



LOUIS PERRY & ASSOCIATES, INC.
A CDM SMITH COMPANY

AKRON RD. CORRIDOR DEVELOPMENT STUDY
REPORT

PREPARED FOR
CITY OF WADSWORTH
MEDINA COUNTY, OHIO

August 2, 2018



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1. INTRODUCTION

The City of Wadsworth has targeted land on the north and south side of Akron Rd. between Medina Line Rd. and I-76 for a development study based on the recent annexation of approximately 6 acres of land south of Akron Rd., and the possible annexation of an additional 16+ acres on the north side of Akron Rd. The total study area encompasses approximately 34.4 acres excluding right-of-way (38.27 acres per Deed), of which 21.9 acres (excluding right-of-way) lies north of Akron Rd (refer to Exhibit 1 – Existing Parcels).

The intent of this study is twofold; first to identify possible land uses and densities for the study area, and second to calculate peak sewage flows and future lift station location based on the land use/densities recommended.

To complete this study, several existing documents were referenced, including the following:

- City of Wadsworth Comprehensive Plan Update
- City of Wadsworth Comprehensive Sanitary Sewer Plan
- City of Wadsworth Water System Master Plan
- City of Wadsworth Planning Principles and Standards
- Traffic Impact Study – Proposed Speedway
- Site Plan – Proposed Speedway

In addition, a custom soil report was generated from the USDA NRCS Web Soil Survey Internet site.

Prior to the selection of possible land use and densities, we conducted a site visit which included walking the study area to the extent possible and driving through and around the established neighborhoods and developments surrounding the site. Of particular interest during the site visit was traffic & traffic noise from I-76, topography, wetlands, existing businesses, and existing housing types.

The land development options and proposed densities presented herein reflect our opinion of the best use of the land in the study area, taking into account soil and site limitations, access to existing roadways and the flavor of the existing development surrounding the study area.

2. I-76/AKRON RD. INTERCHANGE EXISTING DEVELOPMENT

The areas surrounding the study area consist of the following neighborhoods:

- Retail/commercial (zoned C-3 Intensive commercial) to the west and south of I-76. The following businesses are located within this neighborhood:

North side of Akron Rd.

Key Bank: Regional Bank
American Auto & Tire: Car service
GetGo and WetGo: Gas station and car wash
Giant Eagle: Supermarket chain
Restored Church of God (tucked back on Ambassador Dr.)

South Side of Akron Rd.

Target: Discount store retailer.
Office Max: Office Supply retailer.
Kohl's: Department store retail chain
Lowe's: Home improvement chain.
Huntington Bank: Bank
Fresenius Kidney: Kidney disease and dialysis treatment center.
Bellezza: Spa and Salon
Beef O'Bradys: Pub chain restaurant with Irish-inflected grub
Wayback Burgers: Made-to-order burger and milkshake fast-food chain.
GNC: Health and Nutrition related product retailer.
AAA: Membership, travel agency, car seat checks, luggage store
Luxury Nails: Nail salon
Great Clips: Hair salon franchise
Arabic Café: Coffee shop
Plant Fitness: Fitness center franchise
Antonio's Pizza: Casual pizzeria chain
Petco: Chain with pet food & supplies
Mattress Firm: Chain retailer with a wide array of mattresses.

- Residential (zoned R-1 Wadsworth Township) to the west (north of I-76), and to the north, minimum lot size = 2 acres (single family), = 3 acres (two-family).
- Residential (zoned R-1 Norton Township) to the east and north of Akron (Wadsworth) Rd., minimum lot size = 25,000 sq. ft. (single family).
- Rural Residential (zoned RU-1 Norton Township) to the east and south of Akron (Wadsworth) Rd., minimum lot size = approximately 1 acre.
- Central Business (zoned B-1 Norton Township) at the northeast corner of the intersection of Akron Rd. & Medina Line Rd. with an existing business (The Farm Stand).

3. AKRON RD. CORRIDOR LAND FEATURES/LIMITATIONS

A. North side of Akron road (21.9 acres)

The site visit revealed the following features:

The immediate land behind the existing Speedway property (approximately 250 ft. to the east of the I-76 westbound on ramp) is heavily wooded with varying elevations. A low area sits directly behind Speedway, exhibiting some indications of a wetland (poorly drained, hydrophytic vegetation).



AKRON RD. CORRIDOR – NORTH
(LOOKING NORTH JUST TO THE
NORTH OF SPEEDWAY)

The property to the north of the wooded area has a more consistent elevation, is gently rolling sloping towards the northeast. It is mostly an open area, presumably old farm land. There is an existing (gas) well on the eastern side of the property.



AKRON RD. CORRIDOR – NORTH
(TO THE WEST OF PROPOSED
7.5 ACRE OPEN SPACE)

The closest point of this land to I-76 is approximately 750' with farm land (Wadsworth Township) in between. Freeway noise is minimal, especially as one traverses to the north.



AKRON RD. CORRIDOR – NORTH
(FARMLAND TO THE WEST)

The eastern 1/3rd of the property is bisected by a stream flowing northwest to southeast, and then easterly before flowing under Medina Line Rd. approximately 350 ft. north of Akron Rd. There is a steep bank on the west side of the stream, and a large wetland in the flood plain area adjacent to the stream.



AKRON RD. CORRIDOR – NORTH
(LOOKING WEST FROM MEDINA
LINE RD. TOWARDS PROPOSED
7.5 ACRE OPEN SPACE)

The property fronting along Akron Rd. to the east of the proposed Speedway expansion falls to the north, with a large drainage swale flowing to the east approximately 150 ft. from Akron Rd., providing limited land for development.



AKRON RD. CORRIDOR – NORTH
(LOOKING WEST FROM NW
QUADRANT OF AKRON RD.-
MEDINA LINE RD. INTERSECTION)

At the time of our site visit (10:00 am – 11:30 am), traffic along Akron Rd. east of I-76 was light to moderate, and along Medina Line Rd. very low.

There are several limitations to the development of this land, as follows (refer to map at the end of this section):

- The stream corridor features consisting of the steep bank and large wetland, along with the associated riparian buffer result in approximately 7.5 acres of land that would be very difficult to develop (wetland mitigation, extensive fill, stream relocation).
- The area consists mainly of permeable soils (sand, gravelly loam), which are classified as Group A soils (refer to Technical Reference document for Soils Report). Group A soils are defined as follows:
 - Soils having a high infiltration rate (low runoff potential) when thoroughly wet, having a high rate of water transmission.This type of soil exhibits very little runoff during rainfall events, which leads to larger retention basins due to design requirements limiting post-developed runoff to pre-developed levels, or the “critical storm event”.
- The proposed Speedway expansion which will result in two entrance/exit drives off Akron Rd., in addition to the proposed expansion extending into the north property study area approximately ½ the total distance of the property north to south. These features, along with the stream and associated wetland and riparian buffer, result in only one viable option for an access road into the property (off Akron Rd. directly east of the Speedway east property line – refer to Exhibits 2-4, Development Options A-C).
- Ability of Akron Road and I-76 on/off ramps to handle additional traffic without major improvements (refer to Section 6. Development Traffic Impacts).

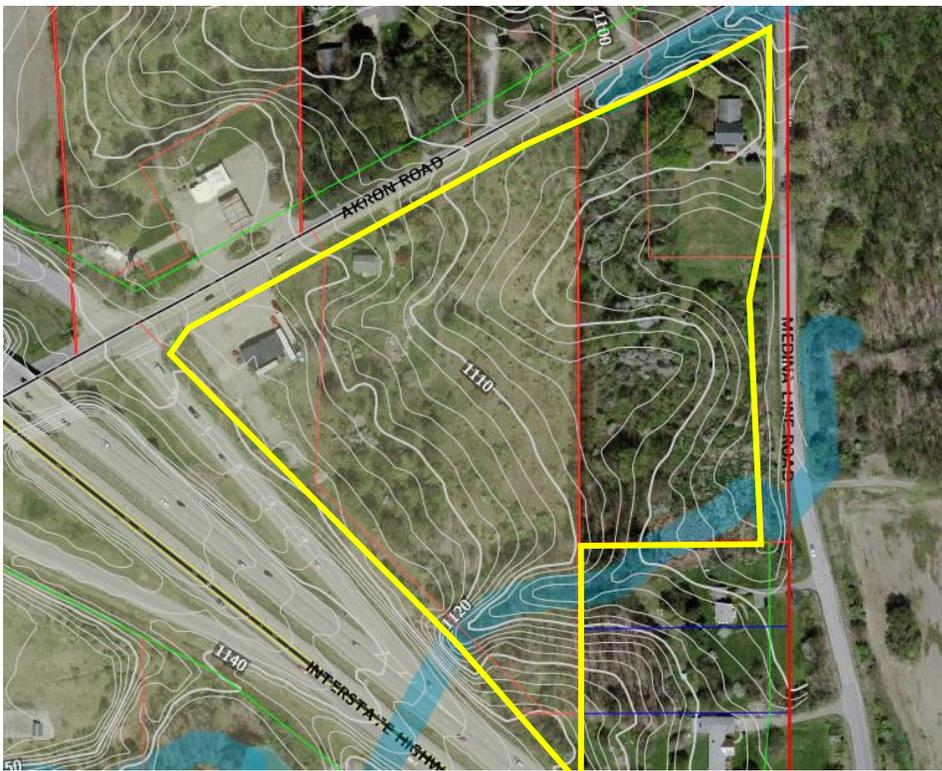
B. South side of Akron road (12.5 acres)

Access to this land was extremely limited due to existing residences and thick low growth vegetation.



AKRON RD. CORRIDOR – SOUTH
(LOOKING SOUTHEAST TO THE
EAST OF INTERSTATE 76)

Using “Google Earth Pro” revealed that the land is wooded, generally sloping (5% grade) west to east. The northeast quadrant is encumbered by a large drainage swale flowing to the east, approximately 250 ft. south of Akron Rd. with elevations up to 10 ft. below Akron Rd. There is also a stream which flows through the very southern tip and southeast corner of this land, posing little restrictions to development.



AKRON RD.
CORRIDOR – SOUTH
(GOOGLE EARTH)

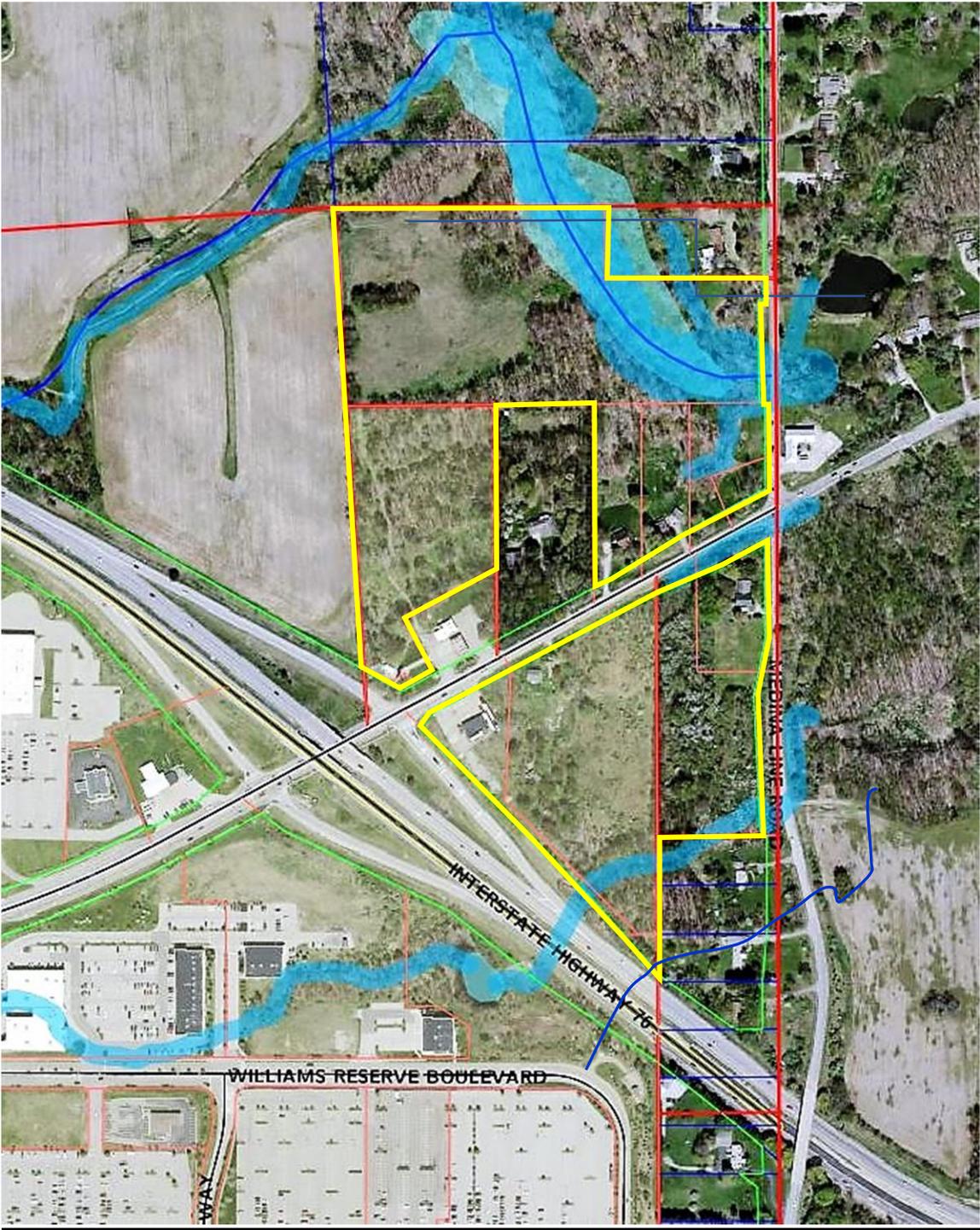
Soil type is generally the same as north of Akron Rd. with the same associated problems (refer to Technical Reference document for Soils Report).

Access road locations on Akron Rd. would be limited to directly across from the proposed access point for the land north of Akron Rd., and approximately 500 ft. minimum to the south of Akron Rd. along Medina Line Rd., due to the previously mentioned drainage swale (refer to Exhibits 2 – 4, Development Options A-C).

C. Akron Road Right-of-Way/Existing Highway Easements

Presently the Akron Road corridor east of I-76 to Medina Line Road is not a dedicated public right-of-way, instead existing as “highway easements” with restricted usages (utilities). It will be imperative for the City of Wadsworth to create a minimum of a 100 ft. dedicated right-of-way along Akron Rd. (by converting the highway easements) to allow for future pavement widening and public utilities to be extended, prior to the proposed development options presented herein.

AKRON RD. CORRIDOR STUDY AREA – EXISTING FEATURES



LEGEND: = WETLANDS = RIPARIAN BUFFER = STREAM

4. DEVELOPMENT OPTIONS – NORTH SIDE OF AKRON RD

The City of Wadsworth Comprehensive Plan Update (2011) includes the following statements regarding the I-76/Akron Rd. Interchange future development:

- *The focus for new development in this area will be on mixed-use office and higher intensity residential uses that can support and complement the “major” commercial developments. Future development should continue to be “destination-commercial” with activity driven design that can safely accommodate automobiles, bicyclists, and pedestrians.*
- *Any future development of commercial uses should have a “town center” style development that combines retail, office, residential, civic, and open spaces into a cohesive development where the focus is on the human-scale. Emphasis should be placed on the pedestrian experience with parking accommodated in screened surface lots or structured parking so that open parking areas do not dominate the street frontage.*
- *Flexibility should be provided to incorporate higher density residential uses or mixed-use developments as part of redevelopment projects south of the interstate to ensure the long-term viability of commercial uses in the area.*
- *All development should include a system of sidewalks and multi-use paths to create enhanced connectivity between uses in this area and other areas of the city.*
- *Landscaping materials should be used to soften the appearance of larger parking areas and reduce the automobile dominance of retail/commercial site design but without negatively impacting sight-distance on public or private streets.*
- *Access management principles and shared parking should be required in order to minimize the number of points of direct access to Akron Road.*

While all of these future development goals have been considered, the amount of available land and restrictions on the land make some of these goals unattainable, most specifically a “town center” development approach (in our opinion) as there is just not enough acreage to support this unless additional land to the west (app. 14 acres) in Wadsworth Township is included (refer to page 47 of the City of Wadsworth Comprehensive Plan Update (2011) at the end of this section (page 12)).

In all development options for the land north of Akron Rd., approximately 7.5 acres along the stream corridor will be set aside as “open space”. This land will include a storm water management basin (SWMB), ½ mile walking trail and future sanitary lift station. Access to the developable land to the west of the open space will be off Akron Rd., 400 ft. to the west of Medina Line Rd, and 760 ft. to the east of the easterly I-76 on/off ramps (minimum of 600 ft. per ODOT Figure 801-1), just east of the easterly Speedway property line. The access road will travel north, then northwest and west, terminating in a cul-de-sac (total length = approximately 1,000 ft.). An easement should be provided from the cul-de-sac, extending westerly to the Wadsworth Township corporation line. This will open up the possibility of future development and land annexation but will also result in additional traffic and congestion on Akron Rd (to be discussed in further detail – Section 6).

The first option A (Exhibit 2) for the development of the property north of Akron Rd. would involve the creation of a new zoning district (LID-Cluster). The portion of the access road and utilities from Akron Rd. to the cul-de-sac loop could be either public or private (depending on which option best meets the city’s goals), and all additional drives and utilities would be private. Low impact development (LID) would be required, which would include permeable pavements,

downspout rain barrels, rain gardens, bioretention areas, and water saving plumbing fixtures. A density of 4 units per acre is anticipated (could be adjusted based upon the final development plan) and would apply to all the land north of Akron Rd., including the open space. This would result in 86 units, which the developer would have the freedom to choose between single family and multi-family residences. In addition, grouping of like units and staggered frontages would be required, with an emphasis on shared driveways. Minimum square footage should be kept on the low end, perhaps around 600 s.f. for duplex and multi-family, to 800 s.f. for single family units (this is slightly lower than the existing zoning code permits) in the attempt to provide affordable housing. and keeping with the “downsizing” trend among millennials and recent college grads. This is an ideal location for this use, being very close to highway access (with minimal noise) and the retail neighborhood to the west of I-76 which could be connected to the development area by extending the existing sidewalks which terminate at the westerly on/off ramps for I-76.

Additional features for this option would include a walking trail/bike path around the perimeter of the property, which would connect to the walking trail in the open space, and a community/common area. The common area could provide a playground, picnic tables/pavilion, basketball court, horseshoe pits, fire pits etc. to enhance the livability of the development.

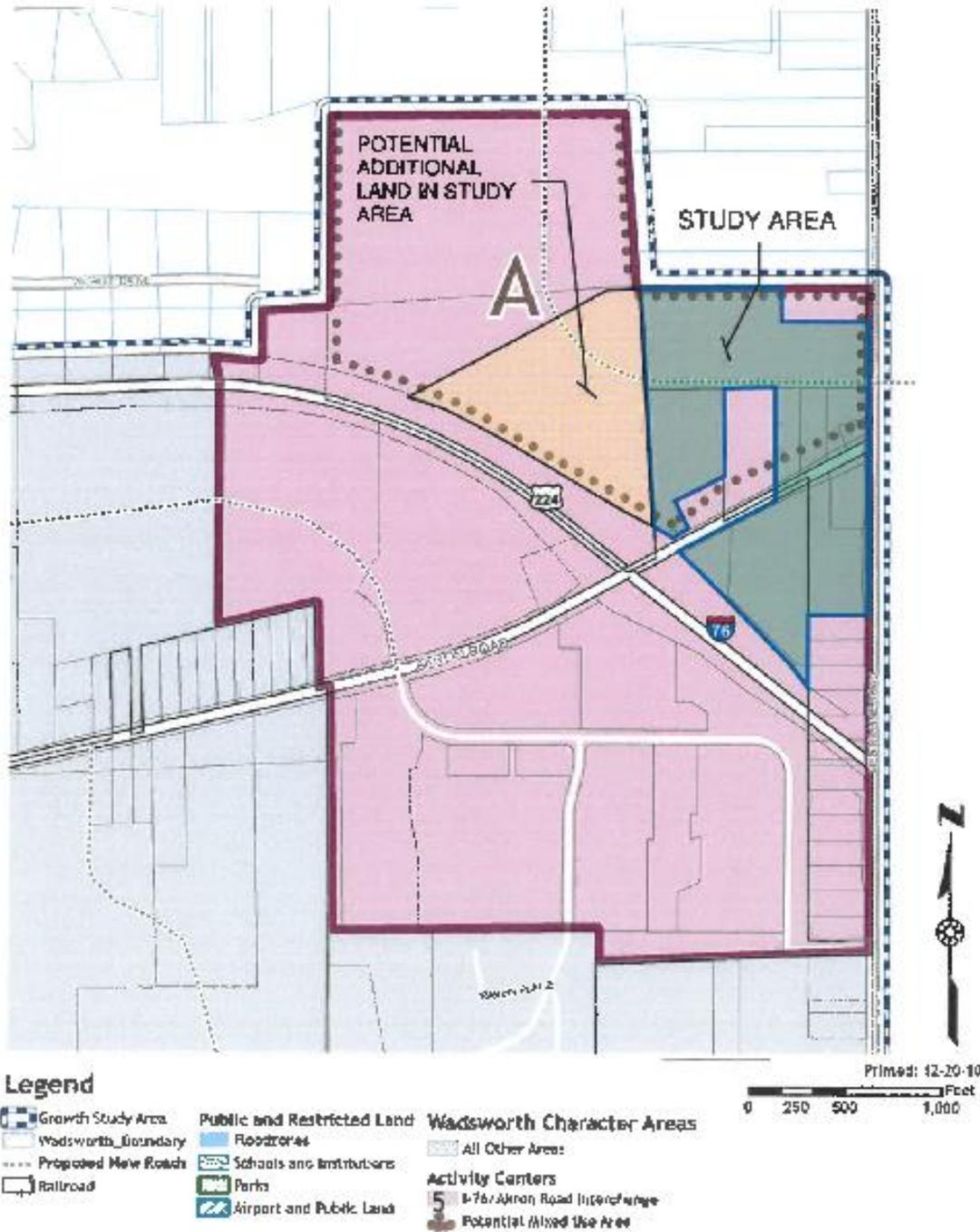
Option B (Exhibit 3) would be commercial in nature, consisting of a multi-story hotel to the south and accompanying use (existing C-4 zoning) to the north of the access road. The walking trail within the open space could be utilized by hotel guests. The access road and utilities may be either public or private for this option.

Option C (Exhibit 4) would be a residential use (similar to Option A), with densities and minimum unit sizes similar to existing City of Wadsworth R-3 and R-4 zoning. Multi-family homes are anticipated (app. 78 units), with duplex and 3 family styles, again appealing to first time home buyers, young professionals as well as empty nesters. The access road and utilities may be either public or private for this option.

Exhibit 5 indicates the most intense usages from Options A – C.

In all development scenarios, an additional storm water management basin (SWMB) may be required in the low area directly behind the existing Speedway gas station (to the north) based on the amount of impermeable land coverage proposed.

Map 9 – I-76/Akron Road Interchange Character Area Map



5. DEVELOPMENT OPTIONS – SOUTH SIDE OF AKRON RD

We have limited the future development options for the land on the south side of Akron Rd. to existing C-4 and C-5 zoning for all development scenarios, considering the proposed Speedway expansion and future access points on Akron Rd., amount of available land, proposed development options to the north and existing development to the west of I-76. Access into this area will be off Akron Rd. directly across from the proposed access road for the land north of Akron Rd., heading south and then west as a through street to Medina Line Rd (refer to Exhibits 2-5 for potential development layouts). The proposed roadway and required utilities once again may be private or public, depending on which best meets the city's goals.

For all development options, the land fronting along Akron Rd. directly opposite the Speedway property (approximately 700 ft. frontage) has been assigned existing City of Wadsworth C-4 zoning (Highway Interchange Commercial District). Maximum use of this area would be food service (restaurant along Freeway). This approximately 4 acre parcel would allow for 2 restaurants with a centralized parking lot between them. No access would be permitted off Akron Rd., instead utilizing the proposed access road leading to an entrance drive at the rear of the parcel to help alleviate congestion on Akron Rd.

The remaining 5+ acres to the south has been assigned existing C-5 zoning (option A – Exhibit 2), and more specifically “Office” designation (option B & C, Exhibits 3-4), due to lack of this zoning use in the immediate area. Another consideration was the close proximity to the highway, advantageous for employee access but which in our opinion would not be a good use for any residential zoning, even considering potential screening.

The northeast corner of the property (east of the access road) will most likely be needed for a SWMB (option B). However, based on the actual amount of impermeable land coverage proposed in a final development plan, an additional parcel with a designated existing C-1 zoning (General Commercial) may be realized (option A & C). Possible uses for this parcel would be a drug store or small retail to complement the proposed zoning in the study area.

6. DEVELOPMENT TRAFFIC IMPACTS

When discussing future development options, it would be ill-advised not to consider the traffic impacts to Akron Road and the I-76 interchange that future development would impose. A traffic study conducted by “CESO” (June 22, 2017) for the proposed Speedway expansion on the north side of Akron Rd. can be summarized as follows (from CESO report):

- *2017 No-Build Traffic Scenario – all studied intersections will operate at an overall level of service (LOS) “C” or greater.*
- *2017 Build Traffic Scenario – all studied intersections will continue to operate at an overall LOS “C” or greater. In addition, all Speedway driveway movements will operate at a LOS “C” or greater (with recommended (CESO) improvements).*
- *2037 No-Build Traffic Scenario – all studied intersections will operate at an overall LOS “C” or greater, with the exception of the Akron Rd. & I-76 WB on/off ramp intersection (WBTR movement will operate at a LOS “F”).*
- *2037 Build Traffic Scenario – all studied intersections will continue to operate at 2037 No-Build levels, with the exception of the Akron Rd. & I-76 WB on/off ramp intersection (WBTR movement will operate at a LOS “F”). In addition, all Speedway driveway movements will operate at a LOS “C” or greater (with the exception of the Speedway east Driveway SBLR movement PM Peak Hour – LOS “F” condition).*

(S = south, W = west, B = bound, L = left, T = through, R = right)

LOS “C” (signalized intersections) = The number of vehicles stopping is significant, although many pass through without stopping.

LOS “F” (signalized intersections) = Unacceptable delay.

What can be deduced from the CESO traffic study for the Speedway expansion is that additional traffic generated on I-76 and Akron Rd. due to future development within the study area will in all probability lower the LOS of the I-76 interchange on/off ramps, the Speedway access drives, as well as the Akron Rd./Medina Line Rd. intersection to levels that will require substantial improvements (additional traffic studies will need to be conducted based on Study Area access road locations and proposed densities). Possible improvements include the widening of Akron Rd. (multi-lane w/ turn lanes) from Medina Line Rd. to I-76, adding turn lanes to the Akron Rd./Medina Line Rd. intersection, creating a center median along Akron Road from Medina Line Rd. to the I-76 WB ramps (which would prevent cross traffic turning movements except at signalized intersections), signalizing the new access road intersection with Akron Rd., and widening/adding lanes to the I-76 EB & WB on/off ramps which will require ODOT coordination and approval.

Another consideration is the inclusion of land to the west of the study area (north side of Akron Rd.) in Wadsworth Township accessed via the easement extended from the proposed north access road cul-de-sac (as displayed in Exhibits 2-5). This would allow for the annexation of an additional 14+/- acres of developable land (refer to Page 12), which would not be recommended until full build out of the Study Area and required roadway improvements are implemented (considering the additional traffic to be generated by the inclusion of the land in Wadsworth Township).

7. PEAK SEWAGE FLOWS

Peak sanitary sewage flows are dependent on the future development type (office, commercial, residential) and densities. The peak flows for the options presented herein are as follows (note bold text = contributing flow to peak flow):

A. LAND ON NORTH SIDE OF AKRON RD (OPTION A)

DESIGNATION	AREA (acres)	# OF UNITS	ASSIGNED FLOW	ADF (gpd)	PEAK FACTOR	PEAK FLOW (mgd)
TOTAL LAND	21.8995		-			
RIGHT-OF-WAY (60')	1.2745		-			
OPEN SPACE	8.2800		-			
LID-Cluster	12.3450	86	300 gpd/unit**	25,800	3.7	0.095
PEAK FLOW	12.3450	86				0.095

** 300 gpd based on water saving plumbing fixtures and smaller households.

B. LAND ON NORTH SIDE OF AKRON RD (OPTION B)

DESIGNATION	AREA (acres)	# OF UNITS	ASSIGNED FLOW (per MCSE)	ADF (gpd)	PEAK FACTOR	PEAK FLOW (mgd)
TOTAL LAND	21.8995		-			
RIGHT-OF-WAY (80')	1.6990		-			
OPEN SPACE	7.9987		-			
C-4	3.6800		1500 gpd/acre	5,520	3.7	0.020
C-4	8.5216		1500 gpd/acre	12,782	3.7	0.047
C-4 (Hotel)	8.5216	120	100 gpd/room	12,000	3.7	0.044
PEAK FLOW	12.2016					0.067

C. LAND ON NORTH SIDE OF AKRON RD (OPTION C)

DESIGNATION	AREA (acres)	# OF UNITS	ASSIGNED FLOW (per MCSE)	ADF (gpd)	PEAK FACTOR	PEAK FLOW (mgd)
TOTAL LAND	21.8995		-			
RIGHT-OF-WAY (60')	1.2745		-			
OPEN SPACE	8.2800		-			
R-3 (Duplex)	8.7010	48 (24)	400 gpd/unit	19,200	3.7	0.071
R-4 (3 family)	3.6440	30 (10)	400 gpd/unit	12,000	3.7	0.044
PEAK FLOW	12.3450	78				0.115

D. LAND ON SOUTH SIDE OF AKRON RD (OPTION A & B)

DESIGNATION	AREA (acres)	# OF UNITS	ASSIGNED FLOW	ADF (gpd)	PEAK FACTOR	PEAK FLOW (mgd)
TOTAL LAND	12.4875		-			
RIGHT-OF-WAY (80')	1.1218		-			
OPEN SPACE	2.2328					
C-4 (Restaurant)	3.7866	2 x 120	100 gpd/seat	24,000	3.7	0.089
C-5	5.3463		1500 gpd/acre	8,020	3.7	0.030
C-5 (Office)	5.3463	2 x 120	20 gpd/employee	4,800	3.7	0.018
PEAK FLOW	9.1329					0.119

E. LAND ON SOUTH SIDE OF AKRON RD (OPTIONS C)

DESIGNATION	AREA (acres)	# OF UNITS	ASSIGNED FLOW	ADF (gpd)	PEAK FACTOR	PEAK FLOW (mgd)
TOTAL LAND	12.4875		-			
RIGHT-OF-WAY (80')	1.1218		-			
C-1	2.2328		1500 gpd/acre	3,349	3.7	0.012
C-4 (Restaurant)	3.7866	2 x 120	100 gpd/seat	24,000	3.7	0.089
C-5	5.3463		1500 gpd/acre	8,020	3.7	0.030
C-5 (Office)	5.3463	2 x 120	20 gpd/employee	4,800	3.7	0.018
PEAK FLOW	11.3657					0.131

Maximum peak flow for Options A, B & C:

- North side of Akron Rd. – Option C (R-3 & R-4 Zoning) = **0.115 mgd**
- South side of Akron Rd. – Option C (C-1, C-4 Restaurant & C-5) = **0.131 mgd**

Total = 0.246 mgd

F. ULTIMATE SERVICE AREA – WADSWORTH TOWNSHIP/NORTON TOWNSHIP (EXHIBIT 6)

DESIGNATION	AREA (acres)	# OF UNITS	ASSIGNED FLOW	ADF (gpd)	PEAK FACTOR	PEAK FLOW (mgd)
TOTAL LAND	1318		-			
RIGHT-OF-WAY (10%)	128		-			
R-1 (Wadsworth Twp.)	968	564	400 gpd/unit	225,600	3.65	0.823
R-1 (Norton Twp.)	187	326	400 gpd/unit	130,400	3.7	0.483
STUDY AREA	35	-	-	-	-	0.246
PEAK FLOW	1190	890				1.552

8. PROPOSED UTILITIES

The land development options presented herein will require the extension of existing utilities and the construction of new utilities to service the proposed land uses. In addition, interim measures for sanitary sewer service will be necessary to service the recently annexed parcels prior to the proposed future development options presented herein. In all future development options, there are some similarities regarding the proposed utilities, as follows:

- A sanitary sewer lift station will be required to service the development of the study area, due to the nearest gravity sewer line being located west of I-76, approximately 60 ft. southwest of the on ramp for the eastbound lanes of I-76 (400 ft. south of Akron Rd), with a ground elevation at the existing sewer approximately 45 ft. higher than the ground elevation at the location of the proposed study area North and South access road intersections with Akron Rd. The recommended location for the lift station will be located at the low point of the study area, on the west side of Medina Line Rd. approximately 310 ft. north of Akron Rd. (on the south side of the existing stream). Sewage will be conveyed via a force main from the lift station southerly along the west side of Medina Line Rd., and then westerly along the north side of Akron Rd. to the I-76 WB on/off ramps, and thence southwesterly under I-76 to an existing sanitary sewer manhole.

The force main will cross Ohio Department of Transportation (ODOT) Right-of-way, which will require an easement from ODOT.

Preliminary sizing of the force main is 4" diameter (HDPE), based on the following parameters:

- Length of force main = 1,925 l.f.
 - $\Delta H \approx 45$ ft. (static head)
 - Peak sewage flow = 0.25 mgd (175 gpm) – immediate study area
 - Note that when considering the total ultimate service area (peak sewage flow = 1.552 mgd (1,080 gpm)) lift station upgrades and a larger diameter force main will be required.
- Upon completion of the Speedway expansion, an existing 12" water main will be located on the south side of Akron Rd., terminating at the easterly Speedway property line. In accordance with the City of Wadsworth Water System Master Plan, this water main shall be extended easterly 550 l.f. to the west side of Medina Line Rd (within the right-of-way), and thence north 680 l.f. and south 855 l.f. along Medina Line Rd. to the limits of the development study area property lines. This will allow for future looping of the water mains as shown in Exhibit 4 (Scenario #6 & #7) of the Water System Master Plan prepared by Burgess & Niple, Ltd (Exhibit 7 of this report).

Proposed utilities for the development of the land on the north and south side of Akron Rd. will consist of 8" water mains, 8" gravity sanitary sewers and storm sewers of various sizes (12" – 30"). In addition, the existing water main will be extended along Akron Rd. to Medina Line Rd. and extended north and south along Medina Line Rd. to the study area property limits (size = 12" diameter). The following table summarizes the anticipated lengths of the required utilities to allow for development of the study area:

OPTION	WATER MAIN (l.f.)	SANITARY SEWER (l.f.)	STORM SEWER (l.f.)
1A-C North	1,680	1,335	1,500
1A-B South	690	460	565
1C South	690	460	950
R.O.W.	535 (12") – Akron Rd.	1,115 (4" force main) – Akron Rd.	
R.O.W	1,535 (12") - Medina Line Rd.	300 (4" force main) – Medina Line Rd.	
R.O.W		510 (4" force main) – I-76 Crossing	

A. Interim Sanitary Sewer Service

Prior to the development of the study area and the construction of the sanitary sewer lift station, the City of Wadsworth is obligated (through annexation agreements) to provide (but not construct) interim sanitary sewer service to the existing parcels (total of 10 to be developed - refer to Exhibit 1).

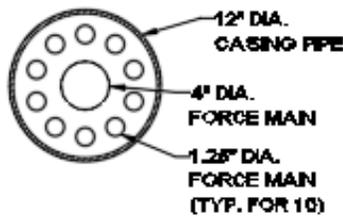
There are two viable options for interim sanitary sewer service, as follows:

1. Each parcel owner would be required to install a grinder pump station, and associated force main. The force main (1.25" diameter) would be installed in a common trench with force mains from the other parcels. To accommodate the I-76 crossing, it will be necessary to install a large diameter (12" casing pipe – see detail below) under the highway (L = 520 ft. +/-), which will carry each individual force main to the discharge sanitary sewer manhole on the west side of I-76. The casing pipe can also include a 4" diameter pipe at the center, to be utilized for the force main when the lift station is constructed, thereby eliminating an additional I-76 crossing.

This arrangement will result in up to 10 individual force mains within the future right-of-way of Akron Rd. and may be difficult to coordinate the installation so that all individual force mains are installed at the same time and in the same trench. In addition, several individual force mains entering the discharge manhole will present a challenge as to spacing and elevation.

2. In lieu of multiple individual grinder pumps and force mains, an 8" diameter gravity sewer can be installed along Akron Rd. and Medina Line Rd., flowing to the future lift station location. An interim grinder pump station with sufficient capacity to handle the sewage flow from the individual parcels (E-One WH483, 5,000 gpd capacity) can be installed, which would also require a 1.25" diameter force main. This force main can be laid in the same trench as the gravity sanitary sewer and can be directional drilled under the I-76 interstate. Upon development of the study area, the interim lift station would be replaced, and a new 4" diameter form installed (at the developer's expense).

The determination of responsibility for the construction/funding of the aforementioned improvements is beyond the scope of this report.



CASING PIPE DETAIL

9. CONCLUSION

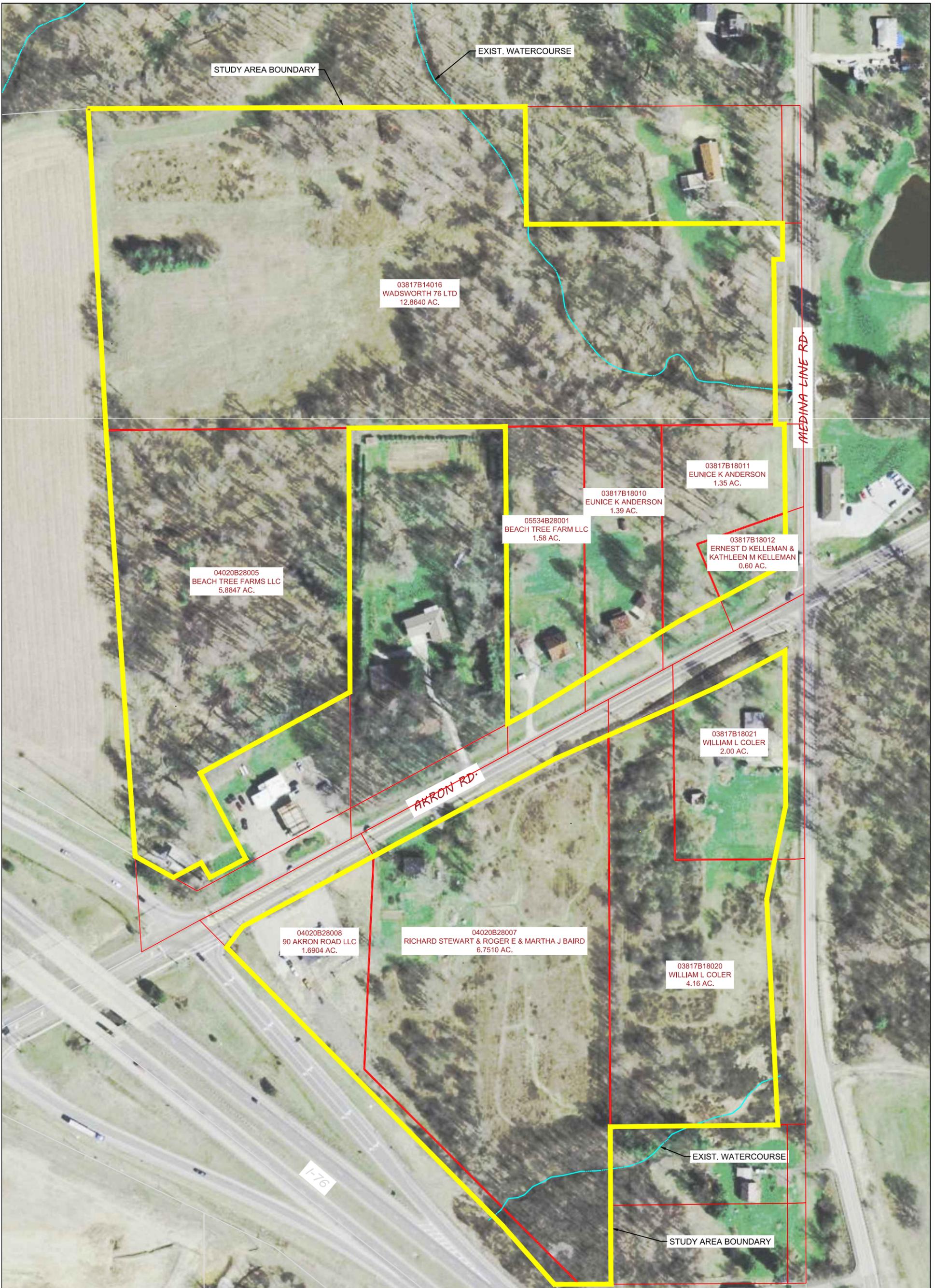
The development options and utility layouts presented herein represent our view of the most viable approach for the use of the land within the study area, however the actual development of the land will ultimately be based on many factors with the decision residing with the City of Wadsworth planning officials.

Prior to future development, additional traffic studies (as previously mentioned) will be warranted based on the Speedway expansion and other development ongoing in the area, which may warrant roadway improvements and signalized intersections for the proposed access roads and the Akron Rd./Medina Line Rd. intersection.

The potential improvement/widening of Akron Rd. to a multi-lane boulevard type street (not a part of this study) will also need to be coordinated with the design/geometric layout of the future access road intersections.

It is our intent that this report along with the associated exhibits will prove very beneficial to the City of Wadsworth when future planning decisions regarding the development of the Akron Rd. Corridor will be made.

10. EXHIBITS 1 - 7

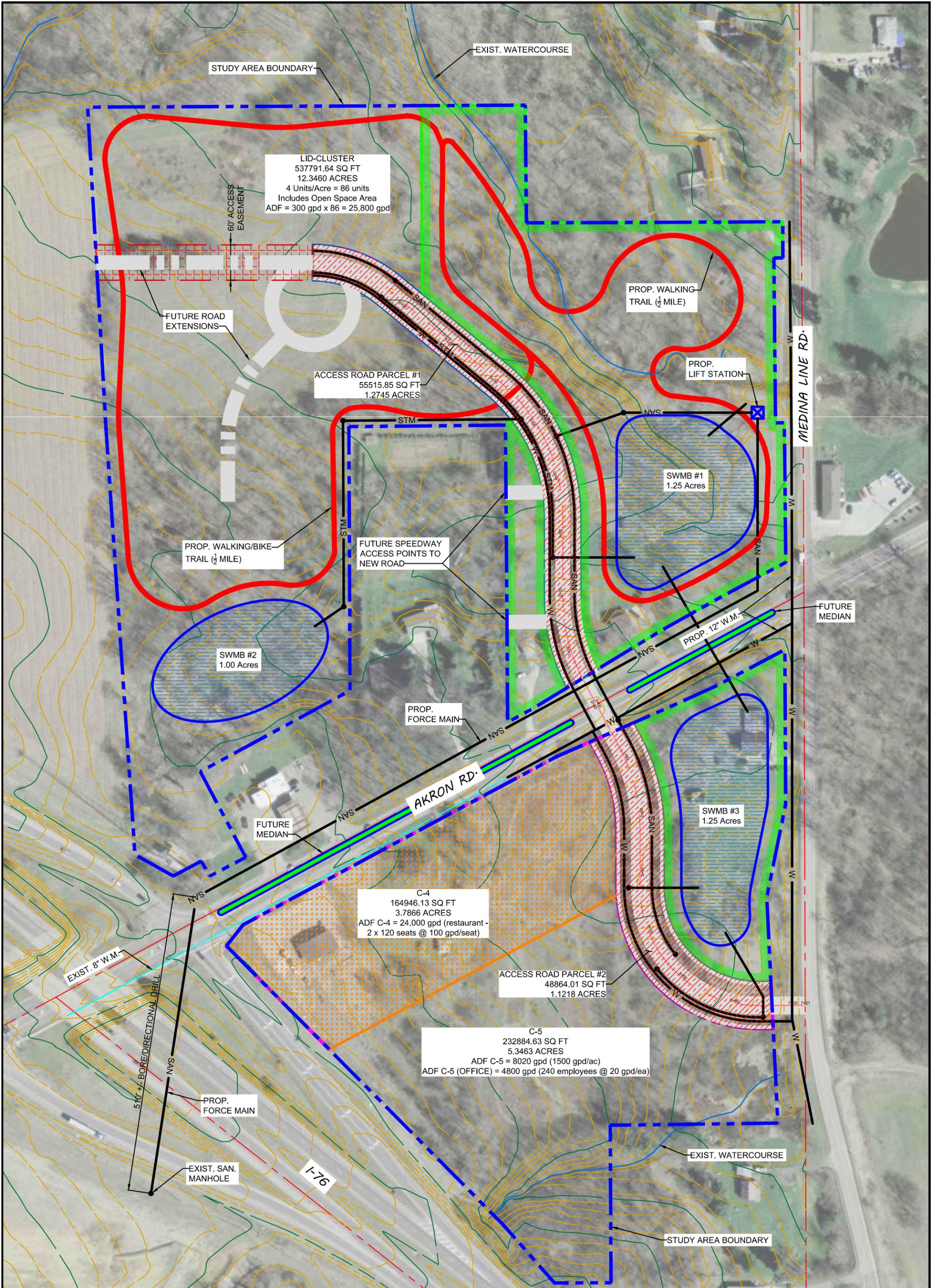


CITY OF WADSWORTH - LAND PLANNING STUDY
EXIST. PARCELS IN STUDY AREA

EXHIBIT 1

PLAN
SCALE: 1"=150'





LID-CLUSTER
 537791.64 SQ FT
 12.3460 ACRES
 4 Units/Acre = 86 units
 Includes Open Space Area
 ADF = 300 gpd x 86 = 25,800 gpd

ACCESS ROAD PARCEL #1
 55515.85 SQ FT
 1.2745 ACRES

C-4
 164946.13 SQ FT
 3.7866 ACRES
 ADF C-4 = 24,000 gpd (restaurant -
 2 x 120 seats @ 100 gpd/seat)

C-5
 232884.63 SQ FT
 5.3463 ACRES
 ADF C-5 = 8020 gpd (1500 gpd/ac)
 ADF C-5 (OFFICE) = 4800 gpd (240 employees @ 20 gpd/ea)

ACCESS ROAD PARCEL #2
 48864.01 SQ FT
 1.1218 ACRES

SWMB #2
 1.00 Acres

SWMB #1
 1.25 Acres

SWMB #3
 1.25 Acres

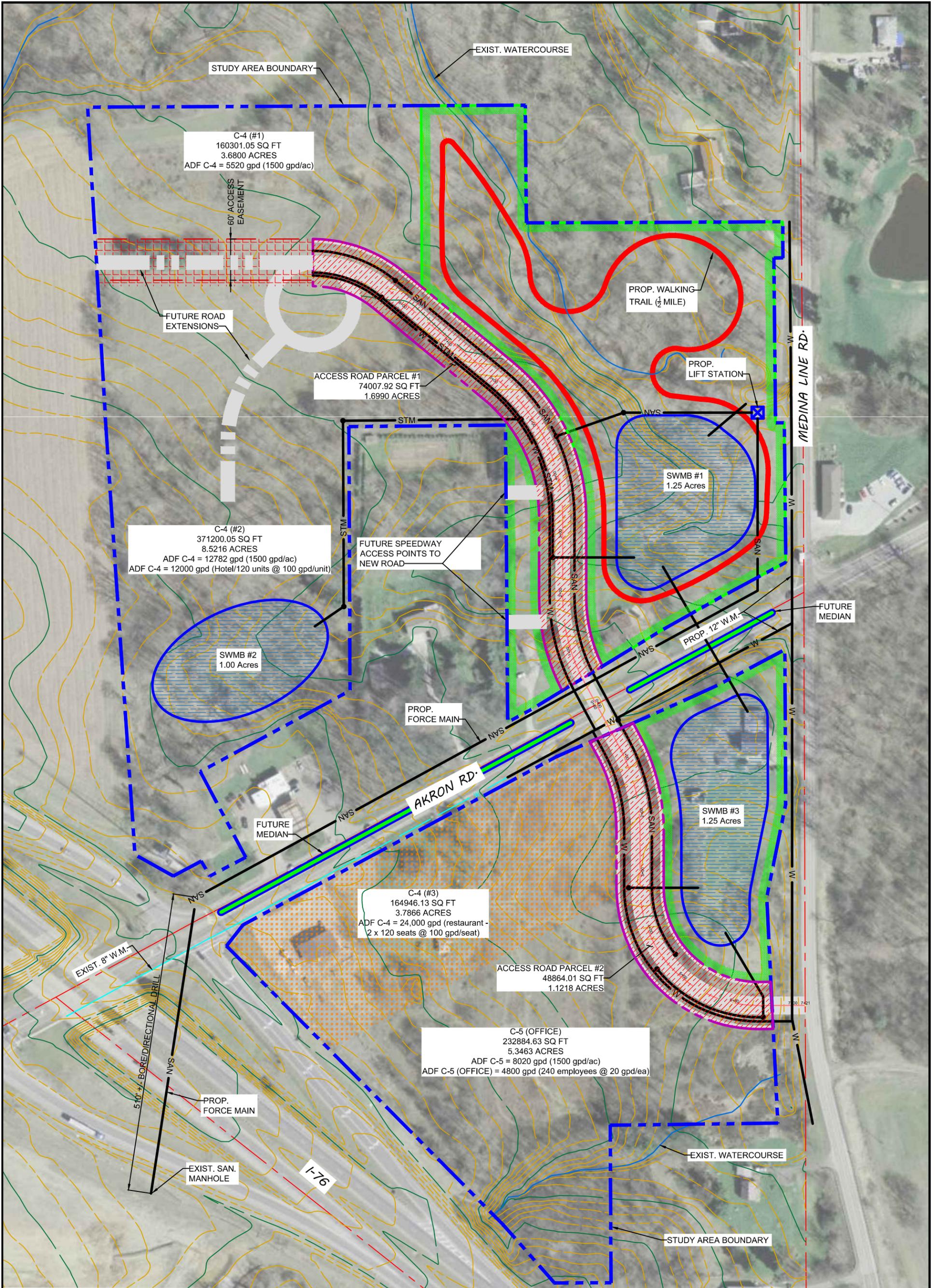
LEGEND

-  ACCESS ROAD PARCEL
-  OUTLOT PARCEL
-  OPEN SPACE PARCEL
-  ACCESS EASEMENT
-  STUDY AREA BOUNDARY

**CITY OF WADSWORTH - LAND PLANNING STUDY
 OPTION A
 EXHIBIT 2**

PLAN
 SCALE: 1"=150'



LEGEND

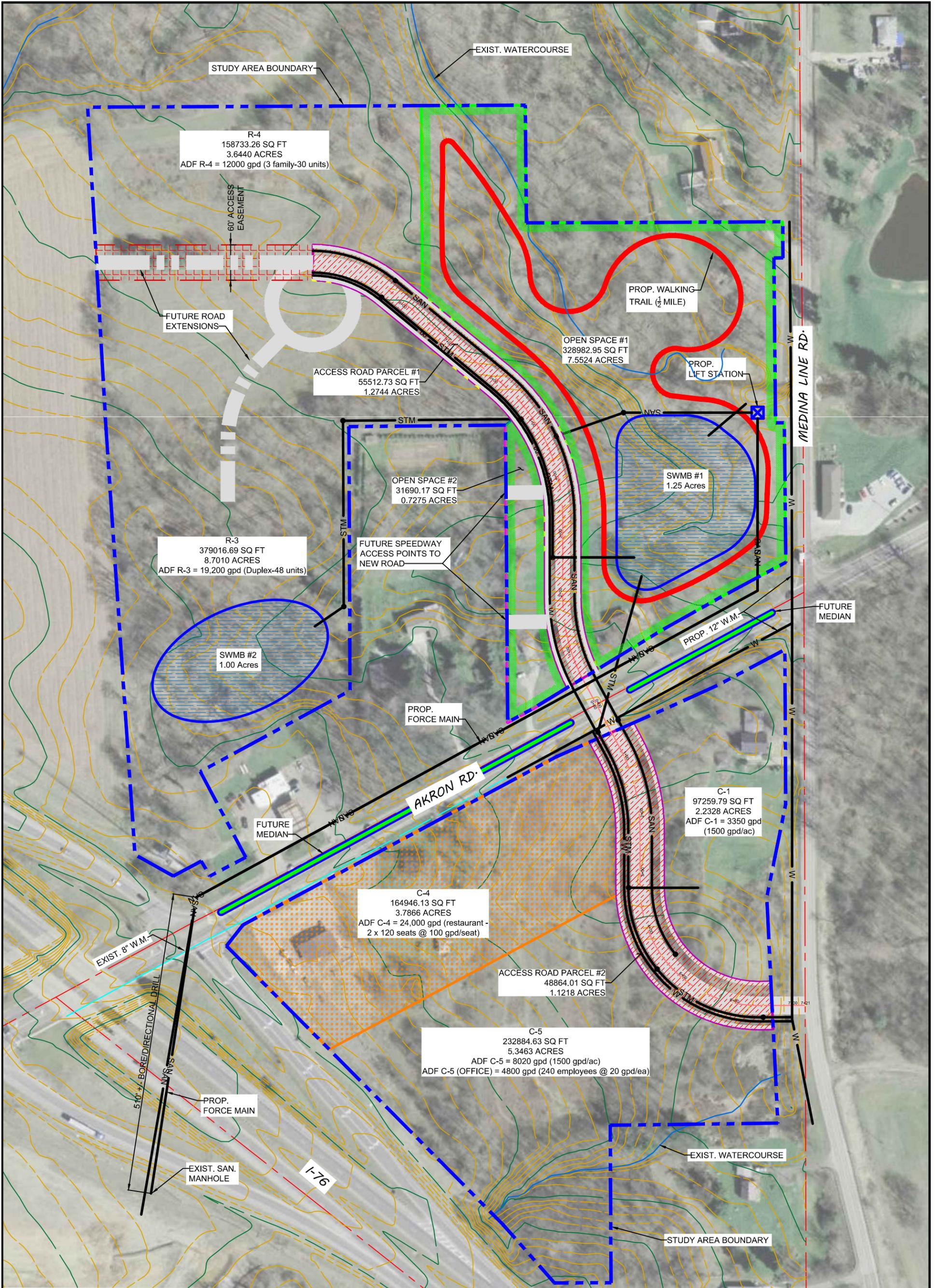
-  ACCESS ROAD PARCEL
-  OUTLOT PARCEL
-  OPEN SPACE PARCEL
-  ACCESS EASEMENT
-  STUDY AREA BOUNDARY

**CITY OF WADSWORTH - LAND PLANNING STUDY
OPTION B**

EXHIBIT 3

PLAN
SCALE: 1"=150'





LEGEND

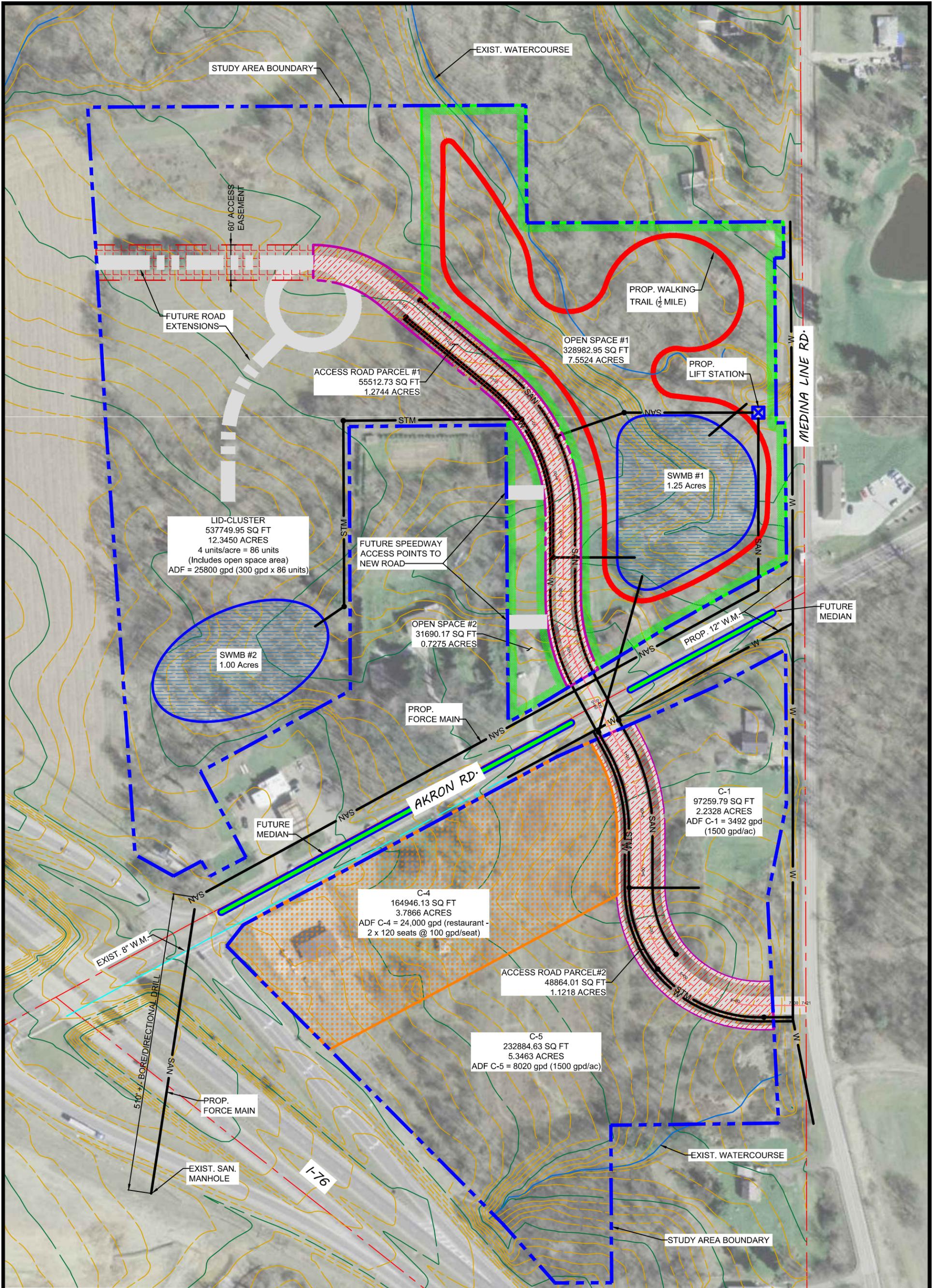
-  ACCESS ROAD PARCEL
-  OUTLOT PARCEL
-  OPEN SPACE PARCEL
-  ACCESS EASEMENT
-  STUDY AREA BOUNDARY

**CITY OF WADSWORTH - LAND PLANNING STUDY
OPTION C**

EXHIBIT 4

PLAN
SCALE: 1"=150'





LEGEND

- ACCESS ROAD PARCEL (MOST INTENSE USAGE FROM OPTIONS A-C)
- OUTLOT PARCEL
- OPEN SPACE PARCEL
- ACCESS EASEMENT
- STUDY AREA BOUNDARY

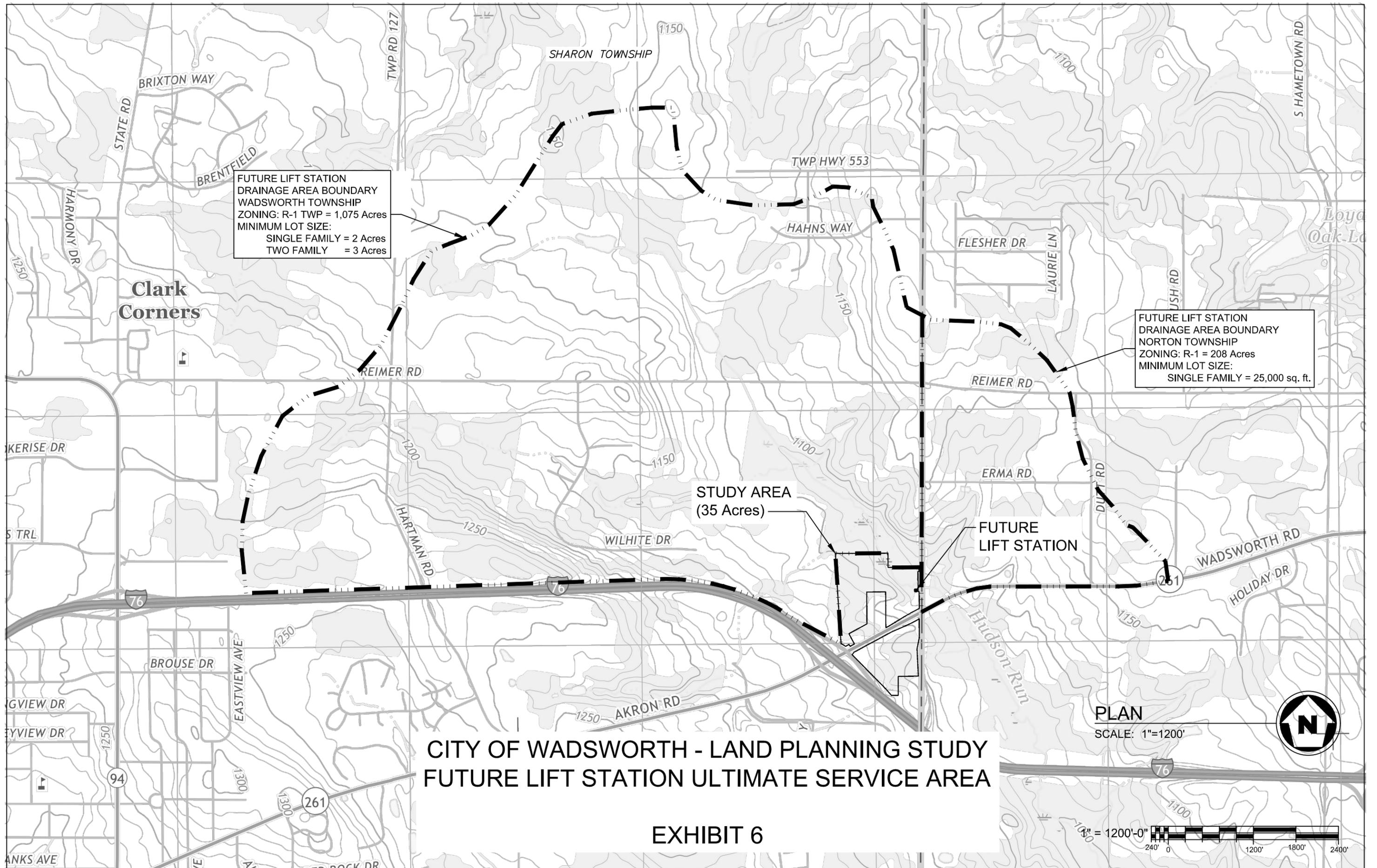
CITY OF WADSWORTH - LAND PLANNING STUDY

(MOST INTENSE USAGE FROM OPTIONS A-C)

EXHIBIT 5

PLAN
SCALE: 1"=150'





Clark
Corners

Loyal
Oak-La

