

## GENERAL NOTES:

- Contractor will be required to provide notice to utility companies a minimum of forty-eight (48) hours prior to any excavation, as follows:

Kansas One-Call 687-2470

The Contractor must notify the following in case of an emergency:

Cox Communications	262-4270
Kansas Gas Service	1-888-482-4950
Westar Energy	383-8650
Aquila Energy	1-888-482-4950
SBC	268-2245
City of Wichita Water Dept.	268-4563
City of Wichita Sewer Maint.	268-4024
City of Wichita Storm Sewer Maint.	268-4090
City of Wichita Traffic Maint.	268-4034
Conoco Pipeline Co.	1-800-231-2551
Southern Star Pipeline Co.	529-6600
Phillips Pipeline Co.	1-800-766-8230
Jayhawk Pipeline Co.	1-888-542-9575

- Underground utility service lines and overhead utility pole lines 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.
- 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 abutting 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 will be required to re-establish any property irons which are damaged or destroyed by his construction operations. Such irons shall be re-established by a licensed land surveyor in accordance with state laws.
- All excavation & trenching material shall be stockpiled or spread out on site as determined by the Engineer.
- All existing and proposed erosion control measures including silt fencing, erosion control mat, straw bales, inlet barriers, and const. entrance shall be maintained throughout construction by the contractor and until project is accepted by the City of Wichita. The on-site engineer shall complete weekly reports on the status of erosion control measures. The contractor shall be required to comply with maintenance and/or replacement of erosion control measures as determined by the on-site engineer until project is accepted by City of Wichita. Maintenance and/or replacement of erosion control measures to be paid by L.S. bid item "Site Clearing & Restoration"

- All of Reserve "B" & "C" above the static water surface and within Maize Rd. R/W shall be seeded and mulched as follows: (Permanent Seeding)

SEED -- Kansas Premium Fescue Blend;  
8#/1000 Sq. Ft.  
FERTILIZER -- 12-24-12 Ratio at 350 Lbs./Ac.  
MULCH -- 2 Tons Prairie Hay / Acre

All other disturbed areas not in street R/W are to be seeded as follows: (Temporary Seeding)

SEED -- Rye grass (PLS) -- 5#/1000 Sq. Ft. and  
Kansas Premium Fescue Blend; 5#/1000 Sq. Ft.

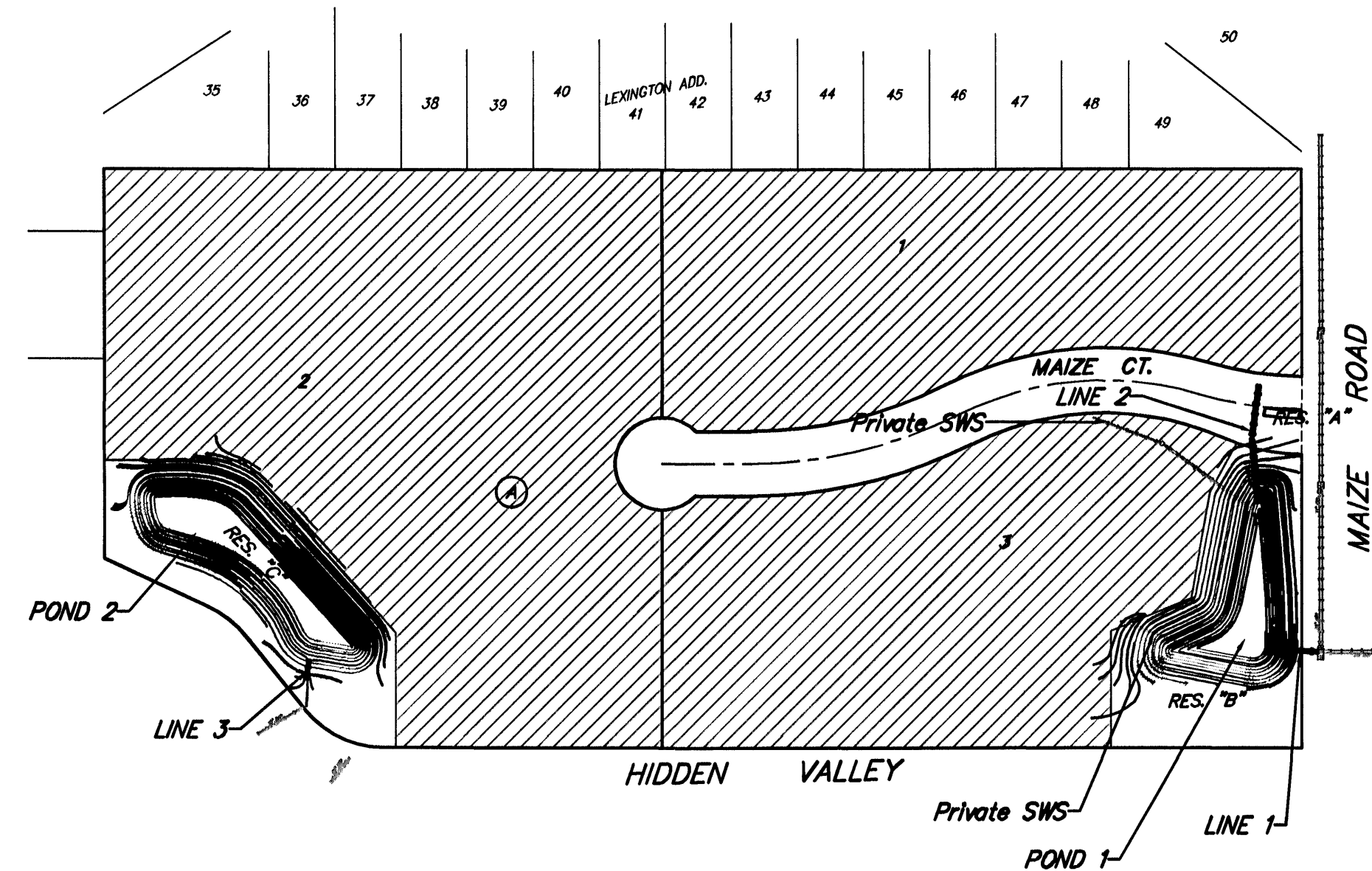
Contractor shall prepare ground per City Specifications. All seeding operations shall conform to City of Wichita Standard Specifications. All cost associated with seeding, mulching, and fertilizing shall be included in bid item "Project Seeding".

- The developer for this project is Matt Lillie, and may be contacted at (316) 773-1313.

- Rubble from the removal of miscellaneous structures and excess excavation which is to be wasted shall be disposed of on sites to be provided by the Contractor. These sites shall be approved by the Engineer as to suitability, appearance and site location. Locations, in the opinion of the Engineer, that will leave an unsightly appearance will not be approved. All disposal sites must be approved by the Kansas Department of Health and Environment. Material either stockpiled or disposed of in a flood plain would require a Kansas State Board of Agriculture permit. Any material dumped in waters of the United States or wetlands is subject to U.S. Corps of Engineers permitting regulations. Any material buried or stockpiled beyond approved construction limits would require additional archaeological investigations unless buried in a previously approved borrow location.

# STORM WATER DRAIN #298 to serve **LILLIE 2ND ADDITION** CITY OF WICHITA, KANSAS

James L. Armour, P.E. City Engineer  
Project Number  
468-84208  
O.C.A. Number  
751432



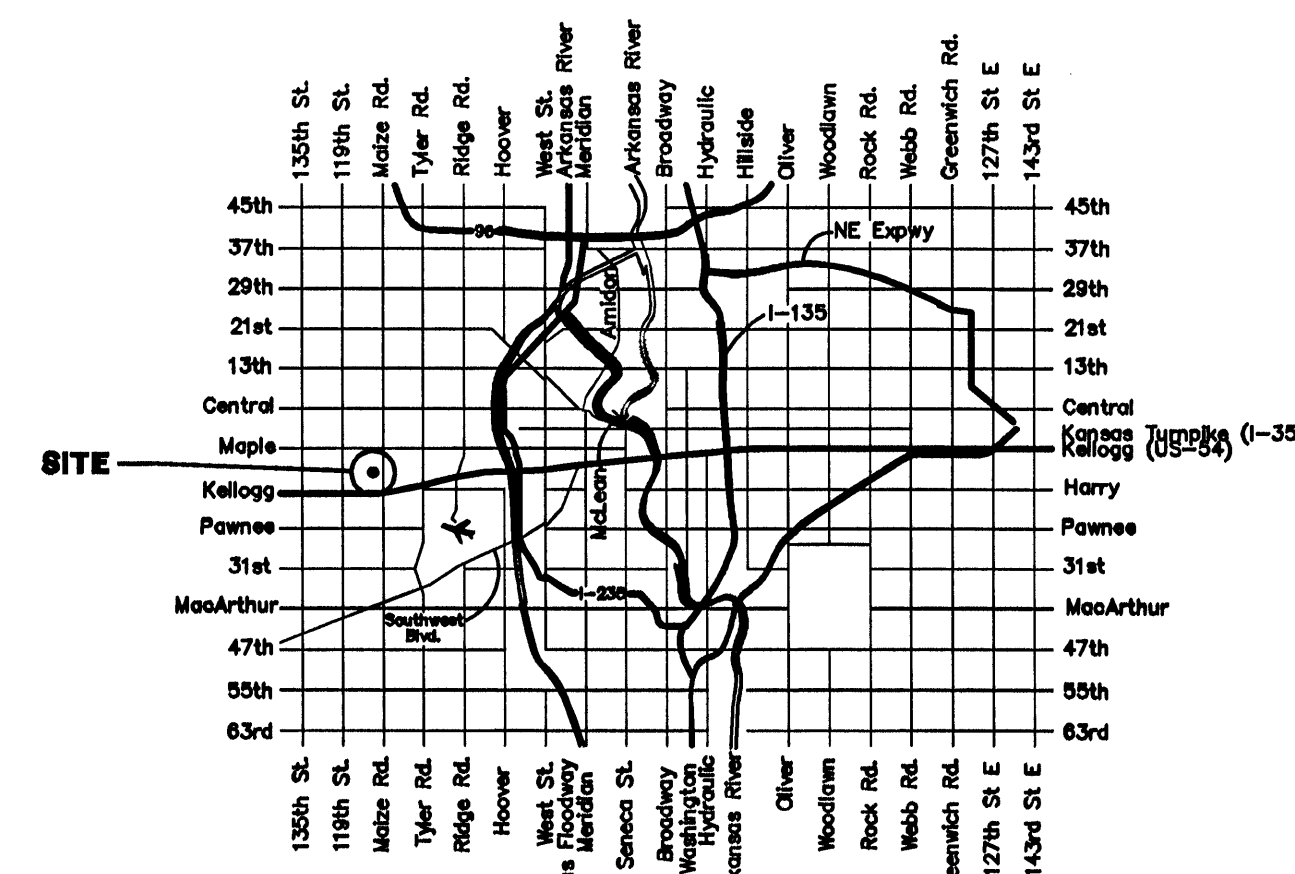
## Benchmarks

City Disc - Maize Road & McCormick  
(Hidden Valley) 0.5 Mi. South of Maple  
on the NE Corner of R.C.B.C Over  
Cowskin Creek, South of Hidden Valley  
Elev. = 1318.93 City Datum (1318.93  
NGVD29)

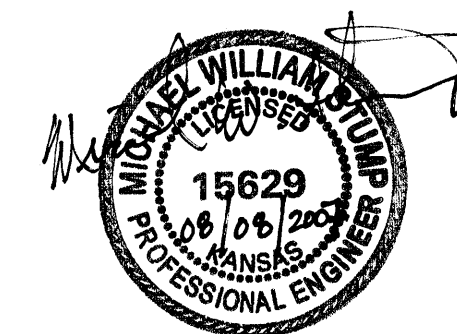
## Sheet Index

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Benefit District



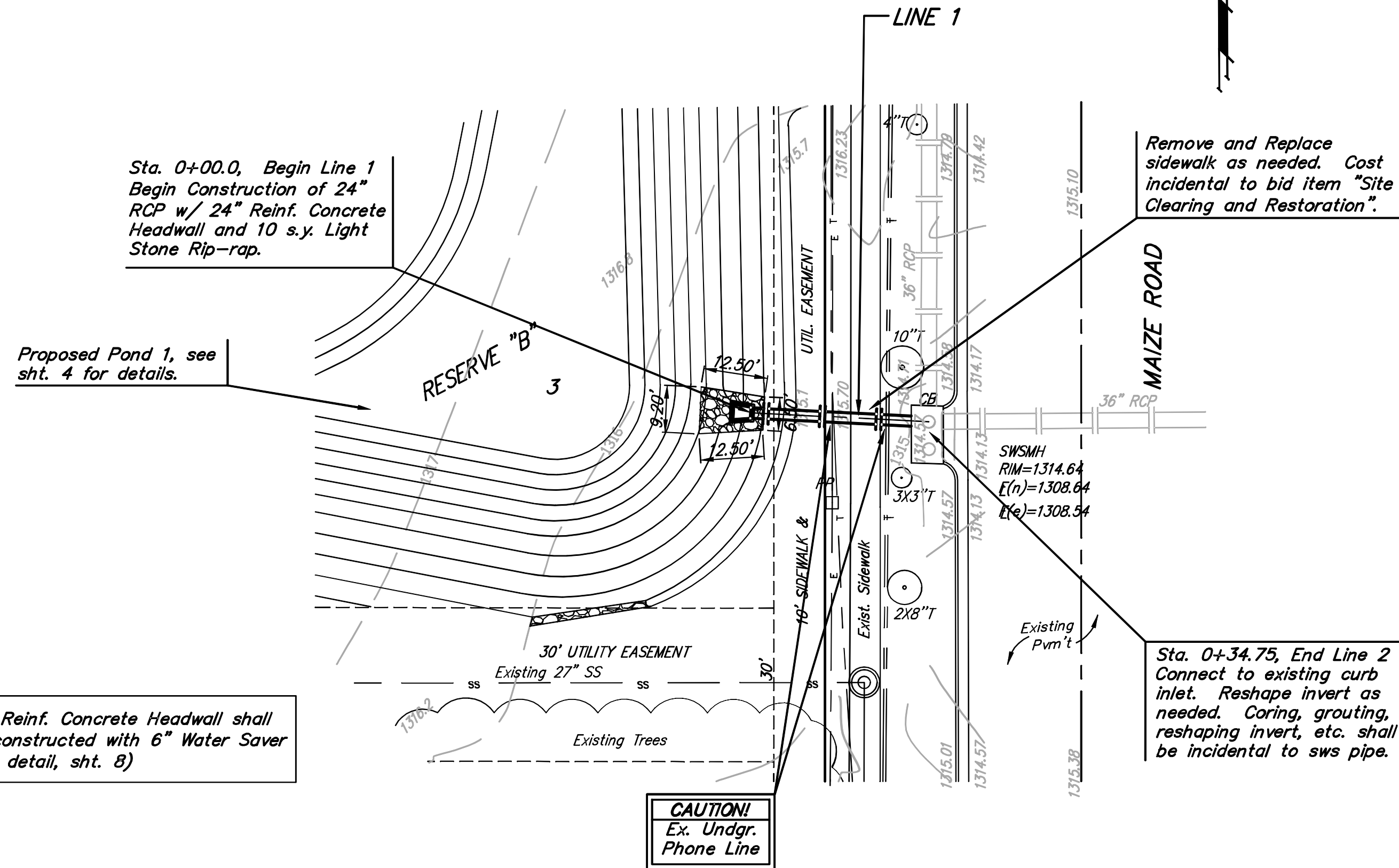
Vicinity Map



Baughman Company, P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149  
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

BENCHMARK:  
 City Disc - Maize Road & McCormick  
 (Hidden Valley) 0.5 MI. South of Maple  
 on the NE Corner of R.C.B.C Over  
 Cowskin Creek, South of Hidden Valley  
 Elev. = 1318.93 City Datum (1318.93  
 NGVD29)

SCALE:  
 1" = 20' HORIZONTAL  
 1" = 5' VERTICAL  
 • = IRON



Sta. 0+04.0, Begin Line 2  
 Begin construction of 24"  
 RCP with end section.  
 Install 37 s.y. Light Stone  
 Rip-rap around both end  
 sections.

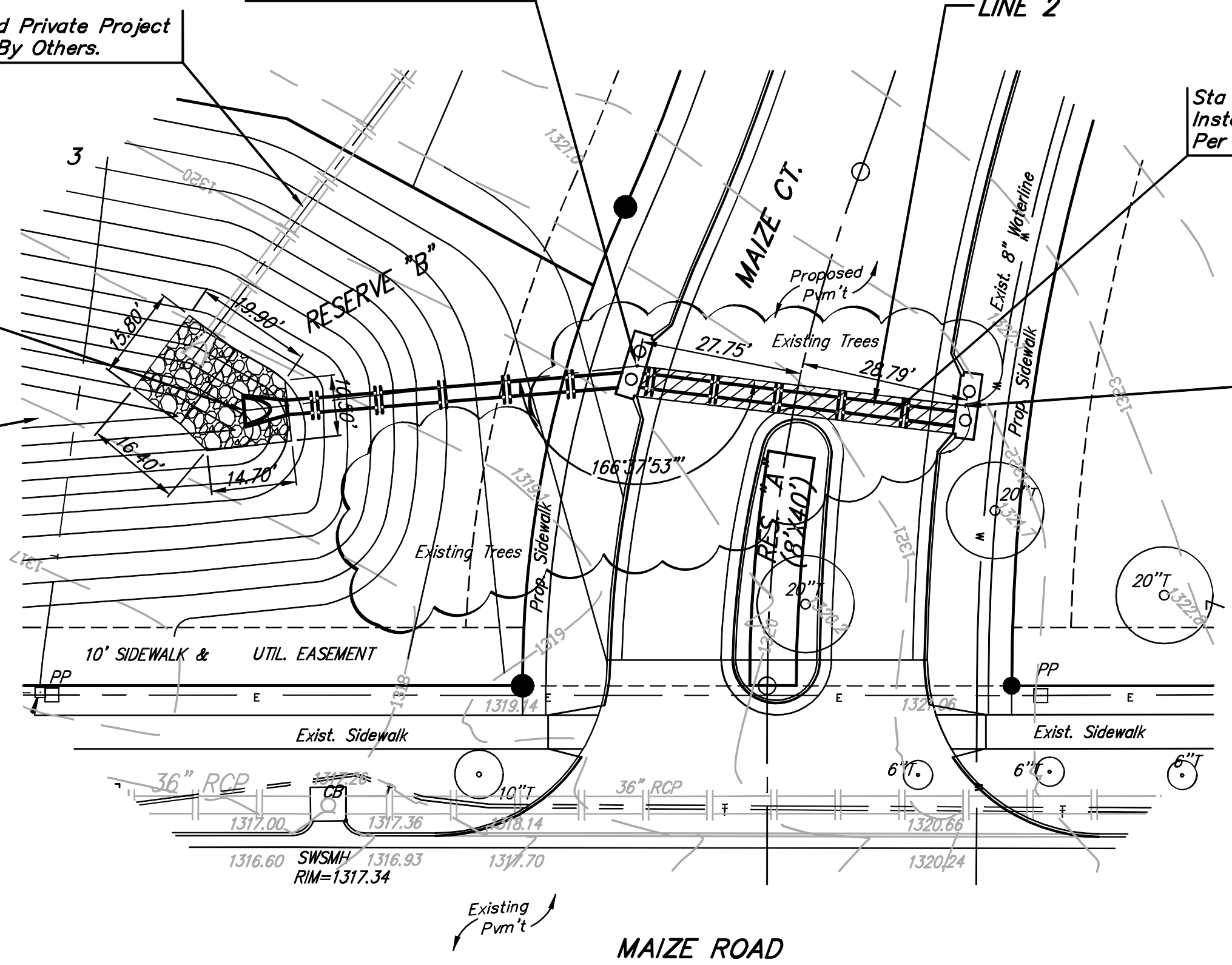
Proposed Private Project  
 SWS - By Others.

Sta. 0+71.89, Line 2  
 Const. Std Type-1A Double  
 Curb Inlet. (10' x 3')  
 Top Elev. = 1321.40

Sta 0+71.8 to Sta 1+28.7  
 Install 56.9 L.F. Flowable Fill  
 Per City of Wichita Specs.

Sta. 1+28.64, End Line 2  
 Const. Std Type-1A Double  
 Curb Inlet. (10' x 3')  
 Top Elev. = 1321.40

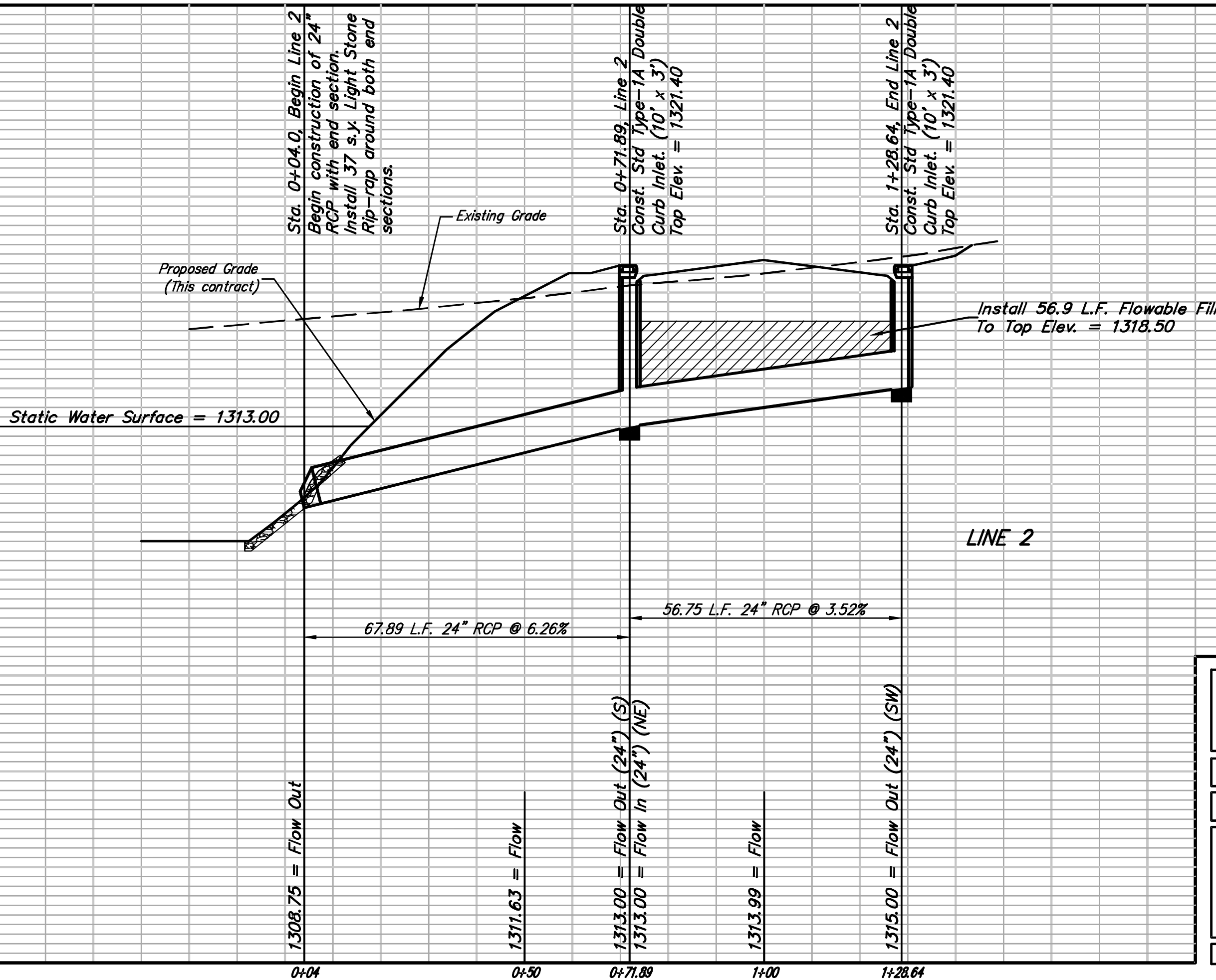
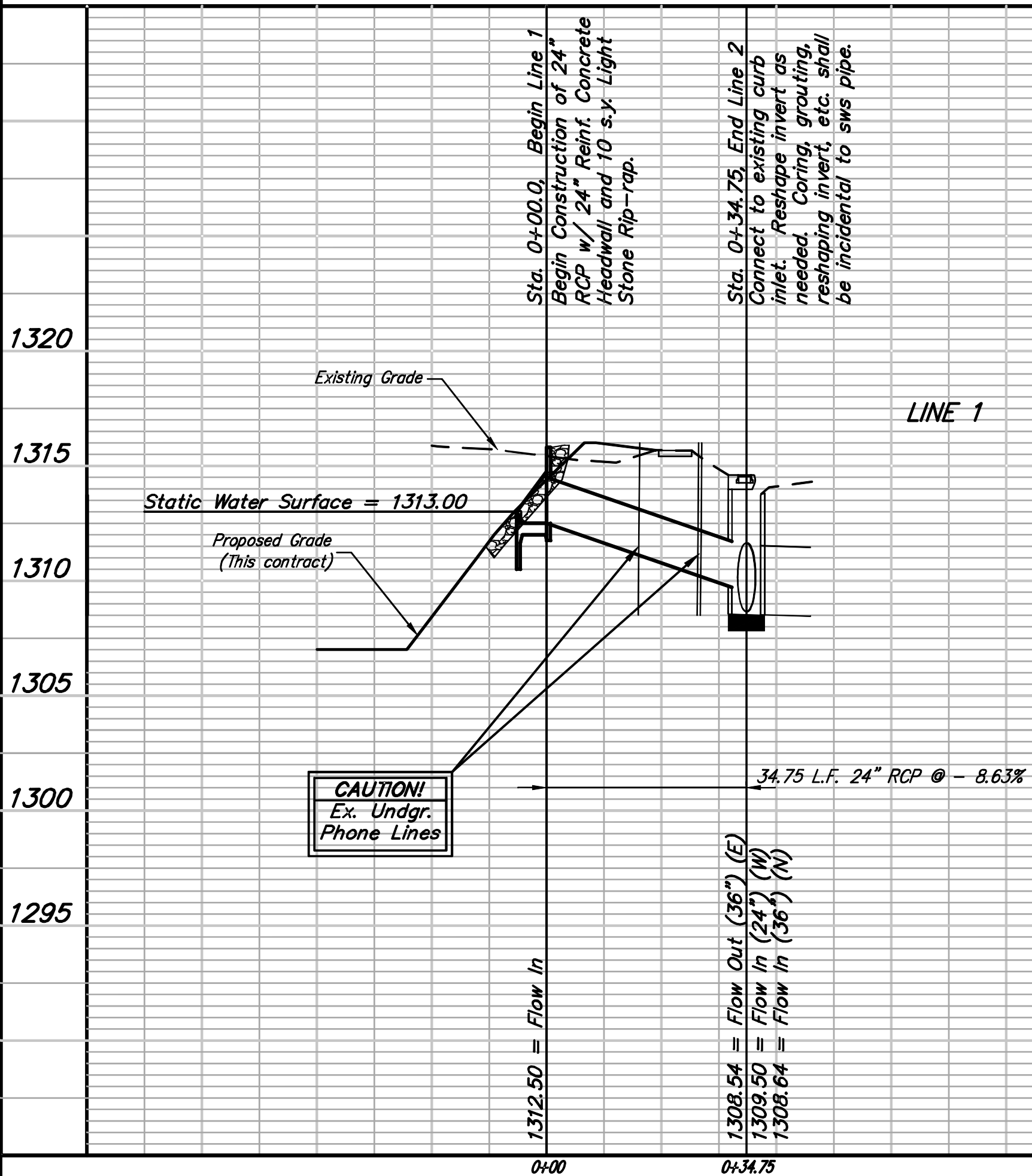
Proposed Pond 1, see  
 sht. 4 for details.



24" Reinf. Concrete Headwall shall  
 be constructed with 6" Water Saver  
 (see detail, sht. 8)

CAUTION!  
 Ex. Undgr.  
 Phone Line

Sta. 0+34.75, End Line 2  
 Connect to existing curb  
 inlet. Reshape invert as  
 needed. Coring, grouting,  
 reshaping invert, etc. shall  
 be incidental to sws pipe.

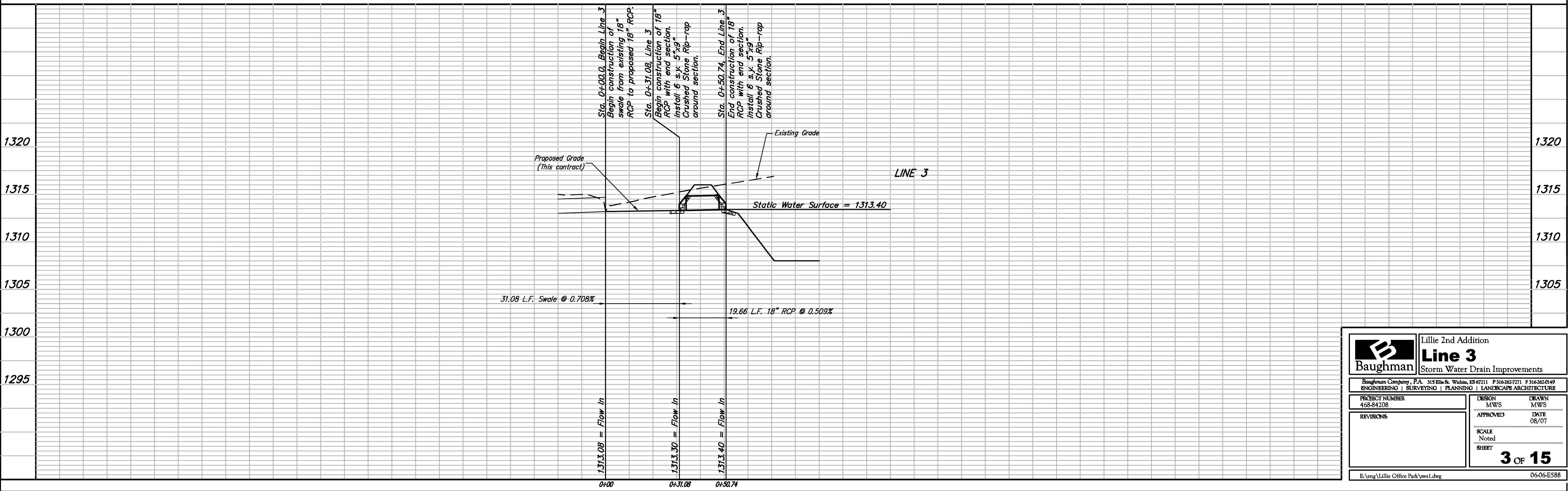
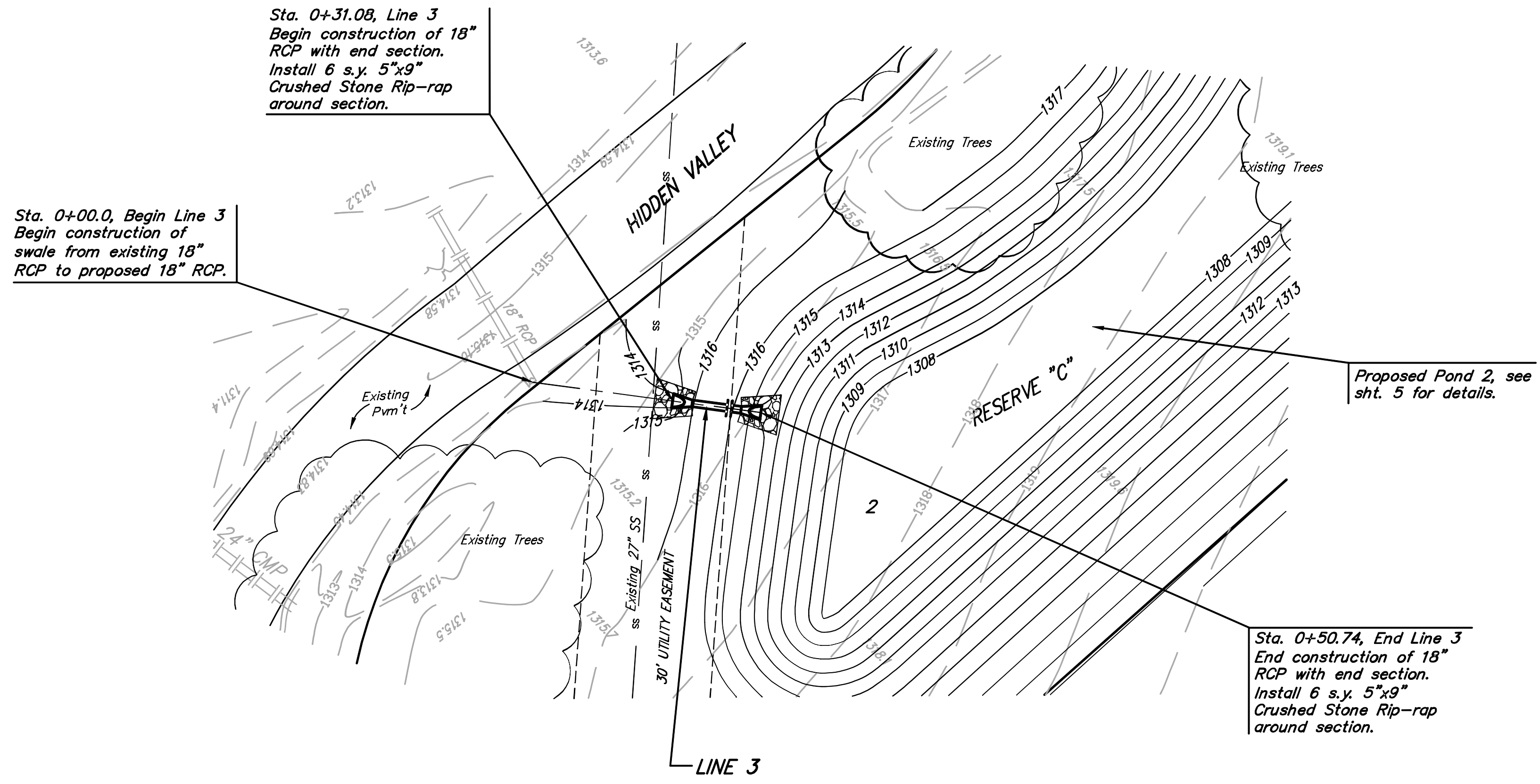


<b>Baughman</b>		Lillie 2nd Addition <b>Line 1 &amp; 2</b> Storm Water Drain Improvements	
Baughman Company, P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 ENGINEERING   SURVEYING   PLANNING   LANDSCAPE ARCHITECTURE			
PROJECT NUMBER 468-84208	DESIGN MWS	DRAWN MWS	APPROVED DATE 08/07
REVISIONS:	SCALE Noted		SHEET 2 OF 15
E:\eng\Lillie Office Park\sws1.dwg			06-06-E588

BENCHMARK:  
 City Disc - Maize Road & McCormick  
 (Hidden Valley) 0.5 MI. South of Maple  
 on the NE Corner of R.C.B.C Over  
 Cowskin Creek, South of Hidden Valley  
 Elev. = 1318.93 City Datum (1318.93  
 NGVD29)



SCALE:  
 1" = 20' HORIZONTAL  
 1" = 5' VERTICAL  
 • = IRON



	Lillie 2nd Addition	
	<b>Line 3</b>	
Storm Water Drain Improvements		
<small>Baughman Company, P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149          ENGINEERING   SURVEYING   PLANNING   LANDSCAPE ARCHITECTURE</small>		
PROJECT NUMBER 468-84208	DESIGN MWS	DRAWN MWS
REVISIONS:	APPROVED	DATE 08/07
SCALE Noted		SHEET <b>3 OF 15</b>
<small>E:\eng\Lillie Office Park\sws1.dwg</small>		<small>06-06-E588</small>

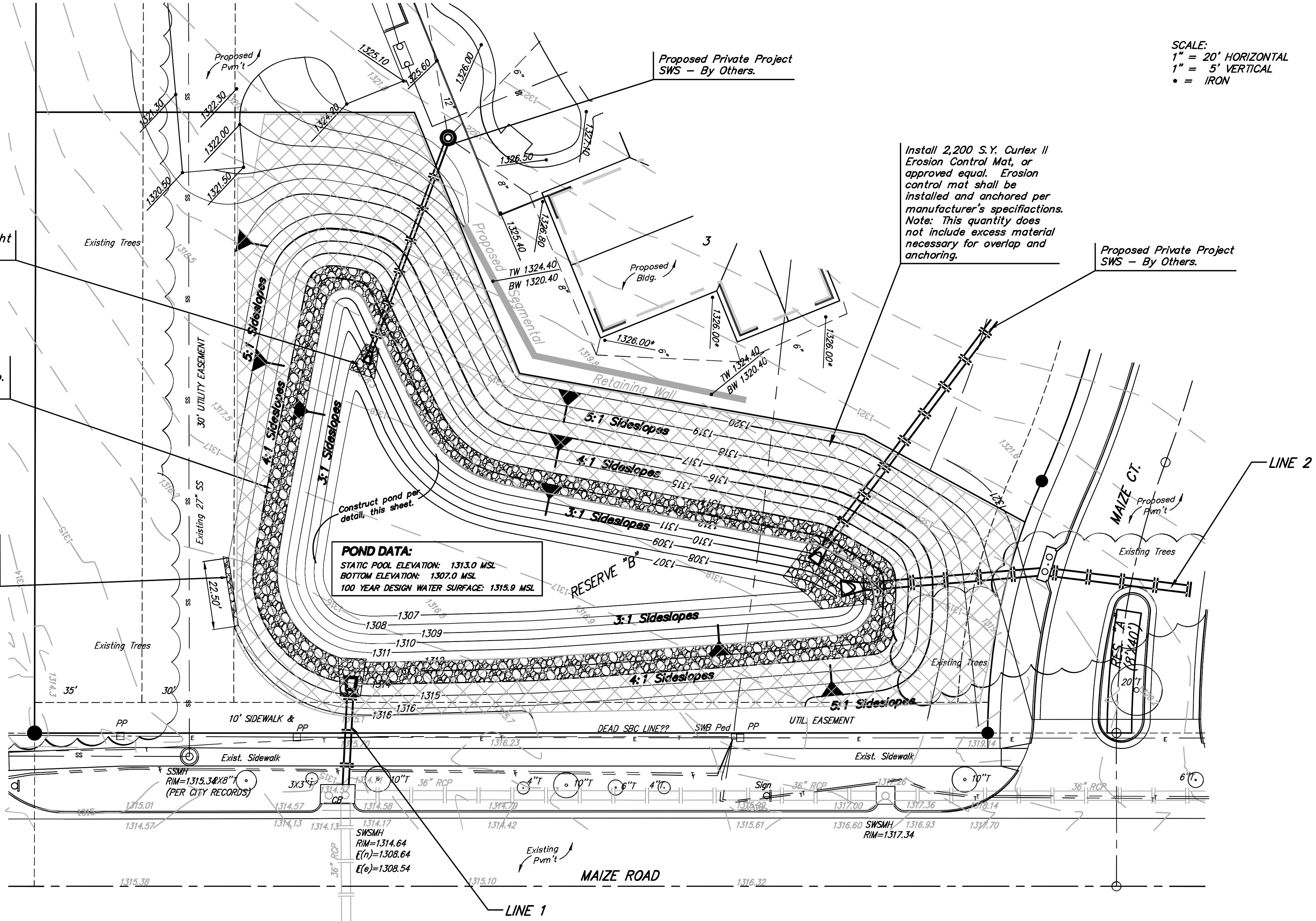
BENCHMARK:  
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SCALE:  
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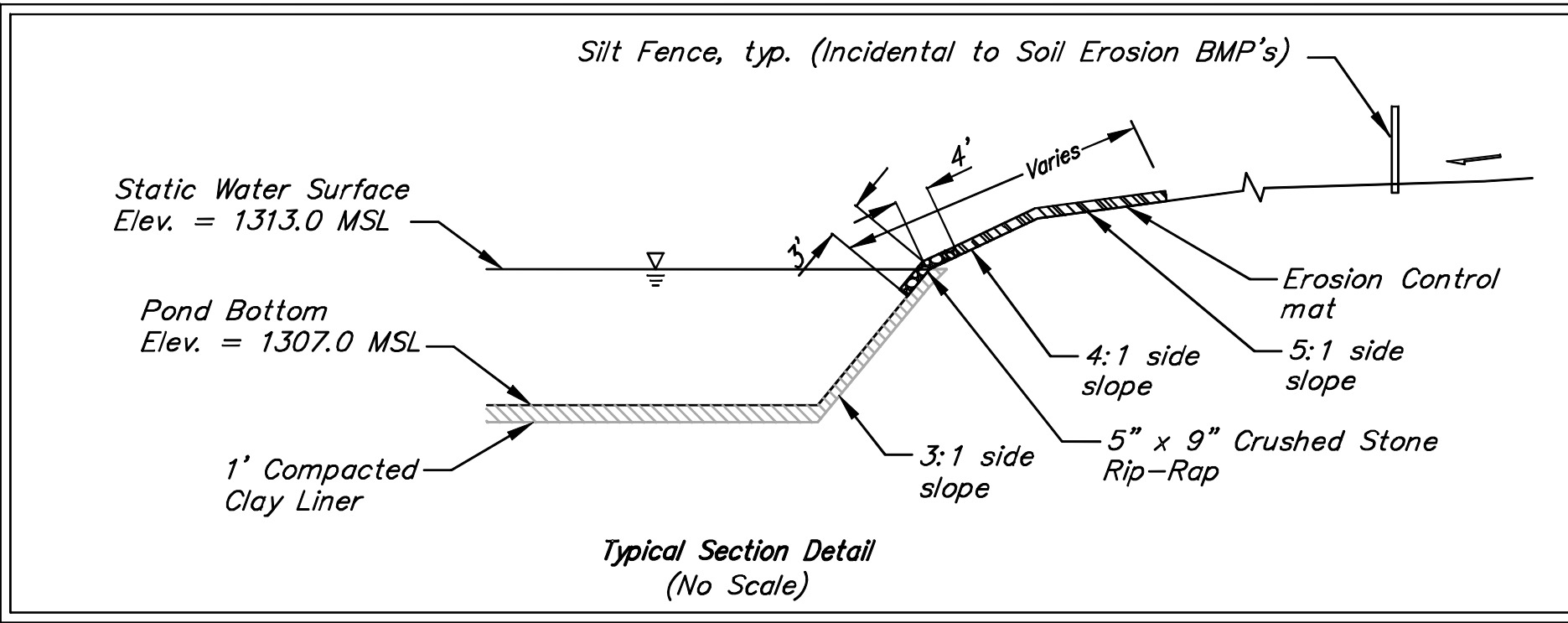
EARTH WORK TOTALS		
	C.Y. Excavation	C.Y. Fill
Mass Grading	8,121	63
Pond 1 Construction	5,026	203
Pond 2 Construction	7,265	65
<b>Total</b>	<b>20,412</b>	<b>331</b>

Earthwork quantities are for reference only. All cost associated with mass grading, Pond 1 and Pond 2 construction shall be incidental to lump sum bid item "Mass Grading".



**POND DATA:**  
 STATIC POOL ELEVATION: 1313.0 MSL  
 BOTTOM ELEVATION: 1307.0 MSL  
 100 YEAR DESIGN WATER SURFACE: 1315.9 MSL

- NOTES:**
- Pond bottom and sideslopes below static pool elevation shall be over-excavated 1' and a 1' clay liner shall be compacted to 95% std. density. The plasticity index (P.I.) shall be at least 30. The compaction and P.I. shall be verified during construction. P.I. determination and compaction testing shall be arranged by the contractor at the request of the inspector. Cost shall be incidental to "Site Clearing & Restoration". Cost of over-excavation to install Clay Liner shall be incidental to bid item, "Mass Grading."
  - All of Reserve "B" & "C" above the static water surface and within Maize Rd. R/W shall be seeded and mulched as follows: (Permanent Seeding)  
 SEED -- Kansas Premium Fescue Blend; 5#/1000 Sq. Ft.  
 FERTILIZER -- 12-24-12 Ratio at 350 Lbs./Ac.  
 MULCH -- 2 Tons Prairie Hay / Acre  
 All other disturbed areas not in street R/W are to be seeded as follows: (Temporary seeding)  
 SEED -- Rye grass (PLS)--5#/1000 Sq. Ft. and Kansas Premium Fescue Blend; 5#/1000 Sq. Ft.  
 Contractor shall prepare ground per City Specifications. All seeding operations shall conform to City of Wichita Standard Specification. All cost associated with seeding, mulching and fertilizing shall be included in bid item "Project Seeding".
  - Install Erosion Control Mat (Curlx II or approved equal) from 1' below the water surface to Reserve Limits.
  - Contractor to strip top 3" of soil within Res. "B" & "C" and street R/W before mass grading and stockpile. Top soil stockpile to be redistributed over Reserve "B" & "C" above water elevation prior to seeding.
  - Compaction of 95% shall be obtained in all street R/W's, 90% in all other areas.
  - Any excess excavation shall be stockpiled on-site at an area indicated by the Engineer out of easements and R/W.



--- 151 --- Existing Grade  
 --- 14B --- Proposed Grade

	Lillie 2nd Addition	
	<b>Pond 1</b> Storm Water Drain Improvements	
Baughman Company, P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 ENGINEERING   SURVEYING   PLANNING   LANDSCAPE ARCHITECTURE		
PROJECT NUMBER 468-84208	DESIGN MWS	DRAWN MWS
REVISIONS:	APPROVED DATE 08/07	SCALE Noted SHEET <b>4 OF 15</b>
E:\eng\Lillie Office Park\aws.Ldw 06-06-E588		

BENCHMARK:  
 City Disc - Maize Road & McCormick  
 (Hidden Valley) 0.5 MI. South of Maple  
 on the NE Corner of R.C.B.C Over  
 Cowskin Creek, South of Hidden Valley  
 Elev. = 1318.93 City Datum (1318.93  
 NGVD29)

SCALE:  
 1" = 20' HORIZONTAL  
 1" = 5' VERTICAL  
 • = IRON

Pond shall be adjusted in the field to miss first row of perimeter trees on the south and west sides. Excavation quantities are based on proposed contours. Pond may be reduced as needed to save trees.

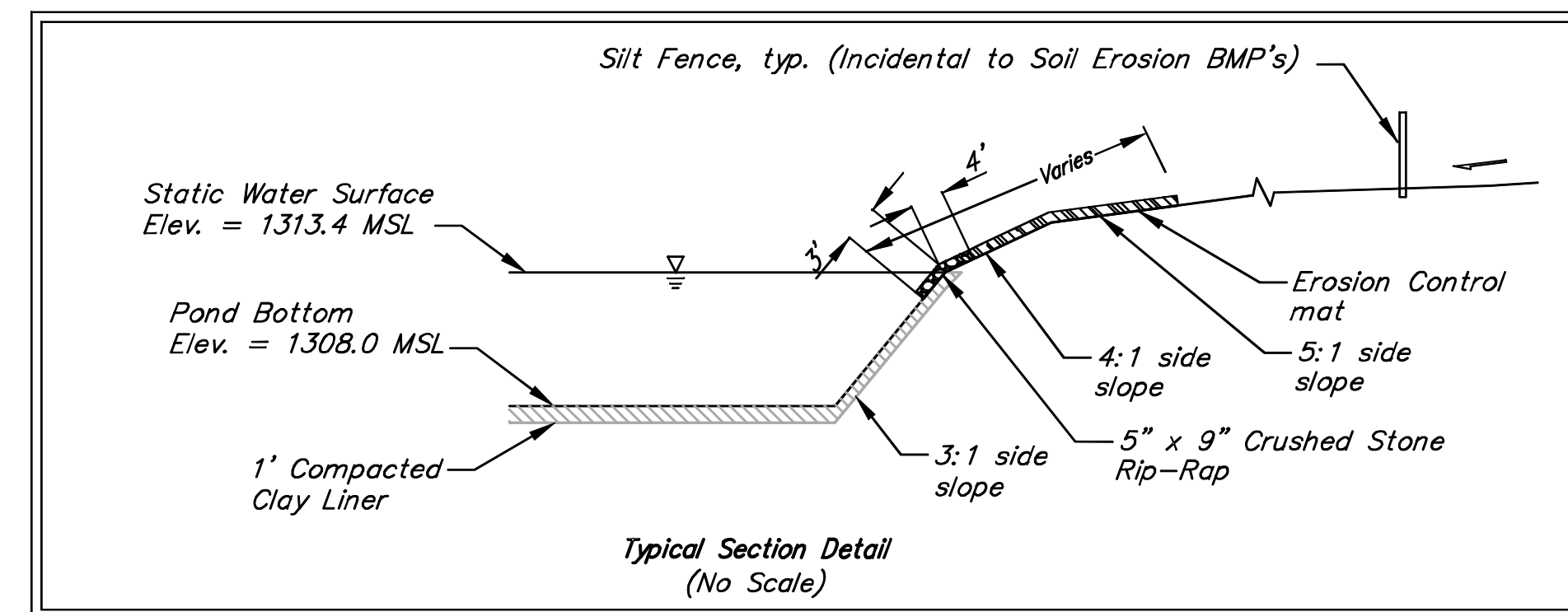
Shed, light pole and landscaping material to be removed by others prior to construction.

Install 440 S.Y. 5"x9" Crushed Stone rip-rap. See detail, this sheet.

Construct pond per detail, this sheet.

NOTES:

- Pond bottom and sideslopes below static pool elevation shall be over-excavated 1' and a 1' clay liner shall be compacted to 95% std. density. The plasticity index (P.I.) shall be at least 30. The compaction and P.I. shall be verified during construction. P.I. determination and compaction testing shall be arranged by the contractor at the request of the inspector. Cost shall be incidental to "Site Clearing & Restoration". Cost of over-excavation to install Clay Liner shall be incidental to bid item, "Mass Grading."
- All of Reserve "B" & "C" above the static water surface and within Maize Rd. R/W shall be seeded and mulched as follows: (Permanent Seeding)  
 SEED -- Kansas Premium Fescue Blend; 8g/1000 Sq. Ft.  
 FERTILIZER -- 12-24-12 Ratio at 350 Lbs./Ac.  
 MULCH -- 2 Tons Prairie Hay / Acre  
 All other disturbed areas not in street R/W are to be seeded as follows: (Temporary seeding)  
 SEED -- Rye grass (PLS)--5g/1000 Sq. Ft. and Kansas Premium Fescue Blend; 5g/1000 Sq. Ft.  
 Contractor shall prepare ground per City Specifications. All seeding operations shall conform to City of Wichita Standard Specification. All cost associated with seeding, mulching and fertilizing shall be included in bid item "Project Seeding".
- Install Erosion Control Mat (Curlx II or approved equal) from 1' below the water surface to Reserve Limits.
- Contractor to strip top 3" of soil within Res. "B" & "C" and street R/W before mass grading and stockpile. Top soil stockpile to be redistributed over Reserve "B" & "C" above water elevation prior to seeding.
- Compaction of 95% shall be obtained in all street R/W's, 90% in all other areas.
- Any excess excavation shall be stockpiled on-site at an area indicated by the Engineer out of easements and R/W.



**POND DATA:**  
 STATIC POOL ELEVATION: 1313.4 MSL  
 BOTTOM ELEVATION: 1308.0 MSL  
 100 YEAR DESIGN WATER SURFACE: 1316.0 MSL

Install 1,980 S.Y. Curlx II Erosion Control Mat, or approved equal. Erosion control mat shall be installed and anchored per manufacturer's specifications. Note: This quantity does not include excess material necessary for overlap and anchoring.

EARTH WORK TOTALS		
	C.Y. Excavation	C.Y. Fill
Mass Grading	8,121	63
Pond 1 Construction	5,026	203
Pond 2 Construction	7,265	65
Total	20,412	331

Earthwork quantities are for reference only. All cost associated with mass grading, Pond 1 and Pond 2 construction shall be incidental to lump sum bid item "Mass Grading".

**Baughman** Lillie 2nd Addition  
**Pond 2**  
 Storm Water Drain Improvements

Baughman Company, P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149  
 ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

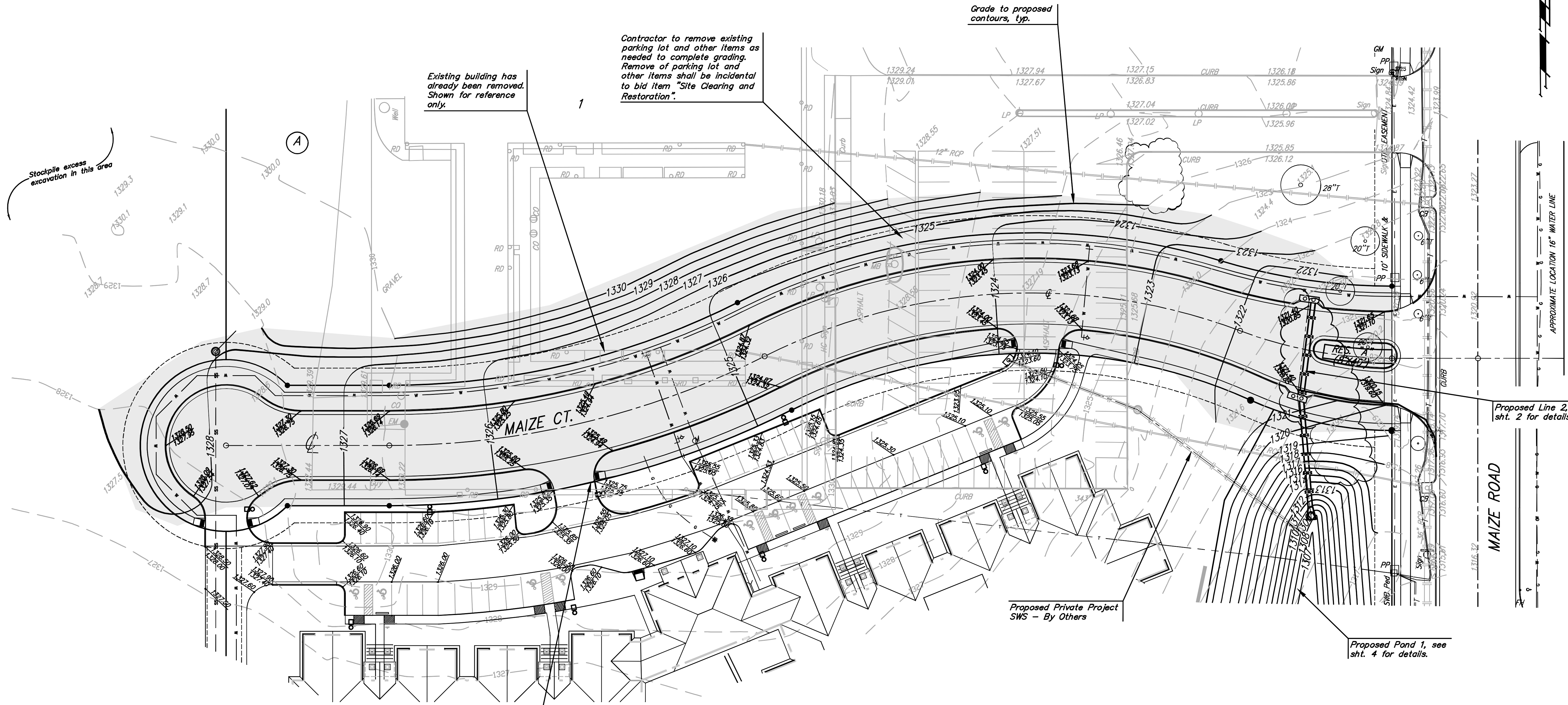
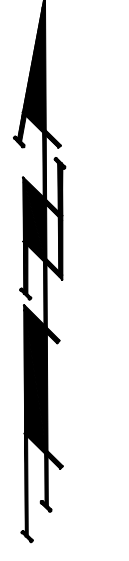
PROJECT NUMBER 468-84208	DESIGN MWS	DRAWN MWS
REVISIONS:	APPROVED	DATE 08/07
	SCALE Noted	SHEET

**5 OF 15**

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BENCHMARK:  
 City Disc - Maize Road & McCormick  
 (Hidden Valley) 0.5 Mi. South of Maple on  
 the NE Corner of R.C.B.C Over Cowskin  
 Creek, South of Hidden Valley  
 Elev. = 1318.93 City Datum (1318.93  
 NGVD29)

SCALE:  
 1" = 30' HORIZONTAL  
 1" = 30' VERTICAL  
 . = IRON



Existing building has already been removed. Shown for reference only.

Contractor to remove existing parking lot and other items as needed to complete grading. Remove of parking lot and other items shall be incidental to bid item "Site Clearing and Restoration".

Grade to proposed contours, typ.

Stockpile excess excavation in this area

A

Proposed Line 2, see sht. 2 for details.

Proposed Pond 1, see sht. 4 for details.

NOTES:

- Pond bottom and sideslopes below static pool elevation shall be over-excavated 1' and a 1' clay liner shall be compacted to 95% std. density. The plasticity index (P.I.) shall be at least 30. The compaction and P.I. shall be verified during construction. P.I. determination and compaction testing shall be arranged by the contractor at the request of the inspector. Cost shall be incidental to "Site Clearing & Restoration". Cost of over-excavation to install Clay Liner shall be incidental to bid item, "Mass Grading."
- All of Reserve "B" & "C" above the static water surface and within Maize Rd. R/W shall be seeded and mulched as follows: (Permanent Seeding)  
 SEED -- Kansas Premium Fescue Blend; 8#/1000 Sq. Ft.  
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 SEED -- Rye grass (PLS)--5#/1000 Sq. Ft. and Kansas Premium Fescue Blend; 5#/1000 Sq. Ft.  
 Contractor shall prepare ground per City Specifications. All seeding operations shall conform to City of Wichita Standard Specification. All cost associated with seeding, mulching and fertilizing shall be included in bid item "Project Seeding".

Mass Grade up to Right-of-Way of proposed Building Site.

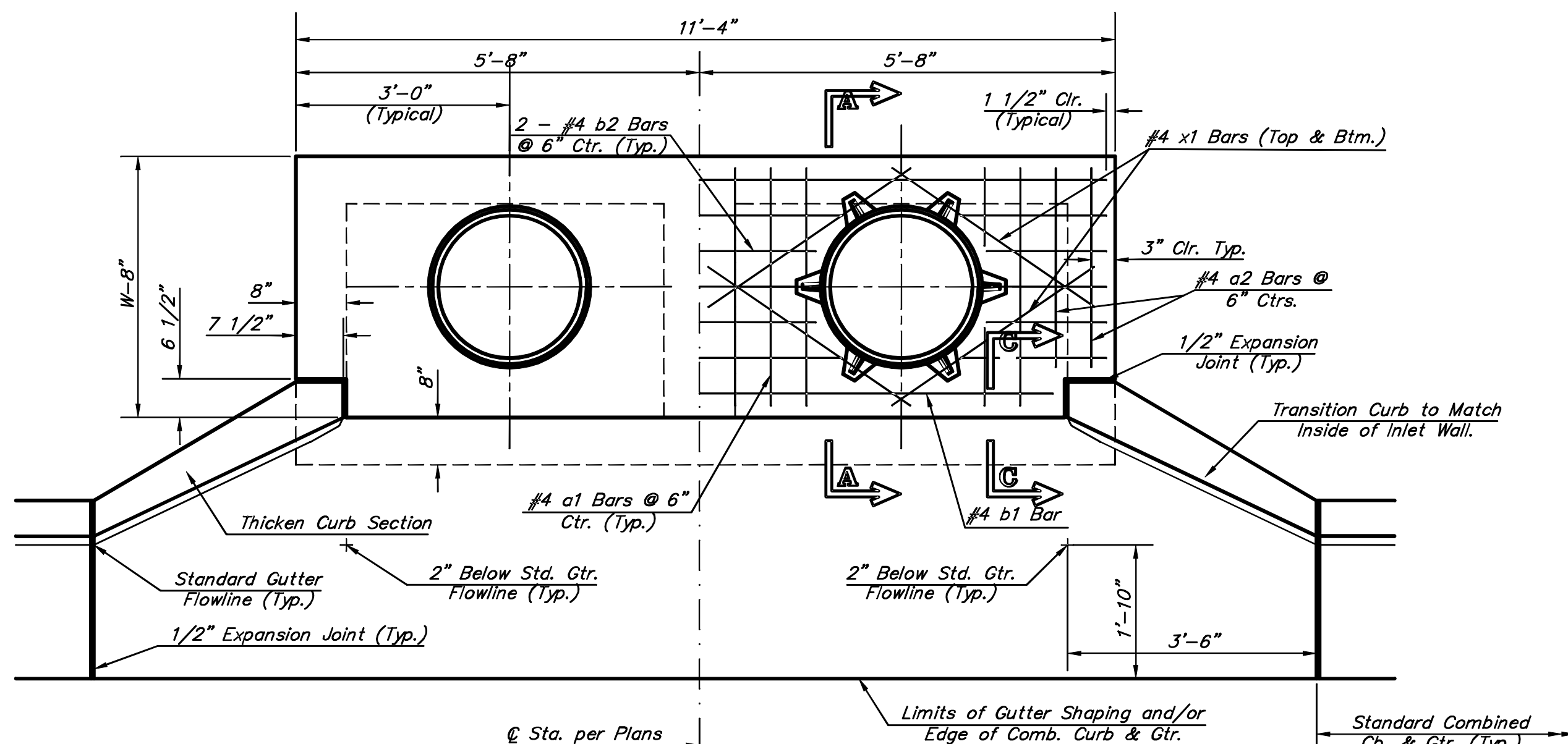
--151-- Existing Grade  
 ---148--- Proposed Grade

EARTH WORK TOTALS		
	C.Y. Excavation	C.Y. Fill
Mass Grading	8,121	63
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Pond 2 Construction	7,265	65
<b>Total</b>	<b>20,412</b>	<b>331</b>

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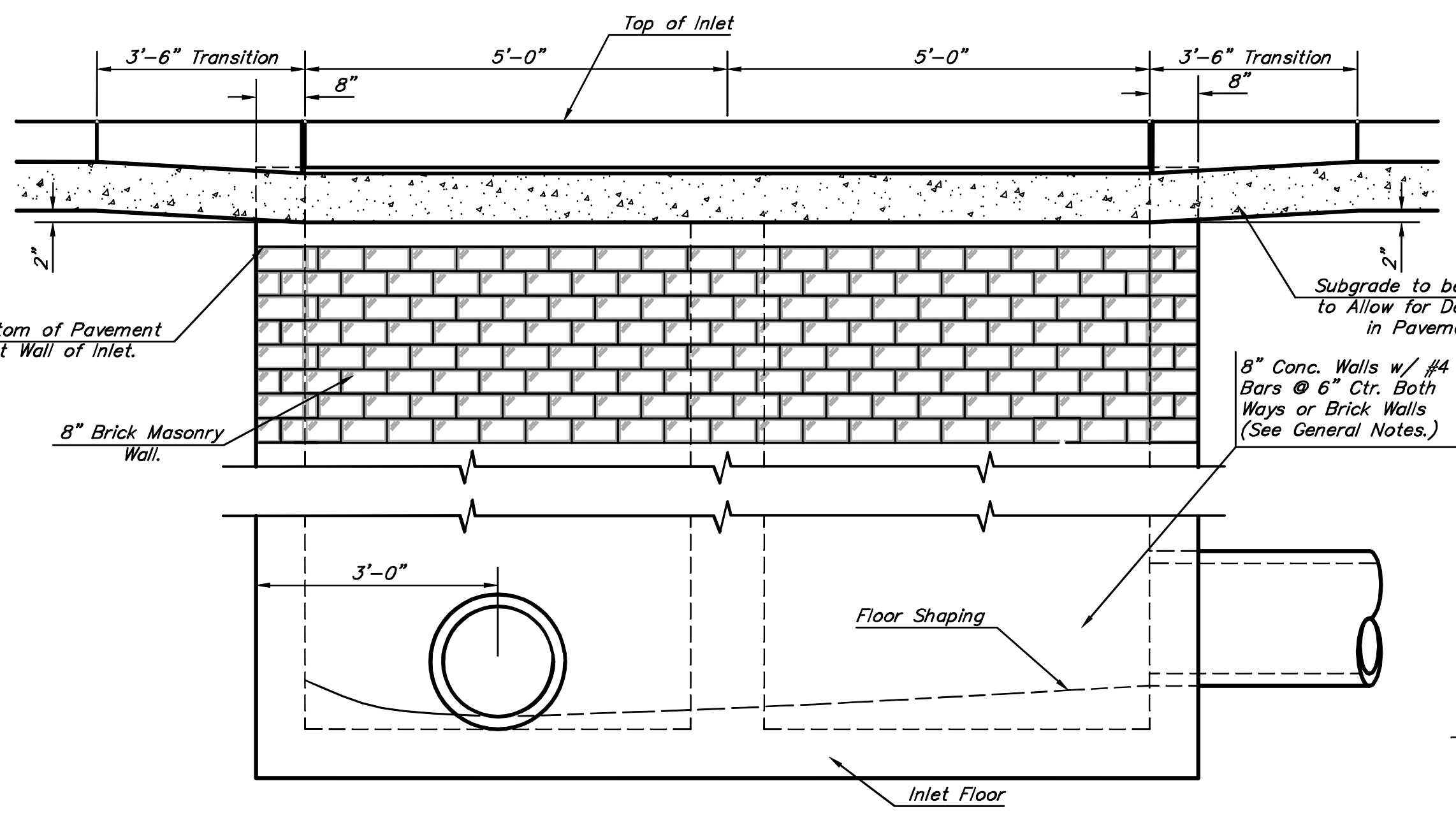
Proposed Private Project SWS - By Others

	Lillie 2nd Addition	
	<b>Mass Grading</b> Storm Water Drain Improvements	
<small>Baughman Company, P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149          ENGINEERING   SURVEYING   PLANNING   LANDSCAPE ARCHITECTURE</small>		
PROJECT NUMBER 468-84208	DESIGN MWS	DRAWN MWS
REVISIONS:	APPROVED MWS	DATE 08/07
	SCALE Noted	SHEET <b>6 OF 15</b>
<small>E:\eng\Lillie Office Park\lws1_massgrade.dwg 06-06-E588</small>		

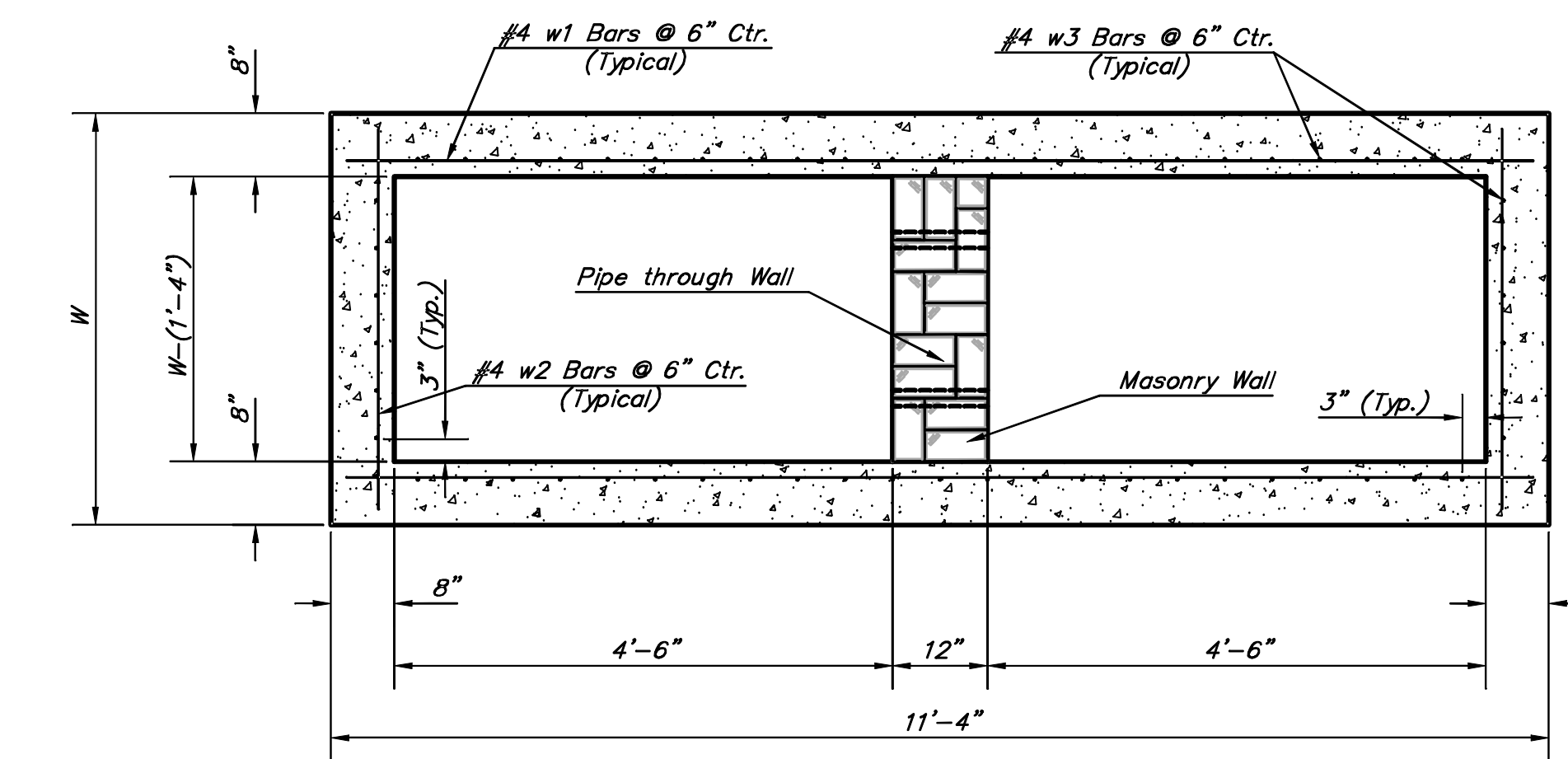


**PLAN**

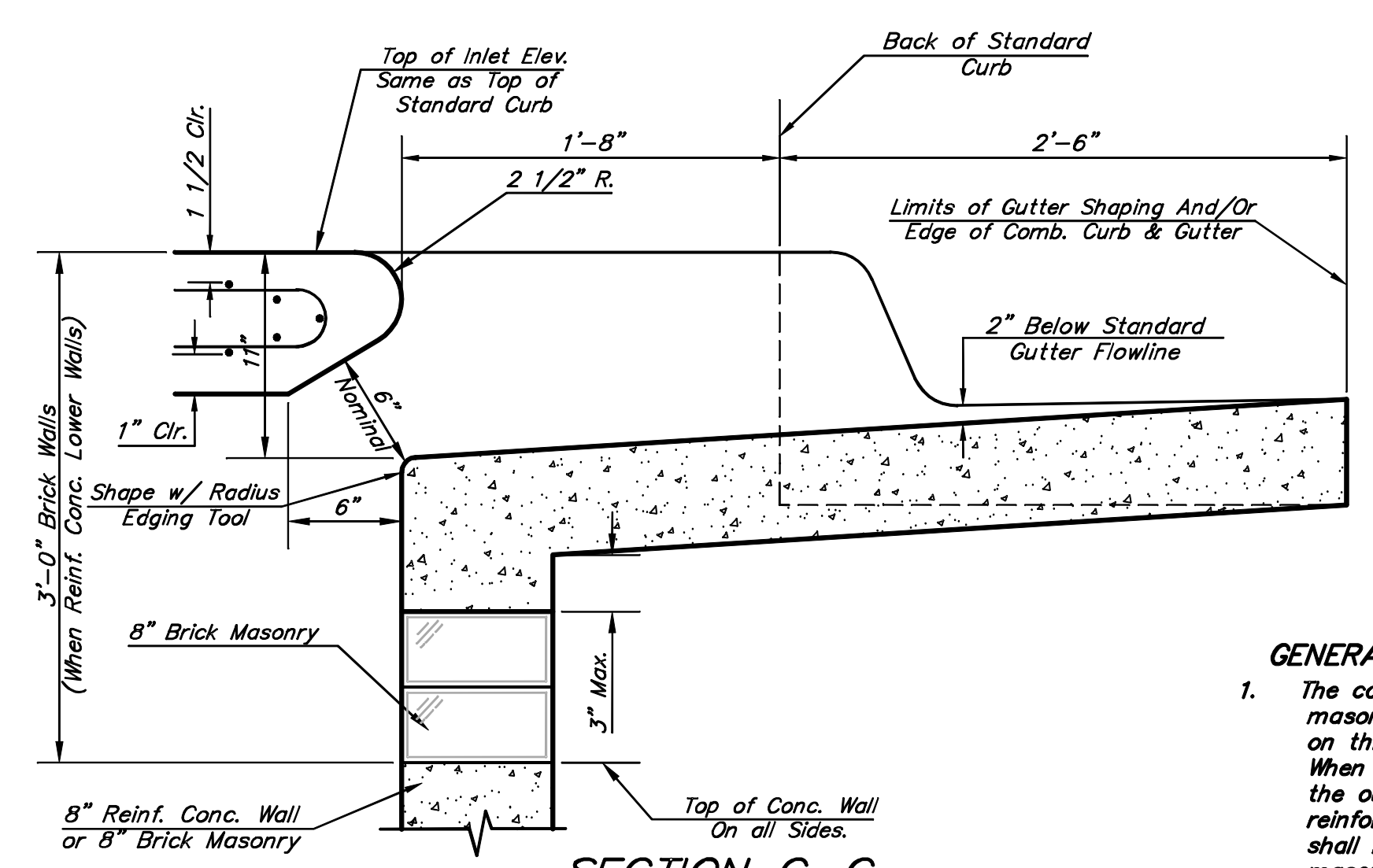
\*Left Side Shown Without Slab Reinforcing, Right Side Shown With Slab Reinforcing



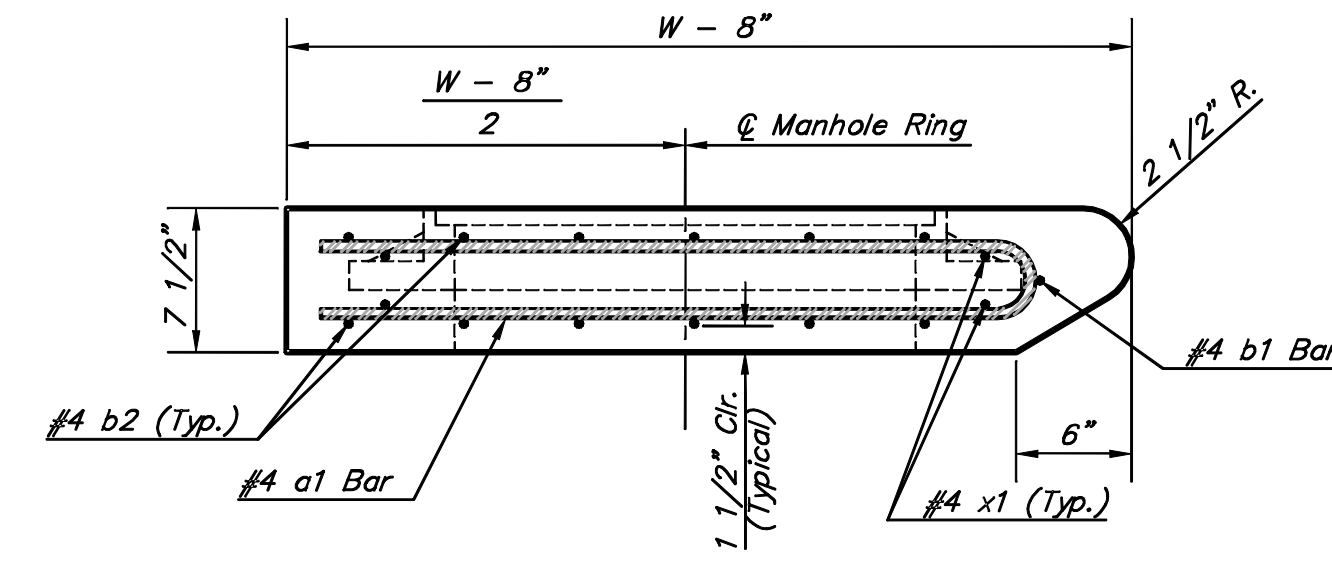
**ELEVATION**



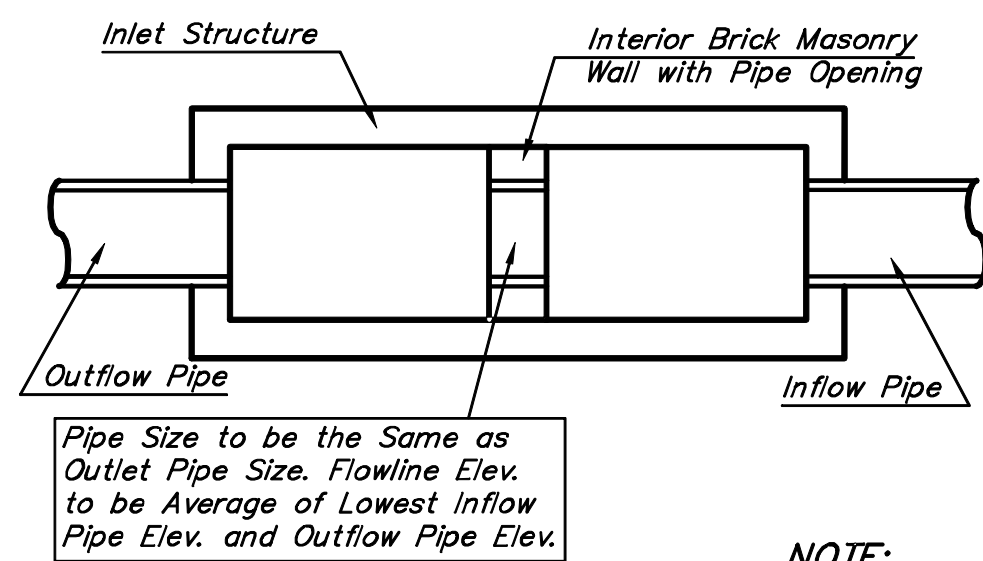
**SECTION B-B**



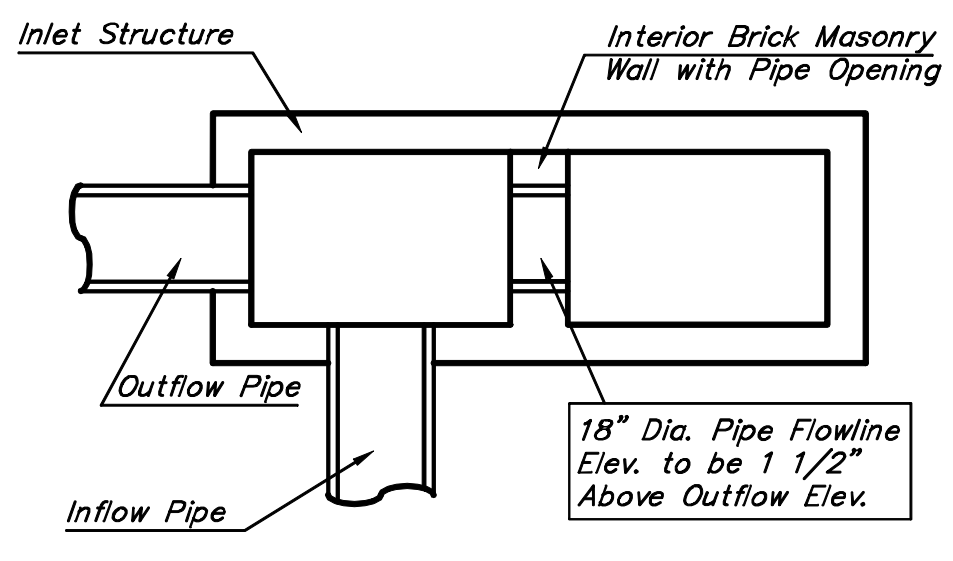
**SECTION C-C**



**SECTION A-A**

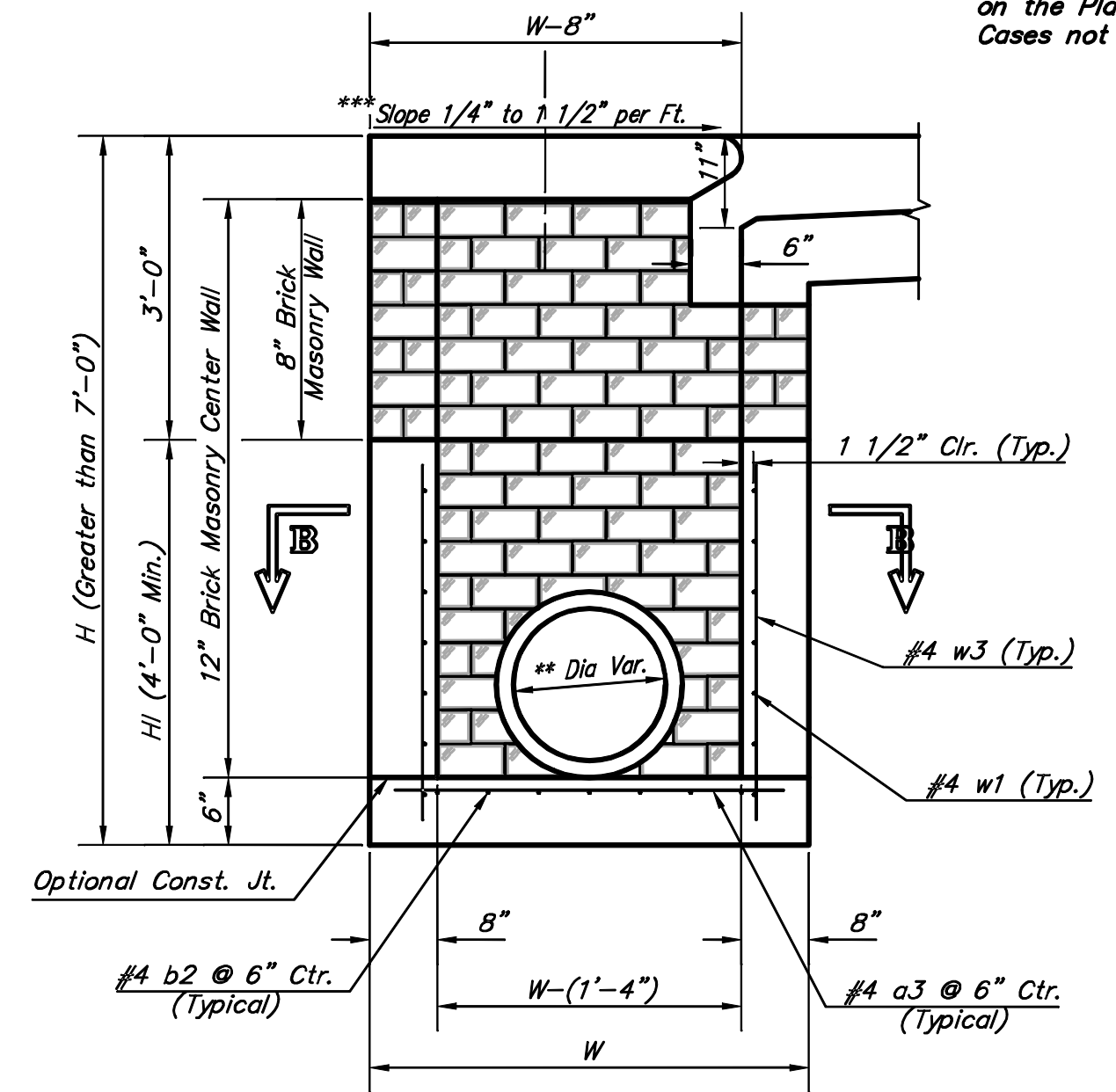


**CASE I**



**CASE II**

**NOTE:**  
Center Wall Pipe Size shall be as Specified in Inlet Construction Notes on the Plan/Profile Sheets for those Cases not Shown Here.



**TYPICAL INLET SECTION AT CENTER WALL (Reinforced Concrete Walls)**

**TYPICAL INLET SECTION AT CENTER WALL (Masonry Walls)**

**NOTES:**  
\*\* A center wall opening shall be provided by means of a section of reinforced concrete pipe. See Case I and Case II above.  
\*\*\* Slope of inlet tops to match sidewalk of parking slopes within limits indicated

**PRECAST SLAB AND FLOOR REINFORCING**

MARK	SIZE	W = 4'-4"		W = 5'-4"		W = 6'-4"		W = 7'-4"		W = 8'-4"	
		NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH
* a1	#4	13	6'-7"	13	8'-7"	13	10'-7"	13	12'-7"	13	14'-7"
a2	#4	4	6'-0"	4	8'-0"	4	10'-0"	4	12'-0"	4	14'-0"
a3	#4	23	4'-1"	23	5'-1"	23	6'-1"	23	7'-1"	23	8'-1"
b1	#4	7	9'-9"	7	9'-9"	7	9'-9"	7	9'-9"	7	9'-9"
* b2	#4	23	11'-1"	29	11'-1"	35	11'-1"	41	11'-1"	47	11'-1"
x1	#4	16	3'-10"	16	4'-2"	16	4'-6"	16	4'-10"	16	5'-2"

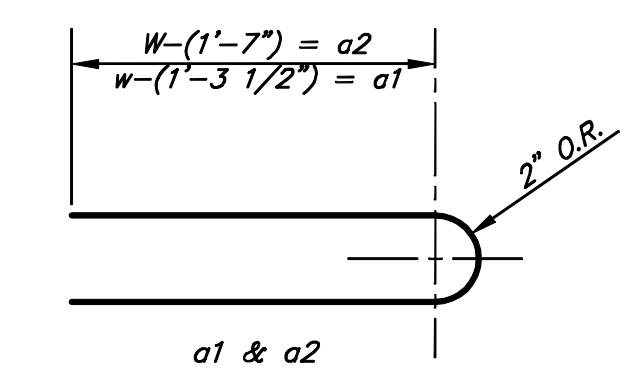
**WALL REINFORCING**

MARK	SIZE	W = 4'-4"		W = 5'-4"		W = 6'-4"		W = 7'-4"		W = 8'-4"	
		NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH
w1	#4	①	11'-1"	①	11'-1"	①	11'-1"	①	11'-1"	①	11'-1"
w2	#4	①	4'-1"	①	5'-1"	①	6'-1"	①	7'-1"	①	8'-1"
w3	#4	52	②	56	②	60	②	64	②	68	②

\* Field Bend or Cut Reinforcing as Required for Clearance.  
① Hl - 12" (Hl - 21") Rounded down to nearest 0.5"  
② Hl - 3"

**GENERAL NOTES:**

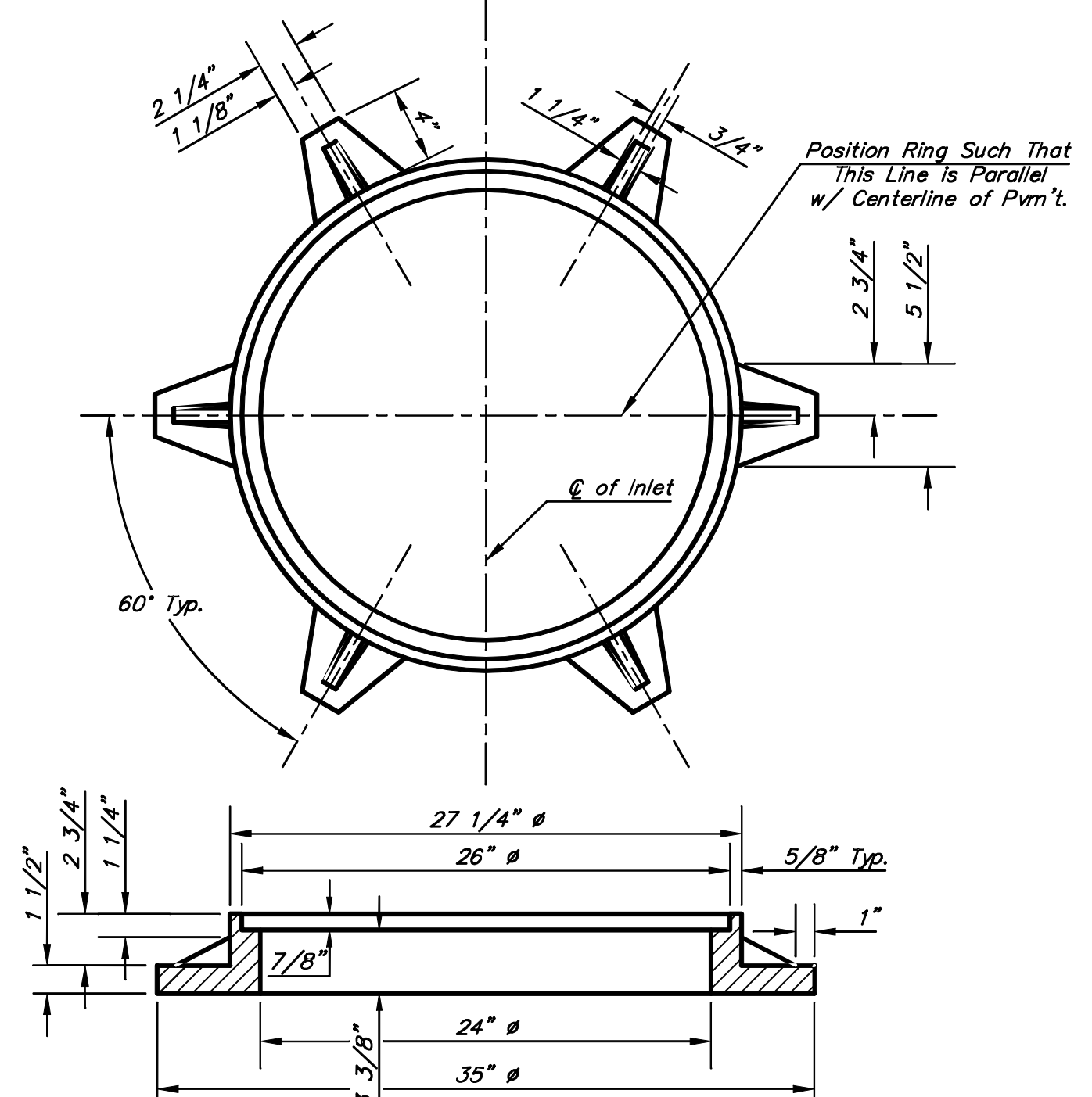
- The contractor shall be required to construct 8" brick masonry walls between the concrete inlet base and top on this inlet when W=6'-4" or less and H=7'-0" or less. When W is greater than 6'-4" and H is less than 7'-0" the outside inlet walls below the brick stack shall be reinforced concrete construction and the center wall shall be of masonry construction as shown for the masonry wall option.
- Inlet invert shall be shaped with 8 sack sand mix concrete to create flow channels and to increase hydraulic efficiency such that the inlet will be self cleaning between all inlet and/or outlet pipes.
- Concrete tops to be installed on thin mortar cushion to insure full support along brick walls. Concrete tops may be cast in place or precast. Concrete used for inlet construction shall be concrete pavement mix.
- Inlet top reinforcing shall be spaced on 6" max. centers. Inlet lids shall be notched out as indicated to facilitate construction of curb. Bars in inlet top to be field bent or cut to clear manhole ring.
- The ends of all pipes installed in inlets shall be cut off flush with the inside face of the inlet wall.



**BENDING DIAGRAM**

**STANDARD CURB INLET PRECAST TOPS**

W	PRE-CAST TOP SIZE	PIPE SIZE	CU. YD. CONC.
4'-4"	3'-8" 11'-4" 7 1/2"	21" & SMALLER	0.83±
5'-4"	4'-8" 11'-4" 7 1/2"	24" & 30"	1.09±
6'-4"	5'-8" 11'-4" 7 1/2"	36" & 42"	1.35±
7'-4"	6'-8" 11'-4" 7 1/2"	48" & 54"	1.61±
8'-4"	7'-8" 11'-4" 7 1/2"	60" & 66"	1.87±



**MANHOLE RING AND COVER**

Weight = 180 lbs.  
\*See City of Wichita Standard Manhole Ring and Cover Detail Sheet for Cover Details to Be Used With Inlet Frame.

**Baughman** City of Wichita Standard Type 1A  
**Curb Inlet Details**  
Inlet Opening = 6" X 10"

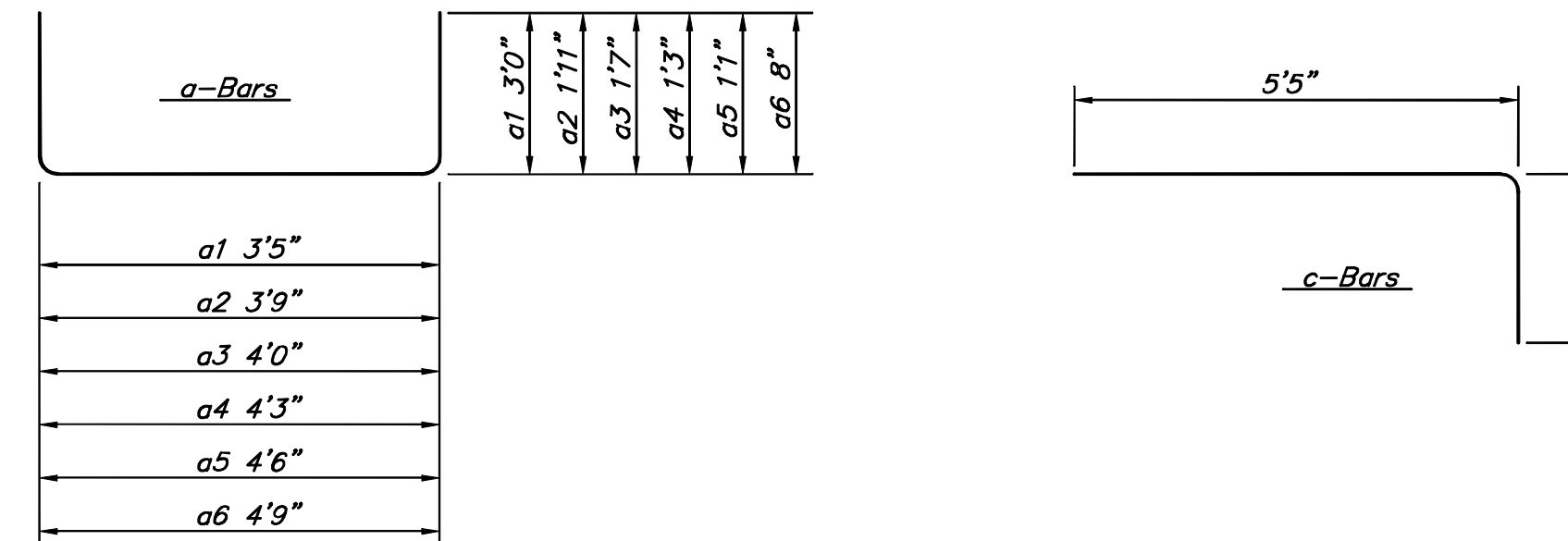
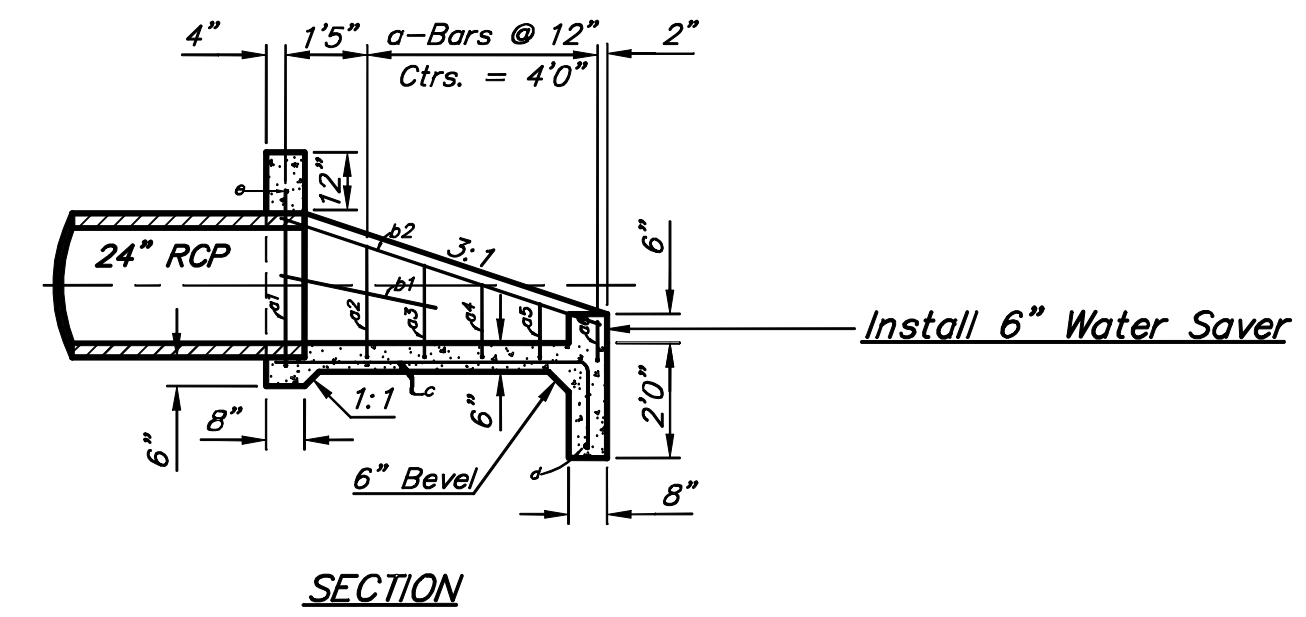
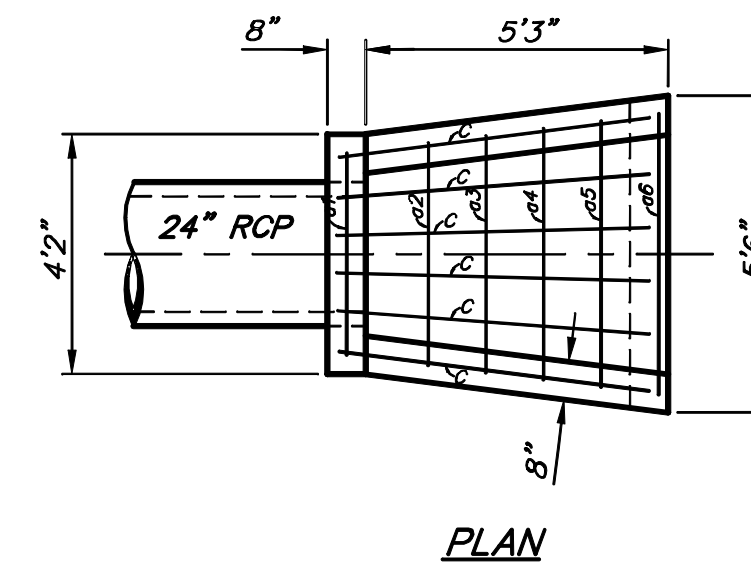
Baughman Company, P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149  
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

PROJECT NUMBER 468-84208	DESIGN C.O.W.	DRAWN Staff
REVISIONS: Revised Feb. 16, 1989	APPROVED	DATE

SCALE  
None

SHEET  
**7 OF 15**

F:\Eng\Details\Sewers\Type 1A.S.dwg 06-06-E588



**REBAR SCHEDULE**

Bar	Shape	No.	Length	Weight
a1	┌	1	9'5"	6.29
a2	┌	1	7'7"	5.07
a3	┌	1	7'2"	4.79
a4	┌	1	6'9"	4.51
a5	┌	1	6'4"	4.23
a6	┌	1	6'1"	4.06
b1	—	2	2'9"	3.67
b2	—	2	5'10"	7.79
c	┌	6	6'11"	27.72
d	—	1	5'0"	3.37
e	—	1	3'10"	2.56
Total Rebar			74.03 Lbs.	
Concrete			1.40 C.Y.	

A Deduction in Concrete Quantities Has Been Made for Pipe Openings Through the Headwall  
 \* Field Bend or Cut Reinforcing as Required for Clearance.  
 All Concrete Reinforcement to be #4 Rebar  
 All Rebar to Have Min. of 1 1/2" Conc. Cover

**HEADWALL FOR 24" RCP**

	Lillie 2nd Addition	
	<b>24" RC Headwall Detail</b> Storm Water Drain Improvements	
<small>Baughman Company, P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149          ENGINEERING   SURVEYING   PLANNING   LANDSCAPE ARCHITECTURE</small>		
PROJECT NUMBER 458-84208	DESIGN	DRAWN
REVISIONS:	APPROVED	DATE 08/07
	SCALE Noted	
	SHEET	<b>8 OF 15</b>
<small>E:\eng\Lillie Office Park\sws1_details.dwg 06-06-E588</small>		

1" = 60'

Maintain 100 l.f. Silt Fence, per this project.

Install Curb Inlet Protection, per this project.

**NOTES:**  
 1. This Plan Is Not To Be Used As A Comprehensive Grading Plan. All Spot Elevations Are Proposed & Subject To Change.

2. Each Lot Area Disturbed By Construction Shall Be the Responsibility of Each Individual Homeowner. Owner Responsible to Follow All SWPP Plans & Guidelines For The Area.

3. Erosion Control Matting and/or Other Approved Bank Stabilization w/Seeding & Fertilizer Shall Be Installed at Engineered Channels or Sedimentation Basins Where the Designed Sideslopes Will be Greater Than 6:1. All Other Disturbed Areas Shall be Seeded, Fertilized, & Mulched As Follows:

**SEED** ---  
 150 lbs. per acre of K-31 Fescue.  
 200 lbs. per acre of Annual Rye.  
 50 lbs. per acre of Brome  
**FERTILIZER** ---  
 12-24-12 Ratio - 350 lbs./ac.  
**MULCH** ---  
 2 Tons of Prairie Hay or Bromegrass Hay per Acre "Patted" w/Forks Or Punched Into Soil To Reduce Loss Due To Wind.

4. Install 8' Wide Curlex/Excelsior Blanket, or Approved Equal, on Prepared Surface Back of Curb. Edge of Blanket Will Be At Back of Curb. Install Per Manufactures Recommendation, Including Staples.

5. The Silt Fence Installed Around the Ponds May be Substituted with a 40' Wide Strip of Mat-Blend 50/50 Plus Wood Fiber Mulch. The Seeding Rate Shall Be the Same As Note 3. Contact Mat, Inc. For More Information on Mat-Blend Plus at 1-888-477-3028. Mat-Blend Plus May be Substituted For Another Comparable Hydro-Mulch Product.

6. All Seeding Shall Be Drilled During Spring or Fall Planting Seasons. Fall Seeding Shall Be September 1 thru Mid October. Spring Seeding Shall be From March 15 thru Mid May.

7. All of Reserve "B" & "C" above the static water surface and within Maize Rd. R/W shall be seeded and mulched as follows: (Permanent Seeding)

**SEED** --- Kansas Premium Fescue Blend; 8#/1000 Sq. Ft.  
**FERTILIZER** --- 12-24-12 Ratio at 350 Lbs./Ac.  
**MULCH** --- 2 Tons Prairie Hay / Acre

All other disturbed areas not in street R/W are to be seeded as follows: (Temporary seeding)  
**SEED** --- Rye grass (PLS)--5#/1000 Sq. Ft. and Kansas Premium Fescue Blend; 5#/1000 Sq. Ft.

Contractor shall prepare ground per City Specifications. All seeding operations shall conform to City of Wichita Standard Specifications. All cost associated with seeding, mulching, and fertilizing shall be included in bid item "Project Seeding".

Contractor may use existing entrance to site. Must keep area clean of mud and debris.

Install 720 l.f. Silt Fence, per this project.

Install 850 l.f. Silt Fence, per this project.

Install 300 l.f. Silt Fence, per this project.

Install 120 l.f. Silt Fence, per this project.

Install 790 l.f. Silt Fence, per this project.

Install 220 l.f. Silt Fence, per this project.

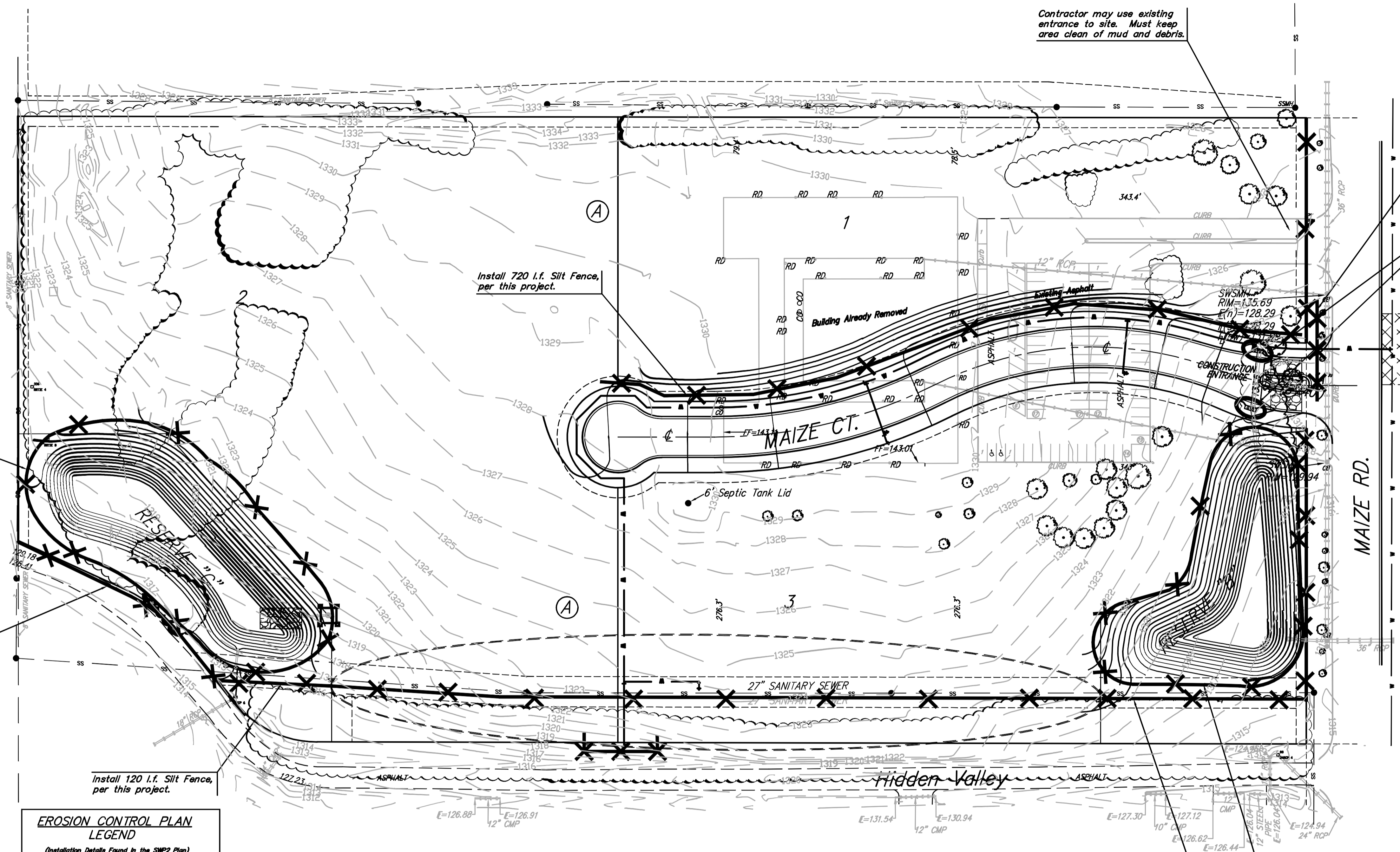
**EROSION CONTROL PLAN LEGEND**  
 (Installation Details Found in the SWP2 Plan)

	- LIGHT STONE RIP-RAP
	- DROP INLET PROTECTION
	- CURB INLET PROTECTION
	- STRAW BALE BARRIERS
	- SILT FENCING
	- EARTH DIKES

NO SCALE

EROSION CONTROL MEASURE	UNITS	QUANTITY
SILT FENCE	L.F.	1853
RIPRAP	S.Y.	94
DROP INLET BARRIER	EA.	2
CURB INLET BARRIER	EA.	2
STRAW BALE BARRIER	EA.	0
Construction Entrance	EA.	1

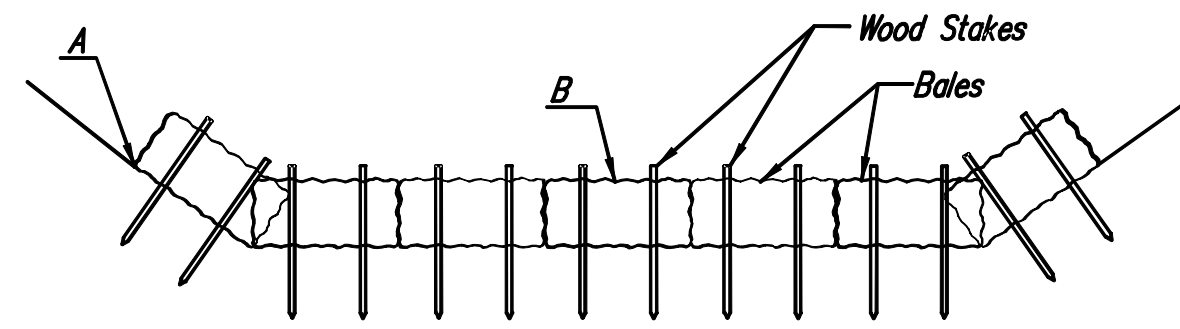
QUANTITIES ARE FOR INFORMATION ONLY!  
 CONTRACTOR SHALL VERIFY QUANTITIES PER FINAL BID QUANTITY SHEET.



	Lillie 2nd Addition	
	<b>SWPP</b> Storm Water Drain Improvements	
<small>Baughman Company, P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149          ENGINEERING   SURVEYING   PLANNING   LANDSCAPE ARCHITECTURE</small>		
PROJECT NUMBER 468-84208	DESIGN MWS	DRAWN MWS
REVISIONS:	APPROVED DATE 08/07	SCALE Noted
		<b>9 OF 15</b>
<small>E:\eng\Lillie Office Park\Erosion Control Plan.dwg 06-06-E588</small>		



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 (%)	Ditch 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'.

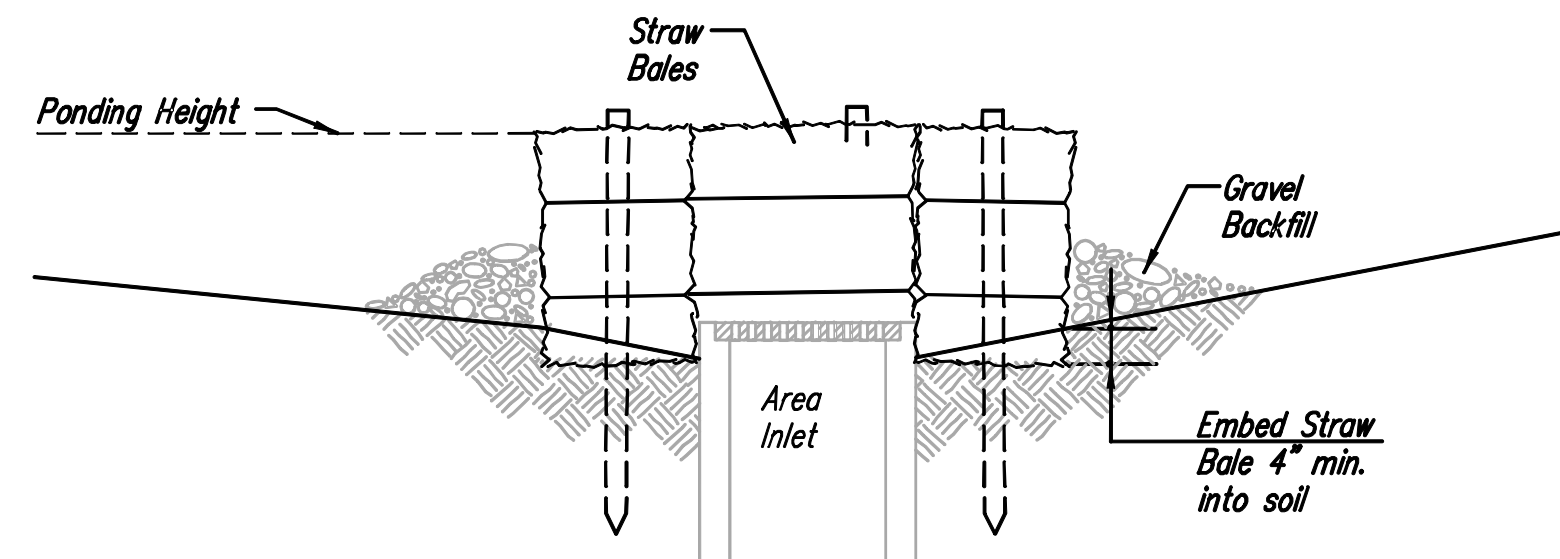
**List of common placement/installation mistakes to avoid:**

- 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.

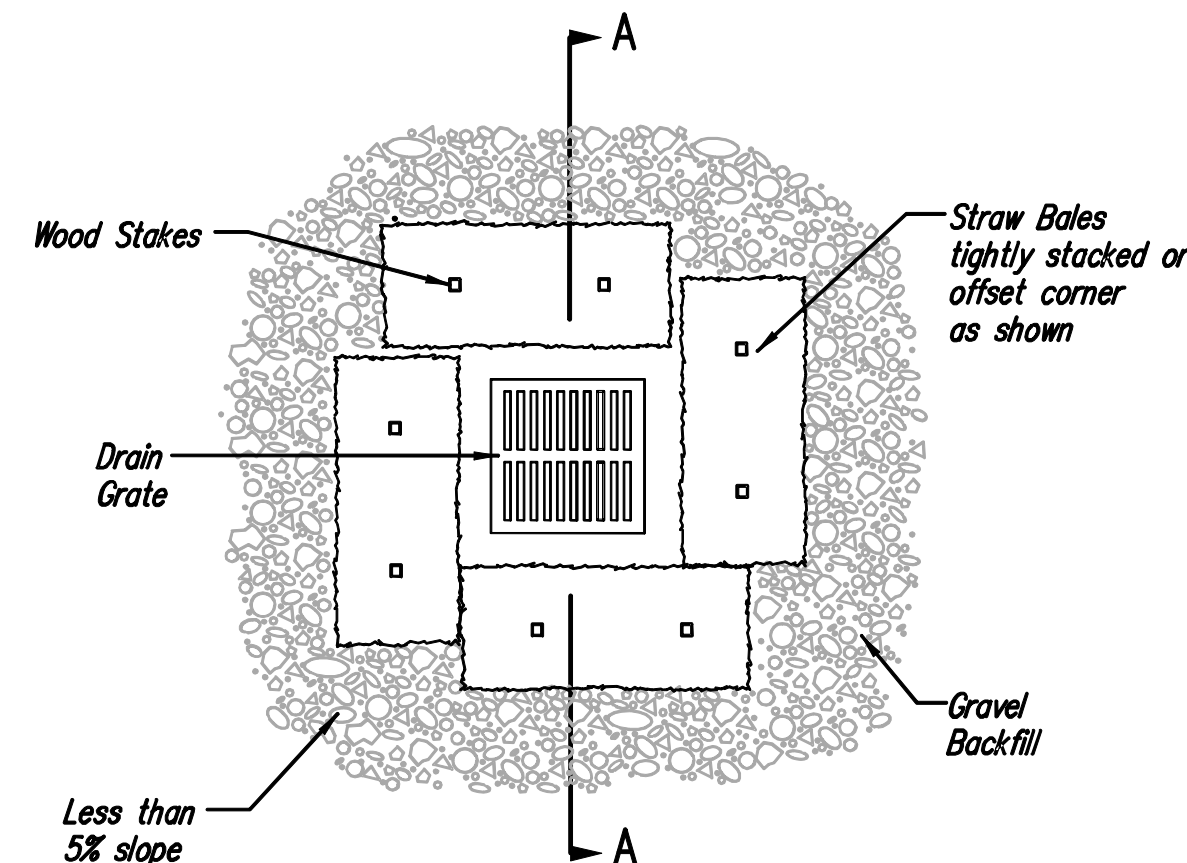
**Inspection and Maintenance:**

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.

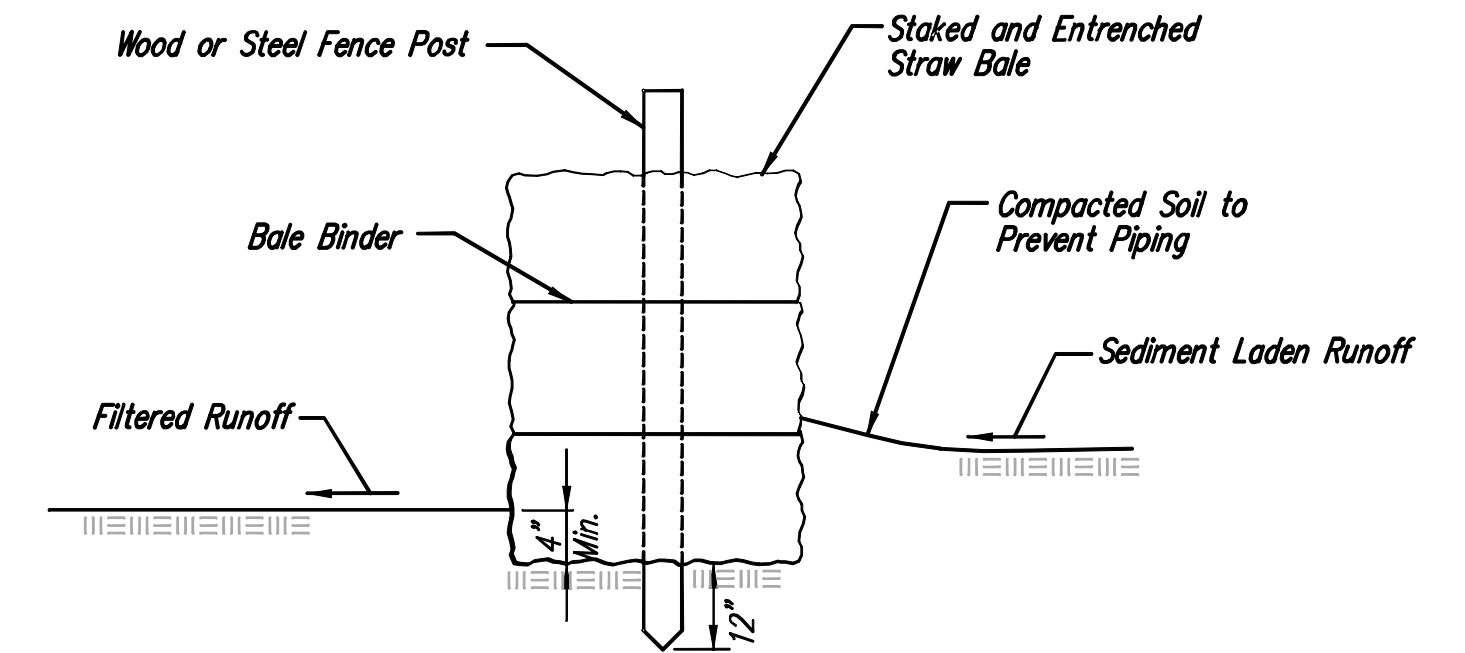
**List of common placement installation mistakes to avoid:**

- 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.

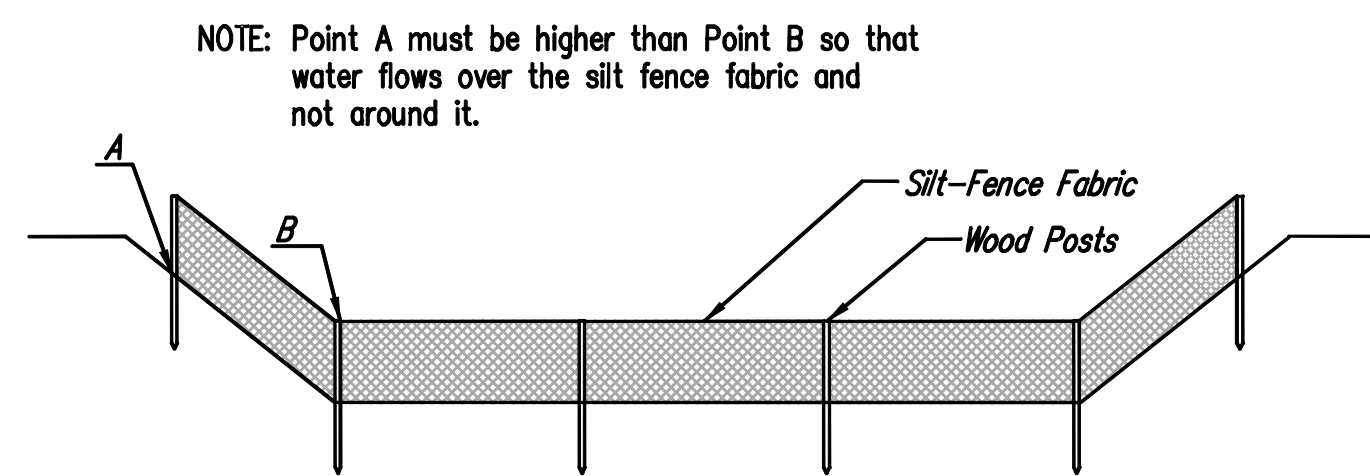
**Inspection and Maintenance:**

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?



<b>SOIL EROSION BMPs</b>	
STRAW BALE DITCH CHECK AND BARRIER DETAILS	
JIM ARMOUR, P.E. CITY ENGINEER	
PROJECT NUMBER 468-84208	OCA NO. 751432
DATE JAN 2007	SHEET 11 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 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 upslope 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.

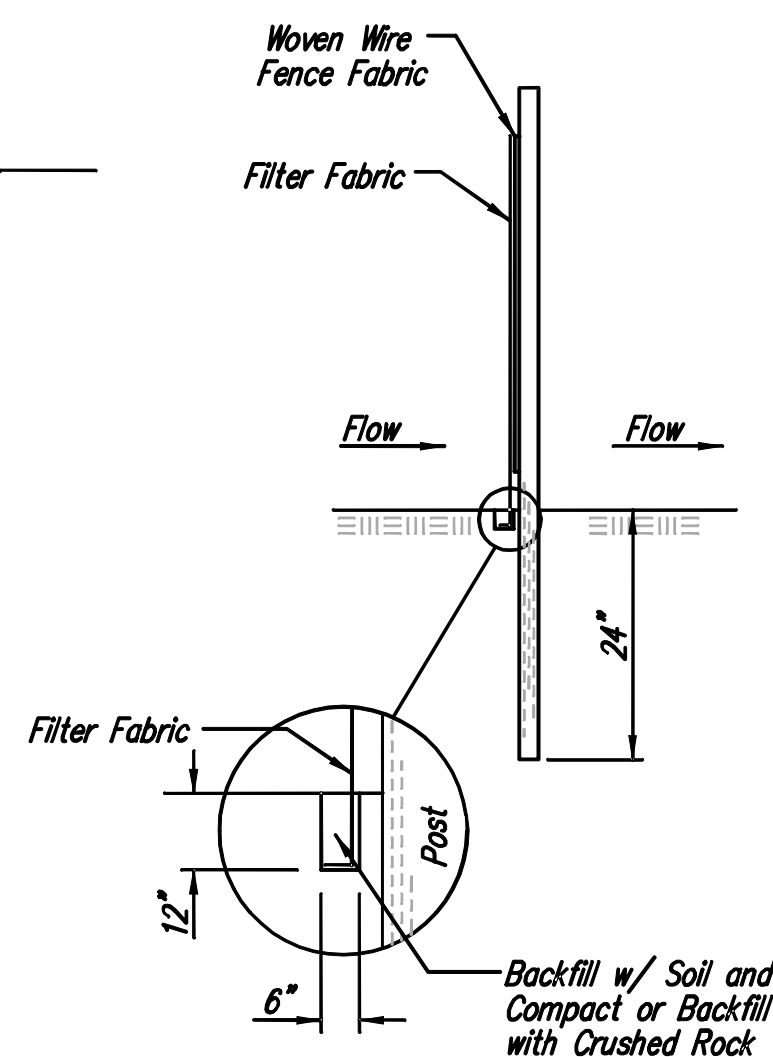
**List of common placement/installation mistakes to avoid:**

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.

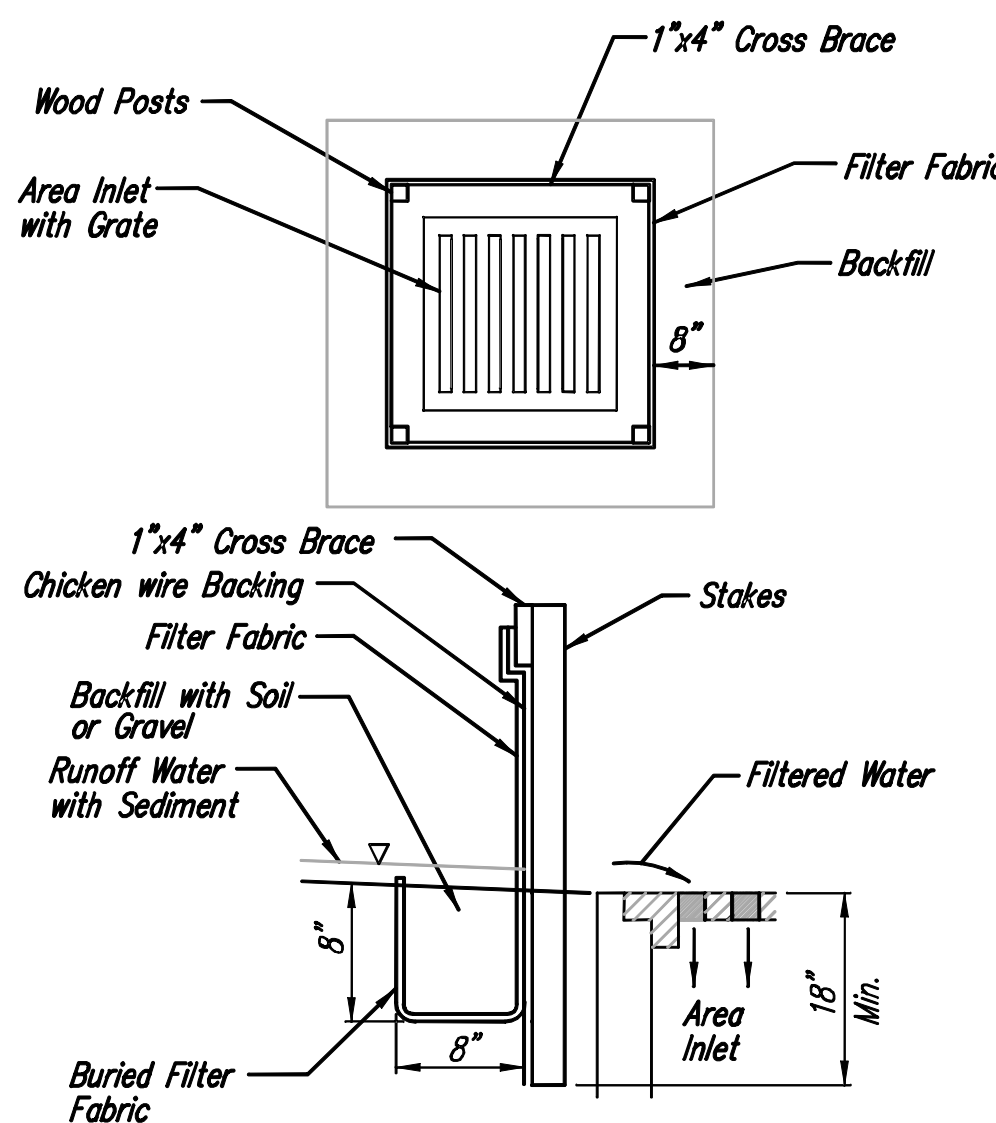
**Inspection and Maintenance:**

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 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.

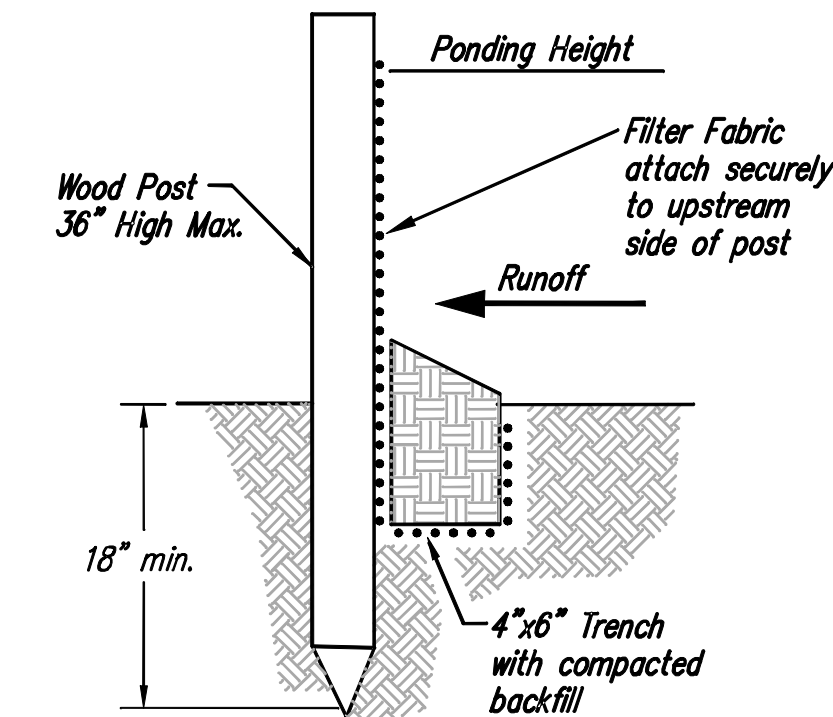
**List of common placement/installation mistakes to avoid:**

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 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.

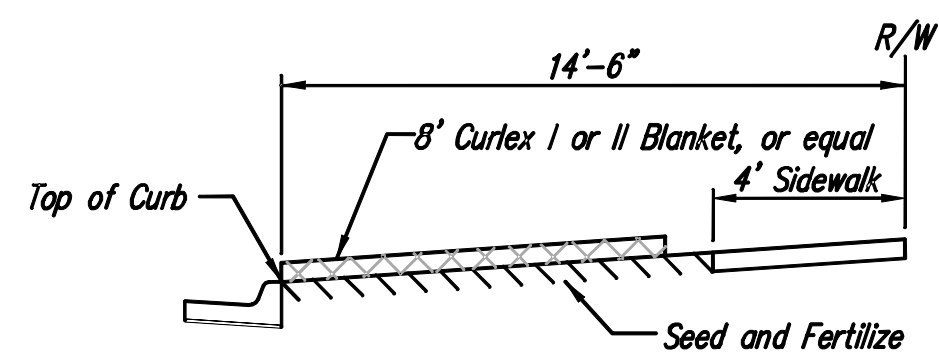
**Inspection and Maintenance:**

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:

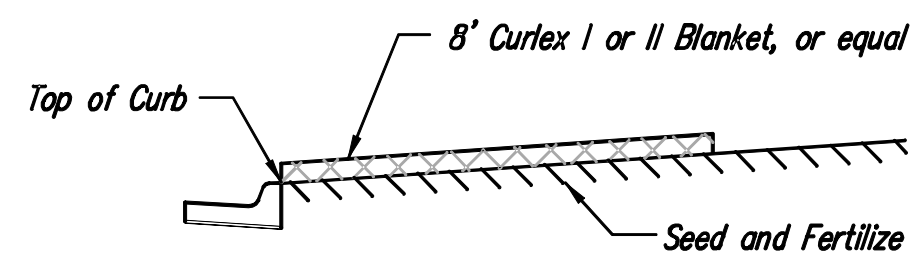
- Are there any points along the slope barrier where water is concentrating?
- Does water flow under the slope barrier?
- Do the silt fences sag excessively?
- Has the silt fence torn or become detached from the posts?
- Does sediment need to be removed from behind the slope barrier?



<b>SOIL EROSION BMPs</b>	
<b>SILT FENCE DITCH CHECK AND BARRIER DETAILS</b>	
<b>JIM ARMOUR, P.E. CITY ENGINEER</b>	
PROJECT NUMBER 468-84208	OCA NO. 751432
DATE JAN 2007	SHEET 12 OF 15

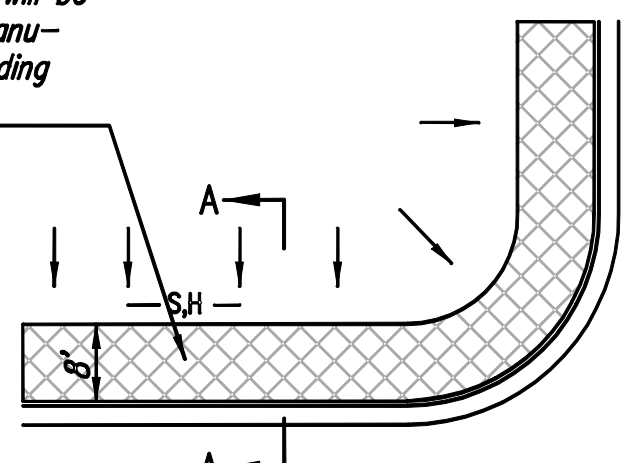


SECTION B-B

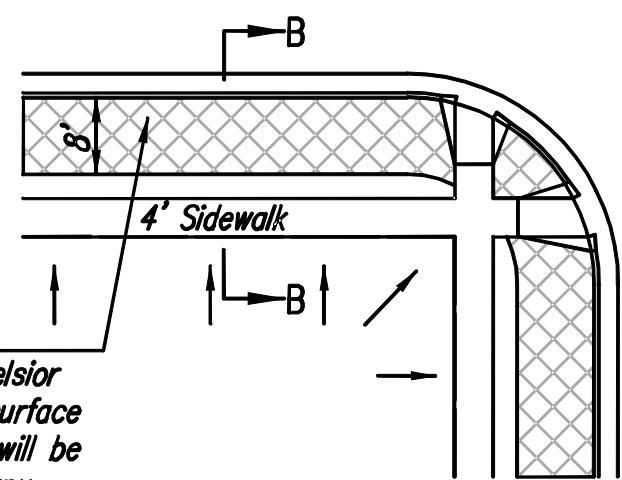


SECTION A-A

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)



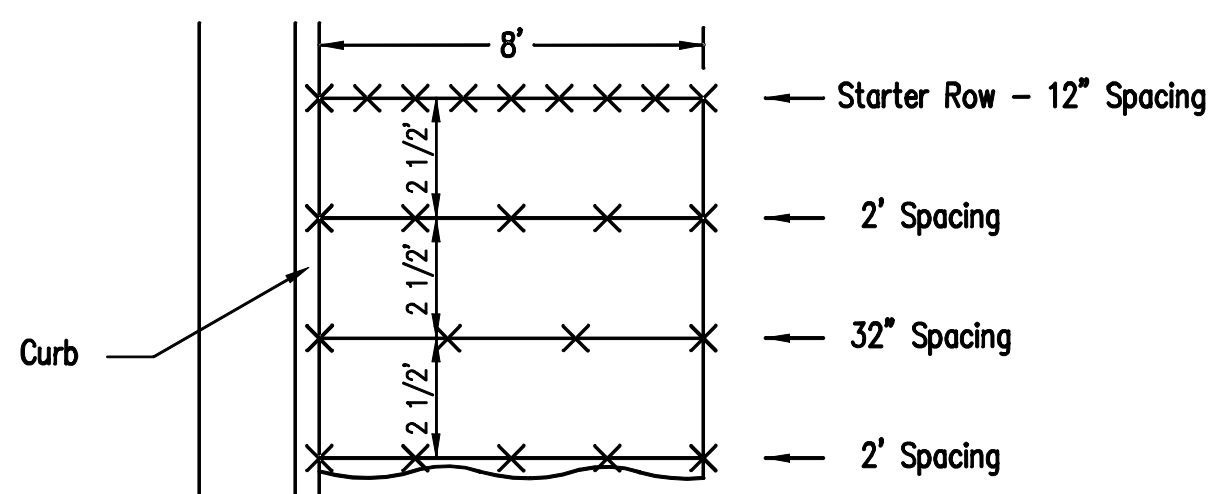
SOUTH STREET



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.

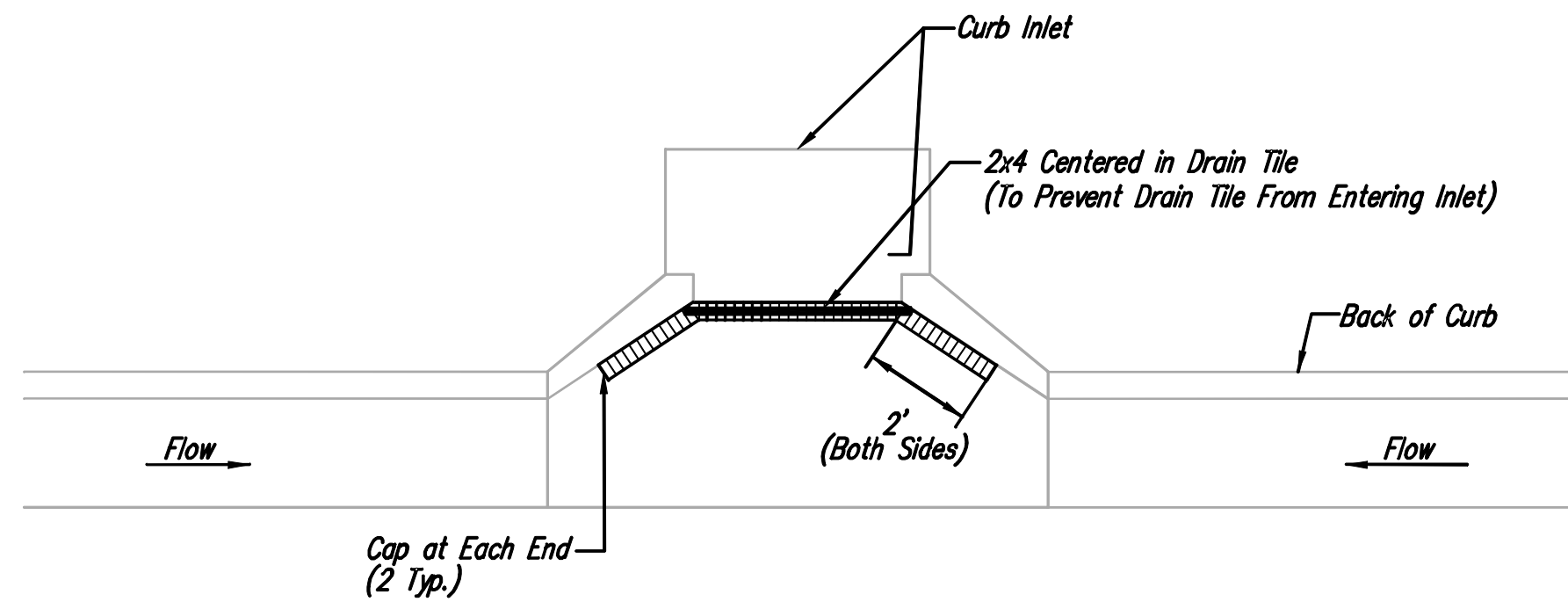
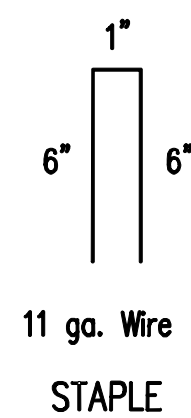
**BACK OF CURB PROTECTION DETAIL**



STAPLE PATTERN

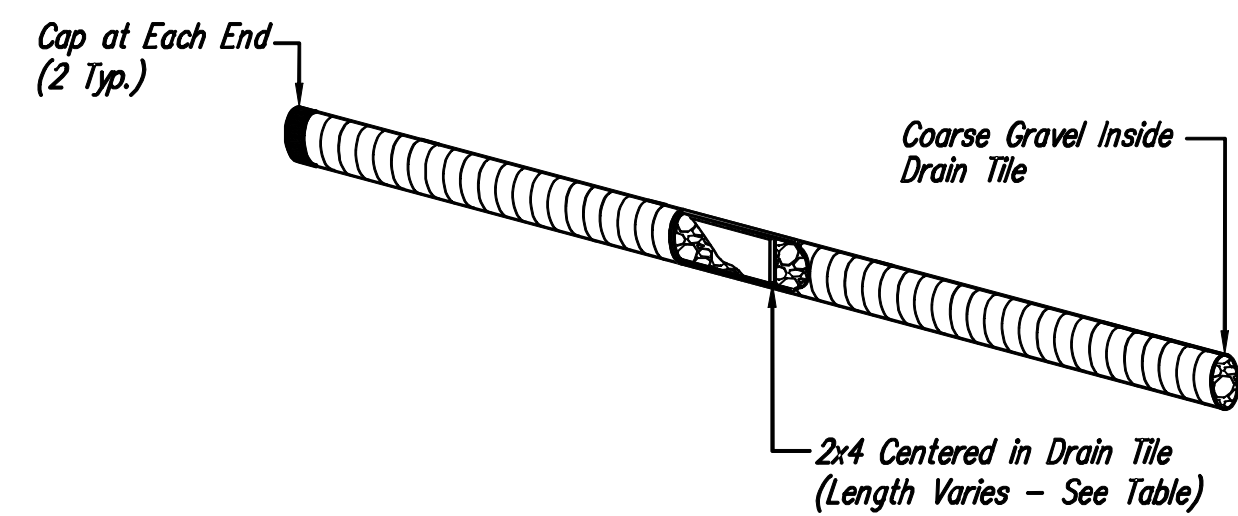
NOTES: Use 6" seam overlap

**DETAILS FOR CURLEX I OR II BLANKETS**



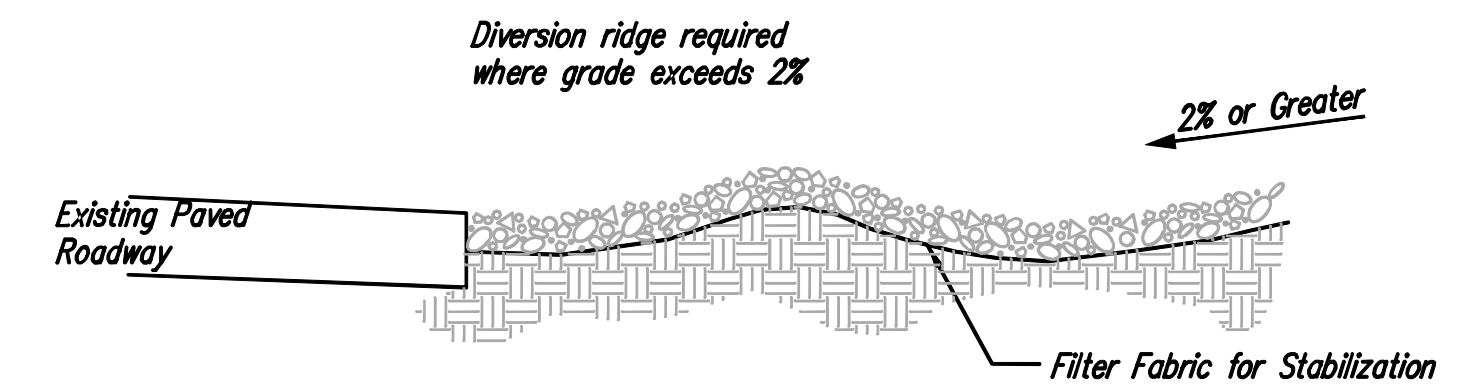
Note: Place 4" perforated PVC pipe, filled with 1/2"-1" dia. gravel, in front of curb inlet as shown.

2x4 LENGTH	INLET TYPE	INLET OPENING
5'-6"	1-A	5'-0"
10'-6"	1-A	10'-0"
15'-6"	1-A	15'-0"

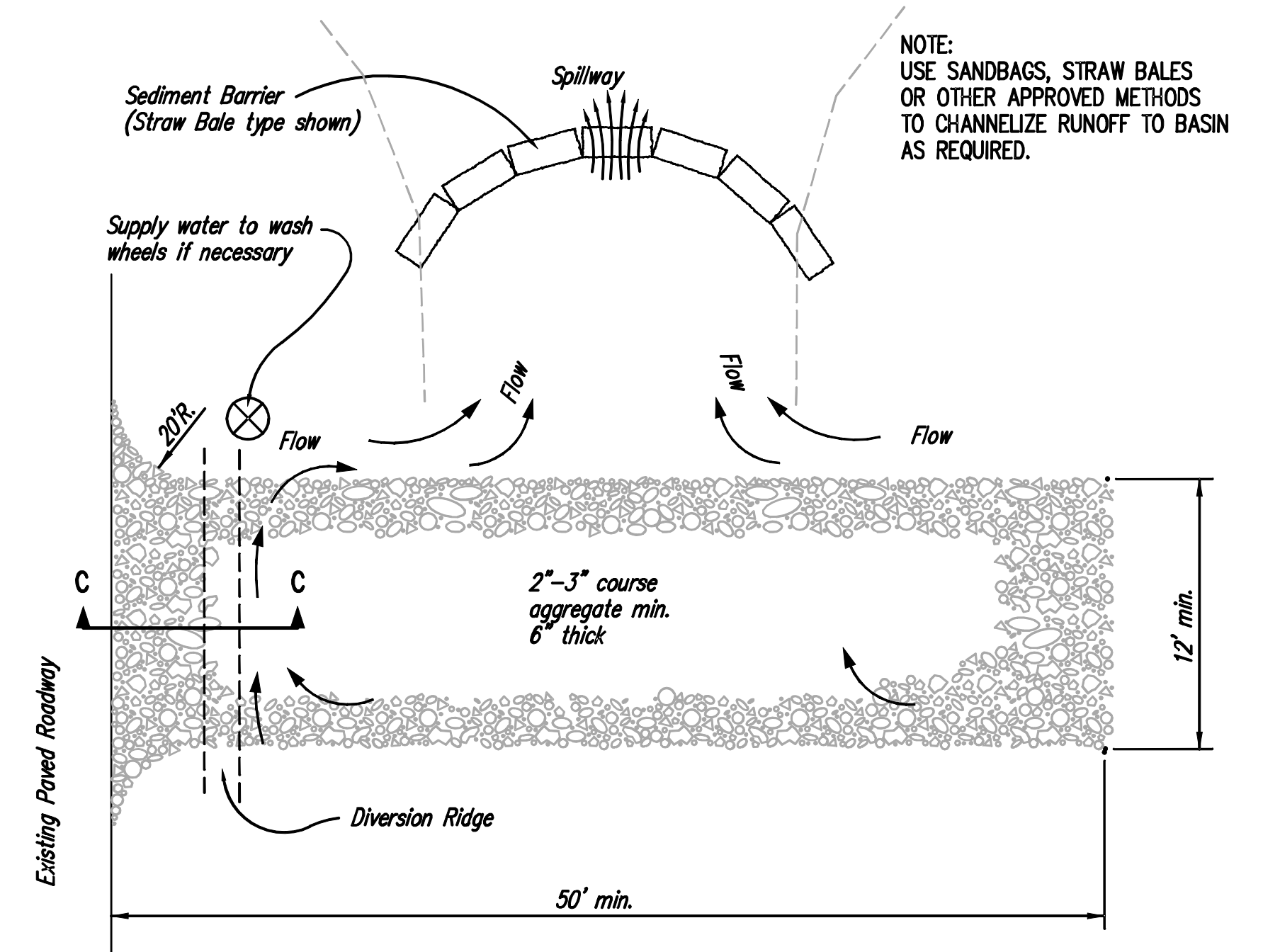


**CURB INLET PROTECTION**

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.



**SOIL EROSION BMPs**  
 BACK OF CURB PROTECTION,  
 CURB INLET PROTECTION  
 AND  
 CONSTRUCTION ENTRANCE

**JIM ARMOUR, P.E.**  
 CITY ENGINEER

PROJECT NUMBER 468-84208 OCA NO. 751432

DATE JAN 2007 SHEET 13 OF 15

# LILLIE 2ND ADDITION WICHITA, SEDGWICK COUNTY, KANSAS

Sanitary Sewer Points

PT	EAST	NORTH	ELEV	DESC
1000	4181.1712	5110.4561	0.0000	"Ex. MH, Line 1"
1001	4266.0027	5159.3365	0.0000	Sta. 0+97.91
1002	4266.0027	5417.1836	0.0000	Sta. 3+55.76
1003	4541.3166	5110.1468	0.0000	"Ex. MH, Line 2"
1004	4541.3013	5122.9443	0.0000	Sta. 0+12.80

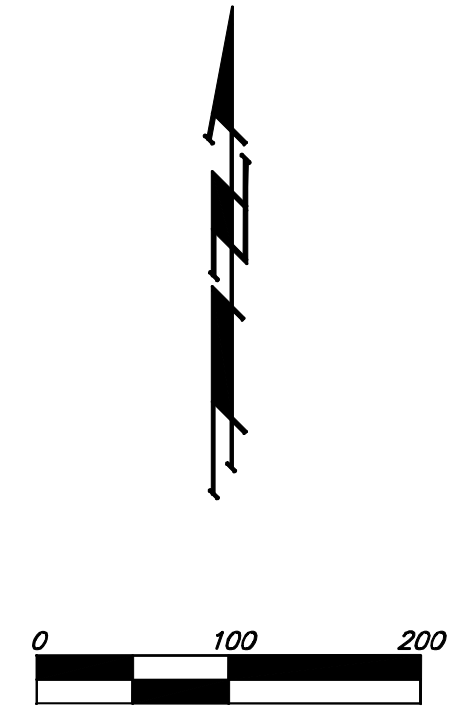
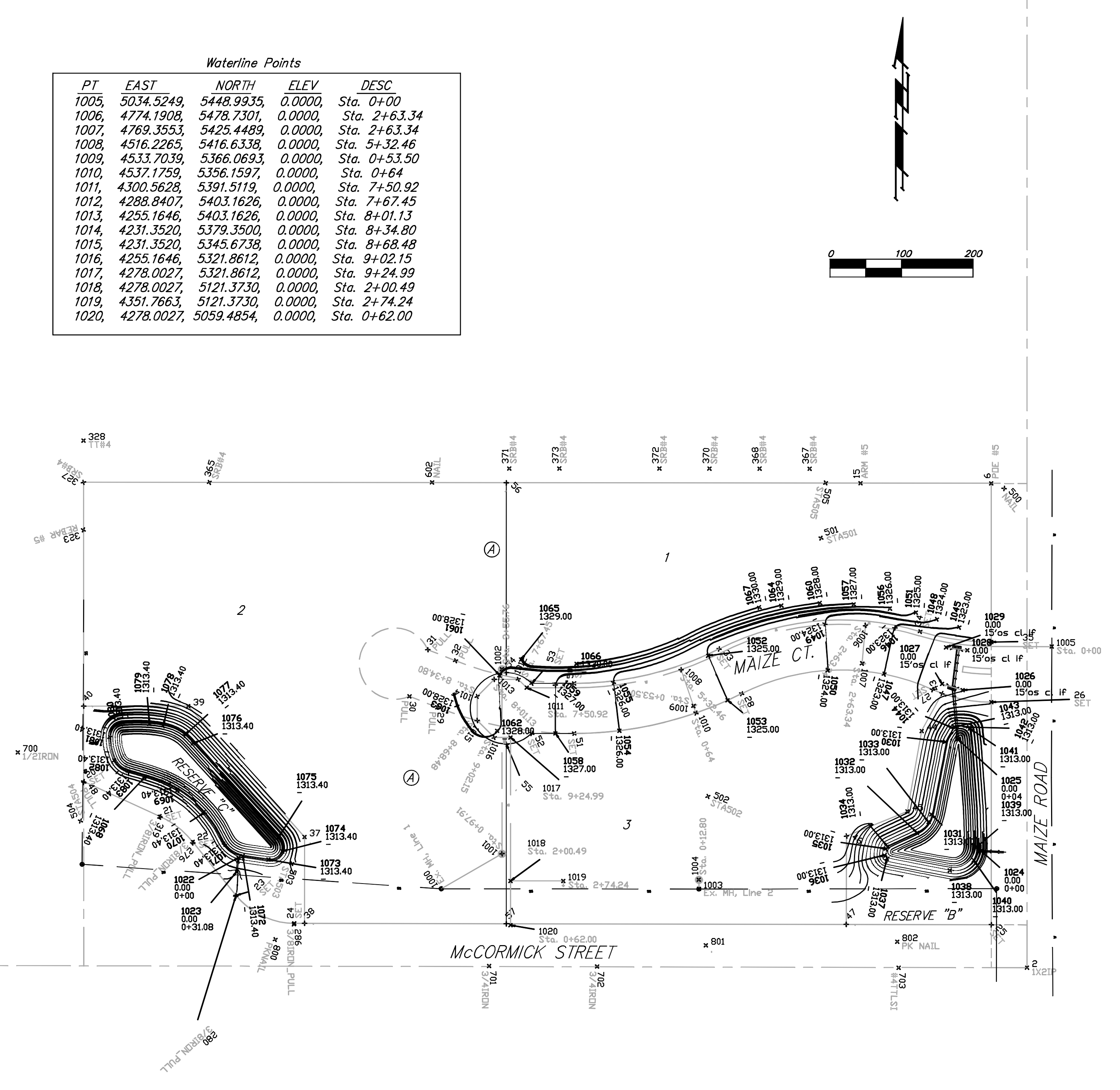
Storm Water Drain Points

PT	NORTH	EAST	ELEV	DESC
1022	5153.7827	3897.8284	0.0000	0+00
1023	5134.2952	3895.2393	0.0000	0+31.08
1024	5163.2700	4935.5276	0.0000	0+00
1025	5319.4881	4903.1471	0.0000	0+04
1026	5387.9826	4909.8326	0.0000	15'os cl if
1027	5396.7232	4881.1341	0.0000	15'os cl if
1028	5443.7373	4916.5211	0.0000	15'os cl if
1029	5447.8124	4886.7991	0.0000	15'os cl if
1030	5315.7642	4885.7048	1313.0000	-
1031	5214.2894	4866.1740	1313.0000	-
1032	5188.5479	4846.2108	1313.0000	-
1033	5203.7349	4862.3615	1313.0000	-
1034	5169.1017	4805.0822	1313.0000	-
1035	5166.0722	4802.8352	1313.0000	-
1036	5157.2688	4801.5298	1313.0000	-
1037	5152.8334	4804.3964	1313.0000	-
1038	5135.9462	4892.0099	1313.0000	-
1039	5168.8116	4930.0638	1313.0000	-
1040	5150.3502	4925.3733	1313.0000	-
1041	5334.2369	4920.2587	1313.0000	-
1042	5336.0935	4918.1095	1313.0000	-
1043	5336.9356	4899.0239	1313.0000	-
1044	5335.0232	4896.3352	1313.0000	-
1045	5475.8426	4905.0803	1323.0000	-
1046	5475.2393	4815.3362	1323.0000	-
1047	5410.4400	4800.1793	1323.0000	-
1048	5487.0730	4873.8324	1324.0000	-
1049	5480.9214	4717.5645	1324.0000	-
1050	5415.6828	4721.4641	1324.0000	-
1051	5496.4392	4844.7021	1325.0000	-
1052	5436.0983	4554.2825	1325.0000	-
1053	5373.7091	4581.2296	1325.0000	-
1054	5331.3537	4430.0543	1326.0000	-
1055	5398.8128	4421.6812	1326.0000	-
1056	5501.9781	4808.3994	1326.0000	-
1057	5507.7575	4757.8327	1327.0000	-
1058	5327.5119	4340.7039	1327.0000	-
1059	5395.2378	4340.5394	1327.0000	-
1060	5509.7608	4710.5759	1328.0000	-
1061	5408.6306	4262.8677	1328.0000	-
1062	5331.1424	4259.2852	1328.0000	-
1063	5365.8398	4203.0712	1328.0000	-
1064	5505.9827	4656.6995	1329.0000	-
1065	5430.6734	4292.5997	1329.0000	-
1066	5424.7046	4370.1486	1330.0000	-
1067	5503.6677	4625.8187	1330.0000	-
1068	5266.9839	3767.0653	1313.4000	-
1069	5248.2558	3812.1102	1313.4000	-
1070	5216.6592	3850.1092	1313.4000	-
1071	5172.7210	3877.9219	1313.4000	-
1072	5156.2583	3903.5525	1313.4000	-
1073	5151.2308	3939.4942	1313.4000	-
1074	5162.5372	3958.8326	1313.4000	-
1075	5182.3009	3953.4599	1313.4000	-
1076	5313.6811	3834.1883	1313.4000	-
1077	5325.1721	3822.4569	1313.4000	-
1078	5338.3013	3792.4240	1313.4000	-
1079	5340.6964	3773.2946	1313.4000	-
1080	5340.2621	3733.1854	1313.4000	-
1081	5322.0709	3717.7082	1313.4000	-
1082	5289.9074	3723.9044	1313.4000	-
1083	5273.6885	3743.7954	1313.4000	-

Waterline Points

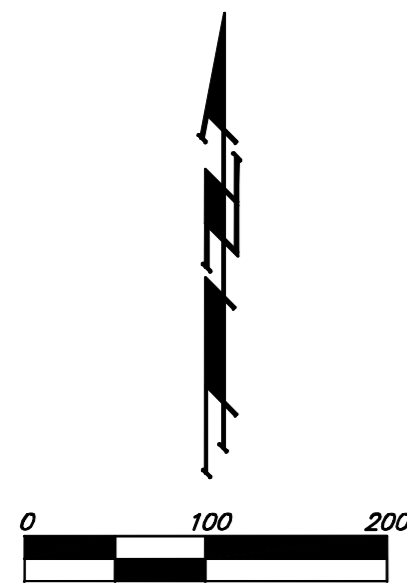
PT	EAST	NORTH	ELEV	DESC
1005	5034.5249	5448.9935	0.0000	Sta. 0+00
1006	4774.1908	5478.7301	0.0000	Sta. 2+63.34
1007	4769.3553	5425.4489	0.0000	Sta. 2+63.34
1008	4516.2265	5416.6338	0.0000	Sta. 5+32.46
1009	4533.7039	5366.0693	0.0000	Sta. 0+53.50
1010	4537.1759	5356.1597	0.0000	Sta. 0+64
1011	4300.5628	5391.5119	0.0000	Sta. 7+50.92
1012	4288.8407	5403.1626	0.0000	Sta. 7+67.45
1013	4255.1646	5403.1626	0.0000	Sta. 8+01.13
1014	4231.3520	5379.3500	0.0000	Sta. 8+34.80
1015	4231.3520	5345.6738	0.0000	Sta. 8+68.48
1016	4255.1646	5321.8612	0.0000	Sta. 9+02.15
1017	4278.0027	5321.8612	0.0000	Sta. 9+24.99
1018	4278.0027	5121.3730	0.0000	Sta. 2+00.49
1019	4351.7663	5121.3730	0.0000	Sta. 2+74.24
1020	4278.0027	5059.4854	0.0000	Sta. 0+62.00

PT	NORTH	EAST	ELEV	DESC
1	7644.7200	5000.0000		3X4IP
2	5000.0000	5000.0000		1X2IP
6	5677.0545	4949.9493		POE #15
15	5677.3205	4767.2647		ARM #5
20	5260.2924	3681.2783		SET
21	5211.4789	3788.0235		SET
22	5175.6874	3834.1497		SET
23	5101.1422	3894.2260		SET
24	5062.1075	3975.6022		SET
25	5060.1030	4949.9955		SET
26	5371.2129	4949.9722		SET
27	5388.8787	4867.7733		SET
28	5383.1137	4600.9150		SET
29	5364.0767	4175.4140		PULL
30	5379.4429	4136.6321		PULL
31	5444.5207	4162.4174		PULL
32	5429.1545	4201.1993		PULL
33	5445.6288	4569.4213		SET
34	5469.9355	4850.5725		SET
35	5455.2129	4949.9659		SET
37	5182.8274	3990.0000		
38	5062.0779	3990.0000		
39	5365.7833	3827.4665		
40	5365.6682	3681.2088		
43	5383.3962	4881.2197		
44	5330.7704	4852.5924		
45	5218.4299	4832.6894		
46	5184.0949	4747.5075		
47	5060.5198	4747.4068		
48	5258.9968	3681.3324		PULL
50	5397.5119	4366.9614		SET
51	5327.5119	4366.9614		SET
52	5327.5119	4307.7098		SET
53	5397.5119	4307.7098		SET
54	5412.5119	4272.0027		
55	5312.5119	4272.0027		
56	5677.8597	4272.0027		
57	5061.4977	4272.0027		
276	5174.6554	3833.8048		3/8IRON_PULL
280	5099.9964	3893.8407		3/8IRON_PULL
286	5060.8952	3975.1401		3/8IRON_PULL
319	5210.4391	3787.6570		3/8IRON_PULL
323	5612.1550	3680.8464		REBAR #5
327	5678.5617	3681.0023		SRB #4
328	5736.7776	3680.9311		TT #4
365	5678.4306	3856.9374		SRB #4
367	5697.4817	4696.1684		SRB #4
368	5697.6446	4626.2249		SRB #4
370	5697.6034	4556.1359		SRB #4
371	5697.8666	4276.2186		SRB #4
372	5697.7299	4486.1812		SRB #4
373	5697.9248	4346.3049		SRB #4
500	5669.9800	4967.9300		NAIL
501	5600.4582	4712.0276		STA501
502	5239.3941	4553.9176		STA502
503	5145.7439	3972.1298		STA503
504	5205.0515	3676.6956		STA504
505	5677.8301	4718.3656		STA505
600	5523.5371	2431.3144		STA600
601	5005.4249	2362.8966		CTR
602	5678.4072	4168.2927	147.3977	NAIL
603	7633.4154	2360.5109		N1/4COR
700	5301.1290	3589.0775		1/2IRON
701	5002.5137	4248.0096		3/4IRON
702	5001.8340	4398.9762		3/4IRON
703	5000.0555	4820.4227		#4TTLST
800	5039.4720	3948.9250	127.3300	PKNAIL
801	5031.1857	4550.9375		
802	5036.2170	4818.3600	128.8100	PK NAIL



	Lillie 2nd Addition	
	<b>Staking Coordinates</b> Storm Water Drain Improvements	
Baughman Company, P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 ENGINEERING   SURVEYING   PLANNING   LANDSCAPE ARCHITECTURE		
PROJECT NUMBER 468-84208	DESIGN MWS	DRAWN MWS
REVISIONS:	APPROVED DATE 08/07	SCALE Noted
		SHEET <b>14 OF 15</b>
E:\eng\Lillie Office Park\Coordinates_staking (all).dwg 06-06-E588		

# LILLIE 2ND ADDITION WICHITA, SEDGWICK COUNTY, KANSAS



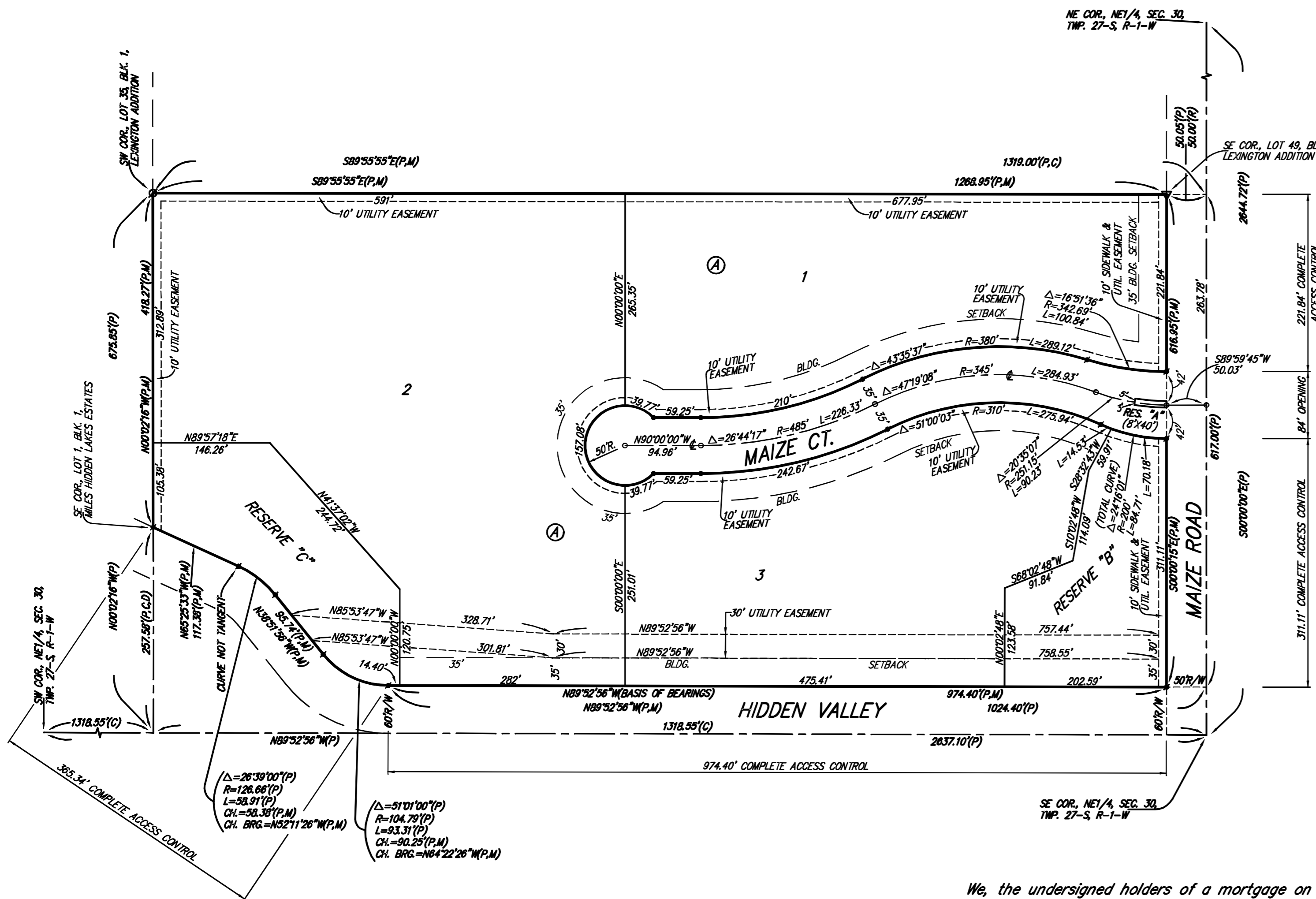
- = #4 REBAR W/ "BAUGHMAN" CAP (SET)
- = #4 REBAR W/ "BAUGHMAN" CAP (FOUND)
- ◻ = #4 REBAR W/ "SBS" CAP (FOUND)
- ◻ = #4 REBAR W/ "POE" CAP (FOUND)

MINIMUM BUILDING PAD ELEVATIONS FOR LOWEST OPENING TO THE STRUCTURES		
LOT	BLOCK	ELEVATION
2, 3	A	1322.0

- (M) = MEASURED
- (D) = DESCRIBED
- (P) = PLATTED
- (C) = CALCULATED
- (R) = RECORD MEASUREMENT
- (C-P) = CALCULATED PER PLATTED INFO.
- (C-D) = CALCULATED PER DESCRIBED INFO.

BENCHMARK:  
CITY OF WICHITA BENCHMARK DISC -  
MAIZE ROAD & MCCORMICK (HIDDEN VALLEY)  
0.5 MI. S. OF MAPLE ON THE NE CORNER  
OF R.C.B.C. OVER CONSKIN CREEK,  
SOUTH OF HIDDEN VALLEY  
ELEV. = 1318.93 NGVD29

NOTE:  
ADDITIONAL BUILDING SETBACK  
REQUIREMENTS PER COMMUNITY  
UNIT PLAN 39-288 ON FILE WITH  
THE CITY OF WICHITA, KANSAS.



State of Kansas) SS We, Baughman Company, P.A., Surveyors in  
Sedgwick County) aforesaid county and state do hereby certify that we have surveyed and  
platted "LILLIE 2ND ADDITION", Wichita, Sedgwick County, Kansas and that  
the accompanying plat is a true and correct exhibit of the property  
surveyed, described as and being a replat of all of Lots 1, 2, and 3,  
Block A, together with all of Reserves "A", "B", and "C", and together with  
all of Maize Ct., all as platted and dedicated in Lillie Addition, Wichita,  
Sedgwick County, Kansas.

All being situated in the NE1/4 of Sec. 30, Twp. 27-S,  
R-1-W of the 6th P.M., Sedgwick County, Kansas.

Existing public easements and dedications being  
vacated by virtue of K.S.A. 12-512(b).

Baughman Company, P.A.

This plat of "LILLIE 2ND ADDITION", Wichita,  
Sedgwick County, Kansas has been submitted to and approved by the  
Wichita-Sedgwick County Metropolitan Area Planning Commission, Wichita,  
Kansas.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 2007.  
Wichita-Sedgwick County Metropolitan Area Planning Commission

\_\_\_\_\_, Chair  
Darrell A. Downing

\_\_\_\_\_, Secretary  
John L. Schlegel

\_\_\_\_\_, Surveyor  
Michael G. Conrey

This plat approved and all dedications  
shown hereon accepted by the City Council of the City of Wichita,  
Kansas, this \_\_\_\_\_ day of \_\_\_\_\_, 2007.

\_\_\_\_\_, Mayor  
Carl Brewer

\_\_\_\_\_, City Clerk  
Karen Sublett

Know all men by these presents that we,  
the undersigned, have caused the land in the surveyors certificate to be  
platted into Lots, a Block, a Street, and Reserves to be known as "LILLIE  
2ND ADDITION", Wichita, Sedgwick County, Kansas. The utility easements  
are hereby granted as indicated for the construction and maintenance of  
all public utilities. The sidewalk and utility easements are hereby granted  
as indicated for the construction and maintenance of public sidewalks and  
for the construction and maintenance of all public utilities. The street is  
hereby dedicated to and for the use of the public. Reserve "A" is hereby  
reserved for streets, entry monuments, open space, utilities, and  
landscaping. Reserve "B" is hereby reserved for lakes, landscaping,  
drainage purposes, entry monuments, signage, sidewalks, and utilities as  
confined to easements. Reserve "C" is hereby reserved for lakes,  
landscaping, drainage purposes, and utilities as confined to easements.  
Reserves "A", "B", and "C" shall be owned and maintained by the lot  
owners association for the addition. Access controls shall be as depicted  
on the face of the plat and are hereby granted to the City of Wichita,  
Kansas. The Minimum Building Pad Elevation for the lowest opening to  
the structures shall be as indicated on the face of the plat.

Physicians Development, L.L.C.,  
a Kansas limited liability company

\_\_\_\_\_, Co-Manager/Member  
Gregory F. Lakin, O.D., J.D.

\_\_\_\_\_, Co-Manager/Member  
Matthew J. Lillie

Reviewed in accordance with K.S.A. 58-2005  
on this \_\_\_\_\_ day of \_\_\_\_\_, 2007.

Entered on transfer record this \_\_\_\_\_ day  
of \_\_\_\_\_, 2007.

\_\_\_\_\_, County Clerk  
Don Brace

We, the undersigned holders of a mortgage on the  
above described property, do hereby consent to this plat of "LILLIE 2ND  
ADDITION", Wichita, Sedgwick County, Kansas.

Central National Bank

\_\_\_\_\_, Notary Public

My App't. Exp. \_\_\_\_\_

State of Kansas) SS The foregoing instrument acknowledged be-  
Sedgwick County) fore me, this \_\_\_\_\_ day of \_\_\_\_\_, 2007, by \_\_\_\_\_,  
\_\_\_\_\_, of Central National Bank, on behalf of the bank.

\_\_\_\_\_, Notary Public

My App't. Exp. \_\_\_\_\_

State of Kansas) SS The foregoing instrument acknowledged before  
Sedgwick County) me, this \_\_\_\_\_ day of \_\_\_\_\_, 2007, by Matthew J. Lillie,  
Co-Manager/Member of Physicians Development, L.L.C., a Kansas limited  
liability company, on behalf of the limited liability company.

\_\_\_\_\_, Notary Public

My App't. Exp. \_\_\_\_\_

State of Kansas) SS This is to certify that this plat has been  
Sedgwick County) filed for record in the office of the Register of Deeds, this \_\_\_\_\_ day  
of \_\_\_\_\_, 2007 at \_\_\_\_\_ o'clock \_\_\_\_\_ M; and is duly recorded.

\_\_\_\_\_, Register of Deeds  
Bill Meek

\_\_\_\_\_, Deputy  
Tonya Buckingham

## LILLIE 2ND ADDITION

Baughman Company, P.A.  
315 Ellis St. Wichita, KS 67211 P 316-262-7171 F 316-262-0149  
Baughman ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

NOTE:  
A DRAINAGE PLAN HAS BEEN DEVELOPED FOR THIS SUBDIVISION AND IS  
ON FILE WITH THE CITY OF WICHITA, KANSAS. DRAINAGE INTENT SHALL  
REMAIN AS DEPICTED OR AS MODIFIED WITH THE APPROVAL OF THE CITY  
ENGINEER OF THE CITY OF WICHITA, KANSAS. NO OBSTRUCTIONS WHICH  
IMPEDE THE FLOW OF THIS DRAINAGE PLAN SHALL BE ALLOWED.