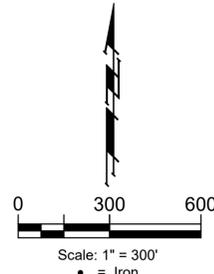
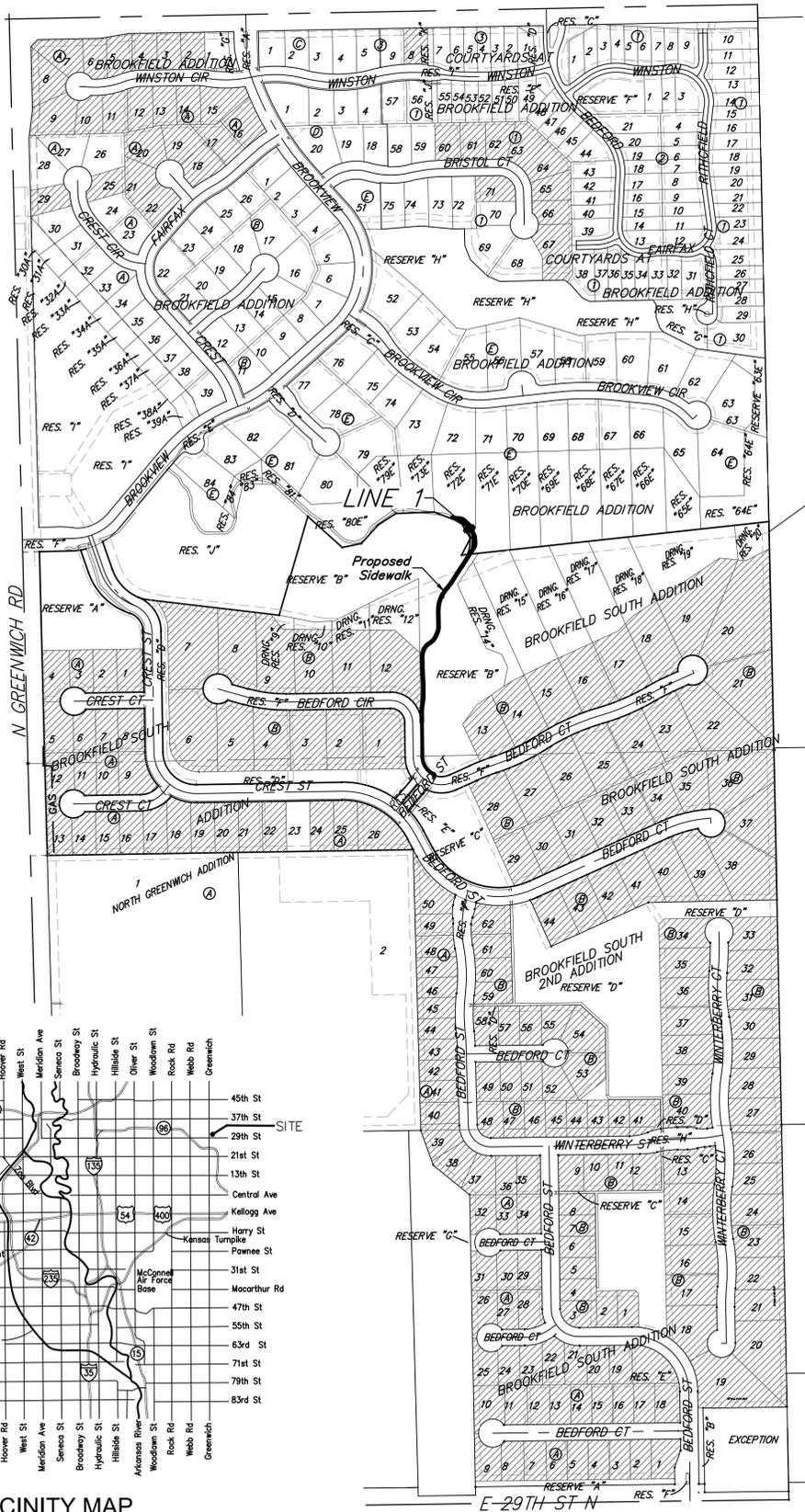


Sidewalk Improvements to serve BROOKFIELD SOUTH - PHASE 6 & PHASE 7 CITY OF WICHITA, KANSAS

Paul Gunzelman, P.E., City Engineer
Project Number 472-2022-085784 47477224 E4112



GENERAL NOTES:

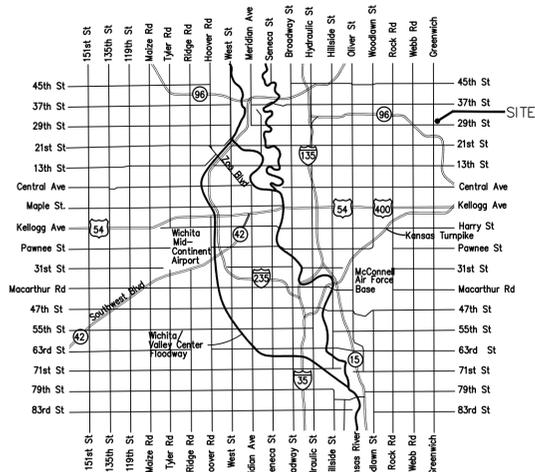
- Contractor will be required to provide notice to utility companies a minimum of forty-eight (48) hours prior to any excavation, as follows:
Kansas One-Call 687-2470
The Contractor must notify the following in case of an emergency:
Cox Communications 262-4270
Kansas Gas Service 1-888-482-4950
Westar Energy 383-8650
Aquila Energy 1-800-303-0357
ATT 268-2245
City of Wichita Water Dept. 268-4563
City of Wichita Sewer Maint. 268-4024
City of Wichita Storm Sewer Maint. 268-4090
City of Wichita Traffic Maint. 268-4034
Conoco Phillips Pipeline Co. 1-877-267-2290
Southern Star Pipeline Co. 529-6600
Kinder-Morgan Pipeline Co. 1-888-844-5658
- Utility service lines, poles, valve boxes, meters, and etcetera are to be adjusted as necessary by others prior to construction unless the plans specifically call for their adjustment by the Contractor or unless the plans specifically identify a utility to be adjusted by its owner during construction. Existing utilities and their location, as shown on the plans, represent the best information obtainable for design. The Contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.
- Rubble from the removal of miscellaneous structures and excess excavation which is to be wasted shall be disposed of on sites to be provided by the Contractor. These sites shall be approved by the Engineer as to suitability, appearance and site location. Locations, in the opinion of the Engineer, that will leave an unsightly appearance will not be approved. All disposal sites must be approved by the Kansas Department of Health and Environment. Material either stockpiled or disposed of in a flood plain would require a Kansas State Board of Agriculture permit. Any material dumped in waters of the United States or wetlands is subject to U.S. Corps. of Engineers permitting regulations. Any material buried or stockpiled beyond approved construction limits would require additional archaeological investigations unless buried in a previously approved borrow location.
- Trees and shrubs in public right-of-way which are in direct conflict with proposed new construction shall be removed by the Contractor ONLY with the Developer or Baughman Company approval. Trees and shrubs which are not in direct conflict with proposed new construction shall be saved and protected from damage.
- The Contractor shall give all property owners and/or tenants of developed property abutting the construction of this project a minimum of ten (10) days notice prior to start of construction.
- The Contractor shall be responsible for preserving property irons. The Contractor will be required to re-establish any property irons which are damaged or destroyed by his construction operations. Such irons shall be re-established by a licensed Land Surveyor in accordance with state laws.
- All existing and proposed erosion control measures including silt fencing, erosion control mat, straw bales, inlet barriers, and const. entrance shall be maintained throughout construction by the Contractor and until project is accepted by the City of Wichita. The on-site Engineer shall complete weekly reports on the status of erosion control measures. The Contractor shall be required to comply with maintenance and/or replacement of erosion control measures as determined by the on-site Engineer until project is accepted by City of Wichita.
- All areas disturbed during construction shall be seeded as follows: (Permanent Seeding)
Native Seed Mixture:
PLS Rate: lbs./ac. Item:
80 Fertilizer (16-20-0)
2 Big Bluestem Grass Seed (Kaw)
10 Canada Wildrye Grass Seed
2 Indiangrass Seed (Osage)
2 Little Bluestem Grass Seed (Aldous)
6.3 Side Oats Grama Grass Seed (El Reno)
10 Sterile Wheatgrass (Regreen/Quick Guard)
1 Switchgrass Seed (Blackwell)
0.5 Tall Dropseed
4 Western Wheatgrass Seed (Barton)
5 Annual Rye
2 tons/acre Prairie Hay/Bromegrass Hay mulch
- The Developer for this project is Jeff Mullen
8100 E. 22nd St. N., Bldg. 1000, Wichita, KS 67272
PH(316) 684-7300 email: jeff@ritchiedevelopment.com
- Earthwork quantities shown on the Earthwork Cross Sections sheet are provided for informational only. All costs associated with earthwork shall be considered incidental to the cost of the sidewalk.
- Excess excavation shall be stockpiled or spread on-site at a location determined by the Developer or Design Engineer.

BENCHMARKS

RR spike in asphalt, SW Cor.,
N1/2, SW1/4, Sec. 34, TWP. 26-S,
R-2-E.
Elev. = 1400.59 NAVD
R.R. spike in E. face of power pole,
174± N. of S. line, N1/2, SW1/4
& 49± E. of W. line, SW1/4, SEC.
34, TWP. 26-S, R-2-E.
Elev. = 1398.64 NAVD88
R.R. spike in S. face of power pole,
294± S. of N. line, SW1/4, &
48± E. of W. line, SW1/4, SEC. 34,
TWP. 26-S, R-2-E.
Elev. = 1386.14 NAVD88

SHEET INDEX

| | |
|-----------------------------|-------|
| Title Sheet | 1 |
| Sidewalk Plan | 2-3 |
| Line 1 | 4 |
| RCBC Details | 5-8 |
| Erosion Control Plan | 9 |
| Erosion Control BMP Details | 10-14 |
| Cross Sections | 15 |
| Copy of Plat | 16-17 |



VICINITY MAP

Project Earthwork Totals (CY unadjusted for shrink & swell)
Excavation Compacted Fill

187 45

Total Project Length
1,019 L.F. = 0.19 Miles

| REVISION RECORD | | | | |
|-----------------|---------|---------------------------------|-----|-----|
| NO. | DATE | DESCRIPTION | DR. | BY |
| 1 | 12/2/25 | Sheet Index: Added RCBC Details | JAK | AEG |



Oct. 10, 2025

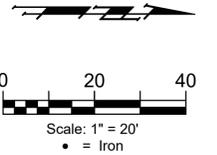
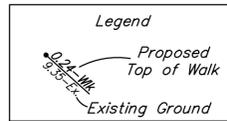
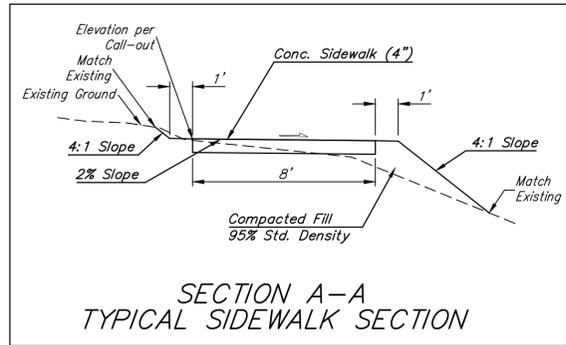
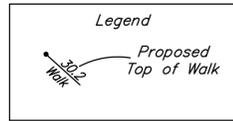
BAUGHMAN COMPANY
315 Ellis St. Wichita, KS 67211 316-262-7271
BaughmanCo.com

BENNIFET DISTRICT:

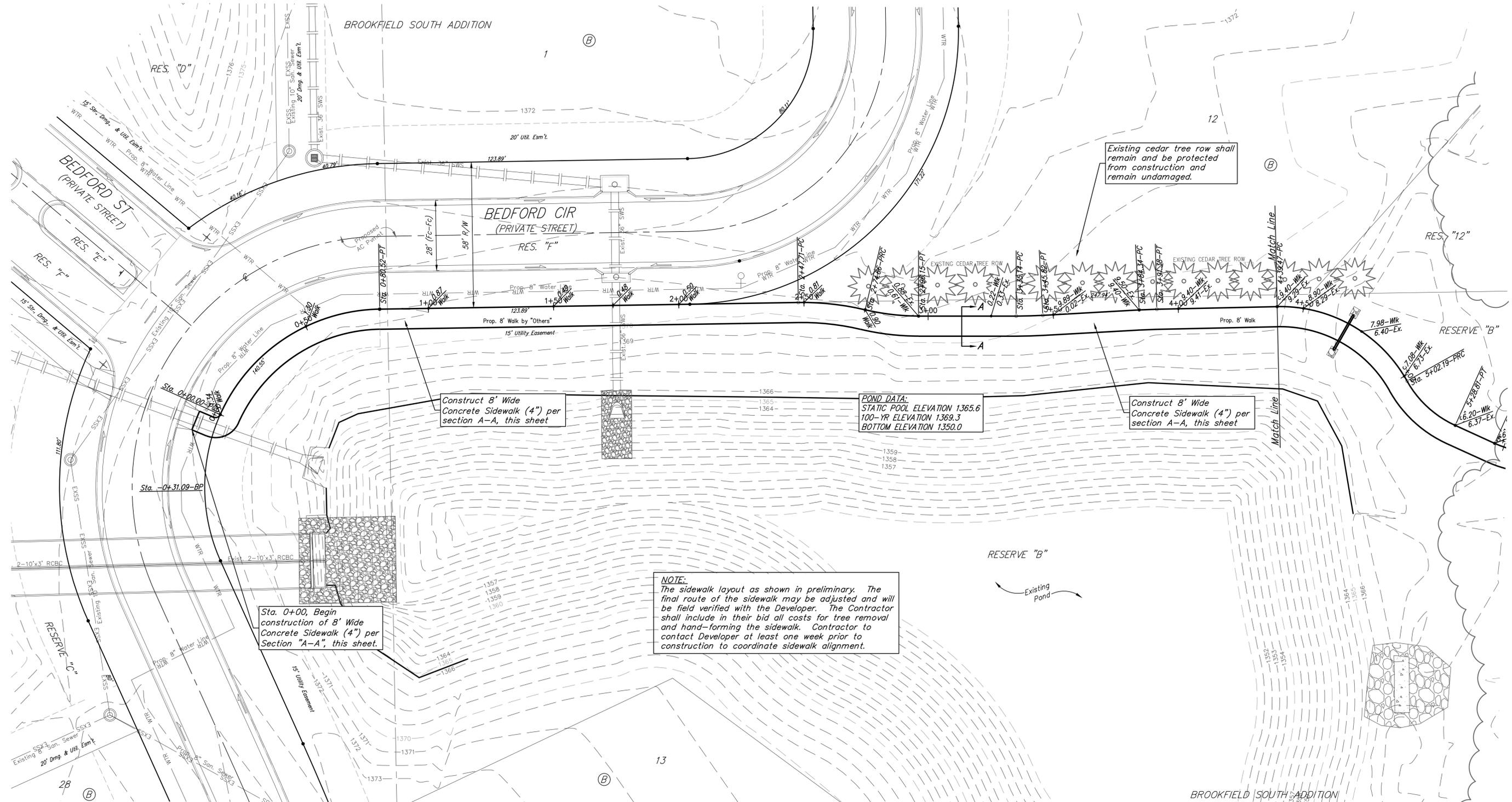
BENCHMARKS:
 RR spike in asphalt, SW Cor.,
 N1/2, SW1/4, Sec. 34, TWP. 26-S,
 R-2-E.
 Elev. = 1400.59 NAVD

RR spike in E. face of power pole,
 174± N. of S. line, N1/2, SW1/4
 & 49± E. of W. line, SW1/4, SEC.
 34, TWP. 26-S, R-2-E.
 Elev. = 1398.64 NAVD88

RR spike in S. face of power pole,
 294± S. of N. line, SW1/4, &
 48± E. of W. line, SW1/4, SEC. 34,
 TWP. 26-S, R-2-E.
 Elev. = 1386.14 NAVD88



| REVISION RECORD | | | | |
|-----------------|---------|--------------|-----|-----|
| NO. | DATE | DESCRIPTION | DR. | BY |
| 1 | 12/2/25 | Sheet Number | JAK | AEG |



BAUGHMAN COMPANY
 315 Ellis St.
 Wichita, KS 67211
 BaughmanCo.com

Brookfield South Addition
 Phase 6 & Phase 7

SIDEWALK PLAN

Sidewalk Improvements

PROJECT NUMBER:

DESIGN: AEG DRAWN: JAK

DATE: Oct. 10, 2025

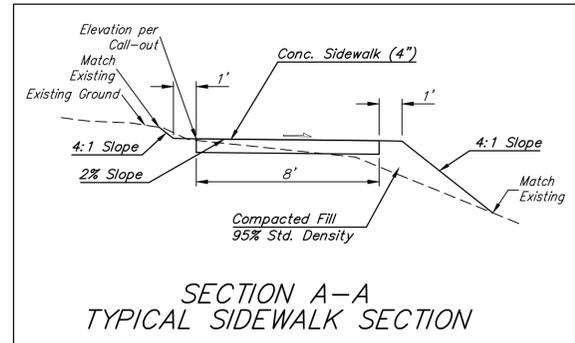
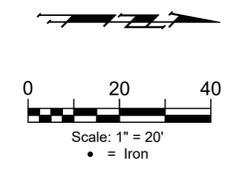
SHEET 2 OF 17

File: C:\Projects\Brookfield South 2nd Addition\Engineering\base.dwg

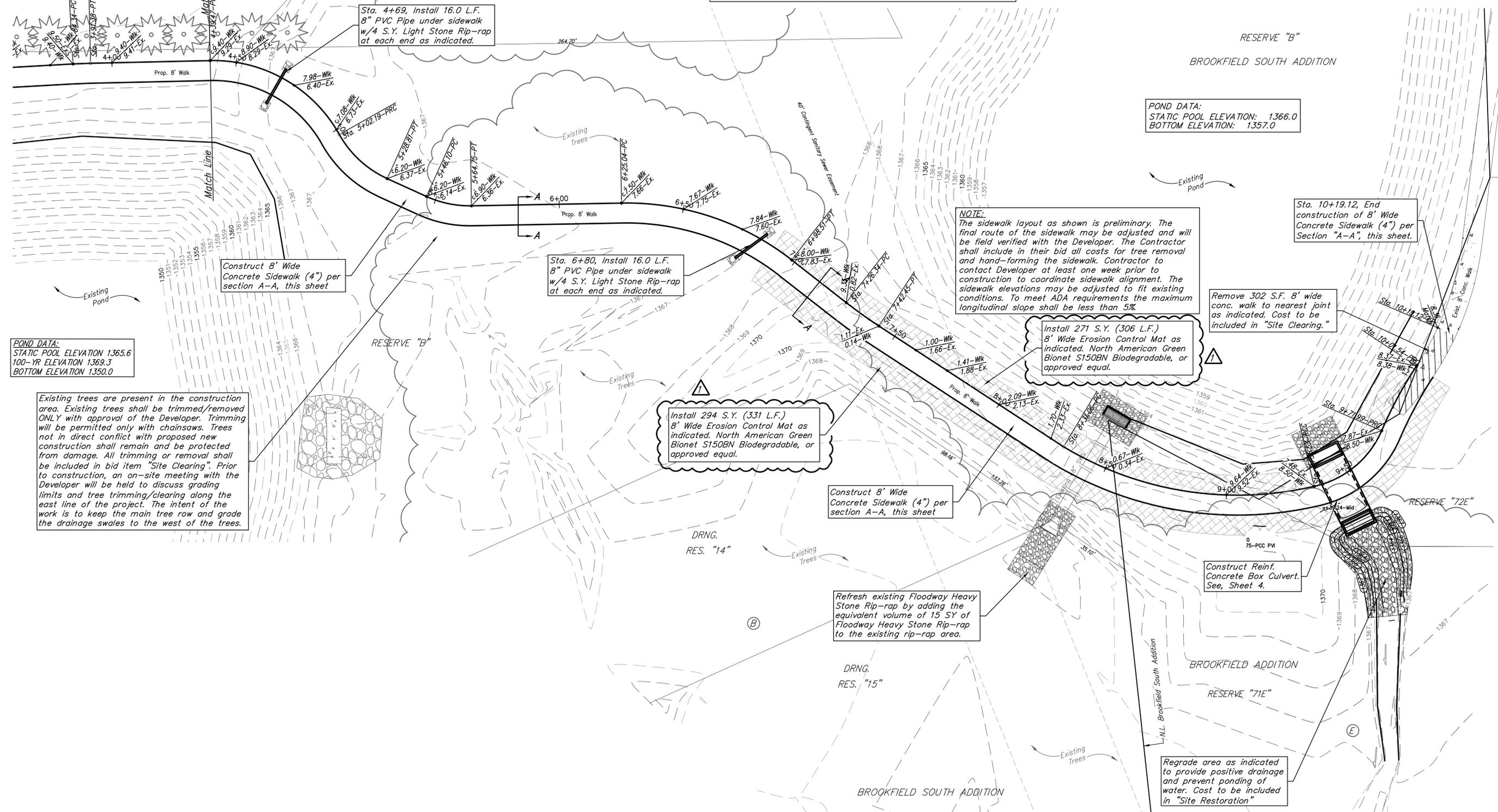
BENCHMARKS:
 RR spike in asphalt, SW Cor.,
 N1/2, SW1/4, Sec. 34, TWP. 26-S,
 R-2-E.
 Elev. = 1400.59 NAVD

RR spike in E. face of power pole,
 174± N. of S. line, N1/2, SW1/4
 & 49± E. of W. line, SW1/4, SEC.
 34, TWP. 26-S, R-2-E.
 Elev. = 1398.64 NAVD88

RR spike in S. face of power pole,
 294± S. of N. line, SW1/4, &
 48± E. of W. line, SW1/4, SEC. 34,
 TWP. 26-S, R-2-E.
 Elev. = 1386.14 NAVD88



| REVISION RECORD | | | | |
|-----------------|---------|---|-----|-----|
| NO. | DATE | DESCRIPTION | DR. | BY |
| 1 | 12/2/25 | Added Erosion Control Mat to both sides of sidewalk | JAK | AEG |



POND DATA:
 STATIC POOL ELEVATION 1365.6
 100-YR ELEVATION 1369.3
 BOTTOM ELEVATION 1350.0

Existing trees are present in the construction area. Existing trees shall be trimmed/removed ONLY with approval of the Developer. Trimming will be permitted only with chainsaws. Trees not in direct conflict with proposed new construction shall remain and be protected from damage. All trimming or removal shall be included in bid item "Site Clearing". Prior to construction, an on-site meeting with the Developer will be held to discuss grading limits and tree trimming/clearing along the east line of the project. The intent of the work is to keep the main tree row and grade the drainage swales to the west of the trees.



BAUGHMAN COMPANY
 315 Ellis St.
 Wichita, KS 67211
 316-262-7271
 BaughmanCo.com

Brookfield South Addition
 Phase 6 & Phase 7

SIDEWALK PLAN

Sidewalk Improvements
 PROJECT NUMBER:

DESIGN: AEG DRAWN: JAK
 DATE: Oct. 10, 2025

SHEET OF
3R 17

File: C:\Projects\Brookfield South 2nd Addition\Engineering\base.dwg

BENCHMARKS:
 RR spike in asphalt, SW Cor.,
 N1/2, SW1/4, Sec. 34, TWP. 26-S,
 R-2-E.
 Elev. = 1400.59 NAVD

RR spike in E. face of power pole,
 174'± N. of S. line, N1/2, SW1/4
 & 49'± E. of W. line, SW1/4, SEC.
 34, TWP. 26-S, R-2-E.
 Elev. = 1398.64 NAVD88

RR spike in S. face of power pole,
 294'± S. of N. line, SW1/4, &
 48'± E. of W. line, SW1/4, SEC. 34,
 TWP. 26-S, R-2-E.
 Elev. = 1386.14 NAVD88

Existing trees shall be trimmed/removed ONLY with approval of the Developer. Trimming will be permitted only with chainsaws. Trees not in direct conflict with proposed new construction shall remain and be protected from damage. All trimming or removal shall be included in bid item "Site Clearing". Prior to construction, an on-site meeting with the Developer will be held to discuss grading limits and tree trimming/clearing along the east line of the project. The intent of the work is to keep the main tree row and grade the drainage swales to the west of the trees.

The rip-rap on the pond side (west) of the RCBC may be placed on top of the existing pond liner without damaging the pond liner. No rip-rap toe walls are required for the rip-rap on the pond side of the RCBC (west). The rip-rap may be placed without de-watering the existing pond. No rip-rap filter course is required below the static pond elevation. The rip-rap called out on the downstream (east) side of the RCBC shall have a toe wall along the downstream (east) side of the rip-rap. No other rip-rap toe walls are required.

The Contractor may construct the RCBC with cast-in-place or precast methods. All materials, work, required equipment, etc. including excavation, backfilling, foundation stabilization, granular backfill, precast RCBC sections, precast RCBC end sections, precast toewalls, forms, concrete, steel reinforcement, soil saver wall, etc. shall be considered subsidiary to the Pipe, SWS, RCBC (12' x 4') lump sum bid item.

Pre-cast RCBC Construction:

The length of RCBC shall be 24 L.F. plus two 6' precast end sections for a total length of 36 L.F. from end to end.

Hubguard shall be 6" tall on each end section.

A pre-cast toe-wall shall be installed on each end section.

The upstream (west) end shall have a soil saver wall that is 30" tall from the bottom of the end section.

Bridge backwall protection system is not required.

All materials, work, required equipment, etc. including foundation stabilization, granular backfill, precast RCBC sections, precast RCBC end sections, soil saver wall, precast toe-walls, etc. shall be considered subsidiary to the Pipe, SWS, RCBC (12' x 4') bid item.

Cast-in-Place RCBC Construction:

The length of the RCBC shall be 24 L.F. plus 6' 8-5/8" L.F. of cast in place flared wingwalls/hubguard on both ends for a total length of 37' 5-1/4".

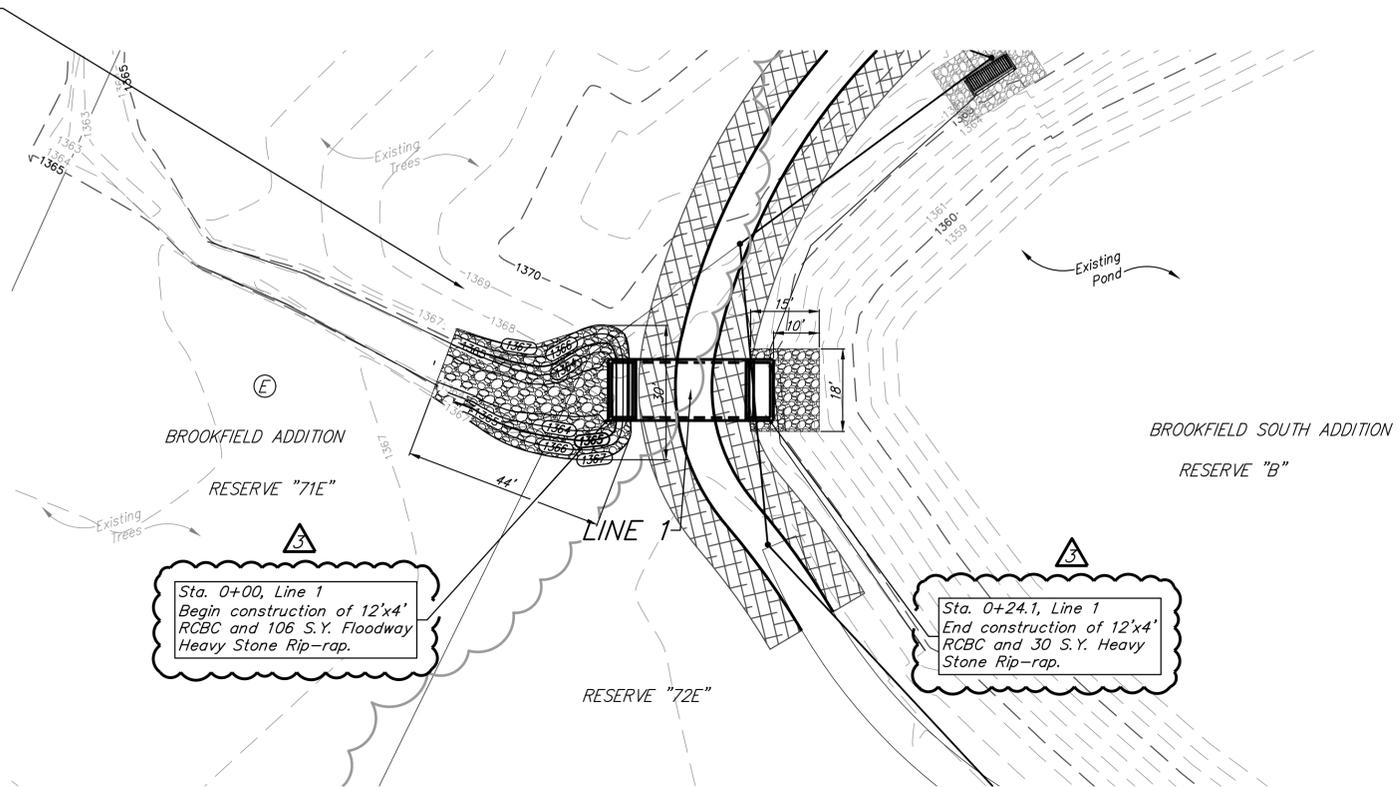
6" thick Scour aprons are required on both ends of the RCBC.

A cast-in-place soil saver wall is required on the upstream (west) end of the RCBC at a height of 30" above the flow line of the scour apron.

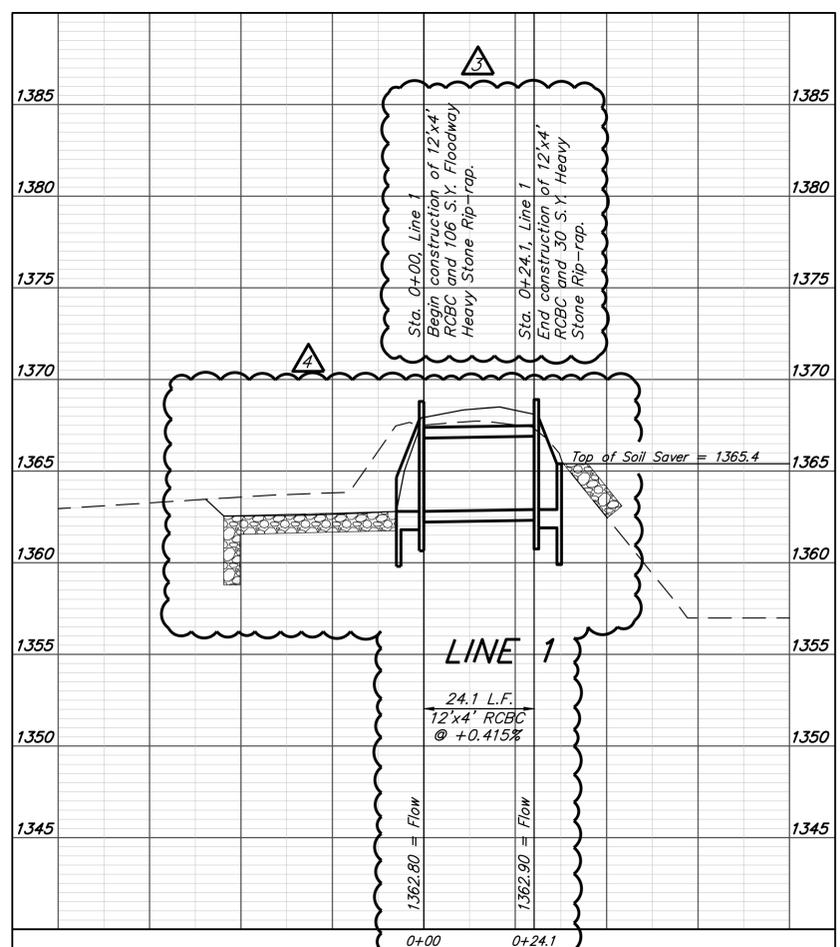
Bridge backwall protection system is not required.

Wingwall Weep holes shall be raised to be 15" above the flow line of the RCBC.

An additional 24 SY of Heavy Stone Rip-Rap will be required on the upstream side (west end) of the RCBC. The Rip-Rap will be widened to 32' wide centered on the center line of the RCBC and will be paid by over running the bid item.



| REVISION RECORD | | | | |
|-----------------|---------|--|-----|-----|
| NO. | DATE | DESCRIPTION | DR. | BY |
| 1 | 12/2/25 | Added note regarding rip-rap | JAK | AEG |
| 2 | 12/2/25 | Added note regarding precast or cast-in-place option | JAK | AEG |
| 3 | 12/2/25 | RCBC size, rip-rap type; precast toewalls, end sections, and hubguards notes deleted. See Rev. No. 2 | JAK | AEG |
| 4 | 12/2/25 | RCBC size and flowline elevations; rip-rap shown in profile | JAK | AEG |



BAUGHMAN COMPANY

315 Ellis St.
 Wichita, KS 67211
 316-262-7271
 BaughmanCo.com

Brookfield South Addition
 Phase 6 & Phase 7

LINE 1

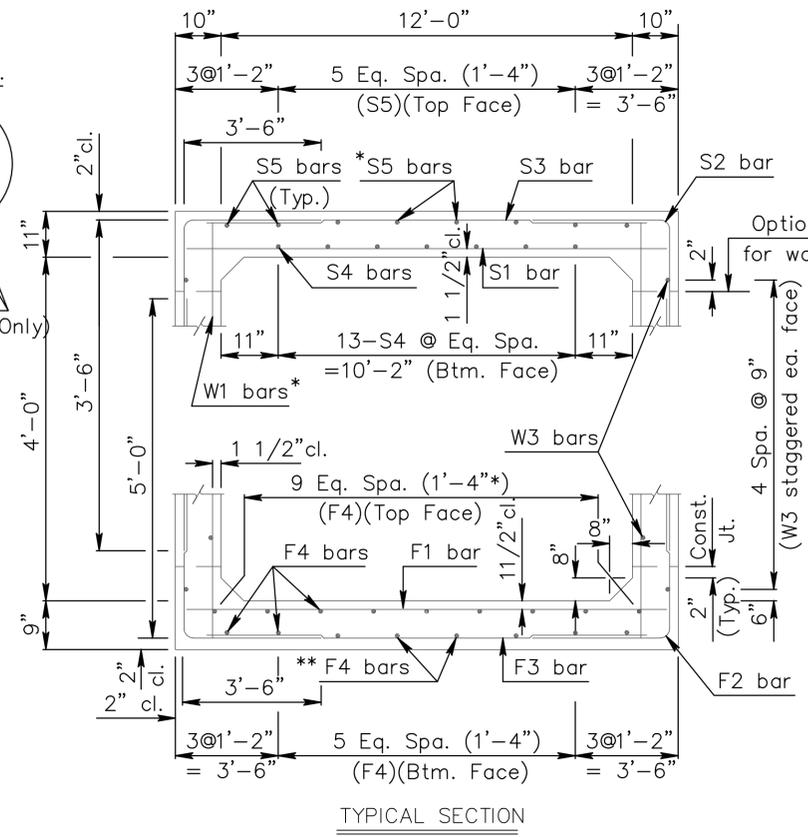
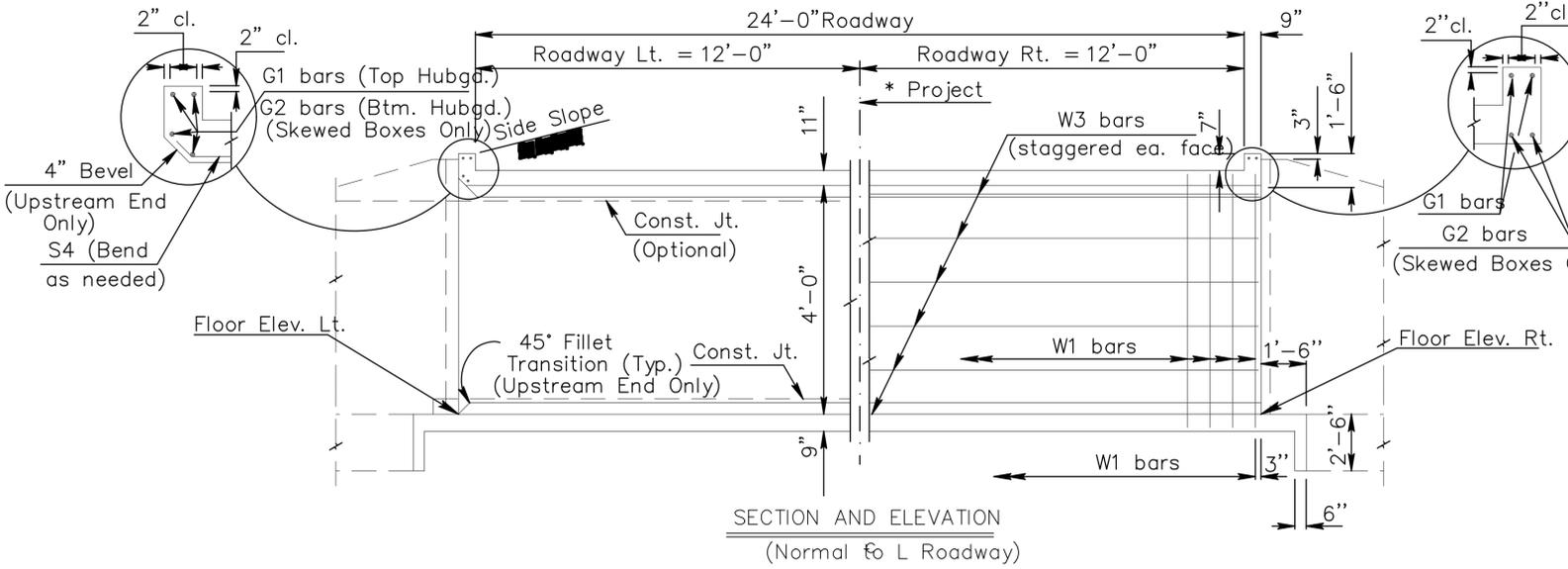
STORM WATER DRAIN
 Sidewalk Improvements

PROJECT NUMBER:

DESIGN: AEG DRAWN: JAK
 DATE: Oct. 10, 2025

SHEET OF
4R 17

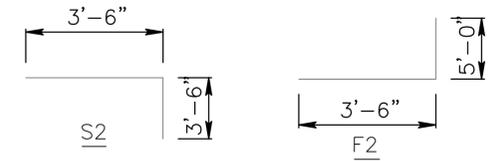
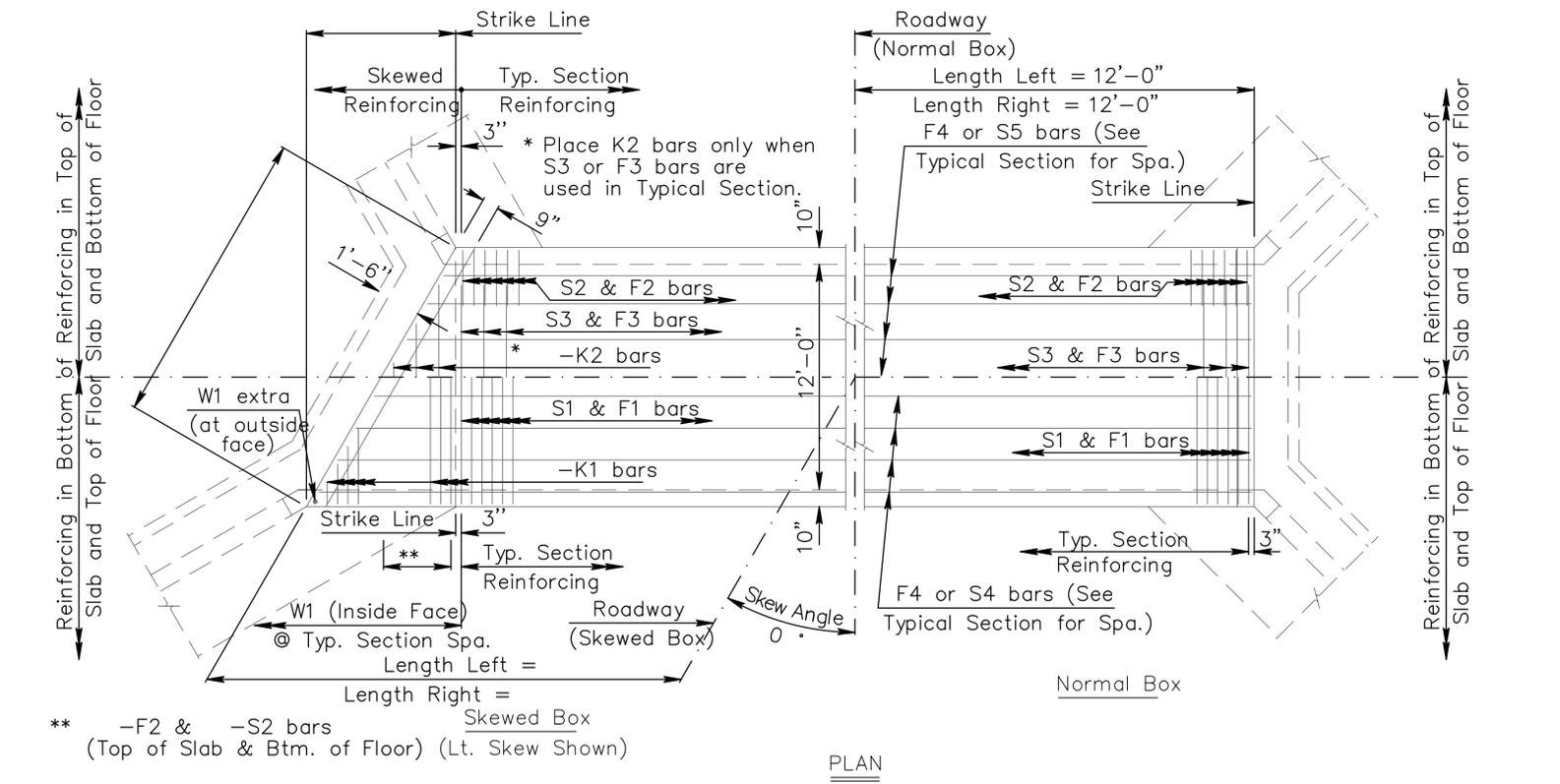
File: E:\Projects\Brookfield South\2nd Addition\Engineering\Phase 6\Sidewalk_24-06-E826.dwg



* See RCB Auxiliary Details for Optional Splice.
 * Omit when S3 bar is omitted
 ** Omit when F3 bars are omitted.

GENERAL NOTES

DESIGN SPECIFICATION: AASHTO LRFD Spec., 2007 Ed., 2009 Int.
DESIGN LOADING: HL93
UNIT STRESSES: Grade 4.0 Concrete; $f'_c = 4,000$ p.s.i.
 Reinforcing Steel; $f_y = 60,000$ p.s.i.
FILL HEIGHT: Unless otherwise noted, the Design Fill Height is measured from the riding surface at the culvert and shall include the surfacing.
CONCRETE: Grade 4.0 Concrete shall be used throughout. Bevel all exposed edges with a 3/4 inch triangular moulding. Where Grade 4.0 Concrete (AE) is specified, it shall be placed in the top slab above the Construction Joint.
REINFORCING: All reinforcing shall conform to ASTM A615, Grade 60. All dimensions relative to reinforcing steel shall be to centerline of bar unless otherwise noted.
EXCAVATION: Excavation for culverts less than bridge length shall not be paid for directly but shall be subsidiary to Grade 4.0 Concrete. Excavation for RCB Bridges shall be paid for as Class III Excavation.
SEAL COURSE: A Seal Course may be required by the Engineer. The Seal Course shall be unreinforced Concrete (Commercial Grade) to a minimum depth of 3 inches or as determined by the Engineer. Concrete for the seal course shall be paid for at the unit price set for Concrete for Seal Course.
FOUNDATION STABILIZATION: The Foundation Stabilization quantity has been calculated to the limits shown on the "RCB Auxiliary Details" sheet. The depth may be increased by the Engineer. The Contractor may underrun Foundation Stabilization under the barrel if founded on firm material and with the Engineer's approval. Use Foundation Stabilization on all wingwalls unless founded on rock or granular material.
QUANTITIES: The quantities shown in the Culvert Summary include apron and/or soil saver quantities when their construction is required by the plans. Payment for additional quantities that result from including seal course and/or floating apron, as a change in original plans, shall be made at the Unit Price bid for the various items involved.
GRANULAR BACKFILL (WINGWALLS): See the "Auxiliary Details" sheet.
STRIKE LINE: Wingwalls and that portion of the RCB outside the Strike Line shall be constructed level. Footing for wingwalls shall be constructed with the culvert floor. See wingwall detail sheet.
BRIDGE BACKWALL PROTECTION SYSTEM: For structures with this bid item in the Summary of Quantities. See the "Auxiliary Details" sheet.



BENDING DIAGRAM
 All Dimensions are out to out of bars.

** -F2 & -S2 bars (Top of Slab & Btm. of Floor) (Lt. Skew Shown)

| CULVERT SUMMARY | | | | | | | | | | LRFR RATING FACTORS | | | | | | |
|-----------------|-----------------|-----------------|-----------------|------|------------|-------------|-------------|------------|------------------|---------------------|-----------------|-----------------------|--------------|--------------|---------------|-----------|
| Floor Elev. Lt. | Floor Elev. Rt. | Crown Gr. Elev. | Design Fill Ht. | Skew | Left Wings | Right Wings | Scour Apron | Soil Saver | Concrete | | | Reinf. Steel (Gr. 60) | | | HL-93 Loading | |
| | | | | | | | | | Barrel (Cu.Yds.) | Wings (Cu.Yds.) | Total (Cu.Yds.) | Barrel (Lbs.) | Wings (Lbs.) | Total (Lbs.) | Inventory | Operating |
| 1362.80 | 1362.90 | 1368.50 | 0 | 0 | Flared | Flared | Yes | Yes | 27.37 | 12.89 | 40.26 | 5781 | 1371 | 7152 | 2.45 | 3.17 |

*See Bending Diagram

| Minimum Splice Lengths | |
|------------------------|-------|
| #4 | 1'-5" |
| #5 | 1'-9" |

| BAR SCHEDULE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|--------|-----|--------|------|------|-----|--------|------|------|-----|--------|------|------|--------|--------|--------|------|--------|--------|------|------|-------|--------|------|--------|--------|--------|------|--------|-----|--------|--------|------|-----|--------|------|------|-----|--------|--|--|--|--|--|
| F1 | | | | F2 | | | | F3 | | | | F4 | | | | S1 | | | | S2 | | | | S3 | | | | S4 | | | | S5 | | | | | | | | | | | | |
| Size | Spa. | No. | Length | Size | Spa. | No. | Length | Size | Spa. | No. | Length | Size | Spa. | No. | Length | Size | Spa. | No. | Length | Size | Spa. | No. | Length | Size | Spa. | No. | Length | Size | Spa. | No. | Length | Size | Spa. | No. | Length | Size | Spa. | No. | Length | | | | | |
| 6 | 6 1/2" | 44 | 13'-4" | 7 | 6" | 96 | 8'-6" | N/A | N/A | N/A | N/A | 4 | 16 | 23'-8" | 7 | 6 1/2" | 44 | 13'-4" | 5 | 6" | 96 | 7'-0" | 4 | 9" | 25 | 13'-4" | 5 | 13 | 23'-8" | 4 | 10 | 23'-8" | | | | | | | | | | | | |
| K1 | | | | K2 | | | | W1 | | | | W2 | | | | W3 | | | | W4 | | | | G1 | | | | G2 | | | | | | | | | | | | | | | | |
| N/A | N/A | N/A | | N/A | N/A | N/A | | 4 | 1" | 46 | 5'-4" | N/A | N/A | N/A | N/A | 4 | 10 | 23'-8" | N/A | N/A | N/A | N/A | 5 | 4 | 13'-4" | N/A | N/A | N/A | | | | | | | | | | | | | | | | |

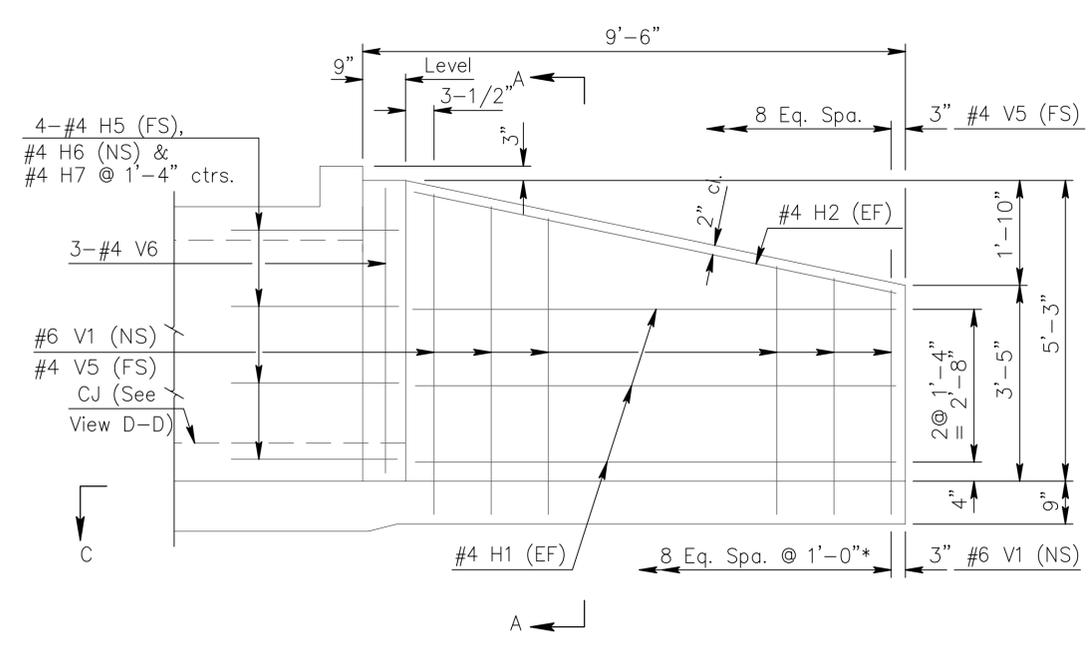
| SUMMARY OF QUANTITIES | |
|---|-----------|
| Concrete (Grade 4.0) | 40.3 C.Y. |
| Concrete (Grade 4.0)(AE) | 0.0 C.Y. |
| Bridge Backwall Protection System | S.Y. |
| Reinforcing Steel (Gr. 60) | 7150 Lbs. |
| Reinforcing Steel (Gr.60)(Epoxy Coated) | 0 Lbs. |
| Class III Excavation | C.Y. |
| Foundation Stabilization | 16 C.Y. |
| Concrete for Seal Course (Set) | 1 C.Y. |
| Granular Backfill (Wingwalls) | 24 C.Y. |

| NO. | DATE | REVISIONS | BY | APP'D |
|-------------------------------------|------------|------------|----------|----------|
| KANSAS DEPARTMENT OF TRANSPORTATION | | | | |
| Serial No.(0000) Sta. 0+00 | | | | |
| SINGLE 12 ft x 4 ft RFB | | | | |
| BR 1.12.4 F | | | | Sedgwick |
| DESIGNED | DATE | QUANTITIES | CADD | |
| DESIGN CK. | DETAIL CK. | QUAN. CK. | CADD CK. | |

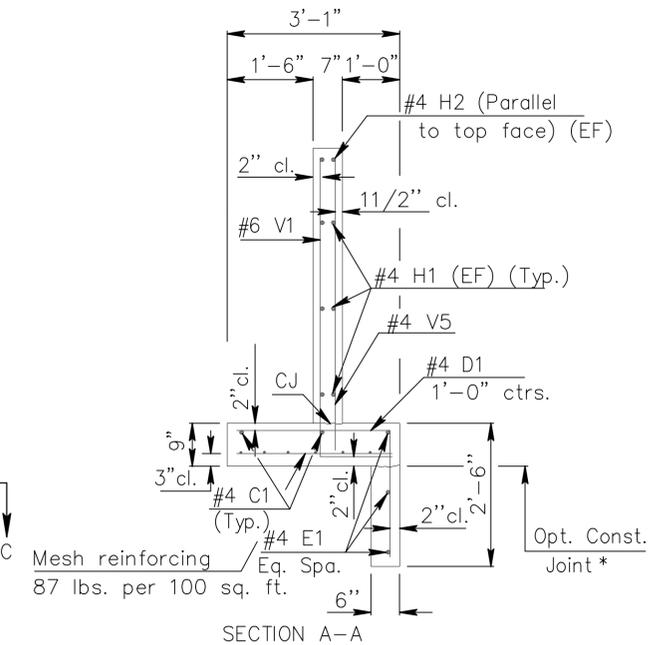
| | | | | |
|--------|-----------------|------|-----------|--------------|
| STATE | PROJECT NO. | YEAR | SHEET NO. | TOTAL SHEETS |
| KANSAS | 472-2022-085784 | 2025 | 6 | 17 |

GENERAL NOTES

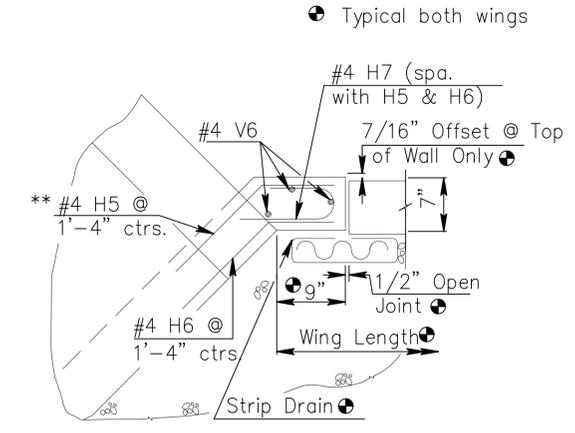
DESIGN SPECIFICATION: AASHTO LRFD Spec., 2007 Ed., 2009 Int.
 DESIGN LOADING: HL93
 UNIT STRESSES: Grade 4.0 Concrete; f'c = 4,000 p.s.i.
 Reinforcing Steel; fy = 60,000 p.s.i.
 CONCRETE: Grade 4.0 Concrete shall be used throughout. Bevel all exposed edges with a 3/4" triangular moulding.
 REINFORCING: All reinforcing shall conform to ASTM A615, Grade 60. Welded Wire Reinforcement shall conform to ASTM A185. All dimensions relative to reinforcing steel shall be to centerline of bar unless otherwise noted. Welded Wire Reinforcement shall be classified as pounds of reinforcing and included in the total quantity for the bid item Reinforcing Steel (Gr. 60).
 QUANTITIES: Wingwall Quantities include all quantities outside the neat lines of the box, excluding the hubguard.
 APRON: A 6" concrete slab shall be constructed between the downstream wings in locations subject to scour only when specified on the plans or by the Engineer.
 BACKFILL MATERIAL: Use Granular Backfill material meeting the requirements of SB-1, SB-2, SCA-1, SCA-2. Backfill all wings to limits shown on the "RCB Auxiliary Sheet".
 FILTER FABRIC: Separate in-situ material from granular backfill with approved filter fabric complying with Section 1710. Filter Fabric is subsidiary to "Granular Backfill".
 FOUNDATION STABILIZATION: Use Foundation Stabilization on all wingwalls unless founded on rock or granular material.



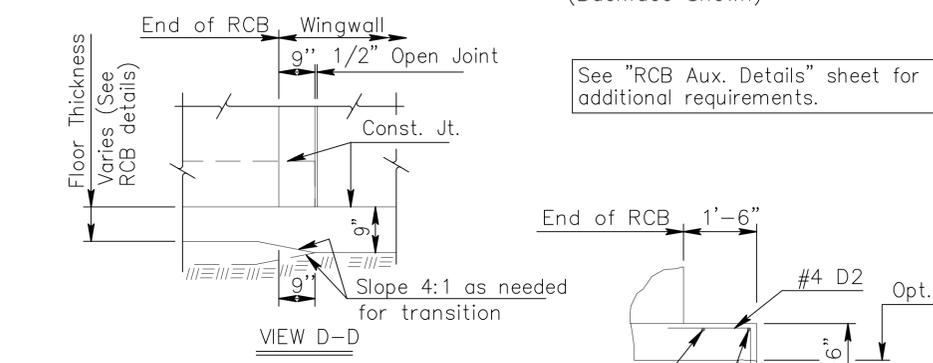
ELEVATION OF WINGWALL
(Backface Shown)



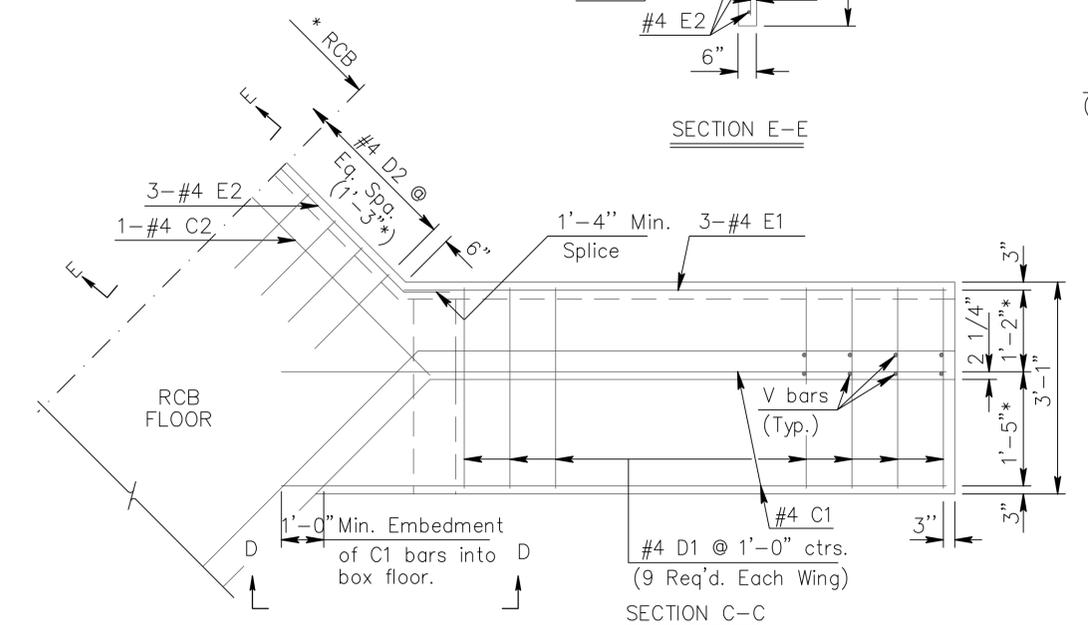
SECTION A-A



WINGWALL JOINT DETAIL
(Plan View)



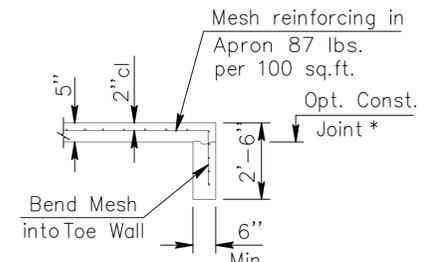
VIEW D-D



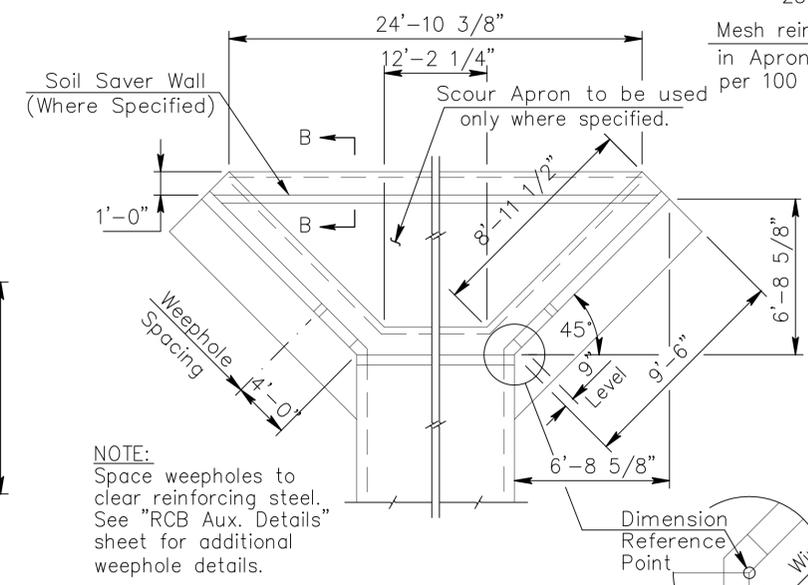
SECTION C-C

NOTE:
 EF = Each Face
 NS = Near Side
 FS = Far Side
 CJ = Const. Joint

See "RCB Aux. Details" sheet for additional requirements.

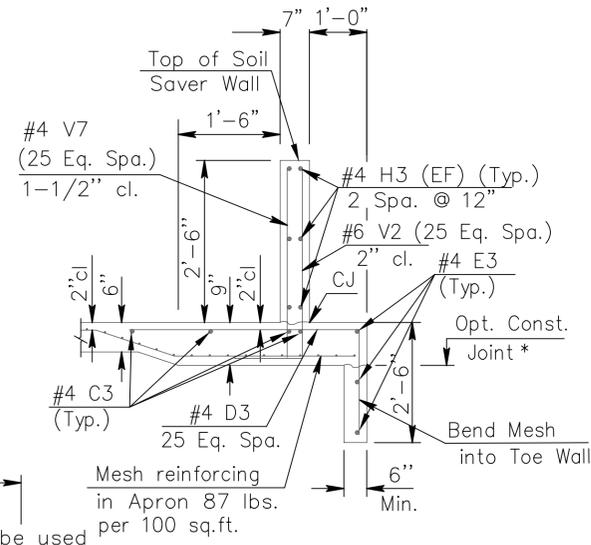


SECTION B-B
(NO SOIL SAVER WALL)

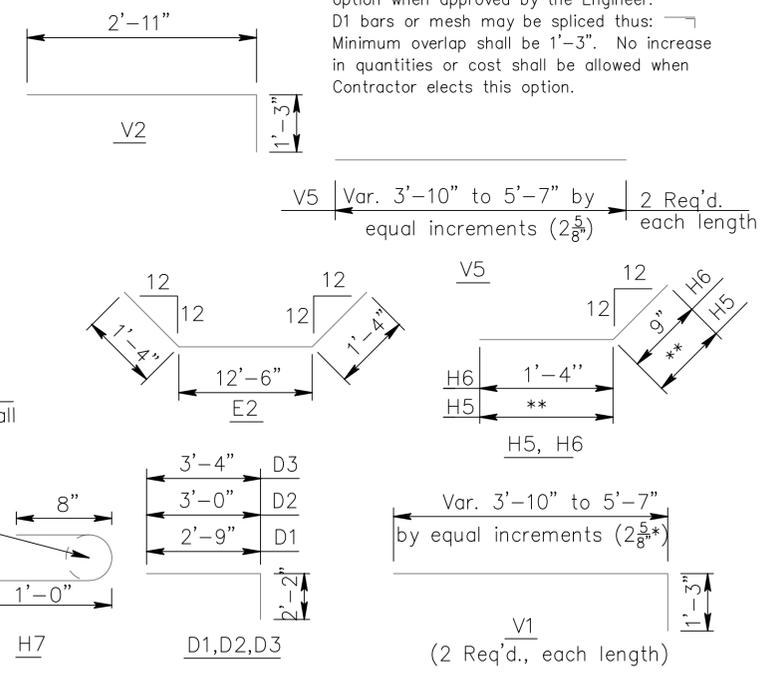


WING DIMENSIONS FOR NORMAL BOX
(3/2 :1 Embankment Slope)

NOTE:
 Space weepholes to clear reinforcing steel. See "RCB Aux. Details" sheet for additional weephole details.



SECTION B-B
(WITH SOIL SAVER WALL)



BENDING DIAGRAM

(All dimensions are out to out of bars.)

** Bend in Field

Quantities listed below are included in the Summary of Quantities shown on the RCB details.

| WINGWALL QUANTITIES (One End Only) | | Foundation Stabilization Concrete(Gr. 4.0) | |
|---------------------------------------|-------------|--|--|
| Wingwalls | 1.80 (C.Y.) | 5.07 (C.Y.) | |
| Apron | 1.95 (C.Y.) | 3.30 (C.Y.) | |
| Soil Save | 1.65 (C.Y.) | 2.25 (C.Y.) | |
| Reinforcing Steel (Gr. 60) | 556 Lbs. | | |
| Soil Saver Wall Reinf. Steel (Gr. 60) | 535 Lbs. | | |
| Welded Wire Fabric (Wings) | 51 Lbs. | | |
| Welded Wire Fabric (Apron) | 156 Lbs. | | |
| Granular Backfill (Wingwalls) | 12.00 C.Y. | | |
| Filter Fabric (subsidiary) | 18.00 S.Y. | | |

NOTE: Reinforcing Bar List is for both wings at one end of box only. * See Bending Diagram

| 0° Skew | Reinforcing Bar List | | | | | | | | | | | | | | | | #4C3 | | | |
|---------|----------------------|--------|-------|--------|-------|--------|------|-------|-------|--------|-------|-------|------|-------|--------|-------|--------|--------|-------|--------|
| | #4C1 | #4D1 | #4E1 | #4C2 | #4D2 | #4E2 | #6V1 | #4H1 | #4H2 | #4H5 | #4H6 | #4H7 | #4V5 | #4V6 | #4C3 | #4D3 | | #4E3 | #4H3 | #6V2 |
| No. | 4 | 18* | 6 | 1 | 10* | 3* | 18 | 12 | 4 | 8* | 8* | 8* | 18 | 6 | 4 | 26* | 3 | 6 | 26 | 26 |
| Length | 11'-7" | 4'-11" | 8'-9" | 13'-4" | 5'-2" | 15'-2" | * | 8'-4" | 8'-6" | 1'-10" | 2'-1" | 1'-9" | * | 5'-0" | 26'-0" | 5'-6" | 26'-0" | 26'-0" | 4'-2" | 2'-11" |

| | | | | |
|-------------------------------------|----------|------------|---------------|-------|
| 3 | | | | |
| 2 | | | | |
| 1 | | | | |
| NO. | DATE | REVISIONS | BY | APP'D |
| KANSAS DEPARTMENT OF TRANSPORTATION | | | | |
| Serial No.(0000) | | Sta. 0+00 | | |
| FLARED WINGWALLS | | | | |
| 4 ft Rise (0° SKEW) | | | | |
| BR 10.00.04 | | Sedgwick | | |
| DESIGNED | 10-20-10 | APP'D | Larry L. Heck | |
| DETAIL CK. | | QUANTITIES | CADD | |
| DESIGN CK. | | QUAN. CK. | CADD CK. | |

| STATE | PROJECT NO. | YEAR | SHEET NO. | TOTAL SHEETS |
|--------|-----------------|------|-----------|--------------|
| KANSAS | 472-2022-085784 | 2025 | 7 | 17 |

GENERAL NOTES

(All Items on this sheet are subsidiary)

PRECAST BOX CULVERTS: If precast boxes are specified, construct them at the locations shown in the plans and according to the requirement shown on this sheet. When approved by the Engineer, precast box culverts may be used in lieu of cast-in-place box culverts. If the Contractor chooses the precast option, use the cast-in-place quantities as the cost basis. This cost includes all labor equipment, material and incidentals necessary to complete the installation.

Unless otherwise approved by the Engineer, use cast-in-place collars at horizontal and vertical changes in RCB alignment. Use cast-in-place end sections and wingwalls except as noted on this sheet. The Engineer may require cast-in-place sections at junctions of drainage structures.

Cast-in-place concrete work shall conform to the requirements of the KDOT Specifications and Chapter 12 of KDOT's Bridge Design Manual. Use Grade 4.0 concrete and Grade 60 reinforcing steel conforming to ASTM A615 for cast-in-place construction.

Cast-in-place box sections shall have member thicknesses and reinforcement not less than the RCB Standard from the original design. Connections between the cast-in-place and precast members shall be drilled and grouted according to details shown on this sheet. When the wall thicknesses differ between the cast-in-place and precast, transition at a 4:1 without reducing the box opening size. See KDOT Specifications for further requirements.

SPECIFICATIONS: Single-cell Precast Concrete Box Culverts shall conform to the requirements of the following specifications except as noted in the KDOT Specifications. Design multiple-cell precast boxes in accordance with the criteria used to develop the single-cell precast boxes. (See Appendix of ASTM Specification C 1577-08, Table 2 and the latest AASHTO LRFD Specifications.)

DISTRIBUTION SLAB: Fill heights less than 2 feet require a distribution slab. Construct the distribution slab over the width of the exterior walls of the barrel to the outside edges of the roadway shoulders. Terminate the slab a minimum of 2 feet from the edge of a barrel segment.

If the fill height is less than or equal to one foot then:

A distribution slab shall be a minimum of 6 inches thick, reinforced with #4 bars spaced at 18 inches, placed perpendicular to centerline of the box and with #5 bars spaced at 12 inches, placed parallel to centerline of the box. Substitution of an equivalent welded wire fabric is acceptable. Place a min. of 3" of granular material between the box and slab.

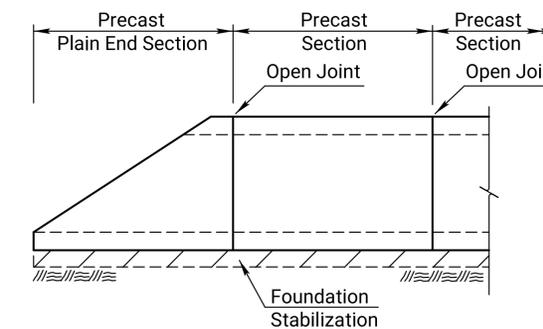
If the fill height is greater than one foot then:

(Use one of the following options)

1. Use the cast-in-place criteria above.
2. Use precast distribution slabs with same criteria as the cast-in-place above. Center the joints in slabs over the box segments. Provide a minimum of 3 inches of granular material between the box and the slabs.
3. Reinforced concrete pavement (min. 6 inches thick) will meet the requirements of a distribution slab. Reinforce as noted above. Provide a minimum of 3 inches of granular material between the concrete pavement and the precast boxes.
4. Asphalt pavement (min. 6 inches thick) will meet the requirements of a distribution slab. Provide a minimum of 6 inches of granular material between the asphalt and the precast boxes. Also provide geogrid with 4" of cover to the asphalt within the granular box.

A special design will be required when the above options are not geometrically possible.

++ When shown on the shop details use a Bridge Backwall Protection conforming to Section 1700 of the KDOT Specifications.



ELEVATION AT PRECAST END SECTION

(Precast End Sections are permitted where straight wings are shown in the plans or at the downstream end for single cell RCB with a rise of six feet or less.)

NOTE: See "Bridge Excavation" sheet, (Std. No. BR100B), for excavation details and basis of payment.

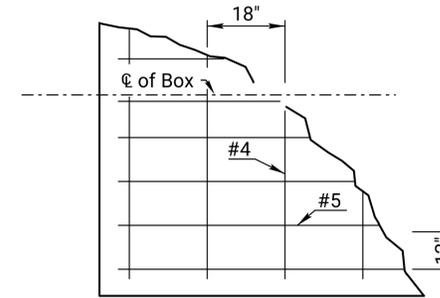
NOTE: Minimum length of precast section shall be 4'-0".

NOTE: A single cell box of equivalent area may be substituted for a double cell box with cell spans less than or equal to 6'-0". Any revision in the cell height from that shown on the plans will not be permitted, unless approved by the Engineer. Two single cell boxes may be substituted for a double cell box, when approved by the Engineer.

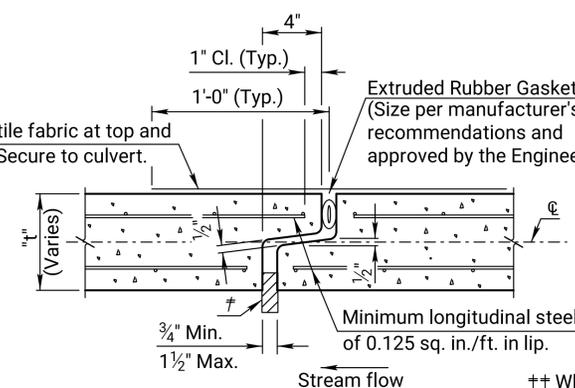
NOTE: See respective RCB Standard Sheets for cast-in-place details.

NOTE: When the fill height is 2'-0" or less "Bridge Backwall Protection" is required.

⊗ Bridge Backwall Protection not shown for clarity.

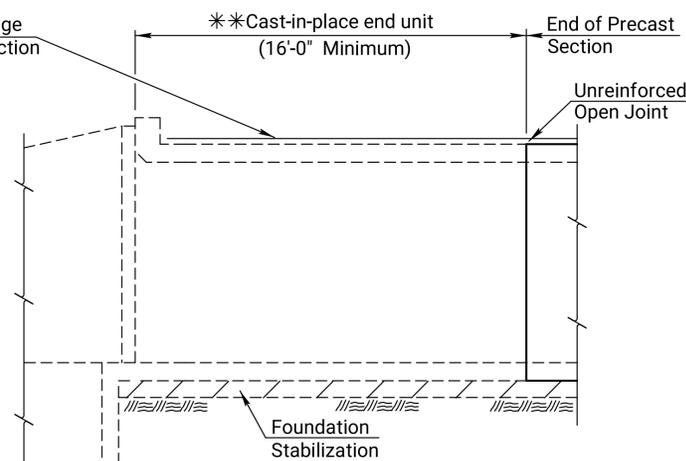


CAST IN PLACE DISTRIBUTION SLAB
(Partial plan of reinforcement)



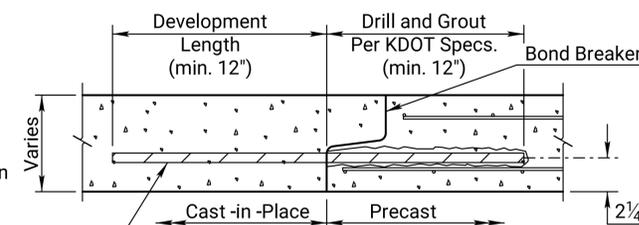
OPTION "C"

† Insert temporary, 3/4"-1" wide, hardwood wedges to prevent over-compressing gasket.

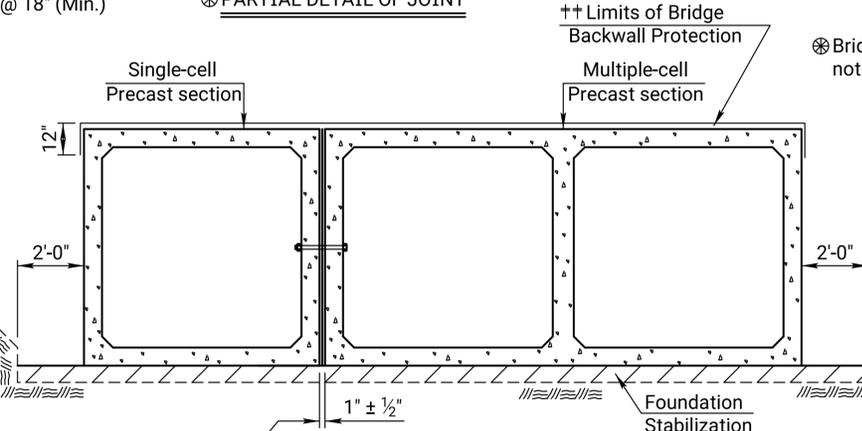


ELEVATION AT HEADWALL

** Minimum barrel length of cast-in-place end unit shall be 16'-0" when using an unreinforced open joint at the end of the precast section.

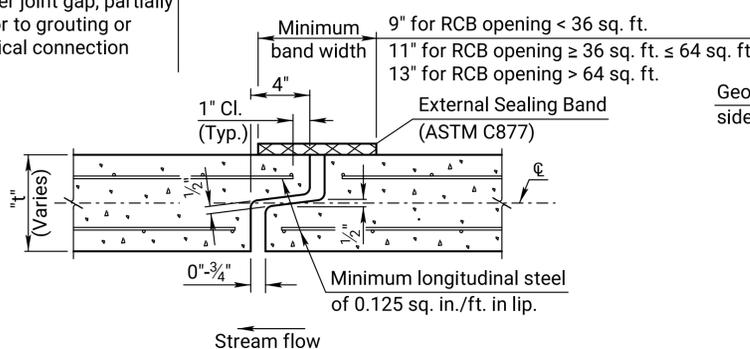


PARTIAL DETAIL OF JOINT



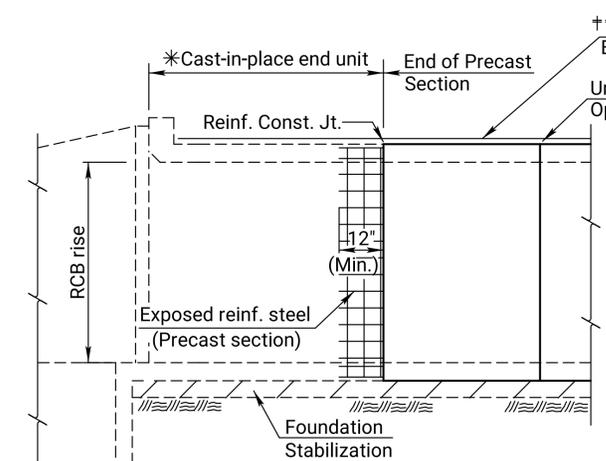
TYPICAL INSTALLATION DETAILS

Fill space between boxes with grout. (To maintain proper joint gap, partially backfill boxes prior to grouting or provide a mechanical connection between boxes.)



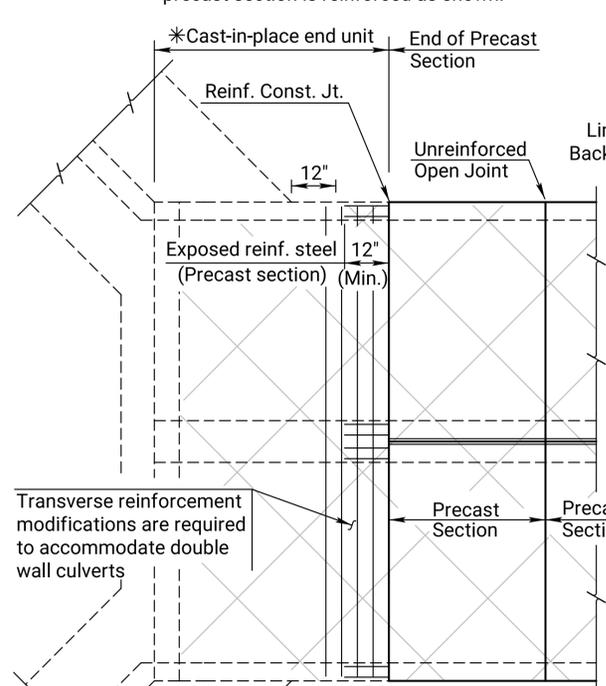
OPTION "B"

OPEN JOINT DETAIL

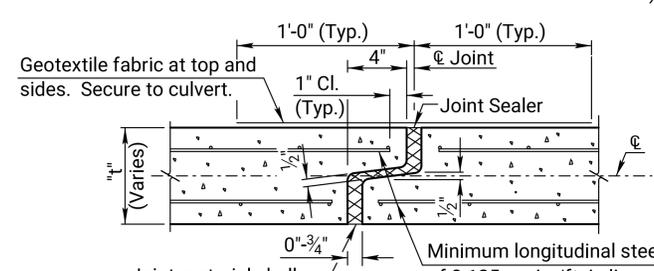


ELEVATION AT HEADWALL

* Minimum barrel length of cast-in-place end unit shall equal the RCB rise or 8'-0", whichever is less. This length can be used when the joint between the cast-in-place end unit and the precast section is reinforced as shown.



PLAN AT HEADWALL
(Double culvert installation shown)



OPTION "A"

Plotted by: KDOT#CADD.Support_ks.gov File: br031.dgn 25-JUN-2022 00:03

| NO. | DATE | REVISIONS | BY | APPD |
|-----|----------|----------------------------------|--------|--------|
| 05 | 08-19-13 | Edit Geogrid Placement | J.P.J. | T.L.F. |
| 04 | 07-28-11 | Added Bridge Backwall Protection | J.P.J. | K.F.H. |
| 03 | 03-10-10 | Clarification of Extension | J.P.J. | K.F.H. |

KANSAS DEPARTMENT OF TRANSPORTATION

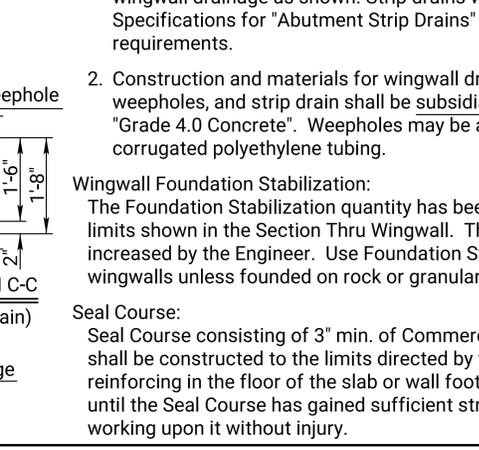
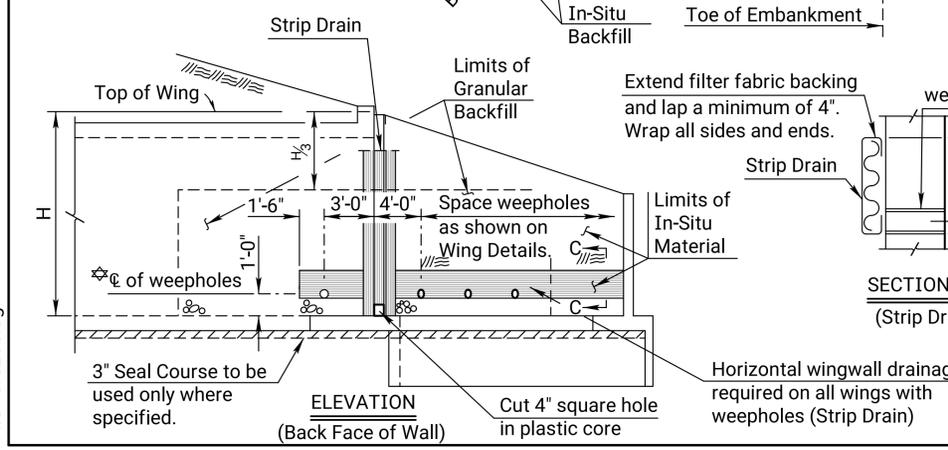
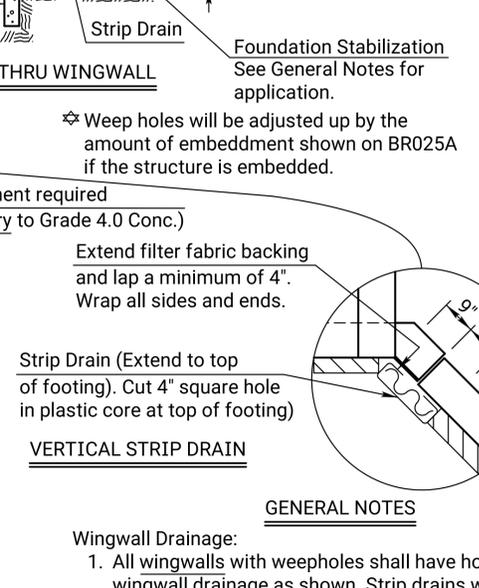
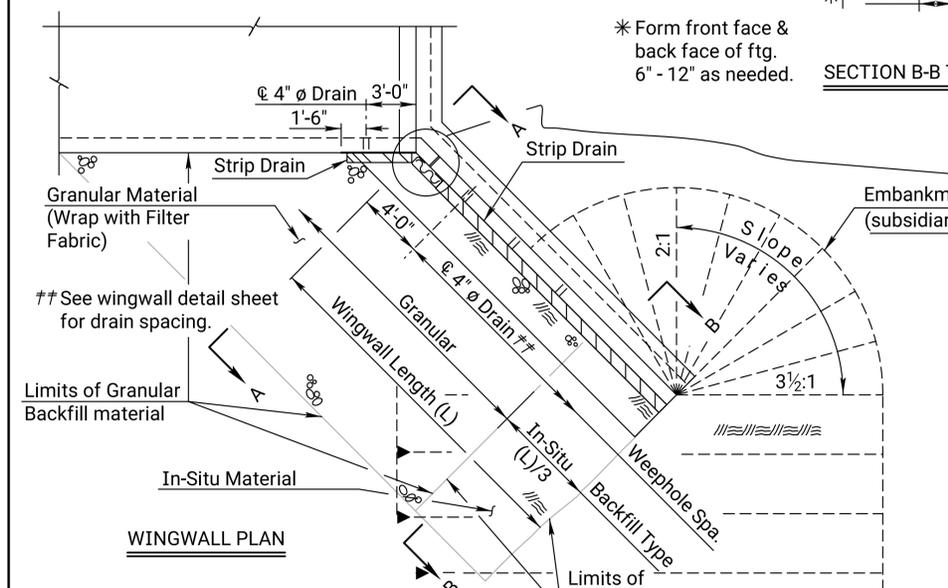
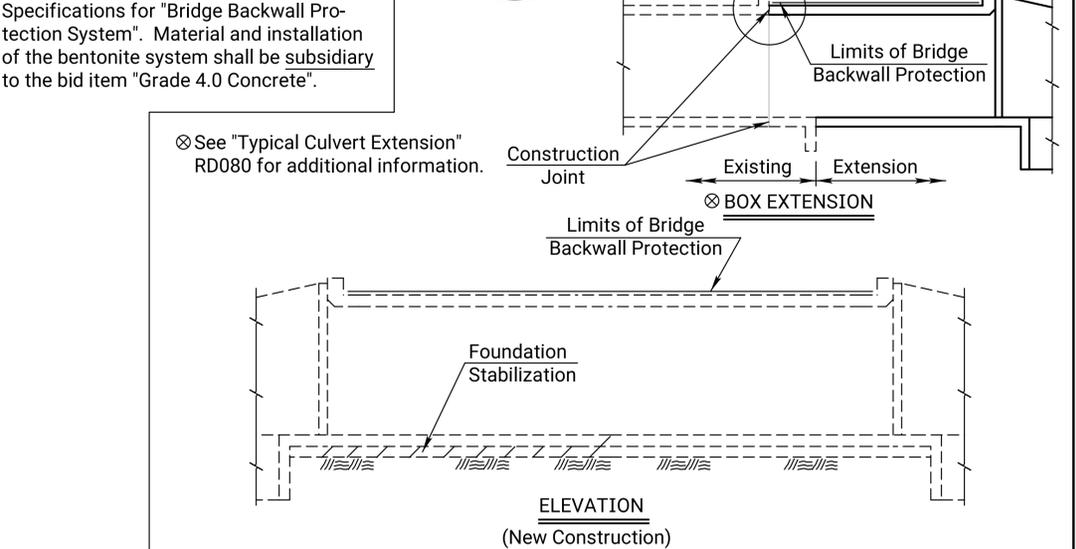
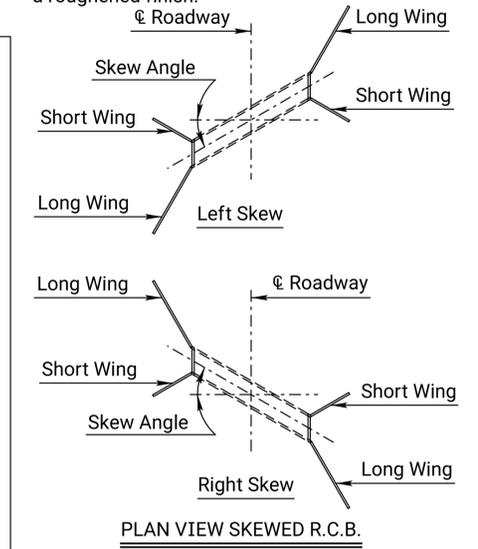
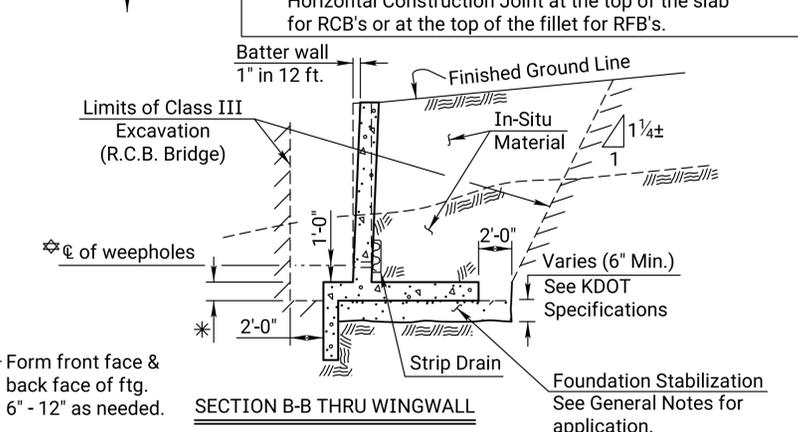
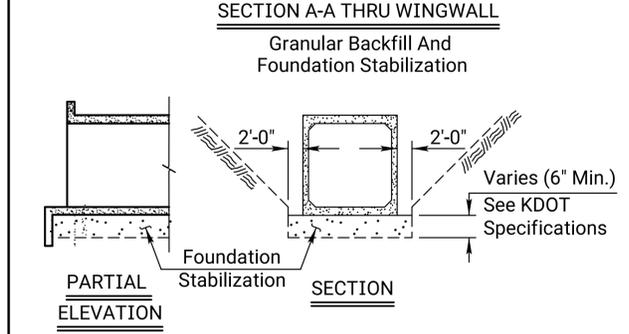
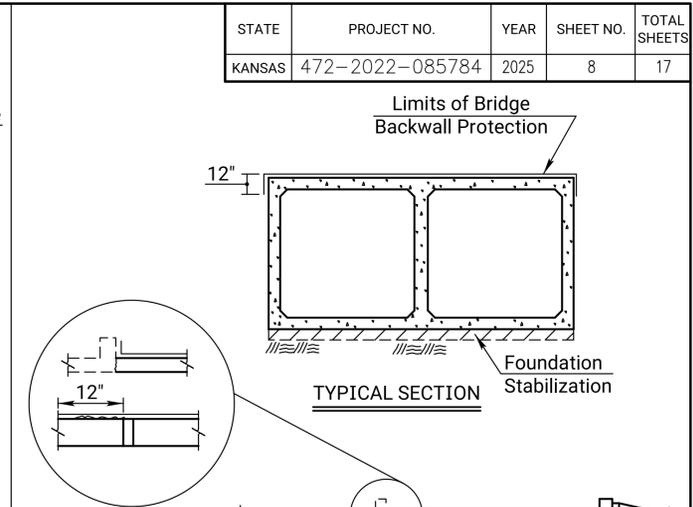
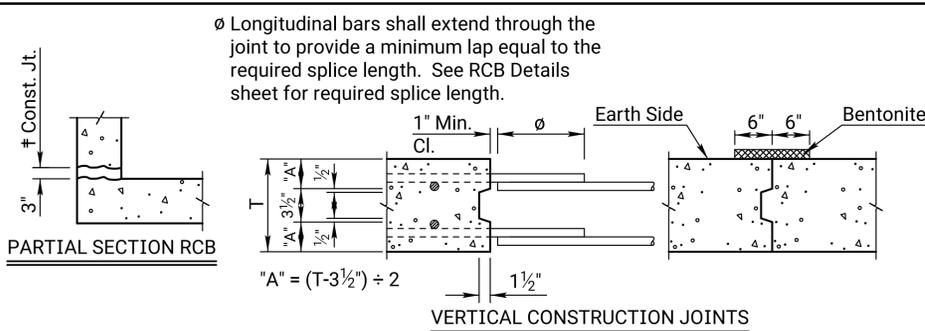
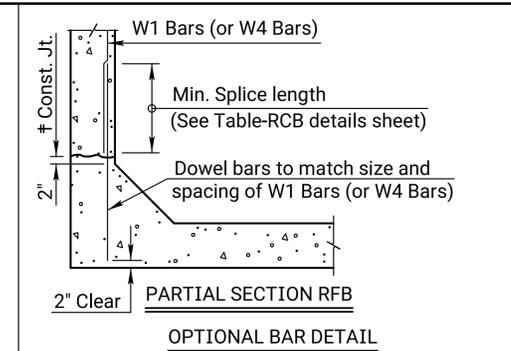
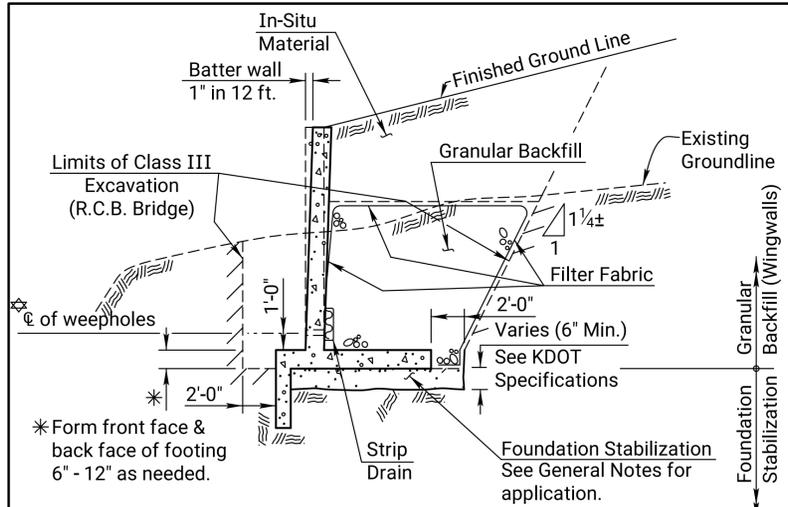
PRECAST CONCRETE BOX CULVERT DETAILS

BR031

| | | | | |
|------------|------------|----------|-----------|------------------|
| DESIGNED | DATE | 09-20-11 | APPD. | Kenneth F. Hurst |
| DESIGN CK. | DETAIL CK. | R.A.M. | QUAN. CK. | TRACED |

KDOT Graphics Certified 06-20-2022 Sh. No. 0

| STATE | PROJECT NO. | YEAR | SHEET NO. | TOTAL SHEETS |
|--------|-----------------|------|-----------|--------------|
| KANSAS | 472-2022-085784 | 2025 | 8 | 17 |



GENERAL NOTES

Foundation Stabilization:
The depth of Foundation Stabilization may be increased by the Engineer. The Contractor may underrun Foundation Stabilization under the barrel if founded on firm material and with the Engineer's approval. Use Foundation Stabilization on all wingwalls unless founded on rock or granular material.

Granular Backfill (Wingwalls):

- Granular Backfill shall be used to backfill behind wingwalls to the limits shown in the WINGWALL PLAN and Elevation detail. Granular Backfill construction may be used separately or combined with Foundation Stabilization as directed by the Engineer.
- Measurement for the bid item, "Granular Backfill (Wingwalls)", shall be measured in Cubic Yards to the theoretical limits as shown.
- Material for Granular Backfill (Wingwalls) shall conform to the requirements of SB-1, SB-2, SCA-1 or SCA-2.
- Consolidate Granular Backfill using hand equipment only. Avoid over consolidation.
- Use filter fabric complying with Section 1710. Use only within the limits of Granular Backfill to separate from the In-Situ Material. Filter Fabric is subsidiary to "Granular Backfill".

In-Situ Backfill (Wingwalls):

- Use any material found within the project limits except Highly Plastic Clay(s) or organic material. The material is subsidiary to "Granular Backfill".
- Use Type "B" Compaction.
- Use only hand or walk behind equipment for Compaction.

Wingwall Drainage:

- All wingwalls with weepholes shall have horizontal and vertical wingwall drainage as shown. Strip drains will be used. See KDOT Specifications for "Abutment Strip Drains" for strip drain requirements.
- Construction and materials for wingwall drainage, including weepholes, and strip drain shall be subsidiary to the bid item, "Grade 4.0 Concrete". Weepholes may be a formed opening or corrugated polyethylene tubing.

Wingwall Foundation Stabilization:
The Foundation Stabilization quantity has been calculated to the limits shown in the Section Thru Wingwall. The depth may be increased by the Engineer. Use Foundation Stabilization on all wingwalls unless founded on rock or granular material.

Seal Course:
Seal Course consisting of 3" min. of Commercial Grade Concrete shall be constructed to the limits directed by the Engineer. No reinforcing in the floor of the slab or wall footing shall be placed until the Seal Course has gained sufficient strength to permit working upon it without injury.

GENERAL NOTES

Bridge Backwall Protection System:

- For all structures with less than or equal to 2'-0" of fill, apply a "Bridge Backwall Protection System" from Section 1700 to the limits shown. Do not place hot mix asphalt directly on this material.
- Use a "non-coal tar" material from KDOT's approved list.
- Protect this material from damage during backfilling. Repair at no additional cost.
- When the Plans show hot mix asphalt placed directly on the slab, substitute "Pavement Water Proofing" material from Section 800, this material shall be subsidiary. Wait 28 days after top slab is completed before applying this material.

| NO. | DATE | REVISIONS | BY | APPD |
|-----|----------|-----------------------------|--------|--------|
| 07 | 02-06-18 | Filter Fabric Clarification | M.L.L. | J.P.J. |
| 06 | 06-07-17 | Filter Fabric Modification | J.P.J. | J.P.J. |
| 05 | 10-11-13 | Granular Backfill Limits | J.P.J. | L.R.R. |

KANSAS DEPARTMENT OF TRANSPORTATION

RCB AUXILIARY DETAILS (LRFD)

BR020B

| | | | | | |
|------------|--------|------------|----------|------------|----------------|
| DESIGNED | J.P.J. | DATE | 04-17-10 | APPD. | Terry L. Fleck |
| DRAWN | J.S.R. | CHECKED | J.P.J. | QUANTITIES | TRACED |
| DESIGN CK. | J.S.R. | DETAIL CK. | J.P.J. | QUAN. CK. | TRACE CK. |

KDOT Graphics Certified 06-20-2022 Sh. No. 0

Plotted by: KDOT\CADD\Support_L_ks.gov 25-JUN-2022 00:01
File: br020b.dgn

BENCHMARKS:
 RR spike in asphalt, SW Cor.,
 N1/2, SW1/4, Sec. 34, TWP. 26-S,
 R-2-E.
 Elev. = 1400.59 NAVD

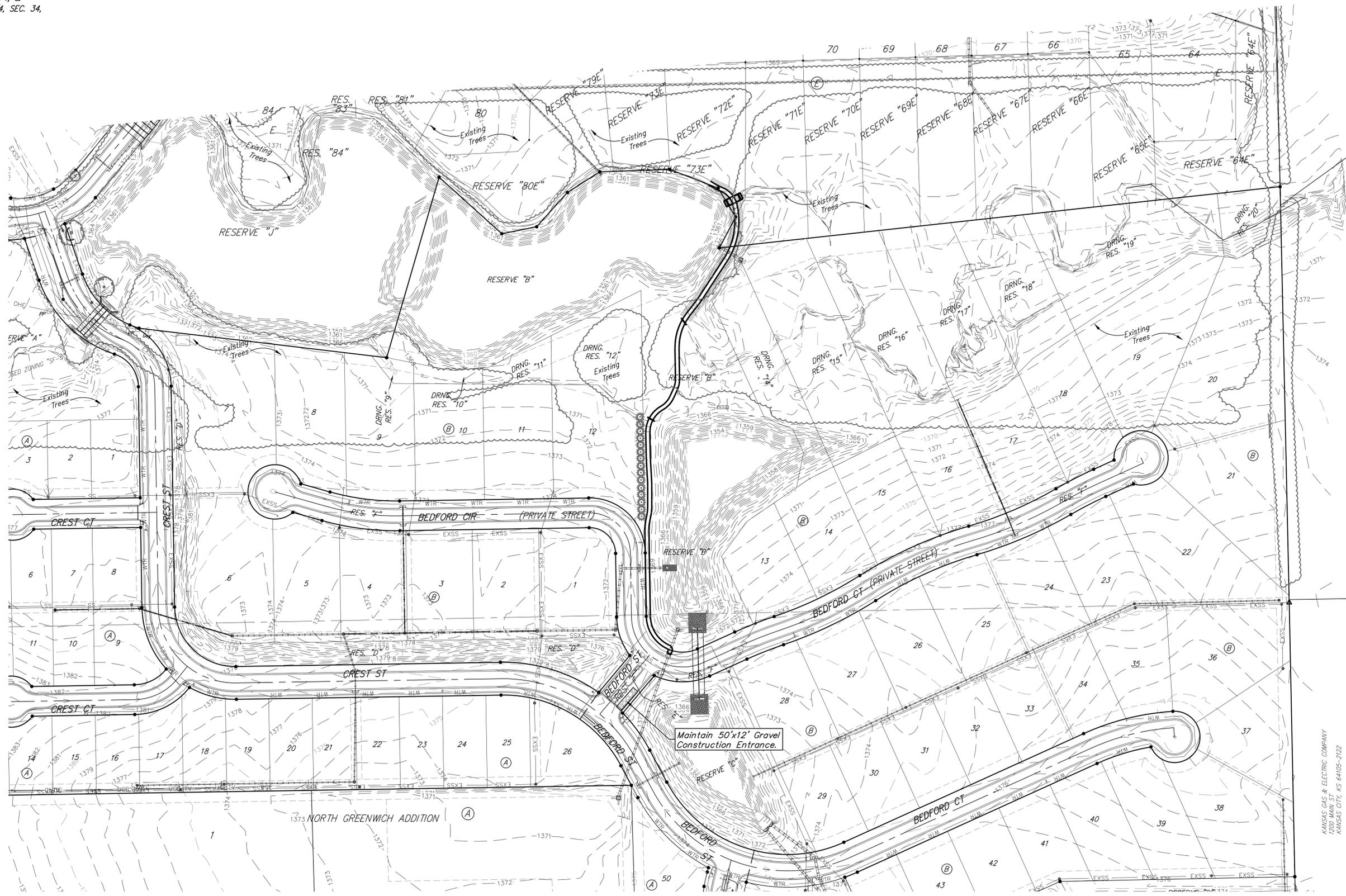
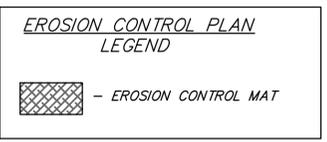
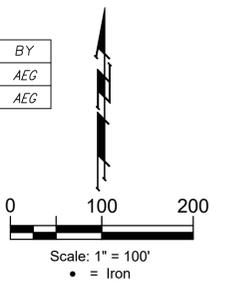
R.R. spike in E. face of power pole,
 174± N. of S. line, N1/2, SW1/4
 & 49± E. of W. line, SW1/4, SEC.
 34, TWP. 26-S, R-2-E.
 Elev. = 1398.64 NAVD88

R.R. spike in S. face of power pole,
 294± S. of N. line, SW1/4, &
 48± E. of W. line, SW1/4, SEC. 34,
 TWP. 26-S, R-2-E.
 Elev. = 1386.14 NAVD88

| EROSION CONTROL MEASURE | INSTALL | MAINTAIN |
|----------------------------|---------|----------|
| CONSTRUCTION ENTRANCE (EA) | 0 | 1 |
| EROSION CONTROL MAT (SY) | 565 | 0 |

* ALL EXISTING BMPs INCLUDING CONSTRUCTION ENTRANCE, SEDIMENT BARRIERS, SILT FENCE, CUT-OFF TRENCH, AND EROSION CONTROL MAT SHALL BE MAINTAINED AND REPAIRED IF NECESSARY.

| REVISION RECORD | | | | |
|-----------------|---------|------------------------------------|-----|-----|
| NO. | DATE | DESCRIPTION | DR. | BY |
| 1 | 12/2/25 | Sheet Numbers | JAK | AEG |
| 2 | 12/2/25 | Added Erosion Control Mat quantity | JAK | AEG |



BAUGHMAN COMPANY
 315 Ellis St.
 Wichita, KS 67211
 316-262-7271
 BaughmanCo.com

Brookfield South Addition
 Phase 6 & Phase 7

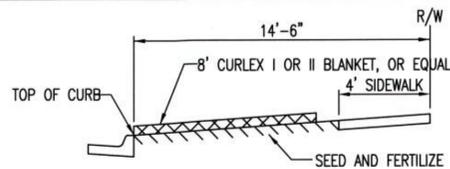
EROSION CONTROL

Sidewalk Improvements
 PROJECT NUMBER:

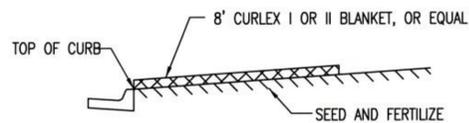
DESIGN: AEG DRAWN: JAK
 DATE: Oct. 10, 2025

KANSAS GAS & ELECTRIC COMPANY
 2200 MAIN ST
 KANSAS CITY, KS 64105-2122

File: C:\Projects\Brookfield South 2nd Addition\Engineering\Phase 6\Sidewalk_24-06-E826.dwg

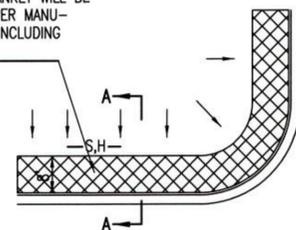


SECTION B-B

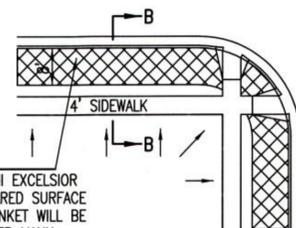


SECTION A-A

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



SOUTH STREET

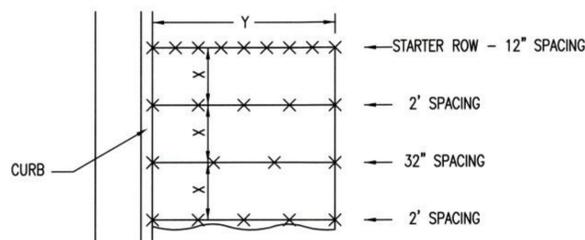


INSTALL 8' WIDE CURLEX I OR II EXCELSIOR BLANKET, OR EQUAL, ON PREPARED SURFACE BACK OF CURB. EDGE OF BLANKET WILL BE AT BACK OF CURB. INSTALL PER MANUFACTURERS RECOMMENDATION, INCLUDING STAPLES. (SEE DETAIL)

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.

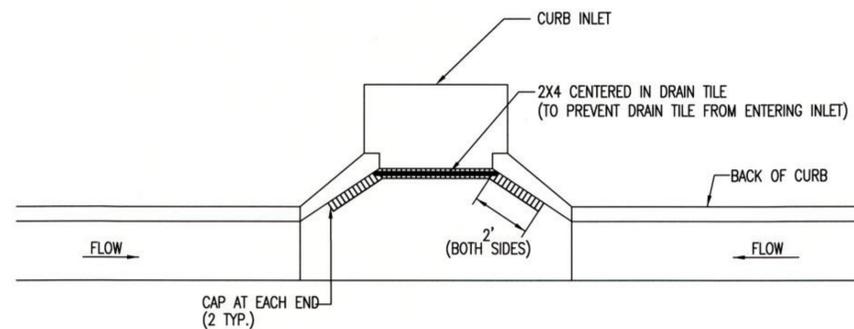
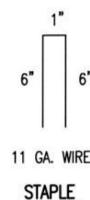
BACK OF CURB PROTECTION DETAIL



STAPLE PATTERN

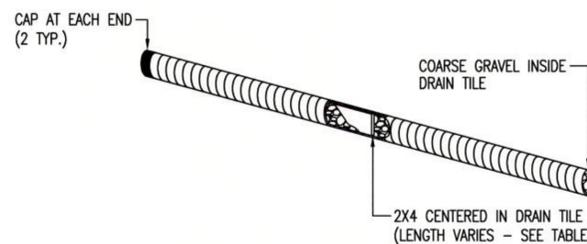
NOTES: USE 6" SEAM OVERLAP
(X & Y = RECOMMENDED BY MANUFACTURE)

DETAILS FOR APPROVED EROSION CONTROL MAT

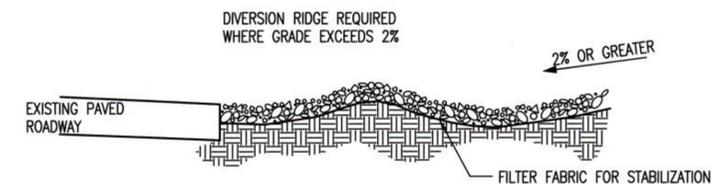


NOTE: PLACE 4" PERFORATED PVC PIPE, FILLED WITH 1/2"-1" DIA. GRAVEL, IN FRONT OF CURB INLET AS SHOWN.

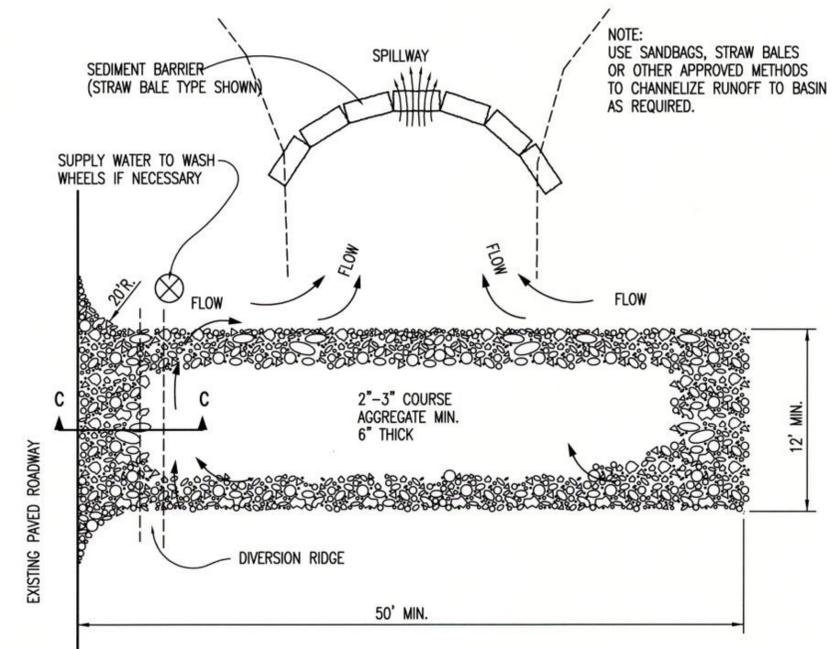
| 2X4 LENGTH | INLET TYPE | INLET OPENING |
|------------|------------|---------------|
| 5'-6" | 1-A | 5'-0" |
| 10'-6" | 1-A | 10'-0" |
| 15'-6" | 1-A | 15'-0" |



CURB INLET PROTECTION
4" PERFORATED PIPE W/ GRAVEL



SECTION C-C

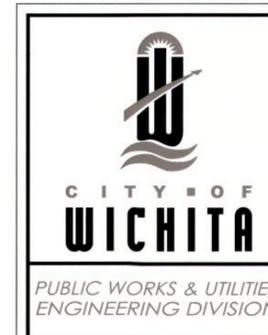


STABILIZED CONSTRUCTION ENTRANCE

GENERAL NOTES

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

REVISION DATE: MAY 2013



BACK OF CURB PROTECTION,
CURB INLET PROTECTION AND
CONSTRUCTION ENTRANCE

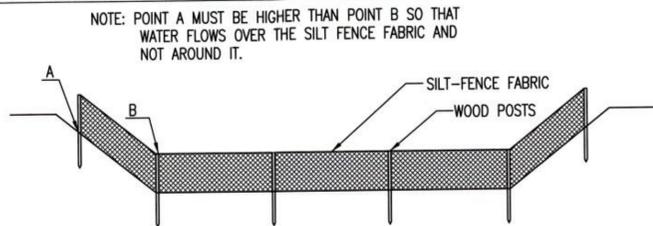
CITY ENGINEER
GARY JANZEN, P.E.

| | | |
|----------------|------------|------|
| PROJECT NUMBER | OCA NUMBER | DATE |
|----------------|------------|------|

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

SHEET

10 of 17



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 UPSLOPE EDGE OF THE TRENCH. LINE TWO SIDES OF THE TRENCH WITH THE FABRIC AS SHOWN ON DETAIL. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT FENCE FABRIC SHOULD REMAIN EXPOSED. LAY THE EXPOSED SILT FENCE ON THE 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.

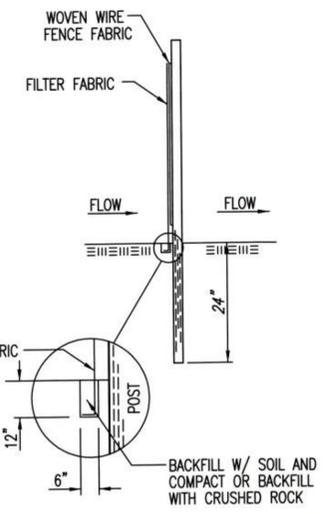
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

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.

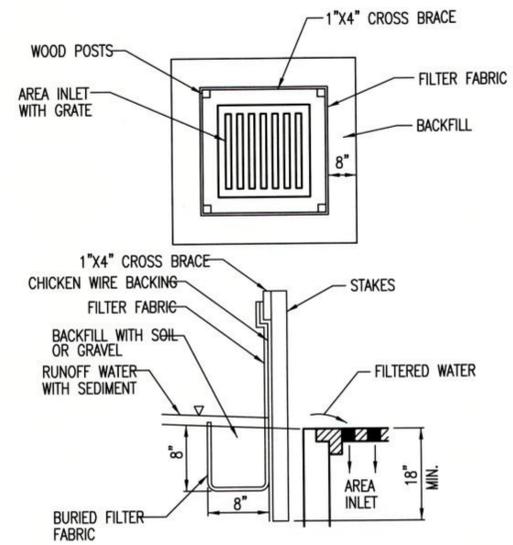
INSPECTION AND MAINTENANCE:

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.

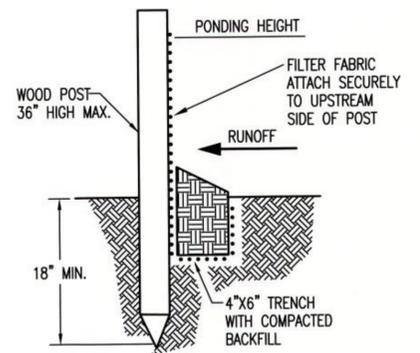
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

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 UPSLOPE OF THE TRENCH TO CLEAR AN AREA FOR DRIVING IN THE POSTS. JUST DOWNSLOPE OF THE TRENCH, DRIVE POSTS INTO THE GROUND TO A DEPTH OF AT LEAST 18". PLACE POSTS NO MORE THAN 4' APART. ATTACH THE SILT FENCE TO THE ANCHORED POST WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

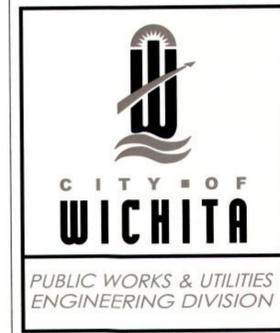
WHEN PRACTICABLE, DO NOT PLACE SILT FENCE SLOPE BARRIERS ACROSS CONTOURS. SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. WHEN THE FLOW CONCENTRATES, IT OVERTOPS THE BARRIER AND THE SILT FENCE SLOPE BARRIER QUICKLY DETERIORATES. DO NOT PLACE SILT-FENCE POSTS ON THE UPSLOPE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

INSPECTION AND MAINTENANCE:

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

- ARE THERE ANY POINTS ALONG THE SLOPE BARRIER WHERE WATER IS CONCENTRATING?
- DOES WATER FLOW UNDER THE SLOPE BARRIER?
- 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?

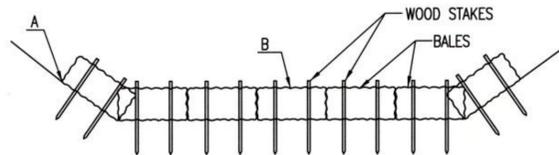
REVISION DATE: MAY 2013



SILT FENCE DITCH CHECK AND BARRIER DETAILS

| | | |
|--|------------|--------------------------|
| CITY ENGINEER GARY JANZEN, P.E. | | |
| PROJECT NUMBER | OCA NUMBER | DATE |
| CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501 | | SHEET 11 of 17 |

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



STRAW BALE DITCH CHECKS

MATERIAL SPECIFICATION:

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

PLACEMENT:

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

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

ROCK CHECKS SHOULD BE USED INSTEAD.

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

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

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

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH PERPENDICULAR TO THE DITCH FLOWLINE THAT IS 4" DEEP AND A BALE'S WIDTH WIDE. EXTEND THE TRENCH IN A STRAIGHT LINE ALONG THE ENTIRE LENGTH OF THE PROPOSED DITCH CHECK. PLACE THE SOIL ON THE UPSTREAM SIDE OF THE TRENCH-IT WILL BE USED LATER.

OPTIONAL: ON THE DOWNSTREAM SIDE OF THE TRENCH, ROLL OUT A LENGTH OF EROSION-CONTROL BLANKET (SCOUR APRON) EQUAL TO THE LENGTH OF THE TRENCH. PLACE THE UPSTREAM EDGE OF THE EROSION-CONTROL BLANKET ALONG THE BOTTOM UPSTREAM EDGE OF THE TRENCH. THE EROSION CONTROL BLANKET SHOULD BE ANCHORED IN THE TRENCH WITH ONE ROW OF 8" LANDSCAPE STAPLES PLACED ON 18" CENTERS. THE REMAINDER OF THE EROSION-CONTROL BLANKET (THE PORTION THAT IS NOT LYING IN THE TRENCH) WILL SERVE AS THE DOWNSTREAM SCOUR APRON. THIS SECTION OF THE BLANKET SHOULD BE ANCHORED TO THE GROUND WITH 8" LANDSCAPE STAPLES PLACED AROUND THE PERIMETER OF THE BLANKET ON 18" CENTERS. THE REMAINDER OF THE BLANKET SHOULD BE ANCHORED USING TWO EVENLY SPACED ROWS OF 8" LANDSCAPE STAPLES ON 18" CENTERS PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH.

PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE ALONG THE CENTERLINE OF THE DITCH CHECK, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS. STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND.

ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE UPSTREAM SIDE OF THE CHECK AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP AND EXTEND UPSTREAM NO MORE THAN 24".

LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

DO NOT PLACE A BALE DITCH CHECK DIRECTLY IN FRONT OF A CULVERT OUTLET. IT WILL NOT STAND UP TO THE CONCENTRATED FLOW.

DO NOT PLACE BALE DITCH CHECKS IN DITCHES THAT WILL LIKELY EXPERIENCE HIGH FLOWS. THEY WILL NOT STAND UP TO CONCENTRATED FLOW.

FOLLOW PRESCRIBED DITCH-CHECK SPACING GUIDELINES. IF SPACING GUIDELINES ARE EXCEEDED, EROSION WILL OCCUR BETWEEN THE DITCH CHECKS.

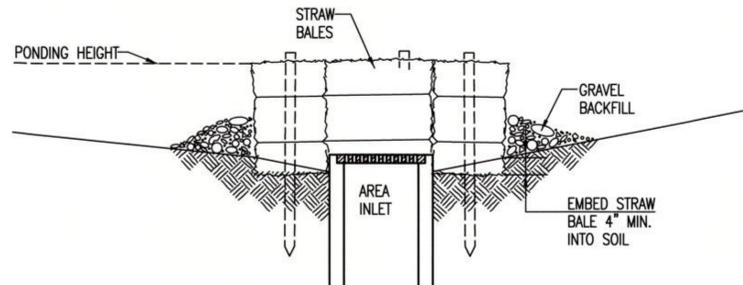
DO NOT ALLOW WATER TO FLOW AROUND THE DITCH CHECK. MAKE SURE THAT THE DITCH CHECK IS LONG ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE CHECK IS HIGHER THAN THE TOP OF THE LOWEST CENTER BALE.

DO NOT PLACE BALE DITCH CHECKS IN CHANNELS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE CHECK IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT. BALE DITCH CHECKS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE CHECK.

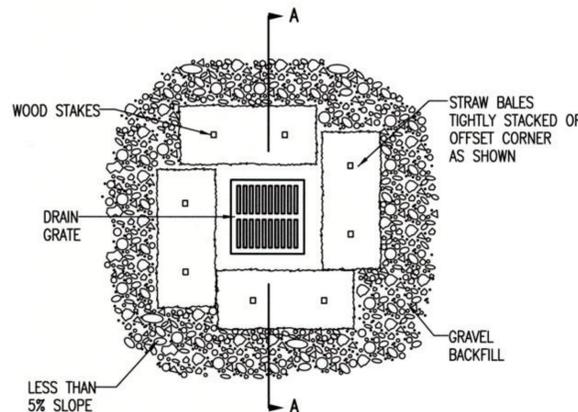
INSPECTION AND MAINTENANCE:

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

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



SECTION A-A



STRAW BALE BARRIERS FOR AREA INLETS (INLET PROTECTION)

MATERIAL SPECIFICATION:

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

PLACEMENT:

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

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH AROUND THE PERIMETER OF THE AREA INLET THAT IS AT LEAST 4" DEEP BY A BALE'S WIDTH WIDE.

PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. SOME BALES MAY NEED TO BE SHORTENED TO FIT INTO THE TRENCH AROUND THE AREA INLET. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS. STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND.

ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE RECEIVING SIDE OF THE BARRIER AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP.

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

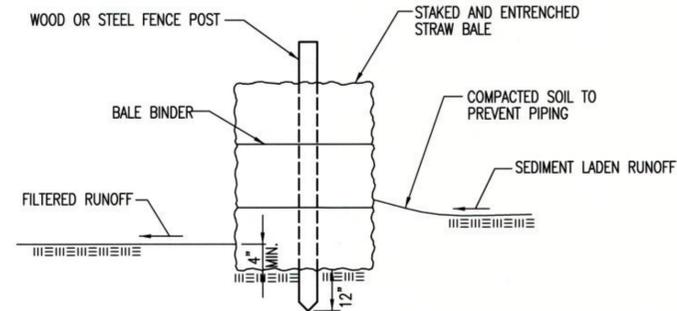
LIST OF COMMON PLACEMENT INSTALLATION MISTAKES TO AVOID:

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

INSPECTION AND MAINTENANCE:

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

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



STRAW BALE BARRIERS

MATERIAL SPECIFICATION:

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

PLACEMENT:

A SLOPE BARRIER SHOULD BE USED AT THE TOE OF A SLOPE WHEN A DITCH DOES NOT EXIST. THE SLOPE BARRIER SHOULD BE PLACED ON NEARLY LEVEL GROUND 5' TO 10' AWAY FROM THE TOE OF A SLOPE. THE BARRIER IS PLACED AWAY FROM THE TOE OF THE SLOPE TO PROVIDE ADEQUATE STORAGE FOR SETTLING OUT SEDIMENT.

WHEN PRACTICABLE, BALE SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW.

BALE SLOPE BARRIERS CAN ALSO BE PLACED ALONG RIGHT-OF-WAY FENCE LINES TO KEEP SEDIMENT FROM CROSSING ONTO ADJACENT PROPERTY. WHEN PLACED IN THIS MANNER, THE SLOPE BARRIER WILL NOT LIKELY FOLLOW CONTOURS.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH THE LENGTH OF THE PLANNED SLOPE BARRIER THAT IS 4" DEEP AND A BALE'S WIDTH WIDE. MAKE SURE THAT THE TRENCH IS EXCAVATED ALONG A SINGLE CONTOUR. WHEN PRACTICABLE, SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. PLACE THE SOIL ON THE UPSLOPE SIDE OF THE TRENCH FOR LATER USE.

PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE ALONG THE CENTERLINE OF THE DITCH CHECK, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS. STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND.

ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE UPSLOPE SIDE OF THE CHECK AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP.

LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WHEN PRACTICAL, DO NOT PLACE BALE SLOPE BARRIERS ACROSS CONTOURS. SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. CONCENTRATED FLOW OVER A SLOPE BARRIER CREATES A SCOUR HOLE ON THE DOWNSLOPE SIDE OF THE BARRIER. THE SCOUR HOLE EVENTUALLY UNDERMINES THE BALES AND THE BARRIER FAILS.

DO NOT PLACE BALE SLOPE BARRIERS IN AREAS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE BARRIER IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT.

BALE SLOPE BARRIERS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE BARRIER.

INSPECTION AND MAINTENANCE:

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

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

REVISION DATE: MAY 2013



CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

STRAW BALE DITCH CHECK AND BARRIER DETAILS

CITY ENGINEER
GARY JANZEN, P.E.

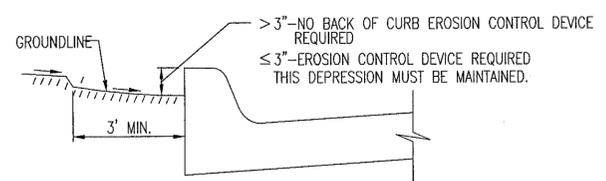
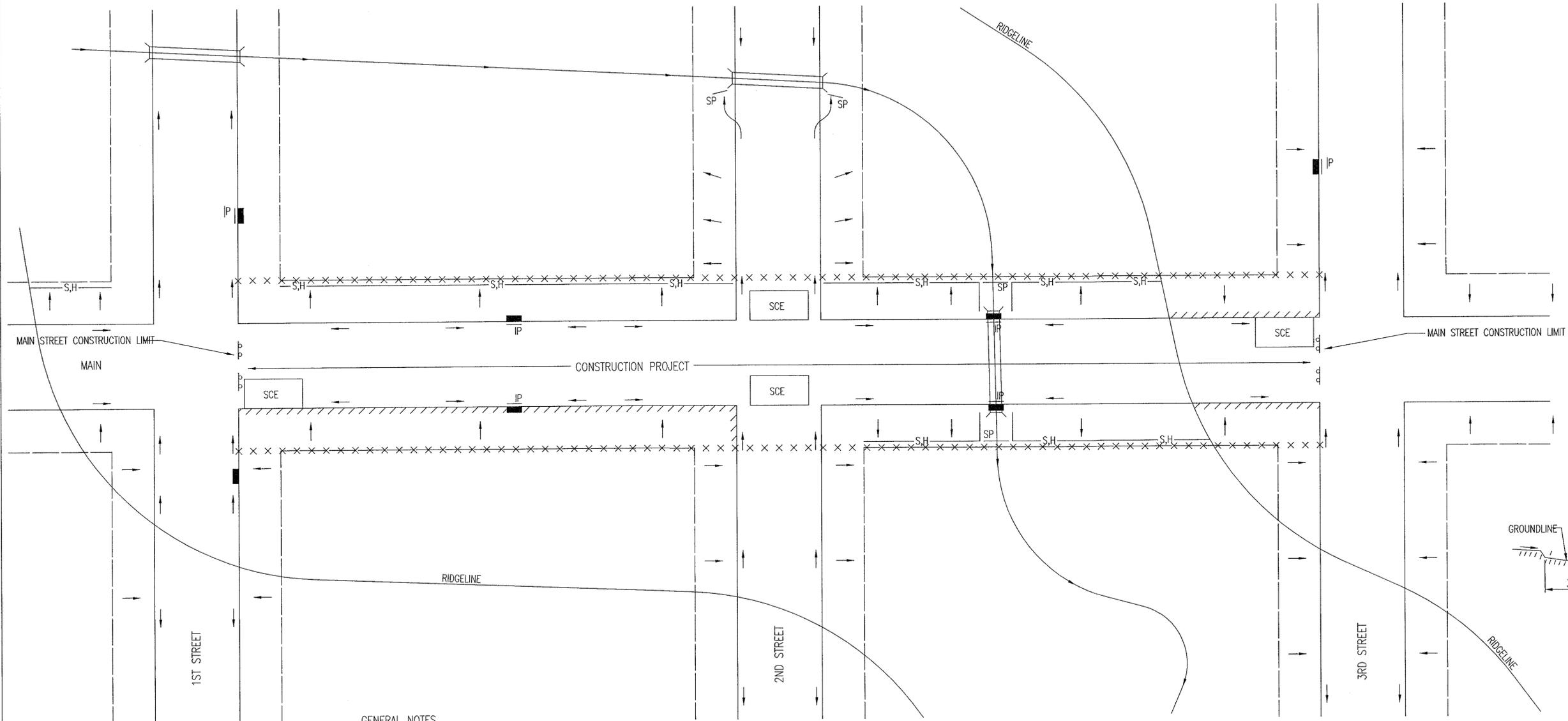
PROJECT NUMBER OCA NUMBER DATE

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

SHEET
12 of 17

GENERAL NOTES

1. 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.
2. EROSION CONTROL DEVICES MUST BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PROCESS AND UNTIL THE DISTURBED EARTH IS RESTABILIZED.
3. 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.
4. 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.
5. 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.
6. 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.



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

1. 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.
2. THE POINT OF COMPLIANCE IS GENERALLY THE RIGHT-OF-WAY LINES WITHIN THE LIMITS OF CONSTRUCTION.
3. EROSION CONTROL DEVICES WILL BE REQUIRED AT ALL POINTS ALONG THE PROJECT WHERE DISTURBED EARTH CAN DRAIN ONTO PRIVATE PROPERTY.
4. INLET PROTECTION DEVICES WILL BE REQUIRED WHEREVER WATER CAN DRAIN OFF THE PROJECT SITE INTO AN INLET, INCLUDING ANY SIDE STREET INLETS.
5. EROSION CONTROL DEVICES SHALL BE INSTALLED AT CREEK CROSSINGS SO AS TO PREVENT SEDIMENT FROM ENTERING THEREIN.
6. 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.
7. ANY MUD TRACKED ONTO STREETS MUST BE REMOVED AT THE END OF EACH WORK DAY.
8. 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:
 - A. 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)
 - B. 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.
 - C. ADDITIONALLY, OTHER EROSION CONTROL DEVICES (HAY BALES, SILT FENCE, ETC.) WILL BE INSTALLED AT LOCATIONS OF CONCENTRATED FLOW RESULTING IN SEDIMENT OVERRUNNING THE MAT.
 - D. 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

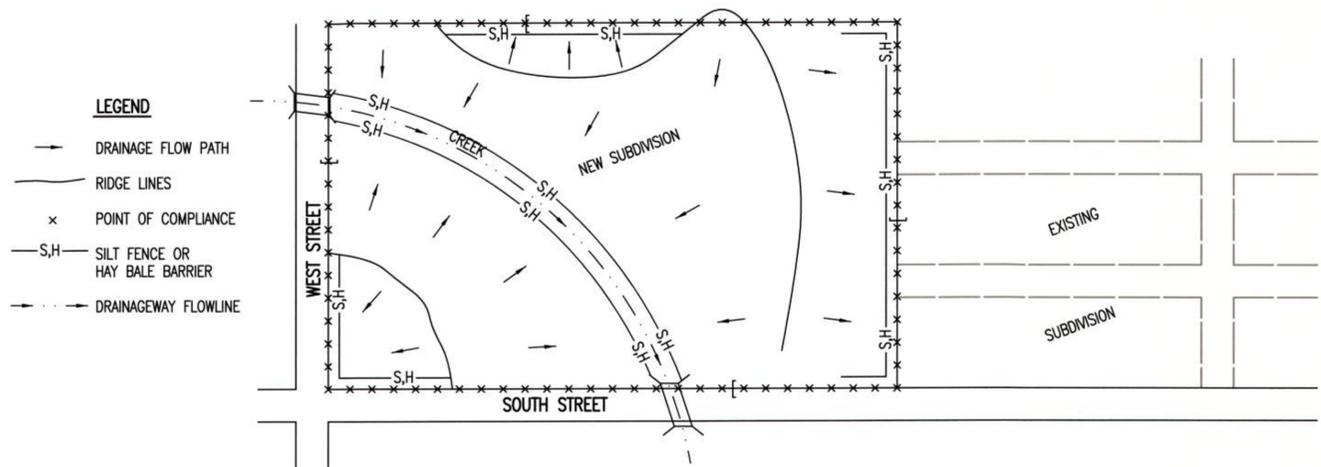
- R-O-W LIMITS
- DRAINAGE FLOW PATH
- x x x x R/W LIMIT WITHIN CONSTRUCTION LIMIT
- STORM WATER INLETS
- IP INLET PROTECTION
- S,H SILT FENCE OR HAY BALE BARRIER
- SP STREAM PROTECTION
- SCE STABILIZED CONSTRUCTION ENTRANCE
- //// BACK OF CURB PROTECTION



CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

| | | |
|--|------------|--------------------------|
| REVISION: JUNE 2015 | | |
| STREET IMPROVEMENT PROJECTS | | |
| CITY ENGINEER GARY JANZEN, P.E. | | |
| PROJECT NUMBER | OCA NUMBER | DATE |
| CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501 | | SHEET 13 of 17 |

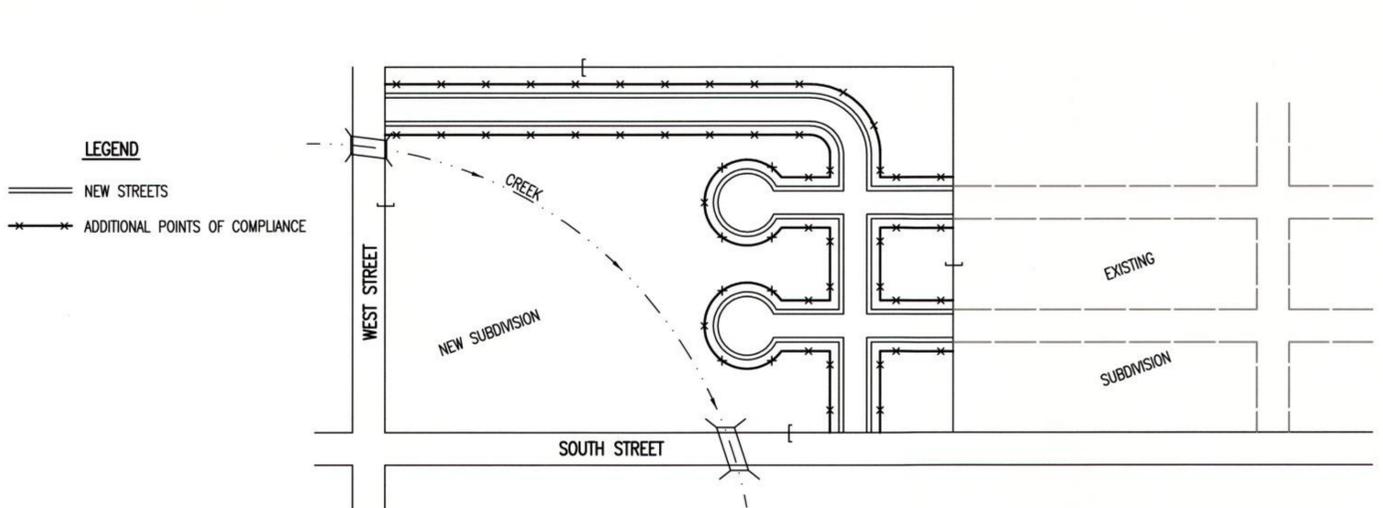
PHASE 1 – INITIAL EARTHWORK AND UTILITIES (EXCEPT STORM SEWER)



- 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.

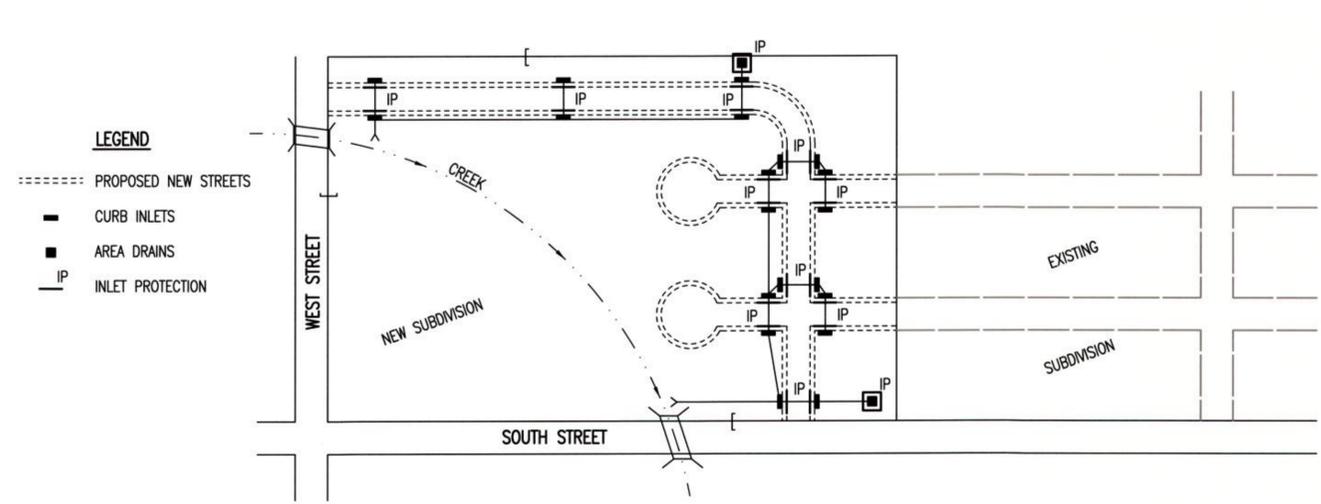
PHASE 3 – STREET CONSTRUCTION



- 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



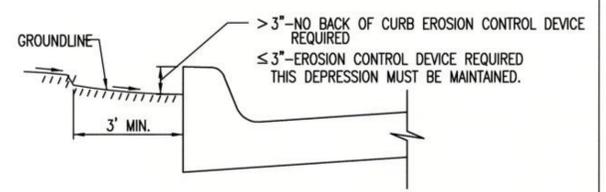
- LEGEND**
- PROPOSED NEW STREETS
 - CURB INLETS
 - AREA DRAINS
 - IP INLET PROTECTION

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 IF COMPLETION OF WORK IN ANY GIVEN PART OF THE SUBDIVISION.
8. ONCE ALL DISTURBED GROUND DRAINING TO AN INLET HAS BEEN RESTABILIZED WITH GRASS OR SOD, THE SUBDIVISION DEVELOPER WILL BE RESPONSIBLE FOR PERMANENTLY REMOVING THE INLET PROTECTION.

GENERAL NOTES

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

SEE DETAIL SHEET FOR BACK OF CURB PROTECTION DETAIL



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



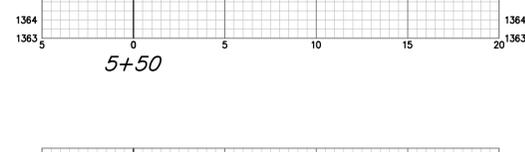
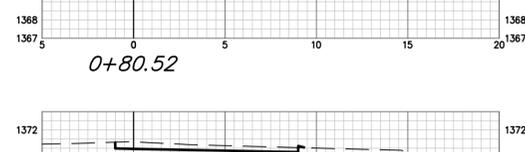
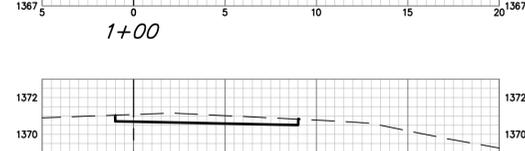
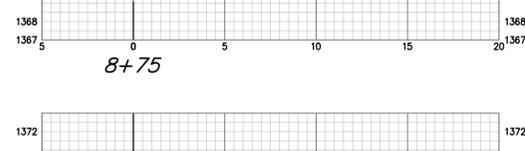
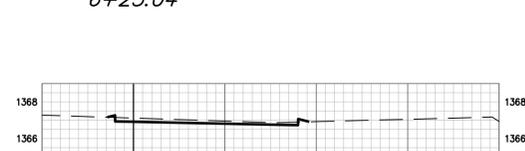
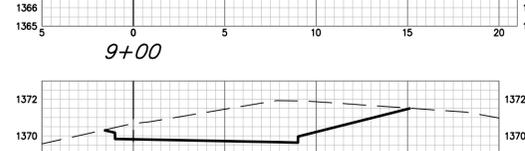
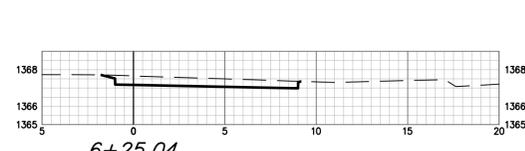
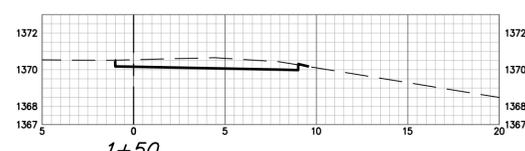
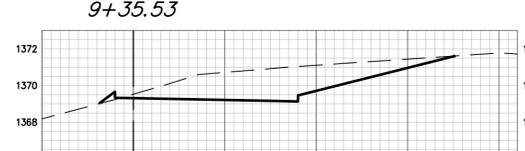
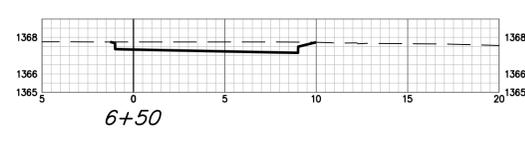
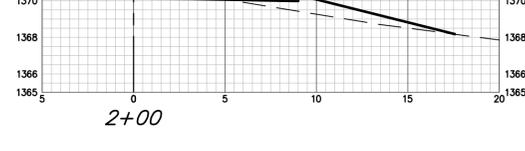
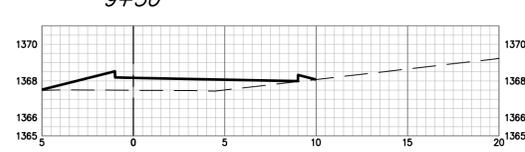
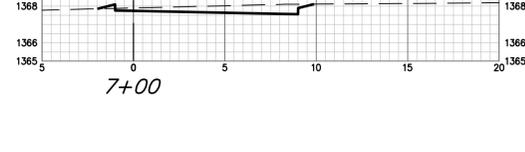
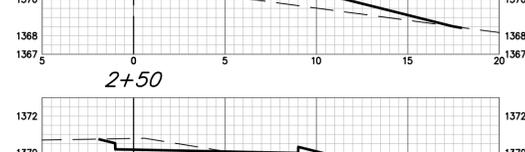
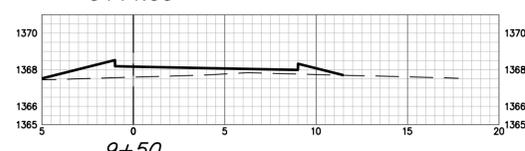
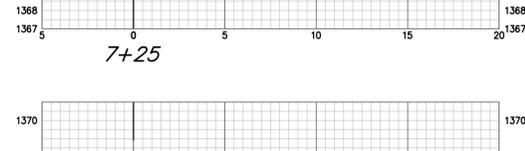
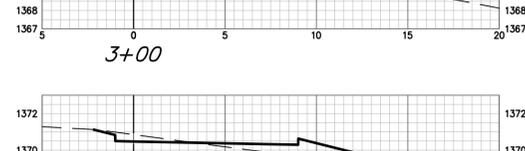
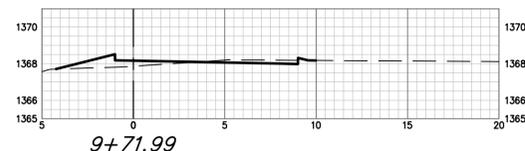
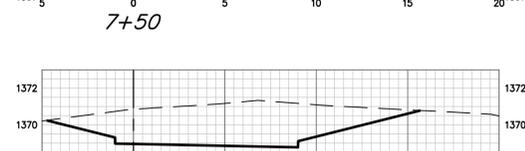
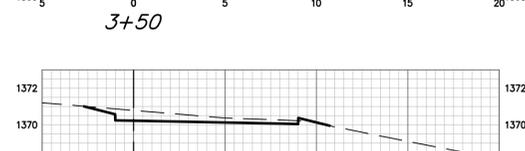
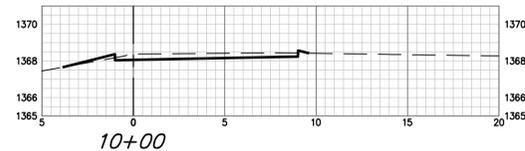
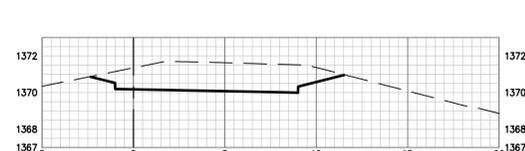
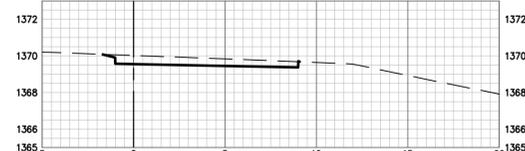
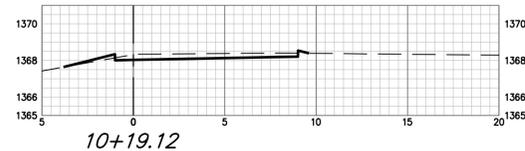
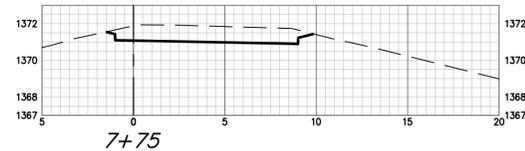
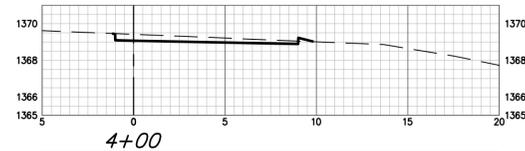
CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

SUBDIVISION DEVELOPMENT PROCESS
CITY ENGINEER
GARY JANZEN, P.E.

| | | |
|--|------------|--------------------------|
| PROJECT NUMBER | OCA NUMBER | DATE |
| CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501 | | SHEET 14 of 17 |

REVISION RECORD

| NO. | DATE | DESCRIPTION | DR. | BY |
|-----|---------|---------------|-----|-----|
| 1 | 12/2/25 | Sheet Numbers | JAK | AEG |



| SIDEWALK CY Excavation (unadjusted) | | | | SIDEWALK CY Compacted Fill (unadjusted) | | | |
|--|-------|--------|--------|--|------|--------|-------|
| Station | Area | Volume | Total | Station | Area | Volume | Total |
| 0+00 | 3.27 | 0.00 | 0.00 | 0+00 | 0.00 | 0.00 | 0.00 |
| 0+50 | 3.01 | 5.50 | 5.50 | 0+50 | 0.02 | 0.01 | 0.01 |
| 0+80.52 | 4.19 | 3.85 | 9.35 | 0+80.52 | 0.00 | 0.01 | 0.02 |
| 1+00 | 3.99 | 2.95 | 12.30 | 1+00 | 0.02 | 0.01 | 0.03 |
| 1+50 | 4.66 | 8.01 | 20.31 | 1+50 | 0.02 | 0.03 | 0.06 |
| 2+00 | 2.50 | 6.63 | 26.94 | 2+00 | 5.23 | 4.85 | 4.91 |
| 2+50 | 1.15 | 3.38 | 30.32 | 2+50 | 6.00 | 10.34 | 15.25 |
| 3+00 | 3.73 | 4.51 | 34.83 | 3+00 | 0.09 | 5.64 | 20.89 |
| 3+50 | 4.07 | 7.24 | 42.08 | 3+50 | 0.00 | 0.09 | 20.98 |
| 4+00 | 2.64 | 6.20 | 48.28 | 4+00 | 0.07 | 0.07 | 21.05 |
| 4+50 | 0.00 | 2.41 | 50.69 | 4+50 | 3.73 | 3.47 | 24.52 |
| 5+00 | 1.71 | 1.42 | 52.11 | 5+00 | 0.39 | 3.61 | 28.13 |
| 5+50 | 2.87 | 4.53 | 56.64 | 5+50 | 0.00 | 0.35 | 28.48 |
| 6+00 | 1.58 | 4.24 | 60.88 | 6+00 | 0.08 | 0.07 | 28.55 |
| 6+25.04 | 4.51 | 2.82 | 63.71 | 6+25.04 | 0.00 | 0.04 | 28.59 |
| 6+50 | 5.10 | 4.27 | 67.98 | 6+50 | 0.00 | 0.00 | 28.59 |
| 7+00 | 3.45 | 7.58 | 75.56 | 7+00 | 0.11 | 0.10 | 28.69 |
| 7+25 | 31.57 | 16.21 | 91.77 | 7+25 | 0.00 | 0.05 | 28.73 |
| 7+50 | 16.76 | 22.75 | 114.52 | 7+50 | 0.00 | 0.00 | 28.73 |
| 7+75 | 8.68 | 11.78 | 126.29 | 7+75 | 0.00 | 0.00 | 28.73 |
| 8+00 | 3.87 | 5.81 | 132.10 | 8+00 | 1.53 | 0.71 | 29.44 |
| 8+31.06 | 4.51 | 4.82 | 136.92 | 8+31.06 | 0.00 | 0.88 | 30.32 |
| 8+50 | 2.41 | 2.52 | 139.44 | 8+50 | 0.87 | 0.30 | 30.62 |
| 8+75 | 21.59 | 11.64 | 151.08 | 8+75 | 0.00 | 0.40 | 31.02 |
| 9+00 | 18.54 | 19.56 | 170.64 | 9+00 | 0.21 | 0.10 | 31.12 |
| 9+35.53 | 0.00 | 12.89 | 183.53 | 9+35.53 | 7.39 | 5.05 | 36.17 |
| 9+50 | 0.00 | 0.00 | 183.53 | 9+50 | 6.52 | 3.89 | 40.06 |
| 9+71.99 | 0.78 | 0.37 | 183.90 | 9+71.99 | 2.07 | 3.62 | 43.68 |
| 10+00 | 2.60 | 1.71 | 185.61 | 10+00 | 0.32 | 1.25 | 44.93 |
| 10+19.12 | 2.54 | 1.88 | 187.49 | 10+19.12 | 0.33 | 0.23 | 45.15 |



**BAUGHMAN
COMPANY**
315 Ellis St.
Wichita, KS 67211
316-262-7271
BaughmanCo.com

Brookfield South Addition
Phase 6 & Phase 7

**EARTHWORK
CROSS
SECTIONS**

Sidewalk Improvements
PROJECT NUMBER:

DESIGN: AEG DRAWN: JAK
DATE: Oct 10, 2025

File: C:\Projects\Brookfield South\2nd Addition\Engineering\phase.dwg

BROOKFIELD SOUTH ADDITION WICHITA, SEDGWICK COUNTY, KANSAS

State of Kansas) SS We, Baughman Company, P.A., Surveyors in
Sedgwick County) aforesaid county and state do hereby certify that we have surveyed and
platted "BROOKFIELD SOUTH ADDITION", Wichita, Sedgwick County, Kansas
and that the accompanying plat is a true and correct exhibit of the
property surveyed, described as the Northwest Quarter of Section 34,
Township 26 South, Range 2 East of the Sixth Principal Meridian, Sedgwick
County, Kansas, EXCEPT that part of said Northwest Quarter platted as
Brookfield Addition, Wichita, Sedgwick County, Kansas, and EXCEPT that
part of said Northwest Quarter platted as Courtyards at Brookfield
Addition, an Addition to Wichita, Sedgwick County, Kansas, subject to road
rights-of-way of record abutting that part of the west line of said
Northwest Quarter lying south of and abutting the south line of said
Brookfield Addition, TOGETHER with that part of the Southwest Quarter of
Section 34, Township 26 South, Range 2 East of the Sixth Principal
Meridian, Sedgwick County, Kansas described as follows: Beginning at the
northeast corner of said Southwest Quarter; thence S01°10'17"E coincident
with the east line of the North Half of said Southwest Quarter, a distance
of 535.21 feet; thence S88°49'43"W, a distance of 459.73 feet; thence
S65°39'55"W, a distance of 380.23 feet; thence N24°20'05"W, a distance
of 181.05 feet to a point on a curve to the right; thence westerly and
northwesterly coincident with said curve, through a central angle of
81°34'25" and having a radius of 332.00 feet, an arc distance of 472.68
feet, (having a chord length of 433.76 feet bearing N68°59'27"W), to the
point of tangency of said curve; thence N28°12'15"W, a distance of 27.27
feet to the northeast corner of North Greenwich Addition, Wichita,
Sedgwick County, Kansas; thence S89°05'37"W (calculated from platted
information), S89°05'47"W (measured), coincident with the north line of
said North Greenwich Addition, a distance of 1366.89 feet (platted),
1366.99 feet (measured), to the intersection with the west line of said
Southwest Quarter; thence N01°33'21"W coincident with the west line of
said Southwest Quarter, a distance of 327.95 feet (platted), 327.94 feet
(calculated from measured information), to the northwest corner of said
Southwest Quarter; thence N88°54'56"E coincident with the north line of
said Southwest Quarter, a distance of 266.376 feet to the point of
beginning, subject to road rights-of-way of record abutting that part of
the west line of said Southwest Quarter lying north of and abutting the
north line of said North Greenwich Addition.

Existing public easements, building setbacks,
access controls, and dedications, if any, being
vacated by virtue of K.S.A. 12-512b, as amended.

Baughman Company, P.A.

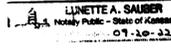

Jonathan C. Hubbell, P.S.#1680, Surveyor

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

INTRUST Bank, N.A.


BRIAN BLACKERBY, Commercial Relationship Mgr.

State of Kansas) SS The foregoing instrument acknowledged be-
Sedgwick County) fore me, this 7th day of APRIL, 2022, by BRIAN BLACKERBY,
Commercial Relationship Mgr. of INTRUST Bank, N.A., on behalf of the bank.

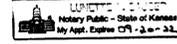

LUNETTE A. SAUBER, Notary Public - State of Kansas
My App't. Exp. 09-20-2022

Know all men by these presents that we, the
undersigned, have caused the land in the surveyors certificate to be
platted into Lots, Blocks, Streets and Reserves to be known as
"BROOKFIELD SOUTH ADDITION", Wichita, Sedgwick County, Kansas. The
utility easements are hereby granted to the public as indicated for the
construction and maintenance of all public utilities. The drainage
easements are hereby granted to the public as indicated for drainage
purposes. The drainage and utility easements are hereby granted to the
public as indicated for drainage purposes and for the construction and
maintenance of all public utilities. The contingent sanitary sewer easement
is for the construction and maintenance of a public sanitary sewer main
and related appurtenances and shall become effective when the City of
Wichita installs a sanitary sewer main to allow for the elimination of the
existing lift station in Brookfield Addition. No permanent foundations
and/or structures shall be located within the contingent sanitary sewer
easement unless permitted by the City of Wichita Department of
Engineering. No sign, light poles, private drainage systems, berms, walls,
masonry trash enclosures or other structures shall be located within public
utility easements unless permitted by the City of Wichita Department of
Engineering and that they do not inhibit the conveyance of surface
drainage. No private drainage systems shall be located within public
drainage easements unless a Residential Drainage Relief Permit is obtained
from the City of Wichita Public Works & Utilities Department. The wall
easement is hereby granted as indicated for the construction and
maintenance of a private screening wall and utility main lines and service
lines shall be allowed to cross this easement. The streets are hereby
dedicated to and for the use of the public. Any cul-de-sac with a 53
foot radius right-of-way shall have a pavement radius of 38 feet.
Reserve "A" is hereby reserved for open space, landscaping, drainage
purposes, berms, entry monuments, walls, fences, signage, sidewalks/walking
paths, floodplain, water lines and related appurtenances as confined to
easement, and utilities as confined to easements. Reserve "B" is hereby
reserved for open space, landscaping, drainage purposes, lakes, berms,
entry monuments, sidewalks/walking paths, floodplain, streets as
confined to easement, and utilities as confined to easements. Reserve "C"
is hereby reserved for open space, landscaping, drainage purposes, lakes,
berms, entry monuments, sidewalks/walking paths, floodplain, streets as
confined to easement, and utilities as confined to easements. Reserve "D"
is hereby reserved for open space, landscaping, drainage purposes, berms,
entry monuments, walls, fences, sidewalks, streets as confined to easement,
and utilities as confined to easements. Reserve "E" is hereby reserved for
open space, landscaping, drainage purposes, entry monuments, streets, and
utilities. Reserve "F" is hereby reserved for open space, landscaping,
drainage purposes, utilities, sidewalks, and private streets. No fill, change
of grade, creation of channel, or any other work shall be carried on within
said Reserves "A", "B", and "C" without the permission of the Engineer for
the appropriate governing body. Reserves "A", "B", "C", "D", "E", and "F",
shall be owned and maintained by the homeowners association for the
addition provided, however, that the undersigned, or the homeowners
association, as the undersigned's successor in interest, may, in their
discretion, deed a parcel of a Reserve to an owner or owners of an
adjacent Lot, subject to the obligation to maintain such deeded parcel of
a Reserve in compliance with the provisions hereof and in compliance with
the maintenance covenants or any applicable restrictive covenants and/or
regulations. Compliance with any platted restrictions and applicable
restrictive covenants affecting said Reserves shall be binding on any owners,
successors, heirs, or assigns. Drainage Reserves "9", "10", "11", "12", "14",
"15", "16", "17", "18", "19" and "20" are hereby reserved for open space,
landscaping, drainage reserve purposes, floodplain, sanitary sewer as
confined to easement, and utilities as confined to easements. No fill,
change of grade, creation of channel, or any other work shall be carried on
within said floodplain without the permission of the Engineer for the
appropriate governing body. Drainage Reserves "9", "10", "11", "12", "14",
"15", "16", "17", "18", "19" and "20" shall be owned and maintained by the
owners of the corresponding adjacent lots and shall be the responsibility of
said corresponding adjacent lot owners until such time as the appropriate
governing body elects to assume the responsibility for maintenance and
improvements to the drainage. FEMA floodplain and regulatory floodway
boundaries are subject to periodic change and such change may affect the
intended land use within the subdivision. Access controls shall be as
depicted on the face of the plat and are hereby granted to the appropriate
governing body as indicated on the face of the plat. The Minimum
Building Pad Elevations for the lowest opening to the structures shall be as
indicated on the face of the plat.

37th & Greenwich, LLC,
a Kansas limited liability company


Jeff Mullen, President/CEO of
Ritchie Development, LLC,
a Kansas limited liability company

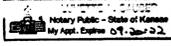
State of Kansas) SS The foregoing instrument acknowledged before
Sedgwick County) me, this 6th day of APRIL, 2022, by Jeff Mullen, President/CEO
of Ritchie Development, LLC, a Kansas limited liability company, as
Manager of 37th & Greenwich, LLC, a Kansas limited liability company, on
behalf of the limited liability company.


LUNETTE A. SAUBER, Notary Public
My App't. Exp. 09-20-2022

37th & Greenwich Investments, LLC,
a Kansas limited liability company


Jeff Mullen, President/CEO of
Ritchie Development, LLC,
a Kansas limited liability company

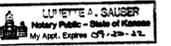
State of Kansas) SS The foregoing instrument acknowledged before
Sedgwick County) me, this 6th day of APRIL, 2022, by Jeff Mullen, President/CEO
of Ritchie Development, LLC, a Kansas limited liability company, as
Manager of 37th & Greenwich Investments, LLC, a Kansas limited liability
company, on behalf of the limited liability company.


LUNETTE A. SAUBER, Notary Public
My App't. Exp. 09-20-2022

Greenwich Investments, LLC,
a Kansas limited liability company

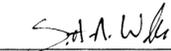

Jeff Mullen, President/CEO of
Ritchie Associates, LLC,
a Kansas limited liability company

State of Kansas) SS The foregoing instrument acknowledged before
Sedgwick County) me, this 6th day of APRIL, 2022, by Jeff Mullen, President/CEO
of Ritchie Associates, LLC, a Kansas limited liability company, as Manager
of Greenwich Investments, LLC, a Kansas limited liability company, on
behalf of the limited liability company.


LUNETTE A. SAUBER, Notary Public
My App't. Exp. 09-20-2022

This plat of "BROOKFIELD SOUTH ADDITION",
Wichita, Sedgwick County, Kansas has been submitted to and approved by
the Wichita-Sedgwick County Metropolitan Area Planning Commission,
Wichita, Kansas.
Dated this 3rd day of FEBRUARY, 2022.
Wichita-Sedgwick County Metropolitan Area Planning Commission



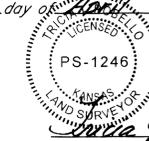

William M. Johnson, Chair

Scott A. Wadle, Secretary

This plat approved and all dedications
shown hereon accepted by the City Council of the City of Wichita,
Kansas, this 3rd day of May, 2022.


Brandon J. Whipple, Mayor

Karen Sublett, City Clerk

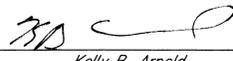
Reviewed in accordance with K.S.A. 58-2005
on this 13th day of April, 2022.



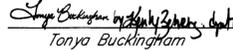

Tricia L. Robello, P.S. #1246
Deputy County Surveyor
Sedgwick County, Kansas

Entered on transfer record this 11th day
of May, 2022.

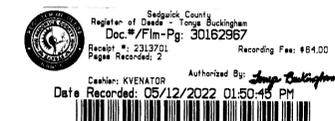



Kelly B. Arnold, County Clerk

State of Kansas) SS This is to certify that this plat has been
Sedgwick County) filed for record in the office of the Register of Deeds, this 12th day
of May, 2022 at 01:50:45 clock P.M. and is duly recorded.

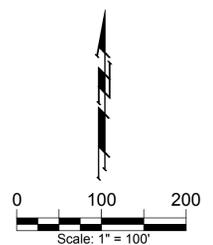
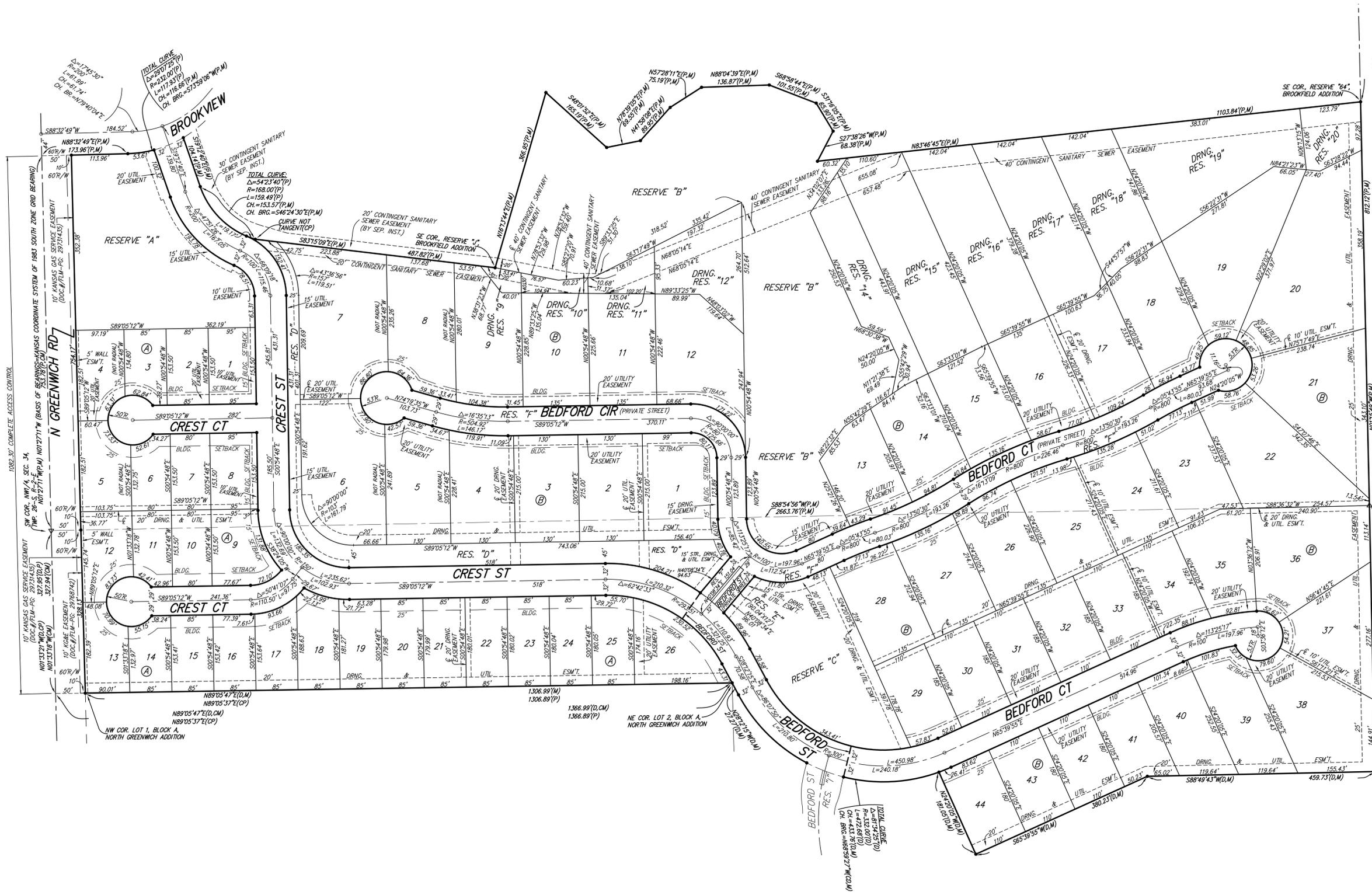

Tonya Buckingham, Register of Deeds


Keny Zehring, Deputy



BROOKFIELD SOUTH ADDITION

WICHITA, SEDGWICK COUNTY, KANSAS



SCALE IS ACCURATE ONLY WHEN PRINTED 24"x36"

- = #4 REBAR W/ "BAUGHMAN" CAP (SET)
 - = #4 REBAR W/ "BAUGHMAN" CAP (FOUND)
 - = 3/4" IRON PIPE (FOUND)(ORIGIN UNKNOWN)
 - △ = STONE (FOUND)
 - ⊙ = RAILROAD SPIKE (FOUND)(ORIGIN UNKNOWN)
 - ▽ = #6 REBAR (FOUND)(ORIGIN UNKNOWN)
 - ◇ = 3/4" IRON PIPE IN THIMBLE (FOUND)(ORIGIN UNKNOWN)
 - ⊗ = #4 REBAR W/ "SCHWAB-EATON" CAP (FOUND)
 - ◇ = #5 REBAR W/ "MKEC" CAP OVER STONE (FOUND)
- (M) = MEASURED
 (P) = INFO. FROM PLAT OF NORTH GREENWICH ADDITION
 (D) = DESCRIBED
 (R) = RECORD MEASUREMENT
 (F) = CALCULATED FROM MEASURED INFO.
 (CP) = CALCULATED INFO. FROM PLAT OF NORTH GREENWICH ADDITION
 (CD) = CALCULATED FROM DESCRIBED INFO.
 R/W = RIGHT-OF-WAY

NOTE:
 ALL LOTS WITHIN BROOKFIELD SOUTH ADDITION SHALL HAVE A 5 FOOT SIDE YARD BUILDING SETBACK.

DRAINAGE PLAN NOTE:
 A master drainage plan has been developed for this plat. All drainage easements, rights-of-way, and reserves shall remain at established grades (unless modified with the approval of the City Engineer) and shall be unobstructed to allow for the conveyance of stormwater in accordance with the Stormwater Manual. The maintenance of all drainageways and drainage facilities in backyard drainage easements and reserves shall be the responsibility of the property owner, and shall be enforced by the Homeowners' Association and be provided for in the Homeowners' Association covenants.

Right-of-way Note:
 No regarding within abutting rights-of-way shall be allowed with the construction of the berms allowed within Reserves A, B, C, and D. The berms cannot impact access to or bury manholes, water valves and/or water meters.

BENCHMARK:
 CHISELED SQUARE ON C HEADWALL OF R.E.C.C. ON SOUTH SIDE OF 37TH ST. N., 176.9' W. & 15.8' S. OF THE NE COR., NW1/4, SEC. 34, TWP. 26-S, R-2-E. ELEV. = 1373.80 NAVD88.

CHISELED SQUARE ON E. SIDE OF SCHOOL SIGNAL POLE BASE, W. SIDE OF GREENWICH ROAD, 302' S. & 21.9' W. OF THE SW COR., NW1/4, SEC. 34, TWP. 26-S, R-2-E. ELEV. = 1387.64 NAVD88.

TOP OF 1" IRON PIPE AT NW COR., NW1/4, SEC. 34, TWP. 26-S, R-2-E. ELEV. = 1380.04 NAVD88

| MINIMUM BUILDING PAD ELEVATIONS FOR LOWEST OPENING TO THE STRUCTURES | | |
|--|-------|------------------|
| LOT | BLOCK | ELEVATION NAVD88 |
| 38-44 | B | 1383.5 |
| 28,29 | B | 1375.0 |
| 16-20 | B | 1372.0 |
| 14-15 | B | 1372.0 |
| 10-13 | B | 1373.0 |
| 7-9 | B | 1373.5 |

FOR REFERENCE ONLY

BROOKFIELD SOUTH ADDITION
 PAGE 2 OF 2

BAUGHMAN COMPANY
 315 Ellis St. Wichita, KS 67211 316-262-7271
 BaughmanCo.com

E:\Projects\Brookfield South Addition - Plat Drawings\Brookfield South - Final.dwg