Floodplain Management & Subdivision Review

Sean O'Callaghan
&
Christopher Scott

Gallatin County
Dept. of Planning &
Community
Development

Division of Land by Subdivision & Platting Act

vs.

Division of Land by Other Mechanisms

Division of Land by Subdivision Exemption

- Statute sets forth certain divisions of land that are exempt from review under the Subdivision and Platting Act (e.g. family transfers, boundary relocations, etc.)
- Review is focused on whether there is an intent to evade subdivision review and whether the C.O.S. complies with survey requirements.
- Very little analysis of the resulting development is allowed.

CERTIFICATE OF SURVEY No. 2231

28 TRACTS OF LAND SITUATED IN THE NW1/4 SECTION 16, T1S, R4E, P.M.M., GALLATIN COUNTY, MONTANA

FOR: J & D WILDLANDS, L.L.P.
BY: GASTON ENGINEERING AND SURVEYING

REASON FOR SURVEY: TO SHOW EXISTING TRACTS OF LAND PER BOOK OF DEEDS 61, PAGE 43, RECORDS OF GALLATIN COUNTY

APRIL, 2001
BOZEMAN, MONTANA

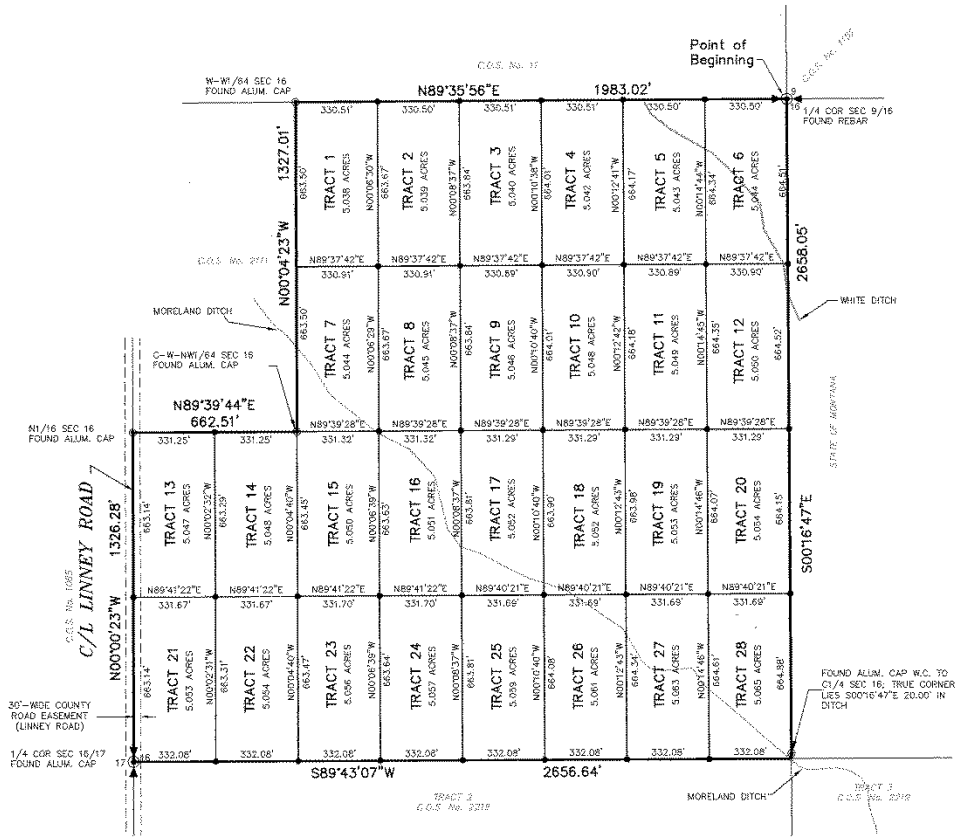
GRAPHIC SCALE

(IN FEET)
1 inch = 300 ft.

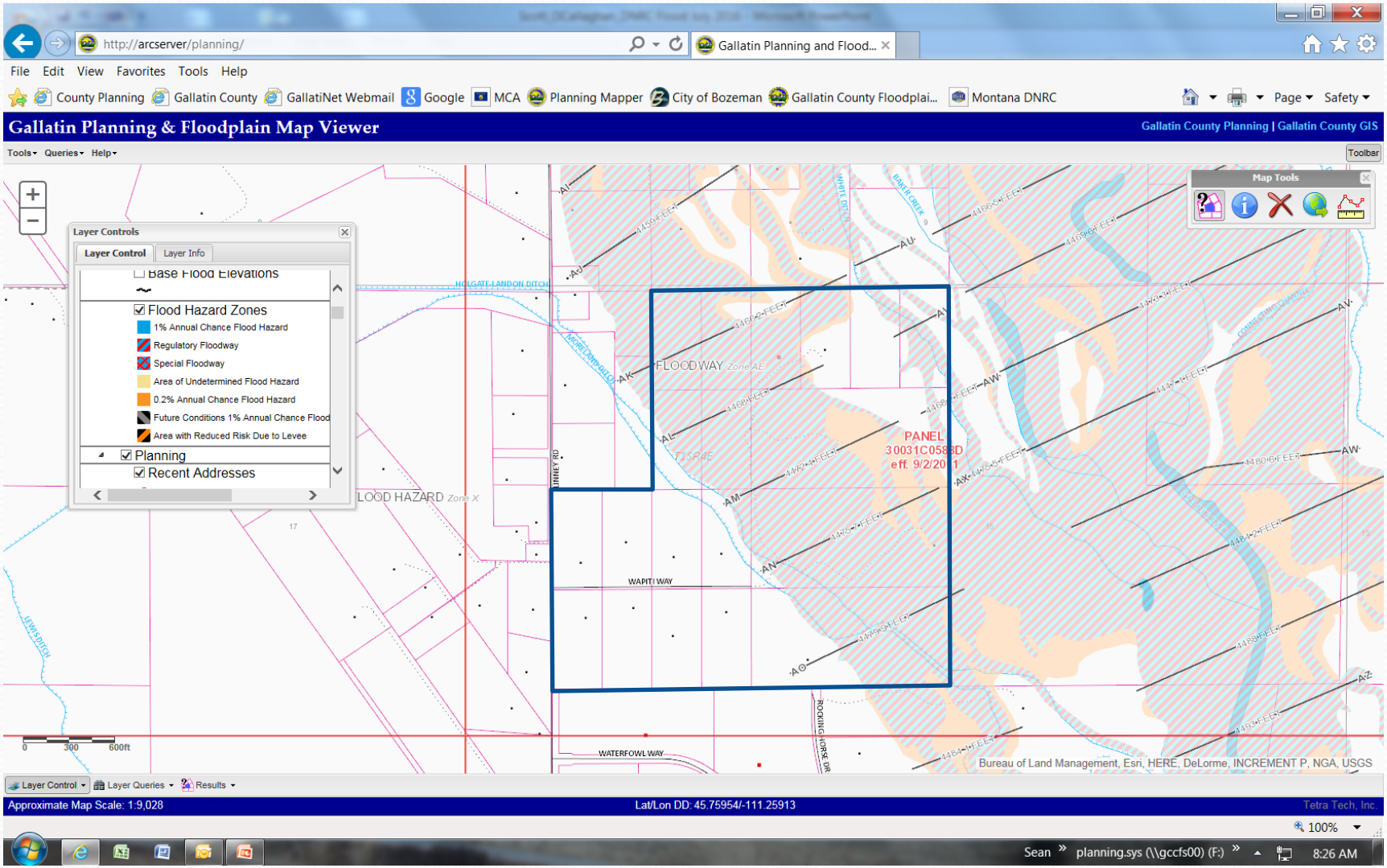
NOTES
⊕ = FOUND MONUMENT AS NOTED
● = SET 5/8"x24" REBAR W/ YPC
W.C. = WITNESS CORNER

BASIS OF BEARING
BEARINGS FOR THIS CERTIFICATE OF SURVEY ARE BASED ON GEODETIC NORTH AS DETERMINED BY GPS SATELLITES.

AREAS
GROSS AREA = 141.402 ACRES



DESCRIPTION


http://arcserver/planning/
Gallatin Planning and Flood...
File Edit View Favorites Tools Help
County Planning
Gallatin County
GallatiNet Webmail
Google
MCA
Planning Mapper
City of Bozeman
Gallatin County Floodplai...
Montana DNRC
Page
Safety
Gallatin Planning & Floodplain Map Viewer
Gallatin County Planning | Gallatin County GIS
Tools
Queries
Help
Toolbar
Map Tools
Layer Controls
Layer Control
Layer Info
Base Flood Elevations
Flood Hazard Zones
1% Annual Chance Flood Hazard
Regulatory Floodway
Special Floodway
Area of Undetermined Flood Hazard
0.2% Annual Chance Flood Hazard
Future Conditions 1% Annual Chance Flood
Area with Reduced Risk Due to Levee
Planning
Recent Addresses
FLOODWAY Zone AE
PANEL
30031C0588D
eff. 9/2/2011
T1S R4E
WAPITI WAY
WATERFOWL WAY
ROCKING HORSE DR
LINNEY RD
HOLGATE-LANDON DITCH
MORELAND-BILOT
BAKER CREEK
WHITE DITCH
LEWIS DITCH
LOOD HAZARD Zone X
0 300 600ft
Bureau of Land Management, Esri, HERE, DeLorme, INCREMENT P, NGA, USGS
Layer Control
Layer Queries
Results
Approximate Map Scale: 1:9,028
Lat/Lon DD: 45.75954/-111.25913
Tetra Tech, Inc.
100%
Sean
planning.sys (\\gccfs00) (F:)
8:26 AM

Gallatin County's

CODE OF THE WEST

4.0 **MOTHER NATURE:** Rural residents usually experience more problems when the elements and earth turn unfriendly. Here are some thoughts to consider:

4.1 The physical characteristics of your property can be positive and negative. Trees are a wonderful amenity, but also provide the fuel behind forest fires. Building at the top of a forested draw should be considered as dangerous as building in an area prone to flooding. Grassland fires are not uncommon. Defensible perimeters are very helpful in protecting buildings from forest or grassland fires and inversely can protect the forest or grassland from igniting if your house catches on fire. If you start a forest or grassland wildfire, you may get the bill to put it out. Contact your local fire district for more information.

4.2 Steep slopes can slide in unusually warm weather. Large rocks can also roll down these slopes, presenting a great danger to people and property.

4.3 North-facing slopes or canyons rarely see direct sunlight in the winter. There is a possibility that snow will accumulate and not melt until spring. Also, it snows in the Rockies *year*-round. Don't be surprised if the Fourth of July parade gets *snowed* out.

4.4 Land topography can tell you where the water will go during heavy precipitation. Sometimes landowners fill a ravine only to find water running through their home during the next storm.

4.5 Many residents protect their homes from flooding with sandbags. The County may not be able to provide sand bags, equipment or people to protect private property from flooding.

4.6 A flash flood can occur, especially during the summer months and spring run-off, turning a dry gully into a raging river or a field into a lake. It is wise to consider the potential for flooding when building. Portions of the County have delineated floodplains or flood-prone areas where home construction is either prohibited or regulated. You may need a floodplain permit. Contact the Gallatin County Planning Department.

4.7 Nature can provide you with some wonderful native neighbors. However, even seemingly harmless animals like deer eat gardens and get in the way of cars. Learn how to live with your wild neighbors. Call the Montana Department of Fish, Wildlife and Parks, or the Gallatin County Extension Office for further information.

4.8 Rural development often encroaches on the traditional habitat of coyotes, mountain lion, bear, rattlesnakes, ground squirrels, mosquitoes and other dangerous and/or nuisance species. Respect their space. Watch your pets and properly store your trash. And watch the wildlife ... from a distance.

4.9 There's nothing quite like a beautiful Montana summer day, until your picnic is crashed by horse flies and mosquitoes. There's no doubt these pests are a pain. The real pain, however, begins when the spray used to kill the buggers negatively impacts the frogs, the birds, and tender native plants. If your picnic, and/or house, is near a bog, wetland, or river, be aware of all the native creatures that come with it and tread lightly. Save some nature for your grandchildren.

1.0 **ROADS AND ACCESS**: The fact that *you* can drive to your property does not necessarily guarantee that your guests or emergency vehicles can. Please consider:

1.1 Emergency response times (sheriff, fire, ambulance, etc.,) cannot be guaranteed. Under some conditions, you may find that emergency response is extremely slow due to circumstances beyond the control of emergency service providers.

1.2 There can be problems with the legal aspects of access, especially if your "access" crosses someone else's property. It is wise to obtain legal advice and understand that easements may be necessary.

1.3 Gallatin County maintains approximately 200 bridges, 200 miles of pavement, and 1,100 miles of dirt and gravel roads. There are public roads in this County that are not maintained (meaning no grading or snow removal). Check with the County Road and Bridge Office to determine the status of a specific road.

1.4 Gallatin County experiences extreme weather conditions that can damage or destroy roads and bridges. It is wise to determine whether or not your private access road was properly engineered and constructed. Even with proper engineering, annual road maintenance can be expected. This can require renting or owning special equipment (tractors, snow blades, etc.).

1.5 Many large construction vehicles cannot navigate narrow roads and bridges. If you plan to build, it is prudent to check out construction access. Rural residences can be more costly to build due to delivery fees and cost required to get materials to your site.

1.6 School buses travel only on maintained public roads previously designated as school bus routes by the school district. Children may need to be driven to designated school bus pick-up locations.

1.7 In extreme weather even County-maintained roads can become impassable. You may need a four-wheel drive vehicle with chains to travel on some snow-packed roads. Snow removal on some County roads may take up to 72 hours. Under certain conditions, roads become narrower. Yielding the right of way is not merely a legal concept, it is a critical safety issue. Living in a rural area means developing special driving skills and good judgment. Driving off road to avoid bad road sections can make a situation worse, tearing up road banks and accelerating erosion. (Don't do it.)

1.8 Don't expect neighbors to join a petition asking for improved service from the County. This includes, but is not limited to: road paving and maintenance, snow removal, and animal and child advisory signage. Rural counties survive on volunteerism. Costs are kept down by the willingness of the populace to go without many things suburban and urban people regard as necessities. Rural people cherish their independence and willingness to take care of their own.

1.9 Natural disasters, especially floods, can destroy roads. Although Gallatin County will repair and maintain County roads, subdivision and private roads are the landowners' responsibility. Rain and run-off can turn a dry creek bed into a raging torrent, washing out roads, bridges and culverts. Residents served by private roads and/or bridges have been hit with large bills for repairs and/or reconstruction after floods.

Review Under the Subdivision of Platting Act

- Local governments adopt subdivision regulations setting forth submittal requirements for applications and development standards that new development must adhere too.
- Analysis of proposed projects is required to ensure that impacts of the project are reasonably mitigated and public health and safety concerns are addressed.
- Public participation in the review process
- Ability to attach conditions of approval
- Formal approval by governing body.

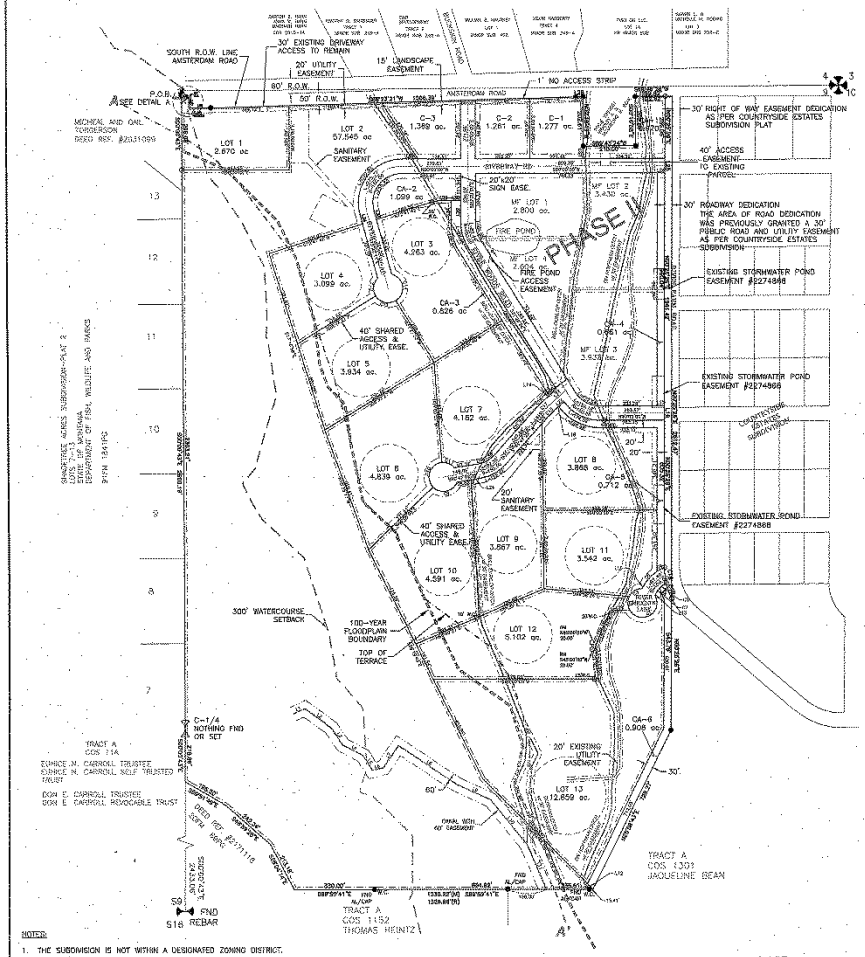
GALLATIN RIVER FARM NORTH MAJOR SUBDIVISION
PHASE 1 - FINAL PLAT

J-491

A TRACT OF LAND BEING TRACT A OF COS 2648 LOCATED IN THE NEI/4, AND SEI/4 OF SECTION 9,TOWNSHIP I SOUTH, RANGE 4 EAST, P.M.M., GALLATIN COUNTY, MT

PURPOSE OF SURVEY: TO CREATE A 22 LOT SUBDIVISION

PREPARED FOR: RIVER FARM ESTATES, INC.



LINE TABLE		
LINE	LENGTH	BEARING
L1	53.11	N59°46'02"E
L2	135.42	S54°12'28"E
L3	84.12	S33°38'18"E
L4	84.52	S62°09'07"E
L5	72.37	S31°46'19"E
L6	47.31	N78°38'18"E
L7	109.06	N34°04'20"E
L8	291.57	S36°30'00"E
L9	151.48	S85°23'41"E
L10	236.03	S39°03'38"E
L11	202.14	S62°20'02"E
L12	31.74	S44°55'41"E
L13	10.21	S28°09'13"W
L14	51.35	N90°00'00"W
L15	10.21	S28°09'13"W
L16	60.00	N00°25'26"E
L17	30.00	N90°00'00"E
L18	7.80	S48°30'34"W
L19	7.82	S48°30'34"W
L20	40.62	S48°30'34"W
L21	73.31	S48°30'34"W
L22	30.20	S48°30'34"W
L23	23.50	S41°41'22"W
L24	38.48	S80°37'40"W
L25	60.00	N00°28'26"E
L26	30.00	N90°00'00"W
L27	51.86	N00°00'06"W
L28	29.28	S88°44'08"W
L29	59.50	N90°00'00"E
L30	40.00	N90°00'00"E
L31	84.29	N00°00'00"W
L32	84.29	S00°00'00"E
L33	39.08	N13°20'11"W
L34	41.14	S13°20'11"E
L35	86.31	N90°00'00"W
L36	86.77	S89°24'44"W
L37	42.08	N00°44'15"W
L38	32.31	S69°41'31"W

CURVE TABLE		
CURVE	LENGTH	RADIUS
C1	188.14	60.00
C2	60.11	60.00
C3	85.91	60.00
C4	34.36	180.00
C5	33.32	120.00
C6	51.56	310.00
C7	26.46	120.00
C8	94.18	180.00
C9	120.80	60.00
C10	134.30	60.00
C11	59.07	60.00
C12	79.72	60.00
C13	94.25	60.00
C14	149.20	60.00
C15	67.85	570.00
C16	74.99	630.00
C17	71.42	600.00
C18	64.50	280.00
C19	67.16	280.00

RIVER FARM NORTH MAJOR SUBDIVISION PHASE 1	
PHASE I TOTAL ACREAGE:	129.484
ROAD R.O.W. ACREAGE:	7.035 (5.3%)
COMMON AREA (CA LOTS) ACREAGE:	5.176 (3.6%)
LOTS 1-13 ACREAGE:	114.186 (79.5%)
COMMERCIAL (C LOTS) ACREAGE:	3.907 (2.7%)
PHASE II TOTAL ACREAGE:	12.768 (8.9%)
RFN MAJOR SUBD. TOTAL ACREAGE =	143.648

NOTES:

1. THE SUBDIVISION IS NOT WITHIN A DESIGNATED ZONING DISTRICT.
2. DENSITIES WITHIN THE PROPOSED SUBDIVISION ACCORDING TO THE BELGRADE CITY FUTURE LAND USE MAP, AMENDED JUNE 2006:
   HIGH DENSITY – area containing commercial lots
   MEDIUM DENSITY – area containing multi-family residential lots
   LOW DENSITY – area containing single-family residential lots
3. NO DEVELOPMENT SHALL TAKE PLACE BELOW THE CREST OF THE TERRACE. (A–A' LINE)
4. GALLATIN RIVER FARM NORTH SUBDIVISION PHASE 1 PARK REQUIREMENT = 1.04 ACRES. CASH IN LIEU= $3,633.44
5. EXEMPTIONS FROM REVIEW:
   A. PHASE II IS EXEMPT FROM REVIEW UNDER 17.36.605(2)(a)
   B. ALL COMMON AREA OPEN SPACE TRACTS ARE EXEMPT FROM REVIEW UNDER 17.36.605(2)(a)
   C. LOT 13 IS EXEMPT FROM REVIEW UNDER 76.4.125(e)(ii)

2299457

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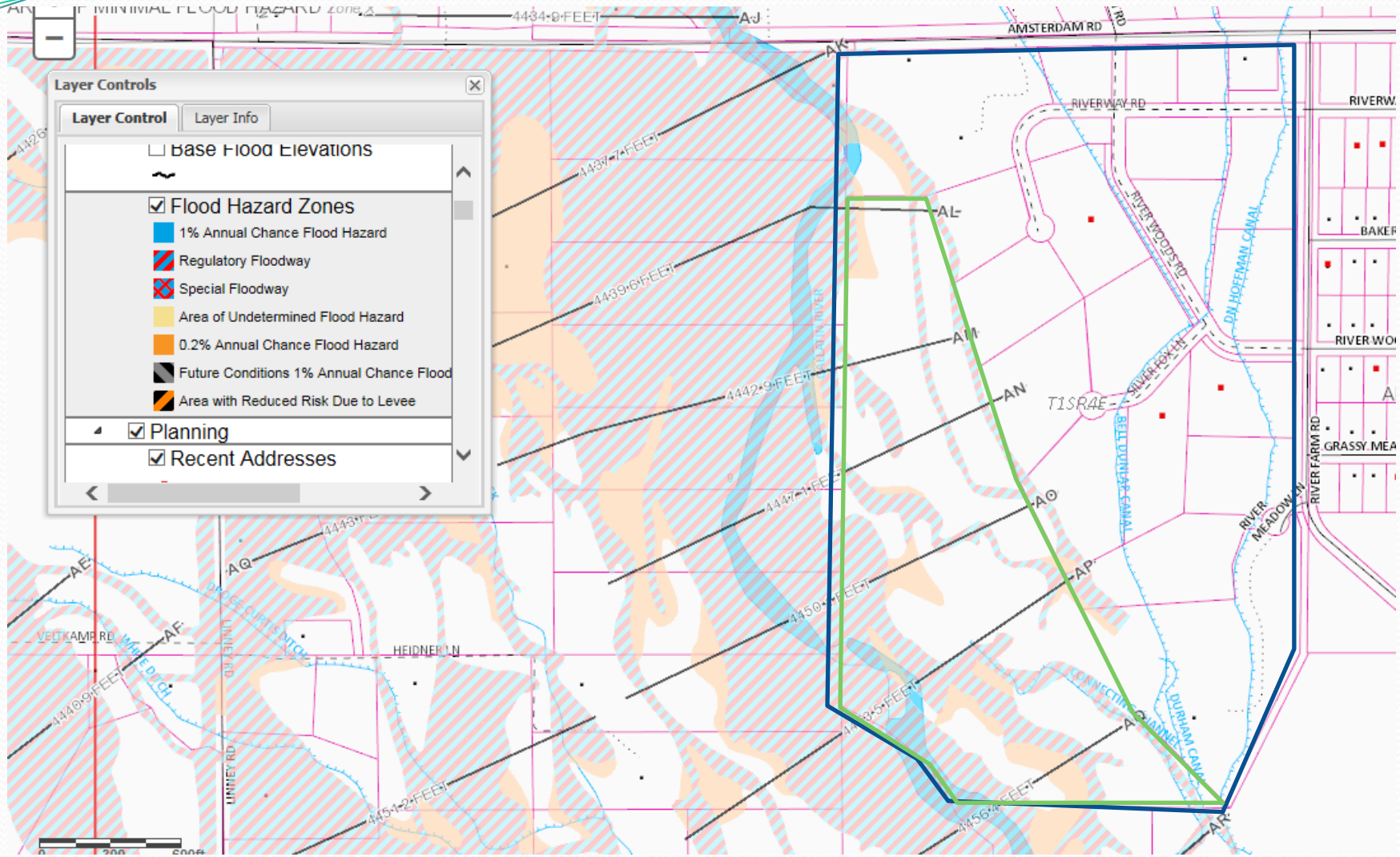
Gallatin County, MT
10/20/2006 04:30P

GRAPHIC SCALE
200 0 100 200 400
(IN FEET)
1 inch = 200 ft.

VICINITY MAP


Layer Controls
Layer Control
Layer Info
Base Flood Elevations
Flood Hazard Zones
1% Annual Chance Flood Hazard
Regulatory Floodway
Special Floodway
Area of Undetermined Flood Hazard
0.2% Annual Chance Flood Hazard
Future Conditions 1% Annual Chance Flood
Area with Reduced Risk Due to Levee
Planning
Recent Addresses
AMSTERDAM RD
RIVERWAY RD
RIVER WOODS RD
DN HOFFMAN CANAL
SILVER FOX LN
BELL DUNLAP CANAL
T1SR4E
RIVER FARM RD
RIVER MEADOW LN
GRASSY MEA
BAKER
RIVER WO
DURHAM CANAL
CONNECTING CHANNEL
VELTKAMP RD
HEIDNER LN
LINNEY RD
WHITE DITCH
DR. GEORGE CURTIS DITCH
4434.0 FEET
4437.7 FEET
4439.6 FEET
4442.9 FEET
4447.4 FEET
4450.4 FEET
4449.9 FEET
4445.2 FEET
4456.4 FEET
AJ
AK
AL
AM
AN
AO
AP
AQ
AR
AE
AF

76-3-504(1)(e) MCA

- Content of Subdivision Regulations must:

  Provide for the identification of areas that, because of natural hazards, are unsuitable for development. The regulations must prohibit subdivisions in these areas unless the hazards can be eliminated or overcome by approved construction techniques or other mitigation measures . . .

76-3-504(1)(f) MCA

- Content of Subdivision Regulations must:

  Prohibit subdivisions for building purposes in areas located within the floodway of a flood of 100-year frequency, as defined by Title 76, chapter 5, or determined to be subject to flooding by the governing body

Items Addressed in Subdivision Regulations

- When is a flood study/flood hazard evaluation required
- What information must be included as part of a flood study
- Do flood hazards have to be addressed as part of an Environmental Assessment even when a flood study isn't required
- What development standards apply to subdivisions that include land in the 100-year floodplain
- Watercourse setbacks

Flood Hazard Evaluation

- “Eyes Wide Open” narrative analysis of flood hazards
- Confidence in H&H of existing regulatory maps
- Overbank flow path uncertainty
- Channel stability and other landscape hazards
- Integrity of any existing fill in the floodplain
- Road design
- Groundwater rise, rain on snow, stormwater, irrigation ditches, dam failure

Development Standards

- Preference to have land within floodplain designated as open space tract
- Lots that contain floodplain must designate building site outside of the floodplain
- Even though building site outside of floodplain, we still require lowest floor to be BFE + 2’
- Safe access to building site during 100-year flood
- Avoid placement of infrastructure in floodplain.
- Bridges (even driveway bridges) have lowest horizontal chord BFE + 2’

Flood Study Waiver Process

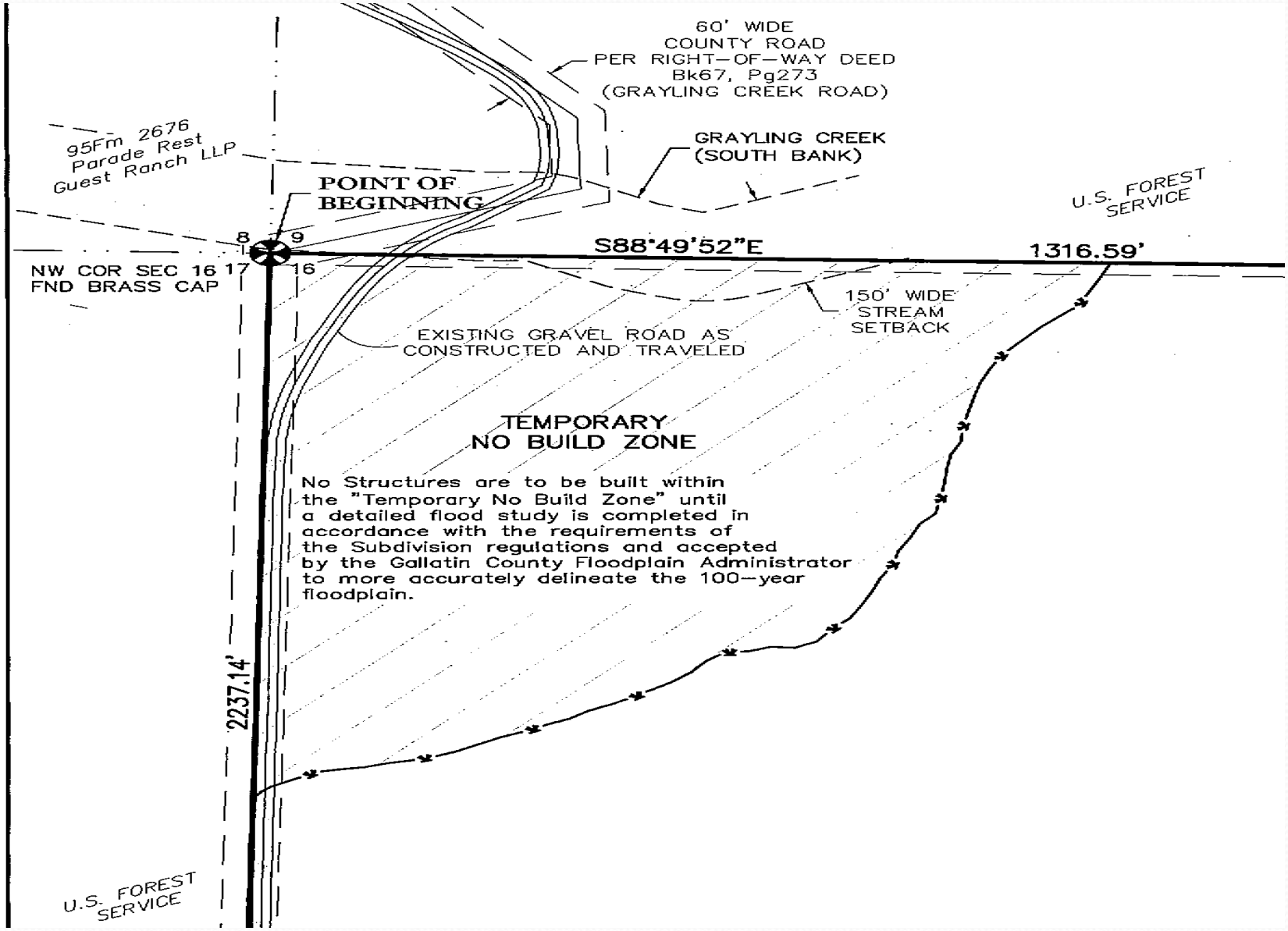
- Burden of proof on applicant:

  The waiver request shall include substantial documentation sufficient to demonstrate that the proposed Subdivision is safe from flood hazards; and shall address the criteria described below in Section 10.F.2. Such documentation may include, but is not limited to, ground elevations, hydrologic information for the subject Watercourse, historical Flood information, descriptions or mapping of local drainage patterns, other similar information.

- Governing body must determine subdivision is reasonably safe from flood hazards, and won't exacerbate flood hazards.
- Must also consider adequacy of mitigation

Past Flood Study Threshold

- If any portion of a proposed subdivision is within 2,000 horizontal feet and less than 20 vertical feet of a watercourse draining an area of 5 square miles or more.


60' WIDE
COUNTY ROAD
PER RIGHT-OF-WAY DEED
Bk67, Pg273
(GRAYLING CREEK ROAD)
95Fm 2676
Parade Rest
Guest Ranch LLP
GRAYLING CREEK
(SOUTH BANK)
POINT OF
BEGINNING
U.S. FOREST
SERVICE
8
9
S88°49'52"E
1316.59'
NW COR SEC 16
FND BRASS CAP
17
16
150' WIDE
STREAM
SETBACK
EXISTING GRAVEL ROAD AS
CONSTRUCTED AND TRAVELED
TEMPORARY
NO BUILD ZONE
No Structures are to be built within
the "Temporary No Build Zone" until
a detailed flood study is completed in
accordance with the requirements of
the Subdivision regulations and accepted
by the Gallatin County Floodplain Administrator
to more accurately delineate the 100-year
floodplain.
2237.14'
U.S. FOREST
SERVICE

Current Flood Study Thresholds

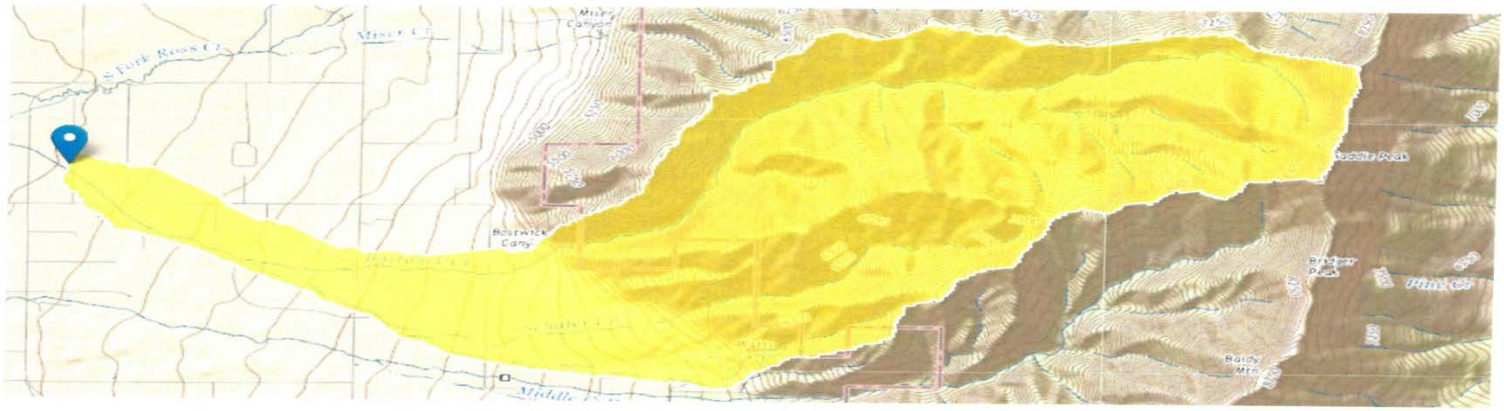
- A flood study is required when any infrastructure (roads, bridges, utilities, etc.) or developable portion of a lot is within:
  - 2,000 horizontal feet and less than 20 vertical feet above the Ordinary High Water Mark of a Watercourse draining 20 square miles, or
  - 1,000 horizontal feet and less than 10 vertical feet above the Ordinary High Water Mark of a Watercourse draining an area between 10 and 20 square miles.

Calculate Watercourse Drainage Area

- http://water.usgs.gov/osw/streamstats/

StreamStats Report

Region ID: MT
Workspace ID: MT20160715102011571000
Clicked Point (Latit... 45.79201,-111.07770
Time: 2016-07-15 10:20:47 -0600



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
CONTDA	Area that contributes flow to a point on a stream (total drainage area minus non-contributing areas within basin)	9.4	square miles

Watercourse Mitigation

- Setbacks
  - 300 foot setback from ordinary high water mark of East and West Gallatin, Madison, Jefferson and Missouri Rivers.
  - 150 foot setback from ordinary high water mark of all other watercourses.

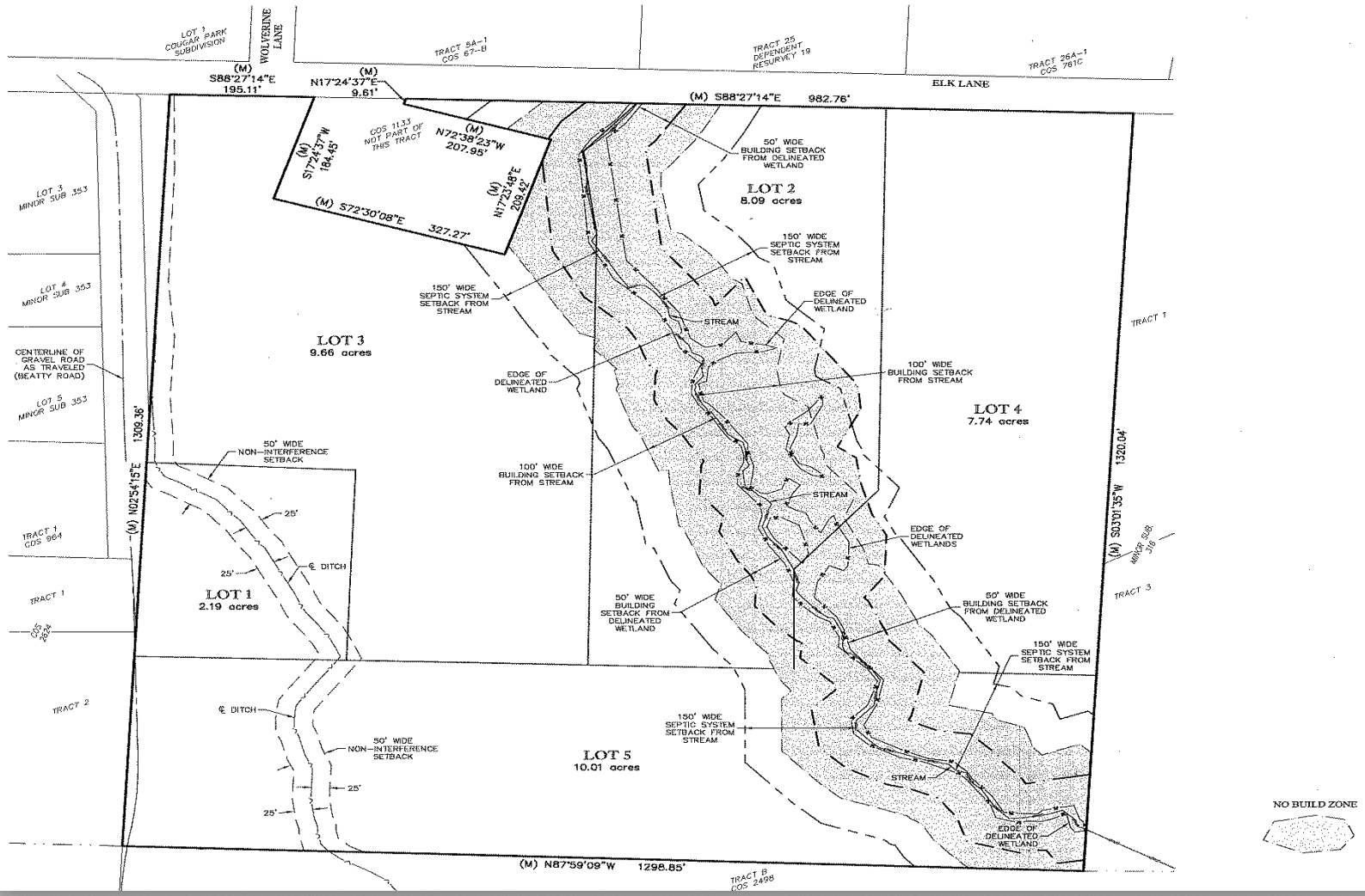
Watercourse Mitigation

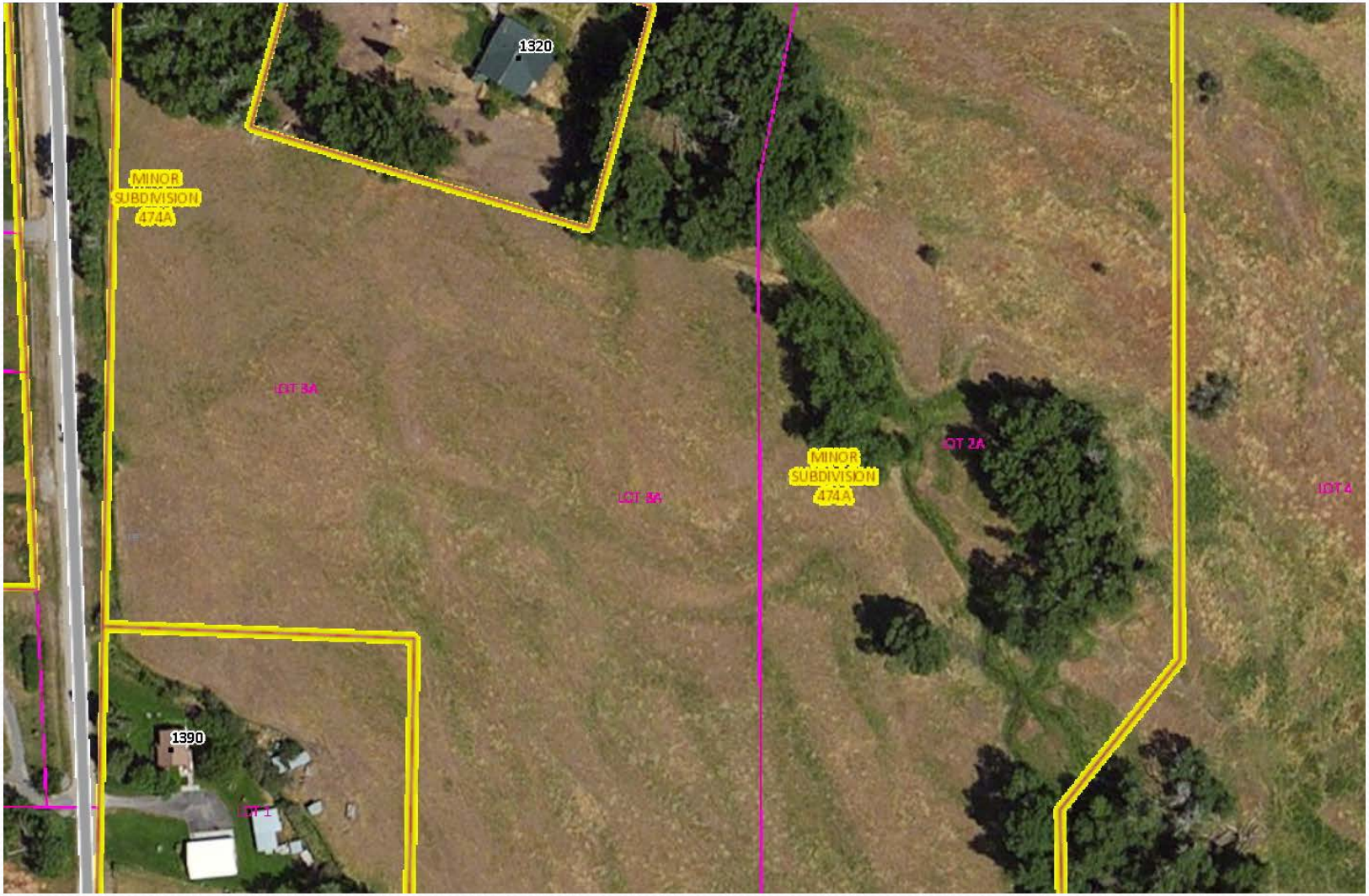
- Watercourse Mitigation Plan
  - Plan is expected to provide equivalent or greater protection than setback.
  - Plan includes provisions for implementation and enforcement of protective measures.
  - Implementation of plan will not adversely impact flood and erosion risks of subject property and upstream/downstream properties.

CONDITIONS OF APPROVAL OF THE
FINAL PLAT OF
SALES FARMSTEAD MINOR SUBDIVISION No. 474

A TRACT OF LAND LOCATED IN THE SOUTHWEST ONE-QUARTER OF SECTION 18,
TOWNSHIP 2 SOUTH, RANGE 5 EAST, PRINCIPAL MERIDIAN MONTANA,
GALLATIN COUNTY, MONTANA

OWNER: GENE COOK DEVELOPMENT INC.
PURPOSE: TO CREATE A 5 LOT MINOR SUBDIVISION




1320
MINOR
SUBDIVISION
474A
LOT 3A
LOT 3A
MINOR
SUBDIVISION
474A
LOT 2A
LOT 4
1390
LOT 1

G-41-G

AMENED MIDDLE CREEK MEADOWS SUB PH 1

G-41-G

AMENDED PLAT OF

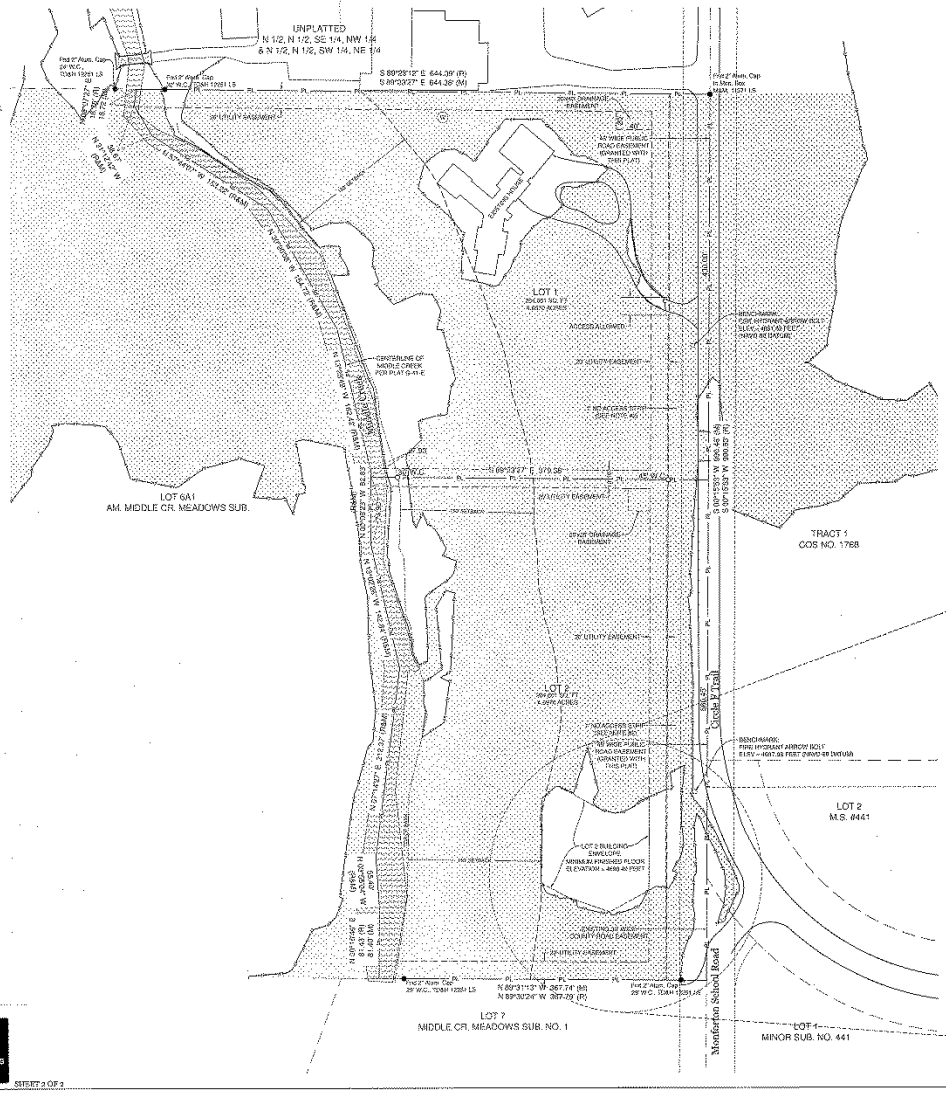
TRACT 2A1 OF THE AMENDED PLAT OF LOT 6A & TRACT 2A OF AMENDED MIDDLE CREEK MEADOWS SUBDIVISION NO. 1 (G-41-E)
LOCATED IN THE NE 1/4, SEC. 12, T. 2S., R. 4E. OF P.M.M., GALLATIN COUNTY, MONTANA

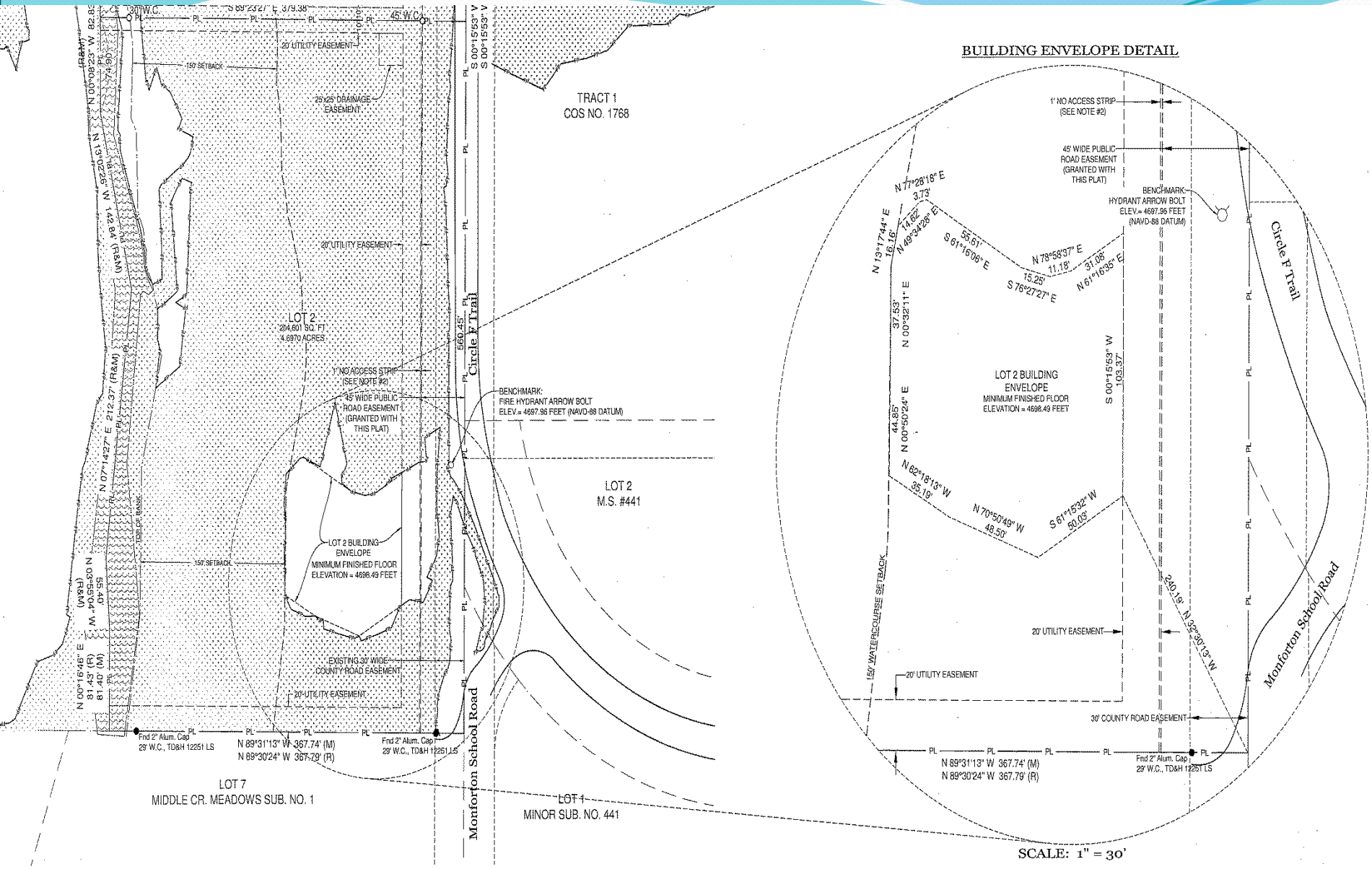
(CONDITIONS OF APPROVAL SHEET)

G-41-G

LEGEND

- FOUND 3/4" O.D. IRON PIPE
- PL — PROPERTY LINE
- ADJOINING PROPERTY LINE
- EASEMENT LINE
- FIRE HYDRANT
- WATER VALVE
- EDGE OF WATER
- TOP OF BANK
- 150' WATERCOURSE SETBACK
- 100-YEAR FLOOD BOUNDARY
- 100 YEAR FLOOD PLAIN PER COMPLIANCE INC. FLOOD STUDY DATED MARCH 2014
- PROPOSED BUILDING ENVELOPE


UNPLATTED
N 1/2, N 1/2, SE 1/4, NW 1/4
& N 1/2, N 1/2, SW 1/4, NE 1/4
S 89°29'12" E 644.39' (R)
S 89°30'27" E 644.38' (M)
Fnd 2" Alum. Cap in Mon. Box MSM 11571 LS
Fnd 2" Alum. Cap 29' W.C., TSM 12661 LS
Fnd 2" Alum. Cap 29' W.C., TSM 12661 LS
30' UTILITY EASEMENT
POND DRAINAGE EASEMENT
40' WIDE PUBLIC ROAD EASEMENT (GRANTED WITH THIS PLAT)
N 71°28'15" E 3.23'
N 49°26'26" E 44.80'
N 00°16'03" W 1122.25' (M)
N 00°16'03" W 1122.25' (R)


BUILDING ENVELOPE DETAIL
TRACT 1
COS NO. 1768
LOT 2
204,601 SQ. FT.
4.6970 ACRES
LOT 2
M.S. #441
LOT 7
MIDDLE CR. MEADOWS SUB. NO. 1
LOT 1
MINOR SUB. NO. 441
Circle F Trail
Monforton School Road
150' SETBACK
20' UTILITY EASEMENT
25'x25' DRAINAGE EASEMENT
1' NO ACCESS STRIP (SEE NOTE #2)
45' WIDE PUBLIC ROAD EASEMENT (GRANTED WITH THIS PLAT)
BENCHMARK: FIRE HYDRANT ARROW BOLT ELEV.= 4697.96 FEET (NAVD-88 DATUM)
LOT 2 BUILDING ENVELOPE MINIMUM FINISHED FLOOR ELEVATION = 4696.49 FEET
EXISTING 30' WIDE COUNTY ROAD EASEMENT
30' COUNTY ROAD EASEMENT
150' WATERCOURSE SETBACK
Fnd 2" Alum. Cap 29' W.C., TD&H 12251 LS
N 89°31'13" W 367.74' (M)
N 89°30'24" W 367.79' (R)
SCALE: 1" = 30'

Some Challenges

- Zone A – when do we require applicants to develop a BFE
- Enforcement concerning floodplains that are established via subdivision review but are not recognized by FEMA
- Floodplains that are delineated on subdivision plats but are affected by FEMA map changes
- Others . . .

Questions?