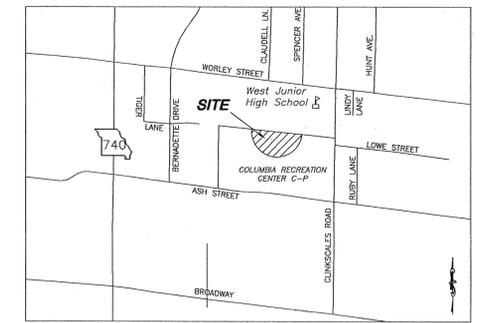


FARMERS MARKET

C-P PLAN
APRIL 13, 2009

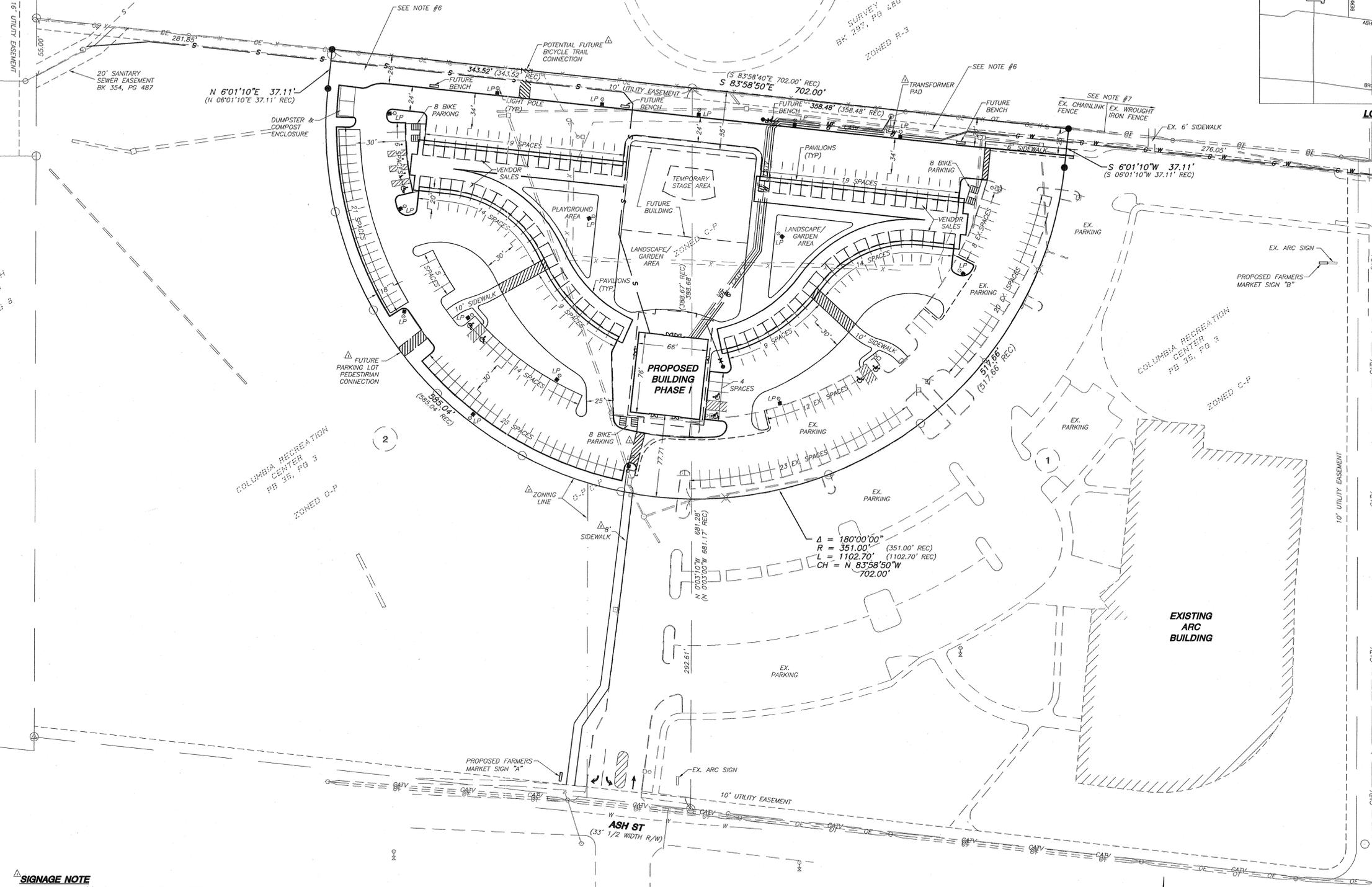
RECEIVED
MAY 08 2009
PLANNING DEPT.



LOCATION MAP
NOT TO SCALE

LEGEND

- Legend listing various symbols and their corresponding utility or site features such as Existing Sanitary Manhole, Proposed Sanitary Manhole, Existing Electric Meter, etc.



SITE DATA

Site data including zoning (C-P), location (SE Quarter Section 10, Township 48 North, Range 13 West), owner (City of Columbia), and developer (Sustainable Farms & Communities).

GENERAL NOTES

- General notes detailing contractor responsibilities, building dimensions, utility locations, and parking requirements.

PARKING DATA

Table showing required parking spaces for Phase 1 Building, Future Building, and Pavilions, along with provided spaces.

BENCHMARK DATA

Benchmark data for the site, including city block name, corner location, and elevation.

FLOOD PLAIN STATEMENT

Flood plain statement indicating the tract is not located within the 100-year flood plain.

STREAM BUFFER STATEMENT

Stream buffer statement indicating the tract is not regulated by the city of Columbia stream buffer ordinance.

SIGNAGE NOTE

Signage note detailing requirements for freestanding signs, including size, height, and placement.

LIGHTING NOTE

Lighting note detailing requirements for permanent lighting, including pole height and fixture placement.

LEGAL DESCRIPTION

Legal description of the tract of land, including location, area, and boundary details.

NATURAL GAS

Natural gas contact information for Ameren UE.

SANITARY SEWER

Sanitary sewer contact information for the City of Columbia.

WATER

Water contact information for the City of Columbia.

TELEPHONE

Telephone contact information for Centurytel.

CABLE TV

Cable TV contact information for Mediacom.

ELECTRICITY

Electricity contact information for the City of Columbia.

APPROVED BY THE CITY OF COLUMBIA PLANNING AND ZONING COMMISSION THIS 21st DAY OF MAY, 2009.

APPROVED BY THE CITY OF COLUMBIA CITY COUNCIL THIS 15th DAY OF JUNE, 2009.

C-P PLAN



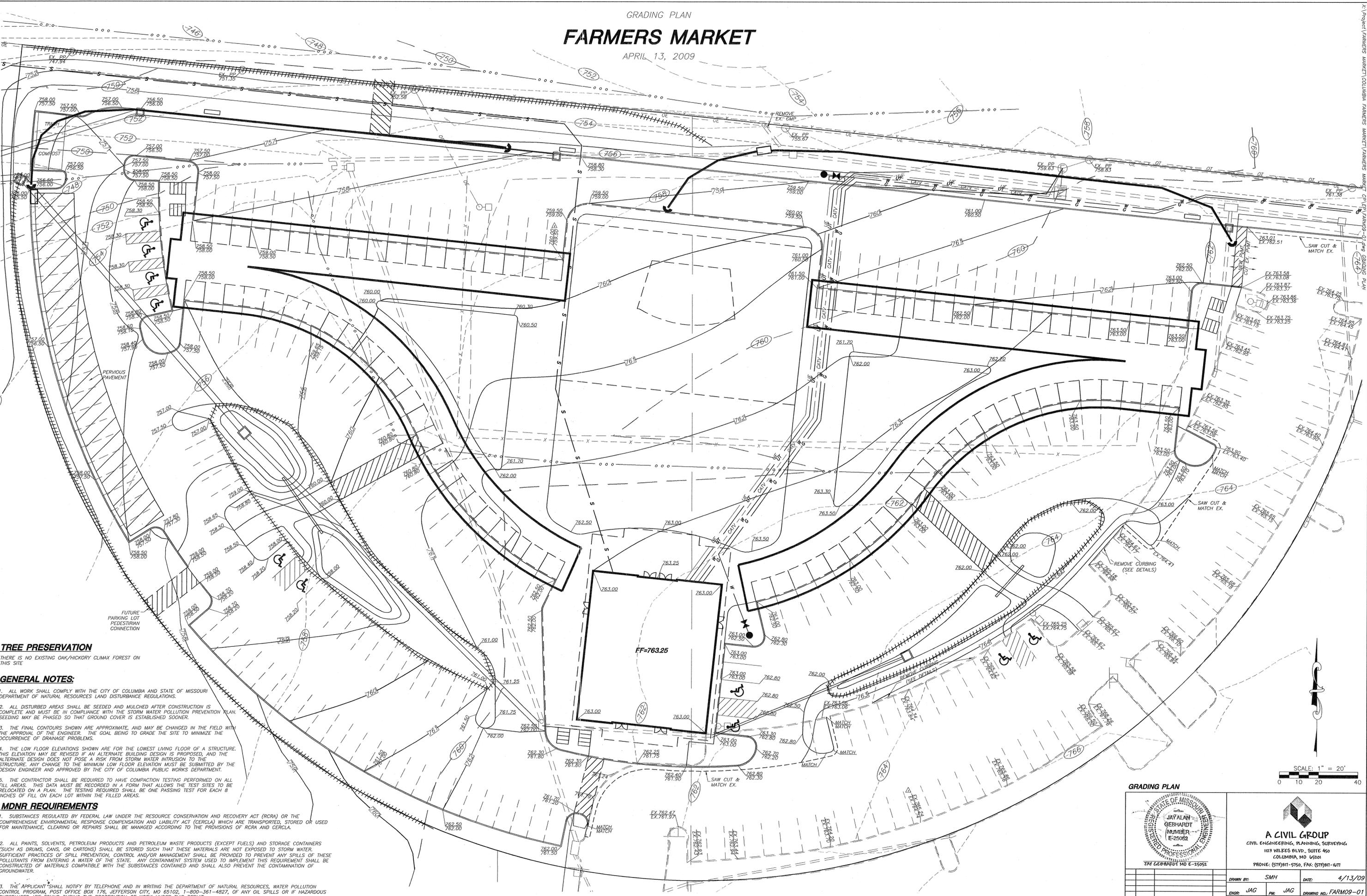
A CIVIL GROUP logo and contact information for Jay Gerhardt, P.E.

Table with columns for Date, Description, and other project details.

GRADING PLAN

FARMERS MARKET

APRIL 13, 2009



TREE PRESERVATION
 THERE IS NO EXISTING OAK/HICKORY CLIMAX FOREST ON THIS SITE

- GENERAL NOTES:**
- ALL WORK SHALL COMPLY WITH THE CITY OF COLUMBIA AND STATE OF MISSOURI DEPARTMENT OF NATURAL RESOURCES LAND DISTURBANCE REGULATIONS.
 - ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED AFTER CONSTRUCTION IS COMPLETE AND MUST BE IN COMPLIANCE WITH THE STORM WATER POLLUTION PREVENTION PLAN. SEEDING MAY BE PHASED SO THAT GROUND COVER IS ESTABLISHED SOONER.
 - THE FINAL CONTOURS SHOWN ARE APPROXIMATE, AND MAY BE CHANGED IN THE FIELD WITH THE APPROVAL OF THE ENGINEER. THE GOAL BEING TO GRADE THE SITE TO MINIMIZE THE OCCURRENCE OF DRAINAGE PROBLEMS.
 - THE LOW FLOOR ELEVATIONS SHOWN ARE FOR THE LOWEST LIVING FLOOR OF A STRUCTURE. THIS ELEVATION MAY BE REVISED IF AN ALTERNATE BUILDING DESIGN IS PROPOSED, AND THE ALTERNATE DESIGN DOES NOT POSE A RISK FROM STORM WATER INTRUSION TO THE STRUCTURE. ANY CHANGE TO THE MINIMUM LOW FLOOR ELEVATION MUST BE SUBMITTED BY THE DESIGN ENGINEER AND APPROVED BY THE CITY OF COLUMBIA PUBLIC WORKS DEPARTMENT.
 - THE CONTRACTOR SHALL BE REQUIRED TO HAVE COMPACTION TESTING PERFORMED ON ALL FILL AREAS. THIS DATA MUST BE RECORDED IN A FORM THAT ALLOWS THE TEST SITES TO BE RELOCATED ON A PLAN. THE TESTING REQUIRED SHALL BE ONE PASSING TEST FOR EACH 8 INCHES OF FILL ON EACH LOT WITHIN THE FILLED AREAS.

- MDNR REQUIREMENTS**
- SUBSTANCES REGULATED BY FEDERAL LAW UNDER THE RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) OR THE COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA) WHICH ARE TRANSPORTED, STORED OR USED FOR MAINTENANCE, CLEARING OR REPAIRS SHALL BE MANAGED ACCORDING TO THE PROVISIONS OF RCRA AND CERCLA.
 - ALL PAINTS, SOLVENTS, PETROLEUM PRODUCTS AND PETROLEUM WASTE PRODUCTS (EXCEPT FUELS) AND STORAGE CONTAINERS (SUCH AS DRUMS, CANS, OR CARTONS) SHALL BE STORED SUCH THAT THESE MATERIALS ARE NOT EXPOSED TO STORM WATER. SUFFICIENT PRACTICES OF SPILL PREVENTION, CONTROL AND/OR MANAGEMENT SHALL BE PROVIDED TO PREVENT ANY SPILLS OF THESE POLLUTANTS FROM ENTERING A WATER OF THE STATE. ANY CONTAINMENT SYSTEM USED TO IMPLEMENT THIS REQUIREMENT SHALL BE CONSTRUCTED OF MATERIALS COMPATIBLE WITH THE SUBSTANCES CONTAINED AND SHALL ALSO PREVENT THE CONTAMINATION OF GROUNDWATER.
 - THE APPLICANT SHALL NOTIFY BY TELEPHONE AND IN WRITING THE DEPARTMENT OF NATURAL RESOURCES, WATER POLLUTION CONTROL PROGRAM, POST OFFICE BOX 178, JEFFERSON CITY, MO 65102, 1-800-361-4827, OF ANY OIL SPILLS OR IF HAZARDOUS SUBSTANCES ARE FOUND DURING THE PROSECUTION OF WORK UNDER THIS PERMIT.

GRADING PLAN

STATE OF MISSOURI
 JAY GERHARDT
 CIVIL ENGINEER
 LICENSE NO. E-25052
 3141 GERMANTOWN RD. #200
 COLUMBIA, MO 65201

A CIVIL GROUP
 CIVIL ENGINEERING, PLANNING, SURVEYING
 1123 WILKES BLVD., SUITE 450
 COLUMBIA, MO 65201
 PHONE: (573)871-5750, FAX: (573)871-1471

SCALE: 1" = 20'
 0 10 20 40

DRAWN BY: SMH	DATE: 4/13/09
ENGR: JAG	PK: JAG
CITY COMMENTS	NO. DATE DESCRIPTION
NO. DATE DESCRIPTION	NO. DATE DESCRIPTION

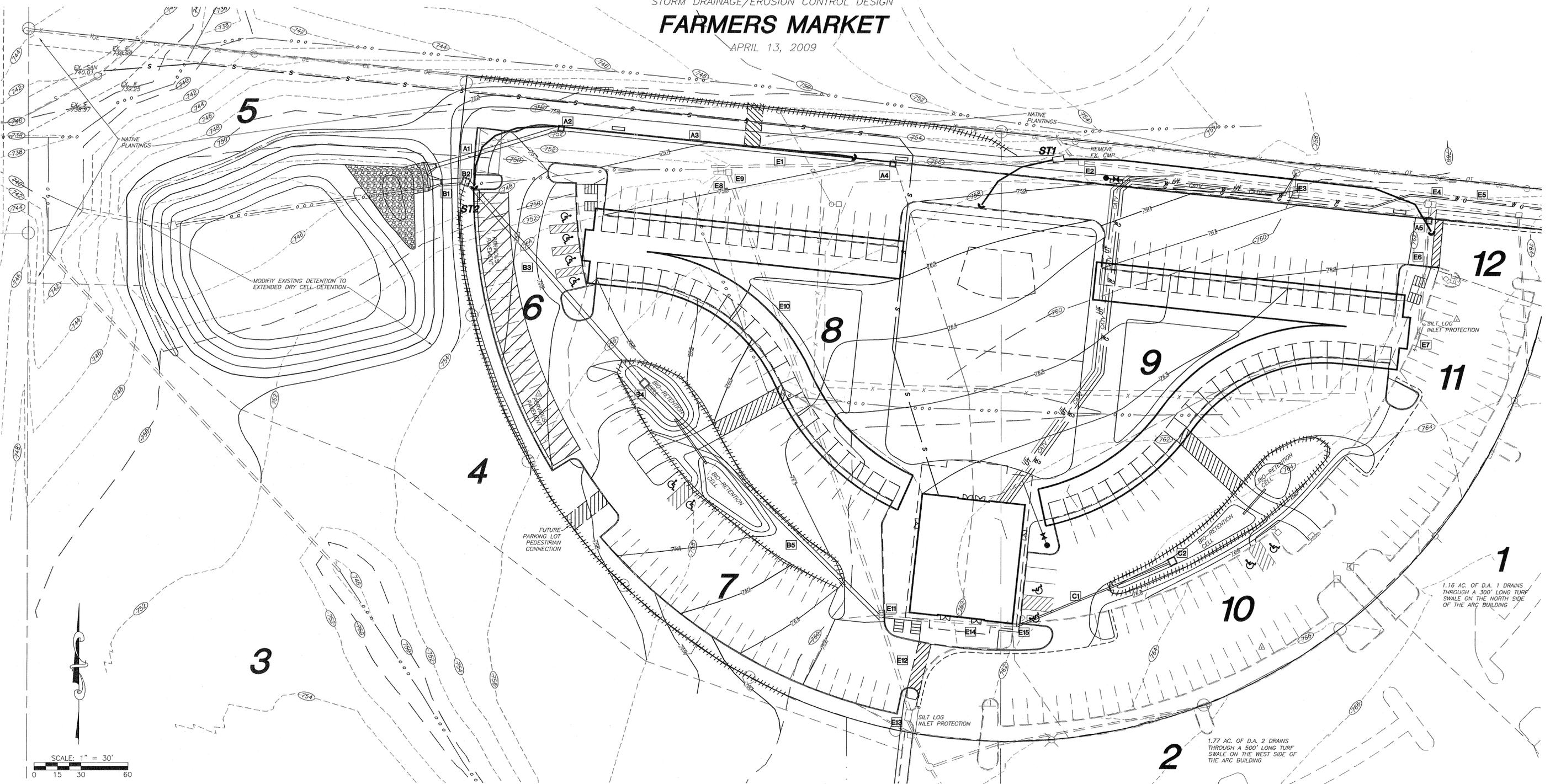
Plotted by: kevin; 07 May 2009 - 3:00pm

JOB NO.: FARM09-01 SHEET 2 OF 5

STORM DRAINAGE/EROSION CONTROL DESIGN

FARMERS MARKET

APRIL 13, 2009



DRAINAGE NOTES

- E1 EX. 235 L.F. 18" HDPE @ 1.00% (PARTIALLY REMOVED)
- E2 EX. 3' X 3' J-BOX, TOP=757.60, E IN=753.25, E OUT=753.23
- E3 EX. 219 L.F. 18" HDPE @ 0.50%
- E4 EX. 6' X 3' J-BOX, TOP=762.35, E IN SOUTH=754.98, E IN EAST=754.48, E OUT WEST=754.46
- E5 EX. 52 L.F. 18" HDPE @ 3.20%
- E6 EX. 82 L.F. 18" HDPE @ 1.00%
- E7 EX. 1.5' X 3' TYPE "A" INLET, TOP=762.10, E BOX=755.88
- E8 EX. 8 L.F. 24" CMP (TO BE REMOVED)
- E9 EX. 3' X 3' J-BOX, TOP=754.70, E IN=751.25, E OUT=751.15 (TO BE REMOVED)
- E10 EX. 295 L.F. 24" HDPE @ 0.60% (TO BE REMOVED)
- E11 EX. 6' X 3' J-BOX, TOP=760.25, E IN SOUTH=753.21, E IN EAST=753.31, E OUT NORTH=753.13
- E12 EX. 59 L.F. 24" RCP @ 1.00%
- E13 EX. 6' X 3' J-BOX, TOP=760.95, E IN=753.82, E OUT=753.81
- E14 EX. 83 L.F. 18" RCP @ 1.70%
- E15 EX. 1.5' X 3' TYPE "A", TOP=761.28, E BOX=754.73

- A1 82 L.F. 30" HDPE @ 1.20% W/F.E.S., E=749.00
- A2 3' X 3' TYPE A INLET, TOP=756.50, E IN=749.92, E OUT=749.82
- A3 210 L.F. 30" HDPE @ 1.00%
- A4 3' X 3' TYPE A INLET, TOP=758.68, E IN=752.06, E OUT=751.96
- A5 3' X 3' TYPE A INLET, TOP=762.75, E IN=755.15, E OUT=755.05
- B1 14 L.F. 36" HDPE @ 1.00% W/F.E.S., E=749.00
- B2 4' X 4' J-BOX, TOP=757.00, E IN=749.24, E OUT=749.14
- B3 169 L.F. 36" HDPE @ 0.69%
- B4 4' X 4' SIDE OPENING INLET, TOP=757.00, E OPENINGS N./S.=756.00, E IN=750.60, E OUT=750.40
- B5 211 L.F. 30" HDPE @ 1.30%
- C1 94 L.F. 15" HDPE @ 1.60%
- C2 4' X 4' SIDE OPENING INLET, TOP=762.00, E OPENINGS E./W.=761.00, E OUT=756.23

SEDIMENT TRAP DETAILS						
SEDIMENT TRAP ID	CONTRIBUTING AREA (ACRES)	PONDED AREA (FT ²)	HEIGHT OF SEDIMENT TRAP, FT (S' MAX)	BASE ELEVATION (FT)	PONDED VOLUME, FT ³ (PONDED AREA X HEIGHT X 0.4)	REQUIRED VOLUME, FT ³ (CONTRIBUTING AREA X 1800)
ST1	0.99	4900	2	756	3920	1782
ST2	1.21	2400	3	748	2880	2178

DRAINAGE STRUCTURE, PIPES						
STRUCTURE	MATERIAL	LENGTH (LF)	SLOPE (%)	PIPE DIAMETER (IN)	COMP. Q. 25-YR (CFS)	25-YR EVENT VELOCITY (FPS)
E1	HDPE	235	1.00	18	27.80	5.94
E2	HDPE	219	0.50	18	27.80	4.20
E3	HDPE	52	1.0	18	24.46	5.94
E4	HDPE	82	1.20	18	4.50	6.51
E5	HDPE	8	3.90	24	38.61	14.22
E6	HDPE	295	0.60	24	38.61	5.58
E7	HDPE	82	1.20	30	42.89	9.15
E8	HDPE	210	1.00	30	36.87	8.36
E9	HDPE	14	1.00	36	54.36	9.44
E10	HDPE	169	0.69	36	52.62	7.84
E11	HDPE	211	1.30	30	46.67	9.53
E12	HDPE	94	1.60	15	8.06	6.66

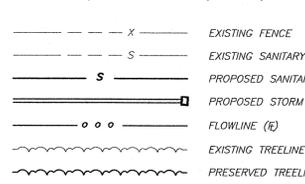
DRAINAGE AREAS			
SYMBOL	ACRES	BMP	LS
1	1.25	EXTENDED DRY DETENTION	4.00
1A	1.16	SWALE/EXTENDED DRY DETENTION	6.00
2	3.31	EXTENDED DRY DETENTION	4.00
2A	1.77	SWALE/EXTENDED DRY DETENTION	6.00
3	4.85	N/A	0.00
4	1.19	EXTENDED DRY DETENTION	4.00
5	0.97	NATIVE PLANTINGS	9.25
6	0.24	PERVIOUS PAVEMENT/EXT. DRY DETENTION	8.50
7	0.88	BIO-RETENTION CELL	8.50
8	0.77	EXTENDED DRY DETENTION	4.00
9	1.09	EXTENDED DRY DETENTION	4.00
10	1.11	BIO-RETENTION CELL	8.50
11	0.17	EXTENDED DRY DETENTION	4.00
12	0.45	EXTENDED DRY DETENTION	4.00

STORMWATER MANAGEMENT

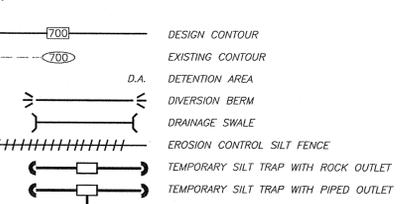
1. THIS SITE CURRENTLY DRAINS SOUTHEAST TO NORTHWEST ACROSS LANDSCAPED AND PAVED AREAS AND THROUGH AN EXISTING STORM WATER SYSTEM OF WHICH APPROXIMATELY 13.29 ACRES FLOWS TO AN EXISTING FLOOD PROTECTION CONTROL DRY CELL DETENTION BASIN. IT IS OUR DETERMINATION THAT THE EXISTING DETENTION DOES CONTAIN THE 100-YEAR EVENT AND THAT SEVERAL EXISTING DRAINAGE PIPES DO NOT HAVE CAPACITY FOR THE 25-YEAR EVENT. PORTIONS OF THE EXISTING STORM WATER SYSTEM WILL BE REPLACED WITH THIS PLAN TO A 25-YEAR EVENT SERVICE LEVEL.

2. IT IS THE INTENT OF THIS PLAN TO CAPTURE THE RUNOFF FROM THE IMPROVED SITE AND DETAIN THE PEAK RUNOFF TO PRE-DEVELOPMENT LEVELS FOR THE Q1, Q2, Q10 AND Q100 DESIGN STORMS. THE WATER QUALITY DESIGN STORM SHALL ALSO BE TREATED TO OBTAIN THE APPROPRIATE WATER QUALITY LEVEL OF SERVICE. THE METHODS USED TO ACHIEVE THESE GOALS SHALL INCLUDE THE RECONFIGURATION OF THE EXISTING DRY CELL DETENTION TO AN EXTENDED DRY CELL DETENTION STRUCTURE, THE USE OF PERVIOUS/POROUS PAVEMENT IN A PORTION OF THE PARKING LOT, THE CREATION OF BIO-RETENTION CELLS, THE PLANTING OF NATIVE VEGETATION AND THE USE OF EXISTING GRASS/TURF SWALES. THE COMBINATION OF THESE BMP'S SHALL PROVIDE AN OVERALL LEVEL OF SERVICE OF 4.0 FOR THE ENTIRE 19.21 ACRE SITE.

3. ALL NEW STORMWATER MANAGEMENT FACILITIES SHALL BE DESIGNED IN ACCORDANCE WITH CHAPTER 12A AND THE STORMWATER MANAGEMENT AND WATER QUALITY MANUAL OF THE CITY OF COLUMBIA.



LEGEND



STORM DRAINAGE/EROSION CONTROL DESIGN

JAY ALAN GEBHARDT
NO. E-25052

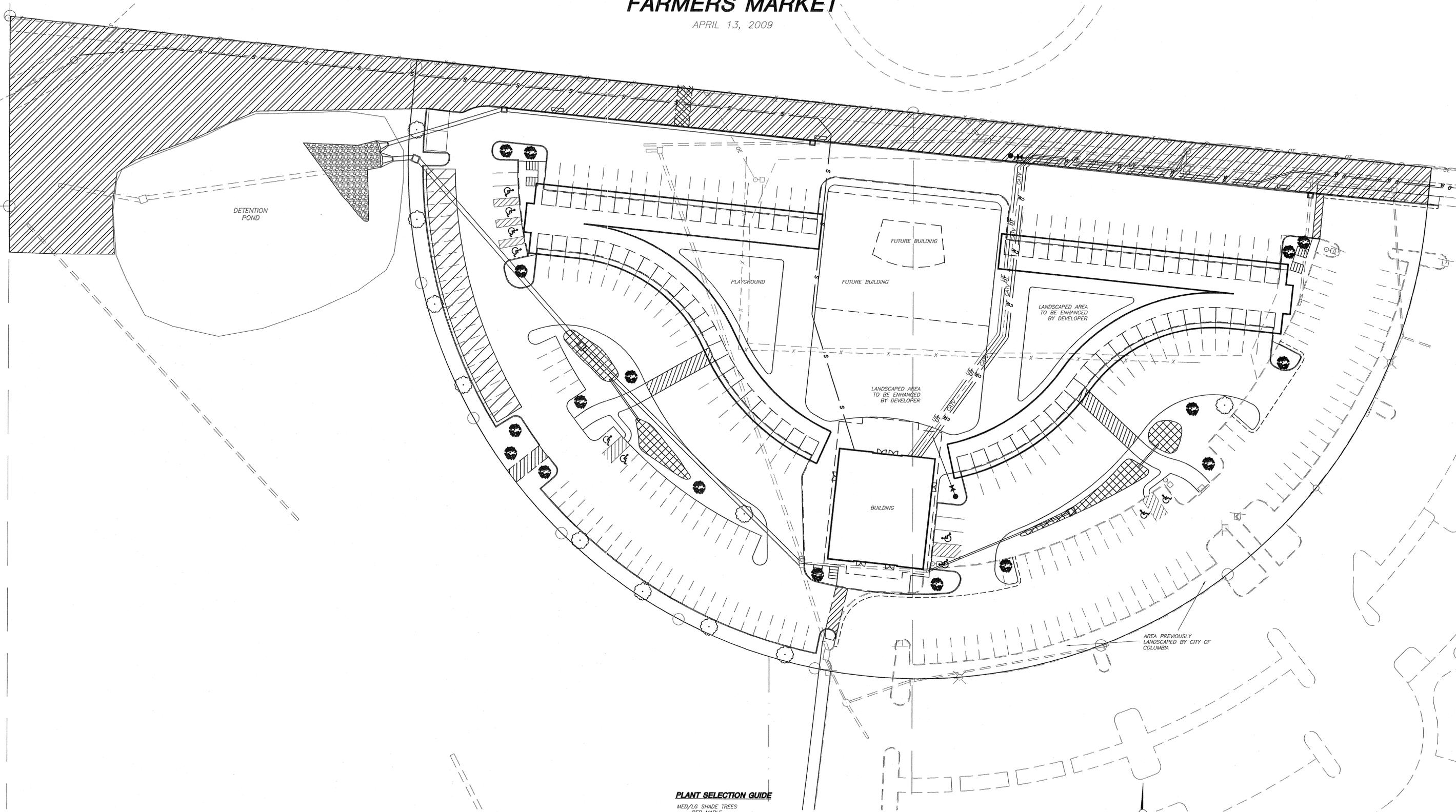
A CIVIL GROUP
CIVIL ENGINEERING, PLANNING, SURVEYING
123 WILKES BLVD., SUITE 450
COLUMBIA, MO 65201
PHONE: (573)811-5150, FAX: (573)811-1471

DRAWN BY: KPM	DATE: 4/13/09
ENGR: JAG	PK: JAG
CITY COMMENTS: KPM	DRAWING NO.: FARM09-01
NO. DATE DESCRIPTION	JOB NO.: FARM09-01
	SHEET 3 OF 5

* THE 25-YR EVENT DOES NOT FLOW THROUGH EXISTING PIPES E1, E3, E5 OR E10.

FARMERS MARKET

APRIL 13, 2009



TREE PRESERVATION NOTE:

NO CLIMAX FOREST

LANDSCAPING NOTES:

- ALL DISTURBED AREAS SHALL BE SEEDED & MULCHED AFTER CONSTRUCTION.
- LANDSCAPING MAY BE ENHANCED BY THE DEVELOPER AS TIME AND BUDGET ALLOWS.

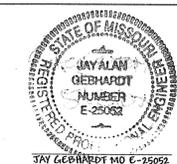
PLANT SCHEDULE			
SYMBOL	QUANTITY	SIZE	CATEGORY
	10	2"	SHADE TREE (MED. - LARGE)
	15	4"	SMALL/ORNAMENTAL TREE
	AS NEEDED	VARIES	NATIVE PLANTINGS
	AS NEEDED	VARIES	BIO-RETENTION CELL PLANTINGS

TOTAL AREA OF LOT= 5.04 AC. = 219,575 SQ.FT.
 TOTAL PAVED AREA= 109,605 SQ.FT. (49.9%)
 TOTAL BUILDING AREA= 14,085 SQ.FT. (6.4%)
 TOTAL IMPERVIOUS AREA= 123,690 SQ.FT. (56.3%)
 TOTAL AREA OF LANDSCAPING= 95,885 SQ.FT. (43.7%)
 109,605 SQ. FT. / 4,500= 24.3 OR 25 TREES REQUIRED.
 25+ NEW TREES SHOWN ON SITE.

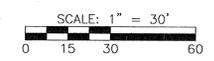
PLANT SELECTION GUIDE

- MED/LG SHADE TREES
 - RED MAPLE
 - KENTUCKY COFFEE TREE
 - BURRY OAK
 - LACEBARK ELM
- ORNAMENTAL TREES
 - REDBUD
 - SERVICEBERRY
 - CRABAPPLE
 - PLUM
- NATIVE PLANTINGS
 - REDBUD
 - CRABAPPLE
 - WAVER ASH
 - DECIDUOUS HOLLY
 - BUTTON BUSH
 - RATTLESNAKE MASTER
 - IRIS
 - RIVER OATS
- RAIN GARDEN PLANTINGS
 - BUTTON BUSH
 - CARDINAL FLOWER
 - THALIA

LANDSCAPING PLAN



A CIVIL GROUP
 CIVIL ENGINEERING, PLANNING, SURVEYING
 1123 WILKES BLVD., SUITE 450
 COLUMBIA, MO 65201
 PHONE: (573)817-5150, FAX: (573)817-1071



Plotted by: kevin; 07 May 2009 - 3:01pm

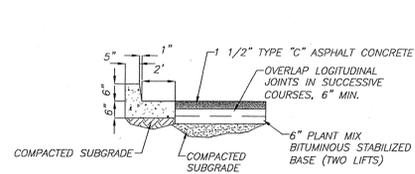
NO.	DATE	DESCRIPTION	BY	JOB NO.	SHEET	OF
				FARM09-01	4	5

X:\Project\FARMERS MARKET\COLUMBIA\FARMERS MARKET\CIVIL\FARM09-01.dwg LANDSCAPE PLAN

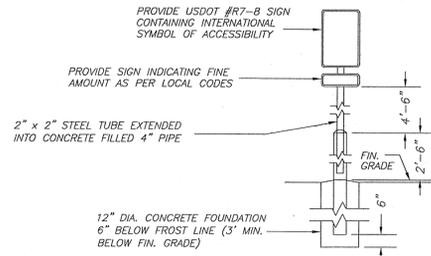
DETAILS

FARMERS MARKET

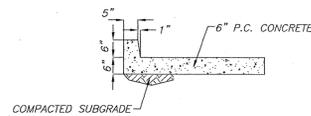
APRIL 13, 2009



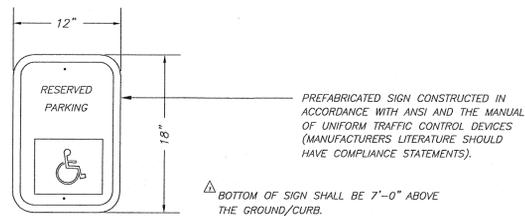
ASPHALT W/ CONCRETE CURB & GUTTER PAVEMENT
N.T.S.



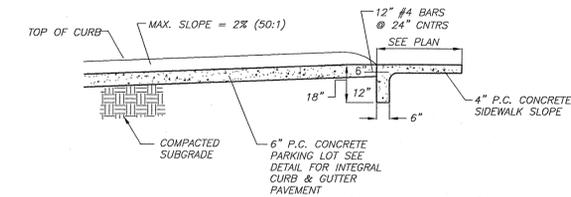
HANDICAPPED PARKING SIGN
N.T.S.



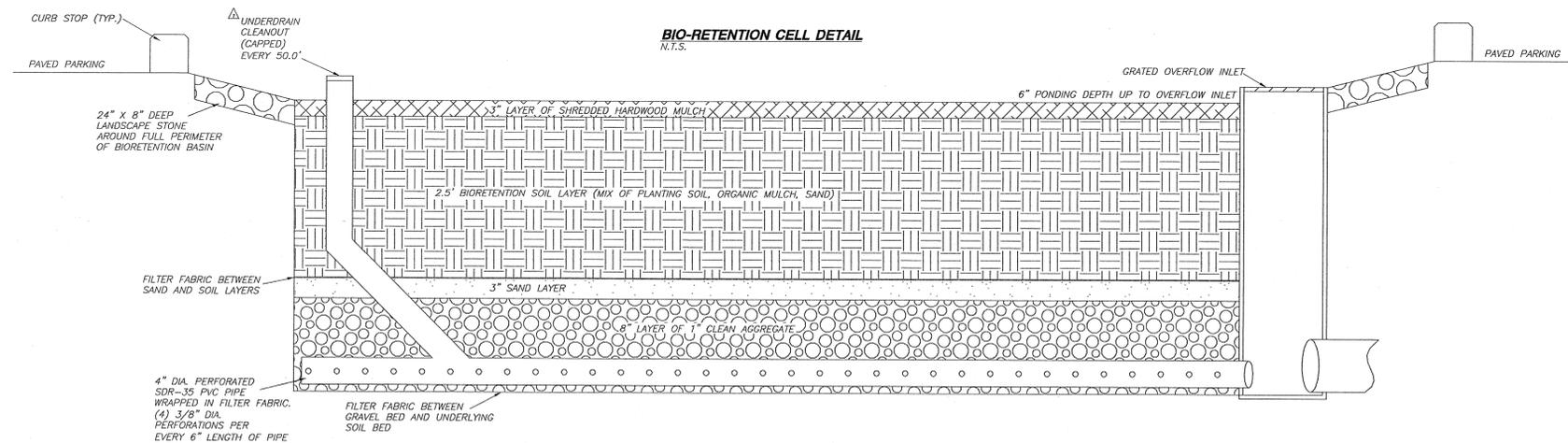
CONCRETE WITH INTEGRAL CURB & GUTTER PAVEMENT
N.T.S.



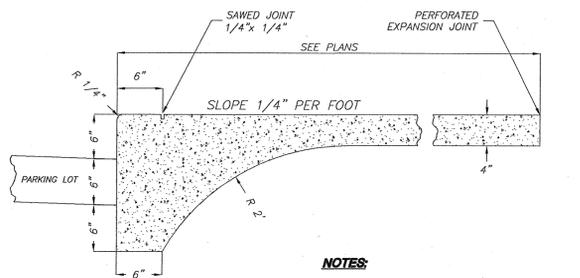
DISABLED RESERVED PARKING SIGN
N.T.S.



SECTION A-A
N.T.S.

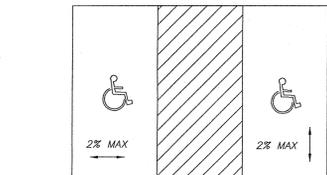


BIO-RETENTION CELL DETAIL
N.T.S.

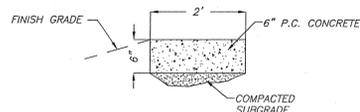


NOTES:
1. ON SIDEWALKS WIDER THAN 5', CROSS SLOPE SHALL BE REDUCED TO 1/8" PER FOOT.

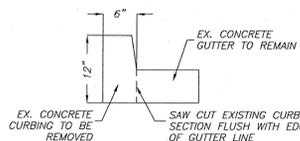
SIDEWALK (DETAIL D)
N.T.S.



DISABLED PAVEMENT/RAMP DETAIL
N.T.S.

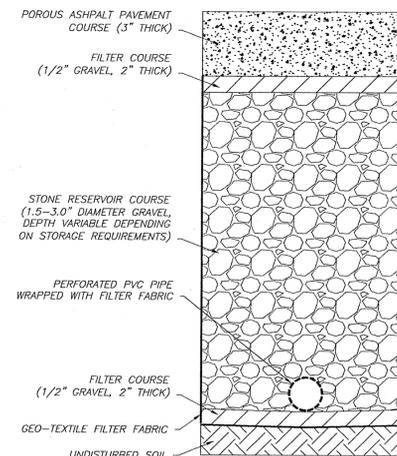


GUTTER SECTION DETAIL - NO CURB
N.T.S.



EXISTING CURB & GUTTER SAW CUT DETAIL
N.T.S.

TYPICAL PERVIOUS PAVEMENT DETAIL
N.T.S.



DETAILS



A CIVIL GROUP
CIVIL ENGINEERING, PLANNING, SURVEYING
123 WILKES BLVD., SUITE 450
COLUMBIA, MD 21021
PHONE: (301)811-5150, FAX: (301)811-1071

NO.	DATE	DESCRIPTION	BY	JOB NO.	FARM09-01	SHEET	5	OF	5
DRAWN BY: SMH			DATE: 4/13/09						
ENGR: JAG			PK: JAG		DRAWING NO.: FARM09-01				
5/05/09			CITY COMMENTS		KPM				

X:\Project\FARMERS MARKET\COLUMBIA\FARMERS MARKET\FARMERS MARKET\PE\FARM09-01.dwg DETAILS