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TANANA 440 MASTER PLAN REPORT

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1985 Surveyor's Report

The Tanana 440 is a Borough owned parcel of land located in Section 12, Township Two South, Range Three West, Fairbanks Meridian, at the southern tip of Chena Ridge. Its nickname derives from its area, actually 438 acres. It was nominated for private development in 1983. FNSB hired Kalen & Associates to perform a boundary survey and write a Surveyor's Report for the parcel in 1985. The master plan options in our March, 1985 report were intended to be quite brief. The maps in that report are blowups of 1" = 1 mile USGS maps to 1" = 1000'. The task was directed toward creation of a few large lots for likely sale to a developer. Three Master plans were rough sketched onto the USGS maps showing various access and parcel options. Most of our 1985 report is germane to current and potential development of the Tanana 440. It contains comparison of costs of development and revenue for development by private developers to costs for the FNSB to perform all development in house. The body of the 1985 report has been reprinted in the same format as this report, along with the three Master plan sketches that accompany it. The 1985 survey data and the appendices have been omitted. It has been reprinted and attached to this report.

History

The entire Chena Ridge area was traveled over, much timber cutting and prospecting took place, but settlement was sparse in early years, prior to the 1950's. The Davis Homestead existed south of Chena Ridge, one mile southwest of section 12. The General Land Office surveyed several sections in the vicinity in 1918. Davis Road was already on the Davis Homestead down in Section 14 south of the end of Chena Ridge. This Davis Homestead was on a small "bump" of

high quality land along the Tanana River that is separated from Chena Ridge by permafrost flats. The permafrost flat made summertime access along Rosie Creek difficult. Davis Road ran northwesterly, up onto the hills where the first access road from Nenana to Ester had been built. The Parks Highway is there now.

A telegraph line had been constructed in 1913-17, close to and parallel to the Tanana River through Section 12. During the placer mining in the 1920's and 30's in the Cripple Creek area near Ester, a trail was constructed from Ester south just west of Cripple Creek, over a hump connecting Chena Ridge to the Nenana Ridge, then along Rosie Creek and over it to intersect with Davis Road. This trail shows up on the first aerial photographs made for the USGS maps in 1948-49, and on the first edition of the USGS map. It is now referred to as the 100 Mile Trail. This trail has been in use since sometime in the 1930s. Use since around 1960, when the south end of Chena Ridge was opened to homesteading, is much heavier. By 1980, it had become a popular, heavily used trail.

In 1938, Rosie Creek Road was constructed by Independent Lumber to gain access to the south end of Chena Ridge overland for logging purposes. It provides an upland road on stable ground above the permafrost zone along the east edge of Chena Ridge to Rosie Creek. It could be used all year round, and was of higher quality than the access west of Rosie Creek from Ester. The new road came off Chena Ridge Road about a half mile up hill from Chena Townsite (the present day campground), and ran near the lower margin of the hill to its south end, where it crossed over the spine and ran into the Rosie Creek drainage. It leaves the high ground a little south of the present day intersection of Potter Road and Cripple Creek Road. From there it was a primitive cat trail cut parallel to Rosie Creek. It crosses Rosie Creek running $\frac{3}{4}$ mile west of the Tanana 440 over permafrost ground south to join into the old trail noted above as Davis Road. Branches of the 100 Mile Trail from Ester intersect the Rosie Creek Trail in several places as shown on a 1"=100' scale map adapted from the FNSB Base maps and the 100 Mile Loop Trail project. The Rosie Creek Road portion of the 100 Mile Trail is more heavily traveled than older portions from Ester due to the ease of access to numerous area residents.

In the 1950s the United States Air Force lost a small plane in a crash in Section 12. It was recovered by running a bulldozer trail from Rosie Creek Road along the top of Chena Ridge, following the spine for much of the way, then south to the crash site. The trail that resulted is excellent. Users can go into the middle of Section 12 to its Center Quarter corner, but must come back out the same trail. We refer to it as the Center Trail hereinafter in this report.

In the 1960s Chena Ridge around Rosie Creek Road was opened to homesteading. A road was built on the southern spine of Chena Ridge, much of it along a quarter line. This became Becker Ridge Road. There were attempts to build various roads in the area along the aliquot parts lines to conform to the homestead parcels, with limited success due to the sometimes steep grades of portions of Chena Ridge. Rosie Creek Road was realigned to the Township line between Section 31 and 6 by Mike Potter from where it crossed Becker Ridge Road to the NW corner of Section 6. Mike Potter then built the road south on the Township line between Section 1 and 6 to Section 12, the northeast corner of the Tanana 440.

In two locations the new road, named Potter Road, was built out to the west into State of Alaska and FNSB selected land. The first is just north of the East $\frac{1}{4}$ of Section 6. This portion of road is substandard, it has never been realigned. It is known locally as "The S Curve" and is

notorious for the numerous cars that fall into the ditch in the winter. The second detour is near the

southeast corner of Section 12 and is along the eastern boundary of the Tanana 440. The road has been constructed over 400 hundred feet west of the northeast corner of Section 12, slicing out a parcel that was incorporated in Reschaven Heights Subdivision. Cripple Creek Road turns back to the township line, where it provides access north and south to the Reschaven Heights Subdivision, and also to the Tanana 440. Many of the parcels in the vicinity of Becker Ridge Road and Rosie Creek Road were subdivided by deeds drawn up by lawyers as the homesteads were subdivided.

In the 1970's, the land West of Chena Ridge that had not been taken as Federal homesteads near the township line between Range 2W and Range 3W, was selected by the State and then Fairbanks North Star Borough. As a portion of their municipal entitlement, FNSB received portions of Section 30, T1S R2W; all of Sections 25 and 36, T1S R3W; and all of Sections 12 and 13, T2S, R3W lying north of the Tanana River. The State of Alaska retained Sections 1, 2, 11 and 14 in a residential classification, and much more to the west as the Bonanza Creek State Forest.

The most choice access to the Tanana River went quickly after the Borough received patent from the State. Government Lot 1 of Section 13 and Government Lot 3 of Section 12 were sold to the Binkley family in the 1980's. They are now identified on FNSB tax maps as TL 1301 and 1201, respectively. Two other US Government lots existed as parcels just under 40 acres each because of the riparian boundary, the Tanana River. They are Government Lot 1 of Section 12, sold to J. W. Mease, now identified as Tax Lot 1203; and Government Lot 2 of Section 12, sold to David and Dorothy Resch, now identified as Tax Lot 1202.

The remaining 438 acres of land, the "Tanana 440" at the south end of Chena Ridge has been highly sought after by private developers. It was nominated to be developed in 1983. FNSB commissioned a boundary survey and brief Surveyor's Report in anticipation of a sale as several large lots – see our report of 1985, attached to this report.

Next came Rosie Creek Subdivision, a State of Alaska subdivision surveyed in 1980 during the heyday of the State Land Disposal program. Our firm performed the survey. We gave the State a discount for allowing the use of a bulldozer to create about four miles of survey access trails along the lines depicted on the final Master Plan. These trails were as-built and the rights of way fitted around them. ATV's were used extensively on the Rosie Creek survey, on section lines as well as on the access trails, so that trail quality to the south and west was improved. The Rosie Creek Subdivision plat was filed in 1981. The first lots were sold later that year. Roads that provide access to the Tanana 440 at three new locations were platted in addition to Potter Road. One road, Tyler Road, was positioned so as to make possible a road running roughly west to east across the Tanana 440 at a mild grade.

David and Dorothy Resch subdivided much of their property along Potter Road beside Section 12 in 1982, Reschaven Heights. Meanwhile, FNSB had begun to develop their Nenana Ridge/Chena Ridge properties, beginning with Cripple Creek Subdivision straddling the Parks Highway in Section 24 in 1981 or so. Cripple Creek Road was designed with a 150 foot wide right of way, intended to be a major collector, or even a future arterial. A design contract to

extend Cripple Creek Road was executed in 1983. The road was extended south through Sections 25 and 36 to the northeast corner of Rosie Creek Subdivision, at Potter Road.

By 1984 the connection was made. The south end of Chena Ridge had the first year round access alternative since 1938. Cripple Creek Road was improved and then paved. It provides a first rate paved access to the Parks Highway. Our Access Analysis confirms that it is a faster and safer, albeit a longer route out of the area, and that a majority of area residents use it.

In the early 1990's the confusion over the road names was addressed. FNSB renamed many roads throughout the borough, eliminating duplicate road names, making roads conform to FNSB tag name rules when practical, and eliminating confusing road names. When driving, Cripple Creek Road became Potter Road going south at the intersection with Potter Road coming from the east – very confusing. Potter Road, as it had been dedicated on the Rosie Creek and Reschaven Subdivision plats, was renamed Cripple Creek Road, making it continuous from the Parks Highway to the Township line alongside the east side of the Tanana 440. The connection running east up to Becker Ridge Road from the northeast corner of Rosie Creek Subdivision remained Potter Road.

In Section 1, just east of TL 1203, the Mease property, a private owner, wished to build on land with a site overlooking the Tanana River - quite close to the township line. He desired access. A bulldozer trail was constructed from about the end of Potter Road (now Cripple Creek Road) south. It is a trespass trail that runs well into FNSB land and then into the J.W. Mease property. The original site has been removed. The current owners, Gary and Janice Contento, are rehabilitating the site with new plantings so that it is not easy to tell it was ever there. A portion of the cat trail is still useable as access to another site built on the J. W. Mease property. The cabin there burned to the ground in 2002. With grades running from 16 to 20% it is not a suitable driveway, and will not be used for Tanana 440 planning.

FNSB granted a limited use easement to J. W. Mease and to Gary and Janis Contento in November, 1985 for construction of a temporary driveway. A Record of Survey was filed in conjunction with this easement. It recognizes the impracticality of using the trespass cat trail for physical access to the Mease and Contento property. Gary Contento constructed a driveway that lessens the grade somewhat by making it longer than the old cat trail. This is the only option that works on steep ground. The resulting driveway is well constructed, ditched well and has turnouts where sharps turns have been made on section lines. But it is not long enough to relieve the grade to anything near FNSB road standards after the first 600 feet. Barrels of sand have been staged at several locations. It has three very sharp curves that run at grades for 13 to 16% - in the turns. In some respects, it is not really much better than the old cat trail because of these turns. While a modern 4 wheel drive car or truck can get up it with ease in spring or winter, it is problematical for large delivery or emergency vehicles. The terms of the lease require that Mease and Contento promise not to oppose or obstruct FNSB in any way with regard to development of their property. It is clear that development is planned. In return, FNSB is committed to provide them with alternative access.

Physical Access and Section Lines

As the history outlined above shows, some of the section lines do provide practical physical access to the Section 12. Each section line is examined in detail as follows:

East Line. Along the east boundary where Cripple Creek Road ends there is a good road built on the section line that will continue to be used as a road in the future. From where Cripple Creek Road joins the section line, Destiny Drive, the grades are within Title 17 standards for about 1000 feet; 500 dedicated road, 500 feet driveway. After that it is too steep. Gary Contento has used part of it for his driveway. Our survey crews left a good cleared trail along it in 1984, however it has become overgrown in part, and blocked by the Contento driveway construction. GVEA has built a power line parallel to the section line out side of the 50 foot easement in Section 12. The section line would make a first rate trail, in fact the lower portion has been maintained as one down to near the Contento house. With grades running from 14 to 18% and a lack of cross grades it is excellent to use as a multi-purpose trail. Except for one problem – the grades become much steeper at a bluff overlooking the Tanana River. This makes it a “dead end”, only a few hundred feet from the J. W. Mease house site and the Contento house. The grades in the Mease property are mild and lead to easy access to the Tanana River, so the temptation for future trespass is overwhelming. It is hard to overstate the potential danger here as well. Although quite steep, it is possible to walk down the bluff to the river on the section line. This part of the Tanana River has a strong back eddy right against the bank, which is scoured rock. It does not freeze over in the winter along the edge.

From the time that we designed Rosie Creek Subdivision a road running east to west from near the northeast corner to Tyler Road has been envisioned as the most practical feeder road. Such a route has become part of the FNSB Comprehensive Road Plan.

North Line. The north section line has a nice mild grade running to the east from Cripple Creek Road. The 4 acre zoning and single frontage make it desirable to turn quickly to the south. No Rosie Creek lot owner has any use of it as a road. The owners of Lot 4, Block 5, Rosie Creek Subdivision have a driveway within the section line easement, and the Air Force Trail begins in the same location. The grades, and the design isolation of Rosie Creek Subdivision, point all of the rest of the section line to trail use. The owners adjoining it to the north do not use it. Instead, they have cut trails up the hill and south of it, outside of the section line easement. An owner of Lot 16 Block 5 built within the section line easement. They were successful in obtaining a partial vacation of the section line. The entire section line easement on both sides is a good candidate for a vacation as a road and rededication as a trail easement. There are two 20 foot wide pedestrian easements that run north from the section line. We placed them in Rosie Creek Subdivision in order to provide for future access to roads and the 100 Mile Trail from lots in the Tanana 440.

West Line. The west line is quite interesting. We used much of it extensively for ATV access in the course of our surveys in 1981 and 1983. From the northwest corner of Section 12 going south, it is fairly steep. The north portion would not be viable as a road. It has a section just north of Tyler Road that has a grade of over 20%. The trail to the north has fallen into disuse. However, it would make a good trail, particularly if one steep section with a 50% grade got some grade work. There is another 20 foot wide pedestrian easement that we platted in Rosie Creek Subdivision for access to the 100 Mile Trail. This one is of great interest; it is the shortest connection from the Tanana 440 to Rosie Creek Trail.

From Tyler Road south the section line trail has remained in constant use, the grades are mild, there are no cross slopes, no stumps in the trail, and it is above the permafrost. It is in use by many different types of users, summer and winter. We have used it most years since 1981. At the south end, the section line easement connects to the end of Kallenberg Road. Some portion

of the section line easement will likely be dedicated as ROW at the southwest corner of the Tanana 440. Due to single frontage against already developed lots of Rosie Creek Subdivision, road dedication is not a “best use” option, but there are no grade problems. Dedication of a trail ROW may be desirable, as future owners can utilize the sections line easement as long as it exists. The southeast corner is a key trail location – one can go south to the Tanana River, it is only 800 feet away. A nasty bump with a very steep (but short) section makes it tricky for ATV and snowmachine use, dangerous for cross country skiers and dog teams. The Binkley family has cut a trail in their property into Section 13 to detour around the bump.

Kallenberg Road could be extended due south along the section line, a 20 to 25 foot cut and fill section for a short distance would eliminate the “bump” at a relatively low cost. We think that a road, or a least an improved driveway along the section line is likely, because the privately owned land on either side of the section line is first rate. A trail conflict is possible. This is the very best access out of the Tanana 440 to the Tanana River portion of the 100 Mile Trail. A dedicated trail would resolve the conflict.

South Line. The south section line has a clearly unambiguous mild grade potential. It has already been constructed. The Binkley family extended the cat trail at the end of Kallenberg Road at the corner of Sections 11-12-13-14 south into Section 13 far enough to get outside of the section line easement, then back north to the section line. The road is centered on the section line 100 feet or so. Then it turns to the north into Lot 5 of Section 12 when the grades dictate so, and runs up to the edge of a very steep bluff, where the family has built a house. The section line is totally clear as a trail, from survey crew activity in 1984. Where the trail ends, the bluff is very steep. Not just steep and tricky like the east side section line bluff, but a true cliff, with grades of 130%. A fall here would likely be fatal. The cliff runs right down into the Tanana River. As the views are fantastic, and the section line easement existent, it does provide some leverage for design options with the Binkley family. They have inquired about vacating it, and tentatively offered to dedicate a trail where they built the detour from the southeast corner of Section 12 to the south around the “bump”.

Trails

What to say about trails? There are many types, not all compatible with each other. The Nordic ski trails should not be very steep, which makes it a good idea to keep them rather narrow, so as to discourage trespass by ATV. The skiers are finicky about the setting of a pair of tracks for their skis to run in. They do not gracefully share their trails until the snow is gone. Pure pedestrian trails have few restrictions, they can be quite steep and still work. Steep trails may possibly even be desired by some users. Snowshoes can be used of steep foot trails that are poor for Nordic skinning. But again, some persons using pedestrian trails resent the use of their trails by other users. Then there are the dog mushers. They do best with nice wide and smooth trails, but they cannot always get them. Dog sleds do not turn sharp corners gracefully, the lead dog (and subsequent dogs) tends to pull the dog behind into the direction being run. So in a sharp turn the dogs behind the leader get pulled against the corner of the turn. The longer the team and the sharper the turn the more this becomes a problem. When it is possible to design or improve a trail for mushing, wide radius turns of 50 feet and more are preferred, 10 foot radius turns are marginal.

The skate skiers can go Nordic on the dual tracks, but mostly prefer wide smooth trails. The skating gait is difficult on narrow trails, and the tracks are not helpful. Skate skiers do very well

on dog mushing and snow machine trails. Ah yes, the snow machines. The sound of a two stroke engine may be music to a young person's ears, especially the racy staccato sound of the high performance machines. However, this sound lies at the heart of the problem with multiple use trails. Complaints by some sectors of the public have caused a bias to develop in some agencies, a negative feeling toward multiple use trails. It is thought that people in general do not want snow machines running near their house (except, of course, from their own house). Trails have a great similarity to roads: Everyone wants the trail to get to their property, but not to continue across it. ATV's have a bit less of a problem, the use of two stroke engines is not dominant. The average four stroke ATV may not be noticed going by. But its tracks are. The ATV's can make a mess of the trails over boggy permafrost areas in the summer. Multiple use trails tend to develop a braided path, with detours around deep muddy sections, sometimes several of them. The up side is that where the mud and muck has been nearly liquefied, the trail freezes up nice and smooth when the transition to winter use takes place. Bog zones connect to streams and rivers, and become main trails sections in the winter, possible the best of the trails in some senses. Snow machines and ATV's can use trails that are quite steep; 25% is common. Dog mushers generally avoid very steep trail sections when practical.

We traveled along the 100 Mile Trail where it runs in the Tanana River from 4.3 mile Chena Ridge Road to the Chena Campground and down to Rosie Creek Trail on a Sunday in late March. We observed two dog teams, over 20 skate skiers, four or five persons ski touring, half a dozen snow machines and six or eight bicycle riders, all happily using the Tanana River without bumping into each other.

The Tanana 440 property has legal access to its boundaries via the sections lines along the north, east and west boundaries, and along a portion of its southern boundary. How useful? The East section line has been blocked by road construction, Cripple Creek Road, then a driveway that runs down to Contento's and Mease. Much of it was good trail at the time of our 1984 survey. The lower portion is in use as a pedestrian (snowshoe) trail to Contento's. It dead ends to a cliff that is not passable except perhaps on foot, it ends in a nearly vertical drop-off into the Tanana River. The north section line could become a trail, but locals are not currently using it. The west side section line north of Tyler Road is not in use in the winter of 2008, but it could be, although it has steep sections. From Tyler Road south it is in moderate to heavy use.

There are parallel sections of trail within the section line easement. All trail use is on the FNSB side of the line. At the southeast corner of Section 12 there are two options: Go south 0.3 miles to the Tanana River, or go west to Rosie Creek Trail (part of the 100 Mile Trail), and then south to the Tanana River. The Tanana River is a part of the 100 Mile Trail. The short route to the south is tricky, it has a steep grade sidehill portion for 100 feet or so, and the drop into the Tanana River is quite abrupt. The route to the west is easy, although a bit bumpy of sedge tussocks for much of the way, and rather narrow. A bridge over Rosie Creek has been constructed and is maintained by local trail users. Both are reliable option for getting onto the 100 Mile trail. The section line easement along the south boundary is not in general use. It has not been opened for the first two hundred feet, a locked gate on private property south of the section line easement blocks a driveway that starts near the section corner, goes easterly and comes back onto the section line, centered on the easement for a quarter mile. This section line dead ends at a real cliff. Not just a very steep portion, but a real cliff that renders the use of this section line useless for public travel.

A third snowmachine trail has been constructed about on the boundary between FNSB and J.W. Mease from the Contento driveway west to a gully. From there it turns south and runs to the Tanana River, forming a trail option that joins into the 100 Mile Trail. The trail is marginal south of FNSB land because no trees were cut, it is really just a pathway between the trees with a small amount of brush cut at the Tanana River. Cooperation between the FNSB and private property owners would be required to convert it into a legal access. It is narrow and difficult to traverse with a large trail breaking snowmachine. It is entirely in uplands, and could easily be upgraded into a first rate trail.

Horses. People using horses are not always welcome on trails because of the droppings they leave on the trail, and because people are worried about meeting them. They are somewhat incompatible with multiple use trails; ATVs and horses do not mix well. But we do accommodate them. On the plus side, the trails tend to be good, they must be cleared wide and should not have branches that could hit riders in the face.

Master Plans

The land is at the south end of Chena Ridge, most of it has a south aspect, there is no permafrost that would influence design, no flood hazards, and connected to a good road. The south end of the ridge and the aliquot part lines forming the parcels are most unfortunately located, a bluff line and two large gullies, and a relatively steep portion of Chena Ridge would be very pleasant to work with. The lines making up the boundaries between the Mary Binkley Trust, Dorothy Resch, J.W. Mease, and Gray Contento are a poor fit to the topography. Two of the parcels, TL 1202, Dorothy Resch and TL 1203, J.W. Mease, would be much easier to deal with if they were joined with the Tanana 440 prior to master planning. It may not be the “best land”, but it is the “best view” property.

No easements of any kind beyond the section line easements were attached to these two parcels. A major consequence is that access options within Section 12 are limited. FNSB’s Tanana 440 land is cut off from the Tanana River. The Mease and Resch parcels are isolated physically. TL 1203, the Mease parcel, has limited access via the east section line, but it is not practical, the grades are 16% to 20%. TL 1202, the Resch parcel, has no practical legal and physical land access whatsoever. The aliquot part lines conflict with the topography, the most difficult area being a sharp little ridge and a pair of deep gullies where the Mease and Resch parcels share a boundary with FNSB. The two main gullies branch into six or seven branch gullies. Planning has been fit around topographical considerations, the aliquot parts property lines and the responses from the owners.

Master Plan A. The first plan was designed with lots conforming to the existing RE-4 zone, none under 40,000 SF. It has circulating roads, provides access to adjoiners and requires no variances. The design provides access to three adjoiners lying immediately south of the northeast quarter of Section 12, TL 1202, Dorothy Resch; TL 1203, J.W. Mease; and the Contento’s land east of TL 1203. They are not necessarily the very best options; other possible connections are shown on other master plans.

An assumption was taken from our Access Analysis that Tyler Road would be connected to a road across Section 12, to be a through road. It is recommended that Tyler Road be renamed, and that all of a new collector be called Cripple Creek Road. In the northeast corner of Section 12, a short portion of the old road would be renamed Destiny Drive. Proposed Cripple Creek

Road is classified in the FNSB Comprehensive Road Plan as a minor collector. We designed it to major collector standards. No grades of the new portion exceed 5%. A large intersection with Destiny Drive with a proposed park pullout near the northeast corner will have essentially flat grades. It is just over 5600 feet long within Section 12. A private developer following the letter of FNSB Title 17 would have to build this portion.

As discussed in our Access Analysis, more road would be recommended to make a transition from Cripple Creek Road in Rosie Creek Subdivision into the northeast corner of Section 12 (400 feet), and from Tyler Road at Kallenberg Road to the west boundary of Section 12 (1000 feet), for a total of about 8000 feet, following our design recommendations. Cripple Creek Road is the backbone around which all other road design has been fitted. We have planned for a main trail alongside the southern ROW of the main road. Options evaluated during the planning process included an easement, placed within the ROW with the trail incorporated into the road prism, an easement, outside of and parallel to the road ROW, or as a parallel dedicated ROW specifically reserved for trail use. The latter option was chosen by the time we staked monuments in preparation for a road dedication plat. The trail ROW is 30 feet wide. A plan and profile has been prepared, and typical road and trail prisms. The main road is 30 feet wide, with two options; a 6 foot wide paved separated bike path parallel to the northerly side of the road, or a 6 foot wide bike path that is integrated into the prism along the northerly side of the road.

There are 96 lots total. It would seem that there could or should be more. It is caused by the restrictions of the RE-4 zone. It is impossible to place any smaller lots without either a rezone or a variance request. We had enclosed a block with roads, we then divided it by the minimum lot size to see how many would fit. We focused on areas where the grades are steep. The lots were fit by use of an "eye" icon. We had verified what direction one looks in to see some prominent mountains; Hayes and Hess, Deborah to the southwest, Denali to the southeast. An "eye" icon was created to indicate a view site. The potential site is looked for - a driveway is sketched in from the best starting point, toward the centroid of the lot for a house site. Then we check to see if a drop of three contours (30 feet) fits well within the lot's boundaries, a clearing downhill in the direction of the mountains. If so, the lot qualifies for an "eye" icon, we have found another site with a mountain view. A designer with a point of view toward maximizing lots would likely come up with more by computing the rough area of each block, then moving intersections around so as to come up with all lots set at 400,000 SF. Under such a "cookie cutter" approach, it is assumed that all lots will be sold, or task is to get as many as possible. We estimate that perhaps 6 to 10 more lots could be squeezed out of Master Plan A.

It is easiest to find superb view locations for lots in the steepest ground in the northeast area. It is a tradeoff: If the land is steep, yards and cultivation are problematical. But one does not have to go very far downhill to get a view if the grade is around 20 or 30%. It helps that much of the land along the easterly portion is scrub aspen. It is new growth coming in after a forest fire or logging activity. A substantial portion of the smallest and least attractive trees are growing in the steep gully area. This greatly encourages the planning of view lots. The east boundary has much "wasted" land at present in the form of an old cat trail, a power line easement, and a driveway that provides access to some Dorothy Resch property, and to Gary Contento and J.W. Mease.

We planned a loop trail system in the mild grade land in the lower southwest area of Section 12. There is much less forest fire damage here. While it is theoretically possible to have view lots,

we do not place them where distances to gain the view are long, and in big timber, so there a few in the southwestern area.

Giancursio Road is connected to proposed Cripple Creek Road. The number of lots is small enough for it to be a local road, however, we have indicated a wide, 80 foot ROW. The wider ROW helps create view lots on the uphill side of the road, the ROW clearing and a PUE become part of the view potential.

The total amount of road is 10,600 feet of collector, for Cripple Creek Road and Giancursio, and 16,500 feet of local road, for a total of 27,100, or 5.13 miles.

Master Plan B. This plan is modeled after FNSB Title 18.50.160, Standards for residential cluster development. It is supported by FNSB Planning with a suggestion that the Tanana 440 is an ideal location for a cluster development. The existing RE-4 zone makes lots double the size normally used for Chena Ridge, this has the effect of removing about one half of the lot area with more road per lot than is considered to be in the practical range for development for most of Chena Ridge. The cluster ordinance offers some very good options. In essence, Title 18.50.160 requires setting aside 50% of the land area as open space, then allows the same number of lots that would be allowed in the existing underlying zone.

From the Purpose statement of this ordinance: “can allow variation in lot sizes without an increase in the overall density of population or development.....at substantially the same population density of the surrounding area.” It is intensely formula driven. The Tanana 440 is actually 435 acres in size, 50 % places 217.5 acres in open space. The number of lots allowed is what would be allowed in the underlying zone, using the gross acreage. 435 acres divided by 3.67 (160,000 SF, RE-4 zone minimum) equals 118 lots. The rules are rigid, and they make one spend extra time refining lines if you are close to the minimum. There is no land in Section 12 that is not suitable for development, all of it is of higher quality than some of the land on Chena Ridge that has been developed, and some of it is “as good as it gets”, with the only thing that can be considered to lower the value being the 15 minute drive to the Geist and the Parks Highway intersection.

After placing roads, the remaining area reduces the average lot size to less than 2 acres. In Master Plan A the RE-4 zone forces the design to have less lots. Title 18.50.160 allows the same number of lots no matter what we do; a prudent private designer is going to find 118 lots. Some of them may be one acre in size, which is appropriate for some of the nice view land near the east boundary. The average lot size will be well under 2 acres.

There is debate as to whether section line easements count. We have adopted the view that only if it is dedicated as ROW should it be subtracted from the open space. Every time some land is taken by dedication, the lot area must be reduced to meet the required open space area formula.

Cripple Creek Road is not very compatible with this option. One of the primary purposes of the cluster development is to reduce the number of roads. However, we have an underlying concept that Cripple Creek Road is more to provide access than to service lots. In Master Plan A we were able to keep the number of driveways on Cripple Creek Road to 13 or so. We tried an early draft of the cluster concept with Cripple Creek Road, a cul-de-sac from Tyler Road and from the east, not connected, the ROW of each narrowed to 40 feet. That would have made for an elegant cluster development that saved some road length. Cripple Creek Road is part of the

FNSB Comprehensive Road Plan, so we connected it , and put a trail ROW on the south side. With smaller lots, there must be many driveways on Cripple Creek Road, 30 or more. The only way to eliminate driveways onto Cripple Creek Road would be to place a road parallel to Cripple Creek Road for the lots, so that access to the main road would be prohibited. We avoided this because planning for less roads was a primary topic of discussion that came out of the FNSB meeting of May 30.

To our surprise, when we totaled up the road lengths, there was a trivial amount of saving of road length. Giancursio Road has been converted into a cul-de-sac. A short connector places emphasis on this, traffic coming down to Cripple Creek Road from the northwest area will have to negotiate an intersection. The most positive part of the cluster plan is the northeast corner, where the concept of small lots allowed us to plan a switchback road and short cu-de-sacs, in harmony with the topography. There would be 118 lots when filled in. The added lots make it attractive when compared to Master Plan A, however, Master Plan A does have more lots deserving of the “eye” icon.

Cripple Creek Road is a stand alone collector 5600 feet long. A first draft of the local roads would have resulted in substantially less road, however, FNSB Planning indicated that they did not like showing the roads as unconnected cul-de-sac branches for each possible entrance to Section 12, so it was discarded as an option before computing road length. A second draft used from much of the last few months is 19,671 feet in length for a total of 26,294 feet, about 5.28 miles of road total.

When a plan to dedicated Cripple Creek Road and a 30 foot wide trail along its southern boundary was adopted, we moved roads off Cripple Creek Road, because a future developer could not cross the trail with driveways. Now Cripple Creek Road stands apart as a collector in all master plans. The total local road length is 21750, plus 5600 feet of Cripple Creek Road for a total length of 27350, or 5.18 miles. This is a little more than in Master Plan A because of Cripple Creek Road.

Master Plan C. This plan requires a rezone. No ifs, and, or buts, we just look at the restriction of the RE-4 zone, and note that it limits planning concepts. However, we do adopt the concept that the RE-4 zone will dictate the number of lots. So the starting point is derived from Master Plan A and Master Plan B, the lot density is going to be about the same as the existing underlying zone, RE-4. Once the notion that a rezone is going to be required, this plan allows the freethinking planning. We plan for 120 residential lots.

The plan concentrates on parks and trails first, some of which have long been in the process. Since we are not feeling limited by open space area, road dedication or lot size, it is very easy to provide right of way, and choice land for parks can be carved out where trails roads and views can be in harmony. We use thirty feet for the trail easement. The thinking is more in line with road planning: the trail ROW is sacred, it is not a shared easement. No adjoining lot owner would have any rights to place anything in it - no gardens, no sheds, no guy anchors or power poles, and the ROW is wide enough to allow for trail construction and maintenance that will not conflict with private property. We initially showed ten parks defined by either road or trail ROWS, or both, and about two miles of trail. There are five large agricultural parcels, ranging from 22 to 30 acres in the southwest area, with boundaries defined by a trail looping system. The entire area is surrounded by a dedicated trail along the section line. Beside that is an open

space buffer, planned to be heavily restricted, kept in a natural state. Many trail ROWs bisect the buffer.

A consultation was made with FNSB Parks and Recreation with regard to dedication of a 30 foot trail along proposed Cripple Creek Road, and how the trails and parks fit. In response to their input, we made slight modifications, put strips beside some trails, and connected them. Now Master Plan C park is bisected a few times by roads, has some thin portions, but can be thought of as a single park connected by a trail system.

Future access to adjoiners is provided to the Resch parcel, TL 1202 through the Binkley Trust property, TL 1202 in the southwesterly portion. This is the very best access for practical access to the river bottom lands south the Resch and Mease parcels. Access to the Mease parcel, TL 1203, is now connected to the northeast road pattern. We do not like where it cuts through the gullies, it makes a large cut in a ridge that we thought would fit very well in the trail/park system. Dorothy Resch indicates a strong opposition to trails, and to any planning that involves her property, and declines to look at maps or plans. For this reason, we show a plan that would provide good access to the Mease property without regard to the Resch property.

Section lines are a significant problem that could be addressed - we propose to vacate all section lines that are not dedicated as road ROW. It should be understood that the public has a right to access on section lines easements, regardless of ownership, and that a road may be constructed on a section line without any need for a permit or application, except perhaps for a wetlands permit to the COE for permafrost areas. This is not applicable to Section 12, there is no real permafrost. The 100 foot section line easement would be replaced with a 30 foot dedicated trail ROW. We showed it centered on the section line for the most part

Giancursio Road is shown in the same location as on Master Plan A as a minor collector. We have not affixed the a series of “eye” icons yet, as we have, for the sake of the argument, freed ourselves from using area as a driving design parameter. For any given lot, we would individually place each driveway and house site in the hilly areas, then draw in the lot line. 120 lots are about the target number, in keeping with the underlying RE-4 zone. This concept is, we think, a large measure of what the purpose of the cluster ordinance could point toward. The cluster ordinance formula removes 50% of the land area prior to lot planning, so they would be much smaller on average than in Master Plan C. We would expect lots to range from under 2 acres to 30 acres, and would make a final master plan that had many “eye” icons.

There is 10,600 feet of collector road, identical to Master Plan A, and 20,500 feet of local road for a total of 31,100 feet of road, 5.89 miles. Much of the extra road is due to providing access to southwest farm parcels, Dorothy Resch and the Binkley Trust, roads that might be of lesser cost.

When done, many zones could apply. RE-4, RE-2, RA-20, OR and OSB. The implications of proposed zones should be addressed at a public meeting. For instance, the RA zones would allow dog kennels. Lot size and restrictions such as dog kennels cannot be enforced by plat notes, FNSB Planning considers them to be covenants, enforceable by lawsuit. It is our opinion that FNSB can make easily enforced covenants restricting lot from being rezoned for further subdivision by placing the restriction in the sale contract. Should a future owner defy the adopted subdivision plan, a lawsuit would not have to be taken very far – indeed, it is unlikely

that FNSB Planning and Zoning would proceed with a rezone until a covenant was legally removed, leaving the burden on the new lot owner.

A summarization of Master Plan C: It proposes vacation, dedication, rezoning and serious covenant contracts. It is fitted around existing trails, preserving many, proposing new trails and parks land, including a tract for use by Chena Goldstream Fire and Rescue that would become part of the park system.

Roads Lengths.

Master Plan A – 5.28 miles.

Master Plan B - 5.28 miles.

Master Plan C - 5.89 miles. This does not count about 1400 feet of Cripple Creek Road that we recommend in our Access Analysis, it is not required by Title 17. Details of roads lengths are on the following page.

TANANA 440 - MASTER PLAN ROAD LENGTHS			
ROAD NAME	COLLECTOR LENGTH (FT)	LOCAL LENGTH (FT)	CLASSIFICATION
MASTER PLAN A			
CRIPPLE CREEK	5600		MINOR COLLECTOR
GIANCURSIO	5000		MINOR COLLECTOR
A ROAD		2000	LOCAL 2
B ROAD		3150	LOCAL 2
C ROAD		1900	LOCAL 2
D ROAD		3000	LOCAL 2
E ROAD		5400	LOCAL 2
F ROAD		700	LOCAL 2
G ROAD		350	LOCAL 2
SUB TOTAL	10600	16500	
TOTAL		27100	
MASTER PLAN B			
CRIPPLE CREEK	5600		MINOR COLLECTOR
GIANCURSIO CUL-DE-SAC		2850	LOCAL 1
GIANCURSIO CONNECTOR		1350	LOCAL 1
W. CR. CR. CUL-DE-SAC NORTH		1050	LOCAL 1
W. CR. CR. CUL-DE-SAC SOUTH		850	LOCAL 1
E. CR. CR. CUL-DE-SAC		300	LOCAL 1
EAST-WEST RIDGE		2750	LOCAL 1
EAST-WEST CUL-DE-SAC		150	LOCAL 1
GULLEY WEST		2950	LOCAL 1
GULLEY WEST CUL-DE-SAC		450	LOCAL 1
GULLEY SWITCH BACK		3400	LOCAL 1
GULLEY S.B. CUL-DE-SAC NORTH		300	LOCAL 1
GULLEY S.B.-S.B. CUL-DE-SAC		250	LOCAL 1
EAST SECTION LINE		650	LOCAL 1
RESCH-MEASE ACCESS		4450	LOCAL 1
SUB TOTAL	5600	21750	
TOTAL		27350	
MASTER PLAN C			
CRIPPLE CREEK	5600		MINOR COLLECTOR
GIANCURSIO	5000		MINOR COLLECTOR
GIANCURSIO S. CUL-DE-SAC		1150	LOCAL 1
GIANCURSIO N. CUL-DE-SACS		1450	LOCAL 1
GIANCURSIO - CR. CR. CONECTOR		1750	LOCAL 1
CR. CR. N.W. CUL-DE-SAC		850	LOCAL 1
CR. CR. S.W. CUL-DE-SAC		4450	LOCAL 1
AG PARCEL CUL-DE-SAC		1100	LOCAL 1
CR. CR. S.E. CUL-DE-SAC		250	LOCAL 1
GULLEY SWITCH BACK		3000	LOCAL 1
SWITCH BACK LOOP		2800	LOCAL 1
SWITCH BACK CUL-DE-SAC		300	LOCAL 1
RESCH-MEASE ACCESS		2500	LOCAL 1
E. SECTION LINE CUL-DE-SAC		300	LOCAL 1
E. SECTION LINE		600	LOCAL 1
SUB TOTAL	10600	20500	
TOTAL		31100	