



Rezoning Petition

Petitioner:

Eric Quiner (Prospective Buyer), 4840 NW Piekenbrock Drive, Des Moines, IA 50310, with consent of Meredith Drive Reformed Church (Property Owner), 10025 NW 62nd Avenue, Johnston, IA 50131

Request:

Comprehensive Plan and Zoning Map Amendments

Subject Property / Rezoning Area

4600 NW 51st Street, Des Moines, IA 50310, located within Section 18 of Township 79 North, Range 24 West of the 5th P.M. (Webster Township). Legal Description: -EX RD- LOTS 88, 89 & S 1/2 LOTS 90 & 91 PIEKENBROCK.

General Location (Attachment 'A'):

The subject property is approximately 1.31 acres in size, and is located on the north side of Meredith Drive between NW 51st Street and NW 52nd Street. The property is "L" shaped having frontage to the south onto Meredith Drive, to the east onto NW 51st Street and to the west onto NW 52nd Street.

Existing Future Land Use Map Classification:

Institutional

Proposed Future Land Use Map Classification:

Neighborhood Commercial

Existing Zoning:

"LDR" Low Density Residential District

Proposed Zoning:

"NB" Neighborhood Business District

Surrounding Zoning:

North – "LDR" Low Density Residential District

South – City of Des Moines (P2 Public, Civic & Institutional District / PUD Planned Unit Development)

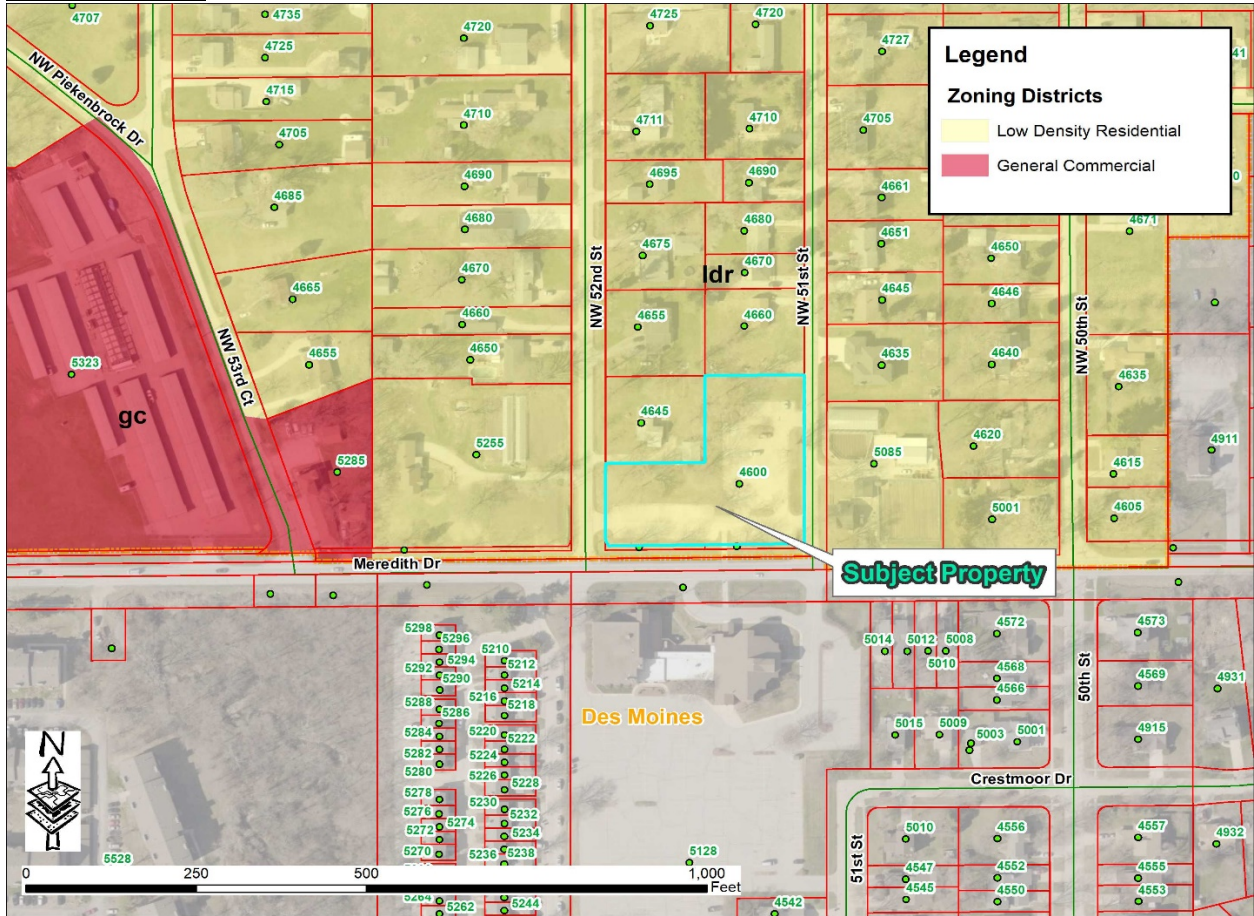
East – "LDR" Low Density Residential District

West – "LDR" Low Density Residential District

Existing Future Land Use



Existing Zoning



GENERAL COMMENTS

The Petitioner is requesting a Comprehensive Plan Amendment and Zoning Map Amendment to change the Future Land Use Map classification from Institutional to Neighborhood Commercial, and to change the Zoning Map from the “LDR” Low Density Residential District to the “NB” Neighborhood Business District for the entire subject property. The submitted application and supplemental materials provided by the petitioner can be found as *Attachment ‘B’* to this report. The stated intent of the request is to rezone the subject property to facilitate redevelopment of the parcel for retail sales of agricultural goods and seasonal products. Future redevelopment would include grow areas for agricultural, permanent greenhouse structures, a proposed storage building as well as an area for retail sales. A portion of the parking lot is proposed to remain to service the new uses.

Historically, the subject property and existing parking lot were designed and utilized for overflow parking for the adjacent Meredith Drive Reformed Church, located directly south of Meredith Drive within the City of Des Moines at 5128 Meredith Drive. The petitioner currently utilizes the subject property and parking lot through agreement with the current property owner, Meredith Drive Reformed Church, to serve as overflow parking for Dogpatch Urban Gardens located directly east of the subject property at 5085 Meredith Drive. The petitioner owns this adjacent property at 5085 Meredith Drive, which contains an existing single-family dwelling, detached garage, as well as a greenhouse structure and additional accessory building used as a retail storefront. The Polk County Board of Adjustment approved a Conditional Use Permit in 2017 for this adjacent property for an agri-tourism use known as Dogpatch Urban Gardens.

The Dogpatch Urban Gardens agri-tourism use includes grow areas for agricultural products as well as a seasonal retail storefront and limited special events. Parking for the special events uses as well as overflow parking for the retail storefront utilize the subject property at 4600 NW 51st Street. The property at 5085 Meredith Drive is zoned “LDR” Low Density Residential District which permits agri-tourism uses through the Conditional Use Permit process. The presence of an existing residence on that property as well as the limited nature of retail sales of locally produced agricultural products allowed this use to be established under the property’s existing residential zoning through the Conditional Use Permit process. In contrast, the subject property under review as part of this request does not contain a principal permitted use of a single-family dwelling under its current “LDR” Low Density Residential District zoning, and therefore a rezoning to a commercial designation would be needed to establish the proposed permanent greenhouse structures and storage building. Additionally, the nature and intensity of the proposed retail sales at the subject property cannot be reasonably accommodated under the intent of the agri-tourism use category within the Ordinance, and requires a commercial zoning designation.

Surrounding Area and Land Use

Reference *Attachment A* for a vicinity map of the subject property and surrounding area. The larger surrounding area includes the unincorporated neighborhoods of Lovington and Piekenbrock. This area is bordered on the north by Interstate 80/35, to the south by Meredith Drive, to the west by Merle Hay Road (Hwy 28), and to the east by Beaver Avenue. The area is primarily zoned “LDR” Low Density Residential District and developed with single-family homes. There are also a few existing commercially zoned and utilized properties along the north side of Meredith Drive approaching Merle Hay Road as well as along the east side of Merle Hay Road extending north towards the Interstate. The nearest commercial zoning relative to the subject property is located approximately 500 feet to the west at the corner of Meredith Drive and NW 53rd Court. There is a smaller parcel located at the northeast corner of this intersection addressed

as 5285 Meredith Drive and zoned “GC” General Commercial District, which contains an existing structure, which County records indicate is partially utilized for office space and partially for multi-tenant apartments. There is a larger parcel located at the northwest corner of Meredith Drive and NW 53rd Court addressed as 5323 Meredith Drive and zoned “GC” General Commercial District, which is developed and utilized as an existing mini-storage unit business.

The local streets serving the unincorporated neighborhoods of Lovington and Piekenbrock extend north from Meredith Drive. They have narrow pavement and right-of-way widths, and there are no sidewalks. The City of Des Moines primarily lies south of Meredith Drive, but their corporate limits include some commercial property on the east side of Merle Hay Road as well as a few residential developments on the north side of Meredith Drive. The City of Urbandale corporate limits begin along the west side of Merle Hay Road. The City of Des Moines corporate limits are located directly adjacent to the south on the opposite side of Meredith Drive. Staff notified the City of the request. Des Moines staff commented on the availability and process to connect to City sewer (see comments below in the utilities section of this report). City Staff also requested the County consider limiting more intensive commercial uses that could occupy the site in the future.

STAFF REVIEW

Property History

The subject property is presently zoned “LDR” Low Density Residential District. Prior to the adoption of the current Zoning Ordinance and Map in 2007 the property was zoned Suburban District, which was also a single-family residential zoning classification. There are limited records on file for this site. Aerial photos appear to indicate the property previously contained a single-family residence, prior to conversion of the site for a parking lot for the Meredith Drive Reformed Church located directly south of Meredith Drive. There is a sign permit on file from 1992 permitting a freestanding sign on the property to advertise the site as the north parking lot for Meredith Drive Reformed Church.

Neighborhood Business District

The requested rezoning to “NB” Neighborhood Business District would allow for the following uses under the Polk County Zoning Ordinance: Agricultural, Commercial Apartments, Indoor and Outdoor Institutional, Public Service, Convenience Commercial, Office, Commercial Retail, Services, Restaurant, Commercial Lodging, Indoor Commercial Amusement, and Gasoline Stations. Additionally, Outdoor Commercial Amusement and Single-Use Production Wind Energy Conversion Systems are allowed by Conditional Use Permit, requiring review and approval by the Polk County Board of Adjustment. The petitioner’s proposal to use the property for agricultural grow areas is a permitted use in all zoning districts. The portion of the proposal for retail sales of agricultural and seasonal products would fall under the Commercial Retail category, being a permitted use within the “NB” Neighborhood Business District. See staff’s recommended condition of approval within the Recommendation section of this report. Staff is recommending that the Commercial category uses permitted within Neighborhood Business be limited to Commercial Retail, Office and Services. This would prohibit any of the following Commercial uses on the property: Convenience Commercial, Restaurant, Commercial Lodging, Indoor and Outdoor Commercial Amusement, and Gasoline Stations. All other non-commercial uses permitted within the zoning district would be allowed as stipulated in the Ordinance.

Roads/Access/Utilities

The property is “L” shaped having frontage to the south onto Meredith Drive, to the east onto NW 51st Street and to the west onto NW 52nd Street. There is an existing driveway entrance to the west onto NW 52nd Street, and two (2) existing driveway entrances to the east onto NW 51st Street. Meredith Drive is classified as a minor arterial roadway connecting Beaver Avenue to the east to other arterial and local streets moving west. Meredith Drive runs along the municipal boundary between the City of Des Moines and unincorporated Polk County between Beaver Avenue to the east and Merle Hay Road (Hwy 28) to the west. The City of Des Moines is responsible for routine maintenance of this stretch of Meredith Drive in accordance with the 28-E agreement between Des Moines and Polk County. NW 51st Street and NW 52nd Street are classified as local roadways. They are hard surfaced, but contain narrow roadway widths and rights-of-way and have relatively steep drainage ditches on both sides. NW 51st Street and NW 52nd Street are maintained by Polk County and provide access to properties north of Meredith Drive within the unincorporated neighborhoods of Lovington and Piekenbrock.

Water service is available through Des Moines Water Works. Current available mapping shows there is an existing 12-inch (12”) water main along Meredith Drive, an eight-inch (8”) main along NW 52nd Street as well as a two-inch (2”) line along NW 51st Street. Future water service and connection would have to be approved and coordinated through Des Moines Water Works. Polk County does not have public sewer service available in this area. The City of Des Moines was provided notice of this request, and responded they have public sewer available along Meredith Drive. However, properties located outside of the City limits must petition to be connected to City sewer, including Council approval, increased rates and agreement with the property owner regarding waiver of future annexation proceedings. The City did state they cannot require the subject property to connect to sanitary sewer, but the property owner could request to do so per the stipulations noted above. Therefore, the property would be allowed to install a private onsite septic system for future wastewater treatment needs. At this time, it is not clear if the proposed uses would require wastewater treatment.

Environmental

The topography of the subject property is relatively flat with little to no change in elevation. Existing contour data indicates the site elevation is between 884 and 886 feet. The property is not located within any designated floodplain areas, and contains no other known environmental hazards or features. There are several mature trees located on the site, primarily along the southern property line bordering Meredith Drive, as well as within the northwestern portion of the property.

Public Testimony

A total of 108 property owners were within the required 500-foot notification boundary. These owners were mailed public notices regarding the request, including the date and time of the Zoning Commission public hearing. To-date, two (2) items of public testimony have been received in support, and zero (0) in opposition, of the request. Given the proximity of their corporate limits, Polk County also notified the City of Des Moines planning staff for review and comment. Their comments were included earlier within this report.

Comprehensive Plan Discussion

The subject property is located within the Northwest Area, as identified in the Polk County 2030 Comprehensive Plan. The area includes the cities of Johnston, Grimes and Polk City as well as Saylorville Reservoir. The Northwest Area generally lies north of Interstate 80/35, extending west

to the County line along Highway 17, north to the County line, and generally lying west of NW 58th Street, NW Polk City Drive (Hwy 415) and the Des Moines River. The majority of unincorporated land within the Northwest Area is located north of Johnston and Grimes along Highway 141, NW Saylorville Drive and surrounding the Saylorville Reservoir, Big Creek Lake and Jester Park, and includes primarily existing single-family homes and subdivisions. The northern portion of this Area is primarily agricultural and open space ground adjacent to and north of Saylorville Reservoir and Big Creek Lake. The subject property and surrounding neighborhoods of Lovington and Piekenbrock are located in the far southeastern corner of the Northwest Area, and are distinguished from the rest of this planning area by their density and proximity to the existing corporate limits of the City of Des Moines and City of Urbandale.

Key issues identified during the development of the Plan for the Northwest Area are largely not relative to the subject property and this request. Those issues include access management along the Highway 141 corridor as well as management of future growth within the areas surrounding Saylorville Reservoir, Jester Park and Highway 141.

Applicable goals and policies identified in the 2030 Comprehensive Plan:

Character of Development Goal – Policy 3: Integrated Development – Neighborhood extensions and new neighborhoods should enhance the character of adjacent urban and rural communities. Polk County will encourage development design that emphasizes connections between new development and existing land uses and fosters a sense of community.

Economic Growth and Land Use Goal - Policy 3: Growing the Tax Base – The County’s tax base is a primary means of supporting vital County services and making many public investments. Polk County will promote economic development and private investment that builds community tax base and improves residents’ quality of life.

Economic Growth and Land Use Goal – Policy 4: Revitalization – Substantial growth can occur in existing developed areas through reinvestment and redevelopment. These efforts can improve utilization of existing public infrastructure and can provide for a diversity of quality housing and businesses opportunities. Polk County will work to direct suitable public and private investment to unincorporated areas and core cities of the metropolitan region in need of reinvestment and redevelopment.

The Comprehensive Plan may be amended from time to time if it can be demonstrated that a real and immediate need exists based upon changing circumstances.

Comprehensive Plan Analysis

Polk County has a significant role and interest in promoting economic development which maintains and grows the County’s tax base, while simultaneously supporting consistency in land use regulation which maintains neighborhood character and fosters stability and compatibility between land uses. The County also has a role in supporting infill development to assist in the reuse of underutilized properties to promote economic development and stabilize existing neighborhoods and land use patterns.

The current Future Land Use classification of the subject property as Institutional is a reflection of the fact the property has historically been utilized as an overflow parking lot for an adjacent church. However, the subject property and existing parking lot effectively function as an accessory commercial parking use, which is no longer needed by the adjacent church property.

Staff understands the adjacent Meredith Drive Reformed church has limited need to continue use and ownership of the property for ancillary parking, and the petitioner has been in contact with the church for possible purchase of the site for redevelopment.

The requested amendments support the applicable goals and policies of the Polk County 2030 Comprehensive Plan. The amendment would support redevelopment of an underutilized and vacant property for proposed agricultural and retail uses. The proposed uses would generally be compatible with the existing limited commercial retail uses adjacent to the east at 5085 Meredith Drive, and further supported by the property's location at the corner of an arterial roadway.

RECOMMENDATION:

Staff recommends approval of the requested Comprehensive Plan Amendment and Zoning Map Amendment to change the Future Land Use Map classification from Institutional to Neighborhood Commercial, and to change the Zoning Map from the "LDR" Low Density Residential District to the "NB" Neighborhood Business District for the subject property.

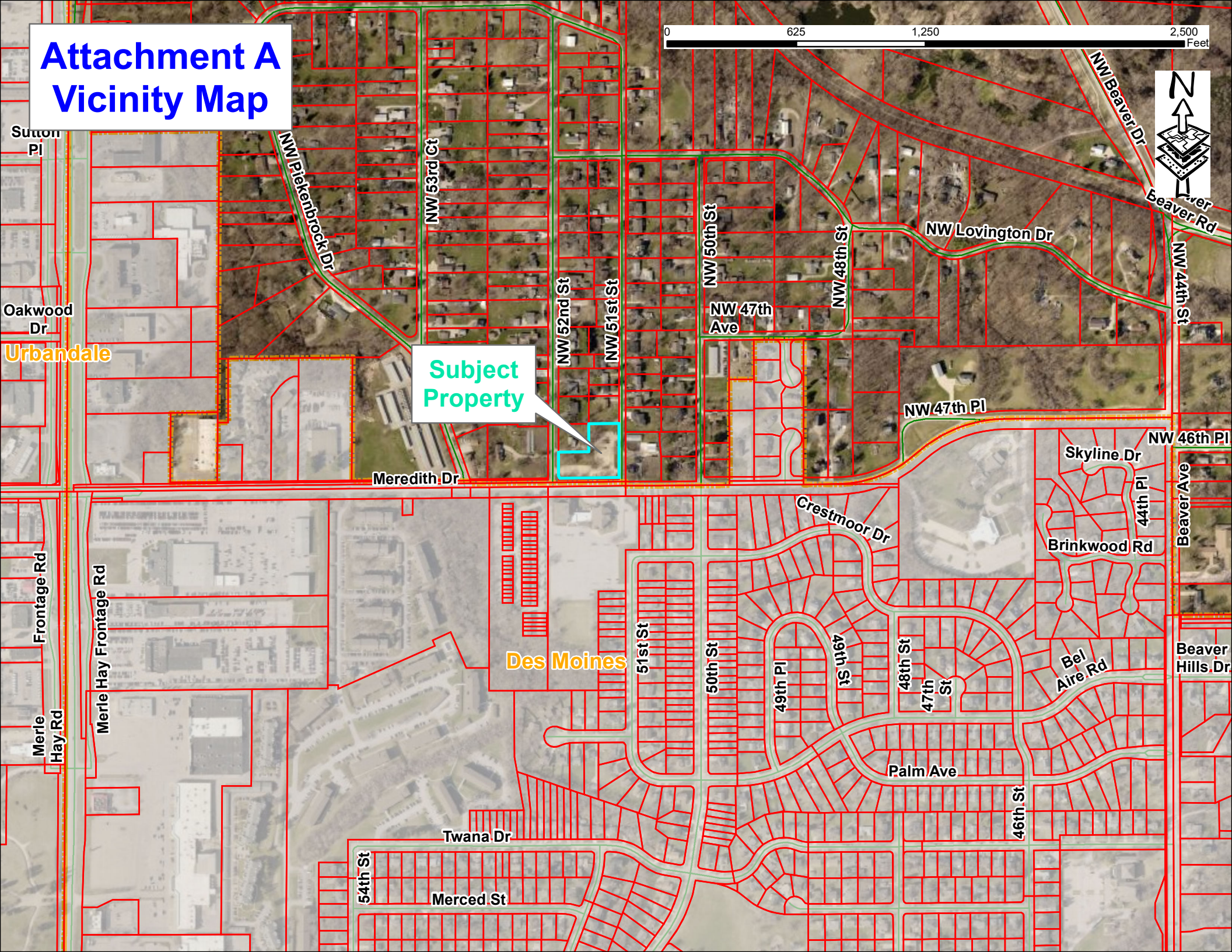
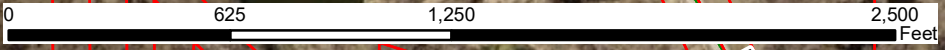
The recommendation for approval is based upon the fact that the request is in harmony with the spirit, intent, goals and policies of the Polk County 2030 Comprehensive Plan. The recommendation for approval of the Zoning Map Amendment is based upon the following: a) The request is in accordance with the Comprehensive Plan; b) Approval supports the public, health, safety and welfare of County residents by promoting redevelopment of an underutilized property, including economic development, expansion of the tax base, and stabilization of the surrounding neighborhood character and land use; and c) The rezoning area is uniquely differentiated from surrounding properties in that it is located at the intersection of three (3) streets, including high visibility and frontage onto an arterial roadway. The rezoning area is further differentiated by the fact that it has been historically developed and utilized as an accessory parking lot, which is no longer in use. Approval is subject to the following condition of approval:

1. The Commercial uses allowed within the "NB" Neighborhood Business District, as listed in Article 4, Division 2, Table 4.1 – Table of Uses within the Polk County Zoning Ordinance, are restricted to the following uses only. All other non-commercial uses allowed within the "NB" Neighborhood Business District are permitted as noted in Table 4.1.

Commercial Uses Permitted:

- a. Commercial Retail
- b. Services
- c. Office

Attachment A Vicinity Map



Attachment B

Comprehensive Plan Amendment and Rezoning Application



A submittal is only a request to have the Comprehensive Plan amendment and/or Zoning Map change reviewed at a public hearing before the Zoning Commission. The Zoning Commission reviews the requested Comprehensive Plan amendment and/or Zoning Map change at a public hearing making a recommendation based on a staff report, applicant presentation, as well as public input. The Zoning Commission recommendation is considered by the Board of Supervisors at a public hearing on the request. Notice of each public hearing is published in the official county newspapers and individual notice will be mailed to all property owners located within 500 feet of the subject property. Requests that are denied shall not come back to the Board of Supervisors for one year. Refunds will not be made once notice has been sent out to adjacent property owners.

Please complete the entire application, submit with fee and review the criteria on page 3.

The undersigned request that the Zoning Commission

- | | |
|---|---|
| 1. <u>Institutional</u>
Current Future Land Use Classification | 2. <u>Neighborhood Commercial</u>
General Commercial
Proposed Future Land Use Neighborhood Business District |
| 3. <u>Low Density Residential</u>
Current Zoning District | 4. <u>General Commercial</u>
Proposed Zoning District |

(time stamp)
Official Use Only

5. Subject Property Address: 4600 NW 51st Street

6. District and Parcel Number: 310/00631-001-000

7. Subject Property Legal Description (attach if necessary):
-EX RD- LOTS 88, 89 & S 1/2 LOTS 90 & 91 PIEKENBROCK

8. Filing Fee: - \$438.00

9. Applicant(s) Information:

Eric Quiner
Applicant (Print Name)

Eric Quiner
Signature

dotloop verified
10/26/21 6:55 AM CDT
JTQU-STVM-XSRF-LADO

10/26/2021
date

Prospective Buyer
Interest in Property (owner, renter, perspective buyer, etc.)

ericquiner@gmail.com
Email

4840 NW Piekenbrock Dr., Des Moines, Iowa 50310
Address, City, State and Zip

515-710-5468
Phone Fax

10. Applicant(s) Representative:

If the appeal is going to be represented by someone other than the applicant please provide that information below:

Applicant Representative (Print Name) Firm or Business Name

Address, City, State and Zip


Email Phone Fax

11. Property Owner Consent:

The application must be signed by all the Titleholders, Contract Purchasers, or Option Purchasers of the subject property. The application may also be signed by the Registered Agent for a corporation or other person with similar legal authority to sign for a property owner. (if additional signatures are needed please attach)

Suzanne Vogel Lead Pastor MDRC

(Print Name)


Signature

dotloop verified
10/26/21 7:19 AM CDT
Q3LE-JJ5V-8QPY-VOBO

10/26/2021

date

(Print Name)

Signature

date

(Print Name)

Signature

date

(Print Name)

Signature

date

12. Written description:

Please provide a written description providing specific detail and reasons for the proposed request. (Attach if necessary)
Optionally attach any additional information including concept plans for the proposed development or use.

SEE ATTACHED

SEE ATTACHED

Return completed forms to: Polk County Public Works, Planning & Development Division
5885 NE 14th Street, Des Moines, IA 50313
▪ Phone (515) 286-3705 ▪ Fax (515) 286-3437 ▪
email: PublicWorks@polkcountyiowa.gov

Forms available online <http://www.polkcountyiowa.gov/PublicWorks/>
Zoning Commission Calendar [Zoning Comm Calendar](#)

**A completed application with required information and filing fee must be submitted.
Incomplete submittals will not be processed and will be returned to the Applicant.**

OFFICIAL USE ONLY			
Date Received		Received by	
P&Z meeting date		BOS meeting date	
BOS Approved	Y / N	Effective date	

ATTACHMENT FOR:

12. Written description:

Please provide a written description providing specific detail and reasons for the proposed request. (Attach if necessary) Optionally attach any additional information including concept plans for the proposed development or use.

DESCRIPTION, DETAIL, AND REASONS FOR PROPOSED REQUEST:

Jenny and Eric Quiner are the owners and operators of Dogpatch Urban Gardens ("DUG"), an urban farm located just north of Meredith drive in the southern edge portion of Webster Township affectionately referred to as Dogpatch neighborhood of unincorporated Polk County.

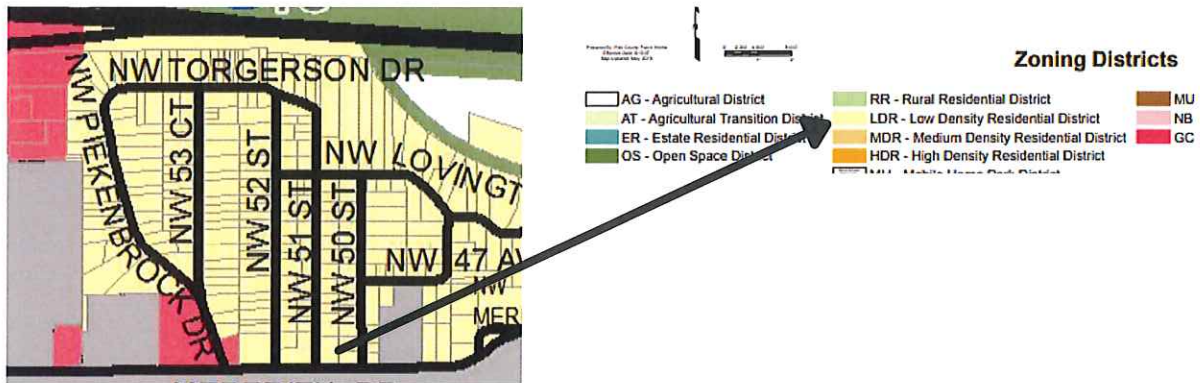


Fig. 1 Polk County Zoning Map & Key

The Quiner family has lived in the Dogpatch neighborhood since 2013. With the support of the Dogpatch community and neighbors, DUG transformed otherwise unutilized land into a successful urban farm where the produce grown is sold to the community at its on-site farm stand and also local farmer's markets (See Figures 2 and 3).



Fig. 2 Before DUG circa 2014



Fig. 3 DUG today

DUG also hosts farm-to-table dinners in conjunction with local chefs, provides tours of the garden, and hosts overnight guests in their on-site farm house via Air BNB. By all accounts, DUG is a source of pride for the community (See Figures 5 and 6).

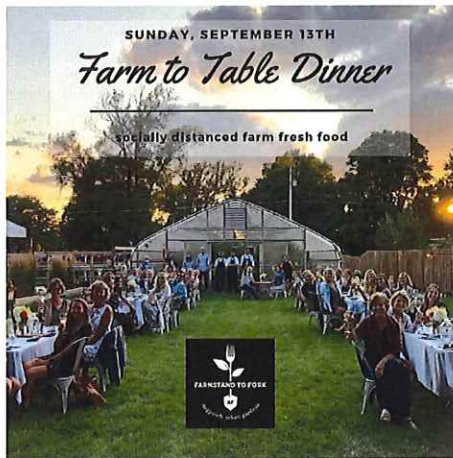


Fig. 5 Farm to Table Dinner Ad



Fig. 6 Urban Farm Stay

DUG is applying to rezone the L-shaped parking lot just to the west of the current DUG farmstand and garden to commercial to allow for a plant nursery and agricultural related retail (See Figure 8).



Fig. 7 Current Subject Property



Fig. 8 Proposed Urban Farm Renovation

The parking lot is currently zoned Low Density Residential ("LDR") and is owned by the Meredith Drive Reformed Church ("MDRC") which is located just south of lot (See Figures 7). The lot was once used for overflow parking for the church, but now it sits mostly vacant and DUG has an agreement with MDRC to use the lot for its overflow parking. On occasion it is used as storage for empty trailers and vehicles. For the last few years, DUG and MDRC have been in discussion about DUG purchasing the lot to transform it from the unused/misused space to useable agricultural land that would include three permanent, heated high tunnels for nursery growing and the sale of local agri-inspired and seasonal products such as pumpkins and Christmas trees. The commercial designation would also allow for a storage shed and a dumpster bay. DUG and MDRC have recently agreed to terms on the purchase of the lot and would like to begin the planned development. After many discussions with community leaders and on the advice of the County office, DUG is requesting a rezoning of the lot from LDR to commercial to accomplish its developmental goals consistent with its current operations and standards as a leader in sustainable urban farming (See Figure 8).

IMPACTS:

1. Public facilities and services, such as transportation, sewers, water supply, schools and public safety.

- Public transportation and schools will not be impacted. DUG regularly hosts school groups for educational tours and will continue to do so.
- Any impact on sewers and water supply will be resolved in accordance with required standards.
- DUG is working with the NRCS (Natural Resources Conservation Services) to improve storm water retention. The goal is to create a Bioretention Cell to purify, harvest, and reuse rainwater on site (See attachment 8 and Figure 8).
- Public safety will be improved by the area being used for an established purpose.

2. Surrounding properties and neighborhood character.

- The parcel to the west of the lot is already used by DUG for gardening. This is known as “Kathy's Plot” The long time owner of the property, Kathy Allen, remains our neighbor and proud DUG partner today (See Figures 9 and 10).



Fig. 8 Bioretention Cell



Fig. 9 Kathy's Plot - Before



Fig. 10 Kathy's Plot - After

- The community, including MDRC, overwhelmingly support DUG and the proposed use for the lot.

3. Productive farmland and on going agricultural operations.

- The proposal would turn an empty parking lot into a space into useable agricultural land to grow fresh produce, consistent with the on going agricultural operations already producing crops on both sides of the lot.
- Converting unused/underutilized parking lot to agricultural space is consistent with the goals of the Comprehensive Plan for 2030 that include agricultural conservation, the improvement of neighborhoods, housing and the quality of life, and to promote economic development.

4. Natural resources and open space; historic buildings or structures.

- No historic buildings or structures will be impacted by the proposal. The proposal would reclaim the natural resources otherwise unused by the current parking lot.

5. Proximity to adjacent City plans.

- DUG is not aware of any adjacent City plan.
- The proposal is consistent with the growing movement to promote urban agriculture and the preservation of lands for agricultural use.
- The lot is currently designated as **institutional** for proposed land use by the Comprehensive Plan for 2030, which includes gardens and arboretums as approved uses by the current Zoning Ordinance. The transformation of this parking lot into usable agricultural space is consistent with those uses described in the plan and zoning ordinance (See Fig 11).

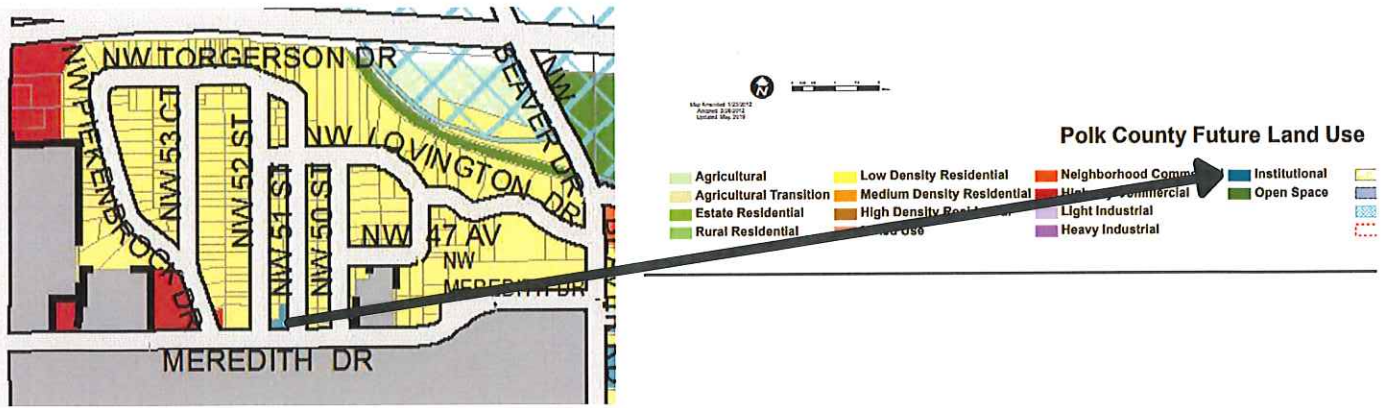


Fig. 11 Comprehensive plan proposed future land use for Polk County - Future use is **Institutional**

Changes may also be needed to correct errors, meet regional goals, or refine the plan based on more recent specific area or corridor plans.

DUG is requesting a comprehensive plan amendment that would change the current designation of the parking lot from LDR and the proposed use to commercial. This will allow for the installation of three heated high tunnels that DUG will operate/lease to allow for the public to enter/shop in. In addition, the commercial use would allow DUG to sell the produce/products and other locally sourced Agri-inspired products on site. Pending County approval this use will allow to connect three city blocks of Urban Farm on otherwise underutilized space within the County.

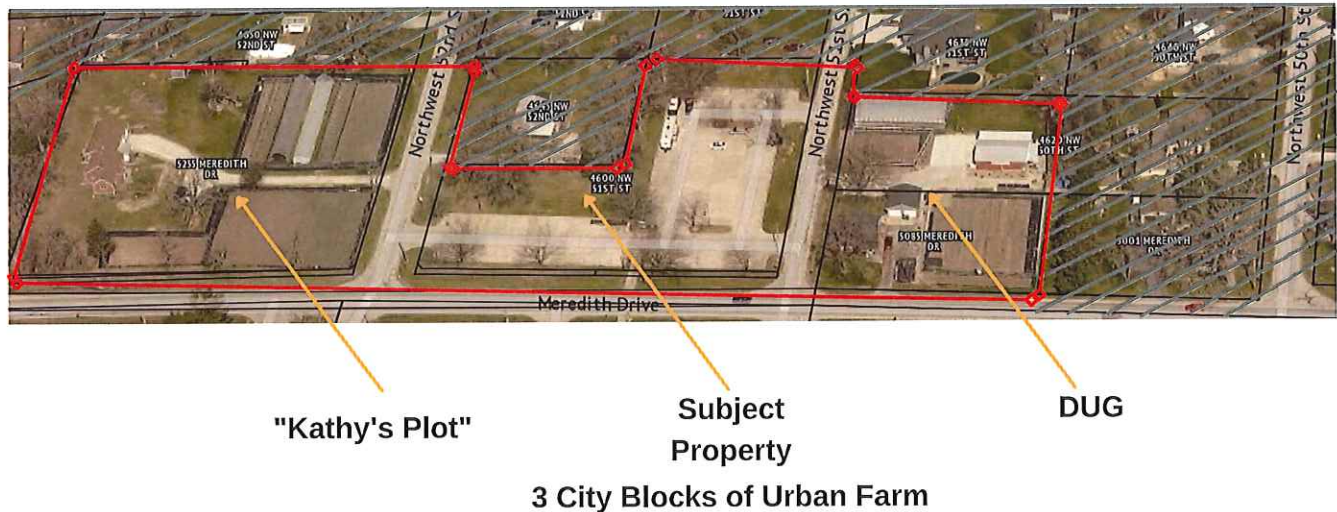
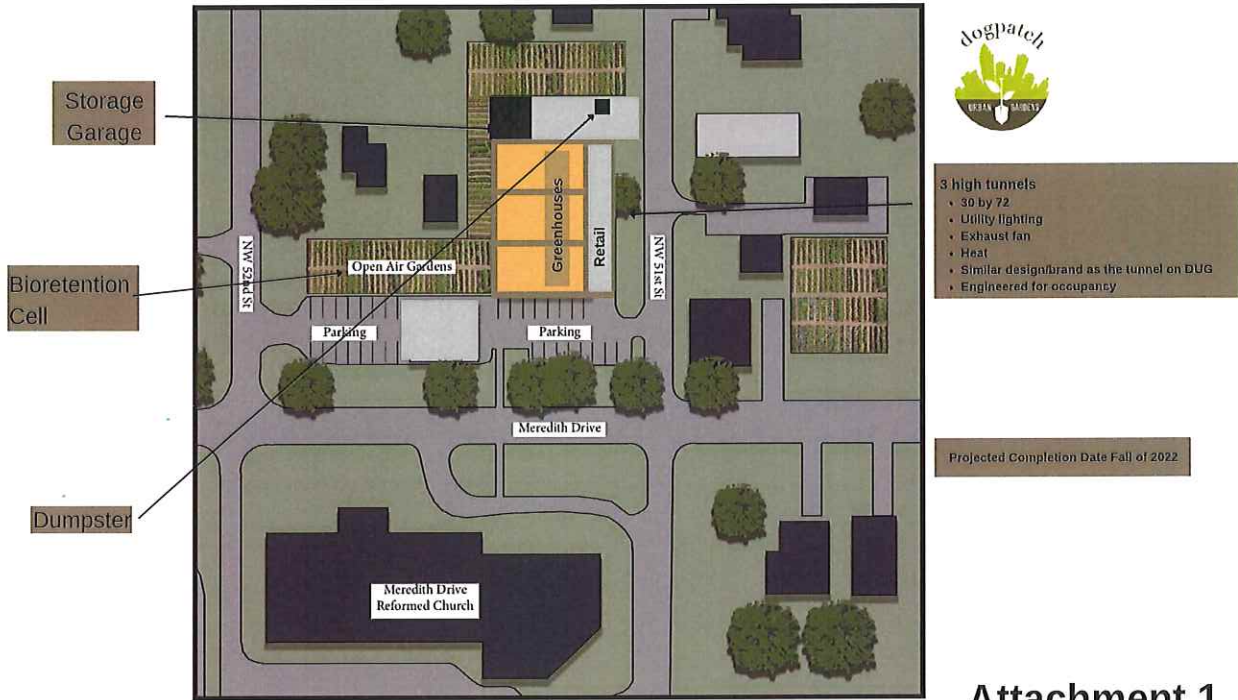


Fig 11. Master Concept for Dogpatch Urban Gardens

Urban Farm Redevelopment Proposed Future Use



Attachment 1



Pre-DUG Circa 2014

Attachment 3



DUG - Year Five 2020

Attachment 4

Kathy's Plot - Before

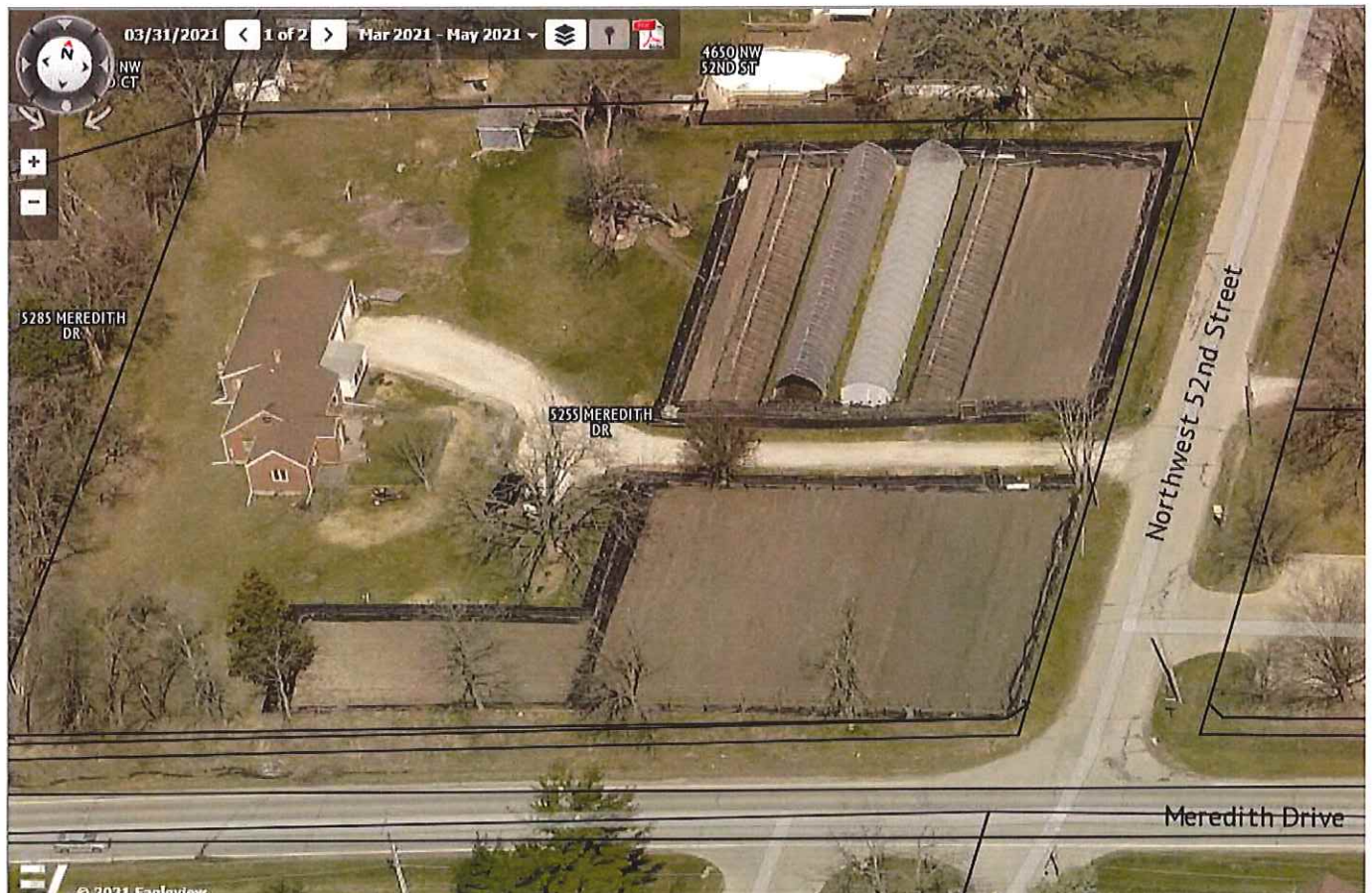
Attachment 5

Property directly to the west of the subject property



Kathy's Plot - After

Attachment 6



Master Concept



"Kathy's Plot"

Subject
Property

DUG

3 City Blocks of Urban Farm
Attachment 7

BIORETENTION CELLS

Green Infrastructure For Stormwater Management



WHAT ARE BIORETENTION CELLS?

Bioretention cells (or biocells) are one of the most widely used green infrastructure practices for managing stormwater. They are landscaped depressions that capture stormwater runoff from impervious surfaces such as parking lots or streets. Above ground, biocells look like a flower garden. Below ground, biocells have an engineered subgrade design to filter pollutants out of stormwater runoff.

WHY INSTALL BIORETENTION CELLS?

Bioretention cells are installed to protect water quality. In most communities, dirty stormwater goes into storm sewers and discharges into local water bodies without treatment. Sediment, heavy metals, oils and greases, and bacteria are transported directly to urban streams. Biocells capture and

breakdown these pollutants and slowly release cool, clean water.

Bioretention cells can also help reduce the flashiness of flows in urban streams because they capture, treat, and slowly release the majority of runoff events. This helps to reduce stream corridor erosion, which threatens adjacent property and infrastructure. It is also a major source of sediment in our streams.

WHERE ARE BIOCELLS INSTALLED?

Biocells are installed where water can't infiltrate and percolate downward through the existing soils at an adequate rate. Large scale developments typically disturb and compact soils, which reduce their ability to infiltrate and percolate water. The engineered subgrade of biocells ensures that captured water readily moves down through a sandy soil media to filter out pollutants.

Attachment 8