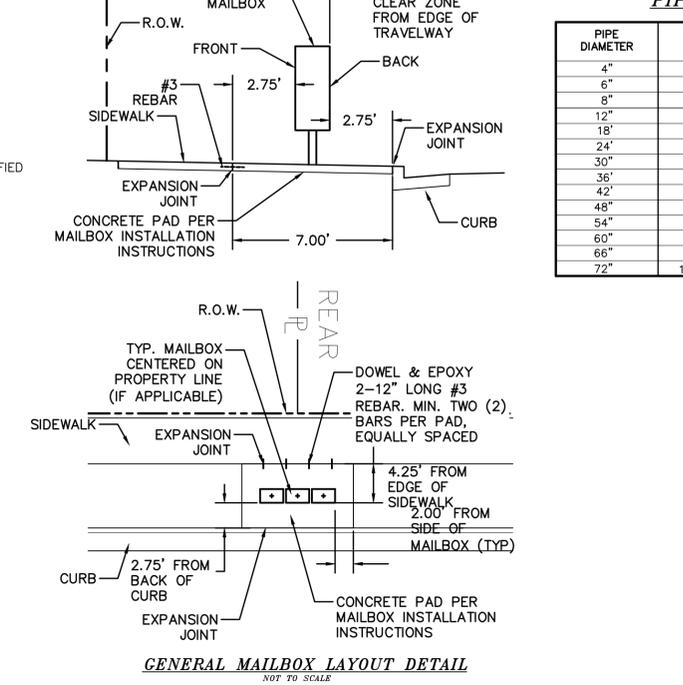
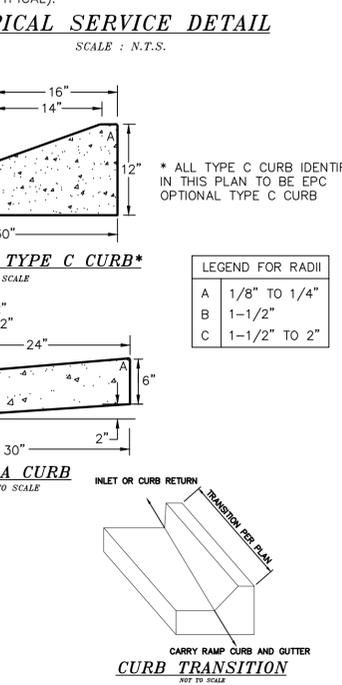
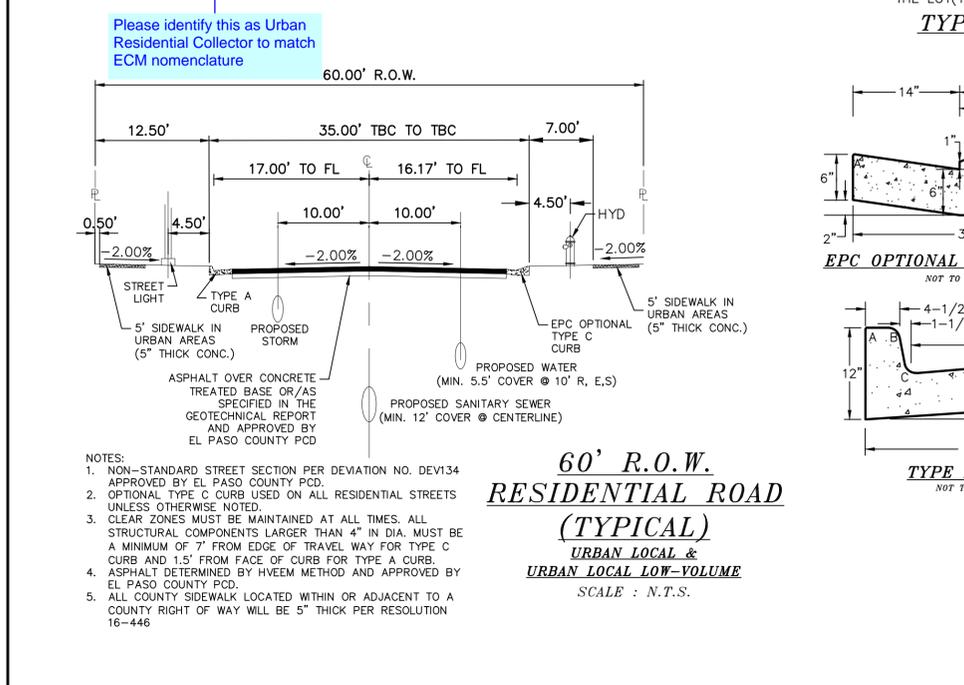
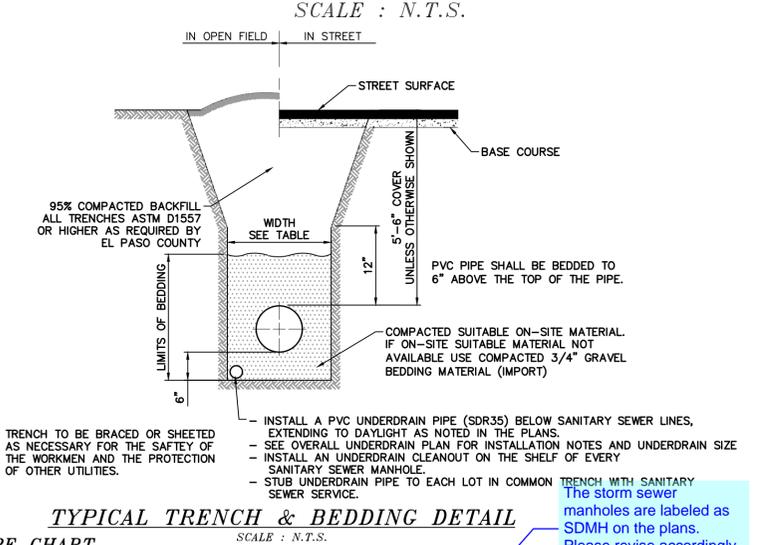
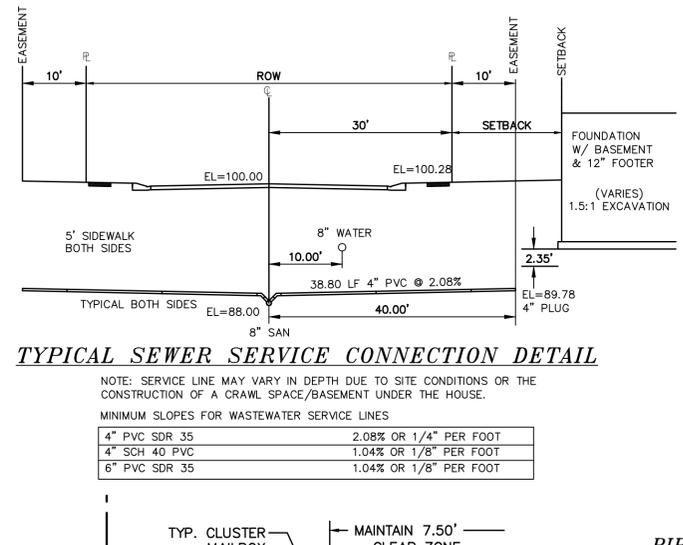
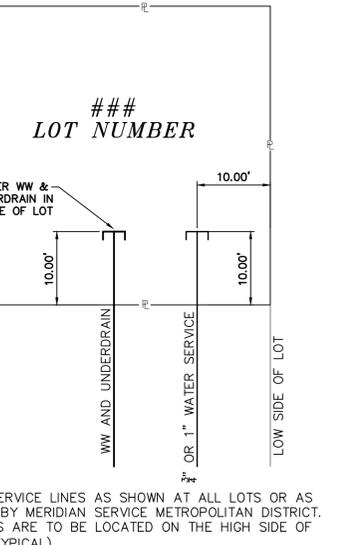
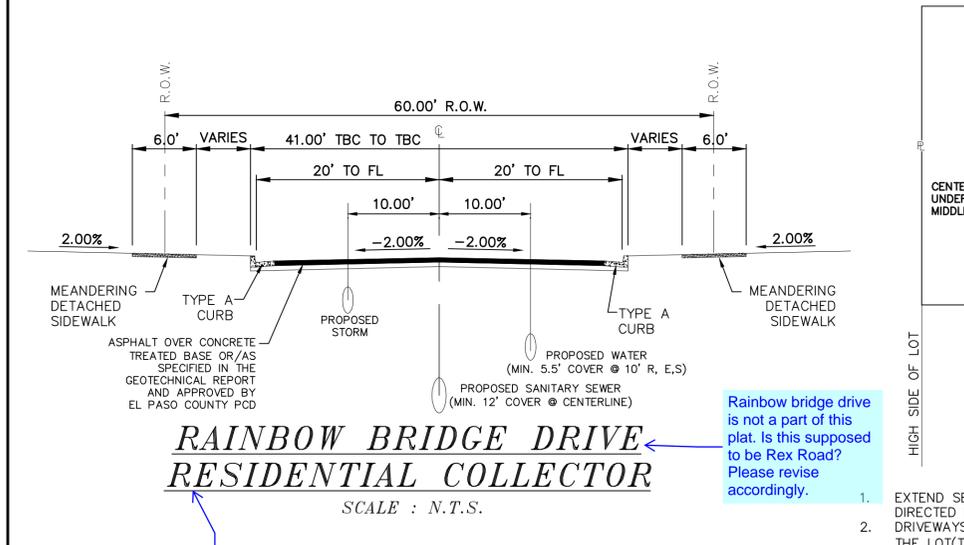
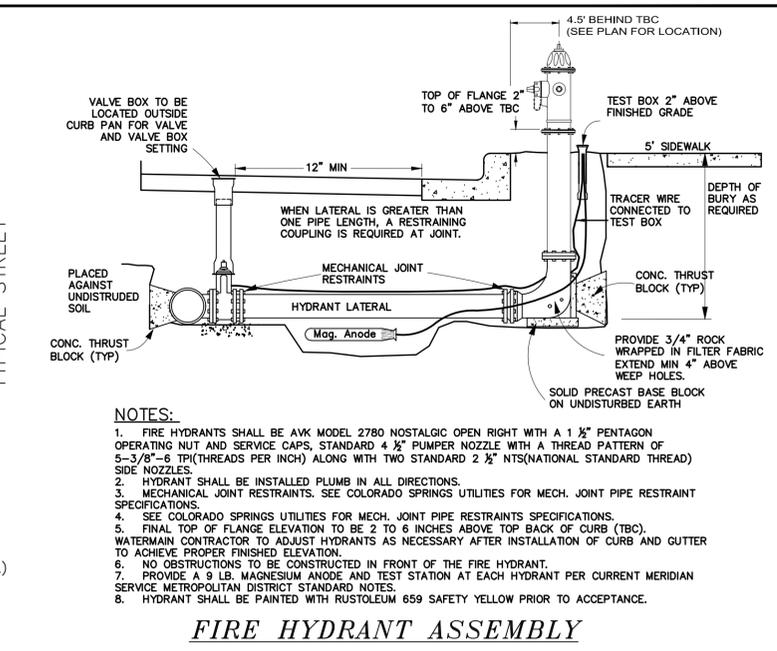
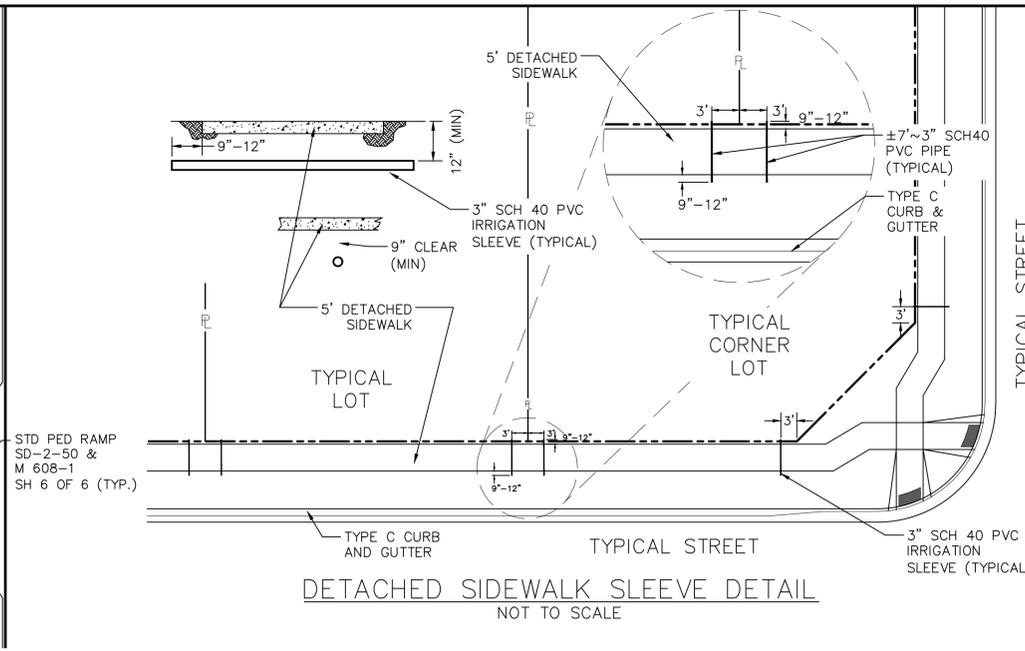
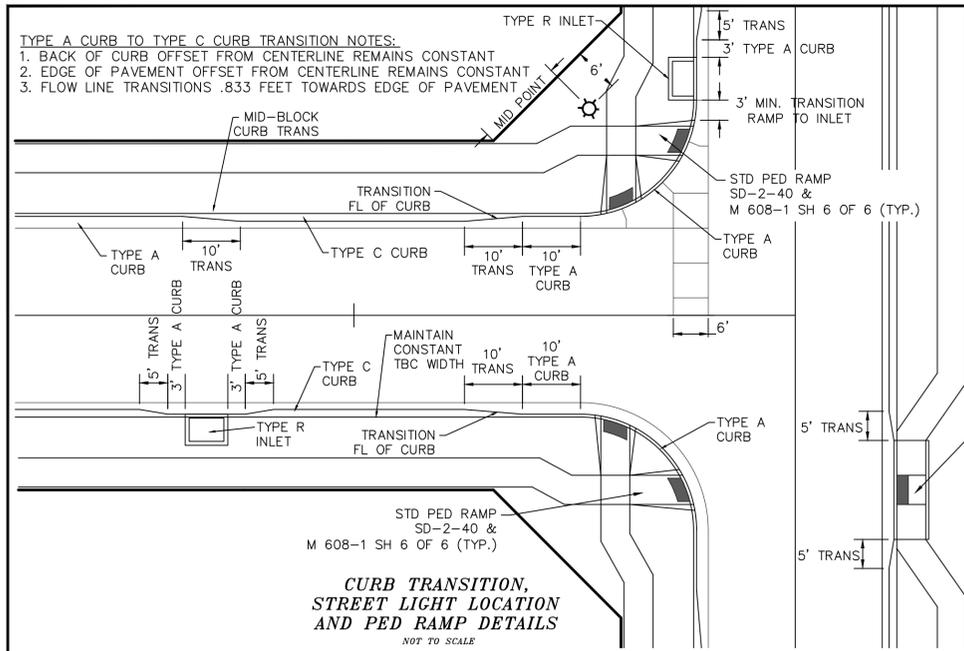


Scale		AS SHOWN	2 of 26	Date	AUG 2019
Drawn by	LOG	Checked by	TAK		
THE ESTATES AT ROLLING HILLS RANCH FILING 1 STREET AND UTILITY PLANS INDEX SHEET					
 <b>MERIDIAN RANCH</b>					
TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457					
1			No.	Date	Appr.
2					
3					
4					
Revisions					





**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
[Symbol]	RCP W/FES	REINFORCED CONCRETE PIPE W/FLARED END SECTIONS
[Symbol]	INLET	STORM SEWER INLET BOX
[Symbol]	STMH	STORM SEWER MANHOLE
[Symbol]	ST	STORM SEWER LINE
[Symbol]	SS	SANITARY SEWER MAIN
[Symbol]	SSMH	SANITARY SEWER MANHOLE
[Symbol]	WM	WATER MAIN (ALL PIPES PVC, UNLESS OTHERWISE NOTED)
[Symbol]	GV	WATER GATE VALVE
[Symbol]	BV	WATER BUTTERFLY VALVE
[Symbol]	BOV	WATER BLOW-OFF VALVE
[Symbol]	HYD ASSY	FIRE HYDRANT ASSEMBLY
[Symbol]	TEE W/GV	WATER TEE W/ GATE VALVES
[Symbol]	ATT SW	ATTACHED SIDEWALK
[Symbol]		STANDARD PEDESTRIAN RAMP PER SD-2-40 & M-608-1 (SH 6 OF 6)
[Symbol]		ANODE (CATHODIC PROTECTION)
[Symbol]	TS	TEST STATION
[Symbol]	HB	HAY BALE DAM
[Symbol]	SF	SILT FENCE
[Symbol]	EXIST	EXISTING FEATURES
[Symbol]		LOT NUMBERS
[Symbol]	PI	CROSS PAN PER SD-2-26
[Symbol]	BT	BEGINNING OF TRANSITION
[Symbol]	ET	END OF TRANSITION
[Symbol]		EXISTING CONTOUR (10')
[Symbol]		EXISTING CONTOUR (2')

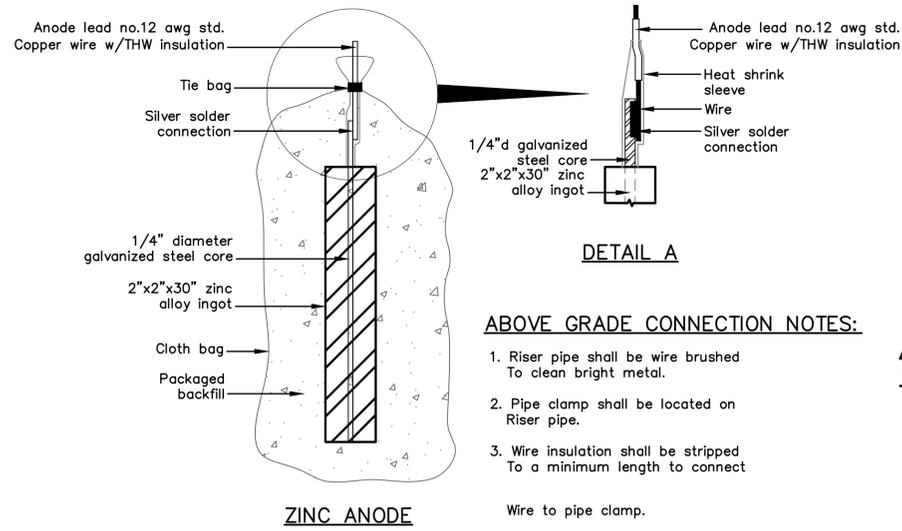
TECH CONTRACTORS  
 11886 STAPLETON DRIVE  
 FALCON, CO 80831  
 TELEPHONE: 719.495.7444  
 FAX: 719.495.2457

**MERIDIAN RANCH**

THE ESTATES AT ROLLING HILLS RANCH FILING 1  
 STREET AND UTILITY PLANS  
 DETAIL SHEET

Scale AS SHOWN  
 Drawn by LOG  
 Checked by TJK  
 Date AUG 2019  
 4 of 26

Revisions  
 No. 1, 2, 3, 4  
 Date  
 Invt.  
 Appr.

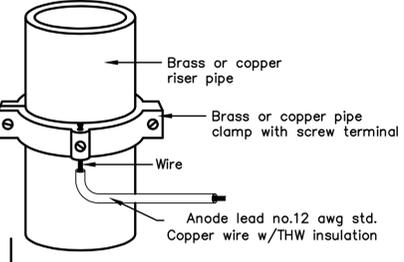


**ZINC ANODE AND CONNECTORS FOR 1" AND 2" WATER SERVICE**

**PACKAGED BACKFILL COMPOSITION:**

75% gypsum  
20% bentonite  
5% sodium sulfate

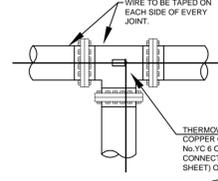
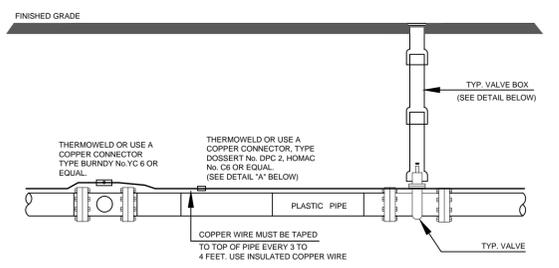
Ingot weight: 30 lbs.  
Pkgd. Weight: 70 lbs. Approx.



**ANODE LEAD ABOVE GRADE CONNECTION**

**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



**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. 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.

**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:**

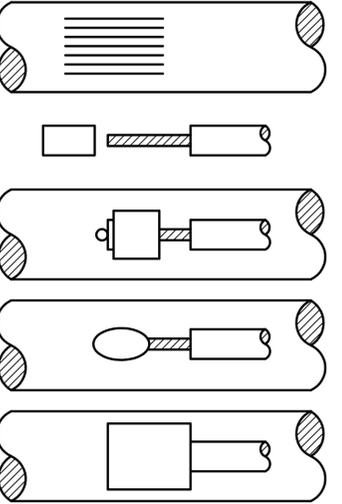
PLACE TUBE OF POLYETHYLENE MATERIAL ON PIPE PRIOR TO LOWERING IT INTO TRENCH.

**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.

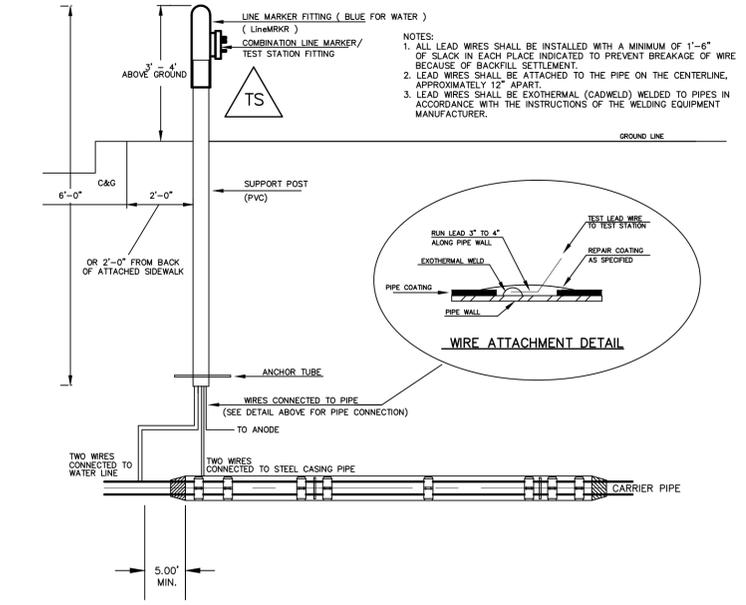


- STEP 1.** File structure connection area (3 in x 3 in) to bare shiny metal and clean.
- STEP 2.** Strip insulation from wire. Attach sleeve where required by manufacturer.
- STEP 3.** Hold mold firmly with opening away from operator and ignite with flint gun.
- STEP 4.** Remove slag from connection and peen weld for soundness.
- STEP 5.** Cover connection and exposed structure surface with a bituminous coating compound. Place plastic shield cap firmly over connection.

**NOTES:**

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

**EXOTHERMIC WELD PROCESS**



**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.
1			
2			
3			
4			

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



THE ESTATES AT ROLLING HILLS RANCH FILING 1  
STREET AND UTILITY PLANS  
DETAIL SHEET

Drawn by	LOG	Checked by	TAK	Date	AUG 2019
Scale	AS SHOWN	5	of	26	

**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)

**NOTE:**  
ALL EXISTING VALVES, MANHOLES,  
HYDRANTS, ECT. TO BE ADJUSTED TO  
FINISHED GRADE AS NECESSARY.

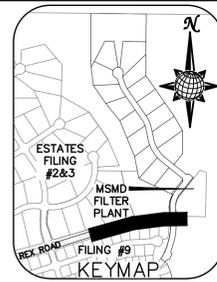
Please indicate the  
MUTCD sign  
designation (i.e.  
R1-1) and dimensions  
of the stop signs, typ.

Please indicate if this  
is at centerline or  
flowline.

Identify the road as  
Urban Residential  
Collector

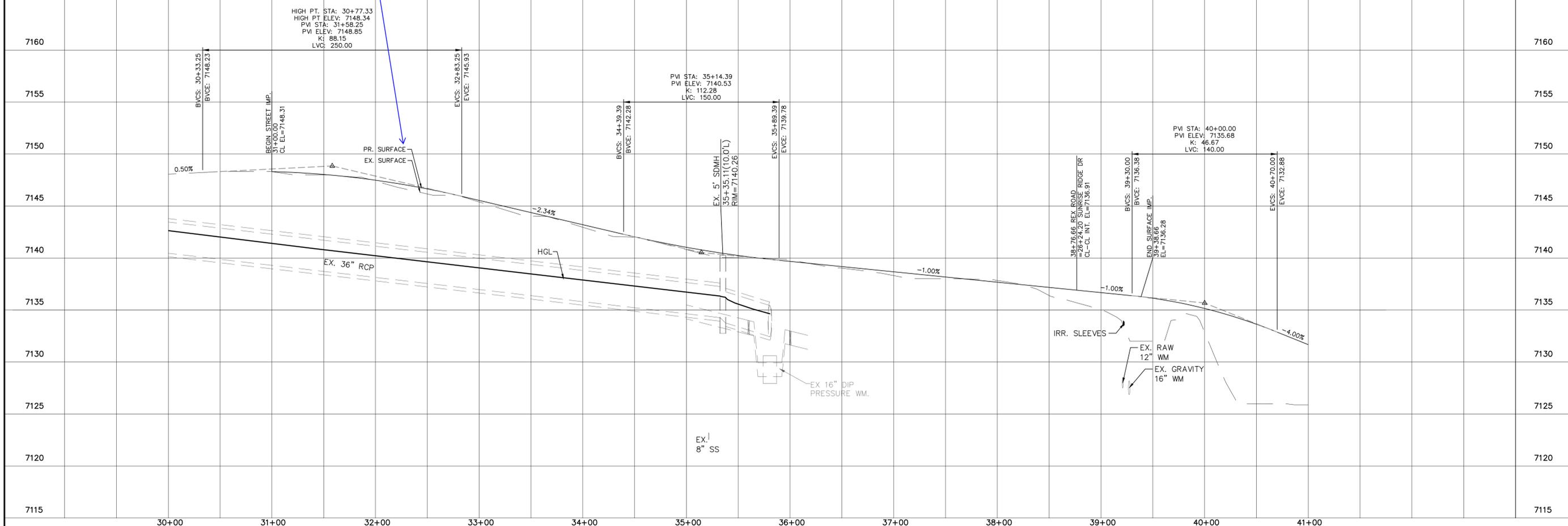
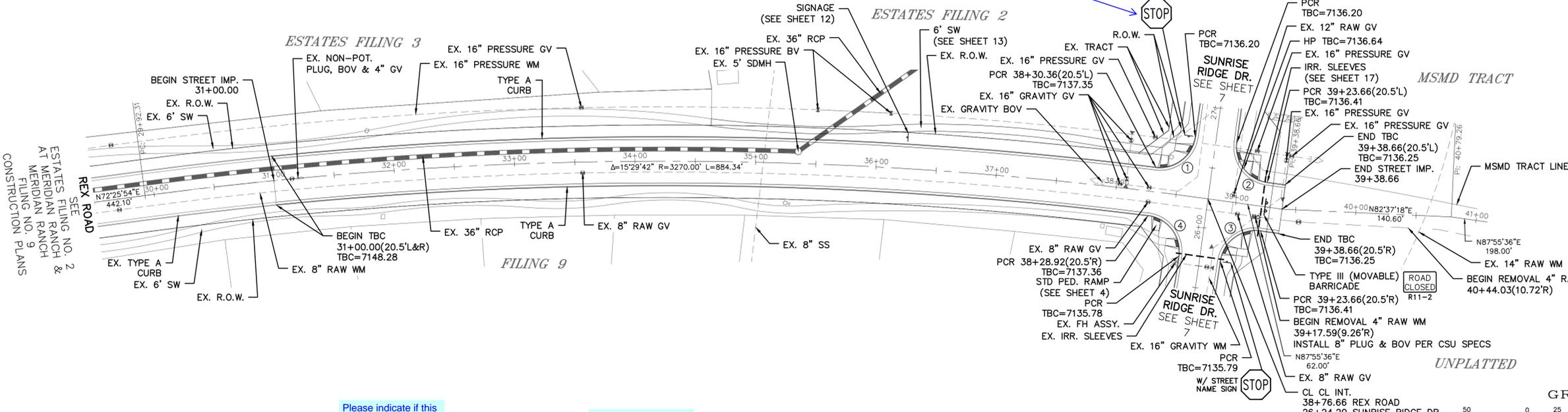
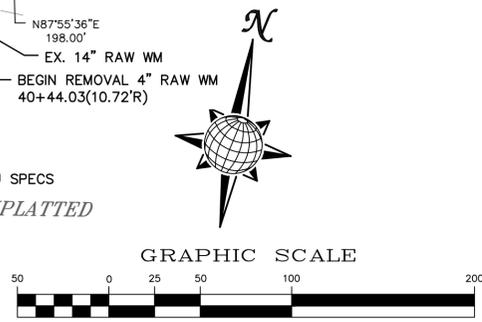
# REX ROAD

RESIDENTIAL COLLECTOR  
60' WIDE RIGHT OF WAY, 36' WIDE ASPHALT PAVEMENT (EDGE TO EDGE)

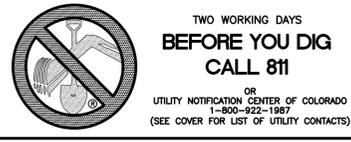


CURVE	LENGTH	RADIUS	DELTA
1	45.92'	29.50'	89°11'20"
2	46.34'	29.50'	90°00'00"
3	46.34'	29.50'	90°00'00"
4	46.77'	29.50'	90°50'11"

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

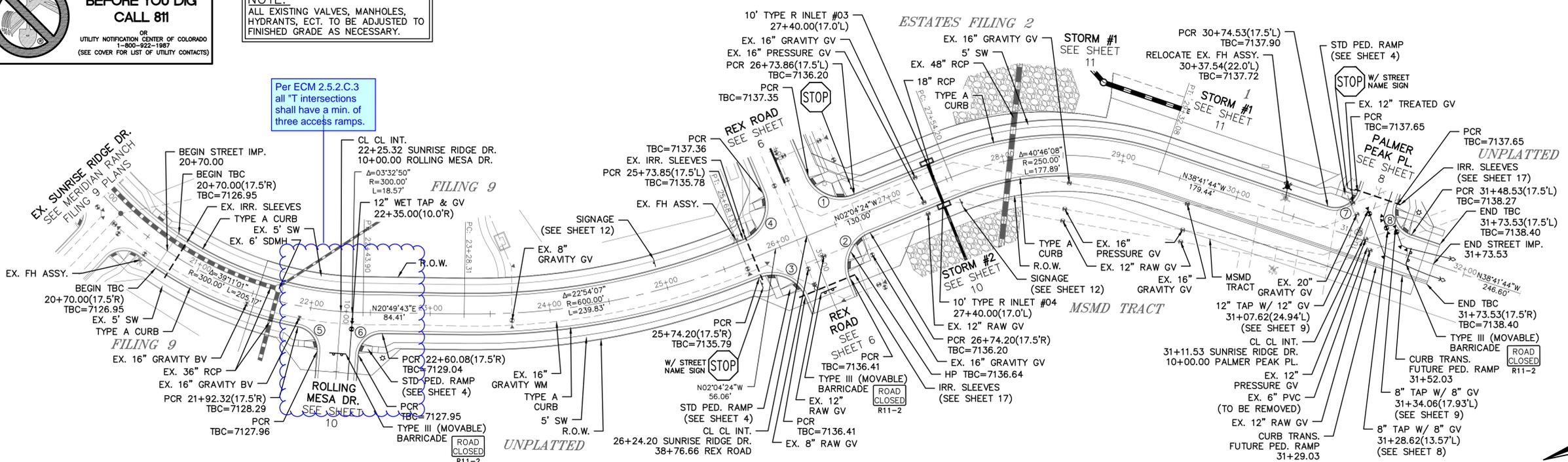


1	2	3	4	No.	Revisions
<p>TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457</p>					
<p><b>MERIDIAN RANCH</b></p>					
<p>THE ESTATES AT ROLLING HILLS RANCH FILING 1 STREET AND UTILITY PLANS REX ROAD</p>					
Scale	AS SHOWN	6 of 26	Date	AUG 2019	
Drawn by	LOG	Checked by	TAK		



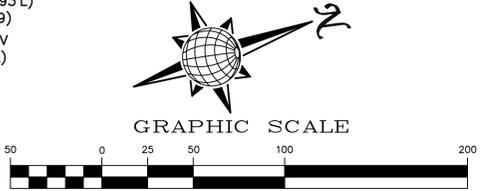
**NOTE:**  
ALL EXISTING VALVES, MANHOLES, HYDRANTS, ECT. TO BE ADJUSTED TO FINISHED GRADE AS NECESSARY.

Per ECM 2.5.2.C.3 all "T" intersections shall have a min. of three access ramps.



CURVE	LENGTH	RADIUS	DELTA
1	45.92'	29.50'	89°11'20"
2	46.34'	29.50'	90°00'00"
3	46.34'	29.50'	90°00'00"
4	46.77'	29.50'	90°50'11"
5	28.49'	19.50'	83°41'48"
6	29.42'	19.50'	86°27'10"
7	30.63'	19.50'	90°00'00"
8	30.63'	19.50'	90°00'00"

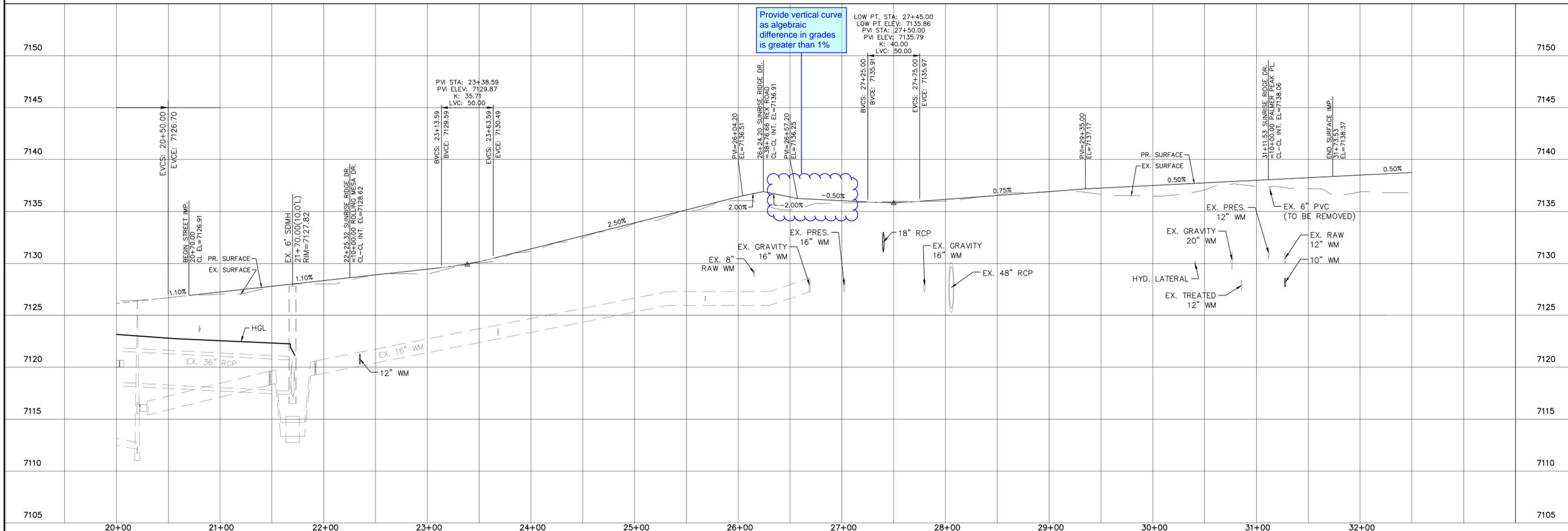
ALL CURB RADII ARE TO TOP BACK OF CURB (TYP.)



# SUNRISE RIDGE DR.

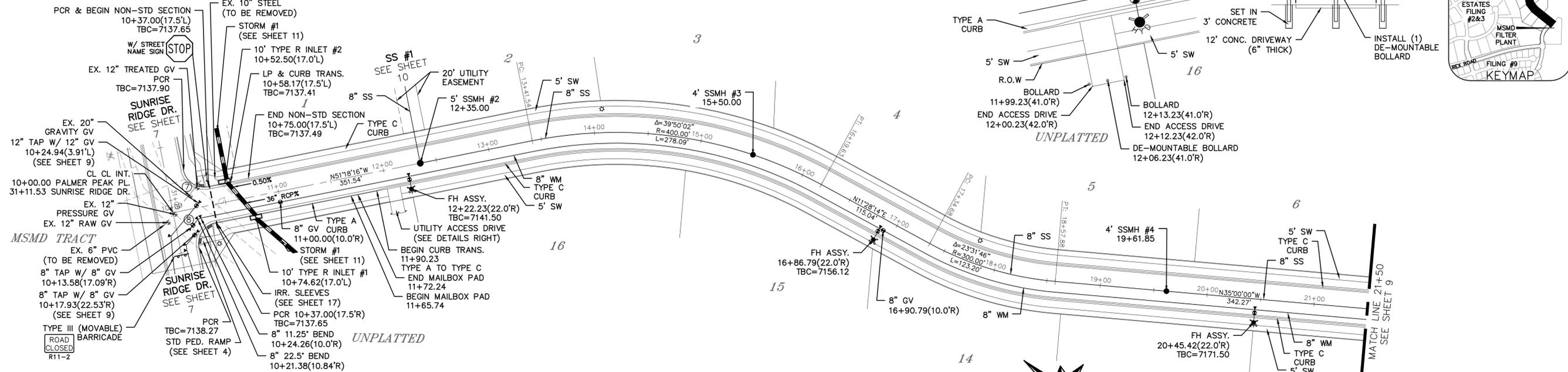
URBAN LOCAL  
60' WIDE RIGHT OF WAY, 30' WIDE ASPHALT PAVEMENT (EDGE TO EDGE)

Provide vertical curve as algebraic difference in grades is greater than 1%



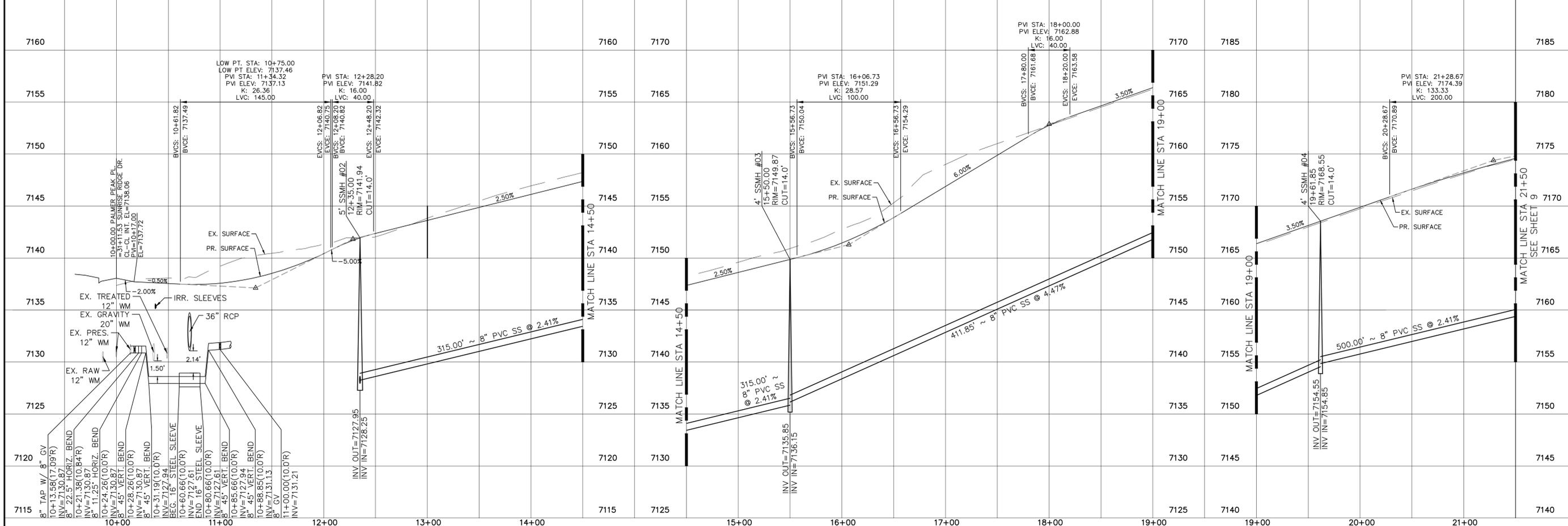
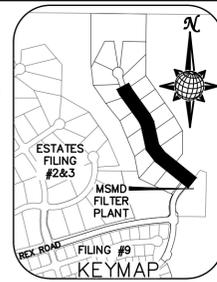
Scale	AS SHOWN	7 of 26	Date	AUG 2019												
	Drawn by				LOG	Checked by	TAK									
THE ESTATES AT ROLLING HILLS RANCH FILING 1 STREET AND UTILITY PLANS																
SUNRISE RIDGE DR.																
TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457																
<b>MERIDIAN RANCH</b>																
<table border="1"> <tr> <th>No.</th> <th>Revisions</th> <th>Date</th> <th>Instr.</th> <th>Appr.</th> <th>Date</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>					No.	Revisions	Date	Instr.	Appr.	Date						
No.	Revisions	Date	Instr.	Appr.	Date											

**NOTE:**  
ALL EXISTING VALVES, MANHOLES, HYDRANTS, ECT. TO BE ADJUSTED TO FINISHED GRADE AS NECESSARY.

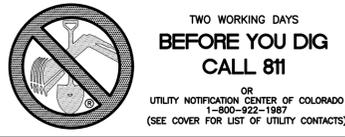


# PALMER PEAK PL.

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



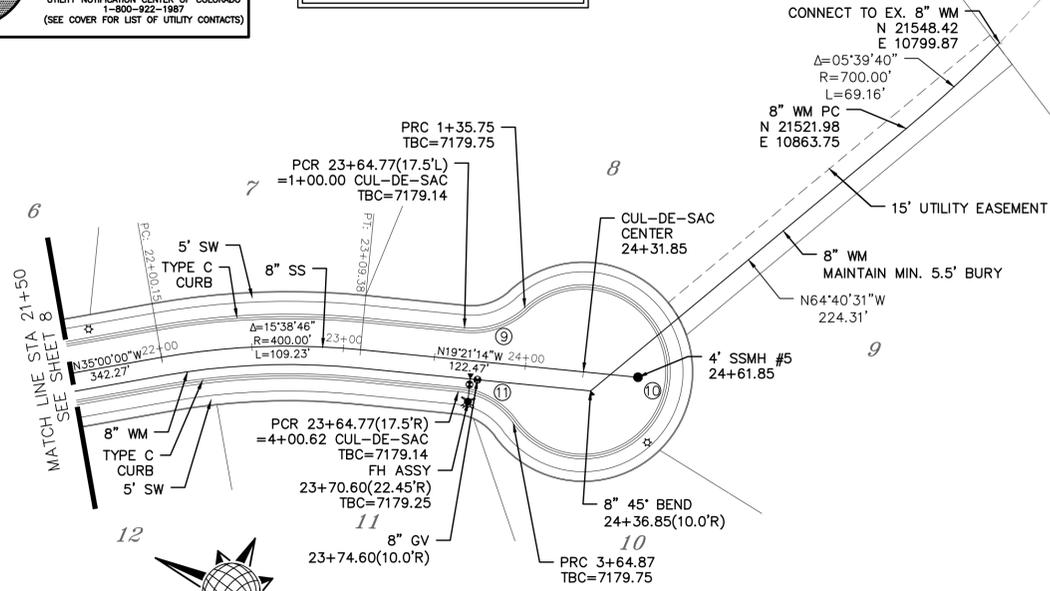
Date	
Appr.	
Revisions	
No.	
TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457	
<b>MERIDIAN RANCH</b>	
THE ESTATES AT ROLLING HILLS RANCH FILING 1 STREET AND UTILITY PLANS PALMER PEAK PL.	
Scale	AS SHOWN
Drawn by	LOG
Checked by	TAK
Date	AUG 2019
8 of 26	



**NOTE:**  
ALL EXISTING VALVES, MANHOLES, HYDRANTS, ECT. TO BE ADJUSTED TO FINISHED GRADE AS NECESSARY.

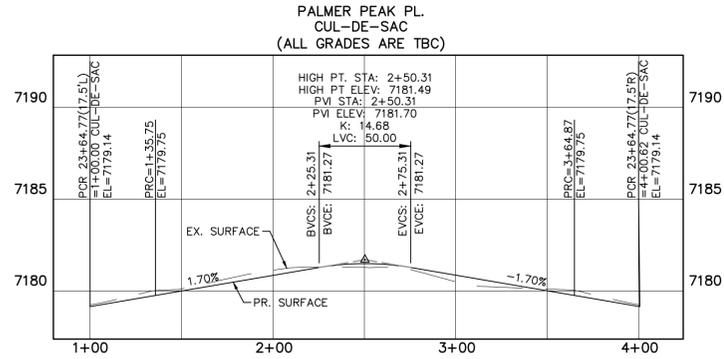
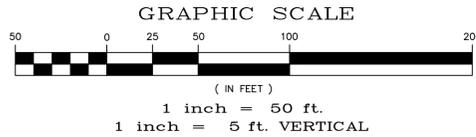
ESTATES FILING 3

TRACT B



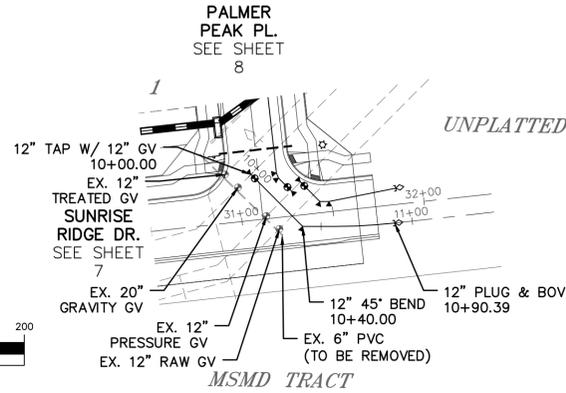
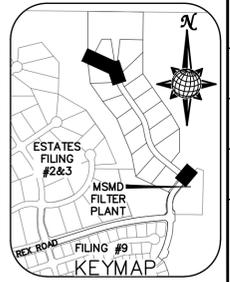
# PALMER PEAK PL.

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

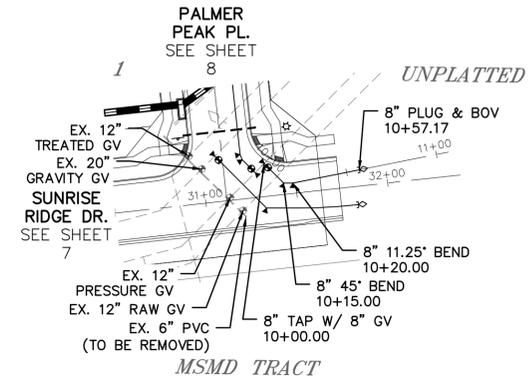


CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
9	35.75'	42.50'	48°11'23"
10	229.13'	47.50'	276°22'46"
11	35.75'	42.50'	48°11'23"

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



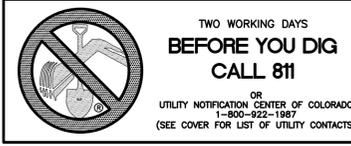
# GRAVITY WM TAP



# PRESSURE WM TAP

7190		PVI STA: 21+28.67 PVI ELEV: 7174.39 K: 133.33 LVC: 200.00		7190		7155		7155
7185		EVCS: 22+28.67 EVCE: 7176.39		7185		7150		7150
7180		CENTER CUL-DE-SAC 24+31.85 EL=7180.92		7180		7145		7145
7175		4" SSMH #05 24+61.85 RW=7180.92 CUT=14.0'		7175		7140		7140
7170				7170		7135		7135
7165				7165		7130		7130
7160				7160		7125		7125
7155				7155		7120		7120
7150				7150		7115		7115
7145				7145		7110		7110

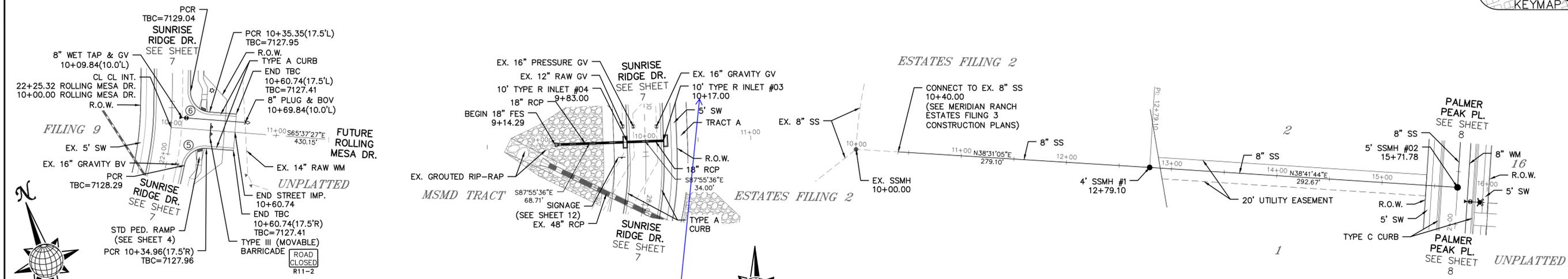
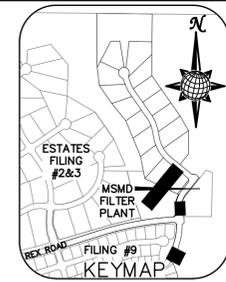
1	2	3	4	No.	Revisions	Date	Appr.
TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457							
				<b>MERIDIAN RANCH</b>			
THE ESTATES AT ROLLING HILLS RANCH FILING 1 STREET AND UTILITY PLANS PALMER PEAK PL.							
Scale	AS SHOWN	9	of	26	Date	AUG 2019	
Drawn by	LOG	Checked by	TAK				



CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
5	28.49'	19.50'	83°41'48"
6	29.42'	19.50'	86°27'10"

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

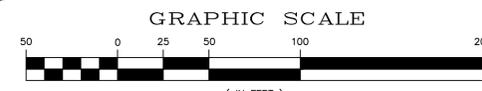
**NOTE:**  
ALL EXISTING VALVES, MANHOLES, HYDRANTS, ECT. TO BE ADJUSTED TO FINISHED GRADE AS NECESSARY.



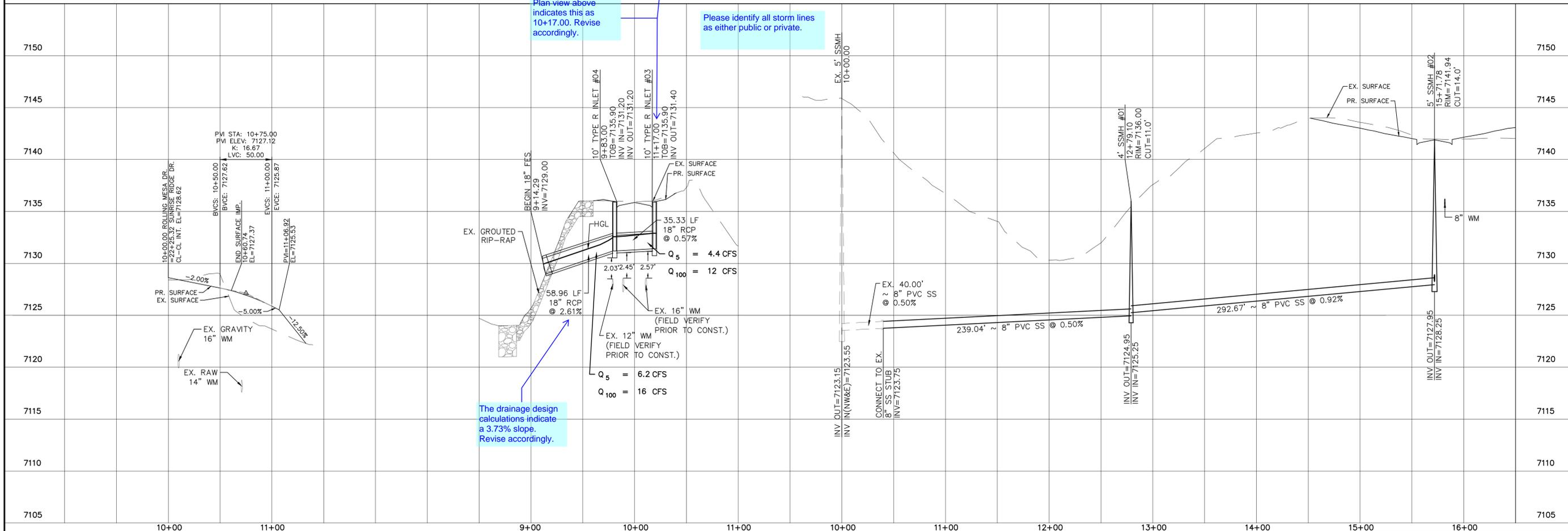
# ROLLING MESA DR.

# STORM #2

# SS #1



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



Plan view above indicates this as 10+17.00. Revise accordingly.

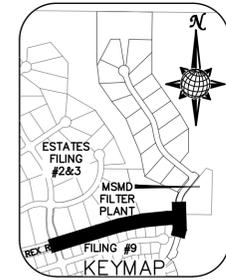
Please identify all storm lines as either public or private.

The drainage design calculations indicate a 3.73% slope. Revise accordingly.

1	2	3	4	No.	Revisions	Date	Appr.
<p>TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457</p>							
<p>THE ESTATES AT ROLLING HILLS RANCH FILING 1 STREET AND UTILITY PLANS ROLLING MESA DR.</p>							
Scale	AS SHOWN	10 of 26	Date	AUG 2019	Checked by	LOG	Drawn by

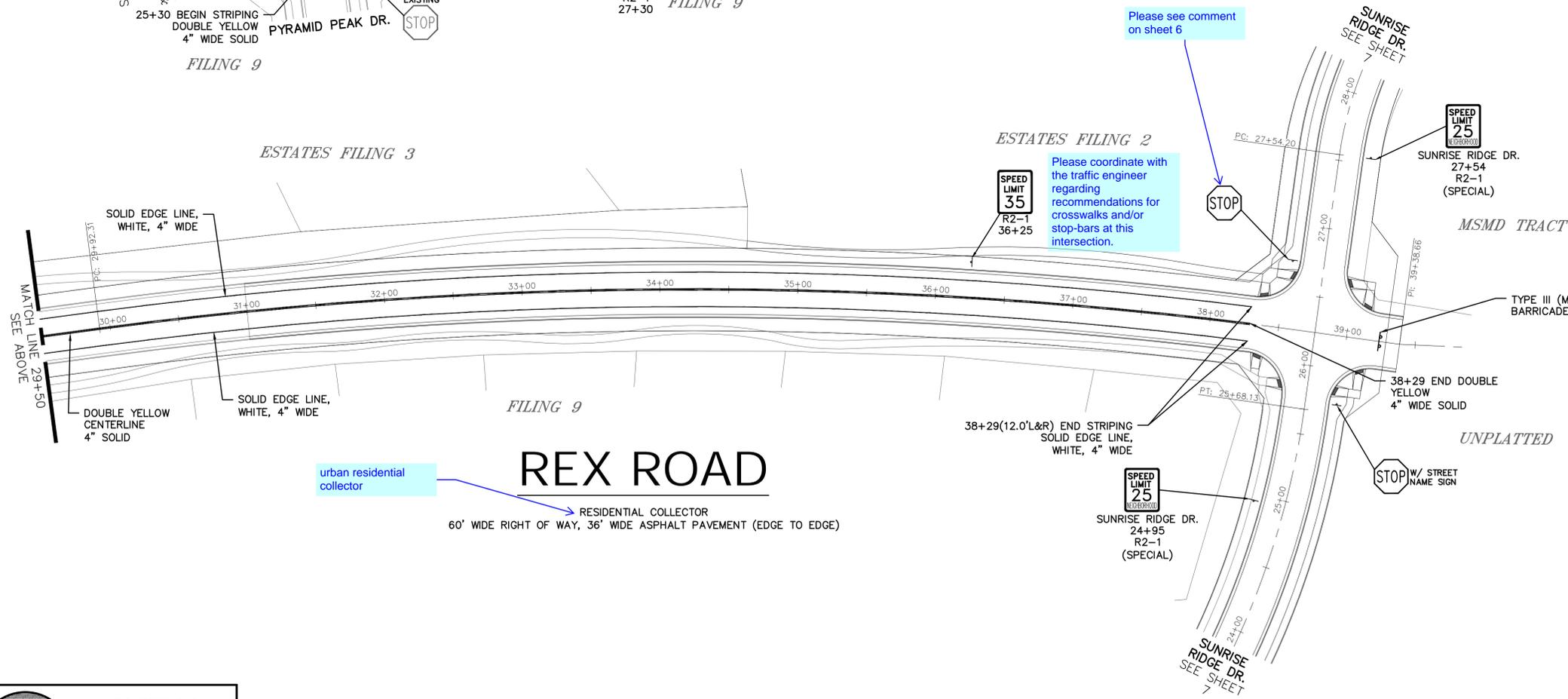
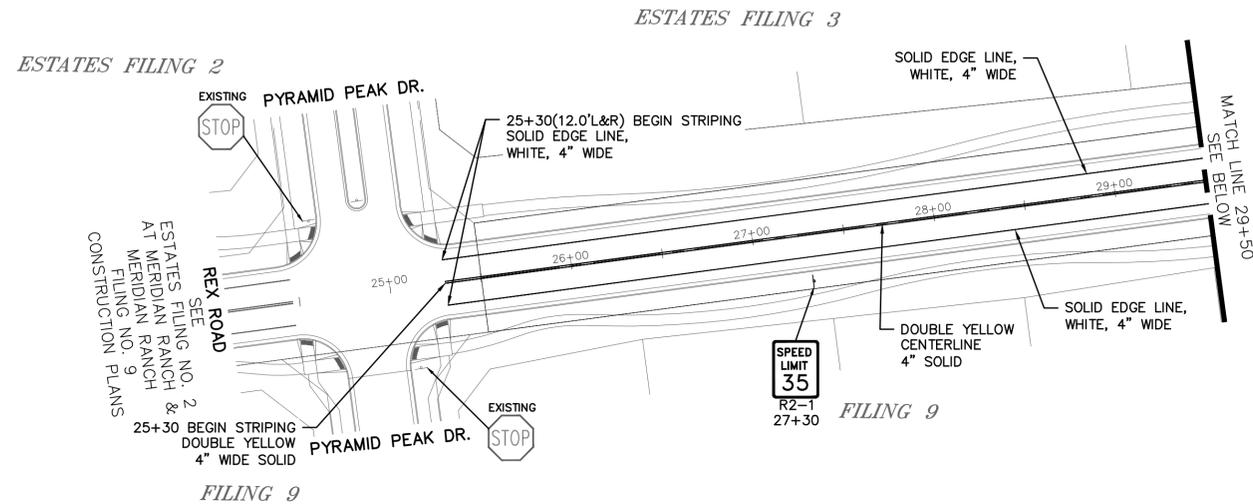


NOTE:  
 DOTTED LINES TO BE  
 2' LONG WITH 4' SPACING  
 PER MUTCD STANDARD



SIGNING AND STRIPING NOTES:

1. ALL SIGNS AND PAVEMENT MARKINGS SHALL BE IN COMPLIANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
2. REMOVAL OF EXISTING PAVEMENT MARKINGS SHALL BE ACCOMPLISHED BY A METHOD THAT DOES NOT MATERIALLY DAMAGE THE PAVEMENT. THE PAVEMENT MARKINGS SHALL BE REMOVED TO THE EXTENT THAT THEY WILL NOT BE VISIBLE UNDER DAY OR NIGHT CONDITIONS. AT NO TIME WILL IT BE ACCEPTABLE TO PAINT OVER EXISTING PAVEMENT MARKINGS.
3. ANY DEVIATION FROM THE STRIPING AND SIGNING PLAN SHALL BE APPROVED BY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT.
4. ALL SIGNS SHOWN ON THE SIGNING AND STRIPING PLAN SHALL BE NEW SIGNS. EXISTING SIGNS MAY REMAIN OR BE REUSED IF THEY MEET CURRENT EL PASO COUNTY AND MUTCD STANDARDS.
5. STREET NAME AND REGULATORY STOP SIGNS SHALL BE ON THE SAME POST AT INTERSECTIONS.
6. ALL REMOVED SIGNS SHALL BE DISPOSED OF IN A PROPER MANNER BY THE CONTRACTOR.
7. ALL STREET NAME SIGNS SHALL HAVE "D" SERIES LETTERS, WITH LOCAL ROADWAY SIGNS BEING 4" UPPER-LOWER CASE LETTERING ON 8" BLANK AND NON-LOCAL ROADWAY SIGNS BEING 6" LETTERING, UPPER-LOWER CASE ON 12" BLANK, WITH A WHITE BORDER THAT IS NOT RECESSED. MULTI-LANE ROADWAYS WITH SPEED LIMITS OF 40 MPH OR HIGHER SHALL HAVE 8" UPPER-LOWER CASE LETTERING ON 18" BLANK WITH A WHITE BORDER THAT IS NOT RECESSED. THE WIDTH OF THE NON-RECESSED WHITE BORDERS SHALL MATCH PAGE 255 OF THE 2012 MUTCD "STANDARD HIGHWAY SIGNS".
8. ALL TRAFFIC SIGNS SHALL HAVE A MINIMUM HIGH INTENSITY PRISMATIC GRADE SHEETING.
9. ALL LOCAL RESIDENTIAL STREET SIGNS SHALL BE MOUNTED ON A 1.75" X 1.75" SQUARE TUBE SIGN POST AND STUB POST BASE. FOR OTHER APPLICATIONS, REFER TO THE CDOT STANDARD S-614-8 REGARDING USE OF THE P2 TUBULAR STEEL POST SLIPBASE DESIGN.
10. ALL SIGNS SHALL BE SINGLE SHEET ALUMINUM WITH 0.100" MINIMUM THICKNESS.
11. ALL LIMIT LINES/STOP LINES, CROSSWALK LINES, PAVEMENT LEGENDS, AND ARROWS SHALL BE A MINIMUM 125 MIL THICKNESS PREFORMED THERMOPLASTIC PAVEMENT MARKINGS WITH TAPERED LEADING EDGES PER CDOT STANDARD S-627-1. WORD AND SYMBOL MARKINGS SHALL BE THE NARROW TYPE. STOP BARS SHALL BE 24" IN WIDTH. CROSSWALKS LINES SHALL BE 12" WIDE AND 8' LONG PER CDOT S-627-1.
12. ALL LONGITUDINAL LINES SHALL BE A MINIMUM 15MIL THICKNESS EPOXY PAINT. ALL NON-LOCAL RESIDENTIAL ROADWAYS SHALL INCLUDE BOTH RIGHT AND LEFT EDGE LINE STRIPING AND ANY ADDITIONAL STRIPING AS REQUIRED BY CDOT S-627-1.
13. THE CONTRACTOR SHALL NOTIFY EL PASO COUNTY DEVELOPMENT SERVICES (719) 520-6819 PRIOR TO AND UPON COMPLETION OF SIGNING AND STRIPING.
14. THE CONTRACTOR SHALL OBTAIN A WORK IN THE RIGHT OF WAY PERMIT FROM THE EL PASO COUNTY PUBLIC SERVICE DEPARTMENT (PSD) PRIOR TO ANY SIGNAGE OR STRIPING WORK WITHIN AN EXISTING EL PASO COUNTY ROADWAY.



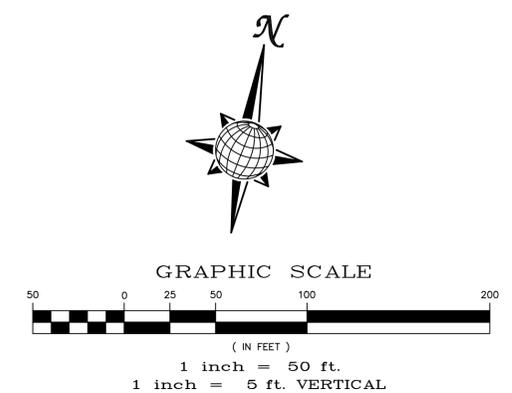
Please see comment on sheet 6

Please coordinate with the traffic engineer regarding recommendations for crosswalks and/or stop-bars at this intersection.

revise to department of public works(dpw)

revise development services to planning and community development

5/1/2013



Scale AS SHOWN	Drawn by LOG	Checked by TAK	Date AUG 2013
	THE ESTATES AT ROLLING HILLS RANCH FILING 1 STREET AND UTILITY PLANS SIGNAGE AND STRIPING		
	TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457		
	MERIDIAN RANCH		



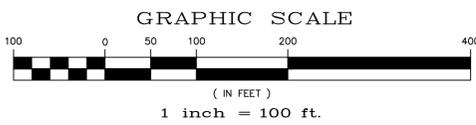


TWO WORKING DAYS  
**BEFORE YOU DIG  
CALL 811**  
OR  
UTILITY NOTIFICATION CENTER OF COLORADO  
1-800-922-1987  
(SEE COVER FOR LIST OF UTILITY CONTACTS)

UNPLATTED

NOTE:  
CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES.  
EX. UTILITIES SEE CONSTRUCTION DRAWINGS FOR:  
1)MERIDIAN SERVICE METRO DISTRICT WATER PLANT SITE PLAN & FLOOR PLAN  
2)MERIDIAN RANCH FILING 9  
3)THE ESTATES FILING 2 AT MERIDIAN RANCH  
4)THE ESTATES FILING 3 AT MERIDIAN RANCH  
5)GUTHRIE RAW WATER EXTENSION THE VISTAS FILING 1 OFFSITE

NOTE:  
8" SS UNLESS OTHERWISE LABELED.



1		2		3		4		No.	
TECH CONTRACTORS		11886 STAPLETON DRIVE		FALCON, CO 80831		TELEPHONE: 719.495.7444		FAX: 719.495.2457	
		MERIDIAN RANCH							
THE ESTATES AT ROLLING HILLS RANCH FILING 1		STREET AND UTILITY PLANS		OVERALL SANITARY SEWER		Drawn by LOG		Checked by TJK	
Scale AS SHOWN		14 of 26		Date AUG 2019		Date		Date	
PCD PROJECT NO. EGP-XX-XXX		Revisions		Date		Appr.		Date	

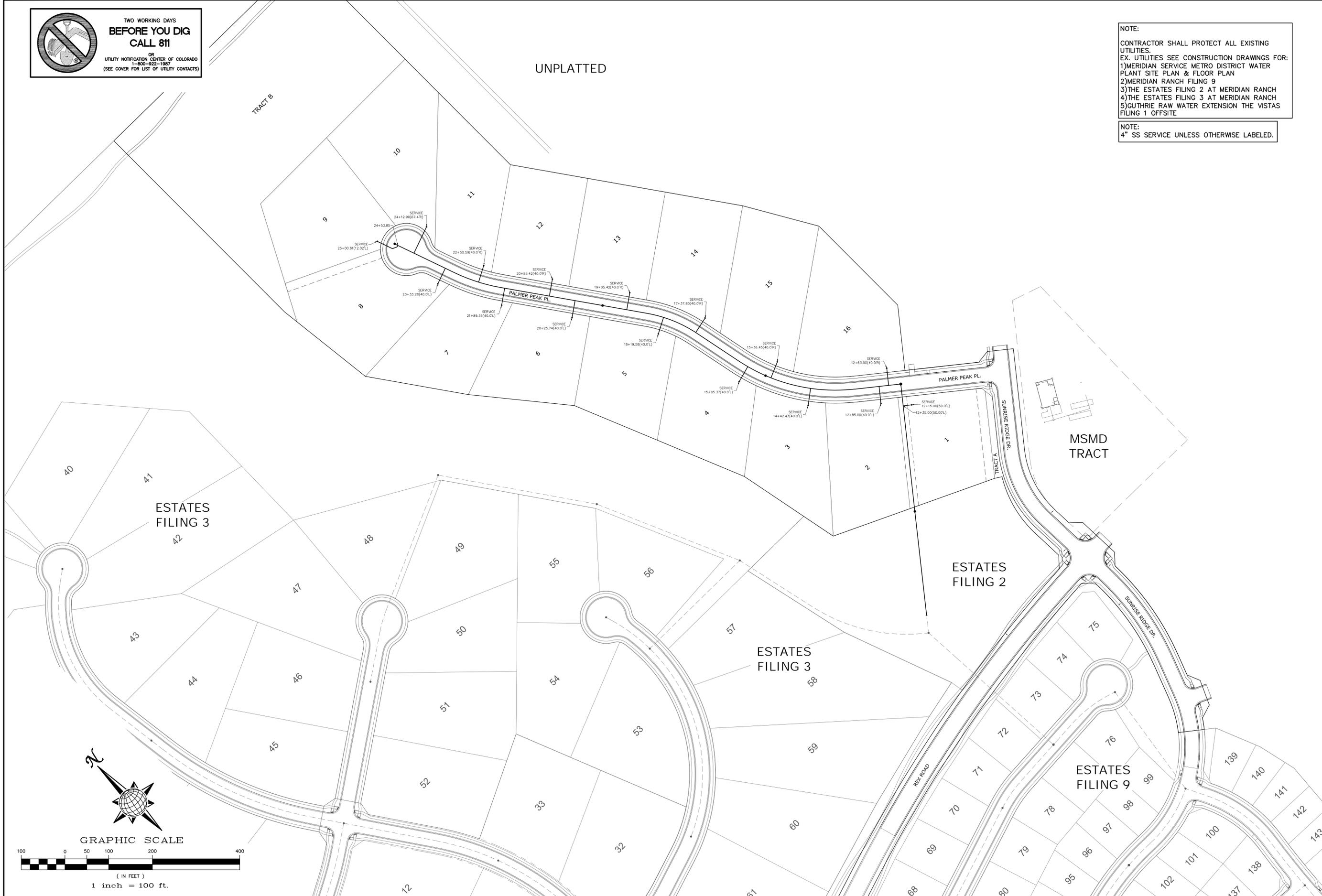


**TWO WORKING DAYS  
BEFORE YOU DIG  
CALL 811**  
OR  
UTILITY NOTIFICATION CENTER OF COLORADO  
1-800-922-1987  
(SEE COVER FOR LIST OF UTILITY CONTACTS)

UNPLATTED

**NOTE:**  
CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES.  
EX. UTILITIES SEE CONSTRUCTION DRAWINGS FOR:  
1)MERIDIAN SERVICE METRO DISTRICT WATER PLANT SITE PLAN & FLOOR PLAN  
2)MERIDIAN RANCH FILING 9  
3)THE ESTATES FILING 2 AT MERIDIAN RANCH  
4)THE ESTATES FILING 3 AT MERIDIAN RANCH  
5)GUTHRIE RAW WATER EXTENSION THE VISTAS FILING 1 OFFSITE

**NOTE:**  
4" SS SERVICE UNLESS OTHERWISE LABELED.



ESTATES FILING 3

ESTATES FILING 2

ESTATES FILING 3

ESTATES FILING 9

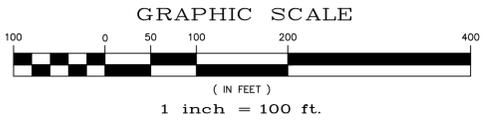
MSMD TRACT

TRACT B

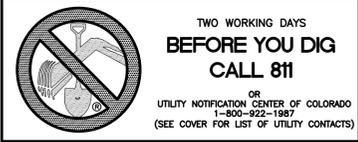
TRACT A

REX ROAD

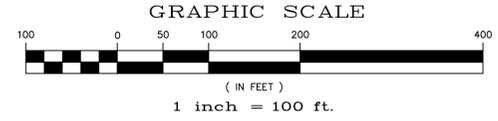
SUNRISE RIDGE DR



TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457		MERIDIAN RANCH		THE ESTATES AT ROLLING HILLS RANCH FILING 1 STREET AND UTILITY PLANS OVERALL SANITARY SEWER SERVICES	
No.	Revisions	Drawn by	LOG	Checked by	TMK
1		Scale	AS SHOWN	Date	AUG 2019
2		15	of 26		
3					
4					
Date	Appr.				



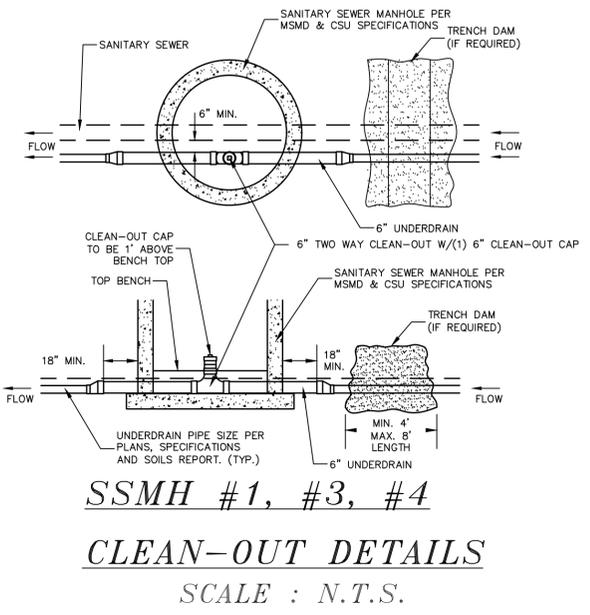
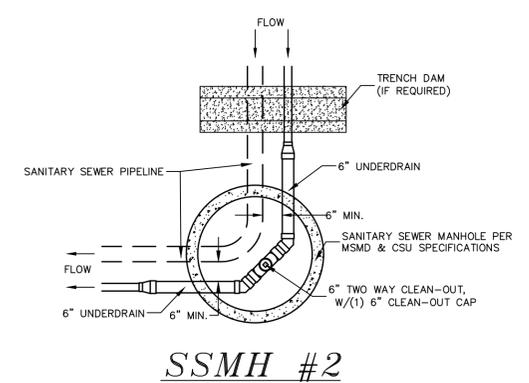
UNPLATTED



NOTE:  
 CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES.  
 EX. UTILITIES SEE CONSTRUCTION DRAWINGS FOR:  
 1)MERIDIAN SERVICE METRO DISTRICT WATER PLANT SITE PLAN & FLOOR PLAN  
 2)MERIDIAN RANCH FILING 9  
 3)THE ESTATES FILING 2 AT MERIDIAN RANCH  
 4)THE ESTATES FILING 3 AT MERIDIAN RANCH  
 5)GUTHRIE RAW WATER EXTENSION THE VISTAS FILING 1 OFFSITE

LEGEND

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



- 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.

1					No.
2					
3					
4					
TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457					Revisions
 <b>MERIDIAN RANCH</b>					Date
THE ESTATES AT ROLLING HILLS RANCH FILING 1 STREET AND UTILITY PLANS OVERALL UNDERDRAIN					Appr.
Scale	AS SHOWN	16 of 26	Drawn by	LOG	Checked by
				TAK	Date
					AUG 2019



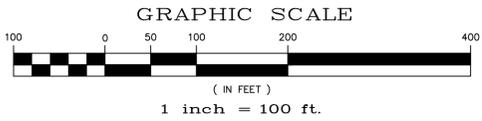
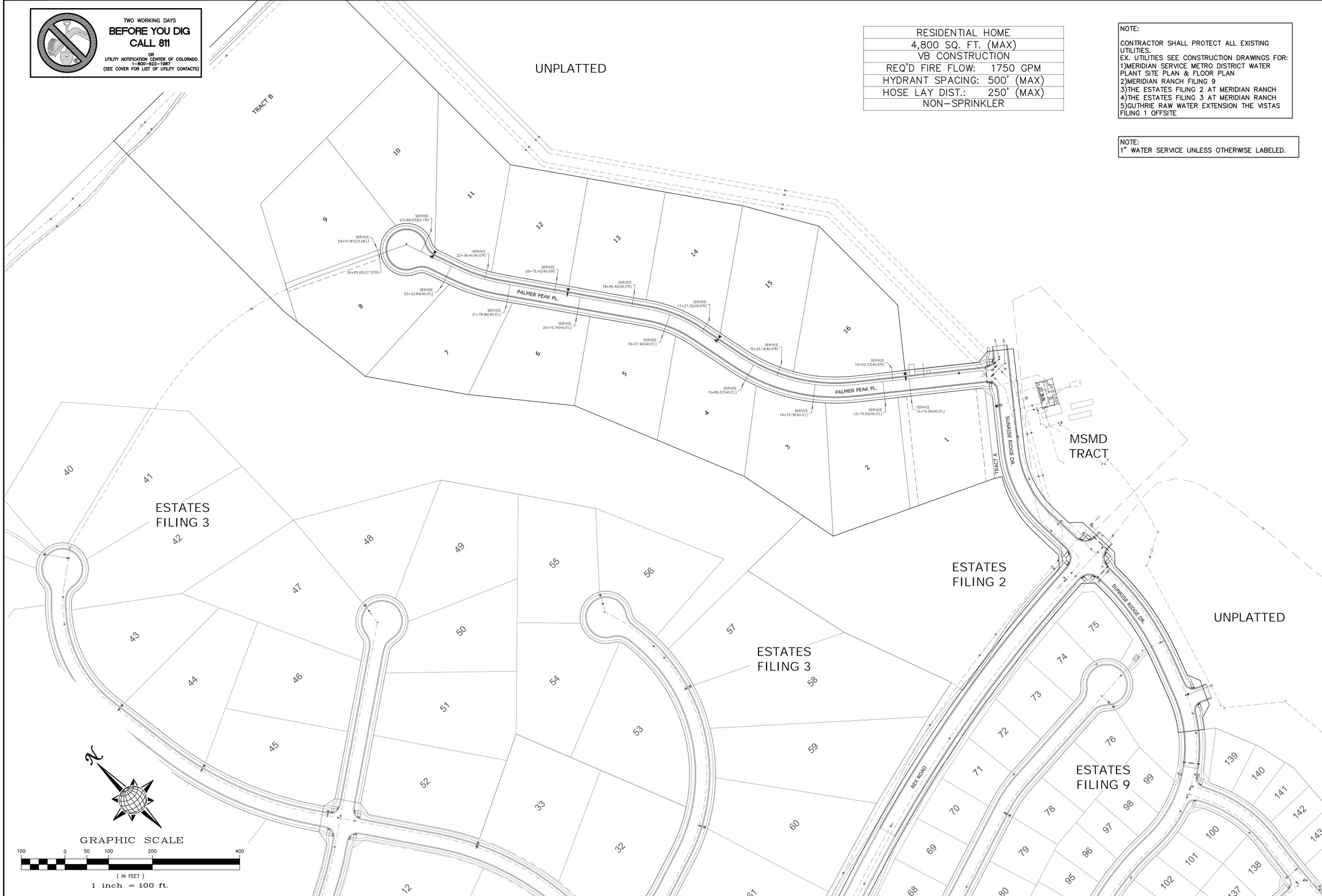


**TWO WORKING DAYS  
BEFORE YOU DIG  
CALL 811**  
OR  
UTILITY NOTIFICATION CENTER OF COLORADO  
1-800-922-1987  
(SEE COVER FOR LIST OF UTILITY CONTACTS)

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

**NOTE:**  
CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES.  
EX. UTILITIES SEE CONSTRUCTION DRAWINGS FOR:  
1)MERIDIAN SERVICE METRO DISTRICT WATER PLANT SITE PLAN & FLOOR PLAN  
2)MERIDIAN RANCH FILING 9  
3)THE ESTATES FILING 2 AT MERIDIAN RANCH  
4)THE ESTATES FILING 3 AT MERIDIAN RANCH  
5)GUTHRIE RAW WATER EXTENSION THE VISTAS FILING 1 OFFSITE

**NOTE:**  
1" WATER SERVICE UNLESS OTHERWISE LABELED.



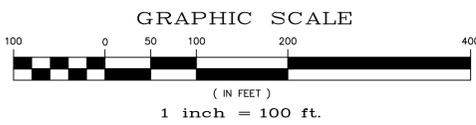
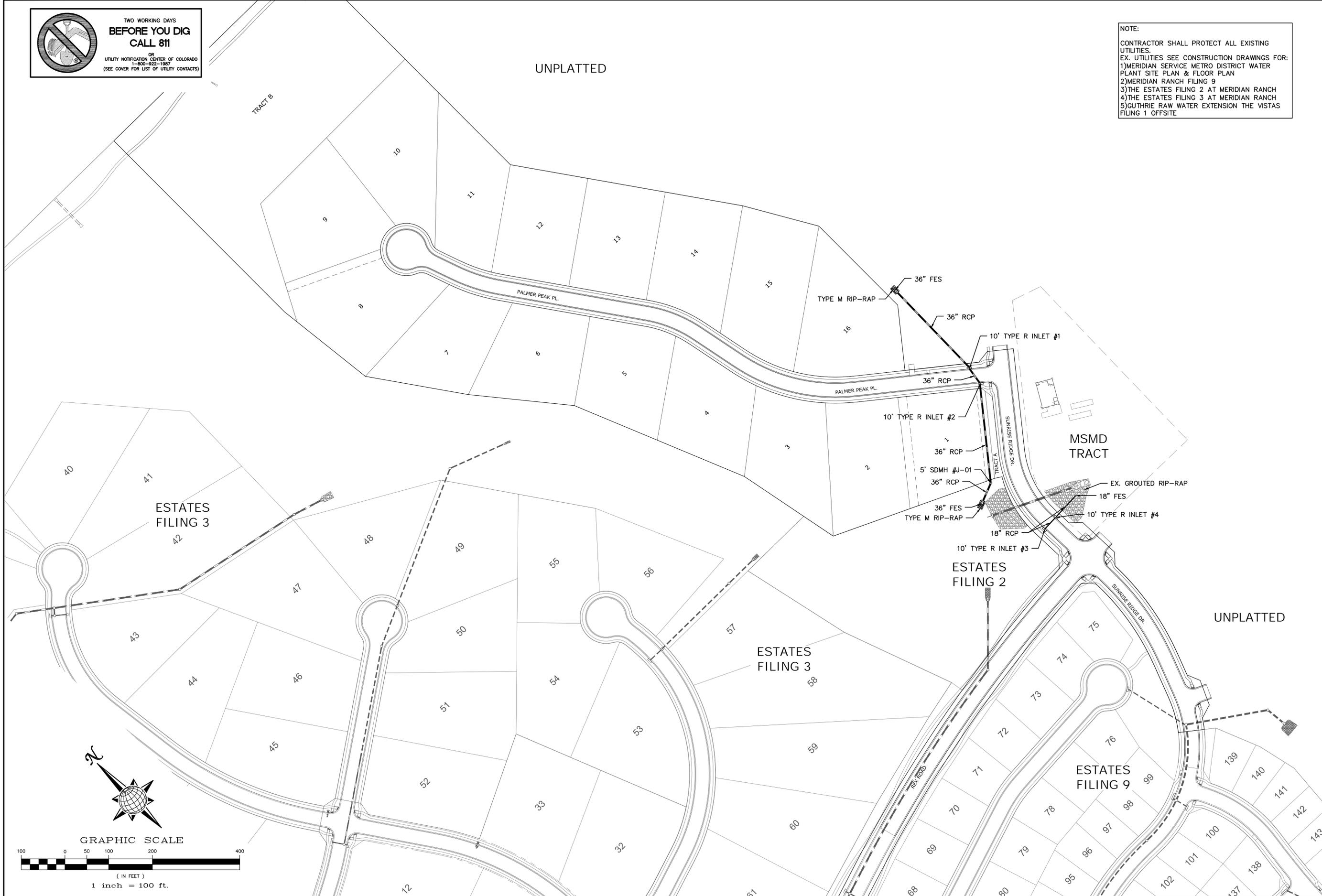
1	2	3	4	No.	Revisions	Date	Appr.
<p>TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457</p>							
<p><b>MERIDIAN RANCH</b></p>							
<p>THE ESTATES AT ROLLING HILLS RANCH FILING 1 STREET AND UTILITY PLANS OVERALL WATER SERVICES</p>							
Drawn by	LOG	Checked by	TAK	Date	AUG 2019		
Scale	AS SHOWN		18 of 26				



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

NOTE:  
CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES.  
EX. UTILITIES SEE CONSTRUCTION DRAWINGS FOR:  
1)MERIDIAN SERVICE METRO DISTRICT WATER PLANT SITE PLAN & FLOOR PLAN  
2)MERIDIAN RANCH FILING 9  
3)THE ESTATES FILING 2 AT MERIDIAN RANCH  
4)THE ESTATES FILING 3 AT MERIDIAN RANCH  
5)GUTHRIE RAW WATER EXTENSION THE VISTAS FILING 1 OFFSITE



1		2		3		4		No.	Revisions	Date	Appr.
<p>TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457</p>											
<p><b>MERIDIAN RANCH</b></p>											
<p>THE ESTATES AT ROLLING HILLS RANCH FILING 1 STREET AND UTILITY PLANS OVERALL STORM DRAIN</p>											
Drawn by	LOG	Checked by	TAK	Date	AUG 2019						
Scale	AS SHOWN			19	of		26				

**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 LOOSENEED 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 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.
- BULK STORAGE OF ALLOWED PETROLEUM PRODUCTS OR OTHER ALLOWED LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL REQUIRE ADEQUATE SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS ONSITE AND TO PREVENT ANY SPILLED MATERIALS FROM ENTERING STATE WATERS, ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR OTHER FACILITIES.
- 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 1. 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

**STEPS FOR CONSTRUCTION**

THE ANTICIPATED START FOR THIS PROJECT IS OCTOBER 2019 WITH AN ANTICIPATED COMPLETION DATE OF MAY 2020. BELOW IS A BRIEF OUTLINE OF THE CONSTRUCTION SEQUENCE FOR THIS PROJECT.

- \* INSTALL INITIAL BMP'S
- \* CONSTRUCTION OF DITCHES AND EROSION CONTROL STRUCTURES
- \* ROUGH GRADING OF LOTS AND ROADS
- \* SANITARY SEWER
- \* WATER
- \* STORM SEWER AND CULVERTS
- \* ELECTRIC
- \* GAS
- \* PHONE & CABLE TV
- \* FINISHED ROAD GRADING AND PAVING

Please update the date as we are already in november

**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.

**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-SEEDED IF NECESSARY. ANY CHECK DAMS THAT HAVE SHIFTED OR DECAYED SHALL BE REPAIRED OR REPLACED.
- \* SILT FENCES SHALL BE CLEANED WHENEVER SEDIMENT HAS REACHED A DEPTH OF 6" AT THE FENCE, AND BROKEN WOODEN PARTS OR TORN FABRIC SHALL BE REPAIRED OR REPLACED.
- \* ANY ACCUMULATED TRASH OR DEBRIS SHALL BE REMOVED FROM OUTLETS.
- \* IF THE DEPTH OF THE SILT IN THE TEMPORARY SEDIMENTATION TRAP EXCEEDS 1/2 OF THE ORIGINAL DEPTH, THE TRAP SHALL BE CLEANED OUT AND RESTORED TO ITS ORIGINAL DEPTH. THE OVERFLOW SPILLWAY SHALL BE CLEANED OR REPAIRED AS NECESSARY.

AN INSPECTION AND MAINTENANCE LOG FOLLOWS THIS STORMWATER MANAGEMENT PLAN.

**REVEGETATION AND SEEDING**

ALL DISTURBED AREAS SHALL BE REQUIRE SEEDING WITHIN TWO (2) WEEKS FOLLOWING THE ESTABLISHMENT OF FINAL GRADE. AREAS TO RECEIVE PAVEMENT DURING THE CONSTRUCTION OF THE ROAD SYSTEM SHALL NOT RECEIVE ANY SEEDING. SEEDING SHOULD BE ACCOMPLISHED USING AN APPROPRIATE GRASS DRILL, BY BROADCASTING OR BY HYDROMULCHING. IF SEEDING BY THE BROADCAST METHOD IS SELECTED THE APPLICATION RATE SHOULD BE DOUBLED. IF HYDROMULCHING IS SELECTED TWO OPERATIONS SHOULD BE CONSIDERED, APPLYING THE SEED FIRST AND THE MULCH IN A SECOND OPERATION. UPON COMPLETION OF THE SEEDING OPERATION THE SITE SHOULD BE COVERED WITH WEEED 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.

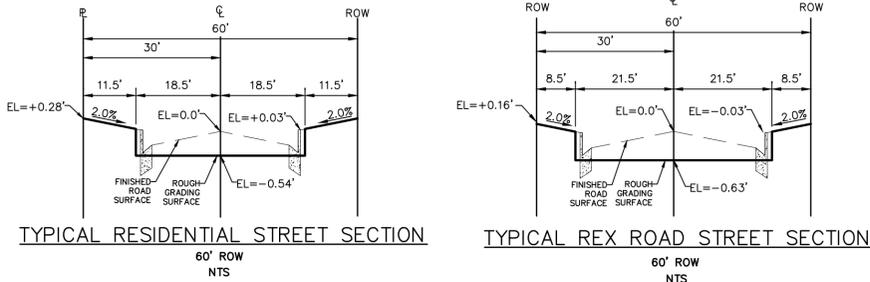
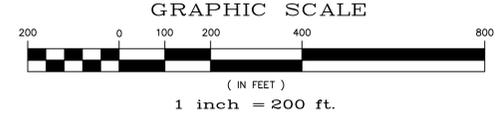
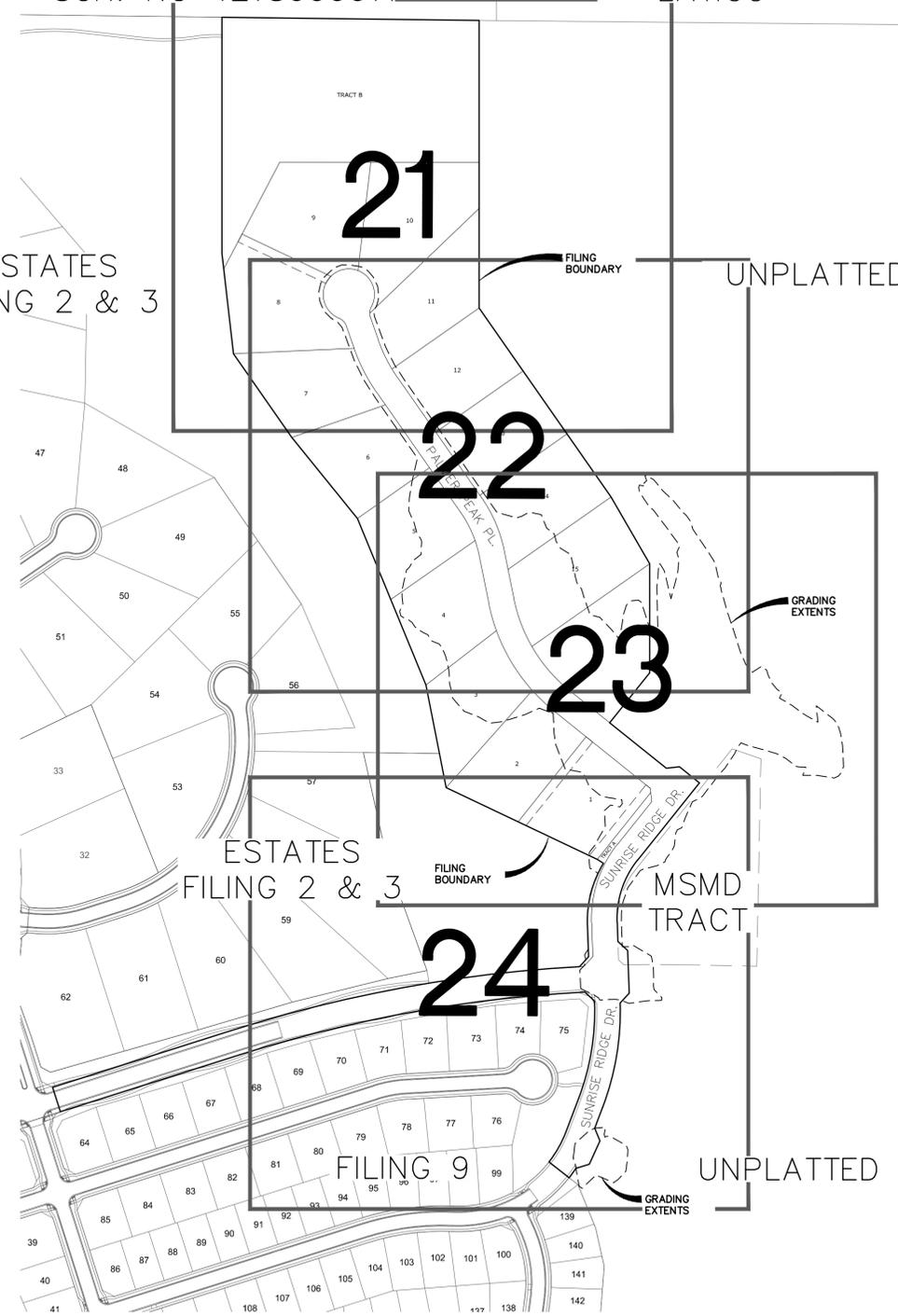
BELOW IS THE ACCEPTED GRASS MIX FOR SANDY SOILS:

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

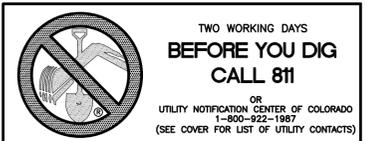
NOTE:  
EXISTING SITE VEGETATION CONSISTS OF GRASSES/WEEDS UNLESS OTHERWISE NOTED

SCH. NO 4218000011 LATIGO

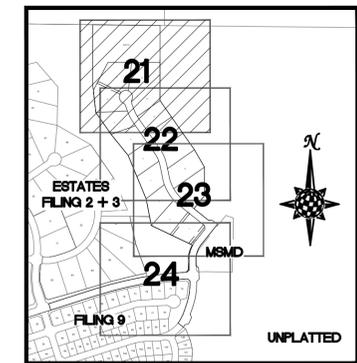
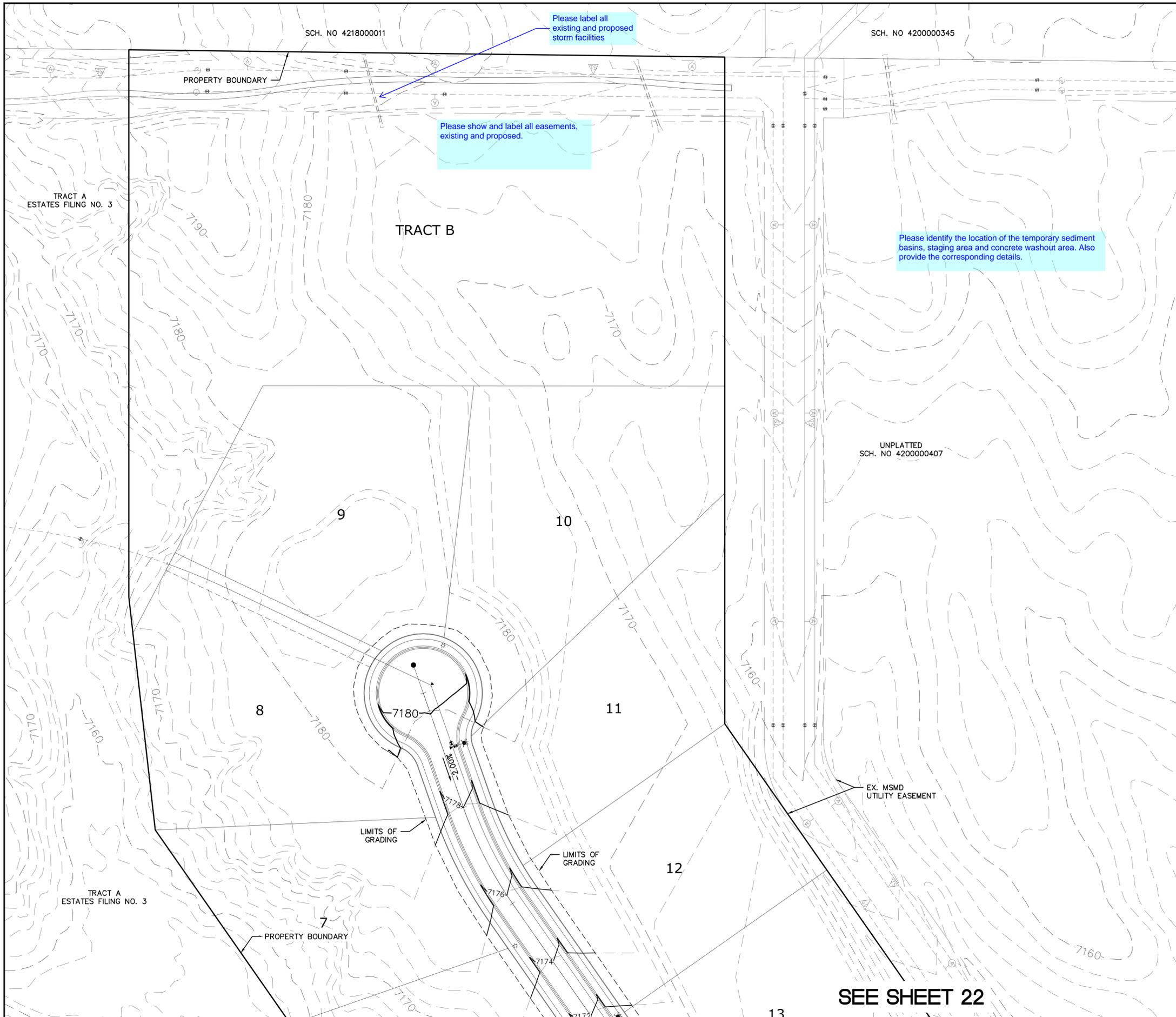
ESTATES FILING 2 & 3



EARTHWORK QUANTITIES			
NET YARDS	BALANCE		
TOTAL STRIPPINGS	12.18 AC.	6,550 CY	
NET YARDS	CUT	FILL	
	10,873 CY	11,400 CY	
20% COMPACTION FACTOR			



Date	Appr.	Date	Revisions	No.
TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457				
MERIDIAN RANCH				
THE ESTATES AT ROLLING HILLS RANCH FILING 1 GRADING/EROSION CONTROL PLAN INDEX SHEET				
Drawn by	Log	Checked by	TAK	Date
AS SHOWN				AUG 2019
Scale				20 of 26



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

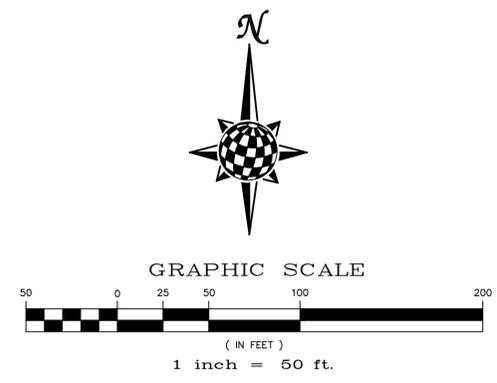
provide symbol for straw bales.

**LEGEND**

SYMBOL	ACRONYM	DESCRIPTION
		STRAW BALES
		EROSION WATTLES PER DETAIL SHEET 26
		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 26
		EXISTING CONTOUR (10')
		EXISTING CONTOUR (2')
		PROPOSED CONTOUR (10')
		PROPOSED CONTOUR (2')
	2.00%	GRADE
	75	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 20.

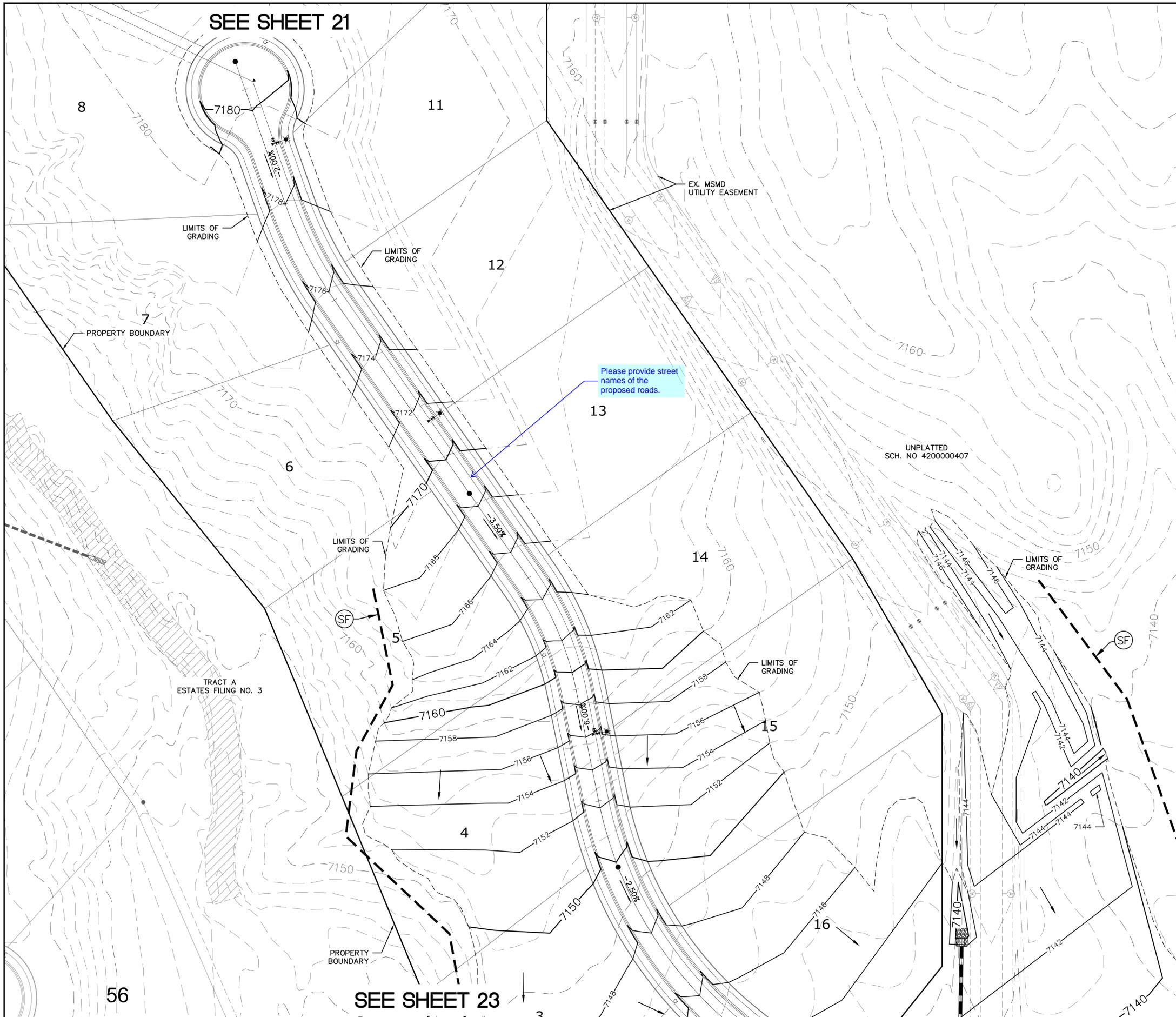
CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES.  
EX. UTILITIES SEE CONSTRUCTION DRAWINGS FOR:  
1) MERIDIAN SERVICE METRO DISTRICT WATER PLANT SITE PLAN & FLOOR PLAN  
2) MERIDIAN RANCH FILING 9  
3) THE ESTATES FILING 2 AT MERIDIAN RANCH  
4) THE ESTATES FILING 3 AT MERIDIAN RANCH  
5) GUTHRIE RAW WATER EXTENSION THE VISTAS FILING 1 OFFSITE



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

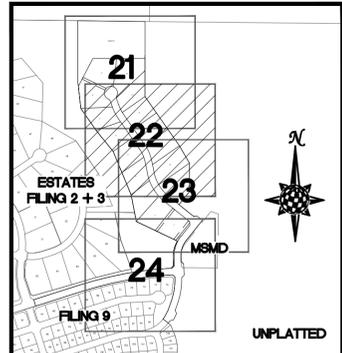
OR  
UTILITY NOTIFICATION CENTER OF COLORADO  
1-800-922-1987  
(SEE COVER FOR LIST OF UTILITY CONTACTS)

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>					
THE ESTATES AT ROLLING HILLS RANCH FILING 1 GRADING/EROSION CONTROL PLAN LAYOUT					
Drawn by	LOG	Checked by	TAK	Date	AUG 2019
Scale	AS SHOWN		21 of 26		



SEE SHEET 21

SEE SHEET 23



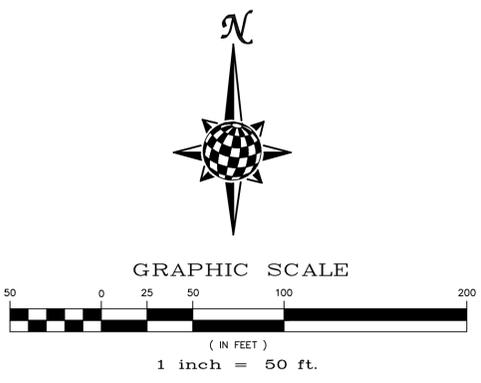
**INDEX MAP**  
N.T.S.

**LEGEND**

SYMBOL	ACRONYM	DESCRIPTION
(---)		STRAW BALES
(---)		EROSION WATTLES PER DETAIL SHEET 26
(---)		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 26
(---)		EXISTING CONTOUR (10')
(---)		EXISTING CONTOUR (2')
(---)		PROPOSED CONTOUR (10')
(---)		PROPOSED CONTOUR (2')
(---)		GRADE
75		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 20.

CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES.  
EX. UTILITIES SEE CONSTRUCTION DRAWINGS FOR:  
1) MERIDIAN SERVICE METRO DISTRICT WATER PLANT SITE PLAN & FLOOR PLAN  
2) MERIDIAN RANCH FILING 9  
3) THE ESTATES FILING 2 AT MERIDIAN RANCH  
4) THE ESTATES FILING 3 AT MERIDIAN RANCH  
5) GUTHRIE RAW WATER EXTENSION THE VISTAS FILING 1 OFFSITE



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

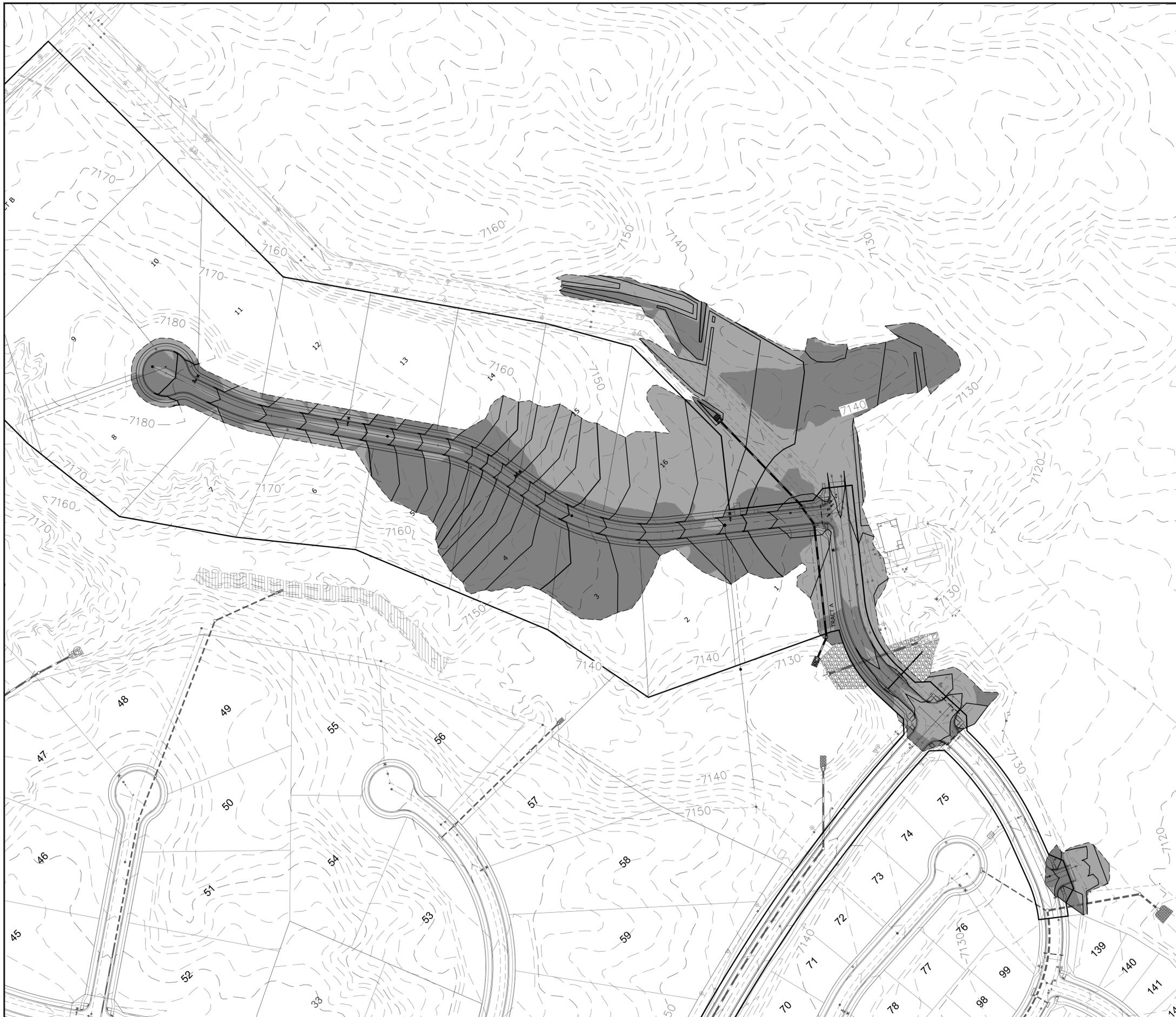
OR  
UTILITY NOTIFICATION CENTER OF COLORADO  
1-800-922-1987  
(SEE COVER FOR LIST OF UTILITY CONTACTS)

1	2	3	4	No.	Revisions	Date	Invt.	Appr.	Date
<p>TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457</p>									
<p>THE ESTATES AT ROLLING HILLS RANCH FILING 1 GRADING/EROSION CONTROL PLAN LAYOUT</p>									
Drawn by	LOG	Checked by	TAK	Date	AUG 2019				
Scale	AS SHOWN			22 of 26					

S:\Onchase\Colling\Journals at Rolling Hills Filing 1\DWG\PLAN SHEETS IMPROVEMENT PLANS\ALERT\Fig. 813 2019.15.42 PM

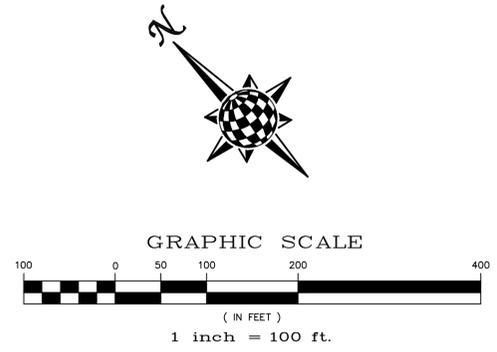






NOTE:  
 ALL CONTOURS SHOWN WITHIN THE PLAN SET ARE TO FINISHED SURFACE. ALL STREET SECTIONS ARE TO BE GRADED TO ROUGH SUB-GRADE AS SHOWN IN THEIR RESPECTIVE TYPICAL STREET SECTION SHOWN ON SHEET 20.

CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES.  
 EX. UTILITIES SEE CONSTRUCTION DRAWINGS FOR:  
 1)MERIDIAN SERVICE METRO DISTRICT WATER PLANT SITE PLAN & FLOOR PLAN  
 2)MERIDIAN RANCH FILING 9  
 3)THE ESTATES FILING 2 AT MERIDIAN RANCH  
 4)THE ESTATES FILING 3 AT MERIDIAN RANCH  
 5)GUTHRIE RAW WATER EXTENSION THE VISTAS FILING 1 OFFSITE



LEGEND:  
 AREAS OF CUT [shaded box]  
 AREAS OF FILL [shaded box]

Scale		AS SHOWN		25 of 26	
Drawn by	LOG	Checked by	TAK	Date	AUG 2019
THE ESTATES AT ROLLING HILLS RANCH FILING 1 GRADING/EROSION CONTROL PLAN LAYOUT			TECH CONTRACTORS 11886 STAPLETON DRIVE FALCON, CO 80831 TELEPHONE: 719.495.7444 FAX: 719.495.2457		
MERIDIAN RANCH			Revisions		
1				No.	
2					
3					
4					
				Date	
				Appr.	

