CONSTRUCTION PLANS

CARLTON POINTE SUBDIVISION
PHASES 1, 2 and 3

ROLESVILLE, NORTH CAROLINA
WAKE COUNTY

SPECIAL CONDITIONS

SPECIAL USE PERMIT NUMBER: SUP 04-02

DATE: Approved 5/3/04 Pending Condition Number 23

PROPERTY/DESCRIPTION: Candlegate Subdivision

PIN NUMBER: 1758.11-56-6007 and 1758.04-54-3431

ZONING/ACREAGE: R & PUD

SPECIAL USE PERMIT PROVISIONS:

1. The subdivision shall be in full compliance with Chapters 91, 92, and 93 of the Town of Rolesville Code of Ordinances unless otherwise noted within the special conditions of this Special Use Permit.

2. Permitted uses shall be limited to single-family residential, public or private open space, and public or private recreation.

3. Before the first Certificate of Occupancy is issued, the developer shall make a payment of $50,000 for the purpose of installing a traffic signal at the intersection of Jonesville Road and US 401.

4. Before the first Certificate of Occupancy is issued, the developer shall install a left and through directional and right directional turn lane for the northbound traffic on Jonesville Road and any other road improvements indicated by the project's Traffic Impact Analysis by Kimley Horn Associates.

5. Pending approval from the NCDOT and before the first Certificate of Occupancy is issued, the developer shall construct a two (2) lane twenty (20') foot wide ribbon pavement section from the property line to US 401.

6. Before the first Certificate of Occupancy is issued, the developer shall submit renderings of the distinctive uniform sign plan to be approved by the Town of Rolesville staff.

7. The two (2) approved "tot" lots within the subdivision shall have materials seen in the submitted Tot Lot Exhibits 1 and 2. The tot lots shall be developed before the first Certificate of Occupancy is issued.

8. Each garage and driveway shall contain a minimum of two (2) spaces.

9. The minimum heated livable home space for each dwelling shall be a minimum of :
   a) 1,350 square feet for homes on Type I lots; and
   b) 1,900 square feet for homes on Type II lots.

10. Home elevatons provided within this development shall be generally consistent in style and appearance with the provided illustrative home elevations (35' and 50' Series Home Elevation Exhibits). Furthermore, homes shall adhere to the following design criteria.

a) Entries: All homes shall have front porches and/or covered stoops at the front entry. Porches and stoops shall be covered with pitched roof elements and provide a minimum depth of four (4) feet;
b) Building Materials: Front facades for each plan elevation shall provide for a mix stone. brick, vinyl shake and /or vinyl siding.
c) Garages: Must contain window elements for garage doors and wide enough to accomodate two (2) cars inside the garage, with two (2) separate doors, and two (2) cars in the driveway.
d) Colors: Primary colors shall consist of natural earthen tones. Accents and details consist of white, off-white or light colors. Painted front door and painted shutter colors shall match.
e) Placement: Entries and front facades shall be located on lots so that they create a visual interest, variety and appeal from the street. Varied setbacks and protrusions of the front facade may be provided to give variety along the streetscape. Identical home elevations shall be prohibited adjacent to one another.
f) Roofs: Primary roof materials shall consist of gray or black shingles; secondary roofs may consist of either identical shingles or a standing seam metal/aluminum material with (copper, gray, black, tan, brown or green finish).
g) Facades and Detailing: At least four (4) of the following elements shall be provided with each front facade: differentiated materials and colors; varied roof lines and pitches; dormers; window mullions; bay windows; patterned stone or brick work; planted foundation beds; pre-cast quoins; keystones; pre-cast accents; standing seam roofs; decorative arches; and shudders.

Prior to building permit submittals, each home elevation shall be reviewd by an Architectural Review Committee (ARC). The committee shall review the proposed plans to ensure the above design guidelines are met. The developer and/or Homeowner's Association will govern the ARC.

11. Before the Certificate of Occupancies are issued for each individual lot, abutting street trees and front yard lot trees (to meet Town standards) shall be installed. Street trees and lot trees adjacent to bike paths along Streets A and B shall be spaced in a manner that gives a uniform appearance and consistency with street trees on the opposing side of the street.

12. Open space areas indicated in the plan shall be preserved to maintain very steep slopes, significant tree cover, and streams. Grading for infrastructure will be permitted.

13. All greenway easements shall be deemed "public", be a minimum of twenty (20') feet in width, and shall be maintained by the Homeowner's Association. The easements shall be completed before the first Certificate of Occupancy is issued for each phase. Any trails constructed for credit or reimbursement by the Town shall be constructed of impervious surface approved by town staff.

14. Before the first Certificate of Occupancy is issued, the developer, as offered, shall make a contribution in the amount of $50,000 for the purpose of developing the Town Park facilities or other nearby recreational amenities.

15. Before final plat approval for each phase, the developer shall install signage and pavement markings, approved by Town staff, at all locations where greenway easements cross all streets so as to assure safety at these locations.

16. Rocky Falls Branch Creek (along the eastern property line) shall have a minimum of a one hundred (100') foot buffer measured on each side of the stream.

17. The developer shall make payment in lieu of the active usability ordinance requirements in the amount of $51,925.

   $17,308 shall be paid before the final plat is recorded on Phase I.
   $17,308 shall be paid before the final plat is recorded on Phase II.
   $17,308 shall be paid before the final plat is recorded on Phase III.

18. An eight (8') foot wide multi-purpose asphalt bike path shall be constructed along Jonesville Road. This path shall be contructed prior to the final Certificate of Occupancy of Phase I, or the 50th Certificate of Occupancy, whichever occurs first.

19. Sidewalks shall be provided on both sides of the streets including cul-de-sacs unless a bike path is noted to be built. The sidewalks shall be installed on each lot before the first Certificate of Occupancy is issued.

20. Where sidewalks and bike paths front the dwelling units, front walkways shall connect to sidewalks/driveways.

21. Before the Final Plat is approval, the developer shall submit to the Town the recorded covenants of the subdivision.

22. The site shall be "select graded" rather than mass graded. Grading shall occur only for the right-of-way for streets, utility easements, slope easements, and the front setback envelope.

23. The development shall be consistent with the plans approved by the Town Board of Commissioners on xx, 2004.

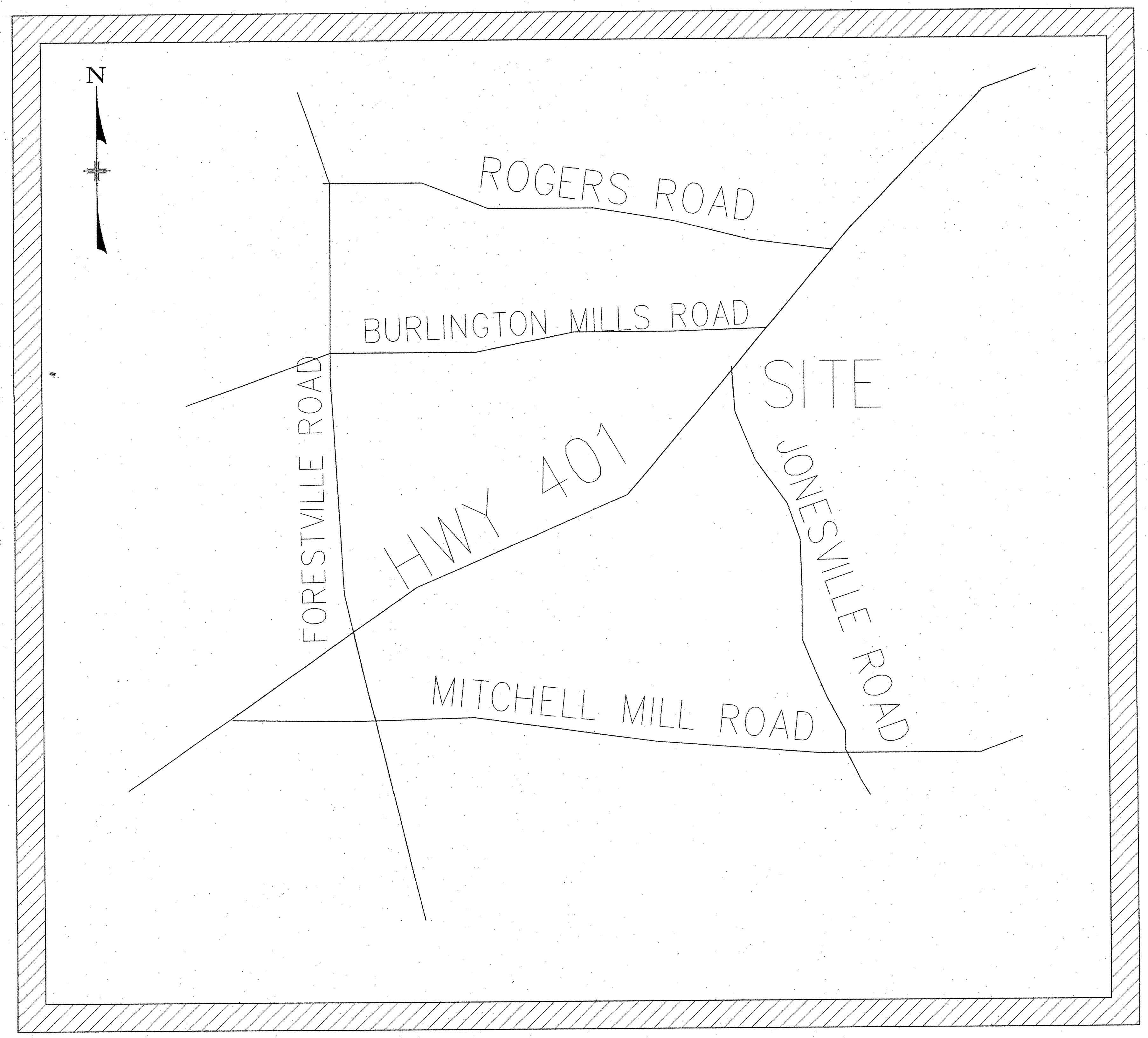
24. The development shall provide at least three (3) pedestrian connections to the public greenway easement indicated in condition #13.

25. The minimum and average lot sizes for single-family residential uses shall be:

   a) Type I Lots - 6,600 minimum square feet with an average of no less than 7,200 sq. ft.; and
   b) Type II Lots - 8,400 minimum square feet with an average of no less than 10,000 sq. ft.v

26. The two (2) street connections to the stub outlets located within the Village of Rolesville shall be constructed within twelve (12) months after the approval from the Division of Water Quality concerning the stream crossings.

27. The development shall have no more than three hundred (300) lots.



VICINITY MAP
NOT TO SCALE

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NORTH CAROLINA PROFESSIONAL SEAL 21626 ENGINEER GEORGE M. McINTYRE 2-8-2007

PUBLIC
Sewer Collection/Extension System
The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and constructions methods used for this project shall conform to the City's Utilities Handbooks' standards and specifications:
City of Raleigh Public Utilities Department Permit # 2953
Construction Approval B.T.
Date 9/13/06

PUBLIC
Water Distribution/Extension System
The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and constructions methods used for this project shall conform to the City's Utilities Handbooks' standards and specifications:
City of Raleigh Public Utilities Department Permit # 2446
Construction Approval B.T.
Date 9/13/06

Phase Plan Revision Approved 4/19/07 BTG

Development Owner:

CARLTON GROUP OF NORTH CAROLINA, LLC
20 SQUADRON BOULEVARD, SUITE 120
NEW CITY, NEW YORK 10956
845-638-9300

McINTYRE & ASSOCIATES, PLLC
4932-B WINDY HILL DR.
RALEIGH, NC 27609

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GUTTERSPREAD CALCULATION TABLE

STRUCTURE	DRAINAGE AREA	C	I 5.67	Q	REQUIRED GUTTER SPREAD	CALCULATED GUTTER SPREAD	ROAD SLOPE
CB#1	0.8	0.6	5.67	2.72	6.5	9.12/2=4.56	1
CB#2	0.32	0.65	5.67	1.18	6.5	6.46	1
CB#4	0.25	0.75	5.67	1.063	6.5	4.23	5
CB#5	0.3	0.75	5.67	1.276	6.5	4.63	5
CB#6	0.4	0.6	5.67	1.361	6.5	3.84	12
CB#7	0.58	0.6	5.67	1.973	6.5	4.62	12
CB#8	0.67	0.6	5.67	2.28	6.5	6.21	4.5
CB#9	1.54	0.3	5.67	2.62	6.5	6.24 *	SAG
CB#10	0.4	0.8	5.67	1.814	6.5	4.89 *	SAG
CB#12	0.25	0.7	5.67	0.992	6.5	3.31	9.55
CB#13	0.53	0.4	5.67	1.202	6.5	6.51	1
CB#14	0.16	0.85	5.67	0.771	6.5	5.33	1
CB#15	0.1	0.85	5.67	0.482	6.5	2.25	9
CB#16	0.13	0.8	5.67	0.590	6.5	5.03	0.75
CB#7A	0.22	0.8	5.67	0.998	6.5	3.24	12
CB#13A	0.5	0.4	5.67	1.134	6.5	6.35	1
CB#15A	0.5	0.6	5.67	1.701	6.5	4.61	9
CB#18	0.18	0.75	5.67	0.765	6.5	3.94	3.42
CB#19	0.18	0.75	5.67	0.765	6.5	3.94	3.42
CB#20	0.15	0.75	5.67	0.638	6.5	2.71	9
CB#23	0.53	0.75	5.67	2.254	6.5	5.65 *	SAG
CB#24	0.5	0.75	5.67	2.126	6.5	4.14 *	SAG
CB#23D	0.5	0.5	5.67	1.418	6.5	5.47	3
CB#23C	0.15	0.75	5.67	0.638	6.5	3.71	3
CB#23B	0.05	0.8	5.67	0.227	6.5	1.68	7
CB#23A	1.0	0.5	5.67	2.835	6.5	6.20	7
CB#25	0.5	0.65	5.67	1.843	6.5	6.21	2.92
CB#26	0.3	0.75	5.67	1.276	6.5	5.25	2.92
CB#30	0.35	0.5	5.67	0.992	6.5	3.52	8.8
CB#31	0.1	0.8	5.67	0.454	6.5	2.17	8.8
CB#32	1	0.5	5.67	2.835	6.5	5.87	8.8
CB#33	0.1	0.85	5.67	0.482	6.5	2.08	11.2
CB#34	0.34	0.6	5.67	1.157	6.5	5.10	2.72
CB#35	0.2	0.85	5.67	0.964	6.5	4.68	2.72
CB#36	0.2	0.8	5.67	0.907	6.5	3.53	7.3
CB#37	0.1	0.8	5.67	0.453	6.5	2.63	5
CB#36A	0.5	0.6	5.67	1.701	6.5	4.85	7.3
CB#39A	0.25	0.7	5.67	0.921	6.5	6.22	SAG
CB#39B	0.25	0.7	5.67	1.063	6.5	6.53	SAG
CB#39C	0.3	0.75	5.67	1.276	6.5	4.63	5
CB#41	0.35	0.85	5.67	1.687	6.5	4.65 *	SAG
CB#42	0.2	0.85	5.67	0.964	6.5	6.41	SAG
CB#42C	0.12	0.85	5.67	0.589	6.5	2.89	6
CB#42B	0.16	0.65	5.67	0.589	6.5	5.03	0.75
CB#42A	0.2	0.75	5.67	0.851	6.5	5.94	0.75
CB#44	0.45	0.8	5.67	2.041	6.5	5.75	5.0
CB#45	0.3	0.8	5.67	1.361	6.5	6.44	1.35
CB#46	0.2	0.8	5.67	0.907	6.5	5.36	1.35
CB#47	0.1	0.85	5.67	0.482	8.5	3.02	3.58
CB#48	0.15	0.8	5.67	0.680	8.5	3.66	3.58
CB#45B	0.16	0.85	5.67	0.771	8.5	3.91	3.58
CB#45A	0.27	0.8	5.67	1.275	8.5	4.91	3.58
CB#50	0.13	0.75	5.67	0.553	8.5	2.58	7.9
CB#51	0.22	0.75	5.67	0.936	6.5	5.81	1.0
CB#52	0.03	0.85	5.67	0.145	6.5	2.09	1.0
CB#53	0.5	0.85	5.67	0.386	8.5	3.35	1.6
CB#54	0.2	0.8	5.67	0.907	8.5	6.15	SAG
CB#55	0.25	0.7	5.67	0.992	8.5	6.5	SAG
CB#56	0.15	0.8	5.67	0.680	8.5	4.5	1.6
CB#56B	0.06	0.85	5.67	0.289	8.5	1.9	6.14
CB#56A	0.06	0.85	5.67	0.289	8.5	1.9	6.14
CB#52A	0.15	0.8	5.67	0.68	6.5	3.26	5.5
CB#58	0.25	0.85	5.67	1.205	6.5	3.72 *	SAG
CB#59	0.35	0.85	5.67	1.687	6.5	4.66 *	SAG
CB#60	0.1	0.85	5.67	0.482	6.5	3.49	2.16
CB#62	0.51	0.4	5.67	1.157	6.5	6.40	1.0
CB#63	1.03	0.4	5.67	2.336	6.5	5.78 *	SAG
CB#64	0.3	0.5	5.67	0.851	6.5	5.89	SAG
CB#65	0.3	0.5	5.67	0.851	6.5	5.89	SAG
CB#70	0.89	0.4	5.67	2.01	6.5	5.23 *	SAG
CB#71	0.5	0.75	5.67	2.126	6.5	5.43 *	SAG
CB#63A	0.4	0.4	5.67	0.907	6.5	5.73	1.0
CB#73	0.2	0.8	5.67	0.907	6.5	3.90	5.0
CB#74	0.71	0.65	5.67	2.617	6.5	6.44	5.0
CB#76	0.4	0.4	5.67	0.907	6.5	5.73	0.75
CB#77	0.03	0.85	5.67	0.145	6.5	2.31	0.75
CB#78	0.15	0.8	5.67	0.680	6.5	5.37	0.75
CB#79	0.31	0.6	5.67	1.055	6.5	6.5	0.75
CB#80	0.1	0.75	5.67	0.425	6.5	2.82	3.5
CB#68B	0.56	0.4	5.67	1.207	6.5	6.5	1
CB#68A	0.2	0.85	5.67	0.964	6.5	5.89	1
CB#78B	0.55	0.7	5.67	2.183	6.5	5.06	10
CB#78A	0.27	0.7	5.67	1.072	6.5	3.41	11.64
CB#81	0.5	0.4	5.67	1.134	6.5	6.35	1
CB#82	0.53	0.4	5.67	1.202	6.5	6.51	1
CB#83	0.55	0.6	5.67	1.871	6.5	6.22	3
CB#84	0.4	0.7	5.67	1.588	6.5	5.76	3
CB#86	0.5	0.6	5.67	1.701	6.5	5.42	4.53
CB#87	0.4	0.65	5.67	1.474	6.5	5.7	2.72
CB#88	0.15	0.8	5.67	0.680	6.5	3.94	2.72
CB#89	0.02	0.85	5.67	0.096	6.5	1.32	4.53
CB#90	0.1	0.85	5.67	0.482	6.5	2.82	4.53
CB#91	0.5	0.4	5.67	1.134	6.5	6.06	1.22
CB#92	0.37	0.75	5.67	0.605	6.5	4.54	1.22
CB#87A	0.5	0.6	5.67	1.701	6.5	4.65	8.72
CB#94	0.48	0.6	5.67	1.633	6.5	5.83	3
CB#95	0.48	0.6	5.67	1.633	6.5	5.63	3.52
CB#96	0.17	0.8	5.67	0.771	6.5	3.93	3.52
CB#98	0.4	0.6	5.67	1.361	6.5	6.58	1.22
CB#99	0.4	0.6	5.67	1.361	6.5	4.61	5.76
CB#100	0.48	0.6	5.67	1.633	6.5	5.03	5.76
CB#101	1.08	0.45	5.67	2.756	6.5	6.46 *	SAG
CB#102	0.12	0.85	5.67	0.578	6.5	4.56	SAG
CB#103	0.3	0.75	5.67	1.276	6.5	6.4	1
CB#105	0.23	0.85	5.67	1.108	8.5	3.44	12
CB#106	0.23	0.85	5.67	1.108	8.5	3.44	12
CB#107	0.1	0.85	5.67	0.482	8.5	2.58	6
CB#109	0.25	0.6	5.67	0.85	6.5	3.79	4.9

* BASED ON DOUBLE CURB INLETS

STORM DRAINAGE CALCULATION TABLE

FROM	TO	DRAINAGE AREA A (acres)	MANNING ROUGH N COEFF. (n)	RUNOFF COEFF. (C)	CA (acres)	SUM CA (acres)	T_c TO STA. (min.)	TOTAL T_c TO STA. (min.)	RAINFALL INTENSITY (in./hr.)	RUNOFF (cfs)	CONTRIB. INFLOW (cfs)	TOTAL FLOW (cfs)	PIPE DIA. (in)	PIPE SLOPE (ft/ft)	FLOW VELOCITY (ft/s)	INLET TYPE
CB#1	CB#2	0.8	0.013	0.6	0.48	0.48	5	5	7.5	3.6	0	3.6	15	0.005	3.7212	DOUBLE
CB#2	FES#3	0.34	0.013	0.75	0.255	0.735	5	5	7.5	5.5125	0	5.513	18	0.005	4.2021	SINGLE
CB#4	CB#5	0.25	0.013	0.75	0.1875	0.1875	5	5	7.5	1.4063	0	1.4063	15	0.005	3.7212	SINGLE
CB#5	CB#6	0.3	0.013	0.75	0.225	0.4125	5	5	7.5	3.0938	0	3.0938	18	0.005	4.2021	SINGLE
CB#6	CB#7	0.4	0.013	0.6	0.24	0.6525	5	5	7.5	4.8938	0	4.8938	18	0.005	4.2021	SINGLE
CB#7	CB#8	0.58	0.013	0.6	0.348	1.0005	5	5	7.5	7.5038	1.32	8.8238	24	0.005	5.0905	SINGLE
CB#8	CB#9	0.67	0.013	0.6	0.402	1.4025	5	5	7.5	10.5188	5.82	16.339	30	0.005	5.9070	SINGLE
CB#9	CB#10	1.54	0.013	0.5	0.77	2.1725	5	5	7.5	16.294	5.82	22.114	30	0.005	5.9070	DOUBLE
CB#10	BPS#11	0.4	0.013	0.8	0.32	2.4925	5	5	7.5	18.694	16.55	36.25	36	0.005	6.6704	DOUBLE
CB#12	CB#13	0.25	0.013	0.7	0.175	0.175	5	5	7.5	1.3125	0	1.3125	15	0.005	3.7212	SINGLE
CB#13	CB#14	0.55	0.013	0.6	0.33	0.505	5	5	7.5	3.7875	2.25	6.038	18	0.005	4.2021	SINGLE
CB#14	CB#15	0.16	0.013	0.85	0.136	0.641	5	5	7.5	4.8075	2.25	7.058	18	0.005	4.2021	SINGLE
CB#15	CB#16	0.1	0.013	0.85	0.085	0.726	5	5	7.5	5.445	4.5	9.945	24.	0.005	5.0905	SINGLE
CB#16	CB#10	0.13	0.013	0.8	0.104	0.83	5	5	7.5	6.225	4.5	10.725	24	0.005	5.0905	SINGLE
CB#7A	CB#7	0.22	0.013	0.8	0.176	0.176	5	5	7.5	1.32	0	1.32	15	0.005	3.7212	SINGLE
YI#8A	CB#8	1	0.013	0.6	0.6	0.6	5	5	7.5	4.5	0	4.5	15	0.005	3.7212	SINGLE
							5	5								
CB#15A	CB#15	0.5	0.013	0.6	0.3	0.3	5	5	7.5	2.25	0	2.25	15	0.005	3.7212	SINGLE
YI#17	CB#18	1.1	0.013	0.5	0.55	0.55	5	5	7.5	4.125	0	4.125	15	0.005	3.7212	Y-INLET
CB#18	CB#19	0.18	0.013	0.75	0.135	0.685	5	5	7.5	5.1375	0	5.138	18	0.005	4.2021	SINGLE
CB#19	CB#20	0.18	0.013	0.75	0.135	0.82	5	5	7.3447	6.02266	0	6.023	18	0.005	4.2021	SINGLE
CB#20	BPS#21	0.15	0.013	0.75	0.1125	0.9325	5	5	7.3447	6.84894	0	6.849	18	0.005	4.2021	SINGLE
YI#22	CB#23	1.74	0.013	0.5	0.87	0.87	5	5	7.5	6.525	0	6.525	18	0.005	4.2021	SINGLE
CB#23	CB#24	0.53	0.013	0.75	0.395	1.2675	5	5	7.5	9.506	6.76	16.266	30	0.005	5.9070	DOUBLE
CB#24	BPS#25	0.50	0.013	0.75	0.375	1.6425	5	5	7.5	12.319	6.76	19.079	30	0.005	5.9070	DOUBLE
CB#23D	CB#23C	0.5	0.013	0.5	0.25	0.25	5	5	7.5	1.875	0	1.875	15	0.005	3.7212	SINGLE
CB#23C	CB#23B	0.15	0.013	0.75	0.1125	0.3625	5	5	7.5	2.7188	0	2.719	15	0.005	3.7212	SINGLE
CB#23B	CB#23A	0.05	0.013	0.8	0.04	0.4025	5	5	7.5	3.0188	0	3.019	15	0.005	3.7212	SINGLE
CB#23A	CB#23	1	0.013	0.5	0.5	0.9025	5	5	7.5	6.7688	0	6.769	18	0.005	4.2021	SINGLE
CB#30	CB#31	0.35	0.013	0.5	0.175	0.175	5	5	7.5	1.3125	0	1.313	15	0.005	3.7212	SINGLE
CB#31	CB#32	0.1	0.013	0.8	0.08	0.255	5	5	7.5	1.9125	0	1.913	15	0.005	3.7212	SINGLE
CB#32	CB#33	1	0.013	0.5	0.5	0.755	5	5	7.5	5.6625	0	5.663	18	0.005	4.2021	SINGLE
CB#33	CB#34	0.1	0.013	0.85	0.085	0.84	5	5	7.5	6.3	0	6.3	18	0.005	4.2021	SINGLE
CB#34	CB#35	0.34	0.013	0.6	0.204	1.044	5	5	7.5	7.83	0	7.83	24	0.005	5.0905	SINGLE
CB#35	CB#36	0.2	0.013	0.85	0.17	1.214	5	5	7.5	9.105	0	9.105	24	0.005	5.0905	SINGLE
CB#36	CB#37	0.2	0.013	0.8	0.16	1.374	5	5	7.5	10.305	2.25	12.56	24	0.005	5.0905	SINGLE
CB#37	BPS #38	0.3	0.013	0.8	0.24	1.614	5	5	7.5	12.105	3.45	15.56	24	0.005	5.0905	DOUBLE
CB#36A	CB#36	0.5	0.013	0.6	0.3	0.3	5	5	7.5	2.25	0	2.25	15	0.005	3.7212	SINGLE
CB#39A	CB#39B	0.35	0.013	0.7	0.245	0.245	5	5	7.5	1.8375	0	1.838	15	0.005	3.7212	SINGLE
CB#39B	CB#39C	0.25	0.013	0.75	0.1875	0.4325	5	5	7.5	3.2438	0	3.244	15	0.005	3.7212	SINGLE
CB#39C	FES#39D	0.3	0.013	0.75	0.225	0.6575	5	5	7.5	4.9313	0	4.931	18	0.005	4.2021	SINGLE
YI#40	CB#41	1.2	0.013	0.65	0.78	0.78	5	5	7.5	5.85	0	5.85	18	0.005	4.2021	Y-INLET
CB#41	CB#42	0.35	0.013	0.85	0.2975	1.0775	5	5	7.5	8.0813	0	8.081	18	0.005	4.2021	DOUBLE
CB#42	BPS #43	0.2	0.013	0.85	0.17	1.2475	5	5	7.5	9.3563	2.67	12.026	24	0.005	5.0905	SINGLE

BPS- BYPASS STRUCTURE

STORM DRAINAGE CALCULATION TABLE (CONTINUED)

FROM	TO	DRAINAGE AREA A (acres)	MANNING ROUGH N COEFF. (n)	RUNOFF COEFF. (C)	CA (acres)	SUM CA (acres)	T_c TO STA. (min.)	TOTAL T_c TO STA. (min.)	RAINFALL INTENSITY (in./hr.)	RUNOFF (cfs)	CONTRIB. INFLOW (cfs)	TOTAL FLOW (cfs)	PIPE DIA. (in)	PIPE SLOPE (ft/ft)	FLOW VELOCITY (ft/s)	INLET TYPE
CB#42C	CB#42B	0.12	0.013	0.85	0.102	0.102	5	5	7.5	0.765	0	0.765	15	0.005	3.7212	SINGLE
CB#42B	CB#42A	0.16	0.013	0.65	0.104	0.206	5	5	7.5	1.545	0	1.545	15	0.005	3.7212	SINGLE
CB#42A	CB#42	0.2	0.013	0.75	0.15	0.356	5	5	7.5	2.67	0	2.67	15	0.005	3.7212	SINGLE
CB#44	CB#45	0.45	0.013	0.8	0.36	0.36	5	5	7.5	0.765	0	2.7	15	0.005	3.7212	SINGLE
CB#45	CB#46	0.3	0.013	0.8	0.24	0.6	5	5	7.5	4.5	3.72	8.22	24	0.005	5.0905	SINGLE
CB#46	CB#47	0.2	0.013	0.8	0.16	0.76	5	5	7.5	5.7	3.72	9.42	24	0.005	5.0905	SINGLE
CB#47	CB#48	0.1	0.013	0.85	0.085	0.845	5	5	7.5	6.3375	3.72	10.058	24	0.005	5.0905	SINGLE
CB#48	BPS#49	0.15	0.013	0.8	0.12	0.965	5	5	7.5	7.2375	3.72	10.958	24	0.005	5.0905	SINGLE
CB#45B	CB#45A	0.16	0.013	0.85	0.136	0.136	5	5	7.5	1.02	0	1.02	15	0.005	3.7212	SINGLE
CB#45A	CB#45	0.27	0.013	0.8	0.216	0.352	5	5	7.5	2.64	0	2.64	15	0.005	3.7212	SINGLE
CB#50	CB#51	0.13	0.013	0.75	0.0975	0.0975	5	5	7.5	0.7313	0	0.7313	15	0.005	3.7212	SINGLE
CB#51	CB#52	0.22	0.013	0.75	0.165	0.2625	5	5	7.5	1.9688	0	1.969	15	0.005	3.7212	SINGLE
CB#52	CB#53	0.03	0.013	0.85	0.0255	0.288	5	5	7.5	2.16	3.72	5.88	18	0.005	4.2021	SINGLE
CB#53	CB#54	0.08	0.013	0.85	0.068	0.356	5	5	7.5	2.67	3.72	6.39	18	0.005	4.2021	SINGLE
CB#54	CB#55	0.2	0.013	0.85	0.17	0.526	5	5	7.5	3.945	3.72	7.665	24	0.005	5.0905	SINGLE
CB#55	CB#56	0.25	0.013	0.8	0.2	0.726	5	5	7.5	5.445	3.72	9.165	24	0.005	5.0905	SINGLE
CB#56	BPS #57	0.15	0.013	0.8	0.12	0.846	5	5	7.5	6.345	13.14	19.485	30	0.005	5.9070	SINGLE
YI#56C	CB#56B	2.1	0.013	0.55	1.155	1.155	5	5	7.5	8.6625	0	8.663	24	0.005	5.0905	Y-INLET
CB#56B	CB#56A	0.06	0.013	0.85	0.051	1.206	5	5	7.5	9.045	0	9.045	24	0.005	5.0905	SINGLE
CB#56A	CB#56	0.06	0.013	0.85	0.051	1.257	5	5	7.5	9.4275	0	9.423	24	0.005	5.0905	SINGLE
YI#52C	YI#52B	0.4	0.013	0.55	0.22	0.22	5	5	7.5	1.65	0	1.65	15	0.005	3.7212	Y-INLET
YI#52B	CB#52A	0.24	0.013	0.55	0.132	0.352	5	5	7.5	2.64	0	2.64	15	0.005	3.7212	Y-INLET
CB#52A	CB#52	0.15	0.013	0.8	0.12	0.472	5	5	7.5	3.54	0	3.54	15	0.005	3.7212	SINGLE
CB#58	CB#59	0.25	0.013	0.85	0.2125	0.2125	5	5	7.5	1.594	0	1.594	15	0.005	3.7212	DOUBLE
CB#59	CB#60	0.35	0.013	0.85	0.2975	0.51	5	5	7.5	3.825	0	3.825	15	0.005	3.7212	DOUBLE
CB#60	FES#61	0.1	0.013	0.85	0.085	0.595	5	5	7.5	4.4625	0	4.463	15	0.005	3.7212	SINGLE
CB#62	CB#63	0.51	0.013	0.7	0.357	0.357	5	5	7.22	2.58	0	2.58	15	0.005	3.7212	SINGLE
CB#63	CB#64	1.03	0.013	0.6	0.618	0.975	5	5	7.22	7.04	4.86	11.89	24	0.005	5.0905	DOUBLE
CB#64	CB#65	0.3	0.013	0.85	0.255	1.23	5	5	7.22	8.88	4.86	13.74	24	0.005	5.0905	SINGLE
CB#65	YI#66	0.3	0.013	0.85	0.255	1.485	5	5	7.22	10.72	4.86	15.58	30	0.005	5.9070	SINGLE
YI#66	YI#67	2	0.013	0.55	1.1	2.585	5	5	7.22	18.60	4.86	23.52	30	0.005	5.9070	Y-INLET
YI#67	YI#68	0.8	0.013	0.55	0.44	3.025	5	5	7.22	21.84	4.86	26.70	30	0.005	5.9070	Y-INLET
YI#68	YI#68A	0.9	0.013	0.55	0.495	3.52	5	5	7.22	25.41	8.58	33.99	36	0.005	5.9070	Y-INLET
YI#68A	YI# 68B	.75	0.013	0.55	0.413	3.93	5	5	7.22	28.39	8.58	36.97	36	0.005	8.0806	Y-INLET
YI#68B	CB#95	.75	0.013	0.55	0.413	4.345	5	5	7.22	31.37	8.58	39.95	36	0.005	8.0806	Y-INLET
YI#63B	CB#63A	0.58	0.013	0.6	0.348	0.348	5	5	7.5	2.61	0	2.61	15	0.005	3.7212	Y-INLET
CB#63A	CB#63	0.4	0.013	0.75	0.3	0.648	5	5	7.5	4.86	0	4.86	18	0.005	4.2021	SINGLE
CB#73	CB#74	0.2	0.013	0.8	0.16	0.16	5	5	7.22	1.16	0	1.15	15	0.005	3.7212	SINGLE
CB#74	YI#75	0.71	0.013	0.65	0.4615	0.6215	5	5	7.22	4.49	6.6	11.08	24	0.005	5.09	SINGLE
YI#75	CB#76	0.8	0.013	0.5	0.4	1.0215	5	5	7.22	7.37	6.6	13.97	24	0.005	5.09	Y-INLET
CB#76	CB#77	0.4	0.013	0.55	0.22	1.2415	5	5	7.22	8.96	8.66	17.62	30	0.005	5.92	SINGLE
CB#77	CB#78	0.03	0.013	0.85	0.0255	1.267	5	5	7.22	9.15	15.05	24.19	30	0.005	5.92	SINGLE
CB#78	CB#79	0.15	0.013	0.8	0.12	1.387	5	5	7.22	10.01	19.36	29.37	36	0.005	6.67	SINGLE
CB#79	CB#80	0.31	0.013	0.7	0.217	1.604	5	5	7.22	11.56	19.36	30.94	36	0.005	6.67	SINGLE
CB#80	YI#69	0.1	0.013	0.75	0.075	1.679	5	5	7.22	12.12	19.36	31.48	36	0.005	6.67	SINGLE
YI#69	CB#70	0.5	0.013	.55	0.275	1.954	5	5	7.22	14.10	19.36	33.47	36	0.005	6.67	SINGLE
CB#70	CB#71	0.89	0.013	0.75	0.68	2.62	5	5	7.22	18.92	19.36	38.28	36	0.005	6.67	DOUBLE
CB#71	BPS#72	0.5	0.013	0.75	0.375	2.99	5	5	7.22	21.69	19.36	40.99	36	0.005	9.80	DOUBLE
YI#76A	CB#76	0.5	0.013	0.55	0.275	0.275	5	5	7.5	2.0625	0	2.063	15	0.005	3.7212	Y-INLET
YI#74A	CB#74	1.6	0.013	0.55	0.88	0.88	5	5	7.5	6.6	0	6.6	18	0.005	4.2021	Y-INLET
YI#77A	CB#77	1.55	0.013	0.55	0.8525	0.8525	5	5	7.5	6.3938	0	6.394	18	0.005	4.2021	Y-INLET
CB#68B	CB#68A	0.56	0.013	0.6	0.336	0.336	5	5	7.5	2.52	0	2.52	15	0.005	3.7212	SINGLE
CB#68A	YI#68	0.2	0.013	0.85	0.17	0.506	5	5	7.5	3.795	0	3.795	15	0.005	3.7212	SINGLE
CB#78B	CB#78A	0.55	0.013	0.7	0.385	0.385	5	5	7.5	2.8875	0	2.888	15	0.005	3.7212	SINGLE
CB#78A	CB#78	0.27	0.013	0.7	0.189	0.574	5	5	7.5	4.305	0	4.305	15	0.005	3.7212	SINGLE
CB#81	CB#82	0.55	0.013	0.6	0.33	0.33	5	5	7.5	2.475	0	2.475	15	0.005	3.7212	SINGLE
CB#82	CB#83	0.7	0.013	0.6	0.42	0.75	5	5	7.5	5.625	0	5.625	18	0.005	4.2021	SINGLE
CB#83	CB#84	0.55	0.013	0.6	0.33	1.08	5	5	7.5	8.1	0	8.1	24	0.005	5.0905	SINGLE
CB#84	BPS#85	0.4	0.013	0.7	0.28	1.36	5	5	7.5	10.2	0	10.2	24	0.005	5.0905	SINGLE
CB#86	CB#87	0.5	0.013	0.6	0.3	0.3	5	5	7.5	2.25	0	2.25	15	0.005	3.7212	SINGLE
CB#87	CB#88	0.4	0.013	0.65	0.26	0.56	5	5	7.5	4.2	2.25	6.45	18	0.005	4.2021	SINGLE
CB#88	CB#89	0.15	0.013	0.8	0.12	0.68	5	5	7.5	5.1	2.25	7.35	18	0.005	4.2021	SINGLE
CB#89	CB#90	0.02	0.013	0.85	0.017	0.697	5	5	7.5	5.2275	2.25	7.478	24	0.005	5.0905	SINGLE
CB#90	CB#91	0.1	0.013	0.85	0.085	0.782	5	5	7.5	5.864	2.25	8.115	24	0.005	5.0905	SINGLE
CB#91	CB#92	0.5	0.013	0.6	0.3	1.082	5	5	7.5	8.115	2.25	10.365	24	0.005	5.0905	SINGLE
CB#92	BPS# 93	0.37	0.013	0.78	0.2886	1.3706	5	5	7.5	10.2795	2.25	12.53	24	0.005	5.0905	SINGLE
CB#87A	CB#87	0.5	0.013	0.6	0.3	0.3	5	5	7.5	2.25	0	2.25	15	0.005	3.7212	SINGLE
CB#94	CB#95	0.48	0.013	0.6	0.288	0.288	5	5	7.22	2.08	0	2.08	15	0.005	3.7212	SINGLE
CB#95	CB#96	0.48	0.013	0.6	0.288	0.576	5	5	7.22	4.16	39.95	44.10	15	0.005	3.7212	SINGLE
CB#96	BPS#97	0.17	0.013	0.8	0.136	0.712	5	5	7.22	5.08	39.95	45.03	18	0.005	4.2021	SINGLE
CB#98	CB#99	0.4	0.013	0.6	0.24	0.24	5	5	7.5	1.8	0	1.8	15	0.005	3.7212	SINGLE
CB#99	CB#100	0.4	0.013	0.6	0.24	0.48	5	5	7.5	3.6	0	3.6	15	0.005	3.7212	SINGLE
CB#100	CB#101	0.48	0.013	0.6	0.288	0.768	5	5	7.5	5.76	0	5.76	18	0.005	4.2021	SINGLE
CB#101	CB#102	1.08	0.013	0.6	0.648	1.416	5	5	7.5	10.62	0	10.62	24	0.005	5.0905	DOUBLE
CB#102	CB#103	0.12	0.013	0.85	1.518	1.518	5	5	7.5	11.385	0	11.39	24	0.005	5.0905	SINGLE
CB#103	BPS#104	0.34	0.013	0.85	1.807	1.807	5	5	7.5	13.553	0	13.55	24	0.005	5.0905	SINGLE
CB#105	CB#106	0.23	0.013	0.85	0.1955	0.1955	5	5	7.5	1.4663	0	1.466	15	0.005	3.7212	SINGLE
CB#106	CB#107	0.23	0.013	0.85	0.1955	0.391	5	5	7.5	2.9325	0	2.933	15	0.005	3.7212	SINGLE
CB#107	FES#108	0.1	0.013	0.85	0.085	0.476	5	5	7.5	3.57	0	3.57	15	0.005	3.7212	SINGLE
CB#109	FES#110	0.48	0.013	0.6	0.288	0.768	5	5	7.5	5.76	0	5.76	18	0.005	4.2021	SINGLE
CB#23F	FES#23G	0.44	0.013	0.6	0.15	0.15	5	5	7.5	1.98	0	1.98	18	0.005	3.7212	SINGLE

PUBLIC
Water Distribution/Extension System
The City of Raleigh consents to the connection to the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh Public Utilities Department Permit: W-2446
Construction Approval: BJW
Date: 9/13/06

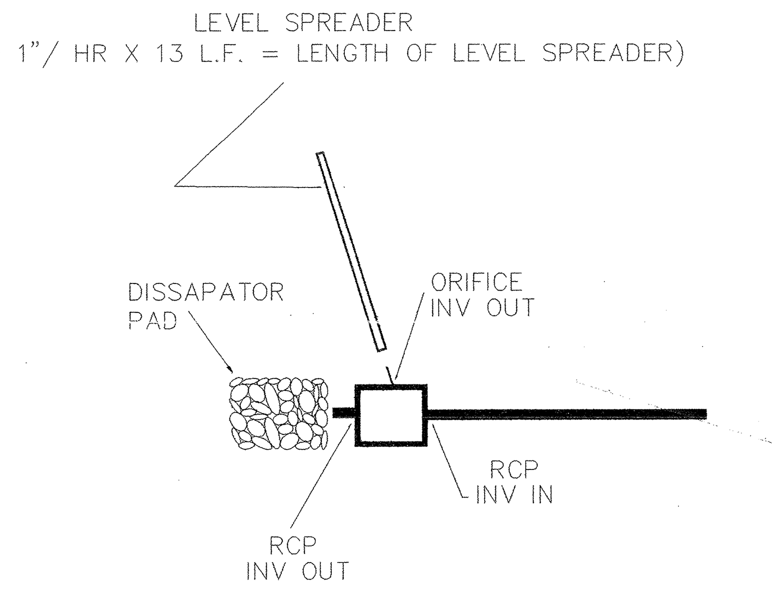
PUBLIC
Sewer Collection/Extension System
The City of Raleigh consents to the connection to the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh Public Utilities Department Permit: S-2953
Construction Approval: BJW
Date: 9/13/06

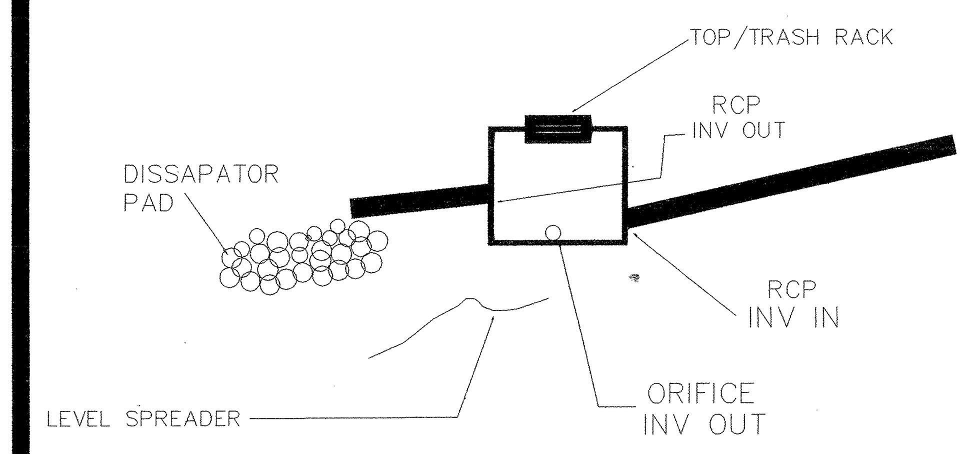
NOTES:
PIPE SECTIONS WILL BE LEFT SHORT SO STORM FLOWS WILL ENTER THE FRONT OF THE BASINS AND BE EXTENDED LATER.

SITE INFORMATION

ACREAGE	
1758.04-54-3431	114.85 ACRES
1758.11-56-6007 (PORTION OF)	19.28 ACRES
TOTAL:	134.13 ACRES
ZONING	
1758.04-54-3431	R-PUD
1758.11-56-6007	R-PUD
ADDITIONAL JONESVILLE ROAD ROW	
TOTAL ROW : 48,606 S.F. (1.11 ACRES)	
OVERALL DENSITY------2.236 UNITS/ACRE	



BYPASS STRUCTURE PLAN
(SEE PLAN FOR DETAILS)



BYPASS STRUCTURE PROFILE
NOT TO SCALE

LEVEL SPREADER BYPASS STRUCTURE DETAIL

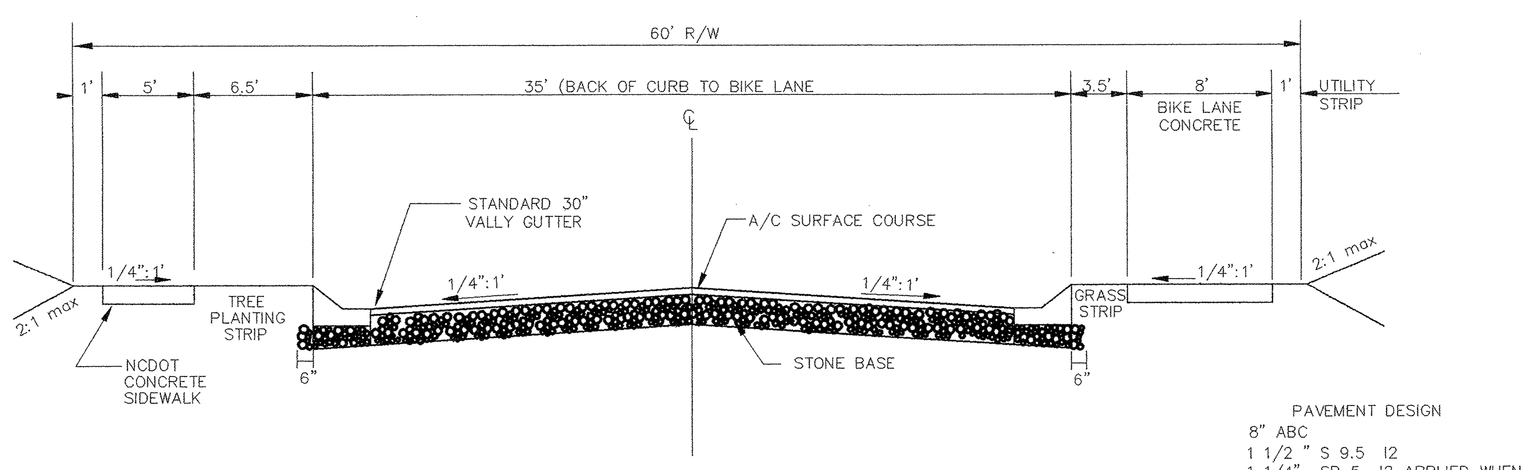
CREEK CROSSING SEQUENCE

1. INSTALL EROSION CONTROL MEASURES AROUND CREEK INCLUDING SILT FENCE, DIVERSION DITCHES, ROCK CHECK DAMS, AS SHOWN ON PLANS.
2. CALL FOR INSPECTION BY WAKE COUNTY EROSION CONTROL INSPECTOR.
3. CLEAR AND GRUB AREAS REQUIRED FOR PIPE CROSSING AND FILLING OF ROADWAY PIPE ABOVE CROSSING.
4. INSTALL TEMPORARY DIVERSION CREEK WITH RIP RAP STABILIZATION.
5. INSTALL CULVERT AND HEADWALL AS SHOWN ON PLANS.
6. FILL IN AROUND CULVERT TO SECURE AND STABILIZE.
7. ONCE PIPE IS INSTALLED AND STABILIZED, REMOVE TEMPORARY DIVERSION CREEK.
8. INSTALL SILT FENCE AS FILL IS INSTALLED AROUND CULVERT. ADJUST SILT FENCE AS FILL LAYERS ARE ADDED.
9. ONCE ALL FILL IS IN PLACE, SEED AND STABILIZE FILL SLOPES.

QUANTITY TAKE-OFF

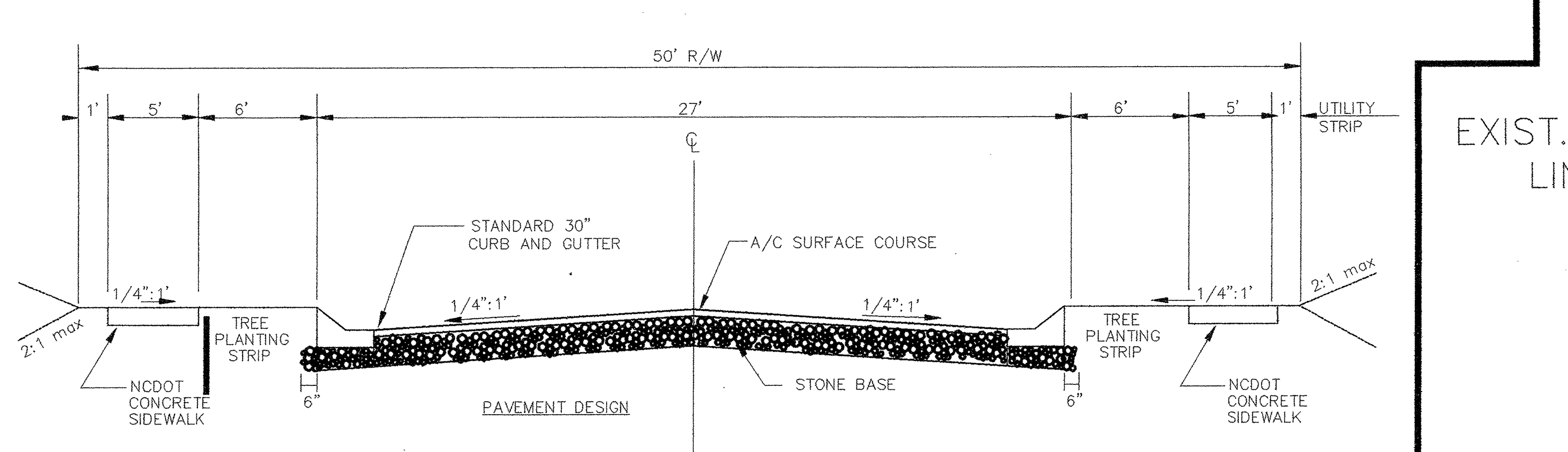
WATERLINE	PHASE 1	PHASE 2	PHASE 3
12" DIP	3140 L.F.	4200 L.F.	2320 L.F.
8" DIP	2200L.F.	360 L.F.	2240 L.F.
6" DIP	0 L.F.	0 L.F.	240 L.F.
SANITARY SEWER			
8" PVC (PUBLIC)	5600 L.F.	2520 L.F.	3080 L.F.
MANHOLES (PUBLIC)	71	24	27
SANITARY SEWER OUTFALL	4100 L.F.	180 L.F.	880 L.F.

STORMSEWER	TOTAL
15"	3,019 L.F.
18"	2,277 L.F.
24"	1,863 L.F.
30"	1,107 L.F.
36"	292 L.F.
48"	155 L.F.
120"	141 L.F.
FES	6
BPS	12
YI	17
CB	87
CB-DOUBLE	11
PAVEMENT	
60' R/W 35' B/B	12,320 L.F.
50' R/W 27' B/B	1,920 L.F.
5' SIDEWALK	11,500 L.F.
8' SIDEWALK	4,144 L.F.



PAVEMENT DESIGN
8" ABC
1 1/2 " S 9.5 I2
1 1/4" SP 5 I2 APPLIED WHEN 75% OF LOTS ARE BUILT OUT IN CORRESPONDING PHASE.

RESIDENTIAL COLLECTOR STREET WITH BIKE LANE
NOT TO SCALE



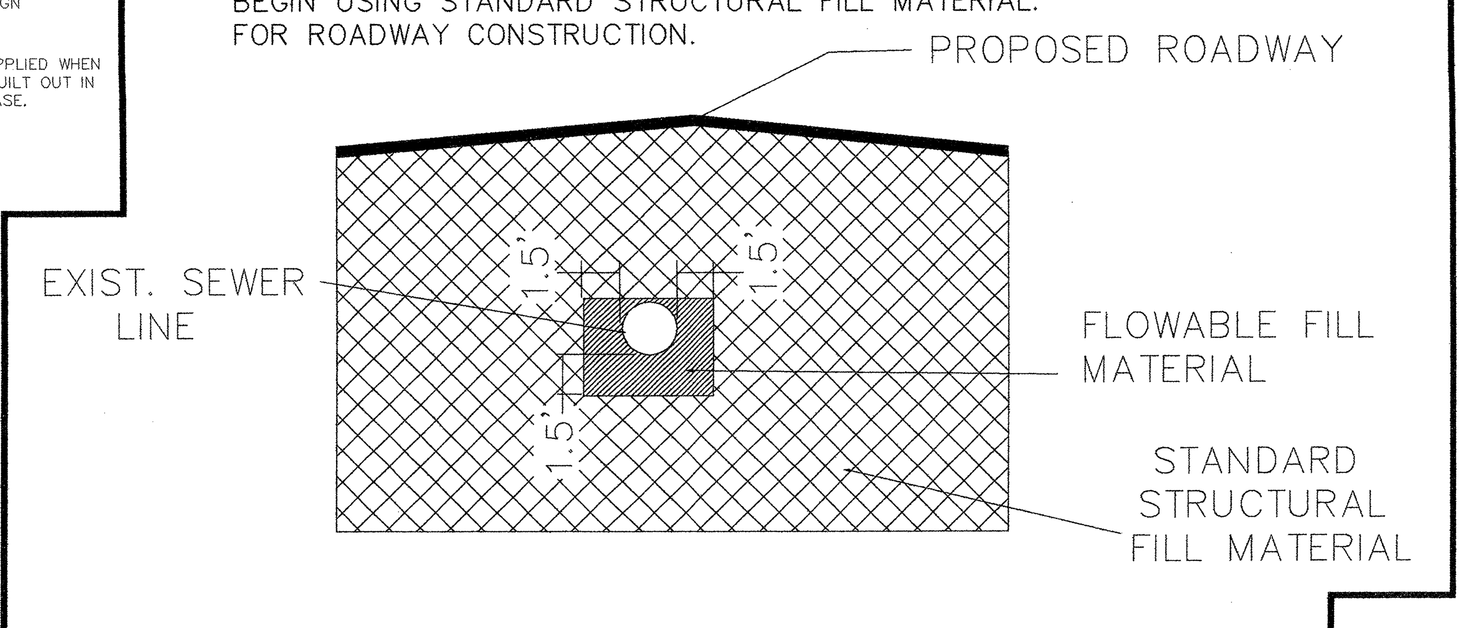
PAVEMENT DESIGN
8" ABC
1 1/2 " S9.5 I2
1 1/4" SP 5 I2 APPLIED WHEN 75% OF LOTS ARE BUILT OUT IN CORRESPONDING PHASE.

LOCAL RESIDENTIAL STREET
NOT TO SCALE

NOTE: CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES RESULTING FROM THE DISTURBANCE OF THE EXISTING AERIAL SEWER LINE.

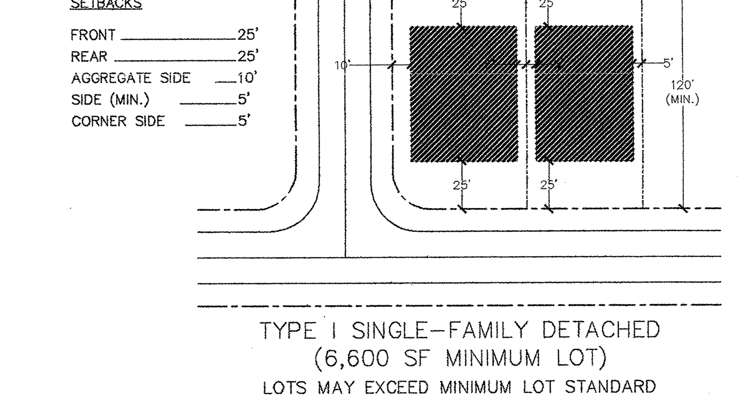
CREEK CROSSING SEWER CONSTRUCTION SEQUENCE

1. INSTALL STORM DRAINAGE SYSTEM .
2. AFTER STORM DRAINAGE SYSTEM IS INSTALLED BEGIN FILLING. WHEN FILL MATERIAL IS WITHIN 1.5 FEET OF EXISTING SEWER LINE BEGIN USING FLOWABLE FILL MATERIAL TO MINIMIZE THE DISTURBANCE OF THE EXISTING SEWER LINE BY HEAVY COMPACTION EQUIPMENT.
3. WHEN FLOWABLE FILL MATERIAL IS .25' OVER EXISTING SEWER LINE BEGIN USING STANDARD STRUCTURAL FILL MATERIAL. FOR ROADWAY CONSTRUCTION.

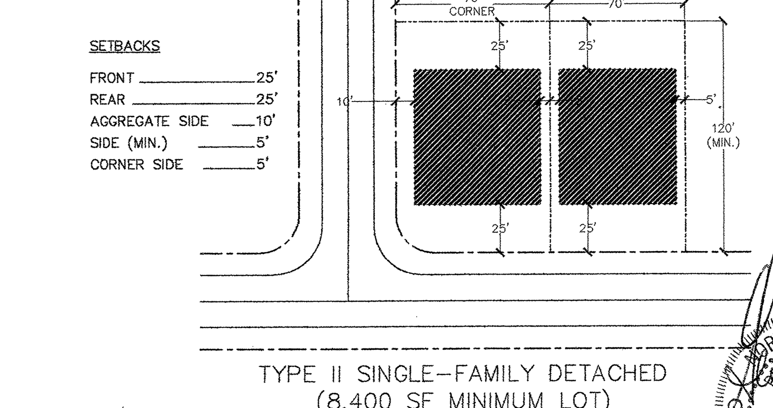


SECTION THROUGH EXISTING SEWER LINE
(NOT TO SCALE)

TYPE LOTS	NUMBER
TYPE I	120
TYPE II	180
TOTAL	300



TYPE I SINGLE-FAMILY DETACHED
(6,600 SF MINIMUM LOT)
LOTS MAY EXCEED MINIMUM LOT STANDARD



TYPE II SINGLE-FAMILY DETACHED
(8,400 SF MINIMUM LOT)
LOTS MAY EXCEED MINIMUM LOT STANDARD

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 11636 GEORGE M. MCINTYRE

NOTES:
ALL CONSTRUCTION OF SANITARY SEWER AND WATERLINE TO BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.

ALL CONSTRUCTION OF ROADS AND STORM DRAINAGE TO BE IN ACCORDANCE WITH TOWN OF ROLESVILLE AND NCDOT STANDARDS AND SPECIFICATIONS.

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CARLTON POINTE SUBDIVISION
SITE DATA SHEET AND
STORM DRAINAGE CALCULATIONS
ROLESVILLE, NC

REVISIONS
REV 9/19/06

CLIENT
CARLTON GROUP OF NC, LLC
20 SQUADRON BLVD
NEW CITY, NEW YORK 10956
914-429-0683

DRAWN DRD
CHECKED GMM
APPROVED GMM
START DATE
JOB CODE -

DRAWING No.
SD-1

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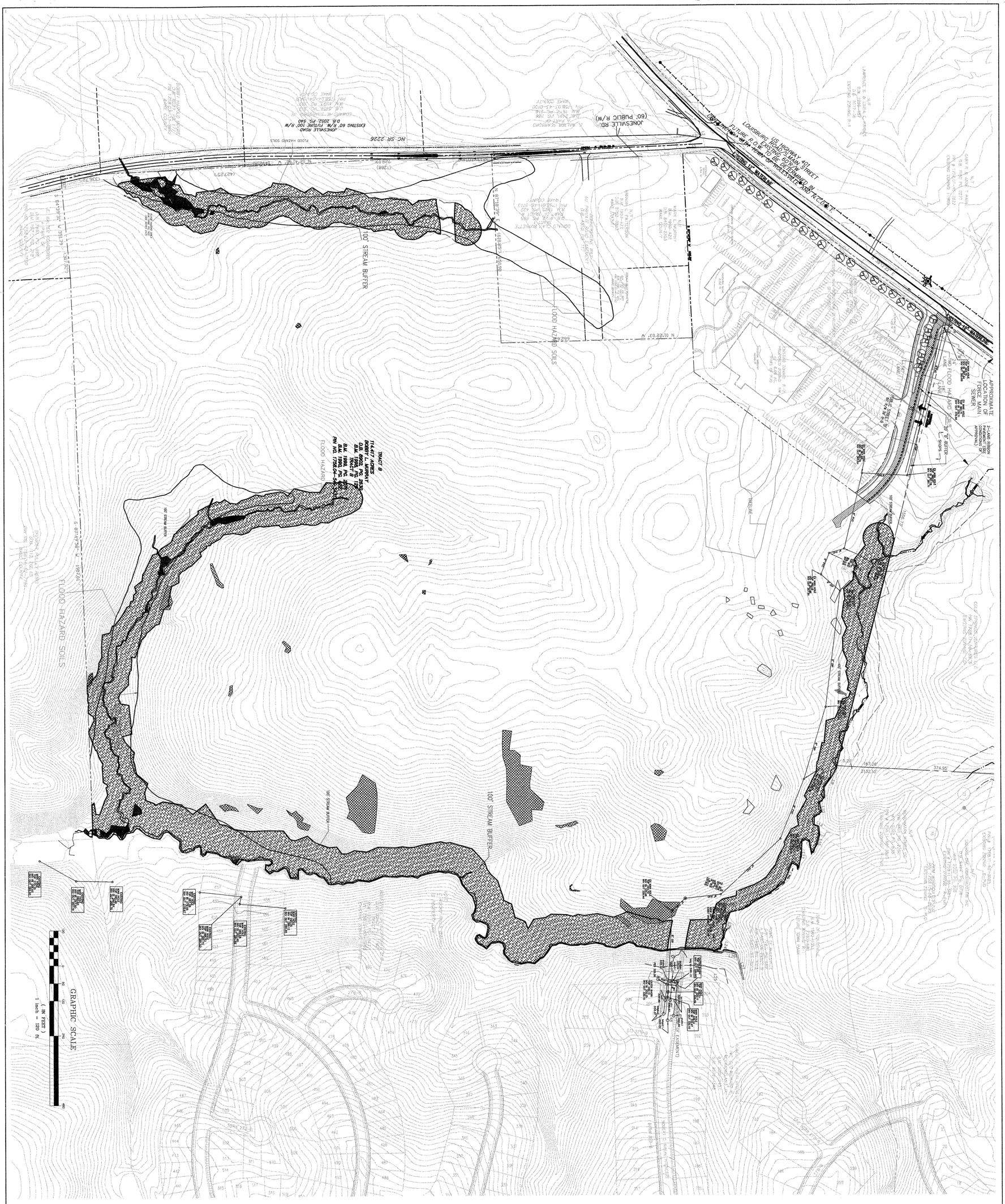

NOTES:
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ALL CONSTRUCTION OF ROADS AND STORM DRAINAGE TO BE IN ACCORDANCE WITH TOWN OF ROLESVILLE AND NCDOT STANDARDS AND SPECIFICATIONS.

N

PUBLIC
Sewer Collection/Extension System
The City of Raleigh consents to the connection to the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh
Public Utilities Department Permit: S-2963
Construction Approval: 9/13/05
Date:

PUBLIC
Water Distribution/Extension System
The City of Raleigh consents to the connection to the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh
Public Utilities Department Permit: W-2446
Construction Approval: 9/13/05
Date:

DRAWING No. S-1

JOB CODE
START DATE
APPROVED GMM
CHECKED CJAM
DRAWN DRD

CLIENT
CARLTON GROUP OF NC, LLC
20 SQUADRON BLVD
NEW CITY, NEW YORK 10956
845-638-9300

REVISIONS

CARLTON POINTE SUBDIVISION
EXISTING SITE CONDITIONS

ROLESVILLE, NC

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Raleigh, NC 27609
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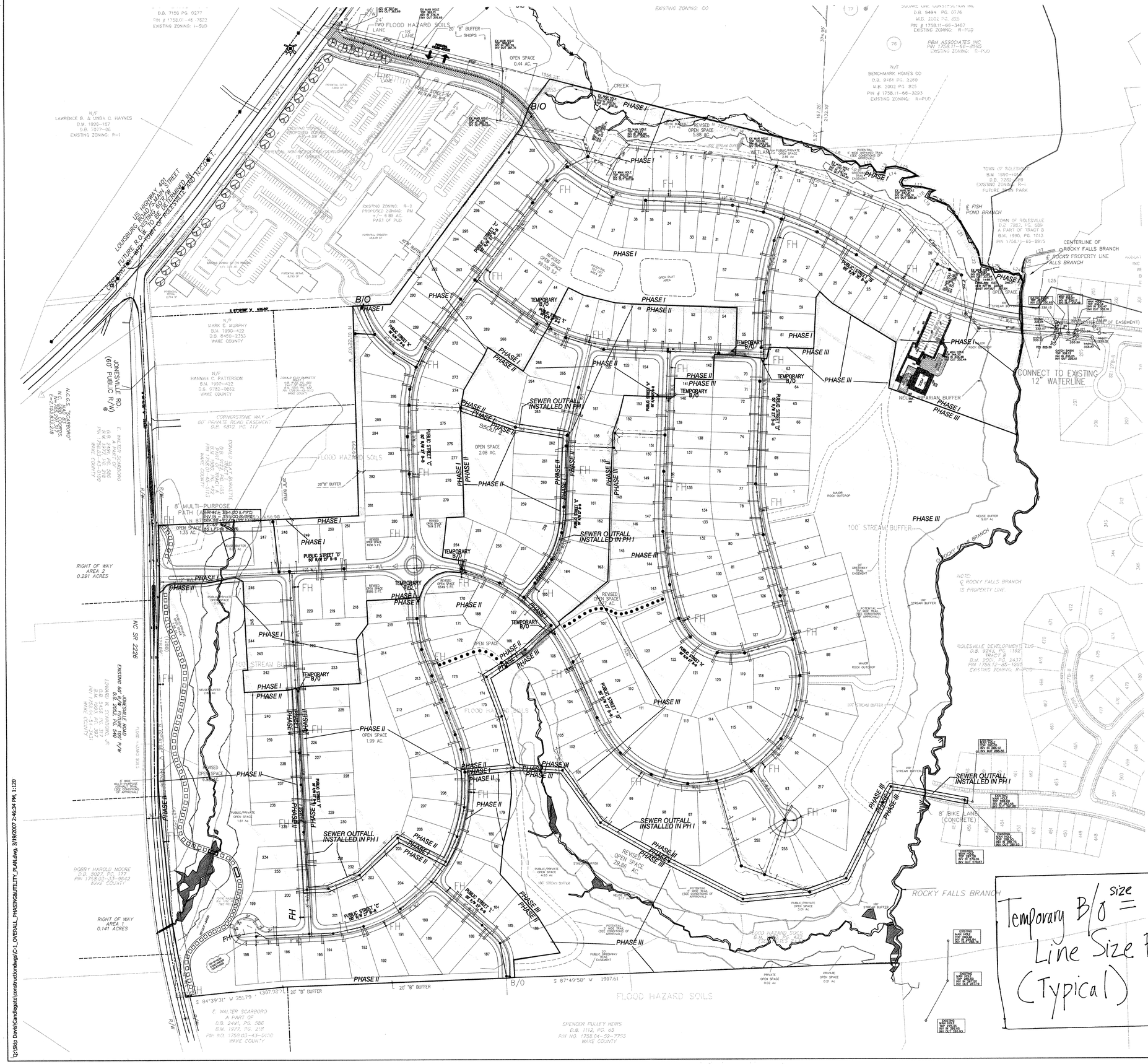

	Phase I	Phase II	Phase III
UNITS	100	104	96
LOT #'S	2-44, 55-61, 218-223, 242-251, 267-300	45-54, 142, 154-168, 170-216, 224-241, 254-266	1, 62-141, 143-153
WATER (L.F.)	6" - 0 8" - 2,200' 12" - 3,140'	6" - 0 8" - 360' 12" - 4,200'	6" - 240' 8" - 2,240' 12" - 2,320'
SEWER (L.F.)	8" - 5,600'	8" - 2,520'	8" - 3,080'
SEWER OUTFALL (L.F.)	8" - 4,100'	8" - 180'	8" - 880'
MANHOLES	71	24	27
FIRE HYDRANTS	10	13	9
BLOW-OFFS	2	1	0
TEMPORARY BLOW-OFFS	6	2	0

NOTES:
ALL CONSTRUCTION OF SANITARY SEWER AND WATERLINE TO BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.

ALL CONSTRUCTION OF ROADS AND STORM DRAINAGE TO BE IN ACCORDANCE WITH TOWN OF ROLESVILLE AND NCDOT STANDARDS AND SPECIFICATIONS.

PUBLIC
Water Distribution/Extension System
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City of Raleigh
Public Utilities Department Permit: W-2446
Construction Approval: BR
Date: 9/13/06

PUBLIC
Sewer Collection/Extension System
The City of Raleigh consents to the connection to the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh
Public Utilities Department Permit: S-2953
Construction Approval: BR
Date: 9/13/06

Phase Plan Revision
Approved 4/19/07
BR

Temporary B/O size = Line Size B/O (Typical)

GRAPHIC SCALE
120 0 60 120 240 480
(IN FEET)
1 inch = 120 ft.

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CARLTON POINTE SUBDIVISION
OVERALL PHASING & UTILITY PLAN
ROLESVILLE, NC

REVISIONS

CLIENT
CARLTON GROUP OF NC, LLC
20 SQUADRON BLVD
NEW CITY, NEW YORK 10956
914-429-0683

DRAWN: DRD
CHECKED: GMM
APPROVED: GMM
START DATE:
JOB CODE:

DRAWING No.
C-1

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NOTES:
ALL CONSTRUCTION OF SANITARY SEWER AND WATERLINE TO BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.

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PUBLIC
Water Distribution/Extension System
The City of Raleigh consents to the connection to the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh Public Utilities Department Permit: W-2416
Construction Approval: DRD 9/13/06
Date:

PUBLIC
Sewer Collection/Extension System
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City of Raleigh Public Utilities Department Permit: S-2953
Construction Approval: DRD 9/13/06
Date:

Phase Plan Revision
Approved 4/19/07
B-Ip

GRAPHIC SCALE
120 0 60 120 240
(IN FEET)
1 inch = 120 ft.

McIntyre & Associates, PLLC
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Raleigh, NC 27609
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CARLTON POINTE SUBDIVISION
OVERALL SITE LAYOUT PLAN with PHASING

ROLESVILLE, NC

REVISIONS

CLIENT
CARLTON GROUP OF NC, LLC
20 SQUADRON BLVD
NEW CITY, NEW YORK 10956
914-429-0683

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APPROVED	GMM
START DATE	
JOB CODE	–

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C-1

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NOTES:
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PUBLIC
Water Distribution/Extension System
The City of Raleigh consents to the connection to the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh
Public Utilities Department Permit: W-2446
Construction Approval: B. Kay
Date: 9/19/06

PUBLIC
Sewer Collection/Extension System
The City of Raleigh consents to the connection to the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh
Public Utilities Department Permit: S-2953
Construction Approval: B. Kay
Date: 9/19/06

GRAPHIC SCALE
60 0 30 60 120 240
(IN FEET)
1 inch = 60 ft.

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(919) 876-0699 (Fax)

CARLTON POINTE SUBDIVISION
ENLARGED SITE PLAN – NORTH with PHASING

ROLESVILLE, NC

REVISIONS
ROLESVILLE REVIEW 10/10/06
FINAL 1/12/06

CLIENT
CARLTON GROUP OF NC, LLC
20 SQUADRON BLVD.
NEW CITY, NEW YORK 10956
849-638-9300

DRAWN: DRD
CHECKED: GMM
APPROVED: GMM
START DATE:
JOB CODE:

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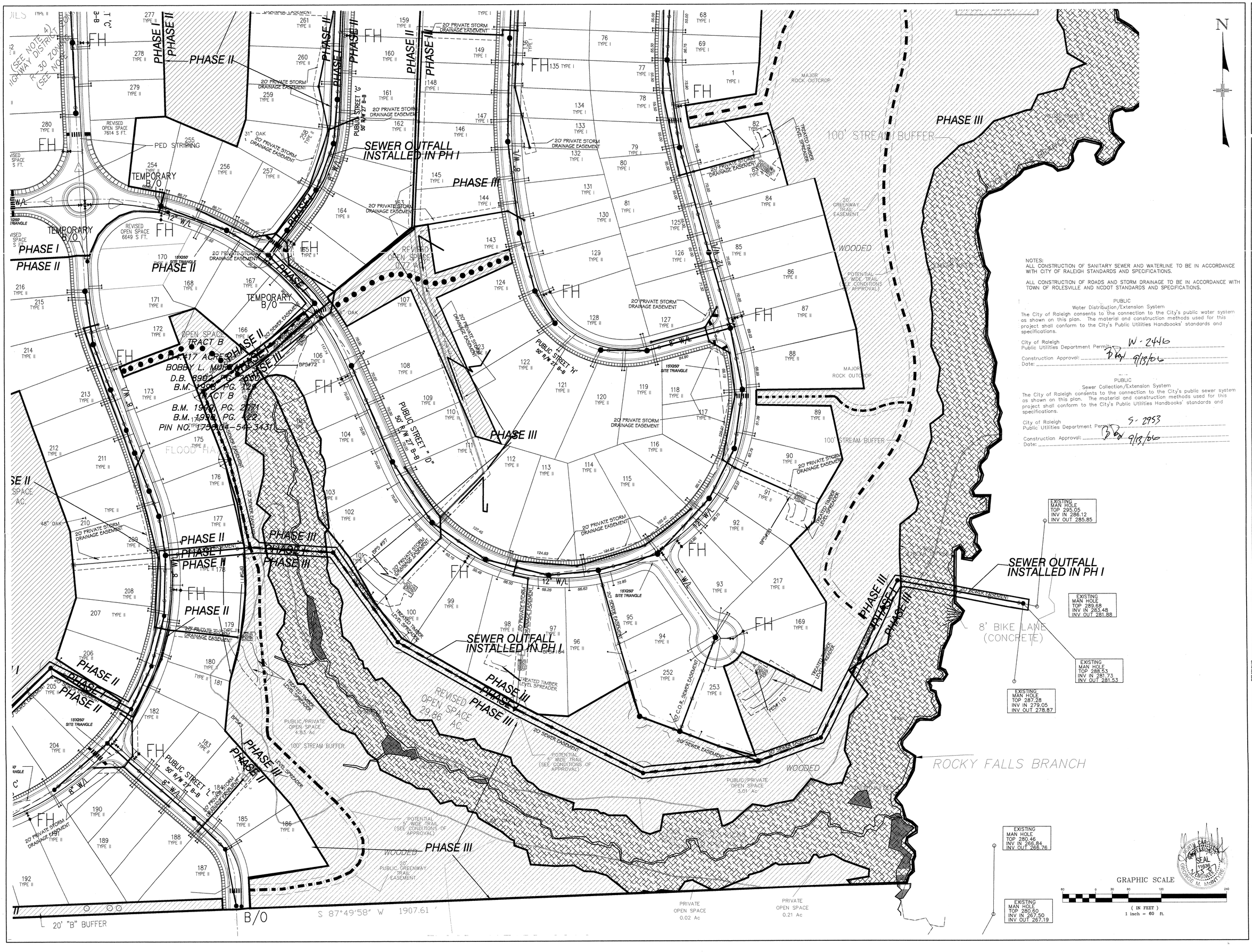
C-1A



NOTES:
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PUBLIC
Water Distribution/Extension System
The City of Raleigh consents to the connection to the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh Public Utilities Department Permit: W-2446
Construction Approval: 9/13/06
Date:

PUBLIC
Sewer Collection/Extension System
The City of Raleigh consents to the connection to the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh Public Utilities Department Permit: S-2953
Construction Approval: 9/13/06
Date:

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CARLTON POINTE SUBDIVISION
ENLARGED SITE LAYOUT PLAN - SOUTHEAST with PHASING

ROLESVILLE, NC

REVISIONS:
ROLESVILLE REVIEW 1/7/08
FINAL 1/7/08

CLIENT:
CARLTON GROUP OF NC, LLC
20 SQUADRON BLVD.
NEW CITY, NEW YORK 10956
914-429-0683

DRAWN	DRD
CHECKED	GMM
APPROVED	GMM
START DATE	
JOB CODE	

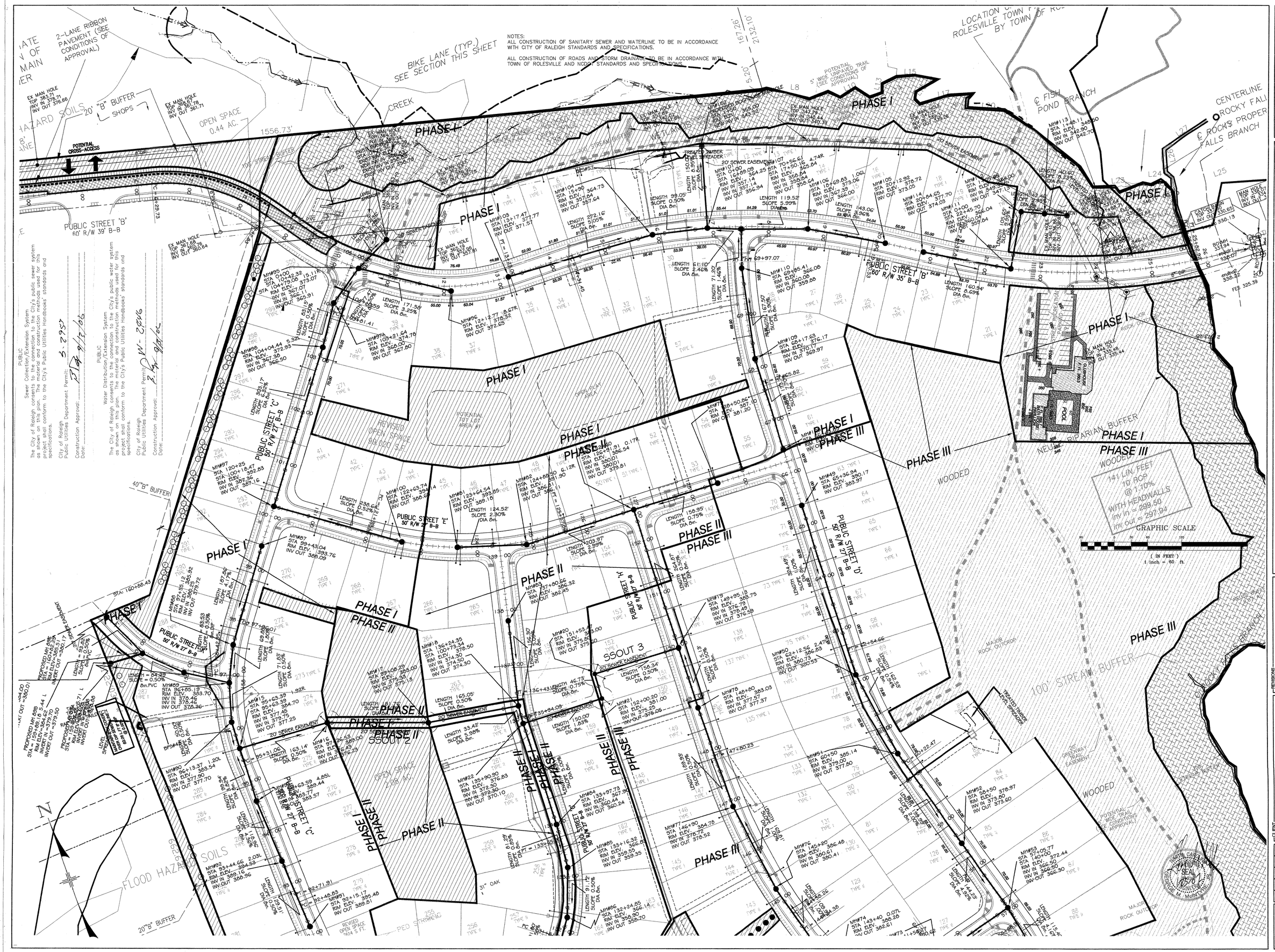
DRAWING No.
C-10

NOTES:
ALL CONSTRUCTION OF SANITARY SEWER AND WATERLINE TO BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.

ALL CONSTRUCTION OF ROADS AND STORM DRAINAGE TO BE IN ACCORDANCE WITH TOWN OF ROLESVILLE AND NCDOT STANDARDS AND SPECIFICATIONS.

PUBLIC
Sewer Collection/Extension System
The City of Raleigh consents to the connection to the City's public sewer system as shown on this plan. The material and construction methods used for this project conform to the City's Public Utilities Handbooks' standards and specifications.
City of Raleigh
Public Utilities Department Permit: S-2950
Construction Approval: BTW 9/12/06
Date:

PUBLIC
Water Distribution/Extension System
The City of Raleigh consents to the connection to the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.
City of Raleigh
Public Utilities Department Permit: W-2046
Construction Approval: BTW 9/12/06
Date:



McIntyre & Associates, PLLC
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CARLTON POINTE SUBDIVISION
ENLARGED UTILITY PLAN – SANITARY SEWER PLAN – NORTH
with PHASING
ROLESVILLE, NC

REVISIONS
ROLESVILLE REVIEW 1/17/08
FINAL 1/12/09

CLIENT
CARLTON GROUP OF NC, LLC
20 SQUADRON BLVD.
NEW CITY, NEW YORK 10956
914-429-0683

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CHECKED	GMM
APPROVED	GMM
START DATE	—
JOB CODE	—

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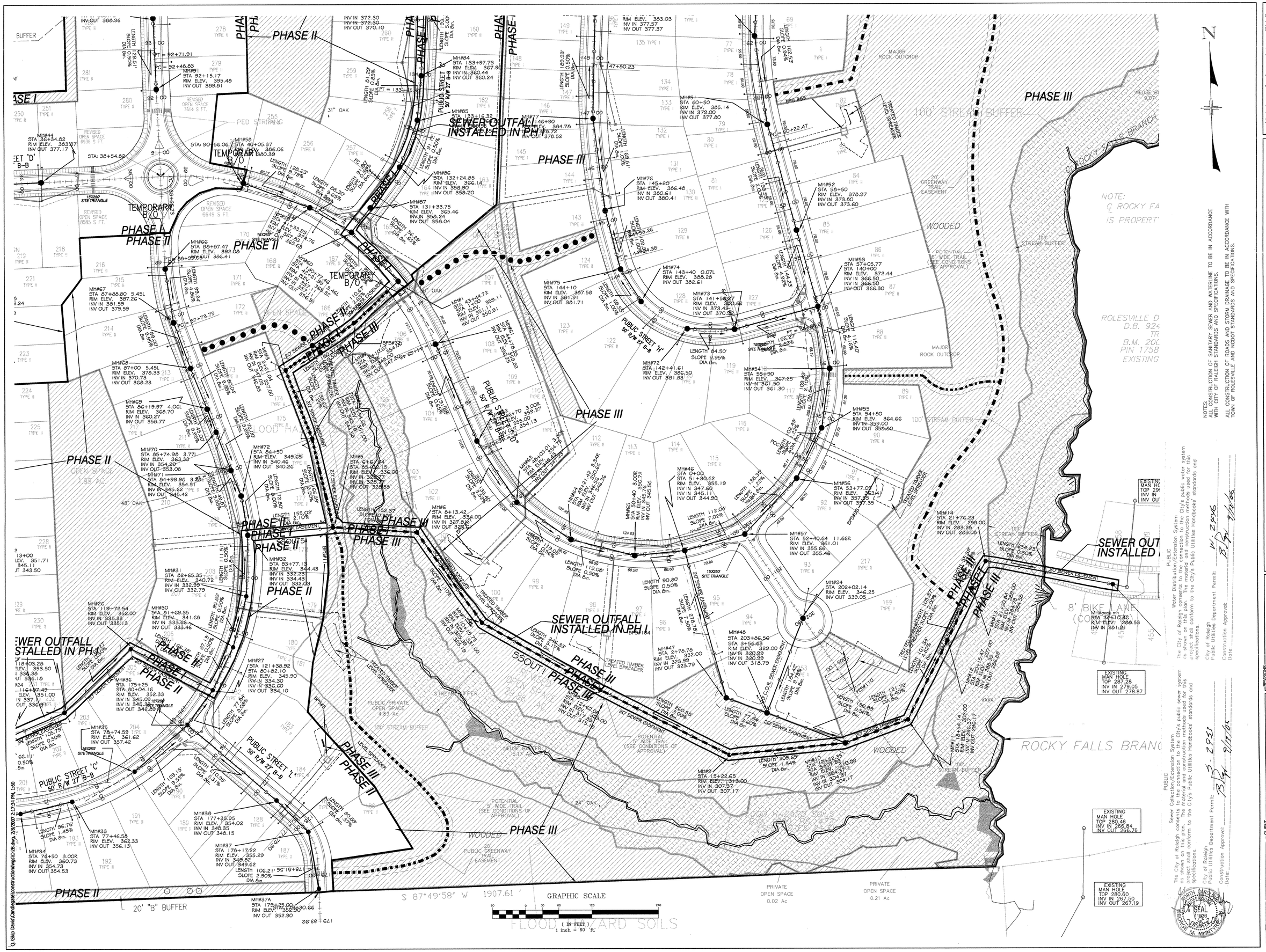

NOTES:
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ALL CONSTRUCTION OF ROADS AND STORM DRAINAGE TO BE IN ACCORDANCE WITH TOWN OF ROLESVILLE AND NCDOT STANDARDS AND SPECIFICATIONS.

PUBLIC
Water Distribution/Extension System
The City of Raleigh consents to the connection to the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.
City of Raleigh Public Utilities Department Permit: W-2846
Construction Approval: B.M. 9/17/06
Date:

PUBLIC
Sewer Collection/Extension System
The City of Raleigh consents to the connection to the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.
City of Raleigh Public Utilities Department Permit: B-2955
Construction Approval: B.M. 9/17/06
Date:

McIntyre & Associates, PLLC
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CARLTON POINTE SUBDIVISION
ENLARGED UTILITY PLAN – SANITARY SEWER PLAN – SOUTHEAST
with PHASING
ROLESVILLE, NC

REVISIONS
ROLESVILLE REVIEW 1/30/06
FINAL 1/12/06

CLIENT
CARLTON GROUP OF NC, LLC
20 SQUADRON BLVD.
NEW CITY, NEW YORK 10956
914-429-0683

DRAWN	DRD
CHECKED	GMM
APPROVED	GMM
START DATE	
JOB CODE	–

DRAWING No.
C-2E

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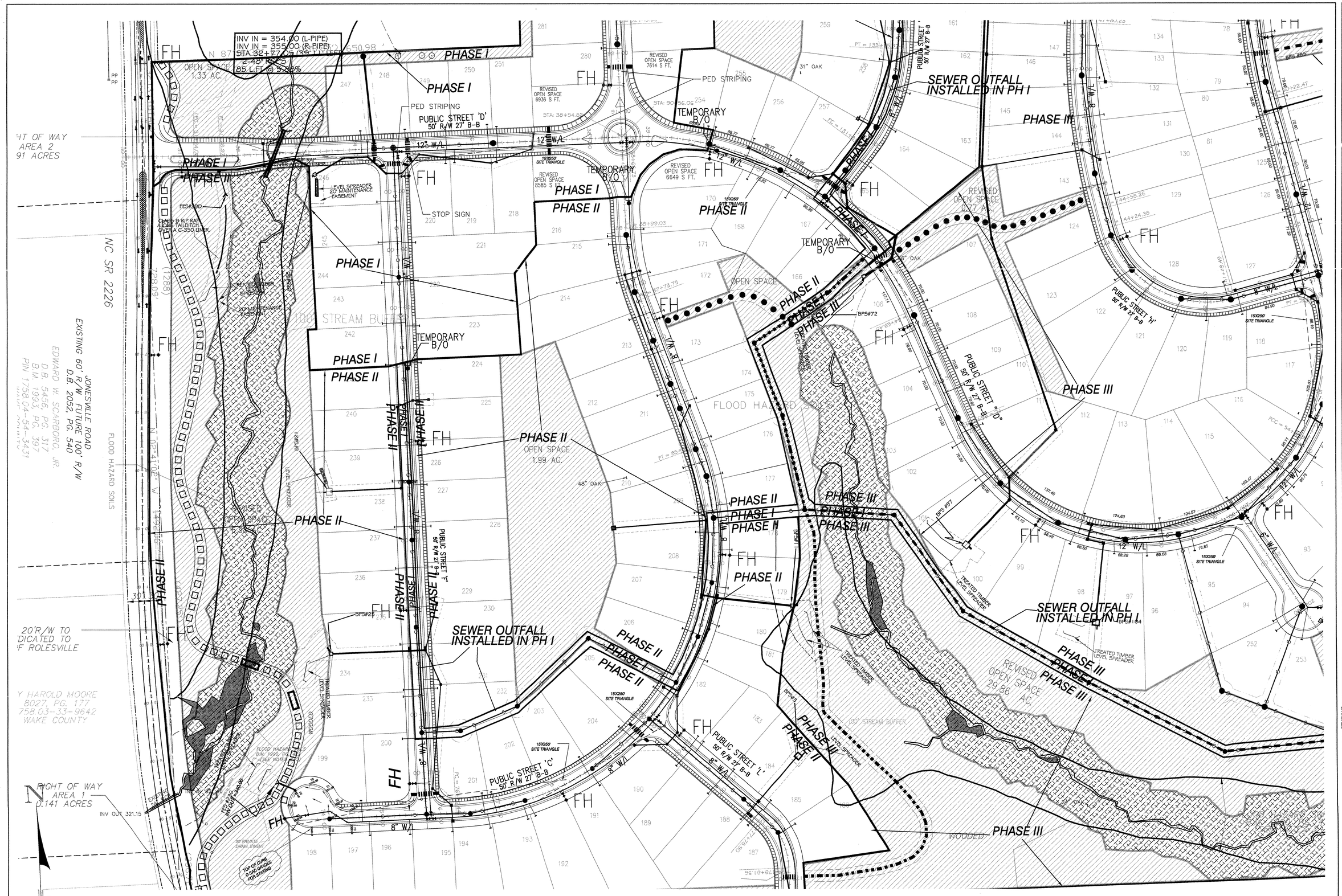

NOTES:
ALL CONSTRUCTION OF SANITARY SEWER AND WATERLINE TO BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.

ALL CONSTRUCTION OF ROADS AND STORM DRAINAGE TO BE IN ACCORDANCE WITH TOWN OF ROLESVILLE AND NCDOT STANDARDS AND SPECIFICATIONS.

PUBLIC
Water Distribution/Extension System
The City of Raleigh consents to the connection to the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh
Public Utilities Department Permit: W-2446
Construction Approval: B. Ray
Date: 9/19/06

PUBLIC
Sewer Collection/Extension System
The City of Raleigh consents to the connection to the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh
Public Utilities Department Permit: S-2953
Construction Approval: B. Ray
Date: 9/19/06

NORTH CAROLINA PROFESSIONAL SEAL 11636 ENGINEER GRIGORIE M. MONTS

GRAPHIC SCALE
60 0 30 60 120 240
(IN FEET)
1 inch = 60 ft.

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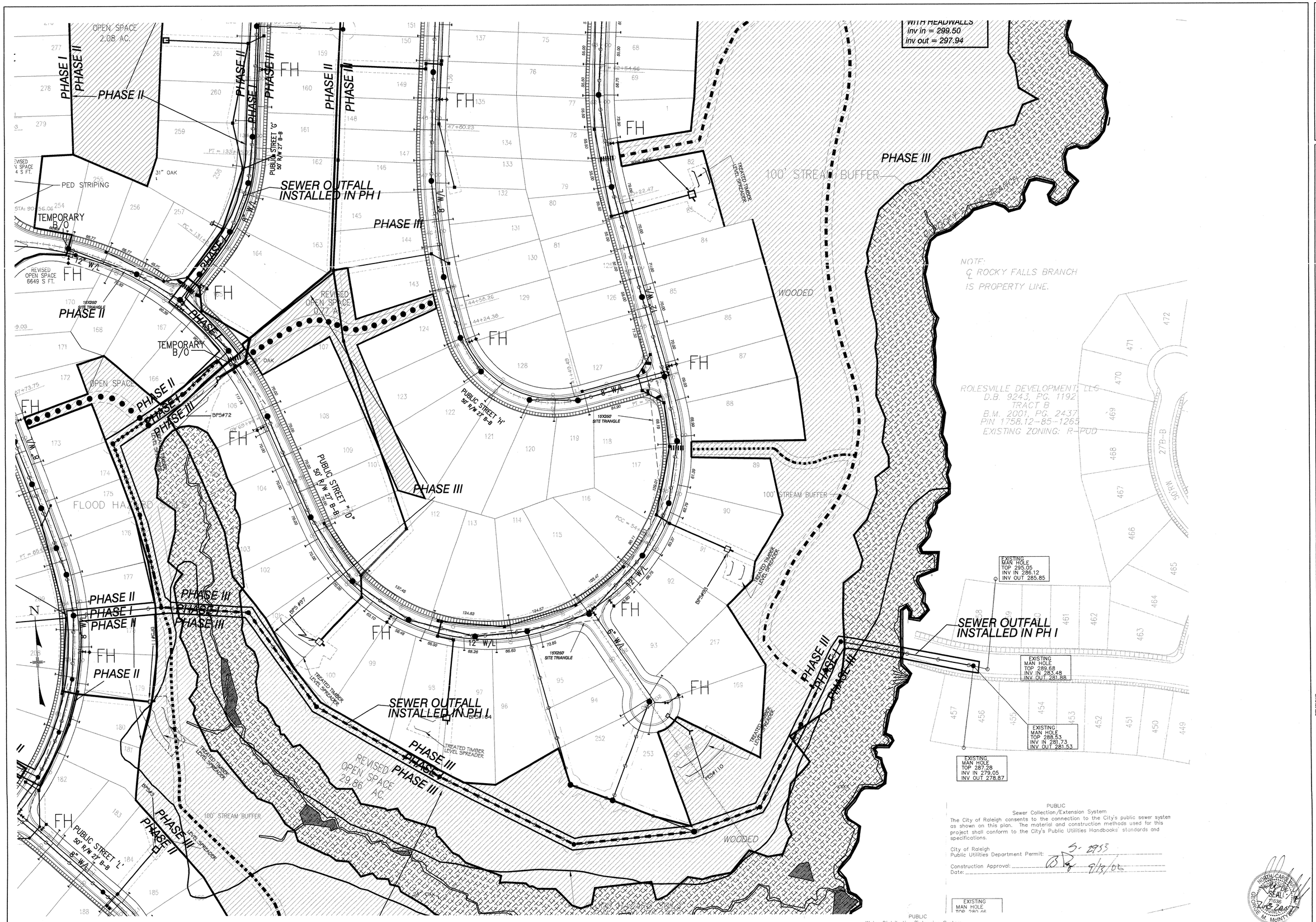
CARLTON POINTE SUBDIVISION
ENLARGED UTILITY PLAN - WATER DISTRIBUTION PLAN - SOUTHWEST with PHASING
ROLESVILLE, NC

REVISIONS
ROLESVILLE SEWER
FINAL 7/12/06

CLIENT
CARLTON GROUP OF NC, LLC
20 SQUADRON BLVD.
NEW CITY, NEW YORK 10956
914-429-0683

DRAWN: DRD
CHECKED: GMM
APPROVED: GMM
START DATE:
JOB CODE: –

DRAWING No.
C-3A



NOTES:
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ALL CONSTRUCTION OF ROADS AND STORM DRAINAGE TO BE IN ACCORDANCE WITH TOWN OF ROLESVILLE AND NCDOT STANDARDS AND SPECIFICATIONS.

PUBLIC
Water Distribution/Extension System
The City of Raleigh consents to the connection to the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh
Public Utilities Department Permit: W-2446

Construction Approval: B. Day
Date: 9/13/06

PUBLIC
Sewer Collection/Extension System
The City of Raleigh consents to the connection to the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh
Public Utilities Department Permit: S-2955

Construction Approval: B. Day
Date: 9/13/06

GRAPHIC SCALE
50 0 30 60 120 240
(IN FEET)
1 inch = 60 ft.

NORTH CAROLINA PROFESSIONAL SEAL 1636 GEORGE M. McINTYRE

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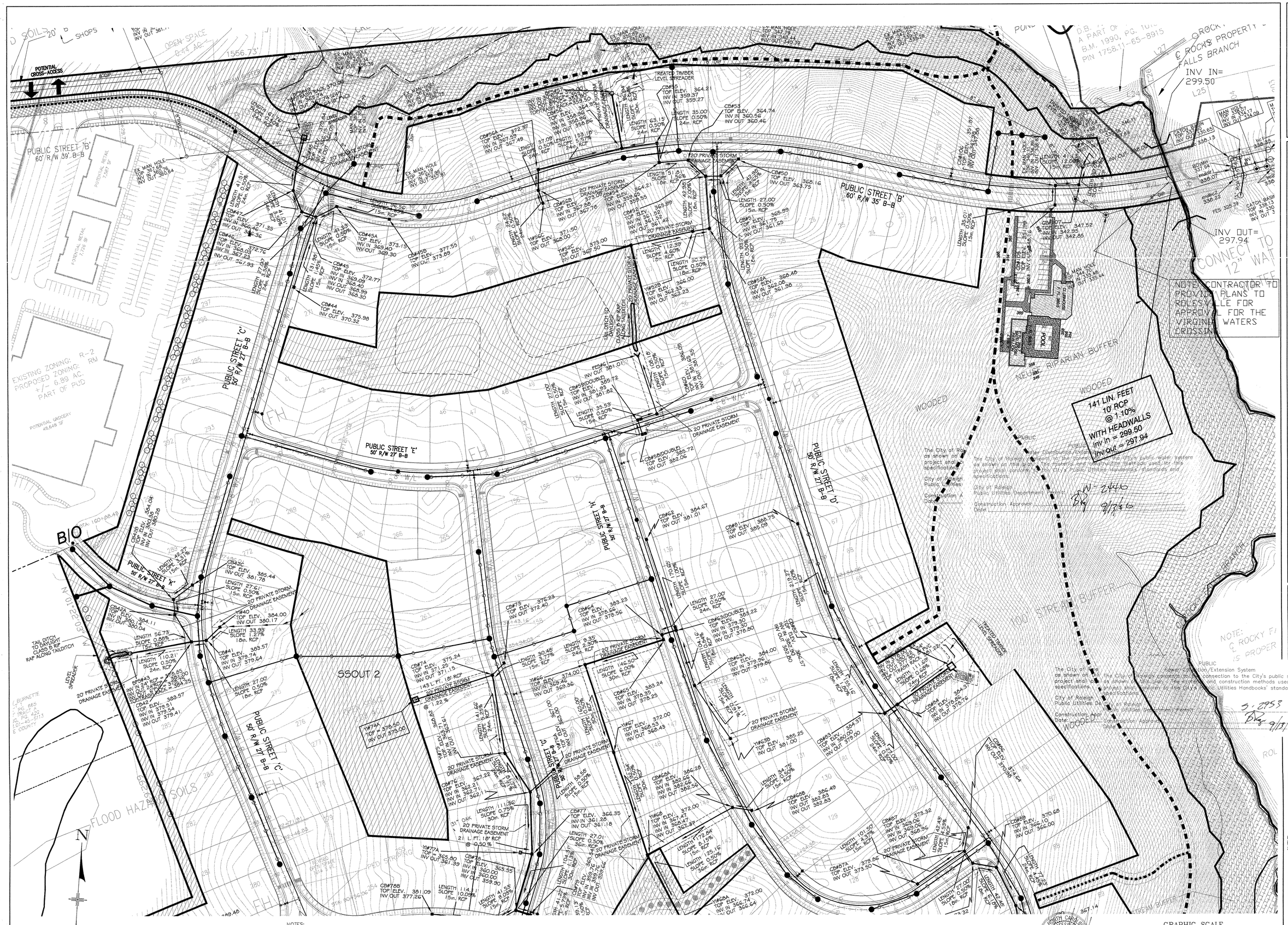
CARLTON POINTE SUBDIVISION
ENLARGED UTILITY PLAN - WATER DISTRIBUTION PLAN - SOUTHEAST with PHASING
ROLESVILLE, NC

REVISIONS
ROLESVILLE REVIEW 1/20/06
FINAL 1/12/06

CLIENT
CARLTON GROUP OF NC, LLC
20 SQUADRON BLVD.
NEW CITY, NEW YORK 10956
914-429-0683

DRAWN: DRD
CHECKED: GMM
APPROVED: GMM
START DATE:
JOB CODE: –

DRAWING No.
C-3B



NOTES:
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ALL CONSTRUCTION OF ROADS AND STORM DRAINAGE TO BE IN ACCORDANCE WITH TOWN OF ROLESVILLE AND NCDOT STANDARDS AND SPECIFICATIONS.

GRAPHIC SCALE
(IN FEET)
1 inch = 60 ft.

McIntyre & Associates, PLLC
Engineering & Land Planners
4932-B Windy Hill Drive
Raleigh, NC 27609
mmcintyre@aol.com
(919) 876-0145 (Office)
(919) 876-0699 (Fax)

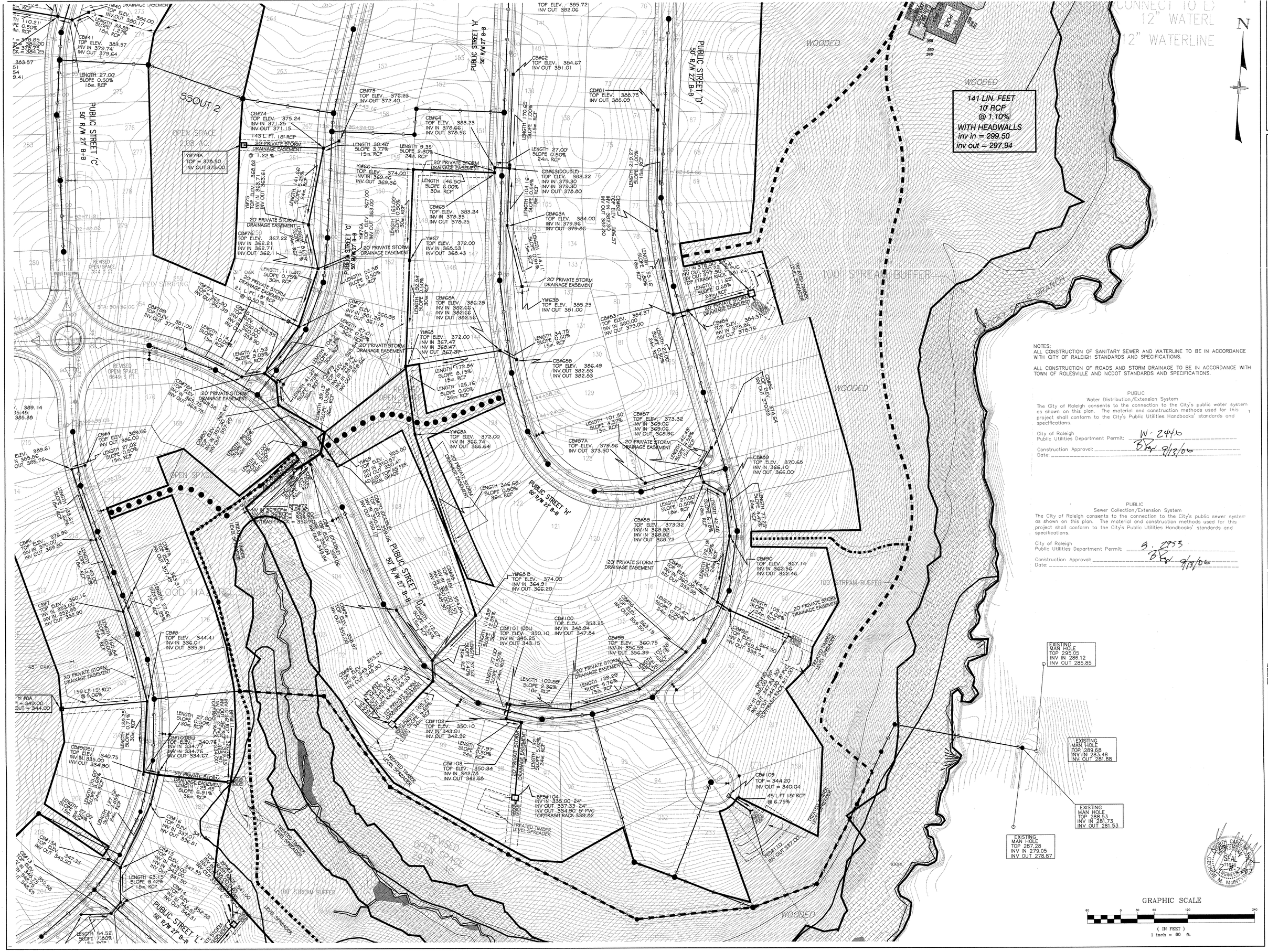
CARLTON POINTE SUBDIVISION
ENLARGED STORM DRAINAGE PLAN - NORTH

ROLESVILLE, NC

CLIENT
CARLTON GROUP OF NC, LLC
20 SQUADRON BLVD.
NEW CITY, NEW YORK 10956
914-429-0683

DRAWN	DRD
CHECKED	GMM
APPROVED	GMM
START DATE	
JOB CODE	–

DRAWING No.
C-4



NOTES:
ALL CONSTRUCTION OF SANITARY SEWER AND WATERLINE TO BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.

ALL CONSTRUCTION OF ROADS AND STORM DRAINAGE TO BE IN ACCORDANCE WITH TOWN OF ROLESVILLE AND NCDOT STANDARDS AND SPECIFICATIONS.

PUBLIC
Water Distribution/Extension System
The City of Raleigh consents to the connection to the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh
Public Utilities Department Permit: W-2446
Construction Approval: BRY 9/13/06
Date:

PUBLIC
Sewer Collection/Extension System
The City of Raleigh consents to the connection to the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh
Public Utilities Department Permit: S-2953
Construction Approval: BRY 9/13/06
Date:

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CARLTON POINTE SUBDIVISION
ENLARGED STORM DRAINAGE PLAN – SOUTHEAST

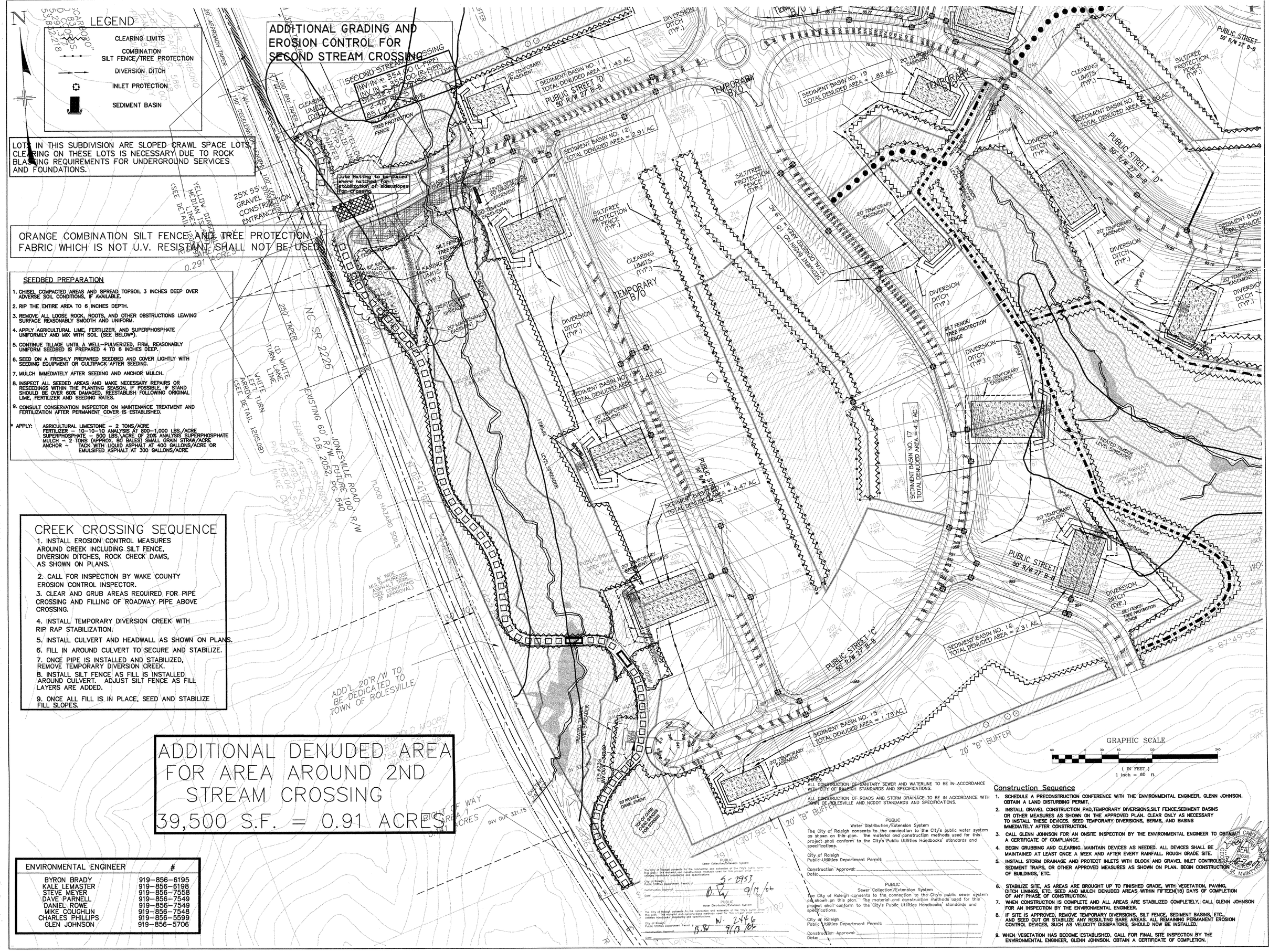
ROLESVILLE, NC

REVISIONS
ROLESVILLE REVIEW 7/07/06
FINAL 1/12/06

CLIENT
CARLTON GROUP OF NC, LLC
20 SQUADRON BLVD.
NEW CITY, NEW YORK 10956
914-429-0683

DRAWN DRD
CHECKED GMM
APPROVED GMM
START DATE
JOB CODE –

DRAWING No.
C-4B



ENVIRONMENTAL ENGINEER	#
BYRON BRADY	919-856-6195
KALE LEMASTER	919-856-6198
STEVE MEYER	919-856-7558
DAVE PARNELL	919-856-7549
DANIEL ROWE	919-856-7549
MIKE COUGHLIN	919-856-7548
CHARLES PHILLIPS	919-856-5599
GLEN JOHNSON	919-856-5706

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CARLTON POINTE SUBDIVISION
AMENDED GRADING AND EROSION CONTROL PLAN FOR SECOND STREAM CROSSING
ROLESVILLE, NC

REVISIONS

CLIENT
CARLTON GROUP OF NC, LLC
20 SQUADRON BLVD.
NEW CITY, NEW YORK 10956
914-429-0683

DRAWN: DRD
CHECKED: GMM
APPROVED: GMM
START DATE:
JOB CODE:

DRAWING No.
EC-1

ORANGE COMBINATION SILT FENCE AND TREE PROTECTION FABRIC WHICH IS NOT U.V. RESISTANT SHALL NOT BE USED.

LOTS IN THIS SUBDIVISION ARE SLOPED CRAWL SPACE LOTS. CLEARING ON THESE LOTS IS NECESSARY DUE TO ROCK BLASTING REQUIREMENTS FOR UNDERGROUND SERVICES AND FOUNDATIONS.

LEGEND

- CLEARING LIMITS
- COMBINATION SILT FENCE/TREE PROTECTION
- DIVERSION DITCH
- INLET PROTECTION
- SEDIMENT BASIN

TOTAL DENUDED AREA= 87.893 ACRES

N

SEEDBED PREPARATION

1. CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3 INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE.
2. RIP THE ENTIRE AREA TO 6 INCHES DEPTH.
3. REMOVE ALL LOOSE ROCK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
4. APPLY AGRICULTURAL LIME, FERTILIZER, AND SUPERPHOSPHATE UNIFORMILY AND MIX WITH SOIL (SEE BELOW*).
5. CONTINUE TILLAGE UNTIL A WELL-PULVERIZED, FIRM, REASONABLY UNIFORM SEEDBED IS PREPARED 4 TO 6 INCHES DEEP.
6. SEED ON A FRESHLY PREPARED SEEDBED AND COVER LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK AFTER SEEDING.
7. MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH.
8. INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. IF STAND SHOULD BE OVER 60% DAMAGED, REESTABLISH FOLLOWING ORIGINAL LIME, FERTILIZER AND SEEDING RATES.
9. CONSULT CONSERVATION INSPECTOR ON MAINTENANCE TREATMENT AND FERTILIZATION AFTER PERMANENT COVER IS ESTABLISHED.

* APPLY: AGRICULTURAL LIMESTONE – 2 TONS/ACRE
FERTILIZER – 10-10-10 ANALYSIS AT 800-1,000 LBS./ACRE
SUPERPHOSPHATE – 500 LBS./ACRE OF 20% ANALYSIS SUPERPHOSPHATE
MULCH – 2 TONS (APPROX. 80 BALES) SMALL GRAIN STRAW/ACRE
ANCHOR – TACK WITH LIQUID ASPHALT AT 400 GALLONS/ACRE OR EMULSIFED ASPHALT AT 300 GALLONS/ACRE

SEEDING SCHEDULE

PERMANENT SEEDING – SHOULDERS, SIDE DITCHES, SLOPES (MAX. 3:1)

DATE	TYPE	PLANTING RATE
AUG. 15– NOV. 1	TALL FESCUE	200 LBS./ACRE
NOV. 1 – MAR. 1	TALL FESCUE AND ABRUZZI RYE *(NURSE CROP)	200 LBS./ACRE 25 LBS./ACRE
MAR. 1 – APR. 15	TALL FESCUE	200 LBS./ACRE
APR. 15– JUN. 30	HULLED COMMON BERMUDAGRASS	15 LBS./ACRE

PERMANENT SEEDING – SLOPES (3:1 TO 2:1)

AUG. 15–NOV.1	TALL FESCUE AND SERICEA LESPEDEZA (UNHULLED, UNSCARIFIED)	200 LBS/ACRE 60 TO 70 LBS/ACRE
NOV. 1–MAR.1	TALL FESCUE AND SERICEA LESPEDEZA (UNHULLED, UNSCARIFIED) AND ABRUZZI RYE	200 LBS/ACRE 60 TO 70 LBS/ACRE 25 LBS/ACRE
MAR. 1–JUNE 1	TALL FESCUE AND SERICEA LESPEDEZA (SCARIFIED)	200 LBS/ACRE 40 TO 50 LBS/ACRE
MAR. 15–JUNE 30	WEEPING LOVEGRASS AND SERICEA LESPEDEZA (SCARIFIED)	10 LBS/ACRE 40 TO 50 LBS/ACRE
MAR. 15–JUNE 30	HULLED COMMON BERMUDAGRASS AND SERICEA LESPEDEZA (SCARIFIED)	15 LBS/ACRE 40 TO 50 LBS/ACRE

TEMPORARY SEEDING

JUNE 1–SEPT. 1	TALL FESCUE AND BROWNTOP MILLET *(NURSE CROP) OR SORGHUM–SUDAN HYBRIDS *(NURSE CROP)	200 LBS/ACRE 35 LBS/ACRE 30 LBS/ACRE

CONSULT CONSERVATION ENGINEER OR SOIL CONSERVATION SERVICE FOR ADDITIONAL INFORMATION CONCERNING OTHER ALTERNATIVES FOR VEGETATION OF DENUDED AREAS. THE ABOVE VEGETATION RATES ARE THOSE WHICH DO WELL UNDER LOCAL CONDITIONS; OTHER SEEDING RATE COMBINATIONS ARE POSSIBLE.

*NURSE CROP/TEMPORARY – RESEED ACCORDING TO OPTIMUM SEASON FOR DESIRED PERMANENT VEGETATION. DO NOT ALLOW TEMPORARY COVER TO GROW OVER 12" IN HEIGHT BEFORE MOWING, OTHERWISE FESCUE MAY BE SHADED OUT.

Construction Sequence

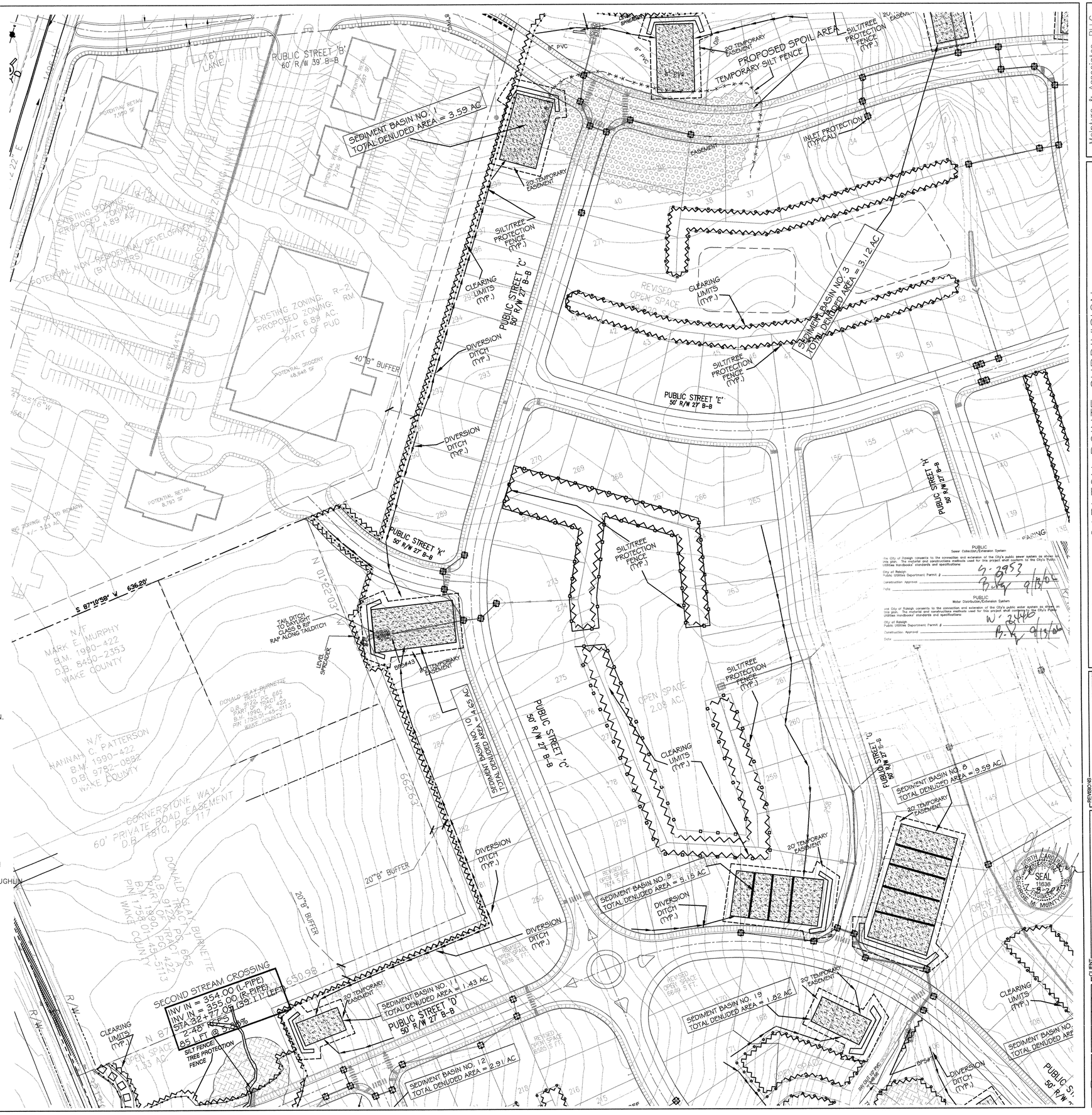
1. SCHEDULE A PRECONSTRUCTION CONFERENCE WITH THE ENVIRONMENTAL ENGINEER, MIKE COUGHLIN. OBTAIN A LAND DISTURBING PERMIT.
2. INSTALL GRAVEL CONSTRUCTION PAD,TEMPORARY DIVERSIONS,SILT FENCE,SEDIMENT BASINS OR OTHER MEASURES AS SHOWN ON THE APPROVED PLAN. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS, BERMS, AND BASINS IMMEDIATELY AFTER CONSTRUCTION.
3. CALL MIKE COUGHLIN FOR AN ONSITE INSPECTION BY THE ENVIRONMENTAL ENGINEER TO OBTAIN A CERTIFICATE OF COMPLIANCE.
4. BEGIN GRUBBING AND CLEARING. MAINTAIN DEVICES AS NEEDED. ALL DEVICES SHALL BE MAINTAINED AT LEAST ONCE A WEEK AND AFTER EVERY RAINFALL. ROUGH GRADE SITE.
5. INSTALL STORM DRAINAGE AND PROTECT INLETS WITH BLOCK AND GRAVEL INLET CONTROLS, SEDIMENT TRAPS, OR OTHER APPROVED MEASURES AS SHOWN ON PLAN. BEGIN CONSTRUCTION OF BUILDINGS, ETC.
6. STABILIZE SITE, AS AREAS ARE BROUGHT UP TO FINISHED GRADE, WITH VEGETATION, PAVING, DITCH LININGS, ETC. SEED AND MULCH DENUDED AREAS WITHIN FIFTEEN(15) DAYS OF COMPLETION OF ANY PHASE OF CONSTRUCTION.
7. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL MIKE COUGHLIN FOR AN INSPECTION BY THE ENVIRONMENTAL ENGINEER.
8. IF SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS. ALL REMAINING PERMANENT EROSION CONTROL DEVICES, SUCH AS VELOCITY DISSIPATORS, SHOULD NOW BE INSTALLED.
9. WHEN VEGETATION HAS BECOME ESTABLISHED, CALL FOR FINAL SITE INSPECTION BY THE ENVIRONMENTAL ENGINEER, MIKE COUGHLIN. OBTAIN A CERTIFICATE OF COMPLETION.

GRAPHIC SCALE

60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.

ENVIRONMENTAL ENGINEER	#
BYRON BRADY	919-856-6195
KALE LEMASTER	919-856-6198
STEVE MEYER	919-856-7558
DAVE PARNELL	919-856-7549
DANIEL ROWE	919-856-7549
MIKE COUGHLIN	919-856-7548
CHARLES PHILLIPS	919-856-5599
GLEN JOHNSON	919-856-7413



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CARLTON POINTE SUBDIVISION
GRADING AND EROSION CONTROL PLAN (CONT.)
ROLESVILLE, NC

REVISIONS

CLIENT
CARLTON GROUP OF NC, LLC
20 SQUADRON BLVD.
NEW CITY, NEW YORK 10956
914-429-0683

DRAWN: DRD
CHECKED: GMM
APPROVED: GMM
START DATE:
JOB CODE:

DRAWING No. C-5D

SEDIMENT TRAP CALCULATION TABLE

TRAP#	TOTAL AREA DRAINAGE(AC)	DENUDED AREA (AC)	C	I	Q10 CFS	REQU. SURFACE AREA .01 X Q10 X 43,560 (SQ. FT.)	REQU. VOLUME TOTAL D.A. X 1,815 (CUBIC FT.)	L (FT)	W (FT)	D (FT)	BASIN TYPE	MIN. WEIR LENGTH
1	3.69	3.69	.50	7.22	13.32	5795	6642	108	54	2.7	CUSTOM	10'
2	3.38	3.02	.50	7.22	12.20	5308	5436	104	52	2.6	CUSTOM	10'
3	3.12	3.12	.50	7.22	11.26	4900	5616	100	50	2.7	CUSTOM	10'
4	4.74	4.20	.50	7.22	17.11	7444	7560	124	62	2.5	CUSTOM	11.5'
5	1.99	1.99	.50	7.22	7.18	3125	3582	80	40	2.7	CUSTOM	10'
7	4.51	4.51	.50	7.22	16.28	7083	8118	120	60	2.7	CUSTOM	11'
8	9.59	9.59	.50	7.22	34.62	15060	18262	174	87	2.7	BAFFLES	24'
9	5.61	5.15	.50	7.22	20.25	8810	9270	134	67	2.6	BAFFLES	24'
10	4.94	4.65	.50	7.22	17.83	7758	8370	126	63	2.6	CUSTOM	11.9'
11	1.43	1.43	.50	7.22	5.16	2246	2574	68	34	2.7	CUSTOM	10'
12	3.02	2.91	.50	7.22	10.9	4743	5238	98	49	2.6	CUSTOM	10'
13	2.68	2.42	.50	7.22	9.67	4209	4356	92	46	2.6	CUSTOM	10'
14	4.92	4.47	.50	7.22	17.76	7727	8046	126	63	2.6	CUSTOM	10'
15	1.73	1.73	.50	7.22	6.25	2717	3114	74	37	2.7	CUSTOM	10'
16	5.9	2.31	.50	7.22	21.3	9266	4158	138	69	2.0	BAFFLES	24'
17	4.9	4.9	.50	7.22	17.69	7695	8100	126	63	2.6	CUSTOM	10'
18	2.6	1.9	.50	7.22	9.39	4083	3420	92	46	2.4	CUSTOM	10'
19	2.0	1.82	.50	7.22	7.22	3141	3276	80	40	2.6	CUSTOM	10'
20	3.59	3.59	.50	7.22	12.96	5638	6462	108	54	2.7	CUSTOM	10'
21	3.38	3.38	.50	7.22	12.20	5308	5940	104	52	2.6	CUSTOM	10'
22	5.18	4.50	.50	7.22	18.70	8135	8100	128	64	2.5	BAFFLES	24'
23	3.5	3.0	.50	7.22	12.64	5497	5400	106	53	2.5	CUSTOM	10'

LEVEL SPREADER NOTES:

1. All level spreaders are standard earthen level spreaders unless otherwise noted in the level spreader sizing chart.

2. Where level spreaders in series are depicted on plans, flow from the drainage system outlet will be directed into the uphill level spreader as per detail on Sheet D-4. Stormwater will sheet flow from uphill level spreader to downhil level spreader.

3. Level spreaders in series will have equal lengths as listed in the level spreader sizing chart for the corresponding outlet.

LEVEL SPREADER/DISSIPATOR PAD SIZING

STRUCTURE	PIPE SLOPE(%)	PIPE SIZE(in.)	Wa=Pipe Dia. + La; Da=1.5 X1.5 X D50 DISSAPATOR PAD La (FT) X W (FT) X Da (IN)	D50 (IN)	Q (cfs) 1"/hr	Total Q (cfs)	LEVEL SPREADER CALC AND SIZE	
FES#3	0.5	18	9 X 10.5 X 7.88	3.5	.7636	5.513	.7636 X 13 =13 LF	
BPS#11	0.5	36	20 X 23 X 15.75	7	5.02	36.25	5.02 X 13 =66 LF	TREATED TIMBER
BPS #21	0.5	18	9 X 10.5 X 7.88	3.5	.95	6.85	0.95 X 13 =13 LF	
BPS#25	0.5	30	16 X 18.5 X 13.5	6	2.64	19.08	2.64 X 13 =35 LF	TREATED TIMBER
BPS#38	0.5	24	13 X 15 X 11.25	5	2.155	15.55	2.155 X 13 =29 LF	
FES#39D	0.5	18	9 X 10.5 X 7.88	3.5		4.93	4.93 X 13 =64 LF	TREATED TIMBER
BPS#43	0.5	24	13 X 15 X 11.25	5	1.66	12.03	1.66 X 13 =22 LF	
BPS#49	0.5	24	13 X 15 X 11.25	5	1.52	10.96	1.52 X 13 =20 LF	
BPS#57	0.5	30	16 X 18.5 X 13.5	6	2.70	19.49	2.70 X 13 =36 LF	TREATED TIMBER
BPS#72	0.5	36	26 X 30 X 22.5	10	5.68	41	5.68 X 13 =74 LF	TREATED TIMBER
BPS#85	0.5	24	13 X 15 X 11.25	5	1.41	10.2	1.41 X 13 = 19 LF	TREATED TIMBER
BPS#93	0.5	30	16 X 18.5 X 13.5	6	1.74	12.53	1.74 X 13 = 23 LF	TREATED TIMBER
BPS#97	0.5	18	9 X 10.5 X 7.88	3.5	6.37	46	6.37 X 13 = 83 LF	TREATED TIMBER
BPS#104	0.5	24	13 X 15 X 11.25	5	1.88	13.55	1.88 X 13 = 25 LF	TREATED TIMBER
FES#108	0.5	15	8 X 9.250 X 6.75	3		3.57	3.57 X 13 = 46 LF	TREATED TIMBER
FES#23G	0.5	18	8 X 9.25 X 6.75	3		2.60	2.60 X 13 = 35 LF	TREATED TIMBER
FES#110	0.5	18	8 X 9.25 X 6.75	3		1.98	1.98 X 13 = 26 LF	TREATED TIMBER

BPS = BY-PASS STRUCTURE

NOTES:
PIPE SECTIONS WILL BE LEFT SHORT SO STORM FLOWS WILL ENTER THE FRONT OF THE BASINS AND BE EXTENDED LATER.

LEVEL SPREADERS WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION.

NOTES:
ALL CONSTRUCTION OF SANITARY SEWER AND WATERLINE TO BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.

ALL CONSTRUCTION OF ROADS AND STORM DRAINAGE TO BE IN ACCORDANCE WITH TOWN OF ROLESVILLE AND NCDOT STANDARDS AND SPECIFICATIONS.

NORTH CAROLINA PROFESSIONAL SEAL 11836 ENGINEER GEORGE M. McINTYRE

PUBLIC
Sewer Collection/Extension System

The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and constructions methods used for this project shall conform to the City's Public Utilities Handbook' standards and specifications

City of Raleigh
Public Utilities Department Permit # S-2853
Construction Approval
Date 9/19/06

PUBLIC
Water Distribution/Extension System

The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and constructions methods used for this project shall conform to the City's Public Utilities Handbook' standards and specifications

City of Raleigh
Public Utilities Department Permit # W-2446
Construction Approval
Date 9/19/06

McIntyre & Associates, PLLC
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(919) 876-0699 (Fax)

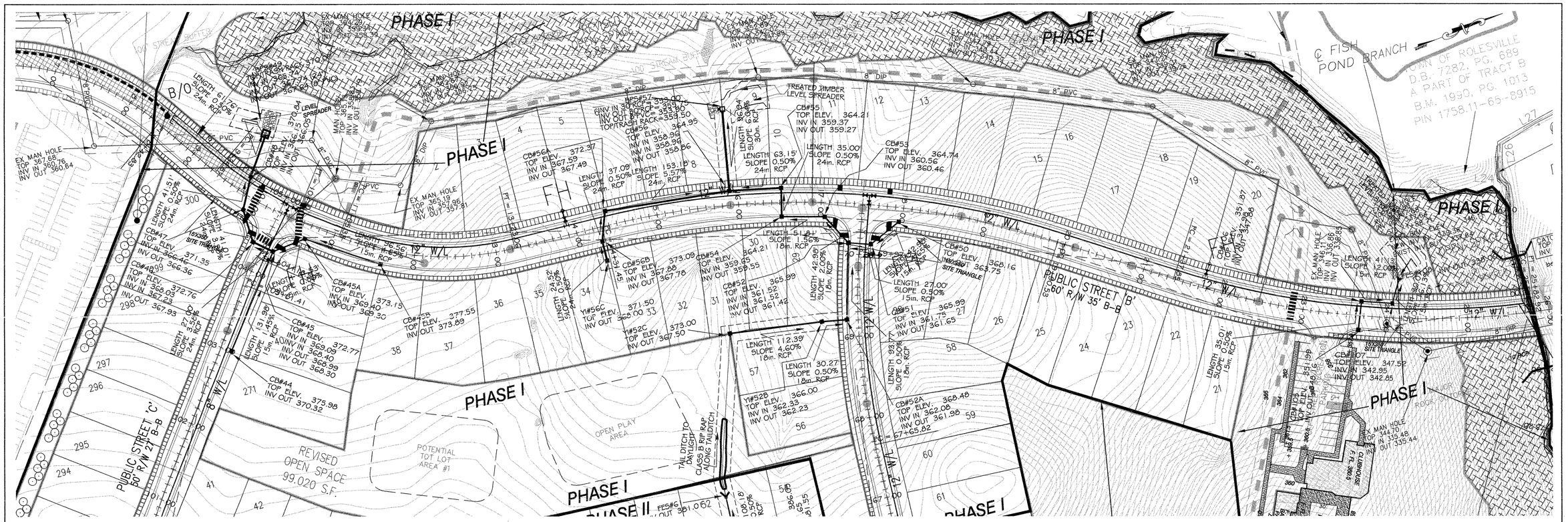
CARLTON POINT SUBDIVISION
GRADING AND EROSION CONTROL PLAN
SEDIMENT BASIN TABLE
ROLESVILLE, NC

REVISIONS
REV 9/19/06

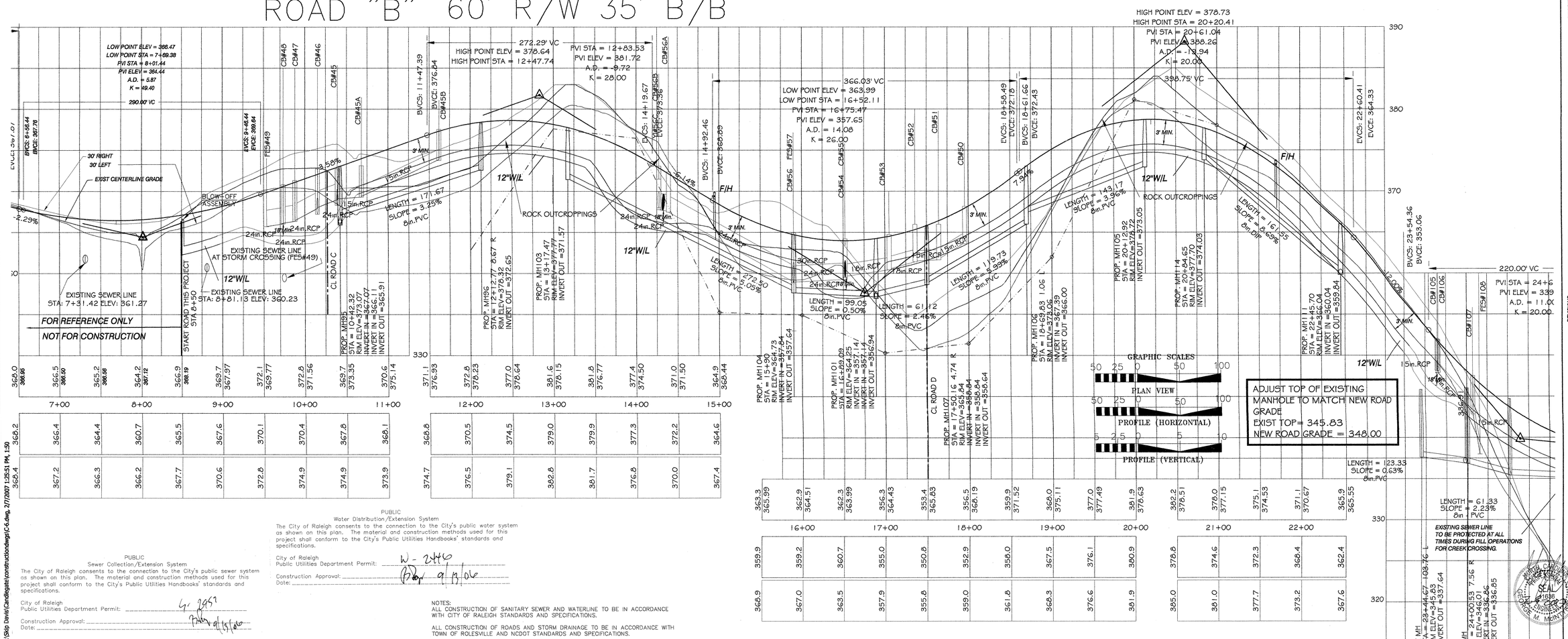
CLIENT
CARLTON GROUP OF NC, LLC
20 SQUADRON BLVD.
NEW CITY, NEW YORK 10956
914-429-0683

DRAWN DRD
CHECKED GMM
APPROVED GMM
START DATE
JOB CODE

DRAWING No.
C-5E



ROAD "B" 60' R/W 35' B/B



PUBLIC
Sewer Collection/Extension System
The City of Raleigh consents to the connection to the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh
Public Utilities Department Permit: W-2457

Construction Approval: [signature]
Date: 9/15/06

PUBLIC
Water Distribution/Extension System
The City of Raleigh consents to the connection to the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh
Public Utilities Department Permit: W-2446

Construction Approval: [signature]
Date: 9/13/06

NOTES:
ALL CONSTRUCTION OF SANITARY SEWER AND WATERLINE TO BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.

ALL CONSTRUCTION OF ROADS AND STORM DRAINAGE TO BE IN ACCORDANCE WITH TOWN OF ROLESVILLE AND NCDOT STANDARDS AND SPECIFICATIONS.

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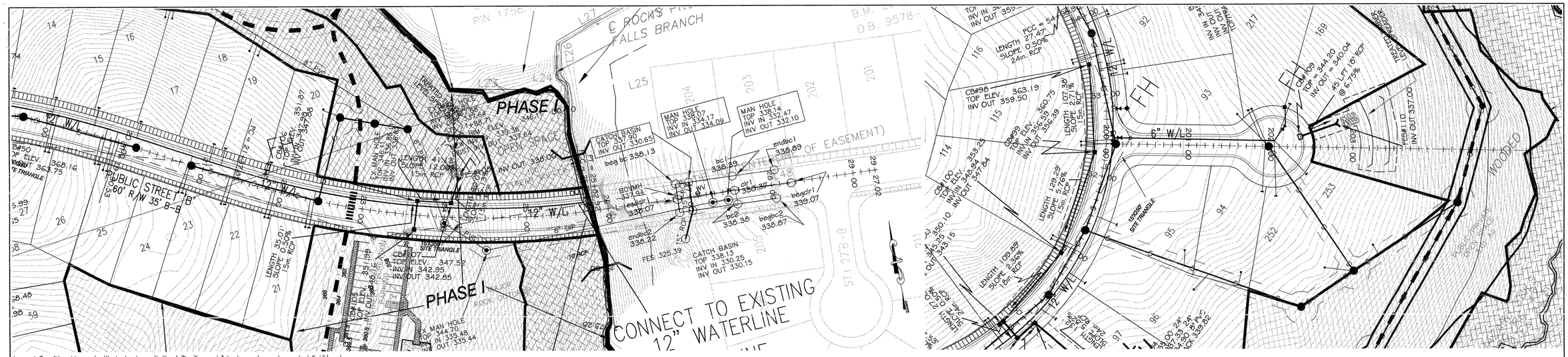
CARLTON POINTE SUBDIVISION
ROAD "B" PLAN AND PROFILE
ROLESVILLE, WAKE COUNTY

REVISIONS
ROLESVILLE REVIEW 1/25/06
FINAL 1/13/06

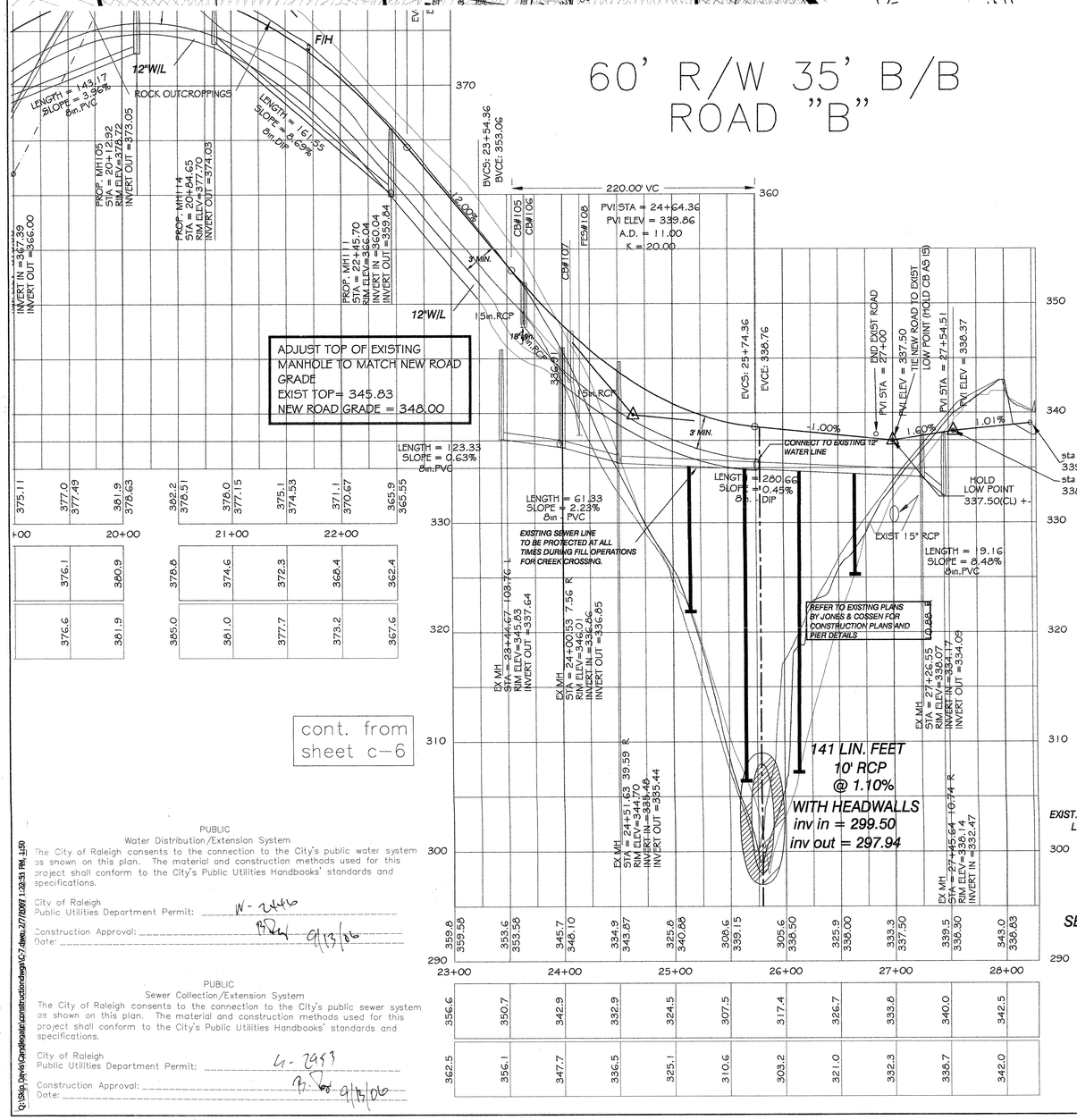
CLIENT
CARLTON GROUP OF NC
20 SQUADRON BLVD
NEW CITY, NEW YORK 10956
845-638-9300

DRAWN: DRD
CHECKED: GMM
APPROVED: GMM
START DATE: 7-10-05
JOB CODE: –

DRAWING No.
C-6



60' R/W 35' B/B ROAD "B"



GRAPHIC SCALES

PLAN VIEW

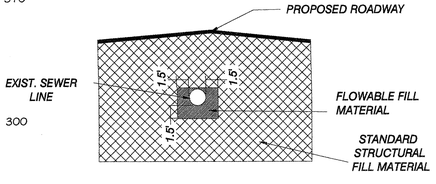
PROFILE (HORIZONTAL)

PROFILE (VERTICAL)

NOTE: CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES RESULTING FROM THE DISTURBANCE OF THE EXISTING AERIAL SEWER LINE.

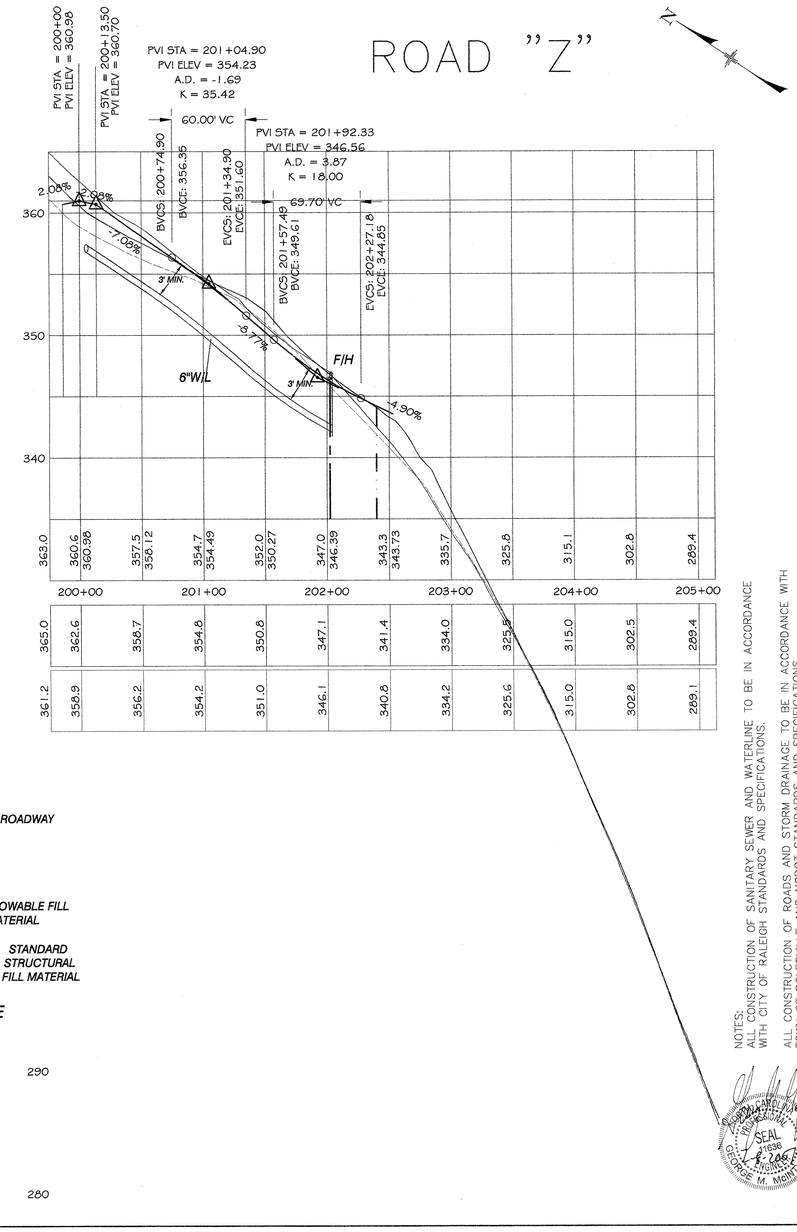
CREEK CROSSING CONSTRUCTION SEQUENCE

1. INSTALL STORM DRAINAGE SYSTEM .
2. AFTER STORM DRAINAGE SYSTEM IS INSTALLED BEGIN FILLING. WHEN FILL MATERIAL IS WITHIN 1.5 FEET OF EXISTING SEWER LINE BEGIN USING FLOWABLE FILL MATERIAL TO MINIMIZE THE DISTURBANCE OF THE EXISTING SEWER LINE BY HEAVY COMPACTION EQUIPMENT.
3. WHEN FLOWABLE FILL MATERIAL IS .25' OVER EXISTING SEWER LINE BEGIN USING STANDARD STRUCTURAL FILL MATERIAL. FOR ROADWAY CONSTRUCTION.



SECTION THROUGH EXISTING SEWER LINE
(NOT TO SCALE)

ROAD "Z"



NOTES:
ALL CONSTRUCTION OF SANITARY SEWER AND WATERLINE TO BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.

ALL CONSTRUCTION OF ROADS AND STORM DRAINAGE TO BE IN ACCORDANCE WITH TOWN OF ROLESVILLE AND NCDOT STANDARDS AND SPECIFICATIONS.

PUBLIC
Water Distribution/Extension System
The City of Raleigh consents to the connection to the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh
Public Utilities Department Permit: W-2446

Construction Approval: 9/13/06
Date:

PUBLIC
Sewer Collection/Extension System
The City of Raleigh consents to the connection to the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh
Public Utilities Department Permit: S-2453

Construction Approval: 9/15/06
Date:

Q:\Skip Davis\Carlton\subdivision\construction\dwgs\C-7.dwg, 2/7/2007 1:22:53 PM, 1:50

McIntyre & Associates, PLLC
Engineering & Land Planners
4932-B Windy Hill Drive
Raleigh, NC 27609
(919) 876-0145 (Office)
(919) 876-0699 (Fax)

CARLTON POINTE SUBDIVISION
ROADS "B" AND "Z" PLAN AND PROFILE

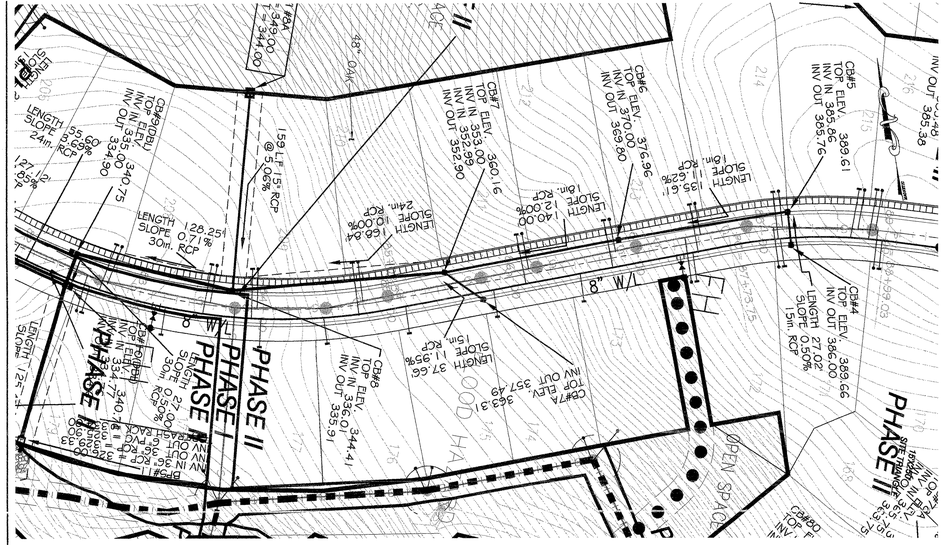
ROLESVILLE, WAKE COUNTY

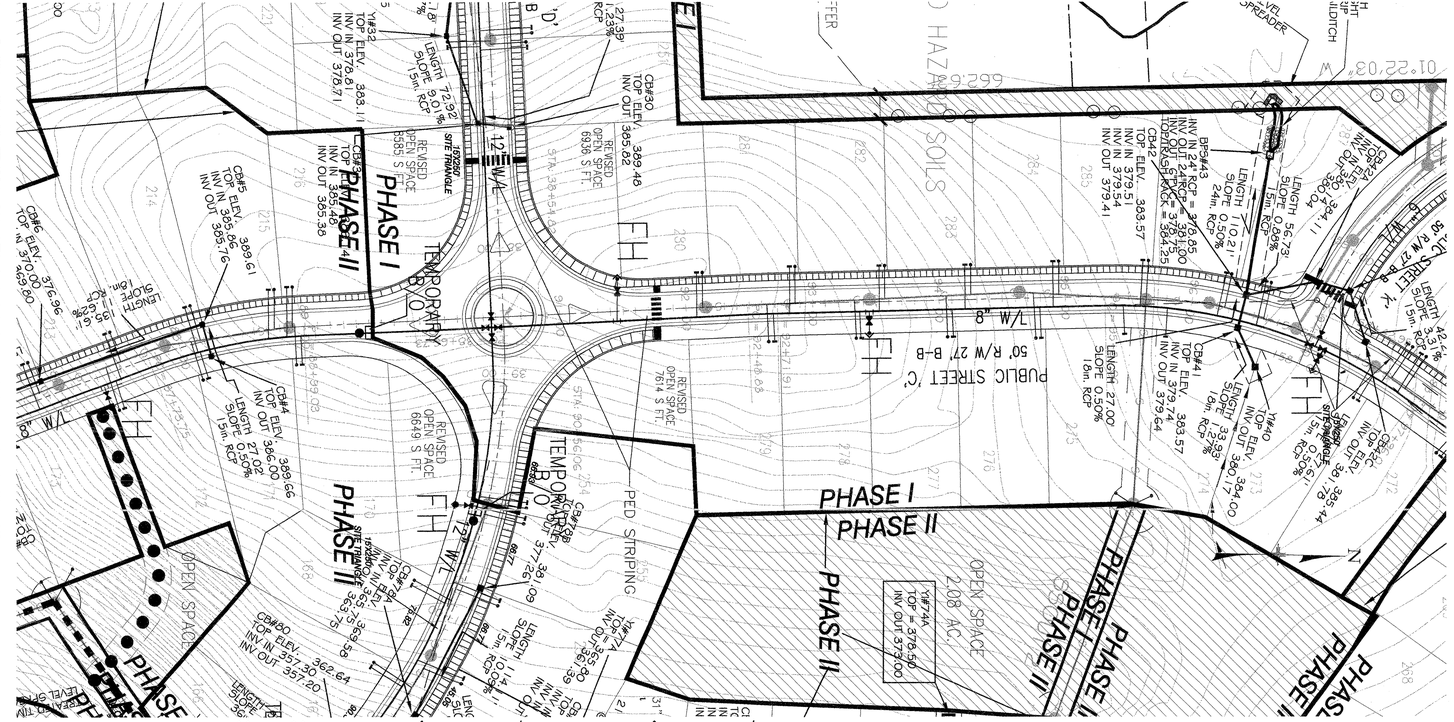
REVISIONS
ROLESVILLE REVIEW
FINAL 1/12/06

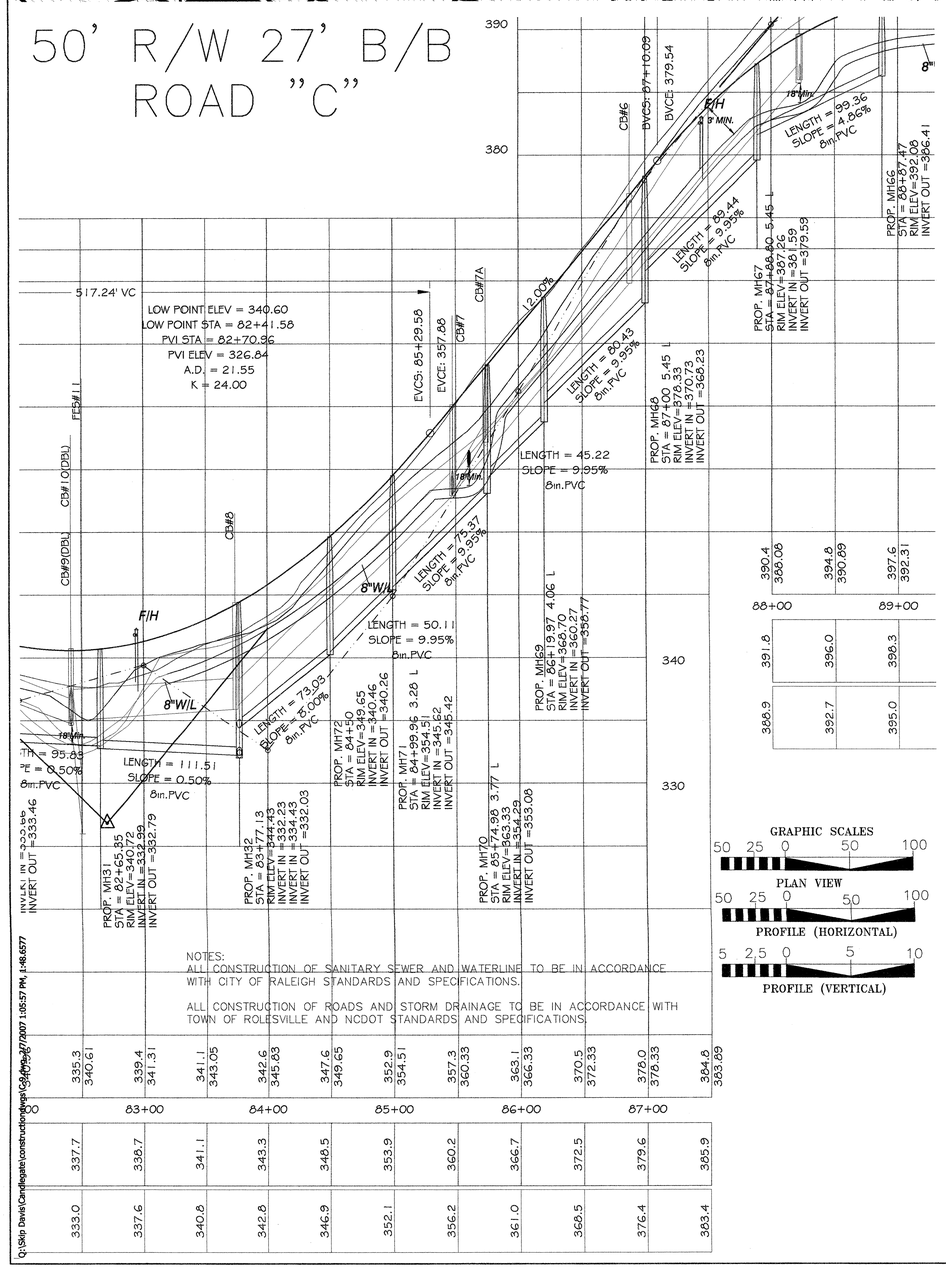
CLIENT
CARLTON GROUP OF NC
20 SQUADRON BLVD
NEW CITY, NEW YORK 10956
845-638-9300

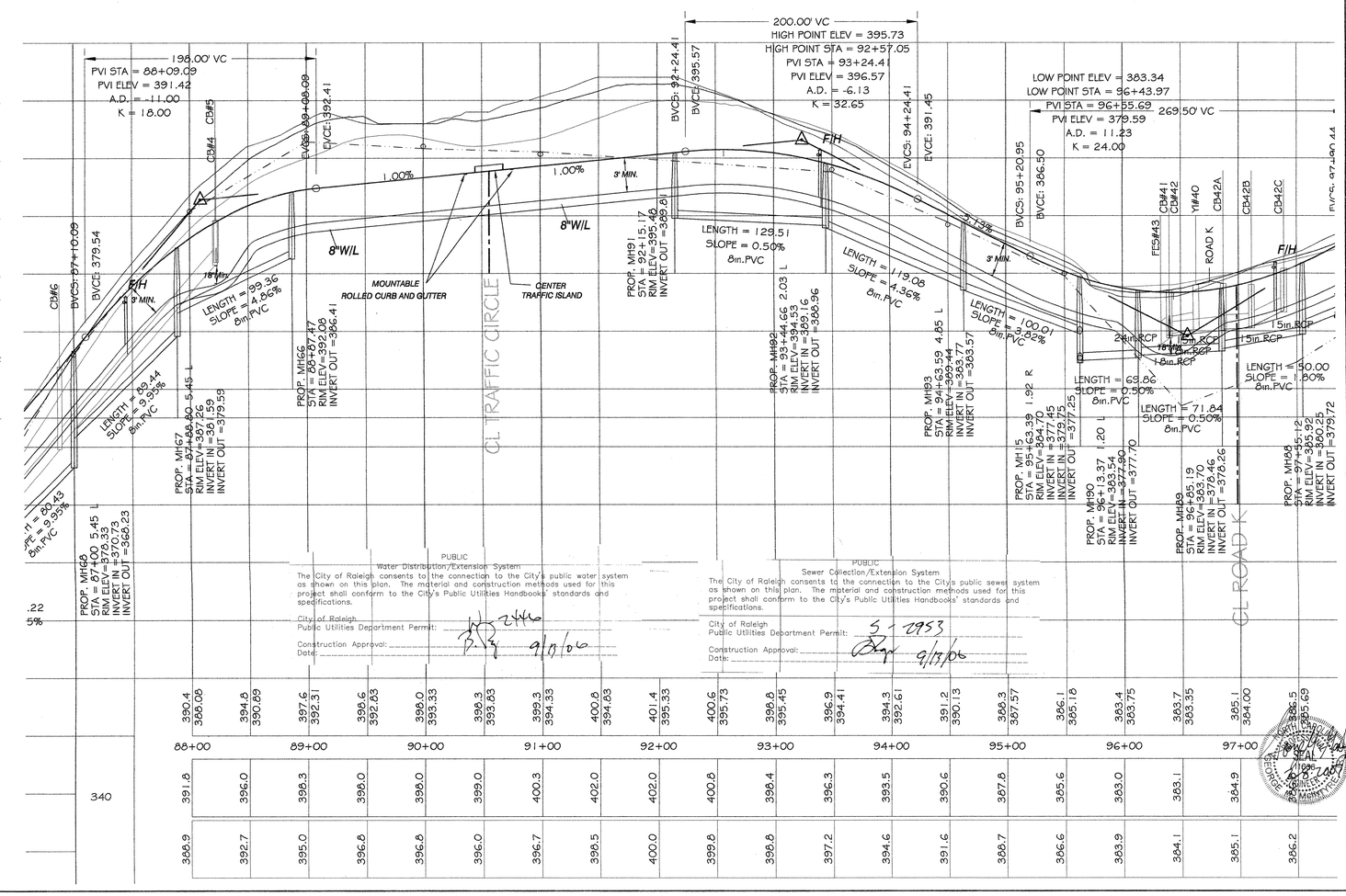
DRAWN: DRD
CHECKED: GMM
APPROVED: GMM
START DATE: 10-05
JOB CODE: -

DRAWING No.
C-7









NOTES:
ALL CONSTRUCTION OF SANITARY SEWER AND WATERLINE TO BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.

ALL CONSTRUCTION OF ROADS AND STORM DRAINAGE TO BE IN ACCORDANCE WITH TOWN OF ROLESVILLE AND NCDOT STANDARDS AND SPECIFICATIONS.

PUBLIC
Water Distribution/Extension System
The City of Raleigh consents to the connection to the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.
City of Raleigh Public Utilities Department Permit: W-2460
Construction Approval: B.B.
Date: 9/19/06

PUBLIC
Sewer Collection/Extension System
The City of Raleigh consents to the connection to the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.
City of Raleigh Public Utilities Department Permit: S-2953
Construction Approval: B.B.
Date: 9/19/06

McIntyre & Associates, PLLC
Engineering & Land Planners
4932-B Windy Hill Drive
Raleigh, NC 27609
(919) 876-0145 (Office)
(919) 876-0699 (Fax)

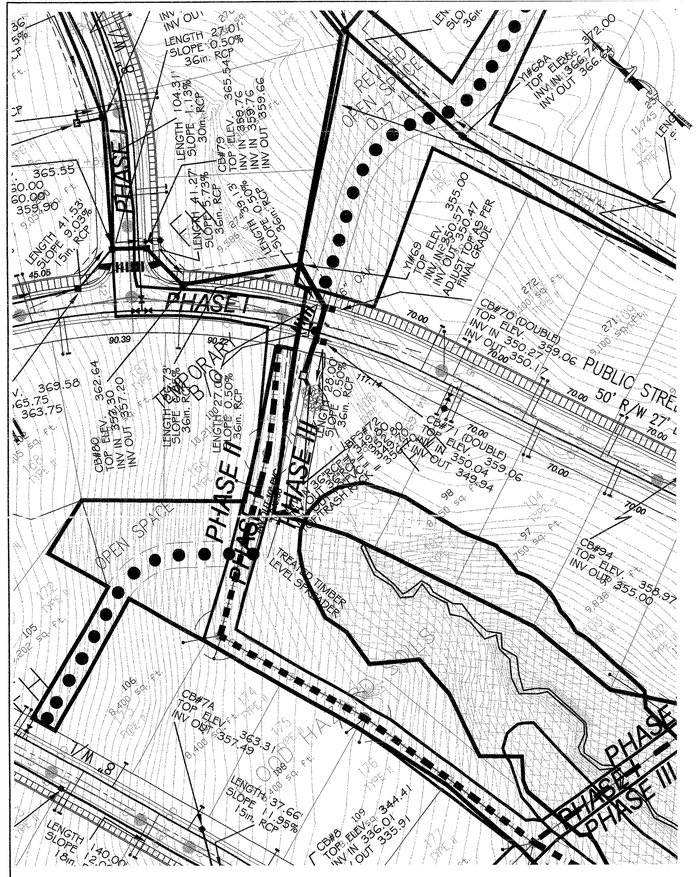
CARLTON POINTE SUBDIVISION
ROAD "C" PLAN AND PROFILE (cont.)
ROLESVILLE, WAKE COUNTY

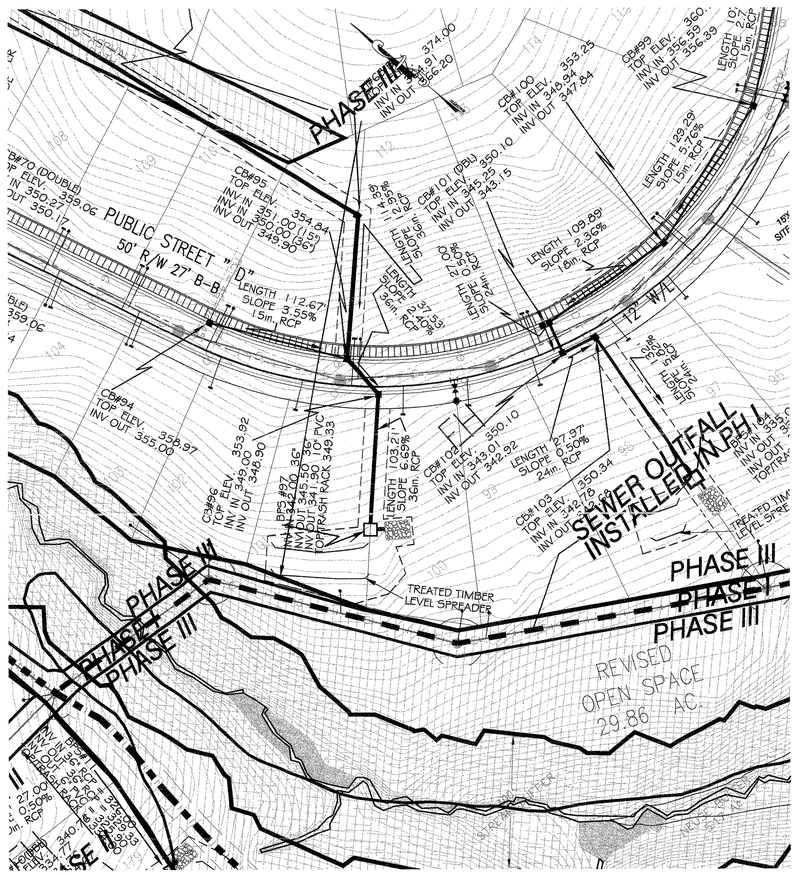
REVISIONS

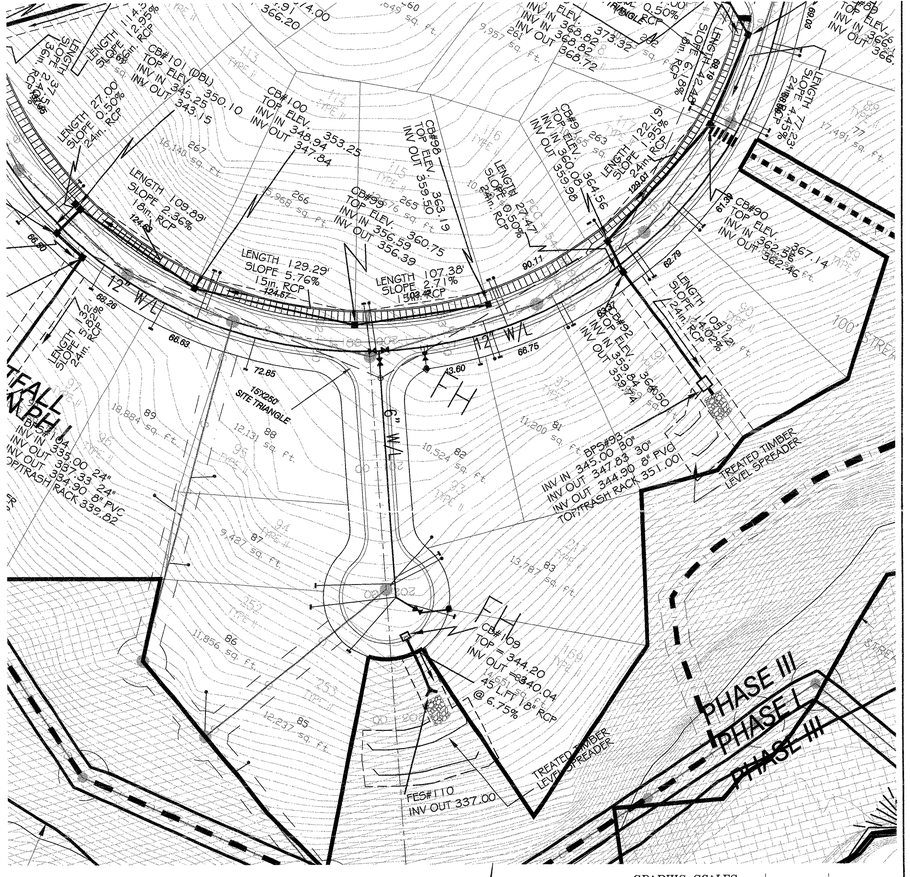
CLIENT
CARLTON GROUP OF NC
20 SQUADRON BLVD
NEW CITY, NEW YORK 10956
845-638-9300

DRAWN: DRD
CHECKED: GMM
APPROVED: GMM
START DATE: 10-05
JOB CODE: –

DRAWING No.
C-9







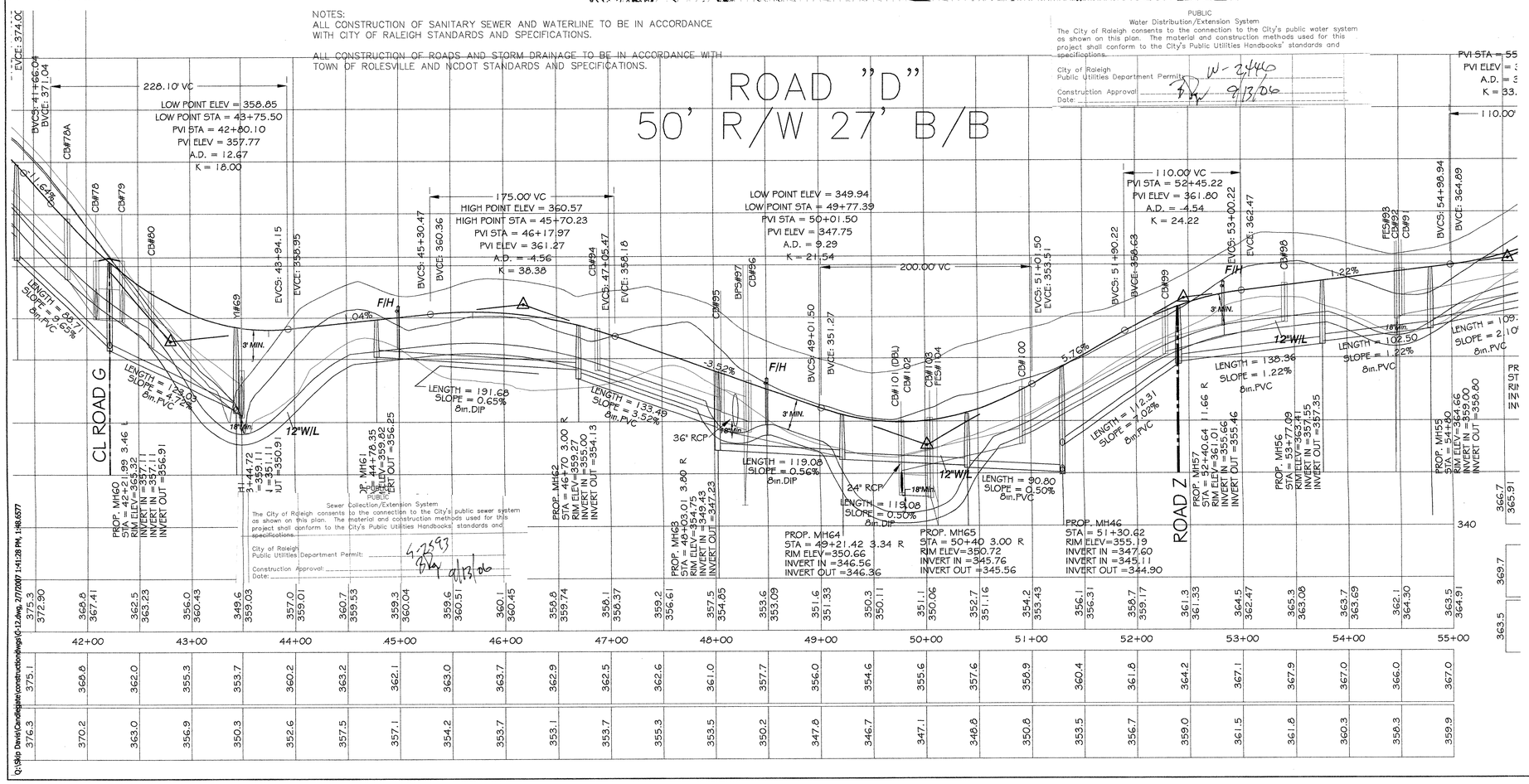
NOTES:
ALL CONSTRUCTION OF SANITARY SEWER AND WATERLINE TO BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.

ALL CONSTRUCTION OF ROADS AND STORM DRAINAGE TO BE IN ACCORDANCE WITH TOWN OF ROLESVILLE AND NCDOT STANDARDS AND SPECIFICATIONS.

PUBLIC
Water Distribution/Extension System
The City of Raleigh consents to the connection to the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh
Public Utilities Department Permit: W-2440
Construction Approval: 9/13/06
Date:

ROAD "D"
50' R/W 27' B/B



Sewer Collection/Extension System
The City of Raleigh consents to the connection to the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh
Public Utilities Department Permit: 4-2393
Construction Approval: 9/13/06
Date:

GRAPHIC SCALES
PLAN VIEW: 50 25 0 50 100
PROFILE (HORIZONTAL): 50 25 0 50 100
PROFILE (VERTICAL): 5 2.5 0 5 10

McIntyre & Associates, PLLC
Engineering & Land Planners
4932-B Windy Hill Drive
Raleigh, NC 27609
(919) 876-0145 (Office)
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CARLTON POINTE SUBDIVISION
ROAD "D" PLAN AND PROFILE(CONT.)
ROLESVILLE, WAKE COUNTY

REVISIONS
PRELIMINARY 8/17/06
FINAL 1/10/06

CLIENT
CARLTON GROUP OF NC
20 SQUADRON BLVD
NEW CITY, NEW YORK 10956
845-638-9300

DRAWN: DRD
CHECKED: GMM
APPROVED: GMM
START DATE: 10-05
JOB CODE: –

DRAWING No.
C-12

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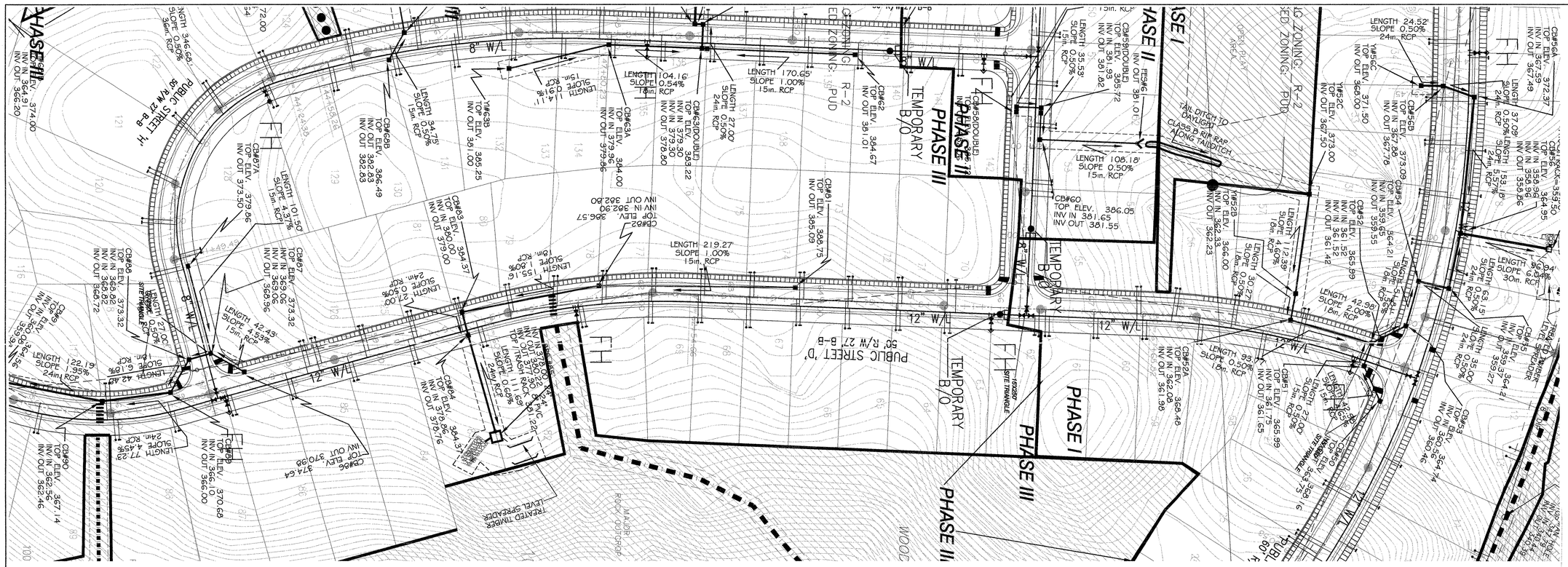

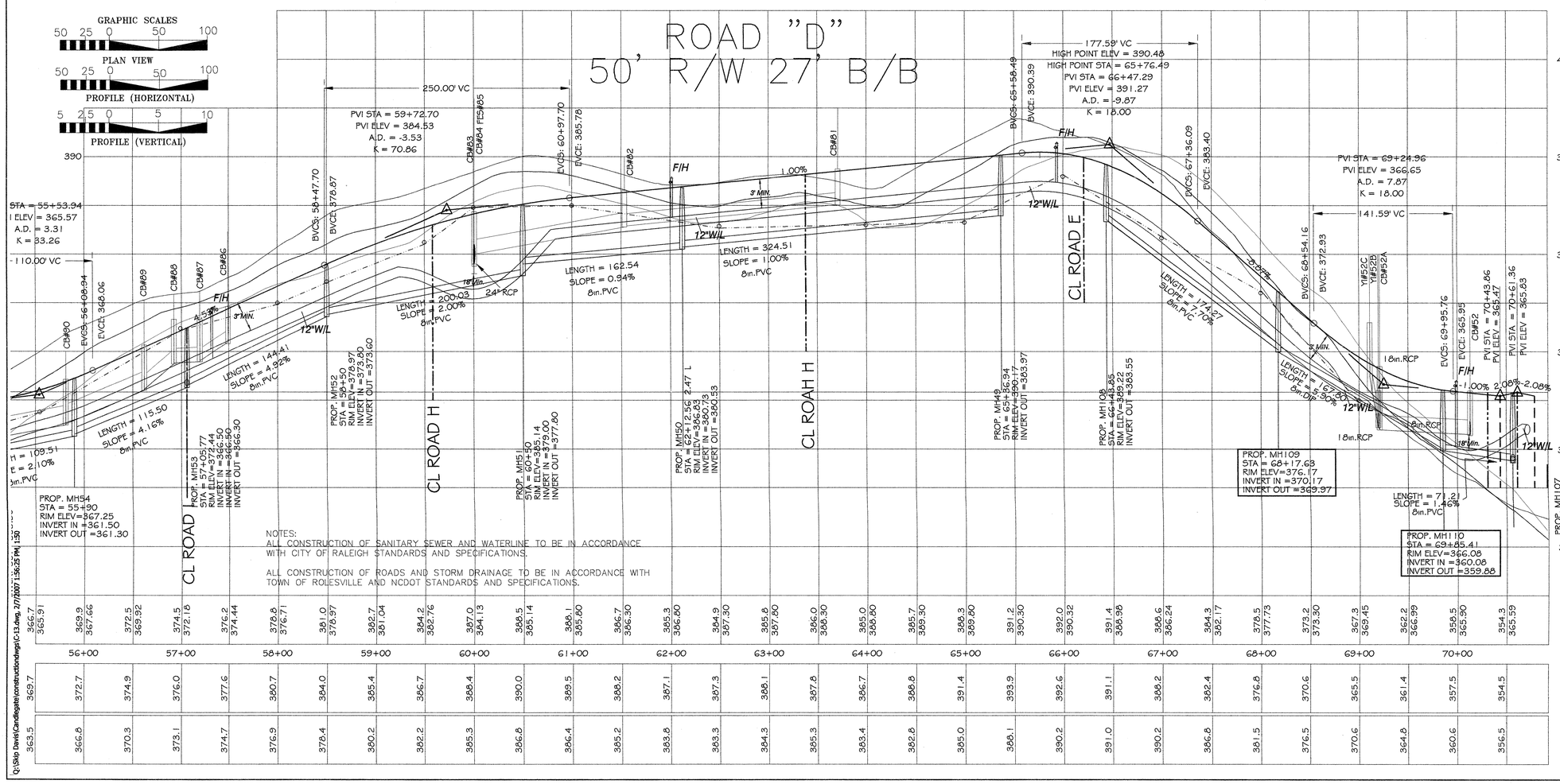

NOTES:
ALL CONSTRUCTION OF SANITARY SEWER AND WATERLINE TO BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.

ALL CONSTRUCTION OF ROADS AND STORM DRAINAGE TO BE IN ACCORDANCE WITH TOWN OF ROLESVILLE AND NCDOT STANDARDS AND SPECIFICATIONS.

PUBLIC
Water Distribution/Extension System
The City of Raleigh consents to the connection to the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh
Public Utilities Department Permit: 2446

Construction Approval: 4/18/06

Date:

PUBLIC
Sewer Collection/Extension System
The City of Raleigh consents to the connection to the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh
Public Utilities Department Permit: 2453

Construction Approval: 9/13/06

Date:

NORTH CAROLINA PROFESSIONAL SEAL 11835 ENGINEER GEORGE M. McINTYRE

McIntyre & Associates, PLLC
Engineering & Land Planners
4932-B Windy Hill Drive
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(919) 876-0145 (Office)
(919) 876-0699 (Fax)

CARLTON POINTE SUBDIVISION
ROAD "D" PLAN AND PROFILE (CONT.)

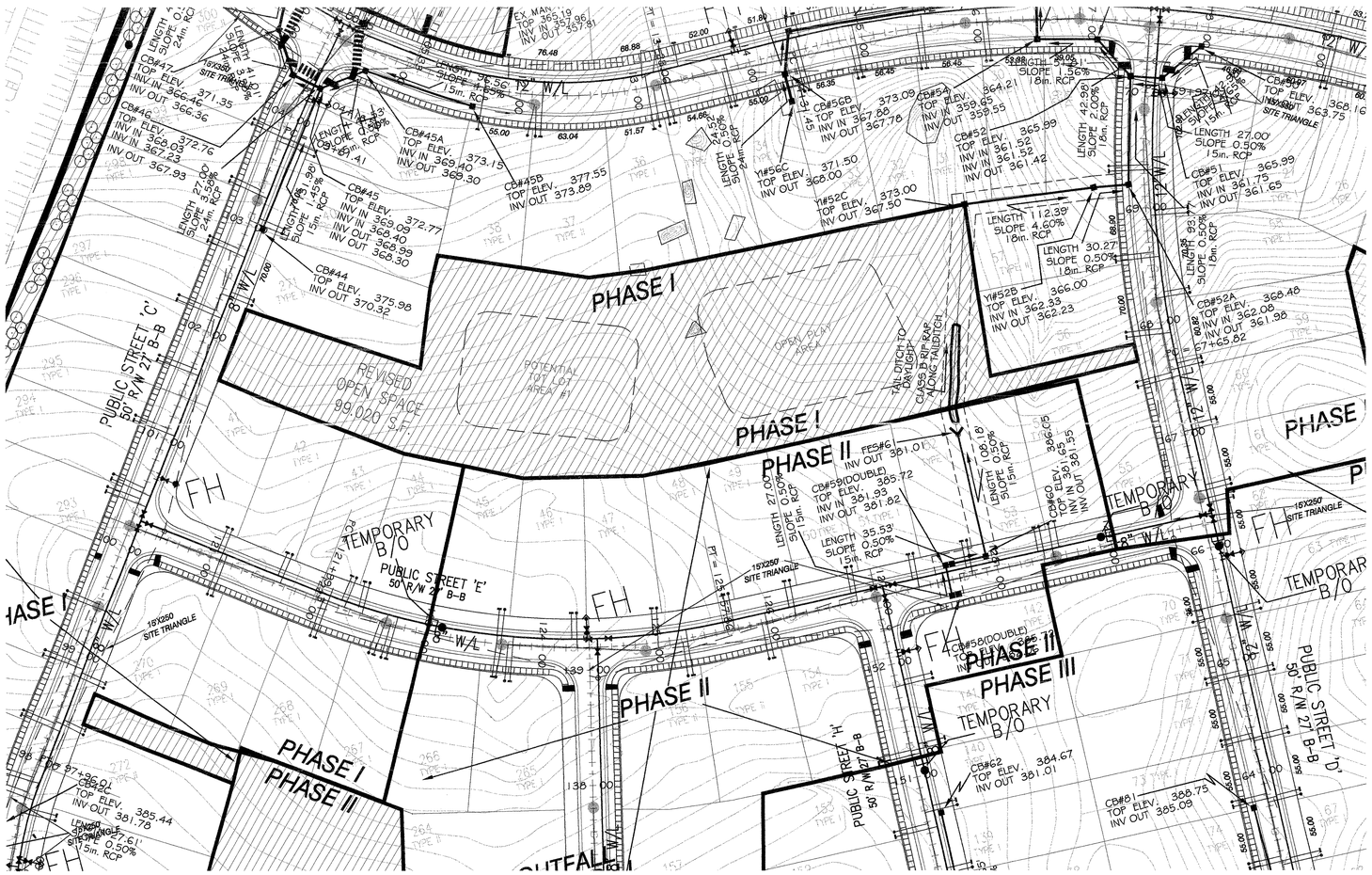
ROLESVILLE, WAKE COUNTY

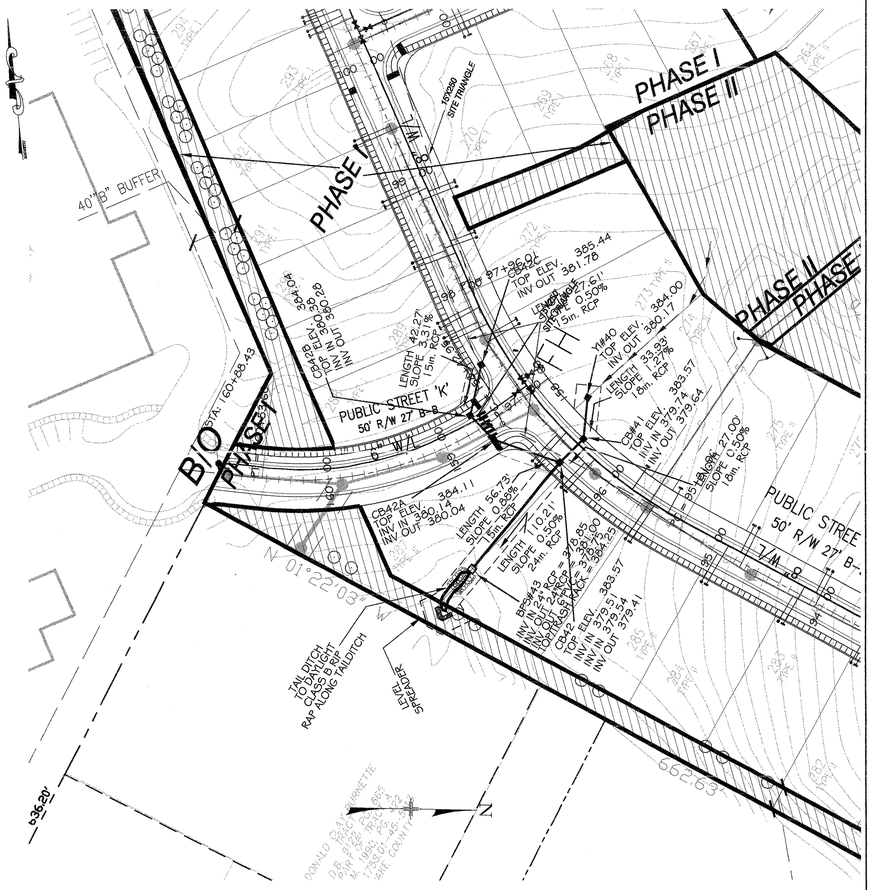
REVISIONS
1. REVISED PER CITY COMMENTS 1/17/06
2. PRINT 1/13/06

CLIENT
CARLTON GROUP OF NC
20 SQUADRON BLVD.
NEW CITY, NEW YORK 10956
845-638-9300

DRAWN: DRD
CHECKED: GMM
APPROVED: GMM
START DATE: 10-05
JOB CODE: –

DRAWING No.
C-13





NOTES:
ALL CONSTRUCTION OF SANITARY SEWER AND WATERLINE TO BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.

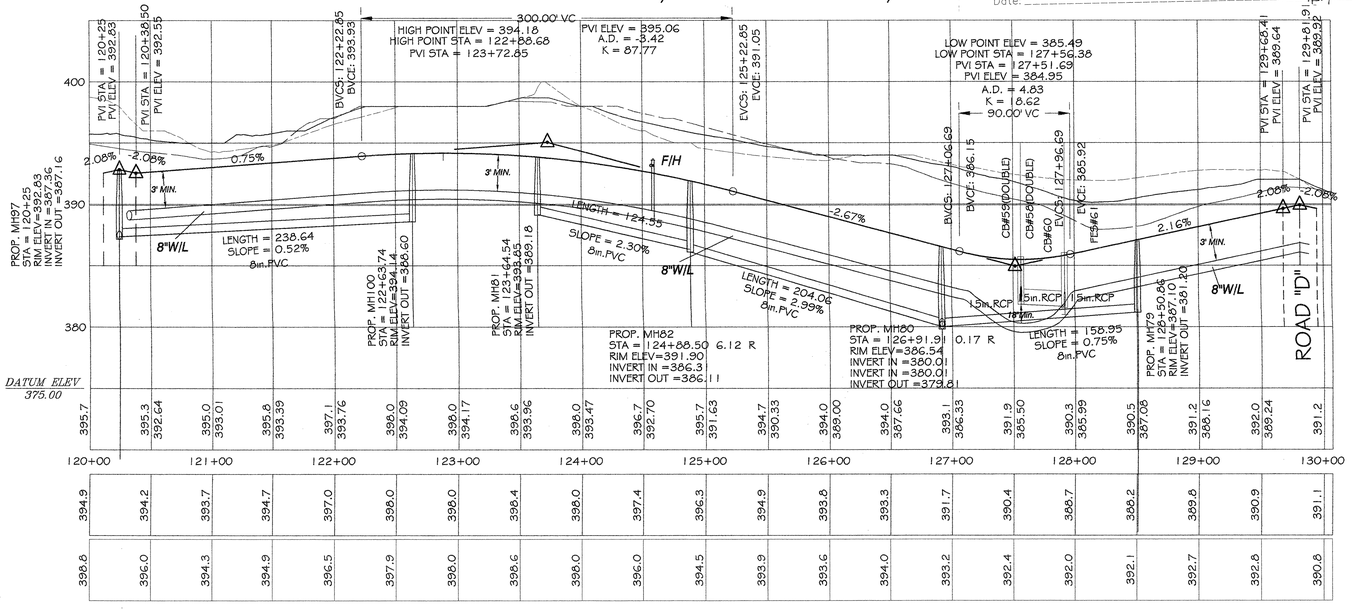
ALL CONSTRUCTION OF ROADS AND STORM DRAINAGE TO BE IN ACCORDANCE WITH TOWN OF ROLESVILLE AND NCDOT STANDARDS AND SPECIFICATIONS.

PUBLIC
Water Distribution/Extension System
The City of Raleigh consents to the connection to the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh
Public Utilities Department Permit: W-2446

Construction Approval: BRH
Date: 9/13/06

ROAD "E"
50' R/W 27' B/B

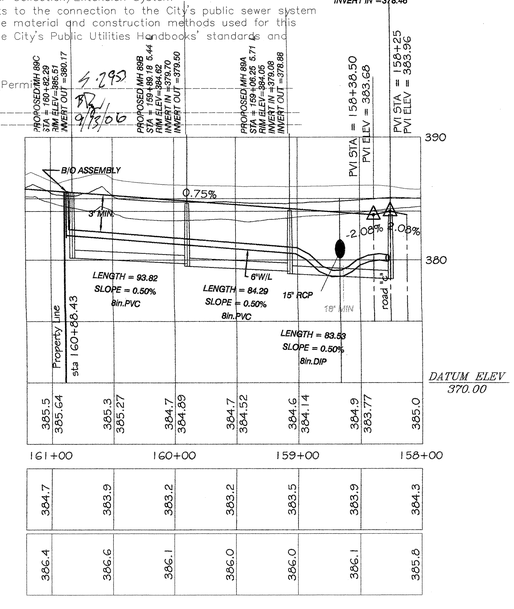


ROAD "K"
50' R/W 27' B/B

PUBLIC
Sewer Collection/Extension System
The City of Raleigh consents to the connection to the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh
Public Utilities Department Permit: S-2950

Construction Approval: BRH
Date: 9/13/06



GRAPHIC SCALES
PLAN VIEW (50 25 0 50 100)
PROFILE (HORIZONTAL) (50 25 0 50 100)
PROFILE (VERTICAL) (5 2.5 0 5 10)

McIntyre & Associates, PLLC
Engineering & Land Planners
4932-B Windy Hill Drive
Raleigh, NC 27609
(919) 876-0145 (Office)
(919) 876-0699 (Fax)

CARLTON POINTE SUBDIVISION
ROADS "E" and "K" PLAN AND PROFILE
ROLESVILLE, WAKE COUNTY

REVISIONS
PRELIMINARY REVIEW 1/31/06
FINAL 1/10/06

CLIENT
CARLTON GROUP OF NC
20 SQUADRON BLVD
NEW CITY, NEW YORK 10956
845-638-9300

DRAWN DRD
CHECKED GMM
APPROVED GMM
START DATE 10-05
JOB CODE –

DRAWING No.
C-14

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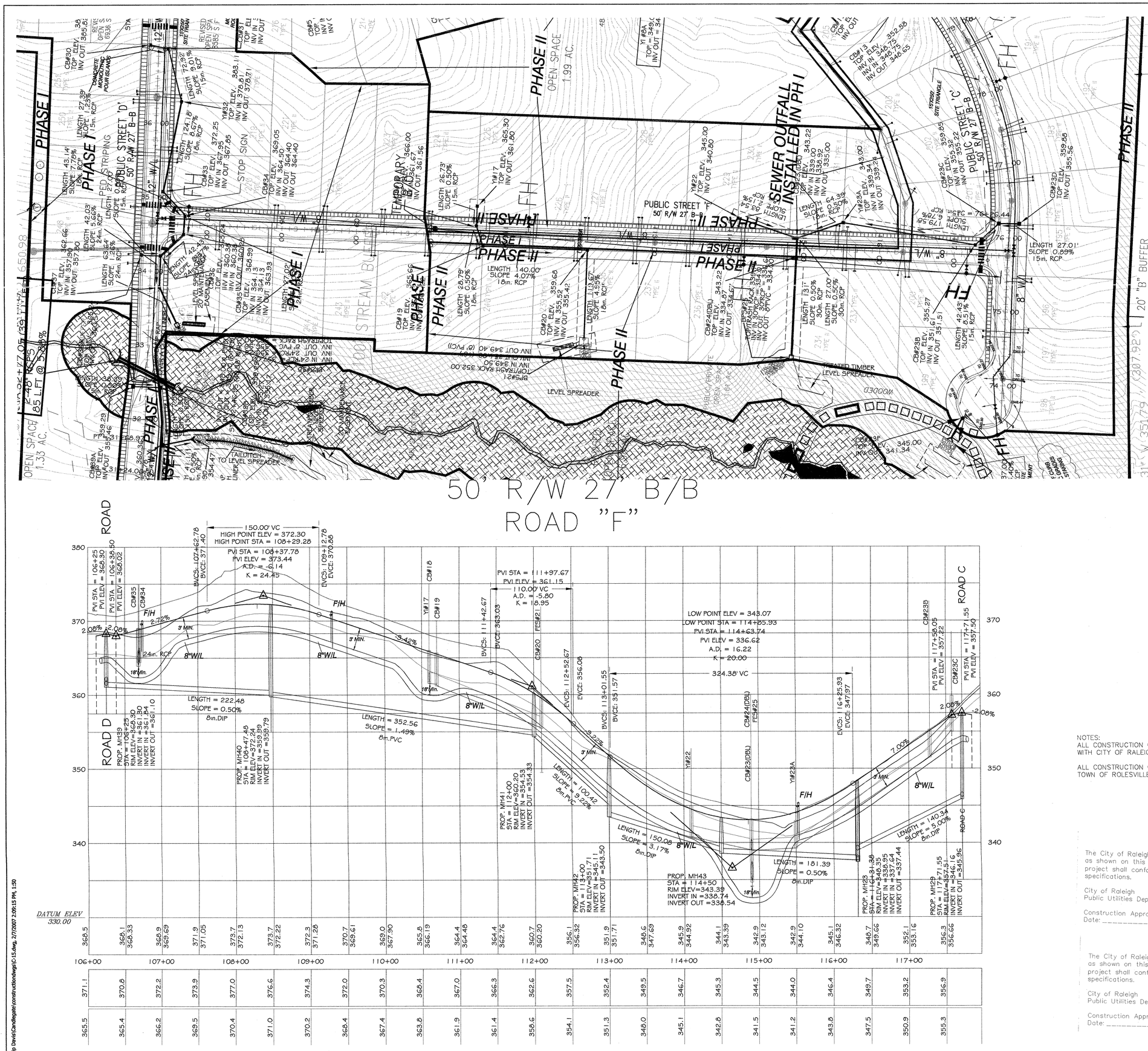

GRAPHIC SCALES

PLAN VIEW 50 25 0 50 100

PROFILE (HORIZONTAL) 50 25 0 50 100

PROFILE (VERTICAL) 5 2.5 0 5 10

NOTES:
ALL CONSTRUCTION OF SANITARY SEWER AND WATERLINE TO BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.

ALL CONSTRUCTION OF ROADS AND STORM DRAINAGE TO BE IN ACCORDANCE WITH TOWN OF ROLESVILLE AND NCDOT STANDARDS AND SPECIFICATIONS.

PUBLIC
Water Distribution/Extension System
The City of Raleigh consents to the connection to the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh
Public Utilities Department Permit: W-2440

Construction Approval: B. Rogers
Date: 9/19/06

PUBLIC
Sewer Collection/Extension System
The City of Raleigh consents to the connection to the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh
Public Utilities Department Permit: S-3953

Construction Approval: B. Rogers
Date: 9/19/06

NORTH CAROLINA PROFESSIONAL SEAL 19268 GEORGE M. MONTGOMERY, JR.

McIntyre & Associates, PLLC
Engineering & Land Planners
4932-B Windy Hill Drive
Raleigh, NC 27609
(919) 876-0145 (Office)
(919) 876-0699 (Fax)

CARLTON POINTE SUBDIVISION
ROAD "F" PLAN AND PROFILE
ROLESVILLE, WAKE COUNTY

REVISIONS
ROLESVILLE REVIEW 1/7/08
FINAL 7/12/08

CLIENT
CARLTON GROUP OF NC
20 SQUADRON BLVD
NEW CITY, NEW YORK 10956
845-638-9300

DRAWN	DRD
CHECKED	GMM
APPROVED	GMM
START DATE	10-05
JOB CODE	–

DRAWING No.
C-15

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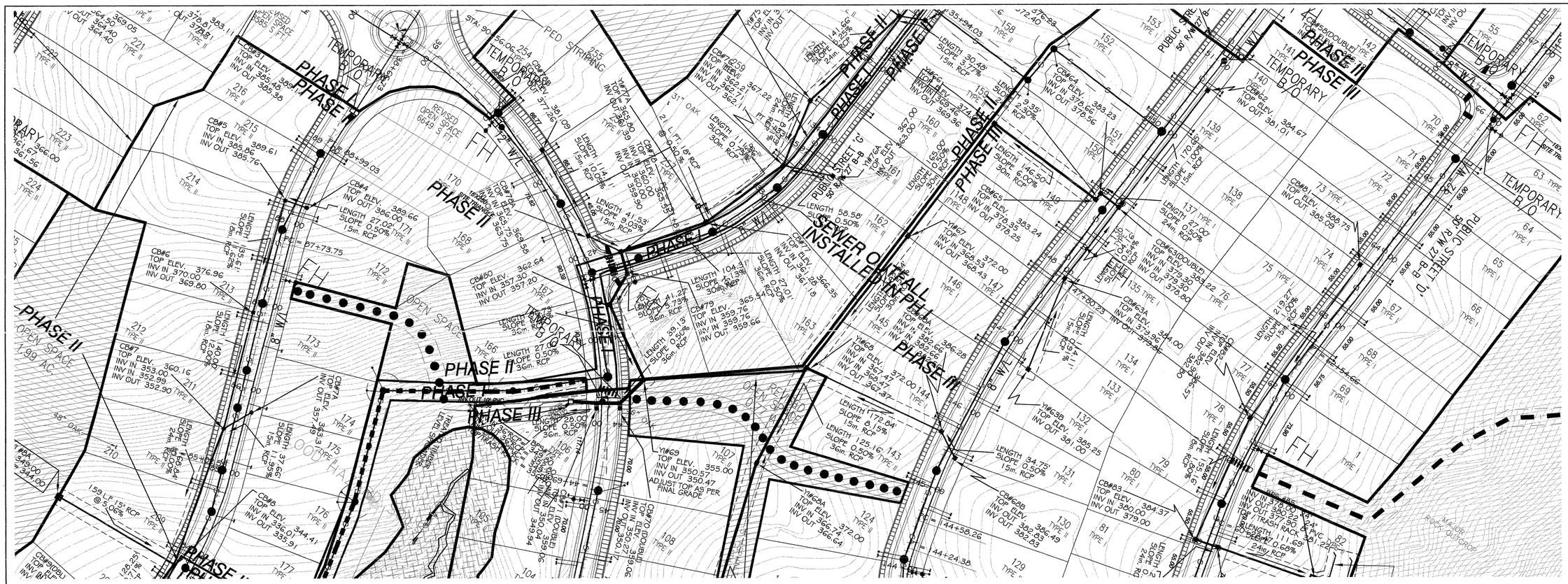


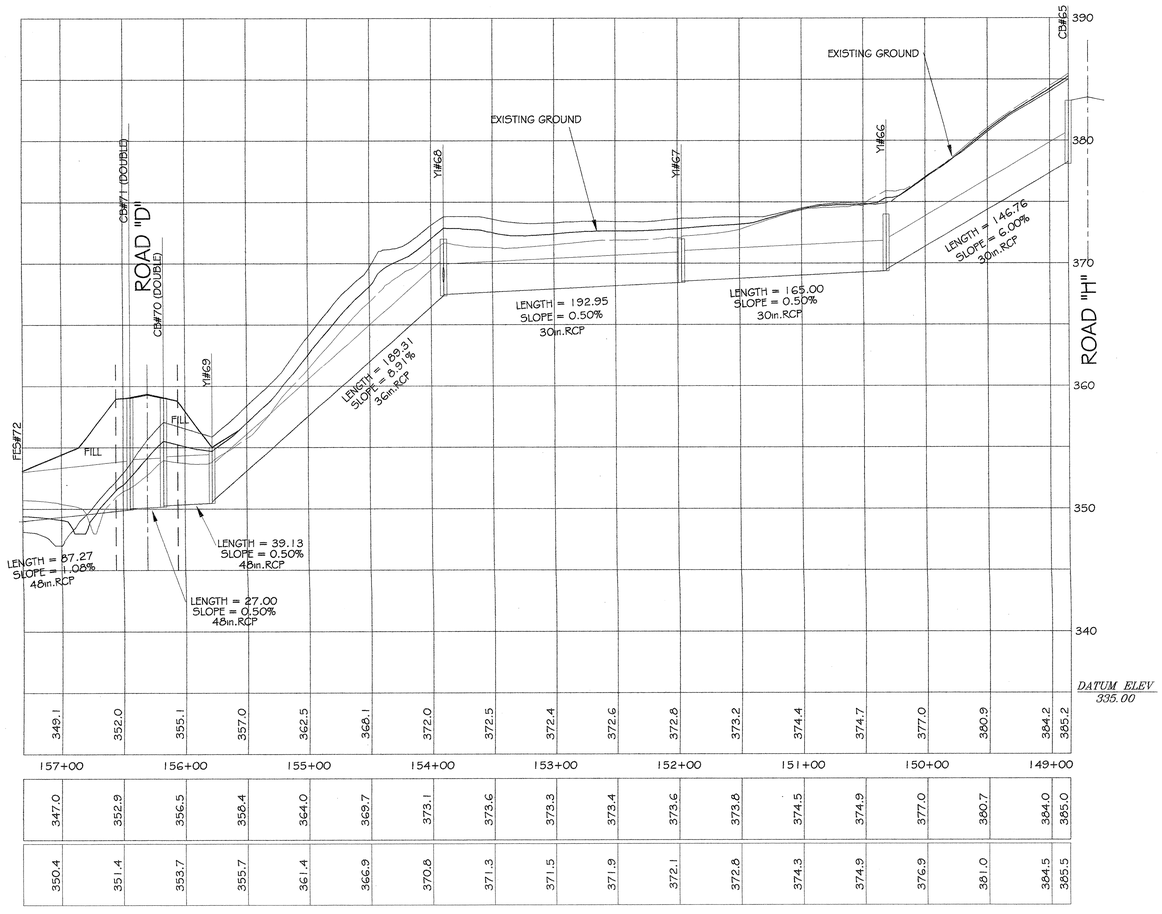
STORMWATER OUTFALL 1

GRAPHIC SCALES

PLAN VIEW 50 25 0 50 100

PROFILE (HORIZONTAL) 50 25 0 50 100

PROFILE (VERTICAL) 5 2.5 0 5 10



NOTES:
ALL CONSTRUCTION OF SANITARY SEWER AND WATERLINE TO BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.

ALL CONSTRUCTION OF ROADS AND STORM DRAINAGE TO BE IN ACCORDANCE WITH TOWN OF ROLESVILLE AND NCDOT STANDARDS AND SPECIFICATIONS.

PUBLIC
Sewer Collection/Extension System
The City of Raleigh consents to the connection to the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh
Public Utilities Department Permit: S-2953
Construction Approval: [signature]
Date: 9/3/06

PUBLIC
Water Distribution/Extension System
The City of Raleigh consents to the connection to the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh
Public Utilities Department Permit: W-2446
Construction Approval: [signature]
Date: 9/3/06

NORTH CAROLINA PROFESSIONAL SEAL 11638 ENGINEER GEORGE M. McINTYRE, JR.

McIntyre & Associates, PLLC
Engineering & Land Planners
4932-B Windy Hill Drive
Raleigh, NC 27609
(919) 876-0145 (Office)
(919) 876-0699 (Fax)

CARLTON POINTE SUBDIVISION
STORMWATER OUTFALL 1 - PLAN AND PROFILE

ROLESVILLE, WAKE COUNTY

REVISIONS
ROLESVILLE REVIEW 1/17/06
FINAL 1/17/06

CLIENT
CARLTON GROUP OF NC
20 SQUADRON BLVD
NEW CITY, NEW YORK 10956
845-638-9300

DRAWN	DRD
CHECKED	GMM
APPROVED	GMM
START DATE	10-05
JOB CODE	-

DRAWING No.
C-18

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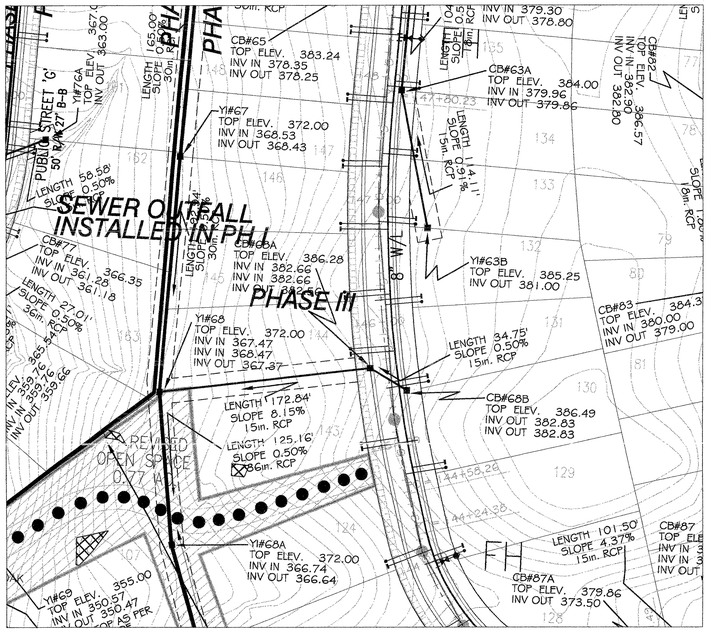
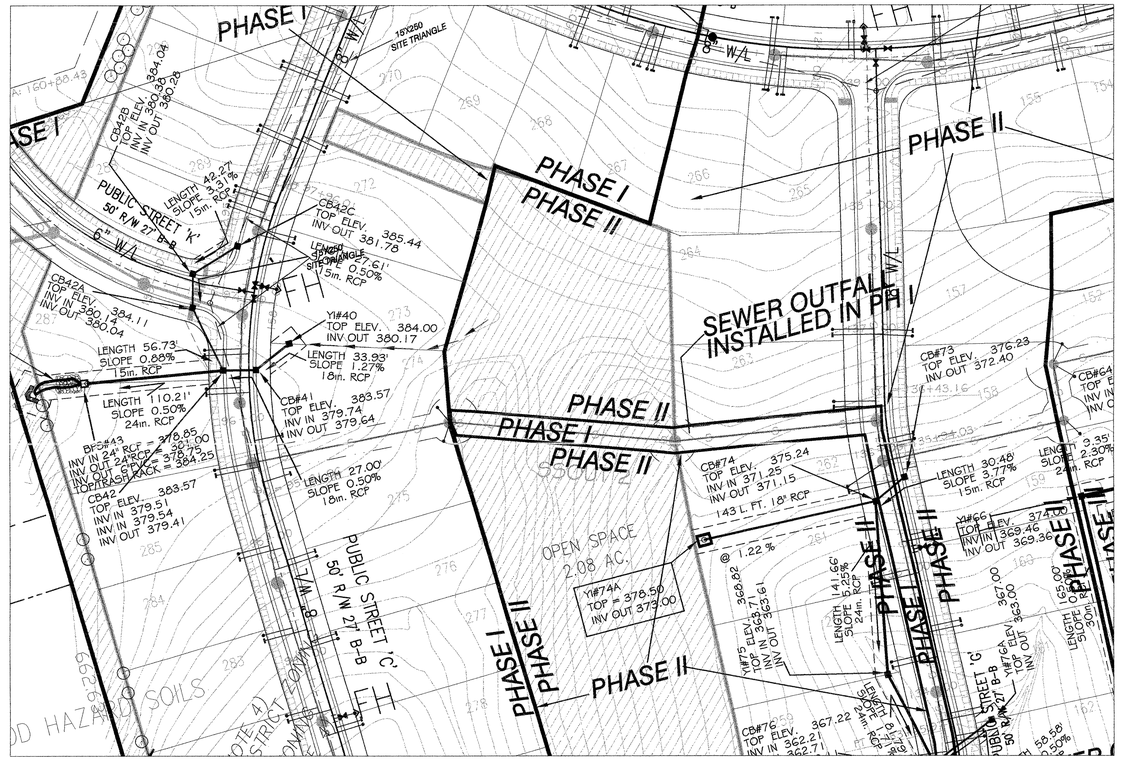
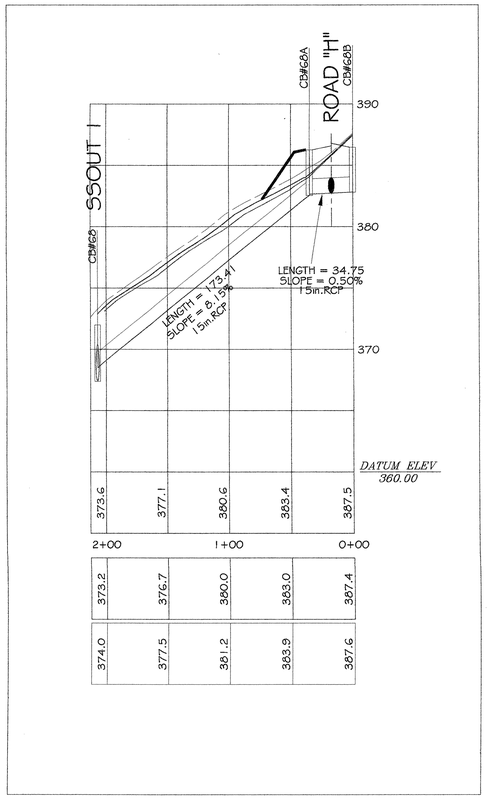
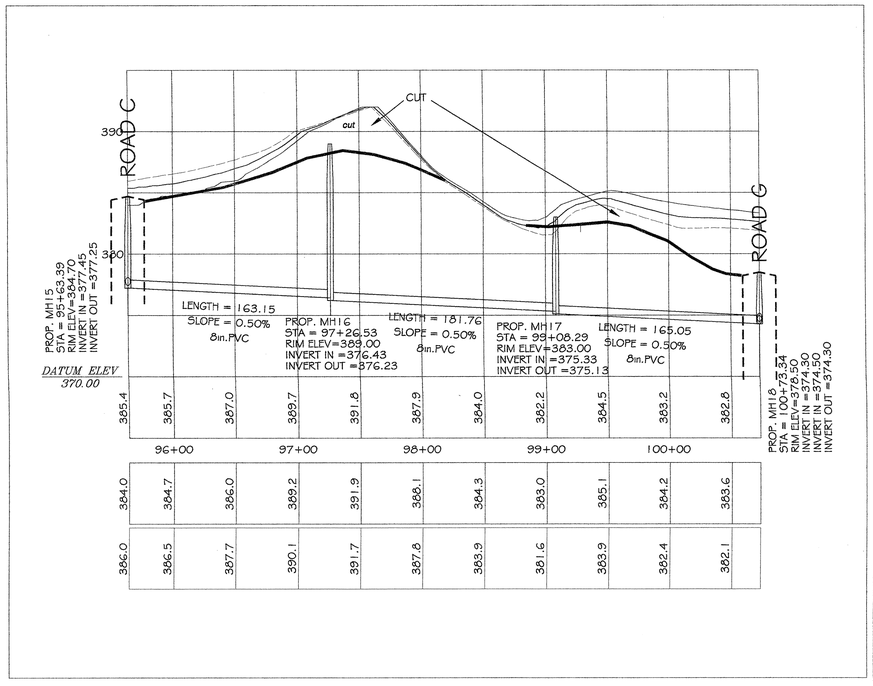


STORMWATER OUTFALL 2



SANITARY OUTFALL 2





GRAPHIC SCALES

PLAN VIEW 50 25 0 50 100

PROFILE (HORIZONTAL) 5 2.5 0 5 10

PROFILE (VERTICAL)

NOTES:
ALL CONSTRUCTION OF SANITARY SEWER AND WATERLINE TO BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.

ALL CONSTRUCTION OF ROADS AND STORM DRAINAGE TO BE IN ACCORDANCE WITH TOWN OF ROLESVILLE AND NCDOT STANDARDS AND SPECIFICATIONS.

PUBLIC
Water Distribution/Extension System
The City of Raleigh consents to the connection to the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh
Public Utilities Department Permit: W-2446

Construction Approval: B. Kapp
Date: 9/13/06

PUBLIC
Sewer Collection/Extension System
The City of Raleigh consents to the connection to the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh
Public Utilities Department Permit: S-2953

Construction Approval: B. Kapp
Date: 9/13/06

McIntyre & Associates, PLLC
Engineering & Land Planners
4932-B Windy Hill Drive
Raleigh, NC 27609
(919) 876-0145 (Office)
(919) 876-0699 (Fax)

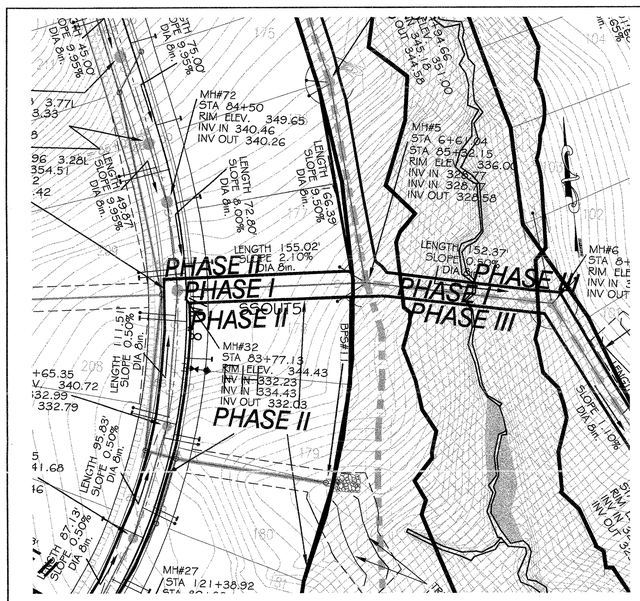
CARLTON POINTE SUBDIVISION
STORM OUTFALL 2 – PLAN AND PROFILE
SANITARY SEWER OUTFALL 2 – PLAN AND PROFILE
ROLESVILLE, WAKE COUNTY

REVISIONS
ROLESVILLE REVIEW 1/17/06
FINAL 1/17/06

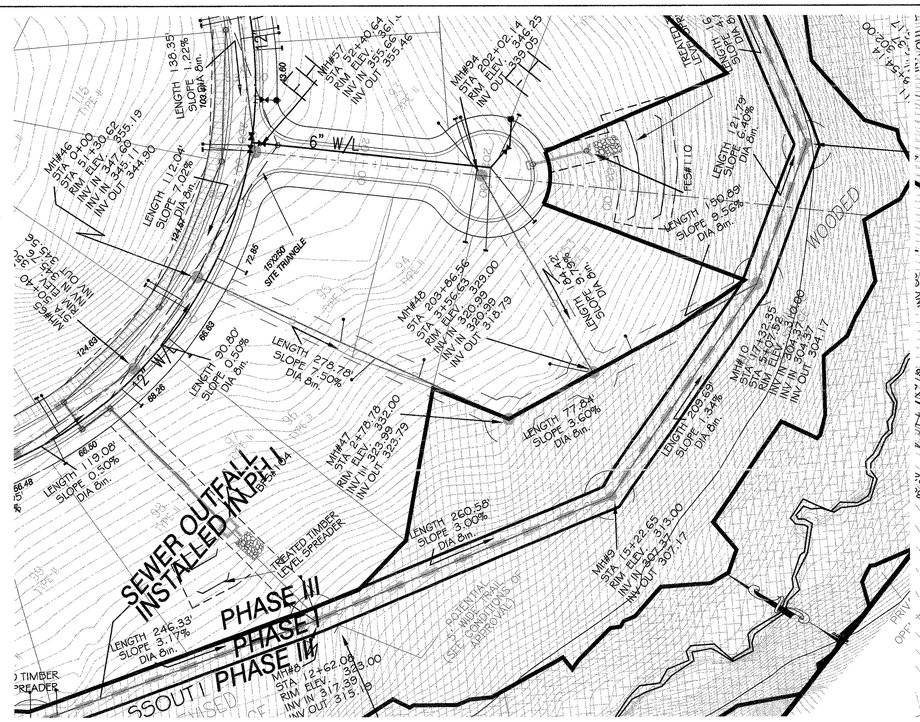
CLIENT
CARLTON GROUP OF NC
20 SQUADRON BLVD
NEW CITY, NEW YORK 10956
845-638-9300

DRAWN: DRD
CHECKED: GMM
APPROVED: GMM
START DATE: 10-05
JOB CODE: –

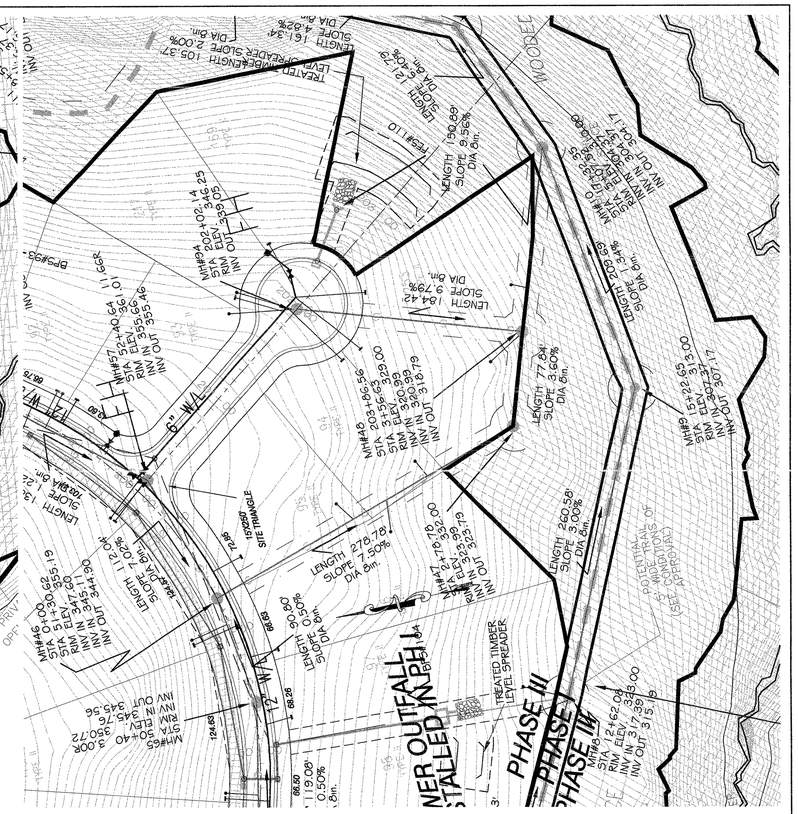
DRAWING No.
C-19



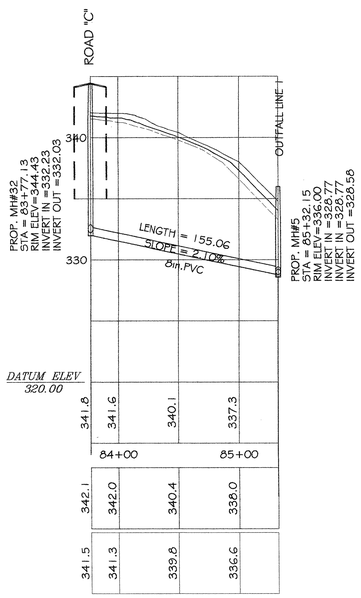
SANITARY OUTFALL 5

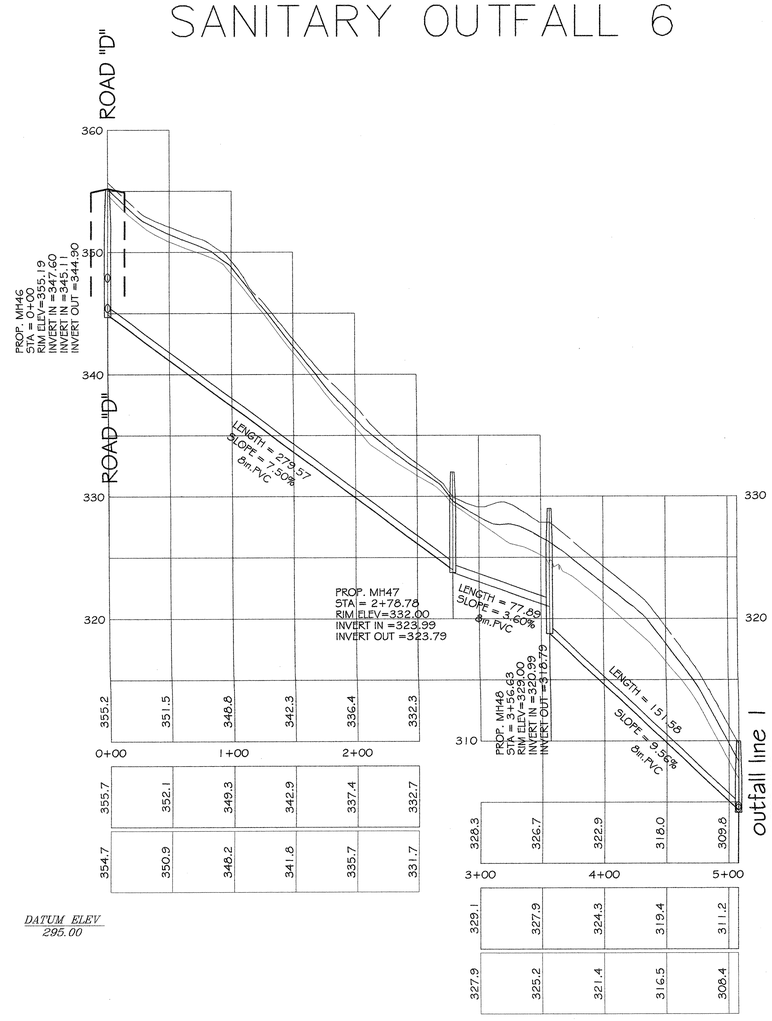


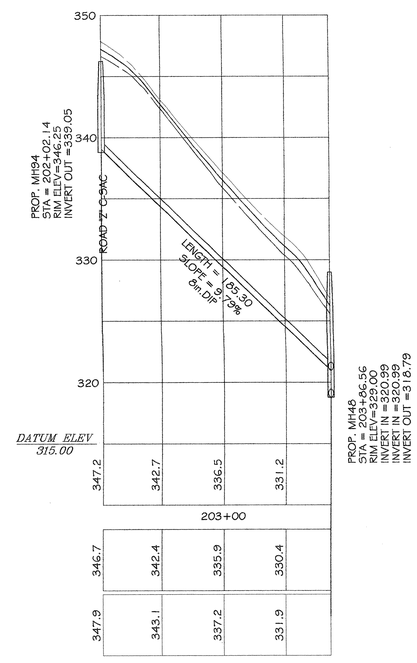
SANITARY OUTFALL 6



SANITARY OUTFALL 7







NOTES:
ALL CONSTRUCTION OF SANITARY SEWER AND WATERLINE TO BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.

ALL CONSTRUCTION OF ROADS AND STORM DRAINAGE TO BE IN ACCORDANCE WITH TOWN OF ROLESVILLE AND NCDOT STANDARDS AND SPECIFICATIONS.

PUBLIC
Water Distribution/Extension System
The City of Raleigh consents to the connection to the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh
Public Utilities Department Permit: W-2446
Construction Approval: BLY
Date: 01/13/06

PUBLIC
Sewer Collection/Extension System
The City of Raleigh consents to the connection to the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh
Public Utilities Department Permit: S-2953
Construction Approval: BLY
Date: 01/13/06

GRAPHIC SCALES
PLAN VIEW (50 25 0 50 100)
PROFILE (HORIZONTAL) (50 25 0 50 100)
PROFILE (VERTICAL) (5 2.5 0 5 10)

McIntyre & Associates, PLLC
Engineering & Land Planners
4932-B Windy Hill Drive
Raleigh, NC 27609
(919) 876-0145 (Office)
(919) 876-0699 (Fax)

CARLTON POINTE - SUBDIVISION
SANITARY OUTFALLS 5, 6, 7 - PLAN AND PROFILE
ROLESVILLE, WAKE COUNTY

REVISIONS
ROLESVILLE REVIEW 1/17/06
FINAL 1/17/06

CLIENT
CARLTON GROUP OF NC
20 SQUADRON BLVD
NEW CITY, NEW YORK 10956
845-638-9300

DRAWN: DRD
CHECKED: GMM
APPROVED: GMM
START DATE: 10-05
JOB CODE: -

DRAWING No.
C-21

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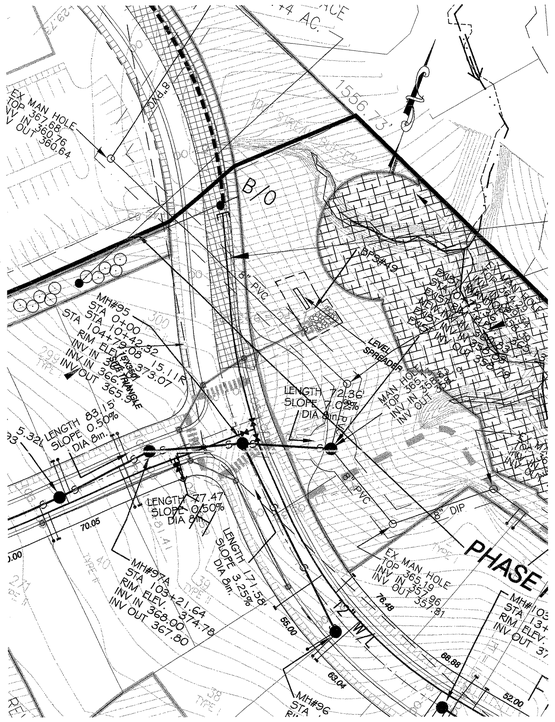
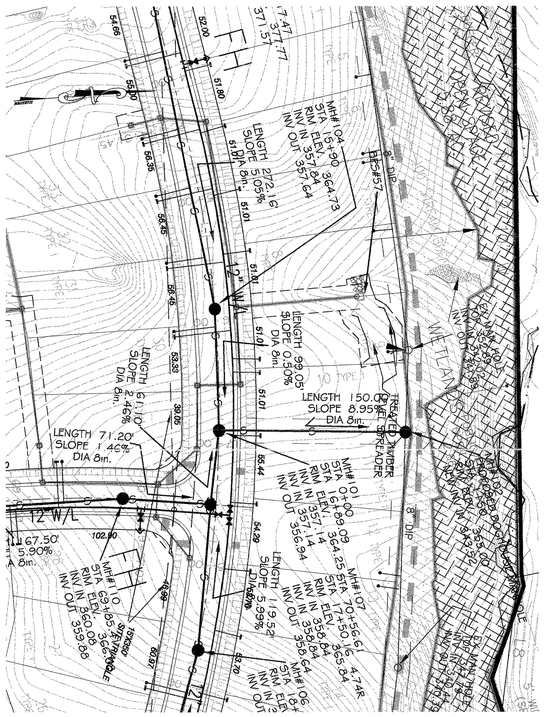
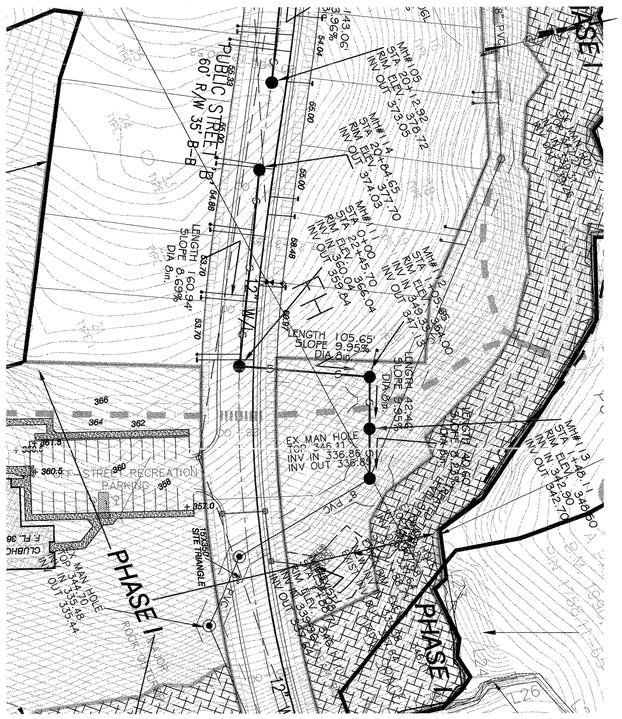


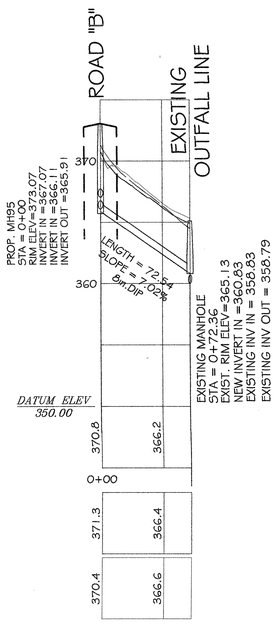
SANITARY OUTFALL 8

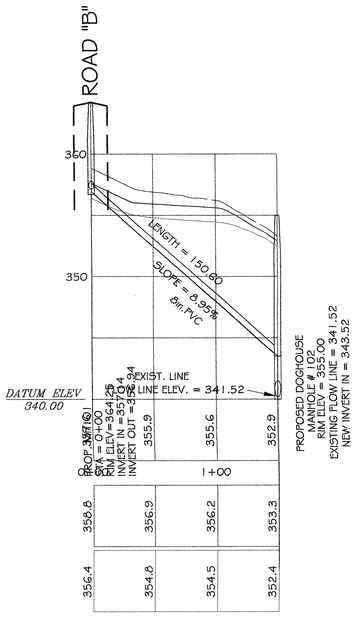


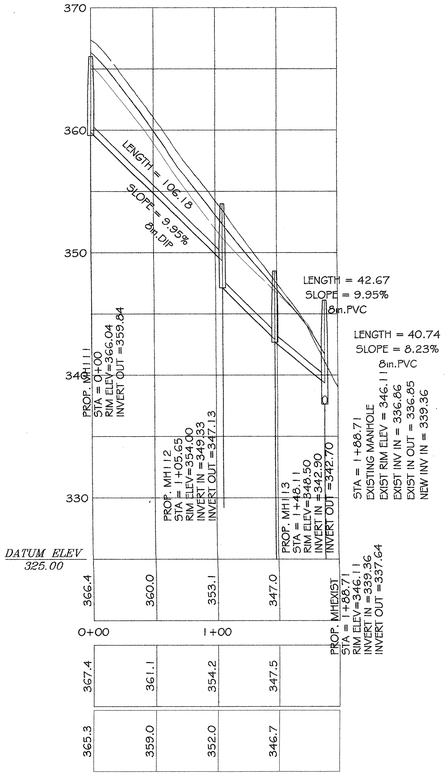
SANITARY OUTFALL 9



SANITARY OUTFALL 10







NOTES:
ALL CONSTRUCTION OF SANITARY SEWER AND WATERLINE TO BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.

ALL CONSTRUCTION OF ROADS AND STORM DRAINAGE TO BE IN ACCORDANCE WITH TOWN OF ROLESVILLE AND NCDOT STANDARDS AND SPECIFICATIONS.

PUBLIC
Water Distribution/Extension System
The City of Raleigh consents to the connection to the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh
Public Utilities Department Permit: W-2446
Construction Approval: [signature]
Date: 9/13/06

PUBLIC
Sewer Collection/Extension System
The City of Raleigh consents to the connection to the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh
Public Utilities Department Permit: S-2953
Construction Approval: [signature]
Date: 9/13/06

GRAPHIC SCALES
PLAN VIEW: 50 25 0 50 100
PROFILE (HORIZONTAL): 50 25 0 50 100
PROFILE (VERTICAL): 5 2.5 0 5 10

SEAL 11636 ENGINEER GEORGE M. MOINTYRE

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4932-B Windy Hill Drive
Raleigh, NC 27609
(919) 876-0145 (Office)
(919) 876-0699 (Fax)

CARLTON POINTE SUBDIVISION
SANITARY OUTFALLS 8, 9, AND 10 – PLAN AND PROFILE

ROLESVILLE, WAKE COUNTY

REVISIONS
ROLESVILLE REVIEW 1/11/06
FINAL 1/17/06

CLIENT
CARLTON GROUP OF NC
20 SQUADRON BLVD
NEW CITY, NEW YORK 10956
845-638-9300

DRAWN: DRD
CHECKED: GMM
APPROVED: GMM
START DATE: 10-05
JOB CODE: –

DRAWING No.
C-22

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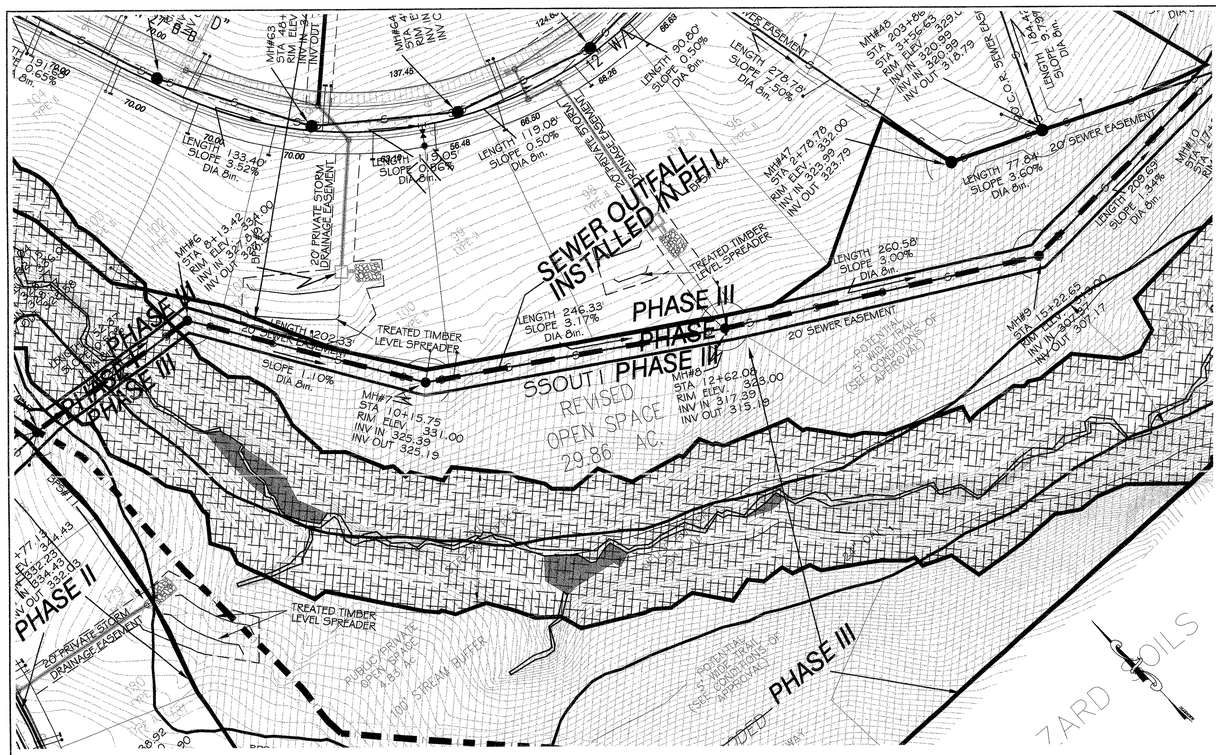
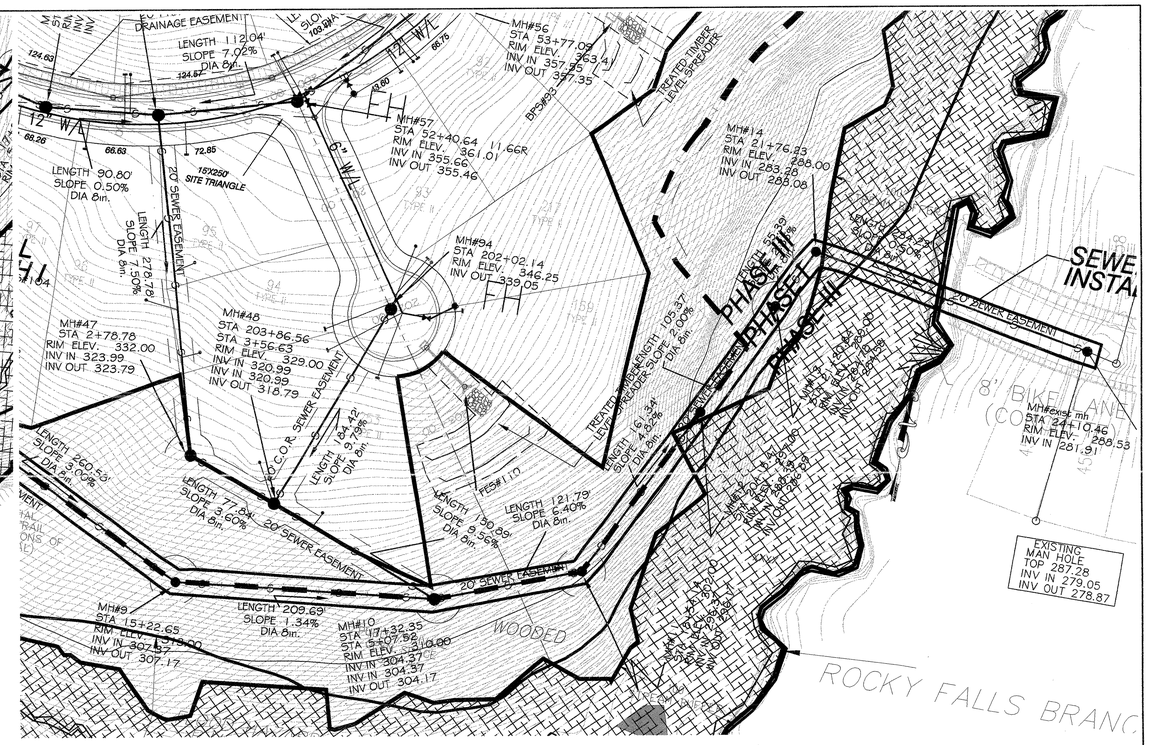
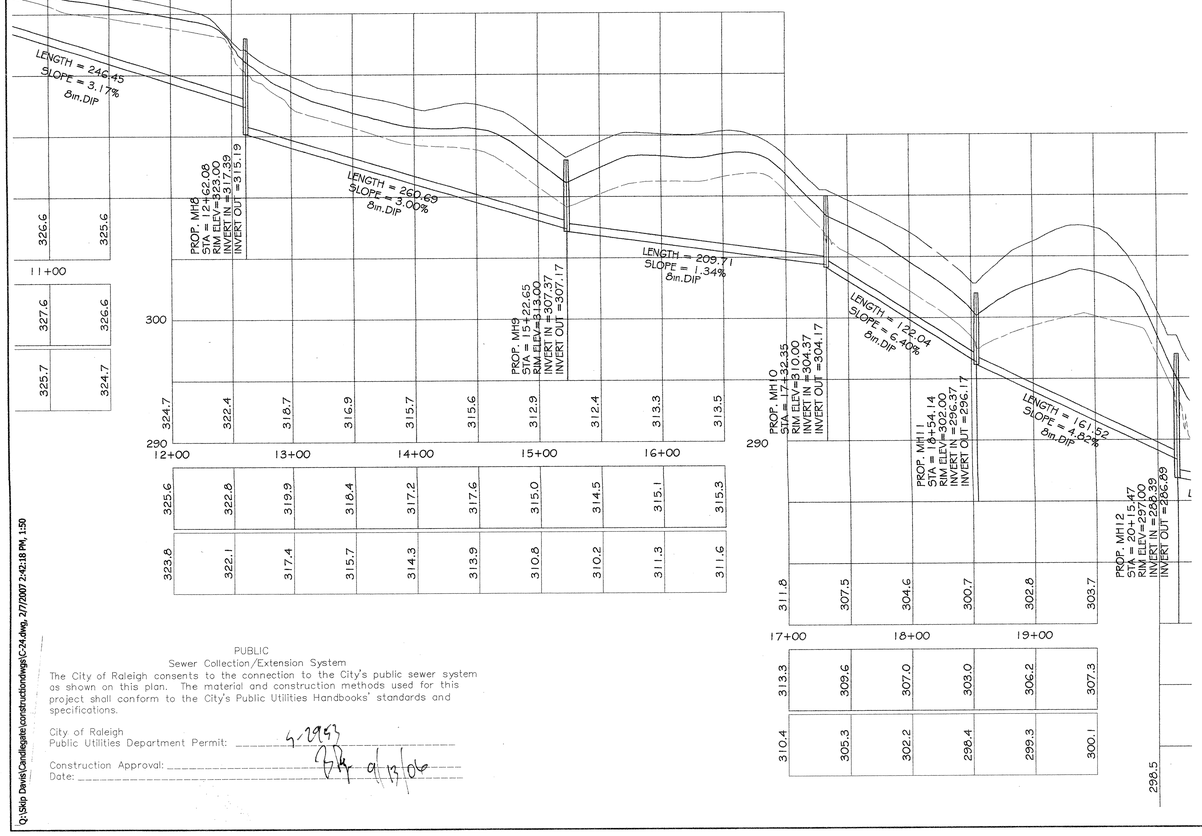


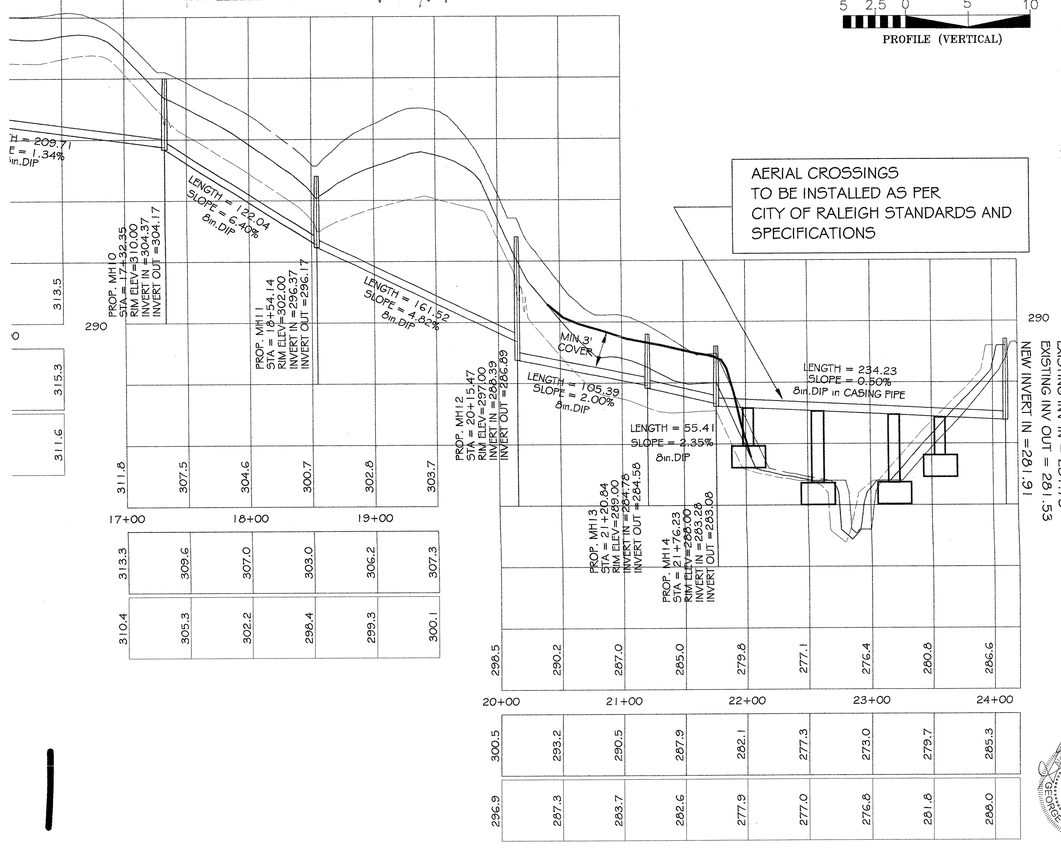


SANITARY OUTFALL 1

NOTES:
ALL CONSTRUCTION OF SANITARY SEWER AND WATERLINE TO BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.

ALL CONSTRUCTION OF ROADS AND STORM DRAINAGE TO BE IN ACCORDANCE WITH TOWN OF ROLESVILLE AND NCDOT STANDARDS AND SPECIFICATIONS.





PUBLIC
Sewer Collection/Extension System
The City of Raleigh consents to the connection to the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh
Public Utilities Department Permit: S-2993
Construction Approval: 9/13/06
Date:

PUBLIC
Water Distribution/Extension System
The City of Raleigh consents to the connection to the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh
Public Utilities Department Permit: W-2446
Construction Approval: 9/13/06
Date:

GRAPHIC SCALES
PLAN VIEW 50 25 0 50 100
PROFILE (HORIZONTAL) 50 25 0 50 100
PROFILE (VERTICAL) 5 2.5 0 5 10

McIntyre & Associates, PLLC
Engineering & Land Planners
4932-B Windy Hill Drive
Raleigh, NC 27609
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(919) 876-0699 (Fax)

CARLTON POINTE SUBDIVISION
SANITARY OUTFALL 1 - PLAN AND PROFILE (CONT.)
ROLESVILLE, WAKE COUNTY

REVISIONS
ROLESVILLE REVIEW 1/25/06
FINAL 1/12/06

CLIENT
CARLTON GROUP OF NC
20 SQUADRON BLVD
NEW CITY, NEW YORK 10956
845-638-9300

DRAWN: DRD
CHECKED: GMM
APPROVED: GMM
START DATE: 10-05
JOB CODE: -

DRAWING No. C-24

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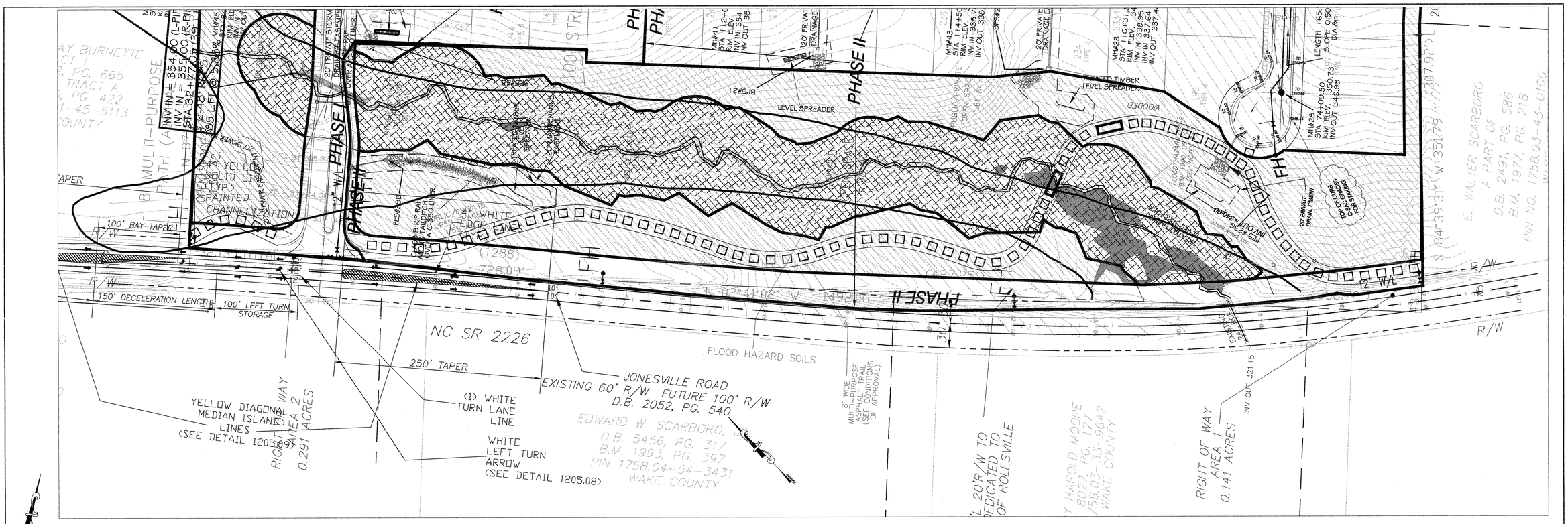
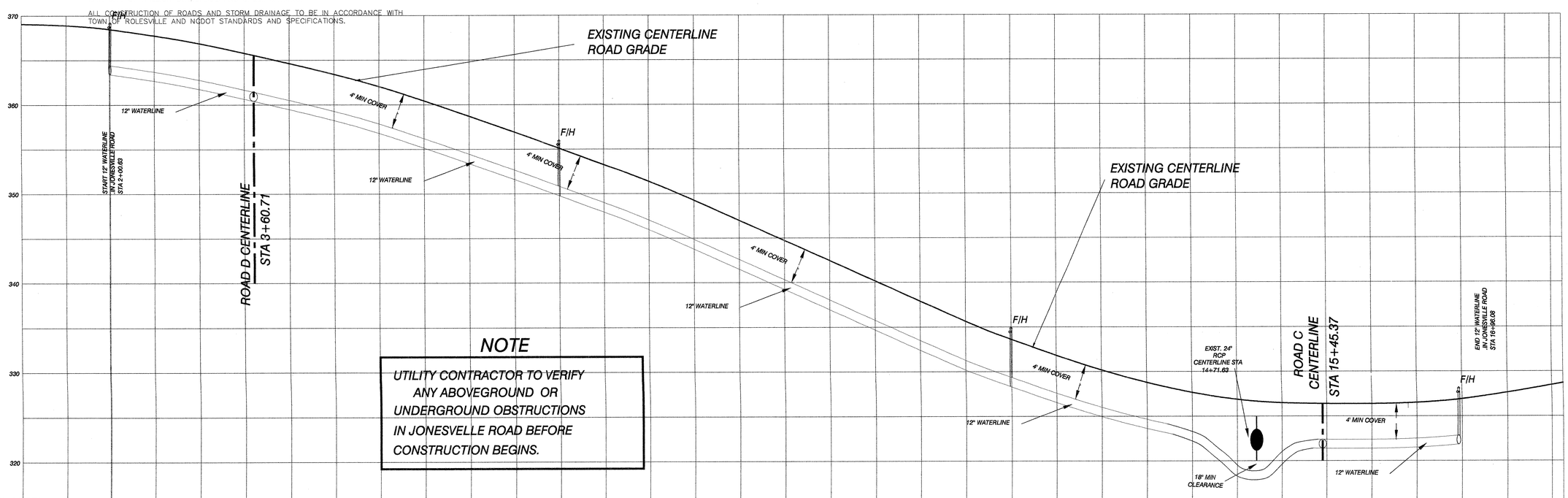


JONESVILLE ROAD

NOTES:
ALL CONSTRUCTION OF SANITARY SEWER AND WATERLINE TO BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.

ALL CONSTRUCTION OF ROADS AND STORM DRAINAGE TO BE IN ACCORDANCE WITH TOWN OF ROLESVILLE AND NCDOT STANDARDS AND SPECIFICATIONS.



NOTE

UTILITY CONTRACTOR TO VERIFY ANY ABOVEGROUND OR UNDERGROUND OBSTRUCTIONS IN JONESVELLE ROAD BEFORE CONSTRUCTION BEGINS.

GRAPHIC SCALES
PLAN VIEW
PROFILE (HORIZONTAL)
PROFILE (VERTICAL)

PUBLIC Water Distribution/Extension System
The City of Raleigh consents to the connection to the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.
City of Raleigh Public Utilities Department Permit: W-2446
Construction Approval: 9/13/00
Date:

PUBLIC Sewer Collection/Extension System
The City of Raleigh consents to the connection to the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.
City of Raleigh Public Utilities Department Permit: S-2953
Construction Approval: 9/13/00
Date:

NORTH CAROLINA PROFESSIONAL SEAL 11626 GEORGE M. McINTYRE

McIntyre & Associates, PLLC
Engineering & Land Planners
4932-B Windy Hill Drive
Raleigh, NC 27609
(919) 876-0145 (Office)
(919) 876-0899 (Fax)

CARLTON POINTE SUBDIVISION
JONESVILLE ROAD - PLAN AND PROFILE
ROLESVILLE, WAKE COUNTY

REVISIONS
PRELIMINARY REVIEW 1/05/06
FINAL 1/12/06

CLIENT
CARLTON GROUP OF NC
20 SQUADRON BLVD
NEW CITY, NEW YORK 10956
845-638-9300

DRAWN: DRD
CHECKED: GMM
APPROVED: GMM
START DATE: 10-05
JOB CODE: –

DRAWING No. C-25

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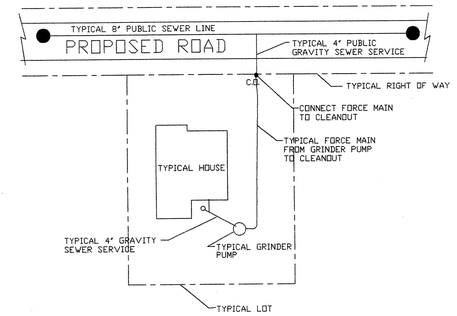

TYPICAL GRINDER PUMP LAYOUT PLAN

NO SCALE

NOTE:

1. The purchaser and subsequent purchaser of each Lot served by a private sanitary sewer pump shall execute and record a perpetual written statement acknowledging both the existence of a private sanitary sewer pump and the responsiblity for continued maintenance thereof by property owner.

2. (This statement shall also be shown on plat) The cost of installation and maintenance of a private sanitary pump on any Lot shall be borne solely and exclusively by the recorded owner and perpetuity of each such Lot. The cost of installation and maintenance of private sanitary sewer pumps shall not be the responsibilty of the City of Raleigh nor the Town of Rolesville nor Wake County. The conveyance of any and all Lots served by the private sanitary sewer pumps shall be made subject to this condition.

NOTE:

✳ DENOTES LOTS THAT WILL PROBABLY REQUIRE GRINDER PUMPS TO SERVE RESIDENCE. THE TOTAL NUMBER OF LOTS REQUIRING GRINDER PUMPS WILL NOT EXCEED 51 LOTS. EXACT HOMES REQUIRING GRINDER PUMPS MAY CHANGE DUE TO FINAL FLOOR ELEVATIONS OF HOMES, HOWEVER; TOTAL GRINDER PUMP LOTS SHALL NOT EXCEED 51. ANY MODIFICATIONS TO THIS DESIGN WILL A REVIEW BY CITY OF RALIEGH PUBLIC UTILITIES DEPARTMENT.

NOTES:
ALL CONSTRUCTION OF SANITARY SEWER AND WATERLINE TO BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.

ALL CONSTRUCTION OF ROADS AND STORM DRAINAGE TO BE IN ACCORDANCE WITH TOWN OF ROLESVILLE AND NCDOT STANDARDS AND SPECIFICATIONS.

PUBLIC
Water Distribution/Extension System
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City of Raleigh
Public Utilities Department Permit: W-2446
Construction Approval: BWR 9/13/06
Date:

PUBLIC
Sewer Collection/Extension System
The City of Raleigh consents to the connection to the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.

City of Raleigh
Public Utilities Department Permit: S-093
Construction Approval: BWR 9/13/06
Date:

NORTH CAROLINA PROFESSIONAL SEAL 11668 ENGINEER GEORGE M. McINTYRE

McIntyre & Associates, PLLC
Engineering & Land Planners
4932-B Windy Hill Drive
Raleigh, NC 27609
mmcintyrepe@aol.com
(919) 876-0145 (Office)
(919) 876-0699 (Fax)

CARLTON POINTE SUBDIVISION
OVERALL PUMP LOT LAYOUT AND DETAIL PLAN

ROLESVILLE, NC

REVISIONS

CLIENT
CARLTON GROUP OF NC, LLC
20 SQUADRON BLVD
NEW CITY, NEW YORK 10956
914-429-0683

DRAWN	DRD
CHECKED	GMM
APPROVED	GMM
START DATE	
JOB CODE	–

DRAWING No.
PL-1

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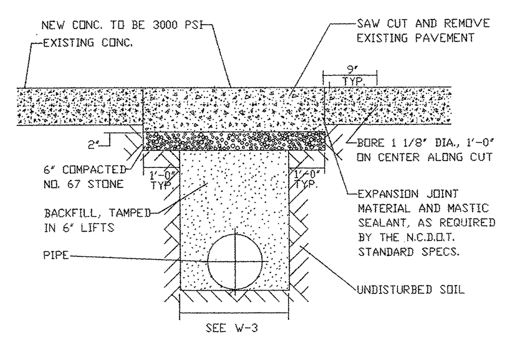
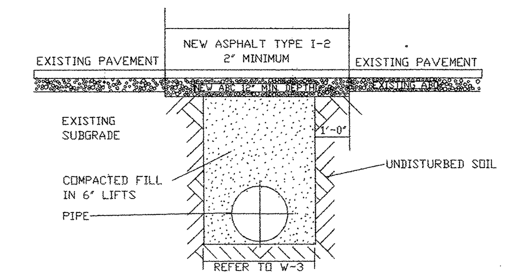


NOTES:

1. See City of Raleigh standards for trenches and pipe bedding W-3 for additional details
2. Pavement cuts over 5'-0" width shall be reinforced to N.C.D.O.T. standards.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
STANDARD CONCRETE PAVEMENT PATCH DETAIL

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-1	RRH	3-31-00		

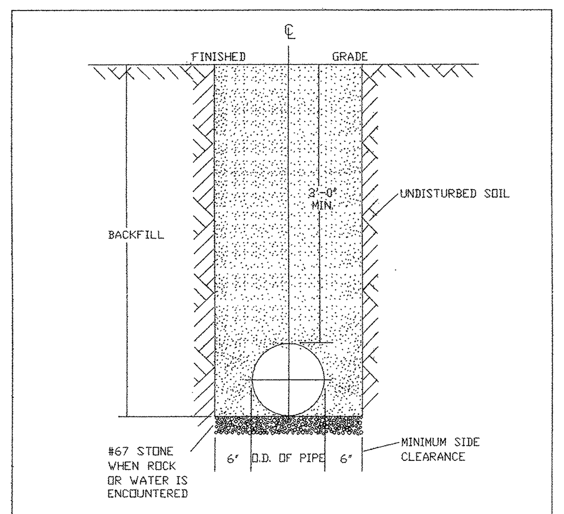


NOTES:

1. The pavement cut shall be defined by a straight edge preferably a machine saw cut.
2. The trench subgrade material shall be backfilled with suitable material and compacted to a density of at least 95% of that obtained by compacting a sample of the material in accordance with AASHTO T-99 as modified by NCDOT.
3. The final 1' of fill shall consist of ABC material compacted to a density equal to 100% of that obtained by compacting a sample of the material in accordance with AASHTO T-80 as modified by NCDOT.
4. The entire thickness/ vertical edge of cut shall be tacked.
5. The same depth of pavement material which exists shall be reinstalled, but in no case shall the asphalt be less than 2" thick.
6. The asphalt pavement material shall be installed and compacted thoroughly to achieve a smooth level patch.
7. Refer to City of Raleigh standards for trenches and pipe bedding, W-3. for additional details.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
STANDARD ASPHALT PAVEMENT PATCH DETAIL

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-2	RRH	3-31-00	D.W.C.	11-1-99

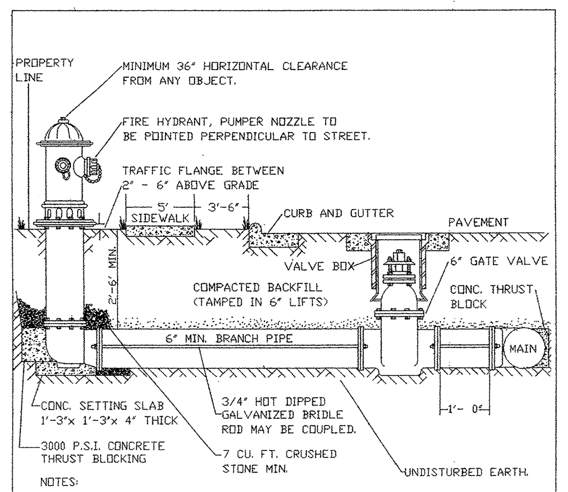


NOTES:

1. Trenches requiring shoring and bracing, dimensions shall be taken from the inside face of the shoring and bracing.
2. No rocks or boulders 4" or larger to be used in backfill.
3. All backfill material shall be suitable native material.
4. Backfill shall be tamped in 6" lifts.
5. Achieve 95% compaction in backfill.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
TRENCH BOTTOM DIMENSIONS & BACKFILLING REQUIREMENTS FOR DUCTILE IRON

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-3	D.W.C.	3-1-87 / 9-3-99	RRH	3-31-00



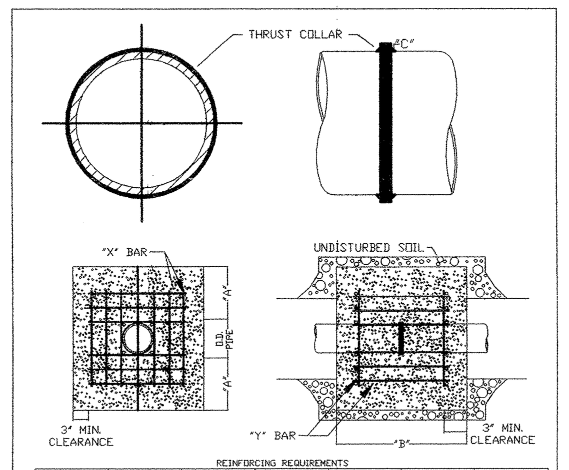
NOTES:

1. FIRE HYDRANT SHALL BE AS MANUFACTURED: MUELLER, AMERICAN DARLING, KENNEDY, M & H, WATEROUS, CLOW, OR AVK.
2. BRANCH PIPE SHALL BE DUCTILE IRON AWWA C150-96.
3. 6" GATE VALVE SHALL BE AWWA C500-86 OPEN LEFT.
4. STEEL RODS AND BOLTS SHALL BE 3/4" HOT DIPPED GALVANIZED.
5. FIRE HYDRANTS WILL BE INSTALLED IN TRUE VERTICAL POSTION.
6. MEGALUGS MAY BE USED ON FIRE HYDRANT BRANCH LEGS FOR RODDING, IF MORE THAN ONE ROD COUPLING IS EXCEEDED.
7. FIRE HYDRANTS TO BE LOCATED IN ROW OR 2 FOOT EASEMENT ADJACENT TO ROW.

ANYTIME SITE WORK, CONSTRUCTION, ROAD WORK, OR ANY OTHER WORK CHANGES THE GRADE OF THE FIRE HYDRANT, THE PERSON RESPONSIBLE FOR THE WORK IS RESPONSIBLE FOR ADJUSTING THE FIRE HYDRANT TO STAY WITHIN COMPLIANCE.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
STANDARD FIRE HYDRANT INSTALLATION DETAIL

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-4		3-1-87 / 7-1-87	Y.C.A.	12-31-91



REINFORCING REQUIREMENTS

I.D. PIPE	REBAR SIZE	"X" BAR LENGTH	"X" BAR WEIGHT	"Y" BAR LENGTH	"Y" BAR WEIGHT	NO. REQUIRED
6" - 36"	#5	2'-2"+ O.D. PIPE	1.043 LBS/FT	1'-1"	11 LBS. EACH	X-24, Y-12
48" & greater	#6	3'-0"+ O.D. PIPE	1.502 LBS/FT	1'-3"	19 LBS. EACH	X-24, Y-12

THRUST COLLAR, AND THRUST SCHEDULE

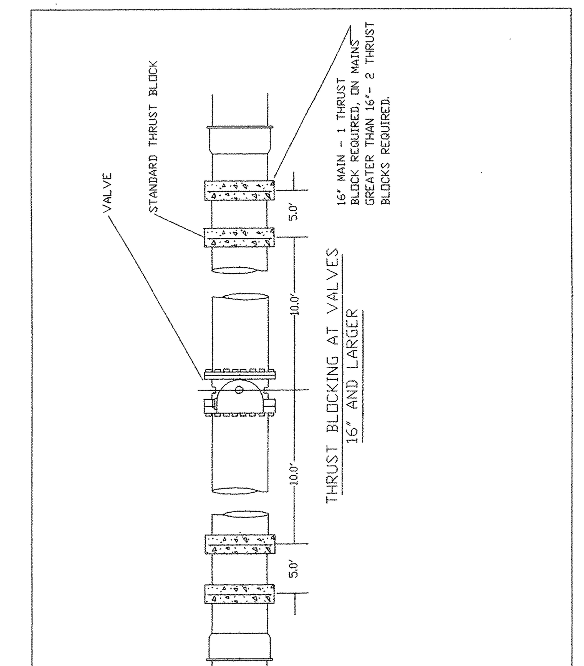
I.D. PIPE	"A"	"B"	"C-6"-16", 20"-24", 30"-36", 48"
6" - 36"	1'-4"	1'-7"	2" 3" 4"
48" & greater	1'-8"	1'-9"	6"

NOTES:

1. SEE STANDARD DETAIL W-9 FOR THRUST BLOCK LOCATIONS.
2. CONCRETE SHALL BE 3000 PSI AND TRANSIT MIXED.
3. REINFORCING BARS SHALL BE DEFORMED AND TIED TOGETHER.
4. TRENCH BOTTOM WIDTH IN VICINITY OF THRUST BLOCK INSTALLATION SHALL BE THE MINIMUM WIDTH AS SHOWN ON STANDARD DETAIL W-3.
5. BACKFILL TAMPED IN 6" LIFTS PER STANDARD DETAIL W-3.
6. THRUST COLLAR MUST BE FACTORY WELDED ON BOTH SIDES ALONG BOTH EDGES OF COLLAR AROUND CIRCUMFERENCE.

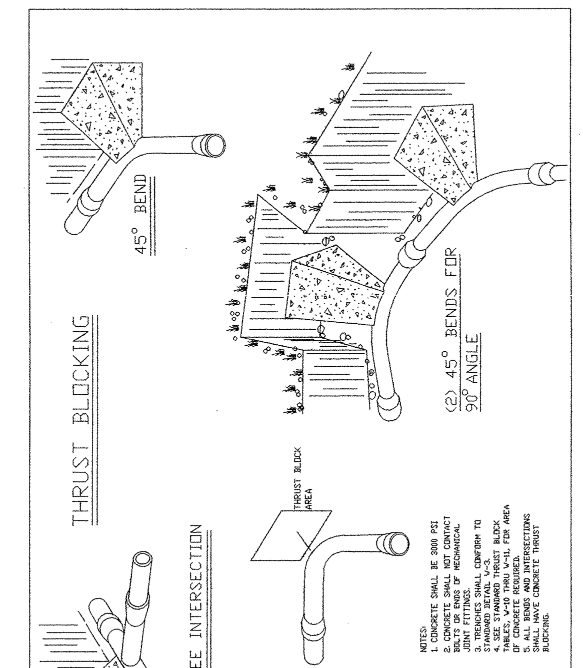
CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
THRUST BLOCKING DESIGN DATA FOR WATER MAINS

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-7	RRH	1-21-00		



CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
STANDARD THRUST BLOCK INSTALLATION FOR VALVES AND DEAD END MAINS

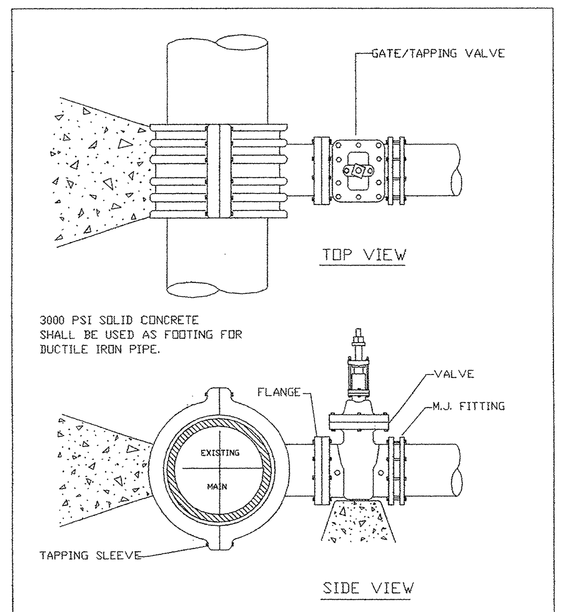
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-8	Y.C.A.	4-12-90 / 6-92	D.W.C. / RRH	9-7-99 / 3-31-00



NOTES:
1. CONCRETE SHALL BE 3000 PSI
2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT FITTINGS.
3. TRENCHES SHALL CONFORM TO STANDARD DETAIL W-3.
4. SEE STANDARD THRUST BLOCK TABLES, W-10 THRU W-11 FOR AREA OF CONCRETE REQUIRED.
5. ALL BENDS AND INTERSECTIONS SHALL HAVE CONCRETE THRUST BLOCKING.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
STANDARD THRUST BLOCKING VIEWS

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-9	D.W.C.	3-1-87 / 9-7-99	RRH	3-31-00

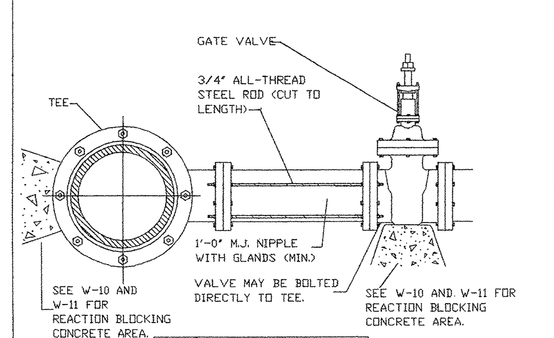


NOTES:

1. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT FITTINGS.
2. SEE STANDARD REACTION BLOCK TABLES, W-10 AND W-11 FOR AREA OF CONCRETE REQUIRED.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
4" - 24" STANDARD TAPPING SLEEVE AND VALVE ASSEMBLY

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-14	Y.C.A.	3-1-87 / 12-31-91	D.W.C. / RRH	9-7-99 / 3-31-00



ROD REQUIREMENTS

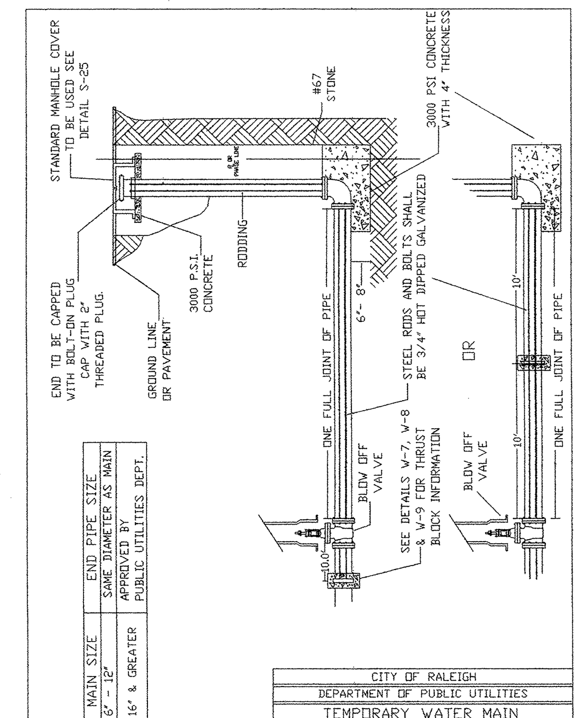
BRANCH SIZE	NO. OF RODS
4"	4
6"	4
8"	4
12"	4
16"	6
24"	6
30"	8
36"	8

NOTES:

1. STEEL RODS AND BOLTS SHALL BE 3/4" HOT DIPPED GALVANIZED.
2. SEE STANDARD THRUST BLOCK. TABLES W-10 AND W-11 FOR CONCRETE.
3. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL FITTINGS.
4. THIS RODDING REQUIREMENT DOES NOT APPLY TO FIRE HYDRANTS.

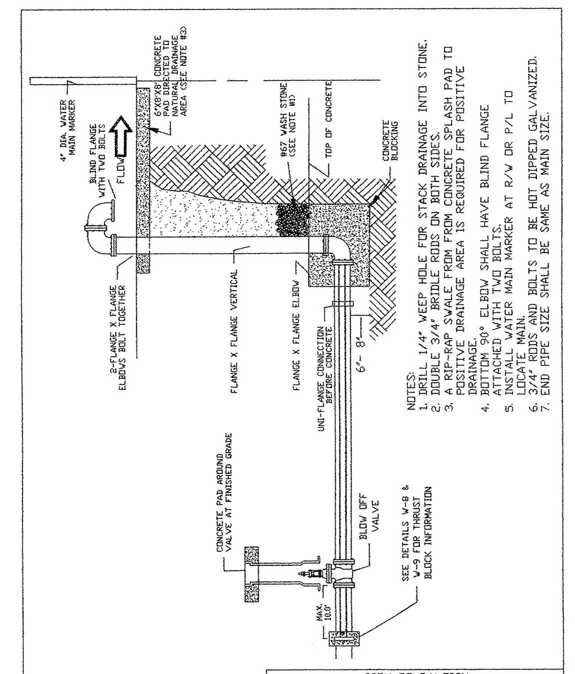
CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
RESTRAINED TEE AND VALVE INSTALLATION ON DEAD LINES (4"-24")

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-15	Y.C.A.	3-1-87 / 12-31-91	D.W.C. / RRH	9-7-99 / 3-31-00



CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
TEMPORARY WATER MAIN BLOW OFF ASSEMBLY

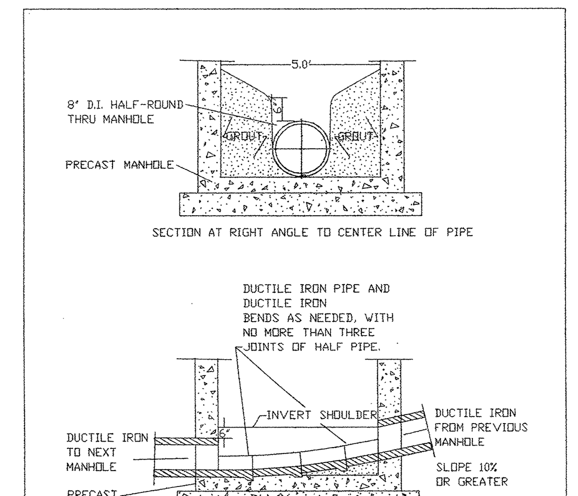
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-19	D.W.C. / RRH	12-28-99 / 3-31-00		



NOTES:
1. DRILL 1/4" WEEP HOLE FOR STACK DRAINAGE INTO STONE.
2. DOUBLE 3/4" BRIDLE RODS ON BOTH SIDES.
3. A RIP-RAP SWALE FROM FROM CONCRETE SPLASH PAD TO POSITIVE DRAINAGE AREA IS REQUIRED FOR POSITIVE DRAINAGE.
4. BOTTOM 90° ELBOW SHALL HAVE BLIND FLANGE ATTACHED WITH TWO BOLTS.
5. INSTALL WATER MAIN MARKER AT R/W OR P/L TO LOCATE MAIN.
6. 3/4" RODS AND BOLTS TO BE HOT DIPPED GALVANIZED.
7. END PIPE SIZE SHALL BE SAME AS MAIN SIZE.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
PERMANENT WATER MAIN BLOW OFF ASSEMBLY

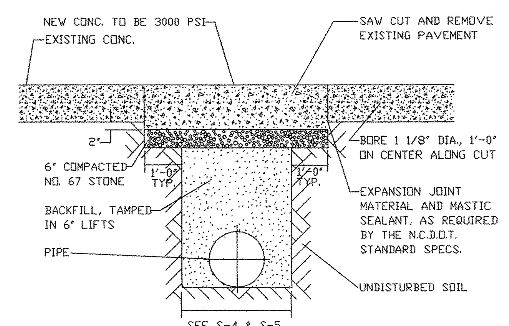
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-20	D.W.C.	12-28-99		



NOTE:
NO HORIZONTAL ALIGNMENT CHANGE CAN BE MADE WITH IN THIS MANHOLE TYPE. USE ON GRADES 10% OR GREATER.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
STANDARD HIGH VELOCITY MANHOLE INVERT

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-23	Y.C.A.	3-1-87 / 12-31-91	RRH	3-30-00

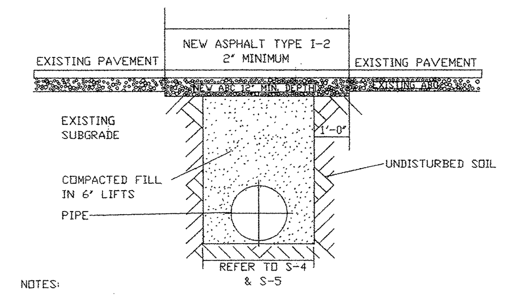


NOTES:

1. See City of Raleigh standards for trenches and pipe bedding (S-4 & S-5) for additional details.
2. Pavement cuts over 5'-0" in width shall be reinforced to N.C.D.O.T. standards.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
STANDARD CONCRETE PAVEMENT PATCH DETAIL

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-2	Y.C.A.	3-1-87 / 12-31-91	D.W.C. / RRH	6-23-99 / 3-30-00

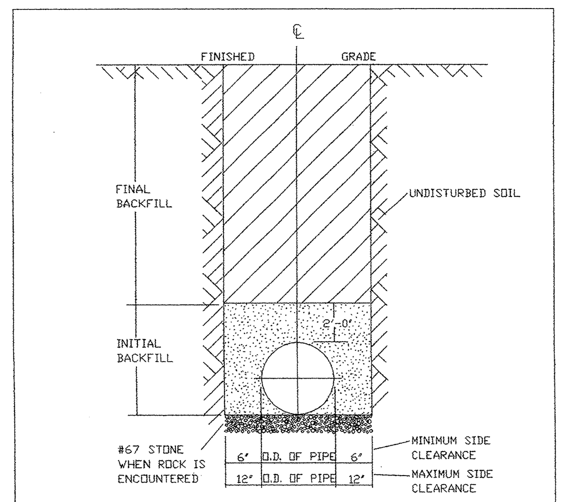


NOTES:

1. The pavement cut shall be defined by a straight edge preferably a machine saw cut.
2. The trench subgrade material shall be backfilled with suitable material and compacted to a density of at least 95% of that obtained by compacting a sample of the material in accordance with AASHTO T-99 as modified by NCDOT.
3. The final 1' of fill shall consist of ABC material compacted to a density equal to 100% of that obtained by compacting a sample of the material in accordance with AASHTO T-80 as modified by NCDOT.
4. The entire thickness and vertical edge of cut shall be tacked.
5. The same depth of pavement material which exists shall be reinstalled, but in no case shall the asphalt be less than 2" thick.
6. The asphalt pavement material shall be installed and compacted thoroughly to achieve a smooth level patch.
7. Refer to City of Raleigh standards for trenches and pipe bedding (S-4 & S-5) for additional details.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
STANDARD ASPHALT PAVEMENT PATCH DETAIL

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-3	D.W.C. / RRH	11-1-99 / 3-30-00		

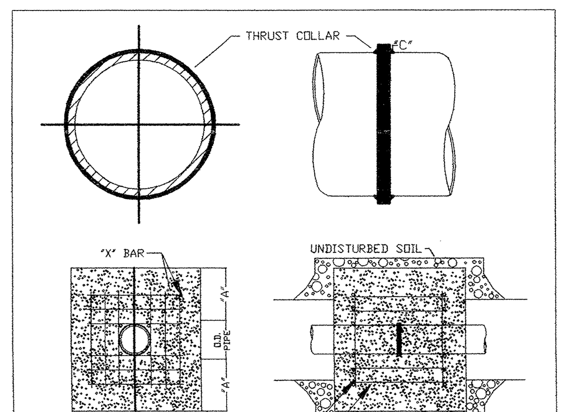


NOTES:

1. Trenches requiring shoring and bracing, dimensions shall be taken from the inside face of the shoring and bracing.
2. No rocks or boulders 4" or larger to be used in initial backfill.
3. All backfill material shall be suitable native material.
4. Backfill shall be tamped in 6" lifts in traffic areas, 12" in non-traffic areas.
5. Achieve 80% compaction in non-traffic areas, and 95% compaction in traffic areas.
6. If in easement 4" topsoil, and 12" clean select fill is required.
7. No boulders 8" in diameter or greater allowed.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
TRENCH BOTTOM DIMENSIONS & BACKFILLING REQUIREMENTS FOR DUCTILE IRON AND REINFORCED CONCRETE PIPE.

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-4	D.W.C.	3-1-87 / 9-3-99	RRH	3-30-00



REINFORCING REQUIREMENTS

I.D. PIPE	REBAR SIZE	"X" BAR LENGTH	"X" BAR WEIGHT	"Y" BAR LENGTH	"Y" BAR WEIGHT	NO. REQUIRED
6" - 36"	#5	2'-2"+ O.D. PIPE	1.043 LBS/FT	1'-1"	11 LBS. EACH	X-24, Y-12
48" & greater	#6	3'-0"+ O.D. PIPE	1.502 LBS/FT	1'-3"	19 LBS. EACH	X-24, Y-12

THRUST COLLAR, AND THRUST SCHEDULE

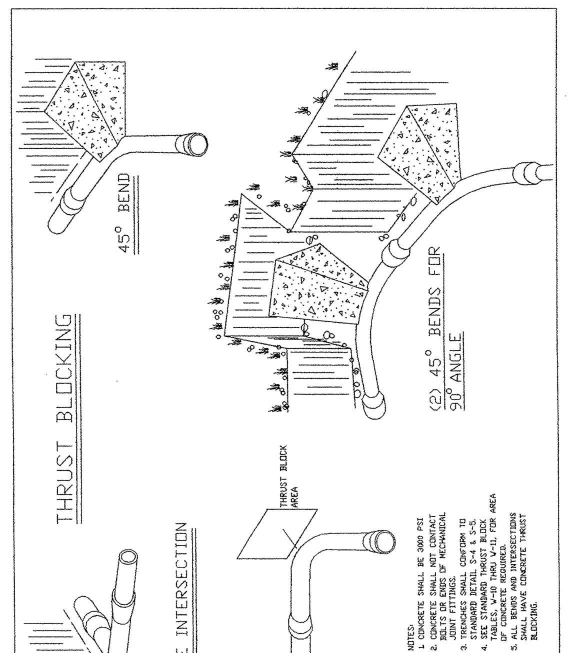
I.D. PIPE	"A"	"B"	"C-6"-16", 20"-24", 30"-36", 48"
6" - 36"	1'-4"	1'-7"	2" 3" 4"
48" & greater	1'-8"	1'-9"	6"

NOTES:

1. SEE STANDARD DETAIL S-7 FOR THRUST BLOCK LOCATIONS.
2. CONCRETE SHALL BE 3000 PSI AND TRANSIT MIXED.
3. REINFORCING BARS SHALL BE DEFORMED AND TIED TOGETHER.
4. TRENCH BOTTOM WIDTH IN VICINITY OF THRUST BLOCK INSTALLATION SHALL BE THE MINIMUM WIDTH AS SHOWN ON STANDARD DETAIL S-4 & S-5.
5. BACKFILL TAMPED IN 6" LIFTS PER STANDARD DETAIL S-4 & S-5.
6. THRUST COLLAR MUST BE FACTORY WELDED ON BOTH SIDES ALONG BOTH EDGES OF COLLAR AROUND CIRCUMFERENCE.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
THRUST BLOCKING DESIGN DATA FOR SEWER FORCE MAIN

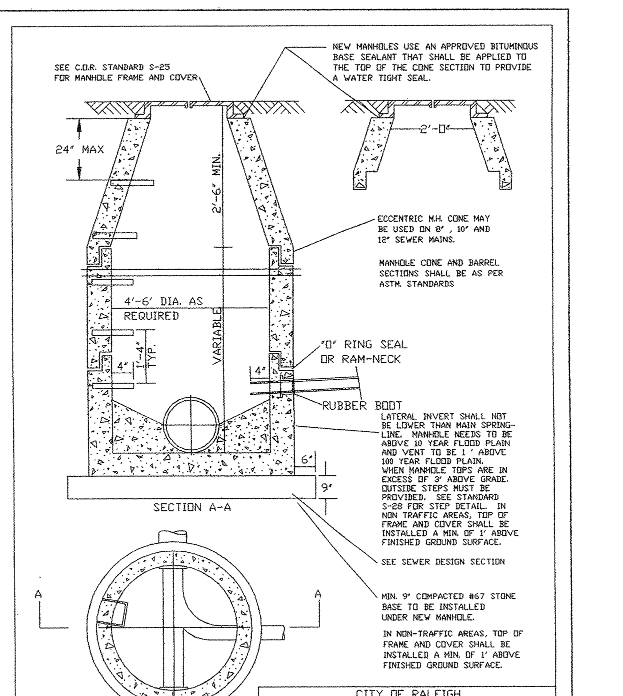
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-6	RRH	1-21-00		



NOTES:
1. CONCRETE SHALL BE 3000 PSI
2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT FITTINGS.
3. TRENCHES SHALL CONFORM TO STANDARD DETAIL S-4 & S-5.
4. SEE STANDARD THRUST BLOCK TABLES, W-10 THRU W-11. FOR AREA OF CONCRETE REQUIRED.
5. ALL BENDS AND INTERSECTIONS SHALL HAVE CONCRETE THRUST BLOCKING.

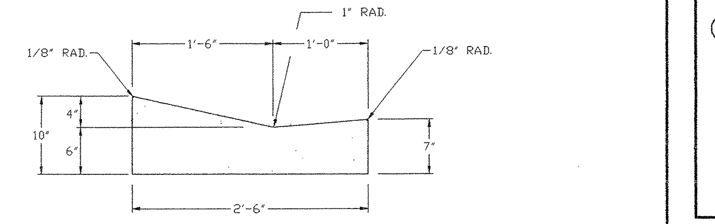
CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
STANDARD THRUST BLOCKING VIEWS

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-7	D.W.C.	3-1-87 / 9-7-99	RRH	3-30-00

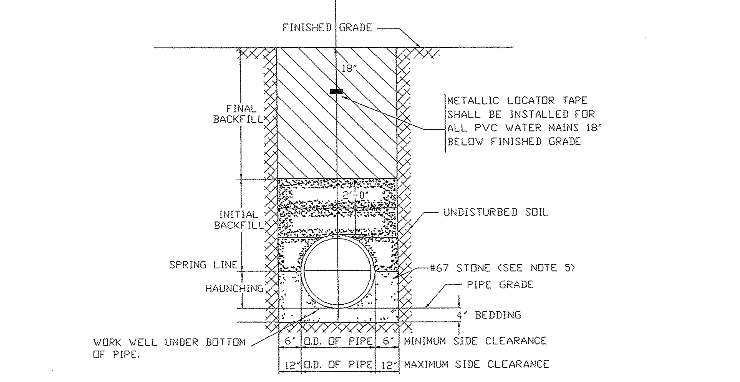


CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
STANDARD PRECAST SANITARY SEWER MANHOLE

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-20	ECC. CONE, EXT BASE	8-17-81 / 3-1-87	Y.C.A. / RRH	12-31-92 / 3-30-00



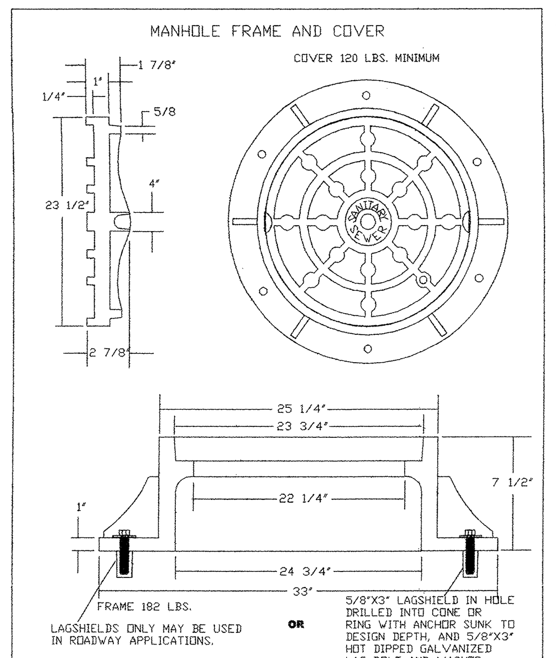
30" CONCRETE VALLEY CURB & GUTTER



TYPICAL TRENCH BOTTOM DIMENSIONS FOR: ABS COMPOSITE, C900-PVC PIPE, AND PVC GRAVITY PIPE.

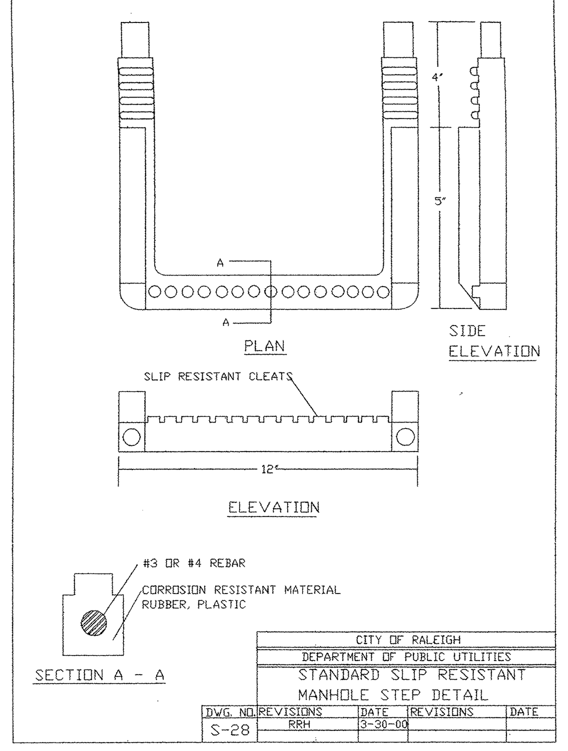
NOTES

1. FOR TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.
2. NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN INITIAL BACKFILL.
3. ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
4. BACKFILL SHALL BE TAMPED IN 6" LAYERS IN TRAFFIC AREAS, 12" IN NON-TRAFFIC AREAS.
5. TO BE USED WITH PVC AND ABS.



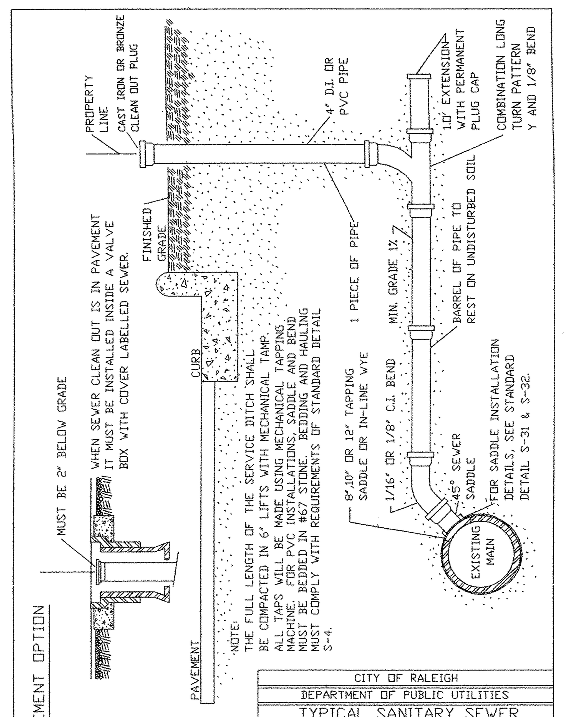
CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
STANDARD MANHOLE COVER

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-25	3-1-87 / RRH	3-1-87 / 3-30-00		



CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
STANDARD SLIP RESISTANT MANHOLE STEP DETAIL

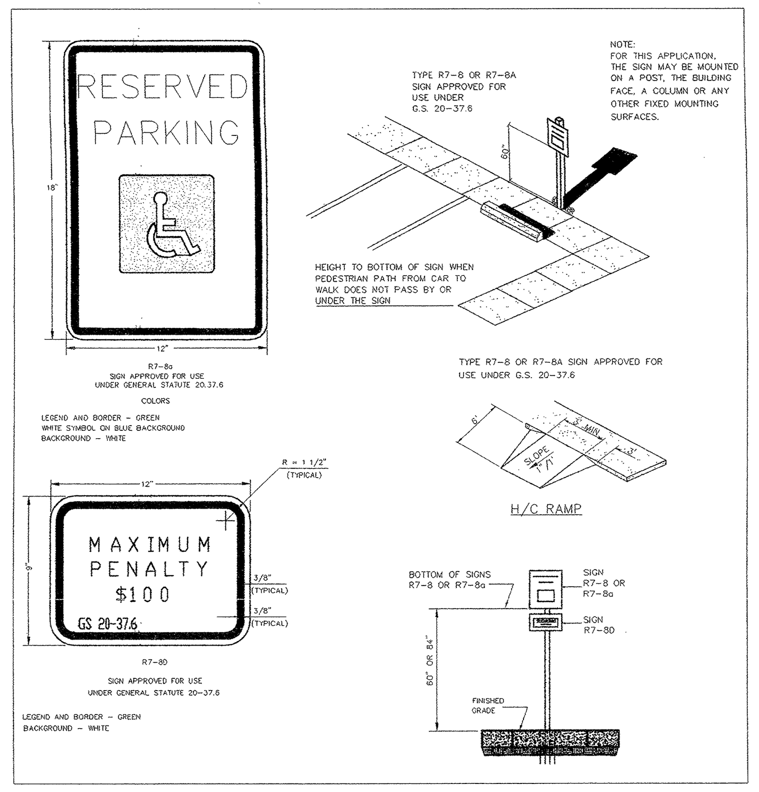
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-28	RRH	3-30-00		

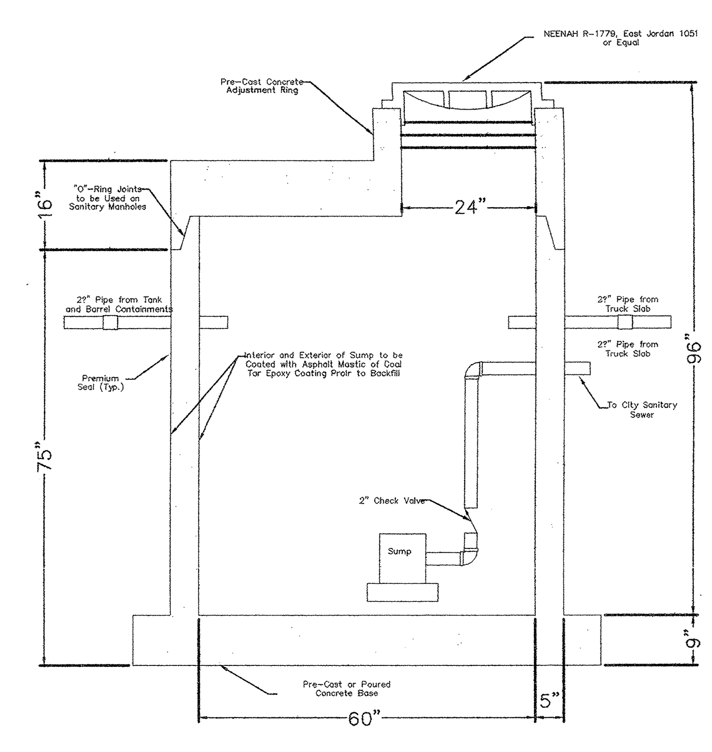


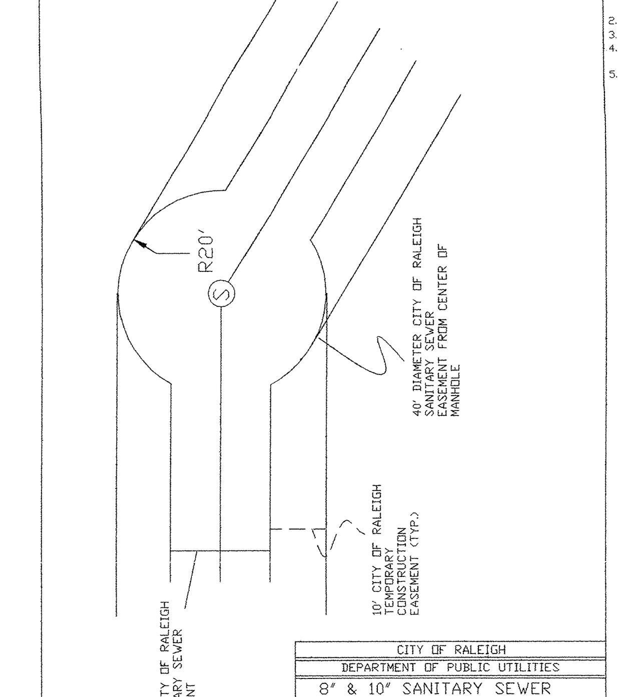
NOTE:
THE FULL LENGTH OF THE SERVICE DITCH SHALL BE COMPACTED IN 6" LIFTS WITH MECHANICAL TAMP. ALL TAPS WILL BE MADE USING MECHANICAL TAPPING MACHINE. FOR PVC INSTALLATIONS, SADDLE AND BEND MUST BE BEDDED IN #67 STONE. BEDDING AND HAULING MUST COMPLY WITH REQUIREMENTS OF STANDARD DETAIL S-4.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
TYPICAL SANITARY SEWER LATERAL CONNECTION

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-30	Y.C.A.	3-1-87 / 12-31-91	Y.C.A. / RRH	6-92 / 3-30-00







CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
8" & 10" SANITARY SEWER EASEMENT WIDTHS

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-43	A.B.B.	1-27-05		

SEAL 11636 — NORTH CAROLINA PROFESSIONAL ENGINEER — GEORGE M. McINTYRE, JR.

PUBLIC
Sewer Collection/Extension System
The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and constructions methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.
City of Raleigh
Public Utilities Department Permit # S-2953
Construction Approval: Bkoy 9/13/06
Date

PUBLIC
Water Distribution/Extension System
The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and constructions methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications.
City of Raleigh
Public Utilities Department Permit # W-2446
Construction Approval: B. Kay 9/13/06

McIntyre & Associates, PLLC
Engineering & Land Planners
4932-B Windy Hill Drive
Raleigh, NC 27609
(919) 427-5227 (Office)
(919) 876-6678 (Fax)

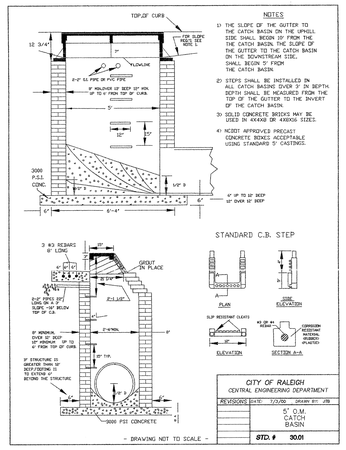
CARLTON POINTE SUBDIVISION
CITY OF RALEIGH ---UTILITY DETAILS
ROLESVILLE, NORTH CAROLINA

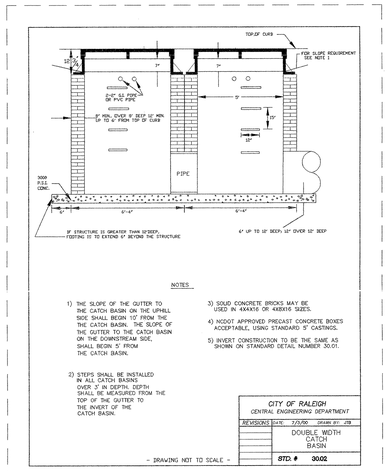
REVISIONS

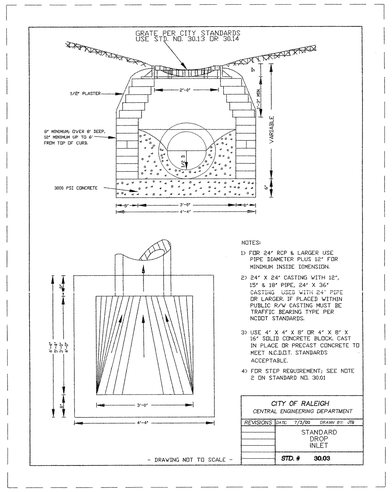
CLIENT
CARLTON GROUP OF NC
20 SQUADRON BLVD., SUITE 270
NEW CITY, NEW YORK 10956
845-638-9300

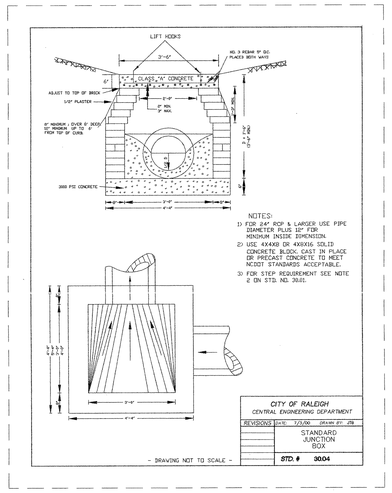
DRAWN GMM
CHECKED GMM
APPROVED GMM
START DATE
JOB CODE

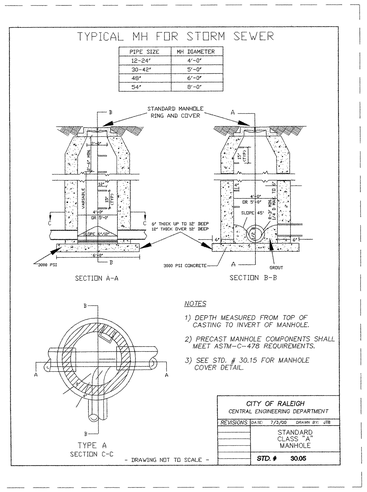
DRAWING No.
D-1

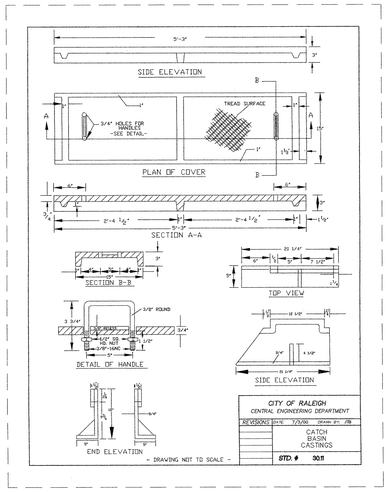


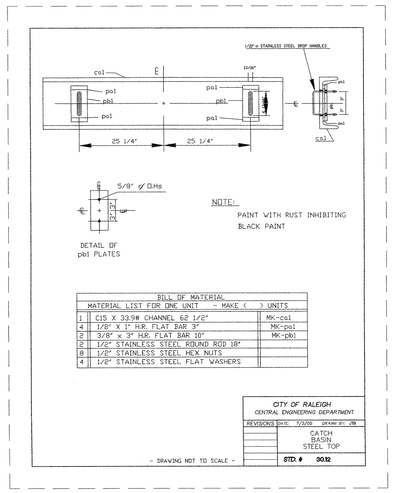


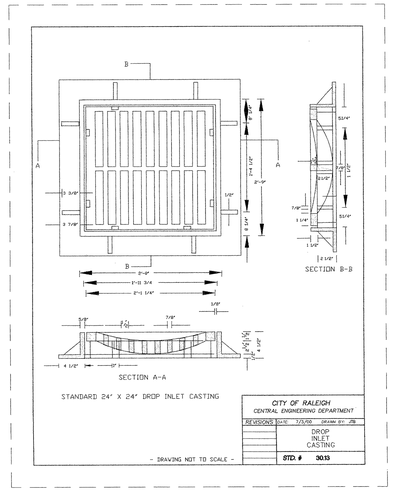


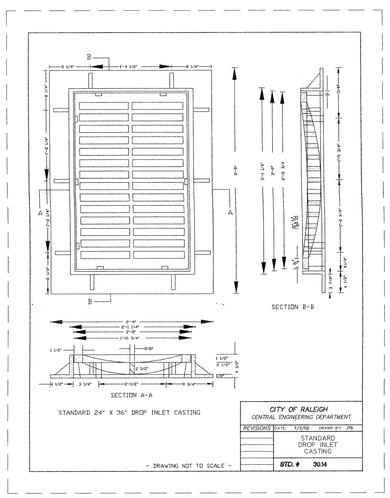


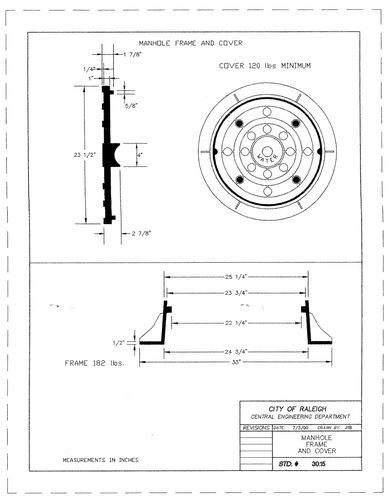


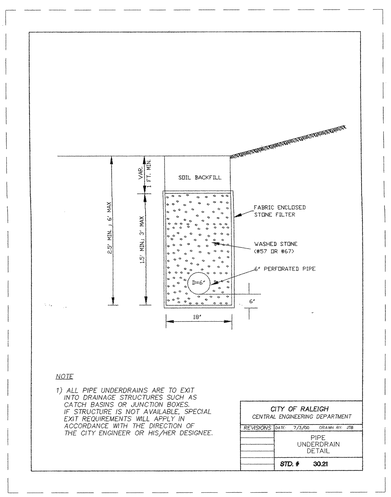












PUBLIC
Sewer Collection/Extension System

The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and constructions methods used for this project shall conform to the City's Public Utilities Handbook' standards and specifications.

City of Raleigh
Public Utilities Department Permit # S-2753
Construction Approval B. Fogg 9/18/06
Date

PUBLIC
Water Distribution/Extension System

The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and constructions methods used for this project shall conform to the City's Public Utilities Handbook' standards and specifications.

City of Raleigh
Public Utilities Department Permit # W-2446
Construction Approval B. Fogg 9/18/06
Date

NORTH CAROLINA PROFESSIONAL SEAL 11636 ENGINEER GEORGE M. MEINTYRE

McIntyre & Associates, PLLC
Engineering & Land Planners
4932-B Windy Hill Drive
Raleigh, NC 27609
(919) 427-5227 (Office)
(919) 876-6678 (Fax)

CARLTON POINT SUBDIVISION
STORM DRAINAGE DETAILS
ROLESVILLE, NC

REVISIONS

CLIENT
CARLTON GROUP OF NC
220 SQUADRON BLVD., SUITE 270
NEW CITY, NEW YORK 10956
845-638-9300

DRAWN GMM
CHECKED GMM
APPROVED GMM
START DATE —
JOB CODE —

DRAWING No.
D-3

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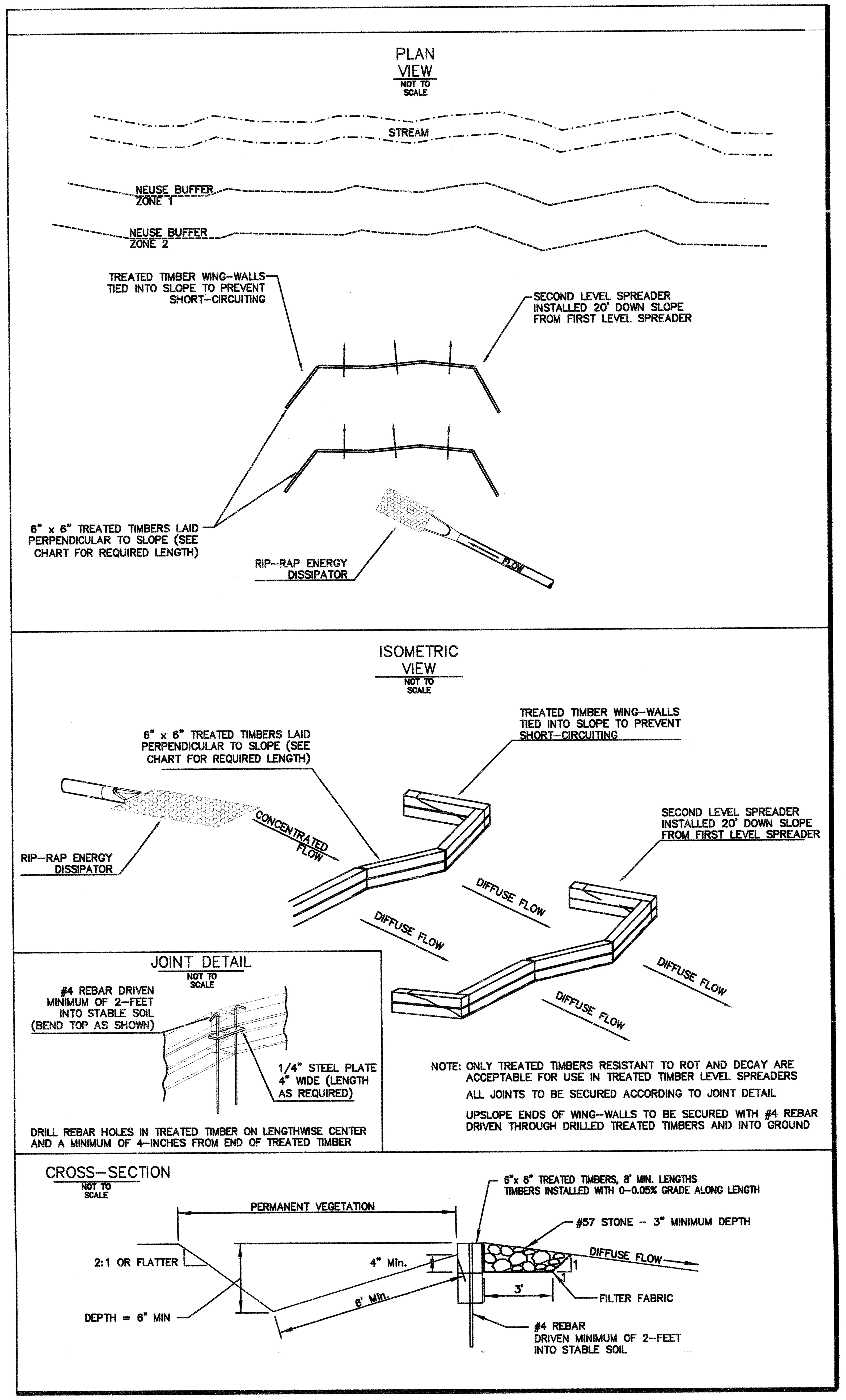
TREATED TIMBER LEVEL SPREADER DETAIL



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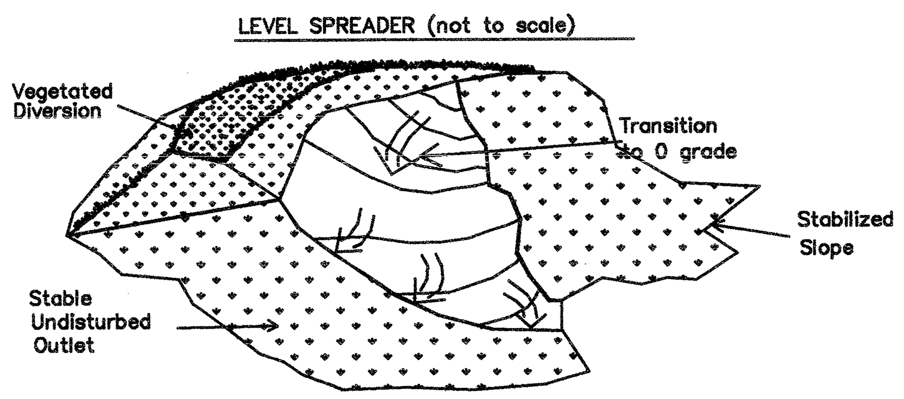


Figure 6.40a Level Spreader is designed to disperse small volumes of concentrated flow across stable slopes.

<u>Grade:</u> The grade of the last 20 feet pf the diversion channel should provide a smooth transition from channel grade to level at the spreader. The grade of the spreader should be 0%.

<u>Spreader Lip:</u> Construct the level lip on undisturbed soil to uniform height and zero grade over the length of the spreader. Protect it with an erosion-resistant material, such as fiberglass matting, to prevent erosion and allow vegetation to become established.

<u>Outlet Area:</u> The outlet disposal area must be generally smooth and well- vegetated with a maximum slope of 10%.

Vegetate all disturbed areas.

Construction Specifications

1. The matting should be a minimum of 4 ft. wide extending 6 inches over the lip and buried 6 inches deep in a vertical trench on the lower edge. The upper edge should butt against smoothly cut sod and be securely held in place with closely spaced heavy duty wire staples at least 12 inches long.

2. Ensure that the spreader lip is level for uniform spreading of stormwater runoff.

3. Construct the level spreader on undisturbed soil (not on fill).

4. Constuct a 20-ft transistion section from the diversion channel to blend smoothly to the width and depth of the spreader.

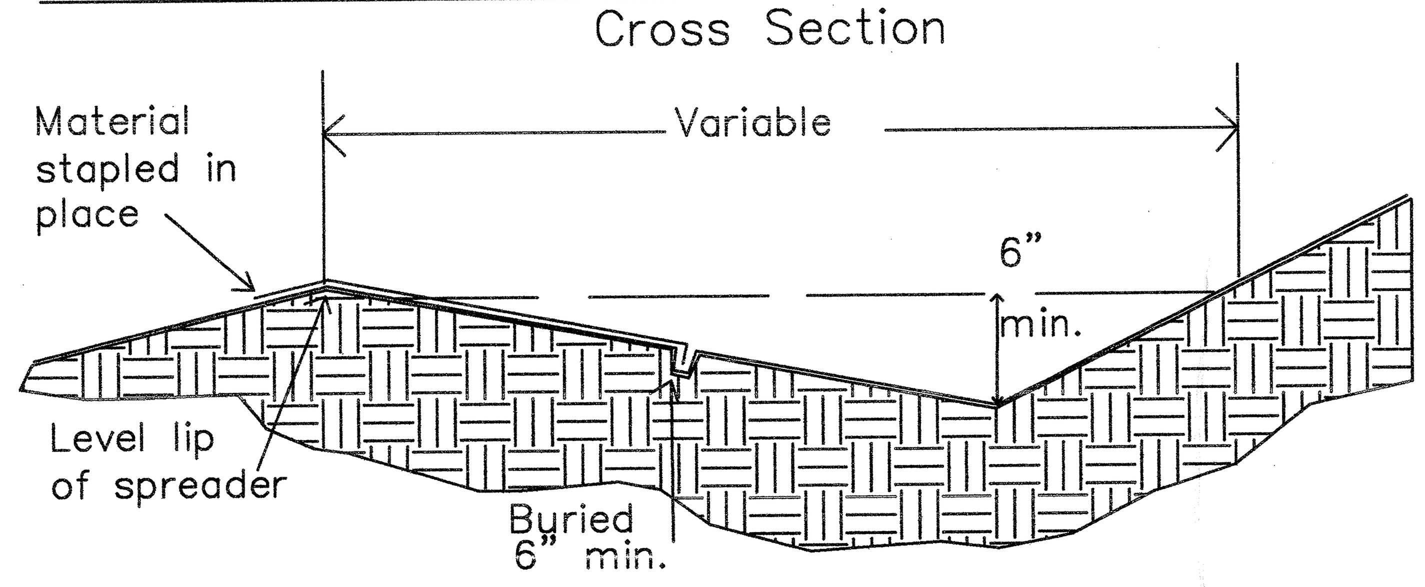


Figure 6.40b Detail of level spreader cross section.

5. Disperse runoff from the spreader across a properly stabilized slope not to exceed 10%. Make sure the slope is sufficiently smooth to keep flow from concentrating.

6. Immediately after its construction, appropriately seed and mulch the entire disturbed area of the spreader.

Maintenance

Inspect level spreaders after every rainfall until vegetation is established, and promptly make needed repairs. After the area has been stabilized, make periodic inspections and keep vegetation in a healthy, vigorous condition.

References

Surface Stabilization
6.10, Temporary Seeding
6.11, Permanent Seeding

Runoff Control Measures
6.20, Temporary Diversions
6.21, Permanent Diversions

6.40 LEVEL SPREADER

Definition

A non-erosive outlet for concentrated runoff constructed to disperse flow uniformly across a slope.

Purpose

To convert concentrated flow to sheet flow and release it uniformly over a stablized area.

Conditions Where Practice Applies

Where sediment-free storm runoff can be released in sheet flow down a stablized slope without causing erosion.

Where a level lip can be constructed without filling.

Where the area below the spreader lip is uniform with the slope of 10% or less and is stable for anticipated flow conditions, preferably well-vegetated.

Where the runoff water will not re-concentrate after release.

Where there will be no traffic over the spreader.

Planning Considerations

The level spreader is a relatively low-cost structure to release small volumes of concentrated flow where site conditions are suitable (Figure 6.40a). The outlet area must be uniform and well-vegetated with slopes of 10% or less. Particular care must be taken to construct the outlet lip completely level in a stable, undisturbed soil. Any depressions in the lip will concentrate the flow, resulting in erosion. Evaluate the outlet system to be sure the flow does not concentrate below the outlet (Figure 6.40b). The level spreader is most often used as an outlet for temporary or permanent diversions and diversion dikes. Runoff water containing high sediment loads must be treated in a sediment trapping device before release in a level spreader.

Design Criteria

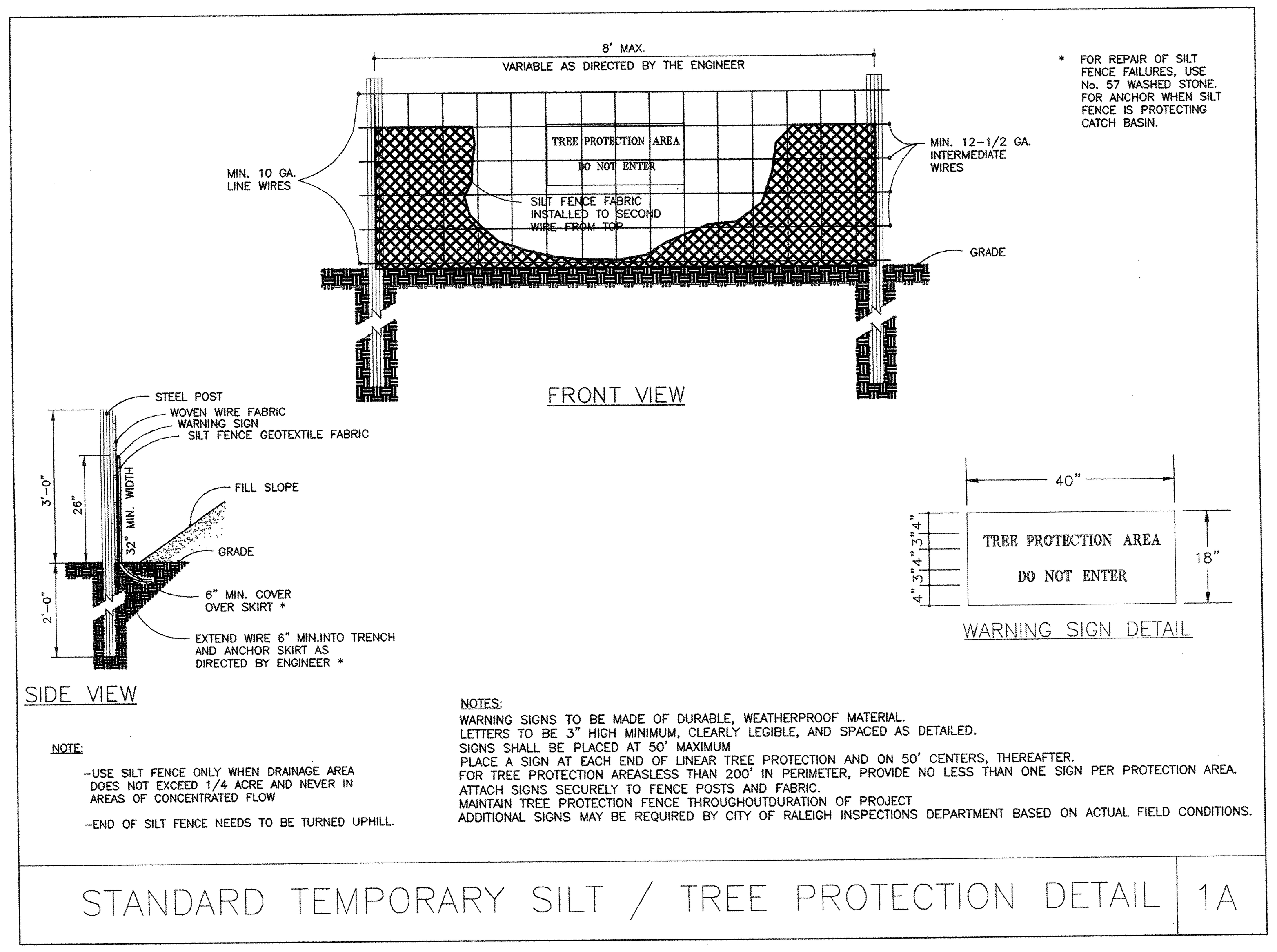
Capacity: Determine the capacity of the spreader by estimating the peak flow from the 10-year storm. Restrict the drainage area so that the maximum flows into the spreader will not exceed 30cfs.

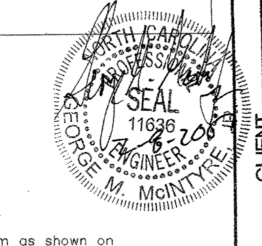
Spreader Dimensions: When water enters the spreader form one end, as from a diversion, select the appropriate length, width, and depth of the spreader from Table 6.40a.

Construct a 20-ft transition section in the diversion channel so the width of the diversion will smoothly meet with the width of the spreader to ensure uniform outflow.

TABLE 6.40a
Minimum Dimensions for
Level Spreader

Design Flow cfs	Entrance Width	Depth	End Width	Length
	-------minimum dimension in feet ------			
0 - 10	10	0.5	3	10
10 - 20	16	0.6	3	20
20 - 30	24	0.7	3	30





PUBLIC
Sewer Collection/Extension System

The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and constructions methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications:

City of Raleigh Public Utilities Department Permit # 6-2953
Construction Approval [signature]
Date 9/13/06

PUBLIC
Water Distribution/Extension System

The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and constructions methods used for this project shall conform to the City's Public Utilities Handbooks' standards and specifications:

City of Raleigh Public Utilities Department Permit # W-2446
Construction Approval [signature]
Date 9/13/06

McIntyre & Associates, PLLC
Engineering & Land Planners
4932-B Windy Hill Drive
Raleigh, NC 27609
(919) 427-5227 (Office)
(919) 876-6678 (Fax)

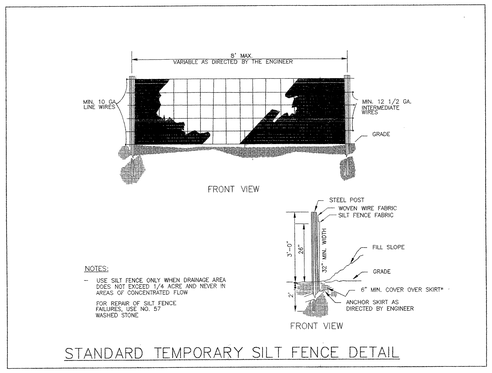
CARLTON POINT SUBDIVISION
LEVEL SPREADER AND
TREE PROTECTION DETAILS
ROLESVILLE, NC

REVISIONS

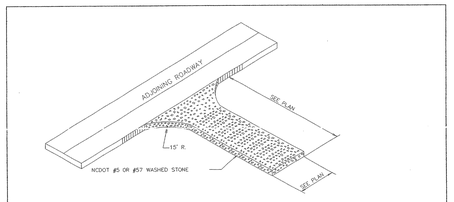
CLIENT
CARLTON GROUP OF NC
20 SQUADRON BLVD., SUITE 270
NEW CITY, NEW YORK 10956
845-638-9300

DRAWN
CHECKED
APPROVED GMM
START DATE
JOB CODE —

DRAWING No.
D-4

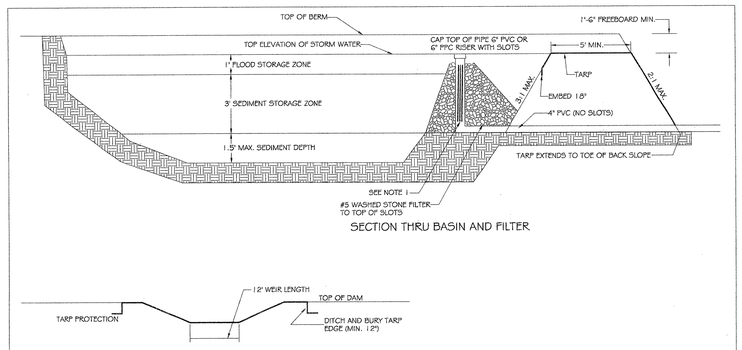


STANDARD TEMPORARY SILT FENCE DETAIL



TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT

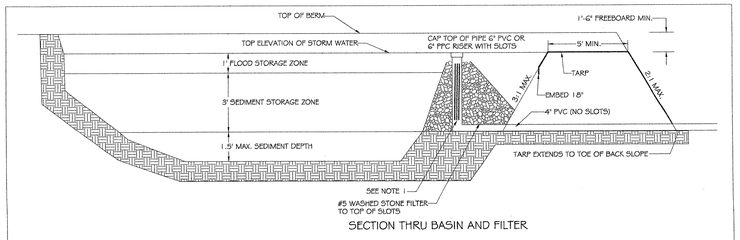
A. NCDOT #5 OR #57 WASHED STONE SHALL BE USED. PAD TO BE 50' L X 25' W X 8" D MIN.
B. TURNING RADIUS SUFFICIENT TO ACCOMODATE LARGE TRUCKS IS TO BE PROVIDED.
C. ENTRANCES SHOULD BE LOCATED TO PROVIDE FOR MAXIMUM UTILITY BY ALL CONSTRUCTION VEHICLES.
D. MUST BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR DIRECT FLOW OF MUD ONTO STREETS. PERIODIC TOPDRESSING MAY BE NECESSARY.
E. TEMPORARY PADS MUST BE LOCATED ON EACH SIDE OF ADJOINING ROADWAY.



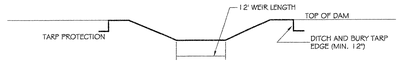
SECTION THRU BASIN AND FILTER

NOTES:
1. DRAW DOWN RISER SHALL BE 6" SCH 40 PVC WITH CLEAN-OUT CAP AND SLOTS. SLOTS SHALL BE PLACED 1/8" WIDE, 1" ON CENTER RADIAL AROUND PIPE. VERTICAL SAW CUTS 24" LONG.
2. THE TARP USED TO PROTECT THE WEIR SHALL BE THE WIDTH SPECIFIED. THE LENGTH OF THE TARP SHALL BE ACCORDING TO AVAILABLE SUPPLY. IF MULTIPLE TARPS ARE TO BE USED THEN TARPS SHALL BE LAPPED AT LEAST 12". THE UPSTREAM 12" TARP SHALL OVERLAP THE DOWNSTREAM TARP. THE TARP SHALL BE 50MIL HEAVY DUTY SILVER TARPAULINS FOR U.V. RESISTANCE.

CUSTOM BASIN



SECTION THRU BASIN AND FILTER



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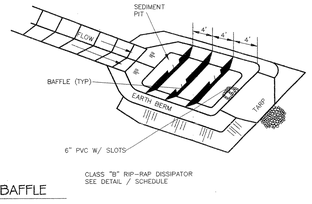
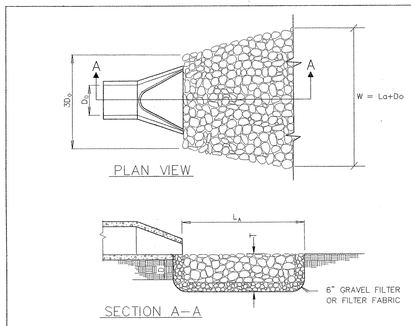


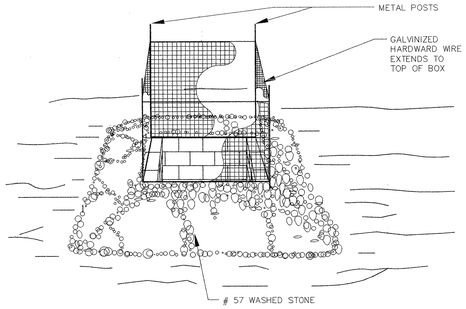
CUSTOM BASIN W/ BAFFLE



NOTES:
1. L IS THE LENGTH OF THE RIPRAP APRON.
2. THE DOWNSTREAM WIDTH OF THE APRON IS EQUAL TO Do+La
3. INSTALL AMOCO 2006 FILTER FABRIC UNDERLINER OR EQUAL BETWEEN THE RIPRAP AND SOIL FOUNDATION.
4. IN A WELL DEFINED CHANNEL EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK, WHICHEVER IS LESS.

OUTLET STABILIZATION

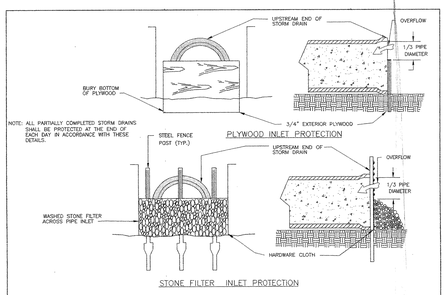
NTS



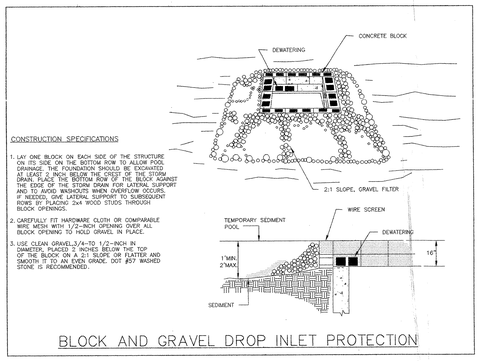
REVISIONS	
DATE	DESCRIPTION

STANDARD CATCH BASIN/YARD INLET PROTECTION

14



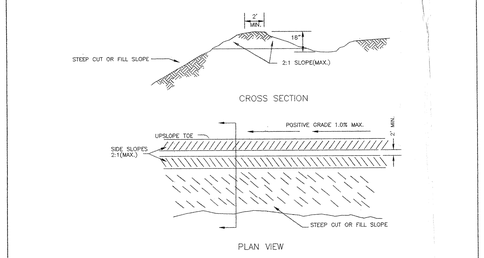
PIPE INLET PROTECTION (PLYWOOD AND STONE)



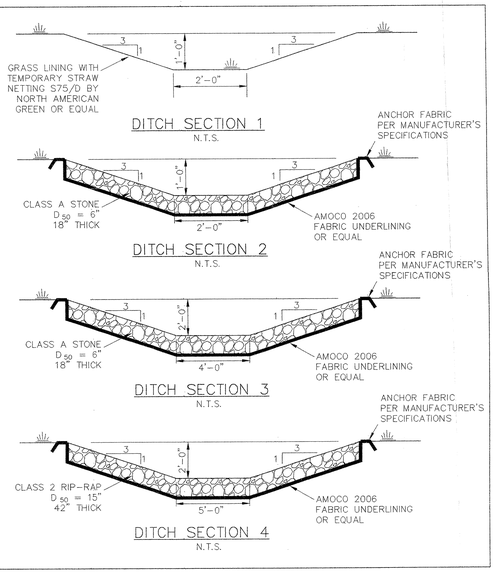
CONSTRUCTION SPECIFICATIONS

1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE ON THE BOTTOM ROW TO ALLOW POOL DRAINAGE. THE FOUNDATION SHOULD BE EXCAVATED AT LEAST 2 INCH BELOW THE CREST OF THE STORM DRAIN. PLACE THE BOTTOM ROW OF THE BLOCK AGAINST THE EDGE OF THE STORM DRAIN FOR STABILITY AND ALIGNMENT. THE STORM DRAIN OVERFLOW MUST BE AT MEDIUM GRADE. SUPPORT THE SUBSEQUENT ROWS BY PLACING 2x4 WOOD STUDS THROUGH BLOCK OPENINGS.
2. CAREFULLY FIT HARDWARE CLOTH OR COMPARABLE MESH OVER ALL BLOCK OPENING OVER ALL BLOCK OPENING TO HOLD GRAVEL IN PLACE.
3. USE CLEAN GRAVEL,3/4-TO 1/2-INCH IN DIAMETER, PLACED 2 INCHES BELOW THE TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER AND SMOOTH IT TO AN EVEN GRADE. DOT #57 WASHED STONE IS RECOMMENDED.

BLOCK AND GRAVEL DROP INLET PROTECTION



DIVERSION DITCH DETAIL



DESIGN CRITERIA:
1. DESIGN FOR 10 YEAR STORM UNLESS OTHERWISE SHOWN.
2. TIME OF CONCENTRATION ASSUMED AS 5 MIN. AT EACH INLET.
3. MANNINGS "n" FACTOR= 0.013.
4. INTENSITY=g/(h+T) WHERE g=195 AND h=22 AS DERIVED FROM THE RALEIGH INTENSITY-DURATION-FREQUENCY CHARTS.
5. ALL YARD INLET TOPS ARE AT RIM, ALL CATCH BASIN TOPS ARE AT TOP OF CURB.

* DESIGN FOR THE 25 YEAR STORM.

PUBLIC
Sewer Collection/Extension System

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City of Raleigh
Public Utilities Department: Permit # S-2953
Construction Approval: 9/18/06
Date:

PUBLIC
Water Distribution/Extension System

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City of Raleigh
Public Utilities Department: Permit # W-2446
Construction Approval: 9/18/06
Date:

CARLTON POINT
SEAL
11636
9-28-2007
C. M. McINTYRE, JR.

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Engineering & Land Planners
4326 Windy Hill Drive
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(919) 876-6678 (Fax)

CARLTON POINT SUBDIVISION
NCDOT/EROSION CONTROL DETAILS

ROLESVILLE, NORTH CAROLINA

REVISIONS

CLIENT
CARLTON GROUP OF NORTH CAROLINA
20 SQUADRON BLVD.
NEW CITY, NEW YORK
845-638-9300

DRAWN
CHECKED
APPROVED GMM
START DATE 10-05
JOB CODE

DRAWING No.
D-5

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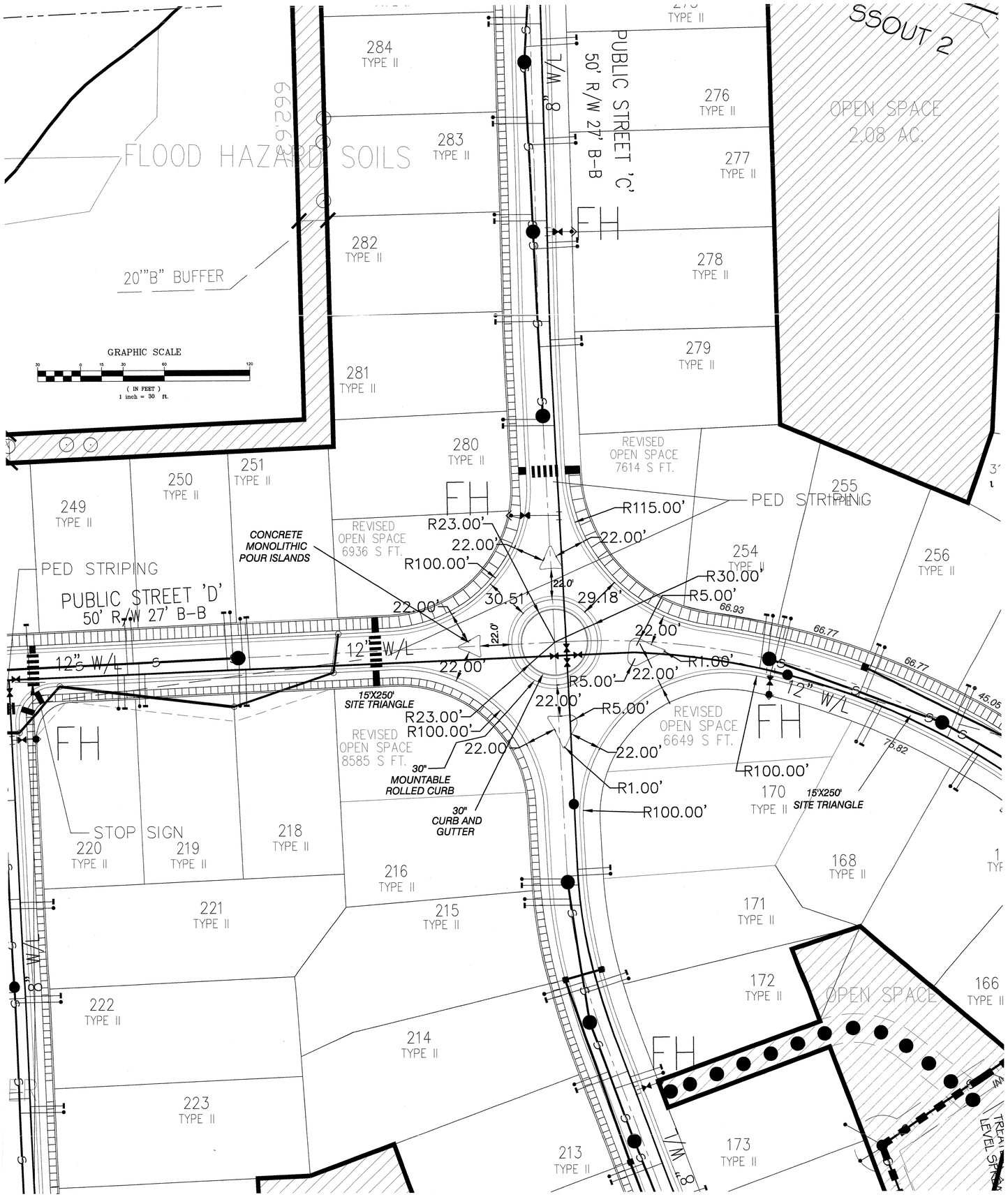

NOTES:
ALL CONSTRUCTION OF SANITARY SEWER AND WATERLINE TO BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.

ALL CONSTRUCTION OF ROADS AND STORM DRAINAGE TO BE IN ACCORDANCE WITH TOWN OF ROLESVILLE AND NCDOT STANDARDS AND SPECIFICATIONS.

PUBLIC
Water Distribution/Extension System
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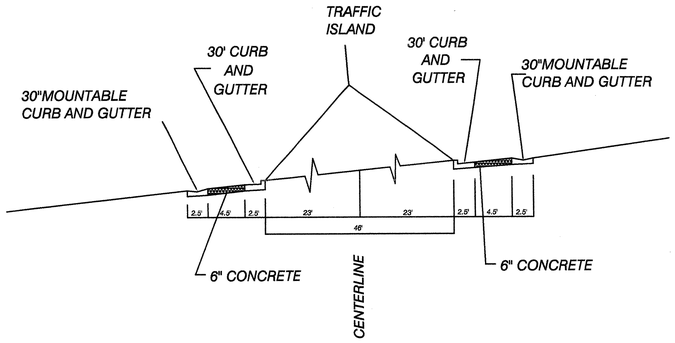

TYPICAL TRAFFIC ISLAND SECTION
NOT TO SCALE
NOT A REPESENTATION OF ACTUAL GRADES
SEE PROFILE SHEETS FOR GRADING

McIntyre & Associates, PLLC
Engineering & Land Planners
4932-B Windy Hill Drive
Raleigh, NC 27609
mmcintyrepe@aol.com
(919) 876-0145 (Office)
(919) 876-0699 (Fax)

CARLTON POINTE SUBDIVISION
TRAFFIC CIRCLE DETAILS
ROLESVILLE, NC

REVISIONS
ROLESVILLE REVIEW 1/05/06
FINAL 1/11/06

CLIENT
CARLTON GROUP OF NC, LLC
20 SQUADRON BLVD.
NEW CITY, NEW YORK 10956
914-429-0683

DRAWN DRD
CHECKED GMM
APPROVED GMM
START DATE
JOB CODE

DRAWING No.
D-6

NORTH CAROLINA PROFESSIONAL SEAL 11636 ENGINEER GEORGE M. McINTYRE