

WATER DISTRIBUTION SYSTEM IMPROVEMENTS

TO SERVE

AVALON PARK 3RD AND 4TH - PHASE 1

OCA NO. 735367

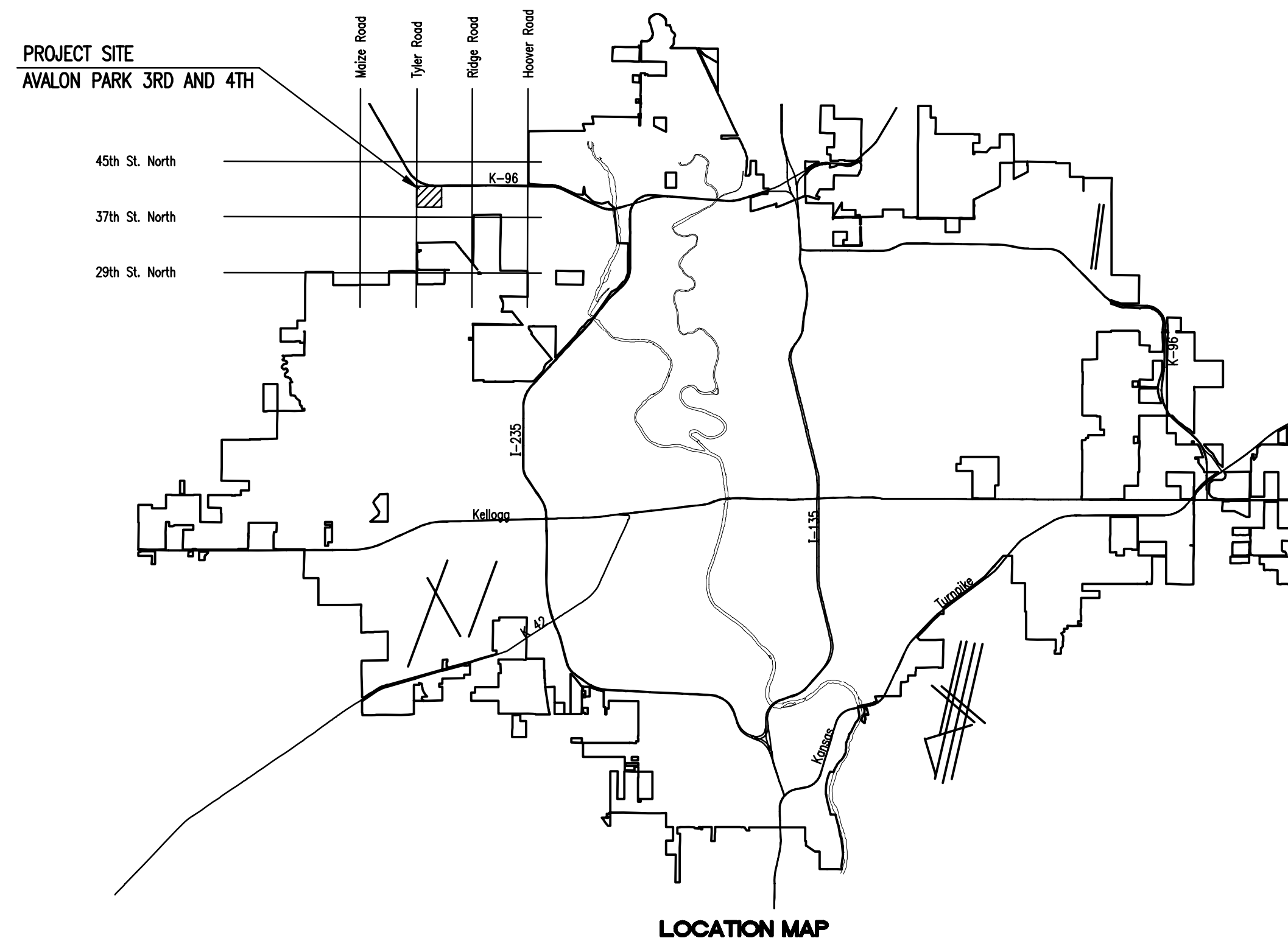
CITY OF WICHITA PROJECT NO. 448-90225

CITY OF WICHITA, KANSAS

JAMES L. ARMOUR, P.E. - CITY ENGINEER

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CONSTRUCTION SCHEDULE/SEQUENCE

THE CONTRACTOR FOR EACH OF THE FOLLOWING AVALON PARK 3RD AND 4TH PROJECTS SHALL COORDINATE THEIR EFFORTS WITH OTHER CONTRACTORS PERFORMING WORK IN THIS AREA SUCH THAT ANY NECESSARY SIMULTANEOUS CONSTRUCTION CAN PROCEED CONCURRENTLY WITHOUT CAUSING UNDUE DELAYS SO THAT CONSTRUCTION CAN BE COMPLETED WITHIN THE TIME FRAMES AS NOTED.

SANITARY SEWER (468-84216)
THE CONTRACTOR SHALL SEQUENCE HIS WORK TO COMPLETE, INCLUDING TESTING AND ACCEPTANCE, THE FOLLOWING WORK: LINE 1 IN ITS ENTIRETY, LINE 3 IN ITS ENTIRETY, LINE 4 IN ITS ENTIRETY, AND THEN COMPLETE ALL REMAINING WORK. ALL WORK ON THE AVALON PARK 3RD AND 4TH - PHASE 1 SANITARY SEWER PROJECT SHALL BE COMPLETED BY SEPTEMBER 11, 2007.

WATER DISTRIBUTION SYSTEM (448-90225)
THE CONTRACTOR SHALL COMPLETE THE AVALON PARK 3RD AND 4TH - PHASE 1 WATERLINE CONSTRUCTION BY OCTOBER 01, 2007. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF WATERLINES WITH THE PAVING CONTRACTOR SO THAT STORM SEWERS CROSSING BELOW PROPOSED WATERLINES WILL BE INSTALLED PRIOR TO WATERLINE CONSTRUCTION.

STORM WATER DRAIN (468-84217)
THE CONTRACTOR SHALL COMPLETE AVALON PARK 3RD AND 4TH - PHASE 3 STORM WATER DRAIN CONSTRUCTION BY OCTOBER 14, 2007.

STREETS/DRAINAGE (472-84441)
THE CONTRACTOR SHALL COMPLETE AVALON PARK 3RD AND 4TH - PHASE 1 STREETS/DRAINAGE CONSTRUCTION BY DECEMBER 15, 2007. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF STORM SEWERS WITH THE WATERLINE CONTRACTOR SO THAT STORM SEWERS CROSSING BELOW PROPOSED WATERLINES WILL BE INSTALLED PRIOR TO WATERLINE CONSTRUCTION.

JUNE 2007

PLANS PREPARED BY
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

N.W. Corner SW 1/4, Sec. 28
Twp. 26S, R-1-W
Found 3/4" Iron Pipe
w/ LS875 Cap-Moehring

N.E. Corner SW 1/4, Sec. 28
Twp. 26S, R-1-W
Found 3/4" Rebar

GENERAL NOTES

- ALL ELEVATIONS SHOWN ARE CITY OF WICHITA DATUM. (U.S.G.S. - 1187.4 = CITY DATUM)
- 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 687-2470

THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF AN EMERGENCY:

COX COMMUNICATIONS 262-0661
KANSAS GAS SERVICE 832-3169
WESTAR ENERGY 383-8600
AQUILA NETWORK 1(800)-527-0357
AT&T 1(800)-870-8390
CITY OF WICHITA WATER DEPARTMENT 262-6000
CITY OF WICHITA SEWER MAINTENANCE 262-6000
- ALL WATER MAINS AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF WICHITA, KANSAS STANDARD SPECIFICATIONS.
- THE WATER MAIN SHALL BE CONSTRUCTED ON THE ALIGNMENT SHOWN BY THE PLANS. 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 COST FOR ANY NECESSARY TREE TRIMMING, CLEARING AND/OR GRUBBING SHALL BE SUBSIDIARY TO SITE CLEARING.
- 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 REOPENED AS NEW CONSTRUCTION PERMITS. PROJECT INSPECTOR MUST ASCERTAIN THAT ANY VALVE CLOSED BY THE CONTRACTOR IS REOPENED. CONTRACTOR WILL BE PERMITTED TO OPERATE WATER VALVES ONLY WHEN THE PROJECT INSPECTOR ASSIGNED TO THE PROJECT IS PRESENT.
- THE CONTRACTOR SHALL NOT START WORK ON THE PROJECT UNTIL THE PROJECT INSPECTOR IS ASSIGNED TO THE PROJECT AND IS PRESENT ON THE SITE. ANY WORK DONE WITHOUT INSPECTION WILL BE REQUIRED TO BE UNCOVERED FOR INSPECTION.
- THE CONTRACTOR SHALL GIVE ALL PROPERTY OWNERS AND/OR TENANTS OF DEVELOPED PROPERTY DIRECTLY ADJACENT TO THE CONSTRUCTION OF THIS PROJECT A MINIMUM OF TEN (10) DAYS ADVANCE 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. ALL COSTS FOR THIS WORK SHALL BE SUBSIDIARY TO SITE RESTORATION.
- THE CONTRACTOR SHALL RESTORE ALL DITCHES, SWALES, ROAD SHOULDERS, ENTRANCES, AND BANKLINES TO THEIR ORIGINAL SLOPES AND GRADES EXCEPT AS SHOWN OTHERWISE.
- NO SERVICES WILL BE INSTALLED AS PART OF THIS PROJECT.
- INTERURBAN TRAFFIC GENERATED OUTSIDE THE PROJECT AREA AND LOCAL BUSINESS OR RESIDENTIAL TRAFFIC GENERATED WITHIN THE PROJECT AREA ARE TO BE CARRIED THROUGH CONSTRUCTION AS FURTHER PROMULGATED BY PROJECT SPECIAL PROVISIONS. THE CONTRACTOR SHALL UTILIZE BARRICADES, SIGNS, GUARDS, AND FLAGMEN IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES INCLUDING ANY TREES REMOVED AND TREE TRIMMINGS 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 THAT, IN THE OPINION OF THE ENGINEER, 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 ARCHAEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED DISPOSAL LOCATION.
- ALL APPROVED EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE STOCKPILED WITHIN AVALON PARK 3RD AND 4TH ADDITION AT NO ADDITIONAL COST TO THE OWNER. STOCKPILE LOCATIONS SHALL BE AS DIRECTED BY THE DEVELOPER AND IN ACCORDANCE WITH GENERAL NOTE NO. 12 ABOVE.
- ALL LAWN/TURF AREAS DISTURBED BY CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE RESTORED WITH THE SAME GRASS/SOD AS EXISTING. RESTORATION OF DISTURBED AREAS SHALL INCLUDE, BUT NOT BE LIMITED TO, TOP SOIL PREPARATION, SEEDING, MULCH, AND/OR RESEEDING. ALL SEEDING/SODDING WORK SHALL BE IN ACCORDANCE WITH THE CITY OF WICHITA STANDARD SPECIFICATIONS AND THE CITY OF WICHITA ADMINISTRATIVE REGULATION NO. AR78 WHICH GOVERNS CLEANUP AND RESTORATION OR REPLACEMENT FOLLOWING CONSTRUCTION. ALL COSTS FOR THIS WORK SHALL BE SUBSIDIARY TO THE LUMP SUM PRICE BID FOR "SITE RESTORATION".
- THE CONTRACTOR SHALL SEED ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES WITH TEMPORARY RYE GRASS. RYE GRASS SEED SHALL BE PLANTED AT A MINIMUM RATE OF SIX (6) POUNDS PER ONE THOUSAND (1,000) SQUARE FEET. THIS TEMPORARY SEEDING MAY BE OMITTED ONLY IF OTHER SEEDING IS REQUIRED IN ACCORDANCE WITH GENERAL NOTE NO. 14 ABOVE. TEMPORARY SEEDING OR PERMANENT SEEDING/SODDING SHALL BE APPLIED WITHIN 14 DAYS AFTER THE AREA HAS BEEN DISTURBED.
- EACH BIDDER SHALL VISIT THE SITE OF THE PROJECT BEFORE SUBMITTING THE PROPOSAL FOR THIS WORK SO THAT HE WILL BE FULLY INFORMED OF THE EXISTING FIELD CONDITIONS AND THE OBSTACLES WHICH MIGHT BE ENCOUNTERED. UPON AWARD OF THE CONTRACT THE CONTRACTOR WILL NOT BE GRANTED ANY ADDITIONAL COMPENSATION WITH REGARDS TO TIME AND MONEY FOR CONDITIONS THAT MAY HAVE BEEN EVALUATED DURING ANY INSPECTION OF THE SITE.
- THE CONTRACTOR SHALL INSTALL AND/OR MAINTAIN EROSION CONTROL METHODS AS SPECIFIED ON SHEETS 12-15. THE FOLLOWING QUANTITIES ARE ESTIMATED, AND SHOULD BE CONSIDERED THE MINIMUM EFFORT REQUIRED. THE GENERAL LOCATION OF THE REQUIRED EROSION CONTROL IS ILLUSTRATED ON THE PROJECT KEY MAP. THE WATERLINE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE EROSION CONTROL SHOWN THROUGHOUT THE COMPLETION OF THIS PROJECT. INSTALLATION OF THESE BMP'S DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF ABATING SOIL EROSION.

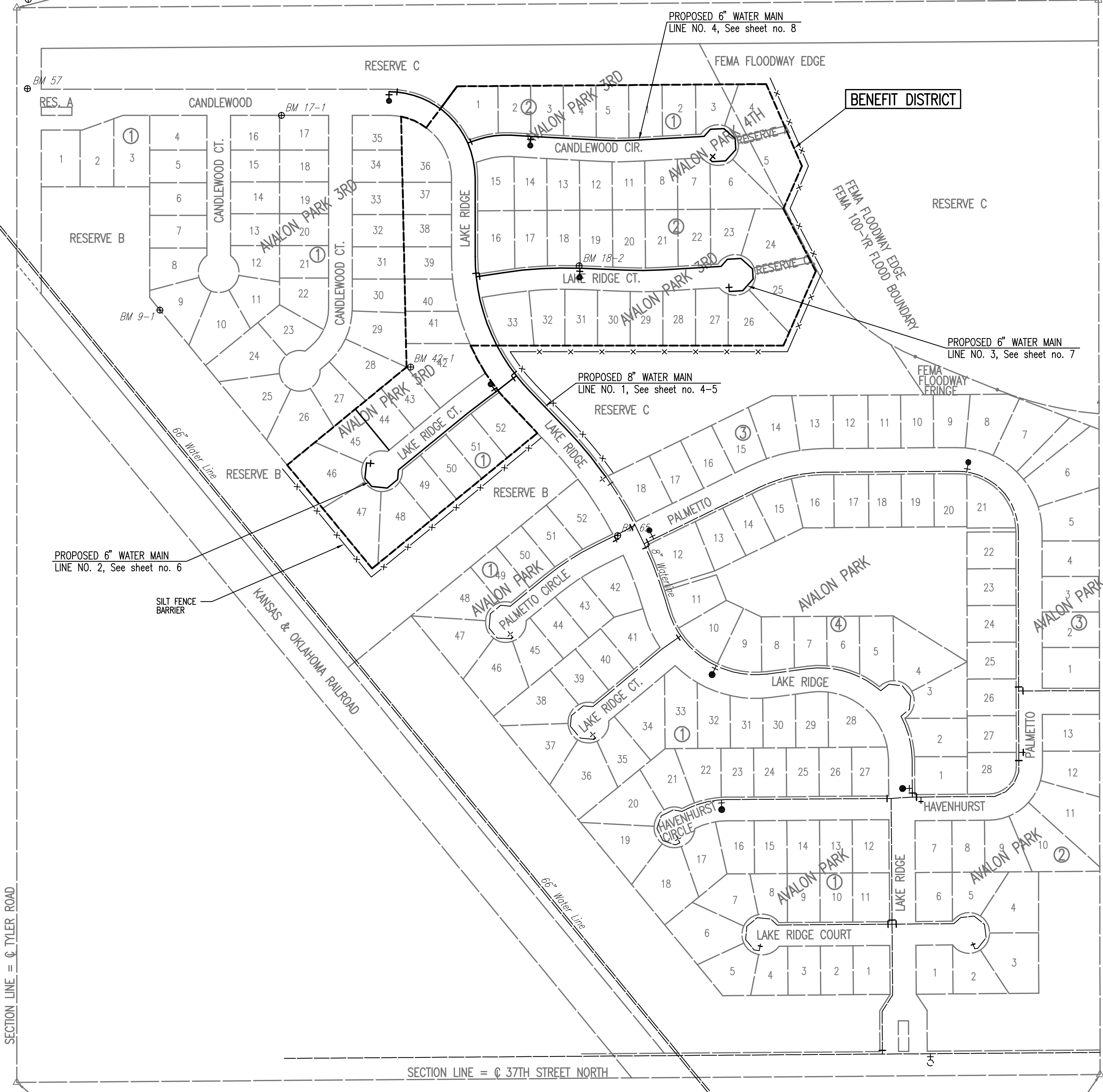
SILT FENCE BARRIER 2,686 L.F.
CONSTRUCTION ENTRANCE 1 EACH

LEGEND

- EXISTING WATER MAIN
- PROPOSED WATER MAIN
- EXISTING WATER VALVE
- PROPOSED WATER VALVE
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- EXISTING BLOW OFF
- PROPOSED BLOW OFF
- PROPOSED HYDRANT TEE w/FUTURE FIRE HYDRANT

BENCHMARK LIST

- BM #57 - CHISELED "d" ON THE S END OF THE RCP AT THE ENTRANCE TO "THE EDGE" PAINT BALL ADVENTURES, ON THE E. SIDE OF TYLER ROAD, BETWEEN THE RAILROAD TRACKS AND K96 HIGHWAY. ELEV. = 153.34
- BM #58 - CHISELED "d" ON THE S END OF THE CONCRETE HEADWALL, ON THE E END OF THE RCB UNDER TYLER ROAD AT THE 1/2 MILE LINE, S OF K96 HIGHWAY. ELEV. = 153.63
- BM #65 - NW CORNER OF LAKE RIDGE AND PALMETTO CIRCLE. ELEV. = 150.58
- BM #9-1 - T-POST, BELOW GRADE, 40' SE OF THE W CORNER OF LOT 9, BLOCK 1, OF AVALON PARK 3RD. ELEV. = 150.95
- BM #17-1 - T-POST, BELOW GRADE, 5' E OF THE NE CORNER OF LOT 17, BLOCK 1, OF AVALON PARK 3RD. ELEV. = 151.13
- BM #18-2 - T-POST, BELOW GRADE, 2' W OF THE SE CORNER OF LOT 18, BLOCK 2, OF AVALON PARK 3RD. ELEV. = 155.85
- BM #42-1 - T-POST, BELOW GRADE, 10' E OF THE W CORNER OF LOT 42, BLOCK 1 OF AVALON PARK 3RD. ELEV. = 150.50



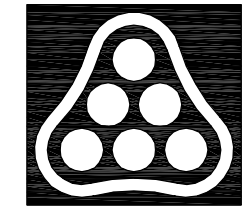
SECTION LINE = C TYLER ROAD

SECTION LINE = C 37TH STREET NORTH

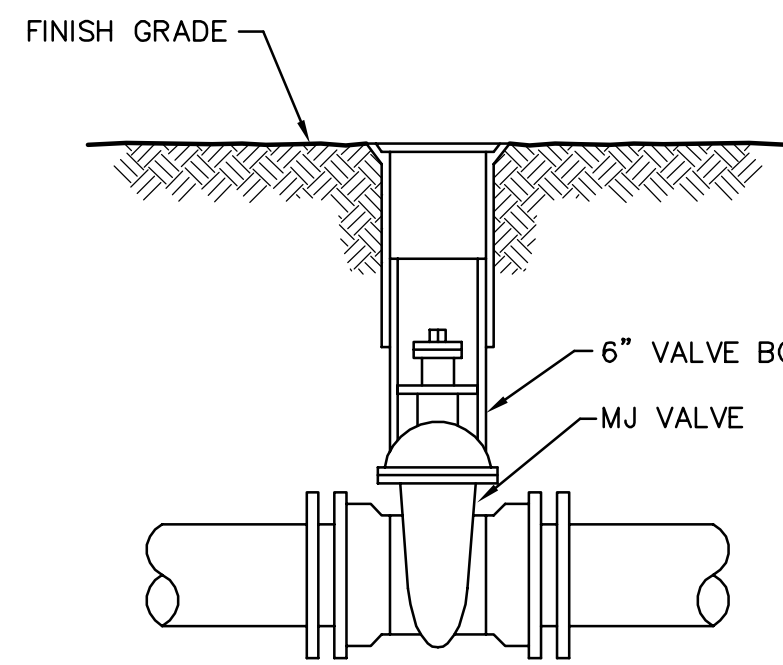
S.W. Cor. SW 1/4,
Sec. 28, Twp. 26S, R-1-W
Found 3/4" Pipe

S.E. Corner SW 1/4,
Sec. 28, Twp. 26S, R-1-W
Found 5/8" Rebar

Served 06-11-2007 9:37:38 AM by JLN
 Plot Scale 1:150 06-11-2007 3:42:11 PM by REFJ
 J:\SENT001\2007\071501\2007-06-12 to City\Waterline\DMG\02-Keymap

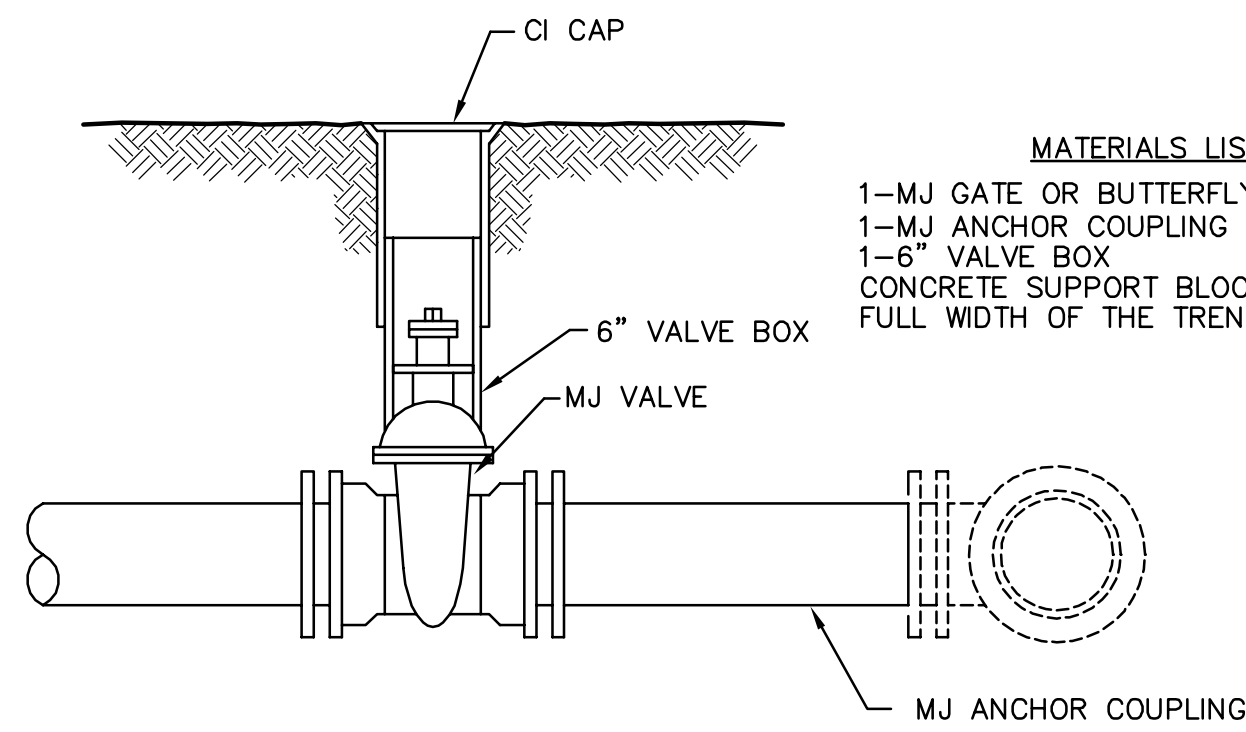


No.	Revision	By	Date
AVALON PARK 3RD & 4TH - PHASE 1 WATERLINE IMPROVEMENTS KEYMAP AND GENERAL NOTES JAMES L. ARMOUR, P.E. - CITY ENGINEER CITY OF WICHITA PROJECT NO. 448-90225 Professional Engineering Consultants, P.A. 303 S. TOPEKA • WICHITA, KANSAS 67202 316-262-2691 • FAX 316-262-3003			
Designed by	MDK	Job No.	35-07150-2-042
Drawn by	JAN	Date	APRIL 2007



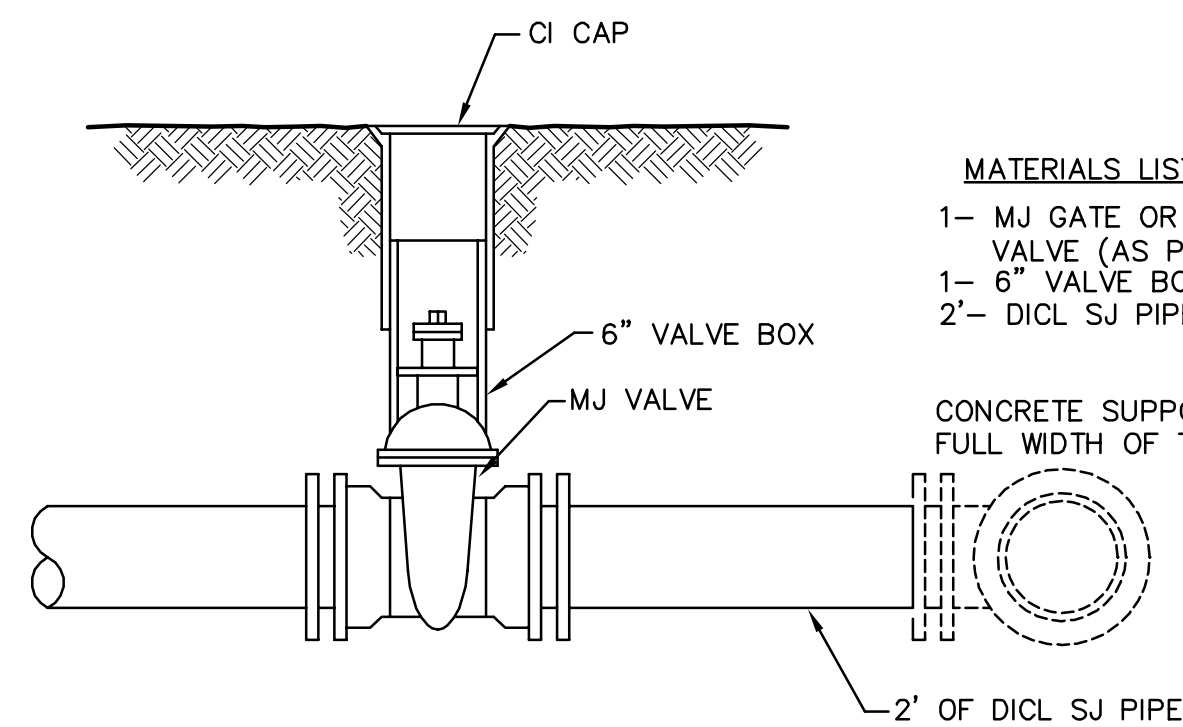
- MATERIALS LIST**
- 1-MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
 - 1-6" VALVE BOX
 - CONCRETE SUPPORT BLOCK SHALL BE FULL WIDTH OF THE TRENCH

LINE VALVE ASSEMBLY



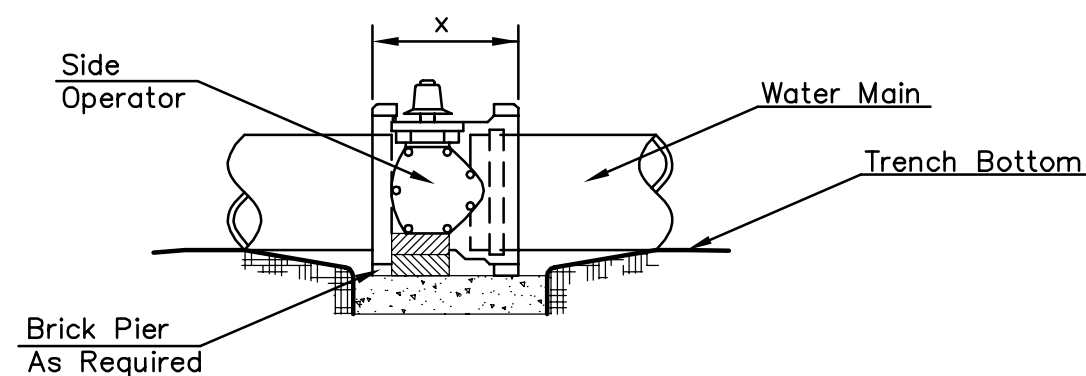
- MATERIALS LIST**
- 1-MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
 - 1-MJ ANCHOR COUPLING (12" OR SMALLER)
 - 1-6" VALVE BOX
 - CONCRETE SUPPORT BLOCK SHALL BE FULL WIDTH OF THE TRENCH

ANCHORED VALVE ASSEMBLY



- MATERIALS LIST**
- 1-MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
 - 1-6" VALVE BOX
 - 2'- DCL SJ PIPE
 - CONCRETE SUPPORT BLOCK SHALL BE FULL WIDTH OF THE TRENCH

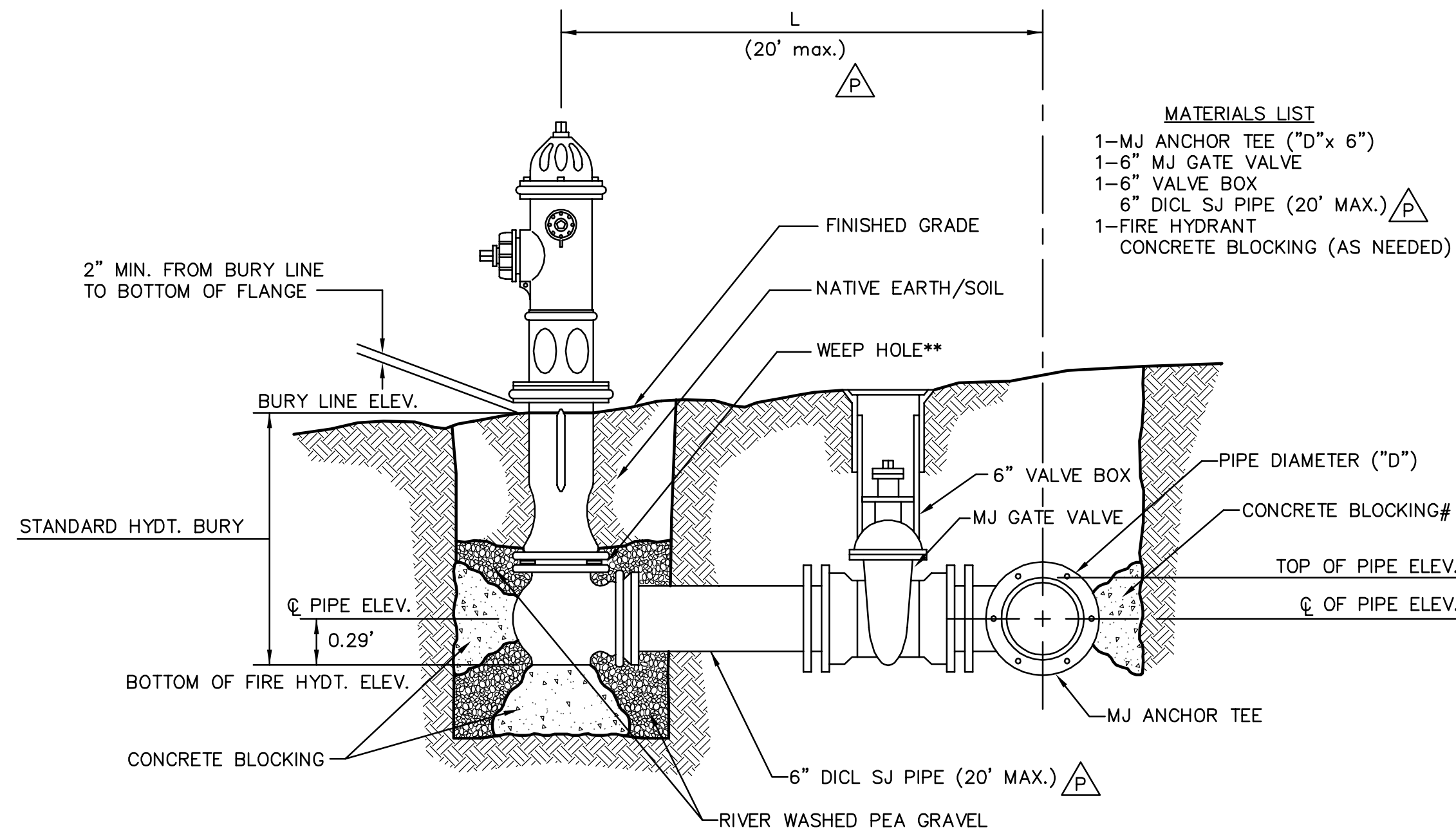
VALVE ASSEMBLY



NOTES

- This detail covers Butterfly Valve installation, inclusive, regardless of type of pipe or joint used. Larger lines to be detailed on plans.
- 6" Valve Box and Cover required per City of Wichita Std. Specifications.
- Conc. Support Block to be full width of trench.

CONCRETE SUPPORT BLOCKING FOR BUTTERFLY VALVE INSTALLATION



- MATERIALS LIST**
- 1-MJ ANCHOR TEE ("D"x 6")
 - 1-6" MJ GATE VALVE
 - 1-6" VALVE BOX
 - 6" DCL SJ PIPE (20' MAX.)
 - 1-FIRE HYDRANT
 - CONCRETE BLOCKING (AS NEEDED)

** CAUTION! WEEP HOLES TO BE KEPT CLEAR DURING CONSTRUCTION AND BACKFILL. CONCRETE FOR THRUST BLOCKING SHALL NOT OBSTRUCT WEEP HOLES. PLACE 1 CUBIC FOOT OF RIVER WASHED PEA GRAVEL AROUND EACH WEEP HOLE.

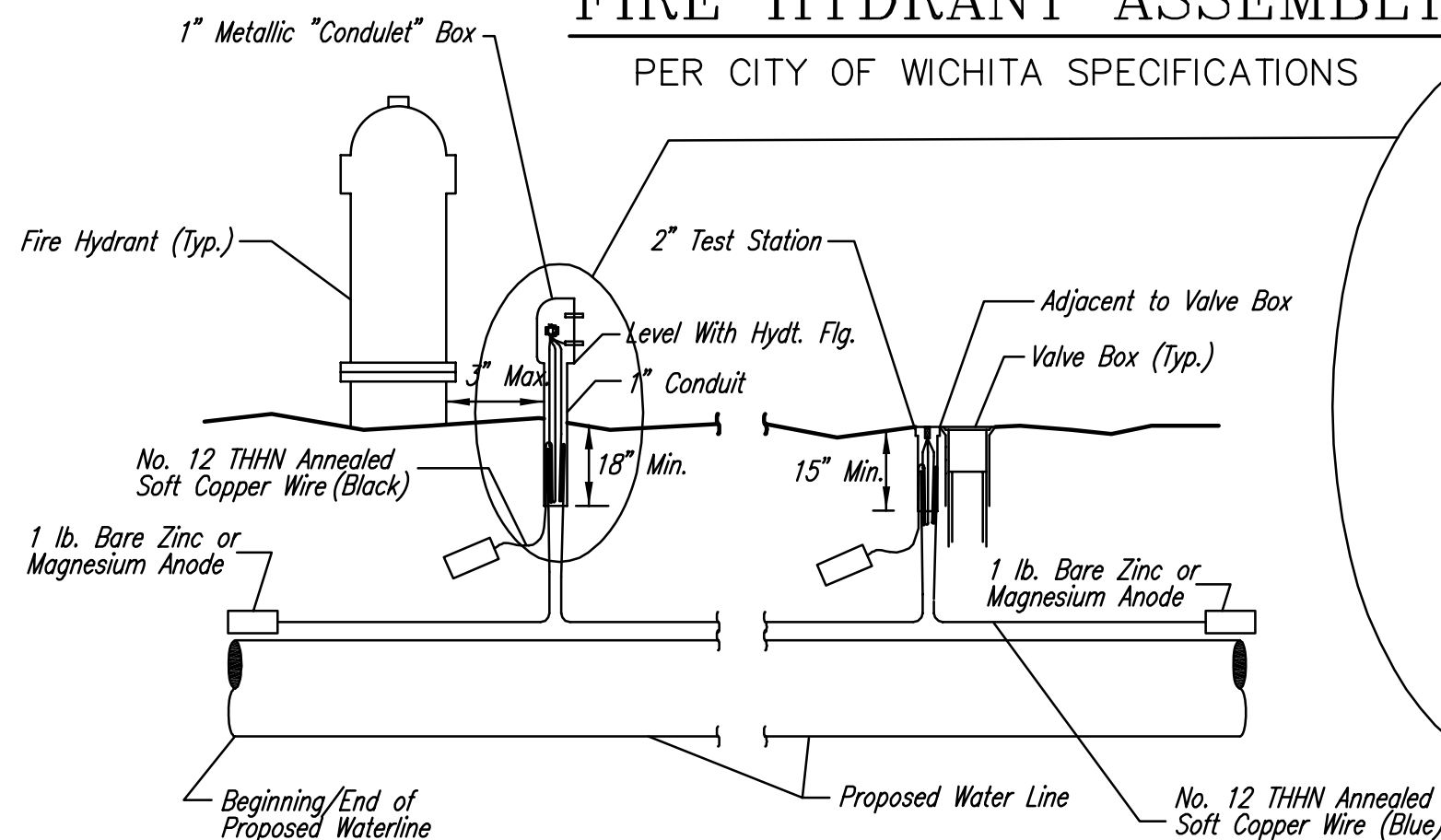
CONCRETE THRUST BLOCKING SHALL BE KEPT CLEAR OF BOLTS, NUTS, AND MJ ACCESSORIES.

* IF HYDRANT BURY IS IN EXCESS OF 5', CONTRACTOR SHALL USE STANDARD 5' HYDRANT BURY AND HYDRANT BARREL EXTENSIONS AS NECESSARY.

FIRE HYDRANTS REQUIRED

STATION	BURY LINE ELEVATION	TOP OF PIPE ELEVATION	FIRE HYDRANT BURY REQUIRED*
WL 1, Sta. 11+69.82	153.4	149.57	4.5'
WL 2, Sta. 0+63.00	151.1	147.27	4.5'
WL 3, Sta. 2+55.48	155.9	152.07	4.5'
WL 4, Sta. 1+57.01	155.7	151.87	4.5'

FIRE HYDRANT ASSEMBLY



TRACER WIRE

Conductive type pipe locator/tracer wire shall be installed to locate all waterline pipe regardless of pipe material. The wire shall extend the entire length of the proposed pipe. The wire shall be taped to the waterline and pulled with the pipe. Split-bolt connectors shall be used at splice locations. Electrical tape shall cover all splices so no bare wire is exposed. Test stations shall be installed adjacent to all fire hydrants along the waterline and at blowoffs or valves near the ends of the waterlines. Any exceptions to the location of test stations shall be approved by the engineer. At each test station, the tracer wire shall be connected to a 1 lb. Zinc or magnesium anode. Anodes shall also be attached to the tracer wire at both the beginning and the end of the proposed waterline. A typical layout of the tracer wire and test station is provided in the above figure.

WIRE

The tracer wire shall be Blue No. 12 THHN annealed soft copper wire with thermal plastic insulation. The insulation shall be heat, oil, and gasoline resistant as manufactured by Temple Electric or approved equal. To allow for grade adjustment, a minimum of 12" of excess wire shall be coiled at the bottom of the test station for all wires. The insulation sheathing shall be removed such that 1" bare copper wire is exposed at all points of connection. Contractor shall attach wire being installed with proposed water main to any tracer wire installed with adjacent waterline projects.

TEST STATIONS

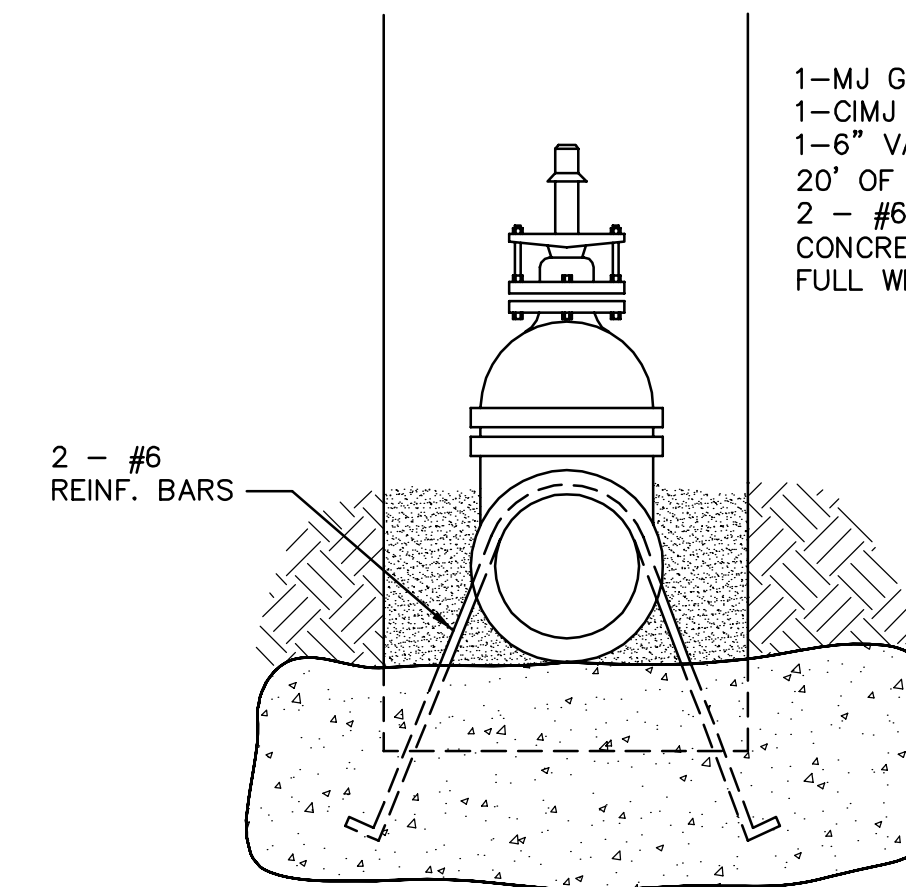
The test station for fire hydrant applications shall be a 1 inch galvanized "condulet" style test station as manufactured by AGRA Industries with a removable solid cover having two leads extending from the face or approved equal. The test station for valve applications shall be 2 inch flush style test station T2PS3B as manufactured by HANDLEY Industries or approved equal. The "condulet" style test station shall be attached to a 1 inch rigid galvanized conduit with a minimum length of 36" and plastic end bushing. The flush style shall have the word "WATER" stamped or molded into the lid. All test stations shall be manufactured using molded blue tops or sufficiently coated with blue enamel paint. The tracer wire and the anode wire shall be installed to allow 10 inches of wire within the test station. In concrete environments such as sidewalks or in the downtown area the contractor shall use the flush style test station. The location of all test stations shall be approved by the engineer, recorded, and shown in the as-built drawings.

ANODES

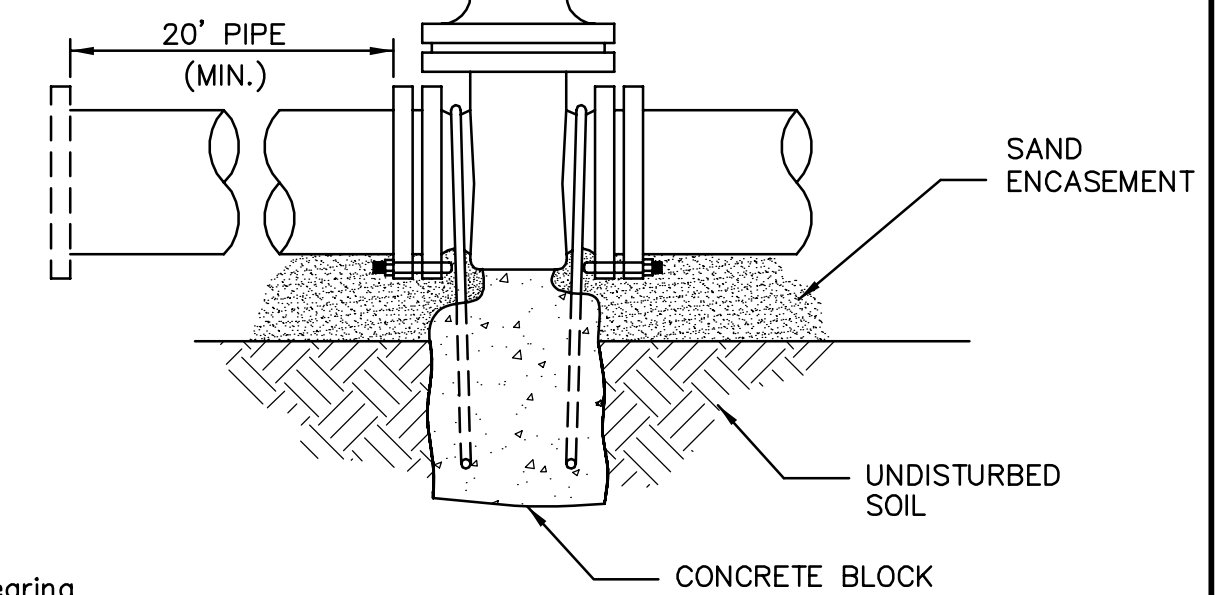
The anodes shall be 1 lb. bare zinc or magnesium. The anodes shall be buried at the same elevation as the waterline at each test station. The anodes shall be connected to Black No. 12 THHN annealed soft copper wire which shall be extended to the test station.

TRACER WIRE DETAIL

COST IS SUBSIDIARY TO PIPE INSTALLATION



- MATERIALS LIST**
- 1-MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
 - 1-CIMJ CAP WHEN NECESSARY
 - 1-6" VALVE BOX
 - 20' OF PIPE (BID WITH PIPE)
 - 2 - #6 REINF. BARS
 - CONCRETE SUPPORT BLOCK SHALL BE FULL WIDTH OF THE TRENCH



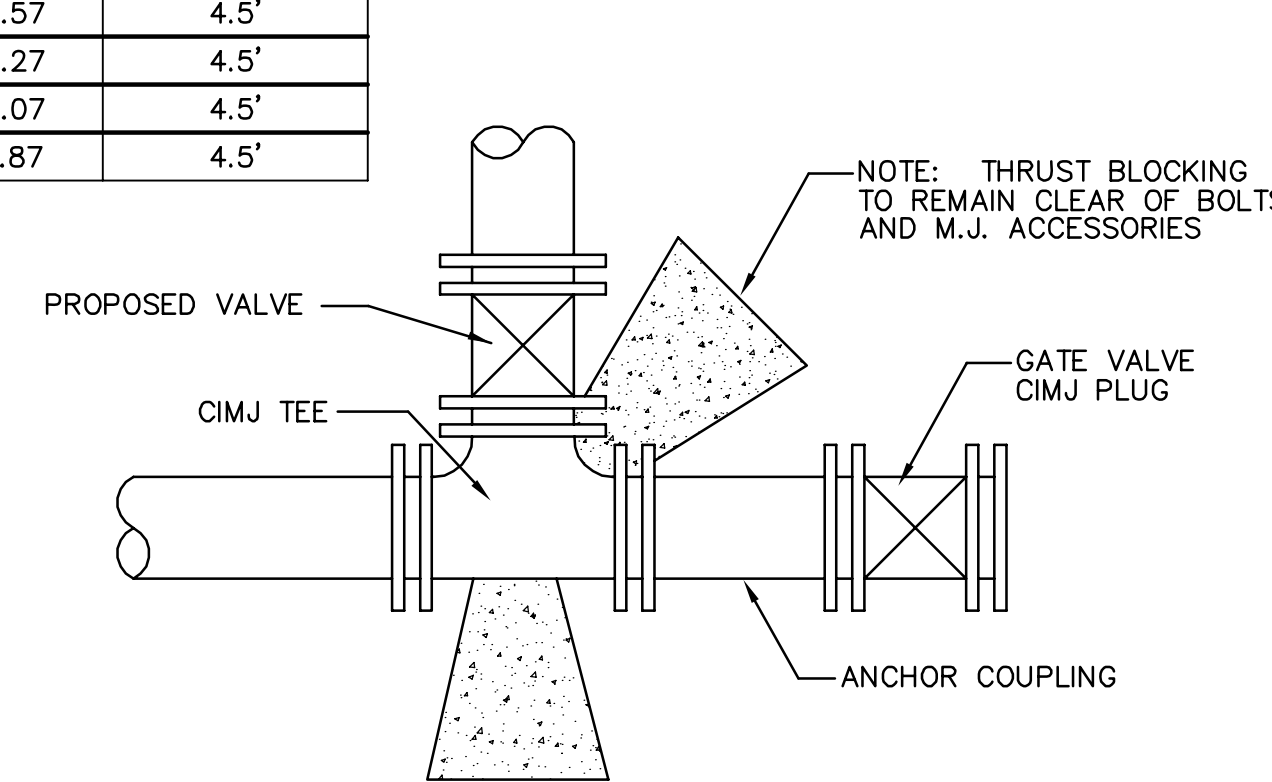
Notes:

- Concrete Block at Valve to have sufficient bearing in undisturbed soil to prevent thrust movement as shown in table at right. Field Engineer to determine thrust loading of undisturbed soil and final size of thrust block.
- The thrust block shall be constructed such that bolts, nuts, and other MJ accessories are kept clear of concrete.
- All valves at dead ends and at other locations as called out on the plans shall be blocked as shown here.

THRUST AT VALVES

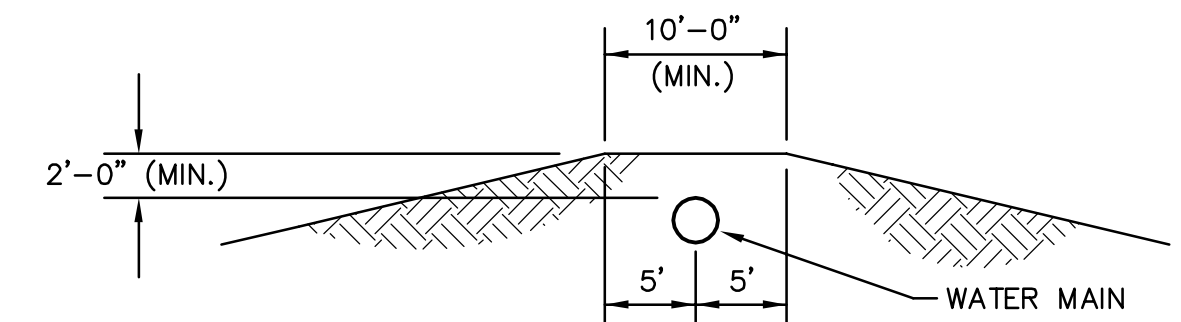
VALVE	THRUST AT 150 #/in ²
4"	1809 lbs.
6"	4245 lbs.
8"	7540 lbs.
12"	16965 lbs.

ANCHORED VALVE ASSEMBLY, SPECIAL



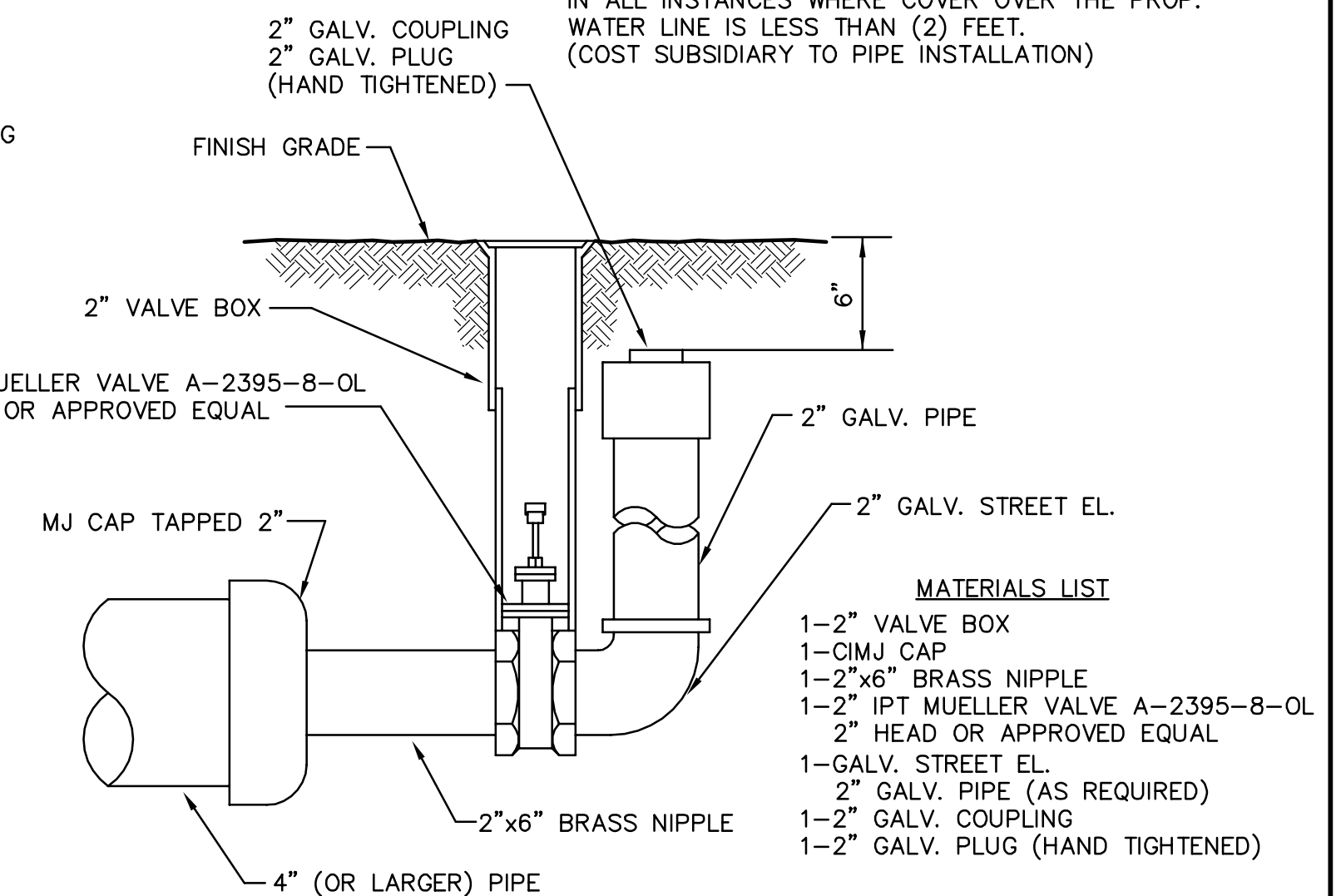
KEY BLOCK DETAIL

2 Blue Wires and 1 Black Wire All Connected to Single Test Lead With Split Bolt Connection and Blue No. 12 THHN Annealed Soft Copper Wire



PROTECTIVE FILL DETAIL

MINIMUM PROTECTIVE FILL SHALL BE PROVIDED IN ALL INSTANCES WHERE COVER OVER THE PROP. WATER LINE IS LESS THAN (2) FEET. (COST SUBSIDIARY TO PIPE INSTALLATION)



2" BLOWOFF ASSEMBLY

- MATERIALS LIST**
- 1-2" VALVE BOX
 - 1-CIMJ CAP
 - 1-2"x6" BRASS NIPPLE
 - 1-2" IPT MUELLER VALVE A-2395-8-OL
 - 1-2" HEAD OR APPROVED EQUAL
 - 1-GALV. STREET EL.
 - 2" GALV. PIPE (AS REQUIRED)
 - 1-2" GALV. COUPLING
 - 1-2" GALV. PLUG (HAND TIGHTENED)

- Revised: 01-07-05 per CITY
- Revised: 10-06-04 by PEC
- Revised: 08-14-01, CITY
- Revised: 11-13-00, MCG
- Revised: 6-7-00, MCG

THE CITY OF WICHITA

CITY ENGINEER'S OFFICE
455 NORTH MAIN STREET
WICHITA, KANSAS 67202
(316) 268-4500
(316) 268-4114 FAX

STANDARD WATER ASSEMBLY DETAILS

JAMES L. ARMOUR, P.E. - CITY ENGINEER

PROJECT NUMBER 448-90225 OCA NO. 735367

DATE DEC 98 SHEET 3 OF 15

PLAN
 CHECKED
 BY
 DATE

PROFILE
 CHECKED
 BY
 DATE

WL CURVE DATA
 $\Delta=7^{\circ}57'47''$ Lt D= 5' 35' 3.8" R= 1026.00' L= 142.60' T= 71.41' E= 2.48'
 CURVE DATA BASED ON \odot RADIUS $\Delta/2= 3^{\circ} 58' 53.5''$

WL STATION	WL ARC LENGTH	CHORD LENGTH ON 6' OFFSET Right	DEFLECTION ANGLE	TOTAL DEFLECTION
PC 0+15.00			0°00'00.0"	0°00'00.0"
0+25.00	10.00'	10.06'	0°16'45.2"	0°16'45.2"
0+50.00	25.00'	25.15'	0°41'53.0"	0°58'38.2"
0+75.00	25.00'	25.15'	0°41'53.0"	1°40'31.1"
1+00.00	25.00'	25.15'	0°41'53.0"	2°22'24.1"
VB 1+20.00	20.00'	20.12'	0°33'30.4"	0°25'54.5"
1+25.00	5.00'	5.03'	0°08'22.6"	0°34'17.1"
VB 1+40.00	15.00'	15.09'	0°25'07.8"	0°39'24.9"
1+50.00	10.00'	10.06'	0°16'45.2"	0°46'10.1"
1+57.60	7.60'	7.64'	0°12'43.9"	0°58'53.5"
PT 1+57.60	0.00'	0.00'	0°00'00.0"	0°58'54.0"
TOTAL	L= 142.60'		Defl./ft.= 1.675315 min.	

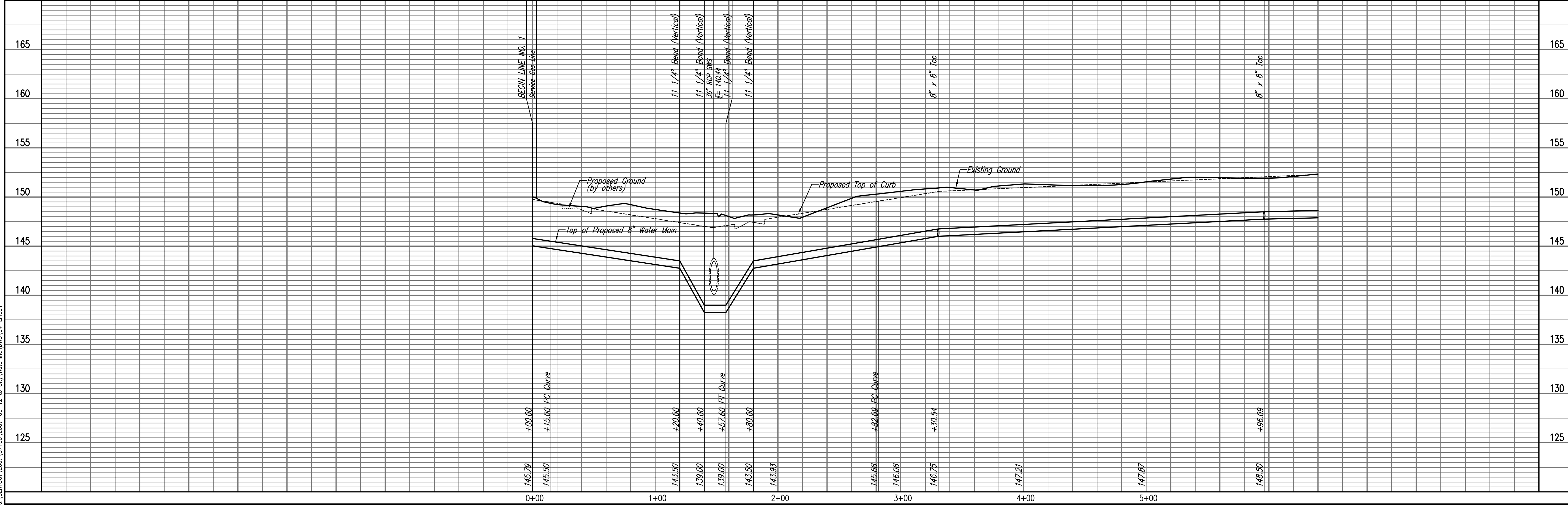
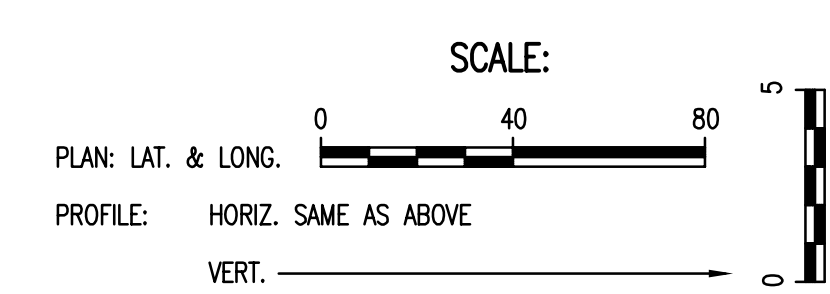
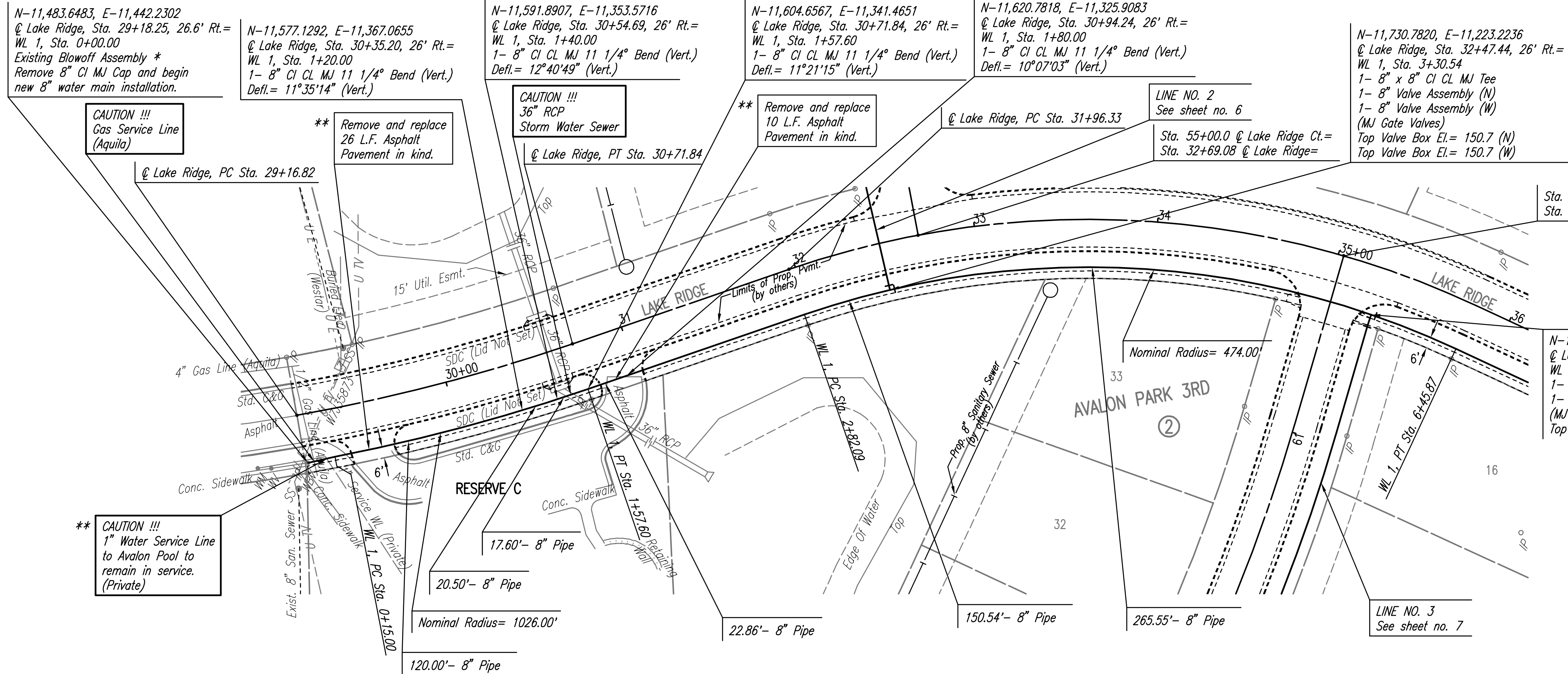
WL CURVE DATA
 $\Delta=43^{\circ}58'21''$ Rt D= 12' 5' 15.8" R= 474.00' L= 363.78' T= 191.38' E= 37.18'
 CURVE DATA BASED ON \odot RADIUS $\Delta/2= 21^{\circ} 59' 10.5''$

WL STATION	WL ARC LENGTH	CHORD LENGTH ON 6' OFFSET Right	DEFLECTION ANGLE	TOTAL DEFLECTION
PC 2+82.09			0°00'00.0"	0°00'00.0"
3+00.00	17.91'	17.68'	1°04'56.8"	01°04'56.8"
3+25.00	25.00'	24.68'	1°30'39.5"	02°35'36.3"
TEE 3+30.54	5.54'	5.47'	0°20'05.4"	02°55'41.7"
3+50.00	19.46'	19.21'	1°10'34.1"	04°06'15.8"
3+75.00	25.00'	24.68'	1°30'39.5"	05'36'55.3"
4+00.00	25.00'	24.68'	1°30'39.5"	07'07'34.8"
4+25.00	25.00'	24.68'	1°30'39.5"	08'38'14.2"
4+50.00	25.00'	24.68'	1°30'39.5"	10'08'53.7"
4+75.00	25.00'	24.68'	1°30'39.5"	11'39'33.2"
5+00.00	25.00'	24.68'	1°30'39.5"	13'10'12.7"
5+25.00	25.00'	24.68'	1°30'39.5"	14'40'52.1"
5+50.00	25.00'	24.68'	1°30'39.5"	16'11'31.6"
5+75.00	25.00'	24.68'	1°30'39.5"	17'42'11.1"
TEE 5+96.09	21.09'	20.82'	1°16'28.7"	18'58'39.8"
6+00.00	3.91'	3.86'	0°14'10.7"	19'12'50.6"
6+25.00	25.00'	24.68'	1°30'39.5"	20'43'30.0"
PT 6+45.87	20.87'	20.60'	1°15'40.9"	21'59'10.6"
TOTAL	L= 363.78'		Defl./ft.= 3.626315 min.	

* PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE THE EXISTING 8" WATERLINE AT STATION 0+00.00 TO VERIFY PIPE SIZE, TYPE, FITTINGS, AND HORIZONTAL AND VERTICAL LOCATION. THE CONTRACTOR SHALL REPORT HIS FINDINGS TO THE ENGINEER SO THAT ANY NECESSARY PLAN MODIFICATIONS CAN BE MADE. ANY ADDITIONAL LABOR OR MATERIALS NECESSARY TO COMPLETE THE CONNECTION SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT.

** Contractor shall maintain access to Avalon Park Pool. Coordinate with Marv Schellenberg at (316) 992-4653.

Unless noted otherwise, elevations shown are top of pipe



Professional Engineering Consultants, P.A.
 803 S. TOPKA AVENUE, KANSAS CITY, MO 64108
 316-262-2691 • FAX 316-262-3003

Designed By MDK
 Drawn By JAN

Job No. 35-07150-002-042
 Date APRIL 2007

AVALON PARK 3RD & 4TH - PHASE 1
 WATERLINE IMPROVEMENTS
 WATERLINE NO. 1

JAMES L. ARMOUR, P.E. - CITY ENGINEER
 CITY OF WICHITA PROJECT NO. 448-90225

Sheet 4 of 15

Saved: 06-11-2007 9:45:58 AM by JAN
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PLAN
 CHECKED
 BY
 DATE

WL CURVE DATA				
Δ=90° 0' 0" Lt D=27' 9" 15.8" R=211.00' L=331.44' T=211.00' E=87.4'				
CURVE DATA BASED ON C RADIUS Δ/2=45° 0' 0"				
WL STATION	WL ARC LENGTH	CHORD LENGTH ON 6' OFFSET Right	DEFLECTION ANGLE	TOTAL DEFLECTION
PC 8+38.38			0° 00' 00.0"	0° 00' 00.0"
8+50.00	11.62'	11.95'	1° 34' 39.6"	01° 34' 39.6"
8+75.00	25.00'	25.70'	3° 23' 39.5"	04° 58' 19.1"
9+00.00	25.00'	25.70'	3° 23' 39.5"	08° 21' 58.6"
9+25.00	25.00'	25.70'	3° 23' 39.5"	11° 45' 38.1"
9+49.82	24.82'	25.51'	3° 22' 11.5"	15° 07' 49.6"
9+74.64	24.82'	25.51'	3° 22' 11.5"	18° 30' 01.1"
10+00.00	25.00'	25.70'	3° 23' 39.5"	21° 53' 40.6"
10+25.00	25.00'	25.70'	3° 23' 39.5"	25° 17' 20.1"
10+50.00	25.00'	25.70'	3° 23' 39.5"	28° 41' 00.6"
10+75.00	25.00'	25.70'	3° 23' 39.5"	32° 04' 40.1"
11+00.00	25.00'	25.70'	3° 23' 39.5"	35° 28' 20.6"
11+25.00	25.00'	25.70'	3° 23' 39.5"	38° 52' 00.1"
11+49.82	24.82'	25.51'	3° 22' 11.5"	42° 15' 40.6"
11+74.64	24.82'	25.51'	3° 22' 11.5"	45° 39' 20.1"
PT 11+69.82	19.82'	20.38'	2° 41' 27.5"	48° 03' 00.6"
TOTAL	L=331.44'	Defl./Lt.=8.14632 min.		

LINE NO. 3
 See sheet no. 7

LINE NO. 4
 See sheet no. 8

Sta. 60+00.0 @ Lake Ridge=
 Sta. 35+02.98 @ Lake Ridge Ct.=

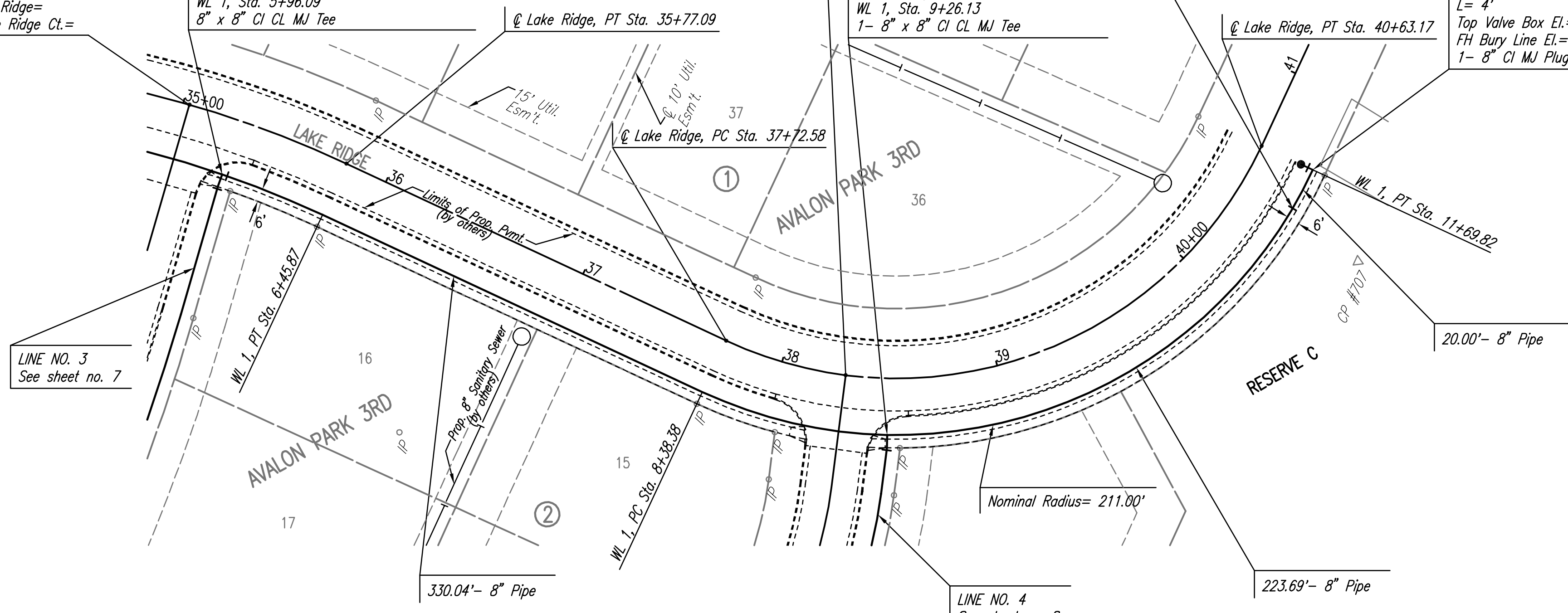
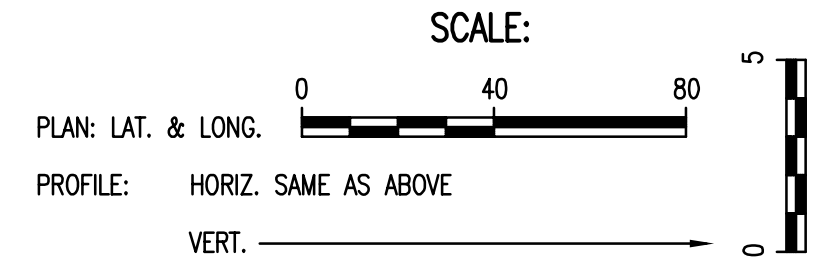
N-11,973.6683, E-11,124.7648
 @ Lake Ridge, Sta. 35+24.58, 26' Rt.=
 WL 1, Sta. 5+96.09
 8" x 8" CI CL MJ Tee

Sta. 70+00.0 @ Candlewood Cir=
 Sta. 38+29.88 @ Lake Ridge =

N-12,301.1124, E-11,104.1667
 @ Lake Ridge, Sta. 38+49.51, 26' Rt.=
 WL 1, Sta. 9+26.13
 1- 8" x 8" CI CL MJ Tee

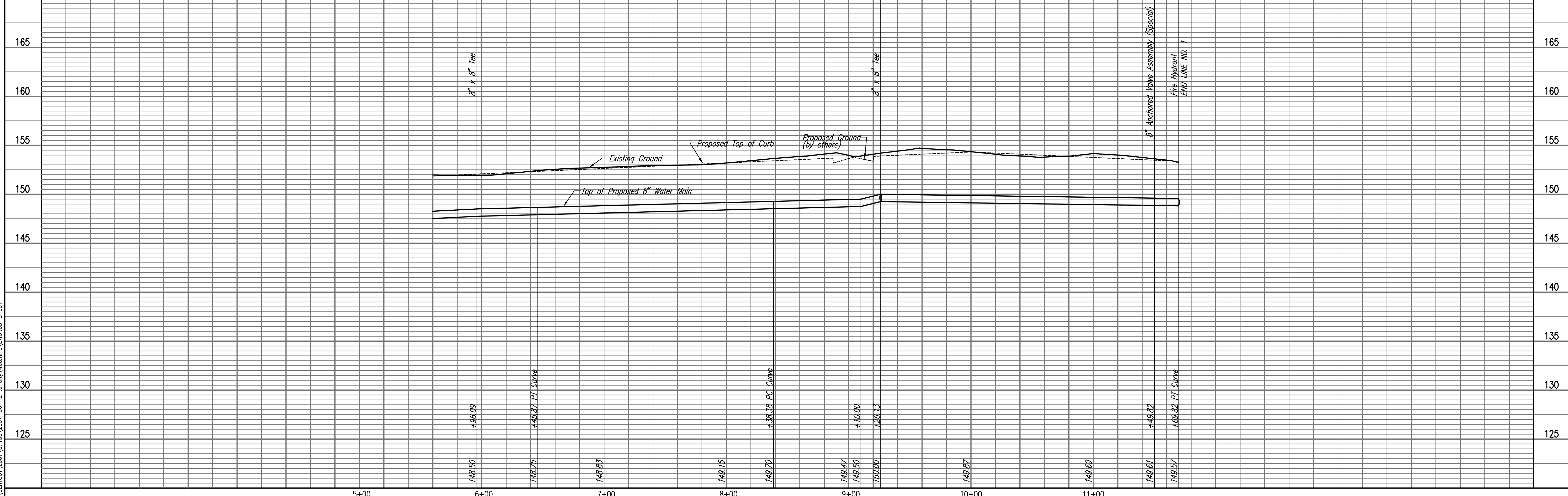
N-12,425.9195, E-10,931.1234
 @ Candlewood, Sta. 40+45.65, 26' Rt.=
 WL 1, Sta. 11+49.82
 1- 8" Anchored Valve Assembly (Special)
 Top Valve Box El.= 153.6

N-12,426.8667, E-10,911.1534
 @ Candlewood, Sta. 40+63.17, 26' Rt.=
 WL 1, Sta. 11+69.82
 1- Fire Hydrant Assembly
 L= 4'
 Top Valve Box El.= 153.5
 FH Bury Line El.= 153.4
 1- 8" CI MJ Plug (W)



Unless noted otherwise, elevations shown are top of pipe

WATERLINE NO. 1



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 Plot Scale: 1/40 06-11-2007 3:40:26 PM by: BCL
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Professional Engineering Consultants, P.A.
 803 S. TOPKA WICHITA, KANSAS 67202
 316-262-2691 • FAX 316-262-3003

Job No. 35-07150-002-042 Date APRIL 2007

Designed By MDK JAN
 Drawn By JAN

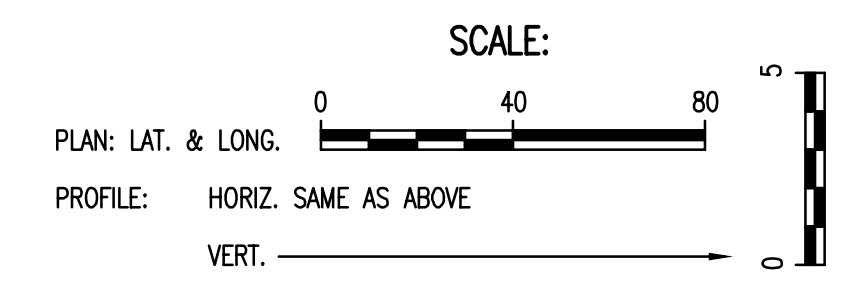
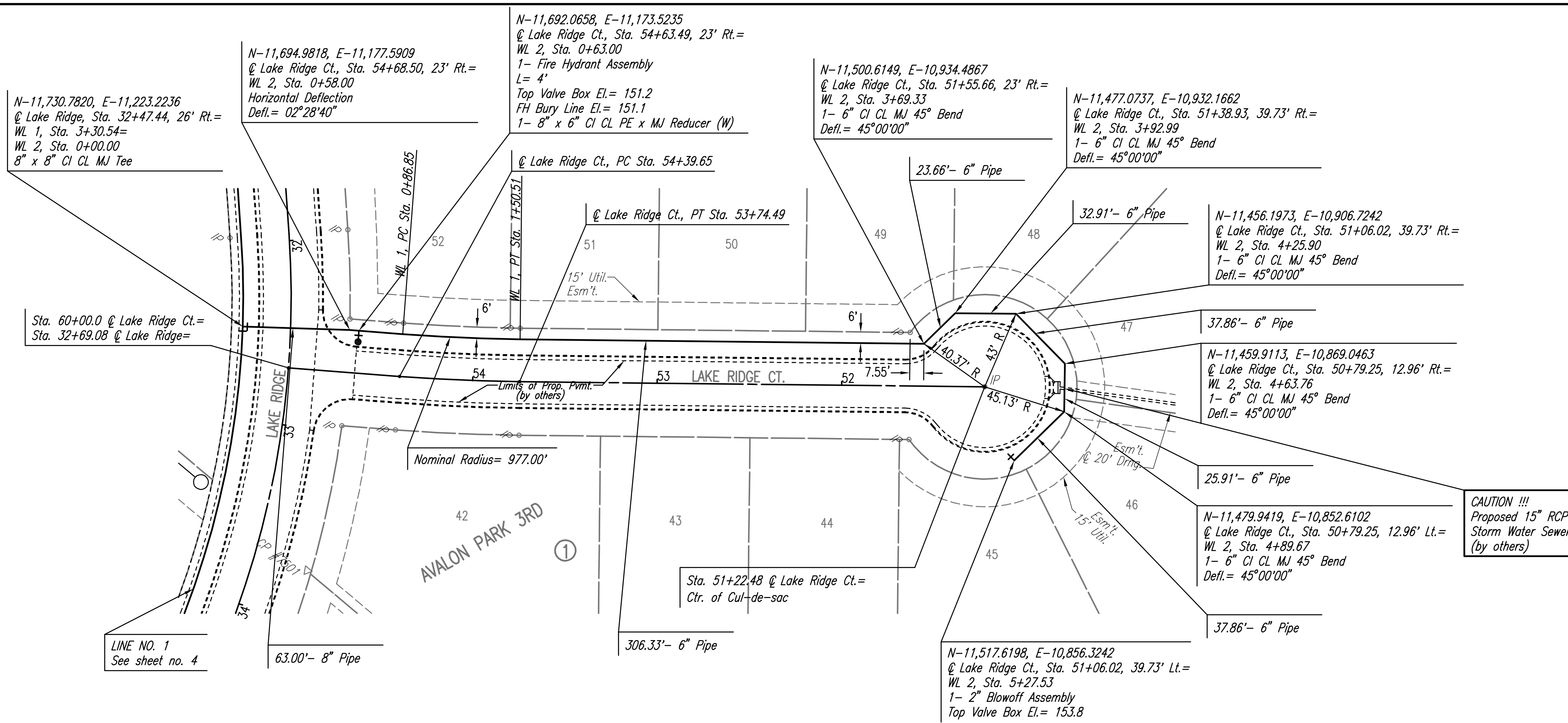
AVALON PARK 3RD & 4TH - PHASE 1
 WATERLINE IMPROVEMENTS
 WATERLINE NO. 1

JAMES L. ARMOUR, P.E. - CITY ENGINEER
 CITY OF WICHITA PROJECT NO. 448-90225

Sheet 5 of 15

BY	DATE
CHECKED	CHECKED
PLAN	

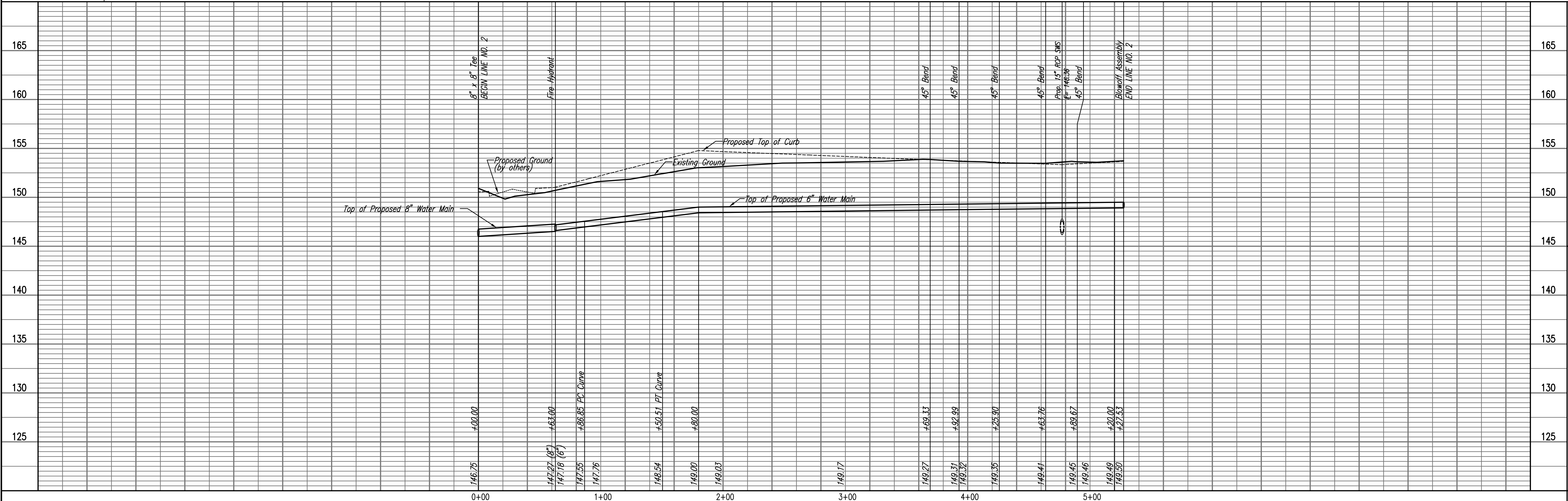
WL CURVE DATA				
A=3°43'59" Lt D=5°51'52.1" R=977.00' L=63.66' T=31.84' E=.520'				
CURVE DATA BASED ON @ RADIUS Δ/2= 1° 51' 59.5"				
WL STATION	WL ARC LENGTH	CHORD LENGTH ON -6' OFFSET Left	DEFLECTION ANGLE	TOTAL DEFLECTION
PC 0+86.85			0°00'00.0"	0°00'00.0"
1+00.00	13.15'	13.07'	0°23'08.1"	0°23'08.1"
1+25.00	25.00'	24.85'	0°43'59.0"	0°17'07.1"
1+50.00	25.00'	24.85'	0°43'59.0"	0°17'07.1"
PT 1+50.51	0.51'	0.51'	0°00'53.8"	0°15'59.5"
TOTAL	L= 63.66'			Defl./ft.= 1.759338 min.



Unless noted otherwise, elevations shown are top of pipe

WATERLINE NO. 2

BY	DATE
CHECKED	CHECKED
PROFILE	



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Job No. 35-07150-002-042 Date APRIL 2007

Designed By MDK JAN
 Drawn By JAN

AVALON PARK 3RD & 4TH - PHASE 1
 WATERLINE IMPROVEMENTS
 WATERLINE NO. 2

JAMES L. ARMOUR, P.E. - CITY ENGINEER
 CITY OF WICHITA PROJECT NO. 448-90225

Sheet 6 of 15

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DATE
BY
CHECKED
PLAN

DATE
BY
CHECKED
PROFILE

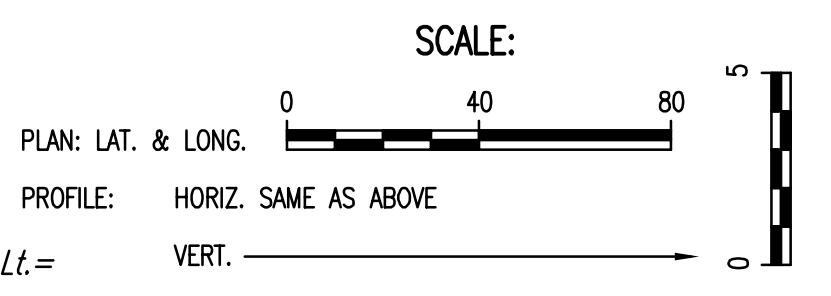
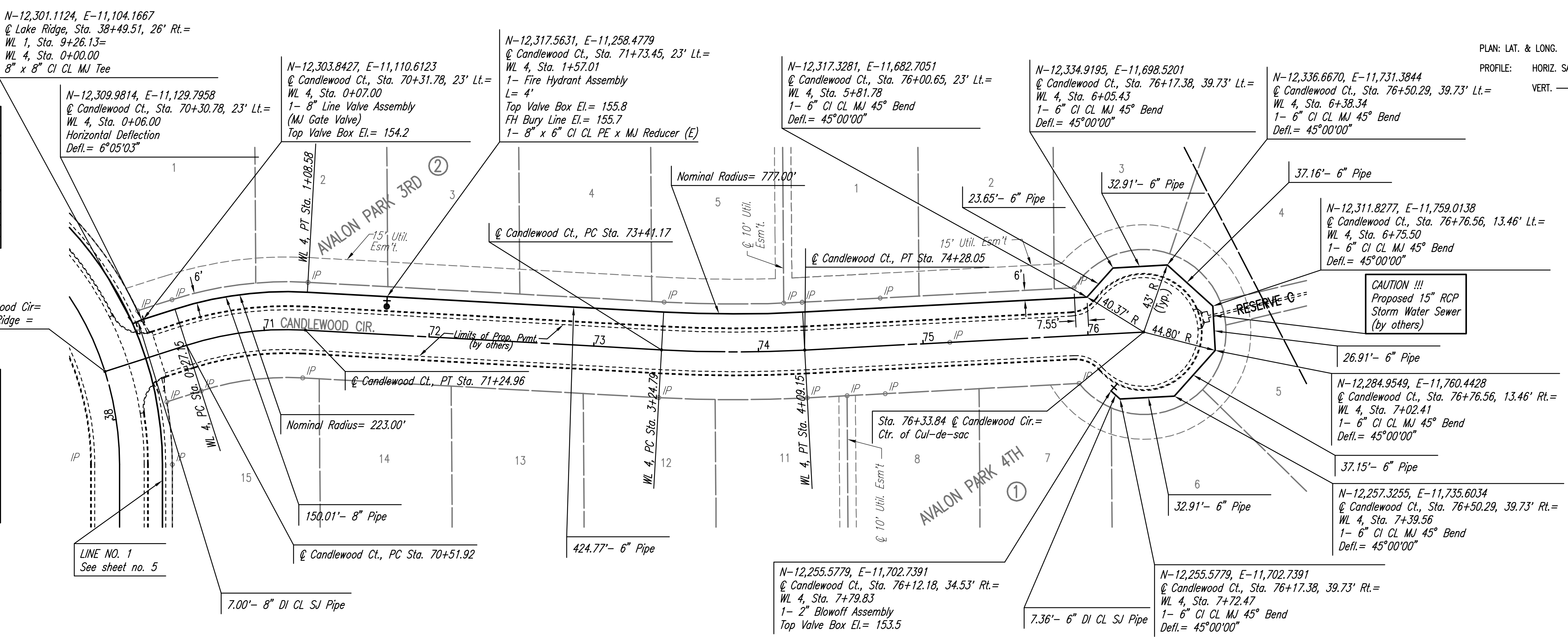
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WL CURVE DATA
 $\Delta=20^{\circ}55'22''$ Rt D= 25' 41' 35.4" R= 223.00' L= 81.43' T= 41.18' E= 3.77'
 CURVE DATA BASED ON \hat{C} RADIUS $\Delta/2= 10^{\circ} 27' 41''$

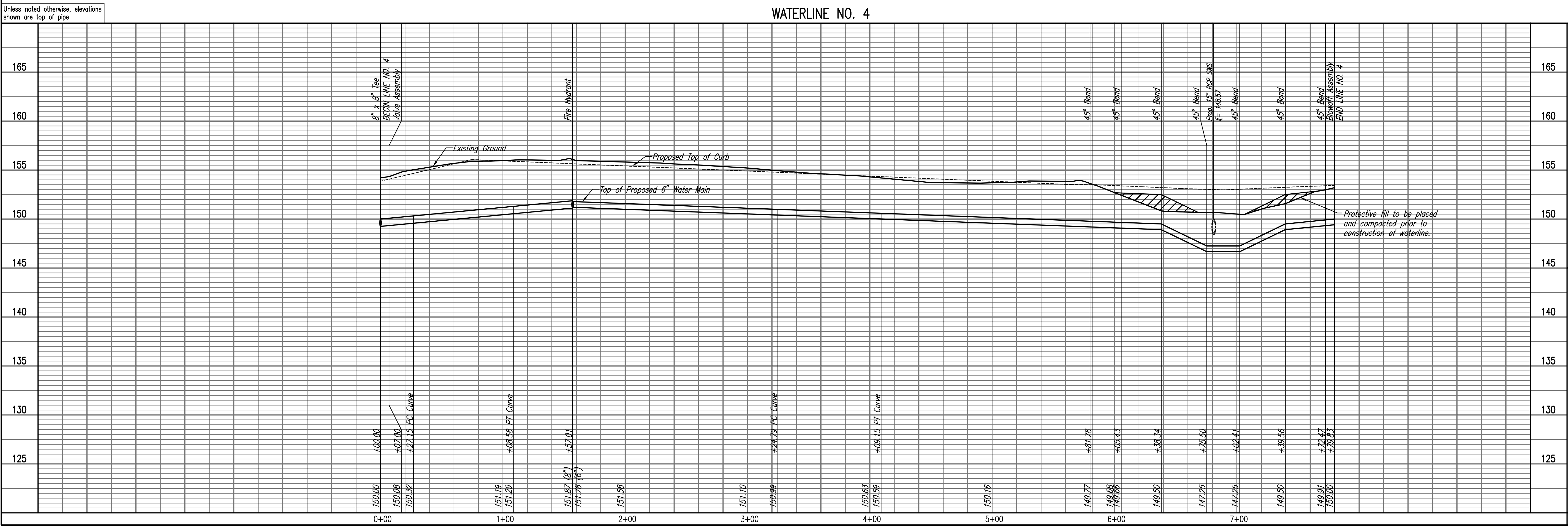
WL STATION	WL ARC LENGTH	CHORD LENGTH ON -6' OFFSET Left	DEFLECTION ANGLE	TOTAL DEFLECTION
PC 0+27.15			0'00"00.0'	0'00"00.0'
0+50.00	22.85'	23.45'	2'56"07.6"	02'56"07.6"
0+75.00	25.00'	25.66'	3'12"41.9"	06'08"49.6"
1+00.00	25.00'	25.66'	3'12"41.9"	09'21"31.5"
PT 1+08.58	8.58'	8.81'	1'06"08.1"	10'27"41.0"
TOTAL	L= 81.43'	Defl./ft.= 7.707953 min.		

WL CURVE DATA
 $\Delta=6^{\circ}13'15''$ Lt D= 7' 22' 26.3" R= 777.00' L= 84.36' T= 42.22' E= 1.15'
 CURVE DATA BASED ON \hat{C} RADIUS $\Delta/2= 3^{\circ} 6' 37.5''$

WL STATION	WL ARC LENGTH	CHORD LENGTH ON -6' OFFSET Left	DEFLECTION ANGLE	TOTAL DEFLECTION
PC 3+24.79			0'00"00.0'	0'00"00.0'
3+25.00	0.21'	0.21'	0'00"27.9"	00'00"27.9"
3+50.00	25.00'	24.81'	0'55"18.3"	00'55"46.2"
3+75.00	25.00'	24.81'	0'55"18.3"	01'51"04.5"
4+00.00	25.00'	24.81'	0'55"18.3"	02'46"22.7"
PT 4+09.15	9.15'	9.08'	0'20"14.5"	03'06"37.5"
TOTAL	L= 84.36'	Defl./ft.= 2.212192 min.		



WATERLINE NO. 4



Professional Engineering Consultants, P.A.
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Job No. 35-07150-002-042
 Date: APRIL 2007

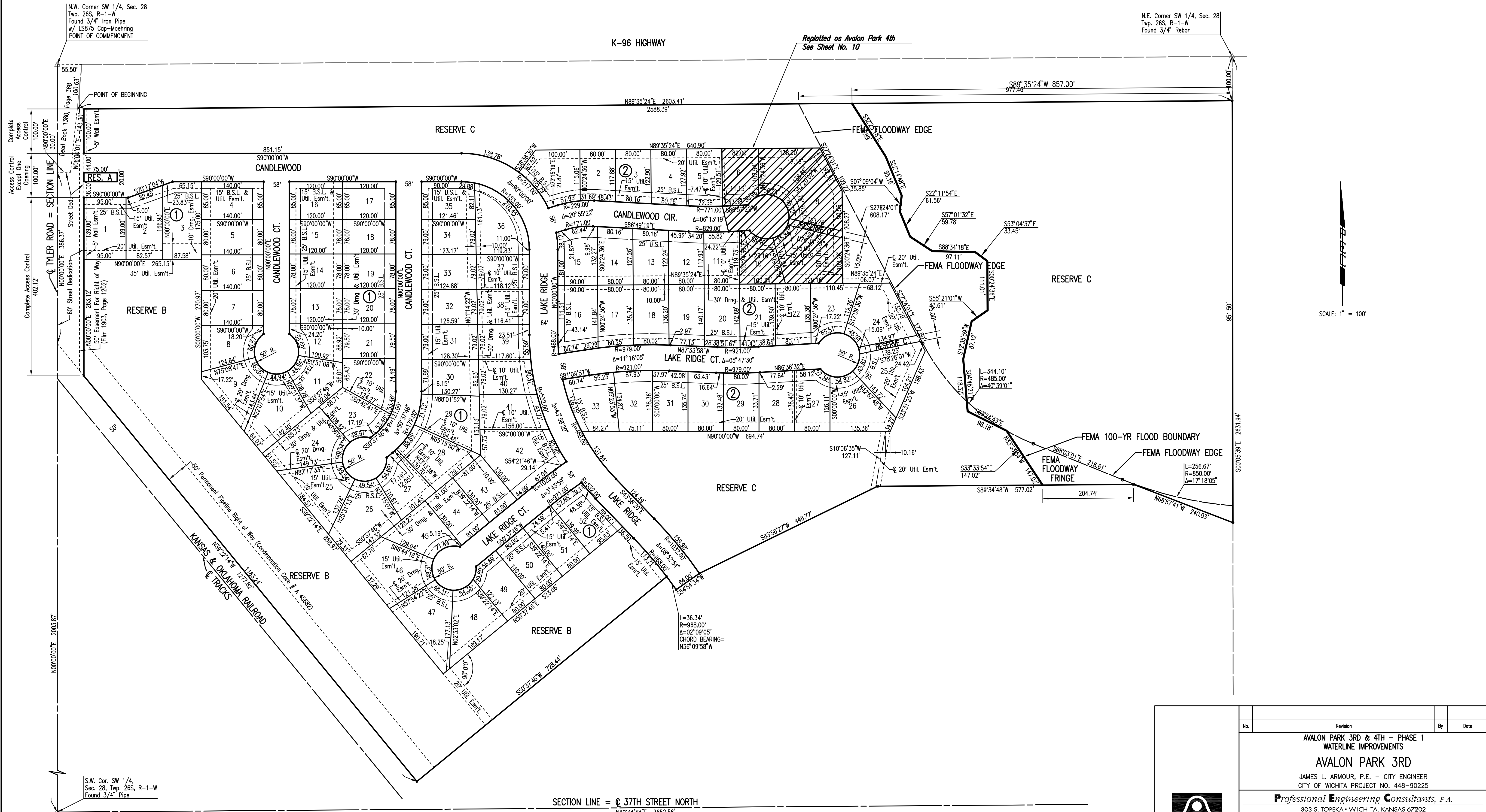
Sheet 8 of 15

JAMES L. ARMOUR, P.E. - CITY ENGINEER
 CITY OF WICHITA PROJECT NO. 448-90225

AVALON PARK 3RD & 4TH - PHASE 1
 WATERLINE IMPROVEMENTS
 WATERLINE NO. 4

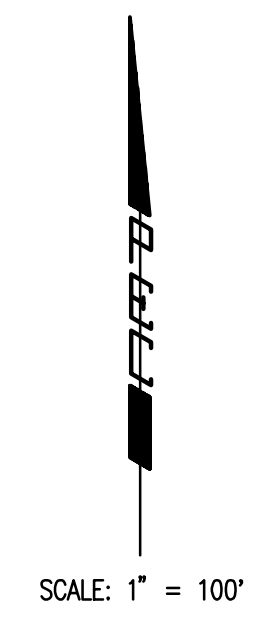
AVALON PARK 3RD

AN ADDITION TO WICHITA,
SEDGWICK COUNTY, KANSAS



N.E. Corner SW 1/4, Sec. 28
Twp. 26S, R-1-W
Found 3/4" Rebar

N.W. Corner SW 1/4, Sec. 28
Twp. 26S, R-1-W
Found 3/4" Iron Pipe
w/ LS875 Cap-Moehring
POINT OF COMMENCEMENT

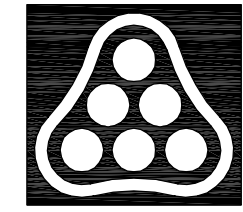


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 Plot Scale 1:100 06-11-2007 3:39:21 PM by REFJ
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S.W. Cor. SW 1/4,
Sec. 28, Twp. 26S, R-1-W
Found 3/4" Pipe

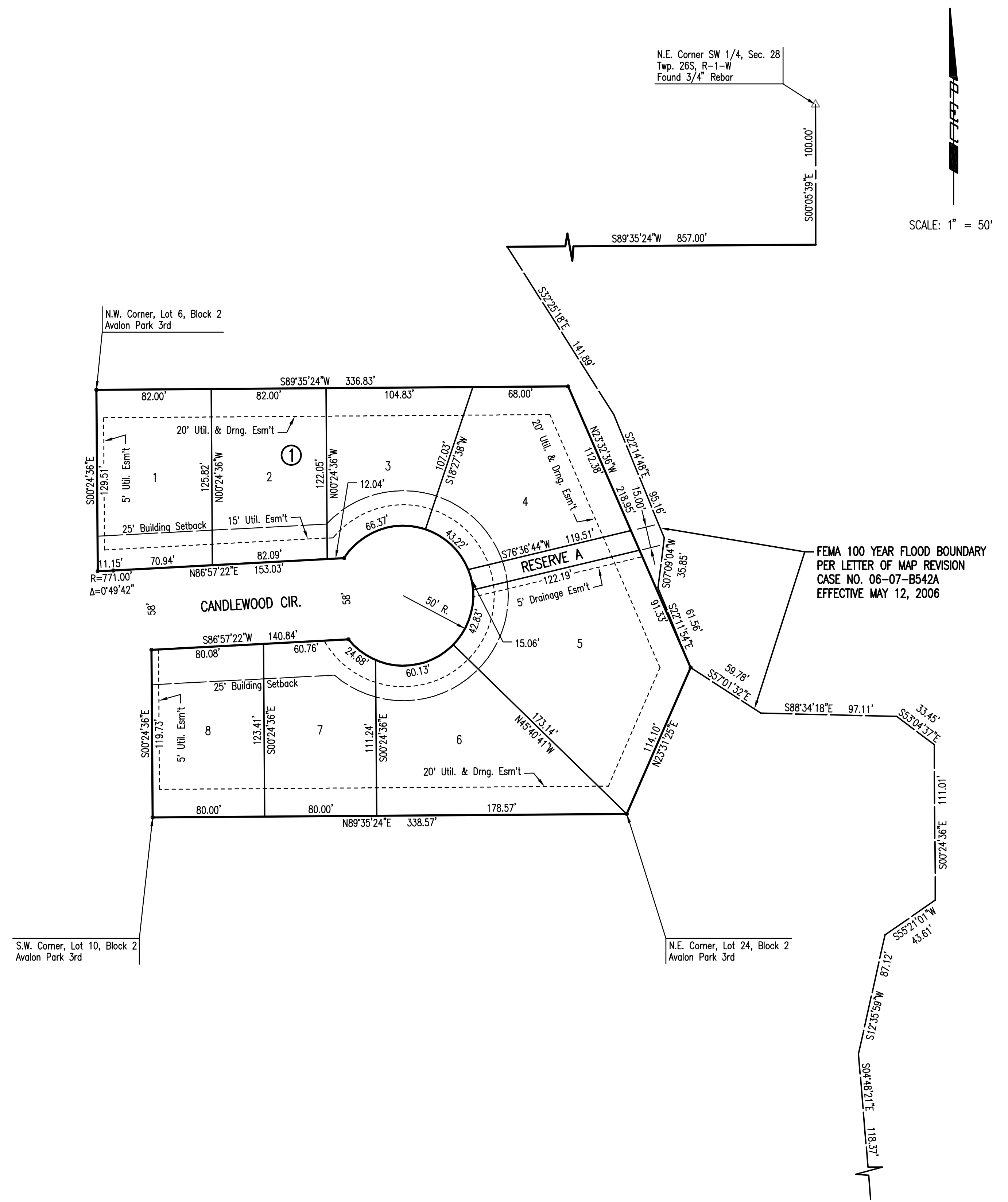
SECTION LINE = 37TH STREET NORTH
N89°34'48"E 2652.56'

No.	Revision	By	Date
	AVALON PARK 3RD & 4TH - PHASE 1 WATERLINE IMPROVEMENTS		
	AVALON PARK 3RD		
	JAMES L. ARMOUR, P.E. - CITY ENGINEER CITY OF WICHITA PROJECT NO. 448-90225		
	Professional Engineering Consultants, P.A.		
	303 S. TOPEKA • WICHITA, KANSAS 67202 316-262-2691 • FAX 316-262-3003		
Designed by	MDK	Job No.	35-07150-2-042
Drawn by		Date	APRIL 2007
			Sht. 9 of 15



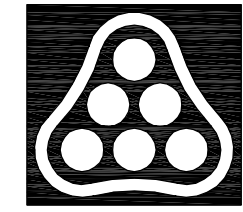
AVALON PARK 4TH

AN ADDITION TO WICHITA,
SEDGWICK COUNTY, KANSAS



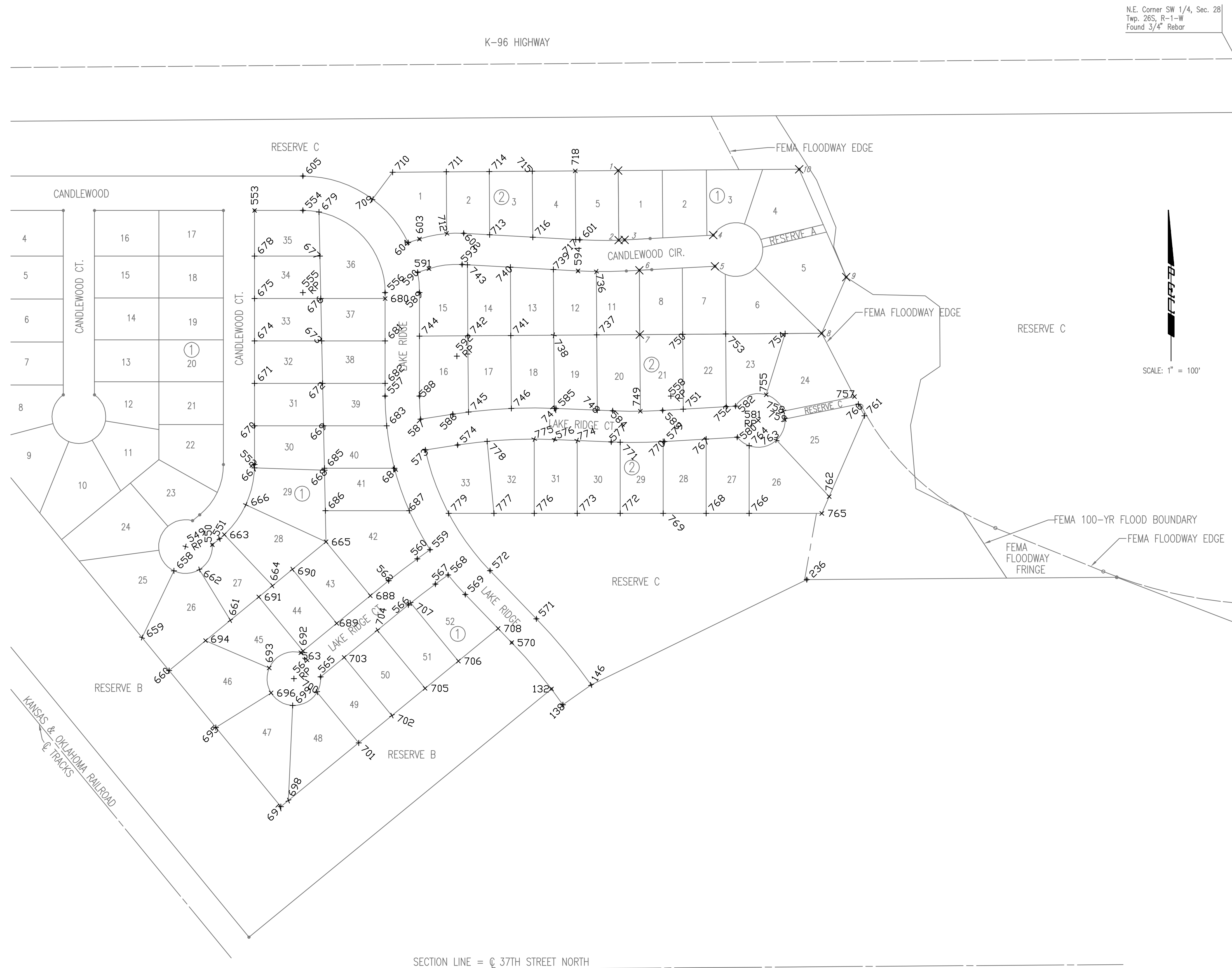
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	Revision	By	Date
AVALON PARK 3RD & 4TH - PHASE 1 WATERLINE IMPROVEMENTS AVALON PARK 4TH PLAT JAMES L. ARMOUR, P.E. - CITY ENGINEER CITY OF WICHITA PROJECT NO. 448-90225			
Professional Engineering Consultants, P.A. 303 S. TOPEKA • WICHITA, KANSAS 67202 316-262-2691 • FAX 316-262-3003			
Designed by	MDK	Job No.	35-07150-2-042
Drawn by		Date	APRIL 2007
			SH. 10 of 15



AVALON PARK 3RD AND AVALON PARK 4TH

AN ADDITION TO WICHITA,
SEDGWICK COUNTY, KANSAS



COORDINATE LIST		
PL. #	NORTHING	EASTING
1	12443.150999	11497.961073
2	12313.642691	11498.887550
3	12314.154092	11510.022183
4	12322.918762	11674.848491
5	12265.000589	11677.928301
6	12257.521928	11537.286373
7	12137.795226	11538.142874
8	12140.217208	11876.701530
9	12244.836603	11922.242391
10	12445.560567	11834.784558
100	10892.294381	10603.077748
236	11681.824082	11848.853872
549	11743.180062	10692.527619
550	11746.598165	10742.410648
551	11757.501700	10755.698792
552	11895.879574	10821.153365
553	12368.866669	10821.153365
554	12368.866669	10911.153365
555	12215.866669	10911.153365
556	12215.866669	11064.153365
557	12023.355746	11064.153365
558	12023.355746	11596.153365
559	11737.414356	11147.531563
560	11720.434770	11123.847344
561	10884.144535	11723.396878
562	11679.624046	11070.669257
563	11545.602370	10907.336966
564	11497.346744	10894.245192
565	11500.764846	10944.128221
566	11634.786523	11107.460513
567	11673.296934	11157.641196
568	11690.276520	11181.325414
569	11653.982699	11213.285826
573	11922.965359	11139.047502
574	11932.293733	11199.068903
575	11022.219387	11340.510352
576	11942.388495	11379.623165
577	11937.907490	11485.043410
578	12916.024273	11526.619354
579	11938.704843	11583.958106
580	11946.668223	11719.691184
581	11978.003992	11758.653596
582	12004.568659	11716.294199
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585	12000.336170	11382.086296
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587	11980.277316	11130.140223
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589	12215.866669	11128.153365
590	12253.789689	11124.813948
591	12260.455381	11145.644156
592	12097.590911	11197.760987
593	12268.327929	11207.240988
594	12256.341279	11423.123353
595	13084.066358	11469.081953
601	12314.252080	11426.338791
602	12326.238731	11210.456427
603	12315.695962	11127.967102
604	12309.030270	11107.136894
658	11698.058441	10670.986047
659	11573.756090	10611.642702
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665	11752.152777	10954.120058
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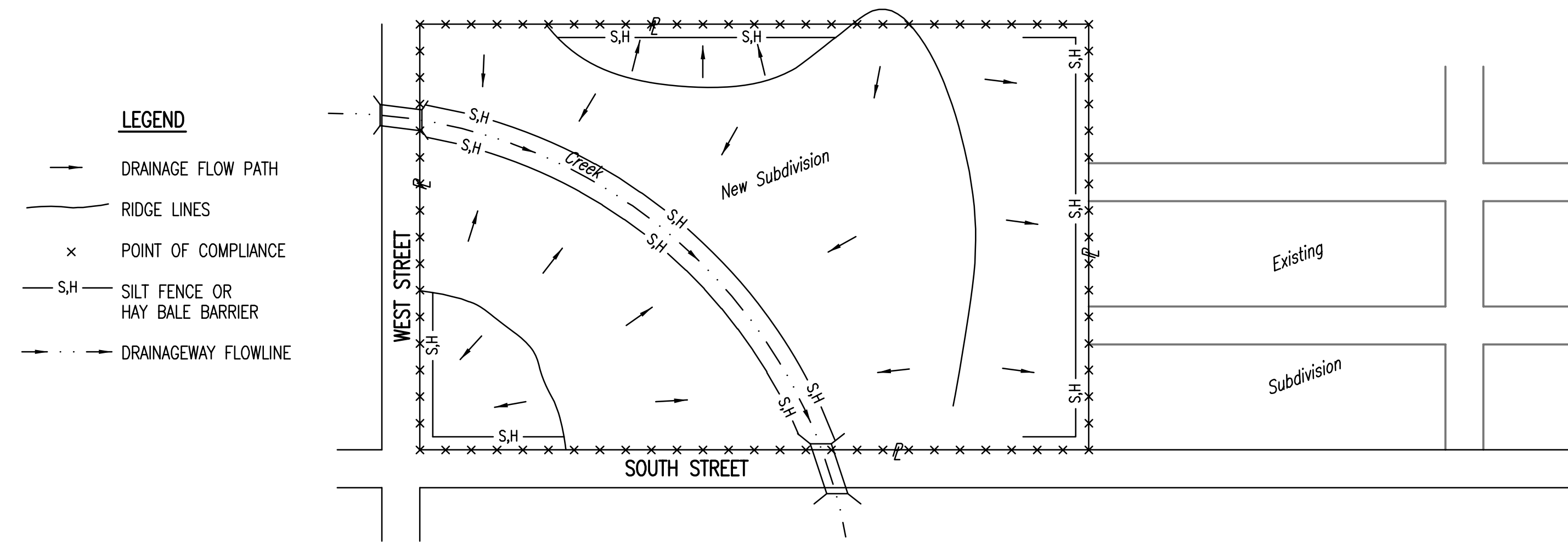
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672	12046.866669	10947.744364
673	12125.866669	10946.035317
674	12125.866669	10821.153365
675	12204.866669	10821.153365
676	12204.866669	10944.326270
677	12283.866669	10942.617223
678	12283.866669	10821.153365
679	12365.958733	10940.841284
680	12204.866669	11064.153365
681	12125.866669	11064.153365
682	12046.866669	11064.153365
683	11967.866669	11067.055111
684	11888.866669	11081.433355
685	11888.866669	10951.162458
686	11809.866669	10952.871504
687	11809.866669	11108.868629
688	11651.654879	11036.583217
689	11600.273988	10973.965297
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692	11548.893096	10911.347376
693	11517.093374	10848.309688
694	11568.055127	10729.760152
695	11406.291152	10749.055406
696	11470.781377	10851.886235
697	11258.863038	10870.026972
698	11270.441486	10884.137632
699	11447.396277	10892.020134
700	11472.170250	10937.444083
701	11377.752783	11014.917969
702	11428.499342	11076.762829
703	11536.727847	10987.956350
704	11587.474407	11049.801210
705	11479.245902	11138.607689
706	11529.992461	11200.452549
707	11638.209297	11111.655646
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714	12441.434130	11257.967214
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716	12319.110121	11338.844343
717	12314.666323	11418.878180
718	12442.578709	11417.963120
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741	12136.078358	11298.149015
742	12135.506068	11218.151062
743	12267.774697	11217.204839
744	12134.862243	11128.153365
745	11993.670097	11219.165728
746	12000.344042	11299.120031
747	12000.457700	11379.121265
748	11997.060592	11459.147615
749	11995.109705	11539.163618
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COORDINATE LIST		
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Scaled 06-08-2007 3:32:30 PM by JAW
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 J:\SENTOU\2007\07150\2007-06-12 to City\Waterline\DWG\11-ProjectCoordinates

No.	Revision	By	Date
AVALON PARK 3RD & 4TH - PHASE 1 WATERLINE IMPROVEMENTS AVALON PARK 3RD AND 4TH PROJECT COORDINATES JAMES L. ARMOUR, P.E. - CITY ENGINEER CITY OF WICHITA PROJECT NO. 448-90225			
Professional Engineering Consultants, P.A. 303 S. TOPEKA • WICHITA, KANSAS 67202 316-262-2691 • FAX 316-262-3003			
Designed by	MDK	Job No.	35-07150-2-042
Drawn by		Date	APRIL 2007
			Sht. 11 of 15

PHASE 1 – INITIAL EARTHWORK AND UTILITIES (EXCEPT STORM SEWER)

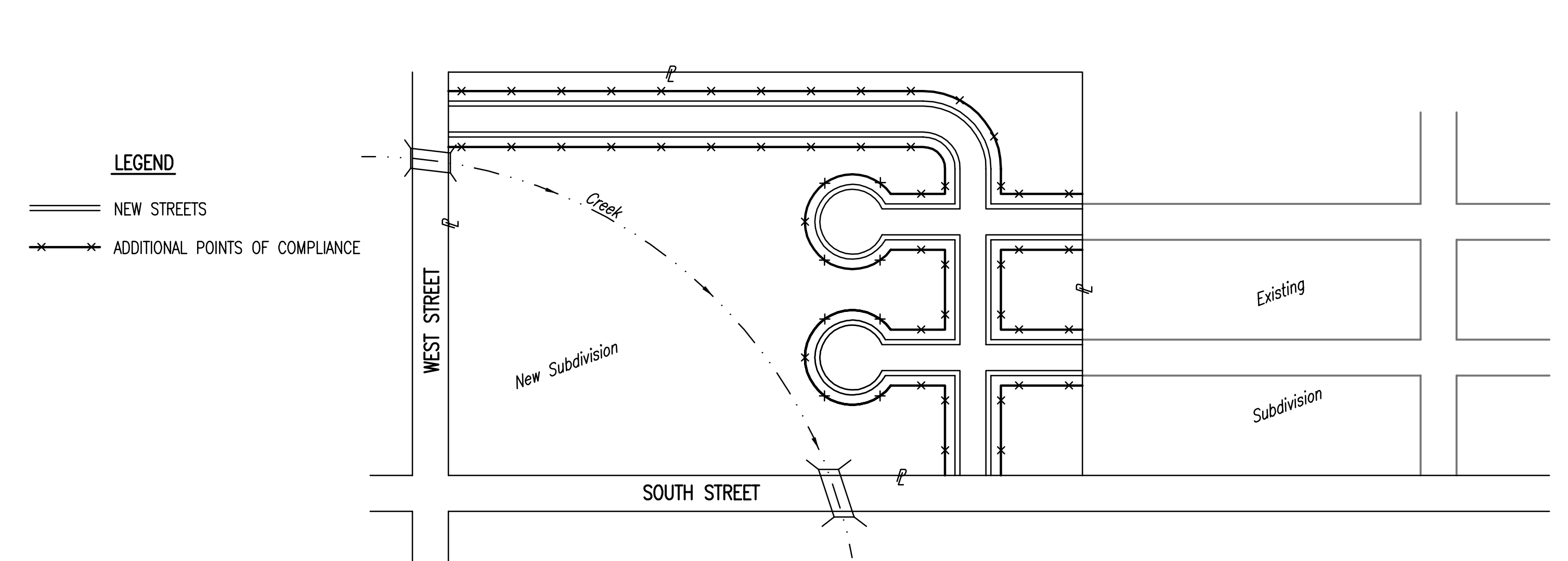


LEGEND

- DRAINAGE FLOW PATH
- RIDGE LINES
- x POINT OF COMPLIANCE
- S.H. SILT FENCE OR HAY BALE BARRIER
- DRAINAGWAY FLOWLINE

1. 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.
2. 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.
3. 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.
4. ANY MUD TRACKED ONTO ADJACENT STREETS WILL BE REMOVED WITHIN 48 HOURS OR BY FRIDAY AT 6:00 PM, WHICHEVER IS EARLIER.
5. 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.
6. UTILIZE STABILIZED CONSTRUCTION ENTRANCE AT ENTRANCE AND EXIT ONTO ANY EXISTING PUBLIC STREETS.
7. 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.
8. 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

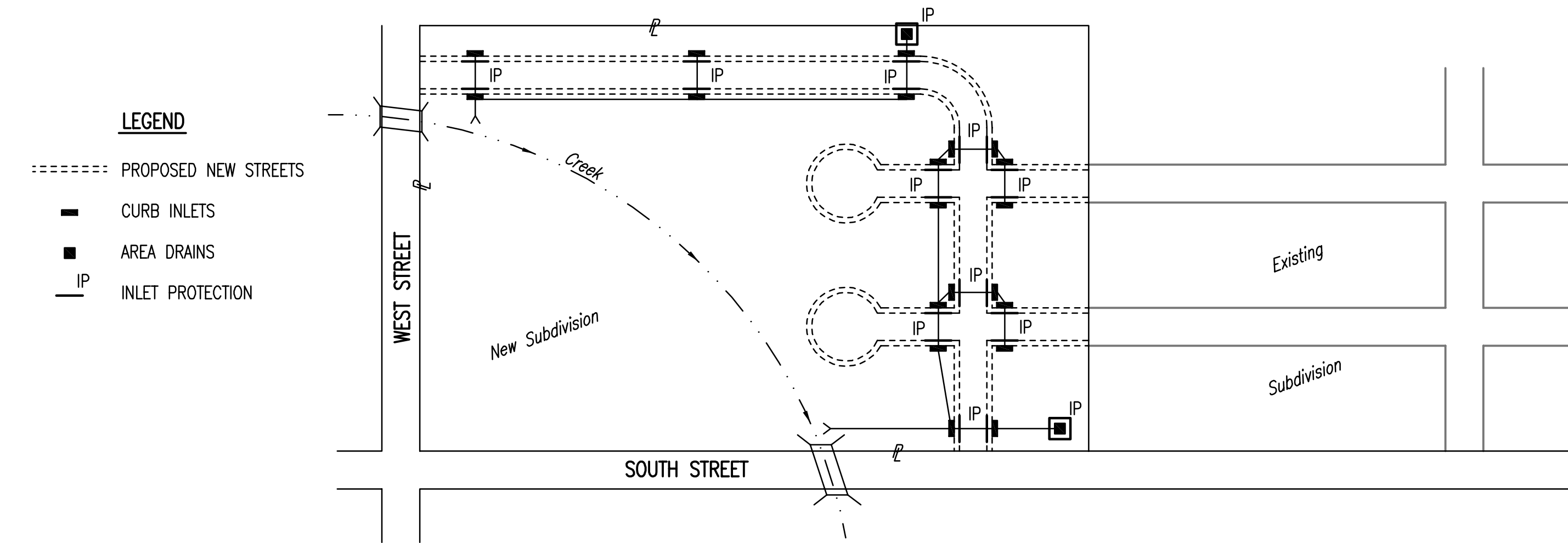


LEGEND

- NEW STREETS
- x ADDITIONAL POINTS OF COMPLIANCE

1. 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.
2. CURB OPENING INLET PROTECTION:
 - A. SUMP AREAS – INLET PROTECTION SHALL BE PROVIDED WHEN STREET SUBGRADE WORK IS COMPLETED.
 - B. NON-SUMP LOCATIONS – PROVIDE INLET PROTECTION AS SOON AS BASE COURSE ASPHALT IS INSTALLED, BEFORE THE SURFACE COURSE LIFT.
3. 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.
4. SEE DETAIL SHEET FOR BACK OF CURB PROTECTION.
5. 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.
6. THE STREET CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING BACK OF CURB EROSION CONTROL DEVICES.
7. 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



LEGEND

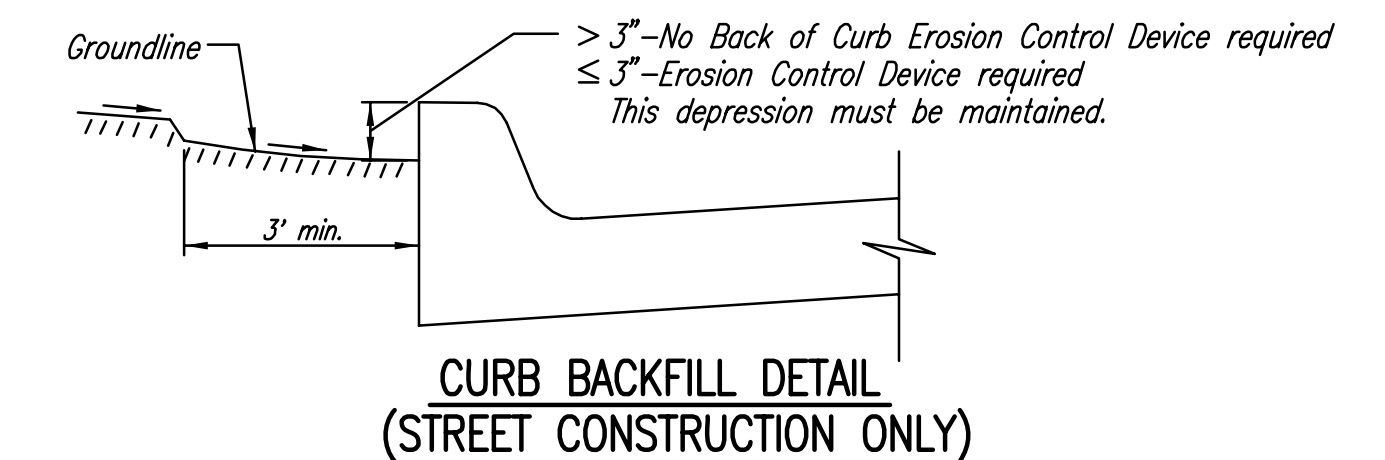
- PROPOSED NEW STREETS
- CURB INLETS
- AREA DRAINS
- IP INLET PROTECTION

1. DURING THIS PHASE OF SUBDIVISION DEVELOPMENT, ALL EROSION CONTROL DEVICES REQUIRED IN PHASE 1 SHALL REMAIN IN PLACE AND BE MAINTAINED.
2. AS NEW STORM SEWERS, WITH INLETS, ARE INSTALLED, THE STORM SEWERS MUST NOW BE PROTECTED SO ALL NEW INLETS BECOME POINTS OF COMPLIANCE.
3. AREA DRAINS – AS SOON AS WATER CAN FLOW INTO THESE DRAINS, HAY BALE OR SILT FENCE PROTECTION WILL BE INSTALLED AROUND THEM.
4. 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.
5. THE STORM SEWER CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING THESE DEVICES.
6. THE SUBDIVISION DEVELOPER WILL MAINTAIN THESE EROSION CONTROL DEVICES ONCE INSTALLED.
7. ALL DISTURBED GROUND WILL BE FINAL GRADED AND TEMPORARILY OR PERMANENTLY SEEDED WITHIN 14 DAYS IF COMPLETION OF WORK IN ANY GIVEN PART OF THE SUBDIVISION.
8. 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:

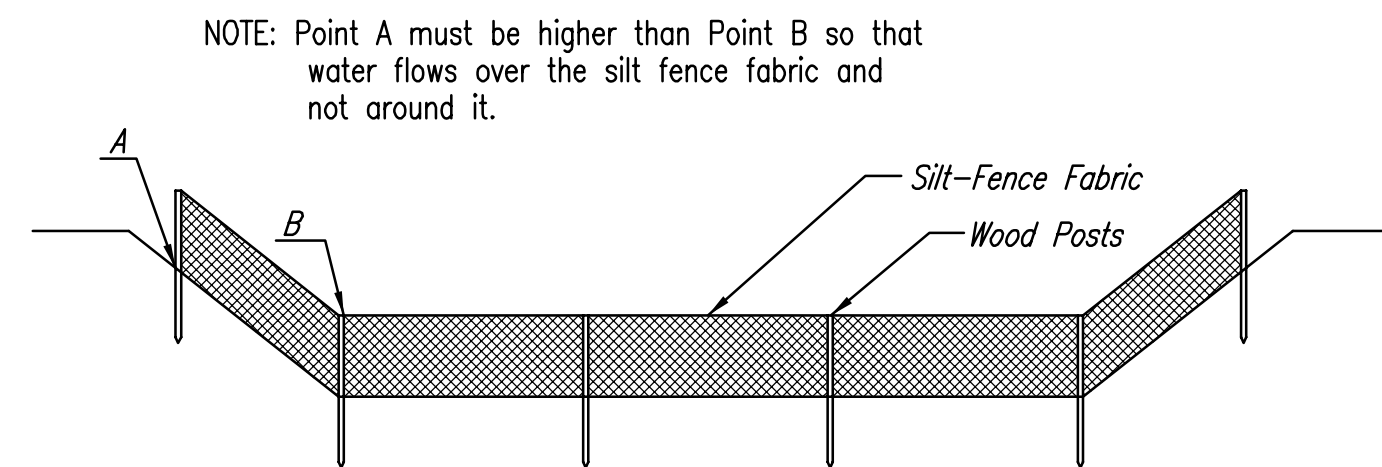
1. THE INTENT OF ALL EROSION CONTROL DEVICES IS TO PREVENT ERODED SOIL FROM ENTERING DITCHES, STORM SEWERS, LAKES, STREETS OR ANY OTHER OTHER DRAINAGE FEATURE.
2. THIS SHEET IS INTENDED TO PROVIDE GUIDELINES AS TO WHAT TYPE OF EROSION CONTROL DEVICES WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS. CONTRACTORS ARE EXPECTED TO BID PROJECTS ACCORDINGLY.
3. 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.
4. PERSONS DESTROYING EROSION CONTROL DEVICES SHALL BE RESPONSIBLE FOR IMMEDIATELY REPAIRING THEM OR INSTALLING SUITABLE REPLACEMENT DEVICES.
5. 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.
6. 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.
7. 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.
8. 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.
9. 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



S:\06-08-2007 3:40:14 PM by JAW
 Plot Scale 1:1 06-11-2007 3:56:23 PM by REJ
 J:\SEN\07\2007\07150\2007-06-12 to City\Waterline\DWG\12-SoilErosionBMP's

		SOIL EROSION BMP's SUBDIVISION DEVELOPMENT PROCESS	
JIM ARMOUR, P.E. CITY ENGINEER		PROJECT NUMBER 448-90225	OCA NO. 735367
DATE JAN. 2007	SHEET 12 OF 15		



ELEVATION
SILT FENCE DITCH CHECKS
(STREAM PROTECTION)

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 downstream side of the trench. Place the edge of the fabric in the trench starting at the top upstream edge of the trench. Line two sides of the trench with the fabric as shown on 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 upstream side of the trench to clear an area for driving in the posts. Just downstream 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.

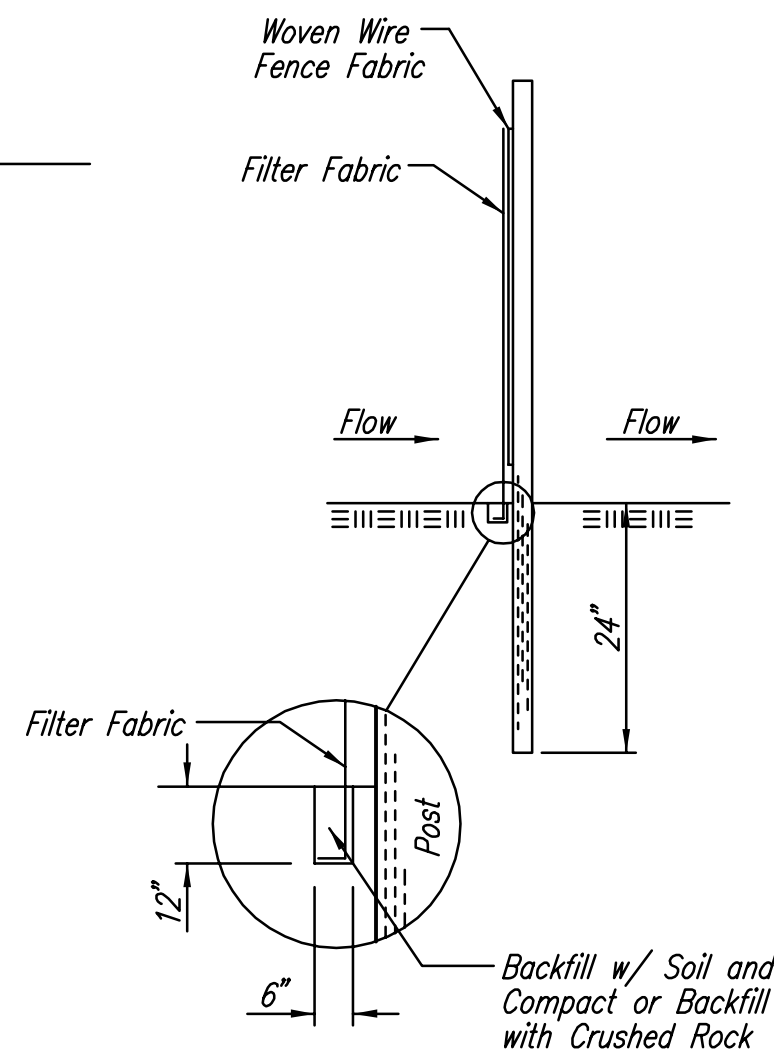
List of common placement/installation mistakes to avoid:

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 upstream 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.

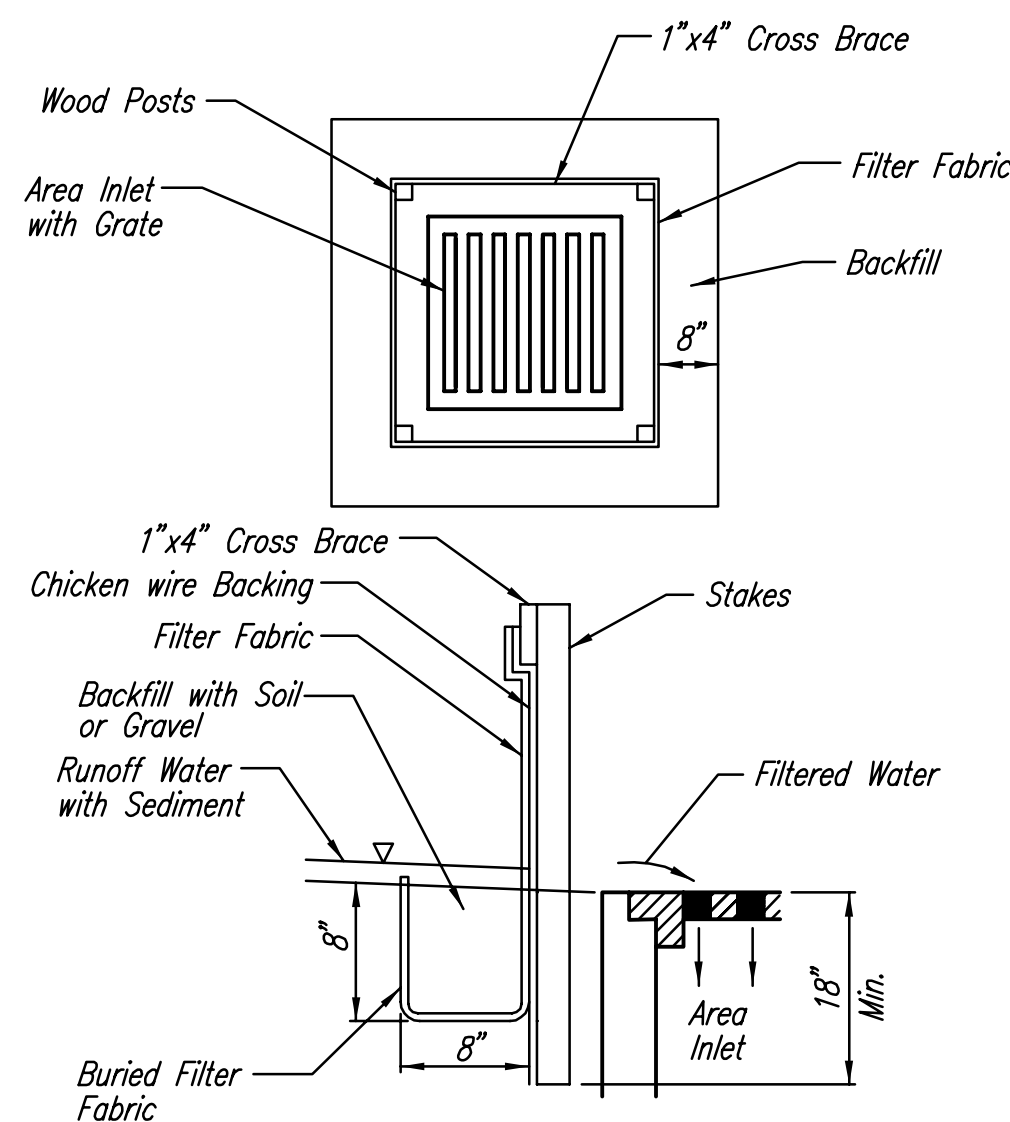
Inspection and Maintenance:

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?



ANCHOR TRENCH DETAIL



SILT FENCE BARRIERS FOR AREA INLETS
(INLET PROTECTION)

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 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.

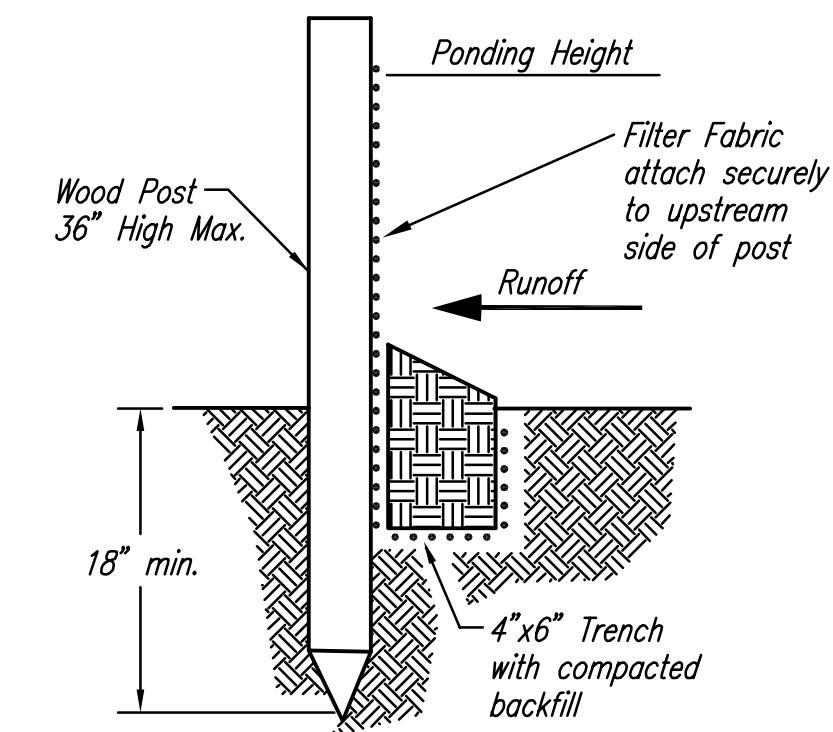
List of common placement/installation mistakes to avoid:

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 resisted 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?



SOIL EROSION BMPs

**SILT FENCE
DITCH CHECK
AND
BARRIER DETAILS**

JIM ARMOUR, P.E.
CITY ENGINEER

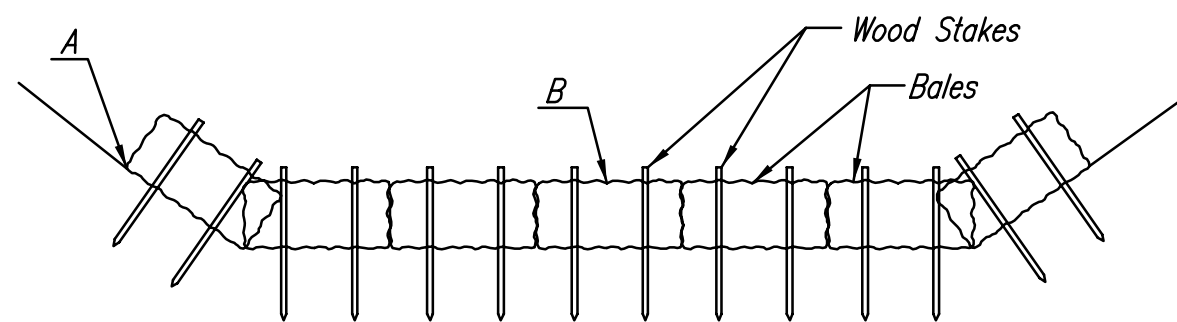
PROJECT NUMBER
448-90225

OCA NO.
735367

DATE
JAN. 2007

SHEET 13 OF 15

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 grade (%)	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".

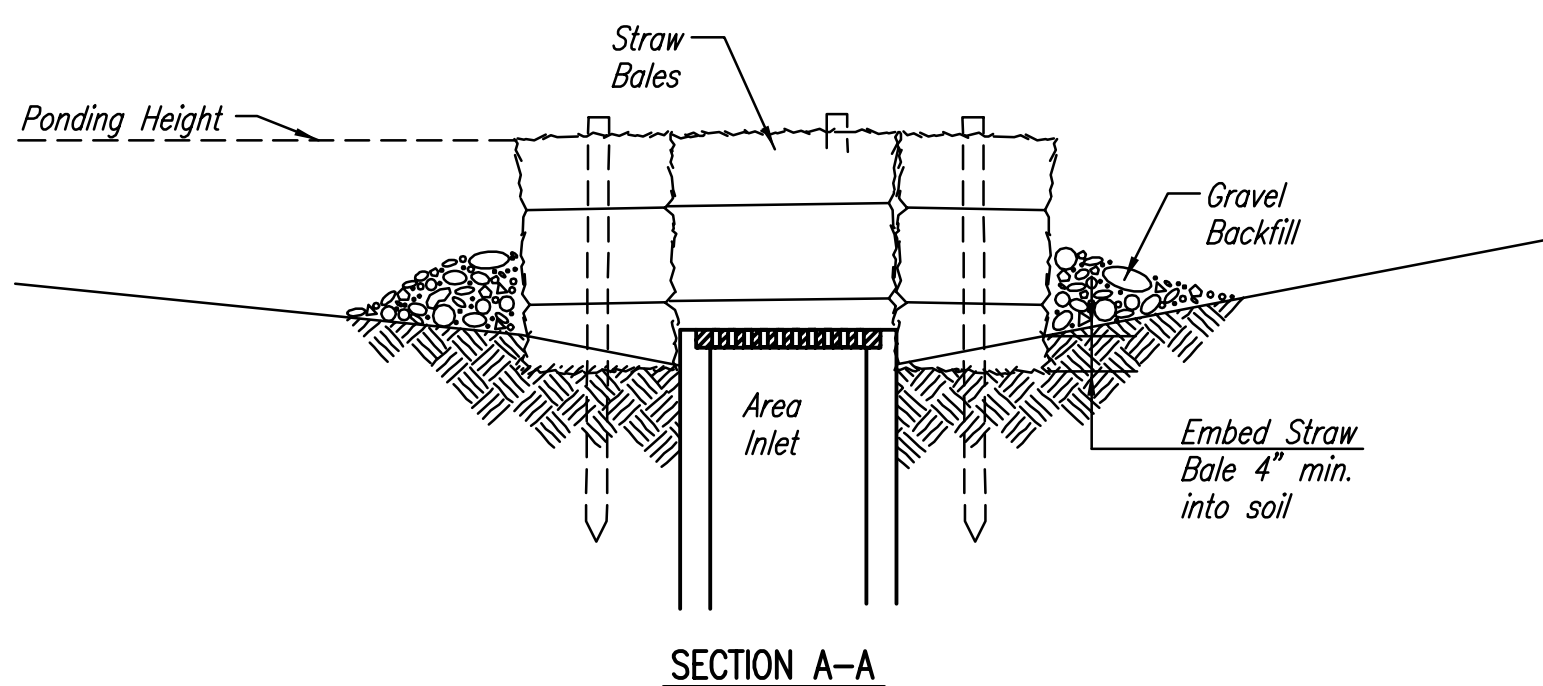
List of common placement/installation mistakes to avoid:

- 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.

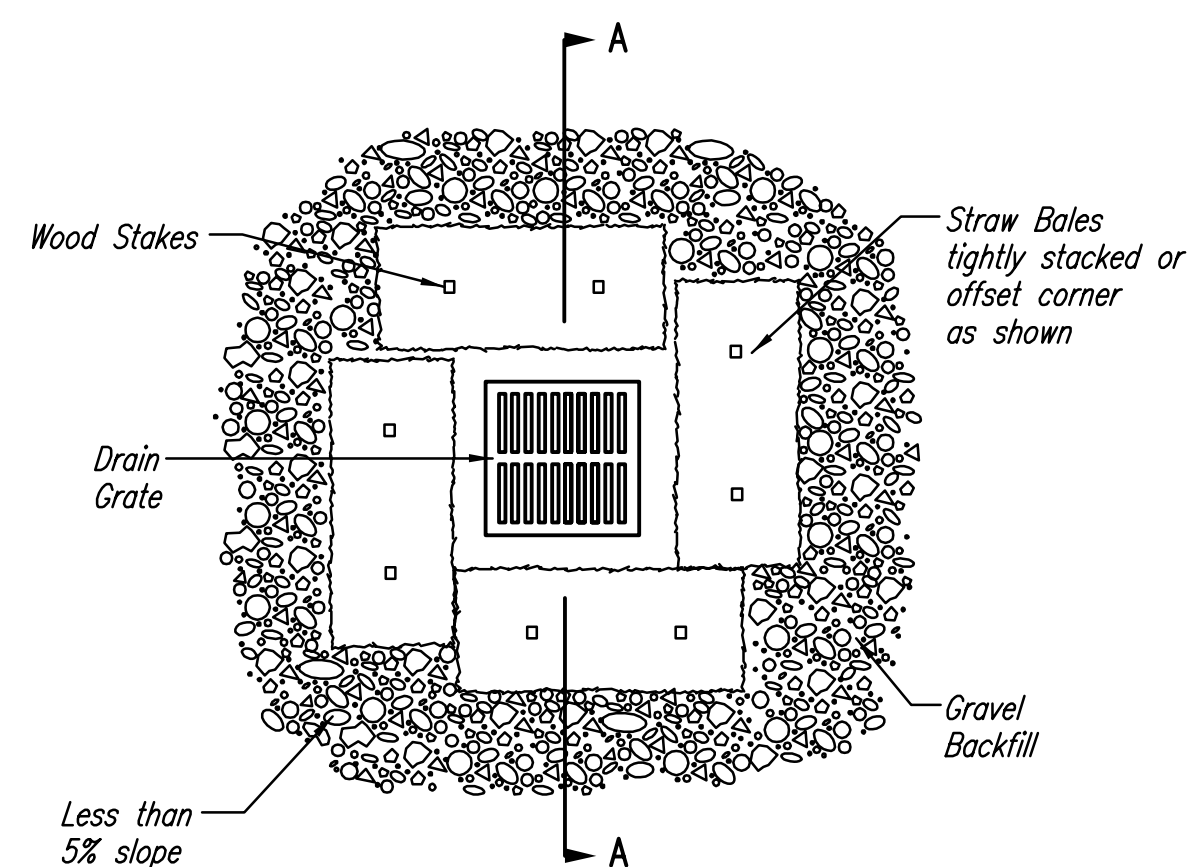
Inspection and Maintenance:

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 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 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.

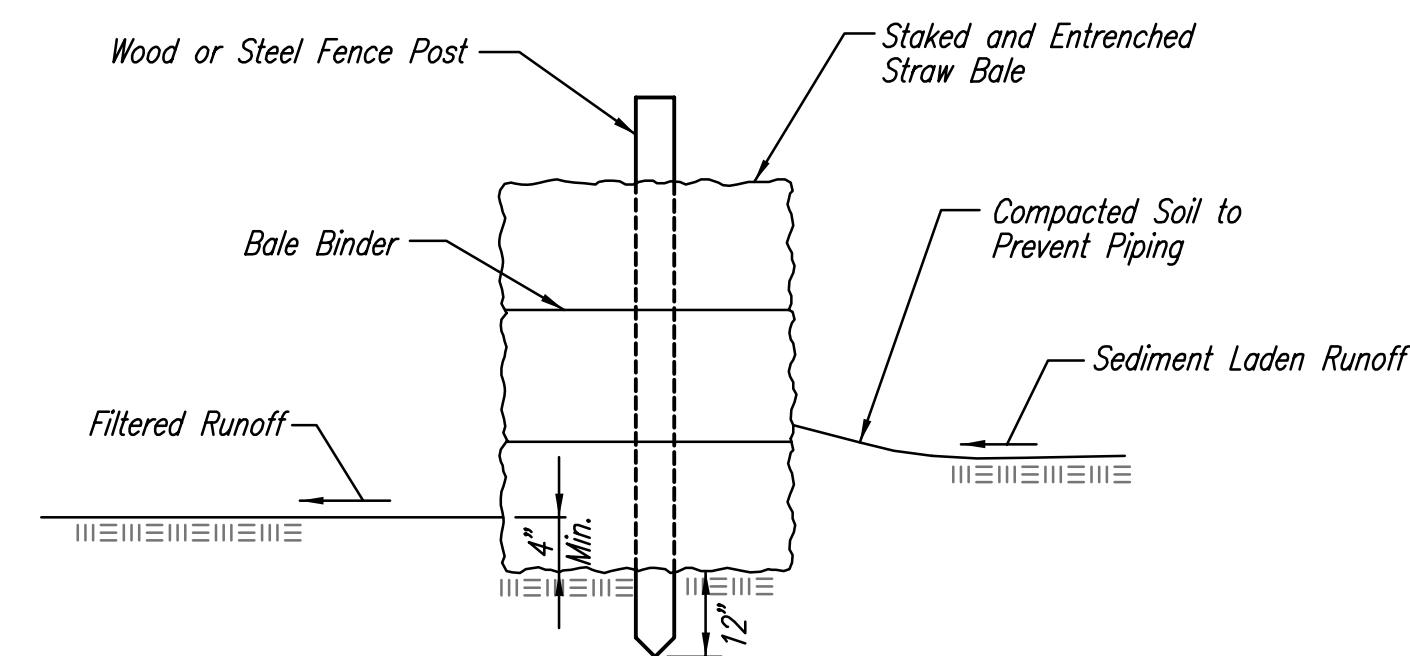
List of common placement installation mistakes to avoid:

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 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:

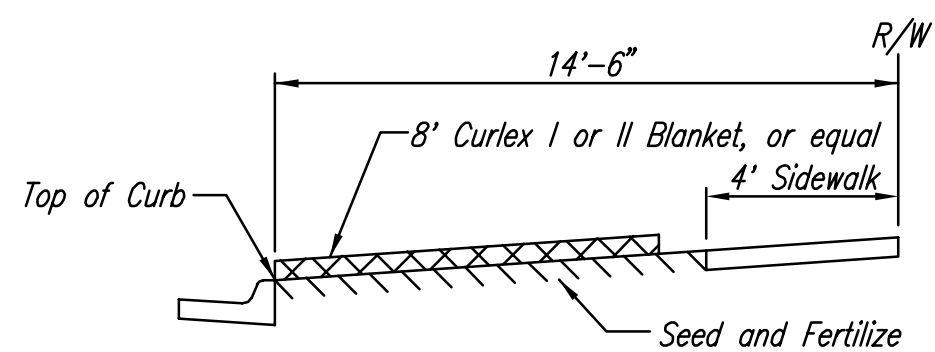
When practical, do not place bale slope barriers across contours. Slope barriers should be placed along contours to avoid a concentration of flow. Concentrated flow over a slope barrier creates a scour hole on the downslope side of the barrier. The scour hole eventually undermines the bales and the barrier 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:

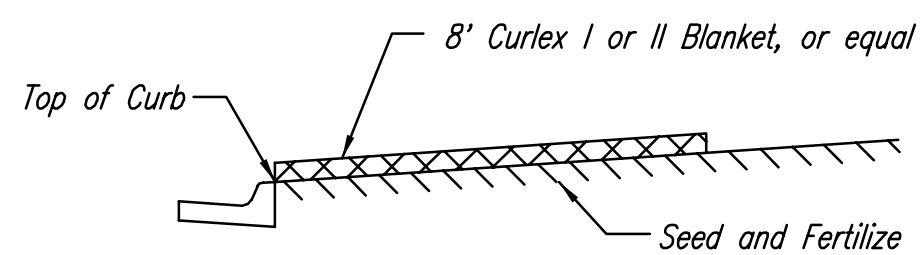
Bale slope barriers should be inspected every 7 days and within 24 hours of a rainfall of 1/2" or more. The following is a list of questions that should be addressed during each inspection:

- 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?

	SOIL EROSION BMPs	
	STRAW BALE DITCH CHECK AND BARRIER DETAILS	
	JIM ARMOUR, P.E. CITY ENGINEER	
	PROJECT NUMBER 448-90225	OCA NO. 735367
DATE JAN, 2007	SHEET 14 OF 15	

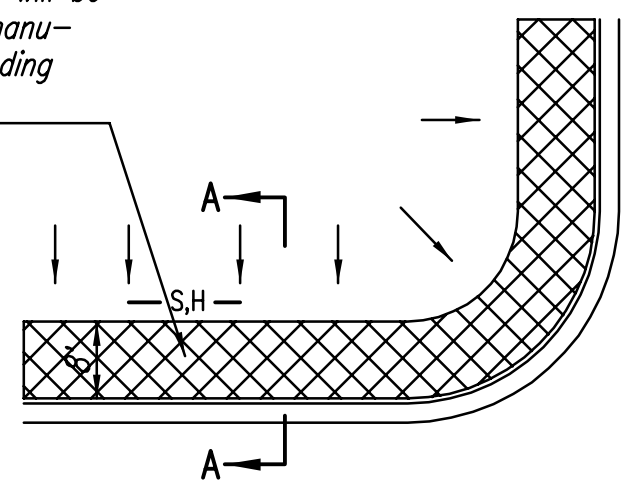


SECTION B-B

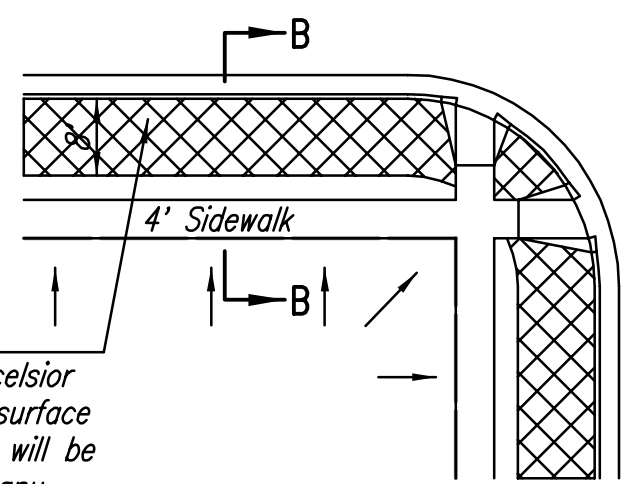


SECTION A-A

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

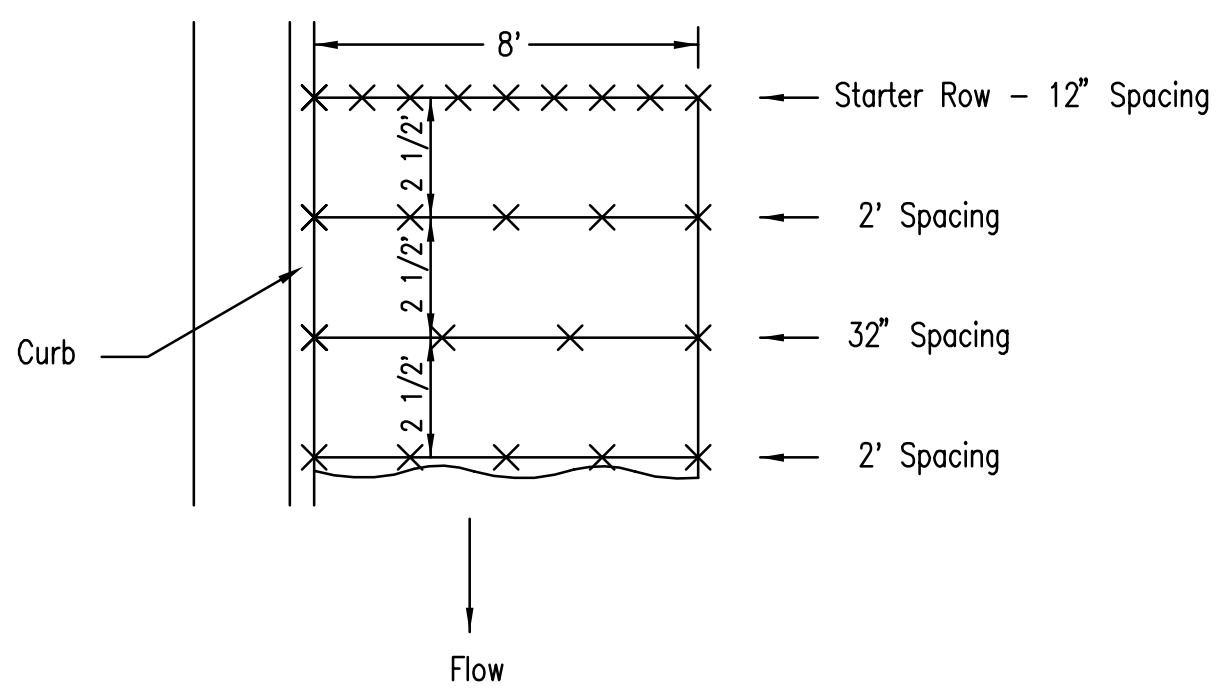


Install 8' wide Curlex I or II Excelsior Blanket, or equal, on prepared surface back of curb. Edge of blanket will be at back of curb. Install per manufacturer's recommendation, including staples. (See detail)

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.

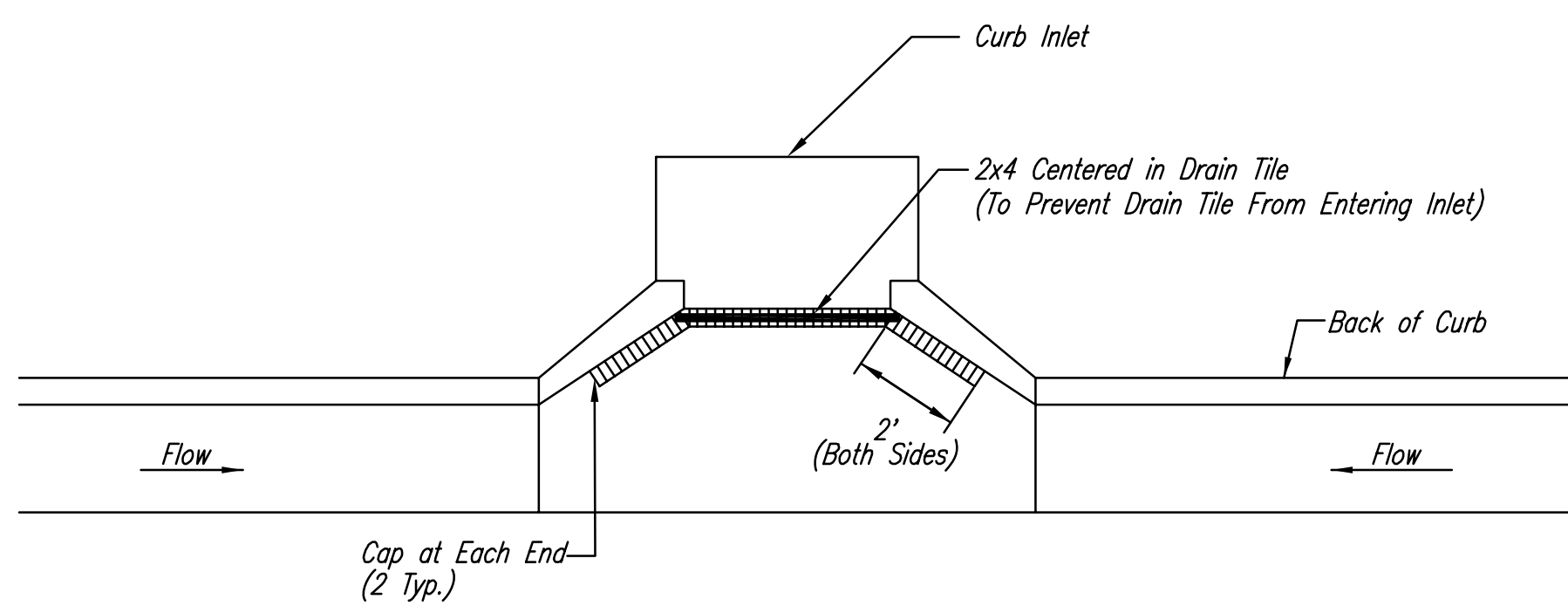
BACK OF CURB PROTECTION DETAIL



STAPLE PATTERN

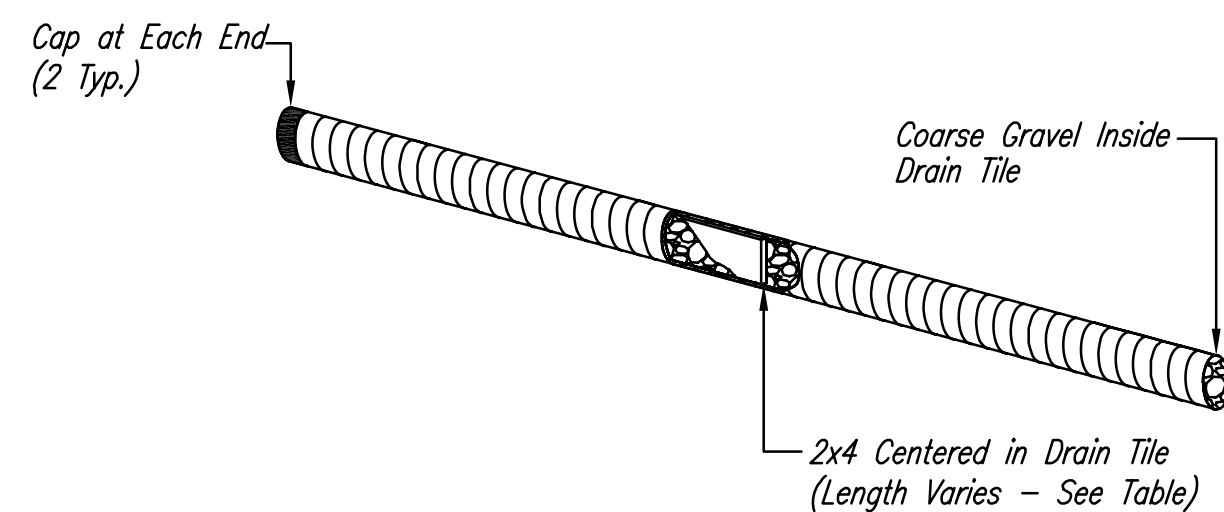
NOTES: Use 6" seam overlap

DETAILS FOR CURLEX I OR II BLANKETS

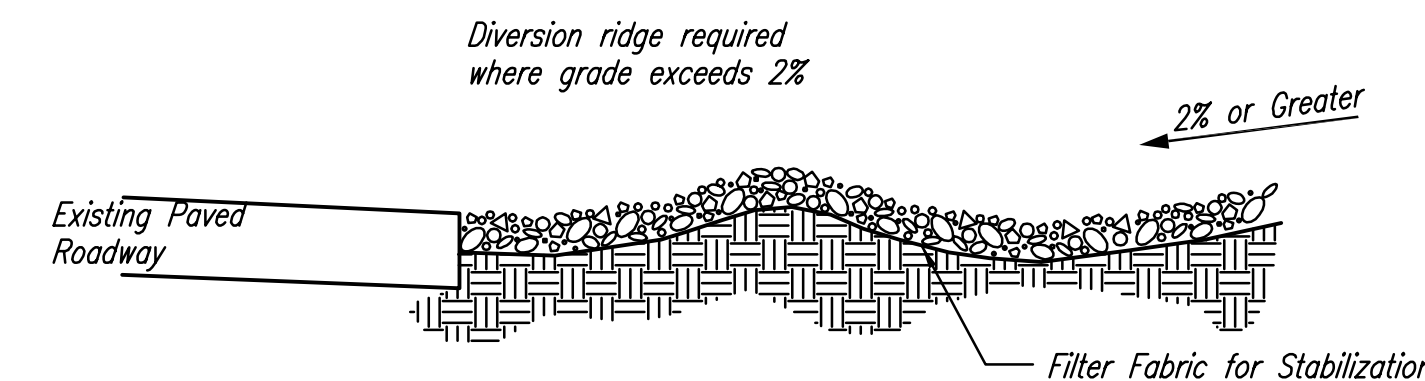


Note: Place 4" perforated PVC pipe, filled with 1/2"-1" dia. gravel, in front of curb inlet as shown.

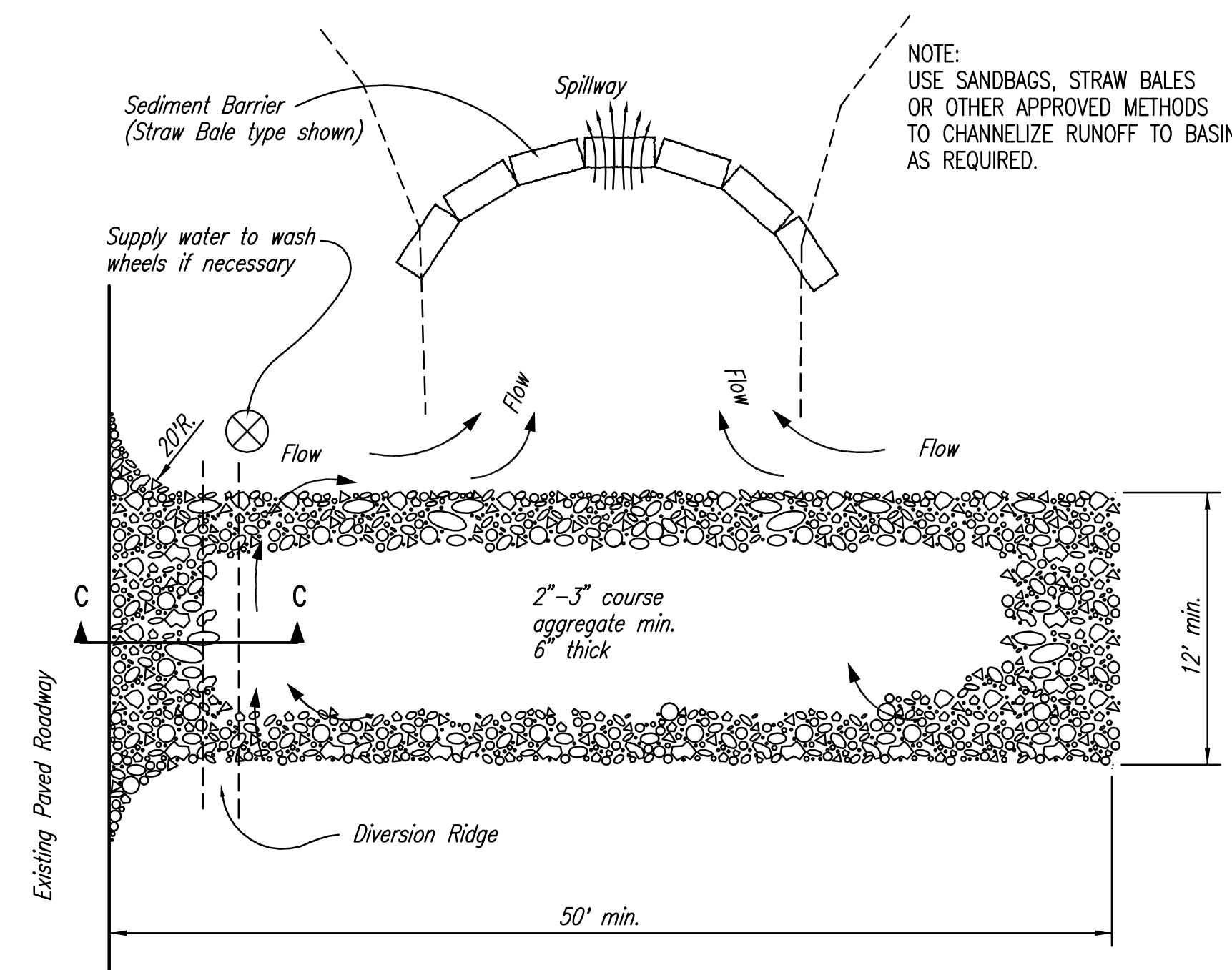
2X4 LENGTH	INLET TYPE	INLET OPENING
5'-6"	1-A	5'-0"
10'-6"	1-A	10'-0"
15'-6"	1-A	15'-0"



CURB INLET PROTECTION
4" PERFORATED PIPE W/ GRAVEL



SECTION C-C



STABILIZED CONSTRUCTION ENTRANCE

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.

CITY OF WICHITA

SOIL EROSION BMPs

**BACK OF CURB PROTECTION,
CURB INLET PROTECTION
AND
CONSTRUCTION ENTRANCE**

JIM ARMOUR, P.E.
CITY ENGINEER

PROJECT NUMBER 448-90225	OCA NO. 735367
DATE JAN. 2007	SHEET 15 OF 15

S:\06-08-2007 3:41:54 PM by JAW
 Plot Scale 1:1 06-11-2007 3:34:57 PM by REJ
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