

# WATER DISTRIBUTION SYSTEM TO SERVE WICHITA CROSSING - LOT 3

AS BUILT PLANS

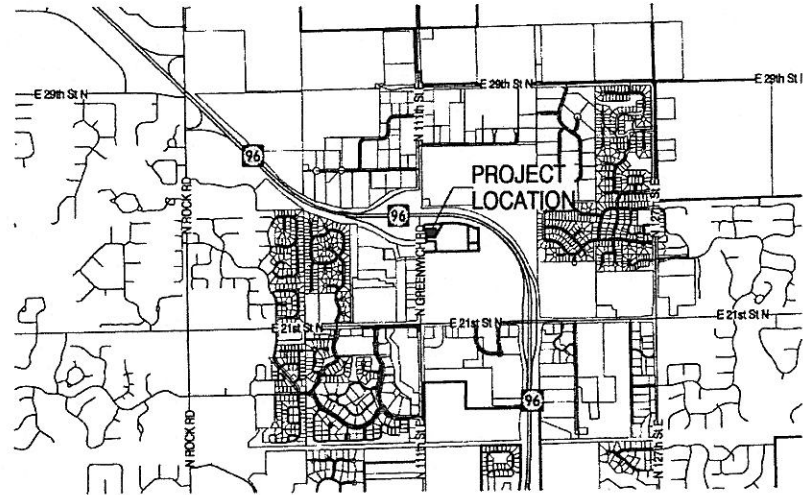
CITY OF WICHITA, KANSAS  
GARY JANZEN, P.E. - CITY ENGINEER

PROJECT NUMBER  
1875 PPW (607853)

FEBRUARY 5, 2015

Contractor: Nowak  
Inspector: Fred Smith, Baughman Co.  
pdf's by: KEK, 9/1/15

### SITE LOCATION & VICINITY MAP



1 LOCATION MAP  
SCALE: 1"=2000'

### SITE DATA

**LEGAL DESCRIPTION:** LOT 3, BLOCK 1, WICHITA CROSSING, AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS DESCRIBED AS FOLLOWS: BEGINNING AT THE SOUTHWEST CORNER OF SAID LOT 3, THENCE NORTH 0°43'24" EAST (BASIS OF BEARING IS NAD83 GRID KANSAS SOUTH ZONE), ALONG THE EASTERLY RIGHT-OF-WAY LINE OF GREENWICH ROAD, A DISTANCE OF 6.52 FEET; THENCE SOUTH 88°10'35" WEST, SAID LINE ALSO BEING THE EAST LINE OF SAID LOT 1, A DISTANCE OF 188.48 FEET; THENCE NORTH 30°51'31" EAST, SAID LINE ALSO BEING THE EAST LINE OF SAID LOT 1, EAST A DISTANCE OF 164.90 FEET; THENCE SOUTH 89°16'36" WEST, SAID LINE ALSO BEING THE EAST LINE OF SAID RESERVE A, A DISTANCE OF 61.25 FEET; THENCE NORTH 0°43'24" EAST, SAID LINE ALSO BEING THE EAST LINE OF SAID RESERVE A, A DISTANCE OF 273.40 FEET; THENCE SOUTH 89°16'36" WEST, SAID LINE ALSO BEING THE EAST LINE OF SAID RESERVE A, A DISTANCE OF 142.00 FEET; THENCE SOUTH 45°43'25" EAST, ALONG THE EASTERLY RIGHT-OF-WAY LINE OF GREENWICH ROAD, A DISTANCE OF 70.71 FEET; THENCE, NORTH 89°16'34" EAST, ALONG THE EASTERLY RIGHT-OF-WAY LINE OF GREENWICH ROAD, A DISTANCE OF 10.00 FEET TO THE POINT OF BEGINNING.

**BENCHMARKS:** SITE DATUM: CHISELED SQUARE IN TOP OF CURB ON WEST END OF ISLAND 42.2 FEET NORTH AND 4.8 FEET EAST OF THE NORTHWEST CORNER OF LOT 7 AS RECORDED ON THE PLAT OF VILLAGE AT GREENWICH ADDITION A THE REGISTER OF DEEDS, SEDGWICK COUNTY, KANSAS, ELEVATION = 1366.075 (NADV 29), ELEVATION = 1367.46 (NAVD88).

SBM-1: CHISELED SQUARE IN THE CENTER OF INLET ON THE EAST SIDE OF NORTH GREENWICH ROAD 12.8 FEET SOUTH AND 14.1 FEET WEST OF THE SOUTHWEST CORNER OF SUBJECT PROPERTY, ELEVATION = 1368.92 (NAVD88).

SBM-2: CHISELED SQUARE IN CENTER OF INLET ON THE EAST SIDE OF NORTH GREENWICH ROAD 63.5 FEET NORTH AND 19.6 FEET WEST OF THE NORTHWEST CORNER OF SUBJECT PROPERTY, ELEVATION = 1367.72 (NAVD88).

**ZONING:** COMMUNITY UNIT PLAN (CUP) 0P-329  
**ADDRESS:** 2540 N. GREENWICH RD., WICHITA, KS 67205  
**PIN:** 30003455

### PROJECT CONTACTS

**DEVELOPER:** MR. R. ERIC SEITZ, PRESIDENT, THE SEITZ GROUP, INC., 5729 LEBANON ROAD, SUITE 144, FRISCO, TX 75034, ERIC@SEITZGROUP.NET

**CIVIL ENGINEER:** MR. CARLOS I. CABRE, P.E., 2201 LONG PRAIRIE, SUITE 107-322, FLOWER MOUND, TX 75022, (214) 513-8764, CARLOS@CABRE.US

**SURVEYOR:** MR. LLOYD P. DORZWEILER, LS, ALPHA LAND SURVEYS, INC., 216 WEST SECOND AVENUE, HUTCHINSON, KS 67501, (620) 728-0012

**GEOTECH ENGINEERS:** MR. KENT J. SCHWIEGER, P.E., TERRACON CONSULTANTS, INC., 1815 S. EISENHOWER, WICHITA, KS 67209, (316) 262-0171

MR. MICHAEL G. EHSS, P.E., TERRACON CONSULTANTS, INC., 1815 S. EISENHOWER, WICHITA, KS 67209, (316) 262-0171

**SWPPP ENGINEER:** MR. JASON D. NEAL, P.E., SENIOR PROJECT PROFESSIONAL, SCS AQUATERRA, 11120 E. 26TH STREET N, SUITE 1100, WICHITA, KS 67226, (316) 315-4205, JNEAL@SCSENGINEERS.COM

**LAND OWNER:** SF-WICHITA-I, L.P., ATTN: MR. R. ERIC SEITZ, 5729 LEBANON ROAD, SUITE 144, FRISCO, TX 75034, ERIC@SEITZGROUP.NET

**LANDSCAPE ARCHITECT:** MR. NICK STAB, RLA, ASLA, LEED GREEN ASSOCIATE, WDM ARCHITECTS P.A., 105 NORTH WASHINGTON, WICHITA, KS 67202, (316) 262-4700, NSTAB@WDMARCHITECTS.COM

**ENVIRONMENTAL SCIENTISTS:** MR. JAMES C. BRUGGEMAN, P.G., DUE DILIGENCE DEPARTMENT MANAGER, TERRACON CONSULTANTS INC., 1815 S. EISENHOWER, WICHITA, KS 67209, (316) 262-0171, JBRUGGEMAN@TERRACON.COM

MR. JOHN N. RATHGEBER, SENIOR STAFF SCIENTIST, TERRACON CONSULTANTS INC., 1815 S. EISENHOWER, WICHITA, KS 67209, (316) 262-0171, JNRATHGEBER@TERRACON.COM

### CITY OF WICHITA CONTACTS

**ENGINEERING:** MR. JAMES E. WAGNER, P.E., ENGINEER, CITY OF WICHITA, 1801 S. MCLEAN BLVD., WICHITA, KS 67213, (316) 207-9777 (CELL), JWAGNER@WICHITA.GOV

MR. SHAWN MELLIES, P.E., CHIEF DESIGN ENGINEER, CITY OF WICHITA, CITY HALL, 8TH FLOOR, 455 N. MAIN, WICHITA, KS 67202, (316) 268-4632, SMELLIES@WICHITA.GOV

MR. JAMES HARDESTY, WATER QUALITY SPECIALIST, CITY OF WICHITA, 455 N. MAIN, 8TH FLOOR, WICHITA, KS 67202, (316) 268-8317, JHARDESTY@WICHITA.GOV

MS. JULIANNE KALLMAN, P.E., SUBDIVISION ENGINEER, CITY ENGINEER'S OFFICE, CITY HALL, 7TH FLOOR, 455 N. MAIN, WICHITA, KS 67202-1688, (316) 268-4236, JKALLMAN@WICHITA.GOV

MS. REBECCA GREIF, SMALL PROJECTS ENGINEER, CITY OF WICHITA, 455 N. MAIN STREET, 7TH FLOOR, WICHITA, KS 67202, (316) 268-4305, RGREIF@WICHITA.GOV

### GENERAL NOTES

- THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE SAFETY REGULATIONS. ALL CONSTRUCTION SHALL BE COMPLETED FOLLOWING CURRENT CITY STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
- CONTRACTOR WILL BE REQUIRED TO PROVIDE NOTICE TO UTILITY COMPANIES A MINIMUM OF SEVENTY-TWO (72) HOURS PRIOR TO ANY EXCAVATION AS FOLLOWS:  
KANSAS ONE-CALL 887-2470  
THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF AN EMERGENCY:  
AT&T 1-800-246-8464  
BLACK HILLS ENERGY 1-800-694-8869  
CITY OF WICHITA WATER 1-316-268-4555  
CITY OF WICHITA SEWER 1-316-268-4073  
CITY OF WICHITA STORMWATER 1-316-268-4200  
CITY OF WICHITA TRAFFIC 1-316-268-4034  
COX COMMUNICATIONS 1-888-249-3530  
KANSAS GAS SERVICE 1-888-482-4950  
WESTAR ENERGY 1-800-544-4857
- UTILITY SERVICE LINES, POLES, ETC. ARE TO BE ADJUSTED AS NECESSARY BY OTHERS PRIOR TO CONSTRUCTION UNLESS THE PLANS SPECIFICALLY CALL FOR THEIR ADJUSTMENT BY THE CONTRACTOR OR UNLESS THE PLANS SPECIFICALLY IDENTIFY A UTILITY TO BE ADJUSTED BY ITS OWNER DURING CONSTRUCTION. EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.
- RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES INCLUDING ANY TREES REMOVED AND TREE REMAINS AND EXCESS EXCAVATED MATERIAL SHALL BE DISPOSED OF ON SITES PROVIDED BY THE CONTRACTOR. THESE SITES SHALL ALSO BE APPROVED OF BY THE ENGINEER AS TO SUITABILITY, APPEARANCE, AND SITE LOCATION. LOCATIONS, IN THE OPINION OF THE ENGINEER, THAT 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 WILL 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 MAY REQUIRE ADDITIONAL ARCHEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED BORROW LOCATION.
- TREES AND SHRUBS IN PUBLIC RIGHT-OF-WAY WHICH ARE IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE REMOVED BY THE CONTRACTOR WITH THE ENGINEER'S APPROVAL. TREES AND SHRUBS WHICH ARE NOT IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE SAVED AND PROTECTED FROM DAMAGE.
- THE CONTRACTOR SHALL GIVE ALL PROPERTY OWNERS AND/OR TENANTS OF DEVELOPED PROPERTY ADJACENT TO THE CONSTRUCTION OF THIS PROJECT A MINIMUM OF TEN (10) DAYS NOTICE PRIOR TO START OF CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR SHALL 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.
- THE WATER DISTRIBUTION DIVISION SHALL FIELD LOCATE WATER VALVES ONE TIME DURING CONSTRUCTION WHEN REQUESTED BY THE CONTRACTOR. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PRESERVE SUCH FIELD LOCATIONS DURING THE CONSTRUCTION PROCESS. WATER VALVES, VALVE BOXES OR FIRE HYDRANTS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE. VALVE BOXES AND WATER METERS WITHIN THE PROJECT LIMITS SHALL BE ADJUSTED TO MATCH FIELD GRADES.
- THE CONTRACTOR SHALL NOTIFY THE CONSULTANT ENGINEER AND TOM WASSON WITH THE CITY AT 316-268-4574 WITH THE ANTICIPATED CONSTRUCTION START DATE AND NOTIFY THEM OF PROJECT COMPLETION. STAKING AND INSPECTION FOR THIS PROJECT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- IF TRAFFIC WILL BE IMPACTED BY CONSTRUCTION, A TRAFFIC CONTROL PLAN MUST BE SUBMITTED AND APPROVED BY THE CITY TRAFFIC ENGINEER. BROWN CONE AT TRAFFIC CONTROL MEASURES BEFORE CONSTRUCTION CAN BEGIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL MEASURES TO FACILITATE CONSTRUCTION. ALL CONSTRUCTION ZONE MARKINGS AND SIGNS SHALL CONFORM TO THE LATEST VERSION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AS PUBLISHED BY THE US DEPT. OF TRANSPORTATION. FEDERAL HIGHWAY ADMINISTRATION. ALL COSTS ASSOCIATED WITH THE CONSTRUCTION MARKINGS AND SIGNS SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
- ALL ELEVATIONS SHOWN ARE NAVD 88.
- ALL AREAS DISTURBED DURING CONSTRUCTION THAT WILL NOT BE UNDER PROPOSED PAVEMENT SHALL BE RESTORED TO MATCH EXISTING CONDITIONS.
- OPENING AND CLOSING WATER VALVES SHALL BE DONE SLOWLY TO PREVENT DAMAGE TO THE WATER DISTRIBUTION SYSTEM FROM WATER HAMMER. ALL VALVES CLOSED BY THE CONTRACTOR MUST BE REDOPED AS NEW CONSTRUCTION PERMITS. THE PROJECT INSPECTOR MUST ASCERTAIN THAT ANY VALVE CLOSED BY THE CONTRACTOR IS REDOPED. THE CONTRACTOR WILL BE PERMITTED TO OPERATE WATER VALVES ONLY WHEN THE PROJECT INSPECTOR ASSIGNED TO THE PROJECT IS PRESENT.
- THE CONTRACTOR SHALL LAY A TRACER WIRE AND SET TEST STATIONS ALONG ALL WATER PIPE INSTALLED IN ACCORDANCE WITH CITY SPECIFICATIONS AND TRACER WIRE DETAIL ON DETAIL SHEET WL-101, COST IS SUBSIDIARY TO PIPE INSTALLATION.
- THE CONTRACTOR SHALL PROVIDE MATERIALS FOR TEMPORARY PROTECTION OF WATERLINES. CONNECTIONS TO THE EXISTING WATERLINE(S) SHALL BE MADE WITH CLEAN, SWAGED PIPE AND FLUSHED UPON COMPLETION OF THE-INS.
- REQUESTS FOR SHORT TERM WATER INTERRUPTIONS SHALL BE MADE TO THE CITY WATER DISTRIBUTION DIVISION AND WILL BE SUBJECT TO THEIR APPROVAL. THE CONTRACTOR SHALL GIVE WRITTEN NOTICE TO ANY PROPERTY OWNER, BUSINESS, AND/OR TENANTS THAT WILL HAVE WATER SERVICE INTERRUPTED AT LEAST 5 DAYS IN ADVANCE. SUCH NOTIFICATIONS SHOULD INDICATE THE TIME AND DATE THAT THE WATER WILL BE TURNED OFF AND WHEN THE SERVICE WILL BE RESTORED. NO BUSINESS, PROPERTY OWNER, AND/OR TENANTS SHALL BE WITHOUT WATER SERVICE FOR MORE THAN 8 HOURS. PROPOSED TIE IN LOCATIONS WHICH WILL AFFECT WATER SERVICE TO PROPERTY OWNERS SHALL BE PERFORMED DURING NON-PEAK HOURS.
- THE CONTRACTOR MUST SCHEDULE THE CONNECTIONS TO THE EXISTING MAIN WITH THE CITY SUCH THAT THERE IS A MINIMUM DISRUPTION OF SERVICE. CONNECTIONS SHALL BE MADE DURING PERIODS OF LOW WATER USAGE. THE CONTRACTOR SHALL SUBMIT HIS PROPOSED SCHEDULE FOR COMPLETING WORK FOR CITY APPROVAL AT LEAST 10 DAYS PRIOR TO BEGINNING CONSTRUCTION.
- DEFLECTIONS AT PIPE JOINT OR COUPLINGS SHALL NOT EXCEED THE PIPE MANUFACTURER'S RECOMMENDED MAXIMUM WHERE DEFLECTIONS ARE GREATER THAN THE MAXIMUM ALLOWED, THE CONTRACTOR SHALL UTILIZE CI WJ LONG SLEEVE OR MULTIPLE JOINTS.
- ANY EXCESS JOINT EXPOSED DURING EXCAVATION SHALL BE REPLACED IF WITHIN FOUR FEET OF PROPOSED JOINT.
- CITY MAINTENANCE OF WATER MAINS ENDS AT RIGHT-OF-WAY OR EASEMENT LINE.
- VALVES 12 INCH AND LARGER ARE TO BE OPERATED BY THE CITY WATER DISTRIBUTION DIVISION, 48 HOURS OF ADVANCE NOTICE IS REQUIRED.
- ALL WET TAPS SHALL BE INSTALLED BY THE CITY OF WICHITA. THE CONTRACTOR WILL REIMBURSE THE CITY FOR TAPPING FEES.
- THE CONTRACTOR SHALL PROTECT FROM DAMAGE AND SUPPORT EXISTING UTILITIES THROUGH CONSTRUCTIONS AS APPROVED BY THE UTILITY OWNER AND THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL LIMIT THE EXTEND OF TRENCH OPENINGS OVERNIGHT AND WEEKENDS TO LESS THAN 50 FEET.
- ANY SIDEWALK, DRIVE APPROACH, CURB, OR STREET PAVEMENT REMOVED TO CONSTRUCT PROJECT MUST HAVE A PAVEMENT CUT PERMIT AND BE REPLACED BY THE CITY CONTRACTOR. PERMITS CAN BE OBTAINED BY CALLING 316-268-4501 OR 316-268-4480.

### SHEET INDEX

NO. SHEET TITLE	ISSUED NUMBER AND DATE				
	1	2	3	4	5
1 CP-W COVER PAGE	X	X			
2 1 OF 1 ALTA/ACSM LAND TITLE SURVEY	X	X			
3 1 OF 1 FINAL PLAT	X	X			
4 C-3.0 GRADING PLAN	X	X			
5 C-5.0 WATER PLAN	X	X			
6 C-5.1 WATER LINE BLOW-UPS AND PROFILE	X	X			
7 WW-101 STANDARD WATER ASSEMBLY DETAIL	X	X			
8 WW-102 STANDARD WATER SERVICE DETAIL	X	X			
9 WW-103 STANDARD VAULT DETAILS AND METER ASSEMBLIES	X	X			
10 WW-104 MISCELLANEOUS WATER DETAILS	X	X			
11 SW-501 BACK OF CURB PROTECTION, CURB INLET PROTECTION AND CONSTRUCTION ENTRANCE	X				
12 SW-502 SILT FENCE DITCH CHECK AND BARRIER DETAILS	X				
13 SW-503 STRAW BALE DITCH CHECK AND BARRIER DETAILS	X				
14 SW-504 STREET IMPROVEMENT PROJECTS	X				
15 SW-505 SUBDIVISION DEVELOPMENT PROJECTS	X				

APPROVED AS NOTED  
BY WICHITA PUBLIC WORKS  
ENGINEERING DIVISION  
& BY WICHITA FIRE DEPARTMENT

Engineering: *Rebecca Greif* 3/10/2015  
Utilities: *Jason Kelly* 3-10-15  
Fire Dept.: *Blair* 3-10-15

### NOTE TO CONTRACTORS

**PUBLIC PROPERTY:** Inspection and testing for the waterline is to be provided by a Licensed Consulting Engineering Firm under contract with the Owner/Developer. Said inspection to be in accordance with the City of Wichita standard construction engineering practices and certified by a Professional Engineer licensed in the state of Kansas. No work shall be performed in dedicated easements or public right-of-way by the Contractor without such inspection nor shall any work be commenced without written authorization by City Engineering. All Construction and Materials shall comply with the City of Wichita Specifications and Standards and Special Provision (on file and available in the City Engineer's Office) or no the City's Website.

**PRIVATE PROPERTY:** Installation and testing for the fire protection line is to be performed by a City of Wichita licensed fire protection contractor in accordance with the fire codes as adopted by the City of Wichita. All materials and construction practices for the fire protection line shall comply with the fire codes as adopted by the City of Wichita (available from the City of Wichita Fire Department). The Contractor shall not commence work without notification and approval of the Wichita Fire Department. Inspection of the fire protection line is to be provided by a licensed Consulting Engineering Firm under contract with the Owner/Developer and the Fire Department. The contractor shall not start work until the project inspector is assigned to the project and present on the site. Any work done without inspection will be required to be uncovered for inspection.

An approved copy of these plans signed by City staff are required on-site.

ISSUES		
NO.	DATE	DESCRIPTION
1	01.12.2015	FOR PERMIT
2	02.05.2015	FOR PERMIT

**SPINSHIVA GROUP**  
 5729 LEBANON ROAD, SUITE 144  
 FRISCO, TX 75034  
 T. 214-705-1078 F. 214-407-8912

**WICHITA CROSSING - LOT 3**  
 LOT 3, BLOCK 1, WICHITA CROSSING  
 AN ADDITION TO WICHITA  
 SEDGWICK COUNTY, KANSAS

CARLOS I. CABRE  
 LICENSED PROFESSIONAL ENGINEER  
 23322  
 PROFESSIONAL SEAL  
 02/10/2015  
**Carlos I. Cabre, P.E.**  
 Development & Engineering Consultant  
 702 Lives Park, Suite 100  
 Frisco, TX 75034

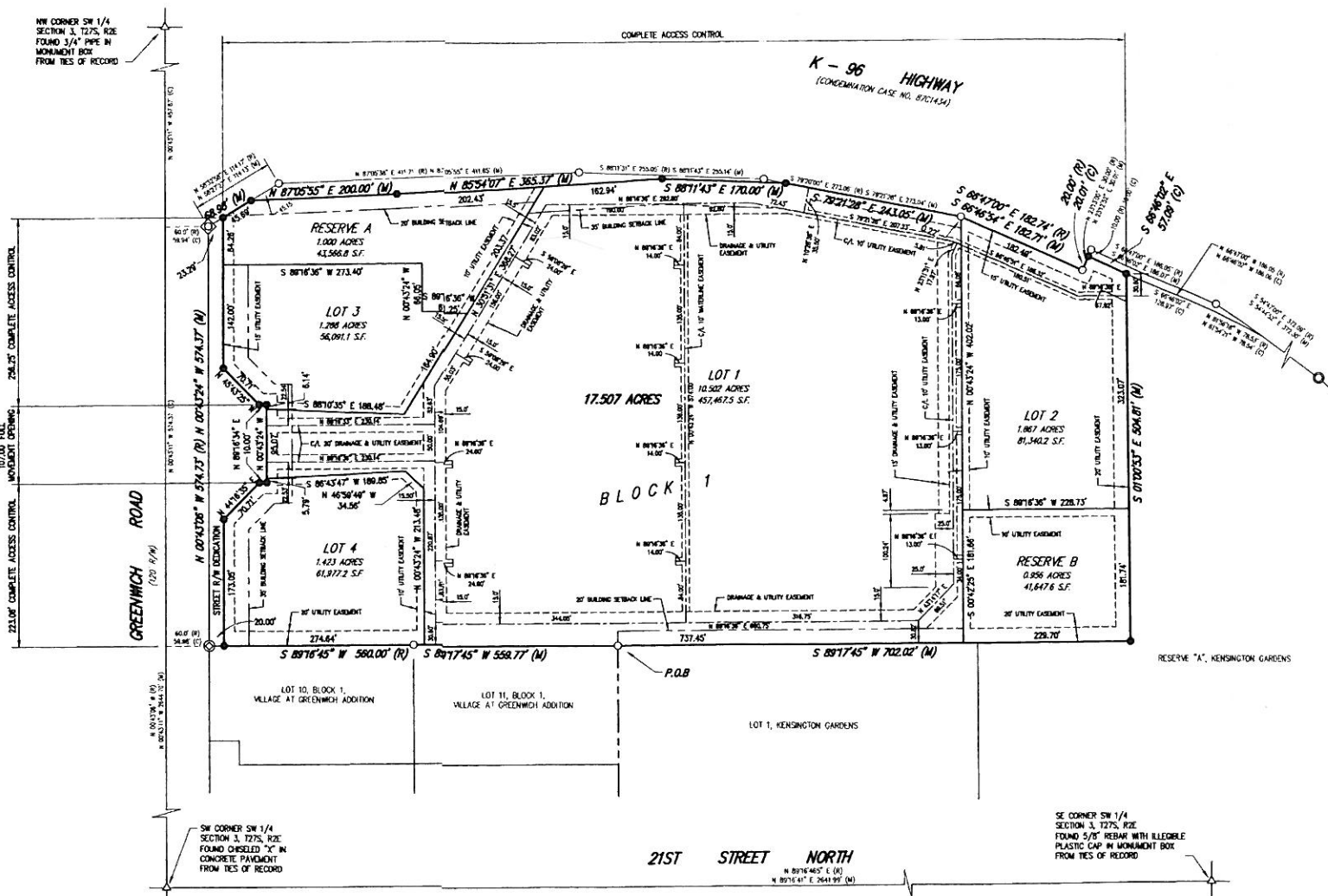
**COVER PAGE**  
 DATE: FEBRUARY 05, 2015  
 SCALE: AS SHOWN  
 JOB NAME: 12-09  
 DRAWING NUMBER: **CP-W**



FINAL PLAT

# WICHITA CROSSING

AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS.



**SURVEYOR'S CERTIFICATE AND DESCRIPTION**

I, LLOYD P. DORZWEILER, A LICENSED LAND SURVEYOR OF THE STATE OF KANSAS, DO HEREBY CERTIFY THAT THE FOLLOWING DESCRIBED TRACT OF LAND WAS SURVEYED ON 23<sup>rd</sup> DAY OF September, 2014 AND THE ACCOMPANYING FINAL PLAT PREPARED AND THAT ALL MONUMENTS SHOWN HEREIN ACTUALLY EXIST AND THEIR POSITIONS ARE CORRECTLY SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF.

A PORTION OF RESERVE "A", KENSINGTON GARDENS, SEDGWICK COUNTY, KANSAS DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHWEST CORNER OF LOT 1 OF SAID KENSINGTON GARDENS, THENCE SOUTH 89°17'45" WEST (BASIS OF BEARING IS NAD83 GRID KANSAS SOUTH ZONE) ALONG THE SOUTHERLY RIGHT-OF-WAY LINE OF SAID RESERVE "A" A DISTANCE OF 559.77 FEET (560.00 FEET RECORD) TO THE EASTERLY RIGHT-OF-WAY LINE OF GREENWICH ROAD, SAID LINE ALSO BEING THE NORTH LINE OF SAID LOTS 10 AND 11, BLOCK 1, VILLAGE AT GREENWICH ADDITION, WICHITA, SEDGWICK COUNTY, KANSAS, THENCE NORTH 00°43'24" WEST ALONG THE EASTERLY RIGHT-OF-WAY LINE OF GREENWICH ROAD 574.37 FEET (574.73 FEET RECORD) TO THE SOUTHERLY RIGHT-OF-WAY LINE OF K-96 HIGHWAY, THENCE NORTH 58°27'27" EAST ALONG THE SOUTHERLY RIGHT-OF-WAY LINE OF K-96 HIGHWAY 68.98 FEET; THENCE NORTH 87°05'55" EAST ALONG THE SOUTHERLY RIGHT-OF-WAY LINE OF K-96 HIGHWAY 200.00 FEET, THENCE NORTH 85°54'07" EAST ALONG THE SOUTHERLY RIGHT-OF-WAY LINE OF K-96 HIGHWAY 365.37 FEET, THENCE SOUTH 88°11'43" EAST ALONG THE SOUTHERLY RIGHT-OF-WAY LINE OF K-96 HIGHWAY 170.00 FEET, THENCE SOUTH 79°21'28" EAST ALONG THE SOUTHERLY RIGHT-OF-WAY LINE OF K-96 HIGHWAY 243.05 FEET; THENCE SOUTH 66°46'54" EAST ALONG THE SOUTHERLY RIGHT-OF-WAY LINE OF K-96 HIGHWAY 182.71 FEET (182.74 FEET RECORD); THENCE NORTH 23°12'52" EAST ALONG THE SOUTHERLY RIGHT-OF-WAY LINE OF K-96 HIGHWAY 20.01 FEET; THENCE SOUTH 66°46'02" EAST ALONG THE SOUTHERLY RIGHT-OF-WAY LINE OF K-96 HIGHWAY 57.99 FEET; THENCE SOUTH 01°09'53" EAST 504.81 FEET TO THE EXTENSION OF THE SOUTHERLY RIGHT-OF-WAY LINE OF SAID RESERVE "A"; THENCE SOUTH 89°17'45" WEST ALONG THE SOUTHERLY RIGHT-OF-WAY LINE OF SAID RESERVE "A" AND THE EXTENSIONS THEREOF 702.02 FEET TO THE POINT OF BEGINNING, CONTAINING 17.507 ACRES.

EXISTING PUBLIC EASEMENTS AND DEDICATIONS ARE BEING VACATED BY VIRTUE OF K.S.A. 12-512B AS AMENDED.

**OWNER'S CERTIFICATE AND DEDICATION**

STATE OF KANSAS )  
SEDGWICK COUNTY ) SS

THIS IS TO CERTIFY THAT THE UNDERSIGNED OWNER(S) OF THE LAND DESCRIBED IN THE SURVEYOR'S CERTIFICATE, HAVE CAUSED THE SAME TO BE SURVEYED AND SUBDIVIDED ON THE ACCOMPANYING PLAT INTO LOTS, BLOCKS, STREETS, AND RESERVES UNDER THE NAME OF WICHITA CROSSING AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS.

THIS PLAT SHALL CONFORM TO THE RECITALS OF THE K-96 AND GREENWICH SOUTH COMMUNITY UNIT PLAN (CUP2012-00026, DP-328).

LOTS 1, 2, 3 AND 4, BLOCK 1, ARE REQUIRED TO ADHERE TO THE MINIMUM PAD ELEVATIONS AS SHOWN ON THE "MINIMUM PAD ELEVATIONS" TABLE.

THE UTILITY EASEMENTS ARE HEREBY GRANTED AS INDICATED FOR THE CONSTRUCTION AND MAINTENANCE OF ALL PUBLIC UTILITIES.

ALL STREETS ARE HEREBY DEDICATED TO AND FOR THE USE OF THE PUBLIC.

ACCESS CONTROLS SHALL BE AS DEPICTED ON THE FACE OF THE PLAT AND ARE HEREBY GRANTED TO THE APPROPRIATE GOVERNING BODY.

RESERVES A AND B ARE PLATTED FOR STORMWATER DETENTION, LANDSCAPING, AND IRRIGATION. RESERVES A AND B SHALL BE OWNED AND MAINTAINED BY THE LOT OWNERS' ASSOCIATION.

A DRAINAGE PLAN HAS BEEN DEVELOPED FOR THE PLAT. ALL DRAINAGE EASEMENTS, RIGHTS-OF-WAY, OR RESERVES SHALL REMAIN AT ESTABLISHED GRADES AND UNOBSTRUCTED TO ALLOW FOR CONVEYANCE OF STORMWATER, UNLESS MODIFIED WITH THE APPROVAL OF THE APPLICABLE CITY OF COUNTY ENGINEER.

SF-WICHITA-I, L.P.

BY: SF-WICHITA GP, LLC, GENERAL PARTNER OF SF-WICHITA-I, L.P.

R. ERIC SEITZ, PRESIDENT OF SF-WICHITA GP, LLC

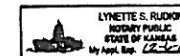
**NOTARY CERTIFICATE**

STATE OF KANSAS, COUNTY OF SEDGWICK ) SS

THE FOREGOING INSTRUMENTS WAS ACKNOWLEDGED BEFORE ME THIS 15<sup>th</sup> DAY OF October, 2014, BY R. ERIC SEITZ, PRESIDENT OF SF-WICHITA GP, LLC.

Lynette S. Rudon, NOTARY PUBLIC

MY COMMISSION EXPIRES: 12-16-14



LOT NUMBER	ELEVATION
1	1372.0 (NAVD88)
2	1372.0 (NAVD88)
3	1372.0 (NAVD88)
4	1372.0 (NAVD88)

**BENCH MARKS**

SITE DATUM: CHISELED SQUARE IN TOP OF CURB ON WEST END OF ISLAND 42.2 FEET NORTH AND 4.8 FEET EAST OF THE NORTHWEST CORNER OF LOT 7 AS RECORDED ON THE PLAT OF VILLAGE AT GREENWICH ADDITION AT THE REGISTER OF DEEDS, SEDGWICK COUNTY, KANSAS.  
ELEVATION=1366.975(NGVD29)  
ELEVATION=1367.46(NAVD88)

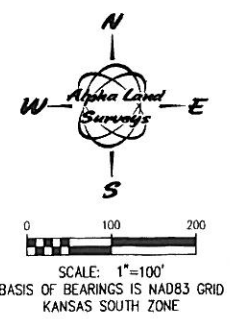
SBM-1: CHISELED SQUARE IN CENTER OF INLET ON THE EAST SIDE OF NORTH GREENWICH ROAD 12.8 FEET SOUTH AND 14.1 FEET WEST OF THE SOUTHWEST CORNER OF SUBJECT PROPERTY.  
ELEVATION=1368.92(NAVD88)

SBM-2: CHISELED SQUARE IN CENTER OF INLET ON THE EAST SIDE OF NORTH GREENWICH ROAD 63.5 FEET NORTH AND 19.6 FEET WEST OF THE NORTHWEST CORNER OF SUBJECT PROPERTY.  
ELEVATION=1367.72(NAVD88)

**LEGEND OF SYMBOLS & ABBREVIATIONS**

- △ SECTION SUBDIVISION CORNER FOUND
- FOUND WITH PLASTIC CAP
- STAMPED "BAUGHMAN"
- FOUND WITH PLASTIC CAP
- STAMPED "RAB"
- FOUND WITH PLASTIC CAP
- STAMPED "WKEC"
- FOUND 3/4" PIPE UNKNOWN ORIGIN
- FOUND 1/2" PIPE UNKNOWN ORIGIN
- SET 1/2" REBAR WITH CAP
- STAMPED "ALPHA CLS-184"
- SET 1/2" REBAR WITH CAP STAMPED "ALPHA CLS-184" IN CONCRETE

N. NORTH  
S. SOUTH  
E. EAST  
W. WEST  
° DEGREES  
' FEET OR MINUTES  
" INCHES OR SECONDS  
SQ. SQUARE  
FT. FEET  
VOL. VOLUME  
PG. PAGE  
OR OFFICIAL RECORD  
C. CALCULATED  
R. RECORDED  
M. MEASURED



**FLOOD NOTE**

THIS PROPERTY IS LOCATED WITHIN FLOOD ZONE "X" (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AS DETERMINED BY THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP FOR SEDGWICK COUNTY, KANSAS, COMMUNITY PANEL NUMBER 2017C0377E. EFFECTIVE DATE FEBRUARY 7, 2007

**MORTGAGE CERTIFICATE**

INTRUST BANK, N.A., HOLDER OF A MORTGAGE ON THE ABOVE DESCRIBED PROPERTY, DOES HEREBY CONSENT TO THE PLAT OF WICHITA CROSSING AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS

INTRUST BANK, N.A.  
Dan Jones  
DAN JONES, COMMERCIAL REAL ESTATE LENDING RELATIONSHIP MANAGER

STATE OF KANSAS, COUNTY OF SEDGWICK ) SS

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS 10<sup>th</sup> DAY OF October, 2014, DAN JONES, COMMERCIAL REAL ESTATE LENDING RELATIONSHIP MANAGER, INTRUST BANK, N.A.

IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND AND AFFIXED MY OFFICIAL SEAL, THE DAY AND YEAR FIRST ABOVE WRITTEN

Lynette S. Rudon, NOTARY PUBLIC  
MY COMMISSION EXPIRES: 12/16/14

LYNETTE S. RUDON  
NOTARY PUBLIC  
STATE OF KANSAS  
My Comm. Exp. 12-16-14

**PLANNING COMMISSION CERTIFICATE**

STATE OF KANSAS, CITY OF WICHITA ) SS:

THIS PLAT OF WICHITA CROSSING AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS HAS BEEN APPROVED BY THE WICHITA-SEDGWICK COUNTY METROPOLITAN AREA PLANNING COMMISSION, WICHITA, KANSAS.

DATED THIS 11<sup>th</sup> DAY OF SEPTEMBER, 2014.

WICHITA-SEDGWICK COUNTY METROPOLITAN AREA PLANNING COMMISSION

Matthew Goolsby, CHAIR  
John L. Schegel, SECRETARY

**GOVERNING BODY CERTIFICATE**

STATE OF KANSAS, CITY OF WICHITA ) SS:

THIS PLAT APPROVED AND ALL DEDICATIONS SHOWN HEREON, IF ANY, ARE ACCEPTED BY CITY COUNCIL OF THE CITY OF WICHITA, KANSAS, THIS 23<sup>rd</sup> DAY OF November, 2014.

Carl Brewer, MAYOR  
Karen Sublett, CITY CLERK

**TRANSFER RECORD**

ENTERED ON TRANSFER RECORD THIS 16<sup>th</sup> DAY OF December

Kelly B. Arnold, COUNTY CLERK

**REGISTER OF DEEDS**

STATE OF KANSAS, CITY OF WICHITA ) SS:

THIS IS TO CERTIFY THAT THIS INSTRUMENT WAS FILED FOR RECORD IN THE REGISTER OF DEEDS OFFICE AT 4:14:15 PM (P.M.), ON THIS 16<sup>th</sup> DAY OF December, 2014.

Bill MEEK, REGISTER OF DEEDS  
Tonya Buckingham, DEPUTY

**COUNTY SURVEYOR CERTIFICATE**

STATE OF KANSAS, SEDGWICK COUNTY ) SS:

I HEREBY CERTIFY THAT THIS SURVEY HAS BEEN REVIEWED FOR FILING, PURSUANT TO K.S.A. 58-2005 AND K.S.A. 58-2001 FOR CONTENT ONLY AND IS IN COMPLIANCE WITH THOSE PROVISION. NO OTHER WARRANTIES ARE EXTENDED OR IMPLIED.

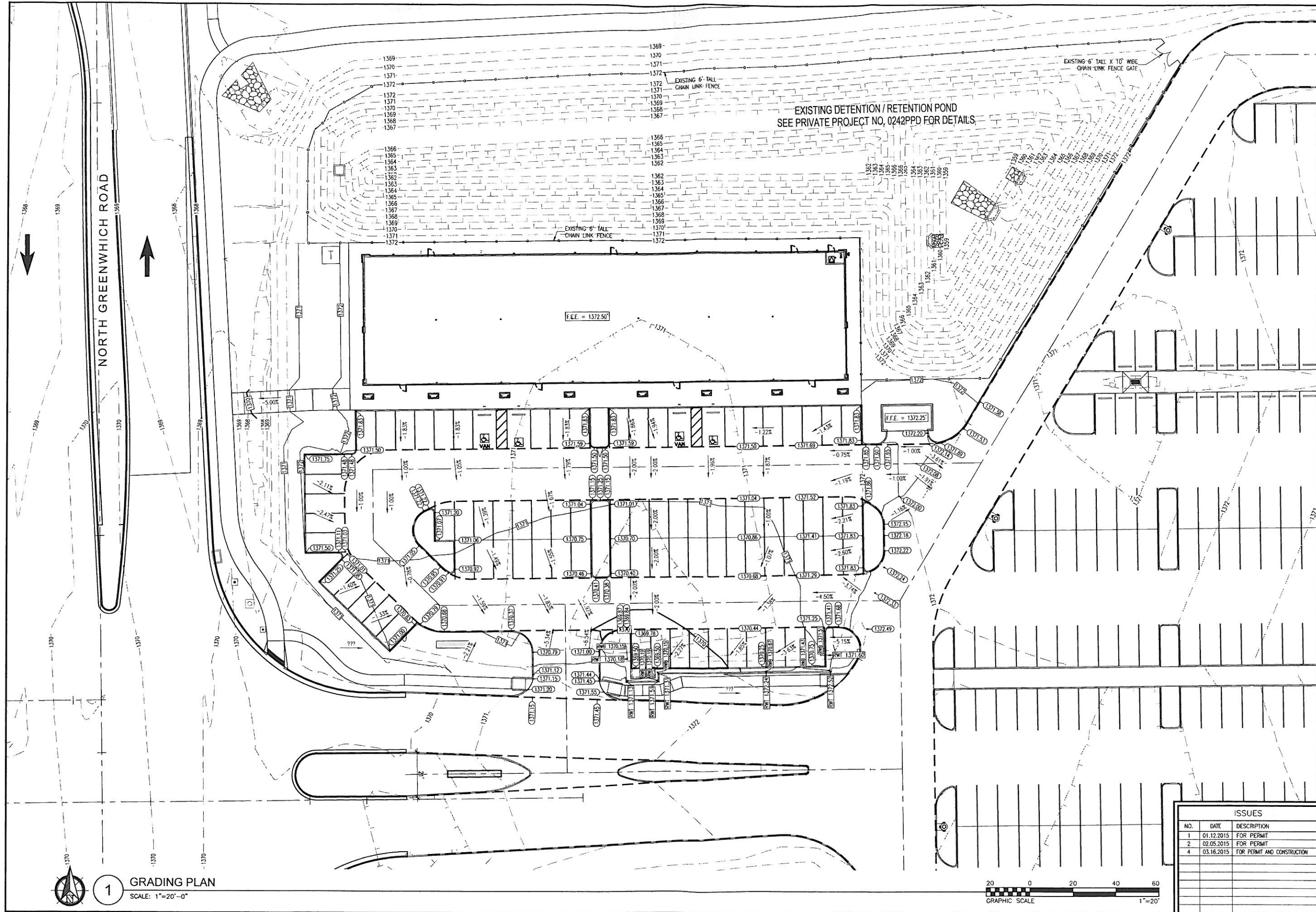
Tricia L. Robello, LS # 12-1248  
DEPUTY COUNTY SURVEYOR  
SEDGWICK COUNTY, KANSAS

Register of Deeds - Sedgwick County  
Doc #/Film # - Pg: 23485812  
Paper Recorded: 12/16/2014  
Recording Fee: \$20.00

Author: Jpeg  
Date Recorded: 12/16/2014 04:18:15 PM

**Alpha Land Surveys, Inc.**  
216 WEST SECOND AVENUE  
HITCHCOCK, KANSAS 67501  
PH: (620) 728-0012 FAX: (620) 728-0415

SURVEY DATE: 08/19/2013 PLOT DATE: 10/08/2014  
DRAWN BY: R28 PROJ. NO.: 1302007  
CHECKED BY: LPD SHEET 1 OF 1



NORTH GREENWICH ROAD

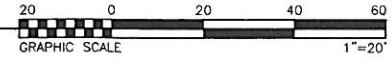
EXISTING DETENTION / RETENTION POND  
SEE PRIVATE PROJECT NO. 0242PPD FOR DETAILS

F.F.E. = 1372.50'

F.F.E. = 1372.25'



1 GRADING PLAN  
SCALE: 1"=20'-0"



**SP** THE SUTZ GROUP  
A DEVELOPMENT & SUPPLY OF REAL ESTATE  
5729 LEBANON ROAD, SUITE 144  
FRISCO, TX 75034  
T. 214-705-1078 F. 214-407-8912

**WICHITA CROSSING - LOT 3**  
LOT 3, BLOCK 1, WICHITA CROSSING  
AN ADDITION TO WICHITA  
SEDGWICK COUNTY, KANSAS



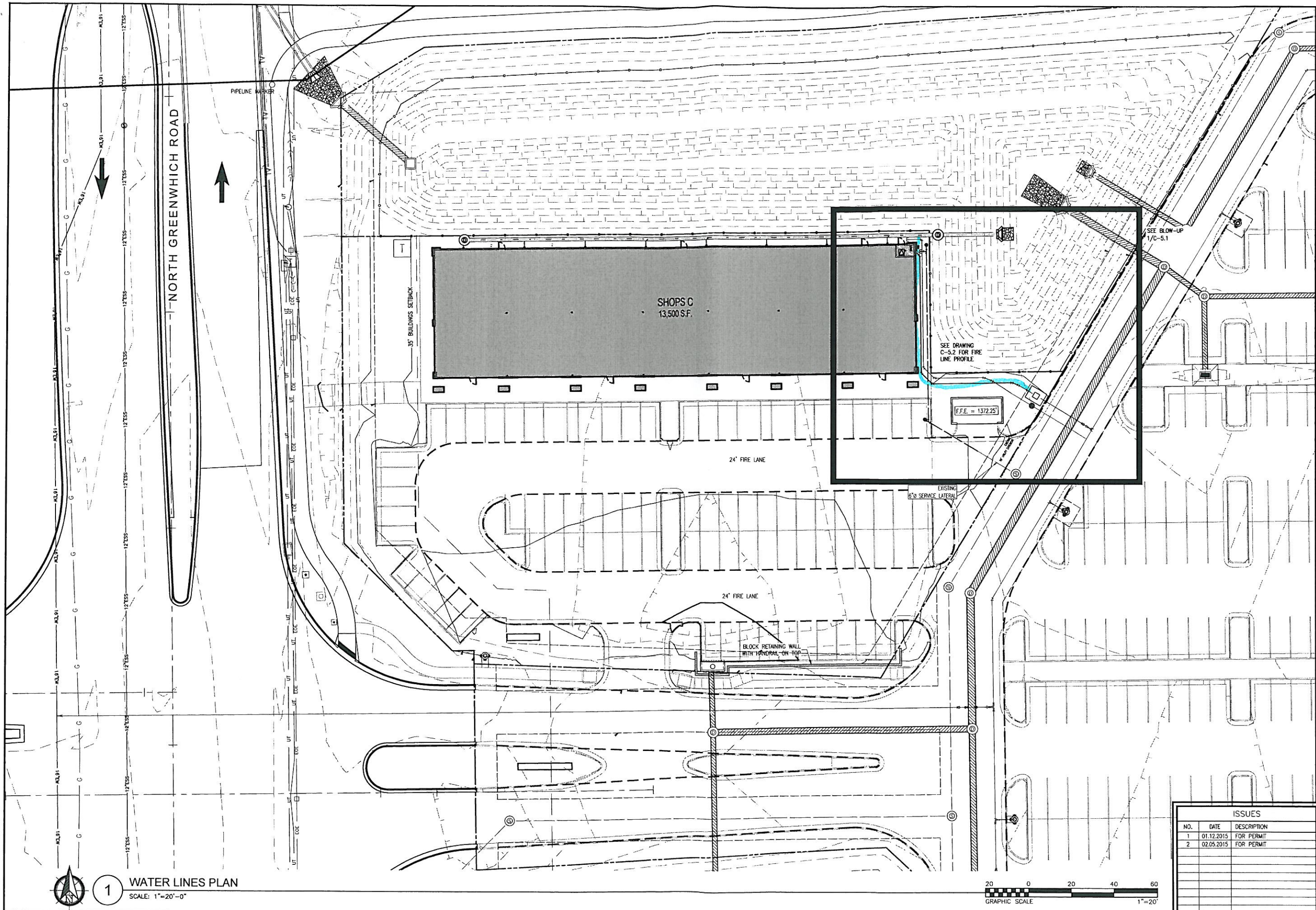
**Carlos I. Cabré, P.E.**  
Professional Engineer  
2200 Lone Star Blvd, Suite 1000  
Frisco, TX 75034  
www.carloscabre.com

**GRADING PLAN**  
DRAWING TITLE

THIS DOCUMENT REPRESENTS THE DESIGN EFFORT OF CARLOS I. CABRE, P.E. AND HIS FIRM. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN. IT IS NOT TO BE REPRODUCED, COPIED, REPRINTED, OR OTHERWISE USED FOR ANY OTHER PROJECTS OR PURPOSES WITHOUT THE WRITTEN AUTHORIZATION OF CARLOS I. CABRE, P.E.

ISSUES		
NO.	DATE	DESCRIPTION
1	01.12.2015	FOR PERMIT
2	02.05.2015	FOR PERMIT
4	03.16.2015	FOR PERMIT AND CONSTRUCTION

DATE: MARCH 16, 2015  
SCALE: 1"=20'  
JOB NUMBER: 12-09  
DRAWING NUMBER: **C-3.0**



**THE SHITZ GROUP**  
 5729 LEBANON ROAD, SUITE 144  
 FRISCO, TX 75034  
 T. 214-705-1078 F. 214-407-8912

**WICHITA CROSSING - LOT 3**  
 LOT 3, BLOCK 1, WICHITA CROSSING  
 AN ADDITION TO WICHITA  
 SEDGWICK COUNTY, KANSAS



**Carlos L. Cabré, P.E.**  
 Development & Engineering Consultant  
 230 Longhorn, Suite 10222  
 Overland Park, KS 66202  
 www.cabre.com

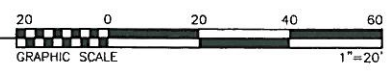
**WATER LINES PLAN**

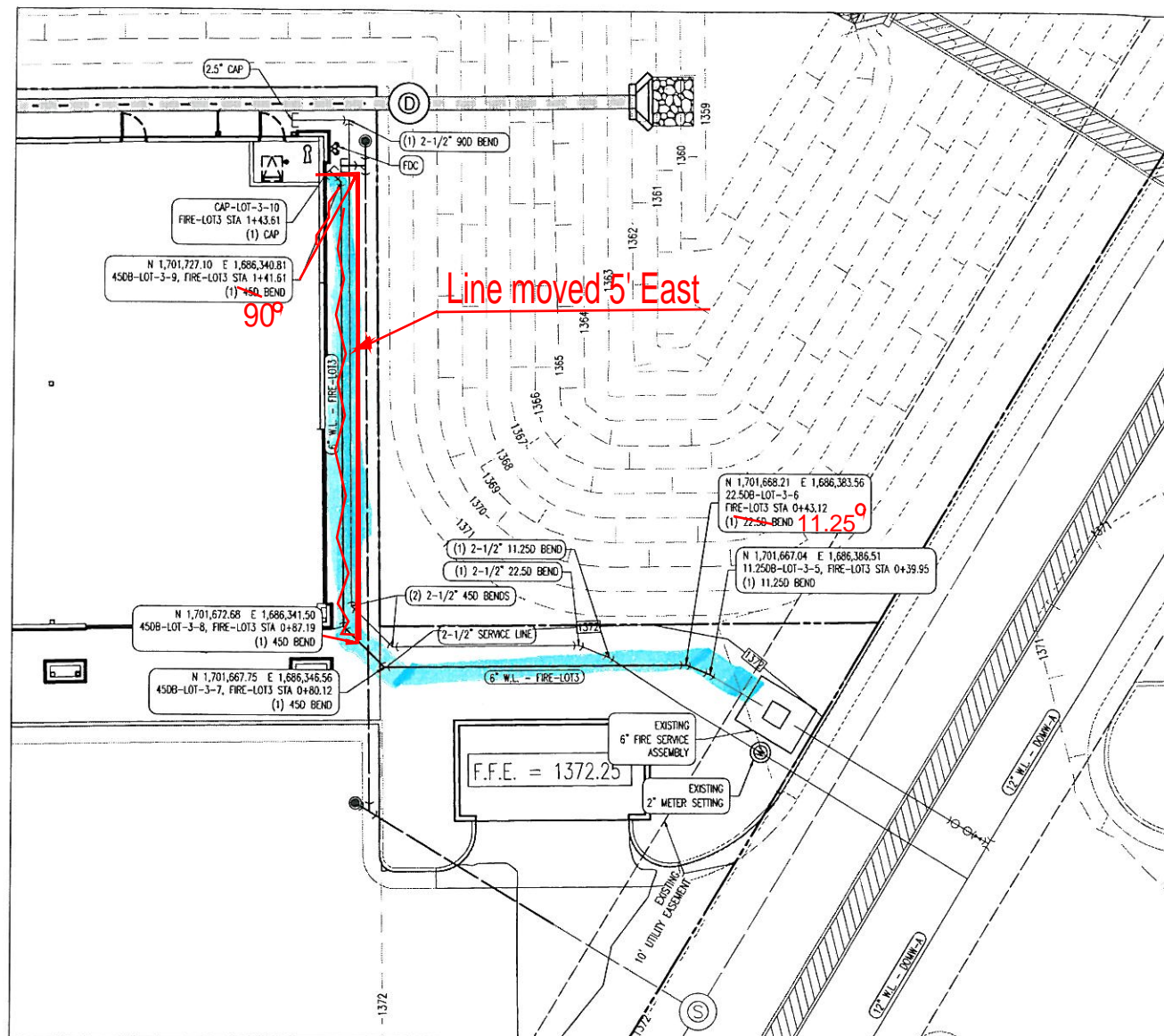
THIS DOCUMENT REPRESENTS THE DESIGN EFFORT OF CARLOS L. CABRE, P.E. AND THE DESIGN OF THIS PROJECT. CARLOS L. CABRE, P.E. RETAINS TITLE AND OWNERSHIP OF THIS PROJECT. THIS DOCUMENT IS THE PROPERTY OF CARLOS L. CABRE, P.E. AND SHALL BE KEPT CONFIDENTIAL. IT IS TO BE USED ONLY FOR THE PROJECT AND NOT FOR ANY OTHER PURPOSES OR USED IN OTHER PROJECTS OR EXTENSIONS TO THIS PROJECT, UNLESS AUTHORIZED IN WRITING BY CARLOS L. CABRE, P.E.

ISSUES	
NO.	DATE DESCRIPTION
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2	02.05.2015 FOR PERMIT

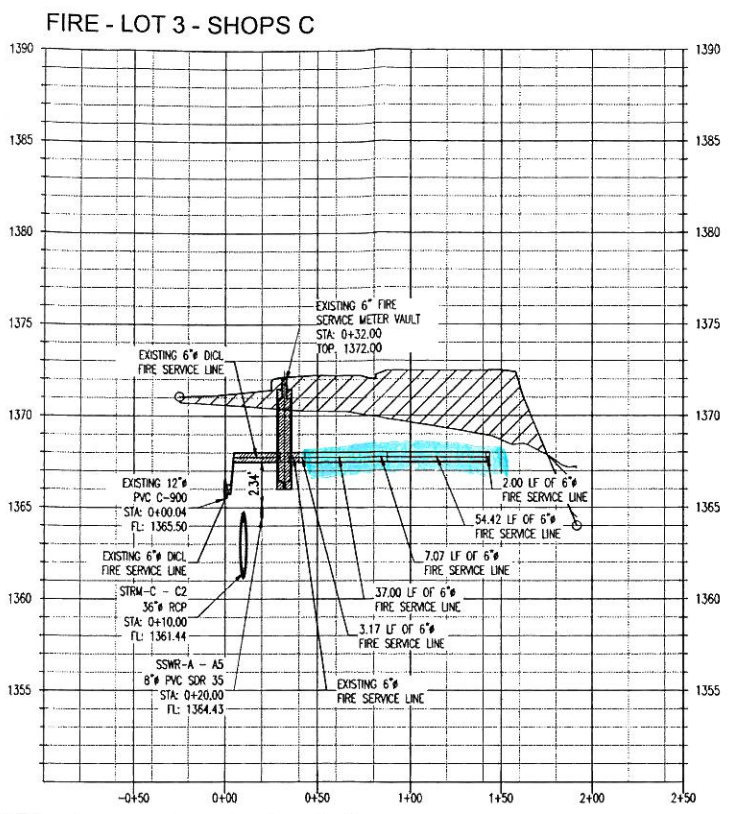
DATE: FEBRUARY 05, 2015  
 SCALE: 1"=20'  
 JOB NUMBER: 12-09  
 DRAWING NUMBER: **C-5.0**

**1 WATER LINES PLAN**  
 SCALE: 1"=20'-0"





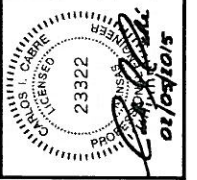
**1 WATER SERVICE AND FIRE LINE BLOW-UP LOT3**  
SCALE: 1"=10'-0"



**2 FIRE WATER LINE PROFILE**  
SCALE VERTICAL: 1"=10'-0"  
SCALE HORIZONTAL: 1"=50'-0"

**SHILSHIVA GROUP**  
INDEPENDENT SURVEYING & SITE PREPARATION  
5729 LEBANON ROAD, SUITE 144  
FRISCO, TX 75034  
T. 214-705-1078 F. 214-407-8912

**WICHITA CROSSING - LOT 3**  
LOT 3, BLOCK 1, WICHITA CROSSING  
AN ADDITION TO WICHITA  
SEDGWICK COUNTY, KANSAS



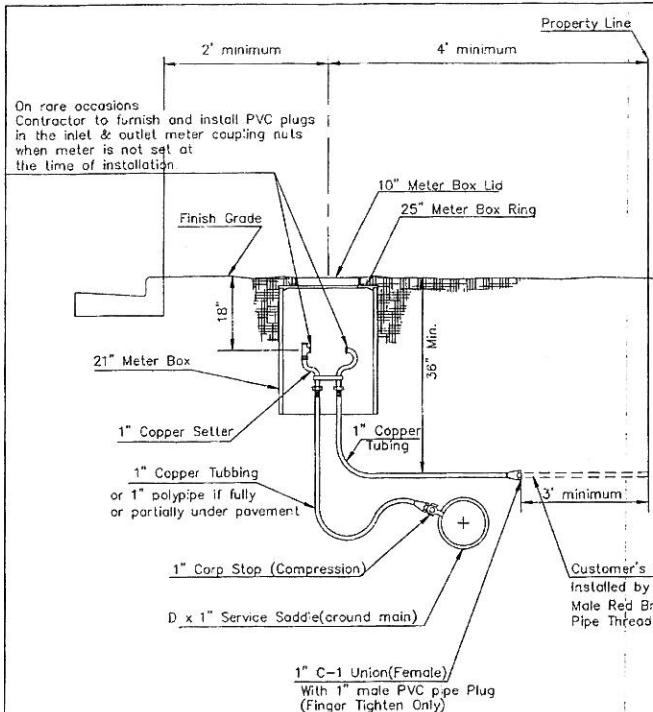
**Carlos I. Cabre, P.E.**  
Civil/Structural Engineering Consultant  
1000 West 10th Street, Suite 200  
Wichita, Kansas 67202  
www.carloscabre.com

**WATER LINE BLOW-UPS AND PROFILE**  
THIS DOCUMENT REPRESENTS THE DESIGN EFFORT OF CARLOS I. CABRE, P.E., AND IS ISSUED AS AN INSTRUMENT OF SERVICE FOR THE SUBJECT PROJECT. IT IS NOT TO BE USED FOR ANY OTHER PROJECTS WITHOUT THE WRITTEN CONSENT OF CARLOS I. CABRE, P.E. ANY REVISIONS TO THIS DOCUMENT SHALL BE INDICATED BY A REVISION TABLE. THIS DOCUMENT IS THE PROPERTY OF CARLOS I. CABRE, P.E. AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF CARLOS I. CABRE, P.E.

ISSUES		
NO.	DATE	DESCRIPTION
1	01.12.2015	FOR PERMIT
2	02.05.2015	FOR PERMIT

DATE: FEBRUARY 05, 2015  
SCALE: AS SHOWN  
JOB NUMBER: 12-09  
DRAWING NUMBER: C-5.1





On rare occasions Contractor to furnish and install PVC plugs in the inlet & outlet meter coupling nuts when meter is not set at the time of installation.

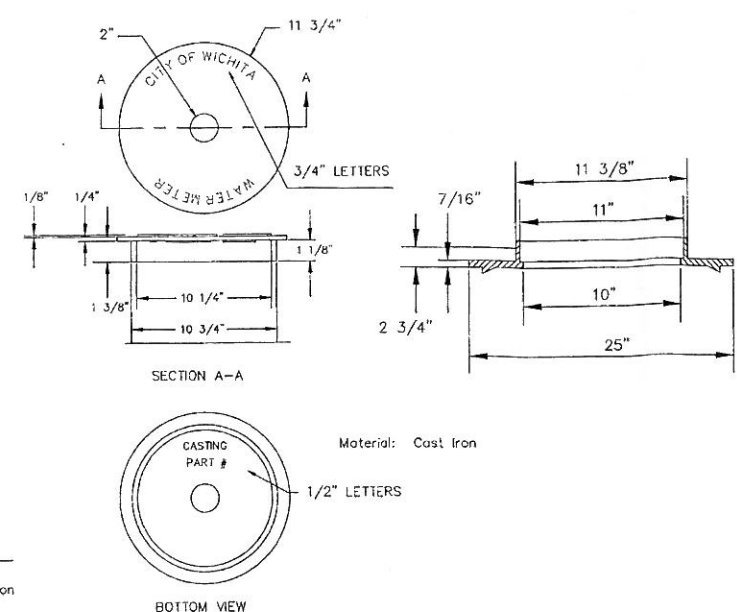
Minimum length of pipe on consumer side is 36" of copper tubing from meter set.

Bore hole under paving shall be a maximum of 2" in diameter and a minimum of 36" below top of pavement.

Service Saddles are required on all mains.

Meter boxes will be located on each lot to be served, as indicated in the SPECIAL PROVISIONS

TYPICAL 1" METER SETTING

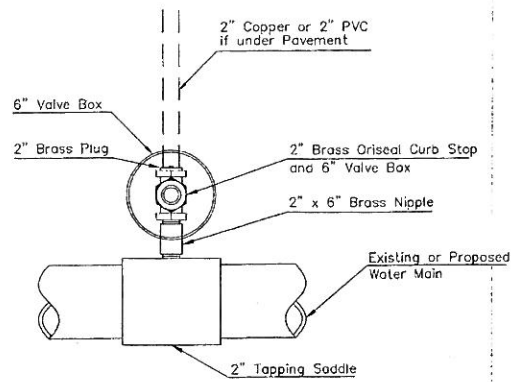


NOT TRAFFIC RATED RING & LID FOR 1" METER BOX

- 1 - Ø Mueller Thread Corporation Stop
- Ø Type "K" Copper Tubing
- 1 - Ø Copper to Iron Union (Male)
- 1 - Ø Brass Curb Stop (Iron to Iron)
- 2 - Øx4" Brass Nipple
- Air Release
- 2 - Ø Brass Elbows (90°)
- 1 - 1"x6" Brass Nipple
- 1 - 30" Monitor Cover
- 1 - 20" Meter Lid

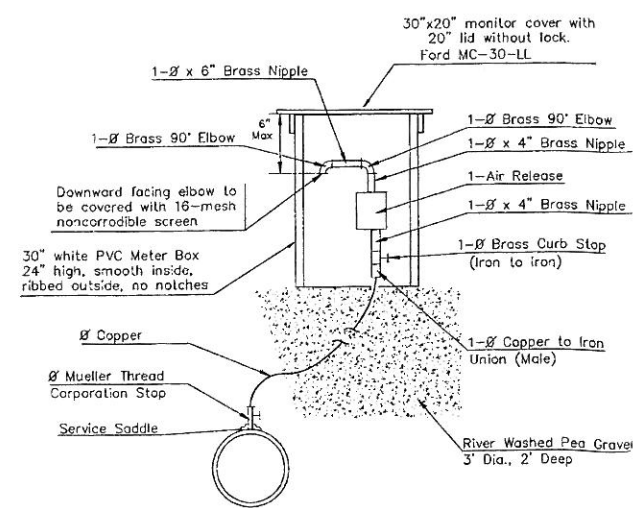
NOTE:

THE 1 1/2" AIR RELEASE ASSEMBLY WILL TYPICALLY BE USED ON WATER MAINS 24" AND SMALLER, AS SPECIFICALLY DESIGNATED IN THE PLANS. COMBINATION AIR RELEASE ASSEMBLIES WILL BE SPECIFICALLY DESIGNED FOR PROJECTS WITH LARGER MAINS, AND WILL BE INCLUDED IN THE PLANS.

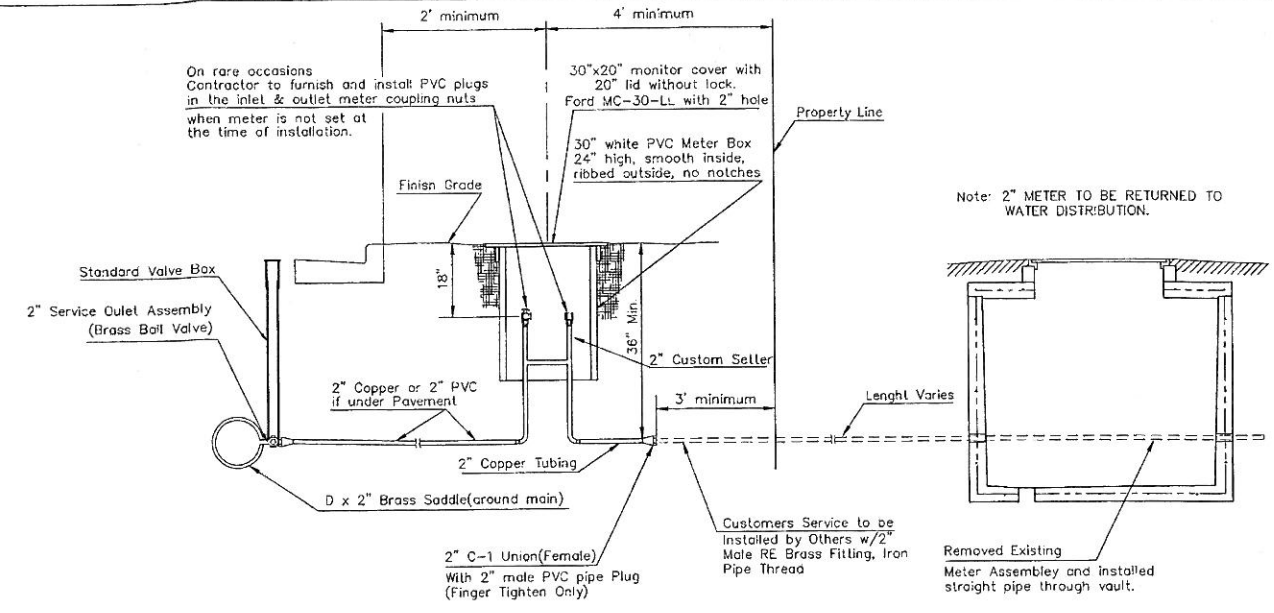


Note: Where the 2" Service Outlet Assembly is to be used to connect a 2" main to another main, the 2" valve shall be a 2" IPT Gate Valve. 2" ball or globe valves shall not be approved for this use.

2" SERVICE OUTLET ASSEMBLY TOP VIEW



MATERIALS FOR 1" or 2" AIR RELEASE ASSEMBLY Ø = 1" or 2"

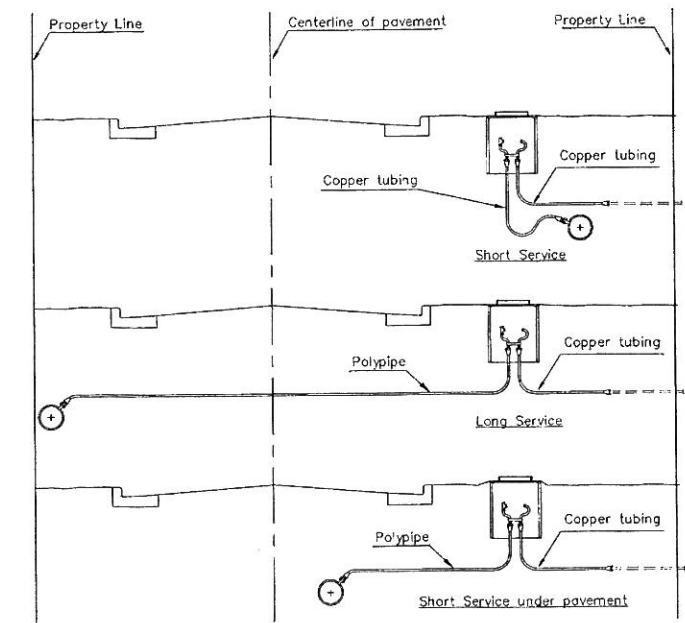


TYPICAL 2" METER SETTING

Note: ONE VALVE STEM EXTENSION FOR EACH VALVE BURIED GREATER THAN 3'.

TYPICAL 2" METER SETTING INVOLVING EXISTING 2" METER VAULT

Note: ONE VALVE STEM EXTENSION FOR EACH VALVE BURIED GREATER THAN 5'.



SERVICE TYPES

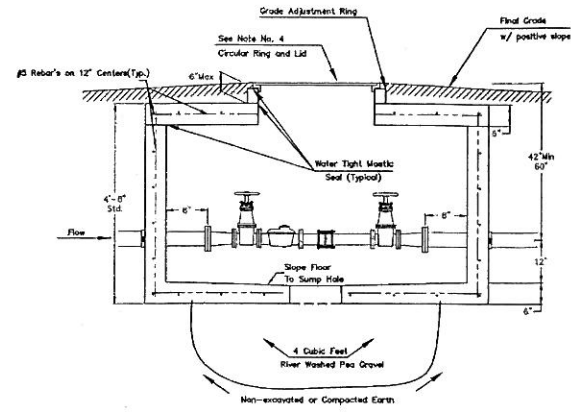
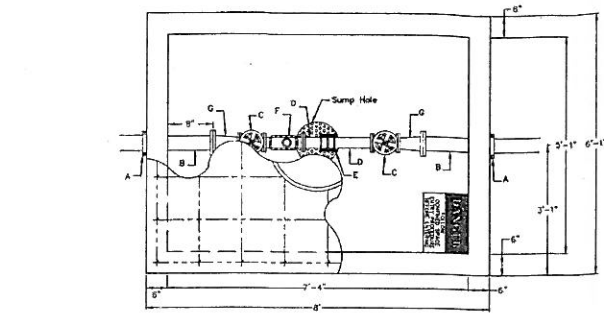


<p>CITY OF WICHITA PUBLIC WORKS &amp; UTILITIES ENGINEERING DIVISION</p>	<p>STANDARD WATER SERVICE DETAIL</p> <p>CITY ENGINEER <b>GARY JANZEN, P.E.</b></p>		
	PROJECT NUMBER	OCA NUMBER	DATE
	<p>CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501</p>		
SHEET			8
- of -			

REVISED: JANUARY 2015

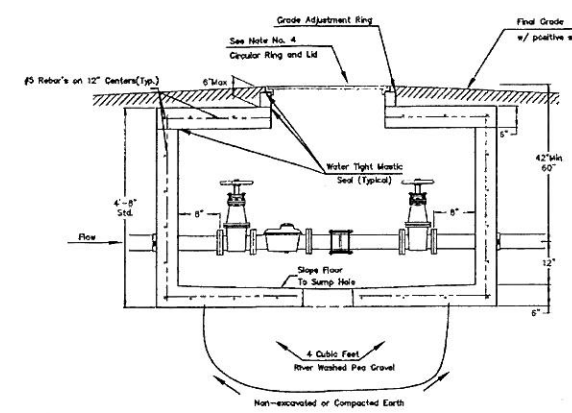
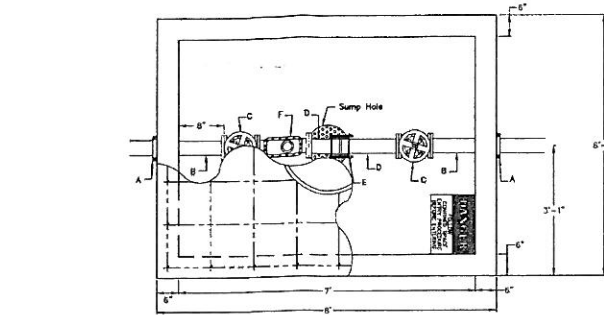
Notes For All Services - 3" thru 12":

- When the standard vault dimensions are not applicable, such as when additional space is required for special pipe, fittings, additional meters, etc. the design engineer shall design a vault with the required dimensions for Public Works and Utilities approval.
- The vault shall be poured concrete, cement blocks (voids to be completely filled with 2500 P.S.I. concrete), or approved precast structure (such as Clutter Inc. vaults approved 8/1/2000). The intent of these details shall not be limited by drawings or standards of precast structures.
- Vault location to be determined by Public Works and Utilities prior to construction and approved by Department's field supervisor prior to installation. A final inspection will be required for acceptance. Vault location standards include but not limited to: not to be located where subjected to vehicular loads, not to be located in any right-of-way or utility easement, and must be located on the property being served.
- The manhole ring and lid shall be Neenah R-6034 Frame with Type "C" Solid Lid and Drop Down Handle or US Foundry APS-30x30 (Aluminum). Where applicable the standard 10" Public Works and Utilities pattern meter reading lid and ring shall be located directly above water meter register. All meter registers shall have an approved lid directly vertical above. All joints of concrete to concrete or metal to concrete in the construction of the vault shall have an approved water tight mastic joint seal.
- Any fillings or appurtenances required to achieve proper elevation of pipe through the vault shall be provided by the contractor and appropriately noted on as-builts submitted by the inspecting engineer. Such fillings shall be a minimum of 2" from the exterior wall of vault.
- For all domestic services larger than 3" the contractor shall provide an outlet flange connection as shown 8" from the inside wall. Inlet and outlet wall sleeves shall be provided and installed by the contractor and shall be in alignment with one another. The inlet and outlet pipe shall be ductile iron pipe, cement lined, Class 150 per Standard Specifications and shall be continuous through vault wall and joint no less than 2" from the exterior wall of vault. Flanges of inlet and outlet pipes shall be in proper alignment and bolt pattern shall be rotated in such a way that valves and other fittings shall be in their proper vertical alignment when installed.
- For all services 4" and larger the contractor shall install a mega lug, restrained joint, or approved equal on the exterior walls of the vault, which shall be manufactured of ductile iron conforming to ASTM A 536-80, heat treated to a minimum hardness of 370 BHN and have a working pressure of at least 250 P.S.I. For all services smaller than 4" the contractor shall install an approved vault clamp on the exterior walls of the vault.
- All valves, meters, assemblies, and fittings shall be provided with sufficient concrete or other approved supports to the vault floor.
- The "Confined Space Warning" sign shall be fastened to the top of all vaults. If necessary for landscaping or site considerations, the sign may be fastened to the vault lid if it does not impede access to the handle. Acceptable materials: Aluminum 73415HH, Plastic 73439HH, or S.A. Vinyl 73463HH.
- All meters shall have an electronic read register compatible with the current City of Wichita meter reading system. All detector meters shall be an 5/8 cubic foot Badger meter with ERT register or approved equal. Gallon meters shall not be accepted.
- Additional Notes For Fire Services:
  - A post indicator valve (PIV) is an option for the outlet valve and may be requested by the architect or owner. The PIV is not required by City of Wichita ordinance.
  - When Siamese connections are required by the Wichita Fire Department, refer to the current City Code Section 15.
  - If due to any reason the completed vault retains ground or drainage water in excess of 4" in depth from the floor of the vault, the property owner shall be responsible for providing and installing an appropriate automatic sump pump or approved equal, as well as any other appurtenances required to make such system function as intended.
  - The property owner is responsible for completing an "Application for Private Fire Protection" prior to final acceptance of the project.



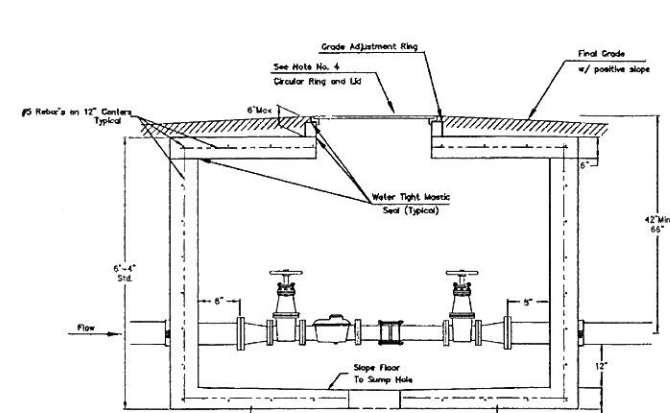
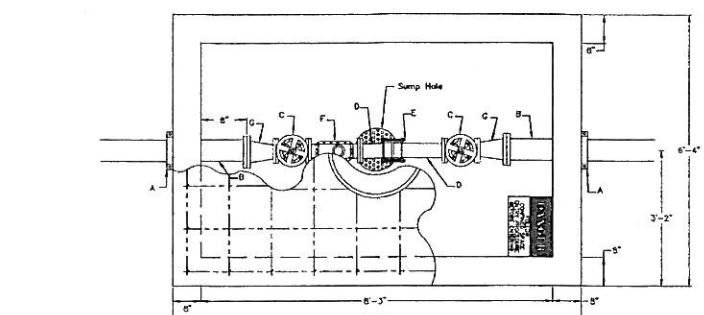
- A - 4" Vault Clamp
- B - Min. 3" Piece of 4" FL x PE DCL Pipe
- C - 3" Flange Non-rising Stem Gate Wheel Valve
- D - 3" FL x PE Pipe
- E - 3" Flex Coupling
- F - 3" Badger Recordall II Turbo Cubic Foot Meter with ERT Register or Sensus W-3500R Cubic Foot Meter with AMR Register.
- G - 3" x 4" FL Reducer

3" Domestic Service



- A - 4" Vault Clamp
- B - Min. 3" Piece of 4" FL x PE DCL Pipe
- C - 4" Flange Non-rising Stem Gate Wheel Valve
- D - 4" FL x PE Pipe
- E - 4" Flex Coupling
- F - 4" Badger Recordall II Turbo Cubic Foot Meter with ERT Register or Sensus W-1000R Cubic Foot Meter with AMR Register.

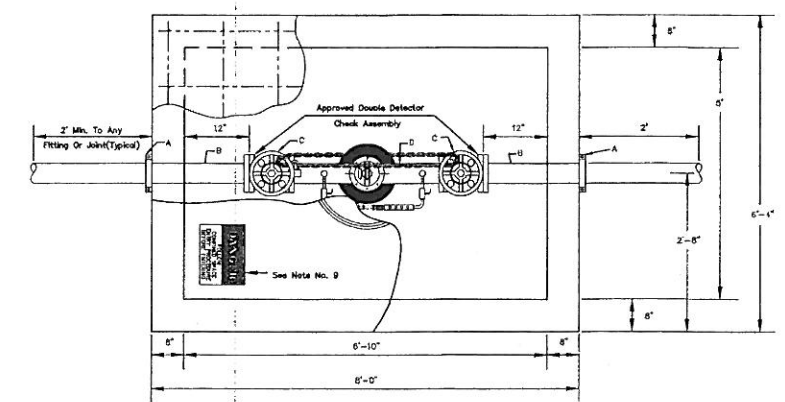
4" Domestic Service



- A - 6" Mega Lug (See Note 7)
- B - Min. 3" Piece of 6" FL x PE DCL Pipe
- C - 4" Flange Non-rising Stem Gate Wheel Valve
- D - 4" FL x PE Pipe
- E - 4" Flex Coupling
- F - 4" Badger Recordall II Turbo Cubic Foot Meter with ERT Register or Sensus W-1000R Cubic Foot Meter with AMR Register.
- G - 6" x 4" Flange Reducer

6" Domestic Service with 4" meter

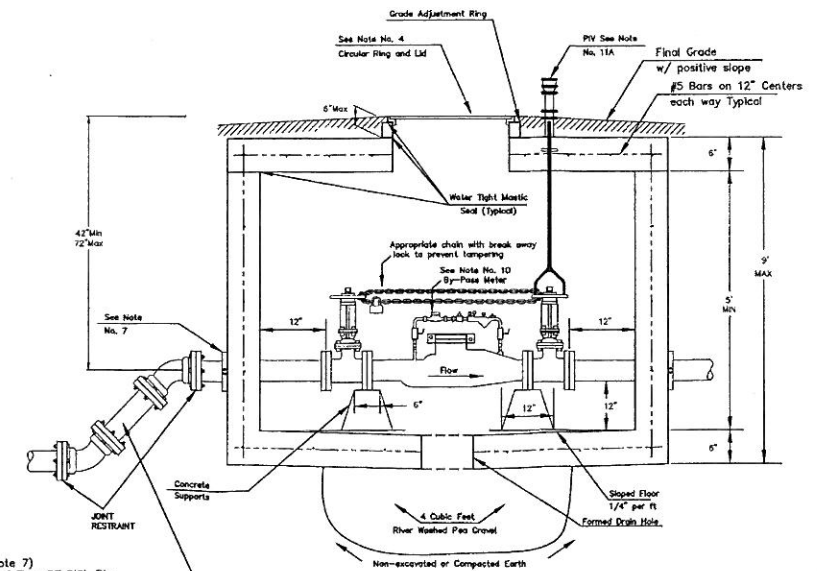
NOTE:  
INSPECTOR FROM PUBLIC WORKS AND UTILITIES TO BE CONTACTED  
24 HOURS PRIOR TO INSTALLATION TO SET VAULT.  
CONTACT: 316-219-8928 OR 316-219-8929



NOTE:  
Domestic Services larger than 6" shall be custom designed by Engineer.

- A - Mega Lug (See Note 7)
- B - Min. 3"-8" Piece of FL x PE DCL Pipe
- C - Flange Gate Valve, Wheel Operated
- D - Ames Model 3001SS or approved equal with metered (cubic foot) by-pass assembly

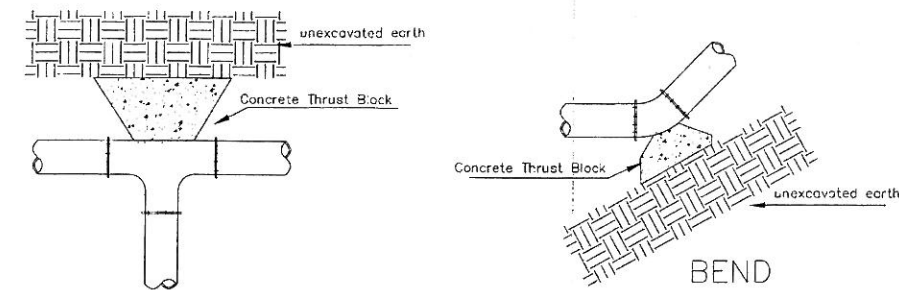
4" thru 8" Fire Service



Use 45 degree fillings as necessary to keep depth of vault within 78 inch maximum. All fittings should be mega lug, restrained joint or approved equal.

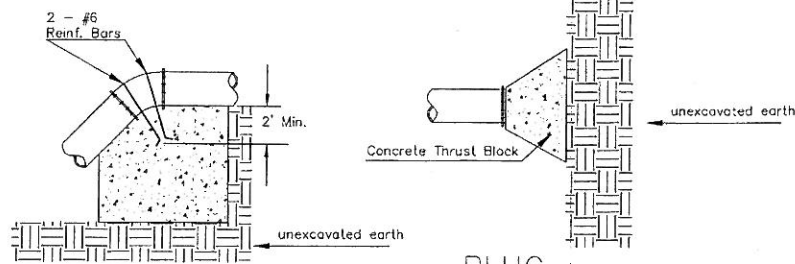


STANDARD VAULT DETAILS AND METER ASSEMBLIES		
CITY ENGINEER <b>GARY JANZEN, P.E.</b>		
PROJECT NUMBER	OCA NUMBER	DATE 12/2011
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		SHEET 9 of



TEE

BEND

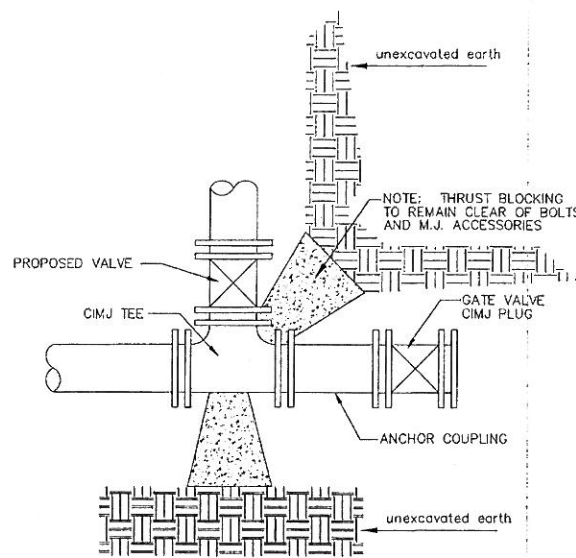


VERTICAL BEND

PLUG

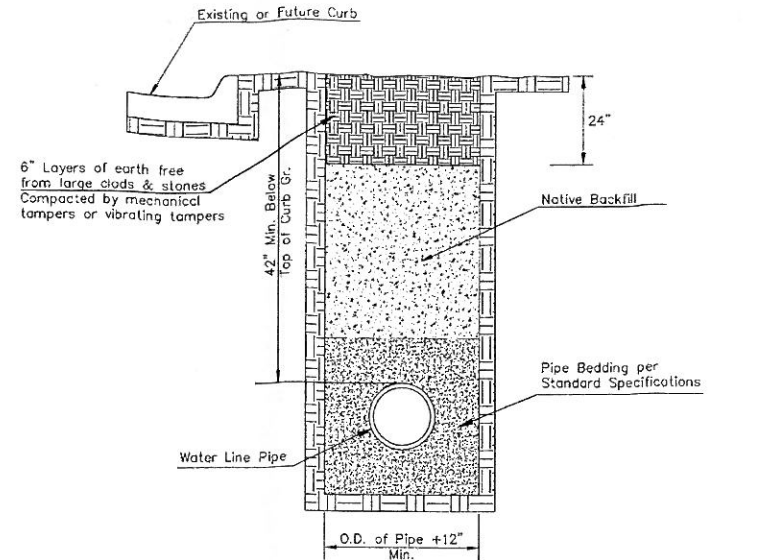
PIPE SIZE	THRUST AT FITTINGS IN TONS - AT 150#/IN <sup>2</sup> P					
	PLUG	90°	45°	22 1/2°	11 1/4°	TEE
6"	2.8	3.95	2.15	1.09	.55	2.8
8"	4.9	6.95	3.75	1.90	.96	4.9
12"	11.4	16.1	8.75	4.45	2.25	11.4
16"	20.15	28.5	15.4	7.85	3.95	20.15
20"	31.15	44.0	23.85	12.15	6.10	31.15
24"	44.55	63.0	34.1	17.4	8.75	44.55

TYPICAL THRUST BLOCKS



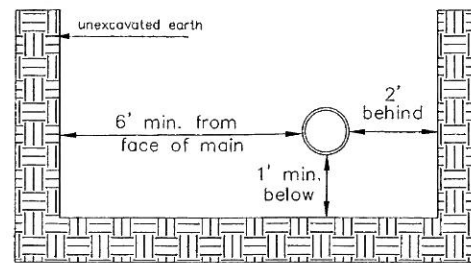
KEY BLOCK DETAIL

\* PLANS GOVERN  
UNLESS OTHERWISE NOTED ON PLANS

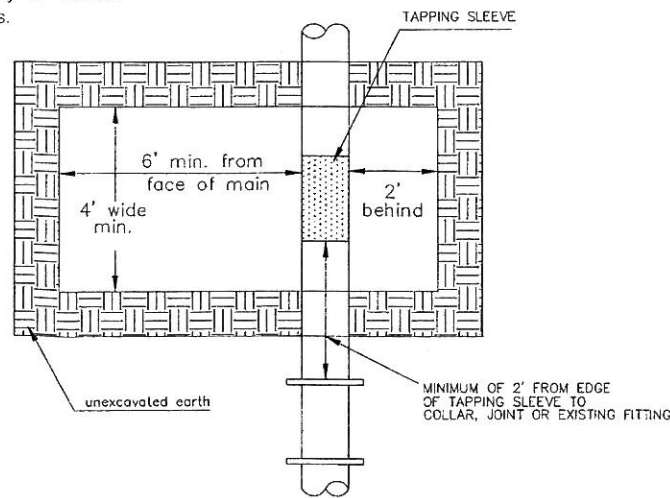


TRENCH COMPACTION IN ROAD RIGHT-OF-WAY

SIDE VIEW

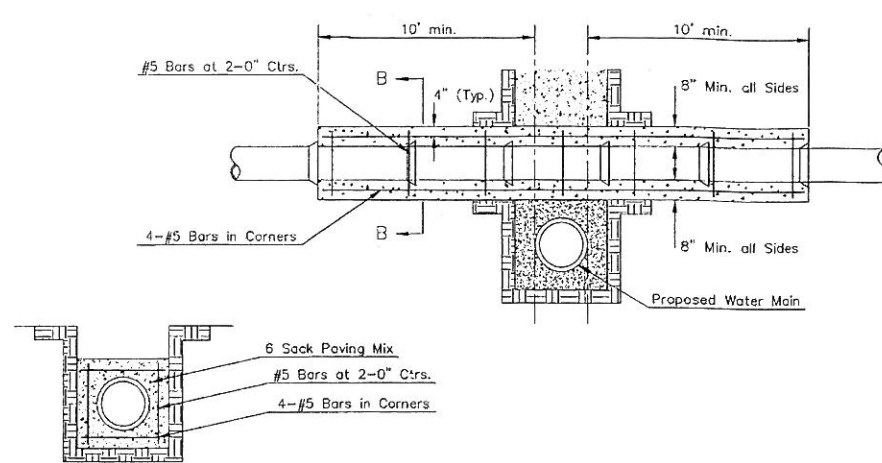


TOP VIEW



EXCAVATION FOR WET TAP

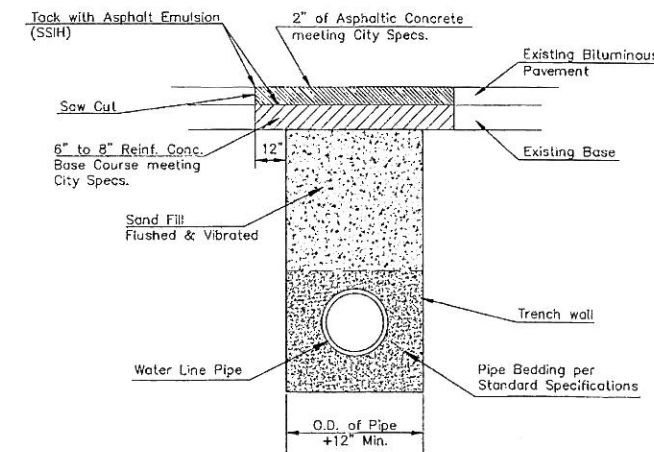
Note: When shoring is required it is to be per The City of Wichita Standard Specifications.



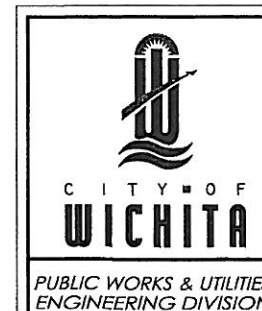
SECTION B-B

Note: Encasement to begin and end at a Bell on Sanitary Sewer Pipe.

REINFORCED CONCRETE ENCASEMENT OF SANITARY SEWER

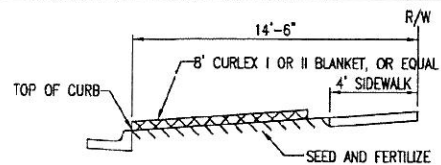


PAVEMENT REPLACEMENT & TRENCH COMPACTION UNDER EXISTING AND PROPOSED CITY ROADS

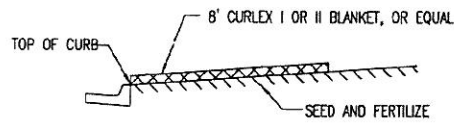


MISCELLANEOUS WATER DETAILS		
CITY ENGINEER		
GARY JANZEN, P.E.		
PROJECT NUMBER	OCA NUMBER	DATE
		04/2014
CITY ENGINEER'S OFFICE		SHEET
CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		10
		of

REVISED JANUARY 2015

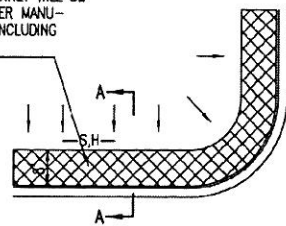


SECTION B-B

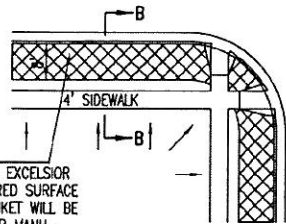


SECTION A-A

INSTALL 8' WIDE CURLEX I OR II EXCELSIOR BLANKET, OR EQUAL, ON PREPARED SURFACE BACK OF CURB. EDGE OF BLANKET WILL BE AT BACK OF CURB. INSTALL PER MANUFACTURER'S RECOMMENDATION, INCLUDING STAPLES. (SEE DETAIL)



SOUTH STREET

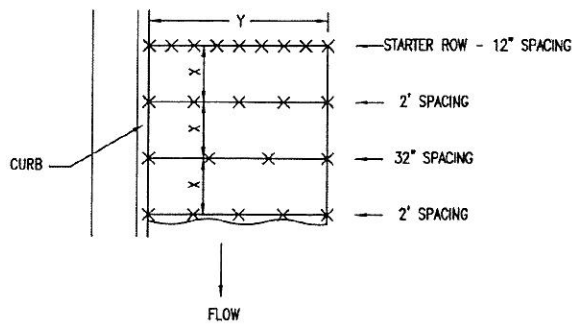


INSTALL 8' WIDE CURLEX I OR II EXCELSIOR BLANKET, OR EQUAL, ON PREPARED SURFACE BACK OF CURB. EDGE OF BLANKET WILL BE AT BACK OF CURB. INSTALL PER MANUFACTURER'S RECOMMENDATION, INCLUDING STAPLES. (SEE DETAIL)

GENERAL NOTES

- EXCELSIOR MAT TO BE INSTALLED WHEN SOD IS NOT SPECIFIED ON PROJECT.
- EXCELSIOR BLANKET TO BE INSTALLED OVER SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
- AFTER INSTALLATION OF EXCELSIOR BLANKET, AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB AND INTO THE GUTTER, SUPPLEMENTAL EROSION CONTROL DEVICES WILL BE INSTALLED BY THE CONTRACTOR AS NEEDED, TO FIX THE PROBLEM.

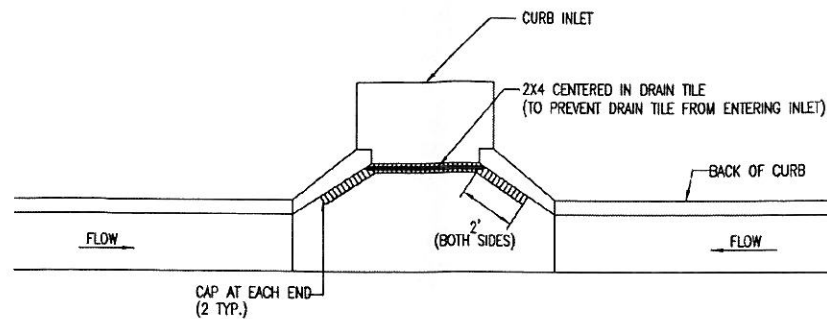
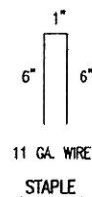
BACK OF CURB PROTECTION DETAIL



STAPLE PATTERN

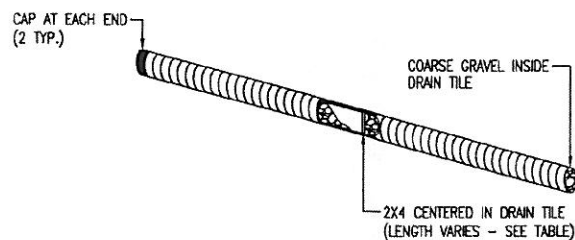
NOTES: USE 6" SEAM OVERLAP  
(X & Y = RECOMMENDED BY MANUFACTURE)

DETAILS FOR APPROVED EROSION CONTROL MAT

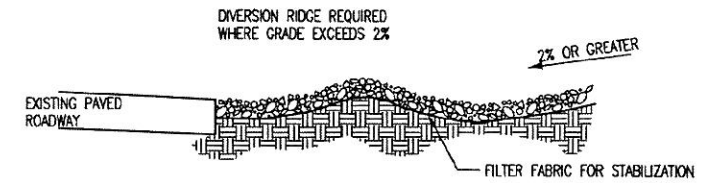


NOTE: PLACE 4" PERFORATED PVC PIPE, FILLED WITH 1/2"-1" DIA. GRAVEL, IN FRONT OF CURB INLET AS SHOWN.

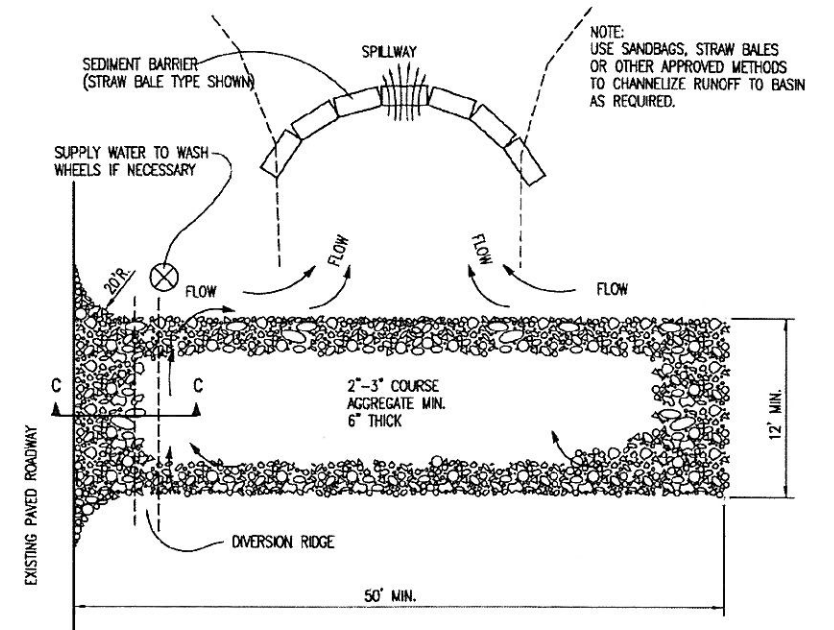
2X4 LENGTH	INLET TYPE	INLET OPENING
5'-6"	1-A	5'-0"
10'-6"	1-A	10'-0"
15'-6"	1-A	15'-0"



CURB INLET PROTECTION  
4" PERFORATED PIPE W/ GRAVEL



SECTION C-C



STABILIZED CONSTRUCTION ENTRANCE

GENERAL NOTES

- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
- WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
- WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN, AS SHOWN ABOVE.
- DRIVE ENTRANCES ONTO RESIDENTIAL LOTS WILL NOT BE REQUIRED TO HAVE THE SEDIMENT BARRIER SHOWN, BUT WHEEL WASHING MAY BE REQUIRED IF STABILIZED ENTRANCE IS NOT SUFFICIENT TO KEEP MUD FROM BEING TRACKED ONTO ADJACENT STREET. ENTRANCE SHALL EXTEND FROM BACK OF CURB TO DWELLING.

REVISION DATE: MAY 2013



05/13/13

**CITY OF WICHITA**  
PUBLIC WORKS & UTILITIES  
ENGINEERING DIVISION

BACK OF CURB PROTECTION,  
CURB INLET PROTECTION AND  
CONSTRUCTION ENTRANCE

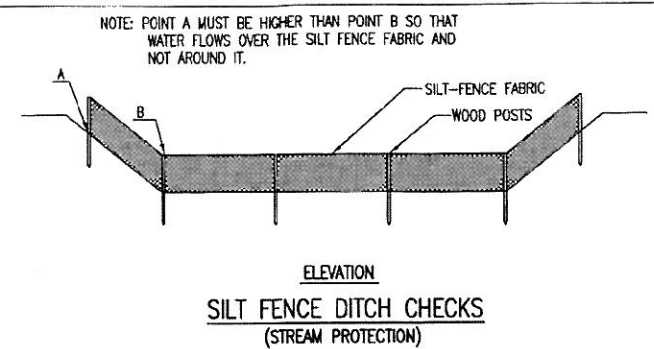
CITY ENGINEER  
**GARY JANZEN, P.E.**

PROJECT NUMBER    DCA NUMBER    DATE

CITY ENGINEER'S OFFICE  
CITY HALL - SEVENTH FLOOR  
455 NORTH MAIN STREET  
WICHITA, KANSAS 67202-1620  
(316) 268-4501

SHEET

11



**MATERIAL SPECIFICATION:**

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION. THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG. SILT FENCE FABRIC SHOULD BE ATTACHED TO THE WOODEN POSTS WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

**PLACEMENT:**

PLACE SILT FENCE IN DITCHES WHERE IT IS UNLIKELY THAT IT WILL BE OVERTOPPED. WATER SHOULD FLOW THROUGH A SILT FENCE DITCH CHECK, NOT OVER IT. SILT FENCE DITCH CHECKS OFTEN FAIL WHEN OVERTOPPED. SILT FENCE DITCH CHECKS SHOULD BE PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH. THE SILT FENCE SHOULD EXTEND FAR ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE FENCE IS HIGHER THAN THE TOP OF THE LOW POINT OF THE FENCE. THIS PREVENTS WATER FROM FLOWING AROUND THE CHECK. SILT FENCE DITCH CHECKS SHOULD NOT BE PLACED IN DITCHES WHERE HIGH FLOWS ARE EXPECTED. ROCK CHECKS SHOULD BE USED INSTEAD. SILT FENCE SHOULD BE PLACED IN DITCHES WITH SLOPES OF 6% OR LESS. FOR SLOPES STEEPER THAN 6%, ROCK CHECKS SHOULD BE USED.

THE FOLLOWING TABLE PROVIDES CHECK SPACING FOR A GIVEN DITCH GRADE:

DITCH CHECK DITCH GRADE (%)	SPACING CHECK SPACING (FEET)
0.5	200
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	30

**PROPER INSTALLATION METHOD:**

EXCAVATE A TRENCH PERPENDICULAR TO THE DITCH FLOWLINE THAT IS AT LEAST 12" DEEP BY 6" WIDE. EXTEND THE TRENCH IN A STRAIGHT LINE ALONG THE ENTIRE LENGTH OF THE PROPOSED DITCH CHECK. PLACE THE SOIL ON THE UPSTREAM SIDE OF THE TRENCH FOR LATER USE. ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC ON THE DOWNSLOPE SIDE OF THE TRENCH. PLACE THE EDGE OF THE FABRIC IN THE TRENCH STARTING AT THE TOP UPSLOPE EDGE OF THE TRENCH. LINE TWO SIDES OF THE TRENCH WITH THE FABRIC AS SHOWN IN DETAIL. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT FENCE FABRIC SHOULD REMAIN EXPOSED. LAY THE EXPOSED SILT FENCE ON THE UPSLOPE SIDE OF THE TRENCH TO CLEAR AN AREA FOR DRIVING IN THE POSTS. JUST DOWNSLOPE OF THE TRENCH, DRIVE POSTS INTO THE GROUND TO A DEPTH OF AT LEAST 24". PLACE POSTS NO MORE THAN 4' APART. ATTACH THE SILT FENCE TO THE ANCHORED POST WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

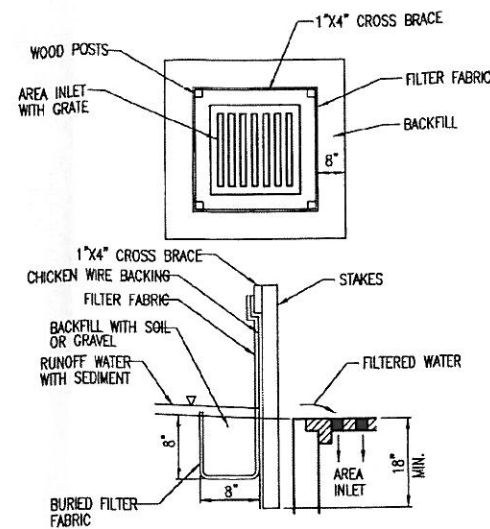
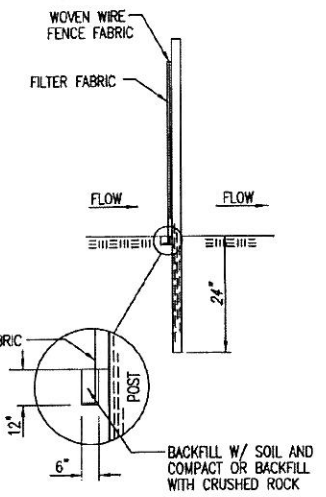
**LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:**

WATER SHOULD FLOW THROUGH A SILT FENCE DITCH CHECK—NOT OVER IT. PLACE SILT FENCE IN DITCHES WHERE IT IS UNLIKELY THAT IT WILL BE OVERTOPPED. SILT FENCE INSTALLATIONS QUICKLY DETERIORATE WHEN WATER OVERTOPS THEM. DO NOT PLACE SILT FENCE POSTS ON THE UPSLOPE SIDE OF THE SILT FENCE FABRIC. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESTRICTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL. DO NOT PLACE A SILT FENCE DITCH CHECK DIRECTLY IN FRONT OF A CULVERT OUTLET. IT WILL NOT STAND UP TO THE CONCENTRATED FLOW. DO NOT PLACE SILT FENCE DITCH CHECKS IN DITCHES THAT WILL LIKELY EXPERIENCE HIGH FLOWS. THEY WILL NOT STAND UP TO CONCENTRATED FLOW. FOLLOW PRESCRIBED DITCH CHECK SPACING GUIDELINES. IF SPACING GUIDELINES ARE EXCEEDED, EROSION WILL OCCUR BETWEEN THE DITCH CHECKS. DO NOT ALLOW WATER TO FLOW AROUND THE DITCH CHECK. MAKE SURE THAT THE DITCH CHECK IS LONG ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE FENCE IS HIGHER THAN THE LOW POINT ON THE TOP OF THE FENCE. DO NOT PLACE SILT FENCE DITCH CHECKS IN CHANNELS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE CHECK IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT.

**INSPECTION AND MAINTENANCE:**

SILT FENCE DITCH CHECKS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

DOES WATER FLOW AROUND THE DITCH CHECK?  
DOES WATER FLOW UNDER THE DITCH CHECK?  
DOES THE SILT FENCE SAG EXCESSIVELY?  
HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?  
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE DITCH CHECK?



**MATERIAL SPECIFICATION:**

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION. THE WIRE OR POLYMERIC MESH BACKING USED TO HELP SUPPORT THE SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION. THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG. THE MATERIAL USED TO FRAME THE TOPS OF THE POSTS SHOULD BE 1" BY 4" BOARDS. SILT FENCE FABRIC AND SUPPORT BACKING SHOULD BE ATTACHED TO THE WOODEN POSTS AND FRAME WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

**PLACEMENT:**

PLACE A SILT FENCE DROP INLET BARRIER IN A LOCATION WHERE IT IS UNLIKELY TO BE OVERTOPPED. WATER SHOULD FLOW THROUGH SILT FENCE, NOT OVER IT. SILT FENCE BARRIERS FOR AREA INLETS OFTEN FAIL WHEN REPEATEDLY OVERTOPPED. WHEN USED AS A BARRIER FOR AREA INLETS, SILT FENCE FABRIC AND POSTS MUST BE SUPPORTED AT THE TOP BY A WOODEN FRAME. WHEN A SILT FENCE BARRIER FOR AREA INLETS IS LOCATED NEAR AN INLET THAT HAS STEEP APPROACH SLOPES, THE STORAGE CAPACITY BEHIND THE BARRIER IS DRASTICALLY REDUCED. TIMELY REMOVAL OF SEDIMENT MUST OCCUR FOR A BARRIER TO OPERATE PROPERLY IN THIS LOCATION.

**PROPER INSTALLATION METHOD:**

EXCAVATE A TRENCH AROUND THE PERIMETER OF THE AREA INLET THAT IS AT LEAST 8" DEEP BY 8" WIDE. DRIVE POSTS TO A DEPTH OF AT LEAST 18" AROUND THE PERIMETER OF THE AREA INLET. THE DISTANCE BETWEEN POSTS SHOULD BE 4' OR LESS. IF THE DISTANCE BETWEEN TWO ADJACENT CORNER POSTS IS MORE THAN 4', ADD ANOTHER POST(S) BETWEEN THEM. CONNECT THE TOPS OF ALL THE POSTS WITH A WOODEN FRAME MADE OF 1" BY 4" BOARDS. USE NAILS OR SCREWS FOR FASTENING. ATTACH THE WIRE OR POLYMERIC-MESH BACKING TO THE OUTSIDE OF THE POST/FRAME STRUCTURE WITH STAPLES, WIRE, ZIP TIES, OR NAILS. ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC LONG ENOUGH TO WRAP AROUND THE PERIMETER OF THE AREA INLET. ADD MORE LENGTH FOR OVERLAPPING THE FABRIC JOINT. PLACE THE EDGE OF THE FABRIC IN THE TRENCH, STARTING AT THE OUTSIDE EDGE OF THE TRENCH. LINE ALL THREE SIDES OF THE TRENCH WITH THE FABRIC. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT FENCE FABRIC SHOULD REMAIN EXPOSED. ATTACH THE SILT FENCE TO THE OUTSIDE OF THE POST/FRAME STRUCTURE WITH STAPLES, WIRE, ZIP TIES, OR NAILS. THE JOINT SHOULD BE OVERLAPPED TO THE NEXT POST.

NOTE: WHEN A SILT FENCE BARRIER FOR AREA INLET IS PLACED IN A SHALLOW MEDIAN DITCH, MAKE SURE THAT THE TOP OF THE BARRIER IS NOT HIGHER THAN THE PAVED ROAD. IN THIS CONFIGURATION, WATER MAY SPREAD ONTO THE ROADWAY CAUSING A HAZARDOUS CONDITION.

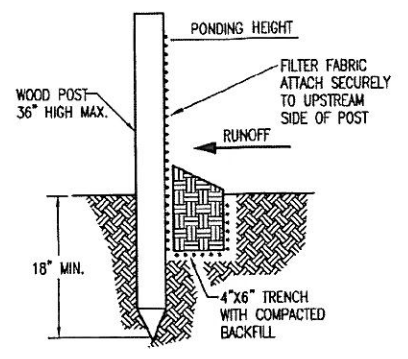
**LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:**

WATER SHOULD FLOW THROUGH A SILT FENCE BARRIER FOR AREA INLET—NOT OVER IT. PLACE A SILT FENCE BARRIER FOR AREA INLET IN A LOCATION WHERE IT IS UNLIKELY TO BE OVERTOPPED. SILT FENCE BARRIER FOR AREA INLETS OFTEN FAIL WHEN REPEATEDLY OVERTOPPED. DO NOT PLACE POSTS ON THE OUTSIDE OF THE SILT FENCE BARRIER FOR AREA INLET. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESTRICTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL. DO NOT INSTALL SILT FENCE BARRIER FOR AREA INLETS WITHOUT FRAMING THE TOP OF THE POSTS. THE CORNER POSTS AROUND AREA INLETS ARE STRESSED IN TWO DIRECTIONS WHEREAS A NORMAL SILT FENCE IS ONLY STRESSED IN ONE DIRECTION. THIS ADDED STRESS REQUIRES MORE SUPPORT.

**INSPECTION AND MAINTENANCE:**

SILT FENCE BARRIER FOR AREA INLETS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

DOES WATER FLOW UNDER THE SILT FENCE?  
DOES THE SILT FENCE SAG EXCESSIVELY?  
HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?  
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE AREA INLET BARRIER?



**SILT FENCE BARRIERS**

**MATERIAL SPECIFICATION:**

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION. THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG. SILT FENCE FABRIC SHOULD BE ATTACHED TO THE WOODEN POSTS WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

**PLACEMENT:**

A SLOPE BARRIER SHOULD BE USED AT THE TOE OF A SLOPE WHEN A DITCH DOES NOT EXIST. THE SLOPE BARRIER SHOULD BE PLACED ON NEARLY LEVEL GROUND 5' TO 10' AWAY FROM THE TOE OF A SLOPE. THE BARRIER IS PLACED AWAY FROM THE TOE OF THE SLOPE TO PROVIDE ADEQUATE STORAGE FOR SETTLING OUT SEDIMENT. WHEN PRACTICABLE, SILT FENCE SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. SILT FENCE SLOPE BARRIERS CAN ALSO BE PLACED ALONG RIGHT-OF-WAY FENCE LINES TO KEEP SEDIMENT FROM CROSSING ONTO ADJACENT PROPERTY. WHEN PLACED IN THIS MANNER, THE SLOPE BARRIER WILL NOT LIKELY FOLLOW CONTOURS.

**PROPER INSTALLATION METHOD:**

EXCAVATE A TRENCH THE LENGTH OF THE PLANNED SLOPE BARRIER THAT IS 6" DEEP BY 4" WIDE. MAKE SURE THAT THE TRENCH IS EXCAVATED ALONG A SINGLE CONTOUR. WHEN PRACTICABLE, SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. PLACE THE SOIL ON THE UPSLOPE SIDE OF THE TRENCH FOR LATER USE. ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC ON THE DOWNSLOPE SIDE OF THE TRENCH. PLACE THE EDGE OF THE FABRIC IN THE TRENCH STARTING AT THE TOP UPSLOPE EDGE. LINE ALL THREE SIDES OF THE TRENCH WITH THE FABRIC. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT-FENCE FABRIC SHOULD REMAIN EXPOSED. LAY THE EXPOSED SILT FENCE UPSLOPE OF THE TRENCH TO CLEAR AN AREA FOR DRIVING IN THE POSTS. JUST DOWNSLOPE OF THE TRENCH, DRIVE POSTS INTO THE GROUND TO A DEPTH OF AT LEAST 18". PLACE POSTS NO MORE THAN 4' APART. ATTACH THE SILT FENCE TO THE ANCHORED POST WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

**LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:**


WHEN PRACTICABLE, DO NOT PLACE SILT FENCE SLOPE BARRIERS ACROSS CONTOURS. SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. WHEN THE FLOW CONCENTRATES, IT OVERTOPS THE BARRIER AND THE SILT FENCE SLOPE BARRIER QUICKLY DETERIORATES. DO NOT PLACE SILT-FENCE POSTS ON THE UPSLOPE SIDE OF THE SILT FENCE FABRIC. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESTRICTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL. DO NOT PLACE SILT FENCE SLOPE BARRIERS IN AREAS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE BARRIER IS NOT SUFFICIENTLY ANCHORED, IT WILL WASH OUT. SILT FENCE SLOPE BARRIERS MUST BE DUG INTO THE GROUND—SILT FENCE AT GROUND LEVEL DOES NOT WORK BECAUSE WATER WILL FLOW UNDERNEATH.

**INSPECTION AND MAINTENANCE:**

SILT FENCE SLOPE BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

ARE THERE ANY POINTS ALONG THE SLOPE BARRIER WHERE WATER IS CONCENTRATING?  
DOES WATER FLOW UNDER THE SLOPE BARRIER?  
DO THE SILT FENCES SAG EXCESSIVELY?  
HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?  
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE SLOPE BARRIER?

REVISION DATE: MAY 2013



**CITY OF WICHITA**

PUBLIC WORKS & UTILITIES  
ENGINEERING DIVISION

**SILT FENCE DITCH CHECK AND BARRIER DETAILS**

CITY ENGINEER  
**GARY JANZEN, P.E.**

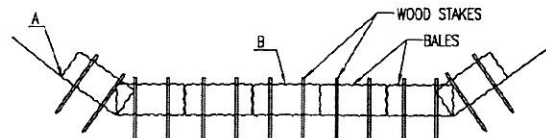
PROJECT NUMBER	OCA NUMBER	DATE

**CITY ENGINEER'S OFFICE**  
CITY HALL - SEVENTH FLOOR  
455 NORTH MAIN STREET  
WICHITA, KANSAS 67202-1620  
(316) 268-4501

SHEET  
12



NOTE: POINT A MUST BE HIGHER THAN POINT B SO THAT WATER FLOWS OVER THE BALES AND NOT AROUND THEM.



### STRAW BALE DITCH CHECKS

#### MATERIAL SPECIFICATION:

BALE DITCH CHECKS MAY BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE. THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG. OPTIONAL: THE DOWNSTREAM SCOUR APRON SHOULD BE CONSTRUCTED OF A DOUBLE-NETTED STRAW EROSION-CONTROL BLANKET AT LEAST 6' WIDE. OPTIONAL: THE METAL LANDSCAPE STAPLES USED TO ANCHOR THE EROSION-CONTROL BLANKET SHOULD BE AT LEAST 8" LONG.

#### PLACEMENT:

BALE DITCH CHECKS SHOULD BE PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH. THE DITCH CHECK SHOULD EXTEND FAR ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE CHECK IS HIGHER THAN THE TOP OF THE LOWEST CENTER BALE. THIS PREVENTS WATER FROM FLOWING AROUND THE CHECK. STRAW BALE DITCH CHECKS SHOULD NOT BE PLACED IN DITCHES WHERE HIGH FLOWS ARE EXPECTED. ROCK CHECKS SHOULD BE USED INSTEAD. BALES SHOULD BE PLACED IN DITCHES WITH SLOPES OF 6% OR LESS. FOR SLOPES STEEPER THAN 6%, ROCK CHECKS SHOULD BE USED. THE FOLLOWING TABLE PROVIDES CHECK SPACING FOR A GIVEN DITCH GRADE:

DITCH CHECK SPACING (%)	CHECK SPACING (FEET)
0.5	200
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	30

#### PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH PERPENDICULAR TO THE DITCH FLOWLINE THAT IS 4" DEEP AND A BALE'S WIDTH WIDE. EXTEND THE TRENCH IN A STRAIGHT LINE ALONG THE ENTIRE LENGTH OF THE PROPOSED DITCH CHECK. PLACE THE SOIL ON THE UPSTREAM SIDE OF THE TRENCH-IT WILL BE USED LATER. OPTIONAL: ON THE DOWNSTREAM SIDE OF THE TRENCH, ROLL OUT A LENGTH OF EROSION-CONTROL BLANKET (SCOUR APRON) EQUAL TO THE LENGTH OF THE TRENCH. PLACE THE UPSTREAM EDGE OF THE EROSION-CONTROL BLANKET ALONG THE BOTTOM UPSTREAM EDGE OF THE TRENCH. THE EROSION CONTROL BLANKET SHOULD BE ANCHORED IN THE TRENCH WITH ONE ROW OF 8" LANDSCAPE STAPLES PLACED ON 18" CENTERS. THE REMAINDER OF THE EROSION-CONTROL BLANKET (THE PORTION THAT IS NOT LYING IN THE TRENCH) WILL SERVE AS THE DOWNSTREAM SCOUR APRON. THIS SECTION OF THE BLANKET SHOULD BE ANCHORED TO THE GROUND WITH 8" LANDSCAPE STAPLES PLACED AROUND THE PERIMETER OF THE BLANKET ON 18" CENTERS. THE REMAINDER OF THE BLANKET SHOULD BE ANCHORED USING TWO EVENLY SPACED ROWS OF 8" LANDSCAPE STAPLES ON 18" CENTERS PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH. PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE ALONG THE CENTERLINE OF THE DITCH CHECK, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS. STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND. ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE UPSTREAM SIDE OF THE CHECK AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP AND EXTEND UPSTREAM NO MORE THAN 24".

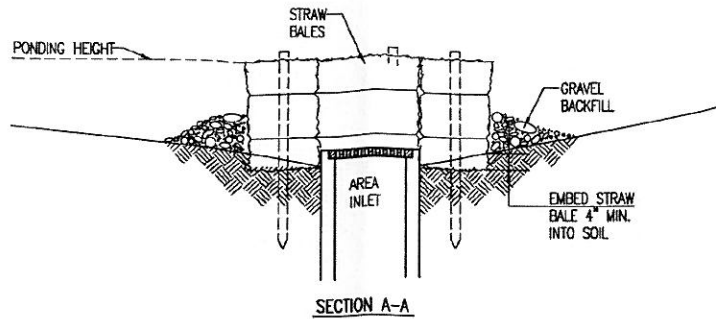
#### LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

DO NOT PLACE A BALE DITCH CHECK DIRECTLY IN FRONT OF A CULVERT OUTLET. IT WILL NOT STAND UP TO THE CONCENTRATED FLOW. DO NOT PLACE BALE DITCH CHECKS IN DITCHES THAT WILL LIKELY EXPERIENCE HIGH FLOWS. THEY WILL NOT STAND UP TO CONCENTRATED FLOW. FOLLOW PRESCRIBED DITCH-CHECK SPACING GUIDELINES. IF SPACING GUIDELINES ARE EXCEEDED, EROSION WILL OCCUR BETWEEN THE DITCH CHECKS. DO NOT ALLOW WATER TO FLOW AROUND THE DITCH CHECK. MAKE SURE THAT THE DITCH CHECK IS LONG ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE CHECK IS HIGHER THAN THE TOP OF THE LOWEST CENTER BALE. DO NOT PLACE BALE DITCH CHECKS IN CHANNELS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE CHECK IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT. BALE DITCH CHECKS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE CHECK.

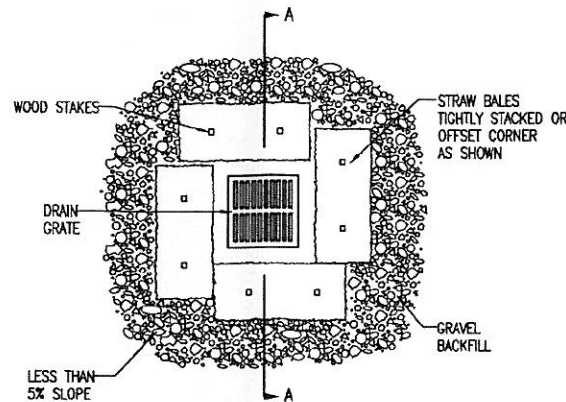
#### INSPECTION AND MAINTENANCE:

BALE DITCH CHECKS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

- DOES WATER FLOW AROUND THE DITCH CHECK?
- DOES WATER FLOW UNDER THE DITCH CHECK?
- DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
- ARE ANY BALES AND/OR SCOUR APRONS (OPTIONAL) DISLODGED?
- ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
- DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE DITCH CHECK?



SECTION A-A



### STRAW BALE BARRIERS FOR AREA INLETS (INLET PROTECTION)

#### MATERIAL SPECIFICATION:

BALE AREA INLET BARRIERS SHOULD BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE. THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG. TWINE SHOULD BE USED TO BIND BALES. THE USE OF WIRE BINDING IS PROHIBITED BECAUSE IT DOES NOT BIODEGRADE READILY.

#### PLACEMENT:

BALE AREA INLET BARRIERS SHOULD BE PLACED DIRECTLY AROUND THE PERIMETER OF A DROP INLET. WHEN A BALE AREA INLET BARRIER IS LOCATED NEAR AN INLET THAT HAS STEEP APPROACH SLOPES, THE STORAGE CAPACITY BEHIND THE BARRIER IS DRAMATICALLY REDUCED. TIMELY REMOVAL OF SEDIMENT MUST OCCUR FOR A BARRIER TO OPERATE PROPERLY IN THIS LOCATION.

#### PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH AROUND THE PERIMETER OF THE AREA INLET THAT IS AT LEAST 4" DEEP BY A BALE'S WIDTH WIDE. PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. SOME BALES MAY NEED TO BE SHORTENED TO FIT INTO THE TRENCH AROUND THE AREA INLET. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS. STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND. ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE RECEIVING SIDE OF THE BARRIER AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP. NOTE: WHEN A BALE AREA INLET BARRIER IS PLACED IN A SHALLOW MEDIAN DITCH, MAKE SURE THAT THE TOP OF THE BARRIER IS NOT HIGHER THAN THE PAVED ROAD. IN THIS CONFIGURATION, WATER MAY SPREAD ONTO THE ROADWAY CAUSING A HAZARDOUS CONDITION.

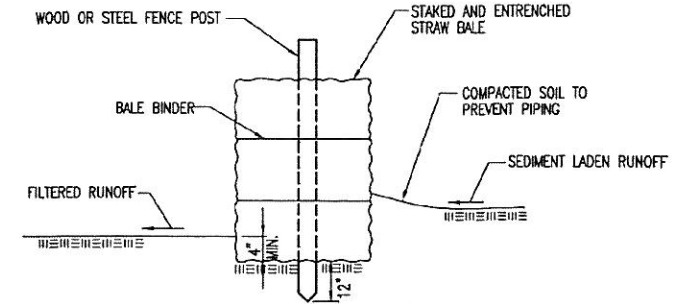
#### LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

BALES SHOULD BE PLACED DIRECTLY AGAINST THE PERIMETER OF THE AREA INLET. THIS ALLOWS OVERTOPPING WATER TO FLOW DIRECTLY INTO THE INLET INSTEAD OF ONTO NEARBY SOIL CAUSING SCOUR. BALE AREA INLET BARRIERS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE BARRIER.

#### INSPECTION AND MAINTENANCE:

BALE AREA INLET BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

- DOES WATER FLOW UNDER THE AREA INLET BARRIER?
- DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
- ARE ANY BALES DISLODGED?
- ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
- DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE AREA INLET BARRIER?



### STRAW BALE BARRIERS

#### MATERIAL SPECIFICATION:

BALE SLOPE BARRIERS MAY BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE. THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG. TWINE SHOULD BE USED TO BIND BALES. THE USE OF WIRE BINDING IS PROHIBITED BECAUSE IT DOES NOT BIODEGRADE READILY.

#### PLACEMENT:

A SLOPE BARRIER SHOULD BE USED AT THE TOE OF A SLOPE WHEN A DITCH DOES NOT EXIST. THE SLOPE BARRIER SHOULD BE PLACED ON NEARLY LEVEL GROUND 5' TO 10' AWAY FROM THE TOE OF A SLOPE. THE BARRIER IS PLACED AWAY FROM THE TOE OF THE SLOPE TO PROVIDE ADEQUATE STORAGE FOR SETTLING OUT SEDIMENT. WHEN PRACTICABLE, BALE SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. BALE SLOPE BARRIERS CAN ALSO BE PLACED ALONG RIGHT-OF-WAY FENCE LINES TO KEEP SEDIMENT FROM CROSSING ONTO ADJACENT PROPERTY. WHEN PLACED IN THIS MANNER, THE SLOPE BARRIER WILL NOT LIKELY FOLLOW CONTOURS.

#### PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH THE LENGTH OF THE PLANNED SLOPE BARRIER THAT IS 4" DEEP AND A BALE'S WIDTH WIDE. MAKE SURE THAT THE TRENCH IS EXCAVATED ALONG A SINGLE CONTOUR. WHEN PRACTICABLE, SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. PLACE THE SOIL ON THE UPSLOPE SIDE OF THE TRENCH FOR LATER USE. PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE ALONG THE CENTERLINE OF THE DITCH CHECK, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS. STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND. ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE UPSLOPE SIDE OF THE CHECK AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP.

#### LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WHEN PRACTICAL, DO NOT PLACE BALE SLOPE BARRIERS ACROSS CONTOURS. SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. CONCENTRATED FLOW OVER A SLOPE BARRIER CREATES A SCOUR HOLE ON THE DOWNSLOPE SIDE OF THE BARRIER. THE SCOUR HOLE EVENTUALLY UNDERMINES THE BALES AND THE BARRIER FAILS. DO NOT PLACE BALE SLOPE BARRIERS IN AREAS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE BARRIER IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT. BALE SLOPE BARRIERS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE BARRIER.

#### INSPECTION AND MAINTENANCE:

BALE SLOPE BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

- ARE THERE ANY POINTS ALONG THE SLOPE BARRIER WHERE WATER IS CONCENTRATING?
- DOES WATER FLOW UNDER THE SLOPE BARRIER?
- DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
- ARE ANY BALES DISLODGED?
- ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
- DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE SLOPE BARRIER?

REVISION DATE: MAY 2013



**CITY OF WICHITA**  
PUBLIC WORKS & UTILITIES  
ENGINEERING DIVISION

### STRAW BALE DITCH CHECK AND BARRIER DETAILS

CITY ENGINEER  
**GARY JANZEN, P.E.**

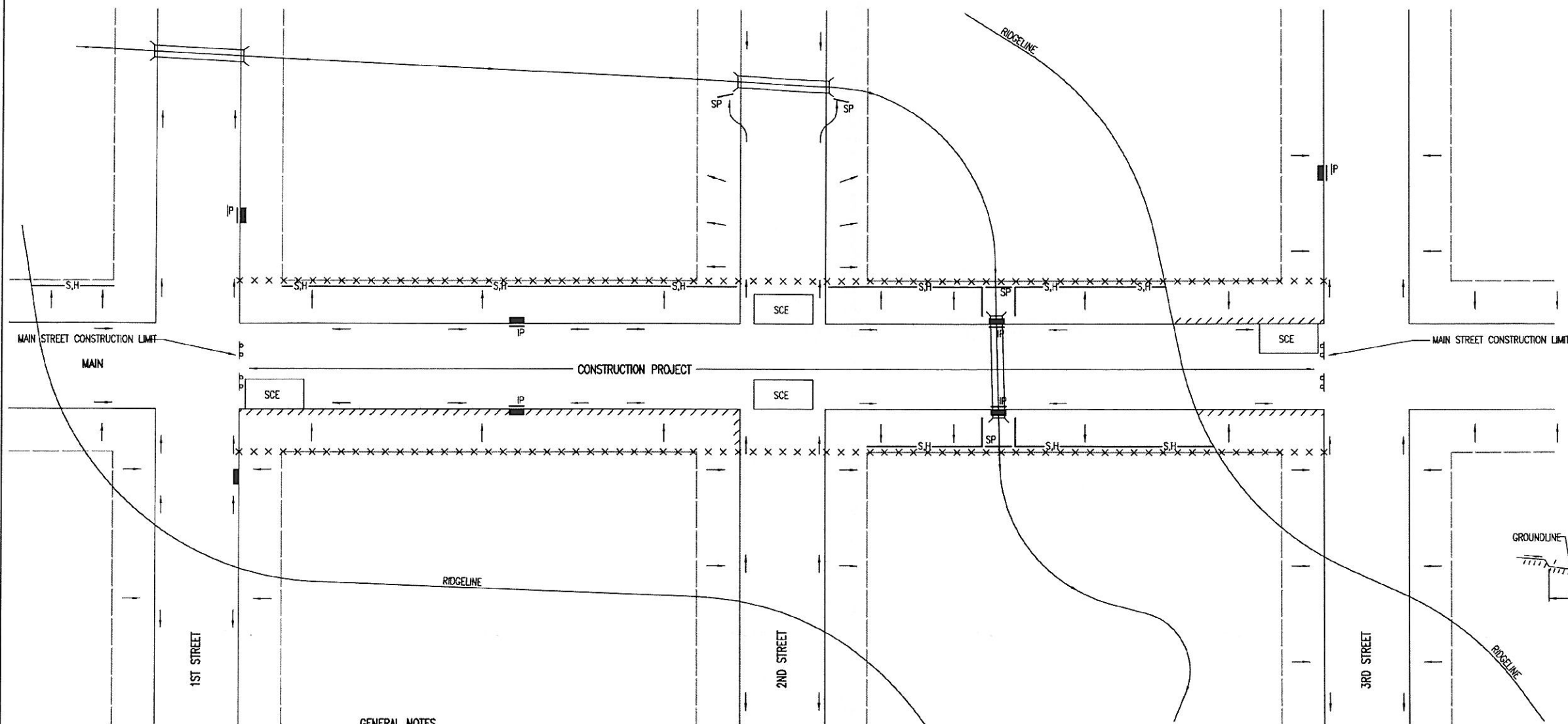
PROJECT NUMBER: OCA NUMBER: DATE:

CITY ENGINEER'S OFFICE  
CITY HALL - SEVENTH FLOOR  
455 NORTH MAIN STREET  
WICHITA, KANSAS 67202-1620  
(316) 268-4501

SHEET  
13

**GENERAL NOTES**

- THIS SHEET IS INTENDED TO PROVIDE GUIDELINES AS TO WHAT TYPES OF EROSION CONTROL DEVICES WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS. CONTRACTORS ARE EXPECTED TO BID PROJECTS ACCORDINGLY.
- EROSION CONTROL DEVICES MUST BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PROCESS AND UNTIL THE DISTURBED EARTH IS RESTABILIZED.
- IF THE PROJECT WILL DISTURB 1 ACRE OR MORE, A FEDERAL/STATE NPDES STORMWATER PERMIT IS REQUIRED. A DETAILED STORMWATER POLLUTION PREVENTION PLAN, IS REQUIRED. THE EROSION CONTROL DEVICES SHOWN ON THIS SHEET ARE CONSIDERED TO BE THE MINIMUM TO BE SHOWN IN THE POLLUTION PREVENTION PLAN.
- FOR PROJECTS DISTURBING LESS THAN 1 ACRE, CONTRACTORS ARE ENCOURAGED TO PREPARE STORMWATER POLLUTION PREVENTION PLANS PRIOR TO CONSTRUCTION. EROSION CONTROL DEVICES MUST BE USED ON ALL PROJECTS.
- FAILURE TO USE AND MAINTAIN EROSION CONTROL DEVICES IS A VIOLATION OF SECTION 16.32 OF THE CITY CODE AND WILL SUBJECT THE CONTRACTOR TO THE PENALTIES PROVIDED FOR THEREIN.
- THE APPLICATION OF EROSION CONTROL DEVICES SHOWN ON THIS SHEET IS FOR SITUATIONS NORMALLY ENCOUNTERED. FROM TIME TO TIME, SITUATIONS WILL ARISE THAT MAY REQUIRE A DIFFERENT DEVICE OTHER THAN THOSE SHOWN. EROSION CONTROL DEVICES, OTHER THAN THOSE SHOWN, MAY BE UTILIZED AS LONG AS THEY ARE EFFECTIVE AND MAINTAINED.

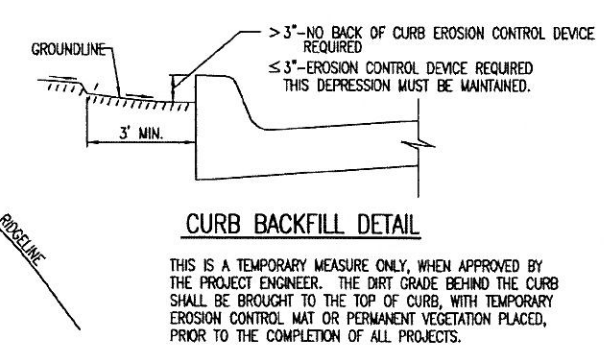


**LEGEND**

- R-0-W LIMITS
- DRAINAGE FLOW PATH
- x x x x x R/W LIMIT WITHIN CONSTRUCTION LIMIT
- STORM WATER INLETS
- IP INLET PROTECTION
- S.H.— SILT FENCE OR HAY BALE BARRIER
- SP STREAM PROTECTION
- SCE STABILIZED CONSTRUCTION ENTRANCE
- //// BACK OF CURB PROTECTION

**GENERAL NOTES**

- THE INTENT OF ALL EROSION CONTROL DEVICES IS TO KEEP ALL SEDIMENT CONFINED TO THE CONSTRUCTION SITE, AND OUT OF ALL UNDERGROUND PIPES, DITCHES, LAKES, AND OTHER DRAINAGE FACILITIES, AND OFF OF STREETS.
- THE POINT OF COMPLIANCE IS GENERALLY THE RIGHT-OF-WAY LINES WITHIN THE LIMITS OF CONSTRUCTION.
- EROSION CONTROL DEVICES WILL BE REQUIRED AT ALL POINTS ALONG THE PROJECT WHERE DISTURBED EARTH CAN DRAIN ONTO PRIVATE PROPERTY.
- INLET PROTECTION DEVICES WILL BE REQUIRED WHEREVER WATER CAN DRAIN OFF THE PROJECT SITE INTO AN INLET, INCLUDING ANY SIDE STREET INLETS.
- EROSION CONTROL DEVICES SHALL BE INSTALLED AT CREEK CROSSINGS SO AS TO PREVENT SEDIMENT FROM ENTERING THEREIN.
- STABILIZED CONSTRUCTION ENTRANCES SHALL BE PROVIDED, AS NEEDED, TO PREVENT MUD FROM TRACKING ONTO STREETS NOT UNDER CONSTRUCTION AND ON STREETS WITHIN THE PROJECT LIMITS IF TRAFFIC IS BEING MAINTAINED THROUGH THE PROJECT.
- ANY MUD TRACKED ONTO STREETS MUST BE REMOVED AT THE END OF EACH WORK DAY.
- THE CONTRACTOR WILL BE REQUIRED TO PLACE EROSION CONTROL DEVICES BACK OF CURB, WHENEVER WATER CAN DRAIN OVER CURB, TO KEEP ERODED SOIL OUT OF THE GUTTERLINES, IN ACCORDANCE WITH THE FOLLOWING:
  - THE DEVICE REQUIRED WILL BE APPROVED EROSION CONTROL MAT LISTED ON THE CITY'S APPROVED MATERIAL LIST. SAID BLANKET SHALL BE PLACED OVER THE APPROPRIATE SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS. (SEE SOIL EROSION BMPs - BACK OF CURB SEDIMENT BARRIER DETAILS)
  - THIS DEVICE SHALL BE INSTALLED IMMEDIATELY WHENEVER THE CURB IS BACKFILLED TO WITHIN 3" OF THE TOP OF CURB. (SEE CURB BACKFILL DETAIL) OTHER BMP'S MAY BE REQUIRED AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB.
  - ADDITIONALLY, OTHER EROSION CONTROL DEVICES (HAY BALES, SILT FENCE, ETC.) WILL BE INSTALLED AT LOCATIONS OF CONCENTRATED FLOW RESULTING IN SEDIMENT OVERRUNNING THE MAT.
  - SHOULD THE PROJECT PLANS SPECIFY THAT THE RIGHT-OF-WAY IS TO BE SODDED, THE EXCELSIOR MAT WILL NOT BE REQUIRED SO LONG AS THE SOD IS PLACED WITHIN 48 HOURS AFTER CURB BACKFILL REACHES A HEIGHT OF 3" OR LESS FROM TOP OF CURB. (SEE CURB BACKFILL DETAIL)



**CURB BACKFILL DETAIL**

THIS IS A TEMPORARY MEASURE ONLY, WHEN APPROVED BY THE PROJECT ENGINEER. THE DIRT GRADE BEHIND THE CURB SHALL BE BROUGHT TO THE TOP OF CURB, WITH TEMPORARY EROSION CONTROL MAT OR PERMANENT VEGETATION PLACED, PRIOR TO THE COMPLETION OF ALL PROJECTS.

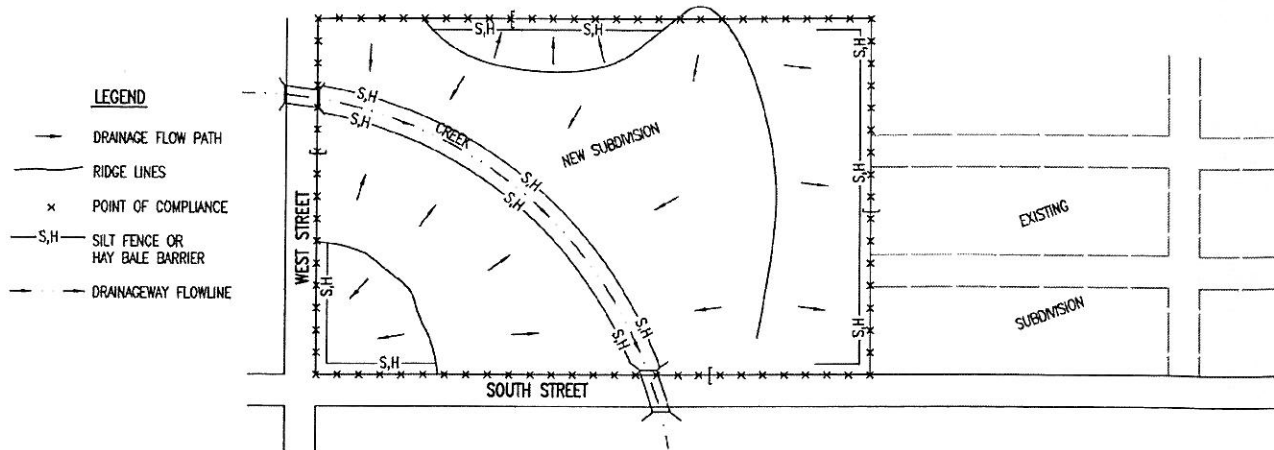


**CITY OF WICHITA**  
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REVISION DATE: 2013

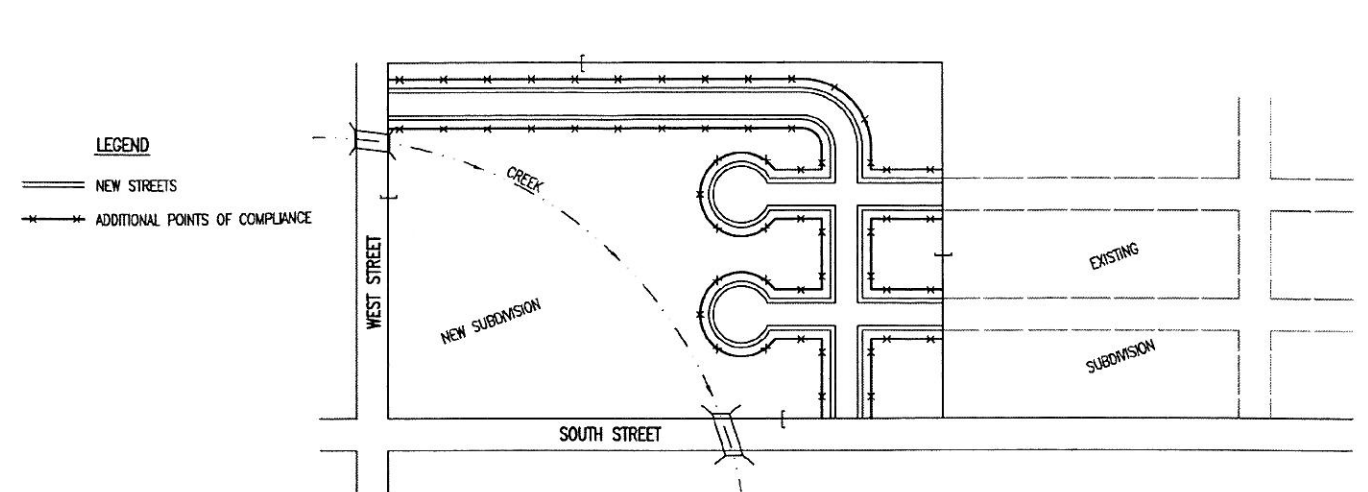
<b>STREET IMPROVEMENT PROJECTS</b>		
CITY ENGINEER <b>GARY JANZEN, P.E.</b>		
PROJECT NUMBER	OCA NUMBER	DATE
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		SHEET <b>14</b>

**PHASE 1 - INITIAL EARTHWORK AND UTILITIES (EXCEPT STORM SEWER)**



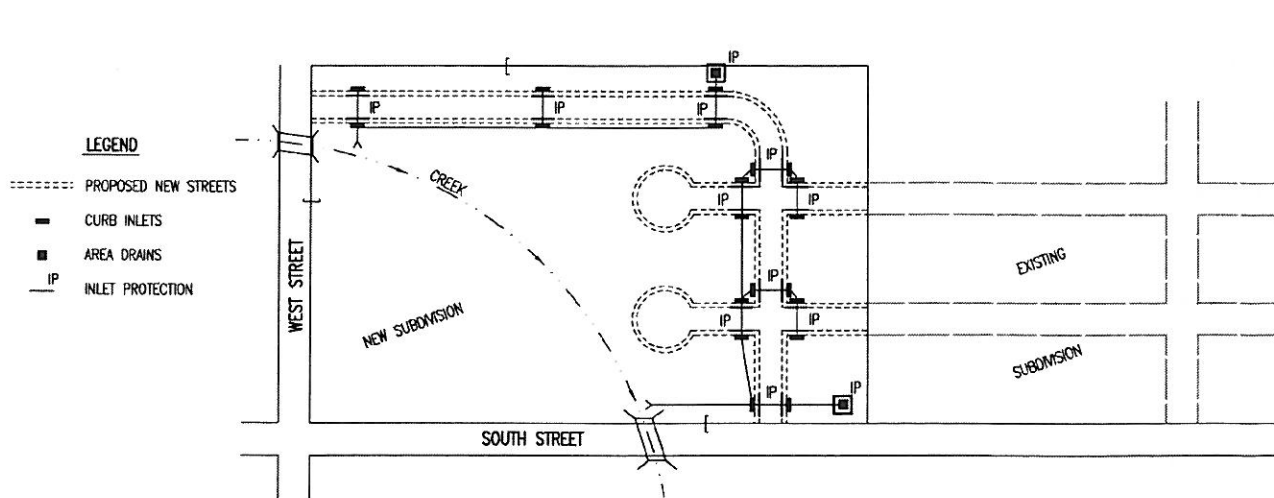
- DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, THE POINTS OF COMPLIANCE ARE THE PERIMETER BOUNDARIES AND ANY DRAINAGE WAYS OR STORM SEWERS DRAINING THROUGH OR FROM THE SITE. SHOULD LAKES BE CONSTRUCTED WITHIN THE SUBDIVISION THAT WILL DISCHARGE DURING STORMS, THEY ARE ALSO A POINT OF COMPLIANCE.
- HAY BALES OR SILT FENCE MUST BE CONSTRUCTED ALONG THE PROPERTY LINE WHERE ON SITE WATER CAN DRAIN OFF THE PROPERTY. THESE EROSION CONTROL DEVICES WILL ALSO BE INSTALLED ALONG ANY DRAINAGE DITCH OR LAKE THAT CAN DISCHARGE.
- SHOULD SILT OR SEDIMENT ENTER THE DITCHES OR STREETS ON THE ADJACENT BOUNDARY STREETS, APPROPRIATE EROSION CONTROL DEVICES WILL BE PLACED WITHIN THE SUBDIVISION TO PREVENT THIS.
- ANY MUD TRACKED ONTO ADJACENT STREETS WILL BE REMOVED WITHIN 48 HOURS OR BY FRIDAY AT 6:00 PM, WHICHEVER IS EARLIER.
- CONTRACTORS WORKING WITHIN THE SITE WILL NOT BE REQUIRED TO USE INDIVIDUAL EROSION CONTROL DEVICES AS LONG AS THOSE SPECIFIED ABOVE ARE IN PLACE AND EFFECTIVE. CONTRACTORS WORKING ON THE BOUNDARY LINE STREETS OR ON ADJACENT PROPERTIES TO EXTEND UTILITIES ARE EXPECTED TO USE EROSION CONTROL DEVICES AT THEIR WORK LOCATIONS, AS NEEDED.
- UTILIZE STABILIZED CONSTRUCTION ENTRANCE AT ENTRANCE AND EXIT ONTO ANY EXISTING PUBLIC STREETS.
- IF THE INITIAL EARTH WORK AND UTILITIES ARE DONE AS PART OF A PUBLIC IMPROVEMENT PROJECT, THESE EROSION CONTROL DEVICES WILL BE INSTALLED BY THE CONTRACTOR AS SPECIFIED IN THE INDIVIDUAL PROJECT CONTRACTS. THE CONTRACTOR WILL MAINTAIN THE DEVICES UNTIL COMPLETION OF THE CONTRACT, AT WHICH TIME THE DEVELOPER WILL ASSUME MAINTENANCE RESPONSIBILITIES. IF THESE CONTRACTS ARE NOT PUBLIC IMPROVEMENT PROJECTS, THE DEVELOPER WILL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THESE DEVICES.
- WITHIN 14 DAYS OF COMPLETION OF EARTHWORK ACTIVITIES IN ANY GIVEN AREA, THAT AREA SHALL BE TEMPORARILY OR PERMANENTLY SEEDED AND MULCHED.

**PHASE 3 - STREET CONSTRUCTION**



- DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, NEW STREETS ARE INSTALLED. ALL EROSION CONTROL DEVICES INSTALLED DURING PHASE 1 AND 2 MUST STILL BE MAINTAINED. THE POINT OF COMPLIANCE NOW SHIFTS TO THE BACK OF CURB ALONG EACH STREET.
- CURB OPENING INLET PROTECTION:
  - SUMP AREAS - INLET PROTECTION SHALL BE PROVIDED WHEN STREET SUBGRADE WORK IS COMPLETED.
  - NON-SUMP LOCATIONS - PROVIDE INLET PROTECTION AS SOON AS BASE COURSE ASPHALT IS INSTALLED, BEFORE THE SURFACE COURSE LIFT.
- EROSION CONTROL DEVICES WILL BE REQUIRED BACK OF CURB WHEREVER WATER CAN FLOW OVER THE CURB AND THE CURB HAS BEEN BACKFILLED TO WITHIN 3" OR LESS OF THE TOP OF CURB (SEE CURB BACKFILL DETAIL). FOR CURBS NOT YET ENTIRELY BACKFILLED (3" OR MORE BELOW TOP OF CURB), ADDITIONAL DEVICES WILL BE REQUIRED AT POINTS WHERE WATER BREAKS OVER CURB WHICH COULD RESULT IN THE PLACEMENT OF SEDIMENT IN THE GUTTER.
- SEE DETAIL SHEET FOR BACK OF CURB PROTECTION.
- THE BACK OF CURB PROTECTION SPECIFIED ON THIS PLAN MAY HAVE TO BE SUPPLEMENTED WITH HAY BALE OR SILT FENCE EROSION CONTROL DEVICES AT LOCATIONS WHERE CONCENTRATED FLOW RESULTS IN SEDIMENT BEING CARRIED OVER THE EXCELSIOR MATS.
- THE STREET CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING BACK OF CURB EROSION CONTROL DEVICES.
- THE INDIVIDUAL LOT OWNERS WILL BE RESPONSIBLE FOR MAINTAINING THE BACK OF CURB EROSION CONTROL DEVICES IN FRONT OF THEIR LOTS UNTIL SUCH TIME AS ADJACENT DISTURBED EARTH IS STABILIZED WITH GRASS OR SOD.

**PHASE 2 - INSTALLATION OF STORM SEWER**

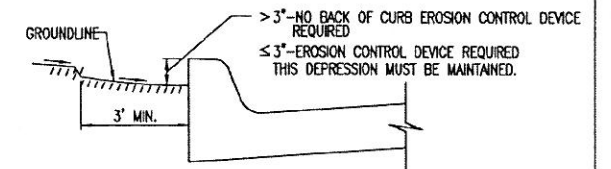


- DURING THIS PHASE OF SUBDIVISION DEVELOPMENT, ALL EROSION CONTROL DEVICES REQUIRED IN PHASE 1 SHALL REMAIN IN PLACE AND BE MAINTAINED.
- AS NEW STORM SEWERS, WITH INLETS, ARE INSTALLED, THE STORM SEWERS MUST NOW BE PROTECTED SO ALL NEW INLETS BECOME POINTS OF COMPLIANCE.
- AREA DRAINS - AS SOON AS WATER CAN FLOW INTO THESE DRAINS, HAY BALE OR SILT FENCE PROTECTION WILL BE INSTALLED AROUND THEM.
- CURB OPENING INLETS - AS SOON AS WATER CAN FLOW INTO THESE DRAINS, INLET PROTECTION DEVICES MUST BE INSTALLED. IF WATER CANNOT FLOW INTO CURB INLETS UNTIL STREET CONSTRUCTION IS COMPLETE, THEN STREET CONTRACTOR WILL INSTALL INLET PROTECTION. SEE PHASE 3 - STREET CONSTRUCTION.
- THE STORM SEWER CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING THESE DEVICES.
- THE SUBDIVISION DEVELOPER WILL MAINTAIN THESE EROSION CONTROL DEVICES ONCE INSTALLED.
- ALL DISTURBED GROUND WILL BE FINAL GRADED AND TEMPORARILY OR PERMANENTLY SEEDED WITHIN 14 DAYS OF COMPLETION OF WORK IN ANY GIVEN PART OF THE SUBDIVISION.
- ONCE ALL DISTURBED GROUND DRAINING TO AN INLET HAS BEEN RESTABILIZED WITH GRASS OR SOD, THE SUBDIVISION DEVELOPER WILL BE RESPONSIBLE FOR PERMANENTLY REMOVING THE INLET PROTECTION.

**GENERAL NOTES**

- THE INTENT OF ALL EROSION CONTROL DEVICES IS TO PREVENT ERODED SOIL FROM ENTERING DITCHES, STORM SEWERS, LAKES, STREETS OR ANY OTHER OTHER DRAINAGE FEATURE.
- THIS SHEET IS INTENDED TO PROVIDE GUIDELINES AS TO WHAT TYPE OF EROSION CONTROL DEVICES WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS. CONTRACTORS ARE EXPECTED TO BID PROJECTS ACCORDINGLY.
- EROSION CONTROL DEVICES SHALL BE MAINTAINED DURING THE CONSTRUCTION PROCESS TO REMAIN EFFECTIVE. MAINTENANCE SHALL BE AS INDICATED ON SOIL EROSION BMP'S DETAIL SHEETS.
- PERSONS DESTROYING EROSION CONTROL DEVICES SHALL BE RESPONSIBLE FOR IMMEDIATELY REPAIRING THEM OR INSTALLING SUITABLE REPLACEMENT DEVICES.
- THE DEVELOPMENT OF ANY SUBDIVISION THAT DISTURBS 1 ACRE OR MORE WILL REQUIRE A FEDERAL/STATE NPDES STORMWATER PERMIT. THE PREPARATION OF A STORMWATER POLLUTION PREVENTION PLAN IS REQUIRED. EROSION CONTROL DEVICES ARE REQUIRED. THE DETAILS SHOWN ON THIS SHEET ARE THE MINIMUM STANDARDS TO BE SHOWN ON POLLUTION PREVENTION PLANS.
- FOR SUBDIVISIONS SMALLER THAN 1 ACRE, SOIL EROSION DEVICES ARE REQUIRED. ALSO, DEVELOPERS AND CONTRACTORS ARE ENCOURAGED TO DEVELOP POLLUTION PREVENTION PLANS FOR EACH PROJECT PRIOR TO CONSTRUCTION.
- FAILURE TO USE AND MAINTAIN SOIL EROSION DEVICES IS A VIOLATION OF SECTION 16.32 OF THE CITY CODE AND WILL SUBJECT THE SUBDIVISION DEVELOPER AND CONTRACTORS TO THE PENALTIES PROVIDED THEREIN.
- THE APPLICATION OF EROSION CONTROL DEVICES SHOWN ON THIS SHEET IS FOR SITUATIONS NORMALLY ENCOUNTERED. FROM TIME TO TIME, SITUATIONS WILL ARISE THAT MAY REQUIRE DEVICES OTHER THAN THAT SHOWN. EROSION CONTROL DEVICES, OTHER THAN THOSE SHOWN, MAY BE UTILIZED SO LONG AS THEY ARE EFFECTIVE AND MAINTAINED.
- A STABILIZED EARTH SURFACE IS DEFINED AS ONE THAT IS HARD SURFACED WITH CONCRETE, ASPHALT, OR THE LIKE, OR ONE ON WHICH 70% OF THE GRASS HAS GERMINATED ON THE ENTIRE SURFACE.

SEE DETAIL SHEET FOR BACK OF CURB PROTECTION DETAIL



**CURB BACKFILL DETAIL (STREET CONSTRUCTION ONLY)**

THIS IS A TEMPORARY MEASURE ONLY. WHEN APPROVED BY THE PROJECT ENGINEER, THE DIRT GRADE BEHIND THE CURB SHALL BE BROUGHT TO THE TOP OF CURB, WITH TEMPORARY EROSION CONTROL MAT OR PERMANENT VEGETATION PLACED, PRIOR TO THE COMPLETION OF ALL PROJECTS.

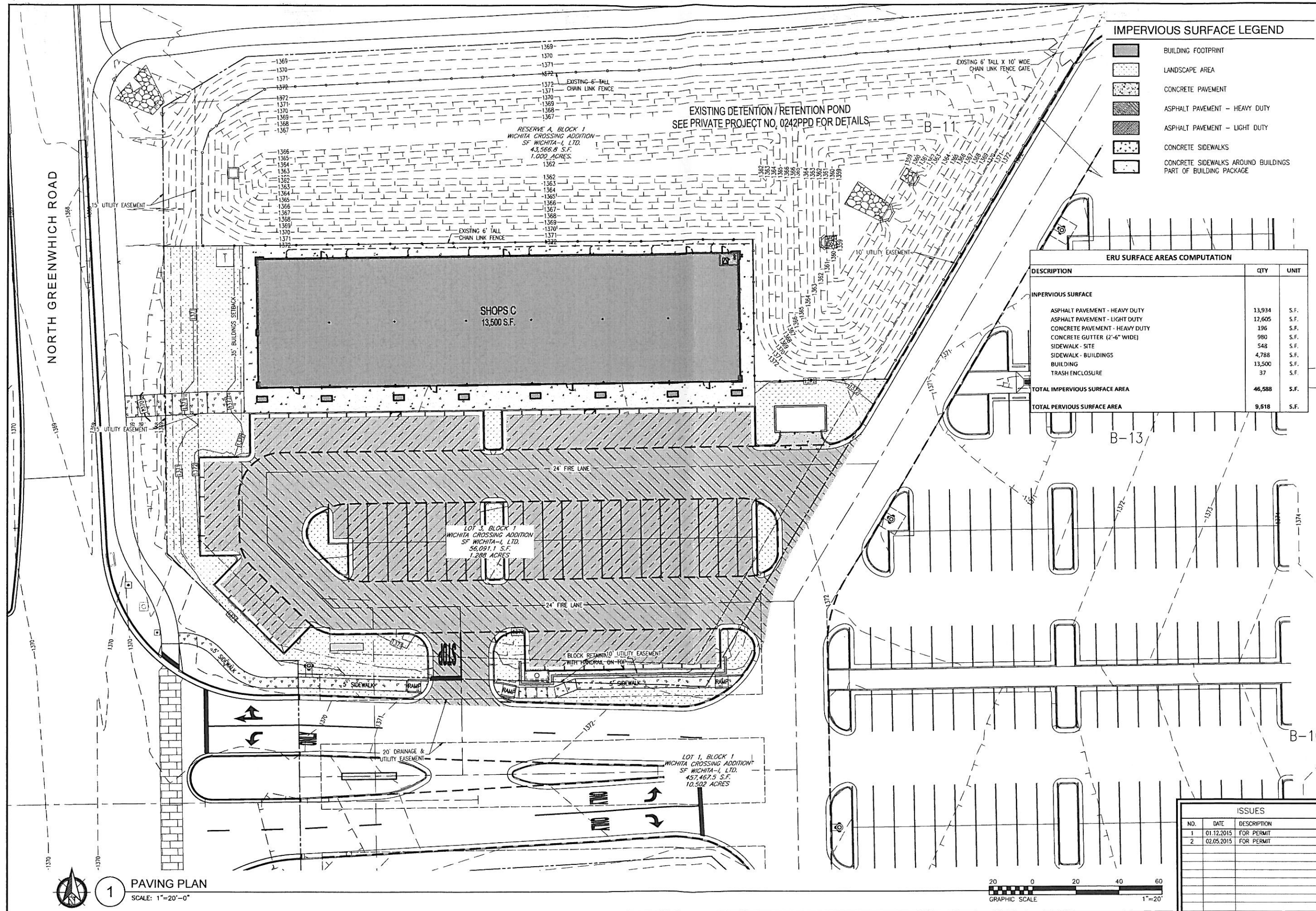
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**CITY OF WICHITA**  
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**SUBDIVISION DEVELOPMENT PROCESS**  
CITY ENGINEER  
**GARY JANZEN, P.E.**

PROJECT NUMBER	OCA NUMBER	DATE
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		SHEET 15



**IMPERVIOUS SURFACE LEGEND**

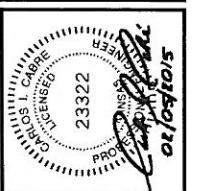
- BUILDING FOOTPRINT
- LANDSCAPE AREA
- CONCRETE PAVEMENT
- ASPHALT PAVEMENT - HEAVY DUTY
- ASPHALT PAVEMENT - LIGHT DUTY
- CONCRETE SIDEWALKS
- CONCRETE SIDEWALKS AROUND BUILDINGS PART OF BUILDING PACKAGE

**ERU SURFACE AREAS COMPUTATION**

DESCRIPTION	QTY	UNIT
<b>IMPERVIOUS SURFACE</b>		
ASPHALT PAVEMENT - HEAVY DUTY	13,934	S.F.
ASPHALT PAVEMENT - LIGHT DUTY	12,605	S.F.
CONCRETE PAVEMENT - HEAVY DUTY	196	S.F.
CONCRETE GUTTER (2'-6" WIDE)	980	S.F.
SIDEWALK - SITE	548	S.F.
SIDEWALK - BUILDINGS	4,788	S.F.
BUILDING	13,500	S.F.
TRASH ENCLOSURE	37	S.F.
<b>TOTAL IMPERVIOUS SURFACE AREA</b>	<b>46,588</b>	<b>S.F.</b>
<b>TOTAL PERVIOUS SURFACE AREA</b>	<b>9,518</b>	<b>S.F.</b>

**SS SURVEY GROUP**  
 DEVELOPMENT & SITE FOR RETAIL/COMMERCIAL  
 5729 LEBANON ROAD, SUITE 144  
 FRISCO, TX 75034  
 T. 214-703-1078 F. 214-407-8912

**WICHITA CROSSING - LOT 3**  
 LOT 3, BLOCK 1, WICHITA CROSSING  
 AN ADDITION TO WICHITA  
 SEDGWICK COUNTY, KANSAS



**Carlos I. Cabré, P.E.**  
 Development & Engineering Consultant  
 2311 W. 10th Street, Suite 202  
 Wichita, Kansas 67202  
 www.cicabre.com

DRAWING TITLE:  
**ERU PLAN**

DATE:  
 FEBRUARY 05, 2015

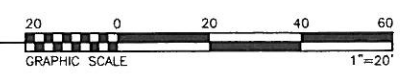
SCALE:  
 1"=20'

JOB NUMBER:  
 12-09

DRAWING NUMBER:  
**ERU-1.0**

**ISSUES**

NO.	DATE	DESCRIPTION
1	01.12.2015	FOR PERMIT
2	02.05.2015	FOR PERMIT



**1 PAVING PLAN**  
 SCALE: 1"=20'-0"