



Planning and Economic Development

Sara Roediger, AICP, Director

From: Kristen Kapelanski, AICP
 Date: 3/23/2020
 Re: **Auburn Pharmaceuticals (City File #20-003)**
Site Plan - Planning Review #2

The applicant is pursuing the development of 65,000 sq. ft. office/warehouse on approximately 9.62 acres on the north side of Rochester Industrial Drive, west of Livernois. The building use would be split almost evenly between warehouse and office. The project was reviewed for conformance with the City of Rochester Hills Zoning Ordinance. The performance standards detailing requirements for odors, noise, hazardous substances, etc. listed in *Section 138-10.310* shall apply to all industrial uses. The comments below and in other review letters are minor in nature and can be incorporated into a final site plan submittal for review by staff after review by the Planning Commission.

- Zoning and Use** (*Section 138-4.300*). The site is zoned REC-W Regional Employment Center - Workplace which permits warehouse/production operations and office/lab/research uses. Additional standards may apply depending on the specific type of production facility proposed. Refer to the table below for the zoning and existing and future land use designations for the proposed site and surrounding parcels.

	Zoning	Existing Land Use	Future Land Use
Proposed Site	REC-W Regional Employment Center-Workplace	Vacant	Workplace
North	R-2 One-Family Residential	Avon Nature Center	Park/Public Open Space
South	REC-W Regional Employment Center - Workplace	Advance Graphic Systems	Workplace
East	REC-W Regional Employment Center - Workplace	Rochester Hills Fire Station	Workplace
West	REC-W Regional Employment Center - Workplace	EEl Global	Workplace

- Site Design and Layout** (*Section 138-6.600-602*). Refer to the table below as it relates to the area, setback, and building requirements of this project in the REC-W district.

Requirement	Proposed	Staff Comments
Max. Height 42 ft.	29 ft.	In compliance
Min. Front Setback 10 ft.	108 ft.	In compliance
Min. Side Setback 25 ft.	174 ft.	In compliance
Min. Rear Setback 30 ft.	88 ft.	In compliance

- Exterior Lighting** (*Section 138-10.200-204*). A photometric plan showing the location and intensity of exterior lighting must be provided. Refer to the table below as it relates to the lighting requirements for this project.

Requirement	Proposed	Staff Comments
Shielding/Glare Lighting shall be fully shielded & directed downward at a 90° angle	Cut sheets provided	In compliance

Requirement	Proposed	Staff Comments
Fixtures shall incorporate full cutoff housings, louvers, glare shields, optics, reflectors or other measures to prevent off-site glare & minimize light pollution Only flat lenses are permitted on light fixtures; sag or protruding lenses are prohibited		
Max. Intensity (measured in footcandles fc.) 10 fc. anywhere on-site, 1 fc. at ROW, & 0.5 fc. at any other property line	Photometric data provided	In compliance
Lamps Max. wattage of 250 watts per fixture LED or low pressure sodium for low traffic areas, LED, high pressure sodium or metal halide for parking lots	Max. 166	In compliance
Max. Height 20 ft.	Max. 20 ft.	In compliance

4. **Parking, Loading and Access** (138-11.100-308). Refer to the table below as it relates to the parking and loading requirements of this project.

Requirement	Proposed	Staff Comments
Min. # Parking Spaces Warehouse: 1 space per 1,700 sq. ft. + 1 space per 350 sq. ft. of office = 33,550 sq. ft./1,700 = 20 spaces Office: 1 space per 350 sq. ft. = 31,450 sq. ft./350 = 90 110 spaces required	110 spaces	In compliance
Max. # Parking Spaces 125% of Min. = 138 spaces		
Min. Barrier Free Spaces 2 BF spaces + 3.33% - 11 ft. in width w/ 5 ft. aisle for 101-150 parking spaces = 6 spaces	6 spaces 11 ft. with 5 ft. aisle	In compliance
Min. Parking Space Dimensions 10 ft. x 18 ft. 24 ft. aisle	10 ft. x 18 ft. 24 ft. aisle	In compliance
Min. Parking Setback 10 ft.	21 ft.	In compliance
Min. Parking Setback from Bldgs. 5 ft.	5 ft.	In compliance
Loading Space 1-3 spaces required for each bldg.	Loading space provided on eastern side of building	In compliance

5. **Natural Features.** In addition to the comments below, refer to the review letters from Engineering and Parks and Natural Resources Departments that may pertain to natural features protection.
- Environmental Impact Statement (EIS)** (Section 138-2.204.G) An EIS consistent with ordinance regulations has been submitted.
 - Tree Removal** (Section 126 Natural Resources, Article III Tree Conservation). The site is subject to the city's tree conservation ordinance. Refer to the Parks and Natural Resources review dated March 13, 2020 for a full review.
 - Wetlands** (Section 126 Natural Resources, Article IV Wetland and Watercourse Protection). The site does contain regulated wetlands. Refer to the ASTI review letter dated March 19, 2020 for detailed impacts and recommendations.
 - Natural Features Setback** (Section 138-9 Chapter 1). The site does contain regulated wetlands. Refer to the ASTI review letter dated March 19, 2020 for detailed impacts and recommendations.
 - Steep Slopes** (Section 138-9 Chapter 2). The site does not contain any regulated steep slopes.
 - Equipment Screening** (Section 138-10.310.J). All heating, ventilation and air conditioning mechanical equipment located on the exterior of the building shall be screened from adjacent streets and properties.
6. **Dumpster Enclosure** (Section 138-10.311). Dumpsters are indicated on the plans. Screening to match the proposed building elevations has been provided.

7. **Landscaping** (138-12.100-308). A landscape plan, signed and sealed by a registered landscape architect, has been provided. Refer to the table below as it relates to the landscape requirements for this project.

Requirement	Proposed	Staff Comments
Buffer B (north) 10 ft. + 2 deciduous + 1.5 ornamental + 2 evergreen + 4 shrubs per 100 ft.	Waiver requested	See a. below
Right of Way (Rochester Industrial Drive: 70 ft.) 1 deciduous per 35 ft. + 1 ornamental per 60 ft. = 2 deciduous + 1 ornamental	2 deciduous 1 ornamental	In compliance
Parking Lot: Interior (90,243 sq. ft.) 5% of parking lot + 1 deciduous per 150 sq. ft. landscape area = 4,152 sq. ft. + 30 deciduous	5,030 sq. ft. 30 deciduous	In compliance
Parking Lot: Perimeter (191 ft.) 1 deciduous per 25 ft. + 1 ornamental per 35 ft. = 8 deciduous + 6 ornamental	8 deciduous 7 ornamental	Hedge required within 30 ft. or right-of-way
Stormwater Basin #1 (531 ft.) 6 ft. width + 1.5 deciduous + 1 evergreen + 4 shrubs per 100 ft. = 6 ft. width + 8 deciduous + 5 evergreen + 21 shrubs	6+ ft. width 8 deciduous 5 evergreen 21 shrubs	In compliance
Stormwater Basin #2 (409 ft.) 6 ft. width + 1.5 deciduous + 1 evergreen + 4 shrubs per 100 ft. = 6 ft. width + 6 deciduous + 4 evergreen + 16 shrubs	6+ ft. width 6 deciduous 4 evergreen 16 shrubs	In compliance

- a. Planting requirements can be waived by the Planning Commission if existing vegetation will provide an equal or greater screen.
 - b. A landscape planting schedule has been provided including the size of all proposed landscaping. A unit cost estimate and total landscaping cost summary, including irrigation, has been provided for landscape bond purposes.
 - c. If required trees cannot fit or planted due to infrastructure conflicts, a payment in lieu of may be made to the City's tree fund at a rate of \$304 per tree. Existing healthy vegetation on the site may be used to satisfy the landscape requirements and must be identified on the plans.
 - d. All landscape areas must be irrigated. This has been noted on the landscape plan, and an irrigation plan must be submitted prior to staff approval of the final site plan. **A note specifying that watering will only occur between the hours of 12am and 5am must be included on the plans.**
 - e. Site maintenance notes listed in *Section 138-12.109* have been included on the plans.
 - f. A note stating "Prior to the release of the performance bond, the City of Rochester Hills must inspect all landscape plantings." has been included on the plans.
8. **Architectural Design** (*Architectural Design Standards*). Detailed elevations have been provided. Elevations have been provided that show buildings composed of primarily split faced block and metal panels. The City's Architectural Design Standards call for durable materials that with an emphasis on natural materials or synthetic materials that mimic the look and feel of natural materials. **The applicant should bring material samples to the Planning Commission. Additionally, the applicant should consider further minimizing the use of metal panels and introducing elements into the façade to provide some color variation.**
9. **Signs.** (*Section 138-10.302*). A note has been included on the plans that all new signage must meet *Chapter 134* of the City Code of Ordinances and be approved under a separate permit issued by the Building Department.



PARKS & NATURAL RESOURCES DEPARTMENT

Ken Elwert, CPRE, Director

To: Kristen Kapelanski, Planning Manager
From: Matt Einheuser, Natural Resources Manager
Date: March 13, 2020
Re: Auburn Pharmaceuticals - Review #2
File #20-003

Approved; no comments at this time.

Copy: Maureen Gentry, Economic Development Assistant

ME/ms

March 19, 2020

Kristen Kapelanski
Department of Planning and
Economic Development
City of Rochester Hills
1000 Rochester Hills Drive
Rochester Hills, MI 48309-3033

**Subject: File No. 20-003 Auburn Pharmaceutical;
Wetland Use Permit Review #2;
Plans received by the City of Rochester Hills on
March 11, 2020
ASTI File No. 9675-94**

Applicant: General Development c/o Teresa Bruce

Dear Ms. Kapelanski:

The above referenced project proposes to construct a commercial building on approximately 9.6 acres of land located along Rochester Industrial Drive, north of Hamlin Road, and west of Livernois Road.

ASTI has reviewed the site plans received by the City on March 11, 2020 (Current Plans) for conformance to the Wetland and Watercourse Protection Ordinance and the Natural Features Setback Ordinance and offers the following comments for your consideration.

COMMENTS

1. **Applicability of Chapter (§126-500).** The Wetland and Watercourse Protection Ordinance is applicable to the subject site because the subject site is not included within a site plan which has received final approval, or a preliminary subdivision plat which received approval prior to January 17, 1990, which approval remains in effect and in good standing and the proposed activity has not been previously authorized.
2. **Wetland and Watercourse Determinations (§126-531).** This Section lists specific requirements for completion of a Wetland and Watercourse Boundary Determination.
 - a. This review has been undertaken in the context of a Wetland and Watercourse Boundary Determination completed on the site by the Applicant's wetland

consultant. ASTI confirmed this wetland delineation in the field on February 3, 2020.

One wetland and one watercourse were identified on the property, both of which are regulated by the City and likely the Michigan Department of Environment, Great Lakes, and Energy (EGLE). No wetland impacts are proposed on the Current Plans.

Wetland and Watercourse Assessments

One wetland and one watercourse were observed on the property. Quality assessments are as follows:

On-Site Wetland

The on-site wetland, which is located within the western portion of the Property, is an emergent and forested wetland. Vegetation within the emergent portion was dominated by the invasive species reed canary grass (*Phalaris arundinacea*), with supporting species such as the invasive species narrow-leaved cattail (*Typha angustifolia*) and the native species late goldenrod (*Solidago gigantea*). Vegetation within the shrub layer, which exhibited a cover of approximately 25%, was dominated by the common native species green ash (*Fraxinus pennsylvanica*) and the invasive species glossy buckthorn (*Frangula alnus*), generally in equal amounts. The tree layer within the emergent portion was mainly comprise of dead green ash and was sparse.

Vegetation within the forested portion of the on-site wetland was dominated by young trees (approximately 10-15 years old) of the common native species green ash and American elm (*Ulmus americana*), with minor inclusions of the common native species of green hawthorn (*Crataegus mollis*); the tree canopy coverage was estimated to be approximately 60-70%. The shrub layer within the forested portion of the on-site wetland was dominated by the invasive species glossy buckthorn and the common native species green ash and American elm, all with generally equal distribution. The herbaceous layer of the forested portion of the on-site wetland was sparse at the time of the site inspection and was dominated by the common native species poison ivy (*Toxicodendron radicans*).

Wetland soils were comprised of sandy clay loams and appeared to be relatively undisturbed since approximately 1990 based on historical aerial photography review. The on-site wetland appears to be the result of natural wetland reclamation from former agricultural activities on the site prior to 1990. The herbaceous vegetation within the on-site wetland is dominated by invasive species (approximately 95%) and the woody vegetation is dominated by native

species (approximately 60%) with significant invasive species inclusions (approximately 40%), thus, the on-site wetland is of low floristic quality. However, the on-site wetland actively receives storm water and natural flow from the southeast via a storm water sewer system on the south side of Rochester Industrial Drive, thereby providing direct water filtration and flow reduction and/or detainment, prior to entering the Clinton River to the west. The Clinton River is the largest watercourse within the City of Rochester Hills and is vital natural resource to the City. Wetlands in close proximity to the Clinton River that provide the natural functions described should be preserved when at all possible. Therefore, the on-site wetland should be considered a valuable natural resource to the City.

Unnamed Watercourse Quality Assessment

The unnamed watercourse, which is a tributary to the Clinton River, exhibited very sparse to no vegetation within its channel and was flowing on the day of the site inspection. The bed of this watercourse was generally sandy with intermittent amounts of cobbles, gravel, and coarse sands. The unnamed watercourse appears to be a result of natural and man-made processes. Based on review of historical aerial photography, the watercourse was originally a portion of a larger natural watercourse system that extended to the southeast. During the early 1980s, commercial and residential development off-site likely changed the watercourse's primary function into that of a stormwater conveyance, which continues to the present day. The watercourse appears to be conduct overland flow only; no evidence of ground water inputs, such seeps, were observed in or around the watercourse. Despite its primary function of a stormwater conveyance, the watercourse showed no significant signs of ecological degradation, such as a silted channel, channel cutting, or scour, and water clarity was high. This watercourse is directly connected to the Clinton River to the west, which is a vital natural resource to the City. Based on the factors above, the unnamed watercourse is of high ecological quality and function and should be considered a valuable natural resource to the City.

3. **Use Permit Required (§126-561).** This Section establishes general parameters for activity requiring permits, as well as limitations on nonconforming activity. This review of the Current Plans has been undertaken in the context of those general parameters, as well as the specific requirements listed below.
 - a. On-site wetland appears to be shown accurately per on the Current Plans. The Current Plans show all alpha-numeric wetland flagging as applied in the field, the date the wetland delineation was completed (June 6, 2017), and by whom the wetland delineation was completed by (Theresa Pardington of Nowak and

- Fraus). The applicant is advised that wetland delineations are only considered valid by the City and EGLE for a period of three years past the completion date.
- b. Former plans indicated a “ditch” in the western portion of the property within the on-site wetland. This feature is an unnamed watercourse that exhibited defined channel bed and banks and was flowing on the day of the site inspection and, thus, meets the definition of a stream under Part 301. The Current Plans show this feature as an unnamed watercourse, which is to ASTI’s satisfaction.
4. **Use Permit Approval Criteria (§126-565).** This Section lists criteria that shall govern the approval or denial of an application for a Wetland Use Permit. The following items must be addressed on a revised and dated Wetland Use Permit application and additional documentation submitted for further review:
- a. As proposed, the Current Plans do not require a City Wetland Use Permit nor likely an EGLE Part 303 permit. ASTI recommends the Applicant contact EGLE for an official regulatory assessment prior to final plan design.
5. **Natural Features Setback (§21.23).** This Section establishes the general requirements for Natural Features Setbacks and the review criteria for setback reductions and modifications.
- a. The Current Plans show all areas of Natural Features Setback. Revised plans must show all areas of applicable Natural Features Setback named as such (not “25’ Wetland Buffer”) and all proposed impacts to on-site Natural Features Setback areas, as calculated by the Applicant, and shown in linear feet on revised plans.
 - b. Natural Features Setback areas on-site were comprised of a high-quality area in the western half of the property and a medium-quality area in the eastern half of the property.

The high-quality area Natural features Setback areas in the western half of the site was comprised of a moderately mature upland forest. Dominant vegetation in this area was comprised of trees of the species of red oak (*Quercus rubra*), ironwood (*Ostrya virginiana*), black cherry (*Prunus serotina*), American elm, and linden (*Tilia Americana*). The estimated tree canopy in this area was estimated to be 85%. The trees in this area likely provide significant shade for the unnamed watercourse during the growing season, as well as reducing erosion, slowing run-off, and reducing sedimentation. Additionally, the tree canopy likely keeps the unnamed watercourse’s waters cool prior to entering the Clinton River

to the west, thereby acting as a high-quality buffer to the on-site wetland and unnamed watercourse. The shrub layer was sparse and was dominated by the invasive species Tartarian honeysuckle and the native black cherry, generally in equal distribution. The herbaceous layer was sparse at the time of the site inspection and was comprised of the native species of pretty sedge (*Carex woodii*) and poison ivy.

The medium-quality Natural Features Setback area located in the eastern half of the site was comprised of a young forest dominated by 10-15 year old trees of the native species green ash, American elm, and green hawthorn; the canopy in the tree layer was estimated at 60%. The shrub layer in this area was thick and was dominated by the invasive species Tartarian honeysuckle and glossy buckthorn. The herbaceous layer was sparse at the time of the site inspection and was dominated by the invasive species mustard garlic (*Allaria petiolaris*). While the tree layer was dominated by common native species (approximately 100%), the shrub and herbaceous layers were dominated by invasive species (approximately 80%) and as a whole, this Natural Features Setback area is of low floristic quality. However, this area did include steeper topography than the west portion of the site and the Natural Features Setback provides a medium buffer to the on-site wetland and unnamed watercourse by reducing overland flow rates, providing partial watercourse shading, slope stabilization, and reducing potential erosion and should be considered medium quality.

- c. The Current Plans indicate that approximately 25 linear feet of Natural Features Setback impacts will occur from the installation of a storm water outlet pipe from Detention Pond #2. The Natural Features Setback in this area is of medium quality and acts as an adequate buffer to the on-site wetland and unnamed watercourse. However, these impacts appear to be small and temporary. Thus, ASTI recommends the City allow for these impacts.

This action would qualify for an exception to the Natural Features Setback ordinance provided that: (1) a prior written notice is given to the City Engineer and written consent is obtained from the City Mayor prior to work commencing; (2) the work is conducted using best management practices (BMPs) to ensure flow and circulation patterns and chemical and biological characteristics of wetlands are not impacted; and (3) such that all impacts to the aquatic environment are minimized. BMPs must be implemented during the construction phase of the proposed project and any temporarily impacted areas must be

restored to original grade with original soils or equivalent soils and seeded with a City-approved seed mix. All this information, as related to Natural Features Setback areas, is shown on the Current Plans to ASTI's satisfaction.

- d. The Current Plans indicate approximately 100 linear feet of impacts to Natural Features Setback in the south-central portion of the site will occur from the installation of temporary tree protection fencing. The Natural Features Setback in this area is of medium quality, but the impacts are presumed to be temporary and, thus, ASTI recommends the City allow for the proposed impacts. However, these temporary impacts are not shown on the Current Plans. Revised plans must show the calculated impacts to the Natural Features Setback in this area and stated them linear feet. Furthermore, revised plans must show a note stating all temporary Natural Features Setback impacts shall be restored to original grade with original soils or equivalent soils and seeded with a City-approved seed mix.

RECOMMENDATION

ASTI recommends the City approve the Current Plans on the condition that the items in comments 5.a and 5.d are addressed on revised plans.

Respectfully submitted,

ASTI ENVIRONMENTAL



Kyle Hottinger
Wetland Ecologist
Professional Wetland Scientist #2927



Dianne Martin
Vice President.
Professional Wetland Scientist #1313



BUILDING DEPARTMENT
Scott Cope

From: Mark Artinian, R.A., Building Inspector/Plan Reviewer
To: Kristen Kapelanski, Planning Department
Date: March 24, 2020
Re: Auburn Pharmaceuticals

Sidwell: 15-21-276-014
City File: 20-003

The Building Department has reviewed the Site Plan Review documents received March 11, 2020 for the above referenced project. Our review was based on the City of Rochester Hills' Zoning Ordinance, the 2015 Michigan Building Code and ICC A117.1 -2009, unless otherwise noted.

Approval is recommended.

The following issues should be addressed in the building permit drawing submission.

General:

1. When establishing grade elevations around the building, please consider that landscape areas adjacent to buildings shall pitch away from the foundation at a 5 percent slope for a minimum of 10 feet from the foundations. Impervious surfaces within 10 feet of the building should be sloped at a minimum 2% percent slope.

If there are any questions, please call the Building Department at 248-656-4615. Office hours are 8 a.m. to 4:30 p.m. Monday through Friday.



DPS/Engineering
Allan E. Schneck, P.E., Director

JRB

From: Jason Boughton, AC, Engineering Utilities Specialist
To: Kristen Kapelanski, AICP, Planning Manager
Date: March 25, 2020
Re: **Auburn Pharmaceuticals, City File #20-003, Section 21
Site Plan Review #2**

Approved

Engineering Services has reviewed the site plan received by the Department of Public Services on March 11, 2020, for the above referenced project. Engineering Services **does** recommend site plan approval with the following comments:

General

1. The city file number #20-003 and the section #21 need to be in the lower right hand corner of every sheet.

Sanitary Sewer

1. Revise the sanitary sewer basis of design to use 2.44 people per REU.

Water Main

1. Revise the location of the proposed water main near the northwest corner of the building outside the influence of the proposed detention pond for maintenance purposes.

Roads/Traffic

1. The separate drawing indicating the improvements at the site access or as the applicant has shown at the yellow cross hatched area (70'x68') should be submitted prior to site plan approval.
2. Use the B-2 modified concrete curb & gutter detail at this eyebrow location. This will help to delineate the 90 degree curve.
3. The Traffic Impact Statement submitted on March 11, 2020 by Baker and Associates indicated that all approaches to the driveway intersection would operate at a LOS A during both peak periods. The City's traffic engineering division agrees with this assessment.
4. On sheet SP-5 and throughout the plan set, revise the access road description from "Rochester Hills Dr. (70' wide)" to ***"Proposed Rochester Industrial Dr. (70' Wide) - Future Drive Upgrade by the CITY"***.

Sidewalk/Pathway

1. Per City Ordinance and/or Planning requirements, a sidewalk is required across the entire frontage. Therefore, it is preferred to obtain a variance to this affect. Please coordinate with Kristen Kapelinski regarding this comment.
2. The sidewalk sight lines are not shown on the Landscape Plan, sheet L2. Please revise per City detail attached.
3. It is understood the sidewalk connection to Clinton River Trailway is not preferred due to security reasons. However, some type of agreement and indication on the site plan should state that future connection to the East or proposed Rochester Hills Research Park development trailway connection would be made once their site build out is complete.

Legal

1. Remove "point of beginning" after the first course in legal description.
2. Last course is missing distance.
3. Central angle for the 4th course does not match what is shown on sheet SP-1.
4. Central angle and length for the 6th course does not match what is shown on sheet SP-1.
5. Verify scale on sheet SP=5a.

The applicant needs to submit a Land Improvement Permit (LIP) application with engineer's estimate, fee and construction plans to proceed with the construction plan review process started.

Enclosure: CITY Pathway and Sidewalk Sight Distance Details

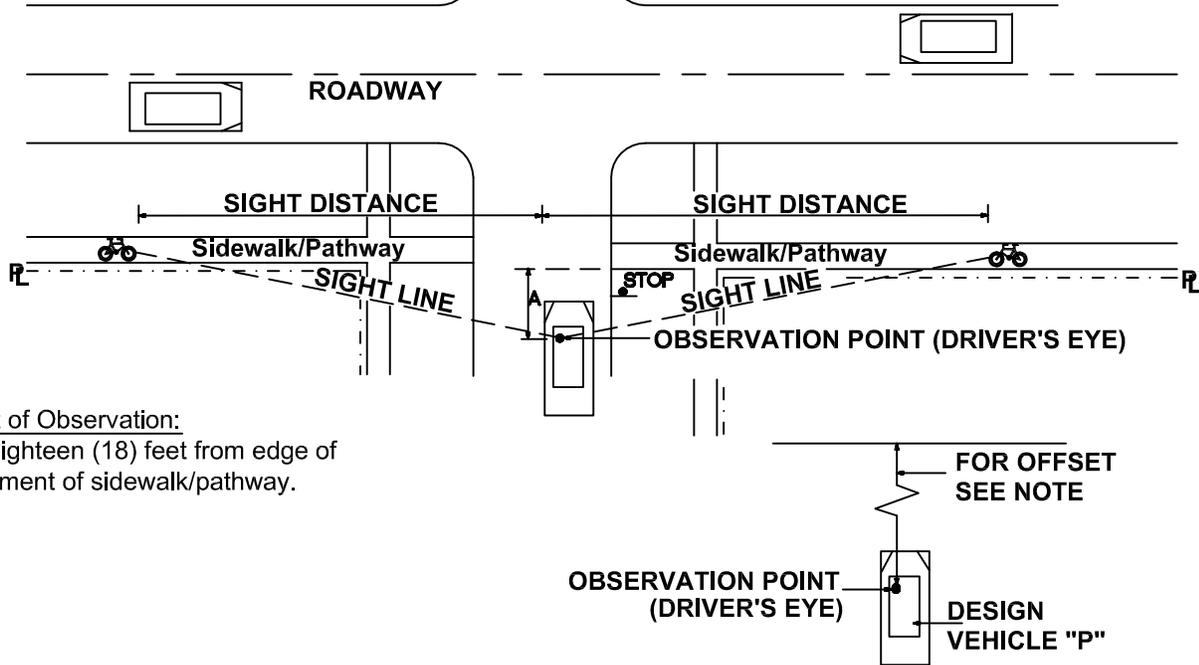
JRB/

c: Allan E. Schneck, P.E., Director; DPS
Tracey Balint, P.E., Public Utilities Engineering Mgr.; DPS
Keith Depp, Project Engineer, DPS
Adele Swann, Utilities Technician, DPS

Paul Davis, P.E. City Engineer/Deputy Director; DPS
Paul G. Shumejko, P.E., PTOE, Transportation Eng. Mgr.; DPS
Jenny McGuckin, ROW/Survey Technician; DPS
File

I:\Eng\PRIV\20003 Auburn Pharmaceutical\Eng Site Plan 2_3-25-20.docx

Different sight distances are required for yield or signal controlled intersections. Contact road agency's (City, R.C.O.C., or M.D.O.T.) design division for determining corner sight distance at yield or signalized approaches.



Point of Observation:

(A) Eighteen (18) feet from edge of pavement of sidewalk/pathway.

The point of vision shall be from the height of eye, 3.5 feet above the proposed intersecting elevation to a height of object 3.5 feet above the existing or proposed road centerline and shall be continuously visible within the specified limits.

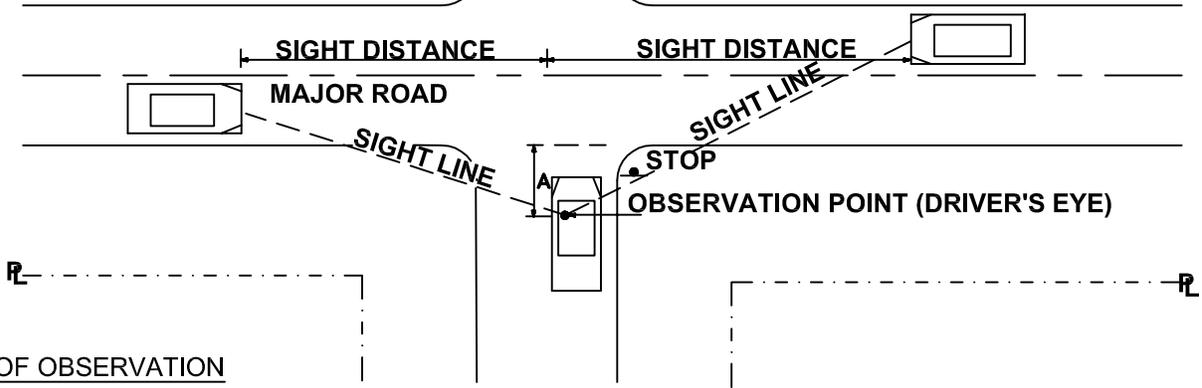
MINIMUM CORNER SIGHT DISTANCE FOR STREETS AT INTERSECTIONS	
PATHWAY GRADE APPROACHING INTERSECTION (%)	MINIMUM SIGHT DISTANCE IN FEET, BOTH DIRECTIONS
0	135
-1	140
-2	145
-3	150
-4	160
-5	165
-6	175
-7	190
-8	205

NOTES

1. Any deviation from given data requires an engineering study approved by the road agency (City, R.C.O.C., or M.D.O.T.) in accordance with the latest edition AASHTO Guide for the Development of Bicycle Facilities.
2. This design guide also applies to new Permit and Plat construction projects.
3. The bicycle design speed used in the chart is 18 MPH.
4. Approach pathway slope greater than 8% is not allowed due to ADA compliance.
5. Existing site conditions may require an engineering study to determine sight distance.

CITY OF ROCHESTER HILLS STANDARD DETAIL FOR: Sight Distance Pathways					
DRAWN BY: B. SMITH	FILE NAME: CIRC DRV	PLAN DATE: 8/28/1996	REV. 4/12/2012	REV. 3/15/2014	REV.
APPROVED BY: PAUL SHUMEJKO, P.E., PTOE CITY TRANSPORTATION ENGINEER			NOT TO SCALE		SHEET 2 OF 2

Different sight distances are required for yield or signal controlled intersections. Contact road agency's (City, R.C.O.C., or M.D.O.T.) design division for determining corner sight distance at yield or signalized approaches.



POINT OF OBSERVATION

Paved Surface:

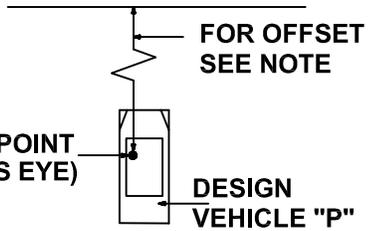
(A) Eighteen (18) feet from edge of pavement of through lane.

Gravel Surface:

(A) Eighteen (18) feet from edge of gravel road.

* For residential driveways approaching gravel or paved roads (A) is 10' from the edge of gravel/pavement.

The point of vision shall be from the height of eye, 3.5 feet above the proposed intersecting elevation to a height of object 3.5 feet above the existing or proposed road centerline and shall be continuously visible within the specified limits.



MINIMUM CORNER SIGHT DISTANCE FOR DRIVEWAYS AND STREETS AT MAJOR ROAD INTERSECTIONS FOR PASSENGER VEHICLES		
MAJOR ROAD POSTED OR 85% SPEED IN MPH	MINIMUM SIGHT DISTANCE IN FEET, BOTH DIRECTIONS	
	2 OR 3 LANE THRU ROAD IN FEET	4 OR 5 LANE THRU ROAD IN FEET
25	280	295
30	335	355
35	390	415
40	445	470
45	500	530
50	555	590
55	610	650

The basic prima facia speed shall be used for gravel roads, unless otherwise approved by the Engineer.

NOTES

1. Any deviation from given data requires an engineering study approved by the road agency (City, R.C.O.C., or M.D.O.T.) in accordance with the latest edition AASHTO policy on geometric design.
2. This design guide also applies to new Permit and Plat construction projects.
3. The above data is based on a left turn maneuver into the intersecting roadway as described in AASHTO. Due to the higher potential accident severity, the left turning sight distance was used to determine the corner sight distance required. Right turn onto major roads shall have the same sight distances.
4. Existing site conditions may require an engineering study to determine sight distance.

CITY OF ROCHESTER HILLS STANDARD DETAIL FOR: Sight Distance Roadways						
DRAWN BY: B. SMITH	FILE NAME: CIRC DRV	PLAN DATE: 8/28/1996	REV. 4/12/2012	REV. 3/15/2014	REV.	
APPROVED BY: PAUL SHUMEJKO, P.E., PTOE CITY TRANSPORTATION ENGINEER			NOT TO SCALE		SHEET 1 OF 2	



FIRE DEPARTMENT

Sean Canto
Chief of Fire and Emergency Services

From: Lee Mayes, Captain/ Assistant Fire Marshal
To: Planning Department
Date: March 26, 2020
Re: Auburn Pharmaceutical

SITE PLAN REVIEW

FILE NO:20-003

REVIEW NO:2

APPROVED X

DISAPPROVED _____

The Rochester Hills Fire Department recommends approval of the above noted project as the proposed design meets the fire and life safety requirements of the adopted fire prevention code related to the site only. Thank you for your assistance with this project and if you have any additional questions or comments, please do not hesitate to contact our office.

Lee Mayes
Captain / Assistant Fire Marshal