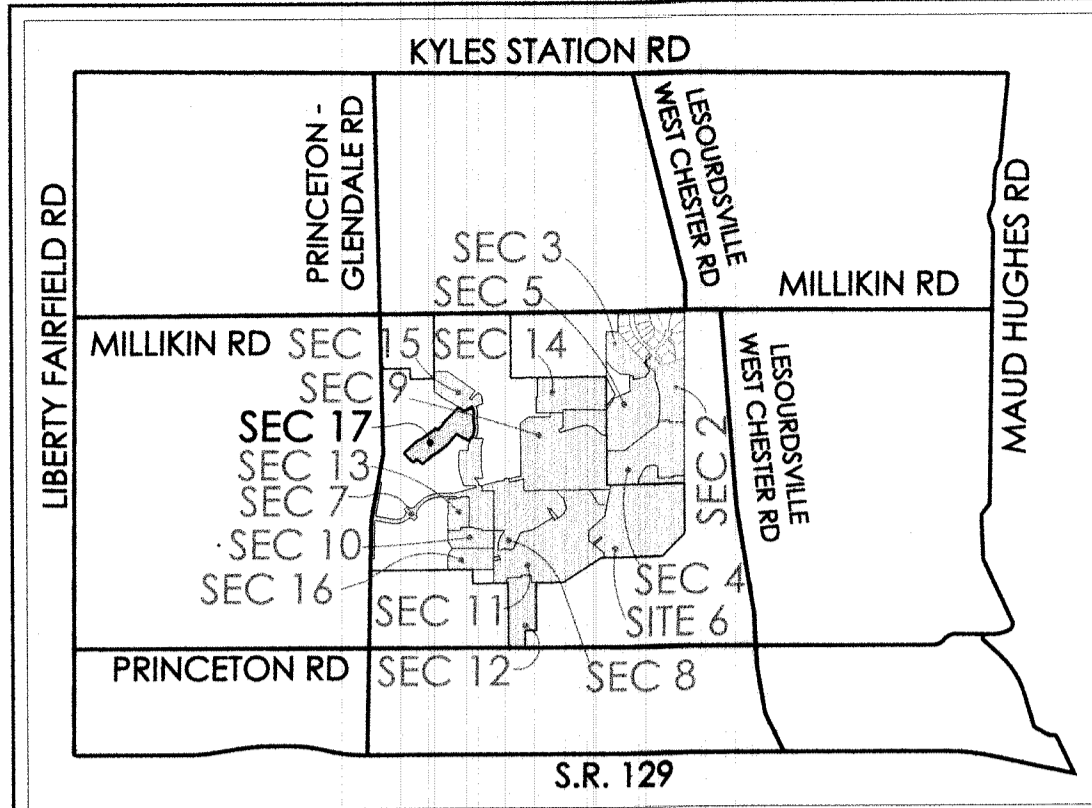


SECTION 17	
PROJECT AREA	10.593 ACRES
AREA IN BUILDING LOTS	5.735 ACRES
AREA IN OPEN SPACE LOTS	2.789 ACRES
AREA IN R/W	2.069 ACRES

SETBACKS							
SECTION	LOTS	MINIMUM WIDTH	TYPICAL AREA	FRONT	SIDE	TOTAL BOTH SIDES	REAR
17	446-470	60'	8,000 S.F.	20'	--	8'	20'

WINDING CREEK SECTION SEVENTEEN AKA CARRIAGE HILL SECTION SEVENTEEN

SECTION 2, TOWN 2, RANGE 3
LIBERTY TOWNSHIP
BUTLER COUNTY, OHIO



VICINITY MAP
N.T.S.

DEVELOPER
LIBERTY LAND COMPANY, LLC.
5342 CARRIAGE HOUSE BOULEVARD
LIBERTY TOWNSHIP, OHIO 45011

OWNER
TERRY LAND INVESTMENT, LLC
5342 CARRIAGE HOUSE BOULEVARD
LIBERTY TOWNSHIP, OHIO 45011

GENERAL NOTES

ALL WORK SHALL BE DONE UNDER THE SUPERVISION OF THE BUTLER COUNTY ENGINEER AND THE AUTHORITY HAVING RESPONSIBILITY FOR UTILITIES IN THE AREA AND IN ACCORDANCE WITH THE RULES AND REGULATIONS FOR SUBDIVISION.

STORM SEWERS SHALL BE A MATERIAL WITH A MANUFACTURER'S MANNINGS "N" OF 0.011 OR LOWER AND A MATERIAL AS NOTED IN APPENDIX D, TABLE D-6 IN THE BUTLER COUNTY SUBDIVISION REGULATIONS ADOPTED NOVEMBER 24, 1997. (NOTE - CORRUGATED METAL PIPE NOT INCLUDED) STEPS SHALL BE INSTALLED IN CATCH BASINS AND MANHOLES IN EXCESS OF FOUR FEET.

CONSTRUCTION WORK SHALL BE IN ACCORDANCE WITH THE OHIO DEPARTMENT OF TRANSPORTATION "CONSTRUCTION AND MATERIAL SPECIFICATIONS" 000T 1997 STANDARDS OR BUTLER COUNTY REQUIREMENTS AND STANDARDS FOR SUBDIVISIONS. WHEN IN CONFLICT, THE COUNTY REQUIREMENTS SHALL PREVAIL.

SUMP COLLECTOR LINES SHALL BE CONSTRUCTED SDR 35 PVC, ARMO CO 2000 OR APPROVED EQUAL.

A PRE-CONSTRUCTION MEETING IS REQUIRED WITH THE BUTLER COUNTY ENGINEER'S OFFICE PRIOR TO THE START OF CONSTRUCTION.

SANITARY SEWER MATERIALS AND INSTALLATION AS PER BUTLER COUNTY WATER & SEWER SPECIFICATIONS USING SECTION 3110 FOR PVC, SDR-35 & 26 PIPE, SECTION 3140 FOR ABS PVC COMPOSITE PIPE, SECTION 3410 FOR MANHOLES.

SANITARY LATERALS SHALL BE EXTENDED TO AT LEAST TEN (10) FEET BEYOND THE PROPERTY/RIGHT-OF-WAY LINE OR TO THE EDGE OF THE EASEMENT, WHICHEVER IS GREATER.

THE UPSTREAM TERMINUS OF THE SANITARY SEWER LATERALS SHOWN HERE ON ARE TO BE 12 FEET BELOW OF THE ELEVATION OF THE BACK OF CURB.

WATER MAIN SHALL HAVE 4" MINIMUM DEPTH TO TOP OF PIPE.
ALL WATER MAINS TO BE DUCTILE IRON PIPE, CL. 53 AWWA C-151.
WATER MAIN MATERIALS, VALVES, FIRE HYDRANTS, FITTINGS, APPURTENANCES, AND INSTALLATION TO BE AS BUTLER COUNTY SPECIFICATIONS, AND SHALL HAVE RESTRAINED JOINTS. ALL WATER MAIN VALVES TO HAVE A MINIMUM DEPTH OF 2.5 AND A MAXIMUM OF 4.0' FROM PROPOSED GRADE TO THE TOP OF THE VALVE OPERATING NUT.

WATER MAIN SHALL HAVE 10' HORIZONTAL, & 18" VERTICAL SEPARATION (OUTSIDE EDGE TO EDGE) WITH ALL OTHER PIPE.

ALL DOWNSPOUT LINES SHALL BE ON SPLASHBLOCKS AND MAY NOT BE CONNECTED TO THE CURB.

ALL TRENCHES WITHIN THE RIGHT-OF-WAY AND UTILITY EASEMENTS SHALL BE COMPACTED AND BACKFILLED IN ACCORDANCE WITH ITEM 203 AND 603 IN THE CURRENT OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS MANUAL.

THE DEVELOPER SHALL BE RESPONSIBLE FOR THE INSTALLATION OF CONDUITS OF THE FULL WIDTH OF THE PUBLIC RIGHT-OF-WAY AS CALLED FOR ON THE TYPICAL SECTION FOR USE BY THE ELECTRIC, TELEPHONE, AND CABLE TELEVISION SERVICES. THE DEVELOPER SHALL COORDINATE THE LOCATION OF THE LINES WITH EACH UTILITY COMPANY.

ALL ELECTRICAL TRANSFORMERS SHALL BE LOCATED SO THAT THEY DO NOT INTERFERE WITH EXISTING MANHOLES OR WATER MAIN APPURTENANCES.

STORM SEWER PIPE SHALL BE TYPE "B" & "C" CONDUIT, 707.42 PVC, ALL DIA. (CONTECH A200 OR EQUAL), 707.33 PVC, UP TO & INCLUDING 24" DIA (HANCOR, ADS, OR EQUAL), 707.01 CMP, ALL DIA., 706.02, REINFORCED CONCRETE PIPE, ALL DIA.

BUTLER COUNTY WATER & SEWER DOES NOT ACCEPT ANY RESPONSIBILITY FOR THE RELOCATION, REPAIR OR REPLACEMENT OF ANY OTHER UTILITY INSTALLED WITHIN FIVE (5) FEET OF THE CENTERLINE OF ANY SANITARY MAIN SEWER OR WATER MAIN.

PRIVATE DRIVEWAYS, PARKING LOTS AND OTHER PAVED AREAS, EARTHEN BERMS OR STRUCTURES SHOULD NOT BE CONSTRUCTED OVER PRIVATE WATER OR SEWER SERVICE LINES WITHIN THE PUBLIC ROAD RIGHT OF WAY OR WITHIN EASEMENT AREAS FOR THE PUBLIC UTILITIES. SHOULD THIS OCCUR, THE PROPERTY OWNER WILL BE HELD RESPONSIBLE FOR THE PROTECTION AND REPAIR OF AND FOR PROVIDING ACCESS TO ANY CURB STOPS, METER PITS, MANHOLES, CLEANOUTS, ETC. INSTALLED IN CONJUNCTION WITH THESE PRIVATE SERVICE LINES AND FOR ANY DAMAGE OR RESTORATION OF THE PAVED SURFACES OR STRUCTURES THAT MAY RESULT FROM THE FUTURE OPERATION, MAINTENANCE, REPAIR OR REPLACEMENT OF SAID SERVICE LINES AND APPURTENANCES.

LOCATION OF EXISTING UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY GROUND CONDITIONS AND EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION.

THE EXISTING UTILITIES SHOWN ARE FOR CONTRACTOR'S CONVENIENCE ONLY. THERE MAY BE OTHER UTILITIES NOT SHOWN ON THESE PLANS. THE OWNER ASSUMES NO RESPONSIBILITY FOR THE LOCATION OF ALL UTILITIES WITHIN THE LIMITS OF THE WORK. ALL DAMAGE MADE TO EXISTING UTILITIES BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

BUTLER COUNTY ASSUMES NO MAINTENANCE RESPONSIBILITY FOR PRIVATE DRIVES.

BUTLER COUNTY WILL NOT BE RESPONSIBLE FOR ANY PAVEMENT OR STORM SEWER REPAIRS RESULTING FROM WATER MAIN REPAIRS. BUTLER COUNTY ALSO WILL NOT BE RESPONSIBLE FOR ADJUSTING VALVES, FIRE HYDRANTS, METER PITS, ETC. AS A RESULT OF GRADE CHANGES. THE GRANTOR SHALL BE RESPONSIBLE FOR THE PROPER ADJUSTMENT OF VALVES, FIRE HYDRANTS, METER PITS, ETC., TO THE SATISFACTION OF BUTLER COUNTY, DUE TO GRADE CHANGES, PAVING, REPAVING, ETC., INITIATED BY THE GRANTOR.

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

ALL BUILDINGS TO BE SERVED BY THE PUBLIC SEWER SYSTEM SHALL BE CONSTRUCTED SO AS TO PROVIDE A MINIMUM OF FOUR FEET (4') OF VERTICAL SEPARATION BETWEEN THE PUBLIC SANITARY SEWER, AT THE POINT OF CONNECTION, AND THE LOWEST BUILDING LEVEL SERVED BY A GRAVITY SEWER CONNECTION. IN ADDITION, SAID BUILDING LEVEL SHALL BE AT LEAST ONE FOOT (1') ABOVE THE LOWEST POINT OF FREE-OVERFLOW (NON-SEALED MANHOLE COVER) UPSTREAM OF ANY TREATMENT FACILITY OR WASTEWATER PUMPING FACILITY THAT RECEIVES THE DISCHARGE FROM SAID BUILDING. SAID MINIMUM SERVICE LEVELS SHALL BE RECORDED ON THE "AS-BUILT" PLANS FOR THE DEVELOPMENT WHICH WILL BE KEPT ON FILE IN THE OFFICE OF THE BUTLER COUNTY SANITARY ENGINEER.

SANITARY SEWER LATERALS, WHICH SHALL INCLUDE ALL PIPE AND APPURTENANCES FROM THE BUILDING TO THE PUBLIC SEWER MAIN, AND CONNECTION TO THE PUBLIC SEWER MAIN SHALL BE CONSIDERED PRIVATE AND THE RESPONSIBILITY OF THE PROPERTY OWNER TO MAINTAIN. THE CONNECTION TO THE SEWER WOULD BE ANY PIPING THAT EXTENDS OUT FROM THE MAIN BARREL OF THE SEWER MAIN.

ALL GROUND SURFACE AREAS THAT HAVE BEEN EXPOSED OR LEFT BARE AS A RESULT OF CONSTRUCTION AND ARE TO FINAL GRADE AND ARE TO REMAIN SO, SHALL BE SEEDED AND MULCHED AS SOON AS PRACTICAL IN ACCORDANCE WITH STATE OF OHIO SPECIFICATIONS, ITEM 659.

THE CONTRACTOR SHALL SEED AND MULCH DISTURBED GRASS AREAS WITH:
3 LBS. WHEAT OR RYE PER 1000 SQ. FT.
10 LBS. 12-12-12 FERTILIZER PER 1000 SQ. FT.
2 OR 3 BALES OF STRAW PER 1000 SQ. FT.

THE CONTRACTOR SHALL ALSO PROVIDE OTHER EROSION CONTROL MEASURES AS MAY BE REQUIRED BY BUTLER COUNTY ENGINEER DURING THE CONSTRUCTION PHASE.

SEEDING - SPECIFICATIONS AT DETENTION BASIN:
RED FESCUE 1 LB. PER 1000 SQ. FT.
KENTUCKY BLUEGRASS 1/2 LB. PER 1000 SQ. FT.
PERENNIAL RYEGRASS 1/2 LB. PER 1000 SQ. FT.

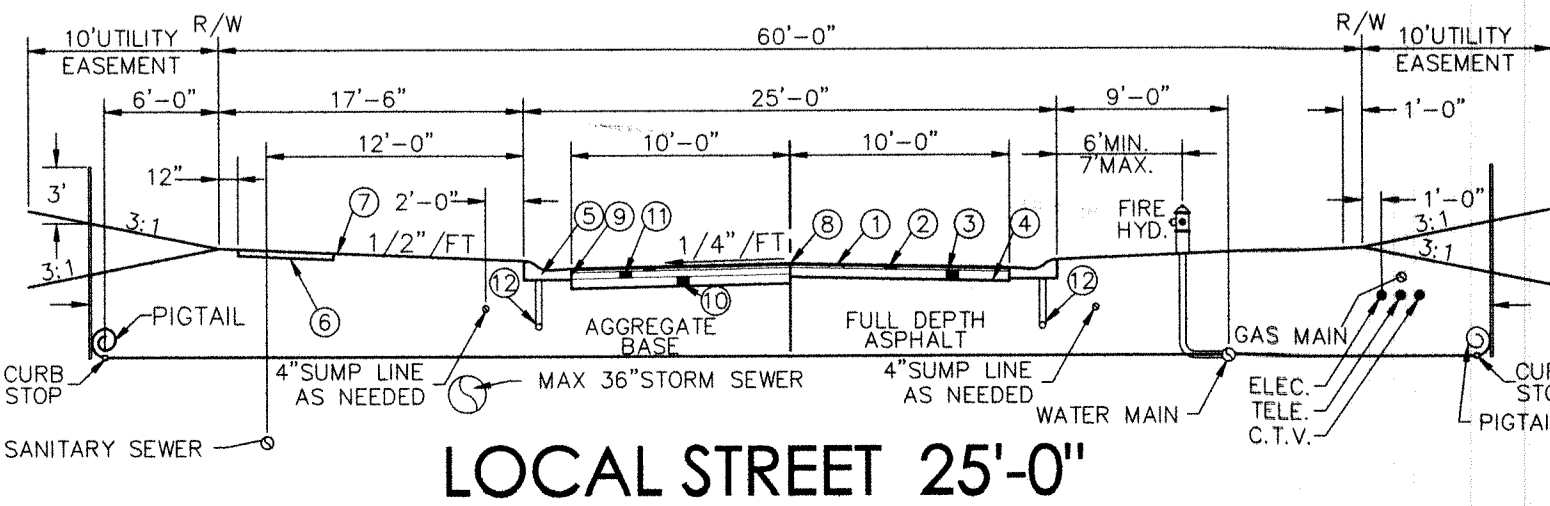
FERTILIZER: 12 - 12 - 12
MULCH - 3 BALES OF STRAW PER 1000 SQ. FT.
MULCH TIE DOWN: LIQUID ASPHALT (R.C. 70, 25 OR 800) 40 GALS. PER 1000 SQ. YDS. OR PLASTIC MULCH NETTING, STAPLED IN PLACE.

NOTES

- ITEM NUMBERS REFER TO THE OHIO DEPARTMENT OF HIGHWAYS CONSTRUCTION AND MATERIAL SPECIFICATIONS, AND ALL CONSTRUCTION WORK SHALL BE DONE ACCORDING TO SAID SPECIFICATIONS OR BUTLER COUNTY REQUIREMENTS AND STANDARDS FOR SUBDIVISIONS. WHEN IN CONFLICT, THE COUNTY REQUIREMENTS SHALL PREVAIL.
- ITEMS THAT PERTAIN TO UNDERGROUND UTILITIES SUCH AS WATERMAIN PIPE, SANITARY SEWER PIPE, WATER VALVES AND MANHOLE FRAMES AND COVERS, ETC. WILL REMAIN UNDER THE JURISDICTION OF THE UTILITY SERVING THE AREA. STORM SEWERS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE BUTLER COUNTY ENGINEER.
- ALL TRENCHES WITHIN THE RIGHT OF WAY AND 10' UTILITY EASEMENTS SHALL BE COMPACTED AND BACKFILLED IN ACCORDANCE WITH ITEMS 203 AND 603 IN THE STATE SPECIFICATIONS.
- SURFACE COURSE (ITEM 448) AND TACK COAT (ITEM 407 ARE TO BE APPLIED NO SOONER THAN NINE (9) MONTHS AFTER THE LEVELING COURSE (ITEM 448), AND FIFTY (50) PERCENT OF THE HOMES ARE COMPLETED. IF AFTER TWO (2) YEARS, FIFTY (50) PERCENT OF THE HOMES HAVE NOT BEEN COMPLETED, THEN THE TOP COURSE MAY BE APPLIED.
- A MINIMUM 10' UTILITY EASEMENT SHALL BE SHOWN ON THE RECORD PLAT PARALLEL AND IMMEDIATELY ADJACENT TO THE RIGHT OF WAY LINE ALLOWING FOR INSTALLATION, OPERATION AND MAINTENANCE OF SEWERS, WATER, ELECTRIC AND TELEPHONE CONDUIT AND ANY OTHER PUBLIC OR QUASI PUBLIC UTILITY.
- DEVELOPER SHALL BE RESPONSIBLE FOR THE INSTALLATION OF CONDUITS FOR THE FULL WIDTH OF THE PUBLIC RIGHT OF WAY AT A DEPTH OF 38" FOR USE BY THE ELECTRIC, TELEPHONE AND CABLE TV SERVICES. THE LOCATION OF THESE LINES SHALL BE COORDINATED WITH UTILITY COMPANIES BY THE DEVELOPER.
- SANITARY LATERALS SHALL BE EXTENDED BEYOND THE LIMITS OF THE UTILITY EASEMENTS, BUT NOT TO EXCEED 12' FROM THE RIGHT OF WAY LINE.
- ALL ELECTRICAL TRANSFORMERS SHALL BE LOCATED SO THAT THEY DO NOT INTERFERE WITH THE EXISTING MANHOLES.
- SUMP LINE CONDUITS ARE TO BE SDR 35.
- THE SANITARY SEWER SHALL BE PLACED IN SUCH A MANNER THAT THE SANITARY MANHOLE COVER DOES NOT CONFLICT WITH THE SIDEWALK.

SERVICES	
ITEM	DEPTH TOP OF PIPE
Underdrain	18"
Supplies	24" - 30"
Gas	24" - 30"
Water	48" - 54"
Electric	36" - 40"
Telephone	36" - 40"
Cable TV	36" - 40"

NOTE: 6" CONCRETE WALK TO BE ON ONE SIDE OF LOCAL STREET.

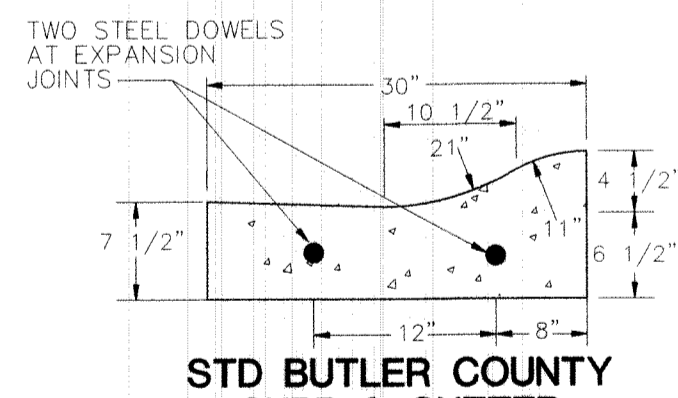


OVERALL PROJECT MAP

1"=500'

INDEX

SHEET	DESCRIPTION
1	COVER SHEET
2	IMPROVEMENT PLAN
3-4	GRADING & S.W.P.P. PLAN
5-6	PROFILES & DETAILS
7	STANDARD DETAILS
8-9	BUTLER COUNTY WATER & SEWER STANDARD DETAILS
10	EROSION CONTROL NOTES & DETAILS



NOTES:
GENERAL: THIS DRAWING SHOWS THE STANDARD TYPE OF CURB THAT SHOULD BE USED ON MOST TYPES OF PAVEMENT. TYPICAL SECTION OF PROJECT SHOWS THE TYPE TO BE USED. ALSO THE THICKNESS OF THE EDGE OF THE PAVEMENT OR THE EDGE OF THE CURB AND GUTTER SECTION.

JOINTS: ONE INCH EXPANSION JOINTS SHALL EXTEND UP TO TOP OF THE CURB AND SHALL BE CONSTRUCTED IN THE CURB AND GUTTER SECTION IN SUCH A MANNER THAT THE JOINT SEAL WILL EXTEND THE FULL WIDTH OF THE GUTTER AND INTO THE CURB FACE A SUFFICIENT DISTANCE TO SEAL THE JOINT TO AN ELEVATION OF AT LEAST TWO (2) INCHES ABOVE THE FLOW LINE OF THE GUTTER SECTION AT EXPANSION JOINTS. ALL JOINTS SHALL BE CONSTRUCTED PERPENDICULAR TO THE EDGE OF THE CURB AND TO THE SURFACE OF THE PAVEMENT. TRANSVERSE EXPANSION JOINT MATERIAL SHALL MEET THE REQUIREMENTS OF 705.03. EXPANSION MATERIAL AND JOINT SEALER IS NOT REQUIRED WHEN CURB IS ADJACENT TO FLEXIBLE TYPE PAVEMENT.

- 1" SURFACE COURSE OF ITEM 448 ASPHALTIC CONCRETE, SEE NOTE #4
- 1 1/2" LEVELING COURSE OF ITEM 448 ASPHALTIC CONCRETE
- 6" BASE COURSE OF ITEM 301 BITUMINOUS AGGREGATE BASE
- COMPACTED SUBGRADE, ITEM 203.13
- ROLL TYPE CURB & GUTTER, ITEM 609 (BUTLER CO. STANDARD C-1)
- 4" THICK CLASS "C" CONCRETE WALK, 6" WIDE, ITEM 608 WALK TO BE 1/2" HIGHER THAN SOD
- SEEDING & MULCHING, ITEM 659
- TACK COAT, ITEM 407 - TO BE APPLIED AT A RATE OF 0.05 GAL. PER SQ. YARD, SEE NOTE #4
- TACK COAT SHALL BE APPLIED TO FRONT FACE OF CURB PRIOR TO INSTALLATION OF THE 301 BITUMINOUS AGGREGATE BASE. ALSO TO BE APPLIED TO THE CURB JOINT AFTER THE INSTALLATION OF 448 LEVELING COURSE
- 6" BASE COURSE OF ITEM 304 AGGREGATE BASE
- 4" BASE COURSE OF ITEM 301 BITUMINOUS AGGREGATE BASE
- ITEM 605, 4" UNDERDRAIN CONNECT UNDERDRAIN TO FRONT FACE OF NEAREST CATCH BASIN

NOTE:
ALL LOTS SHALL BE SERVED BY SANITARY SEWER AND PUBLIC WATER SYSTEMS.

PROJECT BENCHMARK = CENTERLINE NAIL LOCATED AT THE INTERSECTION OF CARRIAGE HOUSE BOULEVARD AND STAGECOACH WAY. ELEVATION = 790.52

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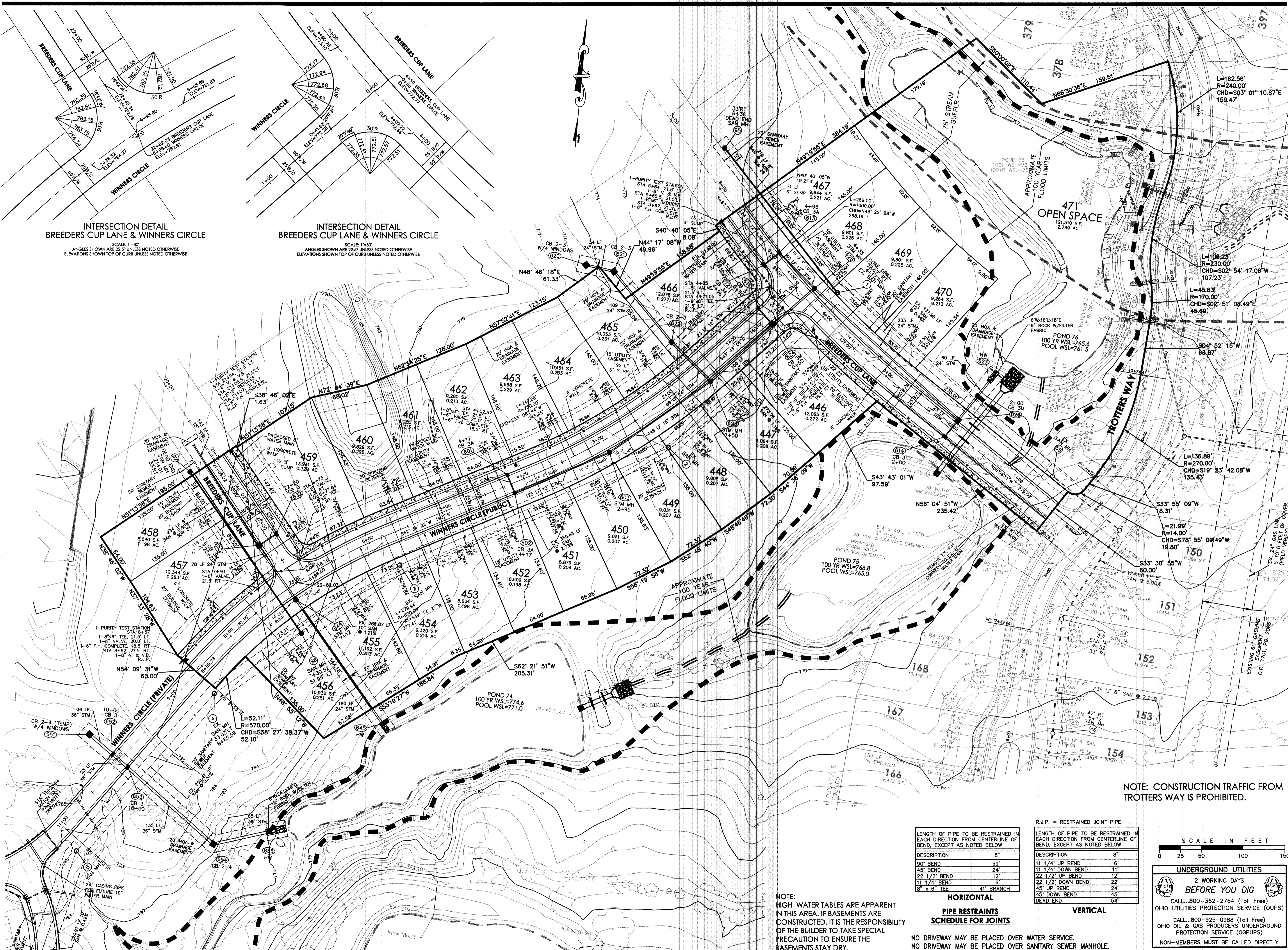
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Date	07/10/17		
No. Revision/Issue		By	Date

**WINDING CREEK
SECTION SEVENTEEN
AKA CARRIAGE HILL
SECTION SEVENTEEN**

SECTION 2, TOWN 2, RANGE 3
LIBERTY TOWNSHIP
BUTLER COUNTY, OHIO

Sheet Title	COVER SHEET
Project No.	04476.06
Scale	1"=50'
Sheet No.	1/10
File No.	04-476



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WINDING CREEK SECTION SEVENTEEN AKA CARRIAGE HILL SECTION SEVENTEEN

SECTION 2, TOWN 2, RANGE 3
LIBERTY TOWNSHIP
BUTLER COUNTY, OHIO

Sheet Title

IMPROVEMENT PLAN

Project No.	04476.06
Scale	1"=50'
Sheet No.	2/10
File No.	04-476

NOTE: CONSTRUCTION TRAFFIC FROM TROTTERS WAY IS PROHIBITED.

HORIZONTAL PIPE RESTRAINTS SCHEDULE FOR JOINTS		VERTICAL	
DESCRIPTION	8"	DESCRIPTION	8"
90° BEND	59'	11 1/4" UP BEND	6'
45° BEND	24'	11 1/4" DOWN BEND	11'
22 1/2° BEND	12'	22 1/2" UP BEND	12'
11 1/4° BEND	6'	22 1/2" DOWN BEND	22'
8" x 6" TEE	41'	45° UP BEND	24'
		45° DOWN BEND	45'
		DEAD END	54'

SCALE IN FEET

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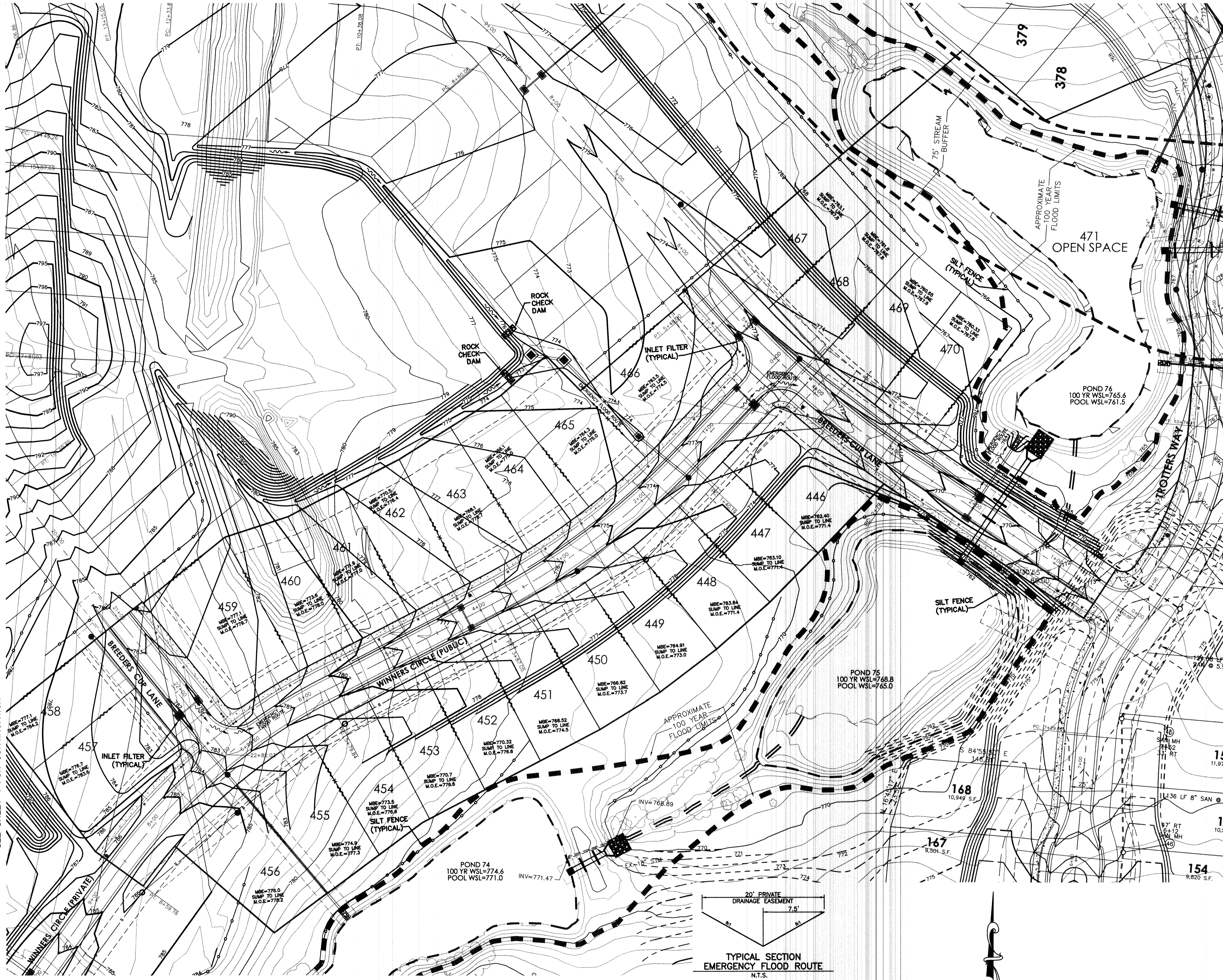
NOTE: HIGH WATER TABLES ARE APPARENT IN THIS AREA. IF BASEMENTS ARE CONSTRUCTED, IT IS THE RESPONSIBILITY OF THE BUILDER TO TAKE SPECIAL PRECAUTION TO ENSURE THE BASEMENTS STAY DRY.

NO DRIVEWAY MAY BE PLACED OVER WATER SERVICE.
NO DRIVEWAY MAY BE PLACED OVER SANITARY SEWER MANHOLE.

SEE SHEET 4 FOR CONTINUATION

SEE SHEET 4 FOR CONTINUATION

SEE SHEET 4 FOR CONTINUATION



NOTE: HIGH WATER TABLES ARE APPARENT IN THIS AREA. IF BASEMENTS ARE CONSTRUCTED, IT IS THE RESPONSIBILITY OF THE BUILDER TO TAKE SPECIAL PRECAUTION TO ENSURE THE BASEMENTS STAY DRY.

NOTE: 6" OF TOPSOIL MAY BE PLACED OVER CLEARED CUT AREAS OF THE LOTS. AFTER COMPACTION EARTHWORK HAS BEEN COMPLETED, THE TOP 18" OF FILL MAY BE TOPSOIL.

LOT DRAINAGE ARROWS SHOWN HEREON ARE BASED ON DIRECTION OF DRAINAGE AFTER COMPLETION OF RESIDENTIAL CONSTRUCTION.

A DETAILED MAINTENANCE PLAN THAT DESCRIBES PROCEDURES (E.G. INSPECTIONS, SEE SECTION 2.16, INSPECTION OF STORM WATER CONTROLS/INTERNAL INSPECTIONS) NEEDED TO ENSURE THE CONTINUED PERFORMANCE OF CONTROL PRACTICES SHALL BE LOCATED AT THE ENTRANCE OF THE DEVELOPMENT AREA OR AT THE JOB TRAILER IN A WELL-MARKED CONTAINER ACCESSIBLE AT ALL TIMES. SUCH PLANS MUST ENSURE THAT POLLUTANTS COLLECTED WITHIN STRUCTURAL POST-CONSTRUCTION PRACTICES, BE DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.



GENERAL NPDES NOTES

- PROJECT INVOLVES THE CONSTRUCTION AND ASSOCIATED INFRASTRUCTURE FOR A LOW DENSITY SINGLE FAMILY SUBDIVISION.
- AREA TO BE DISTURBED IS APPROXIMATELY 27 ACRES.
- APPROXIMATELY 11.3 OF IMPERVIOUS SURFACE IS PROPOSED RESULTING IN 42 PERCENT OF IMPERVIOUSNESS.
- PRE-CONSTRUCTION RUNOFF COEFFICIENT IS 0.30. POST-CONSTRUCTION RUNOFF COEFFICIENT IS 0.55.
- THE PRIMARY SOIL TYPE IS RUSSELL - MIAMI SILT LOAM.
- THE PRIOR LAND USE IS FARM CROPS.
- STONY RUN IS THE FIRST NAMED STREAM RECEIVING RUNOFF FROM THIS SITE. RUNOFF IS ULTIMATELY RECEIVED BY GREGORY CREEK.
- NPDES STORM WATER GENERAL PERMIT NUMBER: 1C005766*AG.
- PROJECT DURATION: THRU 2020
- SITE OPERATOR: LIBERTY LAND COMPANY, LLC.
5342 CARRIAGE HOUSE BOULEVARD
LIBERTY TOWNSHIP, OH 45011
(513) 894-4455
- SWPPP CONTACT: LIBERTY LAND COMPANY, LLC.
5342 CARRIAGE HOUSE BOULEVARD
LIBERTY TOWNSHIP, OH 45011
(513) 894-4455
- UNLESS OTHERWISE NOTED, STANDARDS AND SPECIFICATIONS ESTABLISHED IN THE LATEST EDITION OF THE OHIO DEPARTMENT OF NATURAL RESOURCES "RAINWATER AND LAND DEVELOPMENT" MANUAL, CURRENT EDITION, SHALL GOVERN THE EROSION AND SEDIMENT CONTROL INSTALLATIONS SPECIFIED ON THIS PLAN.
- THE DEVELOPER AND CONTRACTOR SHALL ABIDE BY THE RULES AND REGULATIONS SET FORTH IN THE OHIO EPA PERMIT NO. OH000004 - "AUTHORIZATION FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY" UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES).
- PRIOR TO COMMENCEMENT OF CONSTRUCTION OPERATIONS, ALL SEDIMENTATION AND EROSION CONTROL FEATURES SHALL BE IN PLACE.
- SEDIMENT CONTROL STRUCTURES SHALL BE FUNCTIONAL THROUGHOUT THE COURSE OF EARTH DISTURBING ACTIVITY, AND SHALL CONTINUE TO FUNCTION UNTIL THE UP SLOPE DEVELOPMENT AREA IS REESTABLISHED. AS CONSTRUCTION PROGRESSES AND THE TOPOGRAPHY IS ALTERED, APPROPRIATE CONTROLS MUST BE CONSTRUCTED OR EXISTING CONTROLS ALTERED TO ADDRESS THE CHANGING DRAINAGE PATTERNS.
- ALL GROUND SURFACE AREAS THAT HAVE BEEN EXPOSED OR LEFT BARE AS A RESULT OF DEMOLITION AND ARE TO FINAL GRADE AND TO REMAIN SO, SHALL BE SEEDED AND MULCHED AS SOON AS PRACTICAL IN ACCORDANCE WITH STATE OF OHIO SPECIFICATION ITEM 659, AND IN ACCORDANCE WITH THE CONDITIONS OF THE NPDES STORM WATER GENERAL PERMIT.

MAINTENANCE OF CONTROLS:

- SILT FENCE AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND DAILY DURING A PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
- SHOULD THE FABRIC ON A FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE AND THE BARRIER IS STILL NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
- SEDIMENT DEPOSITS SHALL BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
- ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE AND PREPARED FOR SEEDING.

CONSTRUCTION SEQUENCE

- INSTALL EROSION AND SEDIMENT CONTROL MEASURES BEFORE UPSLOPE CLEARING AND GRADING.
- GRADING AND STRIPPING OF THE REMAINING AREAS OF THE DEVELOPMENT SITE OR PROJECT AREA.
- INSTALL STORMWATER MANAGEMENT SYSTEM.
- TEMPORARY VEGETATIVE STABILIZATION OF EROSION AND SEDIMENT CONTROL MEASURES.
- GRADING OF SUBDIVISION STREET.
- INSTALLATION OF ALL UTILITIES.
- SITE CONSTRUCTION.
- FINAL GRADING, STABILIZATION, AND LANDSCAPING.
- REMOVAL OF EROSION AND SEDIMENT CONTROLS MEASURES.

* DUE TO THE DYNAMICS AND STAGING OF EARTH MOVEMENT, CONTRACTOR MAY NEED TO ALTER THE EROSION CONTROL MEASURES AS SHOWN HEREON. CONTRACTOR TO APPLY (B.M.P.) BEST MANAGEMENT PRACTICES IN ORDER TO CONTROL THE RUNOFF OF SILT AND SEDIMENT.

* ADDITIONAL SILT FENCE MAY BE REQUIRED AS SITE CONDITIONS DETERMINE.

IF A TEMPORARY STOCKPILE IS CREATED, SILT FENCE SHALL BE PLACED AT THE TOE OF SLOPE

NOTE: CONSTRUCTION TRAFFIC FROM TROTTERS WAY IS PROHIBITED.

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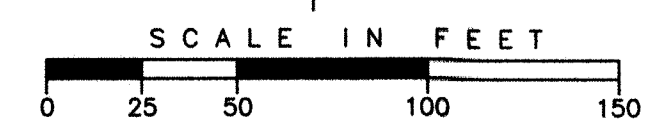
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Project No. 04476.06

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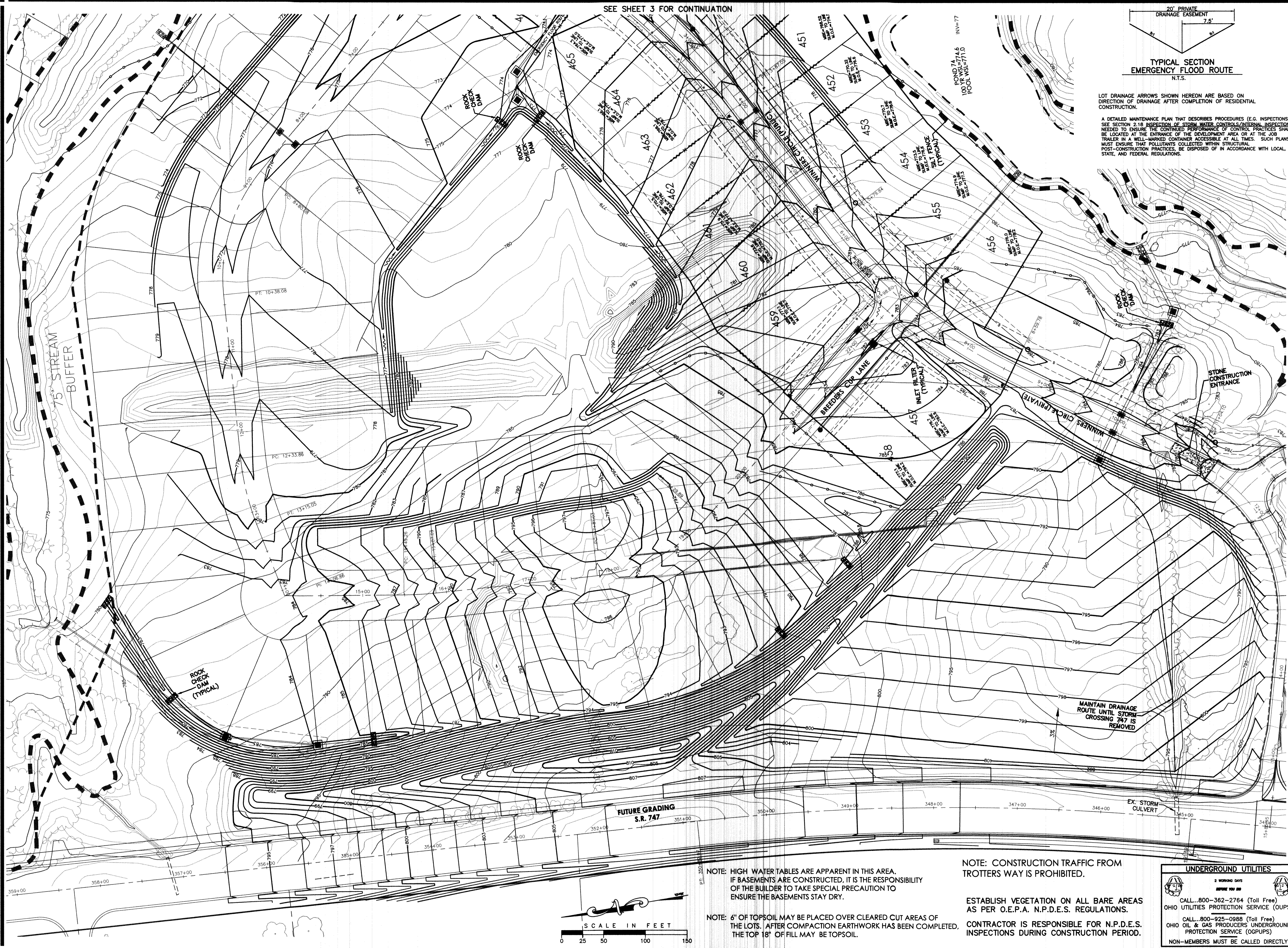
File No. 04-476



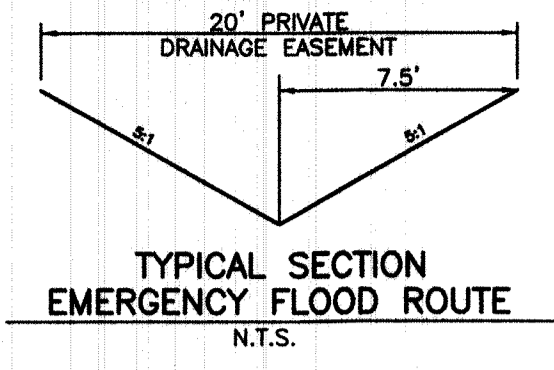
ESTABLISH VEGETATION ON ALL BARE AREAS AS PER O.E.P.A. N.P.D.E.S. REGULATIONS.

CONTRACTOR IS RESPONSIBLE FOR N.P.D.E.S. INSPECTIONS DURING CONSTRUCTION PERIOD.

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SEE SHEET 3 FOR CONTINUATION



LOT DRAINAGE ARROWS SHOWN HEREON ARE BASED ON DIRECTION OF DRAINAGE AFTER COMPLETION OF RESIDENTIAL CONSTRUCTION.

A DETAILED MAINTENANCE PLAN THAT DESCRIBES PROCEDURES (E.G. INSPECTIONS SEE SECTION 2.18 INSPECTION OF STORM WATER CONTROLS/INTERNAL INSPECTIONS) NEEDED TO ENSURE THE CONTINUED PERFORMANCE OF CONTROL PRACTICES SHALL BE LOCATED AT THE ENTRANCE OF THE DEVELOPMENT AREA OR AT THE JOB TRAILER IN A WELL-MARKED CONTAINER ACCESSIBLE AT ALL TIMES. SUCH PLANS MUST ENSURE THAT POLLUTANTS COLLECTED WITHIN STRUCTURAL POST-CONSTRUCTION PRACTICES, BE DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.

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 Cincinnati, Ohio 45241-2097
 Tel 513.759.0004 • Fax 513.563.7099
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Drawn By NAK Project Mgr. RA
 Drawing File 04476064-IMP-00-SECTION 17
 X-Reference Files 04476063-TOP-2014 MAY 14
 Date 07/10/17
 No. Revision/Issue By Date

No.	Revision/Issue	By	Date

**WINDING CREEK
 SECTION SEVENTEEN
 AKA CARRIAGE HILL
 SECTION SEVENTEEN**
 SECTION 2, TOWN 2, RANGE 3
 LIBERTY TOWNSHIP
 BUTLER COUNTY, OHIO

Sheet Title
 GRADING & S.W.P.P. PLAN

Project No. 04476.06
 Scale 1"=50'
 Sheet No. 4/10
 File No. 04-476

NOTE: HIGH WATER TABLES ARE APPARENT IN THIS AREA. IF BASEMENTS ARE CONSTRUCTED, IT IS THE RESPONSIBILITY OF THE BUILDER TO TAKE SPECIAL PRECAUTION TO ENSURE THE BASEMENTS STAY DRY.

NOTE: 6" OF TOPSOIL MAY BE PLACED OVER CLEARED CUT AREAS OF THE LOTS. AFTER COMPACTION EARTHWORK HAS BEEN COMPLETED, THE TOP 18" OF FILL MAY BE TOPSOIL.

NOTE: CONSTRUCTION TRAFFIC FROM TROTTERS WAY IS PROHIBITED.

ESTABLISH VEGETATION ON ALL BARE AREAS AS PER O.E.P.A. N.P.D.E.S. REGULATIONS.
 CONTRACTOR IS RESPONSIBLE FOR N.P.D.E.S. INSPECTIONS DURING CONSTRUCTION PERIOD.

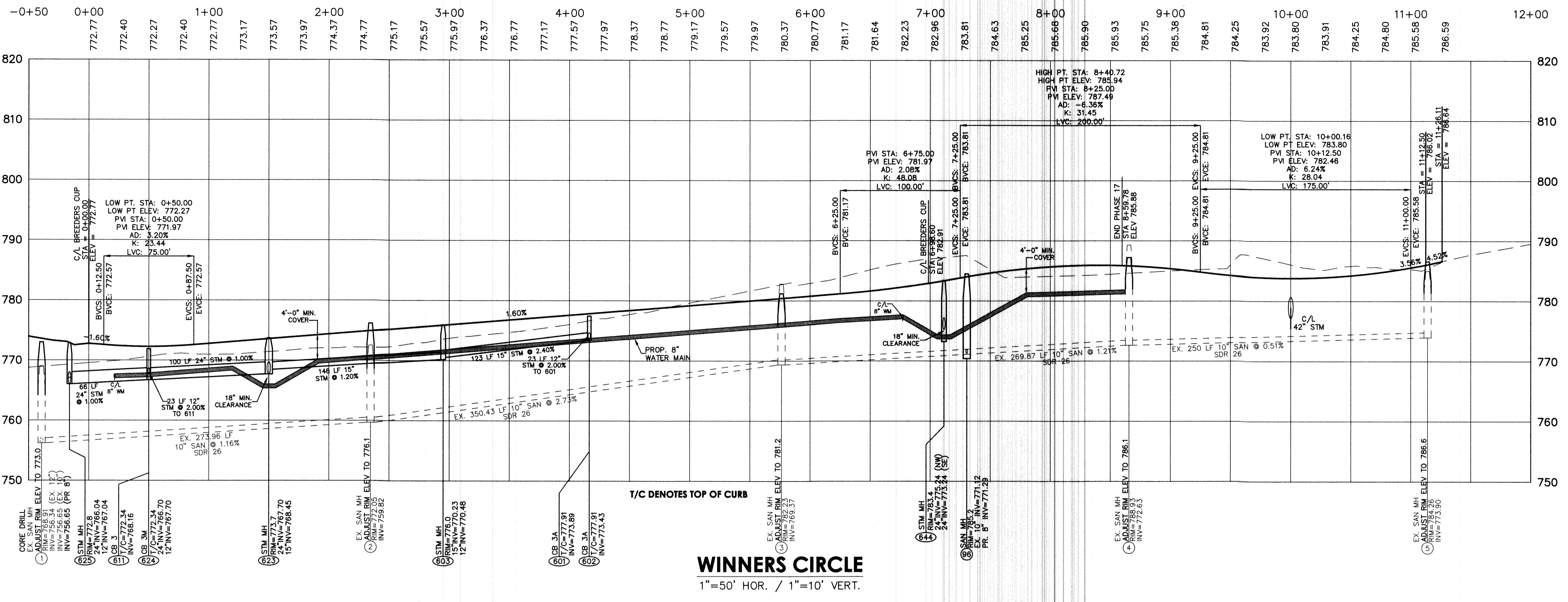
UNDERGROUND UTILITIES
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 CALL...800-362-2764 (Toll Free) OHIO UTILITIES PROTECTION SERVICE (OUPS)
 CALL...800-925-0988 (Toll Free) OHIO OIL & GAS PRODUCERS' UNDERGROUND PROTECTION SERVICE (OGUPS)
 NON-MEMBERS MUST BE CALLED DIRECTLY

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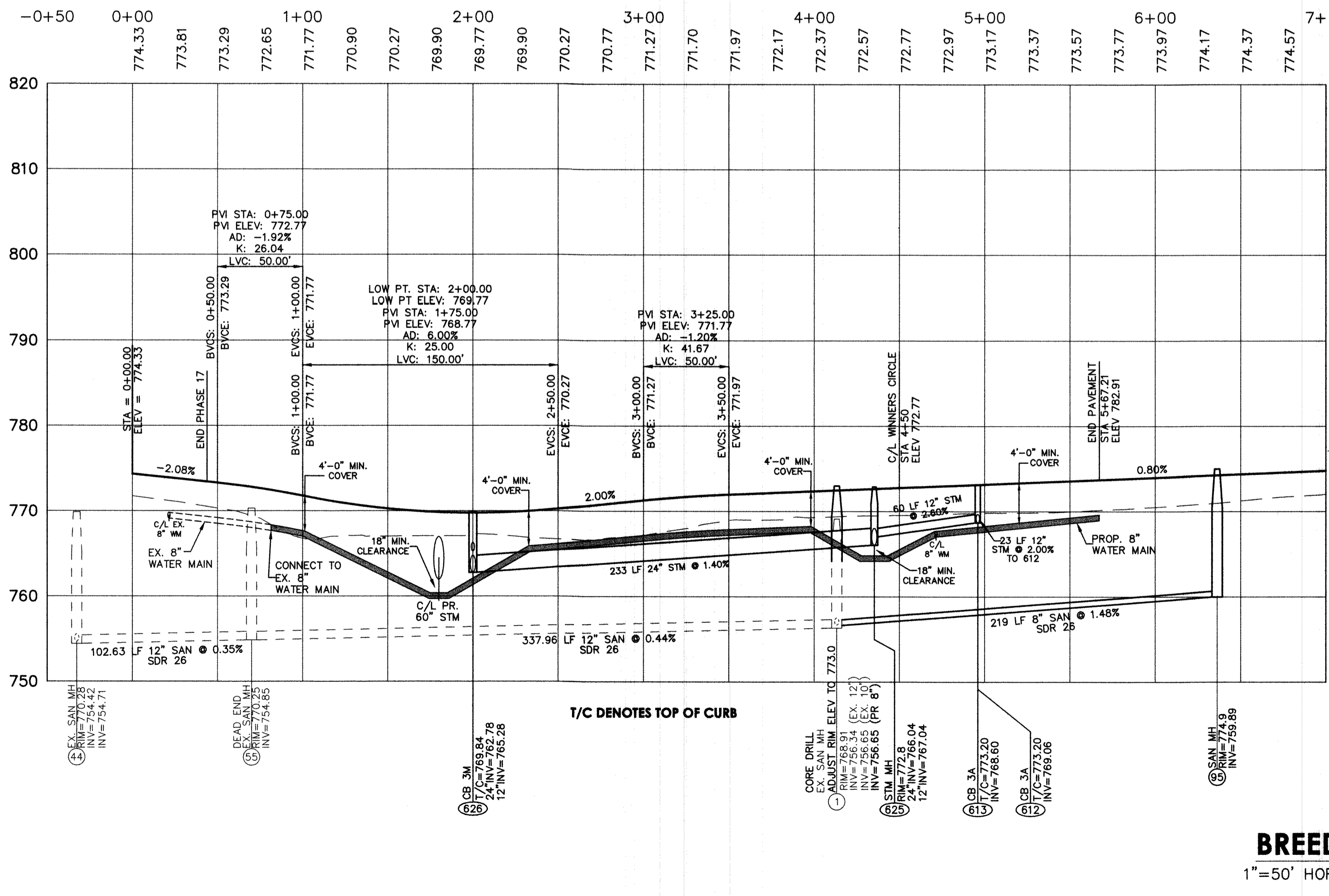


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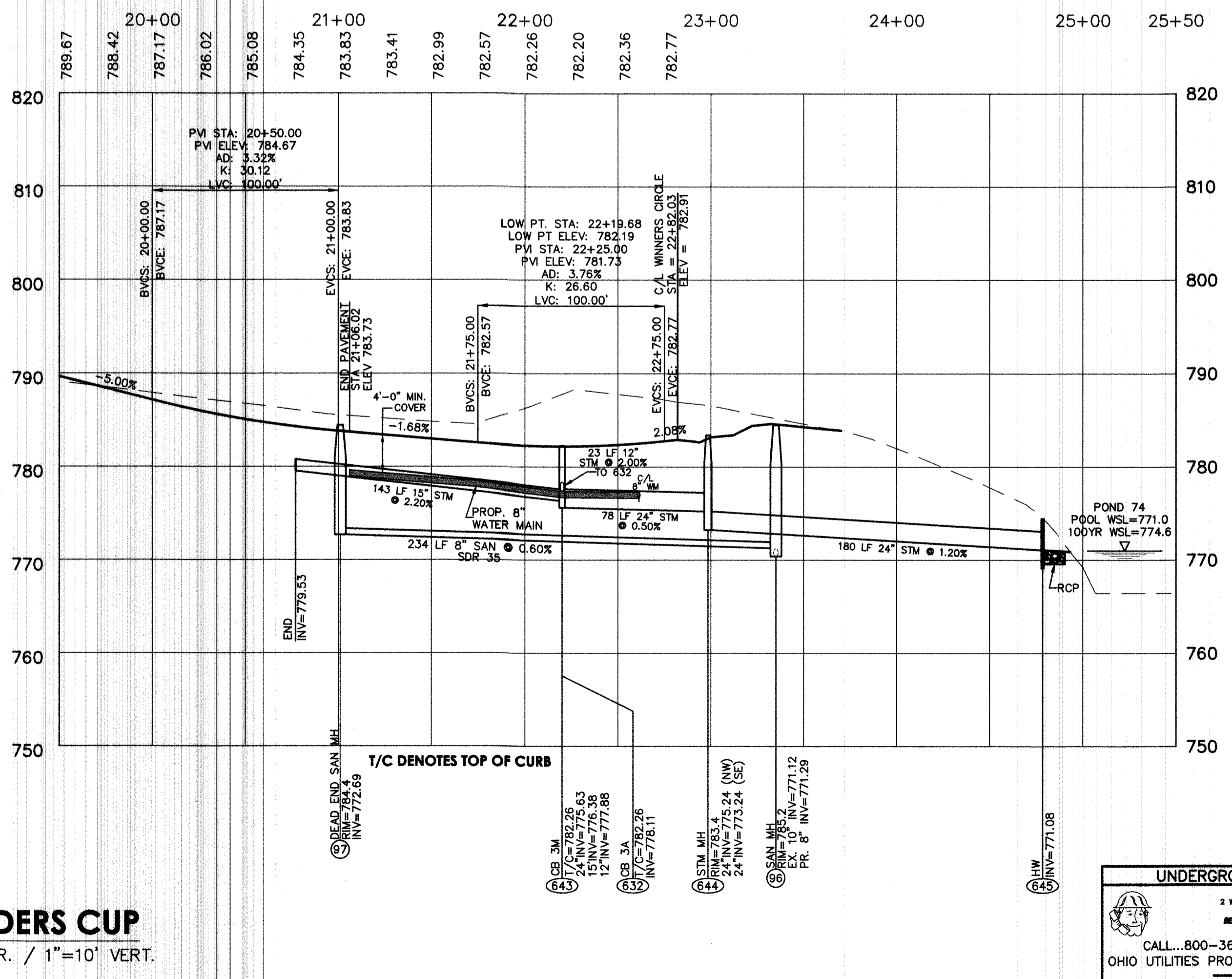
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 Drawing File 04476064-IMP-00-SECTION 17
 X-Reference Files 04476063-IMP-00-SECTION 14
 Date 07/10/17
 No. Revision/Issue By Date



WINNERS CIRCLE
 1"=50' HOR. / 1"=10' VERT.



BREEDERS CUP
 1"=50' HOR. / 1"=10' VERT.



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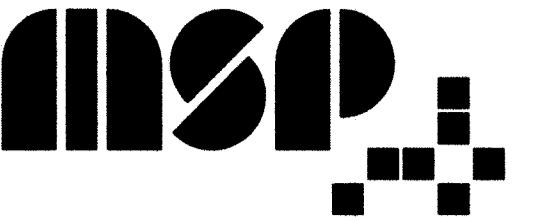
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**WINDING CREEK SECTION SEVENTEEN
 AKA CARRIAGE HILL SECTION SEVENTEEN**

SECTION 2, TOWN 2, RANGE 3
 LIBERTY TOWNSHIP
 BUTLER COUNTY, OHIO

Sheet Title	PROFILES
Project No.	04476.06
Scale	1"=50'
Sheet No.	5/10
File No.	04-476

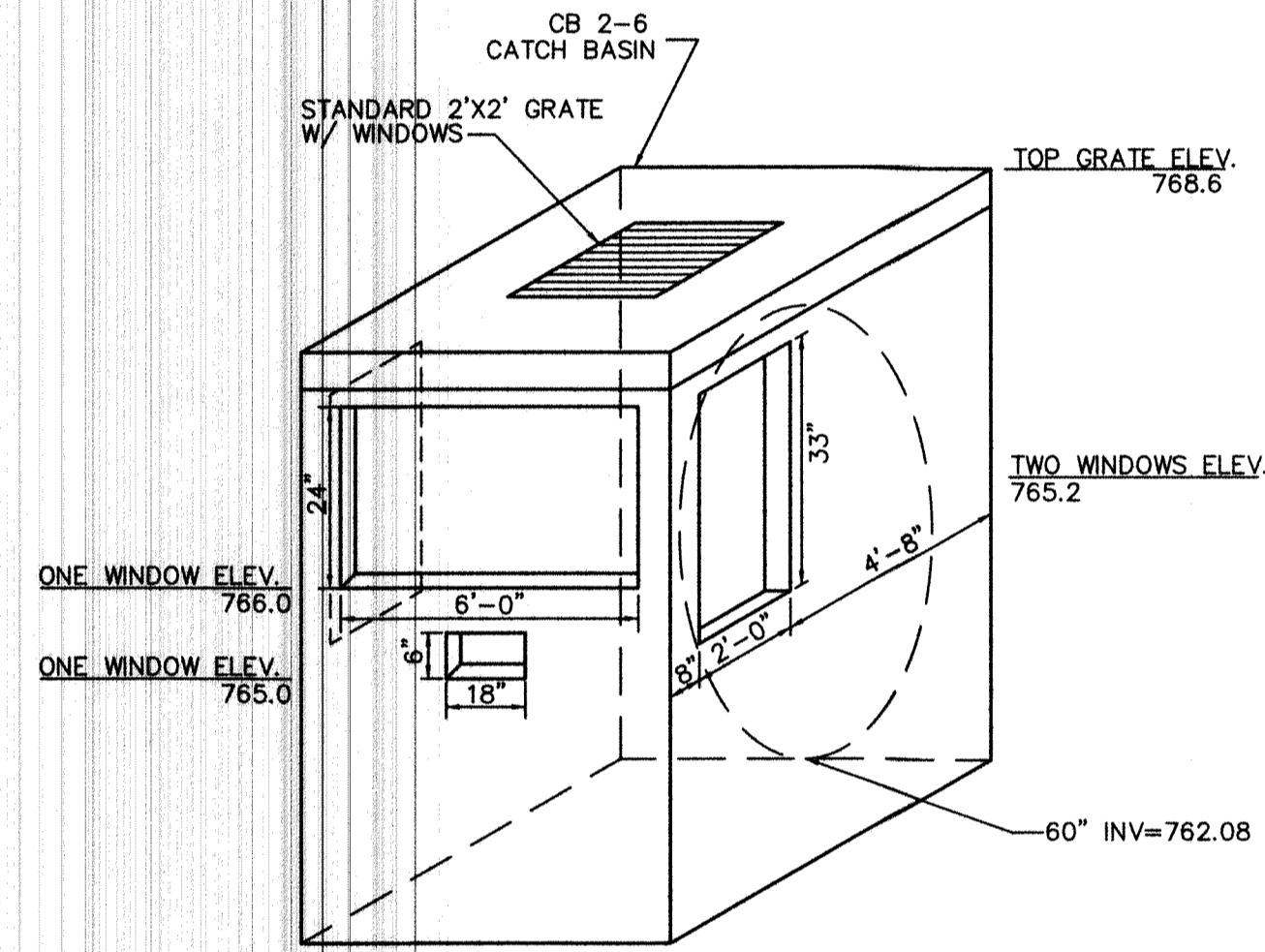
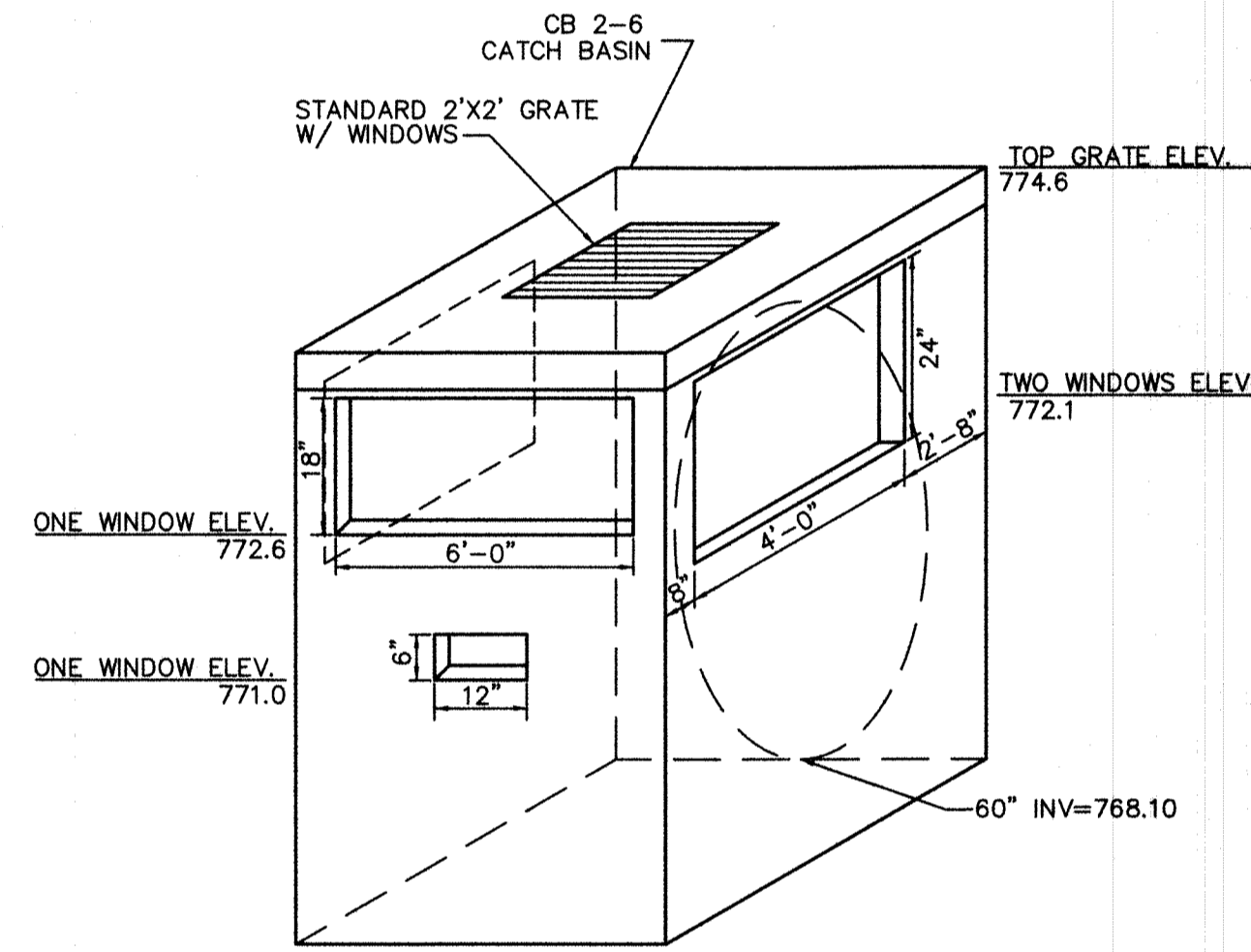
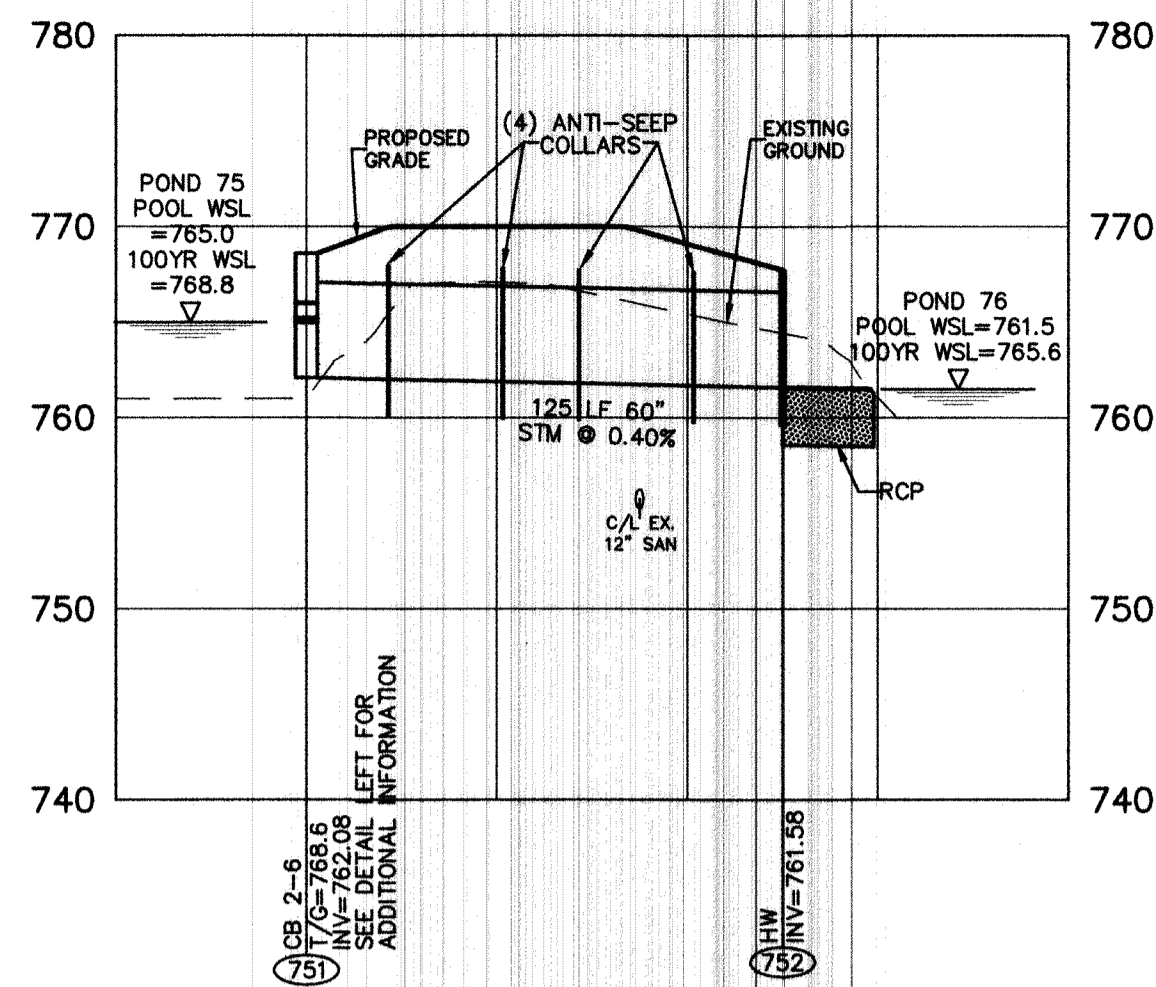
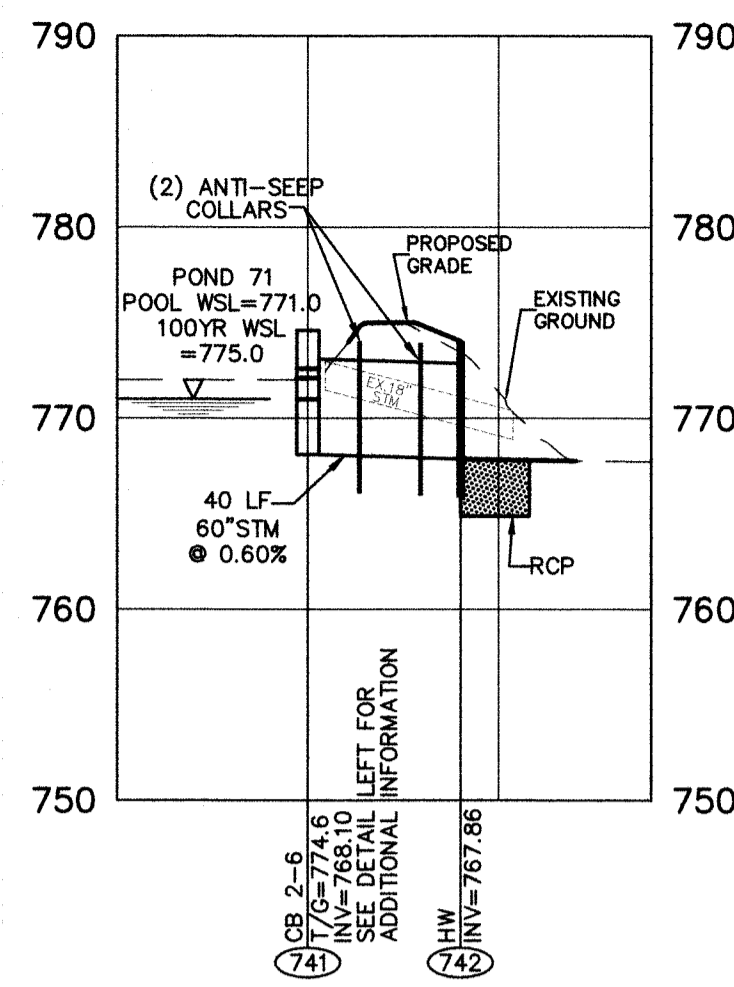
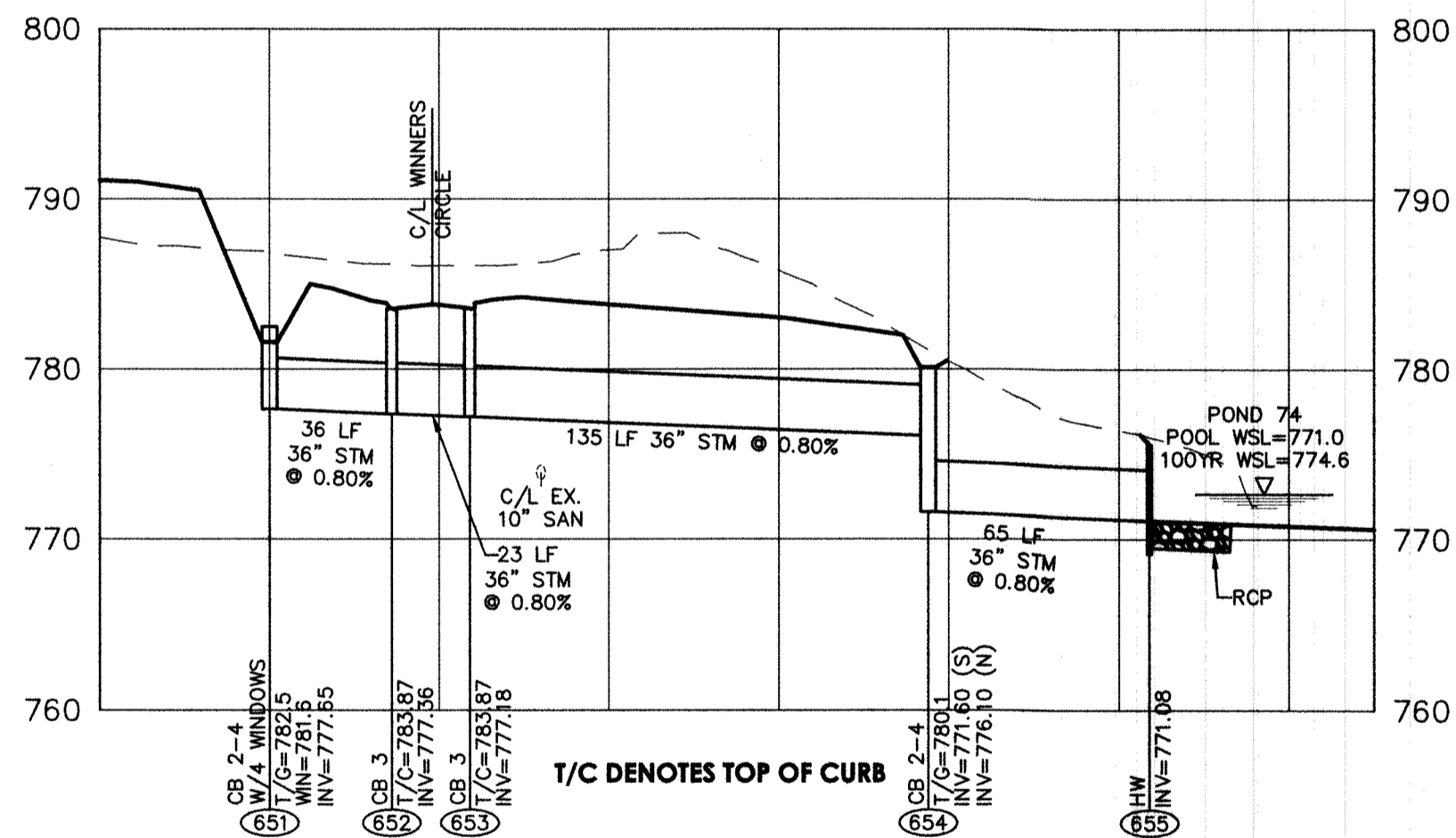
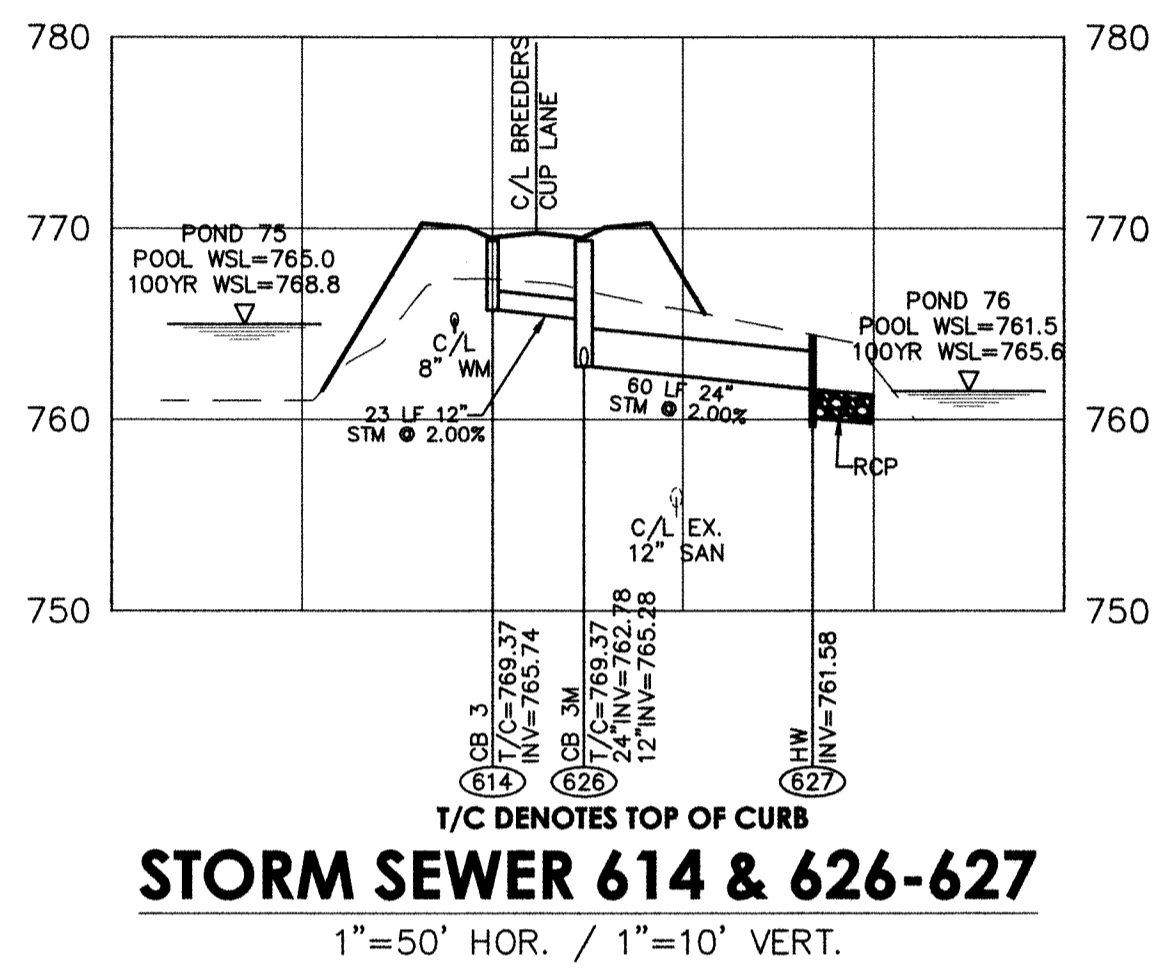
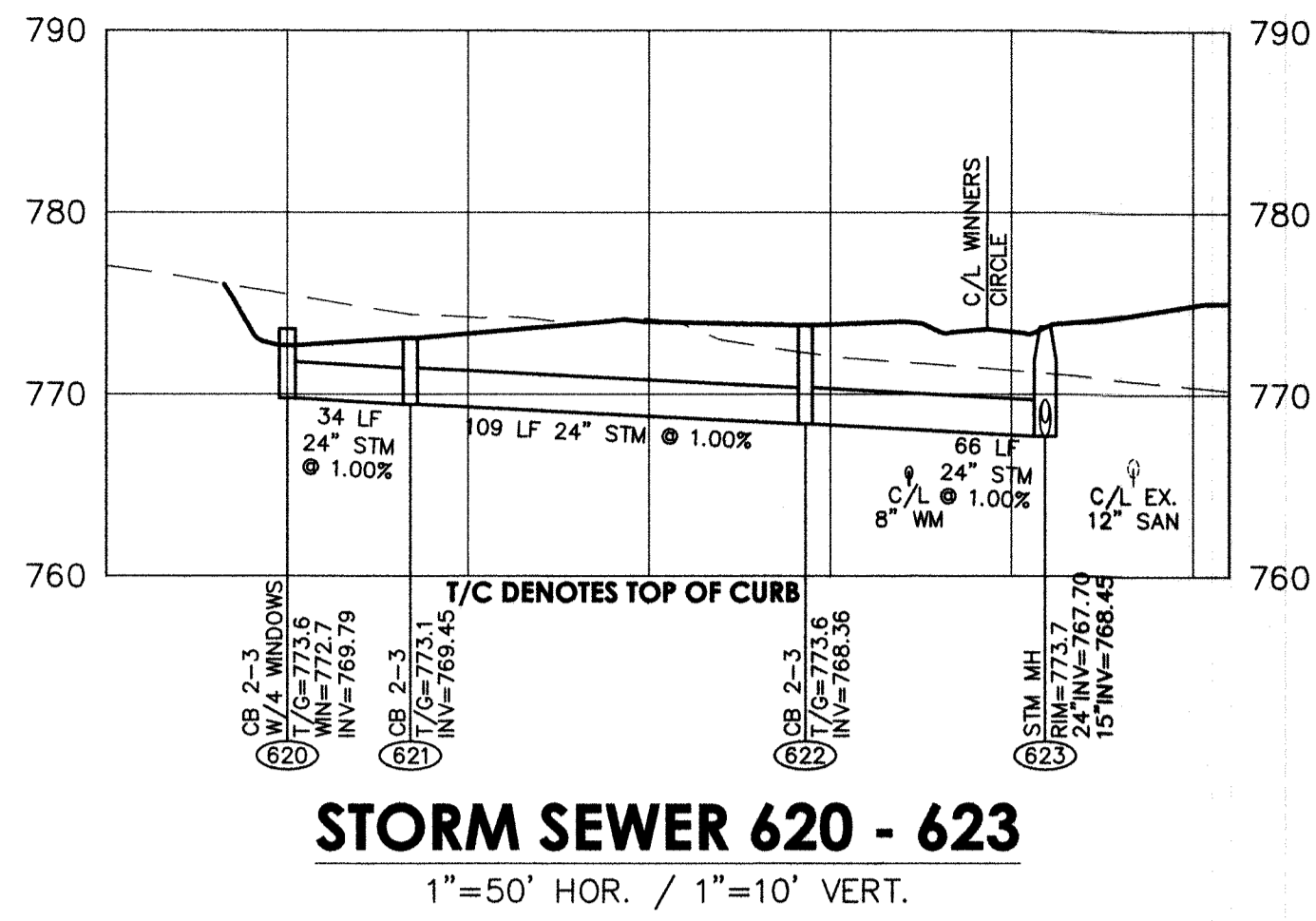
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 X-Reference Files 04476063-TOP-2014 MAY 14
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No.	Revision/Issue	By	Date



**WINDING CREEK
 SECTION SEVENTEEN
 AKA CARRIAGE HILL
 SECTION SEVENTEEN**
 SECTION 2, TOWN 2, RANGE 3
 LIBERTY TOWNSHIP
 BUTLER COUNTY, OHIO

Sheet Title

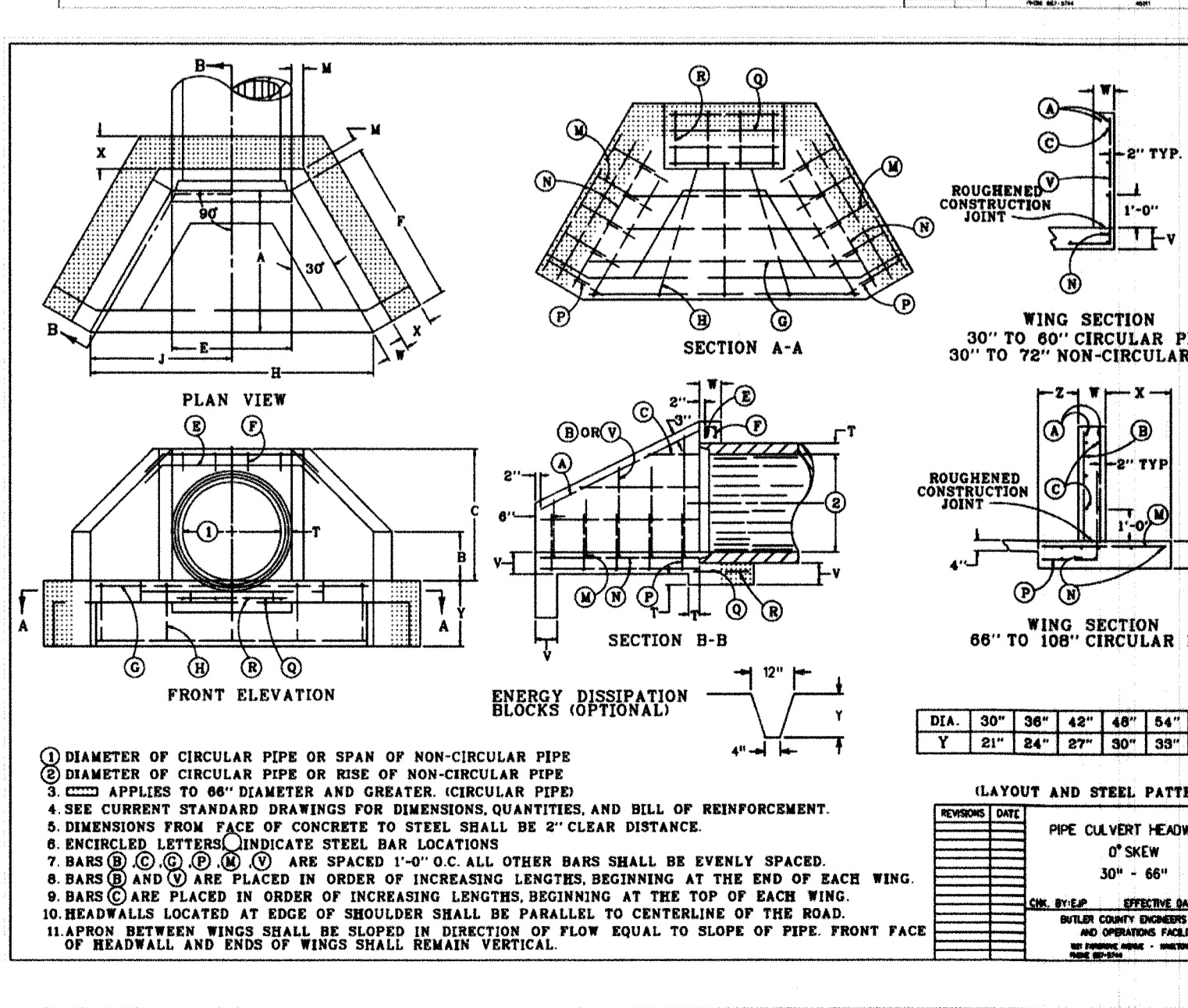
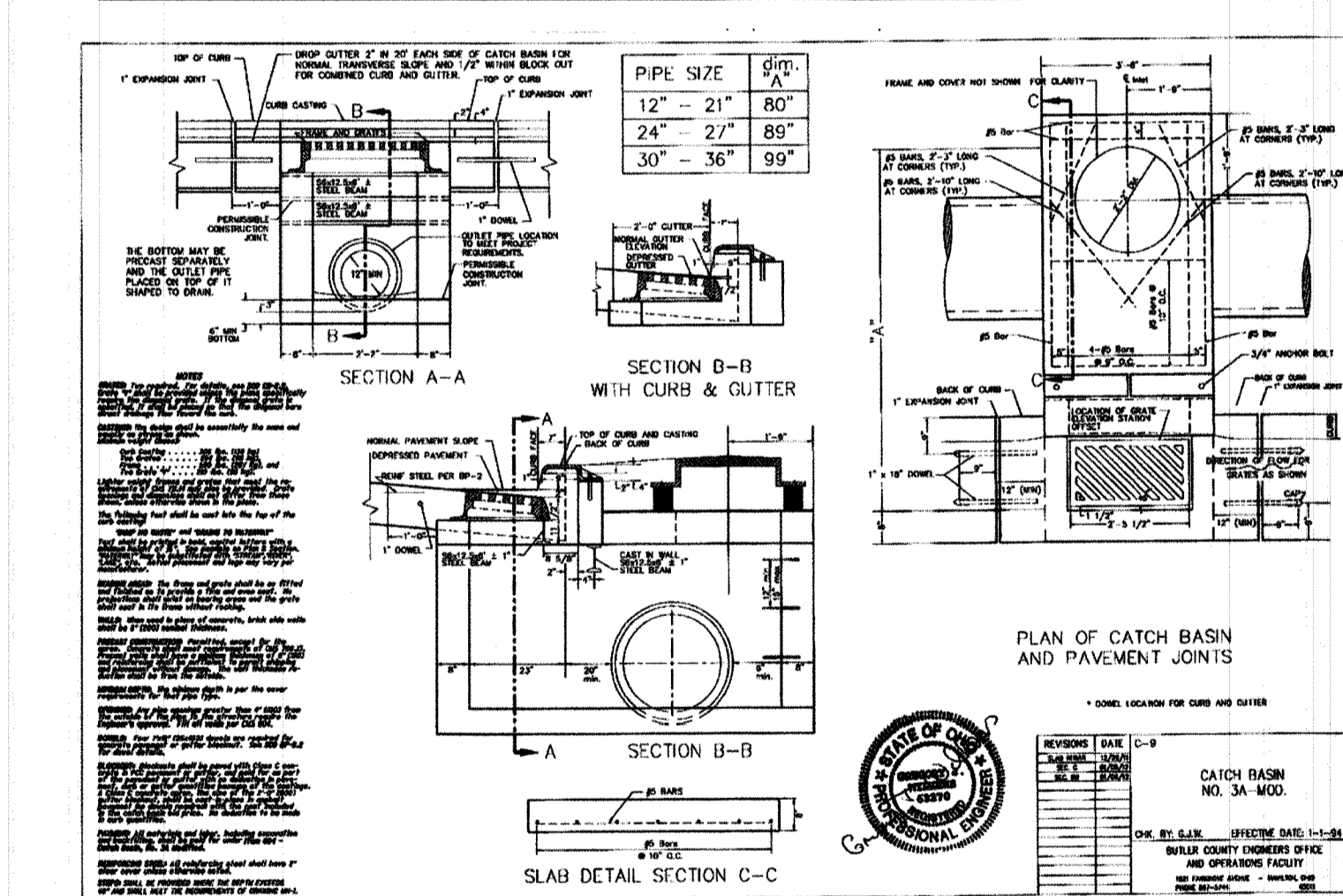
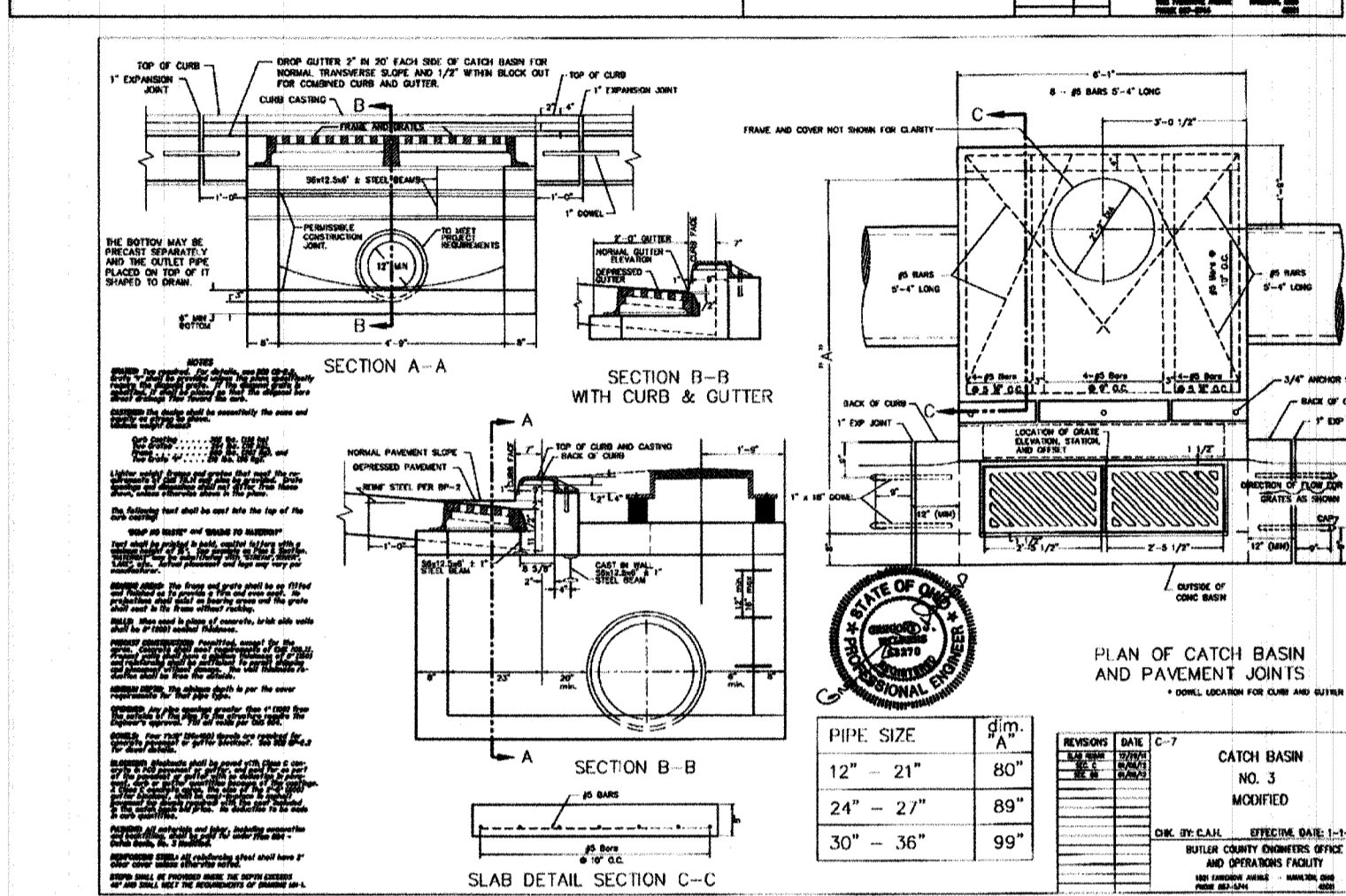
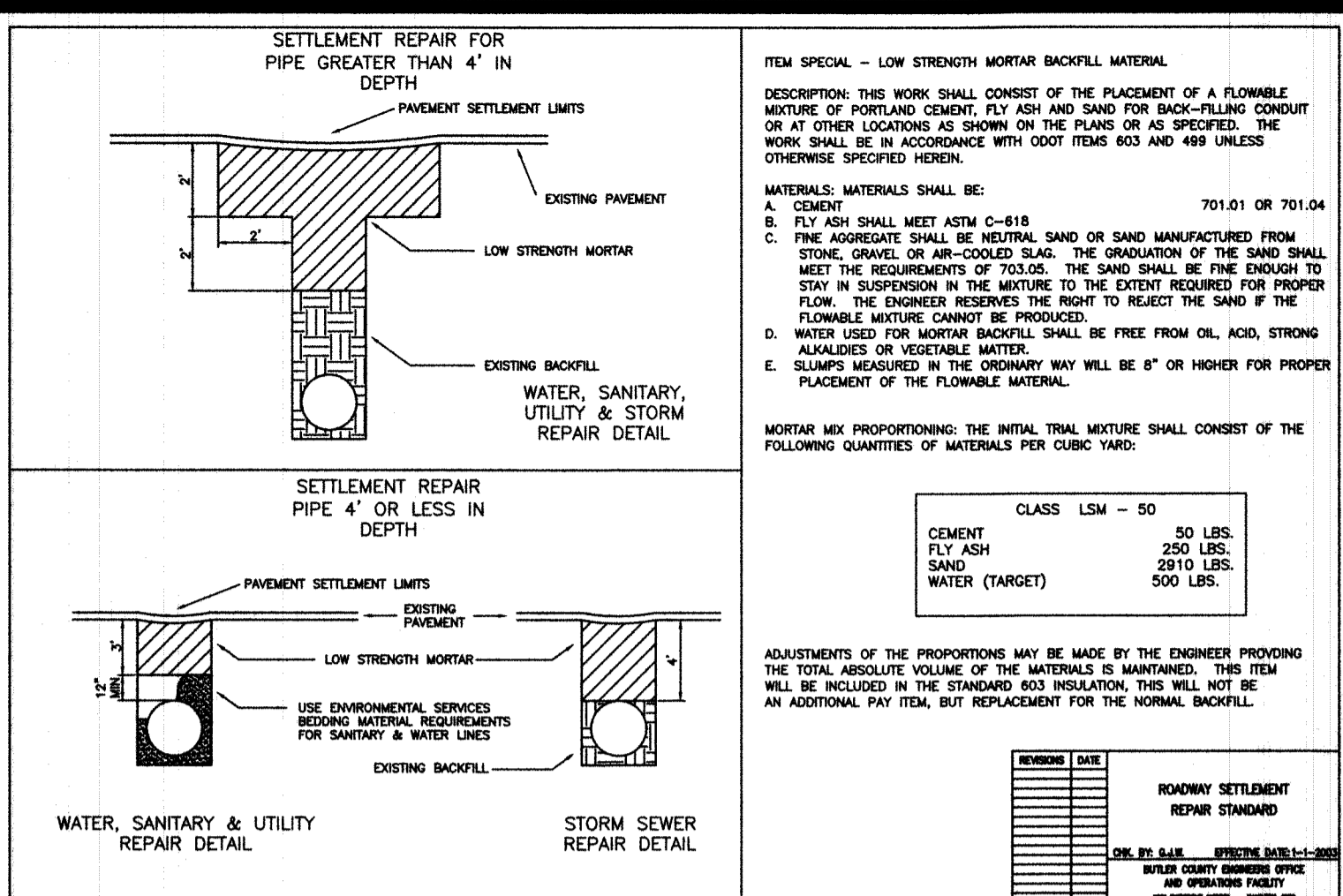
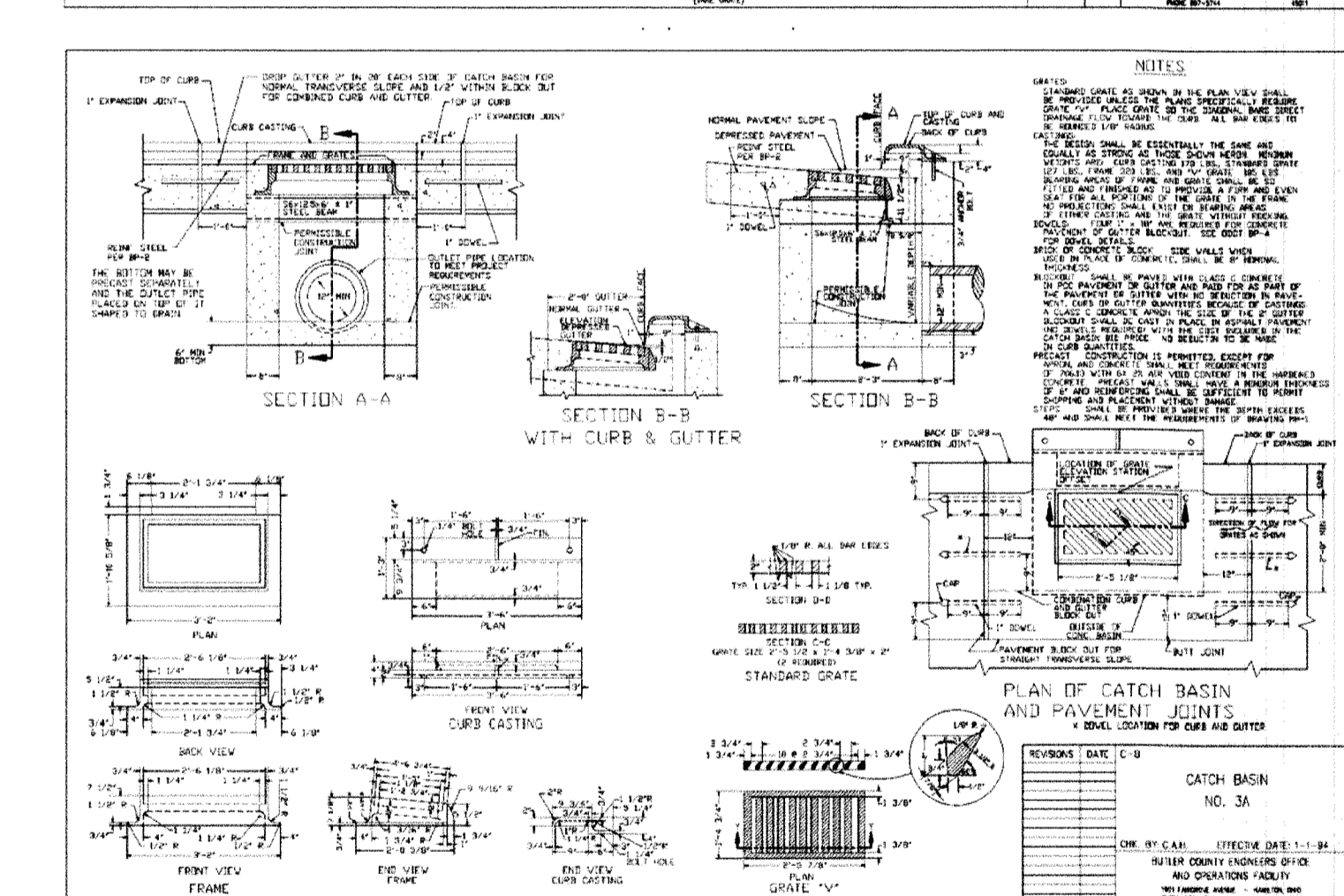
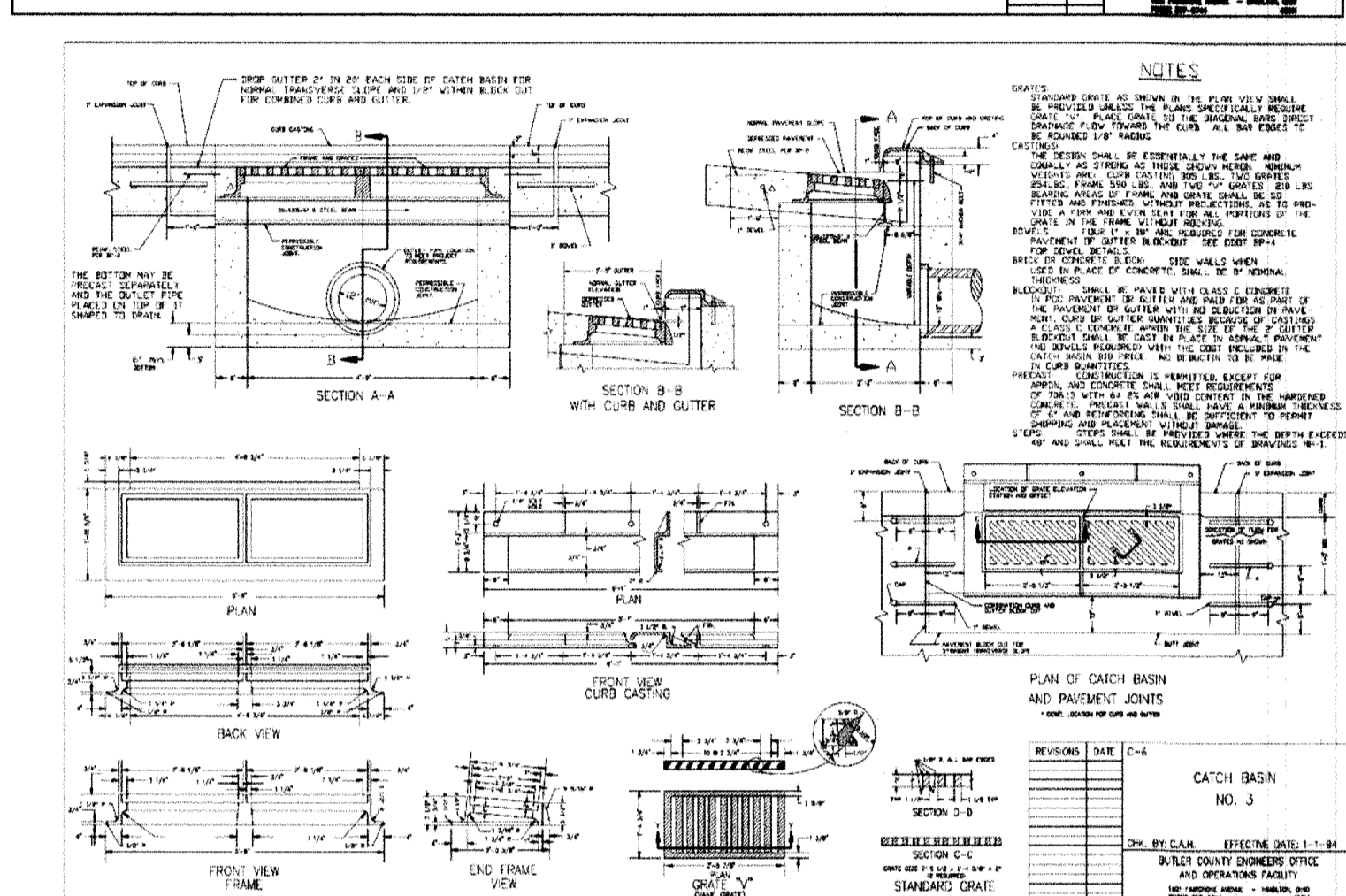
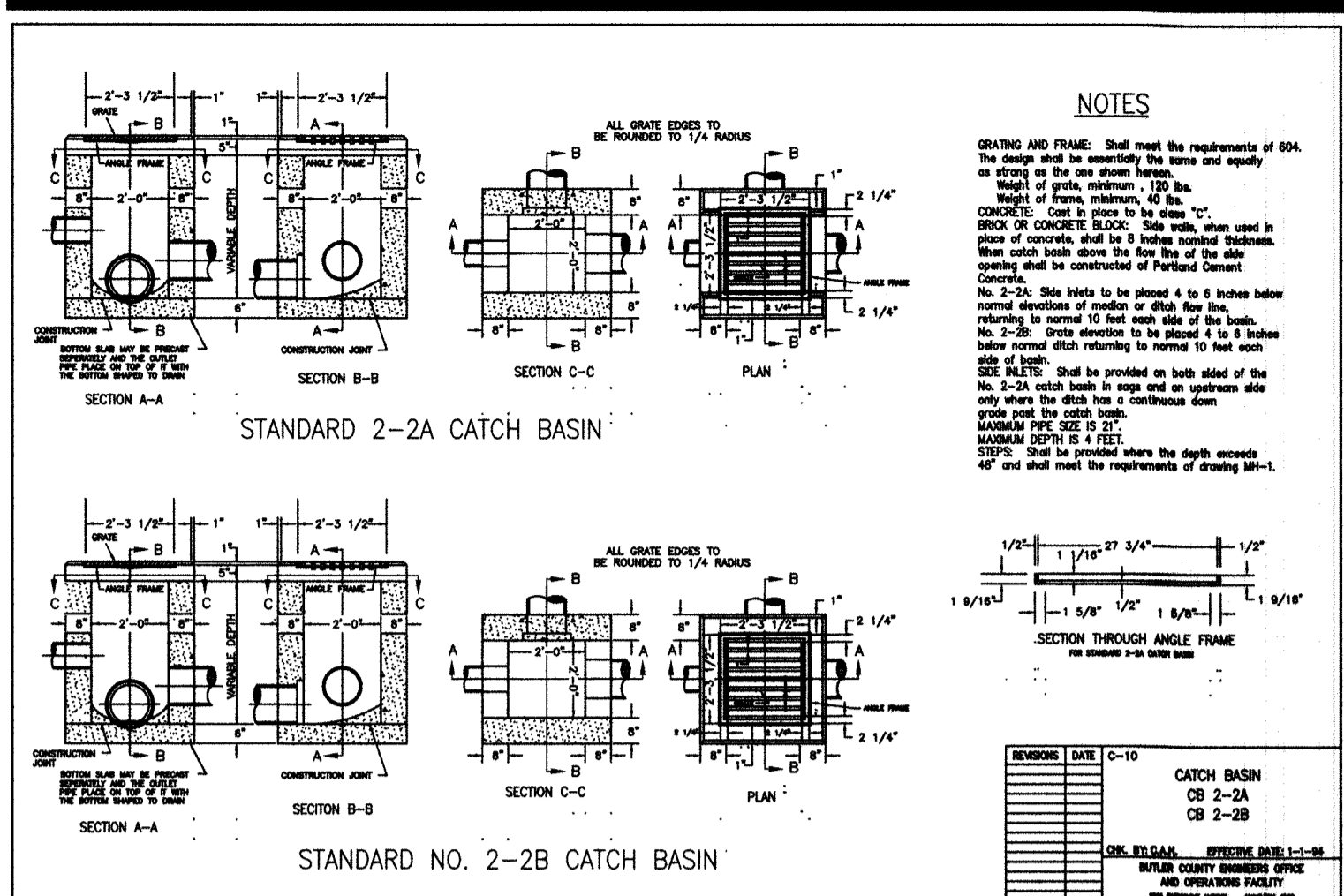
Project No.	04476.06
Scale	1"=50'
Sheet No.	6/10
File No.	04-476

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DIMENSION	DIAMETER OF PIPE							DIMENSION
	30"	36"	42"	48"	54"	60"	66"	
A	3'-9"	4'-4"	4'-11"	5'-6"	6'-1"	6'-8"	7'-5"	A
B	1'-3"	1'-6"	1'-9"	2'-0"	2'-3"	2'-6"	2'-9"	B
C	3'-6"	4'-0"	4'-7"	5'-1"	5'-8"	6'-2"	7'-0"	C
E	3'-1"	3'-8"	4'-3"	4'-10"	5'-5"	6'-0"	6'-7"	E
F	4'-4"	5'-0"	5'-8"	6'-4"	7'-0"	7'-8"	8'-7"	F
H	7'-6"	8'-8"	10'-0"	11'-2"	12'-6"	13'-8"	15'-2"	H
J	3'-9"	4'-4"	5'-0"	5'-7"	6'-3"	6'-10"	7'-7"	J
M			0'-5"				0'-8"	M
T	0'-3.5"	0'-4.0"	0'-4.5"	0'-5.0"	0'-5.5"	0'-6.0"	0'-6.5"	T
V			0'-8"				1'-0"	V
W			0'-8"				0'-10"	W
X							2'-0"	X
Y			2'-0"				2'-6"	Y
Z							1'-3"	Z

CU YDS CONC HEADWALLS

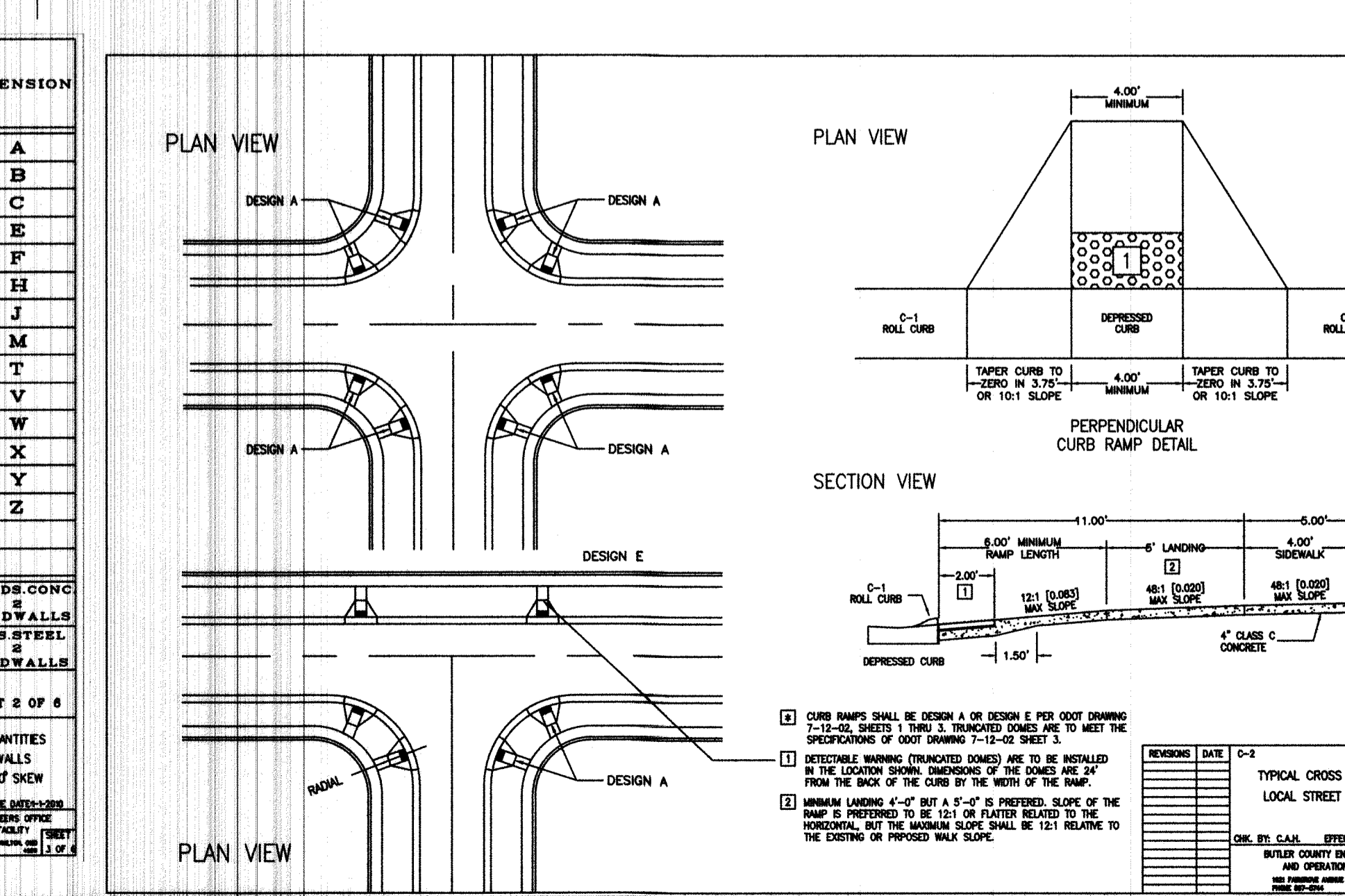
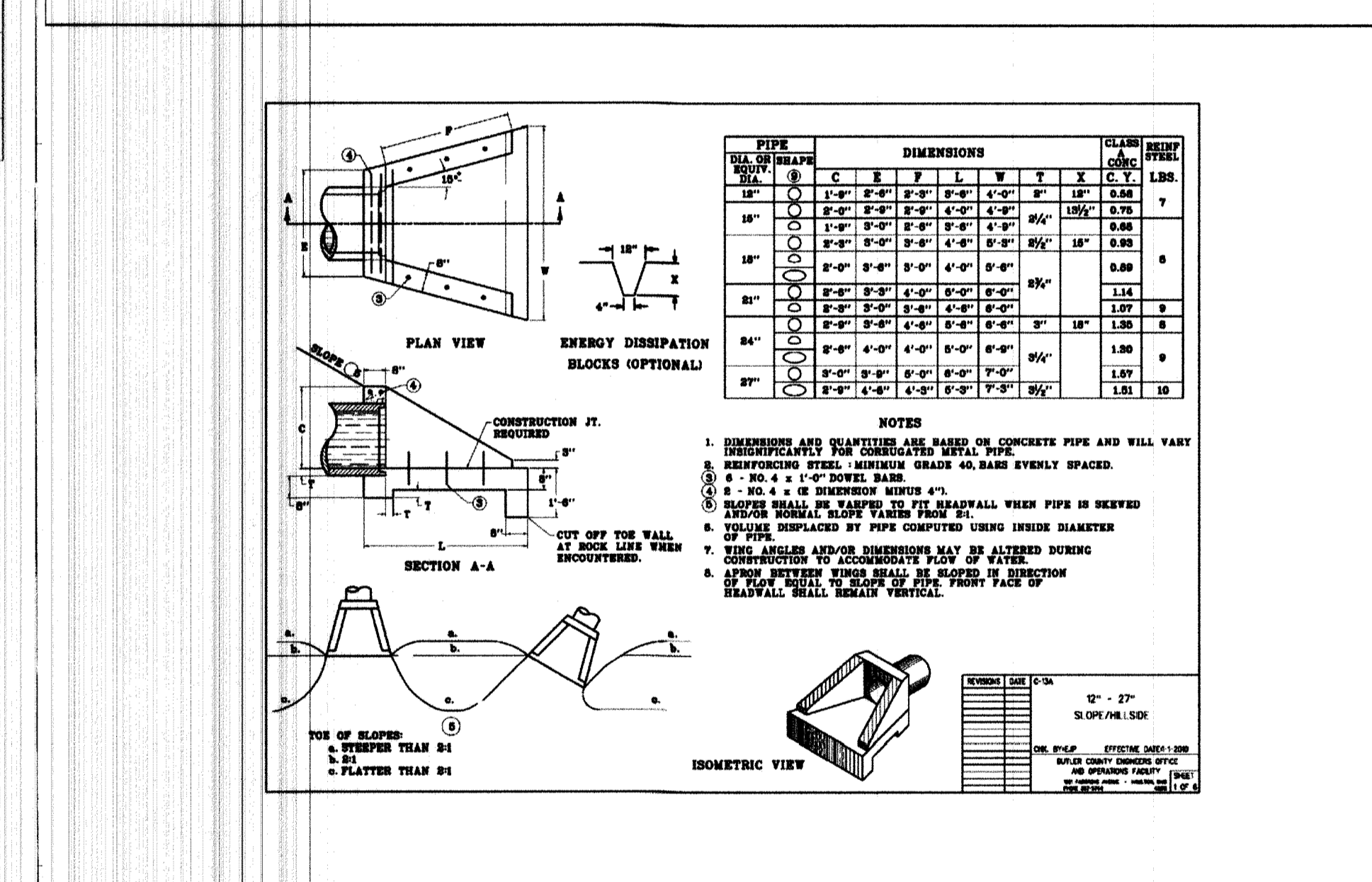
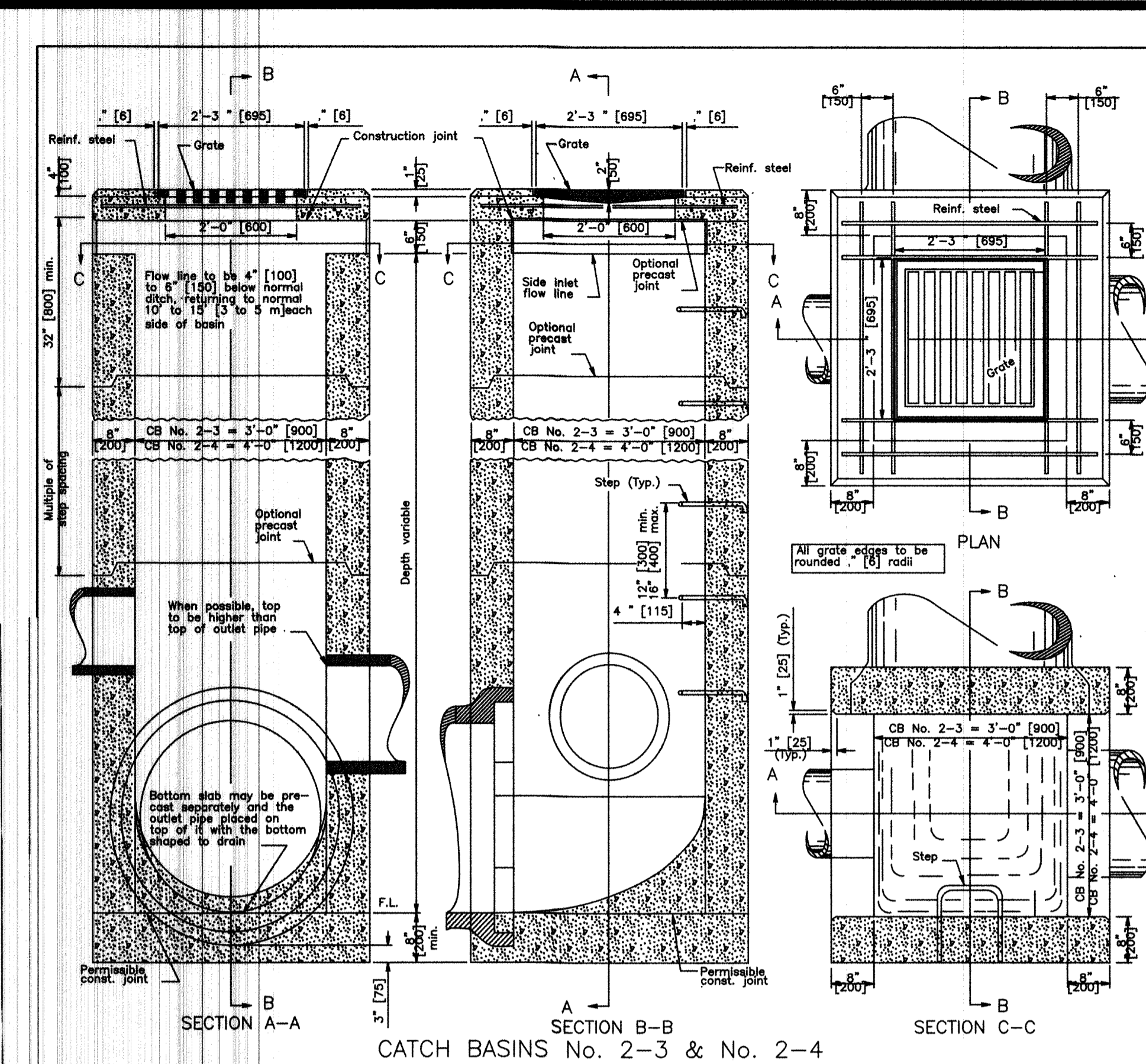
3.36	4.30	5.35	6.53	7.82	9.22	16.78
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CU YDS CONC HEADWALLS

281	363	430	496	583	687	1320
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DIAMETERS AND QUANTITIES ARE BASED ON CONCRETE PIPE AND WILL VARY SLIGHTLY FOR CORRUGATED METAL PIPE.

USE WITH SHEET 2 OF 6



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Drawing File 044776064-DET-00-SECTION 17
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Date 07/10/17
No. Revision/Issue By Date

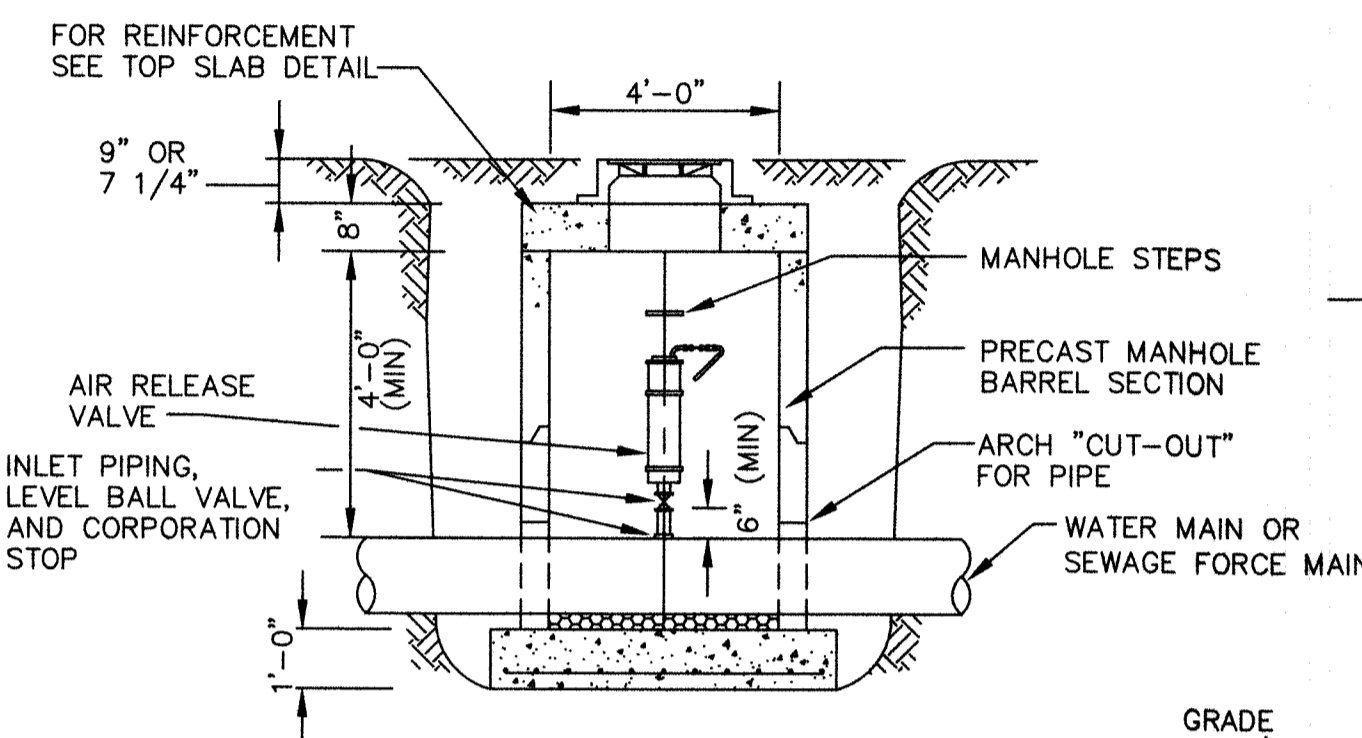
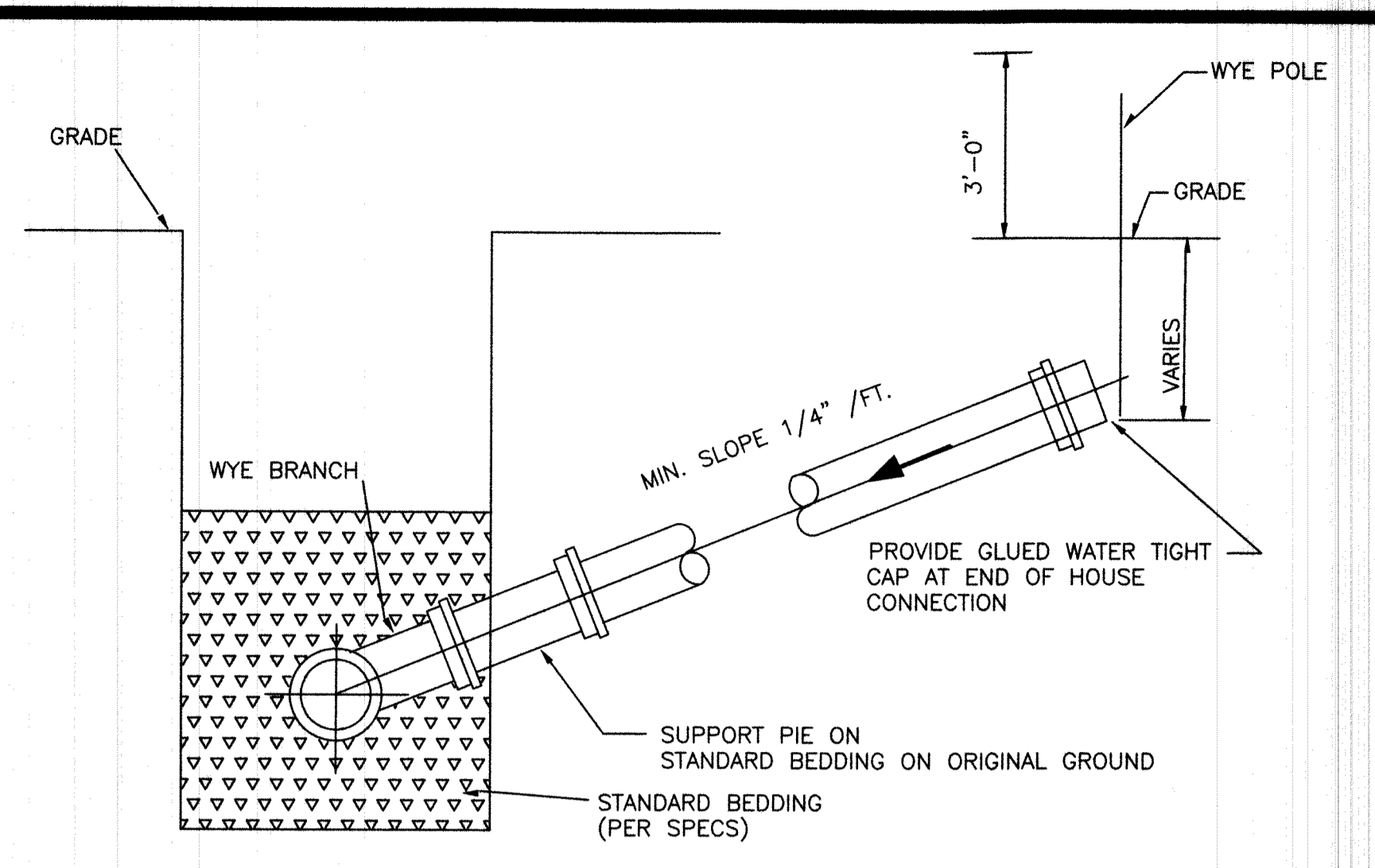
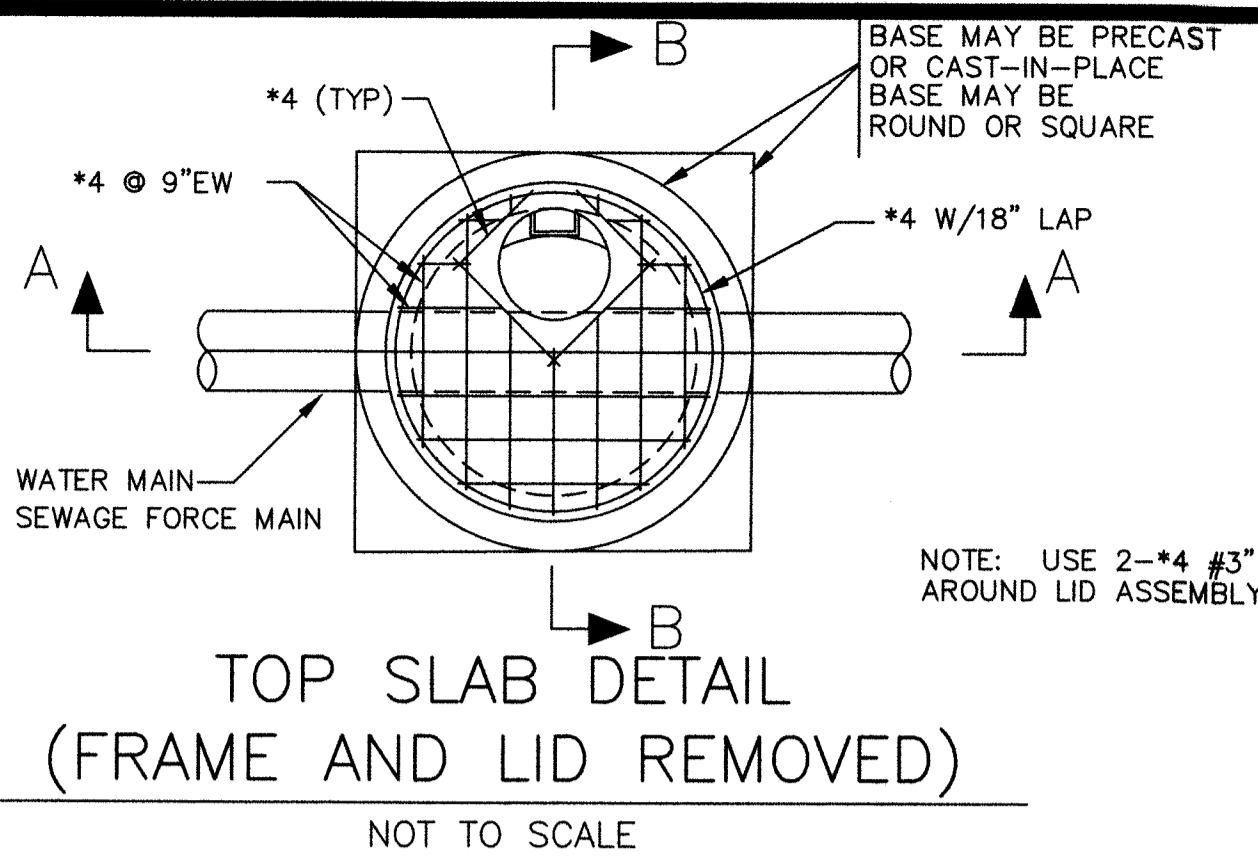
STANDARD INTRODUCTION CONSTRUCTION DRAWING
CATCH BASINS No. 2-3 & 2-4
NUMBER CB-1-2
1/1

**WINDING CREEK
SECTION SEVENTEEN
AKA CARRIAGE HILL
SECTION SEVENTEEN**

**SECTION 2, TOWN 2, RANGE 3
LIBERTY TOWNSHIP
BUTLER COUNTY, OHIO**

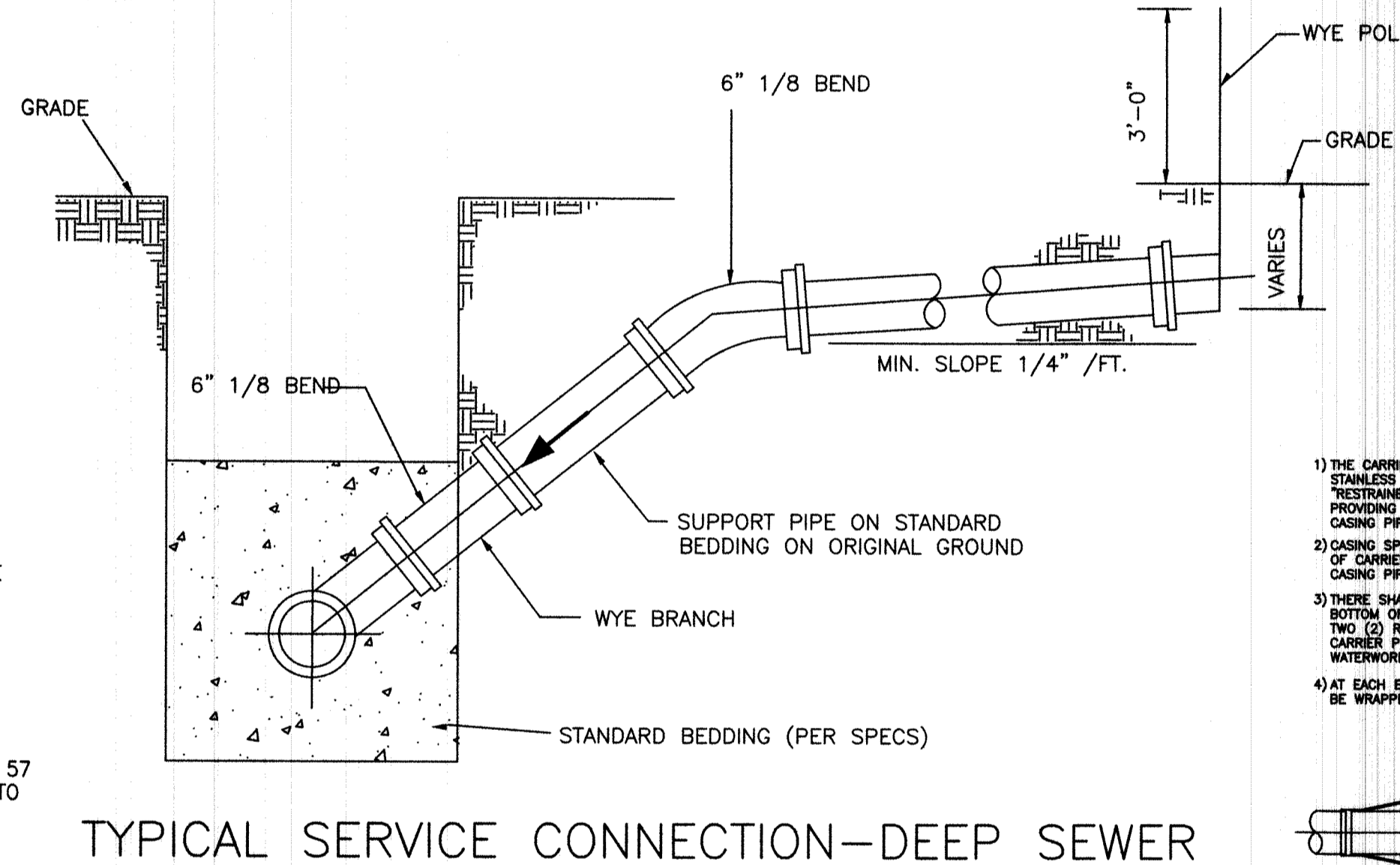
Sheet Title STANDARD DETAILS
Project No. 04476.06
Scale N.T.S.
Sheet No. 7/10
File No. 04-476

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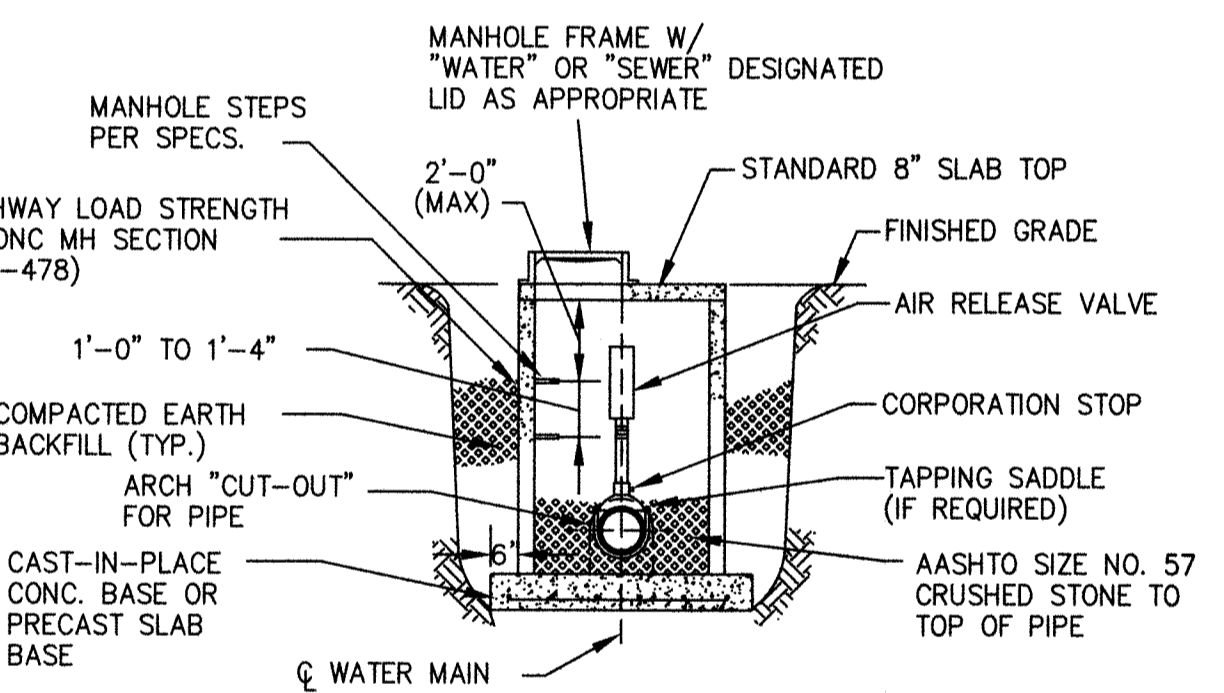


TYPICAL SERVICE CONNECTION-SHALLOW SEWER
NOT TO SCALE

NOTE: CONTRACTOR SHALL SUBMIT FOR APPROVAL SHOP DRAWINGS DETAILING THE TYPE OF AUGER STOP TO BE USED AT EACH BORE AND JACK LOCATION



TYPICAL SERVICE CONNECTION-DEEP SEWER
NOT TO SCALE

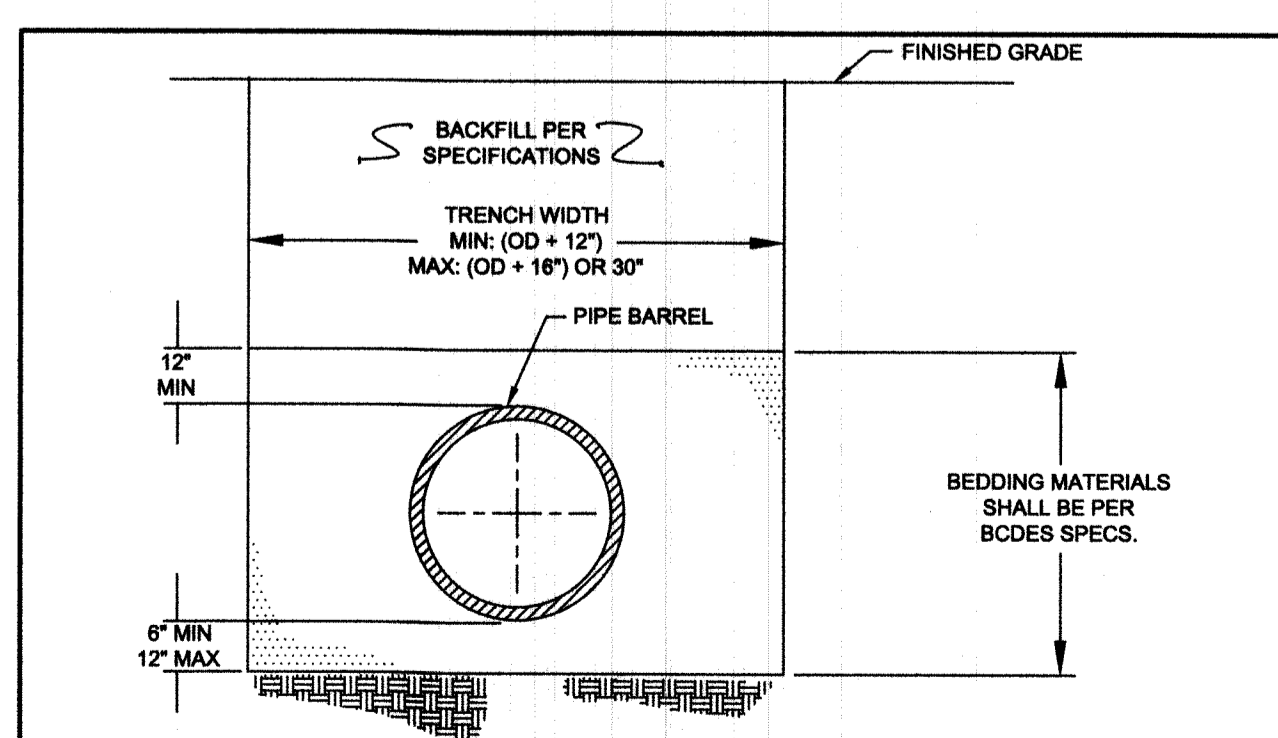


- NOTES:
1. APPLIES TO AIR RELEASE FOR WATER MAINS
 2. PROVIDE PLASTIC MH STEPS WITH 12" TO 16" SPACING.
 3. AIR RELEASE VALVE, CORPORATION STOP, BALL VALVES & PIPING SIZES AS BID OR AS RECOMMENDED BY ARV MANUFACTURER.

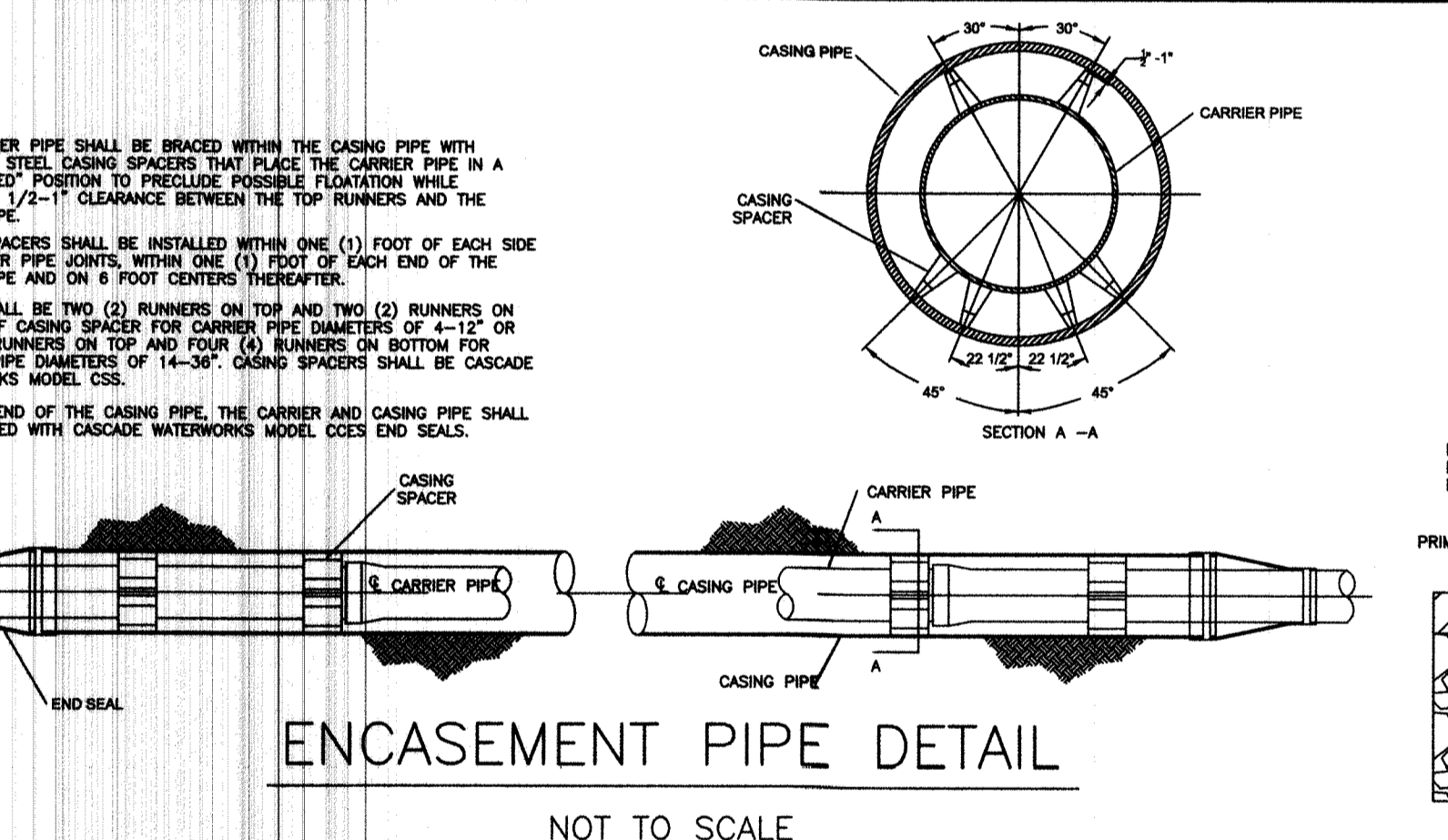
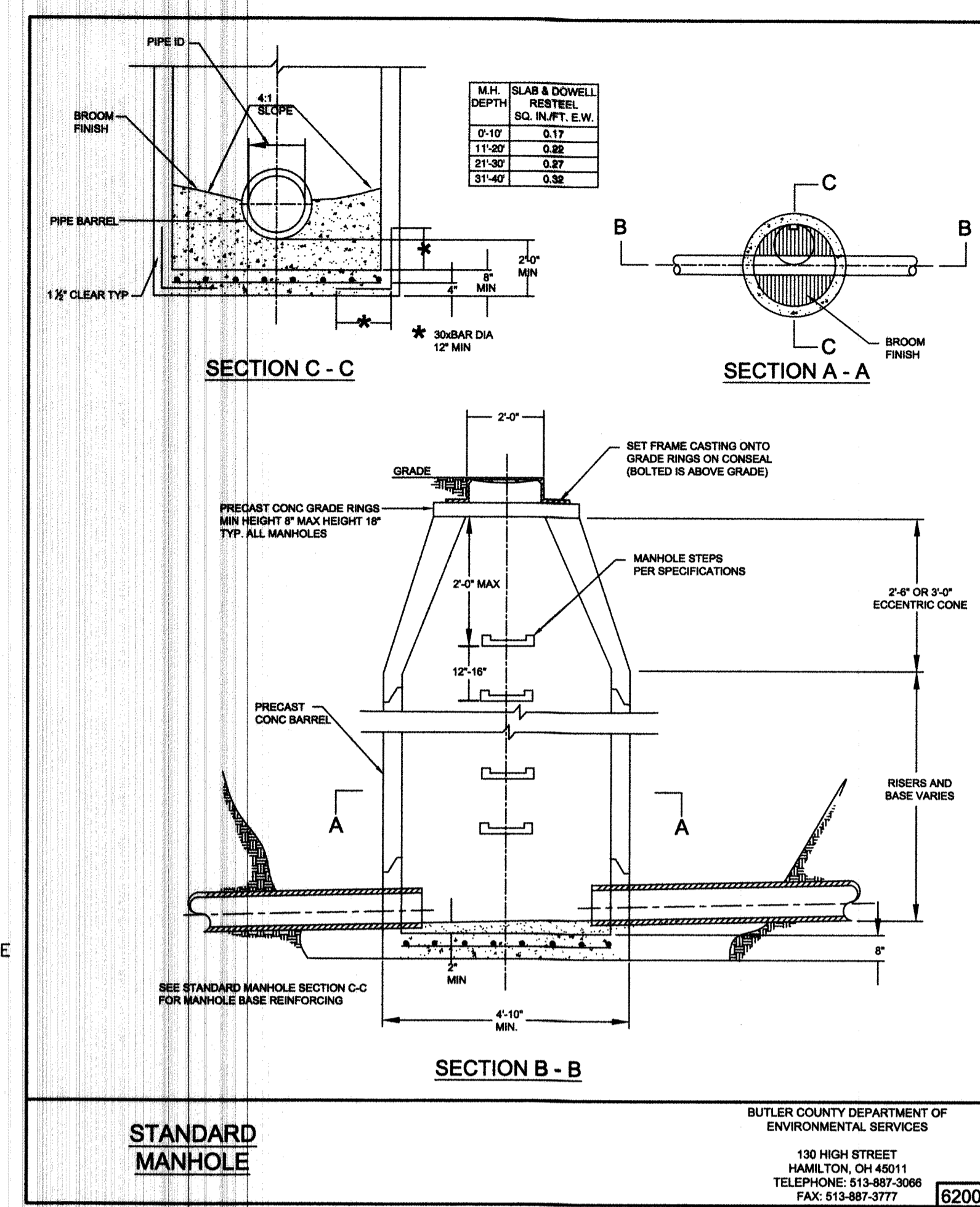
TYPICAL AIR & VACUUM RELEASE VALVE SETTING
NOT TO SCALE

CONCRETE ENCASEMENT
NOT TO SCALE

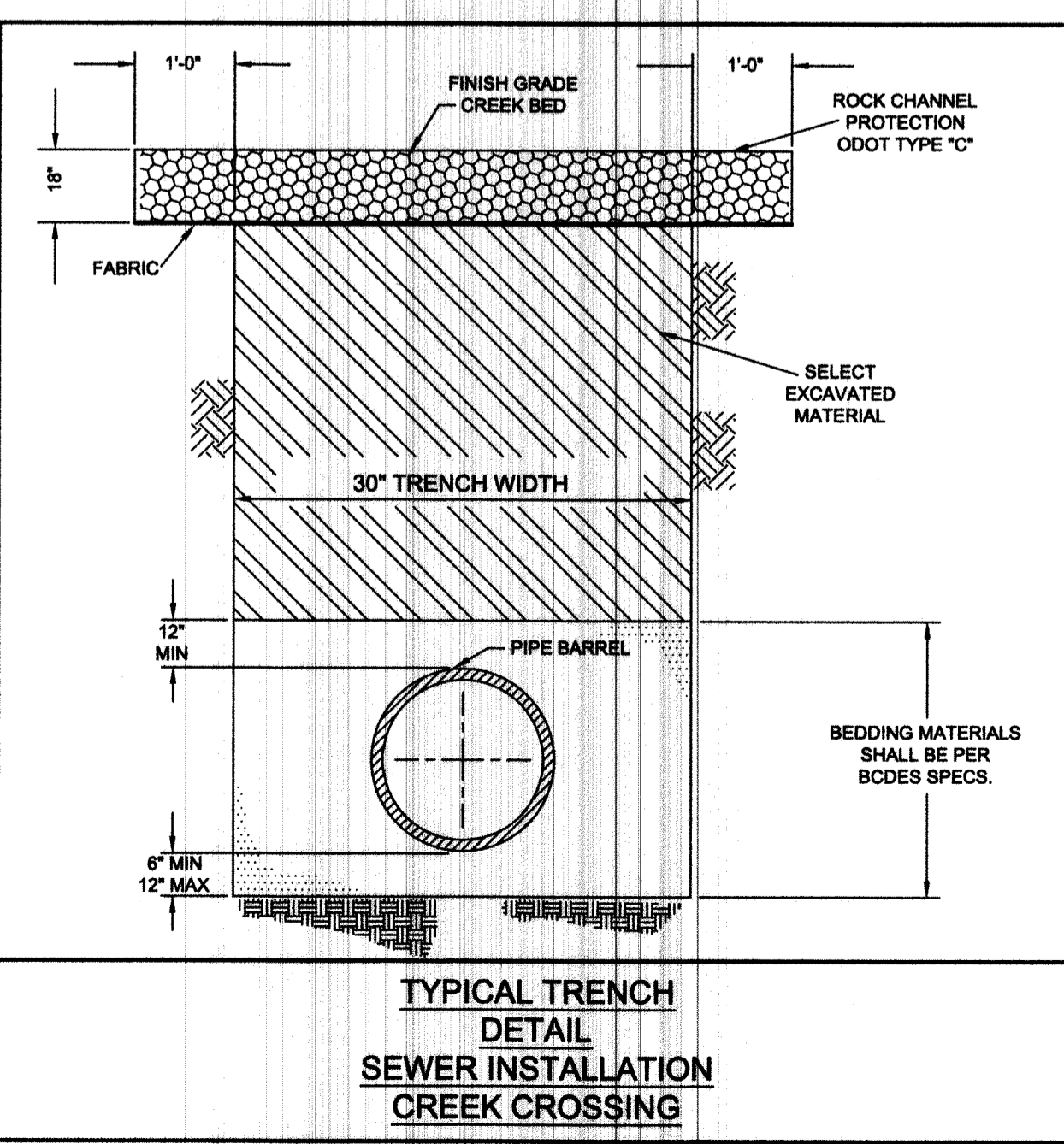
PIPE SIZE (IN. FT.)	CY CONC PER LIN. FT. NO. 3 BARS	SPACING (FT) BETWEEN NO. 3 BARS
6"	0.121	3'-0"
8"	0.138	4'-0"
10"	0.159	4'-0"
12"	0.177	5'-0"
15"	0.200	6'-0"
18"	0.247	6'-10"
24"	0.270	7'-0"
30"	0.318	8'-0"
36"	0.460	10'-0"



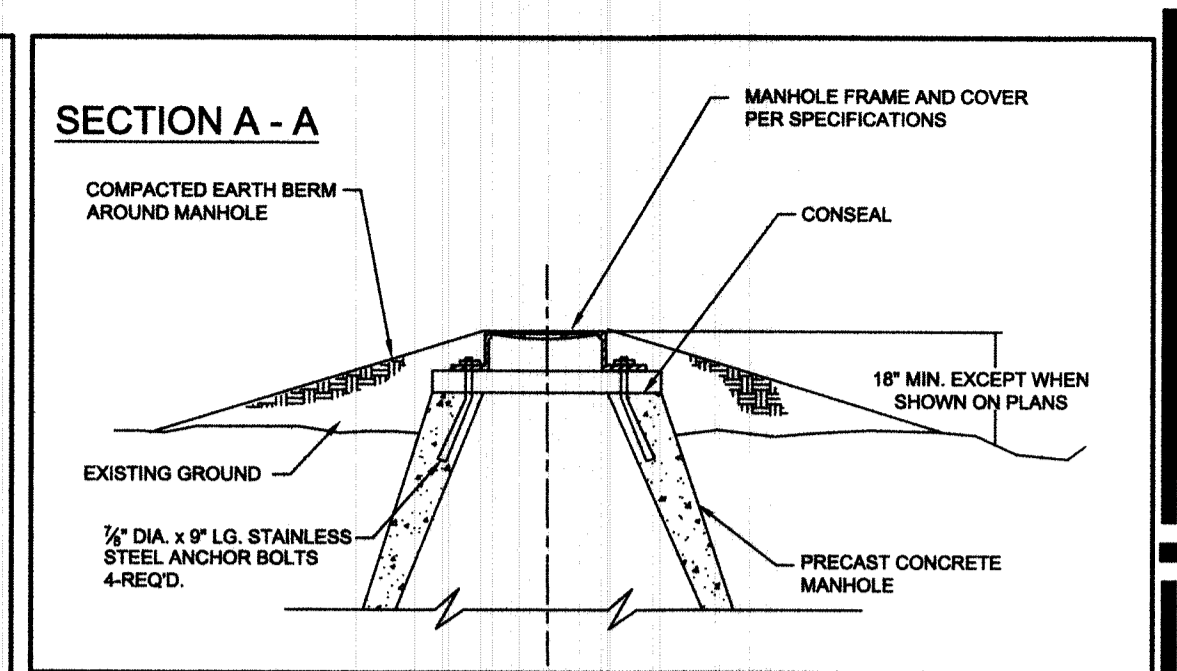
TYPICAL TRENCH DETAIL SEWER INSTALLATION
BUTLER COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
130 HIGH STREET HAMILTON, OH 45011 TELEPHONE: 513-887-3066 FAX: 513-887-3777 6270



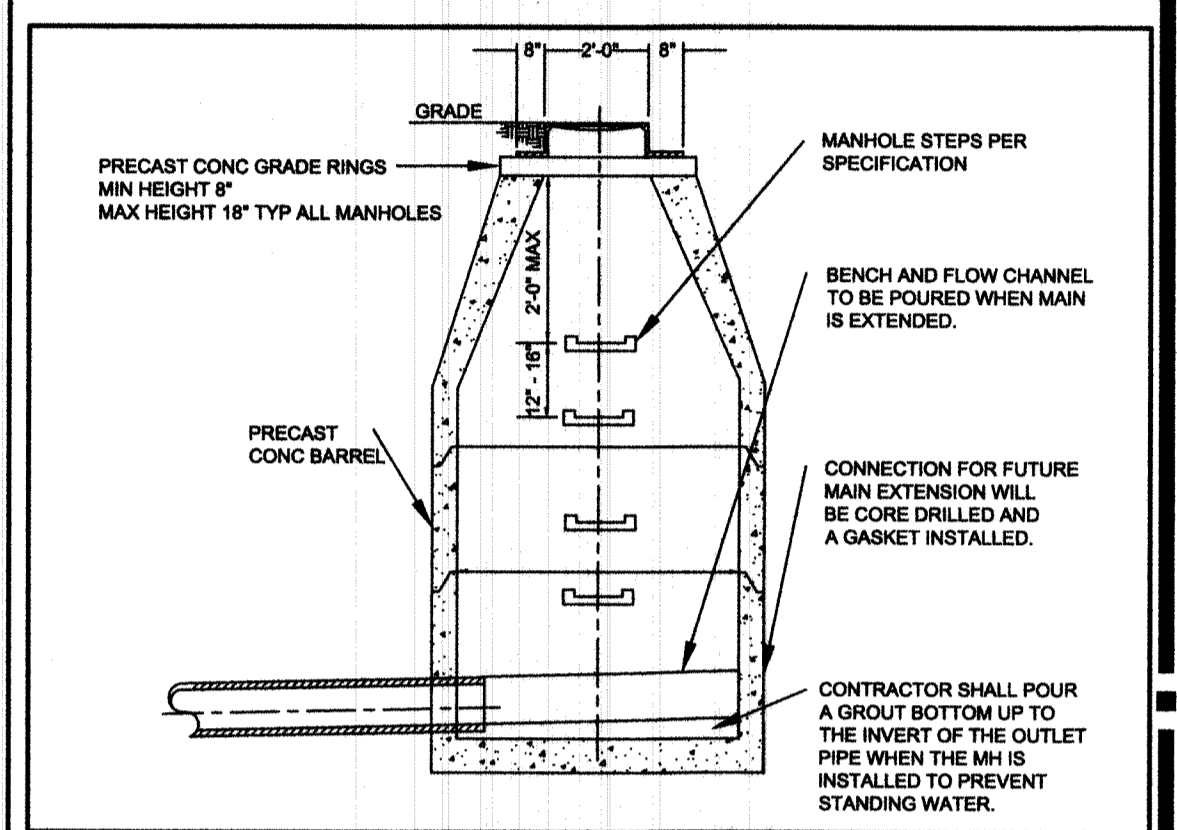
- 1) THE CARRIER PIPE SHALL BE SEWED WITH THE CASING PIPE WITH STAINLESS STEEL CASING SPACERS THAT PLACE THE CARRIER PIPE IN A "RESTRAINED" POSITION TO PRECLUDE PRESSURE FLATION WHILE PROVIDING 1/2-1" CLEARANCE BETWEEN THE TOP RUNNERS AND THE CASING PIPE.
- 2) CASING SPACERS SHALL BE INSTALLED WITHIN ONE (1) FOOT OF EACH END OF THE CARRIER PIPE AND ON 8' FOOT CENTERS THEREAFTER.
- 3) THERE SHALL BE TWO (2) RUNNERS ON TOP AND TWO (2) RUNNERS ON BOTTOM OF CASING SPACER FOR CARRIER PIPE DIAMETERS OF 4-12" OR TWO (2) RUNNERS ON TOP AND FOUR (4) RUNNERS ON BOTTOM FOR CARRIER PIPE DIAMETERS OF 14-36". CASING SPACERS SHALL BE CASCADE WATERWORKS MODEL CSS.
- 4) AT EACH END OF THE CASING PIPE, THE CARRIER AND CASING PIPE SHALL BE WRAPPED WITH CASCADE WATERWORKS MODEL CDS END SEALS.



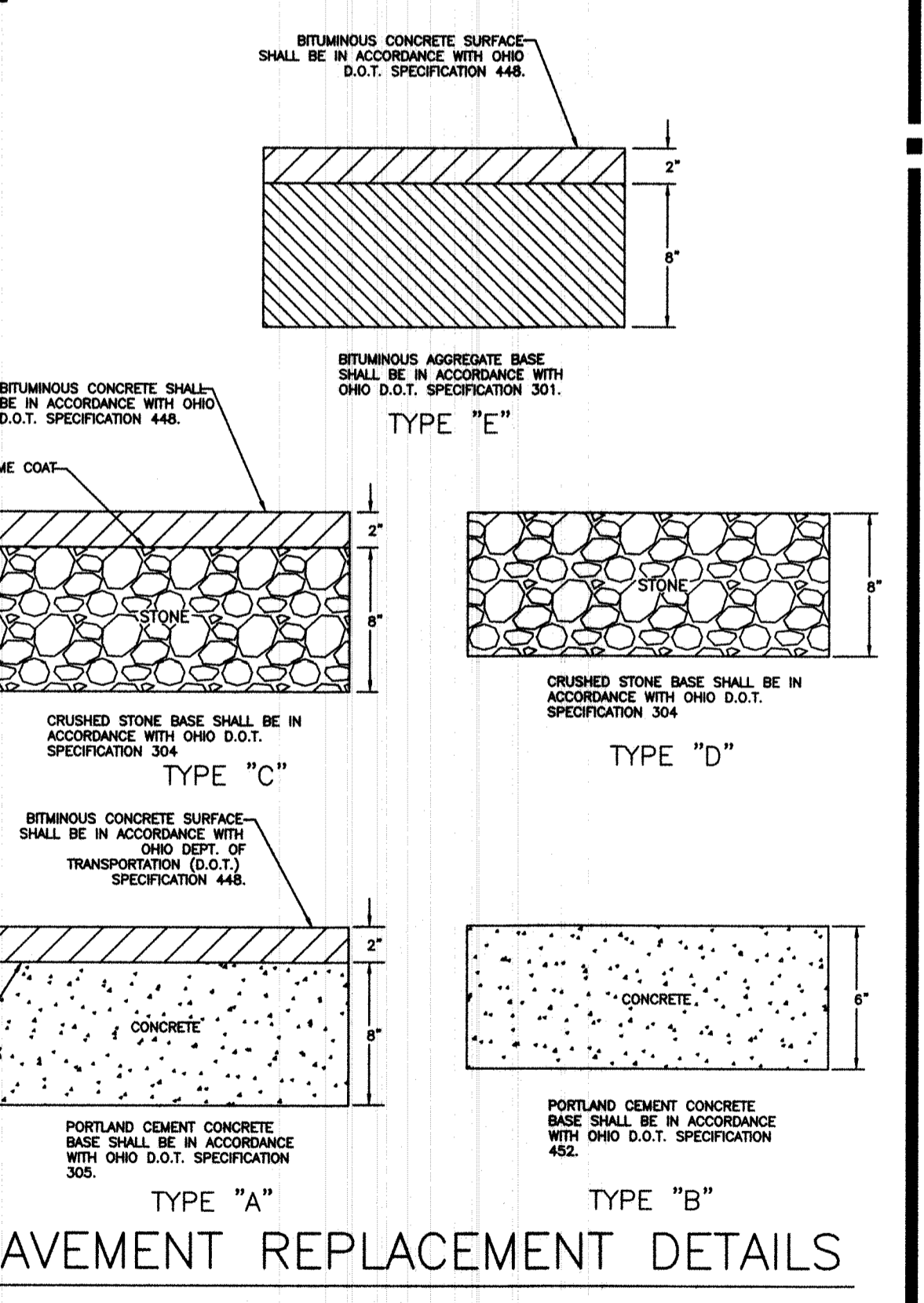
TYPICAL TRENCH DETAIL CREEK CROSSING
BUTLER COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
130 HIGH STREET HAMILTON, OH 45011 TELEPHONE: 513-887-3066 FAX: 513-887-3777 6200



ELEVATED MANHOLE DETAIL
BUTLER COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
130 HIGH STREET HAMILTON, OH 45011 TELEPHONE: 513-887-3066 FAX: 513-887-3777 6170



DEAD END MANHOLE DETAIL
BUTLER COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
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PAVEMENT REPLACEMENT DETAILS
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X-Reference Files
Date 07/10/17
No. Revision/Issue By Date

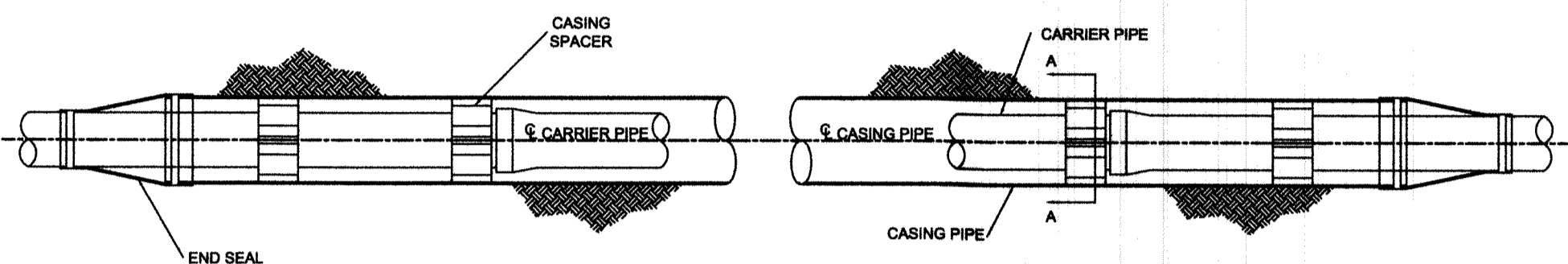
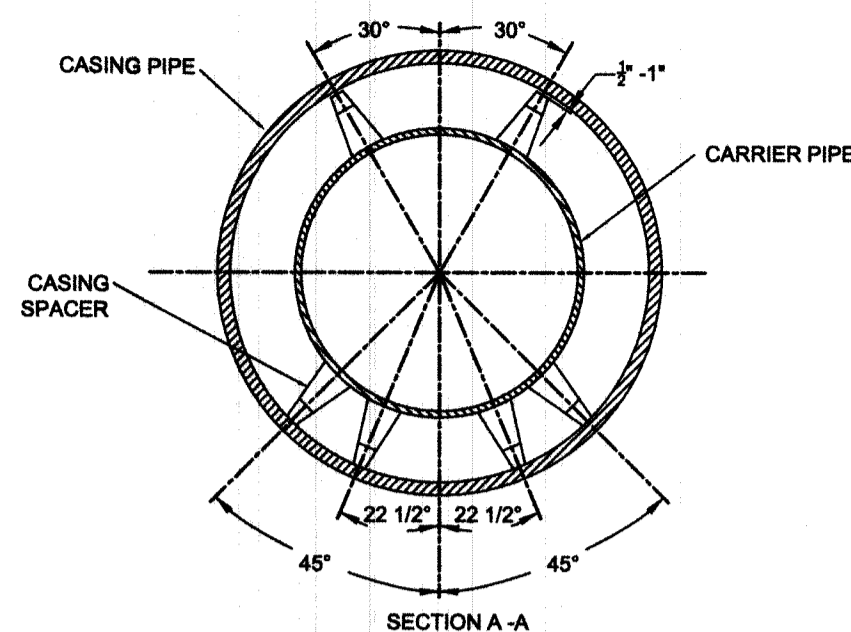
No.	Revision/Issue	By	Date

WINDING CREEK SECTION SEVENTEEN AKA CARRIAGE HILL SECTION SEVENTEEN
SECTION 2, TOWN 2, RANGE 3
LIBERTY TOWNSHIP
BUTLER COUNTY, OHIO

Sheet Title
BUTLER COUNTY WATER & SEWER STANDARD DETAILS
Project No. 04476.06
Scale N.T.S.
Sheet No. 8/10
File No. 04-476

CASING SPACERS SHALL BE INSTALLED WITHIN ONE (1) FOOT OF EACH SIDE OF CARRIER PIPE JOINTS, WITHIN ONE (1) FOOT OF EACH END OF THE CASING PIPE AND ON 6 FOOT CENTERS THEREAFTER.

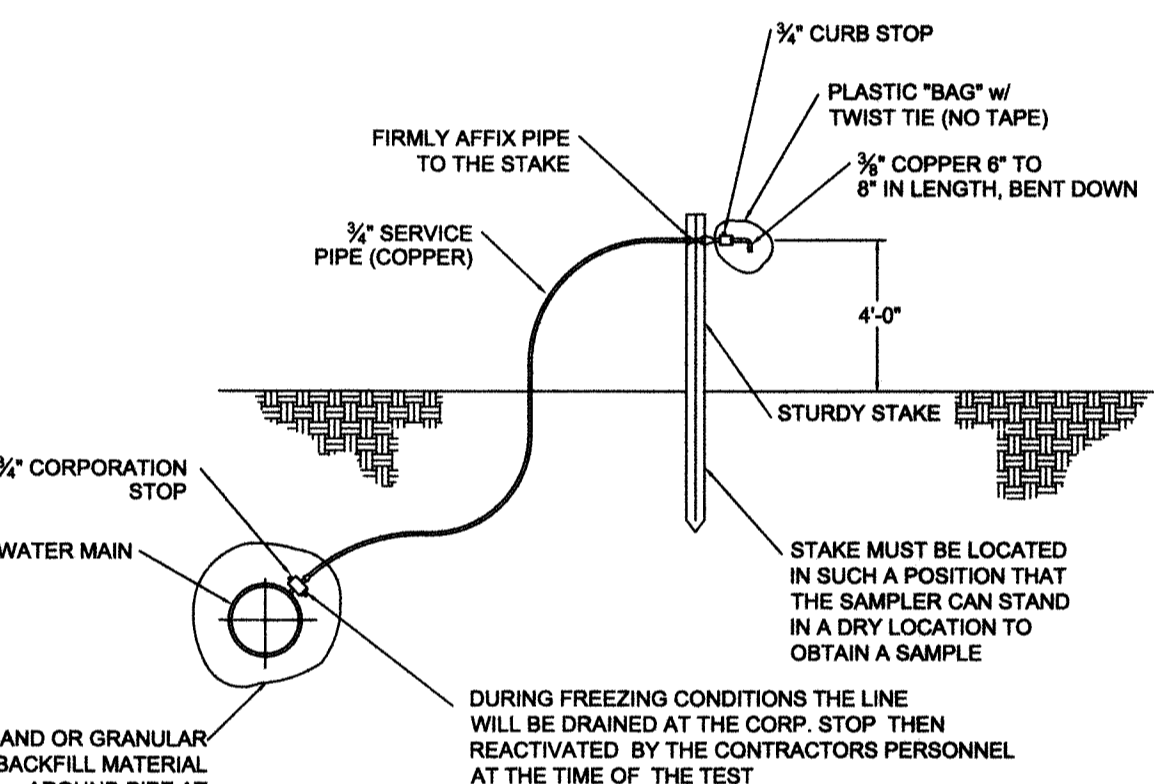
- 1) THE CARRIER PIPE SHALL BE BRACED WITHIN THE CASING PIPE WITH STAINLESS STEEL CASING SPACERS THAT PLACE THE CARRIER PIPE IN A "RESTRAINED" POSITION TO PRECLUDE POSSIBLE FLATGATION WHILE PROVIDING 1/2-1" CLEARANCE BETWEEN THE TOP RUNNERS AND THE CASING PIPE.
- 2)
- 3) THERE SHALL BE TWO (2) RUNNERS ON TOP AND TWO (2) RUNNERS ON BOTTOM OF CASING SPACER FOR CARRIER PIPE DIAMETERS OF 4-12" OR TWO (2) RUNNERS ON TOP AND FOUR (4) RUNNERS ON BOTTOM FOR CARRIER PIPE DIAMETERS OF 14-36". CASING SPACERS SHALL BE CASCADE WATERWORKS MODEL CSS.
- 4) AT EACH END OF THE CASING PIPE, THE CARRIER AND CASING PIPE SHALL BE WRAPPED WITH CASCADE WATERWORKS MODEL CCS END SEALS.



SEWER FORCE MAIN & WATER MAIN ENCASMENT DETAIL

BUTLER COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
 130 HIGH STREET
 HAMILTON, OH 45011
 TELEPHONE: 513-887-3066
 FAX: 513-887-3777

4370



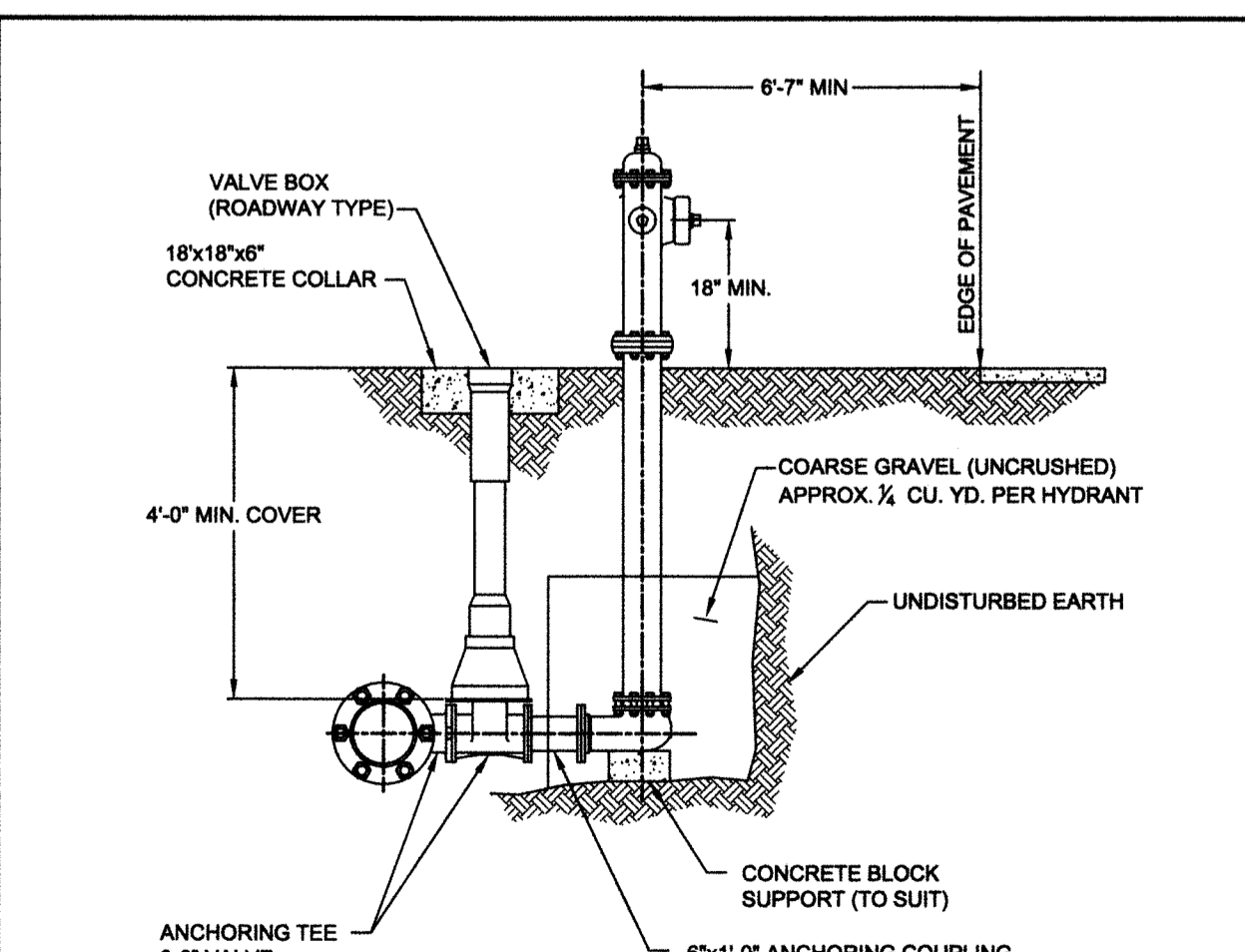
TEMP. PURITY TEST STATION

BUTLER COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
 130 HIGH STREET
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5260

PURITY TEST STATION

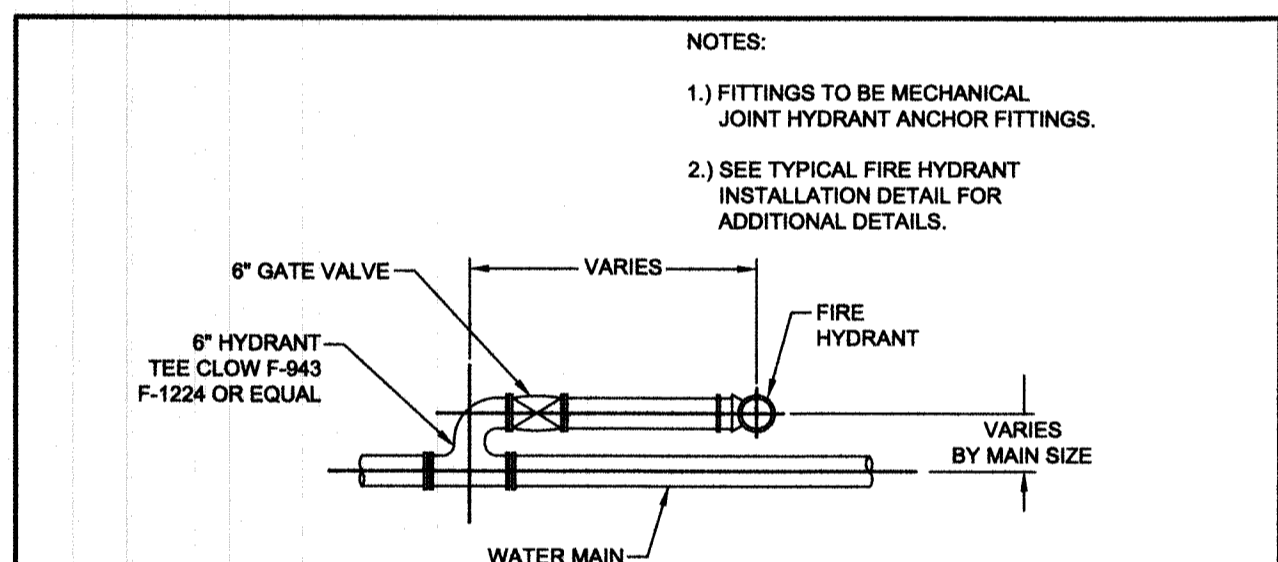
(NOT TO SCALE)



TYPICAL FIRE HYDRANT INSTALLATION

BUTLER COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
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 HAMILTON, OH 45011
 TELEPHONE: 513-887-3066
 FAX: 513-887-3777

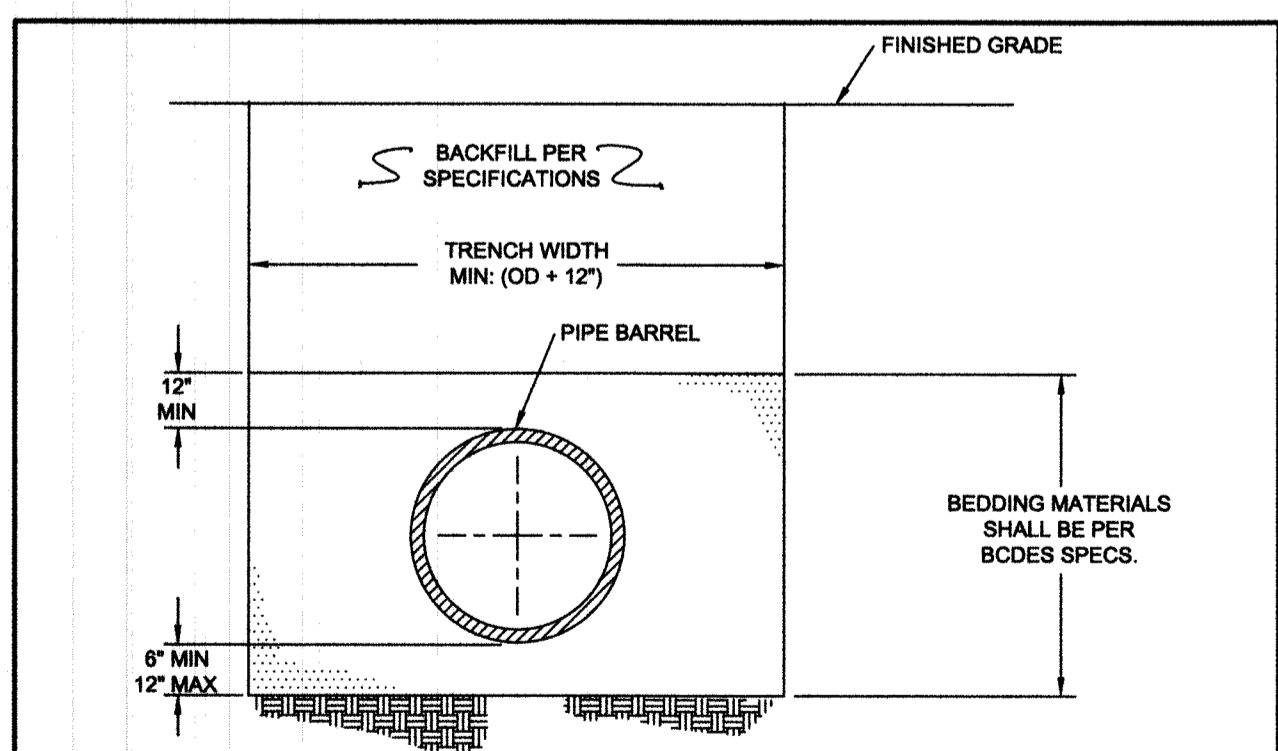
5110



SETTING FOR HYDRANT ADJACENT TO MAIN

BUTLER COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES
 130 HIGH STREET
 HAMILTON, OH 45011
 TELEPHONE: 513-887-3066
 FAX: 513-887-3777

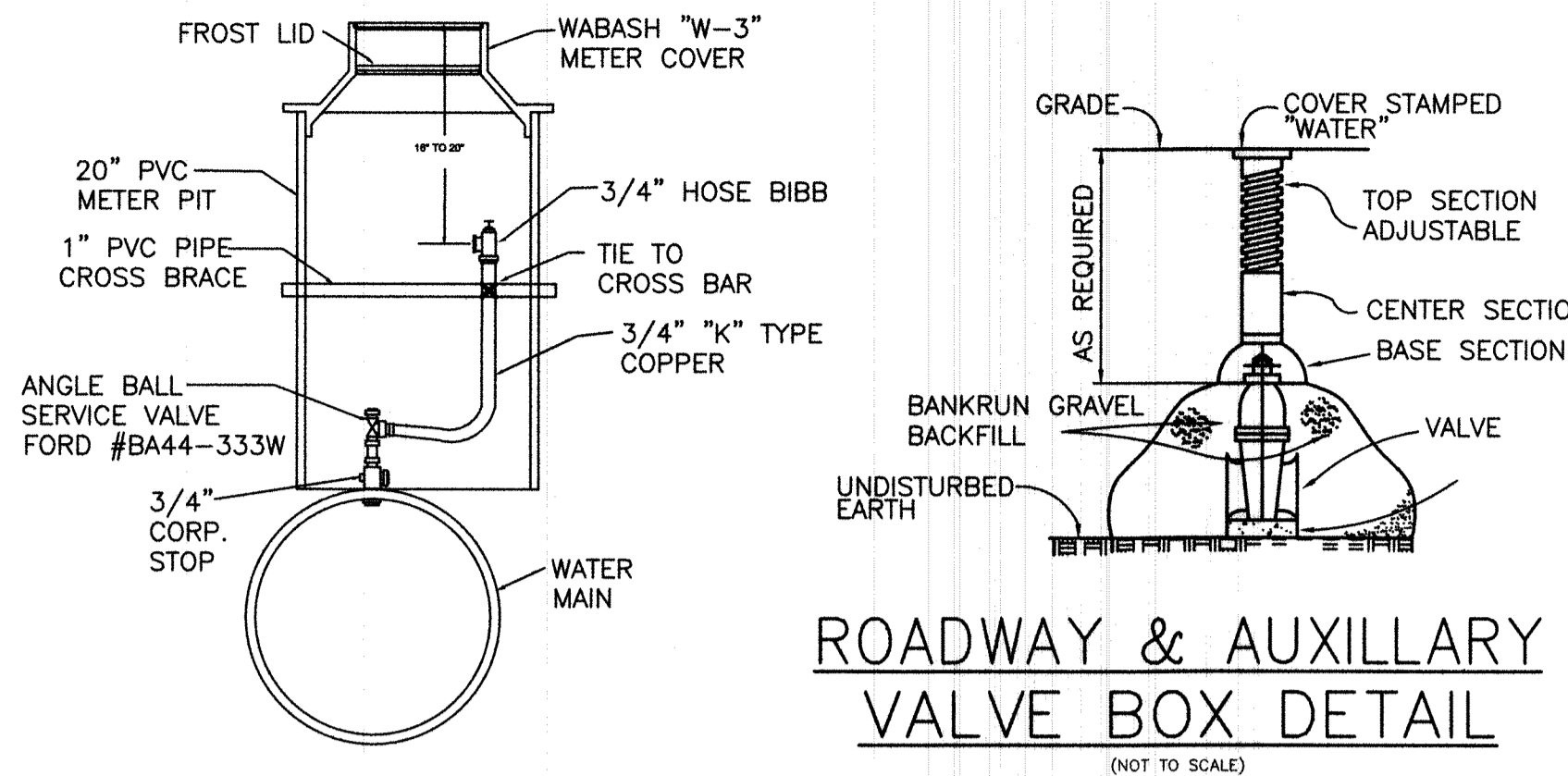
5120



TYPICAL TRENCH DETAIL WATER MAIN INSTALLATION

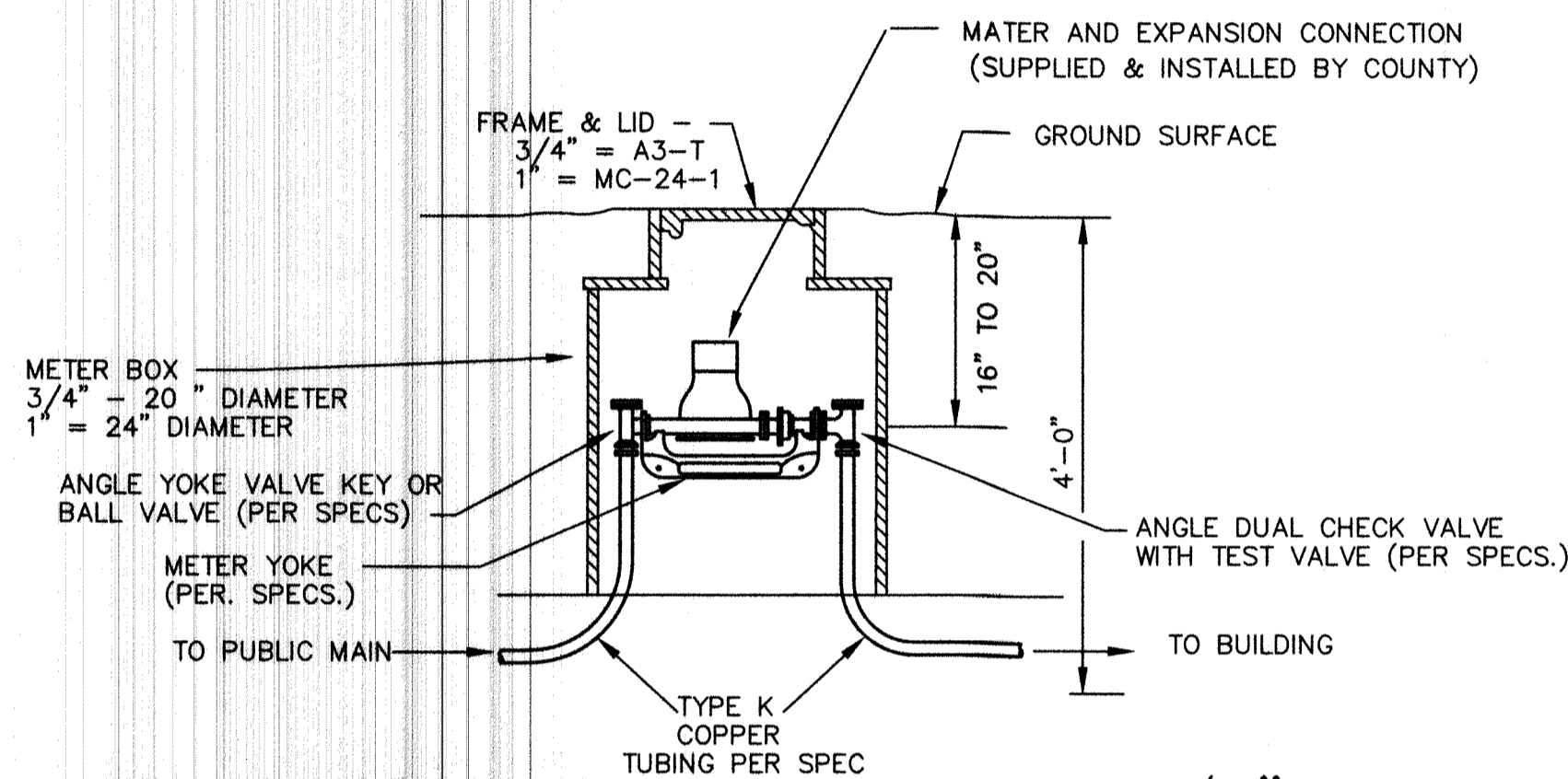
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5280

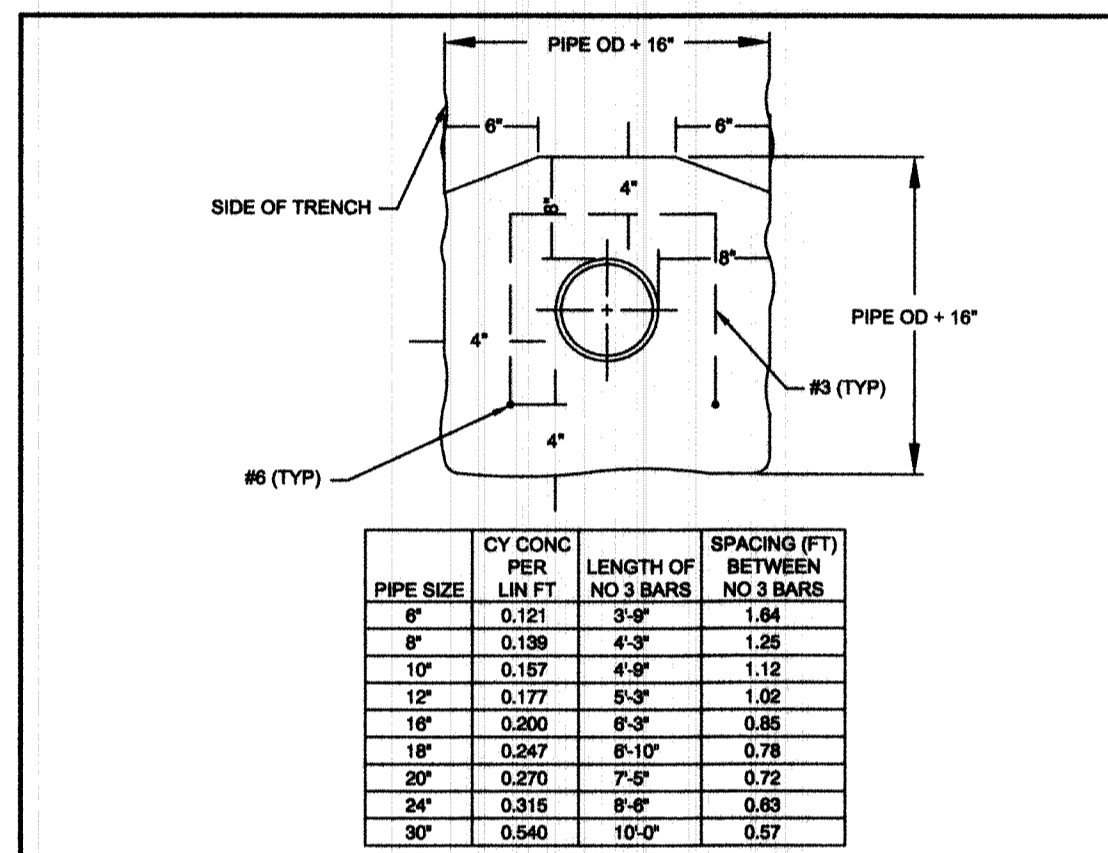


AIR RELEASE VALVE

(NOT TO SCALE)



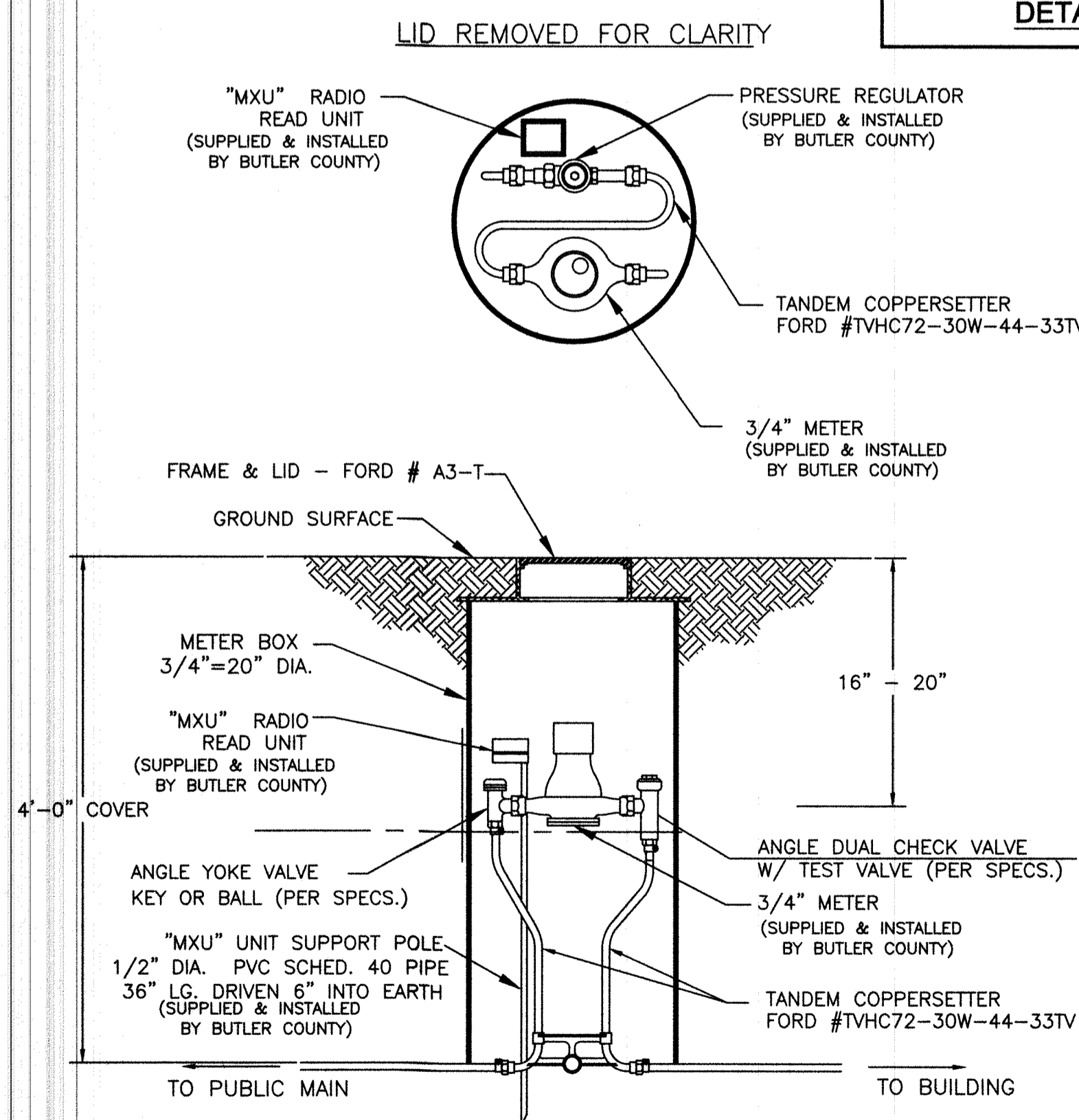
STANDARD INSTALLATION FOR 3/4" AND 1" WATER METER SETTINGS



CONCRETE ENCASMENT DETAIL

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 130 HIGH STREET
 HAMILTON, OH 45011
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6240



TANDEM COPPERSETTER INSTALLATION FOR 3/4" METER & PRESSURE REGULATOR

UNDERGROUND UTILITIES
 2 WORKING DAYS
BEFORE YOU DIG
 CALL...800-382-2764 (Toll Free)
 OHIO UTILITIES PROTECTION SERVICE (OUPS)
 CALL...800-925-0988 (Toll Free)
 OHIO OIL & GAS PRODUCERS UNDERGROUND PROTECTION SERVICE (OGUPS)
 NON-MEMBERS MUST BE CALLED DIRECTLY

MSP
McGill Smith Punshon, Inc.
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 www.mcgillsmithpunshon.com
 Engineers • Architects • Surveyors
 Landscape Architects • Planners

Drawn By NAK Project Mgr. RA
 Drawing File 04476064-DEI-00-SECTION 17
 X-Reference Files N/A
 Date 07/10/17
 No. Revision/Issue By Date

**WINDING CREEK SECTION SEVENTEEN
 AKA CARRIAGE HILL
 SECTION SEVENTEEN**

SECTION 2, TOWN 2, RANGE 3
 LIBERTY TOWNSHIP
 BUTLER COUNTY, OHIO

Sheet Title BUTLER COUNTY WATER & SEWER STANDARD DETAILS
 Project No. 04476.06
 Scale N.T.S.
 Sheet No. 9/10
 File No. 04-476

