

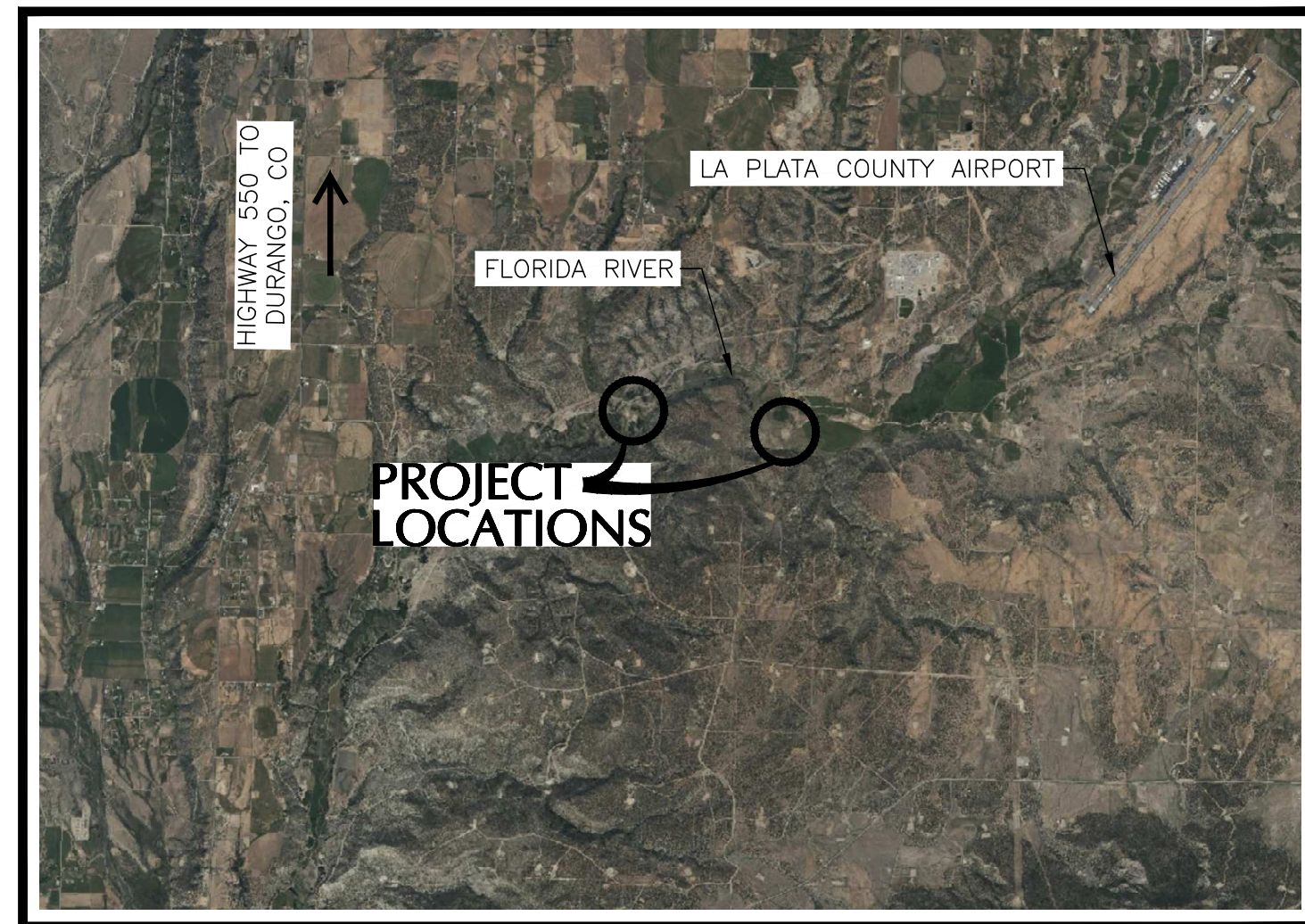
INTERIM STORMWATER MANAGEMENT PLAN (SWMP) FOR WELL LOCATION 325172 & 312051 LOGOS RESOURCES, LLC & SIMCOE, LLC

LA PLATA COUNTY, COLORADO

GENERAL NOTES

- PROJECT RESTORATION LIMITS SHOWN ON THESE PLANS ARE APPROXIMATE. BEST MANAGEMENT PRACTICES (BMPs) ARE SHOWN AS GRAPHICAL SYMBOLS AND DO NOT REPRESENT ACTUAL SIZE AND SHAPE OF BMP WHEN APPLICABLE.
- INTERIM SWMP PROJECT RESTORATION LIMITS FOR LOCATION ID 325172 (LOGOS RESOURCES, LLC WELL API #067-05515) ARE SHOWN ON SHEET C3 – INTERIM SWMP FOR WELL LOCATION ID 325172.
- INTERIM SWMP PROJECT RESTORATION LIMITS FOR LOCATION ID 312051 (LOGOS RESOURCES, LLC WELL API #067-08138 & SIMCOE, LLC WELL API #067-08731) ARE SHOWN ON SHEET C4 – INTERIM SWMP FOR WELL LOCATION ID 312051.
- WORK WILL CONSIST OF INSTALLING BMPs AS SHOWN ON THESE PLANS TO PROVIDE INTERIM STABILIZATION OF THE WELL PADS. WORK ASSOCIATED WITH INTERIM SWMP FOR WELL LOCATION ID 325172 INCLUDES THE INSTALLATION OF A LOW-WATER CROSSING, REINSTALLATION OF AN EXISTING STEEL CONTAINMENT RING AND ASSOCIATED APPURTENANCES AROUND PRODUCED WATER STORAGE TANK, DRAINAGE SWALE, AND REVEGETATION. WORK ASSOCIATED WITH INTERIM SWMP FOR WELL LOCATION ID 312051 INCLUDES RIPRAP INSTALLATION ALONG THE PERIMETER OF THE PAD, DRAINAGE SWALES, OVERFLOW CHANNEL IMPROVEMENTS, AND REVEGETATION.
- LOCATION OF STAGING AREAS SHALL BE COORDINATED WITH LOGOS RESOURCES AND THEIR SUBCONTRACTORS. LOCATION MAY BE MODIFIED IN THE FIELD IF WARRANTED AND REDLINED ON THESE PLANS.
- ANY SOIL STOCKPILED ON-SITE SHALL BE IN ACCORDANCE WITH DETAIL MM-2 STOCKPILE MANAGEMENT FROM VOLUME 3, CHAPTER 7 OF THE MILE HIGH FLOOD DISTRICT (MHFD) URBAN STORM DRAINAGE CRITERIA MANUAL (USDCM). CONTRACTOR SHALL REDLINE THE STOCKPILE LOCATION ON THESE PLANS IF USED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR:
 - OBTAINING AND ADHERING TO, AT HIS OWN EXPENSE, ALL PERMITS OR LICENSES WHICH ARE NECESSARY TO PERFORM THE PROPOSED WORK, INITIATE PERMIT APPLICATIONS THROUGH THE COUNTY OF LA PLATA.
 - IN CASE OF AN EMERGENCY AFTER WORKING HOURS, CONTACT THE OWNER'S REPRESENTATIVE.
 - PROPER NOTIFICATION OF ALL NECESSARY AGENCIES PRIOR TO THE COMMENCEMENT OF WORK.
 - PROJECT SAFETY
 - JOB SITE CONDITIONS AT ALL TIMES.
 - TRAFFIC CONTROL.
 - PROPER NOTIFICATION OF ALL NECESSARY AGENCIES FOR REQUIRED INSPECTIONS.
 - CONSTRUCTION DEWATERING
- THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE AT LEAST 48 HOURS PRIOR TO THE START OF WORK. ALL WORK SHALL BE INSPECTED AND APPROVED BY THE OWNER'S REPRESENTATIVE.
- THE CONTRACTOR SHALL CONTACT ALL APPROPRIATE UTILITY COMPANIES AND OWNER'S REPRESENTATIVE PRIOR TO THE BEGINNING OF ANY WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION (INCLUDING DEPTHS) OF ANY EXISTING UTILITIES. ALL EXISTING UTILITIES SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR. DAMAGED UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S OWN EXPENSE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROL OF SURFACE WATER, STORMWATER, AND GROUNDWATER THROUGHOUT THE DURATION OF THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE EROSION AND SEDIMENT CONTROL PERMIT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ANY GROUNDWATER ENCOUNTERED DURING THE WORK ASSOCIATED WITH ANY PORTION OF THIS PROJECT AND OBTAINING A CONSTRUCTION DEWATERING PERMIT IF APPLICABLE. GROUNDWATER SHALL BE PUMPED, PIPED, REMOVED, AND DISPOSED OF IN A MANNER WHICH DOES NOT CAUSE FLOODING OF EXISTING STREETS NOR EROSION ON ABUTTING PROPERTIES IN ORDER TO CONSTRUCT THE IMPROVEMENTS SHOWN ON THESE PLANS. ANY UNSTABLE AREAS, AS A RESULT OF GROUNDWATER, ENCOUNTERED DURING THE INSTALLATION OF THE PROPOSED IMPROVEMENTS SHALL BE STABILIZED AS AGREED UPON BY THE CONTRACTOR, AND THE DESIGN ENGINEER AT THE TIME OF THEIR OCCURRENCE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING ALL SURFACES AND RELATED STRUCTURES TO ORIGINAL CONDITIONS (OR BETTER) AND GRADES UNLESS DESIGNATED OTHERWISE ON THE DRAWINGS.
- THE CONTRACTOR SHALL HAVE IN HIS POSSESSION AT ALL TIMES ONE (1) SIGNED COPY OF THE PLANS.
- CONTACT THE ENGINEER PRIOR TO PLAN MODIFICATION WHERE DISCREPANCIES BETWEEN THE PLANS AND FIELD CONDITIONS EXIST.
- SURVEY DATA PROVIDED TO WRIGHT WATER ENGINEERS ON FEBRUARY 8, 2022 BY IKAV ENERGY, INC. ORIGINAL SURVEY COMPLETED IN JUNE 2016.

PROJECT LOCATION



6000 0 6000 12000 FT

MAP SOURCE: © 2022 MICROSOFT CORPORATION © 2022 MAXAR © CNES (2022) DISTRIBUTION AIRBUS DS

CONTACTS

WELL OWNER (API #067-05515 & API #067-08138):
LOGOS RESOURCES, LLC
2010 AFTON PLACE
FARMINGTON, NM 87401
CONTACT: MARCIA BRUEGGENJOHANN
505-787-2220 (OFFICE)

WELL OWNER (API #067-08731):
IKAV ENERGY, INC.
1199 MAIN AVE.
SUITE #101
DURANGO, CO 81301
CONTACT: JULIE BEST
970-394-0131 (OFFICE)

ENGINEER:
WRIGHT WATER ENGINEERS, INC.
1666 N. MAIN AVE.
SUITE C
DURANGO, CO 81301
CONTACT: HAYES LENHART, P.E.
970-259-7411 (OFFICE)

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C5	SWMP DETAILS
C6	SWMP DETAILS
C7	LOW WATER CROSSING DETAIL

SWMP LEGEND

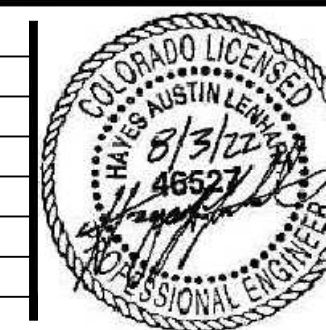
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→			STORMWATER FLOW DIRECTION ARROW
---			LIMITS OF INTERIM RECLAMATION
---			STABILIZED STAGING AREA
---			CHECK DAM
---			EROSION CONTROL BLANKET
---			SEED AND MULCH
---			SEDIMENT CONTROL LOG
---			EXISTING STORM PIPE
---			DITCH CENTERLINE
---			INFILTRATION AREA
---			RIPRAP

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INTERIM SWMP FOR WELL LOCATION ID 325172 & 312051
LOGOS RESOURCES, LLC & SIMCOE, LLC

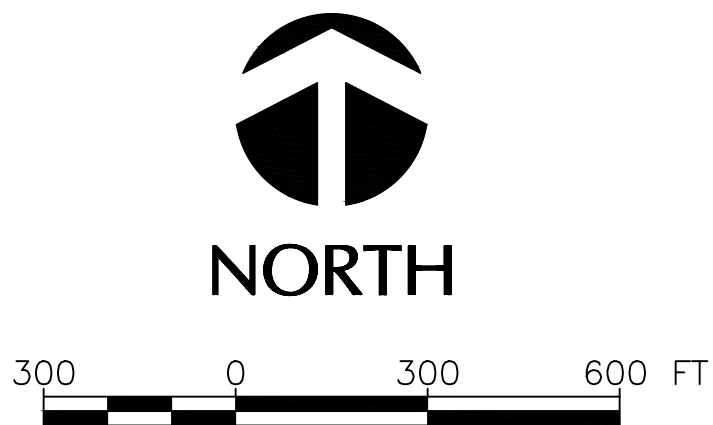
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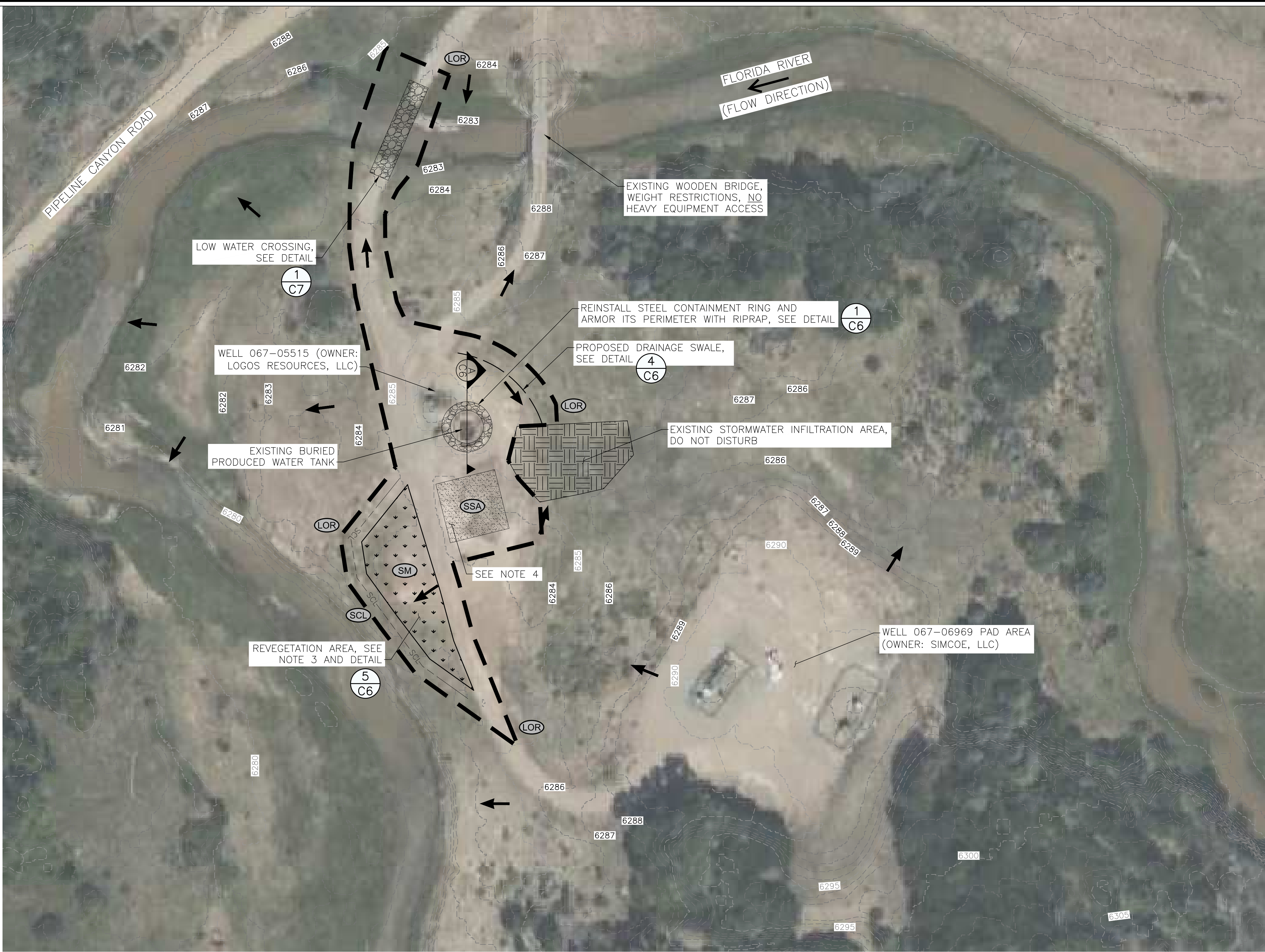


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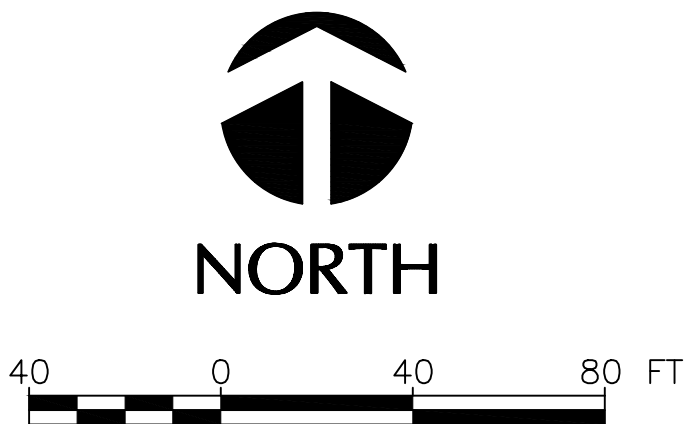
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- NOTES:
1. SEE SHEET C1 FOR GENERAL SWMP NOTES AND SWMP LEGEND.
 2. SEE DETAIL SHEETS C5 - C7 FOR BEST MANAGEMENT PRACTICES (BMPs) IDENTIFIED ON THIS PLAN.
 3. AREAS THAT ARE TO BE REVEGETATED SHALL HAVE SOIL AMENDMENT APPLIED FIRST. SEE DETAIL SHEETS FOR MORE INFORMATION.
 4. GRAVEL FOR STABILIZED STAGING AREA (SSA) TO REMAIN IN PLACE AFTER WORK IS COMPLETE. PERIMETER CONTROLS ASSOCIATED WITH SSA TO BE REMOVED ONCE SSA IS NO LONGER IN USE. SEE DETAIL 2 ON SHEET C5 FOR MORE INFORMATION.
 5. BASED ON FIELD CONDITIONS ENCOUNTERED, FINAL LOCATIONS AND/OR LIMITS OF BMPs MAY BE ADJUSTED WITH PRIOR WRITTEN ACCEPTANCE OF DESIGN ENGINEER AND OWNER. CONTRACTOR SHALL KEEP A REDLINED SET OF PLANS TO INDICATE ANY CHANGES TO LOCATIONS AND/OR LIMITS OF BMPs.

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**INTERIM SWMP FOR WELL LOCATION ID 325172 & 312051
LOGOS RESOURCES, LLC & SIMCOE, LLC**

INTERIM SWMP FOR WELL LOCATION ID 325172

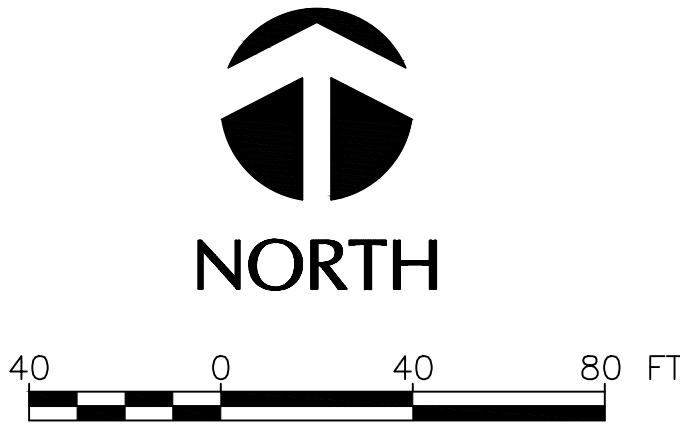
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- NOTES:
1. SEE SHEET C1 FOR GENERAL SWMP NOTES AND SWMP LEGEND.
 2. SEE DETAIL SHEETS C5 - C7 FOR ALL BEST MANAGEMENT PRACTICES (BMP) IDENTIFIED ON THIS PLAN.
 3. AREAS THAT ARE TO BE REVEGETATED SHALL HAVE SOIL AMENDMENT APPLIED FIRST. SEE DETAIL SHEETS FOR MORE INFORMATION.
 4. EXISTING OVERFLOW CHANNEL TO BE STABILIZED AS SHOWN ON THIS PLAN. CHANNEL STABILIZATION TO CONSIST OF THE FOLLOWING ITEMS: 1) SOIL AMENDMENT, 2) RESEEDING, 3) EROSION CONTROL BLANKET, AND 4) INSTALLATION OF CHECK DAMS. ALL ITEMS SHALL BE IN ACCORDANCE WITH THEIR RESPECTIVE DETAILS AS INDICATED ON THE PLAN.
 5. EROSION CONTROL BLANKET SHOWN ON THESE PLANS SHALL BE ROLLMAX BIONET C700BN OR APPROVED EQUAL AND UTILIZE THE "LOW FLOW CHANNEL" STAKING METHOD. SEE DETAILS ON SHEET C5 AND CHAPTER 7 OF VOLUME 3 OF THE MILE HIGH FLOOD DISTRICT (MHFD) URBAN STORM DRAINAGE CRITERIA MANUAL (USDCM) FOR MORE INFORMATION.
 6. GRAVEL FOR STABILIZED STAGING AREA (SSA) TO REMAIN IN PLACE AFTER WORK IS COMPLETE. PERIMETER CONTROLS ASSOCIATED WITH SSA TO BE REMOVED ONCE SSA IS NO LONGER IN USE. SEE DETAIL 2 ON SHEET C5 FOR MORE INFORMATION.
 7. BASED ON FIELD CONDITIONS ENCOUNTERED, FINAL LOCATIONS AND/OR LIMITS OF BMPs MAY BE ADJUSTED WITH PRIOR WRITTEN ACCEPTANCE OF DESIGN ENGINEER AND OWNER. CONTRACTOR SHALL KEEP A REDLINED SET OF PLANS TO INDICATE ANY CHANGES TO LOCATIONS AND/OR LIMITS OF BMPs.
 8. OFFSITE STORMWATER FLOWS ARE DIVERTED AWAY FROM SITE VIA EXISTING SWALE AND CULVERT.
 9. LOCATION WILL BE PROTECTED FROM DEGRADATION BY INSTALLATION AND ONGOING MAINTENANCE OF BMPs SHOWN ON THIS PLAN.

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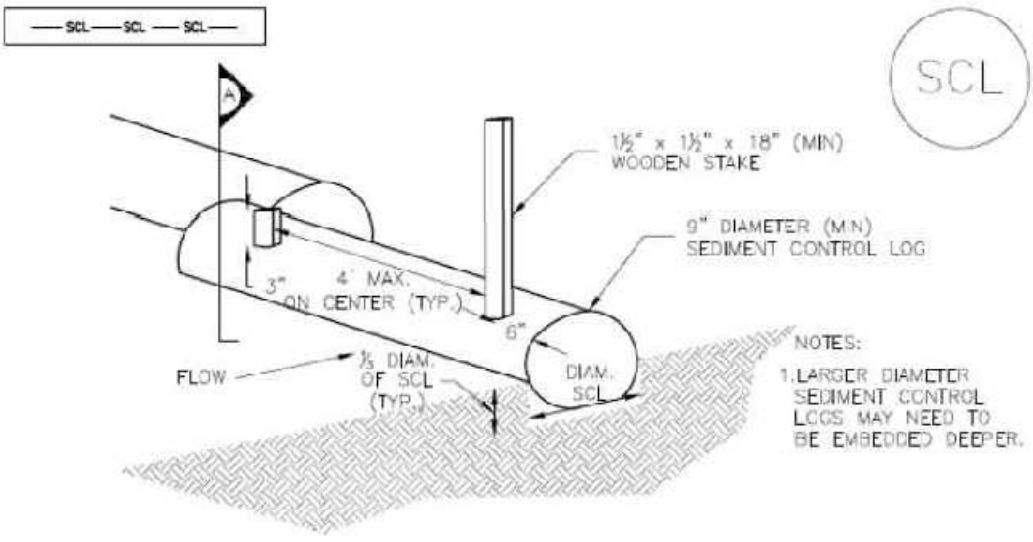


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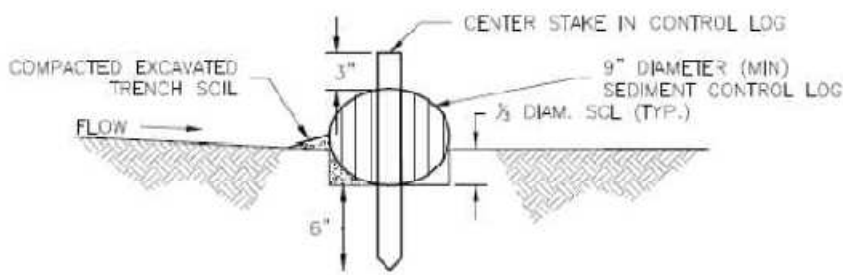
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LOGOS RESOURCES, LLC & SIMCOE, LLC

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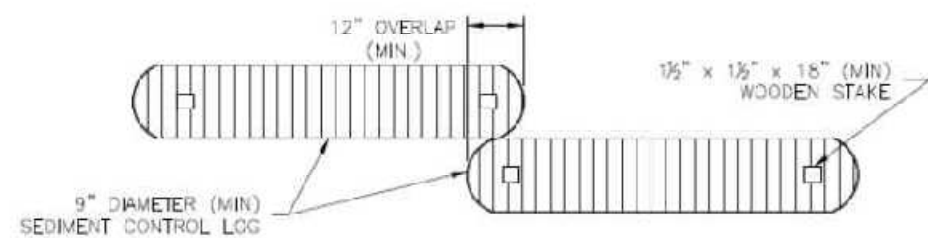
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TRENCHED SEDIMENT CONTROL LOG



SECTION A
TRENCHED SEDIMENT CONTROL LOG



LOG JOINTS

SC-1. TRENCHED SEDIMENT CONTROL LOG

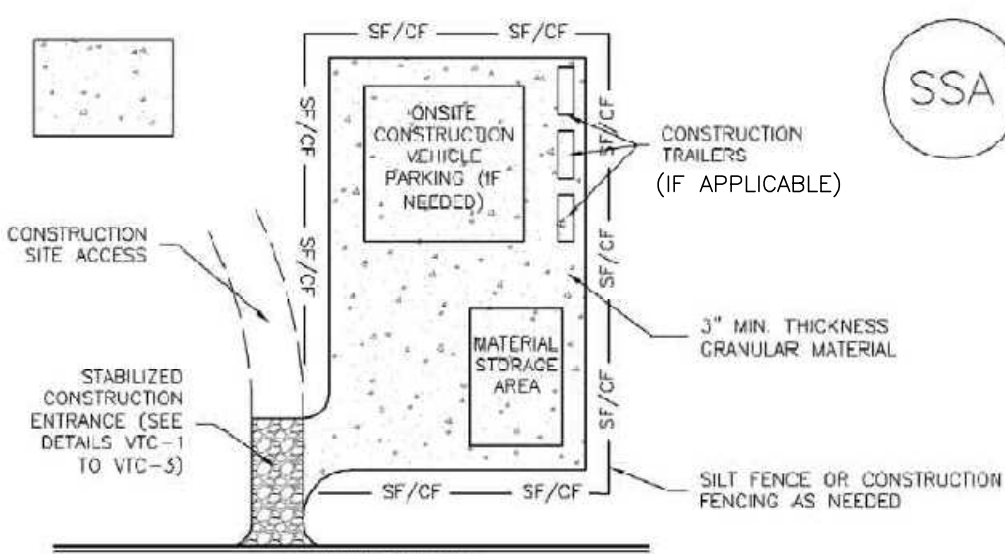
SEDIMENT CONTROL LOG INSTALLATION NOTES

1. SEE PLAN VIEW FOR LOCATION AND LENGTH OF SEDIMENT CONTROL LOGS.
2. SEDIMENT CONTROL LOGS THAT ACT AS A PERIMETER CONTROL SHALL BE INSTALLED PRIOR TO ANY UPGRADE/GRADING/ACTIVITIES.
3. SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR OR COCONUT FIBER (AND SHALL BE FREE OF ANY NOXIOUS WEED SEEDS OR DEFECTS INCLUDING RIPS, HOLES AND OBVIOUS WEAR).
4. SEDIMENT CONTROL LOGS MAY BE USED AS SMALL CHECK DAMS IN DITCHES AND SWALES. HOWEVER, THEY SHOULD NOT BE USED IN PERENNIAL STREAMS.
5. IT IS RECOMMENDED THAT SEDIMENT CONTROL LOGS BE TRENCHED INTO THE GROUND TO A DEPTH OF APPROXIMATELY 1/2 OF THE DIAMETER OF THE LOG. IF TRENCHING TO THIS DEPTH IS NOT FEASIBLE AND/OR DESIRABLE (SHORT TERM INSTALLATION WITH DESIRE NOT TO DAMAGE LANDSCAPE) A LESSER TRENCHING DEPTH MAY BE ACCEPTABLE WITH MORE ROBUST STAKING. COMPOST LOGS THAT ARE 8 LB/FT DO NOT NEED TO BE TRENCHED.
6. THE UPHILL SIDE OF THE SEDIMENT CONTROL LOG SHALL BE BACKFILLED WITH SOIL OR FILTER MATERIAL THAT IS FREE OF ROCKS AND DEBRIS. THE SOIL SHALL BE TIGHTLY COMPACTED INTO THE SHAPE OF A RIGHT TRIANGLE USING A SHOVEL, OR WEIGHTED LAWN ROLLER OR BLOWN IN PLACE.
7. FOLLOW MANUFACTURERS' GUIDANCE FOR STAKING. IF MANUFACTURERS' INSTRUCTIONS DO NOT SPECIFY SPACING, STAKES SHALL BE PLACED ON 4' CENTERS AND EMBEDDED A MINIMUM OF 6" INTO THE GROUND. 3" OF THE STAKE SHALL PROTRUDE FROM THE TOP OF THE LOG. STAKES THAT ARE BROKEN PRIOR TO INSTALLATION SHALL BE REPLACED. COMPOST LOGS SHOULD BE STAKED 10' ON CENTER.

SEDIMENT CONTROL LOG MAINTENANCE NOTES

1. MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOG SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP. TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 1/2 OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.
5. SEDIMENT CONTROL LOG SHALL BE REMOVED AT THE END OF CONSTRUCTION. COMPOST FROM COMPOST LOGS MAY BE LEFT IN PLACE AS LONG AS BAGS ARE REMOVED AND THE AREA SEEDED. IF DISTURBED AREAS EXIST AFTER REMOVAL, THEY SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, JEFFERSON COUNTY, COLORADO, DOUGLAS COUNTY, COLORADO, AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)



SSA-1. STABILIZED STAGING AREA

STABILIZED STAGING AREA INSTALLATION NOTES

1. SEE PLAN VIEW FOR LOCATION OF STAGING AREA(S).
-CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.
2. STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.
3. STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.
4. THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.
5. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703 AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.
6. ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.

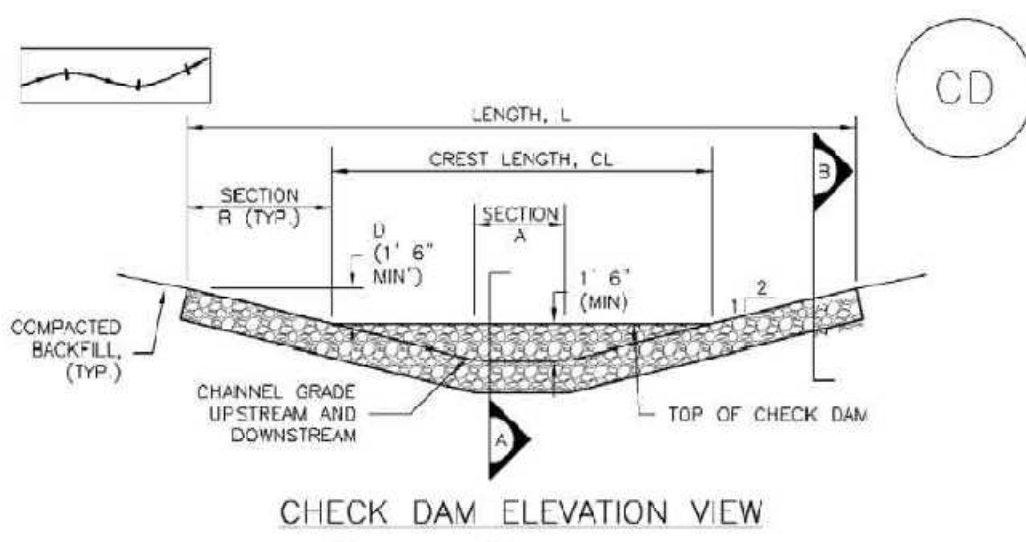
STABILIZED STAGING AREA MAINTENANCE NOTES

1. MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

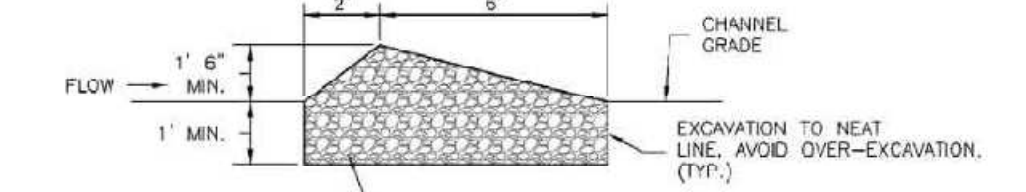
STABILIZED STAGING AREA MAINTENANCE NOTES

5. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.
 6. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.
- NOTE: SSA IS EXISTING AND MAY OR MAY NOT NEED MAINTENANCE. MAINTAIN AS NECESSARY.

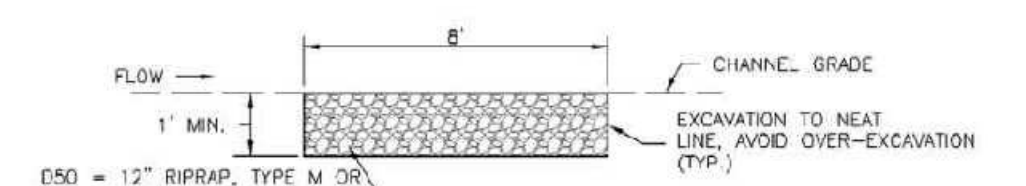
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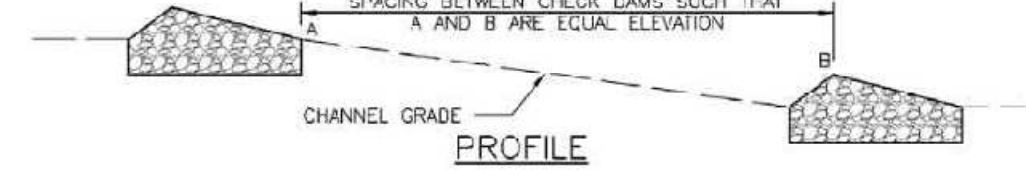
CHECK DAM ELEVATION VIEW



SECTION A



SECTION B



CD-1. CHECK DAM

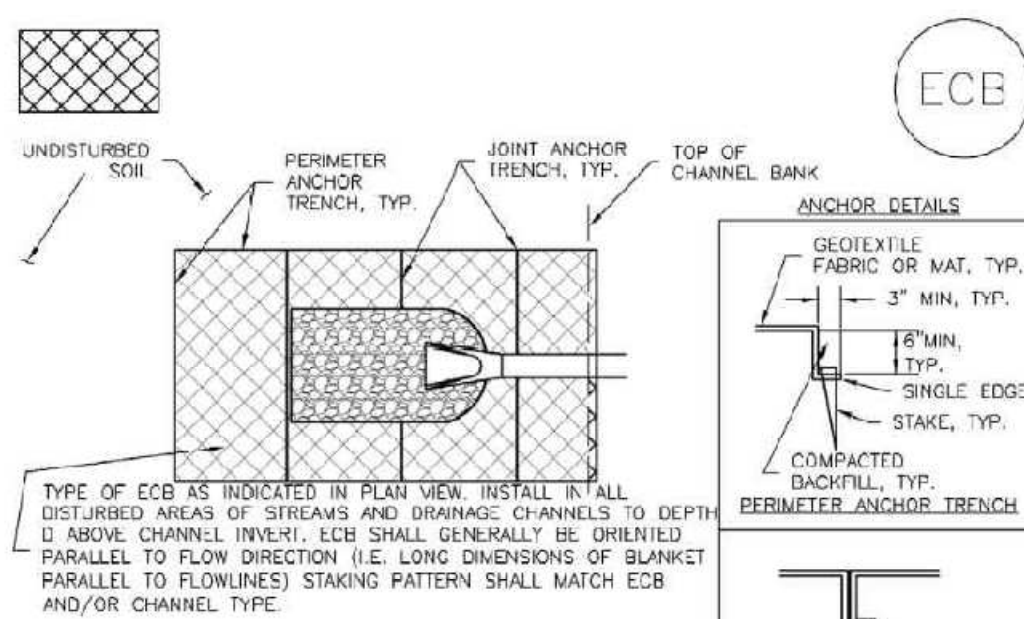
CHECK DAM INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
-LOCATION OF CHECK DAMS.
-CHECK DAM TYPE (CHECK DAM OR REINFORCED CHECK DAM).
-LENGTH (L), CREST LENGTH (CL), AND DEPTH (D).
2. RIPRAP UTILIZED FOR CHECK DAMS SHOULD BE OF APPROPRIATE SIZE FOR THE APPLICATION. TYPICAL TYPES OF RIPRAP USED FOR CHECK DAMS ARE: TYPE M (100 12") OR TYPE L (500 9").
3. RIPRAP PAD SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF 1'.
4. THE ENDS OF THE CHECK DAM SHALL BE A MINIMUM OF 1' 6" HIGHER THAN THE CENTER OF THE CHECK DAM.

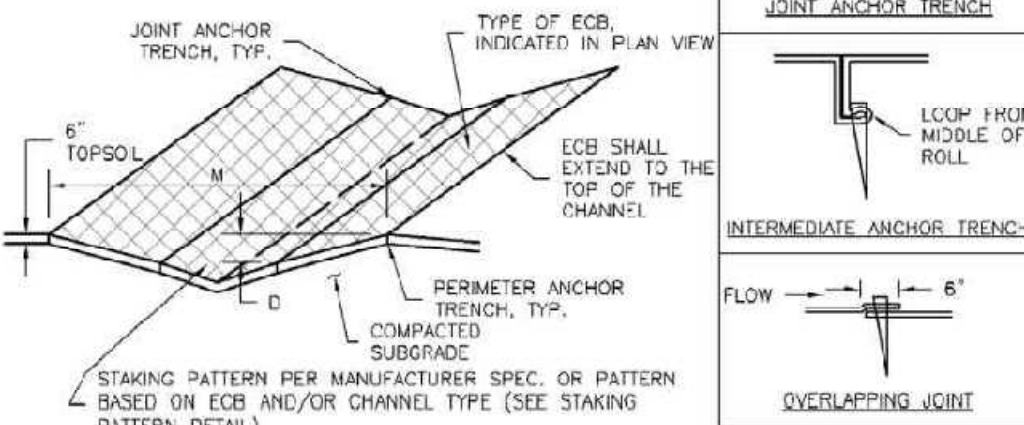
CHECK DAM MAINTENANCE NOTES

1. MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. SEDIMENT ACCUMULATED UPSTREAM OF THE CHECK DAMS SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS WITHIN 1/2 OF THE HEIGHT OF THE CREST.
5. CHECK DAMS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED.
6. WHEN CHECK DAMS ARE REMOVED, EXCAVATIONS SHALL BE FILLED WITH SUITABLE COMPACTED BACKFILL. DISTURBED AREA SHALL BE SEEDED AND MULCHED AND COVERED WITH GEOTEXTILE OR OTHERWISE STABILIZED.

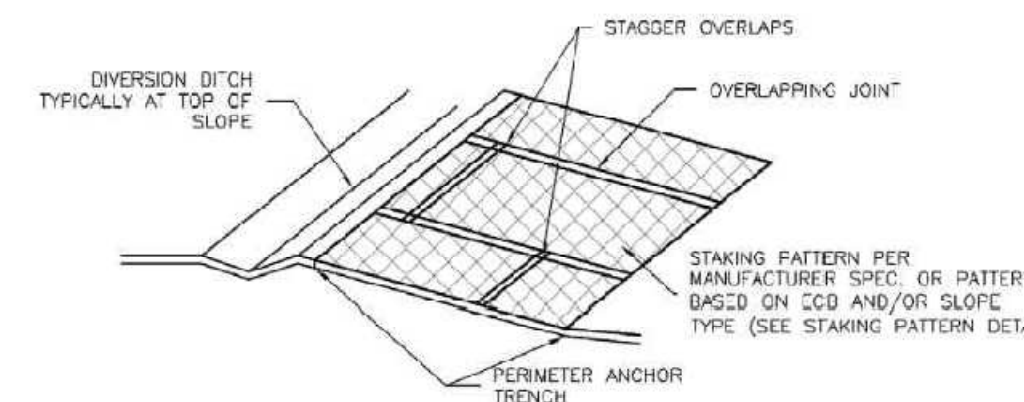
(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)



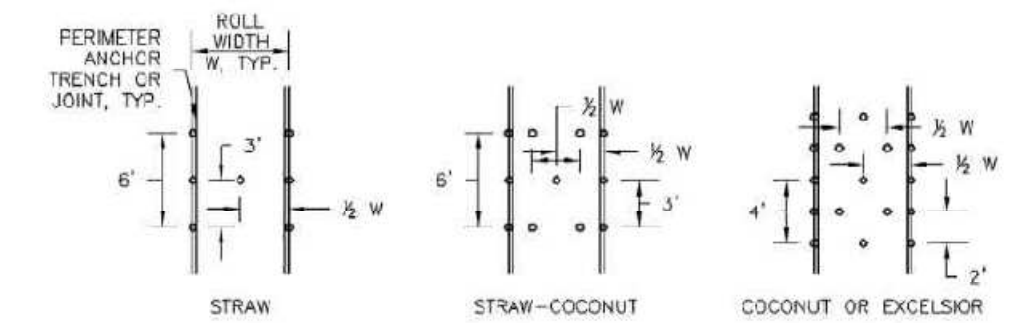
ECB-1. PIPE OUTLET TO DRAINAGEWAY



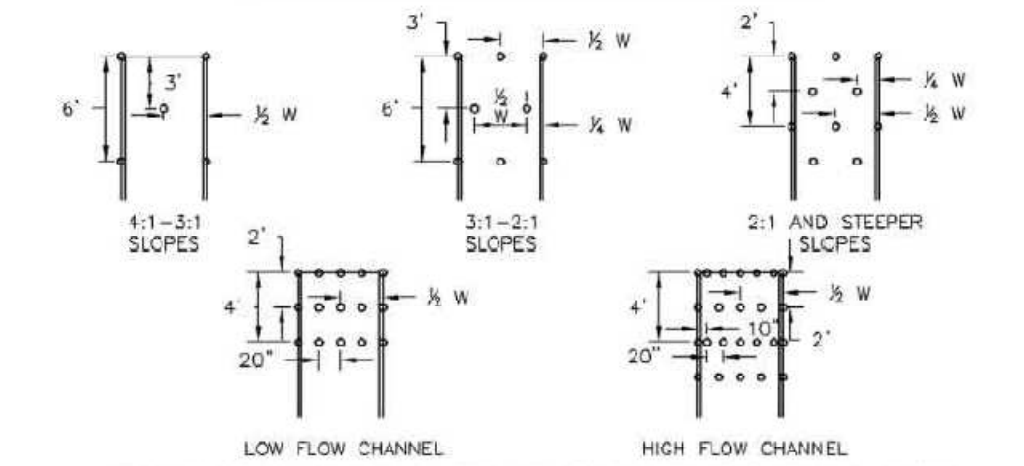
ECB-2. SMALL DITCH OR DRAINAGEWAY



ECB-3. OUTSIDE OF DRAINAGEWAY



STAKING PATTERNS BY ECB TYPE



STAKING PATTERNS BY SLOPE OR CHANNEL TYPE

EROSION CONTROL BLANKET INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
-LOCATION OF ECB.
-TYPE OF ECB (STRAW, STRAW-COCONUT, COCONUT OR EXCELSIOR).
-AREA A, IN SQUARE YARDS OF EACH TYPE OF ECB.
2. 100% NATURAL AND BIODEGRADABLE MATERIALS ARE PREFERRED FOR RECPs, ALTHOUGH SOME JURISDICTIONS MAY ALLOW OTHER MATERIALS IN SOME APPLICATIONS.
3. IN AREAS WHERE ECBs ARE SHOWN ON THE PLANS, THE PERMITTEE SHALL PLACE TOPSOIL AND PERFORM FINAL GRADING, SURFACE PREPARATION, AND SEEDING AND MULCHING. SUBGRADE SHALL BE SMOOTH AND MOIST PRIOR TO ECB INSTALLATION AND THE ECB SHALL BE IN FULL CONTACT WITH SUBGRADE. NO GAPS OR VOIDS SHALL EXIST UNDER THE BLANKET.
4. PERIMETER ANCHOR TRENCH SHALL BE USED ALONG THE OUTSIDE PERIMETER OF ALL BLANKET AREAS.
5. JOINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER (LONGITUDINALLY AND TRANSVERSELY) FOR ALL ECBs EXCEPT STRAW WHICH MAY USE AN OVERLAPPING JOINT.
6. INTERMEDIATE ANCHOR TRENCH SHALL BE USED AT SPACING OF ONE-HALF ROLL LENGTH FOR COCONUT AND EXCELSIOR ECBs.
7. OVERLAPPING JOINT DETAIL SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER FOR ECBs ON SLOPES.
8. MATERIAL SPECIFICATIONS OF ECBs SHALL CONFORM TO TABLE ECB-1.
9. ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING ECBs SHALL BE RESEEDED AND MULCHED.
10. DETAILS ON DESIGN PLANS FOR MAJOR DRAINAGEWAY STABILIZATION WILL GOVERN IF DIFFERENT FROM THOSE SHOWN HERE.

TABLE ECB-1. ECB MATERIAL SPECIFICATIONS

TYPE	COCONUT CONTENT	STRAW CONTENT	EXCELSIOR CONTENT	RECOMMENDED NETTING*
STRAW**	-	100%	-	DOUBLE/NATURAL
STRAW-COCONUT	30% MIN	70% MAX	-	DOUBLE/NATURAL
COCONUT	100%	-	-	DOUBLE/NATURAL
EXCELSIOR	-	-	100%	DOUBLE/NATURAL

*STRAW ECBs MAY NOT BE USED OUTSIDE OF STREAMS AND DRAINAGE CHANNEL. **NATURAL NETTING MAY BE ACCEPTABLE IN SOME JURISDICTIONS

EROSION CONTROL BLANKET MAINTENANCE NOTES

1. MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. ECBs SHALL BE LEFT IN PLACE TO EVENTUALLY BIODEGRADE, UNLESS REQUESTED TO BE REMOVED BY THE LOCAL JURISDICTION.
5. ANY ECB PULLED OUT, TORN, OR OTHERWISE DAMAGED SHALL BE REPAIRED OR REINSTALLED. ANY SUBGRADE AREAS BELOW THE GEOTEXTILE THAT HAVE ERODED TO CREATED A VOID UNDER THE BLANKET, OR THAT REMAIN BELOW OF GRASS SHALL BE REPAIRED, RESEEDED AND MULCHED AND THE ECB REINSTALLED.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO AND TOWN OF PARKER COLORADO, NOT AVAILABLE IN AUTOCAD)

SEDIMENT CONTROL LOGS

(SCL)

SOURCE: MHFD (CHAPTER 7, VOLUME 3 OF USDCM)

STABILIZED STAGING AREA

(SSA)

SOURCE: MHFD (CHAPTER 7, VOLUME 3 OF USDCM)

CHECK DAM (CD)

SOURCE: MHFD (CHAPTER 7, VOLUME 3 OF USDCM)

EROSION CONTROL BLANKET (ECB)

SOURCE: MHFD (CHAPTER 7, VOLUME 3 OF USDCM)



WRIGHT WATER ENGINEERS, INC.
1666 N. MAIN AVE. SUITE C
DURANGO, CO 81301
(970)259-7411 FAX(970)259-8758

NO.	BY	DATE	DESCRIPTION	COMMENTS
1	---	---	---	---
2	---	---	---	---
3	---	---	---	---
4	---	---	---	---
5	---	---	---	---



	DATE
DESIGN	JBH 08/03/22
DETAIL	JBH 08/03/22
CHECK	HAL 08/03/22
APPROVAL	
SCALE	SHOWN
C5 - SWMP DETAILS.dwg	

INTERIM SWMP FOR WELL LOCATION ID 325172 & 312051
LOGOS RESOURCES, LLC & SIMCOE, LLC

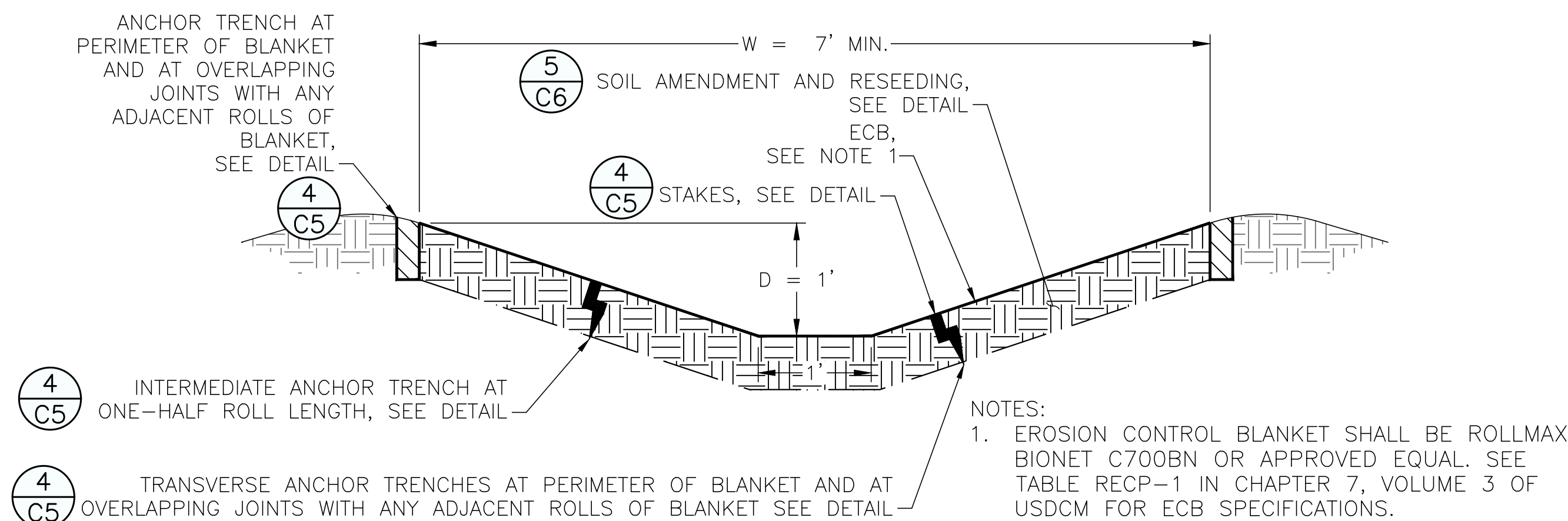
SWMP DETAILS

JOB NO.	191-027.030
REVISION NO.	---
SHEET NO.	C5



NOTES:
1. MAY SUBSTITUTE ONE 12-INCH LAYER OF TYPE II BEDDING. THE SUBSTITUTION OF ONE LAYER OF TYPE II BEDDING SHALL NOT BE PERMITTED AT DROP STRUCTURES. THE USE OF A COMBINATION OF FILTER FABRIC AND TYPE II BEDDING AT DROP STRUCTURES IS ACCEPTABLE.
2. FIFTY PERCENT OR MORE BY WEIGHT RETAINED ON THE #40 SIEVE.

- ### HYDROMULCH NOTES:
1. HYDROMULCH MUST MEET OR EXCEED THE FOLLOWING REQUIREMENTS:
 - 1.1. HYDROMULCH IS TO BE FULLY BIODEGRADABLE MATRIX COMPOSED OF 100% RECYCLED AND THERMALLY REFINED WOOD FIBERS, CRIMPED INTERLOCKING BIODEGRADABLE FIBERS, AND NATURALLY DERIVED BIOPOLYMERS.
 - 1.2. FUNCTIONAL LONGEVITY SHALL BE LESS THAN OR EQUAL TO 12 MONTHS.
 - 1.3. CURE TIME SHALL BE LESS THAN 2 HOURS.
 - 1.4. THERMALLY PROCESSED WOOD FIBERS – 77%
 - 1.5. WETTING AGENTS (CROSS LINKED TACKIFIERS) – 10%
 - 1.6. CRIMPED, BIODEGRADABLE INTERLOCKING FIBERS – 2.5%



SEEDING NOTES:

1. AFTER SOIL AMENDMENT, CONTRACTOR SHALL APPLY SEED MIX SHOWN IN TABLE 7-3.
2. AMOUNT OF PLS SHOWN IN TABLE 7-3 IS FOR DRILL SEEDING APPLICATION. CONTRACTOR SHALL DOUBLE AMOUNT OF PLS FOR BROADCAST SEEDING.

**SEED MIX MUST BE APPROVED BY
LAND OWNER AND AMENDED AS
NECESSARY.

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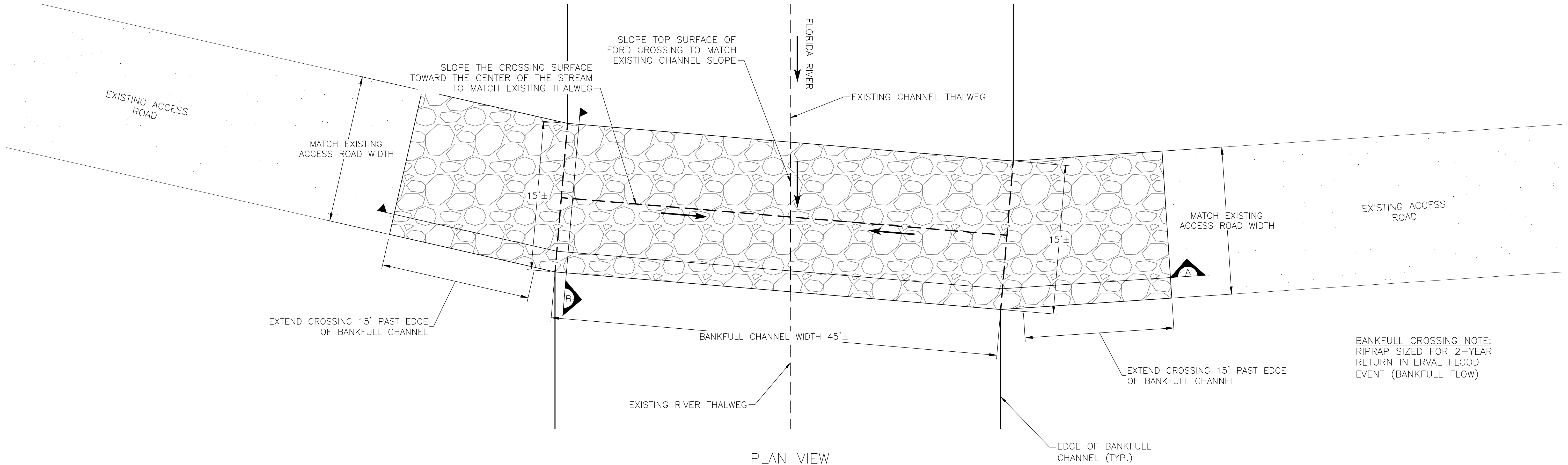
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DETAIL	JBH	08/03/22
CHECK	HAL	08/03/22
APPROVAL		
SCALE		SHOWN
C5 - SWMP DETAILS.dwg		

**INTERIM SWMP FOR WELL LOCATION ID 325172 & 312051
LOGOS RESOURCES, LLC & SIMCOE, LLC**

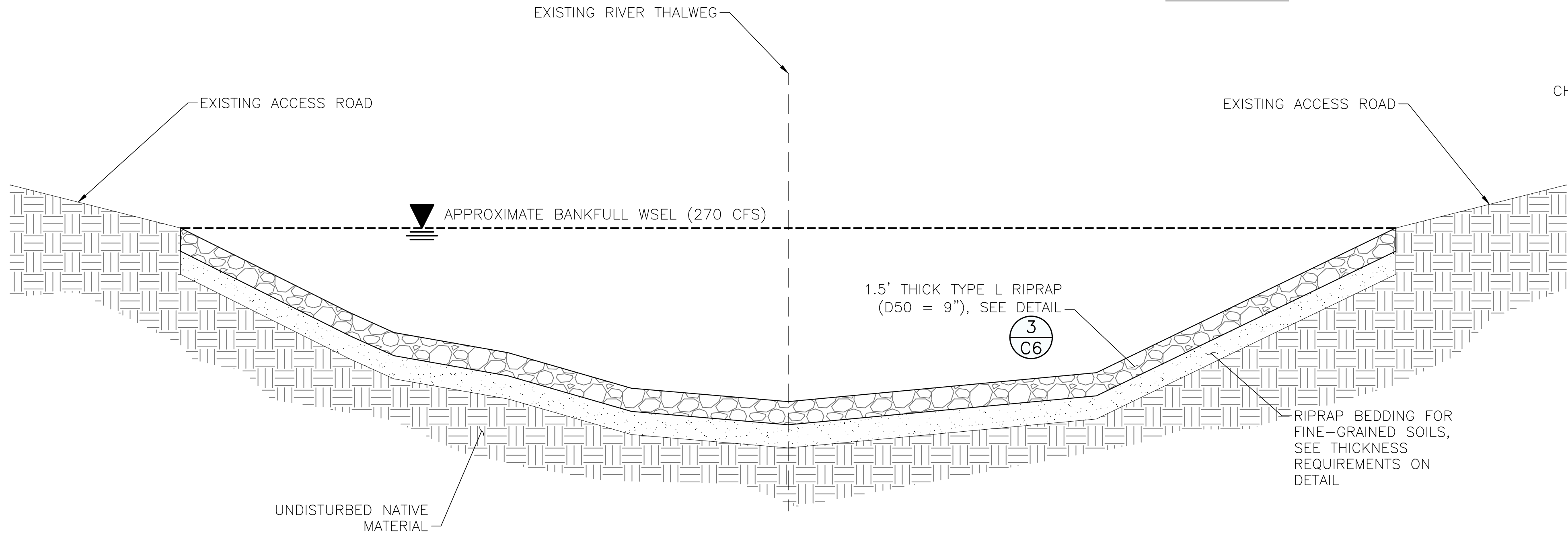
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JOB NO.	191-027.030
REVISION NO.	----
SHEET NO.	C6

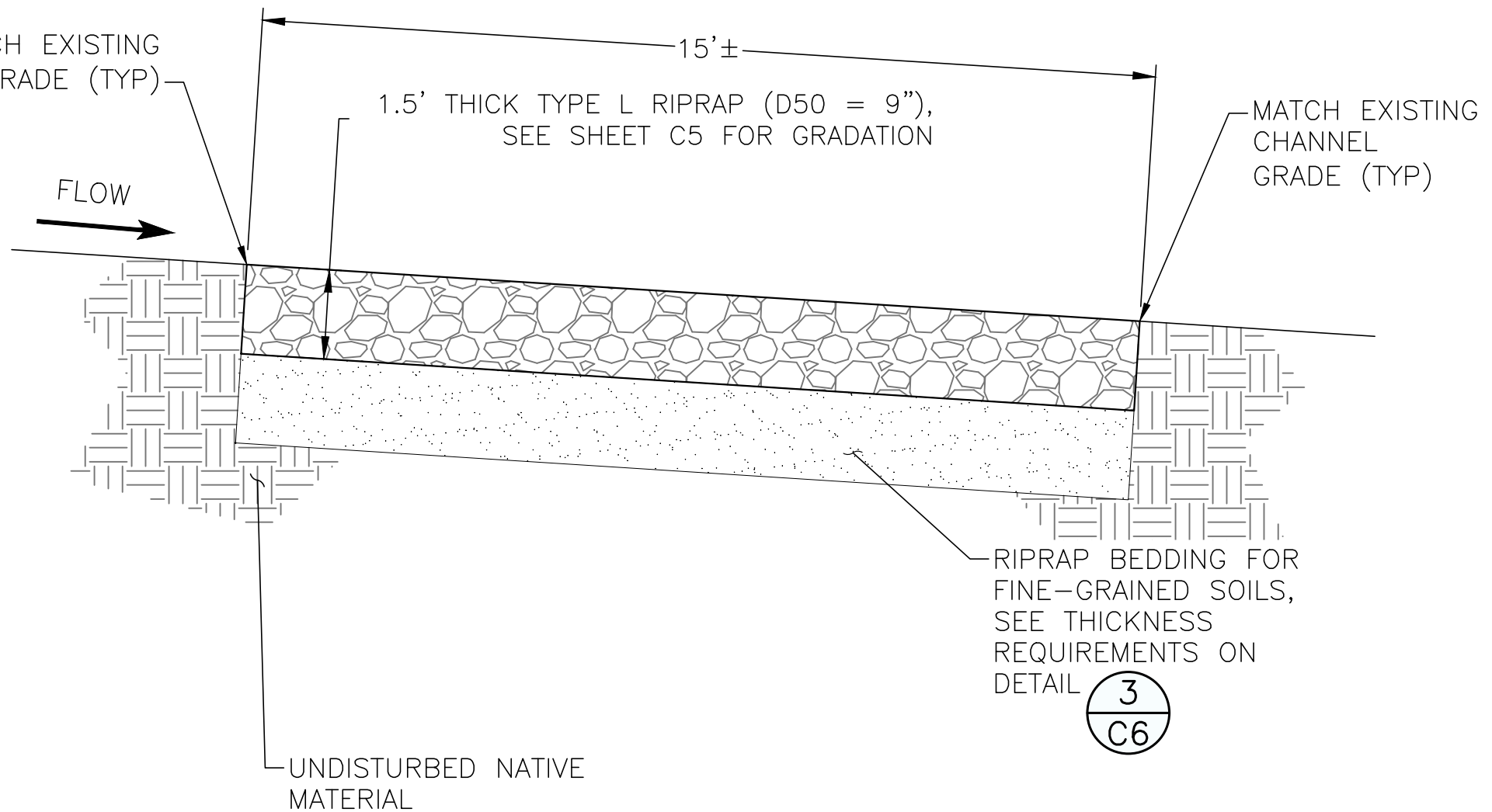
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PLAN VIEW



SECTION A



SECTION B

1 LOW WATER CROSSING DETAIL
C7

NOT TO SCALE. SOURCE: DETAIL BASED ON GUIDANCE FROM
NATURAL RESOURCES CONSERVATION SERVICE (NRCS)
CONSERVATION PRACTICE STANDARD 578



WRIGHT WATER ENGINEERS, INC.
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NO.	BY	DATE	DESCRIPTION	COMMENTS
1	JBH	08/03/22	DESIGN	
2	JBH	08/03/22	CHECK	
3	HAL	08/03/22	APPROVAL	
4			SCALE	
5			SHOWN	



DESIGN	JBH	08/03/22
DETAIL	JBH	08/03/22
CHECK	HAL	08/03/22
APPROVAL		
SCALE		
SHOWN		

INTERIM SWMP FOR WELL LOCATION ID 325172 & 312051
LOGOS RESOURCES, LLC & SIMCOE, LLC

LOW WATER CROSSING DETAIL

JOB NO. 191-027.030
REVISION NO. ---
SHEET NO. C7

PHOTO 1

Well site sign for location verification.

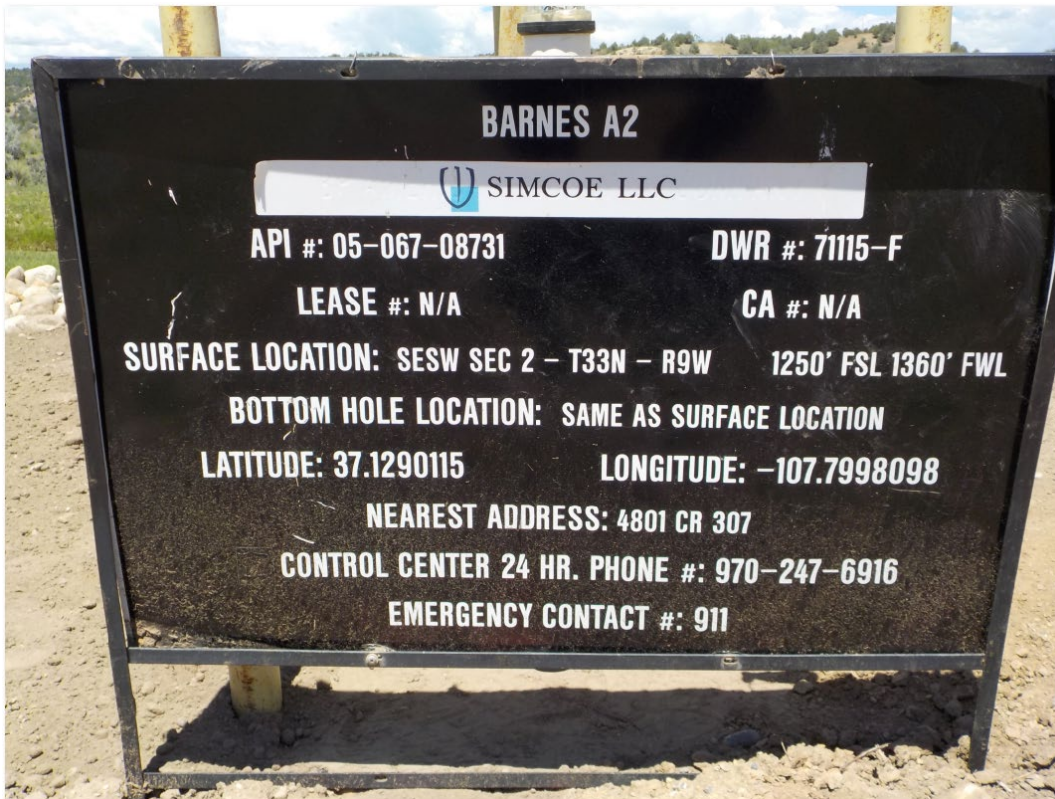


PHOTO 2

Drainage ditch along the west side of the access road facing north to south.



PHOTO 3

Drainage ditch to west of access road facing south to north.



PHOTO 4 & 5

Hard hat for scale photo of drainage ditch to the west side of the access road.



PHOTO 6

Fractured rock at inlet and fractured rock check dam. Photo taken from slightly northeast to slightly southwest.



PHOTO 7

Close up photo of fractured rock inlet. Photo taken facing east to west.



PHOTO 8

Fractured rock check dam installed at the west edge of disturbance. Hard hat in place for scale of the feature height.



PHOTO 9

Same check dam as photo 8 photo taken from north to south with hard hat in place for scale



PHOTO 10 & 11

Fractured rock check dam on the left edge of photo and straw wattles and water way on the right edge.



Photo 12 & 13

Wattle installation. They are dug into the soils, staked through the center throughout and double crossed staked at the ends with ends overlapping.



PHOTO 14, 15 & 16

Wattles installed at the edge of pad along the water way bank.



PHOTO 17 & 18

Fractured rock and boulders. Truck parked in view for scale of fractured rock feature.



PHOTO 19

West edge of well pad.



PHOTO 20

Rock installed on west edge of pad from the pad looking west.



PHOTO 21

View of the fractured rock feature from the well pad facing to the northwest.



PHOTO 22

Close up photo of disturbed area demonstrating the seed has been broadcast prior to hydromulch application.



PHOTO 23

Seed on loosened soils prior to hydromulch application.



PHOTO 24, 25, & 26
Hydromulch applied.



PHOTO 27
Erosion Blanket

