PREDEVELOPMENT GRADING FOR ROLLING HILLS RANCH NORTH AT MERIDIAN RANCH

PREPARED FOR GTL, INC. DBA GTL DEVELOPMENT, INC.

A PARCEL OF LAND LOCATED IN A PORTION OF SECTIONS 20 AND 21,
IN TOWNSHIP 12 SOUTH, RANGE 64 WEST OF THE 6TH PRINCIPAL MERIDIAN,
EL PASO COUNTY, STATE OF COLORADO.

UTILITY CONTACTS:

WATER – MERIDIAN SERVICE METROPOLITAN DISTRICT
POC: BRADEN MCCRORY
(719)–495–6567

SANITARY SEWER – MERIDIAN SERVICE METROPOLITAN DISTRICT
POC: BRADEN McCRORY
(719)–495–6567

DRAINAGE – EL PASO COUNTY DSD/INSPECTIONS
(719)–520–6300

DRAINAGE – MERIDIAN SERVICE METROPOLITAN DISTRICT
POC: TOM KERBY
(719)–495–7444

GAS – BLACK HILLS ENERGY
(719)–393–6625

ELECTRIC – MOUNTAIN VIEW ELECTRIC ASSOC.
(719)–495–2283

GEOTECHNICAL ENGINEER – ENTECH ENGINEERING, INC.
(719)–531–5599

FALCON FIRE PROTECTION DISTRICT
(719) 495–4050

CAUTION - NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOW ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

LEGAL DESCRIPTION:

KNOW ALL MEN BY THESE PRESENTS:
THAT GTL, INC. DBA GTL DEVELOPMENT, INC., THEODORE TCHANG, PRESIDENT AND EL PASO COUNTY BEING THE OWNERS OF PROPERTY UNDERLYING THE FOLLOWING DESCRIBED TRACT OF LAND:

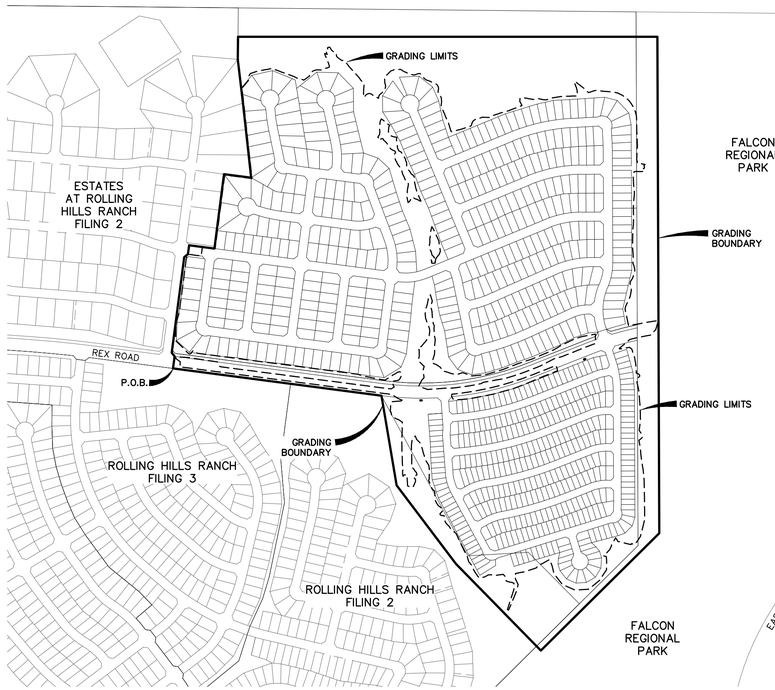
A PARCEL OF LAND LOCATED IN A PORTIONS OF SECTION 20 AND 21,
IN TOWNSHIP 12 SOUTH, RANGE 64 WEST OF THE 6TH PRINCIPAL MERIDIAN, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

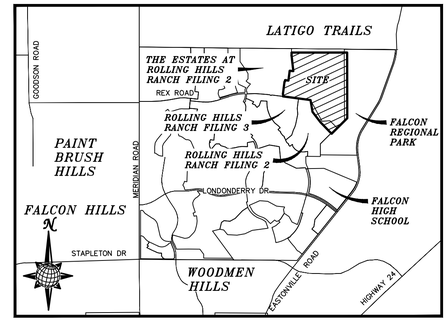
BEGINNING AT A POINT ON THE SOUTHEASTERN MOST CORNER OF THE ESTATES AT ROLLING HILLS RANCH FILING NO. 2, RECORDED WITH RECEPTION NO. 222714944 IN THE RECORDS OF EL PASO COUNTY;

THE FOLLOWING ELEVEN (11) COURSES ARE ON SAID BOUNDARY OF THE ESTATES AT ROLLING HILLS RANCH FILING NO. 2.

1.THENCE N07°26'02"W A DISTANCE OF 80.00 FEET;
2.THENCE N37°33'58"W A DISTANCE OF 31.11 FEET;
3.THENCE N07°26'02"W A DISTANCE OF 636.00 FEET;
4.THENCE N52°26'02"E A DISTANCE OF 31.11 FEET;
5.THENCE N07°26'02"W A DISTANCE OF 60.00 FEET;
6.THENCE S82°33'58"E A DISTANCE OF 168.00 FEET;
7.THENCE N07°26'02"W A DISTANCE OF 495.00 FEET;
8.THENCE S82°33'58"E A DISTANCE OF 180.00 FEET;
9.THENCE N06°14'24"W A DISTANCE OF 495.03 FEET;
10.THENCE N06°47'53"W A DISTANCE OF 290.00 FEET;
11.THENCE N00°34'17"W A DISTANCE OF 149.26 FEET;
12.THENCE N00°00'00"E A DISTANCE OF 2,767.24 FEET;
13.THENCE S00°13'03"E A DISTANCE OF 3,275.30 FEET;
14.THENCE S45°14'56"W A DISTANCE OF 1,100.00 FEET;
15.THENCE N44°24'40"W A DISTANCE OF 800.00 FEET;
16.THENCE N37°01'57"W A DISTANCE OF 650.00 FEET;
17.THENCE N09°54'46"W A DISTANCE OF 600.00 FEET;
18.THENCE N82°33'58"W A DISTANCE OF 1,387.37 FEET TO THE POINT OF BEGINNING.

THE ABOVE PARCEL OF LAND CONTAINS 206.887 ACRES, MORE OR LESS.





VICINITY MAP
N.T.S.

SHEET	SHEET INDEX
1	COVER SHEET
2	INDEX SHEET
3–14	LAYOUT SHEETS
15	CUT–FILL SHEETS
16–23	DETAIL SHEETS

TWO WORKING DAYS
BEFORE YOU DIG CALL 811
OR
UTILITY NOTIFICATION CENTER OF COLORADO
1–800–922–1987
(SEE COVER FOR LIST OF UTILITY CONTACTS)

BASIS OF BEARING

BASIS OF BEARINGS FOR THIS DESCRIPTION IS THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SECTION 29, T12S, R64W OF THE 6TH P.M., WHICH IS ASSUMED TO BEAR S89°25'42"E FROM THE SOUTHWEST CORNER OF SECTION 29 (A STONE W/SCRIBED "X") TO THE SOUTH QUARTER CORNER OF SECTION 29 (3.25" ALUM. CAP LS 30087).

BENCH MARK

1) MRRC1 – 3 1/4" ALUMINUM CAP ON NO.6 REBAR LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF LONDONDERRY DRIVE AND ANGELES ROAD. LOCATED AT THE SE CORNER OF THE MERIDIAN RANCH RECREATIONAL CENTER SIGN. ELEVATION – 7098.40'

2) MRMS1 – 3 1/4" ALUMINUM CAP ON NO.6 REBAR LOCATED ON THE WEST SIDE OF RAINBOW BRIDGE DRIVE 1,150 FEET NORTH OF LONDONDERRY DRIVE. LOCATED NEAR THE BACK OF SIDE WALK AT THE NW CORNER OF RAINBOW BRIDGE DRIVE AND THE NORTHERLY ENTRANCE TO MERIDIAN RANCH ELEMENTARY SCHOOL (10480 RAINBOW BRIDGE DRIVE). ELEVATION – 7099.73'

DEVELOPERS STATEMENT:

DEVELOPERS STATEMENT:

THE UNDERSIGNED DEVELOPER HAS READ AND WILL COMPLY WITH ALL OF THE REQUIREMENTS SPECIFIED IN THESE GRADING AND EROSION CONTROL PLAN AND THE ACCOMPANYING DRAINAGE REPORT.

RAUL GUZMAN, VICE PRESIDENT
GTL DEVELOPMENT, INC.

5/12/2022
DATE

OWNERS STATEMENT:

OWNERS STATEMENT:

THE UNDERSIGNED OWNER HAS READ AND WILL COMPLY WITH ALL OF THE REQUIREMENTS SPECIFIED IN THESE GRADING AND EROSION CONTROL PLAN AND THE ACCOMPANYING DRAINAGE REPORT.

RAUL GUZMAN, VICE PRESIDENT
MERIDIAN RANCH INVESTMENTS, INC.

5/12/2022
DATE

RAUL GUZMAN, VICE PRESIDENT
GTL DEVELOPMENT, INC.

5/12/2022
DATE

DESIGN ENGINEER'S STATEMENT:

THIS GRADING AND EROSION CONTROL PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR GRADING AND EROSION CONTROL PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THIS PLAN.

COLORADO REGISTERED THOMAS A. KERBY 31429 PROFESSIONAL ENGINEER

THOMAS A. KERBY, P.E. #31429

EL PASO COUNTY:

COUNTY PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH COUNTY DESIGN CRITERIA. THE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE COUNTY THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA, AND ENGINEERING CRITERIA MANUAL AS AMENDED.

IN ACCORDANCE WITH ECM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS FROM THE DATE SIGNED BY THE EL PASO COUNTY ENGINEER. IF CONSTRUCTION HAS NOT STARTED WITHIN THOSE 2 YEARS, THE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL, INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND COMMUNITY DEVELOPMENT DIRECTORS DISCRETION.

JENNIFER IRVINE, P.E.
COUNTY ENGINEER / ECM ADMINISTRATOR

DATE

No.	Revisions	Date	Init.	Appr.	Date
1					
2					
3					
4					

TECH CONTRACTORS
11886 STAPLETON DRIVE
FALCON, CO 80831
TELEPHONE: 719.495.7444
FAX: 719.495.2457

MERIDIAN RANCH

PREDEVELOPMENT GRADING
ROLLING HILLS RANCH NORTH
ROUGH GRADING AND EROSION
CONTROL PLAN
COVER SHEET

Drawn by LCG | Checked by TAK | Date MAY 2022

Scale AS SHOWN | 1 of 23

PCD PROJECT NO. EPG222

EL PASO COUNTY STANDARD NOTES:

1. STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF SITE WATERS, INCLUDING WETLANDS.

2. NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS TO REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.

3. A SEPARATE STORMWATER MANAGEMENT PLAN (SWMP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. MANAGEMENT OF THE SWMP DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR. THE SWMP SHALL BE LOCATED ON SITE AT ALL TIMES AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.

4. ONCE THE ESQCP IS APPROVED AND A "NOTICE TO PROCEED" HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE APPROVED GEC. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY STAFF.

5. CONTROL MEASURES MUST BE INSTALLED PRIOR COMMENCEMENT OF ACTIVITIES THAT COULD CONTRIBUTE POLLUTANTS TO STORMWATER. CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, AND DISTURBED LAND AREAS SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF THE DISTURBANCE.

6. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REMAIN IN EFFECTIVE OPERATING CONDITION UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND FINAL STABILIZATION IS ESTABLISHED. ALL PERSONS ENGAGED IN LAND DISTURBANCE ACTIVITIES SHALL ASSESS THE ADEQUACY OF CONTROL MEASURES AT THE SITE AND IDENTIFY IF CHANGES TO THOSE CONTROL MEASURES ARE NEEDED TO ENSURE THE CONTINUED EFFECTIVE PERFORMANCE OF THE CONTROL MEASURES. ALL CHANGES TO TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES MUST BE INCORPORATED INTO THE STORMWATER MANAGEMENT PLAN.

7. TEMPORARY STABILIZATION SHALL BE IMPLEMENTED ON DISTURBED AREAS AND STOCKPILES WHERE GROUND DISTURBING CONSTRUCTION ACTIVITY HAS PERMANENTLY CEASED OR TEMPORARILY CEASED FOR LONGER THAN 14 DAYS.

8. FINAL STABILIZATION MUST BE IMPLEMENTED AT ALL APPLICABLE CONSTRUCTION SITES. FINAL STABILIZATION IS ACHIEVED WHEN ALL GROUND DISTURBING ACTIVITIES ARE COMPLETE AND ALL DISTURBED AREAS EITHER HAVE A UNIFORM VEGETATIVE COVER WITH INDIVIDUAL PLANT DENSITY OF 70 PERCENT OF PRE-DISTURBANCE LEVELS ESTABLISHED OR EQUIVALENT PERMANENT ALTERNATIVE STABILIZATION METHOD IS IMPLEMENTED. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED UPON FINAL STABILIZATION AND BEFORE PERMIT CLOSURE.

9. ALL PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE INSTALLED AS DESIGNED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT EFFECT THE DESIGN OR FUNCTION OF PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE ECM ADMINISTRATOR PRIOR TO IMPLEMENTATION.

10. EARTH DISTURBANCES SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY MINIMIZE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION. ALL DISTURBANCES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME. PRE-EXISTING VEGETATION SHALL BE PROTECTED AND MAINTAINED WITHIN 50 HORIZONTAL FEET OF A WATERS OF THE STATE UNLESS SHOWN TO BE INFEASIBLE AND SPECIFICALLY REQUESTED AND APPROVED.

11. COMPACTION OF SOIL MUST BE PREVENTED IN AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES OR WHERE FINAL STABILIZATION WILL BE ACHIEVED BY VEGETATIVE COVER. AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES SHALL ALSO BE PROTECTED FROM SEDIMENTATION DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED. IF COMPACTION PREVENTION IS NOT FEASIBLE DUE TO SITE CONSTRAINTS, ALL AREAS DESIGNATED FOR INFILTRATION AND VEGETATION CONTROL MEASURES MUST BE LOOSENED PRIOR TO INSTALLATION OF THE CONTROL MEASURE(S).

12. ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE A STABILIZED CONVEYANCE DESIGNED TO MINIMIZE EROSION AND THE DISCHARGE OF SEDIMENT OFF SITE.

13. CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO ENTER STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES. CONCRETE WASHOUTS SHALL NOT BE LOCATED IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT, OR WITHIN 50 FEET OF A SURFACE WATER BODY, CREEK OR STREAM.

14. DURING DEWATERING OPERATIONS OF UNCONTAMINATED GROUND WATER MAY BE DISCHARGED ON SITE, BUT SHALL NOT LEAVE THE SITE IN THE FORM OF SURFACE RUNOFF UNLESS AN APPROVED STATE DEWATERING PERMIT IS IN PLACE.

15. EROSION CONTROL BLANKETING OR OTHER PROTECTIVE COVERING SHALL BE USED ON SLOPES STEEPER THAN 3:1.

16. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO CONSTRUCTION DEBRIS, TREE SLASH, BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.

17. WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. CONTROL MEASURES MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.

18. TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF-SITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.

19. THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, SOIL, AND SAND THAT MAY ACCUMULATE IN ROADS, STORM DRAINS AND OTHER DRAINAGE CONVEYANCE SYSTEMS AND STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.

20. THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY REQUIRED TO PERFORM THE WORK IN AN ORDERLY SEQUENCE. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS.

21. NO CHEMICAL(S) HAVING THE POTENTIAL TO BE RELEASED IN STORMWATER ARE TO BE STORED OR USED ONSITE UNLESS PERMISSION FOR THE USE OF SUCH CHEMICAL(S) IS GRANTED IN WRITING BY THE ECM ADMINISTRATOR. IN GRANTING APPROVAL FOR THE USE OF SUCH CHEMICAL(S), SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.

22. BULK STORAGE OF ALLOWED PETROLEUM PRODUCTS OR OTHER ALLOWED LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL REQUIRE ADEQUATE SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS ONSITE AND TO PREVENT ANY SPILLED MATERIALS FROM ENTERING STATE WATERS, ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR OTHER FACILITIES.

23. NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE CURB AND GUTTER OR DITCH EXCEPT WITH APPROVED SEDIMENT CONTROL MEASURES.

24. OWNER/DEVELOPER AND THEIR AGENTS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 25, ARTICLE 8, CRS), AND THE "CLEAN WATER ACT" (33 USC 1344), IN ADDITION TO THE REQUIREMENTS OF THE LAND DEVELOPMENT CODE, DCM VOLUME II AND THE ECM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (1041, NPDES, FLOODPLAIN, 404, FUGITIVE DUST, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND OTHER LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, LOCAL, OR COUNTY AGENCIES, THE MOST RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.

25. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE ONLY AT APPROVED CONSTRUCTION ACCESS POINTS.

26. PRIOR TO CONSTRUCTION THE PERMITTEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.

27. A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND SHALL BE UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.

28. THE SOILS REPORTS FOR THIS SITE ARE ROLLING HILLS RANCH NORTH FILING 1 & 2 DATED APRIL 20, 2022 AND ROLLING HILLS RANCH DATED JULY, 15, 2019 BOTH HAVE BEEN PREPARED BY ENTECH ENGINEERING, INC. AND SHALL BE CONSIDERED A PART OF THESE PLANS.

29. AT LEAST TEN DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB ONE (1) ACRE OR MORE, THE OWNER OR OPERATOR OF CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SWMP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR INFORMATION OR APPLICATION MATERIALS CONTACT:

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
WATER QUALITY CONTROL DIVISION
WQCD - PERMITS
4300 CHERRY CREEK DRIVE SOUTH
DENVER, CO 80246-1530
ATTN: PERMITS UNIT

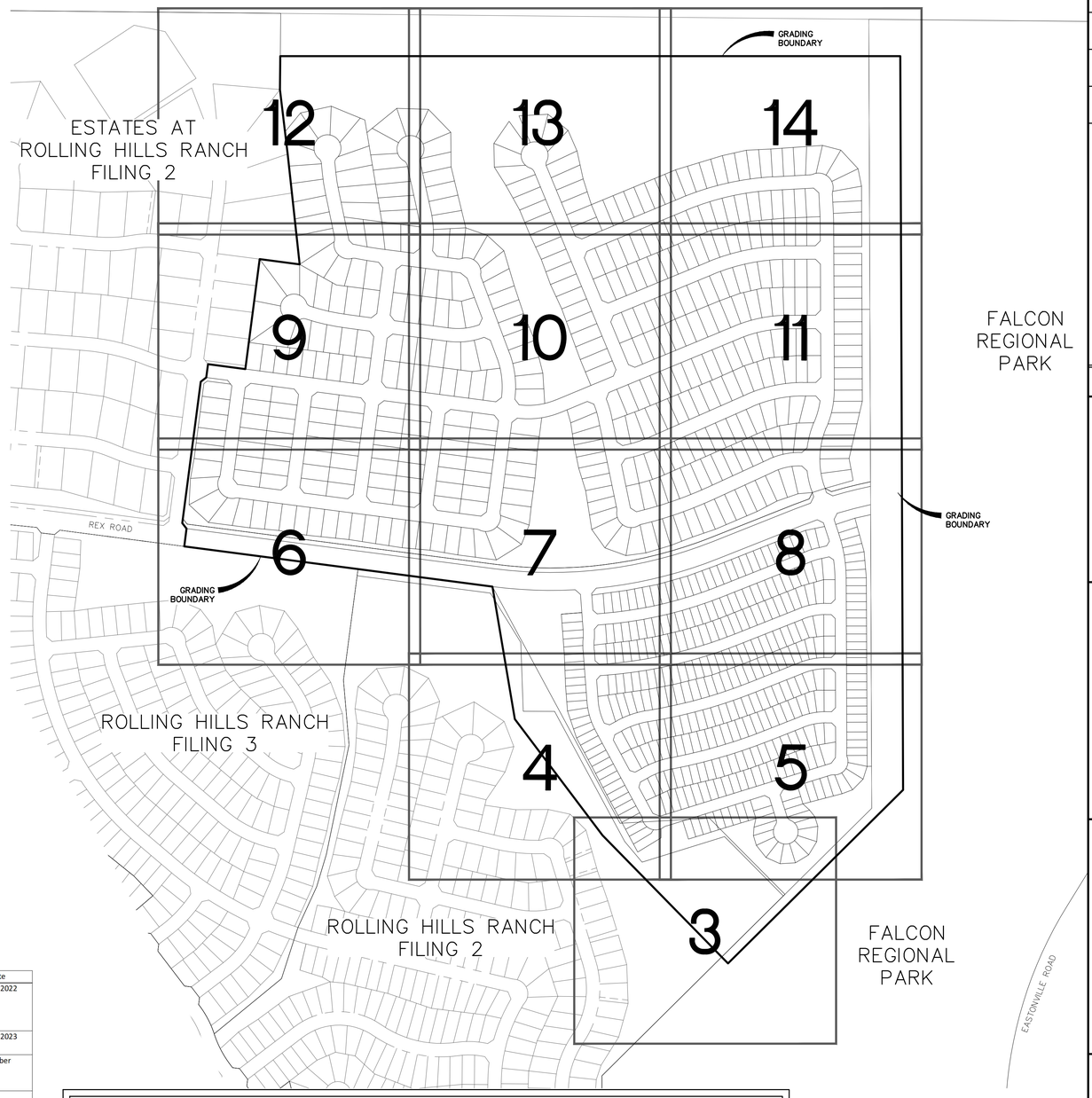
N

GRAPHIC SCALE

300 0 150 300 600 1200

(IN FEET)

1 inch = 300 ft.



Stage	Description	Control Measures	Begin Date	End Date
Stage 1	Overlot Grading	Silt fence & VTC Temporary Sed. Basins Swale Checks as needed Surface Roughening	June 2022	August 2022
Stage 2	Underground utilities Surface Improvements	Perimeter Control Inlet Protection	August 2022	August 2023
Stage 3	Home Construction	Inlet Protection Individual Lot Perimeter Control	November 2022	November 2025
Final Stabilization	Permit Close	Final Stabilization Permanent Seeding Permanent Measures	November 2025	

EARTHWORK QUANTITIES

NET YARDS	BALANCE	
TOTAL STRIPPINGS	157.9 AC.	84,915 CY
	CUT	FILL
NET YARDS	320,730 CY	320,730 CY

20% COMPACTION FACTOR

NOTE:
1) EXISTING VEGETATION ON THE PROJECT SITE AND THE IN SURROUNDING AREAS CONSISTS OF A MIXTURE OF NATIVE GRASSES AND WEEDS WITH COVERAGE APPROXIMATING 50% DENSITY UNLESS OTHERWISE NOTED. SOME AREAS HAVE NEGLIGIBLE VEGETATIVE GROWTH AT THIS TIME AS THE SITE WAS PREVIOUSLY GRADED AND RE-SEEDED OR USED AS A BUILDERS' STOCKPILE LOCATION. AREAS PREVIOUSLY GRADED HAS BEEN RE-SEEDED WITH THE APPROVED COUNTY SEED MIX.
2) MATERIAL STORAGE, TOPSOIL STOCKPILES(EDFCD: MM-2), STAGING(UDFCD: SM-6), CONCRETE WASHOUT AND WASTE AREAS SHALL BE IDENTIFIED BY THE CONTRACTOR PRIOR TO START OF CONSTRUCTION AND ADJUSTED AS NECESSARY.
3) THERE IS NO CONCRETE BATCH PLANT ASSOCIATED WITH THIS PROJECT.
4) NO SLOPES GREATER THAN 3:1 ARE EXPECTED ON THIS SITE. SLOPES GREATER THAN 3:1 REQUIRE EROSION CONTROL BLANKET.
5) MIRIFI FABRIC TO BE PLACED BELOW ALL RIP-RAP.

TWO WORKING DAYS
BEFORE YOU DIG
CALL 811
OR
UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987
(SEE COVER FOR LIST OF UTILITY CONTACTS)

No.	Revisions	Date	Init.	Appr.	Date
1		.			
2		.			
3		.			
4		.			

TECH CONTRACTORS
11886 STAPLETON DRIVE
FALCON, CO 80831
TELEPHONE: 719.495.7444
FAX: 719.495.2457

MERIDIAN RANCH

PREDEVELOPMENT GRADING
ROLLING HILLS RANCH NORTH
ROUGH GRADING AND EROSION
CONTROL PLAN
GRADING INDEX SHEET

Drawn by LCG | Checked by TAK | Date MAY 2022

Scale AS SHOWN | 2 of 23

COLORADO REGISTERED 31429 PROFESSIONAL ENGINEER 5.12.22

PCD PROJECT NO. EPG222

SEE SHEET 4

SEE SHEET 5

TEMP. SED. BASIN 5

TEMP. INLET STRUCTURE (SEE SHEET 16)

54" RCP (SEE SHEET 16)

LIMITS OF GRADING

3:1

4:1

IMPACT STILLING BASIN & FOREBAY (SEE SHEET 17)

STRAW WATTLE

LIMITS OF GRADING

POND CHANNEL (SEE SHEET 16)

WQCV
(SEE DRAINAGE REPORT
FOR DETAILED INFORMATION)

ULTIMATE FINAL FUTURE FLOWS DETENTION POND G
100-YEAR STORAGE VOLUME = 24.8 AC-FT
100-YEAR STORAGE ELEVATION = 7030.10
Q_{100} IN = 653 CFS
Q_{100} OUT = 450 CFS
5-YEAR STORAGE VOLUME = 8.9 AC-FT
5-YEAR STORAGE ELEVATION = 7027.50
Q_5 IN = 101 CFS
Q_5 OUT = 21 CFS
WQCV = 0.9 AC-FT

GRADING PERMIT BOUNDARY

GRADING PERMIT BOUNDARY

EX. REGIONAL PARK WATER SERVICE

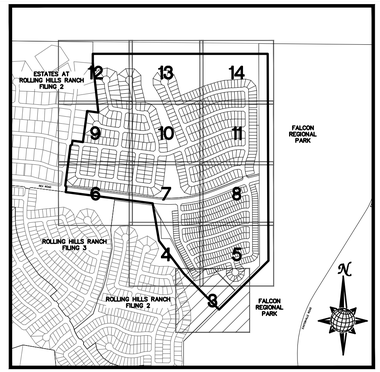
ROLLING HILLS RANCH FILING 2 TRACT G

EXISTING 40' DRAINAGE & GRADING EASEMENT

EXISTING 120' DRAINAGE & UTILITY EASE

FALCON REGIONAL PARK

MORNING HILLS DR.



INDEX MAP

N.T.S.

LEGEND

SYMBOL	ACRONYM	DESCRIPTION
		STRAW BALES PER DETAIL SHEET 23
		EROSION WATTLES PER DETAIL SHEET 23
OR		EROSION CONTROL BLANKET PER DETAIL ECB-1 & ECB-2 DCM VOL. 2
	RCP	REINFORCED CONCRETE PIPE
	SF	SILT FENCE PER DETAIL SF-1, SF-2 & SF-3 DCM VOL. 2
	VTC	VEHICLE TRACKING CONTROL PER DETAIL VT-2 DCM VOL. 2
IP	IP	INLET PROTECTION PER DETAIL SHEET 23
		LIMITS OF GRADING
7150		EXISTING CONTOUR (10')
		EXISTING CONTOUR (2')
7150		PROPOSED CONTOUR (10')
		PROPOSED CONTOUR (2')
		CONSTRUCTION BOUNDARY
		FLOW DIRECTION
2.00%		GRADE
A		LOT GRADE TYPE

NOTE:
ALL CONTOURS SHOWN WITHIN THE PLAN SET ARE TO FINISHED SURFACE. ALL STREET SECTIONS ARE TO BE GRADED TO ROUGH SUB-GRADE AS SHOWN IN THEIR RESPECTIVE TYPICAL STREET SECTION SHOWN ON SHEET 22.

CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES.
EX. UTILITIES SEE CONSTRUCTION DRAWINGS FOR:
1) ESTATES AT ROLLING HILLS RANCH FILING 2
2) ROLLING HILLS RANCH FILING 3
3) ROLLING HILLS RANCH FILING 2
4) ROLLING HILLS RANCH FILING 1
5) ROUGH GRADING FOR ROLLING HILLS RANCH
6) EASTONVILLE RAW WATER PIPELINE
7) MSMD PUMP STATION AND WATER TANK WATER TRANSMISSION LINES AND ROAD

N

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)

1 inch = 50 ft.

TWO WORKING DAYS
BEFORE YOU DIG
CALL 811
OR
UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987
(SEE COVER FOR LIST OF UTILITY CONTACTS)

No.	Revisions	Date	Init.	Appr.	Date
1		.	.	.	.
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TECH CONTRACTORS
11886 STAPLETON DRIVE
FALCON, CO 80831
TELEPHONE: 719.495.7444
FAX: 719.495.2457

MERIDIAN RANCH

PREDEVELOPMENT GRADING
ROLLING HILLS RANCH NORTH
ROUGH GRADING AND EROSION
CONTROL PLAN
PLAN SHEET

Drawn by LCG | Checked by TAK | Date MAY 2022

Scale AS SHOWN | 3 of 23

COLORADO REGISTERED PROFESSIONAL ENGINEER
31429
5.12.22

PCD PROJECT NO. EPG222

SEE SHEET 7

CROSS-SECTION DETAIL SEE SHEET 17

B B'

54" RCP (SEE SHEET 18)

7060

7058

7056

7054

7052

7050

7048

7046

7044

7042

7040

7038

7036

7034

LIMITS OF GRADING

237 CY TYPE M RIP-RAP

OUTLET PROTECTION (SEE SHEET 18)

STRAW WATTLE

CURLEX I EXCELSIOR EROSION CONTROL BLANKET OR APPROVED EQUAL PLACED WITHIN 5 DAYS OF SEEDING APPROX. 405 SY

SF

-2.00%

-4.00%

-0.75%

-0.77%

-1.00%

OVERLOOK BLUFF DR.

MORNING RIDGE DR.

MORNING HILLS DR.

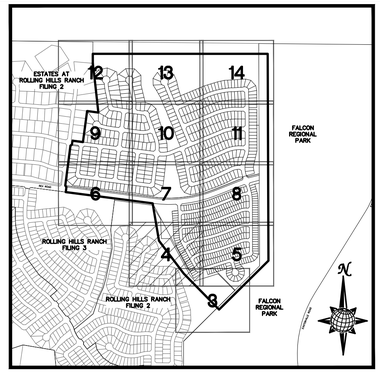
ROLLING HILLS RANCH FILING 2 TRACT G

GRADING PERMIT BOUNDARY

LIMITS OF GRADING

SEE SHEET 5

SEE SHEET 3



INDEX MAP

N.T.S.

LEGEND

SYMBOL	ACRONYM	DESCRIPTION
		STRAW BALES PER DETAIL SHEET 23
		EROSION WATTLES PER DETAIL SHEET 23
OR		EROSION CONTROL BLANKET PER DETAIL ECB-1 & ECB-2 DCM VOL. 2
	RCP	REINFORCED CONCRETE PIPE
	SF	SILT FENCE PER DETAIL SF-1, SF-2 & SF-3 DCM VOL. 2
	VTC	VEHICLE TRACKING CONTROL PER DETAIL VT-2 DCM VOL. 2
IP	IP	INLET PROTECTION PER DETAIL SHEET 23
		LIMITS OF GRADING
7150		EXISTING CONTOUR (10')
		EXISTING CONTOUR (2')
7150		PROPOSED CONTOUR (10')
		PROPOSED CONTOUR (2')
		CONSTRUCTION BOUNDARY
		FLOW DIRECTION
2.00%		GRADE
A		LOT GRADE TYPE

NOTE:
ALL CONTOURS SHOWN WITHIN THE PLAN SET ARE TO FINISHED SURFACE. ALL STREET SECTIONS ARE TO BE GRADED TO ROUGH SUB-GRADE AS SHOWN IN THEIR RESPECTIVE TYPICAL STREET SECTION SHOWN ON SHEET 22.

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50 0 25 50 100 200

(IN FEET)

1 inch = 50 ft.

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MERIDIAN RANCH

PREDEVELOPMENT GRADING
ROLLING HILLS RANCH NORTH
ROUGH GRADING AND EROSION
CONTROL PLAN
PLAN SHEET

Drawn by LCG | Checked by TAK | Date MAY 2022

Scale AS SHOWN | 4 of 23

COLORADO REGISTERED 31429 PROFESSIONAL ENGINEER 5-12-22

PCD PROJECT NO. EPG222

SEE SHEET 8

SEE SHEET 4

SEE SHEET X

EXISTING
40' DRAINAGE
& GRADING EASEMENT

SEE SHEET 17

FALCON
REGIONAL
PARK

EX.
REGIONAL PARK
WATER SERVICE

CURLEX I EXCELSIOR
EROSION CONTROL BLANKET
OR APPROVED EQUAL
PLACED WITHIN 5 DAYS
OF SEEDING
APPROX. 3,001 SY

GRADING
PERMIT
BOUNDARY

LIMITS OF
GRADING

4:1

SF

EXISTING
40' UTILITY EASEMENT

STRAW
WATTLE

EX.
REGIONAL PARK
WATER SERVICE

70 CY
TYPE L RIP-RAP

EXISTING
40' DRAINAGE
& GRADING EASEMENT

FALCON
REGIONAL
PARK

TEMP. SED. BASIN 5

TEMP. INLET STRUCTURE
(SEE SHEET 16)

54" RCP
(SEE SHEET 16)

3:1

IMPACT STILLING BASIN & FOREBAY
(SEE SHEET 17)

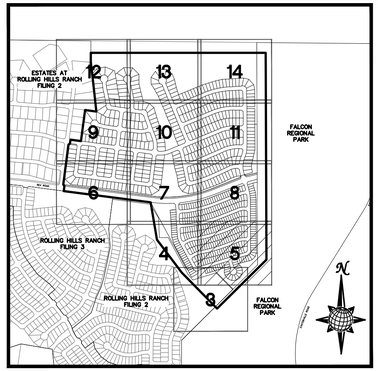
STRAW
WATTLE

LIMITS OF
GRADING

ROLLING HILLS
RANCH FILING 2
TRACT G

-0.75%

-0.50%



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	SF	SILT FENCE PER DETAIL SF-1, SF-2 & SF-3 DCM VOL. 2
	VTC	VEHICLE TRACKING CONTROL PER DETAIL VT-2 DCM VOL. 2
IP	IP	INLET PROTECTION PER DETAIL SHEET 23
		LIMITS OF GRADING
		EXISTING CONTOUR (10')
		EXISTING CONTOUR (2')
7150		PROPOSED CONTOUR (10')
		PROPOSED CONTOUR (2')
		CONSTRUCTION BOUNDARY
		FLOW DIRECTION
2.00%		GRADE
A		LOT GRADE TYPE

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WATER TRANSMISSION LINES AND ROAD

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MERIDIAN RANCH

PREDEVELOPMENT GRADING
ROLLING HILLS RANCH NORTH
ROUGH GRADING AND EROSION
CONTROL PLAN
PLAN SHEET

Drawn by	Checked by	Date
LCG	TAK	MAY 2022

Scale	Sheet
AS SHOWN	5 of 23

COLORADO REGISTERED
31429
PROFESSIONAL ENGINEER
5-12-22

PCD PROJECT NO. EPG222

22

ESTATES AT ROLLING HILLS RANCH FILING 2

GRADING PERMIT BOUNDARY

CRESCENT CREEK DR.

1

ESTATE RIDGE DR.

LIMITS OF GRADING

REX ROAD

VTC

EX. TYPE III MOVABLE BARRICADE

CLOSED R11-2

GRADING PERMIT BOUNDARY

LIMITS OF GRADING

EX. ELECTRIC VAULT (PROTECT IN PLACE)

APPROX. LOCATION OF MVEA FACILITIES (FIELD VERIFY AND PROTECT IN PLACE)

ROLLING HILLS RANCH FILING 3 TRACT A

ROLLING HILLS RANCH FILING 2 TRACT G

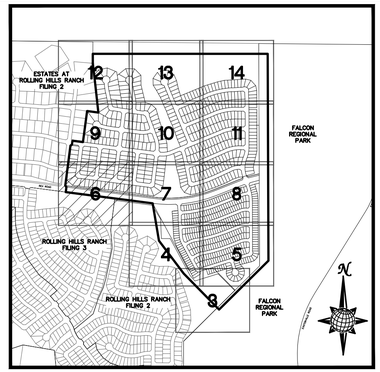
CROOKED BLUFF DR.

CROOKED HILL DR.

89 90 91 92 93 94 196 109 110 111 112 113 114 115 116

SEE SHEET 9

SEE SHEET 7



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MERIDIAN RANCH

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ROLLING HILLS RANCH NORTH
ROUGH GRADING AND EROSION
CONTROL PLAN
PLAN SHEET

Drawn by	Checked by	Date
LCG	TAK	MAY 2022

Scale	Sheet
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COLORADO REGISTERED PROFESSIONAL ENGINEER
31429
5.12.22

PCD PROJECT NO. EPG222

SEE SHEET 10

SEE SHEET 6

SEE SHEET 8

SEE SHEET 4

TEMP. SED. BASIN 3

4'x10'x1.5' TYPE L RIP-RAP 2.2 CY

TEMP. 8" PVC WATER QUALITY PIPE (SEE DETAIL SHEET 16)

VMAX SC250 TURF REINFORCING MAT(TRM) OR APPROVED EQUAL PLACED PER MANUFACTURER'S SPEC. WITHIN 5 DAYS OF SEEDING SEE DETAILS SHEET 19

PROPOSED WQ MAINTENANCE EASEMENT

CURLEX I EXCELSIOR EROSION CONTROL BLANKET OR APPROVED EQUAL PLACED WITHIN 5 DAYS OF SEEDING APPROX. 264 SY

TYPE H RIP-RAP 188 CY

4:1

MODIFIED TYPE D INLET (SEE DETAILS SHEET 18)

LIMITS OF GRADING

TYPE L RIP-RAP 7 CY

EX. ELECTRIC VAULT (PROTECT IN PLACE)

EX. ELECTRIC LOCATE (PROTECT IN PLACE)

APPROX. LOCATION OF MVEA FACILITIES (FIELD VERIFY AND PROTECT IN PLACE)

EX. RIP-RAP (TO BE REMOVED)

EX. 12" PVC WATER QUALITY PIPE (TO BE REMOVED)

GRADING PERMIT BOUNDARY

CROSS-SECTION DETAIL SEE SHEET 17

54" RCP (SEE SHEET 18)

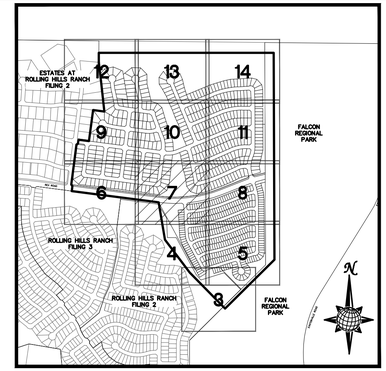
-2.00%

-1.00%

-0.75%

+2.00%

-4.00%



INDEX MAP

N.T.S.

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IP	IP	INLET PROTECTION PER DETAIL SHEET 23
		LIMITS OF GRADING
7150		EXISTING CONTOUR (10')
		EXISTING CONTOUR (2')
7150		PROPOSED CONTOUR (10')
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		CONSTRUCTION BOUNDARY
		FLOW DIRECTION
2.00%		GRADE
A		LOT GRADE TYPE

NOTE:
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WATER TRANSMISSION LINES AND ROAD

N

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)

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1-800-922-1987
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TECH CONTRACTORS
11886 STAPLETON DRIVE
FALCON, CO 80831
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FAX: 719.495.2457

MERIDIAN RANCH

PREDEVELOPMENT GRADING
ROLLING HILLS RANCH NORTH
ROUGH GRADING AND EROSION
CONTROL PLAN
PLAN SHEET

Drawn by	Checked by	Date
LCG	TAK	MAY 2022

Scale	
AS SHOWN	7 of 23

COLORADO REGISTERED PROFESSIONAL ENGINEER
31429
5-12-22

PCD PROJECT NO. EPG222

SEE SHEET 11

SEE SHEET 7

SEE SHEET 5

LIMITS OF GRADING

EXISTING 40' DRAINAGE & GRADING EASEMENT

FALCON REGIONAL PARK

EXISTING 120' CONSTRUCTION EASEMENT

TEMP. 8" PVC WATER QUALITY PIPE (SEE DETAIL SHEET 16)

CURLEX I EXCELSIOR EROSION CONTROL BLANKET OR APPROVED EQUAL PLACED WITHIN 5 DAYS OF SEEDING APPROX. 81 SY

TEMP. SED. BASIN 4

4'x10'x1.5' TYPE L RIP-RAP 2.2 CY

EX. 8" PVC WATER QUALITY PIPE (TO BE REMOVED)

EX. ELECTRIC VAULT (PROTECT IN PLACE)

EX. RIP-RAP (TO BE REMOVED)

APPROX. LOCATION OF MVEA FACILITIES (FIELD VERIFY AND PROTECT IN PLACE)

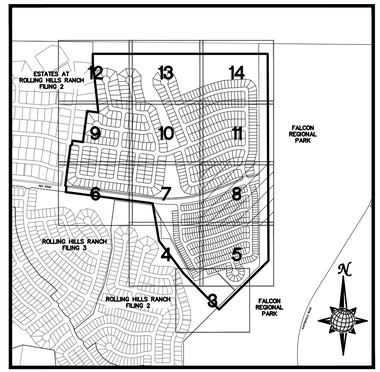
CURLEX I EXCELSIOR EROSION CONTROL BLANKET OR APPROVED EQUAL PLACED WITHIN 5 DAYS OF SEEDING APPROX. 3,001 SY

STRAW WATTLE

GRADING PERMIT BOUNDARY

EXISTING 40' DRAINAGE & GRADING EASEMENT

SEE SHEET 17



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MERIDIAN RANCH

PREDEVELOPMENT GRADING
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ROUGH GRADING AND EROSION
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Drawn by	Checked by	Date
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AS SHOWN	8 of 23

COLORADO LICENSED
JASON R. KEATING
31429
5-12-22
PROFESSIONAL ENGINEER

PCD PROJECT NO. EPG222

SEE SHEET 12

GRADING PERMIT BOUNDARY

LIMITS OF GRADING

ESTATES AT ROLLING HILLS RANCH FILING 2

ESTATE RIDGE DR.

SUNRISE RIDGE DR.

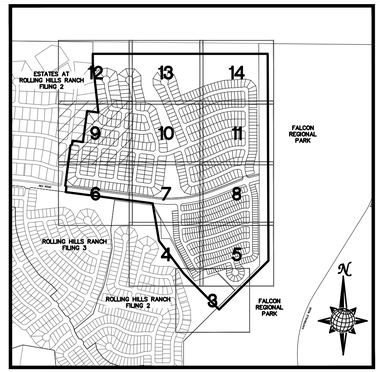
EX. TYPE III MOVABLE BARRICADE (NO CONSTRUCTION ACCESS)
ROAD CLOSED R11-2

GRADING PERMIT BOUNDARY

SEE SHEET 6

SEE SHEET 10

69 70 71 72 73 74 75 76 77 23 22



INDEX MAP
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Drawn by	Checked by	Date
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Scale	Sheet
AS SHOWN	9 of 23

COLORADO REGISTERED 31429 PROFESSIONAL ENGINEER 5.12.22

PCD PROJECT NO. EPG222

SEE SHEET 13

SEE SHEET 9

SEE SHEET 11

SEE SHEET 7

LIMITS OF GRADING

VMAX SC250 TURF REINFORCING MAT(TRM)
OR APPROVED EQUAL
PLACED PER MANUFACTURER'S SPEC.
WITHIN 5 DAYS OF SEEDING
SEE DETAILS SHEET 19

CURLEX I EXCELSIOR
EROSION CONTROL BLANKET
OR APPROVED EQUAL
PLACED WITHIN 5 DAYS
OF SEEDING
APPROX. 994 SY

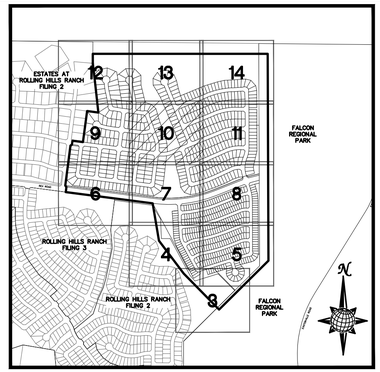
TYPE M RIP-RAP
80 CY

TEMP. SED. BASIN 1

TEMP. SED. BASIN 2

TEMP. 8" PVC
WATER QUALITY PIPE
(SEE DETAIL SHEET 16)

(2)4'x10'x1.5'
TYPE L RIP-RAP
2.2 CY EACH



INDEX MAP

N.T.S.

LEGEND

SYMBOL	ACRONYM	DESCRIPTION
		STRAW BALES PER DETAIL SHEET 23
		EROSION WATTLES PER DETAIL SHEET 23
OR		EROSION CONTROL BLANKET PER DETAIL ECB-1 & ECB-2 DCM VOL. 2
	RCP	REINFORCED CONCRETE PIPE
	SF	SILT FENCE PER DETAIL SF-1, SF-2 & SF-3 DCM VOL. 2
	VTC	VEHICLE TRACKING CONTROL PER DETAIL VT-2 DCM VOL. 2
IP	IP	INLET PROTECTION PER DETAIL SHEET 23
		LIMITS OF GRADING
7150		EXISTING CONTOUR (10')
		EXISTING CONTOUR (2')
7150		PROPOSED CONTOUR (10')
		PROPOSED CONTOUR (2')
		CONSTRUCTION BOUNDARY
		FLOW DIRECTION
2.00%		GRADE
A		LOT GRADE TYPE

NOTE:
ALL CONTOURS SHOWN WITHIN THE PLAN SET ARE TO FINISHED SURFACE. ALL STREET SECTIONS ARE TO BE GRADED TO ROUGH SUB-GRADE AS SHOWN IN THEIR RESPECTIVE TYPICAL STREET SECTION SHOWN ON SHEET 22.

CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES.
EX. UTILITIES SEE CONSTRUCTION DRAWINGS FOR:
1) ESTATES AT ROLLING HILLS RANCH FILING 2
2) ROLLING HILLS RANCH FILING 3
3) ROLLING HILLS RANCH FILING 2
4) ROLLING HILLS RANCH FILING 1
5) ROUGH GRADING FOR ROLLING HILLS RANCH
6) EASTONVILLE RAW WATER PIPELINE
7) MSMD PUMP STATION AND WATER TANK WATER TRANSMISSION LINES AND ROAD

N

GRAPHIC SCALE

50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

TWO WORKING DAYS
BEFORE YOU DIG
CALL 811
OR
UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987
(SEE COVER FOR LIST OF UTILITY CONTACTS)

No.	Revisions	Date	Init.	Appr.	Date
1		.	.	.	.
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TECH CONTRACTORS
11886 STAPLETON DRIVE
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FAX: 719.495.2457

MERIDIAN RANCH

PREDEVELOPMENT GRADING
ROLLING HILLS RANCH NORTH
ROUGH GRADING AND EROSION
CONTROL PLAN
PLAN SHEET

Drawn by	Checked by	Date
LCG	TAK	MAY 2022

Scale	Sheet
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COLORADO LICENSED
31429
PROFESSIONAL ENGINEER
12-22

PCD PROJECT NO. EPG222

SEE SHEET 14

SEE SHEET 10

SEE SHEET 8

VMAX SC250 TURF REINFORCING MAT(TRM)
OR APPROVED EQUAL
PLACED PER MANUFACTURER'S SPEC.
WITHIN 5 DAYS OF SEEDING
SEE DETAILS SHEET 21

LIMITS OF GRADING

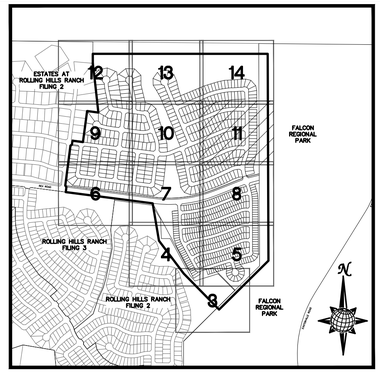
EXISTING
40' DRAINAGE
& GRADING EASEMENT

FALCON REGIONAL PARK

GRADING PERMIT BOUNDARY

LIMITS OF GRADING

EXISTING
40' DRAINAGE
& GRADING EASEMENT



INDEX MAP
N.T.S.

LEGEND

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		FLOW DIRECTION
2.00%		GRADE
A		LOT GRADE TYPE

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N

GRAPHIC SCALE

50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

TWO WORKING DAYS
BEFORE YOU DIG CALL 811
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UTILITY NOTIFICATION CENTER OF COLORADO
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FAX: 719.495.2457

MERIDIAN RANCH

PREDEVELOPMENT GRADING ROLLING HILLS RANCH NORTH ROUGH GRADING AND EROSION CONTROL PLAN PLAN SHEET

Drawn by	Checked by	Date
LCG	TAK	MAY 2022

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COLORADO REGISTERED PROFESSIONAL ENGINEER
31429
5.12.22

PCD PROJECT NO. EPG222

FALCON LATCO LLC
SCH. NO 4200000345

GRADING PERMIT BOUNDARY

GRADING PERMIT BOUNDARY

CURLEX I EXCELSIOR EROSION CONTROL BLANKET OR APPROVED EQUAL PLACED WITHIN 5 DAYS OF SEEDING APPROX. 993 SY

LIMITS OF GRADING

STRAW WATTLE SEE SHEET 17

SEE SHEET 13

LIMITS OF GRADING

GRADING PERMIT BOUNDARY

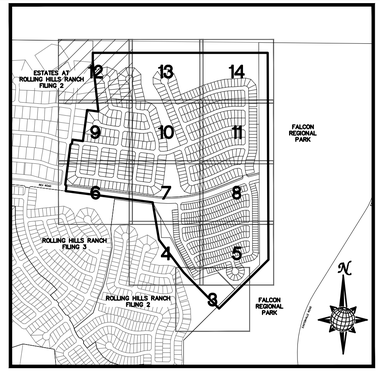
SEE SHEET 9

ESTATES AT ROLLING HILLS RANCH FILING 2

ESTATE RIDGE DR.

64 65 66 63 62 67 60 61 68

2.00% 1.50% 4.00% 3.00%



INDEX MAP

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GRAPHIC SCALE

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(IN FEET)
1 inch = 50 ft.

TWO WORKING DAYS
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MERIDIAN RANCH

PREDEVELOPMENT GRADING
ROLLING HILLS RANCH NORTH
ROUGH GRADING AND EROSION
CONTROL PLAN
PLAN SHEET

Drawn by	Checked by	Date
LCG	TAK	MAY 2022

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AS SHOWN	12 of 23

COLORADO LICENSED PROFESSIONAL ENGINEER 31429 6-12-22

PCD PROJECT NO. EPG222

FALCON LATGO LLC
SCH. NO 4200000345

GRADING PERMIT BOUNDARY

GRADING PERMIT BOUNDARY

CURLEX I EXCELSIOR EROSION CONTROL BLANKET OR APPROVED EQUAL PLACED WITHIN 5 DAYS OF SEEDING APPROX. 993 SY

24 CY TYPE L RIP-RAP

LIMITS OF GRADING

VMAX SC250 TURF REINFORCING MAT(TRM) OR APPROVED EQUAL PLACED PER MANUFACTURER'S SPEC. WITHIN 5 DAYS OF SEEDING SEE DETAILS SHEET 20

STRAW WATTLE SEE SHEET 17

SEE SHEET 12

SEE SHEET 10

SEE SHEET 14

SEE SHEET 17

CURLEX I EXCELSIOR EROSION CONTROL BLANKET OR APPROVED EQUAL PLACED WITHIN 5 DAYS OF SEEDING APPROX. 1,178 SY

LIMITS OF GRADING

LP= 7120.78

HP= 7121.46

7121.29

7121.25

-1.50%

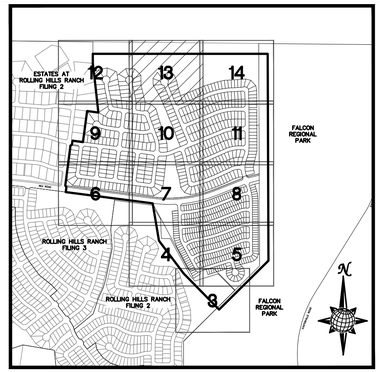
-1.00%

-4.00%

-5.00%

-3.00%

4:1



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WATER TRANSMISSION LINES AND ROAD

N

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)

1 inch = 50 ft.

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FAX: 719.495.2457

MERIDIAN RANCH

PREDEVELOPMENT GRADING
ROLLING HILLS RANCH NORTH
ROUGH GRADING AND EROSION CONTROL PLAN
PLAN SHEET

Drawn by	Checked by	Date
LCG	TAK	MAY 2022

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AS SHOWN	13 of 23

COLORADO REGISTERED JEFFREY T. KENNEDY 31429 PROFESSIONAL ENGINEER
5-12-22

PCD PROJECT NO. EPG222

FALCON LATGO LLC
SCH. NO 4200000345

GRADING PERMIT BOUNDARY

SEE SHEET 13

CURLEX I EXCELSIOR EROSION CONTROL BLANKET OR APPROVED EQUAL PLACED WITHIN 5 DAYS OF SEEDING APPROX. 1,178 SY

SEE SHEET 17

LIMITS OF GRADING

C

C'

-1.00%

-3.00%

-1.00%

SEE SHEET 11

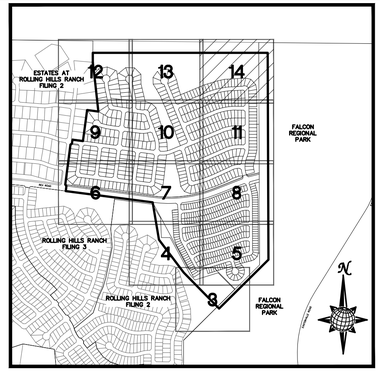
FALCON REGIONAL PARK

GRADING PERMIT BOUNDARY

EXISTING 40' DRAINAGE & GRADING EASEMENT

VMAX SC250 TURF REINFORCING MAT(TRM) OR APPROVED EQUAL PLACED PER MANUFACTURER'S SPEC. WITHIN 5 DAYS OF SEEDING SEE DETAILS SHEET 21

LIMITS OF GRADING



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GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)

1 inch = 50 ft.

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MERIDIAN RANCH

PREDEVELOPMENT GRADING
ROLLING HILLS RANCH NORTH
ROUGH GRADING AND EROSION
CONTROL PLAN
PLAN SHEET

Drawn by	Checked by	Date
LCG	TAK	MAY 2022

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COLORADO LICENSED
THOMAS A. KENNEDY
31429
PROFESSIONAL ENGINEER
5-12-22

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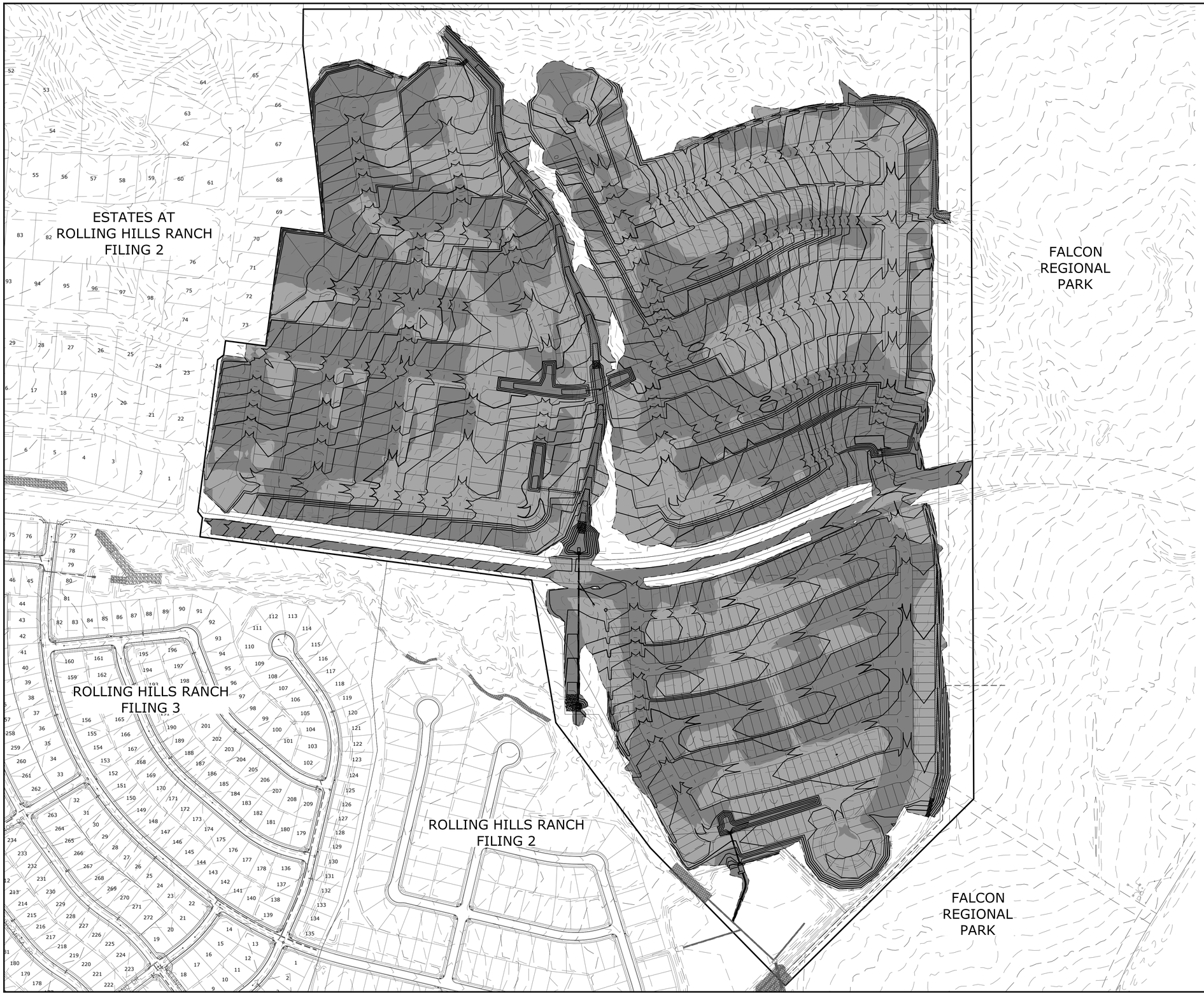

LEGEND:

AREAS OF CUT

AREAS OF FILL

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N

GRAPHIC SCALE

200 0 100 200 400 800

(IN FEET)

1 inch = 200 ft.

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MERIDIAN RANCH

PREDEVELOPMENT GRADING
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CONTROL PLAN
CUT-FILL SHEET

Drawn by	Checked by	Date
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TIMOTHY A. KASSAWARA
31429
PROFESSIONAL ENGINEER
5-12-22

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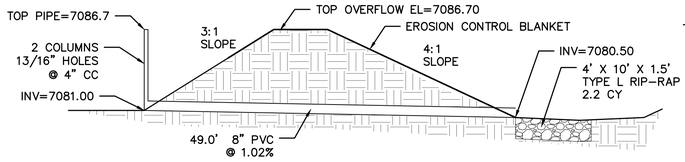
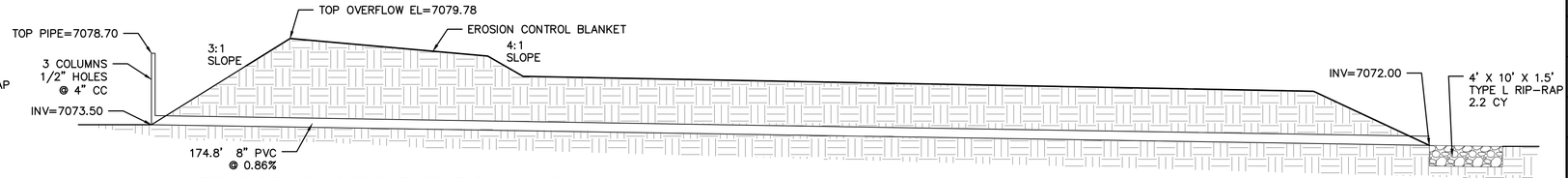


TEMPORARY SEDIMENTATION POND 1
TEMPORARY SEDIMENTATION AND WATER QUALITY PIPE
CROSS SECTION
NTS



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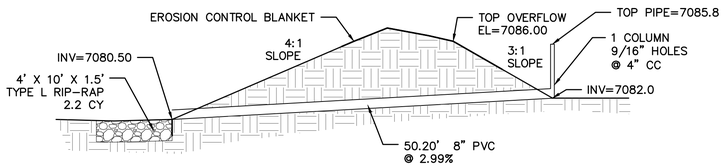
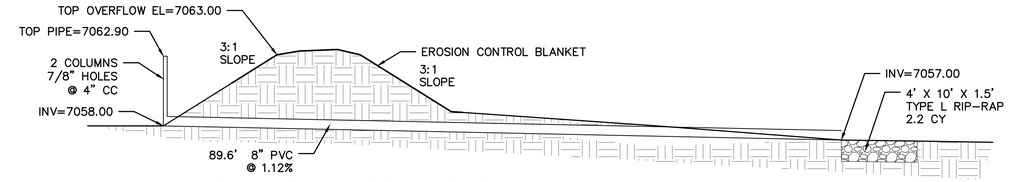
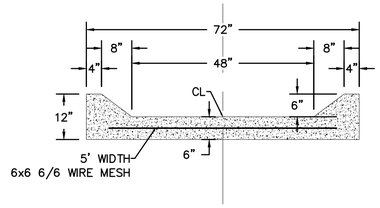
TEMPORARY SEDIMENTATION AND WATER QUALITY PIPE
CROSS SECTION
NTS



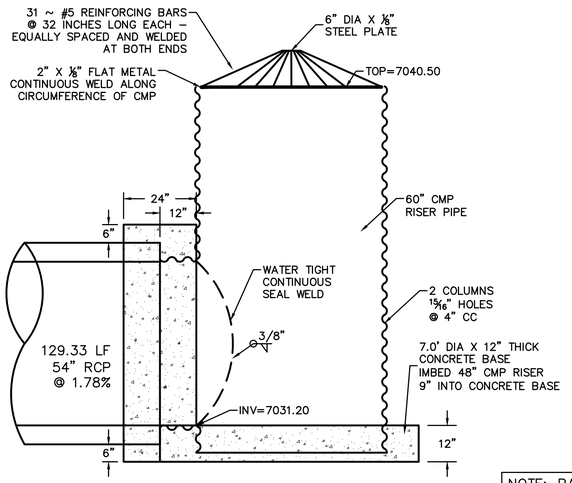
TEMPORARY SEDIMENTATION POND 2
TEMPORARY SEDIMENTATION AND WATER QUALITY PIPE
CROSS SECTION
NTS



TEMPORARY SEDIMENTATION POND 4
TEMPORARY SEDIMENTATION AND WATER QUALITY PIPE
CROSS SECTION
NTS

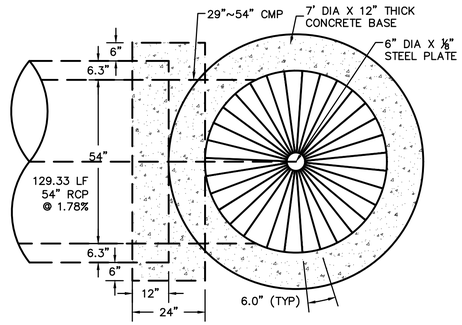


CONCRETE POND CHANNEL
CROSS SECTION DETAIL
NTS

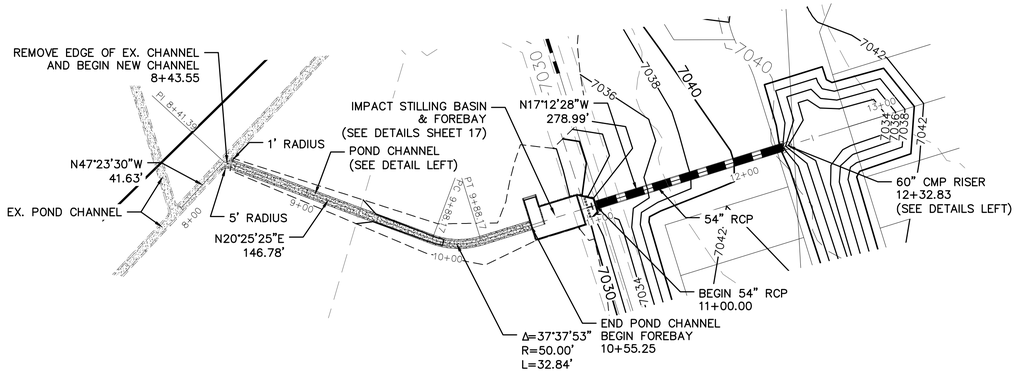


CONTROL STRUCTURE
SIDE VIEW
NTS

NOTE: PAINT OR COAT ALL WELD AND CUT AREAS OF THE CMP PIPES.

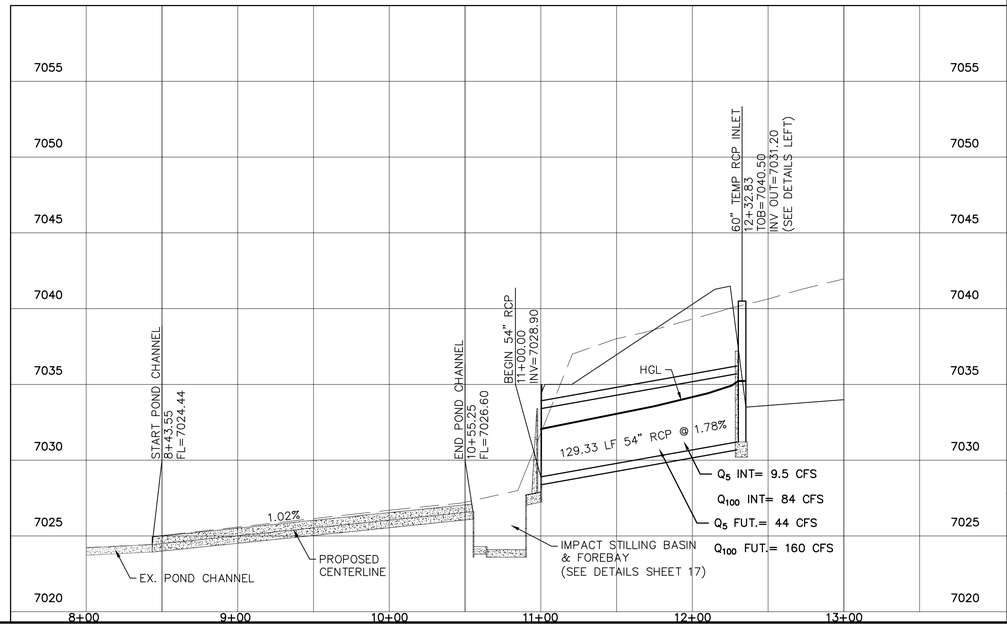


CONTROL STRUCTURE
TOP VIEW
NTS



GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.
1 inch = 5 ft. VERTICAL

TEMP. SED. BASIN 5 OUTLET



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MERIDIAN RANCH

PREDEVELOPMENT GRADING
ROLLING HILLS RANCH NORTH
ROUGH GRADING AND EROSION CONTROL PLAN
DETAIL SHEET

Drawn by	Checked by	Date
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AS SHOWN	16 of 23

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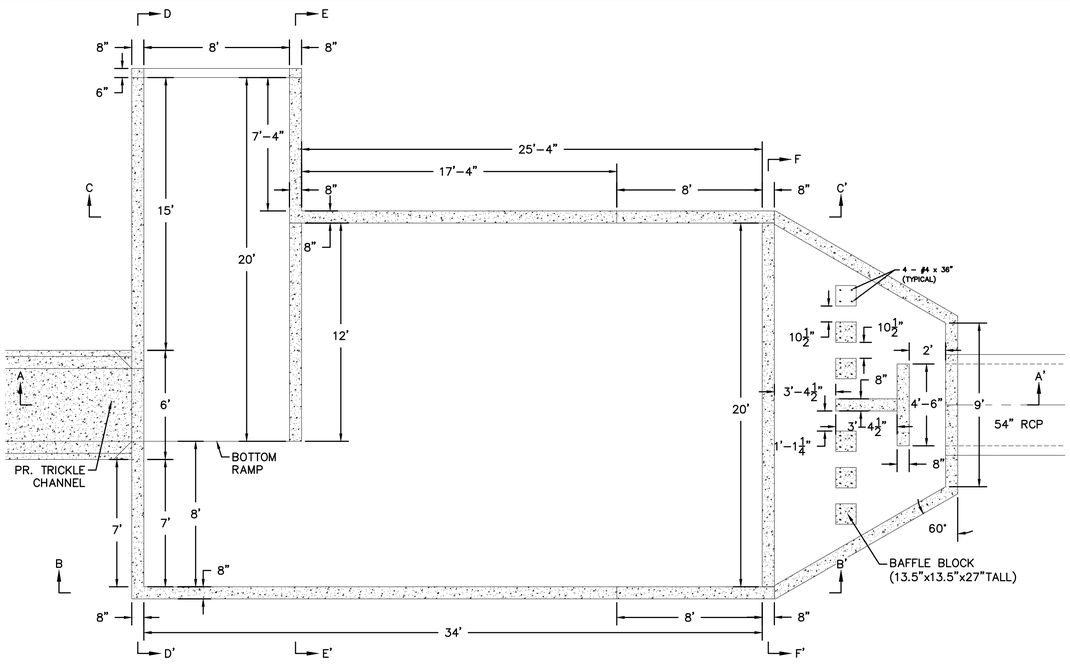
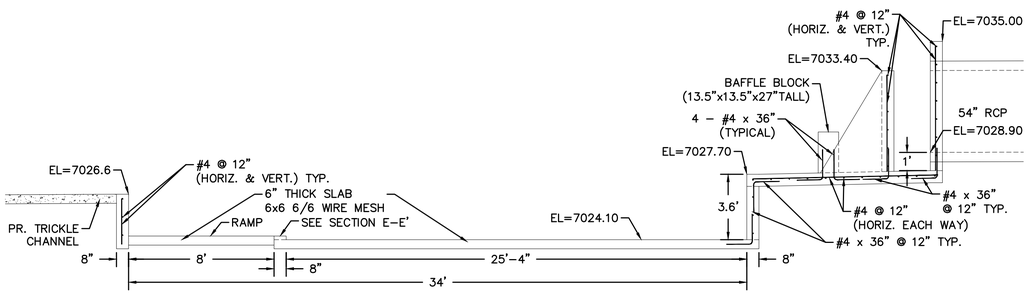
5-12-22

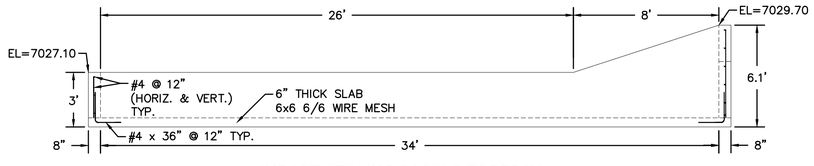
PCD PROJECT NO. EPG222



IMPACT STILLING BASIN & FOREBAY
PLAN VIEW
NTS



IMPACT STILLING BASIN & FOREBAY
CROSS SECTION A-A'
NTS



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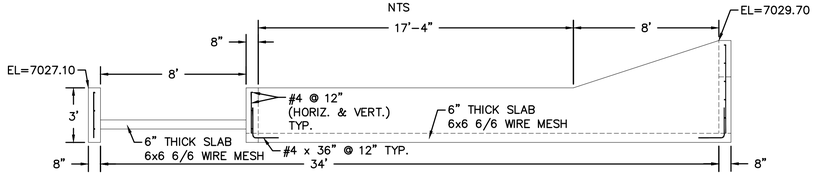
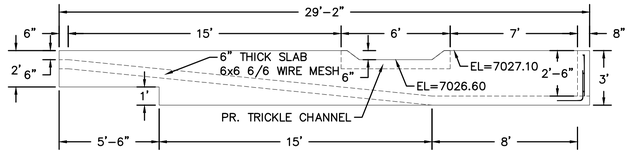
CROSS SECTION B-B'
NTS



IMPACT STILLING BASIN & FOREBAY
CROSS SECTION C-C'
NTS



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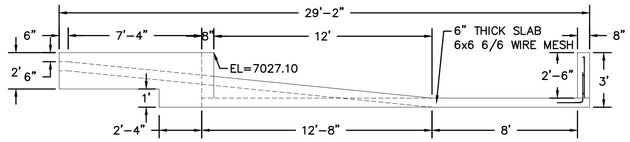
CROSS SECTION D-D'
NTS



IMPACT STILLING BASIN & FOREBAY
CROSS SECTION E-E'
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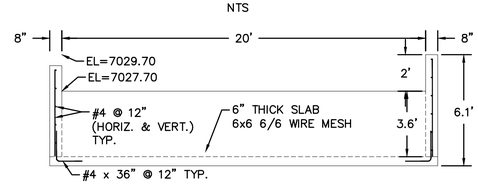
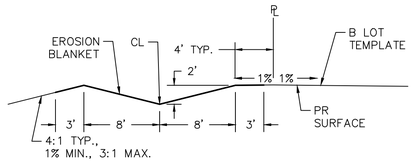
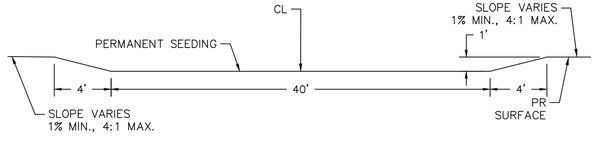


IMPACT STILLING BASIN & FOREBAY
CROSS SECTION F-F'
NTS



DETAIL A-A'
EROSION CONTROL BLANKET
CROSS SECTION
NTS



DETAIL B-B'
CROSS SECTION
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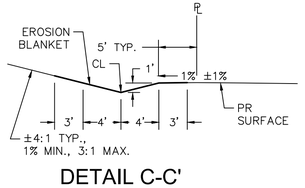

DETAIL C-C'
EROSION CONTROL BLANKET
CROSS SECTION
NTS

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MERIDIAN RANCH

PREDEVELOPMENT GRADING
ROLLING HILLS RANCH NORTH
ROUGH GRADING AND EROSION
CONTROL PLAN
DETAIL SHEET

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Scale	Sheet
AS SHOWN	17 of 23

COLORADO REGISTERED PROFESSIONAL ENGINEER
31429
7-12-22

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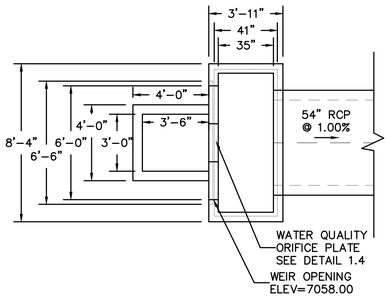
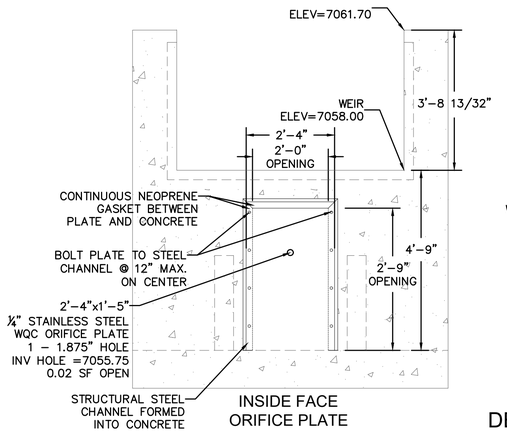
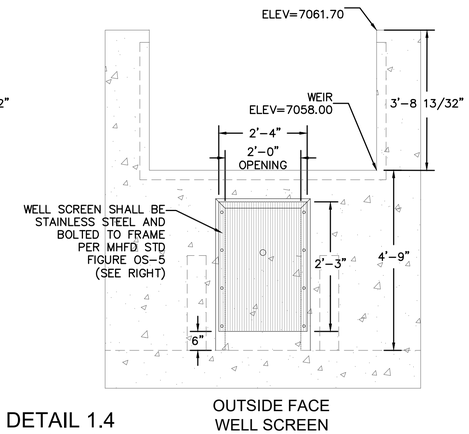


DETAIL 1.1
OUTLET STRUCTURE
PLAN VIEW
NTS

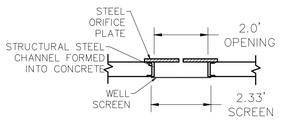


INSIDE FACE
ORIFICE PLATE

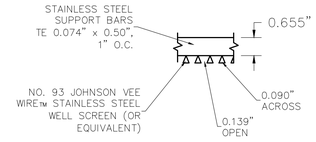


OUTSIDE FACE
WELL SCREEN

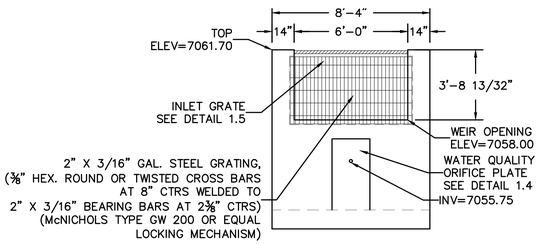
DETAIL 1.4
OUTLET STRUCTURE
WATER QUALITY PLATE
NTS



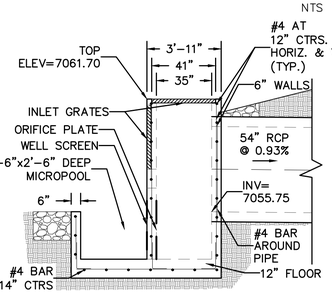
ORIFACE PLATE
ASSEMBLY



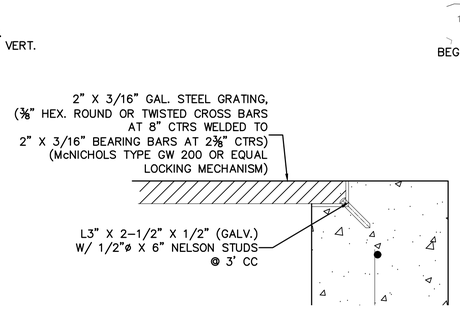
WELL SCREEN
DETAIL



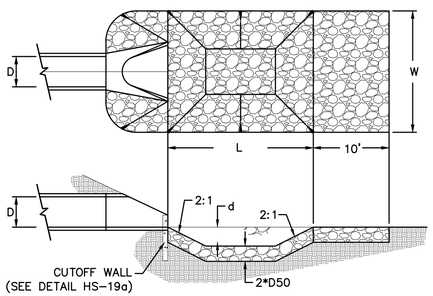
DETAIL 1.2
OUTLET STRUCTURE
FRONT VIEW
NTS



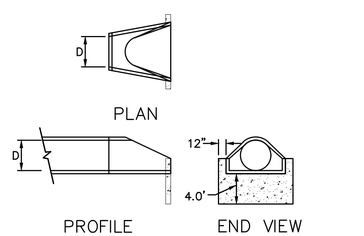
DETAIL 1.3
OUTLET STRUCTURE
CROSS SECTION
NTS



DETAIL 1.5
GRATE
NTS



URBAN DRAINAGE AND FLOOD CONTROL DISTRICT (MODIFIED*)
Figure HS-19. Culvert and Outlet Erosion Protection
*RIP RAP RECTANGULAR POOL



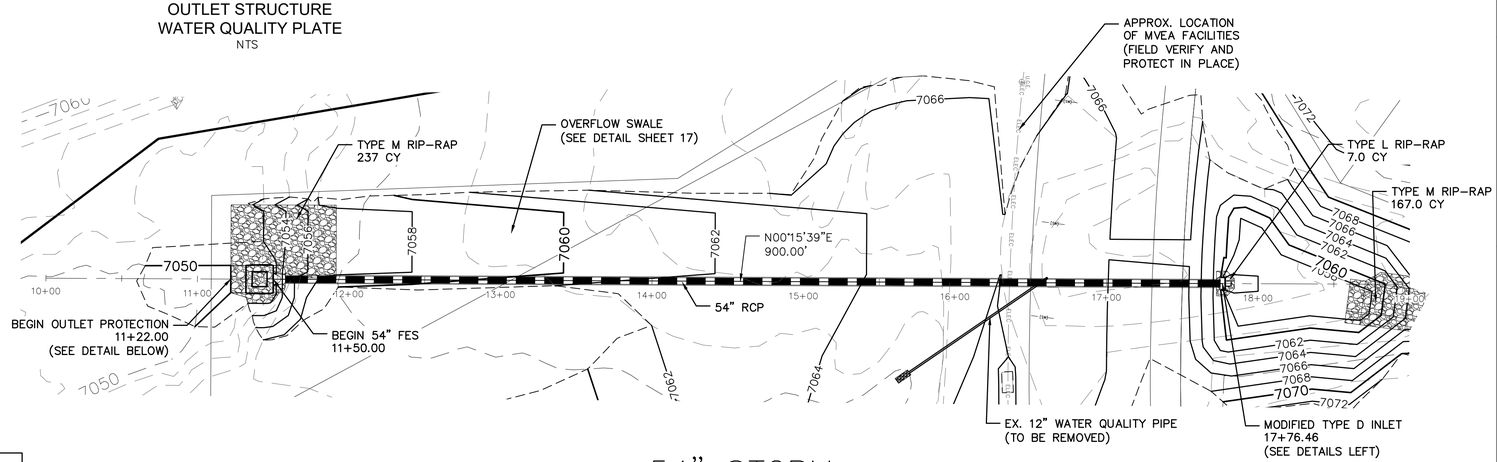
URBAN DRAINAGE AND FLOOD CONTROL DISTRICT
Figure HS-19a. Culvert Cutoff Wall

NOTES:
1. Flared end section required at RCP outlets.
2. Provide joint fasteners for flared end sections.

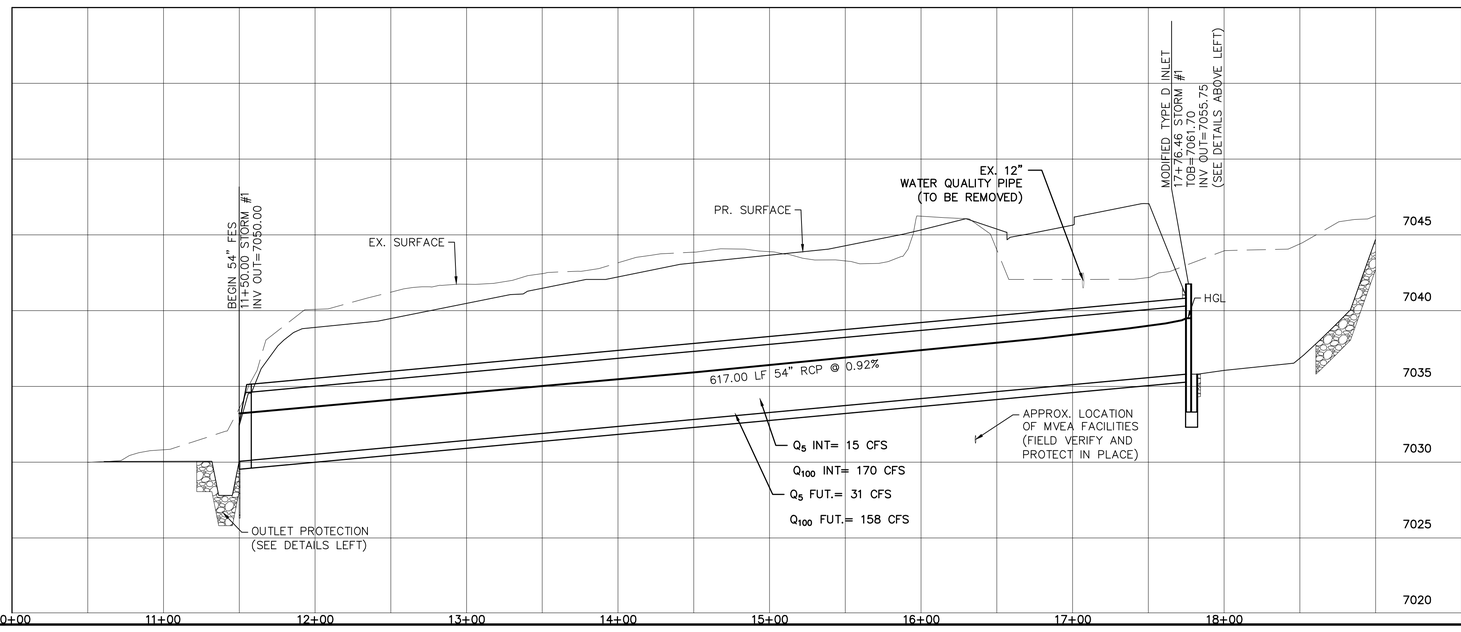
OS-1

PIPE OUTLET	L	W	d	TYPE	D_{50}	CY	NOTES
54"	18.0	18.0	2.0	M	1.00'	43.0	SEE BELOW

OS-1
OUTLET PROTECTION DETAIL
NTS



54" STORM



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MERIDIAN RANCH

PREDEVELOPMENT GRADING
ROLLING HILLS RANCH NORTH
ROUGH GRADING AND EROSION
CONTROL PLAN
DETAIL SHEET

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TIMOTHY A. KNAPP
31429
12-22
PROFESSIONAL ENGINEER

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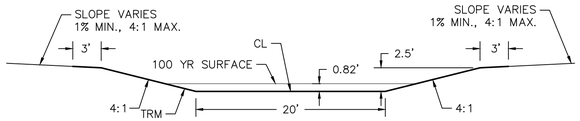
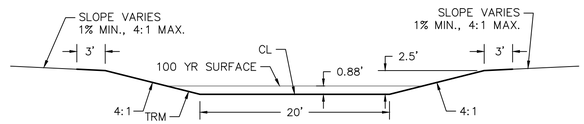


DETAIL D-D'
TURF REINFORCEMENT MAT
CROSS SECTION
NTS



DETAIL E-E'
TURF REINFORCEMENT MAT
CROSS SECTION
NTS

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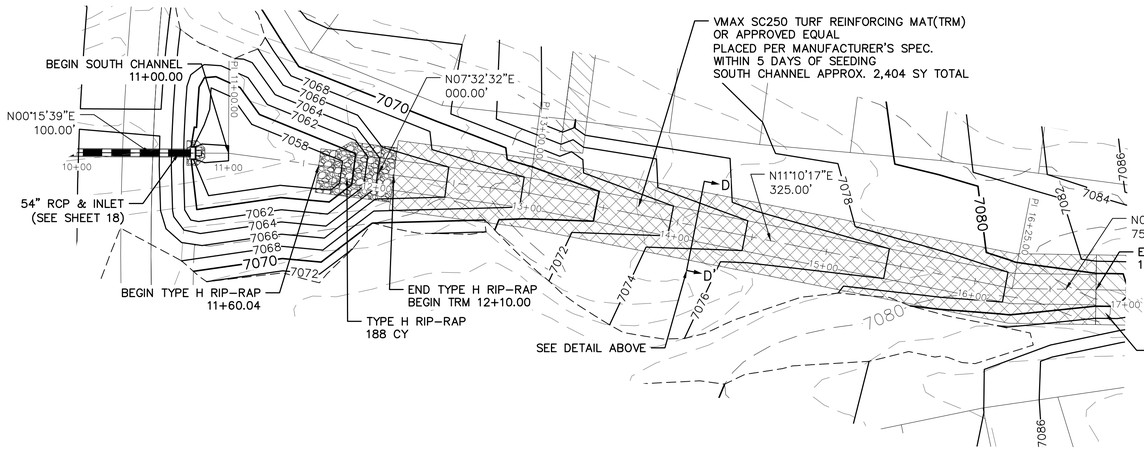
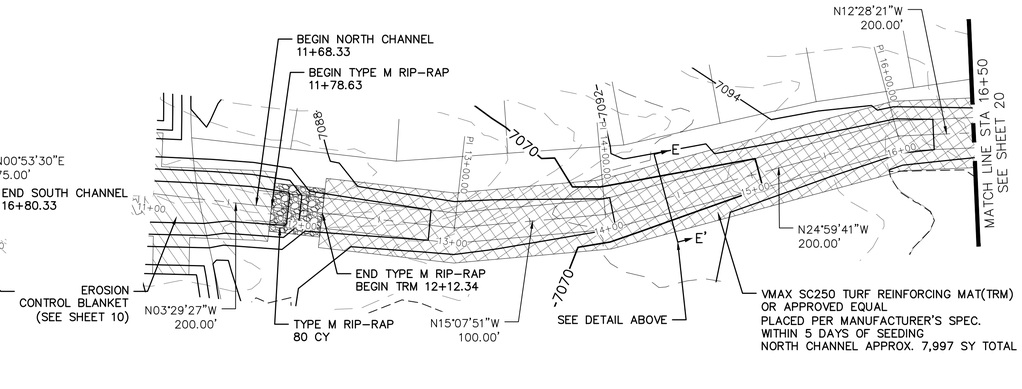
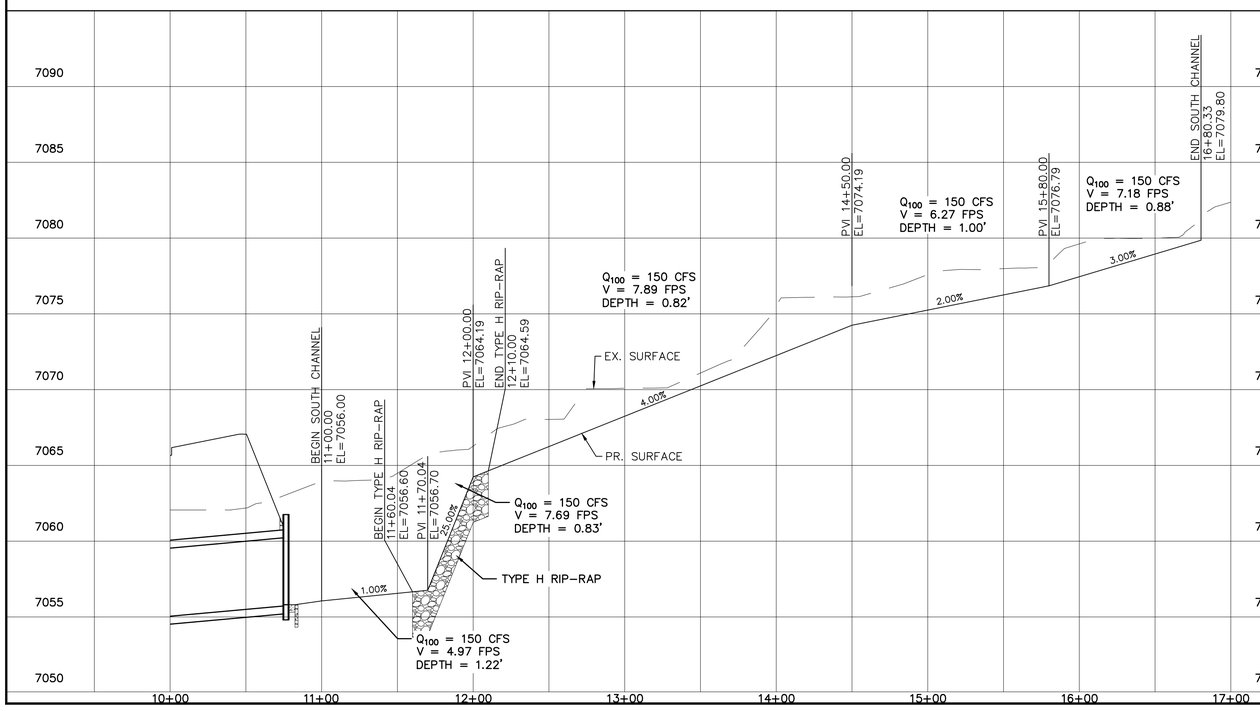


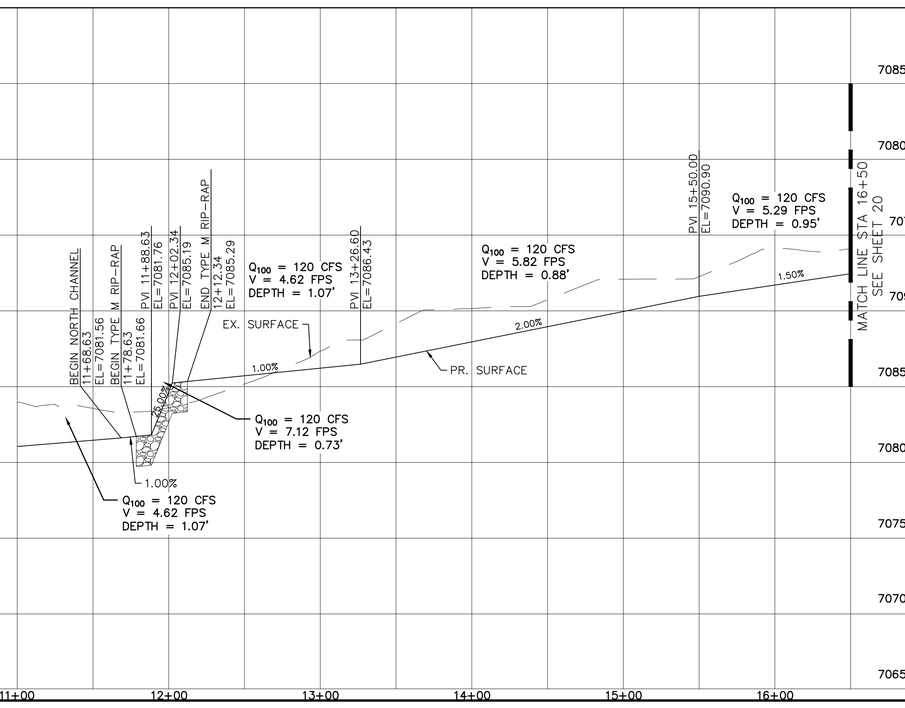


GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.
1 inch = 5 ft. VERTICAL

OPEN SPACE SOUTH CHANNEL



OPEN SPACE NORTH CHANNEL



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ROLLING HILLS RANCH NORTH
ROUGH GRADING AND EROSION
CONTROL PLAN
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Date: MAY 2022
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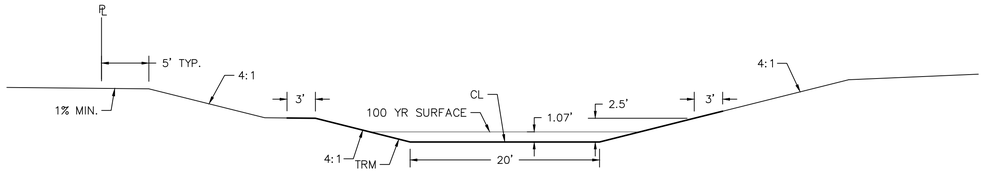
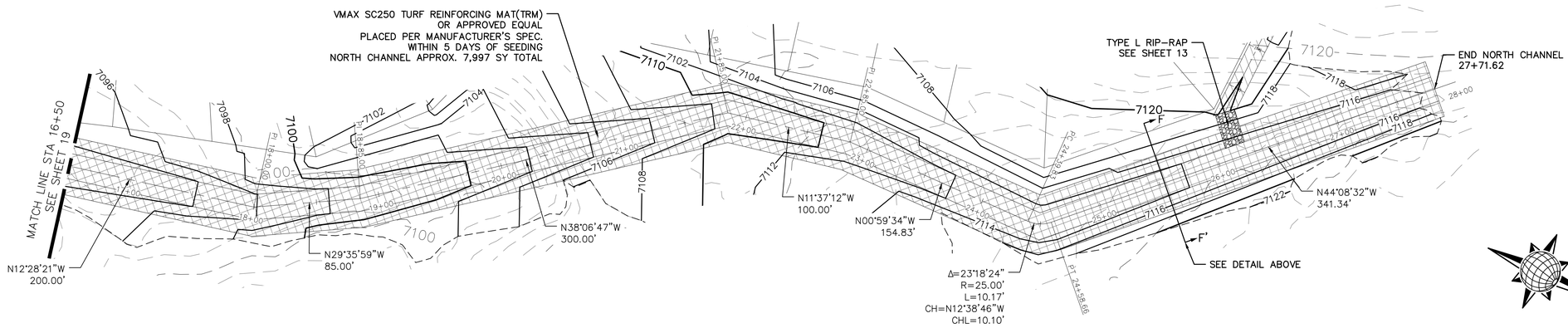


DETAIL F-F'
EROSION CONTROL BLANKET
CROSS SECTION
NTS



GRAPHIC SCALE
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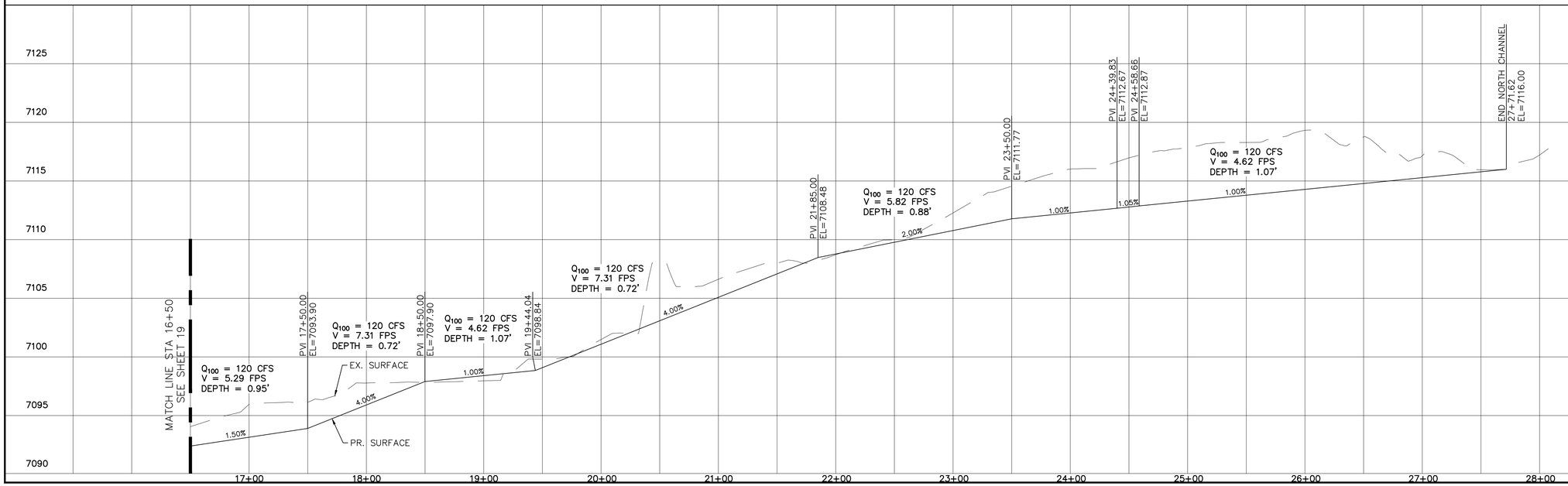
(IN FEET)
1 inch = 50 ft.
1 inch = 5 ft. VERTICAL

OPEN SPACE NORTH CHANNEL



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31429
12-22-22
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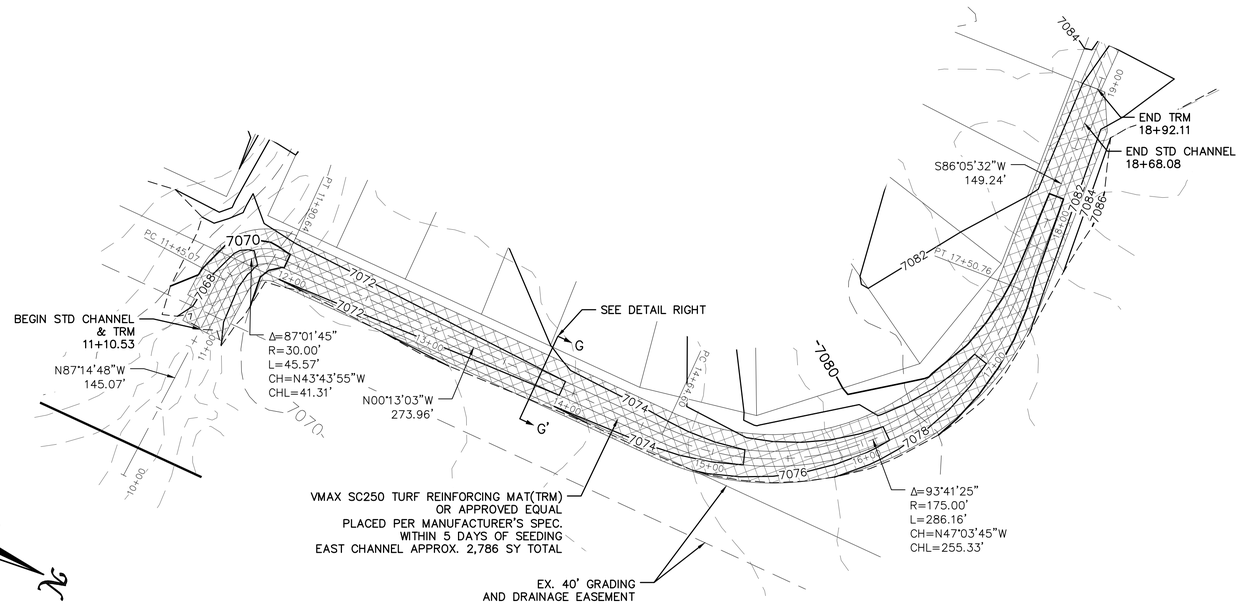
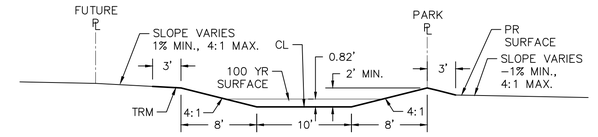


GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)

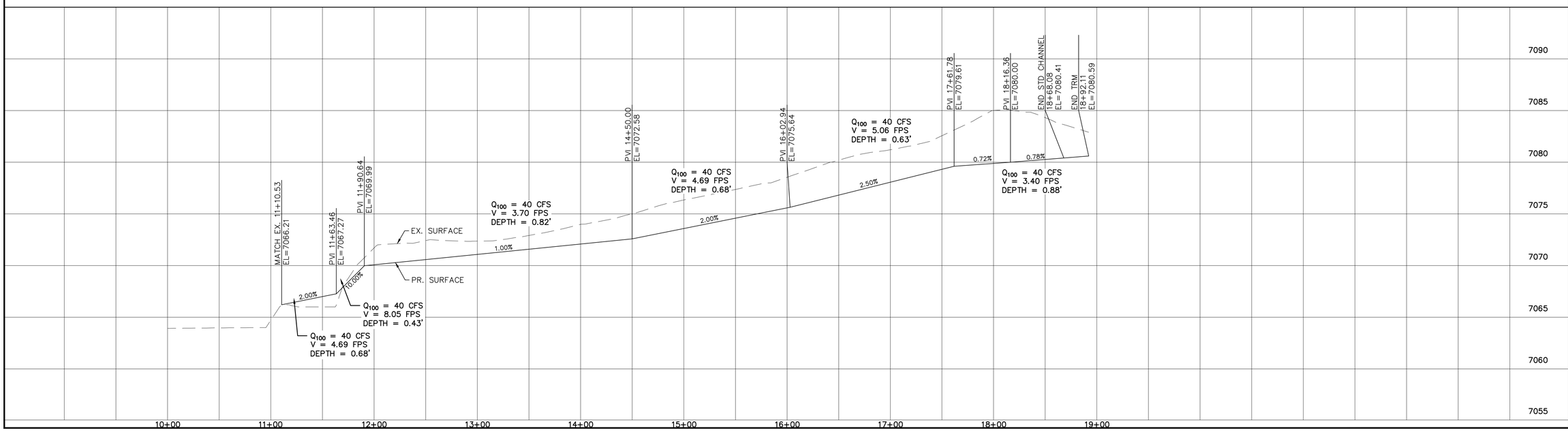
1 inch = 50 ft.
1 inch = 5 ft. VERTICAL



DETAIL G-G'

TURF REINFORCEMENT MAT
CROSS SECTION
NTS

OPEN SPACE EAST CHANNEL



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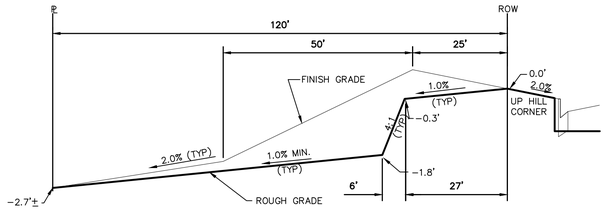
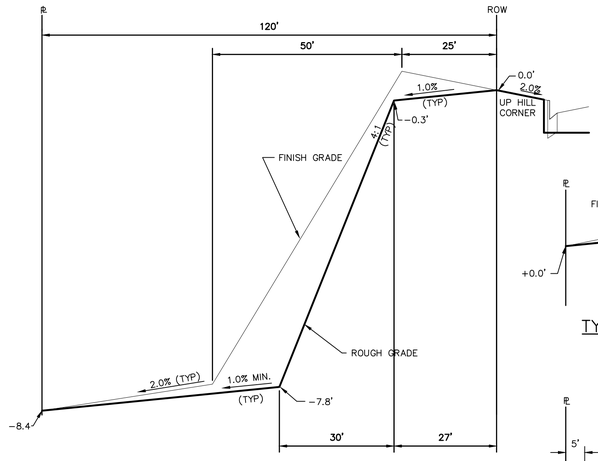


TYPICAL LOT "G2" TEMPLATES

NTS



TYPICAL LOT "W8" TEMPLATES

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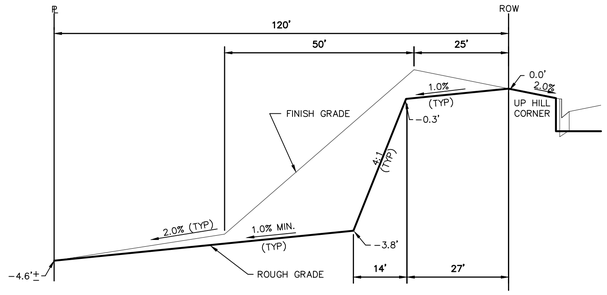

TYPICAL LOT "G4" TEMPLATES

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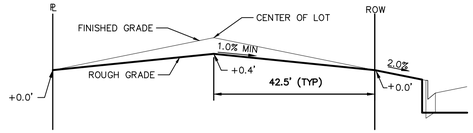

TYPICAL LOT "B" TEMPLATE SOUTH REX

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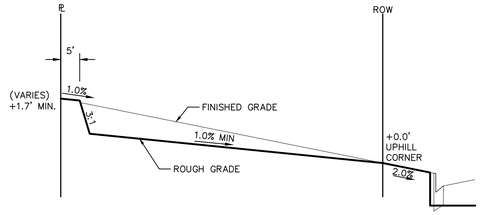

TYPICAL LOT "A" TEMPLATE SOUTH REX

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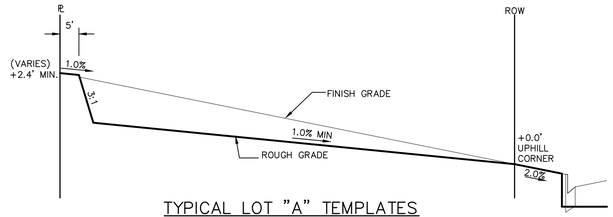

TYPICAL LOT "A" TEMPLATES

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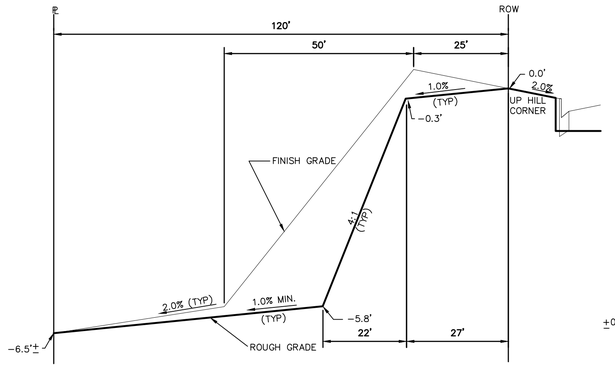

TYPICAL LOT "G6" TEMPLATES

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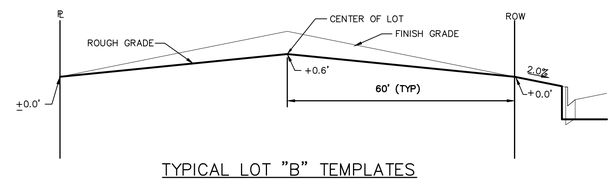
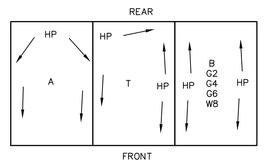


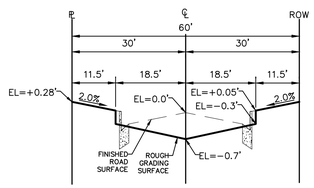
TYPICAL LOT "B" TEMPLATES

NTS



TYPICAL DRAINAGE PATTERN

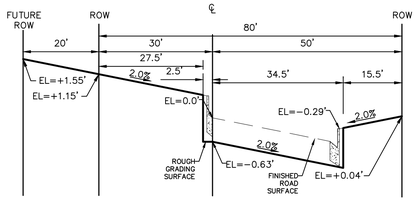
NTS



TYPICAL RESIDENTIAL STREET SECTION

60' ROW

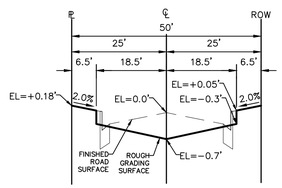
NTS



REX ROAD TYPICAL
TEMP. MINOR ARTERIAL STREET SECTION

80' ROW(100' FUTURE)

NTS



TYPICAL RESIDENTIAL STREET SECTION
SOUTH OF REX ROAD

50' ROW

NTS

STEPS FOR CONSTRUCTION

THE ANTICIPATED START FOR THIS PROJECT IS JUNE 2022 WITH AN ANTICIPATED COMPLETION DATE OF AUGUST 2022. BELOW IS A BRIEF OUTLINE OF THE CONSTRUCTION SEQUENCE FOR THIS PROJECT.

* INSTALL INITIAL BMP'S
* CONSTRUCTION OF DITCHES AND EROSION CONTROL STRUCTURES
* ROUGH GRADING
* SEEDING, BLANKET AND RIP-RAP INSTALL

EROSION AND SEDIMENT CONTROLS

SILT FENCES AND STRAW BALE CHECK DAMS (OR APPROVED EQUAL) WILL BE INSTALLED PRIOR TO ANY EXCAVATION FOR THE MAJOR ROADS. STRAW BALE CHECK DAMS, FILTREX OR APPROVED EQUAL WILL BE PLACED AT ALL ENTRANCES AND EXITS OF DRAINAGE WAYS. STRAW BALES, FILTREXX OR APPROVED EQUAL WILL BE INSTALLED AROUND THE OUTLET AND OVERFLOW STRUCTURE. THE OUTLET STRUCTURE WILL ALSO BE PROTECTED WITH RIPRAP ON THE DOWNSTREAM SIDE.

NON-STRUCTURE PRACTICES TO CONTROL EROSION AND SEDIMENTATION WILL INCLUDE RESEEDING OF GROUND COVER IN DISTURBED AREAS ACCORDING TO THE EROSION CONTROL PLAN. TEMPORARY SEEDING OF THE DETENTION POND AND MULCHING ALONG STEEP EMBANKMENTS WILL BE PERFORMED AS REQUIRED.

SILT FENCE IS REQUIRED TO BE IN PLACE PRIOR TO ANY MOVEMENT OF DIRT.

MATERIAL HANDLING AND SPILL PREVENTION

THE MOST PROBABLE SOURCE OF NON-STORMWATER POLLUTION IS REFUELING AND DAILY MAINTENANCE OPERATIONS. IF MOBILE FUEL TRUCKS ARE USED TO SERVICE EQUIPMENT, ABSORBENT MATERIALS AND CONTAINERS FOR THE STORAGE OF USED ABSORBENT MATERIAL WILL BE CLOSE BY. IF A FUEL TANK IS LEFT ON SITE, BERMS WILL BE BUILT AROUND THE TANK TO CAPTURE ANY SPILLED FUEL. AGAIN, ABSORBENT MATERIALS AND THEIR CONTAINERS WILL BE ON HAND.

THERE ARE NO DEDICATED ASPHALT OR CONCRETE BATCH PLANTS PLANNED ON SITE.

FINAL STABILIZATION AND LONG TERM STORMWATER MANAGEMENT

ONCE THE MAJOR ROADS ARE PAVED AND THE SURROUNDING DISTURBED AREAS ARE 70% ESTABLISHED WITH VEGETATION AND ACCEPTANCE BY THE MERIDIAN RANCH SERVICE DISTRICT, THE CHECK DAMS AND THE SILT FENCES AROUND THE STREETS CAN BE REMOVED. AFTER COMPLETION OF THE STORM SEWER SYSTEM, THE STRAW BALES AND/OR FILTREX CAN BE REMOVED. AFTER ALL GROUND DISTURBING CONSTRUCTION HAS BEEN COMPLETED AND ALL SLOPES ARE 70% ESTABLISHED WITH VEGETATION AND ACCEPTANCE BY THE MERIDIAN RANCH SERVICE DISTRICT, REMAINING CHECK DAMS AND SILT FENCES CAN BE REMOVED. THE RIPRAP ON ANY OF THE OUTLETS WILL REMAIN AFTER CONSTRUCTION TO REDUCE EROSION OF THE CHANNELS. ALL PERMANENT SWALES WILL BE LINED WITH LANDSCAPING TO SLOW RUNOFF AND FILTER SEDIMENTS.

OTHER CONTROLS

THERE ARE SEVERAL BEST MANAGEMENT PRACTICES THAT CAN BE EMPLOYED TO PREVENT OR MITIGATE THE SOURCE OF POLLUTANTS AND CONTAMINATION OF STORMWATER RUNOFF. SOME OF THESE ARE:
* ALL REFUSE DUMPSTERS AND RECEPTACLES SHALL BE EQUIPPED WITH FUNCTIONAL LIDS TO PREVENT RAIN AND SNOW FROM ENTERING.
* STORAGE CONTAINERS, DRUMS AND BAGS SHALL BE STORED AWAY FROM DIRECT TRAFFIC ROUTES TO PREVENT ACCIDENTAL SPILLS.
* EMPTY DRUMS SHALL BE COVERED TO PREVENT COLLECTION OF PRECIPITATION.
* CONTAINERS SHALL BE STORED ON PALLETS OR OTHER DUNNAGE TO PREVENT CORROSION OF CONTAINERS, WHICH CAN RESULT WHEN CONTAINERS COME IN CONTACT WITH MOISTURE ON THE GROUND.
* REGULARLY SCHEDULED REMOVAL OF CONSTRUCTION TRASH AND DEBRIS.

THE CONTRACTOR IS CERTAINLY NOT LIMITED TO THESE GOOD HOUSEKEEPING MEASURES, AND MAY IMPLEMENT FURTHER CONTROLS AS PRUDENCE AND GOOD JUDGEMENT DEEM NECESSARY.

INSPECTION AND MAINTENANCE

A THOROUGH INSPECTION OF THE STORMWATER MANAGEMENT SYSTEM SHALL BE PERFORMED EVERY 14 DAYS AS WELL AS AFTER ANY RAIN OR SNOWMELT EVENT THAT CAUSES SURFACE EROSION:
* EROSION OF V-NOTCH SWALES, CHANNELS AND SIDE SLOPES SHALL BE REPAIRED.
* WHEN THE CHECK DAMS HAVE SILTED UP TO HALF THEIR HEIGHT, THE SILT SHALL BE REMOVED, CHANNEL GRADE REESTABLISHED, AND SIDE SLOPES RE-SEEDED IF NECESSARY. ANY CHECK DAMS THAT HAVE SHIFTED OR DECAYED SHALL BE REPAIRED OR REPLACED.
* SILT FENCES SHALL BE CLEANED WHENEVER SEDIMENT HAS REACHED A DEPTH OF 6" AT THE FENCE, AND BROKEN WOODEN PARTS OR TORN FABRIC SHALL BE REPAIRED OR REPLACED.
* ANY ACCUMULATED TRASH OR DEBRIS SHALL BE REMOVED FROM OUTLETS.
* IF THE DEPTH OF THE SILT IN THE TEMPORARY SEDIMENTATION TRAP EXCEEDS 1/2 OF THE ORIGINAL DEPTH, THE TRAP SHALL BE CLEANED OUT AND RESTORED TO ITS ORIGINAL DEPTH. THE OVERFLOW SPILLWAY SHALL BE CLEANED OR REPAIRED AS NECESSARY.

AN INSPECTION AND MAINTENANCE LOG FOLLOWS THIS STORMWATER MANAGEMENT PLAN.

REVEGETATION AND SEEDING

ALL DISTURBED AREAS SHALL BE REQUIRE SEEDING WITHIN TWO (2) WEEKS FOLLOWING THE ESTABLISHMENT OF FINAL GRADE. AREAS TO RECEIVE PAVEMENT DURING THE CONSTRUCTION OF THE ROAD SYSTEM SHALL NOT RECEIVE ANY SEEDING. SEEDING SHOULD BE ACCOMPLISHED USING AN APPROPRIATE GRASS DRILL, BY BROADCASTING OR BY HYDROMULCHING. IF SEEDING BY THE BROADCAST METHOD IS SELECTED THE APPLICATION RATE SHOULD BE DOUBLED. IF HYDROMULCHING IS SELECTED TWO OPERATIONS SHOULD BE CONSIDERED, APPLYING THE SEED FIRST AND THE MULCH IN A SECOND OPERATION. UPON COMPLETION OF THE SEEDING OPERATION THE SITE SHOULD BE COVERED WITH WEED FREE MULCH AT A RATE OF 4,000 LBS. PER ACRE. MULCH SHALL BE INSTALLED PER DCM VOLUME 2, FIGURE MU-1, FOUND ON PAGE 3-30.

BELOW IS THE ACCEPTED GRASS MIX FOR SANDY SOILS:

GRASS	VARIETY	AMOUNT IN PLS LBS. PER ACRE
SIDEOATS GRAMA	EL RENO	3.0
WESTERN WHEATGRASS	BARTON	2.5
SLENDER WHEATGRASS	NATIVE	2.0
LITTLE BLUESTERN	PASTURA	2.0
SAND DROPSEED	NATIVE	0.5
SWITCH GRASS	NEBRASKA	3.0
WEEPING LOVE GRASS	MORPHA	1.0

NOTE:

"FINISH GRADE" IN THE TEMPLATES ARE ONLY APPROXIMATE GRADES. ACTUAL FINISHED GRADES WILL VARY DEPENDING ON INDIVIDUAL HOME PLOT PLANS. PLOT PLANS SHALL CLOSELY FOLLOW THE FINISH GRADE PATTERNS SHOWN IN THE TEMPLATES WITHOUT ADVERSELY AFFECTING THE GRADES AND DRAINAGE PATTERNS OF NEIGHBORING LOTS OR TRACTS. CONTOURS SHOWN ON THESE PLANS ARE ROUGH GRADES AND WILL CHANGE WITH EVERY HOME CONSTRUCTION. FIELD VERIFY ALL GRADES PRIOR DESIGN OF INDIVIDUAL HOME PLOT PLANS.

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1					
2					
3					
4		.	.	.	.

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FALCON, CO 80831
TELEPHONE: 719.495.7444
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MERIDIAN RANCH

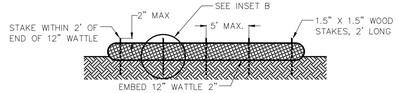
PREDEVELOPMENT GRADING
ROLLING HILLS RANCH NORTH
ROUGH GRADING AND EROSION
CONTROL PLAN
DETAIL SHEET

Drawn by LCG | Checked by TAK | Date MAY 2022

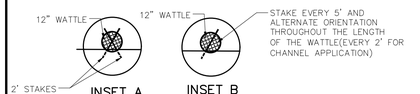
Scale AS SHOWN | 22 of 23

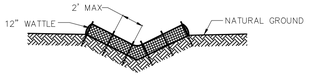
COLORADO REGISTERED PROFESSIONAL ENGINEER 31429 1.12.22

PCD PROJECT NO. EPG222

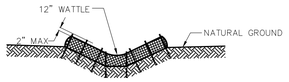


SECTION – SURFACE APPLICATION

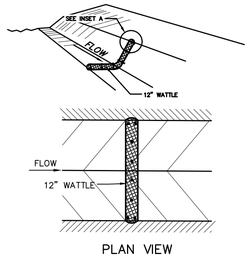




SECTION – V-NOTCH CHANNEL



SECTION –TRAPAZOIDAL CHANNEL



PLAN VIEW

NOTES:

USE 2 FT WOODEN STATES WITH A 1.5 IN BY 1.5 IN NOMINAL CROSS SECTION.

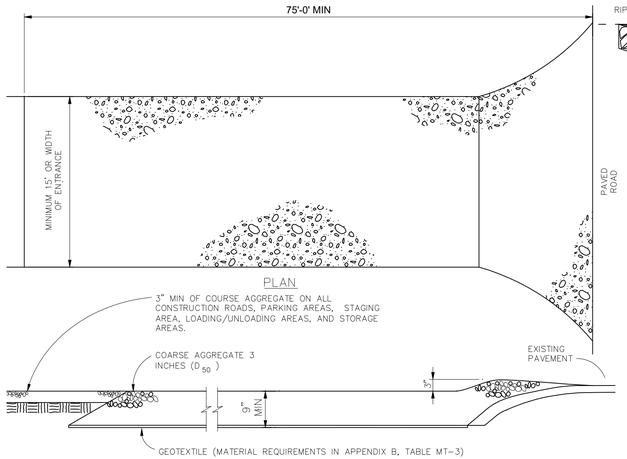
ONLY INSTALL 12" WATTLES TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES OR AS DIRECTED.

REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES ONE HALF OF THE EXPOSED LOG HEIGHT. INSPECTIONS SHELL BE PERFORMED FREQUENTLY FOR PROPER FUNCTION.

WHEN MORE THAN ONE EROSION LOG IS NEEDED, ENDS MUST BE TIGHTLY ABUTTED.

WATTLES MAY ALSO BE USED ACROSS LONG SLOPES TO REDUCE EROSION AND SEDIMENT VOLUME.

STRAW WATTLES MAY BE USED IN LIEU OF STRAW BALES AND/OR SILT FENCE WITH APPROVAL THE COUNTY, OWNER, ENGINEER, AND SWMP ADMINISTRATOR.



PLAN

SECTION

VEHICLE TRACKING

NTS

VEHICLE TRACKING NOTES

INSTALLATION REQUIREMENTS

1. ALL ENTRANCES TO THE CONSTRUCTION SITE ARE TO BE STABILIZED PRIOR TO CONSTRUCTION BEGINNING.

2. CONSTRUCTION ENTRANCES ARE TO BE BUILT WITH AN APRON TO ALLOW FOR TURNING TRAFFIC, BUT SHOULD NOT BE BUILT OVER EXISTING PAVEMENT EXCEPT FOR A SLIGHT OVERLAP.

3. AREAS TO BE STABILIZED ARE TO BE PROPERLY GRADED AND COMPACTED PRIOR TO LAYING DOWN GEOTEXTILE AND STONE.

4. CONSTRUCTION ROADS, PARKING AREAS, LOADING/UNLOADING ZONES, STORAGE AREAS, AND STAGING AREAS ARE TO BE STABILIZED.

5. CONSTRUCTION ROADS ARE TO BE BUILT TO CONFORM TO SITE GRADES, BUT SHOULD NOT HAVE SIDE SLOPES OR ROAD GRADES THAT ARE EXCESSIVELY STEEP.

MAINTENANCE REQUIREMENTS

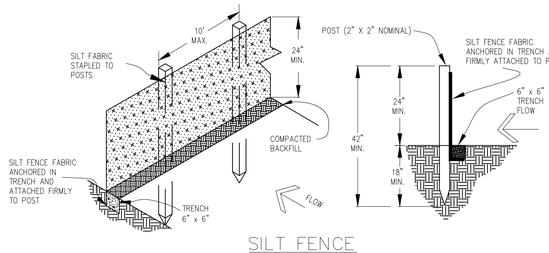
1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL STABILIZED AREAS, ESPECIALLY AFTER STORM EVENTS.

2. STONES ARE TO BE REAPPLIED PERIODICALLY AND WHEN REPAIR IS NECESSARY.

3. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED DAILY BY SHOVELING OR SWEEPING. SEDIMENT IS NOT TO BE WASHED DOWN STORM SEWER DRAINS.

4. STORM SEWER INLET PROTECTION IS TO BE IN PLACE, INSPECTED, AND CLEANED IF NECESSARY.

5. OTHER ASSOCIATED SEDIMENT CONTROL MEASURES ARE TO BE INSPECTED TO ENSURE GOOD WORKING CONDITION.



SILT FENCE

NTS

SILT FENCE NOTES

INSTALLATION REQUIREMENTS

1. SILT FENCES SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

2. WHEN JOINTS ARE NECESSARY, SILT FENCE GEOTEXTILE SHALL BE SPLICED TOGETHER ONLY AT SUPPORT POST AND SECURELY SEALED.

3. METAL POSTS SHALL BE "STUDDED TEE" OR "U" TYPE WITH MINIMUM WEIGHT OF 1.33 POUNDS PER LINEAR FOOT. WOOD POSTS SHALL HAVE A MINIMUM DIAMETER OR CROSS SECTION DIMENSION OF 2 INCHES.

4. THE FILTER MATERIAL SHALL BE FASTENED SECURELY TO METAL OR WOOD POSTS USING WIRE TIES, OR TO WOOD POSTS WITH 3/4" LONG #9 HEAVY-DUTY STAPLES. THE SILT FENCE GEOTEXTILE SHALL NOT BE STAPLED TO EXISTING TREES.

5. WHILE NOT REQUIRED, WIRE MESH FENCE MAY BE USED TO SUPPORT THE GEOTEXTILE. WIRE FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY-DUTY WIRE STAPLES AT LEAST 3/4" LONG, TIE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 6" AND SHALL NOT EXTEND MORE THAN 3' ABOVE THE ORIGINAL GROUND SURFACE.

6. ALONG THE TOE OF FILLS, INSTALL THE SILT FENCE ALONG A LEVEL CONTOUR AND PROVIDE AN AREA BEHIND THE FENCE FOR RUNOFF TO POND AND SEDIMENT TO SETTLE. A MINIMUM DISTANCE OF 5 FEET FROM THE TOE OF THE FILL IS RECOMMENDED.

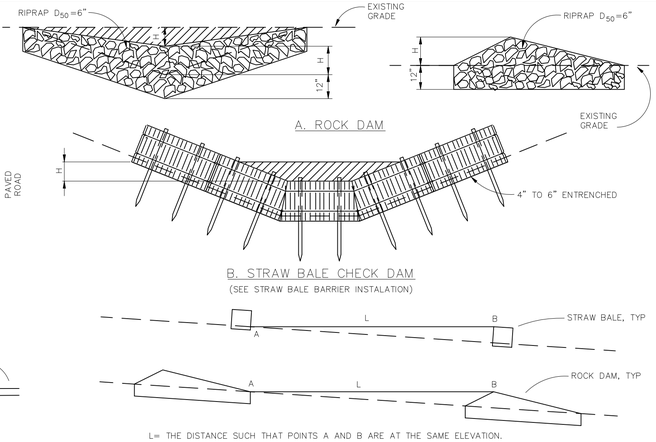
7. THE HEIGHT OF THE SILT FENCE FROM THE GROUND SURFACE SHALL BE MINIMUM OF 24 INCHES AND SHALL NOT EXCEED 36 INCHES; HIGHER FENCES MAY INPOUND VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE.

MAINTENANCE REQUIREMENTS

1. CONTRACTOR SHALL INSPECT SILT FENCES IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS OF NO RAINFALL. DAMAGED, COLLAPSED, UNENTRENCHED OR INEFFECTIVE SILT FENCES SHALL BE PROMPTLY REPAIRED OR REPLACED.

2. SEDIMENT SHALL BE REMOVED FROM BEHIND SILT FENCE WHEN IT ACCUMULATES TO HALF THE EXPOSED GEOTEXTILE HEIGHT.

3. SILT FENCES SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED AS APPROVED BY THE CITY.



CHECK DAM

NTS

CHECK DAM NOTES

INSTALLATION REQUIREMENTS

1. STRAW BALES USED AS CHECK DAMS ARE TO MEET THE REQUIREMENTS STATED IN FIGURE SBB-2.

2. THE "H" DIMENSION SHALL BE SELECTED TO PROVIDE WEIR FLOW CONVEYANCE FOR 2-YEAR FLOW OR GREATER.

MAINTENANCE REQUIREMENTS

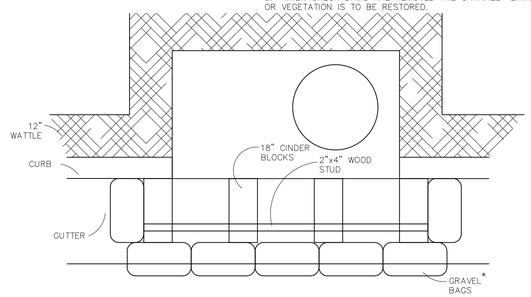
1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL CHECK DAMS, ESPECIALLY AFTER STORM EVENTS.

2. REPLACE STONE AS NECESSARY TO MAINTAIN THE CORRECT HEIGHT OF THE DAM.

3. ACCUMULATED SEDIMENT AND DEBRIS IS TO BE REMOVED FROM BEHIND THE DAMS AFTER EACH STORM OR WHEN 1/2 OF THE ORIGINAL HEIGHT OF THE DAM IS REACHED.

4. CHECK DAMS ARE TO REMAIN IN PLACE AND OPERATIONAL UNTIL THE DRAINAGE AREA AND CHANNEL ARE PERMANENTLY STABILIZED.

5. WHEN CHECK DAMS ARE REMOVED THE CHANNEL LINING OR VEGETATION IS TO BE RESTORED.



MODIFIED BLOCK AND GRAVEL BAG* CURB INLET PROTECTION

NTS

BLOCK AND GRAVEL BAG* CURB INLET PROTECTION NOTES

INSTALLATION REQUIREMENTS

1. INLET PROTECTION SHALL BE INSTALLED IMMEDIATELY AFTER CONSTRUCTION OF INLET.

2. CONCRETE BLOCKS ARE TO BE LAID AT 2' SPACING ON THEIR SIDES WITH THE OPEN ENDS OF THE BLOCK FACING EACH OTHER.

3. IF MORE THAN ONE 2X4 IS REQUIRED, THEY NEED TO OVERLAP BY A MINIMUM OF 2'

4. GRAVEL BAGS ARE TO BE PLACED AROUND THE CONCRETE BLOCKS AND 2X4 TO CLOSELY ABUTTING ONE ANOTHER SO THERE ARE NO GAPS.

5. GRAVEL BAGS ARE TO CONTAIN WASHED SAND OR GRAVEL APPROXIMATELY 3/4 INCH IN DIAMETER.

6. BAGS ARE TO BE MADE OF 1/4" INCH WIRE MESH (USED WITH GRAVEL ONLY) OR GEOTEXTILE.

MAINTENANCE REQUIREMENTS

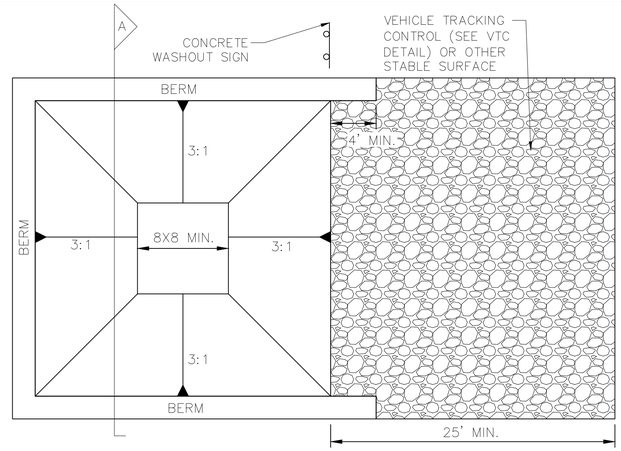
1. CONTRACTOR SHALL INSPECT INLET PROTECTION IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS NO RAINFALL.

2. DAMAGED OR INEFFECTIVE INLET PROTECTION SHALL PROMPTLY BE REPAIRED OR REPLACED.

3. SEDIMENT SHALL BE REMOVED WHEN SEDIMENT HAS ACCUMULATED TO APPROXIMATELY 1/2 THE DESIGN DEPTH OF THE TRAP.

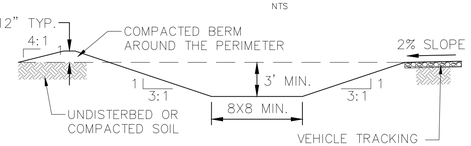
4. INLET PROTECTION SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED WITHIN THE DRAINAGE AREA AS APPROVED BY THE CITY.

* AN ALTERNATE 3/4" TO 1" GRAVEL FILTER OVER A WIRE SCREEN MAY BE USED IN PLACE OF GRAVEL BAGS. THE WIRE MESH SHALL EXTEND ABOVE THE TOP OF THE CONCRETE BLOCKS AND THE GRAVEL PLACED OVER THE WIRE SCREEN TO THE TOP OF THE CONCRETE BLOCKS.



CONCRETE WASHOUT AREA PLAN

NTS



SECTION A

NTS

CWA INSTALLATION NOTES:

1. SEE PLAN VIEW FOR CWA INSTALLATION LOCATION.
2. DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOACTE WITHIN 1000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASABLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE SHOULD BE USED.
3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
4. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' X 8'. SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.
5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE A MINIMUM HEIGHT OF 1'.
6. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
7. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
8. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

CWA MAINTENANCE NOTES:

1. INSPECT BMPs EACH WORKDAY AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS ASOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS ACCUMULATED IN PIT SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2'.
5. CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.
6. THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
7. WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOPSOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

STRAW BALE BARRIER NOTES

INSTALLATION REQUIREMENTS

1. STRAW BALE BARRIERS SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

2. BALES SHALL CONSIST OF APPROXIMATELY 5 CUBIC FEET OF CERTIFIED WEED FREE HAY OR STRAW AND WEIGH NOT LESS THAN 35 POUNDS.

3. BALES ARE TO BE PLACED IN A SINGLE ROW WITH THE END OF THE BALES TIGHTLY ABUTTING ONE ANOTHER.

4. EACH BALE IS TO BE SECURELY ANCHORED WITH AT LEAST TWO STAKES AND THE FIRST STAKE IS TO BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE TO FORCE THE BALES TOGETHER.

5. STAKES ARE TO BE A MINIMUM OF 42 INCHES LONG. METAL STAKES SHALL BE STANDARD "T" OR "U" TYPE WITH MINIMUM WEIGHT OF 1.33 POUNDS PER LINEAR FOOT. WOOD STAKES SHALL HAVE A MINIMUM DIAMETER OR CROSS SECTION DIMENSION OF 2 INCHES.

6. BALES ARE TO BE BOUND WITH EITHER WIRE OR STRING AND ORIENTED SUCH THAT THE BINDINGS ARE AROUND THE SIDES AND NOT ALONG THE TOPS AND BOTTOMS OF THE BALE.

7. GAPS BETWEEN BALES ARE TO BE CHINKED (FILLED BY WEDGING) WITH STRAW OR THE SAME MATERIAL OF THE BALE.

8. END BALES ARE TO EXTEND UPSLOPE SO THE TRAPPED RUNOFF CANNOT FLOW AROUND THE ENDS OF THE BARRIER.

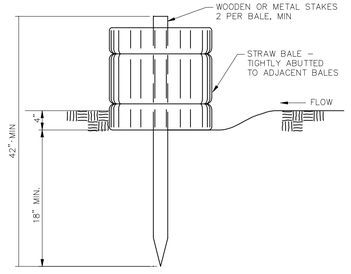
MAINTENANCE REQUIREMENTS

1. CONTRACTOR SHALL INSPECT STRAW BALE BARRIERS IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS NO RAINFALL.

2. DAMAGED OR INEFFECTIVE BARRIERS SHALL PROMPTLY BE REPAIRED, REPLACING BALES IF NECESSARY, AND UNENTRENCHED BALES NEED TO BE REPAIRED WITH COMPACTED BACKFILL MATERIAL.

3. SEDIMENT SHALL BE REMOVED FROM BEHIND STRAW BALE BARRIERS WHEN IT ACCUMULATES TO APPROXIMATELY 1/2 THE HEIGHT OF THE BARRIER.

4. STRAW BALE BARRIERS SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED AS APPROVED BY THE CITY.



STRAW BALE BARRIER

NTS

TWO WORKING DAYS
BEFORE YOU DIG
CALL 811
OR
UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987
(SEE COVER FOR LIST OF UTILITY CONTACTS)

No.	Revisions	Date	Init.	Appr.	Date
1		.	.	.	.
2					
3					
4					

TECH CONTRACTORS
11886 STAPLETON DRIVE
FALCON, CO 80831
TELEPHONE: 719.495.7444
FAX: 719.495.2457

CWA

MERIDIAN RANCH

PREDEVELOPMENT GRADING
ROLLING HILLS RANCH NORTH
ROUGH GRADING AND EROSION
CONTROL PLAN
DETAIL SHEET

Drawn by	Checked by	Date
LCG	TAK	MAY 2022

Scale	Sheet
AS SHOWN	23 of 23

COLORADO REGISTERED PROFESSIONAL ENGINEER
31429
7-22-22

PCD PROJECT NO. EPG222