

# CONSTRUCTION DRAWINGS FOR ROLLING HILLS RANCH FILING 2 AT MERIDIAN RANCH

### CAUTION - NOTICE TO CONTRACTOR

**IMPROVEMENT PLANS**  
**PREPARED FOR GTL, INC. DBA GTL DEVELOPMENT, INC.**

A PARCEL OF LAND LOCATED IN A PORTION OF SECTION 20 AND 29  
IN TOWNSHIP 12 SOUTH, RANGE 64 WEST OF THE 6TH PRINCIPAL MERIDIAN,  
EL PASO COUNTY, STATE OF COLORADO.

DATE \_\_\_\_\_



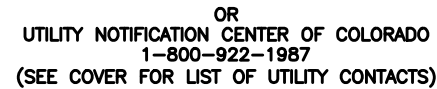
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<b>No.</b>	<b>Revisions</b>	<b>Date</b>	<b>Appr. Date</b>



**MERIDIAN RANCH**

COVER SHEET

11/3/2020  
DATE



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

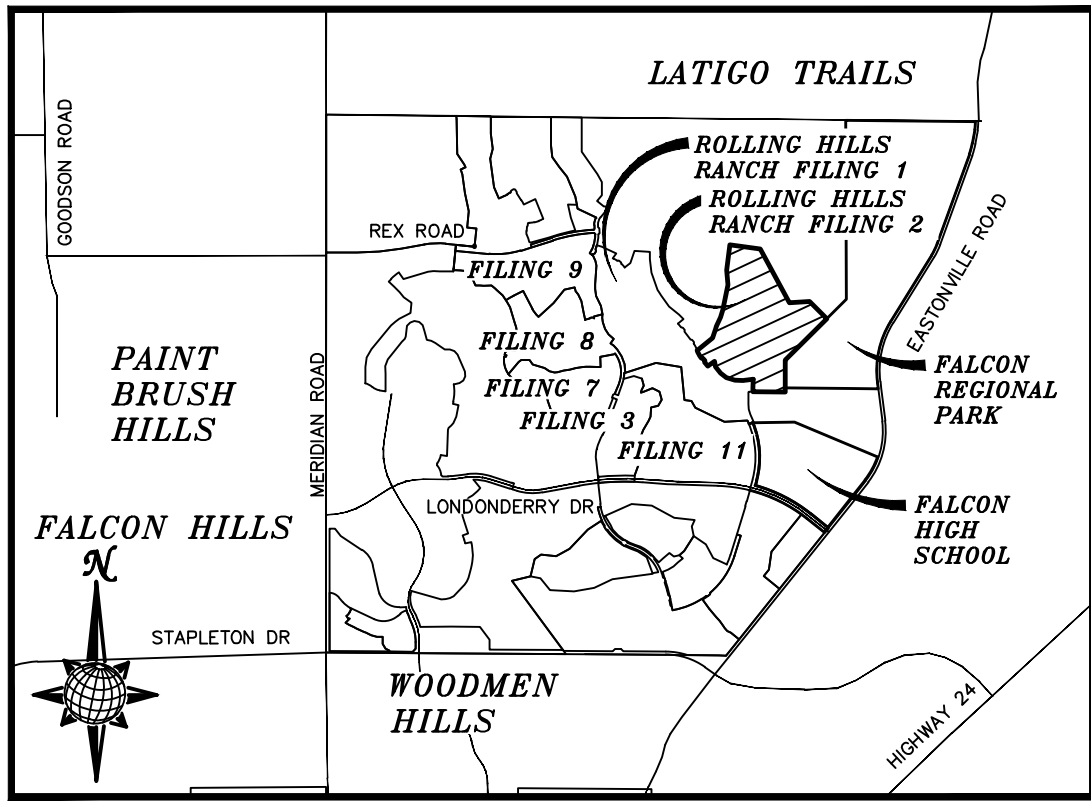


# CONSTRUCTION DRAWINGS FOR ROLLING HILLS RANCH FILING 2 AT MERIDIAN RANCH

## IMPROVEMENT PLANS

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

A PARCEL OF LAND LOCATED IN A PORTION OF SECTION 20 AND 29  
IN TOWNSHIP 12 SOUTH, RANGE 64 WEST OF THE 6TH PRINCIPAL MERIDIAN,  
EL PASO COUNTY, STATE OF COLORADO.



VICINITY MAP  
N.T.S.

#### UTILITY CONTACTS:

WATER — MERIDIAN SERVICE METROPOLITAN DISTRICT  
POC: KEVIN FACKERELL  
(719)–495–6567

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

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

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

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

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

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

FALCON FIRE PROTECTION DISTRICT  
(719) 495–4050

#### CAUTION – NOTICE TO CONTRACTOR

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

#### LEGAL DESCRIPTION:

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

A PARCEL OF LAND LOCATED IN A PORTIONS OF SECTION 20 AND 29,  
IN TOWNSHIP 12 SOUTH, RANGE 64 WEST OF THE 6TH PRINCIPAL MERIDIAN, MORE  
PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEASTERN MOST CORNER OF TRACT A OF ROLLING HILLS RANCH  
FILING NO. 1, RECORDED WITH RECEPTION NO. \_\_\_\_\_ IN THE RECORDS OF EL PASO  
COUNTY, POINT BEING ON THE EASTERN BOUNDARY LINE OF SAID FILING;

THE FOLLOWING SIXTEEN (16) COURSES ARE ON SAID BOUNDARY LINE:

1. THENCE N00°34'48"E ON SAID TRACT LINE A DISTANCE OF 20.00 FEET;
2. THENCE N00°34'48"E A DISTANCE OF 60.00 FEET;
3. THENCE N00°34'48"E A DISTANCE OF 164.38 FEET;
4. THENCE S83°20'49"W A DISTANCE OF 201.60 FEET;
5. THENCE N89°25'12"W A DISTANCE OF 155.00 FEET;
6. THENCE N72°06'02"W A DISTANCE OF 178.27 FEET;
7. THENCE N53°19'57"W A DISTANCE OF 139.84 FEET;
8. THENCE N37°18'43"W A DISTANCE OF 165.00 FEET;
9. THENCE N13°05'03"W A DISTANCE OF 109.66 FEET;
10. THENCE S52°41'17"W A DISTANCE OF 165.00 FEET;
11. THENCE N37°18'43"W A DISTANCE OF 98.00 FEET;
12. THENCE N07°41'17"E A DISTANCE OF 31.11 FEET;
13. THENCE N37°18'43"W A DISTANCE OF 60.00 FEET;
14. THENCE N82°18'43"W A DISTANCE OF 31.11 FEET;
15. THENCE N37°18'43"W A DISTANCE OF 15.26 FEET TO A CURVE TO THE RIGHT;
16. THENCE ON THE ARC OF SAID CURVE, HAVING A RADIUS OF 470.00 FEET, A DELTA ANGLE OF 19°11'01", AN ARC LENGTH OF 157.37 FEET, WHOSE LONG CHORD BEARS N27°43'13"W A DISTANCE OF 156.63 FEET;
17. THENCE N50°35'03"E A DISTANCE OF 388.67 FEET;
18. THENCE N17°50'28"E A DISTANCE OF 180.00 FEET;
19. THENCE N17°50'28"E A DISTANCE OF 60.00 FEET;
20. THENCE N24°44'20"E A DISTANCE OF 200.00 FEET;
21. THENCE N16°41'21"E A DISTANCE OF 150.00 FEET;
22. THENCE N11°42'15"E A DISTANCE OF 500.00 FEET;
23. THENCE N04°57'36"W A DISTANCE OF 290.00 FEET;
24. THENCE N07°26'02"E A DISTANCE OF 500.00 FEET;
25. THENCE S82°33'58"E A DISTANCE OF 605.38 FEET;
26. THENCE S28°18'46"E A DISTANCE OF 1200.00 FEET;
27. THENCE N86°45'47"E A DISTANCE OF 400.00 FEET;
28. THENCE S44°45'04"E A DISTANCE OF 478.58 FEET;
29. THENCE S45°14'56"W A DISTANCE OF 1150.00 FEET;
30. THENCE S00°11'44"E A DISTANCE OF 550.00 FEET;
31. THENCE S00°34'48"W A DISTANCE OF 60.00 FEET;
32. THENCE S00°34'48"W A DISTANCE OF 20.00 FEET;
33. THENCE N89°25'12"W A DISTANCE OF 636.55 FEET TO THE POINT OF BEGINNING.

THE ABOVE PARCEL OF LAND CONTAINS 88.227 ACRES, MORE OR LESS.

#### DISTRICT ENGINEER:

THOMAS A. KERBY, PE CO 31429  
MERIDIAN SERVICE METROPOLITAN DISTRICT

DATE

#### 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

#### 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  
MERIDIAN RANCH INVESTMENTS, INC.

DATE

#### 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 VOLUMES 1 AND 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 ET THE PLANNING AND COMMUNITY DEVELOPMENT DIRECTORS DISCRETION.

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

DATE

#### BASIS OF BEARING

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

#### WATER AND SANITARY SEWER APPROVALS:

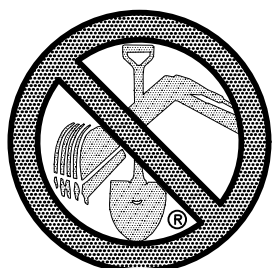
DAVID A. PELSER, GENERAL MANAGER  
MERIDIAN SERVICE METROPOLITAN DISTRICT

DATE

#### BENCH MARK

1) MRR01 — 3 1/4" ALUMINUM CAP ON NO.6 REBAR LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF LONDONDERRY DRIVE AND ANGELES ROAD. LOCATED AT THE SE CORNER OF THE MERIDIAN RANCH RECREATIONAL CENTER SIGN. ELEVATION — 7098.40'

2) 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'

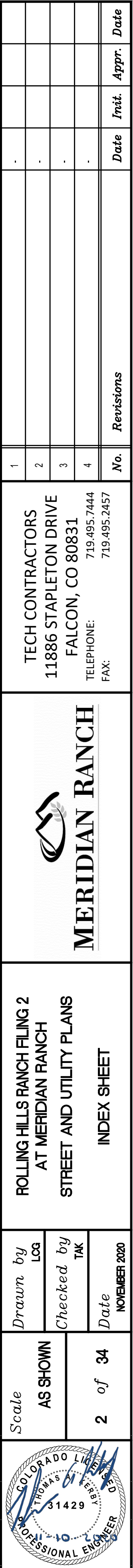


TWO WORKING DAYS  
BEFORE YOU DIG  
CALL 811

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

1	2	3	4	No.	Revisions	Date	Init.	Appr.	Date
1	2	3	4	No.	Revisions	Date	Init.	Appr.	Date
TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE 719.495.7444 FAX 719.495.2457					MERIDIAN RANCH				
ROLLING HILLS RANCH FILING 2 AT MERIDIAN RANCH STREET AND UTILITY PLANS COVER SHEET					Scale AS SHOWN				
Drawn by LGS					Checked by TJK				
1					of 34				
NOVEMBER 2020									

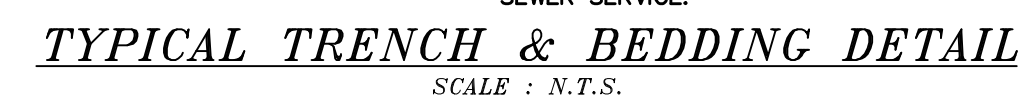
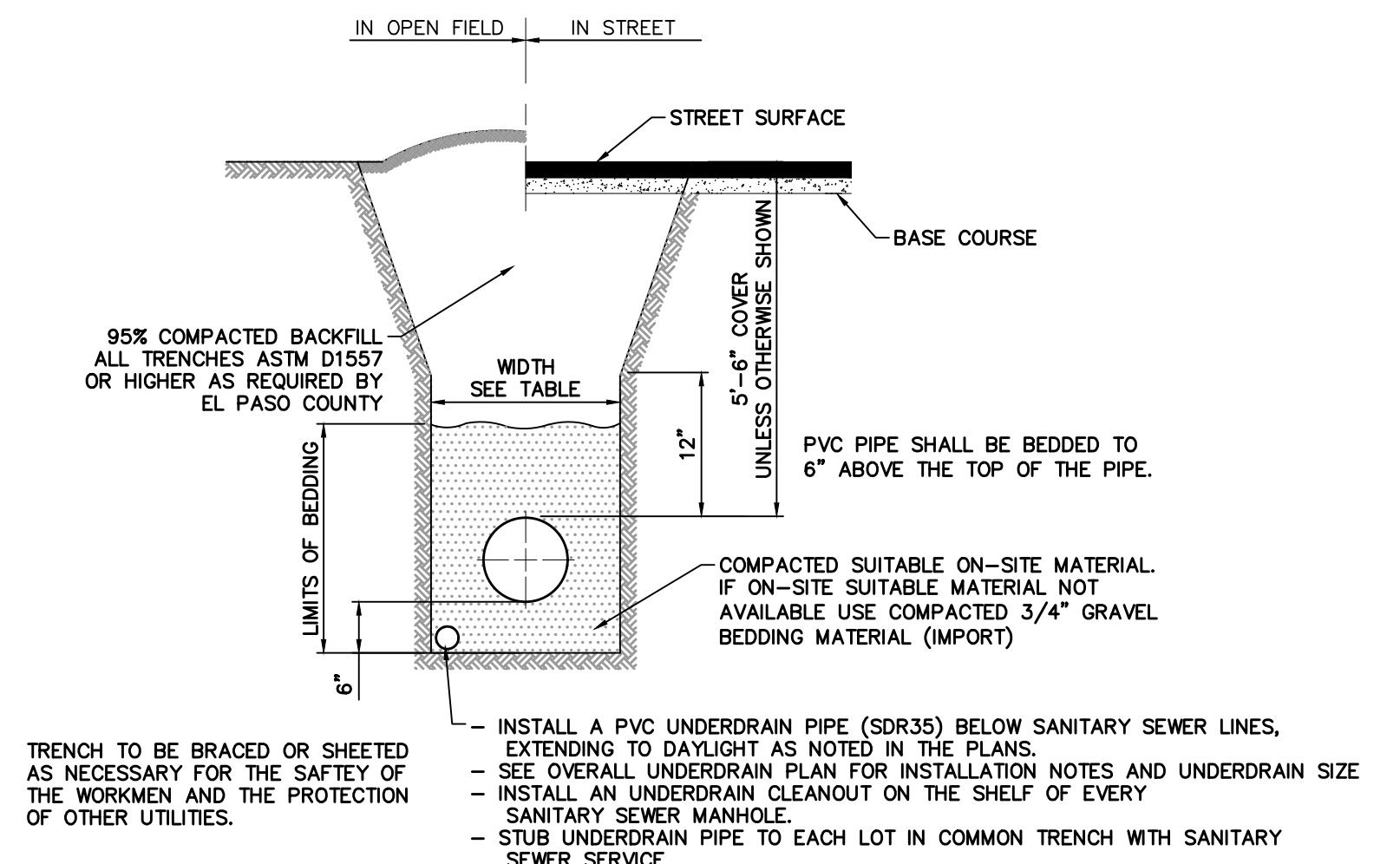
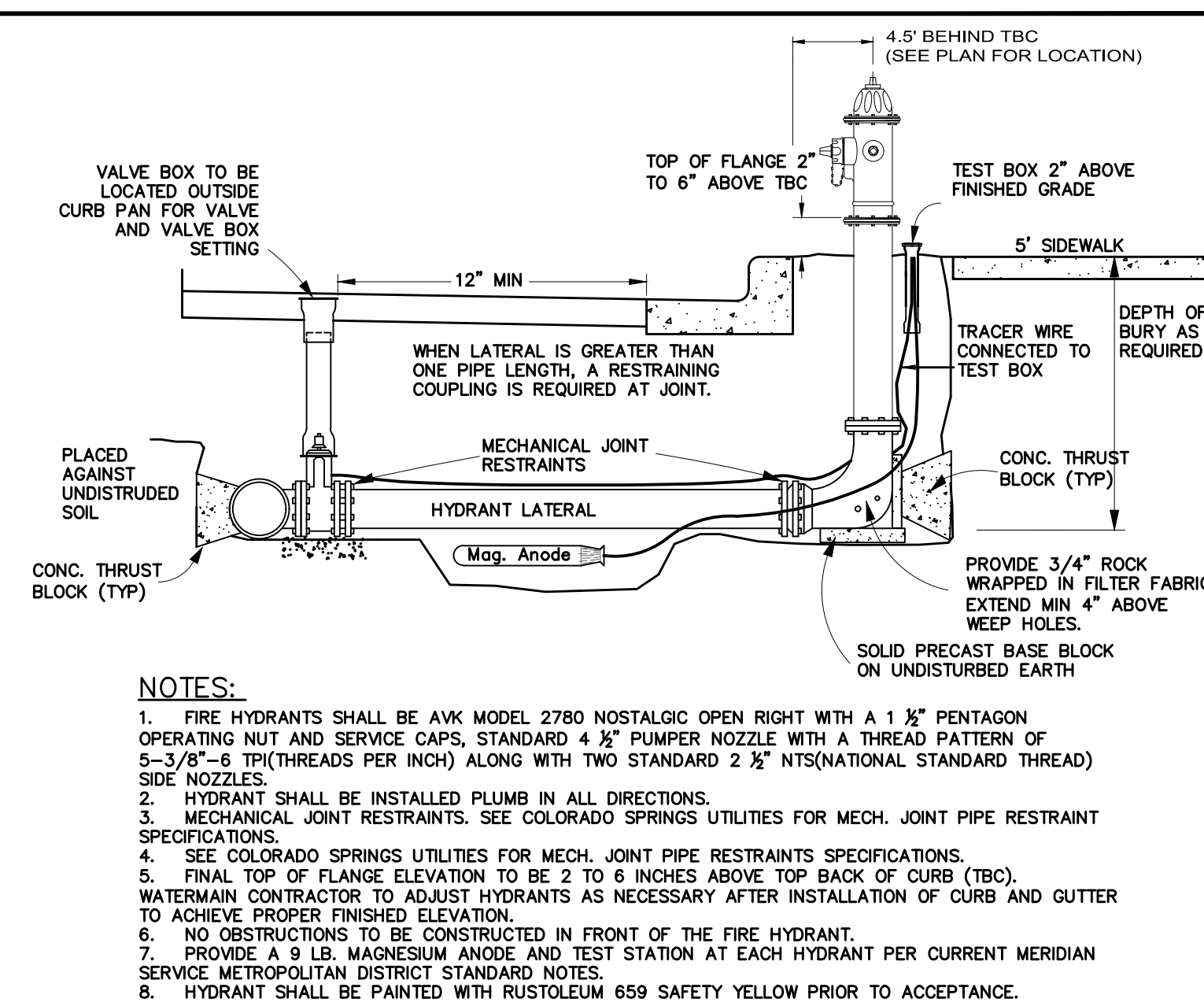
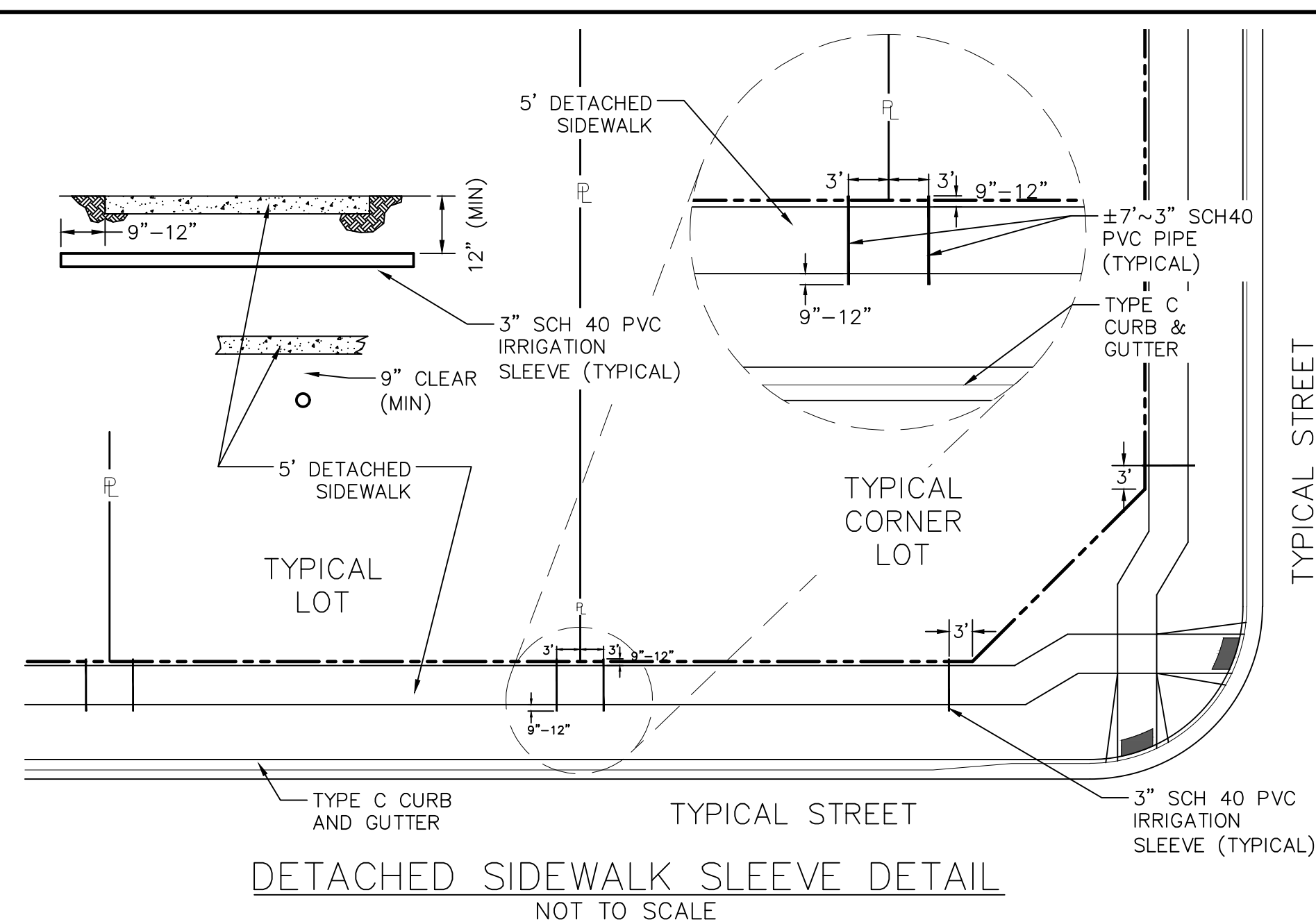
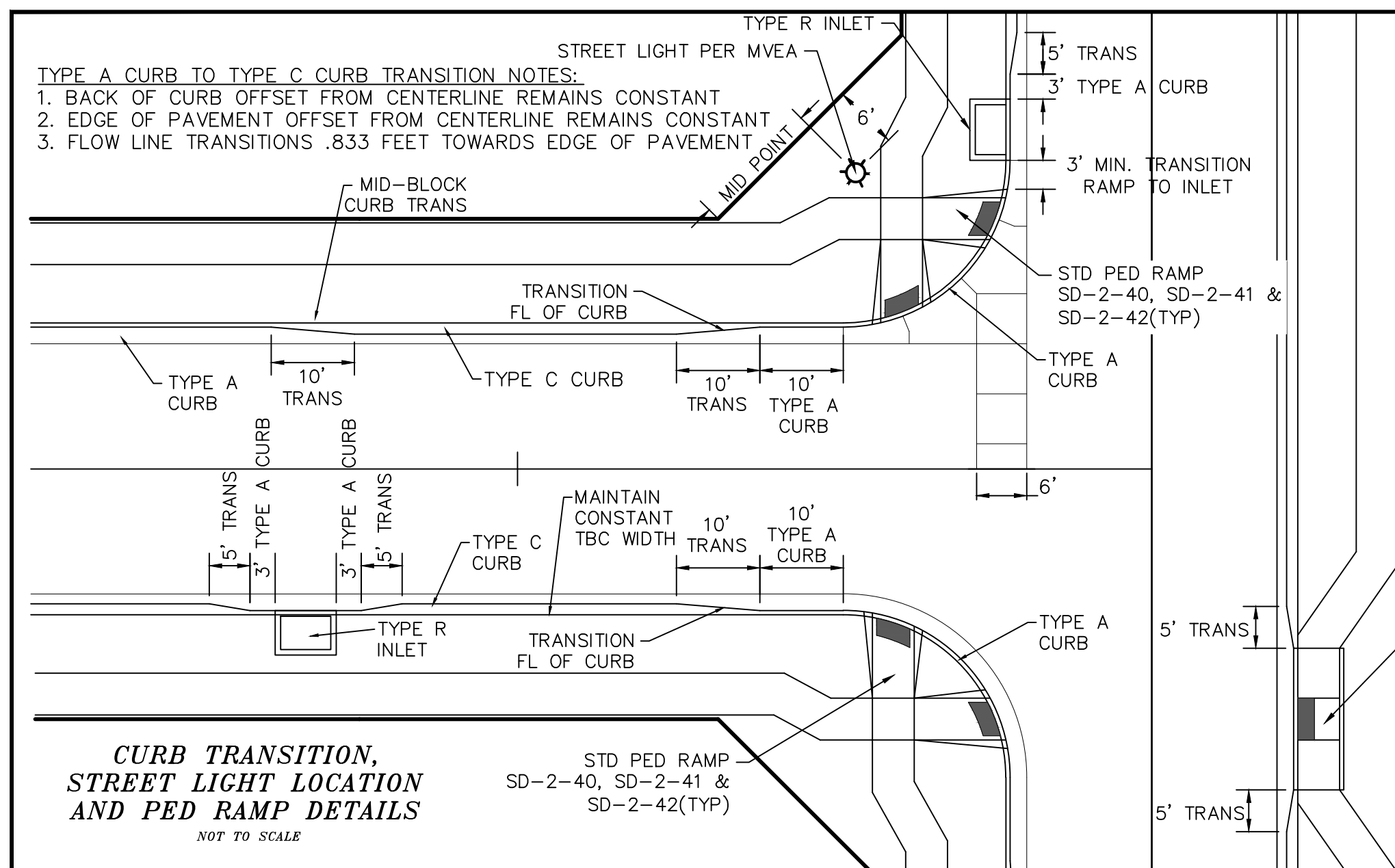

































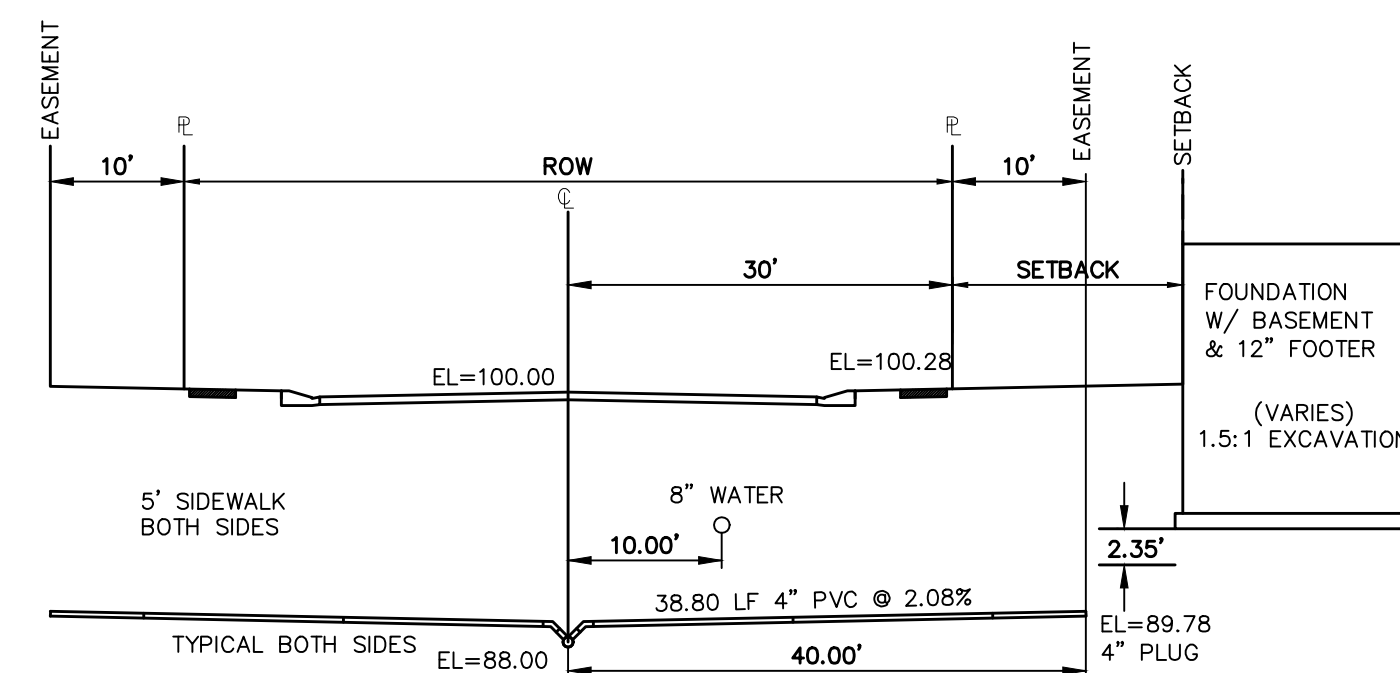
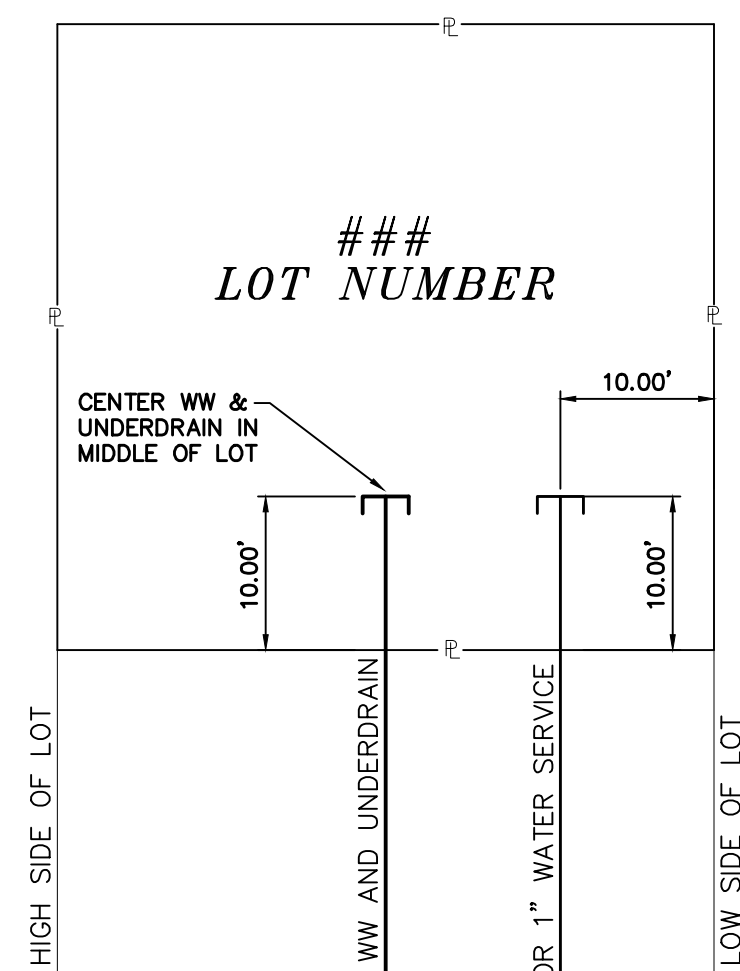
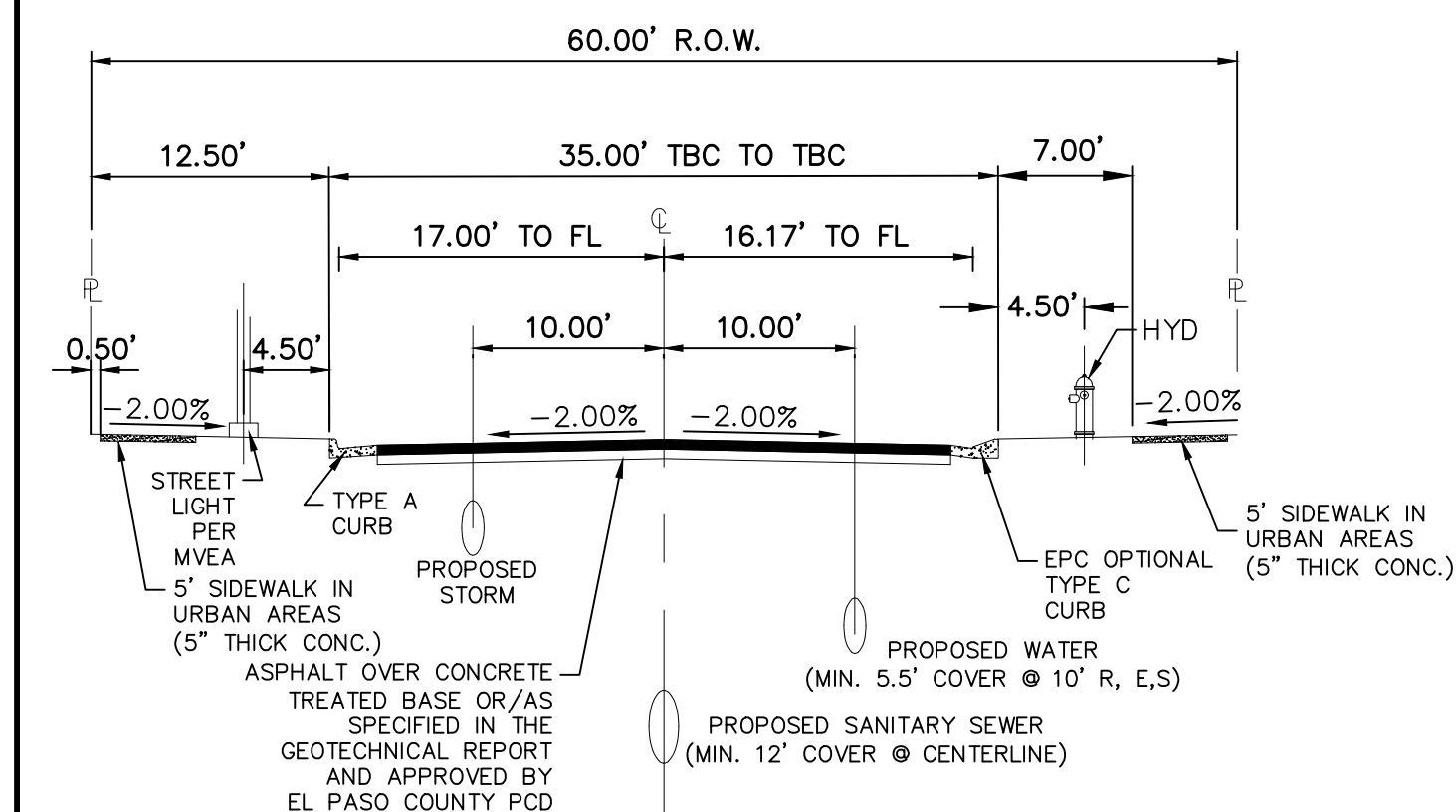




PIPE CHART

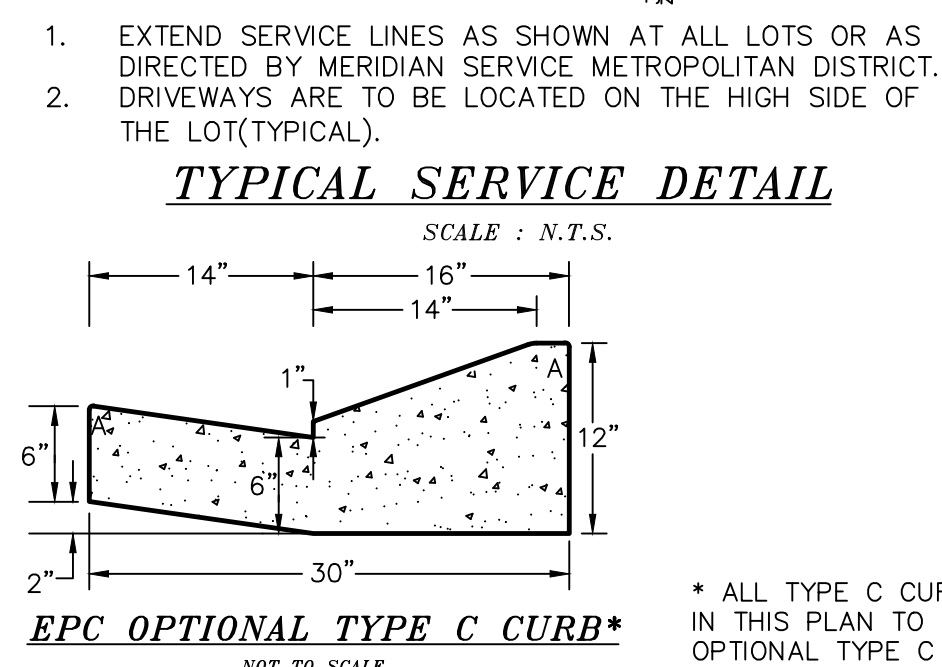
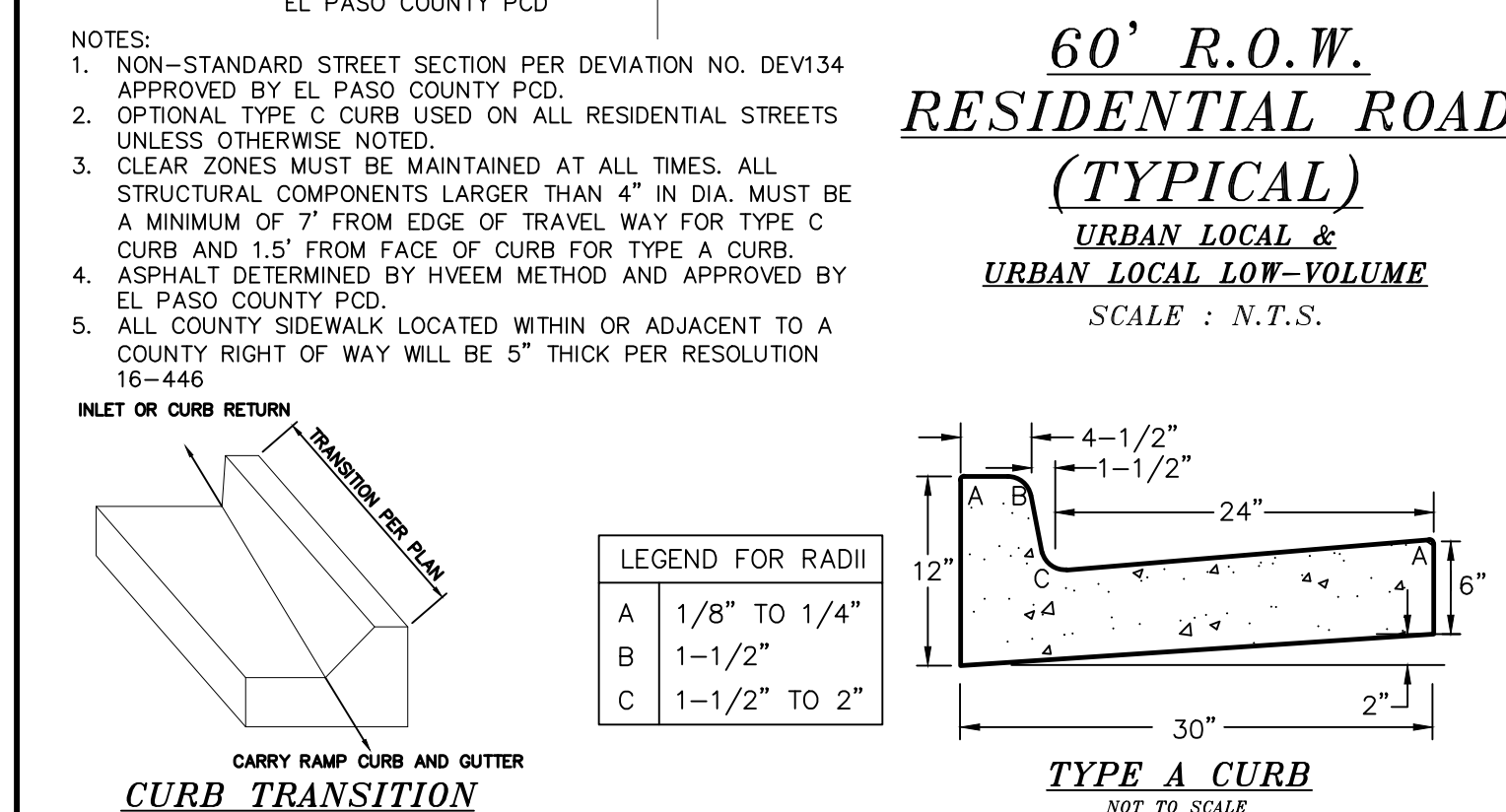
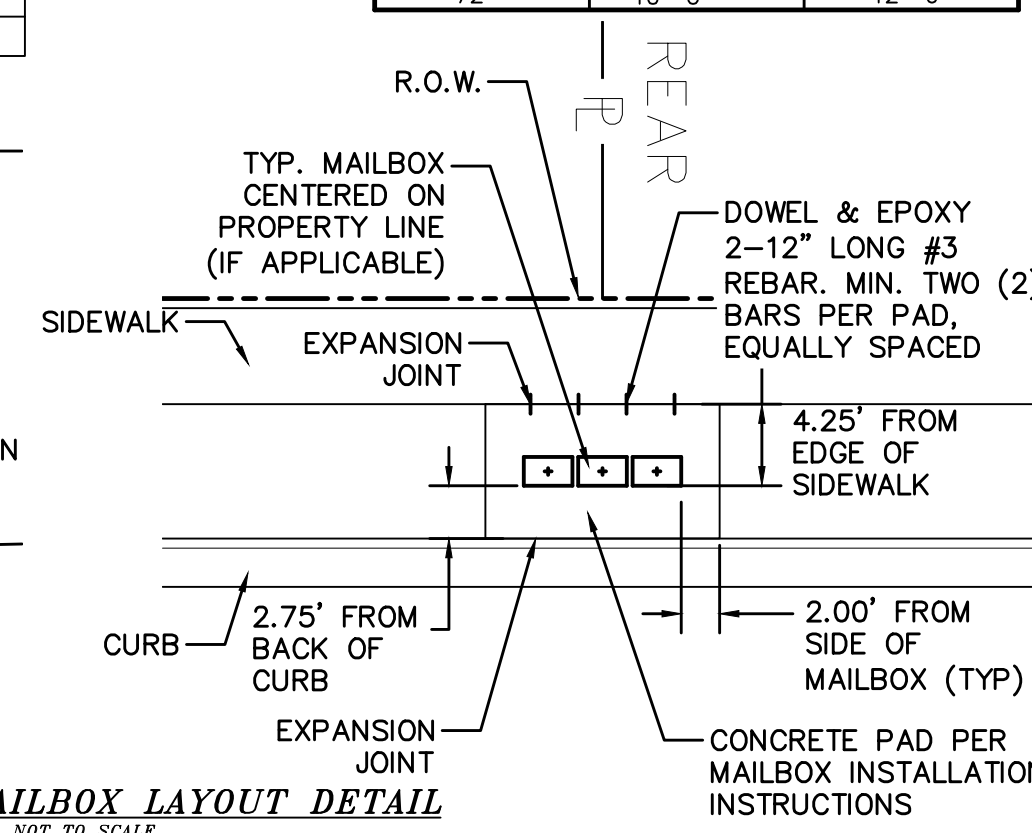
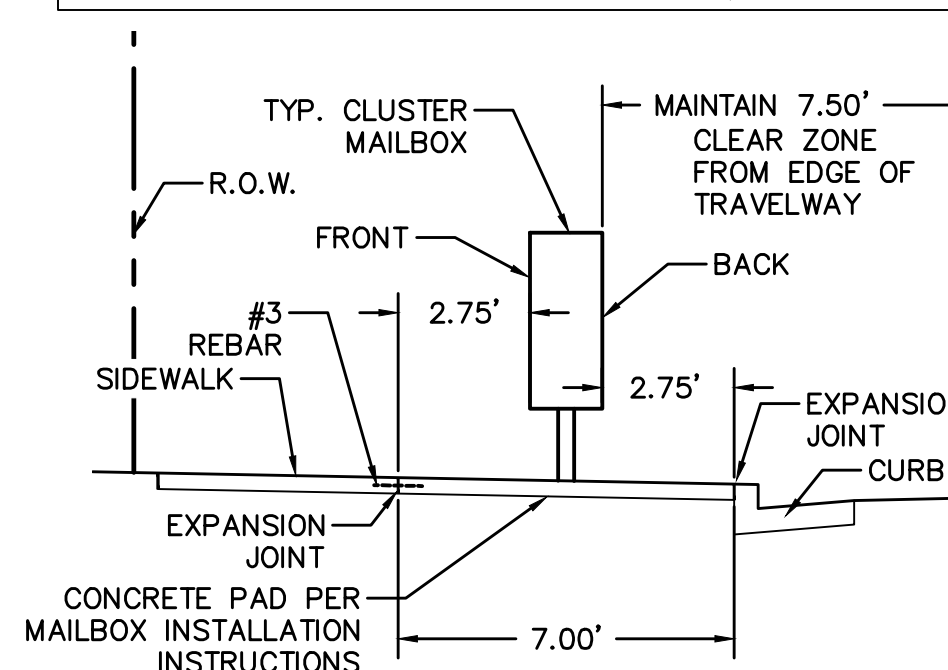
PIPE DIAMETER	MINIMUM WIDTH	MAXIMUM WIDTH
4"	1'-4"	4'-0"
6"	1'-6"	4'-0"
8"	1'-8"	4'-0"
12"	2'-0"	4'-0"
18"	3'-0"	4'-0"
24"	3'-6"	4'-0"
30"	4'-0"	6'-0"
36"	5'-0"	6'-0"
42"	6'-0"	8'-0"
48"	6'-6"	8'-0"
54"	8'-0"	8'-0"
60"	8'-0"	8'-0"
66"	8'-0"	10'-0"
72"	10'-0"	12'-0"

<u><b>SYMBOL</b></u>	<u><b>ACRONYM</b></u>	<u><b>DESCRIPTION</b></u>
	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 PEDESTRIAN RAMP PER SD-2-40 & M-608-1 (SH 6 OF 6)
		ANODE (CATHODIC PROTECTION)
	TS	TEST STATION
	HB	HAY BALE DAM
	SF	SILT FENCE
	EXIST	EXISTING FEATURES
		LOT NUMBERS
		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
		EXISTING CONTOUR (10')
		EXISTING CONTOUR (2')



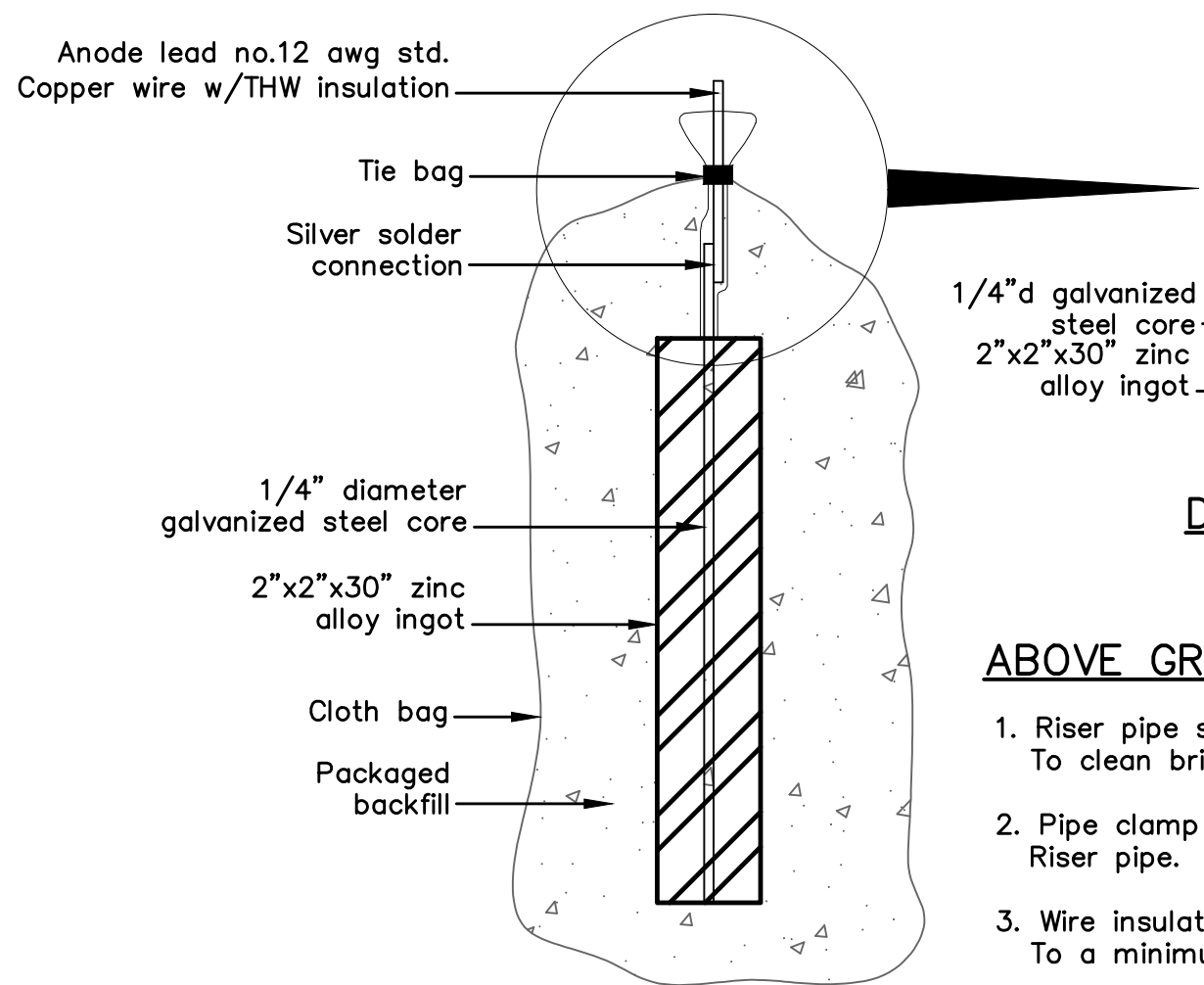
NOTE: SERVICE LINE MAY VARY IN DEPTH DUE TO SITE CONDITIONS OR THE CONSTRUCTION OF A CRAWL SPACE/BASEMENT UNDER THE HOUSE.

4" PVC SDR 35	2.08% OR 1/4" PER FOOT
4" SCH 40 PVC	1.04% OR 1/8" PER FOOT
6" PVC SDR 35	1.04% OR 1/8" PER FOOT





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ZINC ANODE

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

DETAIL A

ABOVE GRADE CONNECTION NOTES:

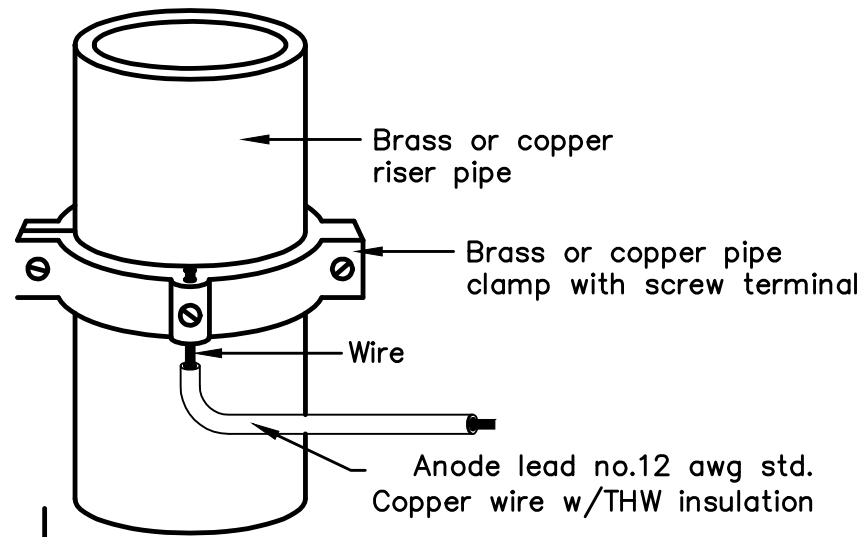
1. Riser pipe shall be wire brushed To clean bright metal.
2. Pipe clamp shall be located on Riser pipe.
3. Wire insulation shall be stripped To a minimum length to connect

Wire to pipe clamp.

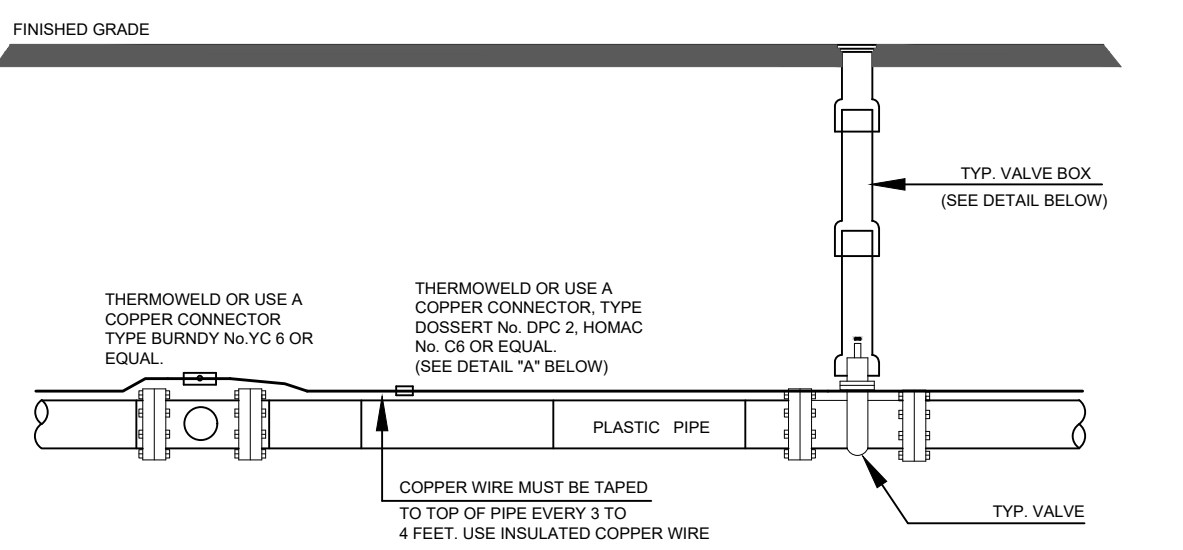
PACKAGED BACKFILL COMPOSTION:

75% gypsum  
20% bentonite  
5% sodium sulfate

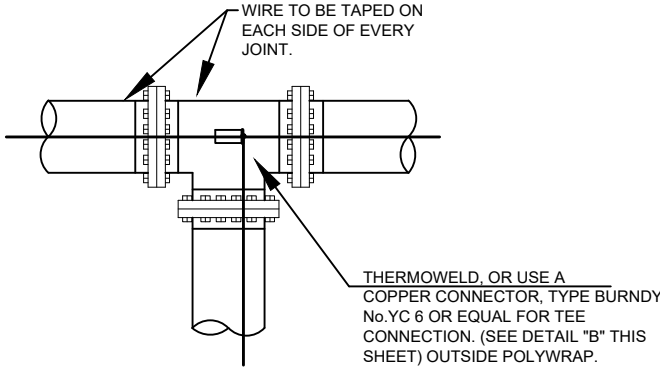
Ingot weight: 30 lbs.  
Pkgd. Weight: 70 lbs. Approx.



ANODE LEAD ABOVE  
GRADE CONNECTION



DETAIL "A"



DETAIL "B"

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:

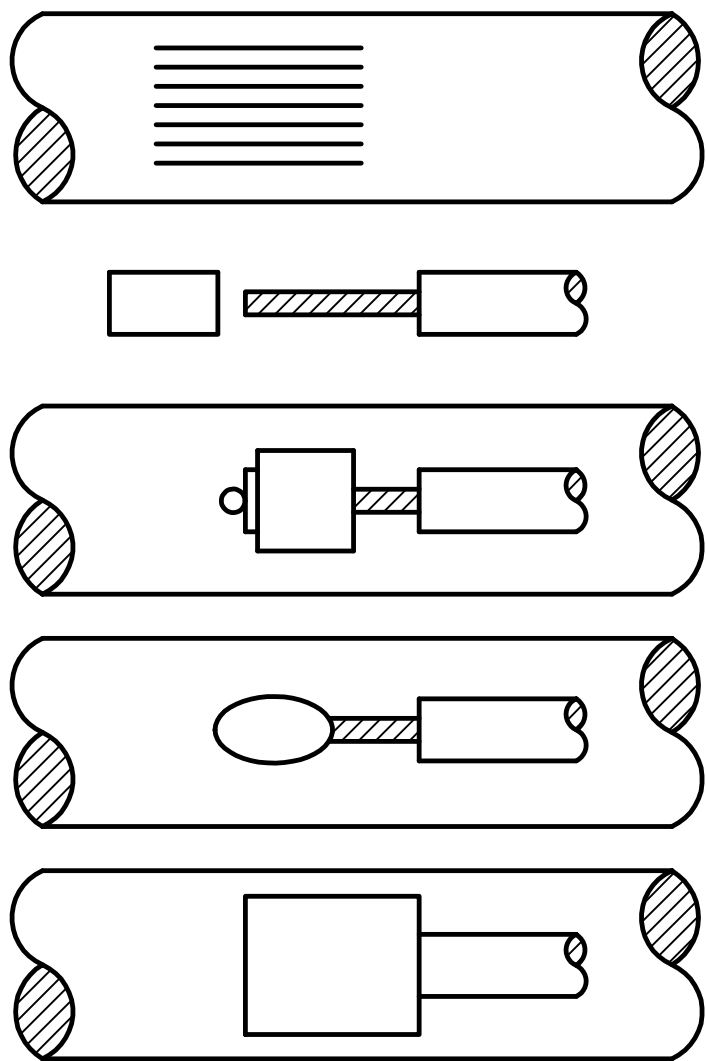
PLACE TUBE OF POLYETHYLENE MATERIAL ON PIPE PRIOR TO LOWERING IT INTO TRENCH.

STEP 2:

PULL TUBE OVER THE LENGTH OF THE PIPE. TAPE 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:

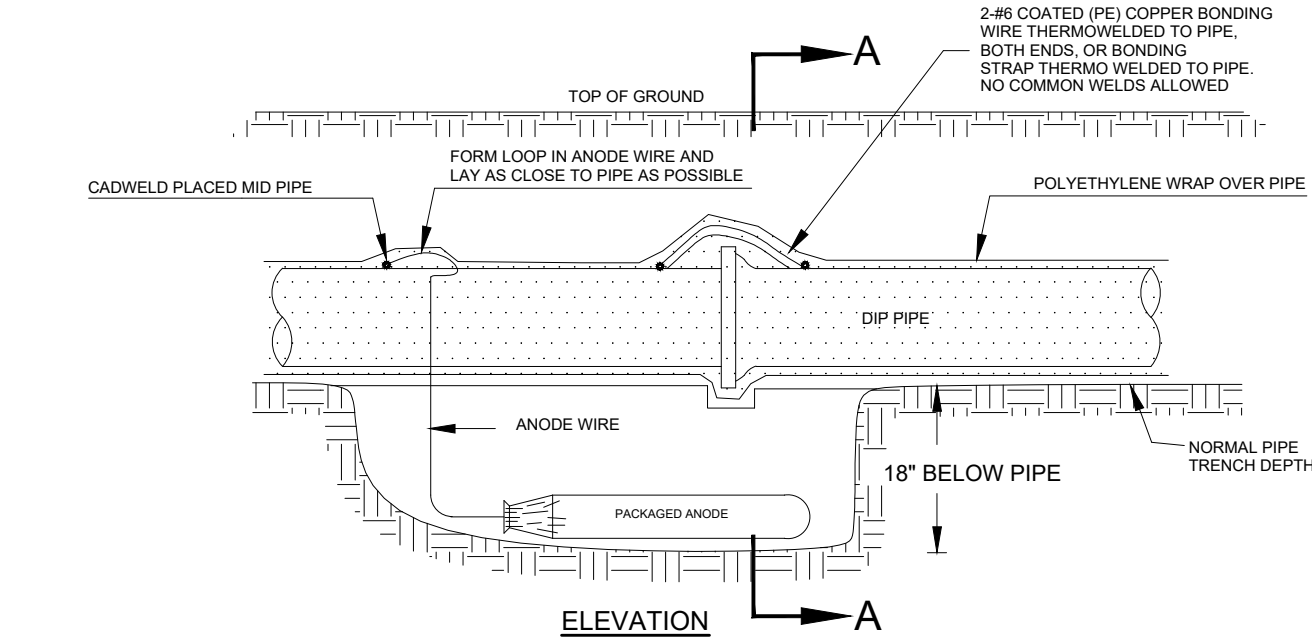
OVERLAP FIRST TUBE WITH ADJACENT TUBE AND SECURE WITH PLASTIC ADHESIVE TAPE. THE POLYETHYLENE TUBE MATERIAL COVERING THE PIPE SHALL BE LOOSE. EXCESS MATERIAL SHALL BE NEATLY DRAWN UP AROUND THE PIPE BARREL, FOLDED ON TOP OF PIPE AND TAPED IN PLACE.



NOTES:

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

EXOTHERMIC WELD PROCESS



Anode Design

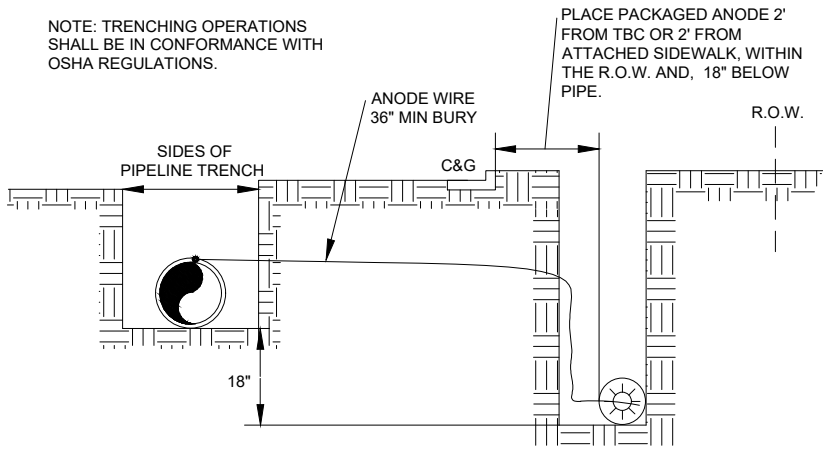
For use with DIP in conjunction with poly-wrap sleeves and piping in 1000 ohm-cm soil estimating a 5% holiday area.

Pipe Size Inches	Actual OD Inches	Anode Spacing Feet	Anode (see note 2) 17 lb
4	4.8	76.3	17 lb
6	6.9	53.1	17 lb
8	9.05	40.5	17 lb
12	13.20	27.7	17 lb
16	16	21.0	32 lb
20	20	16.9	32 lb
24	24	14.2	48 lb
30	30	11.4	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

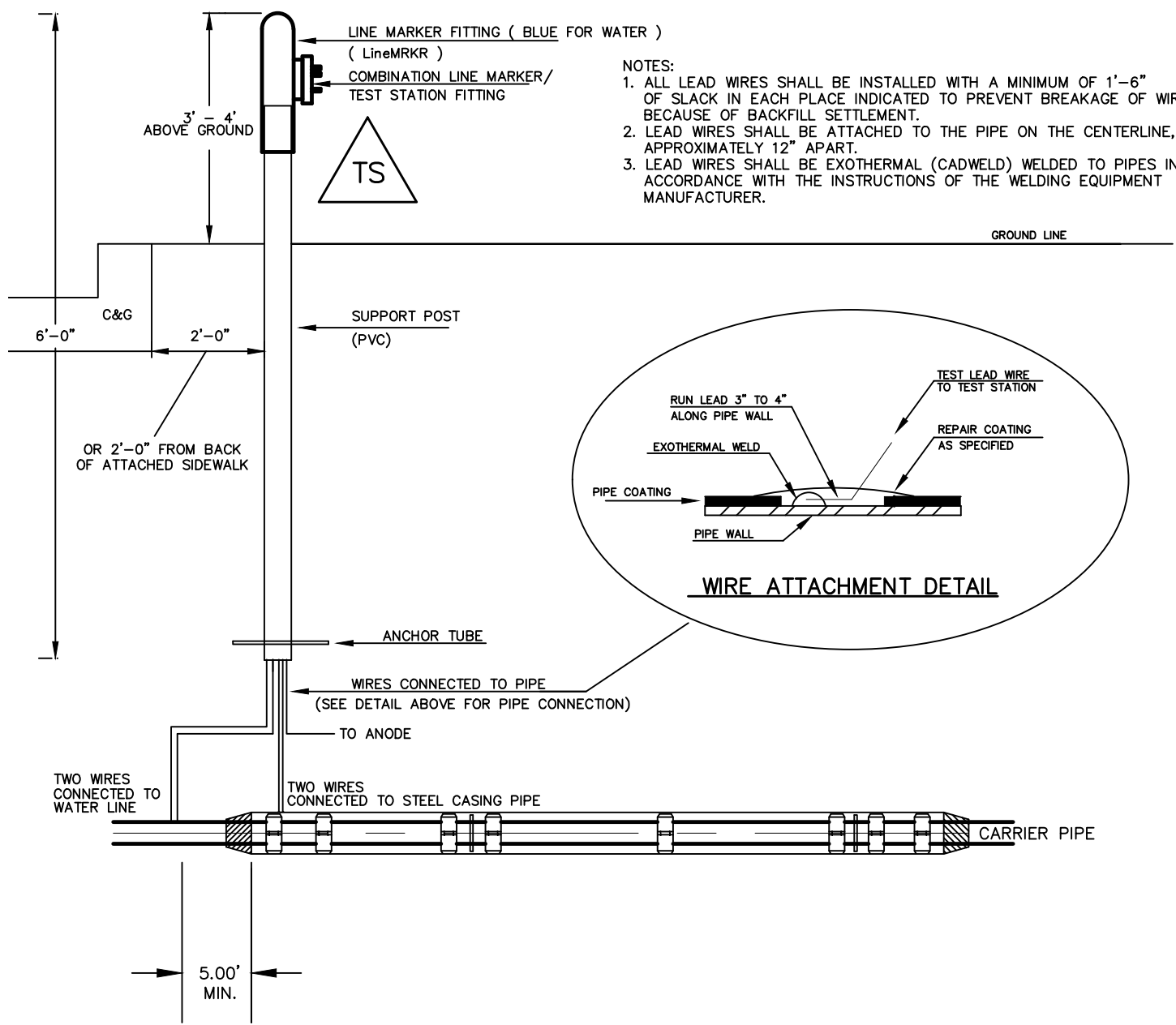
The distance from the point of the beginning to the first anode shall not exceed one half the recommended spacing.

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. 9 lb anodes can be used on metal fittings when using PVC pipe.
3. Packaged anode to be wetted and covered with soil prior to backfilling.



SECTION A-A



TYPICAL DETAIL FOR TEST STATION  
WITH STEEL SLEEVE INSTALLATION

NOTES:

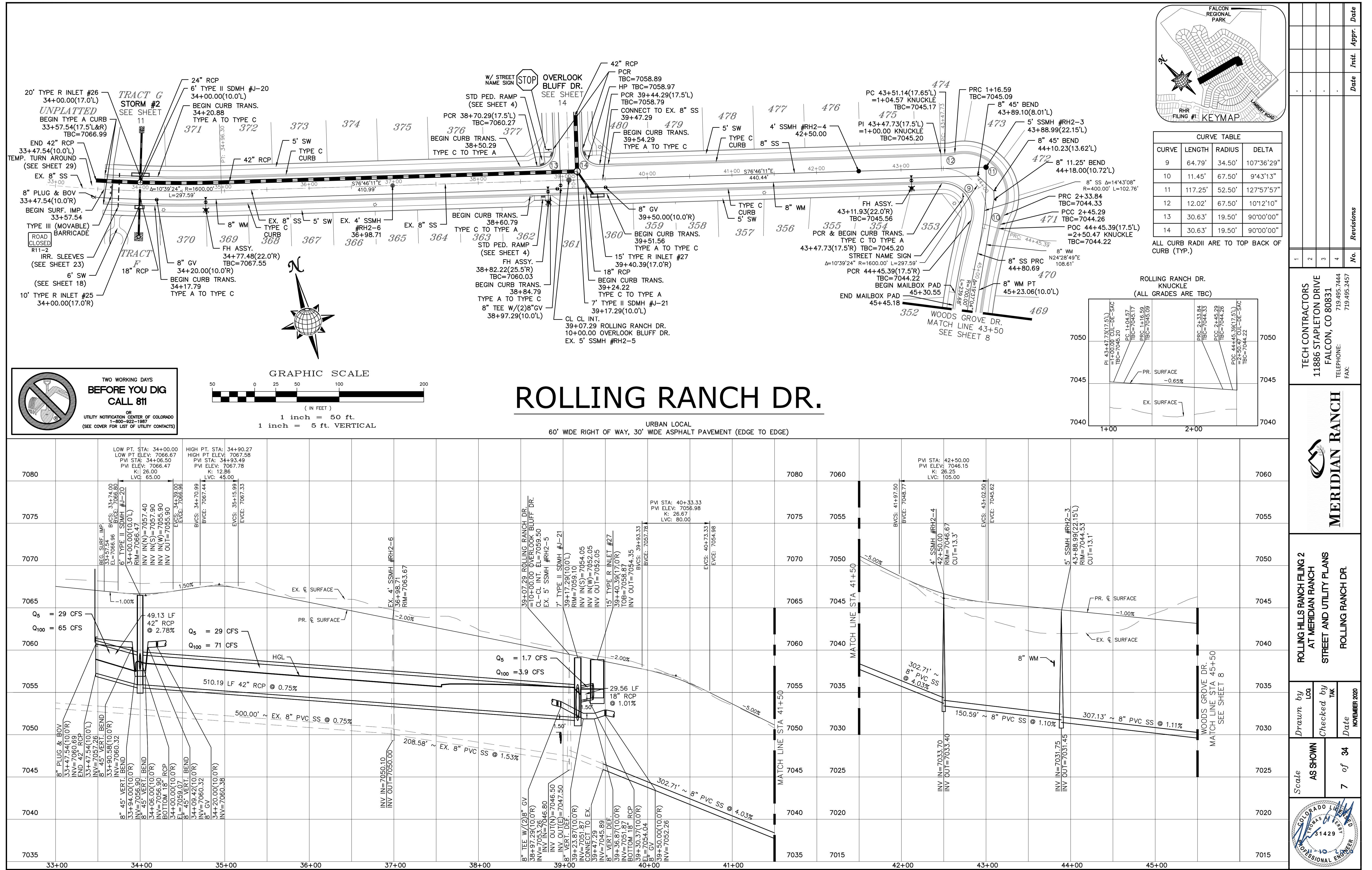
- 1.) Lowerings to be cathodically protected under the direction of the MSMD Inspector, per standards. (For anode size see detail above.)
- 2.) Example can vary due to site conditions and MSMD Inspector's direction's.
- 3.) Reference Colorado Springs Utilities Standard Detail Drawing No. A 8-6 – Steel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

No.	Revisions	Date	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 FLING 2 AT MERIDIAN RANCH STREET AND UTILITY PLANS DETAIL SHEET				
Drawn by	Log	Checked by	TAK	Date
AS SHOWN				NOVEMBER 2020
Scale	5	of	34	
PROFESSIONAL ENGINEER 31429 COLORADO LICENSE 11/10/2020				





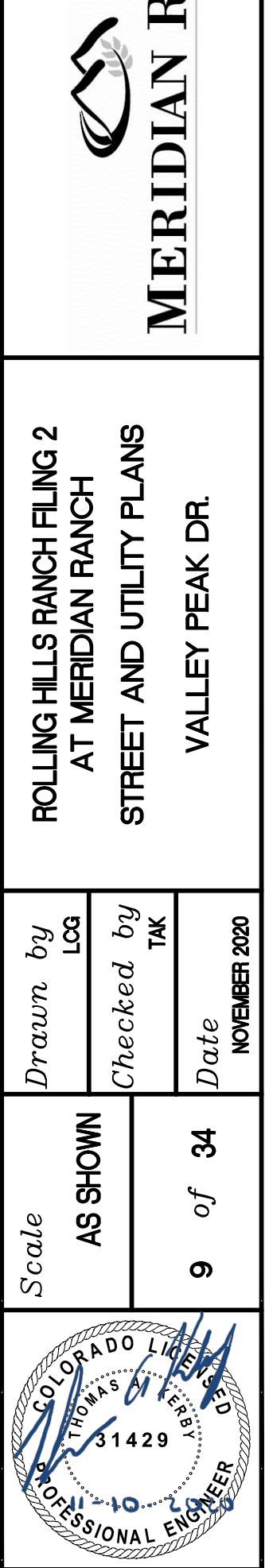
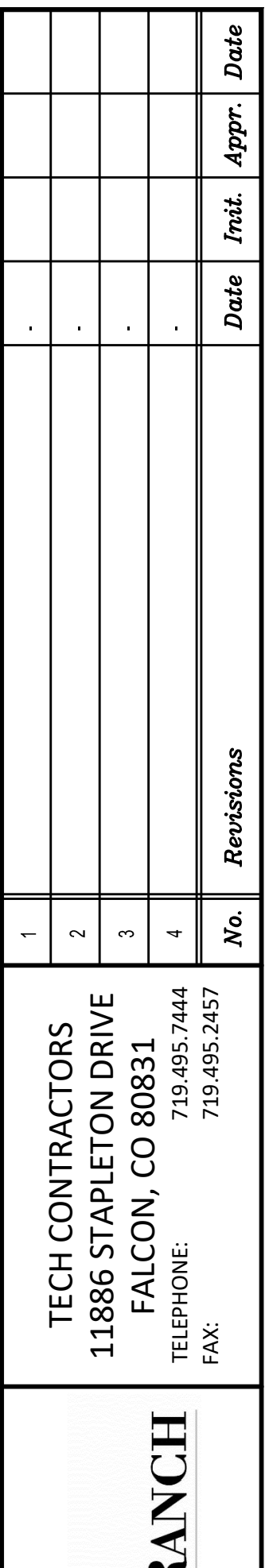




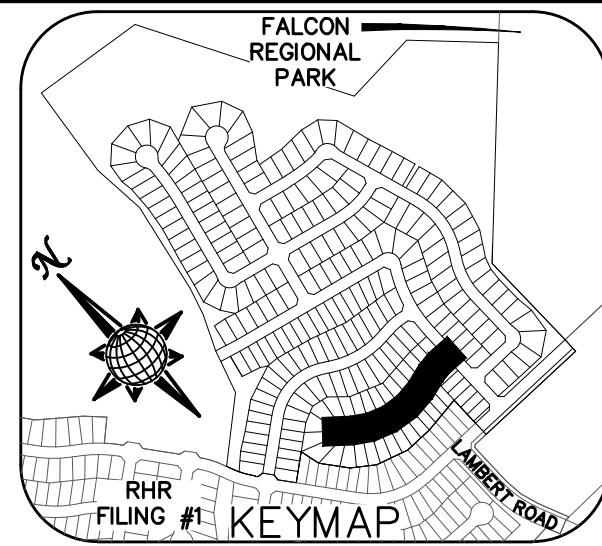
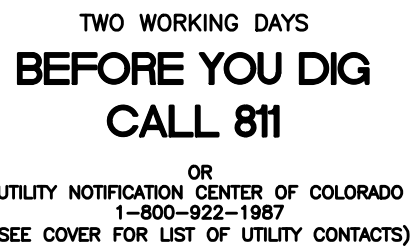










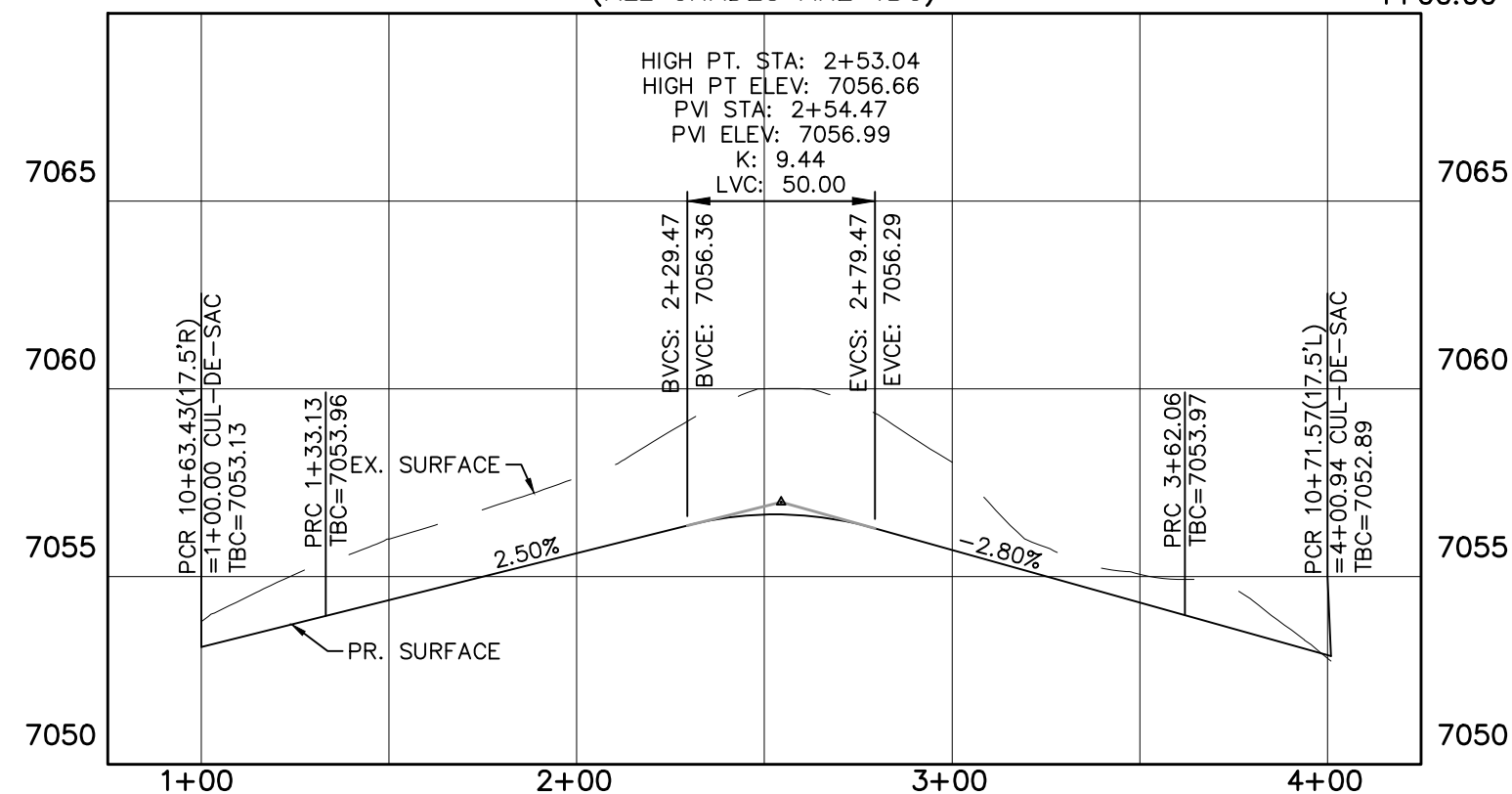


CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
5	30.63'	19.50'	90°00'00"
6	30.63'	19.50'	90°00'00"
40	33.13'	42.50'	44°39'30"
41	228.93'	47.50'	276°08'49"
42	38.88'	42.50'	52°25'17"

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

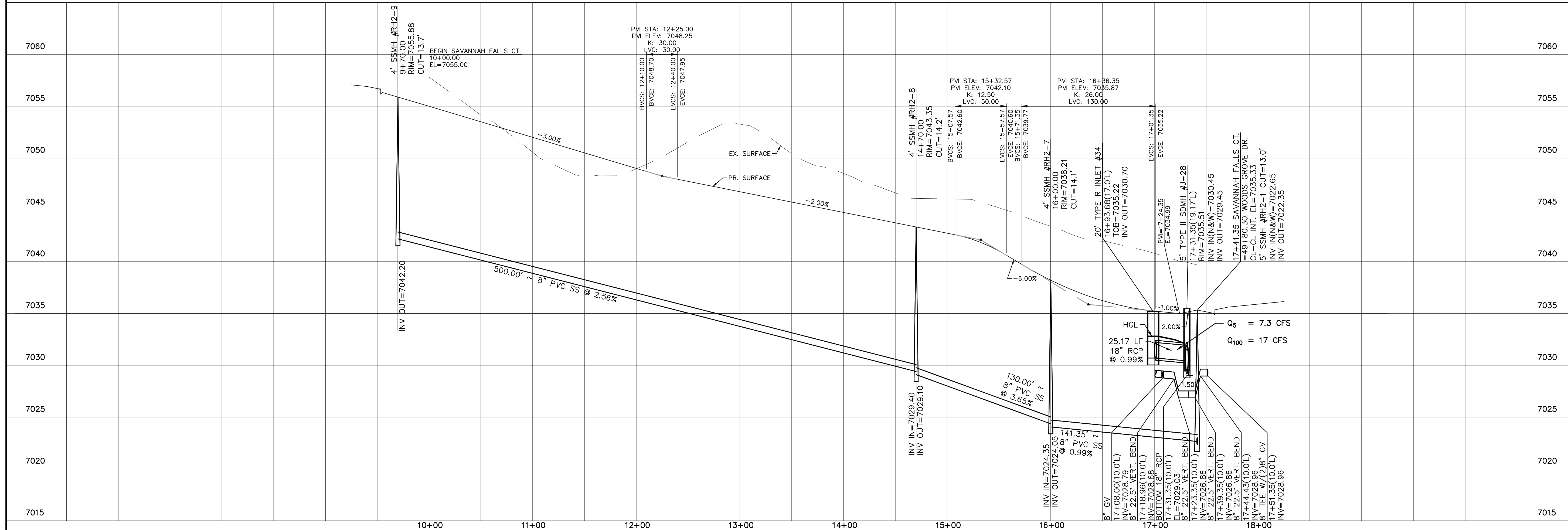


1 inch = 50 ft.  
1 inch = 5 ft. VERTICAL



# SAVANNAH FALLS CT.

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



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


**MERIDIAN RANCH**

ROLLING HILLS RANCH FILING 2  
AT MERIDIAN RANCH  
STREET AND UTILITY PLANS  
SAVANNAH FALLS CT.

<i>Drawn by</i>	LOG
<i>Checked by</i>	TAK
<i>Date</i>	NOVEMBER 2020

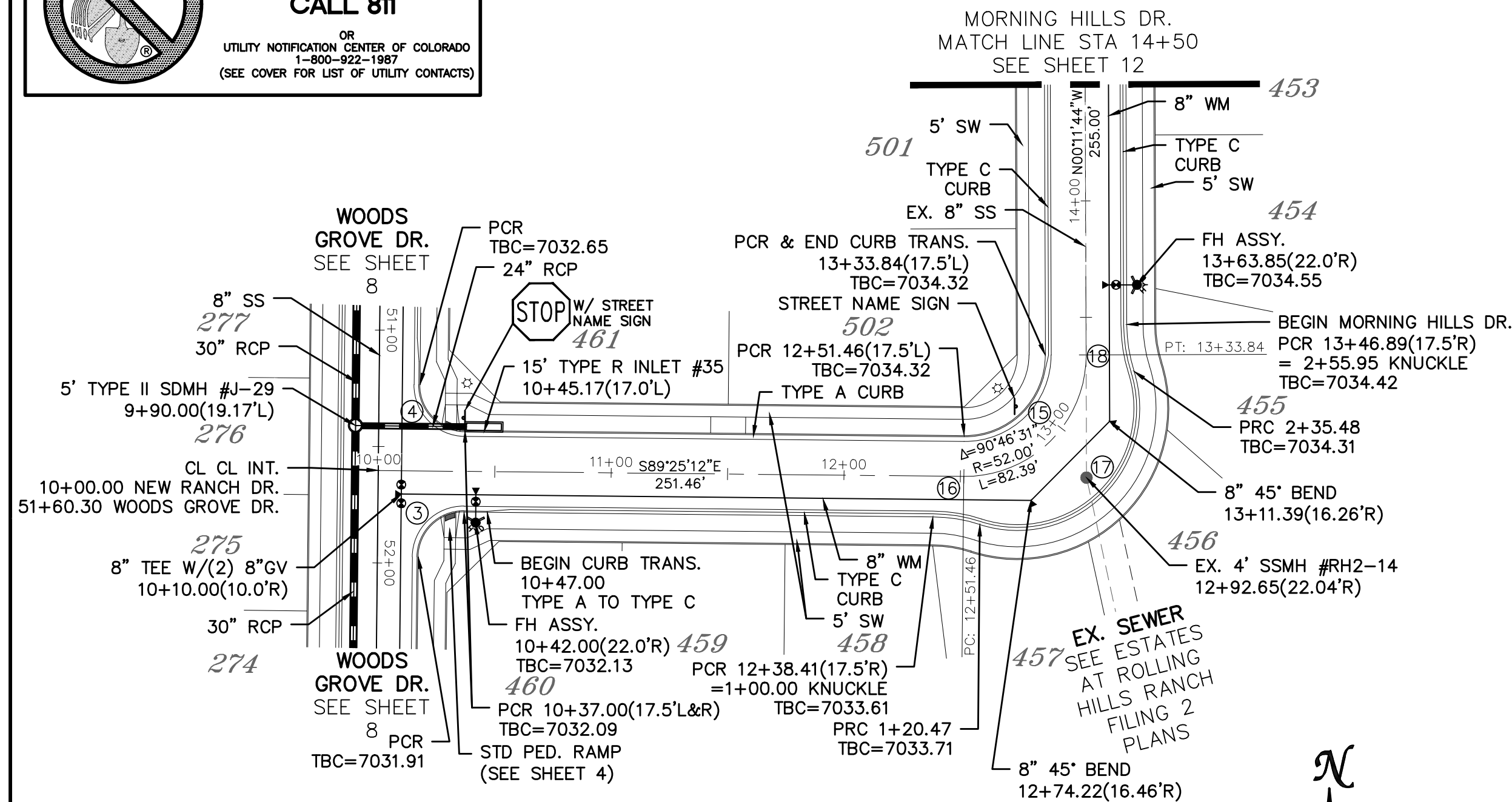
Scale

AS SHOWN

10 of 34

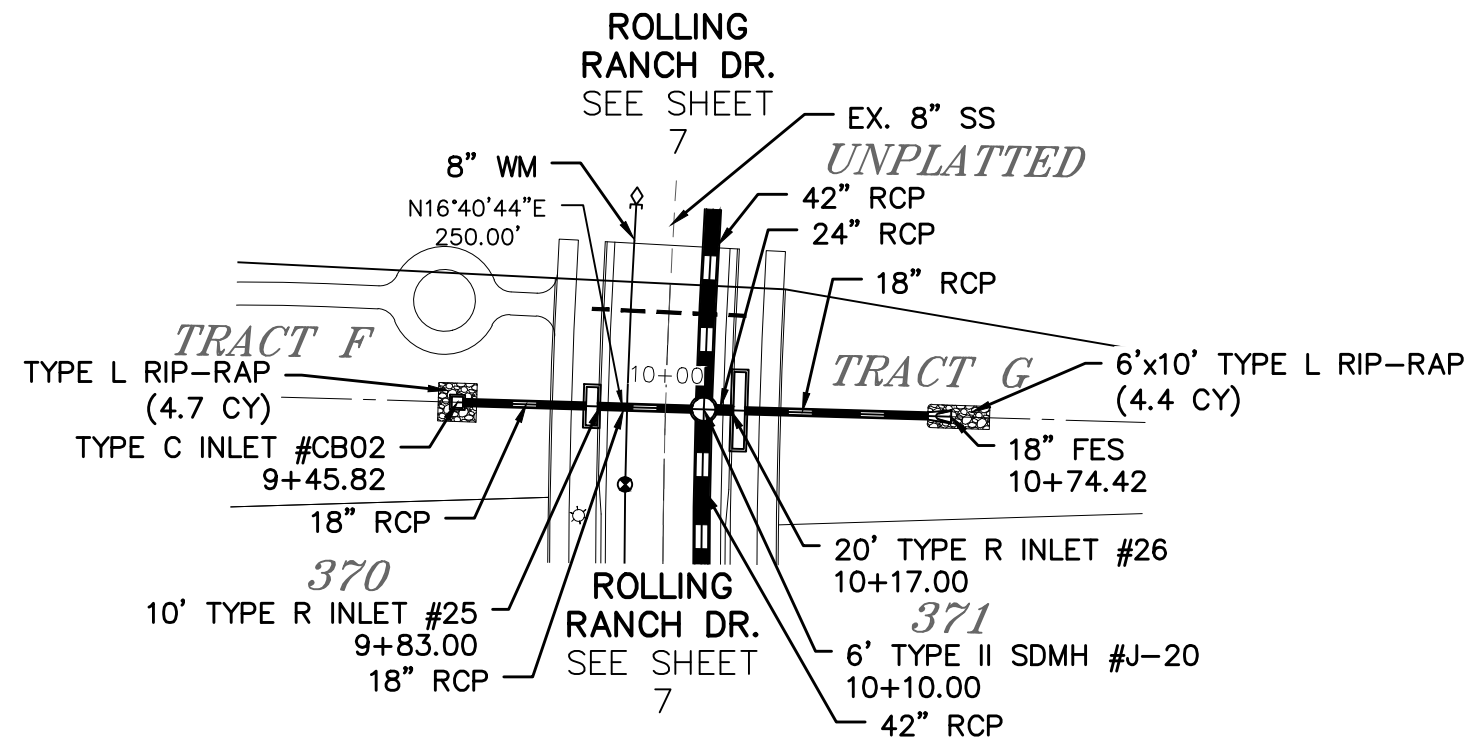
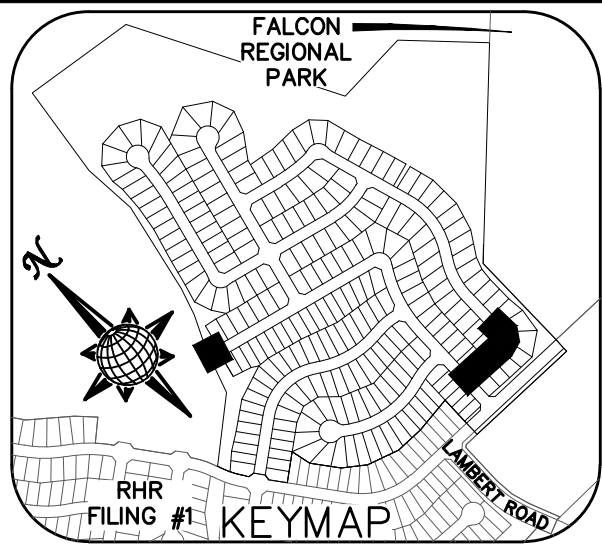






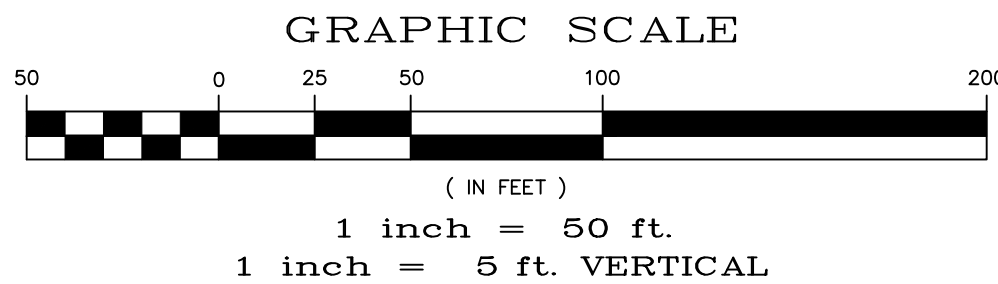
CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
3	30.63'	19.50'	90°00'00"
4	30.63'	19.50'	90°00'00"
15	54.66'	34.50'	90°46'31"
16	20.47'	67.50'	17°22'20"
17	115.01'	52.50'	125°31'12"
18	20.47'	67.50'	17°22'20"

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

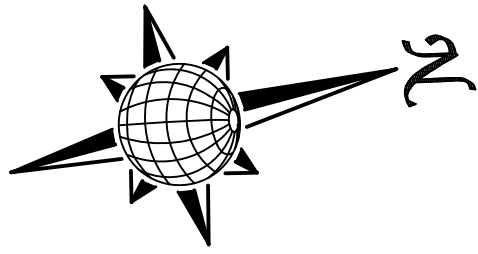


# NEW RANCH DR.



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



# STORM #2



7050																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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	Scale AS SHOWN	Drawn by LOG	ROLLING HILLS RANCH FILING 2 AT MERIDIAN RANCH STREET AND UTILITY PLANS  NEW RANCH DR. + STORM #2	 <b>MERIDIAN RANCH</b>	TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457	1	-		
		Checked by TAK				2	-		
	11 of 34	Date NOVEMBER 2020				3	-		
						4	-		
						No.	Revisions	Date	Initt.

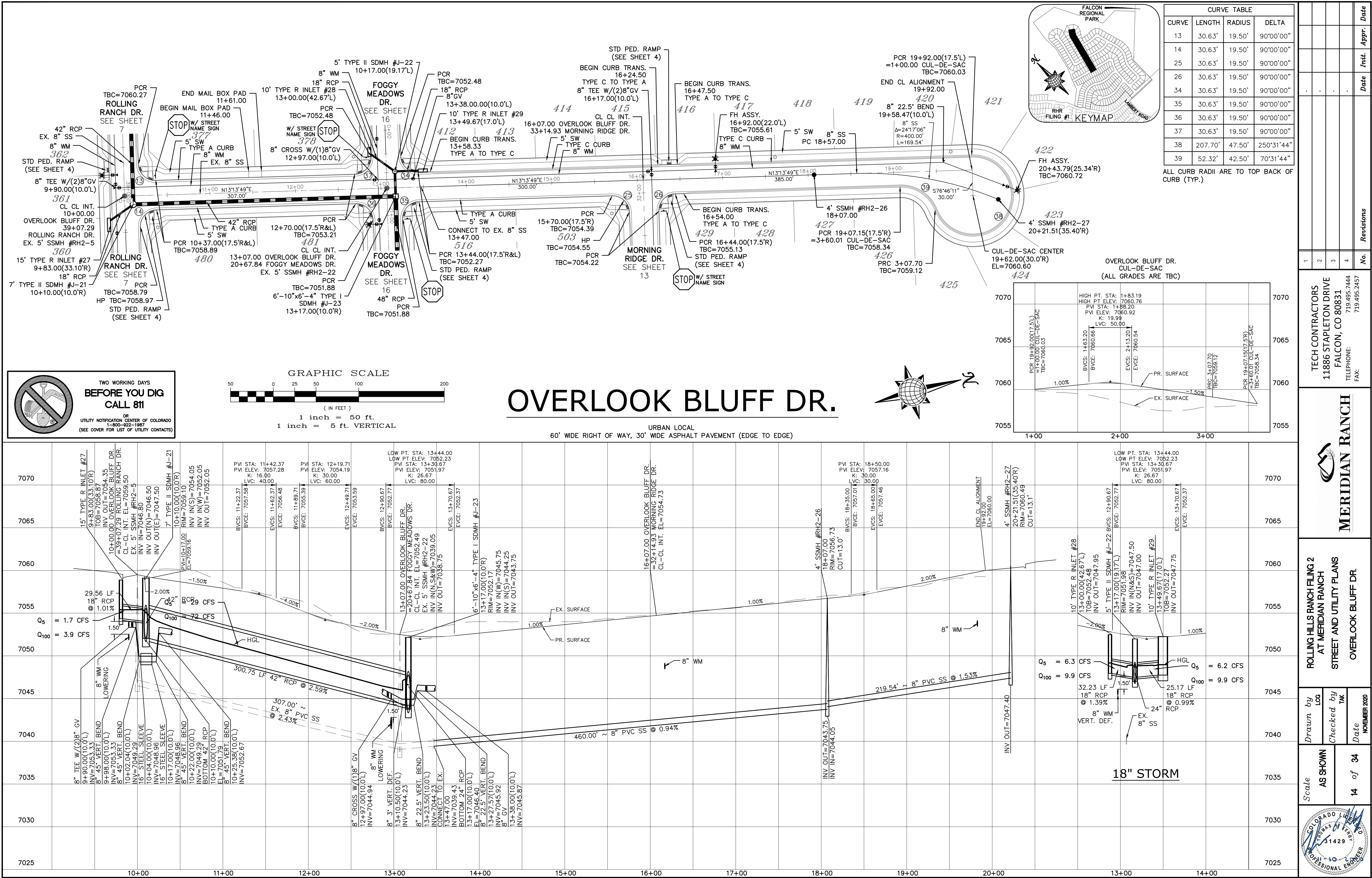








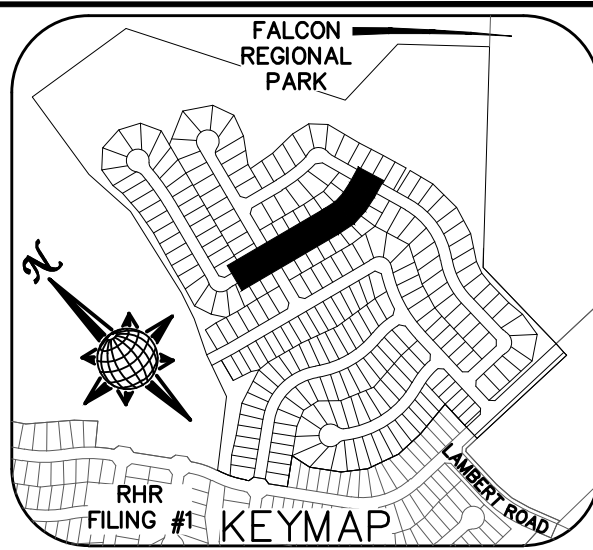




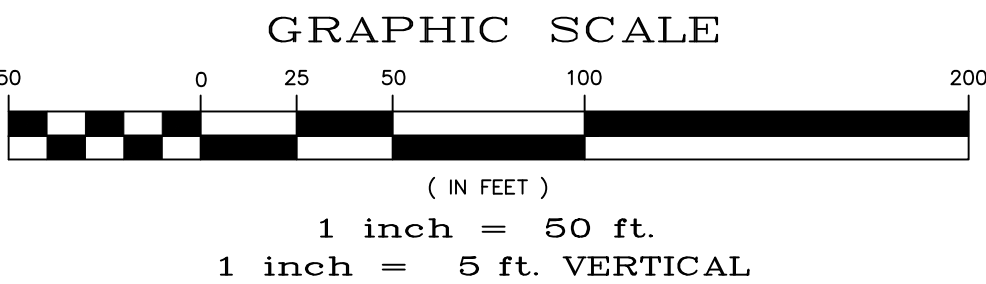








ALL CURB RADII ARE TO TOP BACK OF  
CURB (TYP.)



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

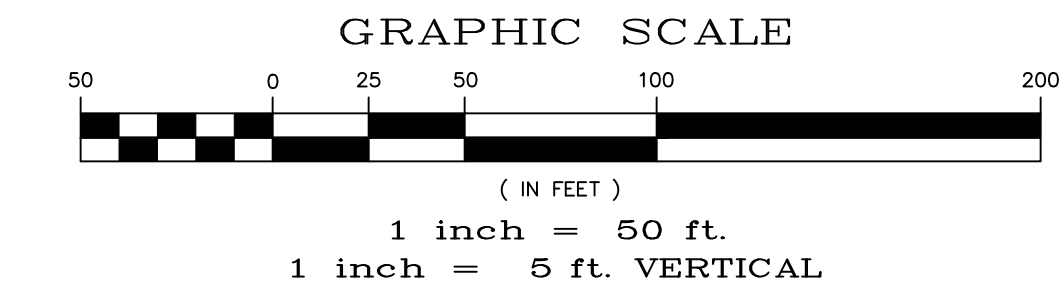
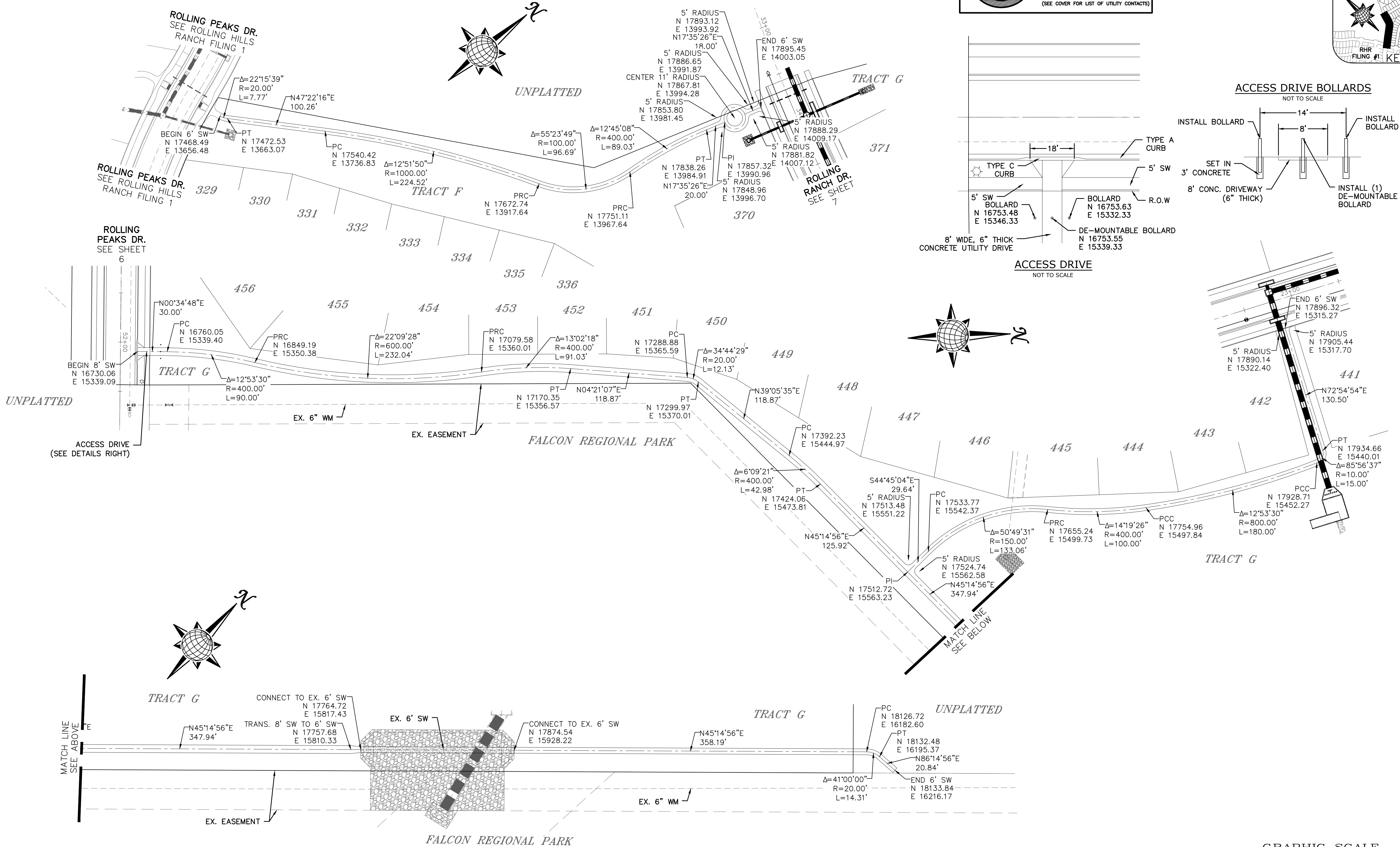
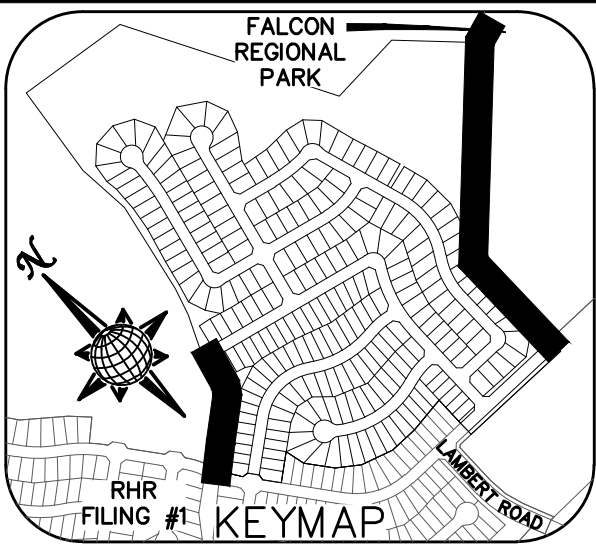
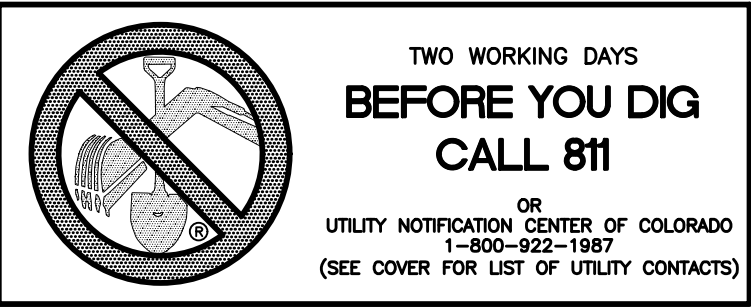








6' SIDEWALK PLAN



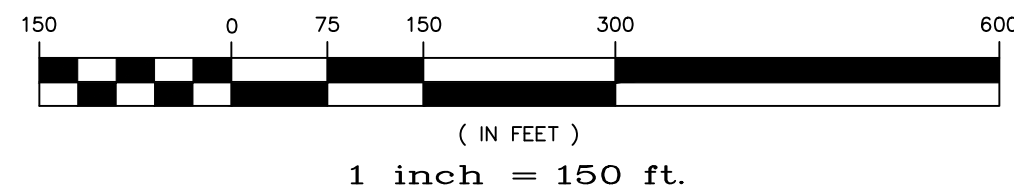
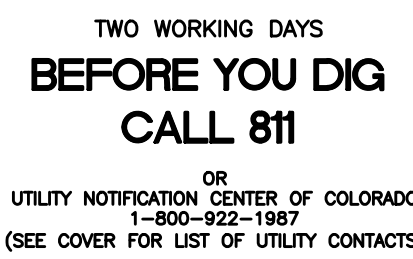
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	AS SHOWN		Log	AT MERIDIAN RANCH			11886 STAPLETON DRIVE		2				
			Checked by	STREET AND UTILITY PLANS			FALCON, CO 80831		3				
	18 of 34		TAK	SIDEWALK PLAN			TELEPHONE: 719.495.7444		4				
		Date	NOVEMBER 2020		FAX: 719.495.2457		Revisions		No.	Date	Init.	Appr.	Date







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



UNPLATTED

UNPLATTED

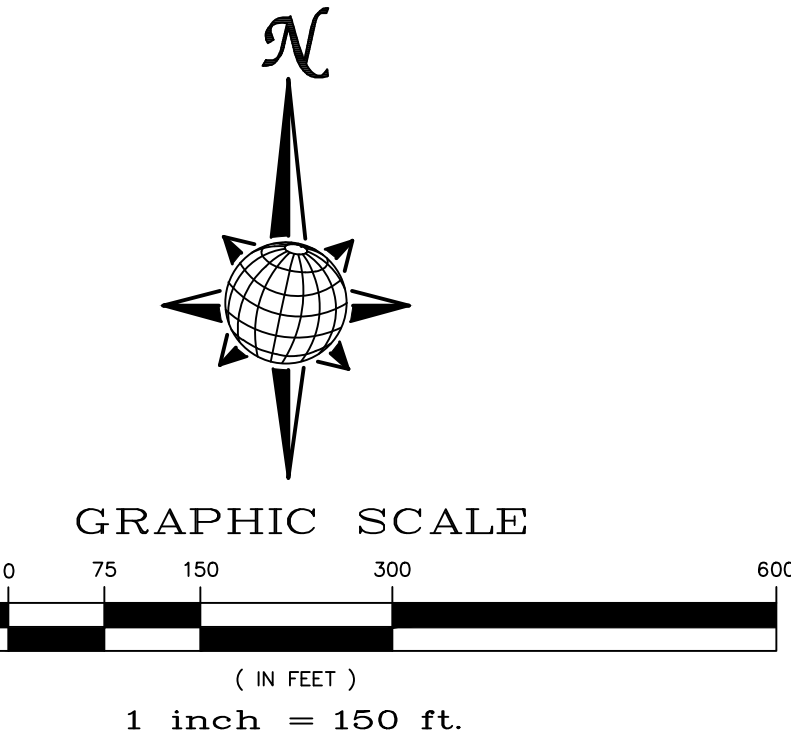
UNPLATTED

	Scale AS SHOWN	Drawn by LOG	ROLLING HILLS RANCH FILING 2 AT MERIDIAN RANCH STREET AND UTILITY PLANS  OVERALL SANITARY SEWER SERVICES	 <b>MERIDIAN RANCH</b>	TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831  TELEPHONE: 719.495.7444 FAX: 719.495.2457	1	-		
		Checked by TAK				2	-		
	20 of 34 Date NOVEMBER 2020					3	-		
						4	-		
						No.	Revisions	Date	Invt.



CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES.  
EX. UTILITIES SEE CONSTRUCTION DRAWINGS FOR:

- 1) ROUGH GRADING FOR ROLLING HILLS RANCH AT MERIDIAN RANCH
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- 3) ESTATES AT ROLLING HILLS RANCH FILING 2



————	EX. 4" UNDERDRAIN
—— —	EX. 6" UNDERDRAIN
- - -	EX. 8" UNDERDRAIN
————	4" UNDERDRAIN
—— —	6" UNDERDRAIN
- - -	8" UNDERDRAIN

GRAPHIC SCALE

( IN FEET )  
1 inch = 150 ft.

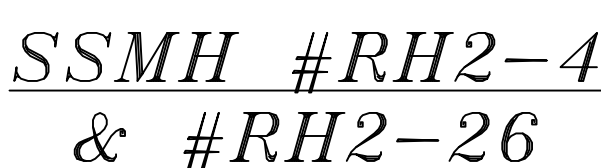
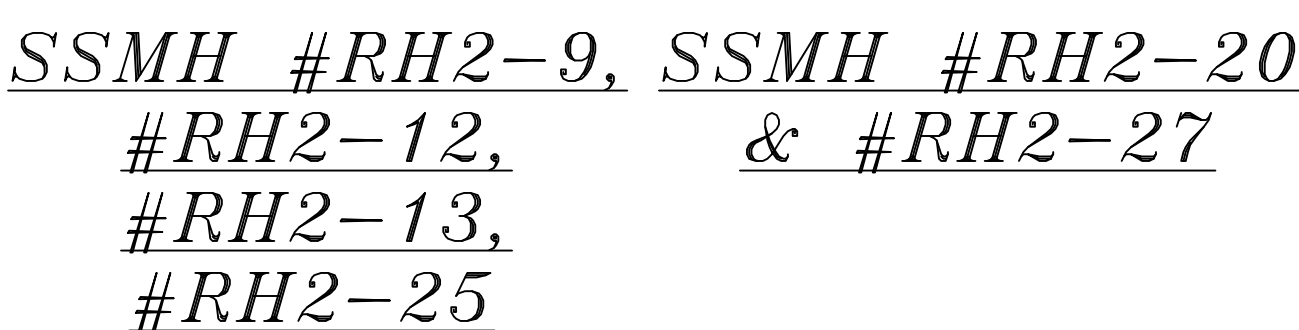
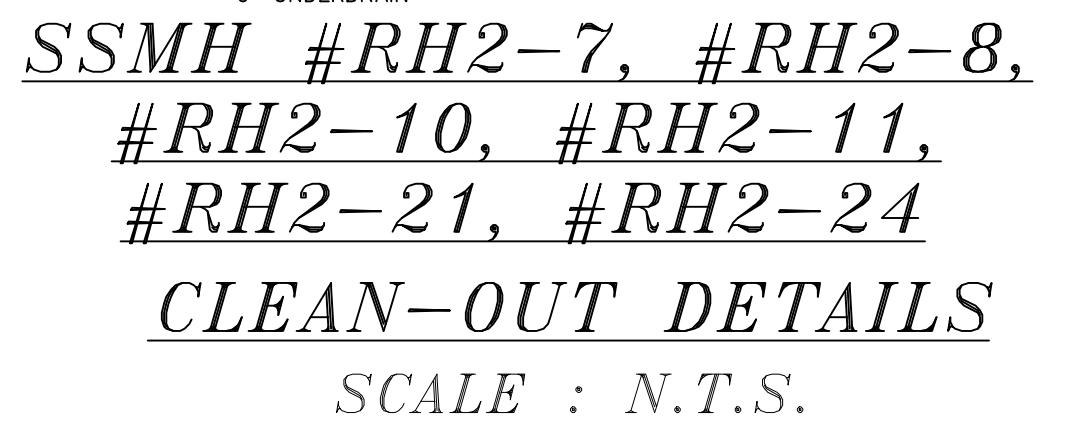
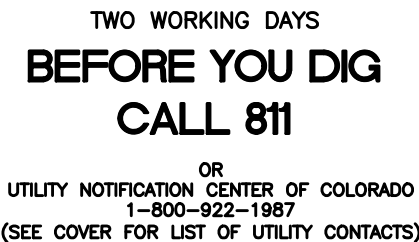
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EX.  
UNDERDRAIN  
GALLERY

UNPLATTED

PCD PROJECT NO. SF-20-20





- 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 EQUIV, 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 THE DISTRICT 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 UNDERDRAIN MAIN LINE 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.

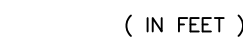
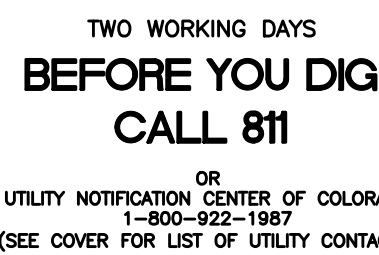






CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES.  
EX. UTILITIES SEE CONSTRUCTION DRAWINGS FOR:  
1) ROUGH GRADING FOR ROLLING HILLS RANCH AT MERIDIAN RANCH  
2) ROLLING HILLS RANCH FILING 1 AT MERIDIAN RANCH  
3) ESTATES AT ROLLING HILLS RANCH FILING 2

3/4" WATER SERVICE UNLESS OTHERWISE LABELED.



1 inch = 150 ft.

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

1	-		
2	-		
3	-		
4	-		
<b>No.</b>	<b>Revisions</b>	<b>Date</b>	<b>Appr. Date</b>

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



# MERIDIAN RANCH

**ROLLING HILLS RANCH FILING 2  
AT MERIDIAN RANCH  
STREET AND UTILITY PLANS  
OVERALL WATER SERVICES**

Scale AS SHOWN	Drawn by LCG
	Checked by TAK
	Date NOVEMBER 2020









EL PASO COUNTY STANDARD NOTES:

1. STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS, ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF SITE WATERS, INCLUDING WETLANDS.
2. NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS TO REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
3. A SEPARATE STORMWATER MANAGEMENT PLAN (SWMP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQOP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. MANAGEMENT OF THE SWMP DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR. THE SWMP SHALL BE LOCATED ON SITE AT ALL TIMES AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.
4. ONCE THE ESQOP IS APPROVED AND A "NOTICE TO PROCEED" HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE APPROVED GEC. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY STAFF.
5. CONTROL MEASURES MUST BE INSTALLED PRIOR COMMENCEMENT OF ACTIVITIES THAT COULD CONTRIBUTE POLLUTANTS TO STORMWATER. CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, AND DISTURBED LAND AREAS SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF THE DISTURBANCE.
6. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REMAIN IN EFFECTIVE OPERATING CONDITION UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND FINAL STABILIZATION IS ESTABLISHED. ALL PERSONS ENGAGED IN LAND DISTURBANCE ACTIVITIES SHALL ASSESS THE ADEQUACY OF CONTROL MEASURES AT THE SITE AND IDENTIFY IF CHANGES TO EROSION CONTROL MEASURES ARE NEEDED TO ENSURE THE CONTINUED EFFECTIVE PERFORMANCE OF THE CONTROL MEASURES. ALL CHANGES TO TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES MUST BE INCORPORATED INTO THE STORMWATER MANAGEMENT PLAN.
7. TEMPORARY STABILIZATION SHALL BE IMPLEMENTED ON DISTURBED AREAS AND STOCKPILES WHERE GROUND DISTURBING CONSTRUCTION ACTIVITY HAS PERMANENTLY CEASED OR TEMPORARILY CEASED FOR LONGER THAN 14 DAYS.
8. FINAL STABILIZATION MUST BE IMPLEMENTED AT ALL APPLICABLE CONSTRUCTION SITES. FINAL STABILIZATION IS ACHIEVED WHEN ALL GROUND DISTURBING ACTIVITIES ARE COMPLETE AND ALL DISTURBED AREAS EITHER HAVE A UNIFORM VEGETATIVE COVER WITH INDIVIDUAL PLANT DENSITY OF 70 PERCENT OF PRE-DISTURBANCE LEVELS ESTABLISHED OR EQUIVALENT PERMANENT ALTERNATIVE STABILIZATION METHOD IS IMPLEMENTED. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED UPON FINAL STABILIZATION AND BEFORE PERMIT CLOSURE.
9. ALL PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE INSTALLED AS DESIGNED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT EFFECT THE DESIGN OR FUNCTION OF PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE ECM ADMINISTRATOR PRIOR TO IMPLEMENTATION.
10. EARTH DISTURBANCES SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY MINIMIZE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION. ALL DISTURBANCES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME. PRE-EXISTING VEGETATION SHALL BE PROTECTED AND MAINTAINED WITHIN 50 HORIZONTAL FEET OF A WATERS OF THE STATE UNLESS SHOWN TO BE INFEASIBLE AND SPECIFICALLY REQUESTED AND APPROVED.
11. COMPACTION OF SOIL MUST BE PREVENTED IN AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES OR WHERE FINAL STABILIZATION WILL BE ACHIEVED BY VEGETATIVE COVER. AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES SHALL ALSO BE PROTECTED FROM SEDIMENTATION DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED. IF COMPACTION PREVENTION IS NOT FEASIBLE DUE TO SITE CONSTRAINTS, ALL AREAS DESIGNATED FOR INFILTRATION AND VEGETATION CONTROL MEASURES MUST BE LOOSENEED PRIOR TO INSTALLATION OF THE CONTROL MEASURE(S).
12. ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE A STABILIZED CONVEYANCE DESIGNED TO MINIMIZE EROSION AND THE DISCHARGE OF SEDIMENT OFF SITE.
13. CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO ENTER STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES. CONCRETE WASHOUTS SHALL NOT BE LOCATED IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT, OR WITHIN 50 FEET OF A SURFACE WATER BODY, CREEK OR STREAM.
14. DURING DEWATERING OPERATIONS OF UNCONTAMINATED GROUND WATER MAY BE DISCHARGED ON SITE, BUT SHALL NOT LEAVE THE SITE IN THE FORM OF SURFACE RUNOFF UNLESS AN APPROVED STATE DEWATERING PERMIT IS IN PLACE.
15. EROSION CONTROL BLANKETING OR OTHER PROTECTIVE COVERING SHALL BE USED ON SLOPES STEEPER THAN 3:1.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO CONSTRUCTION DEBRIS, TREE SLASH, BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.
17. WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. CONTROL MEASURES MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.
18. TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF-SITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
19. THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, SOIL, AND SAND THAT MAY ACCUMULATE IN ROADS, STORM DRAINS AND OTHER DRAINAGE CONVEYANCE SYSTEMS AND STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.
20. THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY REQUIRED TO PERFORM THE WORK IN AN ORDERLY SEQUENCE. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS.
21. NO CHEMICAL(S) HAVING THE POTENTIAL TO BE RELEASED IN STORMWATER ARE TO BE STORED OR USED ONSITE UNLESS PERMISSION FOR THE USE OF SUCH CHEMICAL(S) IS GRANTED IN WRITING BY THE ECM ADMINISTRATOR. IN GRANTING APPROVAL FOR THE USE OF SUCH CHEMICAL(S), SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
22. BULK STORAGE OF ALLOWED PETROLEUM PRODUCTS OR OTHER ALLOWED LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL REQUIRE A DEDICATED SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS ONSITE AND TO PREVENT ANY SPILLED MATERIALS FROM ENTERING STATE WATERS, ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR OTHER FACILITIES.
23. NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE CURB AND GUTTER OR DITCH EXCEPT WITH APPROVED SEDIMENT CONTROL MEASURES.
24. OWNER/DEVELOPER AND THEIR AGENTS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 25, ARTICLE 8, CRS), AND THE "CLEAN WATER ACT" (33 USC 1344), IN ADDITION TO THE REQUIREMENTS OF THE LAND DEVELOPMENT CODE, DCM VOLUME II AND THE ECM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (1041, NPDES, FLOODPLAIN, 404, FUGITIVE DUST, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND OTHER LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, LOCAL, OR COUNTY AGENCIES, THE MOST RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
25. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE ONLY AT APPROVED CONSTRUCTION ACCESS POINTS.
26. PRIOR TO CONSTRUCTION THE PERMITEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
27. A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND SHALL BE UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
28. THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY ENTECH ENGINEERING, INC. AND SHALL BE CONSIDERED A PART OF THESE PLANS.
29. AT LEAST TEN DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB ONE (1) ACRE OR MORE, THE OWNER OR OPERATOR OF CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SWMP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR INFORMATION OR APPLICATION MATERIALS' CONTACT:

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

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 2021
Stage 3	Home Construction	Inlet Protection Individual Lot Perimeter Control	September 2020	
Final Stabilization	Permit Close	Final Stabilization Permanent Measures	June 2022	

## EARTHWORK QUANTITIES

NET YARDS	BALANCE	
TOTAL STRIPPINGS	0.00 AC.	000 CY
	<u>CUT</u>	<u>FILL</u>
NET YARDS	80 CY	4,800 CY
20% COMPACTION FACTOR		
NOTE: FILL WILL BE GENERATED FROM UTILITY INSTA		

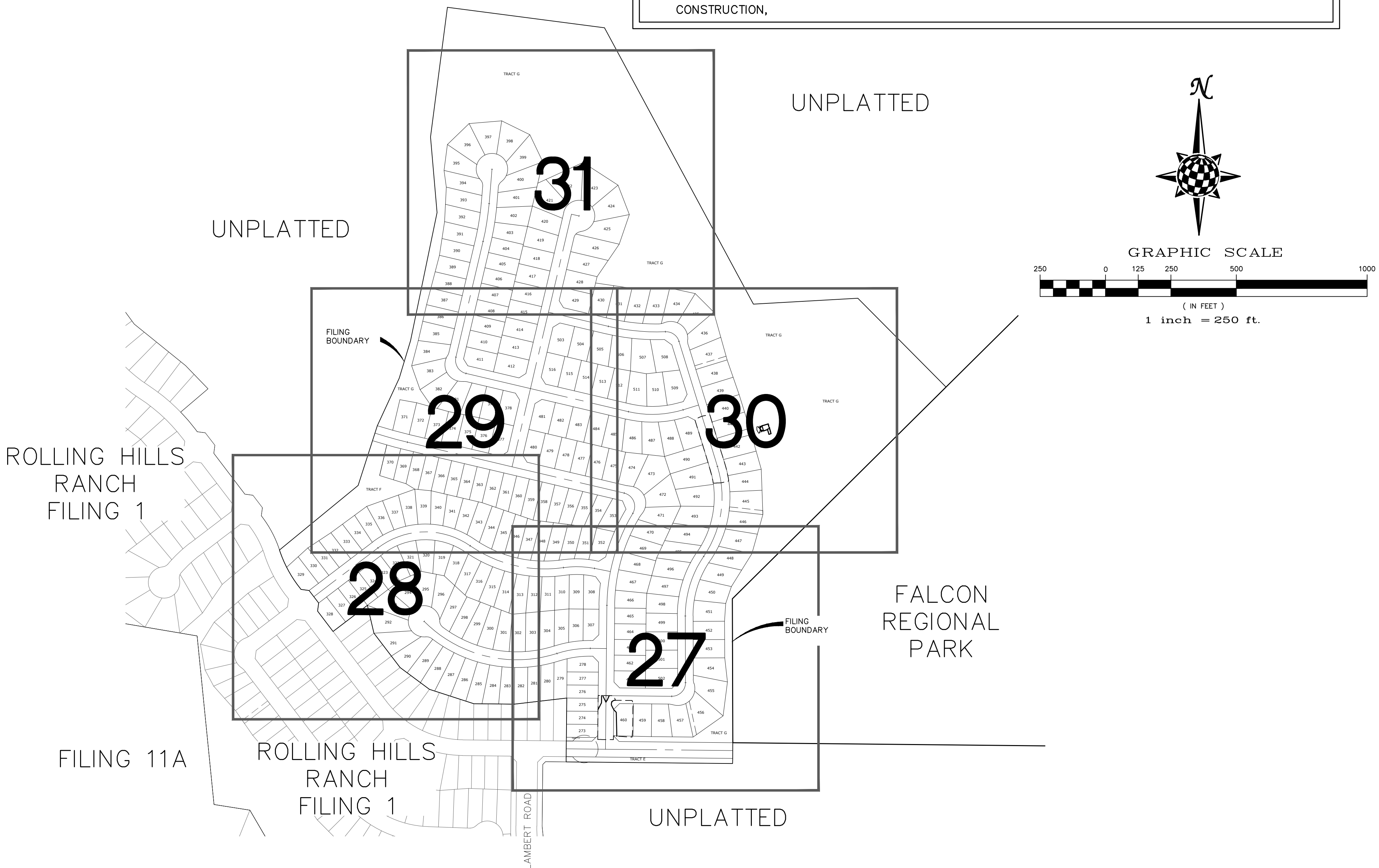
**NOTE:**


- 1) EXISTING VEGETATION ON THE PROJECT SITE AND THE IN SURROUNDING AREAS CONSISTS OF A MIXTURE OF NATIVE GRASSES AND WEEDS WITH COVERAGE APPROXIMATING 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.
- 2) 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.
- 3) THERE IS NO CONCRETE BATCH PLANT ASSOCIATED WITH THIS PROJECT.
- 4) NO SLOPES GREATER THAN 3:1 ARE EXPECTED ON THIS SITE. SLOPES GREATER THAN 3:1 REQUIRE EROSION CONTROL BLANKET.
- 5) THESE GRADING PLANS ENCOMPASS STAGE TWO OF THE CONSTRUCTION INVOLVING THE INSTALLATION OF THE UNDERGROUND UTILITIES AND SURFACE IMPROVEMENTS. MINOR EARTH MOVING ACTIVITIES ARE THE RESULT OF THE FILLING OF THE TEMPORARY SEDIMENTATION PONDS FROM STAGE ONE CONSTRUCTION,



**TWO WORKING DAYS  
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OR  
UTILITY NOTIFICATION CENTER OF COLORADO  
1-800-922-1987  
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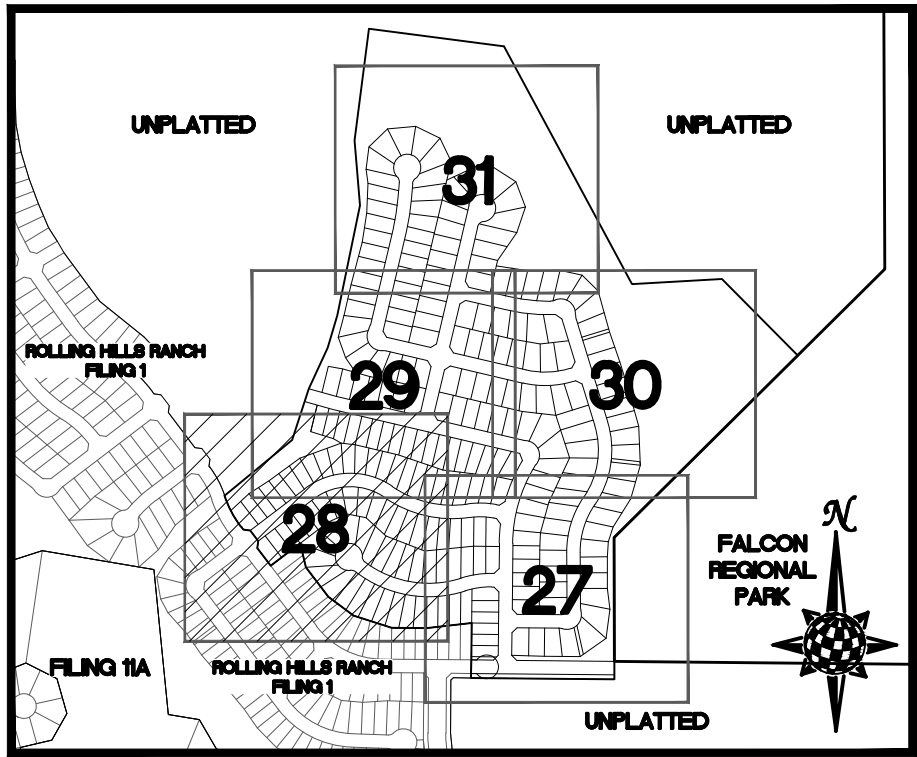
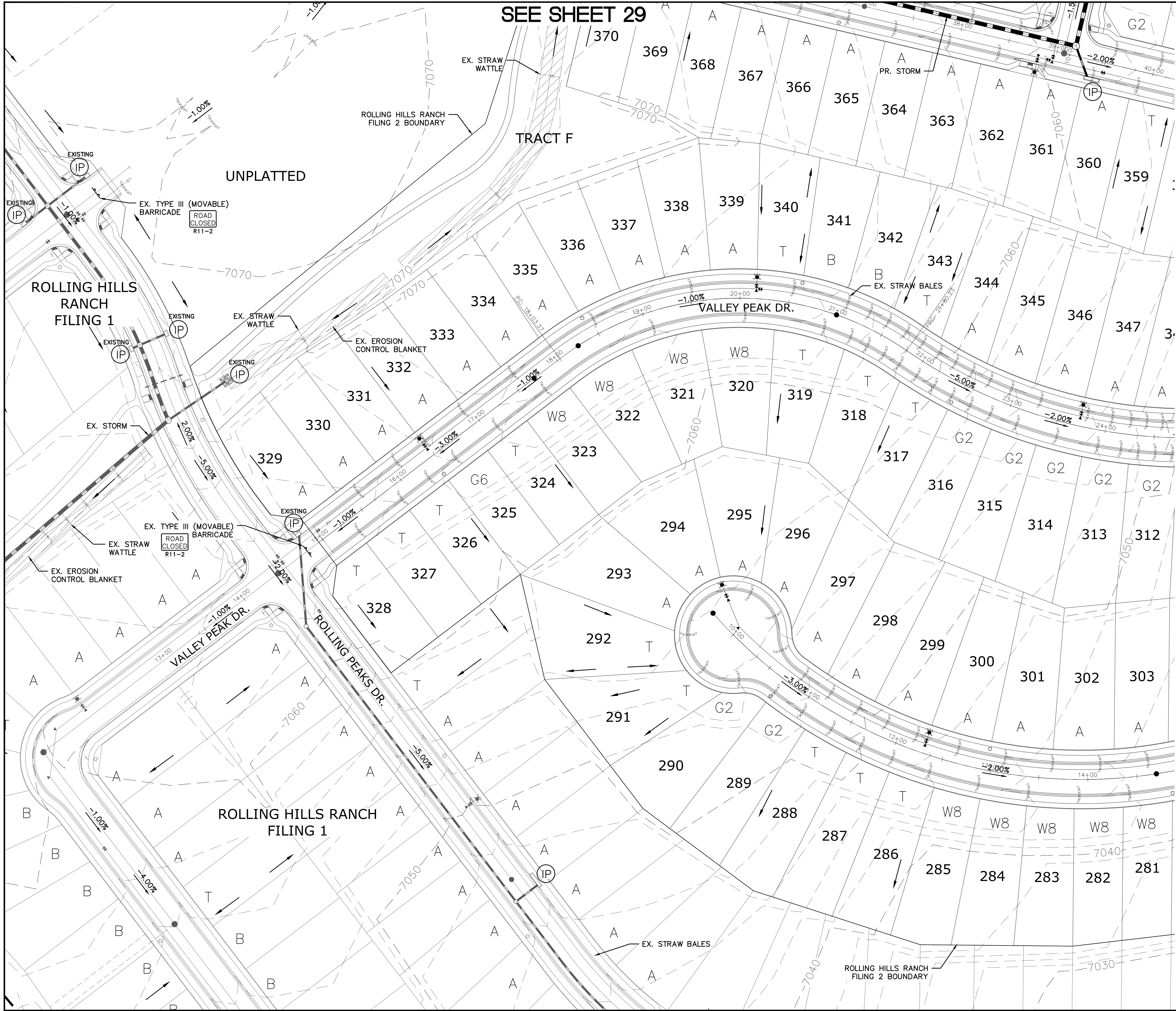


	Scale AS SHOWN	Drawn by LOJ	ROLLING HILLS RANCH FILING 2 AT MERIDIAN RANCH GRADING-EROSION CONTROL PLAN	 <b>MERIDIAN RANCH</b>	TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457	1								
		Checked by TAK				2								
	Date NOVEMBER 2020	26 of 34												
									No.	Revisions	Date	Invt.	Appr.	Date





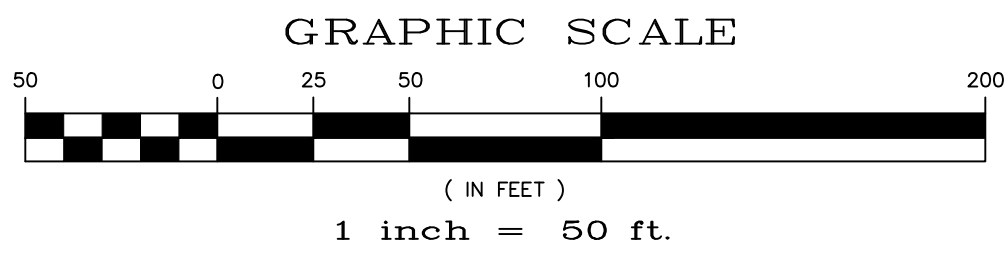
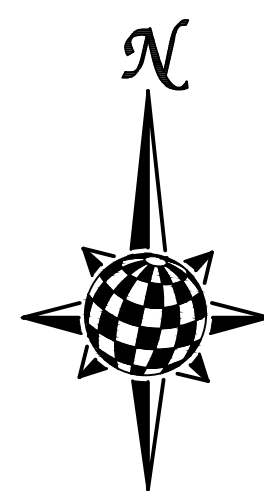




INDEX MAP  
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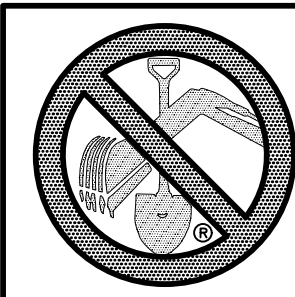
LEGEND

SYMBOL	ACRONYM	DESCRIPTION
		STRAW BALES (INITIAL)
		EROSION WATTLES (INTERIM) PER DETAIL SHEET 34
		EROSION CONTROL BLANKET (INTERIM) PER DETAIL ECB-1 & ECB-2 DCM VOL. 2
	RCP	REINFORCED CONCRETE PIPE
	SF	SILT FENCE (INITIAL) PER DETAIL SF-1, SF-2 & SF-3 DCM VOL. 2
	UTC	VEHICLE TRACKING CONTROL (INITIAL & INTERIM) PER DETAIL VT-2 DCM VOL. 2
	IP	INLET PROTECTION (INTERIM) PER DETAIL SHEET 34
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		LIMITS OF GRADING/CONSTRUCTION BOUNDARY
		FLOW DIRECTION
		GRADE
		LOT NUMBER
		LOT GRADE TYPE
		STORMWATER FLOW ARROW



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 33.

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



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FALCON, CO 80831  
TELEPHONE: 719.495.7444  
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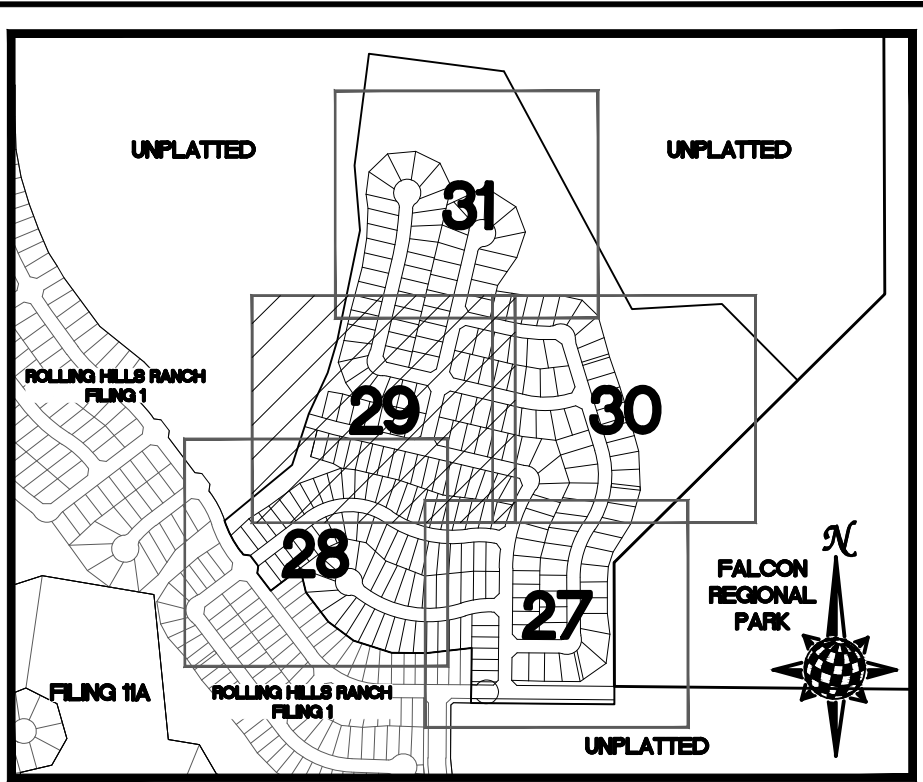
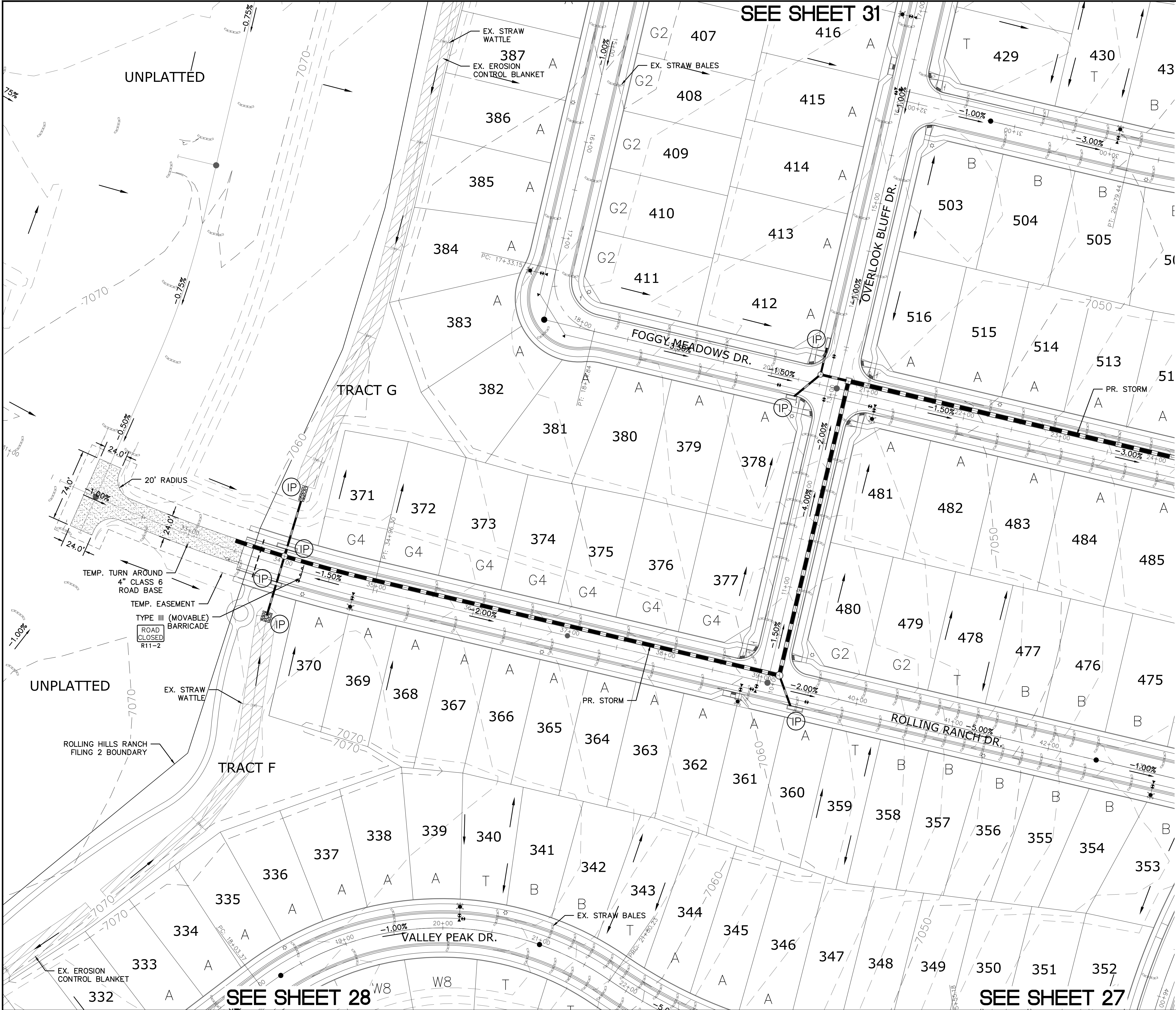


ROLLING HILLS RANCH FILING 2  
AT MERIDIAN RANCH  
GRADING/EROSION CONTROL PLAN  
GRADING LAYOUT

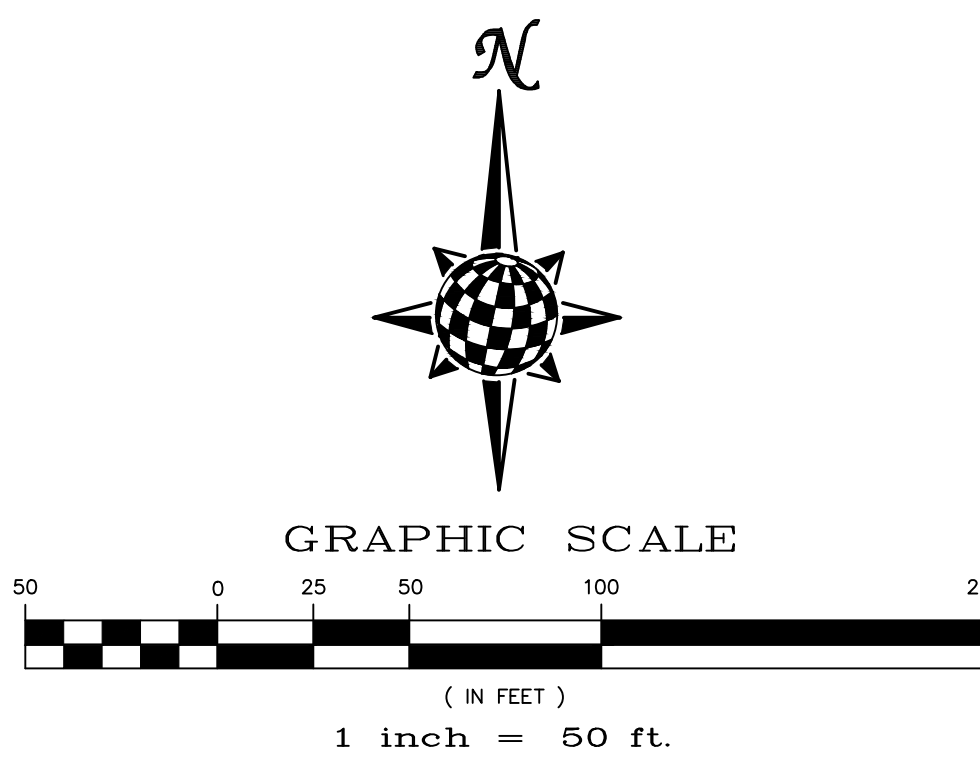
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AS SHOWN				NOVEMBER 2020
Scale				





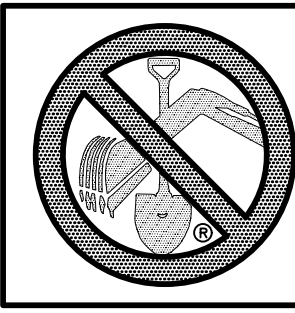


SYMBOL	ACRONYM	DESCRIPTION
		STRAW BALES (INITIAL)
		EROSION WATTLES (INTERIM)
		EROSION CONTROL BLANKET (INTERIM)
	RCP	REINFORCED CONCRETE PIPE
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	VT	VEHICLE TRACKING CONTROL (INITIAL & INTERIM) I DETAIL VT-2 DCM VOL. 2
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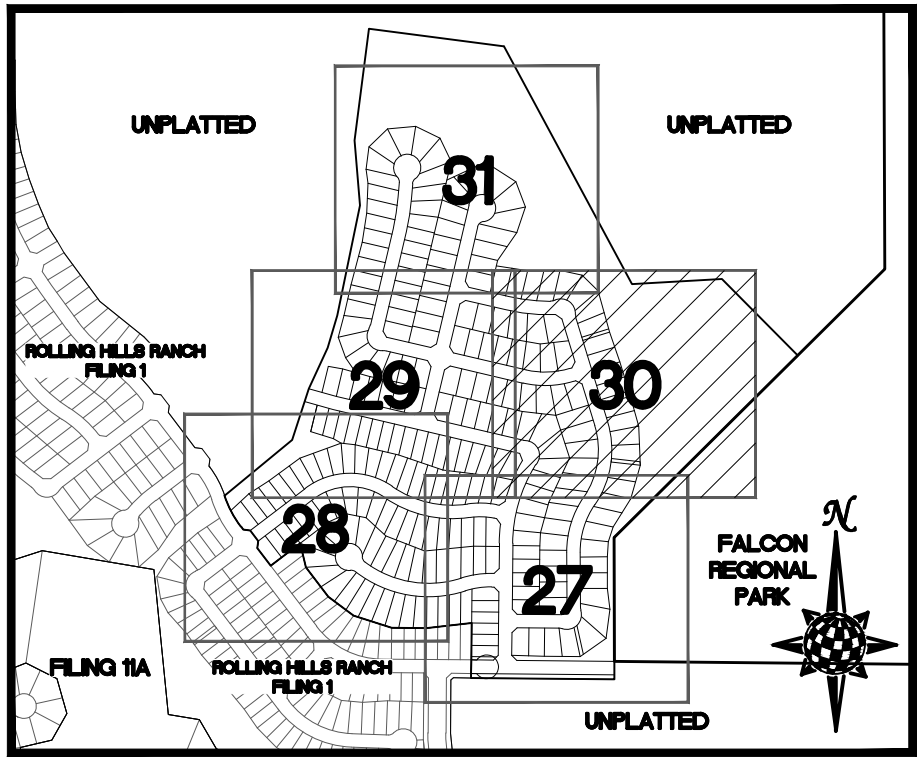
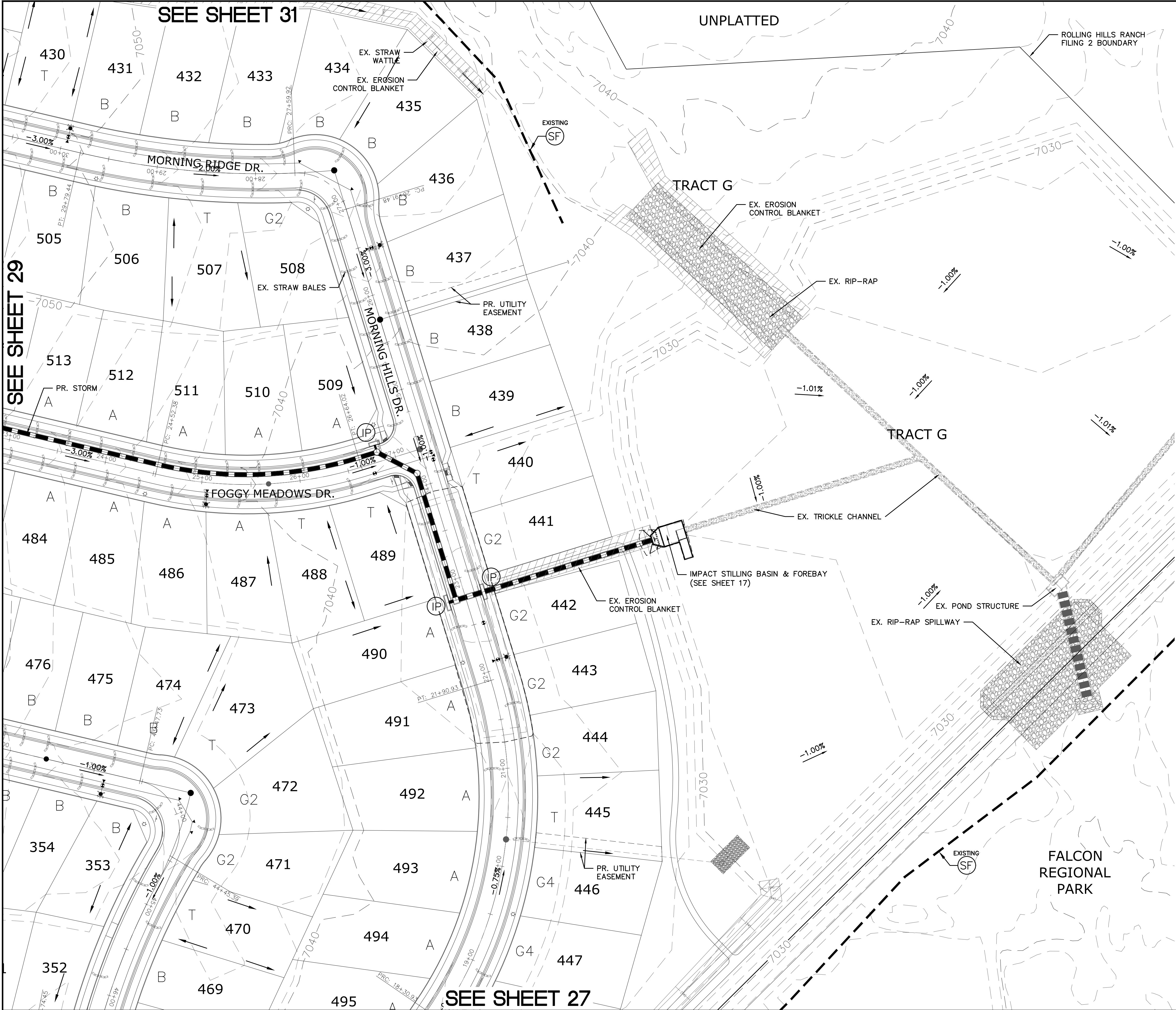
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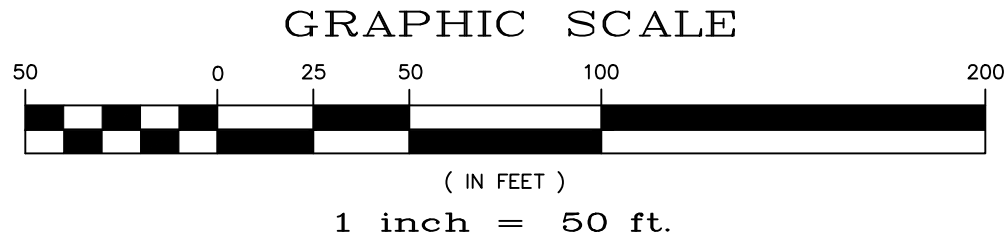
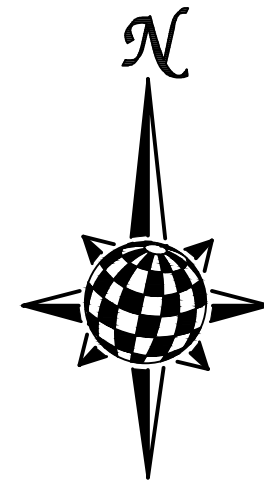




INDEX MAP  
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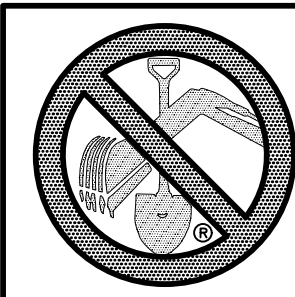
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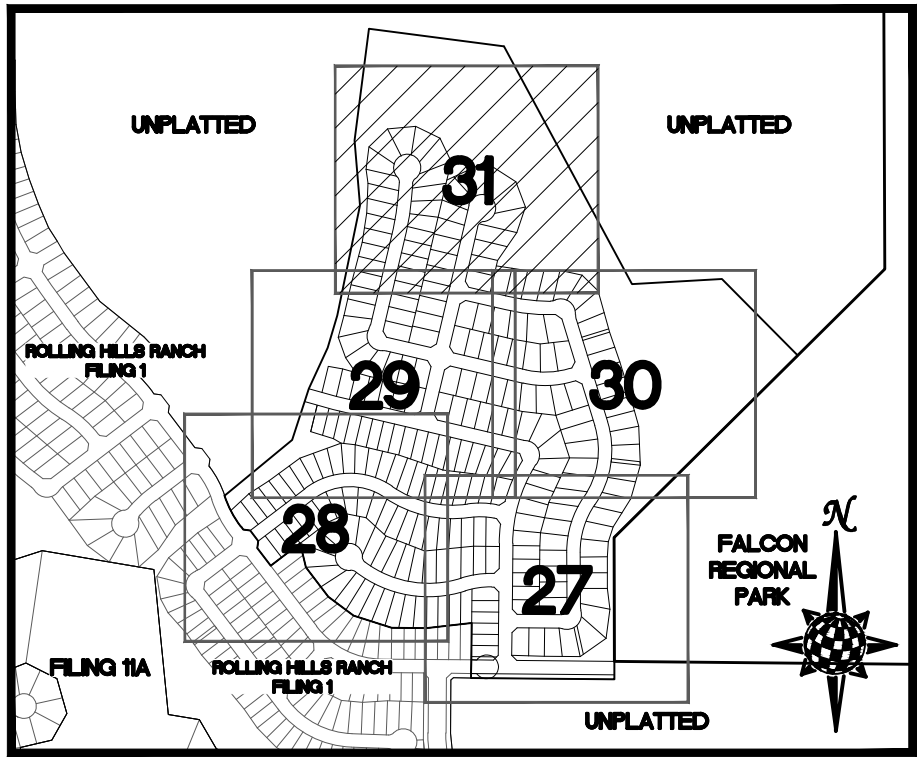
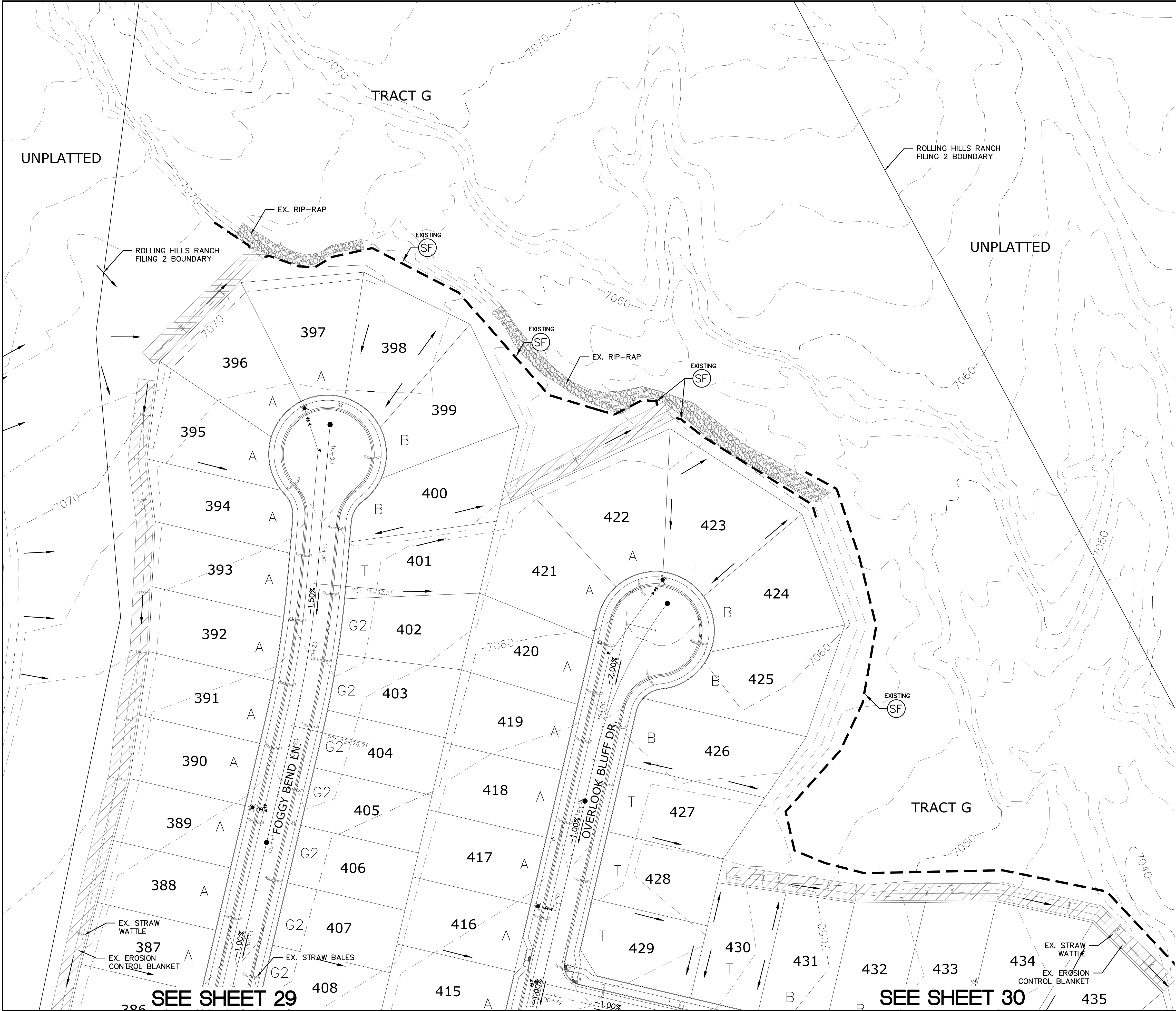


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AS SHOWN				30 of 34



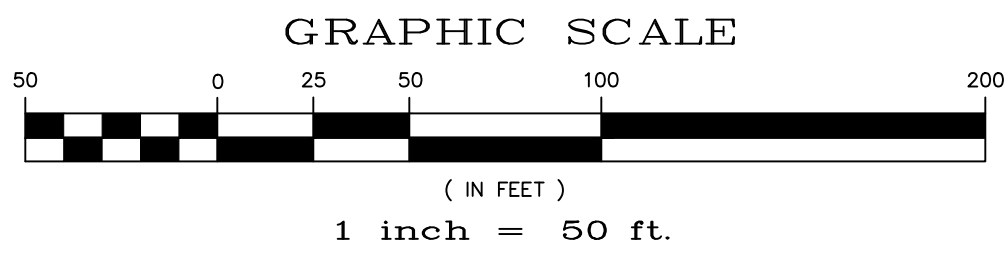
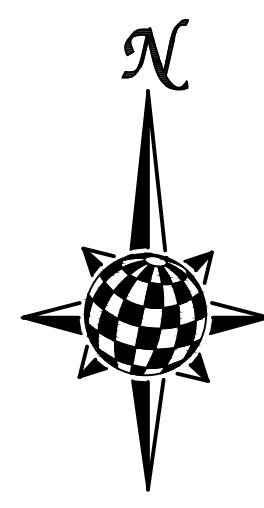




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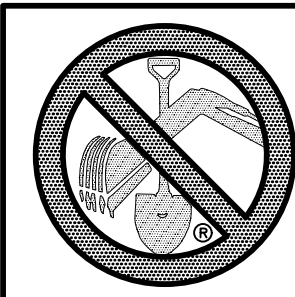
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		EXISTING CONTOUR (10')
		EXISTING CONTOUR (2')
		PROPOSED CONTOUR (10')
		PROPOSED CONTOUR (2')
		LIMITS OF GRADING/CONSTRUCTION BOUNDARY
		FLOW DIRECTION
		GRADE
		LOT NUMBER
		LOT GRADE TYPE
		STORMWATER FLOW ARROW



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 33.

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



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



ROLLING HILLS RANCH FILING 2  
AT MERIDIAN RANCH  
GRADING-EROSION CONTROL PLAN  
GRADING LAYOUT

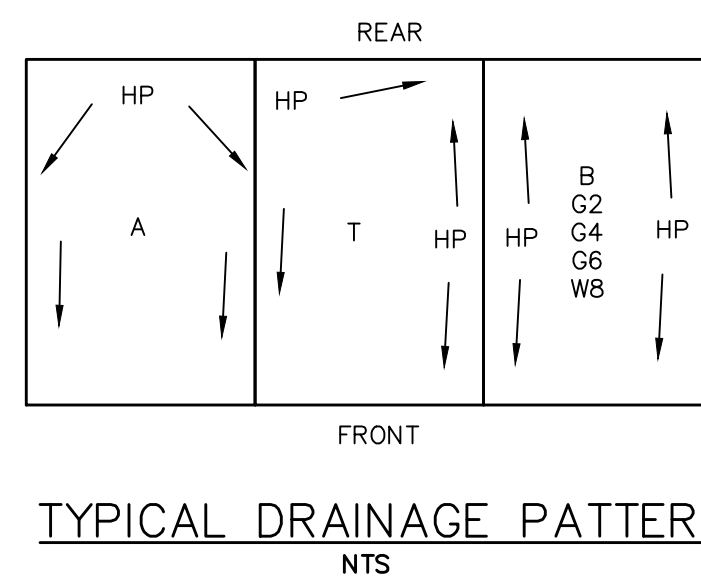
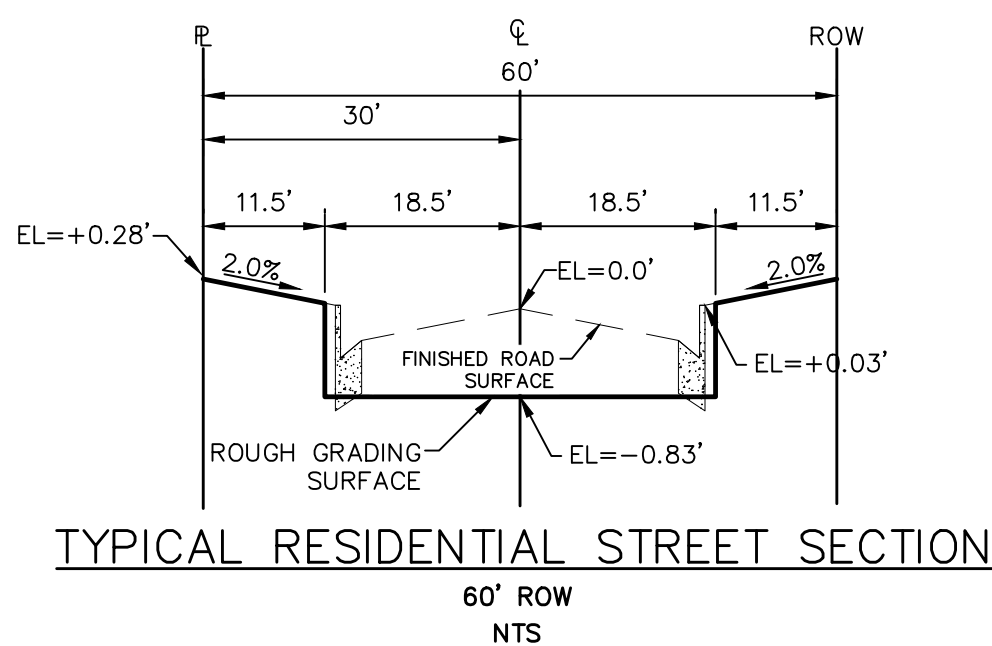
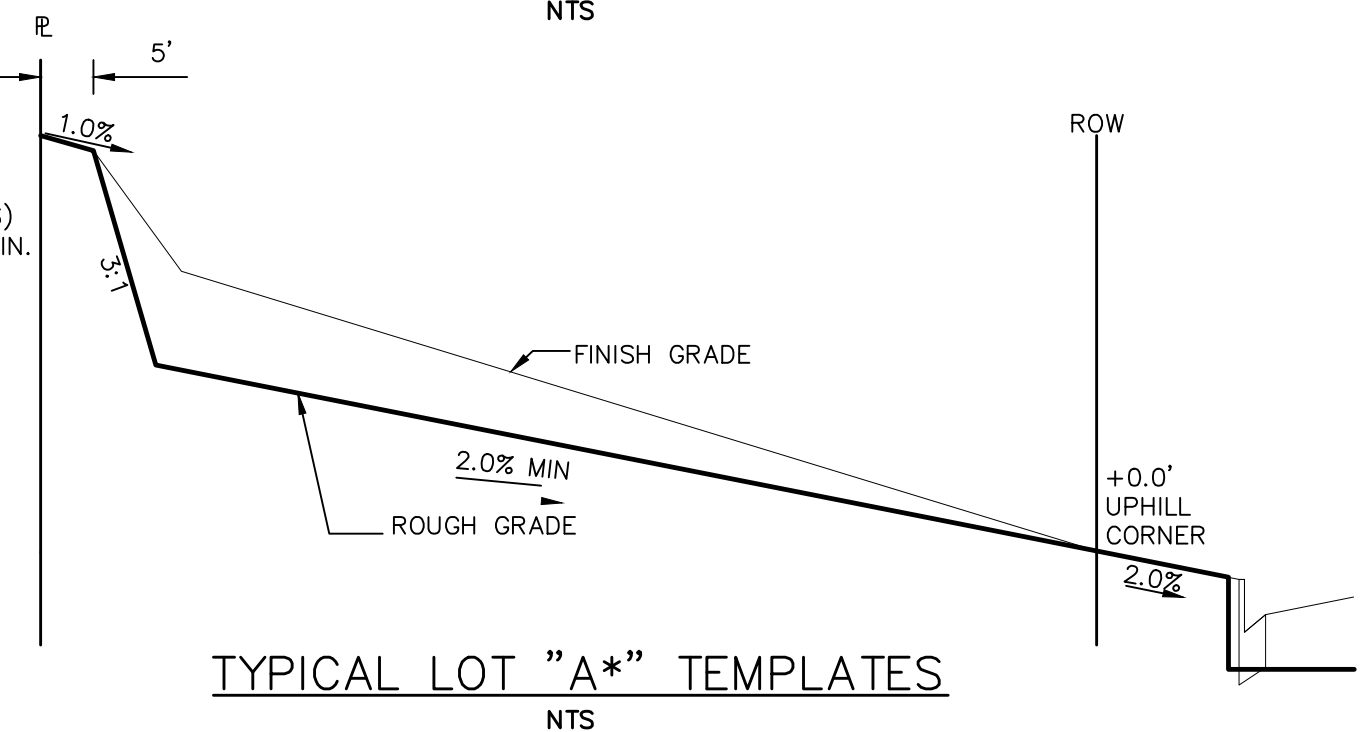
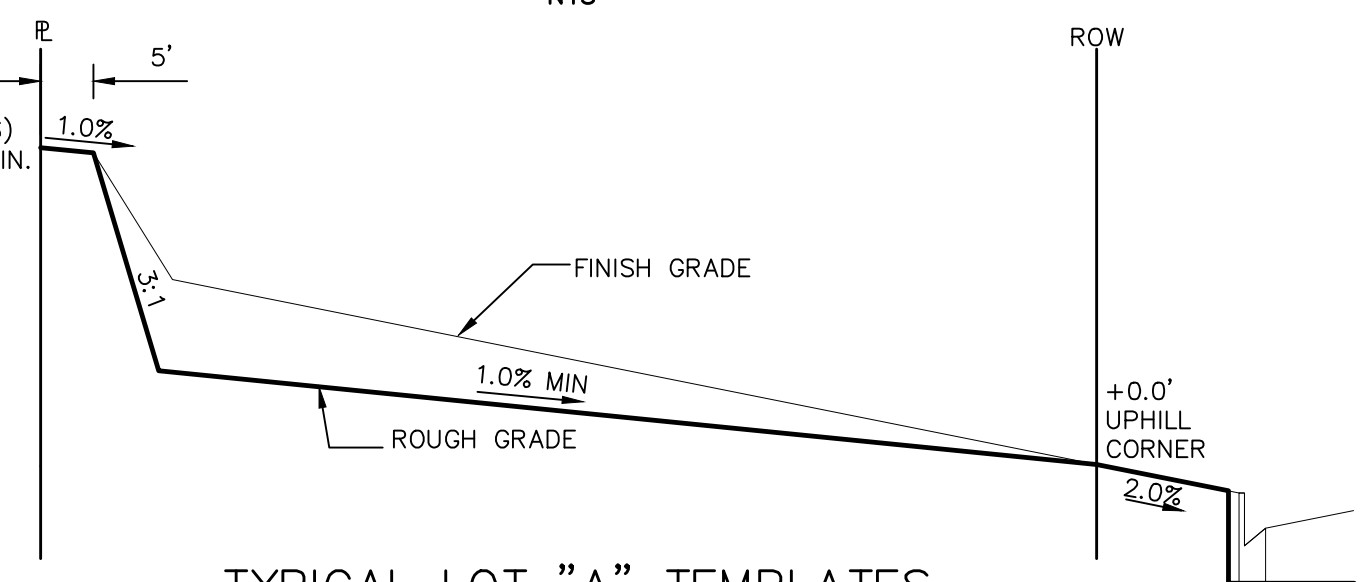
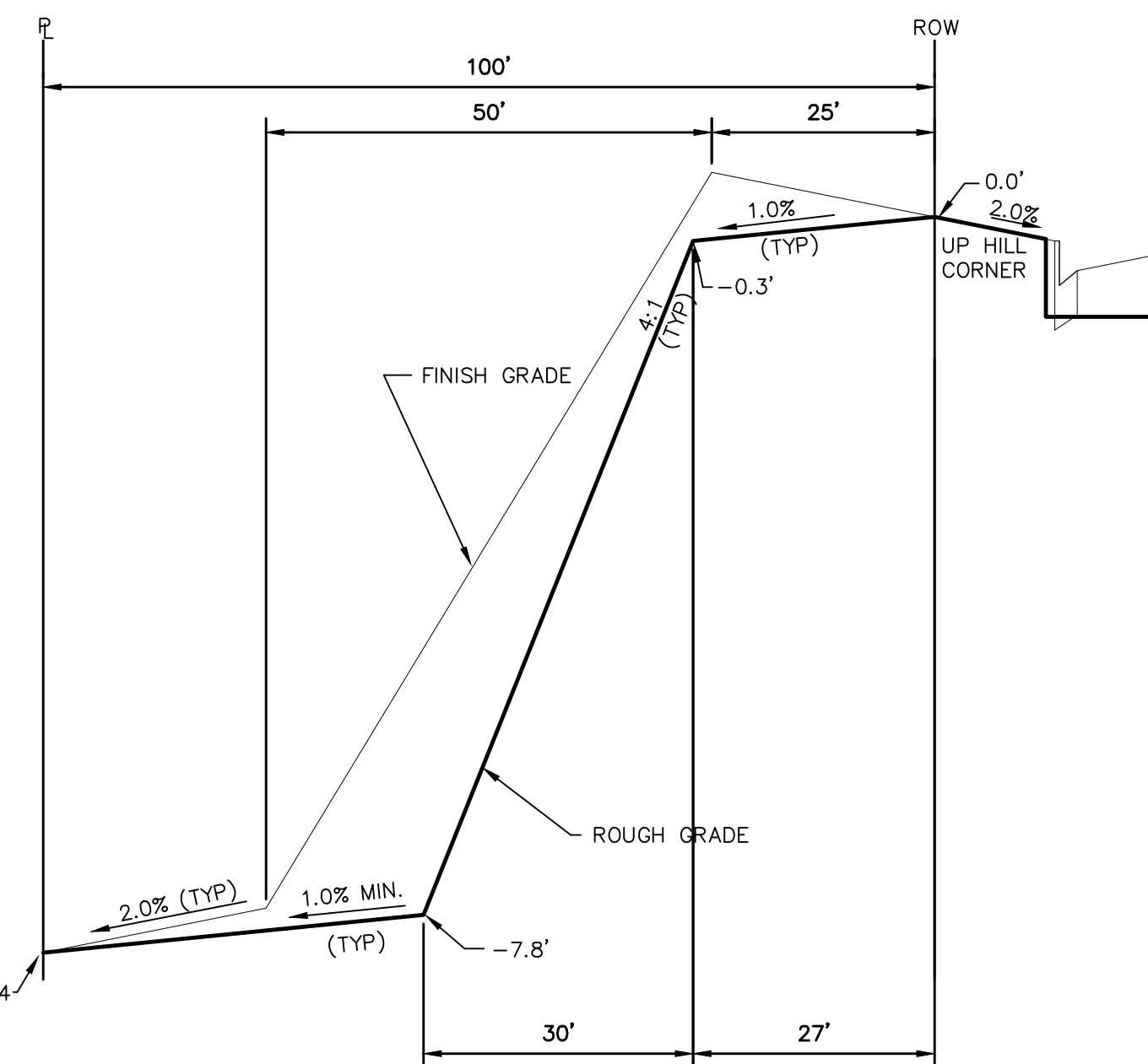
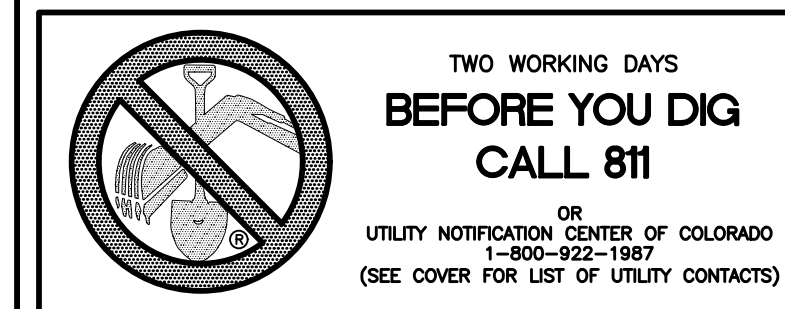
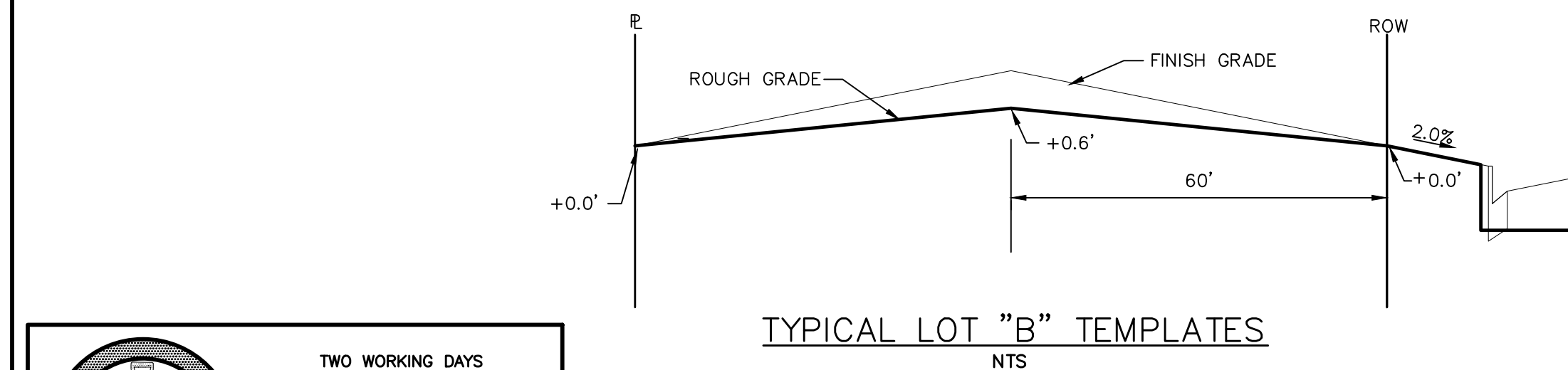
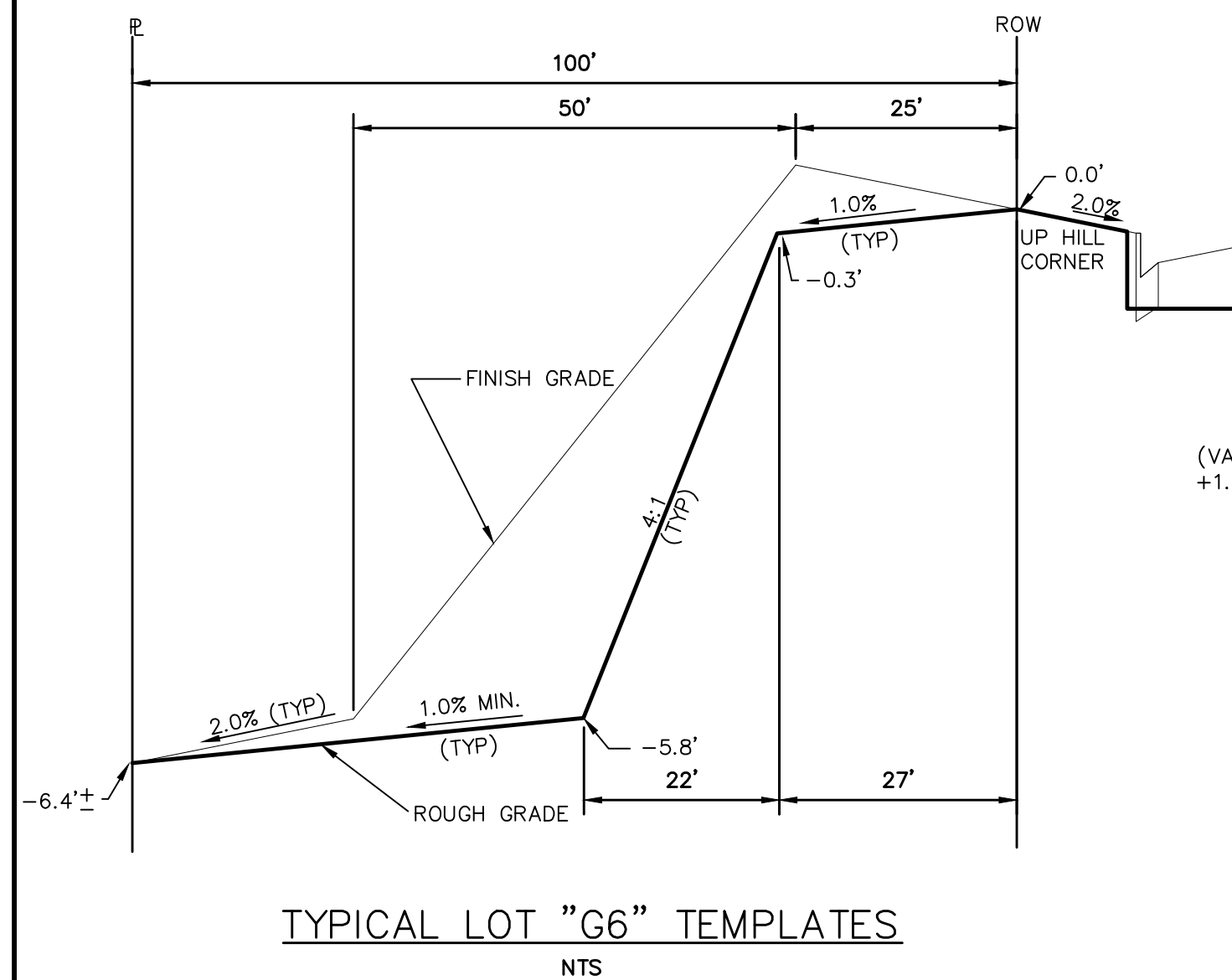
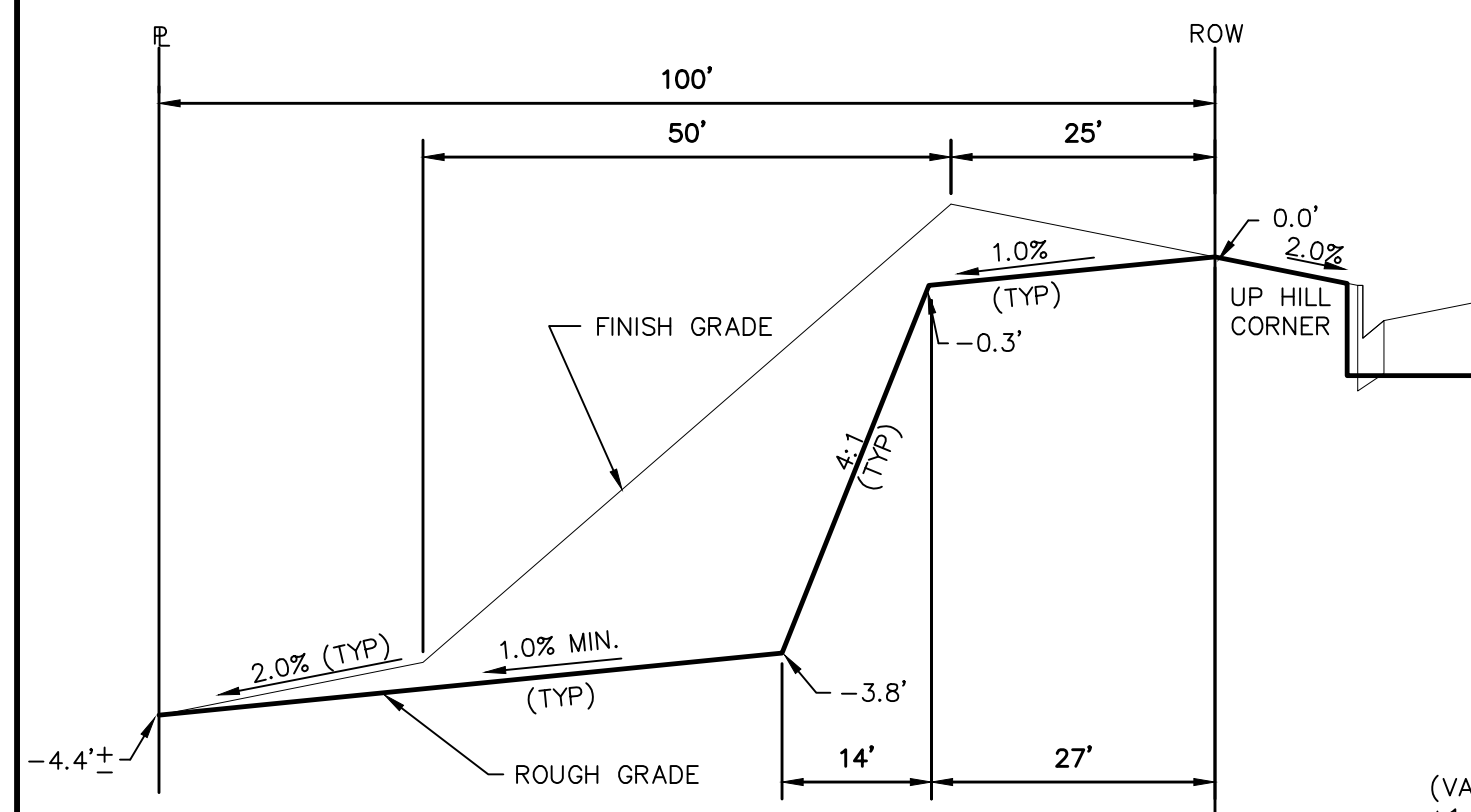
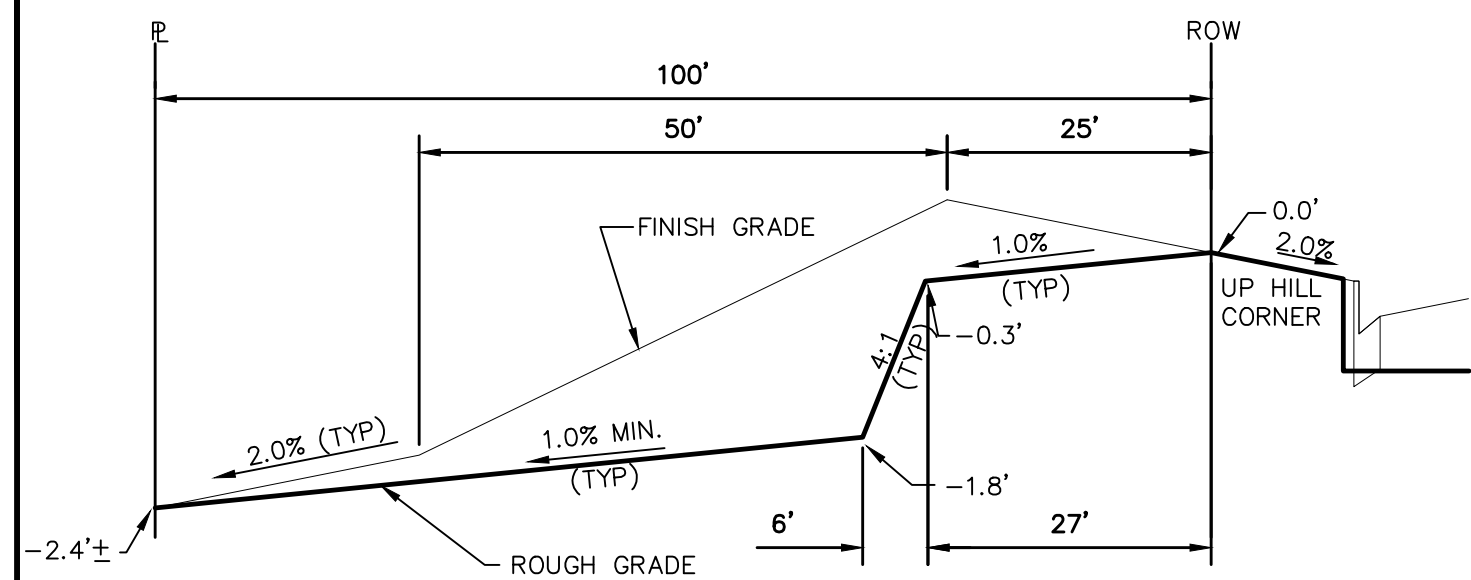
Scale	Drawn by	Log	Checked by	TAK	Date
AS SHOWN					NOVEMBER 2020
					31 of 34











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.

### STEPS FOR CONSTRUCTION

THE ANTICIPATED START FOR THIS PROJECT IS JANUARY 2021 WITH AN ANTICIPATED COMPLETION DATE OF SEPTEMBER 2021. 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 ALONG THE STREETS CAN BE REMOVED. AFTER COMPLETION OF THE STORM SEWER SYSTEM, THE STRAW BALES AND/OR FILTERS CAN BE REMOVED. AFTER ALL GROUND DISTURBING CONSTRUCTION HAS BEEN COMPLETED AND ALL SLOPES ARE 70% ESTABLISHED WITH VEGETATION AND ACCEPTANCE BY THE MERIDIAN RANCH SERVICE DISTRICT, REMAINING CHECK DAMS AND SILT FENCES CAN BE REMOVED. THE RIPRAP ON ANY OF THE OUTLETS WILL REMAIN. AFTER CONSTRUCTION TO REDUCE EROSION OF THE CHANNELS, ALL PERMANENT SWALES WILL BE LINED WITH LANDSCAPING TO SLOW RUNOFF AND FILTER SEDIMENTS.

## OTHER CONTROLS

THERE ARE SEVERAL BEST MANAGEMENT PRACTICES THAT CAN BE EMPLOYED TO PREVENT OR MITIGATE THE SOURCE OF POLLUTANTS AND CONTAMINATION OF STORMWATER RUNOFF. SOME OF THESE ARE:

- \* ALL REFUSE DUMPSTERS AND RECEPTACLES SHALL BE EQUIPPED WITH FUNCTIONAL LIDS TO PREVENT RAIN AND SNOW FROM ENTERING.
- \* STORAGE CONTAINERS, DRUMS AND BAGS SHALL BE STORED AWAY FROM DIRECT TRAFFIC ROUTES TO PREVENT ACCIDENTAL SPILLS.
- \* EMPTY DRUMS SHALL BE COVERED TO PREVENT COLLECTION OF PRECIPITATION.
- \* CONTAINERS SHALL BE STORED ON PALLETS OR OTHER DUNNAGE TO PREVENT CORROSION OF CONTAINERS, WHICH CAN RESULT WHEN CONTAINERS COME IN CONTACT WITH MOISTURE ON THE GROUND.
- \* REGULARLY SCHEDULED REMOVAL OF CONSTRUCTION TRASH AND DEBRIS.
- THE CONTRACTOR IS CERTAINLY NOT LIMITED TO THESE GOOD HOUSEKEEPING MEASURES, AND MAY IMPLEMENT FURTHER CONTROLS AS PRUDENCE AND GOOD JUDGEMENT DEEM NECESSARY.

## INSPECTION AND MAINTENANCE

A THOROUGH INSPECTION OF THE STORMWATER MANAGEMENT SYSTEM SHALL BE PERFORMED EVERY 14 DAYS AS WELL AS AFTER ANY RAIN OR SNOWMELT EVENT THAT CAUSES SURFACE EROSION:

- \* EROSION OF V-NOTCH SWALES, CHANNELS AND SIDE SLOPES SHALL BE REPAIRED.
- \* WHEN THE CHECK DAMS HAVE SILTED UP TO HALF THEIR HEIGHT, THE SILT SHALL BE REMOVED, CHANNEL GRADE REESTABLISHED, AND SIDE SLOPES RE-SEEDED IF NECESSARY. ANY CHECK DAMS THAT HAVE SHIFTED OR DECAYED SHALL BE REPAIRED OR REPLACED.
- \* SILT FENCES SHALL BE CLEANED WHENEVER SEDIMENT HAS REACHED A DEPTH OF 6" AT THE FENCE, AND BRUSH, WOODEN PARTS OR OTHERS 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 USED, GENERATE A SEEDING RATE OF 100 LBS. PER ACRE. APPLYING THE SEED MIX AND THE MULCH IN A SECOND OPERATION. UPON COMPLETION OF THE SEEDING OPERATION THE SITE SHOULD BE COVERED WITH WEEF FINE 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:	AMOUNT IN PLS.
GRASS	VARIETY	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

	Scale AS SHOWN	Drawn by Loca Checked by TAK Date NOVEMBER 2020	ROLLING HILLS RANCH FILING 2 AT MERIDIAN RANCH GRADING+EROSION CONTROL PLAN  GRADING DETAIL SHEET	 <b>MERIDIAN RANCH</b>	TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831  TELEPHONE: 719.495.7444 FAX: 719.495.2457	1						
						2						
	33 of 34	3										
		4										
		No.	Revisions	Date	Inst.	Appr.	Date					



