

Drainage Report Save-A-Lot Wichita, Sedgwick County, Kansas

Location

The subject property is located in Wichita, Sedgwick County, Kansas. The proposed development is located North of 13th Street, East of Grove Avenue, South of 14th Street, and West of Poplar Avenue, on the SW corner of the SE ¼ of section 10, Township 27 South, Range 1 East. The area of the site is approximately 1.4 acres. The site is shown on the Wichita East, Kansas Quadrangle, located in Appendix A.

Soils

According to the NRCS (SCS) Sedgwick County Soil Survey (Appendix B) soils on the site are Urban land-Elandco complex, (U_b – HSG “B”) and Urban land-Farnum complex, 0-3% slopes, (U_c – HSG “B”). The HSG used to select runoff coefficients was “B”.

Pre-Project Conditions

Pre-Project Development

The site currently consists of vacant lots zoned for commercial use.

Pre-Project Landform and Slope

Slopes across the site range from 0.4-2.4%.

Pre-Project Drainage Conditions

The entire site is in Zone B. Zone B includes areas between limits of the 100-year flood and 500-year flood. The nearest 100-year flood plain (Zone A9) is approximately ½ mile West of the site, on the Wichita Drainage Canal (FIRM Panel 10, Wichita, Sedgwick County, Kansas, May 15, 1986) (Appendix C.)

Pre-Project Runoff Characteristics

The site was considered as one watershed, 1.4 acres in size. Runoff from this site drains from the streets via three inlets. Two inlets, located at the NE corner of 13th St. and N. Grove Avenue, route the water they collect south along Grove Avenue. The other inlet, located at the NW corner of 13th Street and Poplar Avenue, routes the runoff East along 13th Street. The site’s runoff was analyzed using the Rational Method. The site’s area was considered to be 20% impervious. Time of Concentration (T_c) was calculated using the FAA method, Appendix D. A table showing the existing runoff from the site is shown below.

Table 1. Pre-Project Runoff

Design Storm	2-Year (cfs)	5-Year (cfs)	10-year (cfs)	100-Year (cfs)
Entire Site	1.5	1.9	2.6	5.0

Post-Project Conditions

Post-Project Development

The site will develop as a commercial lot consisting of a grocery store accompanied by a parking lot.

Post-Project Landform and Slope

Proposed slopes are expected to range from 0.5% to 7%. Proposed stormwater sewer will pick up the runoff and route it into the existing stormwater sewer. The proposed grading plan can be found in Appendix E.

Post-Project Runoff Characteristics

The proposed development was divided into six separate drainage sub-areas, as shown in Appendix F. Sub-areas A1, A3, and A6 would dispense their runoff onto the streets where they would enter existing inlets. Runoff from sub-area, A5, will drain into an area inlet at the bottom of the truck ramp and then be routed via an 8-inch PVC to the inlet located in the southeast corner of the parking lot. Sub-area A4 will drain into the inlet mentioned above. The runoff from A4 and A5 will then be routed east, via a 15-inch Reinforced Concrete Pipe (RCP), to an existing inlet, located at the NW corner of 13th Street and Poplar Avenue. It will then enter the existing storm sewer. The final sub-area, A2, will drain into an inlet located at the southwest corner of the parking lot. A 15-inch RCP will connect this inlet to an existing inlet located at the NE corner of 13th St. and N. Grove Avenue. Table 2 below shows the proposed development's runoff associated with each sub-area and the total runoff of the proposed site for each design storm.

Table 2. Post-Project Runoff

	2-Year (cfs)	5-Year (cfs)	10-Year (cfs)	100-Year (cfs)
A1	1.0	1.2	1.4	2.0
A2	1.3	1.6	1.8	2.7
A3	0.3	0.4	0.5	0.7
A4	0.3	0.4	0.5	0.7
A5	1.3	1.6	1.8	2.7
A6	0.3	0.4	0.5	0.7
Entire Site	4.5	5.4	6.4	9.4

Summary

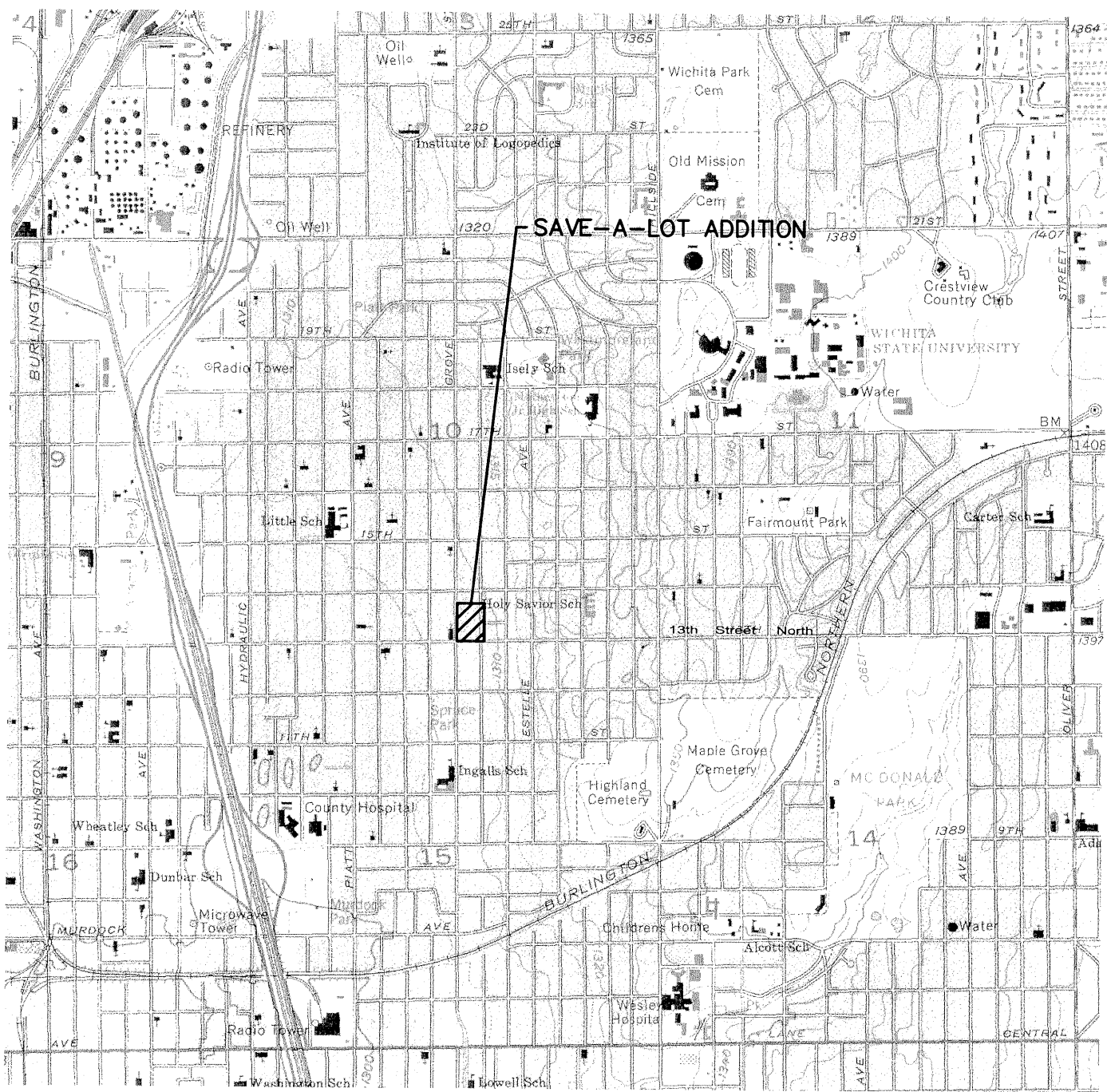
The construction of a Save-A-Lot grocery store has been proposed on a 1.4 acre site located North of 13th St. in between N. Grove Avenue and Poplar Avenue, in Wichita, Sedgwick County, Kansas. The site had previously been developed as single family residential and was considered to be approximately 20% impervious. The Rational Method was used to analyze both the pre-project and post-project conditions. A comparison of the pre-project site runoff and the post-project runoff is shown in Table 3 below.

Table 3. Pre-Project vs. Post-Project Runoff

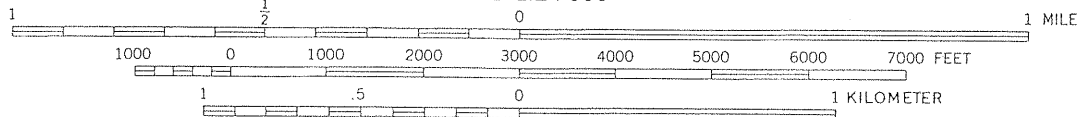
	2-Year (cfs)	5-Year (cfs)	10-Year (cfs)	100-Year (cfs)
Pre-Project	1.5	1.9	2.6	5.0
Post-Project	4.5	5.4	6.4	9.4

The development of this site will increase runoff in the 100-year design event from 5.0 cfs to 9.4 cfs. This increase of 4.4 cfs will have a negligible effect downstream. Due to the size of the site and the position in the watershed, detention would not be practical.

Appendix A
Quadrangle Map



SCALE 1:24 000



CONTOUR INTERVAL 5 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929



K:\MEPS\2003\03002 Save-a-lot\csw\Draw\SUR\03002.mxd.dwg



MKEC
ENGINEERING
CONSULTANTS
411 N. WEBB ROAD
WICHITA, KS. 67206
316 - 684 - 9600

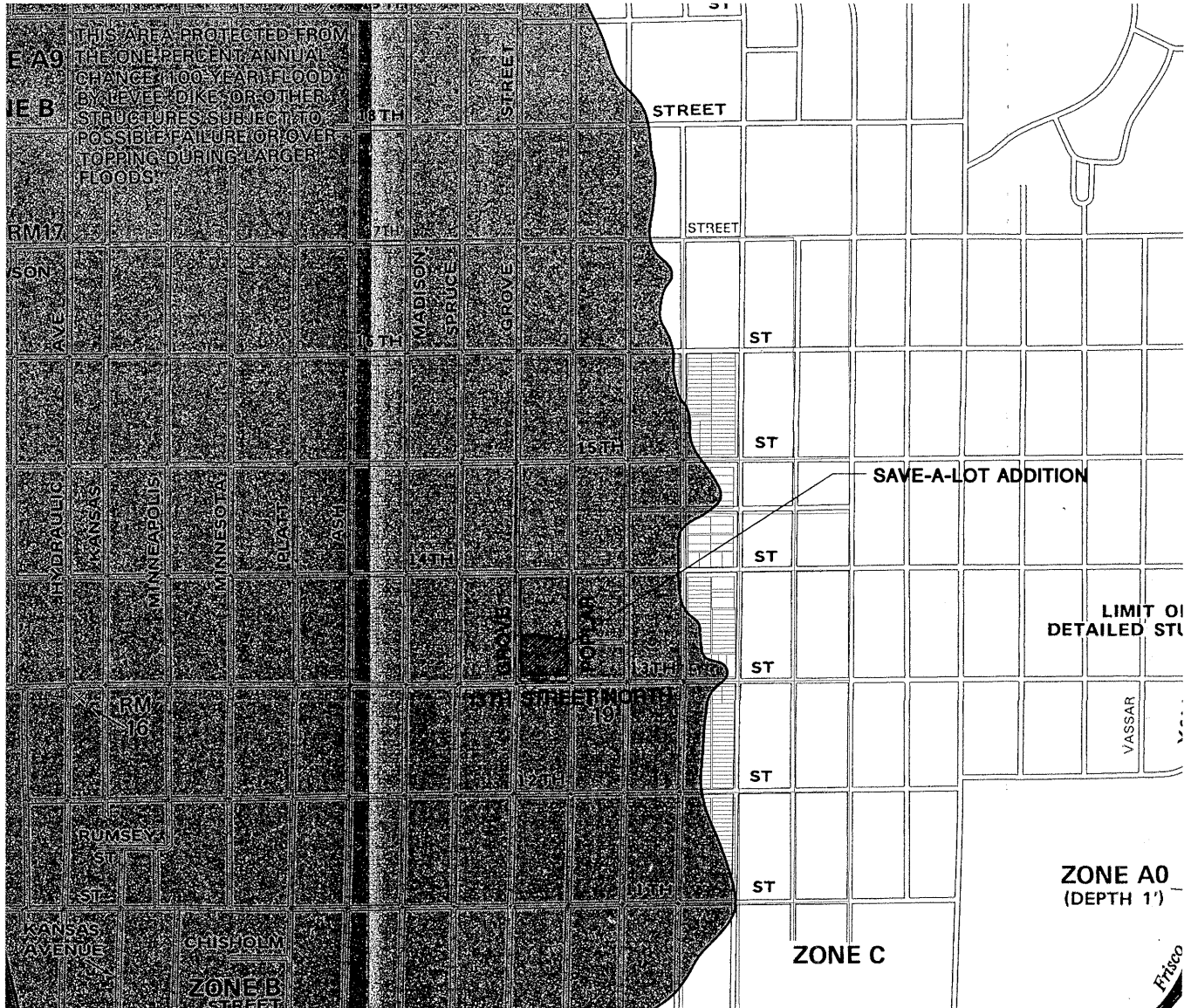
SAVE-A-LOT GROCERY STORE		
PROJECT NAME		
WICHITA EAST QUADRANGLE MAP		
SHEET TITLE		
KLA	SMD	JTC
DESIGN BY.	DRAWN BY.	CHECKED BY.
JANUARY 2005	03002	1 / 1
DATE	JOB NO.	SHEET/OF

Appendix B

Soil Survey

Appendix C

FIRM & FBFM



NATIONAL FLOOD INSURANCE PROGRAM


FIRM
FLOOD INSURANCE RATE MAP

CITY OF
WICHITA,
KANSAS
SEDGWICK COUNTY

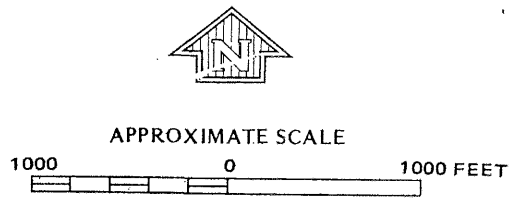

PANEL 10 OF 40
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
200328 0010 B

EFFECTIVE DATE:
MAY 15, 1986



Federal Emergency Management Agency

MKEC
ENGINEERING
CONSULTANTS
411 N. WEBB ROAD
WICHITA, KS. 67206
316 - 684 - 9600

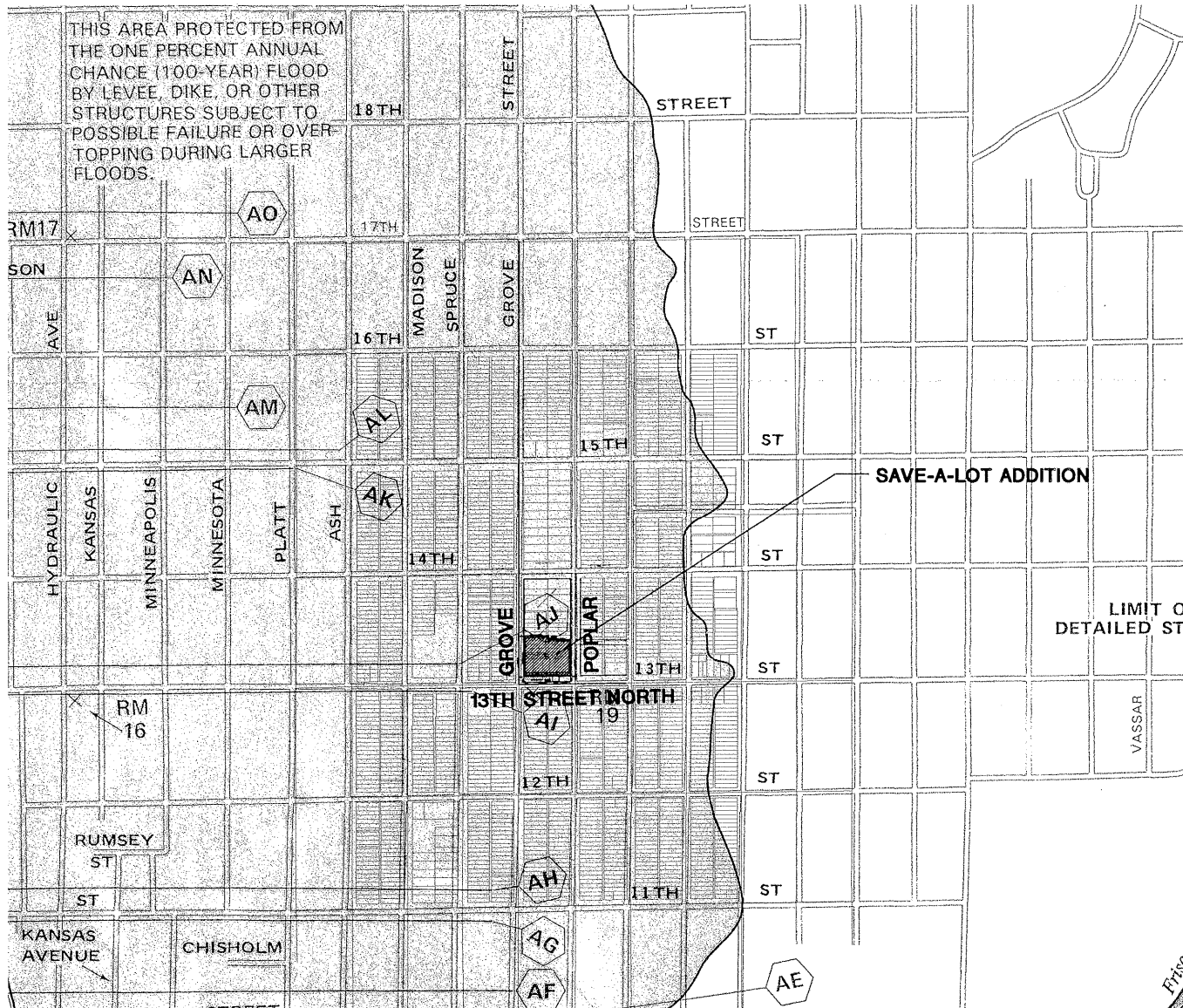
SAVE-A-LOT
PROJECT NAME

FIRM PANEL 125 OF 300
SEDGWICK COUNTY, KANSAS
SHEET TITLE

DESIGN BY: KLA	DRAWN BY: KWS	CHECKED BY: GJA
DATE JANUARY 2005	JOB NO. 03002	SHEET/OF 1 / 1

K:\MFEPS\2003\200328\SAVE-A-LOT\UNL\DWG\FIRM\PRGP\03002F.RW

THIS AREA PROTECTED FROM THE ONE PERCENT ANNUAL CHANCE (100-YEAR) FLOOD BY LEVEE, DIKE, OR OTHER STRUCTURES SUBJECT TO POSSIBLE FAILURE OR OVERTOPPING DURING LARGER FLOODS.



NATIONAL FLOOD INSURANCE PROGRAM

FLOODWAY
FLOOD BOUNDARY AND
FLOODWAY MAP

CITY OF
WICHITA,
KANSAS
SEDGWICK COUNTY

PANEL 10 OF 40
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
200328 0010

EFFECTIVE DATE:
MAY 15, 1986



Federal Emergency Management Agency



APPROXIMATE SCALE



SAVE-A-LOT
PROJECT NAME

FBFM PANEL 125 OF 300
SEDGWICK COUNTY, KANSAS
SHEET TITLE

KLA DESIGN BY:	KWS DRAWN BY:	GJA CHECKED BY:
JANUARY 2005 DATE	03002 JOB NO.	1 / 1 SHEET/OF

K:\MEPS\2003\03002SAVE-A-LOT\CIVIL\DWG\PROP_DRAWING\03002BFM

Appendix D
Spread Sheet

DRAINAGE ANALYSIS SUMMARY
Save-A-Lot

Urban land -Rarnum Complex- Soil Group B; Urban land-Elandco Complex Soil Group B

Area ID	Area ac	Accum. Area ac	C2	C5	C10	C100	Elev Max	Elev Min	Flow Length	Tc2 min	Tc5 min	Tc10 min	Tc100 min	I2 in/hr	I5 in/hr	I10 in/hr	I100 in/hr	Q2 cfs	Q5 cfs	Q10 cfs	Q100 cfs
Post-Project																					
A1	0.3		0.84	0.85	0.87	0.91	124.0	120.4	400	15	15	15	15	3.83	4.56	5.22	7.37	0.97	1.16	1.36	2.01
A2	0.4		0.84	0.85	0.87	0.91	124.4	120.4	740	16	15	15	15	3.83	4.56	5.22	7.37	1.29	1.55	1.82	2.68
A3	0.1		0.84	0.85	0.87	0.91	124.1	121.5	270	15	15	15	15	3.83	4.56	5.22	7.37	0.32	0.39	0.45	0.67
A4	0.1		0.84	0.85	0.87	0.91	124.4	120.6	270	15	15	15	15	3.83	4.56	5.22	7.37	0.32	0.39	0.45	0.67
A5	0.4		0.84	0.85	0.87	0.91	122.8	120.4	220	15	15	15	15	3.83	4.56	5.22	7.37	1.29	1.55	1.82	2.68
A6	0.1		0.84	0.85	0.87	0.91	124.3	121.0	380	15	15	15	15	3.83	4.56	5.22	7.37	0.32	0.39	0.45	0.67
A1+A2+A3+A4+A5+A6	1.4		0.84	0.85	0.87	0.91				16	15	15	15	3.83	4.56	5.22	7.37	4.50	5.43	6.36	9.39
Pre-Project																					
	1.4		0.33	0.35	0.4	0.51	122.4	120.5	233	23	22	21	17	3.17	3.81	4.60	7.00	1.46	1.87	2.58	5.00

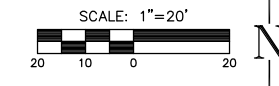
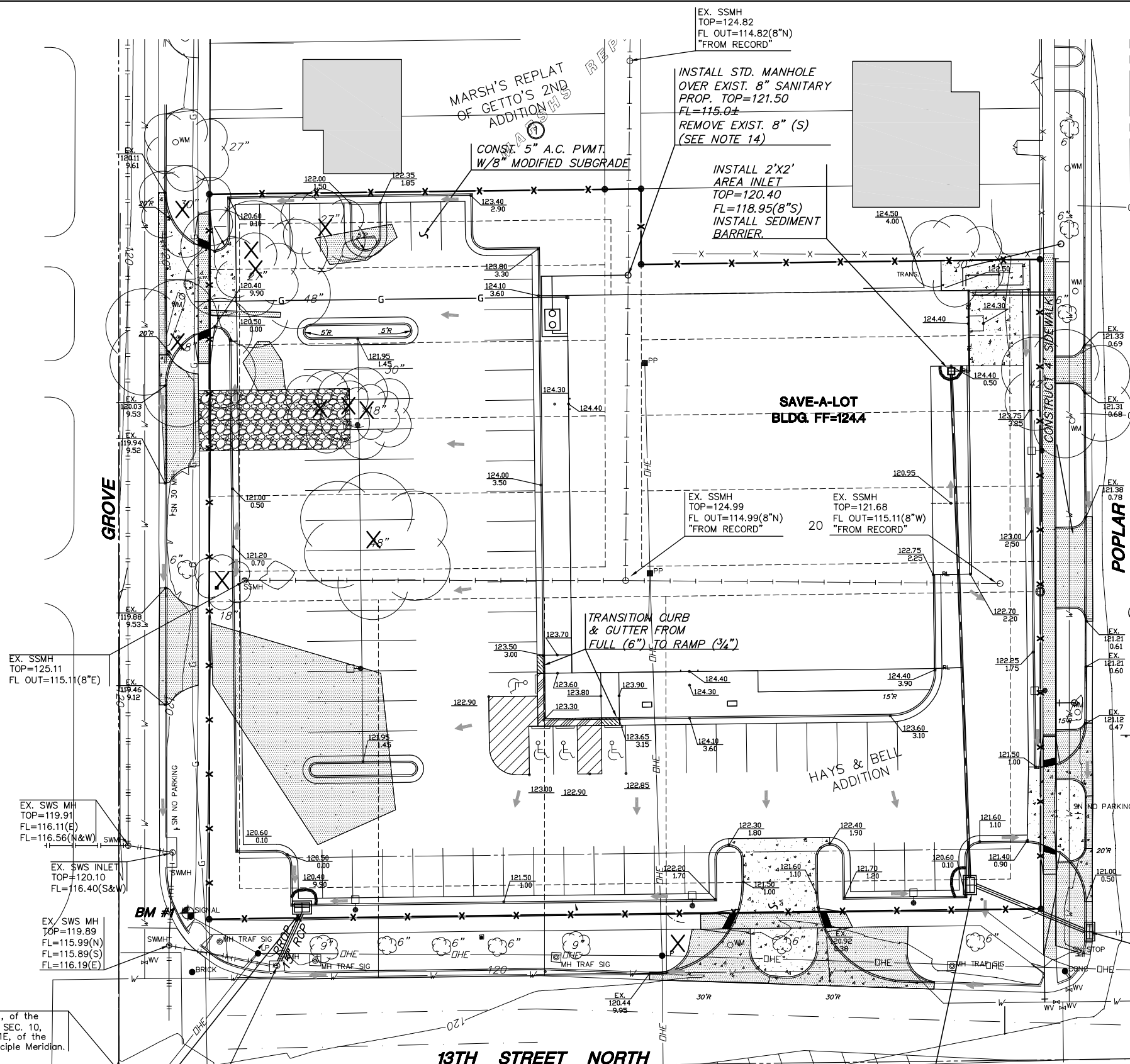
Appendix E

Site Grading

GENERAL NOTES

- UNLESS SHOWN OR STATED OTHERWISE ON THESE DRAWINGS, MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF WICHITA STANDARD SPECIFICATIONS.
- CONTRACTOR WILL BE REQUIRED TO PROVIDE A MINIMUM ADVANCE NOTICE OF SEVENTY-TWO (72) HOURS TO UTILITY COMPANIES PRIOR TO STARTING ANY EXCAVATION AS FOLLOWS:
KANSAS ONE-CALL 1-800-344-7233
OR 687-2470 (LOCAL WICHITA)
- THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF AN EMERGENCY:
SBC (TELEPHONE) 800-870-8390
COX COMMUNICATIONS (CABLE) 262-0661
WESTAR (ELECTRIC) 383-8600
KANSAS GAS SERVICE (GAS) 832-3101
CITY OF WICHITA WATER & SEWER MAINT. 262-6000
AQUILA (GAS) 946-0096
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR WILL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH IRONS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS.
- EXISTING UTILITIES AND THEIR LOCATIONS, AS SHOWN ON THE PLANS REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS UTILITY COMPANIES AND IS EITHER FROM COMPANY RECORD DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE PLAN LOCATIONS SHOWN ARE NOT GUARANTEED. ADDITIONAL EXISTING UTILITIES MAY ALSO BE ENCOUNTERED.
- RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES AND EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE DISPOSED OF ON SITES TO BE PROVIDED BY THE CONTRACTOR. THESE SITES SHALL BE APPROVED BY THE ENGINEER AS TO SUITABILITY, APPEARANCE AND SITE LOCATION. LOCATIONS THAT, IN THE OPINION OF THE ENGINEER, WILL LEAVE AN UNSIGHTLY APPEARANCE WILL NOT BE APPROVED. ALL DISPOSAL SITES MUST BE APPROVED BY THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT. MATERIAL EITHER STOCKPILED OR DISPOSED OF IN A FLOOD PLAIN WOULD REQUIRE A KANSAS STATE BOARD OF AGRICULTURE PERMIT. ANY MATERIAL DUMPED IN WATERS OF THE UNITED STATES OR WETLANDS IS SUBJECT TO U.S. CORPS OF ENGINEERS PERMITTING REGULATIONS. ANY MATERIAL BURIED OR STOCKPILED BEYOND APPROVED CONSTRUCTION LIMITS WOULD REQUIRE ADDITIONAL ARCHAEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED BORROW LOCATION.
- A SAW CUT OF AT LEAST ONE-HALF THE DEPTH OF THE EXISTING SURFACE COURSES OR ONE-FOURTH THE DEPTH OF THE EXISTING TOTAL PAVEMENT THICKNESS SHALL BE PROVIDED AT LOCATIONS WHERE PROPOSED CONSTRUCTION ABUTS AN EXISTING SURFACE OR PAVEMENT FOR WHICH PARTIAL REMOVAL OF THAT SURFACE OR PAVEMENT IS REQUIRED. SAW JOINT TO FACILITATE REMOVAL WITHIN THREE (3) FEET OF EXISTING JOINTS WILL NOT BE PERMITTED AND FOR SUCH INSTANCES THE LIMITS OF REMOVAL SHALL EXTEND TO THE EXISTING JOINT. SUCH SAW CUTS WILL NOT BE PAID FOR DIRECTLY AND THIS COST SHALL BE CONSIDERED AS SUBSIDIARY TO THE REMOVAL OF SURFACE OR PAVEMENT.
- CONTRACTOR SHALL REMOVE ALL CONCRETE PAVEMENT, SIDEWALKS, SLABS FROM AREAS OF PROPOSED IMPROVEMENTS, AND LEGALLY DISPOSE OF OFF SITE. (SEE NOTE 6).
- ALL FOOTINGS AND/OR FOUNDATIONS LOCATED WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED TO A MINIMUM DEPTH OF 18" BELOW SUBGRADE IN AREAS TO BE PAVED OR REMOVED COMPLETELY IN AREAS TO BE SEEDED.
- TREES/SHRUBS ARE AN IMPORTANT ASSET TO THIS DEVELOPMENT. ONLY TREES/SHRUBS WITH TRUNKS LYING WITHIN THE PAVEMENT AREA MAY BE REMOVED. EVERY EFFORT SHALL BE MADE TO SAVE ALL OTHERS OUTSIDE THE CURB/SIDEWALK LINES.
- EQUIPMENT AND CONSTRUCTION MATERIALS SHALL REMAIN OUT OF AND AWAY FROM TREE DRIPLINES WHEREVER POSSIBLE SO AS NOT TO COMPACT THE ROOT ZONE OR DAMAGE THE TREE.
- CONTRACTOR SHALL COORDINATE WITH ENGINEER ON THE REMOVAL OF TREES/SHRUBS OUTSIDE BACK OF CURB/SIDEWALK. NO TREES/SHRUBS SHALL BE REMOVED PRIOR TO A MEETING ON SITE WITH ENGINEER.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION AND COST ASSOCIATED WITH EXTENSION, RELOCATION, ABANDONMENT AND/OR REMOVAL OF ALL UTILITIES. ARRANGEMENTS SHALL BE MADE WITH UTILITY COMPANIES AND ALL FEES SHALL BE PAID BY THE CONTRACTOR.
- MKEC WILL PROVIDE CONSTRUCTION PLANS PER CITY OF WICHITA REQUIREMENTS FOR THE INSTALLATION OF SANITARY SEWER, STORMWATER SEWER (15" AND LARGER) AND WATER MAIN. CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLATION AND CITY REQUIRED STAKING, INSPECTION AND AS BUILT DRAWINGS.
- CONTRACTOR SHALL REFER TO "GEOTECHNICAL ENGINEERING REPORT" FOR SUBSURFACE CONDITIONS AND TREATMENT.
- REFER TO "SITE SURVEY PLAN" (SHEET SSI.1) FOR FURTHER DETAIL ON EXISTING SITE CONDITIONS.

INSTALL TYPE 1 CURB INLET
TOP=120.40
FL=118.00(15"S)
(5'X3')
INSTALL 21 L.F. OF 15"
RCP. TIE-INTO EXISTING
INLET (SW). INSTALL
SEDIMENT BARRIER &
P.V.M.T. UNDER DRAIN.
(SEE NOTE 14)



LEGAL
ALL OF MARSH'S REPLAT, WICHITA, KANSAS.
AND ALSO;
LOT 1, BLOCK 1, HAYS AND BELL ADDITION,
WICHITA, KANSAS.

BENCHMARKS
BM #1 C.O.W. DISK ON SIGNAL LIGHT POLE
NE CORNER OF 13TH ST. AND GROVE ST.
ELEV.=120.19 (CITY DATUM)
BM #2 "d" TO NE CORNER OF 13TH ST. N. &
POPLAR ST. NORTH ON RETURN OF DRV.
ELEV.=121.52 (CITY DATUM)

SITE NOTES
PLAT AREA - 1.93 ACRES MORE OR LESS.
ZONING: "TF"-3 & "GO" (EXISTING)
"LC" (PROPOSED)

- LEGEND**
- PAVEMENT/SIDEWALK, SAWCUT & REMOVAL (BC-BC)
 - PROPOSED REINF. CONCRETE P.V.M.T.
 - TREE/SHRUB TO BE REMOVED
 - PROPOSED TOP OF CURB & GUTTER FLOW LINE ELEVATIONS
 - RAINLEADER
 - INLET SEDIMENT BARRIER
 - CONSTRUCTION ENTRY
 - LINEAR SEDIMENT BARRIER

REMOVE EXIST. INLET TOP
REPLACE W/TYPE II
EX. GRATE TOP=120.51
PROP. INLET TOP=120.80
FL=118.00(W)
(SEE NOTE 14)

INSTALL TYPE 1 CURB INLET
TOP=120.6
FL IN=118.25(8"N)
FL OUT=118.17(15"E)
(5'X3')
INSTALL 43 L.F. OF 15"
RCP. TIE-INTO EXISTING
INLET (SE). INSTALL
SEDIMENT BARRIER &
P.V.M.T. UNDER DRAIN
(SEE NOTE 14)



SAVE-A-LOT ADDITION		
PROJECT NAME		
SITE GRADING PLAN		
SHEET TITLE		
KLA DESIGN BY.	KWS DRAWN BY.	GJA CHECKED BY.
JANUARY 2005 DATE	03002 JOB NO.	1 / 1 SHEET/OF

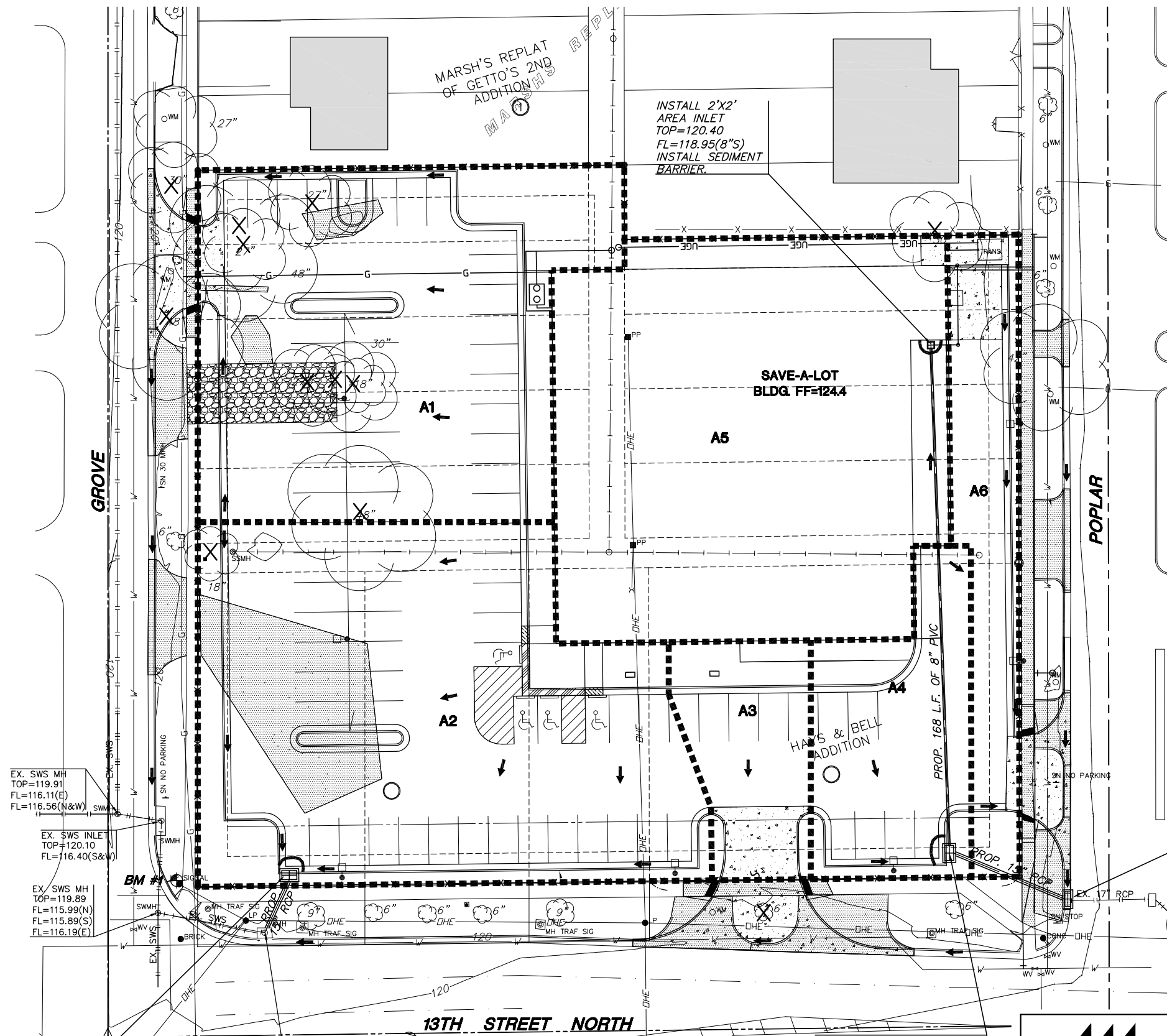
K:\MPE\2003 Save-a-lot\Draw\Drainage\Site Grading Plan.dwg

Appendix F
Drainage & Utility

GENERAL NOTES

- UNLESS SHOWN OR STATED OTHERWISE ON THESE DRAWINGS, MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF WICHITA STANDARD SPECIFICATIONS.
- CONTRACTOR WILL BE REQUIRED TO PROVIDE A MINIMUM ADVANCE NOTICE OF SEVENTY-TWO (72) HOURS TO UTILITY COMPANIES PRIOR TO STARTING ANY EXCAVATION AS FOLLOWS:
KANSAS ONE-CALL 1-800-344-7233
OR 687-2470 (LOCAL WICHITA)
- THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF AN EMERGENCY:
SBC (TELEPHONE) 800-870-8390
COX COMMUNICATIONS (CABLE) 262-0661
WESTAR (ELECTRIC) 383-8600
KANSAS GAS SERVICE (GAS) 832-3101
CITY OF WICHITA WATER & SEWER MAINT. 262-6000
AQUILA (GAS) 946-0096
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR WILL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH IRONS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS.
- EXISTING UTILITIES AND THEIR LOCATIONS, AS SHOWN ON THE PLANS REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS UTILITY COMPANIES AND IS EITHER FROM COMPANY RECORD DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE PLAN LOCATIONS SHOWN ARE NOT GUARANTEED. ADDITIONAL EXISTING UTILITIES MAY ALSO BE ENCOUNTERED.
- RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES AND EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE DISPOSED OF ON SITES TO BE PROVIDED BY THE CONTRACTOR. THESE SITES SHALL BE APPROVED BY THE ENGINEER AS TO SUITABILITY, APPEARANCE AND SITE LOCATION. LOCATIONS THAT, IN THE OPINION OF THE ENGINEER, WILL LEAVE AN UNSIGHTLY APPEARANCE WILL NOT BE APPROVED. ALL DISPOSAL SITES MUST BE APPROVED BY THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT. MATERIAL EITHER STOCKPILED OR DISPOSED OF IN A FLOOD PLAIN WOULD REQUIRE A KANSAS STATE BOARD OF AGRICULTURE PERMIT. ANY MATERIAL DUMPED IN WATERS OF THE UNITED STATES OR WETLANDS IS SUBJECT TO U.S. CORPS OF ENGINEERS PERMITTING REGULATIONS. ANY MATERIAL BURIED OR STOCKPILED BEYOND APPROVED CONSTRUCTION LIMITS WOULD REQUIRE ADDITIONAL ARCHAEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED BORROW LOCATION.
- A SAW CUT OF AT LEAST ONE-HALF THE DEPTH OF THE EXISTING SURFACE COURSES OR ONE-FOURTH THE DEPTH OF THE EXISTING TOTAL PAVEMENT THICKNESS SHALL BE PROVIDED AT LOCATIONS WHERE PROPOSED CONSTRUCTION ABUTS AN EXISTING SURFACE OR PAVEMENT FOR WHICH PARTIAL REMOVAL OF THAT SURFACE OR PAVEMENT IS REQUIRED. SAW JOINT TO FACILITATE REMOVAL WITHIN THREE (3) FEET OF EXISTING JOINTS WILL NOT BE PERMITTED AND FOR SUCH INSTANCES THE LIMITS OF REMOVAL SHALL EXTEND TO THE EXISTING JOINT. SUCH SAW CUTS WILL NOT BE PAID FOR DIRECTLY AND THIS COST SHALL BE CONSIDERED AS SUBSIDIARY TO THE REMOVAL OF SURFACE OR PAVEMENT.
- CONTRACTOR SHALL REMOVE ALL CONCRETE PAVEMENT, SIDEWALKS, SLABS FROM AREAS OF PROPOSED IMPROVEMENTS, AND LEGALLY DISPOSE OF OFF SITE. (SEE NOTE 6).
- ALL FOOTINGS AND/OR FOUNDATIONS LOCATED WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED TO A MINIMUM DEPTH OF 18" BELOW SUBGRADE IN AREAS TO BE PAVED OR REMOVED COMPLETELY IN AREAS TO BE SEDED.
- TREES/SHRUBS ARE AN IMPORTANT ASSET TO THIS DEVELOPMENT. ONLY TREES/SHRUBS WITH TRUNKS LYING WITHIN THE PAVEMENT AREA MAY BE REMOVED. EVERY EFFORT SHALL BE MADE TO SAVE ALL OTHERS OUTSIDE THE CURB/SIDEWALK LINES.
- EQUIPMENT AND CONSTRUCTION MATERIALS SHALL REMAIN OUT OF AND AWAY FROM TREE DRIP LINES WHEREVER POSSIBLE SO AS NOT TO COMPACT THE ROOT ZONE OR DAMAGE THE TREE.
- CONTRACTOR SHALL COORDINATE WITH ENGINEER ON THE REMOVAL OF TREES/SHRUBS OUTSIDE BACK OF CURB/SIDEWALK. NO TREES/SHRUBS SHALL BE REMOVED PRIOR TO A MEETING ON SITE WITH ENGINEER.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION AND COST ASSOCIATED WITH EXTENSION, RELOCATION, ABANDONMENT AND/OR REMOVAL OF ALL UTILITIES. ARRANGEMENTS SHALL BE MADE WITH UTILITY COMPANIES AND ALL FEES SHALL BE PAID BY THE CONTRACTOR.
- MKEC WILL PROVIDE CONSTRUCTION PLANS PER CITY OF WICHITA REQUIREMENTS FOR THE INSTALLATION OF SANITARY SEWER, STORMWATER SEWER (15" AND LARGER) AND WATER MAIN. CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLATION AND CITY REQUIRED STAKING, INSPECTION AND AS BUILT DRAWINGS.
- CONTRACTOR SHALL REFER TO "GEOTECHNICAL ENGINEERING REPORT" FOR SUBSURFACE CONDITIONS AND TREATMENT.
- REFER TO "SITE SURVEY PLAN" (SHEET SS1.1) FOR FURTHER DETAIL ON EXISTING SITE CONDITIONS.

SW COR., of the SE 1/4 of SEC. 10, T27S, R1E, of the 6th Principle Meridian.



LEGAL
ALL OF MARSH'S REPLAT, WICHITA, KANSAS. AND ALSO; LOT 1, BLOCK 1, HAYS AND BELL ADDITION, WICHITA, KANSAS.

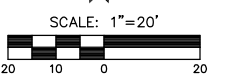
BENCHMARKS
BM #1 C.O.W. DISK ON SIGNAL LIGHT POLE NE CORNER OF 13TH ST. AND GROVE ST. ELEV.=120.19 (CITY DATUM)
BM #2 "C" TC NE CORNER OF 13TH ST. N. & POPLAR ST. NORTH ON RETURN OF DRV. ELEV.=121.52 (CITY DATUM)

SITE NOTES
PLAT AREA - 1.93 ACRES MORE OR LESS.
ZONING: "TF"-3 & "GO" (EXISTING)
"LC" (PROPOSED)

- LEGEND**
- PAVEMENT/SIDEWALK, SAWCUT & REMOVAL (BC-BC)
 - PROPOSED REINF. CONCRETE PVMT.
 - TREE/SHRUB TO BE REMOVED
 - PROPOSED TOP OF CURB & GUTTER FLOW LINE ELEVATIONS
 - RAINLEADER
 - INLET SEDIMENT BARRIER
 - CONSTRUCTION ENTRY
 - LINEAR SEDIMENT BARRIER

REMOVE EXIST. INLET TOP
REPLACE W/TYPE II
EX. GRATE TOP=120.51
PROP. INLET TOP=120.80
FL=118.00(W)
(SEE NOTE 14)

BM #2



INSTALL TYPE 1 CURB INLET
TOP=120.40
FL=118.00(15"S)
(5'X3')
INSTALL 21 L.F. OF 15"
RCP. TIE-INTO EXISTING
INLET (SW). INSTALL
SEDIMENT BARRIER &
PVMT. UNDER DRAIN.
(SEE NOTE 14)

EX. SWS INLET
TOP=119.92
FL=117.00(15"N)
FL=116.62(W)

INSTALL TYPE 1 CURB INLET
TOP=120.6
FL IN=118.25(8"N)
FL OUT=118.17(15"E)
(5'X3')
INSTALL 43 L.F. OF 15"
RCP. TIE-INTO EXISTING
INLET (SE). INSTALL
SEDIMENT BARRIER &
PVMT. UNDER DRAIN
(SEE NOTE 14)

MKEC
ENGINEERING
CONSULTANTS
411 N. WEBB ROAD
WICHITA, KS. 67206
316-684-9600

SAVE-A-LOT
PROJECT NAME

DRAINAGE AND UTILITY PLAN
SHEET TITLE

DESIGN BY: KLA	DRAWN BY: AJK	CHECKED BY: GJA
DATE: JANUARY 2005	JOB NO.: 03002	SHEET/OF: 1 / 1

K:\MPE\2003\SAVE-A-LOT\CIVIL\DWG\DRAINAGE AND UTILITY PLAN.DWG