

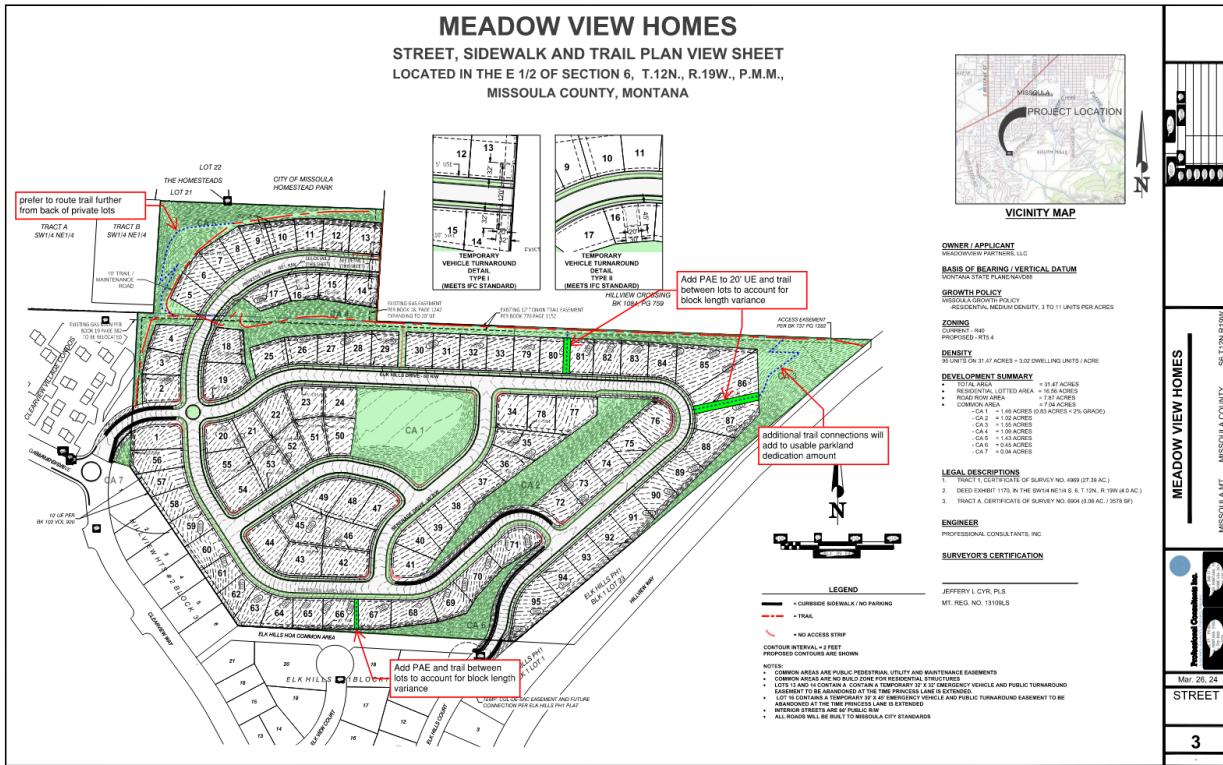
From: Nathan McLeod
To: Troy Monroe; Traci Freshour
Cc: Dave DeGrandpre
Subject: Meadowview
Date: Wednesday, April 17, 2024 9:56:37 AM
Attachments: imaoe001.xls

Troy,

I've been reviewing Meadowview Homes, and I've got the following suggestion regarding mitigating for block length. Would Engineering be supportive of this?

Block Length Variance:

In order to support the block length variance several public access easements with trails should be added as shown in the below preliminary plat markup.



Parks and Recreation Meadowview Homes Sufficiency #3 review

4.17.2024

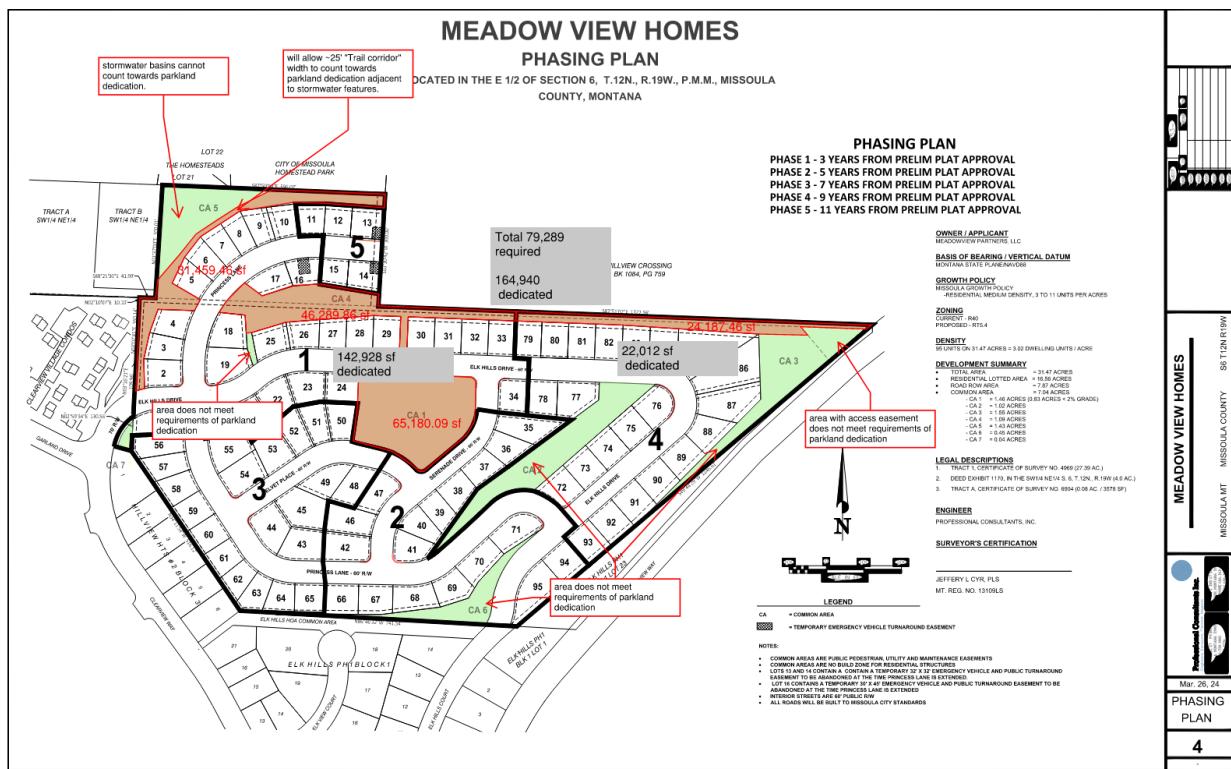
As submitted Parks and Recreation does not have enough information to deem this sufficient. Please see the following for information/changes requested.

Parkland Dedication.

Calculations do not appear to be correct. Certain areas are counted that do not qualify, see image below of highlighted areas that appear to meet the requirements for parkland dedication (note my numbers are not necessarily accurate). There appears to be more than enough common area (parkland) dedicated to meet the requirements however. Note: Areas including stormwater facilities cannot count towards parkland dedication.

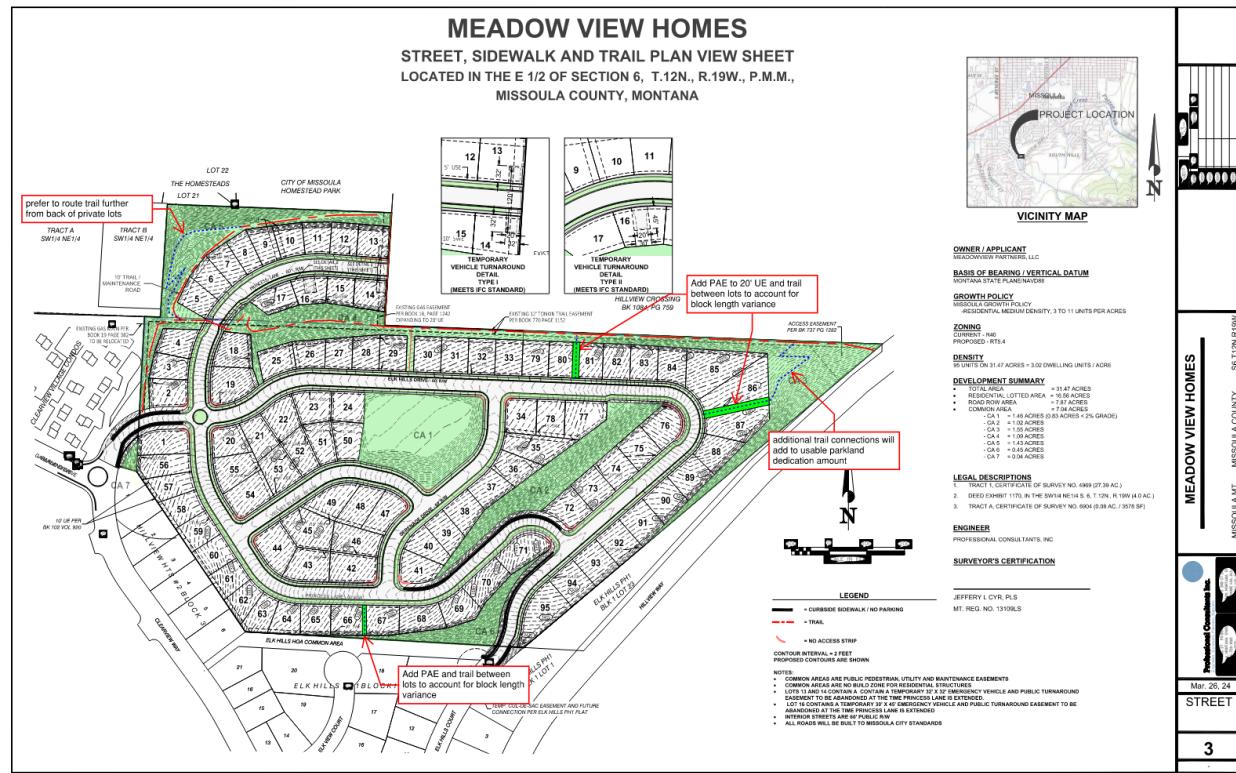
A condition of approval will be similar to the following:

The subdivider shall provide plans for and installation of park improvements to all common areas used to meet parkland dedication requirements, including but not limited to: grading, application of topsoil, installation of commercial grade irrigation system, installation of turf grass and dryland seed or sod, and installation of park trees, subject to review and approval by Parks and Recreation, prior to final plat approval. Topsoil shall be approved by Parks and Recreation and shall have a minimum depth of 10 inches (5-020.14.H, City Subdivision Regulations).



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Boulevard Landscaping Plan:

We appreciate the work that has been done to provide boulevard sidewalks and trees. These improvements will exponentially increase safety, walkability and comfort of the neighborhood.

There are several planting sites that are not showing trees, it is unclear if there are utility conflicts, but in general roadway curves do not have site triangle restrictions, only intersections. Please maximize the planting locations for street trees accordingly.

The boulevard landscaping plan should include preliminary utility layout to ensure that there are no tree conflicts. (Note Sewer and stormwater mains are not permitted within boulevards). We prefer to see driveways (at least conceptually) to ensure the tree layout is in fact achievable. Note that adherence to the tree layout provided in the boulevard landscaping plan will be a condition of final plat approval, only minor variations will be approved and the final count of class II street trees shown in this plan must be met. Preliminary Condition of Approval:

The subdivider shall provide plans for boulevard landscaping for all roads within and adjacent to development lots, subject to review and approval by Parks and Recreation, prior to final plat approval for Phase 1. Class II street trees will be planted at a linear spacing between 25 and 35 feet, with a minimum of one tree per lot, and while tree locations may change slightly in final design, the total number of trees shown within the Right-of-Ways will remain the same. (5-050.5.C, City Subdivision Regulations).

The following note should be added to the boulevard landscaping plan: Street trees will be planted at a linear spacing between 25 and 35 feet, with a minimum of one tree per lot, and while tree locations may change slightly in final design, the total number of trees shown will remain the same.

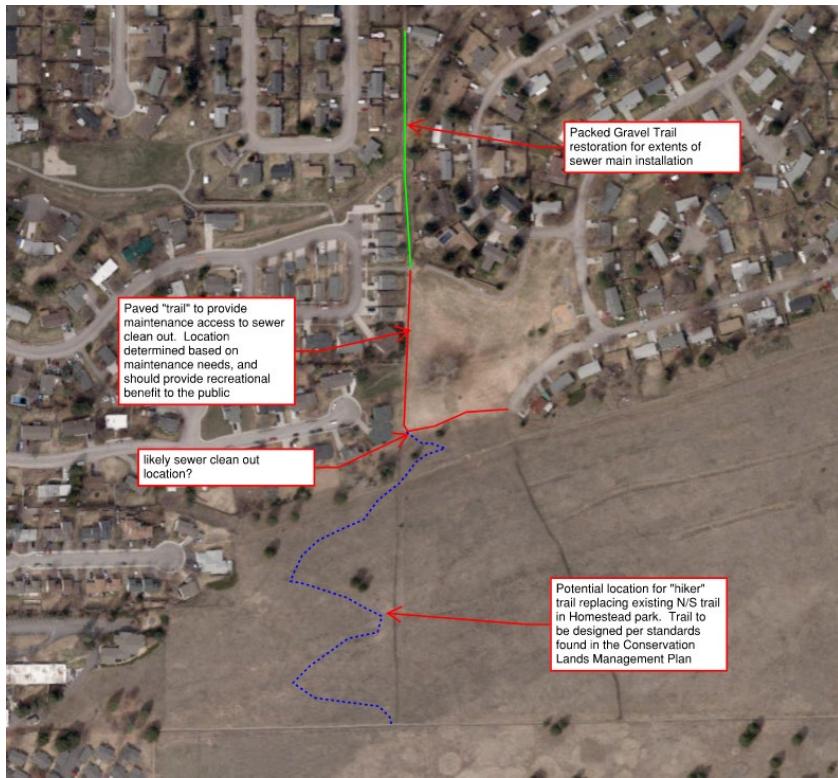
Include on the plans the utility/site triangle offset table found in the parks design manual.

Sewer and Stormwater Facilities:

Applicant must include plans for the sewer and stormwater system through homestead park, and Wapikia park. Include pipe size, location, depth, and manhole locations. It is still unclear how the stormwater will affect Wapikia park, and additional improvements to accommodate and convey stormwater may be required. We must understand the amount, and duration that stormwater will be flowing through, or stored in Wapikia park. An exhibit showing the extents of impact from stormwater runoff in Wapikia park, and proposed improvements should be included. The area impacted due to construction should also be shown. Include a statement regarding anticipated maintenance access needs and frequency, and where that access will occur (impacts to trails or lands maintained by Parks and Recreation must be mitigated, and required maintenance access planned for accordingly).

Homestead park: Site restoration to include topsoil stripping/amendment, re-vegetation to include seeding and 2 year establishment period with reseeding required in areas where establishment does not meet standards, weed control shall be provided through establishment. The existing user made trail along the eastern park boundary must be replaced with a new natural surface "hiker" trail routed and designed at a sustainable grade per the city of Missoula conservation lands management plan (section 5.2.1). This trail shall connect from Wapikia park through homestead park to the trail in CA5. Routine maintenance (vehicle) access cannot be accommodated within homestead park, sewer and stormwater facilities must be designed to minimize maintenance needs, and manholes/cleanouts must be placed on the applicants property, or in areas accessible by vehicles in Wapikia park. Maintenance access must be shown prior to approval. A maintenance agreement with for maintaining the stormwater and sewer system will be needed.

Wapikia park (and adjacent parks maintained unopened ROW): Restoration to include amended soil, irrigation repair, turfgrass sod, and a new paved access pathway that allows for utility service vehicles to access any manholes/cleanouts etc. The path must accommodate all vehicle maintenance needs (entry and egress must be considered). The path should also provide a recreational benefit to the public and should connect to other access points within the park/the cul-de-sac of 42nd street. The existing pathway between lots further north of Wapikia park must be restored to a packed gravel pathway for the entire extent of area impacted. All work done in areas maintained by parks and recreation must meet standards found in the parks and recreation design manual, and be approved by parks and recreation prior to final plat approval.



Parks and Recreation Meadowview Homes Sufficiency #3 review

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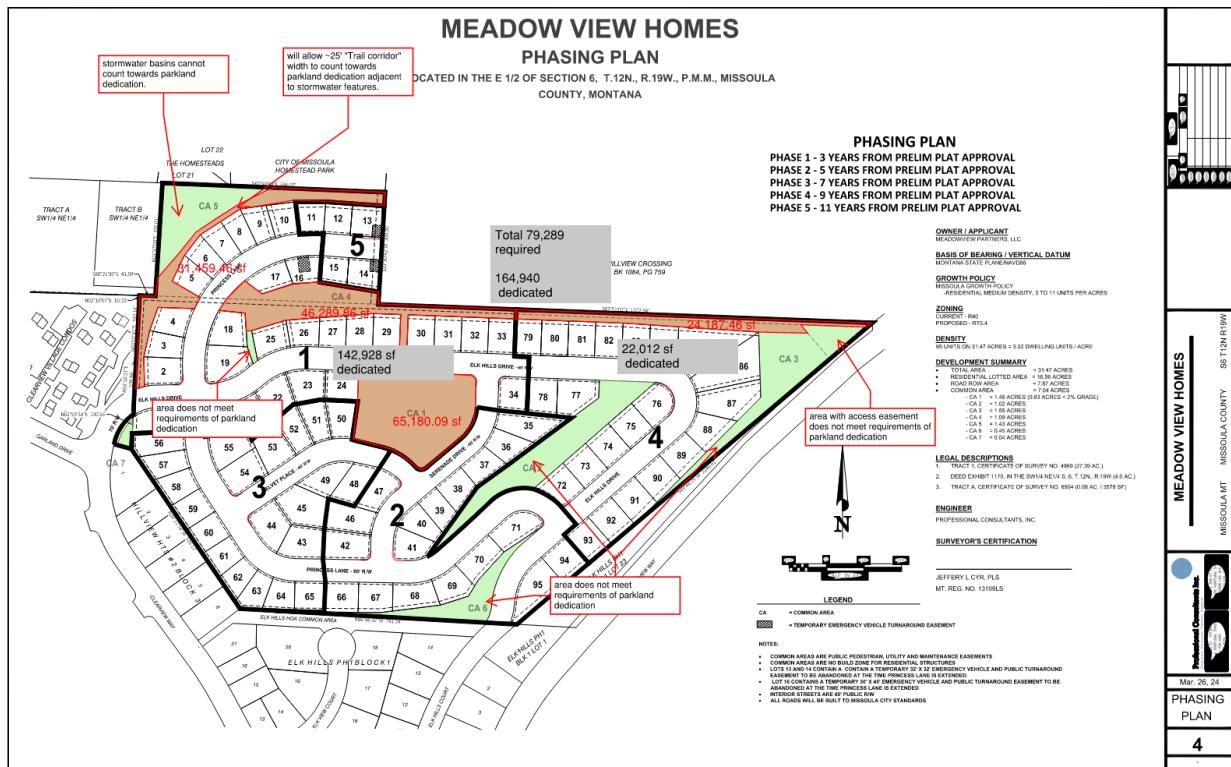
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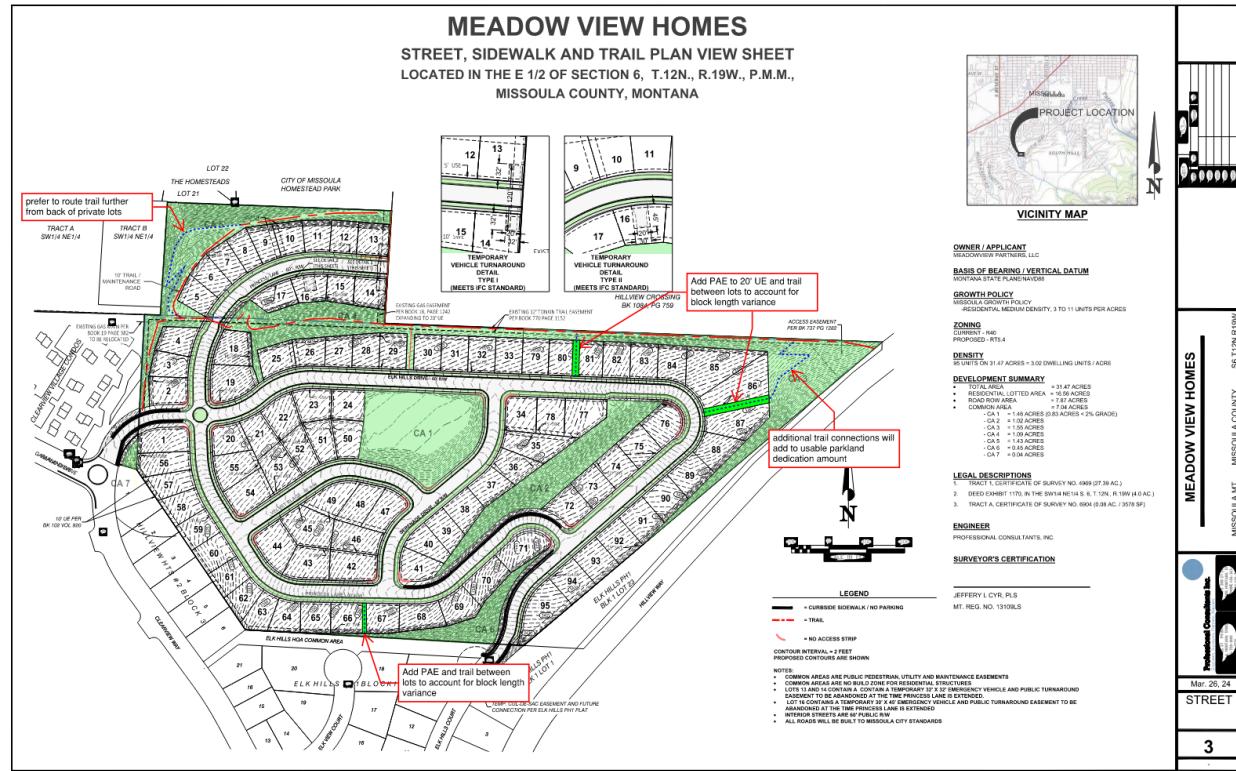
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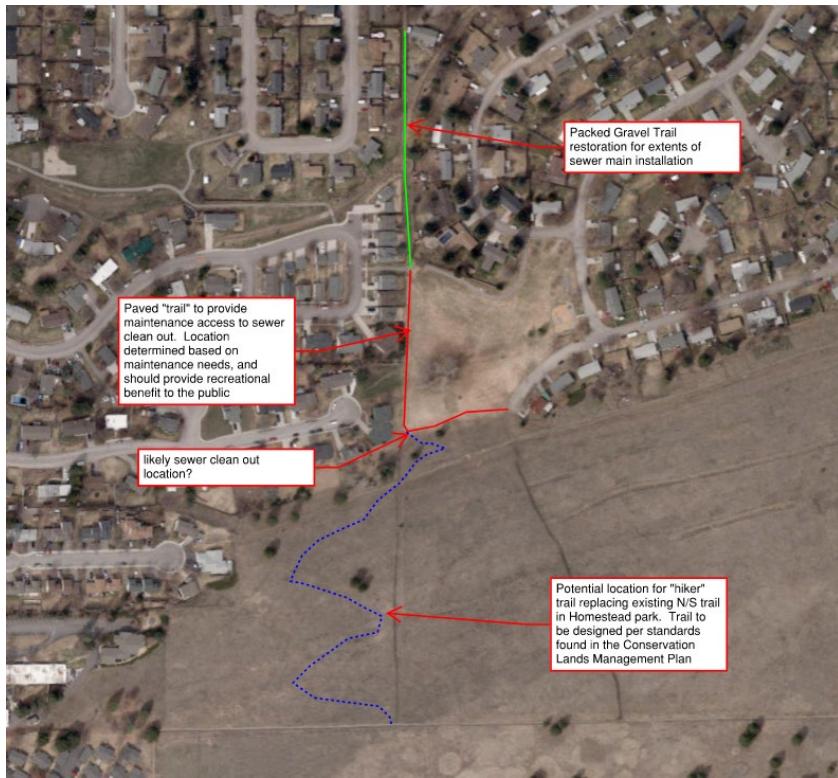
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Engineering 3rd Sufficiency Review – Meadow View Homes Subdivision

Tab 1 - Plat

1. Supplemental Sheet 1, *PRE PLAT*
 - a. Replace "Hillview Crossing" with "Habitat for Humanity"
 - b. Show cul-de-sac easement in Elk Hills or remove the callout
 - c. Move the label for CA7 into CA7 or add a leader arrow
 - d. Dimension all sides of CA7
 - e. Callout Clearview Drive as the 60-ft ROW you dimension. If 70-ft is wanted, call out 10-ft ROW easement on CA7
 - f. Seems to be an extra line in Elk Hills Lot 23 that extends into CA3, remove if not needed
 - g. Remove the No Access strip along the east boundary adjacent to the Habitat parcel
 - h. Remove the red line that is floating in the ROW adjacent to Lot 13
 - i. Label the length of Lot 16 adjacent to street frontage.
 - j. IFC alternative to hammerhead turnaround, as shown on *Pierce 100' Aerial Ladder Turnaround Analysis* standard drawing, is 64-ft from far edge of turn leg. This extent of Princess Lane must be within Phase 1 or within an easement.
 - k. All portions of the IFC alternative to hammerhead turnaround must be in ROW or public access easement. It looks like a portion of the turnaround is in a utility (only) easement.
 - l. Should the callout in Lot 17 be "5' USE"?
2. Supplemental Sheet 2 *Aerial Map*
 - a. (same comments from Pre Plat)
 - b. If not showing gas main, remove callout for gas main
3. Supplemental Sheet 3 *Street*
 - a. (same comments from (1) and (2))
 - b. Correct double "Garland Drive" label
 - c. Correct line type/weight between Lots 29 and 30
4. Supplemental Sheet 6 *Design Grade*
 - a. Provide a profile of Lot 94 showing existing and proposed grades to subdivision boundary. It looks like the proposed grade is about 15-ft below existing grade at property boundary. If excavation is necessary in any Elk Hills subdivision lot, provide easement.
 - b. Provide a profile of Elk Hills Ph 1 Blk 1 Lot 1 showing that the maximum driveway grade (15%) can be met within the street ROW, or provide construction easement
 - c. Show removal of temporary cul-de-sac at Elk Hills Court tie-in and extention of west side sidewalk (this is developer's responsibility)
 - d. Create a new exhibit showing proposed grade to existing grade cut/fill.
5. Supplemental Sheet 7 *Utility Layout*
 - a. Minimum 5-ft between storm and sanitary manholes, measured between outside structures
 - b. This may affect the width of easement between Lots 9 and 10. Verify, and include the necessary easement width.
 - c. Storm or Sanitary manholes who's structure outside is within 10-ft will require a DEQ and MCPWSS deviation.
 - d. A utility easement is necessary for 10-ft all sides of a wet utility main. An easement looks to be necessary along the backsides of Lots 8,9,10, and 11
 - e. Redo utility main alignments to stay between curb faces (except Elk Hills Court tight corner, and Princess Lane @ Elk Hills tight corner).
 - f. Storm mains must remain under curbline or within street.
 - g. Water mains must be 6-ft from center of boulevard (2-ft in front of curb)

- h. Sewer mains must be 8-ft from center of boulevard (4-ft in front of curb)
- i. For all phasing – additional manholes are needed at the phase boundary, or main need to extend to the next planned manhole and easements are necessary (sanitary and storm).

6. Supplemental Sheet 8 *Elk Hills Roadway Design*

- a. Meet AASHTO K values for 25 mph design **K values for sag on Princess Lane still off**
- b. Provide horizontal curve radius, must meet AASHTO minimum (typical all streets)
- c. If superelevation is used, provide maximum rate of superelevation

7. Plat Supplemental Sheet 9 *Princess Roadway Design*

- a. Provide stationing in profile view (**typical all streets**)
- b. Provide standard vertical curve callout (showing beginning and ending station) (**typical all streets**)
- c. A six-foot (6') cut at property line, at CL of road, I calculate would be a 17-ft difference at the end of the hammerhead. Be aware that the hammerhead can only have a max. 10% grade.

8. Supplemental Sheet 13 *Mailbox Layout*

- a. Mailbox clusters are within the boulevard, boxes face the street, boxes have min. 5' ADA width in front of the boxes, at least one ADA curb ramp is required.

9. Supplemental Sheet 14 *Prelim Road Section*

- a. Geotextile required throughout subdivision (**repeat comment**)

Tab 2 - Summary, Assessment and Variance

1. Pg 5, Recommend keeping Elk Hills Court name **Still calling it Elk Hills Dr**
2. Pg 5, Variance to curbside needs to show hardship. Currently doesn't meet Title 12 reasons for curbside. **Curbside proposed on Elk Hills Court with 5' sidewalks on page 6 and 7, tab 2, and no parking lanes (should be 6' sidewalks to meet chapter 7)**
3. PG 13, School map is incorrect for location of project and which school it serves.

Tab 3 - Maps and Diagrams

1. Pg 22 correct the orientation of the sheet
2. **Pg 28 correct the school district map**

Water – Sufficient

Sewer – Sufficient

Stormwater – Not Sufficient

1. 1st Sufficiency Comments
 - a. Comment to include pre- and post-development figures showing drainage sub-basins, time of concentration flow paths, curve numbers, and analysis points remains unaddressed.
 - b. Include run-on from offsite area around the periphery of the development. I cannot tell if this was addressed because a figure showing sub-basin extents has not been submitted.
2. 2nd Sufficiency Comments regarding new proposal to discharge stormwater across the North site boundary to the Hillside Swale:
 - a. Expand analysis area to include offsite area contributing runoff to the Hillside Swale and provide inundation depth in Wapikiya park for design storm events.
 - b. How will stormwater be discharged from the Lower Pond to the Hillside Swale? No piped or surface connection is shown in figures or discussed in the report. Include discussion of new infrastructure required to convey stormwater to the Hillside Swale. Address both regular and emergency overflow. Piped conveyance is required.

3. 3rd Sufficiency Comments regarding revised Lower Pond, Middle Pond, and West Pond layouts
 - a. Lower Pond embankment of 2:1 H:V exceeds maximum allowable slope of 3:1 H:V. Reduce embankment slope to 3:1 H:V or flatter. City would accept underground storage to offset/replace pond volume.
 - b. Middle Pond embankment of 2:1 H:V exceeds maximum allowable slope of 3:1 H:V. Reduce embankment slope to 3:1 H:V or flatter. City would accept underground storage to offset/replace reduced pond volume.
 - c. How was the West Pond infiltration rate of 2.6-in/hr determined?

Note:

1. Design Slope Map
 - i) Slopes over 50% are not allowed. The slope map does not indicate whether proposed slopes are over 50%, only that there are slopes over 25%.
 - ii) Altering slopes on adjacent property (Elk Hills Ph1, Blk 1, Lot 23, Elk Hills HOA Common Area, Clearview Village Condos, Tonkin Trail Easement) not allowed unless easement/permission is obtained. (Section 3-060.2)
 - iii) Grading easements will be required where cut slopes for roads extend outside of the proposed right-of-way. (Section 3-060.1)

From: Troy Monroe
To: Nathan McLeod; Traci Freshour
Cc: Dave DeGrandpre
Subject: RE: Meadowview
Date: Wednesday, April 17, 2024 10:27:07 AM
Attachments: image001.png

Yes, those additions make sense. The access between 66 and 67 will provide access to CA 6, but the steepness of CA 6 will make it practically useless for anything but sledding. There currently isn't public access to Elk Hills common area, but maybe the Elk Hills HOA won't mind an informal trail to Elk View Court.

Troy Monroe PE | City Engineer for Development Review

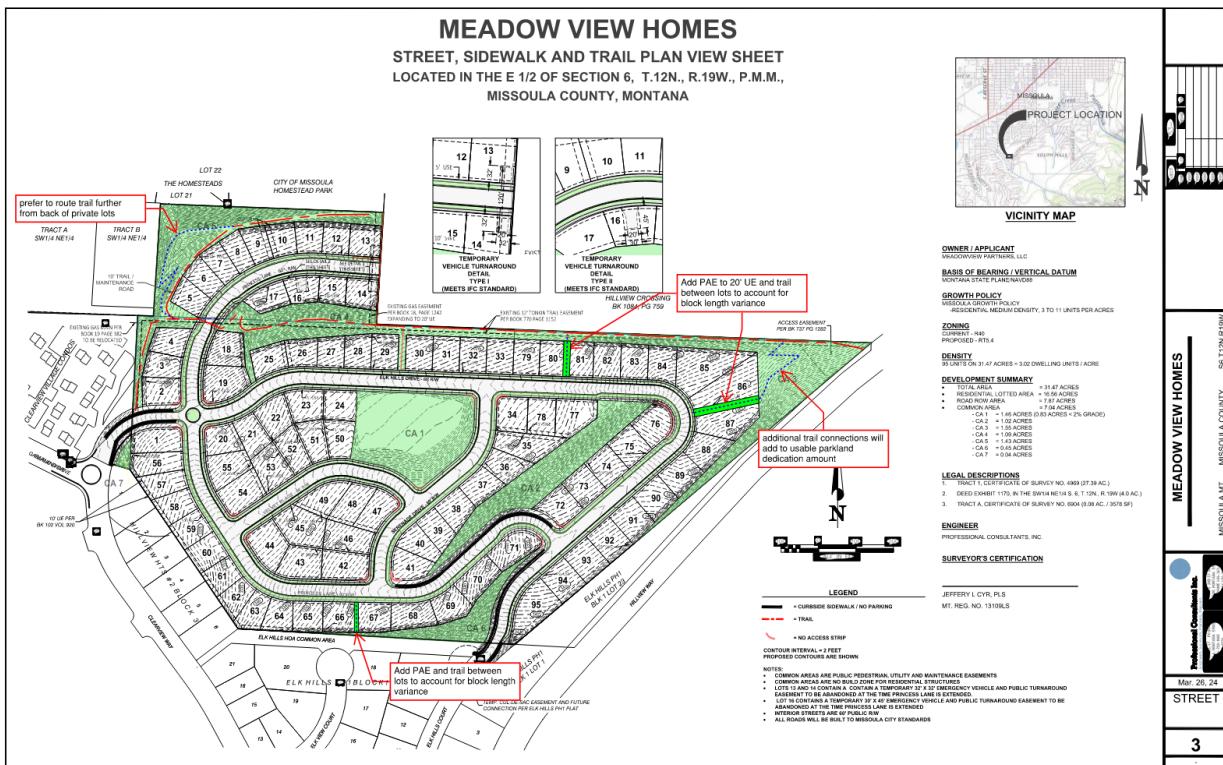
From: Nathan McLeod <McLeodN@ci.missoula.mt.us>
Sent: Wednesday, April 17, 2024 9:57 AM
To: Troy Monroe <MonroeT@ci.missoula.mt.us>; Traci Freshour <FreshourT@ci.missoula.mt.us>
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Troy,

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Block Length Variance:

In order to support the block length variance several public access easements with trails should be added as shown in the below preliminary plat markup.



Nathan McLeod, PLA
 Senior Landscape Architect
 Missoula Parks and Recreation
 600 Clegg Ln | Missoula, MT 59801
 406-552-6261
mcleodn@ci.missoula.mt.us

From: [Troy Monroe](#)
To: [Dave DeGrandpre](#); [Traci Freshour](#)
Subject: RE: Meadow View sufficiency - Fire
Date: Wednesday, April 17, 2024 11:12:40 AM
Attachments: [Additional hydrant request exhibit.pdf](#)
[image001.png](#)

Please use the attached exhibit (the first one had too many pages)

Troy Monroe PE | City Engineer for Development Review

From: Troy Monroe
Sent: Wednesday, April 17, 2024 11:10 AM
To: Dave DeGrandpre <DeGrandpreD@ci.missoula.mt.us>; Traci Freshour <FreshourT@ci.missoula.mt.us>
Subject: Meadow View sufficiency - Fire

Dave –

We need two hydrants added as part of the next submittal.

Per International Fire Code, Appendix C, C102

- Between Lots 23/24
- Between Lots 1/2 Elk Hills Ph 1
 - Direction of emergency response is from Clearview
 - Nearest existing hydrant is >900 ft from Lot 95

Thanks,

Troy Monroe PE | he/him/his | City Engineer for Development Review
Department of Public Works & Mobility
Infrastructure & Mobility Division



Promoting a safe, healthy Missoula through the development of transportation and mobility networks and the efficient delivery of high-quality public infrastructure, utilities, and services.

