

Appendix A

Millet

Proud to be



Lakeside Meadows

(Amendment to Bylaw 2013/11)

REVISED AREA STRUCTURE PLAN

JUNE 2020

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EXECUTIVE SUMMARY

The Lakeside Meadows Area Structure Plan (ASP) has been prepared to provide a framework for the subsequent subdivision and development of this specific area. This ASP will act as a guide to interested parties while providing the Town of Millet with the concept to guide the development of the Lakeside Meadows area. This ASP amendment has been prepared on behalf of the property owner.

Land

The subject property is a ¼ Section generally located in the south-western corner of the Town of Millet, Province of Alberta, Canada. There are seven titled properties within the ¼ Section. Two not owned by the developer are not included in the plan.

Factors Influencing Development

Much of the site has historically been used for agriculture. There appear to be no previous mineral extraction operations on the site. More recently a storm water pond and an extension of Diamond Drive were constructed.

The land slopes gently southeast. There is a natural drainage from the northeastern area of the property to a natural depression in the southeastern area.

Soil and groundwater conditions are feasible for residential development. However, a high-water table and the presence of sandy material will influence construction.

A Biological Site Assessment of the property was performed including vegetation, wildlife, and wetland areas. There was no indication of vegetation of concern. The northeastern part of the site appears to be a natural stand of trees.

No wildlife concerns were noted. The site indicated suitability for nesting birds, however, no nests were observed.

Three wetlands were observed not including the storm pond. Two ephemeral drainages were also noted.

Site access will be from Secondary Highway 616 on the northern boundary of the site and Diamond Drive which extends into the site. Access to Highway 616 will require close coordination with Alberta Transportation as the project design moves forward.

Development Concept

The concept in the ASP provides for single family homes and multi-family homes in the form of row homes and similar attached housing. Neighborhood-supporting commercial and highway-oriented commercial complete the land uses.

Anticipated are 287 single family homes, 130 duplex or semi-detached homes, and 399 row homes and similar attached housing. Also, 150 semi-detached or row homes are anticipated specifically to provide for independent senior living.

Approximately 5.9 ha is anticipated for commercial use. Two areas are envisioned as neighborhood-serving commercial that supports the residents within the development. Approximately 4.8 ha of the 5.9 is highway-serving commercial positioned along the northern edge of the property adjacent to Highway 616.

Development Impacts

The impact of traffic generated by the development to existing roadways was found to be benign. Commercial uses are not expected to generate internal traffic. One purpose of neighborhood-serving commercial is to invite pedestrians to the commercial uses. The proposed internal roadways are centered around Diamond Drive. A new internal road will connect to Highway 616.

Water and sewer will be provided by the Town of Millet. Sufficient capacity in both systems is available to supply an initial portion of the subdivision. Upgrades will be required to service the balance of the development.

The Storm Water Management system will consist of underground pipes and overland conveyance that will be drained to a pond. The pond will release into Pipestone Creek eastwards from the site into a drainage ditch that runs alongside 56 Street.

Power, Telephone and Natural Gas have the capacity to supply the development without impacting the supply to other areas within the Town of Millet.

Development Sequence

The development sequence will be driven by market forces. It is anticipated that the first phases of development will be either of the following.

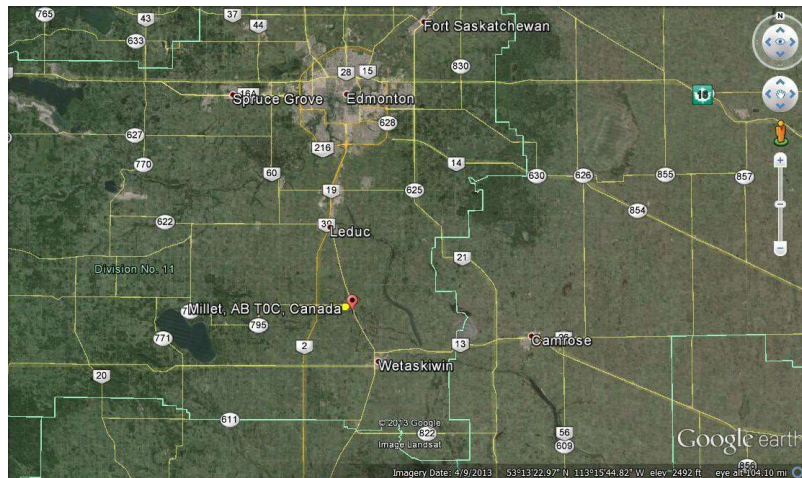
Residential development, south of Diamond Drive and immediately west of 56 Street, is proposed to be the first phase of development. Future phases will be determined by demand however contiguous development is preferred. Utility services were installed along with

Diamond Drive. Therefore, from expedience and cost perspectives, it makes sense to take advantage of the existing available utilities and develop this area first.

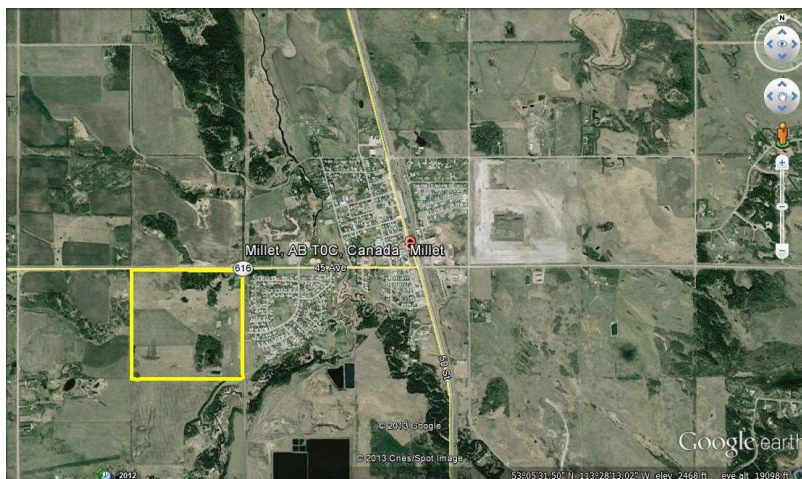
LAND

LOCATION

The subject property is generally located in the south-western corner of the Town of Millet, Province of Alberta, Canada. Figure 1 indicates the location with respect to other land uses in the Town of Millet.



Location in the Region



Location in the Town of Millet

LEGAL DESCRIPTION

The Legal Land Description of the proposed subdivision is NE 1/4, Section 30, Township 47, Range 24, West of the 4th Meridian, in the Town of Millet, Alberta Canada.

OWNERSHIP

There are currently seven titled properties within the boundaries of the NE-30-47-24-4. Following is a summary of the ownerships and the areas included in the ASP. The following table identifies the properties and related land areas. Figure 2 indicates the boundaries of the areas.

Legal	Area (ha)	Owner	In ASP
C of T 002 266 625	1.89	Cornish	No
Lot 24 Block 1 Plan 052 3807	2.29	Venoasen	No
Lot 25MR, Block 1, Plan 0628447	2.632	Town of Millet	Yes
Lot 1 Block 1 Plan 082 1908	1.64	Lakeside Meadows	Yes
NE-30-47-24-4	48.141	Lakeside Meadows	Yes
Lot 27, Block 1, Plan 1820097	1.66	Lakeside Meadows	Yes
Lot 26, Block 1, Plan 1820097	1.17	Lakeside Meadows	Yes
TOTAL	59.423		

FACTORS INFLUENCING DEVELOPMENT

JURISDICTIONAL

Municipal Government Act

The plan has been developed in compliance with Section 633 policies of the Municipal Government Act, RSA 2000, Chapter M-26, describing future land uses, the sequence of development, population projections, the general alignment of major roads, and a utility servicing scheme.

Land Use Bylaws

The Land Use Bylaw as amended through 2018/11 districts the subject land according to the uses illustrated in Figure 3. Figure 4 indicates the Land Use Districts proposed with this ASP.

SITE CONSIDERATIONS

Historical Uses

General Aspects

The majority of the site area has historically been cleared and used for agriculture. More recently, approximately a third of the site was graded to construct a storm water pond and an extension of Diamond Drive.

Resource Extraction

There appear to be no previous mineral extraction operations on the site. A General Query Report from the Alberta Energy Utilities Board indicates there are no sour gas facilities in the vicinity of the ASP.

Current Land Use

The land is presently in agricultural use or is vacant.

Adjacent Land Use

An existing single-family residence on parcel C of T 002 266 625 is currently occupied. Another parcel within the ¼ Section, Lot 24 Plan 052 3807. is vacant.

Moonen Heights located east of the ASP across 56 Street is the only development other than the single home mentioned above adjacent to the property. Moonen Heights, constructed in the late 1970s, is the last residential subdivision to be developed in the Town of Millet.

The properties to the North across Highway 616 are in Wetaskiwin County and are agricultural use.

The adjacent properties to the West and South are also in Wetaskiwin County and are agricultural use.

Natural Features

Site Topography

The land slopes gently generally toward the southeast. There is an overall height differential of about 5m from the Northwest corner to the southeast corner of the plan area. Existing contours are shown in Figure 2.

A natural drainage route begins in the northern third of the property then curves through the center of the property to a natural depression in the southeastern area. A drainage pond was previously constructed at the location of the site's natural low place.

Geotechnical Considerations

According to a geotechnical report by J.R. Paine & Associates Ltd. in 2005 and supplemented by a geotechnical report by Levelton Consultants Ltd. in 2012, the soil and groundwater conditions are feasible for residential development. However, a high water table and the presence of sandy material need to be considered in construction details and approach. Specific mention is made of footing treatments and dewatering measures, that will be required both during the course of construction and as permanent features such as foundation drains.

Ground water flow into the storm water pond needs to be considered in assessing the design capacity of the pond for surface water flows. In addition, the influence of the pond on water tables in the vicinity of the pond, and potentially in a wider area, with respect to basements, road subgrades and other constructed items needs to be considered.

The storm water pond is planned to be a permanent feature. A clay or synthetic liner is recommended by the reports to retain the surface waters. The design would necessarily need to take into account the groundwater influences.

Biological

Triton Environmental Consultant Ltd. performed a Biological Site Assessment of the property in 2013. Triton's assessment included, but was not limited to, vegetation, wildlife, and wetland areas. The following paragraphs summarize Triton's assessment.

Site Vegetation

The site is disturbed by cultivation. Therefore, there was no indication of vegetation of concern. Encroachment of weedy species was noted. An area in the northeastern part of the site appears to be in a natural state. The area is covered by a stand of trees.

Wildlife

According to Triton, no wildlife concerns were noted. The site indicated marginal to moderate suitability for nesting birds such as sharp tailed grouse. No nests were observed.

Wetlands

Triton observed three wetlands not including the storm pond. Two ephemeral drainages were also noted.

Alberta Environment was contacted by Triton in the course of preparing their Assessment. Because the site has historically been agricultural use, the wetlands are disturbed and not of high quality in terms of environmental value. The concept of providing green space in the development in or near the locations of the wetlands was presented to Alberta Environment. Alberta Environment indicated support of this approach as opposed to providing some other mitigation in compensation for developing the areas identified as wetlands.

Access

Access to the site will be from Secondary Highway 616 on the northern boundary of the site, via 56 Street along the eastern boundary of the site and via Diamond Drive which extends into the center of the site. ISL Engineering and Land Services Ltd. (ISL) prepared a Traffic Impact Assessment for the project. ISL's report indicates the existing roadway systems in the area will accommodate the development.

Alberta Transportation was contacted concerning access to Highway 616. Close coordination with Alberta Transportation will need to occur as the design of the project moves forward. Multiple driveways onto Highway 616 will probably not be allowed. The Highway Commercial uses will be accessed by a new road at the center of the site and the site design will accommodate Alberta Transportation's access criteria and provide the ease of circulation that businesses locating to the development will want.

Alberta Transportation has indicated improvements to Highway 616 will be required at the intersections of 56 Street and Highway 616 and at the intersection of the development's main north-south roadway which will connect to Highway 616. The 56 Street Highway 616 improvements will be required at some initial phase of the development. The other Highway 616 improvements will likely be required when the new connection to Highway 616 on the northern boundary is developed.

DEVELOPMENT CONCEPT

The concept in general provides for single family homes, duplexes and multi-family homes in the form of row homes and similar attached housing. Neighborhood-supporting commercial development and highway-oriented commercial services complete the land uses. A summary of the development areas follows.

RESIDENTIAL USES

R1 Single Detached Dwelling Residential

A total of 287 single family homes are anticipated in the concept plan. Approximately 746 residents are projected based on the latest census data of 2.6 persons per household in Alberta. The homes are expected to range from entry level to larger “executive” homes. The mix of homes will be driven by market dynamics over time.

R2 Low Density Residential District

Duplex or semi-detached homes are anticipated in the concept plan. It is estimated that 130 homes will be provided generating a population of 340 residents.

R3 Medium Density Residential District

Row homes and similar attached or semi-detached housing totaling 399 homes are anticipated in the concept plan generating a population of 1037 residents.

R3 Medium Density Residential – Senior Living

A total of 150 semi-detached or row homes are anticipated in the concept plan specifically to provide for independent senior living. A population of 260 residents is anticipated in this area based on the latest census data indicating 56% of independent seniors live in couple arrangements and 25% live alone. For population estimating it is assumed the balance live with a companion.

COMMERCIAL USES

Approximately 5.9 ha net area is anticipated in the concept plan for commercial use. Three areas are envisioned for commercial uses.

C1 Downtown Commercial District

Two areas of the property are designated as commercial uses for businesses that do not require large tracts of land. These commercial areas are envisioned as neighborhood-serving commercial that supports the residents within the development.

On the eastern edge of the development, where the senior housing is potentially located, neighborhood-serving commercial that supports the residents within the development, the senior residents and Moonen Heights’ residents is anticipated.

Central to the property located conveniently to serve the residents of the area and accessible via Diamond Drive or from Highway 616 is a second component of the neighborhood-serving commercial. The concept of this location is its versatility. The focus is pedestrian oriented access, however, it is also well positioned for resident’s entering or leaving the property.

C2 Highway Commercial

Approximately 4.8 ha net area is highway-serving commercial positioned along the northern edge of the property adjacent to Highway 616. The intent is to provide services to the motoring public, visitors to the community and local and regional businesses. Specific businesses visualized are medical services, professional offices, restaurants, retail outlets and auto service.

DEVELOPMENT AREA SUMMARY

Land Use	Area (ha)	Units	Population
R1 Single Detached Dwelling	24.14	287	746
R2 Low Density	4.68	130	340
R3 Medium Density	7.59	399	1037
R3 Senior Living	2.52	150	260
C1 Downtown Commercial	1.76	NA	NA
C2 Highway Commercial	5.57	NA	NA
US Urban Service	5.50	NA	NA
TOTAL	51.76	966	2,383
Note that the above are approximate net areas.			

DEVELOPMENT IMPACTS

TRANSPORTATION

Traffic Generation

Traffic generation was estimated based on the Institute of Transportation Engineers Manual on Trip Generation Rates provided by ISL Engineering. Following is a summary of the information.

TRIP GENERATION SUMMARY

Land Use	Area (ha)	Units	Rate /Unit	Total
R1 Single Detached Dwelling	24.14	287	9.57	2,746
R2 Low Density	4.68	130	5.81	755
R3 Medium Density	7.59	399	5.81	2,318
R3 Senior Living	2.52	150	3.71	557
C1 Downtown Commercial	1.76	NA	1779	924
C2 Highway Commercial	5.57	NA	1211	5,546
TOTAL	42.26	966		12,846

Commercial trips would be less than indicated for two reasons. The Neighborhood Shopping Centres (C1) are internal to the development. Therefore, a significant number of the visits to those businesses would occur via pedestrian, bicycle and similar non-vehicle means. External trips to the C1 would be minimal. A percentage of the visits to the Highway Serving Commercial (C2) would be bypass trips. These are trips to the businesses as the traveler is going by the businesses and not new trips to the businesses adding to the traffic on the adjacent roadway.

Internal Roadway Network

The proposed transportation network internal to the development is centered around a previous extension of Diamond Drive into the middle of the development from 56 Street. Diamond Drive is planned to be extended further west to provide capacity for the ¼ Section west of the ASP. Further circulation within the ASP is illustrated on Figure 6.

General Circulation

The development is planned to minimize the use of motorized vehicles. Therefore, the following guidelines will be applied to development of the transportation network.

- Walkway connections will be provided throughout the development to ensure pedestrian friendly neighborhoods. A conceptual layout of some of the internal trails is provided on Figure 6.
- Roadways within the development will be designed to accommodate parking on both sides of the roadway and still facilitate two-way traffic.

Further development of details concerning connection to existing roads external to the development will be provided at the Subdivision stage of development. Included in such details will be Highway 616 improvements that Alberta Transportation may require.

SERVICING

Civic Servicing

Fire

Fire Service for the area within the ASP will be supplied by the Town of Millet Fire Department.

Police

The Wetaskiwin detachment of the RCMP will provide police service to the area within the development.

Schools

The Wetaskiwin Regional School Board serves the subject area. A new K-8 school was recently built in the Town of Millet and will serve students from the development. Schooling for the older 9 – 12 students will be served via bussing to Wetaskiwin Composite High School.

Utility Servicing

Water

Water will be provided by the Town of Millet and will be supplied to the site from the intersection of 56 Street and Diamond Drive and from the intersection of 56 Street and Highway 616. The water main in Diamond Drive is sized to provide capacity for the ¼ Section west of the ASP.

The water system will be designed in accordance with Town of Millet Policy #51. It is planned that the water system will be looped through the development from the connection at 56 Street and Diamond Drive to the connection at 56 Street and Highway 616.

The Town of Millet's Municipal Engineers have indicated that sufficient water pressure is available to supply an initial portion of the subdivision. Upgrades will be required to service the balance of the development. Figure 7 shows the proposed water system concept.

Sewer

Sewer will be supplied to the site from the intersection of 56 Street and Diamond Drive. The

sewer main in Diamond Drive is sized to provide capacity for the ¼ Section west of the ASP.

The sewer system will be designed in accordance with Town of Millet Policy #51. The Town of Millet's Municipal Engineers have indicated that sufficient capacity is available to provide sewer service to an initial portion of the subdivision. Upgrades will be required to service the balance of the development.

Specifically, prior to the existing 10" sewer line in Diamond Drive reaching its flow capacity, a new trunk sewer will be installed southward along 56 Street to the southeast corner of the development. A lift station will be constructed at this location that will transfer the sewage directly to the sewage treatment cells located south of Moonen Heights. Following the connection to the sewage treatment cells, the current plan is to cap the sewer line at the western edge of Moonen Heights. Figure 8 shows the proposed sewer system concept.

Storm Water Management

The storm water system will be designed in accordance with Town of Millet Policy #51 and the 2006 Alberta Government Standard and Guidelines for Municipal Waterworks, Wastewater and Storm Drainage Systems Part 5 Storm Water Management Guidelines (2013). Figure 9 indicates the concept for the storm water servicing system. Flow paths for the storm flow will be routed overland along streets and in grass-lined channels.

The drainage of the proposed development will be divided into two components: the minor and major stormwater systems (dual drainage system). The minor system will be designed to facilitate the more frequent storms (5 year) and the major system will be designed to accommodate the larger storms (100 year). The minor storm system will consist of catch basins with underground pipes for collection and conveyance. When the minor system's capacity is exceeded, then overland conveyance begins and serves as the major system. The major system typically consists of streets, roads, swales, and ditches which are necessary to convey the overland flow. Both systems will be drained to a pond. A storm water detention pond was previously constructed within the natural low area of the development. The pond will receive runoff from the entire development area and be designed to accommodate a design rainfall event. Figure 10 indicates potential temporary ponding areas and storm water flow routes.

The pond discharge will be discharged by gravity piped flow into Pipestone Creek eastwards from the site into a drainage ditch that runs alongside 56 Street. Major storm overflow, greater than a 1:100 year rainfall event, will follow this same path into Pipestone Creek.

Shallow Utilities

Power, Telephone and Natural Gas will be accessed from the intersection of 56 Street and Diamond Drive and from the intersection of 56 Street and Highway 616. Atco Gas and Fortis Alberta indicated the utilities have the capacity to supply the development without impacting the supply to other areas within the Town of Millet.

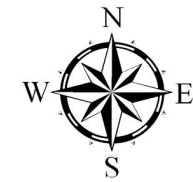
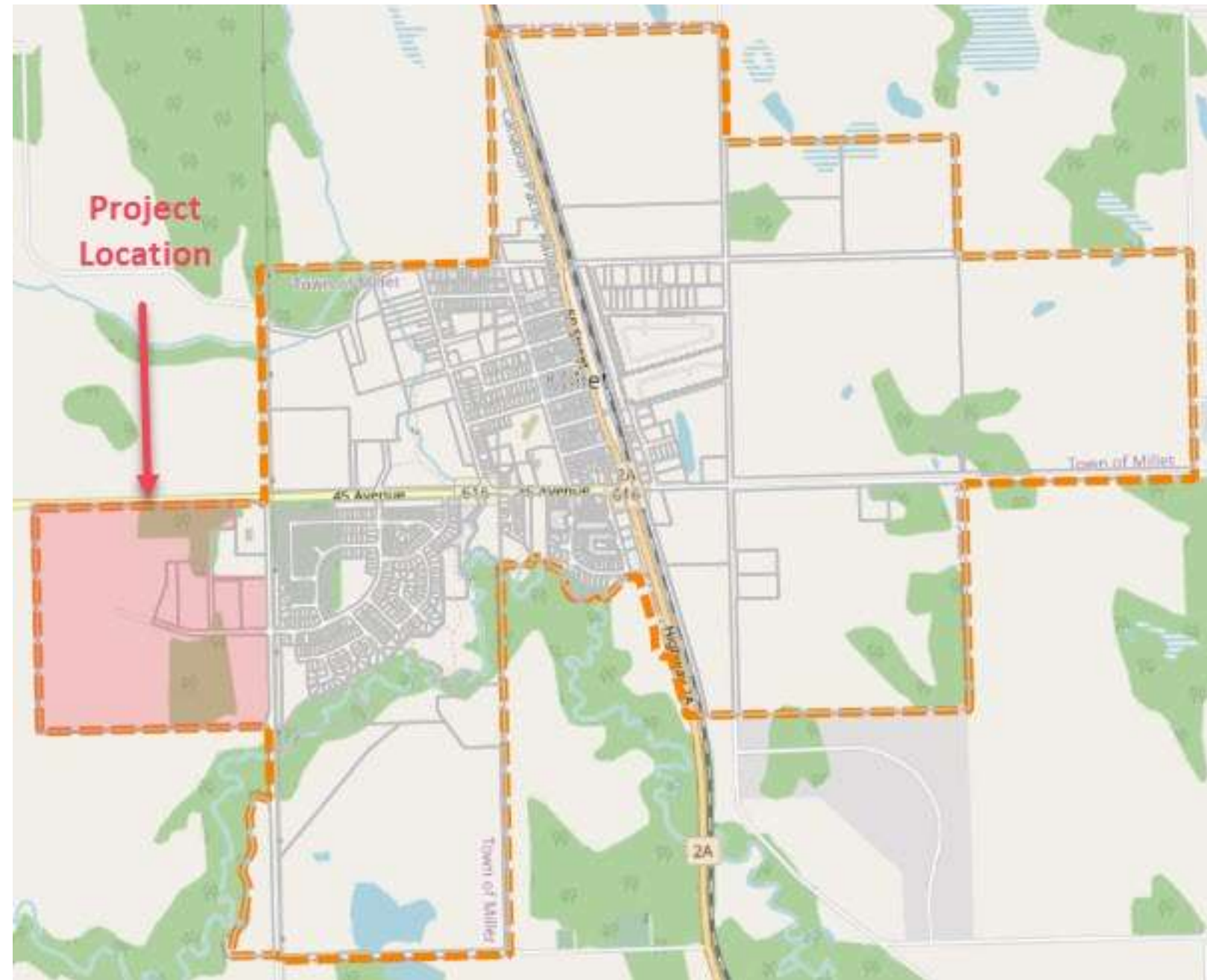
DEVELOPMENT SEQUENCE

The development sequence of the property within the ASP will be driven by market forces.

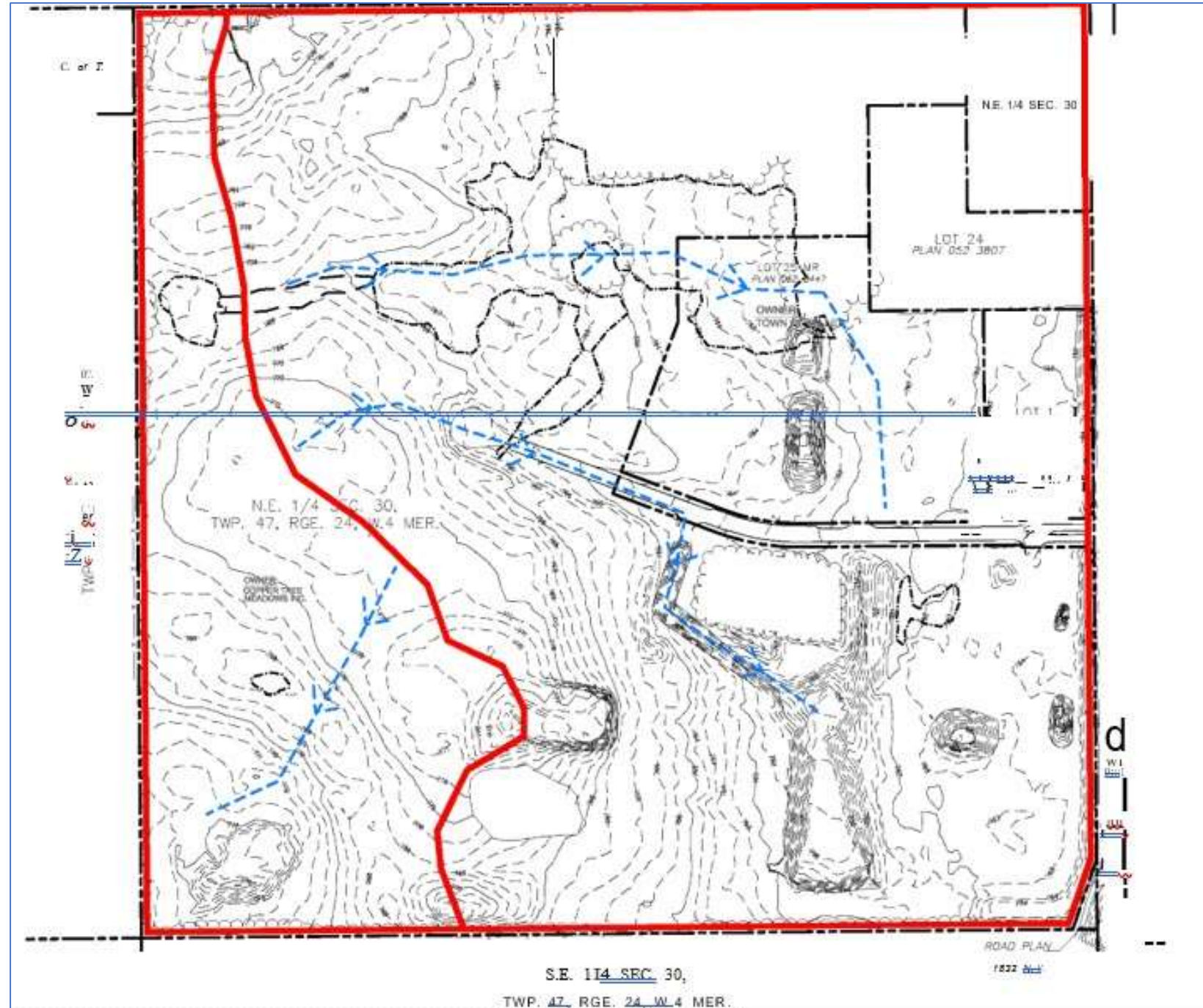
Single Detached Dwelling Residential (R1) development and Medium Density Residential (R3) development is proposed as Phase 1 south of Diamond Drive west of 56 Street. Therefore, from expedience and cost perspectives, it makes sense to take advantage of the existing available utilities and develop this area first.

The demand for highway oriented commercial uses in the Millet vicinity may justify development of the Highway Serving Commercial area along Highway 616 in an early phase. The factor that might deter this use from being in an early phase, is the cost of extending utilities to the designated area.

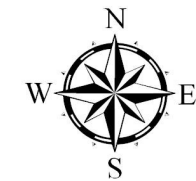
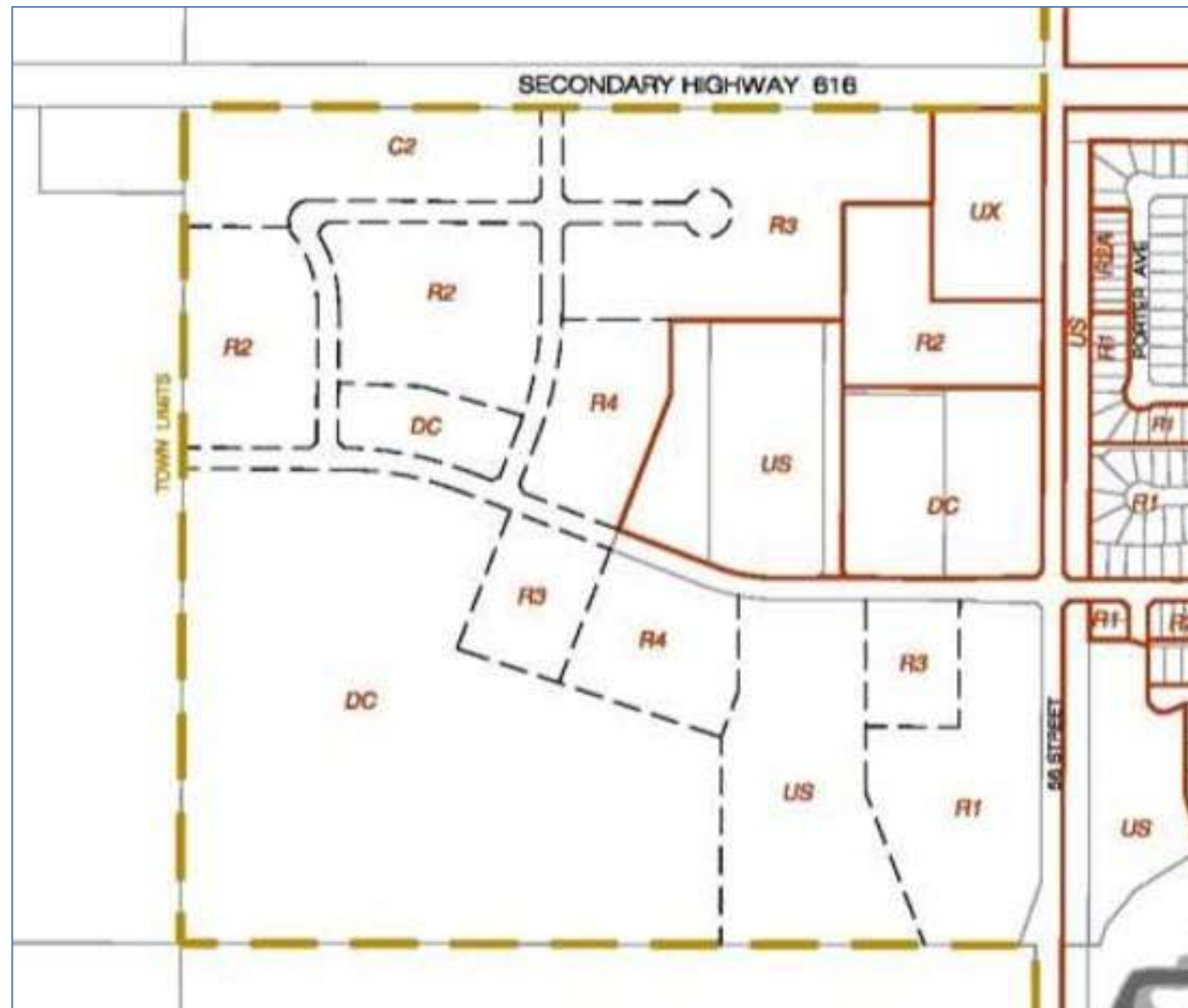
It should be noted that the phasing shown is one concept of how development might proceed. A range of potential dates for each phase is provided. However, the buyers of land areas or lots and the builders responding to market forces will determine the actual development pattern and timing.



PROJECT LOCATION MAP



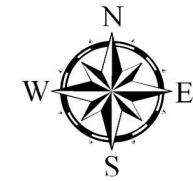
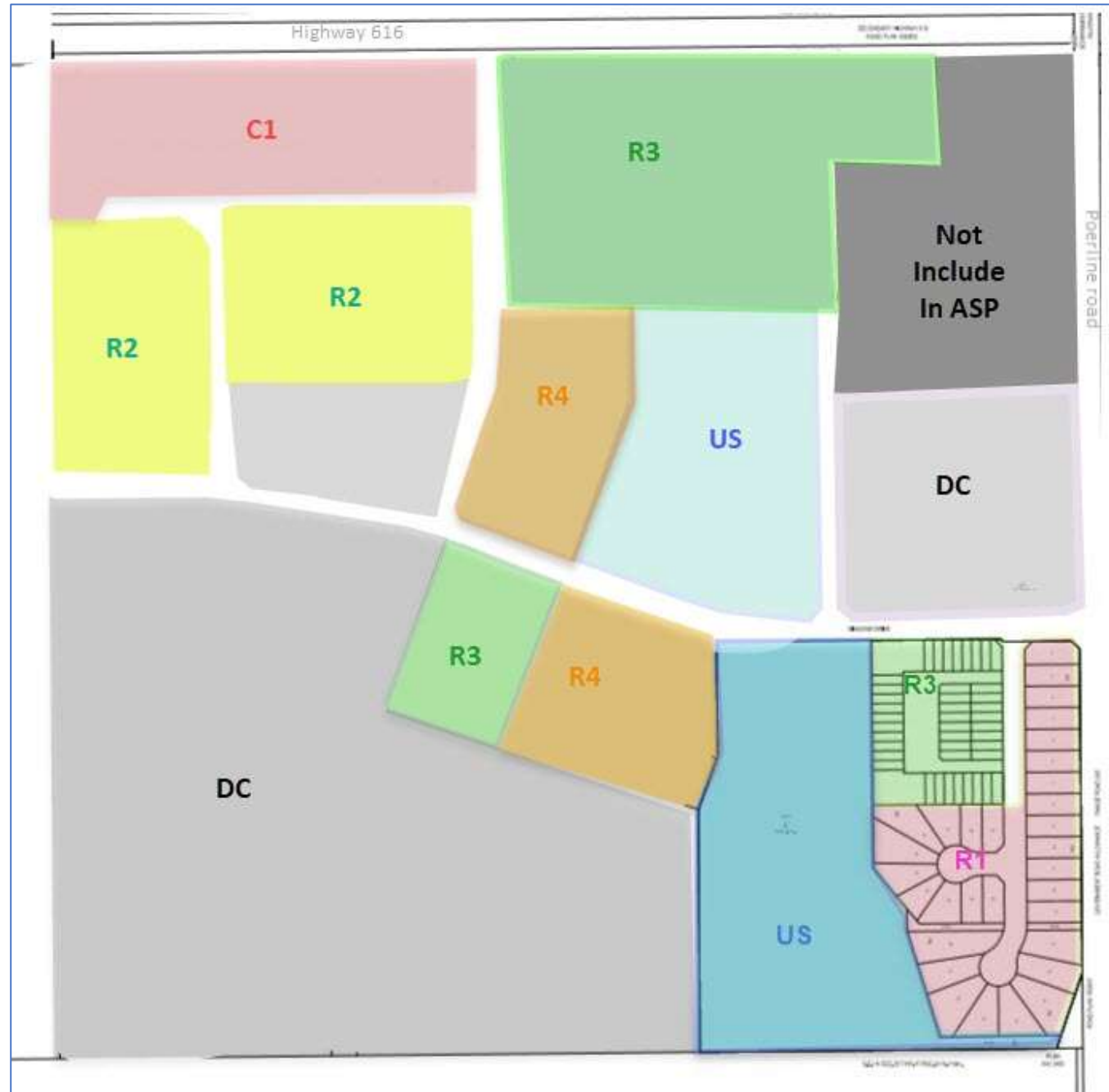
Topography
As provided in 2013 ASP



Land Use

- R1 – Single Detached Dwelling
- R2 – Low Density Residential
- R3 – Medium Density Residential
- R4 – High Density Residential
- C1 – Downtown Commercial
- DC – Direct Control
- US – Urban Service and Open Space

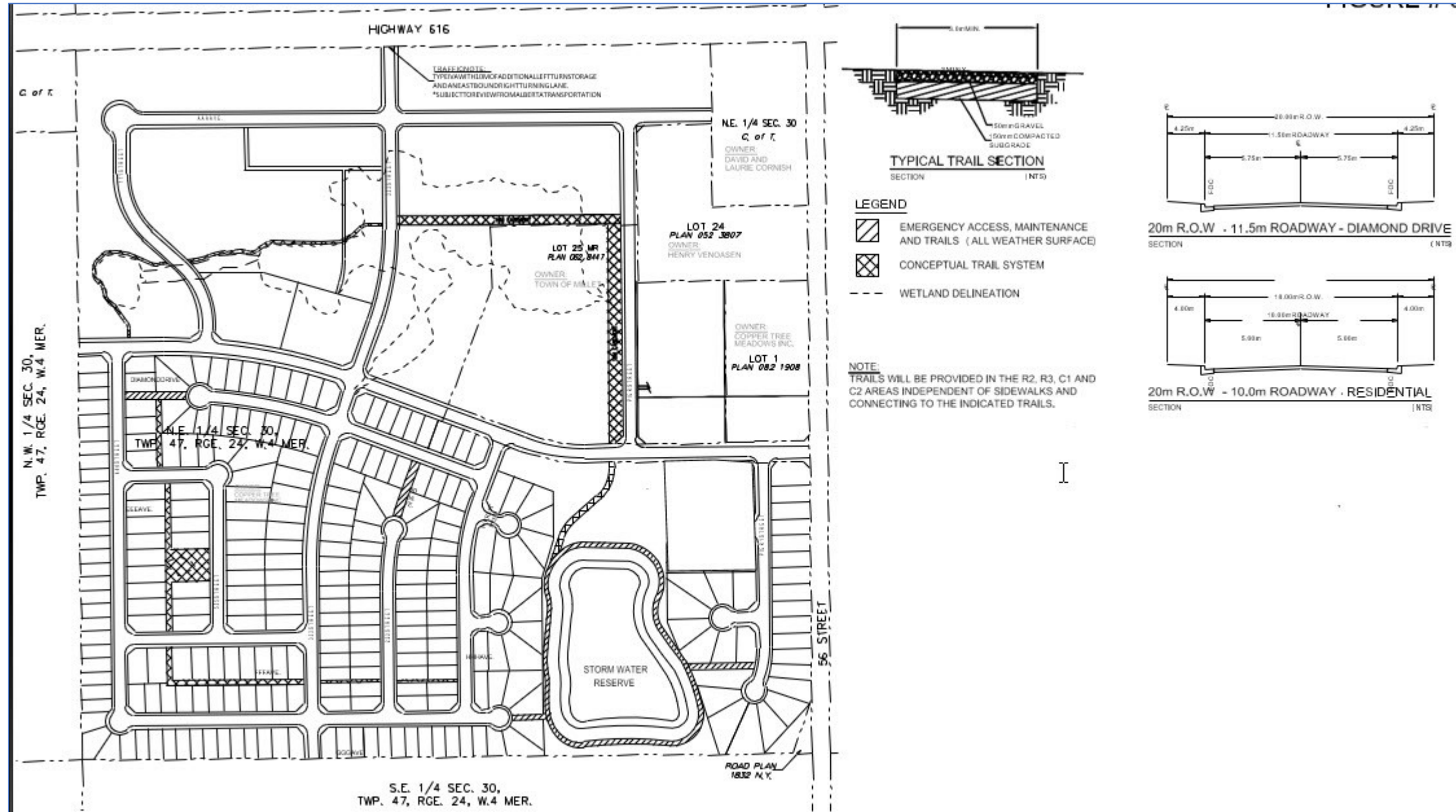
EXISTING LAND USE
AS PROPOSED IN THE LAND USE BYLAW 2018/11

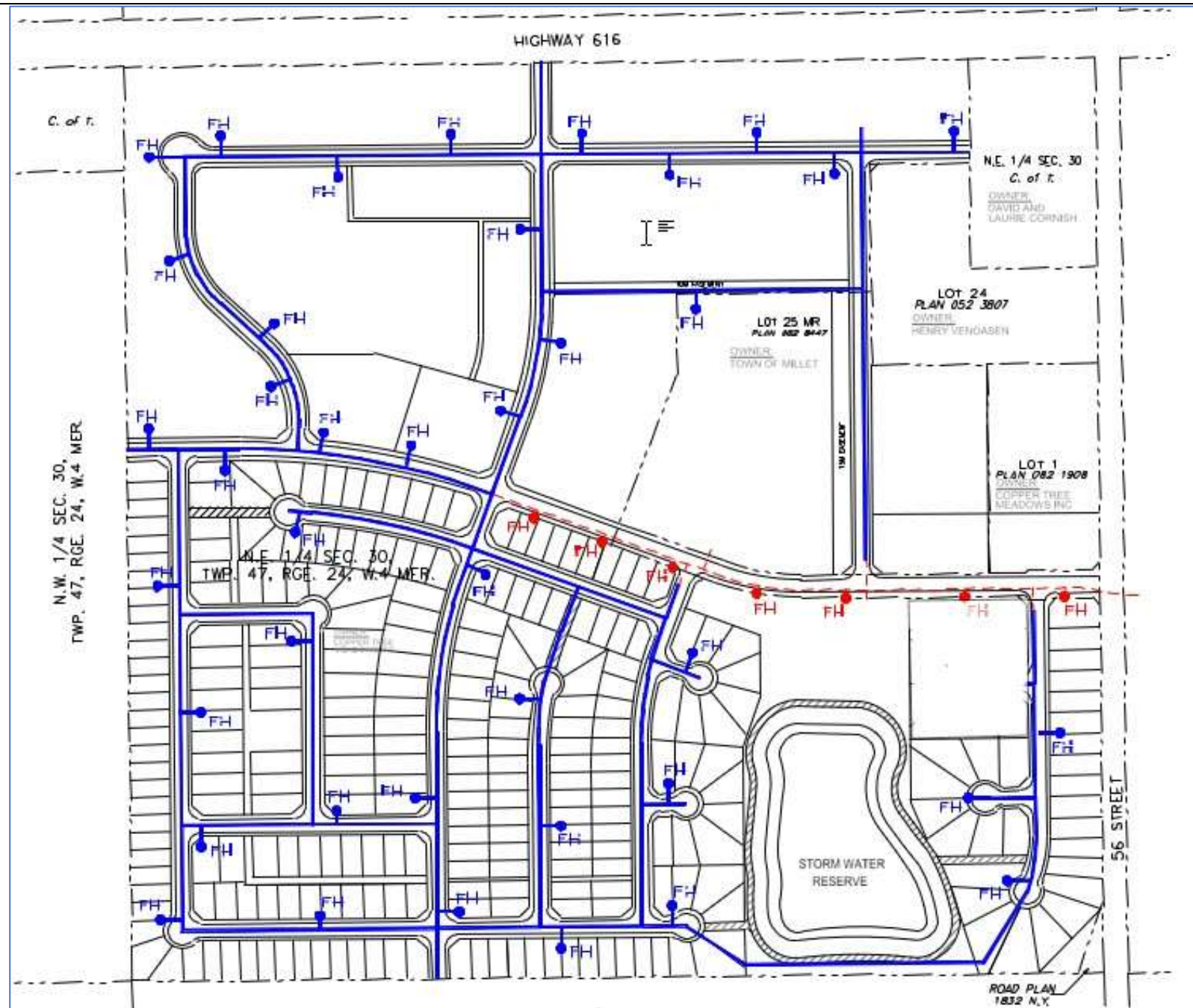


Land Use

- R1 – Single Detached Dwelling
- R2 – Low Density Residential
- R3 – Medium Density Residential
- R4 – High Density Residential
- C1 – Downtown Commercial
- DC – Direct Control
- US – Urban Service and Open Space

PROPOSED GENERALIZED LAND USE

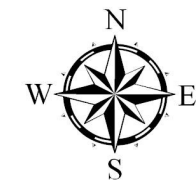
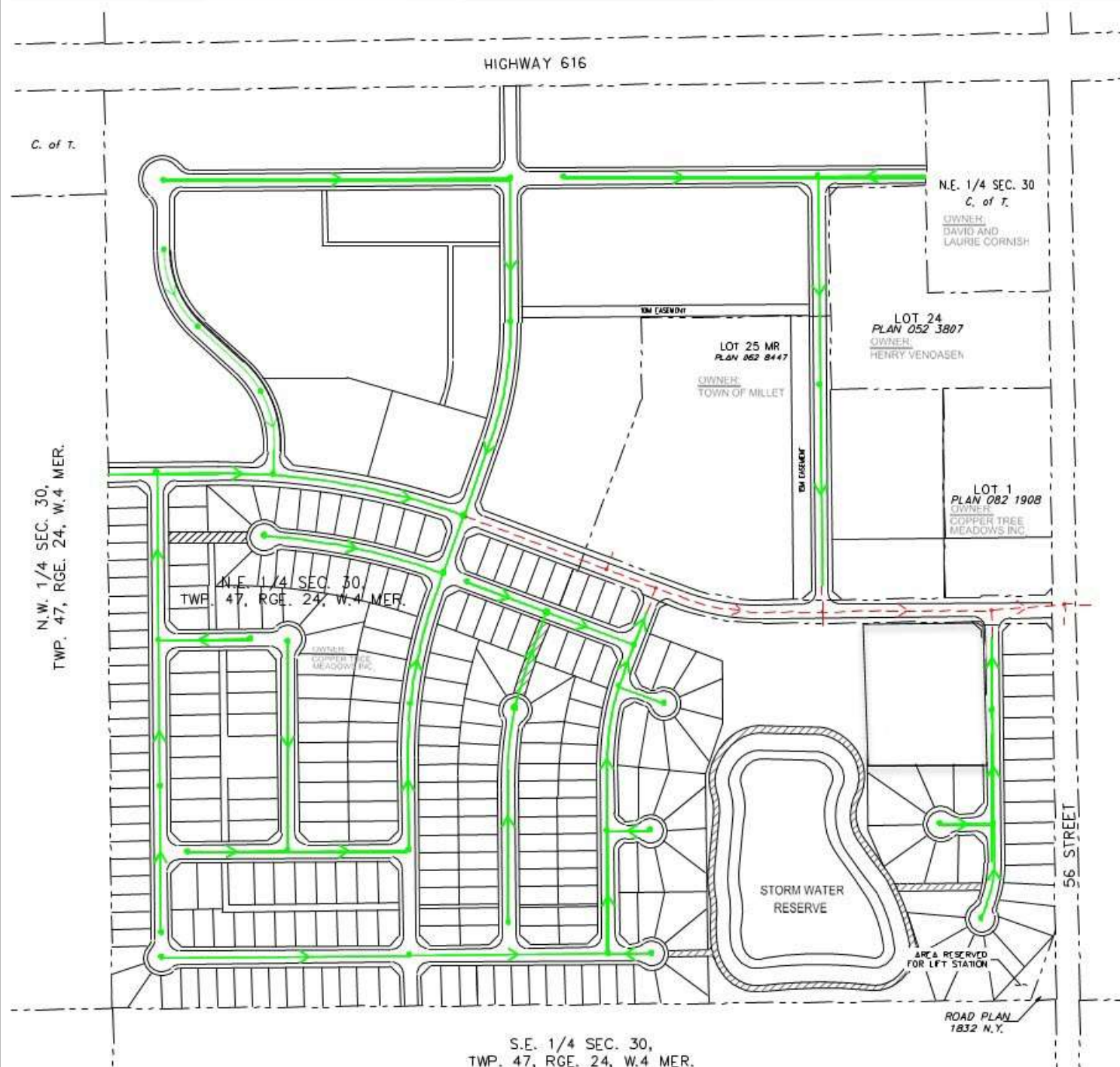




----- Existing Water Distribution System

_____ Proposed Water Distribution System

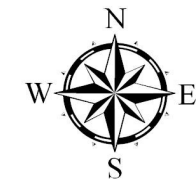
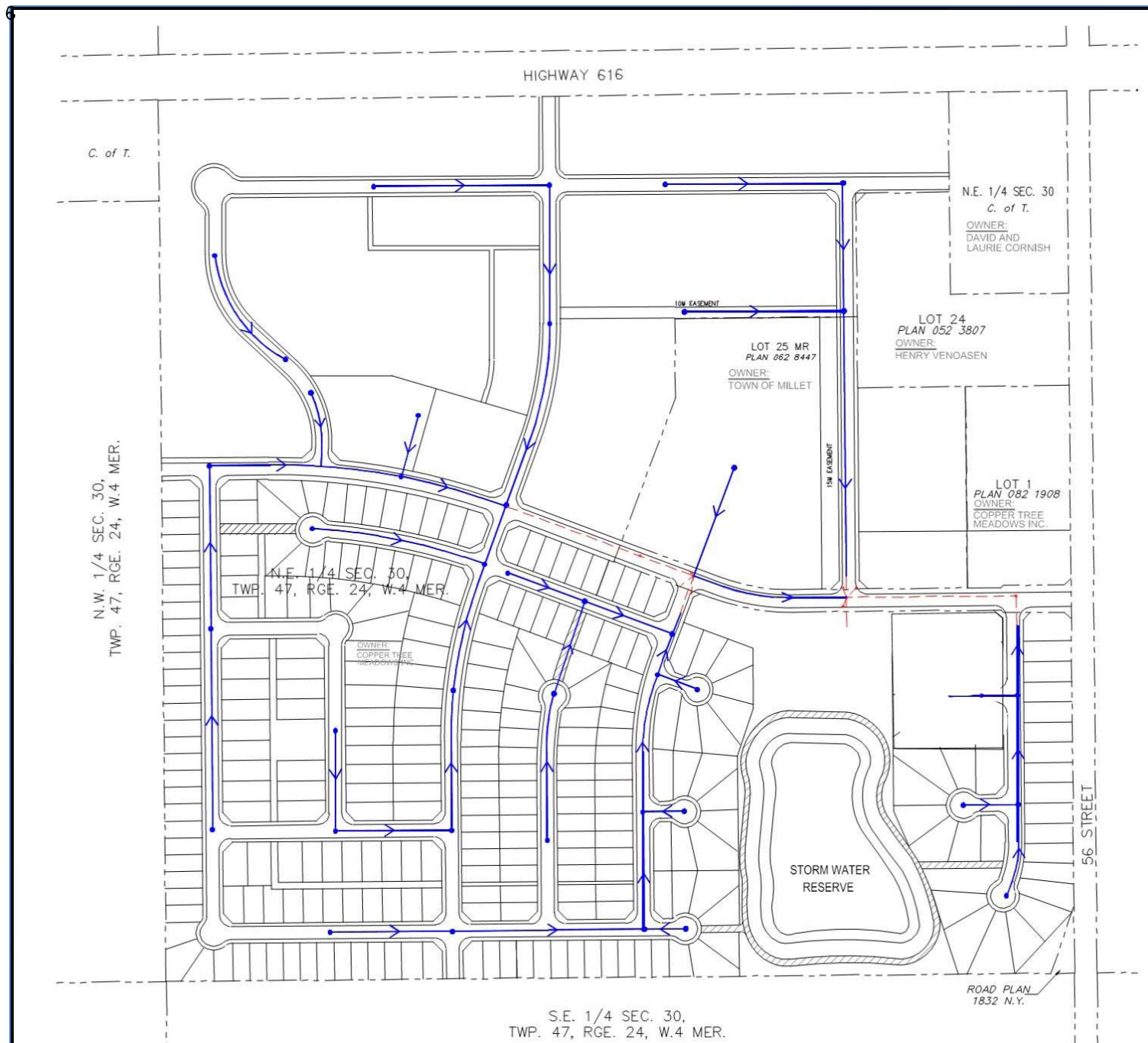
WATER DISTRIBUTION CONCEPT PLAN



----- Existing Sewer System

_____ Proposed Sewer System

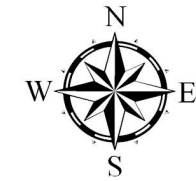
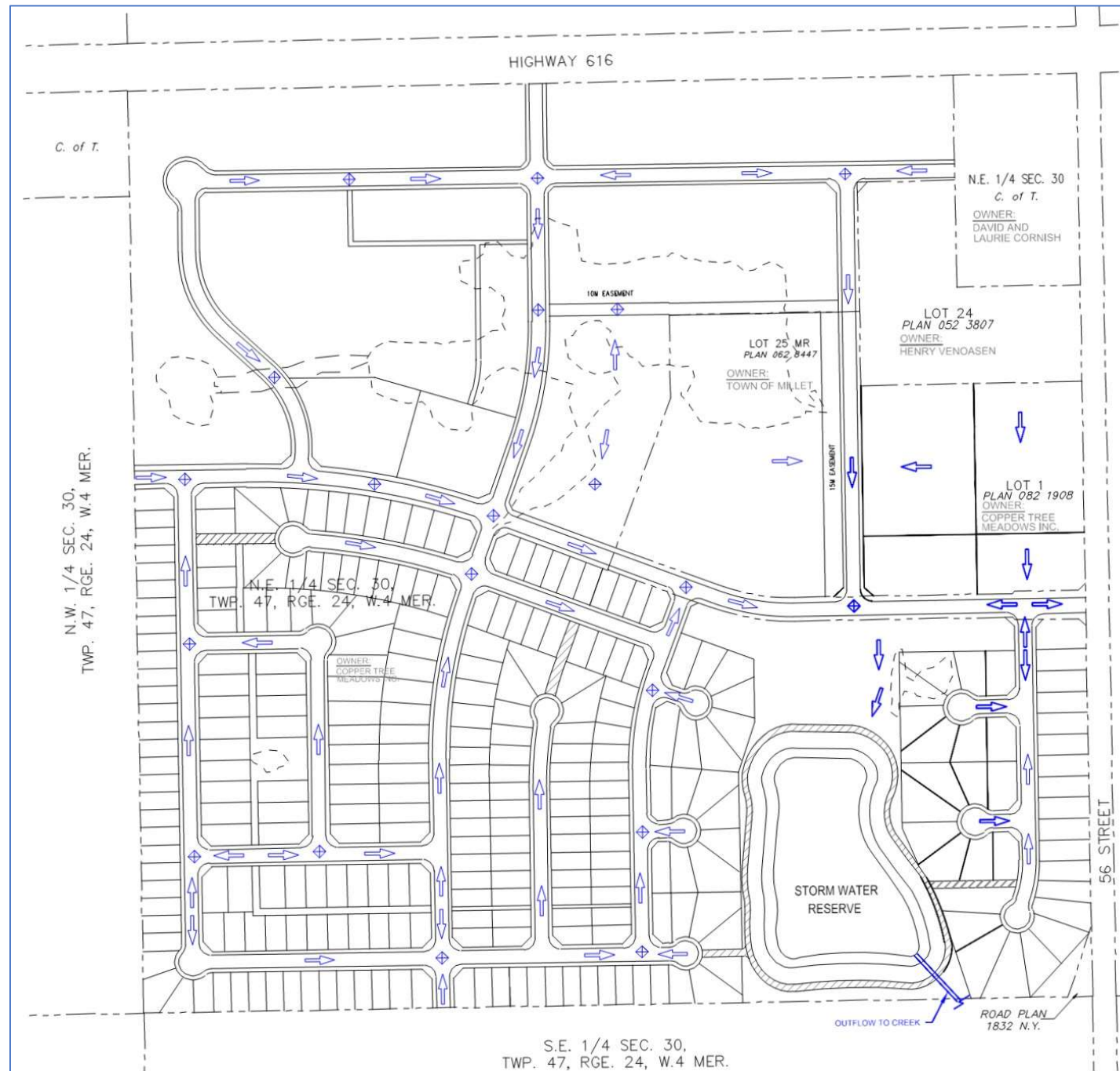
SANITARY STORM SEWER CONCEPT PLAN



----- Existing Storm Sewer System

_____ Proposed Storm Sewer System

STORM SEWER DESIGN CONCEPT



-  SURFACE DRAINAGE DIRECTION
-  COLLECTION POINT
-  WETLAND DELINEATION

STORM WATER FLOW ROUTES