

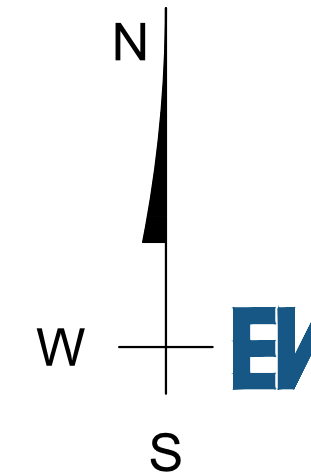
RIDGEGATE SENIOR GRADING, EROSION AND SEDIMENT CONTROL PLAN

RIDGEGATE EAST FILING NO. 4, LOT 3
CENTRAL VILLAGE EAST COUPLET DISTRICT (MU CORE AREA)



VICINITY MAP

1" = 500'



CONTACT LIST:

OWNER/DEVELOPER

KOEBEL & COMPANY
5291 E. YALE AVENUE
DENVER, CO 80222
ATTN: CHRIS MISSROON
PHONE: (303)-300-8827

CIVIL ENGINEER

EVSTUDIO LLC.
5335 W 48TH AVE, SUITE 300,
DENVER, CO 80212
ATTN: BRIAN WELCH, PE
PHONE: (303)-670-7242 X50
EMAIL: brian.welch@evstudio.com

SURVEY - TOPO

MERRICK & COMPANY
5970 GREENWOOD PLAZA BLVD
GREENWOOD VILLAGE, CO 80111
ATTN:
PHONE:
EMAIL:

SURVEY - EASEMENTS

AZTEC CONSULTANTS, INC.
300 E MINERAL AVE #1,
LITTLETON, CO 80122
ATTN:
PHONE:
EMAIL:

WATER & SEWER

PARKER WATER & SANITATION DISTRICT
18100 E WOODMAN DR
PARKER, CO 80134
ATTN:
PHONE:
EMAIL:

FIRE

SOUTH METRO FIRE RESCUE
9195 E MINERAL AVE,
CENTENNIAL, CO 80112
ATTN:
PHONE:
EMAIL:

BENCHMARK

PROJECT BENCHMARK IS RIDGEGATE BM 1, A 3.25" DIAMETER BRASS CAP SET ON THE NORTHWEST BRIDGE ABUTMENT OF RIDGEGATE PARKWAY STAMPED "RIDGEGATE BM 1 2021" AND IS APPROXIMATELY 0.7 MILES EAST ON RIDGEGATE PARKWAY FROM THE INTERSECTION OF I-25 AND RIDGEGATE PARKWAY IN LONE TREE, COLORADO. THE BENCHMARK IS 1 FOOT FROM THE WEST EDGE OF THE ABUTMENT, 3 FEET NORTH OF THE BACK OF WALK, AND 31 FEET NORTH OF THE WEST BOUND CENTERLINE OF RIDGEGATE PARKWAY. ELEVATION IS 5983.40 U.S. SURVEY FEET, NAVD 88 DOUGLAS COUNTY DATUM.

SHEET TABLE

SHEET	DRAWING NO.	TITLE
1	G-1	COVER SHEET
2	G-2	GENERAL NOTES AND LEGEND
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5	E-3	FINAL GESC PLAN
6	D-1	STANDARD DETAILS
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15	D-10	STANDARD DETAILS
16	D-11	STANDARD DETAILS
17	D-12	STANDARD DETAILS
18	D-13	STANDARD DETAILS

THE GRADING, EROSION AND SEDIMENT CONTROL PLAN INCLUDED HEREIN HAS BEEN PLACED IN THE CITY OF LONE TREE FILE FOR THIS PROJECT AND APPEARS TO FULFILL APPLICABLE CITY OF LONE TREE GRADING, EROSION AND SEDIMENT CONTROL CRITERIA, AS AMENDED. ADDITIONAL GRADING, EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED OF THE PERMITTEE(S) DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED GESC PLAN DOES NOT FUNCTION AS INTENDED. THE REQUIREMENTS OF THIS PLAN SHALL RUN WITH THE LAND AND BE THE OBLIGATION OF THE PERMITTEE(S), UNTIL SUCH TIME AS THE GESC PLAN IS PROPERLY COMPLETED, MODIFIED, OR VOIDED. THE GRADING, EROSION AND SEDIMENT CONTROL PLAN INCLUDED HEREIN HAS BEEN PREPARED UNDER MY DIRECT SUPERVISION IN ACCORDANCE WITH THE REQUIREMENTS OF THE GRADING, EROSION AND SEDIMENT CONTROL (GESC) CRITERIA MANUAL OF DOUGLAS COUNTY AS AMENDED.

GESC PLANS PREPARED BY:

EVSTUDIO _____ DATE SIGNED _____ PE NUMBER _____

ASSISTANT DIRECTOR OF DEVELOPMENT REVIEW

DATE

THESE CONSTRUCTION DRAWINGS HAVE BEEN REVIEWED BY DOUGLAS COUNTY FOR GRADING, EROSION AND SEDIMENT CONTROL IMPROVEMENTS ONLY.

ENGINEERING DIVISION ACCEPTANCE BLOCK

EVstudio

Denver, CO
Evergreen, CO

303.670.7242
design@evstudio.com
inspections@evstudio.com
www.evstudio.com

Contact:
Brian Welch, PE
brian.welch@evstudio.com
303.670.7242 x50

UTILITY NOTIFICATION CENTER

The Promise.com

FOR MARKING OF UNDERGROUND MEMBER UTILITIES:
EVSTUDIO ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

RIDGEGATE SENIOR
LONE TREE, CO

22A037

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REVISION:

09/08/2023
DATE: AMT & TAL
DRAWN BY: BMW
CHECKED BY:

COVER SHEET

G-1

GRADING, EROSION, AND SEDIMENT CONTROL (GESC) GENERAL NOTES

- THE DOUGLAS COUNTY ENGINEER'S SIGNATURE AFFIXED TO THIS DOCUMENT INDICATES THE DOUGLAS COUNTY PUBLIC WORKS ENGINEERING HAS REVIEWED THE DOCUMENT AND FOUND IT IN GENERAL COMPLIANCE WITH THE DOUGLAS COUNTY GRADING, EROSION AND SEDIMENT CONTROL (GESC) CRITERIA MANUAL. THE DOUGLAS COUNTY DIRECTOR OF ENGINEERING SERVICES, THROUGH ACCEPTANCE OF THIS DOCUMENT, ASSUMES NO RESPONSIBILITY (OTHER THAN AS STATED ABOVE) FOR THE COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS.
- THE ADEQUACY OF THIS GESC PLAN LIES WITH THE ORIGINAL DESIGN ENGINEER.
- THE GESC PLAN SHALL BE CONSIDERED VALID FOR THREE (3) YEARS FROM THE DATE OF ACCEPTANCE BY DOUGLAS COUNTY, AFTER WHICH TIME THE PLAN SHALL BE VOID AND WILL BE SUBJECT TO RE-REVIEW AND RE-ACCEPTANCE BY DOUGLAS COUNTY.
- ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE DOUGLAS COUNTY PUBLIC WORKS ENGINEERING. DOUGLAS COUNTY RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO THE GESC MANUAL, GESC PLAN OR GESC PERMIT.
- THE PLACEMENT OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs) SHALL BE IN ACCORDANCE WITH THE DOUGLAS COUNTY ACCEPTED GESC PLAN AND THE DOUGLAS COUNTY GESC MANUAL, AS AMENDED.
- ANY VARIATION IN MATERIAL, TYPE OR LOCATION OF EROSION AND SEDIMENT CONTROL BMPs FROM THE DOUGLAS COUNTY ACCEPTED GESC PLAN WILL REQUIRE APPROVAL FROM AN ACCOUNTABLE REPRESENTATIVE OF THE DOUGLAS COUNTY PUBLIC WORKS ENGINEERING.
- AFTER THE GESC PLAN HAS BEEN ACCEPTED, THE GESC PERMIT APPLIED FOR, FEES AND FISCAL SECURITY SUBMITTED TO THE COUNTY, AND THE GESC FIELD MANUAL OBTAINED AND REVIEWED, THE CONTRACTOR MAY INSTALL THE INITIAL-STAGE EROSION AND SEDIMENT CONTROL BMPs INDICATED ON THE ACCEPTED GESC PLAN.
- THE FIRST BMP TO BE INSTALLED ON THE SITE SHALL BE CONSTRUCTION FENCE, MARKERS, OR OTHER APPROVED MEANS OF DEFINING THE LIMITS OF CONSTRUCTION, INCLUDING CONSTRUCTION LIMITS ADJACENT TO STREAM CORRIDORS AND OTHER AREAS TO BE PRESERVED.
- AFTER INSTALLATION OF THE INITIAL-STAGE EROSION AND SEDIMENT CONTROL BMPs, THE PERMITTEE SHALL CALL THE DOUGLAS COUNTY ENGINEERING PERMITS STAFF AT 303-660-7487 TO SCHEDULE A PRECONSTRUCTION MEETING AT THE PROJECT SITE. THE REQUEST SHALL BE MADE A MINIMUM OF THREE BUSINESS DAYS PRIOR TO THE REQUESTED MEETING TIME. NO CONSTRUCTION ACTIVITIES SHALL BE PLANNED WITHIN 24 HOURS AFTER THE PRECONSTRUCTION MEETING.
- THE OWNER OR OWNER'S REPRESENTATIVE, THE GESC MANAGER, THE GENERAL CONTRACTOR, AND THE GRADING SUBCONTRACTOR, IF DIFFERENT FROM THE GENERAL CONTRACTOR, MUST ATTEND THE PRECONSTRUCTION MEETING. IF ANY OF THE REQUIRED PARTICIPANTS FAIL TO ATTEND THE PRECONSTRUCTION MEETING, OR IF THE GESC FIELD MANUAL IS NOT ON SITE, OR IF THE INSTALLATION OF THE INITIAL BMPs ARE NOT APPROVED BY THE DOUGLAS COUNTY EROSION CONTROL INSPECTOR, THE APPLICANT WILL HAVE TO PAY A REINSPECTION FEE, ADDRESS ANY PROBLEMS WITH BMP INSTALLATION, AND CALL TO RESCHEDULE THE MEETING, WITH A CORRESPONDING DELAY IN THE START OF CONSTRUCTION. DOUGLAS COUNTY STRONGLY ENCOURAGES THE APPLICANT TO HAVE THE ENGINEER OF RECORD AT THE PRECONSTRUCTION MEETING.
- CONSTRUCTION SHALL NOT BEGIN UNTIL THE DOUGLAS COUNTY EROSION CONTROL INSPECTOR APPROVES THE INSTALLATION OF THE INITIAL BMPs AND THE APPROVED GESC PERMIT IS PICKED UP FROM THE COUNTY AND IS IN-HAND ON THE SITE. THE COMPLETED PERMIT WILL BE AVAILABLE WITHIN 24-HOURS AFTER THE INSTALLATION OF THE INITIAL BMPs ARE APPROVED.
- THE GESC MANAGER SHALL STRICTLY ADHERE TO THE DOUGLAS COUNTY-APPROVED LIMITS OF CONSTRUCTION AT ALL TIMES. THE DOUGLAS COUNTY PUBLIC WORKS ENGINEERING MUST APPROVE ANY CHANGES TO THE LIMITS OF CONSTRUCTION AND, AT THE DISCRETION OF THE ENGINEERING DIVISION, ADDITIONAL EROSION/SEDIMENT CONTROLS MAY BE REQUIRED IN ANY ADDITIONAL AREAS OF CONSTRUCTION.
- THE MAXIMUM AREA OF CONSTRUCTION SHALL BE LIMITED TO 40 ACRES (70 ACRES IF APPROVED FOR SOIL MITIGATION OPERATIONS) TO REDUCE THE AMOUNT OF LAND DISTURBED AT ANY ONE TIME. LARGER SITES SHALL BE DIVIDED INTO PHASES THAT ARE EACH 40 (OR 70) ACRES OR LESS IN SIZE. THESE PROJECTS SHALL CONDUCT GRADING ACTIVITIES IN ACCORDANCE WITH THE ACCEPTED GESC PLAN. BMP INSTALLATION AND APPROVAL BY DOUGLAS COUNTY AT THE START AND COMPLETION OF EACH PHASE SHALL BE CONDUCTED IN ACCORDANCE WITH THE PROCEDURES OUTLINED IN THE GESC MANUAL AND/OR GESC FIELD MANUAL.
- PRIOR TO ANY CONSTRUCTION ACTIVITY, THE PERMITTEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES. FOR INFORMATION, CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC) AT 811, 1-800-922-1987, OR WWW.COLORADO811.ORG.
- NATURAL VEGETATION SHALL BE RETAINED AND PROTECTED WHEREVER POSSIBLE. EXPOSURE OF SOIL TO EROSION BY REMOVAL OR DISTURBANCE OF VEGETATION SHALL BE LIMITED TO THE AREA REQUIRED FOR IMMEDIATE CONSTRUCTION OPERATIONS.
- THE GESC PERMIT SHALL BE VALID FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF ISSUANCE.
- A COPY OF THE GESC PERMIT, ACCEPTED GESC PLANS AND THE GESC FIELD MANUAL SHALL BE ON SITE AT ALL TIMES.
- THE GESC MANAGER SHALL BE RESPONSIBLE FOR ENSURING THAT THE SITE REMAINS IN COMPLIANCE WITH THE GESC PERMIT AND SHALL BE THE PERMITTEE'S CONTACT PERSON WITH THE COUNTY FOR ALL MATTERS PERTAINING TO THE GESC PERMIT. THE GESC MANAGER SHALL BE PRESENT AT THE SITE THE MAJORITY OF THE TIME AND SHALL BE AVAILABLE THROUGH A 24-HOUR CONTACT NUMBER. IN THE EVENT THAT THE CONTRACTOR'S GESC MANAGER IS NOT ON SITE AND CANNOT BE REACHED DURING A VIOLATION, THE ALTERNATE GESC MANAGER SHALL BE CONTACTED. IF NEITHER THE GESC MANAGER NOR ALTERNATE GESC MANAGER CAN BE CONTACTED DURING ANY VIOLATION, A STOP WORK ORDER MAY BE ISSUED.
- ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE THROUGH THE DOUGLAS COUNTY-APPROVED ACCESS POINT. A VEHICLE TRACKING CONTROL PAD IS REQUIRED AT ALL ACCESS POINTS ON THE SITE. ADDITIONAL STABILIZED CONSTRUCTION ENTRANCES MAY BE ADDED WITH AUTHORIZATION FROM THE DOUGLAS COUNTY PUBLIC WORKS ENGINEERING.
- THE GESC MANAGER IS RESPONSIBLE FOR CLEANUP OF SEDIMENT OR CONSTRUCTION DEBRIS TRACKED ONTO ADJACENT PAVED AREAS. PAVED AREAS INCLUDING STREETS ARE TO BE KEPT CLEAN THROUGHOUT BUILD-OUT AND SHALL BE CLEANED, WITH A STREET SWEEPER OR SIMILAR DEVICE, AT FIRST NOTICE OF ACCIDENTAL TRACKING OR AT THE DISCRETION OF THE DOUGLAS COUNTY EROSION CONTROL INSPECTOR. STREET WASHING IS NOT ALLOWED. DOUGLAS COUNTY RESERVES THE RIGHT TO REQUIRE ADDITIONAL MEASURES TO ENSURE AREA STREETS ARE KEPT FREE OF SEDIMENT AND/OR CONSTRUCTION DEBRIS.

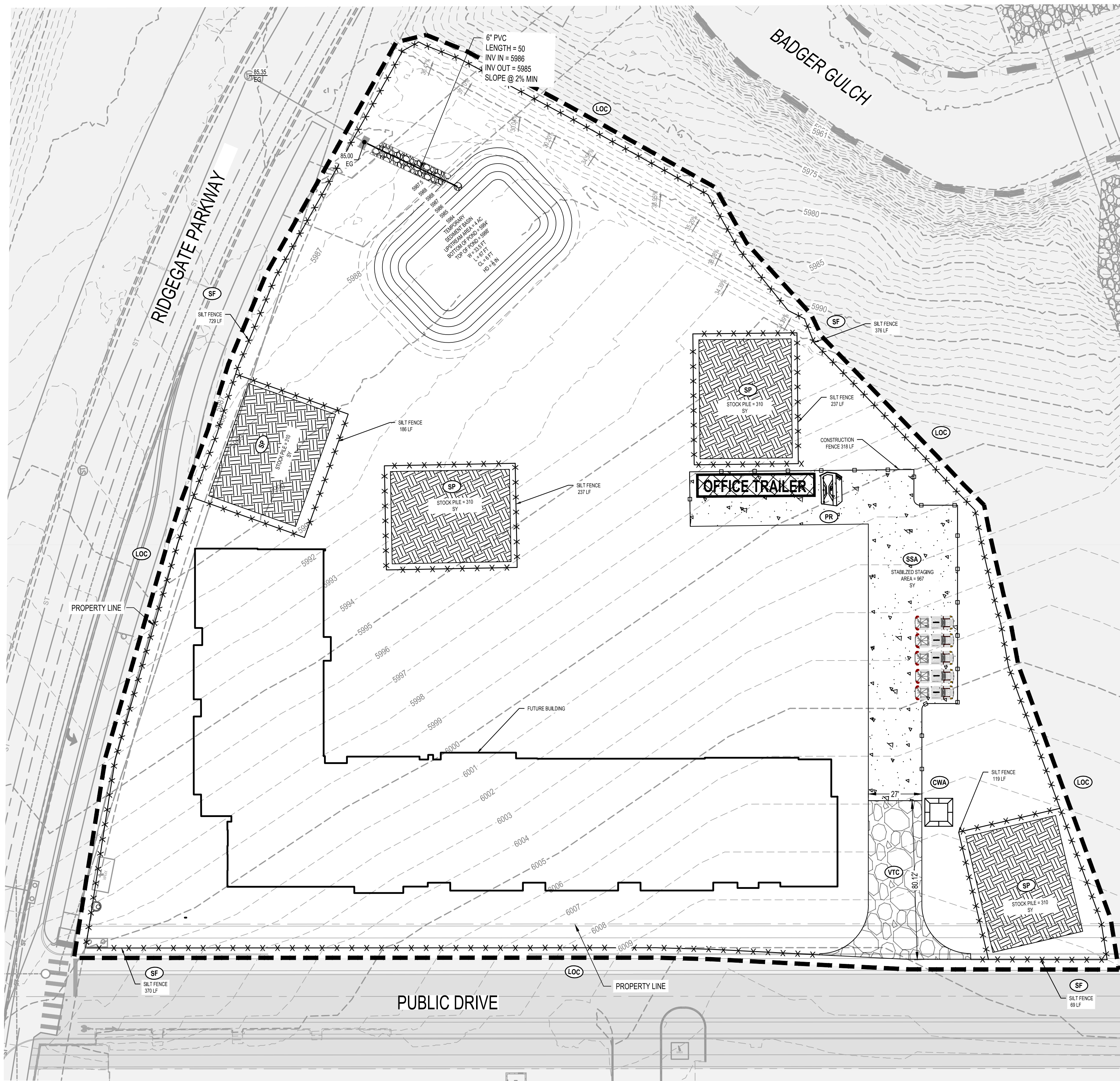
- APPROVED EROSION AND SEDIMENT CONTROL BMPs SHALL BE MAINTAINED AND KEPT IN GOOD REPAIR FOR THE DURATION OF THIS PROJECT. AT A MINIMUM, THE GESC MANAGER SHALL INSPECT ALL BMPs IN ACCORDANCE WITH THE ACCEPTED GESC PLAN AND GESC MANUAL. LEVEL III VIOLATIONS SHALL BE CORRECTED IMMEDIATELY AFTER THE PERMITTEE(S) NOTICE THE VIOLATION(S) OR ARE NOTIFIED OF THE VIOLATION(S). GENERALLY DOUGLAS COUNTY WILL REINSPECT FOR COMPLIANCE WITHIN 48 HOURS OF NOTIFICATION OF LEVEL III VIOLATIONS. LEVEL II VIOLATIONS SHALL BE CORRECTED IMMEDIATELY, OR AS DIRECTED BY A DOUGLAS COUNTY EROSION CONTROL INSPECTOR. ACCUMULATED SEDIMENT AND CONSTRUCTION DEBRIS SHALL BE REMOVED AND PROPERLY DISPOSED.
- STRAW BALES ARE NOT A DOUGLAS COUNTY ACCEPTED SEDIMENT CONTROL BMP.
- TOPSOIL SHALL BE STRIPPED AND STOCKPILED IN THE LOCATION SHOWN ON THE ACCEPTED GESC PLAN. THE GESC MANAGER SHALL SCHEDULE AN INSPECTION WITH THE DOUGLAS COUNTY EROSION CONTROL INSPECTOR AS SOON AS TOPSOIL STRIPPING IS COMPLETED. FAILURE TO SCHEDULE SUCH INSPECTION OR FAILURE TO STOCKPILE TOPSOIL SHALL RESULT IN ISSUANCE OF A STOP WORK ORDER. THE STOP WORK ORDER SHALL REMAIN IN PLACE UNTIL TOPSOIL IS STOCKPILED ON SITE OR APPROPRIATE SOIL AMENDMENTS ARE STOCKPILED ON SITE.
- THE ACCEPTED GESC PLAN MAY REQUIRE CHANGES OR ALTERATIONS AFTER APPROVAL TO MEET CHANGING SITE OR PROJECT CONDITIONS OR TO ADDRESS INEFFICIENCIES IN DESIGN OR INSTALLATION. THE GESC MANAGER SHALL OBTAIN PRIOR APPROVAL FROM THE DESIGN ENGINEER AND DOUGLAS COUNTY PUBLIC WORKS ENGINEERING FOR ANY PROPOSED CHANGES.
- LINING OF TEMPORARY SWALES AND DITCHES SHALL BE IN ACCORDANCE WITH THE GESC CRITERIA MANUAL.
- NO PERMANENT EARTH SLOPES GREATER THAN 3:1 SHALL BE ALLOWED.
- ANY SETTLEMENT OR SOIL ACCUMULATIONS BEYOND THE LIMITS OF CONSTRUCTION DUE TO GRADING OR EROSION SHALL BE REPAIRED IMMEDIATELY BY THE GESC MANAGER. THE GESC MANAGER SHALL BE HELD RESPONSIBLE FOR OBTAINING ACCESS RIGHTS TO ADJACENT PROPERTY, IF NEEDED, AND REMEDIATING ANY ADVERSE IMPACTS TO ADJACENT WATERWAYS, WETLANDS, PROPERTIES, ETC. RESULTING FROM WORK DONE AS PART OF THIS PROJECT.
- A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
- SOILS THAT WILL BE STOCKPILED FOR MORE THAN THIRTY (30) DAYS SHALL BE SEEDED AND MULCHED WITHIN FOURTEEN (14) DAYS OF STOCKPILE CONSTRUCTION. NO STOCKPILES SHALL BE PLACED WITHIN ONE HUNDRED (100) FEET OF A DRAINAGE WAY UNLESS APPROVED BY THE DOUGLAS COUNTY PUBLIC WORKS ENGINEERING.
- ALL CHEMICAL OR HAZARDOUS MATERIAL SPILLS WHICH MAY ENTER WATERS OF THE STATE OF COLORADO, WHICH INCLUDE BUT ARE NOT LIMITED TO, SURFACE WATER, GROUND WATER AND DRY GULLIES OR STORM SEWER LEADING TO SURFACE WATER, SHALL BE IMMEDIATELY REPORTED TO THE CDPHE PER CRS 25-8-601, AND DOUGLAS COUNTY. RELEASES OF PETROLEUM PRODUCTS AND CERTAIN HAZARDOUS SUBSTANCES LISTED UNDER THE FEDERAL CLEAN WATER ACT (40 CFR PART 116) MUST BE REPORTED TO THE NATIONAL RESPONSE CENTER AS WELL AS THE CDPHE. CONTACT INFORMATION FOR CDPHE, DOUGLAS COUNTY AND THE NATIONAL RESPONSE CENTER CAN BE FOUND IN APPENDIX A OF THE GESC MANUAL, AS AMENDED. SPILLS THAT POSE AN IMMEDIATE RISK TO HUMAN LIFE SHALL BE REPORTED TO 911. FAILURE TO REPORT AND CLEAN UP ANY SPILL MAY RESULT IN ISSUANCE OF A STOP WORK ORDER.
- ALL WORK ON SITE SHALL STAY A MINIMUM OF ONE HUNDRED (100) FEET AWAY FROM ANY DRAINAGEWAY, WETLAND, ETC. UNLESS OTHERWISE NOTED ON AN ACCEPTED DOUGLAS COUNTY GESC PLAN.
- ALL PROJECTS SHALL BALANCE EARTHWORK QUANTITIES ON SITE. IN THE EVENT A VARIANCE IS GRANTED BY THE COUNTY DIRECTOR OF ENGINEERING SERVICES TO ALLOW IMPORT OR EXPORT OF MATERIAL, THE PERMITTEE SHALL HAVE A GESC PERMIT IN HAND FOR THE IMPORT OR EXPORT SITE PRIOR TO ANY TRANSPORTING OF EARTHEN MATERIAL. THE GESC MANAGER SHALL NOTIFY THE DOUGLAS COUNTY EROSION CONTROL INSPECTOR OF THE LOCATION AND PERMIT NUMBERS OF BOTH THE EXPORTING AND IMPORTING SITES PRIOR TO ANY IMPORT/ EXPORT OPERATIONS.
- THE USE OF REBAR, STEEL STAKES OR STEEL FENCE POSTS FOR STAKING OR SUPPORT OF ANY EROSION OR SEDIMENT CONTROL BMP IS PROHIBITED (EXCEPT STEEL TEE-POSTS FOR USE IN SUPPORTING CONSTRUCTION FENCE).
- THE CLEANING OF CONCRETE DELIVERY TRUCK CHUTES IS RESTRICTED TO APPROVED CONCRETE WASH OUT LOCATIONS ON THE JOB SITE. THE DISCHARGE OF WATER CONTAINING WASTE CONCRETE TO THE STORM SEWER SYSTEM IS PROHIBITED. ALL CONCRETE WASTE SHALL BE PROPERLY CLEANED UP AND DISPOSED AT AN APPROPRIATE LOCATION.
- ALL DEWATERING ON SITE SHALL BE COORDINATED WITH A DOUGLAS COUNTY EROSION CONTROL INSPECTOR AND BE FREE OF SEDIMENT IN ACCORDANCE WITH THE GESC MANUAL.
- ALL PERMANENT INSTALLATIONS OF PIPES FOR STORM SEWERS, SLOPE DRAINS, AND CULVERTS, TOGETHER WITH RIPRAP APRONS OR OTHER INLET AND OUTLET PROTECTION, REQUIRE INSPECTION BY DOUGLAS COUNTY PUBLIC WORKS ENGINEERING (SEPARATE FROM GESC INSPECTIONS).
- ALL DISTURBED AREAS SHALL BE DRILL SEEDED AND CRIMP MULCHED IN ACCORDANCE WITH THE GESC CRITERIA MANUAL WITHIN THIRTY (30) DAYS OF INITIAL EXPOSURE OR WITHIN FOURTEEN (14) DAYS OF SUBSTANTIAL COMPLETION (AS DEFINED BY DOUGLAS COUNTY) OF AN AREA, WHICHEVER IS LESS. THIS MAY REQUIRE MULTIPLE MOBILIZATIONS FOR SEEDING AND MULCHING.
- ALL SLOPES STEEPER THEN 4:1 REQUIRE EROSION CONTROL BLANKETING.
- HYDRAULIC SEEDING AND HYDRAULIC MULCHING ARE NOT AN ACCEPTABLE METHOD OF SEEDING OR MULCHING IN DOUGLAS COUNTY.
- NO CURB AND GUTTER PERMITS SHALL BE ISSUED UNTIL ALL DISTURBED AREAS ARE DRILL SEEDED AND CRIMP MULCHED.
- NO PAVING PERMITS SHALL BE ISSUED UNTIL ALL INTERIM INLET PROTECTION IS INSTALLED AND APPROVED BY THE EROSION CONTROL INSPECTOR.
- A GESC INSPECTION SHALL BE CONDUCTED FOR CERTIFICATE OR TEMPORARY CERTIFICATE OF OCCUPANCY OR INITIAL ACCEPTANCE.
- GESC MANAGER SHALL PROVIDE AND MAINTAIN PORTABLE TOILETS AND TRASH DUMPSTERS FOR THE PROJECT.

DETAIL SHEET
NO. NO.

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	14

BMP LEGEND

	CD	CHECK DAM
	CB	COMPOST BLANKET
	CFB	COMPOST FILTER BERM
	CWA	CONCRETE WASHOUT AREA
	CF	CONSTRUCTION FENCE
	CM	CONSTRUCTION MARKER
	CS	CURB SOCK
	DW	DEWATERING
	DD	DIVERSION DITCH
	ECB	EROSION CONTROL BLANKET
	IP	INLET PROTECTION
	RCD	REINFORCED CHECK DAM
	RRB	REINFORCED ROCK BERM
	RRC	RRB FOR CULVERT PROTECTION
	SB	SEDIMENT BASIN
	SCL	SEDIMENT CONTROL LOG
	ST	SEDIMENT TRAP
	SM	SEEDING AND MULCHING
	SF	SILT FENCE
	SSA	STABILIZED STAGING AREA
	SR	SURFACE ROUGHENING
	TSD	TEMPORARY SLOPE DRAIN
	TSC	TEMPORARY STREAM CROSSING
	TER	TERRACING
	VTC	VEHICLE TRACKING CONTROL
	WW	VTC WITH WHEEL WASH
		ROCK AND RIPRAP GRADATIONS
	LOC	LIMITS OF CONSTRUCTION



NOTE: SEE COVER SHEET OF LONE TREE STANDARDS NOTES AND DETAILS (SHEET 1 OF 3) FOR LEGEND OF BMP NAMES AND SYMBOLS.



KEYMAP

INITIAL GESC NOTES

1. SEE COVER SHEET OF LONE TREE STANDARD NOTES AND DETAILS (SHEET 1 OF 3) FOR LEGEND OF BMP NAMES AND SYMBOLS.
2. SEE CONSTRUCTION PLANS FOR DETAILS OF PERMANENT DRAINAGE FACILITIES, WATER QUALITY FACILITIES, CULVERTS, STORM DRAINS, AND OUTLET PROTECTION.
3. PORTABLE TOILETS SHALL BE PROVIDED NEAR THE STABILIZED STAGING AREA, PLACED ON A PVIOUS SURFACE, AND STAKED DOWN ON ALL FOUR SIDES.
4. ALL ADJACENT PAVED ROADS SHALL BE KEPT CLEAN AT ALL TIMES AND TRACKOUT SHALL BE CLEANED IMMEDIATELY USING DRY METHODS.

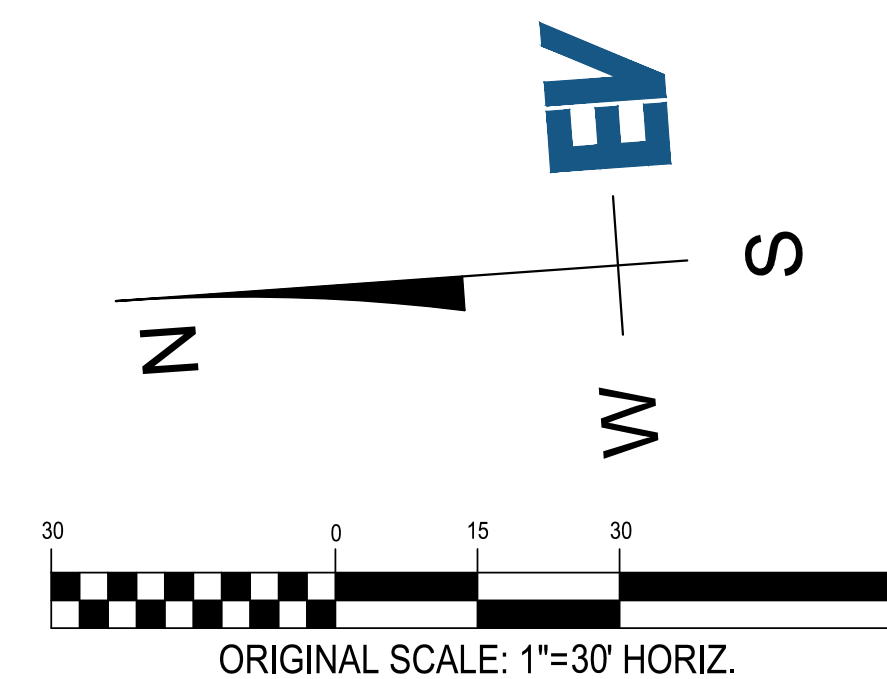
LEGEND

- | | | |
|-----------------|-----------------|---------------|
| EXISTING | PROPOSED | |
| --- | --- | MAJOR CONTOUR |
| --- | --- | MINOR CONTOUR |
| → | → | FLOW ARROW |

BMP LEGEND		UNIT	QTY
	(CWA) CONCRETE WASHOUT AREA	EA	1
	(CF) CONSTRUCTION FENCE	LF	345
	(ECB) EROSION CONTROL BLANKET	SY	895
	(IP) INLET PROTECTION	EA	7
	(SB) SEDIMENT BASIN	EA	1
	(SM) SEEDING AND MULCHING	AC	1.44
	(SF) SILT FENCE	LF	2323
	(SSA) STABILIZED STAGING AREA	SY	967
	(VTC) VEHICLE TRACKING CONTROL	EA	1
	(LOC) LIMITS OF CONSTRUCTION	LF	1657
	(PR) PORTABLE RESTROOM	EA	1

BENCHMARK

PROJECT BENCHMARK IS RIDGEGATE BM 1, A 3.25" DIAMETER BRASS CAP SET ON THE NORTHWEST BRIDGE ABUTMENT OF RIDGEGATE PARKWAY STAMPED "RIDGEGATE BM 1 2021" AND IS APPROXIMATELY 0.7 MILES EAST ON RIDGEGATE PARKWAY FROM THE INTERSECTION OF I-25 AND RIDGEGATE PARKWAY IN LONE TREE, COLORADO. THE BENCHMARK IS 1 FOOT FROM THE WEST EDGE OF THE ABUTMENT, 3 FEET NORTH OF THE BACK OF WALK, AND 31 FEET NORTH OF THE WEST BOUND CENTERLINE OF RIDGEGATE PARKWAY. ELEVATION IS 5983.40 U.S. SURVEY FEET, NAVD 88 DOUGLAS COUNTY DATUM.

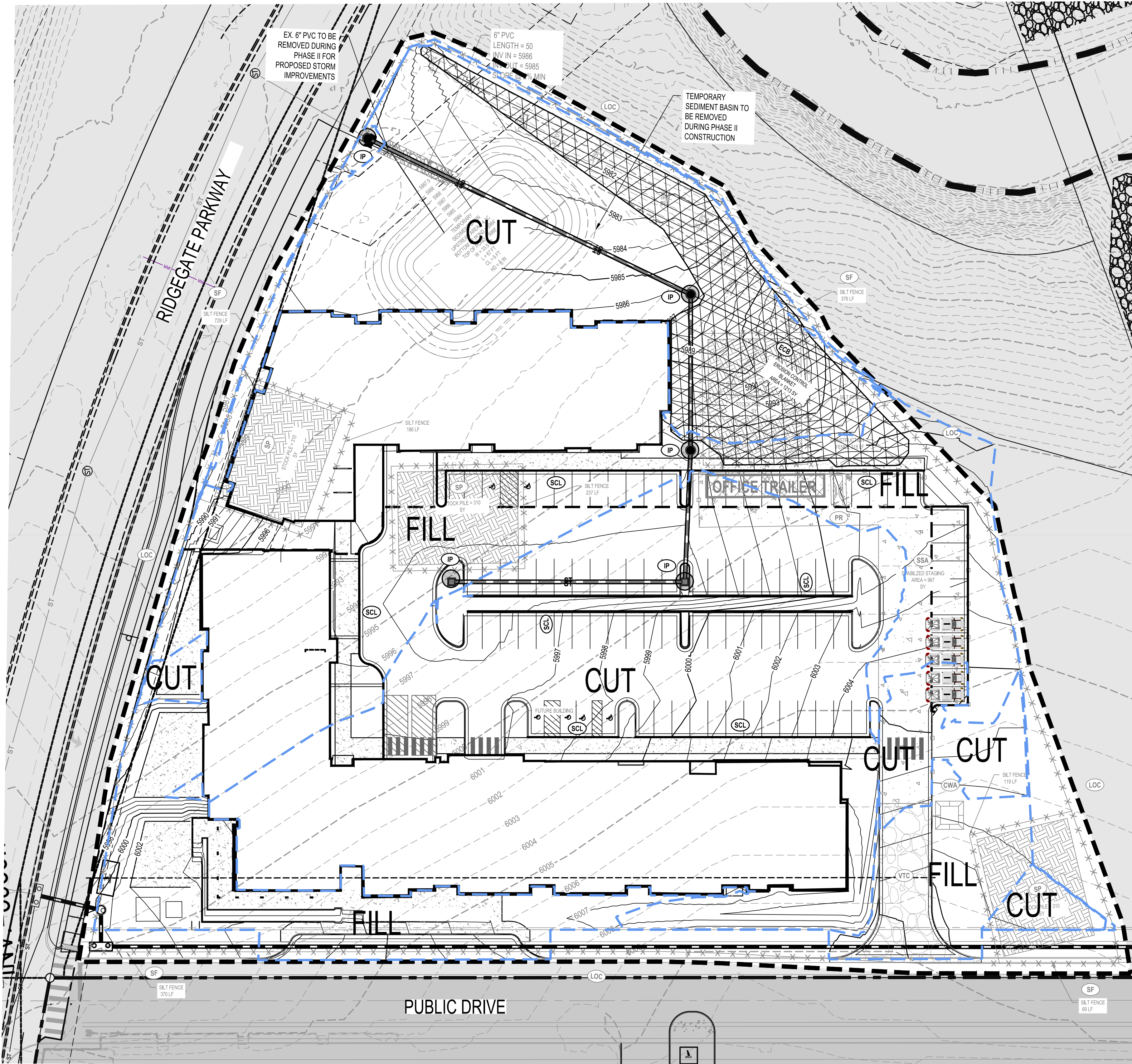


ASSISTANT DIRECTOR OF DEVELOPMENT REVIEW

DATE

THESE CONSTRUCTION DRAWINGS HAVE BEEN REVIEWED BY DOUGLAS COUNTY FOR GRADING, EROSION AND SEDIMENT CONTROL IMPROVEMENTS ONLY.

ENGINEERING DIVISION ACCEPTANCE BLOCK



Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
Earthwork	1.150	1.150	152355.72 Sq. Ft.	12432.67 Cu. Yd.	8195.48 Cu. Yd.	4237.19 Cu. Yd.<Cut>
Totals			152355.72 Sq. Ft.	12432.67 Cu. Yd.	8195.48 Cu. Yd.	4237.19 Cu. Yd.<Cut>

NOTE: SEE COVER SHEET OF LONE TREE STANDARDS NOTES AND DETAILS (SHEET 1 OF 3) FOR LEGEND OF BMP NAMES AND SYMBOLS.



KEYMAP

INTERIM GESC NOTES

1. SEE COVER SHEET OF LONE TREE STANDARD NOTES AND DETAILS (SHEET 1 OF 3) FOR LEGEND OF BMP NAMES AND SYMBOLS.
2. SHADED BMPs WERE INSTALLED IN THE INITIAL STAGE AND SHALL BE LEFT IN PLACE IN THE INTERIM STAGE UNLESS OTHERWISE NOTED.
3. SEE CONSTRUCTION PLANS FOR DETAILS OF PERMANENT DRAINAGE FACILITIES, WATER QUALITY FACILITIES, CULVERTS, STORM DRAINS, AND OUTLET PROTECTION.

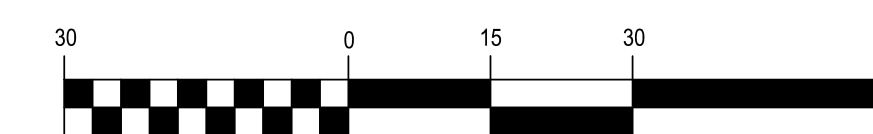
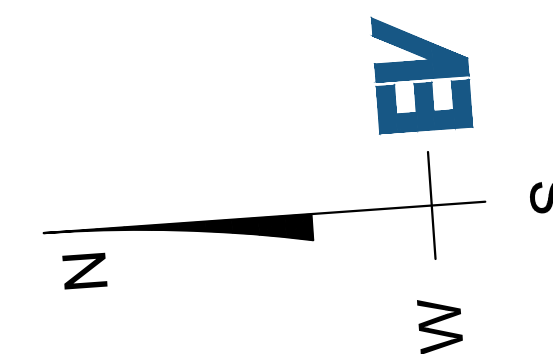
LEGEND

- | EXISTING | PROPOSED | |
|----------|----------|---------------|
| | | MAJOR CONTOUR |
| | | MINOR CONTOUR |
| | | FLOW ARROW |

BMP LEGEND		UNIT	QTY
	(CWA) CONCRETE WASHOUT AREA	EA	1
	(CF) CONSTRUCTION FENCE	LF	345
	(ECB) EROSION CONTROL BLANKET	SY	1213
	(IP) INLET PROTECTION	EA	7
	(SB) SEDIMENT BASIN	EA	1
	(SCL) SEDIMENT CONTROL LOG	LF	2363
	(SM) SEEDING AND MULCHING	AC	1.44
	(SF) SILT FENCE	LF	2323
	(SSA) STABILIZED STAGING AREA	SY	967
	(VTC) VEHICLE TRACKING CONTROL	EA	1
	(LOC) LIMITS OF CONSTRUCTION	LF	1657
	(PR) PORTABLE RESTROOM	EA	1

BENCHMARK

PROJECT BENCHMARK IS RIDGEGATE BM 1, A 3.25" DIAMETER BRASS CAP SET ON THE NORTHWEST BRIDGE ABUTMENT OF RIDGEGATE PARKWAY STAMPED "RIDGEGATE BM 1 2021" AND IS APPROXIMATELY 0.7 MILES EAST ON RIDGEGATE PARKWAY FROM THE INTERSECTION OF I-25 AND RIDGEGATE PARKWAY IN LONE TREE, COLORADO. THE BENCHMARK IS 1 FOOT FROM THE WEST EDGE OF THE ABUTMENT, 3 FEET NORTH OF THE BACK OF WALK, AND 31 FEET NORTH OF THE WEST BOUND CENTERLINE OF RIDGEGATE PARKWAY. ELEVATION IS 5983.40 U.S. SURVEY FEET, NAVD 88 DOUGLAS COUNTY DATUM.



ORIGINAL SCALE: 1"=30' HORIZ.

ASSISTANT DIRECTOR OF DEVELOPMENT REVIEW

DATE

THESE CONSTRUCTION DRAWINGS HAVE BEEN REVIEWED BY DOUGLAS COUNTY FOR GRADING, EROSION AND SEDIMENT CONTROL IMPROVEMENTS ONLY.

ENGINEERING DIVISION ACCEPTANCE BLOCK



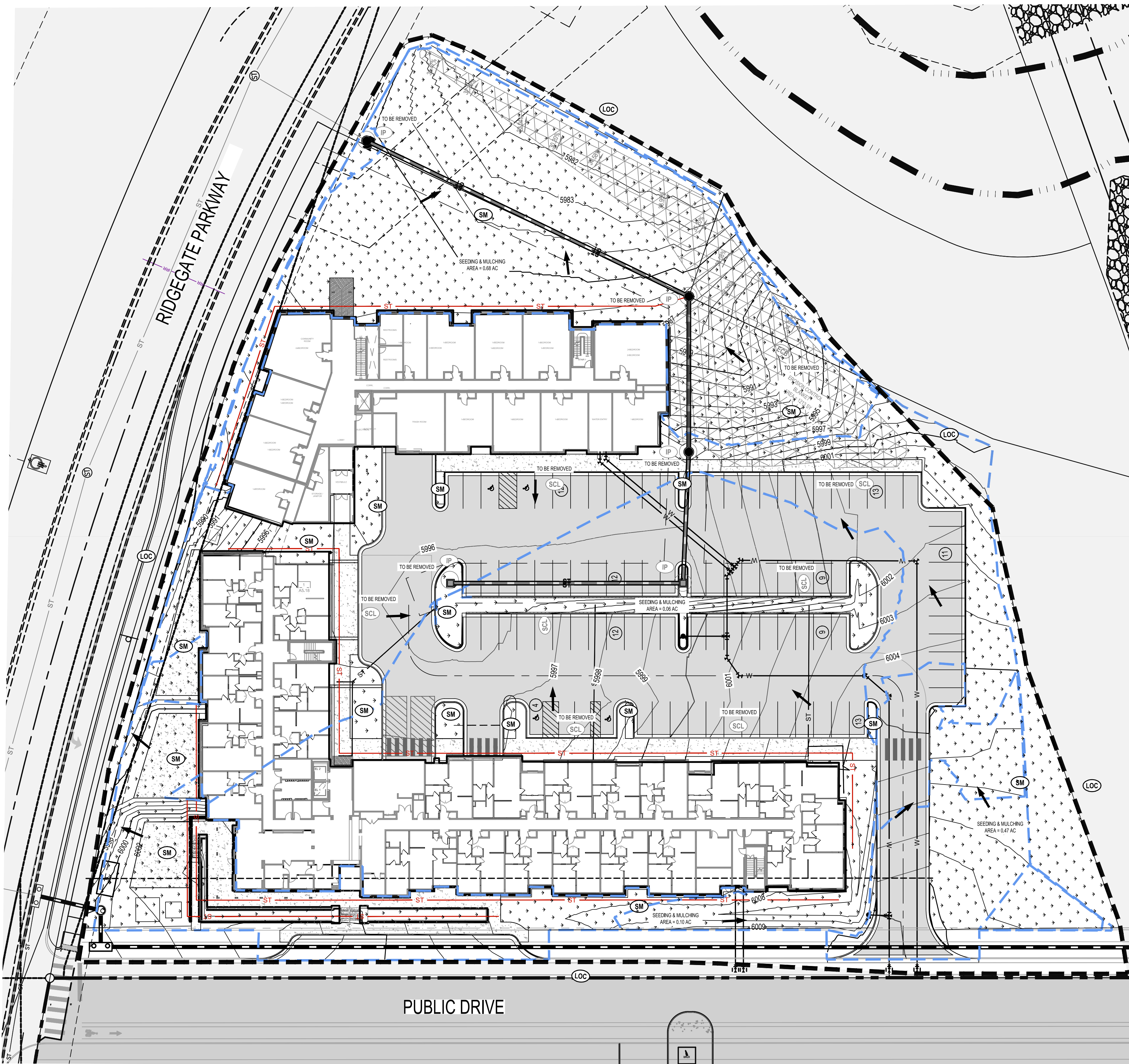
FOR MARKING OF UNDERGROUND MEMBER UTILITIES. EVSTUDIO ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

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REVISION:

DATE: 09/08/2023
DRAWN BY: AMT & TAL
CHECKED BY: BMW

INTERIM GESC PLAN



KEYMAP

FINAL GESC NOTES

1. SEE COVER SHEET OF LONE TREE STANDARD NOTES AND DETAILS (SHEET 1 OF 3) FOR LEGEND OF BMP NAMES AND SYMBOLS.
2. BMPs, UNLESS OTHERWISE INDICATED, SHALL BE LEFT IN PLACE UNTIL REVEGETATION ESTABLISHMENT IS APPROVED BY THE CITY.
3. SEE CONSTRUCTION PLANS FOR DETAILS OF PERMANENT DRAINAGE FACILITIES, WATER QUALITY FACILITIES, CULVERTS, STORM DRAINS, AND OUTLET PROTECTION. THE FOLLOWING BMPs SHALL BE REMOVED AT THE END OF CONSTRUCTION; SSA, SB, VTC, CF, CM, SM, SR, IP, SF, AND SCL.
4. ALL INTERIM EROSION AND SEDIMENT CONTROL BMPs INCLUDING SEEDING AND MULCHING OF DISTURBED AREAS MUST BE INSTALLED, INSPECTED, AND APPROVED BY THE CITY PRIOR TO THE ISSUANCE OF A RIGHT-OF-WAY USE AND CONSTRUCTION PERMIT FOR THE PURPOSE OF PAVING OR INSTALLATION OF CURB AND GUTTER.

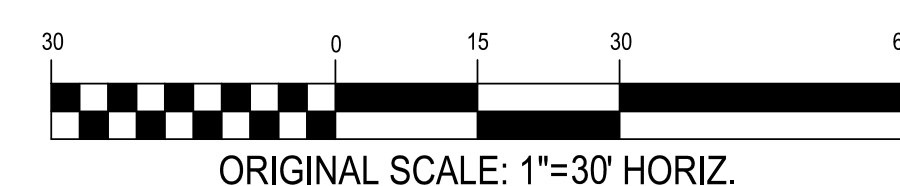
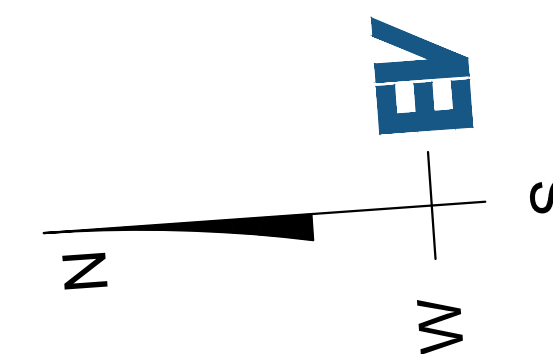
LEGEND

- | | | |
|----------|----------|---------------|
| EXISTING | PROPOSED | |
| --- | --- | MAJOR CONTOUR |
| --- | --- | MINOR CONTOUR |
| --- | --- | FLOW ARROW |

BMP LEGEND		UNIT	QTY
	CWA CONCRETE WASHOUT AREA	EA	1
	CF CONSTRUCTION FENCE	LF	345
	ECB EROSION CONTROL BLANKET	SY	895
	IP INLET PROTECTION	EA	7
	SB SEDIMENT BASIN	EA	1
	SM SEEDING AND MULCHING	AC	1.44
	SF SILT FENCE	LF	2323
	SSA STABILIZED STAGING AREA	SY	967
	VTC VEHICLE TRACKING CONTROL	EA	1
	LOC LIMITS OF CONSTRUCTION	LF	1657
	PR PORTABLE RESTROOM	EA	1

BENCHMARK

PROJECT BENCHMARK IS RIDEGATE BM 1, A 3.25" DIAMETER BRASS CAP SET ON THE NORTHWEST BRIDGE ABUTMENT OF RIDEGATE PARKWAY STAMPED "RIDEGATE BM 1 2021" AND IS APPROXIMATELY 0.7 MILES EAST ON RIDEGATE PARKWAY FROM THE INTERSECTION OF I-25 AND RIDEGATE PARKWAY IN LONE TREE, COLORADO. THE BENCHMARK IS 1 FOOT FROM THE WEST EDGE OF THE ABUTMENT, 3 FEET NORTH OF THE BACK OF WALK, AND 31 FEET NORTH OF THE WEST BOUND CENTERLINE OF RIDEGATE PARKWAY. ELEVATION IS 5983.40 U.S. SURVEY FEET, NAVD 88 DOUGLAS COUNTY DATUM.



Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
Earthwork	1.150	1.150	152355.72 Sq. Ft.	12432.67 Cu. Yd.	8195.48 Cu. Yd.	4237.19 Cu. Yd.<Cut>
Totals			152355.72 Sq. Ft.	12432.67 Cu. Yd.	8195.48 Cu. Yd.	4237.19 Cu. Yd.<Cut>

NOTE: SEE COVER SHEET OF LONE TREE STANDARDS NOTES AND DETAILS (SHEET 1 OF 3) FOR LEGEND OF BMP NAMES AND SYMBOLS.

EVstudio
 Denver, CO
 Evergreen, CO
 303.670.7242
 design@evstudio.com
 inspections@evstudio.com
 www.evstudio.com

Contact:
 Brian Welch, PE
 brian.welch@evstudio.com
 303.670.7242 x50

UTILITY NOTIFICATION CENTER
The Promise.com

FOR MARKING OF UNDERGROUND MEMBER UTILITIES. EVSTUDIO ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

RIDEGATE SENIOR
 LONE TREE, CO
 22A037

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REVISION:

DATE:	09/08/2023
DRAWN BY:	AMT & TAL
CHECKED BY:	BMW

ASSISTANT DIRECTOR OF DEVELOPMENT REVIEW

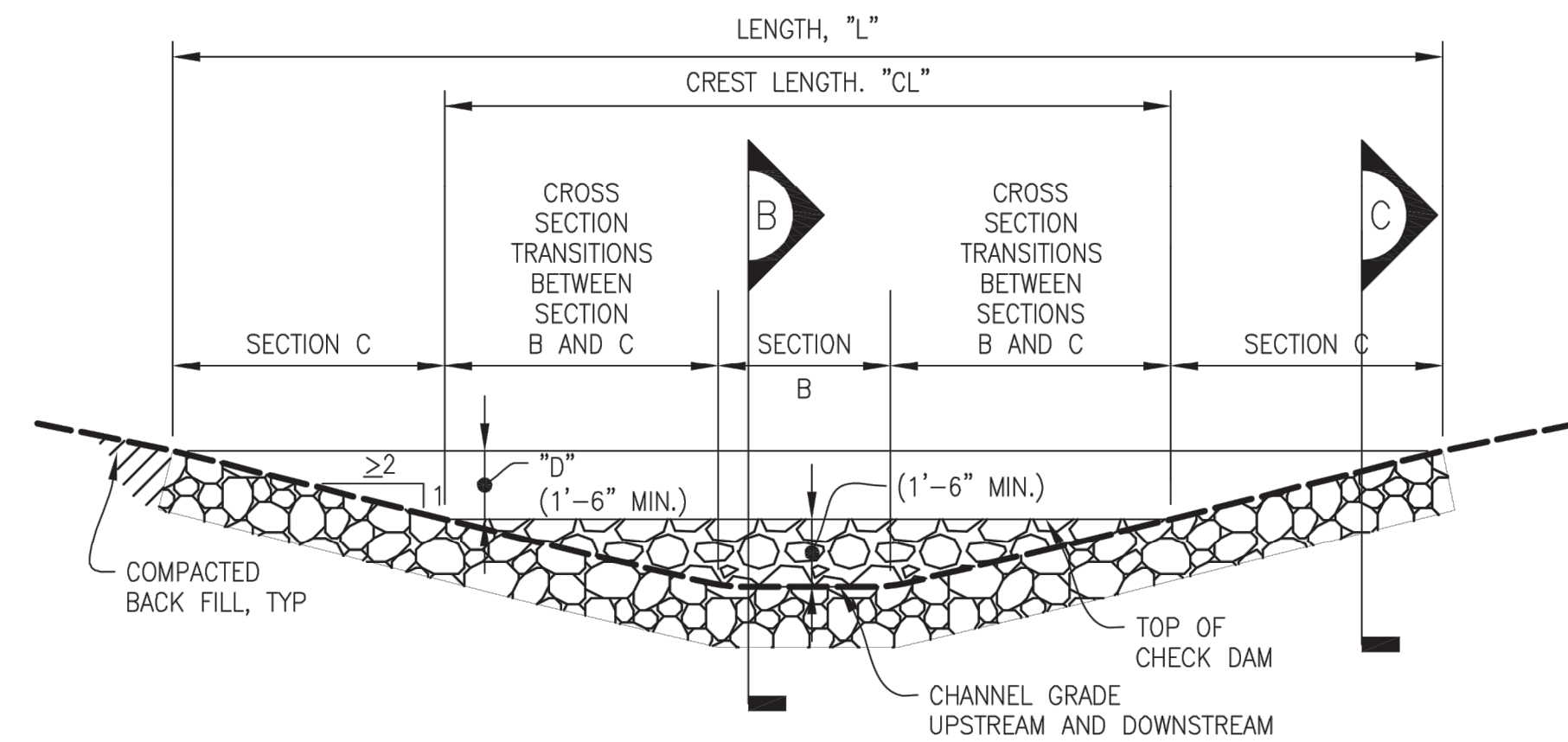
DATE

THESE CONSTRUCTION DRAWINGS HAVE BEEN REVIEWED BY DOUGLAS COUNTY FOR GRADING, EROSION AND SEDIMENT CONTROL IMPROVEMENTS ONLY.

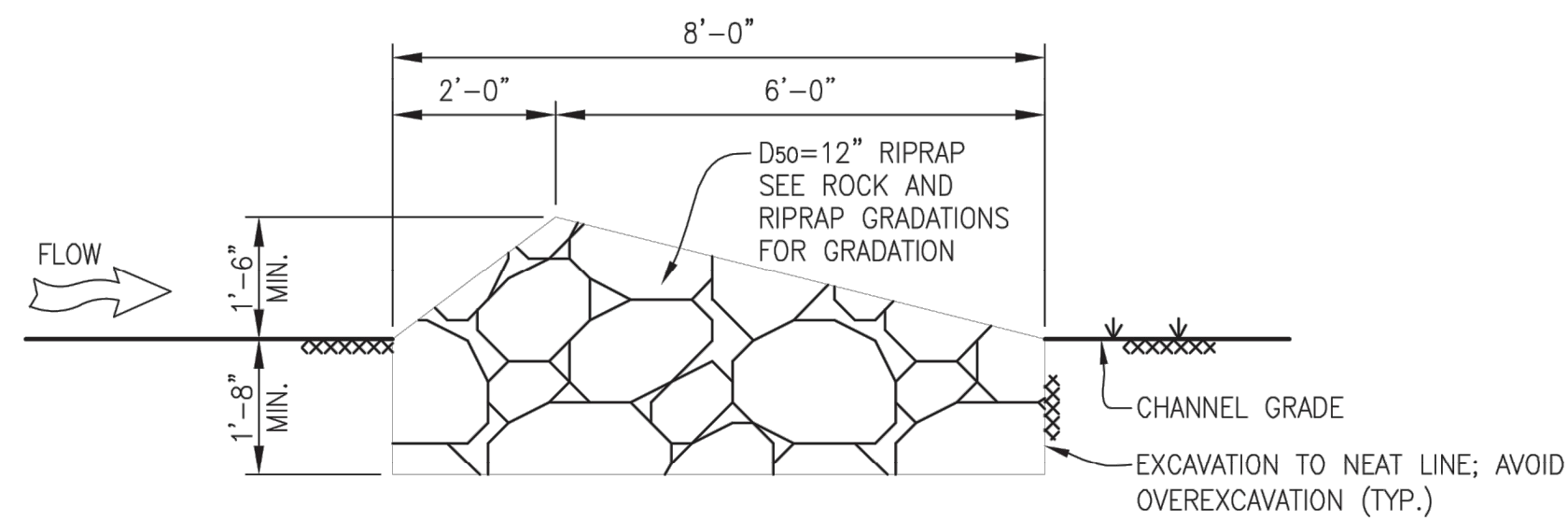
ENGINEERING DIVISION ACCEPTANCE BLOCK

FINAL GESC PLAN

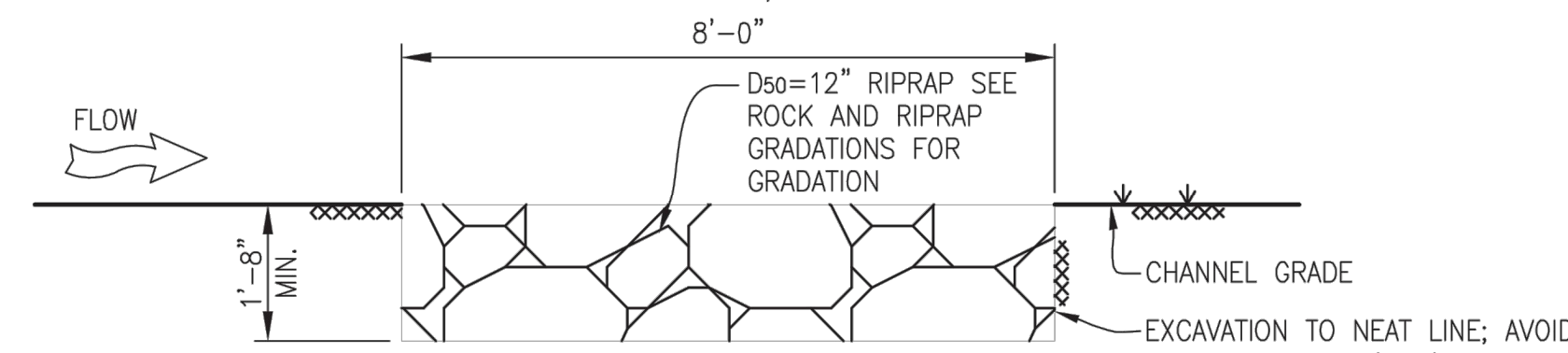
E-3



ELEVATION
SCALE: 1" = 5'-0"



SECTION B
SCALE: 1/2" = 1'-0"



SECTION C
SCALE: 1/2" = 1'-0"

CHECK DAM INSTALLATION NOTES

- SEE PLAN VIEW FOR:
- LOCATIONS OF CHECK DAMS.
- CHECK DAM TYPE (CHECK DAM OR REINFORCED CHECK DAM).
- LENGTH, "L", CREST LENGTH, "CL", AND DEPTH, "D".
- CHECK DAMS INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED AFTER CONSTRUCTION FENCE, BUT PRIOR TO ANY UPSTREAM LAND-DISTURBING ACTIVITIES.
- RIPRAP UTILIZED FOR CHECK DAMS SHALL HAVE A D₅₀ MEDIAN STONE SIZE OF 12".
- RIPRAP PAD SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF 1'-8".
- THE ENDS OF THE CHECK DAM SHALL BE A MINIMUM OF 1'-6" HIGHER THAN THE CENTER OF THE CHECK DAM.

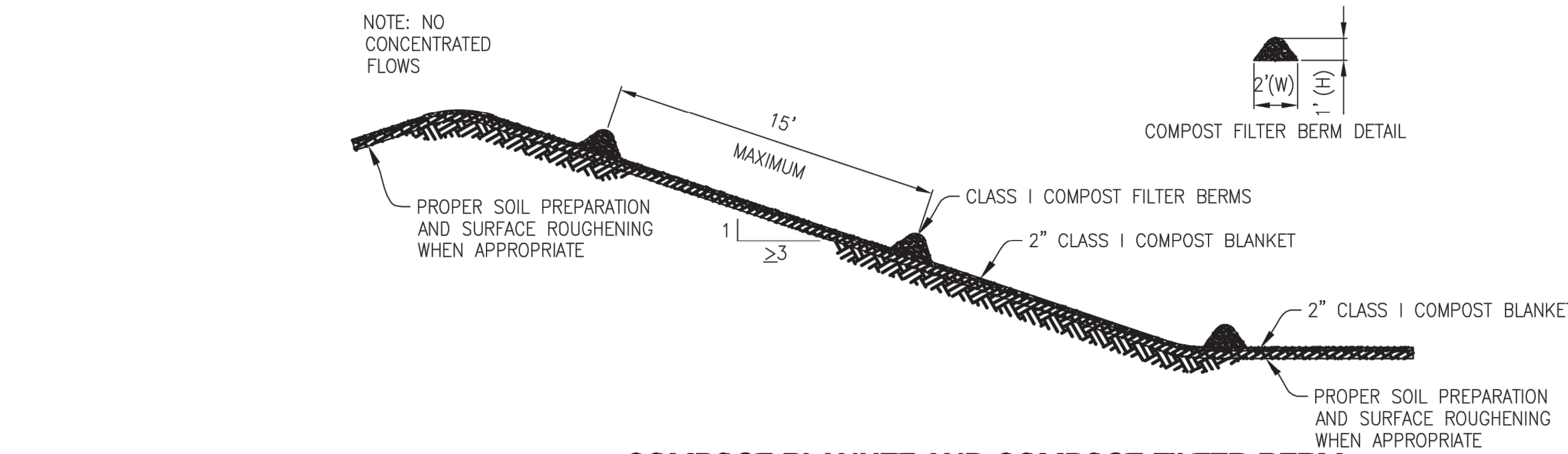
CHECK DAM MAINTENANCE NOTES

- THE RECOMMENDED INSPECTION FREQUENCY FOR CHECK DAMS IS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT AS NECESSARY.
- SEDIMENT ACCUMULATED UPSTREAM OF CHECK DAMS SHALL BE REMOVED WHEN THE SEDIMENT DEPTH UPSTREAM OF CHECK DAM IS WITHIN 1/2 OF THE HEIGHT OF THE CREST.
- CHECK DAMS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND VEGETATED COVER IS APPROVED BY THE COUNTY.
- WHEN CHECK DAMS ARE REMOVED, EXCAVATIONS SHALL BE FILLED WITH SUITABLE COMPACTED BACKFILL. ANY DISTURBED AREA SHALL BE SEEDED AND MULCHED AND COVERED WITH EROSION CONTROL BLANKET OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.



CHECK DAM

1



COMPOST BLANKET AND COMPOST FILTER BERM
SCALE: 1" = 5'-0"

COMPOST BLANKET NOTES:

- SEE PLAN VIEW FOR AREA OF COMPOST BLANKET.
- MAY BE USED IN PLACE OF STRAW MULCH OR EROSION CONTROL BLANKET IN AREAS WHERE ACCESS IS DIFFICULT DUE TO LANDSCAPING OR OTHER OBJECTS OR IN AREAS WHERE A SMOOTH TURF GRASS FINISH IS DESIRED.
- SHALL ONLY BE UTILIZED IN AREAS WHERE SHEET FLOW CONDITIONS PREVAIL; SHALL BE PROHIBITED IN AREAS OF POSSIBLE CONCENTRATED FLOW.
- SOIL PREPARATION SHALL BE COMPLETE PER THE SPECIFICATIONS OUTLINED IN THESE CRITERIA PRIOR TO APPLICATION.
- WHEN TURF GRASS FINISH IS NOT DESIRED, SURFACE ROUGHENING ON SLOPES SHALL TAKE PLACE PRIOR TO APPLICATION.
- SHALL BE EVENLY APPLIED AT A DEPTH OF 2 INCH.
- MAYBE APPLIED UTILIZING PNEUMATIC BLOWER, OR BY HAND.
- SEEDING SHALL BE DRILLED PRIOR TO THE APPLICATION OF COMPOST OR SEED MAY BE COMBINED AND BLOWN WITH THE PNEUMATIC BLOWER.
- COMPOST FILTER BERM SHALL BE UTILIZED ON SLOPES WITH A MAXIMUM SPACING OF 15 FEET PER THE REQUIREMENTS FOUND IN THE COMPOST FILTER BERM SECTION.
- THE RECOMMENDED INSPECTION FREQUENCY IS WEEKLY, DURING AND AFTER ANY STORM EVENT.
- COMPOST USED IN THE APPLICATION OF THE COMPOST BLANKET SHALL BE A CLASS I COMPOST AS DEFINED BY THE FOLLOWING PHYSICAL, CHEMICAL, AND BIOLOGICAL PARAMETERS:

PARAMETERS	CLASS I COMPOST FOR COMPOST BLANKET
MINIMUM STABILITY INDICATOR	STABLE TO VERY STABLE
SOLUBLE SALTS	MAXIMUM 5mmhos/cm
PH	6.0 - 8.0
AG INDEX	> 10
MATURITY INDICATOR EXPRESSED AS PERCENTAGE OF GERMINATION/VIGOR	80+/80+
MATURITY INDICATOR EXPRESSED AS AMMONIA N/ NITRATE N RATIO	< 4
MATURITY INDICATOR EXPRESSED AS CARBON TO NITROGEN RATIO	20:1
TESTED FOR CLOPYRALID	YES/NEGATIVE RESULT
MOISTURE CONTENT	30-60 %
ORGANIC MATTER CONTENT	25-45 % OF DRY WEIGHT
PARTICLE SIZE DISTRIBUTION	3" (75mm) 100% PASSING 1" (25mm) 95% TO 100% PASSING 3/4" (19mm) 85% TO 90% PASSING 3/8" (9.5mm) 50% TO 60% PASSING #4 20 TO 35% PASSING
PRIMARY, SECONDARY NUTRIENTS; TRACE ELEMENT	MUST BE REPORTED
TESTING AND TEST REPORT SUBMITTAL REQUIREMENTS	STA + CLOPYRALID
ORGANIC MATTER PER CUBIC YARD	MUST REPORT
CHEMICAL CONTAMINANTS	MEET OR EXCEED US EPA CLASS A STANDARD, 40 CFR 503.1 TABLES 1 & 3 LEVELS
MINIMUM MANUFACTURING/PRODUCTION REQUIREMENT	FULLY PERMITTED UNDER COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, HAZARDOUS MATERIALS AND WASTE MANAGEMENT DIVISION
RISK FACTOR RELATING TO PLANT GERMINATION AND HEALTH	LOW

NOTE: CLOPYRALID IS THE COMMON NAME OF A HERBICIDE THAT KILLS BROAD-LEAVED WEEDS SUCH AS DANDELIONS, CLOVER AND THISTLE.

COMPOST FILTER BERM NOTES:

- SEE PLAN VIEW FOR LENGTH OF COMPOST FILTER BERM.
- SHALL BE APPLIED TO ALL SLOPES RECEIVING A COMPOST BLANKET AT 15' INCREMENTS.
- FILTER BERMS SHALL RUN PARALLEL TO THE CONTOUR.
- FILTER BERMS SHALL BE A MINIMUM OF 1' H x 2' W.
- FILTER BERMS SHALL BE APPLIED UTILIZING PNEUMATIC BLOWER, OR BY HAND.
- SHALL ONLY BE UTILIZED IN AREAS WHERE SHEET FLOW CONDITIONS PREVAIL; SHALL BE PROHIBITED IN AREAS OF POSSIBLE CONCENTRATED FLOW.
- SOIL PREPARATION SHALL BE COMPLETE PER THE SPECIFICATIONS OUTLINED IN THESE CRITERIA PRIOR TO APPLICATION.
- WHEN TURF GRASS FINISH IS NOT DESIRED, SURFACE ROUGHENING ON SLOPES SHALL TAKE PLACE PRIOR TO APPLICATION.
- SEEDING SHALL BE DRILLED BEFORE THE APPLICATION OF COMPOST OR SEED MAY BE COMBINED AND BLOWN WITH THE PNEUMATIC BLOWER.
- THE RECOMMENDED INSPECTION FREQUENCY IS WEEKLY, DURING AND AFTER ANY STORM EVENT.
- COMPOST USED IN THE APPLICATION OF THE COMPOST BLANKET SHALL BE A CLASS I COMPOST AS DEFINED BY THE FOLLOWING PHYSICAL, CHEMICAL, AND BIOLOGICAL PARAMETERS:

PARAMETERS	CLASS I COMPOST FOR COMPOST FILTER BERM
MINIMUM STABILITY INDICATOR	STABLE TO VERY STABLE
SOLUBLE SALTS	MAXIMUM 5mmhos/cm
PH	6.0 - 8.0
AG INDEX	> 10
MATURITY INDICATOR EXPRESSED AS PERCENTAGE OF GERMINATION/VIGOR	80+/80+
MATURITY INDICATOR EXPRESSED AS AMMONIA N/ NITRATE N RATIO	< 4
MATURITY INDICATOR EXPRESSED AS CARBON TO NITROGEN RATIO	20:1
TESTED FOR CLOPYRALID	YES/NEGATIVE RESULT
MOISTURE CONTENT	30-60 %
ORGANIC MATTER CONTENT	25-45 % OF DRY WEIGHT
PARTICLE SIZE DISTRIBUTION	3" (75mm) 100% PASSING 1" (25mm) 95% TO 100% PASSING 3/4" (19mm) 85% TO 90% PASSING 3/8" (9.5mm) 50% TO 60% PASSING #4 20 TO 35% PASSING
PRIMARY, SECONDARY NUTRIENTS; TRACE ELEMENT	MUST BE REPORTED
TESTING AND TEST REPORT SUBMITTAL REQUIREMENTS	STA + CLOPYRALID
ORGANIC MATTER PER CUBIC YARD	MUST REPORT
CHEMICAL CONTAMINANTS	MEET OR EXCEED US EPA CLASS A STANDARD, 40 CFR 503.1 TABLES 1 & 3 LEVELS
MINIMUM MANUFACTURING/PRODUCTION REQUIREMENT	FULLY PERMITTED UNDER COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, HAZARDOUS MATERIALS AND WASTE MANAGEMENT DIVISION
RISK FACTOR RELATING TO PLANT GERMINATION AND HEALTH	LOW

NOTE: IF A BIOSOLID COMPOST IS TO BE UTILIZED IT SHALL BE PRODUCED BY A FACILITY IN POSSESSION OF A VALID NOTICE OF AUTHORIZATION (NOA) FOR THE UNRESTRICTED USE AND DISTRIBUTION BY THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT. THE NOA SHALL BE PROVIDED UPON REQUEST TO DOUGLAS COUNTY.

NOTE: A LAB TEST DETAILING THE CHEMICAL, PHYSICAL, AND BIOLOGICAL PARAMETERS SHALL BE PROVIDED UPON REQUEST BY DOUGLAS COUNTY.



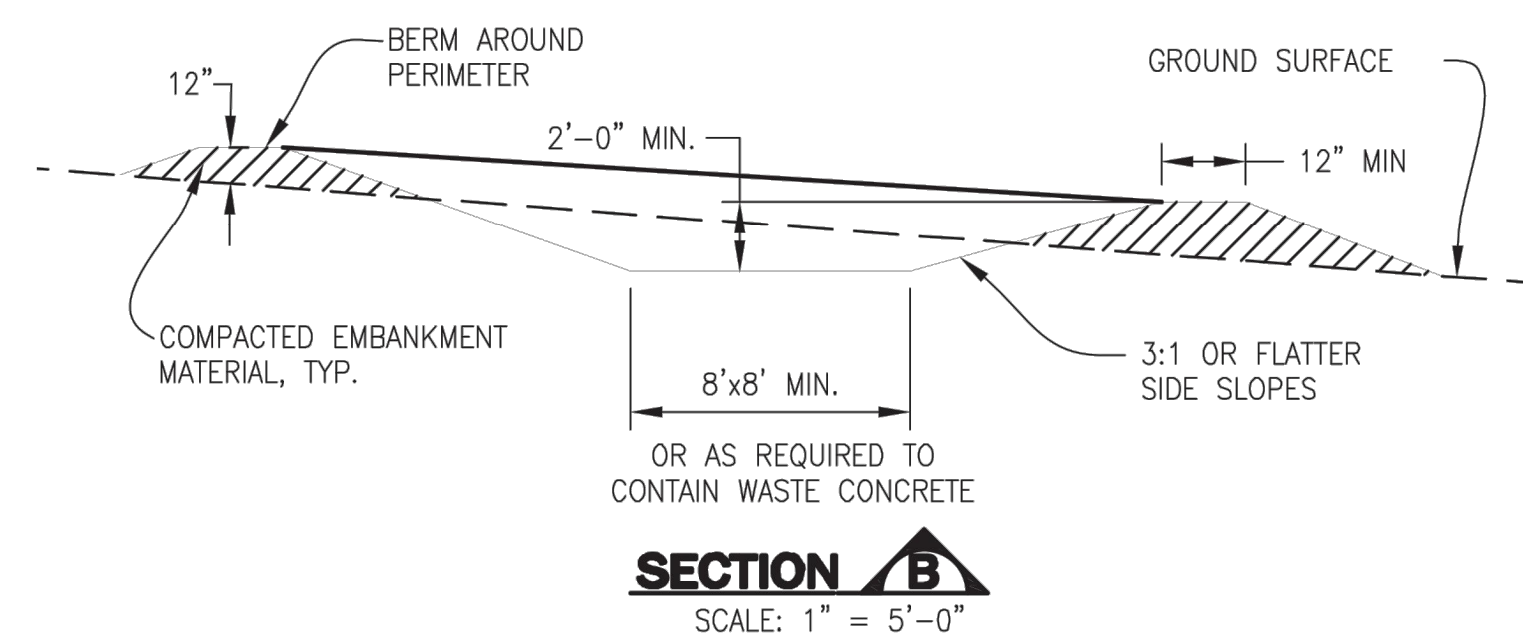
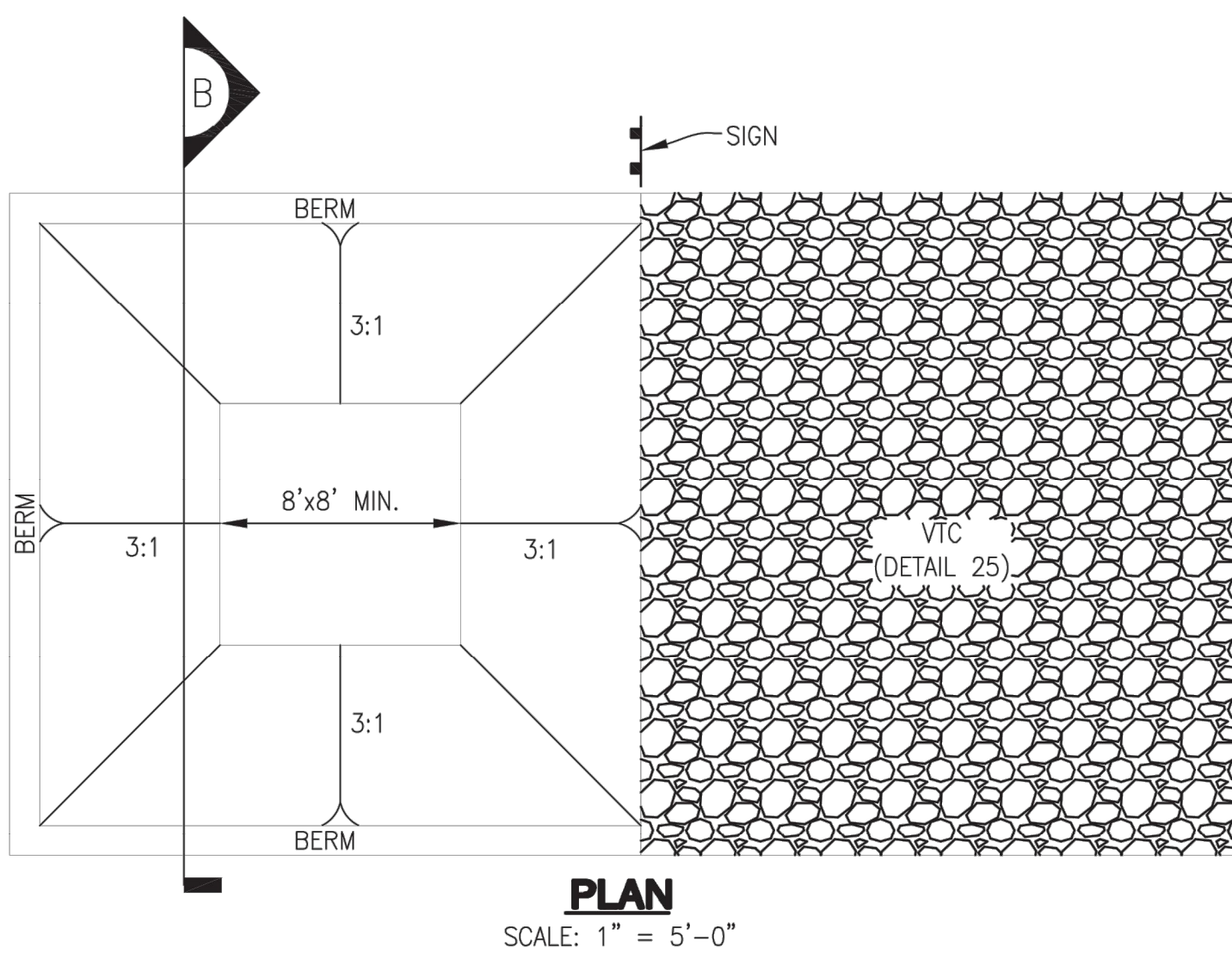
COMPOST BLANKET

2



COMPOST FILTER BERM

3

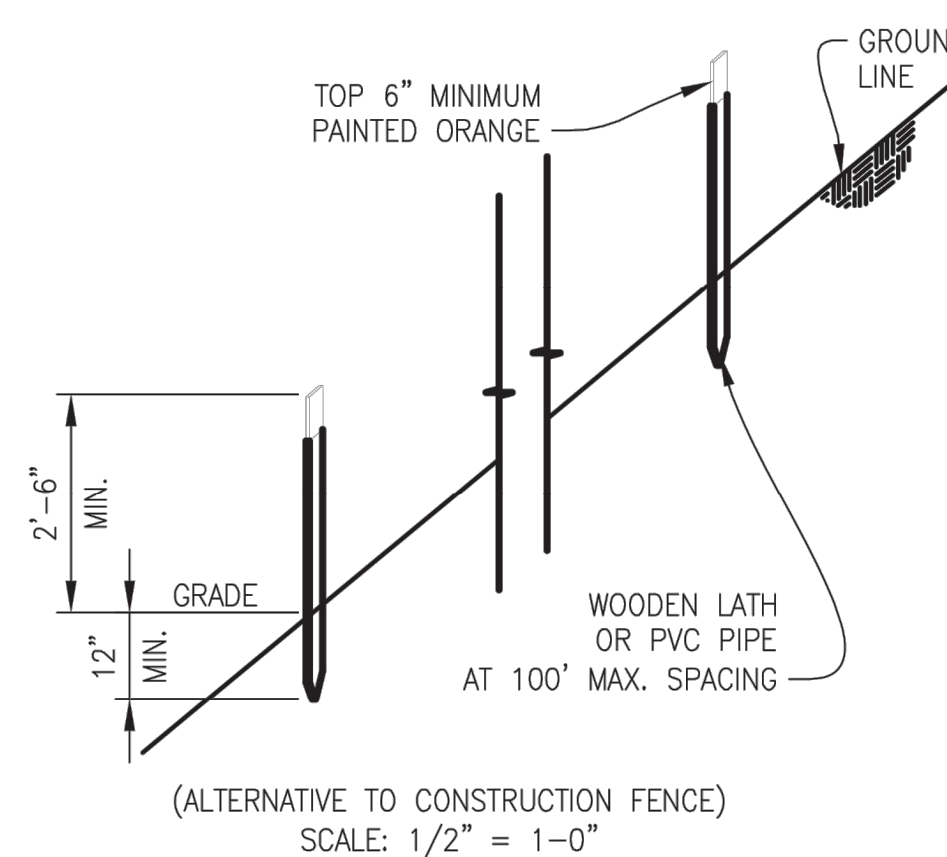
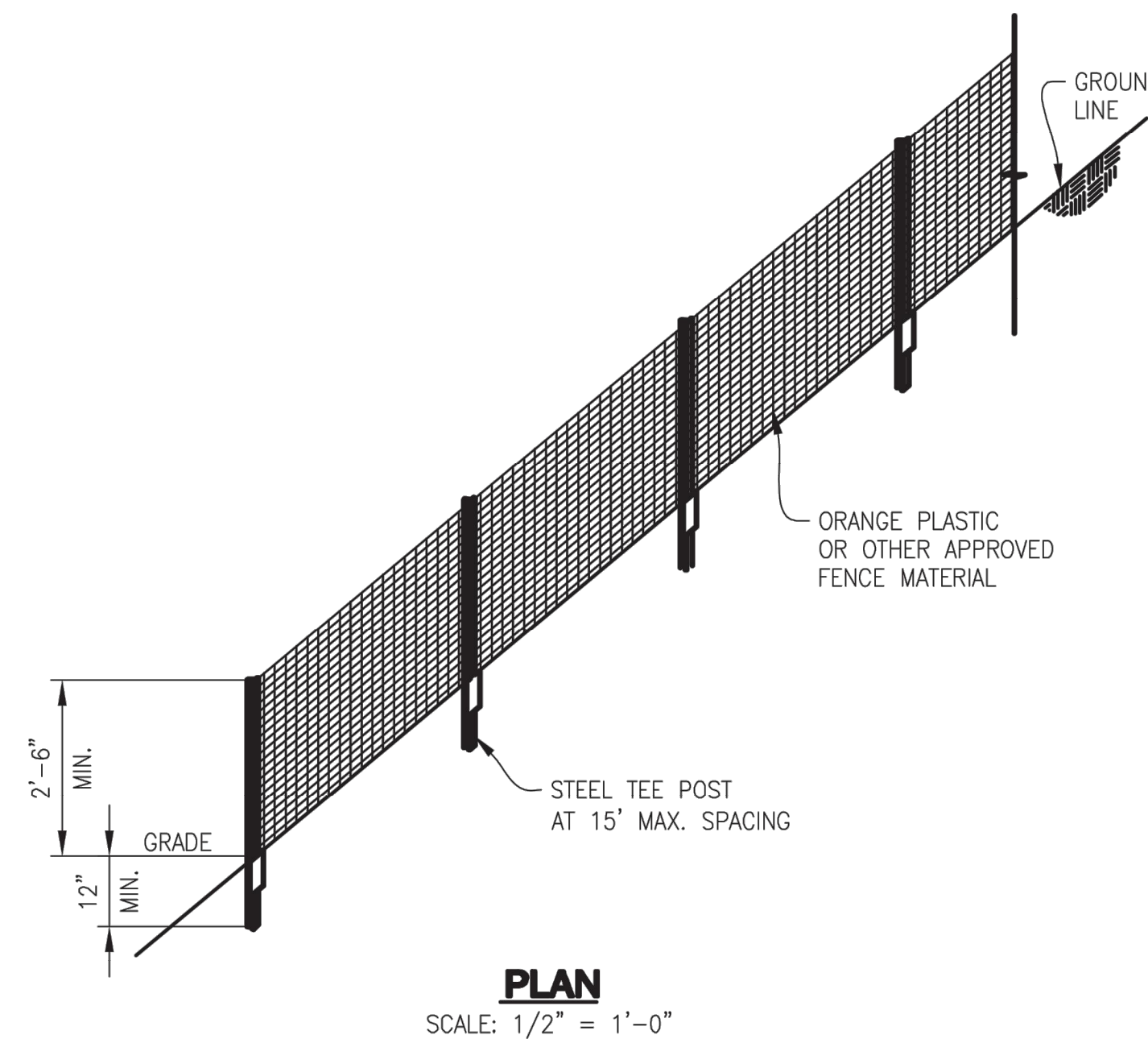


CONCRETE WASHOUT AREA INSTALLATION NOTES

- SEE PLAN VIEW FOR:
- LOCATIONS OF CONCRETE WASHOUT AREA.
- THE CONCRETE WASHOUT AREA SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON SITE.
- VEHICLE TRACKING CONTROL (DETAIL 25) IS REQUIRED AT THE ACCESS POINT.
- SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE WASHOUT AREA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT AREA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
- EXCAVATED MATERIAL SHALL BE UTILIZED IN PERIMETER BERM CONSTRUCTION.
- DURABLE PORTABLE CONCRETE WASHOUT BASINS OR TUBS MAY BE USED WITH THE APPROVAL OF THE EROSION CONTROL INSPECTOR.

CONCRETE WASHOUT AREA MAINTENANCE NOTES

- THE CONCRETE WASHOUT AREA SHALL BE REPAIRED AND ENLARGED OR CLEANED OUT AS NECESSARY TO MAINTAIN CAPACITY FOR WASTED CONCRETE.
- AT THE END OF CONSTRUCTION, ALL CONCRETE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN APPROVED WASTE SITE.
- WHEN THE CONCRETE WASHOUT AREA IS REMOVED, THE DISTURBED AREA SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.
- RECOMMENDED INSPECTION FREQUENCY IS WEEKLY, DURING AND AFTER ANY STORM EVENT.

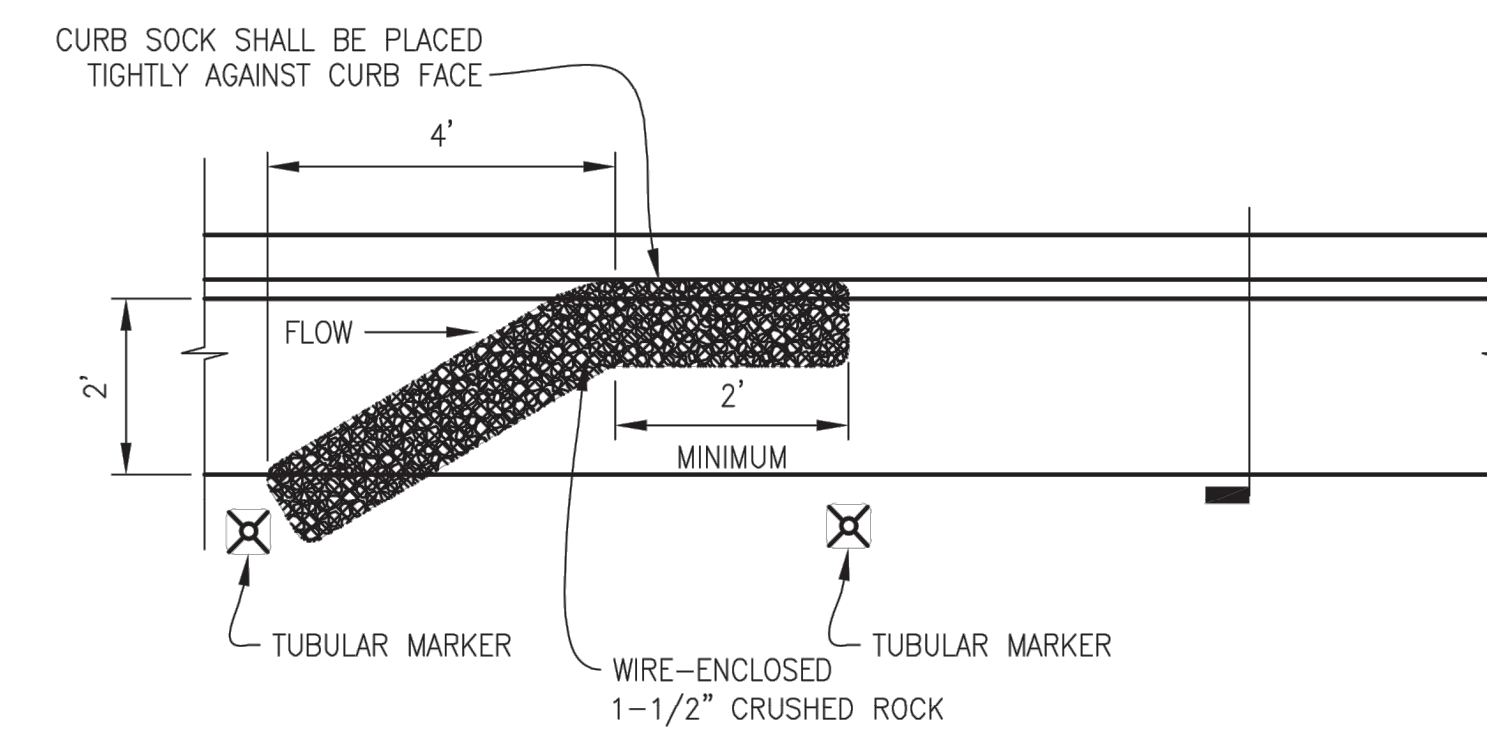


CONSTRUCTION FENCE INSTALLATION NOTES

- SEE PLAN VIEW FOR:
- TYPE OF CONSTRUCTION LIMIT INDICATOR (FENCE OR MARKERS).
- LOCATION AND LENGTH OF FENCE OR LINE OF MARKERS.
- CONSTRUCTION FENCE OR MARKERS INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED PRIOR TO OTHER Bmps AND ANY LAND-DISTURBING ACTIVITIES.
- STEEL TEE POSTS SHALL BE UTILIZED FOR SUPPORT OF CONSTRUCTION FENCE. MAXIMUM SPACING FOR TEE POSTS SHALL BE 15'.

CONSTRUCTION FENCE MAINTENANCE NOTES

- ANY DAMAGED FENCE OR MARKERS SHALL BE REPAIRED ON A DAILY BASIS.
- FENCE OR MARKERS SHALL BE REMOVED AT THE END OF CONSTRUCTION. IF ANY DISTURBED AREA EXISTS AFTER FENCE REMOVAL, IT SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.



MAXIMUM SPACING ALONG STREET GRADE	
STREET SLOPE	CURB SOCK SPACING (FT.)
0.5%	100
1.0%	100
2.0%	75
3.0%	50
4.0%	50
5.0%	50
6.0%	25
7.0%	25
8.0%	25

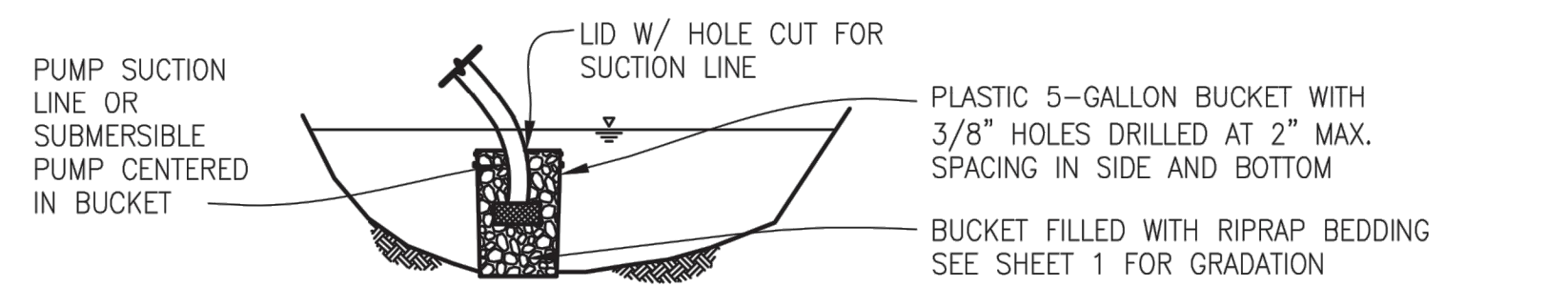
CURB SOCK INSTALLATION NOTES

- SEE PLAN VIEW FOR LOCATION OF CURB SOCK.
- CURB SOCKS INDICATED ON THE GESC PLAN SHALL BE INSTALLED PRIOR TO ANY UPSTREAM LAND DISTURBING ACTIVITIES.
- CRUSHED ROCK SHALL BE FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH THE GRADATION SHOWN ON SHEET 1 (1 1/2").
- WIRE MESH SHALL BE FABRICATED OF 20 GAUGE WIRE TWISTED INTO A MESH WITH A MAXIMUM OPENING OF 1.0 INCH (COMMONLY TERMED "CHICKEN WIRE"). ROLL WIDTH SHALL BE 48 INCHES.
- WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT 6-INCH CENTERS ALONG ALL JOINTS AND 2-INCH CENTERS AT THE ENDS.
- TUBULAR MARKERS SHALL MEET REQUIREMENTS OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), AS AMENDED.
- THE TOP OF THE CURB SOCK SHALL BE 1/2" TO 1" BELOW TOP OF CURB.
- CURB SOCK SHALL BE CONSTRUCTED IN ONE PIECE.

CURB SOCK MAINTENANCE NOTES

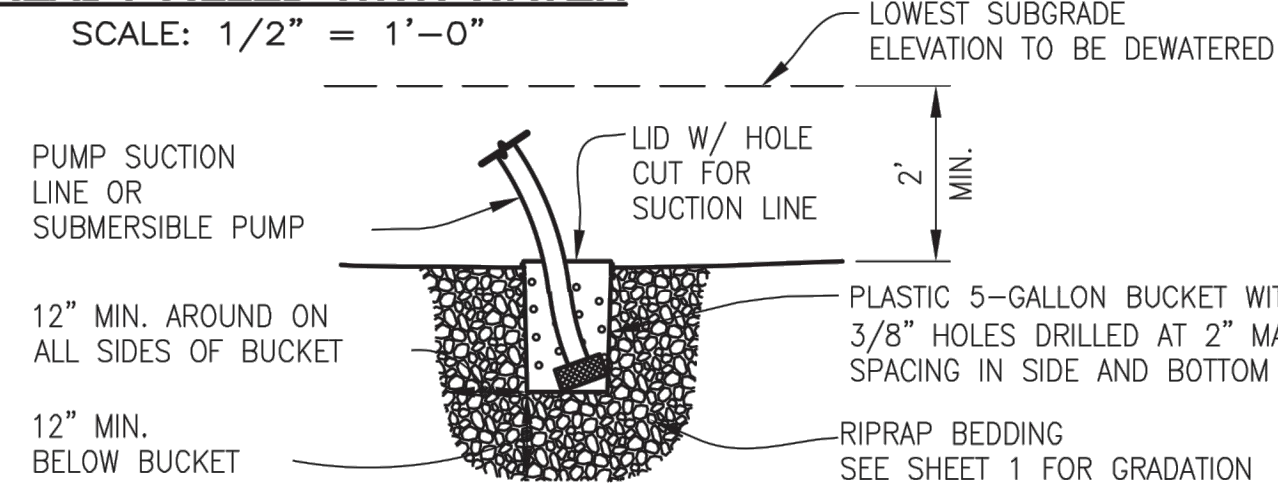
- THE RECOMMENDED INSPECTION FREQUENCY FOR CURB SOCKS IS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT AS NECESSARY.
- SEDIMENT ACCUMULATED UPSTREAM OF CURB SOCK SHALL BE REMOVED WHEN THE SEDIMENT DEPTH UPSTREAM OF THE CURB SOCK IS WITHIN 2 1/2" OF THE CREST.
- CURB SOCKS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS APPROVED, UNLESS THE COUNTY APPROVES EARLIER REMOVAL OF CURB SOCKS IN STREETS.





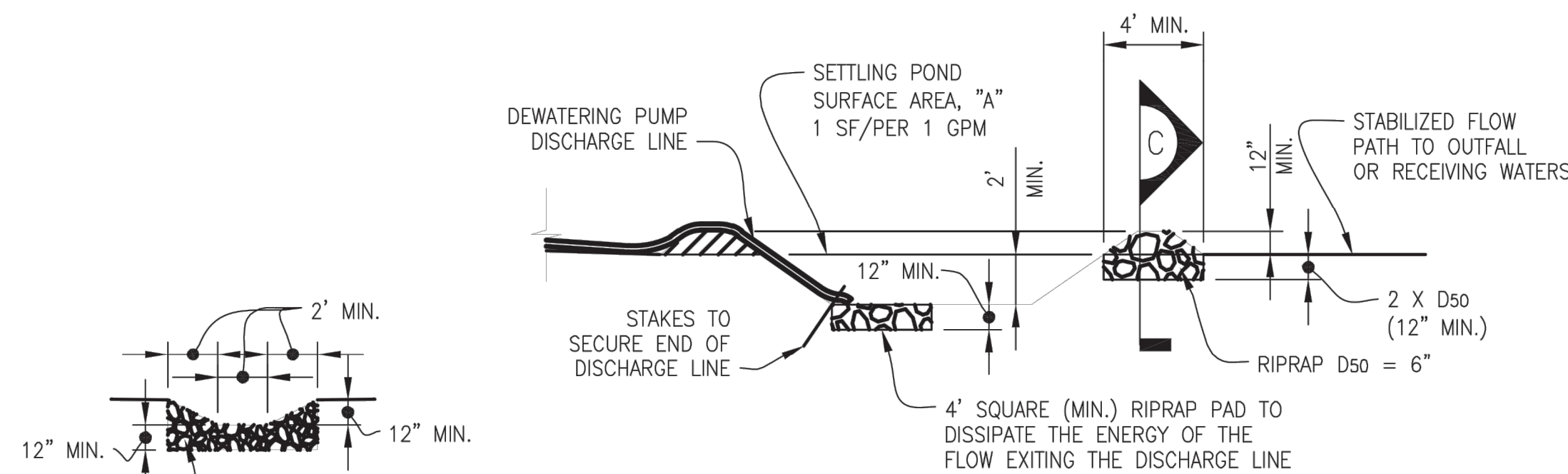
**ALTERNATIVE FOR DRAINING POND
ALREADY FILLED WITH WATER**

SCALE: 1/2" = 1'-0"



DEWATERING SUMP FOR SUBMERSIBLE PUMP

SCALE: 1/2" = 1'-0"



BASIN OUTLET - SECTION C

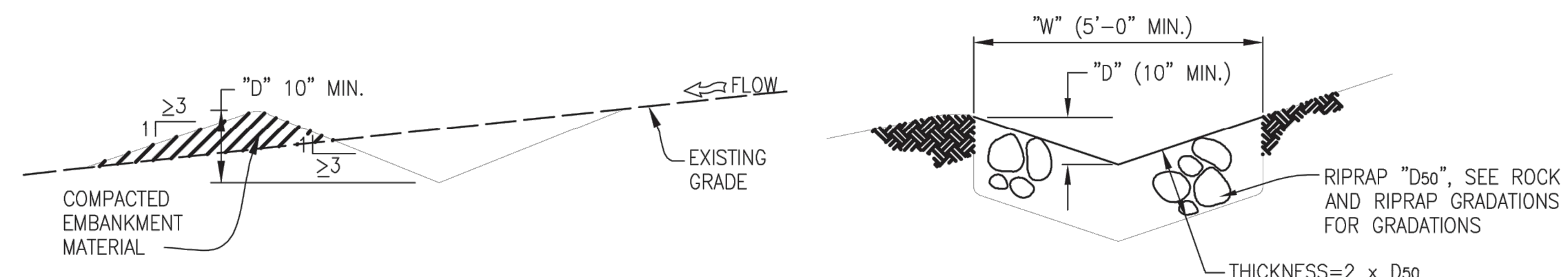
SCALE: 1" = 5'-0"

DEWATERING INSTALLATION NOTES

1. THE PERMITTEE(S) SHALL SCHEDULE AN ONSITE INSPECTION WITH THE EROSION CONTROL INSPECTOR PRIOR TO ANY SITE DEWATERING OPERATIONS BEGIN.
2. THE GESC MANAGER SHALL OBTAIN A CONSTRUCTION DEWATERING PERMIT (DEWATERING PERMIT) FROM THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT (CDPHE) PRIOR TO ANY DEWATERING OPERATIONS THAT REQUIRE A DEWATERING PERMIT.
3. AT A MINIMUM, THE DEWATERING BMPs SHALL CONSIST OF THE FOLLOWING:
PRE-FILTER ON THE SUCTION END OF THE PUMP/HOSE.
FILTER BMP PRIOR TO FINAL DISCHARGE, AND
ENERGY DISSIPATING BMP AT THE DISCHARGE END OF THE HOSE/PUMP.
4. THE TYPE AND PLACEMENT OF DEWATERING CONTROLS SHALL BE COORDINATED WITH, AND APPROVED BY, THE EROSION CONTROL INSPECTOR PRIOR TO THE DISCHARGE OF ANY WATER.

DEWATERING MAINTENANCE NOTES

1. THE RECOMMENDED INSPECTION FREQUENCY IS HOURLY FOR DEWATERING SYSTEMS AND PERFORM ANY NECESSARY REPAIRS OR MAINTENANCE.
2. TEMPORARY SETTLING BASINS SHALL BE REMOVED WHEN NO LONGER NEEDED FOR DEWATERING OPERATIONS. ANY DISTURBED AREA SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.

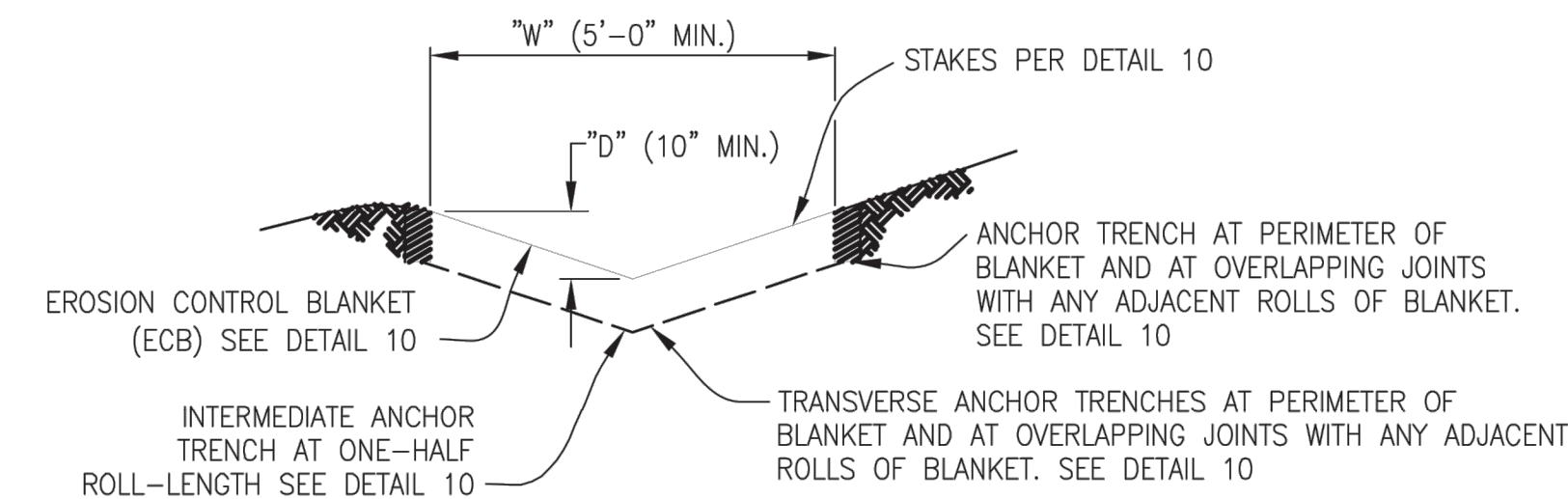


UNLINED

LONGITUDINAL SLOPE $\leq 0.5\%$
SCALE: 1/2" = 1'-0"

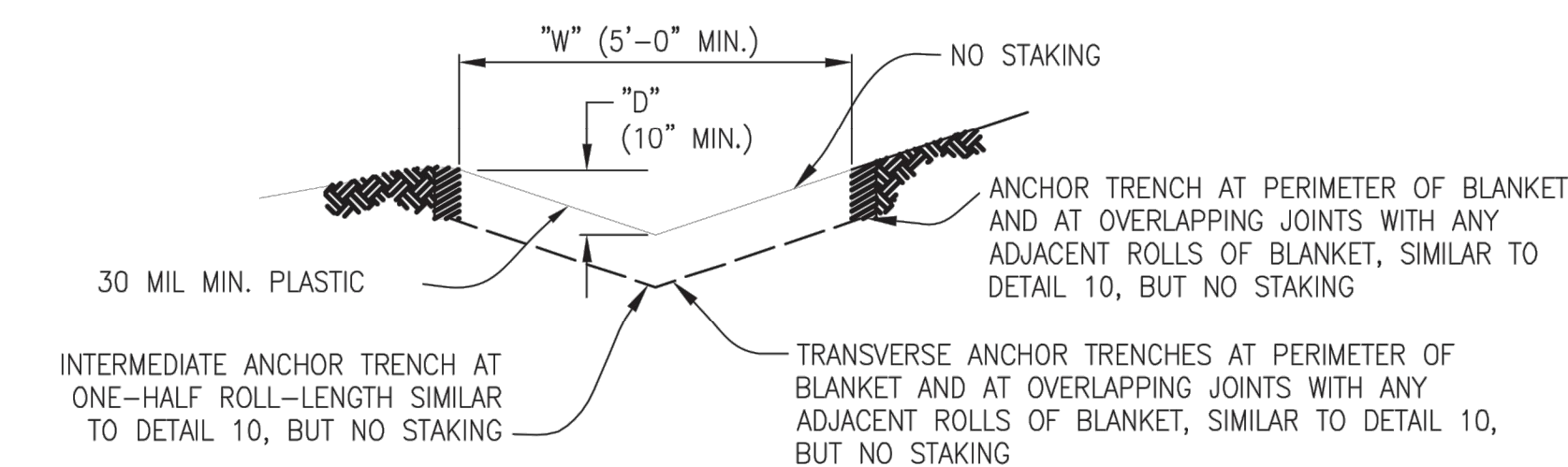
RIPRAP LINED

LONGITUDINAL SLOPE 3% TO 33%
SCALE: 1/2" = 1'-0"



EROSION CONTROL BLANKET (ECB) LINED

LONGITUDINAL SLOPE 0.5% TO 3%
SCALE: 1/2" = 1'-0"



PLASTIC LINED

LONGITUDINAL SLOPE 3% TO 33%
SCALE: 1/2" = 1'-0"

DIVERSION DITCH INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
- LOCATION OF DIVERSION DITCH.
- TYPE OF DITCH (UNLINED, ECB LINED, PLASTIC LINED OR RIPRAP LINED).
- LENGTH OF EACH TYPE OF DITCH.
- DEPTH, "D", AND WIDTH, "W" DIMENSIONS.
- FOR ECB LINED DITCH, EROSION CONTROL BLANKET TYPE (SEE DETAIL 10).
- FOR RIPRAP LINED DITCH, SIZE OF RIPRAP, "D50".
2. SEE DRAINAGE PLANS FOR DETAILS OF ANY PERMANENT CONVEYANCE FACILITIES OR DIVERSION DITCHES EXCEEDING A 2-YEAR FLOW RATE OF 10 CFS.
3. DIVERSION DITCHES INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED PRIOR TO ANY LAND-DISTURBING ACTIVITIES.
4. FOR ECB LINED DITCHES, INSTALLATION OF EROSION CONTROL BLANKET SHALL CONFORM TO THE REQUIREMENTS OF DETAIL 10.
5. IN LOCATIONS WHERE CONSTRUCTION TRAFFIC MUST CROSS A DIVERSION DITCH, THE PERMITTEES SHALL INSTALL A TEMPORARY CULVERT WITH A MINIMUM DIAMETER OF 12-INCHES.

DIVERSION DITCH MAINTENANCE NOTES

1. THE RECOMMENDED INSPECTION FREQUENCY FOR DIVERSION DITCHES IS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT AS NECESSARY.
2. DIVERSION DITCHES ARE TO REMAIN IN PLACE UNTIL THE END OF CONSTRUCTION, OR, IF APPROVED BY THE COUNTY, LEFT IN PLACE.
3. IF DIVERSION DITCHES ARE REMOVED, THE DISTURBED AREA SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.



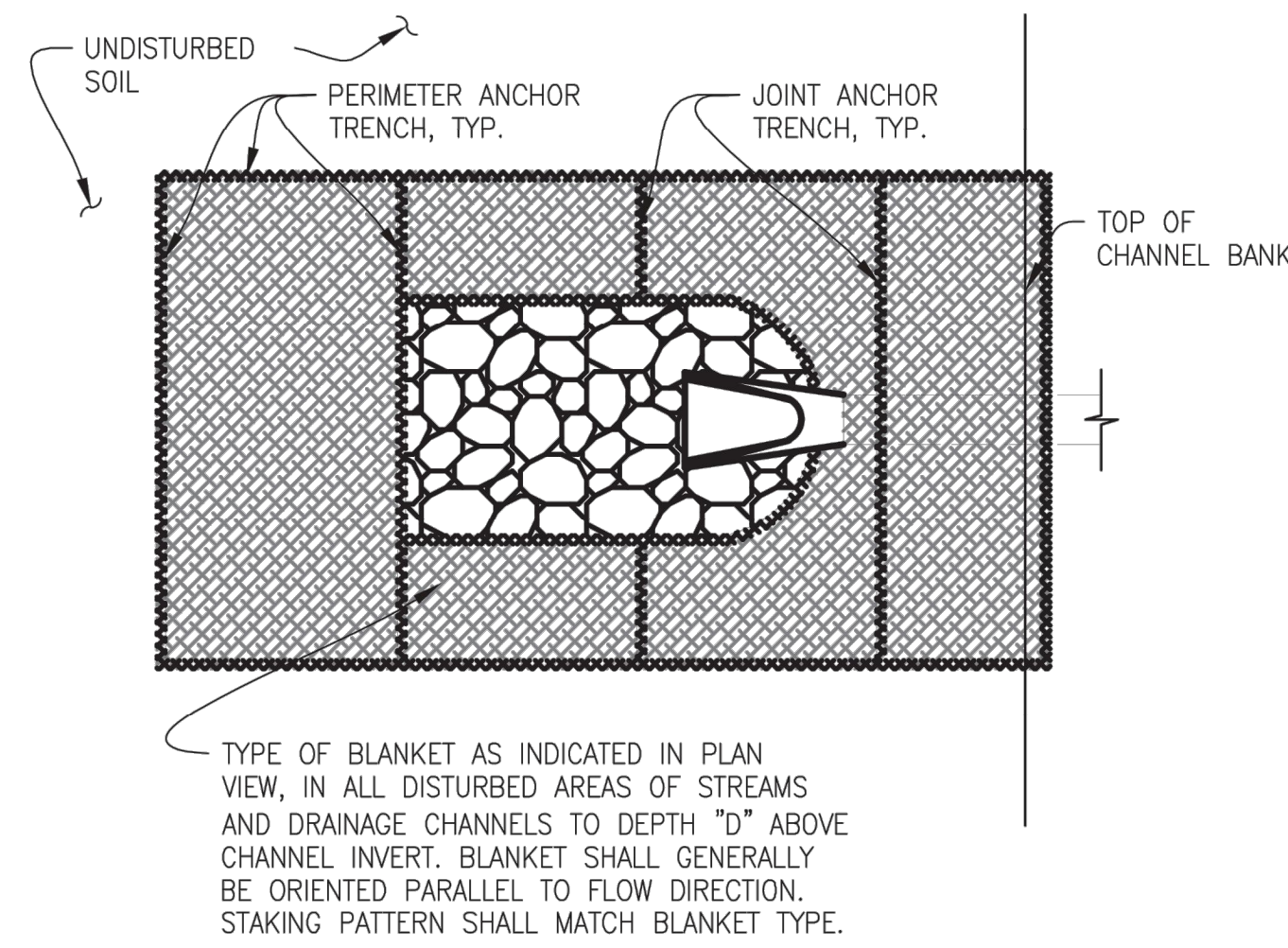
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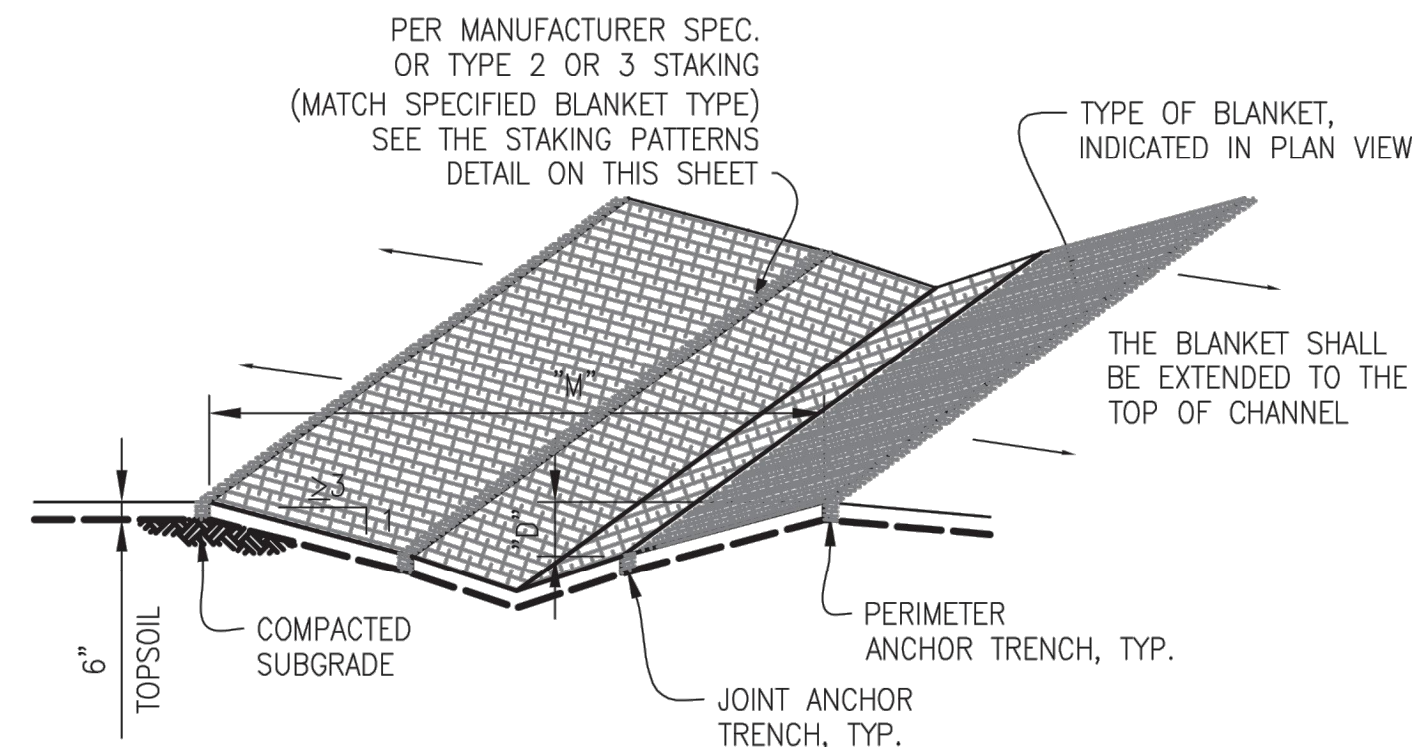
DETAILS

D-3



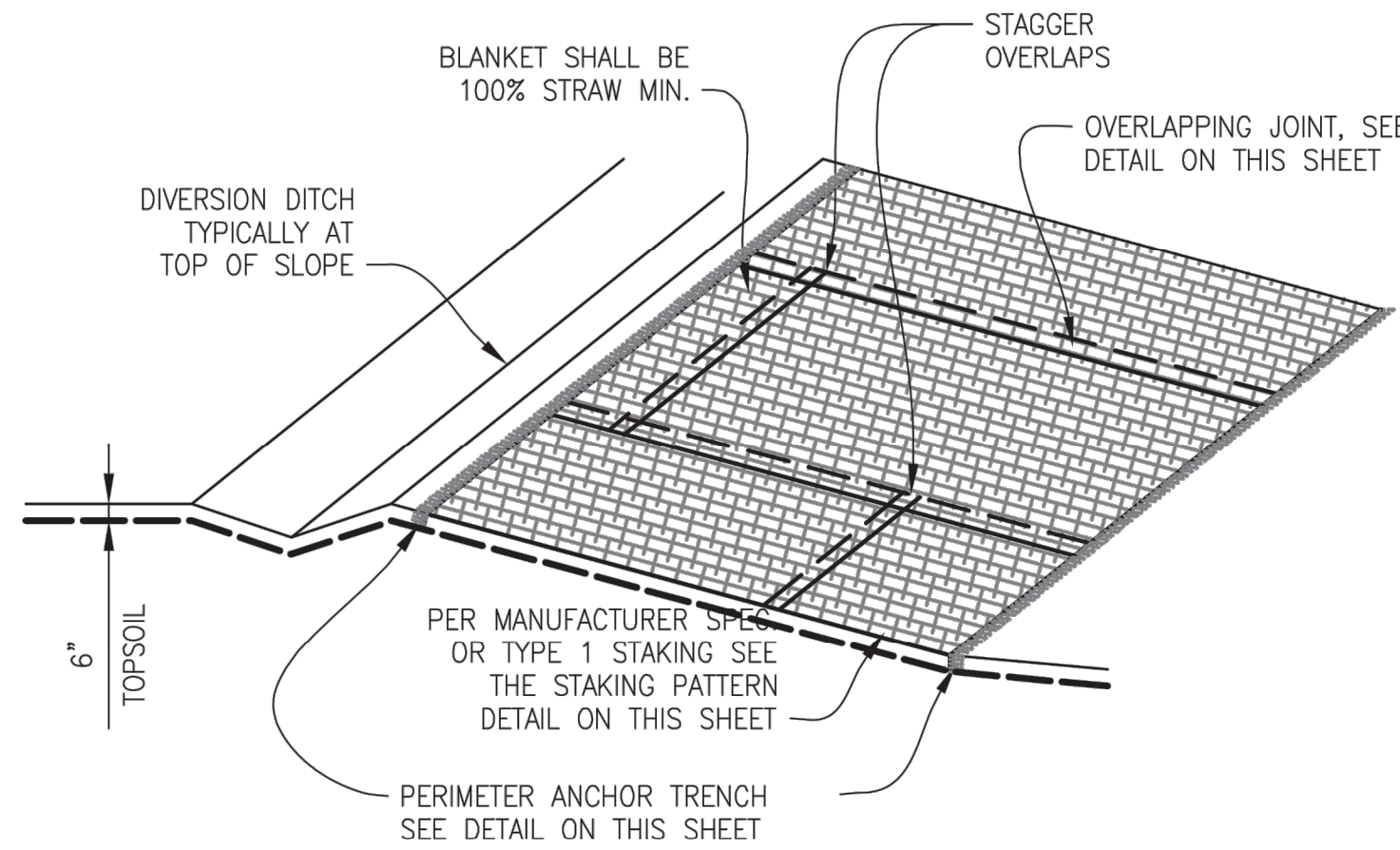
IN DISTURBED AREAS OF STREAMS AND DRAINAGE CHANNELS

SCALE: 1" = 5'-0"



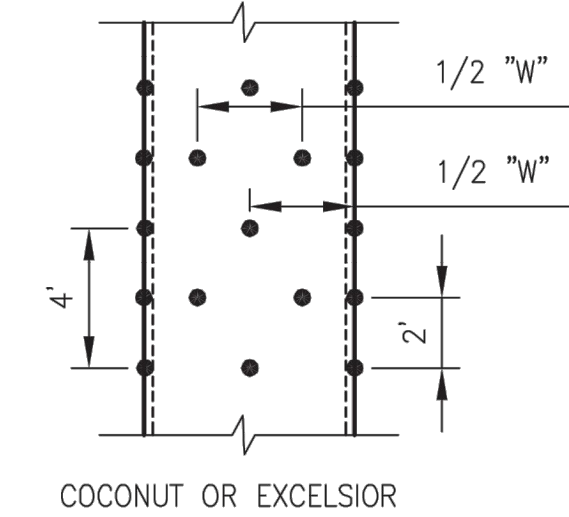
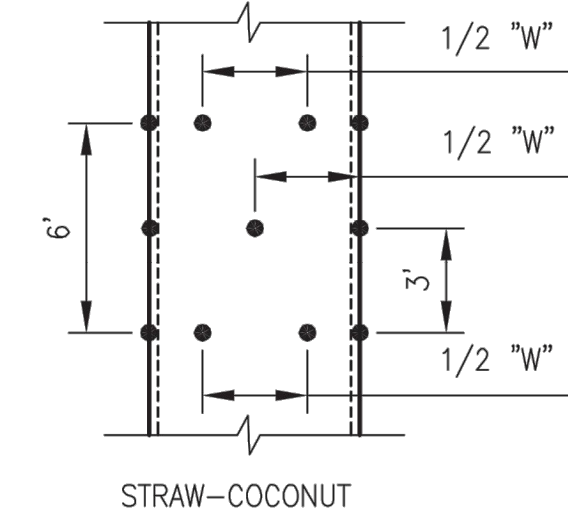
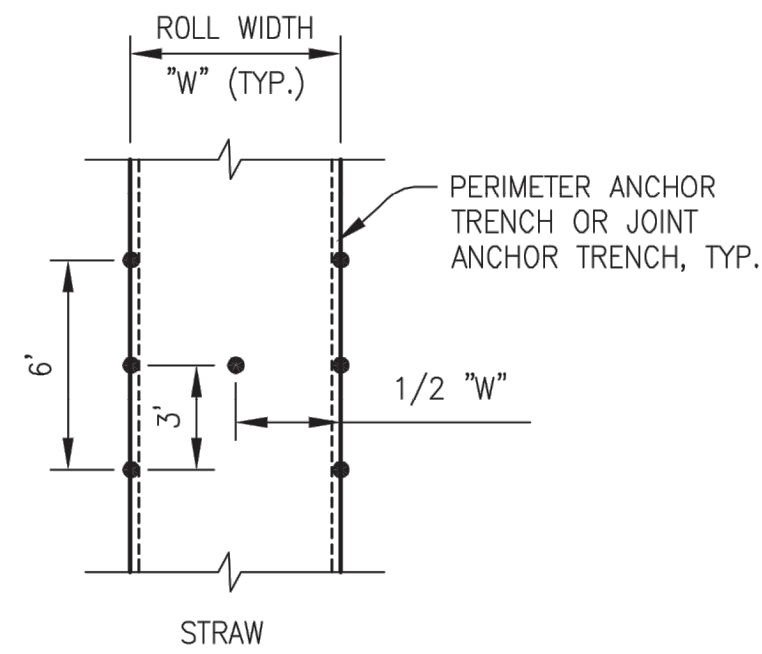
IN DIVERSION DITCH OR SMALL DITCH DRAINAGEWAY

SCALE: 1" = 5'-0"



OUTSIDE OF STREAMS AND DRAINAGE CHANNELS

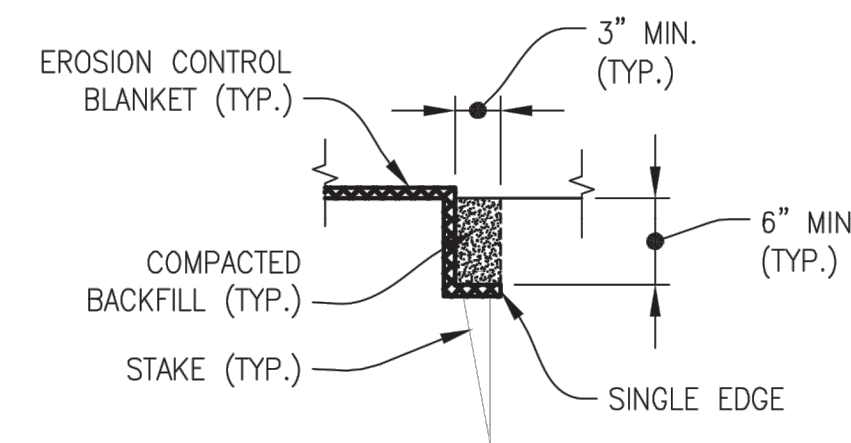
SCALE: 1" = 5'-0"



STAKING PATTERNS

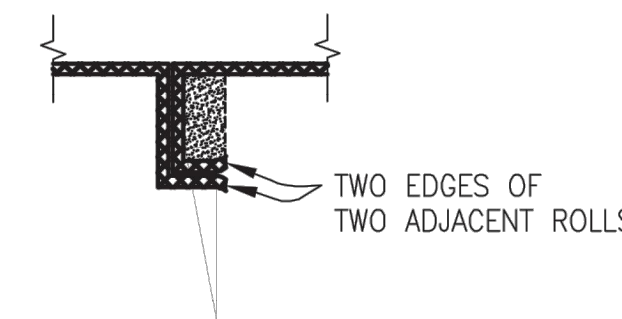
SCALE: 1" = 5'-0"

SHALL BE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATION. IF NO MANUFACTURER'S SPECIFICATION IS AVAILABLE USE THE ACCEPTABLE STAKING PATTERN (AS SHOWN ABOVE).



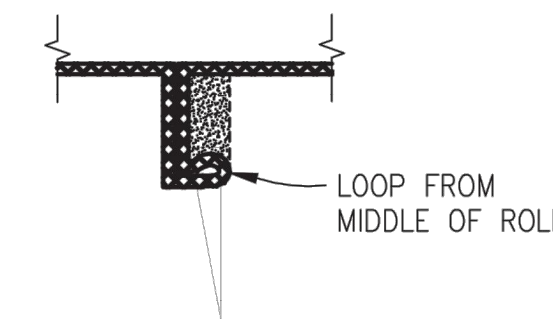
PERIMETER ANCHOR TRENCH

SCALE: 1" = 1'-0"



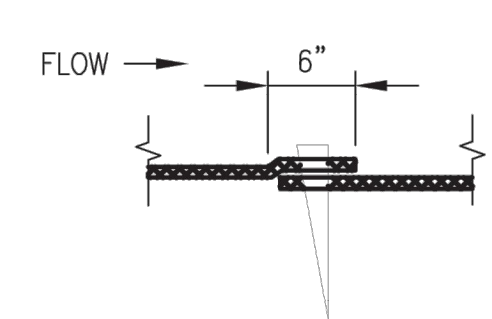
JOINT ANCHOR TRENCH

SCALE: 1" = 1'-0"



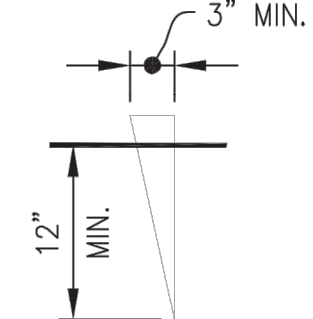
INTERMEDIATE ANCHOR TRENCH

SCALE: 1" = 5'-0"



OVERLAPPING JOINT

SCALE: 1" = 1'-0"



WOOD STAKE DETAIL

SCALE: 1" = 1'-0"
MINIMUM THICKNESS 1/2"

EROSION CONTROL BLANKET INSTALLATION NOTES

- SEE PLAN VIEW FOR:
- LOCATION OF PERIMETER OF EROSION CONTROL BLANKET.
- TYPE OF BLANKET (STRAW, STRAW-COCONUT, COCONUT, OR EXCELSIOR).
- AREA "A" IN SQUARE YARDS OF EACH TYPE OF BLANKET.
- ALL EROSION CONTROL BLANKETS AND NETTING SHALL BE MADE OF 100% NATURAL AND BIODEGRADABLE MATERIAL; NO PLASTIC OR OTHER SYNTHETIC MATERIAL, EVEN IF PHOTO DEGRADABLE, SHALL BE ALLOWED.
- IN AREAS WHERE EROSION CONTROL BLANKET IS SHOWN ON THE PLANS, THE PERMITTEE SHALL PLACE TOPSOIL AND PERFORM FINAL GRADING, SURFACE PREPARATION, AND SEEDING BELOW THE BLANKET IN ACCORDANCE WITH THE REQUIREMENTS OF DETAIL 12, SEEDING AND MULCHING. SUBGRADE SHALL BE SMOOTH AND MOIST PRIOR TO BLANKET INSTALLATION AND THE BLANKET SHALL BE IN FULL CONTACT WITH SUBGRADE, NO GAPS OR VOIDS SHALL EXIST UNDER THE BLANKET.
- PERIMETER ANCHOR TRENCH SHALL BE USED AT OUTSIDE PERIMETER OF ALL BLANKET AREAS.
- JOINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF BLANKETS TOGETHER (LONGITUDINALLY AND TRANSVERSELY) FOR ALL BLANKET INSTALLATIONS IN A DRAINAGEWAY EXCEPT STRAW, WHICH MAY USE AN OVERLAPPING JOINT.
- INTERMEDIATE ANCHOR TRENCH SHALL BE USED AT SPACING OF ONE-HALF THE ROLL LENGTH FOR COCONUT AND EXCELSIOR BLANKETS.
- THE OVERLAPPING JOINT DETAIL SHALL BE USED TO JOIN ROLLS OF BLANKETS TOGETHER FOR BLANKETS ON SLOPES.
- MATERIAL SPECIFICATIONS OF EROSION CONTROL BLANKET SHALL CONFORM TO TABLE 7.1.

EROSION CONTROL BLANKET INSTALLATION NOTES - CONTINUED

- ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING EROSION CONTROL BLANKET SHALL BE RESEEDED AND MULCHED IN ACCORDANCE WITH DETAIL 18.
- SEE DRAINAGE DESIGN PLANS FOR MAJOR DRAINAGEWAY STABILIZATION MEASURES THAT MAY EXCEED THE DESIGN CONDITIONS ASSOCIATED WITH THE DETAILS ABOVE.
- METAL STAKES OR STAPLES MAY BE USED FOR EROSION CONTROL BLANKET INSTALLATIONS OUTSIDE OF DRAINAGE CHANNELS.

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

* FOR OUTSIDE OF STREAMS AND DRAINAGE CHANNELS

EROSION CONTROL BLANKET MAINTENANCE NOTES

- THE RECOMMENDED INSPECTION FREQUENCY FOR EROSION CONTROL BLANKETS IS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS AS NECESSARY.
- EROSION CONTROL BLANKET IS TO BE LEFT IN PLACE UNLESS REQUESTED TO BE REMOVED BY THE COUNTY.
- ANY EROSION CONTROL BLANKET PULLED OUT, TORN, OR OTHERWISE DAMAGED SHALL BE RE-INSTALLED. ANY SUBGRADE AREAS BELOW THE BLANKET THAT HAVE ERODED TO CREATE A VOID UNDER THE BLANKET, OR THAT REMAIN DEVOID OF GRASS SHALL BE REPAIRED, RESEEDED AND MULCHED AND THE EROSION CONTROL BLANKET REINSTALLED.



ECB EROSION CONTROL BLANKET 10

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LONE TREE, CO
22A037

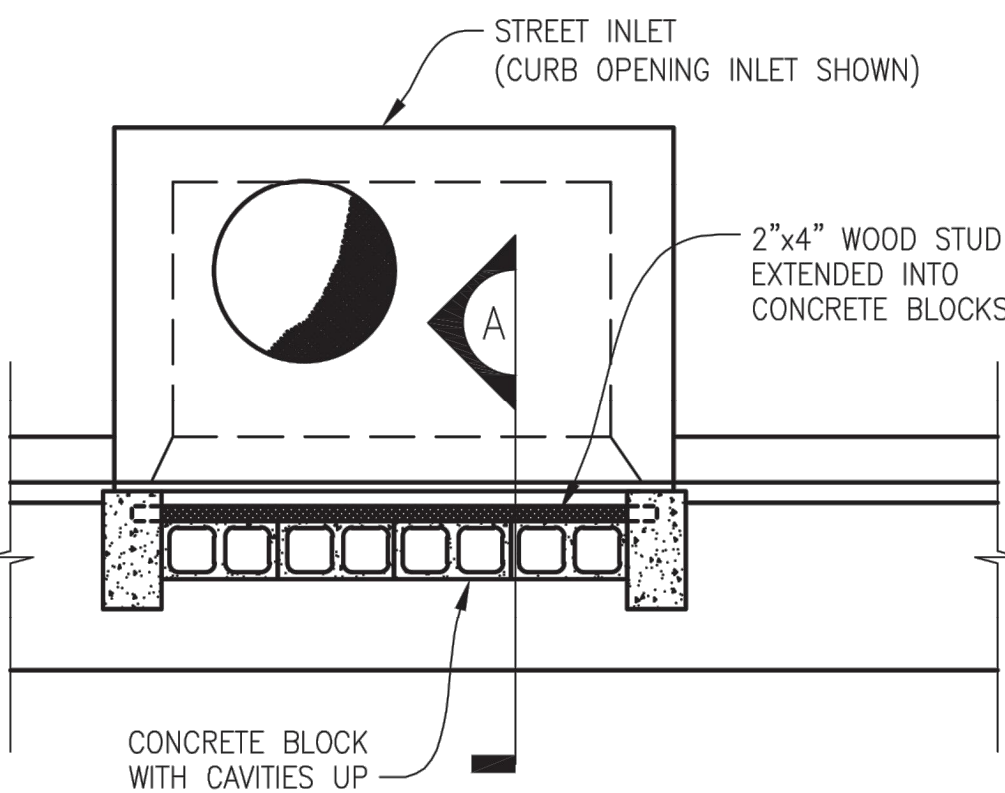
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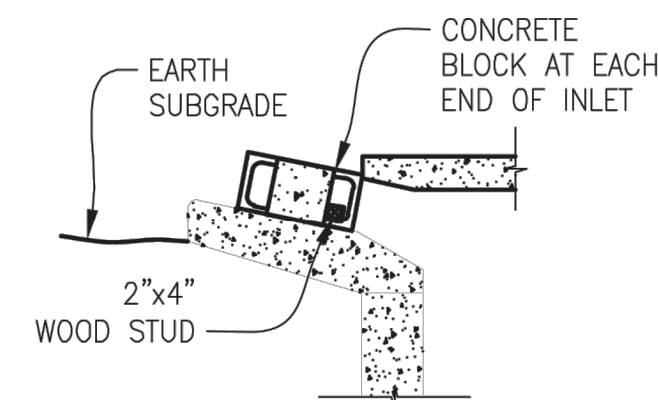
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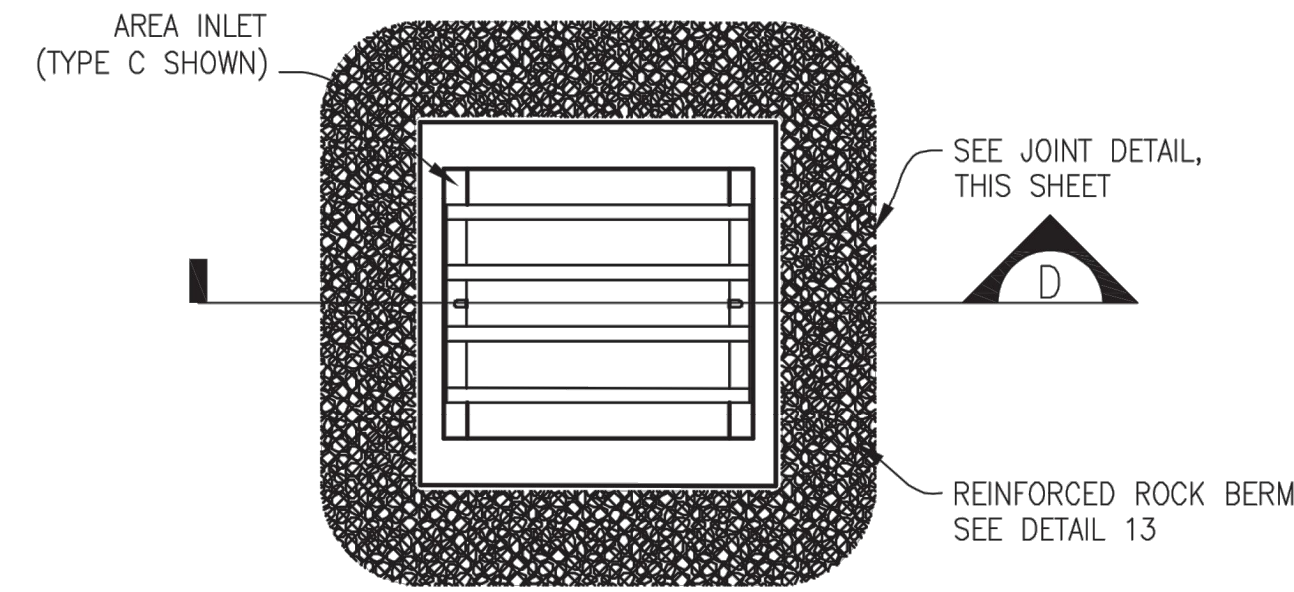
D-4



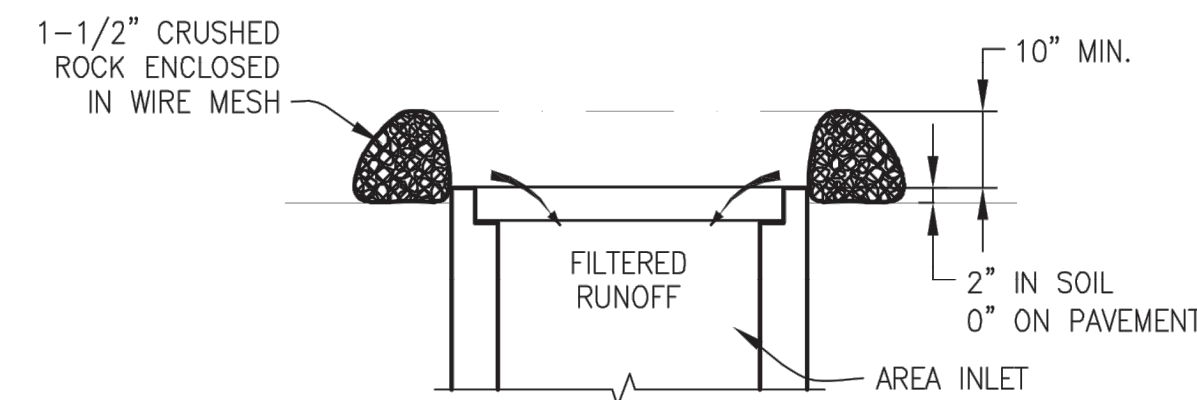
INTERIM CONFIGURATION (BEFORE PAVING) STREET INLET - PLAN
SCALE: 1/2" = 1'-0"



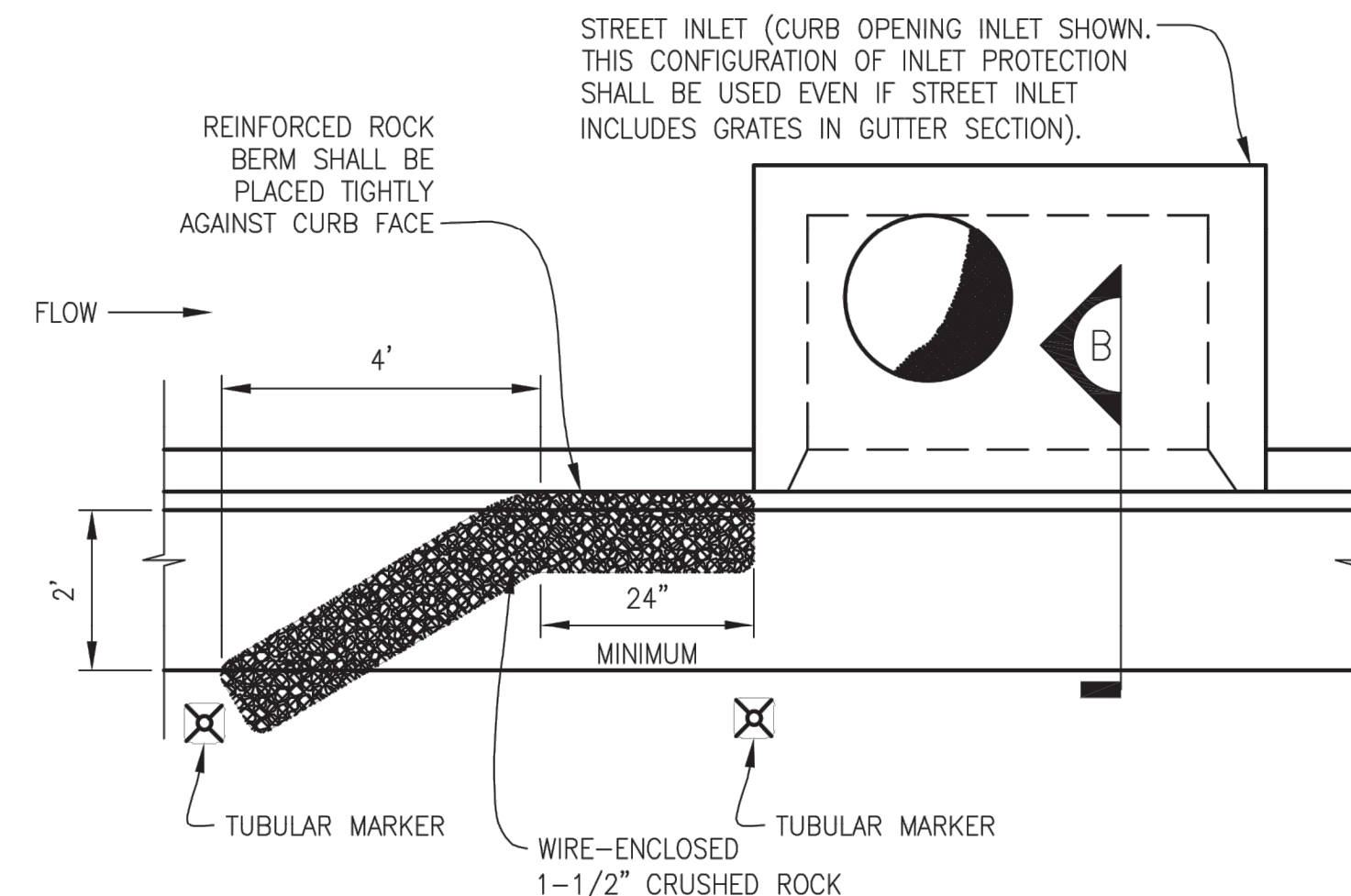
SECTION A
SCALE: 1/2" = 1'-0"



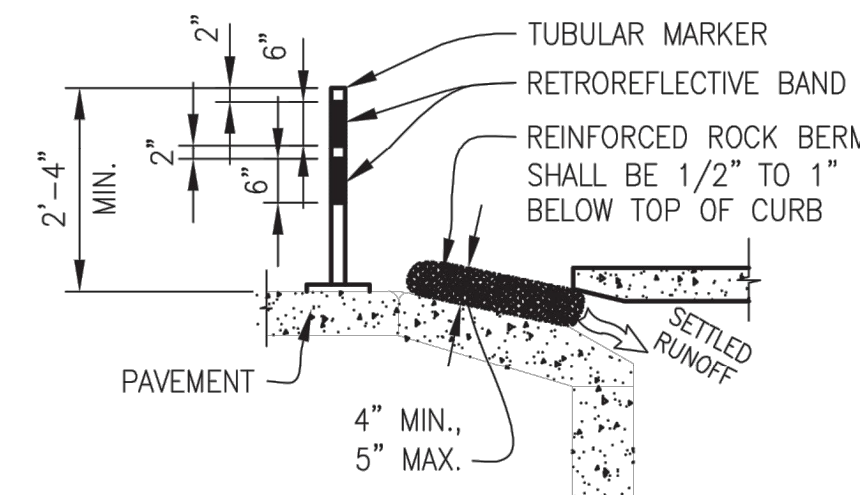
AREA INLET - PLAN
SCALE: 1/2" = 1'-0"



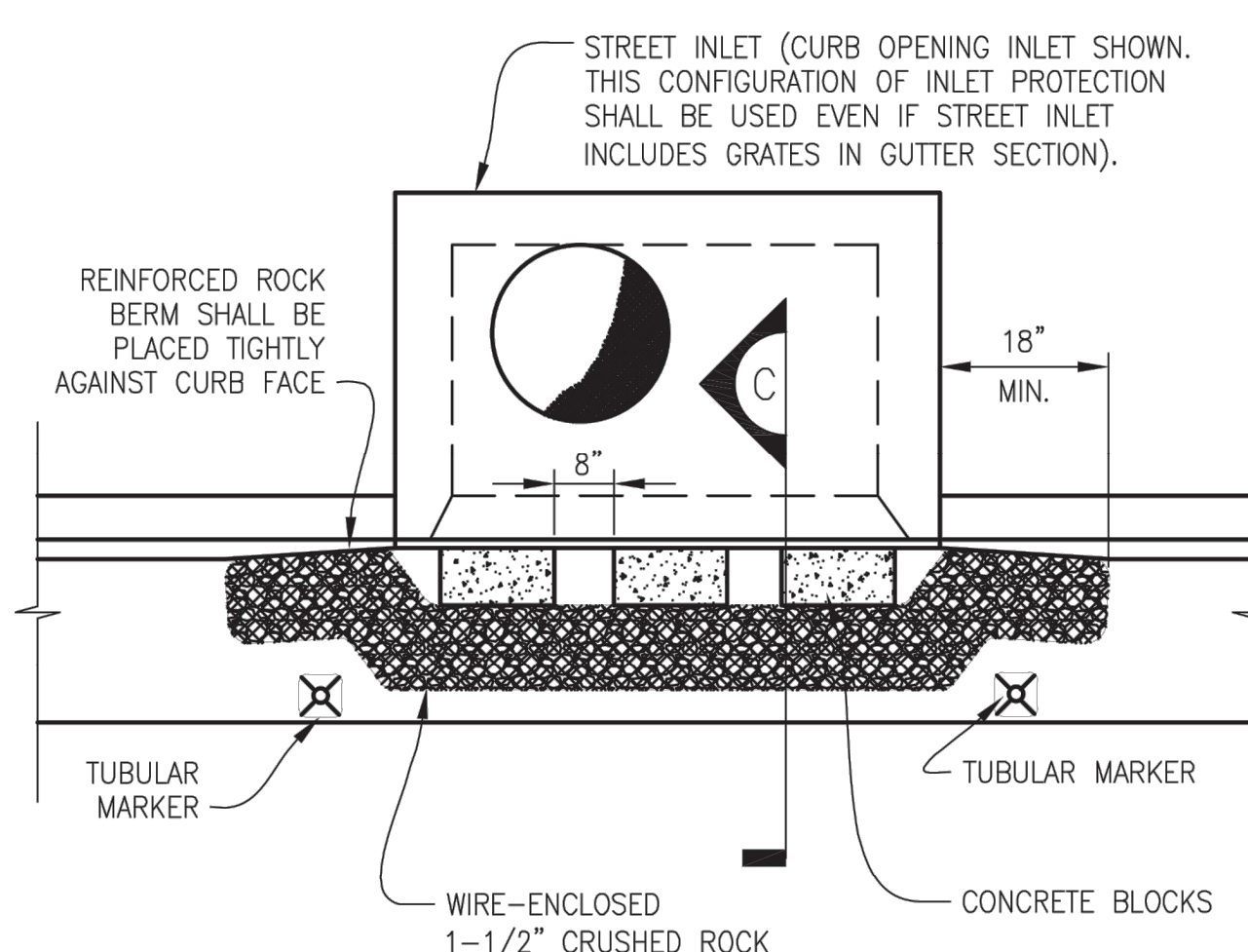
SECTION D
SCALE: 1/2" = 1'-0"



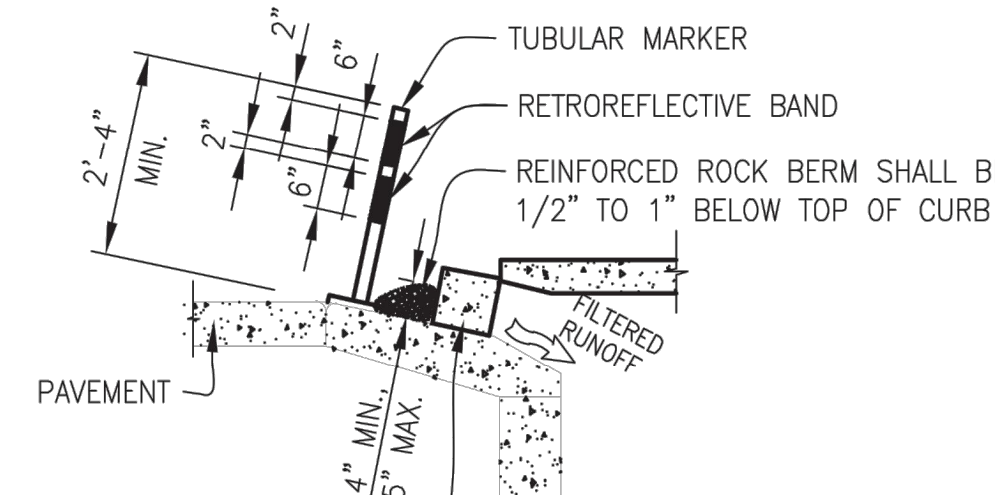
STREET INLET ON CONTINUOUS GRADE (AFTER PAVING) - PLAN
SCALE: 1/2" = 1'-0"



SECTION B
SCALE: 1/2" = 1'-0"

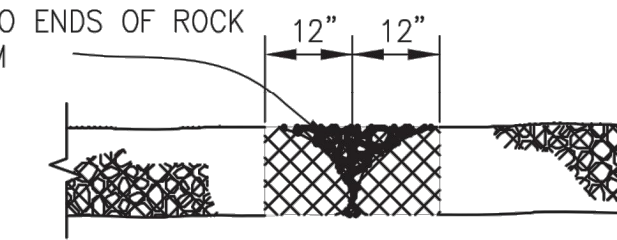


STREET INLET IN SUMP (AFTER PAVING) - PLAN
SCALE: 1/2" = 1'-0"



SECTION C
SCALE: 1/2" = 1'-0"

ANY GAP AT JOINT SHALL BE FILLED WITH 1 1/2" CRUSHED ROCK AND WRAPPED WITH ADDITIONAL WIRE MESH SECURED TO ENDS OF ROCK REINFORCED BERM



JOINT DETAIL
SCALE: 1/2" = 1'-0"

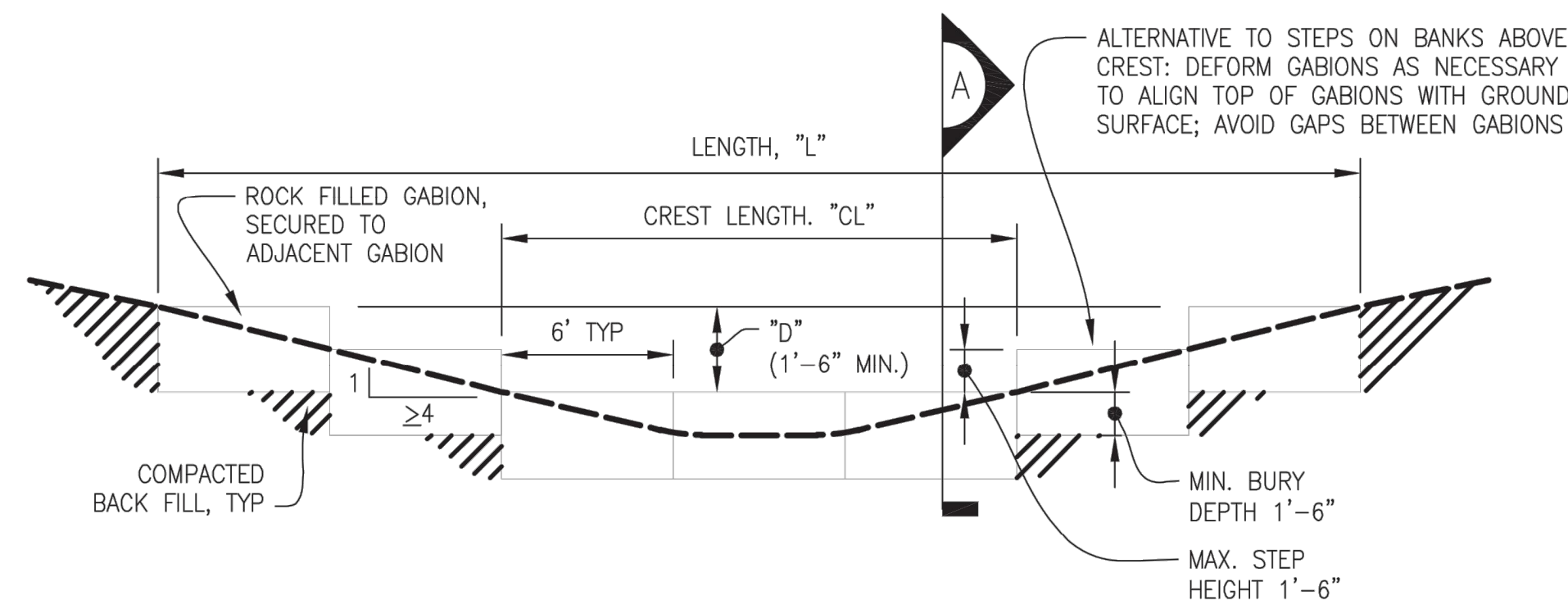
INLET PROTECTION INSTALLATION NOTES

1. INTERIM CONFIGURATION OF INLET PROTECTION IN STREETS SHALL BE INSTALLED WITHIN 48-HOURS OF POURING INLET. INLET PROTECTION (AFTER PAVEMENT) SHALL BE INSTALLED WITHIN 48 HOURS AFTER PAVING IS PLACED.
2. INLET PROTECTION AT AREA INLETS SHALL BE INSTALLED WITHIN 48-HOURS OF POURING INLET.
3. CRUSHED ROCK SHALL BE FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON ROCK AND RIPRAP GRADATIONS (1-1/2").
4. WIRE MESH SHALL BE FABRICATED OF 20 GAUGE WIRE TWISTED INTO A MESH WITH A MAXIMUM OPENING OF 1.0 INCH (COMMONLY TERMED "CHICKEN WIRE"). ROLL WIDTH SHALL BE 48-INCHES.
5. WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT 6-INCH CENTERS ALONG ALL JOINTS AND AT 2-INCH CENTERS ON ENDS OF BERM.
6. REINFORCED ROCK BERM SHALL BE CONSTRUCTED IN ONE PIECE OR SHALL BE CONSTRUCTED USING JOINT DETAIL.
7. TUBULAR MARKERS SHALL MEET REQUIREMENTS OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), AS AMENDED.
8. THE TOP OF REINFORCED ROCK BERM SHALL BE 1/2"-1" BELOW TOP OF CURB.

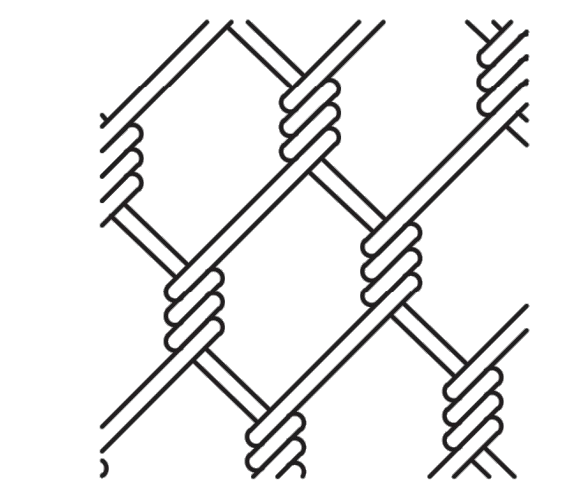
INLET PROTECTION MAINTENANCE NOTES

1. THE RECOMMENDED INSPECTION FREQUENCY FOR INLET PROTECTION IS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT AS NECESSARY. MORE FREQUENT INSPECTIONS AND REPAIRS MAY BE REQUIRED DURING WINTER CONDITIONS DUE TO FREEZE/THAW PROBLEMS.
2. SEDIMENT ACCUMULATED UPSTREAM OF INLET PROTECTION SHALL BE REMOVED WHEN THE SEDIMENT DEPTH UPSTREAM OF ROCK BERM IS WITHIN 2-1/2 INCHES OF THE CREST.
3. INLET PROTECTION IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS APPROVED, UNLESS THE COUNTY APPROVES EARLIER REMOVAL OF INLET PROTECTION IN STREETS.
4. WHEN INLET PROTECTION AT AREA INLETS ARE REMOVED, THE DISTURBED AREA SHALL BE DRILL SEEDDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.

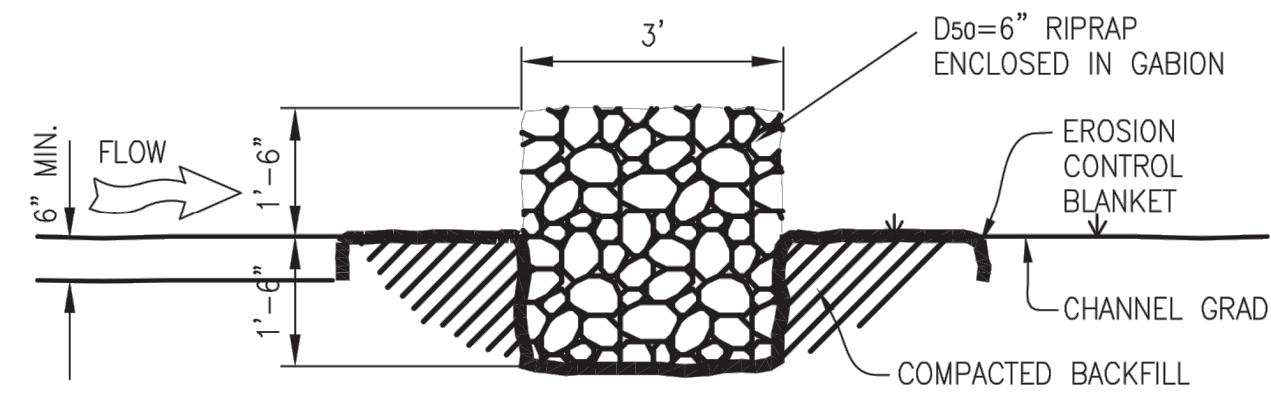




REINFORCED - ELEVATION
SCALE: 1" = 5'-0"



BLOW UP OF TWISTED WIRE GABION
SCALE: NTS



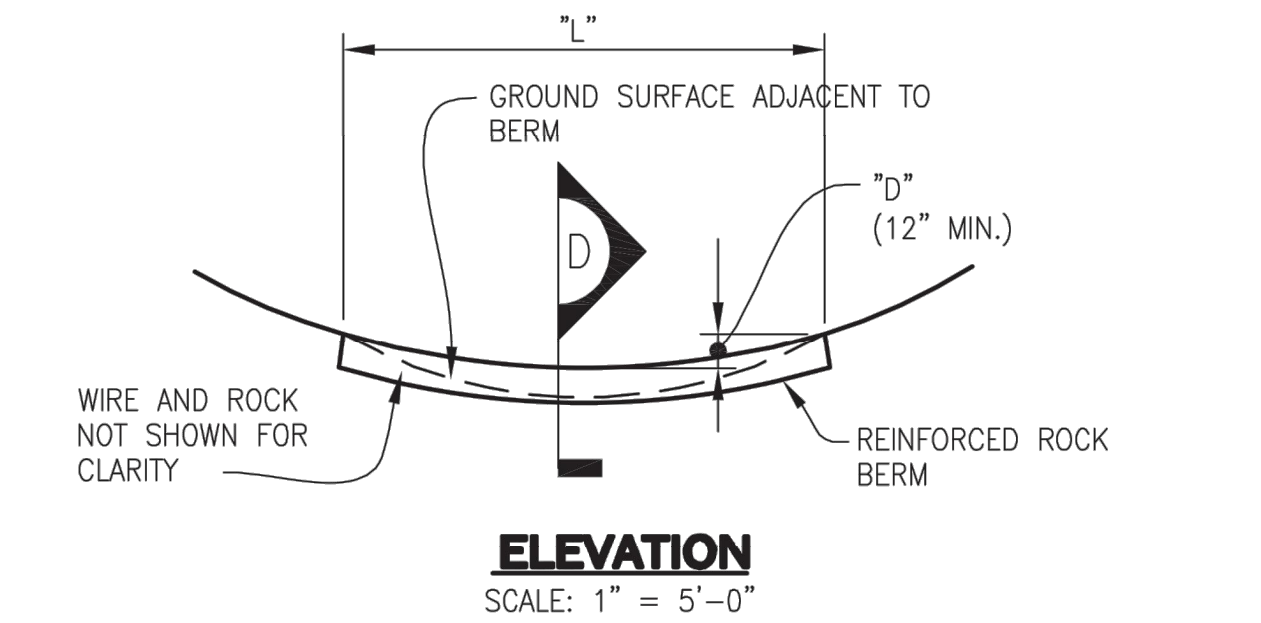
REINFORCED - SECTION A
SCALE: 1/2" = 1'-0"

REINFORCED CHECK DAM INSTALLATION NOTES

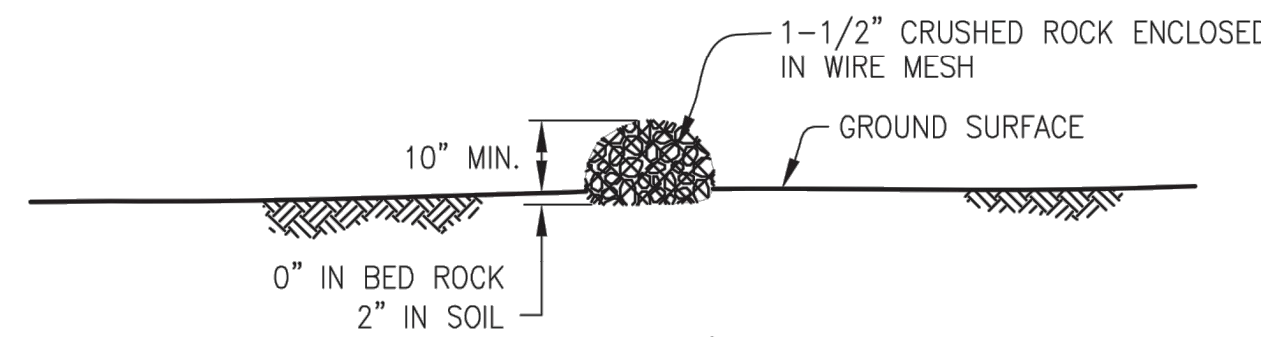
- SEE PLAN VIEW FOR:
 - LOCATIONS OF CHECK DAMS.
 - CHECK DAM TYPE (CHECK DAM OR REINFORCED CHECK DAM).
 - LENGTH, "L", CREST LENGTH, "CL", AND DEPTH, "D".
- CHECK DAMS INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED AFTER CONSTRUCTION FENCE, BUT PRIOR TO ANY UPSTREAM LAND-DISTURBING ACTIVITIES.
- REINFORCED CHECK DAMS, GABIONS SHALL HAVE GALVANIZED TWISTED WIRE NETTING WITH A MAXIMUM OPENING DIMENSION OF 4-1/2" AND A MINIMUM WIRE THICKNESS OF 0.10". WIRE "HOG RINGS" AT 4" SPACING OR OTHER APPROVED MEANS SHALL BE USED AT ALL GABION SEAMS AND TO SECURE THE GABION TO THE ADJACENT GABION.
- THE CHECK DAM SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF 1'-6".
- EROSION BLANKET SHALL BE PLACED IN THE REINFORCED CHECK DAM TRENCH EXTENDING A MINIMUM OF 1'-6" ON BOTH THE UPSTREAM AND DOWNSTREAM SIDES OF THE REINFORCED CHECK DAM.

REINFORCED CHECK DAM MAINTENANCE NOTES

- THE RECOMMENDED INSPECTION FREQUENCY FOR CHECK DAMS IS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT AS NECESSARY.
- SEDIMENT ACCUMULATED UPSTREAM OF CHECK DAMS SHALL BE REMOVED WHEN THE SEDIMENT DEPTH UPSTREAM OF CHECK DAM IS WITHIN 1/2 OF THE HEIGHT OF THE CREST.
- CHECK DAMS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS APPROVED BY THE COUNTY.
- WHEN CHECK DAMS ARE REMOVED, EXCAVATIONS SHALL BE FILLED WITH SUITABLE COMPACTED BACK FILL. ANY DISTURBED AREA SHALL BE DRILL SEEDED AND CRIMP MULCHED AND COVERED WITH EROSION CONTROL BLANKET OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.

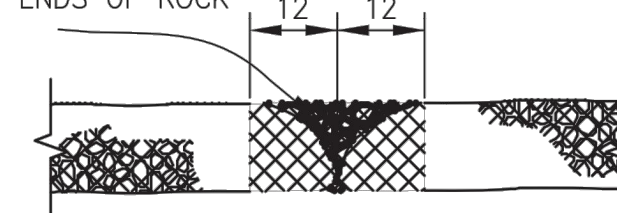


ELEVATION
SCALE: 1" = 5'-0"



SECTION D
SCALE: 1/2" = 1'-0"

ANY GAP AT JOINT SHALL BE FILLED WITH 1 1/2" CRUSHED ROCK AND WRAPPED WITH ADDITIONAL WIRE MESH SECURED TO ENDS OF ROCK REINFORCED BERM



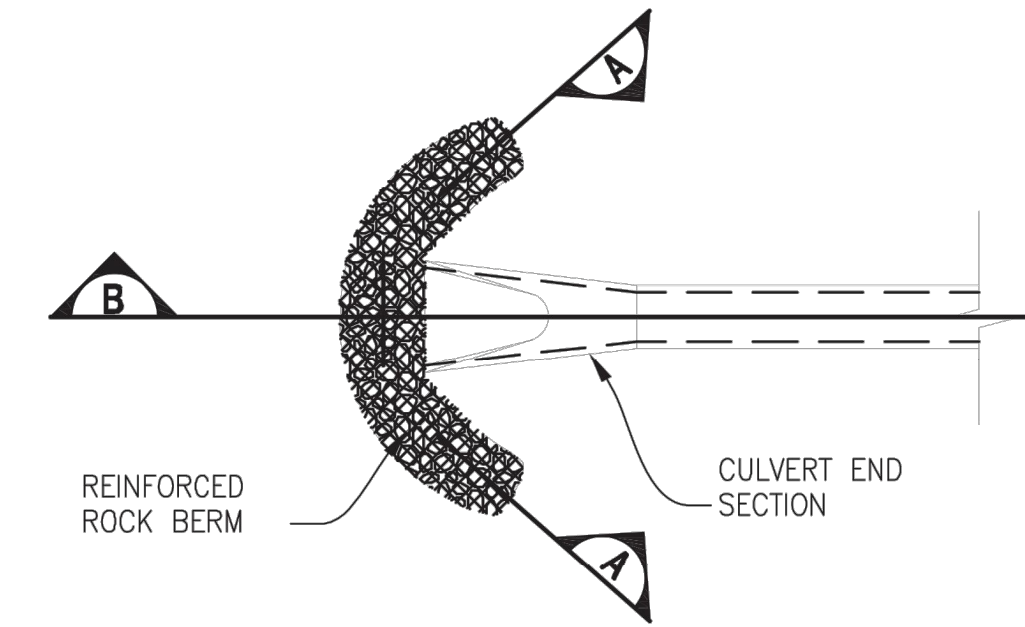
JOINT DETAIL
SCALE: 1/2" = 1'-0"

REINFORCED ROCK BERM INSTALLATION NOTES

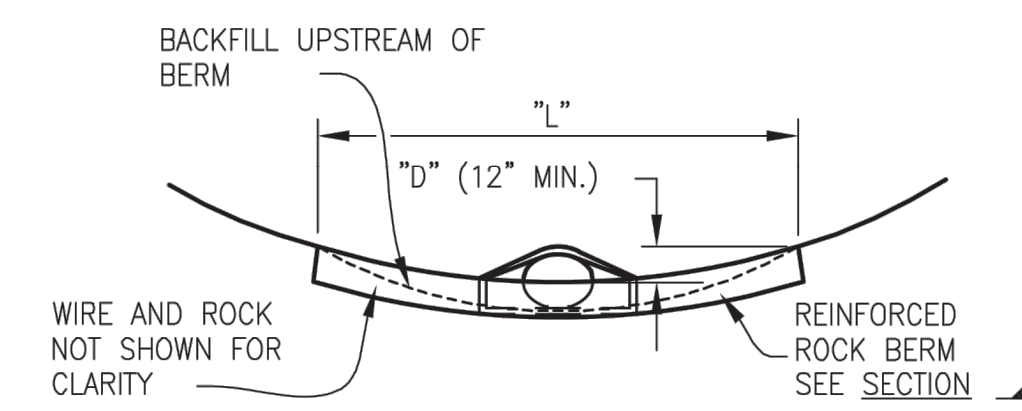
- SEE PLAN VIEW FOR:
 - LOCATIONS OF REINFORCED ROCK BERMS.
 - LENGTH, "L", AND DEPTH, "D" DIMENSIONS.
- REINFORCED ROCK BERM SECTION APPLIES TO CULVERT INLET FILTER AND INLET PROTECTION.
- CRUSHED ROCK SHALL BE FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON ROCK AND RIPRAP GRADATIONS (1-1/2").
- WIRE MESH SHALL BE FABRICATED OF 20 GAUGE WIRE TWISTED INTO A MESH WITH A MAXIMUM OPENING OF 1.0 INCH (COMMONLY TERMED "CHICKEN WIRE"). ROLL WIDTH SHALL BE 48-INCHES.
- WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT 6-INCH CENTERS ALONG ALL JOINTS AND AT 2-INCH CENTERS ON ENDS OF BERM.
- FOR CONCENTRATED FLOW AREAS THE ENDS OF THE REINFORCED ROCK BERM SHALL BE 12" HIGHER THAN THE CENTER OF THE BERM.

REINFORCED ROCK BERM MAINTENANCE NOTES

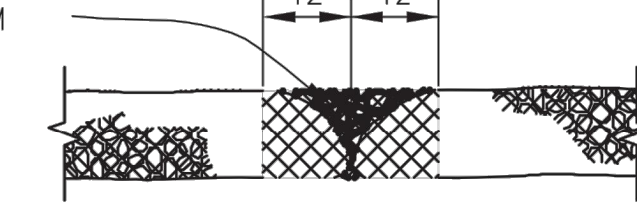
- THE RECOMMENDED INSPECTION FREQUENCY FOR REINFORCED ROCK BERM IS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT AS NECESSARY.
- SEDIMENT ACCUMULATED UPSTREAM OF REINFORCED ROCK BERM SHALL BE REMOVED WHEN THE SEDIMENT DEPTH UPSTREAM OF FILTER IS WITHIN 5 INCHES OF THE CREST.
- REINFORCED ROCK BERMS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS APPROVED.
- WHEN REINFORCED ROCK BERMS ARE REMOVED, ANY DISTURBED AREA SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.



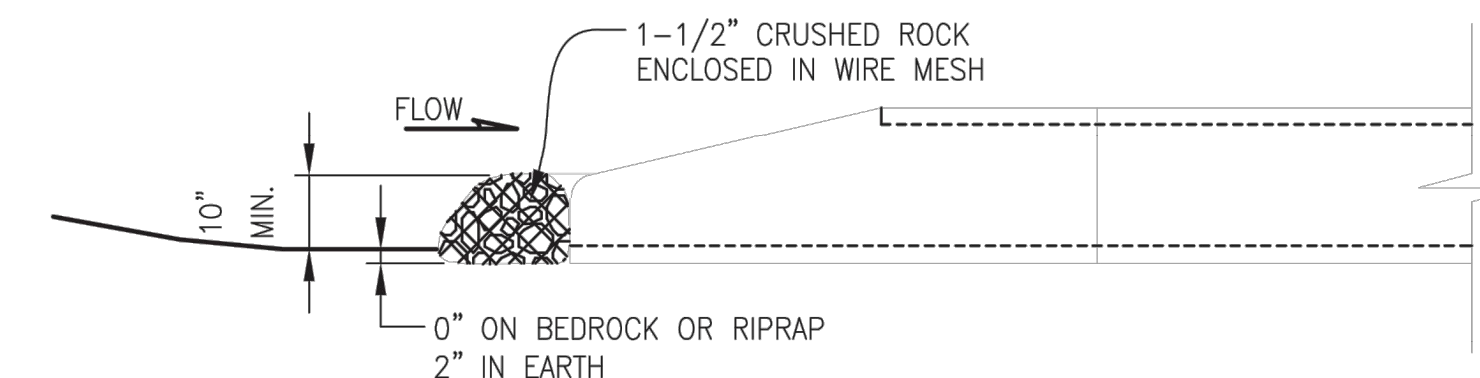
PLAN
SCALE: 1" = 5'-0"



SECTION A
SCALE: 1" = 5'-0"



JOINT DETAIL
SCALE: 1/2" = 1'-0"



SECTION B
SCALE: 1/2" = 1'-0"

INSTALLATION NOTES

- SEE PLAN VIEW FOR:
 - LOCATIONS OF CULVERT INLET FILTERS.
 - LENGTH, "L", AND DEPTH, "D".
- CRUSHED ROCK SHALL BE FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON ROCK AND RIPRAP GRADATIONS (1-1/2").
- WIRE MESH SHALL BE FABRICATED OF 20 GAUGE WIRE TWISTED INTO A MESH WITH A MAXIMUM OPENING OF 1.0 INCH (COMMONLY TERMED "CHICKEN WIRE"). ROLL WIDTH SHALL BE 48-INCHES.
- WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT 6-INCH CENTERS ALONG ALL JOINTS AND AT 2-INCH CENTERS ON ENDS OF BERM.
- THE ENDS OF THE REINFORCED ROCK BERM SHALL BE 12" HIGHER THAN THE CENTER OF THE BERM.

MAINTENANCE NOTES

- THE RECOMMENDED INSPECTION FREQUENCY FOR RRB FOR CULVERT PROTECTION IS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT AS NECESSARY.
- SEDIMENT ACCUMULATED UPSTREAM OF RRB FOR CULVERT PROTECTION SHALL BE REMOVED WHEN THE SEDIMENT DEPTH UPSTREAM OF FILTER IS 1/2 THE HEIGHT OF THE REINFORCED ROCK BERM.
- RRB FOR CULVERT PROTECTION ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS APPROVED BY THE COUNTY.
- WHEN RRB FOR CULVERT PROTECTION ARE REMOVED, ANY DISTURBED AREA SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.



RCD REINFORCED CHECK DAM

12



RRB REINFORCED ROCK BERM

13



RRC RRB FOR CULVERT PROTECTION

14

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DRAWN BY: AMT & TAL
CHECKED BY: BMW

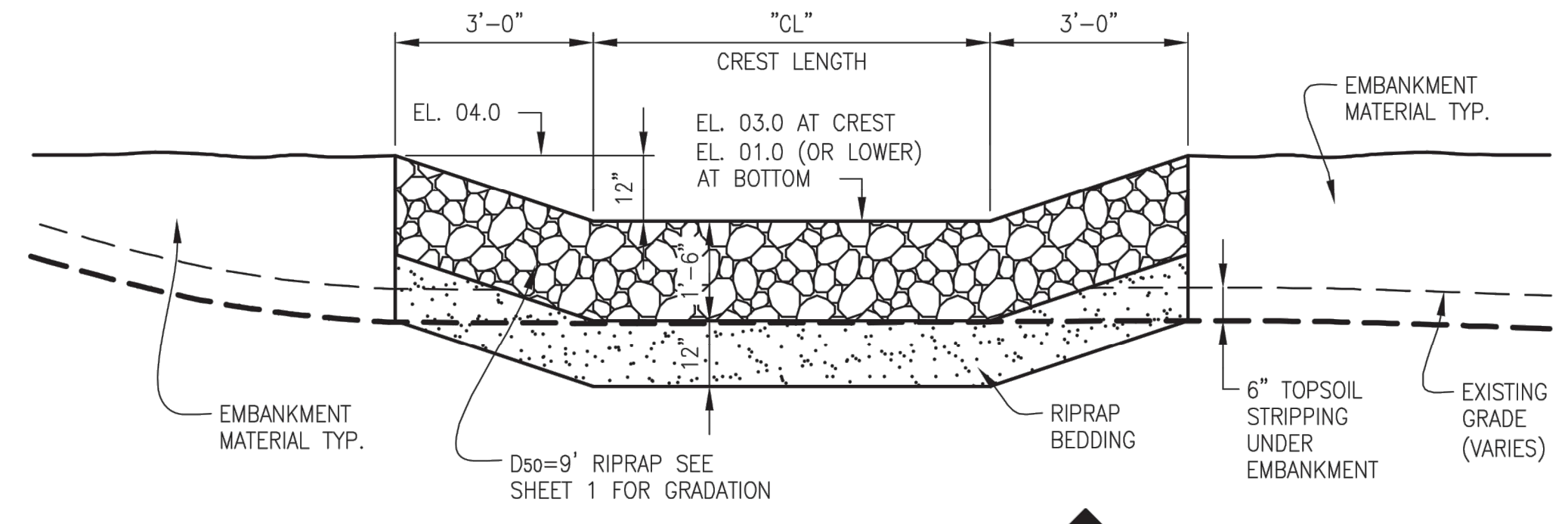
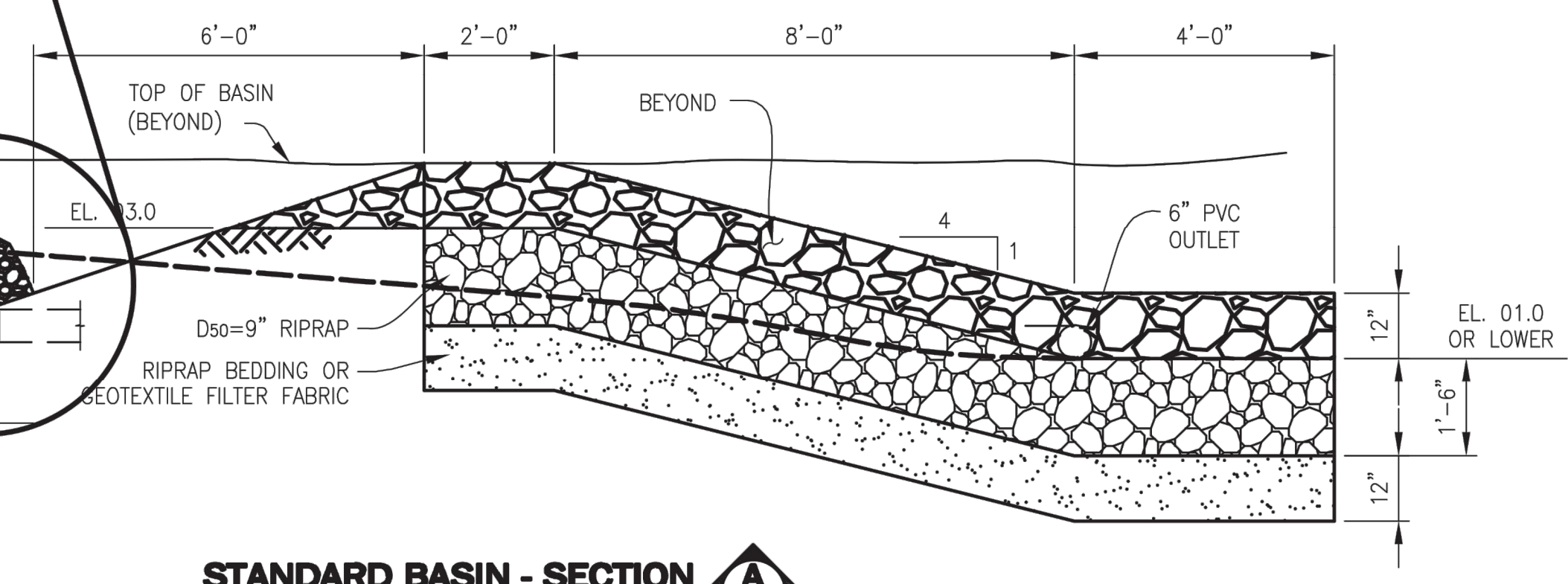
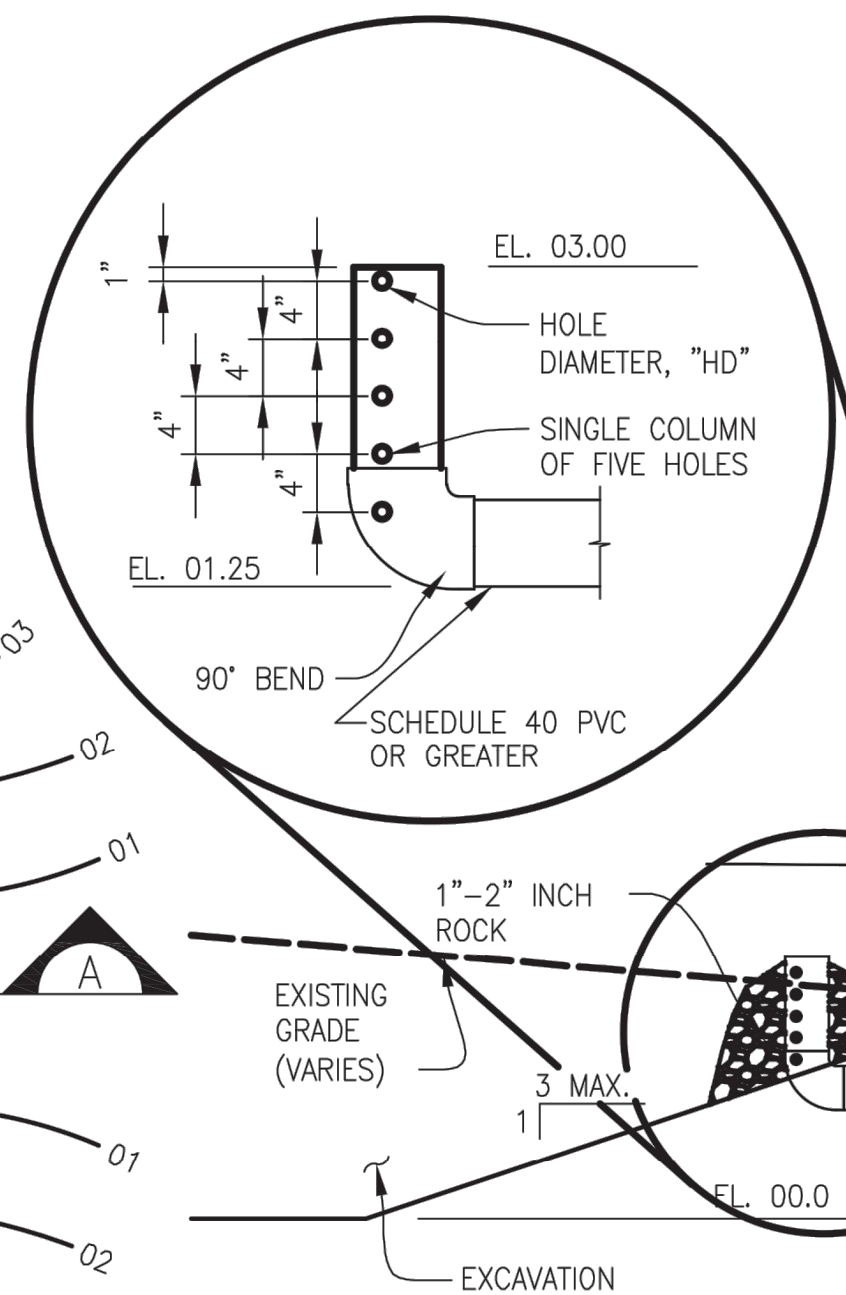
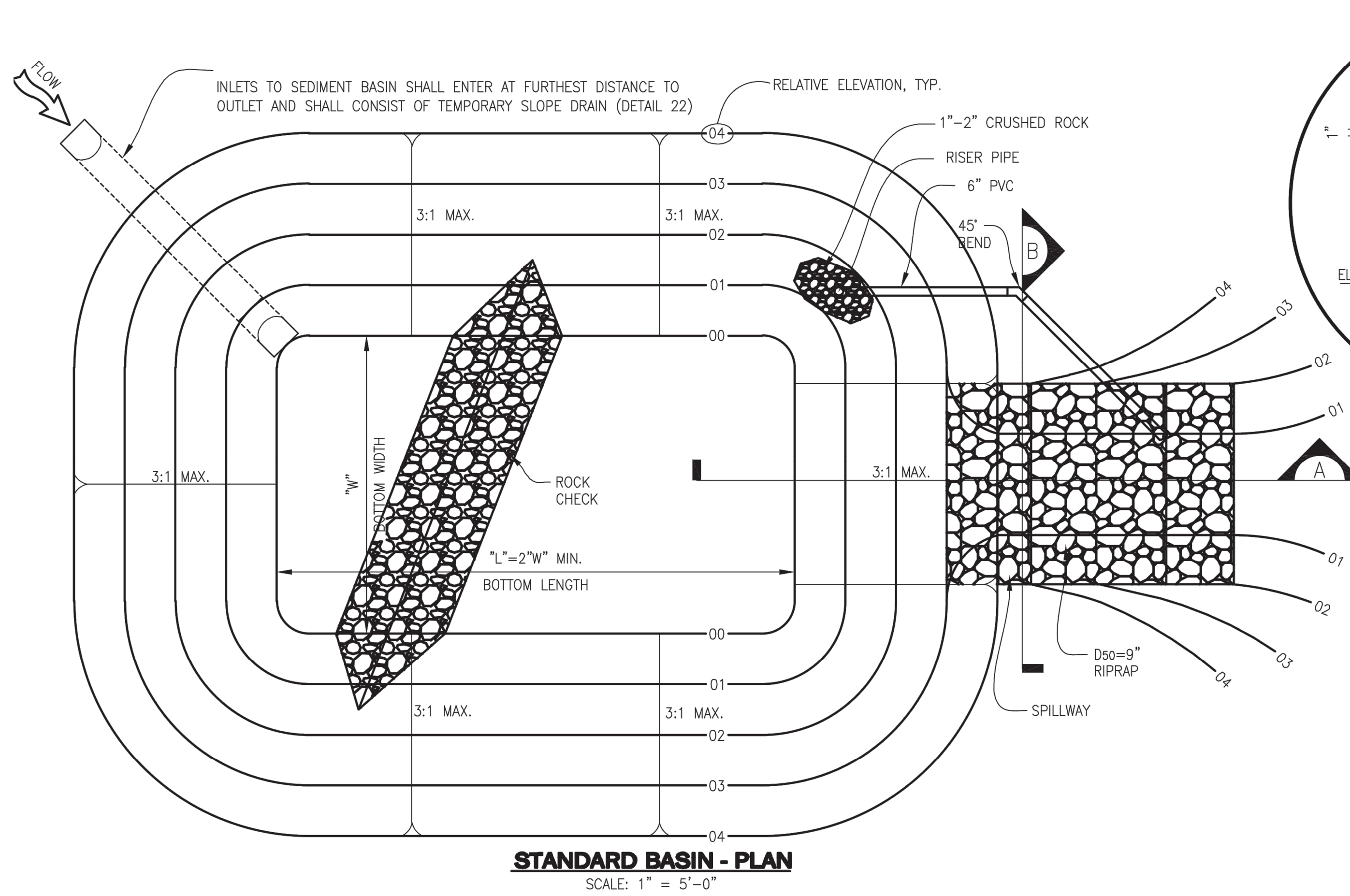
DETAILS

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SEDIMENT BASIN INSTALLATION NOTES

- SEE PLAN VIEW FOR:
 - LOCATION OF SEDIMENT BASIN.
 - TYPE OF BASIN (STANDARD BASIN OR NON-STANDARD BASIN).
 - FOR STANDARD BASIN, CREST LENGTH, "CL", BOTTOM WIDTH, "W", AND HOLE DIAMETER, "HD".
 - FOR NON-STANDARD BASIN, SEE CONSTRUCTION DRAWINGS FOR DESIGN OF BASIN INCLUDING RISER HEIGHT, "H", NUMBER OF COLUMNS, "N", HOLE DIAMETER, "HD", AND PIPE DIAMETER "D".
- FOR STANDARD BASIN, BOTTOM DIMENSION MAY BE MODIFIED AS LONG AS BOTTOM AREA IS NOT REDUCED.
- SEDIMENT BASINS INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED PRIOR TO ANY OTHER LAND-DISTURBING ACTIVITY.
- EMBANKMENT MATERIAL SHALL CONSIST OF SOIL FREE OF DEBRIS, ORGANIC MATERIAL, AND ROCKS OR CONCRETE GREATER THAN 3 INCHES AND SHALL HAVE A MINIMUM OF 15 PERCENT BY WEIGHT PASSING THE NO. 200 SIEVE.
- EMBANKMENT MATERIAL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY WITHIN 2 PERCENTAGE POINTS OF OPTIMUM DENSITY IN ACCORDANCE WITH ASTM D698.
- PIPE SCH 40 OR GREATER SHALL BE USED.
- THE DETAILS SHOWN ON THIS SHEET PERTAIN TO STANDARD SEDIMENT BASIN(S) IDENTIFIED ON THE GESC PLAN VIEW DRAWINGS USED FOR DRAINAGE AREAS LESS THAN 15 ACRES. SEE CONSTRUCTION DRAWINGS FOR EMBANKMENT, STORAGE VOLUME, SPILLWAY, OUTLET, AND OUTLET PROTECTION DETAILS FOR ANY SEDIMENT BASIN(S) THAT HAVE BEEN INDIVIDUALLY DESIGNED FOR DRAINAGE AREAS LARGER THAN 15 ACRES.

SEDIMENT BASIN MAINTENANCE NOTES

- THE RECOMMENDED INSPECTION FREQUENCY FOR SEDIMENT BASIN IS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT AS NECESSARY.
- SEDIMENT ACCUMULATED IN SEDIMENT BASIN SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS 1.0 FOOT.
- SEDIMENT BASINS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS APPROVED BY THE COUNTY.
- IF SEDIMENT BASINS ARE REMOVED, THE DISTURBED AREA SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.

SIZING INFORMATION FOR STANDARD SEDIMENT BASIN			
Upstream Drainage Area (rounded to nearest acre), (ac)	Basin Bottom Width (W), (ft)	Spillway Crest Length (CL), (ft)	Hole Diameter (HD), (in)
1	16	2.0	7/16
2	22	4.0	5/8
3	27	6.0	3/4
4	31	8.0	7/8
5	35	10.0	1.0
6	38	12.0	1 1/8
7	41	14.0	1 1/4
8	44	16.0	1 1/4
9	47	18.0	1 3/8
10	49	20.0	1 3/8
11	52	22.0	1 1/2
12	54	24.0	1 1/2
13	56	26.0	1 5/8
14	59	28.0	1 5/8
15	61	30.0	1 5/8

SEDIMENT BASIN **15**

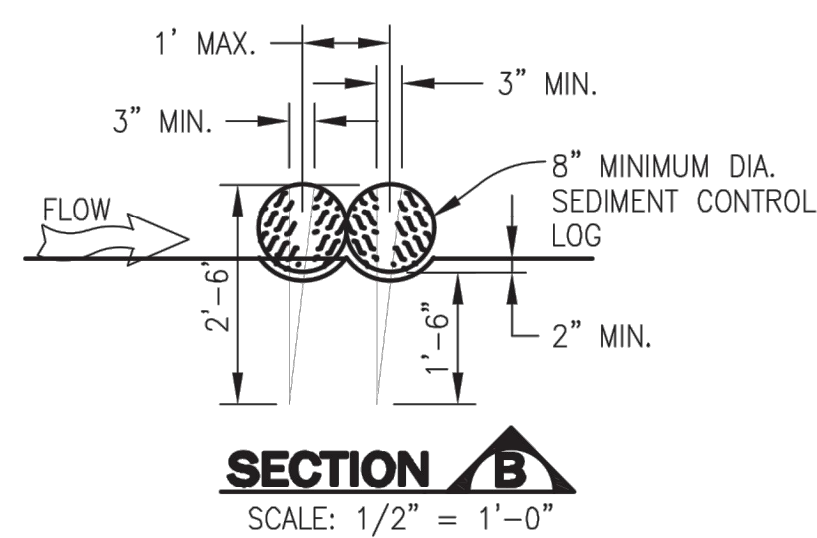
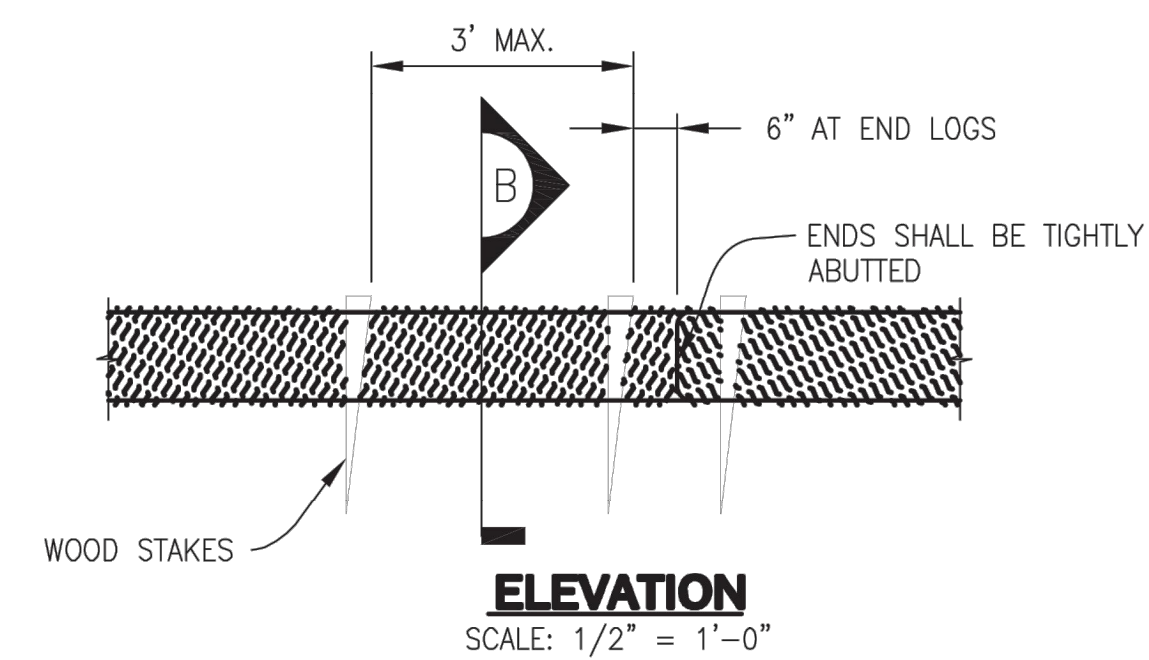
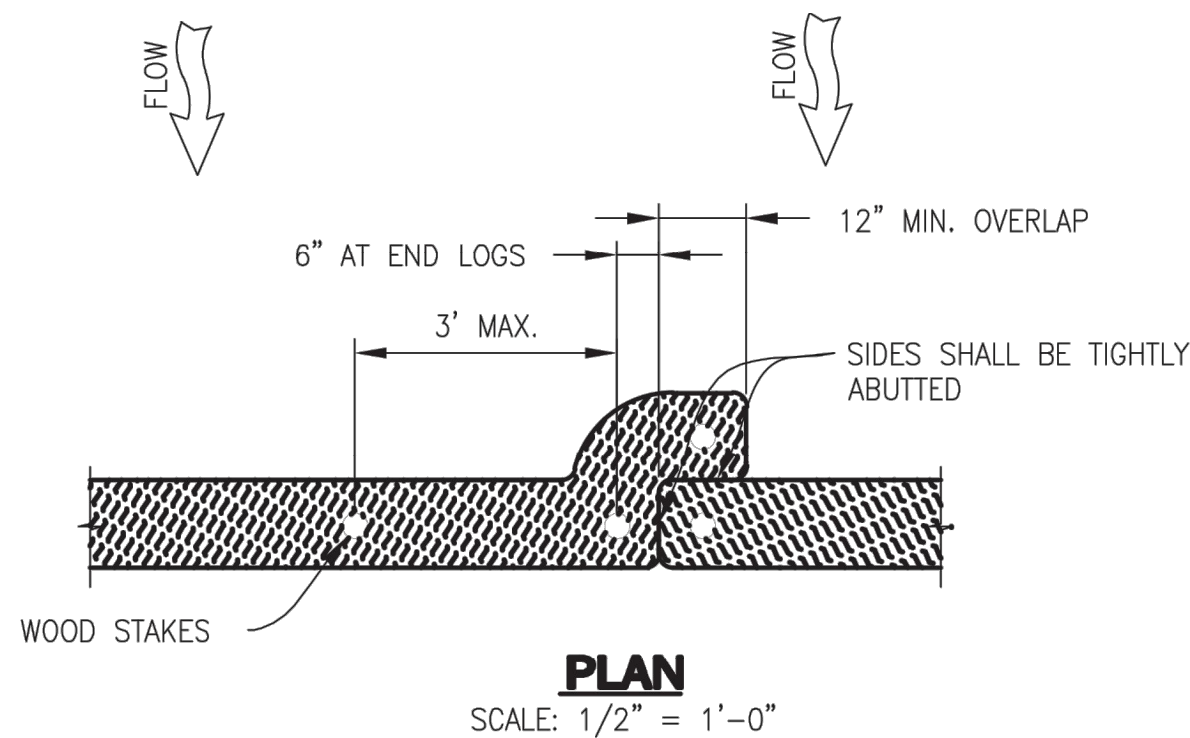
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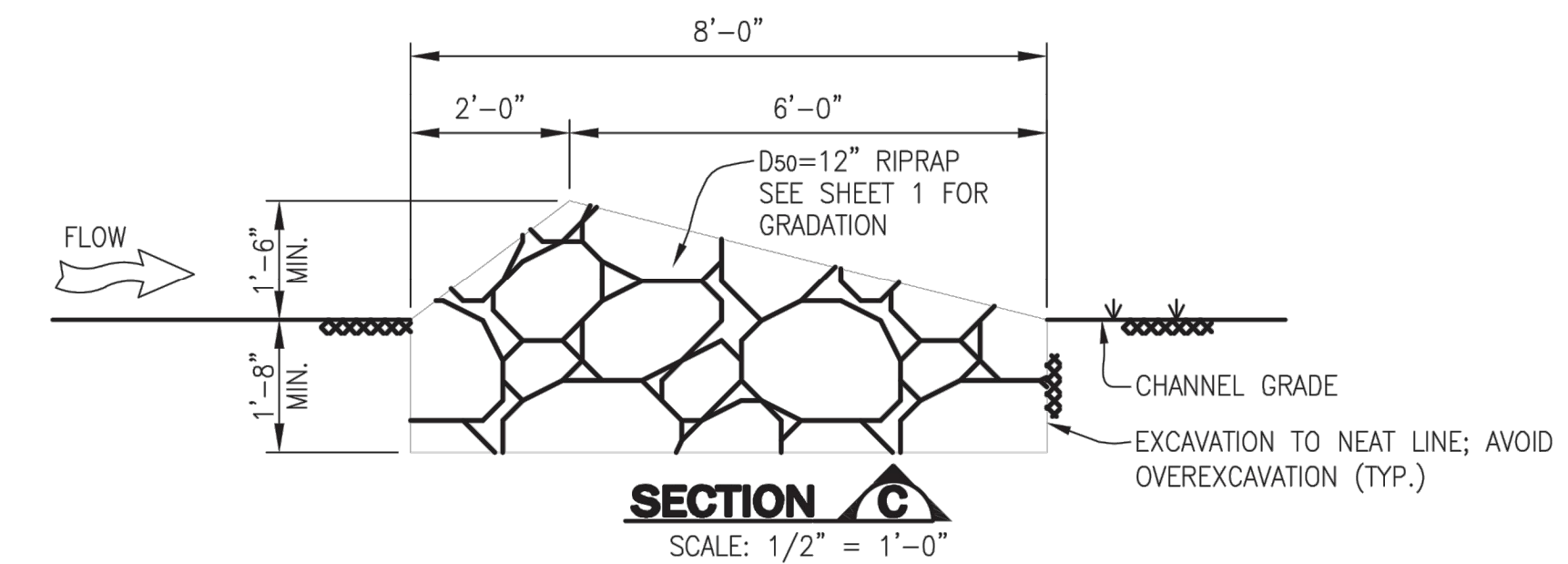
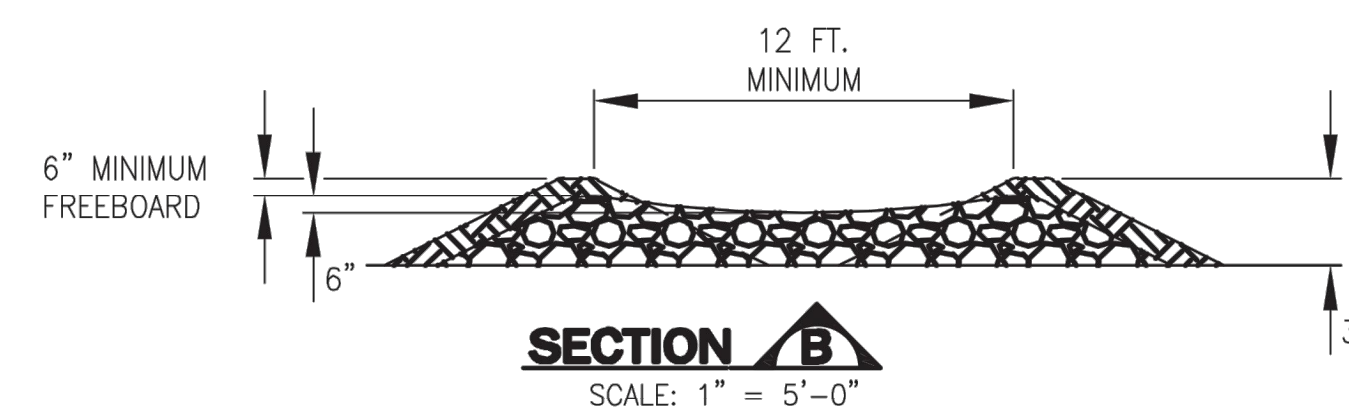
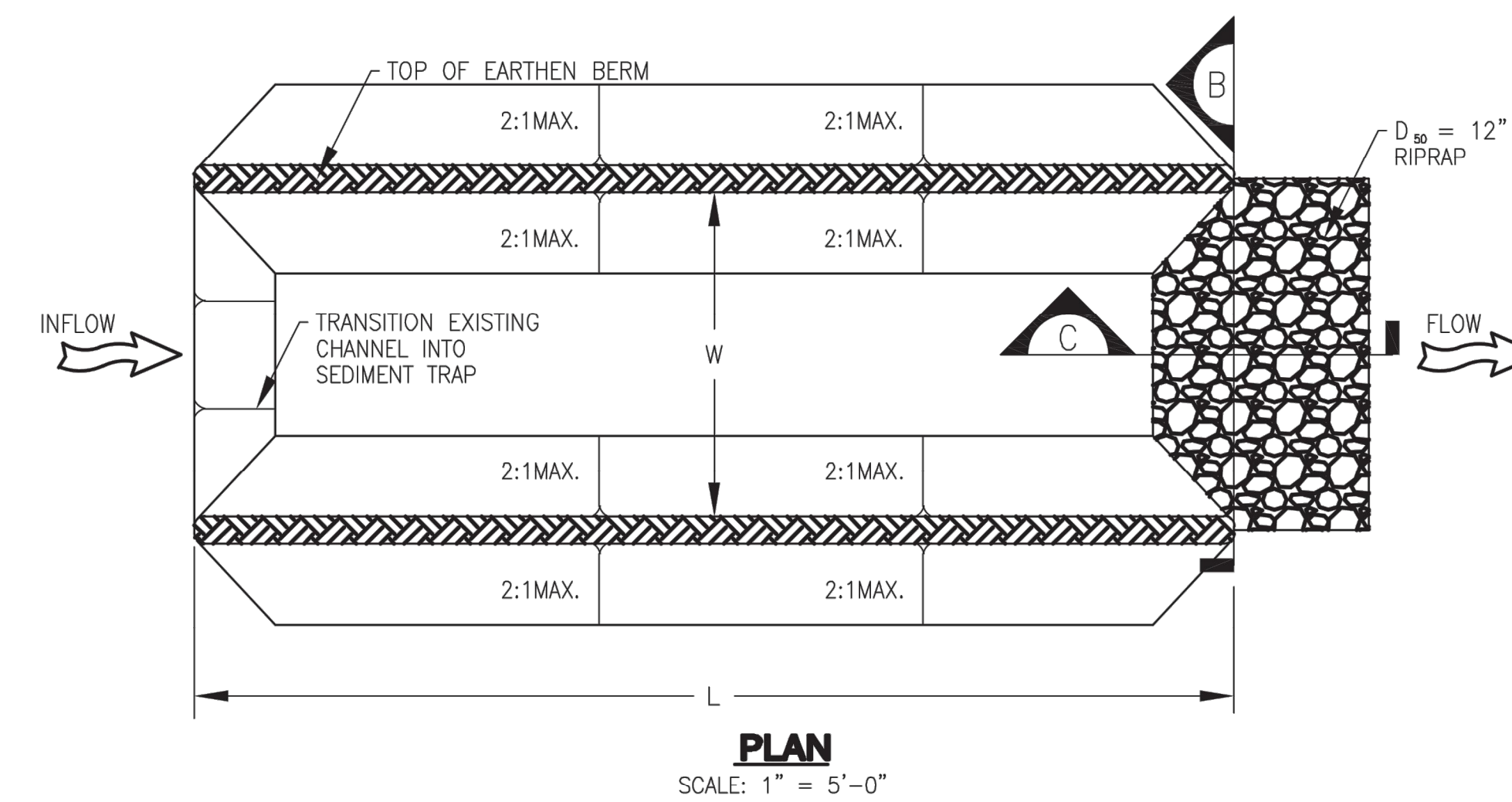


SEDIMENT CONTROL LOG INSTALLATION NOTES

- SEE PLAN VIEW FOR:
- LOCATION AND LENGTH OF SEDIMENT TRAP.
- SEDIMENT CONTROL LOGS INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED PRIOR TO ANY LAND-DISTURBING ACTIVITIES.
- SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR, OR COCONUT FIBER.
- NOT FOR USE IN CONCENTRATED FLOW AREAS.
- THE SEDIMENT CONTROL LOG SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF 2".

SEDIMENT CONTROL LOG MAINTENANCE NOTES

- THE RECOMMENDED INSPECTION FREQUENCY FOR SEDIMENT CONTROL LOGS IS DAILY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY.
- SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOGS SHALL BE REMOVED WHEN THE UPSTREAM SEDIMENT DEPTH IS WITHIN 1/2 THE HEIGHT OF THE CREST OF LOG.
- SEDIMENT CONTROL LOG SHALL REMAIN IN PLACE UNTIL THE VEGETATIVE COVER IS APPROVED BY THE EROSION CONTROL INSPECTOR. IF ANY DISTURBED AREA EXISTS AFTER REMOVAL, IT SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.



SEDIMENT TRAP INSTALLATION NOTES

- SEE PLAN VIEW FOR:
- LOCATION, LENGTH AND WIDTH OF SEDIMENT TRAP.
- SEDIMENT TRAPS INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED PRIOR TO ANY LAND-DISTURBING ACTIVITIES.
- SEDIMENT TRAP BERM SHALL BE CONSTRUCTED FROM MATERIAL FROM EXCAVATION. THE BERM SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D698.
- RIPRAP OUTLET SHALL BE CONSTRUCTED WITH D₅₀ = 12" RIPRAP WITH A MINIMUM OVERFLOW OF 6".
- THE TOP OF THE EARTHEN BERM SHALL BE A MINIMUM OF 6" HIGHER THAN THE TOP OF THE RIPRAP OUTLET STRUCTURE.
- THE ENDS OF THE RIPRAP OUTLET STRUCTURE SHALL BE MINIMUM OF 6" HIGHER THAN THE CENTER OF THE OUTLET STRUCTURE.

SEDIMENT TRAP MAINTENANCE NOTES

- THE RECOMMENDED INSPECTION FREQUENCY FOR SEDIMENT TRAPS IS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY.
- SEDIMENT ACCUMULATED UPSTREAM OF RIPRAP SHALL BE REMOVED WHEN THE UPSTREAM SEDIMENT DEPTH IS WITHIN 1/2 THE HEIGHT OF THE RIPRAP OUTLET STRUCTURE.
- SEDIMENT TRAPS SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVERAGE IS APPROVED BY THE COUNTY.
- WHEN SEDIMENT TRAPS ARE REMOVED THE DISTURBED AREA SHALL BE DRILLED SEEDED AND CRIMP MULCHED OR STABILIZED IN A MANNER APPROVED BY THE COUNTY.



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SEEDING AND MULCHING INSTALLATION NOTES

- SEE PLAN VIEW FOR:
- AREA OF SEEDING AND MULCHING.
- TYPE OF SEED MIX (PERMANENT, TEMPORARY, OR LOW-GROWTH).
- ALL BRANDS FURNISHED SHALL BE FREE FROM SUCH NOXIOUS SEEDS AS RUSSIAN OR CANADIAN THISTLE, COARSE FESCUE, EUROPEAN BINDWEED, JOHNSON GRASS, Knap WEED AND LEAFY SPURGE.
- THE SEEDER SHALL FURNISH TO THE CONTRACTOR A SIGNED STATEMENT CERTIFYING THAT THE SEED FURNISHED IS FROM A LOT THAT HAS BEEN TESTED BY A RECOGNIZED LABORATORY. SEED WHICH HAS BECOME WET, MOLDY, OR OTHERWISE DAMAGED IN TRANSIT OR IN STORAGE WILL NOT BE ACCEPTABLE. SEED TICKETS SHALL BE PROVIDED TO DOUGLAS COUNTY UPON REQUEST.
- DRILL SEEDING MIX SHALL CONFORM TO THE TABLE ON THE RIGHT:
- IF THE SEED AVAILABLE ON THE MARKET DOES NOT MEET THE MINIMUM PURITY AND GERMINATION PERCENTAGES SPECIFIED, THE SUBCONTRACTOR MUST COMPENSATE FOR A LESSER PERCENTAGE OF PURITY OR GERMINATION BY FURNISHING SUFFICIENT ADDITIONAL SEED TO EQUAL THE SPECIFIED PRODUCT. THE TAGS FROM THE SEED MIXES MUST BE SUPPLIED TO THE CONTRACTOR AND FORWARDED TO THE DOUGLAS COUNTY EROSION CONTROL INSPECTOR.
- THE FORMULA USED FOR DETERMINING THE QUANTITY OF PURE LIVE SEED (PLS) SHALL BE (POUNDS OF SEED) X (PURITY) X (GERMINATION) = POUNDS OF PURE LIVE SEED (PLS).
- PERMANENT SEED MIX SHALL BE USED UNLESS OTHERWISE APPROVED BY THE COUNTY.
- ALL AREAS TO BE SEEDED AND MULCHED SHALL HAVE NATIVE TOPSOIL OR APPROVED SOIL AMENDMENTS SPREAD TO A DEPTH OF AT LEAST 6 INCHES (LOOSE DEPTH). HAUL ROADS AND OTHER COMPACTED AREAS SHALL BE LOOSENEED TO A DEPTH OF 6 INCHES PRIOR TO SPREADING TOPSOIL.
- SOIL IS TO BE THOROUGHLY LOOSENEED (TILLED) TO A DEPTH OF AT LEAST 6 INCHES PRIOR TO SEEDING. THE TOP 6 INCHES OF THE SEED BED SHALL BE FREE OF ROCKS GREATER THAN 4 INCHES AND SOIL CLODS GREATER THAN 2 INCHES. SEEDING OVER ANY COMPACTED AREAS THAT HAVEN'T BEEN THOROUGHLY LOOSENEED SHALL BE REJECTED.
- SEED IS TO BE APPLIED USING A MECHANICAL DRILL TO A DEPTH NOT LESS THAN 1/4 INCH AND NOT MORE THAN 3/4 INCH. ROW SPACING SHALL BE NO MORE THAN 6 INCHES. MATERIAL USED FOR MULCH SHALL CONSIST OF LONG-STEMMED STRAW. AT LEAST 50 PERCENT OF THE MULCH, BY WEIGHT, SHALL BE 10 INCHES OR MORE IN LENGTH. MULCH SHALL BE APPLIED AND MECHANICALLY ANCHORED TO A DEPTH OF AT LEAST 2 INCHES. MULCH SHALL BE APPLIED AT A RATE OF 4000 LB. OF STRAW PER ACRE.
- IF THE PERMITTEE DEMONSTRATES TO THE COUNTY THAT IT IS NOT POSSIBLE TO DRILL SEED, SEED IS TO BE UNIFORMLY BROADCAST AT TWO TIMES THE DRILLED RATE, THEN LIGHTLY HARROWED TO PROVIDE A SEED DEPTH OF APPROXIMATELY 1/4 INCH, THEN ROLLED TO COMPACT, THEN MULCHED AS SPECIFIED ABOVE.
- SEEDING AND MULCHING SHALL BE COMPLETED WITHIN 30 DAYS OF INITIAL EXPOSURE OR 14 DAYS AFTER GRADING IS SUBSTANTIALLY COMPLETE IN A GIVEN AREA (AS DEFINED BY THE COUNTY). THIS MAY REQUIRE MULTIPLE MOBILIZATIONS FOR SEEDING AND MULCHING.
- MULCH SHALL BE APPLIED WITHIN 24-HOURS OF SEEDING.
- TACKIFIER SHOULD BE UTILIZED TO HELP PREVENT STRAW DISPLACEMENT.

SEEDING AND MULCHING MAINTENANCE NOTES

- SEEDED AND MULCHED AREAS SHALL BE INSPECTED FOR REQUIRED COVERAGE MONTHLY FOR A PERIOD OF TWO YEARS FOLLOWING INITIAL SEEDING. REPAIRS AND RE-SEEDING AND MULCHING SHALL BE UNDERTAKEN AFTER THE FIRST GROWING SEASON FOR ANY AREAS FAILING TO MEET THE REQUIRED COVERAGE.
- REQUIRED COVERAGE FOR STANDARD, OPEN SPACE AND LOW GROWTH SEED MIXES SHALL BE DEFINED AS FOLLOWS:
 - THREE (3) PLANTS PER SQUARE FOOT WITH A MINIMUM HEIGHT OF 3 INCHES. THE 3 PLANTS PER SQUARE FOOT SHALL BE OF THE VARIETY AND SPECIES FOUND IN THE DOUGLAS COUNTY-APPROVED MIX.
 - NO BARE AREAS LARGER THAN 4 SQUARE FEET (TWO-FEET BY TWO-FEET OR EQUIVALENT). FREE OF ERODED AREAS.
 - FREE FROM INFESTATION OF NOXIOUS WEEDS IN ACCORDANCE WITH SECTION 6.4 OF THE GESC MANUAL.
- REQUIRED COVERAGE FOR TURF GRASS AREAS SHALL BE DEFINED AS FOLLOWS:
 - AT LEAST 80% VEGETATIVE COVER OF GRASS SPECIES PLANTED.
 - NO BARE AREAS LARGER THAN 4 SQUARE FEET (TWO-FEET BY TWO-FEET OR EQUIVALENT). FREE OF ERODED AREAS.
 - FREE FROM INFESTATION OF NOXIOUS WEEDS IN ACCORDANCE WITH SECTION 6.4 OF THE GESC MANUAL.
- RILL AND GULLY EROSION SHALL BE FILLED WITH TOPSOIL PRIOR TO RESEEDING. THE RESEEDING METHOD SHALL BE APPROVED BY THE COUNTY.

DOUGLAS COUNTY PERMANENT DRILL SEEDING MIX

SPECIES	VARIETY	NOTES	% IN MIX	POUNDS OF PLS PER ACRE
BIG BLUESTEM	KAW	PNWS	10	1.1
YELLOW INDIANGRASS	CHEYENNE	PNWS	10	1
SWITCHGRASS	BLACKWELL	PNWS	10	0.4
SIDEOATS GRAMA	VAUGHN	PNWB	10	0.9
WESTERN WHEATGRASS	ARRIBA	PNCS	10	1.6
BLUE GRAMA	HACHITA	PNWB	10	0.3
THICKSPIKE WHEATGRASS	CRITANA	PNCS	10	1
PRAIRIE SANDREED	GOSHEN	PNWS	10	0.7
GREEN NEEDLEGRASS	LODORM	PNCB	10	1
SLENDER WHEATGRASS	PRYOR	PNCB	5	0.6
STREAMBANK WHEATGRASS	SODAR	PNCS	5	0.6
TOTAL				9.2

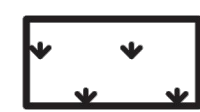
DOUGLAS COUNTY TEMPORARY DRILL SEEDING MIX

SPECIES	VARIETY	NOTES	% IN MIX	POUNDS OF PLS PER ACRE
SMOOTH BROMEGRASS	LINCOLN	PICS	30	3.9
INTERMEDIATE WHEATGRASS	OAHE	PICS	30	4.5
PUBESCENT WHEATGRASS	LUNA	PICS	30	4.2
ANNUAL RYEGRASS	N/A	AICB	10	0.8
TOTAL				13.4

DOUGLAS COUNTY LOW-GROWTH DRILL SEEDING MIX

SPECIES	VARIETY	NOTES	% IN MIX	POUNDS OF PLS PER ACRE
BUFFALOGRASS	TEXOKA	PNWS	20	3.2
BLUE GRAMA	HACHITA	PNWB	20	0.6
WESTERN WHEATGRASS	ARRIBA	PNCS	20	3.2
SIDEOATS GRAMA	VAUGHN	PNWB	20	1.8
THICKSPIKE WHEATGRASS	CRITANA	PNCS	10	1
STREAMBANK WHEATGRASS	SODAR	PNCS	10	1.2
TOTAL				11.0

NOTES:
P=PERENNIAL
A=ANNUAL
N=NATIVE
I=INTRODUCED
W=WARM SEASON
C=COOL SEASON
S=SOD FORMER
B=BUNCHGRASS



SEEDING AND MULCHING 18

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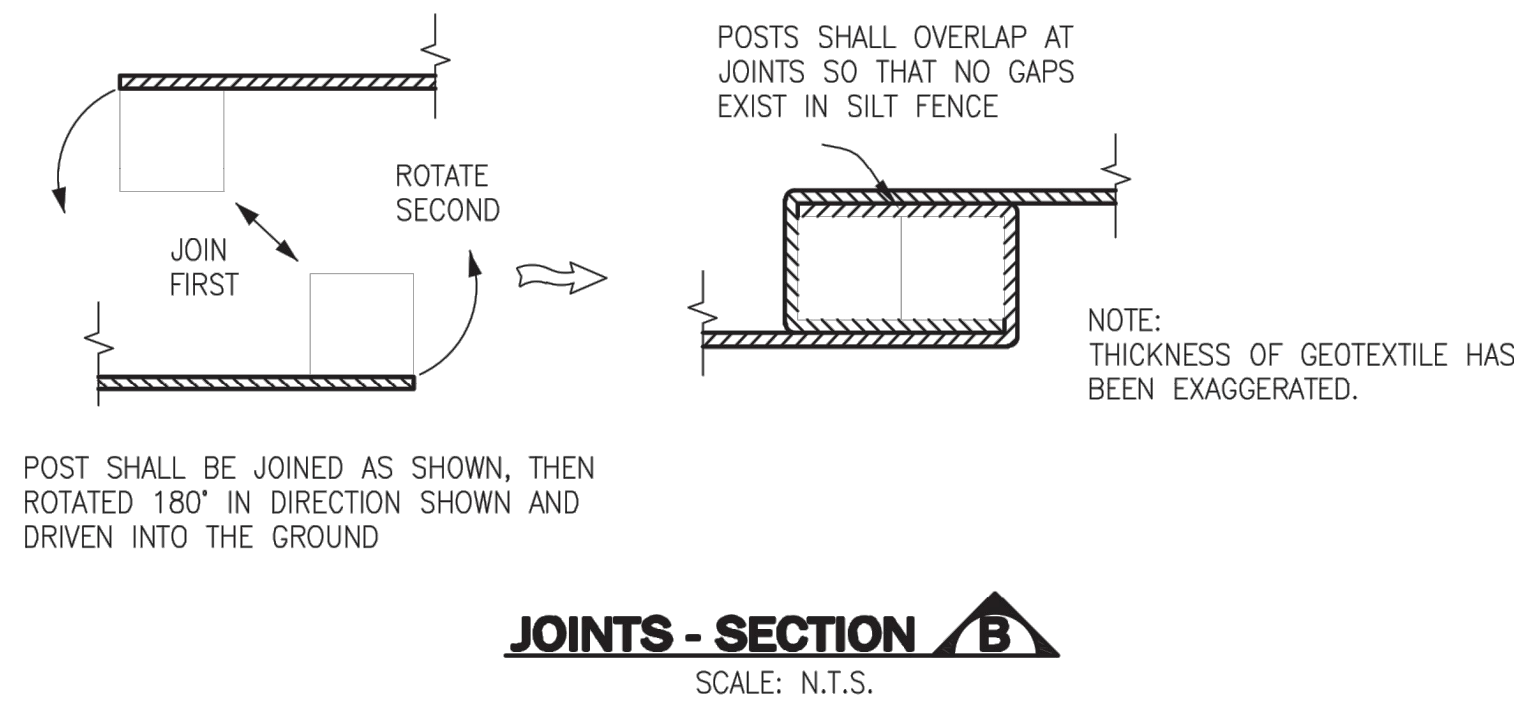
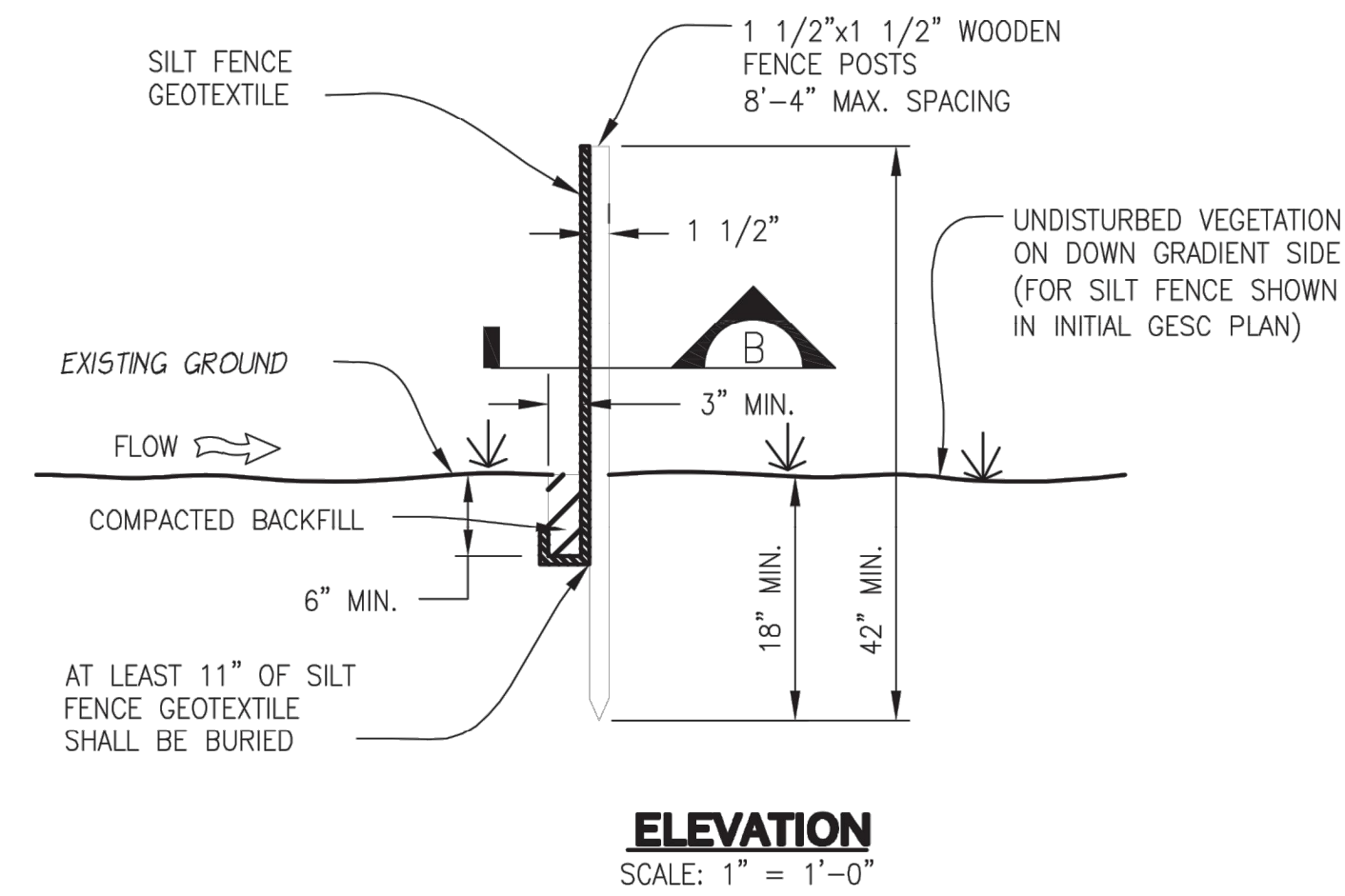
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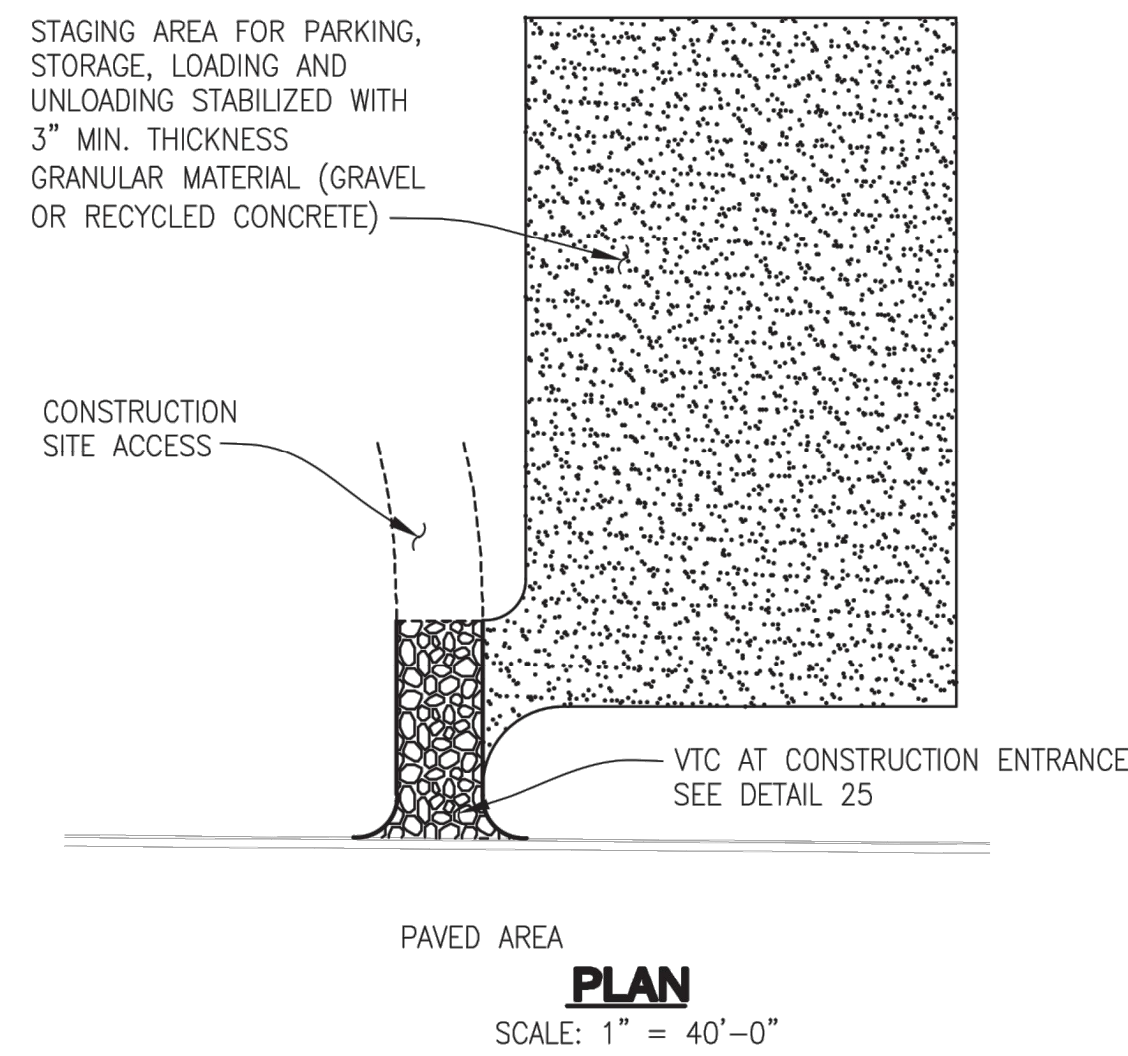


SILT FENCE INSTALLATION NOTES

- SEE PLAN VIEW FOR:
 - LOCATION AND LENGTH OF FENCE.
- ANCHOR TRENCH SHALL BE EXCAVATED WITH TRENCHER, OR WITH SILT FENCE INSTALLATION MACHINE; NO ROAD GRADERS, BACKHOES, ETC. SHALL BE USED. TRENCH SHALL BE COMPACTED BY HAND, WITH "JUMPING JACK", OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.
- SILT FENCE GEOTEXTILE SHALL MEET THE FOLLOWING REQUIREMENTS:
 - 6-TO 12-GALLONS PER MINUTE PER SQUARE FOOT FLOW CAPACITY.
 - 90 LB. TENSILE STRENGTH PER ASTM D4622.
 - UV DESIGN AT 500 HRS MIN. 70% STRENGTH RETAINED PER ASTM D4355.
- SILT FENCE INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED PRIOR TO ANY LAND-DISTURBING ACTIVITIES.

SILT FENCE MAINTENANCE NOTES

- THE RECOMMENDED INSPECTION FREQUENCY FOR SILT FENCE IS DAILY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY.
- SEDIMENT ACCUMULATED UPSTREAM OF SILT FENCE SHALL BE REMOVED WHEN THE UPSTREAM SEDIMENT REACHES A DEPTH OF 6-INCHES.
- SILT FENCE SHALL BE REMOVED WHEN THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS APPROVED BY THE COUNTY. IF ANY DISTURBED AREA EXISTS AFTER REMOVAL, IT SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.

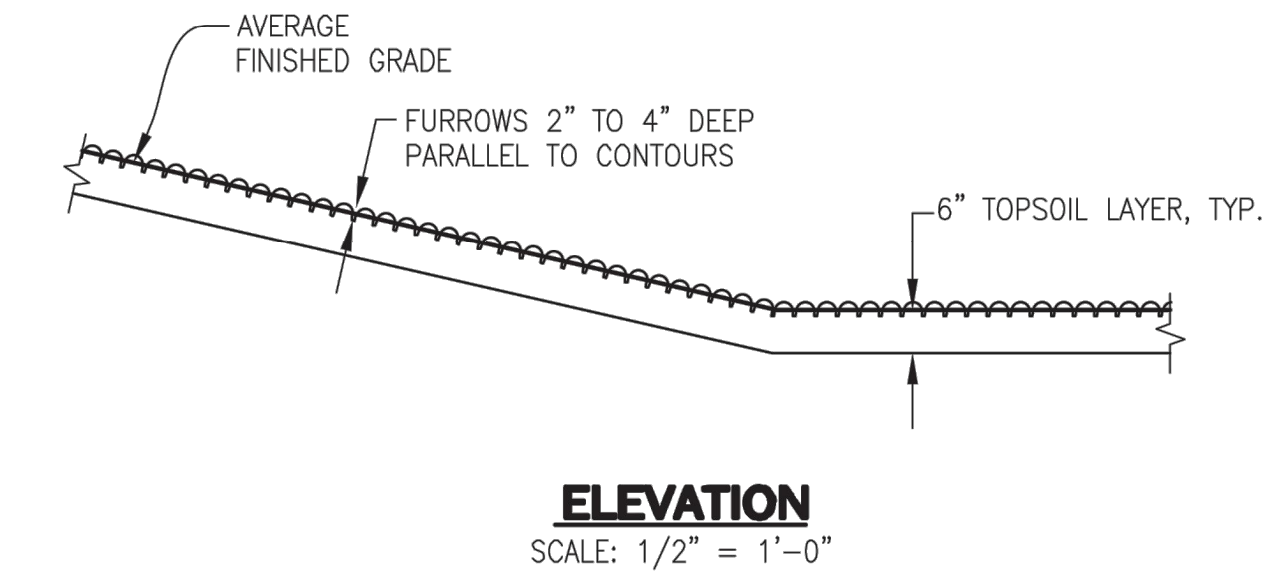


STABILIZED STAGING AREA INSTALLATION NOTES

- SEE PLAN VIEW FOR GENERAL LOCATION OF STAGING AREA. CONTRACTOR MAY MODIFY LOCATION AND SIZE OF STABILIZED STAGING AREA WITH COUNTY APPROVAL.
- STABILIZED STAGING AREA SHALL BE LARGE ENOUGH TO FULLY CONTAIN PARKING, STORAGE, AND UNLOADING AND LOADING OPERATIONS.
- IF REQUIRED BY THE COUNTY, SITE ACCESS ROADS SHALL BE STABILIZED IN THE SAME MANNER AS THE STAGING AREA.
- STAGING AREA SHALL BE STABILIZED PRIOR TO ANY OTHER OPERATIONS ON THE SITE.
- THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM OF 3" OF GRANULAR MATERIAL (GRAVEL OR RECYCLED CONCRETE).

STABILIZED STAGING AREA MAINTENANCE NOTES

- THE RECOMMENDED INSPECTION FREQUENCY FOR THE STABILIZED STAGING AREA IS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY.
- GESC MANAGER SHALL PROVIDE ADDITIONAL THICKNESS OF GRANULAR MATERIAL IF ANY RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.
- STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING AND LOADING OPERATIONS.
- ANY ACCUMULATED DIRT OR MUD SHALL BE REMOVED FROM THE SURFACE OF THE STABILIZED STAGING AREA.
- THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE COUNTY, USED ON SITE, AND THE AREA TOPSOILED, DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED.



SURFACE ROUGHENING INSTALLATION NOTES

- SURFACE ROUGHENING SHALL BE PROVIDED ON ALL FINISHED GRADES (SLOPES AND "FLAT" AREAS) WITHIN 2 DAYS OF COMPLETION OF FINISHED GRADE (FOR AREAS NOT RECEIVING TOPSOIL) OR WITHIN 2 DAYS OF TOPSOIL PLACEMENT.
- AREAS WHERE BUILDING FOUNDATIONS, PAVEMENT, OR SOD IS TO BE PLACED WITHIN 7-DAYS OF FINISHED GRADING DO NOT NEED TO BE SURFACE ROUGHENED.
- DISTURBED SURFACES SHALL BE ROUGHENED USING RIPPING OR TILLING EQUIPMENT ON THE CONTOUR OR TRACKING UP AND DOWN A SLOPE USING EQUIPMENT TREADS.

SURFACE ROUGHENING MAINTENANCE NOTES

- THE RECOMMENDED INSPECTION FREQUENCY FOR SURFACE ROUGHENING IS WEEKLY, DURING AND AFTER ANY STORM EVENT, AND MAKE REPAIRS.
- VEHICLES AND EQUIPMENT SHALL GENERALLY BE CONFINED TO ACCESS DRIVES AND SHALL NOT BE DRIVEN OVER AREAS THAT HAVE BEEN SURFACE ROUGHENED.
- IN NON-TURF GRASS FINISHED AREAS, SEEDING AND MULCHING SHALL TAKE PLACE DIRECTLY OVER SURFACE ROUGHENED AREAS WITHOUT FIRST SMOOTHING OUT THE SURFACE.
- IN AREAS NOT SEEDED AND MULCHED AFTER SURFACE ROUGHENING, SURFACES SHALL BE RE-ROUGHENED AS NECESSARY TO MAINTAIN GROOVE DEPTH AND SMOOTH OVER ANY RILL EROSION.



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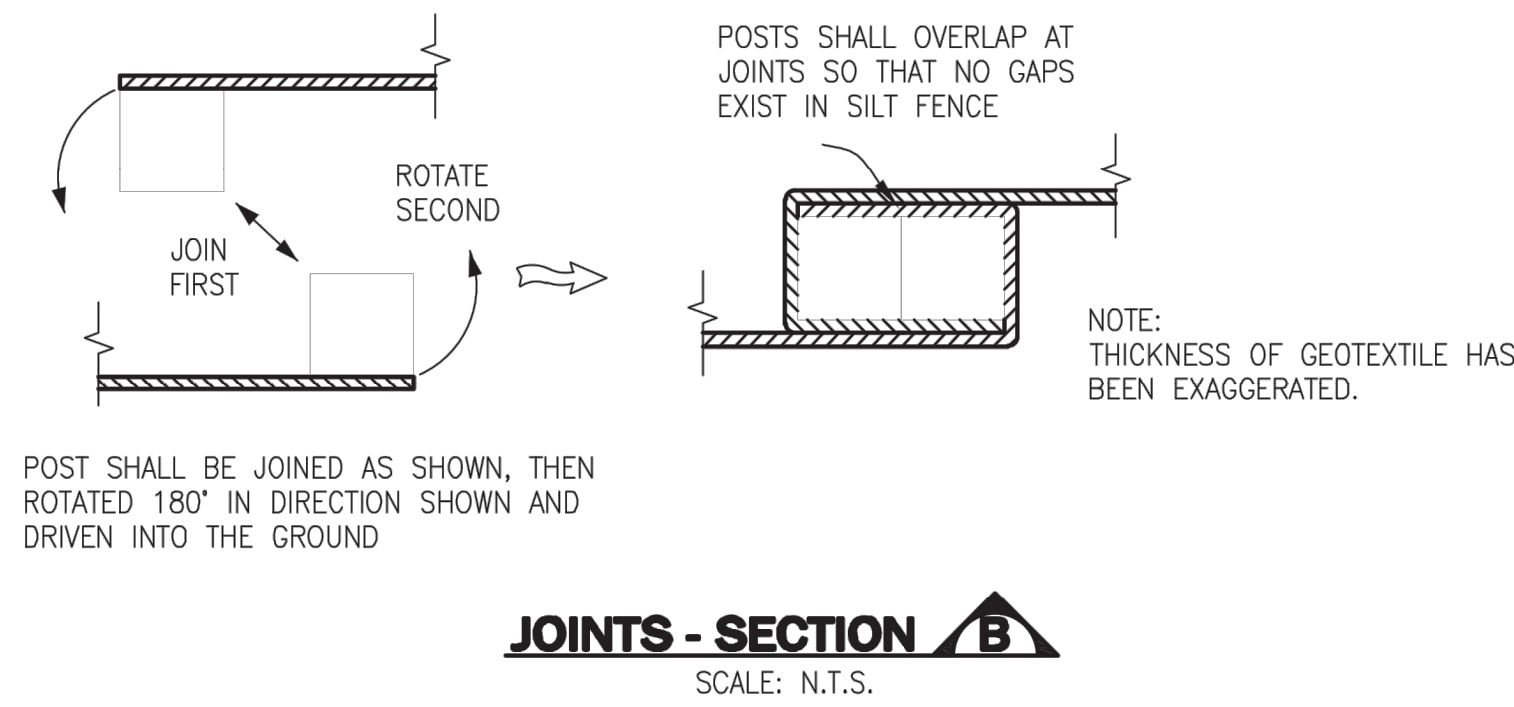
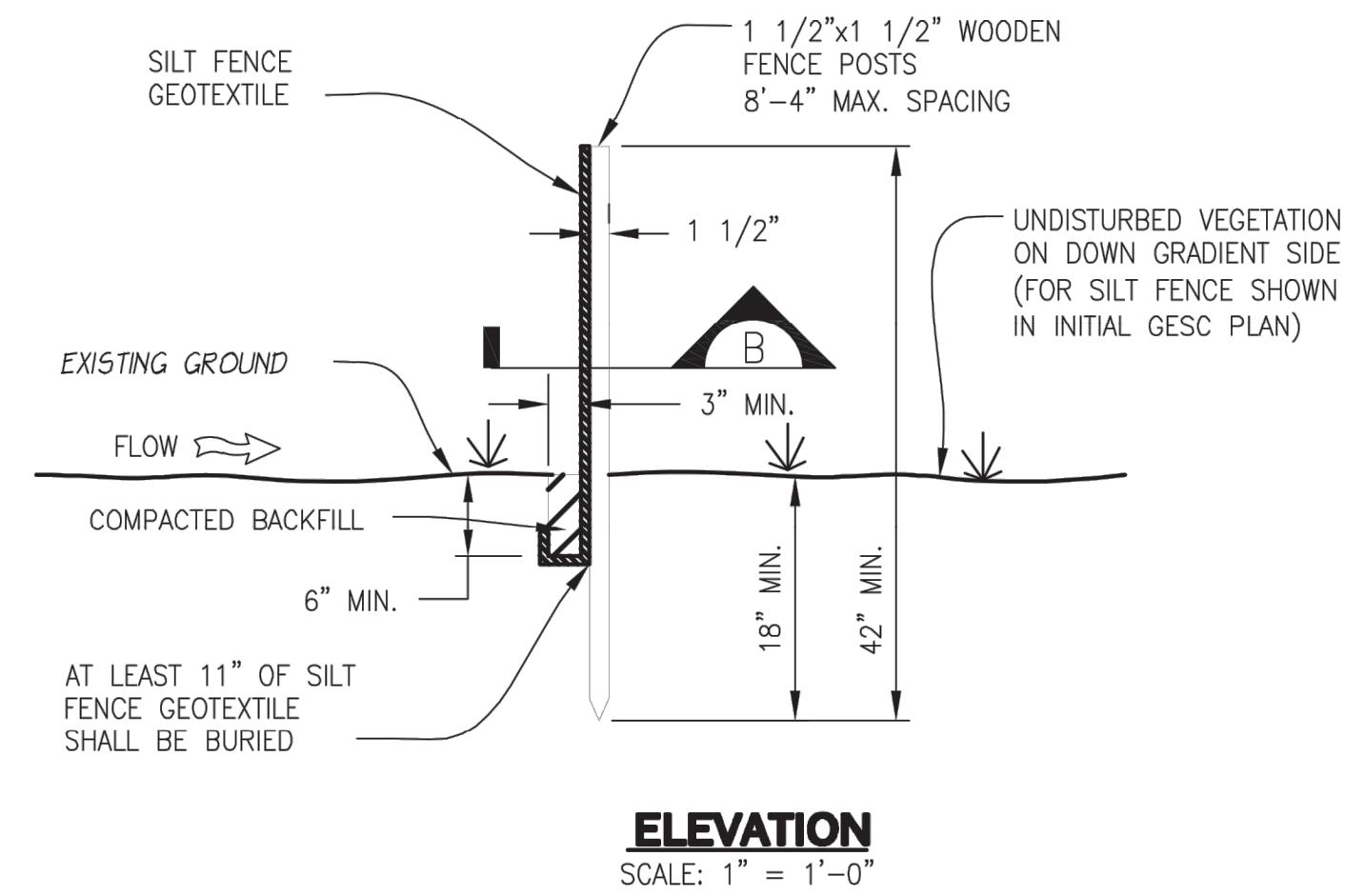
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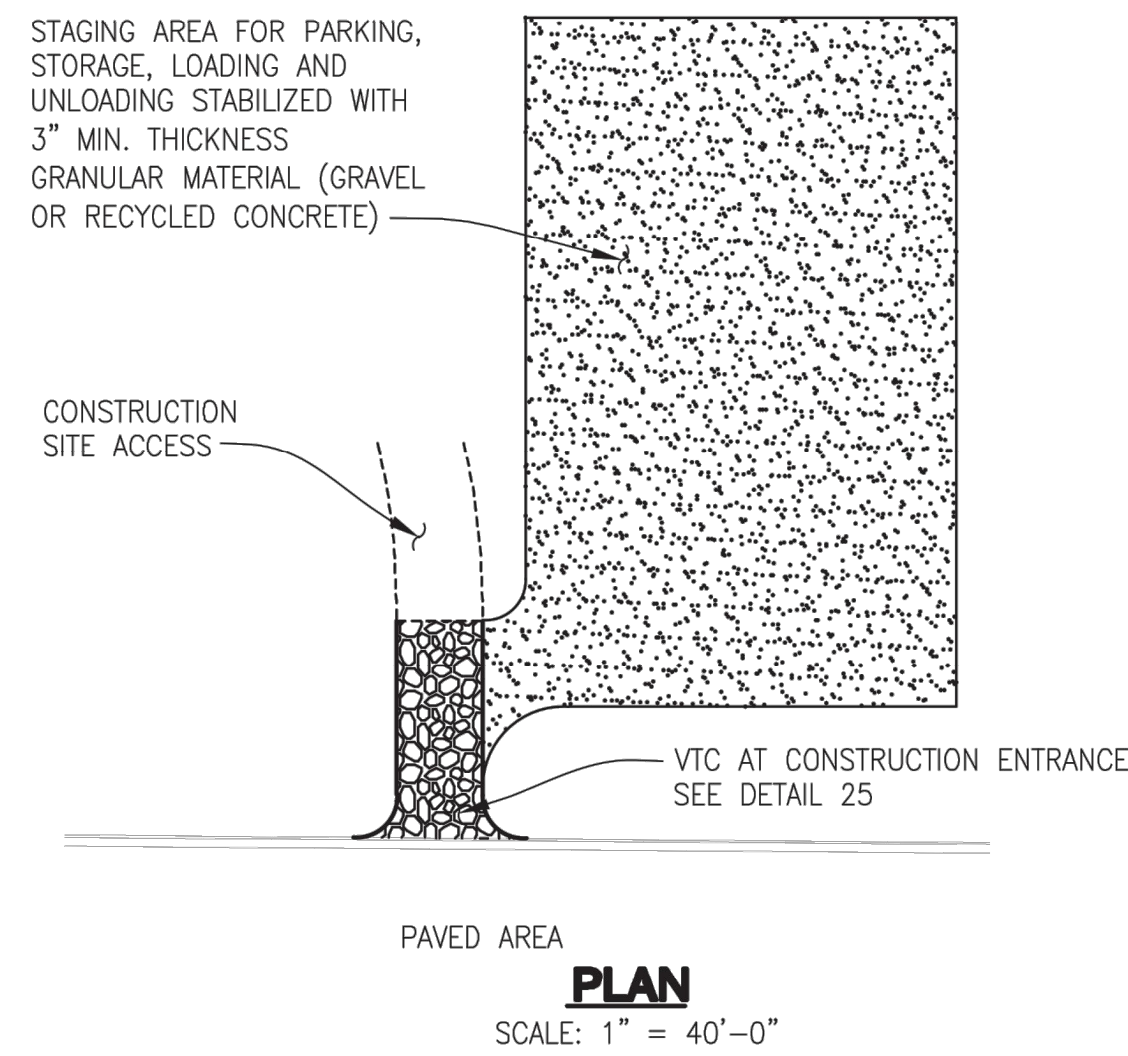


SILT FENCE INSTALLATION NOTES

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- SILT FENCE GEOTEXTILE SHALL MEET THE FOLLOWING REQUIREMENTS:
 - 6-TO 12-GALLONS PER MINUTE PER SQUARE FOOT FLOW CAPACITY.
 - 90 LB. TENSILE STRENGTH PER ASTM D4622.
 - UV DESIGN AT 500 HRS MIN. 70% STRENGTH RETAINED PER ASTM D4355.
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SILT FENCE MAINTENANCE NOTES

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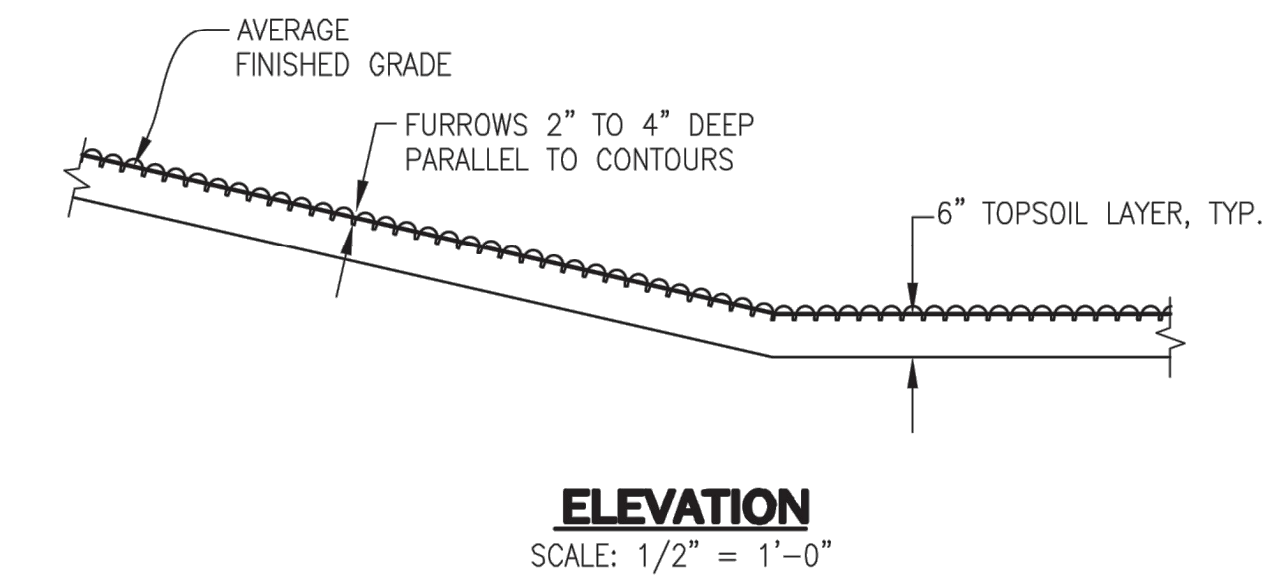


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- IF REQUIRED BY THE COUNTY, SITE ACCESS ROADS SHALL BE STABILIZED IN THE SAME MANNER AS THE STAGING AREA.
- STAGING AREA SHALL BE STABILIZED PRIOR TO ANY OTHER OPERATIONS ON THE SITE.
- THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM OF 3" OF GRANULAR MATERIAL (GRAVEL OR RECYCLED CONCRETE).

STABILIZED STAGING AREA MAINTENANCE NOTES

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- STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING AND LOADING OPERATIONS.
- ANY ACCUMULATED DIRT OR MUD SHALL BE REMOVED FROM THE SURFACE OF THE STABILIZED STAGING AREA.
- THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE COUNTY, USED ON SITE, AND THE AREA TOPSOILED, DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED.



SURFACE ROUGHENING INSTALLATION NOTES

- SURFACE ROUGHENING SHALL BE PROVIDED ON ALL FINISHED GRADES (SLOPES AND "FLAT" AREAS) WITHIN 2 DAYS OF COMPLETION OF FINISHED GRADE (FOR AREAS NOT RECEIVING TOPSOIL) OR WITHIN 2 DAYS OF TOPSOIL PLACEMENT.
- AREAS WHERE BUILDING FOUNDATIONS, PAVEMENT, OR SOD IS TO BE PLACED WITHIN 7-DAYS OF FINISHED GRADING DO NOT NEED TO BE SURFACE ROUGHENED.
- DISTURBED SURFACES SHALL BE ROUGHENED USING RIPPING OR TILLING EQUIPMENT ON THE CONTOUR OR TRACKING UP AND DOWN A SLOPE USING EQUIPMENT TREADS.

SURFACE ROUGHENING MAINTENANCE NOTES

- THE RECOMMENDED INSPECTION FREQUENCY FOR SURFACE ROUGHENING IS WEEKLY, DURING AND AFTER ANY STORM EVENT, AND MAKE REPAIRS.
- VEHICLES AND EQUIPMENT SHALL GENERALLY BE CONFINED TO ACCESS DRIVES AND SHALL NOT BE DRIVEN OVER AREAS THAT HAVE BEEN SURFACE ROUGHENED.
- IN NON-TURF GRASS FINISHED AREAS, SEEDING AND MULCHING SHALL TAKE PLACE DIRECTLY OVER SURFACE ROUGHENED AREAS WITHOUT FIRST SMOOTHING OUT THE SURFACE.
- IN AREAS NOT SEEDED AND MULCHED AFTER SURFACE ROUGHENING, SURFACES SHALL BE RE-ROUGHENED AS NECESSARY TO MAINTAIN GROOVE DEPTH AND SMOOTH OVER ANY RILL EROSION.



RIDGEGATE SENIOR
LONE TREE, CO
22A037

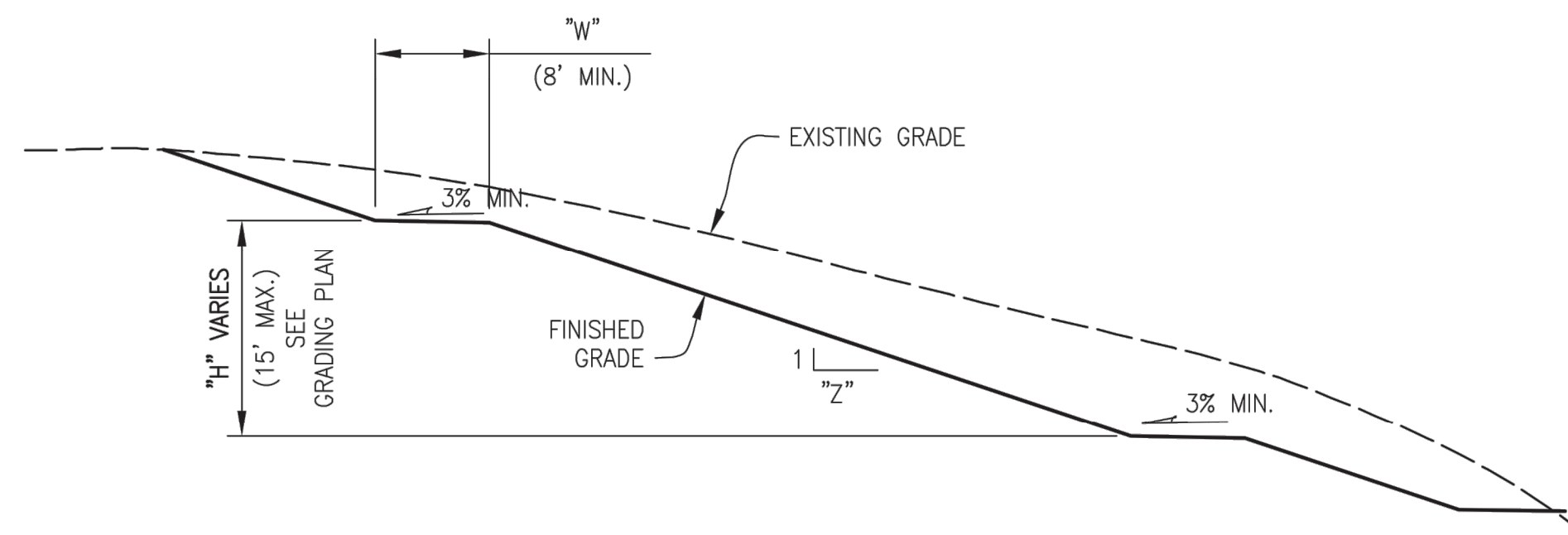
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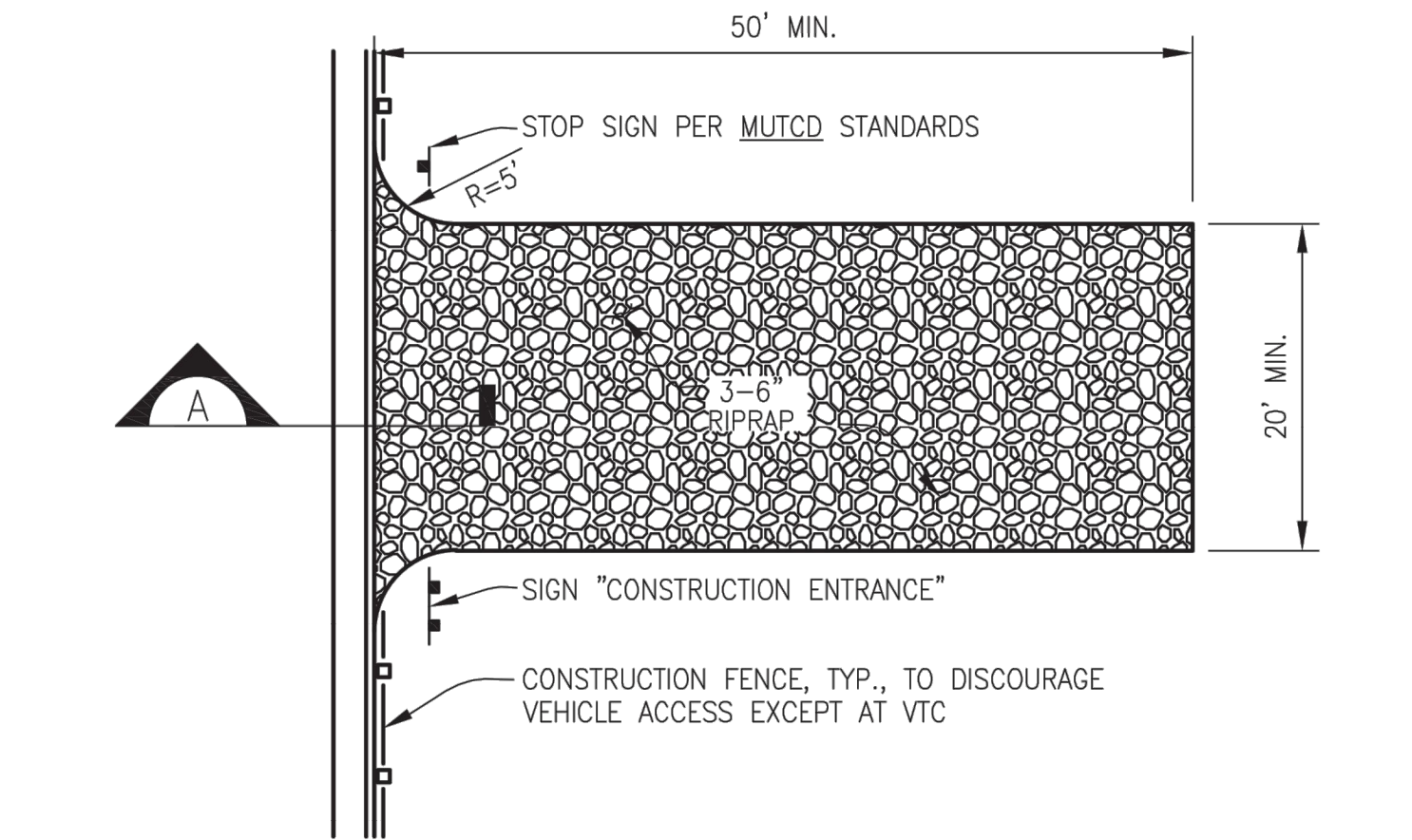
ELEVATION
SCALE: 1/2" = 1'-0"

TERRACING INSTALLATION NOTES

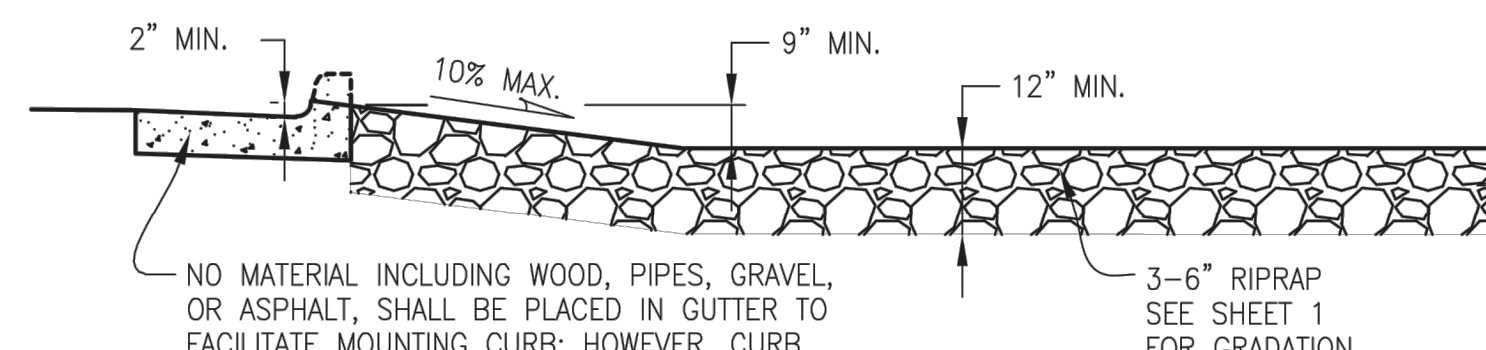
- SEE PLAN VIEW FOR:
- WIDTH, "W", AND SLOPE, "Z".
- TERRACING IS NOT REQUIRED FOR SLOPES OF 4 TO 1 OR FLATTER.
- EARTH (VEGETATED) SLOPES STEEPER THAN 3 TO 1 ARE NOT ALLOWED ON THE SITE.

TERRACING MAINTENANCE NOTES

- THE RECOMMENDED INSPECTION FREQUENCY FOR TERRACING IS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY.
- ANY RILL EROSION OCCURRING ON SLOPES SHALL BE REPAIRED AND RESEEDED AND MULCHED IN ACCORDANCE WITH DETAIL 18.



PLAN
SCALE: 1" = 10'-0"



NO MATERIAL INCLUDING WOOD, PIPES, GRAVEL, OR ASPHALT, SHALL BE PLACED IN GUTTER TO FACILITATE MOUNTING CURB; HOWEVER, CURB MAY BE CUT DOWN TO A HEIGHT OF 2" OR HIGHER FOR EASIER ACCESS AND REPLACED AT PROJECT COMPLETION WITH A DOUGLAS COUNTY RIGHT-OF-WAY USE AND CONSTRUCTION PERMIT; DOUGLAS COUNTY TEMPORARY CONSTRUCTION ACCESS PERMIT IS REQUIRED FOR ALL VTC's

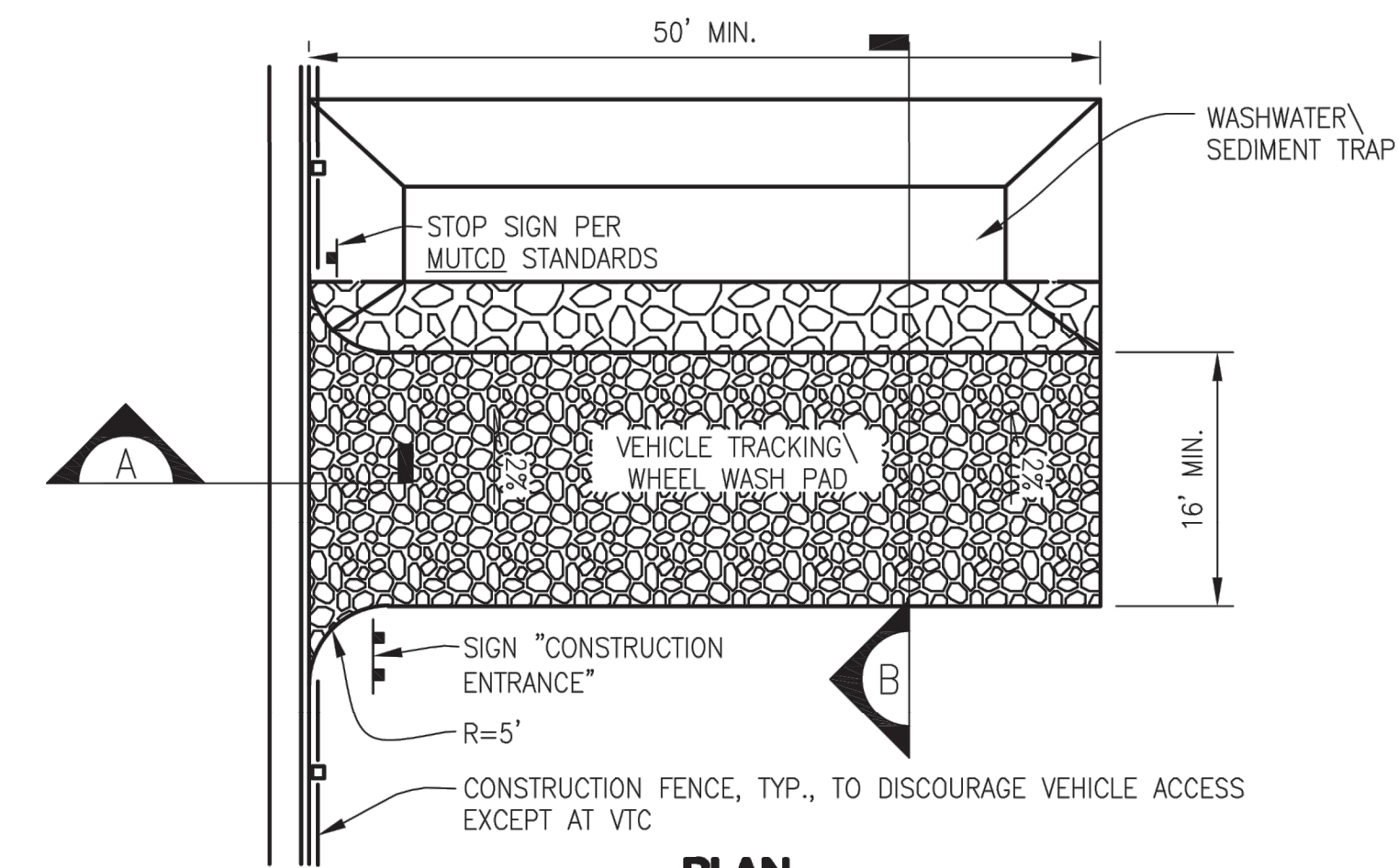
SECTION A
SCALE: 1/2" = 1'-0"

VEHICLE TRACKING CONTROL INSTALLATION NOTES

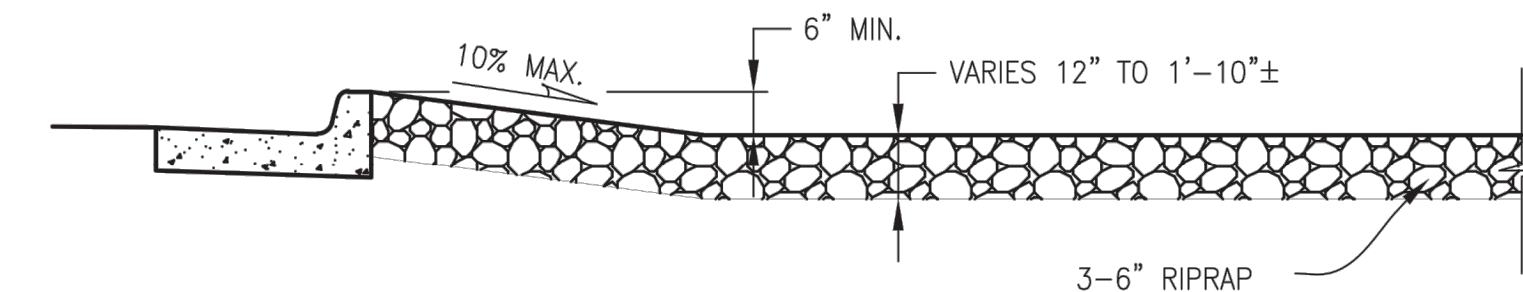
- VEHICLE TRACKING CONTROL PADS SHALL BE INSTALLED AT EVERY ACCESS POINT TO SITE.
- VEHICLE TRACKING CONTROL PADS SHALL CONSIST OF HARD, DENSE, DURABLE STONE, ANGULAR IN SHAPE AND RESISTANT TO WEATHERING. ROUNDED STONE OR BOULDERS WILL NOT BE ACCEPTABLE. THE STONES SHALL BE 3" WITH A MAXIMUM SIZE OF 6". THE STONE SHALL HAVE A SPECIFIC GRAVITY OF AT LEAST 2.6. CONTROL OF GRADATION WILL BE BY VISUAL INSPECTIONS.
- ANY CRACKED OR DAMAGED CURB AND GUTTER AND SIDEWALK SHALL BE REPLACED BY PERMITTEE.
- A DOUGLAS COUNTY TEMPORARY CONSTRUCTION ACCESS PERMIT IS REQUIRED FOR EACH POINT ONTO DOUGLAS COUNTY R.O.W.
- A STOP SIGN INSTALLED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), AS AMENDED, SHALL BE INSTALLED FOR EXITING TRAFFIC AT THE VTC.

VEHICLE TRACKING CONTROL MAINTENANCE NOTES

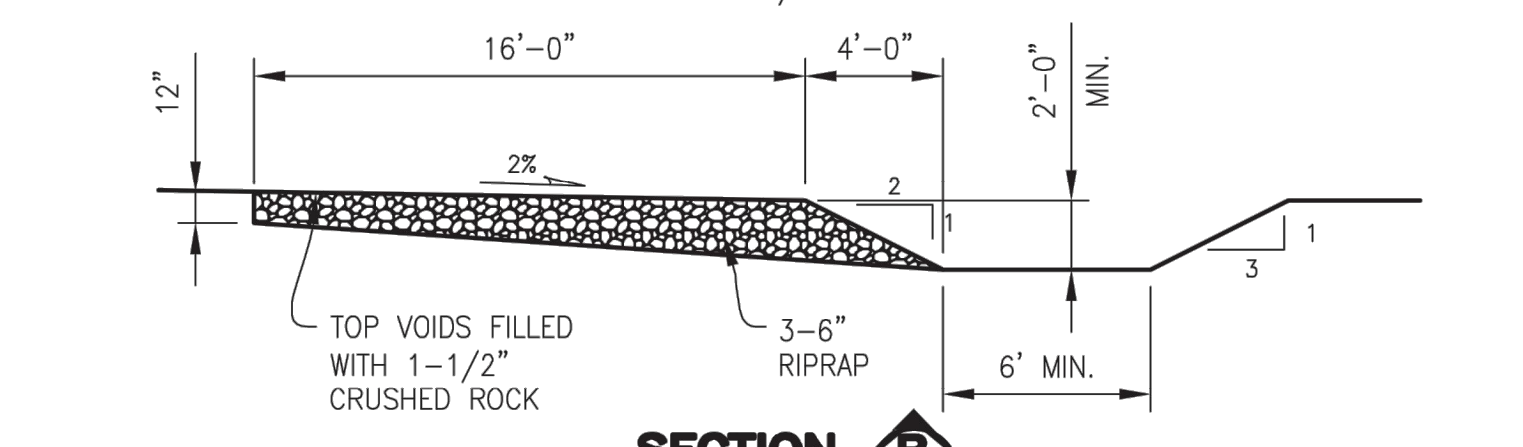
- THE RECOMMENDED INSPECTION FREQUENCY FOR VEHICLE TRACKING CONTROL IS DAILY. GRAVEL SURFACE SHALL BE CLEAN AND LOOSE ENOUGH TO RUT SLIGHTLY UNDER WHEEL LOADS AND CAUSE LOOSE GRAVEL TO DISLodge MUD FROM TIRES. WHEN GRAVEL BECOMES COMPACTED OR FILLED WITH SEDIMENT SO THAT THE EFFECTIVENESS OF THE PAD IS DIMINISHED, CONTRACTOR SHALL RIP, TURN OVER, OR OTHERWISE LOOSEN GRAVEL, PLACE ADDITIONAL NEW GRAVEL, OR REPLACE WITH NEW GRAVEL AS NECESSARY TO RESTORE EFFECTIVENESS.
- VEHICLE TRACKING CONTROL SHALL BE REMOVED AT THE END OF CONSTRUCTION, THE GRAVEL MATERIAL REMOVED OR, IF APPROVED BY THE COUNTY, USED ON SITE, AND THE AREA TOPSOILED, DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED.



PLAN
SCALE: 1" = 10'-0"



SECTION A
SCALE: 1/2" = 1'-0"



SECTION B
SCALE: 1" = 5'-0"

VEHICLE TRACKING CONTROL WITH WHEEL WASH INSTALLATION NOTES

- ALTHOUGH NOT NORMALLY USED, THE COUNTY RESERVES THE RIGHT TO REQUIRE VEHICLE TRACKING CONTROL WITH WHEEL WASH FACILITIES AT SITES WHERE TRACKING ONTO PAVED AREAS BECOMES A SIGNIFICANT PROBLEM.
- IF VEHICLE TRACKING CONTROL WITH WHEEL WASH FACILITIES ARE REQUIRED, ALL WHEELS ON EVERY VEHICLE LEAVING THE SITE SHALL BE CLEANED OF MUD USING A PRESSURE-WASHER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A WATER SOURCE.
- VEHICLE TRACKING CONTROL PADS SHALL CONSIST OF HARD, DENSE, DURABLE STONE, ANGULAR IN SHAPE AND RESISTANT TO WEATHERING. ROUNDED STONE OR BOULDERS WILL NOT BE ACCEPTABLE. THE STONES SHALL BE 3" WITH A MAXIMUM SIZE OF 6". THE STONE SHALL HAVE A SPECIFIC GRAVITY OF AT LEAST 2.6. CONTROL OF GRADATION WILL BE BY VISUAL INSPECTIONS.
- ANY CRACKED OR DAMAGED CURB AND GUTTER AND SIDEWALK SHALL BE REPLACED BY CONTRACTOR.
- A STOP SIGN INSTALLED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), AS AMENDED, SHALL BE INSTALLED FOR EXITING TRAFFIC AT THE VTC.

VEHICLE TRACKING CONTROL WITH WHEEL WASH MAINTENANCE NOTES

- THE RECOMMENDED INSPECTION FREQUENCY FOR VEHICLE TRACKING CONTROL WITH WHEEL WASH FACILITIES IS DAILY. ACCUMULATED SEDIMENTS SHALL BE REMOVED FROM PAD SURFACE.
- ACCUMULATED SEDIMENT IN THE WASHWATER/SEDIMENT TRAP SHALL BE REMOVED WHEN THE SEDIMENT DEPTH REACHES AN AVERAGE OF 12-INCHES.
- VEHICLE TRACKING CONTROL WITH WHEEL WASH FACILITY SHALL BE REMOVED AT THE END OF CONSTRUCTION, THE RIPRAP MATERIAL REMOVED OR, IF APPROVED BY THE COUNTY, USED ON SITE, AND THE AREA TOPSOILED, DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED.



TER TERRACING 24



VTC VEHICLE TRACKING CONTROL 25



VV VTC WITH WHEEL WASH 26

ROCK AND RIPRAP GRADATIONS

TABLE 1. RIPRAP GRADATIONS

RIPRAP TYPE	D50 MEDIAN STONE SIZE (INCHES)	% OF MATERIAL SMALLER THAN TYPICAL STONE	TYPICAL STONE EQUIVALENT DIAMETER (INCHES)	TYPICAL STONE WEIGHT (POUNDS)
VL	6	70 – 100	12	85
		50 – 70	9	35
		35 – 50	6	10
		2 – 10	2	0.4
L	9	70 – 100	15	160
		50 – 70	12	85
		35 – 50	9	35
		2 – 10	3	1.3
M	12	70 – 100	21	440
		50 – 70	18	275
		35 – 50	12	85
		2 – 10	4	3
H	18	100	30	1280
		50 – 70	24	650
		35 – 50	18	275
		2 – 10	6	10
VH	24	100	42	3500
		50 – 70	33	1700
		35 – 50	24	650
		2 – 10	9	35

TABLE 2. RIPRAP BEDDING

SIEVE SIZE	MASS PERCENT PASSING SQUARE MESH SIEVES
	CLASS A
3"	100
1 1/2"	20 – 90
NO. 4	0 – 20
NO. 200	0 – 3

MATCHES SPECIFICATIONS FOR CDOT CLASS A FILTER MATERIAL AND UDFCD TYPE 1 BEDDING. ALL ROCK SHALL BE FRACTURED FACE, ALL SIDES.

TABLE 3. 1 1/2" CRUSHED ROCK

SIEVE SIZE	MASS PERCENT PASSING SQUARE MESH SIEVES
	NO. 4
2"	100
1 1/2"	90 – 100
1"	20 – 55
3/4"	0 – 15
3/8"	0 – 5

MATCHES SPECIFICATIONS FOR NO. 4 COARSE AGGREGATE FOR CONCRETE PER AASHTO M43. ALL ROCK SHALL BE FRACTURED FACE, ALL SIDES.

RIDGEGATE SENIOR
LONE TREE, CO

22A037

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CITY OF LONE TREE

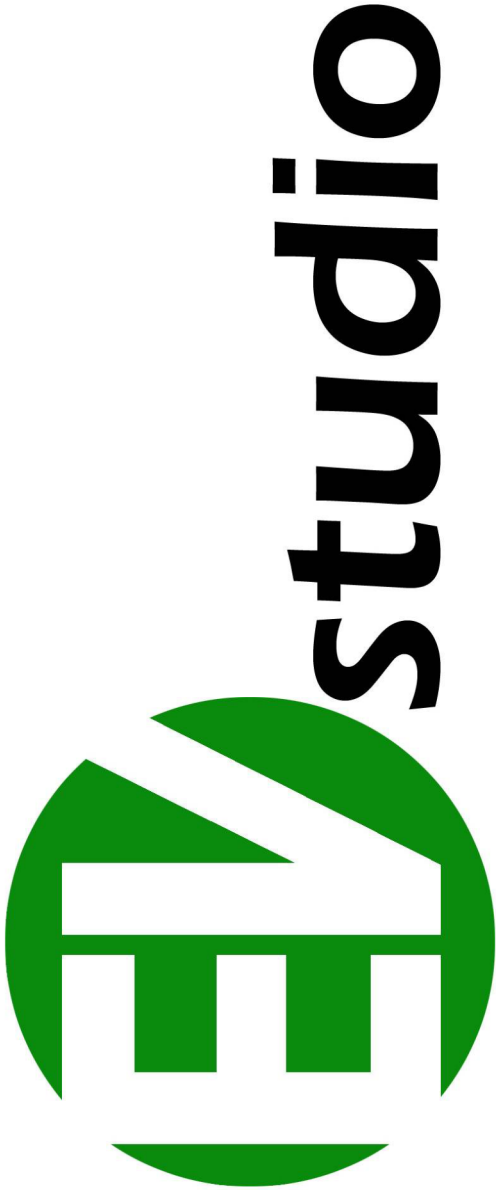
GESC Permit Opinion of Probable Cost

Project: RIDGEGATE SENIOR HOMES	Date: September 8, 2023
--	--------------------------------

BMP No.	BMP	ID	Unit	Installation Unit Cost	Quantity	Cost
1	Check Dam	CD	LF	\$ 24.00	0	\$ -
2	Compost Blanket	CB	SF	\$0.36	0	\$ -
3	Compost Filter Berm	CFB	LF	\$ 2.00	0	\$ -
4	Concrete Washout Area	CWA	EA	\$ 100.00	1	\$ 100.00
5	Construction Fence	CF	LF	\$ 2.00	345	\$ 690.00
6	Construction Markers	CM	LF	\$ 0.20	0	\$ -
7	Curb Sock	CS	LF	\$ 8.00	0	\$ -
8	Dewatering	DW	EA	\$ 600.00	0	\$ -
9	Diversion Ditch	DD	LF	\$ 1.60	0	\$ -
10	Erosion Control Blanket	ECB	SY	\$ 5.00	1,213	\$ 6,065.00
11	Inlet Protection	IP	LF	\$ 20.00	7	\$ 140.00
12	Reinforced Check Dam	RCD	LF	\$ 36.00	0	\$ -
13	Reinforced Rock Berm	RRB	LF	\$ 9.00	0	\$ -
14	RRB for Culvert Protection	RRC	LF	\$ 9.00	0	\$ -
15	Sediment Basin	SB	AC (1)	(2)	1.0	\$ 1,200.00
16	Sediment Control Log	SCL	LF	\$ 2.00	2,363	\$ 4,726.00
17	Sediment Trap	ST	EA	\$ 600.00	0	\$ -
18A	Seeding and Mulching - Mobilization	SM	EA	\$ 1,000.00	1	\$ 1,000.00
18B	Seeding and Mulching - Installation	SM	AC	\$ 750.00	1.4	\$ 1,072.50
19	Silt Fence	SF	LF	\$ 2.00	2,323	\$ 4,646.00
20	Stabilized Staging Area	SSA	SY	\$ 2.00	967	\$ 1,934.00
21	Surface Roughening	SR	AC	\$ 600.00	0.0	\$ -
22	Temporary Slope Drain	TSD	LF	\$ 30.00	0	\$ -
23	Temporary Stream Crossing	TSC	EA	\$ 1,000.00	0	\$ -
24	Terracing	TER	AC	\$ 600.00	0.0	\$ -
25	Vehicle Tracking Control	VTC	EA	\$ 1,000.00	1	\$ 1,000.00
26	VTC with Wheel Wash	WW	EA	\$ 1,500.00	0	\$ -
27	Temporary Batch Plant Restoration		AC	\$ 5,000.00	0.0	\$ -

(1) Upstream Tributary Acre	SUB-TOTAL	\$ 22,573.50
(2) SB Cost = \$1000 +\$200(Upstream Tributary Acres)	15% CONTINGENCY	\$ 3,386.03
	GESC SURETY TOTAL (1)	\$ 25,959.53

NOTE: (1) **MINIMUM SURETY shall be \$2,500.00** (Per Section 16-31-110 of City Zoning Code)



STORMWATER MANAGEMENT PLAN (SWMP)

PROJECT:

**Ridgegate Senior Homes
LOT 2231-242-00-006, LOT 7
Lone Tree, CO 80124**

PREPARED FOR:

**Koebel & Company
5291 E. Yale Avenue
Denver, CO 80222**

PREPARED BY:

**EVstudio, LLC
5335 W. 48th Ave Suite 300
Denver, CO 80212
Prepared By: Alex Telford
Reviewed By: Brian Welch, P.E.
(303) 670-7242**

DATE: September 08 2023

CERTIFICATIONS

EVstudio has prepared this Stormwater Management Plan for Construction Activities for Koelbel & Company located in Denver, Colorado.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Owner or Authorized Agent

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APPENDICES A-D

I. INTRODUCTION

A. THE COLORADO DISCHARGE PERMIT SYSTEM (CDPS) GENERAL PERMIT AND SWMP

For construction projects that require the disturbance of one acre or more, the U. S. Environmental Protection Agency (EPA) requires that the project owner apply for a stormwater permit under the National Pollutant Discharge Elimination System (NPDES) program. For the purposes of the NPDES program, construction activities are defined as clearing, excavating, grading, etc.

The EPA has delegated this permit program in the State of Colorado to the Colorado Department of Public Health and Environment (CDPHE). In compliance with the provisions of the Colorado Water Quality Control Act, (25-8-101 et seq., CRS, 1973 as amended), and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq.; the "Act"), and the regulations and standards adopted and promulgated thereunder, the CDPS General Permit (COR-080000) is issued. This permit is more specifically known as the Colorado Discharge Permit System (CDPS) general permit for Stormwater Discharges Associated with Municipal Separate Storm Sewer Systems (MS4) that Discharge to the Cherry Creek Reservoir Drainage Basin. Projects issued a certificate of permit coverage under the state stormwater discharge permit are granted permission to discharge stormwater associated with construction activity into State waters. The state stormwater discharge permit issued for this project follows this page.

This document comprises the Stormwater Management Plan (SWMP) required by CDPHE, for construction projects that disturb one acre or greater of land in accordance with the state stormwater discharge permit. This document establishes a plan to manage the quality of stormwater runoff from construction activities associated with Ridgeway Senior Housing in the City of Lone Tree, Colorado with the use of best management practices.

This SWMP meets all requirements of Sections B and C of Part I of COR-080000.

This plan is a guide to be used in the field to control and reduce erosion and the discharge of sediments and other pollutants. The plan should be changed, updated, and revised as necessary throughout the construction project. Best management practices should be moved, added, or redesigned as necessary to reduce and control erosion and the discharge of sediment and pollutants in accordance with good engineering, hydrologic and pollution control practices as specified in the Urban Storm Drainage Criteria Manual (USDCM), Volume 3, "Best Management Practices."

B. PROJECT OWNER AND OPERATOR

The project owner and operator is:

Koelbel & Company
5291 E. Yale Avenue,
Denver, CO 80222

C. SWMP SIGNATORY REQUIREMENTS AND CERTIFICATION

The SWMP must clearly identify contractor(s) and/or subcontractor(s) responsible for implementation of the day-to-day activities necessary to complete project. Contractors and subcontractors must certify that they understand the requirements of the state stormwater discharge permit and the plan. Each contractor and/or subcontractor must complete one of the Contractor's Certification Forms.

D. SWMP ADMINISTRATOR

The SWMP Administrator is responsible for the developing, implementing, maintaining, and revising all aspects of the SWMP. The SWMP Administrator is Alliance Construction Solutions.

A thorough inspection of the stormwater management system shall be performed at least once every 14 days and within 24 hours after the end of any precipitation or snowmelt event that causes surface erosion. Any reduction in inspections shall comply with the requirements of section I.6.a of the state stormwater discharge permit and shall be documented in the inspection record. During inspection, the construction inspector shall complete the inspection forms. These sheets should be copied and used as necessary. Ineffective temporary erosion control measures shall be repaired as soon as possible after identification. The construction inspector shall immediately install additional temporary erosion control devices in any area deemed in need of protection.

If inspection results indicate a need for revision to the SWMP, the plan shall be revised and implemented, as appropriate, within seven calendar days following the inspection. All modifications should be noted on the Record of Revisions sheet. The inspection reports shall identify any incidents of non-compliance with the state stormwater discharge permit.

E. RETENTION OF RECORDS

Contractor must always maintain a copy of this SWMP on site. Contractor shall retain copies of the SWMP and all reports required by the state stormwater discharge permit for a period of at least three years from the date that the project is completed.

F. STANDARD PERMIT CONDITIONS

This section discusses state and federal penalties for non-compliance with the state stormwater discharge permit as well as termination of coverage of the permit. Further explanation of these issues is stated within each individual heading:

DUTY TO COMPLY WITH PERMIT CONDITIONS

The EPA and CDPHE have substantial penalties for non-compliance with the state stormwater discharge permit. Any non-compliance constitutes a violation of the Act and is grounds for enforcement action including: permit termination; revocation, re-issuance, or modifications; or denial of permit renewal application. Individuals responsible for such violations are subject to criminal, civil and administrative penalties.

FINAL STABILIZATION AND TERMINATION OF COVERAGE

Final stabilization is achieved when all ground surface disturbing activities at the site have been completed, and when a uniform perennial vegetative cover with a density of 70 percent or pre-disturbance levels has been established or equivalent erosion reduction measures (such as the use of riprap, gabions, or geotextiles) have been employed. Preconstruction photographs shall be taken to aid the estimation of restored vegetative cover. When the site has been fully stabilized, and when BMPs are no longer needed and have been removed, the CONTRACTOR can submit a notice of termination to City of Lone Tree. Upon approval by City of Lone Tree, the CONTRACTOR will notify CDPHE when final stabilization is complete by submitting an Inactivation Notice to CDPHE. The Inactivation Notice is located after the Contractor Certification forms in this document.

II. SITE DESCRIPTION

A. CONSTRUCTION ACTIVITY DESCRIPTION

Ridgegate Senior Housing is a proposed new-construction, multifamily housing development situated between the north and south Ridgegate Parkway couplet. The project comprises two buildings that will be constructed in two phases. Phase I will consist of 101 units, while Phase II will have 64 units, along with a total of 165 parking stalls. To ensure proper site management during the initial construction phase, perimeter controls will be implemented using silt and construction fences. Additionally, vehicle tracking control measures will be installed at the entrance of the site, including concrete washout areas. The designated staging area will provide accessible parking, an office trailer, and portable restrooms. Another essential control measure involves the installation of a temporary sediment basin on the eastern part of the site to mitigate storm runoff.

During the interim construction phase, several tasks will be completed, including the construction of the driveway, rough grading of the site, and the installation of sanitary service lines, storm and water lines, and fire lines. All the previous best management practices (BMPs) will be maintained throughout this interim period, and inlet protection will be ensured around the parking lot. In the final construction phase, both structures will be finished. Once the construction is complete and the site is stabilized, all the previously implemented BMPs will be removed.

B. AREA ESTIMATES

The total site area is 2.86 acres. The approximate area to be disturbed during construction is fully on-site and totals approximately 3.85 acres. The total added impervious area is 3.1 acres. Rough cut/fill volumes are provided in the Subgrade Grading Plan, Sheet CXX.

C. SOILS

The soil types present on the site are Fondis-clay loam and Newlin gravelly sandy loam. According to the United States Department of Agriculture NRCS Web Soil Survey, Fondis-clay loam is classified as hydrologic group C, covering 32.3% of the site. Group C soils exhibit a slow infiltration rate when thoroughly wet. They are typically characterized by a layer that impedes the downward movement of water or are composed of moderately fine-textured soils. These soils have a slow rate of water transmission.

On the other hand, Newlin gravelly sandy loam covers 67.7% of the site and falls under hydrologic group B. Group B soils have a moderate infiltration rate when thoroughly wet. They primarily consist of moderately deep or deep, moderately well-drained, or well-drained soils with a moderately fine to moderately coarse texture. These soils exhibit a moderate rate of water transmission.

D. EXISTING VEGETATION

The existing vegetation on the property consists of native grasses and shrubs. Existing slopes on site are directed down toward the northeastern portion of the lot at approximately 7% slope on average, and the site is almost entirely vegetation and bare ground. The existing surfacing estimate has been determined from an aerial photo from Douglas County's DC Maps Application dated 2019.

E. POTENTIAL POLLUTION SOURCES

The Contractor will reduce the potential for contamination of stormwater runoff by implementing the best management practices contained in this document.

F. NON-STORMWATER DISCHARGES

The following non-stormwater discharges are allowable under this permit if the discharges are identified in the stormwater management plan in accordance with the COR400000 general permit provisions outlined in Part I.C and if they have appropriate control measures in accordance with Part I.B.1.

- i. Discharges to the ground of concrete washout water associated with the washing of concrete tools and concrete mixer chutes. Discharges of concrete washout water must not leave the site as surface runoff or reach receiving waters as defined by this permit. Concrete on-site waste disposal is not authorized by this permit except in accordance with Part I.B.1.a.ii(b). **A concrete washout area will be utilized to capture wastewater and waste products resulting from the cleaning of concrete and masonry equipment. See Section VI for further details.**
- ii. Discharges of landscape irrigation return flow.
- iii. Discharges resulting from emergency firefighting activities during the active emergency response are authorized by this permit.

The CDPHE defines the following discharges as meeting the low-risk discharge criteria. Discharges must infiltrate into the soil without leaving the site as surface water. Refer to the CDPHE Low Risk Discharge Guidance documents for further details.

- i. Discharges to land from the flushing of potable water from a potable water distribution system. Hydrant flushing or water used to moisture condition soil.

G. RECEIVING WATERS

The site primarily slopes northeast, directing the runoff towards the proposed storm infrastructure located at the northeastern edge of the site. This collected runoff is then discharged into a water quality pond, where it undergoes treatment before being conveyed into Badger Gulch.

III. SITE MAPS

Refer to the Erosion and Sediment Control Plans, Sheet C101, and Erosion and Sediment Control Details, Sheet C105, for the following information: construction site boundaries, areas of disturbance, storage areas, all BMP, delineation of floodplain, and location of nearby surface waters.

IV. POTENTIAL POLLUTANT SOURCES

The following sources and activities have been identified as having the potential to contribute pollutants to stormwater discharges. These sources will be controlled through BMP selection and implementation as described in Section 4 – Best Management Practices of this report.

1. All disturbed and stored soils
2. Vehicle tracking of sediments
3. Management of contaminated soils
4. Loading and unloading operations
5. Outdoor storage activities (building materials, fertilizers, chemicals, etc.)
6. Vehicle and equipment maintenance and fueling
7. Significant dust or particulate generating processes
8. Routine maintenance activities using fertilizers, pesticides, detergents, fuels, solvents, oils, etc.
9. On-site waste management practices (waste piles, liquid wastes, dumpsters, etc.)
10. Concrete truck/equipment washing, including the concrete truck chute, fixtures, and equipment
11. Non-industrial waste sources such as worker trash and portable toilets; and
12. Other areas or procedures where potential spills can occur

V. BEST MANAGEMENT PRACTICES

Soil erosion and sediment controls are measures that are used to reduce the amount of soil particles that are carried off a land area and deposited in the receiving water. This section provides a general description of the most appropriate measures planned for this project. The contractor or whoever

the owner/operator has chosen as the responsible party for the erosion and sediment control devices must amend this SWMP and adjust the locations and types of best management practices as needed depending on the daily construction activities so that erosion, sediment, and other pollutants are controlled in accordance with good engineering, hydrologic and pollution control practices as specified in the USDCM Volume 3.

All applicable soil erosion and sediment control measures shall be implemented in accordance with the guidelines contained herein prior to commencement of field construction activities at each location. Measures shall be maintained during and after the construction activity until final stabilization is accomplished. Upon successful revegetation of the disturbed area, all temporary soil erosion and sediment control measures will be removed by the contractor.

A. STRUCTURAL PRACTICES

The following structural erosion and sediment control devices will be used on site: Silt fences, concrete washout areas, stockpile area, stabilized staging area, and vehicle tracking control. The locations of these measures are shown on the Erosion and Sediment Control Plans.

B. NON-STRUCTURAL PRACTICES

The following non-structural erosion and sediment control devices will be used on site: inlet protection and curb socks. The locations of these measures are shown on the Erosion and Sediment Control Plans.

VI. FINAL STABILIZATION

Final stabilization consists of the final planting of perennial vegetation in all disturbed, unvegetated areas affected by construction that are not covered with a hardscape such as rock, asphalt, or concrete.

The temporary erosion control devices shall be removed upon project completion by the contractor. The owner/operator is responsible for final site stabilization (with perennial vegetative species) within 30 days of project completion or as otherwise specified by the contract documents. Following the completion of construction and planting activities, the construction inspector shall conduct periodic site reviews to ensure that vegetation establishment is satisfactory. If vegetative cover is not adequate, special steps to correct problems shall be implemented such as over-seeding, mulching, sodding, or the use of erosion control blankets.

Final stabilization is achieved when all soil-disturbing activities at the site have been completed, and when a uniform perennial vegetative cover with a density of 70 percent has been established or equivalent measures (such as the use of riprap, gabions, or geotextiles) have been employed. When the site has been fully stabilized and all stormwater discharges from construction activities that are authorized by this state stormwater discharge permit are eliminated, the project is then terminated. The Contractor will notify CDPHE and City of Greenwood Village when final stabilization is complete by submitting an Inactivation Notice.

VII. INSPECTION AND MAINTENANCE

A. MAINTENANCE AND INSPECTION

All erosion and sediment control devices shall be installed pursuant to the specifications and the construction details. They shall be maintained so that they remain effective at all times. Sediment will be removed from behind sediment controls when it reaches one-half the height of the control.

A thorough inspection of the stormwater management system shall be performed at least once every 14 days and within 24 hours after the end of any precipitation or snowmelt event that causes surface erosion. Any reduction in inspections shall comply with the requirements of section I.6.a of the state stormwater discharge permit and shall be documented in the inspection record. During inspection, the construction inspector shall complete the inspection forms. These sheets should be copied and used as necessary. Ineffective temporary erosion control measures shall be repaired as soon as possible after identification. The construction inspector shall immediately install additional temporary erosion control devices in any area deemed in need of protection.

If inspection results indicate a need for revision to the SWMP, the plan shall be revised and implemented, as appropriate, within seven calendar days following the inspection. All modifications should be noted on the Record of Revisions sheet. The inspection reports shall identify any incidents of non-compliance with the state stormwater discharge permit.

B. MATERIALS MANAGEMENT PRACTICES

Properly managing hazardous, toxic, or petroleum products on the construction site will greatly reduce the potential for stormwater pollution by these materials. Good housekeeping along with proper use and storage of these construction materials form the basis for proper hazardous material management.

C. GOOD HOUSEKEEPING

The proper use of materials and equipment along with the use of good housekeeping practices greatly reduces the potential for contaminating stormwater runoff. The following is a list of good housekeeping practices to be used during the construction project:

- i. Storage of hazardous materials, chemicals, fuels, and oils, and fueling of construction equipment, shall not be performed within 150 feet of any stream bank, wetland, water supply well, spring, or other water body.
- ii. An effort will be made to store only enough product required to do the job.
- iii. Materials stored on the site will be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure.
- iv. Products will be kept in their original containers with the original manufacturer's label.

- v. Substances will not be mixed with one another unless recommended by the manufacturer.
- vi. Whenever possible, all of the product will be used up before disposing of the container.
- vii. Manufacturer's recommendations for proper use and disposal of a product will be followed.
- viii. If surplus product must be disposed of, manufacturers' or local and state recommended methods for proper disposal will be followed.

D. SPILL CONTROL AND CLEANUP

In addition to the material management practices discussed previously, the following spill control and cleanup practices will be followed to prevent stormwater pollution in the event of a spill:

- i. Spills will be contained and cleaned up immediately after discovery.
- ii. Manufacturer's methods for spill cleanup of a material will be followed as described on the material's SDS.
- iii. Materials and equipment required for cleanup procedures will be kept readily available on the site, either at an equipment storage area or on contractor's trucks. Equipment to be kept on the site will include but not be limited to brooms, dust pans, shovels, granular absorbents, sand, saw dust, absorbent pads and booms, plastic and metal trash containers, gloves, and goggles.
- iv. Personnel on the site will be made aware of cleanup procedures and the location of spill cleanup equipment.
- v. Toxic, hazardous, or petroleum product spills will be documented to the appropriate federal, state, and local agencies.
- vi. Spills will be documented, and a record of the spills will be kept with this SWMP.

If a spill occurs that is reportable to the federal, state, or local agencies, the contractor is responsible for making the notifications.

The federal reportable spill quantity for petroleum products is defined in 40 CFR 110 and is any oil spill that violates applicable water quality standards, causes a film or sheen upon or discoloration of the water surface or adjoining shoreline, or causes a sludge or emulsion to be deposited beneath the surface of the water or adjoining shorelines.

The federal reportable spill quantities for hazardous materials are listed in 40 CFR, Part 302.4 in the table entitled List of Hazardous Substances and Reportable Quantities. Ethylene glycol (antifreeze) should be included in this list and has a reportable quantity of one pound. A release of any chemical, oil, petroleum product, sewage, etc., which may enter waters of the State of Colorado (which include surface water, ground water and dry gullies or storm sewers leading to surface water) must

be reported to CDPHE immediately (25-8-601 CRS). Written notification to CDPHE must follow within five (5) days (5 CCR 1002-61, Section 61.8(5)(d)). Any accidental discharge to the sanitary sewer system must be reported immediately to the local sewer authority and the affected wastewater treatment plant.

Releases of petroleum products and certain hazardous substances listed under the Federal Clean Water Act (40 CFR Part 116) must be reported to the National Response Center as well as to CDPHE as required under the Clean Water Act and the Oil Pollution Act.

If a spill is reportable, the Contractor's superintendent will notify the Owner and the following authorities:

- i. Federal: National Response Center - 1-800-424-8802
- ii. State: Colorado Department of Public Health and Environment 1-877-518-5608
- iii. Local: Local Emergency Planning Committee (OEM) (303) 273-1622
- iv. Division of Oil & Public Safety-Storage Tanks (303) 318-8547
- v. Oil and Gas Conservation Commission (303) 894-2100

If a reportable release occurs, a modification to the SWMP must be made within 14 days. The modification shall include:

- i. a description of the release;
- ii. the date of the release;
- iii. an explanation of why the spill happened;
- iv. a description of procedures to prevent future spills and/or releases
- v. a description of response procedures if a spill or release would occur again

A written description of the release must be submitted to the permitting authority that includes:

- i. a description of the release, including the type of material and an estimated amount of spill
- ii. the date of the release
- iii. an explanation of why the spill happened
- iv. a description of the steps taken to prevent and control future releases

These modifications to the SWMP must be made by the contractor and will be documented on a Spill Report form. In addition, the Spill Report form must be certified at the bottom.

VIII. REFERENCES

1. Douglas County – Douglas County storm Drainage Design and Technical Criteria Manual, Douglas County July 2008, with updates to 2019.
2. *Urban Storm Drainage Criteria Manual, Volumes 1, 2, and 3*, Urban Drainage and Flood Control District, June 2001, with updates to January 2016.
3. *Stormwater Management Plan Preparation Guidance*, Colorado Department of Public Health and Environment, Water Quality Control Division– Stormwater Program, revised April 2011.
4. *Natural Resources Conservation Center Web Soil Survey*, United States Department of Agriculture, site visited May 2020.

APPENDIX A
EROSION AND SEDIMENT CONTROL PLANS

CONTACT LIST:

OWNER/DEVELOPER
KOEBEL & COMPANY
 5291 E. YALE AVENUE
 DENVER, CO 80222
 ATTN: CHRIS MISSROON
 PHONE: (303)-300-8827

CIVIL ENGINEER
EVSTUDIO LLC.
 5335 W 48TH AVE, SUITE 300,
 DENVER, CO 80212
 ATTN: BRIAN WELCH, PE
 PHONE: (303)-670-7242 X50
 EMAIL: brian.welch@evstudio.com

SURVEY - TOPO
MERRICK & COMPANY
 5970 GREENWOOD PLAZA BLVD
 GREENWOOD VILLAGE, CO 80111
 ATTN:
 PHONE:
 EMAIL:

SURVEY - EASEMENTS
AZTEC CONSULTANTS, INC.
 300 E MINERAL AVE #1,
 LITTLETON, CO 80122
 ATTN:
 PHONE:
 EMAIL:

WATER & SEWER
PARKER WATER & SANITATION DISTRICT
 18100 E WOODMAN DR
 PARKER, CO 80134
 ATTN:
 PHONE:
 EMAIL:

FIRE
SOUTH METRO FIRE RESCUE
 9195 E MINERAL AVE,
 CENTENNIAL, CO 80112
 ATTN:
 PHONE:
 EMAIL:

BENCHMARK

PROJECT BENCHMARK IS RIDGEGATE BM 1, A 3.25" DIAMETER BRASS CAP SET ON THE NORTHWEST BRIDGE ABUTMENT OF RIDGEGATE PARKWAY STAMPED "RIDGEGATE BM 1 2021" AND IS APPROXIMATELY 0.7 MILES EAST ON RIDGEGATE PARKWAY FROM THE INTERSECTION OF I-25 AND RIDGEGATE PARKWAY IN LONE TREE, COLORADO. THE BENCHMARK IS 1 FOOT FROM THE WEST EDGE OF THE ABUTMENT, 3 FEET NORTH OF THE BACK OF WALK, AND 31 FEET NORTH OF THE WEST BOUND CENTERLINE OF RIDGEGATE PARKWAY. ELEVATION IS 5983.40 U.S. SURVEY FEET, NAVD 88 DOUGLAS COUNTY DATUM.

RIDGEGATE SENIOR
GRADING, EROSION AND SEDIMENT CONTROL PLAN

RIDGEGATE EAST FILING NO. 4, LOT 3
 CENTRAL VILLAGE EAST COUPLET DISTRICT (MU CORE AREA)



VICINITY MAP

1" = 500'



SHEET TABLE		
SHEET	DRAWING NO.	TITLE
1	G-1	COVER SHEET
2	G-2	GENERAL NOTES AND LEGEND
3	E-1	INITIAL GESC PLAN
4	E-2	INTERIM GESC PLAN
5	E-3	FINAL GESC PLAN
6	D-1	STANDARD DETAILS
7	D-2	STANDARD DETAILS
8	D-3	STANDARD DETAILS
9	D-4	STANDARD DETAILS
10	D-5	STANDARD DETAILS
11	D-6	STANDARD DETAILS
12	D-7	STANDARD DETAILS
13	D-8	STANDARD DETAILS
14	D-9	STANDARD DETAILS
15	D-10	STANDARD DETAILS
16	D-11	STANDARD DETAILS
17	D-12	STANDARD DETAILS
18	D-13	STANDARD DETAILS

THE GRADING, EROSION AND SEDIMENT CONTROL PLAN INCLUDED HEREIN HAS BEEN PLACED IN THE CITY OF LONE TREE FILE FOR THIS PROJECT AND APPEARS TO FULFILL APPLICABLE CITY OF LONE TREE GRADING, EROSION AND SEDIMENT CONTROL CRITERIA, AS AMENDED. ADDITIONAL GRADING, EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED OF THE PERMITTEE(S) DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED GESC PLAN DOES NOT FUNCTION AS INTENDED. THE REQUIREMENTS OF THIS PLAN SHALL RUN WITH THE LAND AND BE THE OBLIGATION OF THE PERMITTEE(S), UNTIL SUCH TIME AS THE GESC PLAN IS PROPERLY COMPLETED, MODIFIED, OR VOIDED. THE GRADING, EROSION AND SEDIMENT CONTROL PLAN INCLUDED HEREIN HAS BEEN PREPARED UNDER MY DIRECT SUPERVISION IN ACCORDANCE WITH THE REQUIREMENTS OF THE GRADING, EROSION AND SEDIMENT CONTROL (GESC) CRITERIA MANUAL OF DOUGLAS COUNTY AS AMENDED.

GESC PLANS PREPARED BY:

EVSTUDIO _____ DATE SIGNED _____ PE NUMBER _____

 ASSISTANT DIRECTOR OF DEVELOPMENT REVIEW

DATE _____

THESE CONSTRUCTION DRAWINGS HAVE BEEN REVIEWED BY DOUGLAS COUNTY FOR GRADING, EROSION AND SEDIMENT CONTROL IMPROVEMENTS ONLY.

ENGINEERING DIVISION ACCEPTANCE BLOCK



303.670.7242
 design@evstudio.com
 inspections@evstudio.com
 www.evstudio.com

Contact:
 Brian Welch, PE
 brian.welch@evstudio.com
 303.670.7242 x50



FOR MARKING OF UNDERGROUND MEMBER UTILITIES, EVSTUDIO ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

RIDGEGATE SENIOR
 LONE TREE, CO

22A037

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REVISION:

09/08/2023
 DATE: AMT & TAL
 DRAWN BY: BMW
 CHECKED BY:

COVER SHEET

G-1

GRADING, EROSION, AND SEDIMENT CONTROL (GESC) GENERAL NOTES

- THE DOUGLAS COUNTY ENGINEER'S SIGNATURE AFFIXED TO THIS DOCUMENT INDICATES THE DOUGLAS COUNTY PUBLIC WORKS ENGINEERING HAS REVIEWED THE DOCUMENT AND FOUND IT IN GENERAL COMPLIANCE WITH THE DOUGLAS COUNTY GRADING, EROSION AND SEDIMENT CONTROL (GESC) CRITERIA MANUAL. THE DOUGLAS COUNTY DIRECTOR OF ENGINEERING SERVICES, THROUGH ACCEPTANCE OF THIS DOCUMENT, ASSUMES NO RESPONSIBILITY (OTHER THAN AS STATED ABOVE) FOR THE COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS.
- THE ADEQUACY OF THIS GESC PLAN LIES WITH THE ORIGINAL DESIGN ENGINEER.
- THE GESC PLAN SHALL BE CONSIDERED VALID FOR THREE (3) YEARS FROM THE DATE OF ACCEPTANCE BY DOUGLAS COUNTY, AFTER WHICH TIME THE PLAN SHALL BE VOID AND WILL BE SUBJECT TO RE-REVIEW AND RE-ACCEPTANCE BY DOUGLAS COUNTY.
- ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE DOUGLAS COUNTY PUBLIC WORKS ENGINEERING. DOUGLAS COUNTY RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO THE GESC MANUAL, GESC PLAN OR GESC PERMIT.
- THE PLACEMENT OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs) SHALL BE IN ACCORDANCE WITH THE DOUGLAS COUNTY ACCEPTED GESC PLAN AND THE DOUGLAS COUNTY GESC MANUAL, AS AMENDED.
- ANY VARIATION IN MATERIAL, TYPE OR LOCATION OF EROSION AND SEDIMENT CONTROL BMPs FROM THE DOUGLAS COUNTY ACCEPTED GESC PLAN WILL REQUIRE APPROVAL FROM AN ACCOUNTABLE REPRESENTATIVE OF THE DOUGLAS COUNTY PUBLIC WORKS ENGINEERING.
- AFTER THE GESC PLAN HAS BEEN ACCEPTED, THE GESC PERMIT APPLIED FOR, FEES AND FISCAL SECURITY SUBMITTED TO THE COUNTY, AND THE GESC FIELD MANUAL OBTAINED AND REVIEWED, THE CONTRACTOR MAY INSTALL THE INITIAL-STAGE EROSION AND SEDIMENT CONTROL BMPs INDICATED ON THE ACCEPTED GESC PLAN.
- THE FIRST BMP TO BE INSTALLED ON THE SITE SHALL BE CONSTRUCTION FENCE, MARKERS, OR OTHER APPROVED MEANS OF DEFINING THE LIMITS OF CONSTRUCTION, INCLUDING CONSTRUCTION LIMITS ADJACENT TO STREAM CORRIDORS AND OTHER AREAS TO BE PRESERVED.
- AFTER INSTALLATION OF THE INITIAL-STAGE EROSION AND SEDIMENT CONTROL BMPs, THE PERMITTEE SHALL CALL THE DOUGLAS COUNTY ENGINEERING PERMITS STAFF AT 303-660-7487 TO SCHEDULE A PRECONSTRUCTION MEETING AT THE PROJECT SITE. THE REQUEST SHALL BE MADE A MINIMUM OF THREE BUSINESS DAYS PRIOR TO THE REQUESTED MEETING TIME. NO CONSTRUCTION ACTIVITIES SHALL BE PLANNED WITHIN 24 HOURS AFTER THE PRECONSTRUCTION MEETING.
- THE OWNER OR OWNER'S REPRESENTATIVE, THE GESC MANAGER, THE GENERAL CONTRACTOR, AND THE GRADING SUBCONTRACTOR, IF DIFFERENT FROM THE GENERAL CONTRACTOR, MUST ATTEND THE PRECONSTRUCTION MEETING. IF ANY OF THE REQUIRED PARTICIPANTS FAIL TO ATTEND THE PRECONSTRUCTION MEETING, OR IF THE GESC FIELD MANUAL IS NOT ON SITE, OR IF THE INSTALLATION OF THE INITIAL BMPs ARE NOT APPROVED BY THE DOUGLAS COUNTY EROSION CONTROL INSPECTOR, THE APPLICANT WILL HAVE TO PAY A REINSPECTION FEE, ADDRESS ANY PROBLEMS WITH BMP INSTALLATION, AND CALL TO RESCHEDULE THE MEETING, WITH A CORRESPONDING DELAY IN THE START OF CONSTRUCTION. DOUGLAS COUNTY STRONGLY ENCOURAGES THE APPLICANT TO HAVE THE ENGINEER OF RECORD AT THE PRECONSTRUCTION MEETING.
- CONSTRUCTION SHALL NOT BEGIN UNTIL THE DOUGLAS COUNTY EROSION CONTROL INSPECTOR APPROVES THE INSTALLATION OF THE INITIAL BMPs AND THE APPROVED GESC PERMIT IS PICKED UP FROM THE COUNTY AND IS IN-HAND ON THE SITE. THE COMPLETED PERMIT WILL BE AVAILABLE WITHIN 24-HOURS AFTER THE INSTALLATION OF THE INITIAL BMPs ARE APPROVED.
- THE GESC MANAGER SHALL STRICTLY ADHERE TO THE DOUGLAS COUNTY-APPROVED LIMITS OF CONSTRUCTION AT ALL TIMES. THE DOUGLAS COUNTY PUBLIC WORKS ENGINEERING MUST APPROVE ANY CHANGES TO THE LIMITS OF CONSTRUCTION AND, AT THE DISCRETION OF THE ENGINEERING DIVISION, ADDITIONAL EROSION/SEDIMENT CONTROLS MAY BE REQUIRED IN ANY ADDITIONAL AREAS OF CONSTRUCTION.
- THE MAXIMUM AREA OF CONSTRUCTION SHALL BE LIMITED TO 40 ACRES (70 ACRES IF APPROVED FOR SOIL MITIGATION OPERATIONS) TO REDUCE THE AMOUNT OF LAND DISTURBED AT ANY ONE TIME. LARGER SITES SHALL BE DIVIDED INTO PHASES THAT ARE EACH 40 (OR 70) ACRES OR LESS IN SIZE. THESE PROJECTS SHALL CONDUCT GRADING ACTIVITIES IN ACCORDANCE WITH THE ACCEPTED GESC PLAN. BMP INSTALLATION AND APPROVAL BY DOUGLAS COUNTY AT THE START AND COMPLETION OF EACH PHASE SHALL BE CONDUCTED IN ACCORDANCE WITH THE PROCEDURES OUTLINED IN THE GESC MANUAL AND/OR GESC FIELD MANUAL.
- PRIOR TO ANY CONSTRUCTION ACTIVITY, THE PERMITTEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES. FOR INFORMATION, CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC) AT 811, 1-800-922-1987, OR WWW.COLORADO811.ORG.
- NATURAL VEGETATION SHALL BE RETAINED AND PROTECTED WHEREVER POSSIBLE. EXPOSURE OF SOIL TO EROSION BY REMOVAL OR DISTURBANCE OF VEGETATION SHALL BE LIMITED TO THE AREA REQUIRED FOR IMMEDIATE CONSTRUCTION OPERATIONS.
- THE GESC PERMIT SHALL BE VALID FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF ISSUANCE.
- A COPY OF THE GESC PERMIT, ACCEPTED GESC PLANS AND THE GESC FIELD MANUAL SHALL BE ON SITE AT ALL TIMES.
- THE GESC MANAGER SHALL BE RESPONSIBLE FOR ENSURING THAT THE SITE REMAINS IN COMPLIANCE WITH THE GESC PERMIT AND SHALL BE THE PERMITTEE'S CONTACT PERSON WITH THE COUNTY FOR ALL MATTERS PERTAINING TO THE GESC PERMIT. THE GESC MANAGER SHALL BE PRESENT AT THE SITE THE MAJORITY OF THE TIME AND SHALL BE AVAILABLE THROUGH A 24-HOUR CONTACT NUMBER. IN THE EVENT THAT THE CONTRACTOR'S GESC MANAGER IS NOT ON SITE AND CANNOT BE REACHED DURING A VIOLATION, THE ALTERNATE GESC MANAGER SHALL BE CONTACTED. IF NEITHER THE GESC MANAGER NOR ALTERNATE GESC MANAGER CAN BE CONTACTED DURING ANY VIOLATION, A STOP WORK ORDER MAY BE ISSUED.
- ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE THROUGH THE DOUGLAS COUNTY-APPROVED ACCESS POINT. A VEHICLE TRACKING CONTROL PAD IS REQUIRED AT ALL ACCESS POINTS ON THE SITE. ADDITIONAL STABILIZED CONSTRUCTION ENTRANCES MAY BE ADDED WITH AUTHORIZATION FROM THE DOUGLAS COUNTY PUBLIC WORKS ENGINEERING.
- THE GESC MANAGER IS RESPONSIBLE FOR CLEANUP OF SEDIMENT OR CONSTRUCTION DEBRIS TRACKED ONTO ADJACENT PAVED AREAS. PAVED AREAS INCLUDING STREETS ARE TO BE KEPT CLEAN THROUGHOUT BUILD-OUT AND SHALL BE CLEANED, WITH A STREET SWEEPER OR SIMILAR DEVICE, AT FIRST NOTICE OF ACCIDENTAL TRACKING OR AT THE DISCRETION OF THE DOUGLAS COUNTY EROSION CONTROL INSPECTOR. STREET WASHING IS NOT ALLOWED. DOUGLAS COUNTY RESERVES THE RIGHT TO REQUIRE ADDITIONAL MEASURES TO ENSURE AREA STREETS ARE KEPT FREE OF SEDIMENT AND/OR CONSTRUCTION DEBRIS.

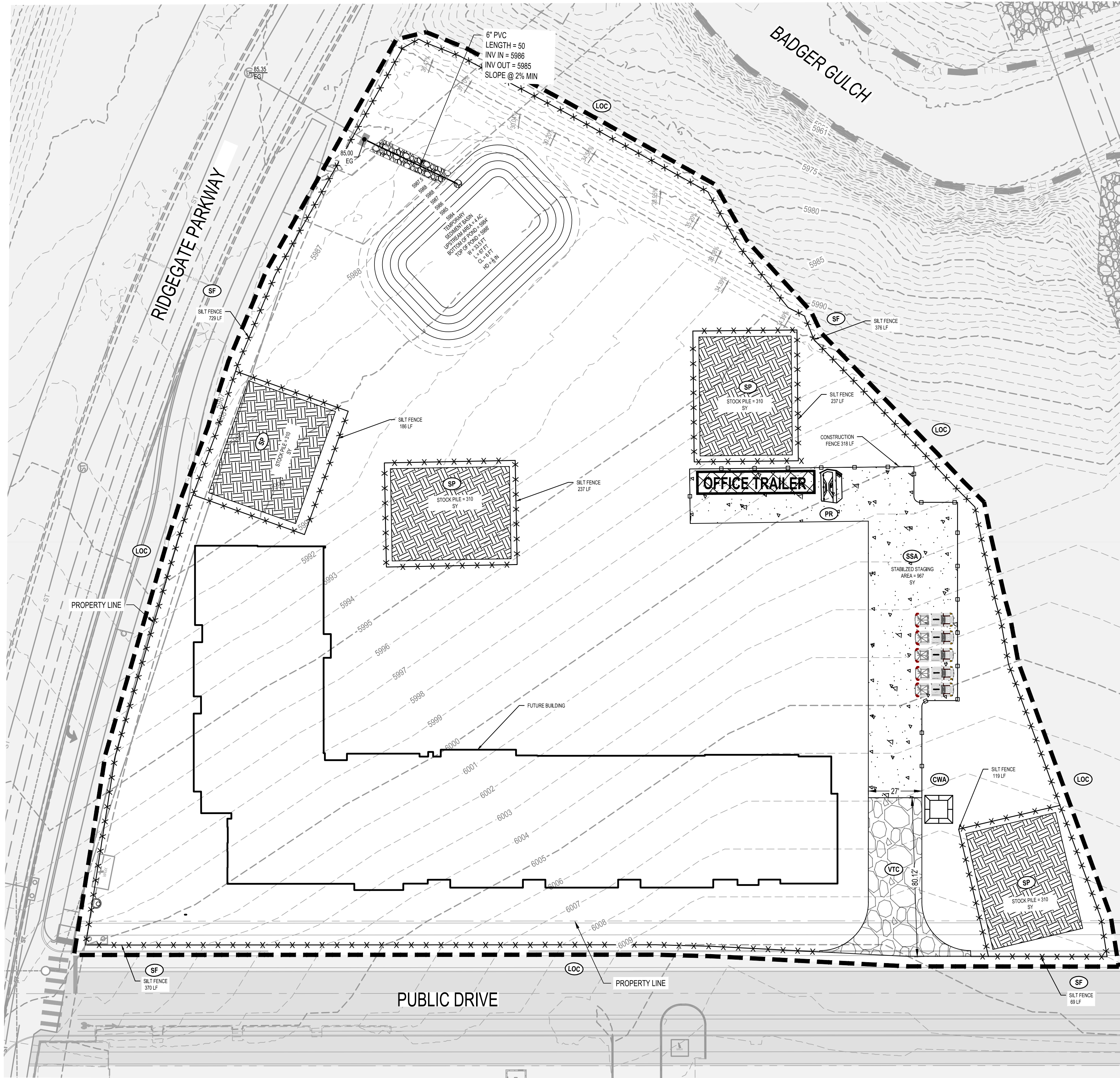
- APPROVED EROSION AND SEDIMENT CONTROL BMPs SHALL BE MAINTAINED AND KEPT IN GOOD REPAIR FOR THE DURATION OF THIS PROJECT. AT A MINIMUM, THE GESC MANAGER SHALL INSPECT ALL BMPs IN ACCORDANCE WITH THE ACCEPTED GESC PLAN AND GESC MANUAL. LEVEL III VIOLATIONS SHALL BE CORRECTED IMMEDIATELY AFTER THE PERMITTEE(S) NOTICE THE VIOLATION(S) OR ARE NOTIFIED OF THE VIOLATION(S). GENERALLY DOUGLAS COUNTY WILL REINSPECT FOR COMPLIANCE WITHIN 48 HOURS OF NOTIFICATION OF LEVEL III VIOLATIONS. LEVEL II VIOLATIONS SHALL BE CORRECTED IMMEDIATELY, OR AS DIRECTED BY A DOUGLAS COUNTY EROSION CONTROL INSPECTOR. ACCUMULATED SEDIMENT AND CONSTRUCTION DEBRIS SHALL BE REMOVED AND PROPERLY DISPOSED.
- STRAW BALES ARE NOT A DOUGLAS COUNTY ACCEPTED SEDIMENT CONTROL BMP.
- TOPSOIL SHALL BE STRIPPED AND STOCKPILED IN THE LOCATION SHOWN ON THE ACCEPTED GESC PLAN. THE GESC MANAGER SHALL SCHEDULE AN INSPECTION WITH THE DOUGLAS COUNTY EROSION CONTROL INSPECTOR AS SOON AS TOPSOIL STRIPPING IS COMPLETED. FAILURE TO SCHEDULE SUCH INSPECTION OR FAILURE TO STOCKPILE TOPSOIL SHALL RESULT IN ISSUANCE OF A STOP WORK ORDER. THE STOP WORK ORDER SHALL REMAIN IN PLACE UNTIL TOPSOIL IS STOCKPILED ON SITE OR APPROPRIATE SOIL AMENDMENTS ARE STOCKPILED ON SITE.
- THE ACCEPTED GESC PLAN MAY REQUIRE CHANGES OR ALTERATIONS AFTER APPROVAL TO MEET CHANGING SITE OR PROJECT CONDITIONS OR TO ADDRESS INEFFICIENCIES IN DESIGN OR INSTALLATION. THE GESC MANAGER SHALL OBTAIN PRIOR APPROVAL FROM THE DESIGN ENGINEER AND DOUGLAS COUNTY PUBLIC WORKS ENGINEERING FOR ANY PROPOSED CHANGES.
- LINING OF TEMPORARY SWALES AND DITCHES SHALL BE IN ACCORDANCE WITH THE GESC CRITERIA MANUAL.
- NO PERMANENT EARTH SLOPES GREATER THAN 3:1 SHALL BE ALLOWED.
- ANY SETTLEMENT OR SOIL ACCUMULATIONS BEYOND THE LIMITS OF CONSTRUCTION DUE TO GRADING OR EROSION SHALL BE REPAIRED IMMEDIATELY BY THE GESC MANAGER. THE GESC MANAGER SHALL BE HELD RESPONSIBLE FOR OBTAINING ACCESS RIGHTS TO ADJACENT PROPERTY, IF NEEDED, AND REMEDIATING ANY ADVERSE IMPACTS TO ADJACENT WATERWAYS, WETLANDS, PROPERTIES, ETC. RESULTING FROM WORK DONE AS PART OF THIS PROJECT.
- A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
- SOILS THAT WILL BE STOCKPILED FOR MORE THAN THIRTY (30) DAYS SHALL BE SEEDED AND MULCHED WITHIN FOURTEEN (14) DAYS OF STOCKPILE CONSTRUCTION. NO STOCKPILES SHALL BE PLACED WITHIN ONE HUNDRED (100) FEET OF A DRAINAGE WAY UNLESS APPROVED BY THE DOUGLAS COUNTY PUBLIC WORKS ENGINEERING.
- ALL CHEMICAL OR HAZARDOUS MATERIAL SPILLS WHICH MAY ENTER WATERS OF THE STATE OF COLORADO, WHICH INCLUDE BUT ARE NOT LIMITED TO, SURFACE WATER, GROUND WATER AND DRY GULLIES OR STORM SEWER LEADING TO SURFACE WATER, SHALL BE IMMEDIATELY REPORTED TO THE CDPHE PER CRS 25-8-601, AND DOUGLAS COUNTY. RELEASES OF PETROLEUM PRODUCTS AND CERTAIN HAZARDOUS SUBSTANCES LISTED UNDER THE FEDERAL CLEAN WATER ACT (40 CFR PART 116) MUST BE REPORTED TO THE NATIONAL RESPONSE CENTER AS WELL AS THE CDPHE. CONTACT INFORMATION FOR CDPHE, DOUGLAS COUNTY AND THE NATIONAL RESPONSE CENTER CAN BE FOUND IN APPENDIX A OF THE GESC MANUAL, AS AMENDED. SPILLS THAT POSE AN IMMEDIATE RISK TO HUMAN LIFE SHALL BE REPORTED TO 911. FAILURE TO REPORT AND CLEAN UP ANY SPILL MAY RESULT IN ISSUANCE OF A STOP WORK ORDER.
- ALL WORK ON SITE SHALL STAY A MINIMUM OF ONE HUNDRED (100) FEET AWAY FROM ANY DRAINAGEWAY, WETLAND, ETC. UNLESS OTHERWISE NOTED ON AN ACCEPTED DOUGLAS COUNTY GESC PLAN.
- ALL PROJECTS SHALL BALANCE EARTHWORK QUANTITIES ON SITE. IN THE EVENT A VARIANCE IS GRANTED BY THE COUNTY DIRECTOR OF ENGINEERING SERVICES TO ALLOW IMPORT OR EXPORT OF MATERIAL, THE PERMITTEE SHALL HAVE A GESC PERMIT IN HAND FOR THE IMPORT OR EXPORT SITE PRIOR TO ANY TRANSPORTING OF EARTHEN MATERIAL. THE GESC MANAGER SHALL NOTIFY THE DOUGLAS COUNTY EROSION CONTROL INSPECTOR OF THE LOCATION AND PERMIT NUMBERS OF BOTH THE EXPORTING AND IMPORTING SITES PRIOR TO ANY IMPORT/ EXPORT OPERATIONS.
- THE USE OF REBAR, STEEL STAKES OR STEEL FENCE POSTS FOR STAKING OR SUPPORT OF ANY EROSION OR SEDIMENT CONTROL BMP IS PROHIBITED (EXCEPT STEEL TEE-POSTS FOR USE IN SUPPORTING CONSTRUCTION FENCE).
- THE CLEANING OF CONCRETE DELIVERY TRUCK CHUTES IS RESTRICTED TO APPROVED CONCRETE WASH OUT LOCATIONS ON THE JOB SITE. THE DISCHARGE OF WATER CONTAINING WASTE CONCRETE TO THE STORM SEWER SYSTEM IS PROHIBITED. ALL CONCRETE WASTE SHALL BE PROPERLY CLEANED UP AND DISPOSED AT AN APPROPRIATE LOCATION.
- ALL DEWATERING ON SITE SHALL BE COORDINATED WITH A DOUGLAS COUNTY EROSION CONTROL INSPECTOR AND BE FREE OF SEDIMENT IN ACCORDANCE WITH THE GESC MANUAL.
- ALL PERMANENT INSTALLATIONS OF PIPES FOR STORM SEWERS, SLOPE DRAINS, AND CULVERTS, TOGETHER WITH RIPRAP APRONS OR OTHER INLET AND OUTLET PROTECTION, REQUIRE INSPECTION BY DOUGLAS COUNTY PUBLIC WORKS ENGINEERING (SEPARATE FROM GESC INSPECTIONS).
- ALL DISTURBED AREAS SHALL BE DRILL SEEDED AND CRIMP MULCHED IN ACCORDANCE WITH THE GESC CRITERIA MANUAL WITHIN THIRTY (30) DAYS OF INITIAL EXPOSURE OR WITHIN FOURTEEN (14) DAYS OF SUBSTANTIAL COMPLETION (AS DEFINED BY DOUGLAS COUNTY) OF AN AREA, WHICHEVER IS LESS. THIS MAY REQUIRE MULTIPLE MOBILIZATIONS FOR SEEDING AND MULCHING.
- ALL SLOPES STEEPER THEN 4:1 REQUIRE EROSION CONTROL BLANKETING.
- HYDRAULIC SEEDING AND HYDRAULIC MULCHING ARE NOT AN ACCEPTABLE METHOD OF SEEDING OR MULCHING IN DOUGLAS COUNTY.
- NO CURB AND GUTTER PERMITS SHALL BE ISSUED UNTIL ALL DISTURBED AREAS ARE DRILL SEEDED AND CRIMP MULCHED.
- NO PAVING PERMITS SHALL BE ISSUED UNTIL ALL INTERIM INLET PROTECTION IS INSTALLED AND APPROVED BY THE EROSION CONTROL INSPECTOR.
- A GESC INSPECTION SHALL BE CONDUCTED FOR CERTIFICATE OR TEMPORARY CERTIFICATE OF OCCUPANCY OR INITIAL ACCEPTANCE.
- GESC MANAGER SHALL PROVIDE AND MAINTAIN PORTABLE TOILETS AND TRASH DUMPSTERS FOR THE PROJECT.

DETAIL SHEET
NO. NO.

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BMP LEGEND

	CD	CHECK DAM
	CB	COMPOST BLANKET
	CFB	COMPOST FILTER BERM
	CWA	CONCRETE WASHOUT AREA
	CF	CONSTRUCTION FENCE
	CM	CONSTRUCTION MARKER
	CS	CURB SOCK
	DW	DEWATERING
	DD	DIVERSION DITCH
	ECB	EROSION CONTROL BLANKET
	IP	INLET PROTECTION
	RCD	REINFORCED CHECK DAM
	RRB	REINFORCED ROCK BERM
	RRC	RRB FOR CULVERT PROTECTION
	SB	SEDIMENT BASIN
	SCL	SEDIMENT CONTROL LOG
	ST	SEDIMENT TRAP
	SM	SEEDING AND MULCHING
	SF	SILT FENCE
	SSA	STABILIZED STAGING AREA
	SR	SURFACE ROUGHENING
	TSD	TEMPORARY SLOPE DRAIN
	TSC	TEMPORARY STREAM CROSSING
	TER	TERRACING
	VTC	VEHICLE TRACKING CONTROL
	WW	VTC WITH WHEEL WASH
		ROCK AND RIPRAP GRADATIONS
	LOC	LIMITS OF CONSTRUCTION



NOTE: SEE COVER SHEET OF LONE TREE STANDARDS NOTES AND DETAILS (SHEET 1 OF 3) FOR LEGEND OF BMP NAMES AND SYMBOLS.



KEYMAP

INITIAL GESC NOTES

1. SEE COVER SHEET OF LONE TREE STANDARD NOTES AND DETAILS (SHEET 1 OF 3) FOR LEGEND OF BMP NAMES AND SYMBOLS.
2. SEE CONSTRUCTION PLANS FOR DETAILS OF PERMANENT DRAINAGE FACILITIES, WATER QUALITY FACILITIES, CULVERTS, STORM DRAINS, AND OUTLET PROTECTION.
3. PORTABLE TOILETS SHALL BE PROVIDED NEAR THE STABILIZED STAGING AREA, PLACED ON A PVIOUS SURFACE, AND STAKED DOWN ON ALL FOUR SIDES.
4. ALL ADJACENT PAVED ROADS SHALL BE KEPT CLEAN AT ALL TIMES AND TRACKOUT SHALL BE CLEANED IMMEDIATELY USING DRY METHODS.

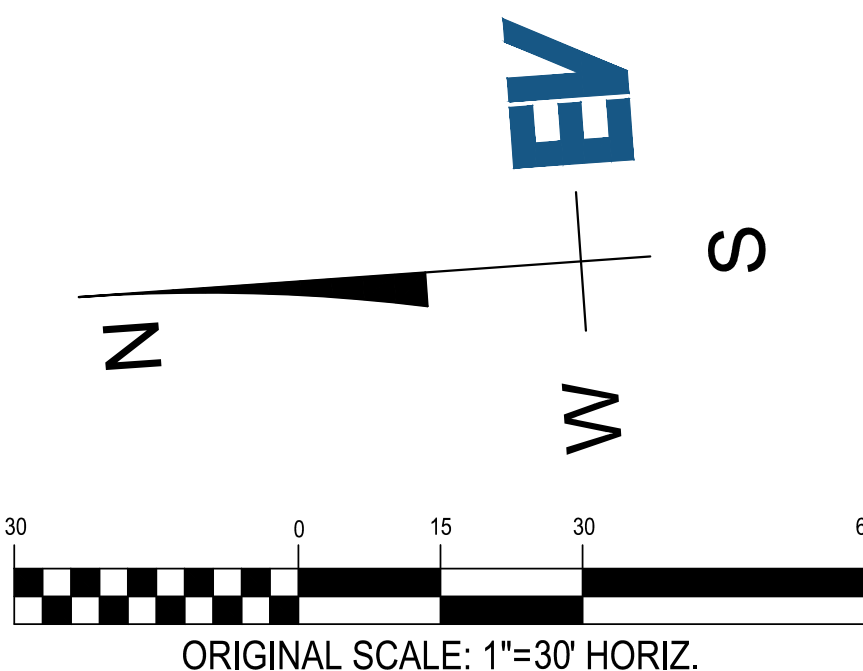
LEGEND

EXISTING	PROPOSED	
- - -	- - -	MAJOR CONTOUR
- - -	- - -	MINOR CONTOUR
- - -	- - -	FLOW ARROW

BMP LEGEND		UNIT	QTY
	(CWA) CONCRETE WASHOUT AREA	EA	1
	(CF) CONSTRUCTION FENCE	LF	345
	(ECB) EROSION CONTROL BLANKET	SY	895
	(IP) INLET PROTECTION	EA	7
	(SB) SEDIMENT BASIN	EA	1
	(SM) SEEDING AND MULCHING	AC	1.44
	(SF) SILT FENCE	LF	2323
	(SSA) STABILIZED STAGING AREA	SY	967
	(VTC) VEHICLE TRACKING CONTROL	EA	1
	(LOC) LIMITS OF CONSTRUCTION	LF	1657
	(PR) PORTABLE RESTROOM	EA	1

BENCHMARK

PROJECT BENCHMARK IS RIDGEGATE BM 1, A 3.25" DIAMETER BRASS CAP SET ON THE NORTHWEST BRIDGE ABUTMENT OF RIDGEGATE PARKWAY STAMPED "RIDGEGATE BM 1 2021" AND IS APPROXIMATELY 0.7 MILES EAST ON RIDGEGATE PARKWAY FROM THE INTERSECTION OF I-25 AND RIDGEGATE PARKWAY IN LONE TREE, COLORADO. THE BENCHMARK IS 1 FOOT FROM THE WEST EDGE OF THE ABUTMENT, 3 FEET NORTH OF THE BACK OF WALK, AND 31 FEET NORTH OF THE WEST BOUND CENTERLINE OF RIDGEGATE PARKWAY. ELEVATION IS 5983.40 U.S. SURVEY FEET, NAVD 88 DOUGLAS COUNTY DATUM.



ASSISTANT DIRECTOR OF DEVELOPMENT REVIEW

DATE _____

THESE CONSTRUCTION DRAWINGS HAVE BEEN REVIEWED BY DOUGLAS COUNTY FOR GRADING, EROSION AND SEDIMENT CONTROL IMPROVEMENTS ONLY.

ENGINEERING DIVISION ACCEPTANCE BLOCK

EVstudio
 Denver, CO
 Evergreen, CO
 303.670.7242
 design@evstudio.com
 inspections@evstudio.com
 www.evstudio.com

Contact:
 Brian Welch, PE
 brian.welch@evstudio.com
 303.670.7242 x50

UTILITY NOTIFICATION CENTER
The Promise.com

FOR MARKING OF UNDERGROUND MEMBER UTILITIES. EVSTUDIO ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

RIDGEGATE SENIOR
 LONE TREE, CO
 22A037

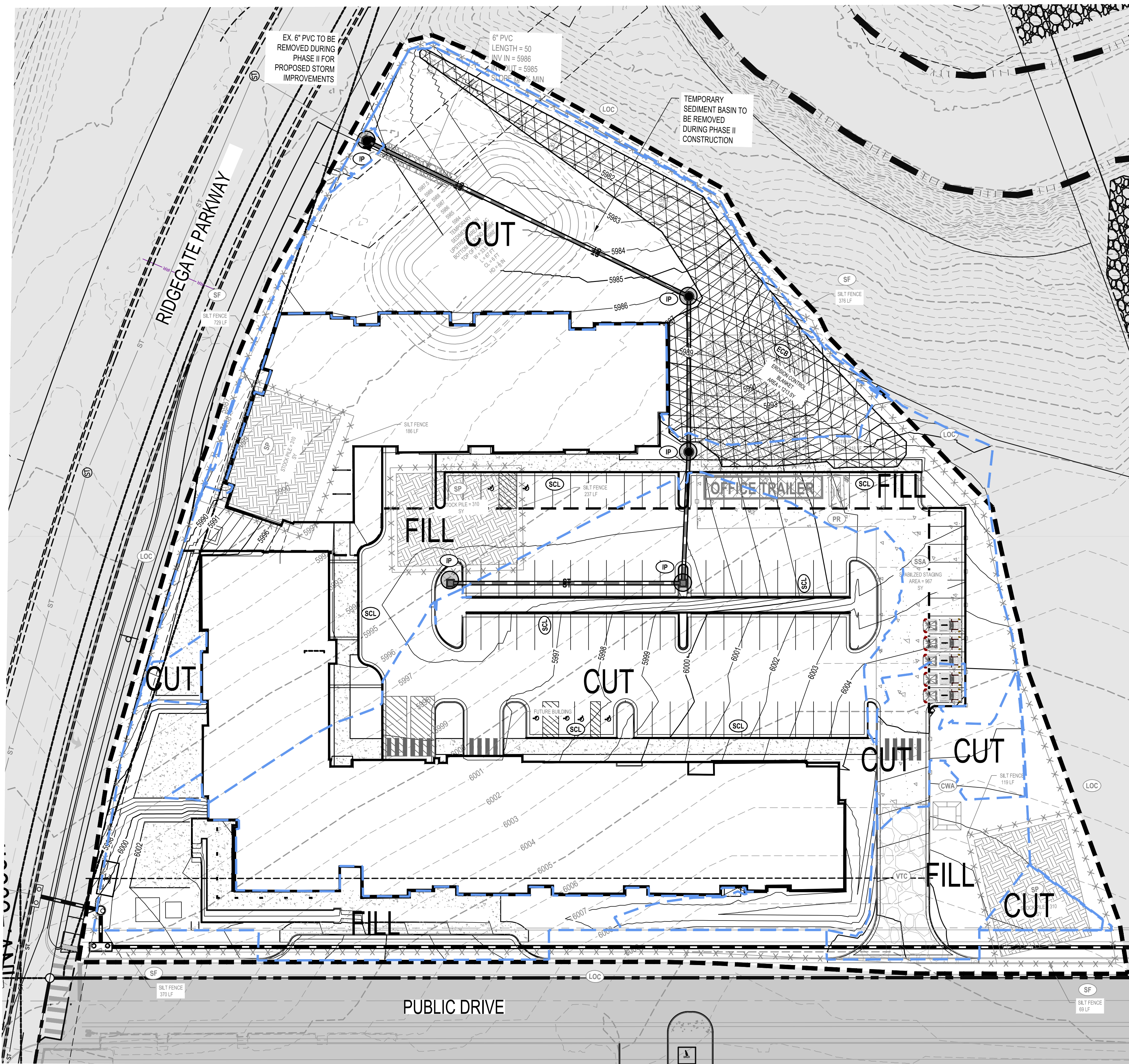
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REVISION:

DATE: 09/08/2023
 DRAWN BY: AMT & TAL
 CHECKED BY: BMW

INITIAL GESC PLAN

E-1



KEYMAP

INTERIM GESC NOTES

1. SEE COVER SHEET OF LONE TREE STANDARD NOTES AND DETAILS (SHEET 1 OF 3) FOR LEGEND OF BMP NAMES AND SYMBOLS.
2. SHADED BMPs WERE INSTALLED IN THE INITIAL STAGE AND SHALL BE LEFT IN PLACE IN THE INTERIM STAGE UNLESS OTHERWISE NOTED.
3. SEE CONSTRUCTION PLANS FOR DETAILS OF PERMANENT DRAINAGE FACILITIES, WATER QUALITY FACILITIES, CULVERTS, STORM DRAINS, AND OUTLET PROTECTION.

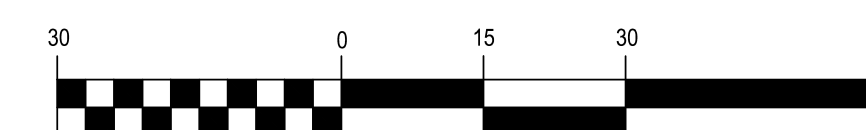
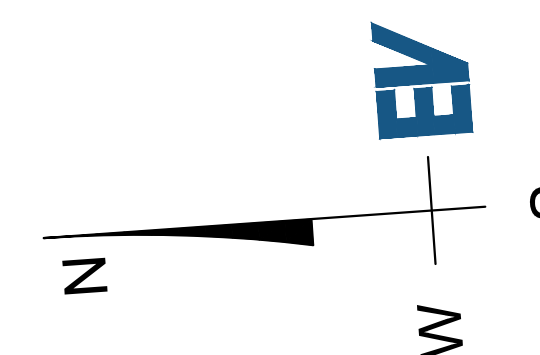
LEGEND

- | | | |
|-----------------|-----------------|---------------|
| EXISTING | PROPOSED | |
| | | MAJOR CONTOUR |
| | | MINOR CONTOUR |
| | | FLOW ARROW |

BMP LEGEND		UNIT	QTY
	(CWA) CONCRETE WASHOUT AREA	EA	1
	(CF) CONSTRUCTION FENCE	LF	345
	(ECB) EROSION CONTROL BLANKET	SY	1213
	(IP) INLET PROTECTION	EA	7
	(SB) SEDIMENT BASIN	EA	1
	(SCL) SEDIMENT CONTROL LOG	LF	2363
	(SM) SEEDING AND MULCHING	AC	1.44
	(SF) SILT FENCE	LF	2323
	(SSA) STABILIZED STAGING AREA	SY	967
	(VTC) VEHICLE TRACKING CONTROL	EA	1
	(LOC) LIMITS OF CONSTRUCTION	LF	1657
	(PR) PORTABLE RESTROOM	EA	1

BENCHMARK

PROJECT BENCHMARK IS RIDGEGATE BM 1, A 3.25" DIAMETER BRASS CAP SET ON THE NORTHWEST BRIDGE ABUTMENT OF RIDGEGATE PARKWAY STAMPED "RIDGEGATE BM 1 2021" AND IS APPROXIMATELY 0.7 MILES EAST ON RIDGEGATE PARKWAY FROM THE INTERSECTION OF I-25 AND RIDGEGATE PARKWAY IN LONE TREE, COLORADO. THE BENCHMARK IS 1 FOOT FROM THE WEST EDGE OF THE ABUTMENT, 3 FEET NORTH OF THE BACK OF WALK, AND 31 FEET NORTH OF THE WEST BOUND CENTERLINE OF RIDGEGATE PARKWAY. ELEVATION IS 5983.40 U.S. SURVEY FEET, NAVD 88 DOUGLAS COUNTY DATUM.

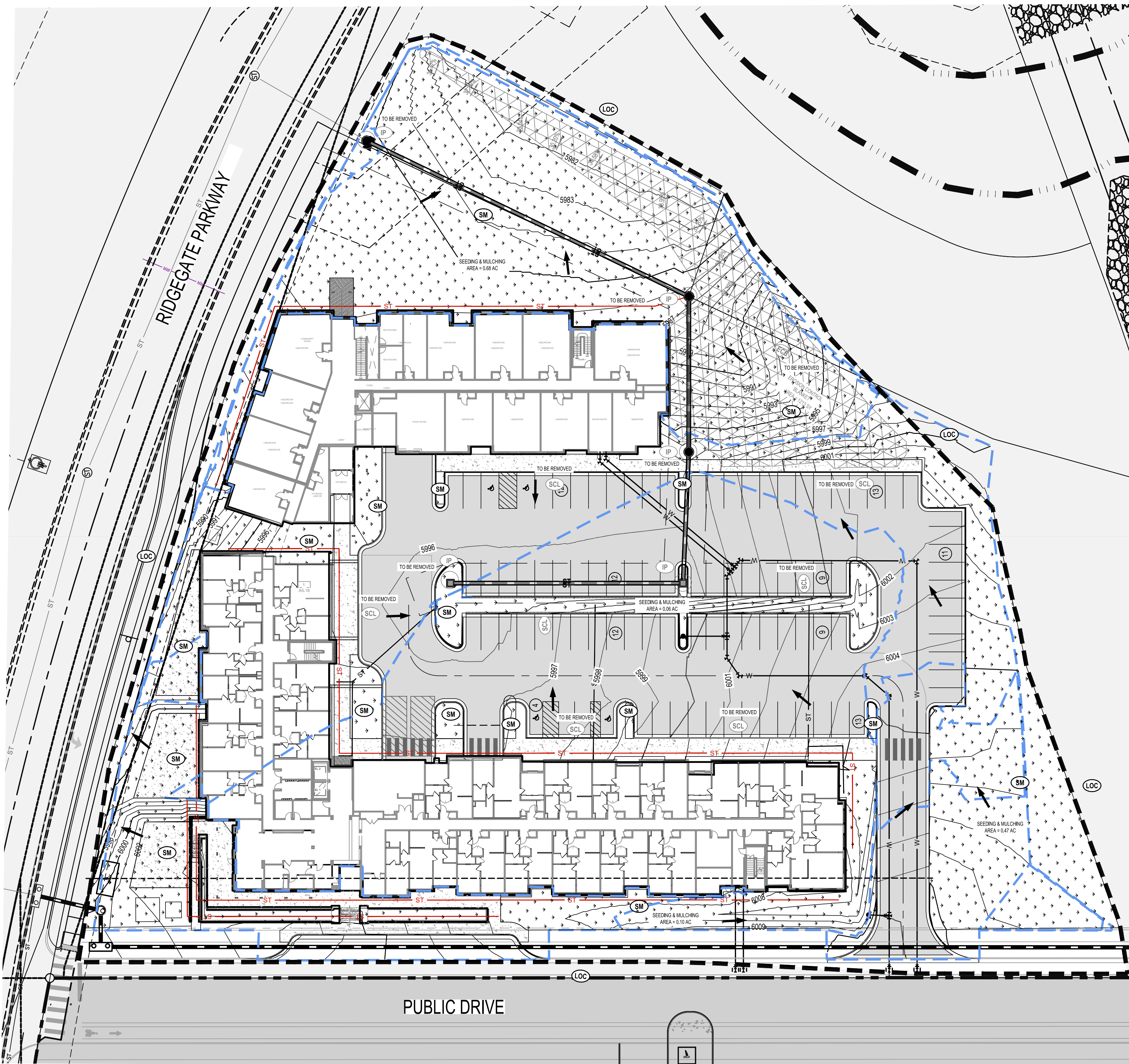


ORIGINAL SCALE: 1"=30' HORIZ.

Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
Earthwork	1.150	1.150	152355.72 Sq. Ft.	12432.67 Cu. Yd.	8195.48 Cu. Yd.	4237.19 Cu. Yd.<Cut>
Totals			152355.72 Sq. Ft.	12432.67 Cu. Yd.	8195.48 Cu. Yd.	4237.19 Cu. Yd.<Cut>

NOTE: SEE COVER SHEET OF LONE TREE STANDARDS NOTES AND DETAILS (SHEET 1 OF 3) FOR LEGEND OF BMP NAMES AND SYMBOLS.



KEYMAP

FINAL GESC NOTES

1. SEE COVER SHEET OF LONE TREE STANDARD NOTES AND DETAILS (SHEET 1 OF 3) FOR LEGEND OF BMP NAMES AND SYMBOLS.
2. BMPs, UNLESS OTHERWISE INDICATED, SHALL BE LEFT IN PLACE UNTIL REVEGETATION ESTABLISHMENT IS APPROVED BY THE CITY.
3. SEE CONSTRUCTION PLANS FOR DETAILS OF PERMANENT DRAINAGE FACILITIES, WATER QUALITY FACILITIES, CULVERTS, STORM DRAINS, AND OUTLET PROTECTION. THE FOLLOWING BMPs SHALL BE REMOVED AT THE END OF CONSTRUCTION; SSA, SB, VTC, CF, CM, SM, SR, IP, SF, AND SCL.
4. ALL INTERIM EROSION AND SEDIMENT CONTROL BMPs INCLUDING SEEDING AND MULCHING OF DISTURBED AREAS MUST BE INSTALLED, INSPECTED, AND APPROVED BY THE CITY PRIOR TO THE ISSUANCE OF A RIGHT-OF-WAY USE AND CONSTRUCTION PERMIT FOR THE PURPOSE OF PAVING OR INSTALLATION OF CURB AND GUTTER.

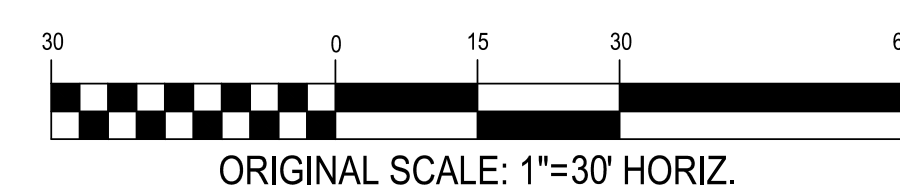
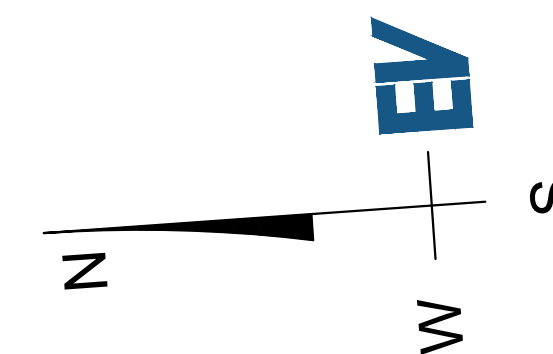
LEGEND

- | | | |
|----------|----------|---------------|
| EXISTING | PROPOSED | |
| --- | --- | MAJOR CONTOUR |
| --- | --- | MINOR CONTOUR |
| --- | --- | FLOW ARROW |

BMP LEGEND		UNIT	QTY
	CWA CONCRETE WASHOUT AREA	EA	1
	CF CONSTRUCTION FENCE	LF	345
	ECB EROSION CONTROL BLANKET	SY	895
	IP INLET PROTECTION	EA	7
	SB SEDIMENT BASIN	EA	1
	SM SEEDING AND MULCHING	AC	1.44
	SF SILT FENCE	LF	2323
	SSA STABILIZED STAGING AREA	SY	967
	VTC VEHICLE TRACKING CONTROL	EA	1
	LOC LIMITS OF CONSTRUCTION	LF	1657
	PR PORTABLE RESTROOM	EA	1

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Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
Earthwork	1.150	1.150	152355.72 Sq. Ft.	12432.67 Cu. Yd.	8195.48 Cu. Yd.	4237.19 Cu. Yd.<Cut>
Totals			152355.72 Sq. Ft.	12432.67 Cu. Yd.	8195.48 Cu. Yd.	4237.19 Cu. Yd.<Cut>

NOTE: SEE COVER SHEET OF LONE TREE STANDARDS NOTES AND DETAILS (SHEET 1 OF 3) FOR LEGEND OF BMP NAMES AND SYMBOLS.

EVstudio
 Denver, CO
 Evergreen, CO
 303.670.7242
 design@evstudio.com
 inspections@evstudio.com
 www.evstudio.com

Contact:
 Brian Welch, PE
 brian.welch@evstudio.com
 303.670.7242 x50

UTILITY NOTIFICATION CENTER

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RIDEGATE SENIOR
 LONE TREE, CO
 22A037

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REVISION:

DATE:	09/08/2023
DRAWN BY:	AMT & TAL
CHECKED BY:	BMW

ASSISTANT DIRECTOR OF DEVELOPMENT REVIEW

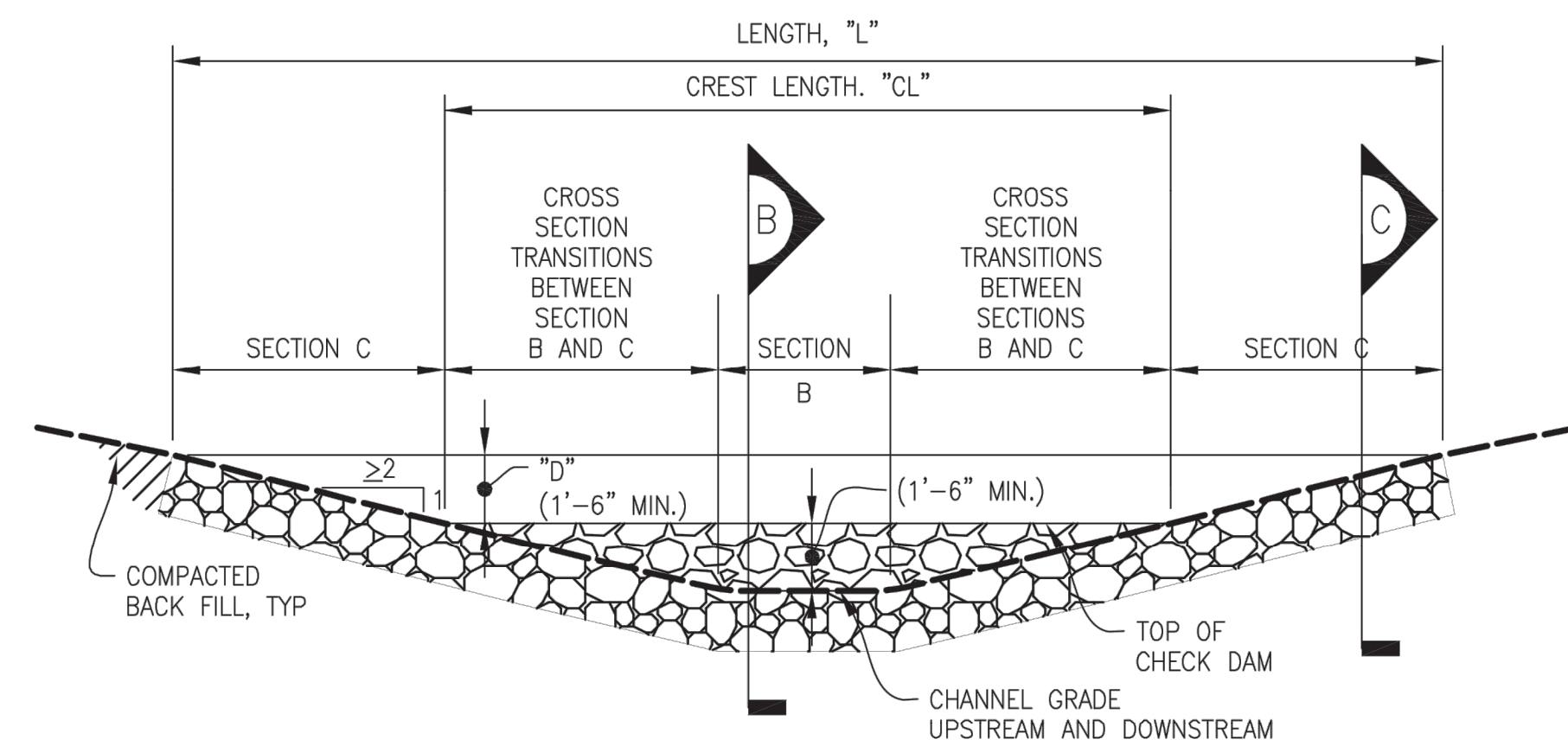
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THESE CONSTRUCTION DRAWINGS HAVE BEEN REVIEWED BY DOUGLAS COUNTY FOR GRADING, EROSION AND SEDIMENT CONTROL IMPROVEMENTS ONLY.

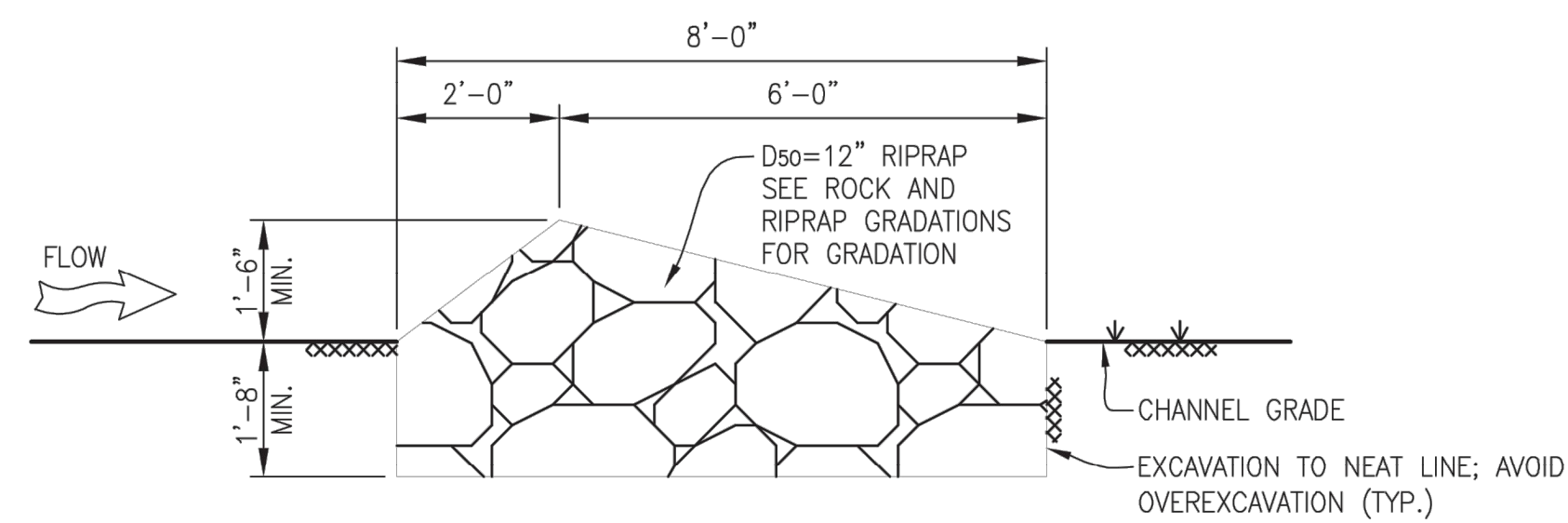
ENGINEERING DIVISION ACCEPTANCE BLOCK

FINAL GESC PLAN

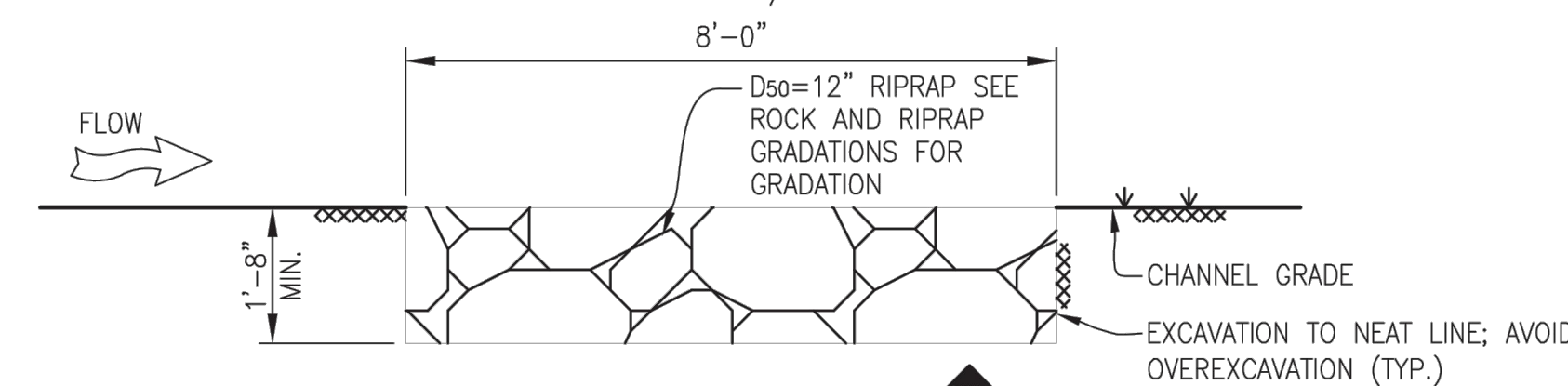
E-3



ELEVATION
SCALE: 1" = 5'-0"



SECTION B
SCALE: 1/2" = 1'-0"



SECTION C
SCALE: 1/2" = 1'-0"

CHECK DAM INSTALLATION NOTES

- SEE PLAN VIEW FOR:
- LOCATIONS OF CHECK DAMS.
- CHECK DAM TYPE (CHECK DAM OR REINFORCED CHECK DAM).
- LENGTH, "L", CREST LENGTH, "CL", AND DEPTH, "D".
- CHECK DAMS INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED AFTER CONSTRUCTION FENCE, BUT PRIOR TO ANY UPSTREAM LAND-DISTURBING ACTIVITIES.
- RIPRAP UTILIZED FOR CHECK DAMS SHALL HAVE A D₅₀ MEDIAN STONE SIZE OF 12".
- RIPRAP PAD SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF 1'-8".
- 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

- THE RECOMMENDED INSPECTION FREQUENCY FOR CHECK DAMS IS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT AS NECESSARY.
- SEDIMENT ACCUMULATED UPSTREAM OF CHECK DAMS SHALL BE REMOVED WHEN THE SEDIMENT DEPTH UPSTREAM OF CHECK DAM IS WITHIN 1/2 OF THE HEIGHT OF THE CREST.
- CHECK DAMS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND VEGETATED COVER IS APPROVED BY THE COUNTY.
- WHEN CHECK DAMS ARE REMOVED, EXCAVATIONS SHALL BE FILLED WITH SUITABLE COMPACTED BACKFILL. ANY DISTURBED AREA SHALL BE SEEDED AND MULCHED AND COVERED WITH EROSION CONTROL BLANKET OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.



CHECK DAM

1



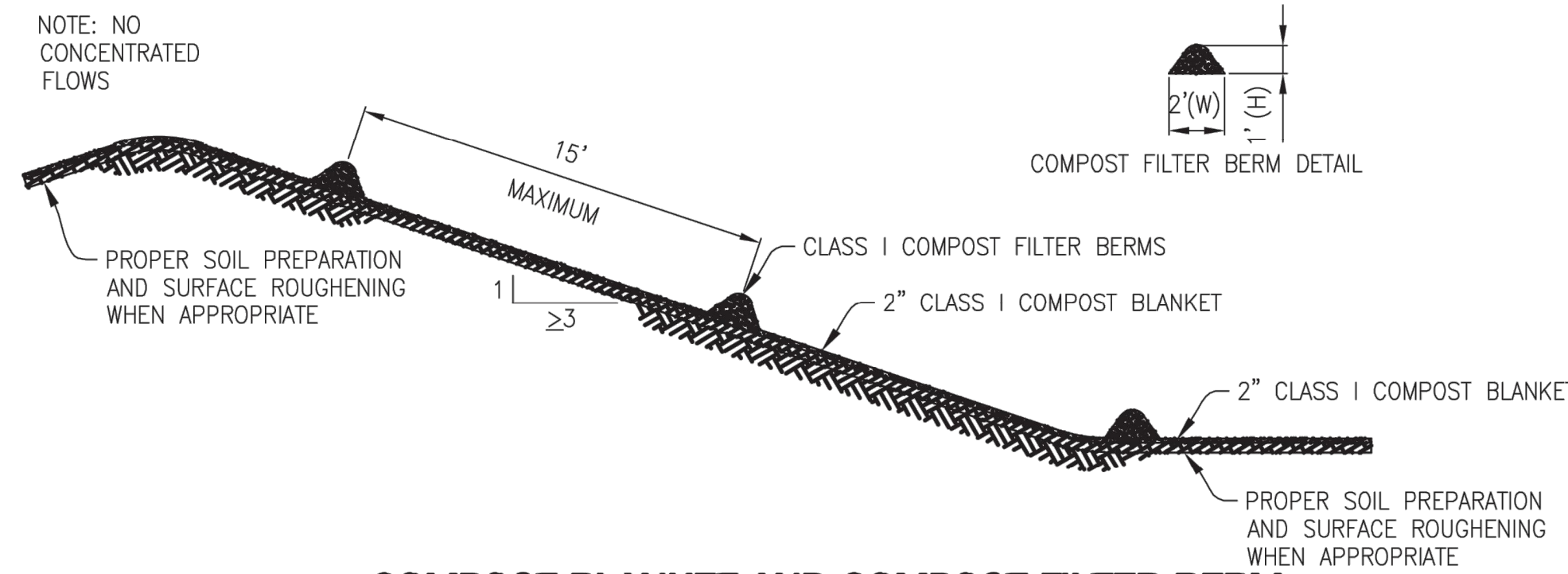
COMPOST BLANKET

2



COMPOST FILTER BERM

3



COMPOST BLANKET AND COMPOST FILTER BERM
SCALE: 1" = 5'-0"

COMPOST BLANKET NOTES:

- SEE PLAN VIEW FOR AREA OF COMPOST BLANKET.
- MAY BE USED IN PLACE OF STRAW MULCH OR EROSION CONTROL BLANKET IN AREAS WHERE ACCESS IS DIFFICULT DUE TO LANDSCAPING OR OTHER OBJECTS OR IN AREAS WHERE A SMOOTH TURF GRASS FINISH IS DESIRED.
- SHALL ONLY BE UTILIZED IN AREAS WHERE SHEET FLOW CONDITIONS PREVAIL; SHALL BE PROHIBITED IN AREAS OF POSSIBLE CONCENTRATED FLOW.
- SOIL PREPARATION SHALL BE COMPLETE PER THE SPECIFICATIONS OUTLINED IN THESE CRITERIA PRIOR TO APPLICATION.
- WHEN TURF GRASS FINISH IS NOT DESIRED, SURFACE ROUGHENING ON SLOPES SHALL TAKE PLACE PRIOR TO APPLICATION.
- SHALL BE EVENLY APPLIED AT A DEPTH OF 2 INCH.
- MAYBE APPLIED UTILIZING PNEUMATIC BLOWER, OR BY HAND.
- SEEDING SHALL BE DRILLED PRIOR TO THE APPLICATION OF COMPOST OR SEED MAY BE COMBINED AND BLOWN WITH THE PNEUMATIC BLOWER.
- COMPOST FILTER BERM SHALL BE UTILIZED ON SLOPES WITH A MAXIMUM SPACING OF 15 FEET PER THE REQUIREMENTS FOUND IN THE COMPOST FILTER BERM SECTION.
- THE RECOMMENDED INSPECTION FREQUENCY IS WEEKLY, DURING AND AFTER ANY STORM EVENT.
- COMPOST USED IN THE APPLICATION OF THE COMPOST BLANKET SHALL BE A CLASS I COMPOST AS DEFINED BY THE FOLLOWING PHYSICAL, CHEMICAL, AND BIOLOGICAL PARAMETERS:

PARAMETERS	CLASS I COMPOST FOR COMPOST BLANKET
MINIMUM STABILITY INDICATOR	STABLE TO VERY STABLE
SOLUBLE SALTS	MAXIMUM 5mmhos/cm
PH	6.0 - 8.0
AG INDEX	> 10
MATURITY INDICATOR EXPRESSED AS PERCENTAGE OF GERMINATION/VIGOR	80+/80+
MATURITY INDICATOR EXPRESSED AS AMMONIA N/ NITRATE N RATIO	< 4
MATURITY INDICATOR EXPRESSED AS CARBON TO NITROGEN RATIO	20:1
TESTED FOR CLOPYRALID	YES/NEGATIVE RESULT
MOISTURE CONTENT	30-60 %
ORGANIC MATTER CONTENT	25-45 % OF DRY WEIGHT
PARTICLE SIZE DISTRIBUTION	3" (75mm) 100% PASSING 1" (25mm) 95% TO 100% PASSING 3/4" (19mm) 85% TO 90% PASSING 3/8" (9.5mm) 50% TO 60% PASSING #4 20 TO 35% PASSING
PRIMARY, SECONDARY NUTRIENTS; TRACE ELEMENT	MUST BE REPORTED
TESTING AND TEST REPORT SUBMITTAL REQUIREMENTS	STA + CLOPYRALID
ORGANIC MATTER PER CUBIC YARD	MUST REPORT
CHEMICAL CONTAMINANTS	MEET OR EXCEED US EPA CLASS A STANDARD, 40 CFR 503.1 TABLES 1 & 3 LEVELS
MINIMUM MANUFACTURING/PRODUCTION REQUIREMENT	FULLY PERMITTED UNDER COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, HAZARDOUS MATERIALS AND WASTE MANAGEMENT DIVISION
RISK FACTOR RELATING TO PLANT GERMINATION AND HEALTH	LOW

NOTE: CLOPYRALID IS THE COMMON NAME OF A HERBICIDE THAT KILLS BROAD-LEAVED WEEDS SUCH AS DANDELIONS, CLOVER AND THISTLE.

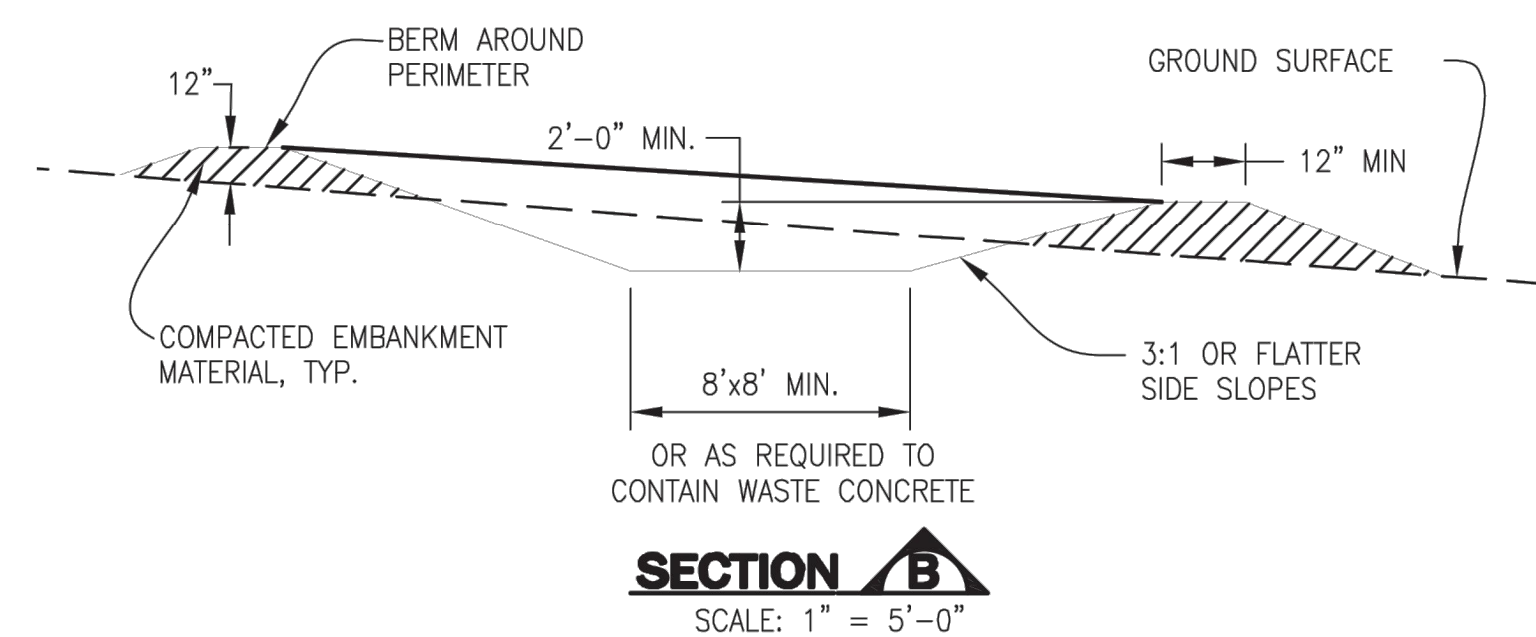
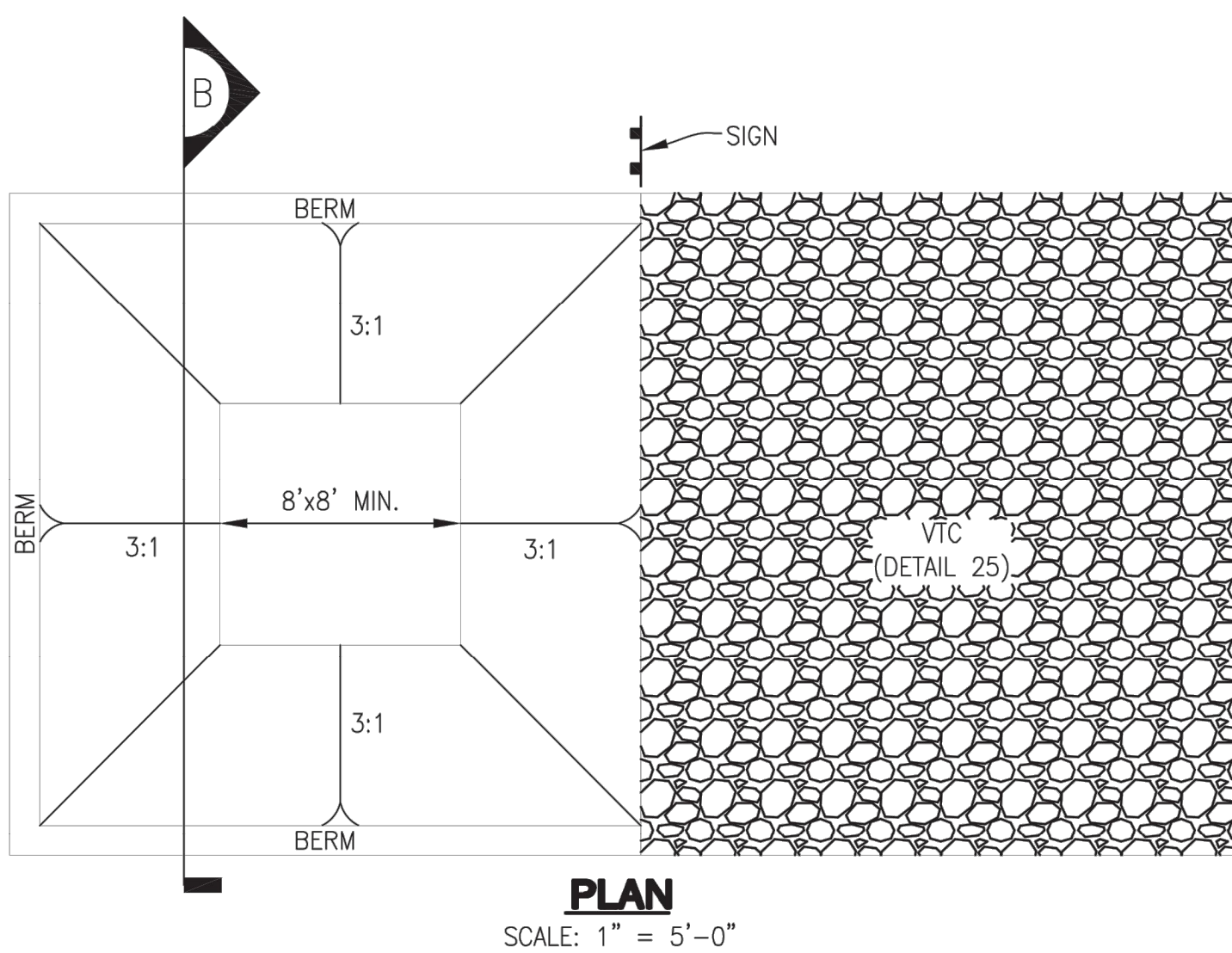
COMPOST FILTER BERM NOTES:

- SEE PLAN VIEW FOR LENGTH OF COMPOST FILTER BERM.
- SHALL BE APPLIED TO ALL SLOPES RECEIVING A COMPOST BLANKET AT 15' INCREMENTS.
- FILTER BERMS SHALL RUN PARALLEL TO THE CONTOUR.
- FILTER BERMS SHALL BE A MINIMUM OF 1' H x 2' W.
- FILTER BERMS SHALL BE APPLIED UTILIZING PNEUMATIC BLOWER, OR BY HAND.
- SHALL ONLY BE UTILIZED IN AREAS WHERE SHEET FLOW CONDITIONS PREVAIL; SHALL BE PROHIBITED IN AREAS OF POSSIBLE CONCENTRATED FLOW.
- SOIL PREPARATION SHALL BE COMPLETE PER THE SPECIFICATIONS OUTLINED IN THESE CRITERIA PRIOR TO APPLICATION.
- WHEN TURF GRASS FINISH IS NOT DESIRED, SURFACE ROUGHENING ON SLOPES SHALL TAKE PLACE PRIOR TO APPLICATION.
- SEEDING SHALL BE DRILLED BEFORE THE APPLICATION OF COMPOST OR SEED MAY BE COMBINED AND BLOWN WITH THE PNEUMATIC BLOWER.
- THE RECOMMENDED INSPECTION FREQUENCY IS WEEKLY, DURING AND AFTER ANY STORM EVENT.
- COMPOST USED IN THE APPLICATION OF THE COMPOST BLANKET SHALL BE A CLASS I COMPOST AS DEFINED BY THE FOLLOWING PHYSICAL, CHEMICAL, AND BIOLOGICAL PARAMETERS:

PARAMETERS	CLASS I COMPOST FOR COMPOST FILTER BERM
MINIMUM STABILITY INDICATOR	STABLE TO VERY STABLE
SOLUBLE SALTS	MAXIMUM 5mmhos/cm
PH	6.0 - 8.0
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MATURITY INDICATOR EXPRESSED AS PERCENTAGE OF GERMINATION/VIGOR	80+/80+
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PRIMARY, SECONDARY NUTRIENTS; TRACE ELEMENT	MUST BE REPORTED
TESTING AND TEST REPORT SUBMITTAL REQUIREMENTS	STA + CLOPYRALID
ORGANIC MATTER PER CUBIC YARD	MUST REPORT
CHEMICAL CONTAMINANTS	MEET OR EXCEED US EPA CLASS A STANDARD, 40 CFR 503.1 TABLES 1 & 3 LEVELS
MINIMUM MANUFACTURING/PRODUCTION REQUIREMENT	FULLY PERMITTED UNDER COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, HAZARDOUS MATERIALS AND WASTE MANAGEMENT DIVISION
RISK FACTOR RELATING TO PLANT GERMINATION AND HEALTH	LOW

NOTE: IF A BIOSOLID COMPOST IS TO BE UTILIZED IT SHALL BE PRODUCED BY A FACILITY IN POSSESSION OF A VALID NOTICE OF AUTHORIZATION (NOA) FOR THE UNRESTRICTED USE AND DISTRIBUTION BY THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT. THE NOA SHALL BE PROVIDED UPON REQUEST TO DOUGLAS COUNTY.

NOTE: A LAB TEST DETAILING THE CHEMICAL, PHYSICAL, AND BIOLOGICAL PARAMETERS SHALL BE PROVIDED UPON REQUEST BY DOUGLAS COUNTY.

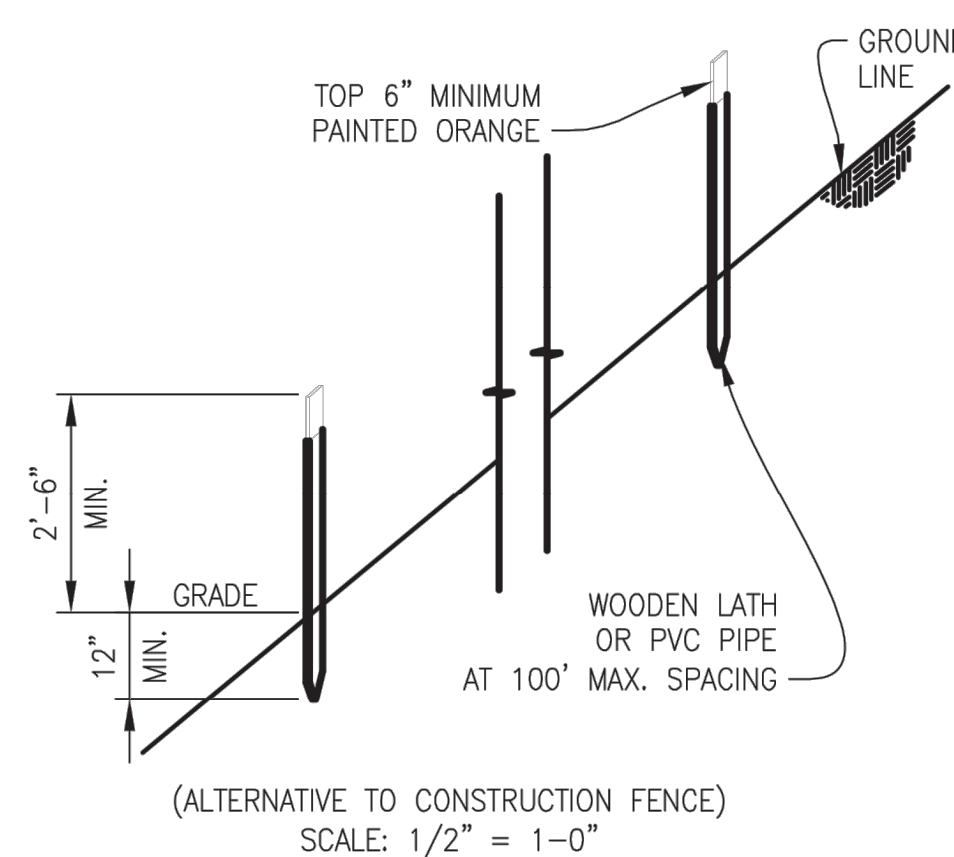
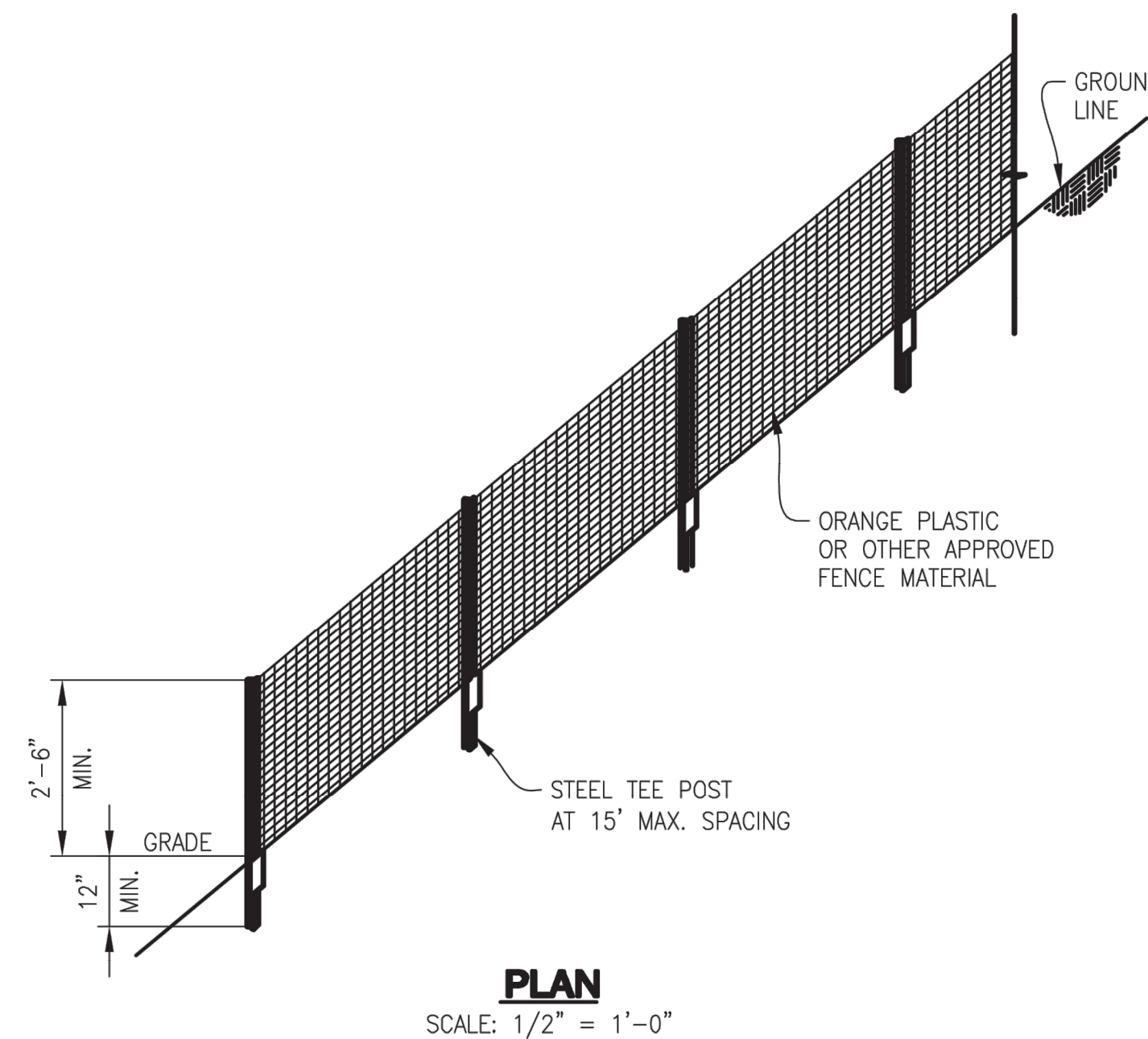


CONCRETE WASHOUT AREA INSTALLATION NOTES

- SEE PLAN VIEW FOR:
- LOCATIONS OF CONCRETE WASHOUT AREA.
- THE CONCRETE WASHOUT AREA SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON SITE.
- VEHICLE TRACKING CONTROL (DETAIL 25) IS REQUIRED AT THE ACCESS POINT.
- SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE WASHOUT AREA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT AREA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
- EXCAVATED MATERIAL SHALL BE UTILIZED IN PERIMETER BERM CONSTRUCTION.
- DURABLE PORTABLE CONCRETE WASHOUT BASINS OR TUBS MAY BE USED WITH THE APPROVAL OF THE EROSION CONTROL INSPECTOR.

CONCRETE WASHOUT AREA MAINTENANCE NOTES

- THE CONCRETE WASHOUT AREA SHALL BE REPAIRED AND ENLARGED OR CLEANED OUT AS NECESSARY TO MAINTAIN CAPACITY FOR WASTED CONCRETE.
- AT THE END OF CONSTRUCTION, ALL CONCRETE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN APPROVED WASTE SITE.
- WHEN THE CONCRETE WASHOUT AREA IS REMOVED, THE DISTURBED AREA SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.
- RECOMMENDED INSPECTION FREQUENCY IS WEEKLY, DURING AND AFTER ANY STORM EVENT.

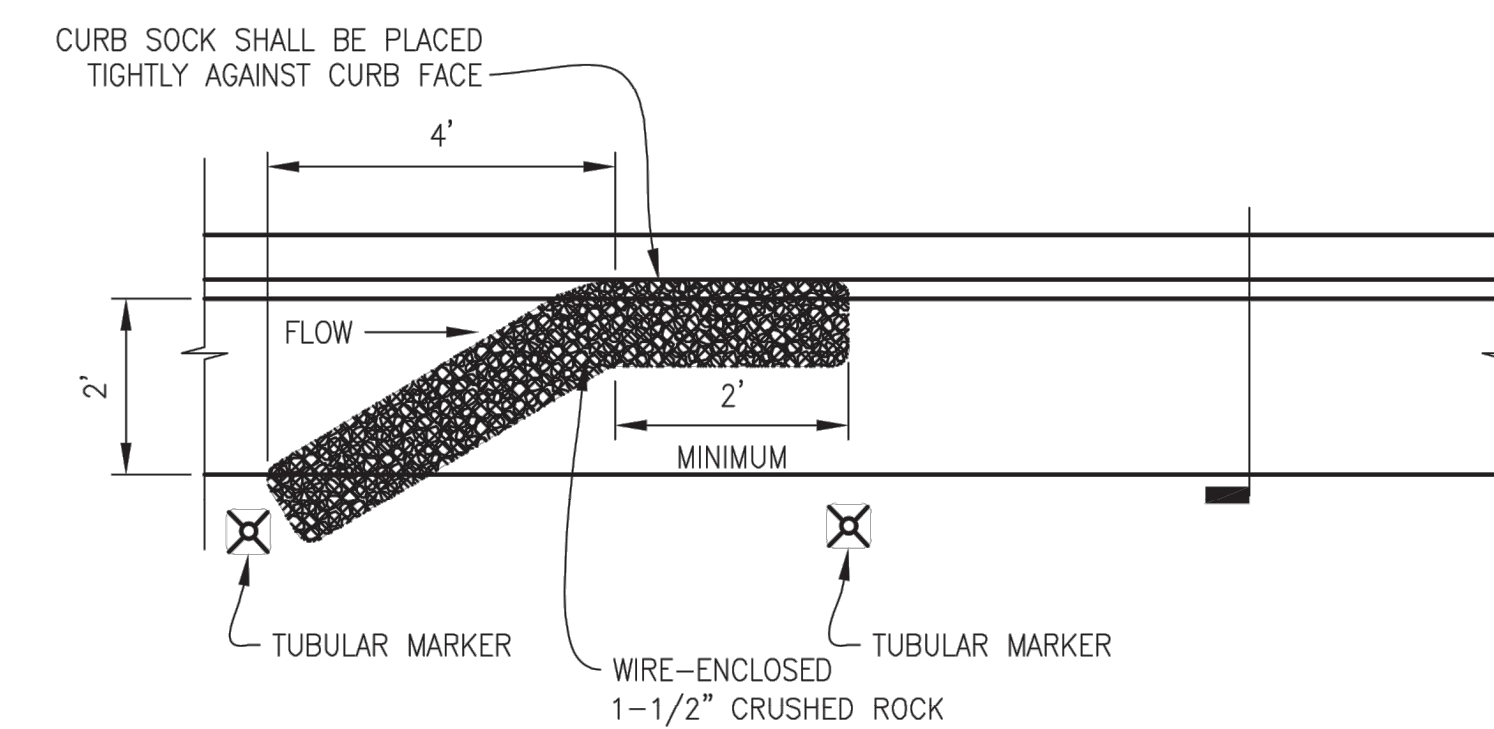


CONSTRUCTION FENCE INSTALLATION NOTES

- SEE PLAN VIEW FOR:
- TYPE OF CONSTRUCTION LIMIT INDICATOR (FENCE OR MARKERS).
- LOCATION AND LENGTH OF FENCE OR LINE OF MARKERS.
- CONSTRUCTION FENCE OR MARKERS INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED PRIOR TO OTHER Bmps AND ANY LAND-DISTURBING ACTIVITIES.
- STEEL TEE POSTS SHALL BE UTILIZED FOR SUPPORT OF CONSTRUCTION FENCE. MAXIMUM SPACING FOR TEE POSTS SHALL BE 15'.

CONSTRUCTION FENCE MAINTENANCE NOTES

- ANY DAMAGED FENCE OR MARKERS SHALL BE REPAIRED ON A DAILY BASIS.
- FENCE OR MARKERS SHALL BE REMOVED AT THE END OF CONSTRUCTION. IF ANY DISTURBED AREA EXISTS AFTER FENCE REMOVAL, IT SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.



MAXIMUM SPACING ALONG STREET GRADE	
STREET SLOPE	CURB SOCK SPACING (FT.)
0.5%	100
1.0%	100
2.0%	75
3.0%	50
4.0%	50
5.0%	50
6.0%	25
7.0%	25
8.0%	25

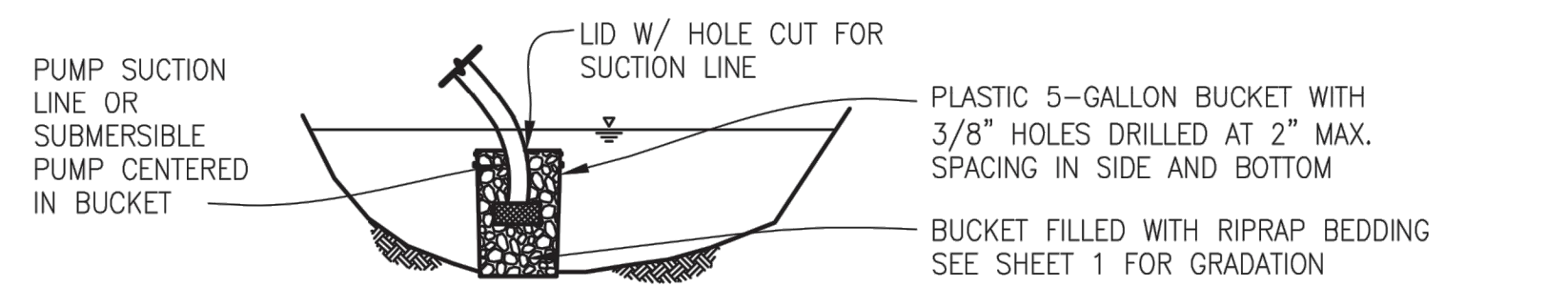
CURB SOCK INSTALLATION NOTES

- SEE PLAN VIEW FOR LOCATION OF CURB SOCK.
- CURB SOCKS INDICATED ON THE GESC PLAN SHALL BE INSTALLED PRIOR TO ANY UPSTREAM LAND DISTURBING ACTIVITIES.
- CRUSHED ROCK SHALL BE FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH THE GRADATION SHOWN ON SHEET 1 (1 1/2").
- WIRE MESH SHALL BE FABRICATED OF 20 GAUGE WIRE TWISTED INTO A MESH WITH A MAXIMUM OPENING OF 1.0 INCH (COMMONLY TERMED "CHICKEN WIRE"). ROLL WIDTH SHALL BE 48 INCHES.
- WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT 6-INCH CENTERS ALONG ALL JOINTS AND 2-INCH CENTERS AT THE ENDS.
- TUBULAR MARKERS SHALL MEET REQUIREMENTS OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), AS AMENDED.
- THE TOP OF THE CURB SOCK SHALL BE 1/2" TO 1" BELOW TOP OF CURB.
- CURB SOCK SHALL BE CONSTRUCTED IN ONE PIECE.

CURB SOCK MAINTENANCE NOTES

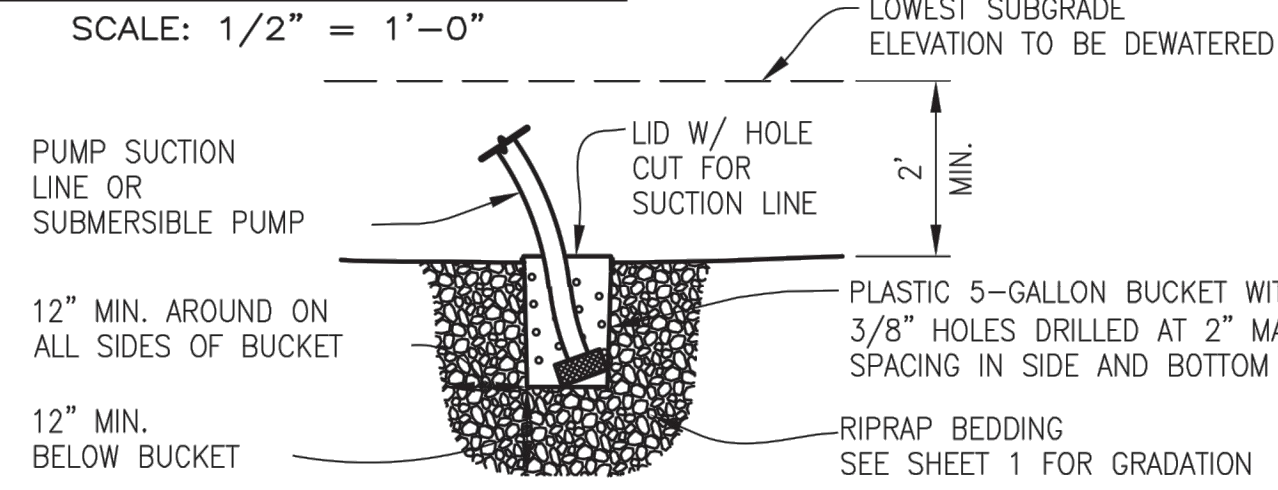
- THE RECOMMENDED INSPECTION FREQUENCY FOR CURB SOCKS IS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT AS NECESSARY.
- SEDIMENT ACCUMULATED UPSTREAM OF CURB SOCK SHALL BE REMOVED WHEN THE SEDIMENT DEPTH UPSTREAM OF THE CURB SOCK IS WITHIN 2 1/2" OF THE CREST.
- CURB SOCKS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS APPROVED, UNLESS THE COUNTY APPROVES EARLIER REMOVAL OF CURB SOCKS IN STREETS.





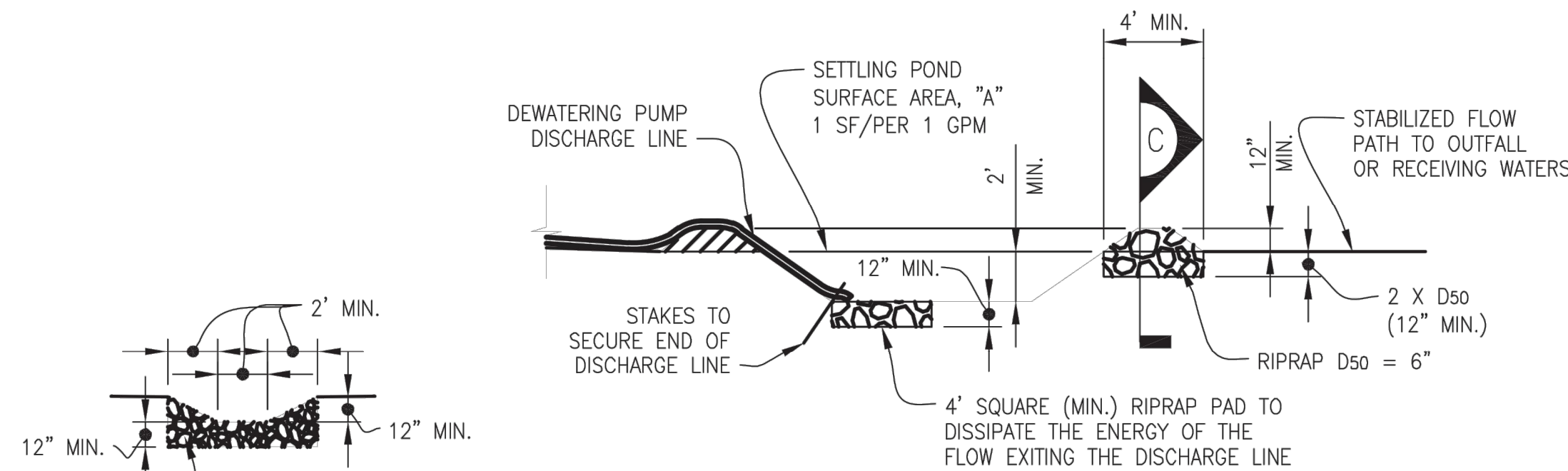
**ALTERNATIVE FOR DRAINING POND
ALREADY FILLED WITH WATER**

SCALE: 1/2" = 1'-0"



DEWATERING SUMP FOR SUBMERSIBLE PUMP

SCALE: 1/2" = 1'-0"



BASIN OUTLET - SECTION C

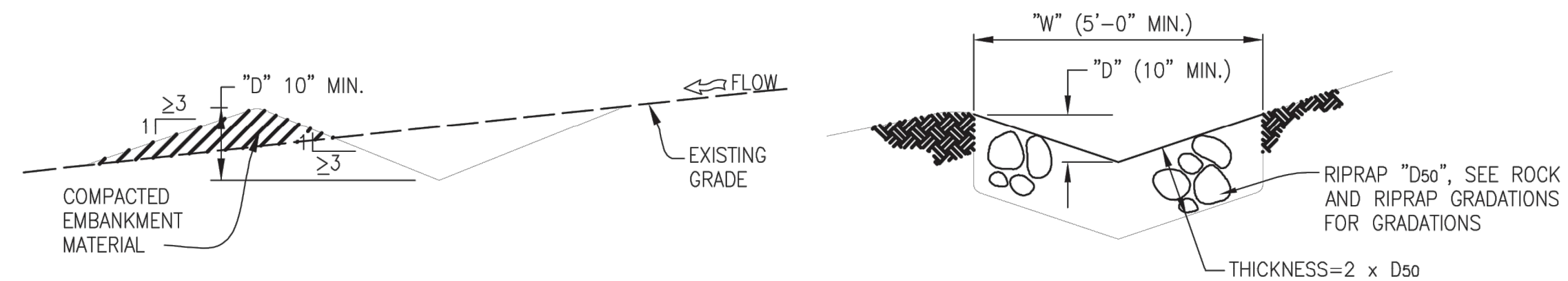
SCALE: 1" = 5'-0"

DEWATERING INSTALLATION NOTES

1. THE PERMITTEE(S) SHALL SCHEDULE AN ONSITE INSPECTION WITH THE EROSION CONTROL INSPECTOR PRIOR TO ANY SITE DEWATERING OPERATIONS BEGIN.
2. THE GESC MANAGER SHALL OBTAIN A CONSTRUCTION DEWATERING PERMIT (DEWATERING PERMIT) FROM THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT (CDPHE) PRIOR TO ANY DEWATERING OPERATIONS THAT REQUIRE A DEWATERING PERMIT.
3. AT A MINIMUM, THE DEWATERING BMPs SHALL CONSIST OF THE FOLLOWING:
PRE-FILTER ON THE SUCTION END OF THE PUMP/HOSE.
FILTER BMP PRIOR TO FINAL DISCHARGE, AND
ENERGY DISSIPATING BMP AT THE DISCHARGE END OF THE HOSE/PUMP.
4. THE TYPE AND PLACEMENT OF DEWATERING CONTROLS SHALL BE COORDINATED WITH, AND APPROVED BY, THE EROSION CONTROL INSPECTOR PRIOR TO THE DISCHARGE OF ANY WATER.

DEWATERING MAINTENANCE NOTES

1. THE RECOMMENDED INSPECTION FREQUENCY IS HOURLY FOR DEWATERING SYSTEMS AND PERFORM ANY NECESSARY REPAIRS OR MAINTENANCE.
2. TEMPORARY SETTLING BASINS SHALL BE REMOVED WHEN NO LONGER NEEDED FOR DEWATERING OPERATIONS. ANY DISTURBED AREA SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.

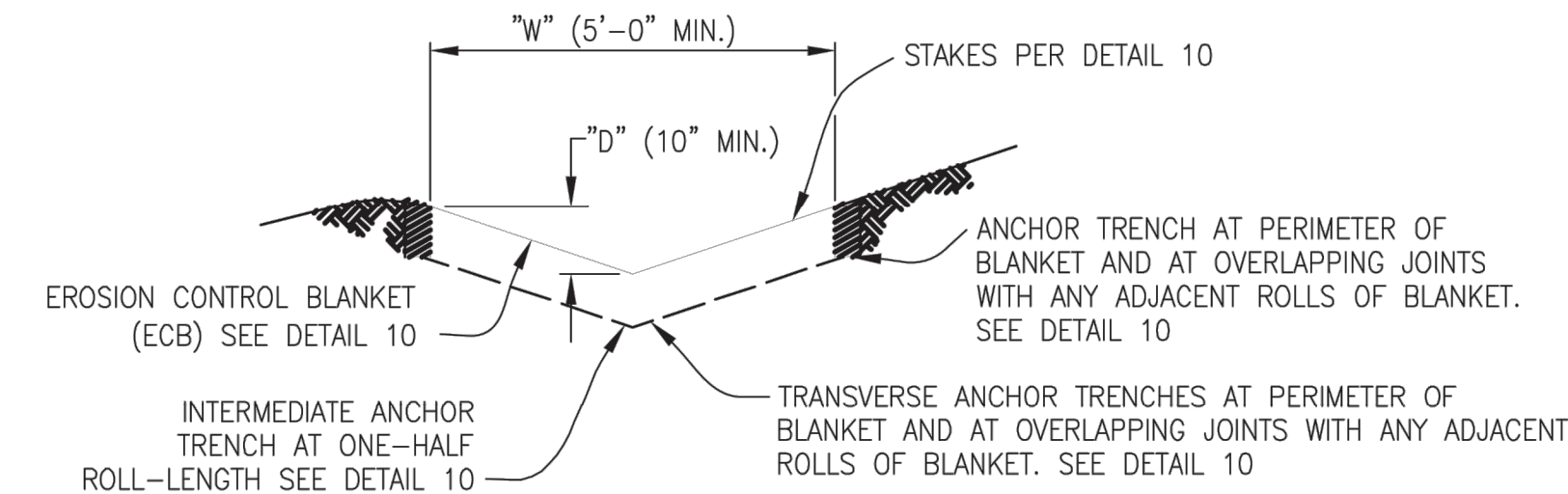


UNLINED

LONGITUDINAL SLOPE $\leq 0.5\%$
SCALE: 1/2" = 1'-0"

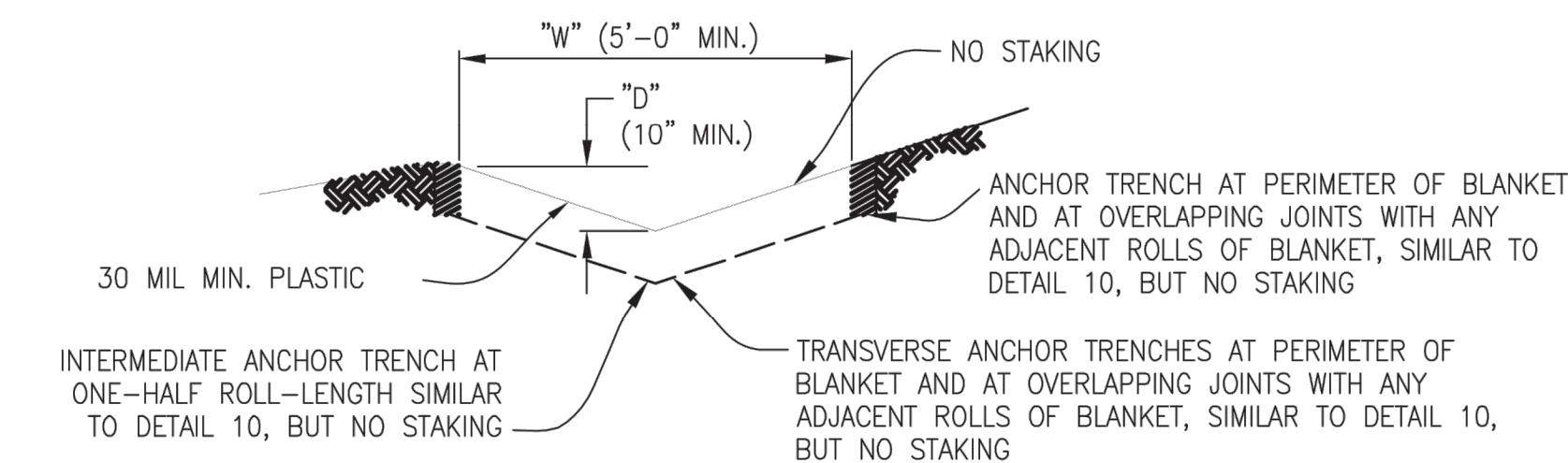
RIPRAP LINED

LONGITUDINAL SLOPE 3% TO 33%
SCALE: 1/2" = 1'-0"



EROSION CONTROL BLANKET (ECB) LINED

LONGITUDINAL SLOPE 0.5% TO 3%
SCALE: 1/2" = 1'-0"



PLASTIC LINED

LONGITUDINAL SLOPE 3% TO 33%
SCALE: 1/2" = 1'-0"

DIVERSION DITCH INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
- LOCATION OF DIVERSION DITCH.
- TYPE OF DITCH (UNLINED, ECB LINED, PLASTIC LINED OR RIPRAP LINED).
- LENGTH OF EACH TYPE OF DITCH.
- DEPTH, "D", AND WIDTH, "W" DIMENSIONS.
- FOR ECB LINED DITCH, EROSION CONTROL BLANKET TYPE (SEE DETAIL 10).
- FOR RIPRAP LINED DITCH, SIZE OF RIPRAP, "D50".
2. SEE DRAINAGE PLANS FOR DETAILS OF ANY PERMANENT CONVEYANCE FACILITIES OR DIVERSION DITCHES EXCEEDING A 2-YEAR FLOW RATE OF 10 CFS.
3. DIVERSION DITCHES INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED PRIOR TO ANY LAND-DISTURBING ACTIVITIES.
4. FOR ECB LINED DITCHES, INSTALLATION OF EROSION CONTROL BLANKET SHALL CONFORM TO THE REQUIREMENTS OF DETAIL 10.
5. IN LOCATIONS WHERE CONSTRUCTION TRAFFIC MUST CROSS A DIVERSION DITCH, THE PERMITTEES SHALL INSTALL A TEMPORARY CULVERT WITH A MINIMUM DIAMETER OF 12-INCHES.

DIVERSION DITCH MAINTENANCE NOTES

1. THE RECOMMENDED INSPECTION FREQUENCY FOR DIVERSION DITCHES IS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT AS NECESSARY.
2. DIVERSION DITCHES ARE TO REMAIN IN PLACE UNTIL THE END OF CONSTRUCTION, OR, IF APPROVED BY THE COUNTY, LEFT IN PLACE.
3. IF DIVERSION DITCHES ARE REMOVED, THE DISTURBED AREA SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.



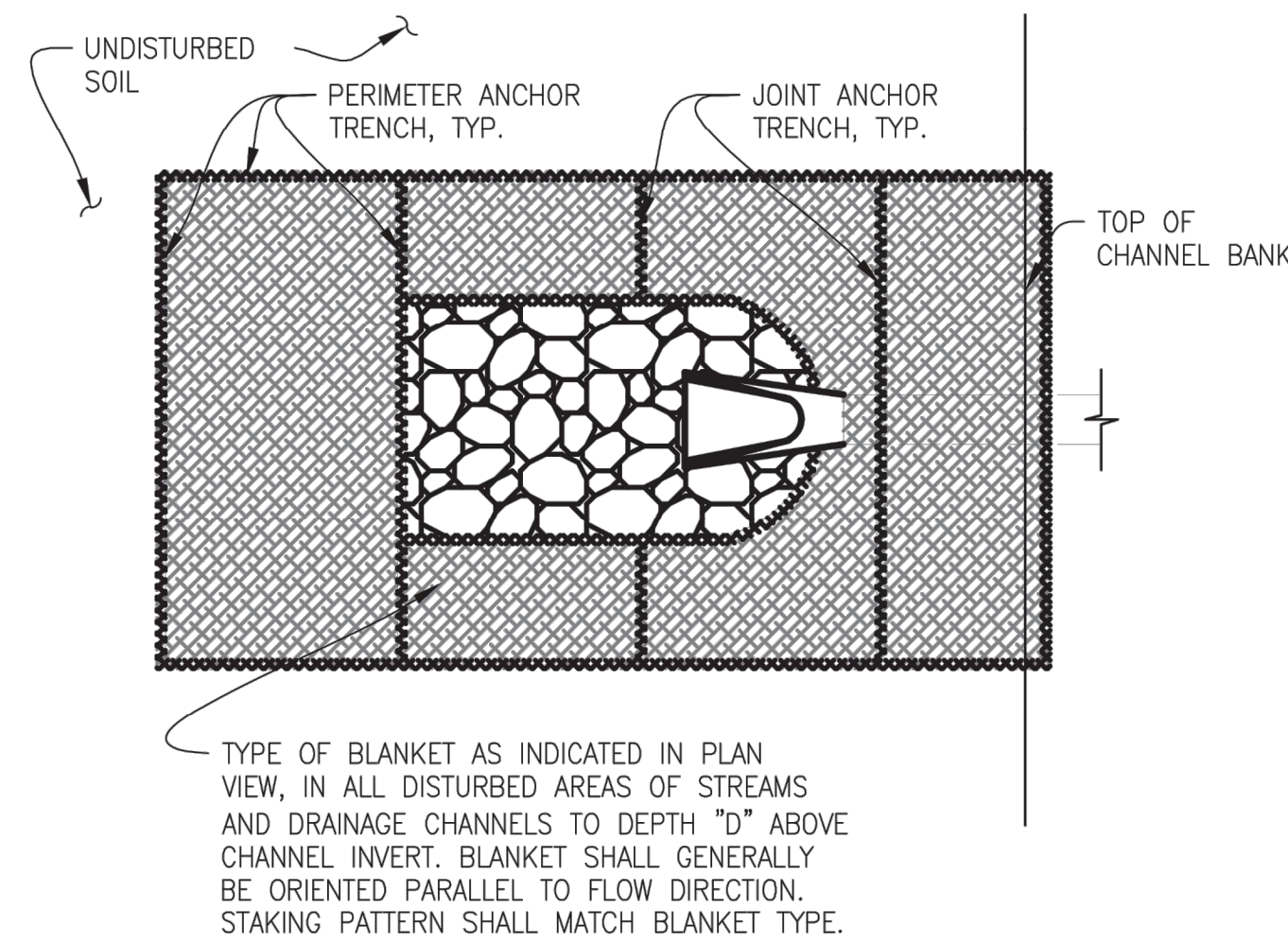
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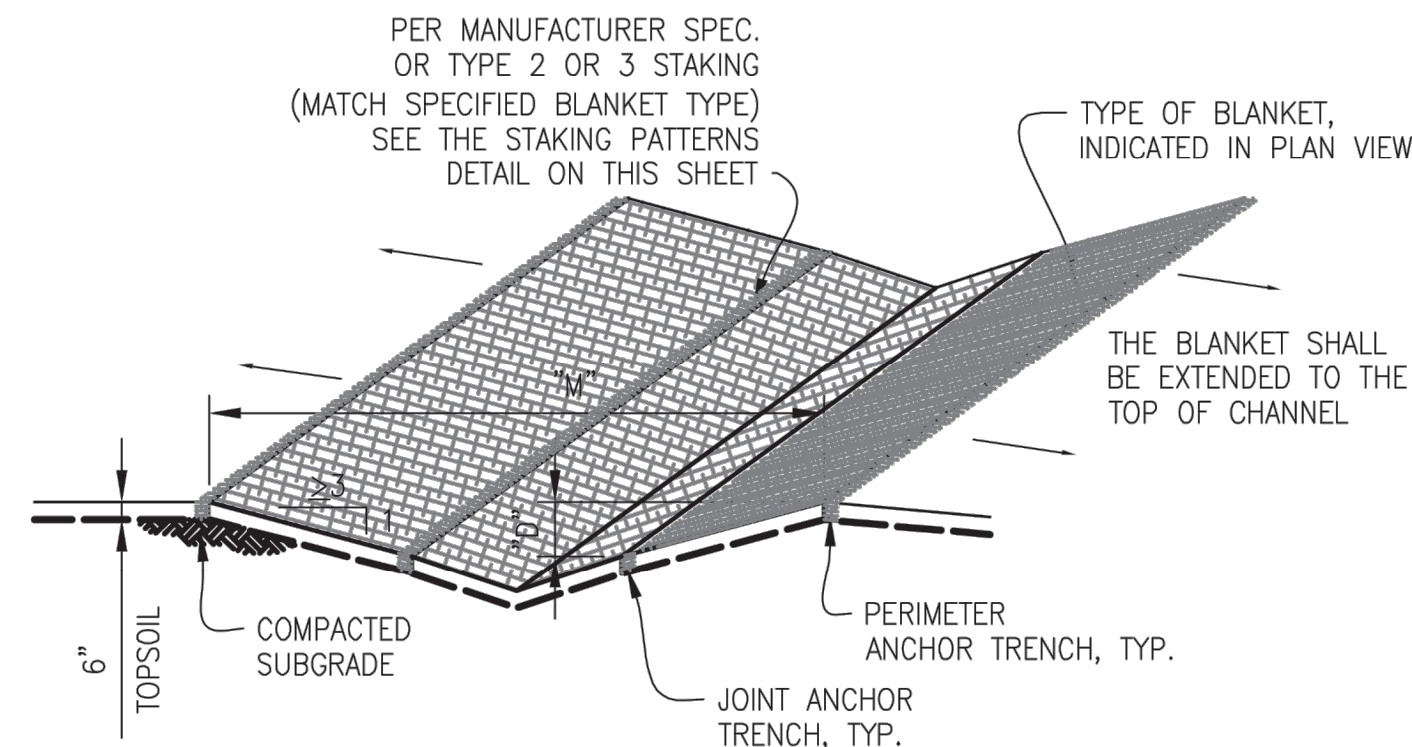
DETAILS

D-3



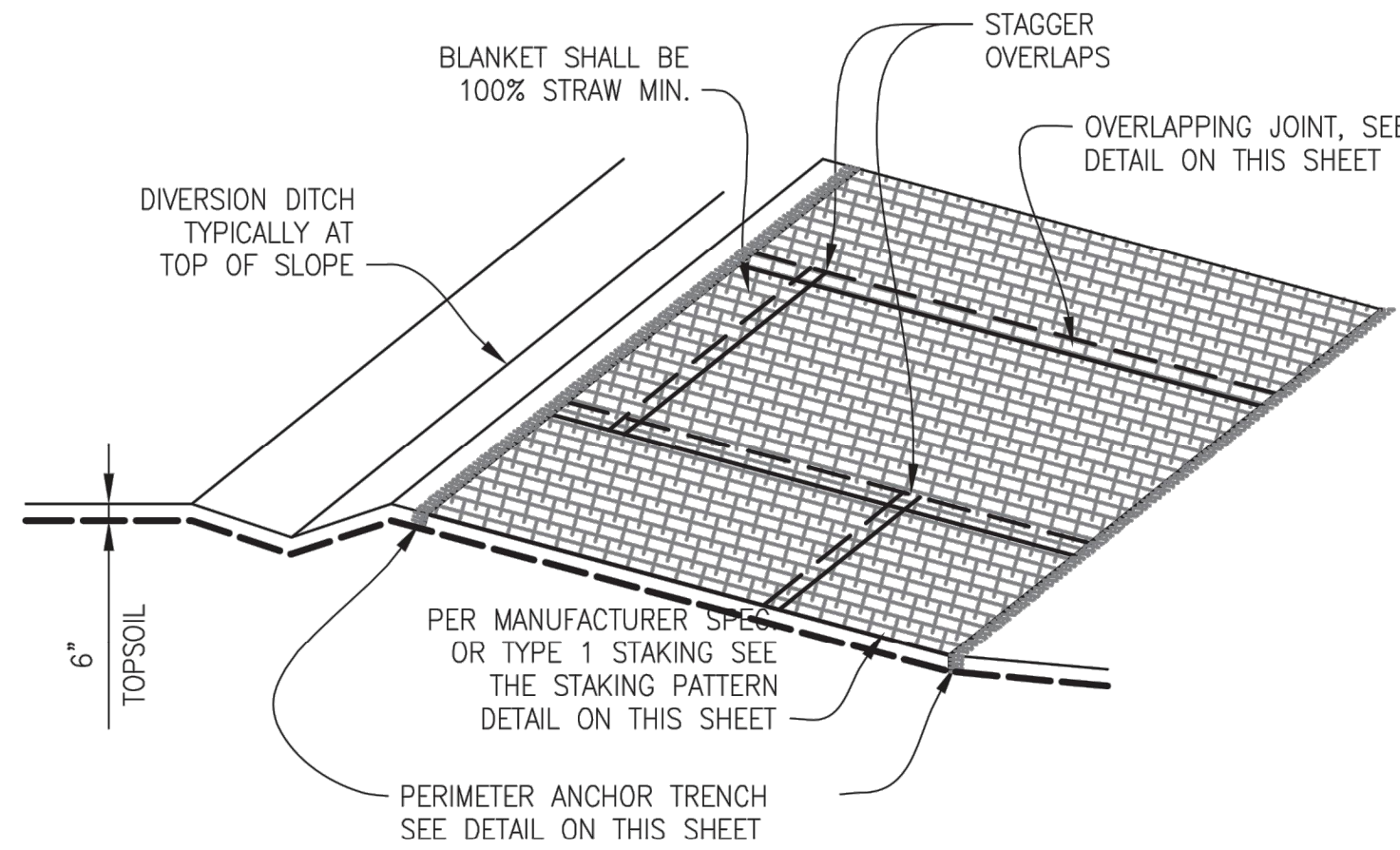
IN DISTURBED AREAS OF STREAMS AND DRAINAGE CHANNELS

SCALE: 1" = 5'-0"



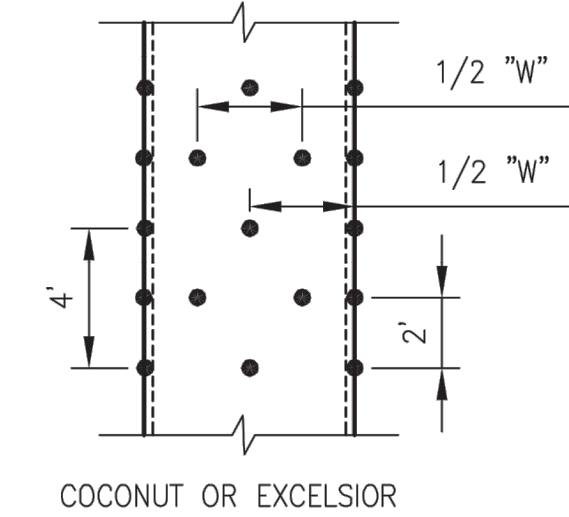
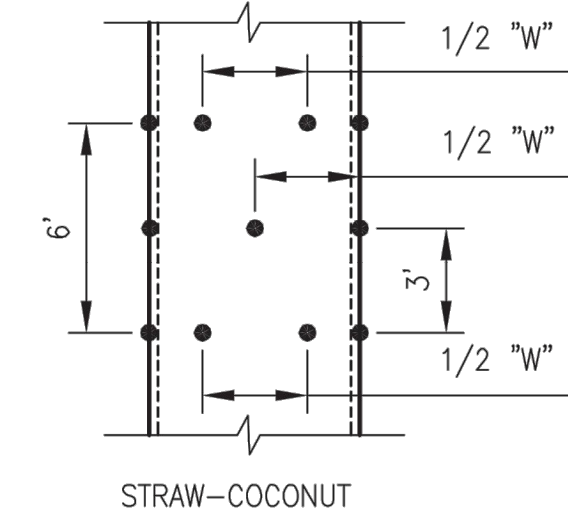
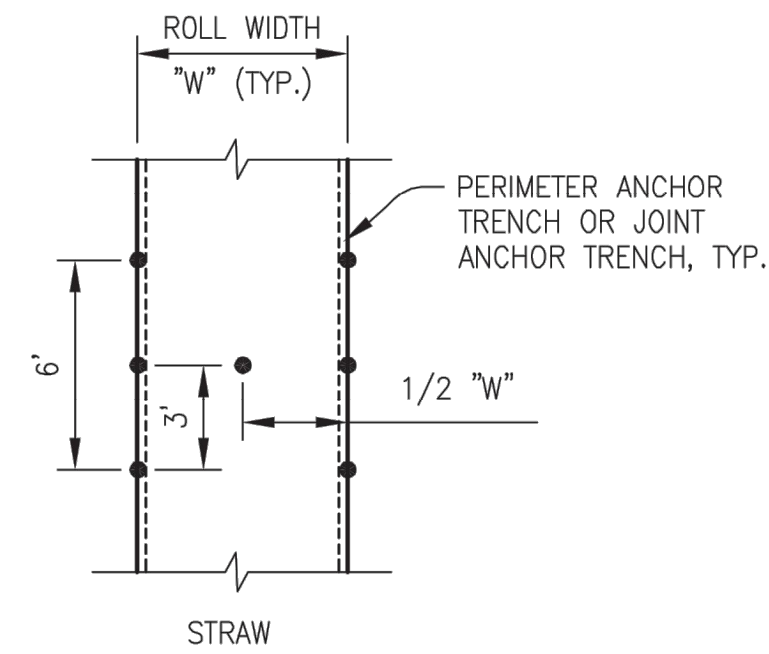
IN DIVERSION DITCH OR SMALL DITCH DRAINAGEWAY

SCALE: 1" = 5'-0"



OUTSIDE OF STREAMS AND DRAINAGE CHANNELS

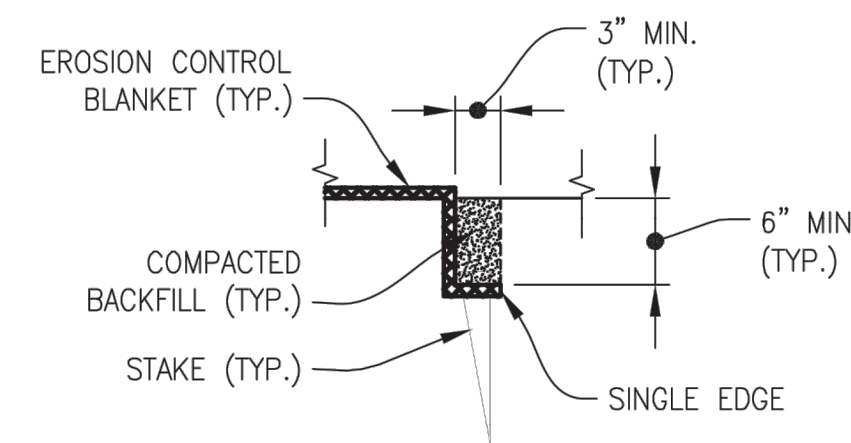
SCALE: 1" = 5'-0"



STAKING PATTERNS

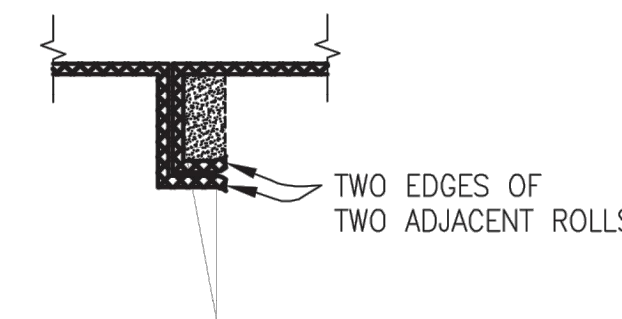
SCALE: 1" = 5'-0"

SHALL BE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATION. IF NO MANUFACTURER'S SPECIFICATION IS AVAILABLE USE THE ACCEPTABLE STAKING PATTERN (AS SHOWN ABOVE).



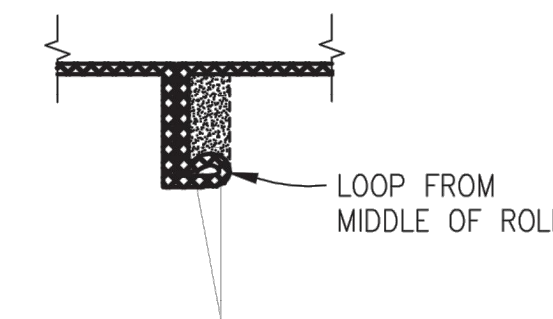
PERIMETER ANCHOR TRENCH

SCALE: 1" = 1'-0"



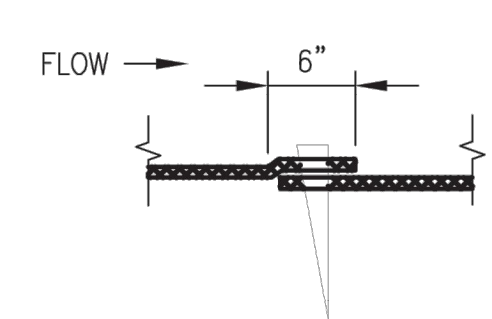
JOINT ANCHOR TRENCH

SCALE: 1" = 1'-0"



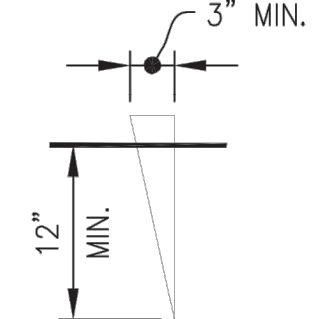
INTERMEDIATE ANCHOR TRENCH

SCALE: 1" = 5'-0"



OVERLAPPING JOINT

SCALE: 1" = 1'-0"



WOOD STAKE DETAIL

SCALE: 1" = 1'-0"
MINIMUM THICKNESS 1/2"

EROSION CONTROL BLANKET INSTALLATION NOTES

- SEE PLAN VIEW FOR:
 - LOCATION OF PERIMETER OF EROSION CONTROL BLANKET.
 - TYPE OF BLANKET (STRAW, STRAW-COCONUT, COCONUT, OR EXCELSIOR).
 - AREA "A" IN SQUARE YARDS OF EACH TYPE OF BLANKET.
- ALL EROSION CONTROL BLANKETS AND NETTING SHALL BE MADE OF 100% NATURAL AND BIODEGRADABLE MATERIAL; NO PLASTIC OR OTHER SYNTHETIC MATERIAL, EVEN IF PHOTO DEGRADABLE, SHALL BE ALLOWED.
- IN AREAS WHERE EROSION CONTROL BLANKET IS SHOWN ON THE PLANS, THE PERMITTEE SHALL PLACE TOPSOIL AND PERFORM FINAL GRADING, SURFACE PREPARATION, AND SEEDING BELOW THE BLANKET IN ACCORDANCE WITH THE REQUIREMENTS OF DETAIL 12, SEEDING AND MULCHING. SUBGRADE SHALL BE SMOOTH AND MOIST PRIOR TO BLANKET INSTALLATION AND THE BLANKET SHALL BE IN FULL CONTACT WITH SUBGRADE, NO GAPS OR VOIDS SHALL EXIST UNDER THE BLANKET.
- PERIMETER ANCHOR TRENCH SHALL BE USED AT OUTSIDE PERIMETER OF ALL BLANKET AREAS.
- JOINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF BLANKETS TOGETHER (LONGITUDINALLY AND TRANSVERSELY) FOR ALL BLANKET INSTALLATIONS IN A DRAINAGEWAY EXCEPT STRAW, WHICH MAY USE AN OVERLAPPING JOINT.
- INTERMEDIATE ANCHOR TRENCH SHALL BE USED AT SPACING OF ONE-HALF THE ROLL LENGTH FOR COCONUT AND EXCELSIOR BLANKETS.
- THE OVERLAPPING JOINT DETAIL SHALL BE USED TO JOIN ROLLS OF BLANKETS TOGETHER FOR BLANKETS ON SLOPES.
- MATERIAL SPECIFICATIONS OF EROSION CONTROL BLANKET SHALL CONFORM TO TABLE 7.1.

EROSION CONTROL BLANKET INSTALLATION NOTES - CONTINUED

- ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING EROSION CONTROL BLANKET SHALL BE RESEEDED AND MULCHED IN ACCORDANCE WITH DETAIL 18.
- SEE DRAINAGE DESIGN PLANS FOR MAJOR DRAINAGEWAY STABILIZATION MEASURES THAT MAY EXCEED THE DESIGN CONDITIONS ASSOCIATED WITH THE DETAILS ABOVE.
- METAL STAKES OR STAPLES MAY BE USED FOR EROSION CONTROL BLANKET INSTALLATIONS OUTSIDE OF DRAINAGE CHANNELS.

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

* FOR OUTSIDE OF STREAMS AND DRAINAGE CHANNELS

EROSION CONTROL BLANKET MAINTENANCE NOTES

- THE RECOMMENDED INSPECTION FREQUENCY FOR EROSION CONTROL BLANKETS IS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS AS NECESSARY.
- EROSION CONTROL BLANKET IS TO BE LEFT IN PLACE UNLESS REQUESTED TO BE REMOVED BY THE COUNTY.
- ANY EROSION CONTROL BLANKET PULLED OUT, TORN, OR OTHERWISE DAMAGED SHALL BE RE-INSTALLED. ANY SUBGRADE AREAS BELOW THE BLANKET THAT HAVE ERODED TO CREATE A VOID UNDER THE BLANKET, OR THAT REMAIN DEVOID OF GRASS SHALL BE REPAIRED, RESEEDED AND MULCHED AND THE EROSION CONTROL BLANKET REINSTALLED.



ECB EROSION CONTROL BLANKET 10

RIDGEGATE SENIOR
LONE TREE, CO
22A037

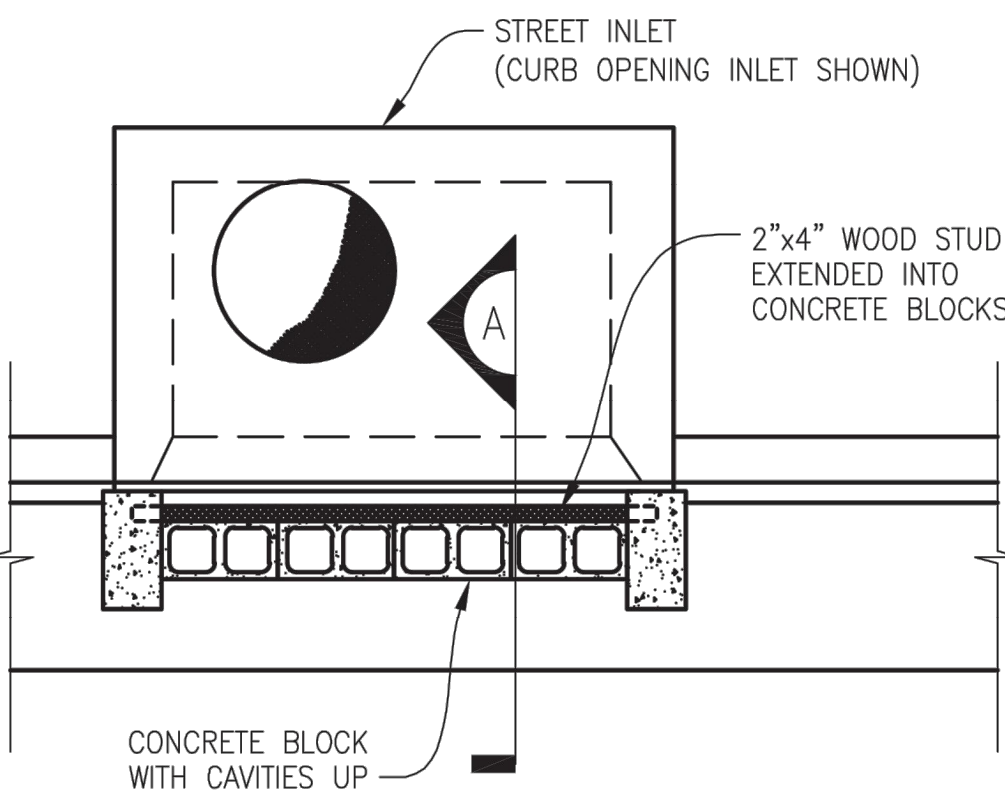
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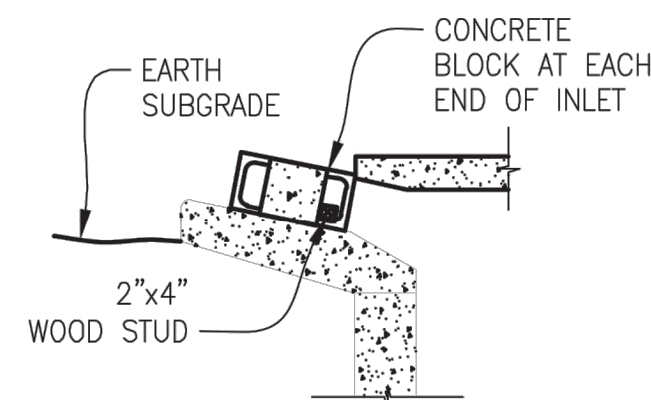
DATE: 09/08/2023
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CHECKED BY: BMW

DETAILS

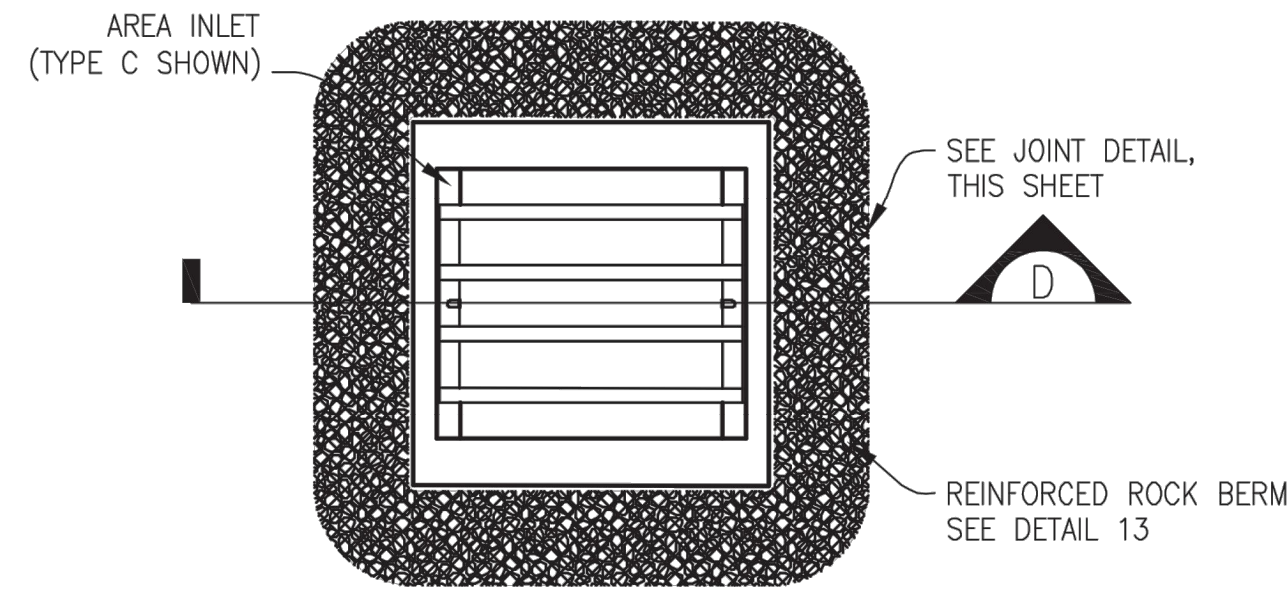
D-4



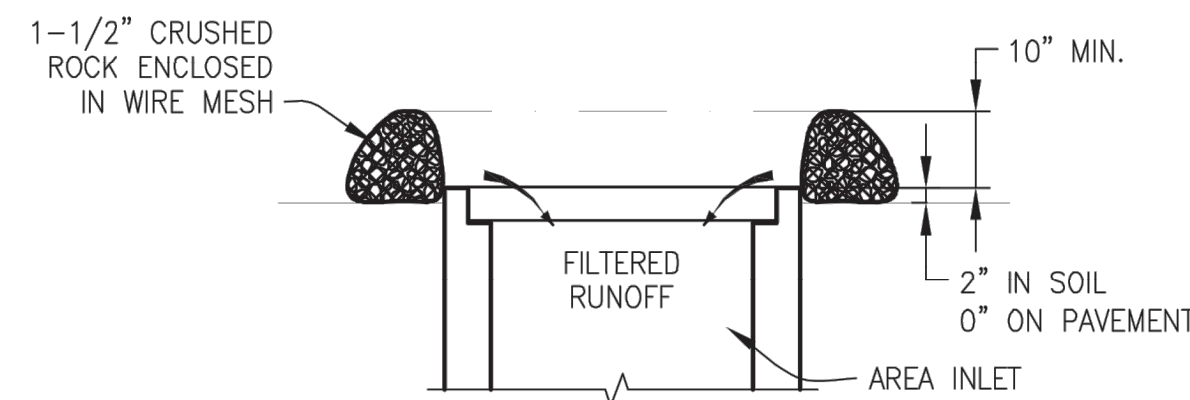
**INTERIM CONFIGURATION
(BEFORE PAVING) STREET INLET - PLAN**
SCALE: 1/2" = 1'-0"



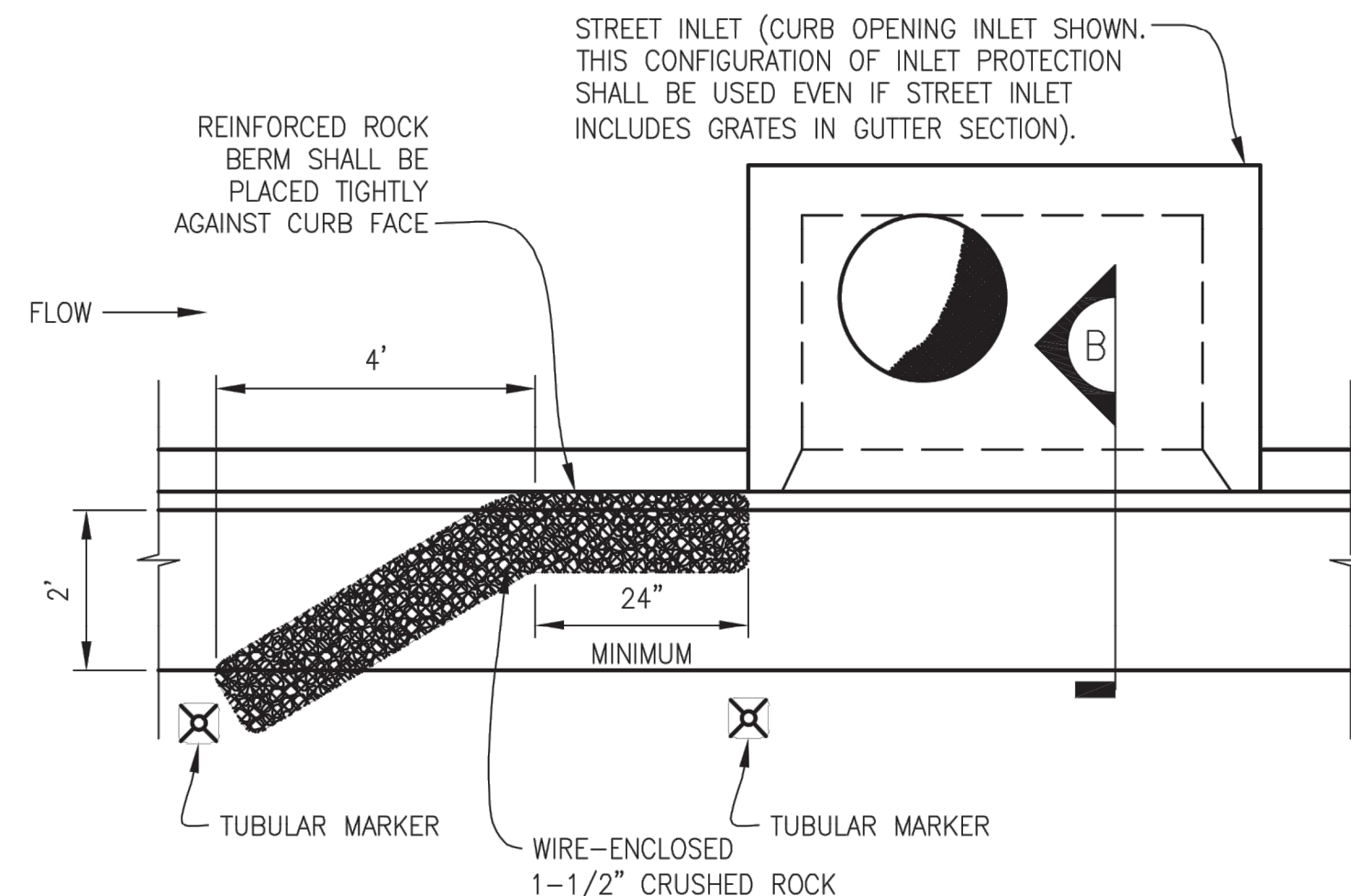
SECTION A
SCALE: 1/2" = 1'-0"



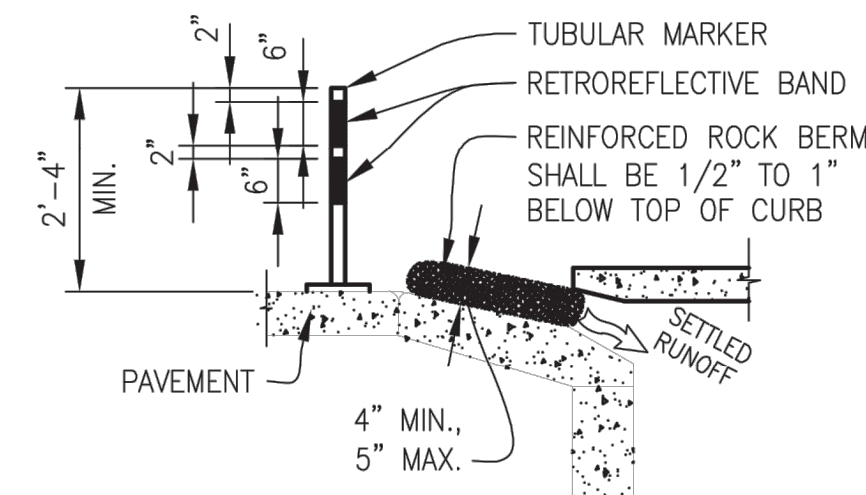
AREA INLET - PLAN
SCALE: 1/2" = 1'-0"



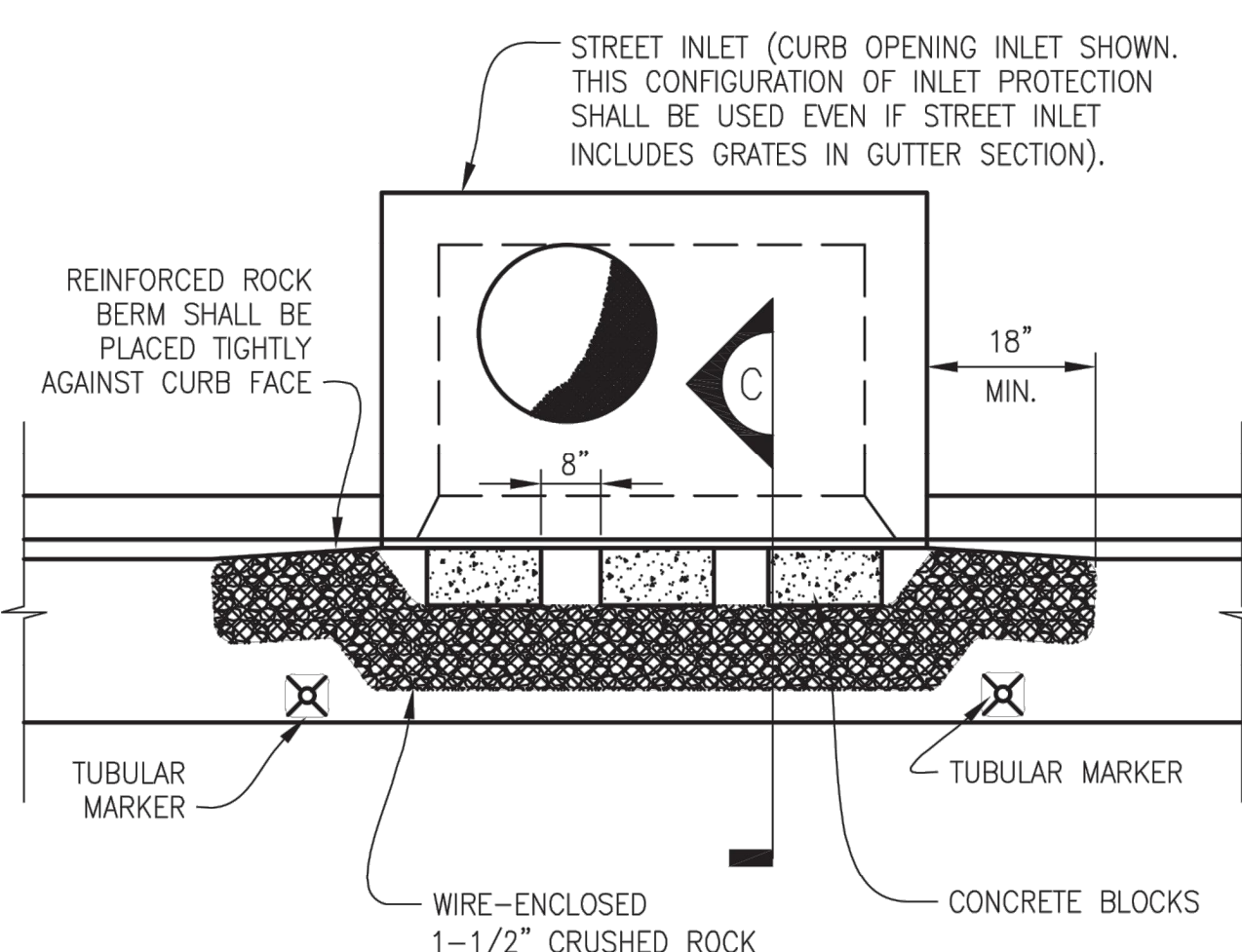
SECTION D
SCALE: 1/2" = 1'-0"



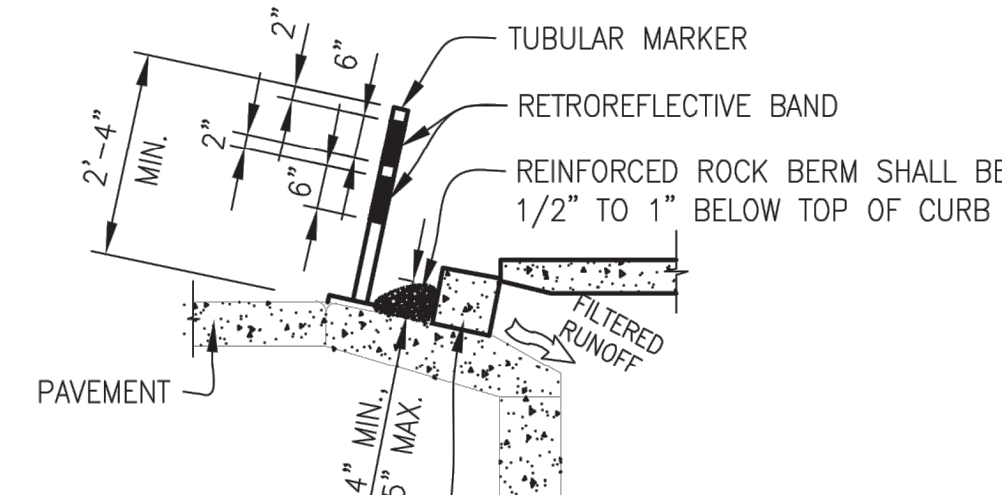
**STREET INLET ON CONTINUOUS GRADE
(AFTER PAVING) - PLAN**
SCALE: 1/2" = 1'-0"



SECTION B
SCALE: 1/2" = 1'-0"

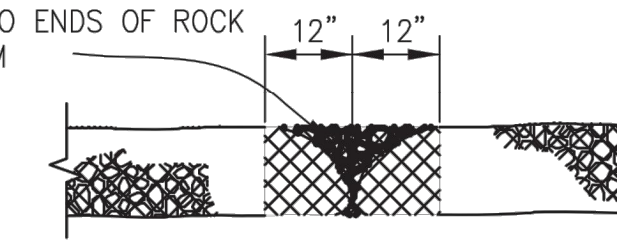


STREET INLET IN SUMP (AFTER PAVING) - PLAN
SCALE: 1/2" = 1'-0"



SECTION C
SCALE: 1/2" = 1'-0"

ANY GAP AT JOINT SHALL BE FILLED WITH 1 1/2" CRUSHED ROCK AND WRAPPED WITH ADDITIONAL WIRE MESH SECURED TO ENDS OF ROCK REINFORCED BERM



JOINT DETAIL
SCALE: 1/2" = 1'-0"

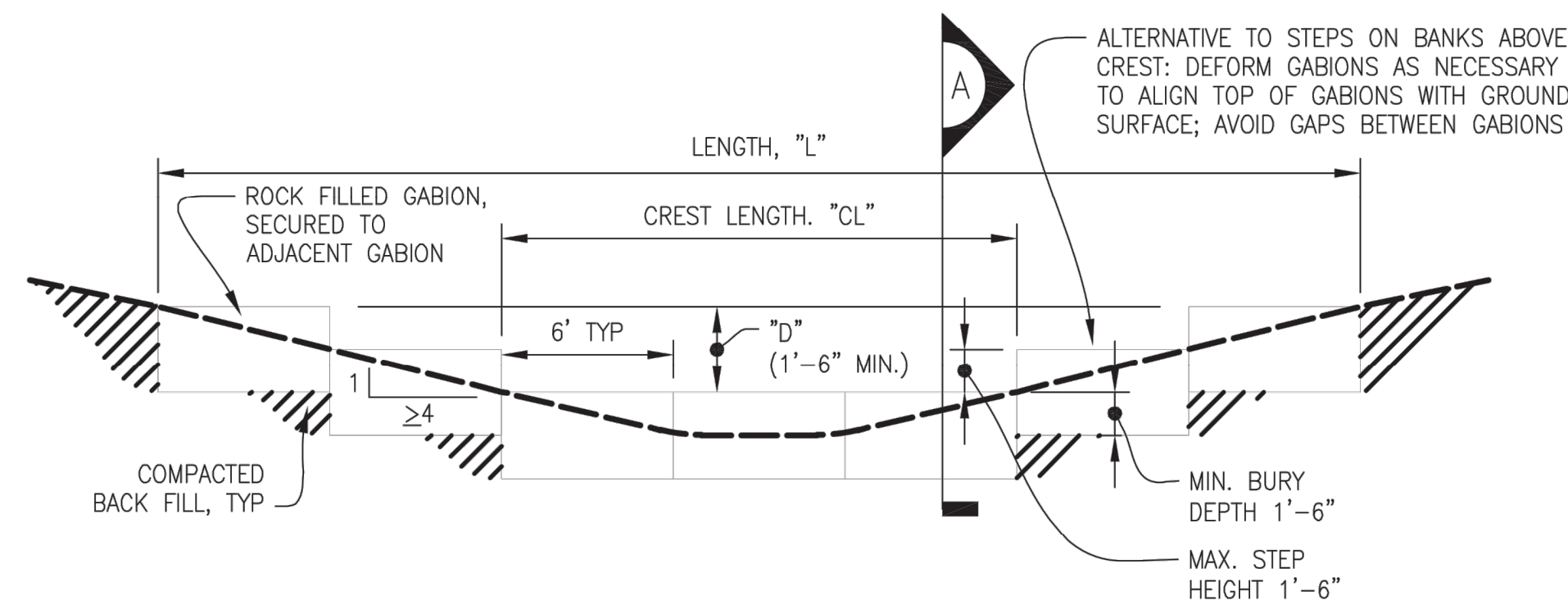
INLET PROTECTION INSTALLATION NOTES

1. INTERIM CONFIGURATION OF INLET PROTECTION IN STREETS SHALL BE INSTALLED WITHIN 48-HOURS OF POURING INLET. INLET PROTECTION (AFTER PAVEMENT) SHALL BE INSTALLED WITHIN 48 HOURS AFTER PAVING IS PLACED.
2. INLET PROTECTION AT AREA INLETS SHALL BE INSTALLED WITHIN 48-HOURS OF POURING INLET.
3. CRUSHED ROCK SHALL BE FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON ROCK AND RIPRAP GRADATIONS (1-1/2").
4. WIRE MESH SHALL BE FABRICATED OF 20 GAUGE WIRE TWISTED INTO A MESH WITH A MAXIMUM OPENING OF 1.0 INCH (COMMONLY TERMED "CHICKEN WIRE"). ROLL WIDTH SHALL BE 48-INCHES.
5. WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT 6-INCH CENTERS ALONG ALL JOINTS AND AT 2-INCH CENTERS ON ENDS OF BERM.
6. REINFORCED ROCK BERM SHALL BE CONSTRUCTED IN ONE PIECE OR SHALL BE CONSTRUCTED USING JOINT DETAIL.
7. TUBULAR MARKERS SHALL MEET REQUIREMENTS OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), AS AMENDED.
8. THE TOP OF REINFORCED ROCK BERM SHALL BE 1/2"-1" BELOW TOP OF CURB.

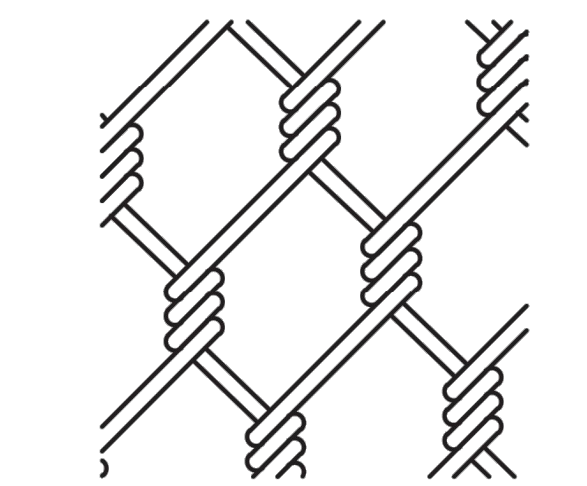
INLET PROTECTION MAINTENANCE NOTES

1. THE RECOMMENDED INSPECTION FREQUENCY FOR INLET PROTECTION IS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT AS NECESSARY. MORE FREQUENT INSPECTIONS AND REPAIRS MAY BE REQUIRED DURING WINTER CONDITIONS DUE TO FREEZE/THAW PROBLEMS.
2. SEDIMENT ACCUMULATED UPSTREAM OF INLET PROTECTION SHALL BE REMOVED WHEN THE SEDIMENT DEPTH UPSTREAM OF ROCK BERM IS WITHIN 2-1/2 INCHES OF THE CREST.
3. INLET PROTECTION IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS APPROVED, UNLESS THE COUNTY APPROVES EARLIER REMOVAL OF INLET PROTECTION IN STREETS.
4. WHEN INLET PROTECTION AT AREA INLETS ARE REMOVED, THE DISTURBED AREA SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.

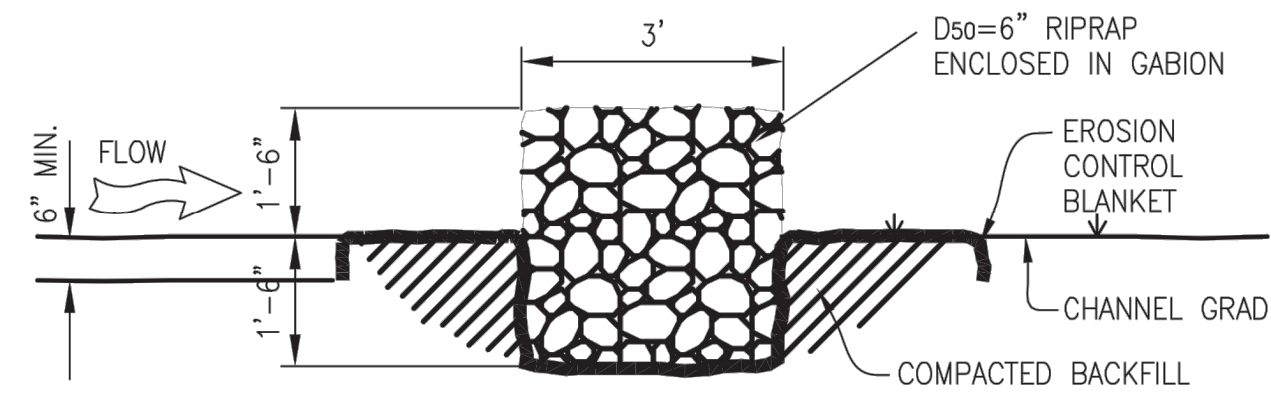




REINFORCED - ELEVATION
SCALE: 1" = 5'-0"



BLOW UP OF TWISTED WIRE GABION
SCALE: NTS



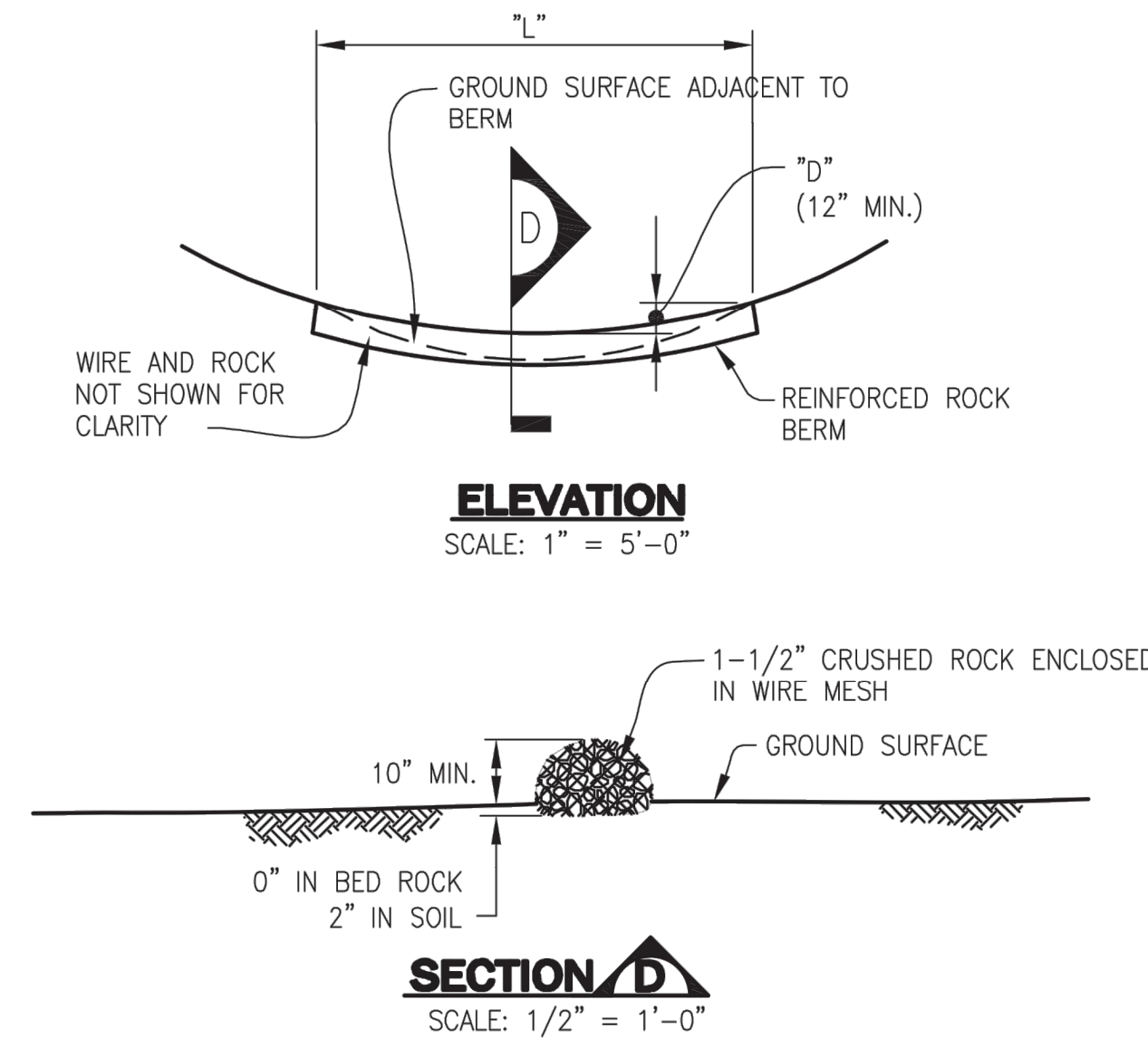
REINFORCED - SECTION A
SCALE: 1/2" = 1'-0"

REINFORCED CHECK DAM INSTALLATION NOTES

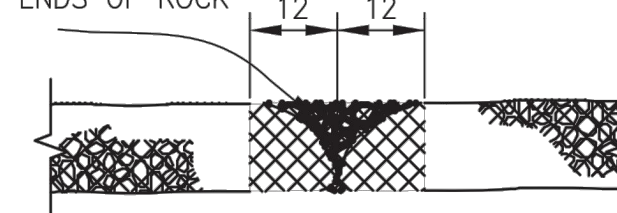
- SEE PLAN VIEW FOR:
 - LOCATIONS OF CHECK DAMS.
 - CHECK DAM TYPE (CHECK DAM OR REINFORCED CHECK DAM).
 - LENGTH, "L", CREST LENGTH, "CL", AND DEPTH, "D".
- CHECK DAMS INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED AFTER CONSTRUCTION FENCE, BUT PRIOR TO ANY UPSTREAM LAND-DISTURBING ACTIVITIES.
- REINFORCED CHECK DAMS, GABIONS SHALL HAVE GALVANIZED TWISTED WIRE NETTING WITH A MAXIMUM OPENING DIMENSION OF 4-1/2" AND A MINIMUM WIRE THICKNESS OF 0.10". WIRE "HOG RINGS" AT 4" SPACING OR OTHER APPROVED MEANS SHALL BE USED AT ALL GABION SEAMS AND TO SECURE THE GABION TO THE ADJACENT GABION.
- THE CHECK DAM SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF 1'-6".
- EROSION BLANKET SHALL BE PLACED IN THE REINFORCED CHECK DAM TRENCH EXTENDING A MINIMUM OF 1'-6" ON BOTH THE UPSTREAM AND DOWNSTREAM SIDES OF THE REINFORCED CHECK DAM.

REINFORCED CHECK DAM MAINTENANCE NOTES

- THE RECOMMENDED INSPECTION FREQUENCY FOR CHECK DAMS IS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT AS NECESSARY.
- SEDIMENT ACCUMULATED UPSTREAM OF CHECK DAMS SHALL BE REMOVED WHEN THE SEDIMENT DEPTH UPSTREAM OF CHECK DAM IS WITHIN 1/2 OF THE HEIGHT OF THE CREST.
- CHECK DAMS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS APPROVED BY THE COUNTY.
- WHEN CHECK DAMS ARE REMOVED, EXCAVATIONS SHALL BE FILLED WITH SUITABLE COMPACTED BACK FILL. ANY DISTURBED AREA SHALL BE DRILL SEEDED AND CRIMP MULCHED AND COVERED WITH EROSION CONTROL BLANKET OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.



ANY GAP AT JOINT SHALL BE FILLED WITH 1 1/2" CRUSHED ROCK AND WRAPPED WITH ADDITIONAL WIRE MESH SECURED TO ENDS OF ROCK REINFORCED BERM



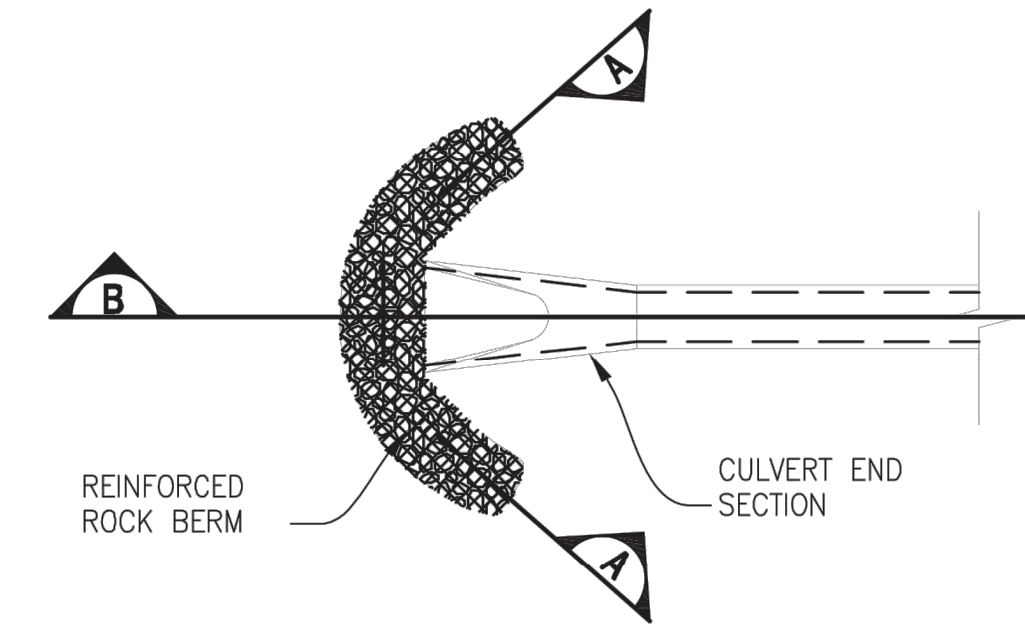
JOINT DETAIL
SCALE: 1/2" = 1'-0"

REINFORCED ROCK BERM INSTALLATION NOTES

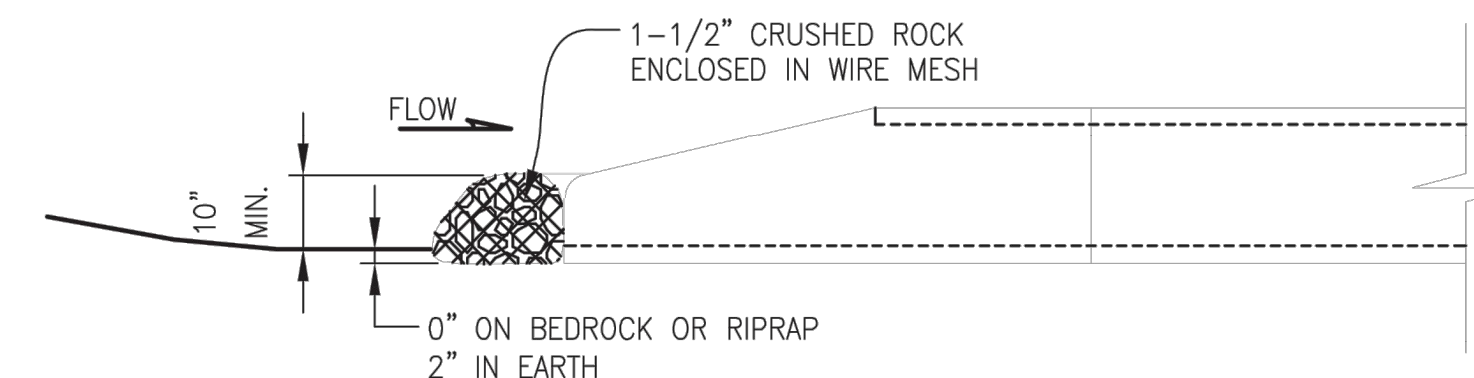
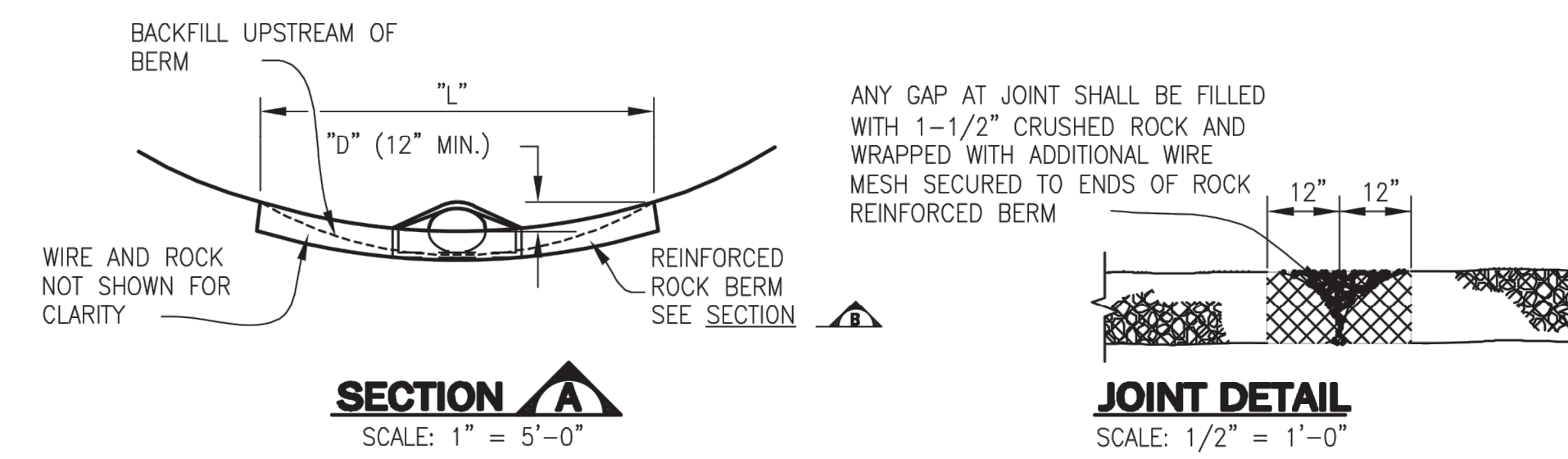
- SEE PLAN VIEW FOR:
 - LOCATIONS OF REINFORCED ROCK BERMS.
 - LENGTH, "L", AND DEPTH, "D" DIMENSIONS.
- REINFORCED ROCK BERM SECTION APPLIES TO CULVERT INLET FILTER AND INLET PROTECTION.
- CRUSHED ROCK SHALL BE FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON ROCK AND RIPRAP GRADATIONS (1-1/2").
- WIRE MESH SHALL BE FABRICATED OF 20 GAUGE WIRE TWISTED INTO A MESH WITH A MAXIMUM OPENING OF 1.0 INCH (COMMONLY TERMED "CHICKEN WIRE"). ROLL WIDTH SHALL BE 48-INCHES.
- WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT 6-INCH CENTERS ALONG ALL JOINTS AND AT 2-INCH CENTERS ON ENDS OF BERM.
- FOR CONCENTRATED FLOW AREAS THE ENDS OF THE REINFORCED ROCK BERM SHALL BE 12" HIGHER THAN THE CENTER OF THE BERM.

REINFORCED ROCK BERM MAINTENANCE NOTES

- THE RECOMMENDED INSPECTION FREQUENCY FOR REINFORCED ROCK BERM IS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT AS NECESSARY.
- SEDIMENT ACCUMULATED UPSTREAM OF REINFORCED ROCK BERM SHALL BE REMOVED WHEN THE SEDIMENT DEPTH UPSTREAM OF FILTER IS WITHIN 5 INCHES OF THE CREST.
- REINFORCED ROCK BERMS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS APPROVED.
- WHEN REINFORCED ROCK BERMS ARE REMOVED, ANY DISTURBED AREA SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.



PLAN
SCALE: 1" = 5'-0"



SECTION B
SCALE: 1/2" = 1'-0"

INSTALLATION NOTES

- SEE PLAN VIEW FOR:
 - LOCATIONS OF CULVERT INLET FILTERS.
 - LENGTH, "L", AND DEPTH, "D".
- CRUSHED ROCK SHALL BE FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON ROCK AND RIPRAP GRADATIONS (1-1/2").
- WIRE MESH SHALL BE FABRICATED OF 20 GAUGE WIRE TWISTED INTO A MESH WITH A MAXIMUM OPENING OF 1.0 INCH (COMMONLY TERMED "CHICKEN WIRE"). ROLL WIDTH SHALL BE 48-INCHES.
- WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT 6-INCH CENTERS ALONG ALL JOINTS AND AT 2-INCH CENTERS ON ENDS OF BERM.
- THE ENDS OF THE REINFORCED ROCK BERM SHALL BE 12" HIGHER THAN THE CENTER OF THE BERM.

MAINTENANCE NOTES

- THE RECOMMENDED INSPECTION FREQUENCY FOR RRB FOR CULVERT PROTECTION IS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT AS NECESSARY.
- SEDIMENT ACCUMULATED UPSTREAM OF RRB FOR CULVERT PROTECTION SHALL BE REMOVED WHEN THE SEDIMENT DEPTH UPSTREAM OF FILTER IS 1/2 THE HEIGHT OF THE REINFORCED ROCK BERM.
- RRB FOR CULVERT PROTECTION ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS APPROVED BY THE COUNTY.
- WHEN RRB FOR CULVERT PROTECTION ARE REMOVED, ANY DISTURBED AREA SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.



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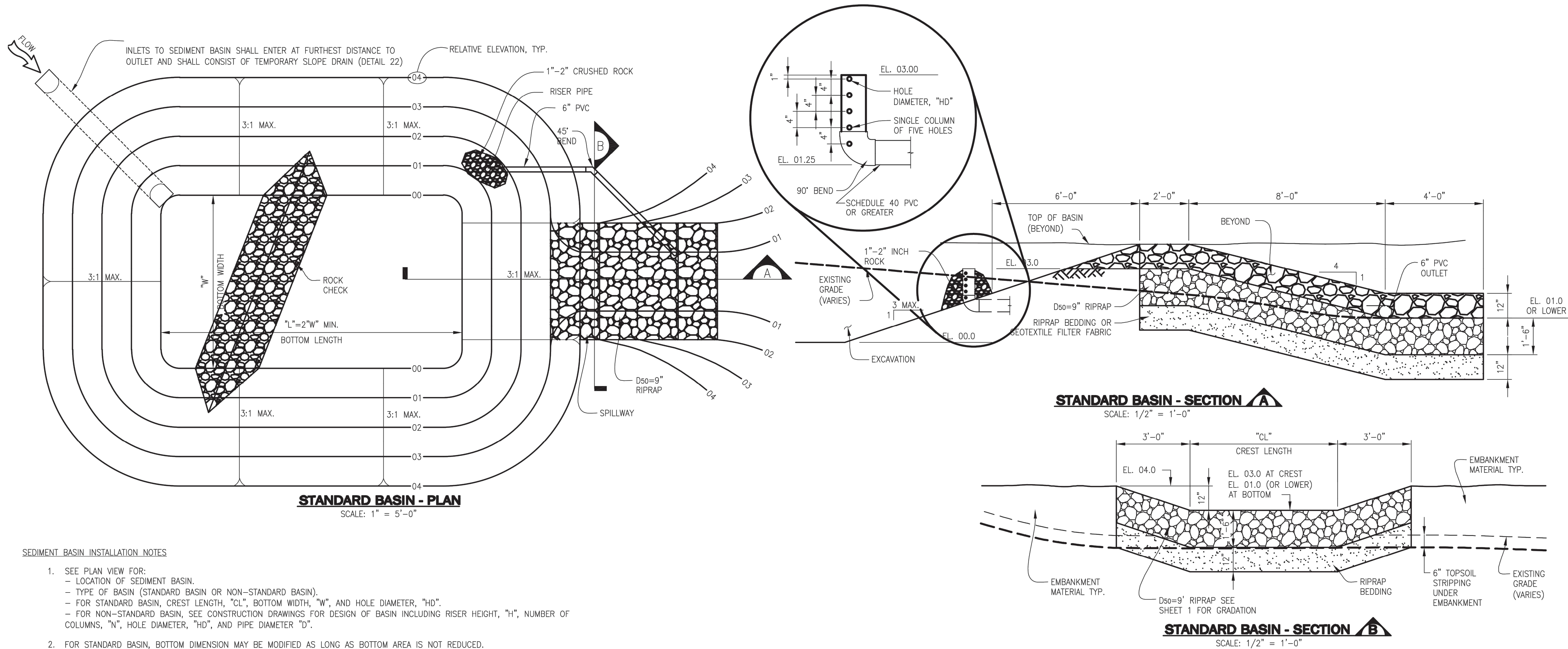
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SEDIMENT BASIN INSTALLATION NOTES

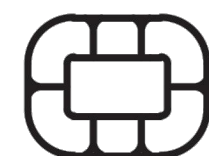
- SEE PLAN VIEW FOR:
 - LOCATION OF SEDIMENT BASIN.
 - TYPE OF BASIN (STANDARD BASIN OR NON-STANDARD BASIN).
 - FOR STANDARD BASIN, CREST LENGTH, "CL", BOTTOM WIDTH, "W", AND HOLE DIAMETER, "HD".
 - FOR NON-STANDARD BASIN, SEE CONSTRUCTION DRAWINGS FOR DESIGN OF BASIN INCLUDING RISER HEIGHT, "H", NUMBER OF COLUMNS, "N", HOLE DIAMETER, "HD", AND PIPE DIAMETER "D".
- FOR STANDARD BASIN, BOTTOM DIMENSION MAY BE MODIFIED AS LONG AS BOTTOM AREA IS NOT REDUCED.
- SEDIMENT BASINS INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED PRIOR TO ANY OTHER LAND-DISTURBING ACTIVITY.
- EMBANKMENT MATERIAL SHALL CONSIST OF SOIL FREE OF DEBRIS, ORGANIC MATERIAL, AND ROCKS OR CONCRETE GREATER THAN 3 INCHES AND SHALL HAVE A MINIMUM OF 15 PERCENT BY WEIGHT PASSING THE NO. 200 SIEVE.
- EMBANKMENT MATERIAL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY WITHIN 2 PERCENTAGE POINTS OF OPTIMUM DENSITY IN ACCORDANCE WITH ASTM D698.
- PIPE SCH 40 OR GREATER SHALL BE USED.
- THE DETAILS SHOWN ON THIS SHEET PERTAIN TO STANDARD SEDIMENT BASIN(S) IDENTIFIED ON THE GESC PLAN VIEW DRAWINGS USED FOR DRAINAGE AREAS LESS THAN 15 ACRES. SEE CONSTRUCTION DRAWINGS FOR EMBANKMENT, STORAGE VOLUME, SPILLWAY, OUTLET, AND OUTLET PROTECTION DETAILS FOR ANY SEDIMENT BASIN(S) THAT HAVE BEEN INDIVIDUALLY DESIGNED FOR DRAINAGE AREAS LARGER THAN 15 ACRES.

SEDIMENT BASIN MAINTENANCE NOTES

- THE RECOMMENDED INSPECTION FREQUENCY FOR SEDIMENT BASIN IS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT AS NECESSARY.
- SEDIMENT ACCUMULATED IN SEDIMENT BASIN SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS 1.0 FOOT.
- SEDIMENT BASINS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS APPROVED BY THE COUNTY.
- IF SEDIMENT BASINS ARE REMOVED, THE DISTURBED AREA SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.

SIZING INFORMATION FOR STANDARD SEDIMENT BASIN

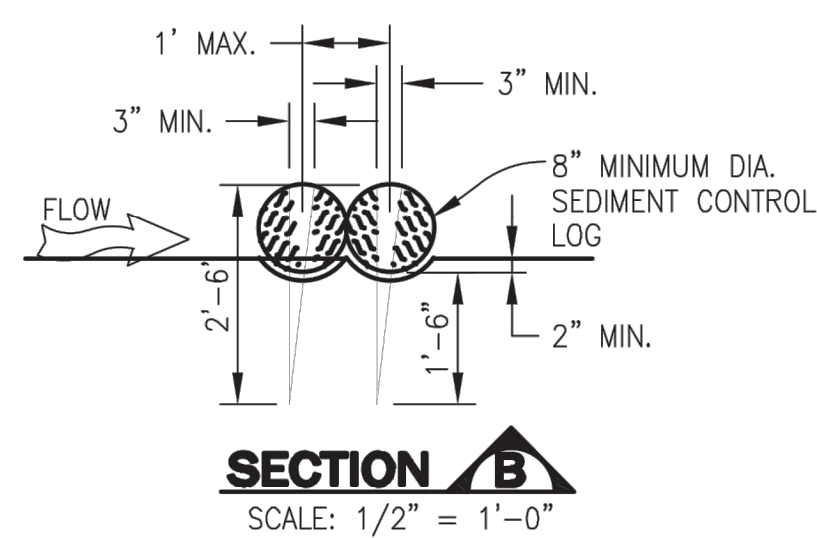
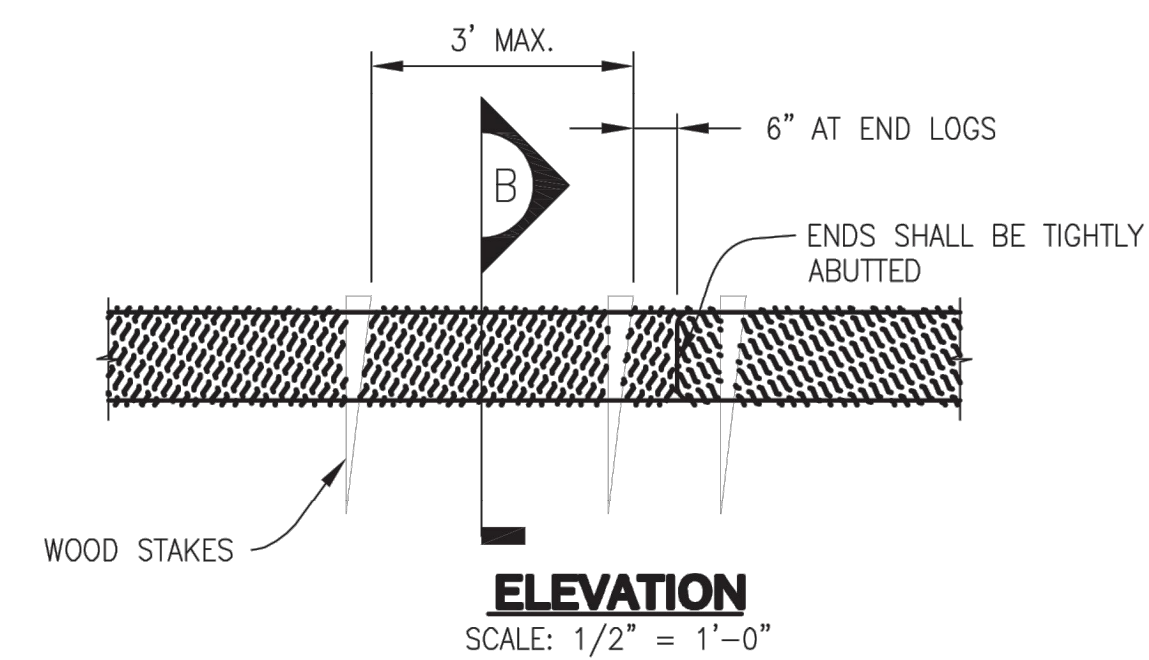
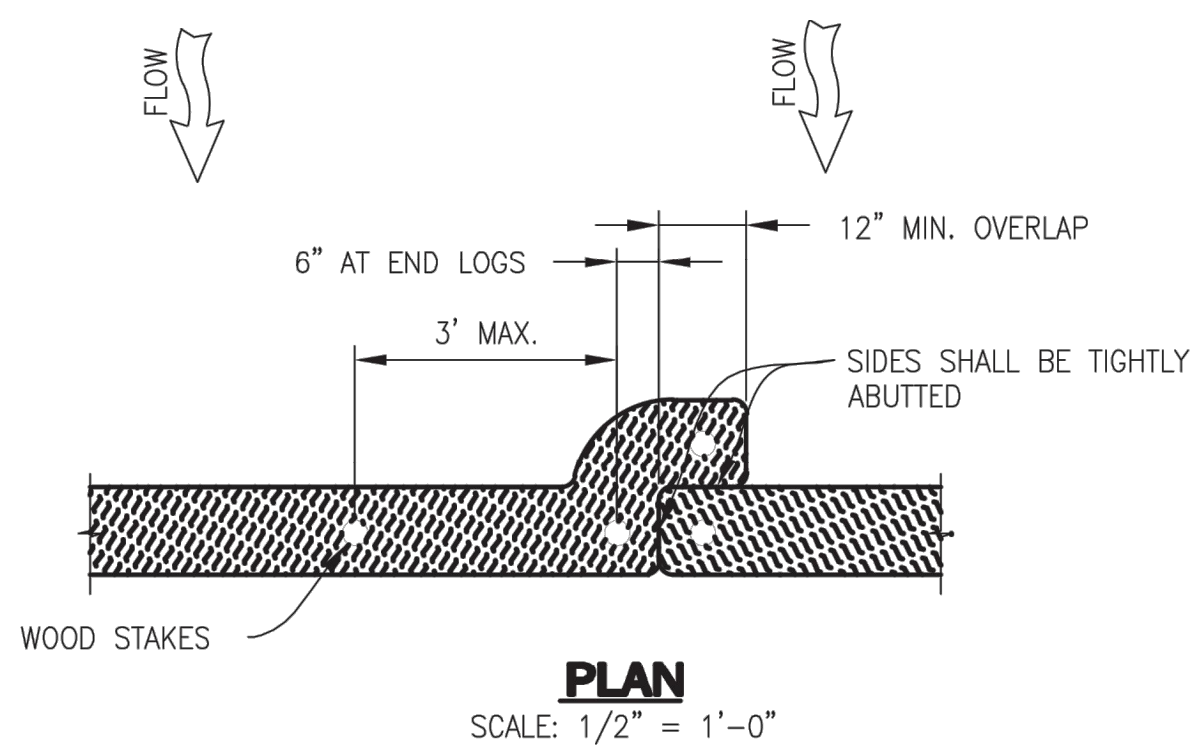
Upstream Drainage Area (rounded to nearest acre), (ac)	Basin Bottom Width (W), (ft)	Spillway Crest Length (CL), (ft)	Hole Diameter (HD), (in)
1	16	2.0	7/16
2	22	4.0	5/8
3	27	6.0	3/4
4	31	8.0	7/8
5	35	10.0	1.0
6	38	12.0	1 1/8
7	41	14.0	1 1/4
8	44	16.0	1 1/4
9	47	18.0	1 3/8
10	49	20.0	1 3/8
11	52	22.0	1 1/2
12	54	24.0	1 1/2
13	56	26.0	1 5/8
14	59	28.0	1 5/8
15	61	30.0	1 5/8



SB

SEDIMENT BASIN

15

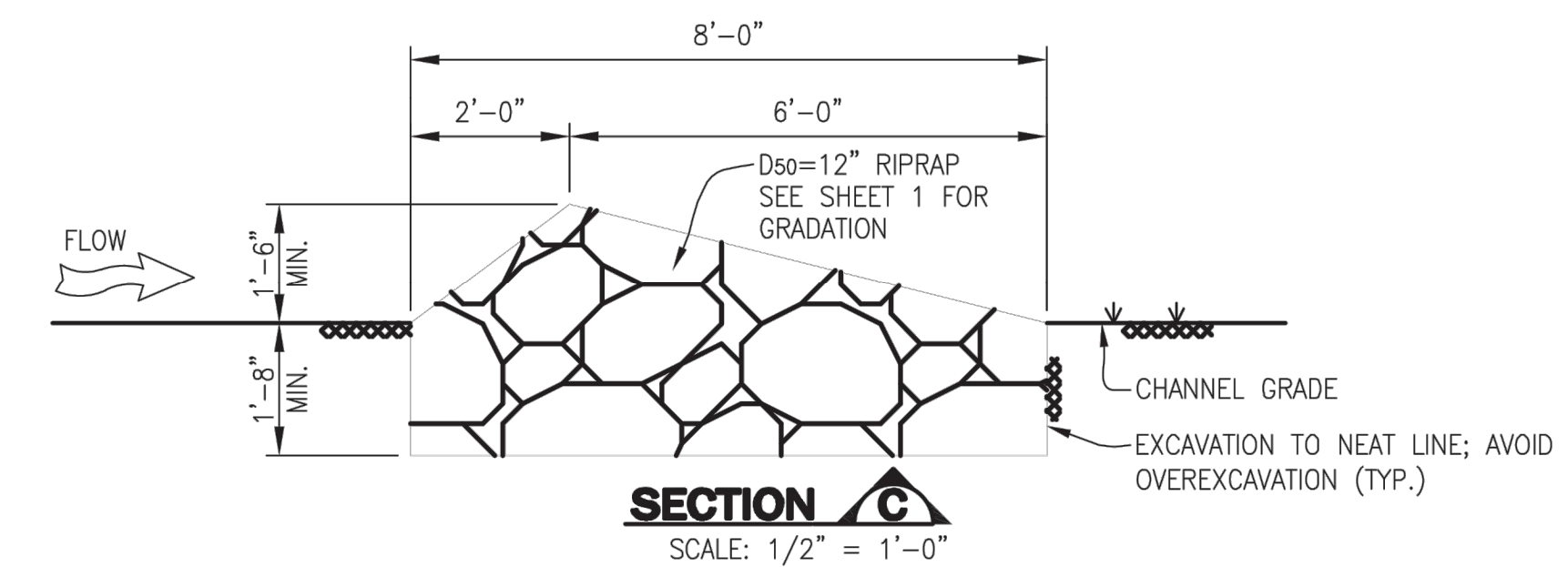
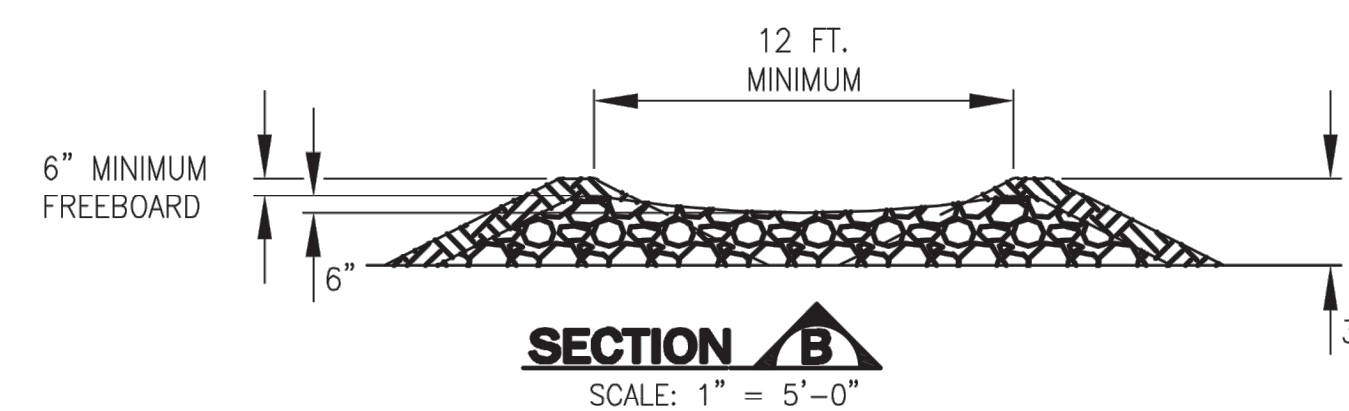
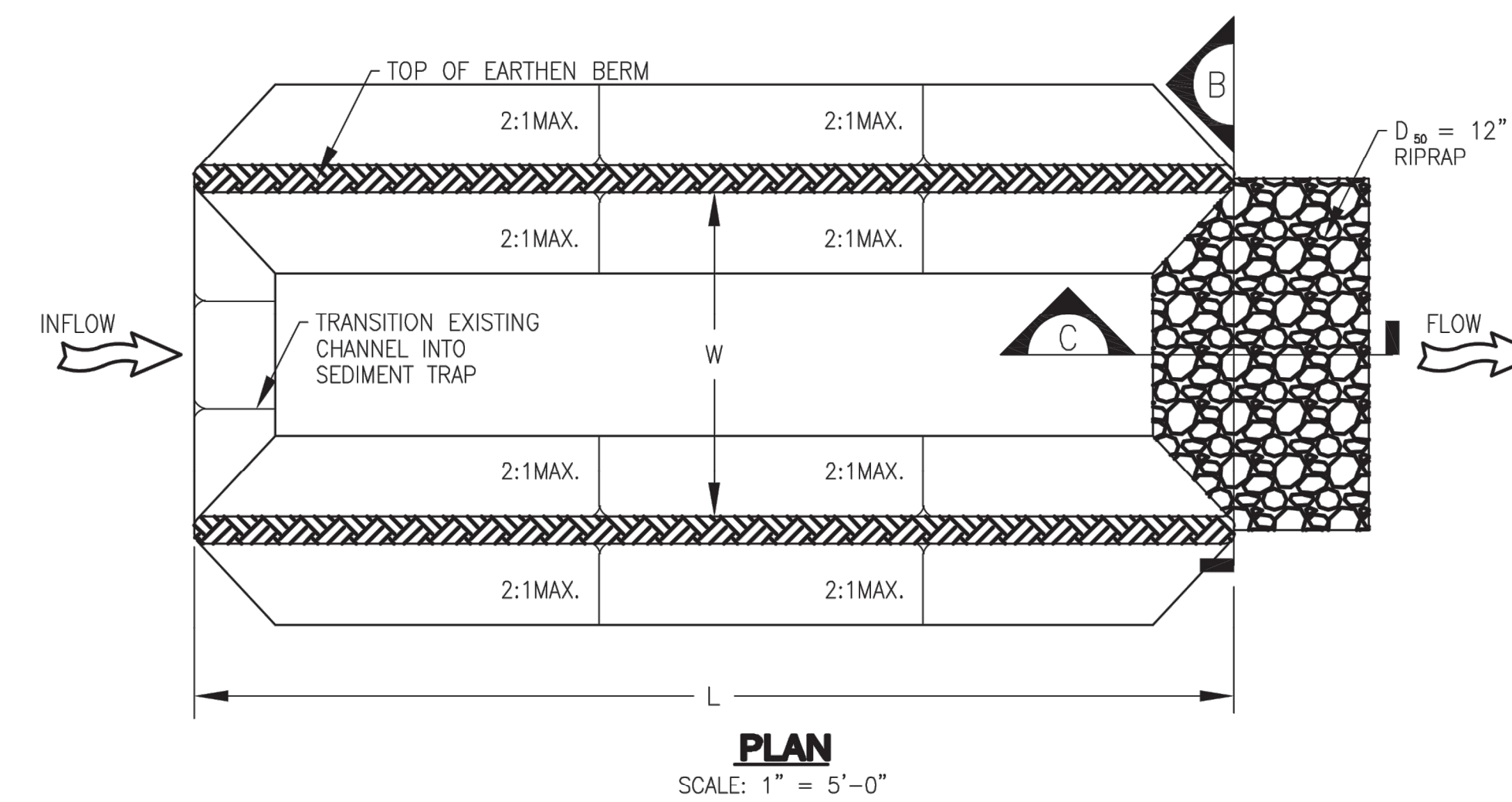


SEDIMENT CONTROL LOG INSTALLATION NOTES

- SEE PLAN VIEW FOR:
- LOCATION AND LENGTH OF SEDIMENT CONTROL LOG.
- SEDIMENT CONTROL LOGS INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED PRIOR TO ANY LAND-DISTURBING ACTIVITIES.
- SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR, OR COCONUT FIBER.
- NOT FOR USE IN CONCENTRATED FLOW AREAS.
- THE SEDIMENT CONTROL LOG SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF 2".

SEDIMENT CONTROL LOG MAINTENANCE NOTES

- THE RECOMMENDED INSPECTION FREQUENCY FOR SEDIMENT CONTROL LOGS IS DAILY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY.
- SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOGS SHALL BE REMOVED WHEN THE UPSTREAM SEDIMENT DEPTH IS WITHIN 1/2 THE HEIGHT OF THE CREST OF LOG.
- SEDIMENT CONTROL LOG SHALL REMAIN IN PLACE UNTIL THE VEGETATIVE COVER IS APPROVED BY THE EROSION CONTROL INSPECTOR. IF ANY DISTURBED AREA EXISTS AFTER REMOVAL, IT SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.



SEDIMENT TRAP INSTALLATION NOTES

- SEE PLAN VIEW FOR:
- LOCATION, LENGTH AND WIDTH OF SEDIMENT TRAP.
- SEDIMENT TRAPS INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED PRIOR TO ANY LAND-DISTURBING ACTIVITIES.
- SEDIMENT TRAP BERM SHALL BE CONSTRUCTED FROM MATERIAL FROM EXCAVATION. THE BERM SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D698.
- RIPRAP OUTLET SHALL BE CONSTRUCTED WITH D₅₀ = 12" RIPRAP WITH A MINIMUM OVERFLOW OF 6".
- THE TOP OF THE EARTHEN BERM SHALL BE A MINIMUM OF 6" HIGHER THAN THE TOP OF THE RIPRAP OUTLET STRUCTURE.
- THE ENDS OF THE RIPRAP OUTLET STRUCTURE SHALL BE MINIMUM OF 6" HIGHER THAN THE CENTER OF THE OUTLET STRUCTURE.

SEDIMENT TRAP MAINTENANCE NOTES

- THE RECOMMENDED INSPECTION FREQUENCY FOR SEDIMENT TRAPS IS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY.
- SEDIMENT ACCUMULATED UPSTREAM OF RIPRAP SHALL BE REMOVED WHEN THE UPSTREAM SEDIMENT DEPTH IS WITHIN 1/2 THE HEIGHT OF THE RIPRAP OUTLET STRUCTURE.
- SEDIMENT TRAPS SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVERAGE IS APPROVED BY THE COUNTY.
- WHEN SEDIMENT TRAPS ARE REMOVED THE DISTURBED AREA SHALL BE DRILLED SEEDED AND CRIMP MULCHED OR STABILIZED IN A MANNER APPROVED BY THE COUNTY.





FOR MARKING OF UNDERGROUND MEMBER UTILITIES. EVSTUDIO ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

SEEDING AND MULCHING INSTALLATION NOTES

- SEE PLAN VIEW FOR:
 - AREA OF SEEDING AND MULCHING.
 - TYPE OF SEED MIX (PERMANENT, TEMPORARY, OR LOW-GROWTH).
- ALL BRANDS FURNISHED SHALL BE FREE FROM SUCH NOXIOUS SEEDS AS RUSSIAN OR CANADIAN THISTLE, COARSE FESCUE, EUROPEAN BINDWEED, JOHNSON GRASS, Knap WEED AND LEAFY SPURGE.
- THE SEEDER SHALL FURNISH TO THE CONTRACTOR A SIGNED STATEMENT CERTIFYING THAT THE SEED FURNISHED IS FROM A LOT THAT HAS BEEN TESTED BY A RECOGNIZED LABORATORY. SEED WHICH HAS BECOME WET, MOLDY, OR OTHERWISE DAMAGED IN TRANSIT OR IN STORAGE WILL NOT BE ACCEPTABLE. SEED TICKETS SHALL BE PROVIDED TO DOUGLAS COUNTY UPON REQUEST.
- DRILL SEEDING MIX SHALL CONFORM TO THE TABLE ON THE RIGHT:
- IF THE SEED AVAILABLE ON THE MARKET DOES NOT MEET THE MINIMUM PURITY AND GERMINATION PERCENTAGES SPECIFIED, THE SUBCONTRACTOR MUST COMPENSATE FOR A LESSER PERCENTAGE OF PURITY OR GERMINATION BY FURNISHING SUFFICIENT ADDITIONAL SEED TO EQUAL THE SPECIFIED PRODUCT. THE TAGS FROM THE SEED MIXES MUST BE SUPPLIED TO THE CONTRACTOR AND FORWARDED TO THE DOUGLAS COUNTY EROSION CONTROL INSPECTOR.
- THE FORMULA USED FOR DETERMINING THE QUANTITY OF PURE LIVE SEED (PLS) SHALL BE (POUNDS OF SEED) X (PURITY) X (GERMINATION) = POUNDS OF PURE LIVE SEED (PLS).
- PERMANENT SEED MIX SHALL BE USED UNLESS OTHERWISE APPROVED BY THE COUNTY.
- ALL AREAS TO BE SEEDED AND MULCHED SHALL HAVE NATIVE TOPSOIL OR APPROVED SOIL AMENDMENTS SPREAD TO A DEPTH OF AT LEAST 6 INCHES (LOOSE DEPTH). HAUL ROADS AND OTHER COMPACTED AREAS SHALL BE LOOSENEED TO A DEPTH OF 6 INCHES PRIOR TO SPREADING TOPSOIL.
- SOIL IS TO BE THOROUGHLY LOOSENEED (TILLED) TO A DEPTH OF AT LEAST 6 INCHES PRIOR TO SEEDING. THE TOP 6 INCHES OF THE SEED BED SHALL BE FREE OF ROCKS GREATER THAN 4 INCHES AND SOIL CLODS GREATER THAN 2 INCHES. SEEDING OVER ANY COMPACTED AREAS THAT HAVEN'T BEEN THOROUGHLY LOOSENEED SHALL BE REJECTED.
- SEED IS TO BE APPLIED USING A MECHANICAL DRILL TO A DEPTH NOT LESS THAN 1/4 INCH AND NOT MORE THAN 3/4 INCH. ROW SPACING SHALL BE NO MORE THAN 6 INCHES. MATERIAL USED FOR MULCH SHALL CONSIST OF LONG-STEMMED STRAW. AT LEAST 50 PERCENT OF THE MULCH, BY WEIGHT, SHALL BE 10 INCHES OR MORE IN LENGTH. MULCH SHALL BE APPLIED AND MECHANICALLY ANCHORED TO A DEPTH OF AT LEAST 2 INCHES. MULCH SHALL BE APPLIED AT A RATE OF 4000 LB. OF STRAW PER ACRE.
- IF THE PERMITTEE DEMONSTRATES TO THE COUNTY THAT IT IS NOT POSSIBLE TO DRILL SEED, SEED IS TO BE UNIFORMLY BROADCAST AT TWO TIMES THE DRILLED RATE, THEN LIGHTLY HARROWED TO PROVIDE A SEED DEPTH OF APPROXIMATELY 1/4 INCH, THEN ROLLED TO COMPACT, THEN MULCHED AS SPECIFIED ABOVE.
- SEEDING AND MULCHING SHALL BE COMPLETED WITHIN 30 DAYS OF INITIAL EXPOSURE OR 14 DAYS AFTER GRADING IS SUBSTANTIALLY COMPLETE IN A GIVEN AREA (AS DEFINED BY THE COUNTY). THIS MAY REQUIRE MULTIPLE MOBILIZATIONS FOR SEEDING AND MULCHING.
- MULCH SHALL BE APPLIED WITHIN 24-HOURS OF SEEDING.
- TACKIFIER SHOULD BE UTILIZED TO HELP PREVENT STRAW DISPLACEMENT.

SEEDING AND MULCHING MAINTENANCE NOTES

- SEEDED AND MULCHED AREAS SHALL BE INSPECTED FOR REQUIRED COVERAGE MONTHLY FOR A PERIOD OF TWO YEARS FOLLOWING INITIAL SEEDING. REPAIRS AND RE-SEEDING AND MULCHING SHALL BE UNDERTAKEN AFTER THE FIRST GROWING SEASON FOR ANY AREAS FAILING TO MEET THE REQUIRED COVERAGE.
- REQUIRED COVERAGE FOR STANDARD, OPEN SPACE AND LOW GROWTH SEED MIXES SHALL BE DEFINED AS FOLLOWS:
 - THREE (3) PLANTS PER SQUARE FOOT WITH A MINIMUM HEIGHT OF 3 INCHES. THE 3 PLANTS PER SQUARE FOOT SHALL BE OF THE VARIETY AND SPECIES FOUND IN THE DOUGLAS COUNTY-APPROVED MIX.
 - NO BARE AREAS LARGER THAN 4 SQUARE FEET (TWO-FEET BY TWO-FEET OR EQUIVALENT). FREE OF ERODED AREAS.
 - FREE FROM INFESTATION OF NOXIOUS WEEDS IN ACCORDANCE WITH SECTION 6.4 OF THE GESC MANUAL.
- REQUIRED COVERAGE FOR TURF GRASS AREAS SHALL BE DEFINED AS FOLLOWS:
 - AT LEAST 80% VEGETATIVE COVER OF GRASS SPECIES PLANTED.
 - NO BARE AREAS LARGER THAN 4 SQUARE FEET (TWO-FEET BY TWO-FEET OR EQUIVALENT). FREE OF ERODED AREAS.
 - FREE FROM INFESTATION OF NOXIOUS WEEDS IN ACCORDANCE WITH SECTION 6.4 OF THE GESC MANUAL.
- RILL AND GULLY EROSION SHALL BE FILLED WITH TOPSOIL PRIOR TO RESEEDING. THE RESEEDING METHOD SHALL BE APPROVED BY THE COUNTY.

DOUGLAS COUNTY PERMANENT DRILL SEEDING MIX

SPECIES	VARIETY	NOTES	% IN MIX	POUNDS OF PLS PER ACRE
BIG BLUESTEM	KAW	PNWS	10	1.1
YELLOW INDIANGRASS	CHEYENNE	PNWS	10	1
SWITCHGRASS	BLACKWELL	PNWS	10	0.4
SIDEOATS GRAMA	VAUGHN	PNWB	10	0.9
WESTERN WHEATGRASS	ARRIBA	PNCS	10	1.6
BLUE GRAMA	HACHITA	PNWB	10	0.3
THICKSPIKE WHEATGRASS	CRITANA	PNCS	10	1
PRAIRIE SANDREED	GOSHEN	PNWS	10	0.7
GREEN NEEDLEGRASS	LODORM	PNCB	10	1
SLENDER WHEATGRASS	PRYOR	PNCB	5	0.6
STREAMBANK WHEATGRASS	SODAR	PNCS	5	0.6
TOTAL				9.2

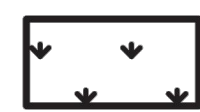
DOUGLAS COUNTY TEMPORARY DRILL SEEDING MIX

SPECIES	VARIETY	NOTES	% IN MIX	POUNDS OF PLS PER ACRE
SMOOTH BROMEGRASS	LINCOLN	PICS	30	3.9
INTERMEDIATE WHEATGRASS	OAHE	PICS	30	4.5
PUBESCENT WHEATGRASS	LUNA	PICS	30	4.2
ANNUAL RYEGRASS	N/A	AICB	10	0.8
TOTAL				13.4

DOUGLAS COUNTY LOW-GROWTH DRILL SEEDING MIX

SPECIES	VARIETY	NOTES	% IN MIX	POUNDS OF PLS PER ACRE
BUFFALOGRASS	TEXOKA	PNWS	20	3.2
BLUE GRAMA	HACHITA	PNWB	20	0.6
WESTERN WHEATGRASS	ARRIBA	PNCS	20	3.2
SIDEOATS GRAMA	VAUGHN	PNWB	20	1.8
THICKSPIKE WHEATGRASS	CRITANA	PNCS	10	1
STREAMBANK WHEATGRASS	SODAR	PNCS	10	1.2
TOTAL				11.0

NOTES:
P=PERENNIAL
A=ANNUAL
N=NATIVE
I=INTRODUCED
W=WARM SEASON
C=COOL SEASON
S=SOD FORMER
B=BUNCHGRASS



SEEDING AND MULCHING 18

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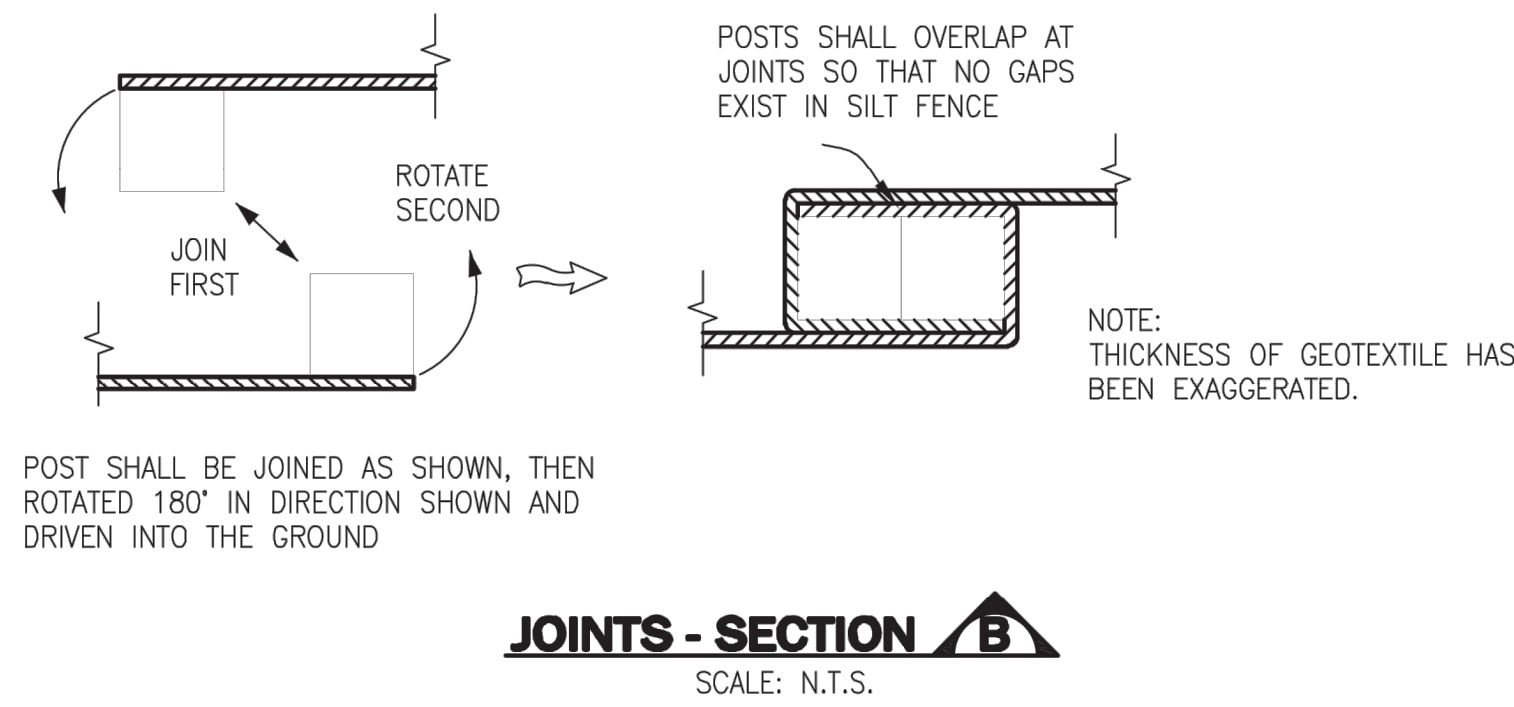
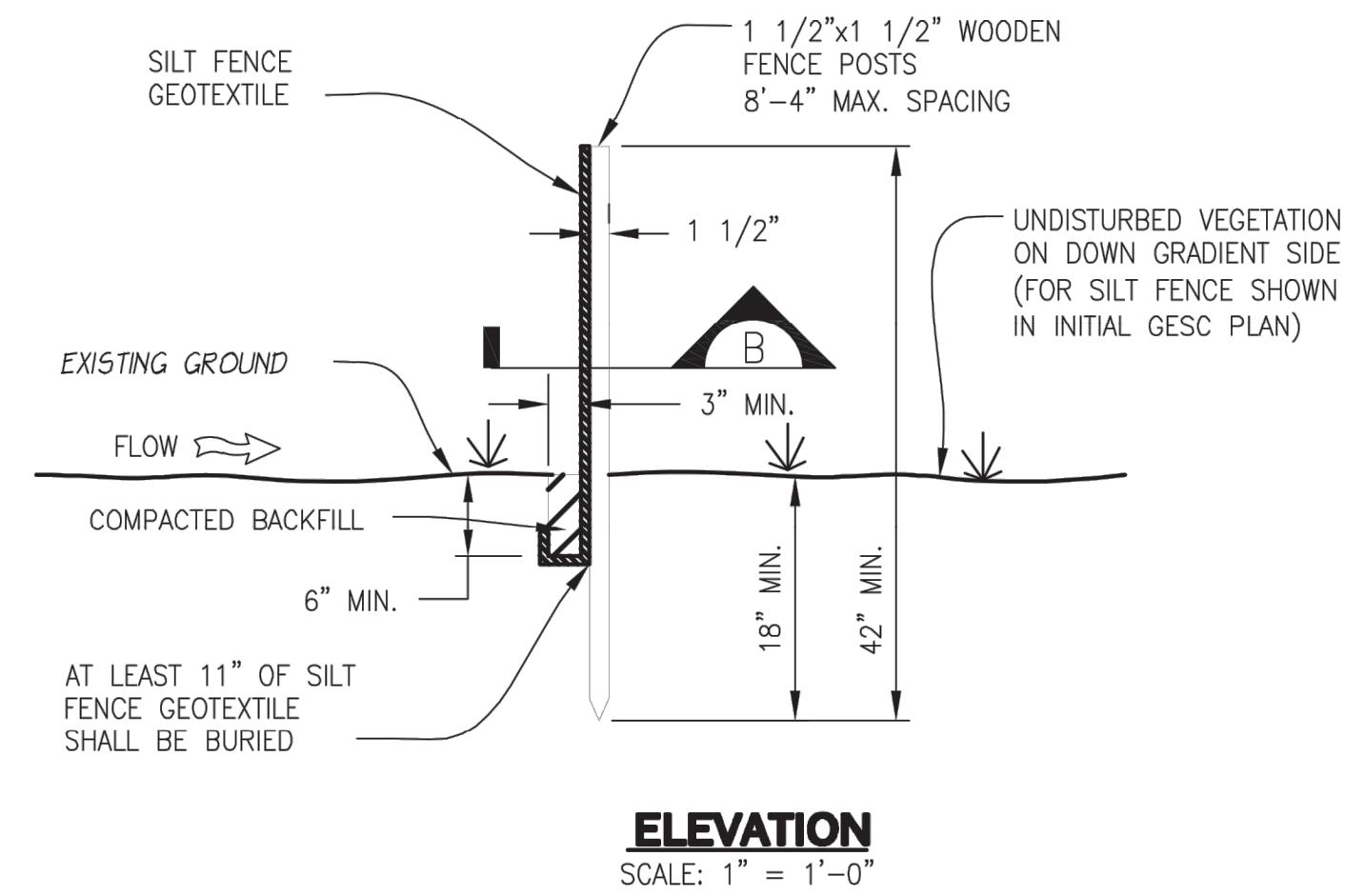
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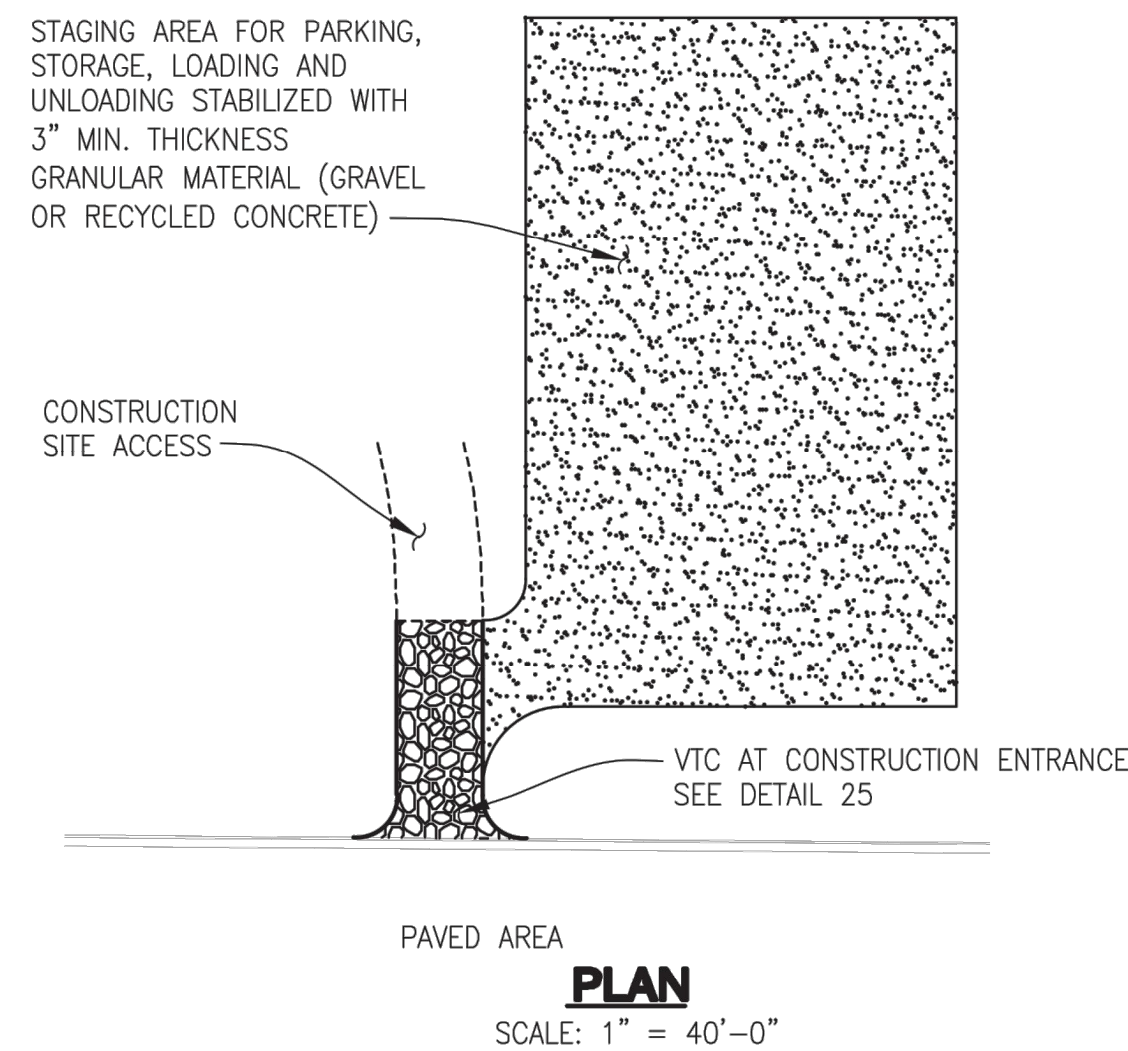


SILT FENCE INSTALLATION NOTES

- SEE PLAN VIEW FOR:
 - LOCATION AND LENGTH OF FENCE.
- ANCHOR TRENCH SHALL BE EXCAVATED WITH TRENCHER, OR WITH SILT FENCE INSTALLATION MACHINE; NO ROAD GRADERS, BACKHOES, ETC. SHALL BE USED. TRENCH SHALL BE COMPACTED BY HAND, WITH "JUMPING JACK", OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.
- SILT FENCE GEOTEXTILE SHALL MEET THE FOLLOWING REQUIREMENTS:
 - 6-TO 12-GALLONS PER MINUTE PER SQUARE FOOT FLOW CAPACITY.
 - 90 LB. TENSILE STRENGTH PER ASTM D4622.
 - UV DESIGN AT 500 HRS MIN. 70% STRENGTH RETAINED PER ASTM D4355.
- SILT FENCE INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED PRIOR TO ANY LAND-DISTURBING ACTIVITIES.

SILT FENCE MAINTENANCE NOTES

- THE RECOMMENDED INSPECTION FREQUENCY FOR SILT FENCE IS DAILY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY.
- SEDIMENT ACCUMULATED UPSTREAM OF SILT FENCE SHALL BE REMOVED WHEN THE UPSTREAM SEDIMENT REACHES A DEPTH OF 6-INCHES.
- SILT FENCE SHALL BE REMOVED WHEN THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS APPROVED BY THE COUNTY. IF ANY DISTURBED AREA EXISTS AFTER REMOVAL, IT SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.

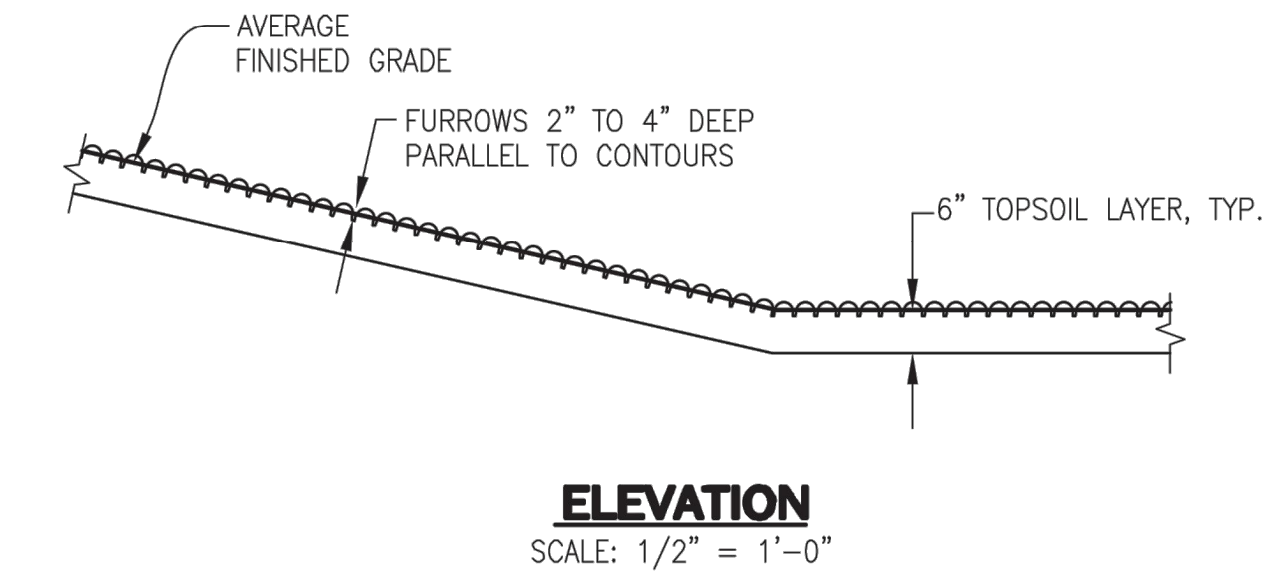


STABILIZED STAGING AREA INSTALLATION NOTES

- SEE PLAN VIEW FOR GENERAL LOCATION OF STAGING AREA. CONTRACTOR MAY MODIFY LOCATION AND SIZE OF STABILIZED STAGING AREA WITH COUNTY APPROVAL.
- STABILIZED STAGING AREA SHALL BE LARGE ENOUGH TO FULLY CONTAIN PARKING, STORAGE, AND UNLOADING AND LOADING OPERATIONS.
- IF REQUIRED BY THE COUNTY, SITE ACCESS ROADS SHALL BE STABILIZED IN THE SAME MANNER AS THE STAGING AREA.
- STAGING AREA SHALL BE STABILIZED PRIOR TO ANY OTHER OPERATIONS ON THE SITE.
- THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM OF 3" OF GRANULAR MATERIAL (GRAVEL OR RECYCLED CONCRETE).

STABILIZED STAGING AREA MAINTENANCE NOTES

- THE RECOMMENDED INSPECTION FREQUENCY FOR THE STABILIZED STAGING AREA IS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY.
- GESC MANAGER SHALL PROVIDE ADDITIONAL THICKNESS OF GRANULAR MATERIAL IF ANY RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.
- STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING AND LOADING OPERATIONS.
- ANY ACCUMULATED DIRT OR MUD SHALL BE REMOVED FROM THE SURFACE OF THE STABILIZED STAGING AREA.
- THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE COUNTY, USED ON SITE, AND THE AREA TOPSOILED, DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED.



SURFACE ROUGHENING INSTALLATION NOTES

- SURFACE ROUGHENING SHALL BE PROVIDED ON ALL FINISHED GRADES (SLOPES AND "FLAT" AREAS) WITHIN 2 DAYS OF COMPLETION OF FINISHED GRADE (FOR AREAS NOT RECEIVING TOPSOIL) OR WITHIN 2 DAYS OF TOPSOIL PLACEMENT.
- AREAS WHERE BUILDING FOUNDATIONS, PAVEMENT, OR SOD IS TO BE PLACED WITHIN 7-DAYS OF FINISHED GRADING DO NOT NEED TO BE SURFACE ROUGHENED.
- DISTURBED SURFACES SHALL BE ROUGHENED USING RIPPING OR TILLING EQUIPMENT ON THE CONTOUR OR TRACKING UP AND DOWN A SLOPE USING EQUIPMENT TREADS.

SURFACE ROUGHENING MAINTENANCE NOTES

- THE RECOMMENDED INSPECTION FREQUENCY FOR SURFACE ROUGHENING IS WEEKLY, DURING AND AFTER ANY STORM EVENT, AND MAKE REPAIRS.
- VEHICLES AND EQUIPMENT SHALL GENERALLY BE CONFINED TO ACCESS DRIVES AND SHALL NOT BE DRIVEN OVER AREAS THAT HAVE BEEN SURFACE ROUGHENED.
- IN NON-TURF GRASS FINISHED AREAS, SEEDING AND MULCHING SHALL TAKE PLACE DIRECTLY OVER SURFACE ROUGHENED AREAS WITHOUT FIRST SMOOTHING OUT THE SURFACE.
- IN AREAS NOT SEEDED AND MULCHED AFTER SURFACE ROUGHENING, SURFACES SHALL BE RE-ROUGHENED AS NECESSARY TO MAINTAIN GROOVE DEPTH AND SMOOTH OVER ANY RILL EROSION.



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 22A037

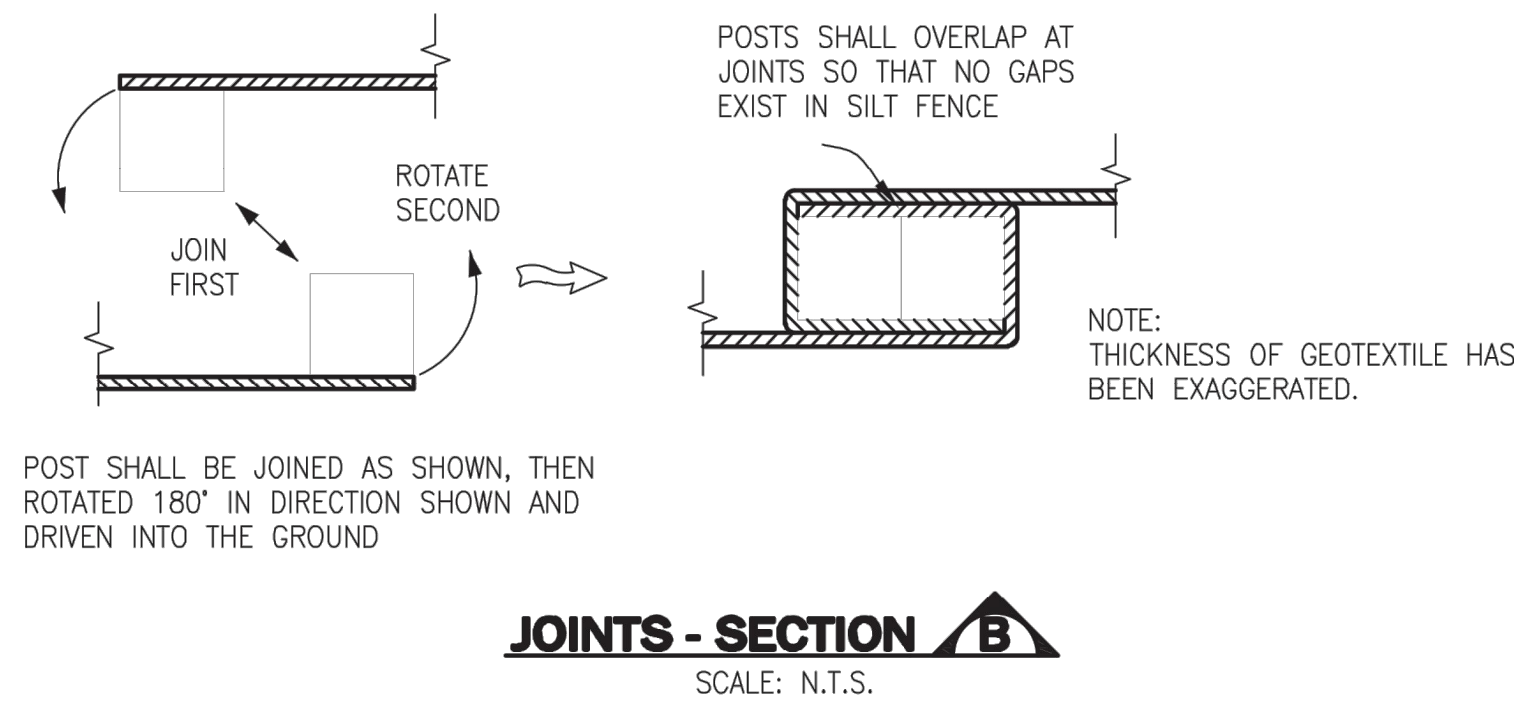
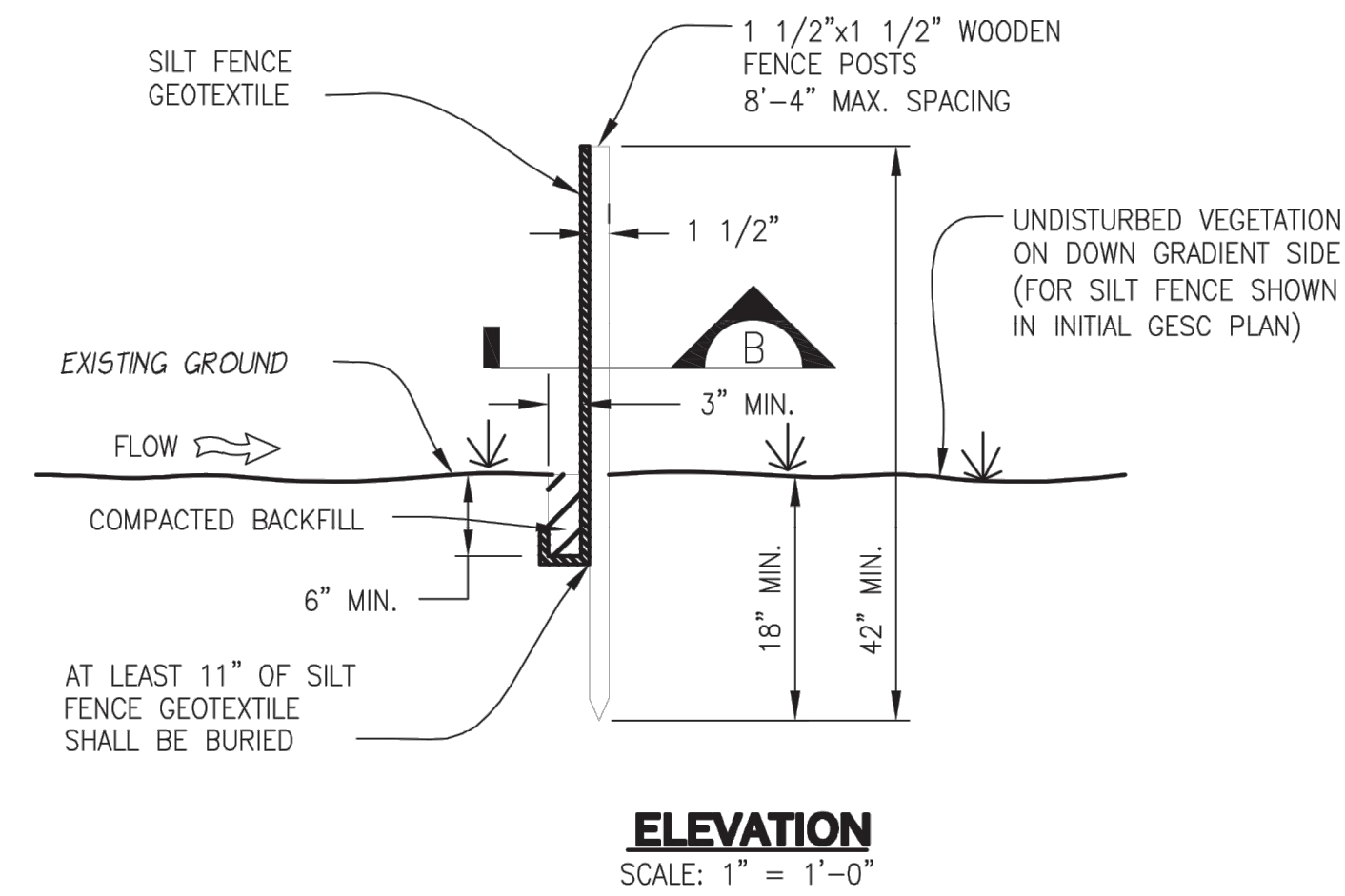
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REVISION:

DATE: 09/08/2023
DRAWN BY: AMT & TAL
CHECKED BY: BMW

DETAILS

D-10

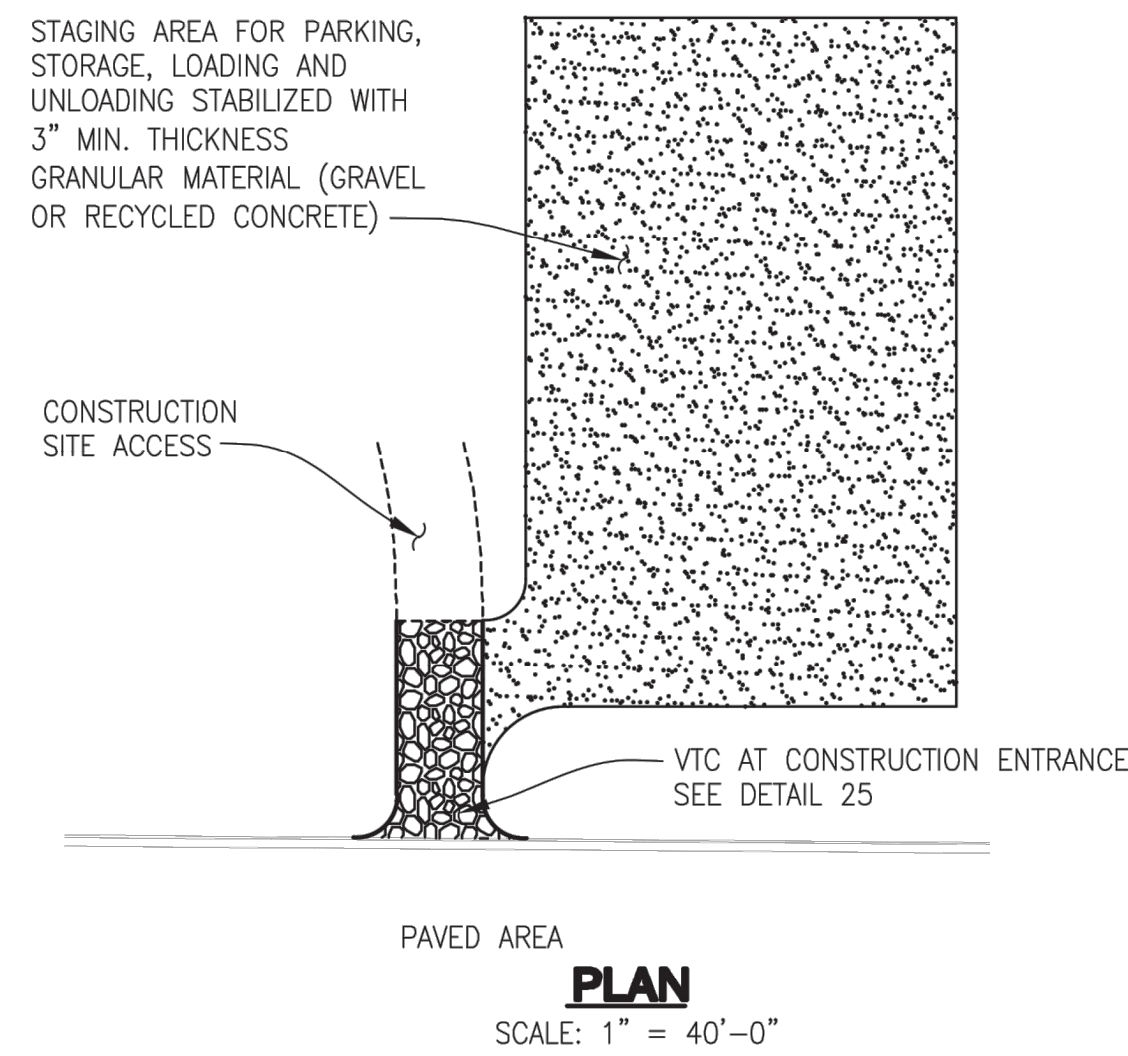


SILT FENCE INSTALLATION NOTES

- SEE PLAN VIEW FOR:
 - LOCATION AND LENGTH OF FENCE.
- ANCHOR TRENCH SHALL BE EXCAVATED WITH TRENCHER, OR WITH SILT FENCE INSTALLATION MACHINE; NO ROAD GRADERS, BACKHOES, ETC. SHALL BE USED. TRENCH SHALL BE COMPACTED BY HAND, WITH "JUMPING JACK", OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.
- SILT FENCE GEOTEXTILE SHALL MEET THE FOLLOWING REQUIREMENTS:
 - 6-TO 12-GALLONS PER MINUTE PER SQUARE FOOT FLOW CAPACITY.
 - 90 LB. TENSILE STRENGTH PER ASTM D4622.
 - UV DESIGN AT 500 HRS MIN. 70% STRENGTH RETAINED PER ASTM D4355.
- SILT FENCE INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED PRIOR TO ANY LAND-DISTURBING ACTIVITIES.

SILT FENCE MAINTENANCE NOTES

- THE RECOMMENDED INSPECTION FREQUENCY FOR SILT FENCE IS DAILY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY.
- SEDIMENT ACCUMULATED UPSTREAM OF SILT FENCE SHALL BE REMOVED WHEN THE UPSTREAM SEDIMENT REACHES A DEPTH OF 6-INCHES.
- SILT FENCE SHALL BE REMOVED WHEN THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS APPROVED BY THE COUNTY. IF ANY DISTURBED AREA EXISTS AFTER REMOVAL, IT SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.

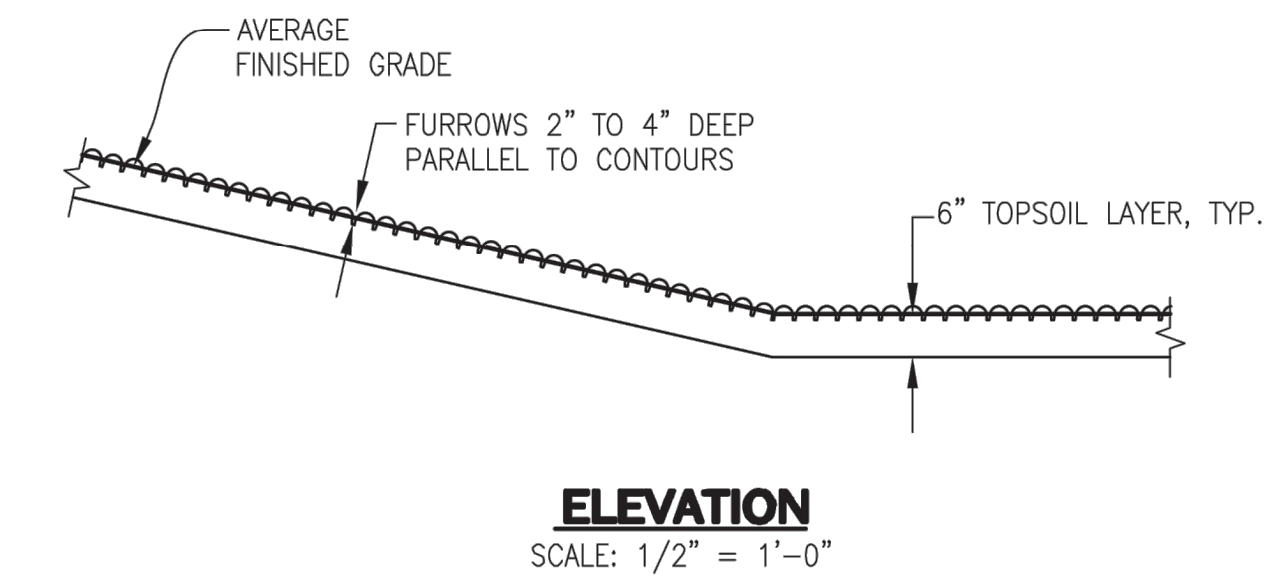


STABILIZED STAGING AREA INSTALLATION NOTES

- SEE PLAN VIEW FOR GENERAL LOCATION OF STAGING AREA. CONTRACTOR MAY MODIFY LOCATION AND SIZE OF STABILIZED STAGING AREA WITH COUNTY APPROVAL.
- STABILIZED STAGING AREA SHALL BE LARGE ENOUGH TO FULLY CONTAIN PARKING, STORAGE, AND UNLOADING AND LOADING OPERATIONS.
- IF REQUIRED BY THE COUNTY, SITE ACCESS ROADS SHALL BE STABILIZED IN THE SAME MANNER AS THE STAGING AREA.
- STAGING AREA SHALL BE STABILIZED PRIOR TO ANY OTHER OPERATIONS ON THE SITE.
- THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM OF 3" OF GRANULAR MATERIAL (GRAVEL OR RECYCLED CONCRETE).

STABILIZED STAGING AREA MAINTENANCE NOTES

- THE RECOMMENDED INSPECTION FREQUENCY FOR THE STABILIZED STAGING AREA IS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY.
- GESC MANAGER SHALL PROVIDE ADDITIONAL THICKNESS OF GRANULAR MATERIAL IF ANY RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.
- STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING AND LOADING OPERATIONS.
- ANY ACCUMULATED DIRT OR MUD SHALL BE REMOVED FROM THE SURFACE OF THE STABILIZED STAGING AREA.
- THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE COUNTY, USED ON SITE, AND THE AREA TOPSOILED, DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED.



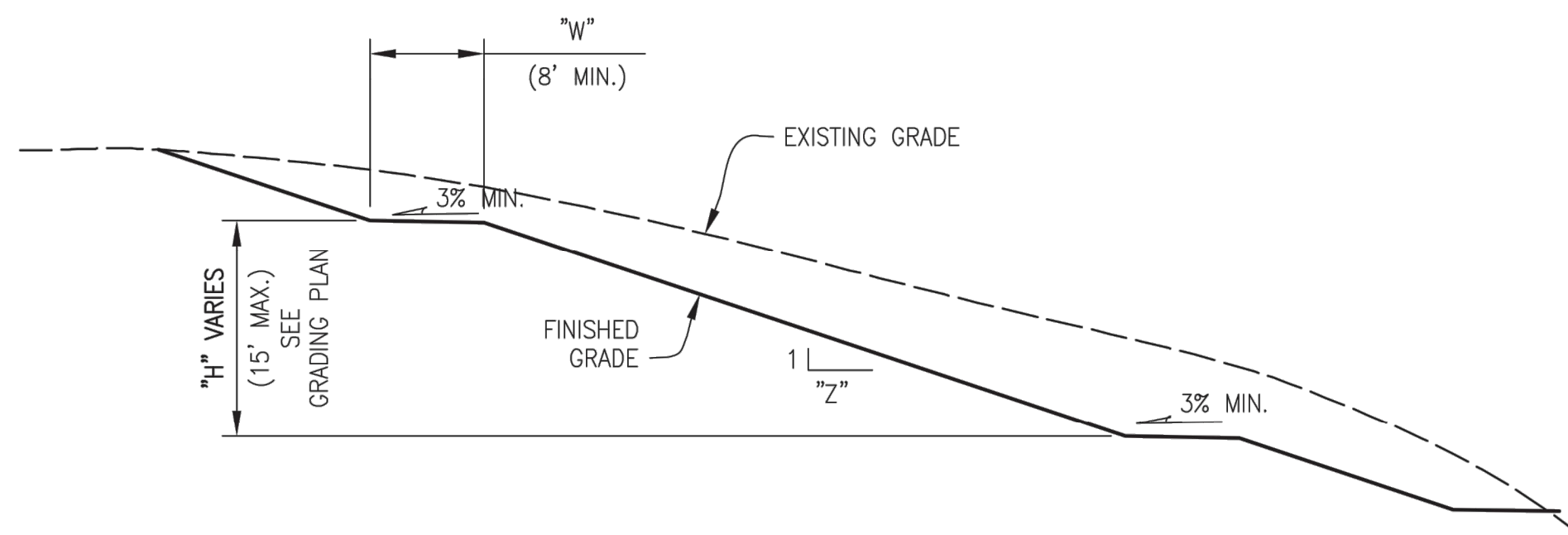
SURFACE ROUGHENING INSTALLATION NOTES

- SURFACE ROUGHENING SHALL BE PROVIDED ON ALL FINISHED GRADES (SLOPES AND "FLAT" AREAS) WITHIN 2 DAYS OF COMPLETION OF FINISHED GRADE (FOR AREAS NOT RECEIVING TOPSOIL) OR WITHIN 2 DAYS OF TOPSOIL PLACEMENT.
- AREAS WHERE BUILDING FOUNDATIONS, PAVEMENT, OR SOD IS TO BE PLACED WITHIN 7-DAYS OF FINISHED GRADING DO NOT NEED TO BE SURFACE ROUGHENED.
- DISTURBED SURFACES SHALL BE ROUGHENED USING RIPPING OR TILLING EQUIPMENT ON THE CONTOUR OR TRACKING UP AND DOWN A SLOPE USING EQUIPMENT TREADS.

SURFACE ROUGHENING MAINTENANCE NOTES

- THE RECOMMENDED INSPECTION FREQUENCY FOR SURFACE ROUGHENING IS WEEKLY, DURING AND AFTER ANY STORM EVENT, AND MAKE REPAIRS.
- VEHICLES AND EQUIPMENT SHALL GENERALLY BE CONFINED TO ACCESS DRIVES AND SHALL NOT BE DRIVEN OVER AREAS THAT HAVE BEEN SURFACE ROUGHENED.
- IN NON-TURF GRASS FINISHED AREAS, SEEDING AND MULCHING SHALL TAKE PLACE DIRECTLY OVER SURFACE ROUGHENED AREAS WITHOUT FIRST SMOOTHING OUT THE SURFACE.
- IN AREAS NOT SEEDED AND MULCHED AFTER SURFACE ROUGHENING, SURFACES SHALL BE RE-ROUGHENED AS NECESSARY TO MAINTAIN GROOVE DEPTH AND SMOOTH OVER ANY RILL EROSION.





ELEVATION
SCALE: 1/2" = 1'-0"

TERRACING INSTALLATION NOTES

- SEE PLAN VIEW FOR:
- WIDTH, "W", AND SLOPE, "Z".
- TERRACING IS NOT REQUIRED FOR SLOPES OF 4 TO 1 OR FLATTER.
- EARTH (VEGETATED) SLOPES STEEPER THAN 3 TO 1 ARE NOT ALLOWED ON THE SITE.

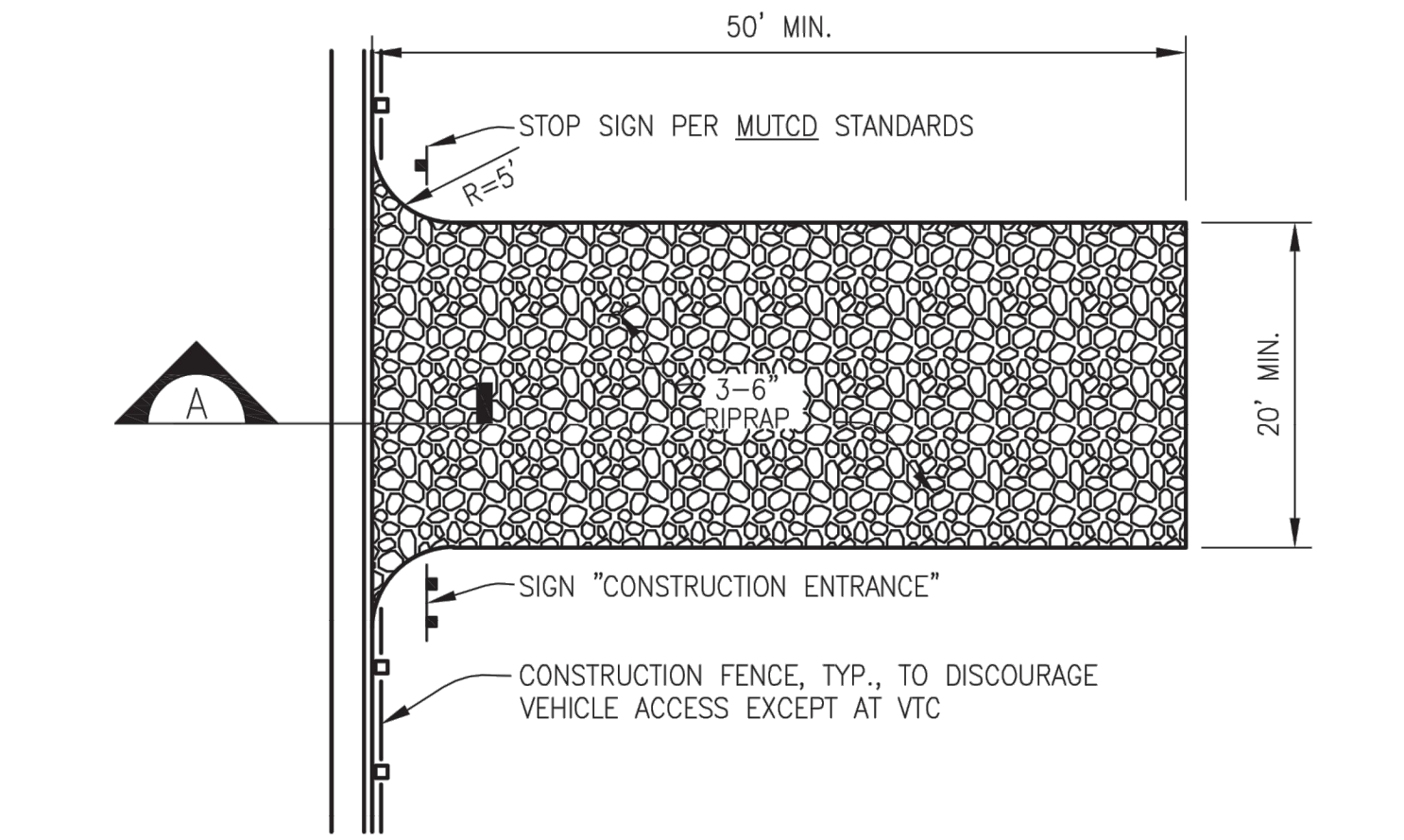
TERRACING MAINTENANCE NOTES

- THE RECOMMENDED INSPECTION FREQUENCY FOR TERRACING IS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY.
- ANY RILL EROSION OCCURRING ON SLOPES SHALL BE REPAIRED AND RESEEDED AND MULCHED IN ACCORDANCE WITH DETAIL 18.

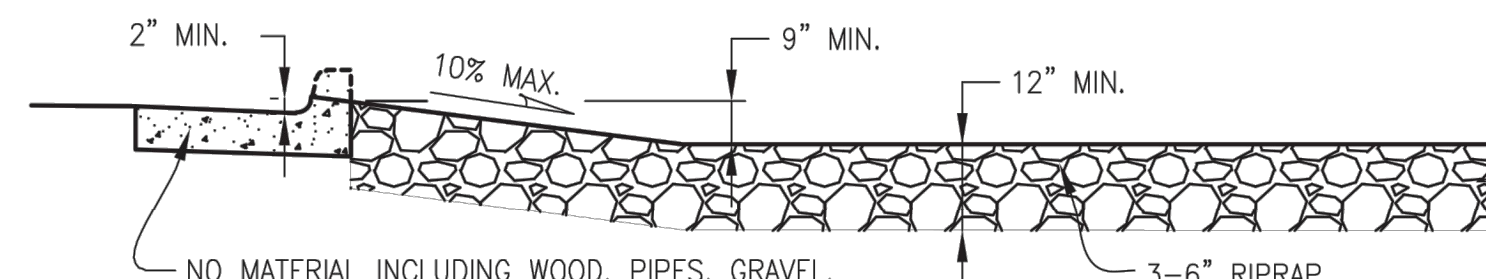


TERRACING

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PLAN
SCALE: 1" = 10'-0"



NO MATERIAL INCLUDING WOOD, PIPES, GRAVEL, OR ASPHALT, SHALL BE PLACED IN GUTTER TO FACILITATE MOUNTING CURB; HOWEVER, CURB MAY BE CUT DOWN TO A HEIGHT OF 2" OR HIGHER FOR EASIER ACCESS AND REPLACED AT PROJECT COMPLETION WITH A DOUGLAS COUNTY RIGHT-OF-WAY USE AND CONSTRUCTION PERMIT; DOUGLAS COUNTY TEMPORARY CONSTRUCTION ACCESS PERMIT IS REQUIRED FOR ALL VTC's

SECTION A
SCALE: 1/2" = 1'-0"

VEHICLE TRACKING CONTROL INSTALLATION NOTES

- VEHICLE TRACKING CONTROL PADS SHALL BE INSTALLED AT EVERY ACCESS POINT TO SITE.
- VEHICLE TRACKING CONTROL PADS SHALL CONSIST OF HARD, DENSE, DURABLE STONE, ANGULAR IN SHAPE AND RESISTANT TO WEATHERING. ROUNDED STONE OR BOULDERS WILL NOT BE ACCEPTABLE. THE STONES SHALL BE 3" WITH A MAXIMUM SIZE OF 6". THE STONE SHALL HAVE A SPECIFIC GRAVITY OF AT LEAST 2.6. CONTROL OF GRADATION WILL BE BY VISUAL INSPECTIONS.
- ANY CRACKED OR DAMAGED CURB AND GUTTER AND SIDEWALK SHALL BE REPLACED BY PERMITTEE.
- A DOUGLAS COUNTY TEMPORARY CONSTRUCTION ACCESS PERMIT IS REQUIRED FOR EACH POINT ONTO DOUGLAS COUNTY R.O.W.
- A STOP SIGN INSTALLED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), AS AMENDED, SHALL BE INSTALLED FOR EXITING TRAFFIC AT THE VTC.

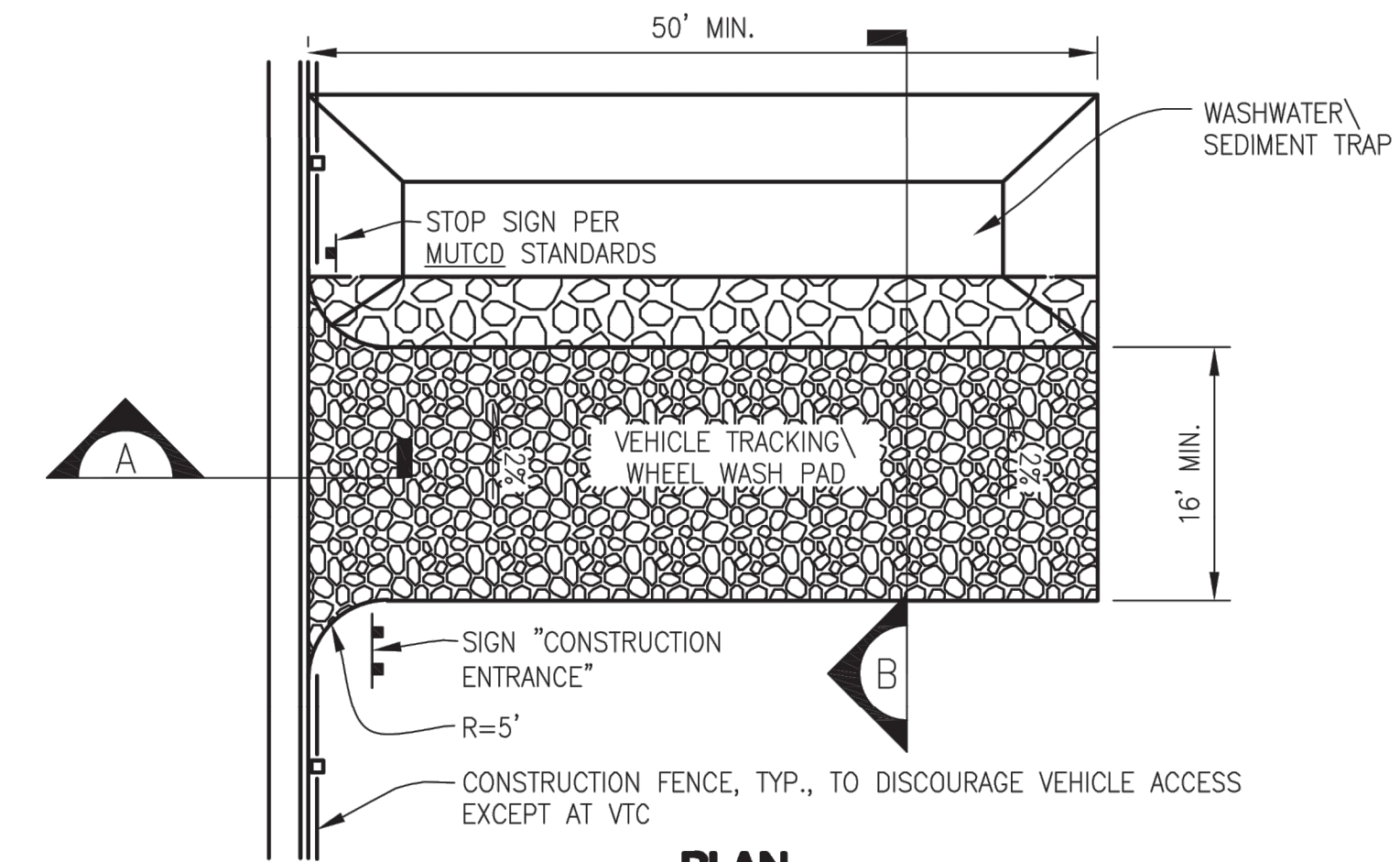
VEHICLE TRACKING CONTROL MAINTENANCE NOTES

- THE RECOMMENDED INSPECTION FREQUENCY FOR VEHICLE TRACKING CONTROL IS DAILY. GRAVEL SURFACE SHALL BE CLEAN AND LOOSE ENOUGH TO RUT SLIGHTLY UNDER WHEEL LOADS AND CAUSE LOOSE GRAVEL TO DISLodge MUD FROM TIRES. WHEN GRAVEL BECOMES COMPACTED OR FILLED WITH SEDIMENT SO THAT THE EFFECTIVENESS OF THE PAD IS DIMINISHED, CONTRACTOR SHALL RIP, TURN OVER, OR OTHERWISE LOOSEN GRAVEL, PLACE ADDITIONAL NEW GRAVEL, OR REPLACE WITH NEW GRAVEL AS NECESSARY TO RESTORE EFFECTIVENESS.
- VEHICLE TRACKING CONTROL SHALL BE REMOVED AT THE END OF CONSTRUCTION, THE GRAVEL MATERIAL REMOVED OR, IF APPROVED BY THE COUNTY, USED ON SITE, AND THE AREA TOPSOILED, DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED.

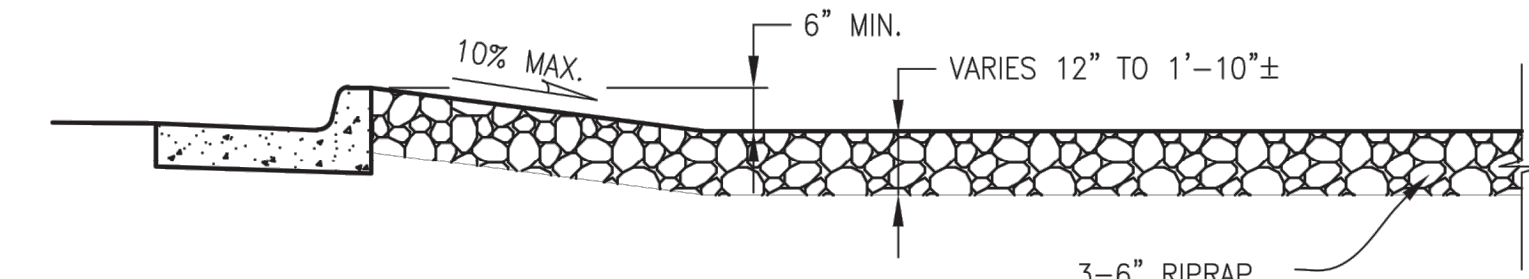


VEHICLE TRACKING CONTROL

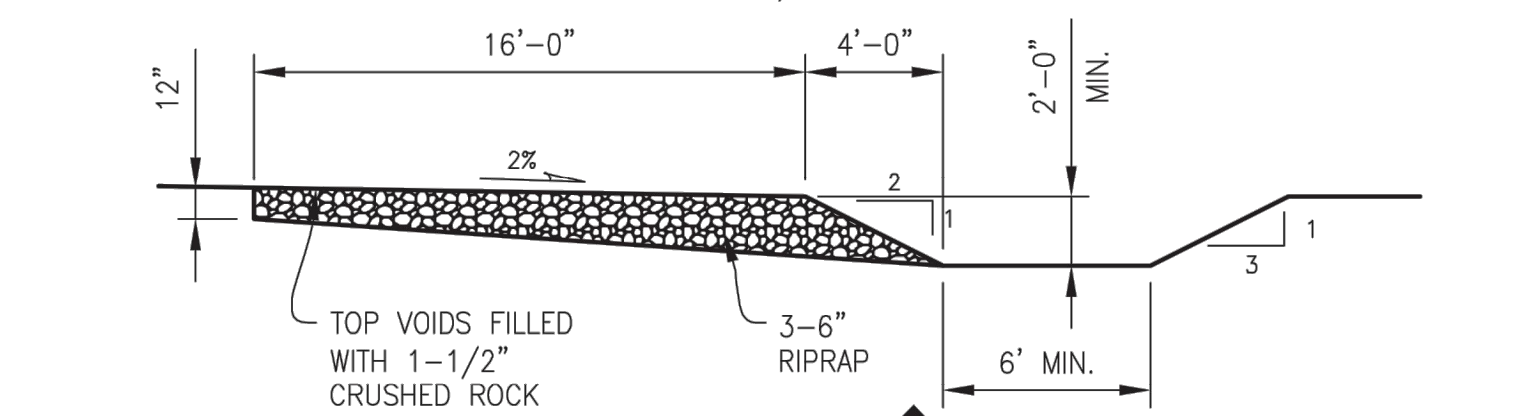
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PLAN
SCALE: 1" = 10'-0"



SECTION A
SCALE: 1/2" = 1'-0"



SECTION B
SCALE: 1" = 5'-0"

VEHICLE TRACKING CONTROL WITH WHEEL WASH INSTALLATION NOTES

- ALTHOUGH NOT NORMALLY USED, THE COUNTY RESERVES THE RIGHT TO REQUIRE VEHICLE TRACKING CONTROL WITH WHEEL WASH FACILITIES AT SITES WHERE TRACKING ONTO PAVED AREAS BECOMES A SIGNIFICANT PROBLEM.
- IF VEHICLE TRACKING CONTROL WITH WHEEL WASH FACILITIES ARE REQUIRED, ALL WHEELS ON EVERY VEHICLE LEAVING THE SITE SHALL BE CLEANED OF MUD USING A PRESSURE-WASHER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A WATER SOURCE.
- VEHICLE TRACKING CONTROL PADS SHALL CONSIST OF HARD, DENSE, DURABLE STONE, ANGULAR IN SHAPE AND RESISTANT TO WEATHERING. ROUNDED STONE OR BOULDERS WILL NOT BE ACCEPTABLE. THE STONES SHALL BE 3" WITH A MAXIMUM SIZE OF 6". THE STONE SHALL HAVE A SPECIFIC GRAVITY OF AT LEAST 2.6. CONTROL OF GRADATION WILL BE BY VISUAL INSPECTIONS.
- ANY CRACKED OR DAMAGED CURB AND GUTTER AND SIDEWALK SHALL BE REPLACED BY CONTRACTOR.
- A STOP SIGN INSTALLED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), AS AMENDED, SHALL BE INSTALLED FOR EXITING TRAFFIC AT THE VTC.

VEHICLE TRACKING CONTROL WITH WHEEL WASH MAINTENANCE NOTES

- THE RECOMMENDED INSPECTION FREQUENCY FOR VEHICLE TRACKING CONTROL WITH WHEEL WASH FACILITIES IS DAILY. ACCUMULATED SEDIMENTS SHALL BE REMOVED FROM PAD SURFACE.
- ACCUMULATED SEDIMENT IN THE WASHWATER/SEDIMENT TRAP SHALL BE REMOVED WHEN THE SEDIMENT DEPTH REACHES AN AVERAGE OF 12-INCHES.
- VEHICLE TRACKING CONTROL WITH WHEEL WASH FACILITY SHALL BE REMOVED AT THE END OF CONSTRUCTION, THE RIPRAP MATERIAL REMOVED OR, IF APPROVED BY THE COUNTY, USED ON SITE, AND THE AREA TOPSOILED, DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED.



VTC WITH WHEEL WASH

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ROCK AND RIPRAP GRADATIONS

TABLE 1. RIPRAP GRADATIONS

RIPRAP TYPE	D50 MEDIAN STONE SIZE (INCHES)	% OF MATERIAL SMALLER THAN TYPICAL STONE	TYPICAL STONE EQUIVALENT DIAMETER (INCHES)	TYPICAL STONE WEIGHT (POUNDS)
VL	6	70 – 100	12	85
		50 – 70	9	35
		35 – 50	6	10
		2 – 10	2	0.4
L	9	70 – 100	15	160
		50 – 70	12	85
		35 – 50	9	35
		2 – 10	3	1.3
M	12	70 – 100	21	440
		50 – 70	18	275
		35 – 50	12	85
		2 – 10	4	3
H	18	100	30	1280
		50 – 70	24	650
		35 – 50	18	275
		2 – 10	6	10
VH	24	100	42	3500
		50 – 70	33	1700
		35 – 50	24	650
		2 – 10	9	35

TABLE 2. RIPRAP BEDDING

SIEVE SIZE	MASS PERCENT PASSING SQUARE MESH SIEVES
	CLASS A
3"	100
1 1/2"	20 – 90
NO. 4	0 – 20
NO. 200	0 – 3

MATCHES SPECIFICATIONS FOR CDOT CLASS A FILTER MATERIAL AND UDFCD TYPE 1 BEDDING. ALL ROCK SHALL BE FRACTURED FACE, ALL SIDES.

TABLE 3. 1 1/2" CRUSHED ROCK

SIEVE SIZE	MASS PERCENT PASSING SQUARE MESH SIEVES
	NO. 4
2"	100
1 1/2"	90 – 100
1"	20 – 55
3/4"	0 – 15
3/8"	0 – 5

MATCHES SPECIFICATIONS FOR NO. 4 COARSE AGGREGATE FOR CONCRETE PER AASHTO M43. ALL ROCK SHALL BE FRACTURED FACE, ALL SIDES.

RIDGEGATE SENIOR
LONE TREE, CO

22A037

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REVISION:

DATE: 09/08/2023
DRAWN BY: AMT & TAL
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DETAILS

D-13



CITY OF LONE TREE

GESC Permit Opinion of Probable Cost

Project: RIDGEGATE SENIOR HOMES	Date: September 8, 2023
--	--------------------------------

BMP No.	BMP	ID	Unit	Installation Unit Cost	Quantity	Cost
1	Check Dam	CD	LF	\$ 24.00	0	\$ -
2	Compost Blanket	CB	SF	\$0.36	0	\$ -
3	Compost Filter Berm	CFB	LF	\$ 2.00	0	\$ -
4	Concrete Washout Area	CWA	EA	\$ 100.00	1	\$ 100.00
5	Construction Fence	CF	LF	\$ 2.00	345	\$ 690.00
6	Construction Markers	CM	LF	\$ 0.20	0	\$ -
7	Curb Sock	CS	LF	\$ 8.00	0	\$ -
8	Dewatering	DW	EA	\$ 600.00	0	\$ -
9	Diversion Ditch	DD	LF	\$ 1.60	0	\$ -
10	Erosion Control Blanket	ECB	SY	\$ 5.00	1,213	\$ 6,065.00
11	Inlet Protection	IP	LF	\$ 20.00	7	\$ 140.00
12	Reinforced Check Dam	RCD	LF	\$ 36.00	0	\$ -
13	Reinforced Rock Berm	RRB	LF	\$ 9.00	0	\$ -
14	RRB for Culvert Protection	RRC	LF	\$ 9.00	0	\$ -
15	Sediment Basin	SB	AC (1)	(2)	1.0	\$ 1,200.00
16	Sediment Control Log	SCL	LF	\$ 2.00	2,363	\$ 4,726.00
17	Sediment Trap	ST	EA	\$ 600.00	0	\$ -
18A	Seeding and Mulching - Mobilization	SM	EA	\$ 1,000.00	1	\$ 1,000.00
18B	Seeding and Mulching - Installation	SM	AC	\$ 750.00	1.4	\$ 1,072.50
19	Silt Fence	SF	LF	\$ 2.00	2,323	\$ 4,646.00
20	Stabilized Staging Area	SSA	SY	\$ 2.00	967	\$ 1,934.00
21	Surface Roughening	SR	AC	\$ 600.00	0.0	\$ -
22	Temporary Slope Drain	TSD	LF	\$ 30.00	0	\$ -
23	Temporary Stream Crossing	TSC	EA	\$ 1,000.00	0	\$ -
24	Terracing	TER	AC	\$ 600.00	0.0	\$ -
25	Vehicle Tracking Control	VTC	EA	\$ 1,000.00	1	\$ 1,000.00
26	VTC with Wheel Wash	WW	EA	\$ 1,500.00	0	\$ -
27	Temporary Batch Plant Restoration		AC	\$ 5,000.00	0.0	\$ -

(1) Upstream Tributary Acre	SUB-TOTAL	\$ 22,573.50
(2) SB Cost = \$1000 +\$200(Upstream Tributary Acres)	15% CONTINGENCY	\$ 3,386.03
	GESC SURETY TOTAL (1)	\$ 25,959.53

NOTE: (1) **MINIMUM SURETY shall be \$2,500.00** (Per Section 16-31-110 of City Zoning Code)

APPENDIX B
INSPECTION FORMS

**COLORADO DEPARTMENT OF TRANSPORTATION
STORMWATER FIELD INSPECTION REPORT AND WEEKLY MEETING NOTES -
ACTIVE CONSTRUCTION**

(1) Project Name:	(2) Project Contractor:	(3) SWMP Administrator:	Erosion Control Inspector:
(4) CDOT Project Engineer/CDOT Designee:	(5) Other Attendee(s) (Name and Title):		
(6) CDOT Project Number:	(7) Project Code (Sub Account #):	(8) CDPS-SCP Certification#:	(9) CDOT Region:
(10) Date of Project Inspection:	(11) Weather at Time of Inspection:		

(12) REASON FOR INSPECTION / EXCLUSION

Routine Inspection: (minimum every 7 Calendar Days)

Runoff Event: (Post-storm event inspections must be conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosion. If no construction activities will occur following a storm event, post-storm event inspections shall be conducted prior to re-commencing construction activities, but no later than 72 hours following the storm event. The occurrence of any such delayed inspection must be documented in the inspection record.) Routine inspections still must be conducted every 7 calendar days.
Storm Start Date: _____ Approximate End Time of Storm (hrs): _____

Third Party Request:

Winter Conditions Inspections Exclusion: Inspections are not required at sites where construction activities are temporarily halted, snow cover exists over the **entire site** for an extended period, **and melting conditions posing a risk of surface erosion do not exist**. This exception is applicable only during the period where **melting conditions do not exist**, and applies to the routine 7-day inspections, as well as the post-storm-event inspections. If **visual inspection** of the site verifies that all of these conditions are satisfied, document the conditions in section 18 (General Notes) and proceed to section 19 (Inspection Certification). Documentation must include: dates when snow cover occurred, date when construction activities ceased, and date when melting conditions began.

Other:

(13) SWMP MANAGEMENT

	Yes	No	NA	(g) Reason for N/A
(a) Is the SWMP notebook located on site?				
(b) Are changes to the SWMP documents noted and approved?				
(c) Are the inspection reports retained in the SWMP notebook?				
(d) Are corrective actions from the last inspection completed?				
(e) Is the Spill Response Plan updated in the SWMP notebook?				
(f) Is a list of potential pollutants updated in the SWMP notebook?				

(14) CURRENT CONSTRUCTION ACTIVITIES

(a) Describe current construction Activities

(b) Estimate of disturbed area at the time of the inspection, use guidance found in 208.04 (e):

	Acres	Notes
Temporary Stabilization		
Interim Stabilization		
Permanent Stabilization Completed		

(c) Has the SWMP Phased BMP Implementation Matrix been updated? Yes No

(15) WEEKLY MEETING NOTES

Notes from last meeting (date _____)

Items to discuss at next meeting (date _____)

(16) CONSTRUCTION SITE ASSESSMENT & CORRECTIVE ACTIONS **Off site Pollutant Discharges are a Violation of the Permit and Reason for Immediate Project Suspension**

The Construction Site Boundary/Limits of Construction (LOC) , all disturbed areas, material and/or waste storage areas that are exposed to precipitation, discharge locations, and locations where vehicles access the site shall be inspected for evidence of, or the **potential** for, pollutants leaving the LOC, entering the stormwater drainagesystem, or discharging to State waters. If there is evidence of sediment or other pollutants discharging from the site, see section 17 (Construction Site Assessment).

All erosion and sediment control practices identified in the SWMP shall be evaluated to ensure that they are maintained and operating correctly. Identify the condition of the BMP, using more than one letter if necessary: **(I)** Incorrect Installation; **(M)** Maintenance is needed; **(F)** BMP failed to operate; **(A)** Additional BMP is needed; **(R)** Remove BMP. Keep copies of this blank page for additional room if needed.

Continuous maintenance is required on all BMPs. **BMPs that are not operating effectively, have proven to be inadequate, or have failed must be addressed as soon as possible, immediately in most cases.**

Location	BMP	Condition	Comments:	Date Completed & Initials
			Description of Corrective Action and Preventative Measure Taken	

Stormwater Management Field Inspection Report Instructions

State waters are defined to be any and all surface and subsurface waters which are contained in or flow through the state, including, streams, rivers, lakes, drainage ditches, storm drains, ground water, and wetlands, but not including waters in sewage systems, waters in treatment works or disposal systems, waters in potable water distribution systems, and all water withdrawn for use until use and treatment have been completed. (Per subsection 107.25 and 25-8-103 (19) CRS)

(3) SWMP Administrator and Erosion Control Inspector: Indicate the name(s) of the individual responsible for implementing, maintaining and revising the SWMP. An Erosion Control Inspector(s) may be required see 208.03(c)2. for requirements.

(4) CDOT Project Engineer/CDOT Designee: Indicate the name of the CDOT representative performing the inspection with the SWMP Administrator/Erosion Control Inspector(s). This person should be the Project Engineer or an authorized representative.

(9) CDPS-SCP Certification #: Indicate the Colorado Discharge Permit System (CDPS) Stormwater Construction Permit (SCP) (for Stormwater Discharges Associated with Construction Activities) certification number, issued by CDPHE, for the project which the report is being completed. Certification number can be found on the first page of the SCP.

(12) Reason(s) for Inspection / Exclusion: Indicate the purpose for the inspection or exclusion. These inspections are required to comply with the CDOT Specifications and the CDPS-SCP.

- Routine Inspections. These inspections are required at least every 7 calendar days during active construction. Suspended projects require the 7 calendar day inspection unless snow cover exists over the entire site for an extended period of time, and melting conditions do not exist (see, Winter Conditions Inspections Exclusions).
- Runoff Event Inspection for Active Sites. See page 1 for definition.
- Third Party Request. Indicate the name of the third party requesting the inspection and, if known, the reason the request was made.
- Winter Conditions Inspections Exclusions. See page 1 for definition. An inspection does not need to be completed, but use this form to document the conditions that meet the Exclusion.
- Other. Specify any other reason(s) that resulted in the inspection.

(13) SWMP Management: Review the SWMP records and documents and use a ✓ to answer the question. To comply with CDOT Standard Specifications and the CDPS-SCP, all of the items identified must be adhered to. If No is checked, indicate the necessary corrective action in section 16 (Construction Site Assessment & Corrective Actions).

- (a)** Is the SWMP notebook located on site? A copy of the SWMP notebook must be retained on site, unless another location, specified by the permit, is approved by the Division.
- (b)** Are changes to the SWMP documents noted and approved? Indicate all changes that have been made to any portion of the SWMP notebook documents during construction. Changes shall be dated and signed at the time of occurrence. Amendments may include items listed in subsection 208.03(d).
- (c)** Are the inspection reports retained in the SWMP notebook? The SWMP Administrator shall keep a record of inspections. Inspection reports must identify any incidents of non-compliance with the terms and conditions of the CDOT specifications or the CDPS-SCP. Inspection records must be retained for three years from expiration or inactivation of permit coverage.
- (d)** Are corrective actions from the last inspection completed? Have corrective actions from the last inspection been addressed? Is a description of the corrective action(s), the date(s) of the corrective action(s), and the measure(s) taken to prevent future violations (including changes to the SWMP, as necessary) documented?
- (e)** Is a Spill Response Plan retained in the SWMP notebook? Subsection 208.06(c) requires that a Spill Response Plan be developed and implemented to establish operating procedures and that the necessary employee training be provided to minimize accidental releases of pollutants that can contaminate stormwater runoff. Records of spills, leaks or overflows that result in the discharge of pollutants must be documented and maintained. Information that should be recorded for all occurrences include the time and date, weather conditions, reasons for spill, etc. Some spills may need to be reported to the Water Quality Control Division immediately.
- (f)** Is a list of potential pollutants retained at the site? Subsection 107.25(b)6 requires the Erosion Control Supervisor to identify and describe all potential pollutant sources, including materials and activities, and evaluate them for the potential to contribute pollutants to stormwater discharge.
- (g)** If NA is checked for any of the items (a) through (f), indicate why in the space provided, if additional space is needed indicate in section 18 (General Notes).

Stormwater Management Field Inspection Report Instructions (continued)

(14) Current Construction Activities:

- (a) Provide a short description of the current construction activities/phase at the project site; include summary of grading activities, installation of utilities, paving, excavation, landscaping, etc.
- (b) Estimate of disturbed area at the time of the inspection, use guidance found in 208.04 (e). Estimate the acres of disturbed area at the time of the inspection. Include clearing, grading, excavation activities, areas receiving overburden (e.g. stockpiles), demolition areas and areas with heavy equipment/vehicle traffic, installation of new or improved haul roads and access roads, staging areas, borrow areas and storage that will disturb existing vegetative cover.
- (c) Has the Phased BMP Implementation Matrix on the SWMP been updated? As part of the inspection the Phased BMP Implementation matrix for both the structural and non-structural BMPs found at the beginning of the SWMP sheets must be reviewed to ensure that "In use on site" box is checked for BMPs currently use at the time of the inspection.

(15) **Weekly Meeting Notes:** The SWMP Administrator shall take notes of water quality comments and action items at each weekly meeting. At the meeting the following shall be discussed and documented:

- (1) Requirements of the SWMP.
- (2) Problems that may have arisen in implementing the site specific SWMP or maintaining BMPs.
- (3) Unresolved issues from inspections and concerns from last inspection
- (4) BMPs that are to be installed, removed, modified, or maintained.
- (5) Planned activities that will effect stormwater in order to proactively phase BMPs.
- (6) Recalcitrant inspection findings

(16) **Construction Site Assessment & Corrective Actions:** Inspect the construction site and indicate where BMP feature(s) identified in section 13 (SWMP Management), require corrective action. Erosion and sediment control practices identified in the SWMP shall be evaluated to ensure that they are operating correctly.

- Location. Site location (e.g., project station number, mile marker, intersection quadrant, etc.).
- BMP. Indicate the type of BMP at this location that requires corrective action (e.g., silt fence, erosion logs, soil retention blankets, etc.).
- Condition. Identify the condition of the BMP, using more than one letter (identified in section 16) if necessary.
- Description of Corrective Action and Preventative Measure Taken. Provide the proposed corrective action needed to bring the area or BMP into compliance. Once corrective actions are completed, state the measures taken to prevent future violations and ensure that the BMPs are operating correctly, including the required changes made to the SWMP.
- Date Completed & Initials. Date and initial when the corrective action was completed and the preventative measure statement finished.

(17) **Construction Site Assessment:** Was there any off site discharge of sediment at this site since the last inspection?

(a) Is there evidence of discharge of sediment or other pollutants from the site? **Off site pollutant discharges are a violation of the permit.** The construction site perimeter, all disturbed areas, material and/or waste storage areas that are exposed to precipitation, discharge locations, and locations where vehicles access the site shall be inspected for evidence of, or the **potential** for, pollutants leaving the construction site boundaries, entering the stormwater drainage system, or discharging to State water.

(b) Has sediment or other pollutants discharging from the site reached State waters? **Off site pollutant discharges are a violation of the permit.** If off site discharge has occurred, explain the discharge and the corrective actions in section 16 (Construction Site Assessment & Corrective Actions) or section 18 (General Notes).

(18) **General Notes:** Indicate any additional notes that add detail to the inspection; this may include positive practices noted on the project.

(19) **Inspection Certification:** In accordance with Part I, F.1.c of the CDPS-SCP, all reports for submittal shall be signed and certified for accuracy.

(20) **Compliance Certification:** In accordance with Part I, D.6.b.2.viii of the CDPS-SCP, compliance shall be certified through signature.

APPENDIX C
SPILL REPORT FORMS

Spill/Release Incident Reporting Form

1. Date of spill/release: _____
2. Location: _____
3. Time of spill/release: _____ a.m. / p.m.
4. Material spilled/released: _____
5. Amount spilled/released: _____
6. Cause of spill/release: _____
7. Description of scene (e.g., type of media contaminated (e.g., soil), distance to storm sewers, if spill/release was contained):

8. Description of clean-up actions taken (e.g., how spill/release was contained (e.g., absorbent pillows), where recovered material was placed, how much material was not recovered, remaining actions to be taken): _____

9. List of offsite emergency responders contacted:

10. List of offsite emergency responders at scene:

11. Action taken to prevent recurrence: _____

12. Signature: _____
Printed Name: _____

Use back of form for additional space as needed. Completed forms should be kept onsite.

APPENDIX D
GENERAL PERMIT APPLICATION



COLORADO

Department of Public Health & Environment

Dedicated to protecting and improving the health and environment of the people of Colorado

ASSIGNED PERMIT NUMBER

Date Received ____/____/____
MM DD YYYY
Revised: 10-2017

STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES APPLICATION COLORADO DISCHARGE PERMIT SYSTEM (CDPS)

PHOTO COPIES, FAXED COPIES, PDF COPIES OR EMAILS WILL NOT BE ACCEPTED.

For Applications submitted on paper - Please print or type. Original signatures are required.

All items must be completed accurately and in their entirety for the application to be deemed complete. Incomplete applications will not be processed until all information is received which will ultimately delay the issuance of a permit. If more space is required to answer any question, please attach additional sheets to the application form. Applications or signature pages for the application may be submitted by mail or hand delivered to:

Colorado Department of Public Health and Environment, 4300 Cherry Creek Drive South, WQCD-P-B2, Denver, CO 80246-1530

For Applications submitted electronically

Please note that you can ONLY complete the feedback form by downloading it to a PC or Mac/Apple computer and opening the Application with Adobe Reader or a similar PDF reader. The form will NOT work with web browsers, Google preview, Mac preview software or on mobile devices using iOS or Android operating systems.

If application is submitted electronically, processing of the application will begin at that time and not be delayed for receipt of the signed document.

Any additional information that you would like the Division to consider in developing the permit should be provided with the application. Examples include effluent data and/or modeling and planned pollutant removal strategies.

Beginning July 1, 2016, invoices will be based on acres disturbed.

DO NOT PAY THE FEES NOW - Invoices will be sent after the receipt of the application.

Disturbed Acreage for this application (see page 4)

- Less than 1 acre (\$83 initial fee, \$165 annual fee)
- 1-30 acres (\$175 initial fee, \$350 annual fee)
- Greater than 30 acres (\$270 initial fee, \$540 annual fee)

PERMIT INFORMATION

Reason for Application: NEW CERT RENEW CERT EXISTING CERT# _____

Applicant is: Property Owner Contractor/Operator

A. CONTACT INFORMATION - *indicates required

* PERMITTED ORGANIZATION FORMAL NAME: _____

1) * PERMIT OPERATOR - the party that has operational control over day to day activities - may be the same as owner.

Responsible Person (Title): _____

Currently Held By (Person): FirstName: _____ LastName: _____

Telephone: _____ Email Address: _____

Organization: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Per Regulation 61 : All reports required by permits, and other information requested by the Division shall be signed by the permittee or by a duly authorized representative of that person. A person is a duly authorized representative only if:

- (i) The authorization is made in writing by the permittee
- (ii) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
- (iii) The written authorization is submitted to the Division

2) **OWNER - party has ownership or long term lease of property - may be the same as the operator.**

Same as 1) Permit Operator

Responsible Person (Title): _____

Currently Held By (Person): FirstName: _____ LastName: _____

Telephone: _____ Email Address: _____

Organization: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Per Regulation 61 : All reports required by permits, and other information requested by the Division shall be signed by the permittee or by a duly authorized representative of that person. A person is a duly authorized representative only if:

- i. The authorization is made in writing by the permittee.
- ii. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a **named individual** or any individual occupying a **named position**); and
- iii. The written authorization is submitted to the Division.

3) ***SITE CONTACT** local contact for questions relating to the facility & discharge authorized by this permit for the facility

Same as 1) Permit Operator

Responsible Person (Title): _____

Currently Held By (Person): FirstName: _____ LastName: _____

Telephone: _____ Email Address: _____

Organization: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

4) ***BILLING CONTACT** if different than the permittee.

Same as 1) Permit Operator

Responsible Person (Title): _____

Currently Held By (Person): FirstName: _____ LastName: _____

Telephone: _____ Email Address: _____

Organization: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

5) **OTHER CONTACT TYPES (check below) Add pages if necessary:**

Responsible Person (Title): _____

Currently Held By (Person): FirstName: _____ LastName: _____

Telephone: _____ Email Address: _____

Organization: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Environmental Contact

Consultant

Stormwater MS4 Responsible Person

Inspection Facility Contact

Compliance Contact

Stormwater Authorized Representative

B) PERMITTED PROJECT/FACILITY INFORMATION

Project/Facility Name _____

Street Address or Cross Streets _____

(e.g., Park St and 5 Ave; CR 21 and Hwy 10; 44 Ave and Clear Creek) ; A street name without an address, intersection, mile marker, or other identifying information describing the location of the project is not adequate. For **linear projects**, the route of the project should be described as best as possible using the starting point for the address and latitude and longitude - more clearly defined in the required map)

City: _____ County: _____ Zip Code: _____

Facility Latitude/Longitude - List the latitude and longitude of the excavation(s) resulting in the discharge(s). If the exact soil disturbing location(s) are not known, list the latitude and longitude of the center point of the construction project. If using the center point, be sure to specify that it is the center point of construction activity. The preferred method is GPS and Decimal Degrees.

Latitude _____ . _____ Longitude _____ . _____ (e.g., 39.70312°, 104.93348°)
Decimal Degrees (to 5 decimal places) Decimal Degrees (to 5 decimal places)

This information may be obtained from a variety of sources, including:

- **Surveyors or engineers** for the project should have, or be able to calculate, this information.
- **U.S. Geological Survey topographical map(s)**, available at area map stores.
- Using a **Global Positioning System (GPS) unit** to obtain a direct reading.
- **Google** - enter address in search engine, select the map, right click on location, and select "what's here".

Note: the latitude/longitude required above is not the directional degrees, minutes, and seconds provided on a site legal description to define property boundaries.

C) MAP (Attachment) If no map is submitted, the application cannot be submitted.

Map: Attach a map that indicates the site location and that CLEARLY shows the boundaries of the area that will be disturbed. A vicinity map is not adequate for this purpose.

D) LEGAL DESCRIPTION - only for Subdivisions

Legal description: If subdivided, provide the legal description below, or indicate that it is not applicable (**do not** supply Township/Range/Section or metes and bounds description of site)

Subdivision(s): _____ Lot(s): _____ Block(s) _____

OR Not applicable (site has not been subdivided)

E) AREA OF CONSTRUCTION SITE - SEE PAGE 1 - WILL DETERMINE FEE

Provide both the total area of the construction site, and the area that will undergo disturbance, in acres.

Total area of project disturbance site (acres): _____

Note: aside from clearing, grading and excavation activities, disturbed areas also include areas receiving overburden (e.g., stockpiles), demolition areas, and areas with heavy equipment/vehicle traffic and storage that disturb existing vegetative cover.

Part of Larger Common Plan of Development or Sale, (i.e., total, including all phases, filings, lots, and infrastructure not covered by this application)

F) NATURE OF CONSTRUCTION ACTIVITY

Check the appropriate box(es) or provide a brief description that indicates the general nature of the construction activities. (The full description of activities must be included in the Stormwater Management Plan.)

- Commercial Development
- Residential Development
- Highway and Transportation Development
- Pipeline and Utilities (including natural gas, electricity, water, and communications)
- Oil and Gas Exploration and Well Pad Development
- Non-structural and other development (i.e. parks, trails, stream realignment, bank stabilization, demolition, etc.)

G) ANTICIPATED CONSTRUCTION SCHEDULE

Construction Start Date: _____ Final Stabilization Date: _____

- *Construction Start Date* - This is the day you expect to begin ground disturbing activities, including grubbing, stockpiling, excavating, demolition, and grading activities.
- *Final Stabilization Date* - in terms of permit coverage, this is when the site is finally stabilized. This means that all ground surface disturbing activities at the site have been completed, and all disturbed areas have been either built on, paved, or a uniform vegetative cover has been established with an individual plant density of at least 70 percent of pre-disturbance levels. **Permit coverage must be maintained until the site is finally stabilized. Even if you are only doing one part of the project, the estimated final stabilization date must be for the overall project.** If permit coverage is still required once your part is completed, the permit certification may be transferred or reassigned to a new responsible entity(s).

H) RECEIVING WATERS (If discharge is to a ditch or storm sewer, include the name of the ultimate receiving waters)

Immediate Receiving Water(s): _____

Ultimate Receiving Water(s): _____

Identify the receiving water of the stormwater from your site. Receiving waters are any waters of the State of Colorado. This includes all water courses, even if they are usually dry. If stormwater from the construction site enters a ditch or storm sewer system, identify that system and indicate the ultimate receiving water for the ditch or storm sewer. **Note:** a stormwater discharge permit does not allow a discharge into a ditch or storm sewer system without the approval of the owner/operator of that system.

I) SIGNATURE PAGE

1. You may print and sign this document and mail the hard copy to the State along with required documents (address on page one).

2. Electronic Submission Signature

You may choose to submit your application electronically, along with required attachments. To do so, click the SUBMIT button below which will direct you, via e-mail, to sign the document electronically using the DocuSign Electronic Signature process. Once complete, you will receive via e-mail, an electronically stamped Adobe pdf of this application. Print the signature page from the electronically stamped pdf, sign it and mail it to the WQCD Permits Section to complete the application process (address is on page one of the application).

- The Division encourages use of the electronic submission of the application and electronic signature. This method meets signature requirements as required by the State of Colorado.
- The ink signed copy of the electronically stamped pdf signature page is also required to meet Federal EPA Requirements.
- Processing of the application will begin with the receipt of the valid electronic signature.

STORMWATER MANAGEMENT PLAN CERTIFICATION

By checking this box "I certify under penalty of law that a complete Stormwater Management Plan, as described in the stormwater management plan guidance, has been pre-pared for my activity. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the Stormwater Management Plan is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for falsely certifying the completion of said SWMP, including the possibility of fine and imprisonment for knowing violations."

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

"I understand that submittal of this application is for coverage under the State of Colorado General Permit for Stormwater Discharges Associated with Construction Activity for the entirety of the construction site/project described and applied for, until such time as the application is amended or the certification is transferred, inactivated, or expired." [Reg 61.4(1)(h)]

For DocuSign
Electronic Signature _____ Ink Signature _____ Date: _____

Signature of Legally Responsible Person or Authorized Agent (submission must include original signature)

Name (printed) Title

Signature: The applicant must be either the owner and operator of the construction site. Refer to Part B of the instructions for additional information.

The application must be signed by the applicant to be considered complete. In all cases, it shall be signed as follows:

(Regulation 61.4 (1e))

- In the case of corporations, by the responsible corporate officer is responsible for the overall operation of the facility from which the discharge described in the form originates
- In the case of a partnership, by a general partner.
- In the case of a sole proprietorship, by the proprietor.
- In the case of a municipal, state, or other public facility, by either a principal executive officer, ranking elected official, (a principal executive officer has responsibility for the overall operation of the facility from which the discharge originates).

3rd Party Preparer: If this form was prepared by an authorized agent on behalf of the Permittee, please complete the field below.

Preparer Name (printed) Email Address

**DO NOT INCLUDE A COPY OF THE STORMWATER MANAGEMENT PLAN
DO NOT INCLUDE PAYMENT—AN INVOICE WILL BE SENT AFTER THE CERTIFICATION IS ISSUED.**
