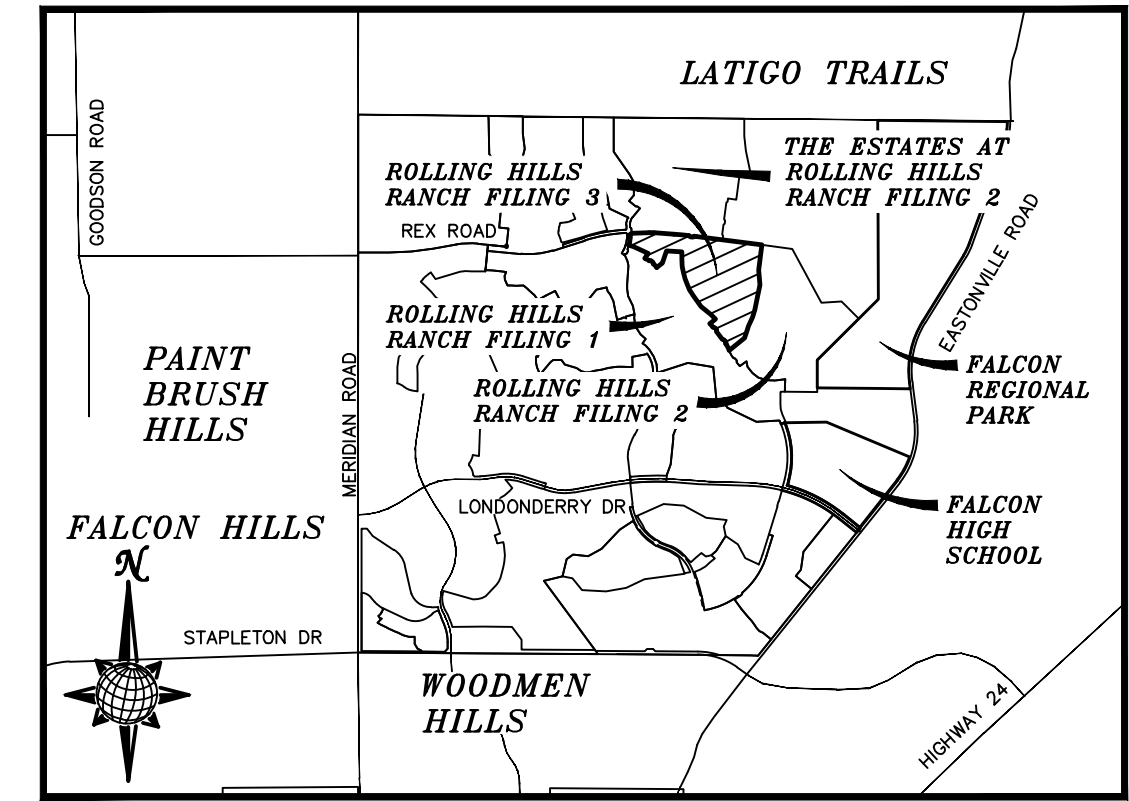


# CONSTRUCTION DRAWINGS FOR ROLLING HILLS RANCH FILING 3 AT MERIDIAN RANCH

## IMPROVEMENT PLANS

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

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



VICINITY MAP  
N.T.S.

SHEET NO	SHEET INDEX
1	COVER SHEET
2	INDEX SHEET
3	NOTES SHEET
4-5	DETAIL SHEETS
6-7	ROLLING RANCH DR.
8-9	CROOKED HILL DR.
10	PARKLAND DR. & EVENING CREEK DR.
11	MONUMENT VISTA DR.
12	CUATRO CAMINOS DR. & BLUFFPOINT DR.
13	CROOKED BLUFF DR.
14	COASTAL HILLS LN.
15	COASTAL HILLS LN. & STORM #1
16	OVERALL SANITARY SEWER
17	OVERALL SANITARY SEWER SERVICES
18	OVERALL UNDERDRAIN
19	UNDERDRAIN DETAILS
20	OVERALL WATER
21	OVERALL WATER SERVICES
22	OVERALL STORM DRAIN
23	GRADING INDEX SHEET
24-29	GRADING LAYOUTS
30	GRADING CUT-FILL LAYOUT
31-32	GRADING DETAIL SHEETS

### UTILITY CONTACTS:

WATER - MERIDIAN SERVICE METROPOLITAN DISTRICT POC: KEVIN FACKERELL (719)-495-6567	GAS - BLACK HILLS ENERGY (719)-393-6625
SANITARY SEWER - MERIDIAN SERVICE METROPOLITAN DISTRICT POC: BRADEN McCORRY (719)-495-6567	ELECTRIC - MOUNTAIN VIEW ELECTRIC ASSOC. (719)-495-2283
DRAINAGE - EL PASO COUNTY PCD/INSPECTIONS (719)-520-6300	GEOTECHNICAL ENGINEER - ENTECH ENGINEERING, INC. (719)-531-5599
DRAINAGE - MERIDIAN SERVICE METROPOLITAN DISTRICT POC: TOM KERBY (719)-495-7444	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 SHOWN 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 BEING THE OWNER OF THE FOLLOWING DESCRIBED TRACT OF LAND:

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

BEGINNING AT THE SOUTHWEST CORNER OF TRACT F OF ROLLING HILLS RANCH FILING NO. 2, RECORDED WITH RECEPTION NO. \_\_\_\_\_ IN THE RECORDS OF EL PASO COUNTY; POINT BEING ON THE WESTERN BOUNDARY LINE OF SAID FILING AND THE EASTERLY RIGHT-OF-WAY LINE OF ROLLING PEAKS DRIVE AND EASTERLY BOUNDARY OF ROLLING HILLS RANCH FILING NO. 1, RECORDED WITH RECEPTION NO. \_\_\_\_\_ IN THE RECORDS OF EL PASO COUNTY AND A CURVE TO THE LEFT;

THE FOLLOWING THIRTY FIVE (35) COURSES ARE ON SAID BOUNDARY LINE:

1. THENCE ON THE ARC OF SAID CURVE, HAVING A RADIUS OF 430.00 FEET, A DELTA ANGLE OF 19°11'01", AN ARC LENGTH OF 143.97 FEET, WHOSE LONG CHORD BEARS N27°43'13"W A DISTANCE OF 143.30 FEET TO A REVERSE CURVE TO THE LEFT;
2. THENCE N37°18'43"W A DISTANCE OF 5.00 FEET;
3. THENCE N07°41'17"E A DISTANCE OF 31.11 FEET;
4. THENCE N37°18'43"W A DISTANCE OF 60.00 FEET;
5. THENCE N82°18'43"W A DISTANCE OF 31.11 FEET;
6. THENCE N37°18'43"W A DISTANCE OF 196.00 FEET;
7. THENCE N07°41'17"E A DISTANCE OF 31.11 FEET;
8. THENCE N37°18'43"W A DISTANCE OF 60.00 FEET;
9. THENCE N82°18'43"W A DISTANCE OF 31.11 FEET;
10. THENCE N37°18'43"W A DISTANCE OF 12.18 FEET TO A CURVE TO THE LEFT;
11. THENCE ON THE ARC OF SAID CURVE, HAVING A RADIUS OF 730.00 FEET, A DELTA ANGLE OF 06°45'05", AN ARC LENGTH OF 86.02 FEET, WHOSE LONG CHORD BEARS N40°41'16"W A DISTANCE OF 85.97 FEET;
12. THENCE N49°29'46"E A DISTANCE OF 137.49 FEET;
13. THENCE N44°03'58"W A DISTANCE OF 123.26 FEET;
14. THENCE N51°02'42"W A DISTANCE OF 252.48 FEET;
15. THENCE N36°17'59"W A DISTANCE OF 267.98 FEET;
16. THENCE N31°18'00"W A DISTANCE OF 60.00 FEET;
17. THENCE N32°36'03"W A DISTANCE OF 70.02 FEET;
18. THENCE N23°19'51"W A DISTANCE OF 116.44 FEET;
19. THENCE N20°13'56"W A DISTANCE OF 117.82 FEET;
20. THENCE N16°17'16"W A DISTANCE OF 124.13 FEET;
21. THENCE N10°51'24"W A DISTANCE OF 125.09 FEET;
22. THENCE N01°44'05"W A DISTANCE OF 145.89 FEET;
23. THENCE N00°12'17"E A DISTANCE OF 140.80 FEET;
24. THENCE N86°03'00"W A DISTANCE OF 305.00 FEET;
25. THENCE S18°34'24"W A DISTANCE OF 254.62 FEET;
26. THENCE S52°12'07"W A DISTANCE OF 140.63 FEET TO A NON-TANGENT CURVE TO THE LEFT;
27. THENCE ON THE ARC OF SAID CURVE, HAVING A RADIUS OF 580.00 FEET, A DELTA ANGLE OF 09°42'05", AN ARC LENGTH OF 98.21 FEET, WHOSE LONG CHORD BEARS N42°38'56"W A DISTANCE OF 98.09 FEET;
28. THENCE N05°36'43"W A DISTANCE OF 32.19 FEET;
29. THENCE N52°38'16"W A DISTANCE OF 60.00 FEET;
30. THENCE S80°20'11"W A DISTANCE OF 32.19 FEET TO A NON-TANGENT CURVE TO THE LEFT;
31. THENCE ON THE ARC OF SAID CURVE, HAVING A RADIUS OF 580.00 FEET, A DELTA ANGLE OF 07°50'52", AN ARC LENGTH OF 79.44 FEET, WHOSE LONG CHORD BEARS N61°42'00"W A DISTANCE OF 79.38 FEET;
32. THENCE N65°37'27"W A DISTANCE OF 20.18 FEET;
33. THENCE N37°21'44"E A DISTANCE OF 123.15 FEET;
34. THENCE N65°37'27"W A DISTANCE OF 315.00 FEET;
35. THENCE N72°14'13"W A DISTANCE OF 102.16 FEET TO A POINT ON THE EASTERLY RIGHT-OF-WAY LINE OF SUNRISE RIDGE DRIVE AND EASTERLY BOUNDARY LINE OF THE ESTATES AT ROLLING HILLS RANCH FILING NO. 1, RECORDED WITH RECEPTION NO. 221714712 IN THE RECORDS OF EL PASO COUNTY AND A NON-TANGENT CURVE TO THE LEFT;

THE FOLLOWING TWO (2) COURSES ARE ON SAID BOUNDARY LINE:

36. THENCE ON THE ARC OF SAID CURVE, HAVING A RADIUS OF 630.00 FEET, A DELTA ANGLE OF 19°34'09", AN ARC LENGTH OF 215.17 FEET, WHOSE LONG CHORD BEARS N07°58'43"E A DISTANCE OF 214.13 FEET;
37. THENCE N42°56'08"E A DISTANCE OF 31.12 FEET TO A POINT ON THE SOUTHERLY RIGHT-OF-WAY LINE OF REX ROAD AND SOUTHERLY BOUNDARY LINE OF THE ESTATES AT ROLLING HILLS RANCH FILING NO. 2, RECORDED WITH RECEPTION NO. \_\_\_\_\_ IN THE RECORDS OF EL PASO COUNTY;

THE FOLLOWING NINE (9) COURSES ARE ON SAID BOUNDARY LINE:

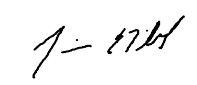
38. THENCE N87°55'36"E A DISTANCE OF 348.00 FEET TO A CURVE TO THE RIGHT;
39. THENCE ON THE ARC OF SAID CURVE, HAVING A RADIUS OF 900.00 FEET, A DELTA ANGLE OF 06°09'39", AN ARC LENGTH OF 96.77 FEET, WHOSE LONG CHORD BEARS S88°59'34"E A DISTANCE OF 96.73 FEET;
40. THENCE S85°54'45"E A DISTANCE OF 400.64 FEET TO A CURVE TO THE RIGHT;
41. THENCE ON THE ARC OF SAID CURVE, HAVING A RADIUS OF 7440.00 FEET, A DELTA ANGLE OF 02°14'02", AN ARC LENGTH OF 290.08 FEET, WHOSE LONG CHORD BEARS S84°47'44"E A DISTANCE OF 290.06 FEET;
42. THENCE S38°26'09"E A DISTANCE OF 31.03 FEET;
43. THENCE S83°16'41"E A DISTANCE OF 60.00 FEET;
44. THENCE N51°52'47"E A DISTANCE OF 31.03 FEET TO A NON-TANGENT CURVE TO THE RIGHT;
45. THENCE ON THE ARC OF SAID CURVE, HAVING A RADIUS OF 7440.00 FEET, A DELTA ANGLE OF 00°18'41", AN ARC LENGTH OF 40.44 FEET, WHOSE LONG CHORD BEARS S82°43'19"E A DISTANCE OF 40.44 FEET;
46. THENCE S82°33'58"E A DISTANCE OF 518.76 FEET;
47. THENCE S82°33'58"E A DISTANCE OF 782.00 FEET;
48. THENCE S07°26'02"W A DISTANCE OF 500.00 FEET;
49. THENCE S04°57'36"E A DISTANCE OF 290.00 FEET;
50. THENCE S11°42'15"W A DISTANCE OF 500.00 FEET;
51. THENCE S16°41'21"W A DISTANCE OF 150.00 FEET;
52. THENCE S24°44'20"W A DISTANCE OF 200.00 FEET;
53. THENCE S17°50'28"W A DISTANCE OF 60.00 FEET;
54. THENCE S17°50'28"W A DISTANCE OF 180.00 FEET;
55. THENCE S05°35'03"W A DISTANCE OF 388.67 FEET TO THE POINT OF BEGINNING;

THE ABOVE PARCEL OF LAND CONTAINS 64.773 ACRES, MORE OR LESS.

### DISTRICT ENGINEER:

  
THOMAS A. KERBY, PE CO 31429  
MERIDIAN SERVICE METROPOLITAN DISTRICT  
DATE 5-24-21


### WATER AND SANITARY SEWER APPROVALS:

  
JIM NIKKEL, GENERAL MANAGER  
MERIDIAN SERVICE METROPOLITAN DISTRICT  
DATE 6/2/2021

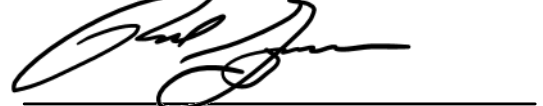
### BENCH MARK

- 1) MRR01 - 3 1/4" ALUMINUM CAP ON NO.8 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) MRRM1 - 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:  
I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN AND ALL OF THE REQUIREMENTS SPECIFIED IN THESE DETAILED PLANS AND SPECIFICATIONS.  
  
RAUL GUZMAN, VICE PRESIDENT  
GTL DEVELOPMENT, INC.  
DATE 6/1/2021

### OWNERS STATEMENT:

OWNERS STATEMENT:  
I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN AND ALL OF THE REQUIREMENTS SPECIFIED IN THESE DETAILED PLANS AND SPECIFICATIONS.  
  
RAUL GUZMAN, VICE PRESIDENT  
GTL DEVELOPMENT, INC.  
DATE 6/1/2021

### DESIGN ENGINEER'S STATEMENT:

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION. SAID PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR DETAILED ROADWAY, DRAINAGE, GRADING AND EROSION CONTROL PLANS AND SPECIFICATIONS, AND SAID DETAILED PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH APPLICABLE MASTER DRAINAGE AND MASTER TRANSPORTATION PLANS. SAID PLANS AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR ROADWAY AND DRAINAGE FACILITIES ARE DESIGNED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS.  
THOMAS A. KERBY, P.E. #31429



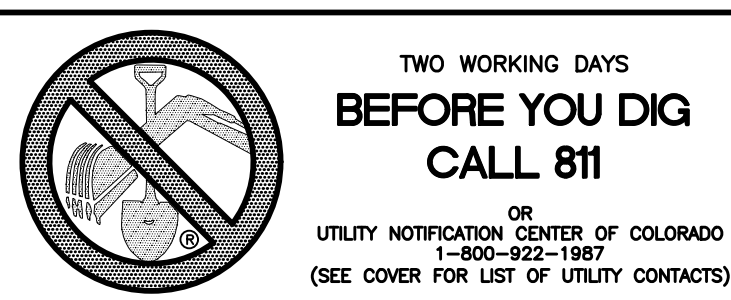
### EL PASO COUNTY:

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 VOL. 1 & 2, 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 BEEN 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.


APPROVED  
Engineering Department  
07/29/2021 7:20:48 PM  
  
JENNIFER IRVINE, P.E.  
COUNTY ENGINEER / ECM ADMINISTRATOR  
EPC Planning & Community Development Department



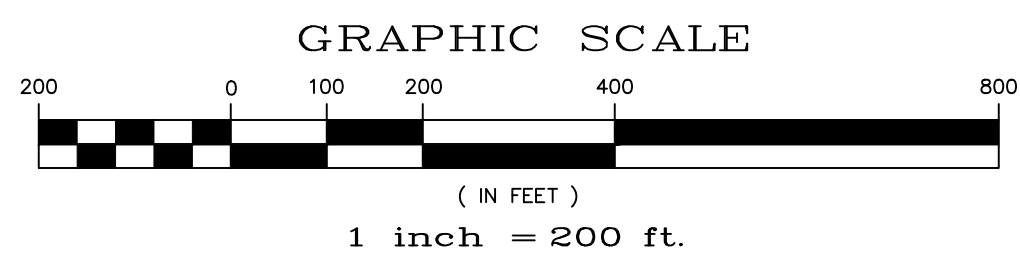
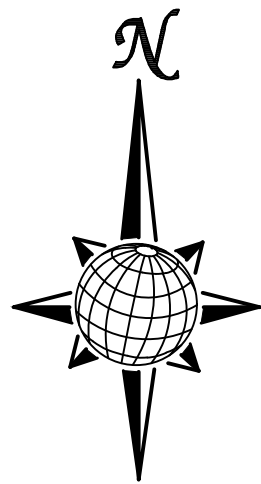
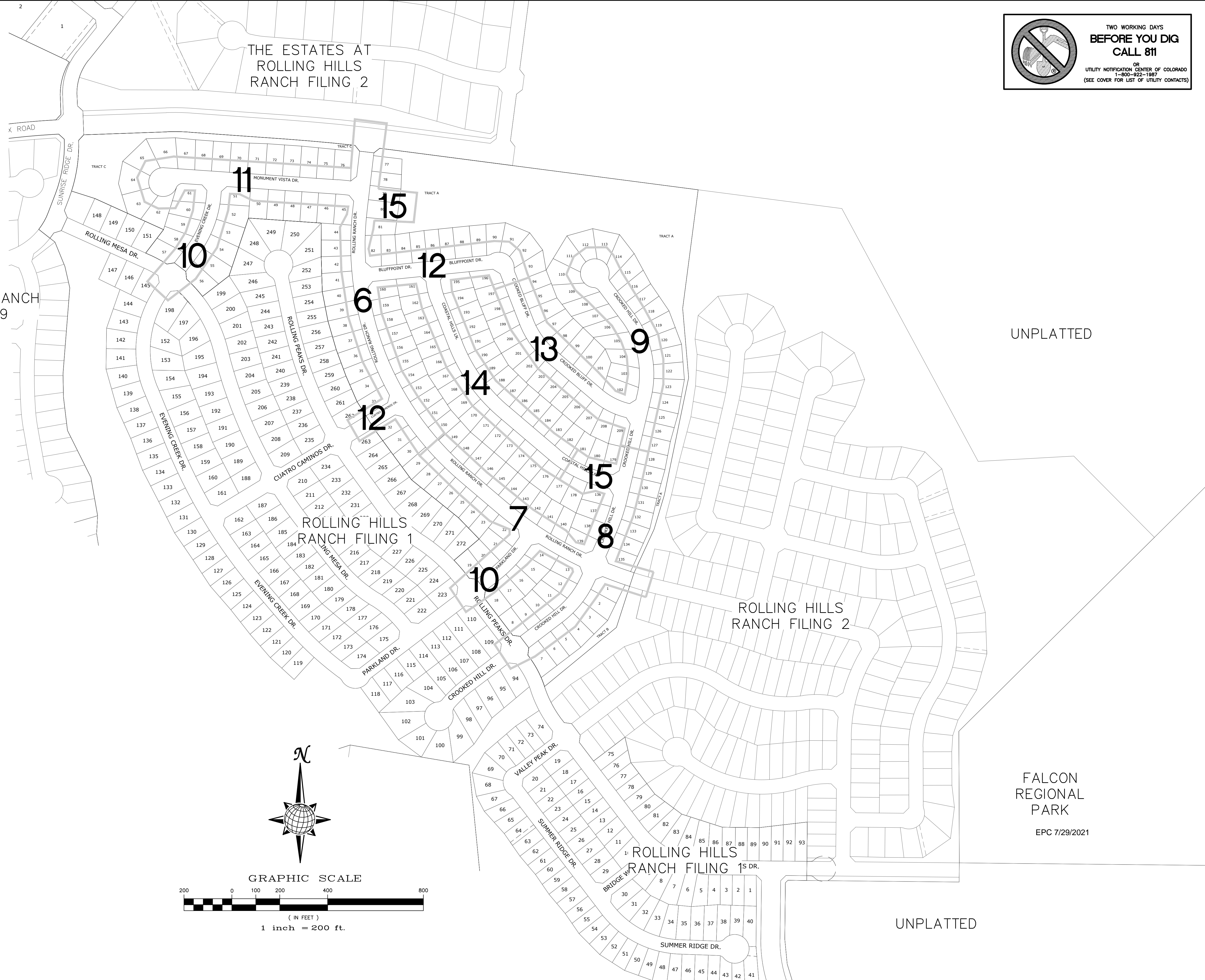
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Drawn by	LOG	DATE
Checked by	TAK	MAY 2021
ROLLING HILLS RANCH FILING 3 AT MERIDIAN RANCH STREET AND UTILITY PLANS COVER SHEET		
TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457		
MERIDIAN RANCH		
Revisions		
No.	Date	Appr.
1		
2		
3		
4		

MERIDIAN RANCH  
FILING 9

THE ESTATES AT  
ROLLING HILLS  
RANCH FILING 2




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)



UNPLATTED

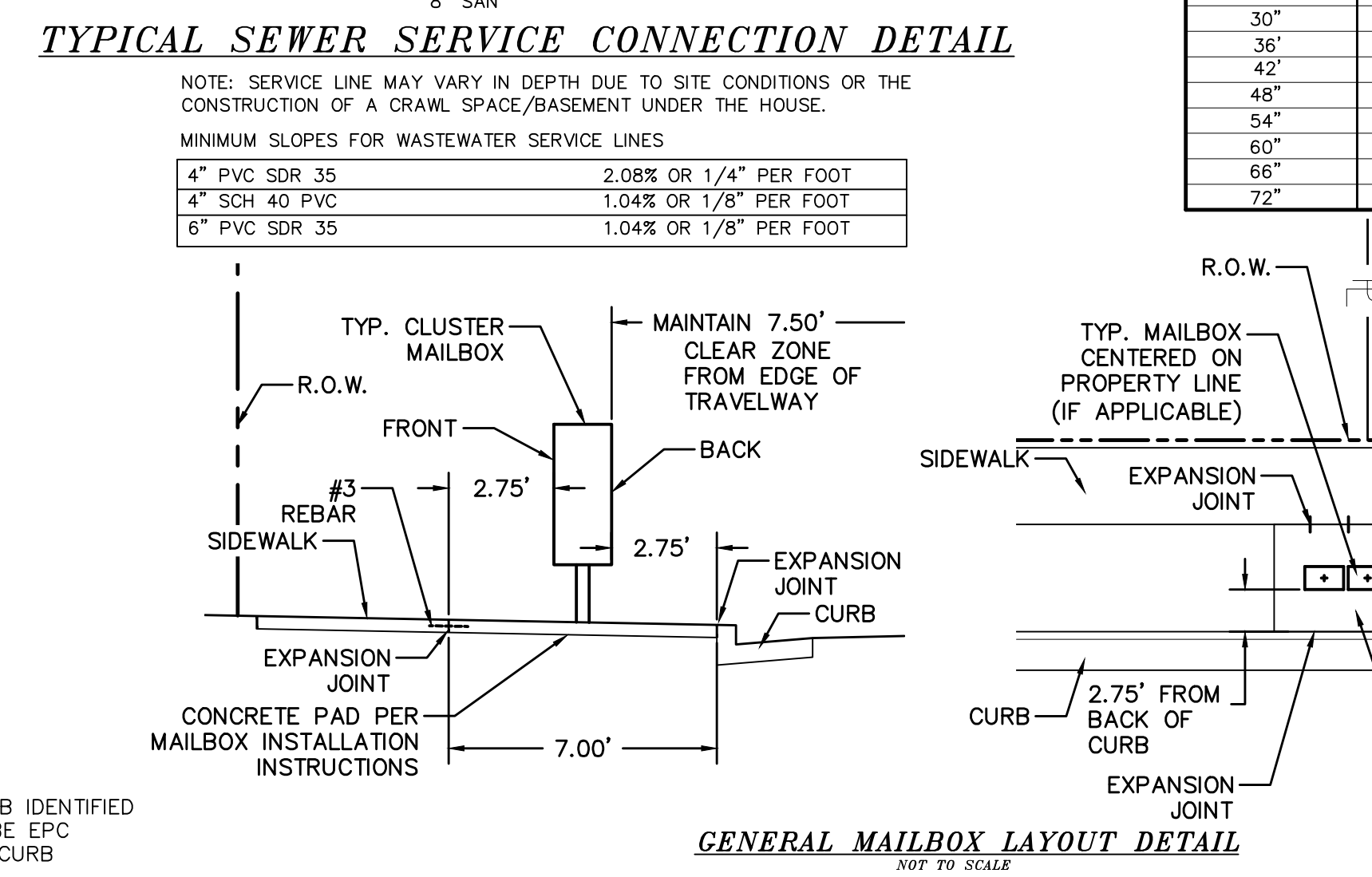
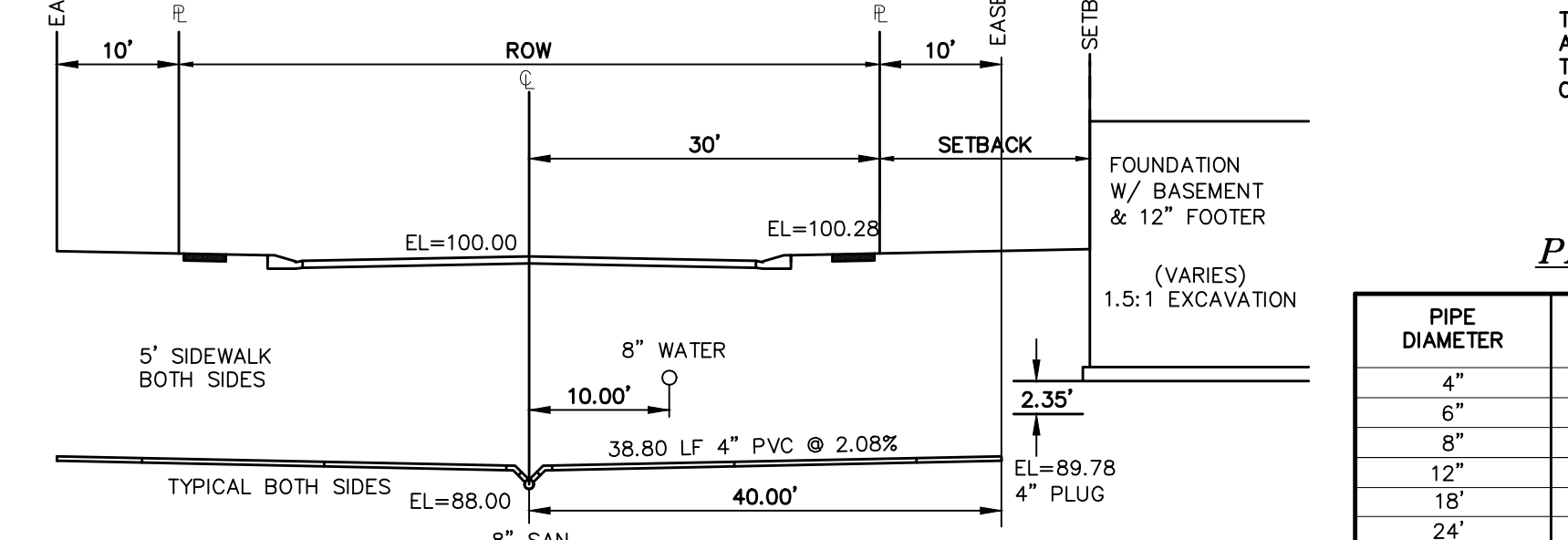
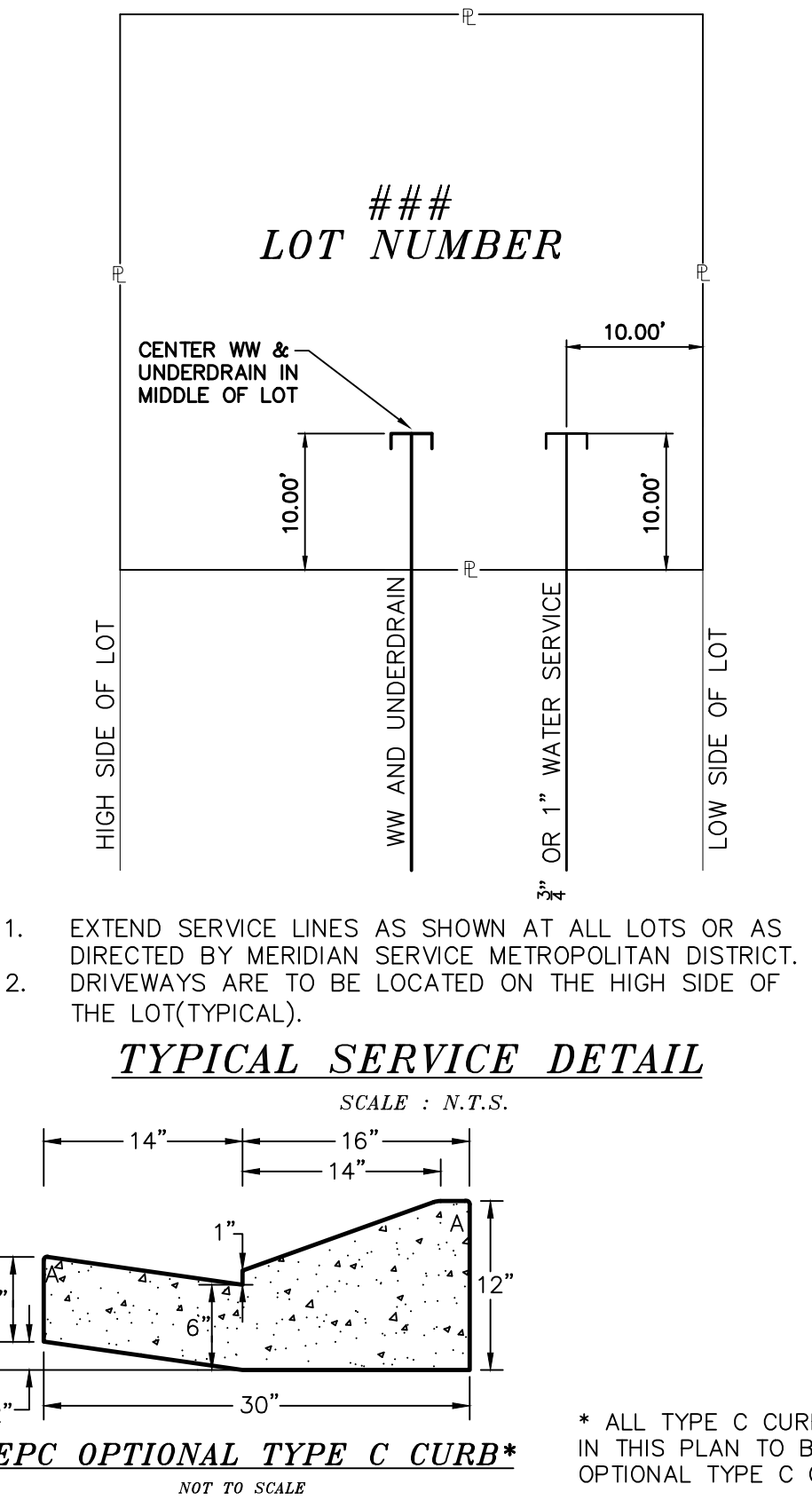
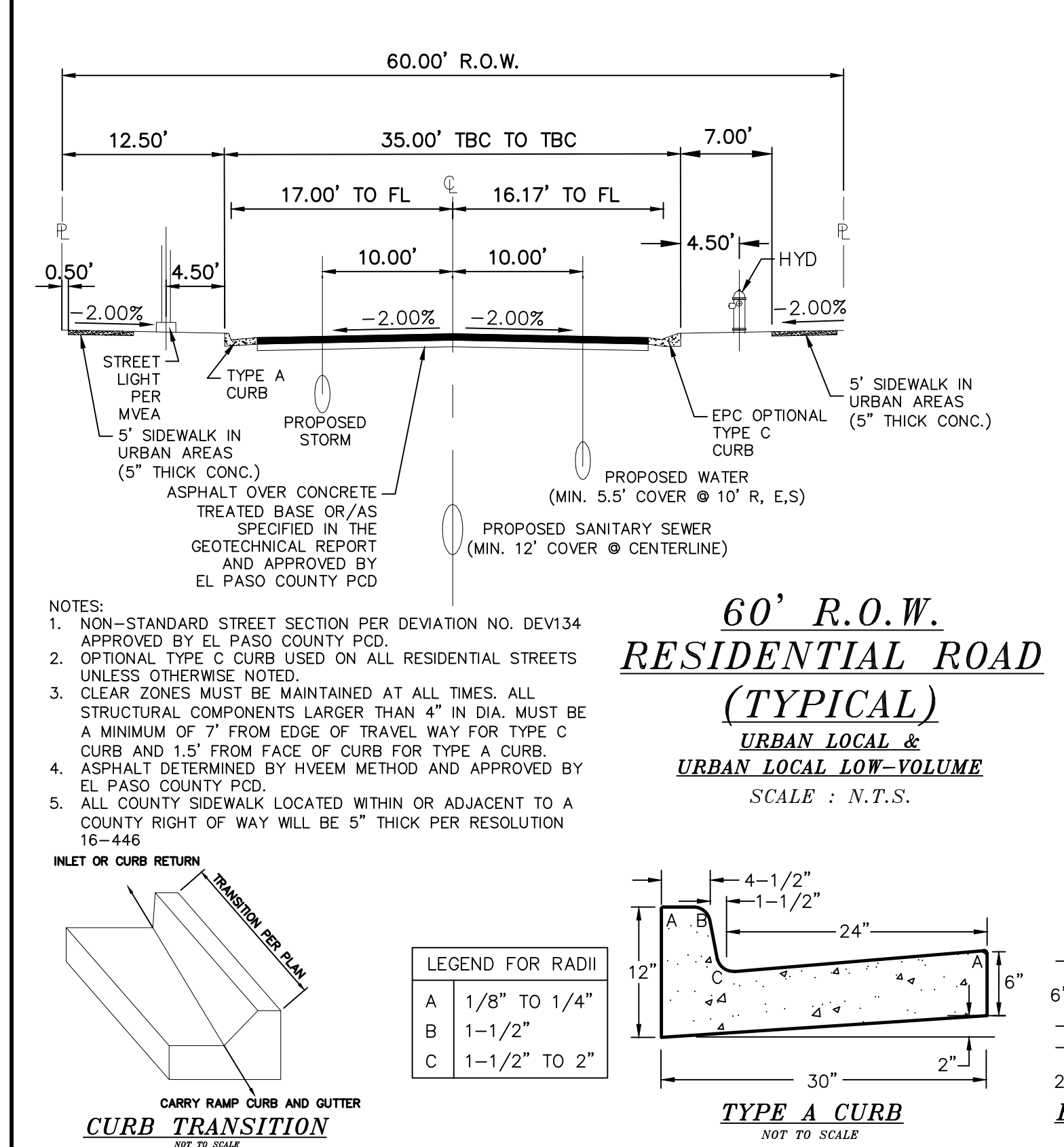
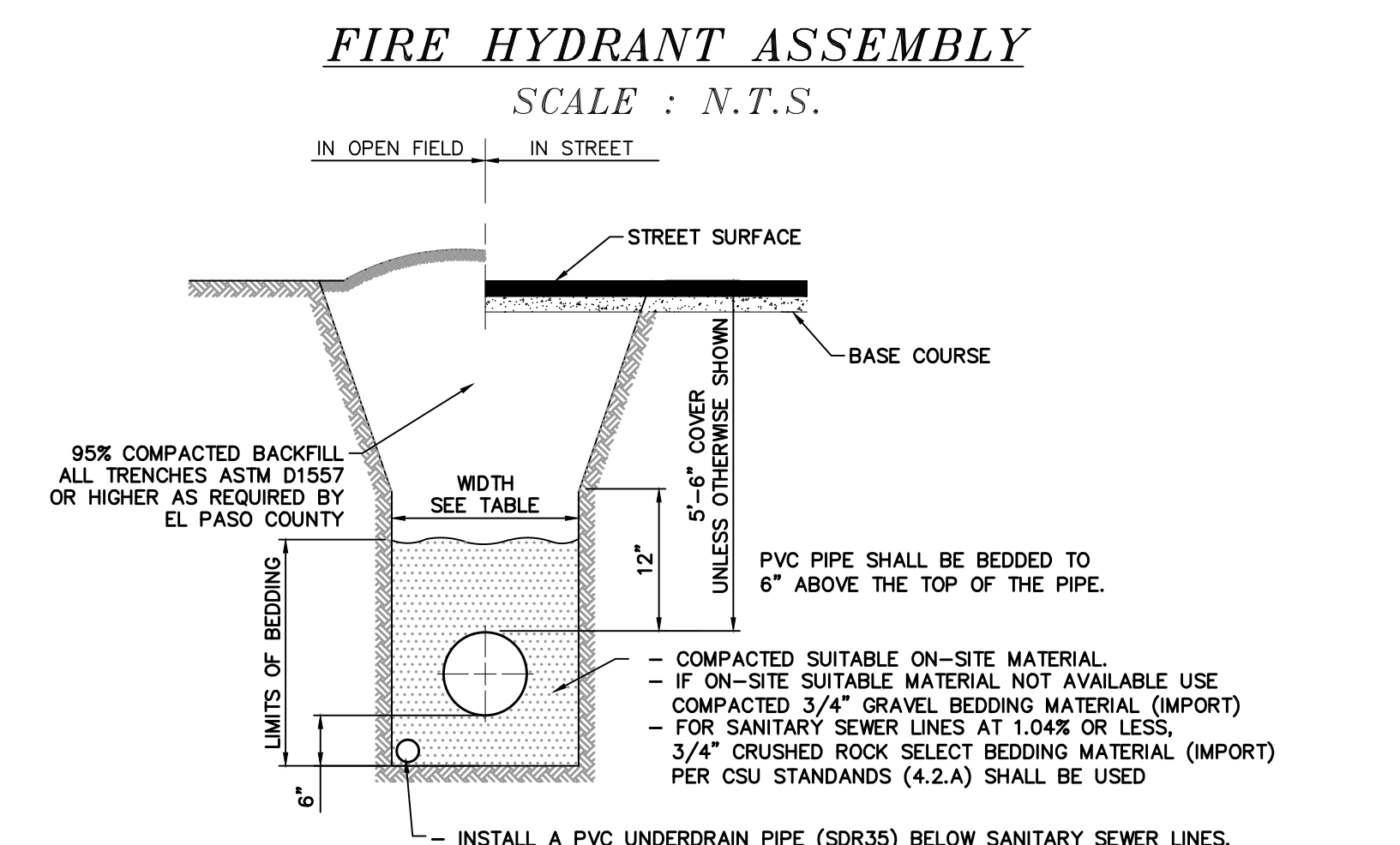
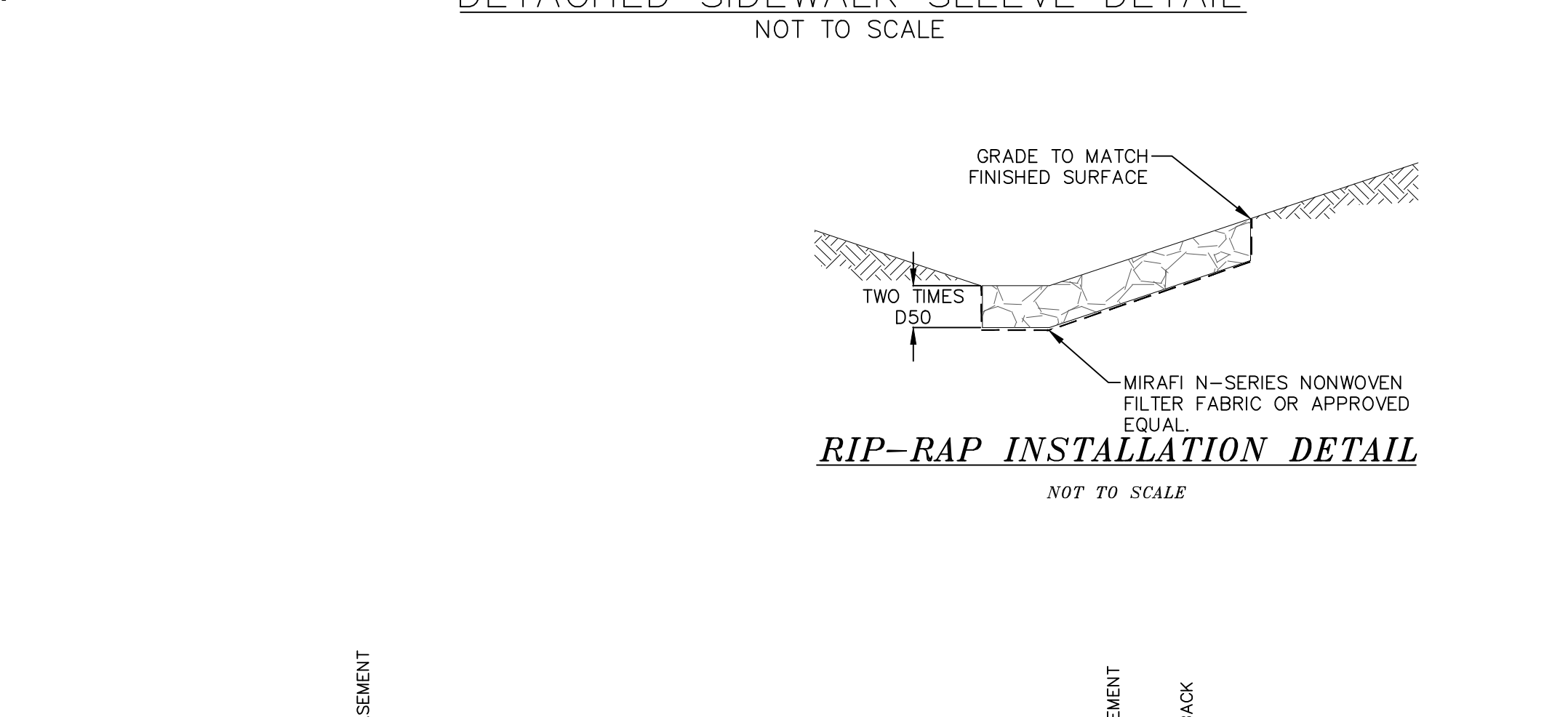
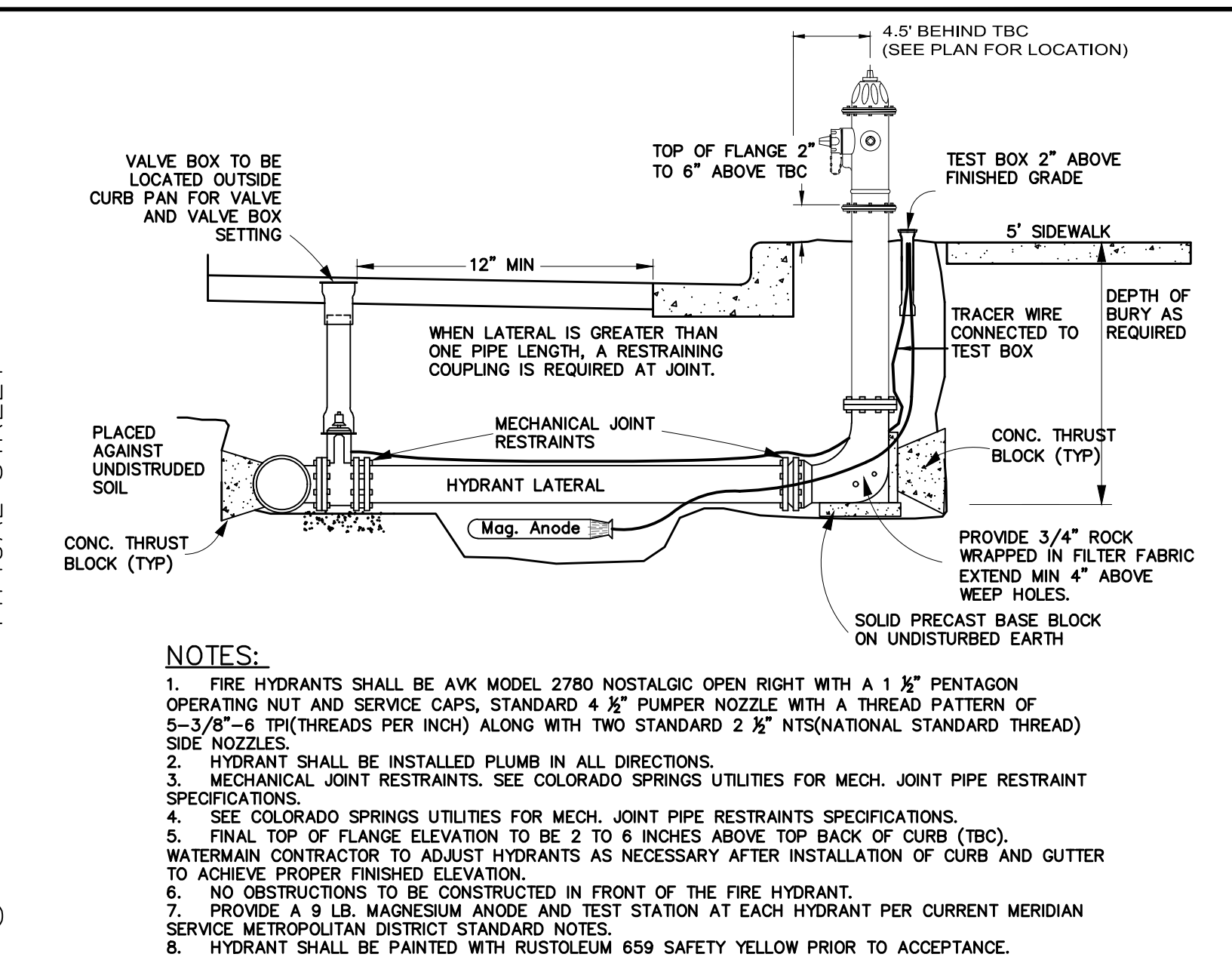
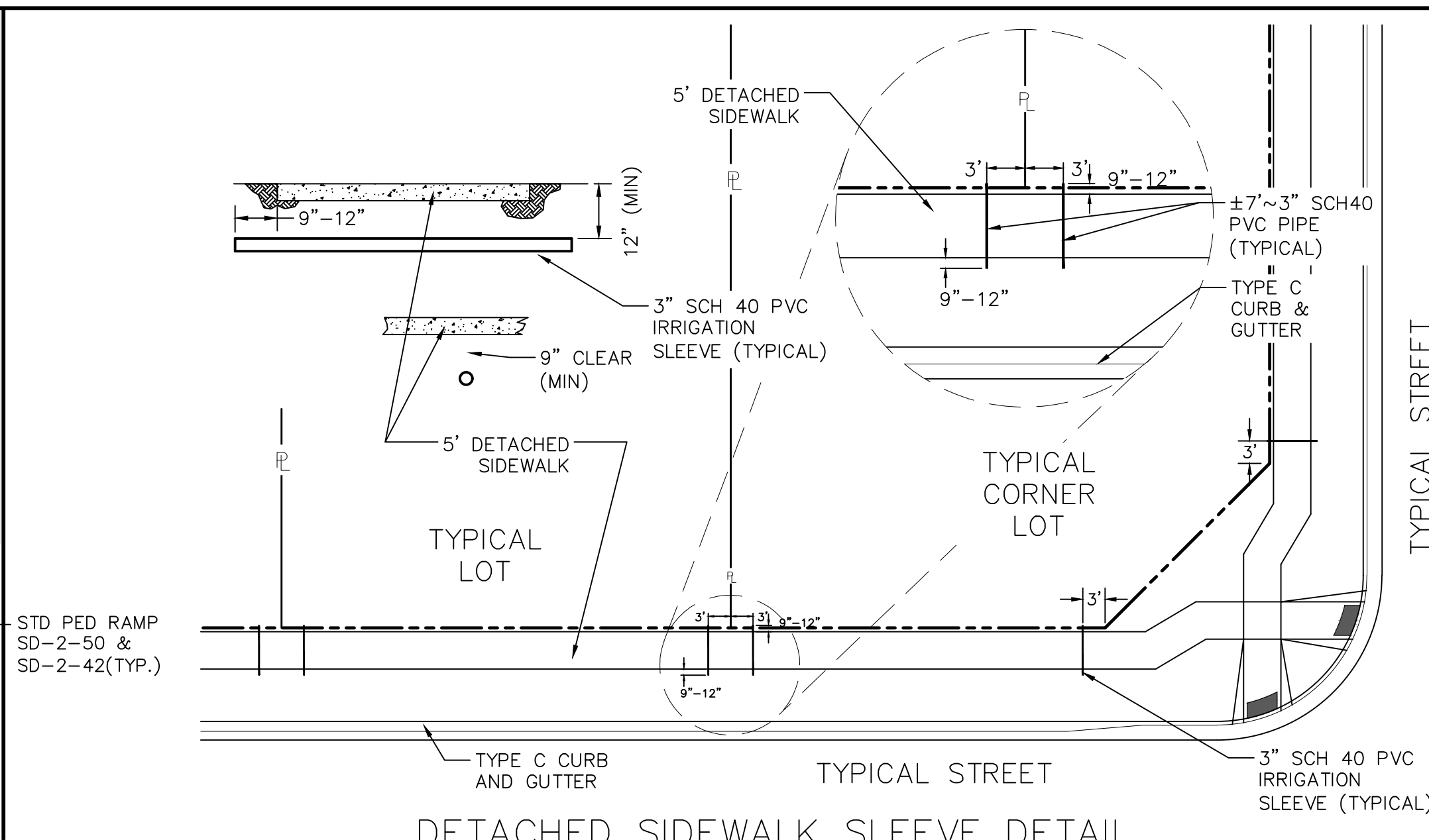
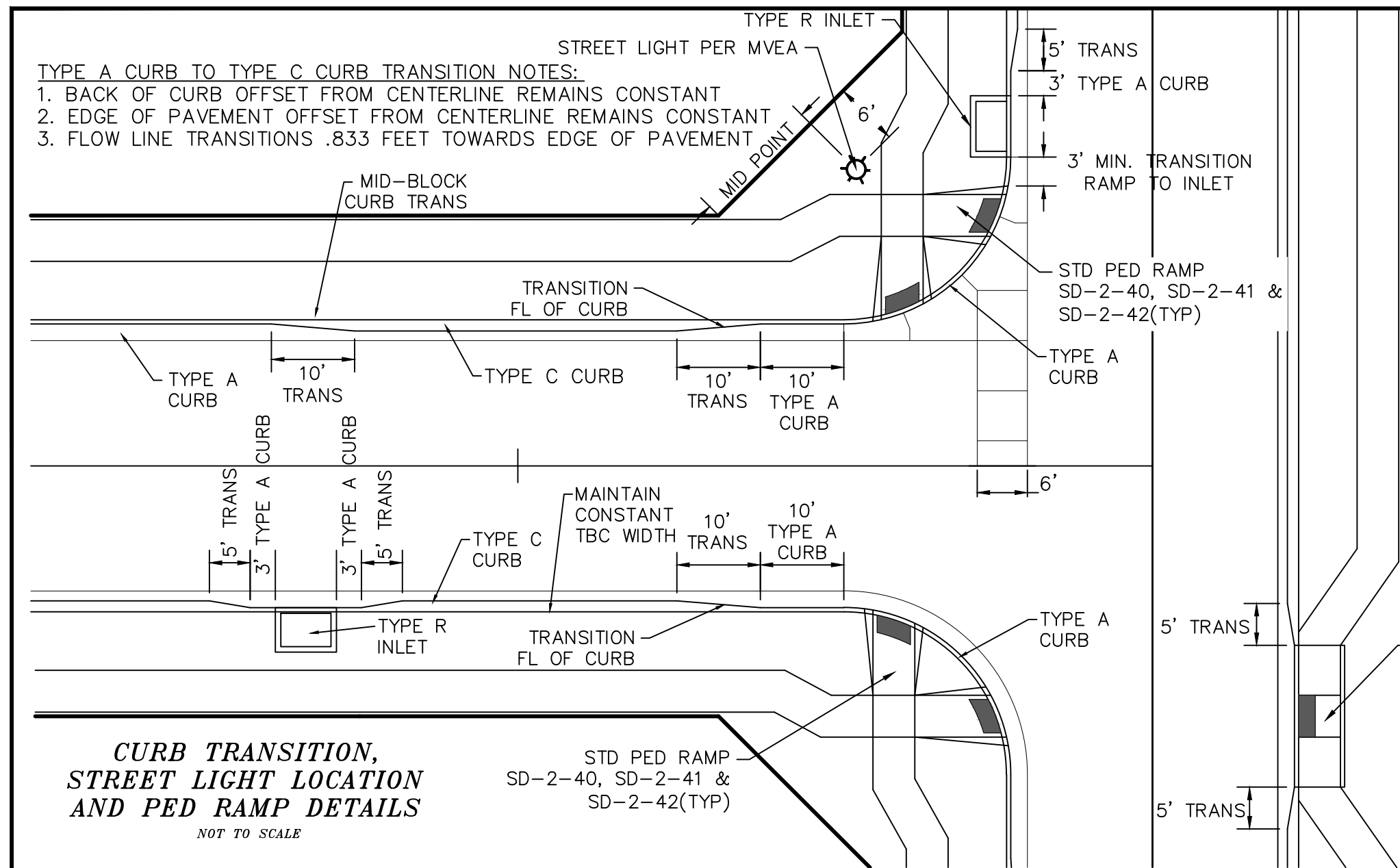
FALCON  
REGIONAL  
PARK  
EPC 7/29/2021

UNPLATTED

Scale		AS SHOWN		2 of 32	
Drawn by	LOG	Checked by	TAK	Date	MAY 2021
ROLLING HILLS RANCH FILING 3 AT MERIDIAN RANCH STREET AND UTILITY PLANS INDEX SHEET					
 <p><b>MERIDIAN RANCH</b></p>					
TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457					
1	2	3	4	No.	
Revisions					Date
					Appr.
					Date







**PIPE CHART**

PIPE DIAMETER	MINIMUM WIDTH	MAXIMUM WIDTH
4"	1'-4"	4'-0"
6"	1'-6"	4'-0"
8"	1'-8"	4'-0"
12"	2'-0"	4'-0"
18"	3'-0"	4'-0"
24"	3'-6"	4'-0"
30"	4'-0"	6'-0"
36"	5'-0"	6'-0"
42"	6'-0"	8'-0"
48"	6'-0"	8'-0"
54"	8'-0"	8'-0"
60"	8'-0"	8'-0"
66"	8'-0"	10'-0"
72"	10'-0"	12'-0"

**LEGEND**

SYMBOL	ACRONYM	DESCRIPTION
	RCP W/FES	REINFORCED CONCRETE PIPE W/FLARED END SECTIONS
	INLET	STORM SEWER INLET BOX
	SDMH	STORM SEWER MANHOLE
	ST	STORM SEWER LINE (PUBLIC UNLESS OTHERWISE NOTED)
	SS	SANITARY SEWER MAIN
	SSMH	SANITARY SEWER MANHOLE
	WM	WATER MAIN (ALL PIPES PVC, UNLESS OTHERWISE NOTED)
	GV	WATER GATE VALVE
	BV	WATER BUTTERFLY VALVE
	BOV	WATER BLOW-OFF VALVE
	HYD ASSY	FIRE HYDRANT ASSEMBLY
	TEE W/GV	WATER TEE W/ GATE VALVES
	ATT SW	ATTACHED SIDEWALK
	STANDARD PED RAMP	STANDARD PEDESTRIAN RAMP PER SD-2-40 & M-608-1 (SH 6 OF 6)
	ANODE	ANODE (CATHODIC PROTECTION)
	TS	TEST STATION
	HB	HAY BALE DAM
	SF	SILT FENCE
	EXIST	EXISTING FEATURES
	123	LOT NUMBERS
	SL	CROSS PAN PER SD-2-26
	SL	STREET LIGHT PER MOUNTAIN VIEW ELECTRIC ASSOCIATION (MVEA)
	R1-1	STOP SIGN - R1-1, 30x30 UNLESS OTHERWISE NOTED
	100	EXISTING CONTOUR (10')
	200	EXISTING CONTOUR (2')

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

**MERIDIAN RANCH**

**ROLLING HILLS RANCH FILING 3 AT MERIDIAN RANCH STREET AND UTILITY PLANS**

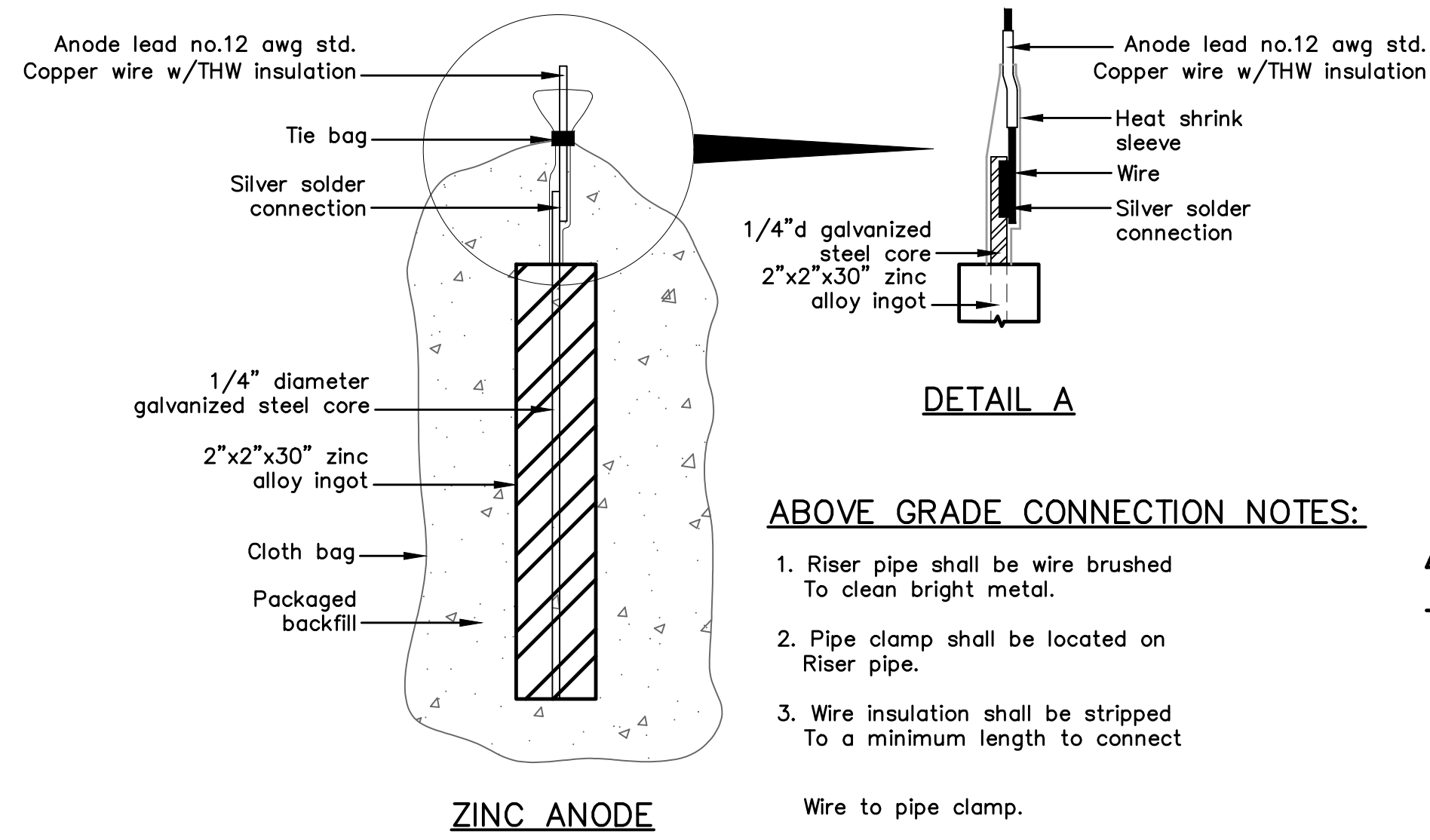
**DETAIL SHEET**

Drawn by: LOG  
Checked by: TJK  
Date: MAY 2021

Scale: AS SHOWN  
4 of 32

Colorado Licensed Professional Engineer  
31429

PCD PROJECT NO. SF-21-016



**ZINC ANODE AND CONNECTORS FOR 1" AND 2" WATER SERVICE**

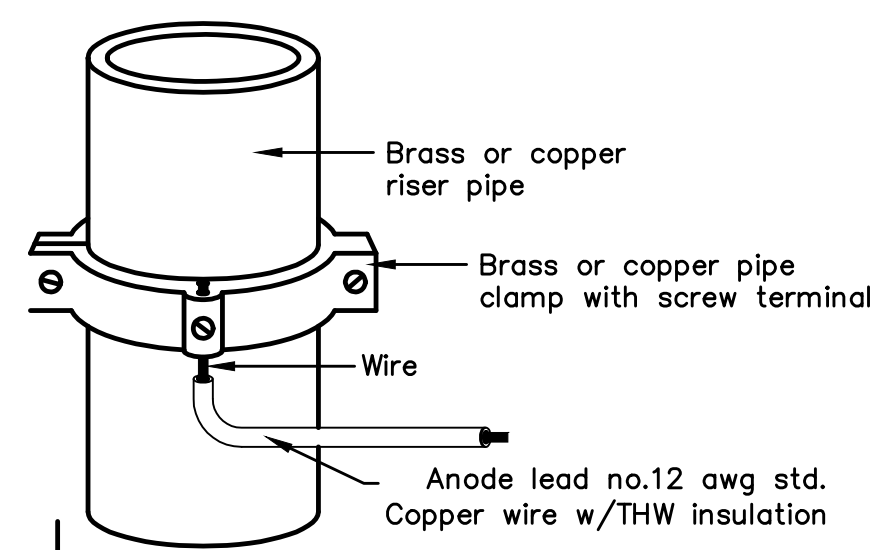
**ABOVE GRADE CONNECTION NOTES:**

1. Riser pipe shall be wire brushed To clean bright metal.
2. Pipe clamp shall be located on Riser pipe.
3. Wire insulation shall be stripped To a minimum length to connect Wire to pipe clamp.

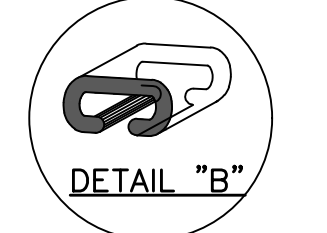
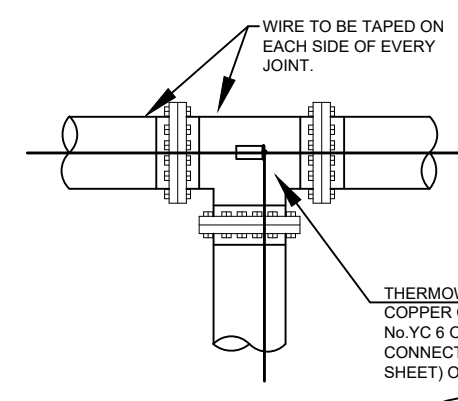
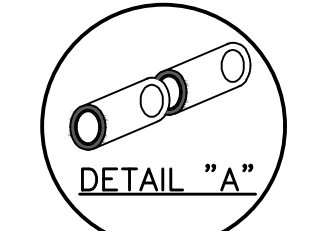
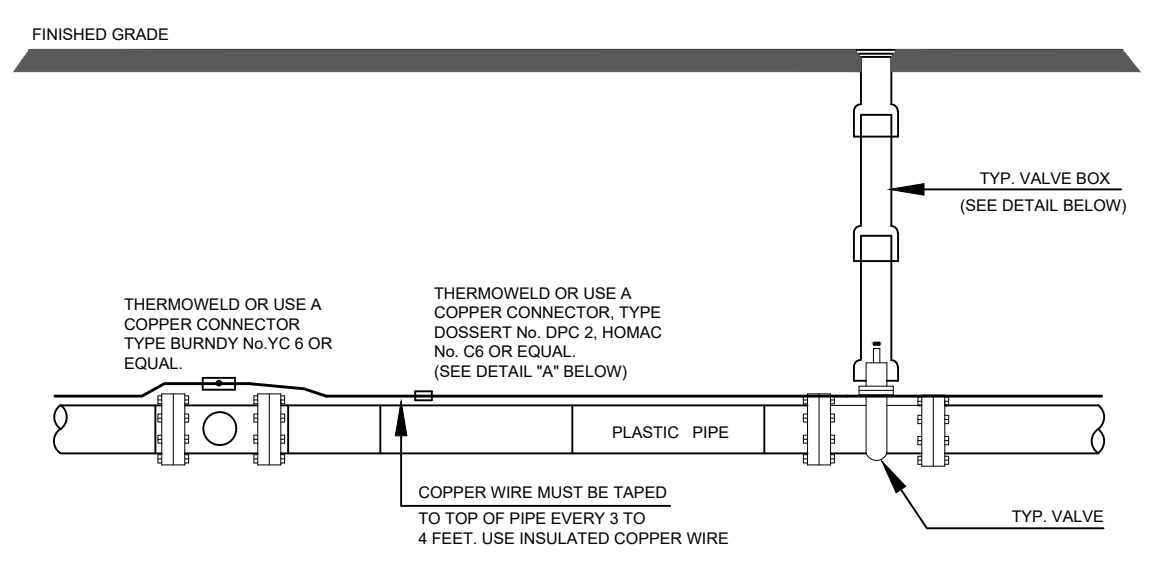
**PACKAGED BACKFILL COMPOSITION:**

75% gypsum  
20% bentonite  
5% sodium sulfate

Ingot weight: 30 lbs.  
Pkgd. Weight: 70 lbs. Approx.



**ANODE LEAD ABOVE GRADE CONNECTION**



**Anode Design**

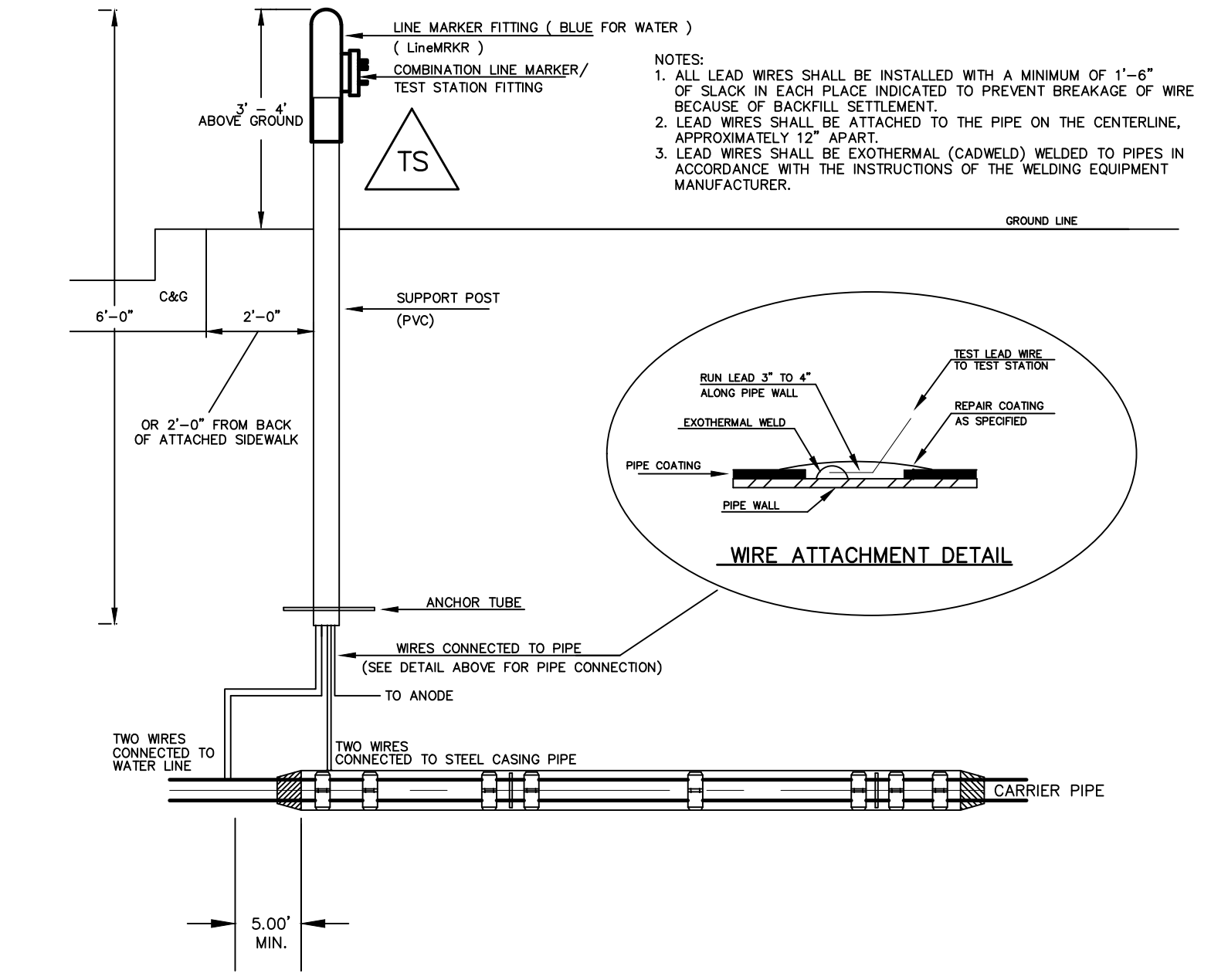
For use with DIP in conjunction with poly-wrap sleeves and piping in 1000 ohm-cm soil estimating a 5% holiday area.

Pipe Size Inches	Actual OD Inches	Anode Spacing Feet (see note 2)	Anode Weight (lb)
4	4.8	763	17 lb
6	6.9	531	17 lb
8	9.05	405	17 lb
12	13.20	277	17 lb
16	16	210	32 lb
20	20	169	32 lb
24	24	142	48 lb
30	30	114	48 lb
36	36	95.7	48 lb
42	42	82.4	48 lb
48	48	72.1	48 lb
54	54	64.2	48 lb

The distance from the point of the beginning to the first anode shall not exceed one half the recommended spacing.

**NOTES**

1. Cadweld connection to be primed and coated carefully. Packed anode should be covered with fine soil containing no rocks or dirt clumps, tamped.
2. When anodes are required with metal fittings and appurtenances together with PVC pipe installations, the anodes shall be placed and attached to the metal fittings in same manner as shown on this drawing.
3. Packaged anode to be wetted and covered with soil prior to backfilling.

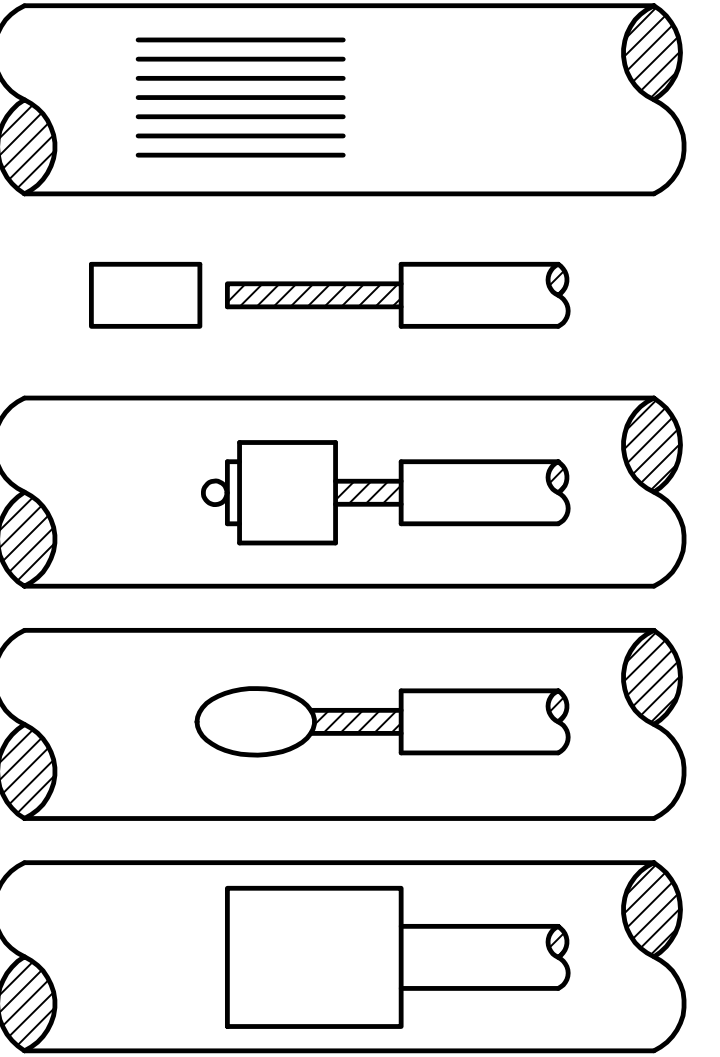
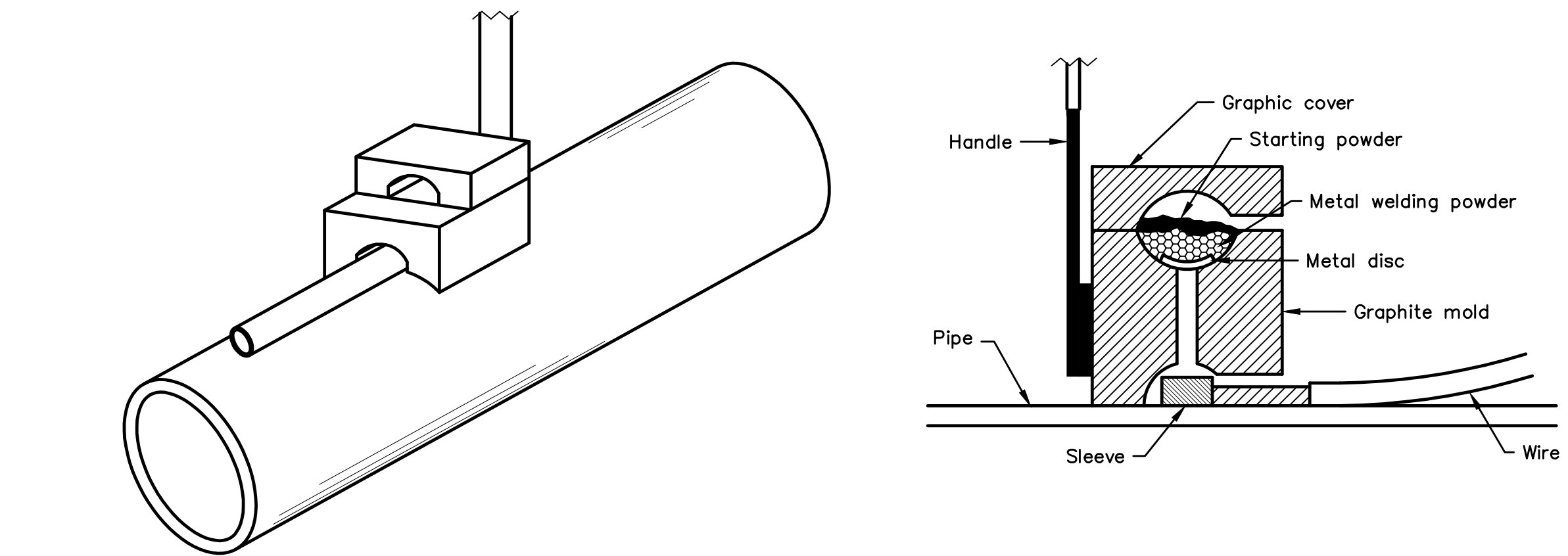


**TYPICAL DETAIL FOR TEST STATION WITH STEEL SLEEVE INSTALLATION**

**NOTES:**

- 1.) Lowerings to be cathodically protected under the direction of the MSMD Inspector, per standards. (For anode size see detail above.)
- 2.) Example can vary due to site conditions and MSMD Inspector's direction's.
- 3.) Reference Colorado Springs Utilities Standard Detail Drawing No. A 8-6 - Steel Sleeve Installation.

EPC 7/29/2021



**NOTES:**

1. All wire welds shall be minimum 3 inches apart.
2. Standard weld cartridges shall be used for steel surfaces.

**EXOTHERMIC WELD PROCESS**

**NOTE**

1. Contractor is responsible for continuity of all tracer wire.
2. Tracer wire is required on all pipes per MSMD specifications (PVC and HDPE).

**FIELD INSTALLATION OF POLYETHYLENE WRAP FOR DIP PIPE AND FITTINGS.**

**STEP 1:**

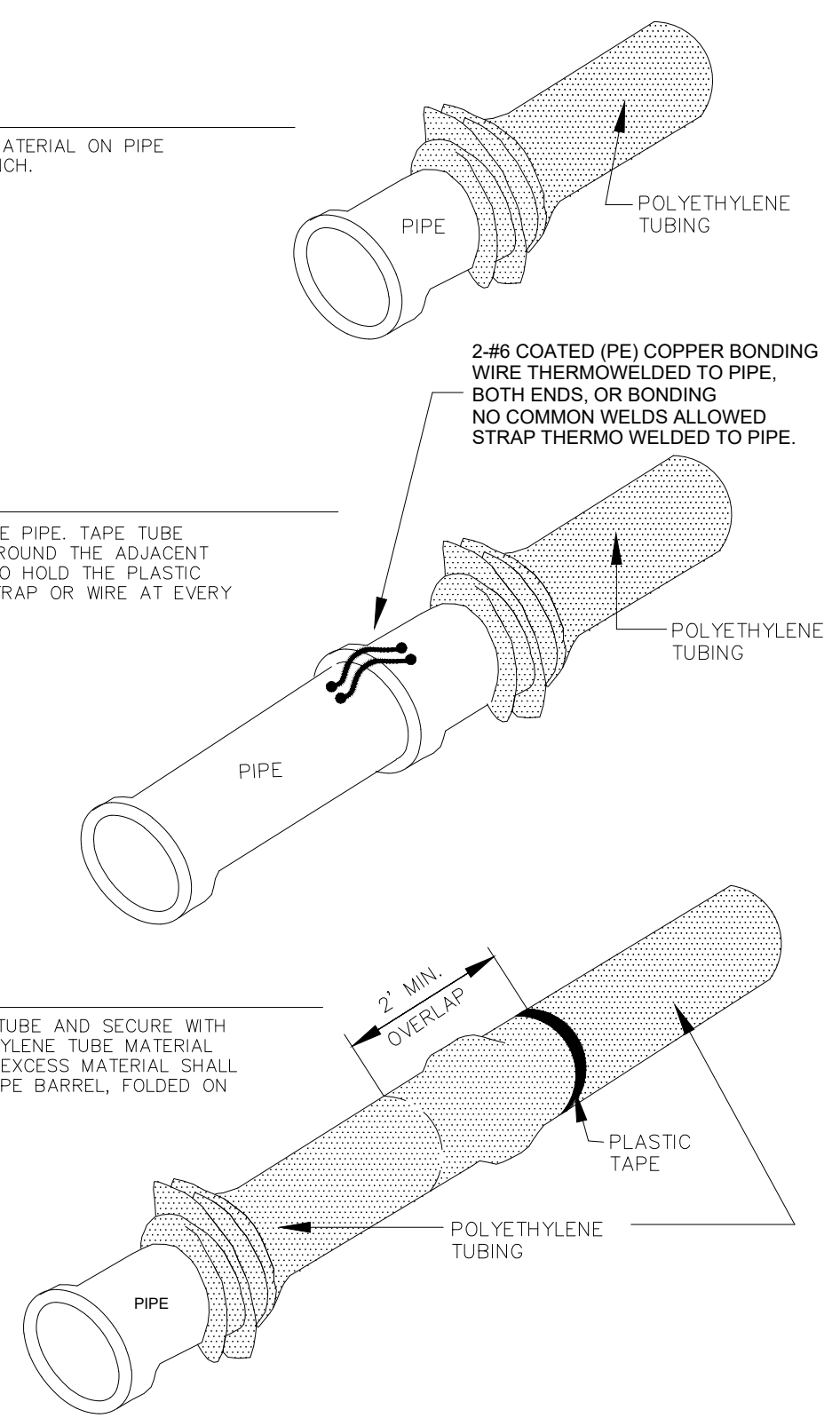
PLACE TUBE OF POLYETHYLENE MATERIAL ON PIPE PRIOR TO LOWERING IT INTO TRENCH.

**STEP 2:**

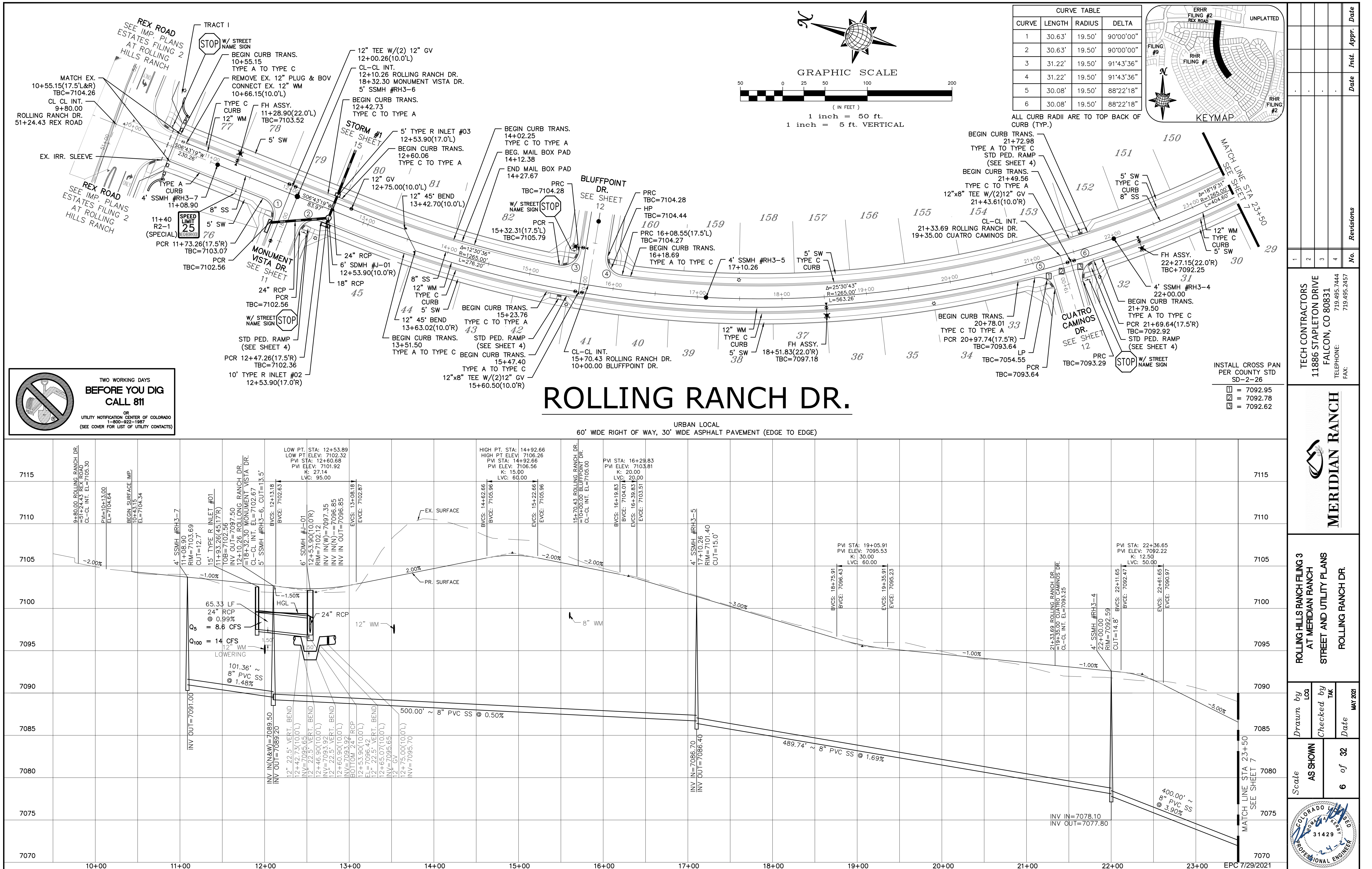
PULL TUBE OVER THE LENGTH OF THE PIPE. TAP TUBE TO END AT JOINT. FOLD MATERIAL AROUND THE ADJACENT SPIGOT END AND WRAP WITH TAPE TO HOLD THE PLASTIC TUBE IN PLACE. INSTALL BONDING STRAP OR WIRE AT EVERY JOINT OF PIPE PRIOR TO WRAPPING.

**STEP 3:**

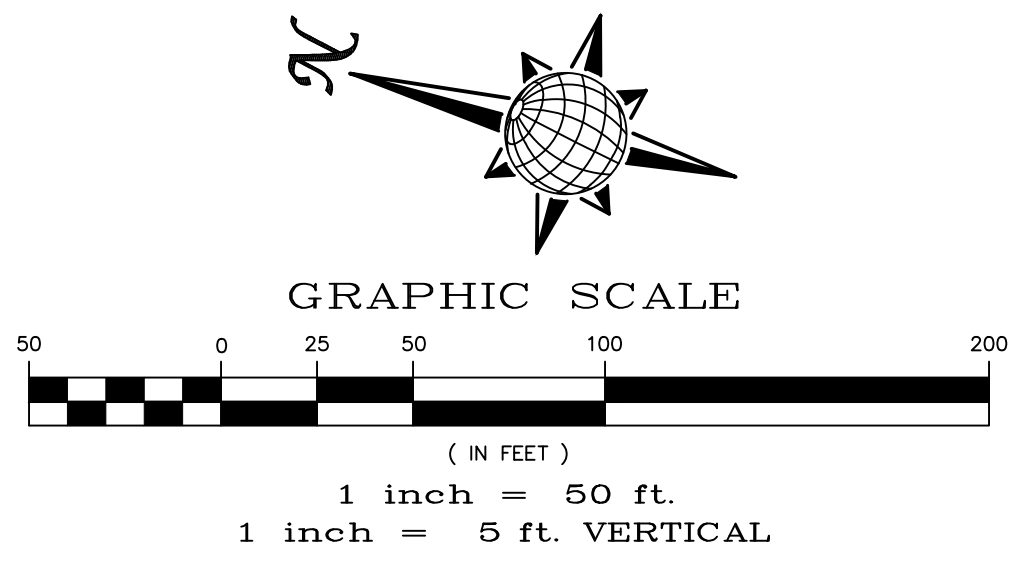
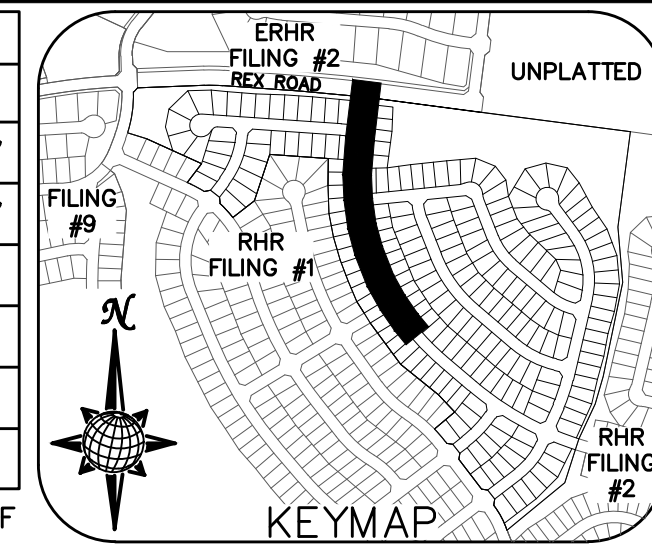
OVERLAP FIRST TUBE WITH ADJACENT TUBE AND SECURE WITH PLASTIC ADHESIVE TAPE. THE POLYETHYLENE TUBE MATERIAL COVERING THE PIPE SHALL BE LOOSE. EXCESS MATERIAL SHALL BE NEATLY DRAWN UP AROUND THE PIPE BARREL, FOLDED ON TOP OF PIPE AND TAPED IN PLACE.



1	2	3	4	No.	Revisions	Date	Appr.	
TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457				<p><b>MERIDIAN RANCH</b></p>				<p>ROLLING HILLS RANCH FILING 3 AT MERIDIAN RANCH STREET AND UTILITY PLANS DETAIL SHEET</p>
Drawn by	LOG	Checked by	TAK					
Scale	AS SHOWN	5	of	32				



CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
1	30.63'	19.50'	90°00'00"
2	30.63'	19.50'	90°00'00"
3	31.22'	19.50'	91°43'36"
4	31.22'	19.50'	91°43'36"
5	30.08'	19.50'	88°22'18"
6	30.08'	19.50'	88°22'18"



**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**

ROLLING HILLS RANCH FILING 3  
AT MERIDIAN RANCH  
STREET AND UTILITY PLANS  
ROLLING RANCH DR.

Scale: **AS SHOWN**

Drawn by: **LOG**

Checked by: **TAK**

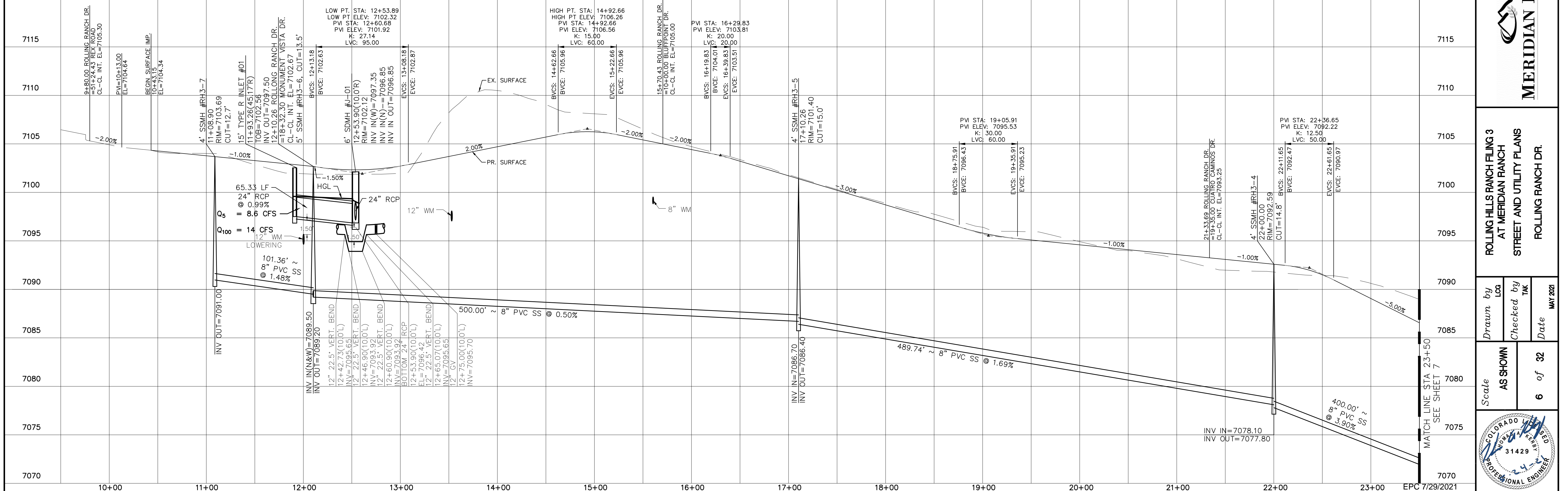
Date: **MAY 2021**

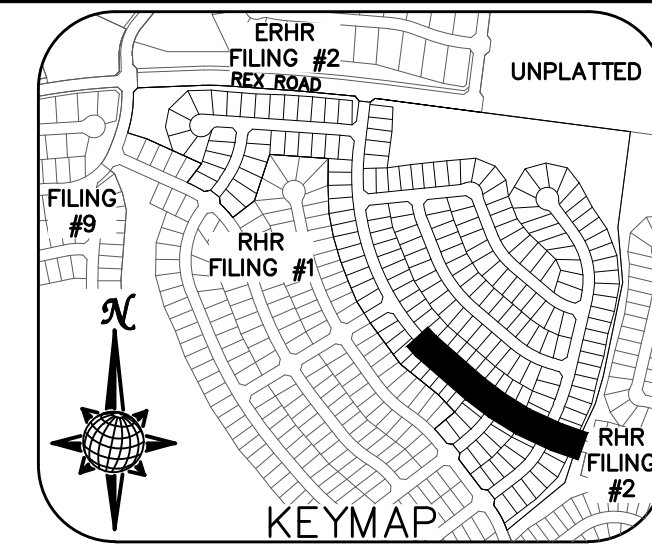
6 of 32

PROFESSIONAL ENGINEER  
31429

# ROLLING RANCH DR.

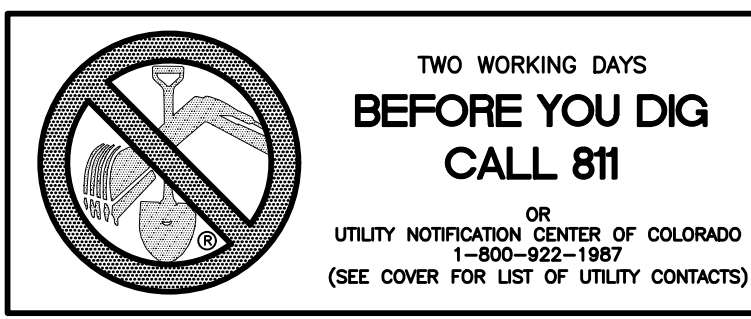
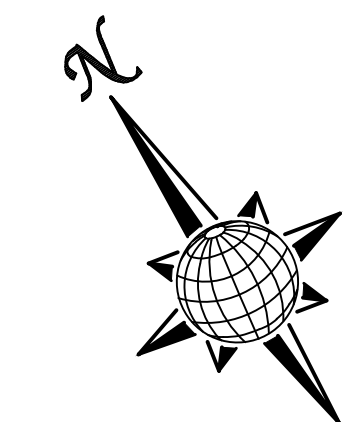
URBAN LOCAL  
60' WIDE RIGHT OF WAY, 30' WIDE ASPHALT PAVEMENT (EDGE TO EDGE)





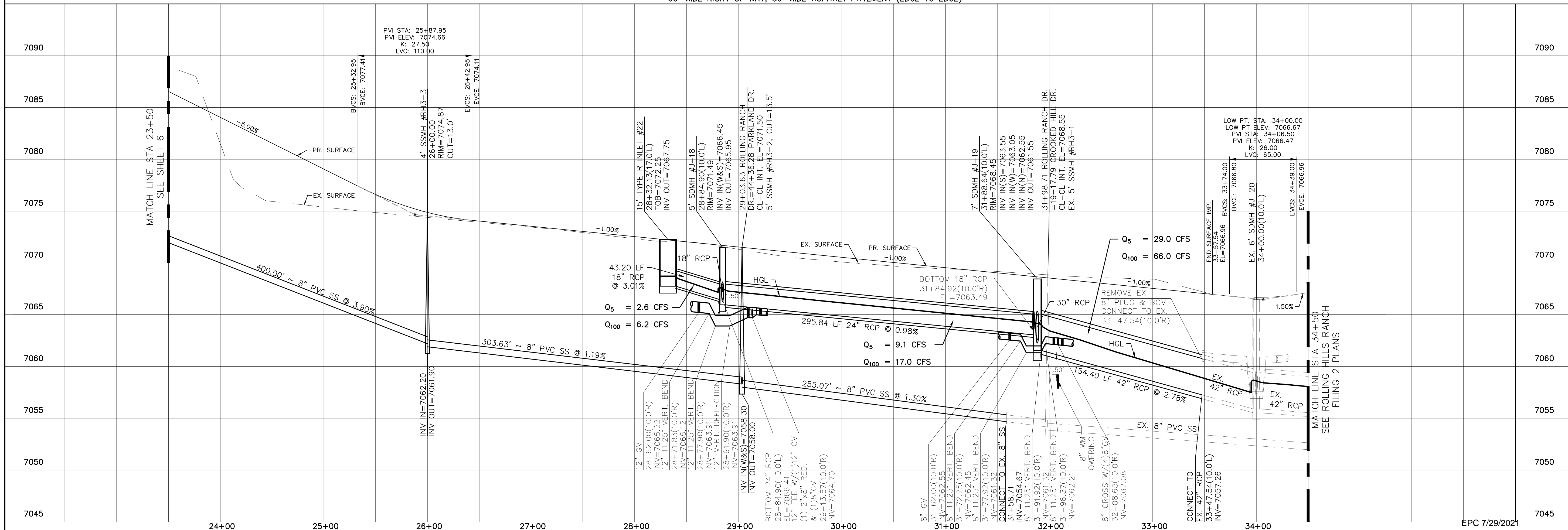
CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
7	30.19'	19.50'	88°42'18"
8	30.19'	19.50'	88°42'18"
9	30.19'	19.50'	88°42'18"
10	30.19'	19.50'	88°42'18"
11	31.09'	19.50'	91°21'23"
12	31.09'	19.50'	91°21'23"

ALL CURB RADII ARE TO TOP BACK OF CURB (TYP.)

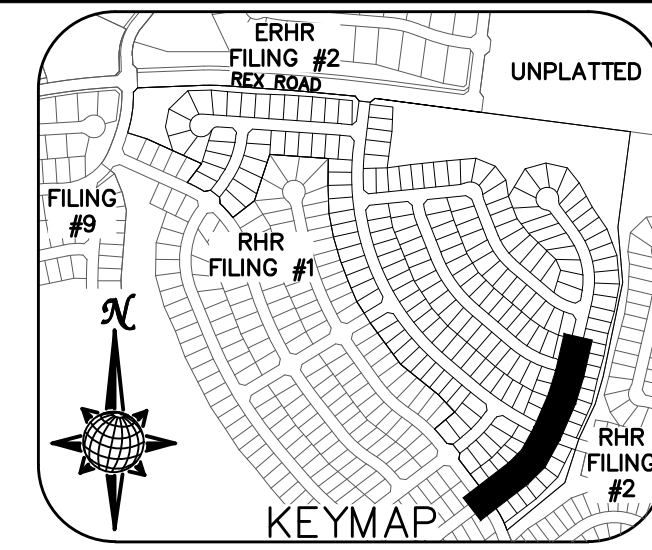


# ROLLING RANCH DR.

URBAN LOCAL  
60' WIDE RIGHT OF WAY, 30' WIDE ASPHALT PAVEMENT (EDGE TO EDGE)

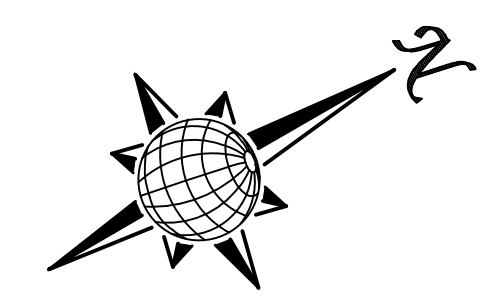


Date	Appr.				
Date	Init.				
Revisions					
No.					
TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457					
<b>MERIDIAN RANCH</b>					
ROLLING RANCH FILING 3 AT MERIDIAN RANCH STREET AND UTILITY PLANS ROLLING RANCH DR.					
Scale	AS SHOWN	7 of 32	Date	MAY 2021	
Drawn by	LOG	Checked by	TAK		
EPC 7/29/2021					



CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
9	30.19'	19.50'	88°42'18"
10	30.19'	19.50'	88°42'18"
11	31.09'	19.50'	91°21'23"
12	31.09'	19.50'	91°21'23"
13	30.63'	19.50'	90°00'00"
14	30.63'	19.50'	90°00'00"

ALL CURB RADII ARE TO TOP BACK OF CURB (TYP.)

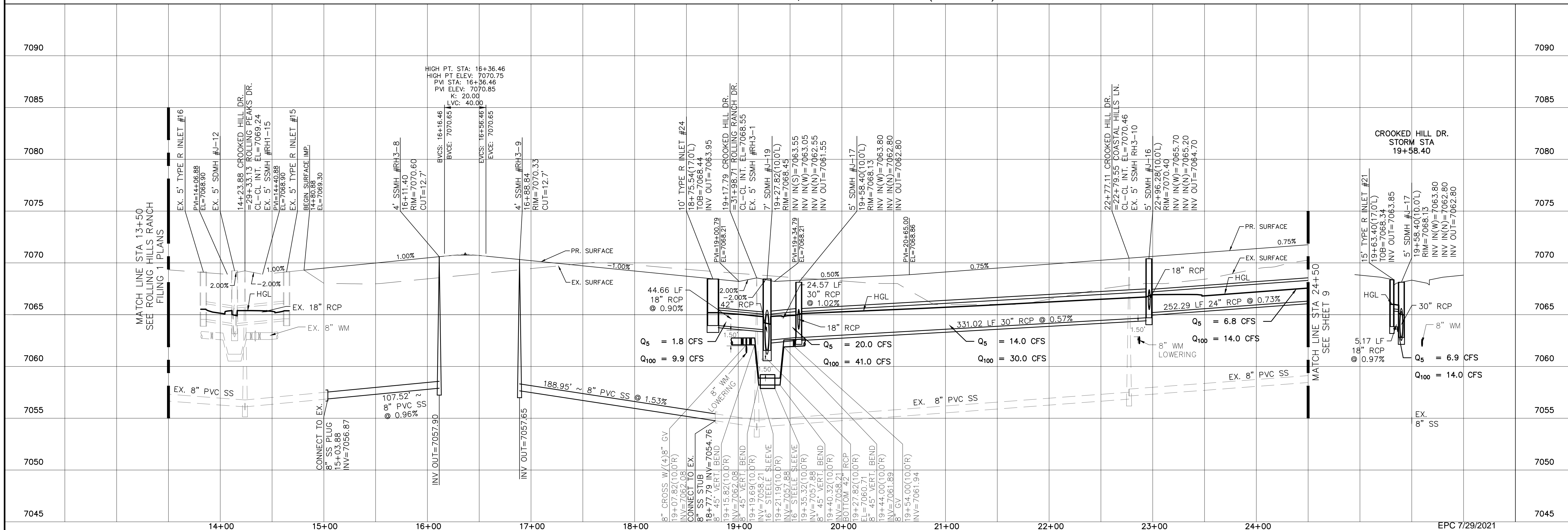


**TWO WORKING DAYS BEFORE YOU DIG CALL 811**

OR  
UTILITY NOTIFICATION CENTER OF COLORADO  
1-800-922-1987  
(SEE COVER FOR LIST OF UTILITY CONTACTS)

# CROOKED HILL DR.

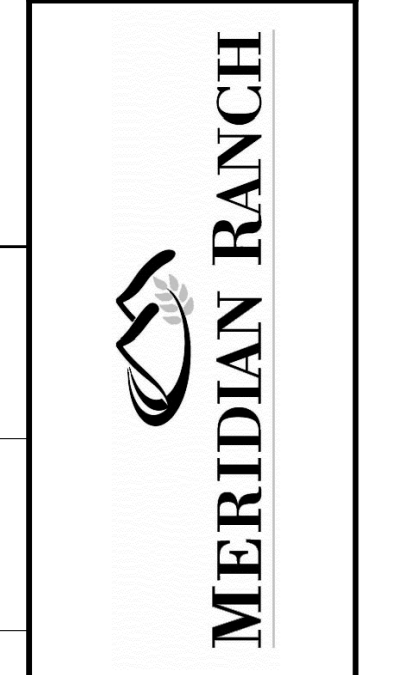
URBAN LOCAL  
60' WIDE RIGHT OF WAY, 30' WIDE ASPHALT PAVEMENT (EDGE TO EDGE)



Date	Appr.
Date	Init.

No.	Revisions
1	
2	
3	
4	

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



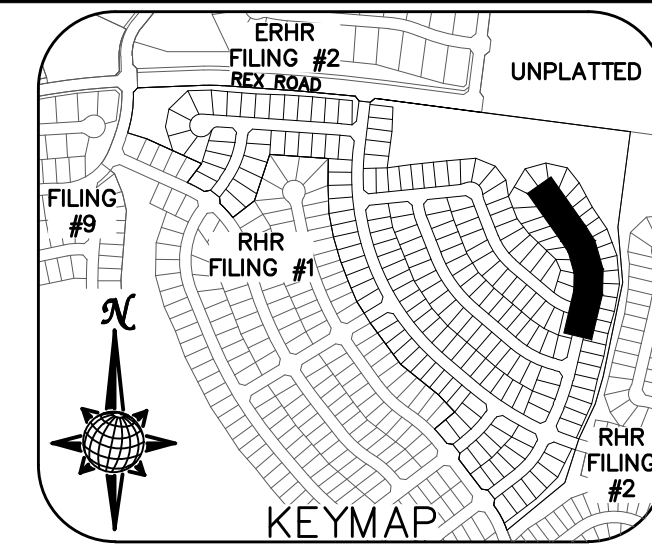
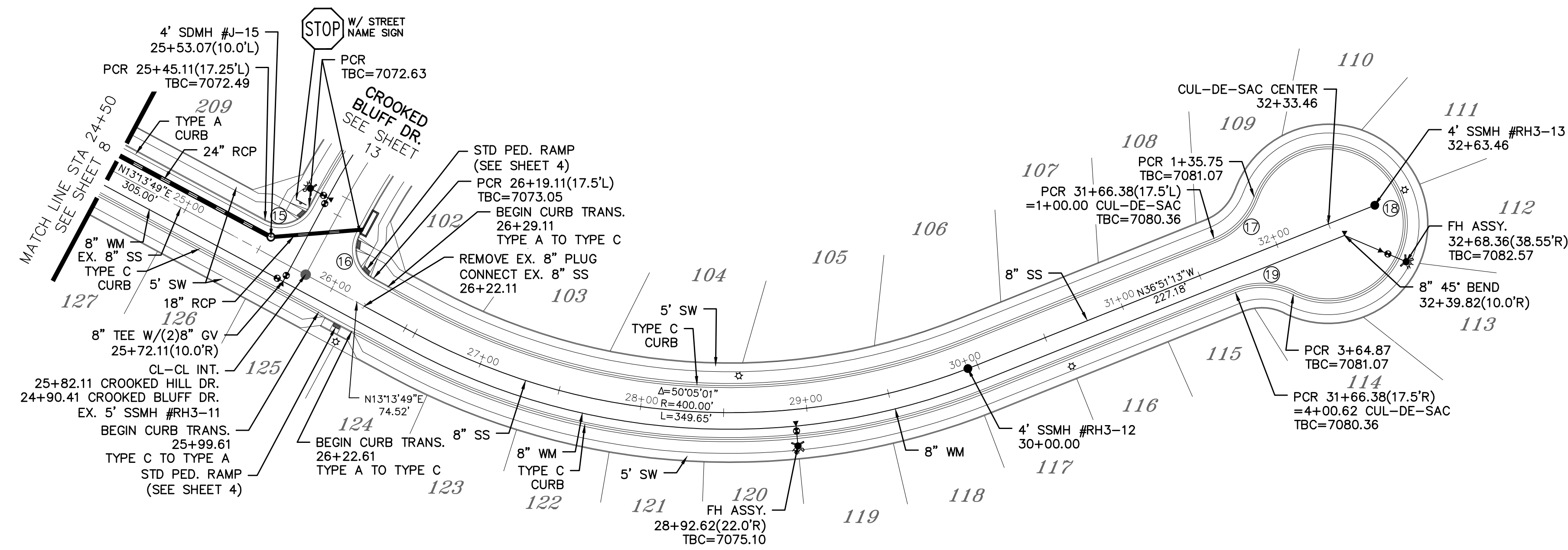
ROLLING HILLS RANCH FILING 3  
AT MERIDIAN RANCH  
STREET AND UTILITY PLANS  
CROOKED HILL DR.

Drawn by LOG  
Checked by TJK  
Date MAY 2021

Scale AS SHOWN  
8 of 32

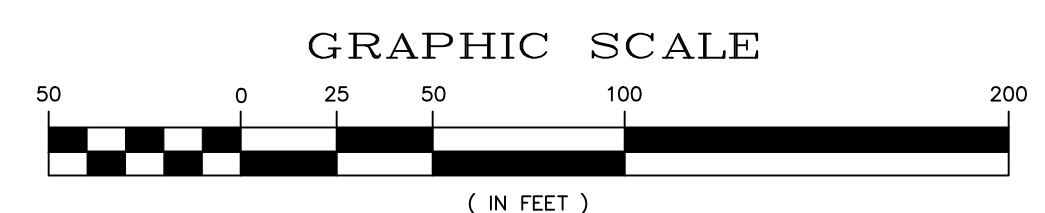
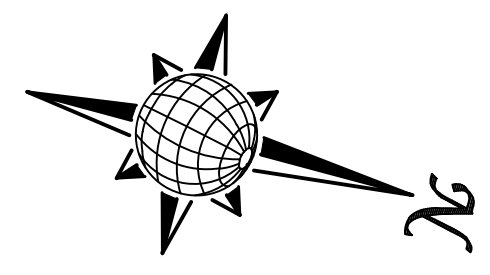






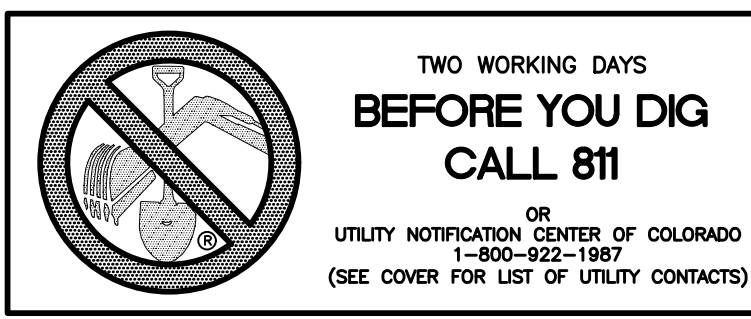
CURVE	LENGTH	RADIUS	DELTA
15	30.63'	19.50'	90°00'00"
16	30.63'	19.50'	90°00'00"
17	35.75'	42.50'	48°11'23"
18	229.13'	47.50'	276°22'46"
19	35.75'	42.50'	48°11'23"

ALL CURB RADII ARE TO TOP BACK OF CURB (TYP.)



# CROOKED HILL DR.

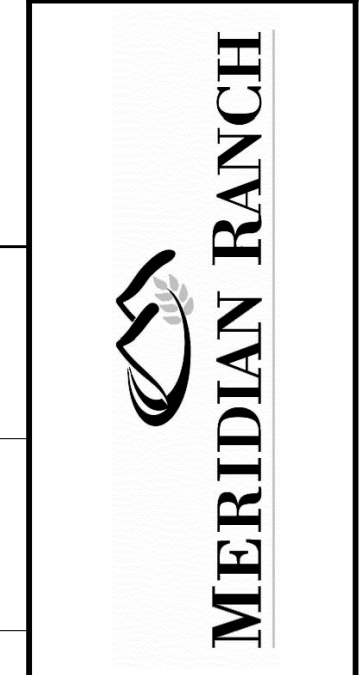
URBAN LOCAL  
60' WIDE RIGHT OF WAY, 30' WIDE ASPHALT PAVEMENT (EDGE TO EDGE)



Date	Appr.

No.	Revisions
1	
2	
3	
4	

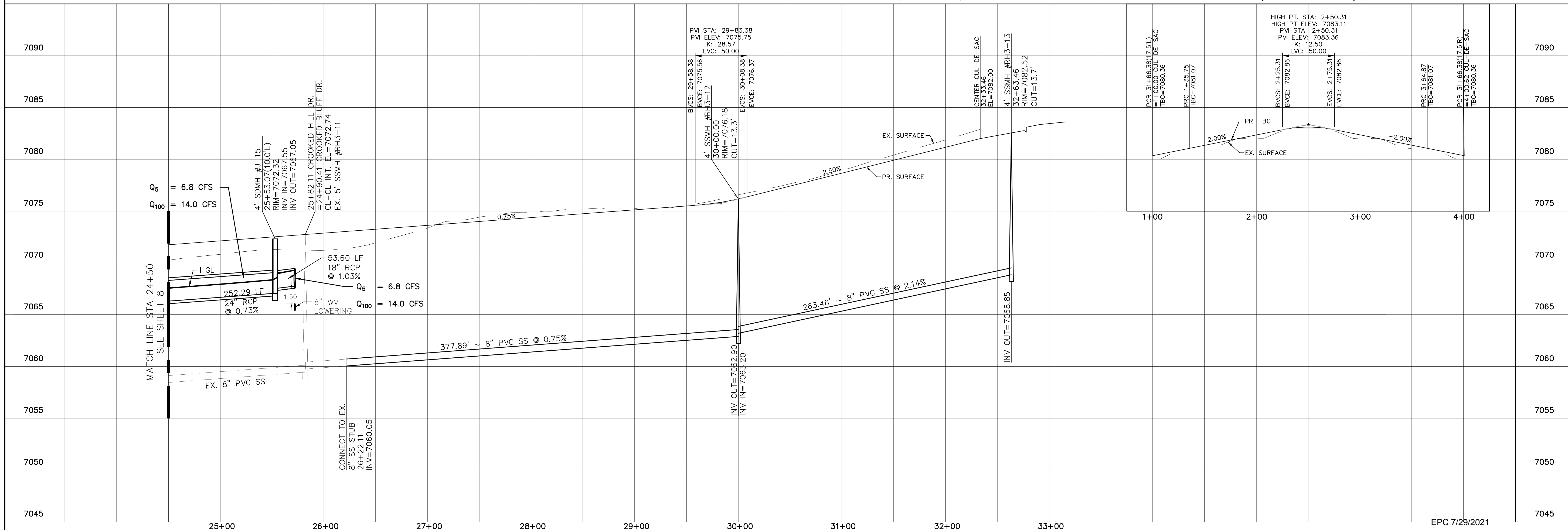
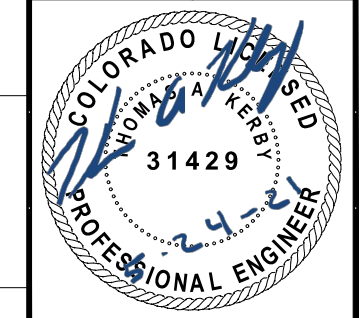
TECH CONTRACTORS  
11886 STAPLETON DRIVE  
FALCON, CO 80831  
TELEPHONE: 719.495.7444  
FAX: 719.495.2457



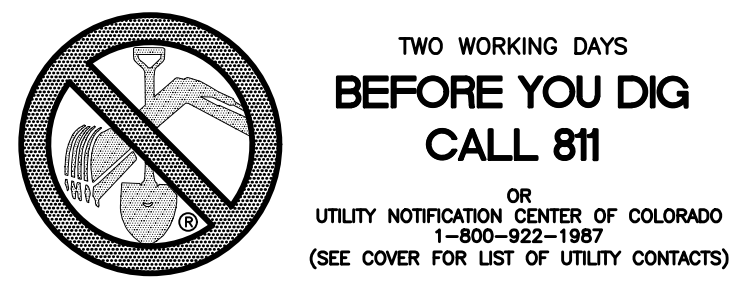
ROLLING HILLS RANCH FILING 3  
AT MERIDIAN RANCH  
STREET AND UTILITY PLANS  
CROOKED HILL DR.

Drawn by LOG  
Checked by TJK  
Date MAY 2021

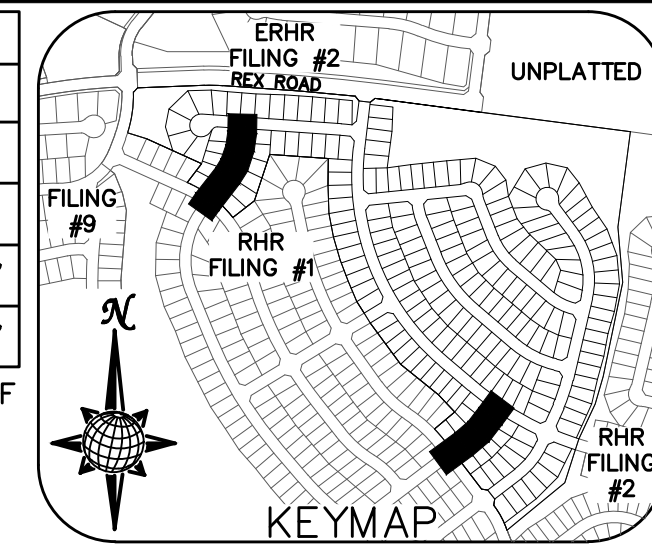
Scale AS SHOWN  
9 of 32



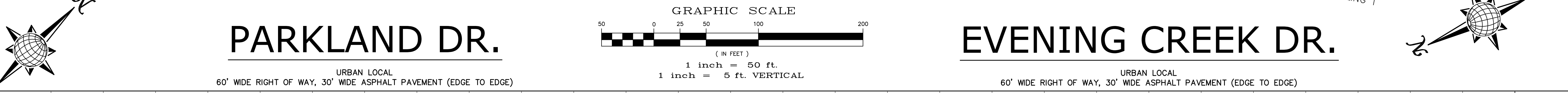
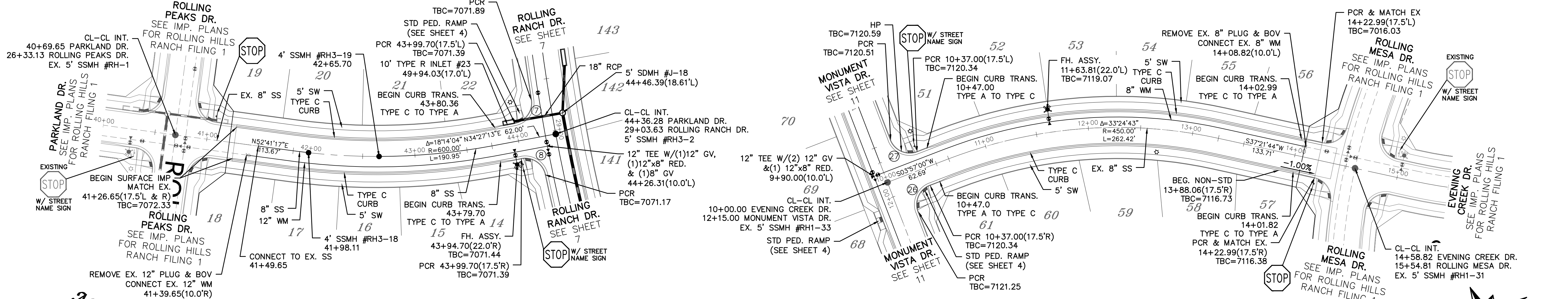
EPC 7/29/2021



CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
7	30.19'	19.50'	88°42'18"
8	30.19'	19.50'	88°42'18"
26	30.63'	19.50'	90°00'00"
27	30.63'	19.50'	90°00'00"



ALL CURB RADII ARE TO TOP BACK OF CURB (TYP.)



# PARKLAND DR.

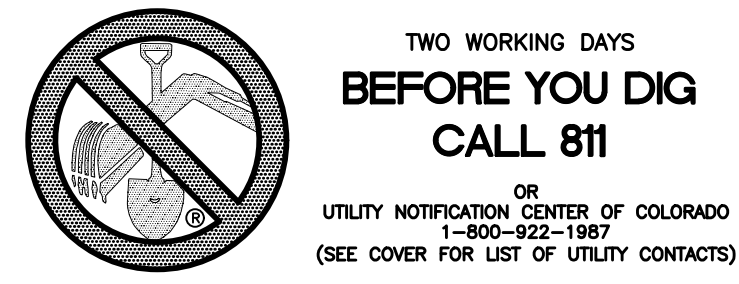
URBAN LOCAL  
60' WIDE RIGHT OF WAY, 30' WIDE ASPHALT PAVEMENT (EDGE TO EDGE)

# EVENING CREEK DR.

URBAN LOCAL  
60' WIDE RIGHT OF WAY, 30' WIDE ASPHALT PAVEMENT (EDGE TO EDGE)

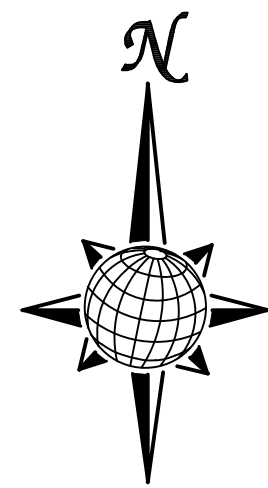
Station	Profile Description	Station	Profile Description	Station	Profile Description
7090	HIGH PT. STA: 42+16.44 HIGH PT. ELEV: 7073.07 PVI STA: 42+16.14 PVI ELEV: 7073.19 K: 25.00 LVC: 50.00	7090	7135		7135
7085	BVCS: 41+91.14 BVGE: 7072.94 EVCS: 42+41.14 EVGE: 7072.94	7085	7130		7130
7080	10' TYPE R INLET #23 49+94.03(17.0'L) TOB=7071.39 INV OUT=7066.90	7080	7125		7125
7075	4' SSMH #RH3-18 41+98.11 RIM=7073.00 CUT=12.7'	7075	7120		7120
7070	PR. SURFACE EX. SURFACE HGL	7070	7115		7115
7065	Q <sub>5</sub> = 6.1 CFS Q <sub>100</sub> = 9.9 CFS 44.86 LF 18" RCP @ 1.00% 12" WM LOWERING	7065	7110		7110
7060	8" PVC SS EX. 8" PVC SS 48.46' ~ 8" PVC SS @ 1.01%	7060	7105		7105
7055	CONNECT TO EX. 8" SS 41+49.65 INV=7059.81	7055	7100		7100
7050	INV OUT=7060.30 INV IN(W&S)=7058.30 INV OUT=7058.00	7050	7095		7095
7045		7045	7090		7090

Date	Appr.	Date	Invt.
No.	Revisions	No.	Revisions
1		2	
3		4	
TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457			
<b>MERIDIAN RANCH</b>			
ROLLING HILLS RANCH FILING 3 AT MERIDIAN RANCH STREET AND UTILITY PLANS PARKLAND DR. + EVENING CREEK DR.			
Scale	AS SHOWN	10 of 32	Date
Drawn by	LOG	Checked by	TAK
			MAY 2021



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)



GRAPHIC SCALE



( IN FEET )

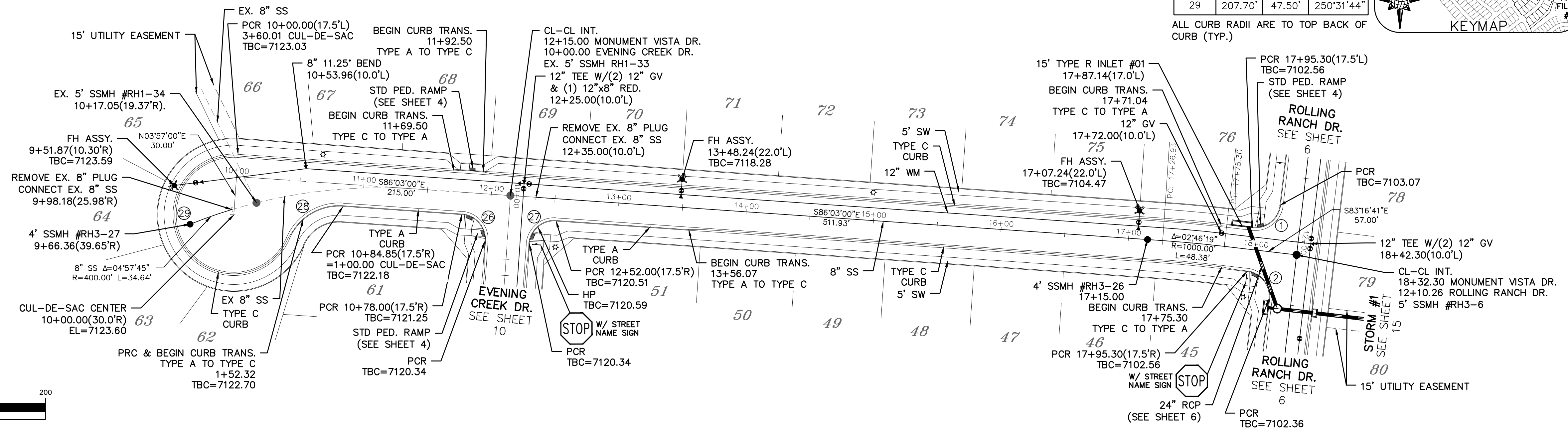
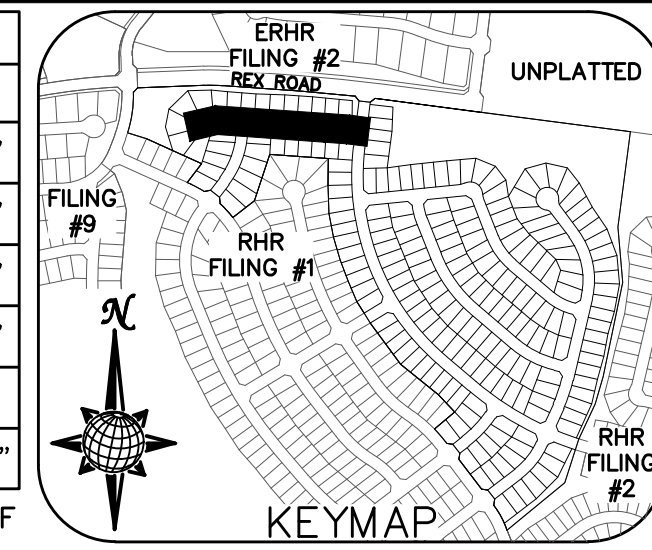
1 inch = 50 ft.

1 inch = 5 ft. VERTICAL

MONUMENT VISTA DR.  
CUL-DE-SAC  
(ALL GRADES ARE TBC)

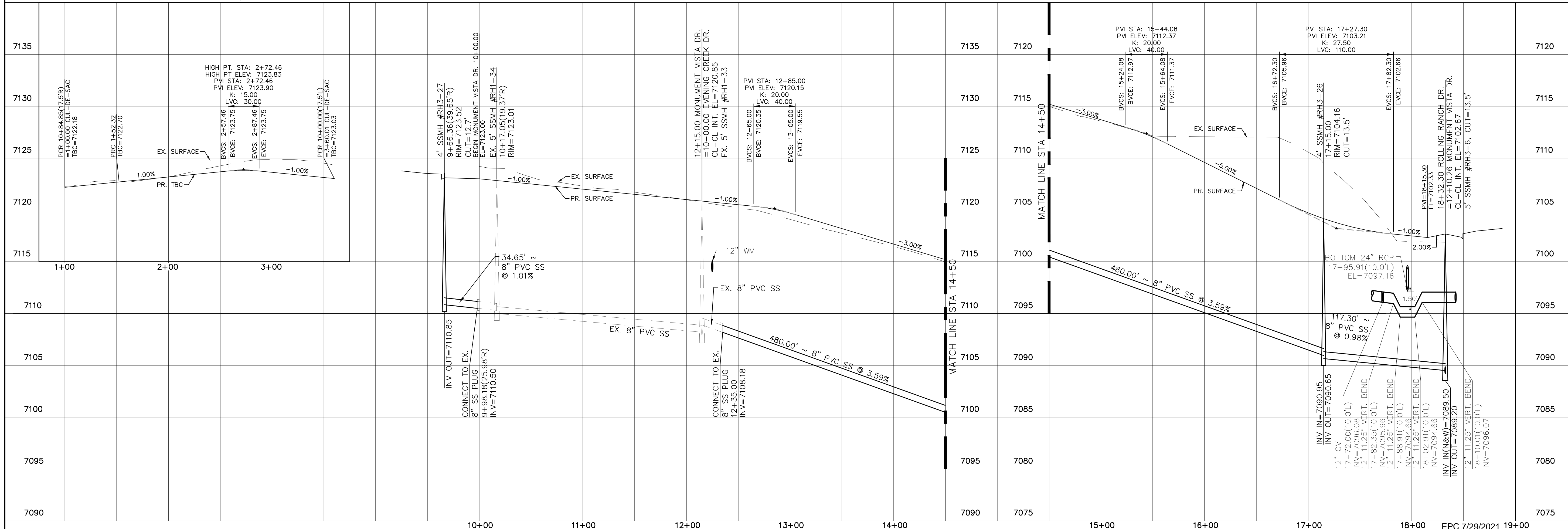
CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
1	30.63'	19.50'	90°00'00"
2	30.63'	19.50'	90°00'00"
26	30.63'	19.50'	90°00'00"
27	30.63'	19.50'	90°00'00"
28	52.32'	42.50'	70°31'44"
29	207.70'	47.50'	250°31'44"

ALL CURB RADII ARE TO TOP BACK OF CURB (TYP.)



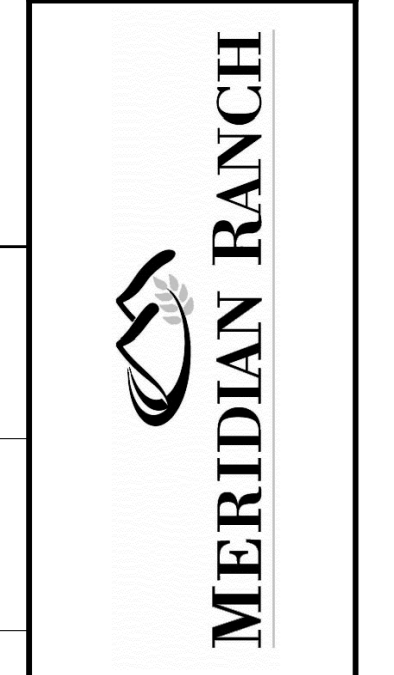
# MONUMENT VISTA DR.

URBAN LOCAL  
60' WIDE RIGHT OF WAY, 30' WIDE ASPHALT PAVEMENT (EDGE TO EDGE)



Date	Appr.	Date	Revis.	No.

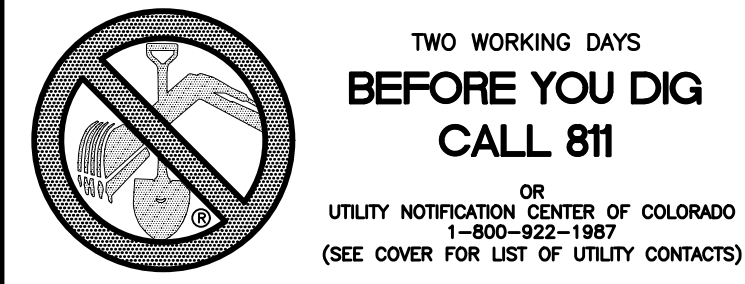
TECH CONTRACTORS  
11886 STAPLETON DRIVE  
FALCON, CO 80831  
TELEPHONE: 719.495.7444  
FAX: 719.495.2457



ROLLING HILLS RANCH FILING 3  
AT MERIDIAN RANCH  
STREET AND UTILITY PLANS  
MONUMENT VISTA DR.

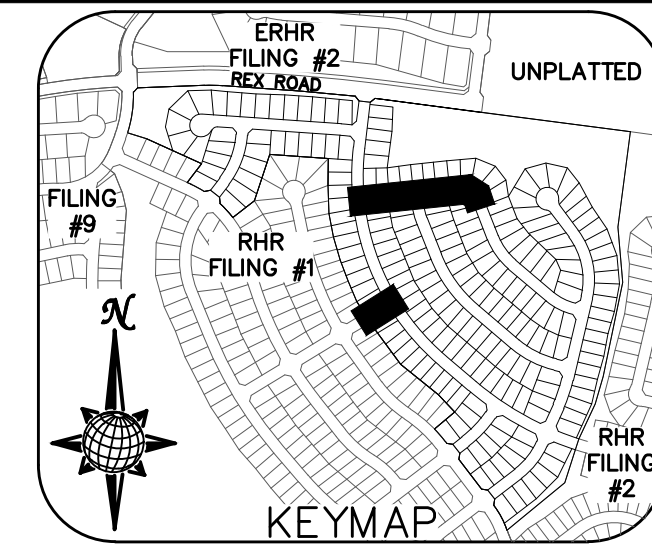
Drawn by LOG  
Checked by TJK  
Date MAY 2021

Scale AS SHOWN 11 of 32



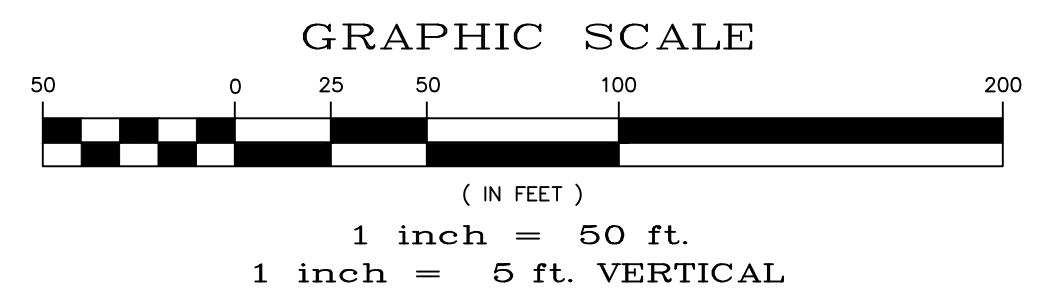
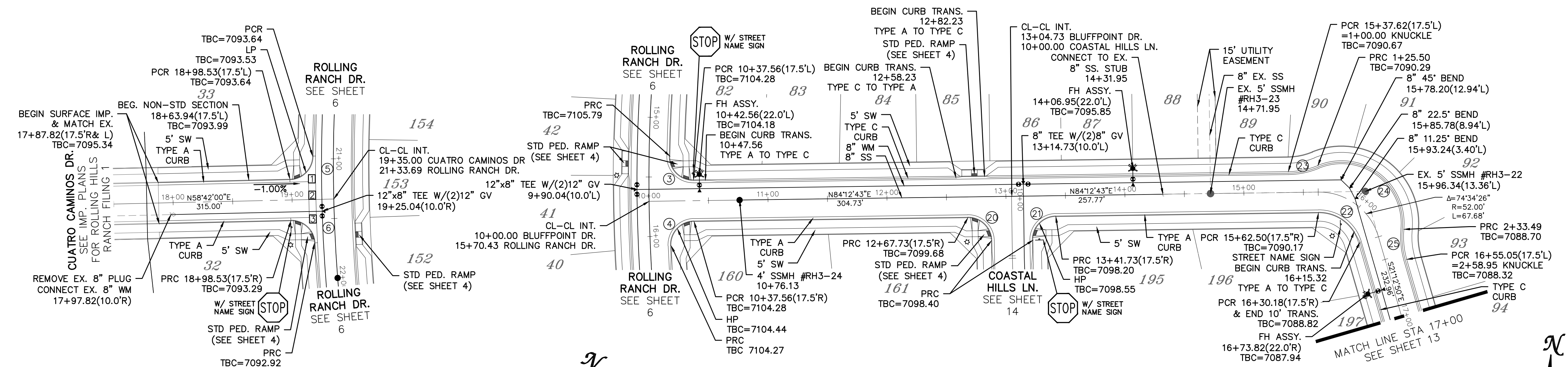
INSTALL CROSS PAN  
PER COUNTY STD  
SD-2-26

1 = 7092.95  
2 = 7092.78  
3 = 7092.62



CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
3	31.22'	19.50'	91°43'36"
4	31.22'	19.50'	91°43'36"
5	30.08'	19.50'	88°22'18"
6	30.08'	19.50'	88°22'18"
20	30.63'	19.50'	90°00'00"
21	30.63'	19.50'	90°00'00"
22	44.90'	34.50'	74°34'26"
23	25.50'	67.50'	21°38'33"
24	107.99'	52.50'	117°51'32"
25	25.50'	67.50'	21°38'33"

ALL CURB RADII ARE TO TOP BACK OF CURB (TYP.)

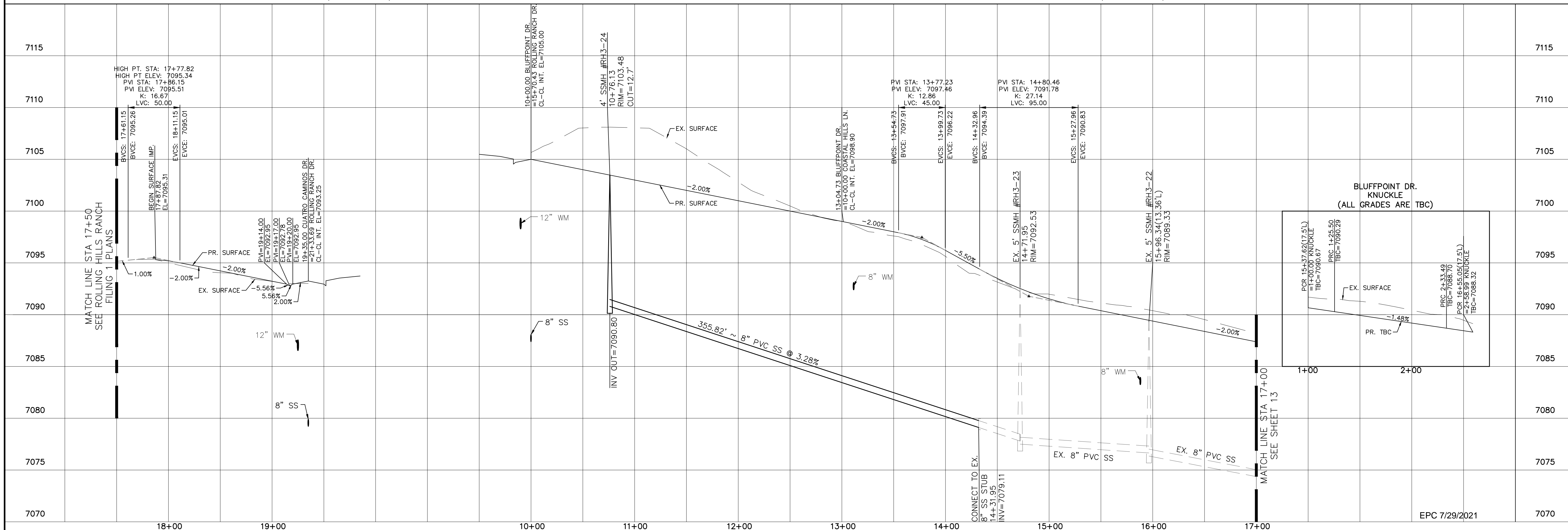


# CUATRO CAMINOS DR.

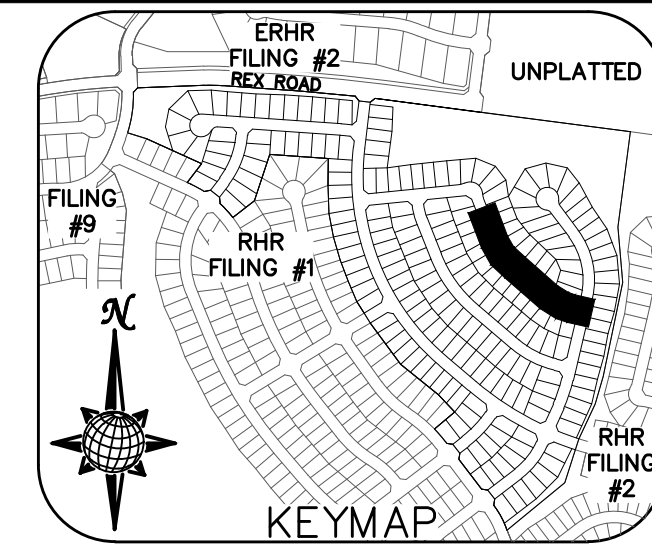
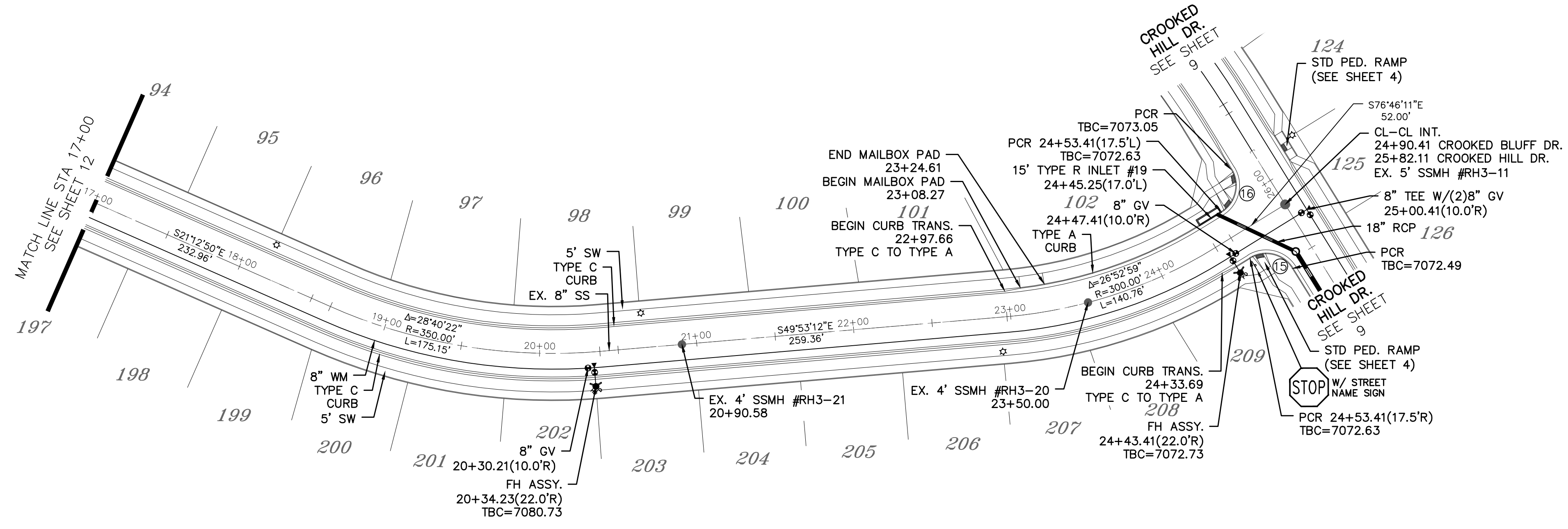
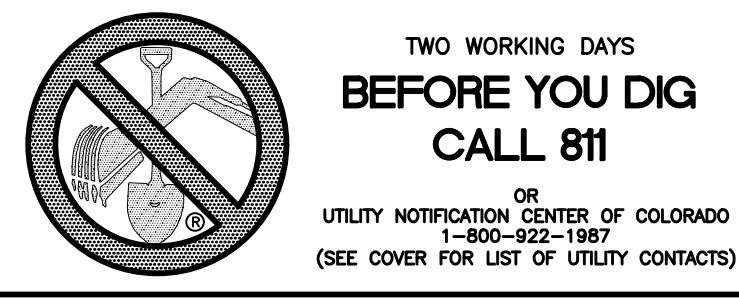
# BLUFFPOINT DR.

URBAN LOCAL  
60' WIDE RIGHT OF WAY, 30' WIDE ASPHALT PAVEMENT (EDGE TO EDGE)

URBAN LOCAL  
60' WIDE RIGHT OF WAY, 30' WIDE ASPHALT PAVEMENT (EDGE TO EDGE)

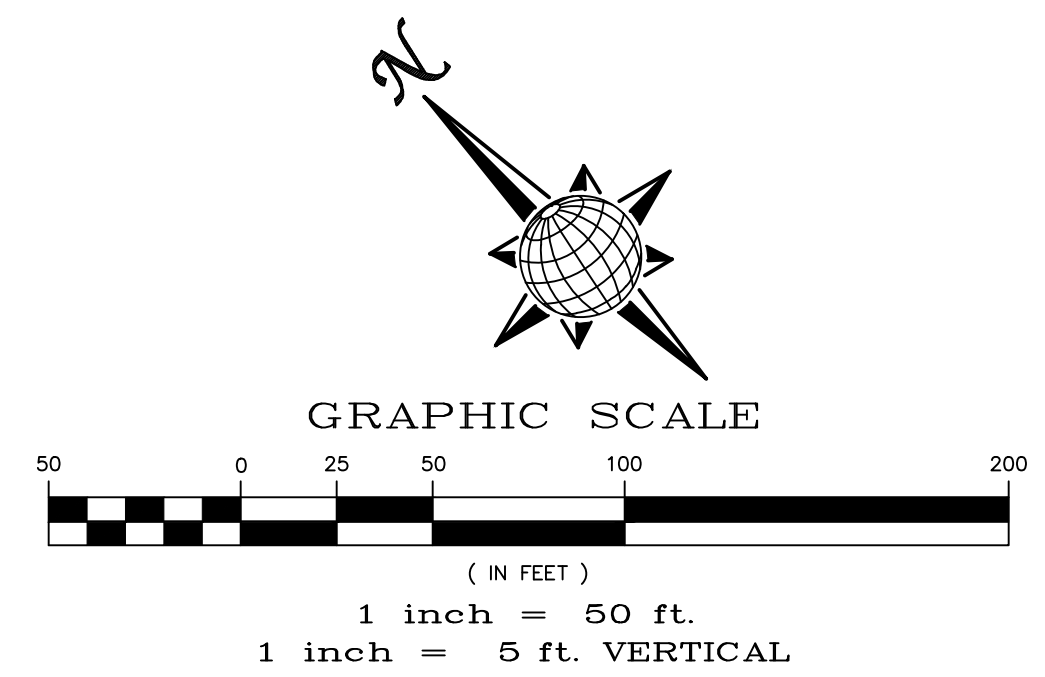


Date					
Appr.					
Revisions					
No.	1	2	3	4	
TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457					
<b>MERIDIAN RANCH</b>					
ROLLING HILLS RANCH FILING 3 AT MERIDIAN RANCH STREET AND UTILITY PLANS CUATRO CAMINOS DR. + BLUFFPOINT DR.					
Drawn by	LOG	Checked by	TAK	Date	MAY 2021
Scale	AS SHOWN	12	of	32	



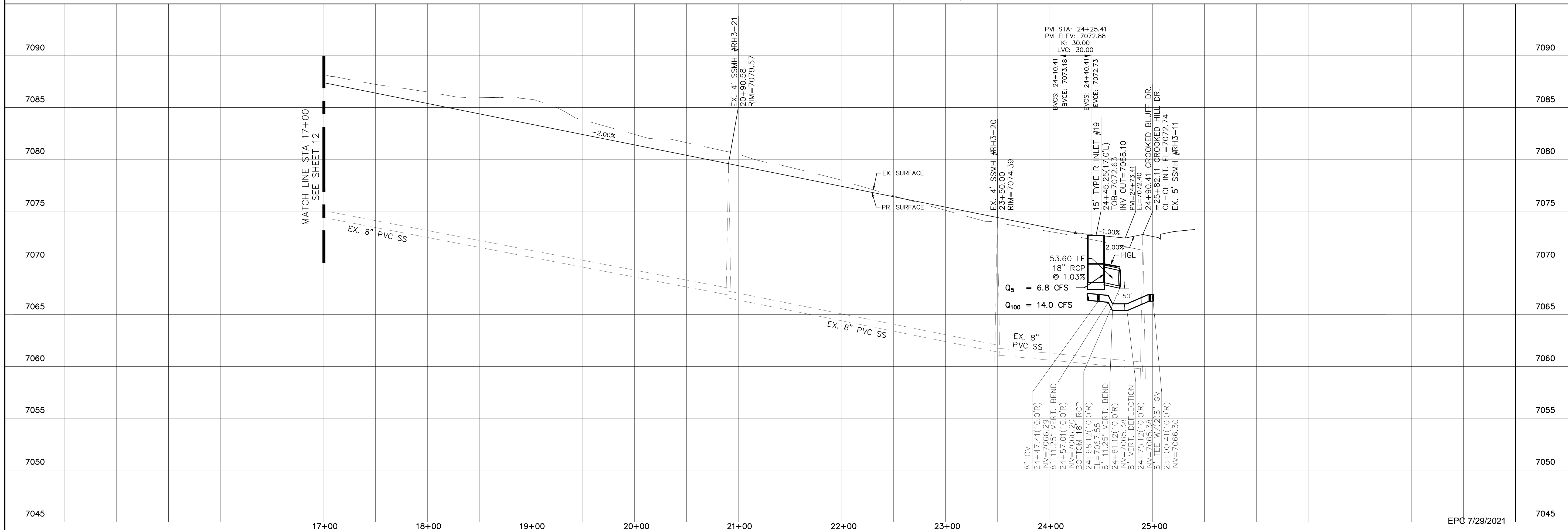
CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
15	30.63'	19.50'	90°00'00"
16	30.63'	19.50'	90°00'00"

ALL CURB RADII ARE TO TOP BACK OF CURB (TYP.)

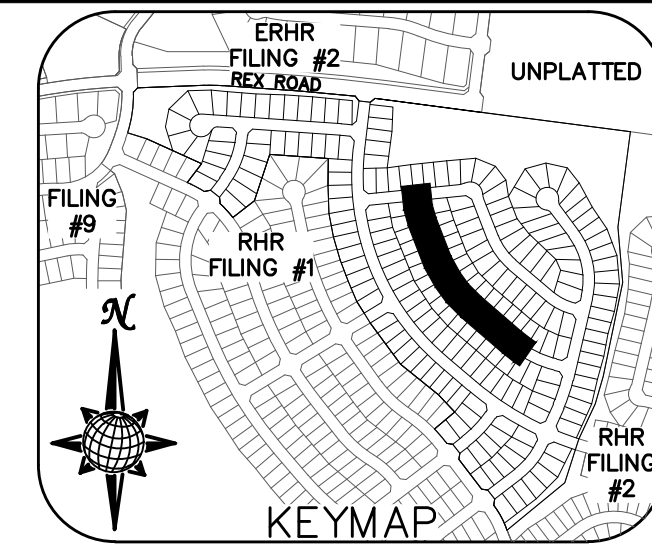
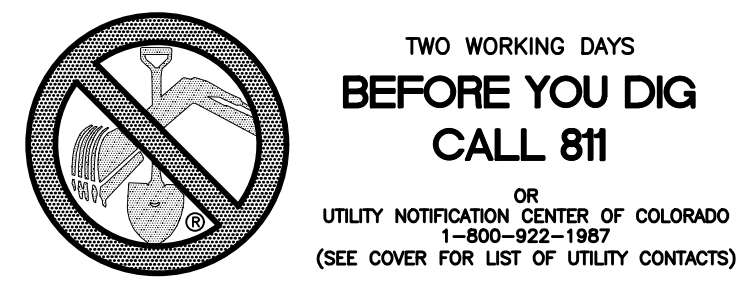


# CROOKED BLUFF DR.

URBAN LOCAL  
60' WIDE RIGHT OF WAY, 30' WIDE ASPHALT PAVEMENT (EDGE TO EDGE)

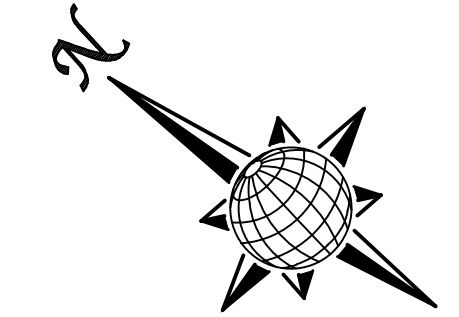
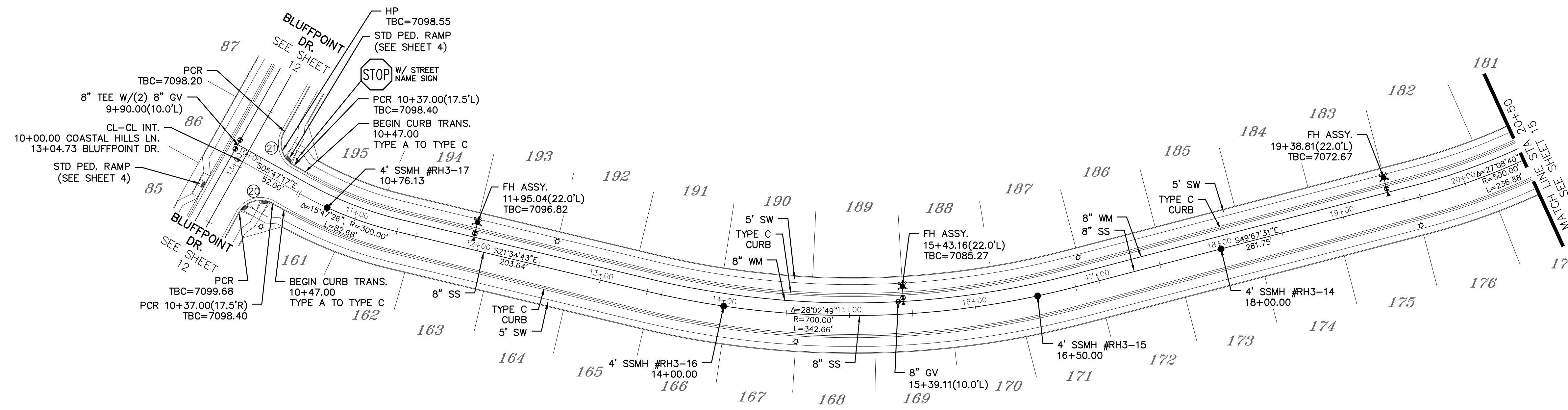


1	2	3	4	No.
TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457				Revisions
<b>MERIDIAN RANCH</b>				
ROLLING HILLS RANCH FILING 3 AT MERIDIAN RANCH STREET AND UTILITY PLANS CROOKED BLUFF DR.				
Scale	AS SHOWN	13	of	32
Drawn by	LOG	Checked by	TAK	Date
				MAY 2021



CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
20	30.63'	19.50'	90°00'00"
21	30.63'	19.50'	90°00'00"

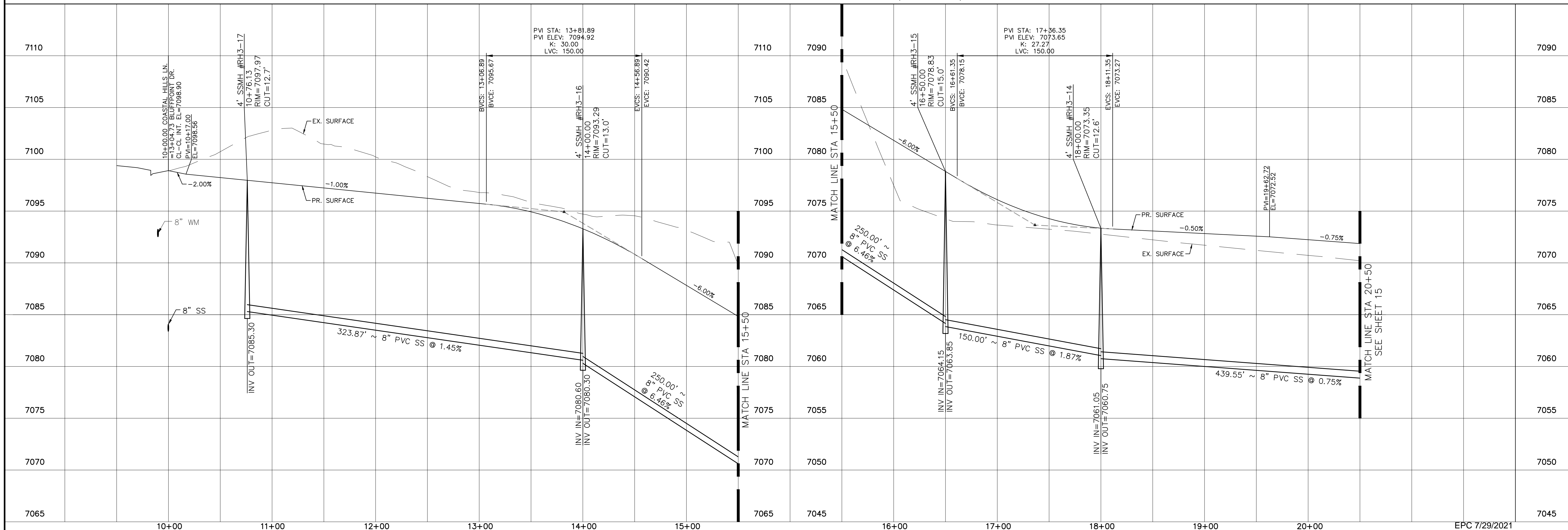
ALL CURB RADII ARE TO TOP BACK OF CURB (TYP.)



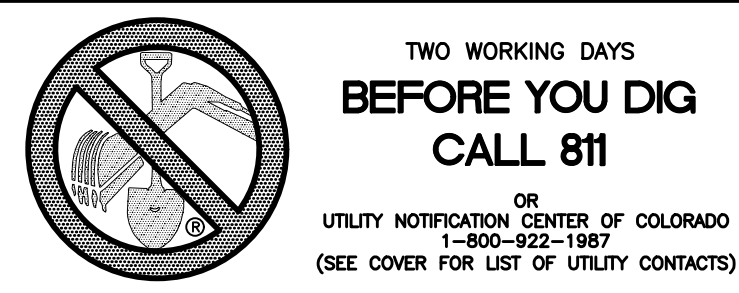
GRAPHIC SCALE  
(IN FEET)  
1 inch = 50 ft.  
1 inch = 5 ft. VERTICAL

# COASTAL HILLS LN.

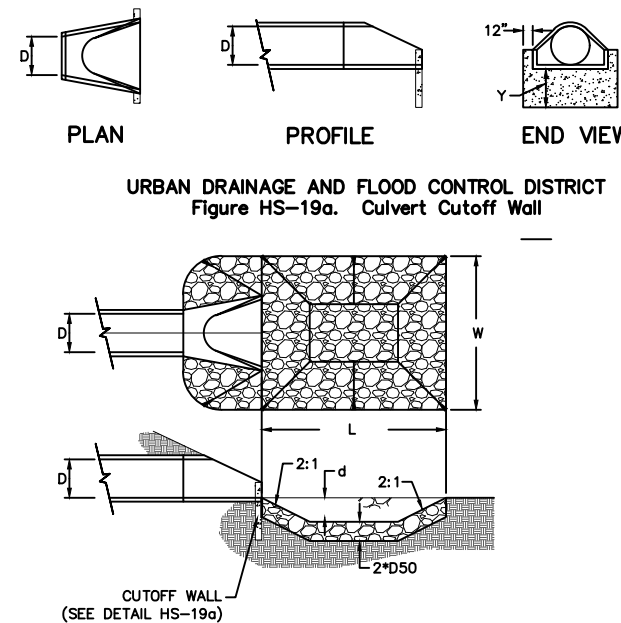
URBAN LOCAL  
60' WIDE RIGHT OF WAY, 30' WIDE ASPHALT PAVEMENT (EDGE TO EDGE)



Date				
Appr.				
Revisions				
No.	1	2	3	4
TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457				
<b>MERIDIAN RANCH</b>				
ROLLING HILLS RANCH FILING 3 AT MERIDIAN RANCH STREET AND UTILITY PLANS COASTAL HILLS LN.				
Scale	AS SHOWN	Drawn by	LOG	Checked by
	14 of 32		TAK	DATE
				MAY 2021



**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)

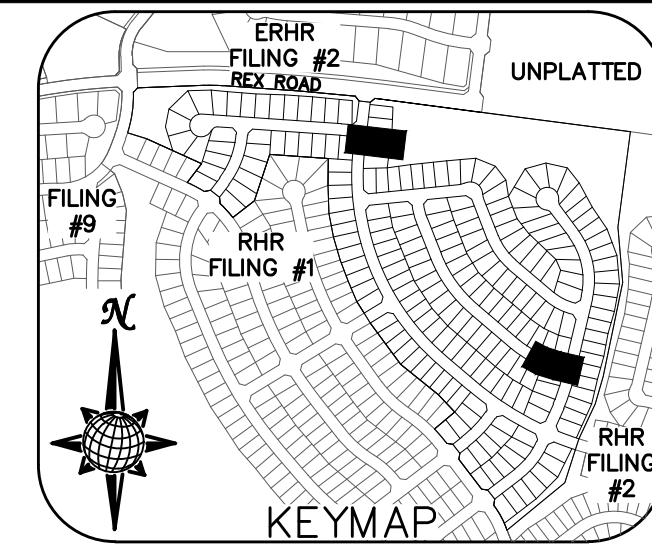
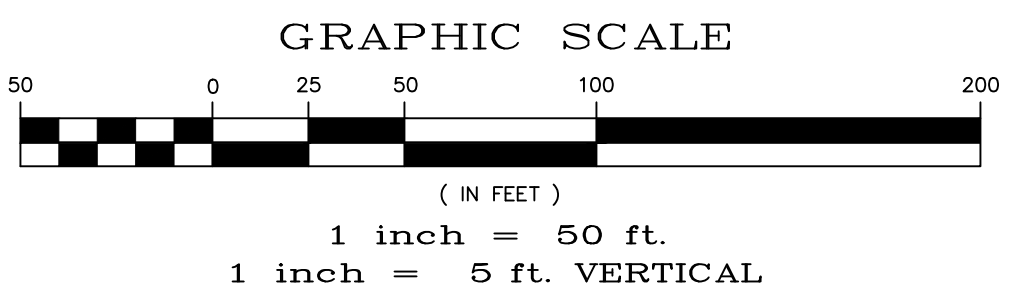


URBAN DRAINAGE AND FLOOD CONTROL DISTRICT (MODIFIED\*)  
Figure HS-19. Curvert and Outlet Erosion Protection  
w/ RAP RECTANGULAR POOL

NOTES:  
1. Headwall with wingwalls or flared end section required at all culvert outlets.  
2. Provide joint fasteners for flared end sections.

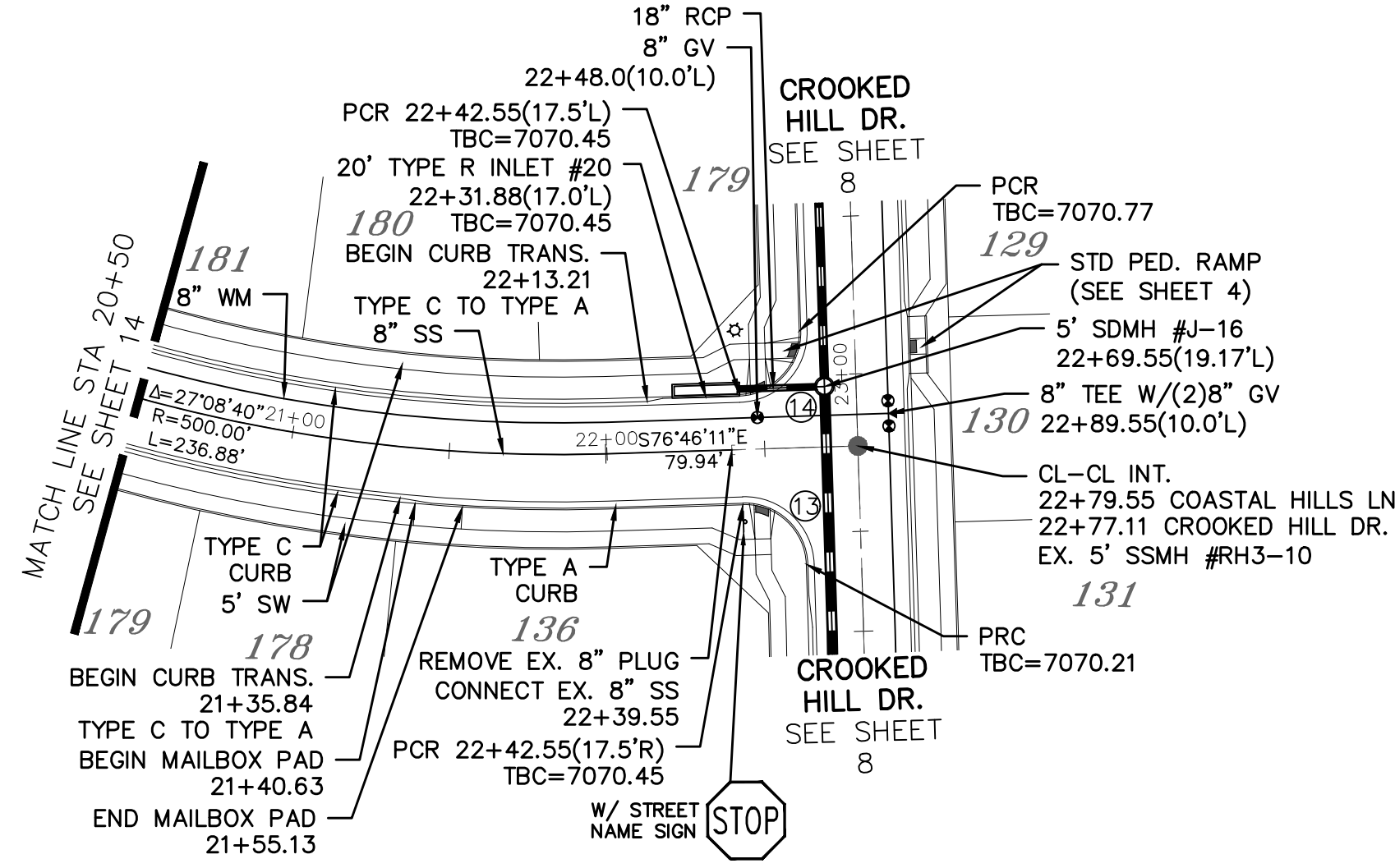
**STORM #1  
OUTLET PROTECTION  
DETAIL**  
NTS

PIPE OUTLET	L	W	d	TYPE	D <sub>50</sub>	CY	Y	NOTES
36"	8.5	8.0	1.0	M	1.0'	7.1	3.0'	SEE ABOVE

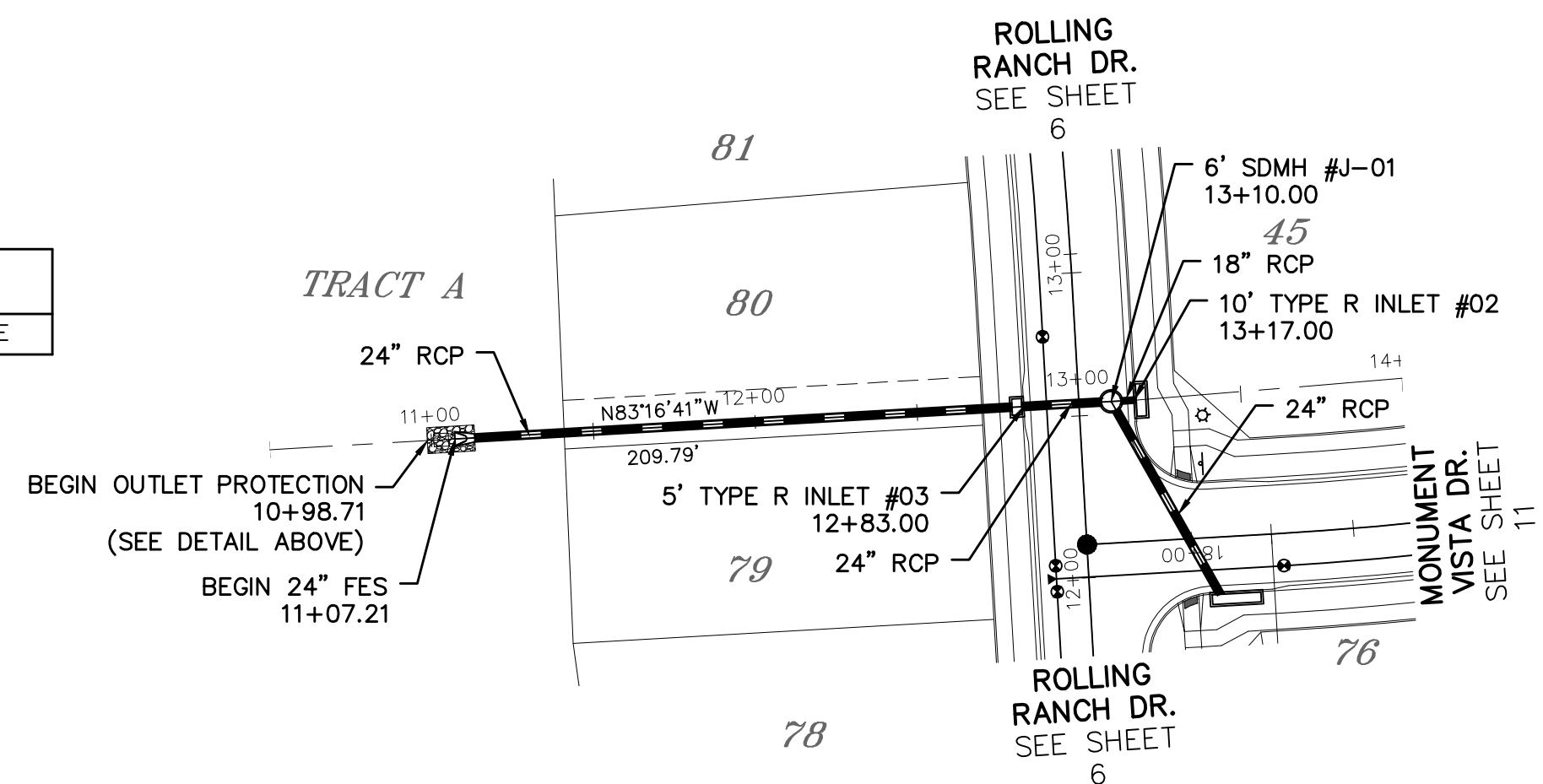


CURVE	LENGTH	RADIUS	DELTA
13	30.63'	19.50'	90°00'00"
14	30.63'	19.50'	90°00'00"

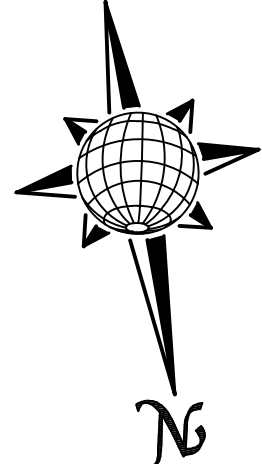
ALL CURB RADII ARE TO TOP BACK OF CURB (TYP.)



**COASTAL HILLS LN.**  
URBAN LOCAL  
60' WIDE RIGHT OF WAY, 30' WIDE ASPHALT PAVEMENT (EDGE TO EDGE)



**STORM #1**



Station	Profile Description	Station	Profile Description	Station	Profile Description	Station	Profile Description
7090		7090		7120		7120	
7085		7085		7115		7115	
7080		7080		7110		7110	
7075		7075		7105		7105	
7070		7070		7100		7100	
7065		7065		7095		7095	
7060		7060		7090		7090	
7055		7055		7085		7085	
7050		7050		7080		7080	
7045		7045		7075		7075	

Date	Appr.

No.	Revisions
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3	
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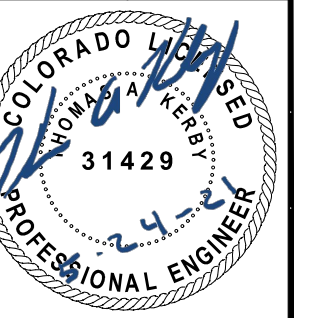
TECH CONTRACTORS  
11886 STAPLETON DRIVE  
FALCON, CO 80831  
TELEPHONE: 719.495.7444  
FAX: 719.495.2457



ROLLING HILLS RANCH FILING 3  
AT MERIDIAN RANCH  
STREET AND UTILITY PLANS  
COASTAL HILLS LN. + STORM #1

Drawn by LOG  
Checked by TJK  
Date MAY 2021

Scale AS SHOWN  
15 of 32

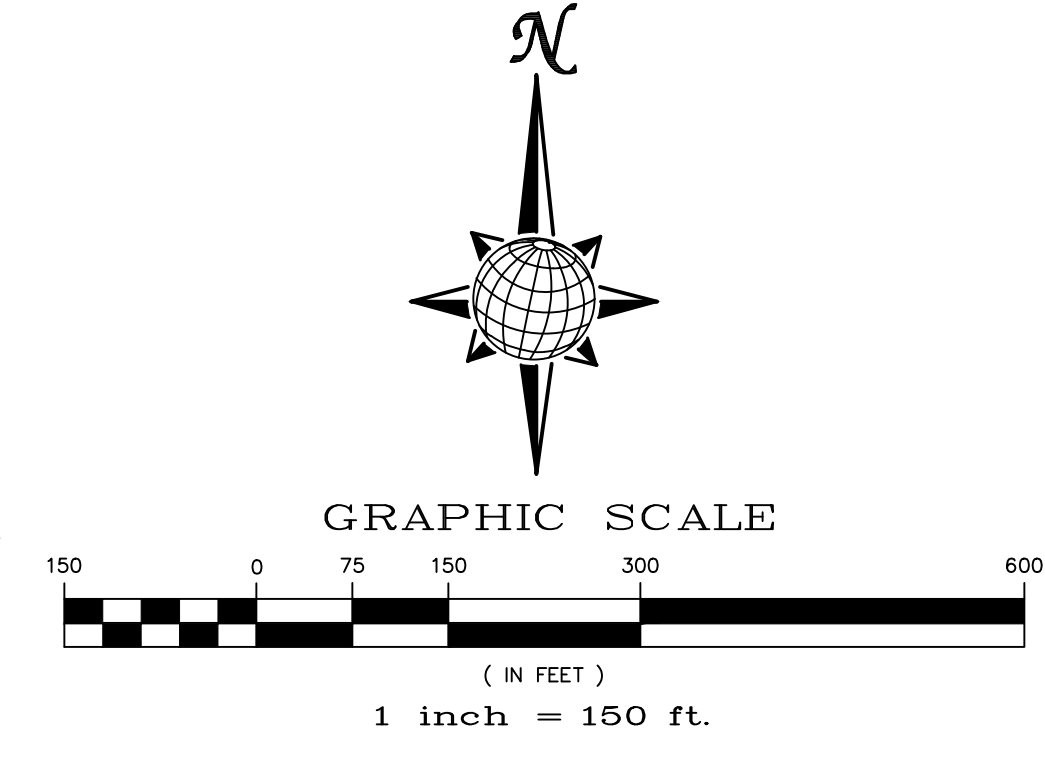




NOTE:  
 CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES.  
 EX. UTILITIES SEE CONSTRUCTION DRAWINGS FOR:  
 1) ROUGH GRADING FOR ROLLING HILLS RANCH AT MERIDIAN RANCH  
 2) ROLLING HILLS RANCH FILING 1 AT MERIDIAN RANCH  
 3) ESTATES AT ROLLING HILLS RANCH FILING 2  
 4) ROLLING HILLS RANCH FILING 2 AT MERIDIAN RANCH

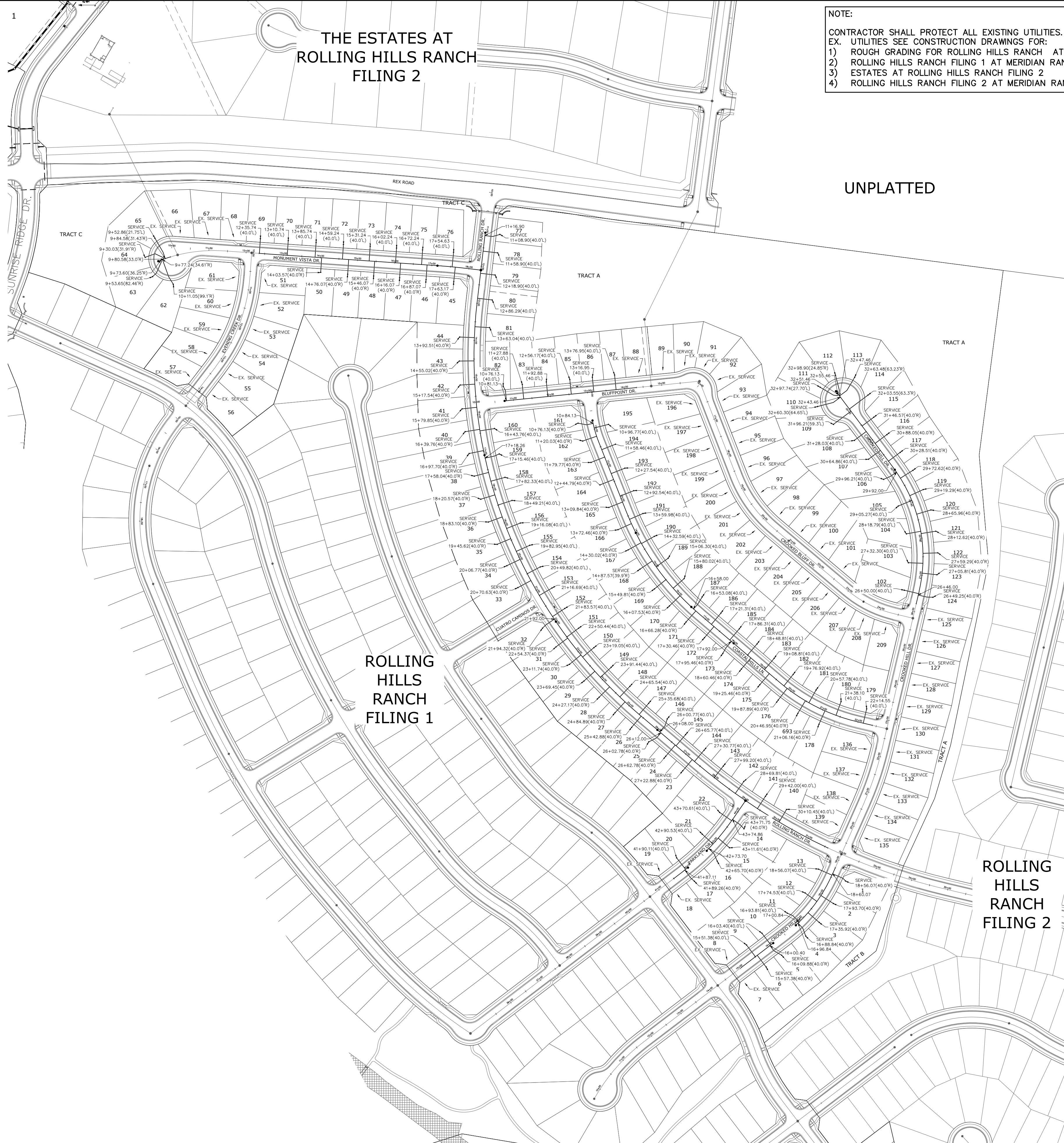
NOTE:  
 8" SS UNLESS OTHERWISE LABELED.

TWO WORKING DAYS  
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 UTILITY NOTIFICATION CENTER OF COLORADO  
 1-800-922-1987  
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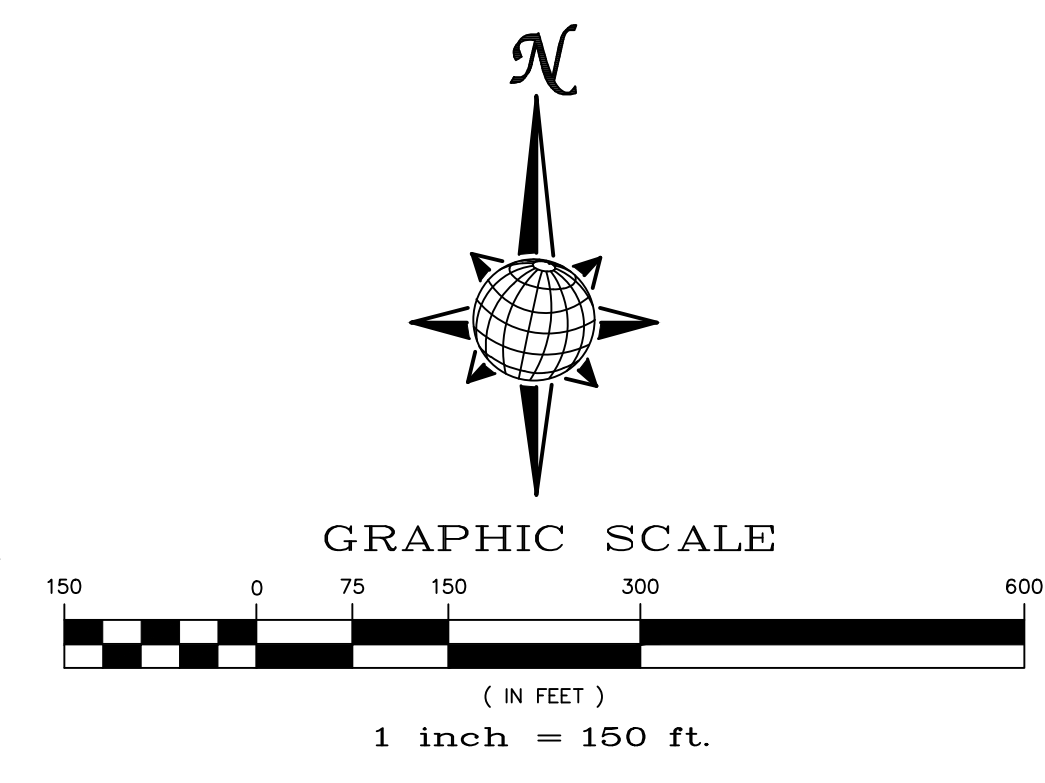
Scale		AS SHOWN		16 of 32			
Drawn by	LOG	Checked by	TAK	Date	MAY 2021		
ROLLING HILLS RANCH FILING 3 AT MERIDIAN RANCH STREET AND UTILITY PLANS OVERALL SANITARY SEWER							
 <b>MERIDIAN RANCH</b>							
TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457							
No.		Revisions		Date		Appr.	
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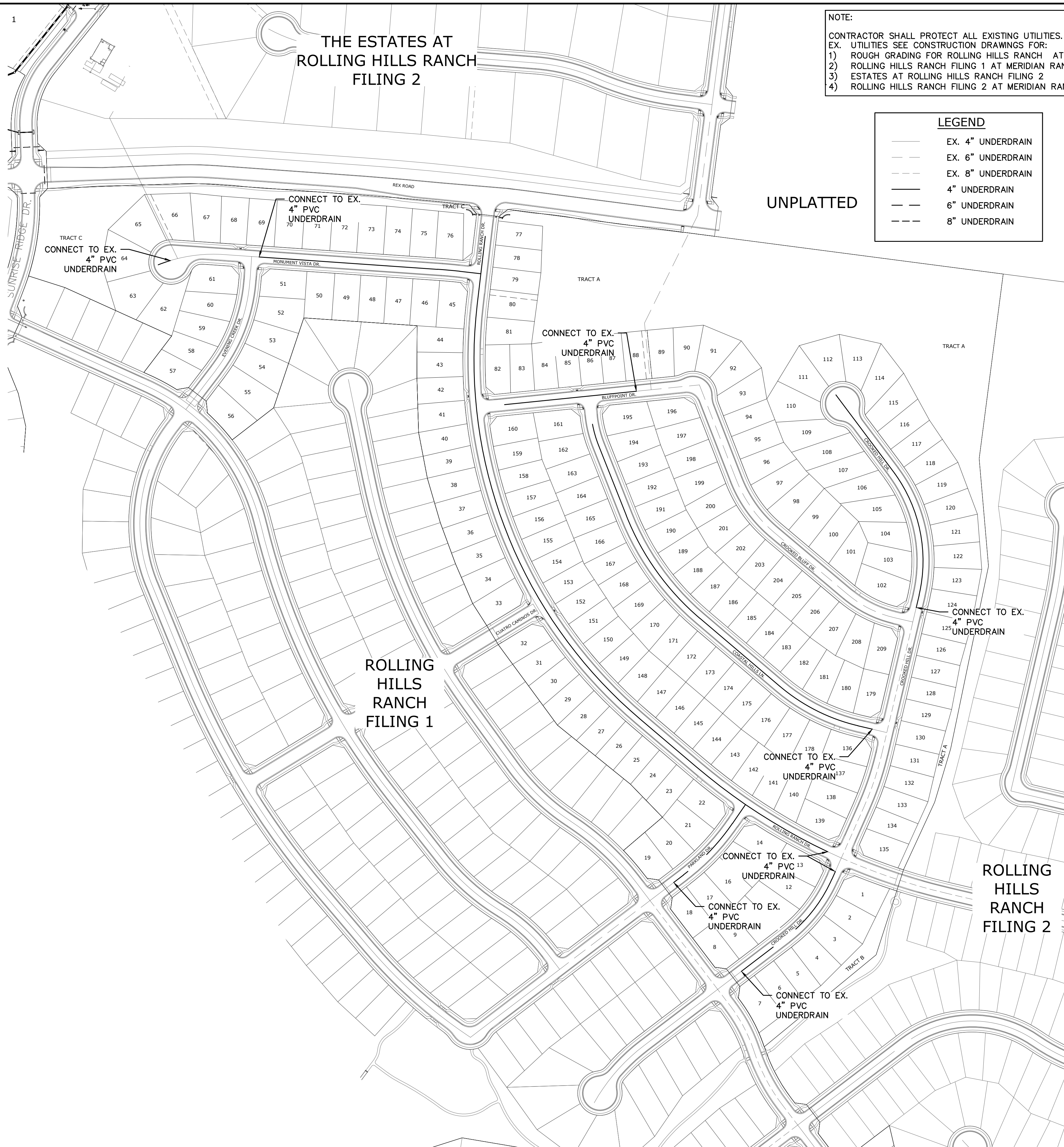


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 <b>MERIDIAN RANCH</b>															
ROLLING HILLS RANCH FILING 3 AT MERIDIAN RANCH STREET AND UTILITY PLANS OVERALL SANITARY SEWER SERVICES															
Drawn by		LOG		Checked by		TKM		Date		MAY 2021					
Scale		AS SHOWN		17		of		32							
															
EPC 7/29/2021															



THE ESTATES AT ROLLING HILLS RANCH FILING 2

ROLLING HILLS RANCH FILING 1

ROLLING HILLS RANCH FILING 2

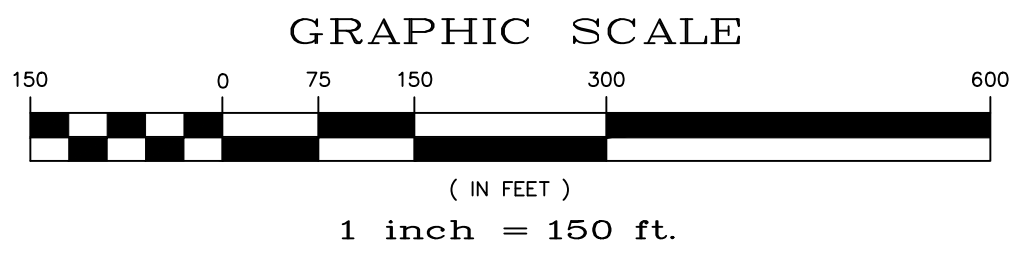
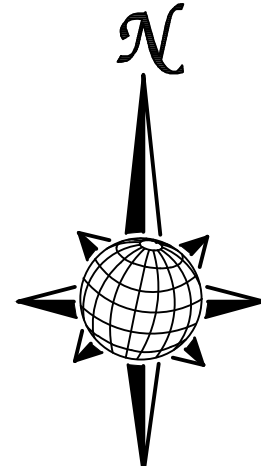
UNPLATTED

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**LEGEND**

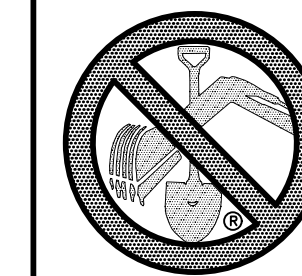
	EX. 4" UNDERDRAIN
	EX. 6" UNDERDRAIN
	EX. 8" UNDERDRAIN
	4" UNDERDRAIN
	6" UNDERDRAIN
	8" UNDERDRAIN

TWO WORKING DAYS  
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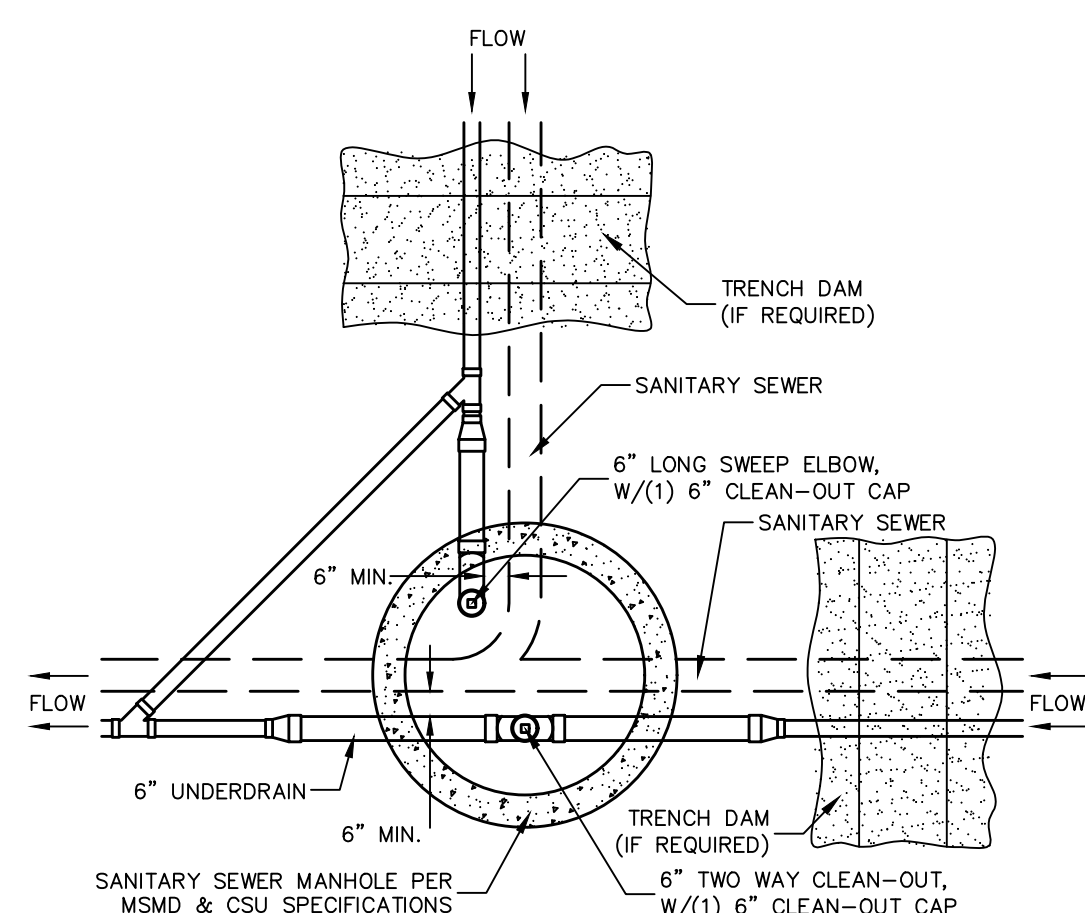


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Drawn by	LOG	Checked by	TAK	Date	MAY 2021																														
ROLLING HILLS RANCH FILING 3 AT MERIDIAN RANCH STREET AND UTILITY PLANS OVERALL UNDERDRAIN																																			
TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457																																			
<b>MERIDIAN RANCH</b>																																			
<table border="1"> <thead> <tr> <th>No.</th> <th>Revisions</th> <th>Date</th> <th>Init.</th> <th>Appr.</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>						No.	Revisions	Date	Init.	Appr.	Date	1						2						3						4					
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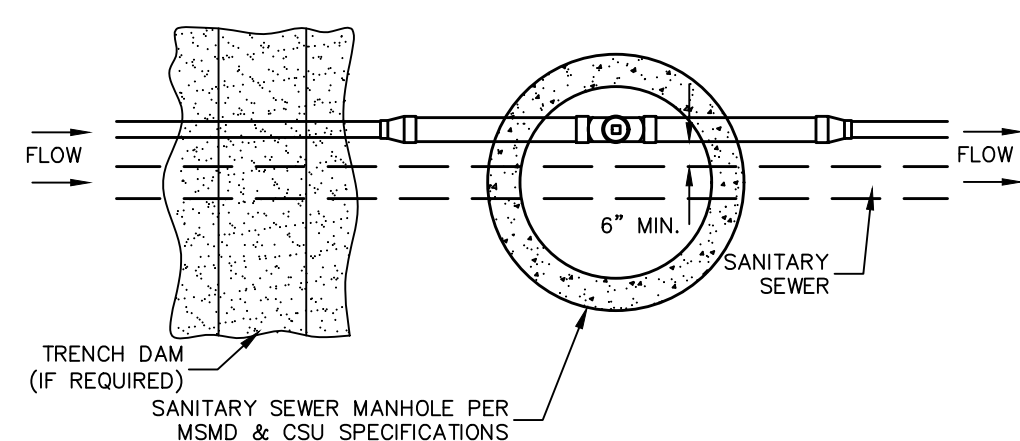




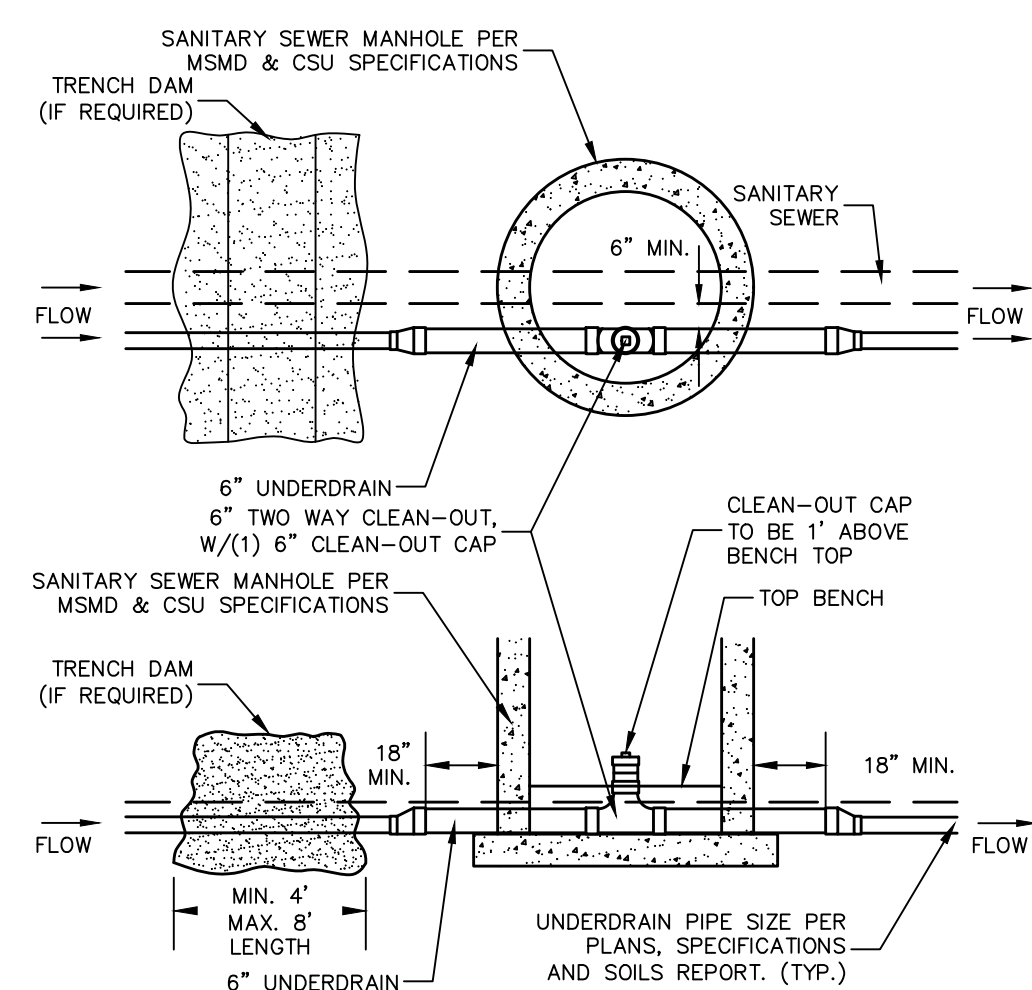
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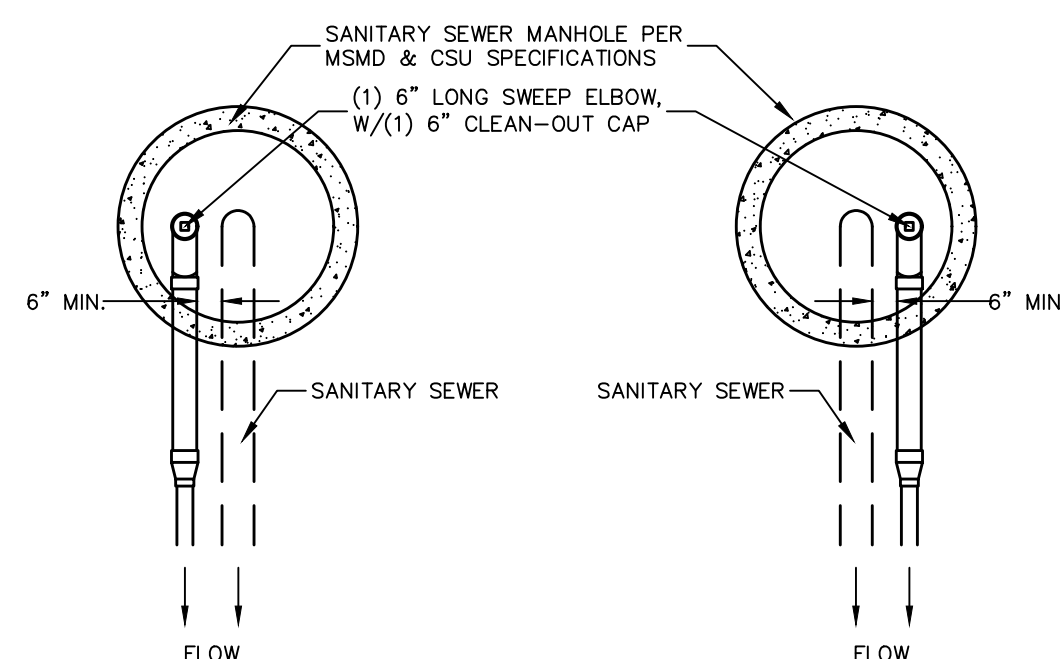
**SSMH #RH3-2  
 & #RH3-6**



**SSMH #RH3-3,  
 #RH3-4, #RH3-5  
 & #RH3-12**



**SSMH #RH3-14, #RH3-15,  
 #RH3-16 & #RH3-26**



**SSMH #RH3-9, SSMH #RH3-7,  
 #RH3-17, #RH3-8,  
 #RH3-19, #RH3-13  
 & #RH3-24 & #RH3-18  
 & #RH3-27**

**NOTES:**

1. THE UNDERDRAIN SYSTEM SHALL BE PASSIVE, WATER TIGHT, NON-PERFORATED PIPE, WITH THE MAIN LINE SIZE DESIGNED BY THE ENGINEER. ALL UNDERDRAIN PIPES AND FITTINGS SHALL BE SDR 35 PVC, OR MSMD APPROVED EQUAL, INSTALLED PER THE SAME INSTALLATION STANDARDS AS OUTLINED BY CSUS FOR SANITARY SEWER SYSTEMS. THE UNDERDRAIN SYSTEM AT EACH SANITARY SEWER MANHOLE SHALL CONTAIN 6" CLEAN-OUTS IN EACH UNDERDRAIN MAIN DIRECTION PER THE CLEAN-OUT DETAIL. ALL LOTS SHALL RECEIVE A WHITE 3" UNDERDRAIN SERVICE LATERAL ADJACENT TO THE SANITARY SEWER SERVICE LATERAL.
2. TESTING OF THE UNDERDRAIN SYSTEM WILL CONSIST OF VISUAL INSPECTIONS FOR WATER IN THE SYSTEM, ALONG WITH A VIDEO INSPECTION PERFORMED BY MSMD PERSONNEL. ALL UNDERDRAIN MAINS AND DOWNSTREAM INFILTRATION STRUCTURES SHALL BE CLEAN AND DEBRIS FREE UPON COMPLETION OF THE SYSTEM AND PRIOR TO CCTV. ALL UNDERDRAIN MAINS SHALL BE CCTV INSPECTED BY MSMD AND REVIEWED FOR APPROVAL. THE SPECIFICATION FOR ALLOWABLE STANDING WATER AND WATER INFILTRATION IN THE UNDERDRAIN SYSTEM SHALL BE THE SAME AS PER CSUS FOR SANITARY SEWER SYSTEMS. IF EXCESS WATER IS OBSERVED IN THE UNDERDRAIN SYSTEM, THE CONTRACTOR SHALL LOCATE THE SOURCE OF WATER INFILTRATION AND REPAIR AS NECESSARY TO MEET CSUS.
3. IF THE UNDERDRAIN MAIN HAS LOW SPOTS THAT EXCEED CSUS STANDARDS, THE CONTRACTOR SHALL REPAIR THE LINE AS NECESSARY TO MEET CSUS. UNDERDRAIN MAINS THAT DO NOT MEET MSMD STANDARDS SHALL BE REPLACED AND OR REPAIRED AS NECESSARY. THE CONTRACTOR SHALL RE-CCTV INSPECT THE UNDERDRAIN MAIN LINES AFTER THE REPAIRS HAVE BEEN MADE WITH ONE VIDEO SUBMITTED TO MSMD FOR REVIEW AND APPROVAL.
4. UNDER DRAIN MAIN LINES SHALL HAVE CONTINUOUS POSITIVE DRAINAGE TO THE POINT OF DISCHARGE INTO A BELOW GRADE AN APPROVED UNDERDRAIN INFILTRATION STRUCTURE WHEREVER POSSIBLE. UNDERDRAIN INFILTRATION STRUCTURES SHALL BE DESIGNED WITH OVERFLOW LINES FOR FUTURE EXPANSION AS NEEDED. IF GROUNDWATER IS ENCOUNTERED DURING CONSTRUCTION OF THE INFILTRATION STRUCTURE, STOP INSTALLATION AND CONTACT THE DISTRICT ENGINEER FOR POSSIBLE ALTERNATE DESIGN.
5. UNDERDRAINS WILL DAYLIGHT AT LOCATIONS SHOWN ON THE DRAWINGS.
6. UNDERDRAIN CLEANOUTS SHALL BE 6 INCH AND SHALL BE LOCATED AT EVERY MANHOLE. UNDERDRAIN CLEANOUTS AND CLEANOUT CONSTRUCTION WILL LEAVE NO INFILTRATION WITHIN SEWER MANHOLES. MANHOLE PENETRATIONS TO BE FILLED WITH NON-SHRINKING GROUT. UNDERDRAIN SIZE WILL NOT BE REDUCED THROUGH THE MANHOLE.
7. TRENCH DAMS WILL BE PROVIDED AT INTERVALS NO GREATER THAN 350 FEET IN SANITARY SEWER SECTIONS WHERE GROUNDWATER EXISTS OR WHERE DIRECTED BY THE ENGINEER. A TRENCH DAM WILL BE CONSTRUCTED WITHIN THE FIRST 100 FEET OF EITHER ENTERING OR EXITING GROUNDWATER. THE CONTRACTOR SHALL NOTIFY THE DISTRICT WHEN GROUNDWATER IS ENCOUNTERED TO REVIEW TRENCH DAM NEEDS, LOCATIONS, AND MATERIALS.
8. TRENCH DAMS MAY BE CONSTRUCTED OF ON SITE MATERIALS IF APPROVED BY THE SOILS ENGINEER.
9. TRENCH DAMS SHALL COMPLETELY INTERRUPT GRAVEL BEDDING AND STABILIZATION THE FULL WIDTH OF THE TRENCH FOR A LENGTH OF NO LESS THAN 4 FEET BUT NO GREATER THAN 8 FEET.
10. TRENCH DAMS SHALL BE COMPACTED TO 95% OF STANDARD PROCTOR AROUND THE SEWER AND UNDERDRAIN PIPELINES.
11. IF ALTERNATE MATERIALS (CONCRETE) OR SOIL AMENDED TRENCH DAMS ARE NECESSARY OR REQUIRED BY THE ENGINEER, THE DAMS SHALL BE EXTENDED A MINIMUM OF 6 FEET ABOVE THE PIPELINE BUT IN NO CASE CLOSER THAN 6" FROM THE SURFACE.

**CLEAN-OUT DETAILS**  
 SCALE : N.T.S.

No.	Revisions	Date	Appr.
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3			
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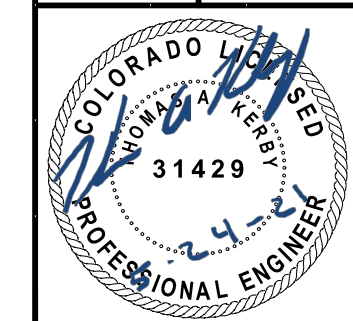
TECH CONTRACTORS  
 11886 STAPLETON DRIVE  
 FALCON, CO 80831  
 TELEPHONE: 719.495.7444  
 FAX: 719.495.2457



ROLLING HILLS RANCH FILING 3  
 AT MERIDIAN RANCH  
 STREET AND UTILITY PLANS  
 UNDERDRAIN DETAILS

Drawn by: LOG  
 Checked by: TAK  
 Date: MAY 2021

Scale: AS SHOWN  
 19 of 32

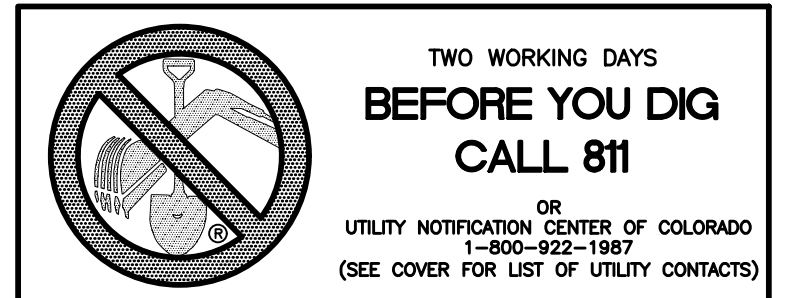








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 2) ROLLING HILLS RANCH FILING 1 AT MERIDIAN RANCH  
 3) ESTATES AT ROLLING HILLS RANCH FILING 2  
 4) ROLLING HILLS RANCH FILING 2 AT MERIDIAN RANCH

NOTE:  
 3/4" WATER SERVICE UNLESS OTHERWISE LABELED.



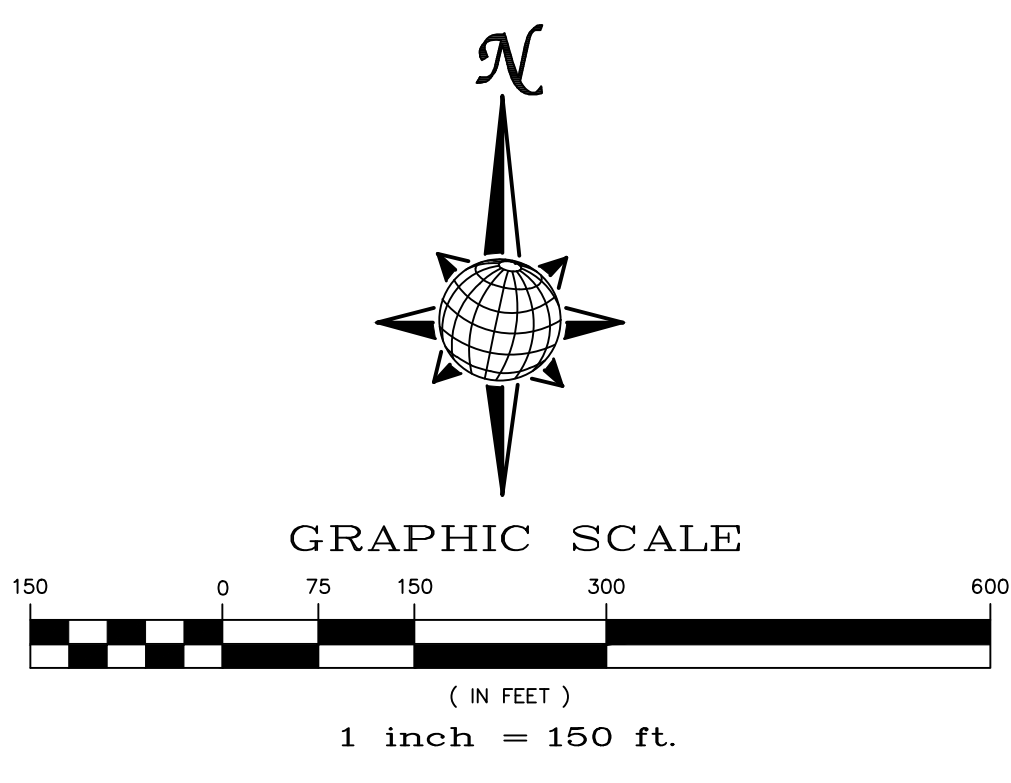
RESIDENTIAL HOME  
 4,800 SQ. FT. (MAX)  
 VB CONSTRUCTION  
 REQ'D FIRE FLOW: 1750 GPM  
 HYDRANT SPACING: 500' (MAX)  
 HOSE LAY DIST.: 250' (MAX)  
 NON-SPRINKLER



		Date
		Appr.
		Date
		Revisions
No.		
1	TECH CONTRACTORS	
2	11886 STAPLETON DRIVE	
3	FALCON, CO 80831	
4	TELEPHONE: 719.495.7444	
	FAX: 719.495.2457	
		
<b>MERIDIAN RANCH</b>		
ROLLING HILLS RANCH FILING 3 AT MERIDIAN RANCH STREET AND UTILITY PLANS OVERALL WATER SERVICES		
Scale	AS SHOWN	
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Date	MAY 2021	
21 of 32		
		



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 1-800-922-1987  
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1		2		3		4	
No.		No.		No.		No.	
TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457							
 <b>MERIDIAN RANCH</b>							
ROLLING HILLS RANCH FILING 3 AT MERIDIAN RANCH STREET AND UTILITY PLANS OVERALL STORM DRAIN							
Drawn by	LOG	Checked by	TAK	Date	MAY 2021		
Scale	AS SHOWN		22 of 32				
							

EL PASO COUNTY STANDARD NOTES:

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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).
- 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.
- 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.
- 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.
- EROSION CONTROL BLANKETING OR OTHER PROTECTIVE COVERING SHALL BE USED ON SLOPES STEEPER THAN 3:1.
- 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.
- 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.
- TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF-SITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
- 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.
- 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.
- NO CHEMICAL(S) HAVING THE POTENTIAL TO BE RELEASED IN STORMWATER ARE TO BE STORED OR USED ON-SITE 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.
- 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 ON-SITE AND TO PREVENT ANY SPILLED MATERIALS FROM ENTERING STATE WATERS, ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR OTHER FACILITIES.
- NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE CURB AND GUTTER OR DITCH EXCEPT WITH APPROVED SEDIMENT CONTROL MEASURES.
- 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.
- ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE ONLY AT APPROVED CONSTRUCTION ACCESS POINTS.
- PRIOR TO CONSTRUCTION THE PERMITTEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
- 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.
- THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY ENTECH ENGINEERING, INC. AND SHALL BE CONSIDERED A PART OF THESE PLANS.
- 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  
 WOOD - PERMITS  
 4300 CHERRY CREEK DRIVE SOUTH  
 DENVER, CO 80246-1530  
 ATTN: PERMITS UNIT

Stage	Description	Control Measures	Begin Date	End Date
Stage 1	Overlot Grading	Perimeter Control Temporary Sed. Basins Swale Checks as needed Surface Roughening	May 2020	November 2020
Stage 2	Underground utilities Surface Improvements	Perimeter Control Inlet Protection	August 2020	March 2022
Stage 3	Home Construction	Inlet Protection Individual Lot Perimeter Control	June 2020	
Final Stabilization	Permit Close	Final Stabilization Permanent Measures	June 2023	

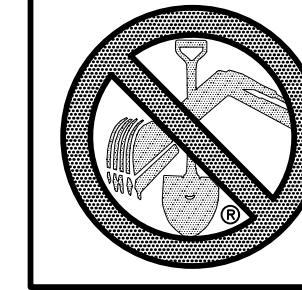
**EARTHWORK QUANTITIES**

NET YARDS BALANCE  
 TOTAL STRIPPINGS 0.00 AC. 000 CY  
 NET YARDS CUT 0 CY  
 FILL 0 CY  
 20% COMPACTION FACTOR

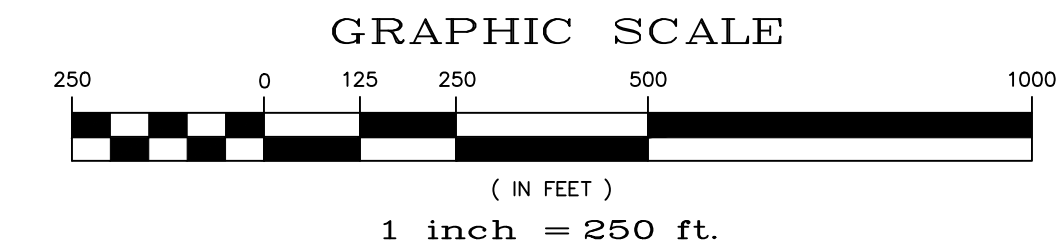
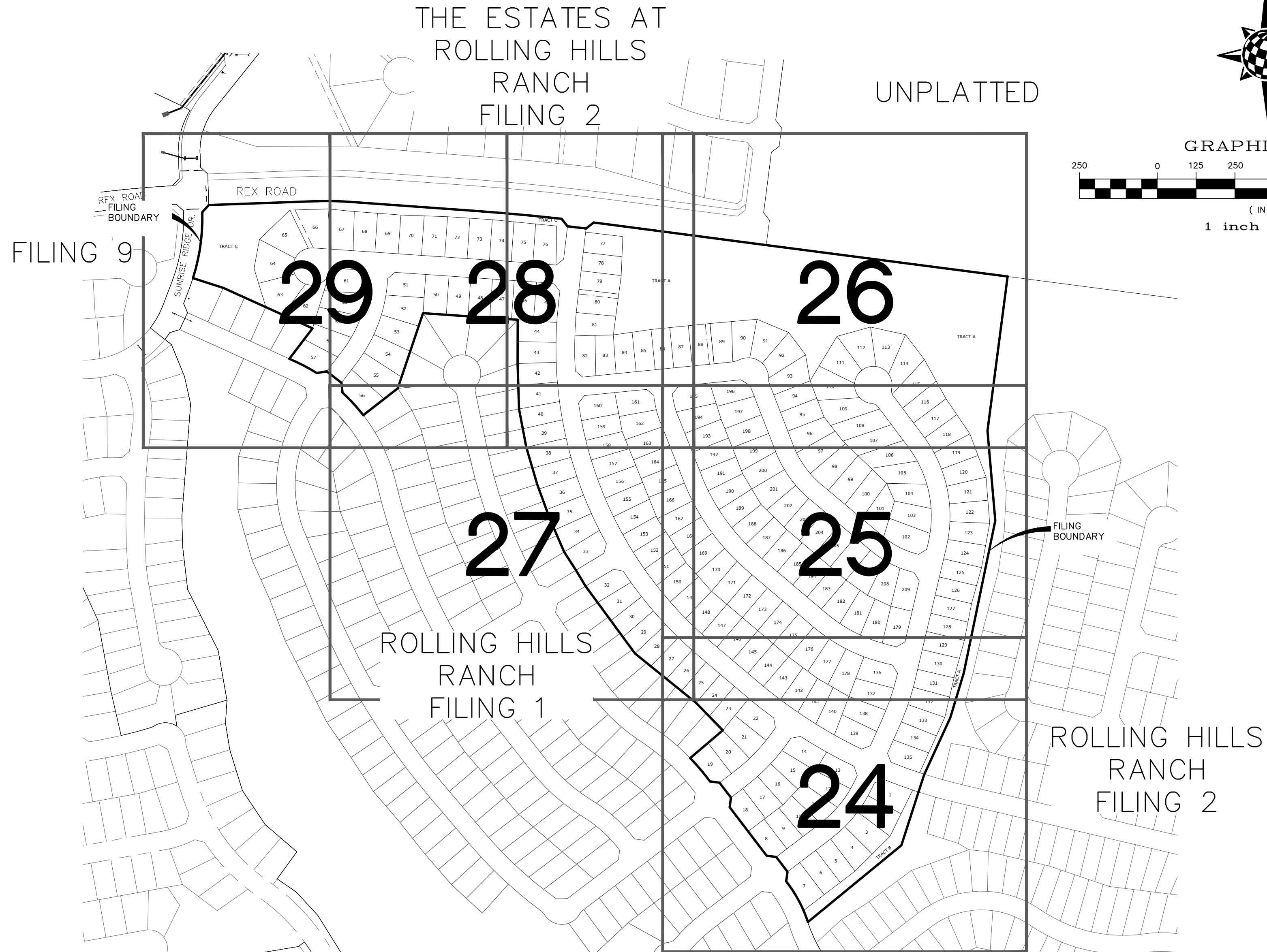
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**NOTE:**

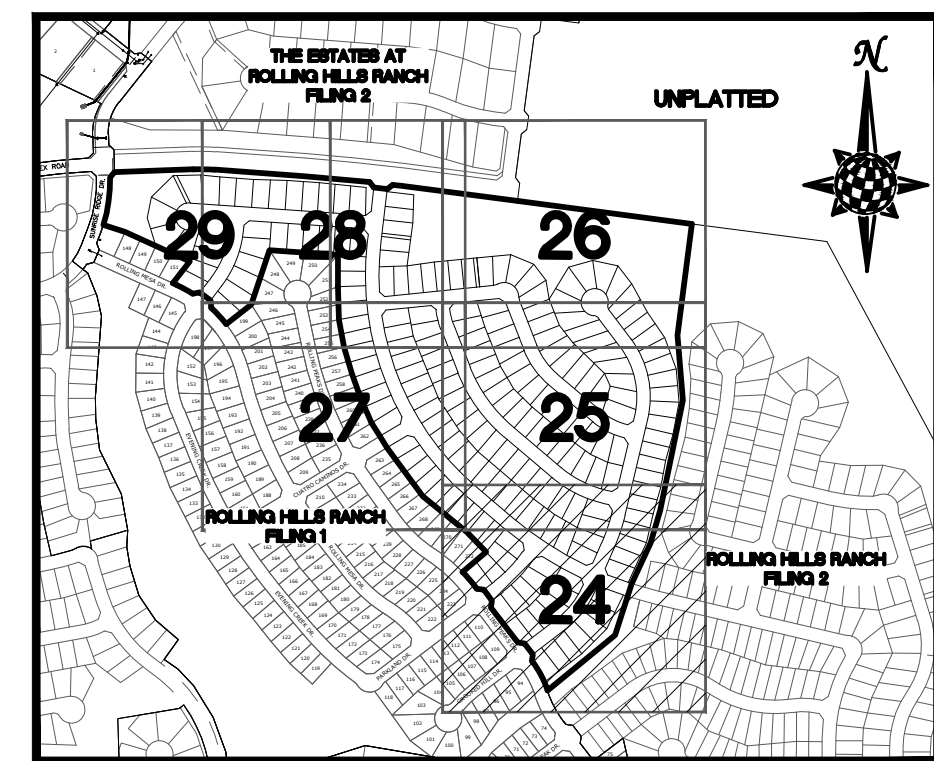
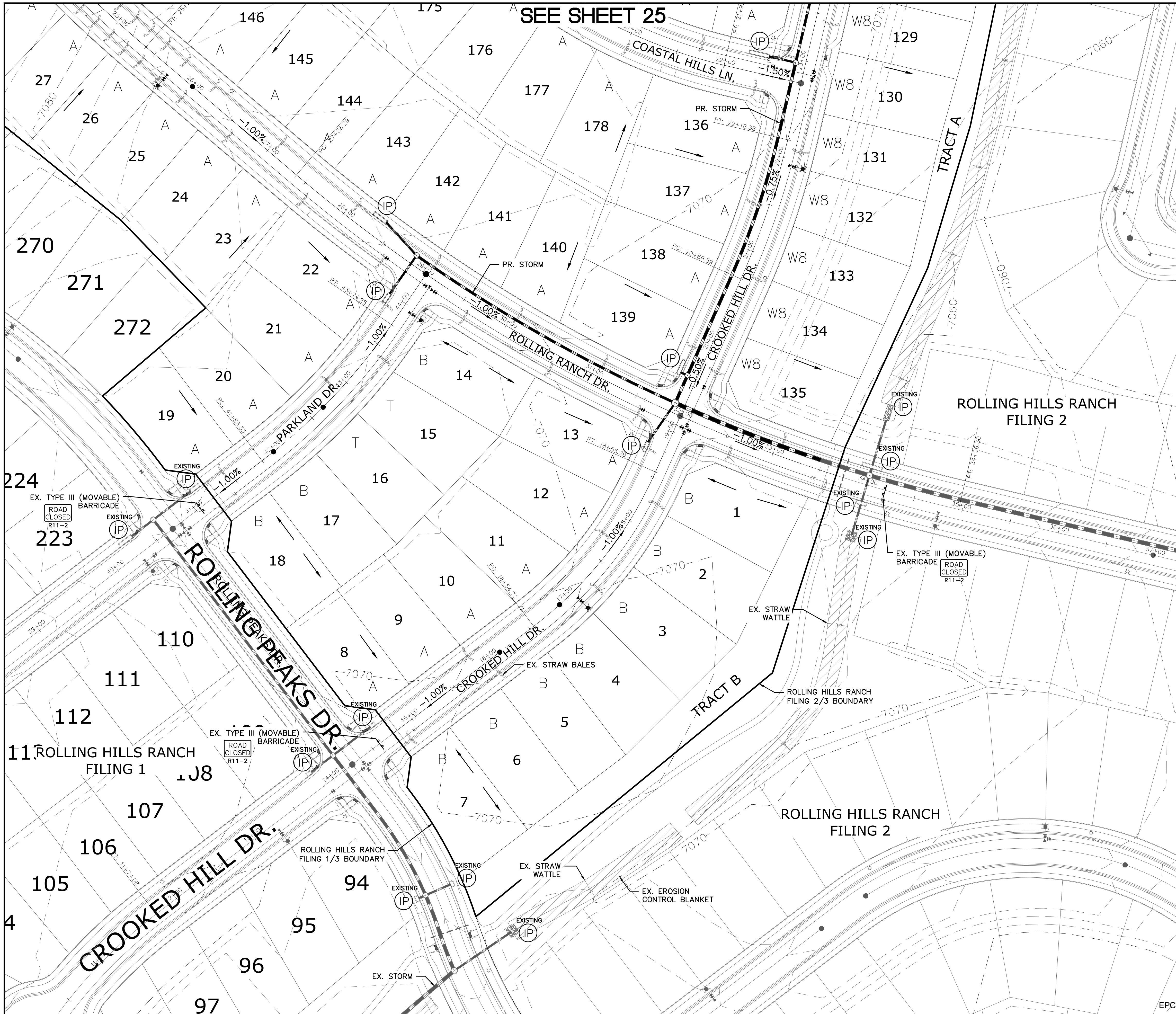
- EXISTING VEGETATION ON THE PROJECT SITE AND THE IN SURROUNDING AREAS CONSISTS OF A MIXTURE OF NATIVE GRASSES AND WEEDS WITH COVERAGE APPROXIMATING 70% DENSITY UNLESS OTHERWISE NOTED. SOME AREAS HAVE NEGLIGIBLE VEGETATIVE GROWTH AT THIS TIME AS THE SITE WAS PREVIOUSLY GRADED AND RE-SEEDING OR USED AS A BUILDERS' STOCKPILE LOCATION. AREAS PREVIOUSLY GRADED HAS BEEN RE-SEEDING WITH THE APPROVED COUNTY SEED MIX.
- MATERIAL STORAGE, TOPSOIL STOCKPILES(UDFCD: 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. IDENTIFICATION SHALL BE LOCATED IN THE SWMP AS WELL AS ANY DETAILS NECESSARY.
- THERE IS NO CONCRETE BATCH PLANT ASSOCIATED WITH THIS PROJECT.
- NO SLOPES GREATER THAN 3:1 ARE EXPECTED ON THIS SITE. SLOPES GREATER THAN 3:1 REQUIRE EROSION CONTROL BLANKET.



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)



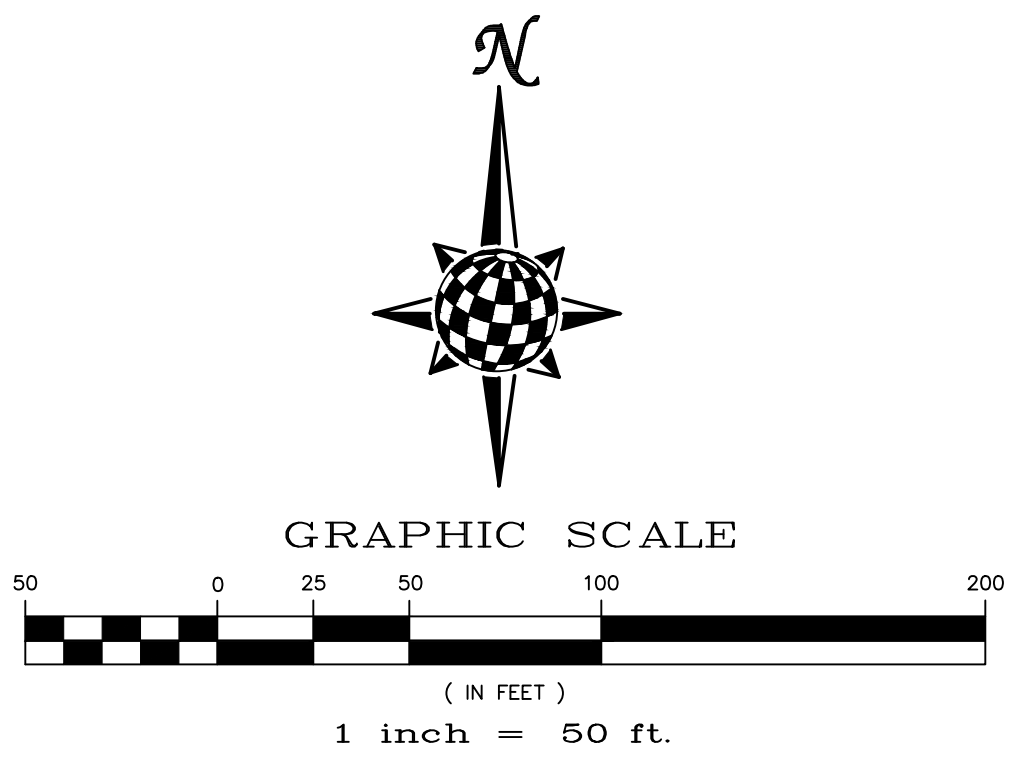
1	2	3	4	No.
TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457				Date
				Revisions
ROLLING HILLS RANCH FILING 3 AT MERIDIAN RANCH GRADING/EROSION CONTROL PLAN				Date
GRADING INDEX SHEET				Appr.
Scale	Drawn by	Checked by	Date	
AS SHOWN	LOG	TAK	MAY 2021	
23 of 32				



**INDEX MAP**  
N.T.S.

**LEGEND**

SYMBOL	ACRONYM	DESCRIPTION
		STRAW BALES
		EROSION WATTLES PER DETAIL SHEET 32
		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	INLET PROTECTION PER DETAIL SHEET 32
		PROPERTY BOUNDARY/CONSTRUCTION BOUNDARY
		EXISTING CONTOUR (10')
		EXISTING CONTOUR (2')
		PROPOSED CONTOUR (10')
		PROPOSED CONTOUR (2')
		LIMITS OF GRADING/CONSTRUCTION BOUNDARY
		FLOW DIRECTION
		GRADE
		LOT NUMBER
		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 31.

CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES.

EX. UTILITIES SEE CONSTRUCTION DRAWINGS FOR:  
1) ROLLING HILLS RANCH ROUGH GRADING  
2) ROLLING HILLS RANCH FILING 1  
3) ESTATES AT ROLLING HILLS RANCH FILING 2  
4) ROLLING HILLS RANCH FILING 2

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TWO WORKING DAYS  
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UTILITY NOTIFICATION CENTER OF COLORADO  
1-800-922-1887  
(SEE COVER FOR LIST OF UTILITY CONTACTS)

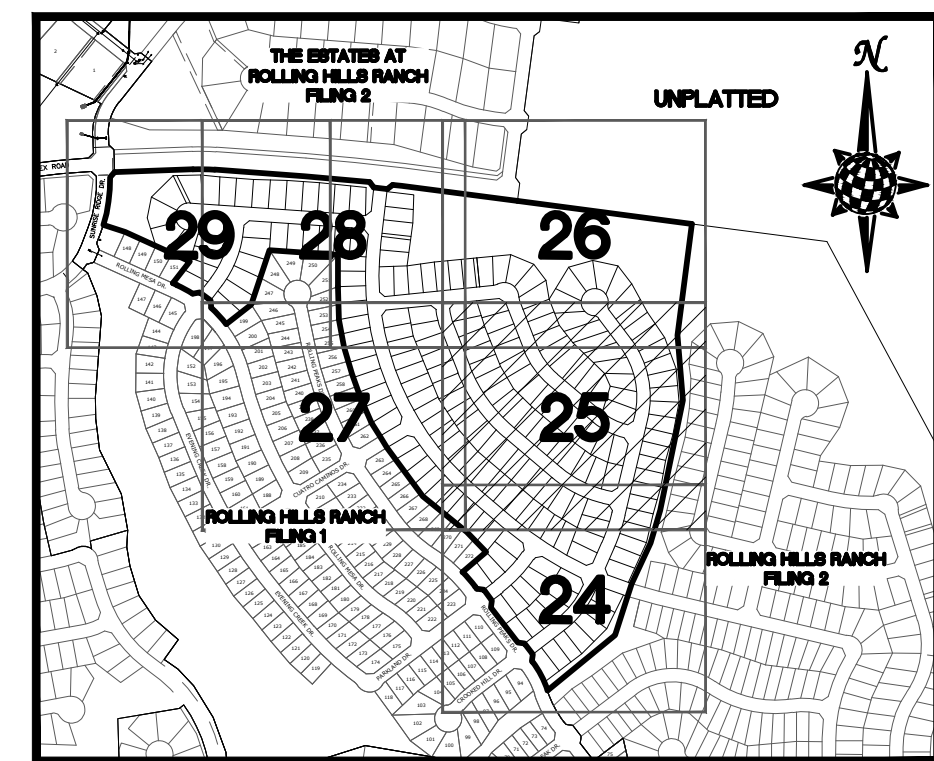
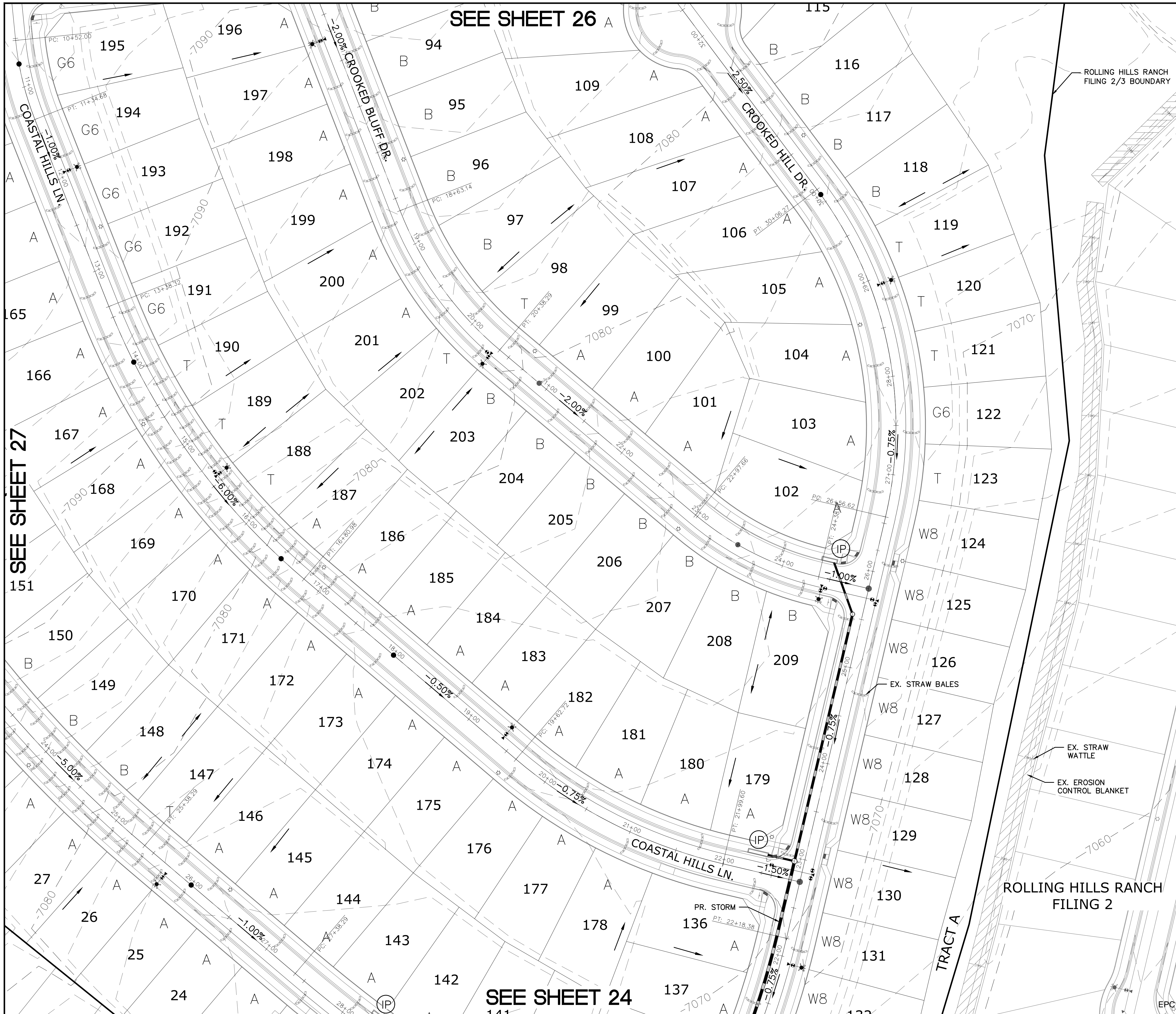
TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457		No.		Revisions		Date		Appr.	
MERIDIAN RANCH		ROLLING HILLS RANCH FILING 3 AT MERIDIAN RANCH GRADING/EROSION CONTROL PLAN		GRADING LAYOUT		Drawn by LOG		Checked by TAK	
Scale AS SHOWN		24 of 32		Date MAY 2021		Date		Date	
PROFESSIONAL ENGINEER 31429		DATE		DATE		DATE		DATE	



SEE SHEET 26

SEE SHEET 27

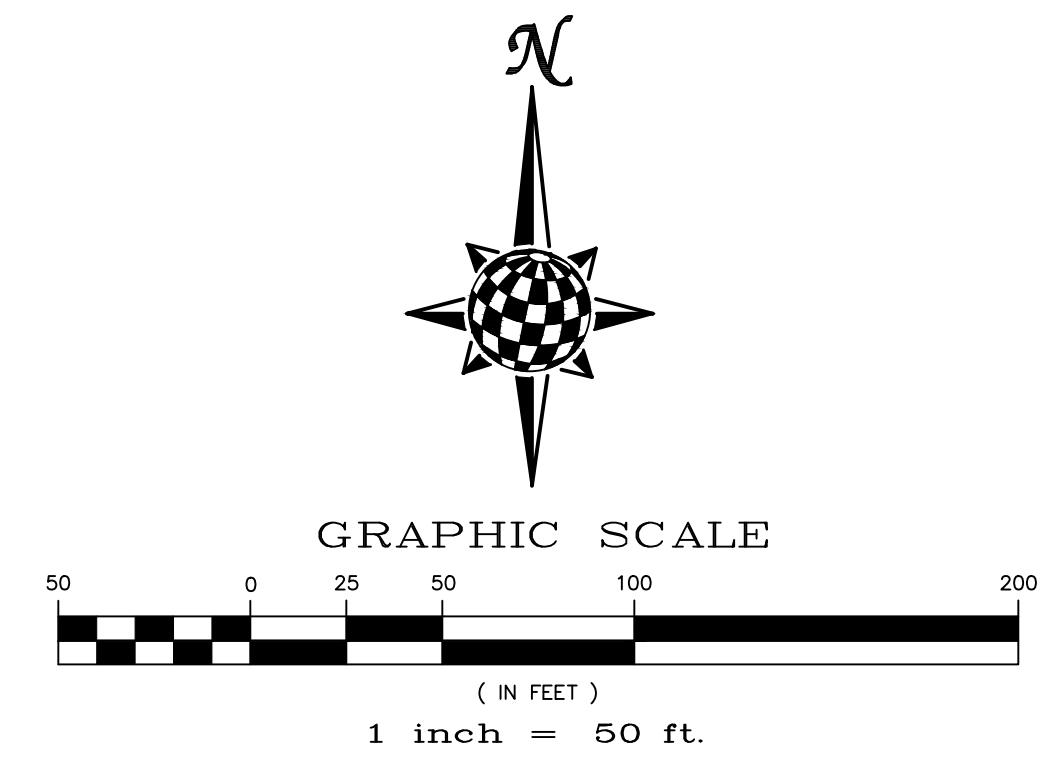
SEE SHEET 24



INDEX MAP  
N.T.S.

LEGEND

SYMBOL	ACRONYM	DESCRIPTION
		STRAW BALES
		EROSION WATTLES PER DETAIL SHEET 32
		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	INLET PROTECTION PER DETAIL SHEET 32
		PROPERTY BOUNDARY/CONSTRUCTION BOUNDARY
		EXISTING CONTOUR (10')
		EXISTING CONTOUR (2')
		PROPOSED CONTOUR (10')
		PROPOSED CONTOUR (2')
		LIMITS OF GRADING/CONSTRUCTION BOUNDARY
		FLOW DIRECTION
	2.00%	GRADE
	75	LOT NUMBER
	A	LOT GRADE TYPE

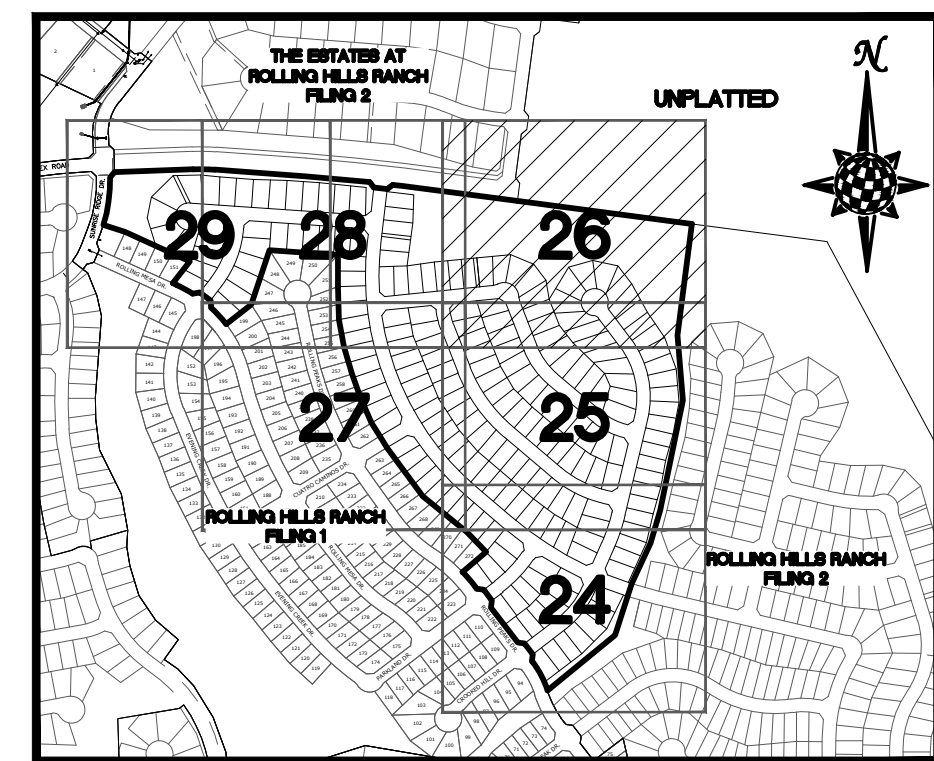
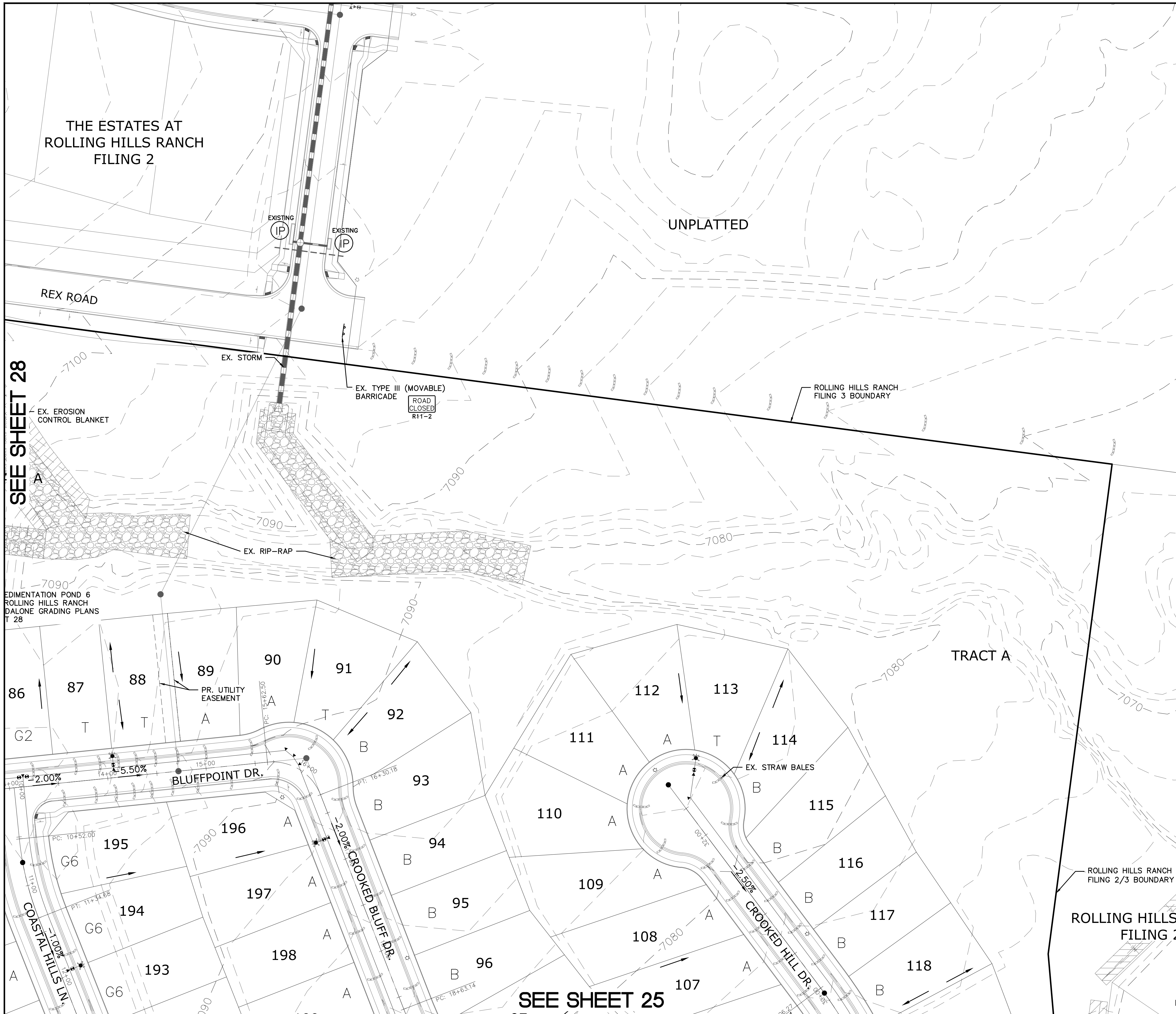


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2) ROLLING HILLS RANCH FILING 1  
3) ESTATES AT ROLLING HILLS RANCH FILING 2  
4) ROLLING HILLS RANCH FILING 2

TWO WORKING DAYS  
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1-800-922-1987  
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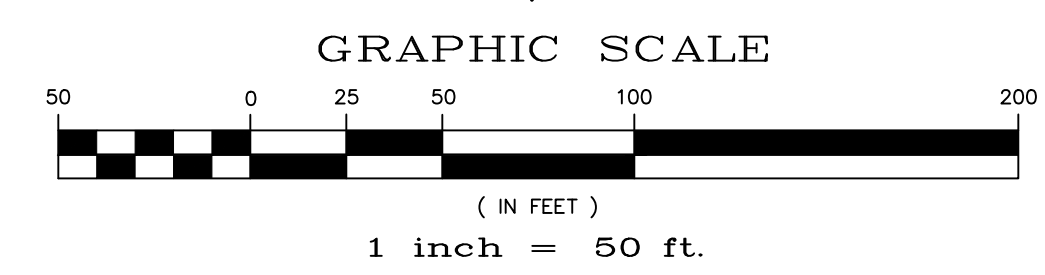
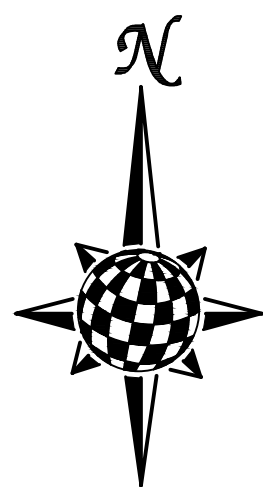
TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457		ROLLING HILLS RANCH FILING 3 AT MERIDIAN RANCH GRADING/EROSION CONTROL PLAN		GRADING LAYOUT	
1	2	3	4	No.	Revisions
Scale	AS SHOWN	25 of 32	Date	MAY 2021	
Drawn by	LOG	Checked by	TAK		
PCD PROJECT NO. SF-21-016					



**INDEX MAP**  
N.T.S.

**LEGEND**

SYMBOL	ACRONYM	DESCRIPTION
		STRAW BALES
		EROSION WATTLES PER DETAIL SHEET 32
		EROSION CONTROL BLANKET PER DETAIL ECB-1 & ECB-2 DCM VOL. 2
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	(IP)	INLET PROTECTION PER DETAIL SHEET 32
		PROPERTY BOUNDARY/CONSTRUCTION BOUNDARY
		EXISTING CONTOUR (10')
		EXISTING CONTOUR (2')
		PROPOSED CONTOUR (10')
		PROPOSED CONTOUR (2')
		LIMITS OF GRADING/CONSTRUCTION BOUNDARY
		FLOW DIRECTION
	2.00%	GRADE
	75	LOT NUMBER
	A	LOT GRADE TYPE



NOTE:  
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4) ROLLING HILLS RANCH FILING 2

**BEFORE YOU DIG CALL 811**

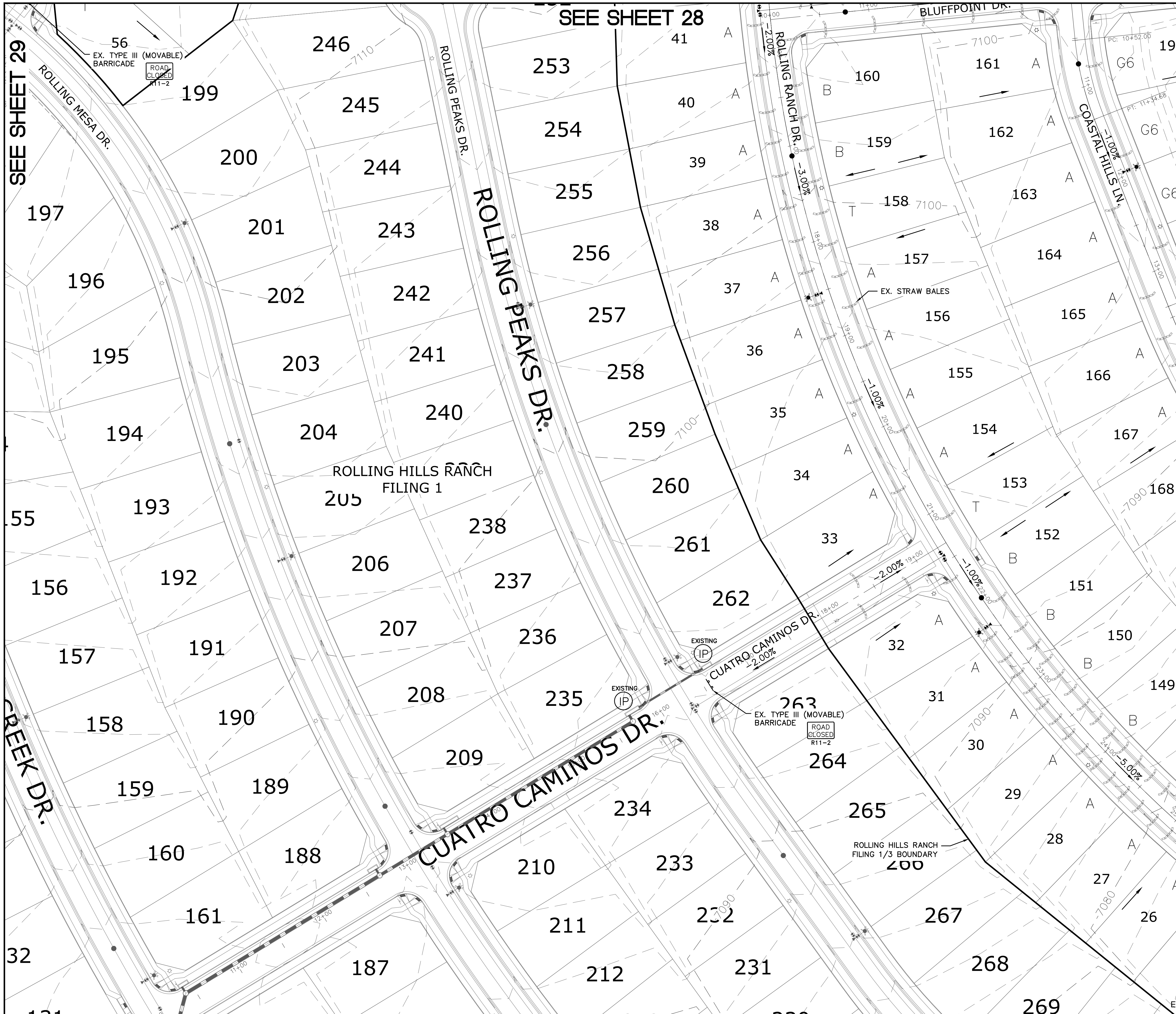
TWO WORKING DAYS  
OR  
UTILITY NOTIFICATION CENTER OF COLORADO  
1-800-922-1837  
(SEE COVER FOR LIST OF UTILITY CONTACTS)

TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457		Date	
MERIDIAN RANCH		Date	
ROLLING HILLS RANCH FILING 3 AT MERIDIAN RANCH GRADING/EROSION CONTROL PLAN GRADING LAYOUT		Date	
Drawn by LOG	Checked by TAK	Date	Appr.
Scale AS SHOWN	26 of 32	Date	
		Date	

SEE SHEET 28

SEE SHEET 25

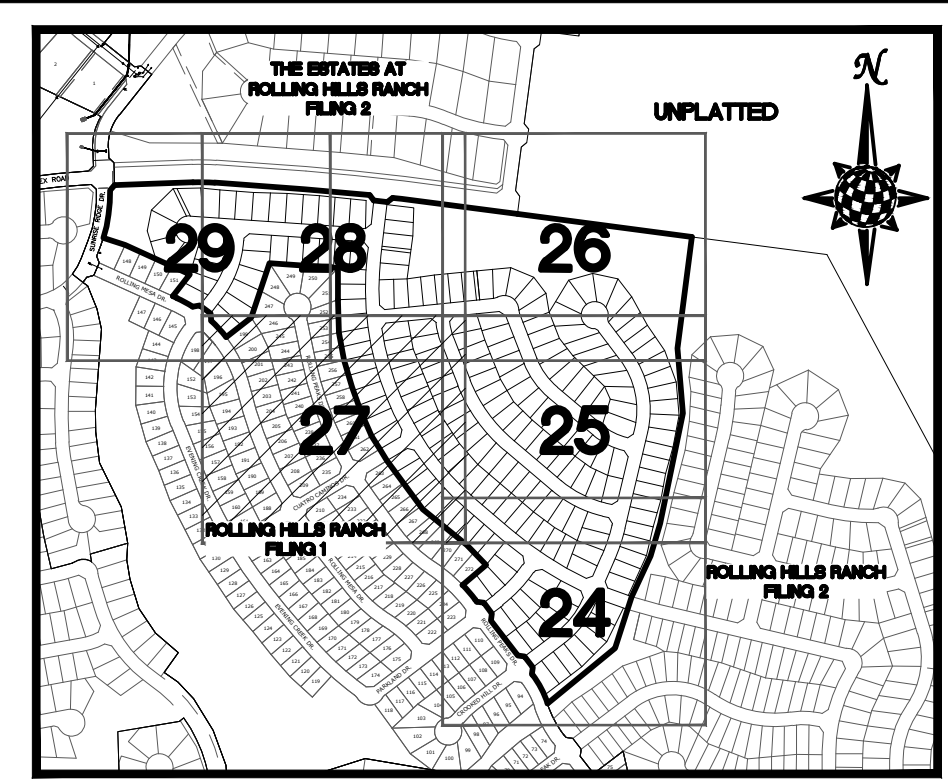
EPC 7/29/2021



SEE SHEET 29

SEE SHEET 28

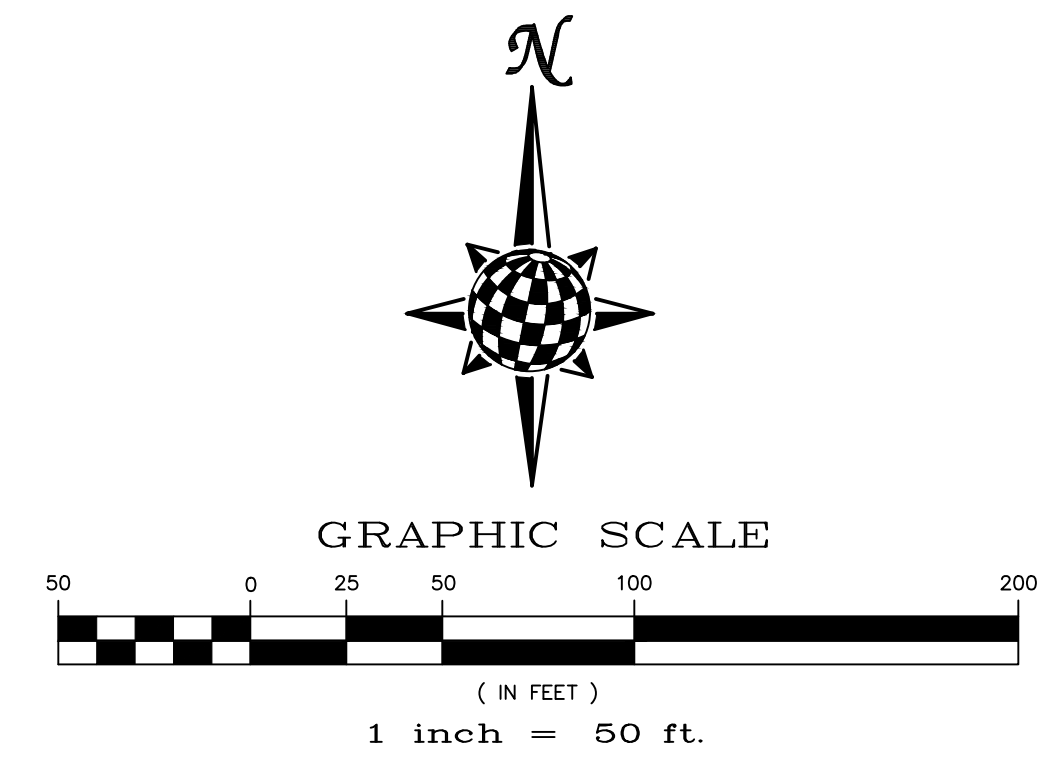
SEE SHEET 25



INDEX MAP  
N.T.S.

**LEGEND**

SYMBOL	ACRONYM	DESCRIPTION
		STRAW BALES
		EROSION WATTLES PER DETAIL SHEET 32
		EROSION CONTROL BLANKET PER DETAIL ECB-1 & ECB-2 DCM VOL. 2
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		PROPERTY BOUNDARY/CONSTRUCTION BOUNDARY
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		PROPOSED CONTOUR (10')
		PROPOSED CONTOUR (2')
		LIMITS OF GRADING/CONSTRUCTION BOUNDARY
		FLOW DIRECTION
		GRADE
		LOT NUMBER
		LOT GRADE TYPE



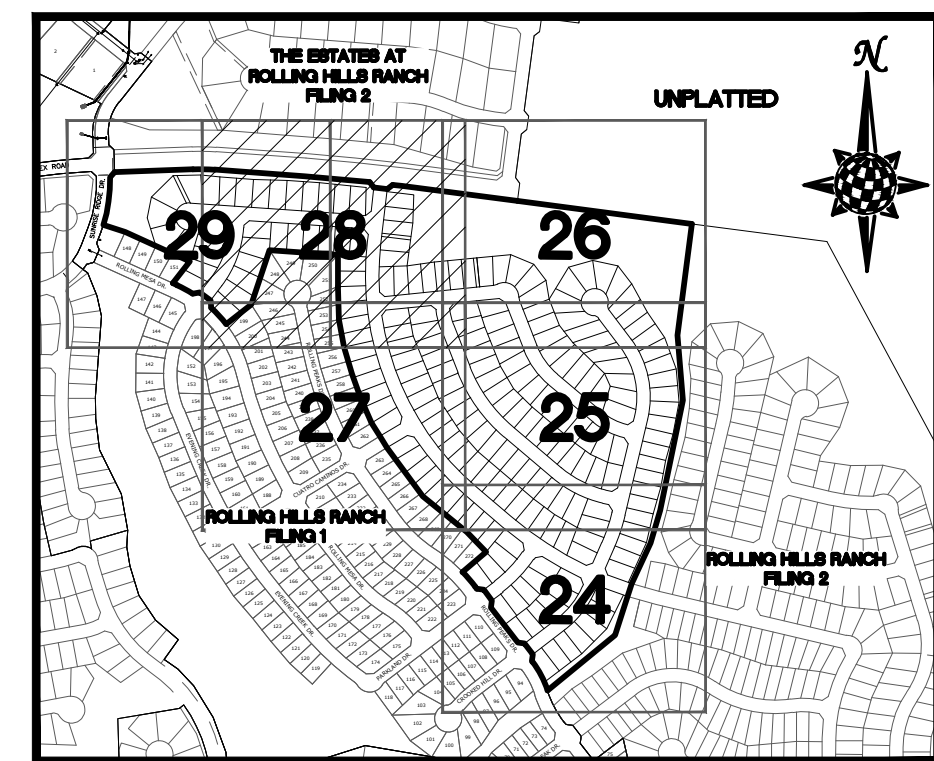
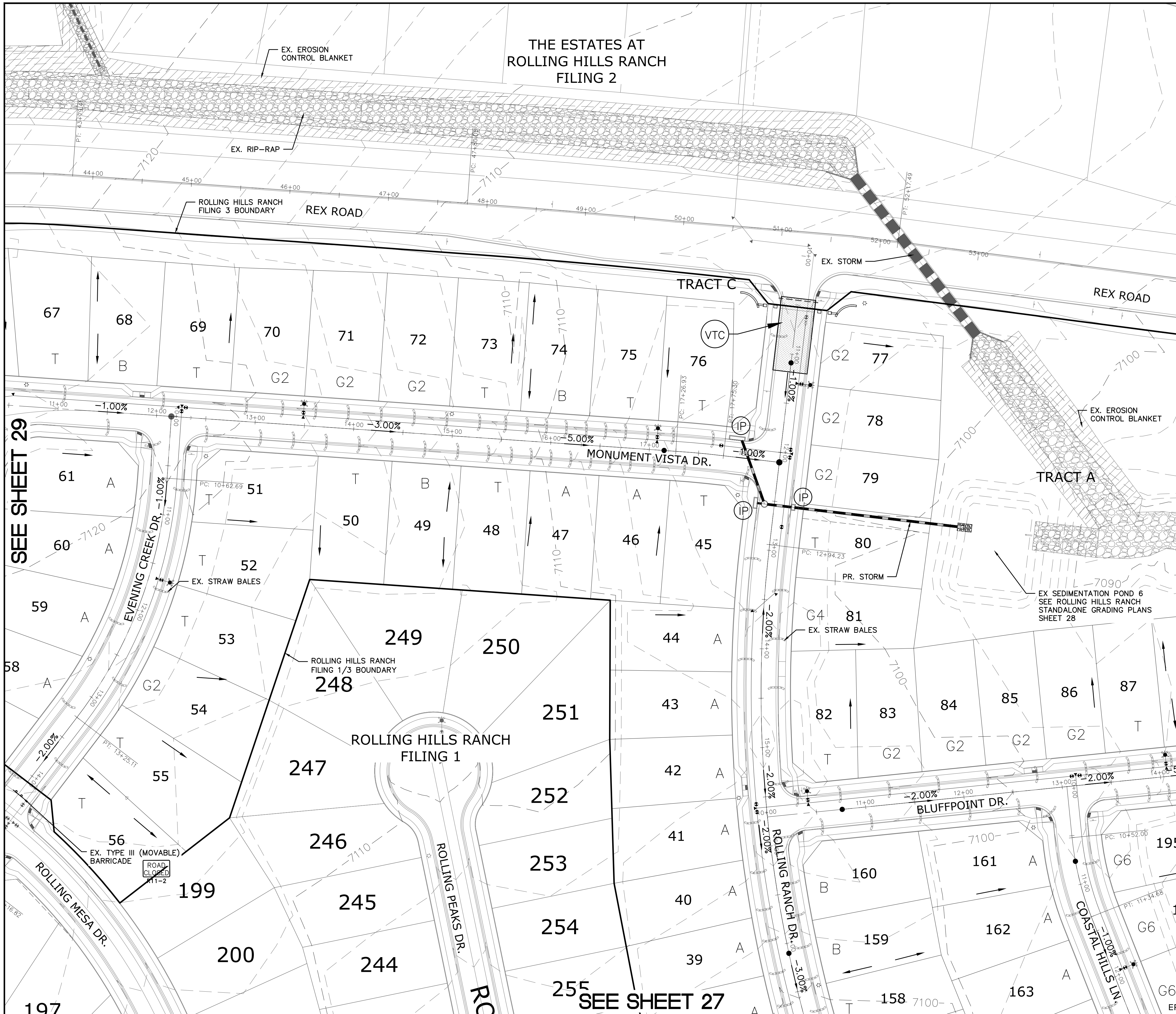
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**BEFORE YOU DIG CALL 811**

TWO WORKING DAYS  
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UTILITY NOTIFICATION CENTER OF COLORADO  
1-800-922-1987  
(SEE COVER FOR LIST OF UTILITY CONTACTS)

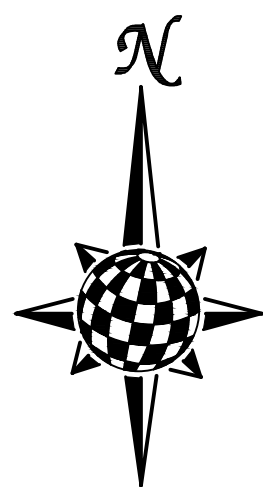
Date		Date		Date	
Appr.		Invt.		Date	
Revisions		No.		No.	
1	2	3	4		
TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457					
<b>MERIDIAN RANCH</b>					
ROLLING HILLS RANCH FILING 3 AT MERIDIAN RANCH GRADING/EROSION CONTROL PLAN GRADING LAYOUT					
Drawn by	LOG	Checked by	TAK	Date	MAY 2021
Scale	AS SHOWN	27	of	32	
PCD PROJECT NO. SF-21-016					



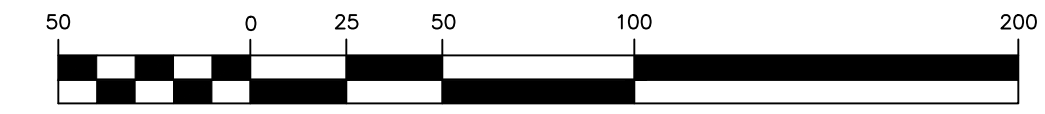
INDEX MAP  
N.T.S.

LEGEND

SYMBOL	ACRONYM	DESCRIPTION
[Symbol]		STRAW BALES
[Symbol]		EROSION WATTLES PER DETAIL SHEET 32
[Symbol]		EROSION CONTROL BLANKET PER DETAIL ECB-1 & ECB-2 DCM VOL. 2
[Symbol]	RCP	REINFORCED CONCRETE PIPE
[Symbol]	SF	SILT FENCE PER DETAIL SF-1, SF-2 & SF-3 DCM VOL. 2
[Symbol]	VTC	VEHICLE TRACKING CONTROL PER DETAIL VT-2 DCM VOL. 2
[Symbol]	IP	INLET PROTECTION PER DETAIL SHEET 32
[Symbol]		PROPERTY BOUNDARY/CONSTRUCTION BOUNDARY
[Symbol]		EXISTING CONTOUR (10')
[Symbol]		EXISTING CONTOUR (2')
[Symbol]		PROPOSED CONTOUR (10')
[Symbol]		PROPOSED CONTOUR (2')
[Symbol]		LIMITS OF GRADING/CONSTRUCTION BOUNDARY
[Symbol]		FLOW DIRECTION
[Symbol]		GRADE
[Symbol]		75
[Symbol]		LOT NUMBER
[Symbol]		A
[Symbol]		LOT GRADE TYPE



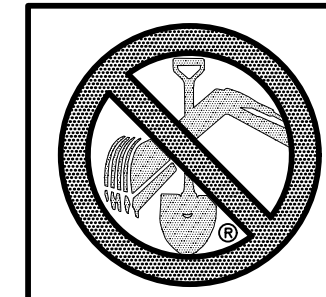
GRAPHIC SCALE



1 inch = 50 ft.

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 31.

CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES.  
EX. UTILITIES SEE CONSTRUCTION DRAWINGS FOR:  
1) ROLLING HILLS RANCH ROUGH GRADING  
2) ROLLING HILLS RANCH FILING 1  
3) ESTATES AT ROLLING HILLS RANCH FILING 2  
4) ROLLING HILLS RANCH FILING 2



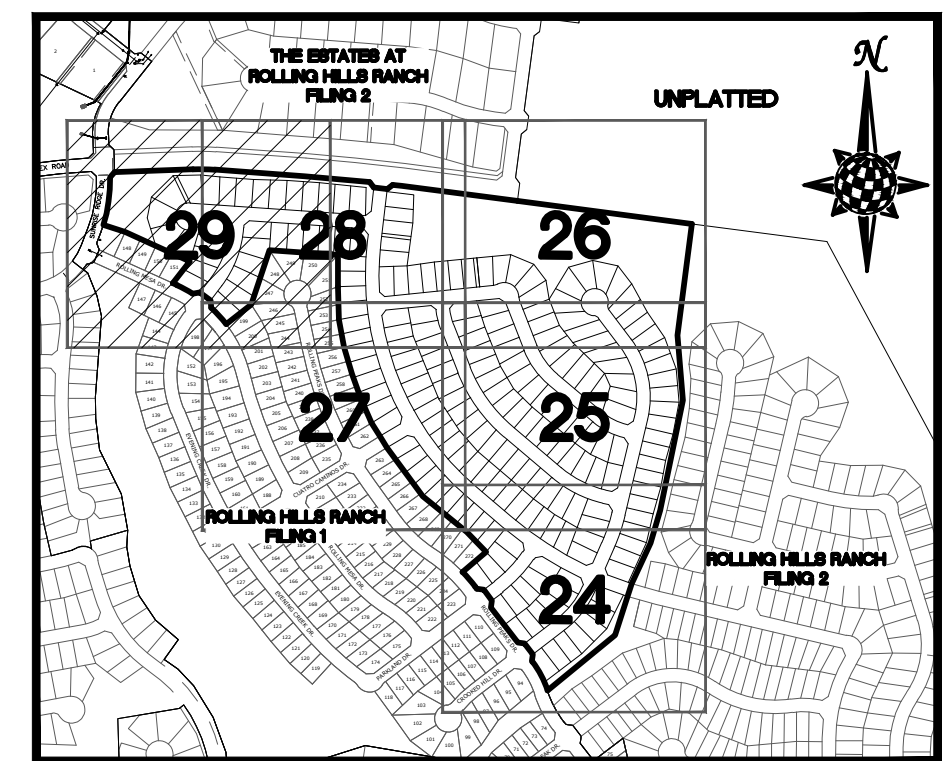
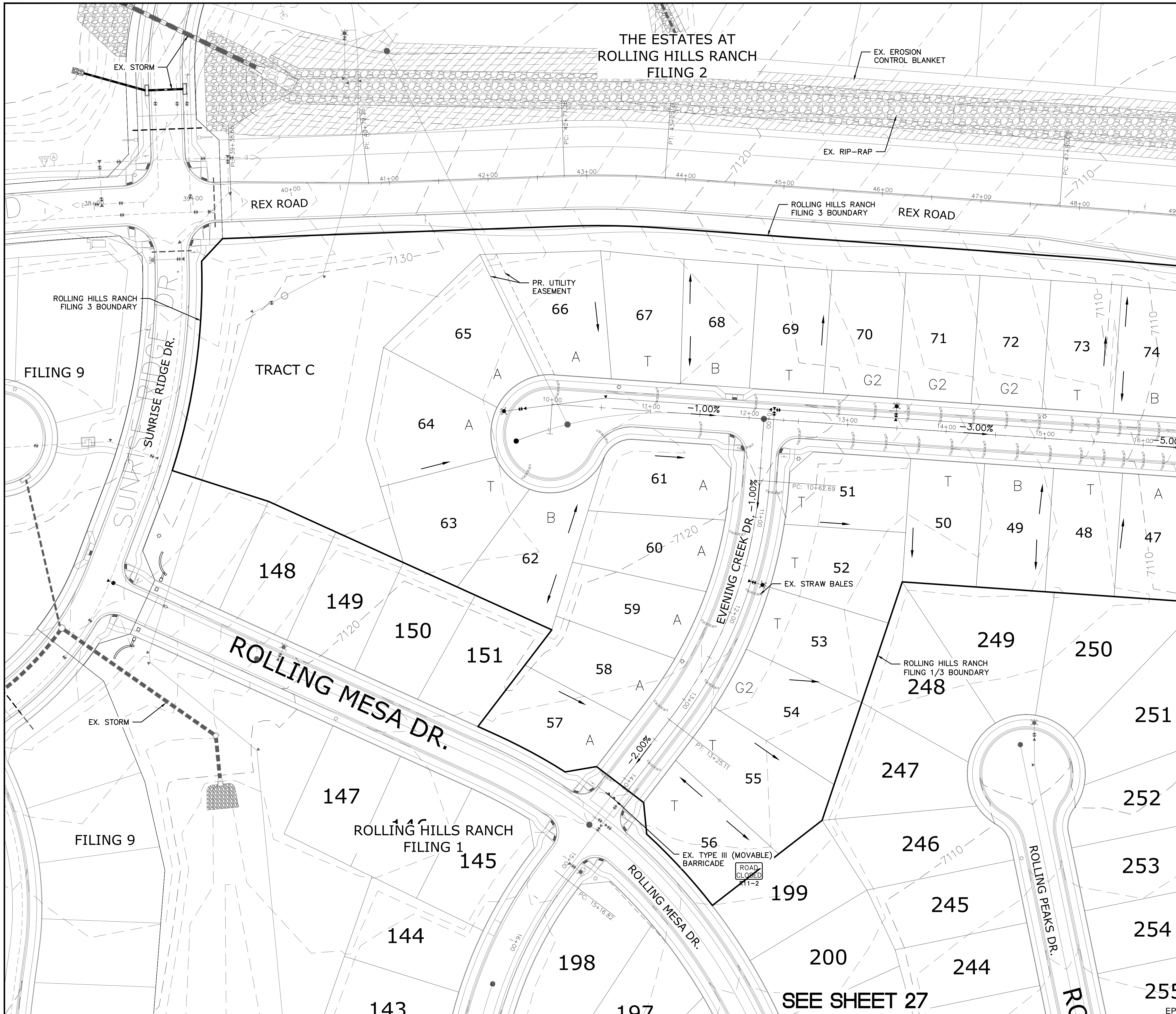
TWO WORKING DAYS  
**BEFORE YOU DIG  
CALL 811**  
OR  
UTILITY NOTIFICATION CENTER OF COLORADO  
1-800-922-1987  
(SEE COVER FOR LIST OF UTILITY CONTACTS)

TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457		MERIDIAN RANCH		ROLLING HILLS RANCH FILING 3 AT MERIDIAN RANCH GRADING/EROSION CONTROL PLAN GRADING LAYOUT	
Drawn by	LOG	Checked by	TAK	Date	MAY 2021
Scale	AS SHOWN	28	of	32	

SEE SHEET 29

SEE SHEET 26

SEE SHEET 27

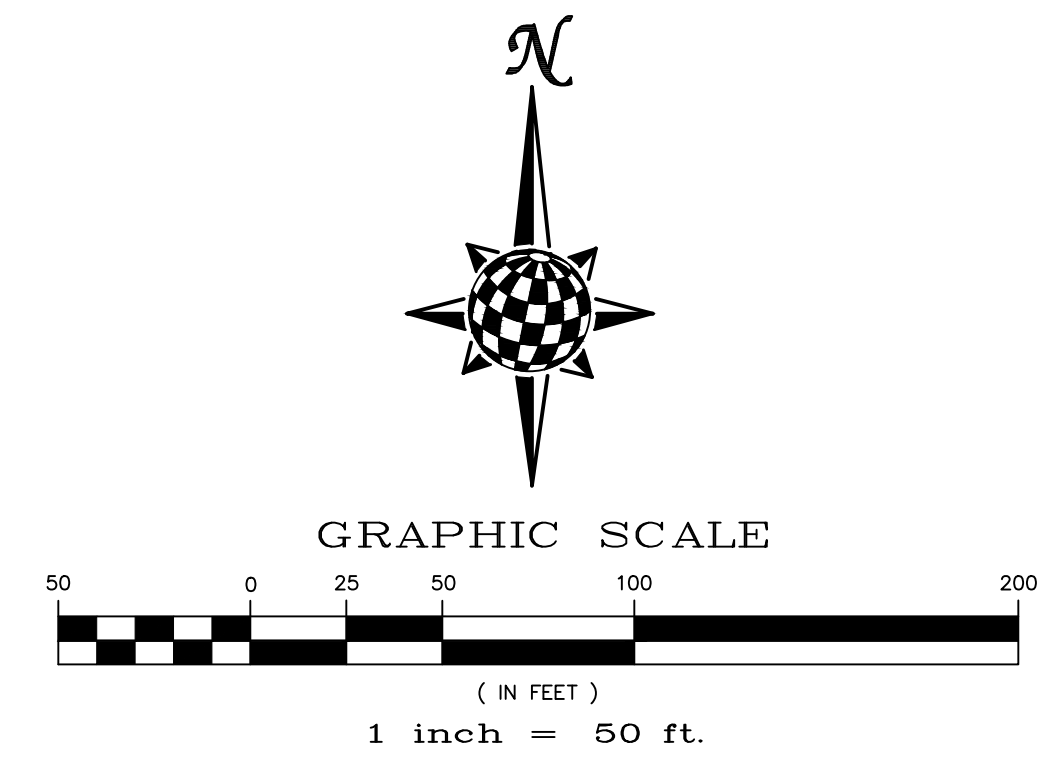


INDEX MAP  
N.T.S.

LEGEND

SYMBOL	ACRONYM	DESCRIPTION
[Symbol]		STRAW BALES
[Symbol]		EROSION WATTLES PER DETAIL SHEET 32
[Symbol]		EROSION CONTROL BLANKET PER DETAIL ECB-1 & ECB-2 DCM VOL. 2
[Symbol]	RCP	REINFORCED CONCRETE PIPE
[Symbol]	(SF)	SILT FENCE PER DETAIL SF-1, SF-2 & SF-3 DCM VOL. 2
[Symbol]	(VTC)	VEHICLE TRACKING CONTROL PER DETAIL VT-2 DCM VOL. 2
[Symbol]	(IP)	INLET PROTECTION PER DETAIL SHEET 32
[Symbol]		PROPERTY BOUNDARY/CONSTRUCTION BOUNDARY
[Symbol]		EXISTING CONTOUR (10')
[Symbol]		EXISTING CONTOUR (2')
[Symbol]		PROPOSED CONTOUR (10')
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[Symbol]		LIMITS OF GRADING/CONSTRUCTION BOUNDARY
[Symbol]		FLOW DIRECTION
[Symbol]	2.00%	GRADE
[Symbol]	75	LOT NUMBER
[Symbol]	A	LOT GRADE TYPE

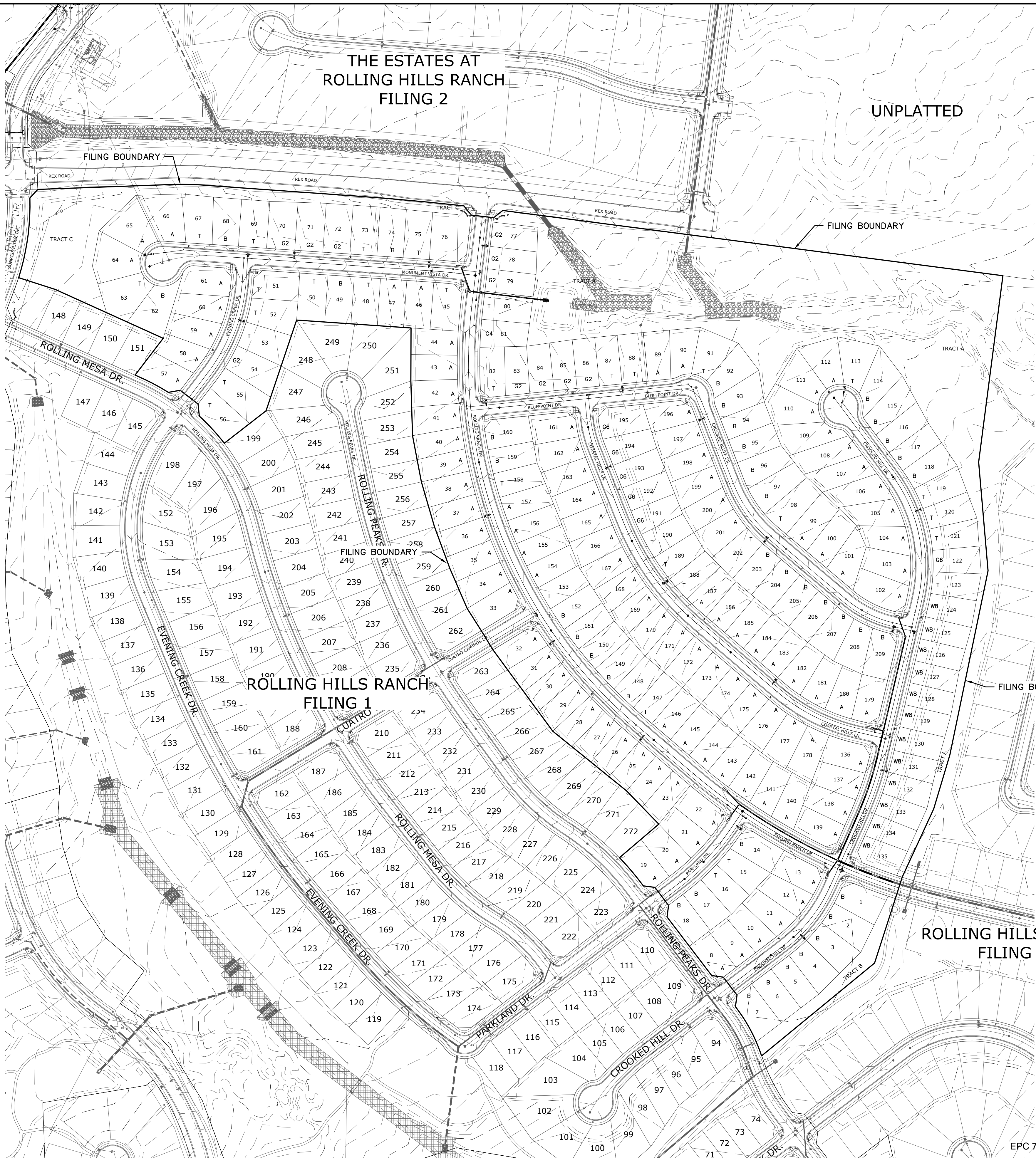
SEE SHEET 28



NOTE:  
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4) ROLLING HILLS RANCH FILING 2

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

1	2	3	4	No.
TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457				
ROLLING HILLS RANCH FILING 3 AT MERIDIAN RANCH GRADING/EROSION CONTROL PLAN GRADING LAYOUT				
Drawn by	LOG	Checked by	TAK	Date
AS SHOWN		29	of 32	MAY 2021

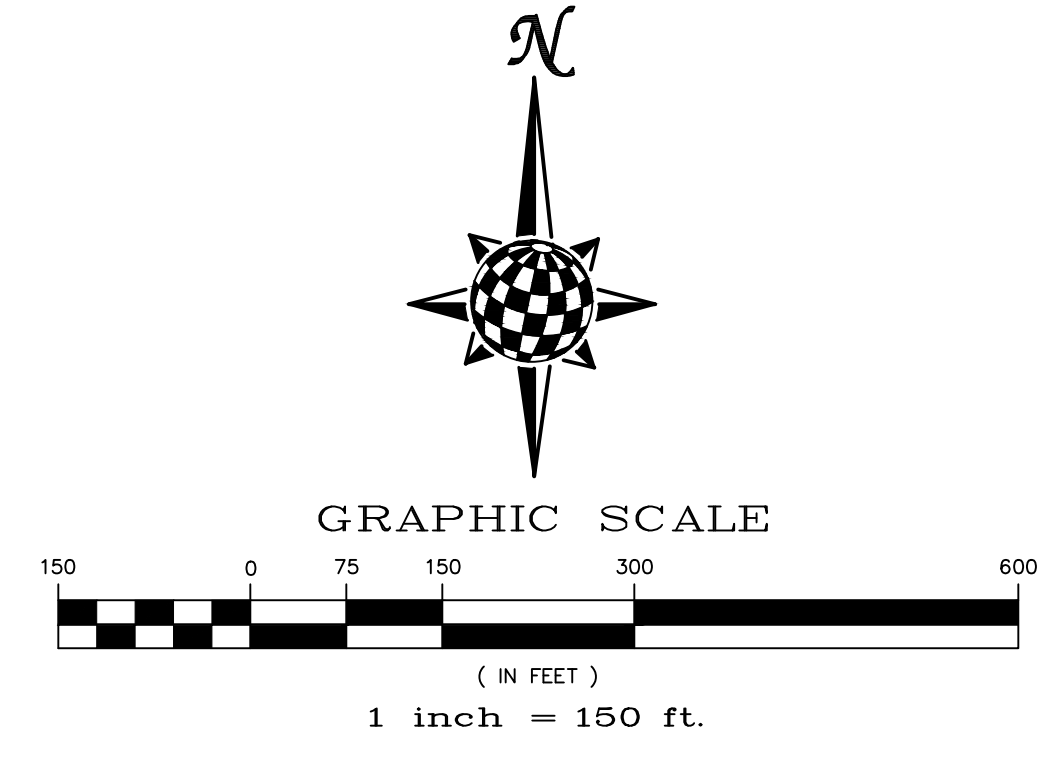


THE ESTATES AT  
ROLLING HILLS RANCH  
FILING 2

UNPLATTED

**LEGEND**

SYMBOL	ACRONYM	DESCRIPTION
		STRAW BALES
		EROSION WATTLES PER DETAIL SHEET 32
		EROSION CONTROL BLANKET PER DETAIL ECB-1 & ECB-2 DCM VOL. 2
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		LIMITS OF GRADING/CONSTRUCTION BOUNDARY
		FLOW DIRECTION
	2.00%	GRADE
	75	LOT NUMBER
	A	LOT GRADE TYPE



**LEGEND:**

AREAS OF CUT	
AREAS OF FILL	

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**TWO WORKING DAYS  
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CALL 811**

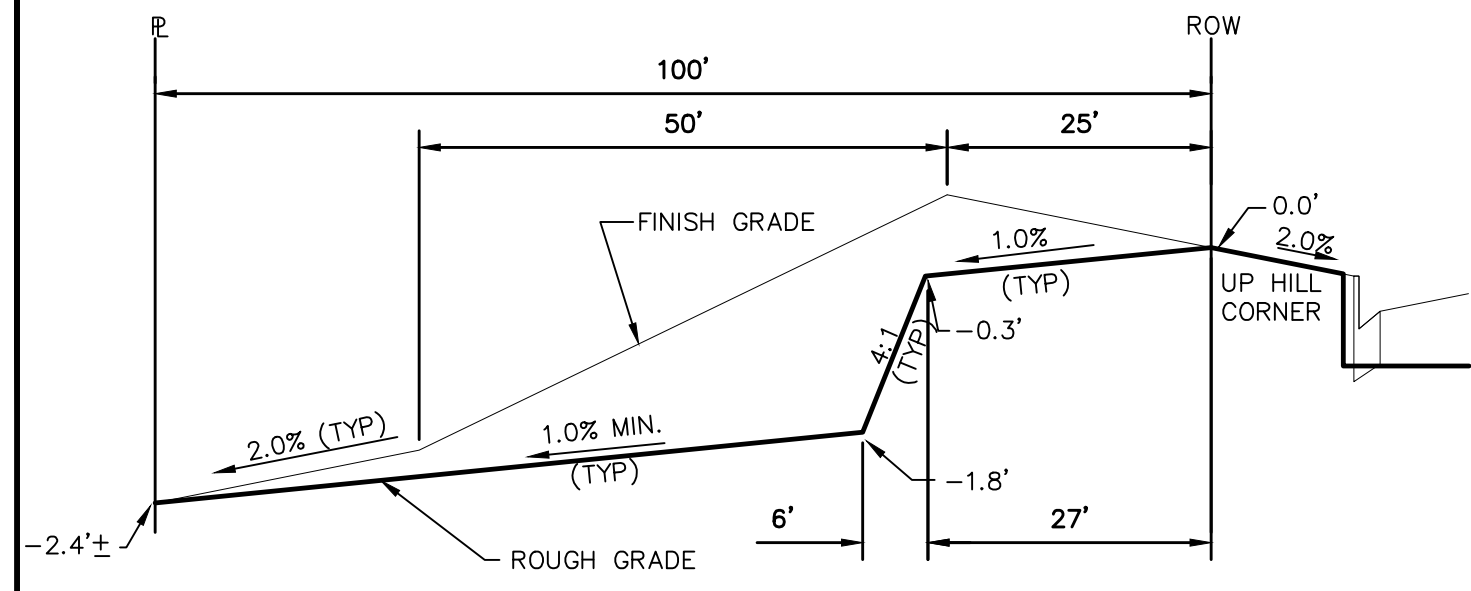
OR  
UTILITY NOTIFICATION CENTER OF COLORADO  
1-800-922-1987  
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EPC 7/29/2021

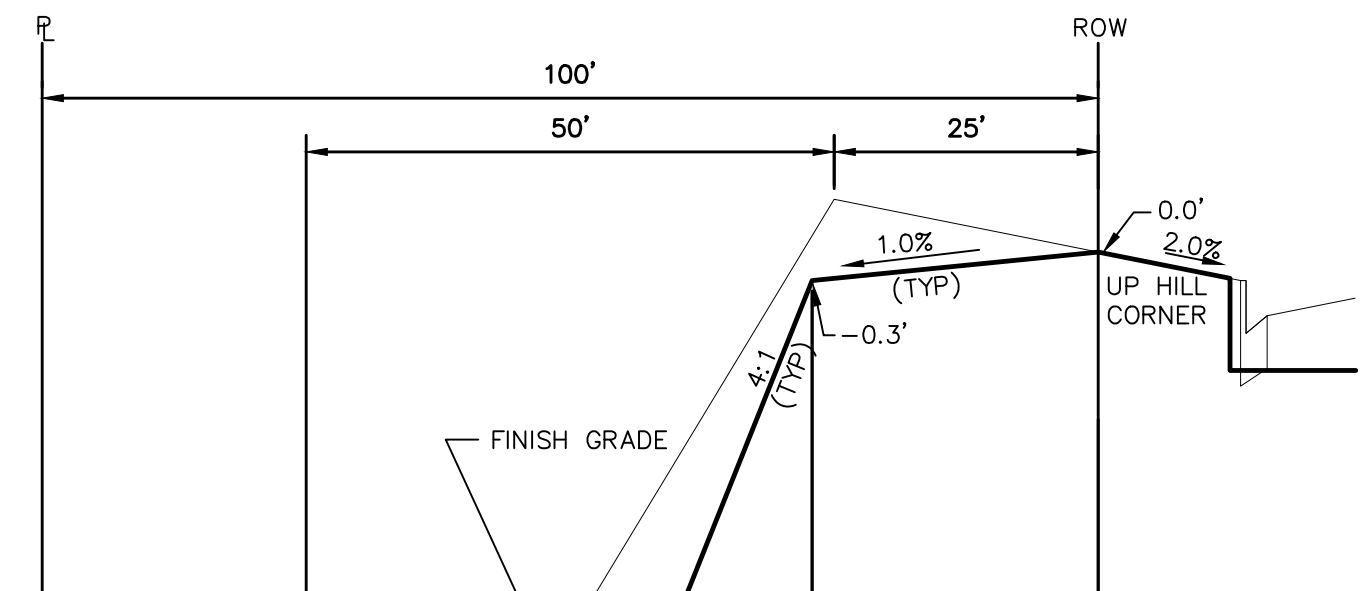
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		2		
		3		
		4		

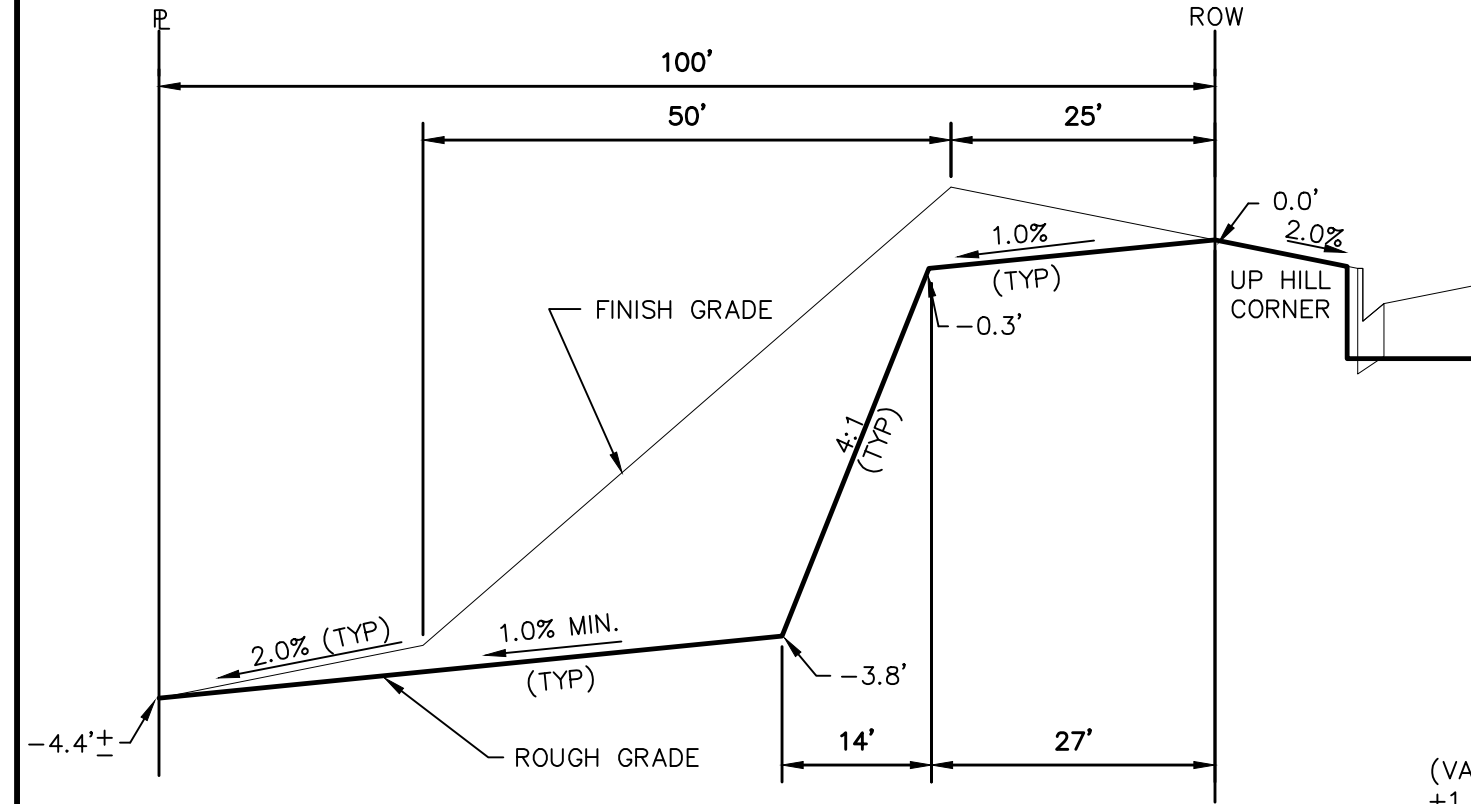
TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457		
<b>MERIDIAN RANCH</b>		
ROLLING HILLS RANCH FILING 3 AT MERIDIAN RANCH GRADING-EROSION CONTROL PLAN	GRADING CUT-FILL LAYOUT	
Drawn by LOG	Checked by TAK	Date MAY 2021
Scale AS SHOWN	30 of 32	



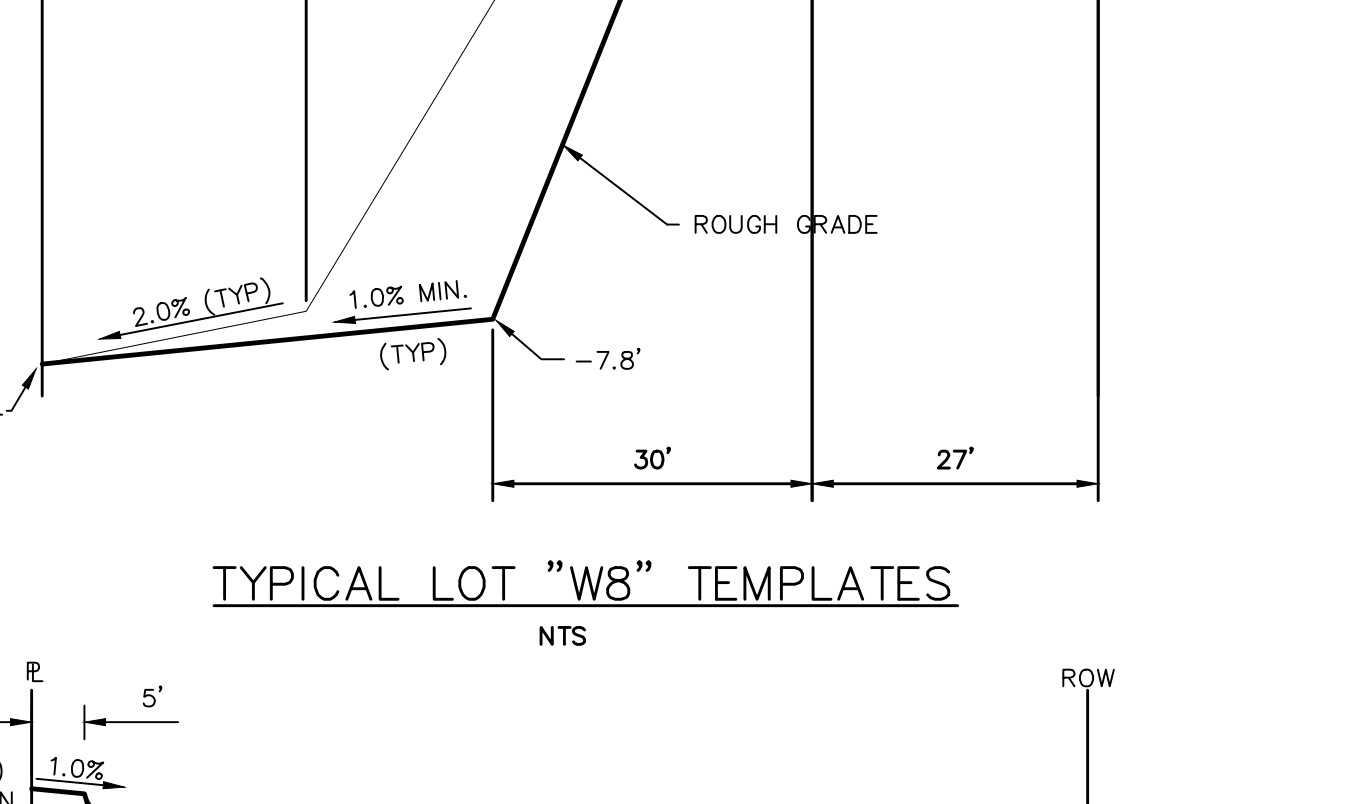
TYPICAL LOT "G2" TEMPLATES  
NTS



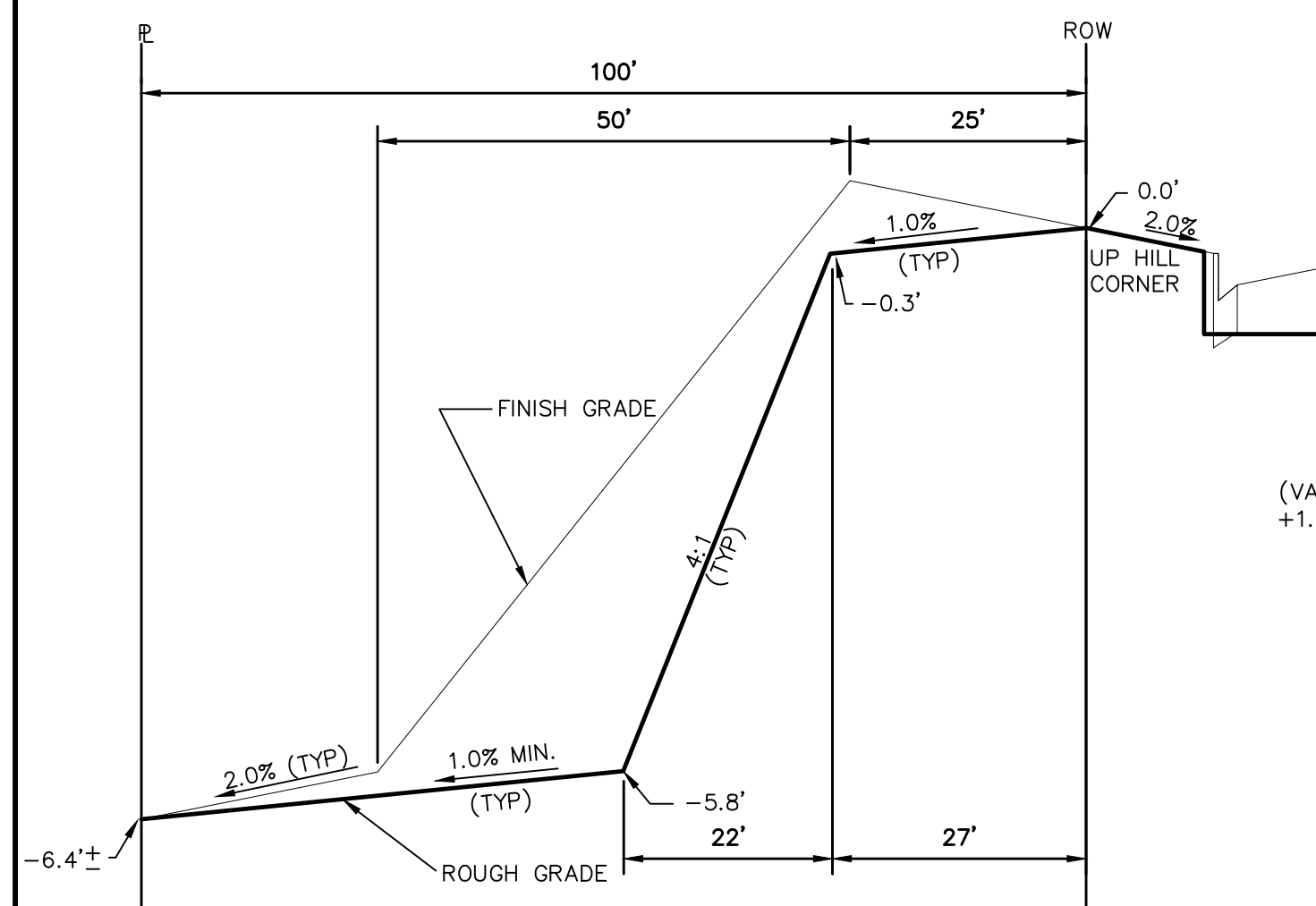
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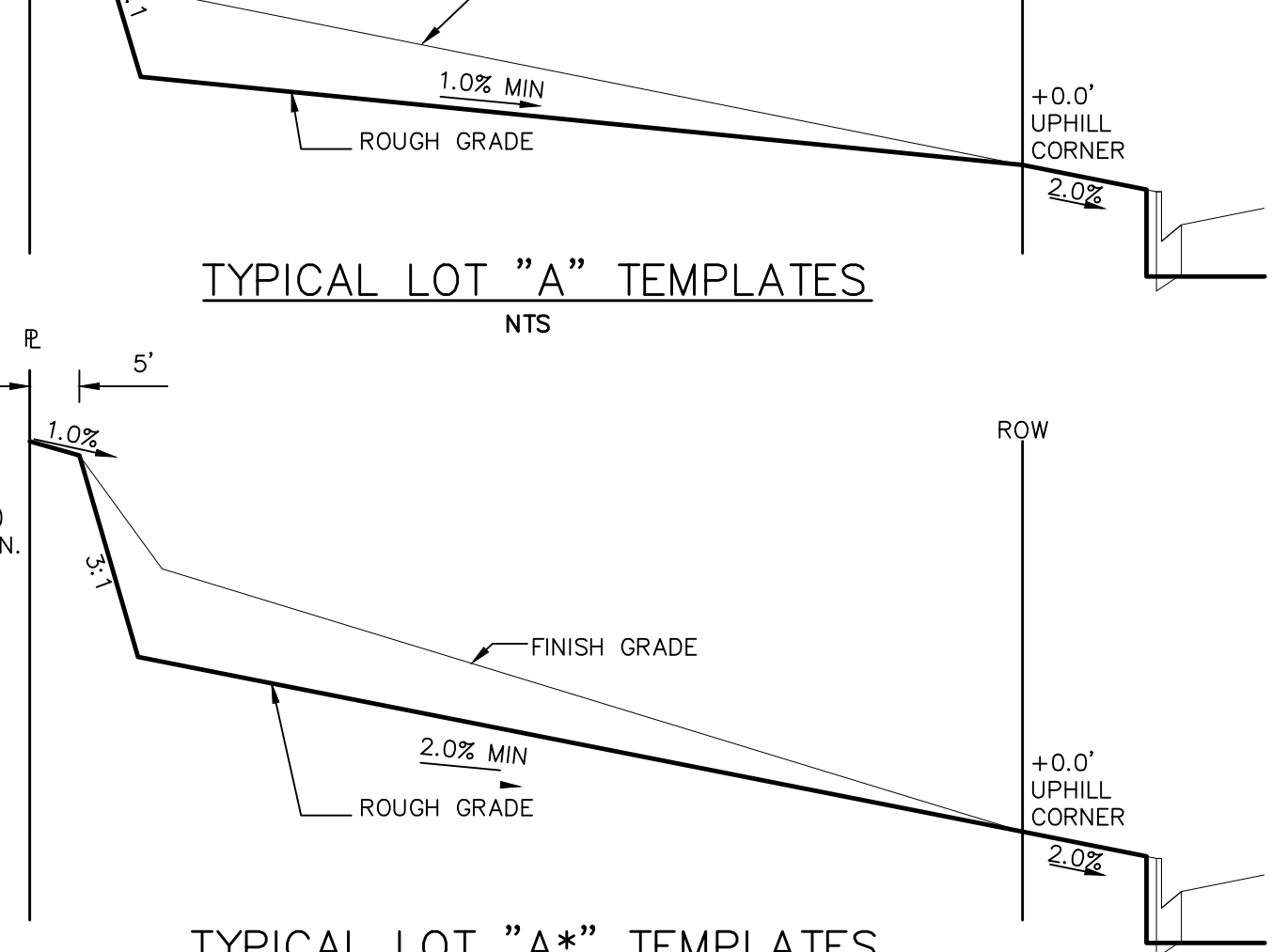
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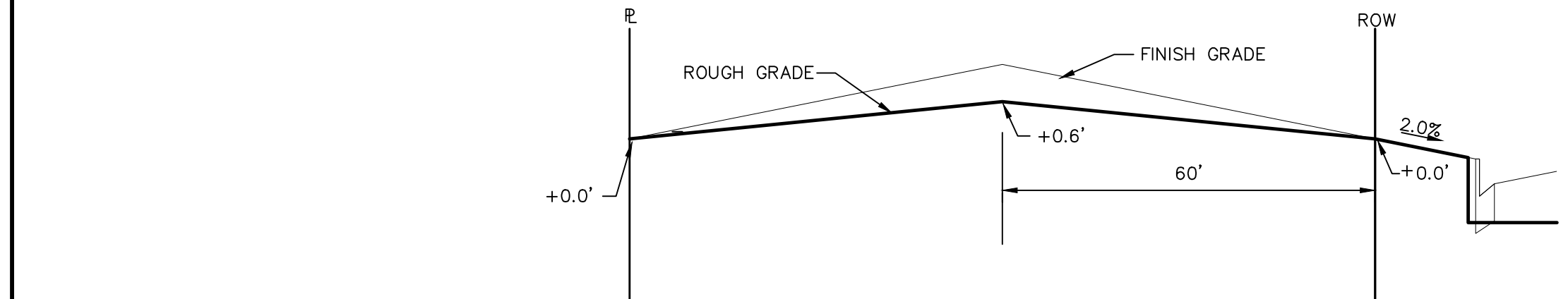
TYPICAL LOT "A" TEMPLATES  
NTS



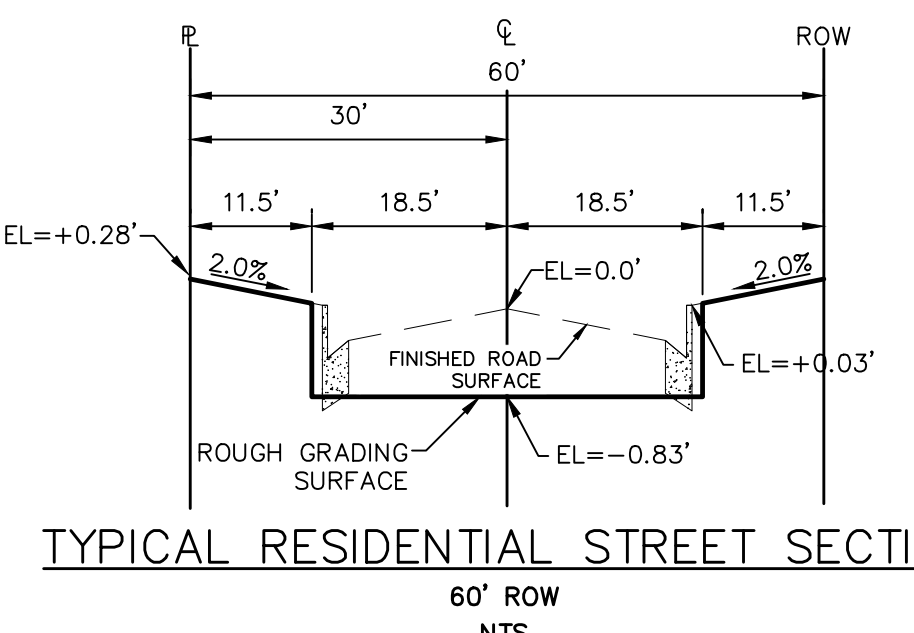
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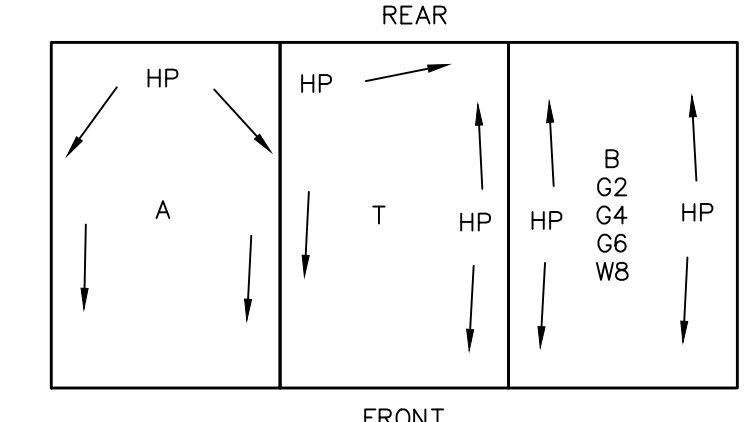
TYPICAL LOT "A\*" TEMPLATES  
NTS



TYPICAL LOT "B" TEMPLATES  
NTS



TYPICAL RESIDENTIAL STREET SECTION  
60' ROW  
NTS



TYPICAL DRAINAGE PATTERN  
NTS

**STEPS FOR CONSTRUCTION**

THE ANTICIPATED START FOR THIS PROJECT IS JULY 2021 WITH AN ANTICIPATED COMPLETION DATE OF JUNE 2022. BELOW IS A BRIEF OUTLINE OF THE CONSTRUCTION SEQUENCE FOR THIS PROJECT.

- \* INSTALL INITIAL BMP'S
- \* SANITARY SEWER
- \* WATER
- \* STORM SEWER AND CULVERTS
- \* ELECTRIC
- \* GAS
- \* PHONE & CABLE TV
- \* FINISHED ROAD GRADING AND PAVING

**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, FILTREX 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.

**EROSION AND SEDIMENT CONTROL STAGE TABLE**

SEE ROUGH GRADING FOR ROLLING HILLS RANCH AT MERIDIAN RANCH PLANS AND SWMP FOR STAGES OF EROSION AND SEDIMENT CONTROL.

**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 FOR THIS 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-SEEDING 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:**

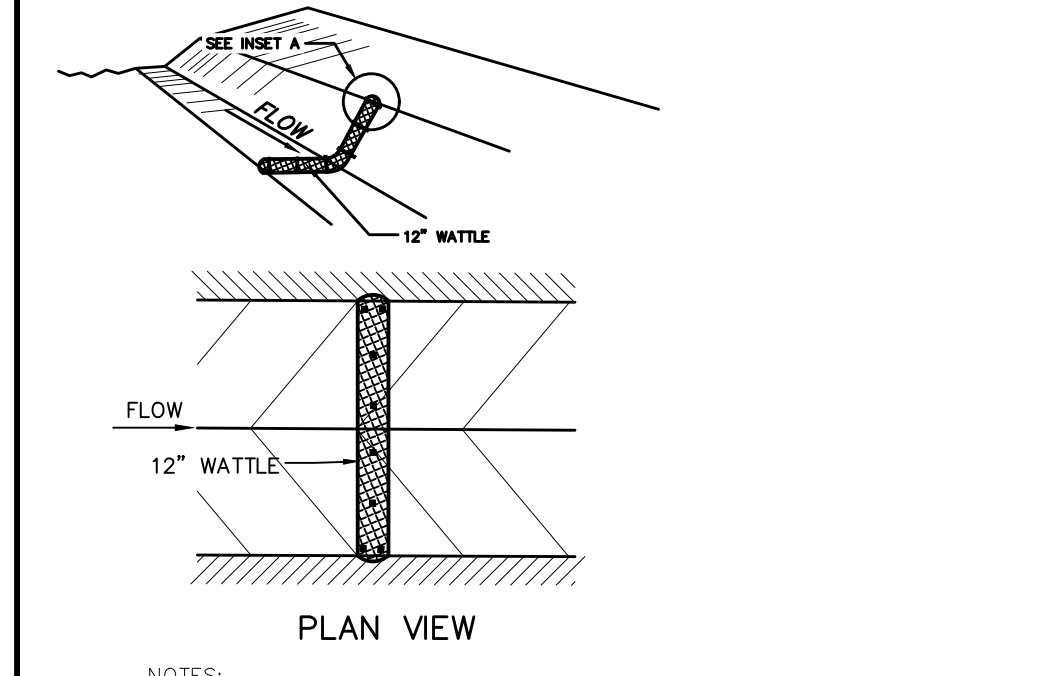
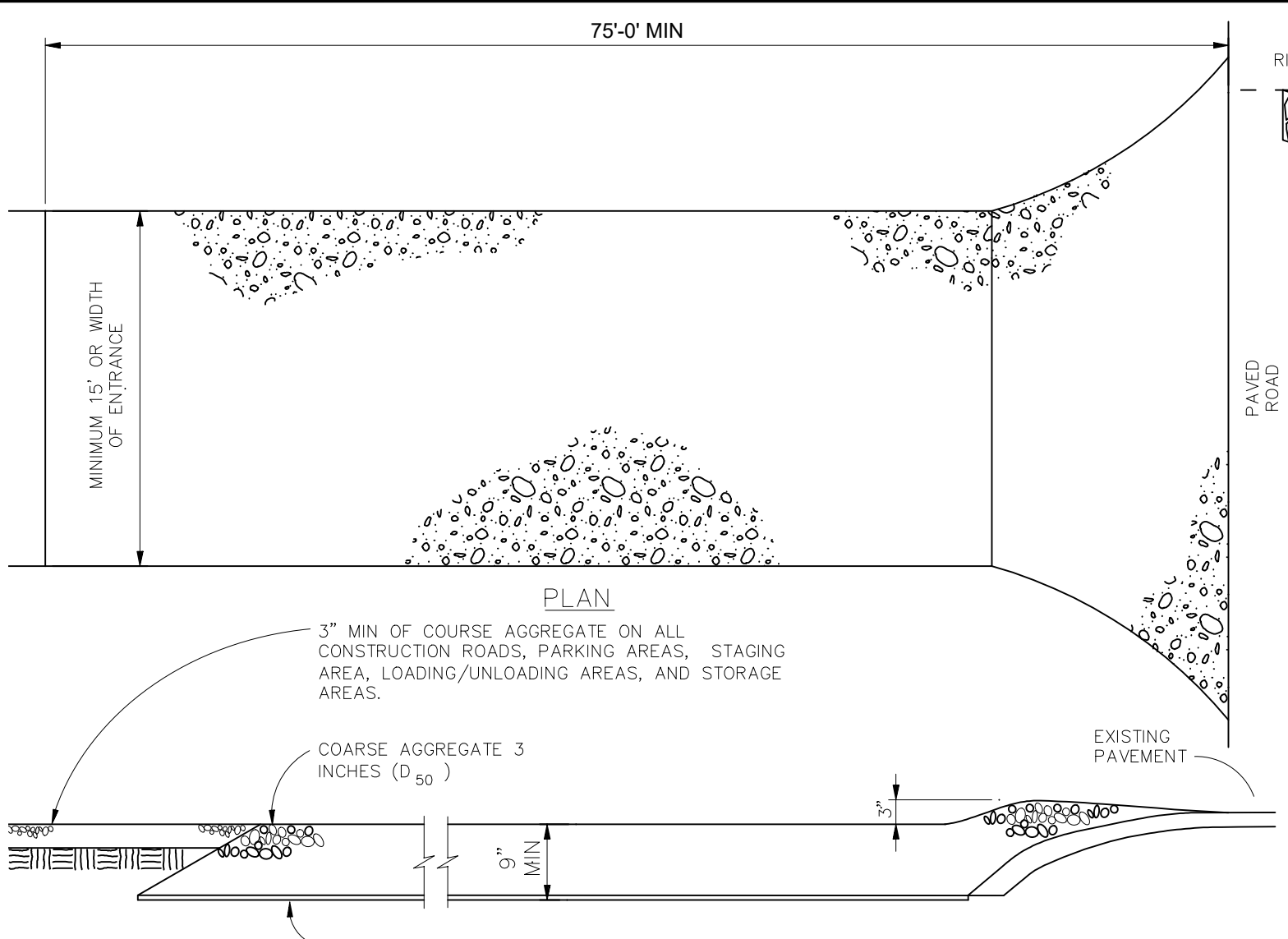
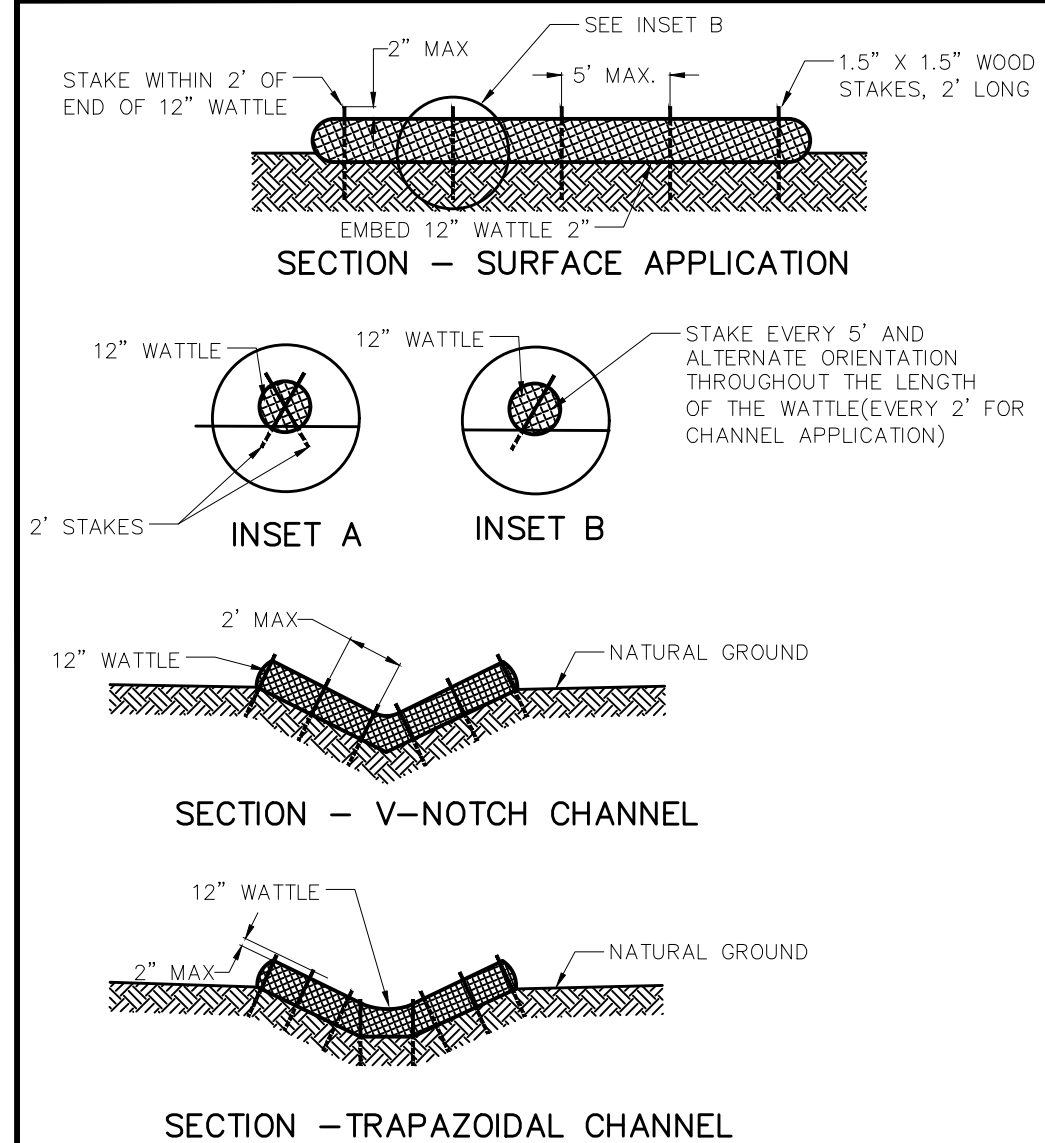
"FINISH GRADE" IN THE TEMPLATES ARE ONLY APPROXIMATE GRADES. ACTUAL FINISHED GRADES WILL VARY DEPENDING ON INDIVIDUAL HOME PLOT PLANS. PLOT PLANS SHALL CLOSELY FOLLOW THE FINISH GRADE PATTERNS SHOWN IN THE TEMPLATES WITHOUT ADVERSELY AFFECTING THE GRADES AND DRAINAGE PATTERNS OF NEIGHBORING LOTS OR TRACTS. 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.

EPC 7/29/2021

**BEFORE YOU DIG CALL 811**

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

Drawn by	Log	Checked by	TAK	Date	MAY 2021
Scale	AS SHOWN	Sheet	31	of	32
<b>TECH CONTRACTORS</b> 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457					
<b>ROLLING HILLS RANCH FILING 3</b> <b>AT MERIDIAN RANCH</b> <b>GRADING/EROSION CONTROL PLAN</b> <b>GRADING DETAIL SHEET</b>					
No.	1	2	3	4	
Revisions					
Date					
Appr.					



**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 REPLACED 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.

**VEHICLE TRACKING NOTES**

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

2. ONLY INSTALL 12\"/>

**VEHICLE TRACKING NOTES**

**INSTALLATION REQUIREMENTS**

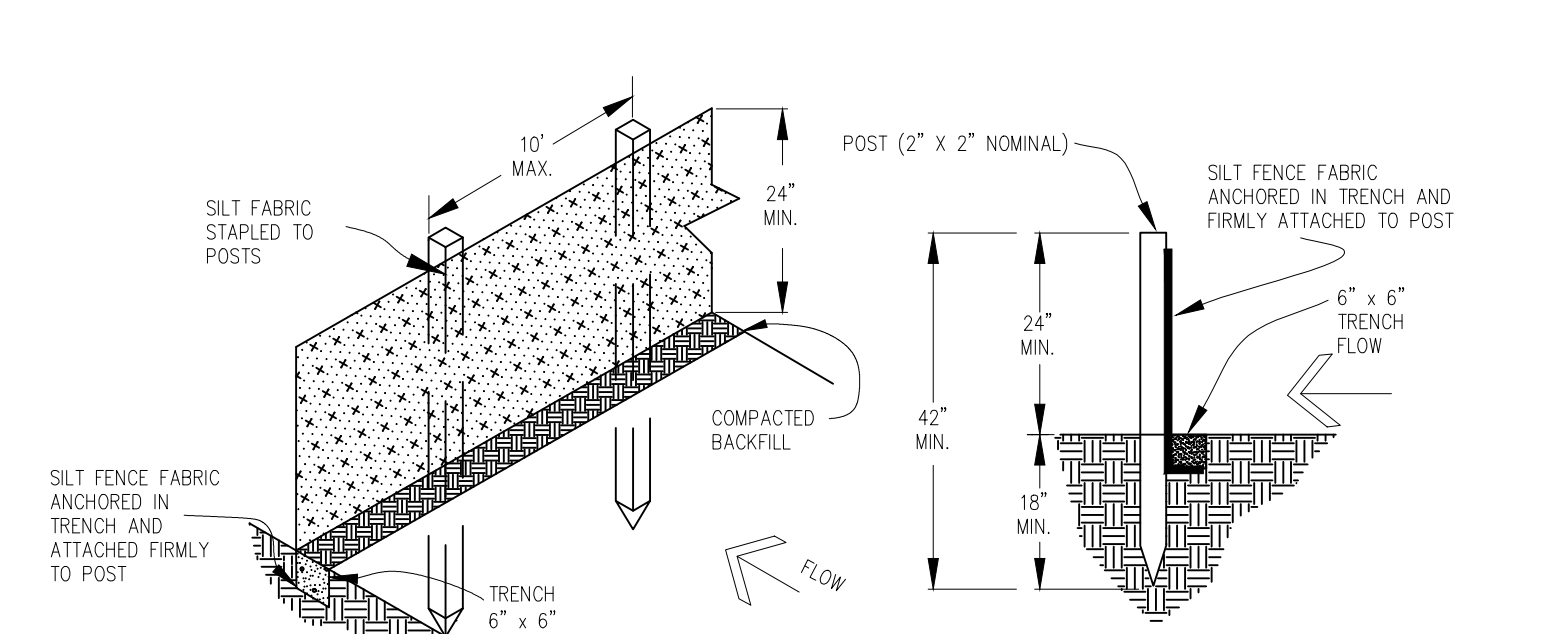
1. STRAW BALES USED AS CHECK DAMS ARE TO MEET THE REQUIREMENTS STATED IN FIGURE SBB-2.
2. THE "H" DIMENSION SHALL BE SELECTED TO PROVIDE WEIR FLOW CONVEYANCE FOR 2-YEAR FLOW OR GREATER.

**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.

**CHECK DAM NOTES**

L = THE DISTANCE SUCH THAT POINTS A AND B ARE AT THE SAME ELEVATION.



**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\"/>

**MAINTENANCE REQUIREMENTS**

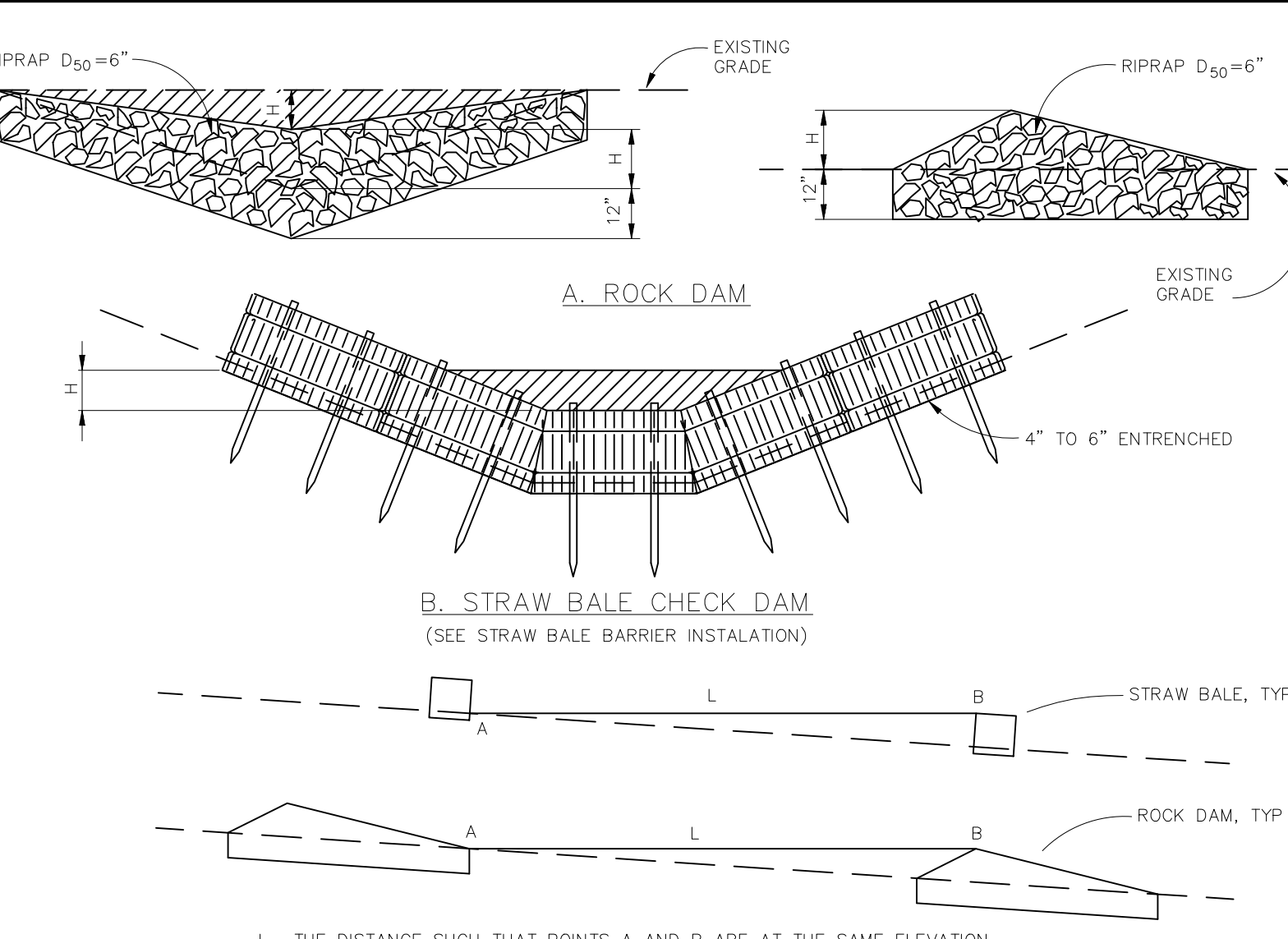
1. CONTRACTOR SHALL INSPECT SILT FENCES IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS OF NO RAINFALL. DAMAGED, COLLAPSED, UNENTRENCHED OR INEFFECTIVE SILT FENCES SHALL BE PROMPTLY REPAIRED OR REPLACED.
2. SEDIMENT SHALL BE REMOVED FROM BEHIND SILT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

**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.
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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.



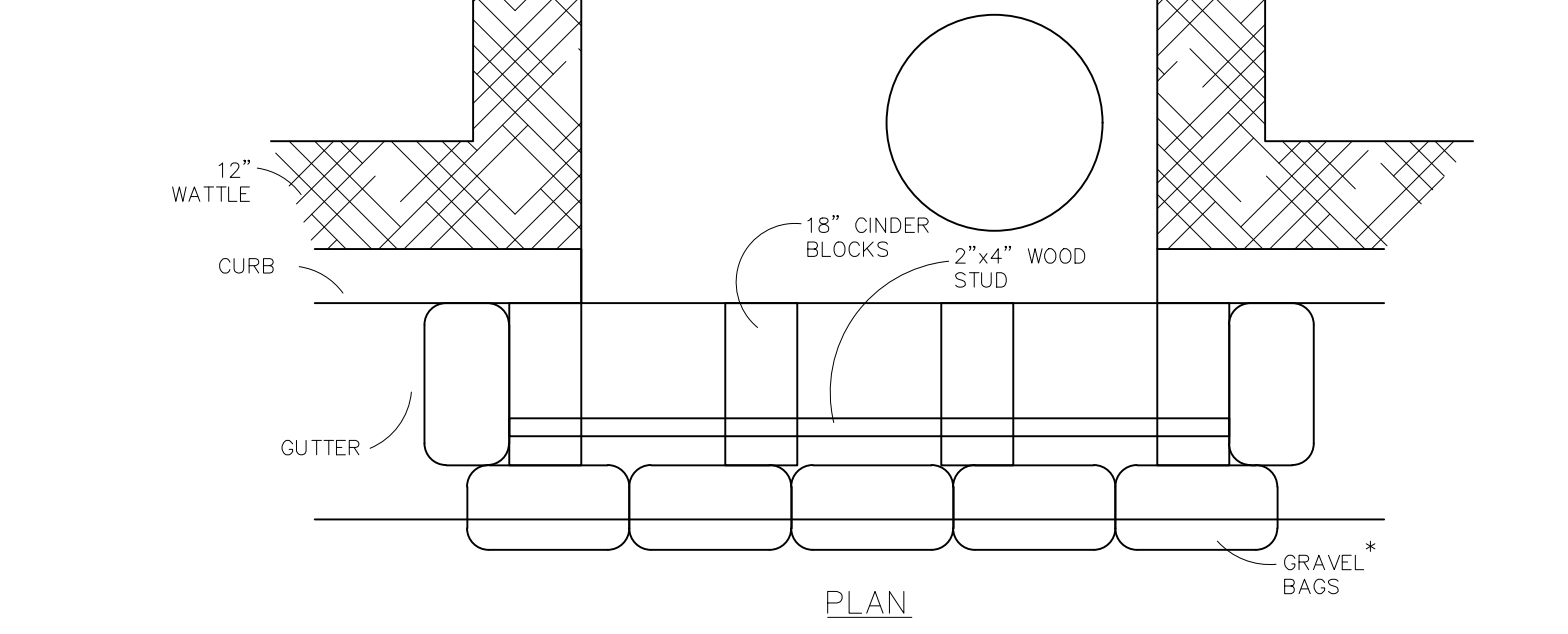
**CHECK DAM NOTES**

**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 NOTES**

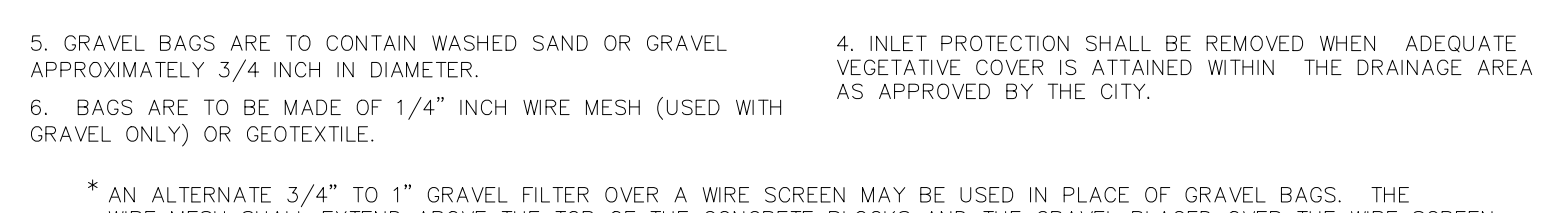
**INSTALLATION REQUIREMENTS**

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.

**CONCRETE WASHOUT AREA PLAN**



**CONCRETE WASHOUT AREA PLAN**

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 LOCATE WITHIN 1000' OF ANY WELLS OR DRINKING WATER SOURCES, IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, 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.

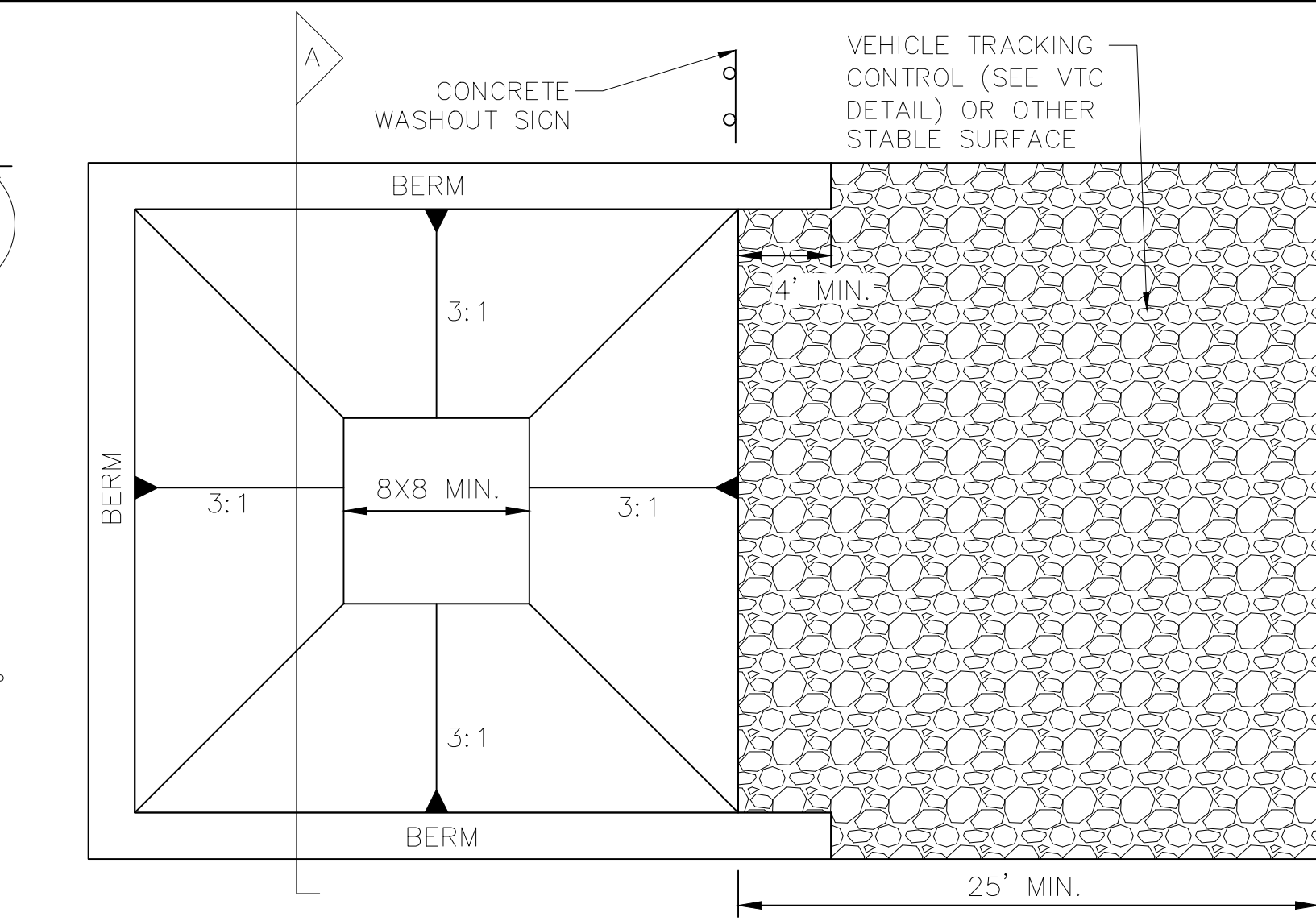
4. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' X 8'. SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.

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.



**CONCRETE WASHOUT AREA PLAN**

**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 LOCATE WITHIN 1000' OF ANY WELLS OR DRINKING WATER SOURCES, IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, 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 SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. 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.

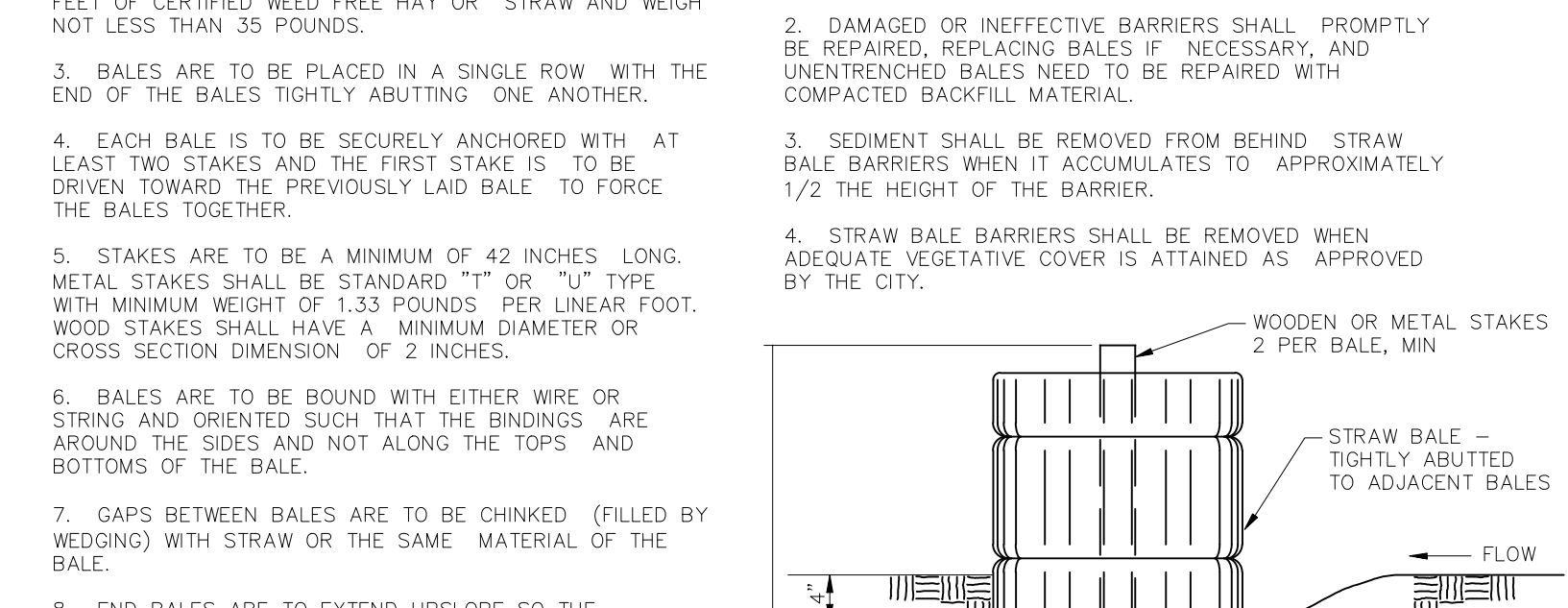
**STRAW BALE BARRIER NOTES**

**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 "I" 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**

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

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

No.	1	2	3	4
Revisions				
Date				
Appr.				
Date				
<b>TECH CONTRACTORS</b> 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457				
 <b>MERIDIAN RANCH</b>				
<b>ROLLING HILLS RANCH FILING 3</b> <b>AT MERIDIAN RANCH</b> <b>GRADING/EROSION CONTROL PLAN</b> <b>GRADING DETAIL SHEET</b>				
Scale	AS SHOWN	Drawn by	Log	Checked by
			TAK	DATE
				MAY 2021
	32 of 32			
 <b>EPC 7/29/2021</b> <b>STRAW BALE BARRIER</b> NTS				

