# STAR EXCAVATION LLC.
# THE FAMILY RANCH RECLAMATION PROJECT
## LEE'S SUMMIT, MISSOURI

*Star Excavation LLC.*
*The Family Ranch Reclamation Project*
*Original 2013 Permit:14.65 Acres*
*(Permit : #PRPWLD20130577)*
*Expanded 2015 Permit: 26.53 Acres*
*Total Area:41.18 Acres*
*Expanded 2021 Permit: 8.00 Acres*
*Total Area:49.18 Acres*

### General Notes:

1. Tree Locations and Sizes are Approximate and are for Reference Only.
2. Property dimensions and bearings shown were taken from an Alta/Acsm Land Title Survey prepared by Engineering Solutions, October 16th, 2012 and have not been checked by GBA.
3. Any construction stormwater discharges from the project site shall be treated with appropriate BMPs in accordance with the project SWPPP and Missouri State Operating Permit MO-G491279.
4. Oil / Gas wells are not present on site per Missouri Department of Natural Resources.
5. The contractor shall contact the City's Development Services Engineering Inspection to schedule a pre-construction meeting with an inspector prior to any land disturbance work at (816) 969-1200.

### FLOODPLAIN NOTE:

According to FEMA Flood Insurance Rate Map (FIRM) Community Panel No. 29095C0408G, effective Date 1/20/17, and Panel No. 29095C0416G, effective Date 1/20/17, the tract lies outside of the Areas Designated as Flood Hazard Areas.

### UTILITY CONTACTS

**Sanitary Sewers:**
Mr. Jeff Thorn, PE
City of Lee's Summit Water Utilities
1200 SE Hamblen Road
Lee's Summit, MO 64063
(816) 969-1900
email: jeff.thorn@cityofLS.net

Mr. Jeff Shook
Little Blue Valley Sewer District
21101 East 78 Highway
Independence, MO 64057
(816) 285-1522
email: jshook@lbvsd.net

**Water:**
Mr. Jeff Thorn, PE
City of Lee's Summit Water Utilities
1200 SE Hamblen Road
Lee's Summit, MO 64063
(816) 969-1900
email: jeff.thorn@cityofLS.net

**Electric Service:**
Mr. Nathan Michael
Kansas City Power & Light
P.O. Box 418679
Kansas City, MO 64141
(816) 220-5210
Fax (816) 245-3623
email: Nathan.Michael@kcpl.com

**Gas:**
Mr. Donnie Richards
Missouri Gas Energy
7500 E 35th Terrace
Kansas City, MO 64129
(816) 472-9464
Fax (816) 472-3488
email: donnie.richards@sug.com

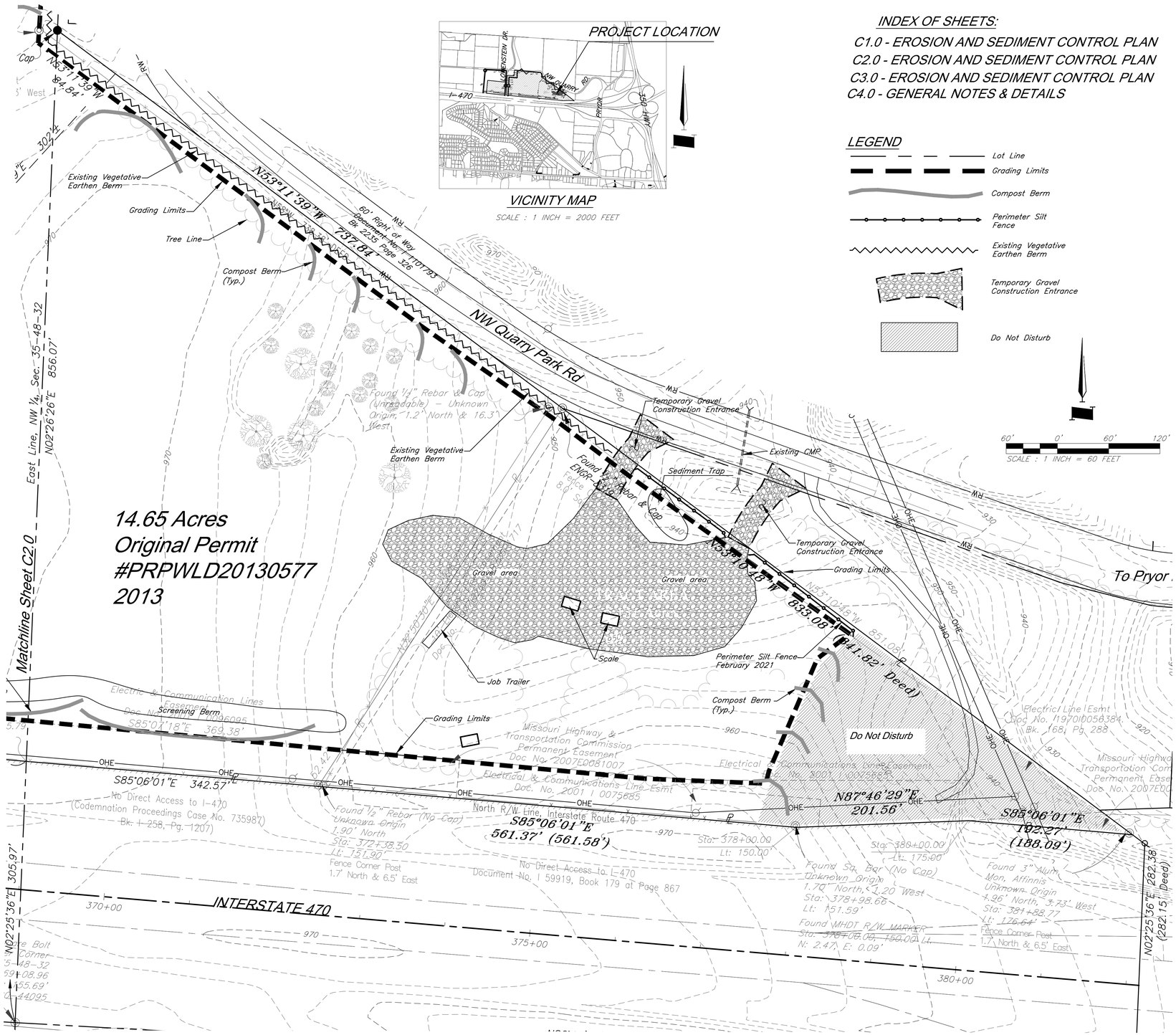
**Cable Television:**
Mr. Greg Thomas
Time Warner Cable
8221 W. 119th Street
Overland Park, KS 66213
(913) 643-1950
email: greg.thomas@twcable.com

**Telephone:**
Ms. Glenda Charles
AT&T
1425 Oak Street
Kansas City, MO 64106
(816) 365-1669
Fax (816) 275-1109
email: gc6954@att.com

Missouri One Call System 1-800-344-7483 (DIG-RITE)


DEVELOPED AND OWNED BY:
PARAGON STAR LLC 801 NORTHWEST
COMMERCE CENTER LEE'S SUMMIT,
MISSOURI 64086
PHONE: (816) 802-6801
CONTACT: Mr. Flip Short
EMAIL: fshort@legacytouch.com

PREPARED & SUBMITTED BY:
GEORGE BUTLER ASSOCIATES, INC.
9801 RENNER BOULEVARD
LENEXA, KANSAS 66219
PHONE: 913-492-0400
FAX: 913-577-8312
CONTACT: BRAD BURTON P.E.
EMAIL: BBURTON@GBATEAM.COM



GBA
architects
engineers
9801 Renner Boulevard
Lenexa, Kansas 66219
913.492.0400
www.gbateam.com


PROPOSED FACILITY FOR:
**STAR EXCAVATION LLC.**
**THE FAMILY RANCH RECLAMATION PROJECT**
*I-470 & PRYOR ROAD*
*LEE'S SUMMIT, MISSOURI*

STATE OF MISSOURI
BRADLEY D. BURTON
NUMBER E-25962
REGISTERED PROFESSIONAL ENGINEER
10-8-21

| REVISION |
|---|
| 9-10-13 Added Details of Phase 1A Per Meeting with City. |

PROJECT NUMBER
12720.01

DATE
03/21/13 10/08/21
09/10/13
10/22/15
02/04/21
08/16/21

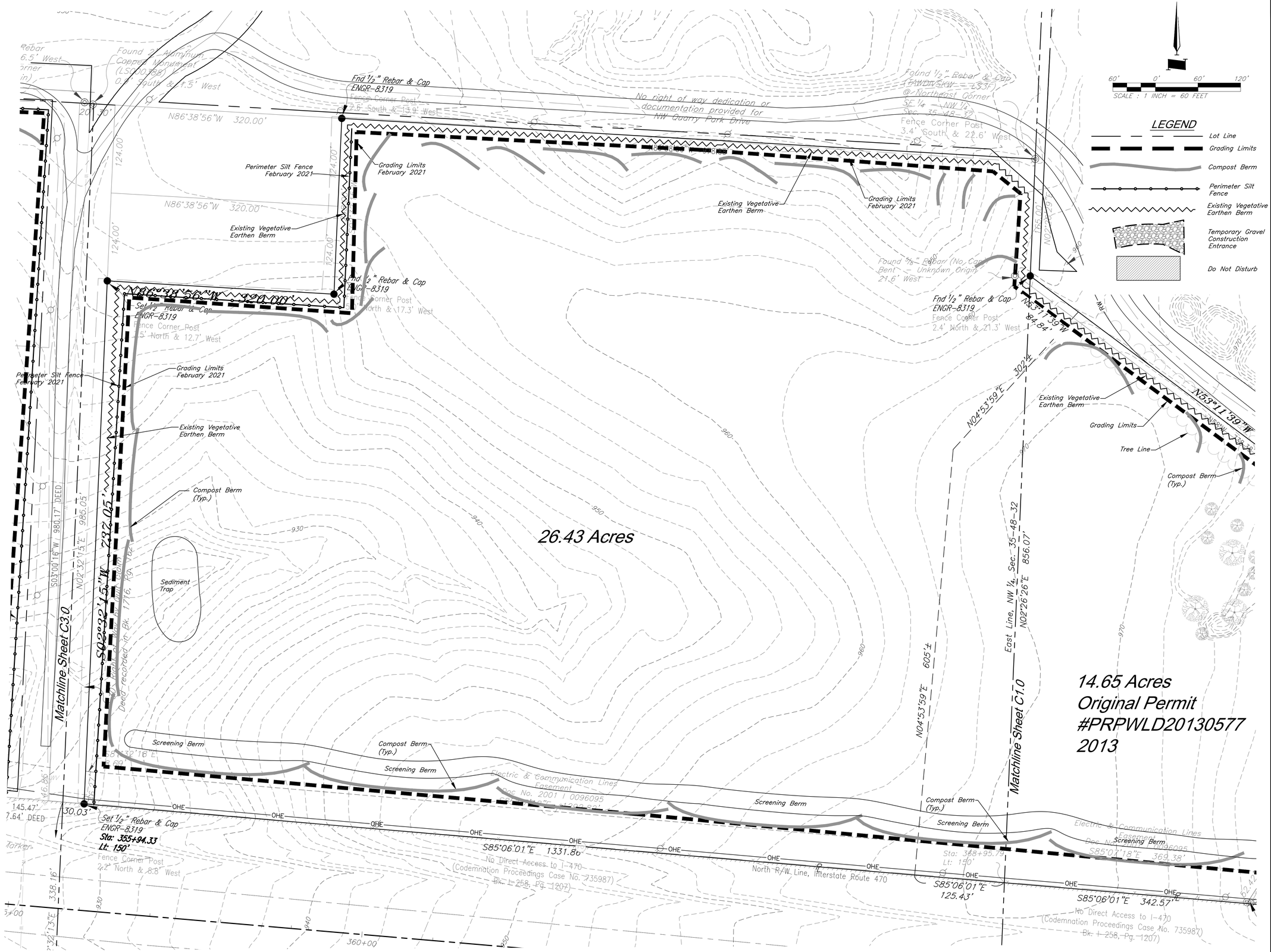
DESIGNED
DWC

DRAWN
DWC/JWM

REVIEWED
BDB

SHEET TITLE
*EROSION AND SEDIMENT CONTROL PLAN*

SHEET NUMBER
**C1.0**




60' 0' 60' 120'

SCALE : 1 INCH = 60 FEET

## LEGEND

- Lot Line
- Grading Limits
- Compost Berm
- Perimeter Silt Fence
- Existing Vegetative Earthen Berm
- Temporary Gravel Construction Entrance
- Do Not Disturb

GBA
architects
engineers
9801 Renner Boulevard
Lenexa, Kansas 66219
913.492.0400
www.gbateam.com

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**THE FAMILY RANCH RECLAMATION PROJECT**

*I-470 & PRYOR ROAD*
*LEE'S SUMMIT, MISSOURI*

STATE OF MISSOURI
BRADLEY D. BURTON
NUMBER E-25862
REGISTERED PROFESSIONAL ENGINEER
10-8-21

REVISION

9-10-13 Added Details of Phase 1A Per Meeting with City.

PROJECT NUMBER
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DATE
03/21/13
09/10/13
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08/16/21

DESIGNED
DWC

DRAWN
DWC/JWM

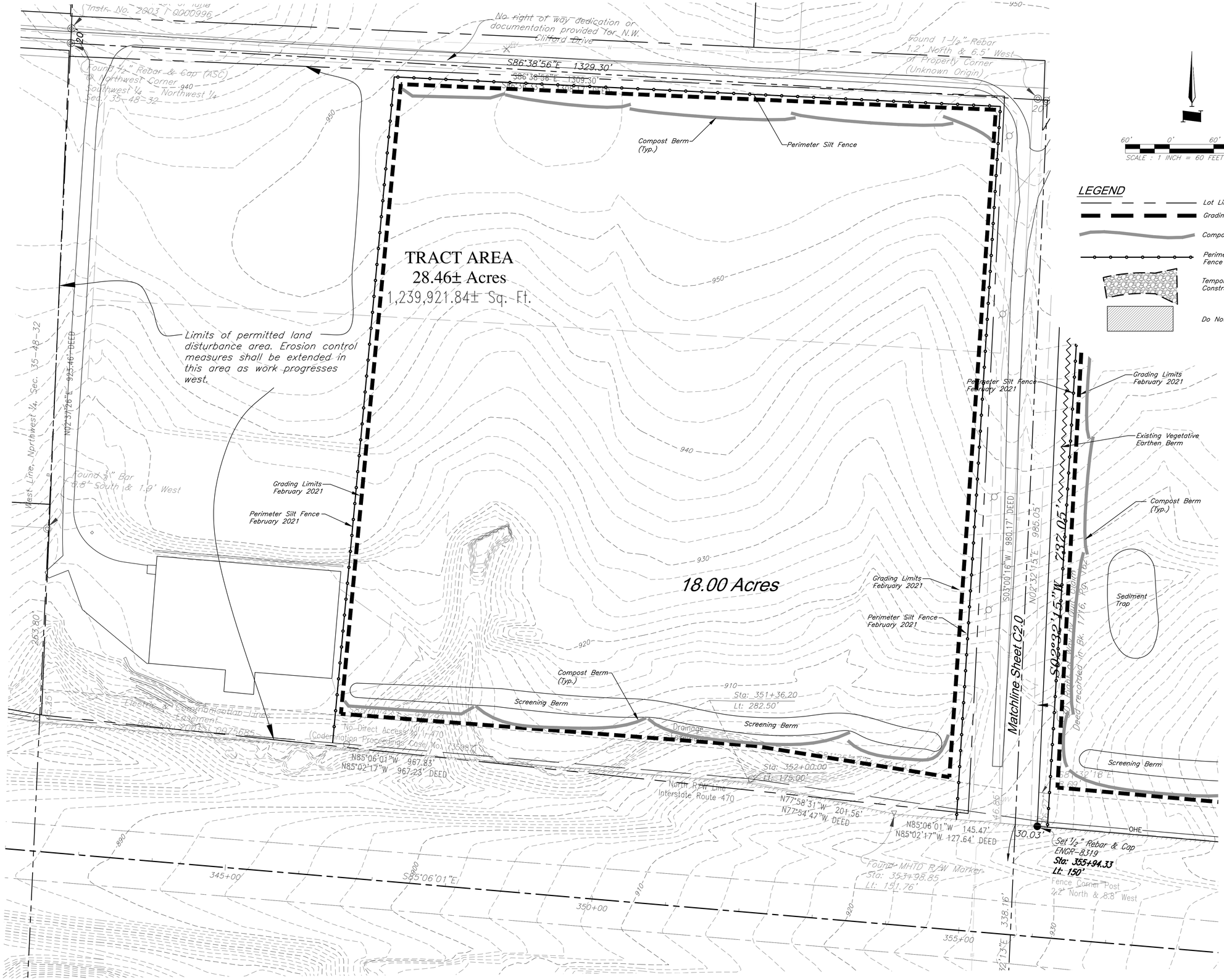
REVIEWED
BDB

SHEET TITLE

*EROSION AND SEDIMENT CONTROL PLAN*

SHEET NUMBER

**C2.0**



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architects
engineers
9801 Renner Boulevard
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913.492.0400
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10-8-21

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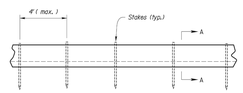
| |
|---|
| PROJECT NUMBER 12720.01 |
| DATE 03/21/13 09/10/13 10/22/15 02/04/21 08/16/21 5/6/22 |
| DESIGNED DWC |
| DRAWN DWC/JWM |
| REVIEWED BDB |
| SHEET TITLE *EROSION AND SEDIMENT CONTROL PLAN* |
| SHEET NUMBER **C3.0** |

## Sediment Control General Notes:

1. The construction covered by these plans shall conform to all applicable standards and specifications of the Lee's Summit design and construction manual.
2. Except where necessary to install erosion and sediment control devices, clearing activities shall not begin until all erosion and sediment control devices have been installed.
3. The contractor shall provide for control of surface erosion and sediment deposition during all phases of construction and until the owner accepts the work as complete. The contractor shall provide temporary seeding, berms, silt fence, sediment traps or other means to prevent sediment from reaching the public right-of-way, streams or adjacent property. In the event the prevention measures are not effective, the contractor shall remove any debris sediment and restore the right-of-way and adjacent property to it's original or better condition.
4. All land disturbances, including residential and commercial development projects, shall provide adequate erosion control to protect public streets, public storm sewer systems, adjacent property, streams, and surface waters from being polluted with sediment and silt.
5. Contractor shall keep the entire project site free of debris and trash at all times. contractor shall execute work using methods that minimize excessive noise or dust emissions. Contractor shall provide methods, means and facilities to prevent contamination of soil or water from discharge of potential construction site pollutants (i.e., diesel fuel, port-a-potty waste, paints, etc.)
6. Areas are not noted on the plan sheets for stockpiling of materials. Soil stockpiles shall be graded such that they do not exceed 3:1, mulch berms or another effectively equal best management practice (bmp) shall be installed completely around the down gradient perimeter of the soil stockpiles and the disturbed areas shall be seeded within 14 days once construction activities on them cease. Gravel material stockpiles shall have mulch berms or another effectively equal bmp installed completely around the down gradient perimeter of the gravel material stockpile.
7. Following stripping operations, the contractor shall remove existing topsoil and stockpile the material in an approved area. Stockpiles shall be stabilized by temporary seeding and mulch berms (see note 6).
8. Soil stabilizing erosion control measures as detailed in sections 2153 of APWA shall be implemented within 14 calendar days after construction activities have temporarily or permanently ceased on any portion of the project site.
9. Contractor must install and maintain the erosion and sediment control measures shown on these plans. If the engineer determines that the installation or the maintenance is inadequate, the contractor must immediately correct at his expense. If it is determined that additional erosion and sediment control measures are needed the contractor will be directed to install and maintain those measures.
10. All mulch berms shall be left in place following final stabilization of the project site.
11. Erosion control BMPs shall remain in place until the watershed treated by each BMP has been stabilized.


Section A–A




Typical Elevation

WATTLES AND BIODEGRADABLE LOG

Notes for Wattles and Biodegradable Log Slope Protection:

1. The Slope barriers shall be placed along contour lines, with a short section turned upgrade at each end of the barrier. The maximum length of the slope barrier shall not exceed 250 feet, and the barrier ends need to be staggered.
2. Install wattles and biodegradable logs per manufacturer's instructions.
3. Spacing of stakes per manufacturer's instructions with 4' max. spacing. Length of stakes shall be a minimum of 2 times the diameter of the log with minimum of 24".

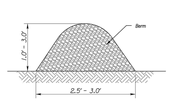



Figure 1
(Perimeter Control)

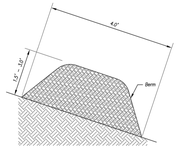



Figure 2
(Steep Slopes)

Notes for Mulch and Compost Filter Beam:

1. The sediment control berm shall be placed uncompacted in a window at locations shown on the plans or as directed by the engineer.
2. Parallel to the base of the slope, or around the perimeter of other affected areas, construct a 1' to 1 foot high by 2.5 to 3 foot wide berm (see Figure 1). For maximum water treatment ability or for steep slopes, construct a 1.5 to 3 foot high trapezoidal berm that is a minimum of 4 feet wide at the base (see Figure 2). In extreme conditions, or where specified by the engineer, a second berm shall be constructed at the top of the slope. Engineer will specify berm requirements.
3. If berm is to be left as permanent or part of the natural landscape, the compost berm may be seeded during application for permanent vegetation.
4. Do not use compost or wood mulch berms in any runoff channels or concentrated flow areas.
5. Wood mulch shall consist of tree and shrub debris resulting from clearing and grubbing and shall be ground by the mechanical means such as a chipper, hammermill, tub grinder or other approved method. Mulch sizing varies with a maximum width of 2" and a maximum length of 10".

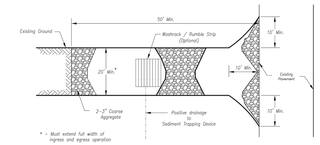
Maintenance for Mulch and Compost Filter Beam:

1. Berm shall be reshaped and material added as necessary to maintain function and dimensions.
2. Breaches in the berm shall be repaired promptly.

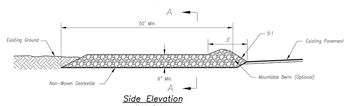
MULCH OR COMPOST FILTER BERMS

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

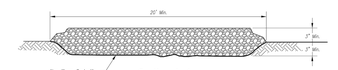
| AMERICAN PUBLIC WORKS ASSOCIATION | KANSAS CITY METRO CHAPTER |
|---|---|
| WATTLES/BIODEGRADABLE LOG AND MULCH/COMPOST FILTER BERM | STANDARD DRAWING NUMBER ESC-04 |
| | ADOPTED: 10/24/2016 |




Plan View
Not to Scale




Side Elevation
Not to Scale




Section A–A
Not to Scale

Notes for Construction Entrance:

1. Avoid locating on steep slopes, at curves on public roads, or downhill of disturbed area.
2. Remove all vegetation and other unsuitable material from the foundation area, grade, and crown for positive drainage.
3. If slope towards the public road exceeds 2%, construct a 6- to 8-inch high ridge with 3H:1V side slopes across the foundation approximately 15 feet from the edge of the public road to divert runoff from it.
4. Install pipe under the entrance if needed to maintain drainage ditches along public roads.
5. Place stone to dimensions and grade as shown on plans. Leave surface sloped for drainage.
6. Divert all surface runoff and drainage from the entrance to a sediment control device.
7. If conditions warrant, place geotextile fabric on the graded foundation to improve stability.

Maintenance for Construction Entrance:

1. Reshape entrance as needed to maintain function and integrity of installation. Top dress with clean aggregate as needed.

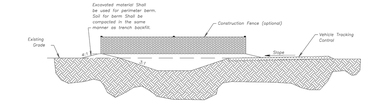
CONSTRUCTION ENTRANCE

Notes for Concrete Washout:

1. Concrete washout areas shall be installed prior to any concrete placement on site.
2. Concrete washout area shall include a flat subsurface pit sized adequately for the amount of concrete placed on site. The slopes leading out of the subsurface pit shall be 2:1. The vehicle tracking pad shall be sloped towards the concrete washout area.
3. Vehicle tracking control is required at the access point to all concrete washout areas.
4. Signs shall be placed at the construction site entrance, washout area and elsewhere as necessary to clearly indicate the location(s) of the concrete washout area(s) to operators of concrete truck and pump rigs.
5. A one-piece impervious liner may be required along the bottom and sides of the subsurface pit in sandy or gravelly soils.

Maintenance for Concrete Washout:

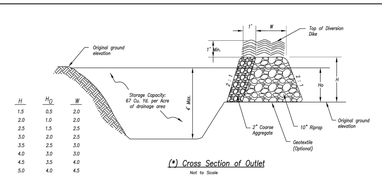
1. Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
2. Concrete washout areas shall be enlarged as necessary to maintain capacity for washed concrete.
3. Concrete washout water, wasted pieces of concrete and all other debris in the subsurface pit shall be transported from the job site in a water-tight container and disposed of properly.
4. Concrete washout areas shall remain in place until all concrete for the project is placed.
5. When concrete washout areas are removed, excavations shall be filled with suitable compacted backfill and topsoil, any disturbed areas associated with the installation, maintenance, and/or removal of the concrete washout areas shall be stabilized.




CONCRETE WASHOUT

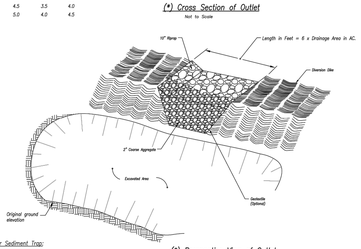
Construction Entrance modified from 2015 Overland Park Standard Details for Erosion and Sediment Control; Concrete Washout modified from 2009 City of Great Bend Standard Drawings.

| AMERICAN PUBLIC WORKS ASSOCIATION | KANSAS CITY METRO CHAPTER |
|---|---|
| CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT | STANDARD DRAWING NUMBER ESC-01 |
| | ADOPTED: 10/24/2016 |




| H | H/2 | W |
|---|---|---|
| 1.5 | 0.5 | 2.0 |
| 2.0 | 1.0 | 2.0 |
| 2.5 | 1.5 | 2.5 |
| 3.0 | 2.0 | 2.5 |
| 3.5 | 2.5 | 3.0 |
| 4.0 | 3.0 | 3.0 |
| 4.5 | 3.5 | 4.0 |
| 5.0 | 4.0 | 4.5 |

(*) Cross Section of Outlet
Not to Scale




(*) Perspective View of Outlet
Not to Scale

(*) – The perspective view and cross section are schematic in nature. Construction plans must provide specific site construction arrangements.

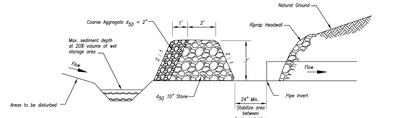
Notes for Sediment Trap:

1. The area under the embankment shall be cleared, grubbed, and stripped of any vegetation and root mat.
2. Fill material for the embankment shall be free of roots or other woody vegetation, organic material, large stones, and other objectionable material. The embankment should be compacted in 6-inch layers by traversing with construction equipment.
3. The earthen embankment shall be stabilized immediately after installation.
4. Construction operations shall be carried out to minimize erosion and water pollution.
5. The structure shall be removed and the area stabilized when the upslope drainage area has been stabilized.
6. All cut and fill slopes shall be 2H : 1V or flatter, except for excavated wet storage areas which may be at a maximum 1H : 1V slope.

Maintenance for Sediment Trap:

1. Check sediment traps after periods of significant runoff.
2. Remove sediment and restore the trap to its original dimensions when sediment accumulates to 20% of the storage capacity.
3. Immediately repair any erosion damage to the embankment and outlet.
4. Keep outlet and pool area free of all trash and other debris.

SEDIMENT TRAP




Section A–A
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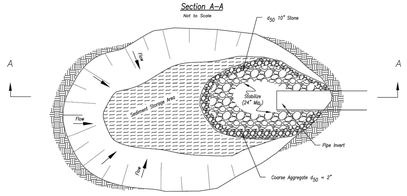



Plan View
Not to Scale

Notes for Sediment Trap at Culvert Opening:

1. The inlet protection device shall be constructed in a manner that will facilitate clean-out and disposal of trapped sediment and minimize interference with construction activities.
2. The inlet protection devices shall be constructed in such manner that any resultant ponding stormwater will not cause excessive inconvenience or damage to adjacent areas or structures.
3. Geometry of the design will be a horseshoe shape around the culvert inlet.
4. The toe of the riprap shall be no closer than 24" from the culvert opening to provide an acceptable emergency outlet for flows from larger storm events.
5. Storage requirements equivalent to that of temporary sediment trap.
6. 67 C.Y./Acre wet storage below base of stone.
7. 67 C.Y./Acre dry storage from base of stone to top of stone berm.

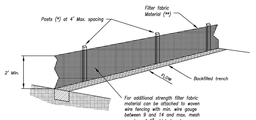
Maintenance for Sediment Trap at Culvert Opening:

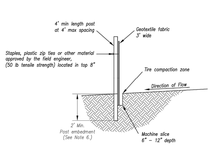
1. Check sediment traps after periods of significant runoff.
2. Remove sediment and restore the trap to its original dimensions when sediment accumulates to 20% of the storage capacity.
3. Immediately repair any erosion damage to the embankment and outlet.
4. Keep outlet and pool area free of all trash and other debris.

SEDIMENT TRAP AT CULVERT OPENING

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

| AMERICAN PUBLIC WORKS ASSOCIATION | KANSAS CITY METRO CHAPTER |
|---|---|
| SEDIMENT TRAPS | STANDARD DRAWING NUMBER ESC-08 |
| | ADOPTED: 10/24/2016 |




(*) POSTS
– MIN. LENGTH 4'
– HARDWOOD 1 ¾" x 1 ¾"
– NO.2 SOUTHERN PINE 2 ¾" x 2 ¾"
– STEEL 1.33 LB/FT

(**) – Geotextile Fabric shall meet the requirements of AASHTO M288

Notes:

1. In order to contain water, the ends of the silt fence must be turned uphill (Figure A).
2. Long perimeter runs of silt fence must be limited to 1320'. Runs should be broken up into several smaller segments to minimize water concentrations (Figure A).
3. Long slopes should be broken up with intermediate rows of silt fence to slow runoff velocities.
4. Attach fabric to upstream side of post.
5. Install posts a minimum of 2' into the ground.
6. Trenching will only be allowed for small or difficult installation, where slicing machine cannot be reasonably used.

SILT FENCE DETAILS
Not to Scale

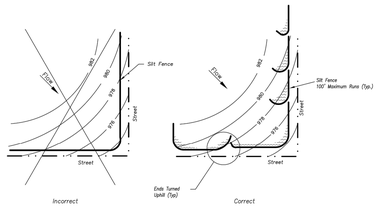
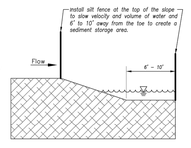
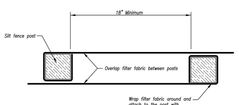



Figure A

SILT FENCE LAYOUT
Not to Scale




JOINING FENCE SECTIONS
Not to Scale

Maintenance:

1. Remove and dispose of sediment deposits when the deposit approaches ½ the height of silt fence.
2. Repair as necessary to maintain function and structure.

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

| AMERICAN PUBLIC WORKS ASSOCIATION | KANSAS CITY METRO CHAPTER |
|---|---|
| SILT FENCE | STANDARD DRAWING NUMBER ESC-03 |
| | ADOPTED: 10/24/2016 |

GBA
architects
engineers
9801 Renner Boulevard
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913.492.0400
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SHEET TITLE
*EROSION AND SEDIMENT CONTROL GENERAL NOTES & DETAILS*

SHEET NUMBER
**C4.0**