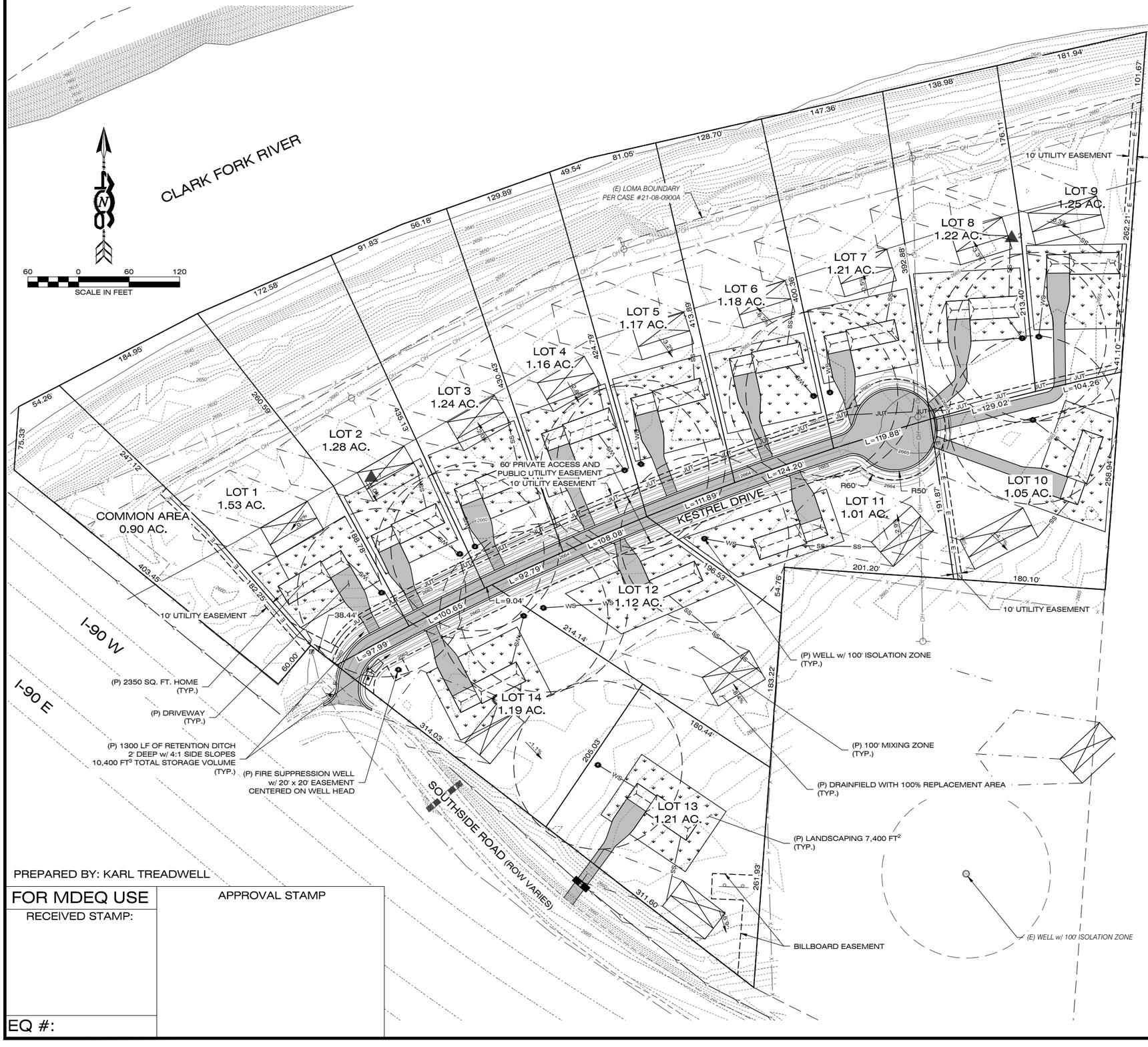

PREPARED BY: KARL TREADWELL

FOR MDEQ USE	APPROVAL STAMP
RECEIVED STAMP:	
EQ #:	

ON-SITE WASTEWATER TREATMENT SYSTEM DESIGN SPECIFICATIONS:

SYSTEM SIZING SPECIFICATIONS

DESIGN USE:	SINGLE-FAMILY RESIDENTIAL
NUMBER OF BEDROOMS:	5 BEDROOMS
DESIGN FLOW USED:	400 GPD

DISPOSAL AREA DESIGN SPECIFICATIONS

	LOTS 1-8 & 11-14	LOTS 9 & 10
SYSTEM TYPE (PRIMARY, 25% REDUCTION):	GRAVITY	GRAVITY
TRENCH OR BED:	TRENCH	TRENCH
SOIL TYPE:	LOAMY SAND	SANDY LOAM
BASAL APPLICATION RATE:	0.8 GPD/SF	0.6 GPD/SF
REQUIRED DISTRIBUTION AREA:	375 SF	500 SF
PROVIDED DISTRIBUTION AREA:	384 SF	504 SF
MINIMUM LATERAL LENGTH:	188 LF	250 LF
PROVIDED LATERAL LENGTH:	3X64'=192 LF	3X84'=252 LF
DRAINFIELD WIDTH:	16 FEET	16 FEET
DRAINFIELD LENGTH:	64 FEET	84 FEET

LATERAL SPECIFICATIONS

LAYOUT:	END MANIFOLD	END MANIFOLD
NUMBER OF LATERALS:	3	3
LATERAL MATERIAL	SCH. 40 PVC	SCH. 40 PVC
LATERAL LENGTH:	64 FEET	84 FEET
LATERAL SIZE (SCH 40 PVC):	1.25 INCHES	1.25 INCHES
LATERAL HORIZONTAL SPACE (ON-CENTER)	7 FEET	7 FEET
CHAMBER WIDTH:	22 INCHES	22 INCHES

MANIFOLD SPECIFICATIONS

MANIFOLD MATERIAL	SCH. 40 PVC	SCH. 40 PVC
MANIFOLD LENGTH:	14 FEET	14 FEET
MANIFOLD SIZE:	1.25”	1.25“
CONNECTION OF FORCE MAIN TO MANIFOLD	END	

SEPTIC TANK SPECIFICATIONS

SEPTIC TANK MINIMUM VOLUME:	1,500 GALLONS
SEPTIC TANK PROPOSED VOLUME:	1,500 GALLONS

SEPTIC SYSTEM CONSTRUCTION NOTES

1. SEPTIC SYSTEM SHALL BE CONSTRUCTED PER DEQ CIRCULAR 4 AND MINERAL COUNTY REQUIREMENTS, WHICHEVER IS MORE STRINGENT.
2. CONTRACTOR TO VERIFY ASSUMPTIONS IN DESIGN PRIOR TO INSTALLATION.
3. CONTRACTOR TO CONTACT DESIGN ENGINEER IF FIELD CONDITIONS OR PRODUCT DIMENSIONS ARE DIFFERENT THAN IDENTIFIED IN THESE DRAWINGS.
4. INSTALL COMPONENTS IN ACCORDANCE WITH THE INSTRUCTIONS PROVIDED BY THE SUPPLIER.
5. PROVIDE OWNERS OF SYSTEM WITH ALL MANUFACTURER'S OPERATION AND MAINTENANCE DOCUMENTATION UPON COMPLETION.

PRE-CAST CONCRETE TANK NOTES

1. RISER HEIGHT MAY VARY DUE TO SITE SLOPES AND FINAL CONFIGURATION OF TANK(S) ON SITE. ENGINEER RECOMMENDS ALL RISERS REMAIN VISIBLE AND ACCESSIBLE TO FACILITATE MAINTENANCE.
2. EXCAVATE TANK BOTTOM TO GRADE. DO NOT OVER-EXCAVATE. IF OVER EXCAVATION OCCURS, ONLY A CRUSHED 1" MINUS GRAVEL SHALL BE USED AS BACKFILL. TANK SHALL BE INSTALLED IN ACCORDANCE WITH THE FLATHEAD COUNTY ENVIRONMENTAL HEALTH REGULATIONS.

NONDEGREDATION ANALYSIS (WORST CASE):

NITRATE ANALYSIS

K	=	254 FT/DAY
N_g	=	0.01 mg/L
L_{MZ}	=	100 FT
Q	=	26.7 FT^3/DAY

NITRATES TOTAL	=	1.61 mg/L
CUMULATIVE NITRATES FOR LOTS 10, 11, 3, AND 2	=	4.21 mg/L

PHOSPHOROUS ANALYSIS

A_{DF}	=	1,024 FT^2
D	=	300 FT
$\#_{HOMES}$	=	1 SFUs

PHOSPHOROUS BREAKTHROUGH TIME = 59.2 YEARS

TRIGGER ANALYSIS

QD	=	373.8 FT^3/DAY
CD	=	50 mg/L
QL	=	900 FT^3/S

NITRATE DILUTION = 0.0002404 mg/L

406 ENGINEERING
CIVIL ENGINEERING
LAND USE CONSULTING
1201 S. 6th St. W.
Missoula, MT 59801
(406) 317-1151
35 6th St. E.
Kalispell, MT 59901
(406) 257-0679
www.406engineeringinc.com

PLOT DATE: 10/14/2021 11:25 AM

DESIGNED: -
DRAFTED: AJ
CHECKED: -
DATE: AUG. 2021

REVISIONS | DATE

PROJECT NAME: CLARK FORK MEADOWS

SHEET TITLE: DEQ SITE LAYOUT

406 PROJECT NO.: 20-101

SHEET: 1 OF 1

LOCATION: 290 SLOWAY FRONTAGE ROAD
REMAINDER PARCEL IN C.O.S. 491
SEC. 15, T. 17N, R.27W, P.M.M.
MINERAL COUNTY, MONTANA

PREPARED FOR: ALBERT WALSH

DWG LOCATION: C:\USERS\KARL.A.TREADWELL\406 ENGINEERING - DOCUMENTS\406 WORK_PROJECT\2020 PROJECT\20-101 ALBERT WALSH\8_DRAFTING\8.1_DRAWINGS\D_20-101.DWG