The 1-Gigabit Solution

VOTER'S GUIDE FOR RSF CONNECT

Project Overview

RSF Connect is a community-motivated project that will make 1-Gigabit-per-second internet service available to all homeowners and businesses in the Covenant. Many have suffered for years with poor to nonexistent internet speeds that have left us unable to work from home, hindered our children from doing their homework and made homes more difficult to sell. Internet is a basic need, a basic utility, not a luxury. We need the service to be cutting-edge, reliable, economical, future-proof and available to all homeowners and businesses — and we need it now. The Board and Technology Committee believe that RSF Connect is the solution, *The 1-Gigabit Solution*.

RSF Connect will be an underground, fiber-optic network that is financed, constructed and controlled by the Association. This project will enable the Association to offer 1-Gigabit internet connectivity throughout the Covenant at competitive rates. No internet service provider (ISP) offers this service in the Covenant. With a favorable vote from you and your neighbors, construction will begin during the first quarter of 2018 and should be finished in approximately 18 months. As segments of the network are completed, service may become available prior to the completion of all construction.

The reasons to undertake this community-motivated project now are:

1. ISPs that were interviewed by the Technology Committee indicated that the low density of our community would require that the Association pay $10 million to $20 million to subsidize the project, without the Association receiving the benefit of ownership and control.
2. Having exhausted a search for a realistic alternative, the Technology Committee recommended that the Association construct and own a 1-Gigabit fiber-optic network and contract with an ISP to operate that network. The project is estimated to cost between $13 million and $14 million.
3. High-speed internet is necessary for business, education, entertainment, safety and security. RSF Connect with 1-Gigabit service will provide residents with one of the fastest and most reliable internet networks not only in San Diego County but in the country. RSF Connect will improve our ability to work from home, help students complete homework online without interruption and permit rapid streaming of multiple TV shows and movies. RSF Connect can support other internet-based features, such as home automation and security and connected medical devices. RSF Connect is an important investment in our community infrastructure. Use of fiber-optic cable is a future-proof strategy as the fiber will not need to be replaced for at least 50 years. As technology improves, the Association can simply upgrade the existing electronics, always giving residents access to cutting-edge technology.
4. RSF Connect will provide the foundation for improved wireless communications, including home cellphone reception and emergency communications, allowing residents to more reliably receive emergency messages and safety updates on a timely basis from the Rancho Santa Fe Fire Protection District, the San Diego County Sheriff's Department and the RSF Patrol.
5. RSF Connect should attract homebuyers and likely lead to increased home values, even for homeowners who do not subscribe.

On August 14, 2017, at an open workshop of the Board and the Technology and Audit / Finance Committees, the members of the Board and Audit / Finance Committee supported the recommendation of the Technology Committee. The Board voted on September 7, 2017, to take the RSF Connect project to a community-wide vote. The vote is advisory, meaning the Board is not obligated to take the project to the community for approval, but nevertheless will be bound by the outcome. The Board is committed to maintaining competitive rates for high-speed internet access, keeping RSF Connect fiscally responsible and accountable and holding assessments at current levels.

The Speed of *The 1-Gigabit Solution*					
Media Length and Type	**Approximate Size**	**Download Speeds**			
		5 Mbps	**10 Mbps**	**20 Mbps**	***The 1-Gigabit Solution* 1000 Mbps**
4-minute Song	4 MB	5 seconds	3 seconds	1.5 seconds	0.03 seconds
5-minute Video	30 MB	40 seconds	26 seconds	13 seconds	0.2 seconds
9-hour Audio Book	110 MB	2 minutes	1.5 minutes	46 seconds	0.9 seconds
45-minute HDTV Show	600 MB	15 minutes	8.5 minutes	4 minutes	5 seconds
2-hour Movie	3.0 – 4.5 GB	72 minutes	60 minutes	32 minutes	25 seconds

MB = Megabyte, GB = Gigabyte, Mbps = Megabits per second

The Work of the Technology Committee

The Technology Committee conducted many meetings with numerous ISPs, including those who serve property owners today (for example, AT&T, Orion and Cox) and those who don't. The Committee sought a design solution that met the following objectives:

- 1-Gigabit high-speed internet connection and related services delivered over fiber-optic cable, preferably underground
- The same service being available to all property and business owners
- Competitive rates
- A single dedicated fiber run to each building site from a central distribution point housing the equipment supporting the network (the Central Office)

The Committee heard repeatedly that the low density of our community would require long fiber runs and that the investment cases of the ISPs required that the Association pay $10 million to $20 million to subsidize the project, without receiving the benefit of ownership and control. Furthermore, many ISPs would have required payment by the Association to create a network design for costing purposes, which they would have owned without a commitment to build.

The Committee conducted a design study search and retained Henkels & McCoy, a nationally recognized engineering firm, to design the network, estimate its cost and file the necessary documentation with the County of San Diego to obtain the permits to proceed with the project. The Committee also conducted a search for an ISP. All existing ISPs who serve property owners today were given an opportunity to submit a proposal. The selection process is in the final stages.

After taking into account the opinions of the Board of Governors of the Golf Club and the Trails Committee, the Technology Committee recommended that the Central Office be built on the unpaved upper Golf Course parking lot. The RSF Connect fiber backbone will be approximately 65-70 miles long and will run mostly under the public roads throughout the Association area and under private roads, provided that easements from the co-owners of those roads are obtained. However, the County will require that the Association use the trail system, wherever feasible, instead of the roads. The network will be accessible from all building sites in the Covenant at service points along property lines to those sites.

The Association will pay for construction and will own the fiber backbone as well as pay for certain operating expenses to maintain and repair the network. The ISP selected will install, own and operate the electronics in the Central Office and install modems, connect homes to the network and serve the customers of RSF Connect. The contract with the ISP will contain performance standards for network reliability, speed and customer service response times. The ISP will provide dedicated technical support technicians locally, a call center for customer service, network monitoring and billing and other administrative services.

In recommending *The 1-Gigabit Solution*, the Technology Committee considered the lack of commitment from current ISPs, their requirement for substantial capital contributions from the Association and the lack of priority given to the needs of the Covenant. The Association has been considering solutions for six years. The Board and Technology Committee believe that the Association is currently in the best position to sponsor and complete the RSF Connect network.

Menu of Services for Homeowners

The Board will select an ISP to supply internet, television and phone services to homes and businesses within the Covenant. After interviewing and reviewing proposals from several ISPs, the Board believes that the following services will be offered to homeowners[1] at the following monthly prices:

1-Gigabit (Upload and Download Speed) Internet:

$100 to $135 per month for cutting-edge technology at a competitive rate

Television:

$98 per month for up to 300 channels[2] (additional fees may apply to premium channels, pay-per-view and DVR)

Telephone:

$10 per line per month for unlimited local and U.S. calling

RSF Connect Costs for Homeowners

While the Association will fund construction of the fiber network, a homeowner will be responsible for the cost of bringing a fiber cable from a "service point" at one of the property lines of their building site to their home. This process will involve installing a new conduit from the service point to the home or extending an existing conduit to the service point. Homeowners will work with the ISP selected by the Association or another qualified contractor to install or extend the conduit.

After interviewing and reviewing proposals from several ISPs, the Board believes that the cost of installing or extending a conduit in most cases should be $6.25 per linear foot. In addition to the cost of installation, the ISP will charge a one-time connection fee of $250, which will be waived if a homeowner signs a three-year service agreement. Homeowners will also be responsible for costs to install or upgrade existing equipment/wiring within their homes to take full advantage of the 1-Gigabit service.

Homeowners will pay the ISP directly for internet and other services they choose. Those who do not want to subscribe to services right away but want to have future connectivity to their home will be able to install fiber from the service point to their home for the same cost as if they had subscribed. Those who do not want to connect to the service point right away can connect later at the then-prevailing rates.

RSF Connect Project Costs and Financing

The cost for RSF Connect is estimated to be between $13 million and $14 million, which includes (1) construction costs of $11.5 million, (2) engineering, consulting and legal costs of $1 million and (3) a contingency allowance of $0.5 million to $1.5 million. While the Board and the Audit / Finance and Technology Committees believe that the estimated range of costs and number of subscribers are conservative, it is possible that the actual costs will be higher and the number of subscribers lower.

The cost of the project will be financed by $8 million from the Covenant Enhancement Fund (CEF) and by $5 million to $6 million of bank financing. The subscription fee of $100 to $135 per month will have two components — $70 will be retained by the ISP selected by the Association and the balance will be remitted to the Association as a "recovery fee." The recovery fee will be used by the Association to repay the loan and to satisfy other cash flow requirements. Any shortfall in cash flows will be funded by ongoing assessments. It is important to note that, based on current projections, assessments will not be increased above the current 14 cents/$100 of assessed value as the result of this project and that there will be no special assessment to fund the project.

Project Cost Summary

Total Cost of Project:	$13 million – $14 million
CEF Contribution:	$8 million
Bank Financing:	$5 million – $6 million, 10-year fixed-rate fully-amortizing loan

Financial Projections

The Association has developed financial projections that address how recovery fees and ongoing assessments will satisfy repayment of the loan and other cash flow requirements. The models show that as subscription levels increase over time, the use of ongoing assessments will decrease. All models have been developed using conservative projections of the number of subscribers and ongoing operating costs. The models do not consider subscriptions that

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[1] A menu of services and costs for businesses will be available upon request.
[2] To view a sample channel lineup, visit www.RSFConnect.com.

may be offered to businesses within the Covenant and recovery fees that may be associated with those subscriptions. The assumed terms of the loan are based on information provided by our lender. The following summarizes two of the models for the first ten years of operation:

Assumptions Common to Both Models:

Total Cost of Project[3]	$13.5 million
Operating Costs	$332,000 (year 1) to $226,000 (year 10)
Additions to Reserves	$142,000/year
Debt Service	$691,000/year
2.5 Cents/$100 Portion of Annual Assessment	$1.1 million/year
Subscription Price for 1-Gigabit[3]	$118/month

Model 1 (conservative based on the assumption that the project is approved by homeowners): If the subscription price is $118 per month and it is assumed that 35% of homeowners (642) subscribe to the network by the end of the first year after the project is completed and fully operational and that the percentage of subscribers increases over the ten-year period to 50% (920), the annual use of the 2.5 cents/$100 portion of assessed value ($1.1 million) will start at $794,000 in year one and decrease to $530,000 by year ten. For comparison purposes, if the subscription price were $100, the annual use of the 2.5 cents/$100 portion of assessed value ($1.1 million) will start at $933,000 in year one and decrease to $729,000 by year ten; if it were $135, the annual use of the 2.5 cents/$100 portion of assessed value ($1.1 million) will start at $664,000 in year one and decrease to $343,000 by year ten. In all cases, after year ten, when the loan is repaid, the 2.5 cent portion of the annual assessment will no longer be needed to support the project.

Model 2 (somewhat conservative based on the assumption that the project is approved by homeowners): If the subscription price is $118 per month and it is assumed that 50% of homeowners (920) subscribe to the network by the end of the first year after the project is completed and fully operational and that the percentage of subscribers increases over the ten-year period to 72% (1,313), the annual use of the 2.5 cents/$100 portion of assessed value ($1.1 million) will start at $636,000 in year one and decrease to $303,000 by year ten. For comparison purposes, if the subscription price were $100, the annual use of the 2.5 cents/$100 portion of assessed value ($1.1 million) will start at $834,000 in year one and decrease to $587,000 by year ten; if it were $135, the annual use of the 2.5 cents/$100 portion of assessed value ($1.1 million) will start at $449,000 in year one and decrease to $36,000 by year ten. In all cases after year ten, when the loan is repaid, the 2.5 cent portion of the annual assessment will no longer be needed to support the project.

If the project is approved, the Board will set the subscription price for the first year of 1-Gigabit service after it reviews the survey responses, and considers, among other things, the then-known cost of the project and other capital needs of the Association.

If the rate of subscriptions is higher than projected, the excess cash inflow will be used to prepay the loan and thereby decrease the dependence on the 2.5 cents/$100 portion of the annual assessment, to reduce the recovery fee charged to subscribers and/or to fund other projects.

The Construction Process

The Association has worked with the County of San Diego to obtain support and approval of the RSF Connect project. The County provided "conceptual" approval and continues to work cooperatively with the Association on the project and construction methods.

The project will be constructed using newer technology called narrow trenching in which small 3-inch cuts are made in the road or trail and the conduit pipe is placed into the trenches. The construction technology allows for the cutting, laying of the conduit and backfill to be done in a very fast sequence. This way, only short segments of roadway will have to be closed for construction, minimizing traffic delays and detours. A traffic control flag team will typically need to close only a single lane of a two-lane road during trenching.

Construction will have to work around newly paved roads, using shoulders and right-of-ways as necessary because the County has a "no-cut" policy on roads paved within three years. Since the County has several roads identified for repaving in the next couple of years, it will be beneficial to move rapidly on the project and install the fiber before these roads are repaved.

Members will be notified of construction progress and road closures via the weekly email newsletter and the Association website (www.rsfassociation.org). Members will have access to online maps showing the progress as well as scheduled road closures and detours.

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[3] The project cost and subscription price are based on the average in the range estimated for each of those amounts.