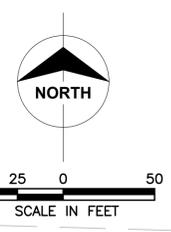


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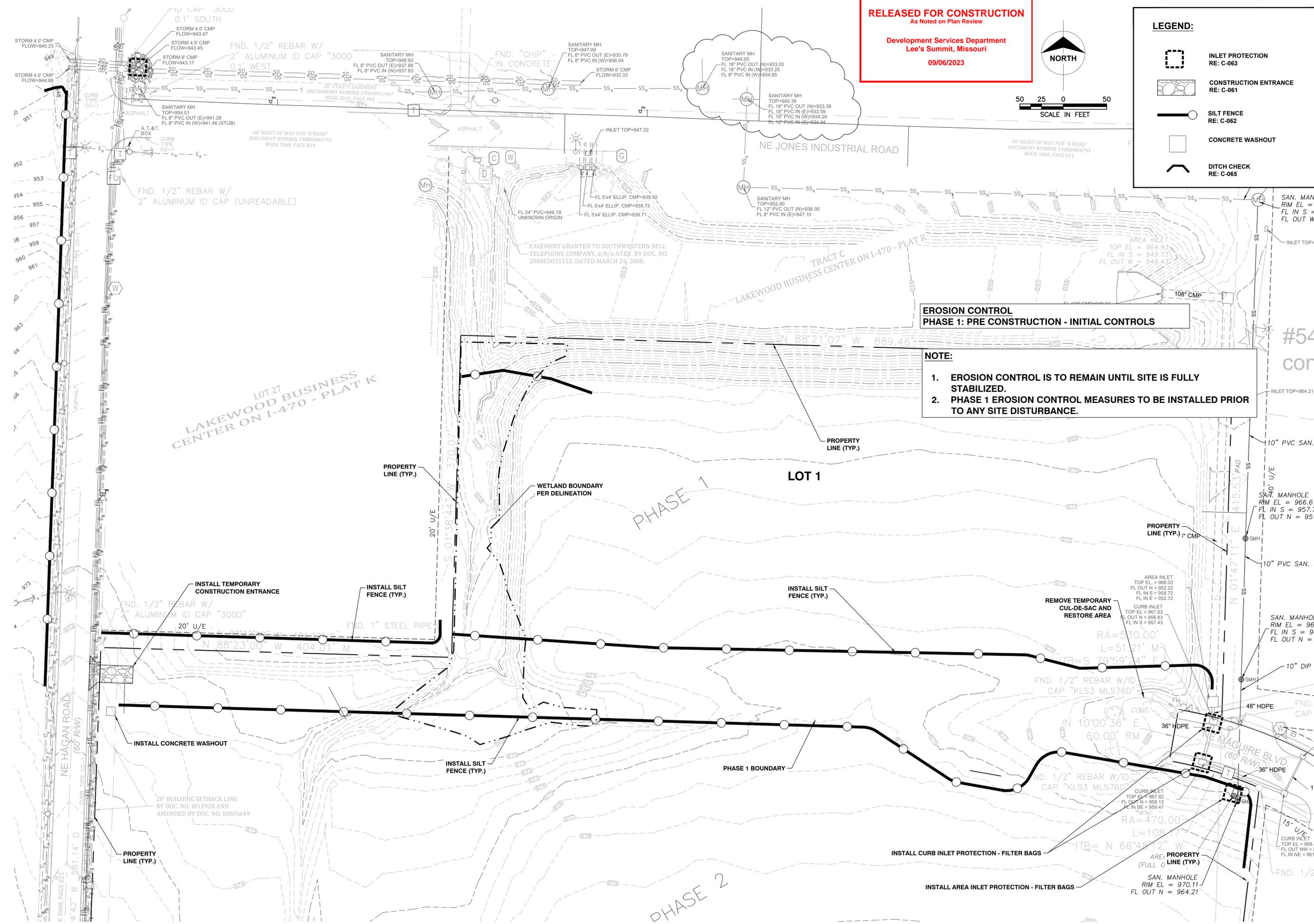


LEGEND:

- INLET PROTECTION
RE: C-063
- CONSTRUCTION ENTRANCE
RE: C-061
- SILT FENCE
RE: C-062
- CONCRETE WASHOUT
- DITCH CHECK
RE: C-065

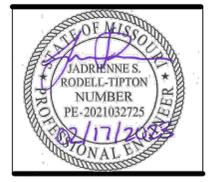
POWELL C W M
ARCHITECTURE/ENGINEERING/SURVEYING
3200 S. State Route 291, Bldg. 1, Independence, MO 64057
(816) 373-4800 | powellcwm.com

Certificates of Authority:
Architecture: MO 310 / KS 73
Engineering: MO 4 / KS 241
Land Surveying: MO 123 / KS 36



DEVELOPER/OWNER
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GRAIN VALLEY, MO 64029
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LAKWOOD BUSINESS CENTER ON I-470 - PLAT S
2710 NE HAGEN ROAD
LEE'S SUMMIT, MO 64064
JACKSON COUNTY

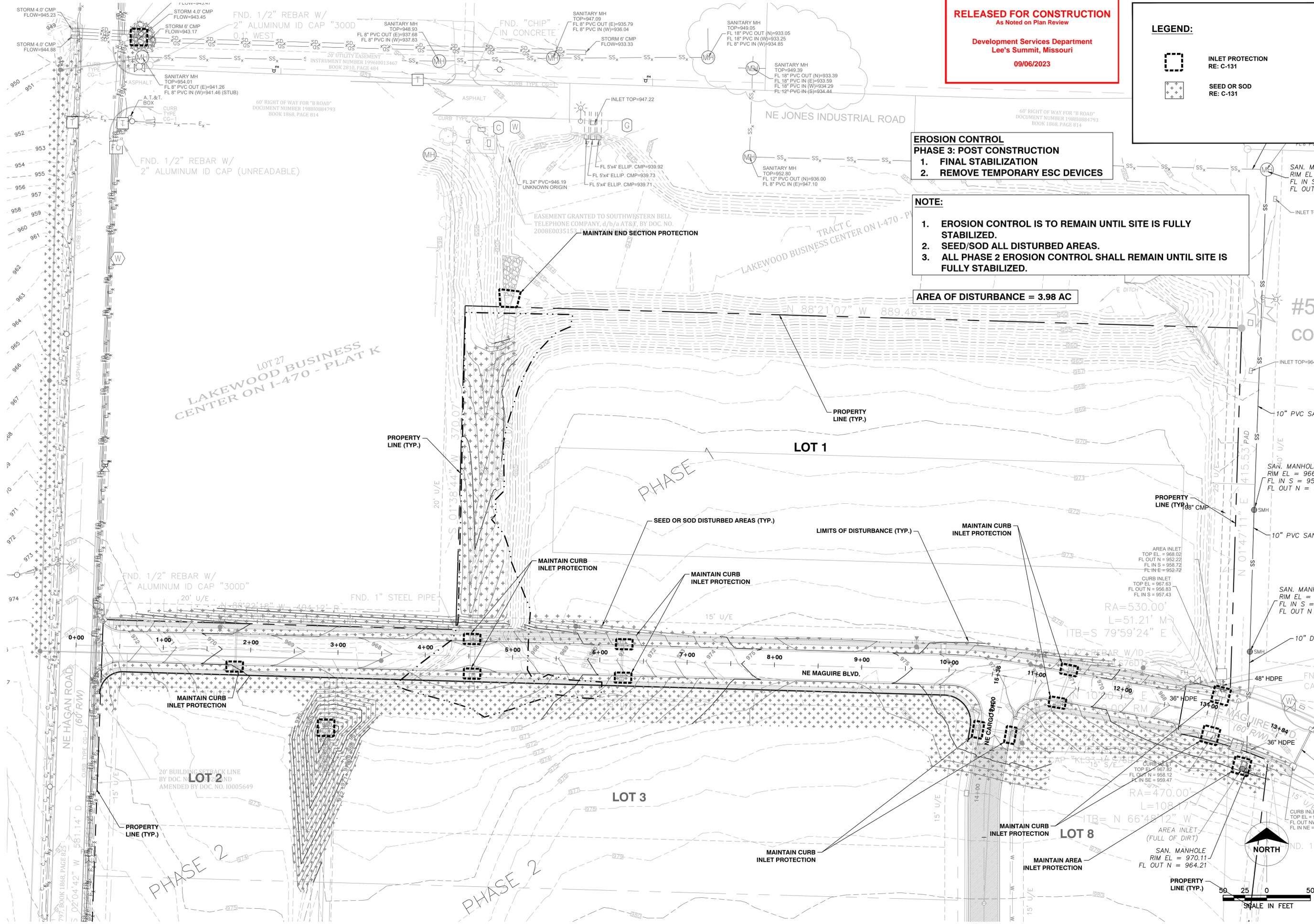


JADRIENNE S. RODELL-TIPTON, PE
PE-2021032725 (MISSOURI) #

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LEGEND:

- INLET PROTECTION
RE: C-131
- SEED OR SOD
RE: C-131

**EROSION CONTROL
PHASE 3: POST CONSTRUCTION**

1. FINAL STABILIZATION
2. REMOVE TEMPORARY ESC DEVICES

NOTE:

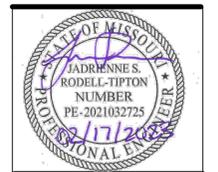
1. EROSION CONTROL IS TO REMAIN UNTIL SITE IS FULLY STABILIZED.
2. SEED/SOD ALL DISTURBED AREAS.
3. ALL PHASE 2 EROSION CONTROL SHALL REMAIN UNTIL SITE IS FULLY STABILIZED.

AREA OF DISTURBANCE = 3.98 AC

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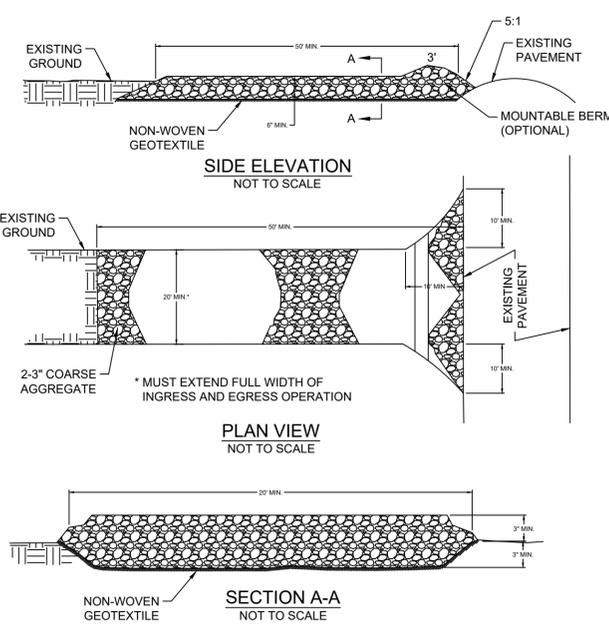


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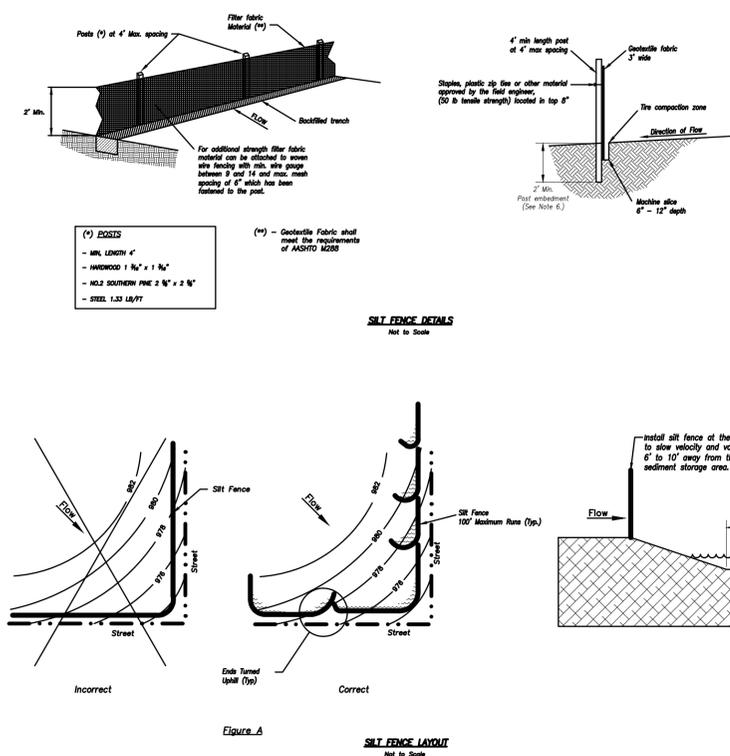
EROSION CONTROL
PHASE 3
053



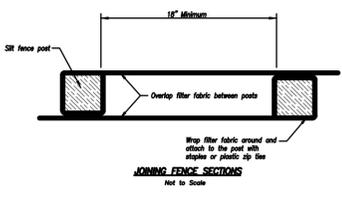
TEMPORARY CONSTRUCTION ENTRANCE
PER APWA DRAWING ESC-01

TEMPORARY CONSTRUCTION ENTRANCE PAD NOTES:

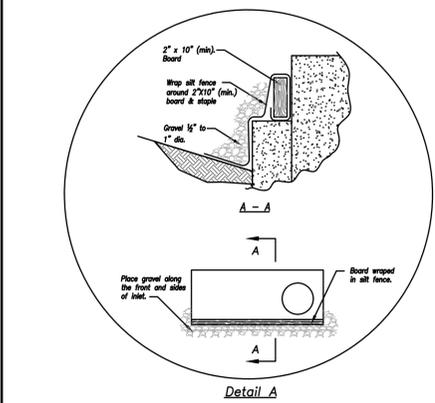
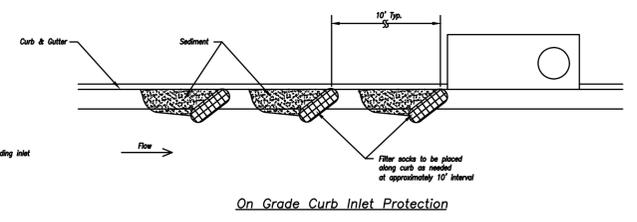
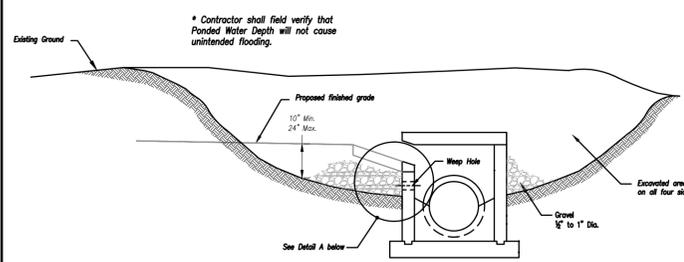
- A) INSTALLATION:**
1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS. IF POSSIBLE, LOCATE WHERE PERMANENT ROADS WILL EVENTUALLY BE CONSTRUCTED.
 2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
 3. IF SLOPE TOWARDS 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 AWAY 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 SMOOTH AND SLOPED FOR DRAINAGE.
 6. DIVER ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE.
 7. IF WET CONDITIONS ARE ANTICIPATED, PLACE GEOTEXTILE FABRIC ON THE GRADED FOUNDATION TO IMPROVE STABILITY.
- B) TROUBLESHOOTING:**
1. CONSULT WITH A QUALIFIED DESIGN PROFESSIONAL IF ANY OF THE FOLLOWING OCCUR:
 - a. INADEQUATE RUNOFF CONTROL TO THE EXTENT THAT SEDIMENT WASHES ONTO PUBLIC ROAD - INSTALL DIVERSIONS OR OTHER RUNOFF CONTROL MEASURES.
 - b. SMALL STONE, THIN PAD, OR ABSENCE OF GEOTEXTILE FABRIC RESULTS IN RUTS AND MUDDY CONDITIONS AS STONE IS PRESSED INTO SOIL - INCREASE STONE SIZE OR PAD THICKNESS OR ADD GEOTEXTILE FABRIC.
 - c. PAD TOO SHORT FOR HEAVY CONSTRUCTION TRAFFIC - EXTEND PAD BEYOND THE MINIMUM 50-FOOT LENGTH AS NECESSARY.
- C) INSPECTION AND MAINTENANCE:**
1. INSPECT STONE PAD AND SEDIMENT DISPOSAL AREA WEEKLY AND AFTER 1/2-INCH OR GREATER STORM EVENTS.
 2. RESHAPE PAD AS NEEDED FOR PROPER DRAINAGE AND RUNOFF CONTROL.
 3. TOPDRESS WITH CLEAN 2- AND 3-INCH STONE AS NEEDED.
 4. IMMEDIATELY REMOVE MUD OR SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROAD. REPAIR ANY BROKEN ROAD PAVEMENT IMMEDIATELY.
 5. REMOVE ALL TEMPORARY ROAD MATERIALS FROM AREAS WHERE PERMANENT VEGETATION WILL BE ESTABLISHED.



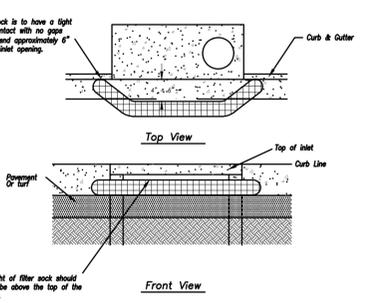
- Notes:**
1. In order to contain water, the ends of the silt fence must be turned uphill (Figure A).
 2. Long perimeter runs of silt fence must be limited to 100'. Runs should be broken up into several smaller segments to minimize water concentrations (Figure A).
 3. Long slopes should be broken up 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 slitting machine cannot be reasonably used.
- Maintenance:**
1. Remove and dispose of sediment deposits when the deposit approaches 1/2 the height of silt fence.
 2. Repair as necessary to maintain function and structure.



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KANSAS CITY METRO CHAPTER	STANDARD DRAWING NUMBER ESC-03 ADOPTED 10/24/2016
SILT FENCE	

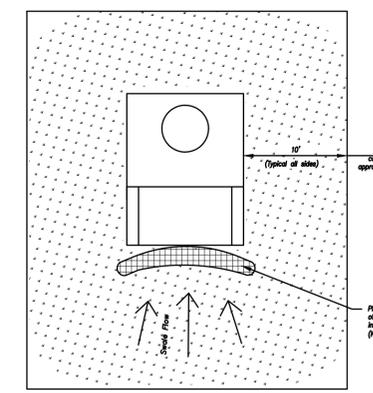
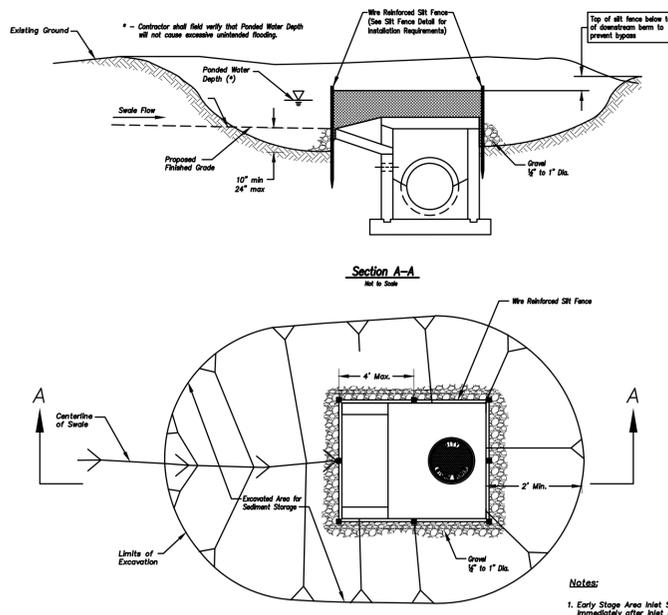


- Notes:**
1. Immediately following inlet construction and prior to construction of curb and inlet throat, protect inlet opening by installing 2' x 10' (min) board wrapped in silt fence. Structures shall have excavated storage area on all four sides to allow settling of sediment (Early Stage Curb Inlet).
 2. When inlet is completed and curb poured, filter socks or approved equal should be used (Late Stage Curb Inlet). Stone socks are not approved for curb inlet use.
 3. Contractor to field verify ponding water shall not create a traffic hazard.
- Maintenance:**
1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
 2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
 3. Repair or replace as necessary to maintain function and integrity of installation.



LATE STAGE CURB INLET
(After Pouring Curb and Inlet Throat)

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KANSAS CITY METRO CHAPTER	STANDARD DRAWING NUMBER ESC-06 ADOPTED 10/24/2016
CURB INLET PROTECTION	



- Notes:**
1. Early Stage Area Inlet Sediment Barrier to be installed immediately after inlet or junction box is constructed.
 2. Silt fence shall remain in place until excavated area is removed and Late Stage Area Inlet is being installed.
 3. Backfill excavated area ONLY after final grading of the site. Stabilization of the site is to immediately follow.
 4. Wire reinforced silt fence may be used in place of silt fence attached to wood frame.
- Maintenance:**
1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
 2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
 3. Repair or replace as necessary to maintain function and integrity of installation.

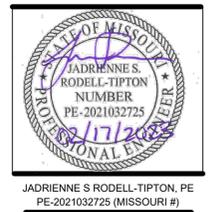
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KANSAS CITY METRO CHAPTER	STANDARD DRAWING NUMBER ESC-07 ADOPTED 10/24/2016
AREA INLET AND JUNCTION BOX PROTECTION	

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EROSION CONTROL
DETAILS -1

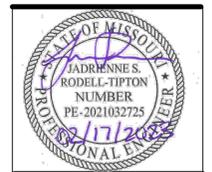
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Certificates of Authority
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Engineering: MO 4 / KS 241
Land Surveying: MO 123 / KS 36

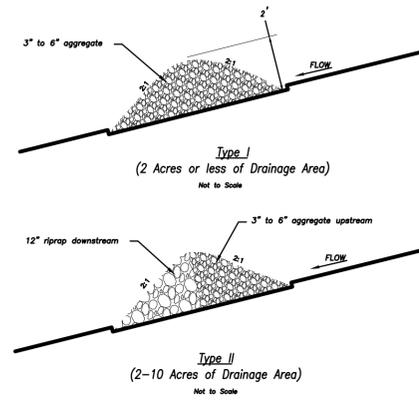
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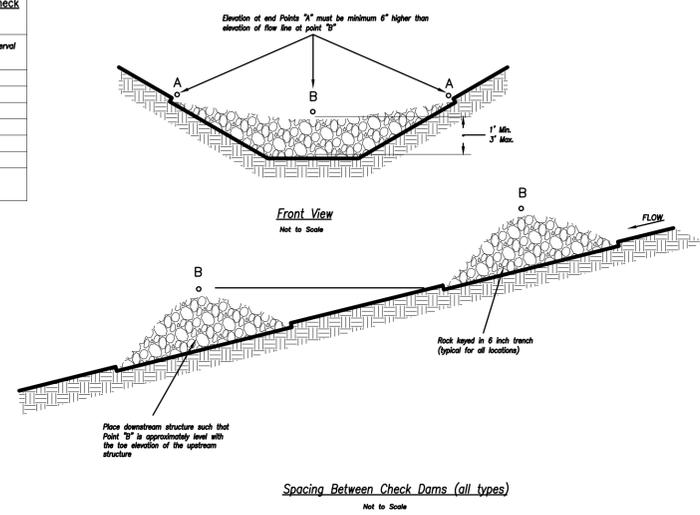
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Temporary Rock Ditch Check Spacing

Ditch Centerline Slope (%)	Spacing Interval (feet)
5.0	60
6.0	50
7.0	43
8.0	36
9.0	33
10.0	29

Note: Use this spacing only for Rock Ditch Checks.



- Notes:**
1. Rock check dams shall be used only for drainage areas less than 10 acres unless approved by the City Engineer.
 2. Use rock checks only in situations where the ditch slope exceeds 6%.

- Maintenance:**
1. Remove and dispose of sediment deposits when the deposit approaches 1/2 the height of the ditch check.
 2. Replace and reshape as necessary to maintain function and integrity of installation.

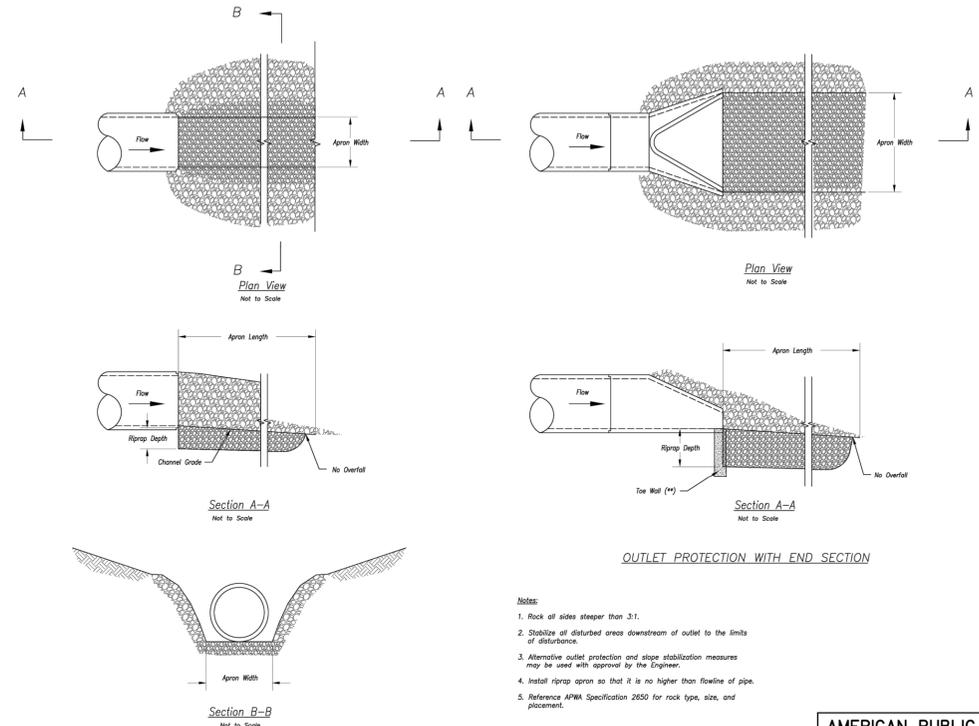
Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

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KANSAS CITY METRO CHAPTER

ROCK DITCH CHECKS

STANDARD DRAWING NUMBER ESC-10 ADOPTED: 10/24/2016



- Notes:**
1. Rock all sides steeper than 3:1.
 2. Stabilize all disturbed areas downstream of outlet to the limits of disturbance.
 3. Alternative outlet protection and slope stabilization measures may be used with approval by the Engineer.
 4. Install riprap apron so that it is no higher than flowline of pipe.
 5. Reference APWA Specification 2650 for rock type, size, and placement.

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

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KANSAS CITY METRO CHAPTER

OUTLET PROTECTION

STANDARD DRAWING NUMBER ESC-14 ADOPTED: 10/24/2016

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ISSUE DATE: 03/31/2022
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062