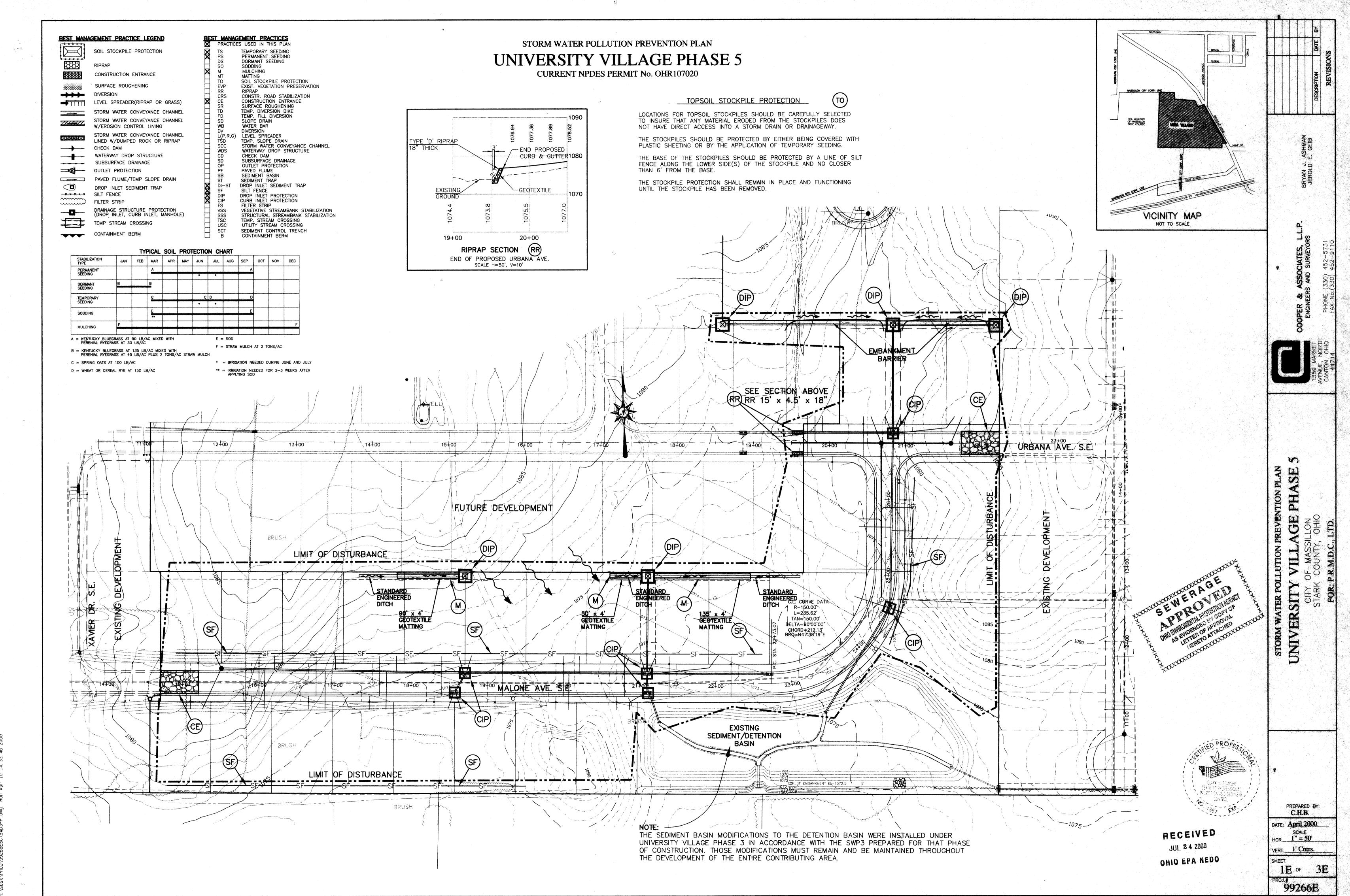
BENCH MARK

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

STORM BASELINE PROFILES 'C', 'D', 'E'

D', 'E'

DNIVERSITY VILLAGO PHASE 5
CITY OF MASSILLON STARK COUNTY, OHIO



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- MULCIAND/OR OTHER APPROPRIATE VEGETATIVE PRACTICES SHALL BE APPL) TO DISTURBED AREAS WITHIN 7 DAYS OF GRADING IF THE AREAS TO REMAIN DORMANT (UNDISTURBED) FOR MORE THAN 45 DAYS)R ON AREAS AND PORTIONS OF THE SITE WHICH CAN BE
- 2. MULC SHALL CONSIST OF ONE OF THE FOLLOWING:

BROLHT TO FINAL GRADE.

- * ;TRAW -- STRAW UNROTTED SMALL GRAIN STRAW APPLIED AT THE RATE OF 2 TONS/AC. OR 90 LB./1,000 SQ. FT. (TWO TO THREE BALES). THE STRAW MULCH SHALL BE SPREAD UNIFORMLY BY HAND OR MECHANICALLY SO THE SOIL SURFACE
- * HYDROSEEDERS -- WOOD CELLULOSE FIBER SHOULD BE USED AT 2.000 LB./AC. OR 46 LB:/1,000 SQ. FT.
- * OTHER -- OTHER ACCEPTABLE MULCHES INCLUDE MULCH MATTINGSS APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS OR WOOD CHIPS APPLIED AT 10-20 TONS/AC.
- MU:H ANCHORING --- MULCH SHALL BE ANCHORED IMMEDIATELY TO MIMIZE LOSS BY WIND OR RUNOFF. THE FOLLOWING ARE ACEPTABLE METHODS FOR ANCHORING MULCH.
- * MECHANICAL -- USE A DISK, CRIMPER, OR SIMILAR TYPE TOOL SET STRAIGHT TO PUNCH OR ANCHOR THE MULCH MATERIAL INTO THE SOIL. STRAW MECHANICALLY ANCHORED SHALL NOT BE FINELY CHOPPED BUT BE LEFT GENERALLY LONGER THAN
- * MULCH NETTINGS -- USE ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS, FOLLOWING ALL PLACEMENT AND ANCHORING INSTRUCTIONS. USE IN AREAS OF WATER CONCENTRATION AND STEEP SLOPES TO HOLD MULCH IN PLACE.
- * ASPHALT EMULSION -- FOR STRAW MULCH, APPLY AT THE RATE OF 160 GAL./AC. (0.1 GAL./SQ. YD.) INTO THE MULCH AS IT IS BEING APPLIED OR AS RECOMMENDED BY THE MANUFACTURER.
- * SYNTHETIC BINDERS -- FOR STRAW MULCH, SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRI-TAC), DCA-70, PETROSET, TERRA TACK OR EQUAL MAY BE USED AT RATES RECOMMENDED BY THE MANUFACTURER.
- * WOOD CELLULOSE FIBER -- WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. THE FIBER BINDER SHALL BE APPLIED AT A NET DRY WEIGHT OF 750 LB./ACRE. THE WOOD CELLULOSE FIBER SHALL BE MIXED WITH WATER AND THE MIXTURE SHALL CONTAIN A MAXIMUM OF 50 LB./GAL. OF WOOD CELLULOSE FIBER.

TEMPORARY SEEDING



- 1. SRUCTURAL EROSION -- AND SEDIMENT-CONTROL PRACTICES SUCH A DIVERSIONS AND SEDIMENT TRAPS SHALL BE INSTALLED AND SABILIZED WITH TEMPORARY SEEDING PRIOR TO GRADING THE REST C THE CONSTRUCTION-SITE.
- IMPORARY SEED SHALL BE APPLIED BETWEEN CONSTRUCTION PERATIONS ON SOIL THAT WILL NOT BE GRADED OR REWORKED FOR 5 DAYS OR MORE. THESE IDLE AREAS SHOULD BE SEEDED AS SOON S POSSIBLE AFTER GRADING OR SHALL BE SEEDED WITHIN 7 DAYS. EVERAL APPLICATIONS OF TEMPORARY SEEDING ARE NECESSARY ON YPICAL CONSTRUCTION PROJECTS.
- HE SEEDBED SHOULD BE PULVERIZED AND LOOSE TO ENSURE THE UCCESS OF ESTABLISHING VEGETATION. HOWEVER, TEMPORARY EEDING SHALL NOT BE POSTPONED IF IDEAL SEEDBED IS NOT OSSIBLE.
- DIL AMENDMENTS -- APPLICATIONS OF TEMPORARY VEGETATION SHALL STABLISH ADEQUATE STANDS OF VEGETATION WHICH MAY REQUIRE HE USE OF SOIL AMENDMENTS. SOIL TESTS SHOULD BE TAKEN ON THE SITE TO PREDICT THE NEED FOR LIME AND FERTILIZER.
- JEEDING METHOD -- SEED SHALL BE APPLIED UNIFORMLY WIITH A LYCLONE SPREADER, 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 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 SPECIES SELECTION					
SEEDNG DATES	SPECIES	LB./1,000 SQ. FT.	PER ACRE		
MAR¢H 1 TO AUGUST 15	OATS- TALL FESCUE ANNUAL RYEGRASS	3 1 1	4 BUSHEL 40 LBS. 40 LBS.		
	PERENNIAL RYEGRASS TALL FESCUE ANNUAL RYEGRASS	1 1 1	40 LBS. 40 LBS. 40 LBS.		
AJQUST 16 TO NOVEMBER 1	RYE TALL FESCUE ANNUAL RYEGRASS	3 1 1	2 BUSHEL 40 LBS. 40 LBS.		
	WHEAT TALL FESCUE ANNUAL RYEGRASS	1 1 1	2 BUSHEL 40 LBS. 40 LBS.		
	PERENNIAL RYEGRASS TALL FESCUE ANNUAL RYEGRASS	1	40 LBS. 40 LBS. 40 LBS.		
NOV. 1 TO SPRING SEEDING	MULCH, SODDING OR	DORMANT SEEDING	YINC		

NOTE - OTHER APPROVED SPECIES MAY BE SUBSTITUTED

MULCHING

SEE <u>MULCH</u> ABOVE.

PERMANENT SEEDING



SITE PREPARATION A SUBSOILER, PLOW OR OTHER IMPLIMENT SHALL BE USED TO REDUCE

- SOIL COMPACTION AND ALLOW MAXIMUM INFILTRATION. SUBSOILING SHOULD BE DONE WHEN THE SOIL MOISTURE IS LOW ENOUGH TO ALLOW THE SOIL TO CRACK OR FRACTURE. SUBSOILING SHALL NOT BE DONE ON SHP-PRONE AREAS WHERE SOIL PREPARATION SHOULD BE LIMITED TO WHAT IS NECESSARY FOR ESTABLISHING VEGETATION.
- 2. THE SITE SHALL BE GRADED AS NEEDED TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION AND SEEDING.
- 3. RESOIL SHALL BE APPLIED WHERE NEEDED TO ESTABLISH VEGETATION.

SEEDBED PREPARATION

- LIME -- AGRICULTURAL GROUND LIMESTONE SHALL BE APPLIED TO ACID SOIL AS RECOMMENDED BY A SOIL TEST. IN LIEU OF A SOIL TEST, LIME SHALL BE APPLIED AT THE RATE OF 100 LB./1,000 S.F OR 2 TONS/ACRE.
- FERTILIZER FERTILIZER SHALL BE APPLIED AS RECOMMENDED BY A SOIL TEST. IN LIEU OF A SOIL TEST, FERTILIZER SHALL BE APPLIED AT A RATE OF 12 LB./1,000 SQ. FT. OR 500 LB./AC. OF 10-10-10 OR 12-12-12 ANALYSIS.
- 3 THE LIMESTONE AND FERTILIZER SHALL BE WORKED INTO THE SOIL WITH A DISK HARROW, SPRING-TOOTH HARROW, OR OTHER IMPLIMENT TO A DEPTH OF 3 INCHES. ON SLOPING LAND THE SOIL SHALL BE WORKED ON THE CONTOUR.

SEEDING DATES AND SOIL CONDITIONS

SEEDING SHOULD BE DONE MARCH 1 TO MAY 31 OR AUGUST 1 TO SEPTEMBER 30. THESE SEEDING DATES ARE IDEAL BUT, WITH THE USE OF ADDITIONAL MULCH AND IRRIGATION SEEDINGS MAY BE MADE ANY TIME THROUGHOUT THE GROWING SEASON. TILLAGE/SEEDBED PREPARATION SHOULD BE DONE WHEN THE SOIL IS DRY ENOUGH TO CRUMBLE AND NOT FORM RIBBONS WHEN COMPRESSED BY HAND.

DORMANT SEEDINGS

- SEEDINGS SHALL NOT BE PLANTED FROM OCTOBER 1 THROUGH NOVEMBER 20.
- 2. THE FOLLOWING METHODS MAY BE USED FOR "DORMANT SEEDING":
 - FROM OCTOBER 1 THROUGH NOVEMBER 20, PREPARE THE SEEDBED, ADD THE REQUIRED AMOUNTS OF LIME AND FERTILIZER, THEN MULCH AND ANCHOR. AFTER NOVEMBER 20, AND BEFORE MARCH 15. BROADCAST THE SELECTED SEED MIXTURE. INCREASE THE SEEDING RATES BY 50% FOR THIS TYPE OF SEEDING.
 - FROM NOVEMBER 20 THROUGH MARCH 15, WHEN SOIL CONDITIONS PERMIT, PREPARE THE SEEDBED, LIME AND FERTILIZE, APPLY THE SELECTED SEED MIXTURE, MULCH AND ANCHOR INCREASE THE SEEDING RATES BY 50% FOR THIS TYPE OF SEEDING.
 - APPLY SEED UNIFORMLY WITH A CYCLONE SPREADER, DRILL, CULTIPACKER SEEDER, OR HYDRO-SEEDER (SLURRY MAY INCLUDE SEED AND FERTILIZER) ON A FIRM, MOIST SEEDBED.
- * WHERE FEASIBLE, EXCEPT WHEN A CULTIPACKER TYPE SEEDER S USED, THE SÉEDBED SHOULD BE FIRMED FOLLOWING SEEDING OPERATIONS WITH A CULTIPACKER, ROLLER, OR LIGHT DRAG. ON SLOPING LAND, SEEDING OPERATIONS SHOULD BE ON THE CONTOUR WHERE FEASIBLE.

	PERMANE	NT SEEDING		
CCED MIV	SEEDING RATE		NOTES:	
SEED MIX	LB./ACRE LB./1,000 S.F.		NOTES.	
	GENERAL	USE		
CREEPING RED FESCUE DOMESTIC RYEGRASS KENTUCKY BLUEGRASS	20-40 10-20 10-20	1/2 - 1 $1/4 - 1/2$ $1/4 - 1/2$		
TALL FESCUE	40	1		
DWARF FESCUE	40	1		
STEEP	BANKS OR	CUT SLOPES		
TALL FESCUE	40	1		
CROWN VETCH TALL FESCUE	10 20	1/4 1/2	NOT LATER THAN AUGUST	
FLAT PEA TALL FESCUE	20 20	1/2 1/2	NOT LATER THAN AUGUST	
ROAL	DITCHES	AND SWALES		
TALL FESCUE	40	1		
DWARF FESCUE. KENTUCKY BLUEGRASS	90 5	2 1/4		
	LAWN	S		
KENTUCKY BLUEGRASS PERENNIAL RYEGRASS	60 60	1 1/2 1 1/2		
KENTUCKY BLUEGRASS CREEPING RED FESCUE		1 1/2 1 1/2	FOR SHADED AREAS	

MULCHING SEE MULCH ABOVE

IRRIGATION

- PERMANENT SEEDING SHALL INCLUDE IRRIGATION TO ESTABLISH VEGETATION DURING DRY OR HOT WEATHER OR ON ADVERSE SITE CONDITIONS AS NEEDED FOR ADEQUATE MOISTURE FOR SEED GERMINATION AND PLANT GROWTH.
- EXCESSIVE IRRIGATION RATES SHALL BE AVOIDED AND IRRIGATION MONITORED TO PREVENT EROSION AND DAMAGE FROM RUNOFF.

MAINTENANCE OF PERMANENT SEEDING

- PERMANENT SEEDING SHALL NOT BE CONSIDERED ESTABLISHED FOR AT LEAST 1 FULL YEAR FROM THE TIME OF PLANTING. SEEDED AREAS SHALL BE INSPECTED FOR FAILURE AND VEGETATION REESATBLISHED AS NEEDED. DEPENDING ON SITE CONDITIONS, IT MAY BE NECESSARY TO IRRIGATE, FERTILIZE, OVERSEED, OR REESTABLISH PLANTINGS IN ORDER TO PROVIDE PERMANENT VEGETATION FOR ADEQUATE EROSION
- MAINTENANCE FERTILIZATION RATES SHALL BE ESTABLISHED BY SOIL TEST RECOMMENDATIONS OR BY USING THE RATES SHOWN IN THE FOLLOWING TABLE.

FERT	LIZATION AND	MOWING		
MIXTURE	FORMULA	LB./AC.	LIME	MOWING
CREEPING RED FESCUE RYEGRASS KENTUCKY BLUEGRASS	10-10-10	500	NOT CLOSER THAN 3'	
TALL FESCUE	10-10-10	500	YEARLY OR AS NEEDED	NOT CLOSER THAN 4"
DWARF FESCUE	10-10-10	500		NOT CLOSER THAN 2"
CROWN VETCH FESCUE	0-20-20	400	SPRING, YEARLY FOLLOWING ESTABLISH	DO NOT MOW
FLAT PEA FESCUE	0-20-20	400	MENT AND EVERY 4-7 YEARS THEREAFTER	DO NOT MOW

NOTE: SOIL TEST RECOMMENDATIONS PREFERRED OVER ABOVE

MATTING



- 1. MATERIAL -- EXCELSIOR MATTING SHALL BE 48" WIDE AND WEIGH AN AVERAGE OF 0.75 LB./SY OR GREATER. JUTE MATTING SHALL BE 48" WIDE AND WEIGH AN AVERAGE OF 1.2 LB./SY OR GREATER. MATTING MADE OF OTHER MATERIAL AND PROVIDING EQUAL OR CREATER STABILIZATION THAN THE ABOVE MAY BE SUBSTITUTED.
- SITE PREPARATION -- AFTER THE SITE HAS BEEN SHAPED AND GRADED. A SEEDBED SHALL BE PREPARED THAT IS RELATIVELY FREE OF FOREIGN MATERIAL, CLODS OR ROCKS THAT ARE GREATER THAN 1.5" IN DIAMETER. THE SITE SHALL BE PREPARED TO INSURE THAT THE MATTING HAS GOOD SOIL CONTACT AND THE MATTING WILL NOT "BRIDGE" OR "TENT" OVER OBSTRUCTIONS.
- 3. MATTING SHALL BE HELD IN PLACE AS RECOMMENDED BY THE MANUFACTURER AS ADEQUATE FOR THE SITE CONDITIONS OR WITH SOD STAPLES. SOD STAPLES SHALL BE No.11 GAUGE OR HEAVIER AND BE 6-10" IN LENGTH. IN LOOSE OR SANDY SOILS LONGER STAPLES SHALL BE USED.
- PLANTING -- LIME AND FERTILIZER SHALL BE USED TO THE RECOMMENDATION OF A SOIL TEST OR A SEEDING PLAN. SEED ACCORDING TO THE MATTING MANUFACTURER'S RECOMMENDATIONS: OR, FOR EXCELSIOR MATTING, SEED AREA TO BE PROTECTED BEFORE INSTALLATION; OR, WHEN USING JUTE MATTING, APPLY HALF THE SEED BEFORE AND HALF THE SEED AFTER INSTALLATION.
- MATTING SHALL BE INSTALLED AS SPECIFIED BY THE MANUFACTURER AS APPROPRIATE FOR THE SITE CONDITIONS OR THE FOLLOWING PROCEDURE MAY BE USED:
 - * AFTER THE SITE IS PREPARED AND EROSION STOPS ARE INSTALLED, START LAYING THE MAT FROM THE TOP OF THE SLOPE OR CHANNEL AND UNROLL THE MATTING ALLOWING 4" OVERLAPS AT THE EDGES.
 - SECURE THE MATTING BY BURYING THE TOP ENDS IN A TRENCH 6" DEEP AND STAPLE THE FOLDED ENDS TO THE BOTTOM OF THE TRENCH. BACKFILL AND TAMP FIRMLY TO THE ESTABLISHED GRADE.
 - STAPLE MATTING EVERY 12" ACROSS THE WIDTH BEGINNING AT THE EDGES AND EVERY 2'IN ROWS THE ENTIRE LENGTH OFTHE MATTING. EVERY OTHER ROW OF STAPLES RUNNING THE LENGTH OF THE MATTING SHOULD BE STAGGERED.
 - TO JOIN TWO ROLLS TOGETHER, CUT A TRENCH TO ANCHOR THE END OF THE NEW ROLL AND SECURE IT THE SAME AS THE TOP ROLL. OVERLAY THE END OF THE PREVIOUS ROLL 18" OVER THE NEW ROLL. CONTINUE TO STAPLE AS DESCRIBED ABOVE.
 - WHEN USING EXCELSIOR MATTING, THE PLASTIC NETTING SHALL BE ON TOP OF THE WOOD FIBER.
- 6. EROSION STOPS SHALL BE USED WHERE RECOMMENDED BY THE MANUFACTURER AND ON AREAS SPECIFIED WHERE HIGH-EROSION POTENTIAL MAY CAUSE UNDERMINING AND GULLIES TO FORM BENEATH THE MATTING.
 - * EROSION STOPS SHALL BE MADE OF STRIPS OF MATTING PLACED IN NARROW TRENCHES 6-12" DEEP THAT COVER THE FULL CROSS SECTION OF THE CHANNEL. THEY SHALL BE SPACED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS OR BY THE FOLLOWING:
 - 3' DOWN THE CHANNEL FROM EACH POINT OF ENTRY OF CONCENTRATED FLOW,
 - AT POINTS WHERE CHANGES IN GRADIENT OR DIRECTION OF CHANNEL OCCURS, AND
 - ON LONG SLOPES AT SPACING FROM 20-100' DEPENDING UPON THE ERODIBILITY OF THE SOIL, VELOCITY AND VOLUME
 - EROSION STOPS SHALL EXTEND BEYOND THE CHANNEL LINER TO THE FULL DESIGN WIDTH OF THE CHANNEL
 - EROSION STOPS SHALL BE CONSTRUCTED WITH 6" DEEP TRENCH, STAPLED TO THE BOTTOM OF THE TRENCH, BACKFILLED AND TAMPED FIRMLY TO CONFORM WITH THE CROSS SECTION OF THE CHANNEL.
 - IF SEEDING HAS BEEN DONE PRIOR TO INSTALLATION OF EROSION STOPS, RESEED DISTURBED AREAS PRIOR TO PLACEMENT OF CHANNEL LINER.

NON-SEDIMENT POLLUTION CONTROL

CONSTRUCTION PERSONNEL, INCLUDING SUBCONTRACTORS WHO MAY USE OR HANDLE HAZARDOUS OR TOXIC MATERIALS, MUST BE MADE AWARE OF THE FOLLOWING GUIDELINES:

- CONTAINERS SHALL BE PROVIDED FOR COLLECTION OF ALL WASTE MATERIAL INCLUDING CONSTRUCTION DEBRIS, TRASH, PETROLEUM PRODUCTS AND ANY HAZARDOUS MATERIALS TO BE USED ON SITE. ALI WASTE MATERIAL SHALL BE DISPOSED OF AT FACILITIES APPROVED FOR THAT MATERIAL.
- NO WASTE MATERIALS SHALL BE BURIED ON-SITE. SITE PERSONNEL INCLUDING SUBCONTRACTORS SHALL BE NOTIFIED THAT NO CONSTRUCTION-RELATED MATERIALS ARE TO BE BURIED ON-SITE.
- MIXING, PUMPING, TRANSFERRING OR OTHERWISE HANDLING CONSTRUCTION CHEMICALS SUCH AS FERTILIZER, LIME, ASPHALT, CONCRETE DRYING COMPOUNDS, AND ALL OTHER POTENTIALLY HAZARDOUS MATERIALS SHALL BE PERFORMED IN AN AREA AWAY FROM ANY WATERCOURSE, DITCH OR STORM DRAIN.
- EQUIPMENT FUELING AND MAINTENANCE, OIL CHANGING, ETC., SHALL BE PERFORMED AWAY FROM WATERCOURSES, DITCHES OR STORM DRAINS, IN AN AREA DESIGNATED FOR THAT PURPOSE. THE DESIGNATED AREA SHALL BE EQUIPPED FOR RECYCLING OIL AND CATCHING SPILL.
- CONCRETE WASH WATER SHALL NOT BE ALLOWED TO FLOW INTO STREAMS, DITCHES, STORM DRAINS, OR ANY OTHER WATER CONVEYANCE A SUMP OR PIT SHALL BE CONSTRUCTED IF NEEDED TO CONTAIN CONCRETE WASH WATER.
- IF HAZARDOUS SUBSTANCES SUCH AS OIL, DIESEL FUEL, HYDRAULIC FLUID, ANTIFREEZE, ETC. ARE SPILLED, LEAKED, OR RELEASED ONTO THE SOIL. THE SOIL SHOULD BE DUG UP AND DISPOSED OF WITH THE TRASH AT A LICENSED SANITARY LANDFILL (NOT A CONSTRUCTION/DEMOLITION DEBRIS LANDFILL). SPILLS ON PAVEMENT SHALL BE ABSORBED WITH SAWDUST OR KITTY LITTER AND DISPOSED OF WITH THE TRASH AT A LICENSED SANITARY LANDFILL. HAZARDOUS OR INDUSTRIAL WASTES SUCH AS MOST SOLVENTS, GASOLINE, OIL-BASED PAINTS, AND CEMENT CURING COMPOUNDS REQUIRE SPECIAL HANDLING. CONTACT OHIO EPA (1-800-282-9378).
- SPILLS OF 25 GAL. OR MORE OF PETROLEUM PRODUCTS SHALL BE REPORTED TO OHIO EPA (1-800-282-9378), THE LOCAL FIRE DEPARTMENT, AND THE LOCAL EMERGENCY PLANNING COMMITTEE WITHIN 30 MIN. OF THE DISCOVERY OF THE RELEASE.

RIPRAP

D50 SPHERICAL

DIAMETER (FT)

MEAN

TYPE 'B'

TYPE 'D

TYPE



D15 SPHERICAL DIAMETER (FT) 0.5

THICKNESS: THE MINIMUM THICKNESS OF THE RIPRAP SHALL BE 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6 INCHES.

QUALITY: STONE FOR RIPRAP SHALL CONSIST OF FIELD STONE OR ROUGH UNHEWN QUARRY STONE OF RECTANGULAR SHAPE. THE SPECIFIC GRAVITY OF INDIVIDUAL STONES SHALL BE 2.5. RUBBLE CONCRETE MAY BE USED PROVIDED IT HAS A DENSITY OF AT LEAST 150 POUNDS PER CUBIC FOOT.

FILTER BLANKET: PLASTIC FILTER BLANKET MATERIAL WILL CONFORM TO THE FOLLOWING PARTICLE SIZE RELATIONSHIPS:

- 1. ADJACENT TO GRANULAR MATERIALS CONTAINING LESS THAN 50% FINE PARTICLES (0.074mm) BY WEIGHT -
- A. d85 BASE (mm)/EOS* FILTER (mm) = GREATER THAN 1 TOTAL OPEN ARÉA OF FILTER IS LESS THAN 36%
- ADJACENT TO ALL OTHER SOILS A. EOS* LESS THAN U.S. STANDARD SIEVE No. 70
- TOTAL OPEN AREA LESS THAN 10% FOS* - EQUIVALENT OPENING SIZE TO A U.S. STANDARD SIEVE SIZE.

OBJECTIONABLE MATERIAL SHALL BE REMOVED.

SUBGRADE PREPARATION: THE SUBGRADE FOR THE RIPRAP OR FILTER MATERIAL SHALL BE PREPARED TO THE REQUIRED LINES OR GRADES OR EMBEDDED IN EXISTING GROUND. ANY FILL REQUIRED IN THE SUBGRADE SHALL BE COMPACTED TO A DENSITY EQUAL TO THAT OF THE SURROUNDING GROUND. BRUSH, TREES, STUMPS, AND OTHER

FILTER BLANKET: PLACEMENT OF THE FILTER BLANKET SHOULD BE DONE IMMEDIATELY AFTER SLOPE PREPARATION. THE CLOTH SHOULD BE PLACED DIRECTLY ON THE PREPARED SLOPE. THE EDGES OF THE SHEETS SHOULD OVERLAP BY AT LEAST 12 INCHES. ANCHOR PINS, 15 INCHES LONG, SHOULD BE SPACED EVERY 3 FEET ALONG THE OVERLAP. THE UPPER AND LOWER ENDS OF THE SHEETS SHOULD BE BURIED A MINIMUM OF 12 INCHES DEEP. FOR STONES 12 INCHES AND LARGER, AN ADDITIONAL 4 INCH LAYER OF GRAVEL MAY BE REQUIRED TO PROTECT THE CLOTH.

STONE PLACEMENT: PLACEMENT OF THE RIPRAP SHOULD IMMEDIATELY FOLLOW THE PLACEMENT OF THE FILTER. THE FINISHED SLOPE SHOULD BE FREE OF POCKETS OF SMALL STONE OR CLUSTERS OF LARGE STONES. HAND PLACING MAY BE NECESSARY TO ACHIEVE THE DESIRED GRADES AND A GOOD DISTRIBUTION OF STONE SIZES.

MAINTENANCE: THE RIPRAP SHOULD BE INSPECTED PERIODICALLY TO DETERMINE IF HIGH FLOWS HAVE CAUSED SCOUR BENEATH THE FILTER BLANKET OR DISLODGED ANY OF THE STONE. IF REPAIRS ARE NEEDED, THEY SHOULD BE ACCOMPLISHED IMMEDIATELY.



DESIRABLE CONSTRUCTION SEQUENCE

- INSTALL SOIL STABILIZATION AND SEDIMENT CONTROL PRACTICES CONSTRUCTION ROAD ENTRANCE(S) DETENTION / SEDIMENT BASINS SEDIMENT TRAPS DIVERSIONS APPROPRIATE SEDIMENT BARRIERS
- GRADE SITE/STOCKPILE TOPSOIL RIGHT OF WAY DIVERSIONS/WATER BARS APPLY VEGETATIVE COVER TO AREAS TO BE DORMANT FOR 45 DAYS OR MORE
- PRESERVE AND PROTECT EXISTING VEGETATION
- INSTALL STORMWATER MANAGEMENT MEASURES STORM SEWERS DROP INLET PROTECTION
- DITCHES AND DITCH LININGS INSTALL PUBLIC UTILITIES
- TEMPORARY VEGETATIVE STABILIZATION TEMPORARY SEEDING VEGETATIVE FILTERS
- MULCHING INSTALL PARKING AND ROAD SUBGRADE
- AGGREGATE COVER SITE CONSTRUCTION WORK CURB AND GUTTER
- RESIDENTIAL/COMMERCIAL CONSTRUCTION RIGHT OF WAY GRADING TEMPORARY SEEDING CURB INLET PROTECTION
- 9. SURFACE ROADS AND PARKING (PAVING) 10. PERMANENT VEGETATIVE STABILIZATION
- PERMANENT OR DORMANT SEEDING SODDING (WHERE REQUIRED) 11. FINAL SITE STABILIZATION

FINAL LANDSCAPING

REMOVE TEMPORARY SEDIMENT CONTROL MEASURES DISPOSE OF TRAPPED SEDIMENT 12. FINAL SITE INSPECTION

STORM WATER POLLUTION PREVENTION PLAN

45 DAYS AFTER FINAL SITE STABILIZATION IS COMPLETE

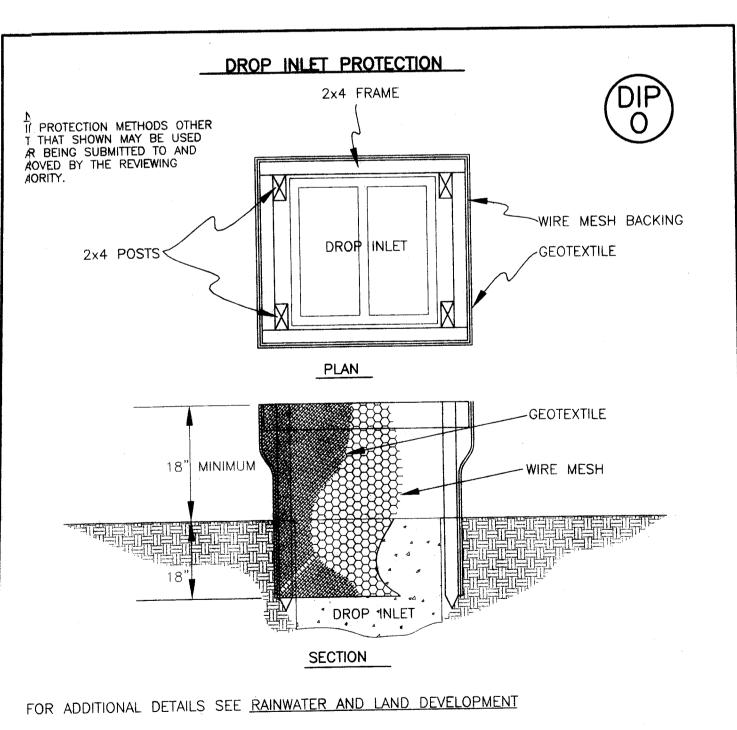
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> IN PROFESS. CLARK H. BOWSER IN EROSION AND SEDIMENT

10. 1367

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.



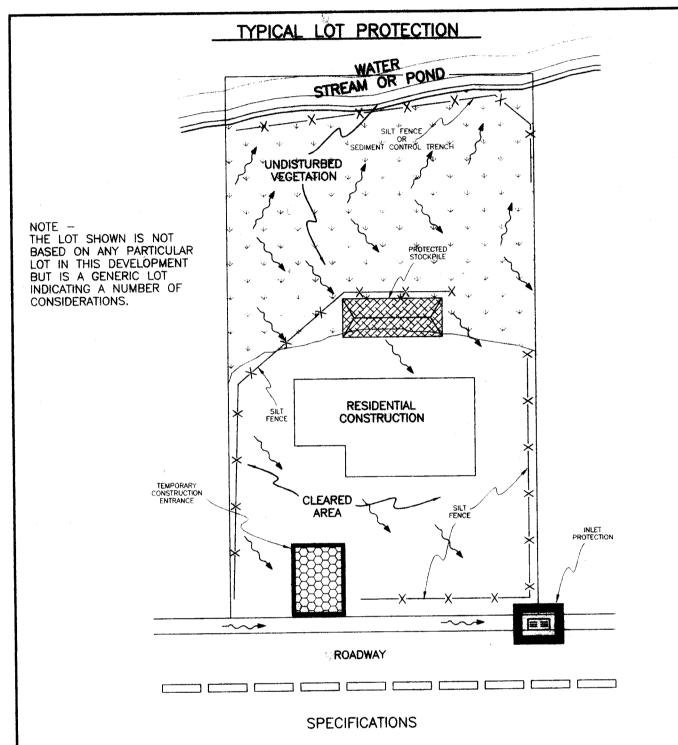
SPECIFICATIONS

- INLET PROTECTION SHALL BE CONSTRUCTED EITHER BEFORE UPSLOPE LAND DISTURBANCE BEGINS OR BEFORE THE STORM DRAIN BECOMES OPERATIONAL.
- THE EARTH AROUND THE INLET SHALL BE EXCAVATED COMPLETELY TO A DEPTH OF AT LEAST 18 INCHES. THE WOODEN FRAME SHALL BE CONSTRUCTED OF 2"x 4" CONSTRUCTION GRADE LUMBER. THE 2x4 POSTS SHALL BE DRIVEN 1" INTO THE GROUND AT THE FOUR CORNERS OF THE INLET AND THE TOP PORTIONS OF 2x4 FRAME ASSEMBLED USING THE OVERLAP JOINT SHOWN. THE TOP OF THE FRAME SHALL BE AT LEAST 6" BELOW ADJACENT ROADS IF PONDED WATER WOULD POSE A SAFETY HAZARD TO TRAFFIC.
- 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
- 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 TO IT. IT SHALL EXTEND FROM THE TOP OF THE FRAME TO 18" BELOW THE INLET NOTCH ELEVATION. THE GEOTEXTILE SHALL OVERLAP ACROSS ONE SIDE OF THE INLET SO THE ENDS OF THE CLOTH ARE NOT FASTENED TO THE
- BACKFILL SHALL BE PLACED AROUND THE INLET IN COMPACTED 6" LAYERS UNTIL THE EARTH IS EVEN WITH THE NOTCH ELEVATION ON ENDS AND TOP ELEVATION ON SIDES.
- 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 THE EARTH DIKE SHALL BE AT LEAST 6' HIGHER THAN THE TOP OF THE FRAME.

STORM WATER POLLUTION PREVENTION PLAN

UNIVERSITY VILLAGE PHASE 5

CURRENT NPDES PERMIT No. OHR107020



EXISTING VEGETATION SHALL BE RETAINED ON IDLE PORTIONS OF THE BUILDING LOTS FOR AS LONG AS CONSTRUCTION OPERATIONS ALLOW. CLEARING SHALL BE DONE SO ONLY ACTIVE WORKING AREAS ARE

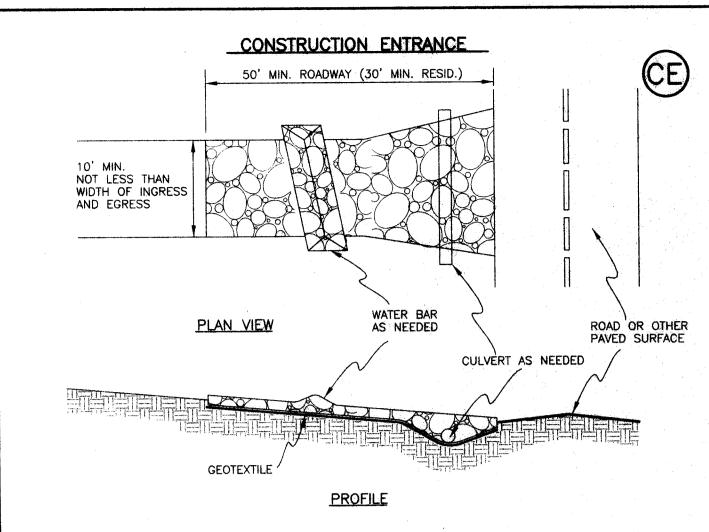
TEMPORARY SEED (ANNUAL RYE, OATS, ETC.) AND/OR MULCH SHALL BE APPLIED TO AREAS, SUCH AS STOCKPILES, THAT ARE BARE AND NOT ACTIVELY BEING WORKED. THIS SHALL APPLY TO AREAS THAT WILL NOT BE REWORKED FOR 14 DAYS OR MORE.

STOCKPILES EXCAVATED FROM BASEMENTS SHALL BE SITUATED AWAY FROM STREETS, SWALES, OR OTHER WATERWAYS AND SHALL BE SEEDED AND/OR MULCHED. SILT FENCE SHALL CONTROL SHEET FLOW RUNOFF FROM THE BUILDING LOT. IT SHALL NOT BE CONSTRUCTED IN CHANNELS OR AREAS OF CONCENTRATED FLOW. OTHER SEDIMENT CONTROLS SUCH AS

INLET PROTECTION AND SEDIMENT TRAPS SHALL ALSO BE USED AS NEEDED TO CONTROL SEDIMENT CONSTRUCTION VEHICLE ACCESS SHALL BE LIMITED TO ONE ROUTE, TO THE GREATEST EXTENT PRACTICAL. THE ACCESS SHALL BE GRAVEL OR CRUSHED ROCK APPLIED TO THE DRIVEWAY AREA.

MUD TRACKED ONTO THE STREET OR SEDIMENT SETTLED AROUND CURB INLET PROTECTION SHALL BE REMOVED DAILY OR AS NEEDED TO PREVENT IT FROM ACCUMULATING. IT SHALL BE REMOVED BY SHOVELLING AND SCRAPING AND SHALL NOT BE WASHED OFF PAVED SURFACES OR INTO STORM

THIS "TYPICAL LOT" IS REPRESENTATIVE ONLY. EROSION AND SEDIMENT CONTROL FOR SPECIFIC LOTS MUST ACCOUNT FOR THE ACTUAL SIZE AND SHAPE OF THE LOT, THE ACTUAL GROUND SLOPES THAT EXIST AS WELL AS THE FINISHED SLOPES, THE ACTUAL LIMITS OF NECESSARILY DISTURBED AREAS, AND ACCESS TO THE PUBLIC ROADWAY FOR BOTH CONSTRUCTION VEHICLES AND STORM WATER RUNOFF.



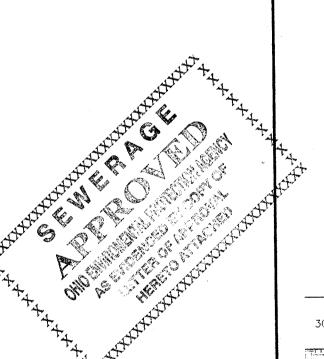
FOR ADDITIONAL DETAILS SEE RAINWATER AND LAND DEVELOPMENT

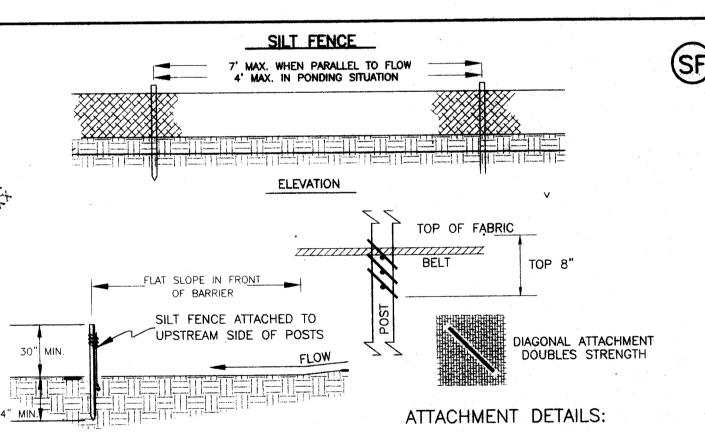
SPECIFICATIONS

- STONE SIZE TWO INCH STONE SHALL BE USED, OR RECYCLED CONCRETE EQUIVALENT.
- LENGTH THE CONSTRUCTION ENTRANCE SHALL BE AS LONG AS REQUIRED TO STABILIZE HIGH TRAFFIC AREAS BUT NOT LESS THAN 50' (EXCEPT ON SINGLE RESIDENCE LOT WHERE A 30' MINIMUM LENGTH
- THICKNESS THE STONE LAYER SHALL BE AT LEAST 6" THICK.

ACCOMPLISHED BY SCRAPING OR SWEEPING.

- WIDTH THE ENTRANCE SHALL BE AT LEAST 10' WIDE, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS AND EGRESS OCCURS.
- BEDDING A GEOTEXTILE SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE. IT SHALL HAVE A GRAB TENSILE STRENGTH OF AT LEAST 200 LB. AND A MULLEN BURST STRENGTH OF AT
- 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. 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. MAINTENANCE - TOP DRESSING OF ADDITIONAL STONE 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
- 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.





* GATHER FABRIC AT POSTS IF NEEDED.
* USE THREE TIES PER POST, ALL WITHIN TOP 8" OF FABRIC. * POSITION TIES DIAGONALLY, PUNCTURING HOLES VERTICALLY A MINIMUM OF 1" APART

* HANG EACT TIE ON A POST NIPPLE AND TIGHTEN SECURELY. * USE CABLE TIES (50 lbs.) OR SOFT WIRE.

SPECIFICATIONS

- SILT FENCE SHALL BE CONSTRUCTED BEFORE UPSLOPE LAND DISTURBANCE BEGINS. SILT FENCE SHALL BE INSTALLED BY THE SLICING METHOD USING AN INTEGRATED SOIL SLICING MACHINE SUCH AS A "TOMMY" BY CARPENTER EROSION CONTROL, OR SIMILAR.
- SLICING MUST BEGIN BEFORE THE CRITICAL POINT TO INSURE ADEQUATE DEPTH OF FABRIC AND CONTINUE BEYOND THE CRITICAL POINT TO INSURE FABRIC DEPTH IS MAINTAINED FOLLOWING REMOVAL OF THE APPARATUS FROM THE SOIL.
- COMPACTION SHALL BE ACHIEVED BY WHEEL ROLLING THE POWER EQUIPMENT OVER EACH SIDE OF THE SILT FENCE - THE UPSTREAM SIDE FIRST, THENM THE DOWNSTREAM SIDE. COMPACT THE SOIL WITH THE LOADER BUCKET FULL OF MATERIAL FOR ADDED WEIGHT. IN DRY CONDITIONS, OR WHERE LARGE CLODS OF SOIL ARE DISRUPTED, 2 OR 3 COMPACTION PASSES OVER EACH SIDE ARE REQUIRED.

POSTS SHALL BE PLACED AFTER THE FABRIC IS IN PLACE AND THE ADJACENT SOIL HAS BEEN COMPACTED.

CRITERIA FOR SILT FENCE MATERIALS

SECTION

STEEL T-POSTS (RE-USABLE) WEIGHING 1.25 Ibs. PER LIN. FT., A MINIMUM OF 48" LONG, SHOULD BE SPACED A MAX. OF 7 FT. APART ON AREAS OF SILT FENCE PARALLEL TO FLOW AND A MAX. OF 4 FT. APART IN AREAS DESIGNED TO POND WATER.

2. SILT FENCE FABRIC — SEE CHART BELOW

FABRIC PROPERTIES	VALUES	TEST METHOD
GRAB TENSILE STRENGHT	90 LB. MINIMUM	ASTM D 1682
MULLEN BURST STRENGTH	190 PSI MINIMUM	ASTM D 3786
SLURRY FLOW RATE	0.3 GAL./MIN./SQ. FT. MAXIMUM	
EQUIVALENT OPENING SIZE	40-80	US STD. SIEVE CW-02215
JLTRAVIOLET RADIATION STABILITY	90% MINIMUM	ASTM-G-26

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PREPARED BY: C.H.B. DATE: April 2000