# APPROVED CONCEPT PLAN

## Preliminary Detention Calculations - South Basins

## Preliminary Detention Calculations - North Basin

Stormwater Detention Summary

| South Basins(Three in Series) | North Basin N-1 |
|---|---|
| 67311 cf total proposed | 11047 cf total proposed |
| 51157 cf required | 9412 cf required |

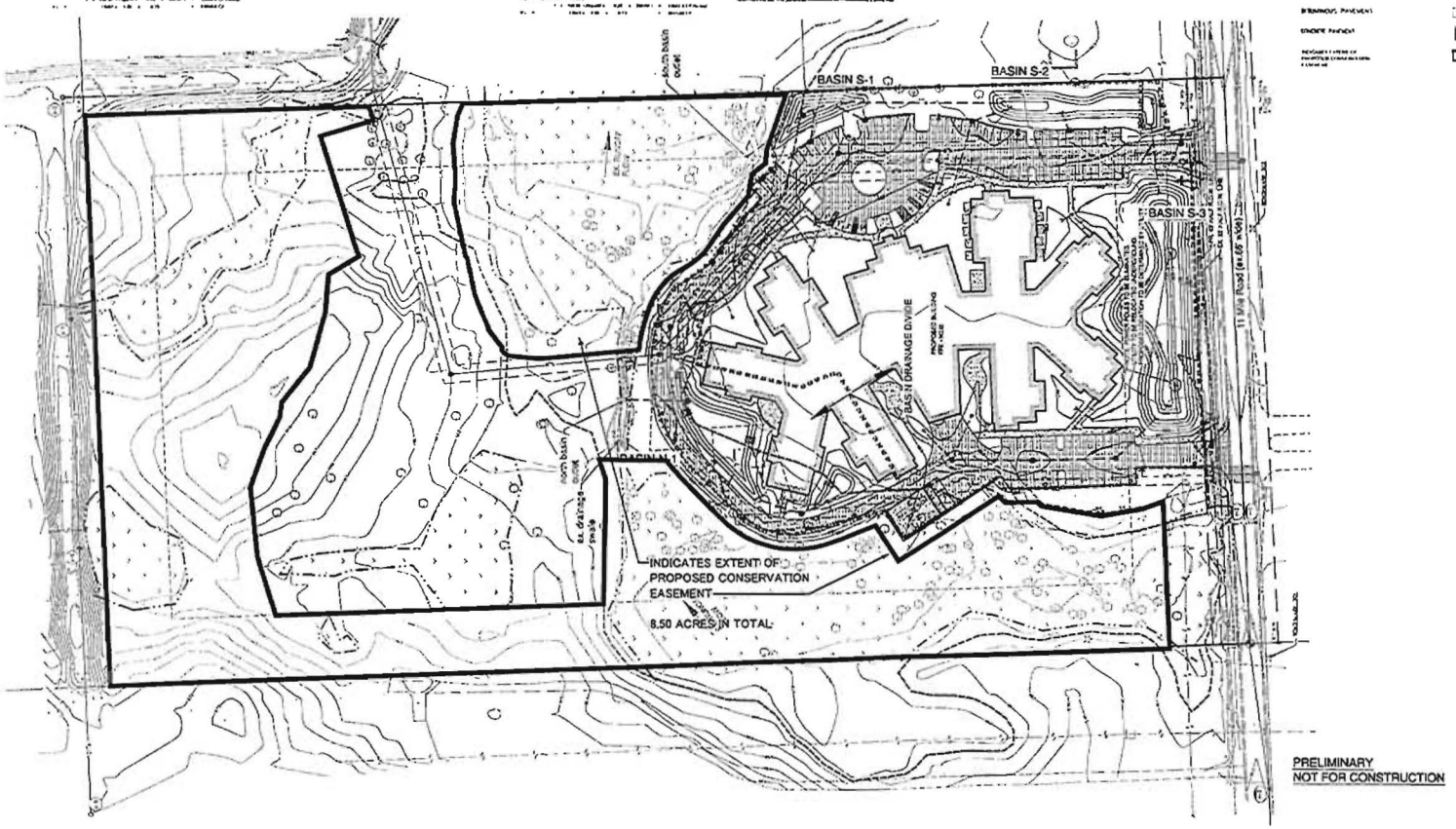
LEGEND

Ex. Floodplain Limit Line

Ex. Wetland Delineation Line

Proposed Drainage Divide Line

LEGEND




PRELIMINARY
NOT FOR CONSTRUCTION

CONSULTANTS:

CIVIL ENGINEER
LIVINGSTON ENGINEERING

ELECTRICAL
ETS ENGINEERING, INC.

LANDSCAPE ARCHITECT
RUSSELL DESIGN

ENVIRONMENTAL CONSULTANT
KING & MACGREGOR ENVIRONMENTAL INC

OWNER
MEDILODGE OF NOVI
11 MILE ROAD
NOVI, MI 48374

PROJECT
PROPOSED BUILDING
11 MILE ROAD
NOVI, MI 48374

SHEET CONTENTS
CONSERVATION EASEMENT PLAN

| DATE | DESCRIPTION | DRAWN BY |
|---|---|---|
| 11/30/2009 | PRELIMINARY SITE PLAN REVIEW | JS |
| 11/06/2009 | PRELIMINARY SITE PLAN REVIEW | TLA |
| 11/03/2009 | PRE-APPLICATION | TLA |

PROJECT NUMBER
09011
LE 091CO

SHEET NUMBER
C-3

# APPLICANT RESPONSE LETTER

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March 18, 2010

**Proposed MediLodge of Novi**
**Novi, Michigan**

**Response to Rezoning and Preliminary Site Plan review**

## PLANNING REVIEW

### ORDINANCE REQUIREMENTS

1. Barrier Free Spaces: Per the Barrier Free Code, one of every six barrier free spaces must be van accessible. Twenty-one barrier free spaces have been provided but only one of those is van accessible. **The applicant should alter the plans so that four of the twenty-one barrier free spaces are van accessible. One sign should be provided for each barrier free space.** The plans do not provide details concerning the ramps or access for barrier free spaces along the main entrance. **The applicant should provide details showing whether these spaces will be flush with the adjacent sidewalk or whether ramps will be provided.**
   *These revisions will be incorporated as part of our final site plan submission.*

2. Loading Space: Approximately 360 square feet of loading space has been provided. **The proposed loading zone should be clearly indicated with the appropriate striping.**
   *These revisions will be incorporated as part of our final site plan submission.*

3. Dumpster Screening: Dumpster screening one foot taller than the proposed should be provided. Interior bumper or posts must be shown. **The applicant should include the height of the dumpster on the screening details and indicate protective bollards.**
   *These revisions will be incorporated as part of our final site plan submission.*

4. Height of Lighting: The height of the proposed lighting fixtures cannot exceed 25 feet when adjacent to residential districts. **The applicant should provide elevations showing the mounting heights for light fixtures attached to the building.**
   *These revisions will be incorporated as part of our final site plan submission.*

5. Photometric Plan – Required Notes: **The applicant should include the hours of operation and required notes on the photometric plan.**
   *These revisions will be incorporated as part of our final site plan submission.*

6. Minimum/Maximum Illumination: Light levels seem particularly high at the borders of the parking on the eastern and western property lines. **The applicant may want to consider reducing light levels at these locations, particularly at the southeastern border of the parking lot due to the adjacent single family residence.** When a site abuts a residential district, maximum illumination at the property line shall not exceed 0.5 foot candle. **The applicant should provide illumination levels at the property line.**
   *These revisions will be incorporated as part of our final site plan submission.*

7. Cut-Off Angles: All cut off angles of fixtures must be 90 degrees when adjacent to residential districts. **The applicant should revise the fixtures so that all have a 90 degree cut off.**
   *These revisions will be incorporated as part of our final site plan submission.*

8. On-Site Sidewalk: The proposed plans show a sidewalk along the majority of the eastern side of the building. However, the sidewalk along the western side of the building does not extend the full length of the building or loop around the access drive. **The applicant should consider providing a sidewalk along the access drive and connecting the internal sidewalk to the regional pathway proposed as part of the public benefit.**
   *This item will be brought to the owner's attention for his consideration.*

9. Facade: The subject property is anticipated to be included in the new Suburban Low-Rise District as part of the Master plan update. Buildings in this new district should have a residential character to their façade, including peaked roofs, dormers, covered porches, etc. The applicant has included some of these features as part of their proposal but **per the City Council preliminary approval motion (March 8, 2010) the applicant should incorporate additional features of the proposed Suburban Low-Rise concept as stated in the Façade Consultant's review letter, dated February 16, 2010.**
   *Revisions have been made to address the Façade Consultant's comments in his review letter and have been included in this submittal.*

10. Woodland Review: There are a number of outstanding issues regarding the tree survey and woodland replacement plan. **The applicant should submit revised plans to address the concerns noted in the Woodland Review Letter.**
    *Refer to woodland review section of writeup.*

11. Applicant should depict all roof top and wall mounted equipment if any or otherwise indicate no roof top or wall mounted accessories.
    *The elevations have been revised to show the locations of equipment wells and screening in and on the roof areas. Final equipment locations will incorporated as part of our final site plan submission.*

12. Development and street names must be approved by the Street Naming Committee before Preliminary Site Plan Approval.
    *Angie Pawlowski will be contacted to see if this is a requirement and if so a meeting will be scheduled.*

13. Signage if proposed requires a permit.
    *Jeannie Niland will be contacted to obtain permit information.*

# ENGINEERING REVIEW

**ADDITIONAL COMMENTS** (to be addressed prior to the Final Site Plan submittal):

## GENERAL

1. Provide a note on the plans that all work shall conform to the current City of Novi standards and specifications.
   *A note will be provided.*

2. The City standard details sheets are not required for Final Site Plan Submittal. They will be required with the Stamping Set submittal.
   ***The detail sheets will be provided with the stamping set submittal.***

3. Provide the City's standard detail sheets for water main (2 sheets - 6/15/98), sanitary sewer (Sheet 1-6/15/98 and Sheet 2-4/24/06), storm sewer (1 Sheet-56/15/98) and paving (1 Sheet-12/15/00) at the time of Stamping Set submittal.
   ***The reference sheets will be provided.***

4. The Non-domestic User Survey form shall be submitted to the City so it can be forwarded to Oakland County. This form was included in the original sit plan package.
   ***The form shall be provided.***

5. Provide sight distance measurements for the Eleven Mile Road entrances in accordance with Figure VIII-E of the Design and Construction Standards.
   ***The sight distance will be shown, as requested.***

6. Provide a traffic control sign table listing the quantities of each sign type proposed for the development. Provide a note along with the table stating all traffic signage will comply with the current MMUTCD standards.
   ***The traffic control sign table and note will be included.***

7. Provide a traffic control plan for the proposed road work activity on (Eleven Mile Road) The plan shall list all MMUTCD barricades, signage, etc. on a separate plan in accordance to the proposed site.
   ***A traffic control plan will be provided.***

8. Provide a note that compacted sand backfill shall be provided for all utilities with the influence of paved areas, and illustrate on the profiles.
   ***The compacted sand backfill note will be included.***

9. Provide a construction materials table on the Utility Plan listing the quantity and material type for each utility (water, sanitary and storm) being proposed.
   ***A contruction materials table will be included.***

10. Provide a utility crossing table indicating that at least 18-inch vertical clearance will be provided, or that additional bedding measures will be utilized at points of conflict where adequate clearance cannot be maintained.
    ***A utility crossing table will be provided.***

11. All utility crossing shall be at or close to 90-degree angle where feasible.
*Utility crossing at 90 degrees is noted.*

12. Provide a note stating if dewatering is anticipated or encountered during construction a dewatering plan must be submitted to the Engineering Department for review.
*Dewatering plan requirement is noted.*

13. Please submit plans on 24"x36" plan sheets per the City of Novi standard.
*The Final Site Plan will be on 24"x36" sheets per the City of Novi standards.*

**WATER MAIN**

14. Maintain a 10-foot horizontal clearance between utilities where applicable. The proposed storm structure located at the northwest corner of the building is currently within the 10-foot buffer of the 8-inch watermain.
*10-foot horizontal utility clearance will be provided, where applicable.*

15. Profiles are required for all watermain greater than or equal to 8-inches in diameter for the final site pan submittal.
*Water main profile requirements are noted.*

16. Label the lead lengths, material and size on the plan.
*Labeling requirements are noted.*

**SANITARY SEWER**

17. Due to the depth of the proposed sewer, the sanitary easement shall be 40-feet in width (20-foot off center of the pipe). Show this on the plan.
*40-foot easement widths for the sanitary sewer will be provided.*

18. Show calculations for the future service area of the sewer extension along Eleven Mile Road and calculate the sewer size required. Based on the demand, the 8-inch sewer shown may not provide sufficient capacity.
*The service area will be indicated on the plans.*

19. Sanitary sewer stubs shall be extended all the way to the property lines.
*The Sanitary sewer stubs will be extended to the adjacent property lines.*

20. Watertight plugs/bulkheads shall be provided at each sanitary sewer stub.
*Watertight plugs/bulkheads will be provided.*

21. An easement is required for all sewers outside of the right of way.
*Easement requirements are noted.*

22. Provide a sanitary sewer basis of design for the development on the utility plan sheet.
*The basis of the design will be provided on the plans.*

23. Note on the construction materials table that 6-inch sanitary leads shall be a minimum SDR 23.5, and mains shall be SDR 26.
*The material notes will be added to the plans.*

24. Provide a note on the Utility Plan and sanitary profile stating the sanitary lead will be buried at least 5 feet deep where under the influence of pavement.
*The note will be shown on the plans.*

25. *For 8-inch and larger extensions* – Provide a testing bulkhead immediately upstream of the sanitary connection point. Additionally, provide a temporary 1-foot deep sump in the first sanitary structure proposed upstream of the connection point, and provide a secondary watertight bulkhead in the downstream side of this structure.
*The testing configuration described will be shown on the plans.*

**STORM SEWER**

26. The proposed plan shows several structures between the "pods" that are not labeled (i.e. roof conductors, clean outs, inlets, etc.). Please label these structures.
*The structures shown will be detailed on the plans.*

27. All storm sewers conveying flow shall be a minimum of 12-inch RCP. Please show this on the plan and profiles on the final site plan submittal.
*Size requirement is noted.*

28. Relocated the end sections in the basins further away from the outlet of the basin in order to fully utilize the permanent pool for sedimentation control. This includes moving the end sections in basin S-2 to the south end of the basin.
*End sections will be relocated as indicated.*

29. Provide a 0.1-foot drop in the downstream invert of all storm structures where a change in direction of 30 degrees or greater occurs.
*Manhole 0.1-foot drops will be provided, where applicable.*

30. Provide a four-foot deep sump and an oil/gas separator in the last storm structure prior to discharging into the basins.
*Deeper sumps will be provided where indicated.*

31. Label all inlet storm structures on the profiles. Inlets are only permitted in paved areas and when followed by a catch basin within 50 feet.
*Inlets will be placed, as indicated.*

32. Label the 10-year HGL on the storm sewer profiles, and ensure the HGL remains at least 1-foot below the rim of each structure.
*The 10-year HGL will be shown on the plans, and will remain1-foot below the rim elevations.*

33. Provide a schedule listing the casting type and other relevant information for each proposed storm structure on the utility plan. Round casting shall be provided on all catch basins except curb inlet structures.
*A structure schedule will be included on the plans, as indicated.*

34. Show and label all roof conductors, and show where they tie into the storm sewer.
*The roof conductor locations will be shown on the plans.*

35. Rip rap is required at each end section per City of Novi standards.
*Rip rap will be shown at each end section on the plans.*

## STORM WATER MANAGEMENT PLAN

36. The Storm Water Management Plan for this development shall be designed in accordance with the Storm Water Ordinance and Chapter 5 of the Engineering Design Manual.
*The Storm Water Management Plan will be designed as requested.*

37. Provide calculations verifying the post-development runoff rate directed to the proposed receiving drainage course does not exceed the pre-development runoff rate for the site.
*Rate calculations will be provided on the plans, as requested.*

38. An adequate maintenance access route to each basin outlet structure and any other pretreatment structures shall be provided (15 feet wide, maximum slope of 1V:5H, and able to withstand the passage of heavy equipment). Verify the access route does not conflict with proposed landscaping.
*An adequate maintenance route to each basin will be provided, as requested.*

39. Provide a 5-foot wide stone bridge allowing direct access to the standpipe from the bank of the basin during high-water conditions (i.e. stone 6-inches above high water elevation). Provide a detail and/or note as necessary.
*A 5-foot wide stone bridge to the outlet structure will be provided, as required.*

40. Provide an access easement for maintenance over the storm water detention system. Also, include an access easement to the detention area from the public road right-of-way.
*An access easement will be provided, as requested.*

41. The primary outlet standpipe shall be designed with a secondary outer pipe with numerous holes. The stone filter would rest against this outer pipe and would help protect the design standpipe from clogging.
*The outlet structure will be designed, as described.*

42. Provide a standpipe outlet detail for each outlet on the plan.
*The details will be provided on the plans.*

## PAVING AND GRADING

43. Please add a separate paving/grading plan to the plan set. The current is clustered and difficult to read.
*A separate paving/grading plan will be provided.*

44. Open cutting 11 Mile Road shall not be permitted unless no other option is feasible. In this case, a bore and jack seems feasible.
*The method for crossing 11 Mile Road will be detailed on the plans.*

45. Verify the slopes along the ingress/egress routing to the building from the barrier-free stalls comply with Michigan Barrier-Free regulations.
*The slopes will be verified on the plans.*

46. Add a note to the plan stating that all damaged sidewalk/pathway due to construction shall be fully restored to meet City standards.
*A restoration note will be added.*

47. The grade of the drive approach shall not exceed 2-percent within the first 25 feet of the intersection. Provide spot grades as necessary to establish this grade.
*The grade restriction is noted.*

48. Provide additional spot grades as necessary to demonstrate that a minimum 5-percent slope away from the building is provided for a minimum distance of ten feet around the perimeter of the building.
*Additional spot grades will be added.*

49. Provide top of curb/walk and pavement/gutter grades to indicate height of curb adjacent to parking stalls or drive areas.
*Curb height will be indicated on the plans.*

50. Provide a line designation representing the effective 19-foot stall length for 17-foot perimeter stalls.
*The parking stalls will be clearly labeled.*

51. Curbing and walks adjacent to the end of 17-foot stalls shall be reduced to 4-inches high, rather than the standard 6-inch height to be provided adjacent to 19-foot stalls. Provide additional details as appropriate.
*Curb height is noted.*

52. Provide the standard Type "M" approach at the Eleven Mile Road driveway/intersections.
*The standard Type "M" opening will be used.*

53. The right-of-way sidewalk shall continue through the drive approach. If like materials are used for each, the sidewalk shall be striped through the approach. The sidewalk shall be increased to 6/8-inches thick along the crossing or match the proposed cross-section if the approach is concrete. The thickness of the sidewalk shall be increased to 6-inches across the drive approach. Provide additional spot grades as necessary to verify the maximum 2-percent cross-slope is maintained along the walk.
*The sidewalk will be specified, as indicated.*

54. Show all pavement cross-sections.
*The cross-sections will be shown on the plans.*

## FLOOD PLAIN

55. A City of Novi floodplain use permit will be required for the proposed floodplain impact. This should be submitted as soon as possible. Contact the Building Department for submittal information. An MDEQ floodplain use permit will also be required prior to site plan approval.
*The floodplain permit is noted.*

## OFF-SITE EASEMENTS

56. Any off-site utility easements anticipated must be executed by both parties **prior to final approval of the plans.** Drafts of the easement shall be submitted at the time of the Preliminary Site Plan submittal for review, and shall be approved by the City prior to final signatures.
*Off-site utility permits requirements are noted.*

## The following must be submitted at the time of Final Site Plan submittal:

57. A letter from either the applicant or the applicant's engineer must be submitted with the Final Site Plan highlighting the changes made to the plans addressing each of the comments listed above and indicating the revised sheets involved.
*The required letter will be submitted with the plans.*

58. An itemized construction cost estimate must be submitted to the Community Development Department at the time of Final Site Plan submittal for the determination of plan review and construction inspection fees. This estimate should only include the civil site work and not any costs associated with construction of the building or any demolition work. ***The cost estimate must be itemized*** for each utility (water, sanitary, storm sewer), on-site paving, right-of-way paving (including proposed right-of-way), grading and the storm water basin (basin construction, control structure, pretreatment structure and restoration).
*An itemized cost estimate will be submitted with the plans.*

## The following must be submitted at the time of Stamping Set submittal:

59. A draft copy of the maintenance agreement for the storm water facilities, as outlined in the Storm Water Management Ordinance, must be submitted to the Community Development Department with the Final Site Plan. Once the form of the agreement is approved, this agreement must be approved by the City Council and shall be recorded in the office of the Oakland County Register of Deeds.
*A draft storm water maintenance agreement will be submitted.*

60. A draft copy of the 20-foot wide easement for the water main to be constructed on the site must be submitted to the Community Development Department.
*A draft water main easement will be submitted.*

61. A draft copy of the 40-foot wide easement for the sanitary sewer to be constructed on the site must be submitted to the Community Development Department.
*A draft sanitary sewer easement will be submitted.*

62. Executed copies of any required off-site utility easements must be submitted to the Community Development Department.
*Any off-site utility easements will be executed and submitted.*

## The following must be addressed prior to construction:

63. A City of Novi Grading Permit will be required prior to any grading on the site. This permit will be issued at the pre-construction meeting. Once determined, a grading permit fee must be paid to the City Treasurer's Office.
*A City of Novi grading permit requirement is noted.*

64. An NPDES permit must be obtained from the MDNRE because the site is over 5 acres in size. The MDNRE requires an approved plan to be submitted with the Notice of Coverage.
*NPDES permit requirement is noted.*

65. A Soil Erosion Control Permit must be obtained from the City of Novi. Contact Sarah Marchioni in the Community Development Department (248-347-0430) for forms and information.
*A City of Novi Soil Erosion Control Permit will be submitted.*

66. A permit for work within the right-of-way of Eleven Mile Road must be obtained from the City of Novi. The application is available from the City Engineering Department and should be filed at the time of Final Site Plan submittal. Please contact the Engineering Department (248-347-0454) for further information.
*A City of Novi work in the right-of-way Permit will be submitted.*

67. A permit for water main construction must be obtained from the MDNRE. This permit application must be submitted through the City Engineer after the water main plans have been approved.
*An MDNRE water main permit application will be submitted.*

68. A permit for sanitary sewer construction must be obtained from the MDNRE. This permit application must be submitted through the City Engineer after the sanitary sewer plans have been approved.
*An MDNRE sanitary sewer permit application will be submitted.*

69. Construction Inspection Fees to be determined once the construction cost estimate is submitted must be paid prior to the pre-construction meeting.
*Inspection fee payment is noted.*

70. A storm water performance guarantee, equal to 1.5 times the amount required to complete storm water management and facilities as specified in the Storm Water Management Ordinance, must be posted at the Treasurer's Office.
*Performance guarantee payment requirement is noted.*

71. An incomplete site work performance guarantee for this development will be calculated (equal to 1.5 times the amount required to compete the site improvements, excluding the storm water facilities) as specified in the Performance Guarantee Ordinance. This guarantee will be posted prior to TCO, at which time it may be reduced based on percentage of construction completed.
*Performance guarantee payment requirement is noted.*

72. A street sign financial guarantee in an amount to be determined ($400 per traffic control sign proposed) must be posted at the Treasurer's Office.
*Traffic sign financial guarantee requirement is noted.*

## MEDILODGE OF NOVI, SP#10-05, TRAFFIC REVIEW

1. In response to our review of the conceptual PRO plan, curb and gutter now appears where proposed. However, all back of curb radii have not been dimensioned as requested (only the access drive returns are dimensioned). Also,

now that an uncurbed rear driveway is proposed, the centerline radii of the that driveway should be shown.
*These revisions will be incorporated as part of our final site plan submission.*

2. Each driveway is appropriately designed and existing STOP (RI-I) signs are now proposed on the engineer's preliminary site/utility plan (although the requested 24-inch size is not specified). To help ensure that the STOP signs are visible to exiting drivers, these signs should also be shown on the landscape plans.
*These revisions will be incorporated as part of our final site plan submission.*

3. Barrier-free access ramps must be detailed and proposed at appropriate internal locations as well as at the two site access drives.
*These revisions will be incorporated as part of our final site plan submission.*

4. The dimensions of the proposed parking lots and abutting sidewalks appear generally satisfactory. The final site plan must include notes confirming that the 7-ft wide sidewalks abutting the lots will be limited to 4 inches in height above the abutting pavement, and the end parking spaces (adjacent to landscape islands) will be a full 9 ft wide (for regular spaces) or 8 ft wide (for barrier-free spaces) to the face of curb, (not back of curb).
*These revisions will be incorporated as part of our final site plan submission.*

5. The proposed rear driveway has been widen to 20 ft from the 18 ft previously proposed, and the proposed absence of curb and gutter has been indicated. Signage is proposed that would limit this drive to both one-way (counterclockwise) flow and emergency-vehicle-only use. We see no need for signing both restrictions, as emergency vehicles will obviously use the drive in either direction as necessary (and the 20-ft width would allow for two such vehicles to pass in either direction in those rare instances where doing so might be appropriate). To reduce the visual clutter and cost, we recommend that the proposed ONE WAY signs be deleted.
*This revision will be incorporated as part of our final site plan submission.*

6. The driveway width on the north and south sides of the landscaped circle by the main entrance has been widened to 43-44 ft from the 20 ft previously proposed. To reduce the amount of unnecessary impermeable surface – an better control the range of paths followed by circulating vehicles – we recommend that the round island be elongated so that the drives north and south of the island are no wider than 35 ft. Even with such a change, our turning template indicates that a full-size bus could circulate 360 degrees around the island without backing up. Also, to help ensure that smaller turning into and out of the drop-off circle do not encroach on the wrong side of the perimeter parking aisle, the blunt corners on the north and south islands should be rounded with at least a 12-ft radius.
*This comment will be reviewed and addressed prior to final site plan submission.*

7. Striping and signing details needing to be addressed on the final site plan are as follows:
    a. Wheelchair symbols in the barrier-free spaces should face to the right when viewed from the parking aisle (those west of the building are incorrect).
    b. A sign symbol should shown at the back of the walk opposite each barrier-free parking space, with the sign indicated as an R&-8 and supplemented with a VAN ACCESSIBLE plate (R7-8a) as applicable.

c. A plan note should indicate that all regular parking spaces shall be striped with white paint and all barrier-free parking spaces shall be striped with blue pain, per City policy and Section 3b.18 of the Michigan Manual of Uniform Traffic Control Devices.
d. The design (size, color combination, and reflective nature) of the proposed AUTHORIZED AND EMERGENCY VEHICLE ONLY signs should be specified. (As indicated above, we believe that the accompany ONE WAY signs are unnecessary and should be deleted.)
e. Sign mounting heights must be detailed. Per the MMUTCD, for sign installation near parking or walking areas (e.g., barrier-free signs), there must be a full 7 ft under the main sign and at least 6ft under a supplemental (e.g., VAN ACCESSIBLE) sign. For signs in other locations (e.g., existing STOP signs), the mounting height may be reduced to 5 ft.
f. The final site plan must include a Signing Quantities table, specifying the number of signs by legend, MMUTCD sign code (where applicable), and size. As we previously requested, the plan should indicate that the exiting STOP signs on the two access drives will be the 24-inch size permitted by the MMUTCD for low-speed situations.

*These comments will be reviewed and addressed prior to final site plan submission.*

## Medilodge SP 10-05 Wetland Review for Preliminary Site Plan Approval

**ONSITE WOODLAND EVALUATION**

ECT has reviewed the City of Novi Official Woodland Map and completed an onsite Woodland Evaluation on February 8, 2010. ECT found that the *Tree Removal and Preservation Plan* (Sheet L-2) does not accurately depict existing site conditions. It appears that only regulation-sized trees (dbh ≥8') within close proximity to the proposed development have been depicted and described on the Plan. These surveyed trees have been marked with numbered metal tree tags. Numerous, mature trees, meeting and exceeding regulation size and occurring on the northern half of the property, have not been depicted on the Plan. These trees appeared to have been marked with a different type of metal tree tag from a past survey. Comparing the *Tree Removal and Preservation Plan* (Sheet L-2) in the Concept/PRO Plan and the Preliminary Site Plan, it appears that some but not all of the regulation-size trees have been added. For example, tree #27 is not shown at all in the plan drawing or Tree Survey Schedule on Sheet L-2 of the Concept/PRO Plan but it is shown as being removed on the plan drawing and tree Survey Schedule on Sheet L-2 of the Preliminary Site Plan. The northern half of the property also includes relatively dense areas of understory trees, shrubs and groundcover. Therefore, the Preliminary Site Plan does not sufficiently characterize the regulated woodland on the site.

Per Sec. 37-4(c)(3) of the updated Woodland Protection Ordinance, "On any parcel containing any degree of regulated woodland, the applicant shall provide site plan documentation showing the locations, species, size and condition of all trees of 8" [dbh] or larger. Existing site understory trees, shrubs and groundcover conditions must be documented on the site plan...in the form of a brief narrative. The woodland conditions narrative should include information regarding plant species, general quantities and condition of woodland vegetation." Therefore, the locations of all regulation-size trees on the site and condition of understory and groundcover

vegetation must be included for the Plan to be in compliance with the Woodland Protection Ordinance plan standards.

The entire site is approximately 20 acres with 12.5 acres of regulated woodland dominating the northern and western two-thirds of the property. Approximately 5.4 acres of the regulated woodland consists of forested and scrub-shrub wetland on the west side of the southern half of the property, in the east-central portion of the property, and in for smaller areas on the northern half of the property. The regulated woodland onsite is unique due to the intactness of the mosaic of upland and wetland forest. This upland/lowland connectivity provides for excellent ecological functioning and diverse wildlife habitat.

Considering the site at a landscape scale, the regulated woodland onsite is associated with a tributary of Davis Creek in the northeast corner of the property and, therefore, ultimately drains to Island Lake to the southwest. It is contiguous with upland and lowland forest to the north, east and west. In their Potential Conservation/Natural Areas Report (July 2002, updated April 2004) for Oakland County, Michigan Natural Features Inventory (MNFI) identified this swath of contiguous woodland as a Priority Three Area for conservation, based upon total size, core, area size, stream corridor, landscape connectivity, restorability of surrounding lands, vegetation quality, parcel fragmentation and element occurrences (rare species) criteria (see attached map). Separated by Eleven Mile Road, the onsite regulated woodland is adjacent to one of only three Priority Two Areas designated within the City of Novi. When considered with adjacent Priority Two and Priority Three Areas and additional regulated woodland, such as Wildlife Woods Park to the west, the onsite woodland serves as and important stepping stone feature in the landscape connecting the only two Priority One Areas designated in the city, near Walled and Island Lakes, respectively (see attached map).

Based on historical aerial photographs, the property was predominantly farm field circa 1949, with woodland associated with only the northernmost wetlands. Reforestation of the property progressed throughout the following decades, first in association with the wetlands and later in the upland portions of the site. As a result, the northern and wetland portions of the site contain the highest quality, most mature woodland vegetation. In particular, the northern third of the parcel adjacent to the sanitary sewer right-of-way and Providence Hospital property contains high quality forested wetland and upland mesic southern forest.

During the February 8, 2010 field visit, ECT observed that the northern portion of the site was dominated by sugar maple, northern red oak, American elm, white ash, red maple, shagbark hickory, ironwood, American beech and musclewood in the upland overstory and understory. The forested wetland areas were dominated by large-diameter eastern cottonwood, silver and red maple, red ash and bur oak in the overstory and maple, ash, elm, musclewood and silky dogwood in the understory. The woodland groundcover was intact, with a diverse composition of native tree seedlings, shrubs, forbs and graminoids. The diversified age structure of the woodland is also noteworthy, ranging from seedlings and understory saplings to mature overstory trees with 20-inch dbh or more. The woodland understory contained relatively few invasives species and significant amounts of native tree advanced regeneration. Advanced regeneration consists of understory trees positioned to move into the overstory as mature trees die or blow over, opening gaps in the canopy. The upland southern two-thirds of the property were dominated by native pioneer species, including American elm, white ash, black cherry and grey dogwood in the woodland areas and grey and silky dogwood, eastern red cedar and ground juniper in the area that was cultivated the longest. This area also had low invasive species density, especially considering

the past land use history of this portion of the property. See attached site photographs.

1. *We will survey the regulated trees in the northern portion of the site. This effort began on March 15 and will be completed by March 19. We will incorporate findings on our drawings at the time of the final site plan submission. If required, we can forward a copy of the additional tree survey when completed.*
2. *We will review sheet L-2, specifically tree #27 and make appropriate revisions on our drawings at the time of the final site plan submission.*
3. *We will provide a descriptive narrative of presumed understory vegetation; including, but not limited to, shrubs, groundcover, forbs and graminoides and make appropriate revisions on our drawings at the time of final site plan submission.*

**WOODLAND IMPACT REVIEW**

Per summary calculations in the lower right-hand corner of the *Tree Removal and Preservation Plan* (Sheet L-2), the Plan proposes the removal of 54 trees with a dbh greater then or equal to 8 inches, requiring 79 replacement credits, all which are to be provided onsite. However ECT found it exceedingly difficult to read the tree survey numbers on the plan drawing provided in Sheet L-2, especially where trees occur close together and large, bold "existing tree to be removed" symbols obscure tree survey numbers. This made a complete comparison of impacts depicted on the plan drawing to the impacts listed on the Tree Survey Schedule impossible. While attempting this comparison, ECT noted the following issues:

1. Tree #528, a 12' silver maple, is shown as being saved in the Tree Survey Schedule but is depicted as being removed on the plan drawing on Sheet L-2. If tree #528 will be impacted by installation of the sanitary sewer north of Eleven Mile Road, an additional 2 replacement credits will be required.

2. Tree #547 and 21" silver maple, is shown as being saved in the Tree Survey Schedule and on the plan drawing on Sheet L-2. However, the retaining wall for the generator and dumpster area on the west side of the development is shown as being only 7" from this tree. ECT believes it is unlikely that the retaining wall can be installed without impacting the critical root zone of tree #547. Therefore, an additional 3 tree replacement credits are required.

3. Following the data provided in the Tree Survey Schedule and adding the 5 credits required per Items 1 and 2 above, ECT calculated that 75 woodland replacements credits would be required. ECT does not know how the Applicant arrived at 79 credits but is concerned that further inconsistencies may occur between the plan drawing and Tree Survey Schedule. Additional inconsistencies cannot be identified at this time due to poor legibility of the drawing.

In addition to the legibility and inconsistency issues noted above, ECT is concerned that regulated woodland impacts have not been accurately identified and replacements correctly calculated for the proposed project for the following reasons:

4. The limits of grading associated with the project have not been clearly depicted, and not all regulation-size trees have been shown for the site. No tree protection fencing is depicted on the Plan. Accurate critical root zones have not been depicted on the site plan for all regulated trees within 50' of

proposed grading or construction activities. All these factors combined make it difficult to evaluate where construction work will be conducted and what regulated trees will be impacted vs. adequately protected. It appears that numerous additional regulated woodland tree impacts have been added along the sanitary sewer lines north of the development and north of Eleven Mile Rd., possibly due to critical root zone impacts. With no clear limits of grading/disturbance, missing regulated tree locations and no tree protection fence or critical root zones shown, the note on Sheet L-2 regarding tree protection fencing being field located at the critical root zones of saved trees is not sufficient to accurately evaluate the number and location of regulated woodland tree impacts and subsequently required replacement credits.

5. ECT understands that the existing overhead electric utility running east-west across the south side of the property will be relocated underground per the utility company (Sheet C-2). Relocation is this utility underground has the potential to impact numerous regulated trees in the forested wetland on the west side of the property. Knowing the location and impact area required to relocate this utility is necessary to accurately evaluate the number of impacted regulated woodland trees and subsequent replacement credits.

6. A description of proposed changes to drainage within regulated woodlands, including grade changes and changes in water levels, has not been included in the Plan. ECT understands per Sheet L-3 that 1,183 SF of permanent wetland impact is proposed along the drainage feature that connects the large forested/scrub-shrub wetland on the southwest side of the property to the forested/scrub-shrub wetland on the east-central side of the property. A culvert connecting the two larger wetlands does not appear to be proposed. ECT also understands per Sheet C-3 that two storm water detention basin outlets are proposed to discharge water to this connective drainage feature and the east-central wetland, respectively. ECT is concerned about the hydrological impacts to the regulated woodland and whether or not additional impacts to regulated woodland vegetation can be expected. If so, these impacts should be incorporated into regulated tree impact and replacement calculations.

1. *We provided the consultant with a revised tree survey (sht. C-1 and C-1A and tree preservation plan (sht. L-2). We assume these revisions satisfy this requirement.*
2. *We will review sheet L-2, specifically tree #528 and make appropriate revisions on our drawings at the time of the final site plan submission. As required by this ordinance, we will review all tree removals with the consultant prior to initiating work.*
3. *Because of the impact with the critical root zone of tree #547 we will provide an additional 3 replacement credits.*
4. *We will modify the tree replacement credits to reflect the removal of tree #547. We will review tree #528 as the final grading plan is developed and modify the woodland replacement credits as required.*
5. *We will graphically depict the location tree protection fence and grading limits at the time of the final site plan submission.*
6. *The overhead utility line is being proposed to be buried in the location of the detention pond between the two drives and will not impact the wetland to the west.*

7. *A culvert is not being proposed in the area of the sanitary sewer crossing, as this area is to be restored to original grade. Soil erosion and sedimentation control measures will be indicated in more detail on the final site plan. Temporary culvert(s) or temporary dewatering measures could be used during construction to divert surface/groundwater, as needed.*
   *The west side of the developed portion of the site, proposed to direct storm water runoff to the north and northeast via detention ponds in series, represents approximately 10% of total watershed that supplies storm water to the wooded wetland on the west side of the site. The additional watershed area being added to the wooded wetland located to the central/northeast, from the west side of the site represents an increase of approximately 2% in size. The relatively small change in area to the watersheds and the fact that the wetlands will remain connected, will not significantly affect the hydrologic characteristics of each wetland. Additionally, the detention ponds will be designed to hold water during storm events to allow for infiltration and groundwater recharge.*

**WOODLAND REPLACEMENT REVIEW**

Per landscape Sheets L-4, L-5, L-6 and L-8, ECT found that the Plan proposed 69 deciduous trees (69 woodland replacement credits), 21 evergreen replacement trees (14 woodland replacement credits), and 48 large shrubs (8 woodland replacements credits) to be onsite (91 woodland replacement credits total). ECT is concerned with the following issues relating to woodland replacement credits and regulated woodland restoration:

1. The woodland replacement credits depicted in plan drawings are inconsistent with the woodland credits presented in the Woodland Replacement Tree Schedule on Sheet L-9 (13 not 12 bur oaks) and the Reforestation Credit Table on Sheet L-5 (91 not 79 total woodland replacement credits). The quantities appear to be incorrect for the deciduous and evergreen replacement trees in the Reforestation Credit Table, and the replacement ratio for evergreen trees ≥ 6' in height is 1.5:1 not 3:1.
2. Approximately half of the replacement material is proposed too close to structures and/or underground utilities and their easements. Some of the propose species are inappropriate, due to location and shade intolerance or being non-native to Michigan. ECT encourages the placement of native woodland credits back into the forested wetland along the southwest side of the property, within the floodplain compensating cut area, outside of the driveway loop adjacent to the remaining regulated woodland, and along the sewer line north of the development. However, replacement material should not be located 1) within 10' of built structures or edges of utility easements (Item l below is a special exception) and 2) over underground utilities or within their associated easements. Specifically, the following locations/species are not appropriate for woodland replacement material:
   a. Sheet L-4 and L-5: large shrub and deciduous tree material in the southwest corner of site located too close to the proposed sanitary sewer, sewer easement, and electrical utility to be relocated belowground.
   b. Sheet L-5: too shady for 3 eastern red cedar near western parking lot.
   c. Sheet L-5: red oak east of generator/dumpster area too close to concrete patio and building.

d. Sheet L-5: river birch north and northwest of building not native to Michigan; some are too close to road and 8" water main.
e. Sheet L-5: bur oak and tulip tree north of loop drive too close to road edge.
f. Sheet L-5: eastern red cedar north of loop drive too close to basin outlet pipe and sanitary sewer.
g. Sheet L-5: river birch east of east parking lot and detention basins not native to Michigan; some are too close to storm water pipes.
h. Sheet L-5: bur oak and sweet gum east of east parking lot too close storm water pipe.
i. Sheet L-6: but oaks and sugar maples too close to sanitary sewer and sewer easement north of development. ECT understands that sewer in this location will be ~ 20' deep and will be difficult to access with a 20' easement for maintenance. ECT asks that in this location, no replacement materials are located within 20' of either side of the sewer line (40' effective planting buffer).

3. A significant portion of the proposed woodland replacement credits are located outside of the proposed conservation easement depicted on the Conservation Easement Plan. ECT is also concerned that the "gourd-shaped" forested/scrub-shrub wetland on the west side of the site, north-central adjacent upland, and floodplain compensating cut portions of the onsite regulated woodland are not proposed within the conservation easement. As currently proposed, the conservation easement fails to provide long-term protection for woodland replacement credits and significant site natural features. Future impacts to these natural features would result in significant fragmentation of the regulated woodland onsite, resulting on a loss of interior/core wildlife habitat and increase in lower quality edge habitat.
4. ECT is unsure of what measures are being proposed within the buffer expansion areas designated on Sheet L-4. Both expansion areas occur within the regulated woodland where disturbance is not planned. Existing native vegetation in these areas should be left intact and undisturbed.
5. It is not clear how much and what type of native groundcover vegetation will be used to restore regulated woodland areas impacted by floodplain compensating cut and sewer line installation.

1. *We will review the replacements and make appropriate revisions to our drawings at the time of the final site plan submission.*
2. *We will make appropriate adjustments to our drawings to address utilities and associated public easements. We understand final locations of all plant material will be approved in the field by the City Landscape Architect and Woodland consultant. Please note the sanitary sewer will be located south of Eleven Mile Road. There will be no impacts to the wetland to the west. We will illustrate this on our drawings at the time of the final site plan submission. We also, will coordinate with the Woodland consultant to satisfy comments related to plant material selection to ensure we meet the requirements for woodland replacements.*
3. *We are concerned that locating woodland replacement trees beyond the limits of work will cause unnecessary damage to the area we are proposing as the conservation easement area. We are also concerned that locating trees in remote areas will also increase maintenance costs to ensure these trees remain viable. As stated in the consultants' on-site woodland evaluation tree seedling are prevalent*

*throughout the woodland area and will naturally replace the trees that die or blow over.*
*It is the intent of the applicant to protect the "gourd shaped" wooded wetland that lies in the approximate middle of the site with the same level of environmental care we have employed on the project to date.*

4. *We are not proposing to disrupt the existing vegetation. Our proposal is to designate these areas as replacement buffer and not physically mitigate the buffer.*
5. *We are proposing Buffer Mix A to restore regulated woodland areas. See sheet L-9.*

**SITE PLAN COMPLIANCE WITH ORDINANCE CHAPTER 37 STANDARDS**

The plan lacks several items for compliance with the Site Plan standards. The following information must be provided in the Plan:

1. Locations of all regulation-size trees on the site,
2. Woodland conditions narrative for the understory and groundcover vegetation for the site,
3. Legible tree survey numbers and reduced tree removal symbols on Sheet L-2 – tree survey numbers should not be obscured,
4. Graphic depiction of tree protection fence locations on Sheet L-2; fence detail on Sheet L-10.
5. Graphic depiction of the limits of grading/disturbance on Sheet L-2 in relation to regulated woodland and regulation-size trees,
6. For regulated trees depicted as being saved within 50' of proposed grading or construction activity boundaries, graphic depiction of the trees' critical root zones to show impact will be avoided,
7. A description of proposed changes to drainage within regulated woodlands, including grade changes and changes in water level.
8. Corrected tree removal and replacement values as outlined above – addition of a replacement credit column in the Tree Survey Schedule would be helpful,
9. Corrected replacement material locations and species as outlined above,
10. Corrected reforestation credit table as outlined above,
11. Clarification of proposed actions in buffer expansion areas in existing regulated woodland, and
12. Clarification of woodland groundcover restoration measures in floodplain compensating cut and sewer installation areas

1. ***We will address each comment and coordinate same with the City Landscape Architect and the Woodland Consultant and revise our drawings as necessary at the time of Final Site Plan Approval Submission.***

**RECOMMENDATION:**

**ECT does not recommend approval of the Plan at this time.** Significant changes must be made to the Preliminary Site Plan to address specific issues and corrections outlined above and bring the Plan into compliance with the City of Novi Woodland Protection Ordinance Chapter 37 standards. ECT recommends that a Revised Preliminary Site Plan be submitted once utility installation/relocation and grading impacts to the onsite regulated woodland are better understood and can be depicted graphically. The location of much of the woodland replacement material should be revised to avoid built structures, underground utilities, and their easements. The existing regulated woodland to remain onsite is the preferred location for woodland

replacement credits and should receive priority over locations in developed areas, as it provides an excellent opportunity for the long-term survival of plant material.

ECT applauds the Applicant's use of a conservation easement to protect the important natural features of the site. ECT strongly encourages the Applicant to expand the boundaries of the conservation easement to the edges of the sanitary sewer easement north of the development to protect additional forested/scrub-shrub wetland, high quality connected upland forest, and compensated floodplain and to prevent further loss of core/interior woodland habitat within a Priority Three Conservation Area.

1. *It is our understanding that this recommendation will be modified to approve the preliminary woodland site plan approval drawings contingent upon satisfying the specifics contained in the March 8, 2010 review letter.*

## PRELIMINARY LANDSCAPE REVIEW

### ORDINANCE CONSIDERATIONS

1. The project site is adjacent to residential properties on all property boundaries. Typically a 4'6" to 6' high landscape berm is required along these property boundaries. The applicant may choose to request a Planning Commission waiver for the berms if it can be shown that significant natural features would be disturbed by the installation. Regardless of berm installation, the applicant must provide buffer landscape along the property boundaries or preserve existing vegetation. It appears that the westerly property line will be adequately buffered with the proposed plantings and existing vegetation. A PRO deviation from the ordinance standards was granted for the west and north berms. Staff would support a waiver of the landscape berm on the easterly property to facilitate the environmentally sound storm water controls as proposed. **The applicant should demonstrate that the buffer proposed at the easterly property line will be adequate to buffer the adjacent residential property. It is likely that additional shrub plantings will be necessary to assure opacity.**
   *We will provide a native vegetative buffer of grasses, shrubs and trees to comply with the opacity requirements of the ordinance.*

### BUILDING FOUNDATION LANDSCAPE (SEC. 2509.3.D.)

1. A 4' wide landscape bed is required along all building foundations with the exception of access points. It appears that the applicant can meet this requirement. More detail for the foundation landscaping will be required upon subsequent submittals.
   *We will provide more detail at the time of Final Site Plan Approval Submission*

2. An area 8' wide multiplied by the length of building foundations is required as foundation landscape area. It appears that the applicant can meet this requirement.
   *We will provide more detail at the time of Final Site Plan Approval Submission*

### LOADING ZONE SCREENING

1. The Applicant has proposed a utility area on the west side of the building. The utility fixtures and loading zone must be adequately screened through the use of privacy fencing and/or landscape. Please provide additional details for the screening on subsequent submittals.
   *We will provide adequate screening and detailing at the time of the Final Site Plan approval submission.*

**IRRIGATION (SEC. 2509 3.F.(6)(B))**

1. All landscape areas are required to be irrigated. Please provide an Irrigation Plan and cost estimate on subsequent submittals.
   *We will provide the required details, notations and cost estimate at the time of the Final Site Plan approval*

## PRELIMINARY SITE PLAN REVIEW- FIRE MARSHALL

1. The location of the fire department connection needs to be shown on the plans. The fire code requires it to be located on the front/address side of the building, in an accessible location, within 100' of a hydrant.
   **The FDC shall be located near the front/main entrance. See the attached plan with the location indicated.**
   *This revision will be incorporated as part of our final site plan submission*

2. The hydrant placements shall be adjusted in the following manner, (See the attached plan):
   **Hydrant #2 shall be moved 100' north and located in the island on east (building) side of the drive.**
   **Hydrant #3 shall be moved 50' northeast.**
   **Hydrant #4 shall be moved 100' south in the end island on the west (building) side of the drive.**
   *These revisions will be incorporated as part of our final site plan submission.*

Thank you again for this review and comments. Please review these revisions and contact me should you have any additional comments.

Sincerely,

Daniel F. DeRemer

Daniel F. DeRemer AIA
Architect
**JW Design Architectural Studio**

**MAPS**

Location

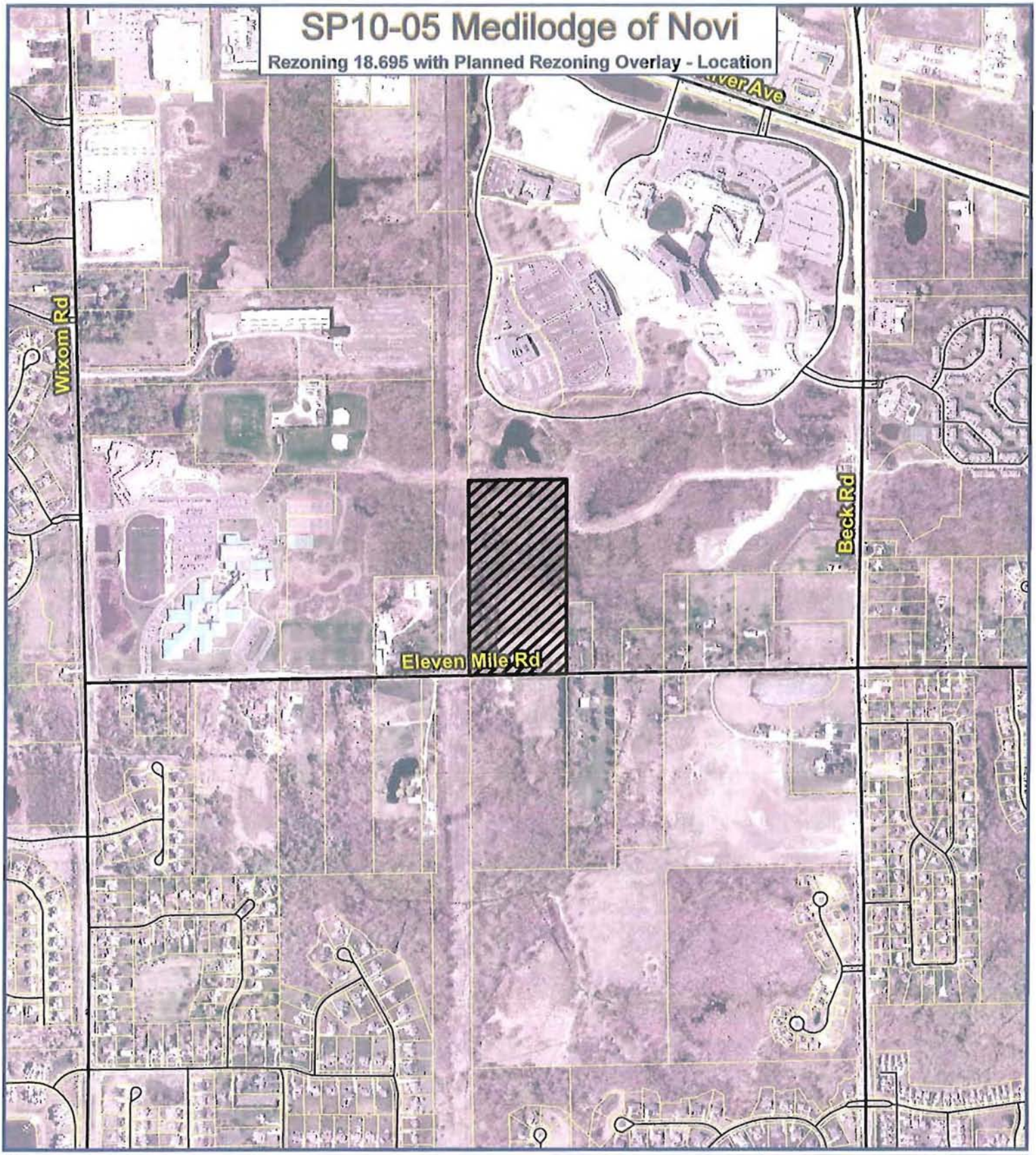
Zoning

Future Land Use

Natural Features

# SP10-05 Medilodge of Novi

## Rezoning 18.695 with Planned Rezoning Overlay - Location




Map Author: Kristen Kapelanski
Date: February 16, 2010
Project: Medilodge of Novi PRO
Version #: 1.0

**MAP INTERPRETATION NOTICE**

Map information depicted is not intended to replace or substitute for any official or primary source. This map was intended to meet National Map Accuracy Standards and use the most recent, accurate sources available to the people of the City of Novi. Boundary measurements and area calculations are approximate and should not be construed as survey measurements performed by a licensed Michigan Surveyor as defined in Michigan Public Act 132 of 1970 as amended. Please contact the City GIS Manager to confirm source and accuracy information related to this map.

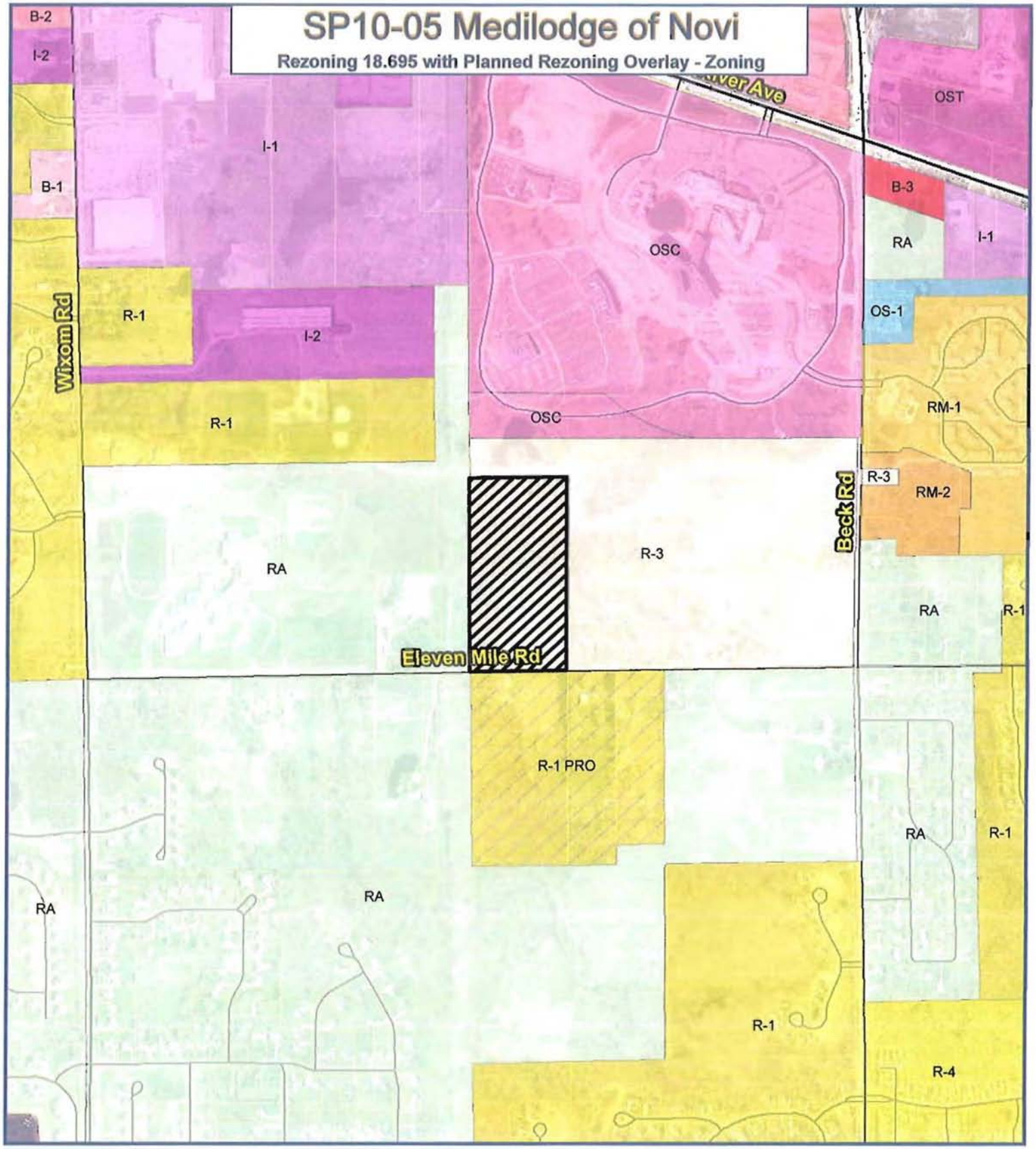
Map Legend

Subject Property


City of Novi
Department Division
Department Name
45175 W Ten Mile Rd
Novi, MI 48375
cityofnovi.org


0 170 340 680 1,020 1,360
Feet

1 inch = 881 feet

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Map Legend

Zoning

- R-A: Residential Acreage
- R-1: One-Family Residential District
- R-1 PRO: R-1 With Planned Rezone Overlay (PRO)
- R-3: One-Family Residential District
- R-4: One-Family Residential District
- RM-1: Low-Density Multiple Family
- RM-2: High-Density Multiple Family
- B-1: Local Business District
- B-2: Community Business District
- B-3: General Business District
- I-1: Light Industrial District
- I-2: General Industrial District
- OS-1: Office Service District
- OSC: Office Service Commercial
- OST: Office Service Technology
- Subject Property

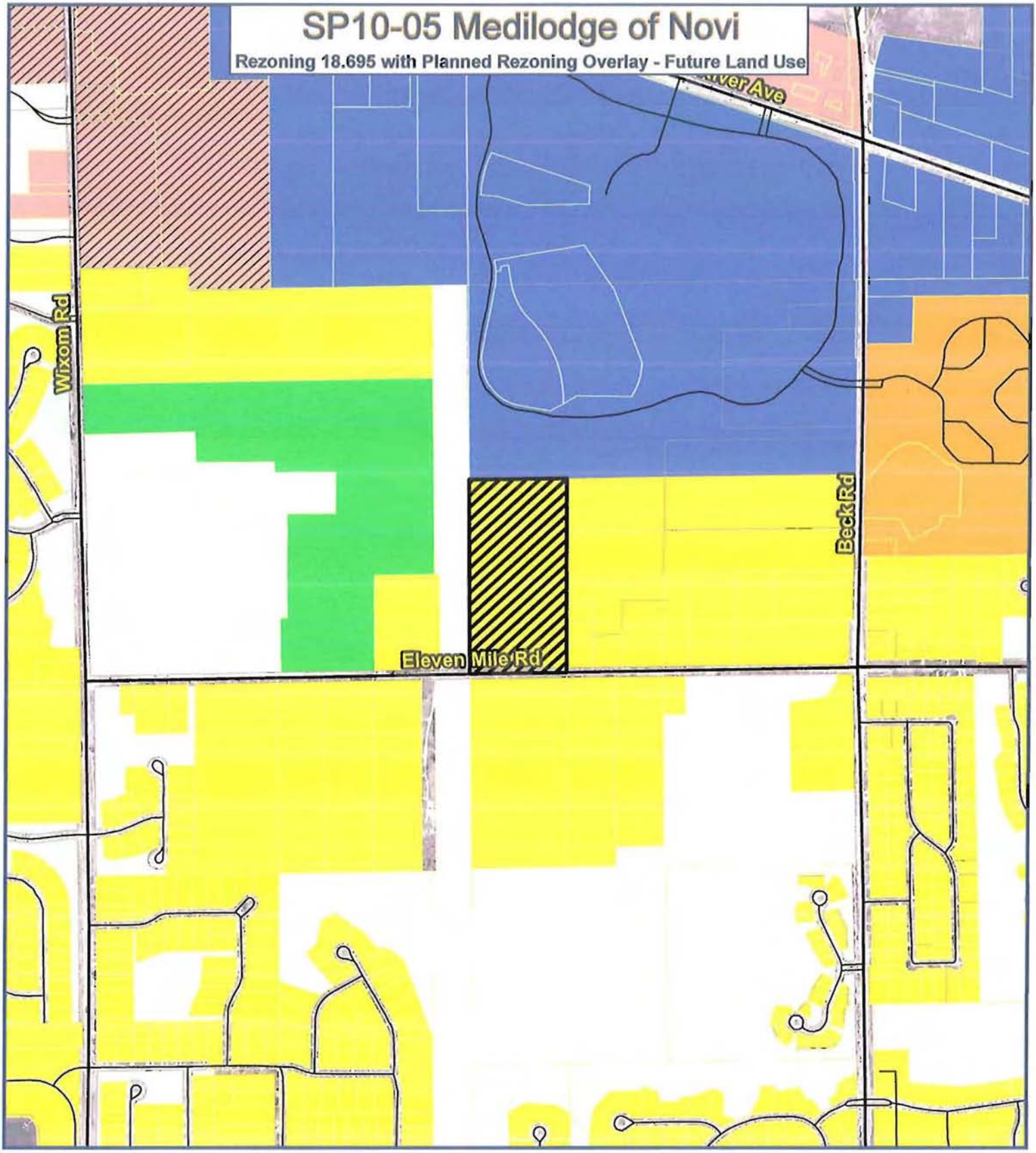
City of Novi
Department Division
Department Name
45175 W Ten Mile Rd
Novi, MI 48375
cityofnovi.org

0 170 340 680 1,020 1,360
Feet

1 inch = 881 feet

# SP10-05 Medilodge of Novi

## Rezoning 18.695 with Planned Rezoning Overlay - Future Land Use




Map Author: Kristen Kapelanski
Date: February 16, 2010
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Map Legend

**Future Land Use**

- SINGLE FAMILY
- MULTIPLE FAMILY
- OFFICE
- LOCAL COMMERCIAL
- COMMUNITY COMMERCIAL
- EDUCATIONAL FACILITY
- PUBLIC PARK
- PRIVATE PARK
- UTILITY
- Subject Property

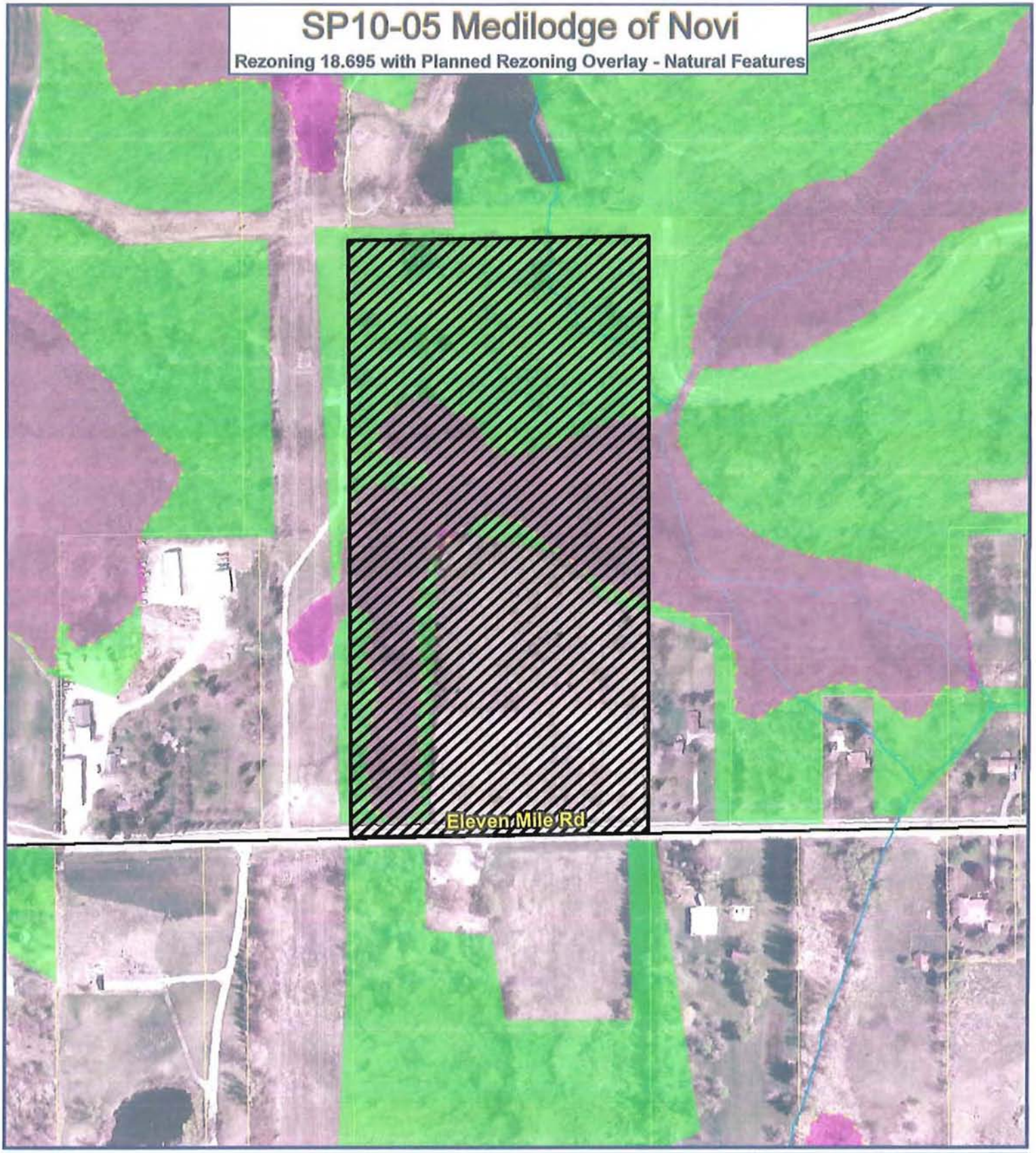

**City of Novi**
Department Division
Department Name
45175 W Ten Mile Rd
Novi, MI 48375
cityofnovi.org


0 170 340 680 1,020 1,360
Feet

1 inch = 881 feet

# SP10-05 Medilodge of Novi

**Rezoning 18.695 with Planned Rezoning Overlay - Natural Features**




Map Author: Kristen Kapelanski
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Map Legend

- Wetland Areas
- Woodlands
- Subject Property


City of Novi
Department Division
Department Name
45175 W Ten Mile Rd
Novi, MI 48375
cityofnovi.org


0 55 110 220 330 440
Feet

1 inch = 289 feet