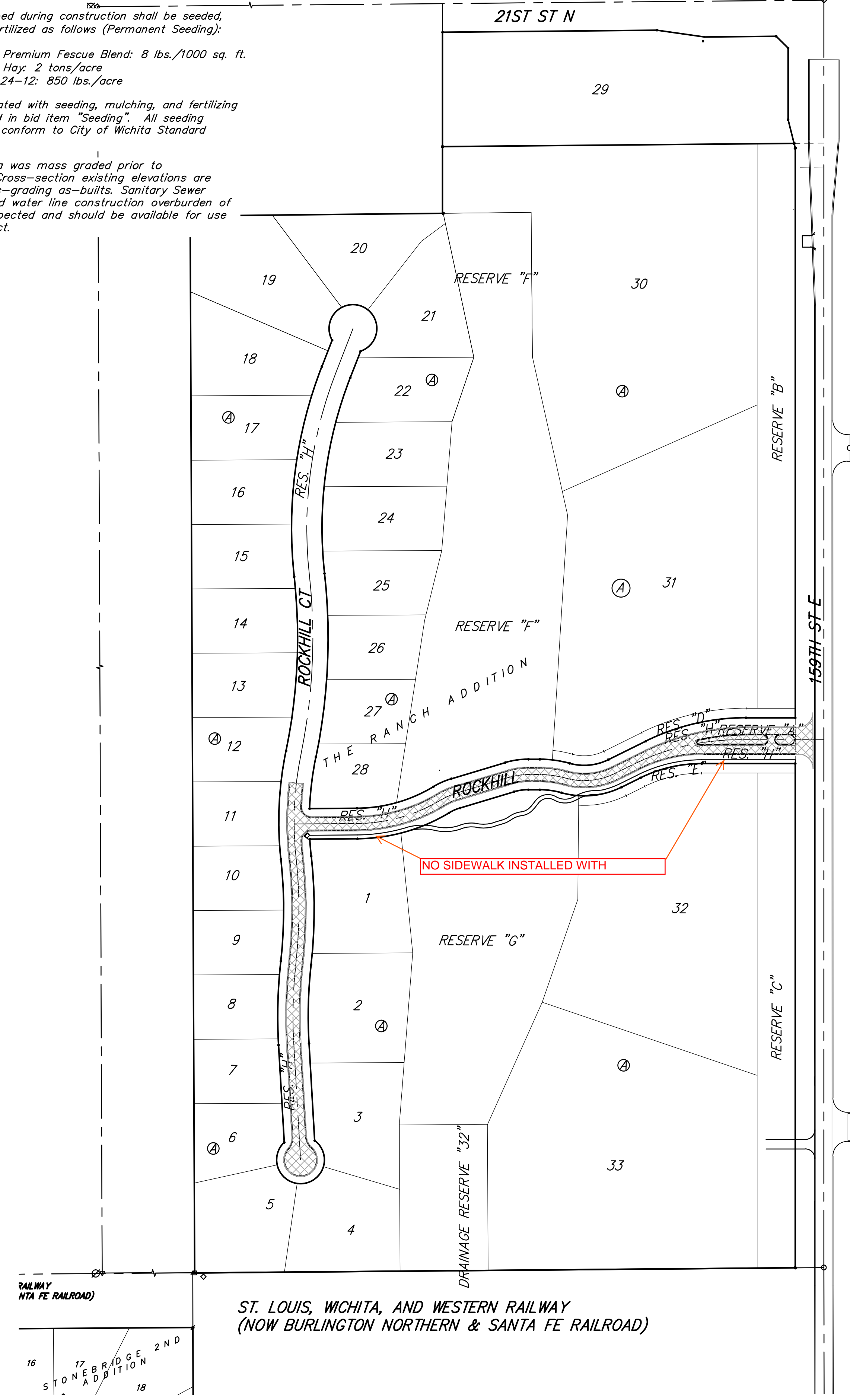


GENERAL NOTES:

- Contractor will be required to provide notice to utility companies a minimum of seventy-two (72) hours prior to any excavation, as follows:
 Kansas One-Call 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
 Black Hills Energy 1-800-303-0357
 AT&T 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 Phillips Pipeline Co. 1-877-267-2290
 Southern Star Pipeline Co. 529-6600
 Kinder-Morgan Pipeline Co. 1-888-844-5658
- Utility service lines, poles, valve boxes, meters, and etcetera are to be adjusted as necessary by others prior to construction unless the plans specifically call for their adjustment by the Contractor or unless the plans specifically identify a utility to be adjusted by its owner during construction. Existing utilities and their location, as shown on the plans, represent the best information obtainable for design. The Contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.
- Rubble from the removal of miscellaneous structures 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.
- 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 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 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 Restoration".
- All excess excavation shall remain on-site and shall be stockpiled on-site at a location to be determined by the Engineer. Excess excavation may be used to build on-site berms at locations indicated by the Engineer.
- A saw cut of at least one-half the depth of existing surface courses or one-fourth the depth of the existing total pavement thickness shall be provided at locations where proposed construction abuts the existing surface course or pavement for which partial removal of that surface or pavement is required. Sawed joint to facilitate removal within three (3) feet of existing joints will not be permitted and for such instances the limits of removal shall extend to the existing joint. Such saw cuts will not be paid for directly and this cost shall be considered as subsidiary to the removal of the surface or pavement.
- The developers for this project is Kevin Mullen, RBR Land, LLC (316)684-7300.

- All areas disturbed during construction shall be seeded, mulched, and fertilized as follows (Permanent Seeding):
 Seed: Kansas Premium Fescue Blend: 8 lbs./1000 sq. ft.
 Mulch: Prairie Hay: 2 tons/acre
 Fertilizer: 12-24-12: 850 lbs./acre
 All costs associated with seeding, mulching, and fertilizing shall be included in bid item "Seeding". All seeding operations shall conform to City of Wichita Standard Specifications.
- The project area was mass graded prior to construction. Cross-section existing elevations are from post mass-grading as-builts. Sanitary Sewer construction and water line construction overburden of 1300 C.Y. is expected and should be available for use on street project.

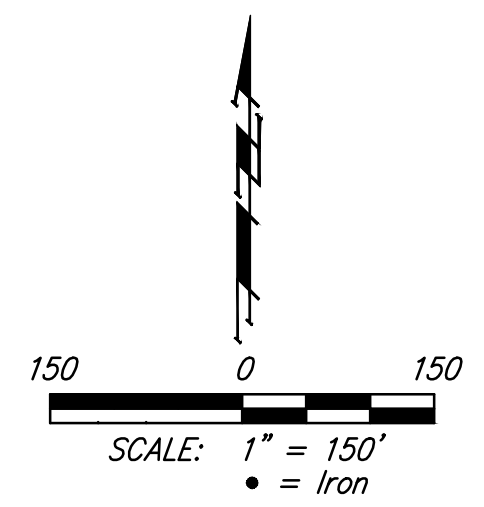


STREET PAVING FOR ROCKHILL to serve THE RANCH ADDITION - PH. I

Rockhill, from Rockhill Ct, east to 159th St. E.
 Rockhill Ct, from Rockhill,
 south to and including the cul-de-sac
CITY OF WICHITA, KANSAS

Gary Janzen, P.E. City Engineer
 Private Project Number
 240 PPP (607879)

AS BUILT PLANS
 Contractor: Kansas Paving
 Inspector: Fred Smith, Baughman Co
 pdf's by: KEK, 5/20/15

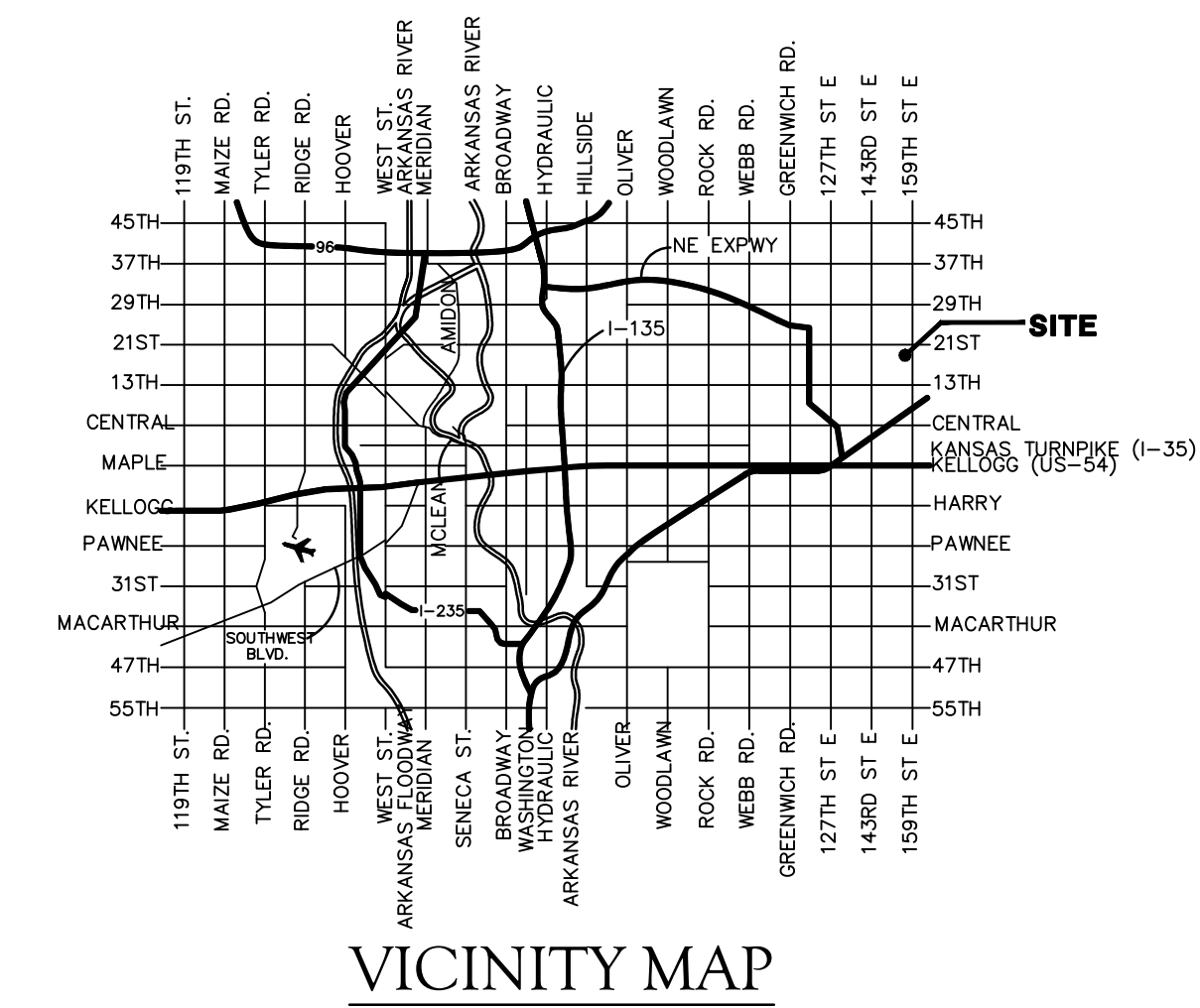


BENCHMARKS

"X" Cut top of 18" RCP 1' east of west end of RCP 31' south and 35' east of SE corner of the NE1/4 of Section 12, TWP. 27-S, R-2-E. Elev. = 1361.23 NAVD88
 "□" Cut on concrete slab north base of entry gate 123' west of east section line and 190' south of the north property line. Elev. = 1368.38 NAVD88

SHEET INDEX

Title Sheet	1
31' Pavement Detail	2
Curb & Gutter Detail	3
Sign Detail	4
Entrance Detail	5
Wheelchair Ramp Detail	6
Rockhill	7-9
Rockhill Court	10-11
Erosion Control Plan	12-14
Erosion Control BMP Details	15-18
Coordinate Sheet	19-21
Street X-Sections	22-27
Copy of Plat	28



APPROVED AS NOTED
 BY CITY ENGINEER OF WICHITA

Streets: Julian Kellman 8-12-14

NOTE TO CONTRACTORS

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

Project Earthwork Totals

Excavation	= 1,298 C.Y.
Loose Fill	= 1,856 C.Y.
Compacted Fill	= 303 C.Y.
Borrow Exc.	= 1,182 C.Y.

(See Note #12 about Borrow Excavation)

Total Project Length
 1,937 L.F. = 0.37 Miles

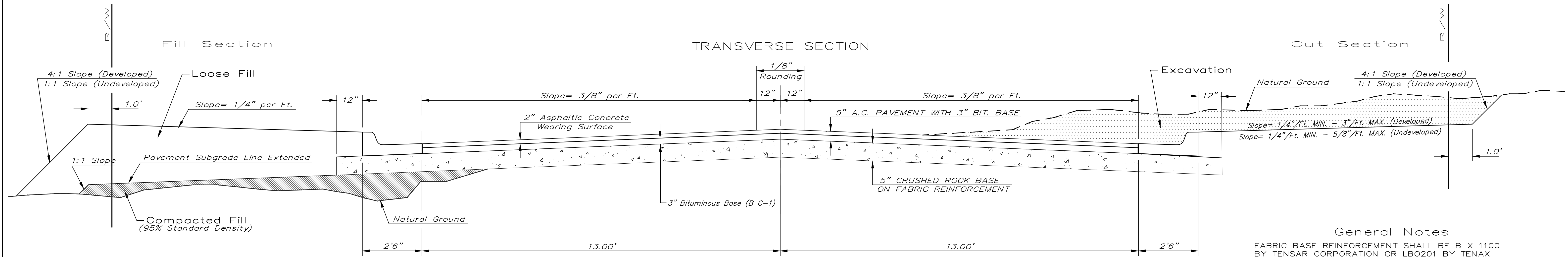


Proposed Streets



Baughman Company, P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0145
 ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

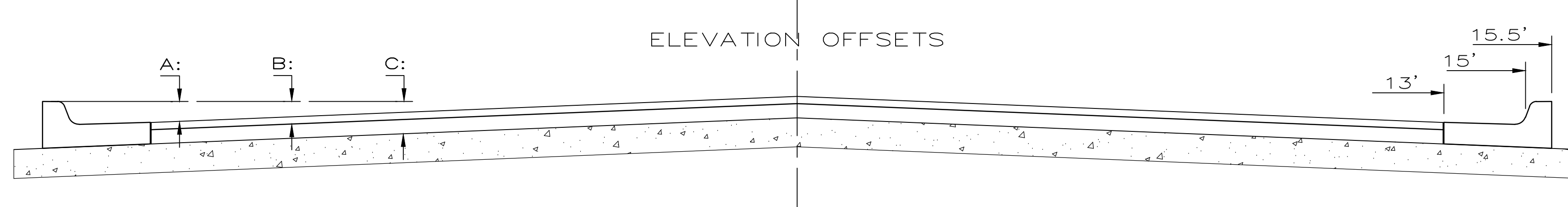
TYPICAL 31' B-B PAVEMENT DETAILS



CRUSHED ROCK GRADATION REQUIREMENTS PERCENT OF AGGREGATE RETAINED

2-1/2"	0
3/4"	20 - 60
#4	50 - 80
#40	80 - 94
#200	90 - 98

ROCK QUALITY SHALL CONFORM TO THE REQUIREMENTS SPECIFIED BY THE KDOT 1990 EDITION STANDARD SPECIFICATION SUBSECTION 1102 FOR DURABILITY CLASS I.



	DISTANCE FROM CENTERLINE (L.T. & RT.)										
	0'	2'	4'	6'	7'	8'	10'	13'	15'	15.5'	16.5'
A: Top of Curbs to Top of Surface Lift	0.10	0.15	0.21	0.27	0.30	0.33	0.40	0.49	-	-	-
B: Top of Curbs to Top of Upper Base Lift	0.27	0.32	0.38	0.44	0.47	0.50	0.57	0.66	-	-	-
C: Top of Curbs to Top of C.R. Subgrade	0.52	0.57	0.63	0.69	0.72	0.75	0.82	0.91	0.97	0.98	1.01

General Notes

FABRIC BASE REINFORCEMENT SHALL BE B X 1100 BY TENSAR CORPORATION OR LBO201 BY TENAX CORPORATION OR APPROVED EQUAL. FABRIC BASE REINFORCEMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

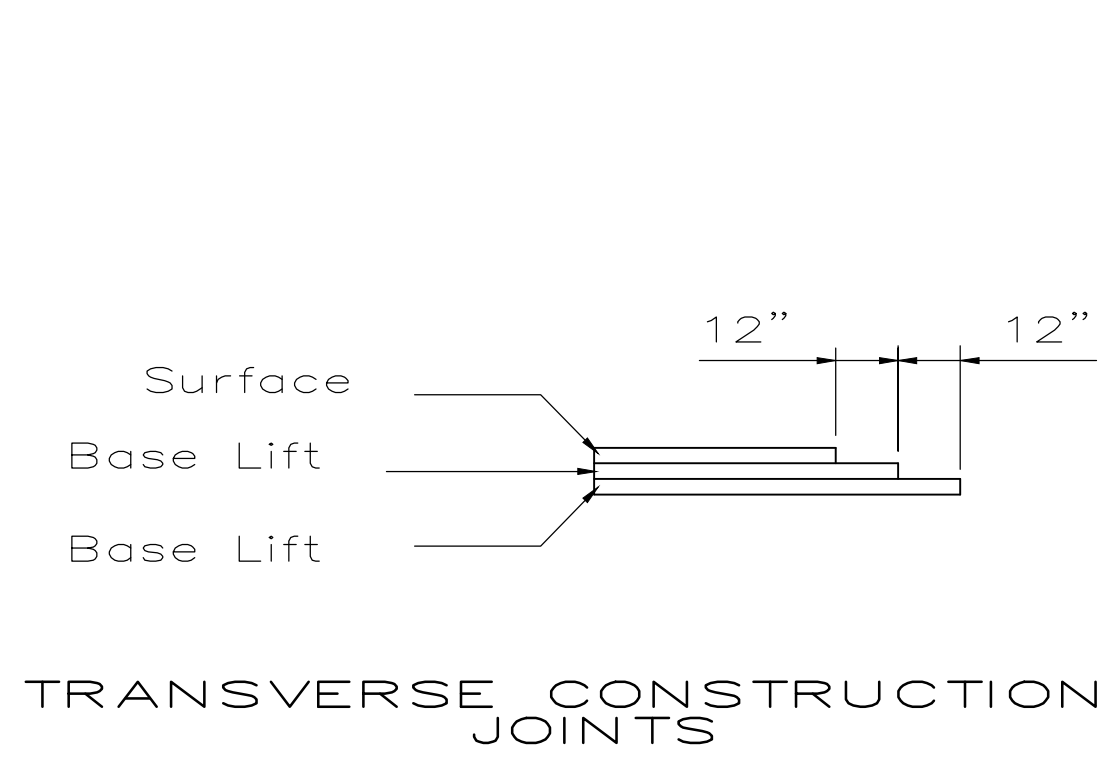
ROCK BASE IS TO BE COMPACTED AND SMOOTHED WITH A STEEL FACED ROLLER PRIOR TO PLACEMENT OF ASPHALT. TACK COAT WILL NOT BE APPLIED TO ROCK BASE.

A TACK COAT OF EMULSIFIED ASPHALT (SC-1H OR CSS-1H) SHALL BE APPLIED AT AN APPROXIMATE RATE OF 0.05 GALLONS PER SQUARE YARD BETWEEN EACH LIFT OF ASPHALTIC MATERIAL.

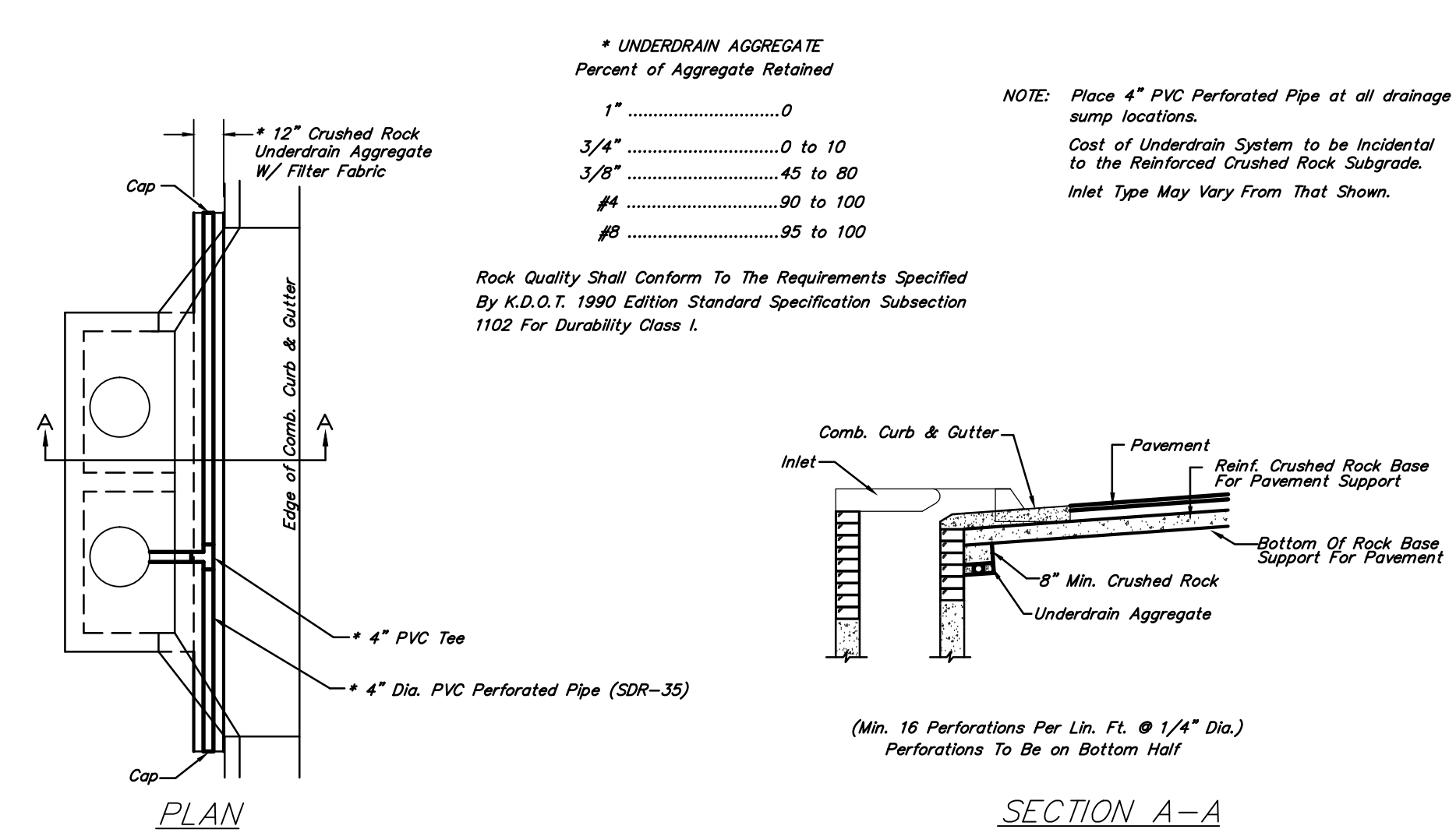
BITUMINOUS BASE AND ASPHALTIC CONCRETE WEARING SURFACE SHALL BE PLACED WITH A LAYDOWN MACHINE HAVING AUTOMATIC CONTROLS FOR LINE AND GRADE.

CONSTRUCTION JOINTS IN EACH LIFT SHALL BE STAGGERED A MINIMUM DISTANCE OF ONE (1) FOOT FROM JOINTS IN PRECEDING LIFTS AND PLACED SO THAT A JOINT WILL BE CONSTRUCTED ON THE CENTERLINE OF THE TOP LIFT.

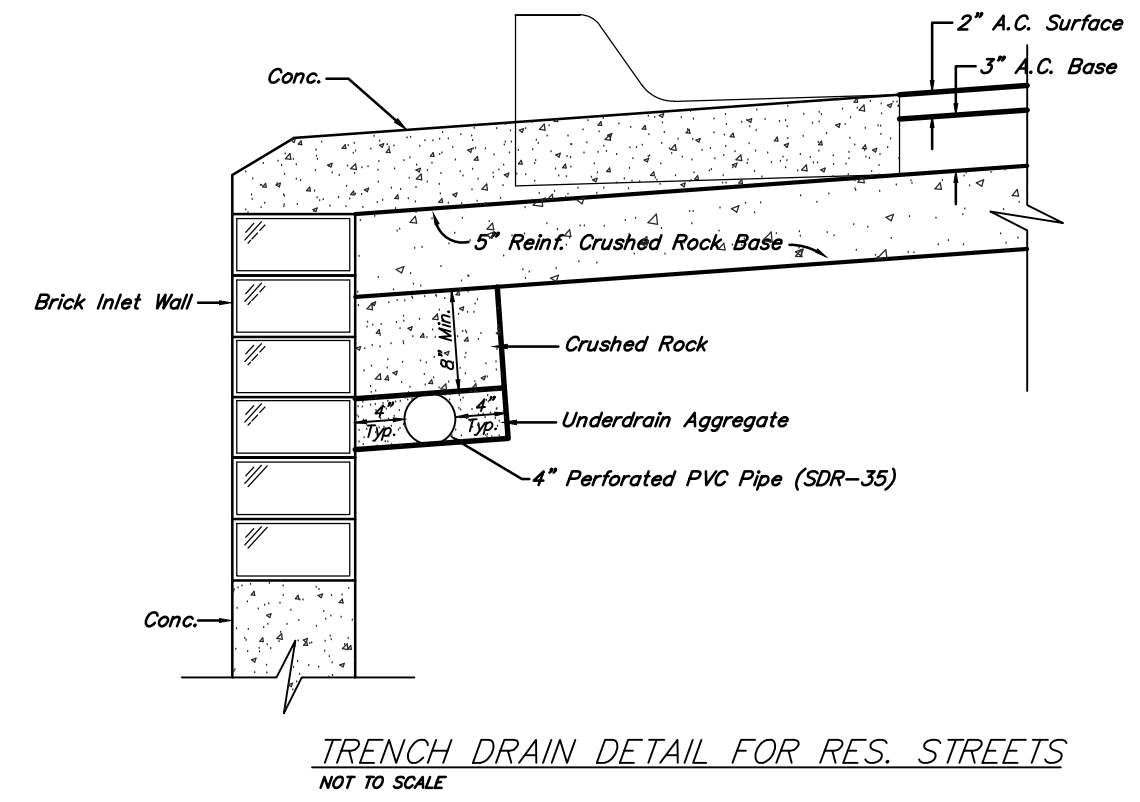
THE ASPHALTIC CONCRETE PAVEMENT BETWEEN THE COMBINED CURB AND GUTTER SHALL BE PAID AS SQUARE YARDS OF 5" ASPHALTIC CONCRETE (3" BITUMINOUS BASE.)



Transverse construction joints shall be constructed in flexible base pavements at locations where pavement joins existing flexible base pavement as shown by the detail. All costs associated with the construction of the transverse joint shall be included in the bid price for Square Yards 5" ASPHALTIC CONCRETE (3" BITUMINOUS BASE).



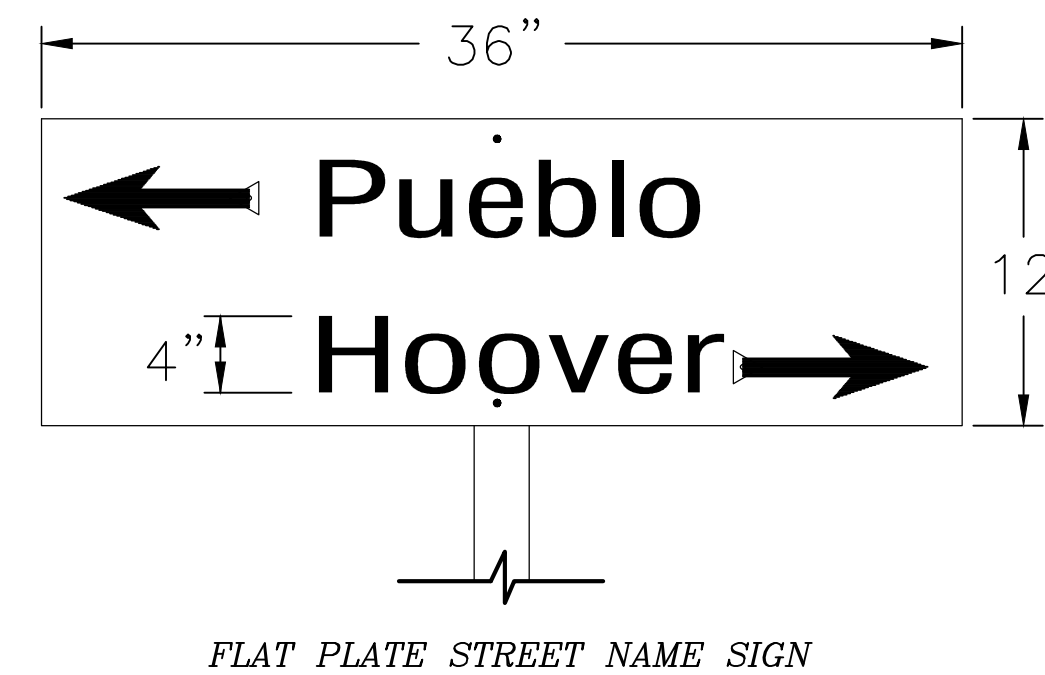
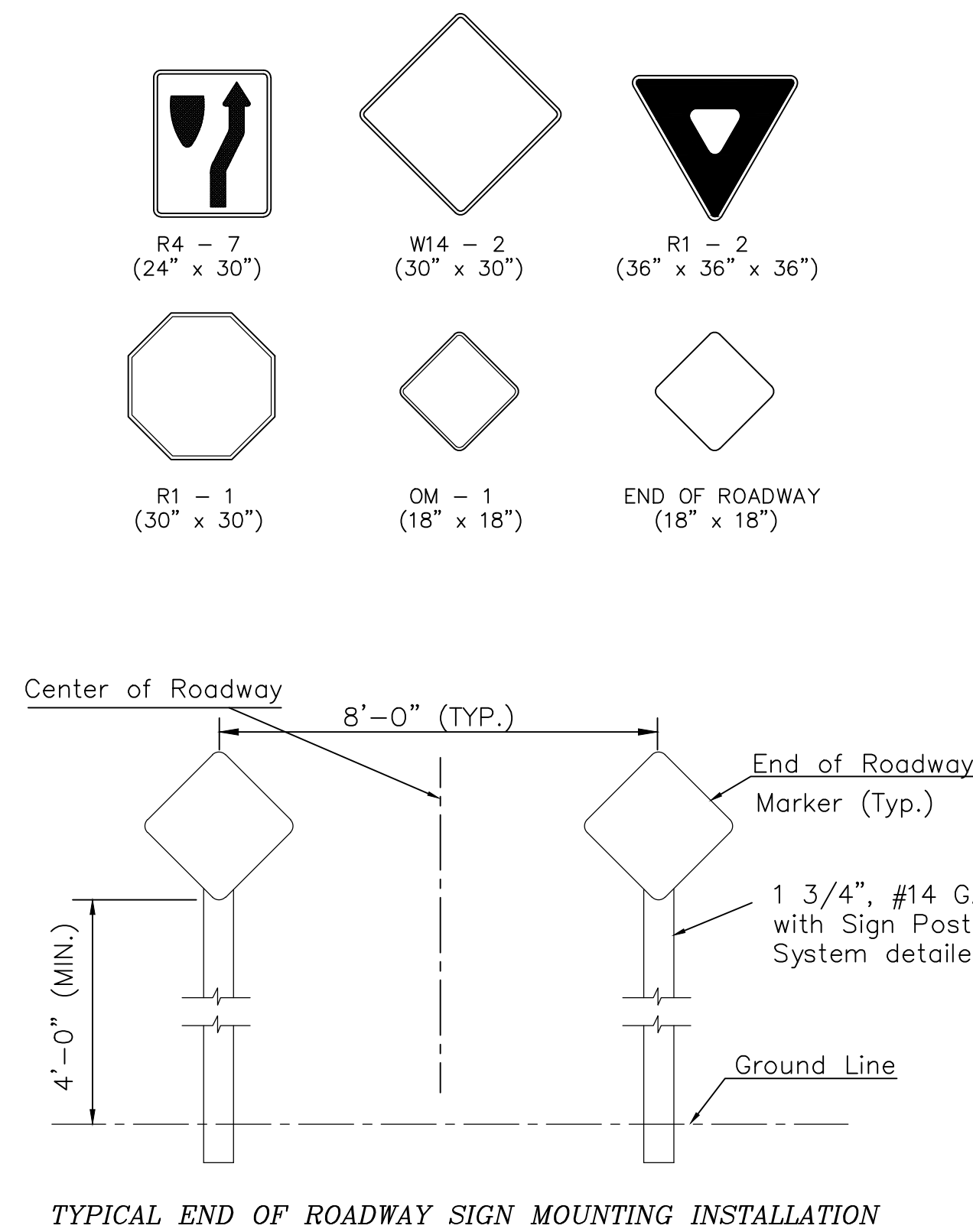
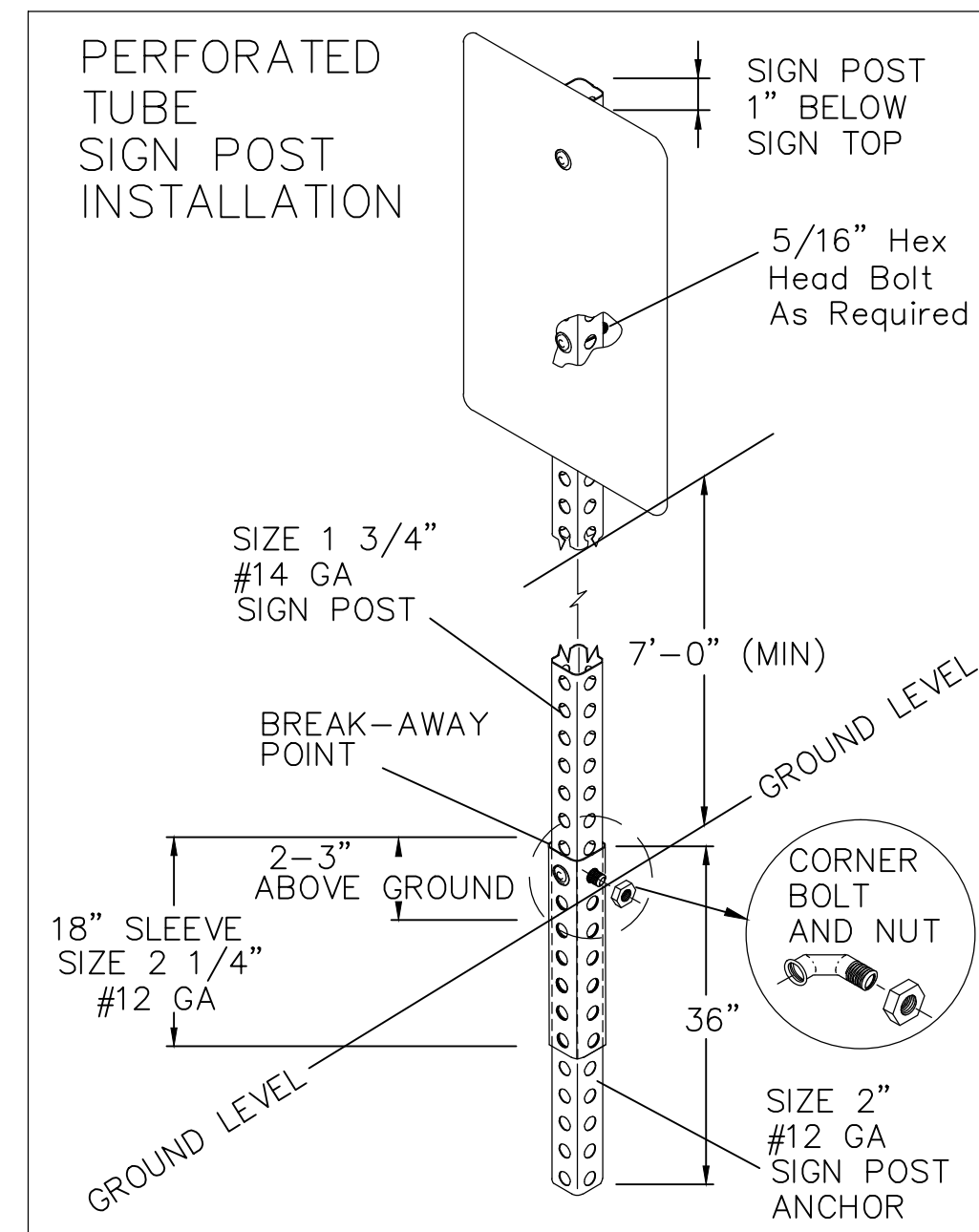
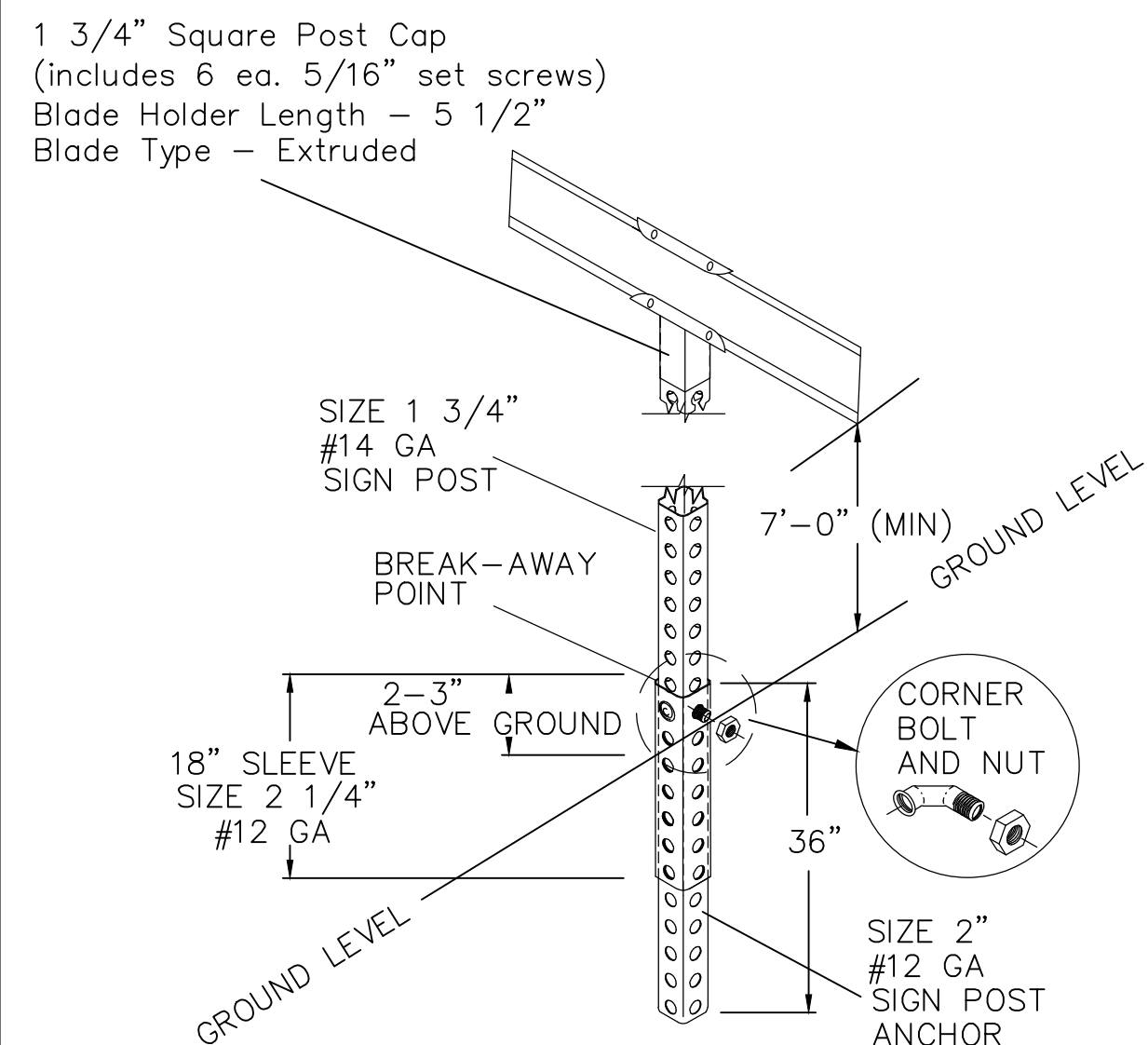
PAVEMENT UNDERDRAIN DETAIL
NOT TO SCALE



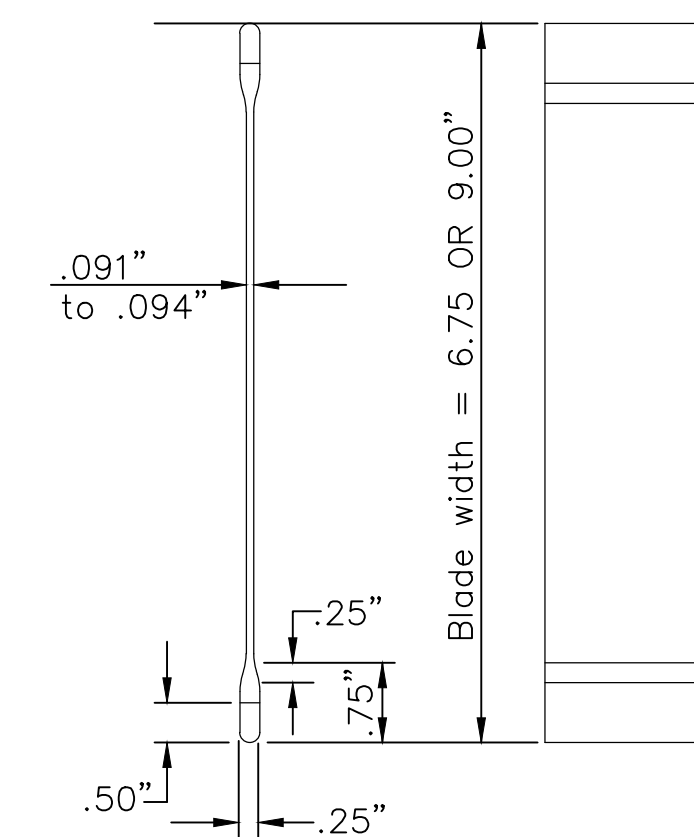
TRENCH DRAIN DETAIL FOR RES. STREETS
NOT TO SCALE

	5 Inch Residential Asphaltic Concrete Pavement w/Crushed Rock Base on Fabric Reinf. City of Wichita, Kansas	
	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 240 PPP (607879)	DESIGN C.O.W.	DRAWN Staff
REVISIONS:	APPROVED DATE 08/14	SCALE None
		SHEET 2 OF 28

FHWA REG. NO.	STATE	PROJECT NO.	YEAR	SHEET NO.	SHEETS
7	KANSAS	240 PPP (607879)		4	28

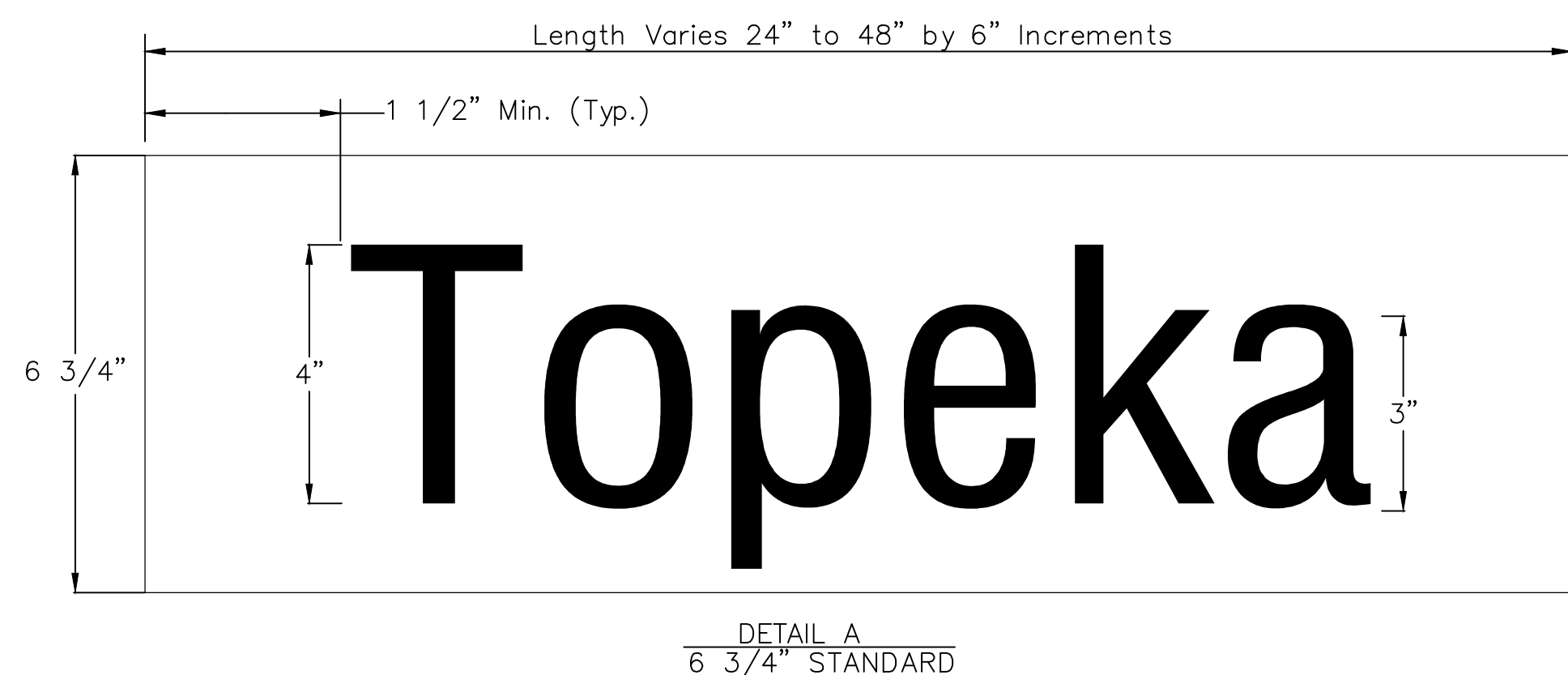


FLAT PLATE STREET NAME SIGN

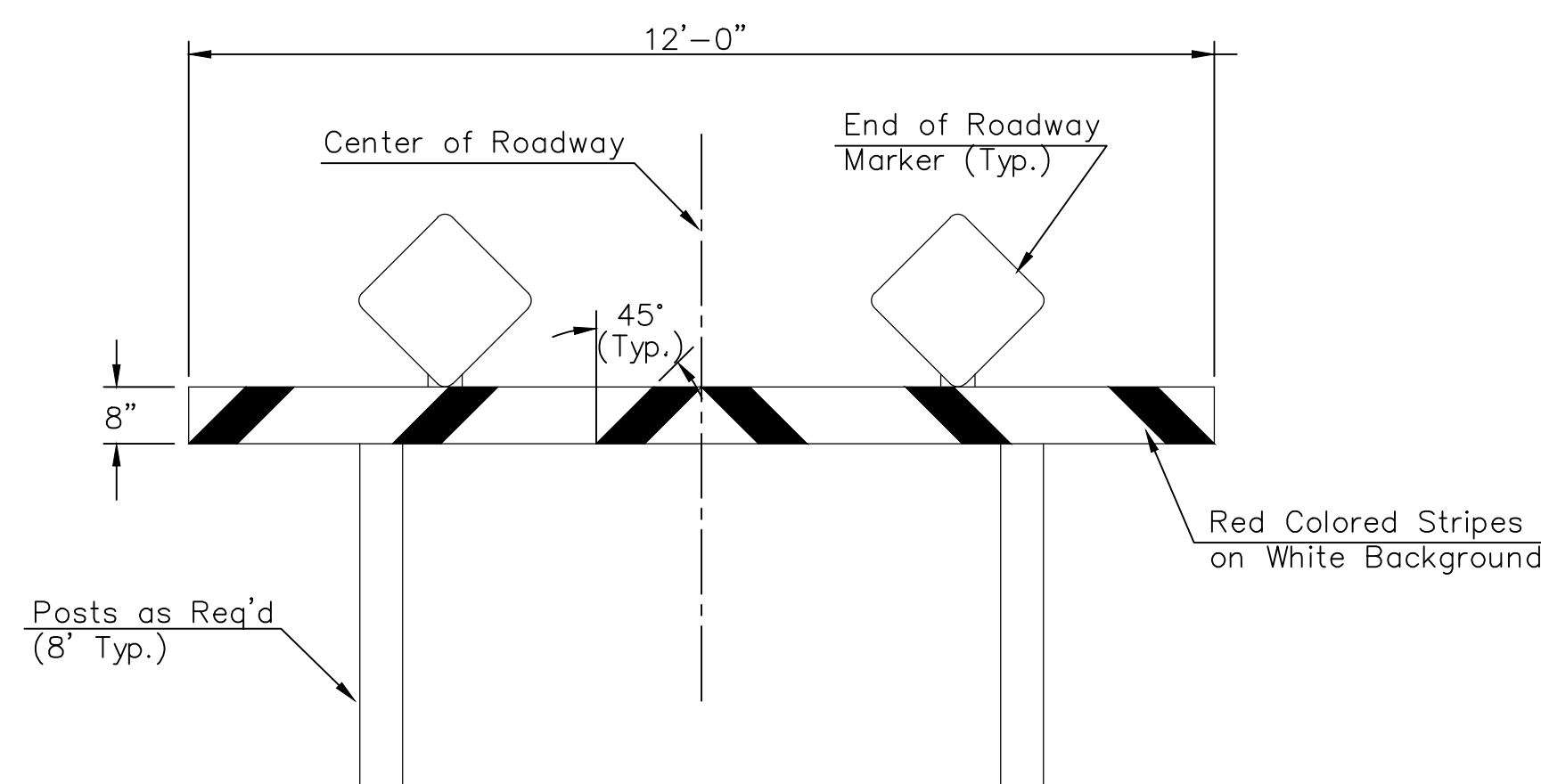


STREET NAME SIGN BLADE DETAILS

TYPICAL TRAFFIC CONTROL AND STREET NAME SIGN MOUNTING INSTALLATION
CURB AND GUTTER SECTION



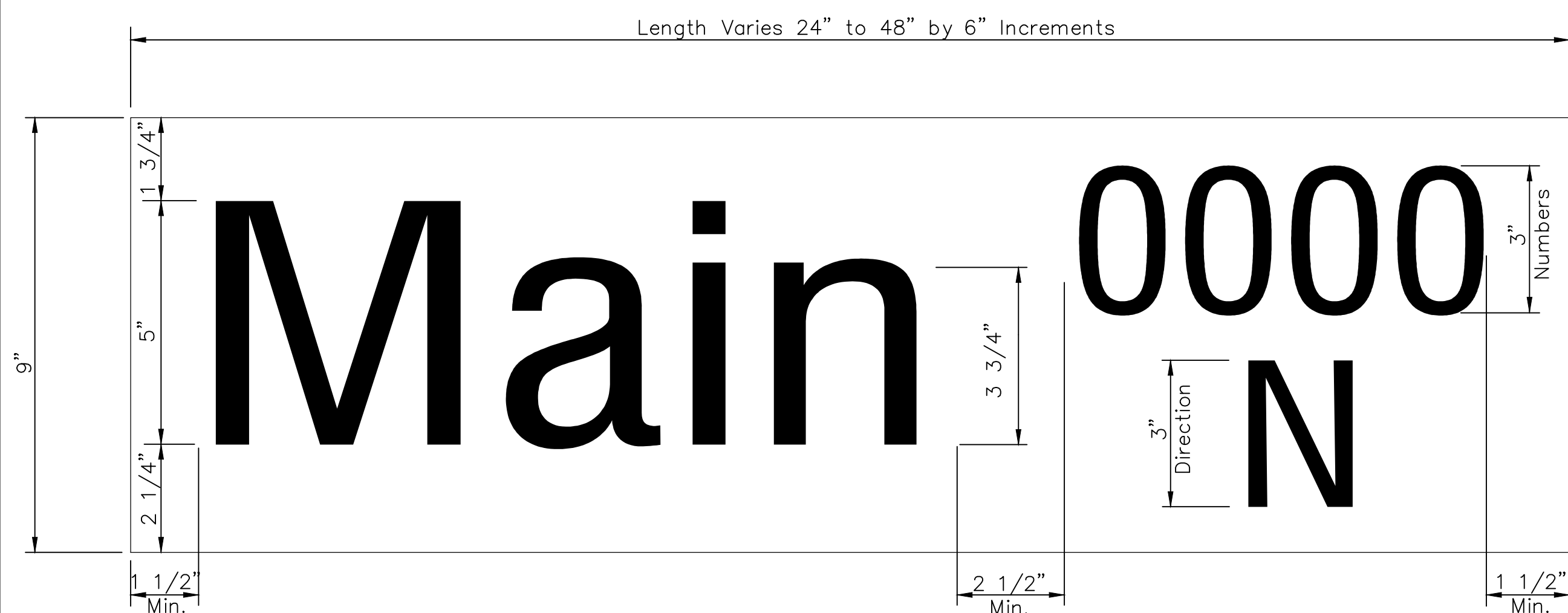
DETAIL A
6 3/4" STANDARD



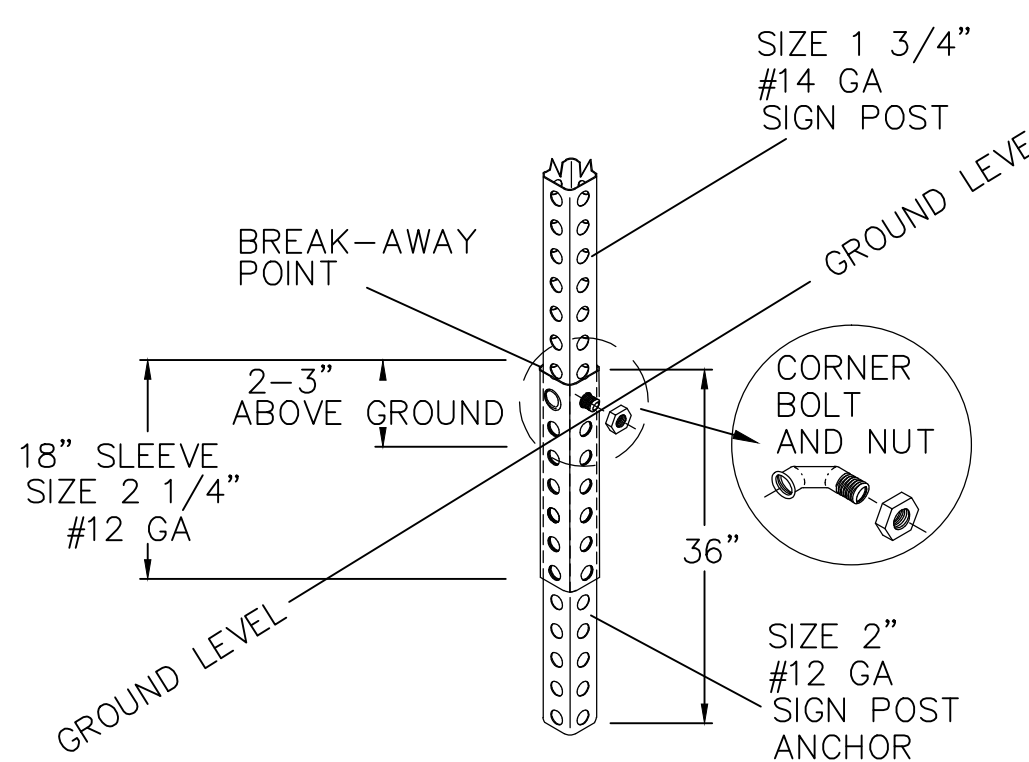
TYPE I BARRICADE DETAIL W/ E.O.R. MARKERS

STREET	STATION	OFFSET	SIGN	QUANTITY*
Rockhill	8+84.05	1.20' LL	R4-7 & OM-1	1
Rockhill	10+73.06	0' LL	R4-7 & OM-1	1
Rockhill	10+84.81	39' Rt.	R1-1	1
Rockhill	10+90.00	42' LL	SNS	1
Rockhill Ct.	6+70.00	30' Rt.	SNS	1
Rockhill Ct.	7+93.58	4' Lt. & Rt.	EOR	2
TOTAL				7

* FOR INFORMATION ONLY



DETAIL B
9" METRO



SIGN POST ANCHOR SYSTEM

STREET NAME	NO. BLADES REQ'D	
	6 3/4" STD.	9" METRO
159th St E ____ N		1
Rockhill ____ E		1
Rockhill	1	
Rockhill Ct (____-____)		1

NOTE: REFERENCES BELOW TO "STANDARD SPECIFICATIONS" DENOTE "STANDARD SPECIFICATION FOR STATE ROAD AND BRIDGE CONSTRUCTION EDITION 1990" BY THE KANSAS DEPARTMENT OF TRANSPORTATION.

- POST ANCHORS: POSTS SHALL BE ANCHORED WITH A YIELDING BASE POST SUPPORT AS DETAILED.
- POSTS FOR TRAFFIC CONTROL SIGNS: POSTS SHALL BE GALVANIZED AND CONFORM TO THE REQUIREMENTS OF SUBSECTION 1620 OF THE STANDARD SPECIFICATIONS, EXCEPT THAT ALL POSTS SHALL WEIGH 3 LBS./FT. MINIMUM.
- POSTS FOR STREET NAME SIGNS (SNS): POSTS SHALL BE 9 FEET LONG, CONSTRUCTED FROM #14 GALVANIZED STEEL PIPE AND SHALL BE 1 3/4" SQUARE WEIGHING A MINIMUM OF 3 LBS./FT. POSTS SHALL BE POSITIONED SO THAT THE BOTTOM BLADE IS 7 FEET ABOVE GRADE.
- POSTS FOR END OF ROADWAY SIGN TO BE 8' LONG AND INSTALLED A MINIMUM OF 4' FROM ROADWAY TO BOTTOM OF SIGN.
- SIGN BLANKS FOR TRAFFIC CONTROL SIGNS: SIGN BLANKS SHALL BE FABRICATED FROM 0.080" ALUMINUM ALLOY 6063-T6 CONFORMING TO THE REQUIREMENTS OF SUBSECTION 1626 OF THE STANDARD SPECIFICATIONS.
- SIGN BLADES FOR STREET NAME SIGNS: EXTRUDED ALUMINUM BLADES SHALL BE ALUMINUM ALLOY CONFORMING TO 6063-T6 OR 5052-H38 (ASTM SPECIFICATION B221, LATEST ISSUE). BLADES SHALL HAVE AN ALDINE OR PHOSPHATE ETCHED FINISH. BLADES SHALL HAVE SQUARE CORNERS AND NO HOLES.
MINIMUM BLADE LENGTH SHALL BE 24". MAXIMUM BLADE LENGTH SHALL BE 48". LENGTH VARIES BY INCREMENTS OF 6".
BLADES BEARING THE STREET NAMES SHALL BE FIRMLY ATTACHED TO THE MOUNTING BRACKETS USING ALLEN-TYPE CONICAL SET SCREWS. THE BLADES SHALL BE ORIENTED PARALLEL TO THE STREET.
- MOUNTING BRACKETS FOR SIGNS: DIE-CAST ALUMINUM BRACKETS SHALL BE ALUMINUM ALLOY 360 HAVING A TENSILE STRENGTH OF 44,000 PSI. THE BRACKETS SHALL BE SMOOTHLY FINISHED FREE OF PITS, BURRS, AND FLAWS. EACH BRACKET SHALL BE TAPPED AND DRILLED FOR 5/16" ZINC-PLATED ALLEN-TYPE SET SCREWS HAVING SELF-LOCKING SAW-TOOTH ENDS.
- FASTENERS: ALL STEEL FASTENERS FOR TRAFFIC CONTROL SIGNS SHALL BE GALVANIZED AND SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 1614 OF THE STANDARD SPECIFICATIONS.
- REFLECTIVE SHEETING: REFLECTIVE SHEETING SHALL BE A MINIMUM TYPE IV PRISMATIC.
- PROCESS INK: ALL PROCESS INK SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 2202 OF THE STANDARD SPECIFICATIONS.
- FABRICATION AND INSTALLATION OF ALL SIGNS SHALL CONFORM TO THE LATEST ADDITION OF THE MUTCD.
- DETAILS - SNS: THE REFLECTIVE SHEETING FOR THE 6 3/4" STANDARD SIZE SNS IS TO BE THE HIGHWAY GREEN BACKGROUND WITH SILVER-WHITE #2 COPY WITH 4" UPPER CASE AND LOWER CASE PRIMARY COPY AND SUFFIX COPY. BOTH SERIES "C". FACES TO TRIM TO A 6 1/4". (SEE DETAIL A.)

THE REFLECTIVE SHEETING FOR THE 9" METRO SIZE SNS IS TO BE THE HIGHWAY GREEN BACKGROUND WITH SILVERWHITE #2 COPY WITH 5" UPPER CASE AND LOWER CASE PRIMARY COPY AND SUFFIX COPY, BOTH SERIES "C". THE CARDINAL DIRECTION CENTERED DIRECTLY BELOW THE BLOCK NUMBER SHALL BE AN UPPER CASE, 4" SERIES "C" LETTER. FACES TO TRIM TO A 8 1/2" WIDTH. (SEE DETAIL B.)

FOR CUL-DE-SAC STREETS, A 9" METRO SIZE BLADE SHALL BE USED WITH THE BLOCK NUMBERS DISPLAYED BENEATH THE STREET NAME. LETTERING TO BE THE SAME AS FOR THE 6 3/4" SIZE BLADE, EXCEPT THAT THE BLOCK NUMBER INFORMATION SHALL BE 4" SERIES "C".

IF BLOCK NUMBERS ARE NOT SHOWN ON THE PLANS THE CONTRACTOR SHALL CONTACT THE TRAFFIC ENGINEER AT 268-4501 PRIOR TO MANUFACTURING THE SIGN.

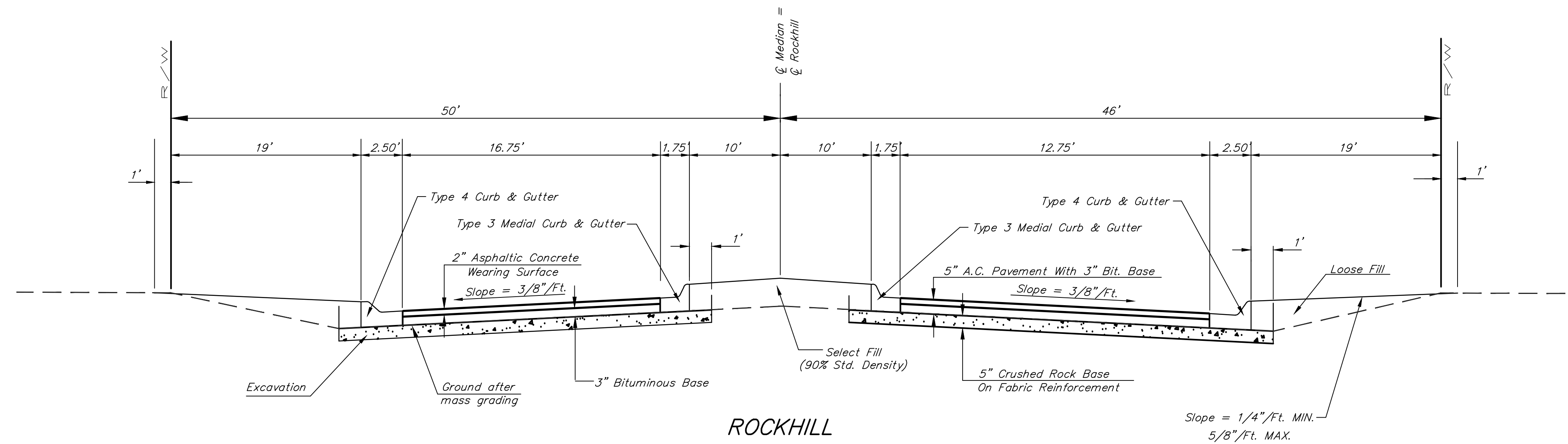
SHOP DRAWINGS OF LAYOUT FOR SNS SHALL BE SUBMITTED TO THE TRAFFIC ENGINEERING DIVISION OF THE CITY OF WICHITA FOR APPROVAL PRIOR TO FABRICATION. THE FINISHED SIGNS AS SUPPLIED SHALL BE OF GOOD APPEARANCE, FREE FROM RAGGED EDGES, CRACKS SCALES OR BLISTERS AND SHALL BE CLEAN-CUT. SIGNS SHALL BE PACKED IN SUCH MANNER AS TO PREVENT DAMAGE OR DEFAACEMENT DURING SHIPMENT OR STORAGE.


- PERMANENT TRAFFIC CONTROL AND SNS: PERMANENT TRAFFIC CONTROL AND SNS SHALL BE MEASURED AND PAID FOR AT THE LUMP SUM PRICE FOR SIGNING. THE PAYMENT AS SET FORTH ABOVE SHALL BE CONSIDERED FULL COMPENSATION FOR ALL EXCAVATION, BACKFILLING, POSTS, ANCHORS, FASTENERS, MATERIALS, LABOR, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK.

SIGNING DETAILS

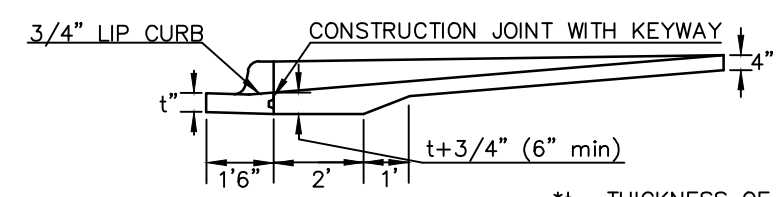
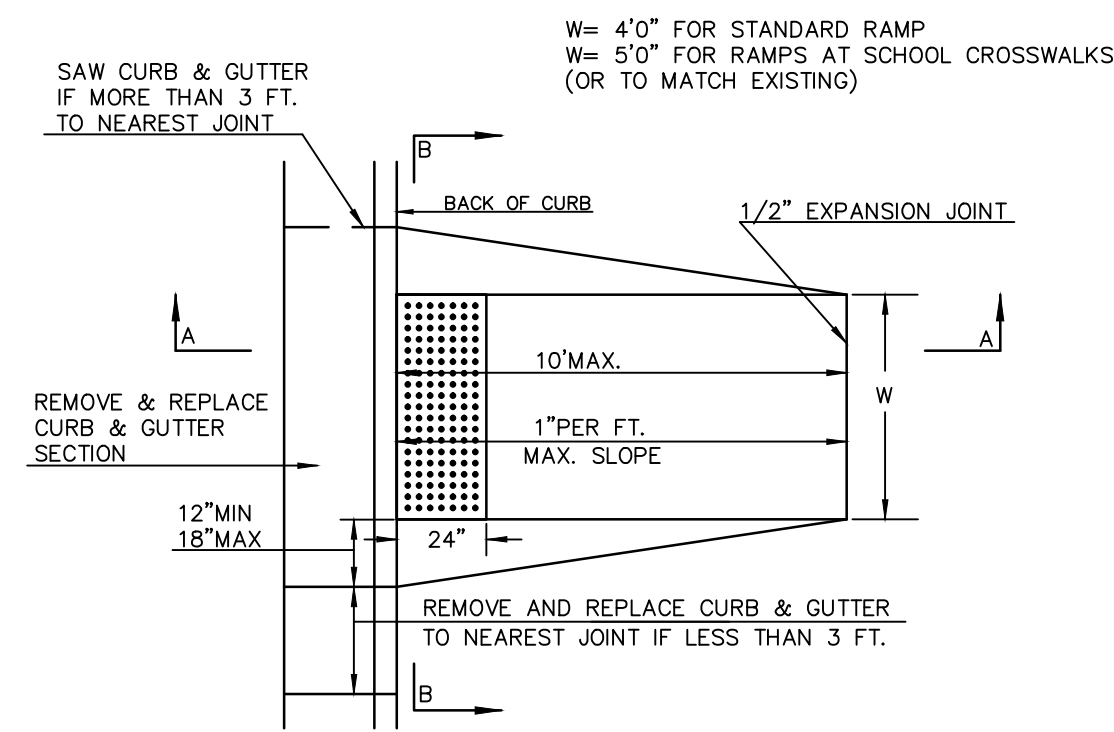
SCALE: NONE	APPROVED BY	DATE: JUNE 1993
DRAWN BY: TM		REVISED: APRIL 2008
REVISED BY: AR		

CITY OF WICHITA
DEPARTMENT OF PUBLIC WORKS
PAUL GUNZELMAN, TRAFFIC ENGINEER, ENGINEERING DIVISION

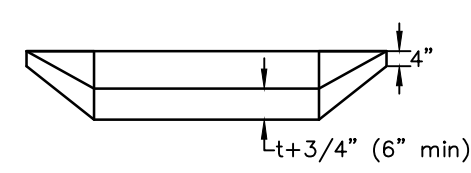


	ENTRANCE DETAILS	
	<small>Baughman Company, P.A. 315 Ellis St., Wichita, KS 67211 P 316.262.7271 F 316.262.0149 ENGINEERING SURVEYING PLANNING LANDSCAPE ARCHITECTURE</small>	
<small>PROJECT NUMBER</small> 240 PPP (607879)	<small>DESIGN STAFF</small> 	<small>DRAWN STAFF</small>
<small>REVISIONS:</small> 	<small>APPROVED</small> 	<small>DATE</small> 08/14
<small>SCALE</small> NONE		<small>SHEET</small> 5 OF 28
<small>STR_Details.dwg</small>		<small>12-11-E839</small>

STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR STREETS WITH COMBINED CURB & GUTTER (TYPE A)

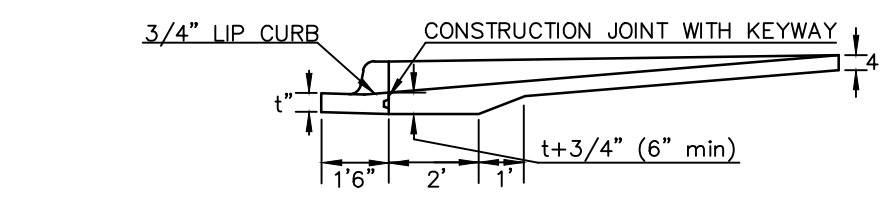
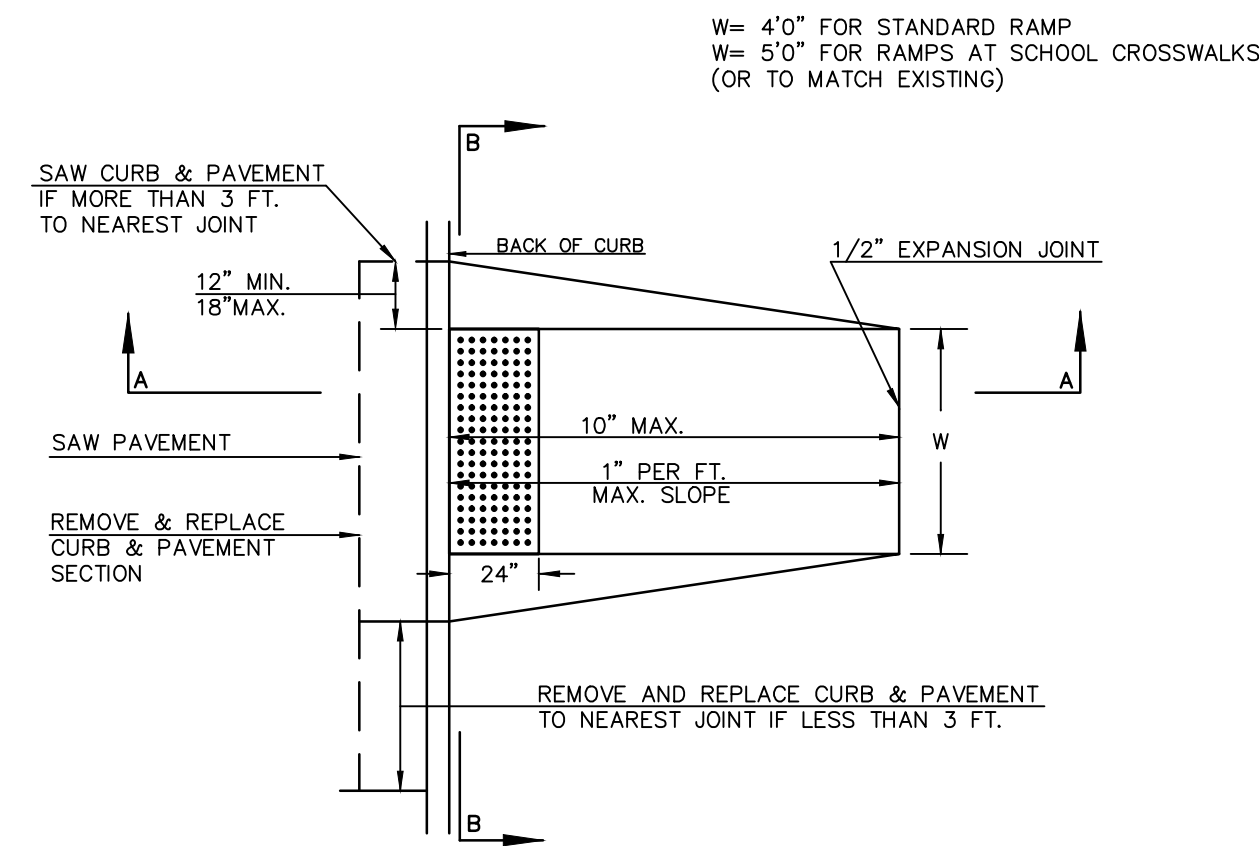


SECTION A-A

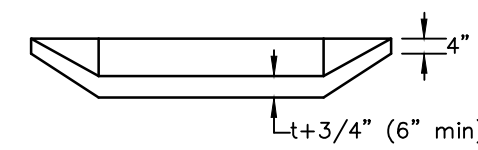


SECTION B-B

STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR CONCRETE STREETS WITH MONOLITHIC CURB (TYPE A)

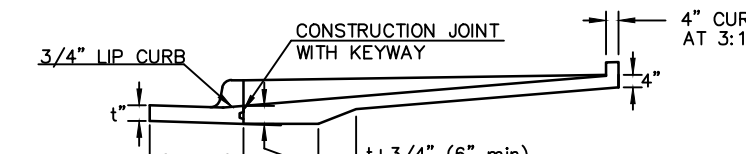
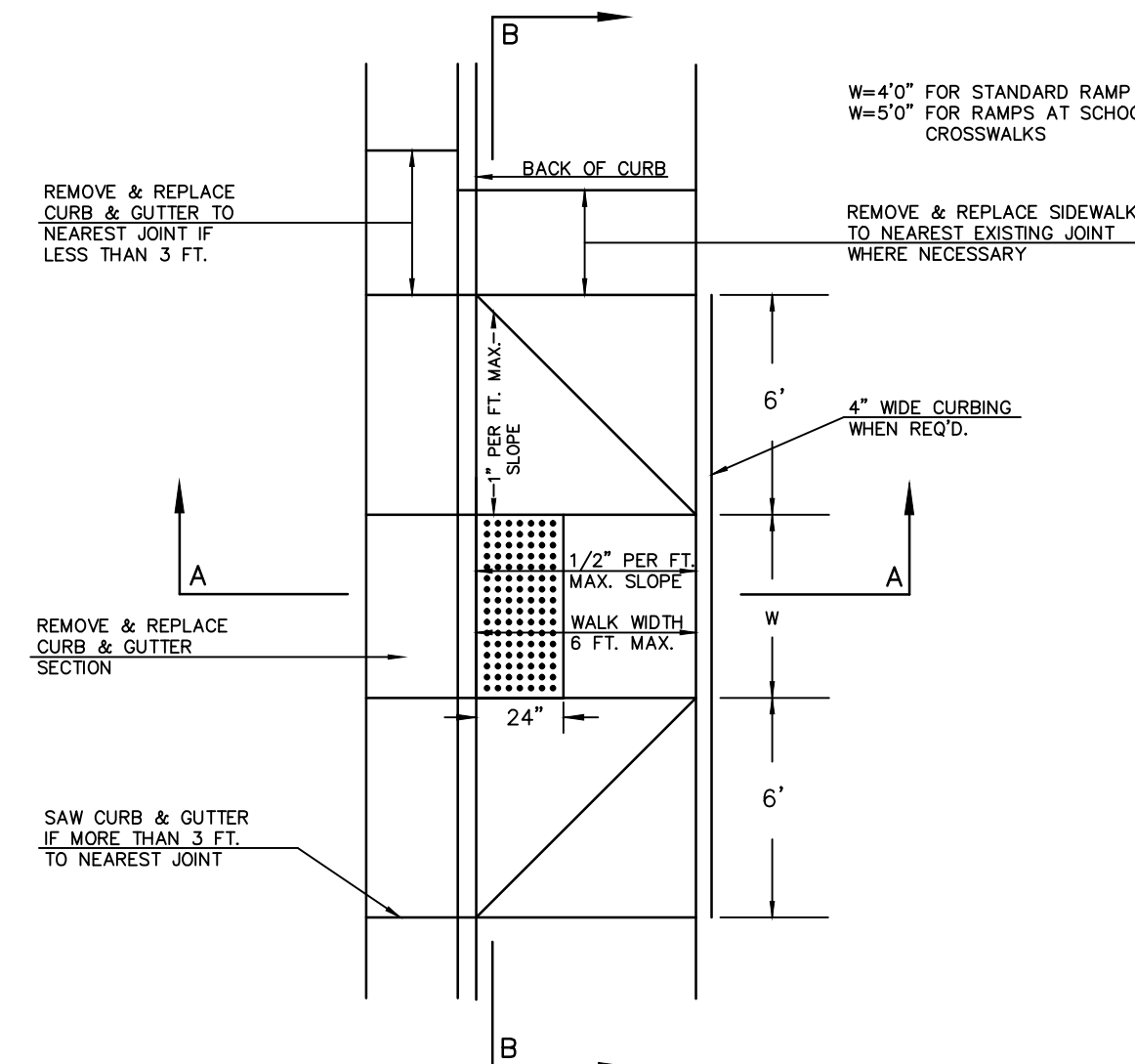


SECTION A-A

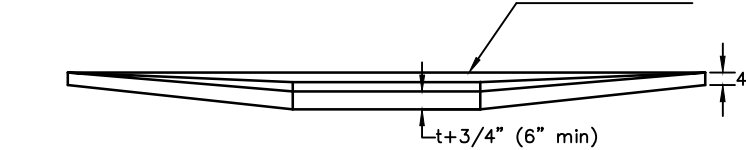


SECTION B-B

STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR STREETS WITH COMBINED CURB & GUTTER AND FULL WALK (TYPE B)

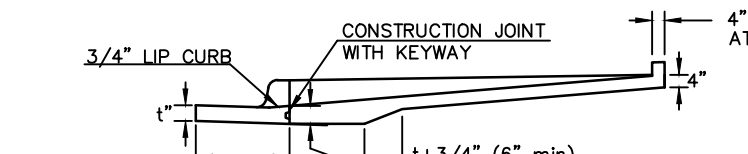
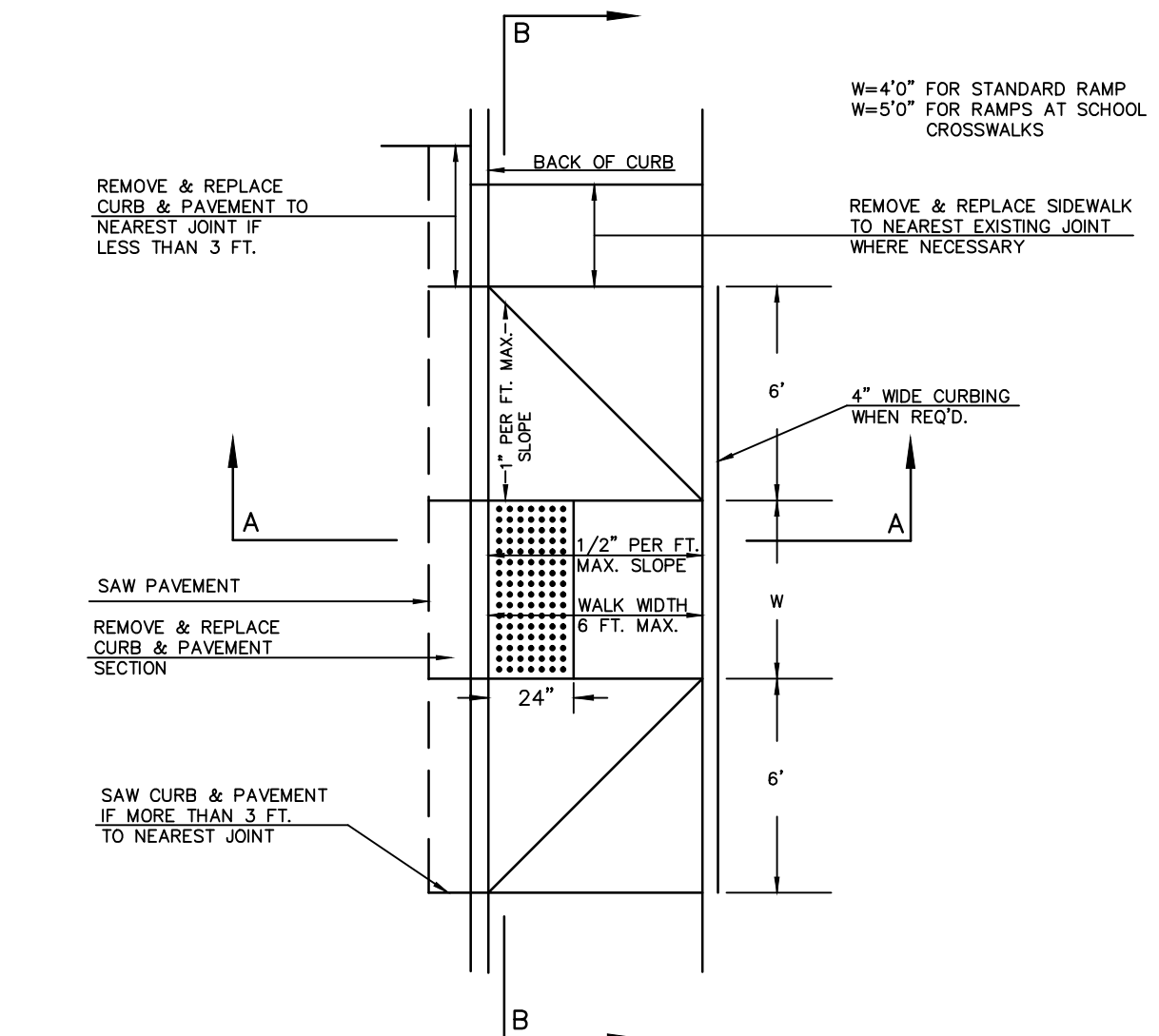


SECTION A-A

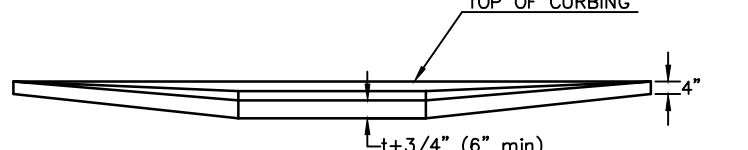


SECTION B-B

STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR STREETS WITH MONOLITHIC CURB AND FULL WALK (TYPE B)

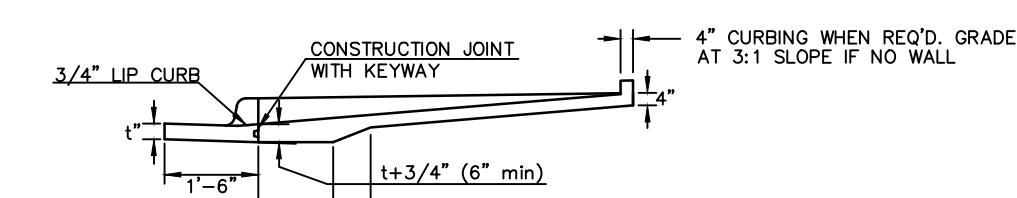
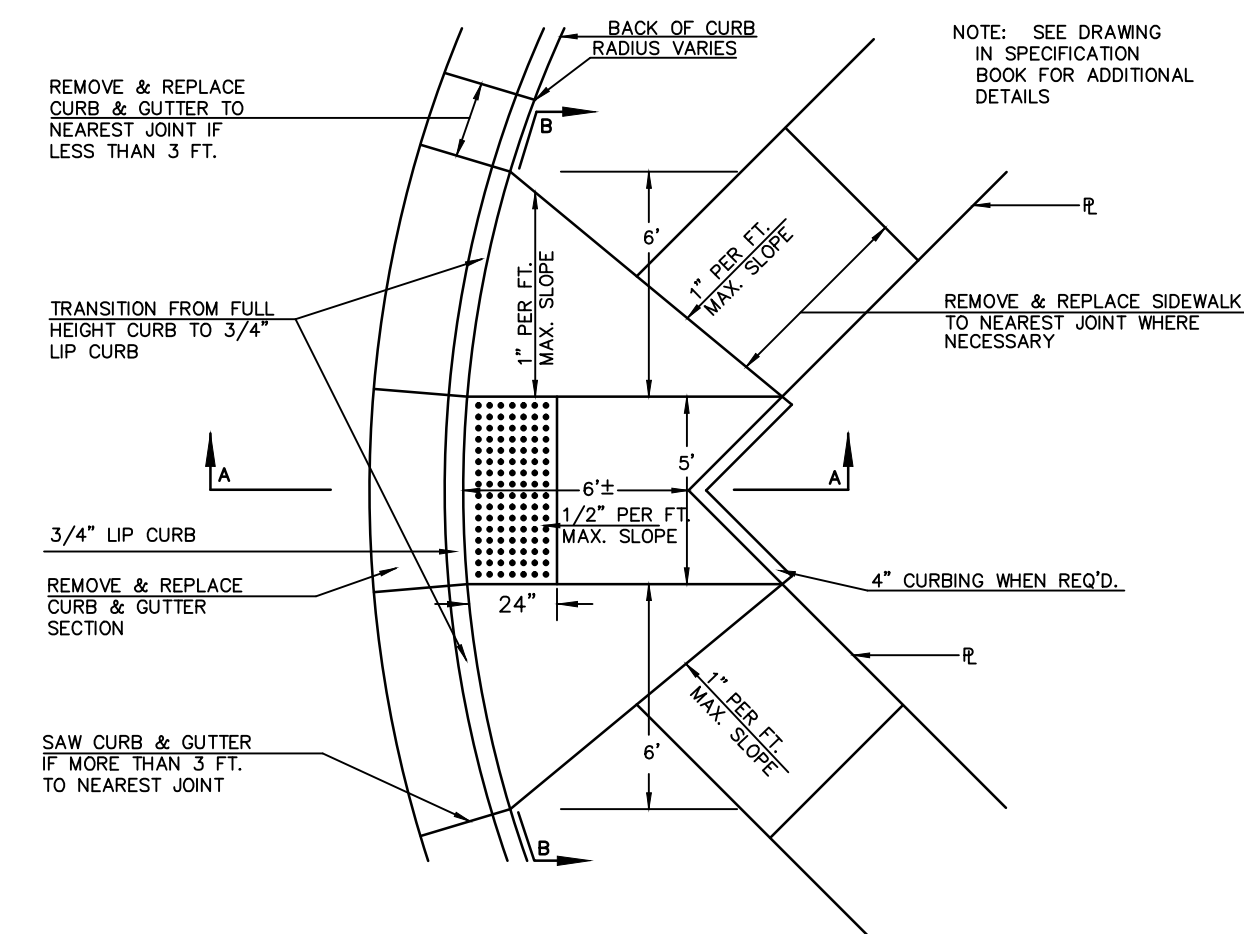


SECTION A-A



SECTION B-B

STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR STREET WITH COMBINED CURB AND GUTTER ON RADIUS WITH 6'± FROM BACK OF CURB TO PROPERTY CORNER (TYPE C)

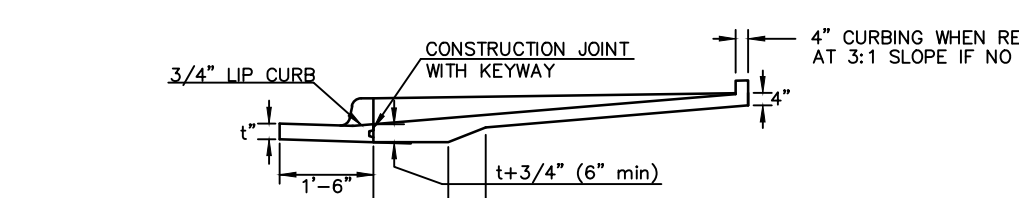
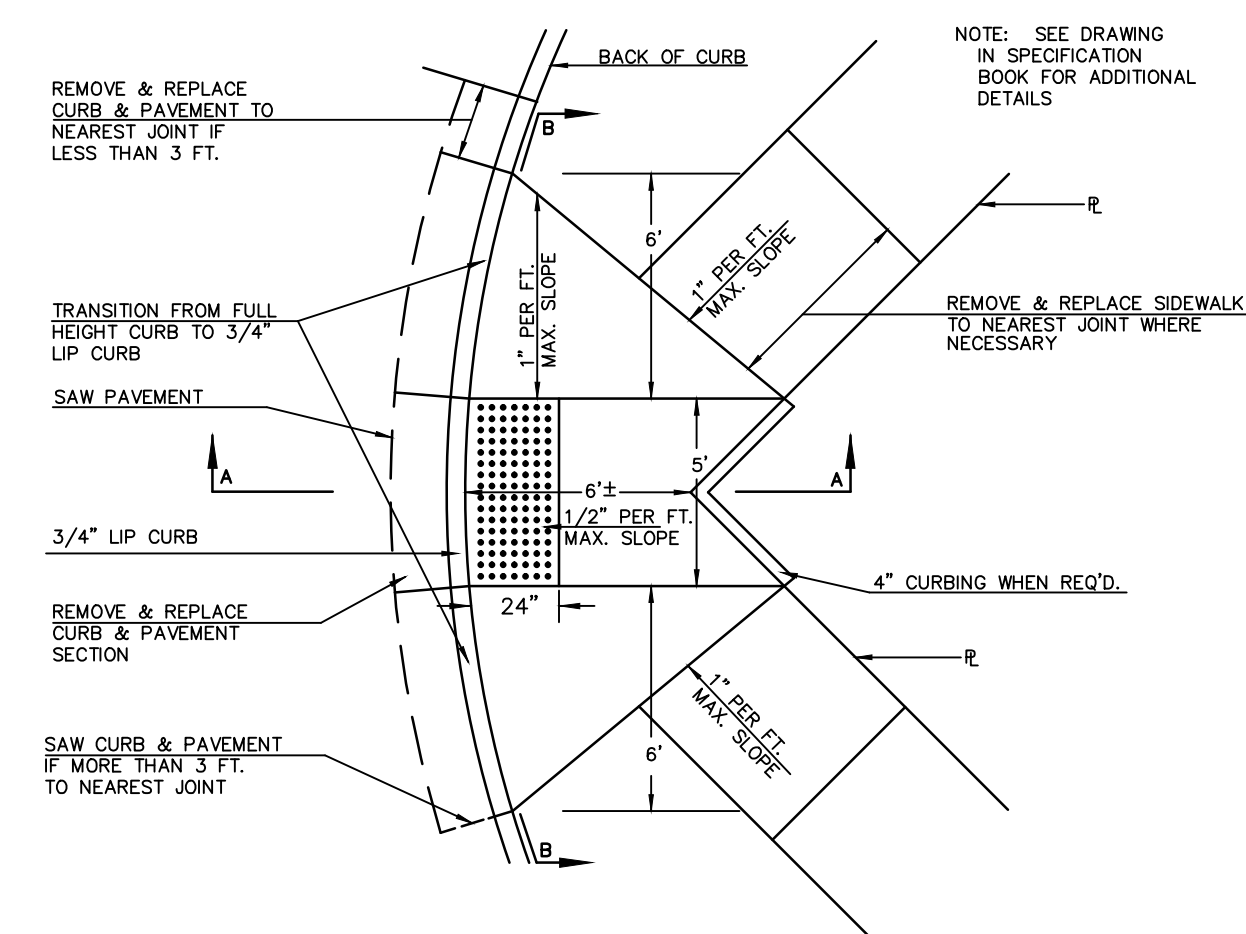


SECTION A-A

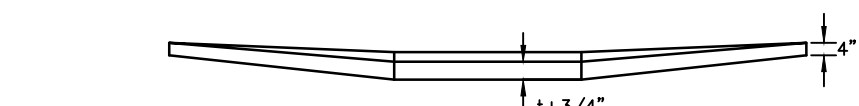


SECTION B-B

STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR STREET WITH MONOLITHIC CURB ON RADIUS WITH 6'± FROM BACK OF CURB TO PROPERTY CORNER (TYPE C)

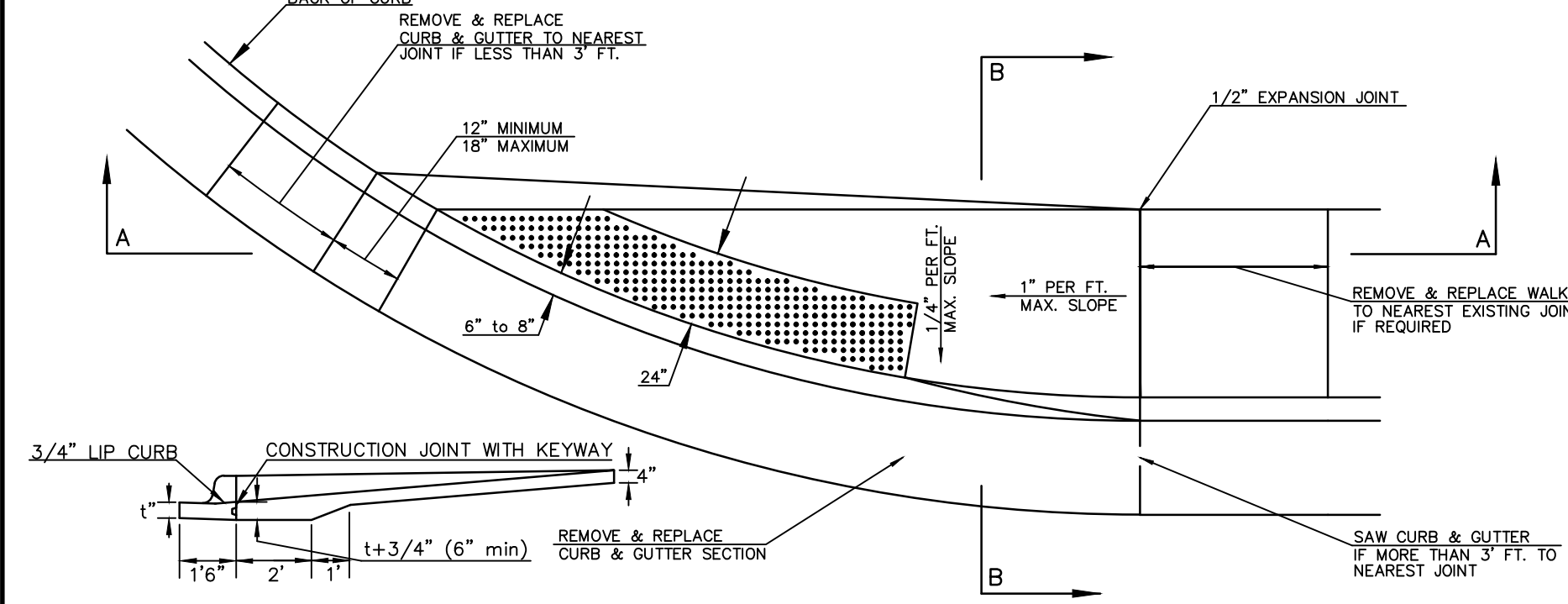


SECTION A-A

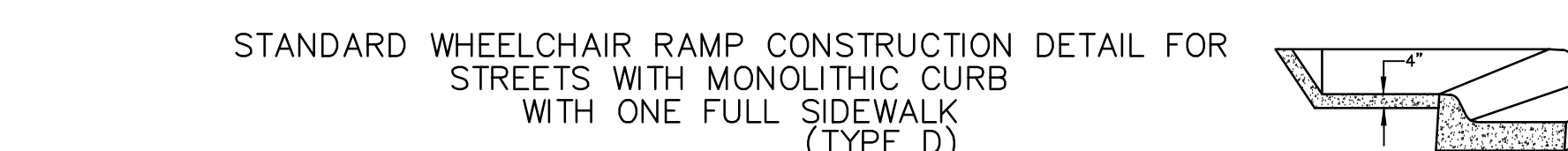


SECTION B-B

STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR STREETS WITH COMBINED CURB & GUTTER WITH ONE FULL SIDEWALK (TYPE D)

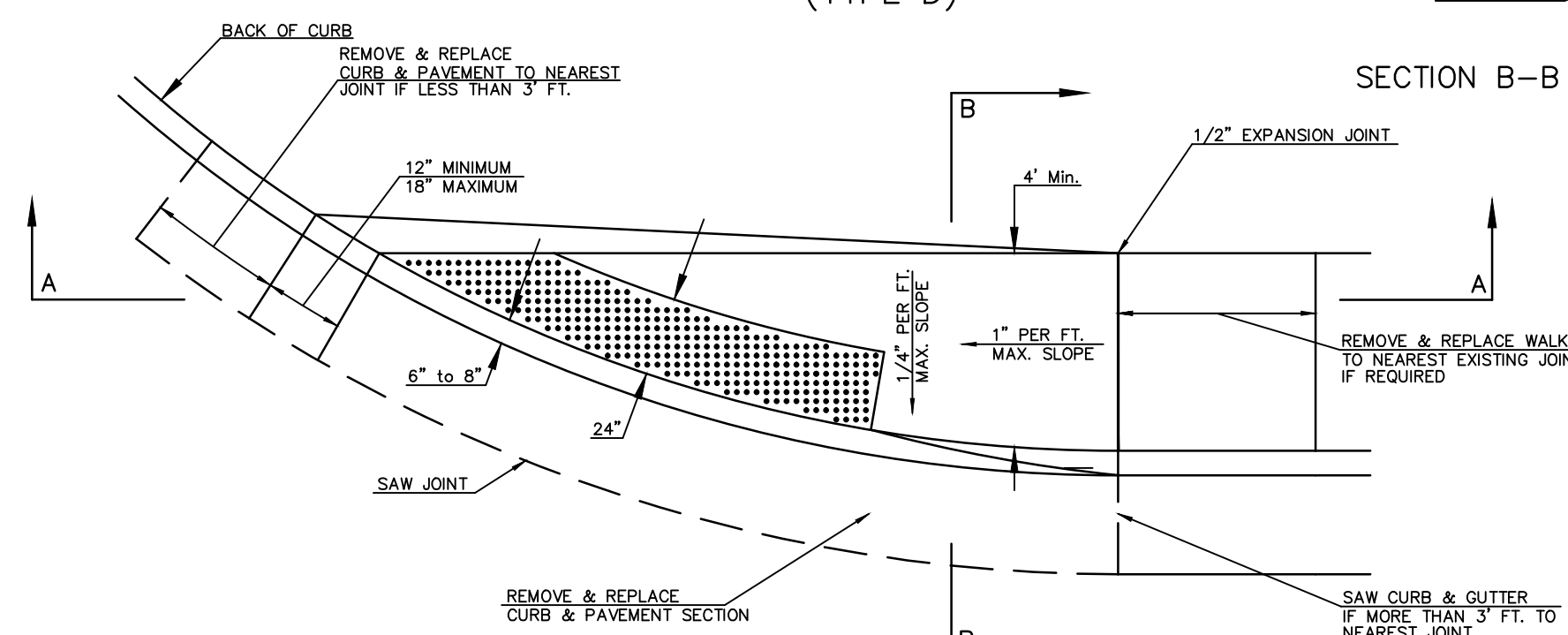


SECTION A-A

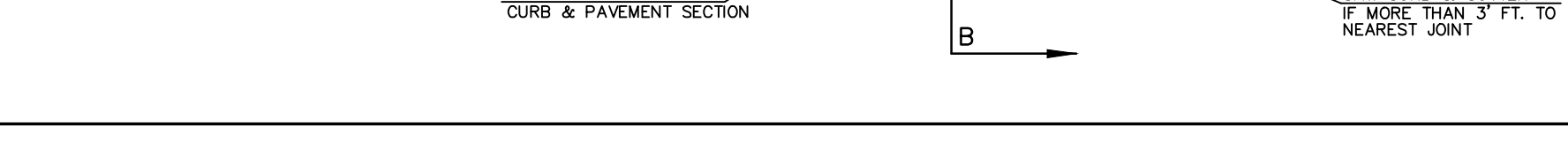


SECTION B-B

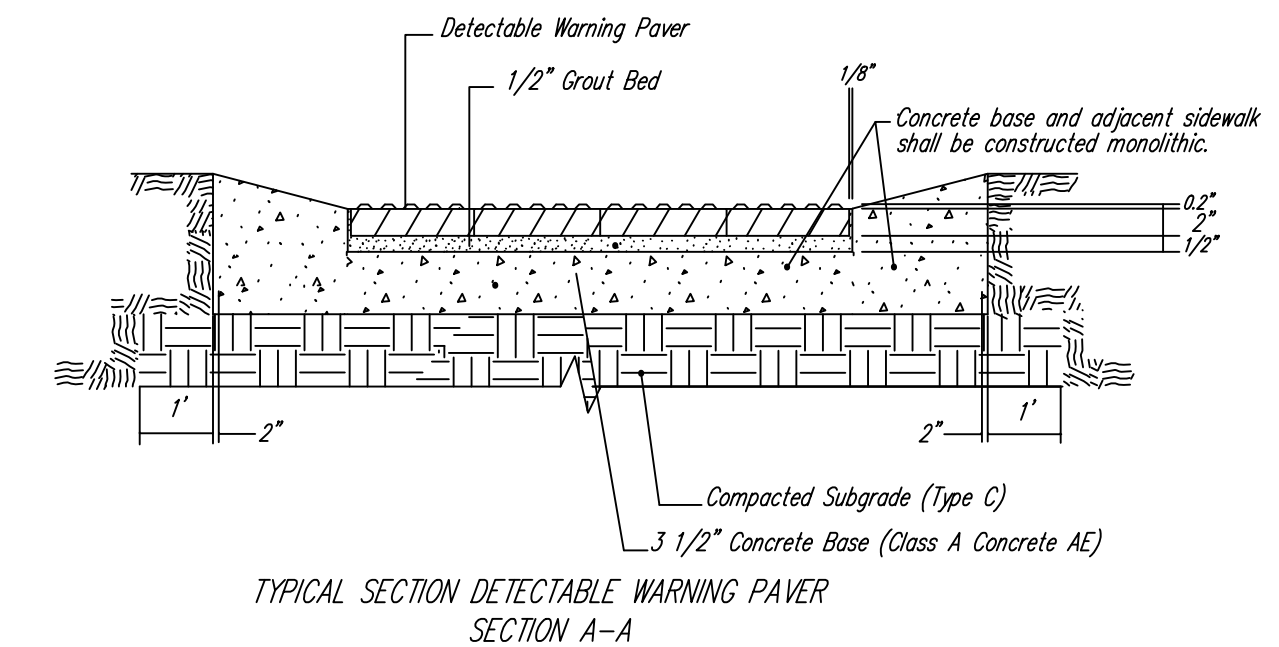
STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR STREETS WITH MONOLITHIC CURB WITH ONE FULL SIDEWALK (TYPE D)



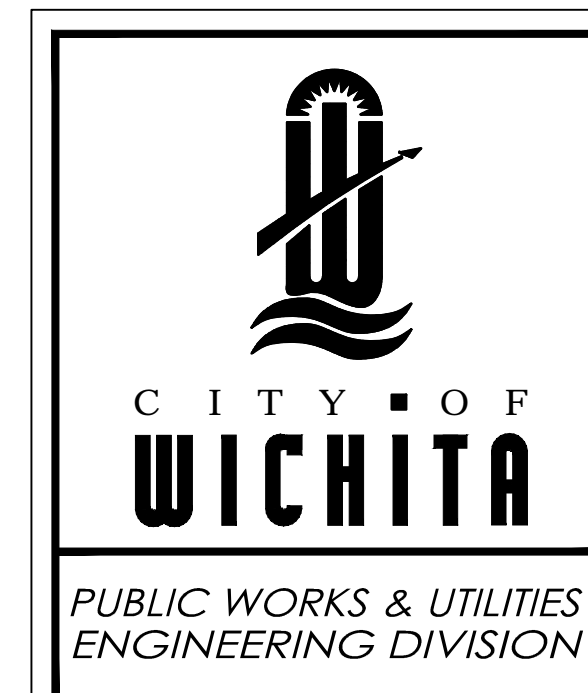
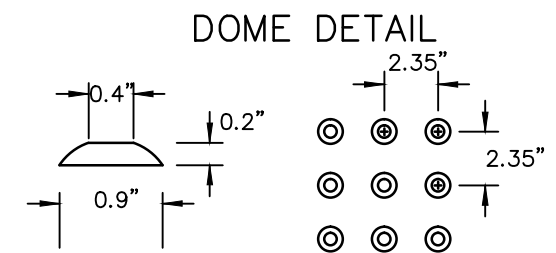
SECTION A-A



SECTION B-B



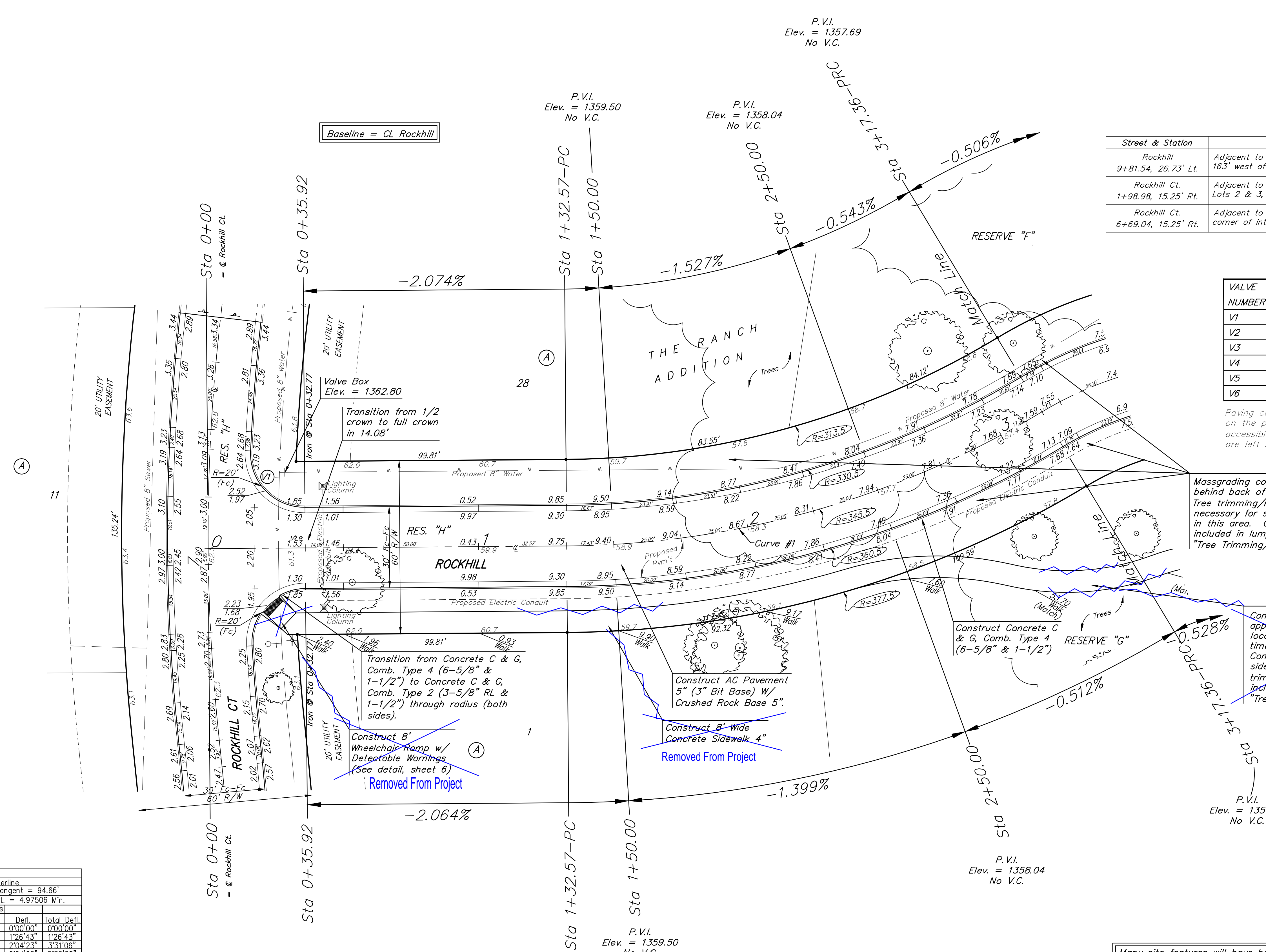
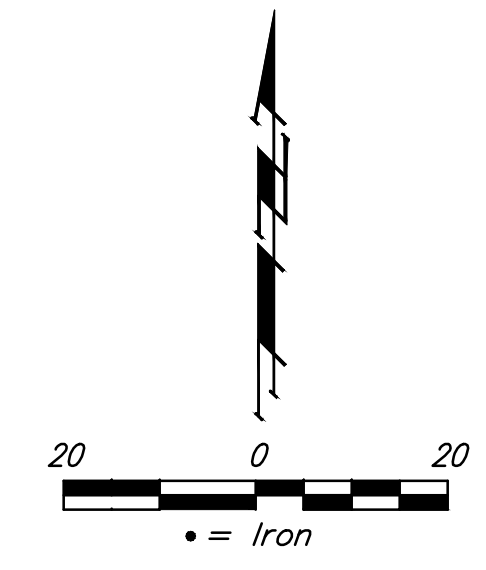
NOTE: HANOVER DETECTABLE WARNING PAVERS (OR AN APPROVED ALTERNATE) SHALL BE USED IN ALL WHEELCHAIR RAMPS. THE 11 3/4" RED 15" PAVER SHALL BE USED IN ALL APPLICATIONS.
 HANOVER ARCHITECTURAL PRODUCTS
 240 BENDER ROAD
 HANOVER, PA 17331
 1-717-637-0500
 www.hanoverpavers.com



WHEELCHAIR RAMP DETAILS WITH DETECTABLE WARNING	
CITY ENGINEER GARY JANZEN, P.E.	
PROJECT NUMBER 240 PPP (607879)	DATE 08/14
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501	
SHEET 6 of 28	

BENCHMARK:
 BM #1: "X" Cut top of 18" RCP 1' east of west end of RCP 31' south and 35' east of SE corner of the NE1/4 of Section 12, TWP. 27-S, R-2-E.
 Elev. = 1361.23 NAVD88

BM #2: "□" Cut on concrete slab north base of entry gate 123' west of east section line and 190' south of the north property line.
 Elev. = 1368.38 NAVD88



Subdivision Bench Marks

Street & Station	Location Description	Elevation
Rockhill 9+81.54, 26.73' Lt.	Adjacent to Fire Hydrant on north side of Rockhill, 163' west of CL of 159th Street East.	
Rockhill Ct. 1+98.98, 15.25' Rt.	Adjacent to Fire Hydrant near common lot corner of Lots 2 & 3, Block A, The Ranch Addition.	
Rockhill Ct. 6+69.04, 15.25' Rt.	Adjacent to Fire Hydrant at south end of return at SE corner of intersection of Rockhill & Rockhill Ct.	

WATER VALVE LOCATION TABLE

VALVE NUMBER	STREET	BASELINE STATION	OFFSET DISTANCE	OFFSET DIRECTION
V1	Rockhill	0+26.50	26'	Lt.
V2	Rockhill	7+79.84	29'	Lt.
V3	Rockhill	11+04.81	46'	Lt.
V4	Rockhill Ct.	0-01.79	43'	Lt.
V5	Rockhill Ct.	1+98.98	24'	Rt.
V6	Rockhill Ct.	6+69.04	24'	Rt.

Paving contractor will be responsible to operate all water valves on the project, in the presence of the inspector, to ensure accessibility to the valves, and that all valves (except blowoffs) are left in the "ON" position when the project is completed.

Massgrading completed to 1' behind back of curb. Additional Tree trimming/removal may be necessary for street construction in this area. Costs to be included in lump sum bid item, "Tree Trimming/Removal".

~~Construct 8' wide sidewalk approximately as shown. Sidewalk location will be field designed at time of construction. Contractor to assume all sidewalk to be hand formed. Tree trimming/removal costs to be included in lump sum bid item, "Tree Trimming/Removal".~~

Curve #1

Curve Data Based on Centerline

Rad. = 345.5' Delta = 30°38'41" Tangent = 94.66'
 Arc = 184.79' L.C. = 182.60' Def./Ft. = 4.97506 Min.

Station	Arc	8' Left	8' Right	Defl.	Total Defl.
1+32.57	-	-	-	0°00'00"	0°00'00"
1+50.00	17.43'	16.27'	18.59'	1°26'43"	1°26'43"
1+75.00	25.00'	23.33'	26.66'	2°04'22"	3°31'06"
2+00.00	25.00'	23.33'	26.66'	2°04'22"	5°35'28"
2+25.00	25.00'	23.33'	26.66'	2°04'22"	7°39'51"
2+50.00	25.00'	23.33'	26.66'	2°04'22"	9°44'13"
2+75.00	25.00'	23.33'	26.66'	2°04'22"	11°48'36"
3+00.00	25.00'	23.33'	26.66'	2°04'22"	13°52'58"
3+17.36	17.36'	16.20'	18.51'	1°26'22"	15°19'20"

Many site features will have been removed by Storm Water Drain contractor during mass grading prior to street construction, including fences, gravel drive, buildings, concrete and some trees.



Baughman The Ranch Addition
ROCKHILL
 STA 0+00 TO STA 3+17.36

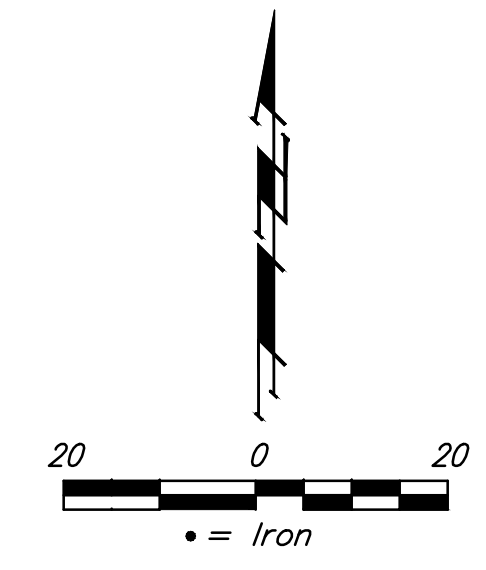
Baughman Company, P.A. 315 Ellis St., Wichita, KS 67211 P 316-262-7271 F 316-262-0149
 ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

PROJECT NUMBER 240 PPP (607879)	DESIGN AEG	DRAWN TMS
REVISIONS:	APPROVED	DATE 08/14
	SCALE Noted	
	SHEET	7 OF 28

STR PLANS.dwg 12-11-ES39

BENCHMARK:
 BM #1: "X" Cut top of 18" RCP 1' east of west end of RCP 31' south and 35' east of SE corner of the NE1/4 of Section 12, TWP. 27-S, R-2-E. Elev. = 1361.23 NAVD88

BM #2: "□" Cut on concrete slab north base of entry gate 123' west of east section line and 190' south of the north property line. Elev. = 1368.38 NAVD88



P.V.I.
Elev. = 1357.69
No V.C.

P.V.I.
Elev. = 1357.00
56' V.C.

P.V.I.
Elev. = 1359.00
No V.C.

Curve #2
Curve Data Based on Centerline
Rad. = 134.5' Delta = 14°22'23" Tangent = 16.96'
Arc = 33.74' L.C. = 33.65' Def./Ft. = 12.77984 Min.

Station	Arc	8' Left	8' Right	Defl.	Total Defl.
3+17.36	-	-	-	0°00'00"	0°00'00"
3+25.00	7.64'	8.95'	6.33'	1°37'38"	1°37'38"
3+50.00	25.00'	29.23'	20.70'	5°19'30"	6°57'08"
3+51.10	1.10'	1.29'	0.91'	0°14'04"	7°11'12"

Curve #3
Curve Data Based on Centerline
Rad. = 134.5' Delta = 16°52'46" Tangent = 19.96'
Arc = 39.63' L.C. = 39.48' Def./Ft. = 12.77778 Min.

Station	Arc	8' Left	8' Right	Defl.	Total Defl.
4+69.34	-	-	-	0°00'00"	0°00'00"
4+75.00	5.66'	6.63'	4.69'	1°12'19"	1°12'19"
5+00.00	25.00'	29.23'	20.69'	5°19'27"	6°31'46"
5+08.97	8.97'	10.50'	7.43'	1°54'37"	8°26'23"

Curve #4
Curve Data Based on Centerline
Rad. = 204.5' Delta = 15°23'04" Tangent = 27.62'
Arc = 54.91' L.C. = 54.75' Def./Ft. = 8.40527 Min.

Station	Arc	8' Left	8' Right	Defl.	Total Defl.
5+33.01	-	-	-	0°00'00"	0°00'00"
5+50.00	16.99'	18.90'	15.07'	2°22'48"	2°22'48"
5+75.00	25.00'	27.79'	22.17'	3°30'08"	5°52'56"
5+87.92	12.92'	14.37'	11.47'	1°48'36"	7°41'52"

Curve #5
Curve Data Based on Centerline
Rad. = 145.5' Delta = 41°49'34" Tangent = 55.60'
Arc = 106.21' L.C. = 103.87' Def./Ft. = 11.81417 Min.

Station	Arc	8' Left	8' Right	Defl.	Total Defl.
6+00.00	-	-	-	0°00'00"	0°00'00"
6+00.00	12.08'	10.17'	13.99'	2°22'43"	2°22'43"
6+25.00	25.00'	21.02'	28.92'	4°55'21"	7°18'04"
6+50.00	25.00'	21.02'	28.92'	4°55'21"	12°13'25"
6+75.00	25.00'	21.02'	28.92'	4°55'22"	17°08'47"
6+94.13	19.13'	16.10'	22.14'	3°46'00"	20°54'47"

Massgrading completed to 1' behind back of curb. Additional Tree trimming/removal may be necessary for street construction in this area. Costs to be included in lump sum bid item, "Tree Trimming/Removal".

Construct Inlet Hookups & Curb Inlet Protection, both sides (See detail, sheet 15) Adjust inlet top to match proposed grade, both sides. To be bid as "Inlet Adjusted".

Construct 8' wide sidewalk approximately as shown. Sidewalk location will be field designed at time of construction. Contractor to assume all sidewalk to be hand formed. Tree trimming/removal costs to be included in lump sum bid item, "Tree Trimming/Removal".
Remove From Project

P.V.I.
Elev. = 1357.69
No V.C.

P.V.I.
Elev. = 1357.00
56' V.C.

P.V.I.
Elev. = 1357.70
No V.C.

P.V.I.
Elev. = 1357.21
No V.C.

P.V.I.
Elev. = 1357.97
No V.C.

P.V.I.
Elev. = 1359.00
No V.C.

P.V.I.
Elev. = 1360.24
No V.C.



Baughman The Ranch Addition
ROCKHILL
 STA 3+17.36 TO STA 6+94.13

Baughman Company, P.A. 315 Ellis St., Wichita, KS 67211 P 316-262-2771 F 316-262-0149
 ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

PROJECT NUMBER: 240 PPP (607879) DESIGN: AEG DRAWN: TMS
 APPROVED: DATE: 08/14
 SCALE: Noted
 SHEET: **8 OF 28**

STR PLANS.dwg 12-11-ES39

Many site features will have been removed by Storm Water Drain contractor during mass grading prior to street construction, including fences, gravel drive, buildings, concrete and some trees.

BENCHMARK:
 BM #1: "X" Cut top of 18" RCP 1' east of west end of RCP 31' south and 35' east of SE corner of the NE1/4 of Section 12, TWP. 27-S, R-2-E.
 Elev. = 1361.23 NAVD88

BM #2: "□" Cut on concrete slab north base of entry gate 123' west of east section line and 190' south of the north property line.
 Elev. = 1368.38 NAVD88

Baseline = CL Rockhill

Sta 10+90.00, 42' Lt.
 Install Std. 6-3/4" SNS
 Assembly "Rockhill" E"
 & "159th St E" N" as per specs.

P.V.I.
 Elev. = 1367.90
 89.62 V.C.

P.V.I.
 Elev. = 1365.00
 No V.C.

Sta 9+81.54, 26.73' Lt.
 Install subdivision benchmark (Flat survey marker No. 8134-08 3" top diameter) in top of curb. Cost shall be incidental to L.F. Concrete C & G, Comb. Type 2 (3-5/8" RL & 1-1/2")

Construct Concrete C & G, Comb. Type 4 (6-5/8" & 1-1/2")

Const. Concrete C & G, Comb. Type 3 (8" & 1-1/2"), Median (See detail, sheet 5) Median shall be filled with friable fill material

Sta. 8+84.05, 1.20' Lt.
 Install R4-7 (keep right) & OM-1 sign.

Construct AC Pavement 5" (3" Bit Base) W/ Crushed Rock Base 5".

Valve Box Elev. = 1362.35

Valve Box Elev. = 1367.10

Saw cut, remove and replace 2' existing pavement as shown. Construct street hookup to match existing 159th St. E. asphalt road To be incidental to "Site Restoration".

* Grades with an * indicate grades for future curb grades to be built with 159th Street East.

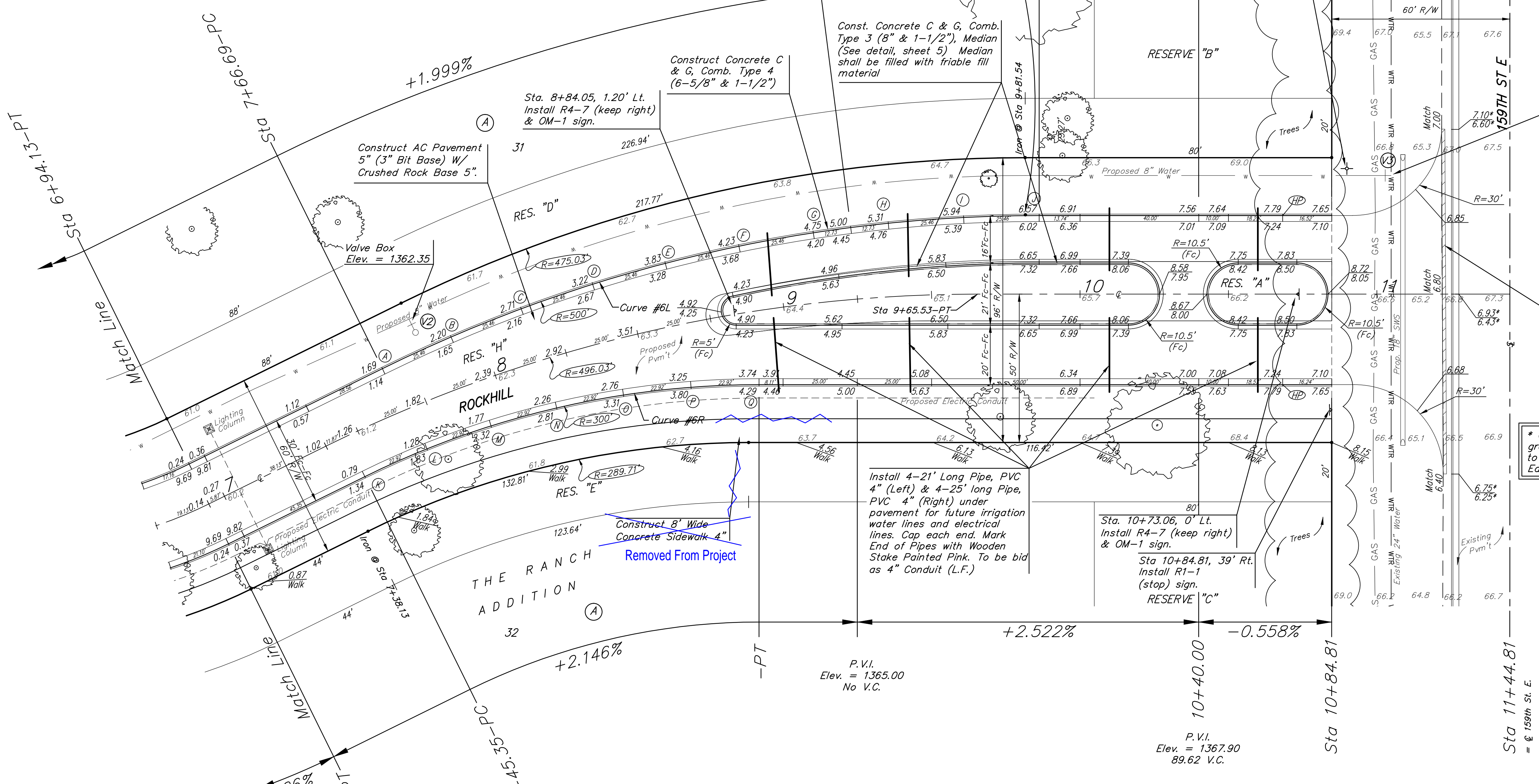
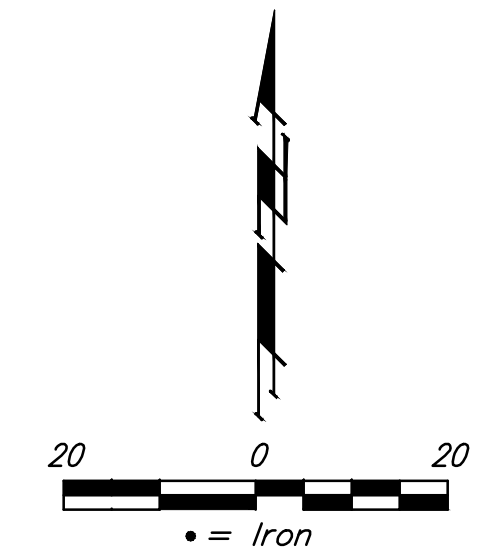
Sta. 10+73.06, 0' Lt.
 Install R4-7 (keep right) & OM-1 sign.

Sta 10+84.81, 39' Rt.
 Install R1-1 (stop) sign.
 RESERVE "C"

P.V.I.
 Elev. = 1365.00
 No V.C.

P.V.I.
 Elev. = 1367.90
 89.62 V.C.

P.V.I.
 Elev. = 1360.24
 No V.C.



Curve #6L
 Curve Data Based on Centerline
 Rad. = 500' Delta = 26°16'01" Tangent = 116.66'
 Arc = 229.14' L.C. = 227.22' Def./Ft. = 3.43898 Min.

Station	Arc	8' Left	Def.	Total Def.
A	-	-	0°00'00"	0°00'00"
B	25.46'	25.87'	1°27'33"	1°27'33"
C	25.46'	25.87'	1°27'33"	2°55'07"
D	25.46'	25.87'	1°27'33"	4°22'40"
E	25.46'	25.87'	1°27'33"	5°50'14"
F	25.46'	25.87'	1°27'33"	7°17'47"
G	25.46'	25.87'	1°27'33"	8°45'20"
H	25.46'	25.87'	1°27'33"	10°12'54"
I	25.46'	25.87'	1°27'33"	11°40'27"
J	25.46'	25.87'	1°27'33"	13°08'00"

Curve #6R
 Curve Data Based on Centerline
 Rad. = 300' Delta = 26°16'01" Tangent = 70.00'
 Arc = 137.52' L.C. = 136.33' Def./Ft. = 5.73014 Min.

Station	Arc	8' Right	Def.	Total Def.
A	-	-	0°00'00"	0°00'00"
B	22.92'	22.31'	2°11'20"	2°11'20"
C	22.92'	22.31'	2°11'20"	4°22'40"
D	22.92'	22.31'	2°11'20"	6°34'00"
E	22.92'	22.31'	2°11'20"	8°45'20"
F	22.92'	22.31'	2°11'20"	10°56'40"
G	22.92'	22.31'	2°11'20"	13°08'00"

Many site features will have been removed by Storm Water Drain contractor during mass grading prior to street construction, including fences, gravel drive, buildings, concrete and some trees.



Baughman The Ranch Addition
ROCKHILL
 STA 6+94.13 TO STA 11+44.81

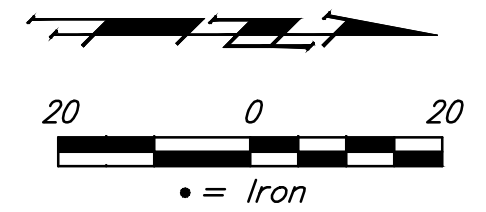
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 ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

PROJECT NUMBER: 240 PPP (607879) DESIGN: AEG DRAWN: TMS
 REVISIONS: APPROVED: DATE: 08/14
 SCALE: Noted SHEET: 9 OF 28

STR PLANS.dwg 12-11-ES39

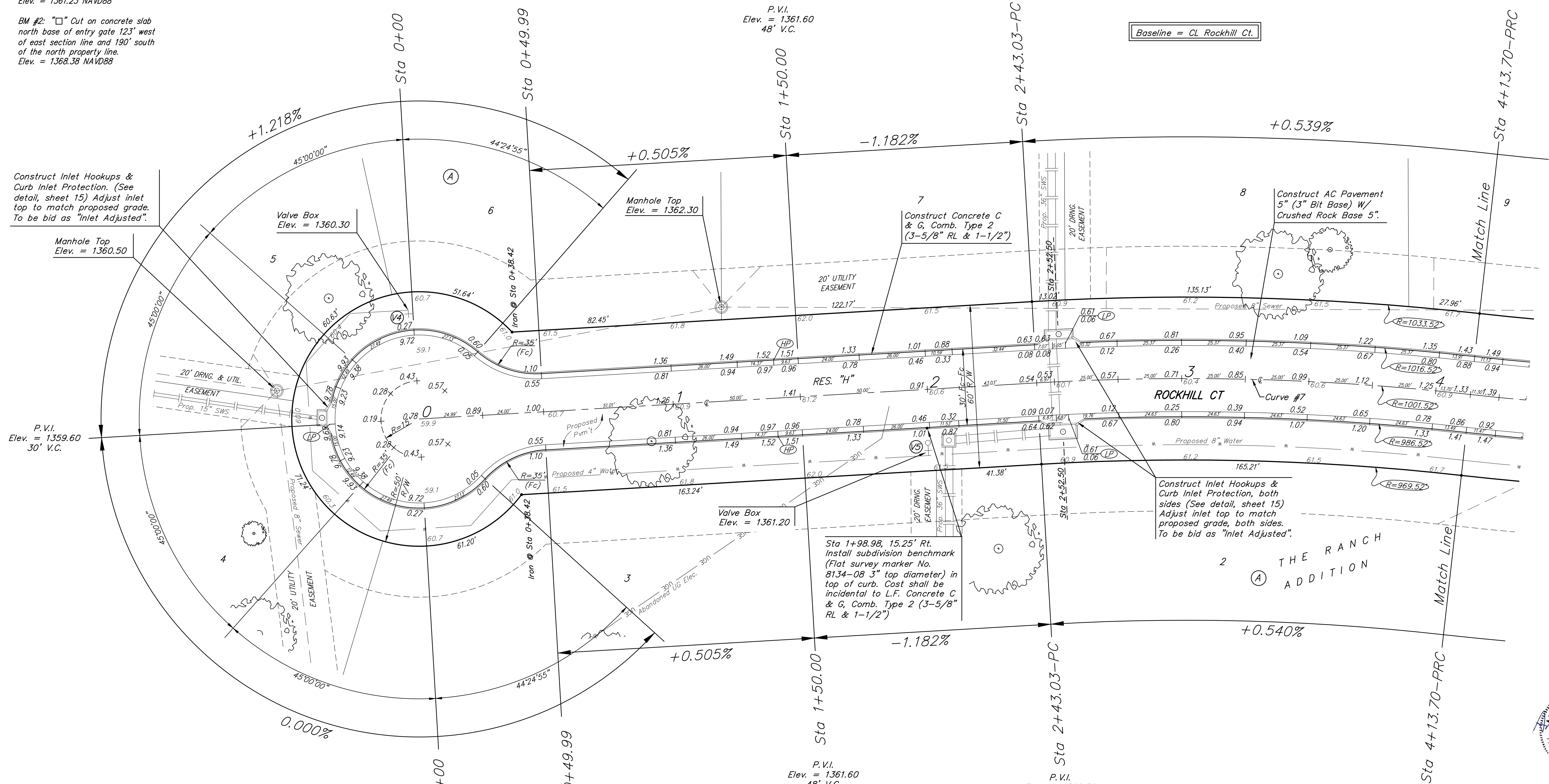
BENCHMARK:
 BM #1: "X" Cut top of 18" RCP 1' east of west end of RCP 31' south and 35' east of SE corner of the NE1/4 of Section 12, TWP. 27-S, R-2-E.
 Elev. = 1361.23 NAVD88

BM #2: "□" Cut on concrete slab north base of entry gate 123' west of east section line and 190' south of the north property line.
 Elev. = 1368.38 NAVD88



P.V.I.
 Elev. = 1360.50
 64.88' V.C.

Baseline = CL Rockhill Ct.



P.V.I.
 Elev. = 1359.60
 30' V.C.

P.V.I.
 Elev. = 1361.60
 48' V.C.

P.V.I.
 Elev. = 1361.60
 48' V.C.

P.V.I.
 Elev. = 1360.50
 63' V.C.

Curve #7

Curve Data Based on Centerline

Rad. = 1001.52' Delta = 94°5'48" Tangent = 85.54'

Arc = 170.67' L.C. = 170.45' Def./ft. = 1.71618 Min.

Station	Face Chord Lengths		Defl.	Total Defl.
	8' Left	8' Right		
2+43.03			0°00'00"	0°00'00"
2+50.00	6.97'	7.13'	0°11'58"	0°11'58"
2+75.00	25.00'	25.57'	0°42'54"	0°54'52"
3+00.00	25.00'	25.57'	0°42'54"	1°37'46"
3+25.00	25.00'	25.57'	0°42'55"	2°20'41"
3+50.00	25.00'	25.57'	0°42'54"	3°03'35"
3+75.00	25.00'	25.57'	0°42'54"	3°46'29"
4+00.00	25.00'	25.57'	0°42'54"	4°29'23"
4+13.70	13.70'	14.01'	0°23'31"	4°52'54"

NOTE: ROLL TYPE CURB & GUTTER (TYPE 2) TO BE CONSTRUCTED ON THE PAVEMENT SHOWN ON THIS SHEET. TOP OF CURB ELEVATIONS ARE GIVEN FOR FULL HEIGHT CURB (TYPE 4).

Many site features will have been removed by Storm Water Drain contractor during mass grading prior to street construction, including fences, gravel drive, buildings, concrete and some trees.



Baughman The Ranch Addition
ROCKHILL CT.
 STA 0+00 TO STA 4+13.70

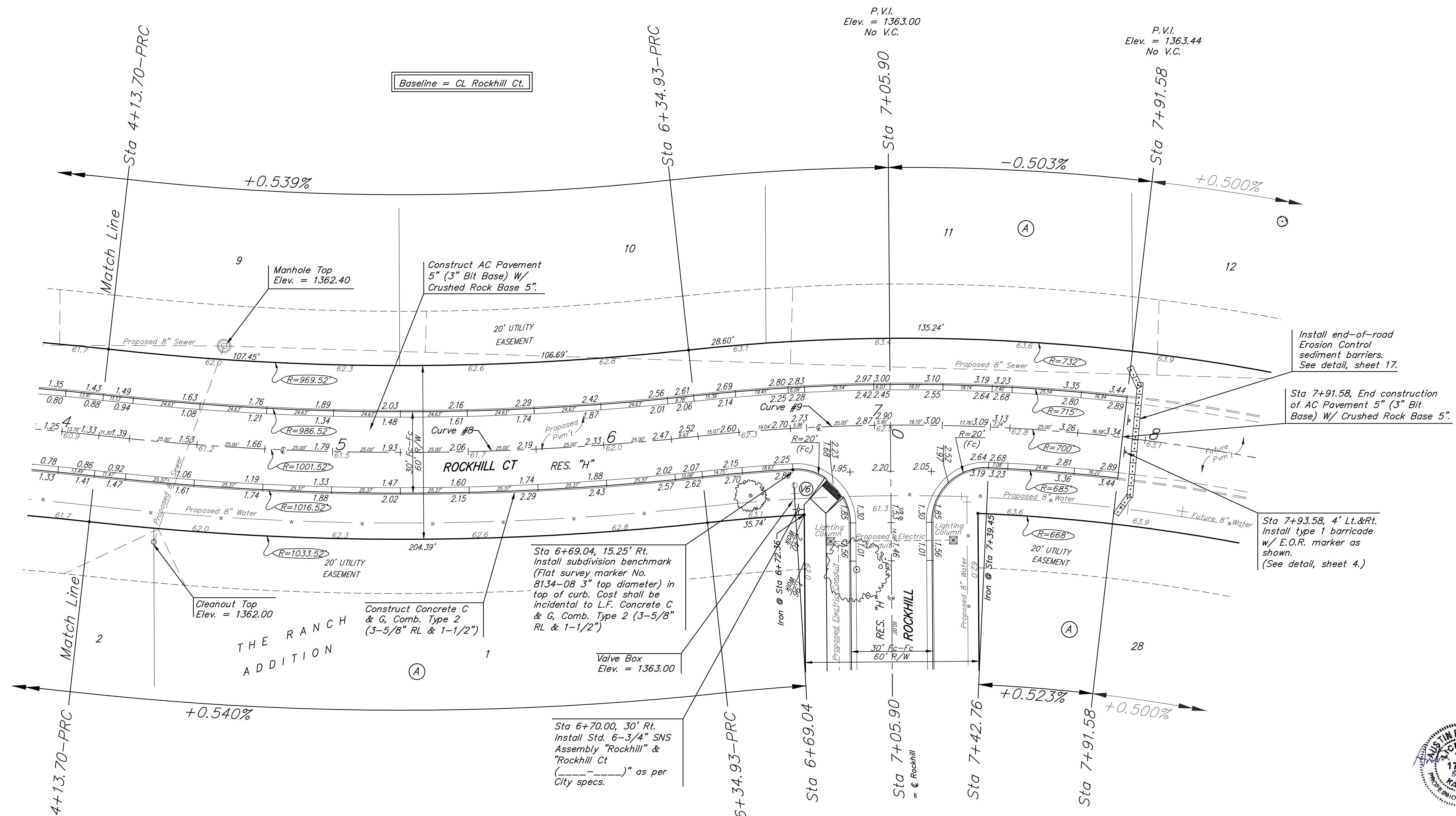
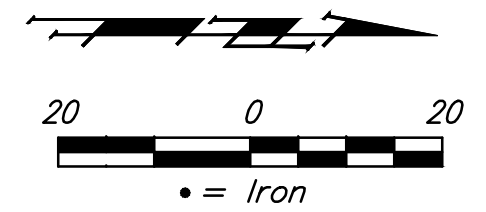
Baughman Company, P.A. 315 Ellis St., Wichita, KS 67211 P: 316-262-2721 F: 316-262-0149
 ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

PROJECT NUMBER: 240 PPP (607879) DESIGN: AEG DRAWN: TMS
 REVISIONS: APPROVED: DATE: 08/14
 SCALE: Noted SHEET: 10 OF 28

STR PLANS.dwg 12-11-E839

BENCHMARK:
 BM #1: "X" Cut top of 18" RCP 1' east of west end of RCP 31' south and 35' east of SE corner of the NE1/4 of Section 12, TWP. 27-S, R-2-E.
 Elev. = 1361.23 NAVD88

BM #2: "□" Cut on concrete slab north base of entry gate 123' west of east section line and 190' south of the north property line.
 Elev. = 1368.38 NAVD88



Curve #9
 Curve Data Based on Centerline
 Rad. = 700' Delta = 12°49'26" Tangent = 78.67'
 Arc = 156.65' L.C. = 156.35' Def./Ft. = 2.45590 Min.

Station	Arc	Face Chord Lengths		Defl.	Total Defl.
		R' Left	R' Right		
6+34.93	-	-	-	0'00"00"	0'00"00"
6+50.00	15.07'	15.57'	14.58'	0'37"01"	0'37"01"
6+69.04	19.04'	19.67'	18.42'	0'46"45"	1'23"46"
6+75.00	5.96'	6.16'	5.77'	0'14"38"	1'38"24"
7+00.00	25.00'	25.82'	24.18'	1'01"24"	2'39"48"
7+05.90	5.90'	6.09'	5.71'	0'14"30"	2'54"18"
7+25.00	19.10'	19.73'	18.47'	0'46"54"	3'41"12"
7+42.76	17.76'	18.35'	17.18'	0'43"37"	4'24"49"
7+50.00	7.24'	7.48'	7.00'	0'17"47"	4'42"36"
7+75.00	25.00'	25.82'	24.18'	1'01"24"	5'44"00"
7+91.58	16.58'	17.13'	16.04'	0'40"43"	6'24"43"

Curve #8
 Curve Data Based on Centerline
 Rad. = 1001.52' Delta = 12°39'19" Tangent = 111.06'
 Arc = 221.23' L.C. = 220.76' Def./Ft. = 1.71612 Min.

Station	Arc	Face Chord Lengths		Defl.	Total Defl.
		R' Left	R' Right		
4+13.70	-	-	-	0'00"00"	0'00"00"
4+25.00	11.30'	11.04'	11.56'	0'19"24"	0'19"24"
4+50.00	25.00'	24.42'	25.57'	0'42"54"	1'02"18"
4+75.00	25.00'	24.42'	25.57'	0'42"54"	1'45"12"
5+00.00	25.00'	24.42'	25.57'	0'42"54"	2'28"06"
5+25.00	25.00'	24.42'	25.57'	0'42"54"	3'11"00"
5+50.00	25.00'	24.42'	25.57'	0'42"54"	3'53"54"
5+75.00	25.00'	24.42'	25.57'	0'42"54"	4'36"48"
6+00.00	25.00'	24.42'	25.57'	0'42"54"	5'19"42"
6+25.00	25.00'	24.42'	25.57'	0'42"54"	6'02"36"
6+34.93	9.93'	9.70'	10.16'	0'17"03"	6'19"40"

NOTE: ROLL TYPE CURB & GUTTER (TYPE 2) TO BE CONSTRUCTED ON THE PAVEMENT SHOWN ON THIS SHEET. TOP OF CURB ELEVATIONS ARE GIVEN FOR FULL HEIGHT CURB (TYPE 4).

Many site features will have been removed by Storm Water Drain contractor during mass grading prior to street construction, including fences, gravel drive, buildings, concrete and some trees.



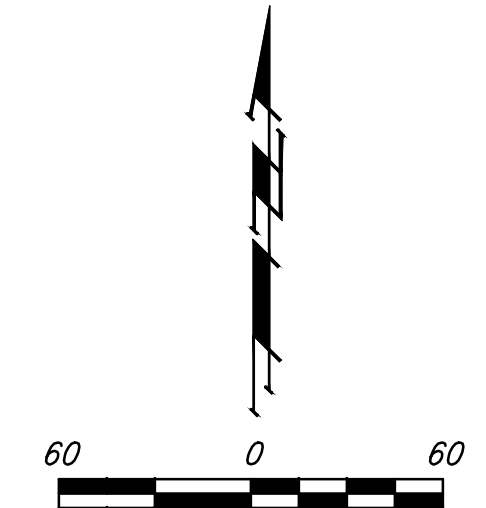
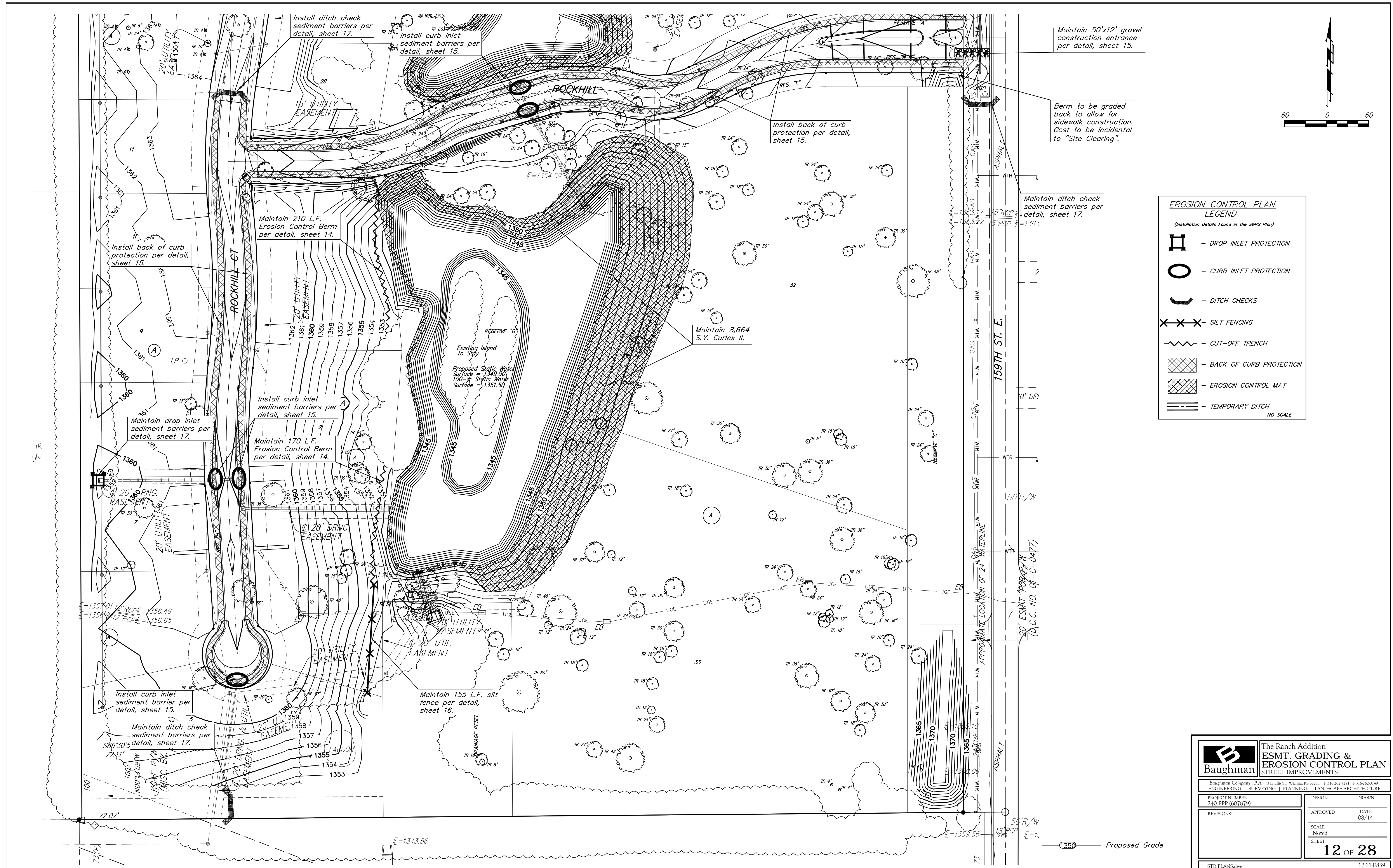
Baughman The Ranch Addition
ROCKHILL CT.
 STA 4+13.70 TO STA 7+91.58

PROJECT NUMBER: 240 PPP (607879)
 DESIGN: AEG
 DRAWN: TMS

REVISIONS:
 APPROVED: DATE: 08/14

SCALE: Noted
 SHEET: 11 OF 28

STR PLANS.dwg 12-11-ES39

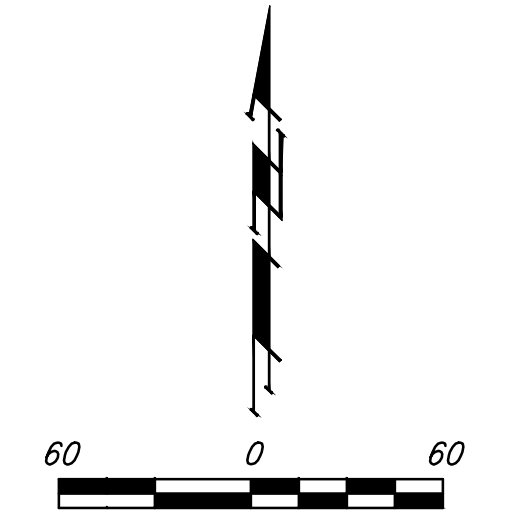
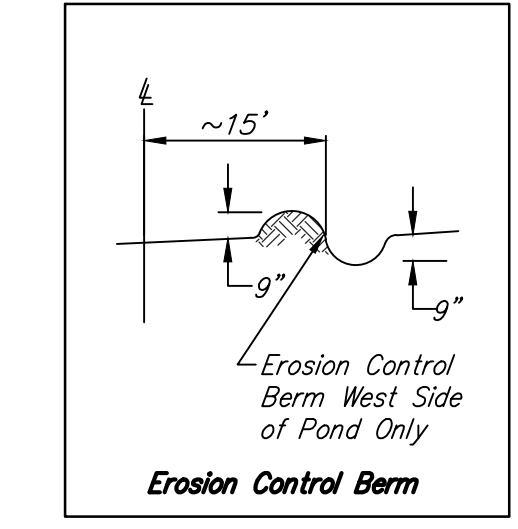
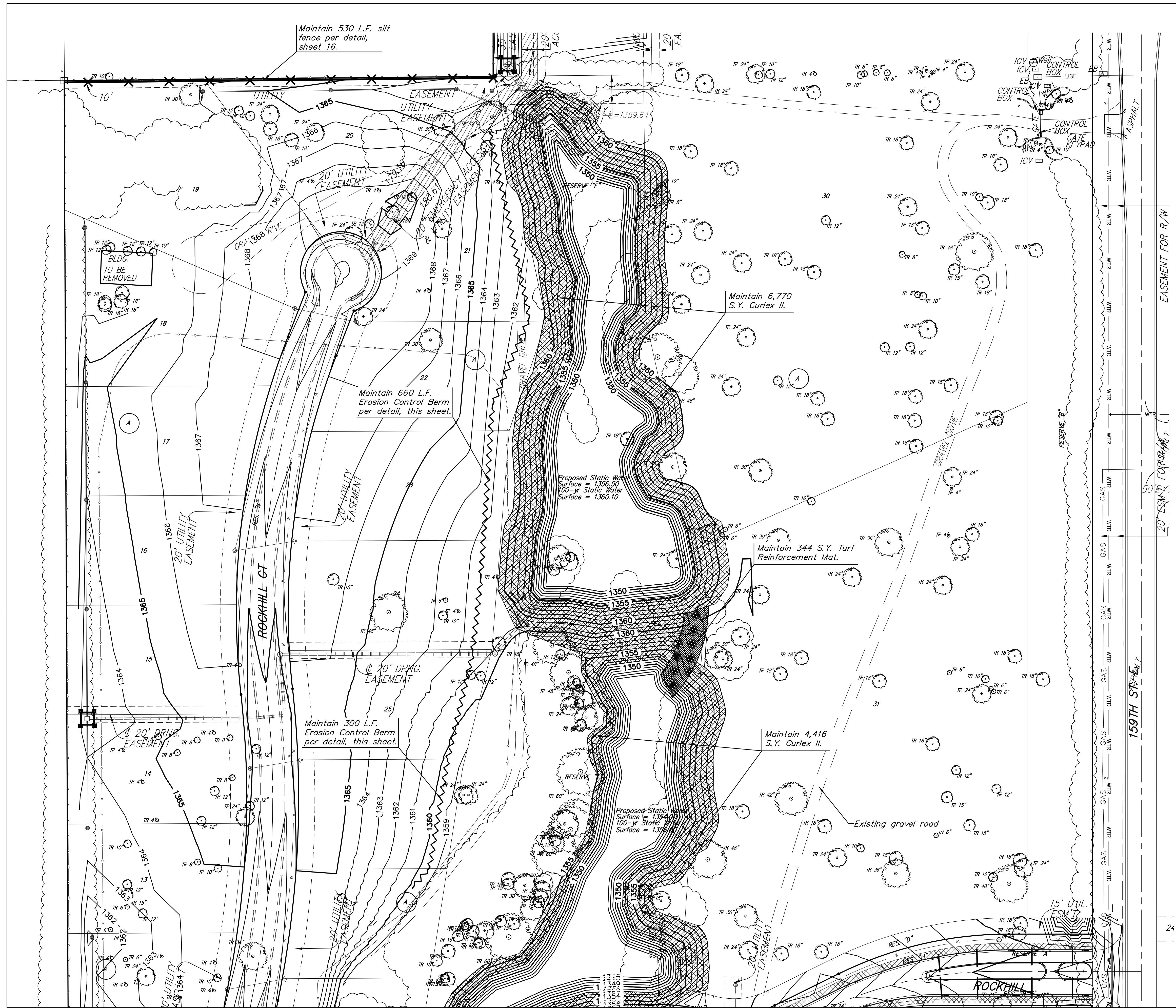


EROSION CONTROL PLAN LEGEND
(Installation Details Found in the SWP2 Plan)

- DROP INLET PROTECTION
- CURB INLET PROTECTION
- DITCH CHECKS
- SILT FENCING
- CUT-OFF TRENCH
- BACK OF CURB PROTECTION
- EROSION CONTROL MAT
- TEMPORARY DITCH

NO SCALE

	The Ranch Addition ESMT. GRADING & EROSION CONTROL PLAN STREET 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 240 PPP (607879)	DESIGN DRAWN	
REVISIONS:	APPROVED DATE 08/14	
	SCALE Noted SHEET	12 OF 28
<small>STR PLANS.dwg</small>		<small>12-11-ES39</small>



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

- DROP INLET PROTECTION
- CURB INLET PROTECTION
- DITCH CHECKS
- SILT FENCING
- CUT-OFF TRENCH
- BACK OF CURB PROTECTION
- EROSION CONTROL MAT
- TEMPORARY DITCH

NO SCALE

EROSION CONTROL MEASURE	INSTALL	MAINTAIN	REMOVE
BACK OF CURB PROTECTION (LF)	3,795	0	0
CONSTRUCTION ENTRANCE (EA)	0	1	0
CURB INLET BARRIER (EA)	5	0	0
DITCH CHECK (EA)	1	4	0
DROP INLET PROTECTION (EA)	0	3	0
EROSION CONTROL (LS)	0	0	0
EROSION CONTROL BERM (LF)	0	1,340	0
SILT FENCE (LF)	0	685	0
EROSION CONTROL MAT (SY)	0	19,850	0
TURF REINFORCEMENT MAT (SY)	0	344	0

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

* ALL EXISTING BMPs INCLUDING CONSTRUCTION ENTRANCE, SEDIMENT BARRIERS, SILT FENCE, CUT-OFF TRENCH, AND EROSION CONTROL MAT SHALL BE MAINTAINED AND REPAIRED IF NECESSARY. REPLACEMENT OR REMOVAL OF EROSION CONTROL MEASURES TO BE PAID FOR BY L.S. BID ITEM "MAINTAIN EXISTING EROSION CONTROL BMPs"

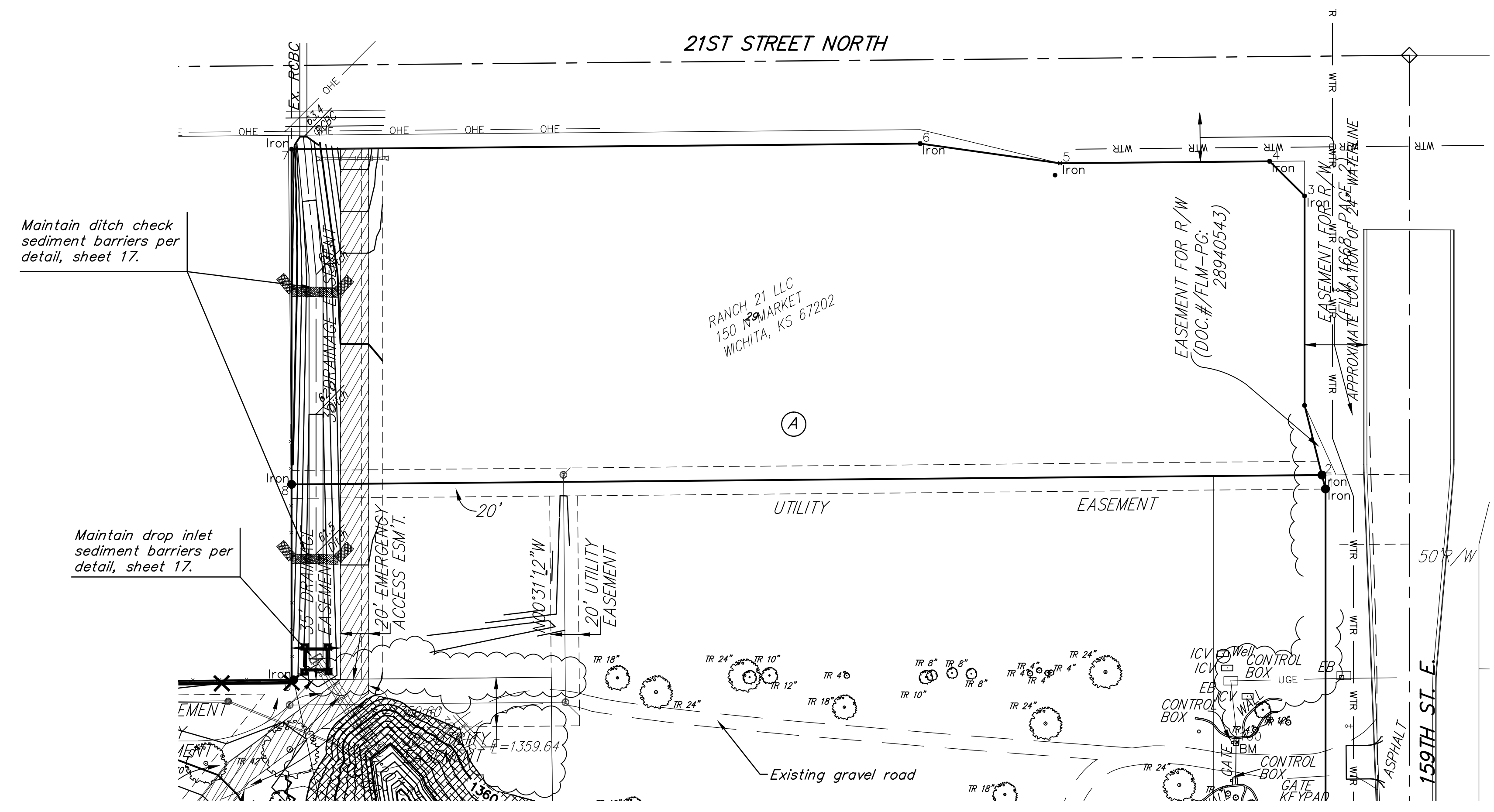
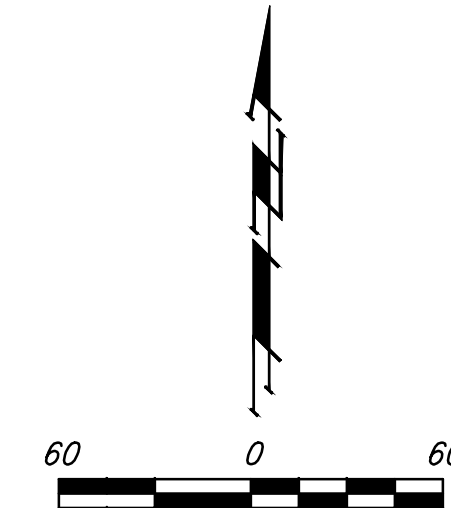
Baughman

Baughman Company, P.A. 315 Ellis St., Wichita, KS 67211 P 316-262-2771 F 316-262-0149
ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE








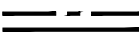
The Ranch Addition
**ESMT, GRADING &
EROSION CONTROL PLAN**
STREET IMPROVEMENTS

<small>PROJECT NUMBER 240 PPP (607879)</small>	<small>DESIGN DRAWN</small>
<small>REVISIONS:</small>	<small>APPROVED DATE</small> 08/14
	<small>SCALE Noted SHEET</small>
13 OF 28	
<small>STR PLANS.dwg 12-11-ES39</small>	

1350 Proposed Grade




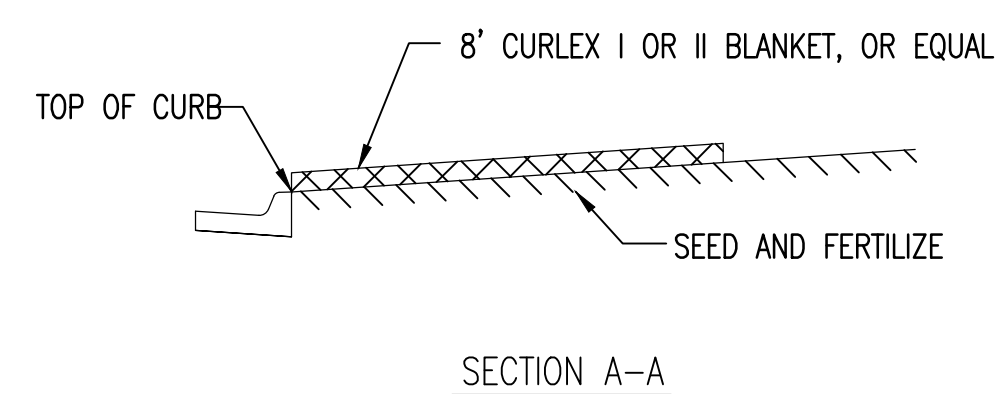
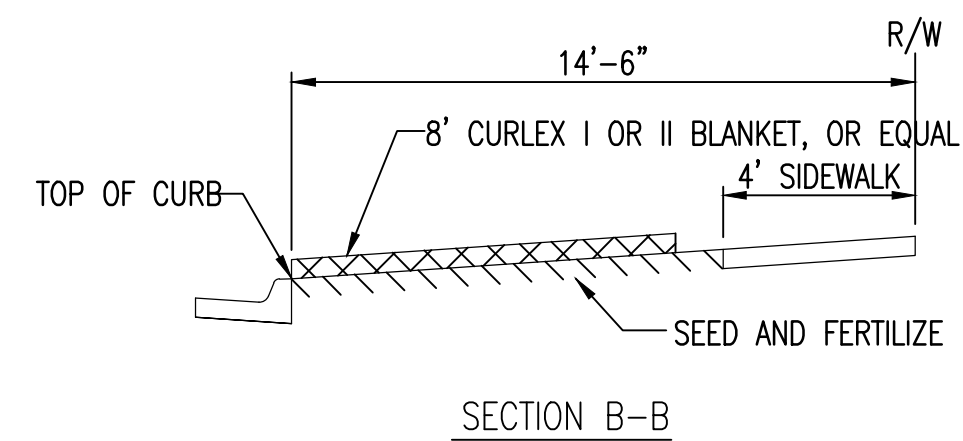
EROSION CONTROL PLAN LEGEND
(Installation Details Found in the SWP2 Plan)

-  - DROP INLET PROTECTION
-  - CURB INLET PROTECTION
-  - DITCH CHECKS
-  - SILT FENCING
-  - CUT-OFF TRENCH
-  - BACK OF CURB PROTECTION
-  - EROSION CONTROL MAT
-  - TEMPORARY DITCH

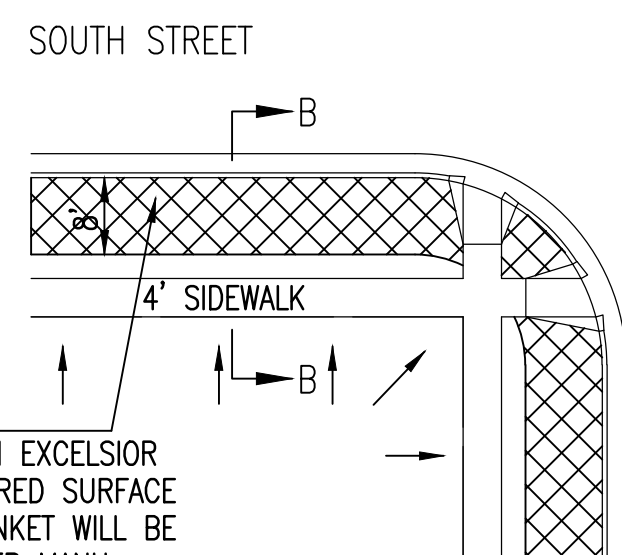
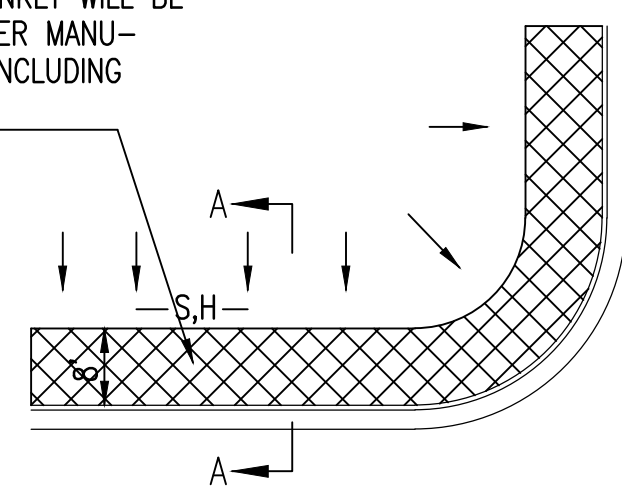
NO SCALE

1350 Proposed Grade

	The Ranch Addition ESMT, GRADING & EROSION CONTROL PLAN STREET 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 240 PPP (607879)	DESIGN DRAWN	APPROVED DATE 08/14
REVISIONS:	SCALE Noted	SHEET 14 OF 28
<small>STR PLANS.dwg</small>		<small>12-11-E839</small>



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 MANUFACTURERS RECOMMENDATION, INCLUDING STAPLES. (SEE DETAIL)

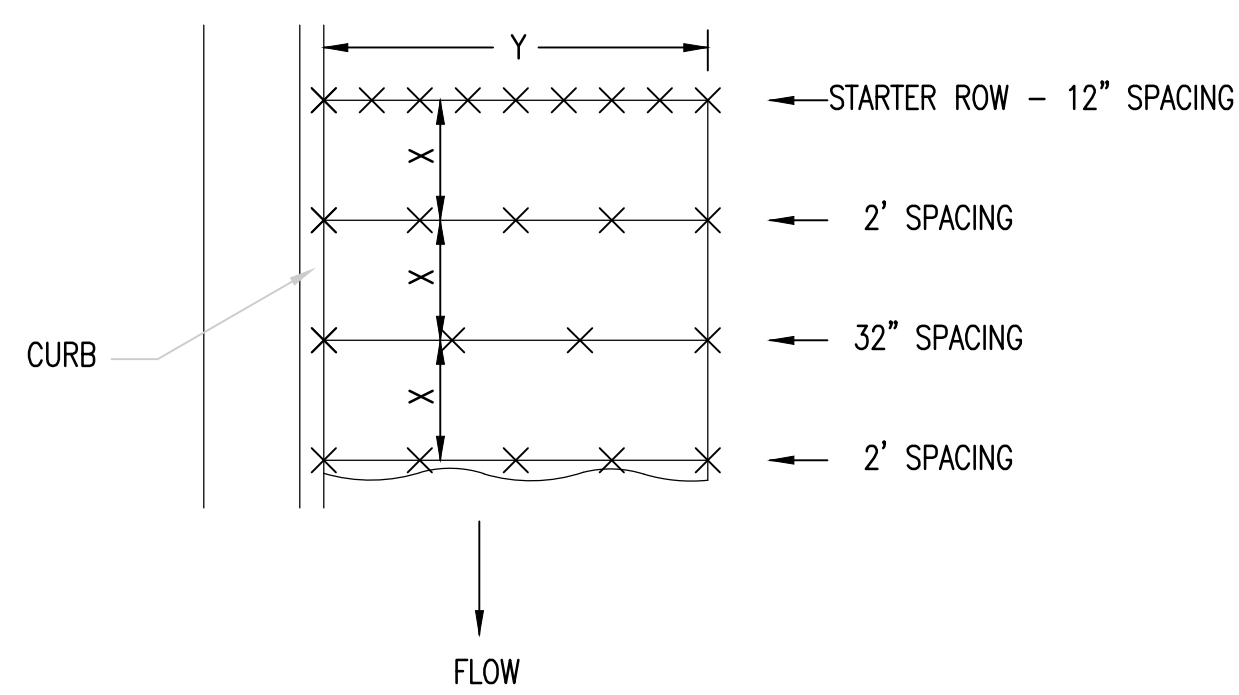


INSTALL 8' WIDE CURLEX I OR II EXCELSIOR BLANKET, OR EQUAL, ON PREPARED SURFACE BACK OF CURB. EDGE OF BLANKET WILL BE AT BACK OF CURB. INSTALL PER MANUFACTURERS RECOMMENDATION, INCLUDING STAPLES. (SEE DETAIL)

GENERAL NOTES

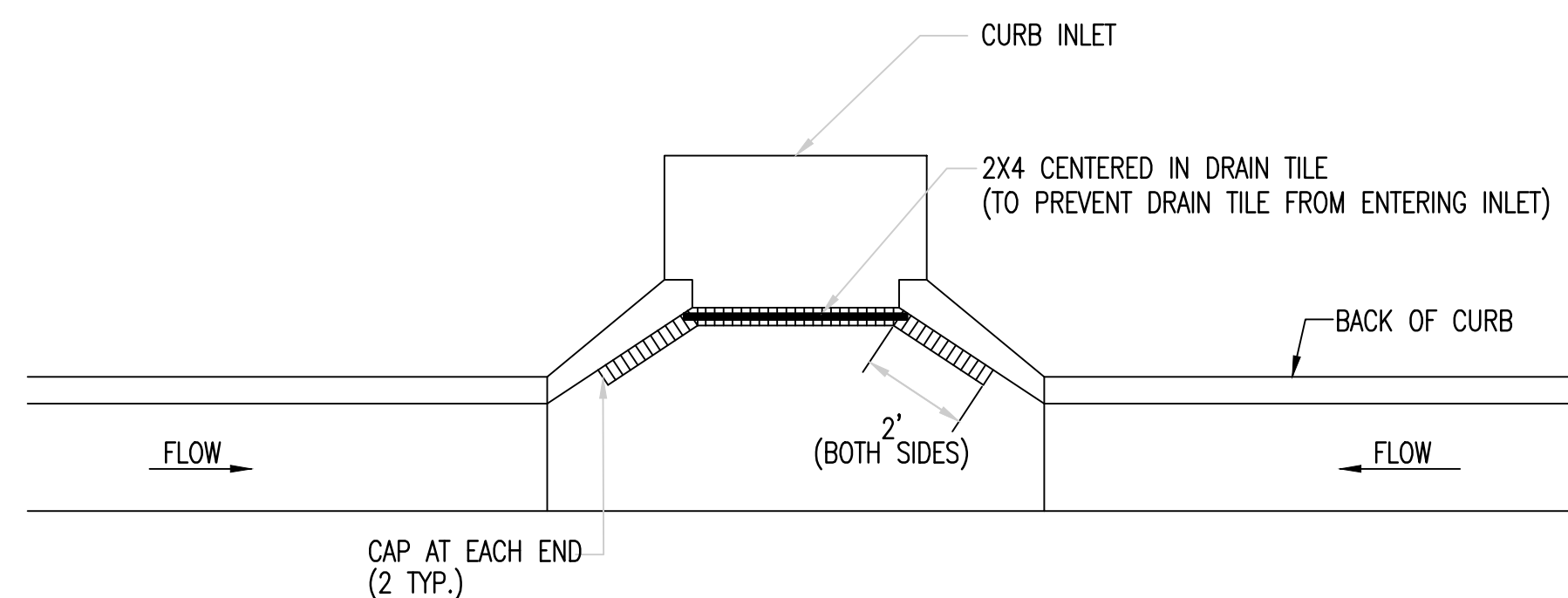
- EXCELSIOR MAT TO BE INSTALLED WHEN SOD IS NOT SPECIFIED ON PROJECT.
- EXCELSIOR BLANKET TO BE INSTALLED OVER SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
- AFTER INSTALLATION OF EXCELSIOR BLANKET, AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB AND INTO THE GUTTER,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

BACK OF CURB PROTECTION DETAIL



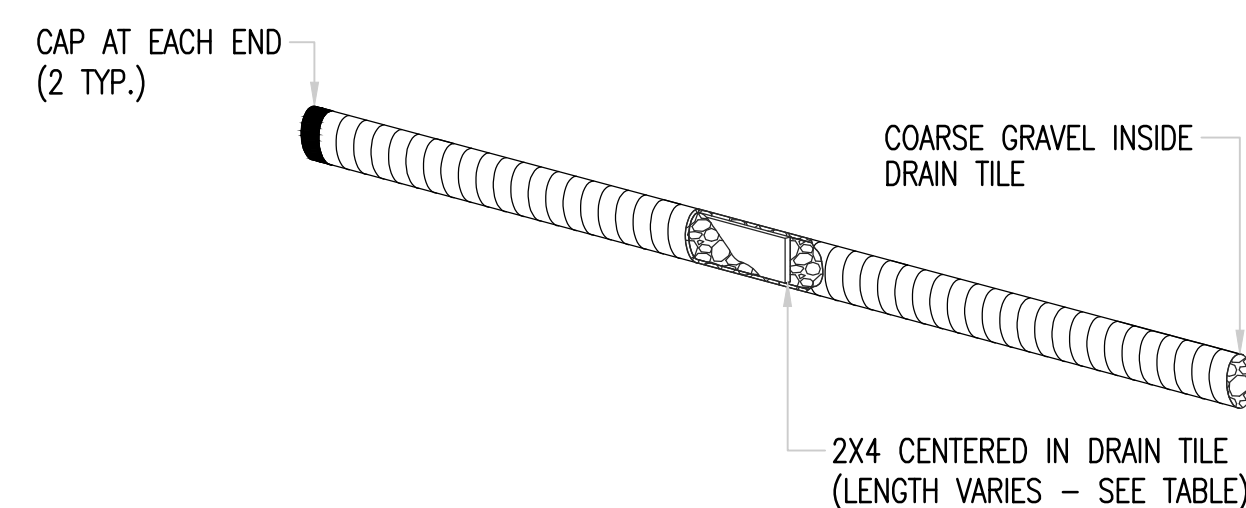
NOTES: USE 6" SEAM OVERLAP
(X & Y = RECOMMENDED BY MANUFACTURE)

DETAILS FOR APPROVED EROSION CONTROL MAT



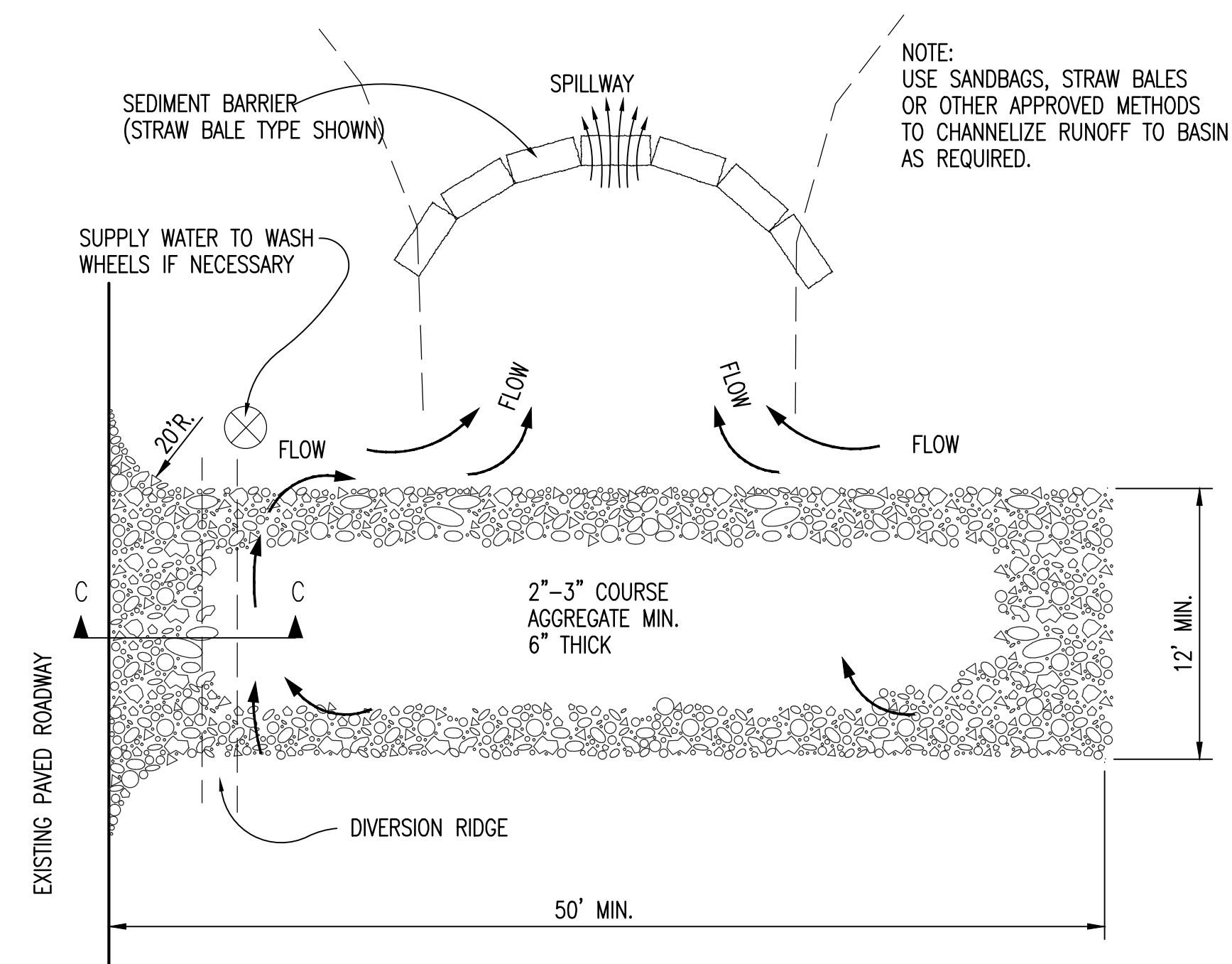
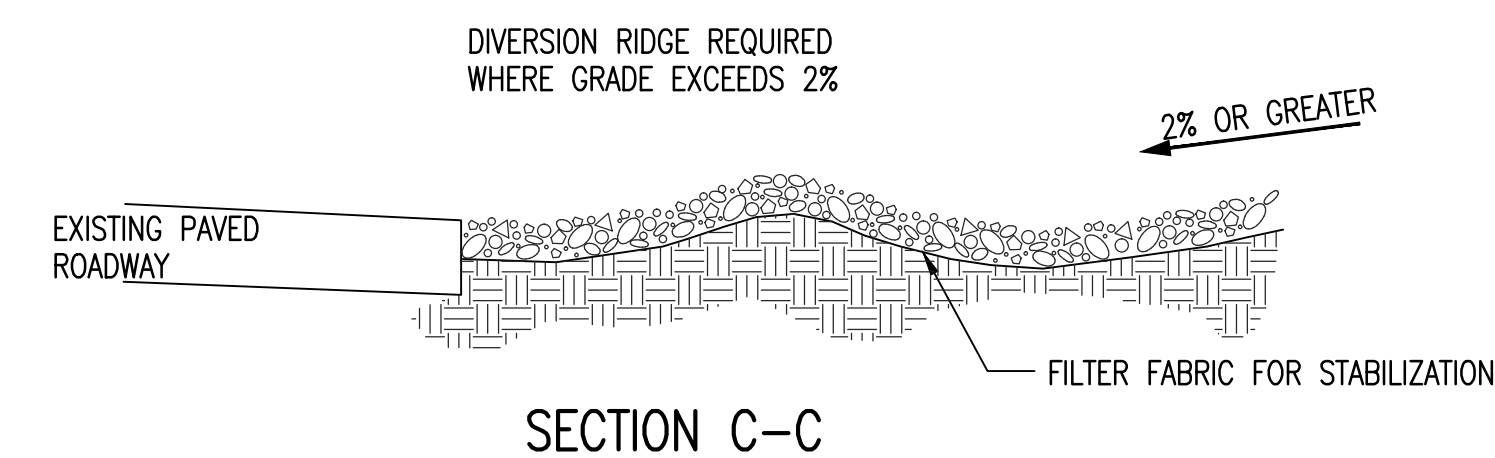
NOTE: PLACE 4" PERFORATED PVC PIPE, FILLED WITH 1/2"-1" DIA. GRAVEL, IN FRONT OF CURB INLET AS SHOWN.

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



CURB INLET PROTECTION

4" PERFORATED PIPE W/ GRAVEL



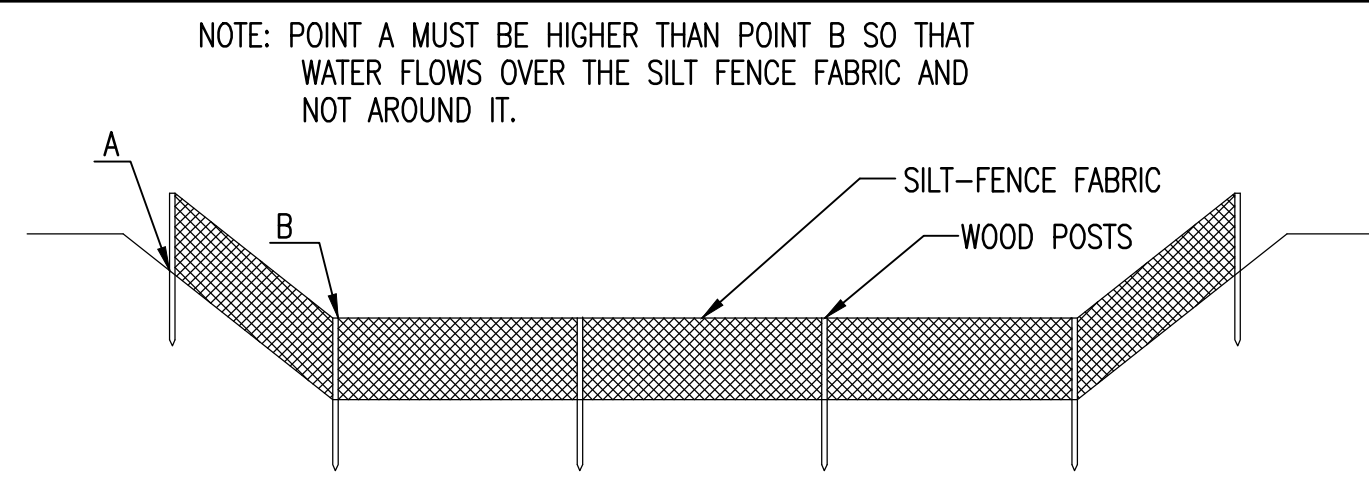
STABILIZED CONSTRUCTION ENTRANCE

GENERAL NOTES

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

BACK OF CURB PROTECTION, CURB INLET PROTECTION AND CONSTRUCTION ENTRANCE

CITY ENGINEER GARY JANZEN, P.E.	
PROJECT NUMBER 240 PPP (607879)	DATE 08/14
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501	SHEET 15 of 28



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.

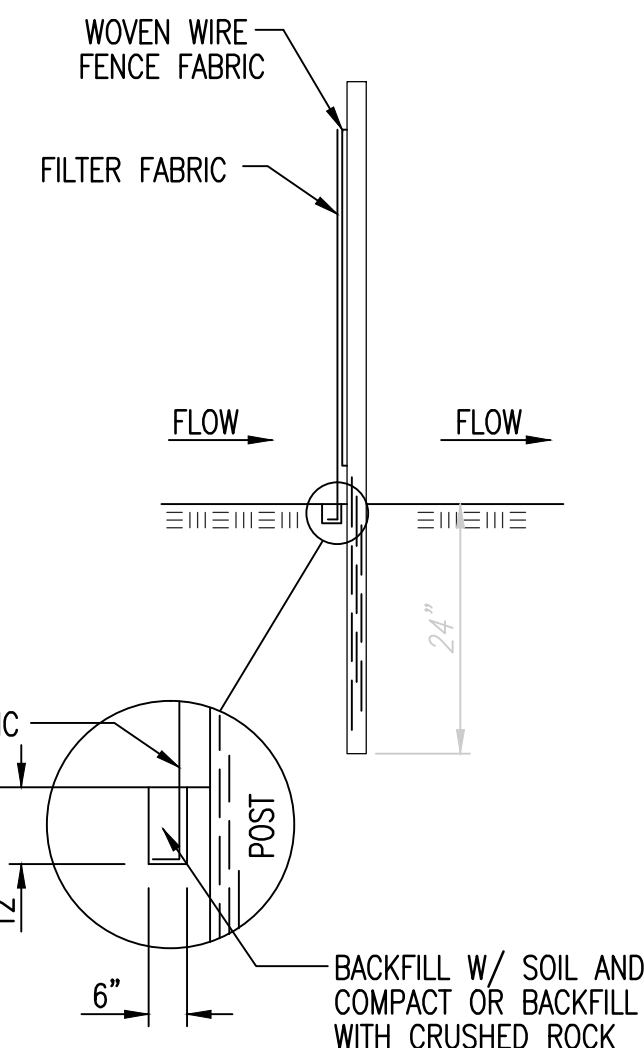
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

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.

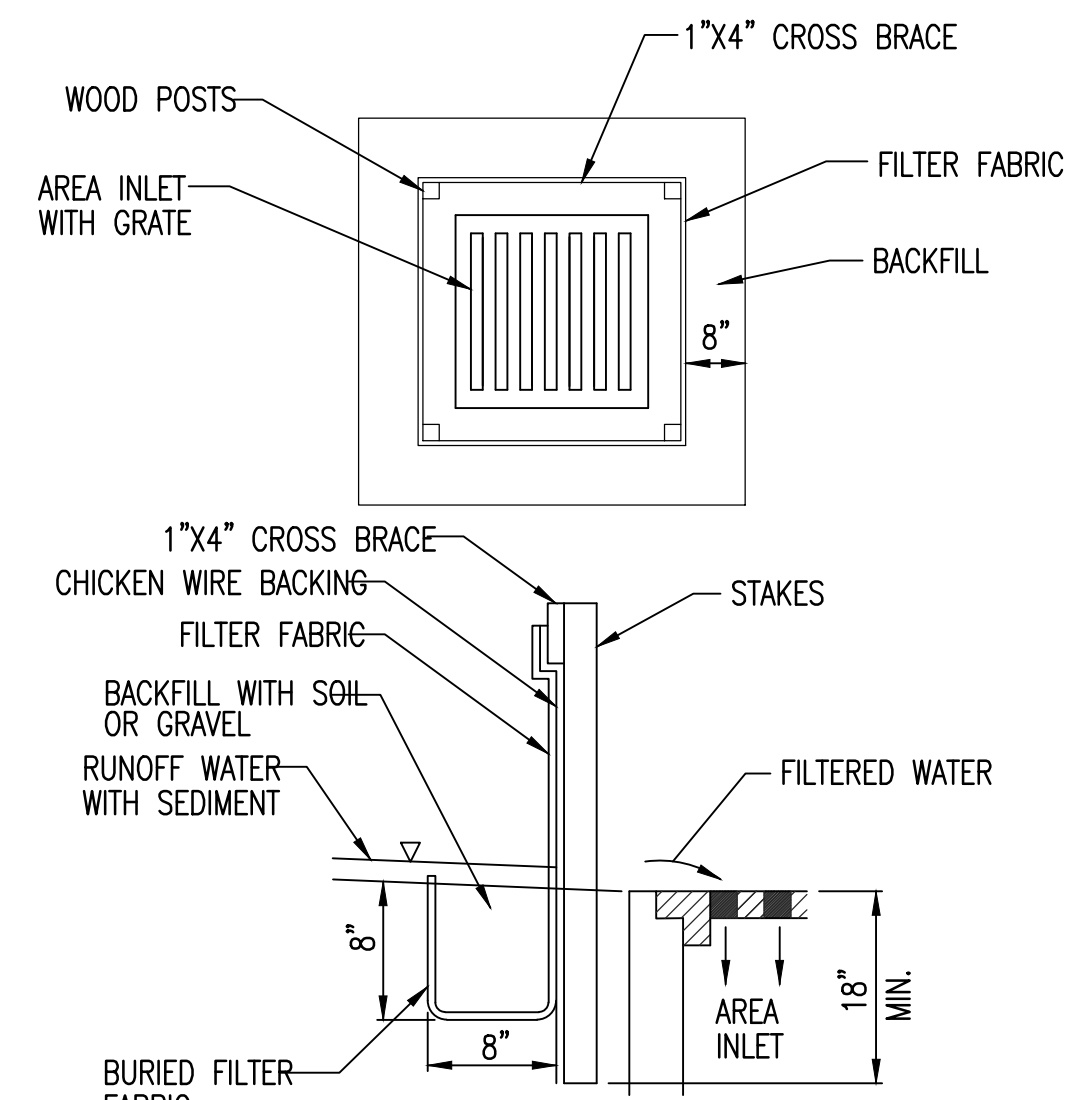
INSPECTION AND MAINTENANCE:

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 AND FRAME WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

PLACEMENT:

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

PROPER INSTALLATION METHOD:

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

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

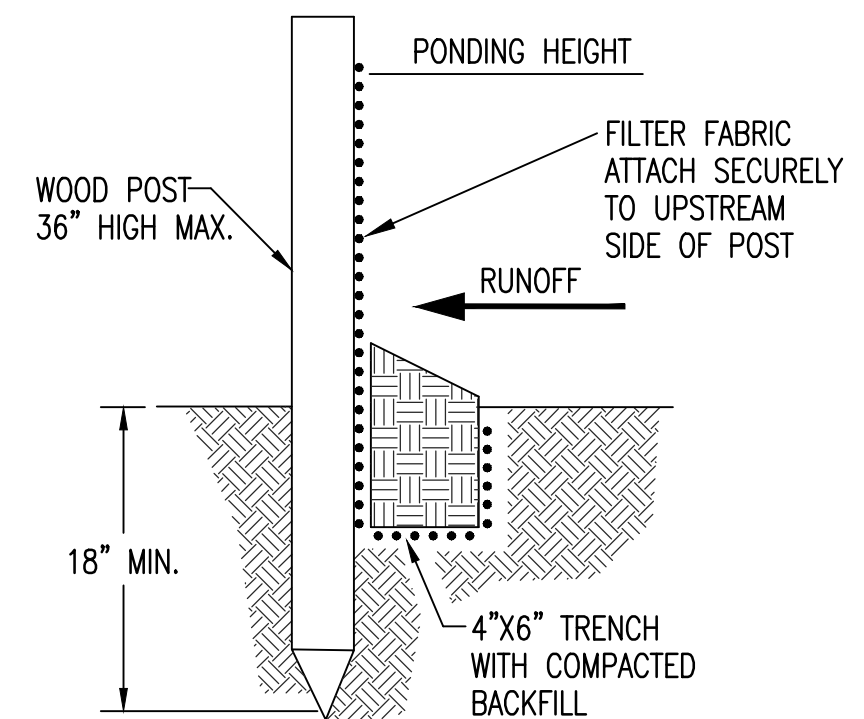
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

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

INSPECTION AND MAINTENANCE:

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

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



SILT FENCE BARRIERS

MATERIAL SPECIFICATION:

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

PLACEMENT:

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

PROPER INSTALLATION METHOD:

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


LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

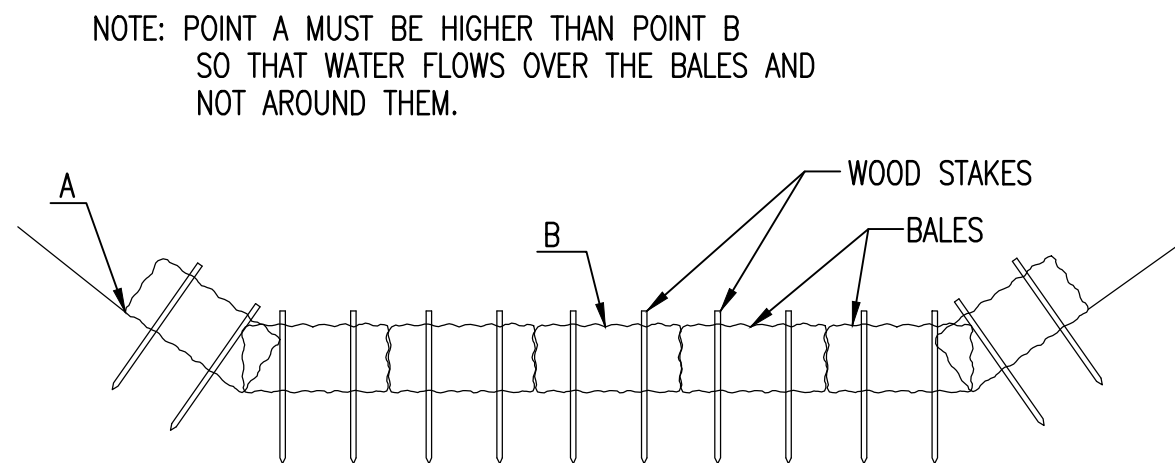
WHEN PRACTICABLE, DO NOT PLACE SILT FENCE SLOPE BARRIERS ACROSS CONTOURS. SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. WHEN THE FLOW CONCENTRATES, IT OVERTOPS THE BARRIER AND THE SILT FENCE SLOPE BARRIER QUICKLY DETERIORATES. DO NOT PLACE SILT-FENCE POSTS ON THE UPSLOPE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

INSPECTION AND MAINTENANCE:

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

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

 <p>CITY OF WICHITA PUBLIC WORKS & UTILITIES ENGINEERING DIVISION</p>	<i>SILT FENCE DITCH CHECK AND BARRIER DETAILS</i>	
	CITY ENGINEER GARY JANZEN, P.E.	
	PROJECT NUMBER 240 PPP (607879)	DATE 08/14
	CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501	
		SHEET 16 of 28



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".

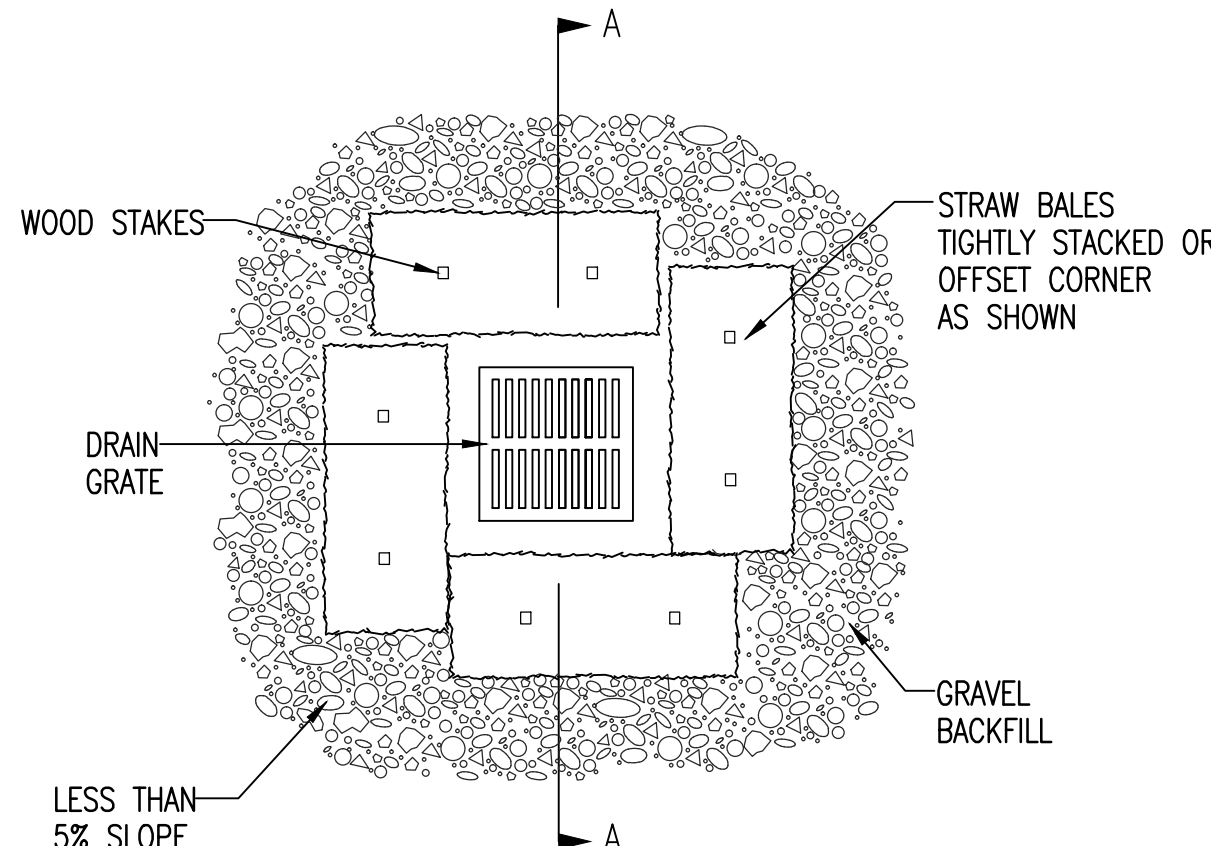
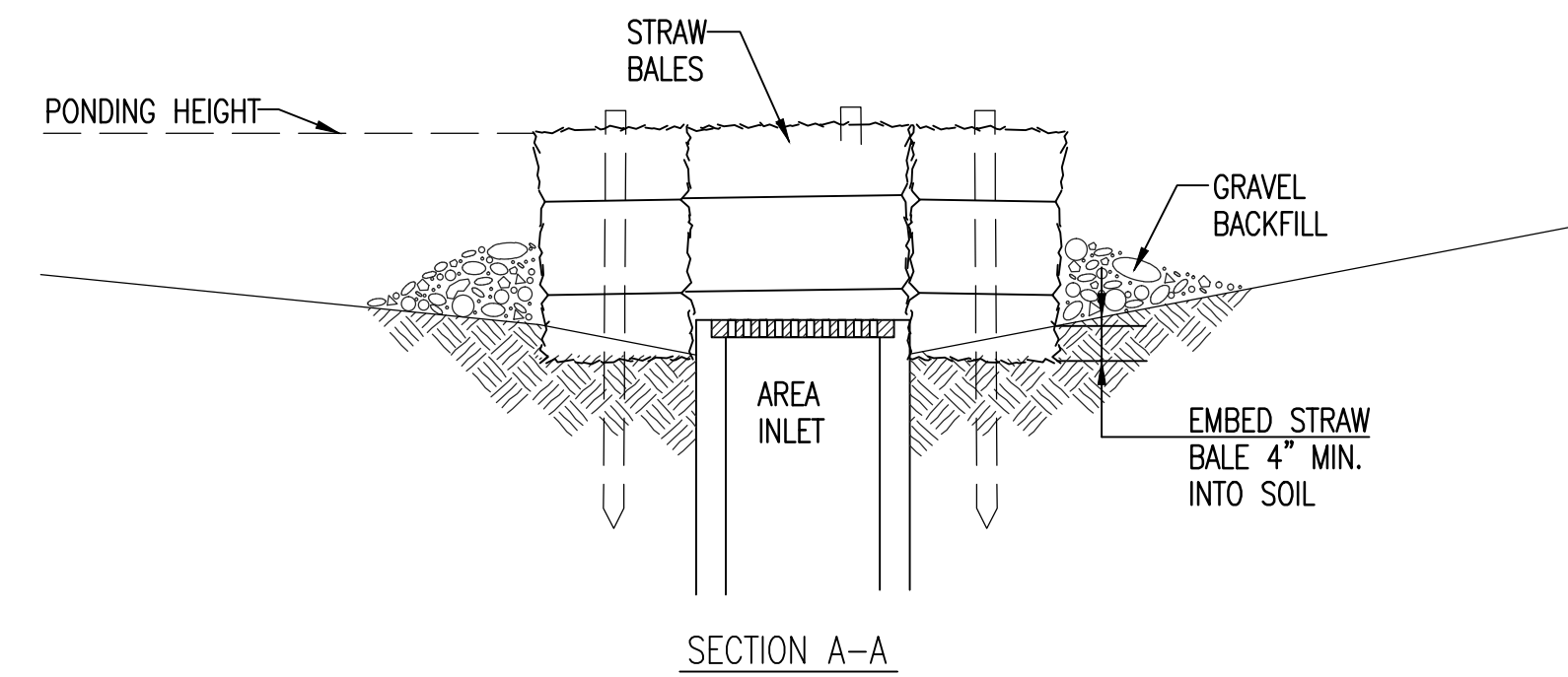
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

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?



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.

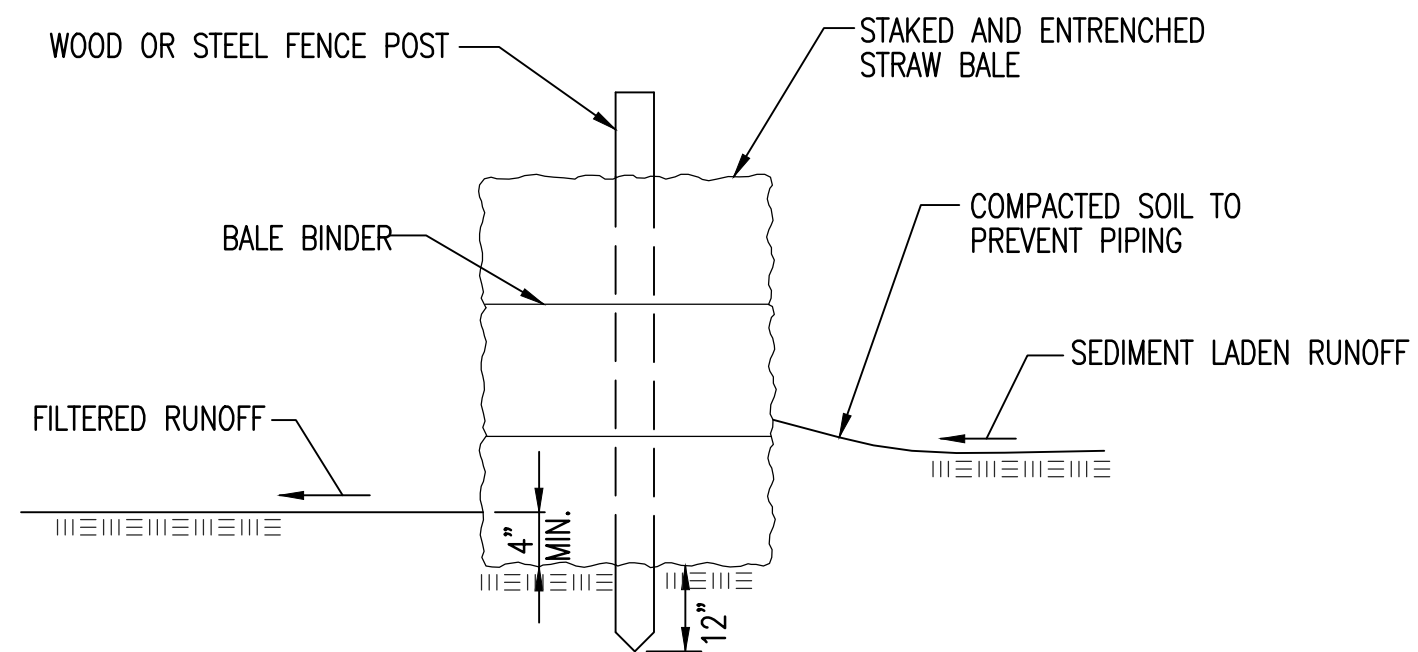
LIST OF COMMON PLACEMENT INSTALLATION MISTAKES TO AVOID:

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.

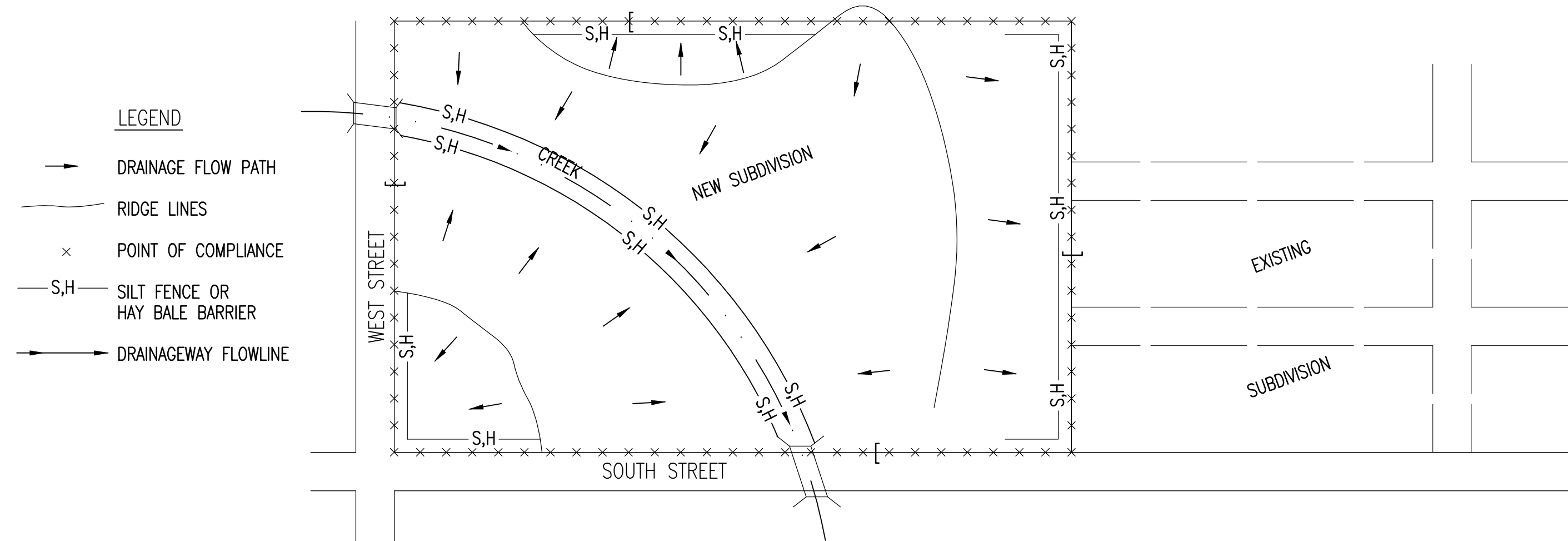
INSPECTION AND MAINTENANCE:

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?

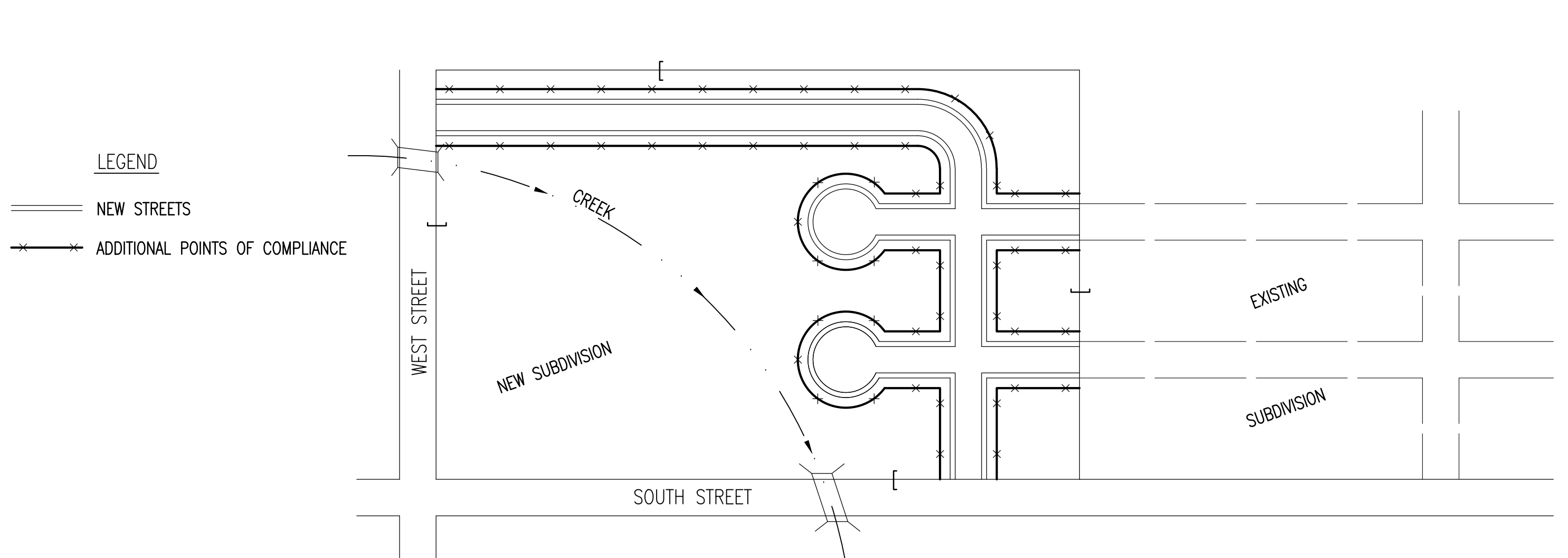
 CITY OF WICHITA PUBLIC WORKS & UTILITIES ENGINEERING DIVISION	<i>STRAW BALE DITCH CHECK AND BARRIER DETAILS</i>	
	CITY ENGINEER GARY JANZEN, P.E.	
	PROJECT NUMBER 240 PPP (607879)	DATE 08/14
	CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501	

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



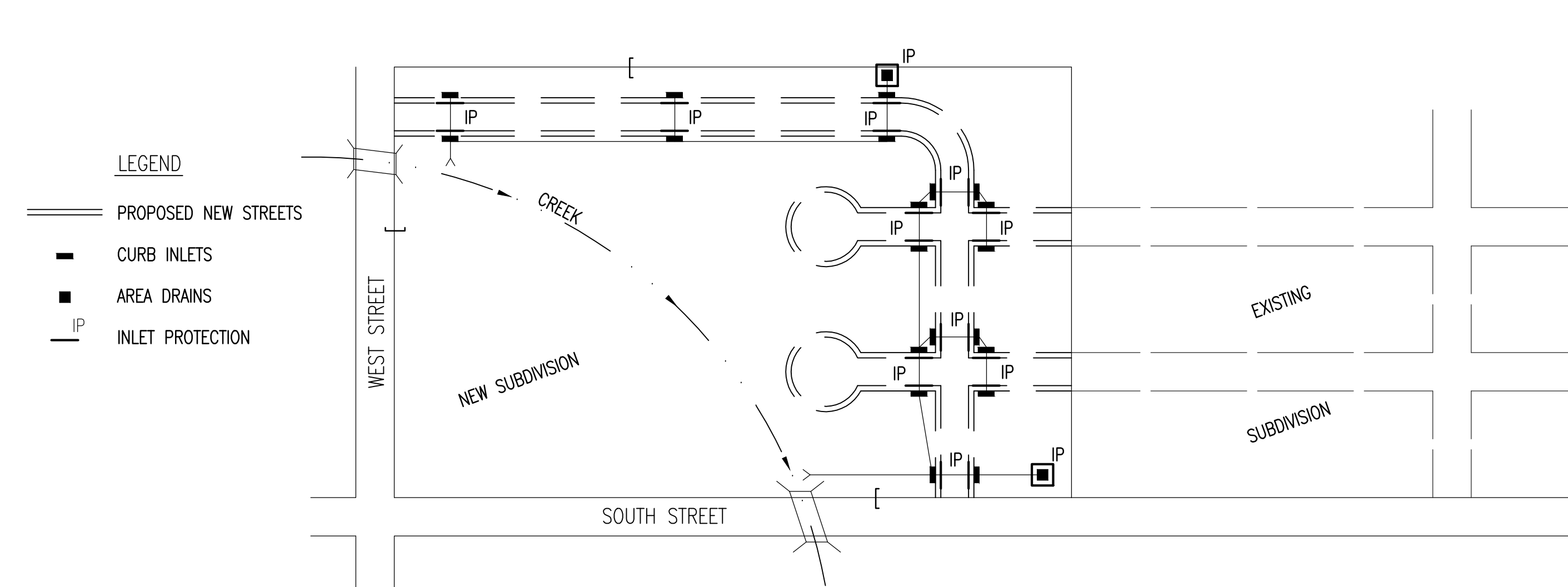
- LEGEND**
- DRAINAGE FLOW PATH
 - RIDGE LINES
 - × POINT OF COMPLIANCE
 - S,H SILT FENCE OR HAY BALE BARRIER
 - DRAINAGEWAY FLOWLINE
1. DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, THE POINTS OF COMPLIANCE ARE THE PERIMETER BOUNDARIES AND ANY DRAINAGE WAYS OR STORM SEWERS DRAINING THROUGH OR FROM 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
 - 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.

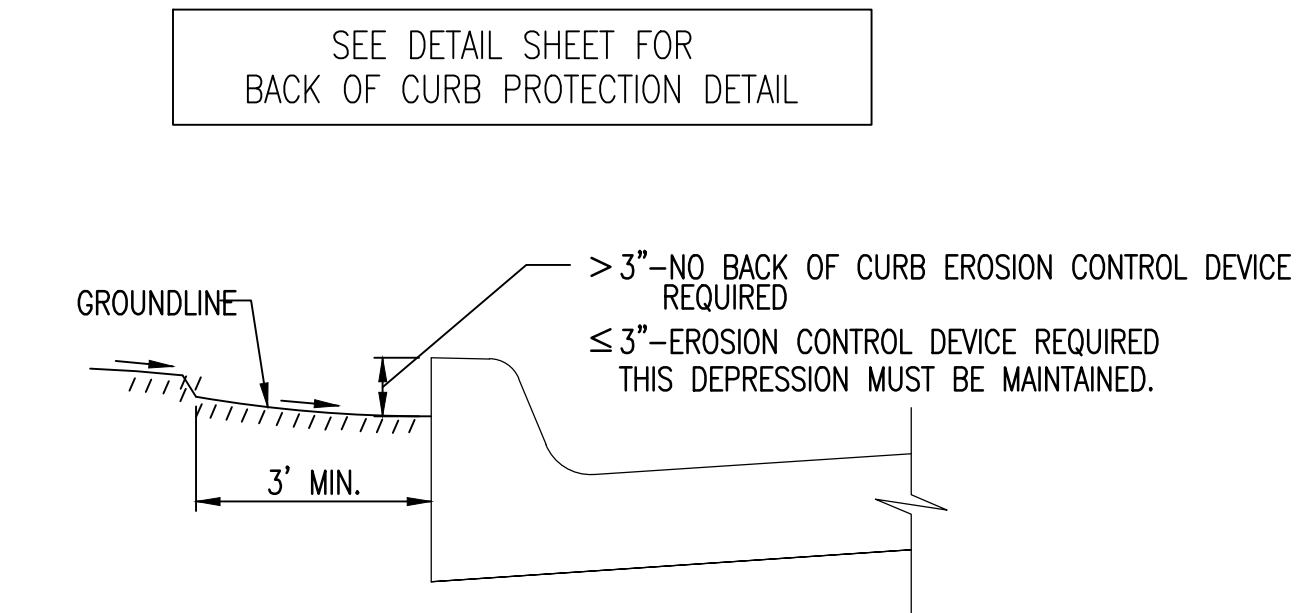
PHASE 2 – INSTALLATION OF STORM SEWER



- 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

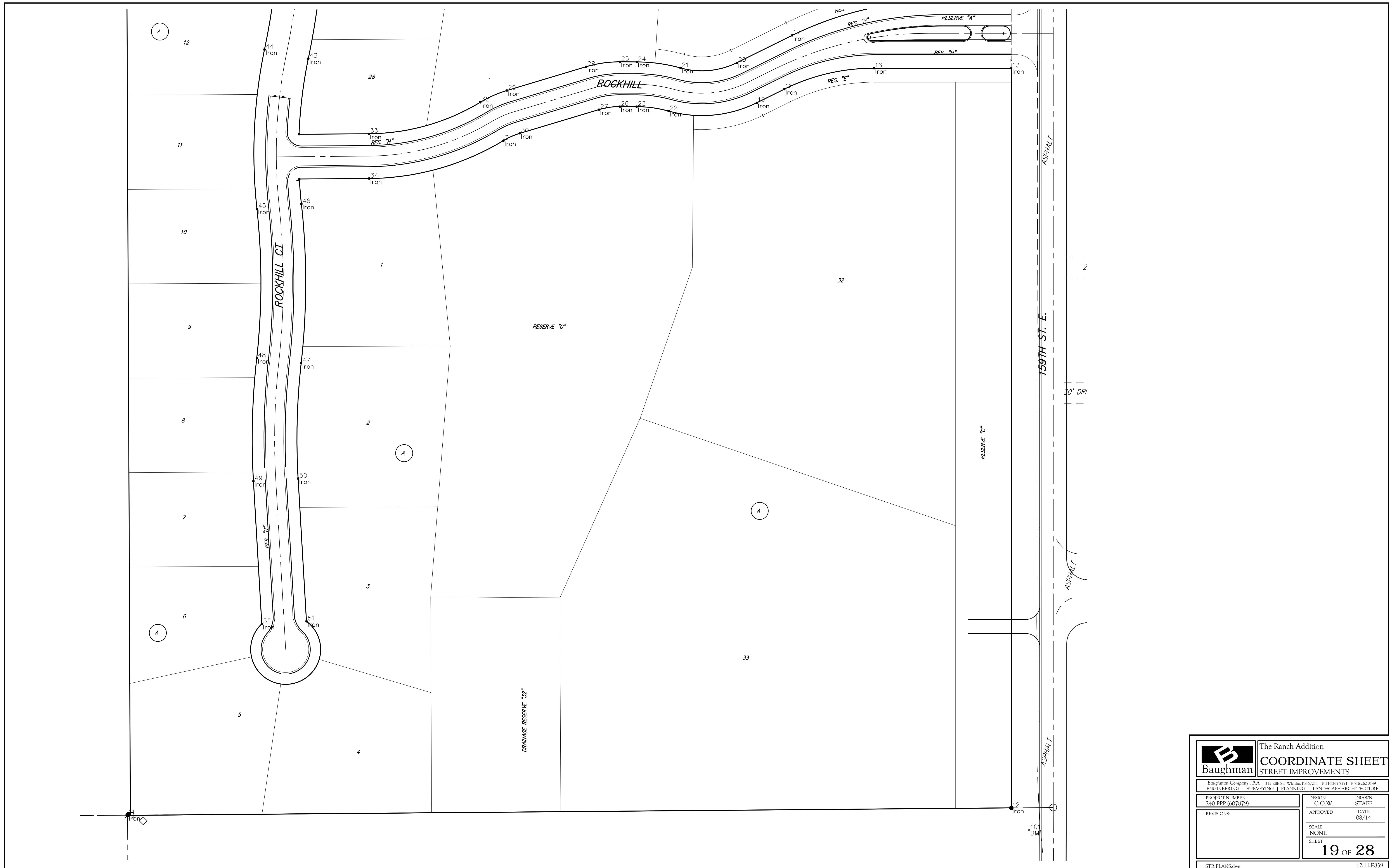
1. THE INTENT OF ALL EROSION CONTROL DEVICES IS TO PREVENT ERODED SOIL FROM ENTERING DITCHES, STORM SEWERS, LAKES, STREETS OR ANY OTHER OTHER DRAINAGE FEATURE.
2. THIS SHEET IS INTENDED TO PROVIDE GUIDELINES AS TO WHAT TYPE OF EROSION CONTROL DEVICES WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS. 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.




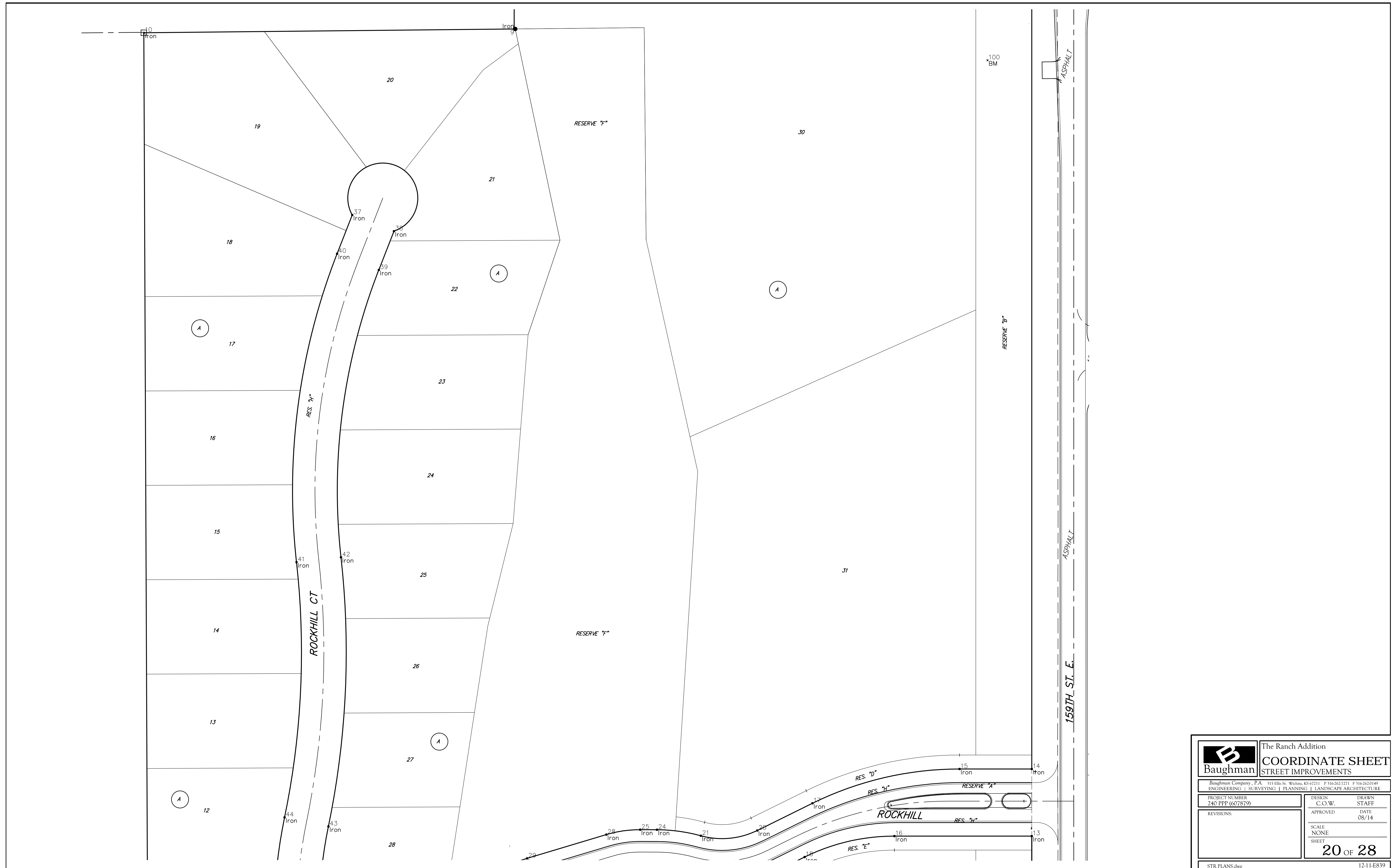
CURB BACKFILL DETAIL (STREET CONSTRUCTION ONLY)


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

 <p>CITY OF WICHITA PUBLIC WORKS & UTILITIES ENGINEERING DIVISION</p>	<p>SUBDIVISION DEVELOPMENT PROCESS</p>	
	<p>CITY ENGINEER GARY JANZEN, P.E.</p>	
	<p>PROJECT NUMBER 240 PPP (607879)</p>	<p>DATE 08/14</p>
	<p>CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501</p>	



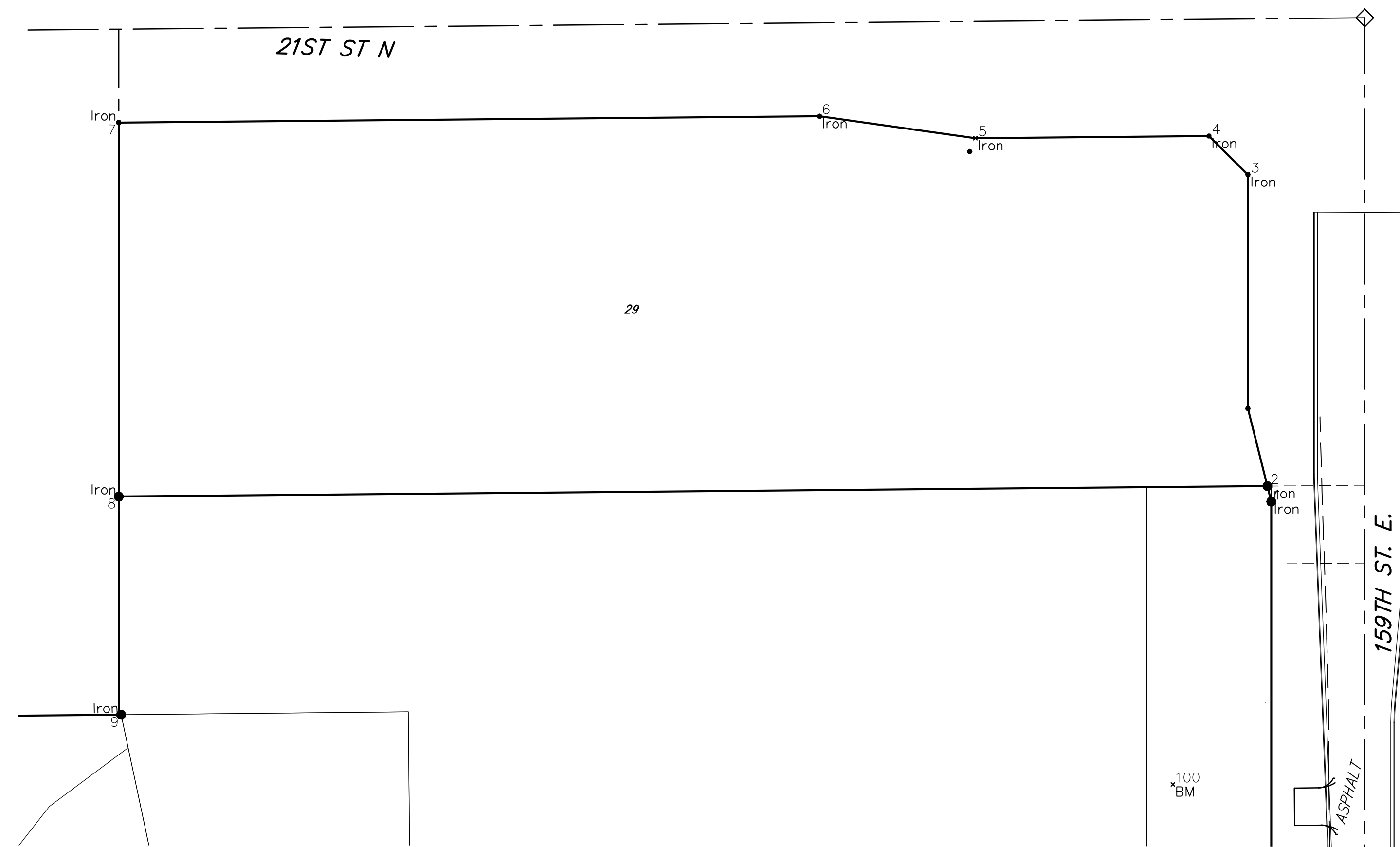
	The Ranch Addition	
	COORDINATE SHEET STREET IMPROVEMENTS	
<small>Baughman Company, P.A. 315 Ellis St. Wichita, KS 67211 P 316-263-7771 F 316-262-0149 ENGINEERING SURVEYING PLANNING LANDSCAPE ARCHITECTURE</small>		
PROJECT NUMBER 240 PPP (607879)	DESIGN C.O.W.	DRAWN STAFF
REVISIONS:	APPROVED	DATE 08/14
SCALE NONE		SHEET 19 OF 28
<small>STR PLANS.dwg</small>		<small>12-11-ES39</small>




	The Ranch Addition	
	COORDINATE SHEET	
STREET IMPROVEMENTS		
<small>Baughman Company, P.A. 315 Ellis St. Wichita, KS 67211 P 316-263-7271 F 316-262-0149 ENGINEERING SURVEYING PLANNING LANDSCAPE ARCHITECTURE</small>		
PROJECT NUMBER 240 PPP (607879)	DESIGN C.O.W.	DRAWN STAFF
REVISIONS:	APPROVED	DATE 08/14
SCALE NONE		SHEET 20 OF 28
<small>STR PLANS.dwg</small>		<small>12-11-ES39</small>

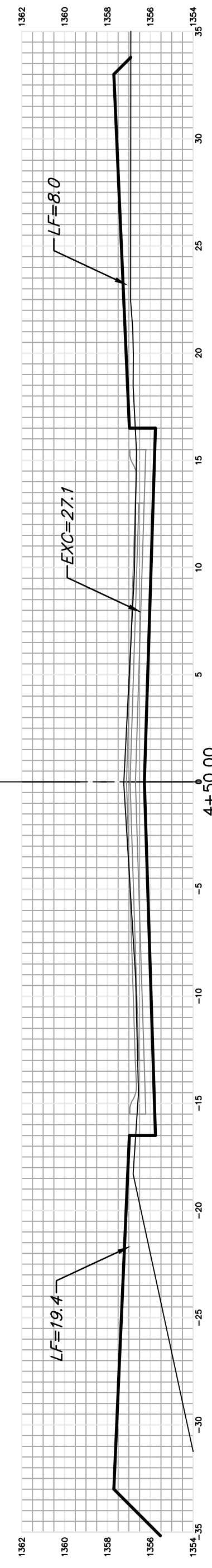
IRONS

Point Table			
Point #	Northing	Easting	Row Description
1	4689.45	9940.00	Iron
2	4699.43	9937.50	Iron
3	4899.32	9925.00	Iron
4	4924.09	9900.00	Iron
5	4922.73	9750.01	Iron
6	4936.82	9649.88	Iron
7	4932.74	9200.00	Iron
8	4692.74	9200.00	Iron
9	4552.74	9201.50	Iron
10	4547.29	8670.58	Iron
11	2329.88	8676.05	Iron
12	2340.23	9940.00	Iron
13	3398.19	9940.00	Iron
14	3494.19	9940.00	Iron
15	3494.19	9836.73	Iron
16	3398.19	9743.58	Iron
17	3445.14	9626.50	Iron
18	3368.28	9615.37	Iron
19	3348.80	9575.91	Iron
20	3406.20	9547.59	Iron
21	3398.63	9466.92	Iron
22	3336.98	9449.75	Iron
23	3343.30	9404.00	Iron
24	3407.30	9404.20	Iron
25	3407.37	9380.16	Iron
26	3343.37	9379.97	Iron
27	3339.05	9350.19	Iron
28	3400.35	9331.79	Iron
29	3366.36	9218.54	Iron
30	3305.06	9236.94	Iron
31	3294.68	9213.49	Iron
32	3349.49	9180.46	Iron
33	3304.50	9021.00	Iron
34	3240.50	9021.48	Iron
37	4286.67	8968.50	Iron
38	4263.42	9028.13	Iron
39	4207.96	9006.50	Iron
40	4231.21	8946.88	Iron
41	3789.98	8888.87	Iron
42	3797.03	8952.48	Iron
43	3411.99	8934.47	Iron
44	3424.95	8871.80	Iron
45	3197.17	8860.99	Iron
46	3204.14	8924.61	Iron
47	2976.32	8924.28	Iron
48	2983.47	8860.68	Iron
49	2807.63	8855.99	Iron
50	2811.37	8919.88	Iron
51	2607.11	8931.84	Iron
52	2603.36	8867.95	Iron
100	4507.95	9876.73	BM
101	2308.67	9965.77	BM

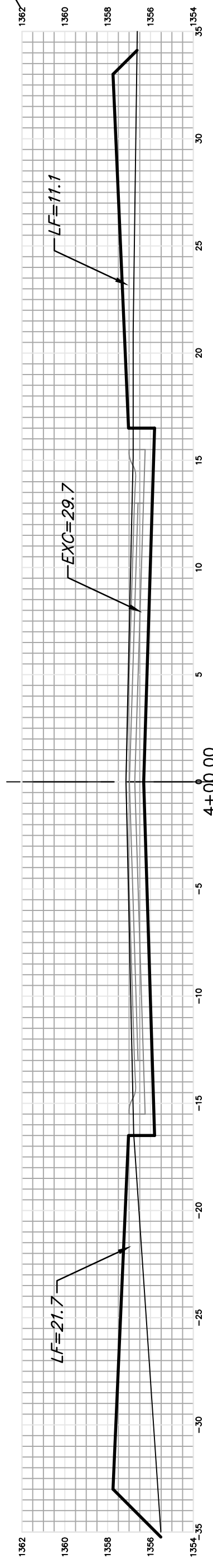


	The Ranch Addition	
	COORDINATE SHEET	
STREET IMPROVEMENTS		
<small>Baughman Company, P.A. 315 Ellis St., Wichita, KS 67211 P 316-263-7771 F 316-262-0149 ENGINEERING SURVEYING PLANNING LANDSCAPE ARCHITECTURE</small>		
PROJECT NUMBER 240 PPP (607879)	DESIGN C.O.W.	DRAWN STAFF
REVISIONS:	APPROVED	DATE 08/14
	SCALE NONE	SHEET
		21 OF 28
STR PLANS.dwg		12-11-ES39

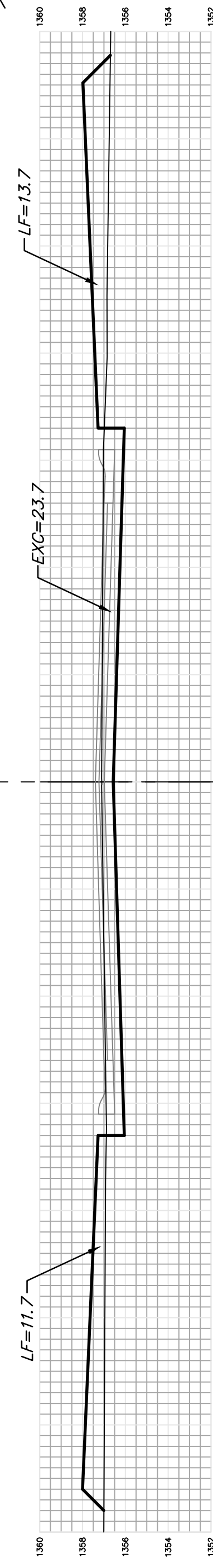
50.00'
 EXC = 45.9
 LF = 53.1
 CF = 0.0



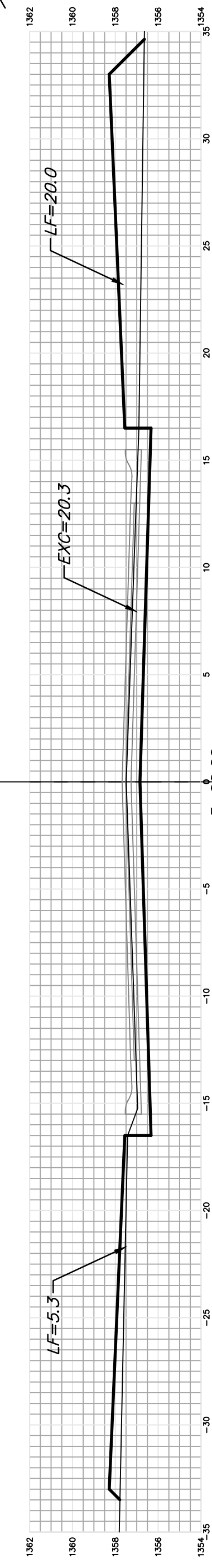
50.00'
 EXC = 52.6
 LF = 55.7
 CF = 0.0



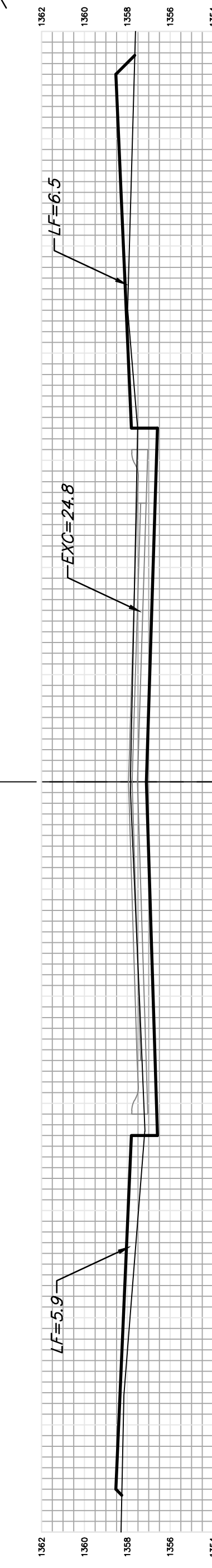
50.00'
 EXC = 49.4
 LF = 53.9
 CF = 0.0



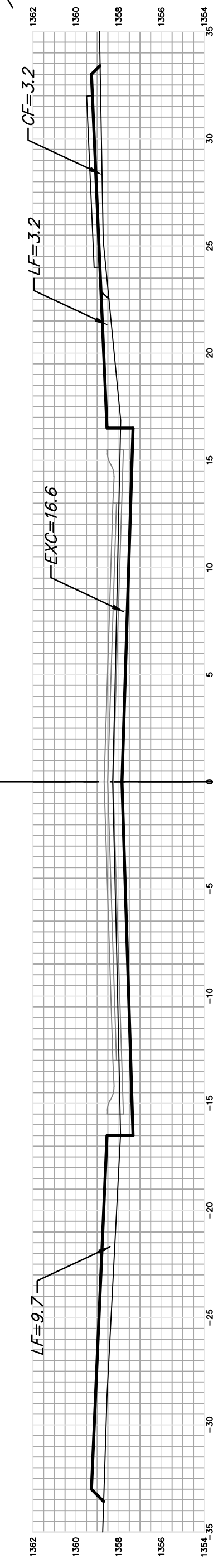
50.00'
 EXC = 40.7
 LF = 46.9
 CF = 0.0



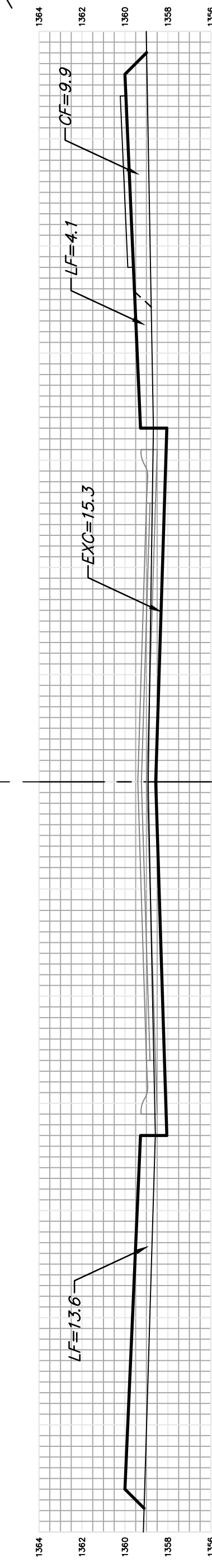
50.00'
 EXC = 41.8
 LF = 34.9
 CF = 0.0



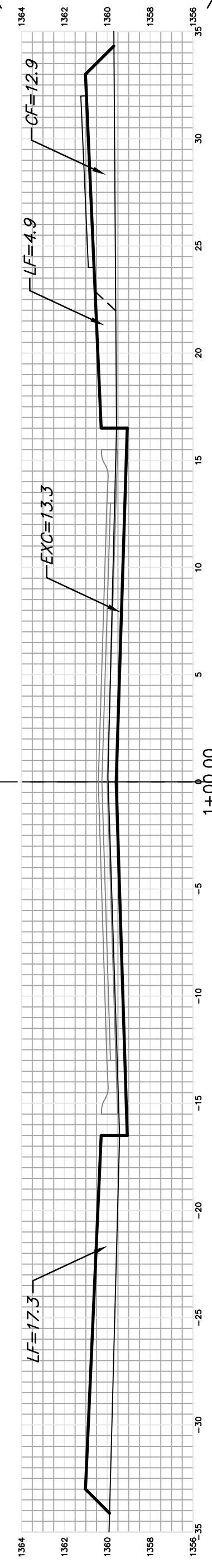
50.00'
 EXC = 38.3
 LF = 23.4
 CF = 3.0



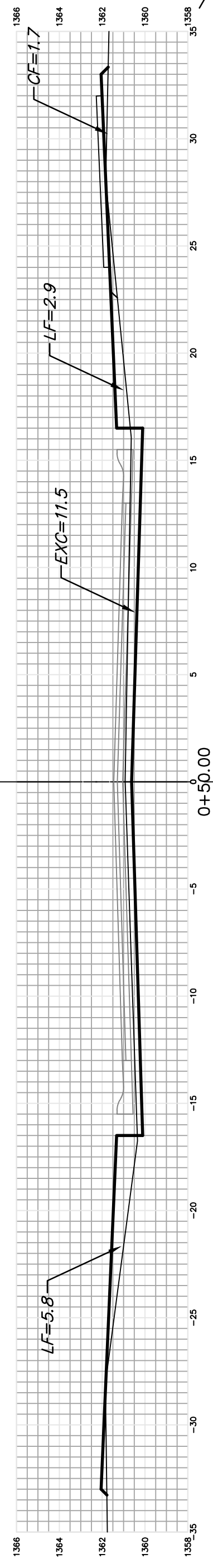
50.00'
 EXC = 29.5
 LF = 28.3
 CF = 12.1



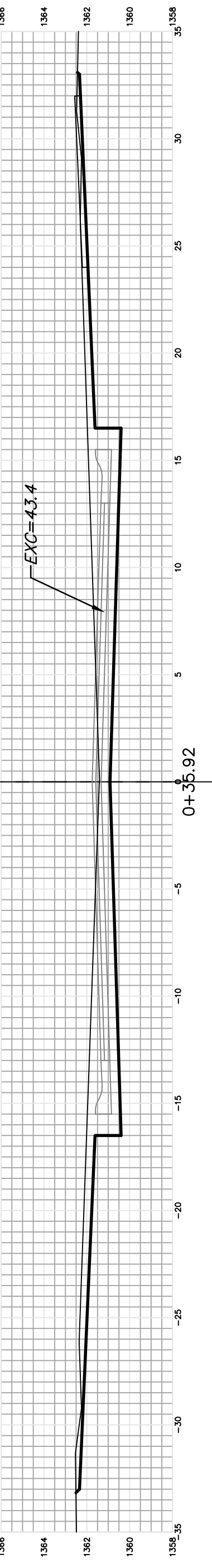
50.00'
 EXC = 26.5
 LF = 36.9
 CF = 21.1



50.00'
 EXC = 23.0
 LF = 28.6
 CF = 13.5



14.08'
 EXC = 14.4
 LF = 2.3
 CF = 0.4

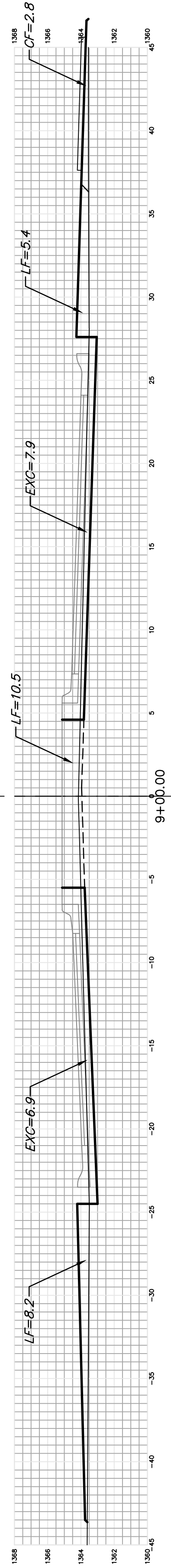


ROCKHILL

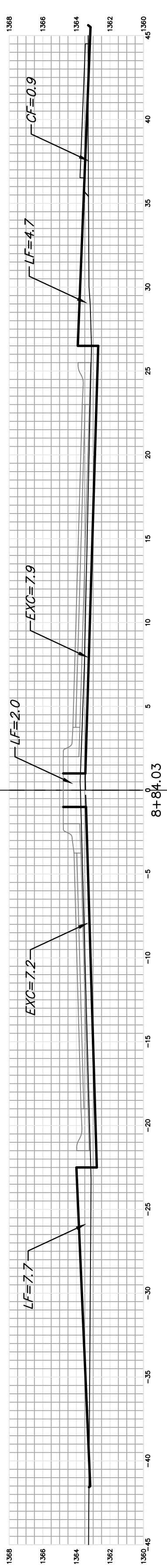
Sheet Totals
 Excavation = 362.1 C.Y.
 Loose Fill = 364.0 C.Y.
 Compacted Fill = 50.1 C.Y.

Baughman
 Baughman Company, P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0144
 ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE
 PROJECT NUMBER 240 PPP (607879) SHEET 22 OF 28
 STR.PLAN5.dwg 12-11-E839

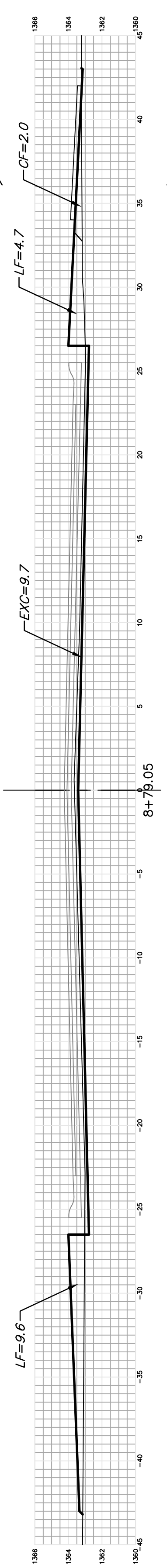
EXC = 15.2
LF = 63.6
CF = 40.7



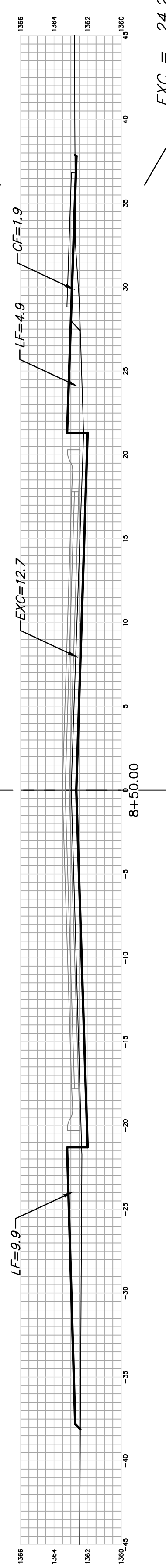
EXC = 8.9
LF = 11.4
CF = 1.1



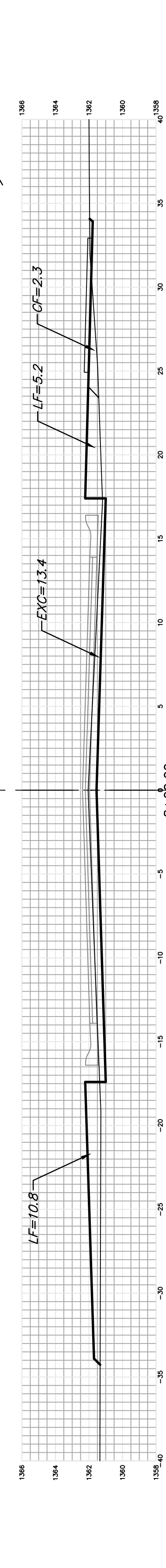
EXC = 2.3
LF = 2.7
CF = 0.3



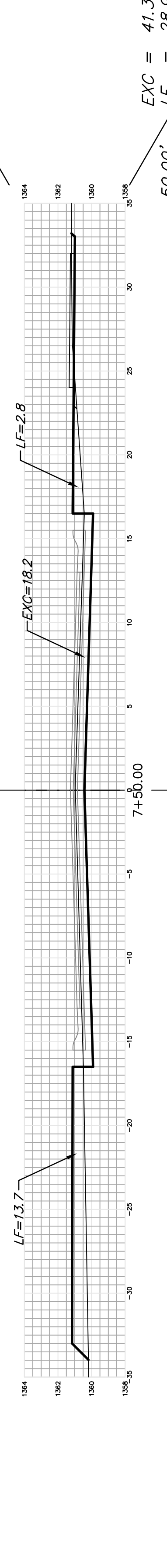
EXC = 12.1
LF = 15.7
CF = 2.1



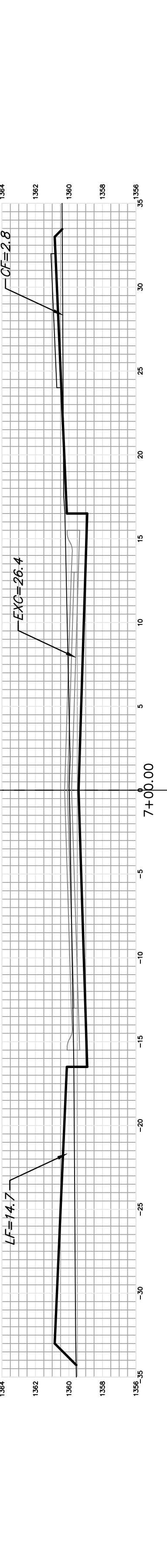
EXC = 24.2
LF = 28.5
CF = 3.9



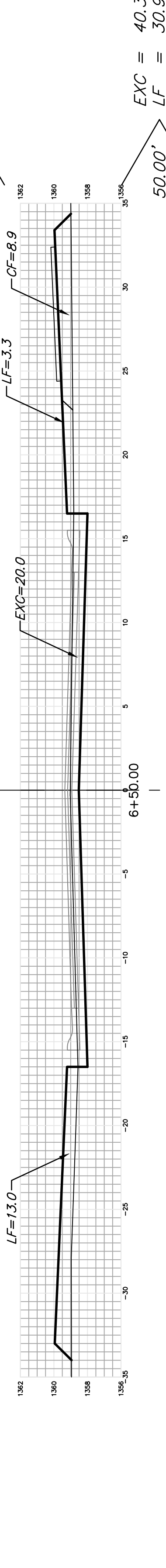
EXC = 29.3
LF = 30.1
CF = 2.1



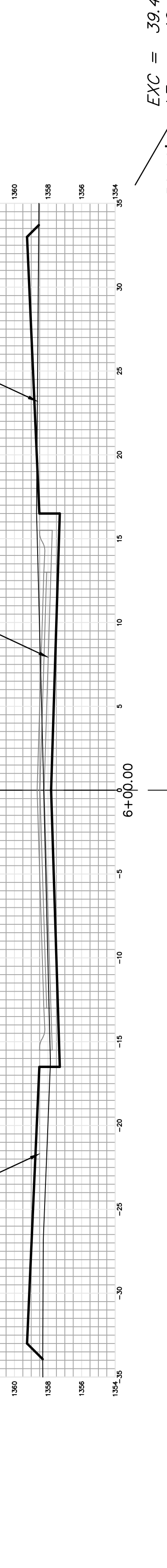
EXC = 41.3
LF = 28.9
CF = 2.6



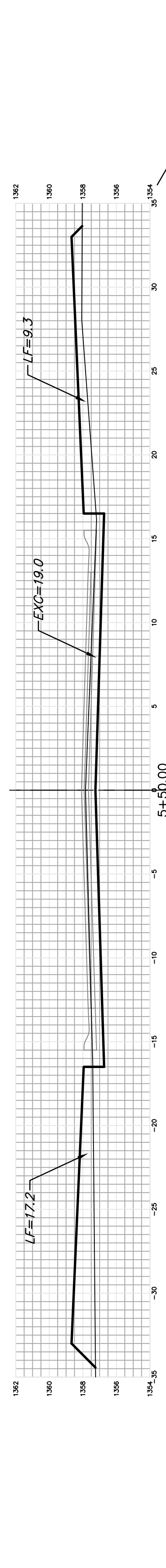
EXC = 43.0
LF = 28.7
CF = 10.8



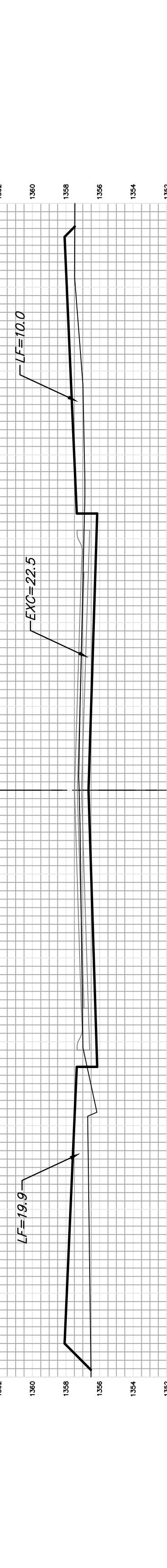
EXC = 40.3
LF = 30.9
CF = 8.2



EXC = 39.4
LF = 40.4
CF = 0.0

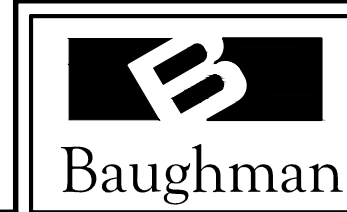


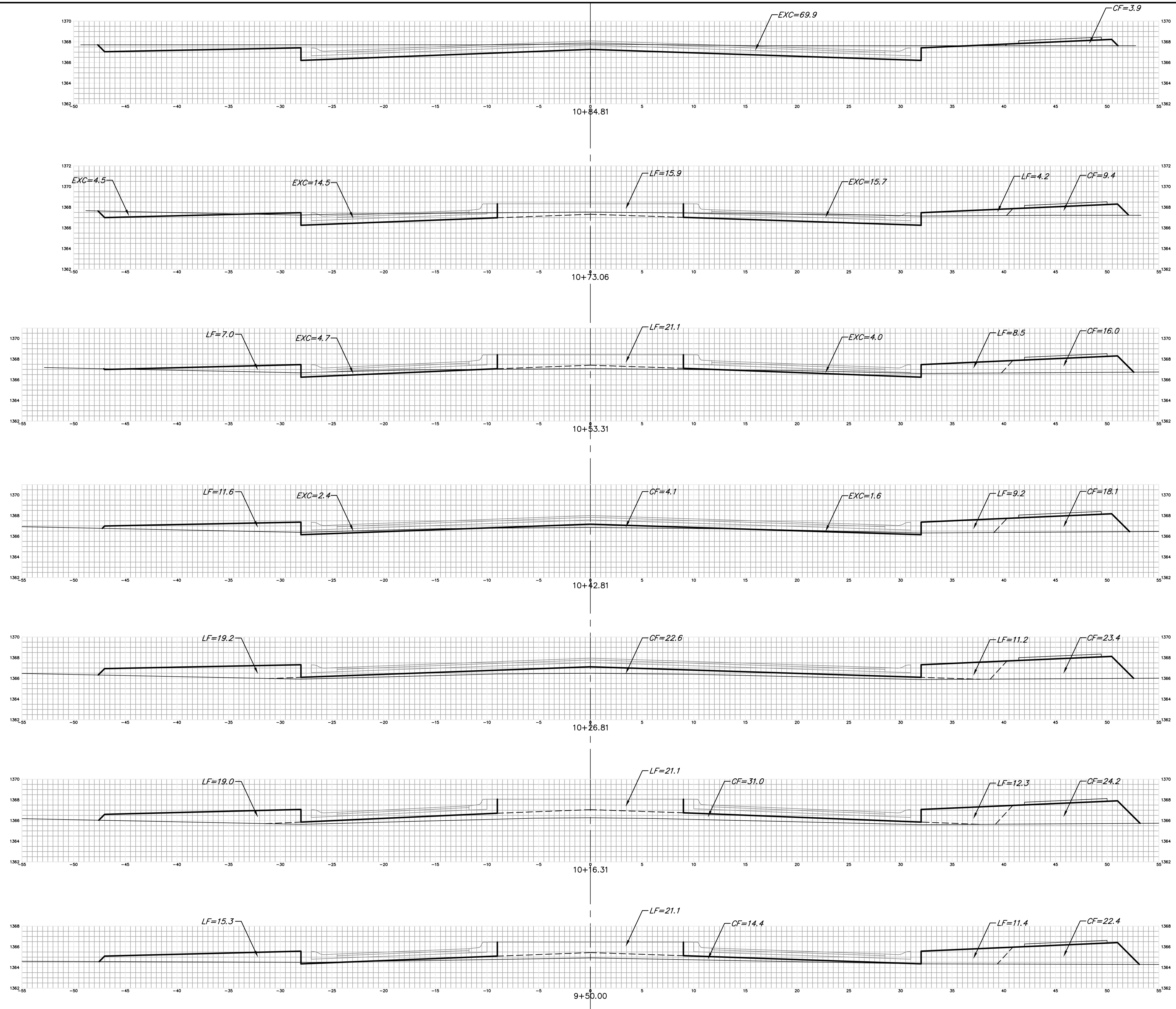
EXC = 38.4
LF = 52.2
CF = 0.0



ROCKHILL

Sheet Totals
Excavation = 294.4 C.Y.
Loose Fill = 333.1 C.Y.
Compacted Fill = 71.8 C.Y.





11.75' $\left\{ \begin{array}{l} EXC = 22.8 \\ LF = 4.4 \\ CF = 2.9 \end{array} \right.$

19.75' $\left\{ \begin{array}{l} EXC = 15.8 \\ LF = 20.7 \\ CF = 9.3 \end{array} \right.$

10.50' $\left\{ \begin{array}{l} EXC = 2.5 \\ LF = 11.2 \\ CF = 7.4 \end{array} \right.$

16.00' $\left\{ \begin{array}{l} EXC = 1.2 \\ LF = 15.2 \\ CF = 20.2 \end{array} \right.$

10.50' $\left\{ \begin{array}{l} EXC = 0.0 \\ LF = 16.1 \\ CF = 19.7 \end{array} \right.$

66.31' $\left\{ \begin{array}{l} EXC = 0.0 \\ LF = 123.0 \\ CF = 113.0 \end{array} \right.$

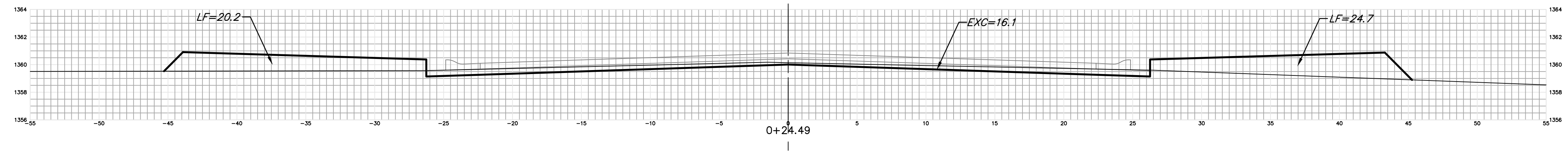
ROCKHILL

Sheet Totals
 Excavation = 42.3 C.Y.
 Loose Fill = 190.6 C.Y.
 Compacted Fill = 172.5 C.Y.

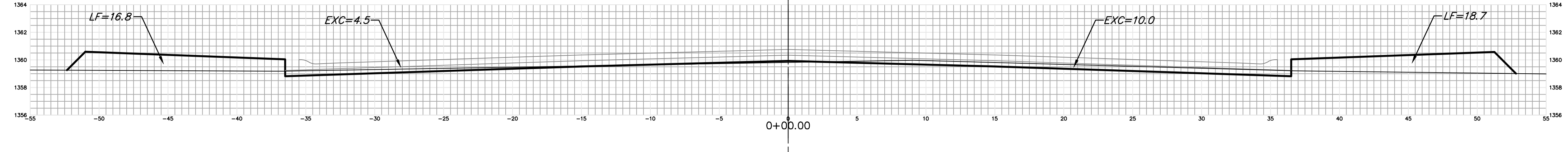
	Baughman Company, P.A. 315 Ellis St. Wichita, KS 67211 P 316-363-7271 F 316-363-0149	
	ENGINEERING SURVEYING PLANNING LANDSCAPE ARCHITECTURE	PROJECT NUMBER
	240 PPP (607879)	SHEET
		24 OF 28
STR PLANS.dwg		12-11-E839



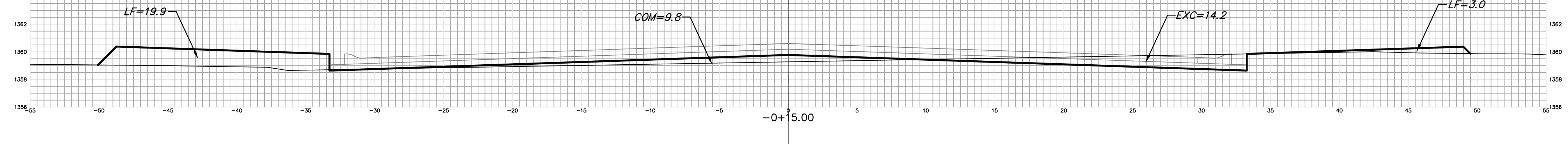
51.01' $\begin{matrix} EXC = 25.0 \\ LF = 92.6 \\ CF = 0.0 \end{matrix}$



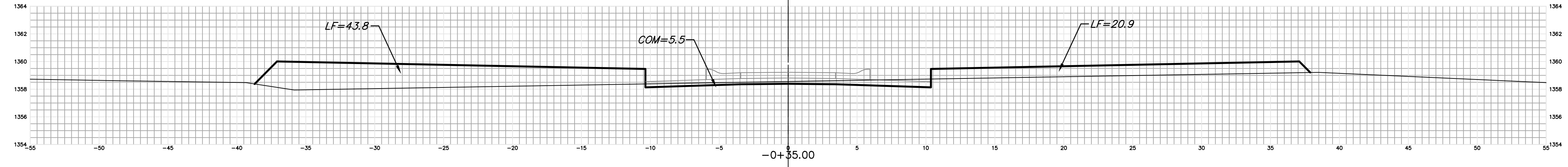
24.50' $\begin{matrix} EXC = 12.1 \\ LF = 43.6 \\ CF = 0.0 \end{matrix}$



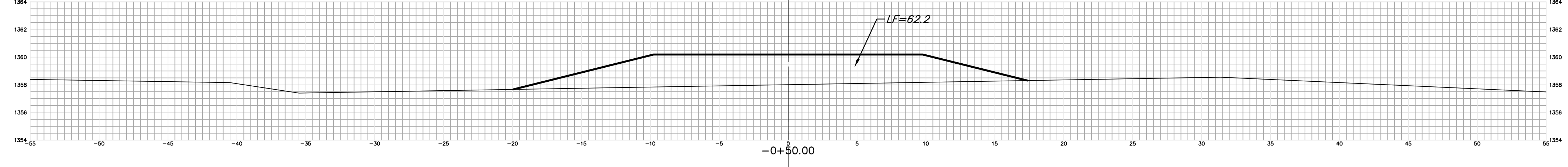
24.49' $\begin{matrix} EXC = 13.9 \\ LF = 36.5 \\ CF = 0.0 \end{matrix}$



15.00' $\begin{matrix} EXC = 8.0 \\ LF = 16.9 \\ CF = 2.7 \end{matrix}$



20.00' $\begin{matrix} EXC = 5.3 \\ LF = 32.4 \\ CF = 4.3 \end{matrix}$

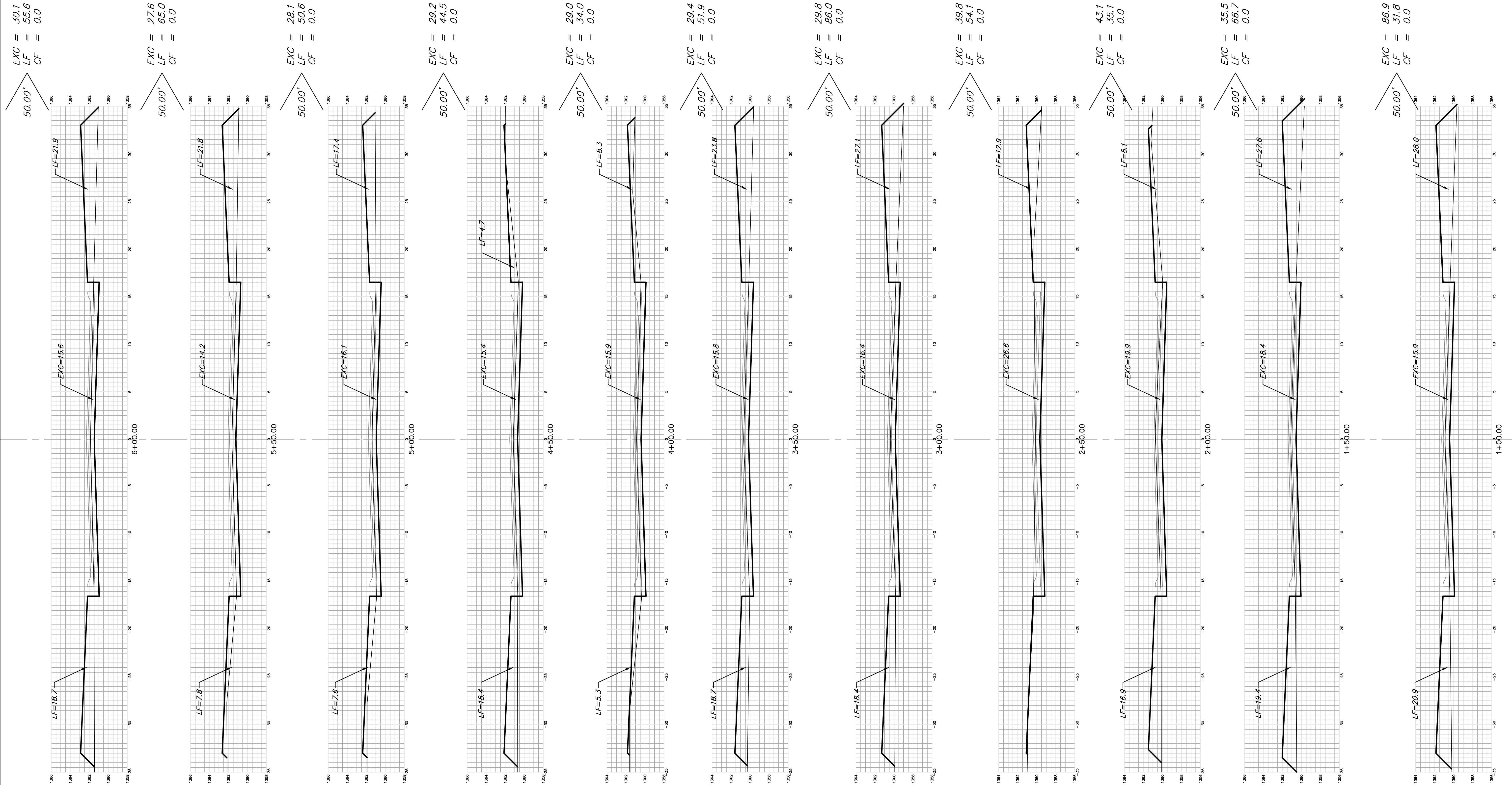


15.00' $\begin{matrix} EXC = 0.0 \\ LF = 35.3 \\ CF = 1.5 \end{matrix}$

ROCKHILL CT.

Sheet Totals
 Excavation = 64.3 C.Y.
 Loose Fill = 257.3 C.Y.
 Compacted Fill = 8.5 C.Y.

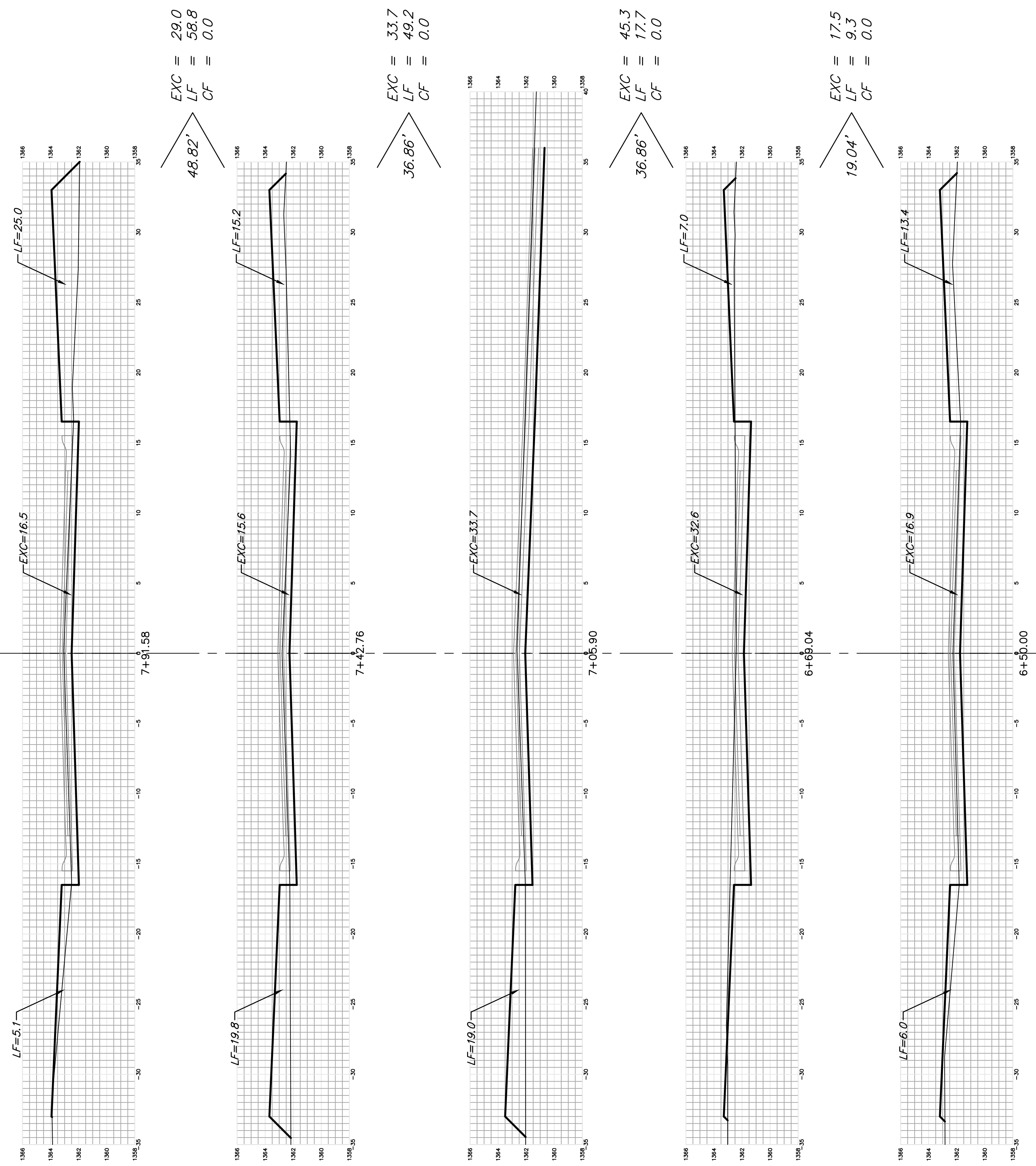




ROCKHILL CT.

Sheet Totals
 Excavation = 408.5 C.Y.
 Loose Fill = 575.3 C.Y.
 Compacted Fill = 0.0 C.Y.





ROCKHILL CT.

Sheet Totals
 Excavation = 125.5 C.Y.
 Loose Fill = 135.0 C.Y.
 Compacted Fill = 0.0 C.Y.

