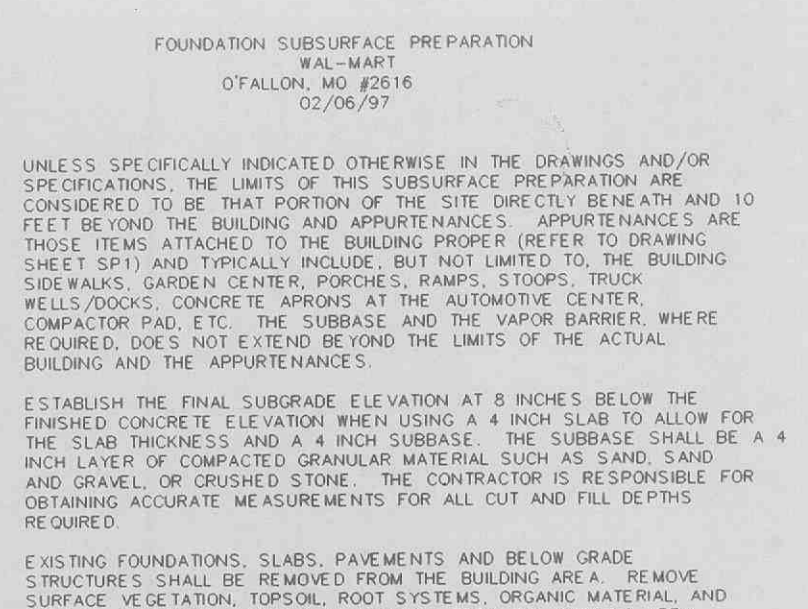
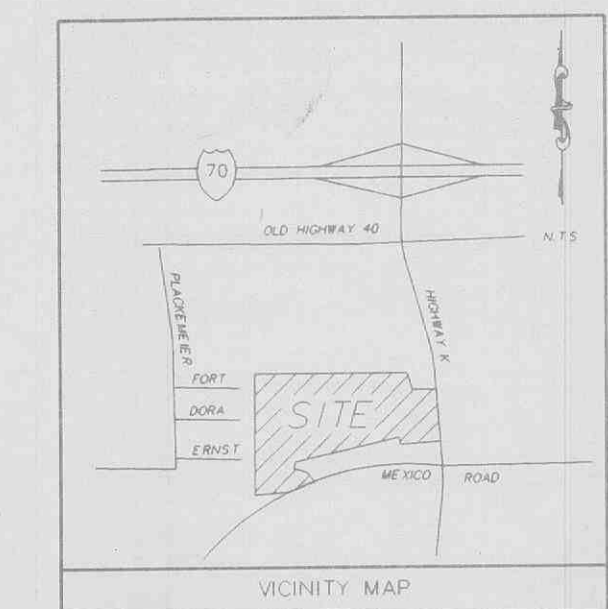


REVISIONS	BY
RETAIL SHOPS GRADES IN REAR	5/06/97



UNLESS SPECIFICALLY INDICATED OTHERWISE IN THE DRAWINGS AND/OR SPECIFICATIONS, THE LIMITS OF THIS SUBSURFACE PREPARATION ARE CONSIDERED TO BE THAT PORTION OF THE SITE DIRECTLY BEHIND AND TO THE RIGHT OF THE BUILDING AND APPROXIMATELY 10 FEET BEYOND THE BUILDING FOOTPRINT. APPROXIMATE HORIZONTAL LOCATIONS OF THESE ITEMS ATTACHED TO THE BUILDING FOOTPRINT ARE TO BE DETERMINED BY THE CONTRACTOR. THESE ITEMS INCLUDE, BUT NOT LIMITED TO, THE BUILDING FOUNDATION, CONCRETE APPROACHES AT THE AUTOMATIC CENTER COMPARTMENT, ETC. THE SURFACE AND THE VERTICAL BARRIER, WHERE REQUIRED, DOES NOT EXTEND BEYOND THE LIMITS OF THE ACTUAL BUILDING AND THE APPROACHES.

ESTABLISH THE FINAL SUBGRADE ELEVATION AT 8 INCHES BELOW THE FINISHED CONCRETE ELEVATION WHEN USING A 4 INCH SLAB TO ALLOW FOR THE SLAB THICKNESS AND A FINISH COURSE. THE SUBGRADE SHALL BE A 4 INCH LAYER OF COMPACTED GRANULAR MATERIAL, SUCH AS SAND, GRAVEL AND GRAVEL OR CRUSHED STONE. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ACCURATE MEASUREMENTS FOR ALL CUT AND FILL REPAIRS REQUIRED.

EXISTING FOUNDATIONS, SLABS, PAVEMENTS AND BELOW GRADE STRUCTURES SHALL BE REMOVED FROM THE BUILDING AREA. REMOVE SURFACE VEGETATION, TOPSOIL, ROOT SYSTEMS, ORGANIC MATERIALS AND SOFT OR OTHERWISE UNSUITABLE MATERIAL FROM THE BUILDING AREA AND ROCK WAS NOT ENCOUNTERED IN ANY TRENCHES WITHIN THE BUILDING FOOTPRINT. FOUNDATION BEARING LEVELS, HOWEVER, IT MAY BE ENCOUNTERED IN THE AREA AS BEYOND THE BUILDING FOOTPRINT. ROOF MAY BE ENCOUNTERED IN THE BUILDING AREA AND AT THE TIME OF EXCAVATION OF THE ROCK LAYER OF COMPACTED GRANULAR MATERIAL, SUCH AS SAND, GRAVEL AND GRAVEL OR CRUSHED STONE, AS INDICATED BY THE OWNER'S ON-SITE GEOTECHNICAL REPRESENTATIVE. OVEREXCAVATE WITH POLYESTER FIBER REINFORCED CONCRETE OR BUILDING SLAB IN THESE AREAS.

FILL MATERIAL SHALL BE FREE OF ORGANIC AND OTHER DELETERIOUS MATERIALS. THE 94 USE HIGH PLASTIC CLAY MAY BE USED AS FILL ONLY MATERIALS. THE 94 USE HIGH PLASTIC CLAY SHALL BE USED AS FILL ONLY MATERIALS WITHIN THE UPPER 6 FEET OF FOUNDATION BEARING AND BELOW THE UPPER 6 FEET OF THE FLOOR SLAB. THE PLASTICITY OF ON-SITE CLAY CAN BE DETERMINED BY THE USE OF LINE MEASUREMENTS AS DIRECTED BY THE ON-SITE GEOTECHNICAL REPRESENTATIVE. IMPORTED MATERIAL SHALL HAVE A LIQUID LIMIT LESS THAN 40.

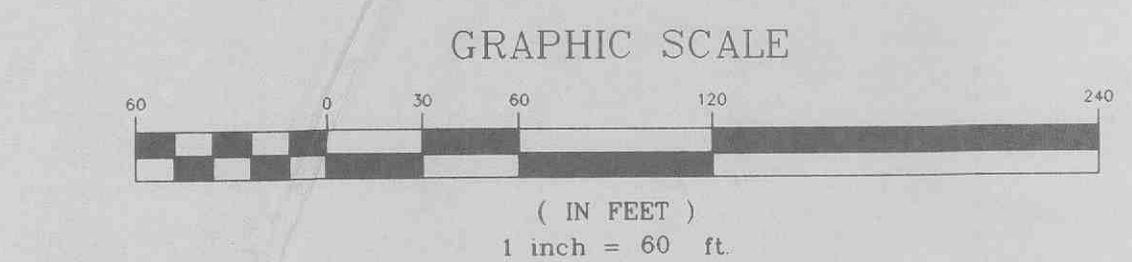
PLACE FILL MATERIAL IN LOOSE LOTS NOT EXCEEDING 8 INCHES IN THICKNESS AND COMPACT TO AT LEAST 95 PERCENT OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (MDD) ALTHOUGH THE MOISTURE CONTENT OF FILL MATERIAL WITHIN THE UPPER FEET OF THE BUILDING PAD TO BE NOT GREATER THAN 2 PERCENT ABOVE THE OPTIMUM VALUE PAID TO BE NOT GREATER THAN 2 PERCENT ABOVE.

THIS FOUNDATION SUBSURFACE PREPARATION DOES NOT CONSTITUTE A COMPLETE SITE WORK SPECIFICATION. INFORMATION COVERED IN THIS PREPARATION GOVERNS OVER THE CONTRACT SPECIFICATIONS. REFER TO THE GEOTECHNICAL REPORT BY MWHST TESTING, INC. DATED JANUARY 9, 1997 FOR INFORMATION AND COVERED IN THIS PREPARATION. THE GEOTECHNICAL REPORT IS FOR INFORMATION ONLY AND IS NOT CONSIDERED AS A DESIGN SPECIFICATION.

DRAINAGE SCHEDULE									
STRUCTURE NUMBER	STRUCTURE TYPE	TOP CASTING	INVERT ELEV.	INVERT ELEV. (FEET)	PIPE DIA.	PERCENT SLOPE	PIPE LENGTH	PIPE TYPE	PERCENT SLOPE
1-2	DROP INLET	539.00	539.00	122	24"	0.0%	0.6%		
3-2	DROP INLET	539.00	534.27	534.13	122	24"	0.0%	0.4%	
3	DROP INLET	539.00	533.64	533.54	122	24"	0.0%	1.0%	
3-4	DROP INLET	539.00	532.52	532.22	165	24"	0.0%	1.0%	
4-5	DROP INLET	536.50	530.39	530.29	158	24"	0.0%	1.5%	
5-6	DROP INLET	533.80	527.92	527.42	142	30"	0.0%	0.8%	
6-7	CURB INLET	534.00	528.28	525.83	142	30"	0.0%	0.8%	
7	CURB INLET	536.50	535.00	535.00	71	24"	0.0%	0.5%	
8	CURB INLET	536.50	531.67	531.57	84	30"	0.0%	0.5%	
8-9	AREA DRAIN	538.80	534.92	534.42	76	24"	0.0%	0.5%	
9	AREA DRAIN	538.80	531.15	531.05	215	30"	0.0%	1.0%	
9-10	CURB INLET	538.50	534.29	534.19	71	24"	0.0%	0.5%	
10-11	CURB INLET	538.50	533.84	533.74	32	24"	0.0%	0.5%	
11	CURB INLET	538.50	533.84	533.74	32	24"	0.0%	0.5%	
11-13	CURB INLET	539.30	533.00	532.90	212	30"	0.0%	0.5%	
12-13	CURB INLET	539.30	532.90	532.80	102	18"	0.0%	1.5%	
13-14	AREA DRAIN	539.70	534.21	533.10	212	30"	0.0%	0.5%	
14-15	AREA DRAIN	539.70	532.04	531.84	54	30"	0.0%	0.5%	
15	CURB INLET	538.50	531.67	531.57	84	30"	0.0%	0.5%	
15-16	CURB INLET	538.50	531.15	531.05	215	30"	0.0%	1.0%	
16	JUNCTION BOX	538.50	531.15	531.05	215	30"	0.0%	1.0%	
17	CURB INLET	533.80	528.97	528.87	80	30"	0.0%	0.8%	
17-18	CURB INLET	533.80	528.97	528.87	240	30"	0.0%	0.9%	
18	CURB INLET	533.80	528.97	528.87	240	30"	0.0%	0.9%	
7-19	CURB INLET	534.50	524.19	523.69	216	42"	0.0%	0.8%	
19-20	CURB INLET	535.70	522.39	522.29	216	42"	0.0%	0.8%	
20	CURB INLET	535.70	522.39	522.29	216	42"	0.0%	0.8%	
20-21	HEADWALL	532.00	529.73	529.73	250	42"	0.0%	0.62%	
21	HEADWALL	532.00	529.73	529.73	250	42"	0.0%	0.62%	
22	CURB INLET	536.40	532.90	532.80	56	18"	0.0%	22.24%	
23	HEADWALL	532.00	529.73	529.73	250	42"	0.0%	0.62%	
24	DROP INLET	538.80	535.30	535.30	124	18"	0.0%	3.00%	
24-25	CURB INLET	537.95	532.82	532.32	55	24"	0.0%	20.58%	
25-26	HEADWALL	531.80	527.80	527.80	100	36"	0.0%	1.25%	
26	HEADWALL	531.80	527.80	527.80	100	36"	0.0%	1.25%	
27	JUNC. BOX	568.00	563.93	563.93	58	24"	0.0%	46.75%	
27-28	JUNC. BOX	540.80	536.80	536.70	58	24"	0.0%	46.75%	
28	JUNC. BOX	540.80	536.80	536.70	58	24"	0.0%	46.75%	
28-29	CURB INLET	540.20	535.46	534.96	124	24"	0.0%	1.0%	
29	CURB INLET	540.20	535.46	534.96	124	24"	0.0%	1.0%	
29-31	HEADWALL	540.00	534.00	534.00	14	24"	0.0%	25.00%	
30-31	HEADWALL	540.00	534.00	534.00	14	24"	0.0%	25.00%	
31	CURB INLET	540.50	533.00	532.50	230	30"	0.0%	3.00%	
31-32	CURB INLET	540.50	532.50	532.00	230	30"	0.0%	3.00%	
32	CURB INLET	540.30	530.24	530.14	325	30"	0.0%	2.14%	
32-33	CURB INLET	538.80	533.00	532.50	160	36"	0.0%	1.96%	
33	CURB INLET	538.80	533.00	532.50	160	36"	0.0%	1.96%	
33-34	HEADWALL	531.00	521.00	521.00	100	18"	0.0%	1.0%	
34	HEADWALL	531.00	521.00	521.00	100	18"	0.0%	1.0%	
35	JUNC. BOX	540.80	532.00	532.00	180	30"	0.0%	2.89%	
35-33	CURB INLET	534.20	539.30	539.20	110	18"	0.0%	5.00%	
36	OUTLET STRUC.	535.82	529.00	529.00	180	30"	0.0%	2.89%	
36-37	JUNC. BOX	519.80	514.80	514.70	150	30"	0.0%	1.96%	
37	JUNC. BOX	519.80	514.80	514.70	150	30"	0.0%	1.96%	
37-38	HEADWALL	511.80	511.80	511.80	50	18"	0.0%	1.0%	
38	HEADWALL	511.80	511.80	511.80	50	18"	0.0%	1.0%	
39	AREA INLET	544.20	539.30	539.20	110	18"	0.0%	5.00%	
39-40	HEADWALL	536.00	536.00	536.00	100	18"	0.0%	1.0%	
40	HEADWALL	536.00	536.00	536.00	100	18"	0.0%	1.0%	
41-42	HEADWALL	512.20	511.80	511.80	50	18"	0.0%	1.0%	
42	CURB INLET	512.20	511.80	511.80	50	18"	0.0%	1.0%	
42-43	CURB INLET	515.25	511.28	511.18	18	18"	0.0%	1.0%	
43-44	HEADWALL	511.00	511.00	511.00	50	18"	0.0%	1.0%	
44	HEADWALL	511.00	511.00	511.00	50	18"	0.0%	1.0%	
45	AREA DRAIN	534.70	531.20	531.20	56	18"	0.0%	4.10%	
45-17	DOUBLE CURB INLET STRUCTURE								

- SITE GRADING NOTES**
- CONTRACTOR IS RESPONSIBLE FOR DEMOLITION OF EXISTING STRUCTURES INCLUDING REMOVAL OF ANY EXISTING UTILITIES SERVING THE STRUCTURE. UTILITIES ARE TO BE REMOVED TO THE RIGHT-OF-WAY.
 - THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST 51 FEET FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
 - ALL CUT OR FILL SLOPES SHALL BE 2:1 OR FLATTER UNLESS OTHERWISE NOTED. SLOPES GREATER THAN 2:1 SHALL HAVE TOPSOIL, SEEDING, AND MULCHING TO BE COVERED WITH CURB & BLENKETS BY AMERICAN ENDOUSER COMPANY OF COLORADO.
 - ALL DISTURBED AREAS NOT OTHERWISE COVERED BY BUILDINGS OR PAVEMENT SHALL RECEIVE FOUR FEET OF TOPSOIL, SEED MARCH AND WATER UNTIL A HEALTHY STAND OF GRASS IS OBTAINED.
 - PRECAST STRUCTURES MAY BE USED AT CONTRACTOR'S OPTION.
 - STORM PIPES SHALL BE AS FOLLOWS:
ALL STORM SEWER PIPES SHALL HAVE WATER-TIGHT GASKETED JOINTS AND MEET OR EXCEED THE MDD AND ASTM D-2231 SPECIFICATIONS. ROOF CLAYS IN PER ASTM C-78 (UNLESS NOTED OTHERWISE).
C/P: CORRUGATED POLYETHYLENE PIPE SMOOTH INTERIOR, WITH FIBERGLASS OVERLAP JOINTS, USE 3/4" TIGHT COUPLERS.
AT ALL JOINTS, ASHED LATEST EDITION.
MISC: CORRUGATED POLYETHYLENE DRAINAGE RIBBING.
 - ALL CONCRETE TO HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH OF 3000 P.S.I.
 - EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
 - FLOODPLAIN
 - ALL DOWNSTREAM STORM SEWER OUTLETS TO HAVE A 3' CUTOFF WALL SEE DETAIL.
 - THE OUTLET STRUCTURE SHALL BE CONSTRUCTED ACCORDING TO ASTM C-475 STANDARD SPECIFICATIONS.

GRADING PLAN



ANCHOR 1
LC-120A-NGR-OR
127,442 S.F. (APPROX.)
FFE-542.00

ANCHOR 2
21,835 S.F.
FFE-538.00
(FUTURE)

SHOPS
30,000 S.F.
FFE-540.00

GARDEN CENTER

DETENTION BASIN

NOTE: THIS SITE IS WITHIN THE 100 YEAR FLOODPLAIN BOUNDARY AS SHOWN ON FORM MAP PANEL 237 OF 525 MAP NUMBER 288183 CO237E REVISED AUGUST 2, 1996. NO PROPOSED CONSTRUCTION SHALL ENHANCE THE EXISTING FLOODWAY. HOWEVER MODIFICATION TO THE FLOODPLAIN IS PLANNED. THE NECESSARY PERMITS WILL BE ACQUIRED.

WOLVERTON & ASSOCIATES, INC.
5600 OAKBROOK PARKWAY / SUITE 00 / NORCROSS, GEORGIA 30093
770 447-9070 FAX



PROPOSED COMMERCIAL DEVELOPMENT
O'FALLON, MISSOURI
THE-ONTARIO DEVELOPMENT, L.L.C.
ST. LOUIS, MISSOURI

DRAWN: MHE
CHECKED: JOW
DATE: 04/22/97
SCALE: 1" = 60'
JOB No.: 98-137
SHEET

C-2