

GENERAL NOTES:

1. The Contractor shall comply with all applicable safety regulations. All construction shall be completed following current City Standard Specifications and Special Provisions.

2. 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 1-888-249-3530
 Kansas Gas Service 1-888-482-4850
 Black Hills Energy 1-800-694-8889
 Westar 1-800-544-4857
 AT&T 1-800-246-8464
 City of Wichita Water Department 1-316-268-4555
 City of Wichita Sewer Maintenance 1-316-268-4073

3. Utility service lines, poles, etc. are to be adjusted as necessary by others prior to construction unless the plans specifically call for their adjustment by the Contractor or unless the plans specifically identify a utility to be adjusted by its owner during construction. Existing utilities and their location, as shown on the plans, represent the best information obtainable for design. The Contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.

4. 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.

5. 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.

6. 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.

7. 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.

8. The Water Distribution Division shall field locate water valves one time during construction when requested by the Contractor. It shall be the Contractor's responsibility to preserve such field locations during the construction process. Water valves, valve boxes or fire hydrants damaged during construction shall be repaired by Contractor at his own expense. Valve boxes and water meters within the project limits shall be adjusted to match field grades.

9. The Contractor shall notify the consultant engineer and Tom Mason with the City at 316-268-4574 with the anticipated construction start date and notify them of project completion. Staking and inspection for this project will be the responsibility of the Contractor.

10. If traffic is impeded by construction, a traffic control plan must be submitted and approved by the City Traffic Engineer, Brian Coon at brcoon@cityofwichita.gov before construction can begin. The Contractor shall be responsible for all traffic control measures to facilitate construction. All construction zone markings and signage shall conform to the latest version of the Manual on Uniform Traffic Control Devices (MUTCD) as published by the US Dept. of Transportation, Federal Highway Administration. All costs associated with construction markings and signage shall be the Contractor's responsibility.

11. All elevations shown are in NAVD88

12. All areas disturbed during construction that will not be under proposed pavement shall be restored to match existing conditions.

13. Any sidewalk, drive approach, or street pavement removed to construct project must have a pavement cut permit and be replaced by the City contractor. Permits can be obtained by calling 316-268-4501 or 316-268-4480.

14. A portion of excess excavated material shall be mounded around manholes which extend more than one (1) foot above the existing ground. Such mound shall be constructed with new development a six (6) foot diameter flat top with 4 to 1 side slopes down to the original ground. The elevation of the flat top of the mound shall be 0.4 foot below the top to the manhole.

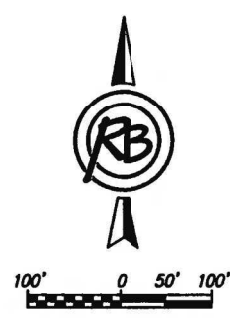
15. Geotechnical report available upon request.

16. Contractor shall limit the extent of trench openings overnight and weekends to less than 50 feet.

17. Contractor shall provide positive drainage away from all manhole covers.

18. City maintenance of storm sewer ends at right-of-way or easement line.

19. The inspecting firm shall submit to the City Stormwater Maintenance Division a digital copy of the CCTV inspection of the conduits and structures following construction. The digital file formation shall be compatible with the City input template. A copy of the template is available upon request at 316-268-4090.



Benchmarks

POINT #1
 SRB BRASS DISC 340' W. & 50' S. OF THE
 CENTERLINE INTERSECTION PAWNEE AVENUE &
 143RD STREET EAST,
 ELEVATION = 1315.65 (NAVD88, G12A)

POINT #2
 CHISELED SQUARE ON THE TOP OF CURB ON THE
 SOUTH END OF THE MEDIAN OF IRONSTONE, 55'
 N. OF THE CENTERLINE OF PAWNEE, SIERRA
 HILLS 2ND ADDITION
 ELEVATION = 1320.03 (NAVD88, G12A)

PRIVATE STORM WATER DRAIN
 to serve
Clear Ridge Townhomes

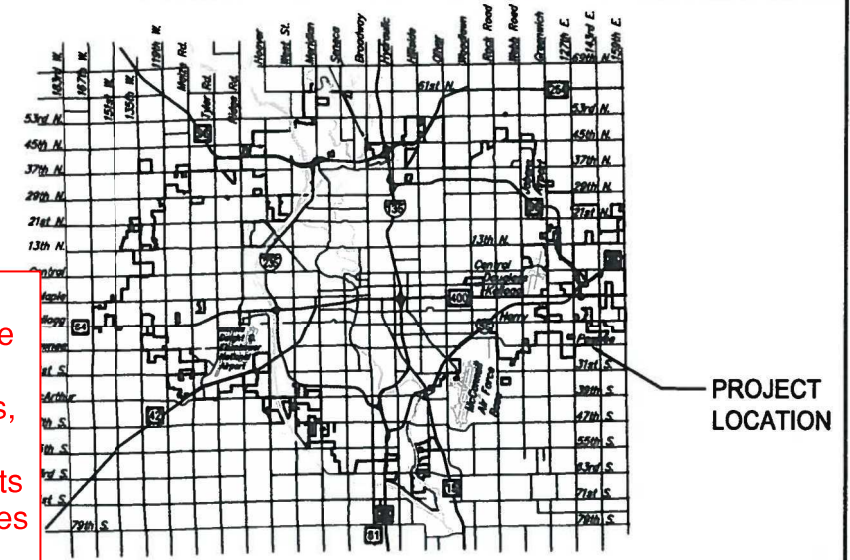
CITY OF WICHITA, KANSAS

Gary Janzen, P.E. City Engineer

Project Number
 0460 PPD (133119)

AS BUILT PLANS
 Contractor: Steve Miller
 Build Wichita
 Inspector: Dakota Zimmerman
 GARVER
 PDF By: 3/19/18 DGZ

Our Contract with the developer was to inspect the East & West drainage culverts. Grading of the lots, reserves and private roads was exempt. Refer to sheets 1-12 with respect to the notes above.
 DGZ 03-19-2018



Vicinity Map
Sheet Index

1. TITLE SHEET
2. SITE GRADING & STORM SEWER PLAN
3. FINAL GRADING PLAN - For information only
4. EROSION CONTROL PLAN
5. RIP RAP & SWS RESTRAIN COUPLER STANDARD DETAIL
- 6-10. EROSION CONTROL STANDARD DETAILS
11. ERU
12. COPY OF PLAT
13. TYPICAL SECTIONS - For information only
- 14-16. PAVING PLANS - For information only
- 17-21. VALLEY GUTTER DETAILS - For information only
- 22-24. STANDARD PAVING & SIGN DETAILS - For information only

The following Standard Details are available on the City's website.
 (SW-101) TYPE 1 INLET
 (SW-301) PRECAST MANHOLE DETAILS
 (SW-303) MH FRAME & COVER DETAILS
 (SW-501 thru SW-505) EROSION CONTROL DETAILS

APPROVED AS NOTED
 BY WICHITA PUBLIC WORKS ENGINEERING
 AND STORMWATER DIVISION
 Engineering *Rebecca [Signature]* 8/4/17
 Stormwater *Joe Hill [Signature]* PE 8/4/17

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 in the state of Kansas. No work shall be performed 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 current City of Wichita Specifications and Standards and Special Provisions. (on file and available at Wichita.gov).

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



Stormwater Certification:
 New Development

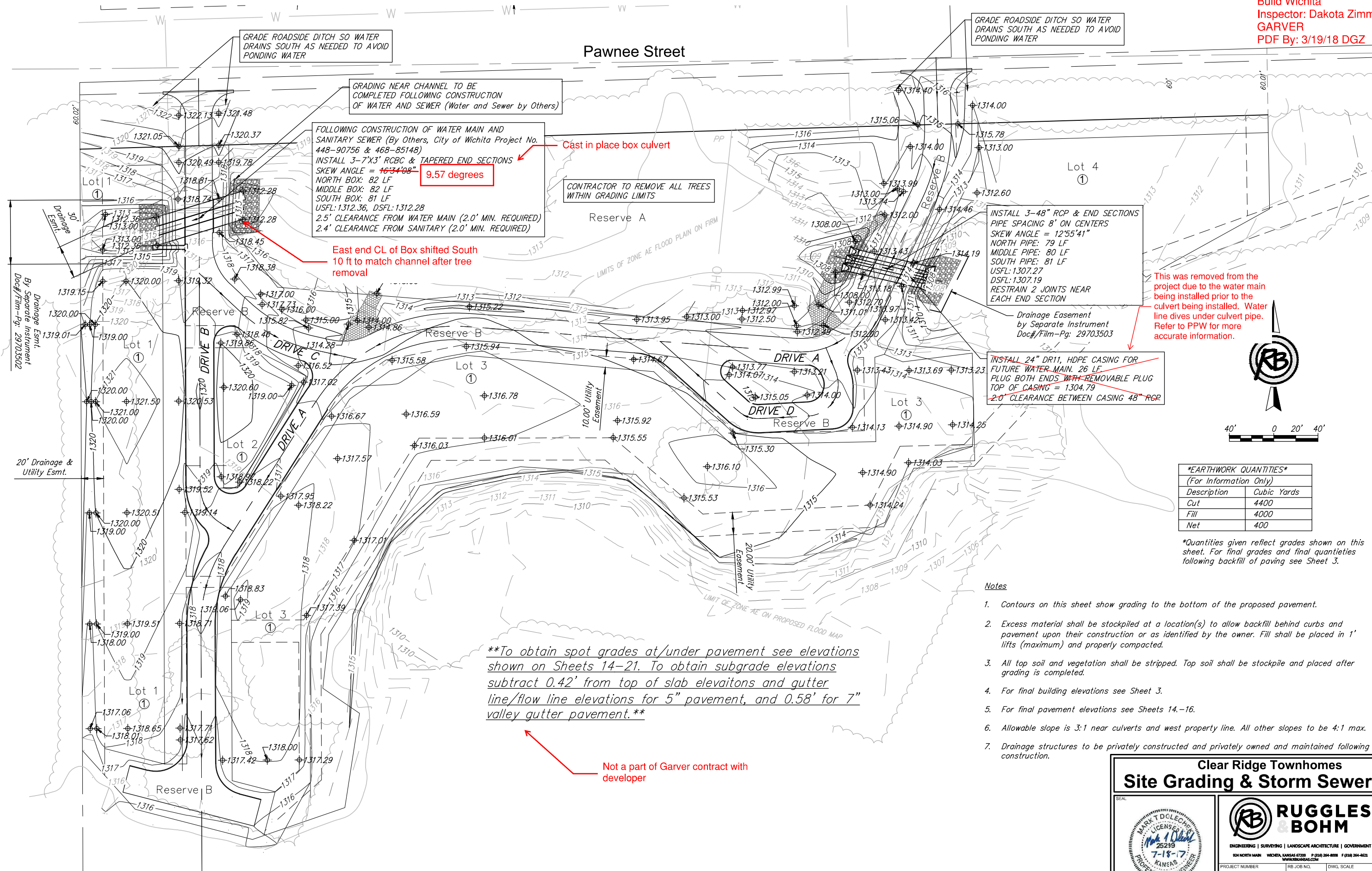
These construction plans were prepared in accordance with the current Stormwater Management Regulations as set forth in the City of Wichita's Stormwater Management Ordinance 16.32 and the policies/guidelines presented in the Wichita/Sedgwick County Stormwater Manual.

Disturbed Area = 6.27
 Water Quality Treatment: Offsite
 Downstream Channel Protection: NA
 Detention: NA
 The BMP used for this development is offsite.

July 2017



ENGINEERING | SURVEYING | LANDSCAPE ARCHITECTURE | GOVERNMENT
 834 NORTH MAIN WICHITA, KANSAS 67208 P (316) 264-6008 F (316) 264-4521
 WWW.RUGGLESANDBOHM.COM



FOLLOWING CONSTRUCTION OF WATER MAIN AND SANITARY SEWER (By Others, City of Wichita Project No. 448-90756 & 468-85148)
 INSTALL 3-7'X3' RCBC & TAPERED END SECTIONS
 SKEW ANGLE = ~~16°34'08"~~ **9.57 degrees**
 NORTH BOX: 82 LF
 MIDDLE BOX: 82 LF
 SOUTH BOX: 81 LF
 USFL: 1312.36, DSFL: 1312.28
 2.5' CLEARANCE FROM WATER MAIN (2.0' MIN. REQUIRED)
 2.4' CLEARANCE FROM SANITARY (2.0' MIN. REQUIRED)

GRADE ROADSIDE DITCH SO WATER DRAINS SOUTH AS NEEDED TO AVOID PONDING WATER

GRADING NEAR CHANNEL TO BE COMPLETED FOLLOWING CONSTRUCTION OF WATER AND SEWER (Water and Sewer by Others)

CONTRACTOR TO REMOVE ALL TREES WITHIN GRADING LIMITS

INSTALL 3-48" RCP & END SECTIONS
 PIPE SPACING 8' ON CENTERS
 SKEW ANGLE = 12°55'41"
 NORTH PIPE: 79 LF
 MIDDLE PIPE: 80 LF
 SOUTH PIPE: 81 LF
 USFL: 1307.27
 DSFL: 1307.19
 RESTRAIN 2 JOINTS NEAR EACH END SECTION

This was removed from the project due to the water main being installed prior to the culvert being installed. Water line dives under culvert pipe. Refer to PPW for more accurate information.

INSTALL 24" DR11, HDPE CASING FOR FUTURE WATER MAIN. 26 LF
 PLUG BOTH ENDS WITH REMOVABLE PLUG
 TOP OF CASING = 1304.79
 2.0' CLEARANCE BETWEEN CASING & RGP



EARTHWORK QUANTITIES
 (For Information Only)

Description	Cubic Yards
Cut	4400
Fill	4000
Net	400

*Quantities given reflect grades shown on this sheet. For final grades and final quantities following backfill of paving see Sheet 3.

Notes

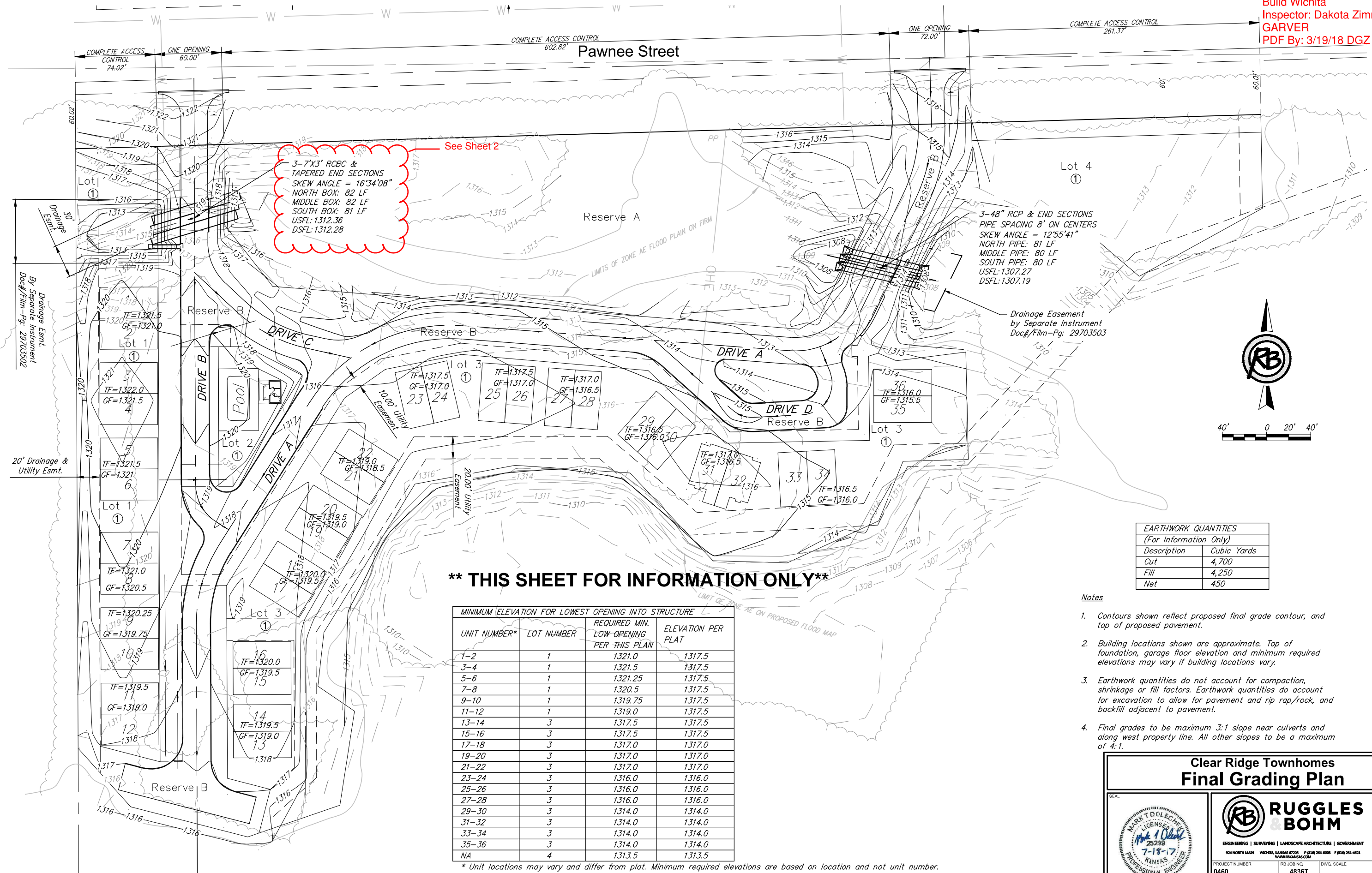
- Contours on this sheet show grading to the bottom of the proposed pavement.
- Excess material shall be stockpiled at a location(s) to allow backfill behind curbs and pavement upon their construction or as identified by the owner. Fill shall be placed in 1' lifts (maximum) and properly compacted.
- All top soil and vegetation shall be stripped. Top soil shall be stockpile and placed after grading is completed.
- For final building elevations see Sheet 3.
- For final pavement elevations see Sheets 14.-16.
- Allowable slope is 3:1 near culverts and west property line. All other slopes to be 4:1 max.
- Drainage structures to be privately constructed and privately owned and maintained following construction.

****To obtain spot grades at/under pavement see elevations shown on Sheets 14-21. To obtain subgrade elevations subtract 0.42' from top of slab elevations and gutter line/flow line elevations for 5" pavement, and 0.58' for 7" valley gutter pavement.****

Not a part of Garver contract with developer

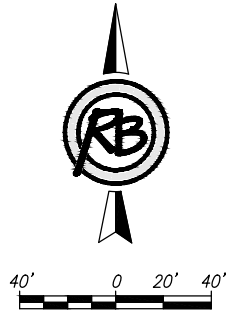
**Clear Ridge Townhomes
 Site Grading & Storm Sewer Plan**

	RUGGLES & BOHM		DATE July 2017
	<small>ENGINEERING SURVEYING LANDSCAPE ARCHITECTURE GOVERNMENT</small> <small>524 NORTH MAIN WICHITA, KANSAS 67208 P (316) 264-8008 F (316) 264-4621</small> <small>WWW.RUGGLESANDBOHM.COM</small>		DESIGN MTD
PROJECT NUMBER 0460	RB JOB NO. 4836T	DWGL SCALE ...	DRAWN MTD
DRAWING FILE 4836 Private Paving and Drainage Plans [Site Grading & Storm Sewer Plan]			REVIEW KWL
			SHEET 2



See Sheet 2
 3-7'X3' RCBC & TAPERED END SECTIONS
 SKEW ANGLE = 16°34'08"
 NORTH BOX: 82 LF
 MIDDLE BOX: 82 LF
 SOUTH BOX: 81 LF
 USFL: 1312.36
 DSFL: 1312.28

3-48" RCP & END SECTIONS
 PIPE SPACING 8' ON CENTERS
 SKEW ANGLE = 12°55'41"
 NORTH PIPE: 81 LF
 MIDDLE PIPE: 80 LF
 SOUTH PIPE: 80 LF
 USFL: 1307.27
 DSFL: 1307.19



**** THIS SHEET FOR INFORMATION ONLY ****

EARTHWORK QUANTITIES (For Information Only)	
Description	Cubic Yards
Cut	4,700
Fill	4,250
Net	450

Notes

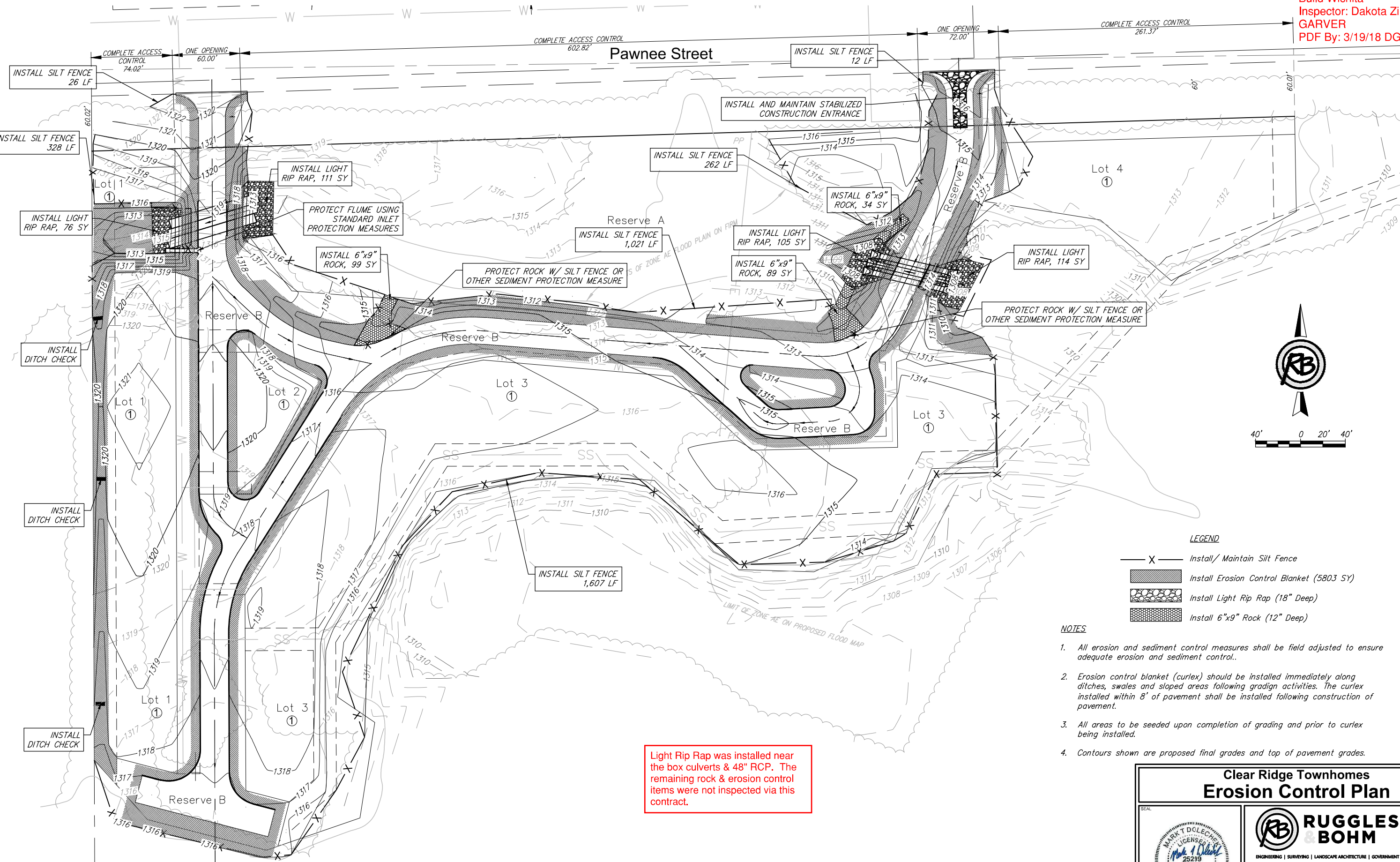
- Contours shown reflect proposed final grade contour, and top of proposed pavement.
- Building locations shown are approximate. Top of foundation, garage floor elevation and minimum required elevations may vary if building locations vary.
- Earthwork quantities do not account for compaction, shrinkage or fill factors. Earthwork quantities do account for excavation to allow for pavement and rip rap/rock, and backfill adjacent to pavement.
- Final grades to be maximum 3:1 slope near culverts and along west property line. All other slopes to be a maximum of 4:1.

MINIMUM ELEVATION FOR LOWEST OPENING INTO STRUCTURE			
UNIT NUMBER*	LOT NUMBER	REQUIRED MIN. LOW-OPENING PER THIS PLAN	ELEVATION PER PLAT
1-2	1	1321.0	1317.5
3-4	1	1321.5	1317.5
5-6	1	1321.25	1317.5
7-8	1	1320.5	1317.5
9-10	1	1319.75	1317.5
11-12	1	1319.0	1317.5
13-14	3	1317.5	1317.5
15-16	3	1317.5	1317.5
17-18	3	1317.0	1317.0
19-20	3	1317.0	1317.0
21-22	3	1317.0	1317.0
23-24	3	1316.0	1316.0
25-26	3	1316.0	1316.0
27-28	3	1316.0	1316.0
29-30	3	1314.0	1314.0
31-32	3	1314.0	1314.0
33-34	3	1314.0	1314.0
35-36	3	1314.0	1314.0
NA	4	1313.5	1313.5

* Unit locations may vary and differ from plat. Minimum required elevations are based on location and not unit number.

**Clear Ridge Townhomes
Final Grading Plan**

	<p>RUGGLES & BOHM ENGINEERING SURVEYING LANDSCAPE ARCHITECTURE GOVERNMENT 924 NORTH MAIN WICHITA, KANSAS 67208 P (316) 264-8008 F (316) 264-4622 WWW.RUGGLESANDBOHM.COM</p>	<p>DATE July 2017</p> <p>DESIGN MTD</p> <p>DRAWN MTD</p> <p>REVIEW KWL</p> <p>SHEET 3</p>	<p>PROJECT NUMBER 0460</p> <p>RB JOB NO. 4836T</p> <p>DWL SCALE ...</p> <p>DRAWING FILE 4836 Private Paving and Drainage Plans [Final Grading Plan]</p> <p>OF 24</p>
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Light Rip Rap was installed near the box culverts & 48" RCP. The remaining rock & erosion control items were not inspected via this contract.

LEGEND

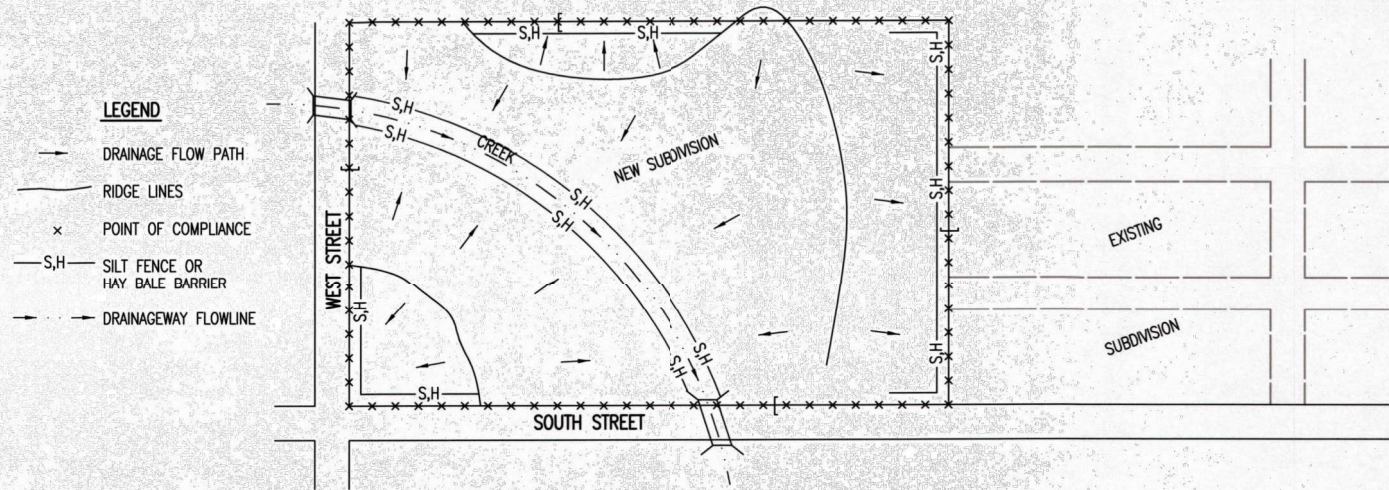
- X — Install/ Maintain Silt Fence
- ▨ Install Erosion Control Blanket (5803 SY)
- ▩ Install Light Rip Rap (18" Deep)
- ▧ Install 6"x9" Rock (12" Deep)

NOTES

1. All erosion and sediment control measures shall be field adjusted to ensure adequate erosion and sediment control.
2. Erosion control blanket (curlex) should be installed immediately along ditches, swales and sloped areas following gradign activities. The curlex installed within 8' of pavement shall be installed following construction of pavement.
3. All areas to be seeded upon completion of grading and prior to curlex being installed.
4. Contours shown are proposed final grades and top of pavement grades.

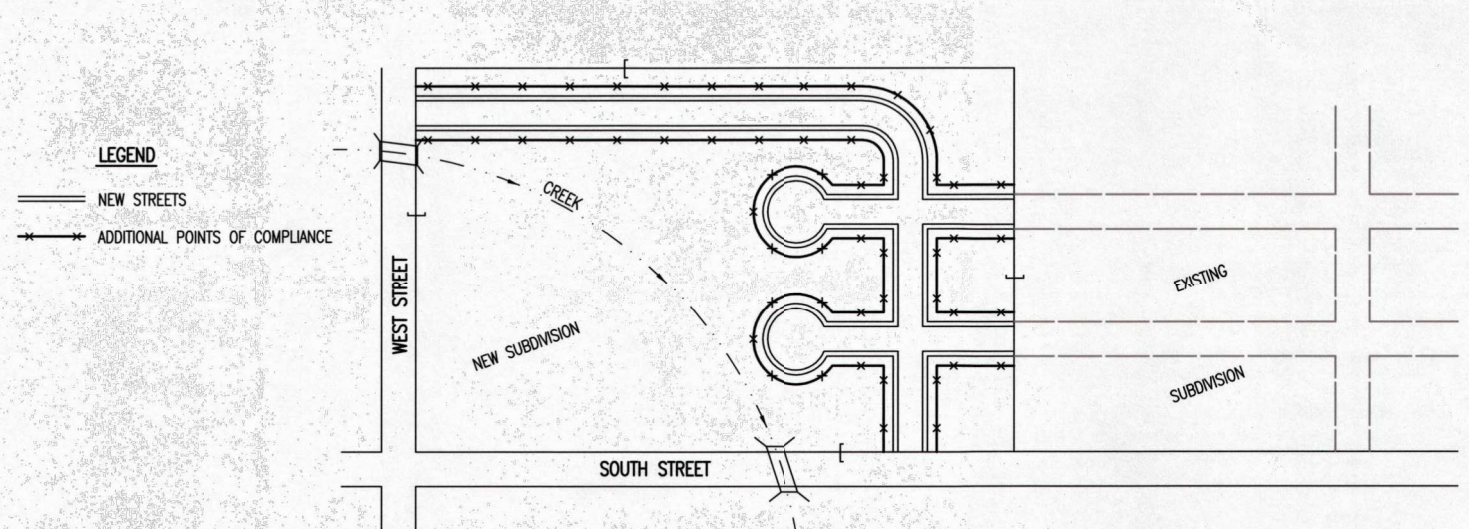
Clear Ridge Townhomes		Erosion Control Plan	
	RUGGLES & BOHM		DATE July 2017
	<small>ENGINEERING SURVEYING LANDSCAPE ARCHITECTURE GOVERNMENT</small> <small>924 NORTH MAIN WICHITA, KANSAS 67208 P (316) 264-8008 F (316) 264-4821</small> <small>WWW.RUGGLESANDBOHM.COM</small>		DESIGN MTD
PROJECT NUMBER 0460	RB JOB NO. 4836T	DWG SCALE ...	DRAWN MTD
DRAWING FILE 4836 Private Paving and Drainage Plans [Erosion Control Plan]		REVIEW KWL	SHEET 4
		OF 24	

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



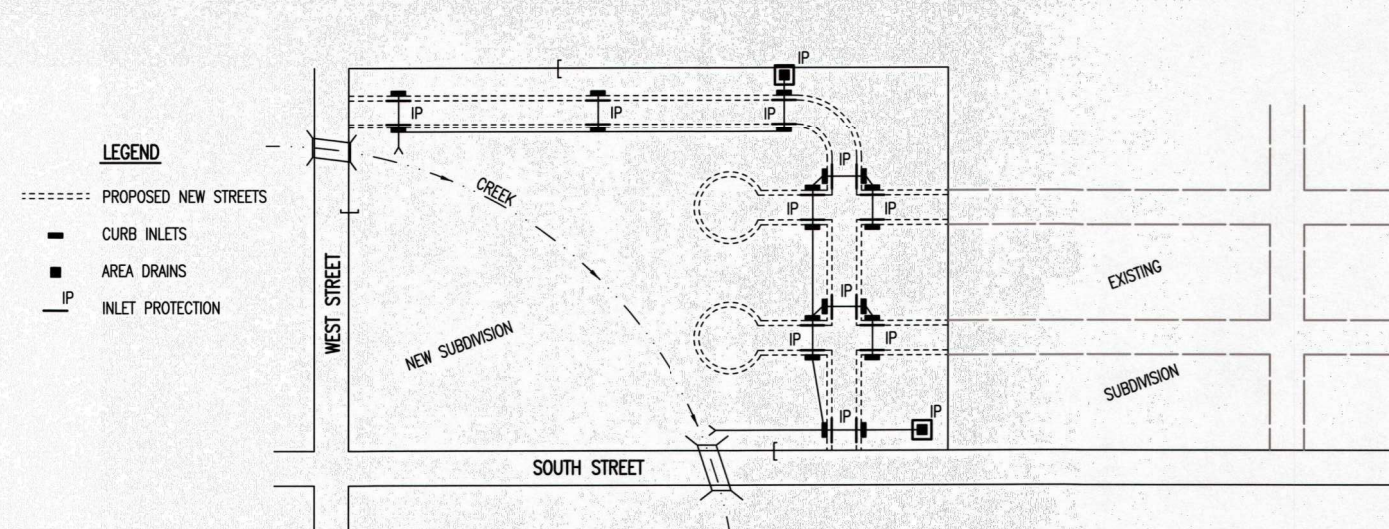
- LEGEND**
- DRAINAGE FLOW PATH
 - RIDGE LINES
 - x POINT OF COMPLIANCE
 - S,H- SILT FENCE OR HAY BALE BARRIER
 - DRAINAGEWAY FLOWLINE
1. DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, THE POINTS OF COMPLIANCE ARE THE PERIMETER BOUNDARIES AND ANY DRAINAGE WAYS OR STORM SEWERS DRAINING THROUGH OR FROM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

PHASE 2 - INSTALLATION OF STORM SEWER

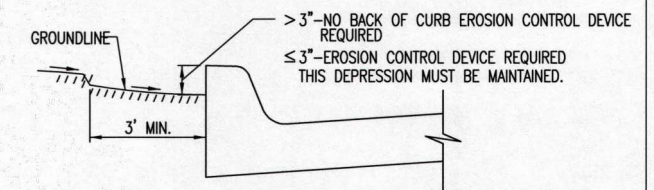


- LEGEND**
- PROPOSED NEW STREETS
 - CURB INLETS
 - AREA DRAINS
 - IP INLET PROTECTION
1. DURING THIS PHASE OF SUBDIVISION DEVELOPMENT, ALL EROSION CONTROL DEVICES REQUIRED IN PHASE 1 SHALL REMAIN IN PLACE AND BE MAINTAINED.
 2. AS NEW STORM SEWERS, WITH INLETS, ARE INSTALLED, THE STORM SEWERS MUST NOW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

GENERAL NOTES

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

SEE DETAIL SHEET FOR BACK OF CURB PROTECTION DETAIL



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.

REVISION DATE: MAY 2013

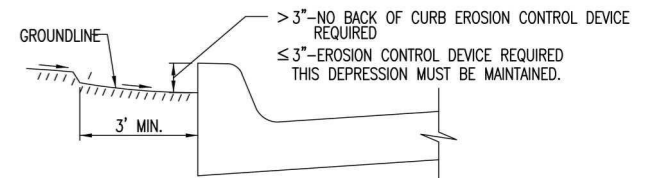
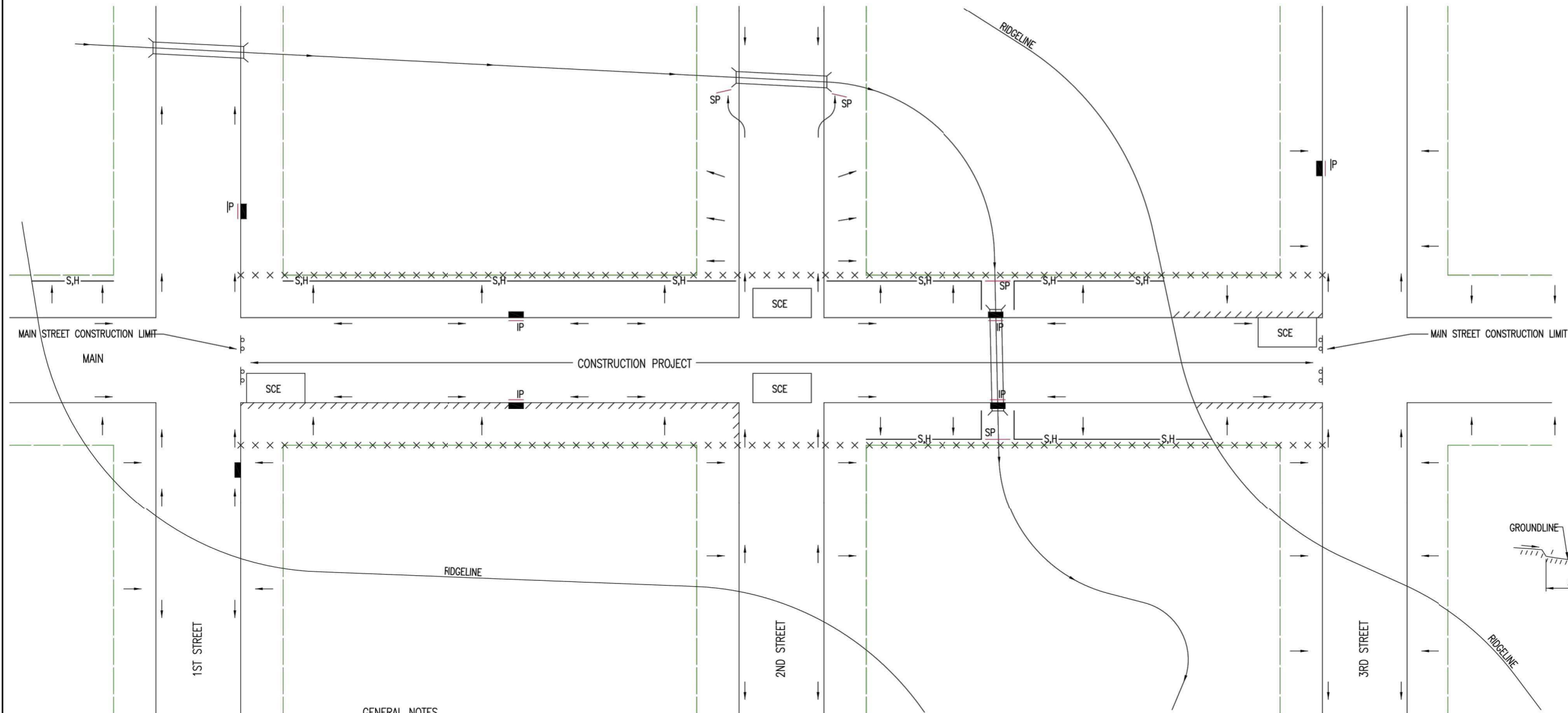


CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

SUBDIVISION DEVELOPMENT PROCESS		
CITY ENGINEER GARY JANZEN, P.E.		
PROJECT NUMBER 0460	OCA NUMBER	DATE
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		SHEET 6
		24

GENERAL NOTES

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



CURB BACKFILL DETAIL

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

GENERAL NOTES

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

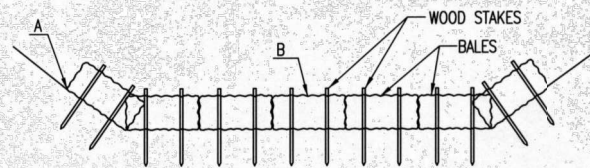
LEGEND

- R-O-W LIMITS
- DRAINAGE FLOW PATH
- R/W LIMIT WITHIN CONSTRUCTION LIMIT
- STORM WATER INLETS
- INLET PROTECTION
- SILT FENCE OR HAY BALE BARRIER
- STREAM PROTECTION
- STABILIZED CONSTRUCTION ENTRANCE
- BACK OF CURB PROTECTION



<p>CITY OF WICHITA PUBLIC WORKS & UTILITIES ENGINEERING DIVISION</p>			REVISION: JUNE 2015		
			<p>STREET IMPROVEMENT PROJECTS</p> <p>CITY ENGINEER GARY JANZEN, P.E.</p>		
PROJECT NUMBER	OCA NUMBER	DATE			
0460					
CITY ENGINEER'S OFFICE			SHEET		
CITY HALL - SEVENTH FLOOR			7		
455 NORTH MAIN STREET					
WICHITA, KANSAS 67202-1620					
(316) 268-4501			24		

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



STRAW BALE DITCH CHECKS

MATERIAL SPECIFICATION:

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

PLACEMENT:

BALE DITCH CHECKS SHOULD BE PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH. THE DITCH CHECK SHOULD EXTEND FAR ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE CHECK IS HIGHER THAN THE TOP OF THE LOWEST CENTER BALE. THIS PREVENTS WATER FROM FLOWING AROUND THE CHECK.

STRAW BALE DITCH CHECKS SHOULD NOT BE PLACED IN DITCHES WHERE HIGH FLOWS ARE EXPECTED. ROCK CHECKS SHOULD BE USED INSTEAD.

BALES SHOULD BE PLACED IN DITCHES WITH SLOPES OF 6% OR LESS. FOR SLOPES STEEPER THAN 6%, ROCK CHECKS SHOULD BE USED.

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

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

PROPER INSTALLATION METHOD:

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

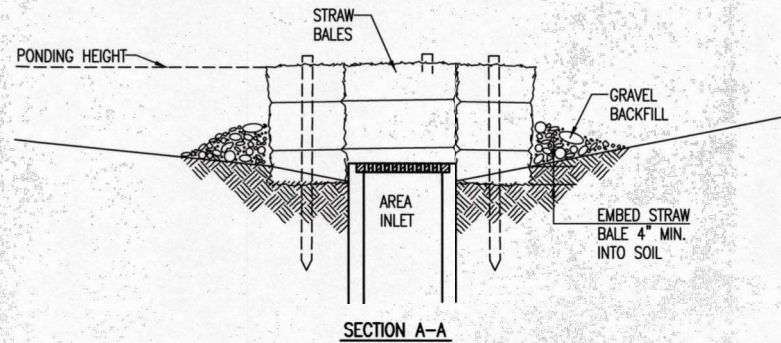
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

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

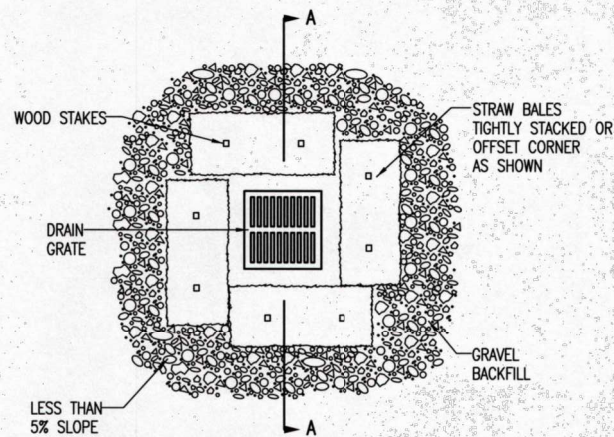
INSPECTION AND MAINTENANCE:

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

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



SECTION A-A



STRAW BALE BARRIERS FOR AREA INLETS (INLET PROTECTION)

MATERIAL SPECIFICATION:

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

PLACEMENT:

BALE AREA INLET BARRIERS SHOULD BE PLACED DIRECTLY AROUND THE PERIMETER OF A DROP INLET. WHEN A BALE AREA INLET BARRIER IS LOCATED NEAR AN INLET THAT HAS STEEP APPROACH SLOPES, THE STORAGE CAPACITY BEHIND THE BARRIER IS 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.

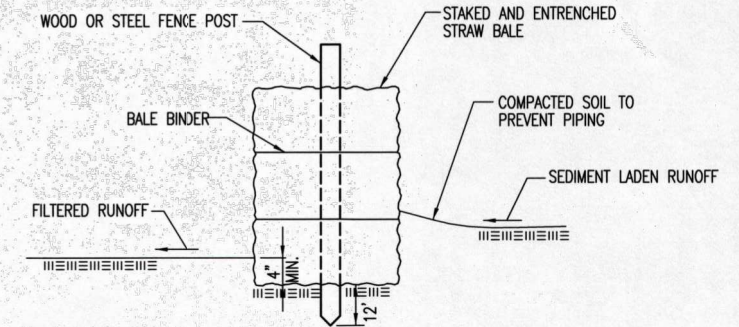
LIST OF COMMON PLACEMENT INSTALLATION MISTAKES TO AVOID:

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 OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

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



STRAW BALE BARRIERS

MATERIAL SPECIFICATION:

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

PLACEMENT:

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

PROPER INSTALLATION METHOD:

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

LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

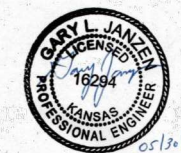
WHEN PRACTICAL, DO NOT PLACE BALE SLOPE BARRIERS ACROSS CONTOURS. SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. CONCENTRATED FLOW OVER A SLOPE BARRIER CREATES A SCOUR HOLE ON THE DOWNSLOPE SIDE OF THE BARRIER. THE SCOUR HOLE EVENTUALLY UNDERMINES THE BALES AND THE BARRIER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


INSPECTION AND MAINTENANCE:

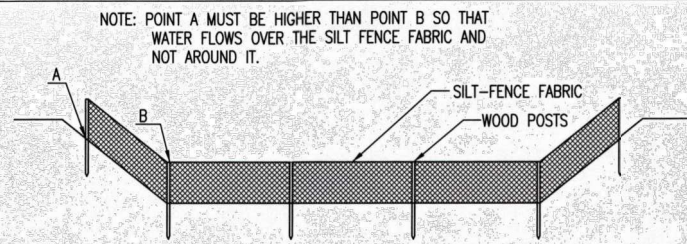
BALE SLOPE BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

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

REVISION DATE: MAY 2013



 CITY OF WICHITA PUBLIC WORKS & UTILITIES ENGINEERING DIVISION			STRAW BALE DITCH CHECK AND BARRIER DETAILS		
			CITY ENGINEER GARY JANZEN, P.E.		
PROJECT NUMBER	OCA NUMBER	DATE			
0460					
CITY ENGINEER'S OFFICE		SHEET			
CITY HALL - SEVENTH FLOOR		8			
455 NORTH MAIN STREET					
WICHITA, KANSAS 67202-1620					
(316) 268-4501				24	



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 DOWNSLOPE 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 UPSLOPE SIDE OF THE TRENCH TO CLEAR AN AREA FOR DRIVING IN THE POSTS. JUST DOWNSLOPE OF THE TRENCH, DRIVE POSTS INTO THE GROUND TO A DEPTH OF AT LEAST 24". PLACE POSTS NO MORE THAN 4' APART. ATTACH THE SILT FENCE TO THE ANCHORED POST WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

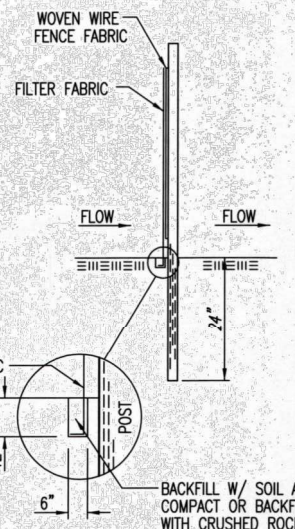
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

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

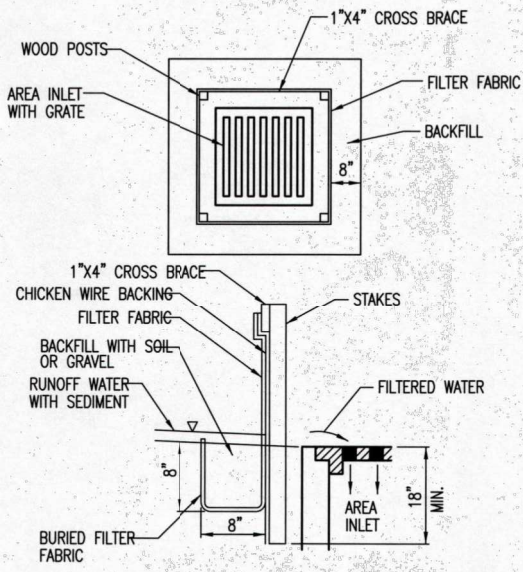
INSPECTION AND MAINTENANCE:

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

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



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.

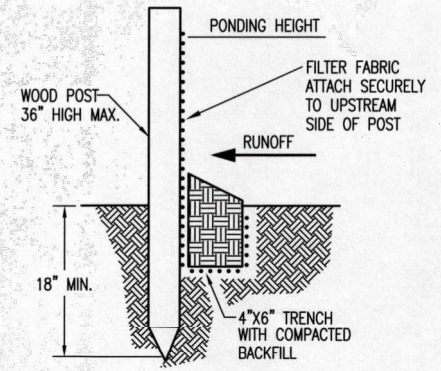
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

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 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?
- DOES THE SILT FENCES SAG EXCESSIVELY?
- HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
- DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE SLOPE BARRIER?

REVISION DATE: MAY 2013



CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

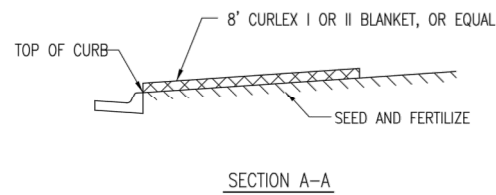
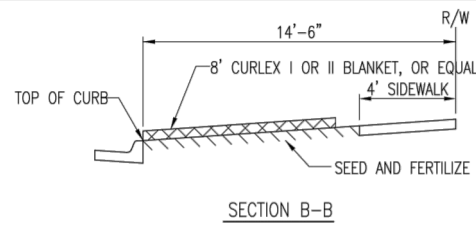
SILT FENCE DITCH CHECK AND BARRIER DETAILS

CITY ENGINEER
GARY JANZEN, P.E.

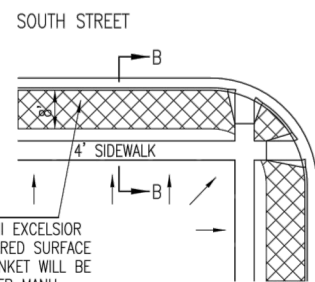
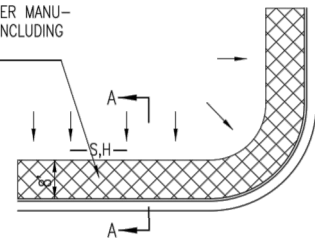
PROJECT NUMBER	OCA NUMBER	DATE
0460		

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

SHEET
9
24



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)

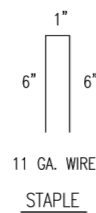
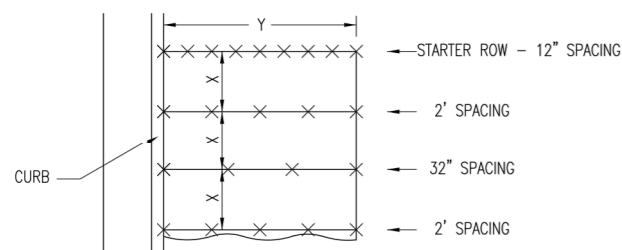


INSTALL 8' WIDE CURLEX I OR II EXCELSIOR BLANKET, OR EQUAL, ON PREPARED SURFACE BACK OF CURB. EDGE OF BLANKET WILL BE AT BACK OF CURB. INSTALL PER MANUFACTURERS RECOMMENDATION, INCLUDING STAPLES. (SEE DETAIL)

GENERAL NOTES

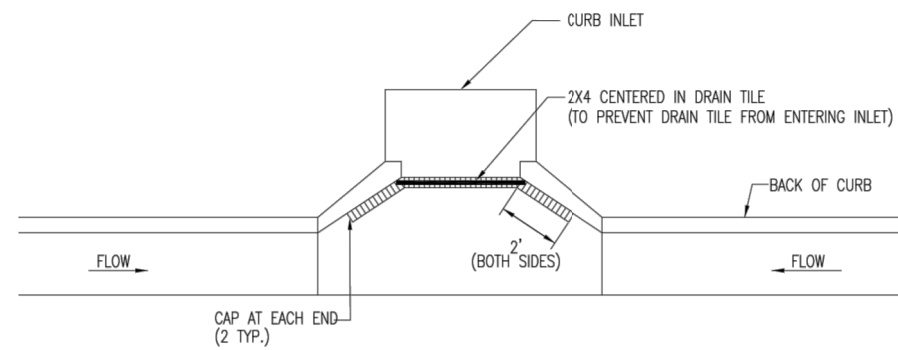
- EXCELSIOR MAT TO BE INSTALLED WHEN SOD IS NOT SPECIFIED ON PROJECT.
- EXCELSIOR BLANKET TO BE INSTALLED OVER SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
- AFTER INSTALLATION OF EXCELSIOR BLANKET, AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB AND INTO THE GUTTER,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

BACK OF CURB PROTECTION DETAIL



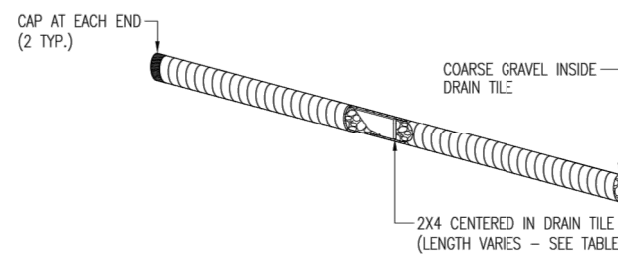
NOTES: USE 6" SEAM OVERLAP
(X & Y = RECOMMENDED BY MANUFACTURE)

DETAILS FOR APPROVED EROSION CONTROL MAT

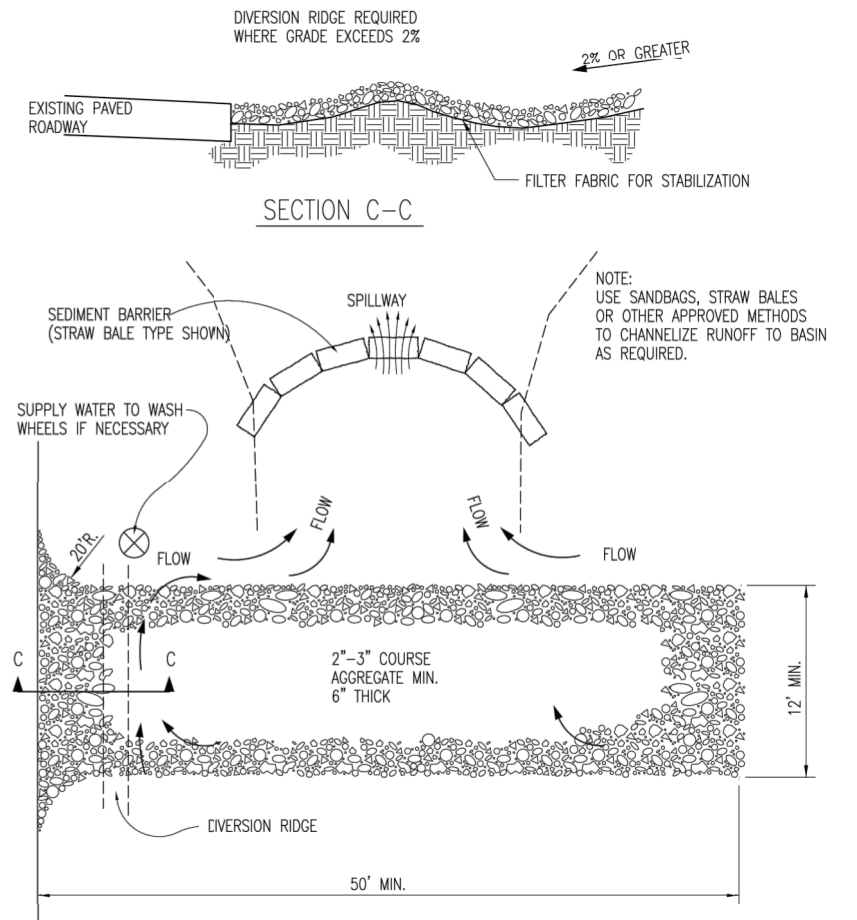


NOTE: PLACE 4" PERFORATED PVC PIPE, FILLED WITH 1/2"-1" DIA. GRAVEL, IN FRONT OF CURB INLET AS SHOWN.

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.

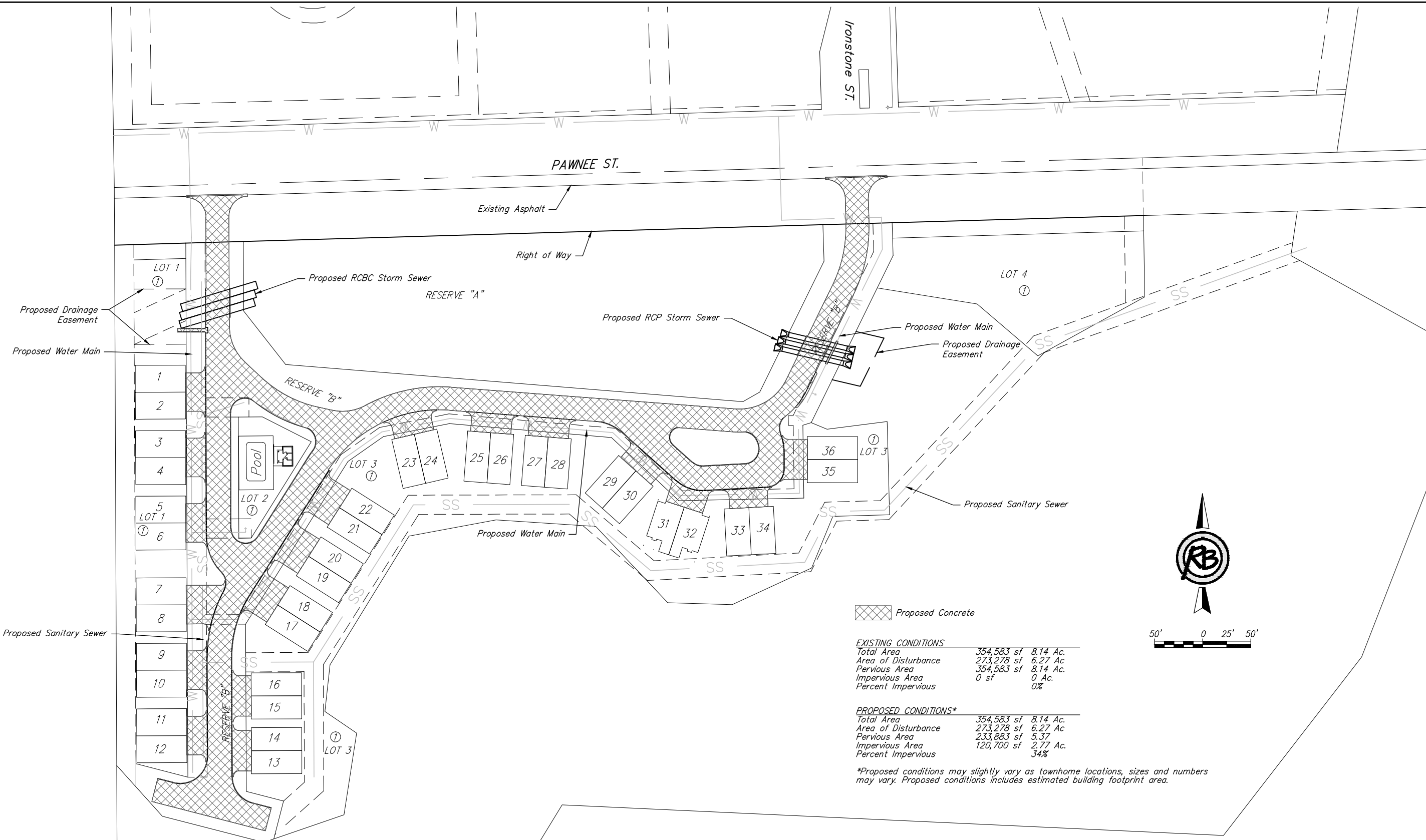
REVISION DATE: MAY 2013



CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

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

CITY ENGINEER GARY JANZEN, P.E.		
PROJECT NUMBER 0460	OCA NUMBER	DATE
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		SHEET 10 24



Proposed Concrete

EXISTING CONDITIONS

Total Area	354,583 sf	8.14 Ac.
Area of Disturbance	273,278 sf	6.27 Ac.
Pervious Area	354,583 sf	8.14 Ac.
Impervious Area	0 sf	0 Ac.
Percent Impervious		0%

PROPOSED CONDITIONS*

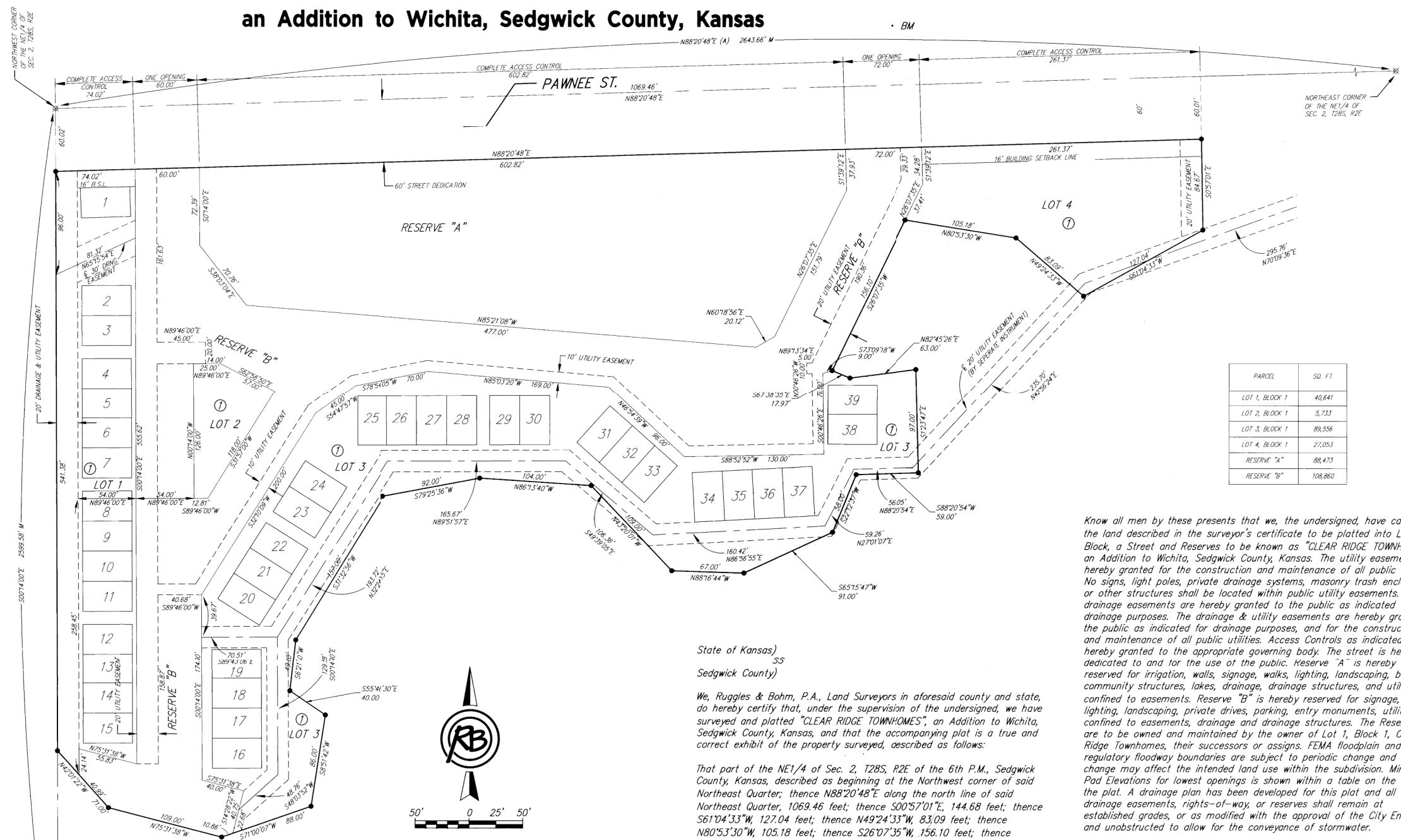
Total Area	354,583 sf	8.14 Ac.
Area of Disturbance	273,278 sf	6.27 Ac.
Pervious Area	233,883 sf	5.37
Impervious Area	120,700 sf	2.77 Ac.
Percent Impervious		34%

*Proposed conditions may slightly vary as townhome locations, sizes and numbers may vary. Proposed conditions includes estimated building footprint area.

CLEAR RIDGE TOWNHOMES ERU		
	RUGGLES & BOHM	DATE July 2017
	<small>ENGINEERING SURVEYING LANDSCAPE ARCHITECTURE GOVERNMENT</small> <small>924 NORTH MAIN WICHITA, KANSAS 67208 P (316) 264-8008 F (316) 264-4822</small> <small>WWW.RUGGLESANDBOHM.COM</small>	DESIGN MTD
PROJECT NUMBER 0460	RB JOB NO. 4836T	DWGL SCALE ...
DRAWING FILE 4836T Engineering Base [ERU]		REVIEW BT
		SHEET 11 OF 24

CLEAR RIDGE TOWNHOMES

an Addition to Wichita, Sedgwick County, Kansas



PARCEL	SQ. FT.
LOT 1, BLOCK 1	40,641
LOT 2, BLOCK 1	5,733
LOT 3, BLOCK 1	89,556
LOT 4, BLOCK 1	27,053
RESERVE "A"	88,473
RESERVE "B"	108,860

BLOCK	LOT NO. / UNITS	ELEVATION (NAVD88)
1	1+3 / 1-19	1317.5
1	3 / 20-24	1317.0
1	3 / 25-30	1316.0
1	3 / 31-39	1314.0
1	4	1313.5

BUILDING SETBACKS:
There will be a zero building setback unless shown on the plot

(A) = Assumed Kansas Zone South Grid Bearing
 W = Measured
 D = Described
 B.S.L. = Building Setback Line

SURVEY MARKER LEGEND

- 1/2" REBAR WITH L.D. HIGH CAP (FOUND)
- 5/8" REBAR WITH CAP (FOUND - ORIGIN UNKNOWN)
- 1/2" REBAR W/RUGGLES & BOHM CAP (SET)

UNIT LOCATION IS CONCEPTUAL AND IS ONLY FOR THE PURPOSE OF ESTABLISHING MINIMUM PAD ELEVATIONS. ANY REVISIONS MUST COMPLY WITH CITY CODE.

BENCH MARK: S88 BRASS DISC 340' W. & 50' S. OF THE CENTERLINE INTERSECTION PANNEE AVENUE & 143RD STREET EAST
 ELEVATION = 1315.65 (NAVD88, G124)

ON-SITE BENCHMARK: CHISELED SQUARE ON THE TOP OF CURB ON THE SOUTH END OF THE MEDIAN OF IRONSTONE, 55' N. OF THE CENTERLINE OF PANNEE, SIERRA HILLS 2ND ADDITION,
 ELEVATION = 1320.03 (NAVD88, G124)

State of Kansas)
 Sedgwick County)

We, Ruggles & Bohm, P.A., Land Surveyors in aforesaid county and state, do hereby certify that, under the supervision of the undersigned, we have surveyed and platted "CLEAR RIDGE TOWNHOMES", an Addition to Wichita, Sedgwick County, Kansas, and that the accompanying plat is a true and correct exhibit of the property surveyed, described as follows:

That part of the NE1/4 of Sec. 2, T28S, R2E of the 6th P.M., Sedgwick County, Kansas, described as beginning at the Northwest corner of said Northeast Quarter, 1069.46 feet; thence N88°20'48"E along the north line of said Northeast Quarter, 1069.46 feet; thence S00°57'01"E, 144.68 feet; thence S61°04'33"W, 127.04 feet; thence N49°24'33"W, 83.09 feet; thence N80°53'30"W, 105.18 feet; thence S26°07'35"W, 156.10 feet; thence S67°38'35"E, 17.97 feet; thence N82°45'26"E, 63.00 feet; thence S01°23'47"E, 97.00 feet; thence S88°20'54"W, 59.00 feet; thence S22°12'37"W, 58.00 feet; thence S65°15'47"W, 91.00 feet; thence N88°16'44"W, 67.00 feet; thence N43°20'01"W, 109.00 feet; thence N86°13'40"W, 104.00 feet; thence S79°25'36"W, 92.00 feet; thence S31°32'56"W, 157.00 feet; thence S06°21'10"W, 49.00 feet; thence S55°46'30"E, 40.00 feet; thence S08°51'42"W, 86.00 feet; thence S71°00'07"W, 88.00 feet; thence N75°31'38"W, 109.00 feet; thence N42°01'22"W, 71.00 feet to the west line of said NE1/4; thence N00°14'00"W along said west line, 601.40 feet to the place of beginning.

All public easements and dedications are hereby vacated by virtue of K.S.A. 12-512b, as amended.

Ruggles & Bohm, P.A.
 William K. Clevenger Land Surveyor

Know all men by these presents that we, the undersigned, have caused the land described in the surveyor's certificate to be platted into Lots, a Block, a Street and Reserves to be known as "CLEAR RIDGE TOWNHOMES", an Addition to Wichita, Sedgwick County, Kansas. The utility easements are hereby granted for the construction and maintenance of all public utilities. No signs, light poles, private drainage systems, masonry trash enclosures or other structures shall be located within public utility easements. The drainage easements are hereby granted to the public as indicated for drainage purposes. The drainage & utility easements are hereby granted to the public as indicated for drainage purposes, and for the construction and maintenance of all public utilities. Access Controls as indicated are hereby granted to the appropriate governing body. The street is hereby dedicated to and for the use of the public. Reserve "A" is hereby reserved for irrigation, walls, signage, walks, lighting, landscaping, berms, community structures, lakes, drainage, drainage structures, and utilities confined to easements. Reserve "B" is hereby reserved for signage, walks, lighting, landscaping, private drives, parking, entry monuments, utilities confined to easements, drainage and drainage structures. The Reserves are to be owned and maintained by the owner of Lot 1, Block 1, Clear Ridge Townhomes, their successors or assigns. FEMA floodplain and regulatory floodway boundaries are subject to periodic change and such change may affect the intended land use within the subdivision. Minimum Pad Elevations for lowest openings is shown within a table on the face of the plat. A drainage plan has been developed for this plat and all drainage easements, rights-of-way, or reserves shall remain at established grades, or as modified with the approval of the City Engineer, and unobstructed to allow for the conveyance of stormwater.

Stephen G. Miller
 Sally E. Miller

State of Kansas)
 Sedgwick County)

The foregoing instrument acknowledged before me, this 2nd day of September, 2016, by Stephen G. Miller and Sally E. Miller, husband and wife.

Eunice I. May Notary Public
 My appointment expires 7/8/17

We the undersigned, holders of a mortgage on a portion of the above described property, do hereby consent to this plat of "CLEAR RIDGE TOWNHOMES", an Addition to Wichita, Sedgwick County, Kansas.

Garden Plain State Bank
 Patrick F. Walden President/CEO

State of Kansas)
 Sedgwick County)
 The foregoing instrument acknowledged before me this 2nd day of September, 2016, by Patrick F. Walden, President/CEO of Garden Plain State Bank, on behalf of the Bank.

Amy L. Hammond, Notary Public
 My appointment expires 7/9/17

This plat of "CLEAR RIDGE TOWNHOMES", an Addition to Wichita, Sedgwick County, Kansas, has been submitted to and approved by the Wichita-Sedgwick County Metropolitan Area Planning Commission, Wichita, Kansas.

Dated this 18th day of August, 2016.

Wichita-Sedgwick County Metropolitan Area Planning Commission
 Carol Chapman Neugebauer Chair
 Dale Miller Secretary

This plat approved and all dedications shown hereon accepted by the City Council of the City of Wichita, Kansas, this 1st day of NOV., 2016.

At the Direction of the City Council
 Jeff Longwell Mayor
 Karen Sublett City Clerk

Reviewed in accordance with K.S.A. 58-2005 on this 20th day of September, 2016.

Deputy County Surveyor
 Sedgwick County Kansas

Entered on transfer record this 9th day of January, 2017.
 Kelly B. Arnold, Clerk

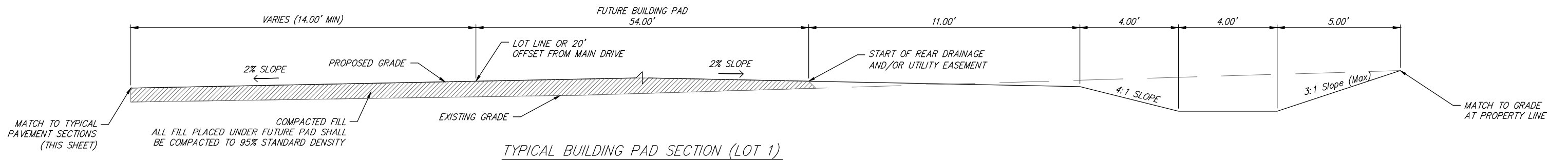
State of Kansas)
 Sedgwick County)

This is to certify that this plat has been filed for record in the office of the Register of Deeds, this 11th day of January, 2017, at 11:11:55 o'clock A.M., and is duly recorded.

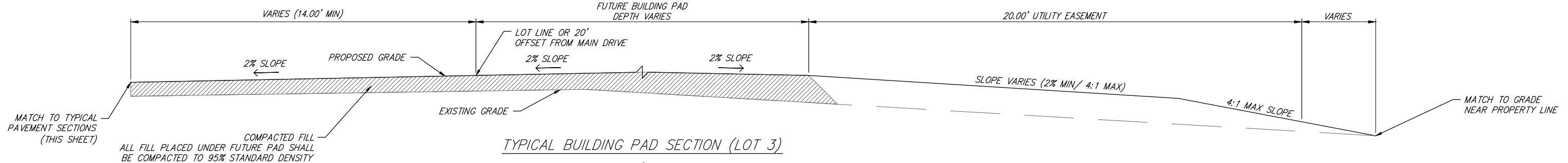
Tonya Buckingham Register of Deeds
 Judy D. Paget Deputy

Register of Deeds - Sedgwick County
 Doc #/File # - 29664110
 Rec'd #, 2004401
 Date Recorded: 01/11/2017 11:11:55 AM

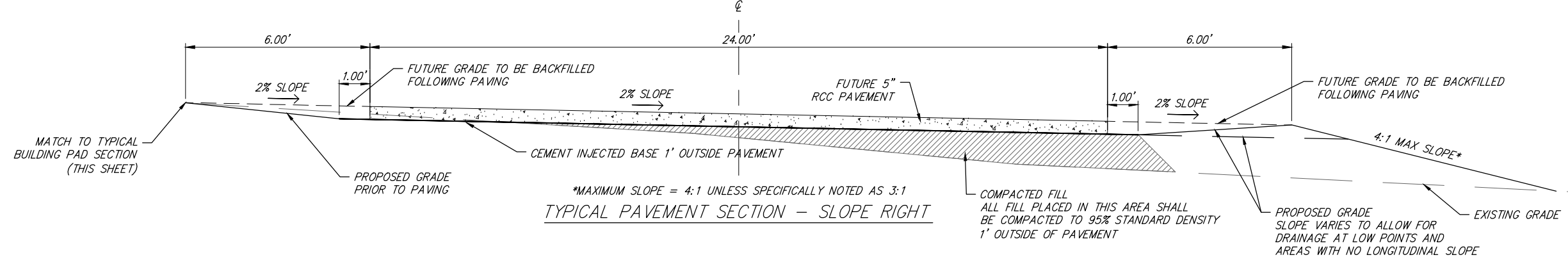




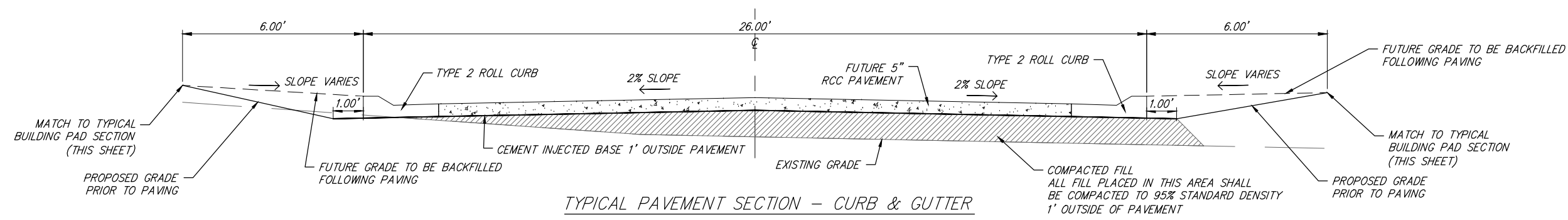
TYPICAL BUILDING PAD SECTION (LOT 1)



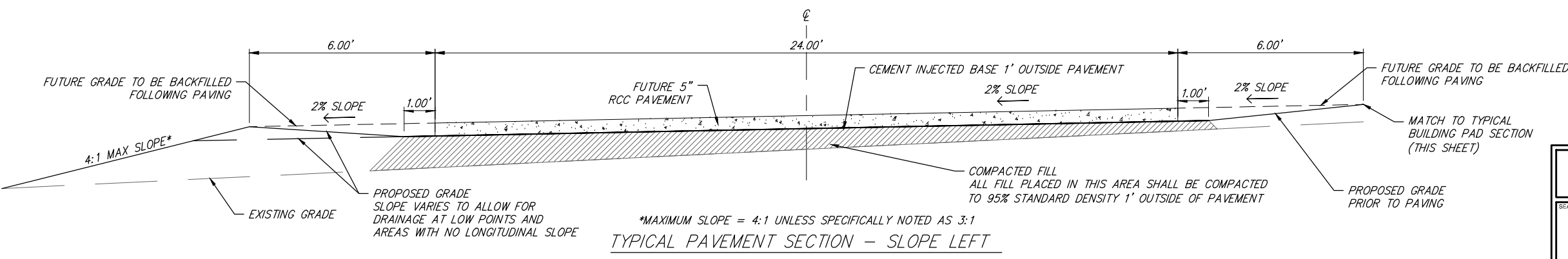
TYPICAL BUILDING PAD SECTION (LOT 3)



TYPICAL PAVEMENT SECTION - SLOPE RIGHT



TYPICAL PAVEMENT SECTION - CURB & GUTTER



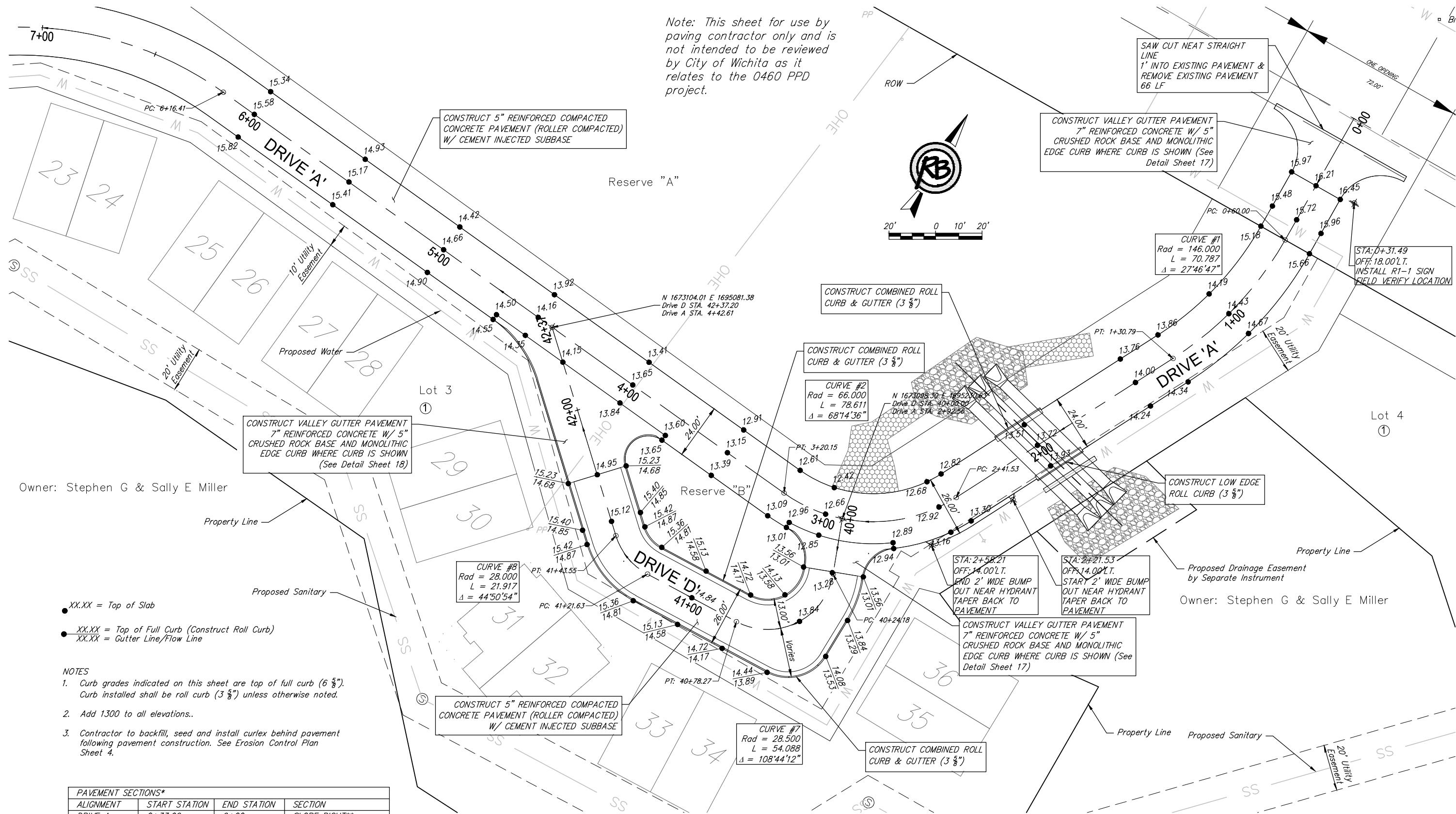
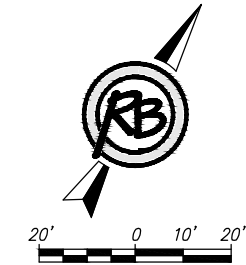
TYPICAL PAVEMENT SECTION - SLOPE LEFT

Note: This sheet for use by paving contractor only and is not intended to be reviewed by City of Wichita as it relates to the 0460 PPD project.

F:\Projects\Projects 4800-4899\4836T (Clear Ridge Townhomes Paving)\4836 Private Paving and Drainage Plans.dwg

Clear Ridge Townhomes Typical Sections			DATE July 2017
			DESIGN MTD
			DRAWN MTD
			REVIEW KWL
			SHEET 13
PROJECT NUMBER 0460	RB JOB NO. 4836T	DWGL SCALE ...	OF 24
DRAWING FILE 4836 Private Paving and Drainage Plans [Typical Sections]			

Note: This sheet for use by paving contractor only and is not intended to be reviewed by City of Wichita as it relates to the 0460 PPD project.



CONSTRUCT VALLEY GUTTER PAVEMENT
7" REINFORCED CONCRETE W/ 5"
CRUSHED ROCK BASE AND MONOLITHIC
EDGE CURB WHERE CURB IS SHOWN
(See Detail Sheet 18)

CONSTRUCT 5" REINFORCED COMPACTED
CONCRETE PAVEMENT (ROLLER COMPACTED)
W/ CEMENT INJECTED SUBBASE

CONSTRUCT VALLEY GUTTER PAVEMENT
7" REINFORCED CONCRETE W/ 5"
CRUSHED ROCK BASE AND MONOLITHIC
EDGE CURB WHERE CURB IS SHOWN (See
Detail Sheet 17)

CONSTRUCT COMBINED ROLL
CURB & GUTTER (3 5/8")

CONSTRUCT COMBINED ROLL
CURB & GUTTER (3 5/8")

CONSTRUCT LOW EDGE
ROLL CURB (3 5/8")

CONSTRUCT 5" REINFORCED COMPACTED
CONCRETE PAVEMENT (ROLLER COMPACTED)
W/ CEMENT INJECTED SUBBASE

CONSTRUCT COMBINED ROLL
CURB & GUTTER (3 5/8")

CONSTRUCT VALLEY GUTTER PAVEMENT
7" REINFORCED CONCRETE W/ 5"
CRUSHED ROCK BASE AND MONOLITHIC
EDGE CURB WHERE CURB IS SHOWN (See
Detail Sheet 17)

Owner: Stephen G & Sally E Miller

Owner: Stephen G & Sally E Miller

- XX.XX = Top of Slab
- XX.XX = Top of Full Curb (Construct Roll Curb)
- XX.XX = Gutter Line/Flow Line

NOTES

1. Curb grades indicated on this sheet are top of full curb (6 5/8"). Curb installed shall be roll curb (3 5/8") unless otherwise noted.
2. Add 1300 to all elevations..
3. Contractor to backfill, seed and install curlex behind pavement following pavement construction. See Erosion Control Plan Sheet 4.

PAVEMENT SECTIONS*			
ALIGNMENT	START STATION	END STATION	SECTION
DRIVE A	0+33.06	6+00	SLOPE RIGHT**
DRIVE D	40+23.28	40+78.27	NON-TYPICAL SECTION
DRIVE D	40+78.27	41+70.95	CURB & GUTTER

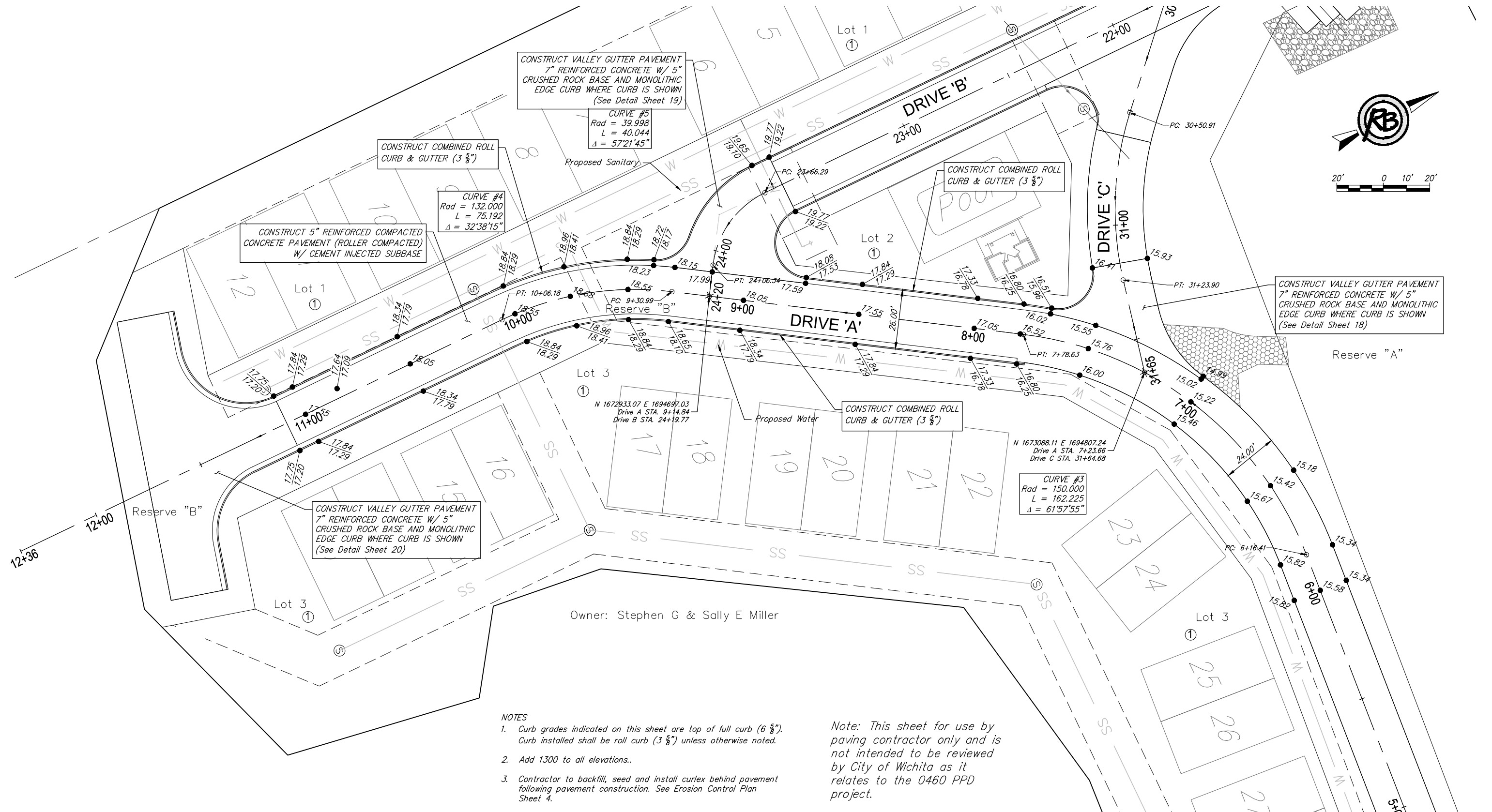
*SECTIONS NOT LISTED ARE VALLEY GUTTER PAVEMENT
**CURB ADDED BOTH SIDES ACROSS RCP NEAR 2+00. 2' ADDITIONAL WIDTH ON LEFT FOR FIRE TRUCK BUMP OUT NEAR STA. 2+40 (SEE PLAN THIS SHEET)

Clear Ridge Townhomes Paving Plans Sheet 1

			DATE July 2017
	ENGINEERING SURVEYING LANDSCAPE ARCHITECTURE GOVERNMENT <small>924 NORTH MAIN WICHITA, KANSAS 67208 P (316) 264-8008 F (316) 264-4821 WWW.RUGGLESANDBOHM.COM</small>		DESIGN MTD DRAWN MTD REVIEW KWL SHEET 14 OF 24
PROJECT NUMBER 0460	RB JOB NO. 4836T	DWGL SCALE ...	
DRAWING FILE 4836 Private Paving and Drainage Plans [Paving Plans Sheet 1]			

F:\Projects\Projects 4800-4899\4836T (Clear Ridge Town Homes Paving)\4836 Private Paving and Drainage Plans.dwg

F:\Projects\Projects 4800-4899\4836T (Clear Ridge Town Homes Paving)\4836T Private Paving and Drainage Plans.dwg



Owner: Stephen G & Sally E Miller

NOTES

1. Curb grades indicated on this sheet are top of full curb (6 5/8"). Curb installed shall be roll curb (3 5/8") unless otherwise noted.
2. Add 1300 to all elevations.
3. Contractor to backfill, seed and install curlex behind pavement following pavement construction. See Erosion Control Plan Sheet 4.

Note: This sheet for use by paving contractor only and is not intended to be reviewed by City of Wichita as it relates to the 0460 PPD project.

ALIGNMENT	START STATION	END STATION	SECTION
DRIVE A	6+00.00	7+50.00	SLOPE RIGHT
DRIVE A	7+50.00	7+80.00	TRANSITION
DRIVE A	7+80.00	11+08.93	CURB & GUTTER

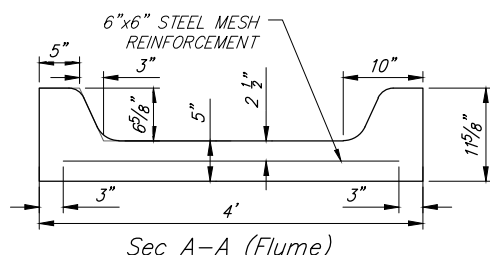
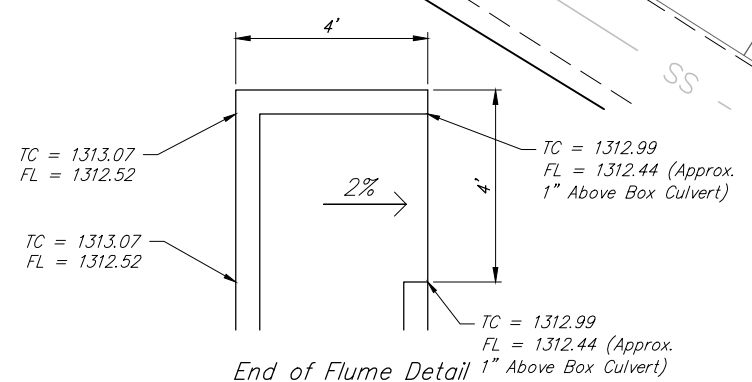
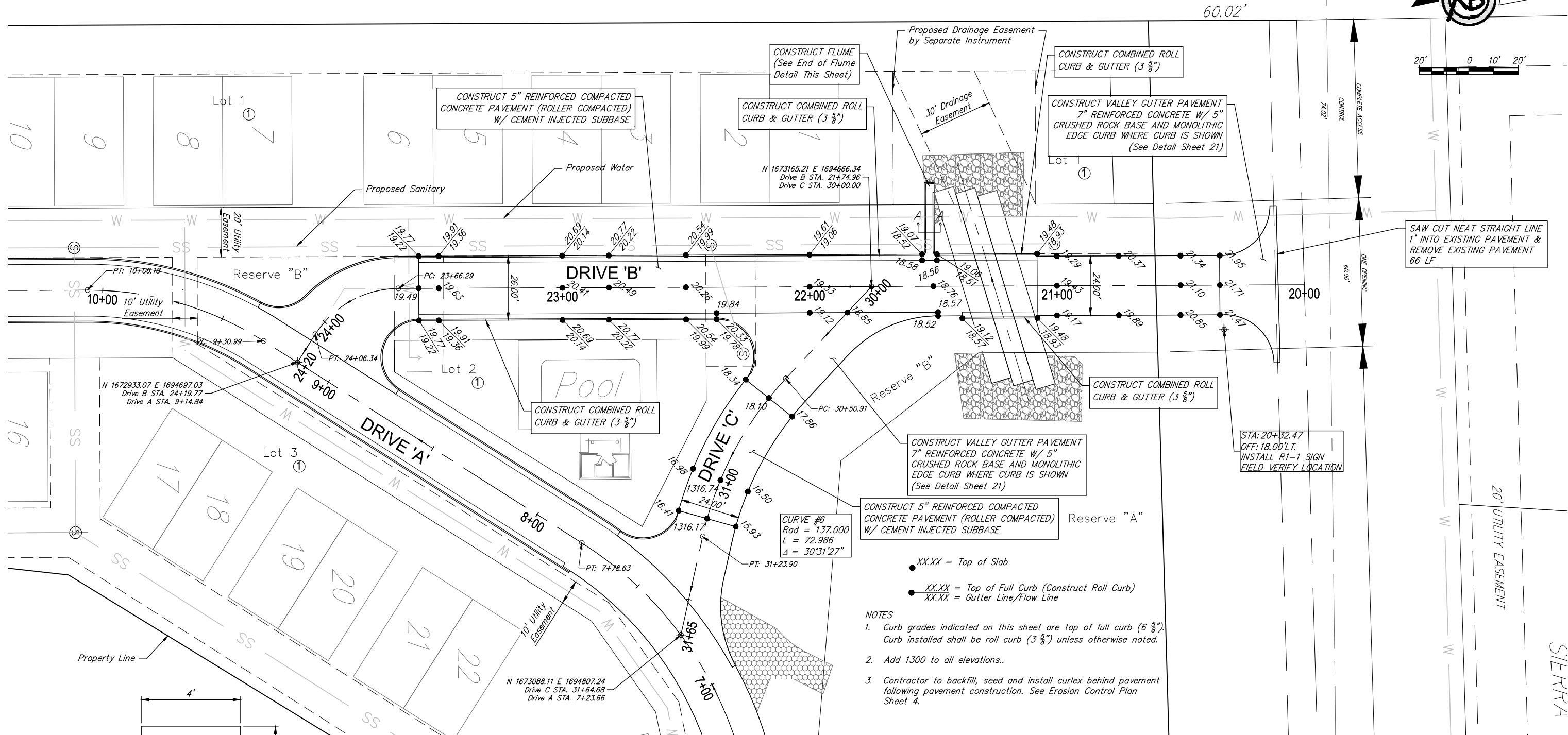
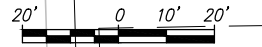
*SECTIONS NOT LISTED ARE VALLEY GUTTER PAVEMENT

- XX.XX = Top of Slab
- XX.XX = Top of Full Curb (Construct Roll Curb)
- XX.XX = Gutter Line/Flow Line

**Clear Ridge Townhomes
Paving Plans Sheet 2**

	<p>RUGGLES & BOHM</p> <p>ENGINEERING SURVEYING LANDSCAPE ARCHITECTURE GOVERNMENT</p> <p>924 NORTH MAIN WICHITA, KANSAS 67208 P (316) 264-8008 F (316) 264-4822 WWW.RUGGLESANDBOHM.COM</p>	<p>DATE July 2017</p> <p>DESIGN MTD</p> <p>DRAWN MTD</p> <p>REVIEW KWL</p> <p>SHEET</p>
	<p>PROJECT NUMBER 0460</p> <p>DRAWING FILE 4836T</p>	<p>RB JOB NO. 4836T</p> <p>DWGL SCALE ...</p>

Note: This sheet for use by paving contractor only and is not intended to be reviewed by City of Wichita as it relates to the 0460 PPD project.



ALIGNMENT	START STATION	END STATION	SECTION
DRIVE B	20+34.15	20+75.00	SLOPE LEFT
DRIVE B	20+75.00	21+08.00	TRANSITION
DRIVE B	21+08.00	23+58.02	CURB & GUTTER**
DRIVE C	30+61.33	31+16.47	SLOPE LEFT

*SECTIONS NOT LISTED ARE VALLEY GUTTER PAVEMENT
 **NO CURB LEFT STA. 21+38.31 TO SOUTH RETURN RADIUS OF DRIVE C

- NOTES
- Curb grades indicated on this sheet are top of full curb (6 5/8"). Curb installed shall be roll curb (3 5/8") unless otherwise noted.
 - Add 1300 to all elevations.
 - Contractor to backfill, seed and install curlex behind pavement following pavement construction. See Erosion Control Plan Sheet 4.

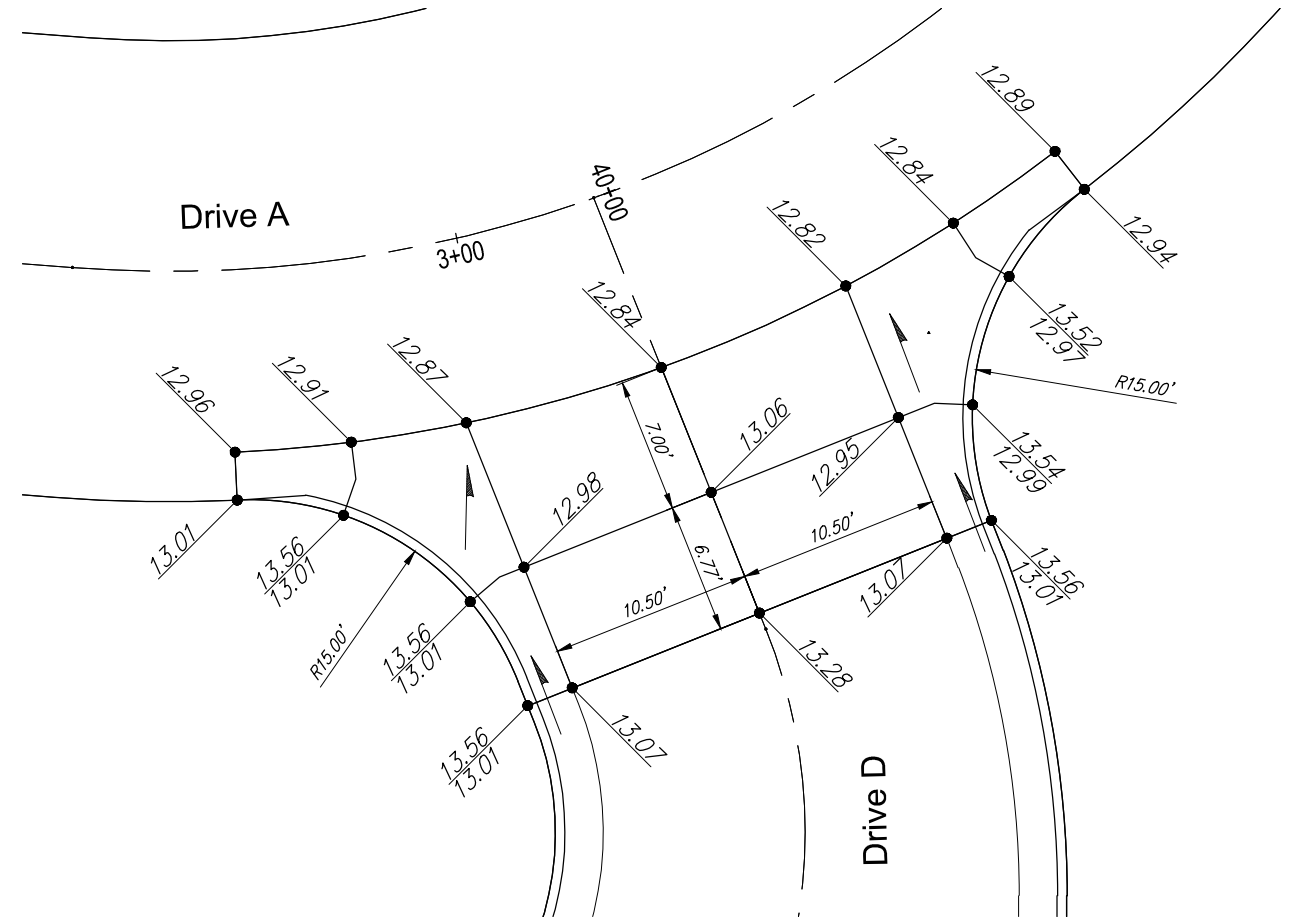
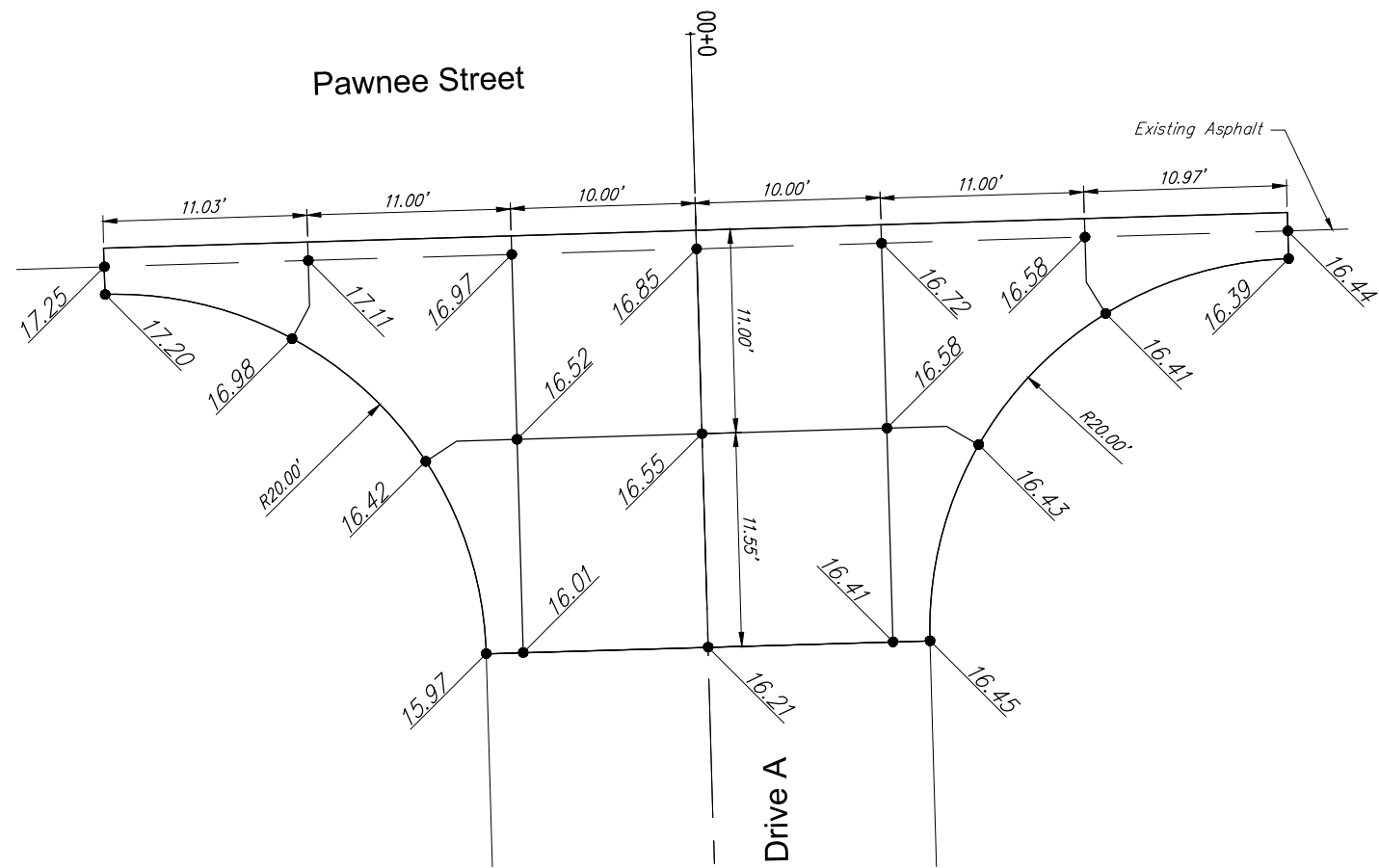
- XX.XX = Top of Slab
- XX.XX = Top of Full Curb (Construct Roll Curb)
- XX.XX = Gutter Line/Flow Line

Clear Ridge Townhomes Paving Plans Sheet 3

	RUGGLES & BOHM		DATE July 2017
	ENGINEERING SURVEYING LANDSCAPE ARCHITECTURE GOVERNMENT 924 NORTH MAIN WICHITA, KANSAS 67208 P (316) 264-8008 F (316) 264-4621 WWW.RUGGLESANDBOHM.COM		DESIGN MTD
PROJECT NUMBER 0460	RB JOB NO. 4836T	DWG SCALE ...	DRAWN MTD
DRAWING FILE 4836 Private Paving and Drainage Plans [Paving Plans Sheet 3]			REVIEW KWL
			SHEET 16
			OF 24

F:\Projects\Projects 4800-4899\4836T (Clear Ridge Townhomes Paving)\4836 Private Paving and Drainage Plans.dwg

Note: This sheet for use by paving contractor only and is not intended to be reviewed by City of Wichita as it relates to the 0460 PPD project.



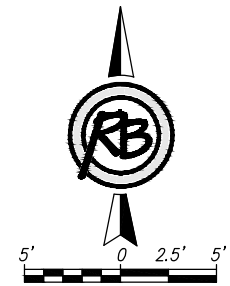
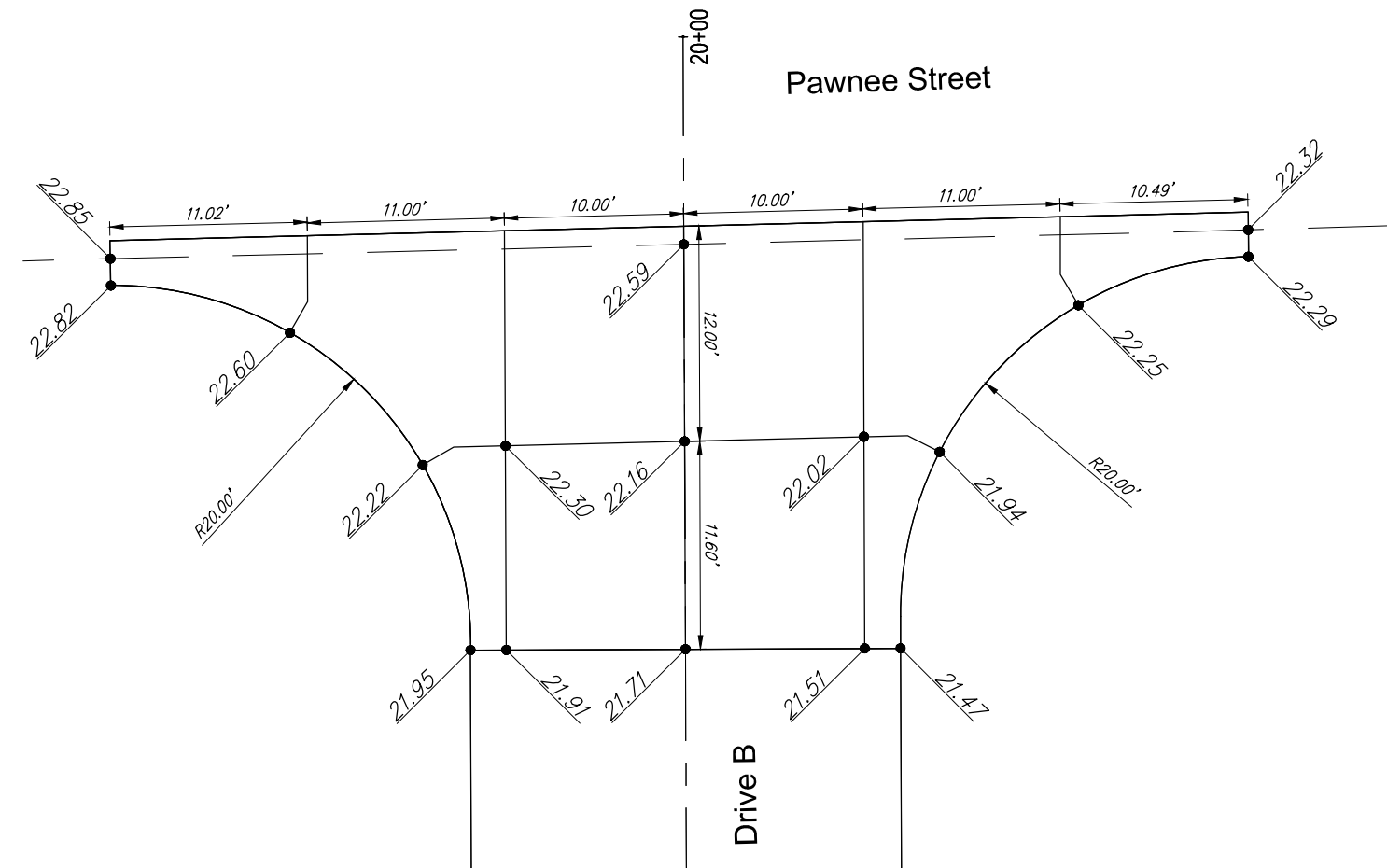
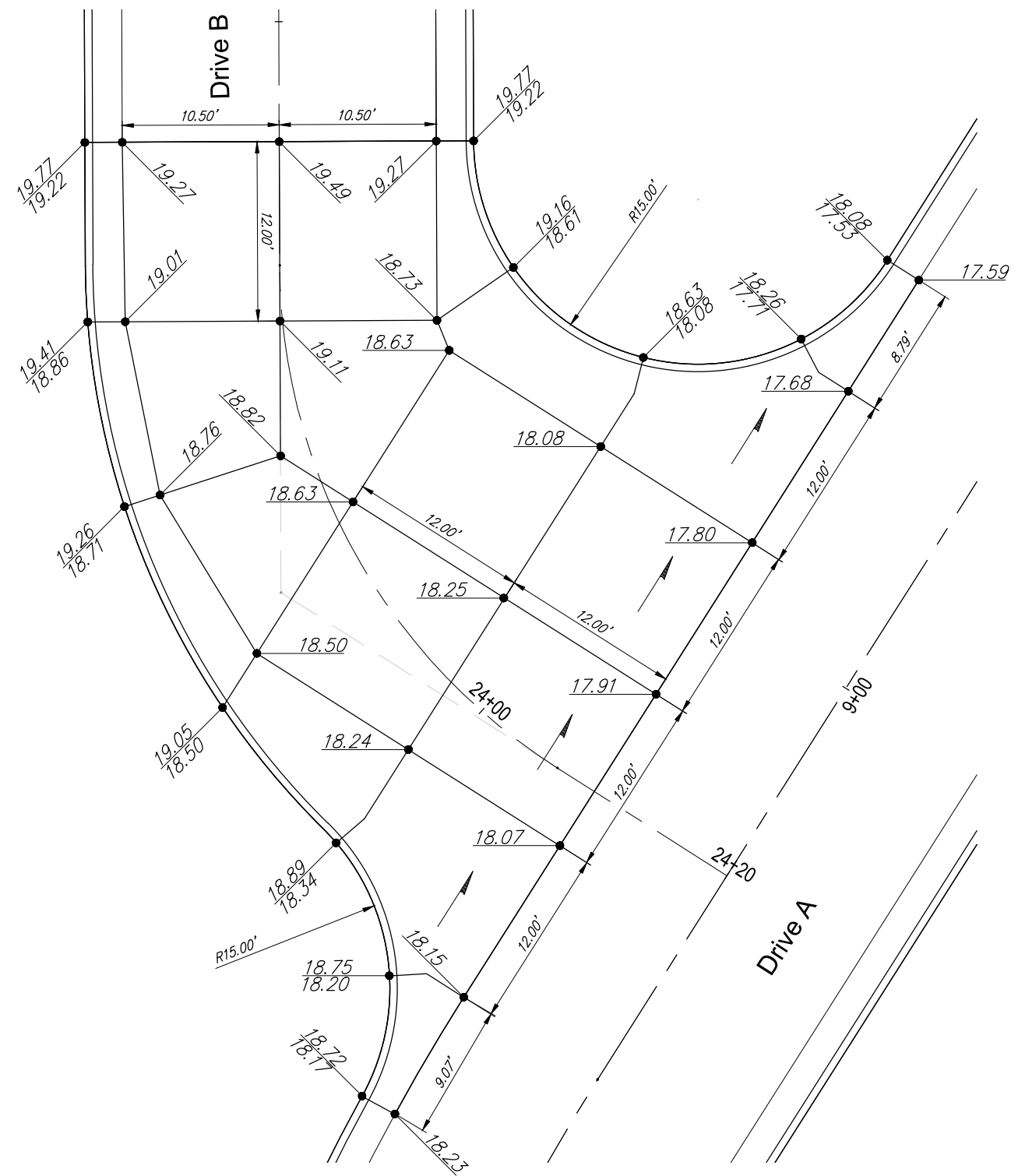
NOTES

- Curb grades indicated on this sheet are top of full curb (6 5/8"). Monolithic edge curb to be installed unless otherwise noted.
- Add 1300 to all elevations.

- XX.XX = Top of Slab
- XX.XX = Top of Full Curb (Construct Monolithic Edge Curb)
- XX.XX = Gutter Line/Flow Line

Clear Ridge Townhomes Valley Gutter Detail 1			
	<p>RUGGLES & BOHM ENGINEERING SURVEYING LANDSCAPE ARCHITECTURE GOVERNMENT 924 NORTH MAIN WICHITA, KANSAS 67208 P (316) 264-8008 F (316) 264-4821 WWW.RUGGLESANDBOHM.COM</p>	<p>DATE: July 2017 DESIGN: MTD DRAWN: MTD REVIEW: KWL</p>	<p>SHEET 17 OF 24</p>
PROJECT NUMBER 0460	RB JOB NO. 4836T	DWGL SCALE ...	
DRAWING FILE 4836 Private Paving and Drainage Plans [Valley Gutter Detail 1]			

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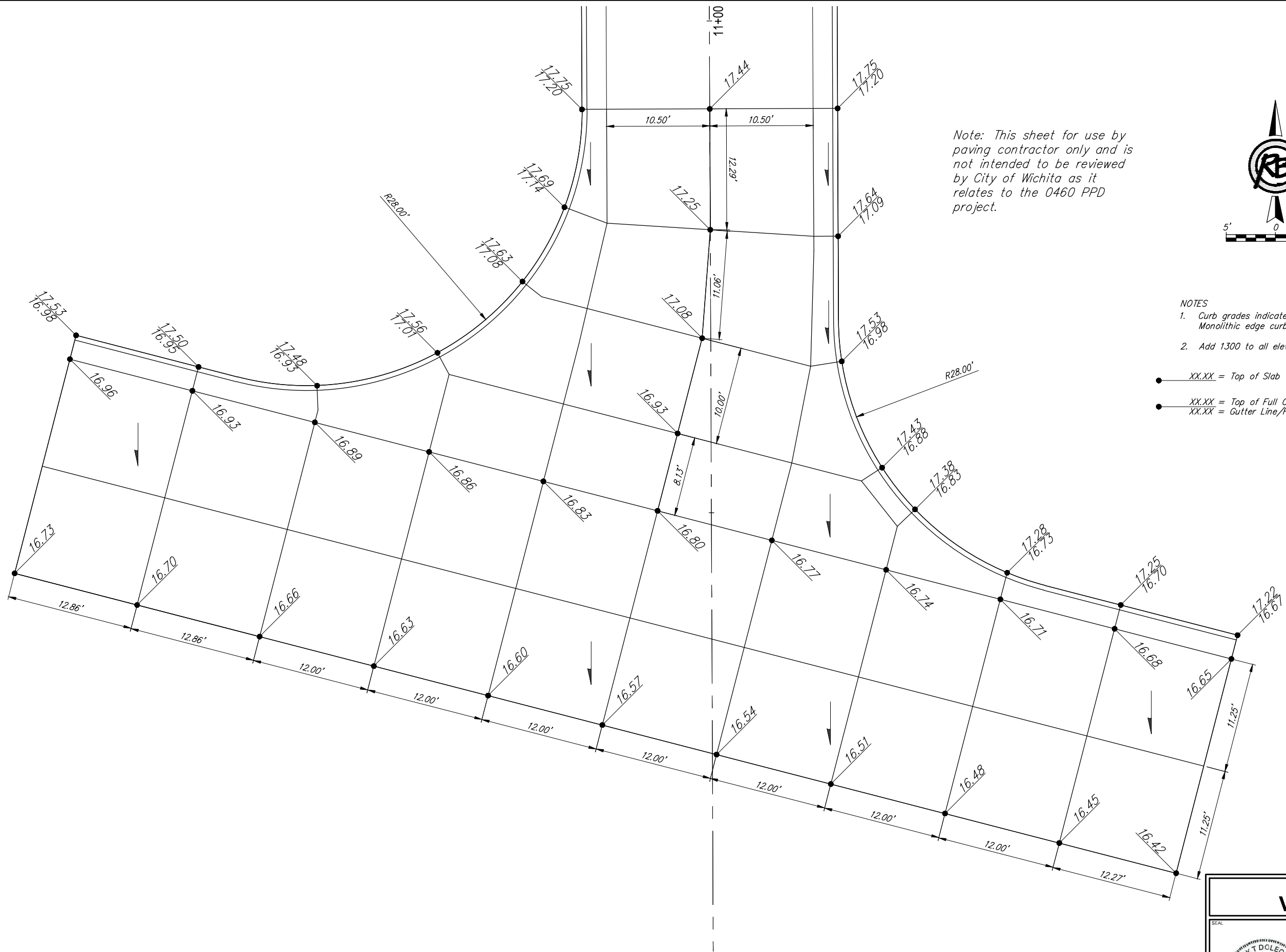
Note: This sheet for use by paving contractor only and is not intended to be reviewed by City of Wichita as it relates to the 0460 PPD project.

NOTES

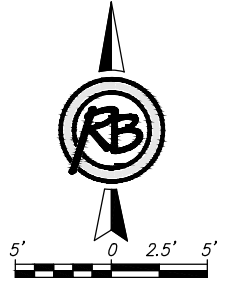
1. Curb grades indicated on this sheet are top of full curb (6 5/8"). Monolithic edge curb to be installed unless otherwise noted.
2. Add 1300 to all elevations..

- XX.XX = Top of Slab
- XX.XX = Top of Full Curb (Construct Monolithic Edge Curb)
- XX.XX = Gutter Line/Flow Line

Clear Ridge Townhomes Valley Gutter Detail 3			DATE July 2017
	RUGGLES & BOHM		DESIGN MTD
	ENGINEERING SURVEYING LANDSCAPE ARCHITECTURE GOVERNMENT 924 NORTH MAIN WICHITA, KANSAS 67208 P (316) 264-8008 F (316) 264-4821 WWW.RUGGLESANDBOHM.COM		DRAWN MTD
PROJECT NUMBER 0460	RB JOB NO. 4836T	DWG. SCALE ...	REVIEW KWL
DRAWING FILE 4836 Private Paving and Drainage Plans [Valley Gutter Detail 3]			SHEET 19 OF 24



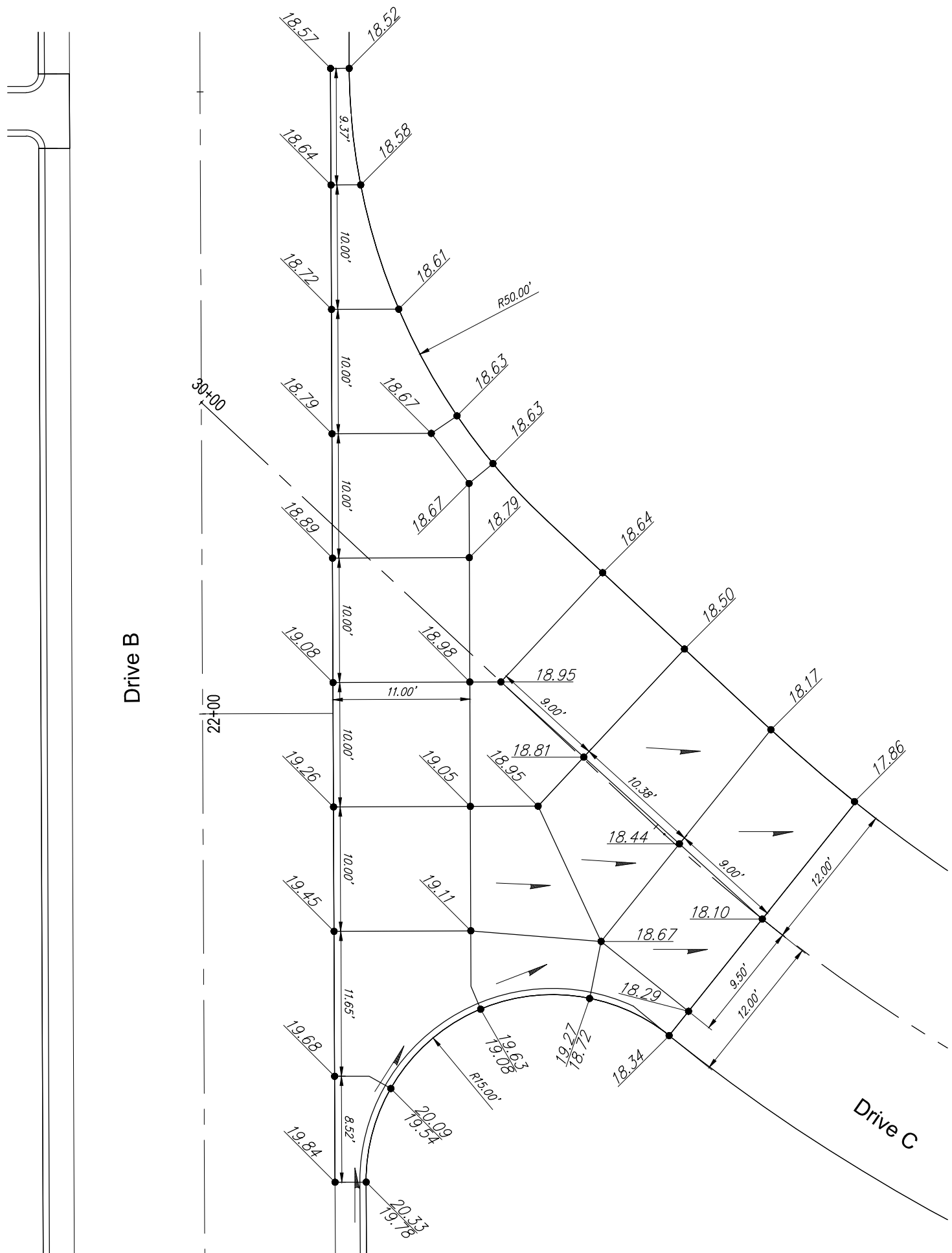
Note: This sheet for use by paving contractor only and is not intended to be reviewed by City of Wichita as it relates to the 0460 PPD project.



- NOTES
- Curb grades indicated on this sheet are top of full curb (6 3/8"). Monolithic edge curb to be installed unless otherwise noted.
 - Add 1300 to all elevations..
- XX.XX = Top of Slab
 - XX.XX = Top of Full Curb (Construct Monolithic Edge Curb)
 - XX.XX = Gutter Line/Flow Line

Clear Ridge Townhomes Valley Gutter Detail 4		
	 ENGINEERING SURVEYING LANDSCAPE ARCHITECTURE GOVERNMENT 924 NORTH MAIN WICHITA, KANSAS 67208 P (316) 264-8008 F (316) 264-4821 WWW.RUGGLESANDBOHM.COM	DATE: July 2017 DESIGN: MTD DRAWN: MTD REVIEW: KWL
PROJECT NUMBER: 0460	RB JOB NO.: 4836T	DWGL SCALE: ...
DRAWING FILE: 4836 Private Paving and Drainage Plans [Valley Gutter Detail 4]		SHEET: 20 OF 24

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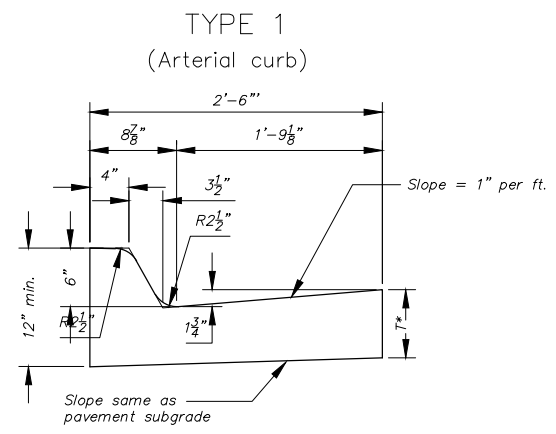


Note: This sheet for use by paving contractor only and is not intended to be reviewed by City of Wichita as it relates to the 0460 PPD project.

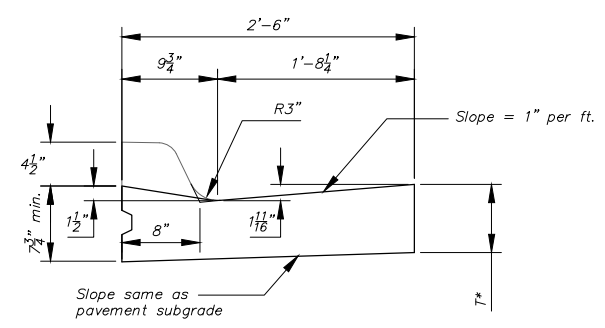
- NOTES
1. Curb grades indicated on this sheet are top of full curb (6 5/8"). Monolithic edge curb to be installed unless otherwise noted.
 2. Add 1300 to all elevations..

- XX.XX = Top of Slab
- XX.XX = Top of Full Curb (Construct Monolithic Edge Curb)
- XX.XX = Gutter Line/Flow Line

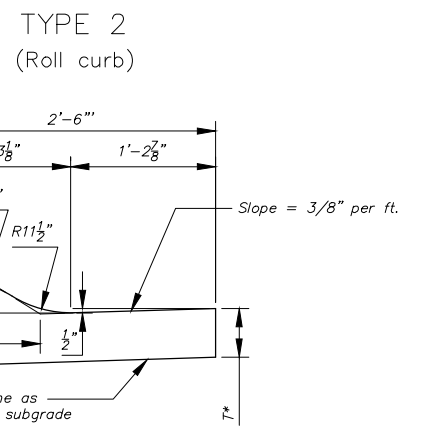
Clear Ridge Townhomes Valley Gutter Detail 5	
 MARK T. DOLECHEK LICENSED PROFESSIONAL ENGINEER KANSAS 7-18-17 25239	RUGGLES & BOHM ENGINEERING SURVEYING LANDSCAPE ARCHITECTURE GOVERNMENT 924 NORTH MAIN WICHITA, KANSAS 67208 P (316) 264-8008 F (316) 264-4621 WWW.RUGGLESANDBOHM.COM
	DATE: July 2017 DESIGN: MTD DRAWN: MTD REVIEW: KWL
PROJECT NUMBER: 0460 DRAWING FILE: 4836 Private Paving and Drainage Plans [Valley Gutter Detail 5]	RB JOB NO.: 4836T DWGL SCALE: ...
SHEET 21 OF 24	



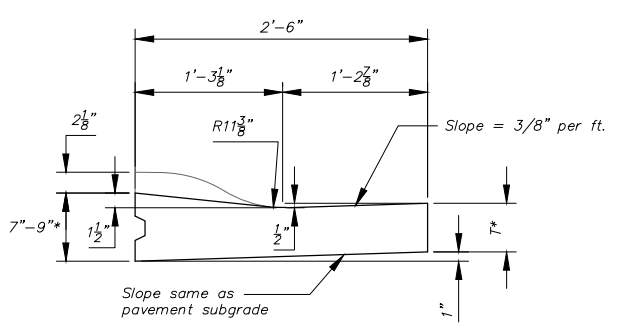
Combined Curb & Gutter (6")



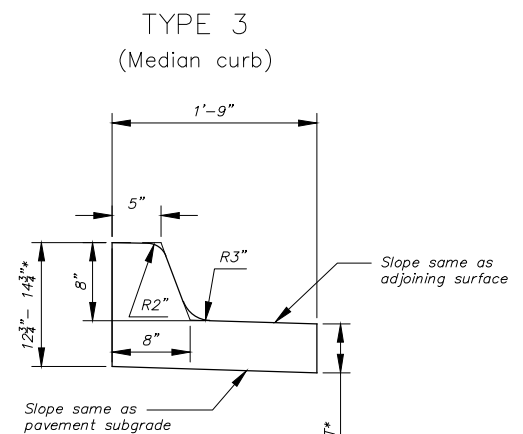
Combined Curb & Gutter (1 1/2")



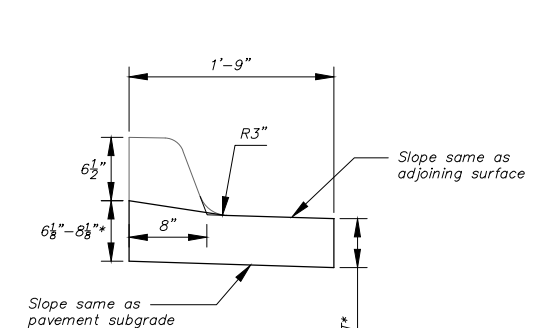
Combined Curb & Gutter (3 5/8")



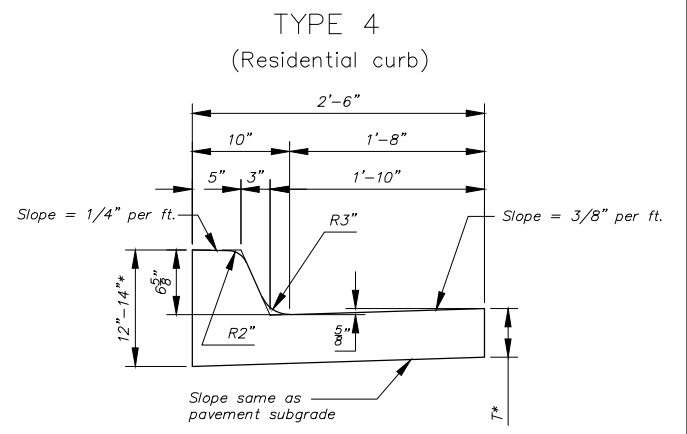
Combined Curb & Gutter (1 1/2")



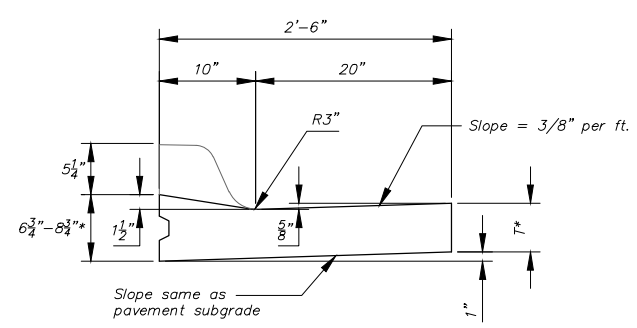
Combined Curb & Gutter (8")



Combined Curb & Gutter (1 1/2")



Combined Curb & Gutter (6 5/8")

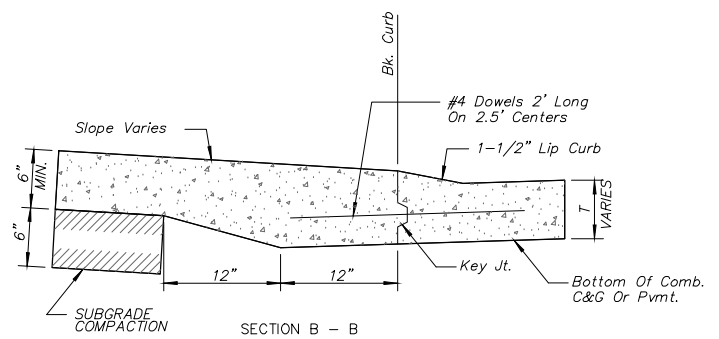


Combined Curb & Gutter (1 1/2")

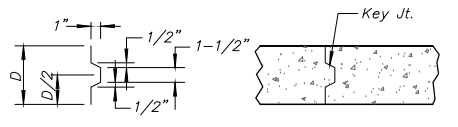
T* = Thickness of curb to adjust with pavement thickness

GENERAL NOTES

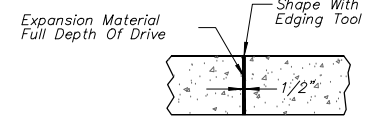
- Expansion (isolation) joints shall be constructed a maximum of 300' apart and at all PIs, PCs, cul-de-sac quadrants, and ends of returns.
- Contraction joints shall be constructed a minimum of 12' apart.
- Joint sealer shall be required at all joints on arterial and industrial streets and at intersections on residential streets.



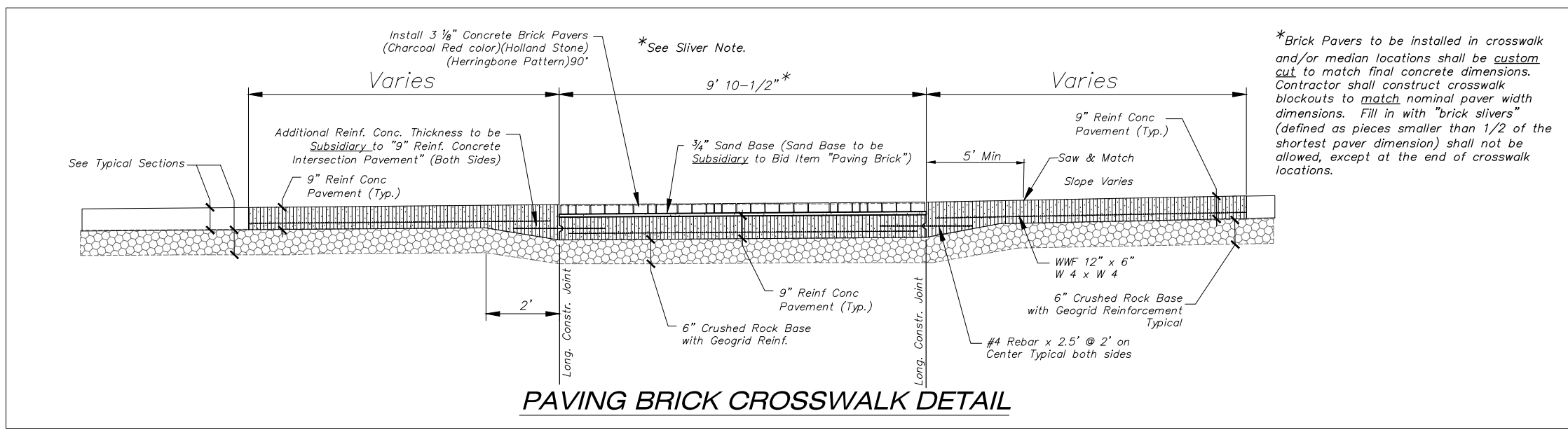
BACK OF CURB DETAIL



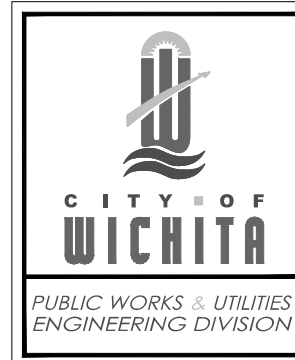
ALT. LONGITUDINAL CONSTRUCTION JOINT



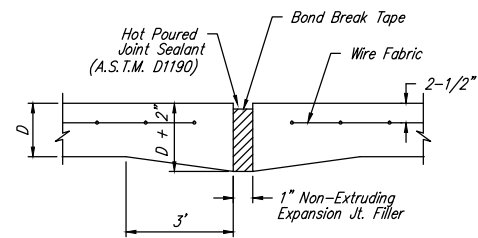
EXPANSION JOINT (E.J.)



PAVING BRICK CROSSWALK DETAIL

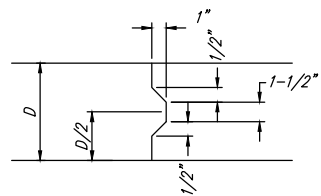


<p>REVISED: OCTOBER 2015</p> <p>CURB & GUTTER & PAVING BRICK CROSSWALK DETAILS</p> <p>CITY ENGINEER GARY JANZEN, P.E.</p>		
PROJECT NUMBER	OCA NUMBER	DATE
0460		
CITY ENGINEER'S OFFICE		SHEET
CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		22
		24

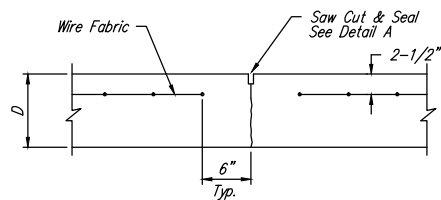


EXPANSION JOINT

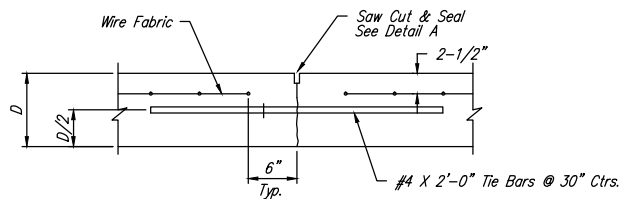
NOTE: Extra Thickness to be Subsidiary to Price of Square Yards Pavement



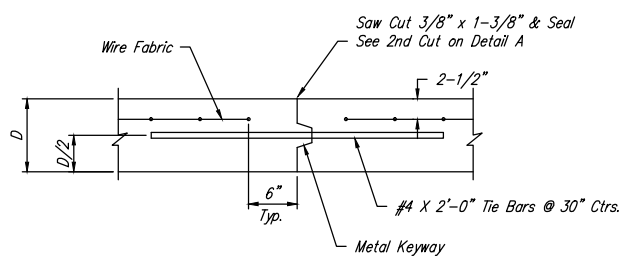
KEYWAY DETAIL



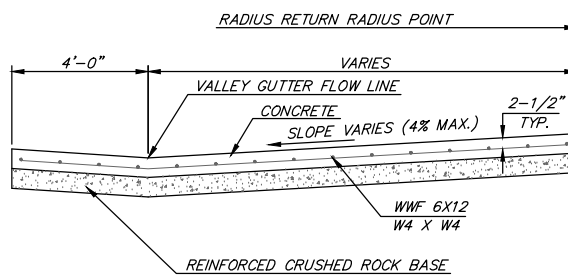
CONTRACTION JOINT DETAIL (C.J.)



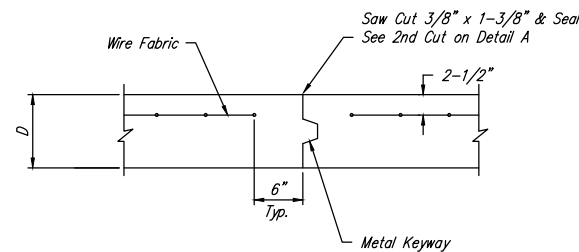
LONGITUDINAL JOINT DETAIL (L.J.)



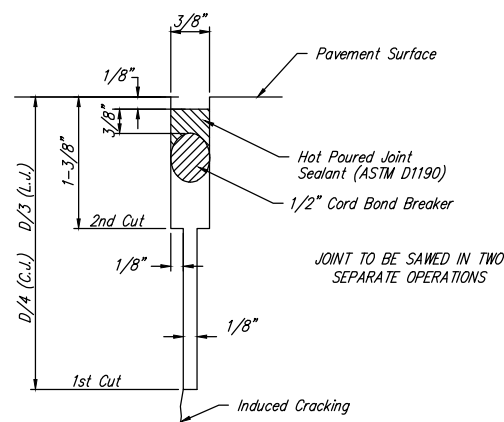
OPTIONAL LONGITUDINAL JOINT DETAIL (L.J.)



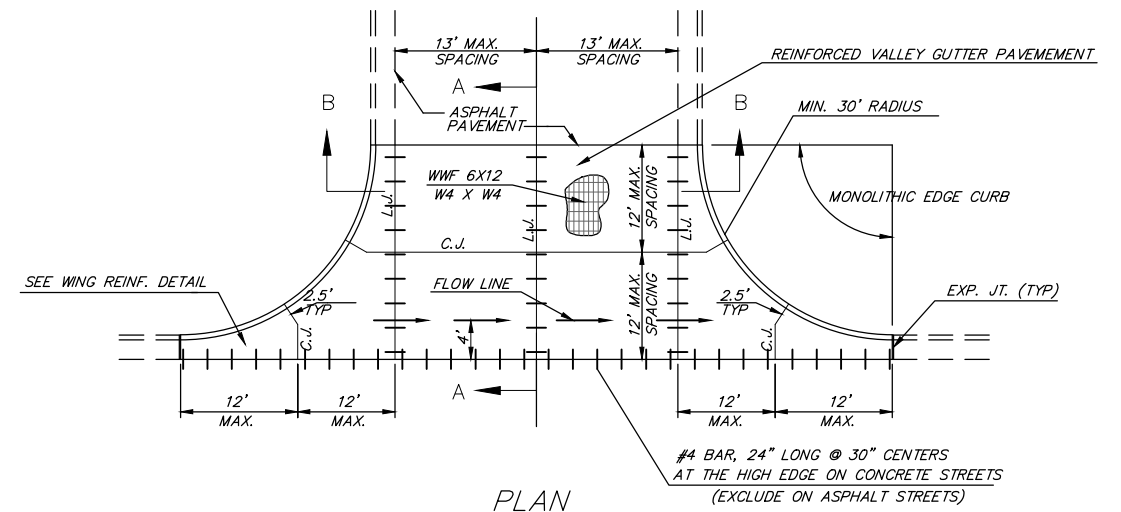
SECTION A-A



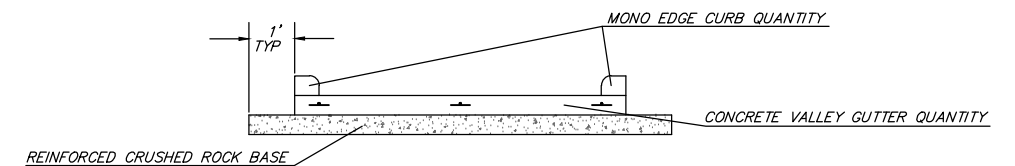
OPTIONAL CONTRACTION JOINT



SAW JOINT DETAIL (DETAIL A)

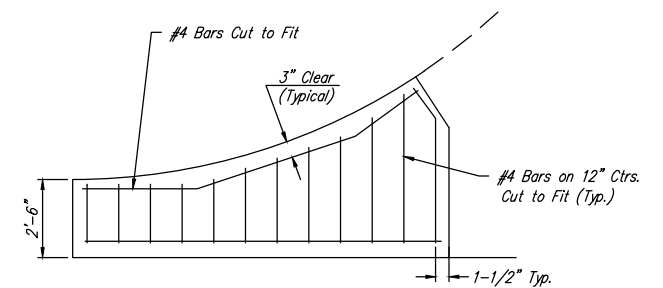


PLAN




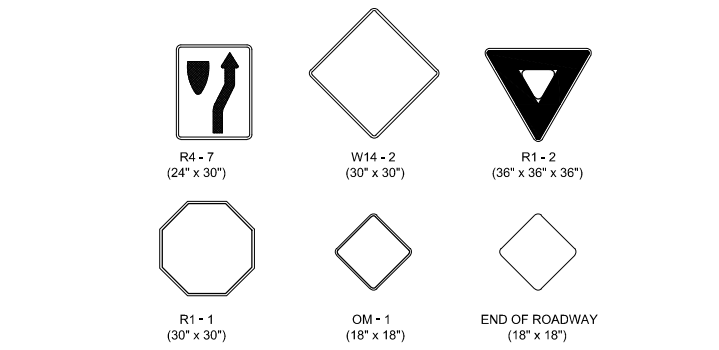
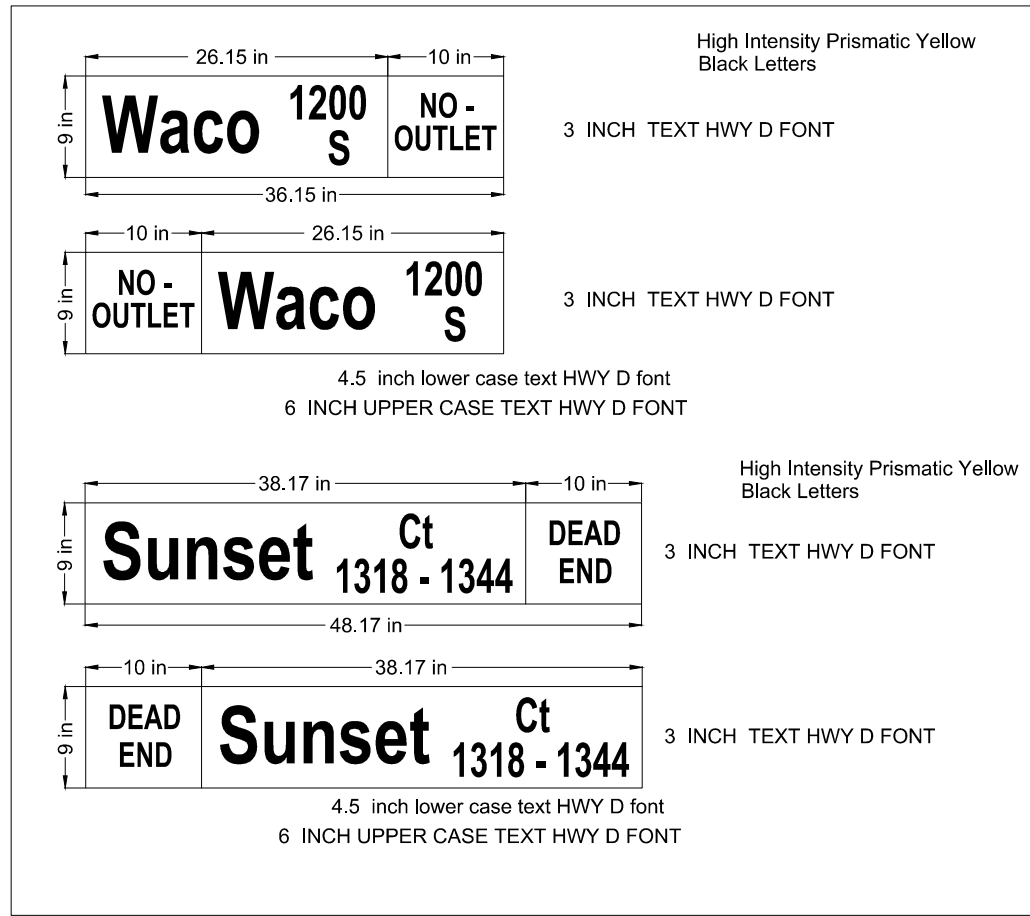
SECTION B-B

REINFORCED VALLEY GUTTER DETAIL

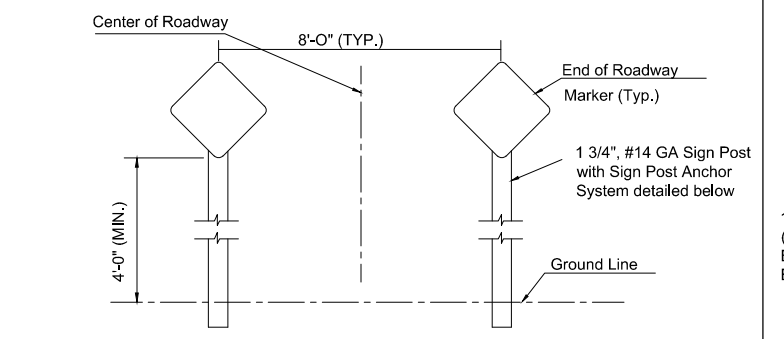


WING REINFORCING DETAIL

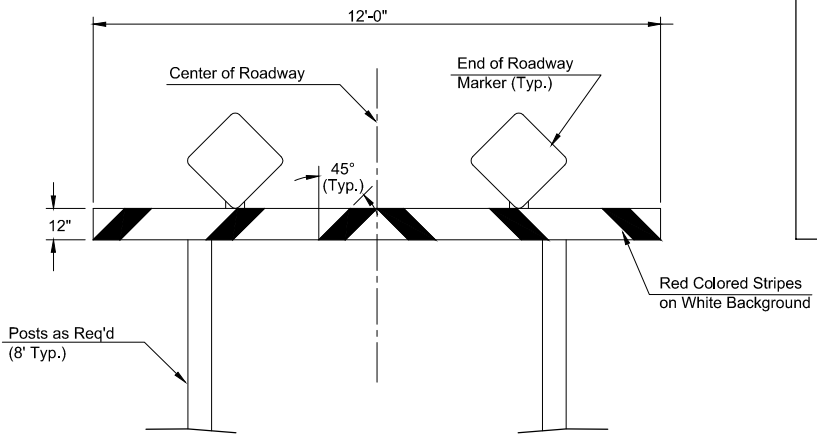
REVISION MAY 2017		SECTION B-B, ROCK EXTENDED ONE FOOT BEYOND PAVEMENT	
			
VALLEY GUTTER DETAILS			
CITY ENGINEER GARY JANZEN, P.E.			
PROJECT NUMBER	OCA NUMBER	DATE	
0460			
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501			SHEET 23 24



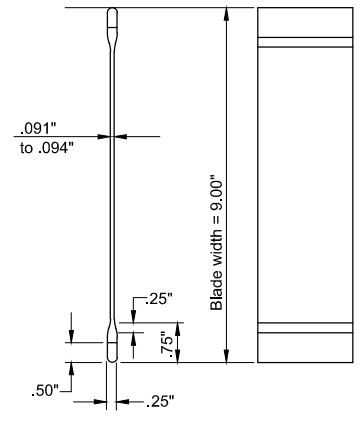
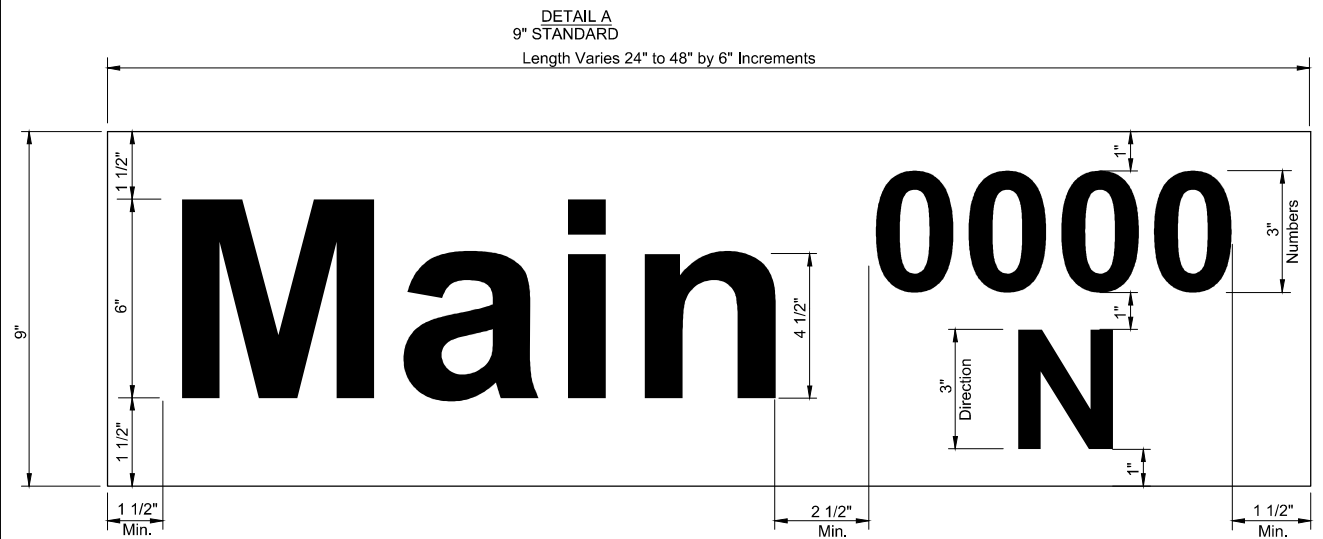
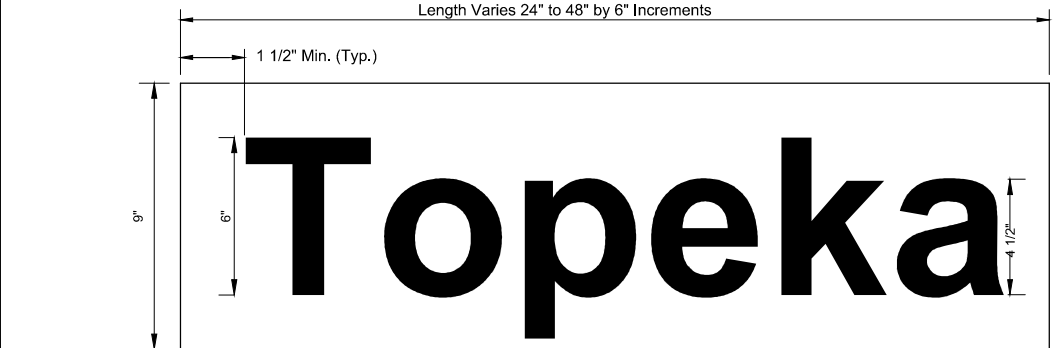
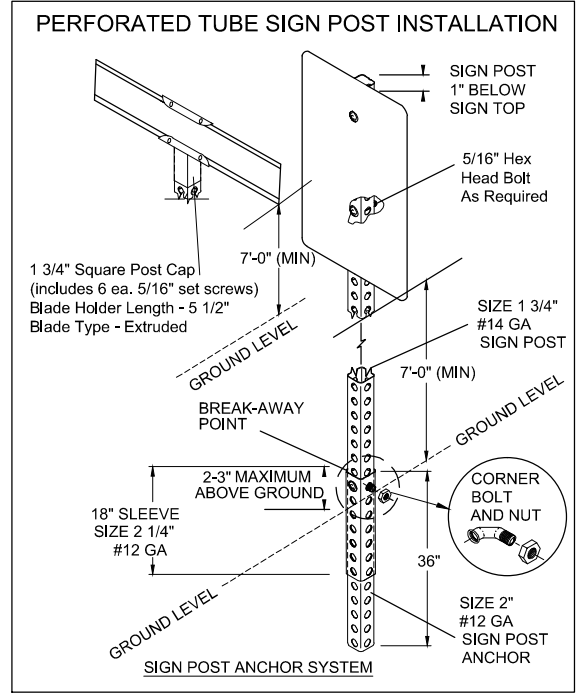
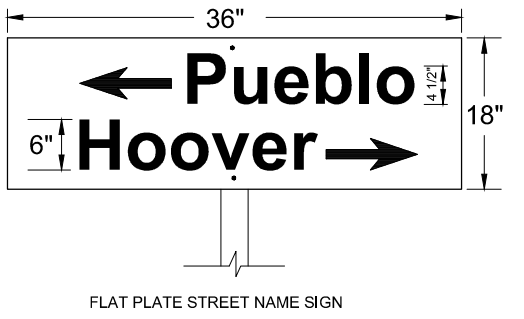
* IN NO CASE SHALL THE SPECIFICATIONS BE LESS THAN REQUIRED BY THE CURRENT MUTCD.



TYPICAL END OF ROADWAY SIGN MOUNTING INSTALLATION



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



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

- FABRICATION AND INSTALLATION OF ALL SIGNS SHALL CONFORM TO THE LATEST EDITION OF THE MUTCD.
 - 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-T3 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 ALODINE 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 380 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 OF HIGH INTENSITY PRISMATIC.
 - PROCESS INK: ALL PROCESS INK SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 2202 OF THE STANDARD SPECIFICATIONS.
 - DETAILS - SNS: THE REFLECTIVE SHEETING FOR THE 9" STANDARD SIZE SNS IS TO BE THE HIGHWAY GREEN BACKGROUND WITH SILVER-WHITE #2 COPY WITH 6" UPPER CASE AND 4 1/2" LOWER CASE PRIMARY COPY AND SUFFIX COPY. BOTH SERIES "C". THE CARDINAL DIRECTION CENTERED DIRECTLY BELOW THE BLOCK NUMBER SHALL BE AN UPPER CASE, 3" SERIES "C" LETTER. FACES TO TRIM TO A 8 1/2". (SEE DETAIL B.)

THE REFLECTIVE SHEETING FOR THE 9" METRO SIZE SNS IS TO BE THE HIGHWAY GREEN BACKGROUND WITH SILVERWHITE #2 COPY WITH 6" UPPER CASE AND 4 1/2" LOWER CASE PRIMARY COPY AND SUFFIX COPY. BOTH SERIES "C". THE CARDINAL DIRECTION CENTERED DIRECTLY BELOW THE BLOCK NUMBER SHALL BE AN UPPER CASE, 3" 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.
- 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, SCALING OR BLISTERS AND SHALL BE CLEAN-CUT. SIGNS SHALL BE PACKED IN SUCH MANNER AS TO PREVENT DAMAGE OR DEFACEMENT 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.

REVISED NOVEMBER 2014



SIGN DETAILS		
TRAFFIC ENGINEER Brian A. Coon P.E.		
PROJECT NUMBER 0460	OCA NUMBER	DATE
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		SHEET 24
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