GREATER MINNESOTA HOUSING FUND

CASE STUDY

Technology Park Apartments
Rochester, MN

Low Cost Affordable Housing
with Low/No Subsidy

Technology Park Apartments

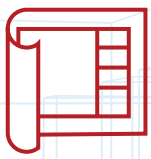
DEVELOPERS	PROJECT TYPE	UNITS	TDC	LOCATION	HARD COST PER SQ FT
Real Estate Equities & Stencil Group	Mixed Income New Workforce Housing	164	$19.7 million	Rochester, MN	$102 PSF ($90K PU) $122K PU TDC

Affordable Housing Cost Reduction Methods

There is a huge demand for all levels of affordable housing and finite government resources to meet this need. Producing new quality affordable housing units without government subsidy, is both achievable and replicable. This is done by making smart design choices and lowering associated material, capital finance, and fee costs. The keys to its success are four-fold:

1

Smart site and building design choices



2

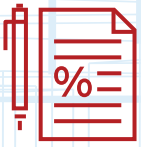
Lower cost building materials

3

Reduction in fees and soft costs

4

Low cost capital



PROJECT SUMMARY

Technology Park Apartments

Technology Park is a newly constructed mixed-income affordable workforce housing development located in Rochester, MN. Technology Park piloted several innovative designs, materials and financing approaches to deliver housing quality and affordability without direct government subsidies. The project delivers first class in unit finishes and features attractive to market rate renters while keeping the costs of construction and operations lower through trade-offs including smaller scale common area amenities and surface parking as opposed to underground parking.

The multi-family complex provides 164 units of rental housing, including 66 units of housing affordable at 60% AMI (Area Median Income), 57 units affordable at 80% AMI, and 41 units of market rate housing.

Technology Park was developed by Real Estate Equities, a private developer, in partnership with the Stencil Group acting as part-owner and contractor. Project financing partners included Merchants Capital, Freddie Mac, and Greater Minnesota Housing Fund.

TECH PARK SAVINGS

As compared with Traditional LIHTC Multifamily*

24%
building design & hard construction cost reduction

11.9%–20%
increased building efficiency

$10K–$15K
cost savings per above ground structured parking space

$17K–$20K
cost savings per surface parking space

$6K–$7K
mechanical systems cost savings per unit

3.4%–5.4%
soft cost reduction

*See Comparison of Costs table, page 18.

KEY INNOVATIONS

New Affordable Housing with Low/No Subsidy

The Technology Park Apartment project was constructed at a hard cost of $102/square foot or $90,000 per unit and total development cost of $120,000 per unit, creating the ability to provide affordable rents without subsidy. The project partners developed Technology Park with the goal of creating a replicable model to produce no-subsidy affordable housing. To achieve this goal, the project utilized a combination of design strategies, cost effective materials, low cost land, a favorable local regulatory environment, low cost debt and equity capital and long-term affordability agreements.

Proponents of affordable housing have long recognized that reliance on the Low Income Housing Tax Credit (LIHTC) program as the primary tool to produce new units of affordable housing will not allow us to keep pace with the existing demand and the full spectrum of rental housing needs. The LIHTC program has been eroded by escalating development costs. The growing competition for scarce tax credits has skewed LIHTC production of units towards lower-income units and left a large segment of the market (renter households between 60% and 100% of AMI) underserved. This project demonstrates that with the right mix of strategies, it is possible to achieve rents affordable to households at a variety of low and moderate incomes.

The barriers most often cited to constructing new affordable rental units includes a combination of construction costs (labor and materials), land cost, regulatory requirements for unit sizes, structured parking, and high cost equity capital resulting in a cost of over $200,000/unit. At this cost, properties cannot be built as affordably for low income households without significant subsidy. If this variety of cost drivers can be addressed through innovative design and materials, prudent site selection, flexibility regarding regulatory requirements, and low cost capital, new construction developments can serve a mix of low income households with affordable rent.

The Technology Park Apartment project was constructed at a hard cost of $102/square foot or $90,000 per unit and total development cost of $120,000 per unit, creating the ability to provide affordable rents without subsidy.

The project utilized the following key objectives:

No Subsidy

Production of affordable, no subsidy, workforce housing in a high demand housing market.[1]

Smart Design and Materials

Employ smart design and cost-effective materials to produce an attractive, quality development engineered for value.

Mixed Income

Utilize mixed income approach to achieve a scale of development whereby market rate units can cross-subsidize affordable units.

Regulatory Flexibility

Work in a regulatory environment or seek regulatory flexibility to allow for flexibility in unit sizes, parking requirements, taxes and fees that will contribute to lowering costs.

Low Cost Debt and Equity

Access social impact equity capital at below a market rate return and highly competitive institutional debt.

Kaas Wilson was engaged as the architectural firm to create this multifamily housing design that takes advantage of numerous cost savings and economies of scale resulting in a very low cost to construct. In fact, the $102/SF hard construction cost is 25% less per square foot than the average comparable development built in the same timeframe.

GMHF, as a majority equity partner, supplied low cost social impact capital, providing a source of equity that was priced below market rate equity capital.

Freddie Mac piloted the Workforce Forward loan, a new multifamily first mortgage. This provided a forward rate lock, fixed rate, low cost debt capital, made possible due to the involvement of GMHF as a non-profit partner, and the affordability of the project. Merchants Bank arranged this financing debt, in addition to providing the construction loan.

The project was constructed with similar standards as the more prescript Low-Income Housing Tax Credit (LIHTC) development, meeting building and energy codes. However, the partners were able to be more flexible with design, unit sizes, building amenities, parking and mechanical system choice.

[1] No tax credits, TIF, or other subsidy was used to finance this project.

Greater Minnesota Housing Fund has been working in Rochester, Minnesota, to address a critical housing shortage, particularly for the growing Mayo Clinic workforce. As in many communities throughout Minnesota, the growing need for new affordable housing production in Rochester cannot be met with the available public subsidy resources. The private market is primarily focused on building market rate apartments, leaving an unfilled rental housing need for affordable workforce housing.

Affordability Restrictions & Unit Mix

A mixed income approach was a key component of the strategy to develop no subsidy affordable housing. The mixed income nature of the project enabled 40% of the units to be affordable to incomes at or below 60% AMI, and 35% of units to be affordable at or below 80% AMI.

Income and Rent Restrictions

Income Restrictions	Unit Count	% of Total
60% AMI	66	40%
80% AMI	57	35%
Market Rate	41	25%
Total Units	**164**	**100%**

Bedroom Mix of Units

Bedroom Per Unit	Unit Count	% of Total
Studio Unit	52	32%
1 BR Unit	32	19%
2 BR Unit	80	49%
Total Units	**164**	**100%**

Rochester Market Area

Low vacancy rates in the Rochester area indicate a strong demand for housing of all income ranges, with affordable vacancies well below frictional vacancy levels (<1%) and market vacancies averaging 4.1% across the Rochester metro.

Using the recommended 30% rent to income ratio, a person making between 60-80% AMI in Olmsted County should pay no more than $1,063–$1,418/month in rent. However, market rents in Rochester, MN, range from $895–$1,450 for studios, $1,200–$2,800 for a one-bedroom and $1,275–$2,800 for a two-bedroom, causing many individuals and families to stretch for housing.

BUILDING DESIGN, VALUE ENGINEERING, REGULATORY ENVIRONMENT, LAND COSTS

New innovations in design and materials lower construction costs. These factors provided a combination of cost-saving techniques, that keep costs lower, without loss of quality.

A	**Scale of Development** To accomplish lower costs, the scale of development matters to achieve the greatest efficiencies.	■ Projects that have at least 150+ units realize cost efficiencies by allowing fixed costs to be spread over a larger number of units, reducing per unit costs.[2] ■ Cost savings methods are relevant at lower scales, but are not as cumulatively cost effective. ■ Scale allows for on-site management office to handle tenant needs, which improves leasing.
B	**Site Characteristics and Land Costs** Clear, level land sites are demonstrably the least costly to develop; the key characteristics of these sites include:	■ Low cost of land.[3] ■ Flat, level site. ■ Connected to utilities. ■ No environmental issues. ■ No demolition.

[2] In markets outside the Twin Cities metro area and Rochester, such as Duluth and Greater Minnesota, minimum project size is 72 units to realize scalable cost savings.

[3] Optimal cost of land is $10,000 or less per unit maximum.

[4] While this is similar to tax credit deals (typically 1.25-1.5 parking spaces/unit), this contrasts with other markets and market rate deals where cities and suburbs require closer to 2/1 but also 1/1 covered parking, which can only be met with underground parking.

C	**Local Regulatory Environment** Cities can encourage development of affordable housing by demonstrating flexibility with local regulatory requirements and waiving or reducing fees.	■ Favorably reduced regulatory requirements for parking, unit sizes. The parking ratio for Tech Park was 1.25 parking spaces/unit.[4] ■ Lower SAC (Special Applications Center), WAC (Washington Administration Code), park dedication (waived by Rochester), permitting and other fees. ■ Flexibility on exterior material requirements. ■ Density. Defined by units/acre, Tech Park's density was almost 34 units/acre.
D	**Parking**[5] Flexibility around types of parking requirements helps to reduce costs as underground parking structures are the costliest.	■ Costly underground parking was not required, which saved an estimated $20,000 per unit. ■ A mix of low cost surface parking ($3,000) and garages ($10,000 - $12,000) met municipal parking requirements.
E	**Building Design** Simple exterior and interior building designs significantly contribute to cost savings but require flexibility by local municipalities during the design approval process.	**EXTERIOR** ■ Minimized exterior articulations and bump outs and a simple flat roof design. ■ Fiber cement siding & quality window systems are comparable to market rate. ■ Limited penetrations and thus limited flashing at openings. ■ Utilized contrasting materials to enhance appearance. ■ Not all units had balconies.

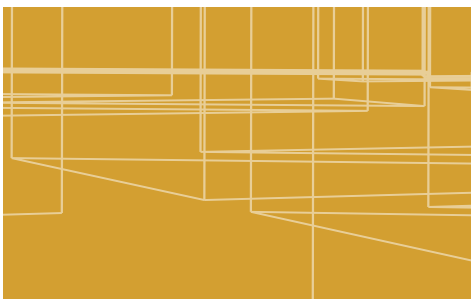
[5] Many urban locations require a minimum ratio of underground parking spaces at $20,000 - $25,000 per stall, adding to total housing production costs per unit; whereas, surface parking runs about $3,000 per stall, and ground level garages run approximately $10,000 per stall.

F **Building Design,** *continued*

INTERIOR

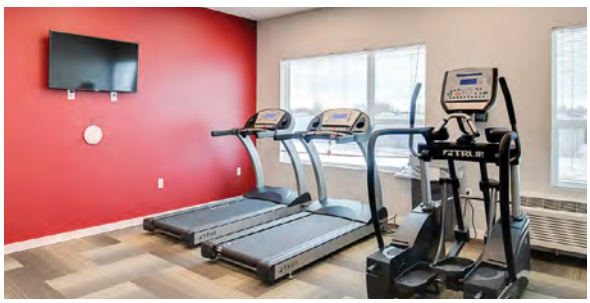
A more efficiently designed building with smaller unit sizes, common areas and amenities, reduces the overall building square footage with limited impact on livability but resulting in significant cost savings. A comparable LIHTC project averages between 1,000-1,100/SF. Tech Park averages 881/SF per unit, resulting in approximately 20% more efficiency than comparable projects. This was achieved by:

- Minimally sized lobby and entrance area.
- Smaller sized unit square footage, in some cases, between 12-20% smaller than tax credit projects:
  - Efficiency: 551 SF
  - 1 BR: 661 SF
  - 2 BR/1BA: 754 SF
  - 2BR/2BA: 1,059 SF
- Limited amenities: Funders often dictate enhanced office, recreation and community spaces which this project was able to self-determine including:
  - Modest size community room.
  - Smaller fitness facility with limited equipment.
  - Minimal outdoor play facilities. The outdoor facilities were limited to grilling areas and seating, dog run, playground, and a fitness trail.
  - All units have in unit washers and dryers.[6]
  - Minimal common areas (halls, lobbies).



[6] Tech Park has in unit washer and dryers in each unit. This contrasts with LIHTC where some 9% tax credit deals have laundry rooms to meet cost containment requirements.

G	**Mechanical: Plumbing, Heating, Ventilating & Air Conditioning (HVAC)**[7] Subsidy funders are extremely sensitive to operating costs dictating the types of HVAC systems a project can use. While there is flexibility in choice, there is resistance to use newer and less road-tested options including the option selected for this project.	■ Alternative HVAC systems are more efficient today and contribute to per unit savings. ■ Utilized Packaged Terminal Air Conditioners (PTACs) heat and cool the apartments versus central air or Magic Pak. PTACs are stand-alone electric units like those found in hotels but with newer technology that is quieter, more compact, energy efficient and uses heat pump technology. ☐ PTAC units meet Minnesota energy code standards but are not Energy Star Rated. ☐ In addition to PTACs, air is circulated using thermometrically controlled units, ducting and transfer fans. ■ Efficient construction and floor plans allow for lower cost/efficient plumbing stacks.
H	**Labor & Negotiated Bidding** The project was not constrained to a subsidy award cycle, which allowed for more flexibility in contract negotiations.	■ The project progressed quickly due to the lack of government funding constraints. ■ The developers were able to lock in contracts early and begin construction. ■ Enabled favorable negotiated pricing. ■ Area labor rates created cost savings.



[7] Tech Park met current State Energy Codes and utilized Energy Star appliances in all units. Today's State Energy Code has advanced significantly and is largely comparable to Minnesota Green Communities (MGC) standards. Tech Park did not qualify for MGC standards primarily due to its use of PTAC vs Magic Paks which are more energy efficient. It is also useful to note that compared to older rental housing stock, a new construction project meeting the Minnesota State Building Code will be dramatically more energy efficient due to today's new construction standards, including a tighter building envelope, better insulation, more efficient HVAC, and Energy Star appliances than in older housing stock.

Cost of Capital

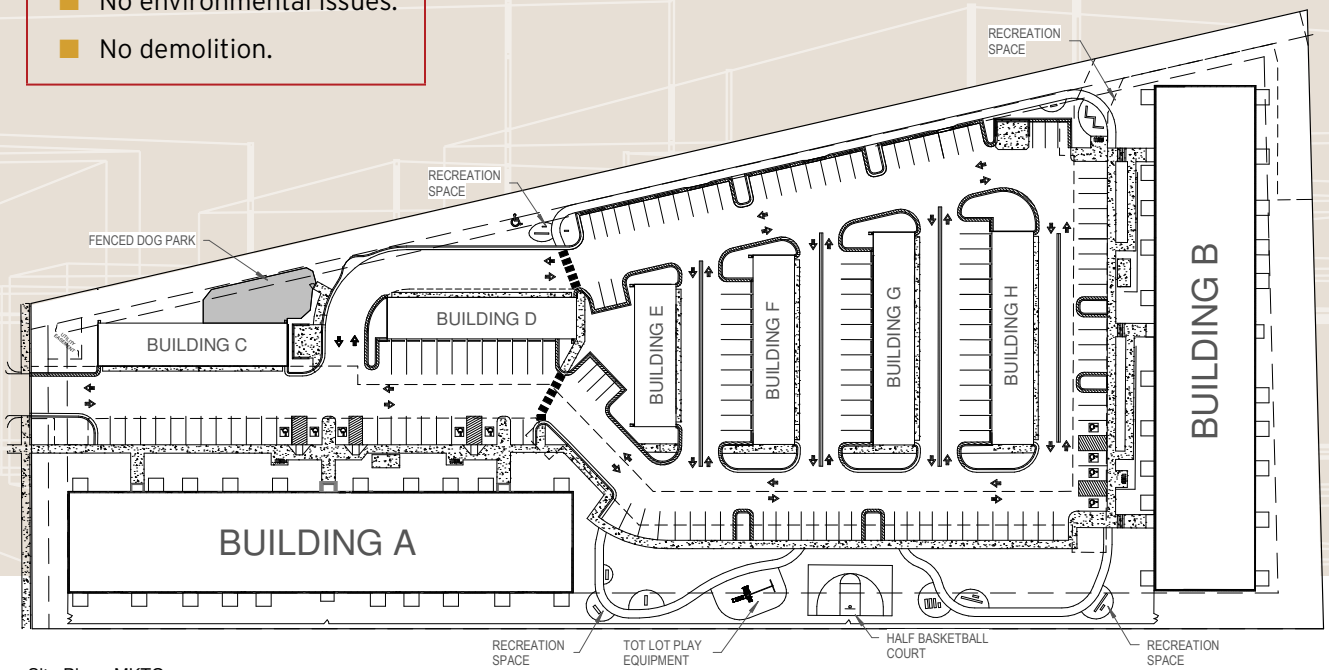
The returns required to attract private equity necessitate higher rents which generally are made possible through subsidy in an affordable housing project. Without subsidy, lower cost sources of capital are instrumental to getting a project to pencil economically.

- Low cost socially motivated equity capital: GMHF provided a lower than market rate return on its equity investment (6% preferred, 8% hurdle vs market returns of 15%) and also enabled the project to access lower cost first mortgage financing from Freddie Mac.

- Low Cost Debt: Freddie Mac piloted a new affordable housing product called the "Non-LIHTC Forward" which lowered the cost of the first mortgage and provided a fixed rate forward commitment in partnership with Merchants Capital as originator.

SITE CHARACTERISTICS

- Low cost of land.
- Flat, level site.
- Connected to utilities.
- No environmental issues.
- No demolition.



1 Site Plan - MKTG
1" = 60'-0"

Operating Cost Savings Considerations & Features

Innovative construction and design helped to keep construction costs down, which in turn keep rents more affordable. The project realized cost savings through fast lease up, cross-subsidy, scalability and ongoing operating savings.

A	**Real Estate Taxes & Insurance**	■ Total replacement costs are lower which reduces the total insurance premium. ■ In areas with local support, developers may apply for 4d taxes in exchange for filing a LURA (Land Use Restriction Agreement) on the property.
B	**Vacancy & Lease Up**	■ High market demands allowed for scheduled lease up and ongoing low vacancies. ■ The project reached stabilized occupancy within 5 months of completing the second building, which is consistent with affordable project lease ups and significantly quicker lease up than most market rate properties.
C	**Administrative**	■ Compliance Light. Non-profit investor requires less reporting than traditional tax credit projects.
D	**Income Mix Advantages**	■ Property can accept a wide range of incomes as a mixed income project, which reduces concentration of low income households.
E	**Repairs / Maintenance**	■ Limited common areas reduce the number of repairs and maintenance. ■ Finishes are durable and ensure fewer repairs and maintenance. ■ Limited elevators (one per building) reduces elevator contracts and annual maintenance costs.
F	**Cross-Subsidy**	■ Market unit rents offset lower revenues from affordable units.
G	**Scalability**	■ 150+ units enables greater cost efficiency on operations. ■ Enables on site property management and leasing.

PHASE II LESSONS LEARNED AND BEST PRACTICES

In August 2021, Phase II of Tech Park will be constructed on an adjacent site and will be composed of 140 units, and includes design changes based on learnings from Tech Park I. Phase I lessons learned include:

A	**Construction Related**	■ **Building exterior and construction material.** The exterior of Tech Park II will utilize the same materials as Phase I, which was cost efficient in both materials and construction/labor. ■ **Contractor and sub-contractor selection and competitive bidding.** Depending on the market area, a more competitive bidding process holds the potential to drive down costs. Contractor selection flexibility brings value, efficiency and lowered costs.
B	**Design Related Learnings**	■ **Exterior.** Limit number of balconies to 20% of units. Balconies typically cost $6-$7K per balcony. All first-floor units have walk out patios, which are much more cost effective than the balconies on upper levels. ■ **Interior.** Tech Park II will have more one-bedroom units. These were the highest demand during lease-up of the first phase and they were fully leased quickly. ■ **Site plan.** The site for Phase II will have the same concept as Phase I (surface parking and stand-alone garages). However, there is more grade to the site which will ultimately increase costs in the form of leveling and retaining walls. ■ **Bedroom and bathroom types.** Phase two will consist of 43 Studios; 44 1BR/1BA; 24 2BR/1BA; 29 2BR/2BA.
C	**Amenities**	■ **Shared space.** Phase II will include a stand-alone clubhouse that can be shared by both phases. Additionally, the building will include a fitness center, club room and management offices for both phases. The stand-alone clubhouse will allow for bigger community facilities than the common areas in Phase I. Phase II will also include a tot lot and dog run.

D	**Replicated Features**	■ **Market size and types.** Phase I proved the concept and the need for affordability at the 60-80% AMI levels which have been underserved. ■ **Regulatory requirements.** Phase II will go through the same incentive development zoning process as Phase I, which allows for flexibility in certain design requirements (e.g. density, parking, etc.) ■ **Cost of capital.** The lower cost of capital in exchange for the affordable units made this type of project feasible and scalable. This type of project and affordability would not be able to achieve traditional equity investor return requirements. ■ **Scale.** Creating 304 units on one campus will make the management of both phases more efficient creating savings for both projects.

Land Cost

Although the land cost on Phase II is higher than Phase I, which came in at $6,800 per unit, land costs for Phase II were still significantly lower than alternative sites. As the cost of land increases beyond $10,000/unit it become less financially feasible to develop this type of affordable housing project.

Projects like Tech Park can be replicated when utilizing a combination of design strategies, cost effective materials, low cost land, a favorable local regulatory environment, low cost debt and equity capital and long-term affordability agreements.

Summary Conclusions

1	2	3	4	5	6
This pilot demonstration sought to optimize cost reduction.	Many, if not all, of the project characteristics can be replicated depending on the local environment.	Not all cost reduction methods may be possible to incorporate into every project due to local regulatory requirements, market for land, and site specifics i.e. parking, land acquisition, site conditions.	The major drivers for cost reduction were land, parking, labor, materials, scale and overall building efficiency.	The durability of the materials is comparable with other higher cost market rate projects.	It is expected that energy costs will be nominally higher for a PTAC unit versus a MagicPak but we acknowledge that this is still to be tested.

Through this combination of cost reductions, it was possible to achieve a 164-unit mixed income development that delivered a project whereby 75% of its units provide rents that are affordable and restricted to Rochester residents at or below 60% and 80% AMI, with 40% of the units restricted at or below 60% AMI and another 35% of the units restricted at or below 80% AMI for 15 years.

This type of development is accomplished in contrast to tax credit projects as it was completed without the use of subsidy dollars.

Similar to tax credit projects, the Technology Park Apartments model can be accomplished only when private and public sector partners collaboratively and innovatively work together.

APPENDIX

FINANCING SUMMARY
SOURCES & USES / FLOW OF FUNDS

SOURCES	Construction	Change	Permanent	Per Unit	% TDC
Merchants Bank Construction Loan - 1st	14,966,000	(14,966,000)			
Permanent Loan - Freddie Mac		-	14,966,000	91,256	76.0%
GMHF Construction Loan - 2nd	3,400,000	(3,400,000)			
GMHF Equity (long-term)			3,400,000	20,732	17.3%
Developer Equity	1,327,598		1,327,598	8,095	6.7%
Total Sources	**19,693,598**	**(18,366,000)**	**19,693,598**	**120,083**	**100.0%**
USES					
Land & Site Work	1,115,185		1,115,185	6,800	5.7%
Hard Costs	14,734,082		14,734,082	89,842	74.8%
Soft Costs	1,372,472		1,372,472	8,369	7.0%
Developer Fee	1,000,000		1,000,000	6,098	5.1%
Financing & Legal Fees	367,947		367,947	2,244	1.9%
Interest & Reserves	968,822		968,822	5,907	4.9%
Contingency	70,728		70,728	431	0.4%
Reserves	64,362		64,362	392	0.3%
Total Uses	**19,693,598**		**19,693,598**	**120,083**	**100.0%**

APPENDIX

COMPARISON OF COSTS

Cost Reduction Opportunity	Traditional LIHTC Multifamily[8]	Tech Park	Cost Savings
Building Design and Hard Construction Cost Smaller unit sizes, compact common spaces, limited amenities	$135/SF	$102/SF	$33/SF or 24% reduction
Building Efficiency Average square feet per unit inclusive of all common space, corridors, etc.	1,000-1,100 SF/unit	$881 SF/unit	11.9%-20% more efficient
Parking			
Underground	$20,000-$25,000/space		
Above ground structured	$10,000/space	$10,000	$10,000-$15,000/space
Surface	$3,000-$5,000/space	$3,000	$17,000-$22,000/space[9]
Mechanical Systems	Magic Pak $8,000-$10,000/unit	PTAC $2,000-$3,000/unit	$6,000-$7,000/unit
Soft Costs All project costs exclusive of land acquisition and hard construction	23%-25% of total development costs	19.6% of total development costs	3.4%-5.4% less

[8] Comparable developments are from sampling of LIHTC projects built in Minnesota from 2016-2019.

[9] As compared to Underground Parking

The mission of the Greater Minnesota Housing Fund is to **support the creation of strong coummunities and affordable homes** by making strategic investments and forming effective partnerships.

GREATER MINNESOTA HOUSING FUND

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