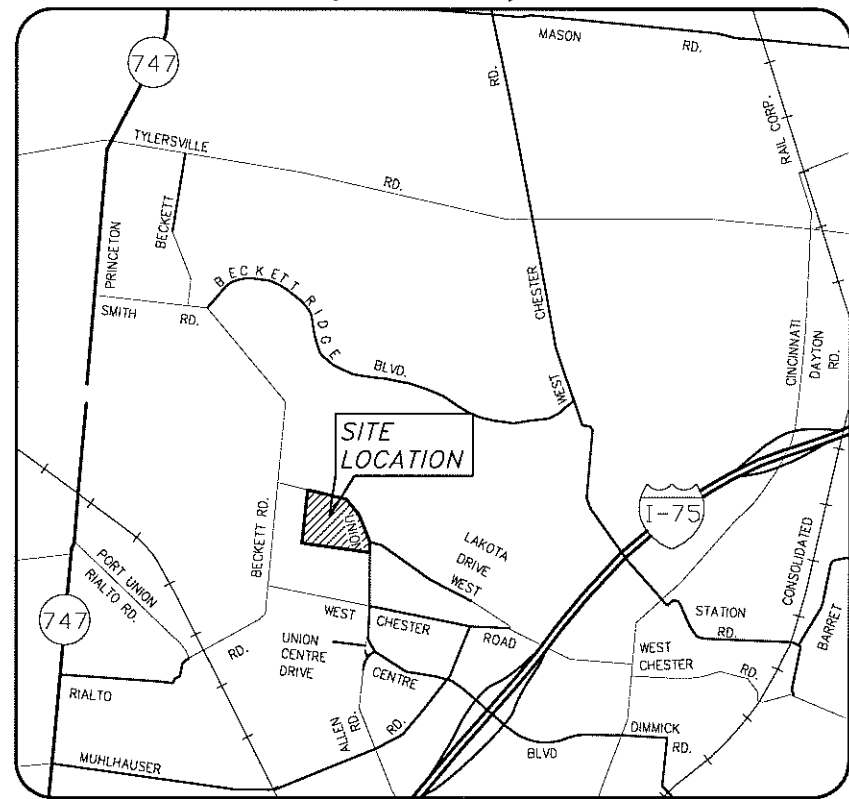


# CHAPPELL CROSSING BOULEVARD PHASE 1 CONSTRUCTION PLANS

WEST CHESTER TOWNSHIP  
BUTLER COUNTY  
SEC. 34, TOWN 3, RANGE 2

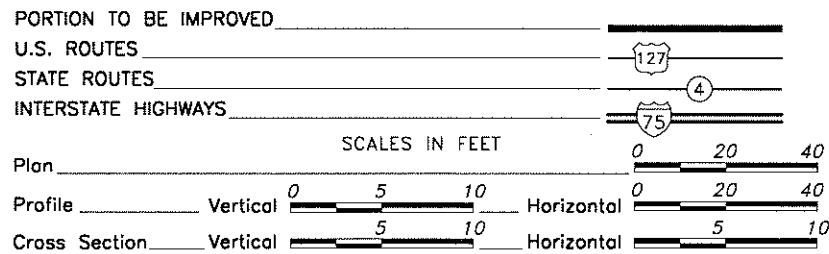
PRINTED  
JAN 27 2004  
NEXUS ENGINEERING

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LOCATION  
MAP

0 1/2 1  
SCALE IN MILES



### PROJECT DESCRIPTION

Construction of CHAPPELL CROSSING BOULEVARD from Sta. 15+07.48 to Sta. 20+35.70, paving the existing inadequate UNION CENTRE BOULEVARD ditch, and enlarging the current detention as shown on the erosion control sheet.

### 1997 SPECIFICATIONS

The standard specifications of the State of Ohio, Department of Transportation, including changes and supplemental specifications listed in the proposal shall govern this improvement. (See General Notes)

Wherever the word "State" occurs, it is to mean Butler County wherever the word "Engineer" occurs, it is to mean Butler County Engineer, limited to the particular duties entrusted in them.

### NOTE:

The Contractor shall contact the Butler County Engineer's Office 48 hours prior to the start of any construction.  
BCEO Utilities: 785-4145

UNDERGROUND UTILITIES

2 WORKING DAYS  
BEFORE YOU DIG

Call...800-362-2764 (Toll Free)  
OHIO UTILITIES PROTECTION SERVICE  
NON-MEMBERS MUST BE CALLED DIRECTLY

**BENCHMARK #1**  
Spike in Power Pole  
Elevation 606.11  
Sta. 103+74.80, 49'± Rt.  
(Along Union Centre Blvd.)

**BENCHMARK #2**  
Iron Pin  
Elevation 600.57  
Sta. 113+21.91, 43.77' Lt.  
(Along Union Centre Blvd.)

STANDARD CONSTRUCTION DRAWING								BUTLER COUNTY STD.	
BP-3.1	7-28-00			DM-2.1	7-20-01	MT-97.10	4-19-02	C-3	1-1-94
BP-5.1	7-28-00	RM-1.1	4-18-03	DM-4.4	7-19-02	MT-97.11	4-19-02	C-7	1-1-94
BP-7.1	7-28-00	RM-3.1M	4-18-03						
						TC-71-10M	9-01-93		
MH-1.2	7-19-02	CB-1.1	7-19-02						
MH-1.3	7-20-01	CB-1.2	7-19-02						
		CB-2.1	7-19-02						
		HW-1.1	7-20-01						

\* NOTE: If English Drawing is Not Available The Metric Drawings To Be Soft Converted.

PLANS PREPARED BY:

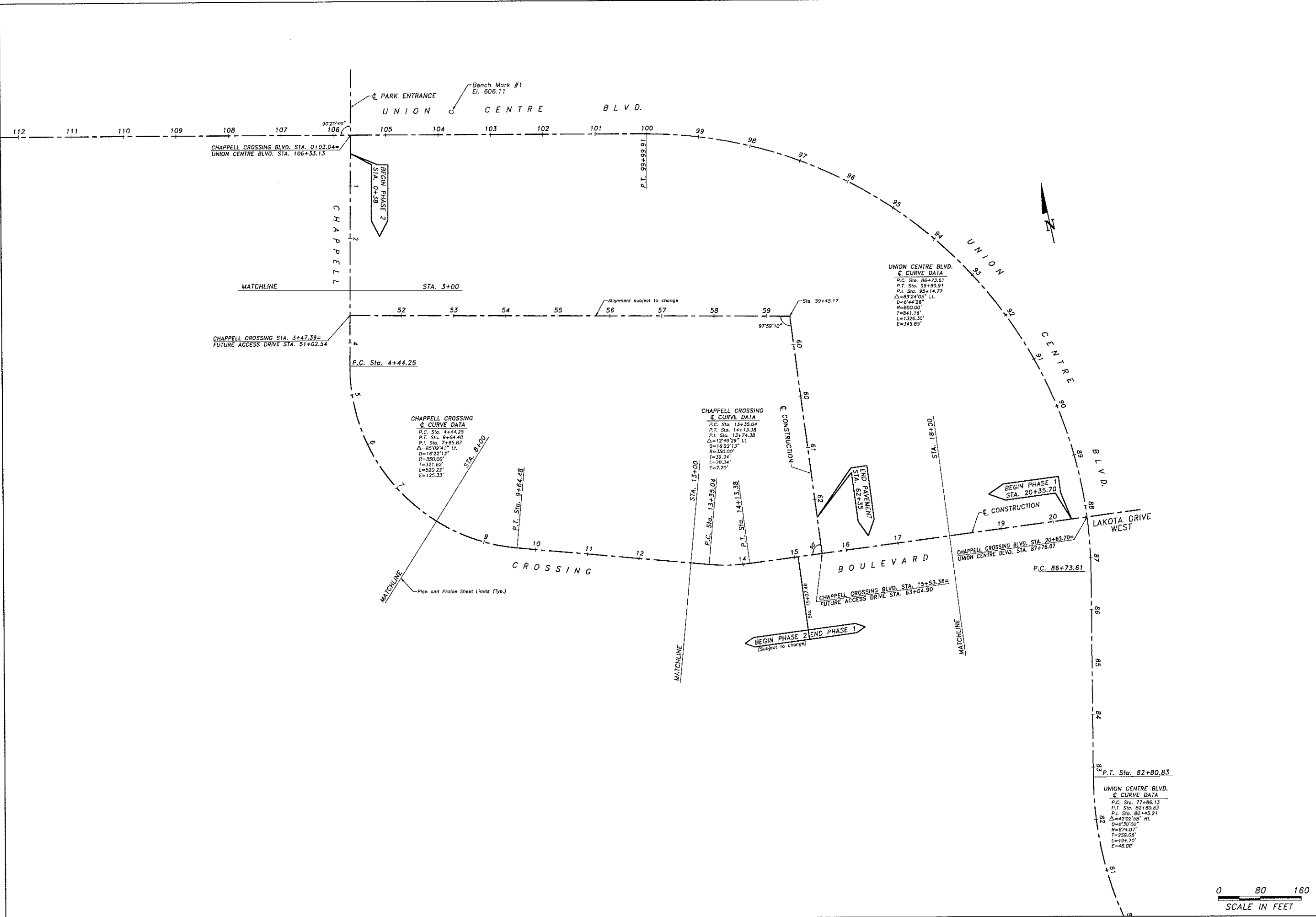
**NEXUS ENGINEERING**  
100 S. WYOMING ST.  
PO BOX 1000  
WEST CHESTER, OHIO 45386  
Phone: (615) 888-4158



CHAPPELL CROSSING BLVD.  
PHASE 1  
TITLE SHEET  
WEST CHESTER, OHIO

DESIGNED C.F.G.  
DRAWN C.F.G.  
CHECKED M.A.N.  
DATE JAN., 2004

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PLANS PREPARED BY:

**NEXUS ENGINEERING**

ONE BUCKLEY ROAD, SUITE 200  
WEST CHESTER, OHIO 45081  
PHONE: (513) 880-9100

**CHAPPELL CROSSING BLVD.**

**SCHEMATIC PLAN**

**WEST CHESTER, OHIO**

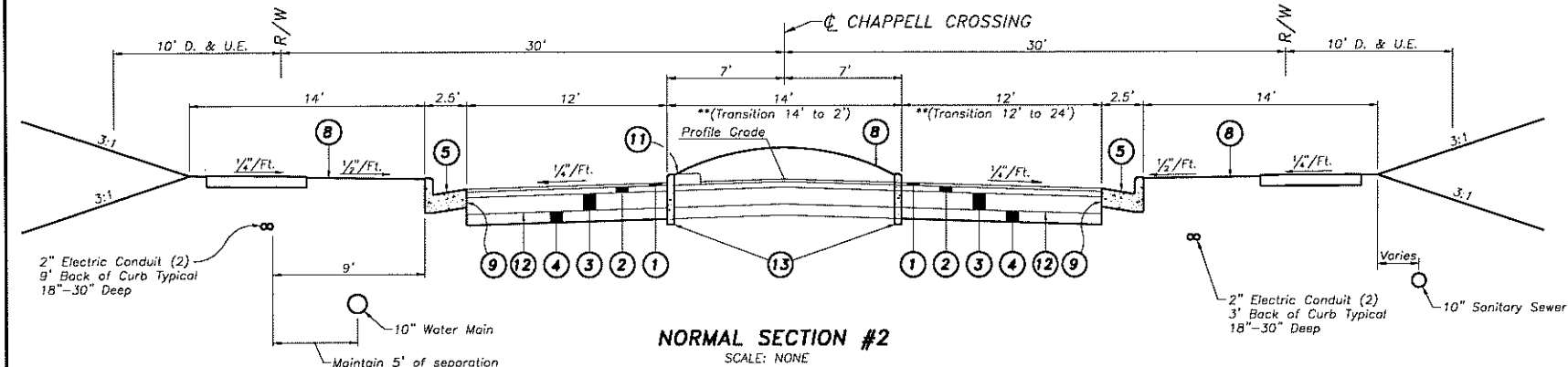
DESIGNED	C.F.G.
DRAWN	C.F.G.
CHECKED	M.A.N.
DATE	JAN., 2004

SCALE IN FEET

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C 2/19

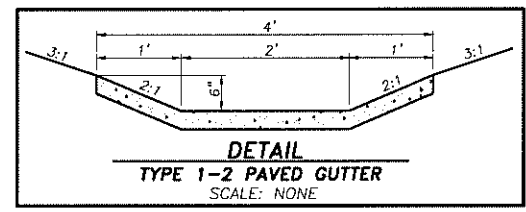
# CHAPPELL CROSSING



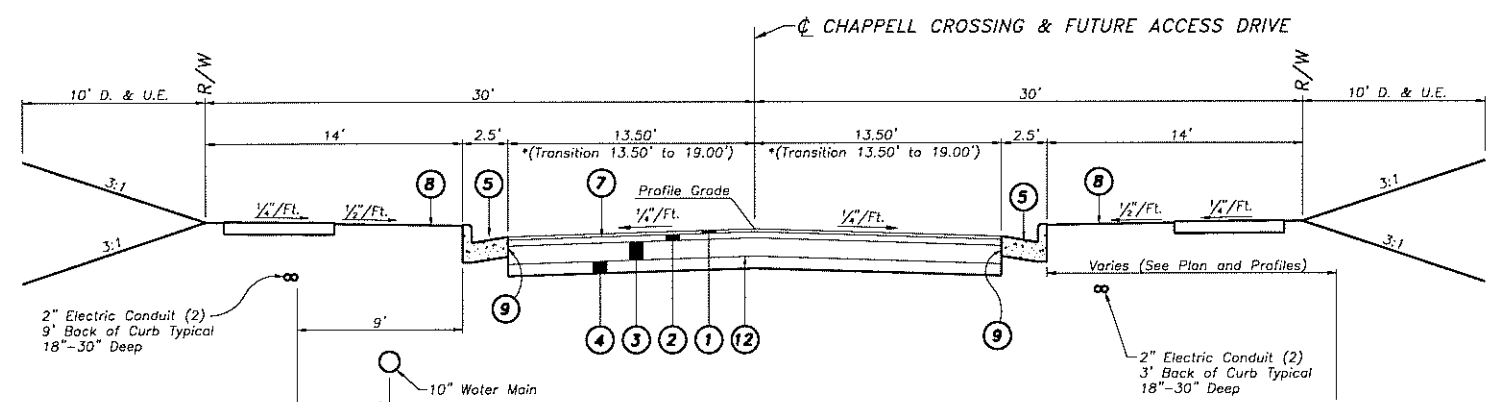
**NORMAL SECTION #2**  
SCALE: NONE

Sta. 19+70.00 to Sta. 20+30.70 = See Intersection Detail Sheet  
 Sta. 19+45.00 to Sta. 19+70.00 = Pavement/Curb Transition  
 Sta. 17+89.29 to Sta. 19+45.00 = Normal Section #2

REF. ITEM	DESCRIPTION
①	404 1" Asphalt Concrete, AC-20
②	403 2" Asphalt Concrete, AC-20
③	301 6" Bituminous Aggregate Base (Depth may vary in resurfacing areas)
④	304 4" Aggregate Base
⑤	609 ODOT Curb, Type 2
⑥	Not Used
⑦	407 Tack Coat, applied at the rate of 0.10 gal. per Sq. Yd.
⑧	659 Seeding and Mulching
⑨	407 Tack coat shall be applied to front face of curb prior to the installation of 301 bituminous aggregate base. Also to be applied to curb joint after the installation of 403 leveling course.
⑩	608 4" Concrete Walk, 1/2" higher than sod.
⑪	609 Curb, Misc.: (Concrete Traffic Divider RM-3.1M)
⑫	408 Bituminous Prime Coat, applied at the rate of 0.40 gal. per Sq. Yd.
⑬	609 ODOT Curb, Type 6



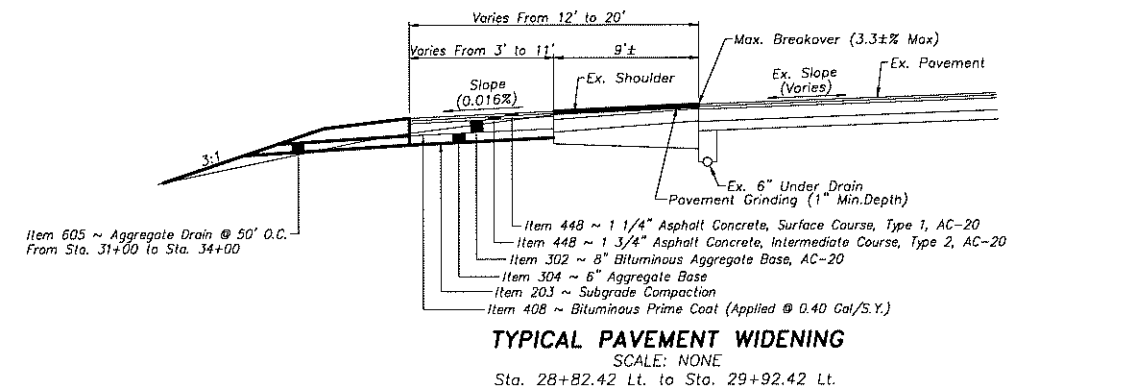
**DETAIL**  
TYPE 1-2 PAVED GUTTER  
SCALE: NONE



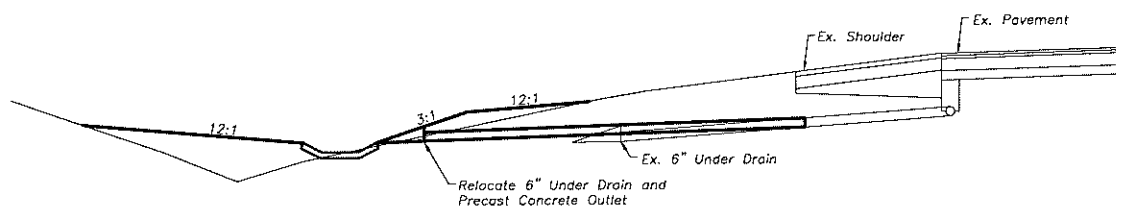
**NORMAL SECTION #1**  
SCALE: NONE

Sta. 16+86.29 to Sta. 17+89.29 = Pavement Transition  
 Sta. 15+99.38 to Sta. 16+86.29 = Normal Section #1  
 Sta. 15+07.48 to Sta. 15+99.38 = Normal Section #1 (Right Side)  
 See Intersection Detail Sheet (Left Side)  
 Sta. 62+58.90 to Sta. 63+04.90 = See Intersection Detail Sheet (Left Side)  
 Sta. 62+35.00 to Sta. 62+58.90 = Normal Section #1

# UNION CENTRE BOULEVARD



**TYPICAL PAVEMENT WIDENING**  
SCALE: NONE  
Sta. 28+82.42 Lt. to Sta. 29+92.42 Lt.



**TYPICAL PIPE UNDERDRAIN RECONSTRUCTION**  
SCALE: NONE

CHAPPELL CROSSING BLVD.  
 PHASE 1  
 TYPICAL SECTIONS  
 WEST CHESTER, OHIO

DESIGNED C.F.G.  
 DRAWN C.F.G.  
 CHECKED M.A.N.  
 DATE JAN., 2004

PLANS PREPARED BY:  
**NEXUS ENGINEERING**  
 CIVIL ENGINEERS AND LAND SURVEYORS  
 8080 BUCKLEUP CENTER DRIVE, SUITE 203  
 WEST CHESTER, OHIO 45381-1000  
 PHONE: (513) 886-9100  
 FAX: (513) 886-9101  
 WWW: WWW.NEXUS-ENG.COM

REFERENCE: 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300, 310, 320, 330, 340, 350, 360, 370, 380, 390, 400, 410, 420, 430, 440, 450, 460, 470, 480, 490, 500, 510, 520, 530, 540, 550, 560, 570, 580, 590, 600, 610, 620, 630, 640, 650, 660, 670, 680, 690, 700, 710, 720, 730, 740, 750, 760, 770, 780, 790, 800, 810, 820, 830, 840, 850, 860, 870, 880, 890, 900, 910, 920, 930, 940, 950, 960, 970, 980, 990, 1000

WATER WORK

Fire hydrant manufacturer, size and shape of operating nuts and threads on hose and pumper connections shall meet the requirements of the local authorities having jurisdiction. Contractor shall verify these requirements.

Although specific provisions required of the Contractor are outlined herein, it shall be the Contractor's responsibility to provide all construction and testing services as necessary for the completion, and acceptance, of the items of work shown on these plans.

Water Main materials, valves, fire hydrants, fittings and appurtenances and installation to be as per Butler County specifications, using Class 53 ductile iron as per AWWA C-151 with minimum 4 feet of cover.

Butler County Department of Environmental Services does not accept any responsibility for the relocation, repair, or replacement of any utility installed within five feet of the center line of any sanitary sewer main or water main.

All water main valves to have a minimum of 2.5 feet and a maximum of 4 feet from proposed grade to the top of the valve operating nut.

MISCELLANEOUS

Provide a minimum clear separation between all public water mains or sanitary sewer lines and other conduits or utilities, of 10 feet, as measured horizontally, except where such conduits or utilities cross over or under a public water or sewer main, where a minimum vertical separation of 18 inches shall be provided, unless otherwise shown on the plans.

All work shall be done under the supervision of the Butler County authority having responsibility for utilities in the area.

SPECIFICATIONS

All material and work provided for the construction, and testing, of the provisions of these plans shall meet the requirements of the BUTLER COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES.

WATER MAIN MATERIALS

Pipe and Fittings Class 53 D.I. AWWA C151/A21.51  
Installation and Tested by AWWA C600.  
Disinfection/Test Per AWWA C601.

WATER MAIN CONNECTION CONTINGENCY

Existing water main valve, located approximately at station 35+63, is to be field verified for location and existence. If the valve location proves to be inaccurate, quantity for wet tap and valve to be included as part of the water main installation.

PLANS PREPARED BY:

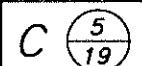
NEXUS ENGINEERING



CIVIL ENGINEER AND LAND SURVEYOR  
BRIAN M. BRIDGES, DIVERSIFIED  
PROFESSIONAL ENGINEER  
STATE OF OHIO  
LICENSE # 3133

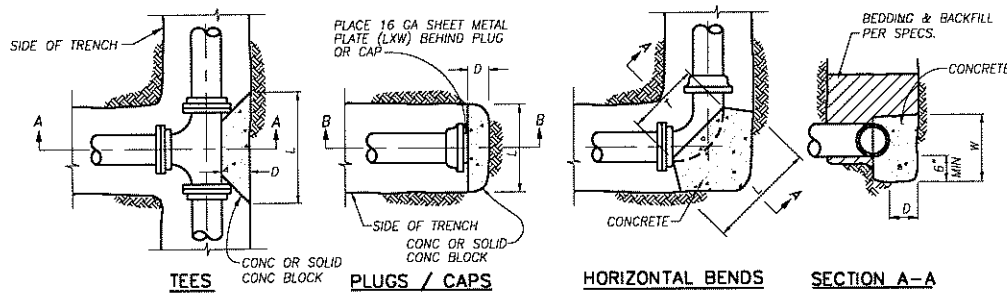
CHAPPELL CROSSING BLVD.  
PHASE 1  
WATER NOTES  
WEST CHESTER, OHIO

DESIGNED	C.F.G.
DRAWN	C.F.G.
CHECKED	M.A.N.
DATE	JAN., 2004



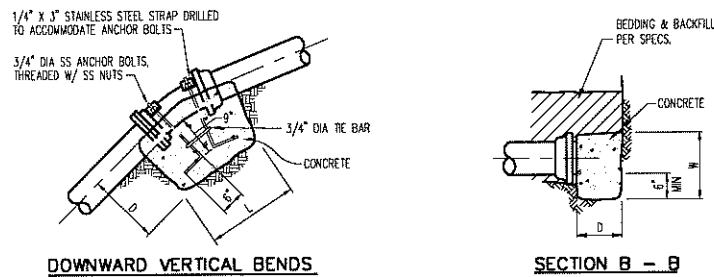
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REVISED



**CONCRETE THRUST BLOCKS**

Not To Scale



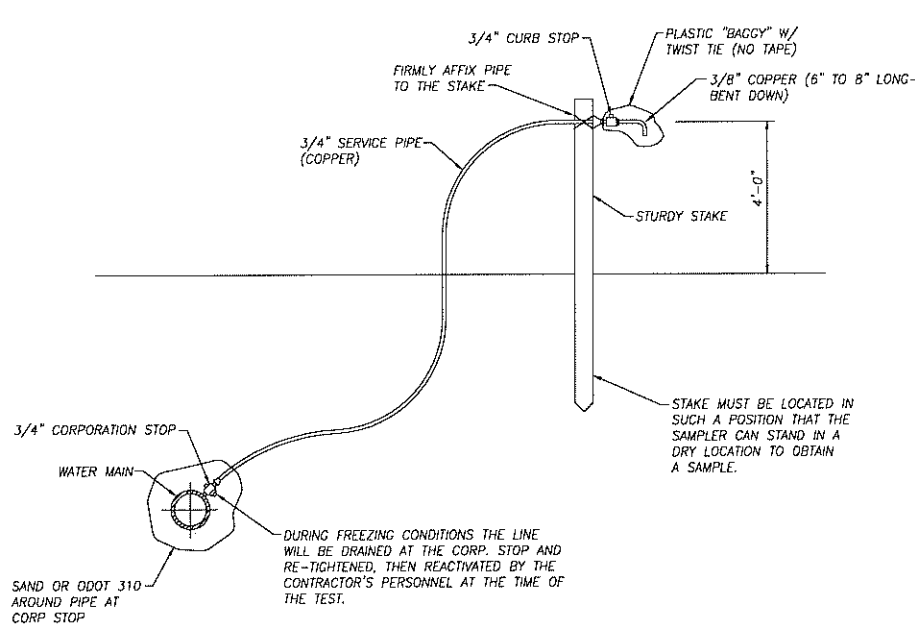
**CONCRETE ANCHOR BLOCKS**

Not To Scale

PLUGS, CAPS & TEES												
SIZE	6"	8"	10"	12"	16"	18"	20"	24"	30"	36"		
D	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"		
L & W	20"	22"	24"	24"	32"	36"	40"	54"	70"	102"		
45° EIGHTH BENDS												
SIZE	6"	8"	10"	12"	16"	18"	20"	24"	30"	36"		
D	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"		
L	18"	20"	22"	24"	34"	40"	45"	58"	72"	98"		
T	16"	16"	18"	18"	18"	28"	33"	46"	52"	58"		
W	12"	14"	16"	18"	22"	25"	28"	36"	48"	76"		
90° QUARTER BENDS												
SIZE	6"	8"	10"	12"	16"	18"	20"	24"	30"	36"		
D	6"	8"	10"	12"	12"	12"	16"	20"	24"	26"		
L	24"	27"	30"	34"	48"	51"	54"	78"	92"	144"		
T	16"	18"	20"	22"	36"	40"	44"	50"	56"	82"		
W	12"	16"	20"	24"	28"	34"	40"	50"	66"	96"		
VERTICAL BEND & STRAIGHT PIPE												
SIZE	6"	8"	10"	12"	16"	18"	20"	24"	30"	36"		
D	15"	15"	18"	18"	21"	21"	24"	24"	32"	36"		
L	24"	24"	30"	30"	36"	36"	42"	42"	58"	68"		

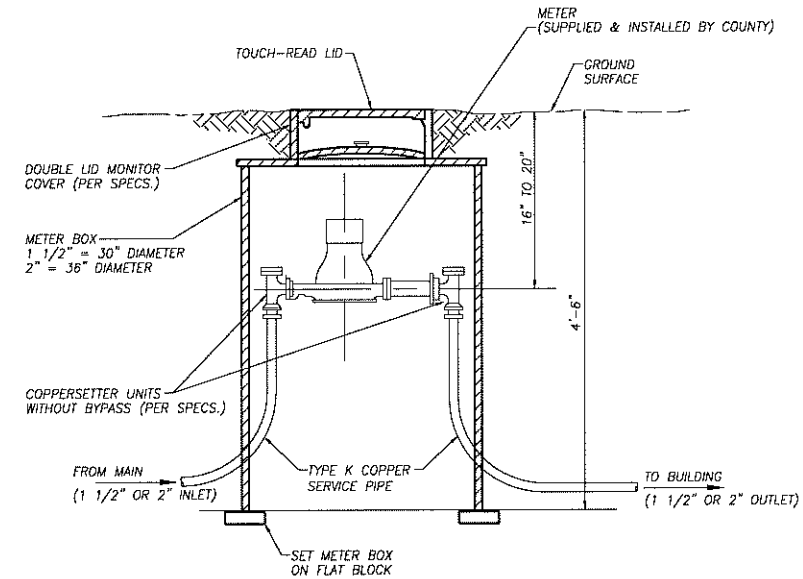
**NOTES:**

- ANCHORS TO BE FULL WIDTH OF TRENCH
- DEPTH "D" MAY BE GREATER THAN SPECIFIED TO ALLOW WORKING SPACE. CONC MUST BE PLACED AGAINST UNDISTURBED EARTH.
- THESE ARE REPRESENTATIVE BLOCKING DIMENSIONS. OTHER BENDS WILL ALSO NEED BLOCKING IF NOT UTILIZING RESTRAINED JOINTS.
- ENCASE ALL JOINTS, BOLTS, & NUTS WITH POLYETHYLENE BEFORE PLACING CONCRETE.
- CONCRETE TYPE AND STRENGTH PER SPECS.
- ALL ANCHOR BOLTS, NUTS, AND STRAPS TO BE STAINLESS STEEL.
- UPWARD VERTICAL BENDS TO HAVE THRUST BLOCKS WITH SAME DIMENSIONS AS FOR HORIZONTAL BENDS.
- 1 1/4 DEGREE AND 22 1/2 DEGREE BENDS TO HAVE THRUST BLOCKS WITH SAME DIMENSIONS AS FOR 45 DEGREE BENDS.



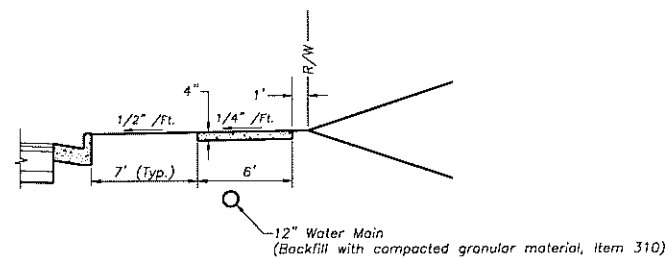
**PURITY TEST STATION**

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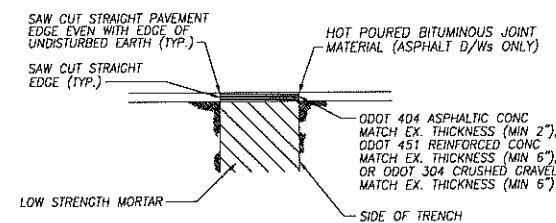
**STANDARD INSTALLATION FOR 1 1/2" AND 2" WATER METER SETTINGS**

Not To Scale

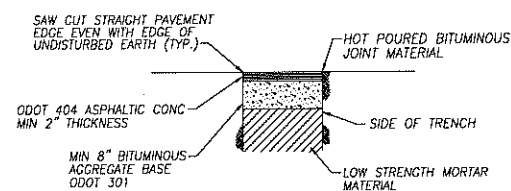


**SIDEWALK DETAIL**

Not To Scale

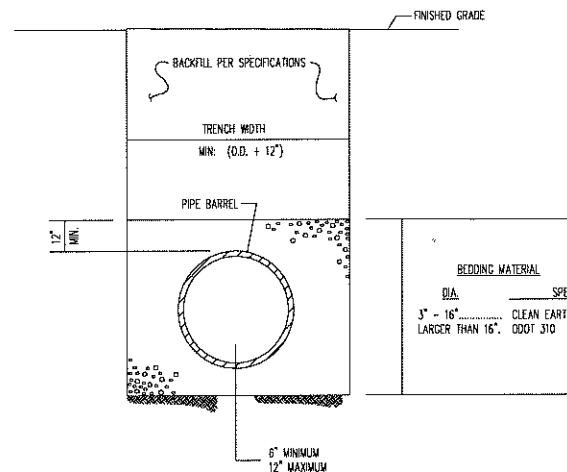


**DRIVEWAY**



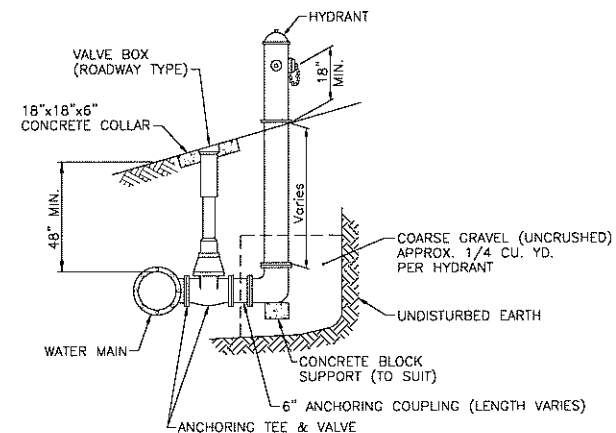
**ASPHALTIC CONCRETE ROADWAY PAVEMENT REPLACEMENT DETAILS**

Not To Scale



**TYPICAL TRENCH DETAIL WATER MAIN INSTALLATION**

Not To Scale



**TYPICAL FIRE HYDRANT INSTALLATION**

Not To Scale

CHAPPELL CROSSING BLVD.  
PHASE 1  
WATER LINE DETAILS  
WEST CHESTER, OHIO

DESIGNED C.F.G.  
DRAWN C.F.G.  
CHECKED M.A.N.  
DATE JAN., 2004

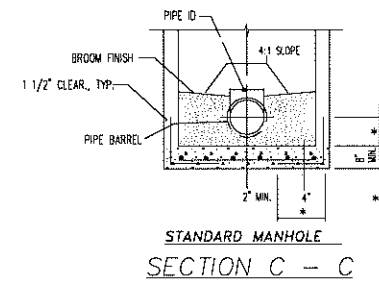
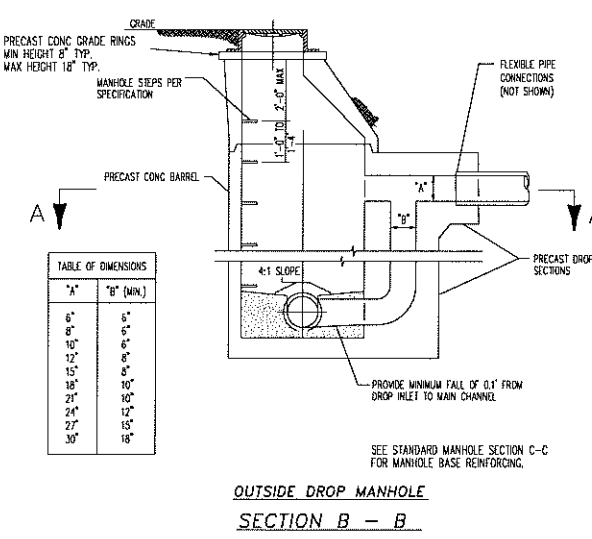
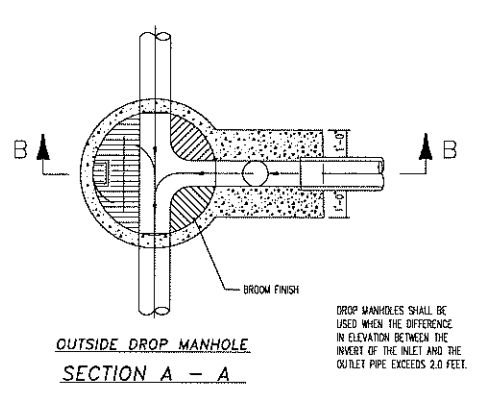
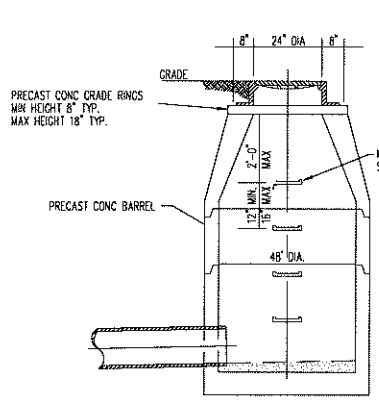
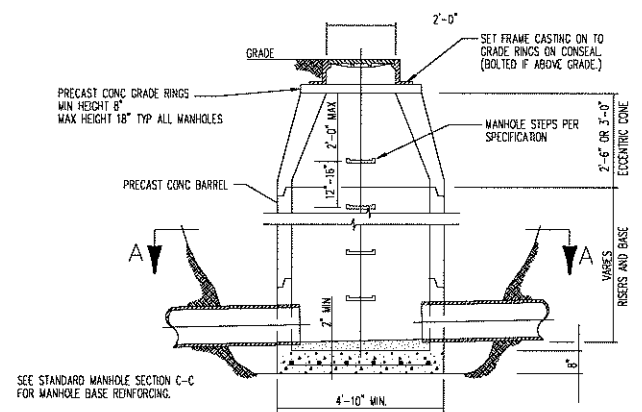
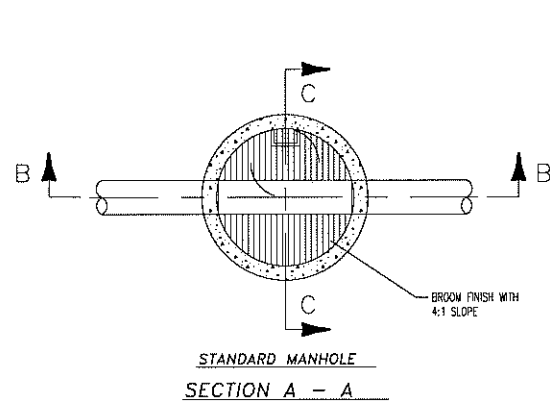
PLANS PREPARED BY:

**NEXUS ENGINEERING**  
1000 BUCKLEY BLVD., SUITE 200  
WEST CHESTER, OHIO 45386-1000  
PHONE: (513) 938-7124

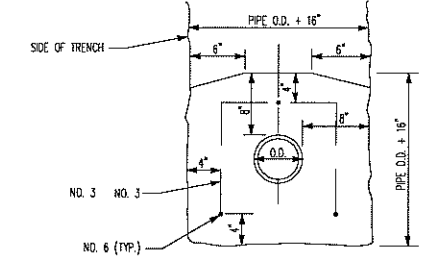
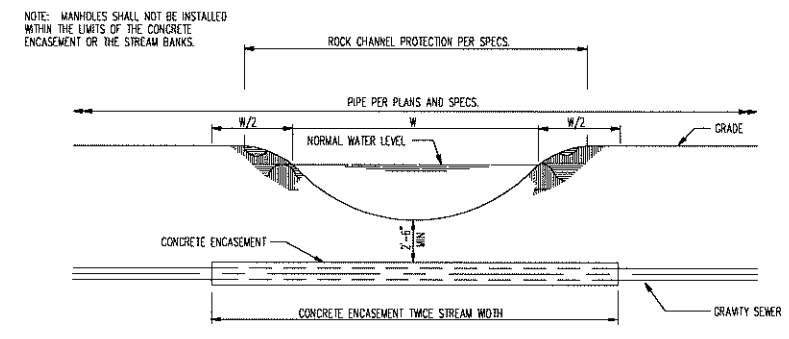


10	9	8	7	6	5	4	3	2	1

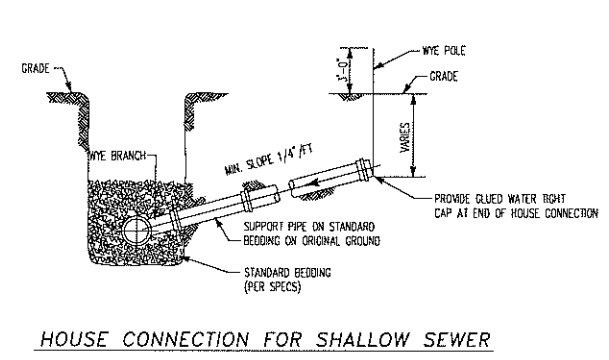
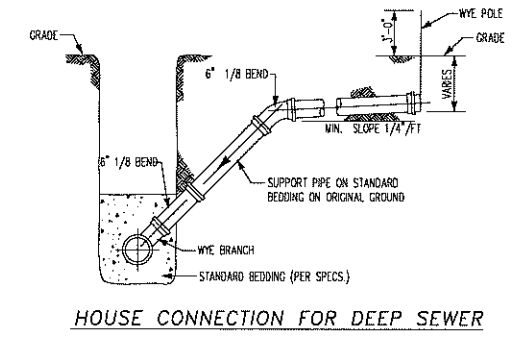
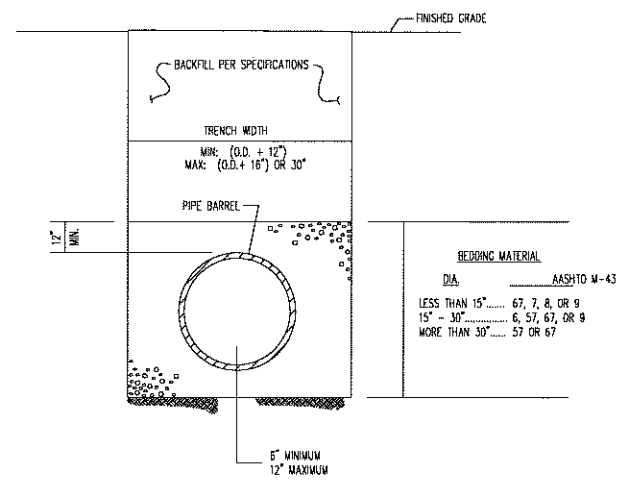
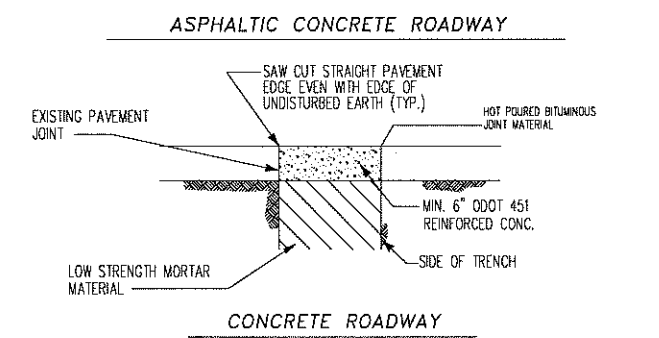
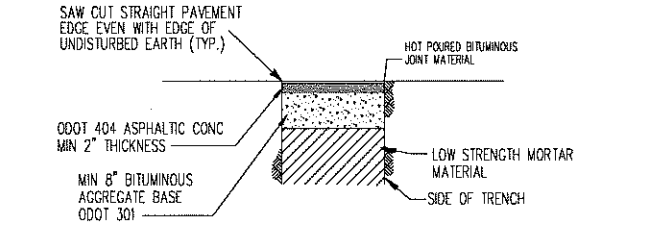
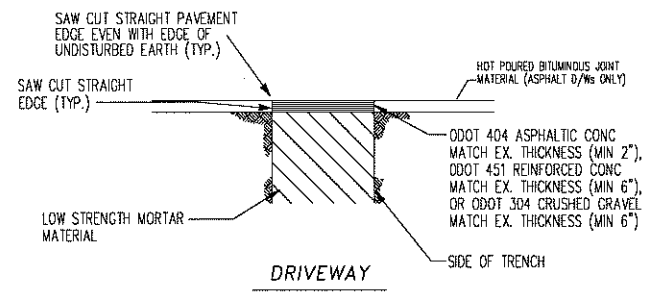
REVISIONS  
DATE



M.H. DEPTH	SJAB & DOWEL RESTIEEL SQ. IN./FT. E.W.
0'-10"	0.17
1'-20"	0.22
2'-30"	0.27
3'-40"	0.32



PIPE SIZE	C.Y. CONC. PER LIN. FT.	LENGTH OF NO. 3 BARS	SPACING (FT) BETWEEN NO. 3 BARS
6"	0.121	3'-9"	1.64
8"	0.136	4'-3"	1.25
10"	0.157	4'-9"	1.12
12"	0.177	5'-3"	1.02
15"	0.200	6'-3"	0.85
18"	0.247	6'-10"	0.78
20"	0.270	7'-5"	0.72
24"	0.315	8'-6"	0.63
30"	0.540	10'-0"	0.57



PLANS PREPARED BY:

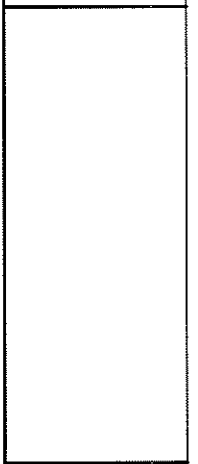
**NEXUS ENGINEERING**  
 1000 WEST CHESTER ROAD, SUITE 400B  
 WEST CHESTER, OHIO 45380  
 PHONE: (513) 865-4150

CHAPPELL CROSSING BLVD.  
 PHASE 1  
 SANITARY SEWER DETAILS  
 WEST CHESTER, OHIO

DESIGNED C.F.G.  
 DRAWN C.F.G.  
 CHECKED M.A.N.  
 DATE JAN., 2004

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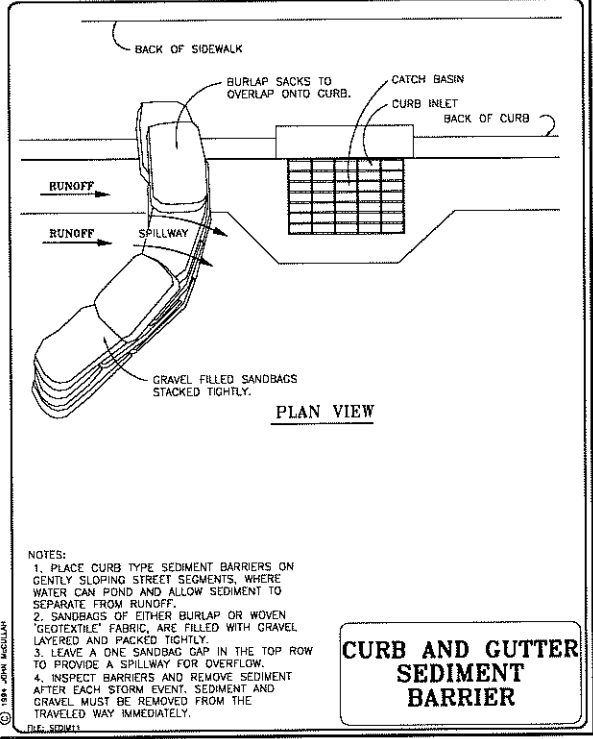
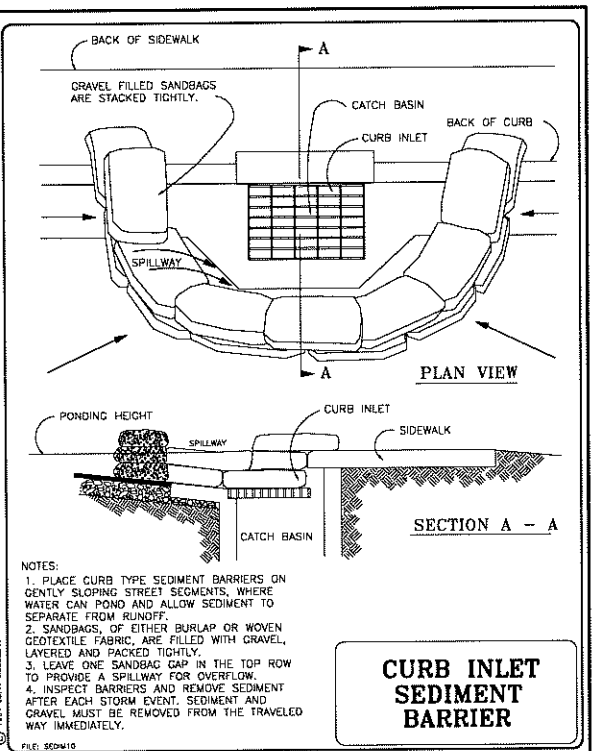
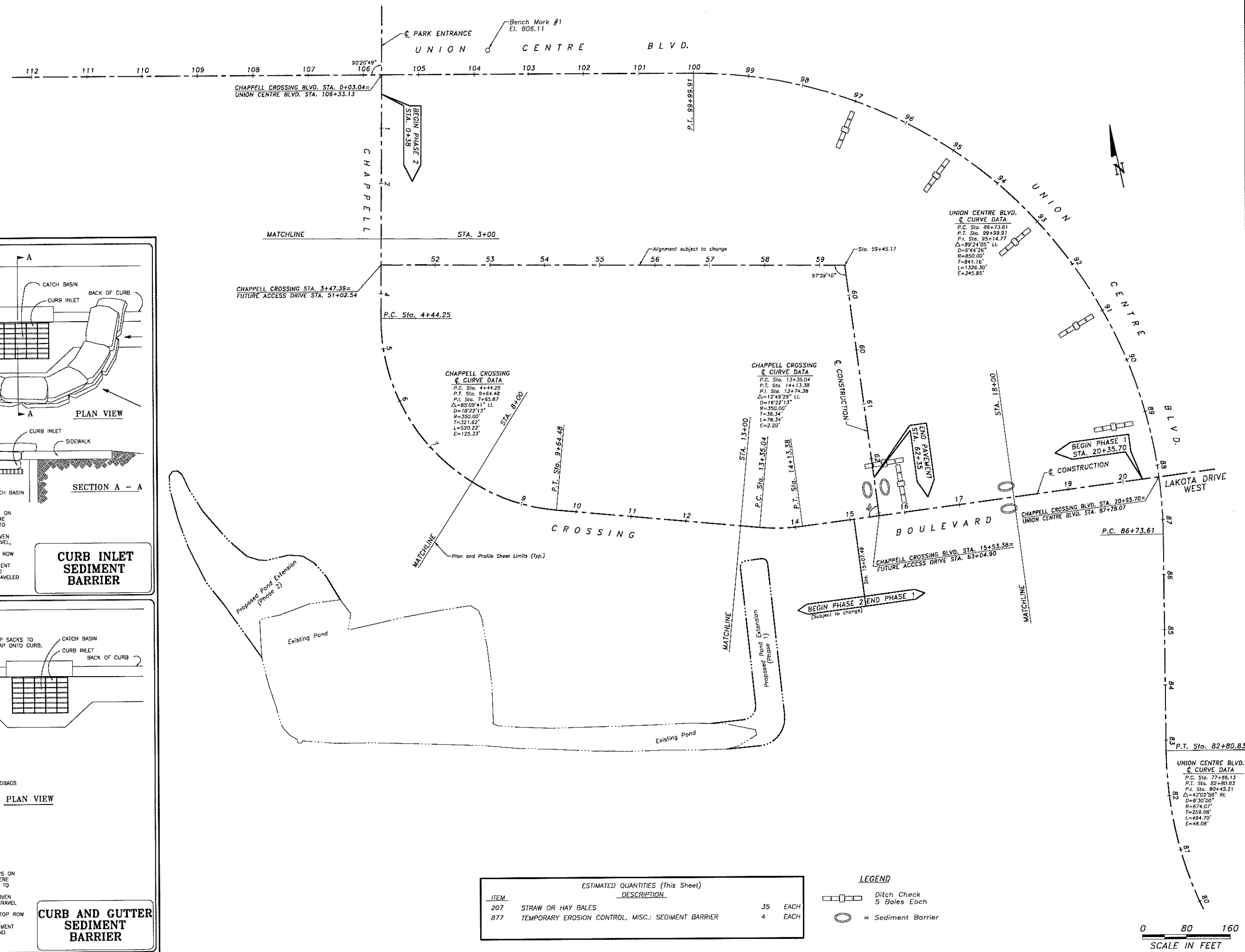
PLANS PREPARED BY:  
**NEXUS ENGINEERING**  
 1000 W. BRIGHT CENTER DRIVE, SUITE 200  
 WEST CHESTER, OHIO 45380  
 Phone: (513) 963-4104



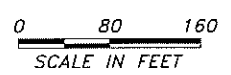
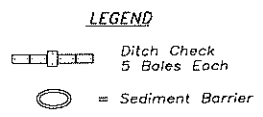
**CHAPPELL CROSSING BLVD.**  
**EROSION CONTROL**  
**WEST CHESTER, OHIO**

DESIGNED C.F.G.  
 DRAWN C.F.G.  
 CHECKED M.A.N.  
 DATE JAN., 2004

DATE



ITEM	ESTIMATED QUANTITIES (This Sheet)	DESCRIPTION	QUANTITY	UNIT
207		STRAW OR HAY BALES	35	EACH
877		TEMPORARY EROSION CONTROL, MISC.: SEDIMENT BARRIER	4	EACH



**ROADWAY NOTES**

**CONTINGENCY QUANTITIES**

The contractor shall not order materials or perform work for items designated by plan note to be used "as directed by the Engineer" unless authorized by the Engineer. The actual work locations and quantities used for such items shall be incorporated into the final change order governing completion of this project.

**LOW STRENGTH MORTAR BACKFILL**

Whenever water lines, sewer lines, (storm or sanitary), culvert pipes, box culverts and/or bridge replacement or repairs including abutments cross county roadways and/or Township roadways the backfill required will be low strength mortar backfill. Unless otherwise noted on the plans. This item will be bid under Item 603 or pertinent bridge items. The limits of the low strength backfill shall be from berm to berm and from flow line to the subgrade. Whenever a cut in pavement is made for removal items the backfill required will be low strength mortar. This item will be bid under the pertinent Item 202. Backfill shall be brought up to the subgrade and within the limits of the roadway and berms. All cuts in driveways shall be backfilled with low strength mortar and bid under Item 603. Limits of backfill shall be the width of the driveway plus two feet on each side. Any cut in County roadways and/or Township roadways, including berms for any reason where the pavement (or berm material) has to be removed the backfill will be low strength mortar.

**FARM DRAINS**

All farm drains, which are encountered during construction, shall be provided with unobstructed outlets. Existing collectors which are located below the roadway ditch elevations, and which cross the roadway, shall be replaced within the Construction Limits by Item 603 Conduit, Type B, one commercial size larger than the existing conduit.

Existing collectors and isolated farm drains, which are encountered above the elevation of roadway ditches, shall be outletted into the roadway ditch by 603 Type F Conduit. The optimum outlet elevations shall be one foot above the flow line elevation of the ditch. Lateral field tiles which cross the roadway shall be intercepted by 603, Type E Conduit, and carried in a longitudinal direction to an adequate outlet or roadway crossing. The location, type, size and grade of replacements shall be determined by the Engineer and payment shall be made on final measurements.

**ROUNDING**

The rounding at slope breakpoints shown on the typical sections apply to all cross sections even though otherwise shown.

**ITEM 802, SUBSURFACE STABILIZATION**

Place two (2) feet of #2 stone and six (6) inch depth of Item 304, under structure and one (1) foot each side of structure as directed by the Engineer to support box culverts and/or larger pipes where existing ground has insufficient bearing.

**UTILITIES**

Listed below are all Utilities located within the project construction limits together with their respective owners:

TYPE	NAMES & ADDRESS
Sanitary & Water Lines	Butler County Dept. of Environmental Services 130 High Street Hamilton, Oh. 45011 Phone (513) 887-3072
Telephone	Cincinnati Bell Telephone 201 E. Fourth Street Cincinnati, Ohio 45201 Phone (513) 565-7043
Electric	Cincinnati Gas and Electric Co. P.O. Box 960 Cincinnati, Ohio 45201 Phone (513) 287-3795
Gas	Cincinnati Gas and Electric Co. P.O. Box 960 Cincinnati, Ohio 45201 Phone (513) 287-2588

**CROSSING & CONNECTIONS TO EXISTING PIPES & UTILITIES**

Where the plans provide for proposed conduit to be connected to, or cross over or under an existing sewer or underground utility, the contractor shall locate the existing pipes or utilities both as to line and grade before starting to lay the proposed conduit.

If it is determined that the elevation of the existing conduit, or existing appurtenance to be connected, differs from the plan elevation or results in a change in the plan conduit slope, the engineer shall be notified before starting construction of any portion of the proposed conduit which will be affected by the variance in the existing elevations.

If it is determined that the proposed conduit will intersect an existing sewer or underground utility if constructed as shown on the plan, the Engineer shall be notified before starting construction of any portion of the proposed conduit which would be affected by the interference with an existing facility.

Payment for all operations described above shall be included in the contract price for the pertinent 603 conduit item.

**EXCAVATION**

All excess excavated material from the retention pond shall be stockpiled at a location specified by Owner(s) within project limits (dumped loose).

**SUBGRADE REPAIR**

Subgrade Repair Item is to include 18" depth of #2 stone and 6" depth of Item 304.

Subgrade Repair: 500 C.Y.

**GENERAL NOTES**

Additional steps are to be added to structures deeper than 4 feet.

**TRAFFIC SIGNAL MODIFICATION**

Item to include reconstruction of loop detectors, additional loop detectors, conduit, Wiring, and design of all required signal modifications.

Design and drawings to be provided by a consultant approved by the Butler County Engineer's Office.

**MAINTENANCE OF TRAFFIC**

The intention of these notes and the "sequencing of construction activities" is to provide for an orderly manner of construction that will provide the least inconvenience to, and the maximum safety of, the contractor, the traveling public, and the affected property owners. Any variances from these Maintenance of Traffic Notes must be approved in advance, in writing, by the Engineer. The requirements for maintaining traffic are as indicated in the "Ohio Manual of Uniform Traffic Control Devices for Streets and Highways", Current Edition and pertinent items of the specifications and proposal shall apply.

The Contractor shall be responsible for furnishing, installing, maintaining, and eventual removal of all required signs and traffic control devices, whether inside or outside the construction limits.

The Contractor shall give two (2) weeks notice to the Engineer prior to construction. Also, the Contractor shall remove or cover signs when not in use and notify the Engineer when finished.

Before work begins, the Contractor shall submit to the Engineer the name and telephone numbers of the Contractor's responsible foremen who can be contacted 24 hours a day by the Butler County Engineer and all interested Police Agencies. The Contractor's foremen shall be responsible for placing or replacing necessary traffic control devices to maintain the traveled pavement safety.

**ELECTRICAL CONDUIT INSTALLATION**

Upon completion of conduit installation, the ends of all the conduit are to be marked by a 2"x4" and labeled to allow for future locations.

**EXISTING TEMPORARY DITCH**

Existing temporary ditch to be backfilled and compacted. To be included with Item 203, Embankment.

CHAPPELL CROSSING BOULEVARD ESTIMATED QUANTITIES				
DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT (\$)
<b>ROADWAY</b>				
ITEM 202, CLEARING AND GRUBBING	LUMP	?		
ITEM 202, STRUCTURE REMOVED (BOX CULVERT)	LUMP	?		
ITEM 202, PIPE REMOVAL OVER 24"	L.F.	?		
ITEM 203, EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION	C.Y.	?		
ITEM 203, EMBANKMENT	C.Y.	?		
ITEM 203, EXCAVATION (DITCH ALONG MUEHLHAUSER ROAD)	C.Y.	?		
ITEM 203, EXCAVATION (DITCH ALONG UNION CENTRE BLVD.)	C.Y.	?		
ITEM 203, EMBANKMENT (DITCH ALONG UNION CENTRE BLVD.)	C.Y.	?		
ITEM 203, EXCAVATION (RETENTION)	C.Y.	?		
ITEM 203, SUBGRADE COMPACTION	S.Y.	?		
ITEM SPECIAL, GEOGRID	S.Y.	?		
ITEM 604, MONUMENT ASSEMBLY	EACH	?		
ITEM 623, LAYOUT STAKES	LUMP	?		
<b>EROSION CONTROL</b>				
ITEM 207, STRAW OR HAY BALES	EACH	?		
ITEM 659, SEEDING AND MULCHING	S.Y.	?		
ITEM 659, REPAIR SEEDING AND MULCHING	S.Y.	?		
ITEM 659, COMMERCIAL FERTILIZER	TON	?		
ITEM 659, WATER	M GAL.	?		
ITEM 877, MISC.: SEDIMENT BARRIER	EACH	?		
<b>PAVEMENT</b>				
ITEM 301, BITUMINOUS AGGREGATE, AC-20	C.Y.	?		
ITEM 304, AGGREGATE BASE	C.Y.	?		
ITEM 403, ASPHALT CONCRETE AC-20	C.Y.	?		
ITEM 404, ASPHALT CONCRETE AC-20	C.Y.	?		
ITEM 407, TACK COAT (0.10 Gal/S.Y.)	GAL	?		
ITEM 408, BITUMINOUS PRIME COAT (0.40 Gal/S.Y.)	GAL	?		
ITEM 601, PAVED CUTTER, TYPE 1-2	L.F.	?		
ITEM 601, PAVED CUTTER, TYPE 1-4	L.F.	?		
ITEM 608, CURB RAMPS	EACH	?		
ITEM 608, 6" CONCRETE WALK	S.F.	?		
ITEM 802, SUBSURFACE STABILIZATION	C.Y.	?		
ITEM 830, ODOT CURB, TYPE 2	L.F.	?		
ITEM 830, ODOT CURB, TYPE 8	L.F.	?		
SUBGRADE REPAIR	C.Y.	?		
<b>WATER WORK</b>				
<b>MISCELLANEOUS</b>				
8" PLUG w/PURITY TEST STATION	EACH	?		
<b>WATER MAIN</b>				
8" WATER MAIN DIP, CLASS 53	L.F.	?		
12" WATER MAIN DIP, CLASS 53	L.F.	?		
<b>TEES</b>				
12"x8" TEE	EACH	?		
16"x12" TEE (WET TAP)	EACH	?		
<b>VALVES</b>				
8" VALVE & VALVE BOX	EACH	?		
12" VALVE & VALVE BOX	EACH	?		
FIRE HYDRANT ASSEMBLY #1	EACH	?		
* Includes per Assembly				
(1) - 6" 90 Degree Bends	1 EACH			
6" - Valve & Valve Box	1 EACH			
16" x 6" Tee	1 EACH			
6" Anchoring Tee	1 EACH			
6" Anchoring Coupling (Length Varies)	L.F.			
6" Riser (Length Varies)	L.F.			
WATER PURITY TEST	EACH	?		
<b>SANITARY SEWER</b>				
<b>SANITARY SEWER</b>				
8", SDR-35 SANITARY SEWER	L.F.	?		
10", SDR-35 SANITARY SEWER	L.F.	?		
<b>MANHOLES</b>				
PRECAST MANHOLE, TYPE A (PRECAST BOTTOM)	EACH	?		
DEAD END MANHOLE	EACH	?		
<b>DRAINAGE QUANTITIES ITEM 603</b>				
12" STORM, ODOT CONDUIT, TYPE B	L.F.	?		
15" STORM, ODOT CONDUIT, TYPE B	L.F.	?		
18" STORM, ODOT CONDUIT, TYPE B	L.F.	?		
30" STORM, ODOT CONDUIT, TYPE B	L.F.	?		
48" STORM, ODOT CONDUIT, TYPE B	L.F.	?		
83"x53" ELLIPTICAL CONCRETE, ODOT CONDUIT, TYPE B, 706.04	L.F.	?		
6"x4' BOX CULVERT, 706.05	L.F.	?		
8"x4' BOX CULVERT, 706.05	L.F.	?		
38"x24" ELLIPTICAL CONCRETE CLASS V STORM, ODOT CONDUIT, TYPE A, 706.04	L.F.	?		
CATCH BASIN, TYPE 3	Each	?		
CATCH BASIN, TYPE 3 (MODIFIED)	Each	?		
CATCH BASIN, TYPE 2-3	Each	?		
CATCH BASIN, TYPE 2-2-B (Frame & Grate Casting)	Each	?		
MANHOLE MH-3 w/SLAB TOP (Neenah R-1574 Casting)	Each	?		
MANHOLE, TYPE 5 w/FLAT SLAB TOP	Each	?		
CLEAN-OUT MANHOLE (Frame and Grate Casting)	Each	?		
CONCRETE (SEE SHEET 20)	C.Y.	?		
REINFORCING STEEL (SEE SHEET 20)	LBS.	?		
CONCRETE (SEE SHEET 21)	C.Y.	?		
REINFORCING STEEL (SEE SHEET 21)	LBS.	?		
HW-2.2 (MODIFIED)	Each	?		
<b>TRAFFIC CONTROL QUANTITIES</b>				
<b>PAVEMENT MARKINGS (ITEM 644, THERMOPLASTIC):</b>				
24" STOP LINES	L.F.	?		
4" CENTERLINE SOLID DOUBLE (YELLOW)	L.F.	?		
8" CHANNELIZING LINE	L.F.	?		
CROSSWALK	L.F.	?		
LANE ARROWS	Each	?		
WORD ON PAVEMENT (96")	Each	?		
<b>SIGNING:</b>				
R-31B	Each	?		
R-31A	Each	?		
R-1	Each	?		
R-37R	Each	?		
TRAFFIC SIGNAL MODIFICATION:	Lump	?		
<b>TRAFFIC CONTROL QUANTITIES</b>				
CENTERLINE (DOUBLE YELLOW)	MILES	?		
4" EDGE LINES	MILES	?		
<b>MAINTENANCE OF TRAFFIC</b>				
MAINTENANCE OF TRAFFIC	LUMP	?		
FIELD OFFICE, TYPE B	LUMP	?		
<b>LIGHTING QUANTITIES</b>				
2" CONDUITS FOR ROADWAY CROSSING	L.F.	?		
ELECTRIC CONDUITS FOR LIGHTING	L.F.	?		

PLANS PREPARED BY:

**NEXUS ENGINEERING**  
CONSULTING ENGINEERS AND SURVEYORS  
100 WEST CHESTER, OHIO 45319  
PHONE: (513) 686-7118

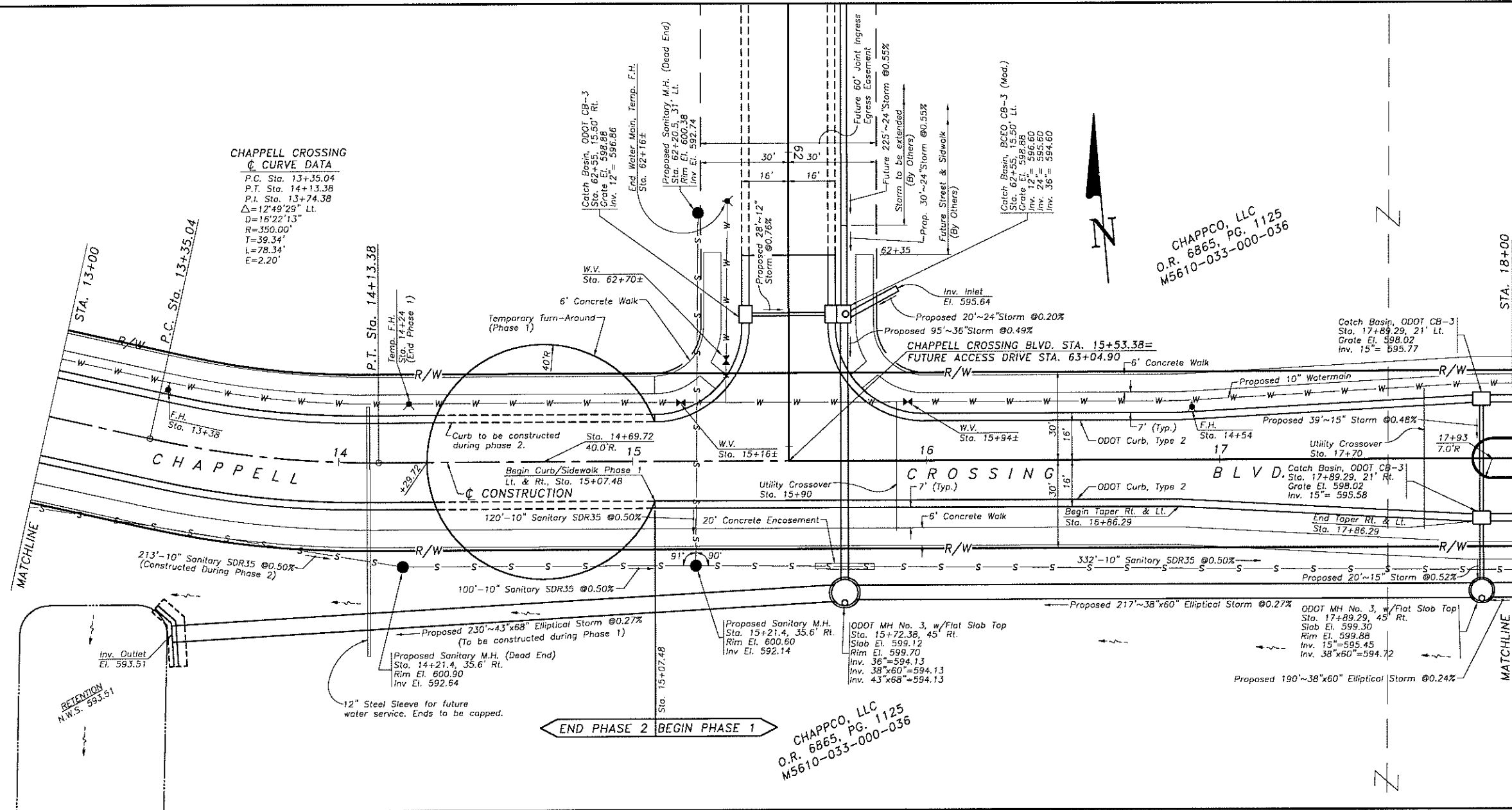


CHAPPELL CROSSING BLVD.  
PHASE 1  
GENERAL NOTES  
WEST CHESTER, OHIO

DESIGNED C.F.G.  
DRAWN C.F.G.  
CHECKED M.A.N.  
DATE JAN., 2004



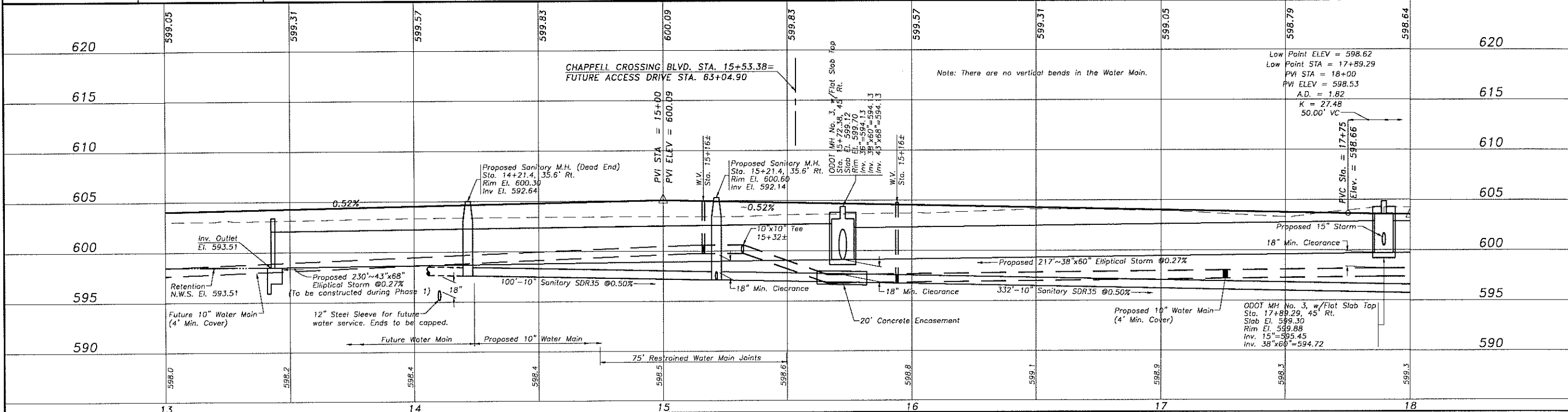
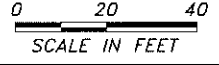
Note: Contractor to coordinate utility cross-overs with Cinergy, Cincinnati Bell, and Time Warner Cable.



**CHAPPELL CROSSING  
CURVE DATA**  
 P.C. Sta. 13+35.04  
 P.T. Sta. 14+13.38  
 P.I. Sta. 13+74.38  
 $\Delta = 12^\circ 49' 29''$  Lt.  
 $D = 16' 22' 13''$   
 $R = 350.00'$   
 $T = 39.34'$   
 $L = 78.34'$   
 $E = 2.20'$

CHAPPCO, LLC  
 O.R. 6865, PG. 1125  
 M5610-033-000-036

CHAPPCO, LLC  
 O.R. 6865, PG. 1125  
 M5610-033-000-036



NO.	DATE	REVISIONS
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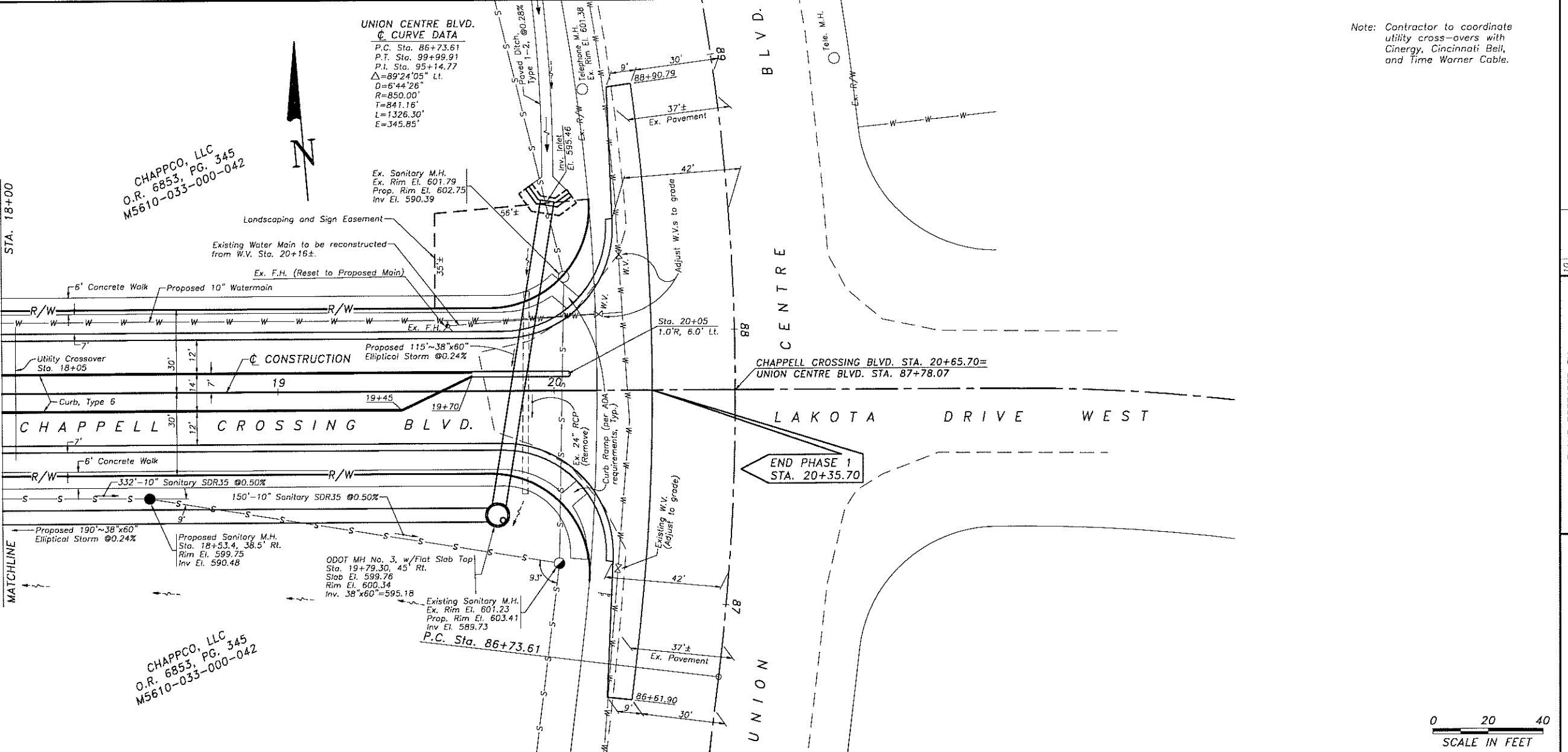
PLANS PREPARED BY:

**NEXUS ENGINEERING**  
 CIVIL ENGINEERS AND LAND SURVEYORS  
 6800 BECKETT CENTER DRIVE, SUITE 203  
 CINCINNATI, OHIO 45241  
 PHONE: (513) 860-9130  
 FAX: (513) 860-9130

**CHAPPELL CROSSING BLVD.  
PHASE 1  
PLAN AND PROFILE**

DESIGNED C.F.G.  
 DRAWN C.F.G.  
 CHECKED M.A.N.  
 DATE NOV., 2003

C 10/19

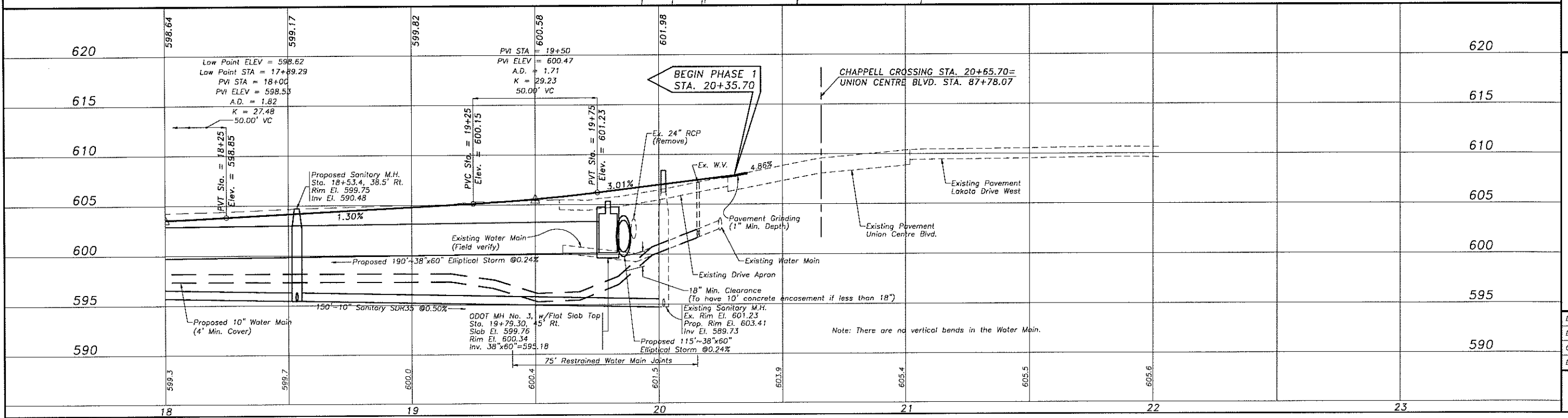
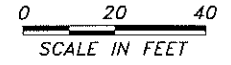


Note: Contractor to coordinate utility cross-overs with Cinergy, Cincinnati Bell, and Time Warner Cable.

CHAPPCO, LLC  
O.R. 6853, PG. 345  
M5610-033-000-042

CHAPPCO, LLC  
O.R. 6853, PG. 345  
M5610-033-000-042

UNION CENTRE BLVD.  
C CURVE DATA  
P.C. Sta. 86+73.61  
P.T. Sta. 99+99.91  
P.I. Sta. 95+14.77  
 $\Delta = 89^{\circ}24'05''$  Lt.  
 $D = 6'44'26''$   
 $R = 850.00'$   
 $T = 841.16'$   
 $L = 1326.30'$   
 $E = 345.85'$



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PLANS PREPARED BY:

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 CIVIL ENGINEERS AND LAND SURVEYORS  
 6000 RECHET CENTER DRIVE, SUITE 203  
 WINDY HILL, OHIO 45228  
 PHONE: (615) 860-9100

**CHAPPELL CROSSING BLVD.  
PHASE 1  
PLAN AND PROFILE**


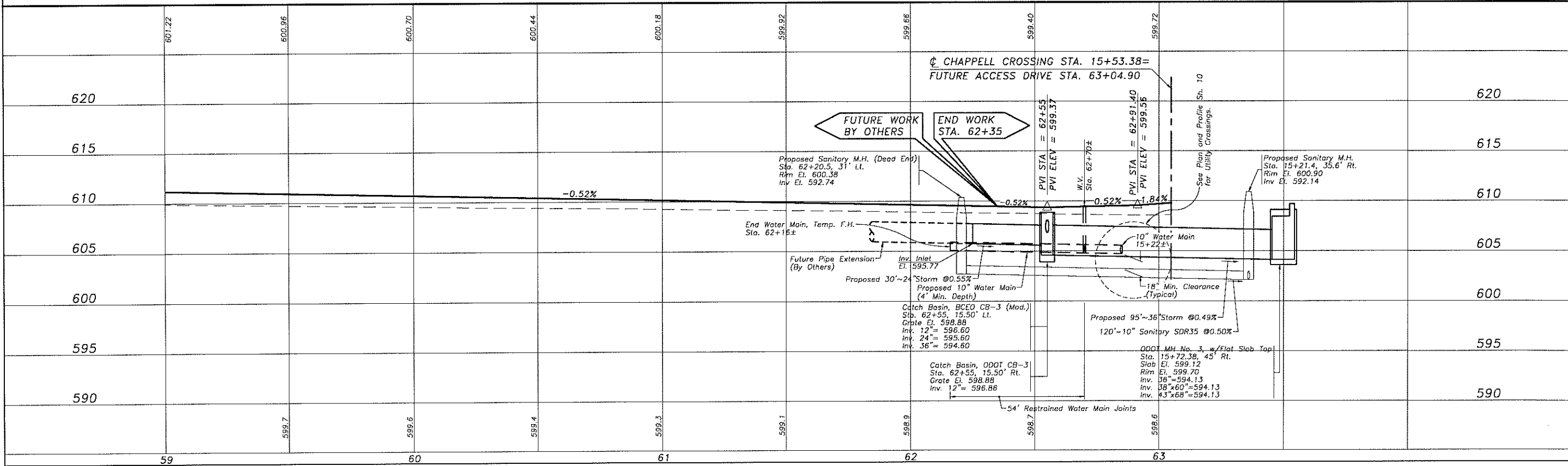
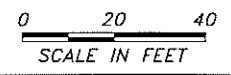
DESIGNED	C.F.G.
DRAWN	C.F.G.
CHECKED	M.A.N.
DATE	JAN., 2004

C 11/19

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 CIVIL ENGINEERS AND LAND SURVEYORS  
 4000 BECKETT CENTER DRIVE, SUITE 203  
 RICHMOND, VA 23220  
 PHONE: (813) 880-9100

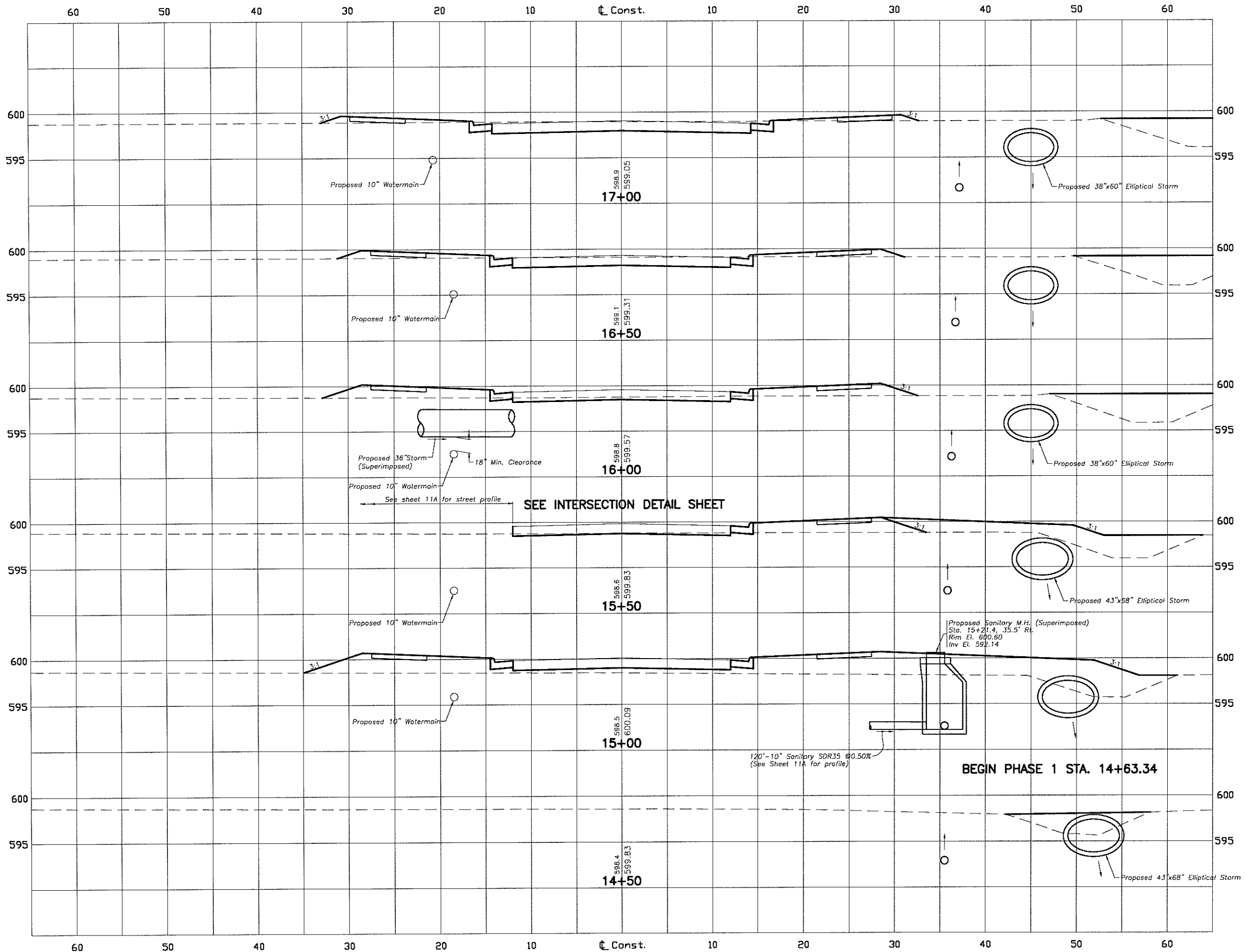
**FUTURE ACCESS DRIVE  
PHASE 1  
PROFILE**

DESIGNED	C.F.C.
DRAWN	C.F.C.
CHECKED	M.A.N.
DATE	JAN., 2004

**C 11A 19**

SEEDING  
END WIDTH SD.  
YDS. YDS.

END AREA VOLUME  
CUT FILL CUT FILL



SEEDING		END AREA		VOLUME	
END WIDTH	SD. YDS.	CUT	FILL	CUT	FILL

PLANS PREPARED BY:  
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CIVIL ENGINEERS AND LAND SURVEYORS  
9800 BECKETT CENTER DRIVE, SUITE 203  
ROSELAND, MA 01923  
PHONE: (617) 890-9100



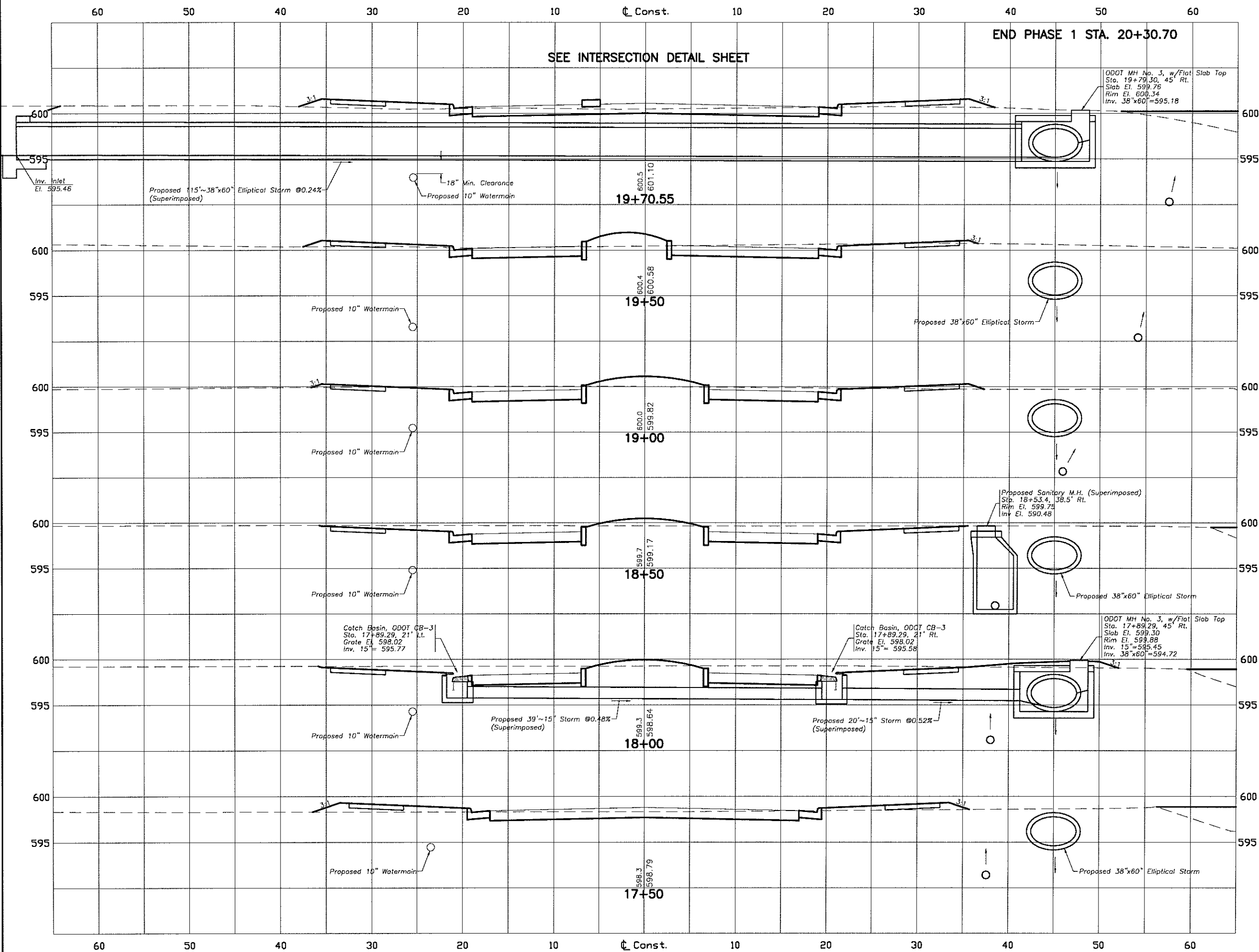
# CHAPPELL CROSSING BLVD. PHASE 1 CROSS SECTIONS

DESIGNED C.F.G.  
DRAWN C.F.G.  
CHECKED M.A.N.  
DATE JAN., 2004

12/19

SEEDING	
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END AREA		VOLUME	
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PLANS PREPARED BY:

**NEXUS ENGINEERING**  
 CIVIL ENGINEERS AND LAND SURVEYORS  
 6000 BECKETT CENTER DRIVE, SUITE 203  
 FARMINGTON, CT 06031  
 PHONE: (860) 820-9130

**CHAPPELL CROSSING BLVD.  
 PHASE 1  
 CROSS SECTIONS**

DESIGNED	C.F.G.
DRAWN	C.F.G.
CHECKED	M.A.H.
DATE	JAN., 2004

SEEDING  
END WIDTH SQ. YDS.

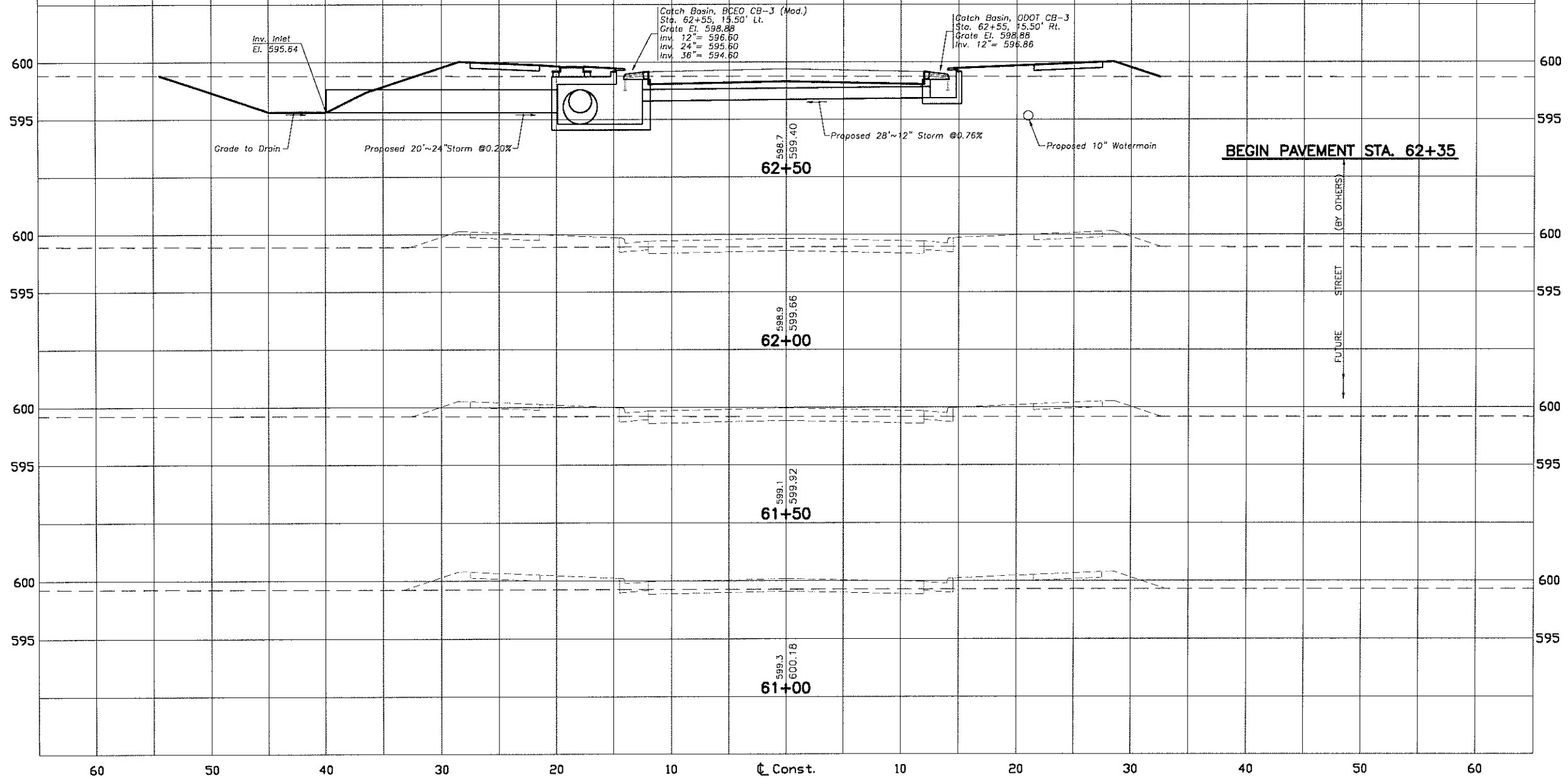
END AREA VOLUME  
CUT FILL CUT FILL

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CHAPPELL CROSSING BLVD. STA. 63+04.90

SEE INTERSECTION DETAIL SHEET



60 50 40 30 20 10  $\text{\textcircled{C}}$  Const. 10 20 30 40 50 60

PLANS PREPARED BY:  
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CIVIL ENGINEERS AND LAND SURVEYORS  
8080 BUCKETT CENTER DRIVE, SUITE 203  
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PHONE: (614) 880-8100



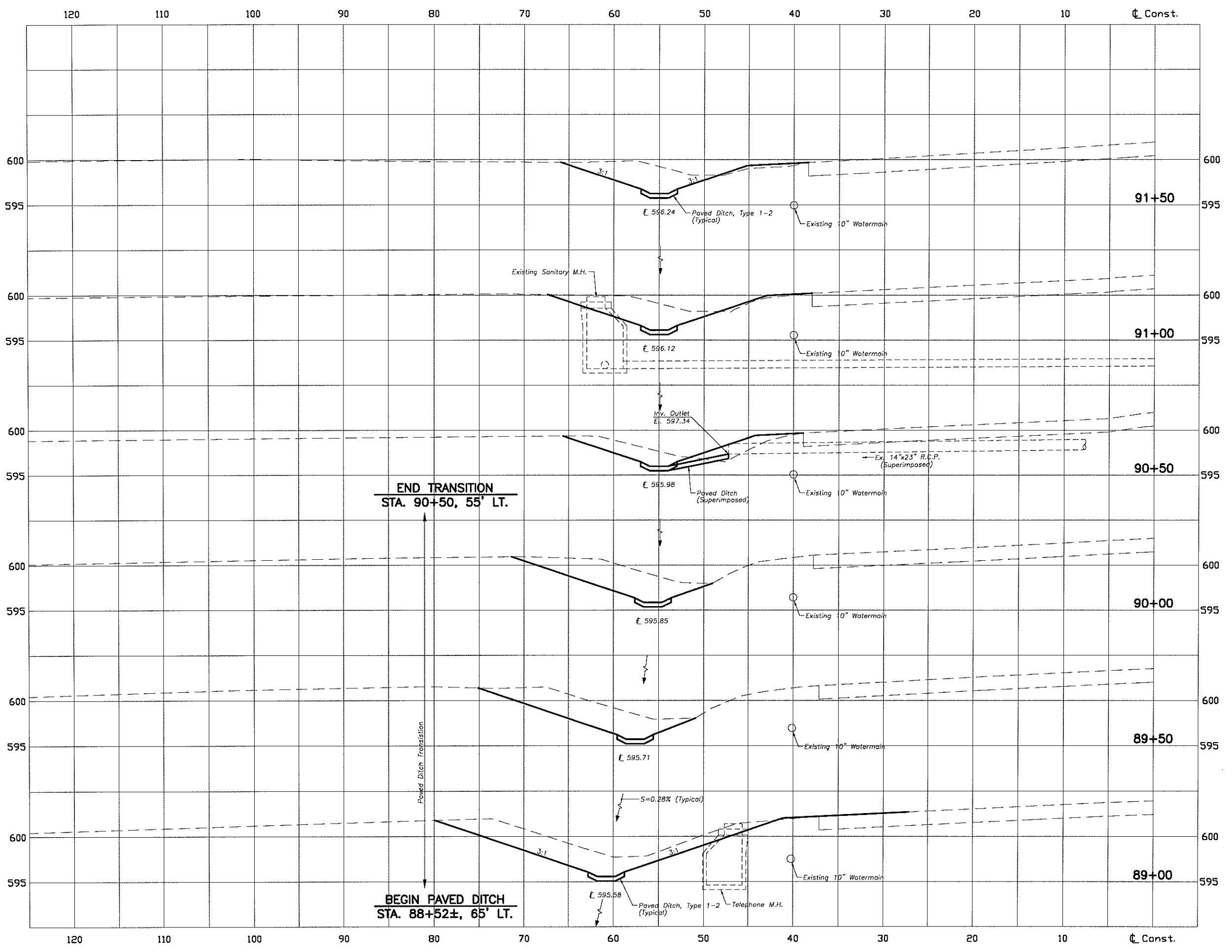
PRIVATE DRIVE  
PHASE 1  
CROSS SECTIONS

DESIGNED C.F.G.  
DRAWN C.F.G.  
CHECKED M.A.N.  
DATE JAN., 2004

C 14/19

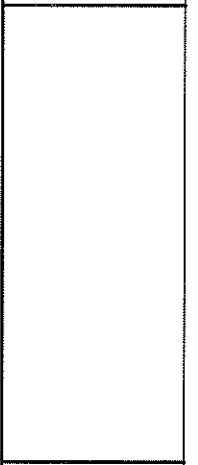
SEEDING	
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PLANS PREPARED BY:  
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 CIVIL ENGINEERS AND LAND SURVEYORS  
 8080 BECKETT CENTER DRIVE, SUITE 203  
 RICHMOND, BC V6X 2C7  
 PHONE: (604) 880-9130



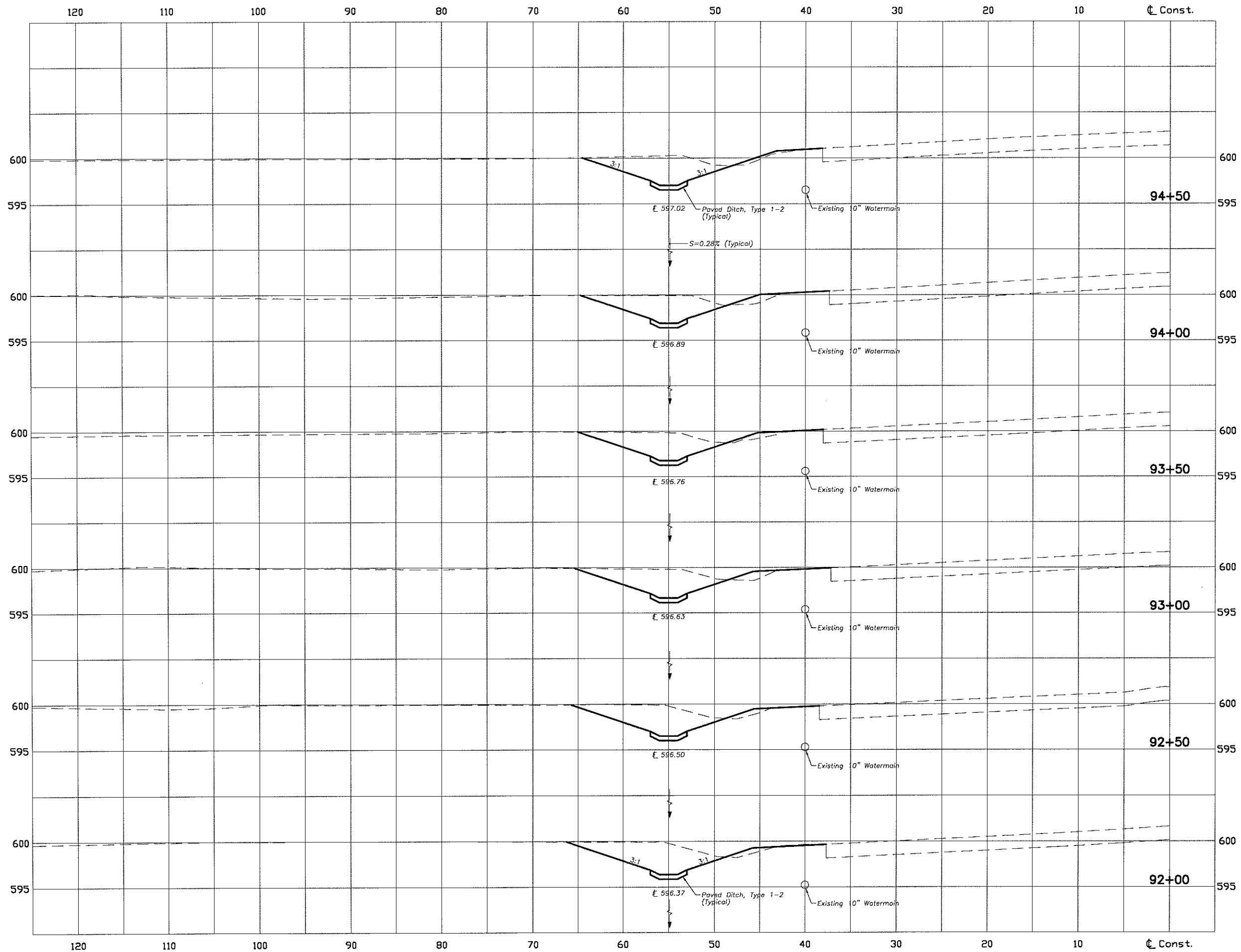
**UNION CENTRE BOULEVARD  
 PAVED DITCH  
 CROSS SECTIONS**

DESIGNED	C.F.G.
DRAWN	C.F.G.
CHECKED	M.A.N.
DATE	JAN., 2004

C 15/19

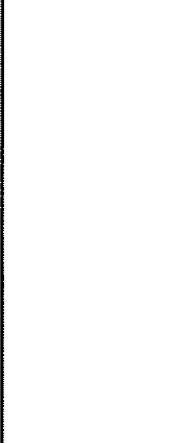
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END AREA VOLUME  
CUT FILL CUT FILL



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PLANS PREPARED BY:  
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808 BECKETT CENTER DRIVE, SUITE 203  
WILMINGTON, MA 01890  
PHONE: (617) 890-9130



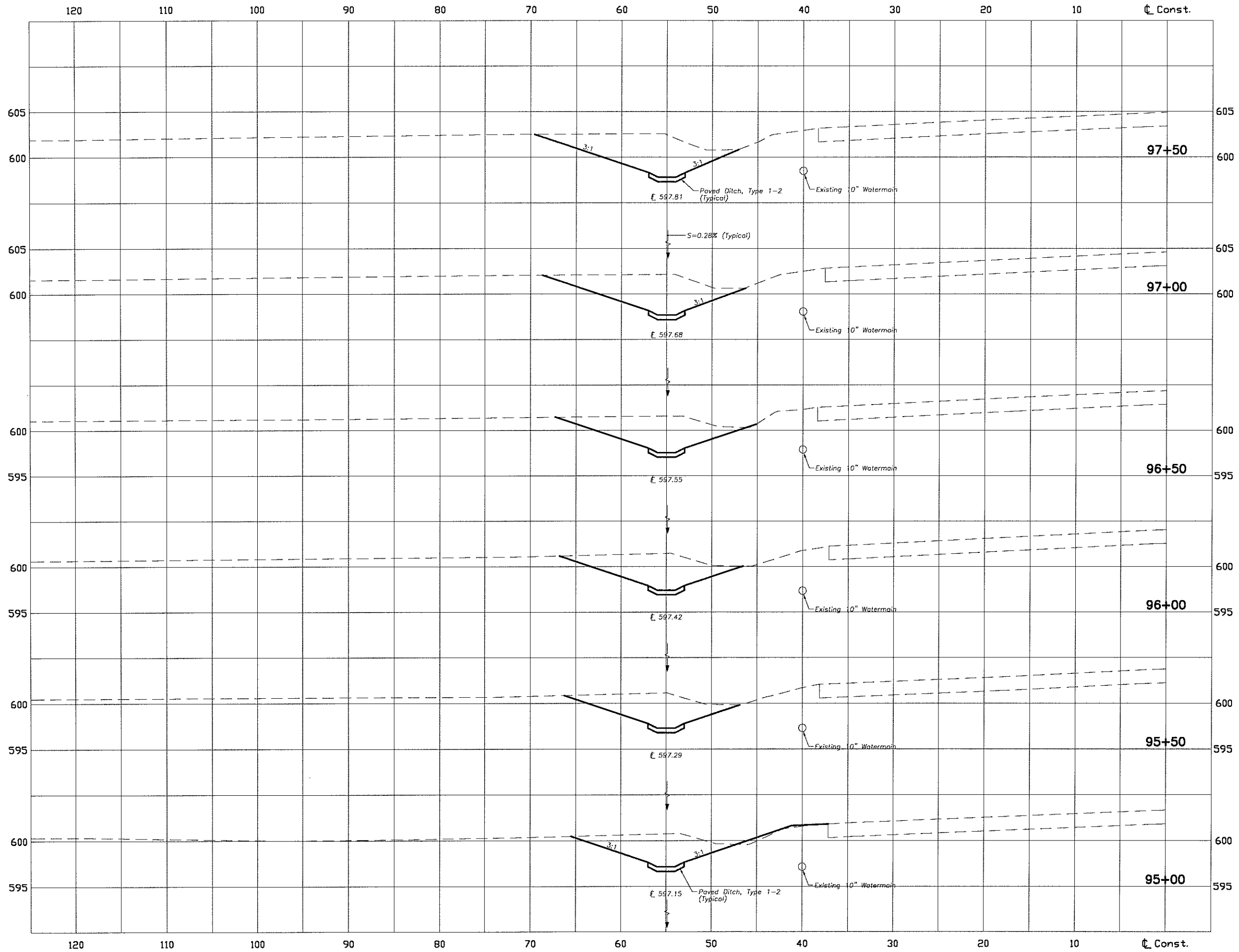
**UNION CENTRE BOULEVARD  
PAVED DITCH  
CROSS SECTIONS**

DESIGNED C.F.G.  
DRAWN C.F.G.  
CHECKED M.A.N.  
DATE JAN., 2004



SEEDING  
END WIDTH SQ. YDS.


END AREA VOLUME  
CUT FILL CUT FILL



NO.	DATE	REVISIONS
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PLANS PREPARED BY:

**NEXUS ENGINEERING**  
 CIVIL ENGINEERS AND LAND SURVEYORS  
 6996 WEST CENTER DRIVE, SUITE 203  
 DENVER, COLORADO 80238  
 PHONE: (313) 860-9130



UNION CENTRE BOULEVARD  
 PAVED DITCH  
 CROSS SECTIONS

DESIGNED	C.F.G.
DRAWN	C.F.G.
CHECKED	M.A.N.
DATE	JAN., 2004


C 17/19

SEEDING  
END WIDTH SQ. YDS.

END AREA VOLUME  
CUT FILL CUT FILL

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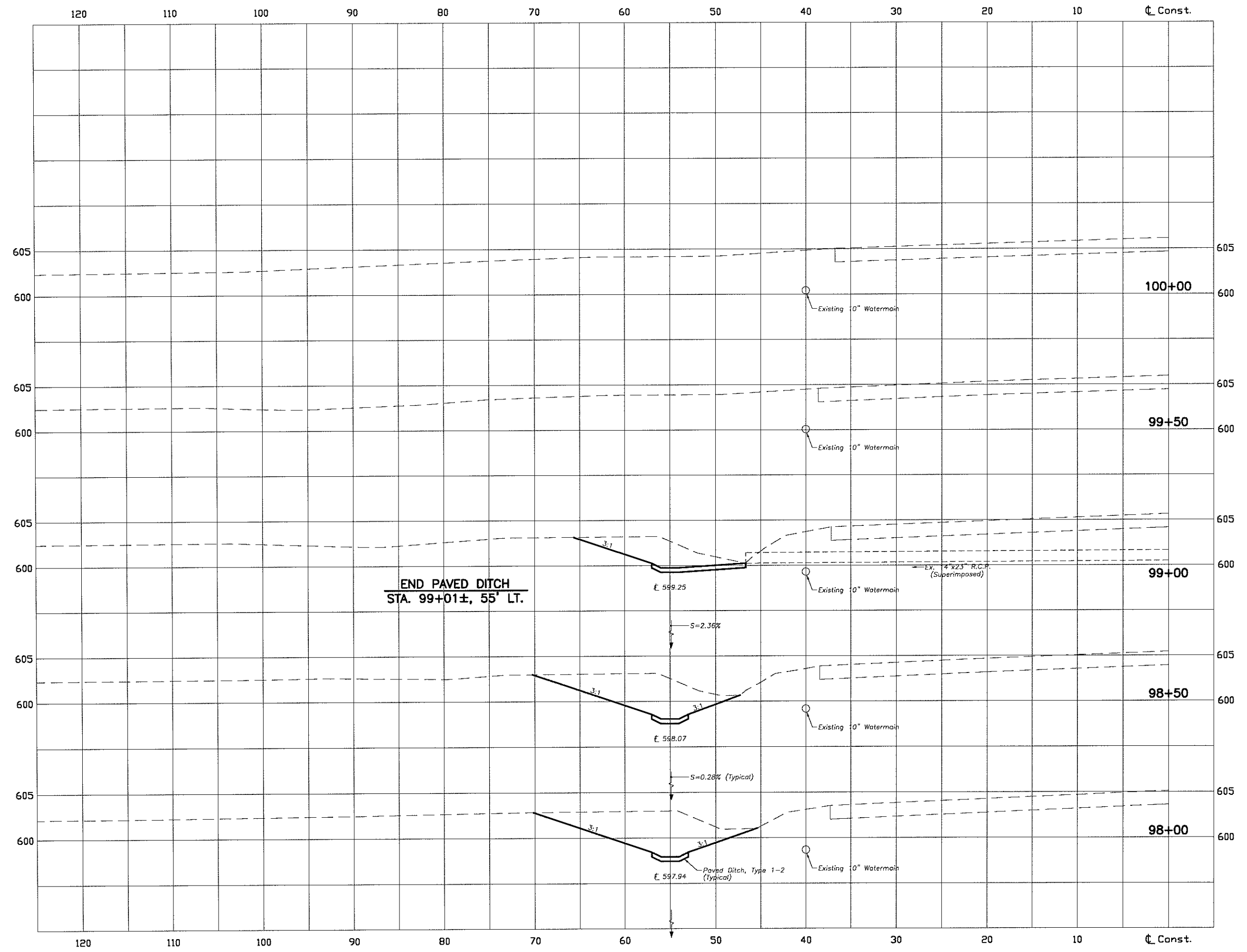
PLANS PREPARED BY:  
**NEXUS ENGINEERING**  
CIVIL ENGINEERS AND LAND SURVEYORS  
8080 BUCKLEY CENTER DRIVE, SUITE 203  
DALLAS, TEXAS 75248  
PHONE: (512) 860-9130



**UNION CENTRE BOULEVARD  
PAVED DITCH  
CROSS SECTIONS**

DESIGNED C.F.G.  
DRAWN C.F.G.  
CHECKED M.A.N.  
DATE JAN., 2004

C 18/19



**END PAVED DITCH  
STA. 99+01±, 55' LT.**

599.25

598.07

597.94

S=2.36%

S=0.28% (Typical)

Paved Ditch, Type 1-2  
(Typical)

Existing 10" Watermain

Existing 10" Watermain

Existing 10" Watermain

Existing 10" Watermain

Existing 10" Watermain

Ex. 4' X 23" R.C.P.  
(Superimposed)

120 110 100 90 80 70 60 50 40 30 20 10 0 Const.

605 600 605 600 605 600 605 600 605 600

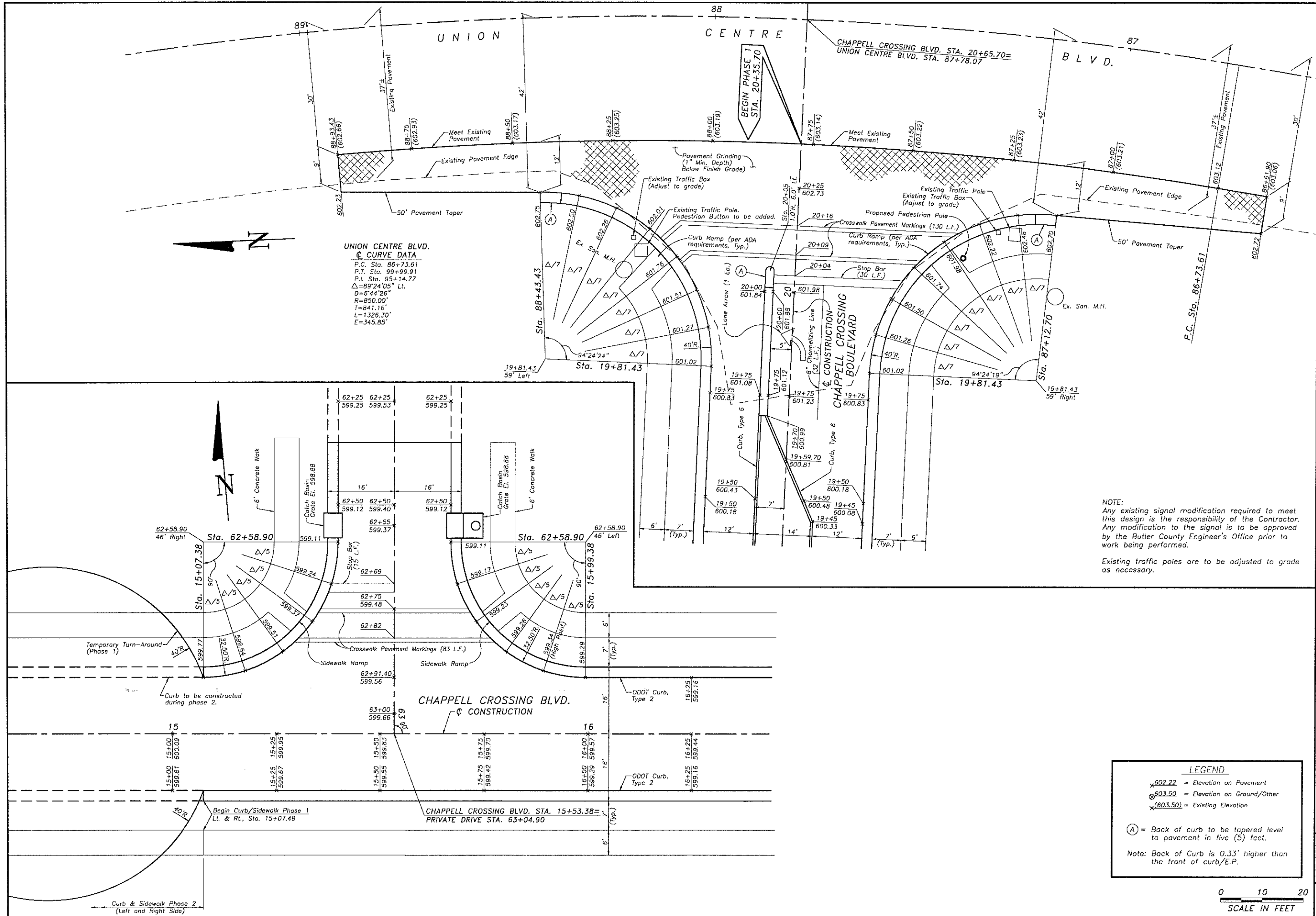
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605 600 605 600 605 600 605 600 605 600

120 110 100 90 80 70 60 50 40 30 20 10 0 Const.



**UNION CENTRE BLVD.  
CURVE DATA**  
 P.C. Sta. 86+73.61  
 P.T. Sta. 99+99.91  
 P.I. Sta. 95+14.77  
 $\Delta = 89^{\circ}24'05''$  Lt.  
 $D = 6^{\circ}44'26''$   
 $R = 850.00'$   
 $T = 841.16'$   
 $L = 1326.30'$   
 $E = 345.85'$

**NOTE:**  
 Any existing signal modification required to meet this design is the responsibility of the Contractor. Any modification to the signal is to be approved by the Butler County Engineer's Office prior to work being performed.

Existing traffic poles are to be adjusted to grade as necessary.

**LEGEND**

- ⊗ 602.22 = Elevation on Pavement
- ⊙ 603.50 = Elevation on Ground/Other
- ⊗ (603.50) = Existing Elevation

(A) = Back of curb to be tapered level to pavement in five (5) feet.

Note: Back of Curb is 0.33' higher than the front of curb/E.P.

89  
88  
87

UNION CENTRE BLVD.

CHAPPELL CROSSING BLVD. STA. 20+65.70=  
UNION CENTRE BLVD. STA. 87+78.07

BLVD.

BEGIN PHASE 1  
STA. 20+35.70

CHAPPELL CROSSING BOULEVARD

CONSTRUCTION

CHAPPELL CROSSING BLVD.  
PHASE 1  
INTERSECTION DETAILS

UNION CENTRE BLVD.  
CURVE DATA

CHAPPELL CROSSING BLVD. STA. 15+53.38=  
PRIVATE DRIVE STA. 63+04.90

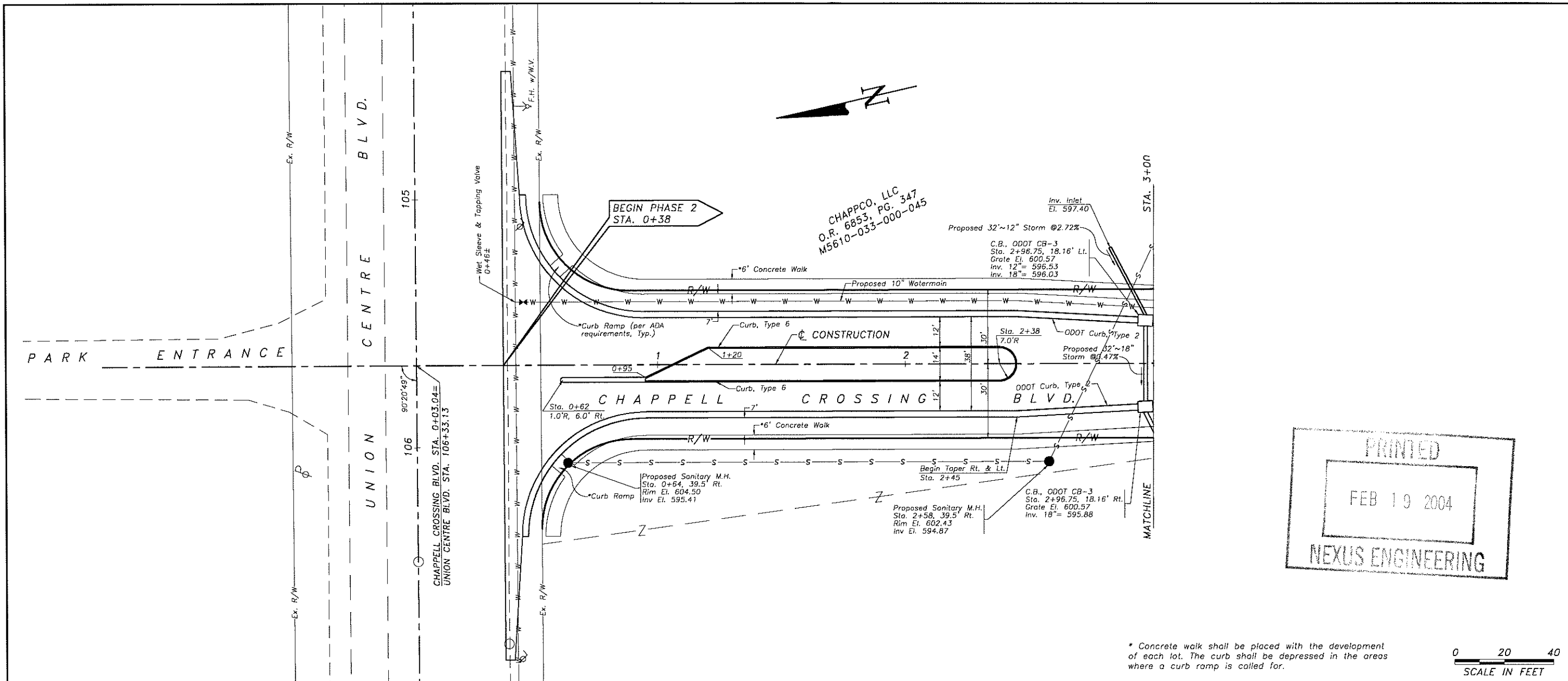
LEGEND

DESIGNED C.F.G.  
DRAWN C.F.G.  
CHECKED M.A.N.  
DATE JAN., 2004

SCALE IN FEET

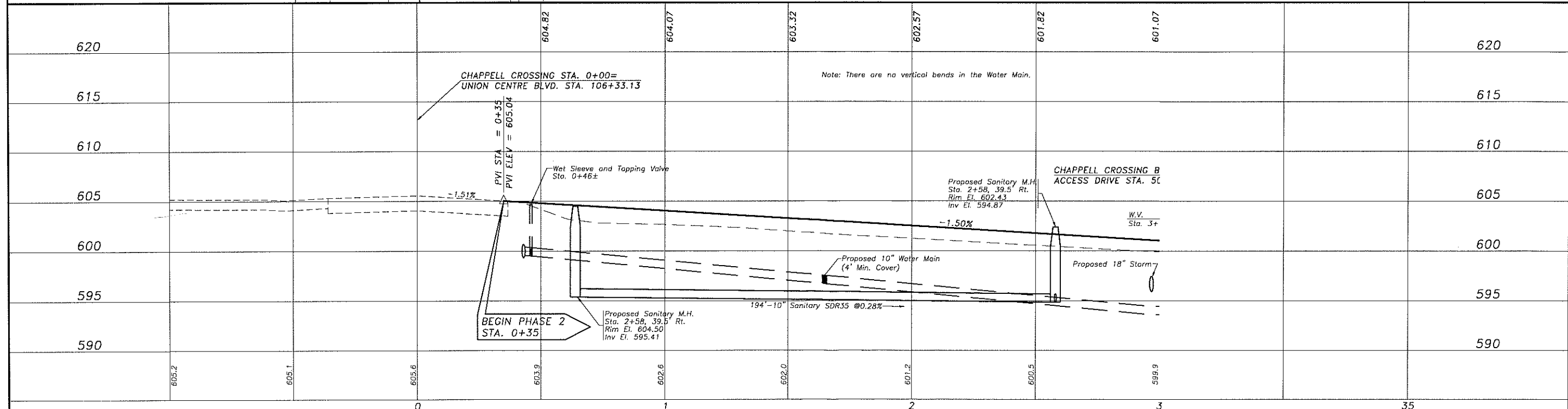
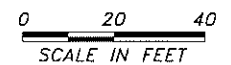
0 10 20

C 19  
19



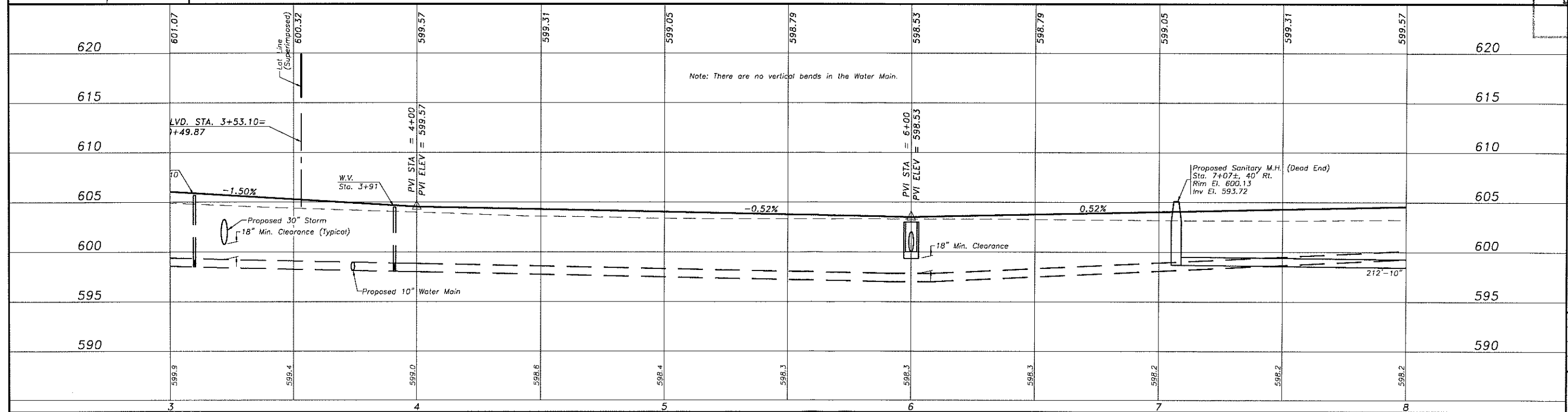
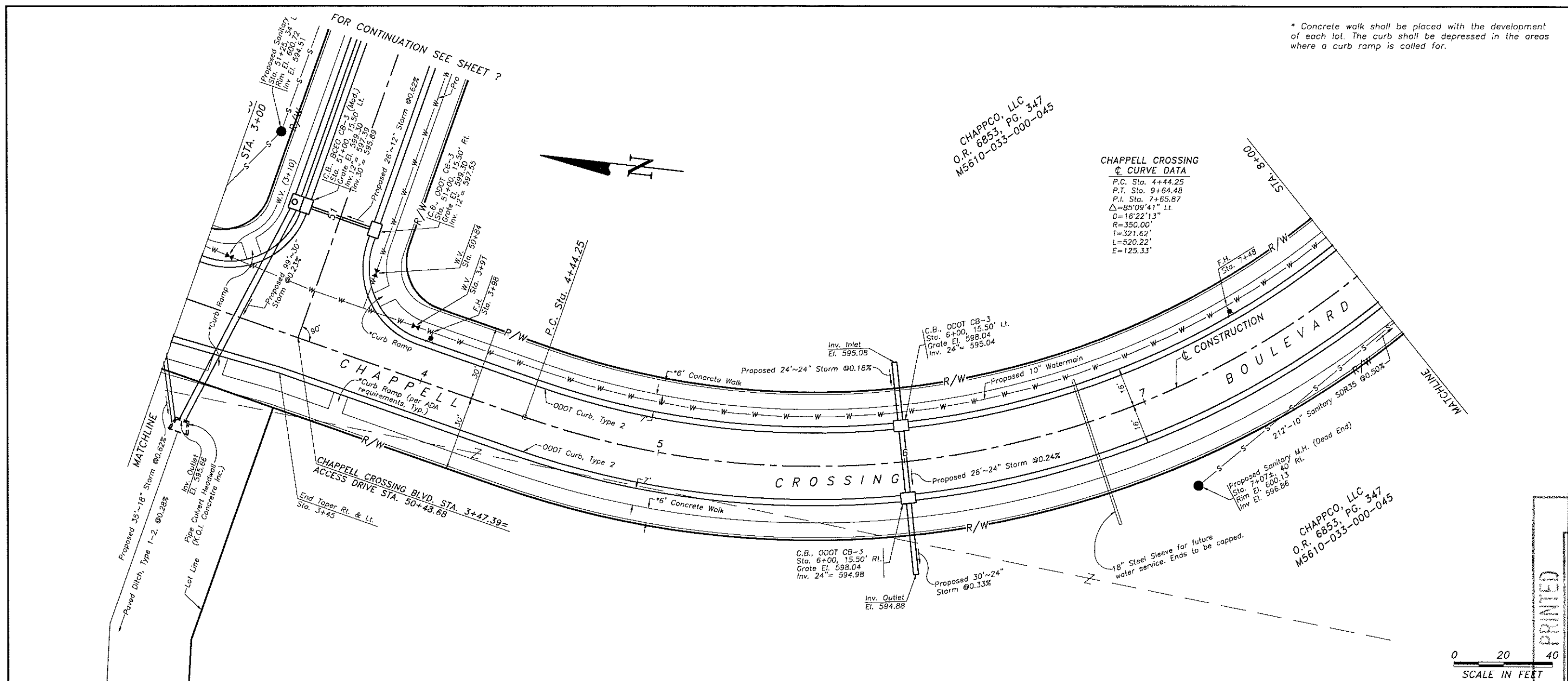
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FEB 19 2004  
NEXUS ENGINEERING

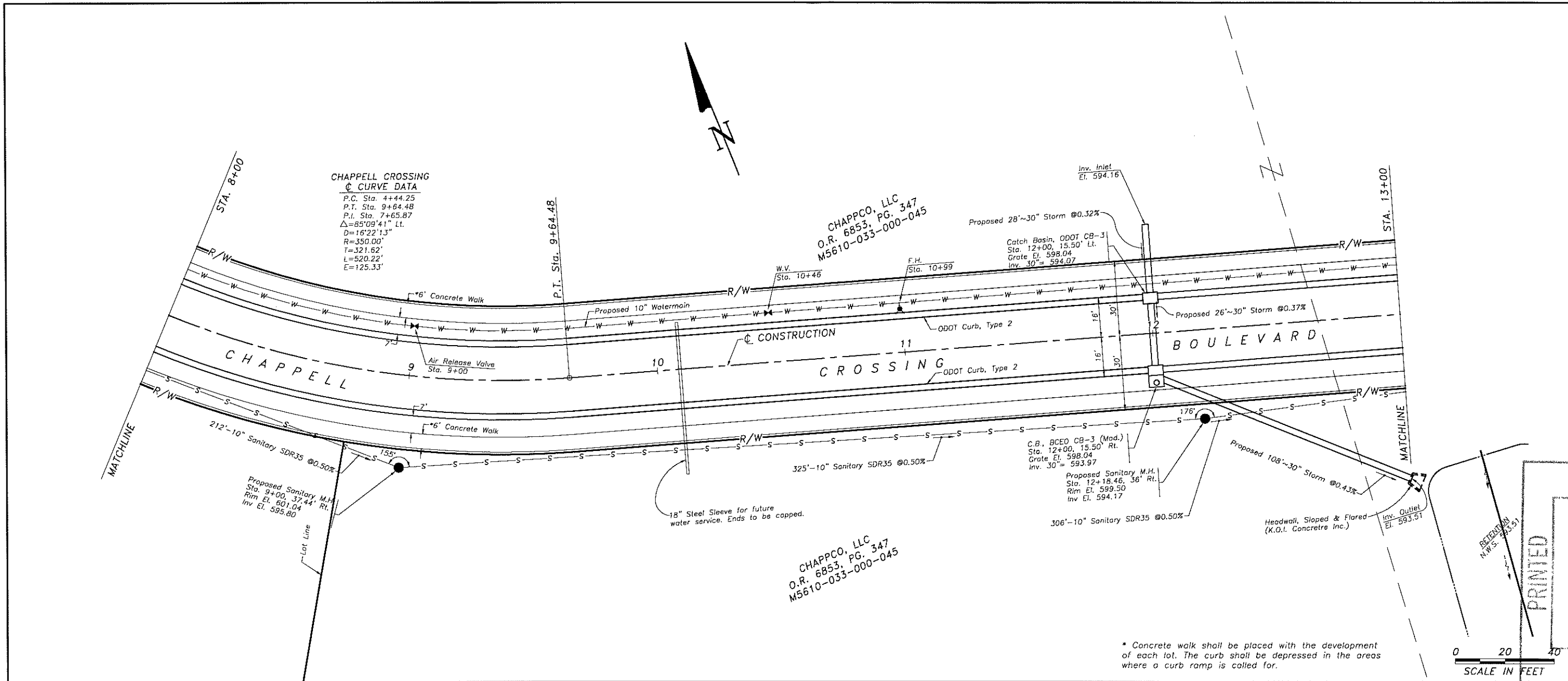
\* Concrete walk shall be placed with the development of each lot. The curb shall be depressed in the areas where a curb ramp is called for.



<p>CHAPPELL CROSSING BLVD. PHASE 1 PLAN AND PROFILE</p>	<p>DESIGNED C.F.G. DRAWN C.F.G. CHECKED M.A.N. DATE JAN., 2004</p>
<p>PRINTED FEB 19 2004 NEXUS ENGINEERING</p>	<p>PLANS PREPARED BY: <b>NEXUS ENGINEERING</b> CIVIL ENGINEERS AND LAND SURVEYORS 8000 BECKETT CENTER DRIVE, SUITE 203 WEST CHESTER, OHIO 45386 PHONE: (513) 886-9111</p>

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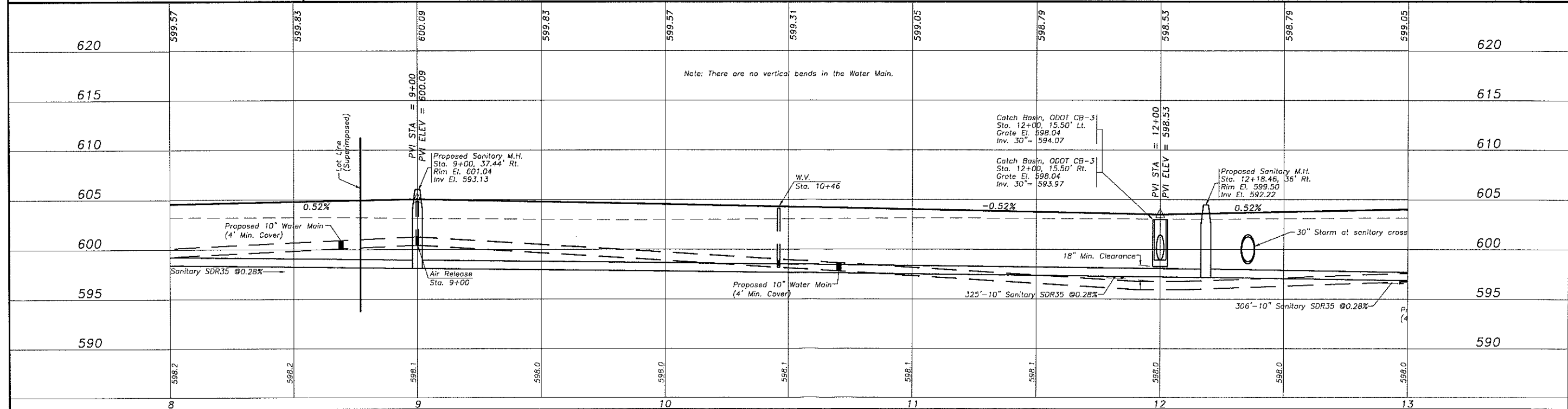




PLANS PREPARED BY:  
**NEXUS ENGINEERING**  
 CIVIL ENGINEERING AND LAND SURVEYING  
 1000 WEST CHESTER CENTER DRIVE SUITE 203  
 CHESTER, OHIO 43009  
 PHONE: (614) 889-9130

FEB 19 2004

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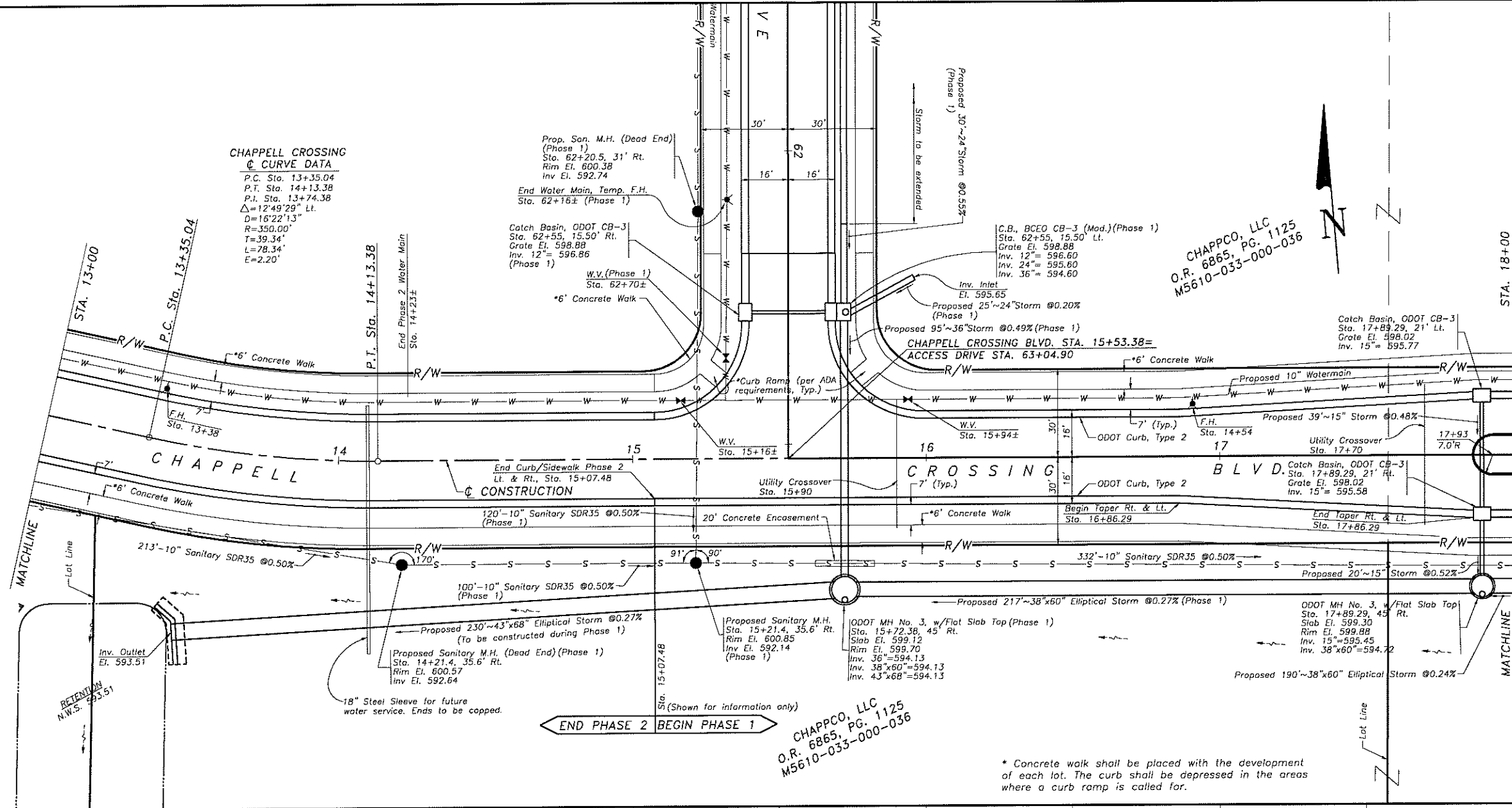


CHAPPELL CROSSING BLVD.  
 PHASE 1  
 PLAN AND PROFILE

DESIGNED C.F.G.  
 DRAWN C.F.G.  
 CHECKED M.A.N.  
 DATE NOV, 2003

C ?

Note: Contractor to coordinate utility cross-overs with Cinergy, Cincinnati Bell, and Time Warner Cable.

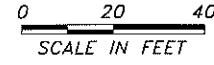


**CHAPPELL CROSSING CURVE DATA**

P.C. Sta.	13+35.04
P.T. Sta.	14+13.38
P.I. Sta.	13+74.38
$\Delta$	12°49'29" Lt.
D	16'22'13"
R	350.00'
T	39.34'
L	78.34'
E	2.20'

CHAPPCO, LLC  
O.R. 6865, PG. 1125  
M5610-033-000-036

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NEXUS ENGINEERING

**NEXUS ENGINEERING**  
CIVIL ENGINEERS AND LAND SURVEYORS  
8006 BECKETT CENTER DRIVE, SUITE 203  
WILMINGTON, OHIO 45397  
PHONE: (513) 960-9700

END PHASE 2 BEGIN PHASE 1  
CHAPPCO, LLC  
O.R. 6865, PG. 1125  
M5610-033-000-036

\* Concrete walk shall be placed with the development of each lot. The curb shall be depressed in the areas where a curb ramp is called for.

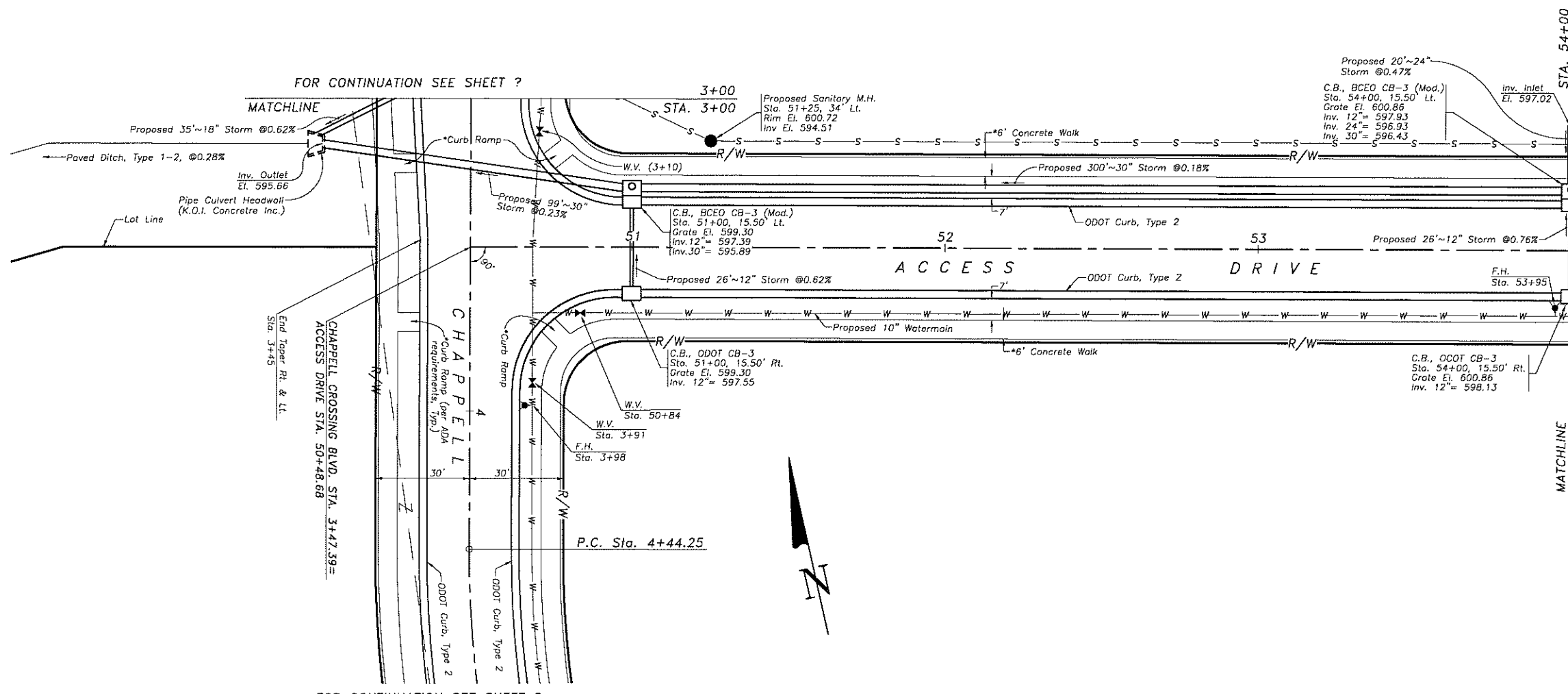
620	599.05										620
615											615
610											610
605											605
600											600
595											595
590											590

CHAPPELL CROSSING BLVD. STA. 15+53.38= FUTURE ACCESS DRIVE STA. 63+04.90

Note: There are no vertical bends in the Water Main.

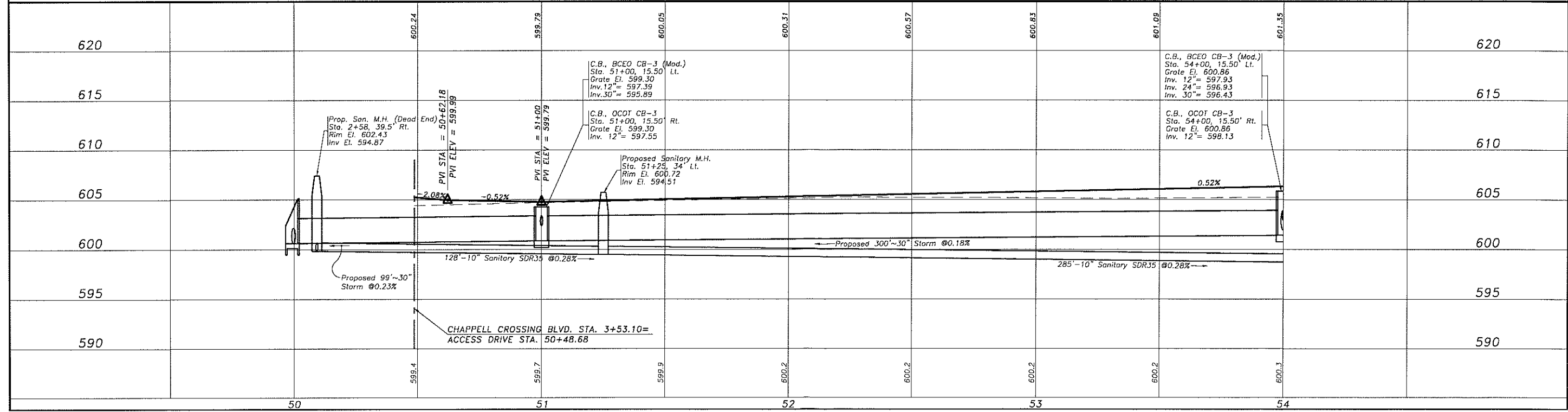
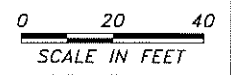
DESIGNED: C.F.G.  
DRAWN: C.F.G.  
CHECKED: M.A.N.  
DATE: NOV, 2003

CHAPPELL CROSSING BLVD. PHASE 1  
PLAN AND PROFILE



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FEB 10 2004  
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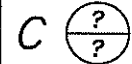


10	
9	
8	
7	
6	
5	
4	
3	
2	
1	

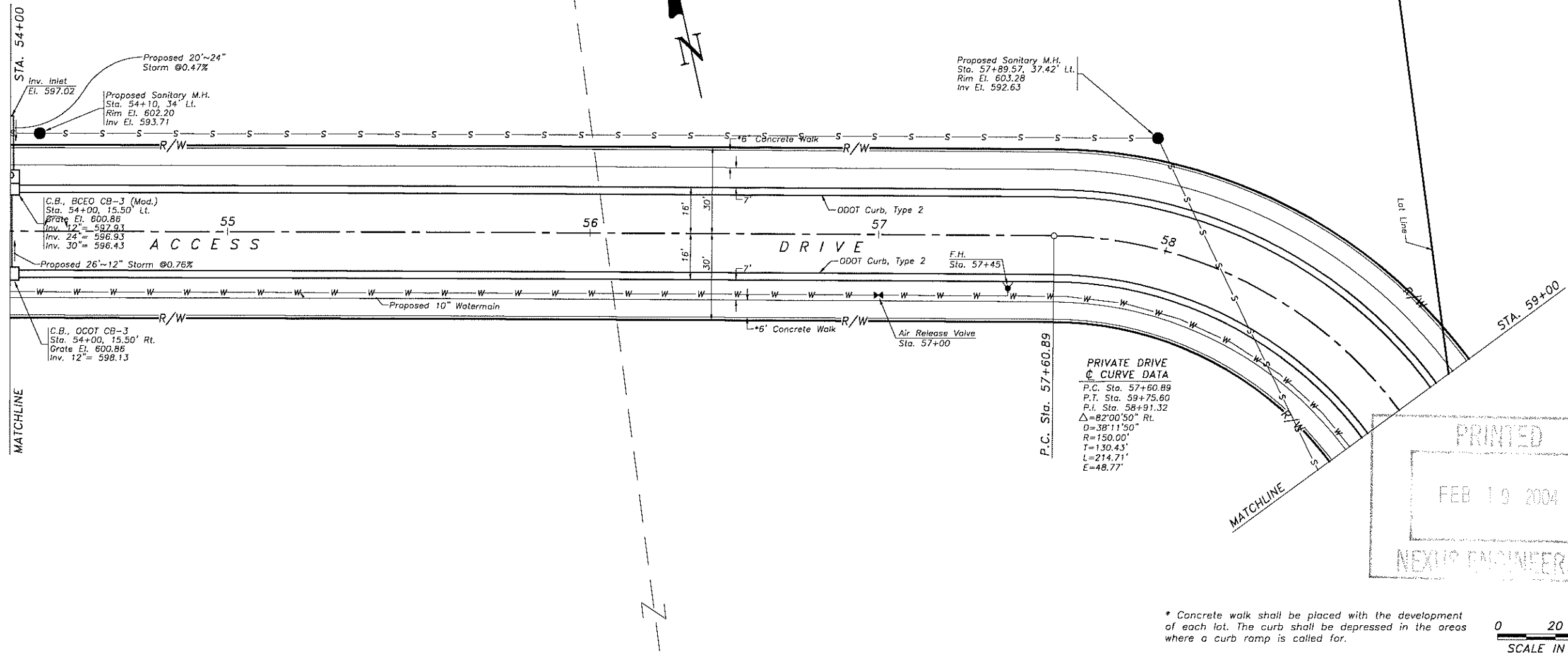
PLANS PREPARED BY: **NEXUS ENGINEERING**  
 CIVIL ENGINEERS AND LAND SURVEYORS  
 6000 SECRET CENTER DRIVE, SUITE 203  
 FLORENCE, SC 29502  
 PHONE: (803) 860-8100  
 FAX: (803) 860-8100

DESIGNED: C.F.G.  
 DRAWN: C.F.G.  
 CHECKED: M.A.N.  
 DATE: JAN., 2004

CHAPPELL CROSSING BLVD.  
 PHASE 2  
 PLAN AND PROFILE





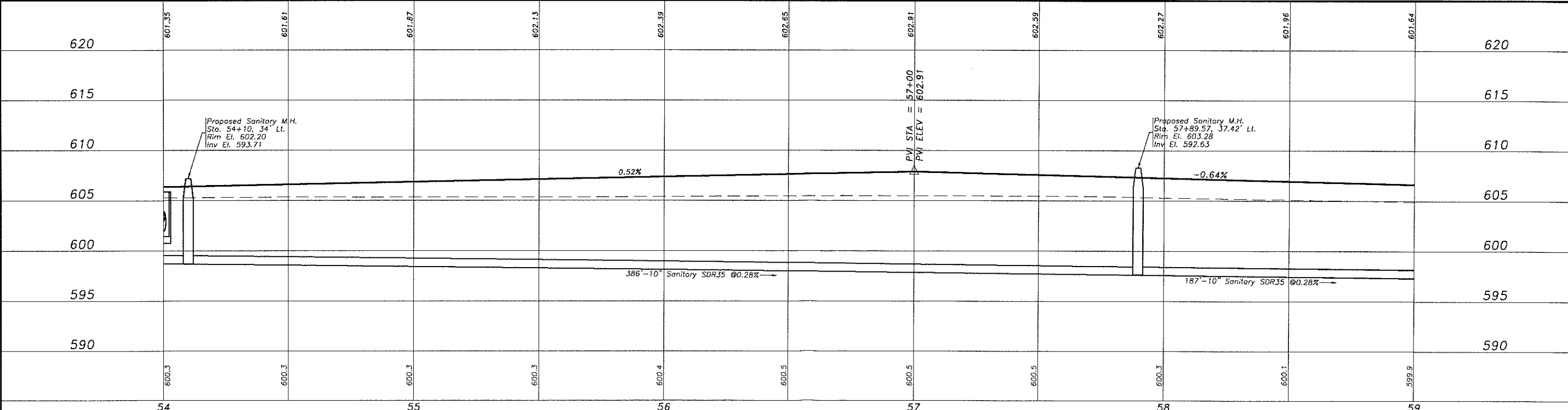



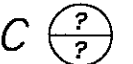
PRIVATE DRIVE  
 C CURVE DATA  
 P.C. Sta. 57+60.89  
 P.T. Sta. 59+75.60  
 P.I. Sta. 58+91.32  
 $\Delta = 82^{\circ}00'50''$  Rt.  
 $D = 38^{\circ}11'50''$   
 $R = 150.00'$   
 $T = 130.43'$   
 $L = 214.71'$   
 $E = 48.77'$

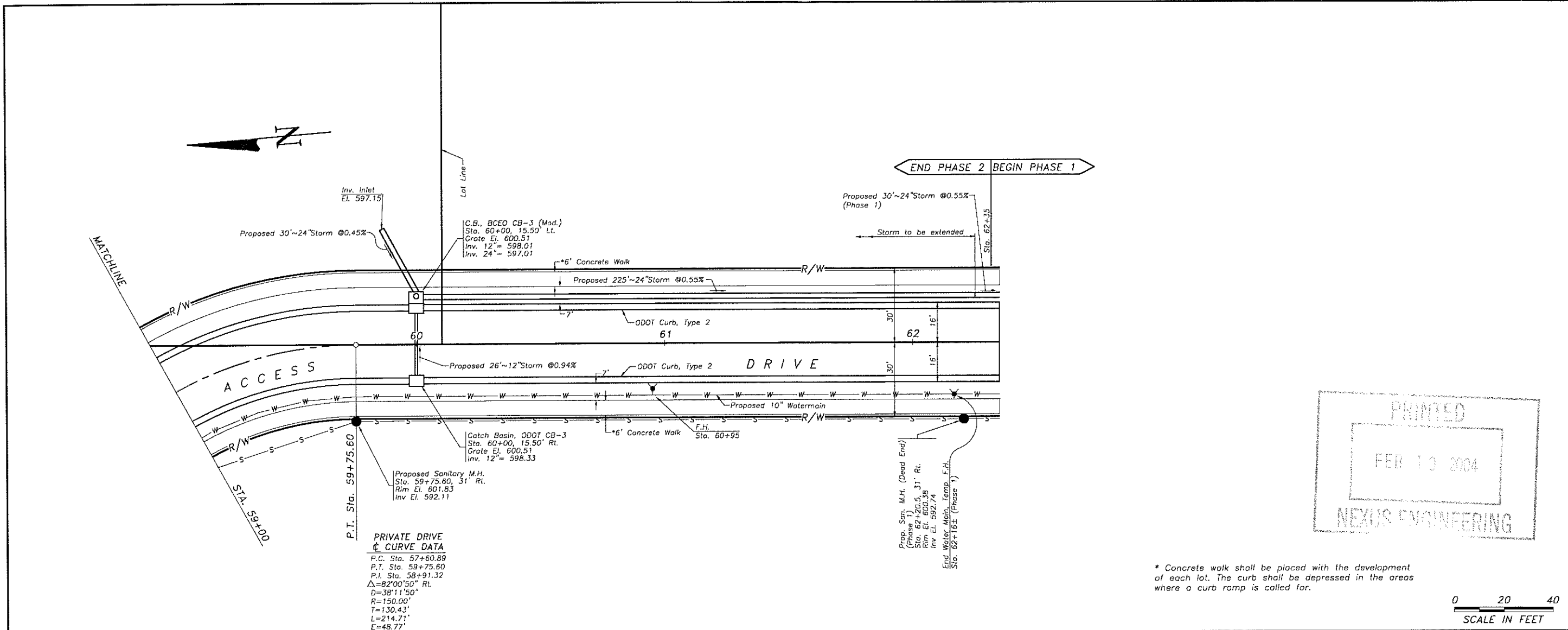
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\* Concrete walk shall be placed with the development of each lot. The curb shall be depressed in the areas where a curb ramp is called for.

0 20 40  
 SCALE IN FEET

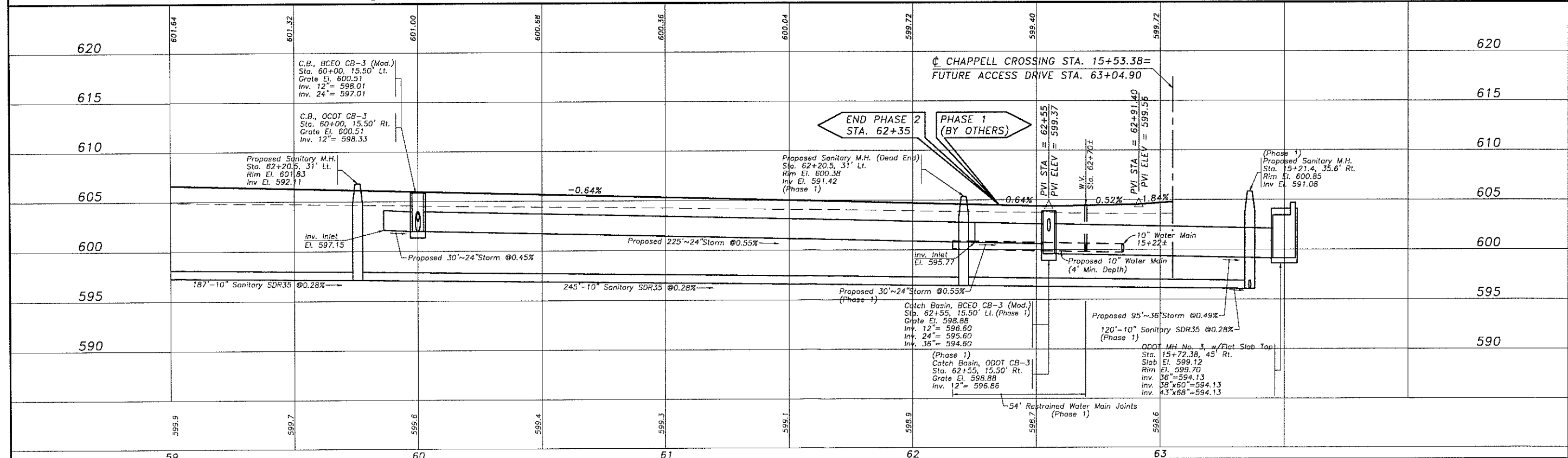


10	9	8	7	6	5	4	3	2	1
PLANS PREPARED BY:									
<b>NEXUS ENGINEERING</b> <small>CON. ENGINEERS AND LAND SURVEYORS        6000 BECKETT CENTER DRIVE, SUITE 200        WEST CHESTER, OHIO 43085        PHONE: (614) 888-9133</small>									
									
<b>CHAPPELL CROSSING BLVD.        PHASE 2        PLAN AND PROFILE</b>									
DESIGNED								C.F.G.	
DRAWN								C.F.G.	
CHECKED								M.A.N.	
DATE								JAN., 2004	
									



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\* Concrete walk shall be placed with the development of each lot. The curb shall be depressed in the areas where a curb ramp is called for.



PLANS PREPARED BY:  
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 CIVIL ENGINEERS AND LAND SURVEYORS  
 6000 BECKETT CENTER DRIVE, SUITE 203  
 WASHINGTON, DC 20007  
 PHONE: (301) 880-9100

DESIGNED C.F.G.  
 DRAWN C.F.G.  
 CHECKED M.A.N.  
 DATE JAN., 2004

DATE