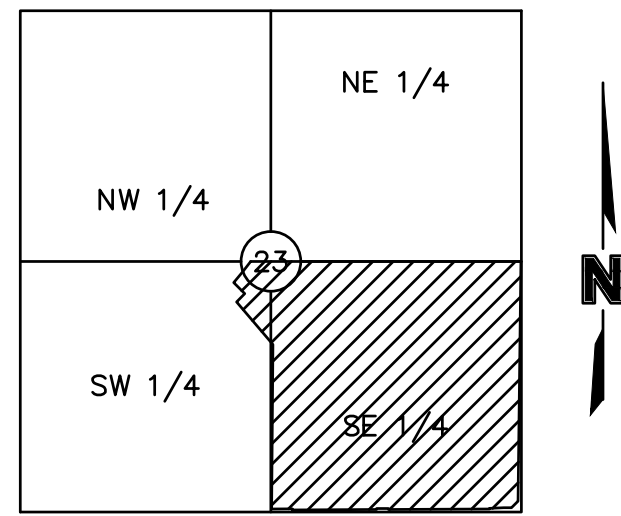


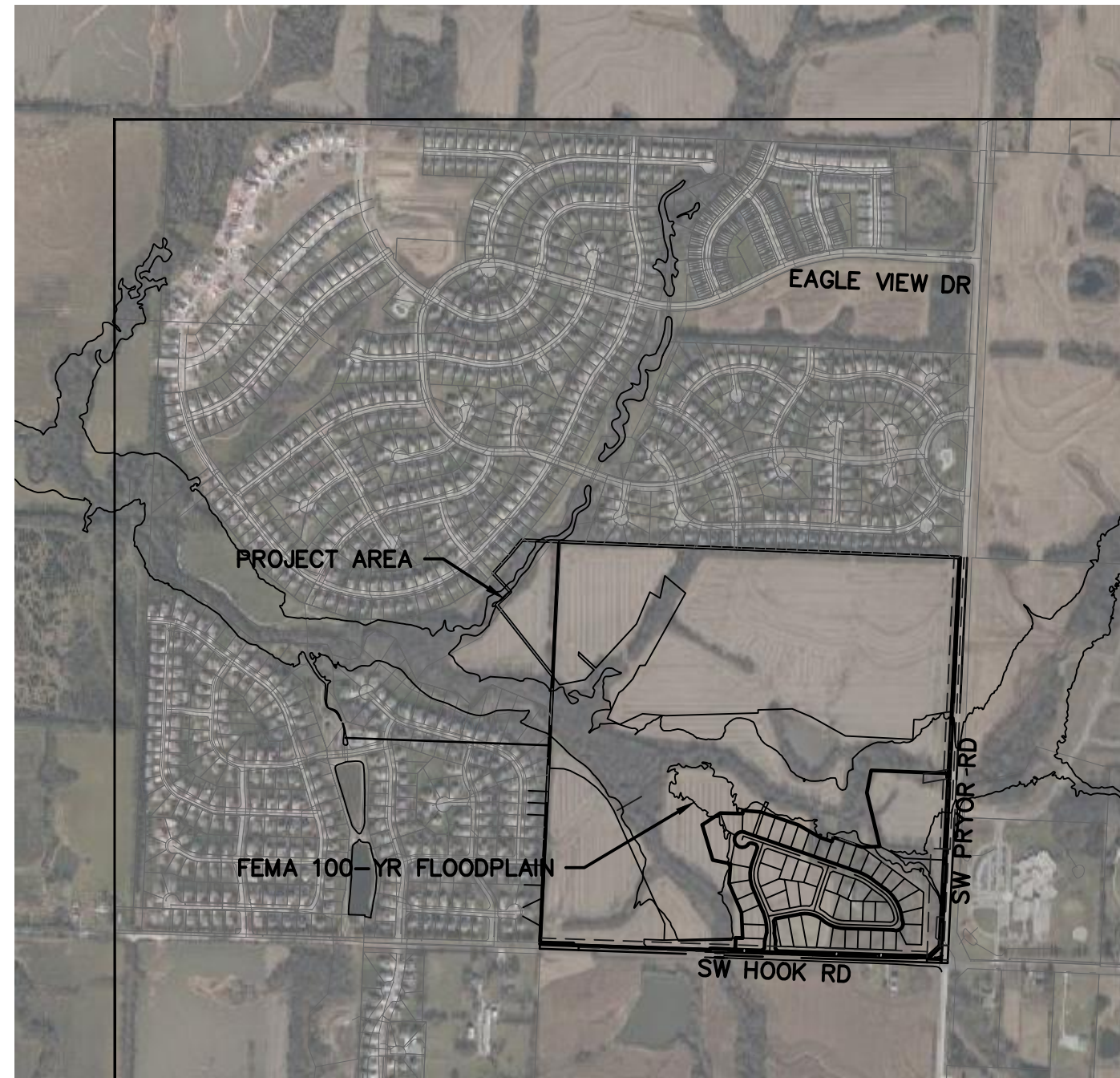
# THE RETREAT AT HOOK FARMS SITE DISTURBANCE PLANS

SECTION 23, TOWNSHIP 47N, RANGE 23W  
IN LEE'S SUMMIT, JACKSON COUNTY, MO



LOCATION MAP  
Sec. 23, Twp. 47 N., Rge. 23 W.  
(N.T.S.)

PROJECT TEAM & UTILITY CONTACT LIST	
<b>OWNER / DEVELOPER</b> HUNT MIDWEST REAL ESTATE DEVELOPMENT, INC. 8300 NE UNDERGROUND DRIVE KANSAS CITY, MO 64161 CONTACT: AARON SCHMIDT PHONE: 816.459.4285 FAX: 000.000.0000	<b>UTILITY SERVICE NUMBERS</b> NAME: DEVELOPMENT SERVICES PHONE: 816-969-1200  NAME: LEE'S SUMMIT WATER & SERVICES DEPARTMENT PHONE: 816-969-1940  NAME: SPIRE (MGE) PHONE: 314-342-0500  NAME: AT&T PHONE: 800-286-8313  NAME: EVERGY PHONE: 816-471-5275  NAME: SPECTRUM (TWC) PHONE: 877-772-2253  NAME: GOOGLE FIBER PHONE: 877-454-6959
<b>ENGINEER</b> OLSSON 1301 BURLINGTON, SUITE 100 NORTH KANSAS CITY, MO 64116 CONTACT: NAME, P.E. PHONE: 816.299.4341	
<b>SURVEYOR</b> OLSSON 1301 BURLINGTON, SUITE 100 NORTH KANSAS CITY, MO 64116 CONTACT: JASON ROUDEBUSH, PLS PHONE: 816.361.1177	



Page Number	Sheet Number	Sheet Title
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42	C401	GENERAL NOTES
43	C402	GENERAL LAYOUT
44	C403	GRADING PLAN
45	C404	OFFSITE GRADING PLAN
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47	C406	SITE DISTURBANCE PLAN - PHASE 2
48	C407	SITE DISTURBANCE PLAN - PHASE 3
49	C408	SITE DISTURBANCE DETAILS
50	C409	SITE DISTURBANCE DETAILS
51	C410	SITE DISTURBANCE DETAILS
52	C411	SITE DISTURBANCE DETAILS
53	C412	SITE DISTURBANCE DETAILS
54	C413	SITE DISTURBANCE DETAILS

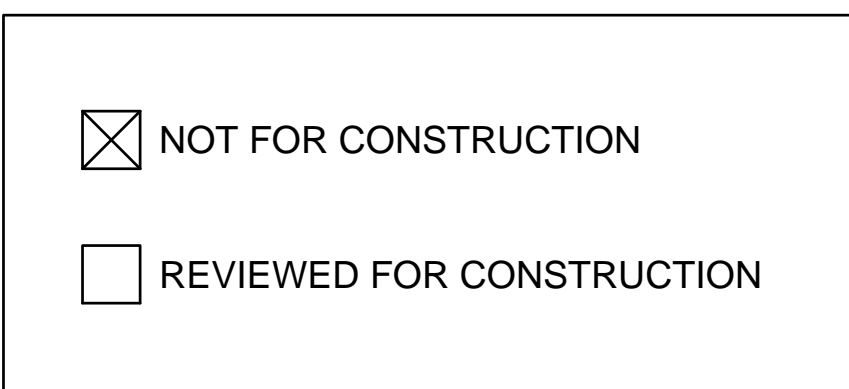
## PROPERTY DESCRIPTION:

(AS PROVIDED BY CHICAGO TITLE INSURANCE COMPANY, NOVEMBER 1, 2018)

ALL THAT PART OF THE SOUTHEAST QUARTER OF SECTION 23, TOWNSHIP 47, RANGE 32, IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, BEING BOUNDED AND DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHWEST CORNER OF SAID SOUTHEAST QUARTER; THENCE SOUTH 89 DEGREES 45 MINUTES 34 SECONDS EAST, ALONG THE NORTH LINE OF SAID SOUTHEAST QUARTER, 2613.19 FEET TO ITS INTERSECTION WITH THE WEST RIGHT-OF-WAY LINE OF PRYOR ROAD AS NOW ESTABLISHED; THENCE SOUTH 02 DEGREES 45 MINUTES 31 SECONDS WEST, ALONG SAID WEST RIGHT-OF-WAY LINE, 2520.50 FEET; THENCE SOUTH 47 DEGREES 23 MINUTES 30 SECONDS WEST, ALONG SAID WEST RIGHT-OF-WAY LINE, 135.21 FEET TO ITS INTERSECTION WITH THE NORTH RIGHT-OF-WAY LINE OF HOOK ROAD, AS NOW ESTABLISHED; THENCE NORTH 87 DEGREES 58 MINUTES 31 SECONDS WEST, ALONG SAID NORTH RIGHT-OF-WAY LINE, 2264.70 FEET; THENCE NORTH 02 DEGREES 43 MINUTES 25 SECONDS EAST, ALONG SAID NORTH RIGHT-OF-WAY LINE, 10.00 FEET; THENCE NORTH 87 DEGREES 58 MINUTES 31 SECONDS WEST, ALONG SAID NORTH RIGHT-OF-WAY LINE, 252.00 FEET TO A POINT ON THE WEST LINE OF SAID SOUTHEAST QUARTER; THENCE NORTH 02 DEGREES 43 MINUTES 25 SECONDS EAST ALONG SAID WEST LINE, 2615.22 FEET TO THE POINT OF BEGINNING.

ALSO,

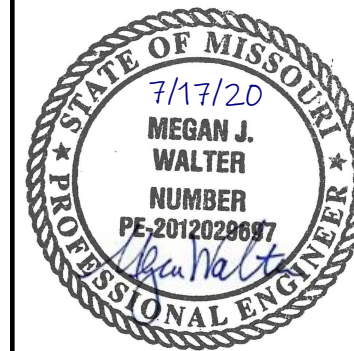
ALL THAT PART OF THE FOLLOWING DESCRIBED PROPERTY IN THE NORTHEAST ¼ OF THE SOUTHWEST ¼ OF SECTION 23, TOWNSHIP 47, RANGE 32, LYING NORTH OF EAGLE CREEK GREENWAY, A SUBDIVISION, ALL IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, TO-WIT:  
 THE SOUTH ONE HALF OF THE NORTHEAST QUARTER AND THE SOUTH ONE-HALF OF THE NORTHWEST QUARTER AND ALL THAT PART OF THE SOUTHWEST QUARTER OF SECTION 23, TOWNSHIP 47, RANGE 32, IN LEE'S SUMMIT, JACKSON COUNTY MISSOURI, BEING DESCRIBED AS FOLLOWS:  
 BEGINNING AT THE SOUTHWEST CORNER OF SAID NORTHWEST QUARTER, THENCE NORTH 2 DEGREES 36 MINUTES 10 SECONDS EAST, ALONG THE WEST LINE OF SAID NORTHWEST QUARTER 1330.50 FEET TO THE NORTHWEST CORNER OF THE SOUTH ONE-HALF OF SAID NORTHWEST QUARTER, THENCE SOUTH 87 DEGREES 40 MINUTES 35 SECONDS EAST, ALONG THE NORTH LINE OF SAID SOUTH ONE-HALF 2657.85 FEET TO THE NORTHEAST CORNER OF SAID SOUTH ONE-HALF, THENCE SOUTH 87 DEGREES 41 MINUTES 31 SECONDS EAST ALONG THE NORTH LINE OF SAID SOUTH ONE-HALF OF SAID NORTHEAST QUARTER 2654.44 FEET TO THE NORTHEAST CORNER OF SAID SOUTH ONE-HALF; THENCE SOUTH 2 DEGREES 46 MINUTES 08 SECONDS WEST, ALONG THE EAST LINE OF SAID NORTHEAST QUARTER 1323.83 FEET TO THE SOUTHEAST CORNER OF SAID NORTHEAST QUARTER; THENCE NORTH 87 DEGREES 45 MINUTES 23 SECONDS WEST, ALONG THE SOUTH LINE OF SAID NORTHEAST QUARTER, 2653.42 FEET TO THE SOUTHWEST CORNER OF SAID NORTHEAST QUARTER; THENCE SOUTH 2 DEGREES 43 MINUTES 24 SECONDS WEST, (DEED-SOUTH 2 DEGREES 41 MINUTES 49 SECONDS WEST), ALONG THE EAST LINE OF SAID SOUTHWEST QUARTER, 1138.42 FEET TO THE CENTERLINE OF MOUSE CREEK, AS NOW ESTABLISHED; THENCE NORTH 25 DEGREES 51 MINUTES 18 WEST (DEED-NORTH 25 DEGREES 52 MINUTES 53 WEST), ALONG SAID CENTERLINE, 73.83 FEET; THENCE NORTH 67 DEGREES 53 MINUTES 09 SECONDS WEST (DEED-NORTH 67 DEGREES 54 MINUTES 44 SECONDS WEST), ALONG SAID CENTERLINE, 379.20 FEET; THENCE SOUTH 39 DEGREES 00 MINUTES 27 SECONDS WEST (DEED-SOUTH 38 DEGREES 58 MINUTES 52 SECONDS WEST), ALONG SAID CENTERLINE, 187.72 FEET; THENCE NORTH 48 DEGREES 37 MINUTES 07 SECONDS WEST (DEED-NORTH 48 DEGREES 38 MINUTES 42 SECONDS WEST), ALONG SAID CENTERLINE, 131.31 FEET; THENCE NORTH 73 DEGREES 28 MINUTES 28 SECONDS WEST (DEED-NORTH 73 DEGREES 29 MINUTES 58 SECONDS WEST), ALONG SAID CENTERLINE, 279.90 FEET THENCE NORTH 26 DEGREES 34 MINUTES 47 SECONDS WEST (DEED-NORTH 26 DEGREES 36 MINUTES 22 SECONDS WEST), ALONG SAID CENTERLINE, 312.25 FEET; THENCE NORTH 62 DEGREES 29 MINUTES 46 SECONDS WEST (DEED-NORTH 62 DEGREES 31 MINUTES 21 SECONDS WEST), ALONG SAID CENTERLINE, 134.47 FEET; THENCE SOUTH 52 DEGREES 10 MINUTES 15 SECONDS WEST (DEED-SOUTH 52 DEGREES 08 MINUTES 40 SECONDS WEST), ALONG SAID CENTERLINE, 85.16 FEET; THENCE SOUTH 19 DEGREES 37 MINUTES 09 SECONDS WEST (DEED-SOUTH 19 DEGREES 35 MINUTES 34 SECONDS WEST), ALONG SAID CENTERLINE, 142.83 FEET; THENCE SOUTH 79 DEGREES 21 MINUTES 39 SECONDS WEST (DEED-SOUTH 79 DEGREES 20 MINUTES 04 SECONDS WEST), ALONG SAID CENTERLINE, 68.92 FEET; THENCE NORTH 73 DEGREES 27 MINUTES 48 SECONDS WEST (DEED-NORTH 73 DEGREES 29 MINUTES 23 SECONDS WEST), ALONG SAID CENTERLINE, 114.02 FEET; THENCE NORTH 25 DEGREES 46 MINUTES 28 SECONDS WEST (DEED-NORTH 25 DEGREES 48 MINUTES 03 SECONDS WEST), ALONG SAID CENTERLINE, 73.12 FEET; THENCE NORTH 87 DEGREES 30 MINUTES 19 SECONDS WEST (DEED-NORTH 87 DEGREES 31 MINUTES 54 SECONDS WEST), ALONG SAID CENTERLINE, 473.33 FEET; THENCE NORTH 49 DEGREES 45 MINUTES 48 SECONDS WEST (DEED-NORTH 49 DEGREES 47 MINUTES 23 SECONDS WEST), ALONG SAID CENTERLINE, 343.23 FEET; THENCE NORTH 56 DEGREES 22 MINUTES 25 SECONDS WEST (DEED-NORTH 56 DEGREES 24 MINUTES 00 SECONDS WEST), ALONG SAID CENTERLINE, 277.94 FEET; THENCE NORTH 65 DEGREES 42 MINUTES 49 SECONDS WEST (DEED-NORTH 65 DEGREES 44 MINUTES 24 SECONDS WEST), ALONG SAID CENTERLINE, 182.37 FEET; THENCE NORTH 22 DEGREES 55 MINUTES 55 SECONDS WEST (DEED-NORTH 22 DEGREES 57 MINUTES 30 SECONDS WEST), ALONG SAID CENTERLINE, 65.99 FEET TO ITS INTERSECTION WITH THE WEST LINE OF SAID SOUTHWEST QUARTER; THENCE NORTH 2 DEGREES 36 MINUTES 17 SECONDS EAST (DEED-NORTH 2 DEGREES 34 MINUTES 42 SECONDS EAST), ALONG SAID WEST LINE, 239.42 FEET TO THE POINT OF BEGINNING.  
 (SHOWN FOR CONVENIENCE IN REPORTING.)



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 USER: emorton  
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 C\_PENDY\_0194059

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1	7/17/2020	CITY COMMENTS	

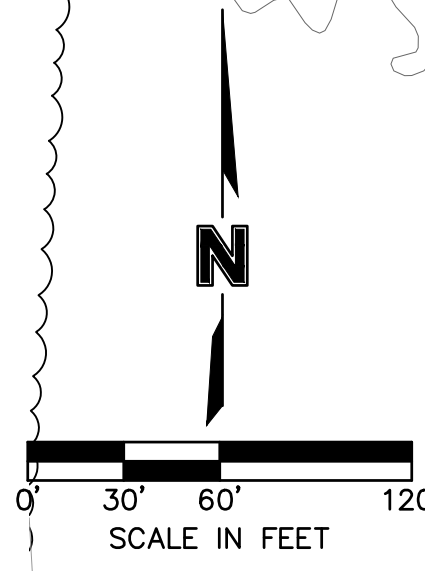
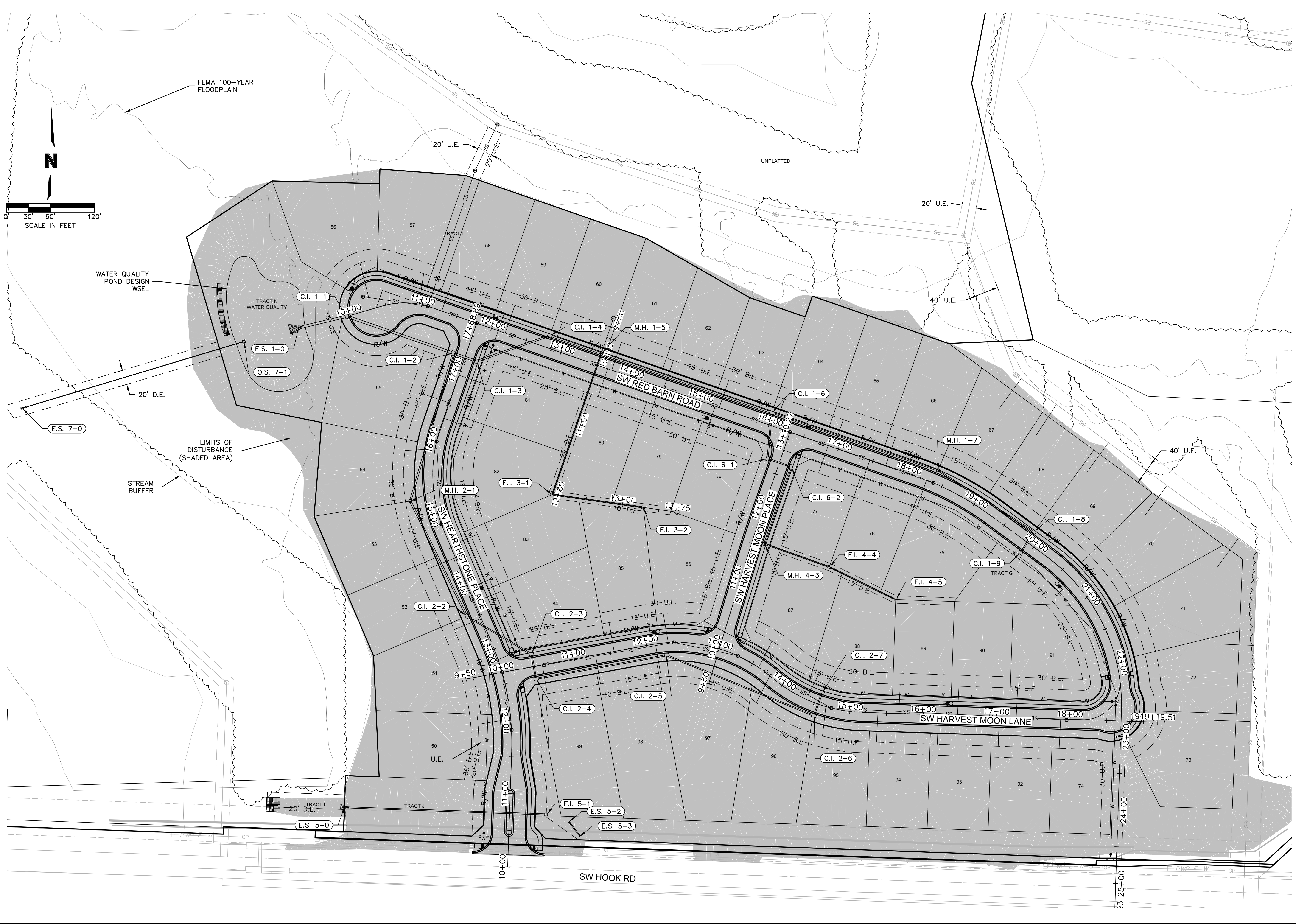
COVER SHEET  
 SITE DISTURBANCE PLANS  
 THE RETREAT AT HOOK FARMS  
 CONSTRUCTION DOCUMENTS  
 LEE'S SUMMIT, MO  
 2020

drawn by: EM  
 checked by: EM  
 designed by: RB  
 QA/QC by: NH  
 project no.: 019-4059  
 drawing no.: C\_TTL00\_0194059  
 date: 4/20/2020

SHEET C400



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 C:\FBASE\_0194059



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7/17/20  
MEGAN J. WALTER  
NUMBER  
PE-2012028697  
Professional Engineer

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	7/17/2020	CITY COMMENTS	

GENERAL LAYOUT  
SITE DISTURBANCE PLANS  
THE RETREAT AT HOOK FARMS  
CONSTRUCTION DOCUMENTS

2020

REVISIONS

drawn by:	EM	checked by:	EM
designed by:	RB	QA/QC by:	NH
project no.:	019-4059	date:	4/20/2020
drawing no.:	C_GEN02_0194059		

SHEET C402

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**GENERAL NOTES:**

- CONTRACTOR SHALL ADHERE TO THE "DESIGN AND CONSTRUCTION MANUAL" SECTION 2100 AS ADOPTED BY THE CITY OF LEE'S SUMMIT (LATEST EDITION), FOR EXCAVATION AND EMBANKMENT WORK WITHIN THE PROPOSED RIGHT-OF-WAY.
- AREAS OF CONSTRUCTION SHALL BE STRIPPED OF ALL VEGETATION, ORGANIC MATTER AND TOPSOIL TO A DEPTH AS RECOMMENDED BY GEOTECHNICAL ENGINEER AND OR TESTING AGENCY. SOILS REMOVED DURING SITE STRIPPING SHOULD BE EVALUATED TO DETERMINE IF PORTIONS OF THE TOPSOIL STRATUM MAY BE UTILIZED AS STRUCTURAL FILL WITHIN PAVEMENT AREAS. ANY MATERIAL NOT DEEMED AS SUITABLE FILL MATERIAL BY THE GEOTECHNICAL ENGINEER AND OR TESTING AGENCY SHALL BE REMOVED FROM THE JOB SITE BY THE CONTRACTOR AT HIS EXPENSE.
- ALL EMBANKMENT OUTSIDE OF RIGHT-OF-WAY SHOULD BE PLACED IN CONTROLLED LIFTS HAVING A MAXIMUM LOOSE LIFT THICKNESS OF 8". EMBANKMENT SHOULD BE COMPACTED TO A MINIMUM OF 95% OF THE MATERIALS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-698 (STANDARD PROCTOR COMPACTION). MOISTURE CONTENT OF THE FILL AT THE TIME OF COMPACTION SHALL BE WITHIN A RANGE OF -0 TO +4 PERCENT OF OPTIMUM MOISTURE CONTENT.

LEGEND	
100-	EXISTING INDEX CONTOURS
100-	EXISTING INTERMEDIATE CONTOURS
100	PROPOSED INDEX CONTOURS
100	PROPOSED INTERMEDIATE CONTOURS

EARTHWORK QUANTITIES		
LOCATION	CUT (C.Y.)	FILL (C.Y.)
STREET	21637	8047
SITE	66789	33695
TOTAL	88426	41742

**NOTES:**

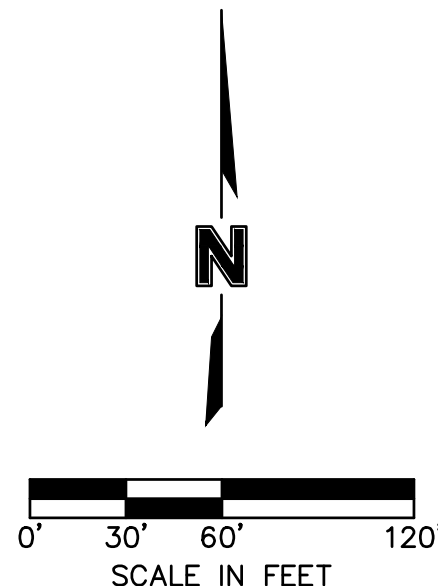
- ONE OIL OR GAS WELL IS LOCATED ON THE PROPERTY (DRY HOLE, ABANDONED AS OF 5/11/1928). COORDINATES: 38.87019N, -94.41911W INFORMATION VERIFIED VIA MISSOURI DNR: <https://dnr.mo.gov/geology/geoserv/oilandgas.htm> (UPDATED AUGUST 2018)

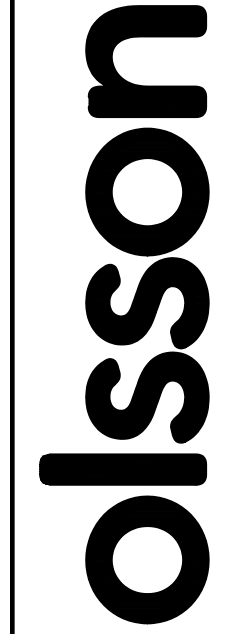
**EARTHWORK QUANTITIES NOTES:**

- EARTHWORK QUANTITIES BASED ON FINISHED GRADE SURFACE AND DO NOT INCLUDE ADJUSTMENTS FOR TOPSOIL AND SHRINKAGE.
- EARTHWORK QUANTITIES DO NOT TAKE INTO CONSIDERATION EXCAVATION, REMOVAL AND DISPOSAL OF MATERIAL DEEMED UNSUITABLE BY A GEOTECHNICAL ENGINEER. THE EARTHWORK CONTRACTOR IS RESPONSIBLE FOR EXCAVATION, REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL AND FOR REPLACING IT WITH SUITABLE MATERIAL.

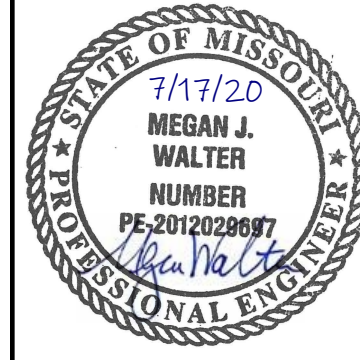
**THIRD PARTY TESTING REQUIRED FOR WATER QUALITY BASIN:**

- REMOVE TOPSOIL AND ORGANIC MATERIAL FROM THE AREA
- PROOF ROLL TO CHECK THE SUBGRADE
  - REMOVE OR REPAIR ANY UNSTABLE AREA IN ACCORDANCE WITH THIRD-PARTY TESTER
- PLACE 9" LOOSE LIFTS OF 9" MATERIAL WITH LL=50 AND PI=25 OR GREATER. EMBANKMENT SHOULD BE COMPACTED TO A MINIMUM OF 95% OF THE MATERIALS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-698 (STANDARD PROCTOR COMPACTION). MOISTURE CONTENT OF THE FILL AT THE TIME OF COMPACTION SHALL BE WITHIN A RANGE OF -0 TO +4 PERCENT OF OPTIMUM MOISTURE CONTENT.





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1	7/17/2020	CITY COMMENTS	

GRADING PLAN  
SITE DISTURBANCE PLANS  
THE RETREAT AT HOOK FARMS  
CONSTRUCTION DOCUMENTS

2020  
LEE'S SUMMIT, MO  
REVISIONS

drawn by: \_\_\_\_\_ EM  
checked by: \_\_\_\_\_ EM  
designed by: \_\_\_\_\_ RB  
QA/QC by: \_\_\_\_\_ NH  
project no.: 019-4059  
drawing no.: C\_GRD01\_0194059  
date: 4/20/2020

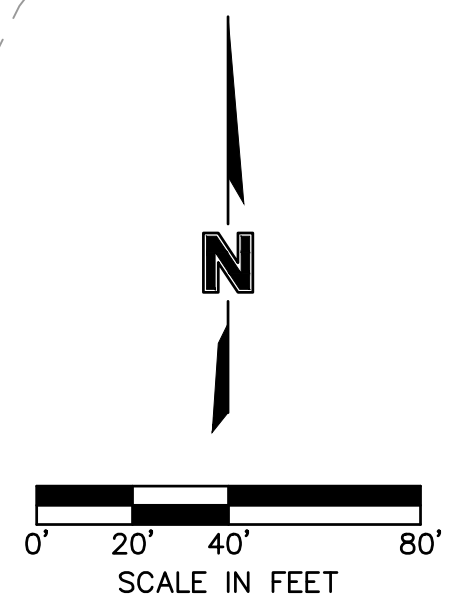
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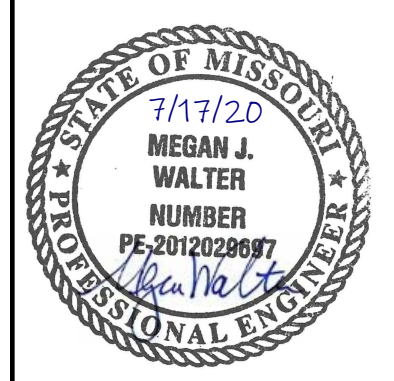


CONTRACTOR TO GRADE SHADED AREA TO USE APPROXIMATELY 15,000 CY EXCESS DIRT FROM THE RETREAT AT HOOK FARMS SITE

INSTALL SILT FENCE (TYP.)



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1	7/17/2020	CITY COMMENTS	

OFFSITE GRADING PLAN  
 SITE DISTURBANCE PLANS  
 THE RETREAT AT HOOK FARMS  
 CONSTRUCTION DOCUMENTS

LEES SUMMIT, MO 2020

drawn by: EM  
 checked by: EM  
 designed by: RB  
 QA/QC by: NH  
 project no.: 019-4059  
 drawing no.: C\_GRD03\_0194059  
 date: 4/20/2020

SHEET C404

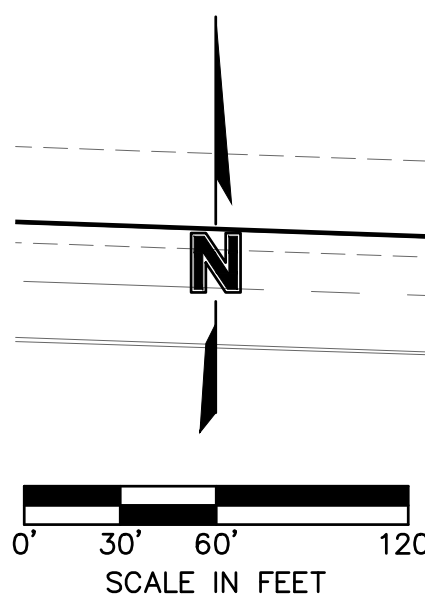
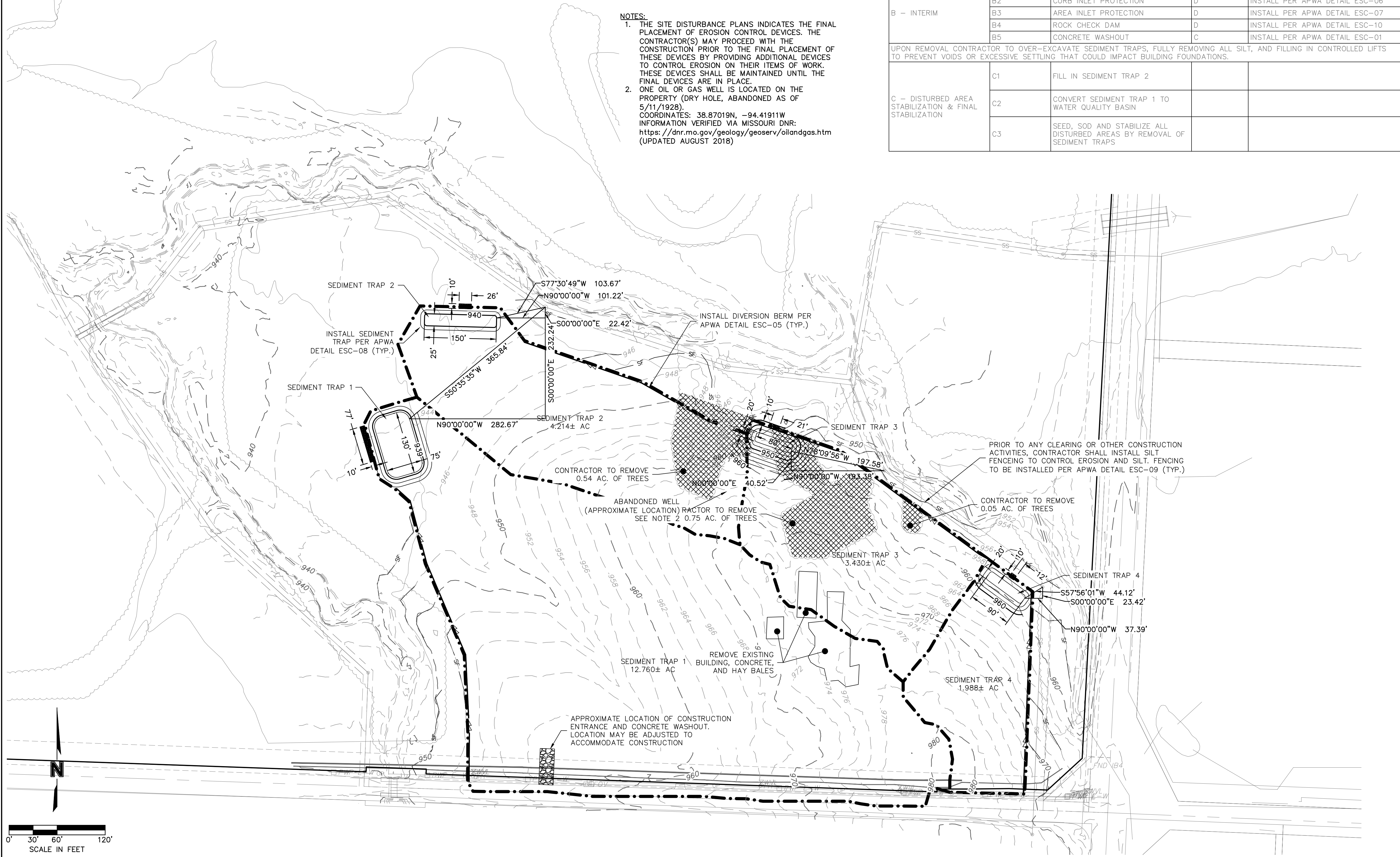
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TEMPORARY SEDIMENT TRAP	1	2	3	4
POND AND PRINCIPAL SPILLWAY DATA:				
DAM TOP ELEVATION	944	944	951	958
EMERGENCY SPILLWAY ELEVATION	943	943	950	957
WET STORAGE VOLUME ELEVATION				
CLEANOUT ELEVATION	941	941	948	955
DRY BOTTOM ELEVATION	940.0	940.9	947.3	945.4
VOL. REQ'D @ 134CY/ACRE	939	940	946	954
VOL. PROVIDED BELOW OUTLET CREST (CY)	1701	562	457	265
CLEANOUT VOLUME (CY)	1312	657	500	724
STONE OUTLET DATA:				
LENGTH (L.) FT.	20	10	10	10
WIDTH (W.) FT.	10	10	10	10
DRAINAGE AREA (AC)	12.76	4.21	3.43	1.99

LEGEND	
	TEMPORARY DIVERSION BERM
	SILT FENCE
	TEMPORARY STONE CONSTRUCTION ENTRANCE
	TREE CLEARING

EROSION CONTROL STAGING CHART				
PROJECT STAGE	EROSION CONTROL BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:
A - PRE-MASS GRADING	A1	CONSTRUCTION ENTRANCE	C	INSTALL PER APWA DETAIL ESC-01
	A2	SILT FENCE	B	INSTALL PER APWA DETAIL ESC-03
	A3	DIVERSION BERM	C	INSTALL PER APWA DETAIL ESC-05
	A4	SEDIMENT TRAPS 1,2,3,4	C	INSTALL PER APWA DETAIL ESC-08
B - INTERIM	B1	SILT FENCE	C	INSTALL PER APWA DETAIL ESC-03
	B2	CURB INLET PROTECTION	D	INSTALL PER APWA DETAIL ESC-06
	B3	AREA INLET PROTECTION	D	INSTALL PER APWA DETAIL ESC-07
	B4	ROCK CHECK DAM	D	INSTALL PER APWA DETAIL ESC-10
	B5	CONCRETE WASHOUT	C	INSTALL PER APWA DETAIL ESC-01
UPON REMOVAL CONTRACTOR TO OVER-EXCAVATE SEDIMENT TRAPS, FULLY REMOVING ALL SILT, AND FILLING IN CONTROLLED LIFTS TO PREVENT VOIDS OR EXCESSIVE SETTLING THAT COULD IMPACT BUILDING FOUNDATIONS.				
C - DISTURBED AREA STABILIZATION & FINAL STABILIZATION	C1	FILL IN SEDIMENT TRAP 2		
	C2	CONVERT SEDIMENT TRAP 1 TO WATER QUALITY BASIN		
	C3	SEED, SOD AND STABILIZE ALL DISTURBED AREAS BY REMOVAL OF SEDIMENT TRAPS		

NOTES:  
 1. THE SITE DISTURBANCE PLANS INDICATES THE FINAL PLACEMENT OF EROSION CONTROL DEVICES. THE CONTRACTOR(S) MAY PROCEED WITH THE CONSTRUCTION PRIOR TO THE FINAL PLACEMENT OF THESE DEVICES BY PROVIDING ADDITIONAL DEVICES TO CONTROL EROSION ON THEIR ITEMS OF WORK. THESE DEVICES SHALL BE MAINTAINED UNTIL THE FINAL DEVICES ARE IN PLACE.  
 2. ONE OIL OR GAS WELL IS LOCATED ON THE PROPERTY (DRY HOLE, ABANDONED AS OF 5/11/1928).  
 COORDINATES: 38.87019N, -94.41911W  
 INFORMATION VERIFIED VIA MISSOURI DNR:  
<https://dnr.mo.gov/geology/geoserv/oilandgas.htm>  
 (UPDATED AUGUST 2018)



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REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	7/17/2020	CITY COMMENTS	

SITE DISTURBANCE PLAN - STAGE A  
SITE DISTURBANCE PLANS  
THE RETREAT AT HOOK FARMS  
CONSTRUCTION DOCUMENTS

LEES SUMMIT, MO

drawn by: EM  
checked by: EM  
designed by: RB  
QA/QC by: NH  
project no.: 019-4059  
drawing no.: C-ERC02\_0194059  
date: 4/20/2020

2020

REVISIONS

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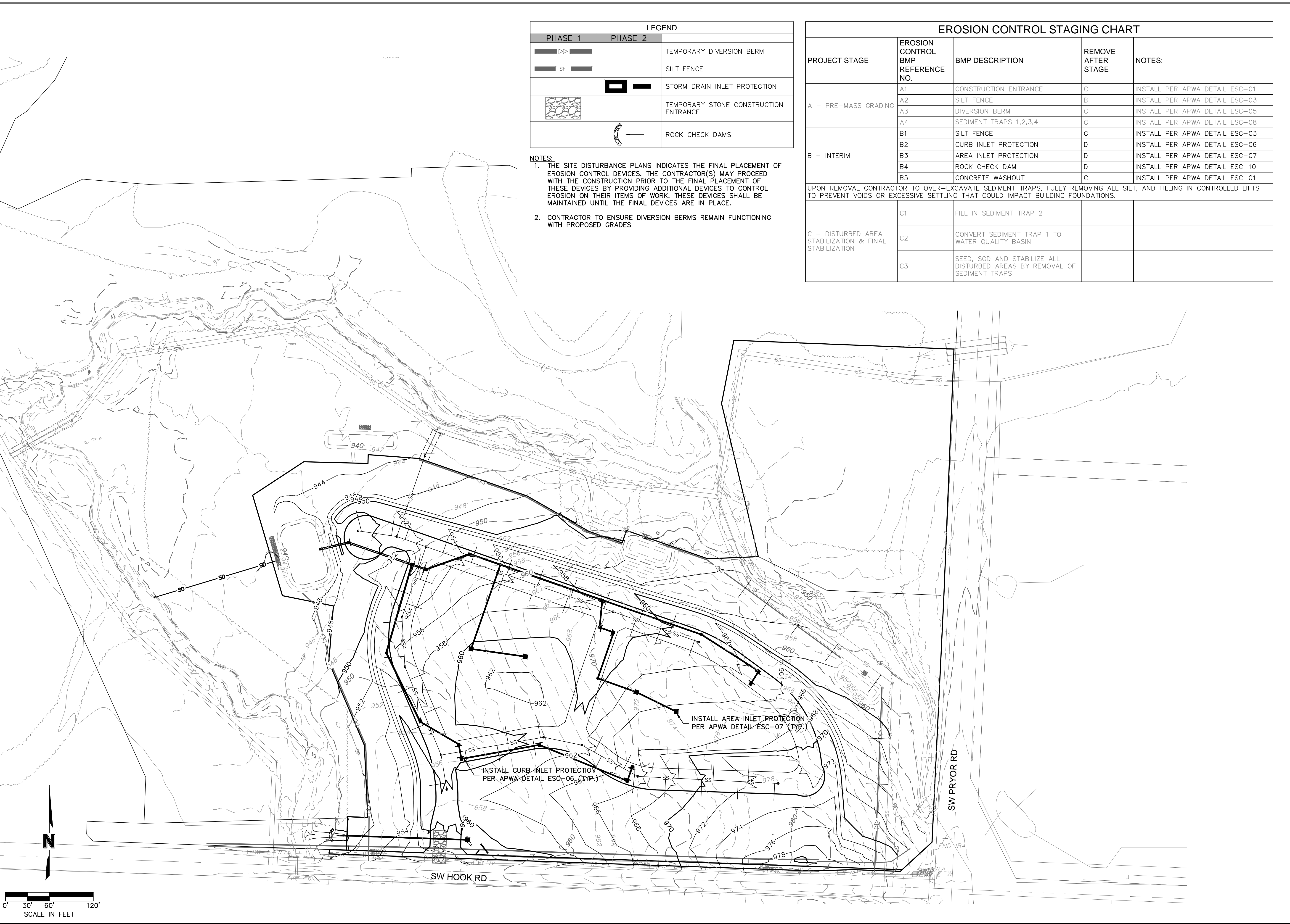
C405

LEGEND		
PHASE 1	PHASE 2	
		TEMPORARY DIVERSION BERM
		SILT FENCE
		STORM DRAIN INLET PROTECTION
		TEMPORARY STONE CONSTRUCTION ENTRANCE
		ROCK CHECK DAMS

- NOTES:**
- THE SITE DISTURBANCE PLANS INDICATES THE FINAL PLACEMENT OF EROSION CONTROL DEVICES. THE CONTRACTOR(S) MAY PROCEED WITH THE CONSTRUCTION PRIOR TO THE FINAL PLACEMENT OF THESE DEVICES BY PROVIDING ADDITIONAL DEVICES TO CONTROL EROSION ON THEIR ITEMS OF WORK. THESE DEVICES SHALL BE MAINTAINED UNTIL THE FINAL DEVICES ARE IN PLACE.
  - CONTRACTOR TO ENSURE DIVERSION BERMS REMAIN FUNCTIONING WITH PROPOSED GRADES

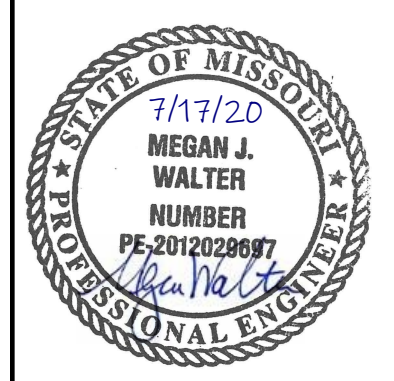
EROSION CONTROL STAGING CHART				
PROJECT STAGE	EROSION CONTROL BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:
A - PRE-MASS GRADING	A1	CONSTRUCTION ENTRANCE	C	INSTALL PER APWA DETAIL ESC-01
	A2	SILT FENCE	B	INSTALL PER APWA DETAIL ESC-03
	A3	DIVERSION BERM	C	INSTALL PER APWA DETAIL ESC-05
	A4	SEDIMENT TRAPS 1,2,3,4	C	INSTALL PER APWA DETAIL ESC-08
B - INTERIM	B1	SILT FENCE	C	INSTALL PER APWA DETAIL ESC-03
	B2	CURB INLET PROTECTION	D	INSTALL PER APWA DETAIL ESC-06
	B3	AREA INLET PROTECTION	D	INSTALL PER APWA DETAIL ESC-07
	B4	ROCK CHECK DAM	D	INSTALL PER APWA DETAIL ESC-10
	B5	CONCRETE WASHOUT	C	INSTALL PER APWA DETAIL ESC-01
UPON REMOVAL CONTRACTOR TO OVER-EXCAVATE SEDIMENT TRAPS, FULLY REMOVING ALL SILT, AND FILLING IN CONTROLLED LIFTS TO PREVENT VOIDS OR EXCESSIVE SETTLING THAT COULD IMPACT BUILDING FOUNDATIONS.				
C - DISTURBED AREA STABILIZATION & FINAL STABILIZATION	C1	FILL IN SEDIMENT TRAP 2		
	C2	CONVERT SEDIMENT TRAP 1 TO WATER QUALITY BASIN		
	C3	SEED, SOD AND STABILIZE ALL DISTURBED AREAS BY REMOVAL OF SEDIMENT TRAPS		

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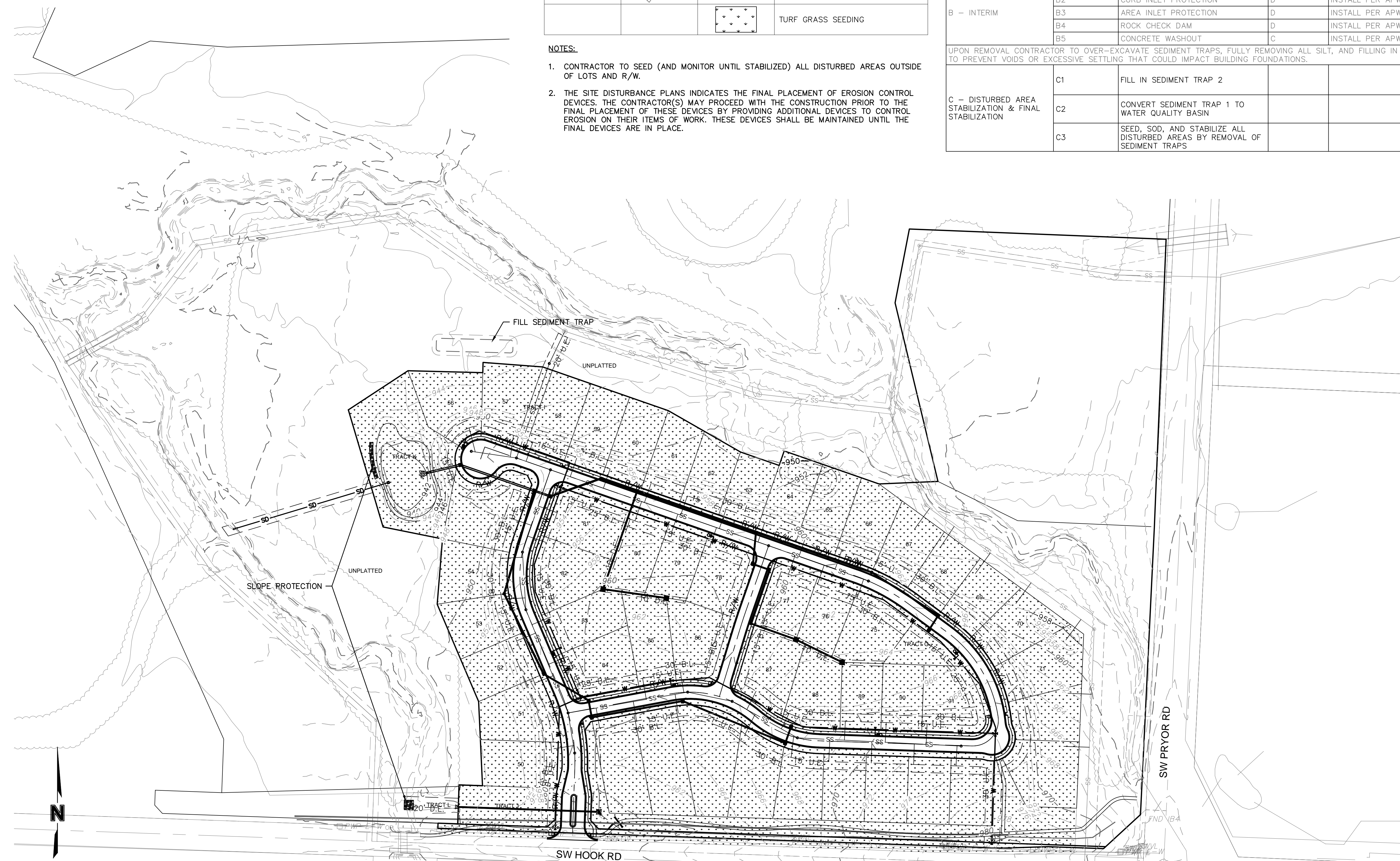
SITE DISTURBANCE PLAN - STAGE B  
 SITE DISTURBANCE PLANS  
 THE RETREAT AT HOOK FARMS  
 CONSTRUCTION DOCUMENTS

2020  
 REVISIONS  
 LEE'S SUMMIT, MO

drawn by:	EM
checked by:	EM
designed by:	RB
QA/QC by:	NH
project no.:	019-4059
drawing no.:	C.ERC03_0194059
date:	4/20/2020

SHEET C406

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LEGEND			
PHASE 1	PHASE 2	PHASE 3	
			TEMPORARY DIVERSION BERM
			SILT FENCE
			STORM DRAIN INLET PROTECTION
			TEMPORARY STONE CONSTRUCTION ENTRANCE
			ROCK CHECK DAMS
			TURF GRASS SEEDING

- NOTES:**
- CONTRACTOR TO SEED (AND MONITOR UNTIL STABILIZED) ALL DISTURBED AREAS OUTSIDE OF LOTS AND R/W.
  - THE SITE DISTURBANCE PLANS INDICATES THE FINAL PLACEMENT OF EROSION CONTROL DEVICES. THE CONTRACTOR(S) MAY PROCEED WITH THE CONSTRUCTION PRIOR TO THE FINAL PLACEMENT OF THESE DEVICES BY PROVIDING ADDITIONAL DEVICES TO CONTROL EROSION ON THEIR ITEMS OF WORK. THESE DEVICES SHALL BE MAINTAINED UNTIL THE FINAL DEVICES ARE IN PLACE.

EROSION CONTROL STAGING CHART				
PROJECT STAGE	EROSION CONTROL BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:
A - PRE-MASS GRADING	A1	CONSTRUCTION ENTRANCE	C	INSTALL PER APWA DETAIL ESC-01
	A2	SILT FENCE	B	INSTALL PER APWA DETAIL ESC-03
	A3	DIVERSION BERM	C	INSTALL PER APWA DETAIL ESC-05
	A4	SEDIMENT TRAPS 1,2,3,4	C	INSTALL PER APWA DETAIL ESC-08
B - INTERIM	B1	SILT FENCE	C	INSTALL PER APWA DETAIL ESC-03
	B2	CURB INLET PROTECTION	D	INSTALL PER APWA DETAIL ESC-06
	B3	AREA INLET PROTECTION	D	INSTALL PER APWA DETAIL ESC-07
	B4	ROCK CHECK DAM	D	INSTALL PER APWA DETAIL ESC-10
	B5	CONCRETE WASHOUT	C	INSTALL PER APWA DETAIL ESC-01
C - DISTURBED AREA STABILIZATION & FINAL STABILIZATION	C1	FILL IN SEDIMENT TRAP 2		
	C2	CONVERT SEDIMENT TRAP 1 TO WATER QUALITY BASIN		
	C3	SEED, SOD, AND STABILIZE ALL DISTURBED AREAS BY REMOVAL OF SEDIMENT TRAPS		

UPON REMOVAL CONTRACTOR TO OVER-EXCAVATE SEDIMENT TRAPS, FULLY REMOVING ALL SILT, AND FILLING IN CONTROLLED LIFTS TO PREVENT VOIDS OR EXCESSIVE SETTLING THAT COULD IMPACT BUILDING FOUNDATIONS.

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SITE DISTURBANCE PLAN - STAGE C  
SITE DISTURBANCE PLANS  
THE RETREAT AT HOOK FARMS  
CONSTRUCTION DOCUMENTS

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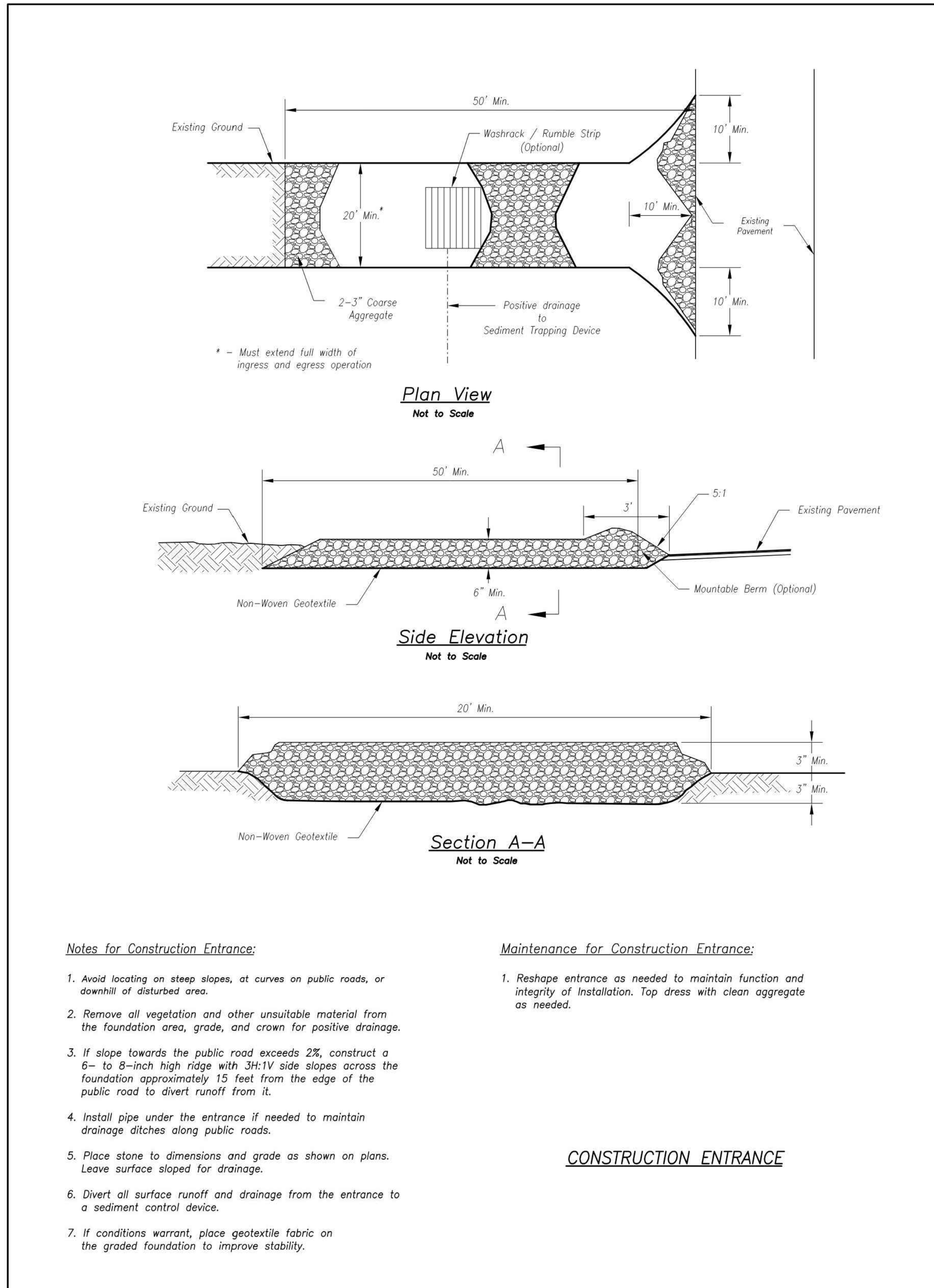
drawn by: EM  
checked by: EM  
designed by: RB  
QA/QC by: NH  
project no.: 019-4059  
drawing no.: C.ERC04\_0194059  
date: 4/20/2020

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SHEET C407



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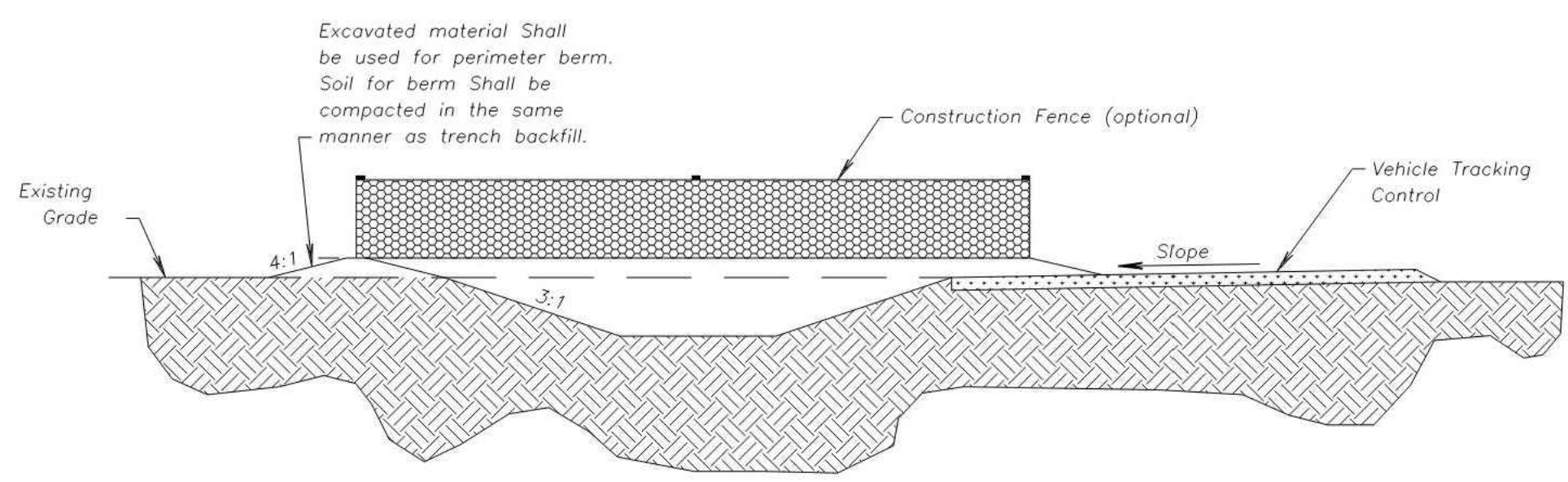
- Notes for Construction Entrance:**
- Avoid locating on steep slopes, at curves on public roads, or downhill of disturbed area.
  - Remove all vegetation and other unsuitable material from the foundation area, grade, and crown for positive drainage.
  - If slope towards the public road exceeds 2%, construct 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.
  - Install pipe under the entrance if needed to maintain drainage ditches along public roads.
  - Place stone to dimensions and grade as shown on plans. Leave surface sloped for drainage.
  - Divert all surface runoff and drainage from the entrance to a sediment control device.
  - If conditions warrant, place geotextile fabric on the graded foundation to improve stability.

- Maintenance for Construction Entrance:**
- Reshape entrance as needed to maintain function and integrity of installation. Top dress with clean aggregate as needed.

**CONSTRUCTION ENTRANCE**

- Notes for Concrete Washout:**
- Concrete washout areas shall be installed prior to any concrete placement on site.
  - Concrete washout area shall include a flat subsurface pit sized relative to the amount of concrete to be placed on site. The slopes leading out of the subsurface pit shall be 3:1. The vehicle tracking pad shall be sloped towards the concrete washout area.
  - Vehicle tracking control is required at the access point to all concrete washout areas.
  - 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.
  - 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:**
- Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
  - Concrete washout areas shall be enlarged as necessary to maintain capacity for wasted concrete.
  - 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.
  - Concrete washout areas shall remain in place until all concrete for the project is placed.
  - 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**

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KANSAS CITY METRO CHAPTER

CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT

STANDARD DRAWING NUMBER ESC-01 ADOPTED: 10/24/2016

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.

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7/17/20  
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 NUMBER  
 PE-2012028697  
 PROFESSIONAL ENGINEER

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SITE DISTURBANCE DETAILS  
 SITE DISTURBANCE PLANS  
 THE RETREAT AT HOOK FARMS  
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2020

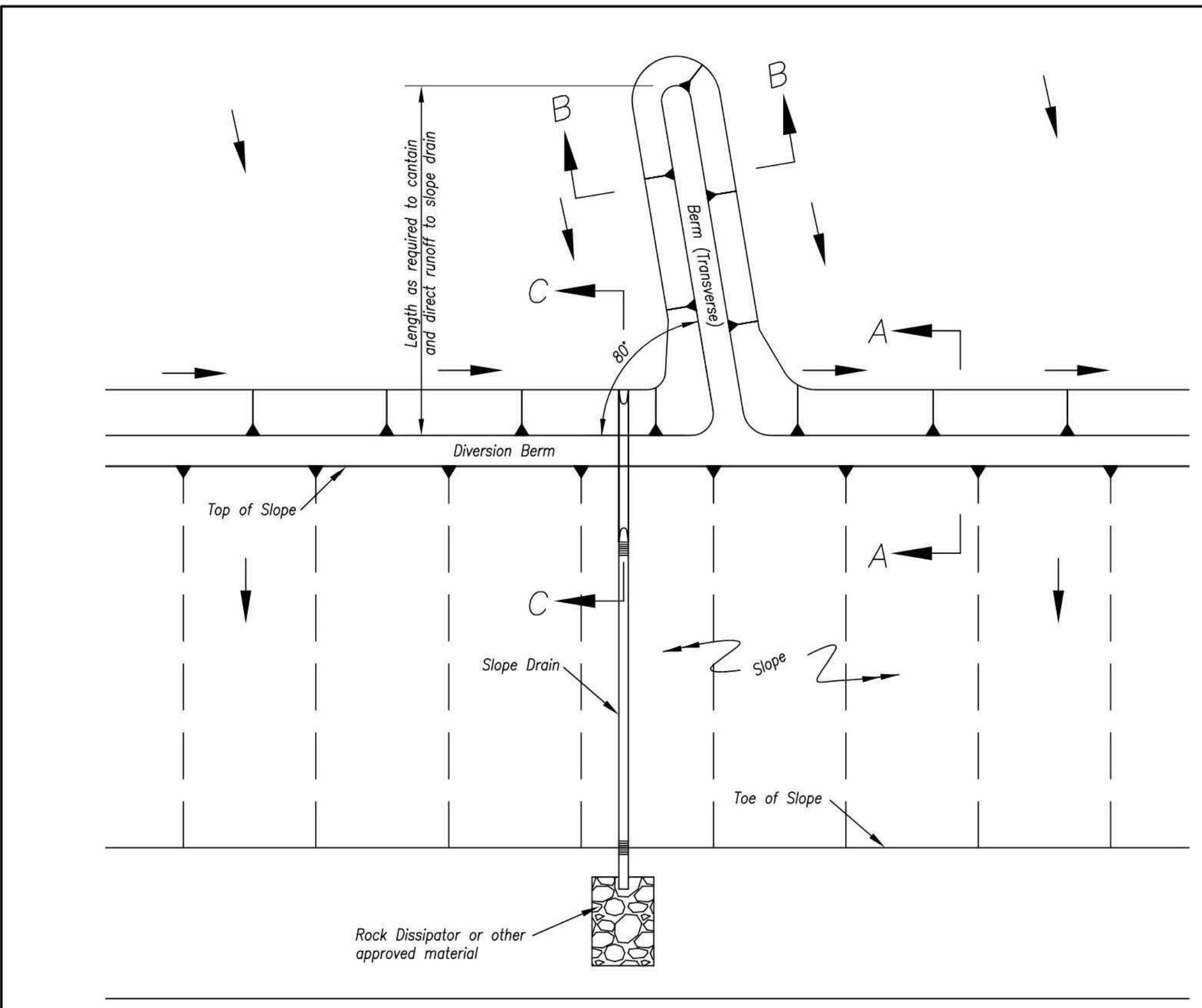
LEES SUMMIT, MO

REVISIONS

drawn by: EM  
 checked by: EM  
 designed by: RB  
 QA/QC by: NH  
 project no.: 019-4059  
 drawing no.: C\_DTL00\_0194059  
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SHEET C408

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TYPICAL PLAN VIEW OF DIVERSION BERM AND SLOPE DRAIN

Notes for Diversion Berm:

- Slope drains are optional, but may be required by the engineer if the berm is at the top of a steep slope.
- Diversion berms must be installed as a first step in the land-disturbing activity and must be functional prior to upslope land disturbance.
- The berm should be adequately compacted to prevent failure.
- Temporary or permanent seeding and mulch shall be applied to the berm immediately following its construction.
- Place the berm so to minimize damages by construction operations and traffic.
- The berm must discharge to a temporary sediment trap or stabilized area.
- All trees, brush, stumps, obstructions and other objectionable material shall be removed and disposed of so as not to interfere with the proper functioning of diversion.
- The diversion shall be excavated or shaped to line, grade and cross-section as required to meet the criteria specified herein, free of irregularities which will impede flow.
- Fills shall be compacted as needed to prevent unequal settlement that would cause damage in the completed diversion. Fill shall be composed of soil which is free from excessive organic debris, rocks or other objectionable materials.

Maintenance:

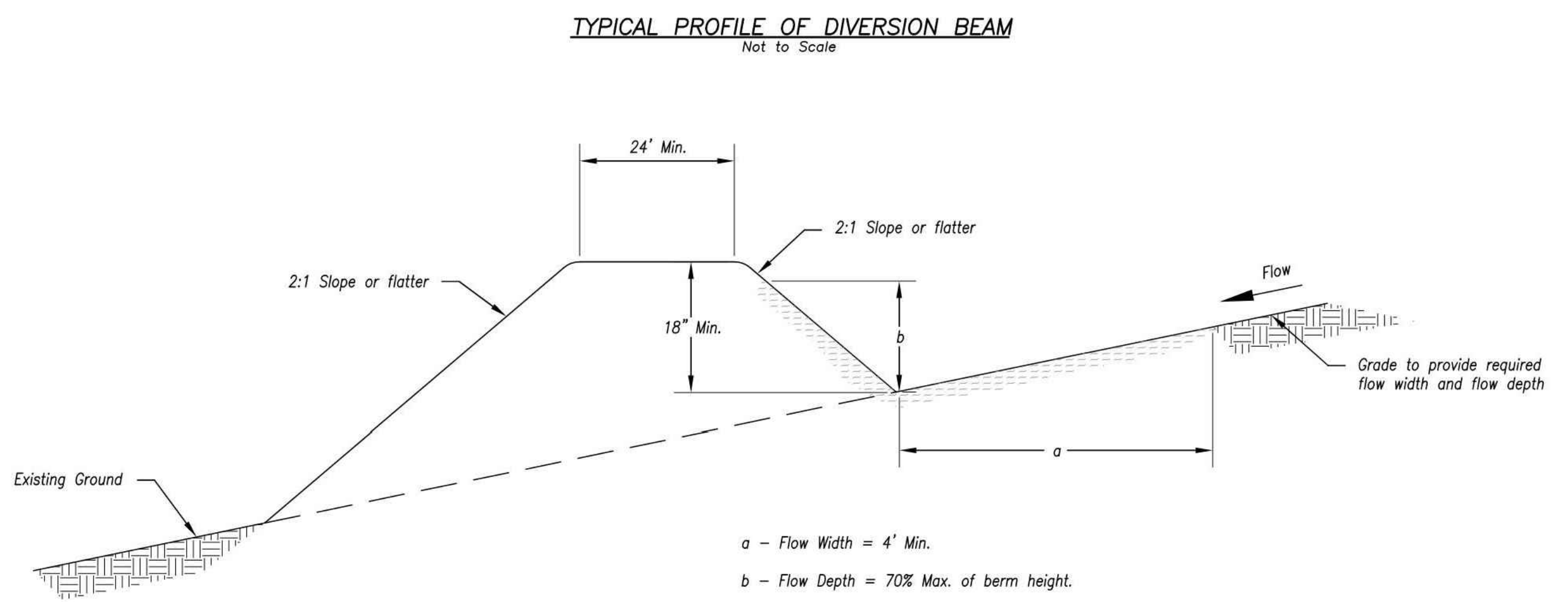
- Berm shall be reshaped, compacted, and stabilized as necessary to maintain its function.
- Breaches in the berm shall be repaired immediately.

Notes for Slope Drain:

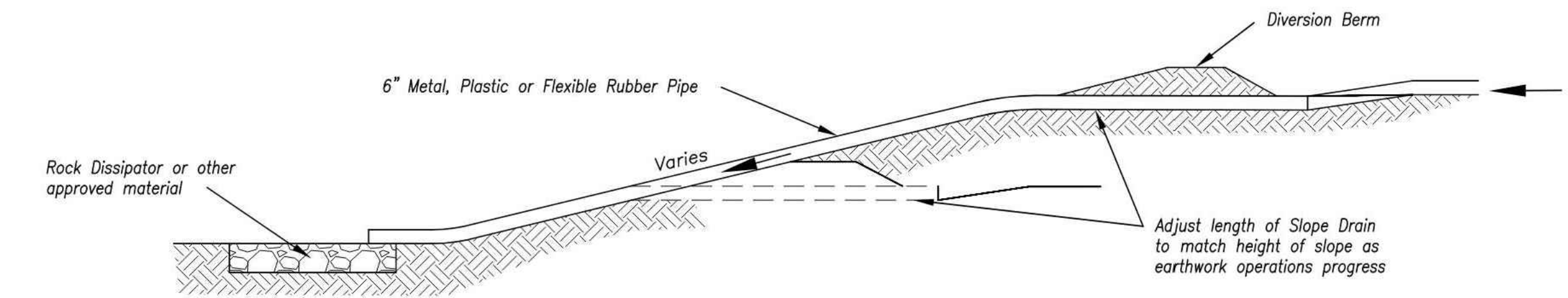
- Slope Drain and Diversion Berm may be used on either project foreslopes or project backslopes.
- Discharge of Slope Drains shall be into stabilized ditch or area, or into Sediment Basin.
- Pipe shall be secured in place as approved by Engineer.

Maintenance:

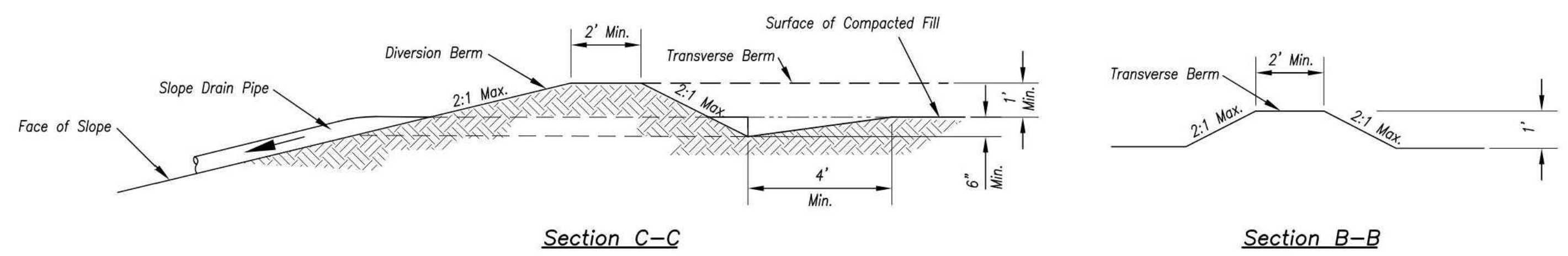
- Accumulation of any visible sediment at the inlet and outlet shall be removed promptly.
- Outlet conditions shall be repaired if scour is observed. Leaking or damaged section of pipe shall be repaired immediately.
- Barriers directing water to the inlet shall be monitored for continuity and effectiveness.



TYPICAL PROFILE OF DIVERSION BEAM



TYPICAL PROFILE OF DIVERSION BERM



TYPICAL PROFILE OF DIVERSION BERM WITH SLOPE DRAIN

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 Kansas City Metro Chapter  
 KANSAS CITY METRO CHAPTER

DIVERSION BERMS AND SLOPE DRAINS  
 STANDARD DRAWING NUMBER ESC-05  
 ADOPTED: 10/24/2016

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

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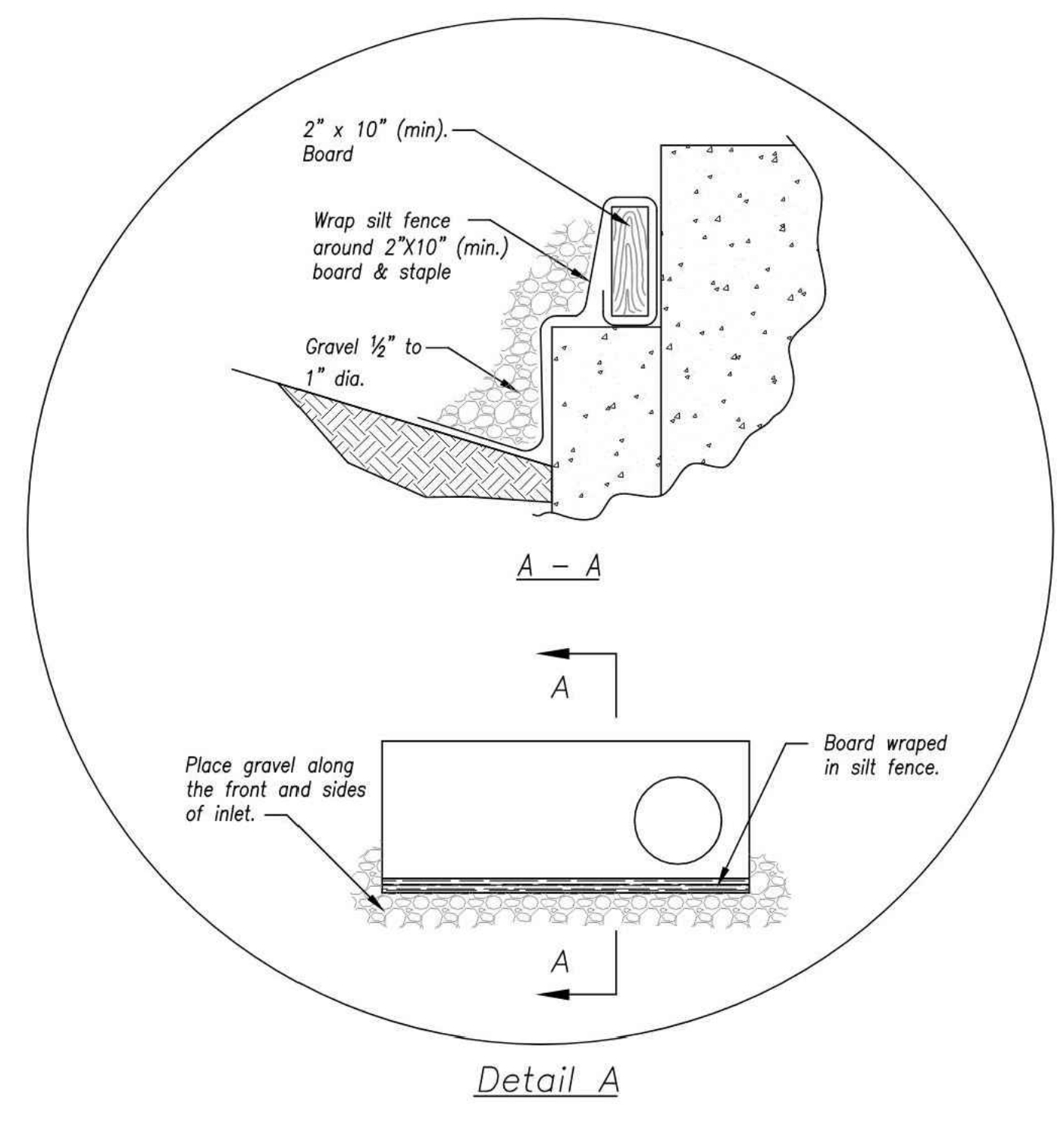
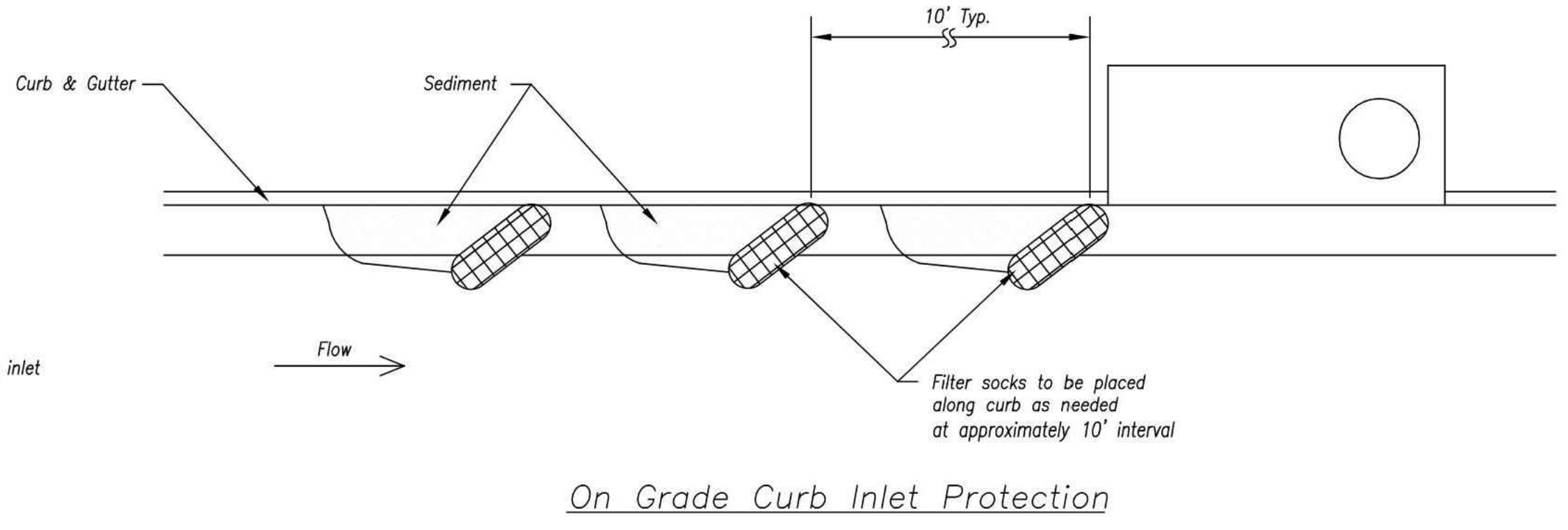
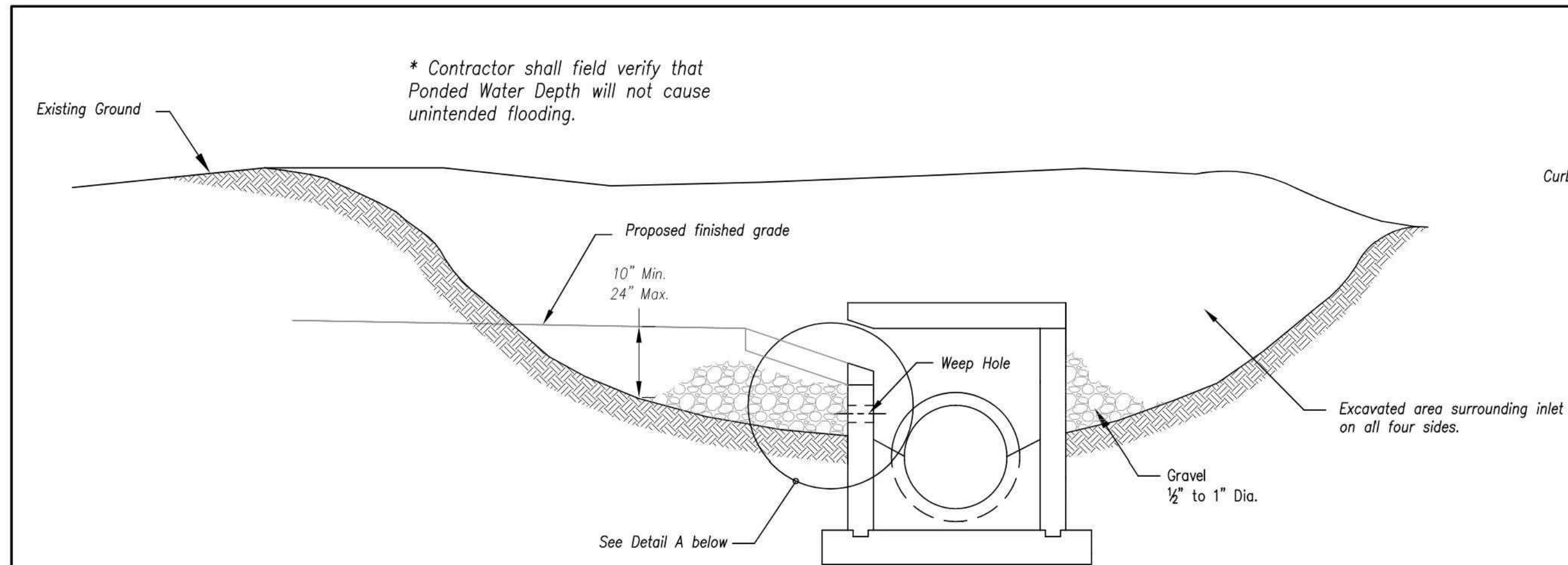
7/17/20  
 MEGAN J. WALTER  
 NUMBER  
 PE-2012028697  
 Professional Engineer

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SITE DISTURBANCE DETAILS  
 SITE DISTURBANCE PLANS  
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 2020  
 LEE'S SUMMIT, MO

drawn by:	EM
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designed by:	RB
QA/QC by:	NH
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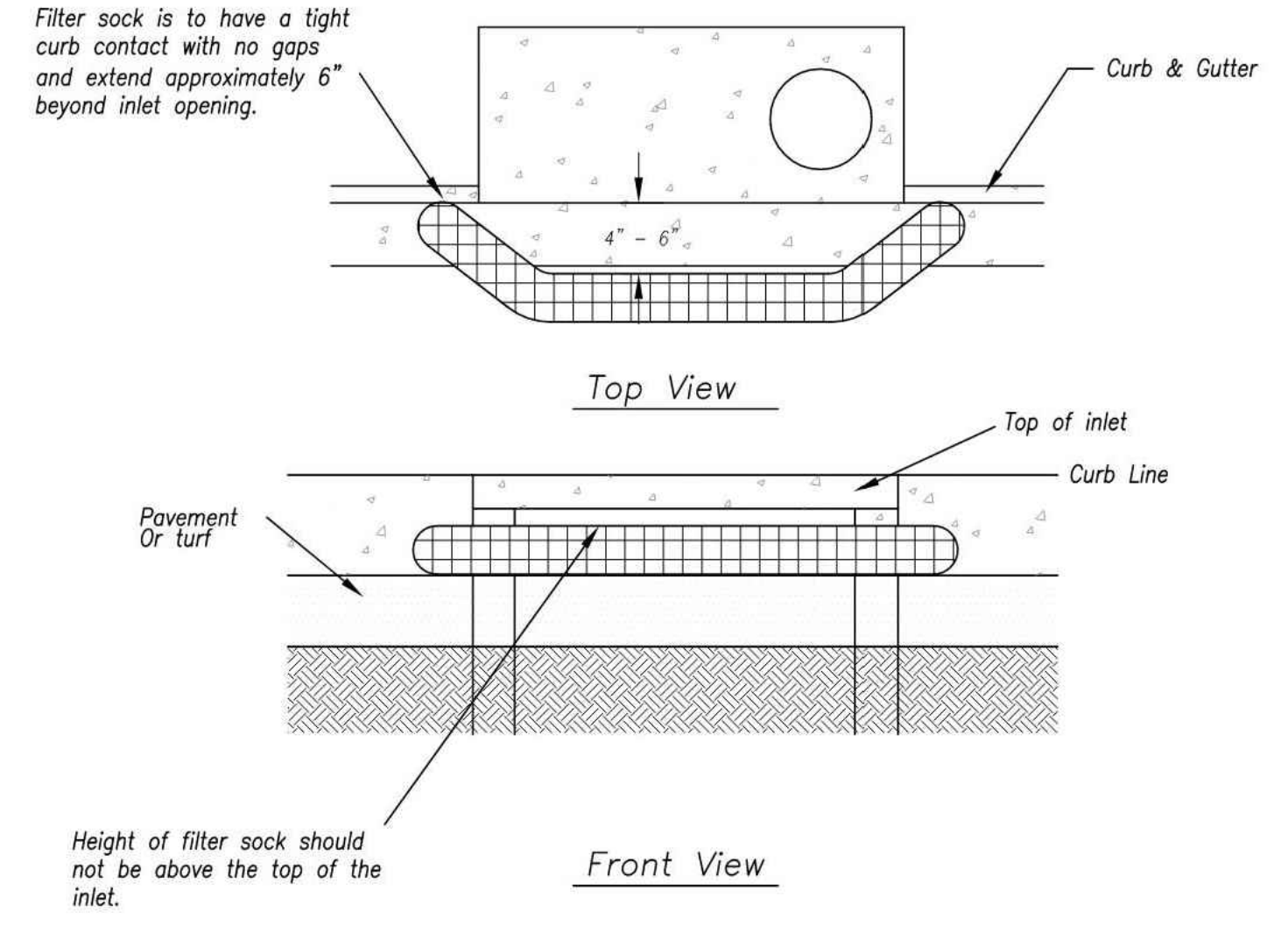
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EARLY STAGE CURB INLET  
 (Open Box and Prior to Pouring Curb and Inlet Throat)

- 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 setting 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). Straw wattles 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.



Sump Inlet Sediment Filter

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

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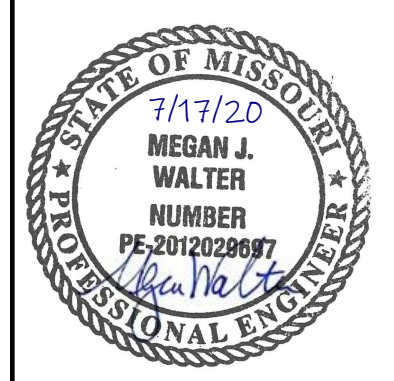
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CURB INLET PROTECTION

STANDARD DRAWING NUMBER ESC-06 ADOPTED: 10/24/2016

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



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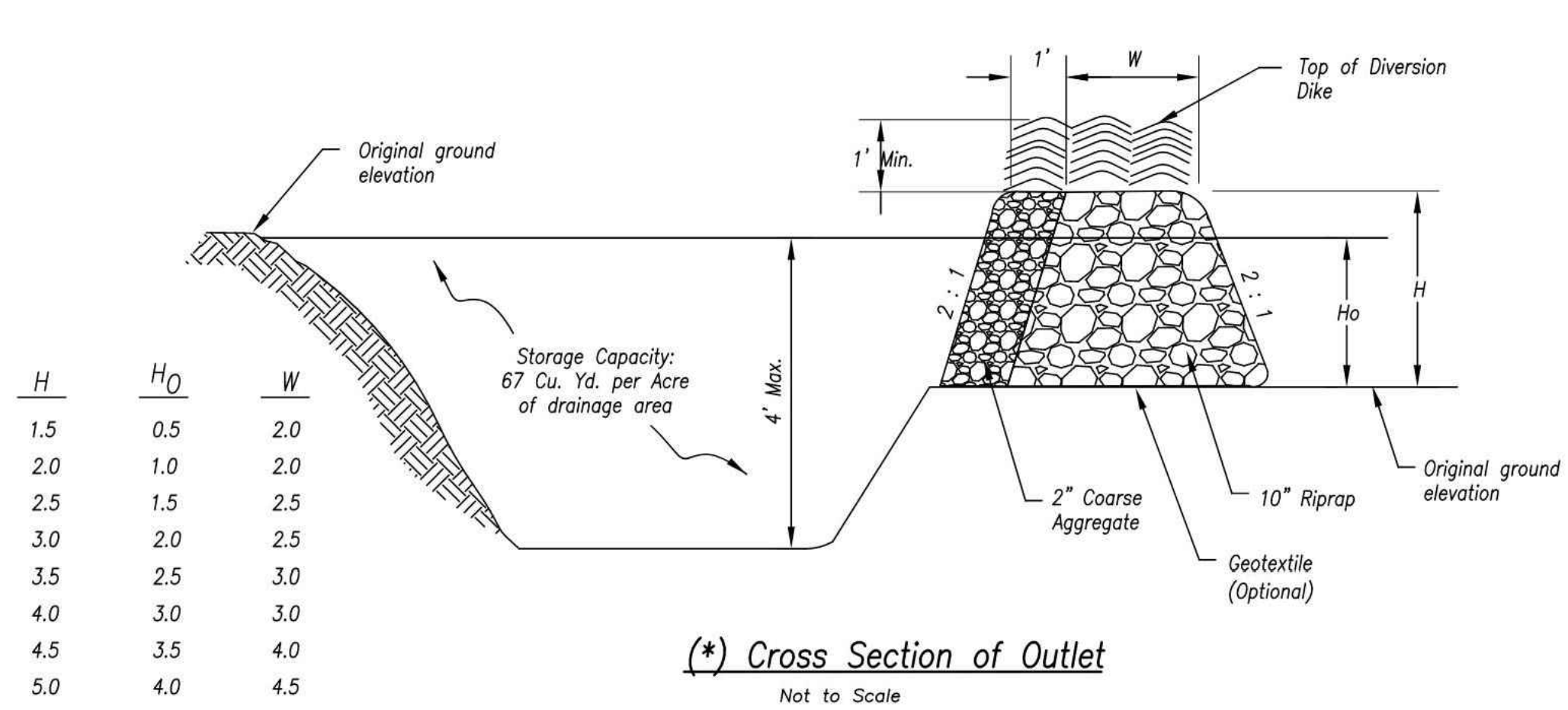
SITE DISTURBANCE DETAILS  
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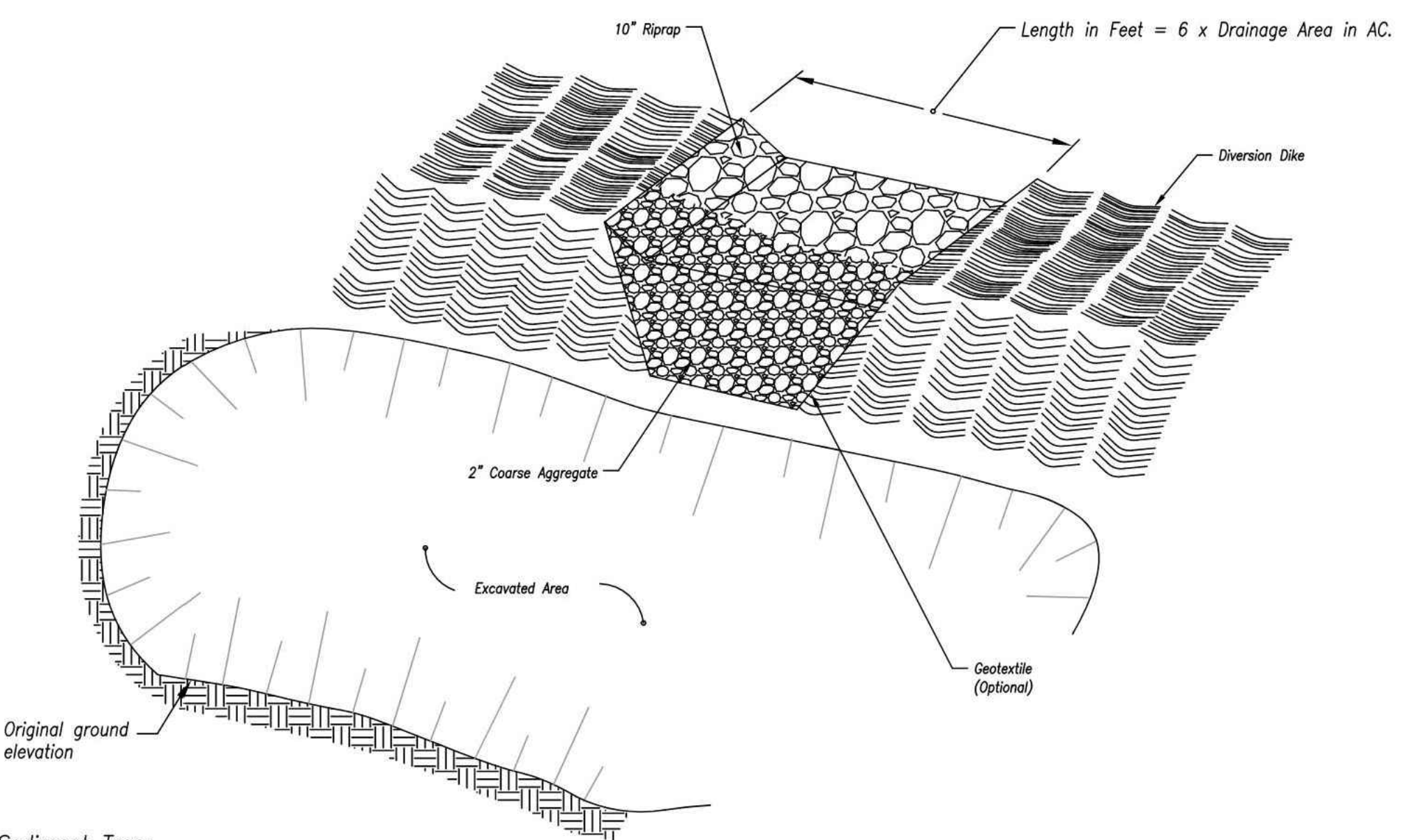
LEE'S SUMMIT, MO

drawn by: EM  
 checked by: EM  
 designed by: RB  
 QA/QC by: NH  
 project no.: 019-4059  
 drawing no.: C\_DTL00\_0194059  
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(\* Cross Section of Outlet  
Not to Scale



(\* Perspective View of Outlet  
Not to Scale

Notes for Sediment Trap:

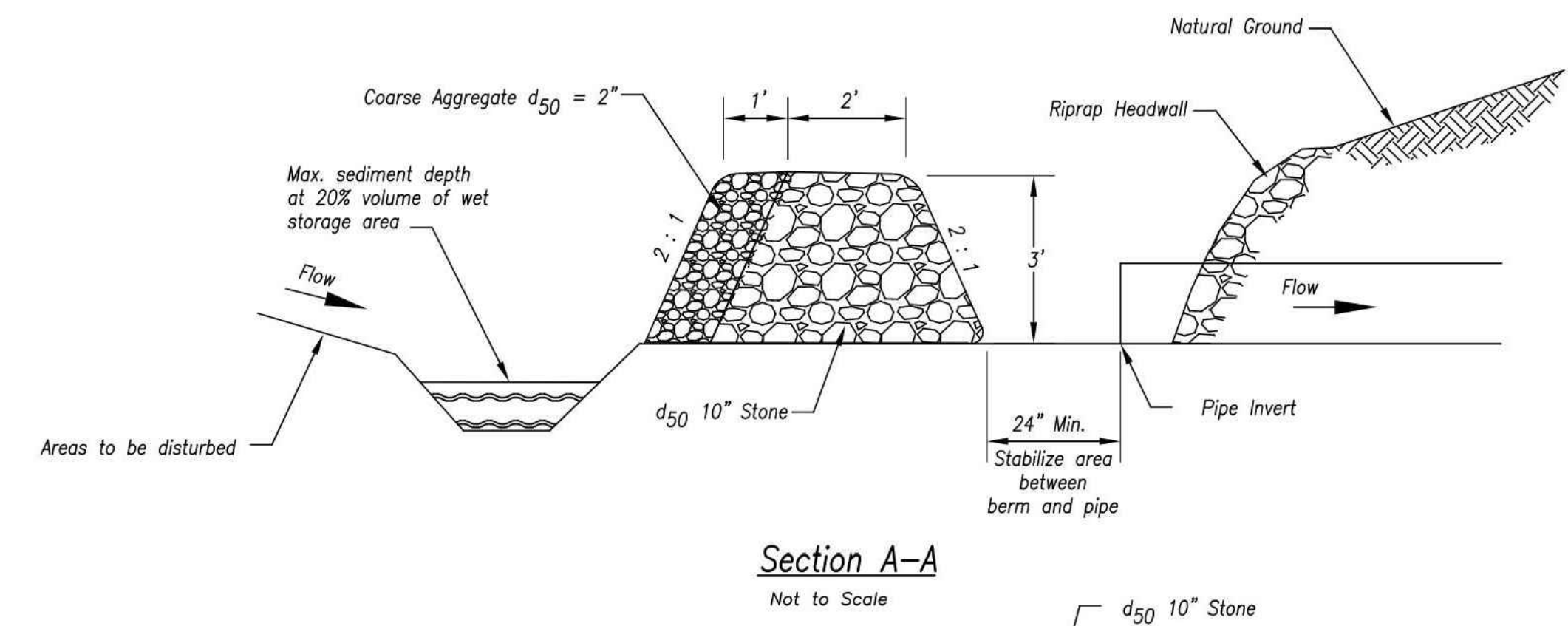
- The area under the embankment shall be cleared, grubbed, and stripped of any vegetation and root mat.
- Fill material for the embankment shall be free of roots or other woody vegetation, organic material, large stones, and other objectionable material. The embankment should be compacted in 6-inch layers by traversing with construction equipment.
- The earthen embankment shall be stabilized immediately after installation.
- Construction operations shall be carried out to minimize erosion and water pollution.
- The structure shall be removed and the area stabilized when the upslope drainage area has been stabilized.
- 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 grade.

SEDIMENT TRAP

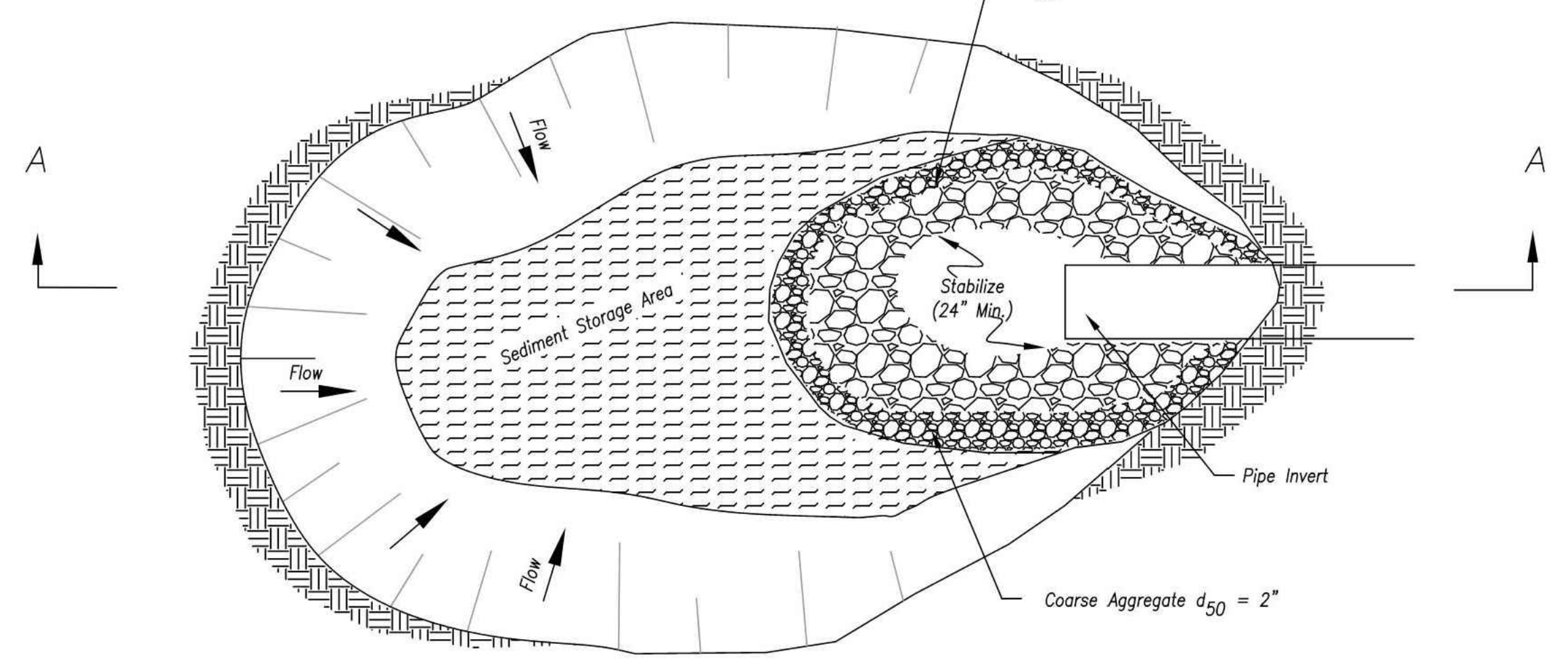
(\* - The perspective view and cross section are schematic in nature. Construction plans must provide specific site construction arrangements.

Maintenance for Sediment Trap:

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



Section A-A  
Not to Scale



Plan View  
Not to Scale

Notes for Sediment Trap at Culvert Opening:

- 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.
- 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.
- Geometry of the design will be a horseshoe shape around the culvert inlet.
- 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.
- Storage requirements equivalent to that of temporary sediment trap.
- 67 C.Y./Acre wet storage below base of stone.
- 67 C.Y./Acre dry storage from base of stone to top of stone berm.

SEDIMENT TRAP AT CULVERT OPENING

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

Maintenance for Sediment Trap at Culvert Opening:

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

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 STANDARD DRAWING  
 NUMBER ESC-08  
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SEDIMENT TRAPS

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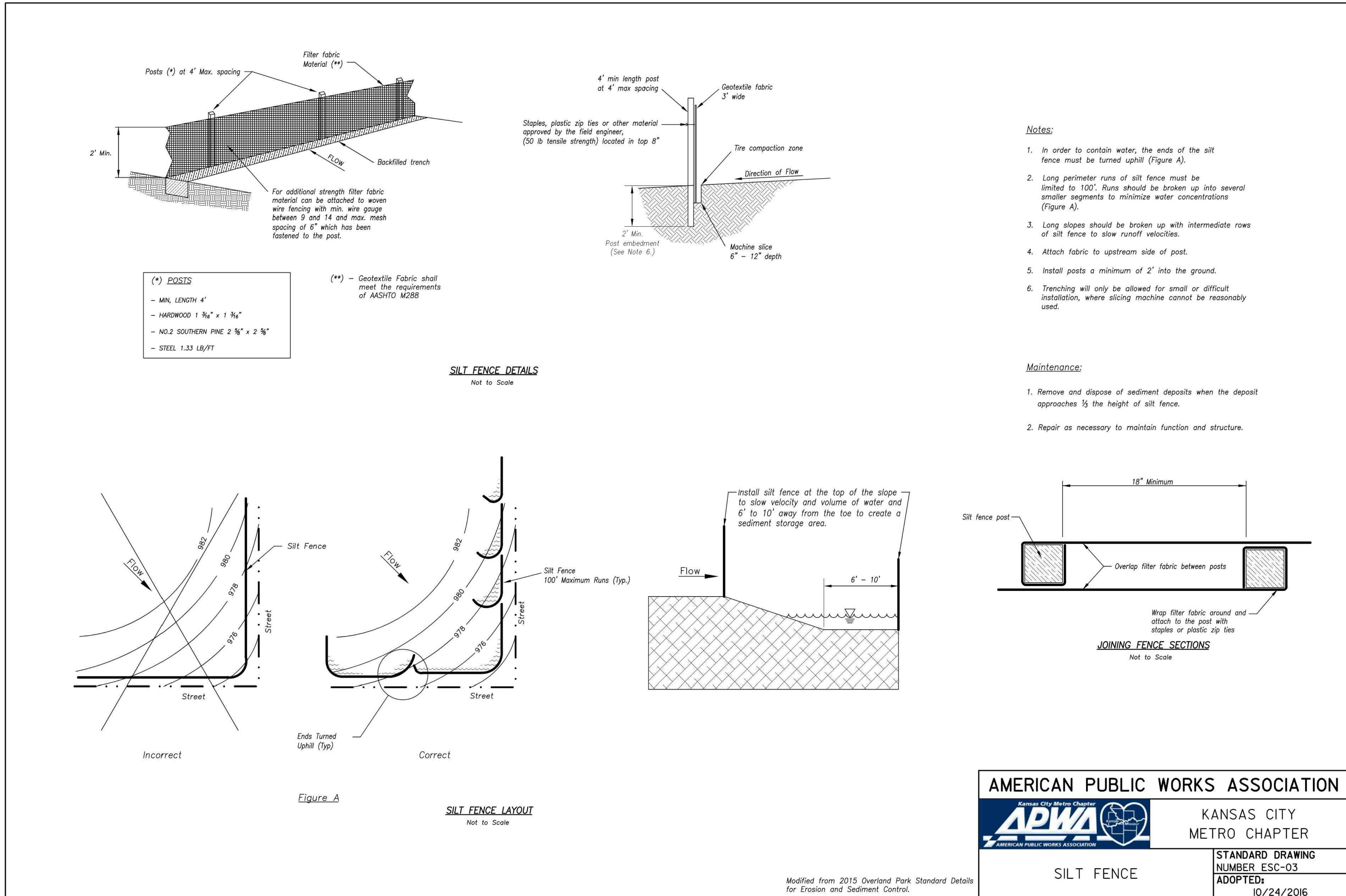
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 MEGAN J. WALTER  
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 PE-2012028687  
 Professional Engineer

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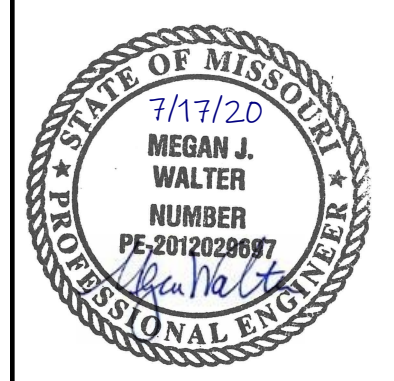
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**SILT FENCE**

STANDARD DRAWING  
NUMBER ESC-03  
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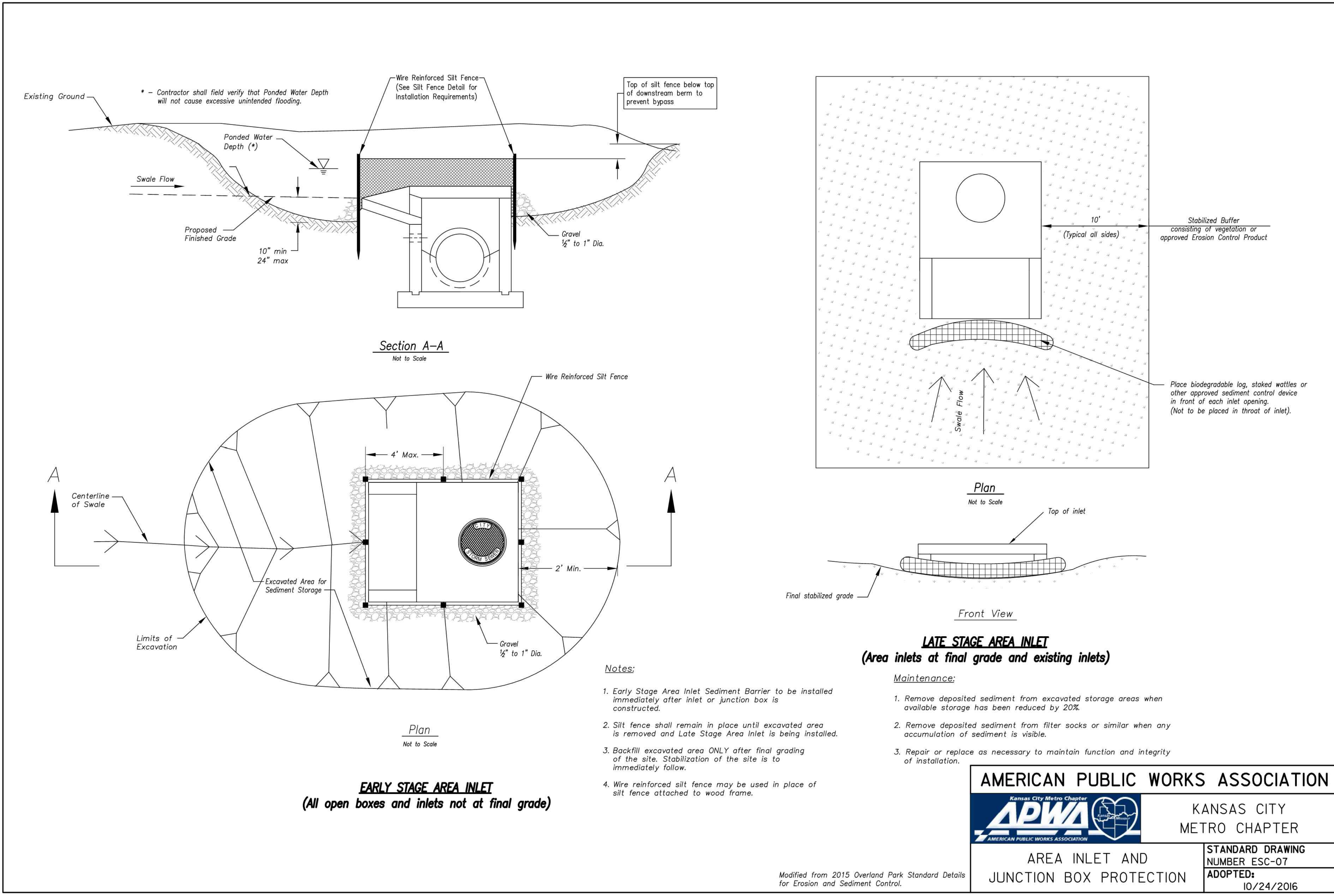
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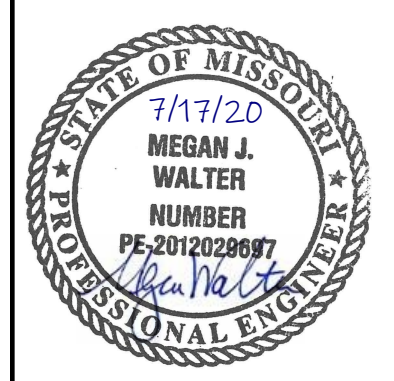
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**ADOPTED:**  
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**AREA INLET AND JUNCTION BOX PROTECTION**

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