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# EXHIBIT A

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# PART 1 - PROJECT INFORMATION

## Prepared by Project Sponsor

**NOTICE:** This document is designed to assist in determining whether the action proposed may have a significant effect on the environment. Please complete the entire form, Parts A through E. Answers to these questions will be considered as part of the application for approval and may be subject to further verification and public review. Provide any additional information you believe will be needed to complete Parts 2 and 3.

It is expected that completion of the full EAF will be dependent on information currently available and will not involve new studies, research or investigation. If information requiring such additional work is unavailable, so indicate and specify each instance.

NAME OF ACTION Proposed Sherwood Meadows Residential Project			
LOCATION OF ACTION (Include street Address, Municipality and County) 14.19 Acres of Land located on Heatherwood Drive, Town of Hamburg, Erie County			
NAME OF APPLICANT/SPONSOR DATO DEVELOPMENT, LLC c/o Sean Hopkins, Esq.		BUSINESS TELEPHONE (716) 510-4338	
ADDRESS 5500 Main Street – Suite 100			
CITY/PO Williamsville		STATE NY	ZIP CODE 14221
NAME OF OWNER (if different)		BUSINESS TELEPHONE	
ADDRESS			
CITY/PO		STATE	ZIP CODE
DESCRIPTION OF ACTION <p>The proposed project ("action") consists of the development of the Project Site as an apartment community consisting of 128 units as depicted on the Site Plan prepared by Nussbaumer &amp; Clarke, Inc. attached as Exhibit "B". The Planning Board previously approved the development of the Project Site as a 56 unit townhouse project and Phase I of the previously approved project consisting of 1 building containing 4 attached residential units, 990 feet of private roadway and related infrastructure and utility improvements were previously constructed. A copy of the Site Plan for the previously approved project is attached as Exhibit "G".</p> <p>The Project Sponsor is not proposing to alter or modify the portions of the previously approved project that have been completed. The proposed project ("action") will consist of twelve 2 story buildings and four buildings will consist of 16 units each and four buildings will consist of 8 units each. The Project Site is zoned R-3 and the proposed project is an expressly permitted use in the R-3 zoning district. On-site parking will be provided including approximately 120 covered parking spaces as depicted on the Concept Plan attached as Exhibit "B" as well as paved parking spaces. The total number of parking spaces will be 256 in order to provide 2 spaces per unit.</p> <p>The proposed project ("action") has been defined broadly to include all site improvements including the construction of buildings, parking areas, access aisles, infrastructure and utility improvements and landscaping. The proposed project ("action") includes all necessary approvals/permits for the proposed apartment community from involved and interested governmental agencies including but not limited to site plan approval from the Town of Hamburg Planning Board.</p> <p>The proposed project is an Unlisted Action pursuant to the State Environmental Quality Review Act since it does not cross any of the thresholds for a Type I action. The Project Sponsor is requesting that the Planning Board conduct a coordinated environmental review of the proposed project in connection with its review of the request for Site Plan Approval. A copy of the negative declaration issued by the Town of Hamburg Planning Board on June 20, 2007 at the completion of its review of the previously approved project is attached as Exhibit "H".</p>			

**Please Complete Each Question - Indicate N.A. if not applicable**

### A. Site Description

Physical setting of overall project, both developed and undeveloped areas.

Present land use:     Urban     Industrial     Commercial     Residential (suburban)     Rural (non-farm)  
                                   Forest     Agriculture     Other    Majority of Project Site consists of vacant land zoned R3 Multifamily District ("R-3")

2. Total acreage of project area:    14.9± ac

**APPROXIMATE ACREAGE**

	PRESENTLY	AFTER COMPLETION
Meadow or Brushland (non-agricultural)	9.2 Acres	2.0 acres
Forested	0 acres	0 acres
Agricultural (Includes orchards, cropland, pasture, etc.)	0 acres	0 acres
Wetland (Freshwater or tidal as per Articles 24, 25 of ECL)	3.9 – Federal acres	3.9 – Federal acres
[Note: No Freshwater Wetlands located on Project Site]		
Unvegetated (Rock, rubble, earth or fill)	0 acres	0 acres
Roads, buildings and other paved surfaces	.9 Acres	4 acres
Other (Indicate type) Greenspace and Landscaping	0 Acres	5 acres

3. What is predominant soil type(s) on project site? Remsen, Canadice and Wayland [Source: Erie County Soil Survey]

a. Soil drainage:  Well drained \_\_% of site  Moderately well drained 100% of site  
 Poorly drained \_\_% of site

b. If any agricultural land is involved, how many acres of soil are classified within soil group 1 through 4 of the NYS Land Classification System? N/A acres. (See 1 NYCRR 370).

4. Are there bedrock outcroppings on project site?  Yes  No

What is depth to bedrock? 6'-8' (in feet)

5. Approximate percentage of proposed project site with slopes:  0-10% 100%  10-15% \_\_%  
 15% or greater \_\_%

6. Is project substantially contiguous to, or contain a building, site, or district, listed on the State or the National Registers of Historic Places?  Yes  No

7. Is project substantially contiguous to a site listed on the Register of National Natural Landmarks?  Yes  No

8. What is the depth of the water table? .5'-1.5' (in feet)

9. Is site located over a primary, principal, or sole source aquifer?  Yes  No

10. Do hunting, fishing or shell fishing opportunities presently exist in the project area?  Yes  No

11. Does project site contain any species of plant or animal life that is identified as threatened or endangered?

Yes  No According to NYSDEC Mapper

Identify each species \_\_\_\_\_

12. Are there any unique or unusual land forms on the project site? (i.e., cliffs, dunes, or other geological formations)

Yes  No Describe \_\_\_\_\_

13. Is the project site presently used by the community or neighborhood as an open space or recreation area?

Yes  No If yes, explain \_\_\_\_\_

14. Does the present site include scenic views known to be important to the community?

Yes  No

15. Streams within or contiguous to project area: Not Applicable

a. Name of Stream and name of River to which it is tributary \_\_\_\_\_

a. Name Unmapped Federal Wetland

b. Size (In acres)

3.75 Acres [Source: Wetland Delineation Report prepared by conducted by Wilson Environmental Technologies dated May 24, 2013 – Copy provided at Exhibit "R"]

17. Is the site served by existing public utilities?  Yes  No

a) If Yes, does sufficient capacity exist to allow connection  Yes  No

b) If Yes, will improvements be necessary to allow connection?  Yes  No

18. Is the site located in an agricultural district certified pursuant to Agricultural and Markets Law, Article 25-AA, Section 303 and 304?  Yes  No

19. Is the site located in or substantially contiguous to a Critical Environmental Area designated pursuant to Article 8 of the ECL, and 6 NYCRR 617?  Yes  No

20. Has the site ever been used for the disposal of solid or hazardous wastes?  Yes

## B. Project Description

1. Physical dimensions and scale of project (fill in dimensions as appropriate)

- Total contiguous acreage owned or controlled by project sponsor 14.9± acres.
- Project acreage to be developed: 14.9± acres initially; 14.9± acres ultimately.
- Project acreage to remain undeveloped 0 acres.
- Length of project, in miles: N/A (If appropriate)
- If the project is an expansion, indicate percent of expansion proposed N/A%.
- Number of off-street parking spaces existing 8; proposed 256.
- Maximum vehicular trips generated per hour 179 (upon completion of project)? (During the PM Peak Hour – Source: Traffic Impact Study prepared by Nussbaumer & Clarke, Inc. based on Institute of Transportation Engineers, Trip Generation Report, 8th edition – ITE Code 220 – Apartments)
- If residential: Number and type of housing units: (Each of the units

	One Family	Two Family	Multiple Family	Condominium
Initially	_____	_____	64	_____
Ultimately	_____	_____	128	_____

- Dimensions (in feet) of largest proposed structure 35' height; 44' width; 173' length.
  - Linear feet of frontage along a public thoroughfare project will occupy is? 60± ft.
2. How much natural material (i.e., rock, earth, etc.) will be removed from the site? 0 tons/cubic yards
3. Will disturbed areas be reclaimed?  Yes  No  N/A
- If yes, for what intended purpose is the site being reclaimed? Landscaping and greenspace
  - Will topsoil be stockpiled for reclamation?  Yes  No
  - Will upper subsoil be stockpiled for reclamation?  Yes  No
4. How many acres of vegetation (trees, shrubs, ground covers) will be removed from site? 4± acres.
5. Will any mature forest (over 100 years old) or other locally-important vegetation be removed by this project:  
 Yes  No

6. If single phase project: Anticipated period of construction n/a months; (including demolition).

7. If multi-phased:

- Total number of phases anticipated 2 (number).
- Anticipated date of commencement phase Summer/Fall month 2013 year, (including demolition).
- Approximate completion date of final phase 10 month 2018 year. [Note: Build-out will be dependent on market conditions]
- Is phase 1 functionally dependent on subsequent phases?  Yes  No

8. Will blasting occur during construction?  Yes  No

9. Number of jobs generated: during construction 30±; after project is complete 2±.

10. Number of jobs eliminated by this project 0.

11. Will project require relocation of any projects or facilities?  Yes  No If yes, explain \_\_\_\_\_

12. Is surface liquid waste disposal involved?  Yes  No

- If yes, indicate type of waste (sewage, industrial, etc.) and amount Sanitary sewage, 10,400± gallons per day
- Name of water body into which effluent will be discharged Lake Erie via Southtowns Advanced WWTP

13. Is subsurface liquid waste disposal involved?  Yes  No Type \_\_\_\_\_

14. Will surface area of an existing water body increase or decrease by proposal?  Yes  No

Explain \_\_\_\_\_

15. Is project or any portion of project located in a 100 year flood plain?  Yes  No

16. Will the project generate solid waste?  Yes  No

- If yes, what is the amount per month 4 tons
- If yes, will an existing solid waste facility be used?  Yes  No
- If yes, give name NYSDEC approved facility location Unknown
- Will any wastes **not** go into a sewage disposal system or into a sanitary landfill?  Yes  No
- If Yes, explain \_\_\_\_\_

17. Will the project involve the disposal of solid waste?  Yes  No  
 a. If yes, what is the anticipated rate of disposal? \_\_\_\_\_ tons/month.  
 b. If yes, what is the anticipated site life? \_\_\_\_\_ years.
18. Will project use herbicides or pesticides?  Yes  No
19. Will project routinely produce odors (more than one hour per day)?  Yes  No
20. Will project produce operating noise exceeding the local ambient noise levels?  Yes  No
21. Will project result in an increase in energy use?  Yes  No  
 If yes, indicate type(s) Electricity and natural gas
22. If water supply is from wells, indicate pumping capacity N/A gallons/minute
23. Total anticipated water usage per day 19,200± gallons/day.
24. Does project involve Local, State, or Federal Funding?  Yes  No  
 If yes, explain \_\_\_\_\_
25. Approvals Required:

		Type	Submittal Date
City, Town, Village Board	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
City, Town, Village Planning Board	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Site Plan Approval	May 2013
City, Town Zoning Board	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
City, County Health Department	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Sewer and Water Connections	TBD
Other Local Agencies	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Town of Hamburg Building Department – Building Permits	TBD
Other Regional Agencies	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Erie County Water Authority – Water connections	TBD
State Agencies	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	New York State Department of Environmental Conservation – Stormwater	TBD
Federal Agencies	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		

**C. Zoning and Planning Information**

1. Does proposed action involve a planning or zoning decision?  Yes  No  
 If Yes, indicate decision required:  
 zoning amendment  zoning variance  special use permit  subdivision  site plan  
 new/revision of master plan  resource management plan  other \_\_\_\_\_
2. What is the zoning classification(s) of the site? R-3 Multifamily District ("R-3").
3. What is the maximum potential development of the site if developed as permitted by the proposed zoning?  
 The maximum potential development of the Project Site consists of the development that would be permitted pursuant to Section 280-45 of the Town of Hamburg Zoning Code. This section of the Zoning Code permits multifamily dwellings, dwelling groups, hospitals and religious institutions, dormitories and there is not a maximum allowable density for multifamily dwellings and 3 story multifamily buildings are expressly permitted. The potential maximum development of the Project Site would consist of approximately 185 attached units.
4. What is the proposed zoning of the site? The Project Sponsor is not seeking to amend the zoning classification of the Project Site.
5. What is the maximum potential development of the site if developed as permitted by the proposed zoning?  
See Answer to Question C3 above.
6. Is the proposed action consistent with the recommended uses in adopted local land use plans?  Yes  No
7. What are the predominant land use(s) and zoning classifications within a ¼ mile radius of proposed action?  
The predominant land use in the vicinity of the Project Site is residential uses on property zoned R-3.
8. Is the proposed action compatible with adjoining/surrounding land uses within a ¼ mile?  Yes  No
9. If the proposed action is the subdivision of land, how many lots are proposed? Not Applicable  
 a. What is the minimum lot size proposed? \_\_\_\_\_
10. Will proposed action require any authorization(s) for the formation of sewer or water districts?  Yes  No

11. Will the proposed action create a demand for any community provided services (recreation, education, police, fire protection)? Yes – The proposed action will increase the demand for community services including police and fire protection services.

a. If yes, is existing capacity sufficient to handle projected demand?  Yes  No – Copy of Traffic Impact Study prepared by Nussbaumer & Clarke, Inc. attached as Exhibit "O"

12. Will the proposed action result in the generation of traffic significantly above present levels?

Yes  No

b. If yes, is the existing road network adequate to handle the additional traffic?

#### **D. Informational Details**

Attach any additional information as may be needed to clarify your project. If there are or may be any adverse impacts associated with your proposal, please discuss such impacts and the measures which you propose to mitigate or avoid them.

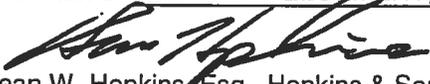
**The Project Sponsor has submitted extensive documentation to assist the lead agency as well as involved and interested agencies in identifying and evaluating potential adverse environmental impacts pursuant to SEQRA. It is the position of the Project Sponsor that the issuance of a negative declaration is appropriate since the proposed project ("action") will not result in any potentially significant adverse environmental impacts. The documentation submitted by the Project Sponsor consists of the following:**

- Exhibit A:** Part 1 of the Long Environmental Assessment Form
- Exhibit B:** Site Plan for Sherwood Meadows Project prepared by Nussbaumer & Clarke, Inc.
- Exhibit C:** Color Conceptual Buildings Elevations prepared by Sutton Architecture PLLC
- Exhibit D:** Color Aerial Photograph of Project Site and Surrounding Vicinity
- Exhibit E:** Article X of the Town of Hamburg Zoning Ordinance (titled "R-3 Multifamily District")
- Exhibit F:** Map 2-10 of the Town of Hamburg Comprehensive Plan (titled "Generalized Future Land Use")
- Exhibit G:** Site Plan for Previously Approved Townhome Project prepared by Nussbaumer & Clarke, Inc.
- Exhibit H:** Negative Declaration issued by Town of Hamburg Planning Board for Previously Approved Townhome Project dated June 20, 2007
- Exhibit I:** Minutes of Meeting of the Town of Hamburg Planning Board held on December 19, 2012
- Exhibit J:** Correspondence from David Burke of Dato Development LLC to Residents to Invite Residents to Attend Informational Meeting on April 2, 2013 with attached plans
- Exhibit K:** Property Owner Notification Map and List of Property Owners as obtained from Town of Hamburg
- Exhibit L:** Sign-In Sheet for Informational Meeting held on April 2, 2013
- Exhibit M:** Correspondence from David Burke of Dato Development LLC to Residents dated April 3, 2013
- Exhibit N:** Minutes of Meeting of the Town of Hamburg Planning Board held on April 3, 2013
- Exhibit O:** Traffic Impact Study prepared by Nussbaumer & Clarke, Inc. dated May of 2013
- Exhibit P:** Wetland Delineation Report prepared by Wilson Environmental Technologies dated November 1, 2006
- Exhibit Q:** Jurisdictional Determination issued by the United States Army Corps of Engineers dated April 10, 2008
- Exhibit R:** Wetland Delineation Report prepared by Wilson Environmental Technologies dated May 24, 2013

**E. Verification**

I certify that the information provided above is true to the best of my knowledge.

Applicant/Sponsor Name DATO DEVELOPMENT, LLC Date 05/24/13

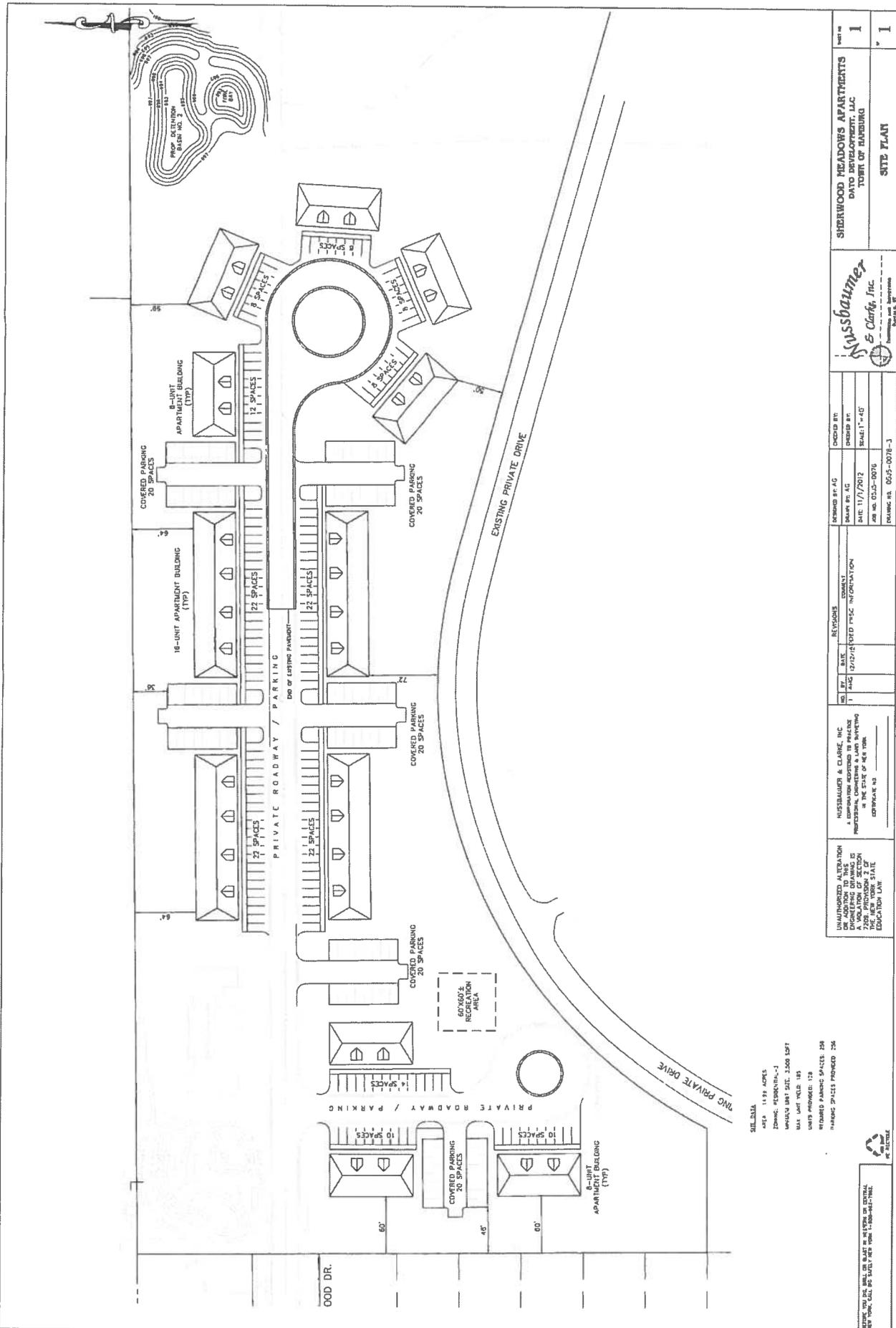
Signature  Title Attorney for Project Sponsor  
Sean W. Hopkins, Esq., Hopkins & Sorgi, PLLC

If the action is in the Coastal Area, and you are a state agency, complete the Coastal Assessment Form before proceeding with this assessment.

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# **EXHIBIT B**

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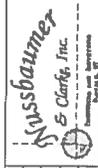


SHELDON  
 AREA 11.99 ACRES  
 ZONING: RESIDENTIAL-3  
 MAXIMUM UNIT SIZE: 2,500 SQ FT  
 MAX UNIT YIELD: 185  
 UNITS PROVIDED: 128  
 REQUIRED PARKING SPACES: 259  
 TRADING SPACES PROVIDED: 256

NOTES: NO USE SHALL OR SHALL BE DEPENDENT ON EXISTING  
 USES. USES SHALL BE SUBJECT TO THE "PROHIBITED USES"  
 OF THE ZONING ORDINANCE.



UNAUTHORIZED ALTERATION OF THIS DRAWING IS PROHIBITED. VIOLATION IS A VIOLATION OF THE PROFESSIONAL ENGINEERING AND SURVEYING ACT IN THE STATE OF NEW YORK. CONTRACT NO. _____		NUSSEBAUM & CLARKE, INC. PROFESSIONAL ENGINEERS AND SURVEYORS IN THE STATE OF NEW YORK CONTRACT NO. _____		NO. OF PAGES: 1 DATE: 12/21/2012 COMMENTS: REVISION INFORMATION		APPROVED BY: JG DRAWN BY: JG DATE: 11/17/2012 JOB NO.: 05-03-0076		CHECKED BY: _____ DATE: _____ SCALE: 1"=40' DRAWING NO.: 05-03-0076-3		SHEET NO. 1 OF 1 SITE PLAN	
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SHERWOOD MEADOWS APARTMENTS  
 DATE DEVELOPMENT, LLC  
 TOWN OF HAMBURG  
 SITE PLAN

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**EXHIBIT C**

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# **EXHIBIT D**

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**Location of Project Site**



Google earth



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**EXHIBIT E**

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Town of Hamburg, NY  
Wednesday, June 19, 2013

## Chapter 280. ZONING

### Article X. R-3 Multifamily District

#### § 280-45. Permitted uses and structures.

Uses and structures permitted in the R-3 District are as follows:

A. Principal uses and structures where served by a public sanitary sewer:

- (1) Principal uses and structures permitted in the R-2 District.
- (2) Multifamily dwellings or condominiums.
- (3) Dwelling groups.
- (4) Hospitals or institutions of a religious, charitable, rehabilitative or philanthropic nature, provided that they are not used for penal or correctional purposes. No on-site incineration is permitted and no off-street parking is allowed in front of the principal structure. **[Amended 7-12-1993 by L.L. No. 6-1993]**
- (5) Nursing or convalescent homes, subject to side yard requirements for other principal buildings.
- (6) Colleges and universities. **[Added 11-28-2011 by L.L. No. 14-2011** *Editor's Note: This local law also provided for the redesignation of former Subsection A(6) and (7) as Subsection (7) as Subsection A(7) and (8), respectively. ]*
- (7) Dormitories.
- (8) The following uses by special use permit authorized by the Planning Board (see Article XLVI):
  - (a) Nursery schools and day-care centers. **[Amended 1-11-1993 by L.L. No. 1-1993** *Editor's Note: This local law also repealed former Subsection A(7)(a), Satellite dish antennas. ]*

B. Accessory uses and structures:

- (1) Accessory uses and structures permitted and as regulated in the R-2 District.

- (2) Accessory uses and structures customarily incidental to permitted principal uses.
- (3) Accommodations for not more than three roomers or lodgers within a dwelling.

## § 280-46. Minimum lot size.

Unless otherwise provided, the minimum lot size in the R-3 District shall be as specified in this section.

### A. Lot area:

- (1) Minimum (single-family home): 9,000 square feet. **[Amended 8-4-2003 by L.L. No. 4-2003]**
- (2) Minimum (two-family dwellings): 5,000 square feet per dwelling unit. **[Amended 8-4-2003 by L.L. No. 4-2003; 12-11-2006 by L.L. No. 7-2006]**
- (3) Three-or-more-family dwellings, not to exceed three stories: no minimum lot size. Density shall be determined based on compliance with all other minimum setback requirements of this section. The parcel of land for a permitted use shall be sufficient in size to adequately accommodate all buildings, required off-street parking, landscaping and other accessory uses as dictated by all other bulk regulations. **[Amended 12-11-2006 by L.L. No. 7-2006]**
- (4) Three-or-more-family dwellings over three stories in height: no minimum lot size. Density shall be determined based on compliance with all other minimum setback requirements of this section. The parcel of land for a permitted use shall be sufficient in size to adequately accommodate all buildings, required off-street parking, landscaping and other accessory uses as dictated by all other bulk regulations. **[Amended 12-11-2006 by L.L. No. 7-2006]**

B. Lot width at the building line: 70 feet for one dwelling unit, plus an additional 15 feet for a second dwelling unit and an additional 20 feet for each dwelling unit over two, but need not exceed 200 feet. **[Amended 8-4-2003 by L.L. No. 4-2003]**

C. Lot width at the front lot line: 30 feet. **[Amended 8-4-2003 by L.L. No. 4-2003]**

## § 280-47. Maximum height of buildings.

Unless otherwise provided, the maximum height of buildings in the R-3 District shall be as specified in this section.

- A. Single-family or two-family dwellings: 2 1/2 stories, not to exceed 35 feet.
- B. Other principal buildings: as regulated by yard requirements.
- C. Accessory buildings: one story, not to exceed 18 feet.

## § 280-48. Required yards.

Unless otherwise provided, the minimum required yards and other open spaces in the R-3 District shall be as specified in this section.

A. Front yard: 35 feet.

B. Side yards: two required.

(1) Single-family dwellings:

(a) The minimum width of any side yard shall be five feet.

(b) The total width of both side yards shall not be less than 15 feet.

(2) Two-family dwellings: The minimum width of any side yard shall be 10 feet.

(3) Other principal buildings. Except as otherwise provided, each side yard shall equal 30 feet or a distance equal to the height of the principal building, whichever is greater; provided, however, that when a side yard adjoins a lot in any district other than an R District, such side yard shall equal 15 feet or a distance equal to 1/2 the height of the principal building, whichever is greater.

C. Rear yard. Except as otherwise provided, no rear yard shall have a depth of less than 30 feet or a distance equal to the height of the principal building, whichever is greater.

D. Three-or-more-family dwellings, not to exceed three stories in height, shall be a minimum of 50 feet from any property line.

E. Three-or-more-family dwellings over three stories in height shall be a minimum of 50 feet from any property line, with an additional one foot for each additional foot exceeding 35 feet in height.

F. Open space between principal buildings on a single lot. No vertical wall of a principal building shall be nearer to a vertical wall of any other principal building than a distance of 30 feet or a distance equal to the average height of such vertical walls measured from the adjoining finished grade, whichever is greater.

### **§ 280-49. Off-street parking.**

For applicable off-street parking regulations, see Article **XXXII**.

### **§ 280-50. Signs.**

For applicable sign regulations, see Article **XXXVI**.

### **§ 280-51. Supplemental regulations.**

For applicable supplemental regulations pertaining to use, clustering, height, area or open space, see Articles **XXXVII** through **XL**.

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**EXHIBIT F**

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# Town of Hamburg

## Generalized Future Land Use

Map: 2-10

**Legend**

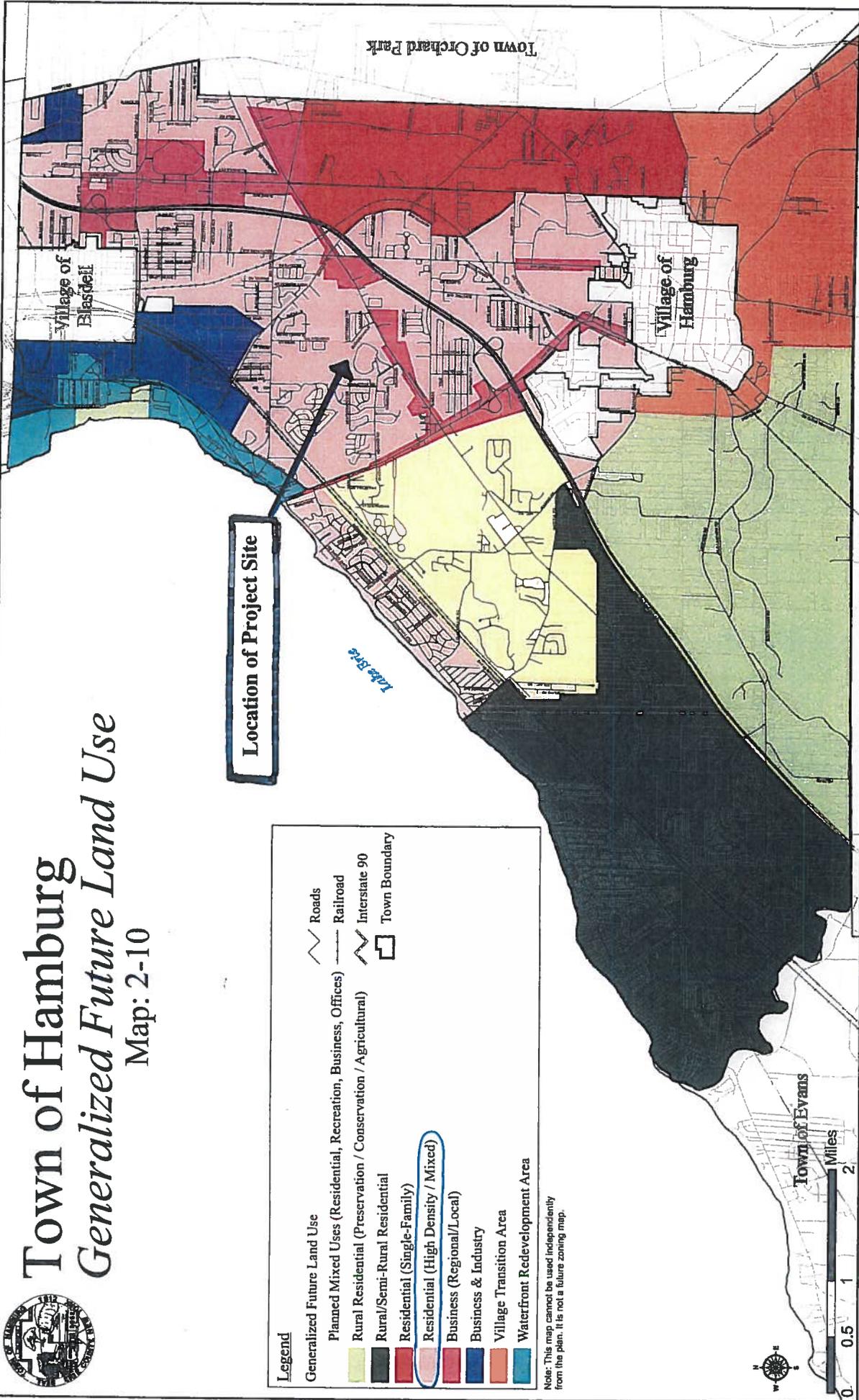
**Generalized Future Land Use**

- Planned Mixed Uses (Residential, Recreation, Business, Offices)
- Rural Residential (Preservation / Conservation / Agricultural)
- Rural/Semi-Rural Residential
- Residential (Single-Family)
- Residential (High Density / Mixed)
- Business (Regional/Local)
- Business & Industry
- Village Transition Area
- Waterfront Redevelopment Area

**Infrastructure:**

- Roads
- Railroad
- Interstate 90
- Town Boundary

Note: This map cannot be used independently from the plan. It is not a future zoning map.



WENDEL DUCHSCHERER ARCHITECTS & ENGINEERS P.C. SHALL ASSUME NO LIABILITY FOR: 1. ANY ERRORS, OMISSIONS, OR INACCURACIES IN THE INFORMATION PROVIDED REGARDLESS OF ANY CAUSES, OR 2. ANY DECISION MADE OR ACTION TAKEN OR NOT TAKEN BY THE READER IN RELIANCE UPON ANY INFORMATION OR DATA FURNISHED HEREUNDER. DATA SOURCES: TOWN OF HAMBURG

Map Created: July, 2009  
WD Project # 2009-06-CRUP

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# **EXHIBIT G**

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# **EXHIBIT H**

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**State Environmental Quality Review  
Negative Declaration  
Notice of Determination of Non-Significance**

Date: June 20, 2007

This notice is issued pursuant to Part 617 of the implementing regulations pertaining to Article 8 (State Environmental Quality Review Act-SEQR) of the Environmental Conservation Law.

The Town of Hamburg Planning Board has determined that the proposed action described below will not have a significant effect on the environment and that a Draft Environmental Impact Statement will not be prepared.

**Name of Action:** Sherwood Meadows Townhomes  
Vacant land as an extension of Heatherwood Drive, north of Hopevale  
Town of Hamburg, New York

**SEQR Status:** Unlisted

**Description of Action:** The construction of a 56-unit townhome development as an extension of Heatherwood Drive

**Location:** Vacant land, east of Heatherwood Drive, north of Hopevale  
Town of Hamburg, New York  
County of Erie

**Reasons Supporting This Determination:** During review of this project, the Town of Hamburg Planning Board identified the relevant areas of environmental concern which are analyzed below:

- A trail system will be provided by the applicant connecting this development to the Town-owned parkland off of Buckingham Road.
- A gated secondary means of egress will be provided onto the Hopevale property for emergency use only and will be recorded in the deed.
- During construction, as many trees as possible will be saved. Additionally, the existing vegetation along the rear of the existing homes on Breckinridge Road will be enhanced.
- The Army Corps of Engineers must sign off on the wetland delineation before Final Approval is granted.

The Town of Hamburg Planning Board, therefore, concludes that the project will not adversely affect the natural resources of the State and/or the health, safety and welfare of the public and is consistent with social and economic consideration. In reaching this decision, the Town of Hamburg Planning Board carefully considered all "Criteria" for Determination of Significance listed in the SEQR Regulations (6 NYCRR 617.7).

**For Further Information:**

**Contact Person:**

**Town of Hamburg Planning Department  
S-6100 South Park Avenue  
Hamburg, NY 14075  
Andrew Reilly, Planning Consultant**

**Dated:** June 20, 2007

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# EXHIBIT I

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Town of Hamburg  
Planning Board Meeting  
December 19, 2012

Minutes

The Town of Hamburg Planning Board met for a Work Session at 6:30 P.M., followed by a Regular Meeting at 7:00 P.M., on Wednesday, December 19, 2012 in Room 7B of Hamburg Town Hall, 6100 South Park Avenue. Those attending included Chairman Peter Reszka, Stephen McCabe, Gerard Koenig, Daniel O'Connell and Doug Schawel.

Others in attendance included Attorney Cheryl McFadden-Zak, Andrew Reilly and Sarah desJardins.

Excused: David Bellissimo, Sasha Yerkovich

**WORK SESSION**

**Susan Keller – 3861 McKinley Parkway**

It was determined that the applicant wishes to rezone her property from R-2 to NC in order to convert the existing Home Occupation business to a commercial business without the restrictions of Home Occupation. Mr. Reilly stated that this is the only parcel on McKinley Parkway still zoned residential, noting that all other properties on McKinley Parkway are zoned commercial.

In response to a question from Mr. Reilly, Ms. Keller stated that she currently has room for five (5) vehicles to park on the property. She further stated that if the property is rezoned, she might need to expand the parking lot. She noted that she would like to add one (1) or two (2) more employees to her hair styling salon.

Mr. Reilly stated that he will make a copy of the Town's old parking requirements for the Board's files so that they can be referred to, if necessary.

Mr. Reilly stated that this rezoning request is in compliance with the Town's Comprehensive Plan.

Mr. McCabe made a motion, seconded by Mr. O'Connell, to forward a positive recommendation to the Town Board regarding this rezoning request. Carried.

**REGULAR MEETING**

Chairman Reszka stated that the Russo Development project applicant had asked that that project be tabled.

**Continuation of Public Hearing – Sgroi Two-Lot Subdivision**

Mr. McCabe read the following notice of public hearing:

"Notice is hereby given that the Town of Hamburg Planning Board will hold a continuation of a Public Hearing on December 19, 2012 in Room 7 B of Hamburg Town Hall at 7:00 P.M. regarding a proposed two-lot subdivision known as the Sgroi Subdivision, to be located at the

end of Woodland Drive. The property is identified as SBL# 196.00-3-8.1.”

Mr. Reilly stated that the applicant is proposing a two-lot subdivision at the end of a dedicated highway. He further stated that a variance would be required for the road frontage provided for each lot.

Mrs. desJardins stated that she recently was informed that the applicant does not intend to build on the proposed lot that is currently vacant (lot # 2). Mr. Reilly stated that the Planning Board has, in the past, approved subdivisions containing lots that are not building lots. He noted that the Planning Board would require that the fact that a lot is not a building lot be filed with the County so that someone does not build on the lot in the future.

Mr. Eric Krull, representing the applicant, stated that the applicant owns property in the Town of Boston that is adjacent to this property. He noted that the applicant purchased this property in Hamburg with the intention of building homes on the portion that is closest to Woodland Drive, but later found out that the property contains wetlands. He began building one (1) home on the westernmost lot but was stopped by the New York State Department of Environmental Conservation (NYSDEC) due to a minor infraction. He stated that since that time, the applicant has paid a fine and performed wetlands mitigation, and has been cleared to continue building the home per the NYSDEC.

Mr. Krull stated that the applicant does not want to sell the entire parcel that is to be divided to one (1) person because his home is situated on the adjacent property in Boston and he does not want someone building near his home.

Mr. Reilly suggested that the applicant attach the vacant lot (lot # 2) to his existing property in Boston.

In response to a question from Chairman Reszka, Mr. Krull stated that the Hamburg Engineering Department has a map showing the exact boundaries of the existing wetlands on the property.

Mr. Krull stated that he will speak to the applicant about the possibility of attaching the vacant land on lot # 2 to his adjacent property in Boston.

Mr. Reilly stated that the applicant needs to discuss the condition of the existing foundation with the Building Department.

Chairman Reszka read the following memo received from the Chairman of the Conservation Advisory Board:

“The approval of a two-lot subdivision here would in effect create a second building lot in the buffer to an NYSDEC wetland, creating the potential for another wetlands violation.”

Chairman Reszka declared the public hearing open. The following people spoke:

1. Mr. Don Larson stated that he owns property approximately 300 feet from this property. He stated that the property on which the applicant proposes to build is extremely wet, and he has no indication as to how the applicant would handle the surface water that will come off the house, as well as the storm water, or where the driveway would be.

He stated that the storm water would probably have to go to adjoining properties. He stated that he feels that this is not a buildable site and noted that 80% of the properties on Woodland Drive and Vail Drive have very wet rear yards in the spring that are unusable. He stated that the existing foundation on the property is unsafe.

2. Dr. Cyril Bodnar, 6841 Woodland Drive, stated that the applicant's property is a mess and kids congregate there on the weekend evenings. He stated that the fence around the foundation is not substantial and is often taken down by the kids. He stated that the applicant's property is extremely wet and worries that the applicant might build a dam, which would adversely affect his (Dr. Bodnar's) property. He stated that he is concerned about his right of ingress and egress to the roadway where the applicant's driveway would begin.

Mr. Krull stated that the NYSDEC and the U.S. Army Corps of Engineers agreed on the boundaries of the existing wetlands on the property, and the existing foundation is not in the wetlands but is in the buffer area. He further stated that plans for the property include a french drain mini-pond that was requested by the NYSDEC, as well as a swale to collect the drainage from the site and process it before it gets to the wetland.

Mr. Reilly stated that some of the neighbors' concerns will be moot if the applicant decides to merge the eastern portion of this property with his adjacent property in Boston because in that scenario subdivision approval would not be required and just the one (1) home would be built.

Chairman Reszka declared the public hearing closed.

Mr. McCabe made a motion, seconded by Mr. O'Connell, to table this proposal. Carried.

Engineering Department comments have been filed with the Planning Department.

### **Public Hearing – Sherwood Meadows Apartments**

Mr. McCabe read the following notice of public hearing:

"Notice is hereby given that the Town of Hamburg Planning Board will conduct a Public Hearing on a proposal by David Burke to construct 128 apartments on vacant land located east of Heatherwood Drive. The Public Hearing will be held on December 19, 2012 at 7:00 p.m. in Room 7B of Hamburg Town Hall."

Mr. Reilly stated that the Planning Board approved a 56-unit townhouse project on this property in 2007. He further stated that to date the infrastructure and one (1) building have been built, and the applicant is proposing to convert the project to an apartment complex, which requires Site Plan Approval from the Planning Board. He noted that the property is zoned R-3, which allows apartment projects.

Mr. Andrew Gow from Nussbaumer & Clarke and David Burke, applicant, appeared on behalf of the proposed project. Mr. Gow stated that the first part of the road has been constructed, as well as one (1) cul-de-sac, one (1) detention basin and the first building containing four (4)

units. He further stated that the road and other infrastructure would be designed and installed as indicated under the original approval. He noted that the townhomes would be replaced by apartment units. He stated that the footprint of the approved plan, as well as the amount of green space provided, is similar to the footprint of the proposed plan.

Mr. Gow stated that eight-unit buildings and sixteen-unit buildings are proposed, both of which were designed with a residential style in mind.

Chairman Reszka declared the public hearing open. The following people spoke:

1. Charles Cox, 3728 Breckinridge, asked if the Town has requirements regarding the type of infrastructure needed for a 56-unit project versus a 128-unit project. He further asked what type of apartments are proposed (low-income, subsidized, etc.) and whether the Town has density requirements for apartment projects. He stated that he was concerned when the townhouse project was approved because he would have liked the applicant to build similar housing to what exists in the neighborhood, but at least the proposed townhouses would have been owner occupied and upscale. He stated that the current proposal could easily add 256 cars to the existing neighborhood streets, and he feels that the streets were not built for that amount of traffic. He stated that there are significant problems already with the existing streets in the neighborhood. He stated that this project would be totally contrary to the existing neighborhood atmosphere that exists now.
2. Mr. Jim Zahradnik, 4537 Roundtree Road, stated that he has lived at this location since 1977 and is concerned about the potential volume of traffic on the existing neighborhood streets as a result of this proposal. He stated that the neighborhood is very family oriented. He asked if a separate drive from Southwestern Boulevard could be developed so that the entrance to Heatherwood Drive could be closed off.
3. Terri Schelter, 3691 Breckinridge Drive, stated that she is very concerned about the increase in traffic that would be generated by this project. She asked if the Town has regulations regarding the number of parking spaces that must be provided for each apartment unit. She asked how many bedrooms the apartments would have. She stated that it is bad enough that she was going to have to look at townhouses, and now she does not want to look at apartments. She stated that this is a whole new plan and does not resemble the previously approved project. She stated that her home is on a curve, and the additional traffic would be a safety concern. She stated that the developer is assuming that he can sell 126 apartments, and she does not have faith that he is assuming correctly this time, since he proposed townhouses before because he assumed he could sell them.
4. Cheryl McBride, 3479 Heatherwood Drive, asked why the developer wishes to change the project from townhouses to apartments, and whether he plans to sell the building that has already been built. She asked if garages are planned for the apartments and whether garages would be available for each apartment unit. She asked if the developer plans to maintain ownership of the development. She stated that she agrees with the previous comments regarding the increase in traffic, and she feels that without another means of egress from the project site, the roads in the neighborhood will not

be able to handle the additional traffic. She stated that the 2010 Comprehensive Plan Update included a survey of Hamburg residents regarding what type of housing they would like in their area, and apartments were last on the list. She stated that her concerns about the proposed rezoning of property off of Howard Road hold true for this proposed apartment complex as well. She stated that in a 1.5 - mile radius of the Howard Road property, there are over 1,200 rental units with many vacancies.

5. Mr. Ken Radens, 4538 Roundtree Road, stated that he feels the developer's new proposal is quite a bit different than the townhouse proposal. He stated that he feels sorry for the people who would be living behind the proposed parking lot. He asked how the project would be phased. He stated that he worries that the buildings might be built and then remain empty. He stated that he is concerned about what the rent would be for these units and noted that he is concerned about the apartments being low income.
6. Mr. Dan Kuczmarski, 3715 Breckinridge Road, stated that he believes that someone could purchase a townhouse and pay a mortgage that would be relatively close to what the apartments would rent for. He stated that he does not see the advantage of building apartments, given that fact.
7. Sarah Burke stated that she believes that it is possible that the provided number of parking spaces might not be sufficient and then people would have to park on the street. She stated that many college students are moving back home and will not be looking for apartments. She stated that an apartment complex is already being built on Route 20. She stated that the existing apartments that are vacant should be filled before new apartments are built. She stated that building apartments on this site will not make the residents of the existing neighborhood feel pride for what they worked for. She asked why single family homes are not being proposed on the site instead of apartments.
8. Lisa Burke, 3722 Breckinridge Road, stated that cars park on both sides of her street, and there is a big parking problem already. She stated that small children run on the streets and she feels that adding more traffic is an accident waiting to happen.
9. Loren Backlas, 3710 Breckinridge Road, stated that he chose this neighborhood because there are only two (2) ways in and out, making it quiet with plenty of room. He stated that all of the apartment traffic will be traveling through the existing neighborhood to get to and from work. He stated that the apartment renters will be walking through the neighborhood. He stated that houses sell in an average of 28 days in the existing neighborhood and he is concerned that they will not sell when prospective buyers see the apartment complex and the related traffic. He stated that if the apartment dwellers could get in and out of the site without going through the existing neighborhood, it would not affect the homes that are already there. He stated that there should be some way to mitigate the increase in noise generated from the project. He stated that the neighborhood roads are in very poor condition and will not be able to handle the additional traffic.
10. Mr. Lawrence Bowman, 3690 Woodhaven Circle, stated that the neighborhood is very family oriented. He stated that he is very concerned about the garbage dumpsters and lighting associated with the apartments. He stated that he enjoys the wildlife in the

woods on the property. He stated that he is concerned about rodents.

11. Mr. Paul Kuss, 3686 Woodhaven Circle, stated that he is concerned that a portion of the apartment buildings will be constructed and then the developer will find out that there is no market for them. He asked why the developer doesn't leave the property vacant until the market comes back and then proceed with the original plan for townhouses.
12. Mr. Joe Kozak, 3717 Breckinridge Road, stated that he spoke to the developer when the townhouse project was approved, and he was told that there would be landscaping and trees behind his home, but nothing has been installed there. He further stated that there is a pile of rubbish behind his home on the developer's property that has been there for over five (5) years. He stated that kids race around on the developer's property on four-wheelers. He asked why the developer doesn't finish the project as it was approved and rent the townhouses instead of selling them. He stated that he is concerned about the additional traffic and the deteriorating roads in the existing subdivision, and asked if the Town will rebuild the roads. He stated that there are apartment complexes with vacancies in the vicinity of this property.

Ms. McBride urged Planning Board members to visit the Roundtree Subdivision, travel its roads and walk the project site. Mr. O'Connell responded that he knows people who live in this area and has family who live in it. He noted that he has visited the area and the site at least six (6) times.

Chairman Reszka declared the public hearing closed.

Chairman Reszka stated that the concerns raised at the public hearing must be addressed by the applicant.

Mr. McCabe made a motion, seconded by Mr. Koenig, to table this proposal. Carried.

Engineering Department comments have been filed with the Planning Department.

**Miller's Collision and Auto, Inc.**

Mr. McCabe made the following motion, seconded by Mr. Schawel:

Based on the information submitted for the Special Use Permit and site visits, the Planning Board has determined that the proposed project (existing business operation getting a Special Use Permit) will not result in any significant adverse environmental impact and a Negative Declaration is hereby issued.

Carried.

Mr. McCabe made the following motion, seconded by Mr. Koenig:

The Planning Board, in reviewing this proposed project and Special Use Permit, has determined, in accordance with Section 280-312, that:

1. The project will be in harmony with the purposes and intent of this chapter (Special Use Permit).
2. The project will not create a hazard to health, safety and general welfare.
3. The project will not alter the essential character of the neighborhood nor be detrimental to its residents.
4. The project will not otherwise be detrimental to the public convenience and welfare.

The project is in accordance with the special requirements for a Public Garage Special Use Permit as follows:

1. The use will be conducted within an area completely enclosed by a fence of at least eight (8) feet in height.
2. The Building Inspector shall make periodic inspections of each operating facility to ensure the proper maintenance of structures and the adequate clean-up of litter.
3. The size, location and materials used shall be determined by the Planning Board.

Therefore, based on the SEQR Negative Declaration, the information submitted and the Special Use Permit discussion, the Planning Board approves the issuance of a Special Use Permit with the following conditions:

1. The project is in accordance with the information submitted.
2. All towed vehicles will be stored within the fence enclosure.
3. Parking next to the building shall be for customers only.
4. There shall be no parking in front of the building.

Carried.

#### **OTHER BUSINESS**

Mr. Koenig made a motion, seconded by Mr. Schawel, to approve the minutes of December 5, 2012. Carried.

Chairman Reszka made a motion, seconded by Mr. Schawel, to adjourn the meeting. The meeting was adjourned at 8:30 P.M.

Respectfully submitted,

Stephen J. McCabe, Secretary

Planning Board

Date: January 2, 2013

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# EXHIBIT J

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**DATO DEVELOPMENT, LLC**

**S5540 SOUTHWESTERN BLVD. HAMBURG, NY 14075**

**716-646-0047 OFFICE**

**716-646-5510 FAX**

**Invitation to Attend Informational Meeting  
to be held at Michael's Banquet Hall on April 2<sup>nd</sup> at 6:30 p.m.  
Proposed Sherwood Apartment Project**

Dear Sean Hopkins:

I am sending you this letter to invite you to attend an informational meeting to be held at Michael's Banquet Facility on Tuesday, April 2<sup>nd</sup> at 4885 Southwestern Boulevard from 6:30 p.m. to 8:00 p.m. for the purpose of discussing the proposed development of property located at the end of Heatherwood Drive as one hundred and twenty eight upscale apartments units. Enclosed is a copy of the Site Plan and a conceptual building elevation plan for the proposed project. The proposed apartments will be approximately 750 to 950 square feet in size.

The Project Site is properly zoned R-3 for the proposed project and the density of the project is considerably less than as permitted by the existing R-3 zoning classification.

The Town of Hamburg previously approved a 56-unit townhouse project for the Project Site in 2007 and to date the infrastructure and one building have been built. The reason the project has been modified is due to the lack of demand for the previously approved for sale attached townhouse units. The existing infrastructure improvements will be utilized in connection with the currently proposed project.

The Planning Board's review of the proposed sketch plan for the project will continue during its upcoming meeting on Wednesday, April 3<sup>rd</sup> at 7:00 p.m. I am hopeful the upcoming informational meeting will allow us to discuss the project outside the confines of a formal Planning Board meeting. Once the sketch plan review process is complete, a site plan application along with the required supporting documentation will be filed the Town of Hamburg.

We welcome input on the proposed project and this will be the purpose of the upcoming informational meeting to be held on April 2<sup>nd</sup> at 6:30 p.m. If you are not able to attend the upcoming informational meeting, please feel free to contact me at your convenience to discuss the proposed project. The best way to contact me is to either call me at 716-646-0047 or by e-mail at [powerframer@yahoo.com](mailto:powerframer@yahoo.com).

Thank you for reviewing this letter and the enclosures. I hope you can attend the upcoming informational meeting if you have any questions regarding the proposed project.

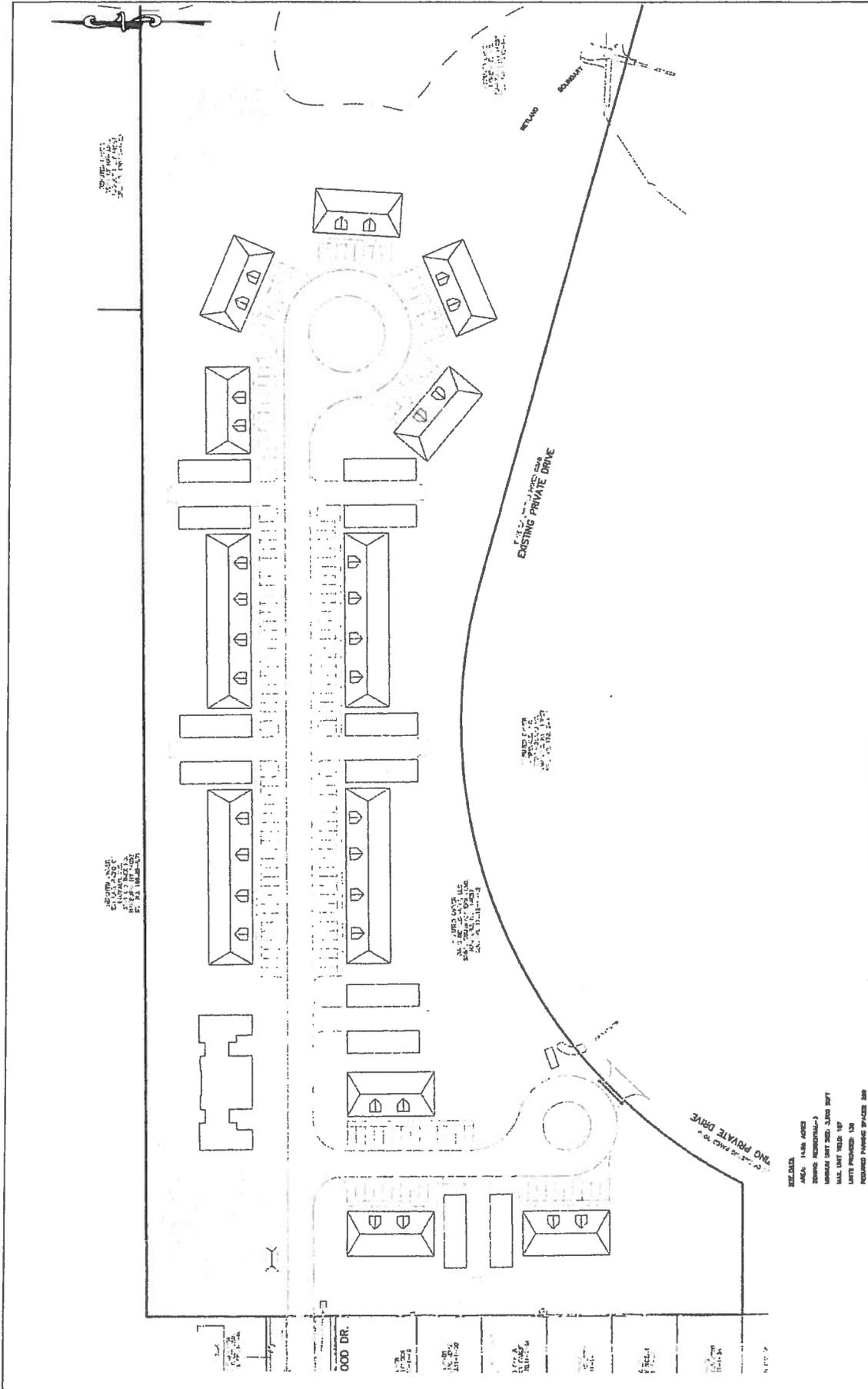
Sincerely,

DATO DEVELOPMENT, LLC

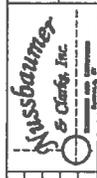
David Burke

Enc.





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NICHOLAS BLANKS, ALAN WELLS  
 PAVED DEVELOPMENT, LLC  
 1240 W. 100TH

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 2. SEE PLAN 18 FOR CONCEPTS  
 3. SEE PLAN 19 FOR CONCEPTS

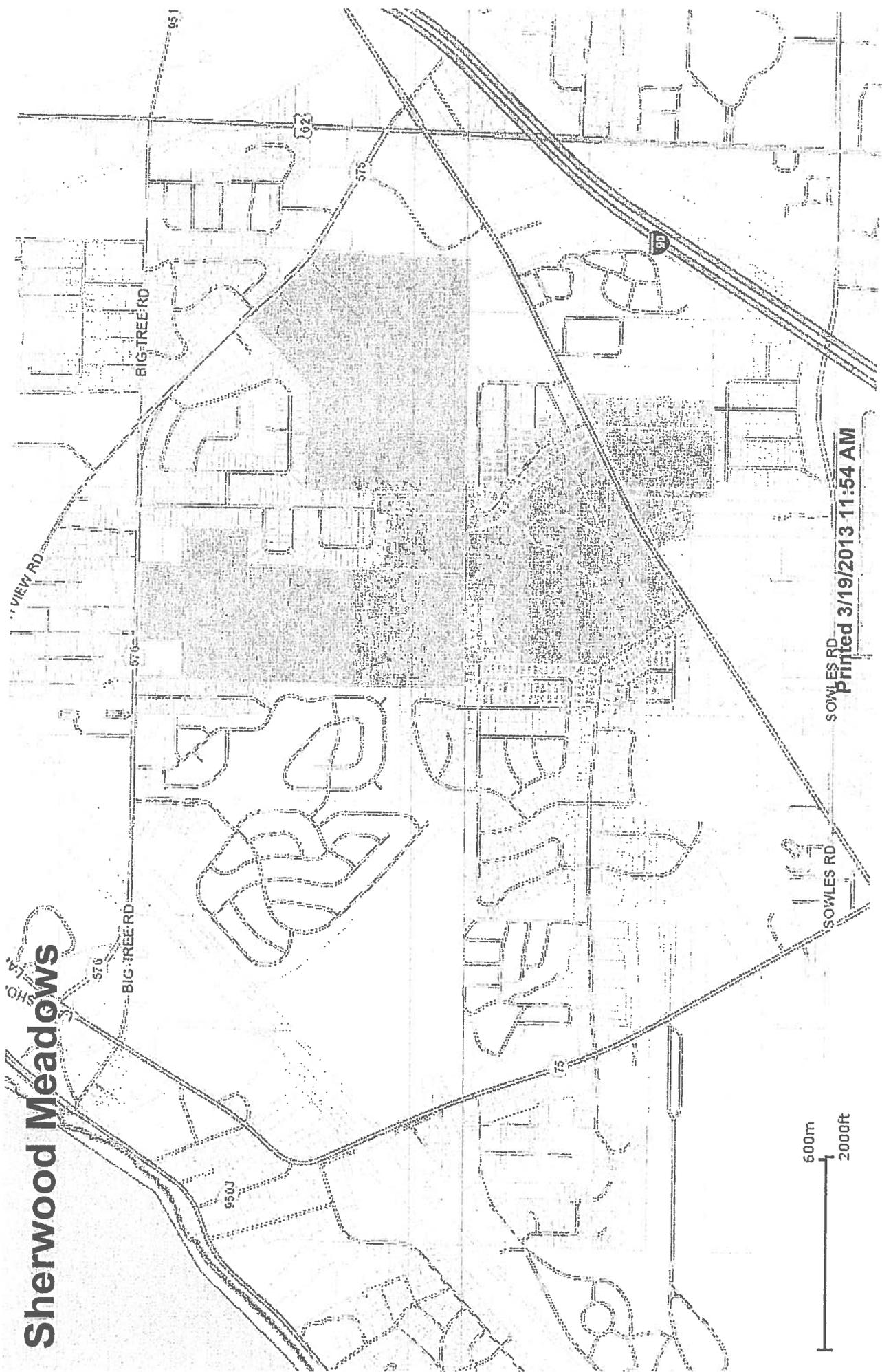
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 2. SEE PLAN 18 FOR CONCEPTS  
 3. SEE PLAN 19 FOR CONCEPTS

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# **EXHIBIT K**

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# Sherwood Meadows



600m  
2000ft

SOWLES RD  
Printed 3/19/2013 11:54 AM

Rook, Scott  
3699 Breckenridge Rd  
Hamburg, NY 14075-2229

Singer, Andrea L & Jason M  
3709 Breckenridge Rd  
Hamburg, NY 14075-2229

Kozak, Joseph & Charlene  
3717 Breckenridge Rd  
Hamburg, NY 14075-2229

Mc Andrews, Michael & wife  
3725 Breckenridge Rd  
Hamburg, NY 14075-2229

Izzio, Virginia  
3695 Breckenridge Rd  
Hamburg, NY 14075-2229

Frontier Central School  
5120 Orchard Ave  
Hamburg, NY 14075

Anderson, Richard & Therese  
3938 Nottingham Ter  
Hamburg, NY 14075-1908

Nastevski, Alexander  
3928 Nottingham Ter  
Hamburg, NY 14075

DATO Development LLC  
5540 Southwestern Blvd  
Hamburg, NY 14075

Davis, Michael  
3736 Heatherwood Dr  
Hamburg, NY 14075-2246

Carbone, John D & wife  
3703 Breckenridge Rd  
Hamburg, NY 14075-2229

Slowik, Wayne & Lynn  
3711 Breckenridge Rd  
Hamburg, NY 14075-2229

Kulczyk, Thomas & Diana  
3719 Breckenridge Rd  
Hamburg, NY 14075-2229

Clouden, Daniel & Patricia  
3727 Breckenridge Rd  
Hamburg, NY 14075-2229

Neth, Annette  
3697 Breckenridge Rd  
Hamburg, NY 14075-2229

Town Of Hamburg  
6100 South Park Ave  
Hamburg, NY 14075-3774

Edwards, William  
3934 Nottingham Terr  
Hamburg, NY 14075

Celotto, Patrick J & Julie M  
3924 Nottingham Terr  
Hamburg, NY 14075

Hopevale Inc  
3780 Howard Rd  
Hamburg, NY 14075-2298

Hart, Kevin Michael  
3730 Heatherwood Dr  
Hamburg, NY 14075-2246

Edwards, Michael & Lisa  
3705 Breckenridge Rd  
Hamburg, NY 14075-2229

Kuczarski, Daniel P & wife  
3715 Breckenridge Rd  
Hamburg, NY 14075-2229

Velasquez, Daniel R & Debra A  
3721 Breckenridge Rd  
Hamburg, NY 14075-2229

Sherwood Meadows Assoc  
5540 Southwestern Blvd  
Hamburg, NY 14075

Entercom Buffalo LLC  
500 Corporate Pkwy  
Buffalo, NY 14226

Town Of Hamburg  
6100 South Park Ave  
Hamburg, NY 14075-3766

Gibbons, Robert & Kathleen  
3930 Nottingham Terr  
Hamburg, NY 14075

Town Of Hamburg  
6100 South Park Ave  
Hamburg, NY 14075-3774

Corcoran Jr, John F & Kerry J  
3742 Heatherwood Dr  
Hamburg, NY 14075-2246

DATO Development LLC  
5540 Southwestern Blvd  
Hamburg, NY 14075

DATO Development LLC  
5540 Southwestern Blvd  
Hamburg, NY 14075

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Hamburg, NY 14075

DATO Development LLC  
5540 Southwestern Blvd  
Hamburg, NY 14075

Kohlhagen, Dennis & Roberta  
4430 Buckingham Ln  
Hamburg, NY 14075-1904

Schelter, Terri  
3691 Breckenridge Rd  
Hamburg, NY 14075-2229

Cox, Charles & Kimberlee  
3728 Breckenridge Rd  
Hamburg, NY 14075-2230

Barone, Gregg A & Cynthia A  
4529 Roundtree Rd  
Hamburg, NY 14075-2217

DATO Development LLC  
5540 Southwestern Blvd  
Hamburg, NY 14075

DATO Development LLC  
5540 Southwestern Blvd  
Hamburg, NY 14075

DATO Development LLC  
5540 Southwestern Blvd  
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5540 Southwestern Blvd  
Hamburg, NY 14075

DATO Development LLC  
5540 Southwestern Blvd  
Hamburg, NY 14075

Carboni, Michael T  
4455 Buckingham Ln  
Hamburg, NY 14075

DATO Development LLC  
5540 Southwestern Blvd  
Hamburg, NY 14075

DATO Development LLC  
5540 Southwestern Blvd  
Hamburg, NY 14075

Guglielmi, Alexander & Mary F  
4438 Buckingham Ln  
Hamburg, NY 14075-1904

Pham, Thanhtruc  
3726 Breckenridge Rd  
Hamburg, NY 14075-2230

Zahradnik, James C & wife  
4537 Roundtree Rd  
Hamburg, NY 14075-2217

Nelson Jr, John R  
3972 Tudor Pl  
Hamburg, NY 14075-1914

Fournier, Kent L & Kristy  
3956 Tudor Pl  
Hamburg, NY 14075-1914

DATO Development LLC  
5540 Southwestern Blvd  
Hamburg, NY 14075

Burke, Michael P & Lisa  
3722 Breckenridge Rd  
Hamburg, NY 14075-2230

DATO Development LLC  
5540 Southwestern Blvd  
Hamburg, NY 14075

Aronica, Susan  
4555 Roundtree Rd  
Hamburg, NY 14075-2217

Moran, John & Corinne  
3975 Tudor Pl  
Hamburg, NY 14075-1913

Schoenle, David & Renae  
3957 Tudor Pl  
Hamburg, NY 14075-1913

Parobek, David P & wife  
4563 Roundtree Rd  
Hamburg, NY 14075-2217

DATO Development LLC  
5540 Southwestern Blvd  
Hamburg, NY 14075

Phillips, Cheryl  
3966 Tudor Pl  
Hamburg, NY 14075-1914

Potter, Frank & Sharon  
3948 Tudor Pl  
Hamburg, NY 14075-1914

DATO Development LLC  
5540 Southwestern Blvd  
Hamburg, NY 14075

Sikora, Daniel E & Ann M  
4547 Roundtree Rd  
Hamburg, NY 14075-2217

Calorico, Bonnie G  
4464 Buckingham Ln  
Hamburg, NY 14075

DATO Development LLC  
5540 Southwestern Blvd  
Hamburg, NY 14075

Dombrowski, Ronald & Carol  
3971 Tudor Pl  
Hamburg, NY 14075-1913

DATO Development LLC  
5540 Southwestern Blvd  
Hamburg, NY 14075

Kwasniewski/Massaro, Marjorie A  
4482 Buckingham Ln  
Hamburg, NY 14075-1904

DATO Development LLC  
5540 Southwestern Blvd  
Hamburg, NY 14075

Piscitello, Anthony V & wife  
3960 Tudor Pl  
Hamburg, NY 14075-1914

Gallivan, Matthew J & Colleen  
4465 Buckingham Ln  
Hamburg, NY 14075-1903

Morrison, William D  
4446 Buckingham Ln  
Hamburg, NY 14075-1904

Drewiega, Michael F & wife  
4456 Buckingham Ln  
Hamburg, NY 14075-1904

Schweickert, Bruce A & Karen J  
3720 Breckenridge Rd  
Hamburg, NY 14075-2230

Tomkinson, Samuel & Catherine  
3981 Tudor Pl  
Hamburg, NY 14075-1913

Wojnar, Robert  
3965 Tudor Pl  
Hamburg, NY 14075-1913

McCarthy, Thomas  
3716 Breckenridge Rd  
Hamburg, NY 14075-2230

Fudella, Lawrence & Roxanne  
3714 Breckenridge Rd  
Hamburg, NY 14075-2230

Kruger, Kim Michael  
4498 Buckingham Ln  
Hamburg, NY 14075

Weiskerger, Roy  
4571 Roundtree Rd  
Hamburg, NY 14075-2217

Stotz, Thomas L & one  
4515 Buckingham Ln  
Hamburg, NY 14075-1915

Backlas, Lawrence R & Patricia  
3710 Breckenridge Rd  
Hamburg, NY 14075-2230

Deet, Kevin  
4508 Buckingham Ln  
Hamburg, NY 14075

Braun, Thomas R & Joan E  
4490 Buckingham Ln  
Hamburg, NY 14075-1916

Petrovic, Sladjan & Ruza  
3988 Sussex Pl  
Hamburg, NY 14075-1912

Pace, Marilyn L  
3984 Sussex Pl  
Hamburg, NY 14075-1912

Petkovsky, David M & Judy  
4531 Buckingham Ln  
Hamburg, NY 14075-1915

Gay, Brad & Jennifer  
4581 Roundtree Rd  
Hamburg, NY 14075-2217

Damico, Peter & Susan  
3708 Breckenridge Rd  
Hamburg, NY 14075-2230

Dawidzik, Richard J & wife  
4591 Roundtree Rd  
Hamburg, NY 14075-2217

Stepien, Barbara  
4516 Buckingham Ln  
Hamburg, NY 14075-1916

Mcfeely, Donald F & wife  
4534 Buckingham Ln  
Hamburg, NY 14075-1916

Coyle, Thomas & Cynthia  
3704 Breckenridge Rd  
Hamburg, NY 14075-2230

Kummer, Wayne J & Beth J  
4599 Roundtree Rd  
Hamburg, NY 14075

Smith, Richard J, Attn:Gina Becker  
5968 McKee Rd  
Newfane, NY 14108

Bratek, Charles T & Lynn M  
3995 Sussex Pl  
Hamburg, NY 14075-1911

Kryszczuk, Jean  
4546 Buckingham Ln  
Hamburg, NY 14075-1918

Ward, Christopher J  
3700 Breckenridge Rd  
Hamburg, NY 14075-2230

Pawlas, Richard D & Theresa  
4607 Roundtree Rd  
Hamburg, NY 14075-2217

Marrara, Louis F & Roberta  
4002 Essex Pl  
Hamburg, NY 14075-1906

Surdyk, Norbert P & wife  
4524 Buckingham Ln  
Hamburg, NY 14075-1916

Tollar, Mildred  
3996 Essex Pl  
Hamburg, NY 14075-1906

Lake, Marshall P & Karen M  
3698 Breckenridge Rd  
Hamburg, NY 14075-2230

Travis, Edward J III & Lisa  
4615 Roundtree Rd  
Hamburg, NY 14075-2217

Kruly, Joseph J & Cecilia  
3990 Essex Pl  
Hamburg, NY 14075-1906

Hopevale Inc  
3780 Howard Rd  
Hamburg, NY 14075-2252

Palma, Margaret J  
4545 Buckingham Ln  
Hamburg, NY 14075-1917

Nicoloff, James & Smiljana  
4558 Buckingham Ln  
Hamburg, NY 14075-1918

Gryz, Bozena E  
4623 Roundtree Rd  
Hamburg, NY 14075-2217

Avery, Chris & Elresa C  
4631 Roundtree Rd  
Hamburg, NY 14075-2217

Higgins, Bernard E & wife  
3995 Essex Pl  
Hamburg, NY 14075-1905

Koch, Kelly A & Christopher  
3689 Breckenridge Rd  
Hamburg, NY 14075

Luraschi, Daniel R & Linda  
3687 Breckenridge Rd  
Hamburg, NY 14075-2229

Shaffer, Cory J  
3685 Breckenridge Rd  
Hamburg, NY 14075-2229

Gold Marc Homes Of Hamburg  
420 Meyer Rd  
West Seneca, NY 14224

Shukla, Arvind K & Malti  
3730 Howard Rd  
Hamburg, NY 14075-2252

Francis, Daniel & Sandra  
3764 Howard Rd  
Hamburg, NY 14075-2252

Anderson, Michael A & Kelly J  
3745 Howard Rd  
Hamburg, NY 14075-2251

Labruna, Denise  
3696 Breckenridge Rd  
Hamburg, NY 14075

Czajka, Paul & Barbara  
4574 Buckingham Ln  
Hamburg, NY 14075-1918

Settlekowski, David & Paulette  
3989 Essex Pl  
Hamburg, NY 14075-1905

Liberatore, Victor  
3984 Burke Pkwy  
Blasdell, NY 14219

Poczalski, Richard & Christine  
3677 Breckenridge Rd  
Hamburg, NY 14075-2229

Fahey, Joseph & Carrie  
3683 Breckenridge Rd  
Hamburg, NY 14075-2229

Zdazenski, Glenn P & Kelly R  
3710 Howard Rd  
Hamburg, NY 14075

Digati, Linda  
3742 Howard Rd  
Hamburg, NY 14075-2252

State Of New York, Attn: Colin Campbell  
110 State St  
Albany, NY 12236-0001

Currie, James  
3757 Howard Rd  
Hamburg, NY 14075-2251

Boehm, William J & Jeanette  
4566 Buckingham Ln  
Hamburg, NY 14075

Guenther, Patricia  
3692 Breckenridge Rd  
Hamburg, NY 14075-2230

Matusick, Mitchell  
6845 Picture Lake Dr  
Hamburg, NY 14075

Bruscia, Daniel R & Linda  
4596 Buckingham Ln  
Hamburg, NY 14075-1920

Pirota, Donald & Patricia  
3681 Breckenridge Rd  
Hamburg, NY 14075-2229

Klubek, Margaret  
4584 Buckingham Ln  
Hamburg, NY 14075-1920

Roland, Frederick & Helen  
3720 Howard Rd  
Hamburg, NY 14075-2252

Wittmeyer, Bryan J  
3752 Howard Rd  
Hamburg, NY 14075-2252

Barbati, Patricia  
3707 Howard Rd  
Hamburg, NY 14075-2251

Mason, James R  
3773 Howard Rd  
Hamburg, NY 14075-2251

Dauria, James M & Linda A  
3717 Howard Rd  
Hamburg, NY 14075-2251

Ciesielski, Lori  
3727 Howard Rd  
Hamburg, NY 14075-2251

LaFord, Michael R  
3735 Howard Rd  
Hamburg, NY 14075-2251

Farmer, Mary Ann  
3941 Nottingham Ter  
Hamburg, NY 14075-1907

Miles, William J & wife  
3939 Nottingham Ter  
Hamburg, NY 14075-1907

Phelan, Rosita  
3935 Nottingham Ter  
Hamburg, NY 14075-1907

Wind, Keith A & Carol L  
3933 Nottingham Ter  
Hamburg, NY 14075

Quinn, Evan  
3929 Nottingham Terr  
Hamburg, NY 14075

Gleason, Kelly A  
3925 Nottingham Ter  
Hamburg, NY 14075-1907

Monnin, Michael & Mary Ellen  
4472 Buckingham Ln  
Hamburg, NY 14075

DATO Development LLC  
5540 Southwestern Blvd  
Hamburg, NY 14075

Nowicki, Cheryl A  
3697 Howard Rd  
Hamburg, NY 14075-2253

Pasternak, Richard & Karen  
4559 Buckingham Ln  
Hamburg, NY 14075-1917

Linck, Duane D & Joyce M  
3783 Howard Rd  
Hamburg, NY 14075-2251

Bukaty, James & Michelle  
3725 Dogwood Ln  
Hamburg, NY 14075-2263

Sojda, Paul & Margaret  
3723 Dogwood Ln  
Hamburg, NY 14075-2263

Bass, Judith Ann  
3777 Howard Rd  
Hamburg, NY 14075-2251

Clark Jr, Francis & Denise  
3721 Dogwood Ln  
Hamburg, NY 14075-2263

Boncore, Thomas G  
3719 Dogwood Ln  
Hamburg, NY 14075

Monaco, Kathleen  
3717 Dogwood Ln  
Hamburg, NY 14075-2263

Pachucki, Waldemar & Teresa  
3945 Nottingham Ter  
Hamburg, NY 14075-1907

LeMere, Robert F & Wendy L  
3787 Howard Rd  
Hamburg, NY 14075-2251

Dragonette, James & Nicholas  
4735 Southwestern Blvd  
Hamburg, NY 14075

Blood, John & Mary  
3722 Dogwood Ln  
Hamburg, NY 14075-2210

Kubik, David & Michelle  
3711 Dogwood Ln  
Hamburg, NY 14075-2263

Alessandra, Danielle  
3714 Dogwood Ln  
Hamburg, NY 14075-2210

Poleon, Michael R & Deann  
3795 Howard Rd  
Hamburg, NY 14075-2251

Murtha, Martin & Barbara  
3713 Dogwood Ln  
Hamburg, NY 14075-2263

Zhang, Tian Ying  
3799 Howard Rd  
Hamburg, NY 14075-2251

Gullo, Russell & Marlene  
1250 Sturgeon Point Rd  
Derby, NY 14047

Morrison, Jeanne  
3707 Dogwood Ln  
Hamburg, NY 14075-2263

Kane, Joseph C/April A.P.  
3734 Dogwood Ln  
Hamburg, NY 14075-2210

Loft, Gerald & Linda C  
3710 Dogwood Ln  
Hamburg, NY 14075-2210

Offhaus, Steven D  
3803 Howard Rd  
Hamburg, NY 14075-2264

Gullo, Russell & Marlene  
1250 Sturgeon Point Rd  
Derby, NY 14047

The Walter James Milligan Jr  
4751 Southwestern Blvd  
Hamburg, NY 14075-1926

Guglielmi, Steven & Lisa  
3791 Howard Rd  
Hamburg, NY 14075

Spinuzza, Diane  
3709 Dogwood Ln  
Hamburg, NY 14075-2263

Kruszka, Timothy A  
3807 Howard Rd  
Hamburg, NY 14075

Czuba, John & Mary  
3736 Dogwood Ln  
Hamburg, NY 14075-2210

Janowsky, Michael & Nicole  
3706 Dogwood Ln  
Hamburg, NY 14075-2210

Wesner, James S & Michelle  
3705 Dogwood Ln  
Hamburg, NY 14075-2263

Pickard, Dara A & Joel S  
3811 Howard Rd  
Hamburg, NY 14075-2264

Shilen, Joseph J & Donna R  
3702 Dogwood Ln  
Hamburg, NY 14075-2210

Yetman, Jenifer J  
3701 Dogwood Ln  
Hamburg, NY 14075-2263

Coffey, Robert & Patricia  
3766 Dogwood Ln  
Hamburg, NY 14075-2257

Simmons, Timothy J & Barbara  
3770 Dogwood Ln  
Hamburg, NY 14075-2257

Santiago, Hector & Mary  
3815 Howard Rd  
Hamburg, NY 14075-2264

Patton, John & wife  
3697 Dogwood Ln  
Hamburg, NY 14075-2263

Wilshaw, Roger S & Ann  
PO BOX 54  
Hamburg, NY 14075

Hayes, Timothy & Ursula  
3827 Howard Rd  
Hamburg, NY 14075-2249

Klubek, Kimberly  
3773 Dogwood Ln  
Hamburg, NY 14075-2258

Eddy, Pat & Mary  
3763 Dogwood Ln  
Hamburg, NY 14075-2258

Dickson, Robert & Kathleen  
3765 Dogwood Ln  
Hamburg, NY 14075-2258

Ballesteros, Anthony & Mary  
3769 Dogwood Ln  
Hamburg, NY 14075-2258

Greco, Michael L & Renata  
3771 Dogwood Ln  
Hamburg, NY 14075-2258

Mc Donald, Stephen  
3696 Dogwood Ln  
Hamburg, NY 14075-2210

Kazmierczak, Harry & Kathleen  
3715 Dogwood Ln  
Hamburg, NY 14075-2263

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**EXHIBIT L**

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# DATO DEVELOPMENT, LLC

Sherwood Neighborhood Meeting  
Tuesday, April 2- 6:30pm

Name (Printed)	Mailing Address	Email Address	If Interested In Receiving Information About the Project, Please Check Here
Lawrence B. Baklas	3710 Breckenridge Rd	LAURENCE@CENSO.NET	<input checked="" type="checkbox"/>
John Carbone	3703 Breckenridge	Juanne Carbone RD. Bunker .CA 917	<input checked="" type="checkbox"/>
JAMN E. O'DAY	3682 BRIARWOOD CT		<input type="checkbox"/>
BRIAN CLOUDEN	3588 FOX RUN DR		<input type="checkbox"/>
JoAnn ManiKowski	3642 NETHERWOOD DR.		<input type="checkbox"/>
BRYAN CARL	3667 Sowers Ln		<input type="checkbox"/>
Alex Kathy Shelton	3711 Woodhaven		<input type="checkbox"/>
Billie Lucarelli	3652 Wexford Ln		<input checked="" type="checkbox"/>
Charles Cox	3708 Breckenridge Rd	charhe@caci.com	<input checked="" type="checkbox"/>
Karen Schwickerdt	3720 Breckenridge Rd	KAREN.V.FABER@CIS.ORG	<input checked="" type="checkbox"/>
Bruce Schwickerdt	" "		<input type="checkbox"/>
Nancy Busben	3657 Woodhaven		<input type="checkbox"/>
William Busben	" "	ARMSTRONG@BIZARMSTRONG.COM	<input type="checkbox"/>
Lisa Edwards	3705 Breckenridge	cedwards.realty@verizon.net	<input type="checkbox"/>
Ed Kiebert	3632 Woodhaven Cir	EdHeTA@VERIZON.NET	<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>



Name	Address 1	City	State
Peter and Susan Damico	3708 Breckenridge Rd.	Hamburg	NY
Linda Luraschi	3687 Breckenridge Rd.	Hamburg	NY
Greg and Cindy Barone	4529 Roundtree Rd	Hamburg	NY
Mike Ginter	5276 Briercliff Dr.	Hamburg	NY
David and Angela Trenchey	3648 Woodhaven Cir	Hamburg	NY
Jim McDonnell	3620 Woodhaven Cir	Hamburg	NY
Gus Phillips	4581 Drayton Parkway	Hamburg	NY
Michael and Lisa Burke	3722 Breckenridge Rd.	Hamburg	NY
Leslie Wegryn	3688 Briarwood Ct.	Hamburg	NY
Timothy Regan	4599 Deerfield Rd.	Hamburg	NY
Ed Eagen	3660 Heatherwood	Hamburg	NY
Glen and Kelly Zdzenski	3710 Howard Rd.	Hamburg	NY
Tim Kruszka/Heather Henrich	3807 Howard Rd.	Hamburg	NY
Jim Zahradnik	4537 Roundtree Rd.	Hamburg	NY
Lawrence and Patricia Backlas	3710 Breckenridge Rd.	Hamburg	NY
John Carbone	3703 Breckenridge Rd.	Hamburg	NY
John O'Day	3682 Briarwood Ct.	Hamburg	NY
Brian Clouden	3588 Fox Run Dr.	Hamburg	NY
Jo Ann Manikowski	3642 Heatherwood Dr.	Hamburg	NY
Bryan Carr	3667 Somerset Ln.	Hamburg	NY
Al and Kathy Shelton	3711 Woodhaven Cir	Hamburg	NY
Mike and Janice Lucarelli	3652 Wexford Ln.	Hamburg	NY
Charles and Kimberlee Cox	3728 Breckenridge Rd.	Hamburg	NY
Bruce and Karen Schweickert	3720 Breckenridge Rd.	Hamburg	NY
William and Norene Busher	3657 Woodhaven Cir	Hamburg	NY
Michael and Lisa Edwards	3705 Breckenridge Rd.	Hamburg	NY
Ed Lichota	3632 Woodhaven Cir.	Hamburg	NY
Lawrence and Roxanne Fudella	3714 Breckenridge Rd.	Hamburg	NY
Daniel and Patricia Clouden	3727 Breckenridge Rd.	Hamburg	NY
James and Lisa Kellner	4592 Deerfield Rd.	Hamburg	NY
Ed Gimbert	3631 Heatherwood Dr.	Hamburg	NY
Ralph Pfilmieri	3659 Woodhaven Cir	Hamburg	NY
Terri Schelter	3691 Breckenridge Rd.	Hamburg	NY
Paul D'Orlando	4597 Drayton Parkway	Hamburg	NY
Lawrence Lichota	3679 Cumberland Ln.	Hamburg	NY
Don Loomis	3662 Woodhaven Cir.	Hamburg	NY
Wayne and Lynn Slowik	3711 Breckenridge Rd.	Hamburg	NY
Jerry Walh	3643 Cumberland Ln.	Hamburg	NY



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# **EXHIBIT M**

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**DATO DEVELOPMENT, LLC**

**S5540 SOUTHWESTERN BLVD. HAMBURG, NY 14075**

**716-646-0047 OFFICE**

**716-646-5510 FAX**

April 3, 2013

Name  
Address  
City, State Zip

Dear \_\_\_\_\_,

Thank you for attending the informational meeting for the proposed Sherwood Meadows project held last evening. The objective of the meeting was to make sure all interested residents are informed regarding the project.

I appreciate and respect your comments and input regarding the proposed project. I also realize that my ideas and opinions may not be consistent with yours. However, I will take into consideration your comments and research them so they can be adequately addresses in connection with the site plan review process.

I also would like to assure you that I plan on building a high quality project that is consistent with others in our portfolio.

Regards,

David Burke  
Managing Member  
Dato Developing, LLC

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**EXHIBIT N**

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Town of Hamburg  
Planning Board Meeting  
April 3, 2013  
Minutes

The Town of Hamburg Planning Board met for a Work Session at 6:30 P.M., followed by a Regular Meeting at 7:00 P.M., on Wednesday, April 3, 2013 in Room 7B of Hamburg Town Hall, 6100 South Park Avenue. Those attending included Chairman Peter Reszka, Stephen McCabe, David Bellissimo, Doug Schawel, August Geraci, Sasha Yerkovich and Dan O'Connell.

Others in attendance included Sarah desJardins and Andrew Reilly, Planning Consultants, Richard Lardo, Assistant Municipal Engineer and Councilwoman Amy Ziegler.

## **WORK SESSION**

### **Armor InnTap Room Parking Lot (5365 Abbott Road)**

Mr. Reilly stated that the applicant owns this property, which is located directly north of the Armor Inn Tap Room. He stated that the applicant proposes to demolish the existing home on the property and construct a parking area for the restaurant. He further noted that the applicant plans to widen the existing driveway on the property for access to the parking area, and a connection is proposed on the south side of the parking area to the existing parking lot for the restaurant.

Board members agreed that new fencing should be erected along the new parking area's north and east property lines because the existing fencing is in disrepair.

Mrs. desJardins stated that a landscaping plan will be submitted by the applicant.

It was determined that the two (2) entrances on Abbott Road should be one-way in and one-way out in order to minimize potential traffic problems on Abbott Road, and the proposed site lighting should be indicated on the site plan.

It was further determined that a sidewalk should be constructed along Abbott Road that will connect the existing driveway on Abbott Road with the new driveway to the north.

Mrs. desJardins stated that this project will require a variance from the Zoning Board of Appeals because the proposed parking area is located too close to Abbott Road.

Engineering Department comments have been filed with the Planning Department.

## **REGULAR MEETING**

### **Sgroi Two-Lot Subdivision**

Mr. McCabe read the following public hearing notice:

"Notice is hereby given that the Town of Hamburg Planning Board will hold a second Public Hearing on April 3, 2013 in Room 7 B of Hamburg Town Hall at 7:00 P.M. regarding a proposed two-lot subdivision known as the Sgroi Subdivision, to be located at the end of Woodland Drive. The property is identified as SBL# 196.00-3-8.1. The second public hearing is being held because new information has been presented by the applicant."

Attorney Sean Hopkins, representing the applicant, stated that the Planning Board had previously requested additional information regarding previous activities that have taken place on the site. He stated that the applicant met with New York State Department of Environmental Conservation (NYSDEC) staff in January 2013 and is waiting for some additional documentation.

Attorney Hopkins stated that the applicant is asking for two (2) building lots. He noted that, to a large degree, this site contains wetlands, so two (2) homes would be the full development of this site.

Chairman Reszka stated that the Board received correspondence regarding this request from Dr. Cyril Bodnar and Mark O'Neill.

Chairman Reszka declared the public hearing open. The following people spoke:

- Dr. Cyril Bodnar, 6841 Woodland Drive, stated that his property abuts this site. He stated that he is concerned about drainage from his property, as well as from the property behind his. He stated that the applicant's property is lower than his, and if he builds the second home, he will have to fill the property because it is so wet. He stated that he is worried that once the applicant's property is filled, his (Dr. Bodnar's) side lot will become a pond because there will be nowhere for his water to go, and his trees will die. He stated that he is also concerned about access.

Chairman Reszka declared the public hearing closed.

Chairman Reszka stated that he has a major problem with this proposed subdivision. He further stated that the Board is being asked to take a marginal lot that would require a variance in order to be considered buildable and split it into two (2) marginal lots that would require additional variances. He stated that he does not believe the Board should consider this for approval.

Mr. Bellissimo concurred with the Chairman's comments.

Chairman Reszka made a motion, seconded by Mr. Bellissimo, to direct the Planning Department to prepare a resolution for the Board's next meeting to deny the requested subdivision of land. Carried.

Engineering Department comments have been filed with the Planning Department.

### **Joe's Auto Service (3756 Lakeview Road)**

Mr. McCabe read the following public hearing notice:

"Notice is hereby given that the Town of Hamburg Planning Board will conduct a Public Hearing for a Special Use Permit for Joe's Auto Service to operate a public garage at 3756 Lakeview Road. The Public Hearing will be held on April 3, 2013 at 7:00 p.m. in

## Hamburg Planning Board meeting

Room 7B of Hamburg Town Hall.”

Mr. Reilly stated that in order to continue towing for the Town of Hamburg Police Department, businesses such as this much obtain a Special Use Permit. He noted that all stored vehicles must be placed in a fenced-in area and must be demarcated on a plan.

Mr. Joe Nelson, applicant, stated that the vehicles that were stored off the property's north property line have been removed to the fenced-in area.

Chairman Reszka declared the public hearing open. No one spoke.

Chairman Reszka declared the public hearing closed.

Mr. Nelson agreed to provide information to the Board regarding what exactly is done on the site and what is stored there.

Mr. Bellissimo made a motion, seconded by Mrs. Yerkovich, to direct the Planning Department to prepare an approval resolution with conditions for the Board's next meeting. Carried.

Mr. Bellissimo made a motion, seconded by Mr. O'Connell, to table this item. Carried.

Engineering Department comments have been filed with the Planning Department.

### **Sean Wall (4241 Quinby Drive)**

Mr. McCabe read the following public hearing notice:

“Notice is hereby given that the Town of Hamburg Planning Board will hold a Public Hearing on a two-lot subdivision known as the McLennan-Wall Two-Lot Subdivision located at 4241 Quinby Drive on April 3, 2013 in Room 7 B of Hamburg Town Hall at 7:00 P.M.”

Mrs. desJardins stated that this proposal meets all zoning requirements.

Chairman Reszka declared the public hearing open. No one spoke.

Chairman Reszka declared the public hearing closed.

Mr. McCabe made a motion, seconded by Mr. Schawel, to grant Preliminary Approval to the proposed two-lot subdivision known as the McLennan-Wall Two Lot Subdivision to be located at 4241 Quinby Drive with the following conditions:

1. Approval is contingent upon the Engineering Department comment letter dated April 3, 2013.
2. The installation of sidewalks is waived, as there are no sidewalks in the immediate area.
3. The filing of the Map Cover is waived.
4. Approval is for one (1) single family home to be constructed on Lot # 2.
5. A Negative SEQR declaration is hereby issued.

Carried.

Engineering Department comments have been filed with the Planning Department.

## Hamburg Planning Board meeting

### **Sherwood Meadows**

Attorney Sean Hopkins, representing the applicant, stated that a public hearing was held in connection with the submitted sketch plan in December 2012. He stated that in the near future a site plan and related application materials will be submitted for this proposed project. He noted that a Traffic Impact Study is being prepared by Nussbaumer & Clarke and will be submitted as part of the site plan application.

Attorney Hopkins stated that an informational meeting was held on April 2, 2013 with nearby residents of the proposed project (approximately 50 – 60 neighbors attended). He stated that the concerns that were raised pertained to traffic, drainage, noise and construction impacts. He further noted that the site plan will include an updated Part One of the Environmental Assessment Form.

Attorney Hopkins stated that the project would be phased, and indicated that Phase One would likely include 56 units. He stated that the applicant does have a market study that demonstrates that there is more than a need for 100 units at this site.

Attorney Hopkins showed the Board conceptual architectural renderings of the proposed building elevations. He stated that the applicant believes they are not like a typical apartment project and noted that sloped roofs with residential type shingles are planned in an assortment of colors.

Attorney Hopkins stated that this property is properly zoned for apartments (R-3). He further noted that when the applicant purchased the property, it was zoned R-3.

In response to a question from Mr. O'Connell, Attorney Hopkins stated that the previously approved project on this site consisted of 56 townhouse units.

Regarding the zoning of the property, Mr. Reilly stated that he assumes the property was probably zoned R-3 when Hopevale was constructed, since R-3 allows institutions. It was determined that Hopevale existed when the Roundtree Subdivision was begun.

Chairman Reszka stated that correspondence was received that day from Mr. Charles Cox, Breckenridge Road that contains interesting discussion of this project as it relates to the Town's Comprehensive Plan.

Chairman Reszka informed the audience that the Planning Board does not conduct any private meetings to discuss a project, and everything is done in front of the public at a public meeting.

Chairman Reszka allowed the following residents to speak:

- Charlie Cox stated that he attended the informational meeting. He stated that at the meeting the applicant stressed the appearance of the buildings, landscaping, buffering, etc. However, the immediate and dramatic effect of the traffic is the residents' biggest concern, and the increase in traffic is inconsistent with what the Roundtree Subdivision has always been and what the residents moved there for. He stated that the subdivision will not be the same if this project is constructed. He stated that the subdivision roads are already in rough shape,

## Hamburg Planning Board meeting

and traffic safety is a concern because people park on both sides of the roadways. He stated that the residents feel that the apartment dwellers will be a transient group and they are concerned about property values, as well as drainage issues. He stated that the residents hope that the Planning Board recognizes what an impact this project would have on their neighborhood, and they hope Board members will give this serious thought.

Chairman Reszka stated that whether or not the apartment dwellers are transient is not something the Planning Board can take into consideration.

- Paul D'Orlando asked if the wetland delineation of this property is available for public review. He stated that the Planning Board would not be necessary if the only thing being reviewed was the zoning of the property. He stated that the Hopevale property was zoned R-3, but no one would have thought that apartments would be constructed there if one drives through the Roundtree Subdivision. He stated that there is a reason why the property is zoned R-3 and it has nothing to do with constructing apartments there. He stated that each situation must be reviewed individually by the Planning Board, and because of the traffic and the layout of the Roundtree Subdivision it is illogical to imagine multi-family housing on this site.
- Terri Schelter stated that none of the applicant's other apartment complexes are located in an area like this where there is no access to a public access road like Southwestern Boulevard, etc. She stated that this development is proposed in an enclosed residential area, which makes it awkward.

Mrs. Yerkovich stated that the nature of the applicant's other apartment complexes is not relevant to this discussion. She noted that the Planning Board must consider this development and how it impacts the existing neighborhood, and it will make sure the project meets all Town laws and all information received will be available for public review.

Mr. Bellissimo made a motion, seconded by Mr. Schawel, to table this project to the Board's May 1, 2013 meeting. Carried.

Engineering Department comments have been filed with the Planning Department.

### **Sharma Development (2836 Pleasant Avenue)**

Attorney Sean Hopkins, representing the applicant, stated that the SEQR Coordinated Review was mailed March 6, 2013 and the 30-day comment period was not over yet. He noted that he believes that to date the Planning Department has not received any comments back from Involved or Interested Agencies expressing any objection to the Planning Board acting as Lead Agency.

## Hamburg Planning Board meeting

Attorney Hopkins stated that a wetland delineation has been performed on this property that identified a 4.81-acre wetland area that qualifies as a federal wetland, and based on input from the New York State Department of Environmental Conservation (NYSDEC), it appears highly likely that it will be a State wetland because it is contiguous to an existing State wetland.

Attorney Hopkins stated that the proposed layout has been modified, based on the wetlands delineation, so that all of the impacts have been removed from the wetland area. He noted that buildings and parking areas are proposed in the 100-foot NYSDEC adjacent area. He further stated that he has met with the NYSDEC and the applicant will have to go through a permitting process with that department, but the applicant's consultant believes a permit will be obtained.

Attorney Hopkins stated that this property is not located in a County sanitary sewer district. As a result, the applicant proposes to be serviced as an out of district customer, which would require that a two-inch forced sanitary sewer line be run in order to provide sanitary sewer capacity to this site. He noted that it has been determined that the sanitary sewer line would have to be run under Town of Hamburg parkland dedicated in connection with a nearby subdivision. He stated that this "alienation of parkland" must be approved by the New York State Legislature and will be requested by the Town of Hamburg.

Attorney Hopkins stated that the new sanitary sewer would only be sized for this particular project.

In response to a question from Mr. Bellissimo, Attorney Hopkins stated that one curb cut onto Southwestern Boulevard and one curb cut onto Pleasant Avenue is proposed. He noted that the curb cut locations are a result of consultation with Erie County Department of Public Works and the New York State Department of Transportation.

Attorney Hopkins stated that the applicant is requesting that the Planning Board schedule the required public hearing for this proposal.

Mrs. Yerkovich made a motion, seconded by Mr. O'Connell, to schedule a public hearing for this project to be held on May 1, 2013. Carried.

Mr. Bellissimo made a motion, seconded by Mr. O'Connell, to table this project. Carried.

Engineering Department comments have been filed with the Planning Department.

### **Willow Woods Subdivision**

Mrs. desJardins stated that the Planning Department received the submitted Draft Environmental Impact Statement (DEIS) on March 22, 2013. She further stated that Mr. Reilly reviewed the document and found it adequate for public review.

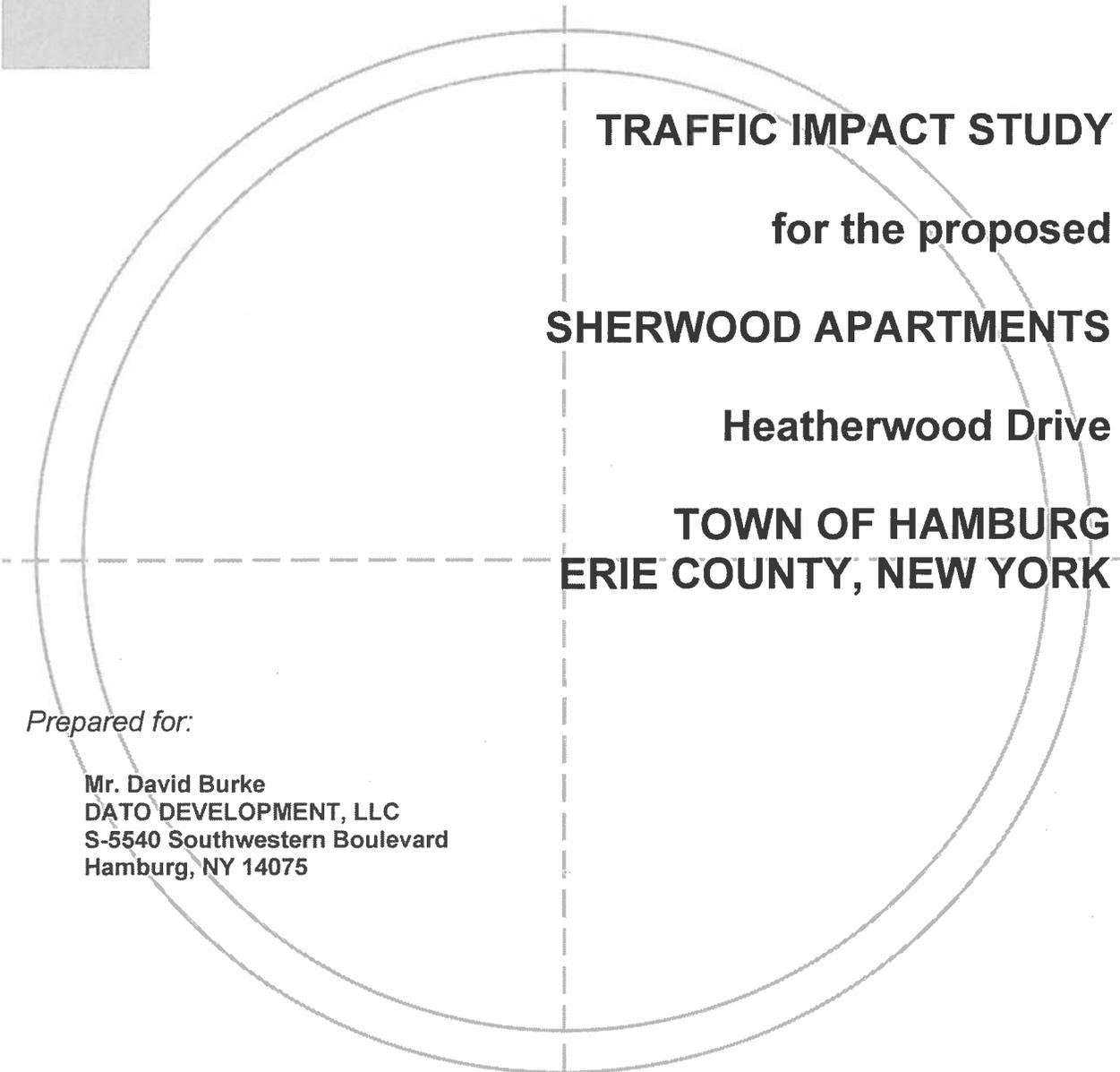
In response to a question from Mr. McCabe, Mr. Reilly stated that the Planning Board has the option to hire an outside consultant to review the document. It was determined that Board members will decide whether to hire the consultant at its meeting of April 17, 2013.

Mr. Reilly stated that the ownership of the ponds and open space on the site will have to be addressed, whether by the creation of a Homeowners' Association or by having adjacent lots owning parts of the ponds and the open space.

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# **EXHIBIT O**

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**TRAFFIC IMPACT STUDY**  
for the proposed  
**SHERWOOD APARTMENTS**  
Heatherwood Drive  
**TOWN OF HAMBURG**  
**ERIE COUNTY, NEW YORK**

*Prepared for:*

Mr. David Burke  
DATO DEVELOPMENT, LLC  
S-5540 Southwestern Boulevard  
Hamburg, NY 14075

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*Locally-owned and Operated since 1933*

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TRAFFIC IMPACT STUDY  
Sherwood Apartments  
Town of Hamburg, New York



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## 1.0 INTRODUCTION AND SUMMARY

DATO Development, LLC plans to redevelop a vacant parcel of land at the end of Heatherwood Drive (3750) for the construction of multiple apartment buildings that would have a total of 128 units. The parcel for the proposed development is located at the eastern end of Heatherwood Drive in the Town of Hamburg. The general area location map and site plan are shown in **Figures 1 and 2A-B** respectively.

The proposed project would access Heatherwood Drive with all vehicles utilizing Howard Road to access either Camp Road or Southwestern Boulevard. This study will review the existing and future traffic patterns and levels of services associated with the intersections within the study area.

The Traffic Impact Study conducted for the Sherwood Apartments project recognizes that much of the development activity within the project's study area mostly consists of residential developments off of Howard Road and commercial developments along Southwestern Boulevard and Camp Road. Hopevale School is located immediately off of Howard Road to the north of Southwestern Boulevard. The traffic study includes an analysis of the un-signalized intersection of Camp Road and Howard Road, Howard Road and Roundtree Road, and the signalized intersection of Southwestern Boulevard and Howard Road.

### 1.1 Purpose and Objectives

The purpose of this Traffic Impact Study is to evaluate the potential impacts that traffic generated by the proposed development (at full occupancy) may have on the adjacent transportation system, summarize the findings in a reasonable and orderly manner, evaluate various entrance and exit alternates, and make recommendations to mitigate any identified traffic impacts.



Project Location

Heatherwood Drive

Roundtree Road

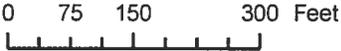
Howard Road

**General Area Location  
Sherwood Apartments  
Town of Hamburg, New York**

**Figure - 1**



Source: NYS GIS Clearinghouse - 2011



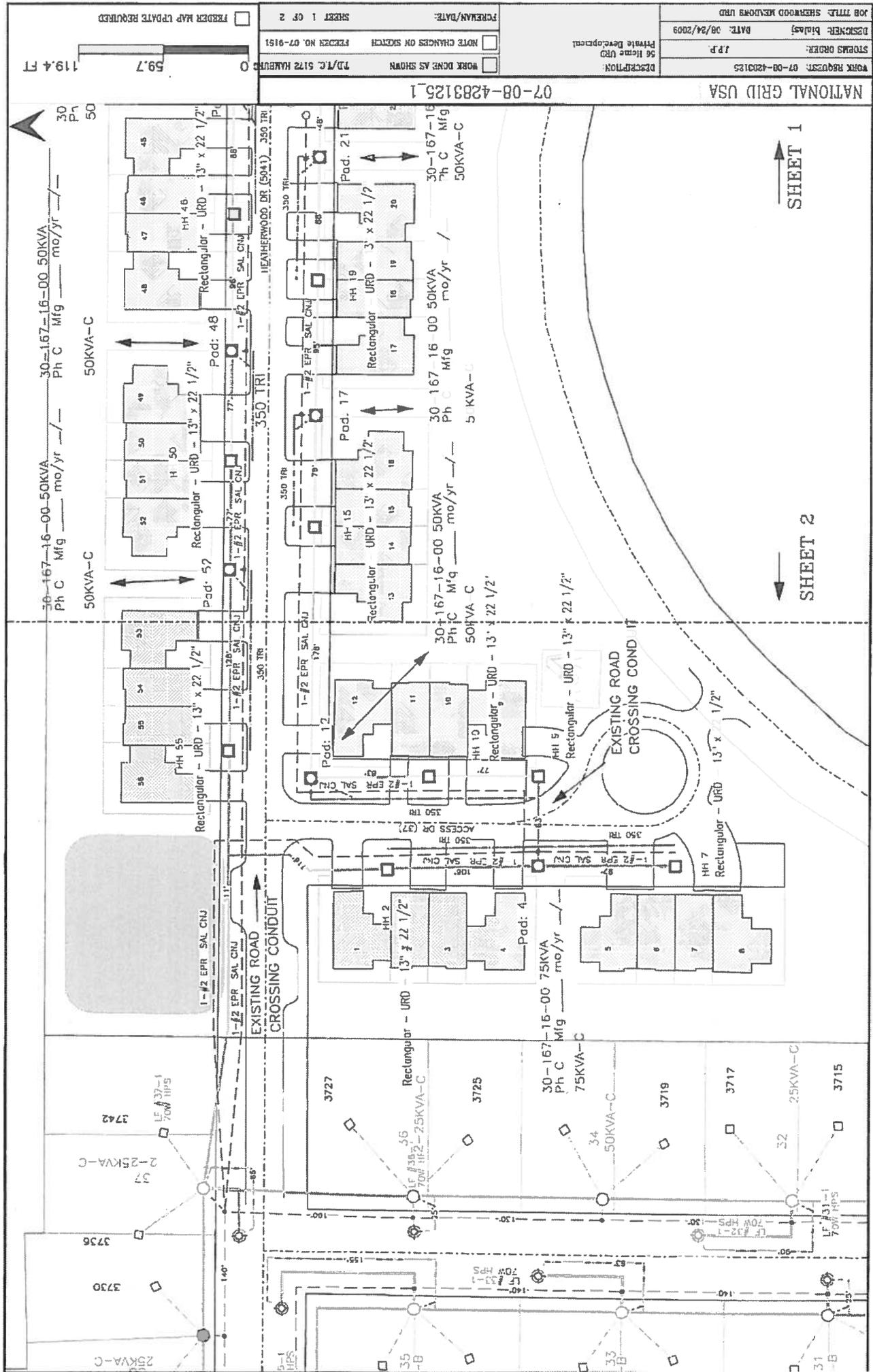


Figure 2a

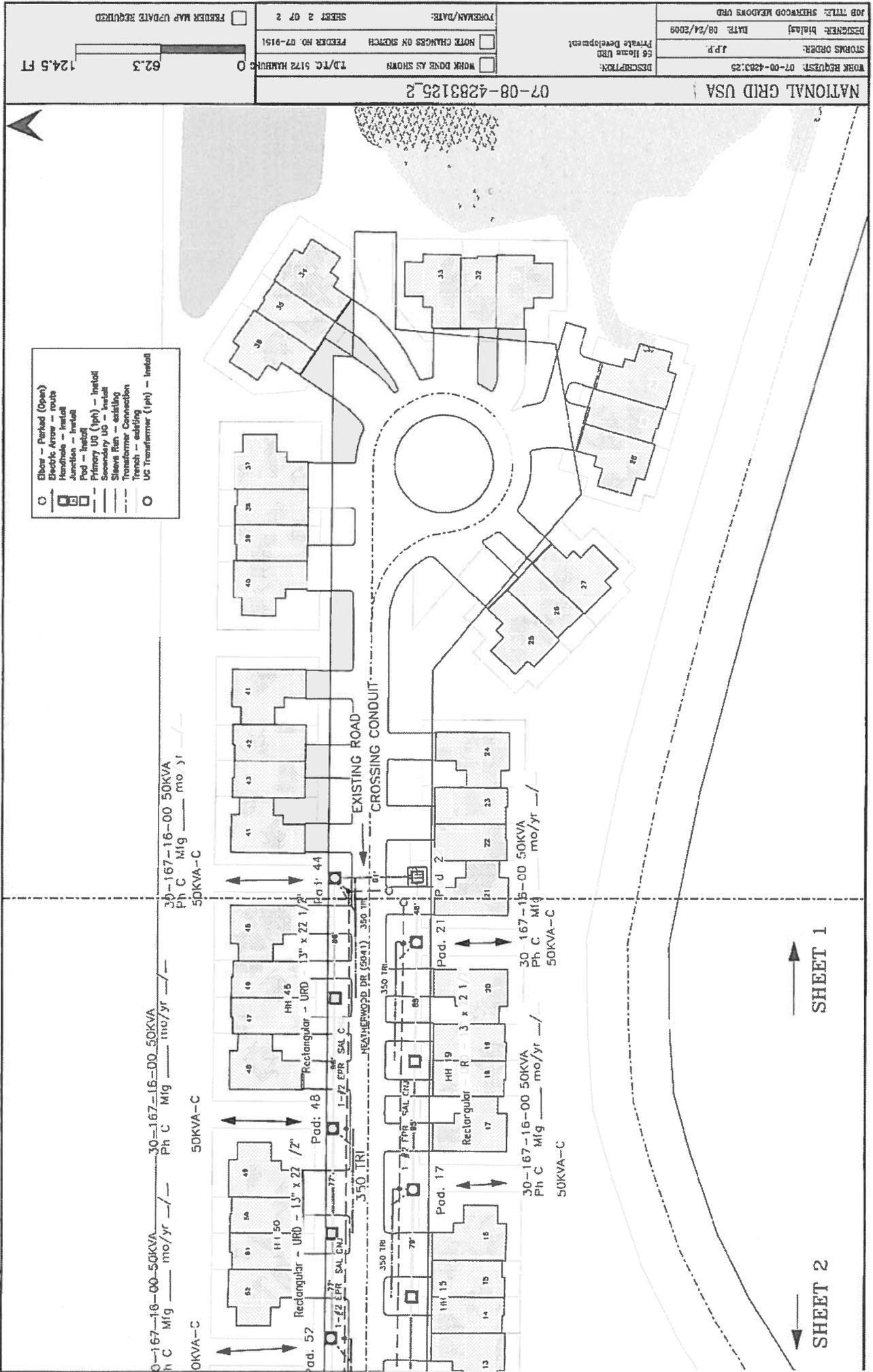


Figure 2b

## 2.0 PROJECT DESCRIPTION

Construction of the proposed Sherwood Apartments project would start in the Fall of 2013, with completion of the project expected by the end of 2018. As currently configured, the project parcel would utilize the eastern end of Heatherwood Drive to gain access to Southwestern Boulevard or Camp Road. The road extension of Heatherwood Drive is shown in the general area location map in **Figure 1**. The proposed project layout is shown in the project site plan in **Figure 2A-B**.

As currently envisioned, the Sherwood Apartments project will consist of the construction of 128 apartments that are two story structures.

For purposes of this Traffic Impact Study, it is assumed that the Sherwood Apartments project will be started in 2013. It is anticipated that full occupancy will occur by the Year 2018. Therefore, the full build-out is assumed by Year 2018.

### 2.1 Description of On-site Existing Development

The existing parcel consists of vacant semi-improved land with four townhouses located in the northwest corner of the property.

### 2.2 Description of Off-site Existing Development

The area surrounding the site parcel is somewhat developed, with single family residential uses located mainly to the east and west, vacant forested land to the north and a school to the south.

### 2.3 Description of Other Planned Off-site Developments

Other planned off-site developments were not known at the time this study was undertaken. The growth rate used to project the 2018 future traffic volumes for the intersections analyzed should account for the trips generated by any proposed developments in the vicinity.

### 3.0 EXISTING AREA CONDITIONS

The transportation network serving vehicular and pedestrian traffic generated by the Sherwood Apartments project consists of roads and intersections immediately adjacent to the site parcel such as Heatherwood Drive, Roundtree Road, Howard Road and other residential streets, as well as major roads such as Southwestern Boulevard and Camp Road. Sidewalks are located on the roads and limited NFTA bus service is available on Camp Road at Howard Road. Photographs of the intersections and general area are included in **Appendix C**.

A brief description of each roadway and intersection follows under Section 3.1 Transportation Systems. The existing conditions of the roadways within the study area are summarized in **Table 1**.

Roadway	Class <sup>1</sup>	Route <sup>2</sup>	Number Lanes <sup>3</sup>	Feature <sup>4</sup>	Width <sup>5</sup>		Speed <sup>6</sup>		Profile <sup>7</sup>	Drainage <sup>8</sup>
					Lane	Shoulder	Limit	Operating		
Southwestern Boulevard	Principal Arterial	US 20	4	Undivided	12	Paved (5)	45	45-50	Flat	Open
Camp Road	Principal Arterial	SR 75	4	Undivided	12	Paved (5)	45	45-50	Flat	Open
Howard Road	Local		2	Undivided	12	Varies	30	30-35	Flat	Open

1. Federal Aid Functional Class of the Roadway.
2. US – Federal Route Number; NY – State Route Number; CR – County Route Number; None – No Route Number.
3. Number of travel lanes in the “highway proper”, i.e., the highway segment between intersections and/or interchanges, excluding turning lanes developed at the intersections and/or interchanges.
4. Divided – opposing travel lanes separated by either a curbed (raised), grass or yellow striped median; Undivided – opposing travel lanes separated by either a yellow full barrier, yellow partial barrier, yellow broken line or a two-way, left-turn lane.
5. Lane and paved shoulder widths are in feet; R – Right; L – Left; Curb – no paved shoulders, offset in feet in parenthesis; gutter – no paved shoulders, offset in feet in parenthesis.
6. Miles per hour (MPH); Limit – posted or statewide speed limit; Operating – average operating speeds in the “highway proper.”
7. Flat – 0 to 3 percent grades; Rolling – 3 to 10 percent grades; Mountainous – 10 plus percent grades.
8. Open – ditches convey surface water away from the roadway; Closed – catch basins and underground pipes collect and convey surface water away from the roadway.

### 3.1 Transportation Systems

#### 3.1.1 Highway Proper

Southwestern Boulevard (US 20). Southwestern Boulevard accommodates four-lane, two-way traffic within the project area in a northeast-southwestern direction. It is classified on the federal-aid highway system as a Principal Arterial. It has a posted speed limit of 45 MPH. The pavement condition is good. Parking at any time is prohibited in both travel directions.

Camp Road (SR 75). Camp Road accommodates four-lane, two-way traffic in a north-south direction. The facility is classified on the federal-aid highway system as a principal arterial. The posted speed limit is 45 MPH. The pavement condition is good. Parking at any time is prohibited in both travel directions.

Howard Road. Howard Road accommodates two-lane, two-way traffic in an east-west direction. The facility is classified as a local road. The posted speed limit is 30 MPH. The pavement

condition is good. No parking restrictions are designated on the road, although observations showed a majority of cars parked on the street were on the north side. This road connects to Southwestern Boulevard and Camp Road.

### 3.1.2 Intersections

The following existing intersections were analyzed within the study area (see **Figure 1** for site location).

Southwestern Boulevard at Howard Road. This four-way intersection uses an actuated-coordinated 3 phase quad left signal control for traffic assignments. Southwestern Boulevard consists of two lanes in each direction (northeast and southwest), with a dedicated left turn in each direction and combined through/right lanes. Howard Road (southbound) and a business driveway (northbound) consist of combined left/through/right lanes.

Camp Road at Howard Road. This four-way intersection is un-signalized. Camp Road consists of two lanes in each direction (north and south), with dedicated left turn lanes and through/right lanes, while Howard Road and Queens Lane consists of a lane in each direction with a dedicated left turn lane and through/right turn lane. Howard Road and Queen's Lane are controlled by stop signs.

Howard Road at Roundtree Road. This three-way intersection is un-signalized. Howard Road consists of one lane in each direction (east and west), with combined left/through/right lanes, and Roundtree Road consists of one southbound approach that is a combined left/through/right lane. Roundtree Road is controlled by a stop sign.

The aforementioned intersections require a detailed capacity and level of service analysis for the existing and future traffic generated by the Sherwood Apartments project once assigned and distributed over the existing transportation system. Refer to the Appendices for details relative to geometric layout and lane configurations.

## 3.2 Study Area Land Use

The lands immediately surrounding the proposed site consist of uses that are commercial, institutional and residential.

## 3.3 Site Accessibility

Currently the site has existing access to Heatherwood Drive. See **Figure 1** for existing driveway locations.

## 4.0 PROJECTED TRAFFIC

### 4.1 Existing Traffic Volumes and Transportation Network

Traffic counts were performed by Nussbaumer (NCI) staff on February 5, 2013. These counts were used for development of existing and future year background traffic needed for this traffic impact study analysis. The manual turning counts provide data on individual approach turning volumes and turning patterns.

The listing in **Table 2** is a summary of the traffic count data collected in the vicinity of the project site. Appendix A includes the summary and details of all the individual intersection manual turning counts gathered for the traffic study.

TABLE 2 SUMMARY OF TRAFFIC DATA COLLECTED			
Location		Year Count Taken	By Whom
<b><u>Intersection Manual Turning Movement Counts</u></b>			
Southwestern Boulevard at Howard Road	(Weekday)	2013	NCI
Camp Road at Howard Road	(Weekday)	2013	NCI
Howard Road at Roundtree Road	(Weekday)	2013	NCI

#### 4.1.1 Growth and Seasonal Adjustment Factor

The seasonal adjustment factor of 0.838 was added to the traffic counts conducted in February 2013 in order to accurately reflect normal conditions at this intersection. This factor was obtained from the New York State Department of Transportation (NYSDOT). See **Appendix A** for a copy of the seasonal factor used.

The growth rate developed to project the future build-out year of 2018 was based on data obtained from the NYSDOT. A growth rate of 0.5% was used to project future volumes. **Tables 3 A-C** shows the calculated growth rates for each approach.

#### 4.1.2 Existing Peak Period Traffic Volumes

As noted earlier, and in **Table 2** for this traffic study, manual intersection turning movement counts were performed for the intersections in the study area. **Tables 3A-3C** shows the 2013 existing traffic and the projected 2018 future traffic volumes for the intersection in the study area.

#### Existing Bus Service

The Niagara Frontier Transportation Authority (NFTA) Metro Bus provides limited bus service within the project area at the intersection of Camp Road and Howard Road (NFTA Route 74 Hamburg).

<b>TABLE 3A PROJECTED GROWTH</b>			
<b>Sherwood Apartments Heatherwood Drive Hamburg, New York Intersection: Camp Road and Howard Road</b>			
<b>Movement</b>	<b>AM PEAK EXISTING 2013</b>	<b>Annual Growth Rate</b>	<b>AM PEAK BACKGROUND 2018</b>
<b>Camp Road Northbound</b>			
Left Turn Movement	2	0.005	2
Through Movement	1048	0.005	1074
Right Turn Movement	15	0.005	15
<b>Camp Road Southbound</b>			
Left Turn Movement	38	0.005	39
Through Movement	353	0.005	362
Right Turn Movement	7	0.005	7
<b>Queens Lane Eastbound</b>			
Left Turn Movement	16	0.005	16
Through Movement	0	0.005	0
Right Turn Movement	17	0.005	17
<b>Howard Road Westbound</b>			
Left Turn Movement	31	0.005	32
Through Movement	0	0.005	0
Right Turn Movement	120	0.005	123
<b>Movement</b>	<b>PM PEAK EXISTING 2013</b>	<b>Annual Growth Rate</b>	<b>PM PEAK EXISTING 2018</b>
<b>Camp Road Northbound</b>			
Left Turn Movement	14	0.005	14
Through Movement	531	0.005	544
Right Turn Movement	73	0.005	75
<b>Camp Road Southbound</b>			
Left Turn Movement	74	0.005	76
Through Movement	1057	0.005	1083
Right Turn Movement	13	0.005	13
<b>Queens Lane Eastbound</b>			
Left Turn Movement	6	0.005	6
Through Movement	0	0.005	0
Right Turn Movement	7	0.005	7
<b>Howard Road Westbound</b>			
Left Turn Movement	33	0.005	34
Through Movement	1	0.005	1
Right Turn Movement	51	0.005	52

TABLE 3B PROJECTED GROWTH			
Sherwood Apartments Heatherwood Drive Hamburg, New York Intersection: Southwestern Boulevard (RT 20) and Howard Road			
Movement	AM PEAK EXISTING 2013	Annual Growth Rate	AM PEAK BACKGROUND 2018
<b>RT 20 Northeastbound</b>			
Left Turn Movement	30	0.005	31
Through Movement	602	0.005	617
<b>RT 20 Southwestbound</b>			
Through Movement	378	0.005	387
Right Turn Movement	49	0.005	50
<b>Howard Road Southbound</b>			
Left Turn Movement	99	0.005	101
Right Turn Movement	46	0.005	47
Movement	PM PEAK EXISTING 2013	Annual Growth Rate	PM PEAK BACKGROUND 2018
<b>RT 20 Northeastbound</b>			
Left Turn Movement	43	0.005	44
Through Movement	693	0.005	710
<b>RT 20 Southwestbound</b>			
Through Movement	832	0.005	853
Right Turn Movement	99	0.005	101
<b>Howard Road Southbound</b>			
Left Turn Movement	64	0.005	66
Right Turn Movement	31	0.005	32

TABLE 3C PROJECTED GROWTH			
Sherwood Apartments Heatherwood Drive Hamburg, New York Intersection: Howard Road & Roundtree Road			
Movement	AM PEAK EXISTING 2013	Annual Growth Rate	AM PEAK BACKGROUND 2018
<b>Howard Road Eastbound</b>			
Left Turn Movement	4	0.005	4
Through Movement	76	0.005	78
<b>Howard Road Westbound</b>			
Through Movement	37	0.005	38
Right Turn Movement	17	0.005	17
<b>Roundtree Road Southbound</b>			
Left Turn Movement	63	0.005	65
Right Movement	16	0.005	16
Movement	PM PEAK EXISTING 2013	Annual Growth Rate	PM PEAK BACKGROUND 2018
<b>Howard Road Eastbound</b>			
Left Turn Movement	16	0.005	16
Through Movement	57	0.005	58
<b>Howard Road Westbound</b>			
Through Movement	69	0.005	71
Right Turn Movement	54	0.005	55
<b>Roundtree Road Southbound</b>			
Left Turn Movement	42	0.005	43
Right Movement	7	0.005	7

#### 4.2 2013 Existing Traffic Volumes

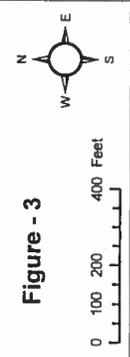
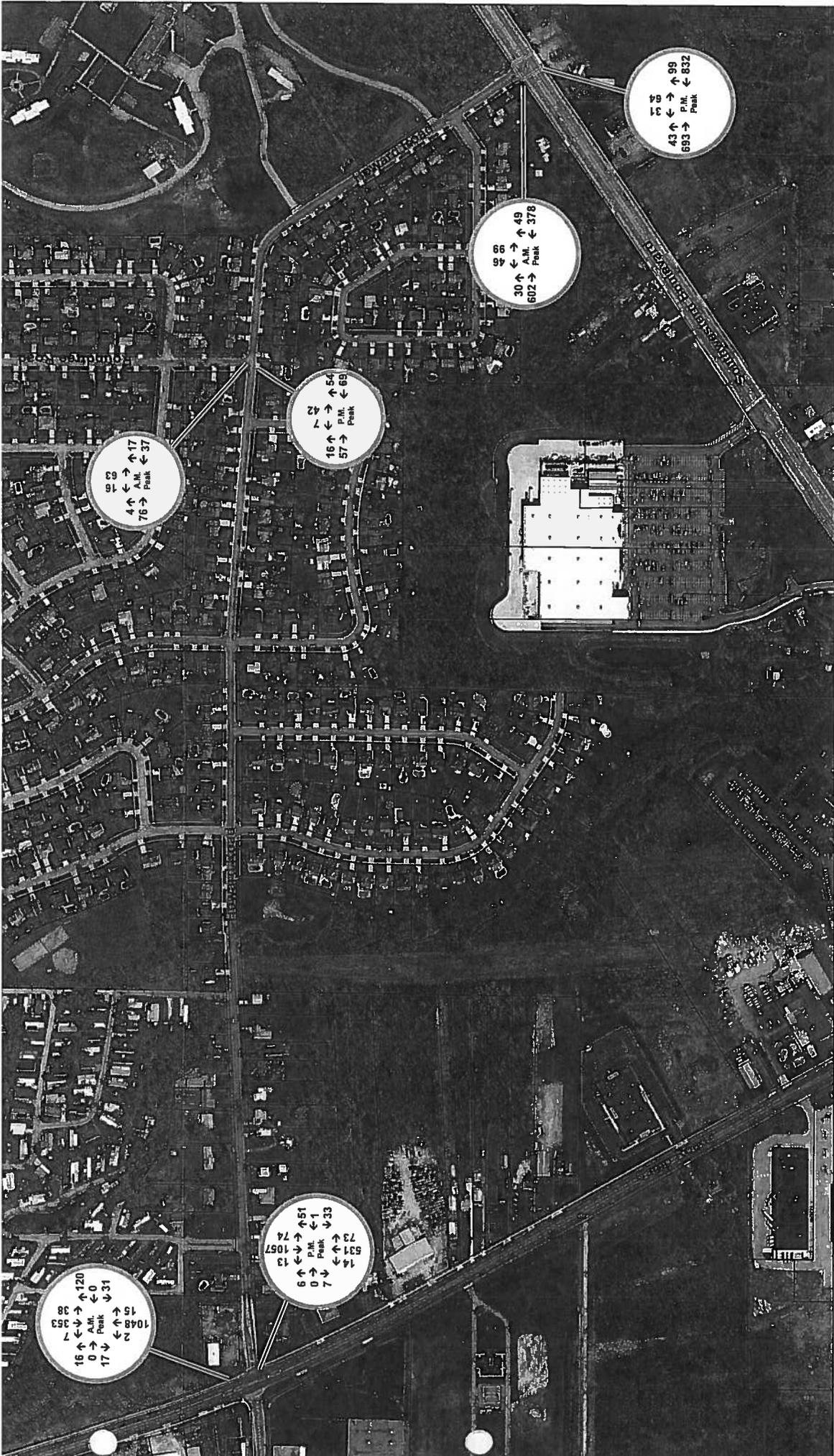
Traffic impact studies (TIS) are required to be prepared in accordance with policies and procedures of the traffic engineering profession (i.e., the Institute of Transportation Engineers (ITE)). The analysis of these intersections will focus on the future impacts the proposed development will have on the intersections' level of service within the study area.

For level of service and site traffic impact analysis, the background and year of completion/occupancy of the Sherwood Apartments project is 2018. The TIS utilized traffic counts (manual intersection turning counts) gathered in 2013 under existing operating conditions.

#### 4.3 2018 Background and 2018 with Development Traffic Volumes

Level of service was evaluated for 2013 existing background and 2018 background traffic volume conditions for the intersections within the study area. These traffic-operating conditions can be expected to be realized without the Sherwood Apartments project. Signalized and un-signalized level of service analyses were also conducted for the peak hours of the 2018 background traffic volumes with the proposed apartments.

**Figure 3** summarizes the 2013 Existing Background Traffic Volumes (weekday AM and PM Peak Hours), **Figure 4** summarizes the 2018 Background Traffic Volumes (weekday AM and PM Peak Hours) and **Figure 5** summarizes the 2018 Background with Development Traffic Volumes at the intersections within the study area. The methodology used to estimate project generated trips are further explained in **Section 4.4** of this report. The level of service analyses for all studied years and conditions are summarized in **Tables 5A-5C** of **Section 5.1** of this report. Copies of the Synchro reports for the intersection analyses are included in Appendix B.

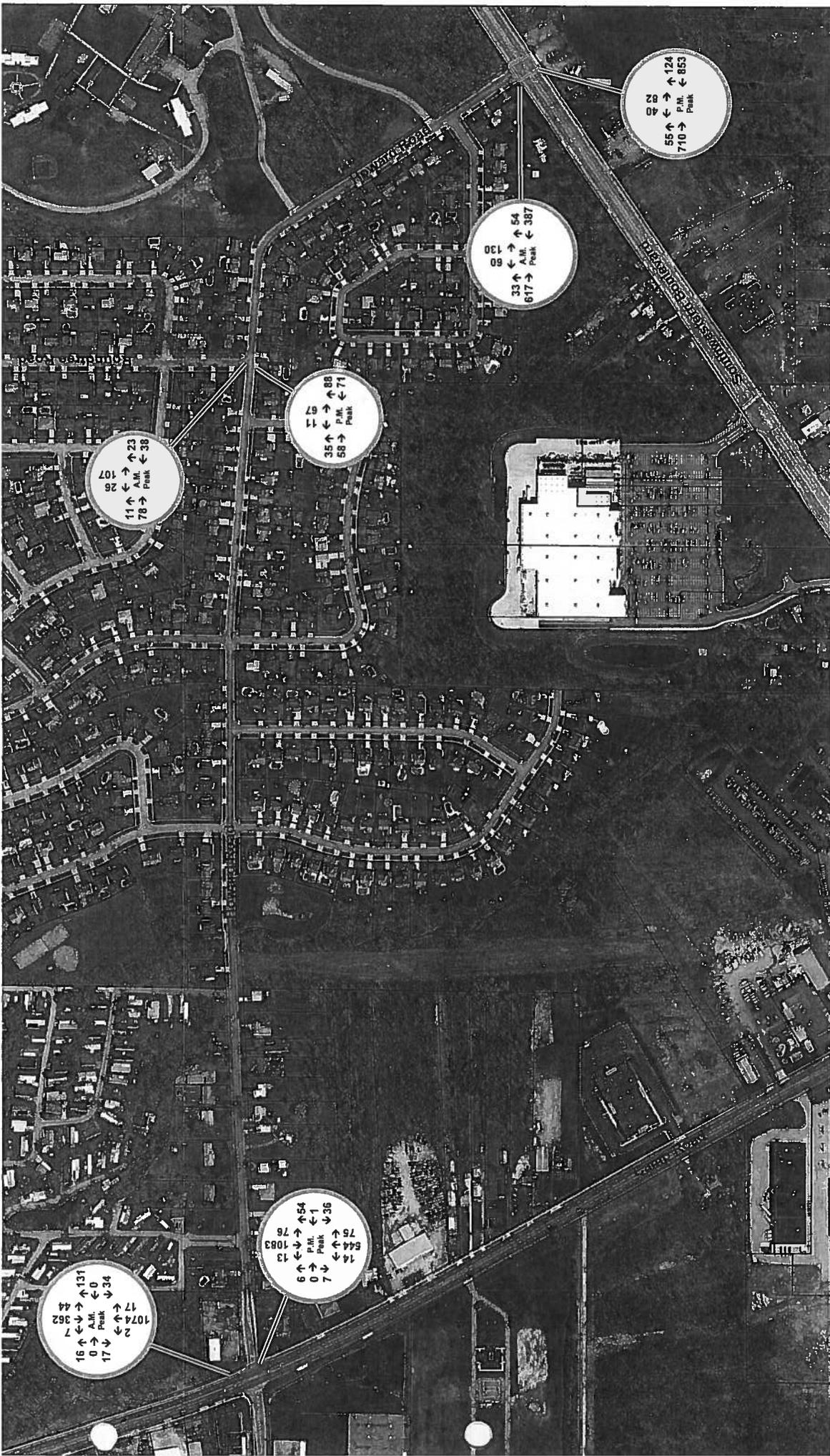


**Figure - 3**

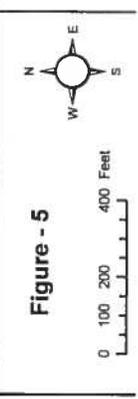
**2013 Existing Volumes**  
**Sherwood Apartments**  
**Town of Hamburg, New York**  
 Source: NYS GIS Clearinghouse - 2011







**2018 Volumes with Developments**  
**Sherwood Apartments**  
**Town of Hamburg, New York**  
 Source: NYS GIS Clearinghouse - 2011



16 ↑ ↑ 131  
 0 → → 0  
 17 ↓ ↓ 17  
 1074 ↑ ↑ 362  
 2 ↓ ↓ 2  
 17 → → 34  
 P.M. Peak  
 P.M. Peak

6 ↑ ↑ 13  
 0 → → 7  
 544 ↑ ↑ 1083  
 P.M. Peak  
 P.M. Peak  
 75 ↓ ↓ 36  
 76 ↓ ↓ 1  
 854 ↓ ↓ 1

11 ↑ ↑ 23  
 26 ↓ ↓ 107  
 78 → → 38  
 P.M. Peak

33 ↑ ↑ 54  
 617 → → 387  
 P.M. Peak  
 P.M. Peak

55 ↑ ↑ 124  
 710 → → 853  
 P.M. Peak  
 P.M. Peak

4.4 Trip Generation – Site – Generated Traffic

Trip Generation

Traffic impact studies generally apply the Institute of Transportation Engineers (ITE) Trip Generation Manual procedures in the calculation of trips generated for a development proposal. The ITE guidelines for estimating trip generation have been followed in determining traffic generated for the proposed land use through application of the procedures of the 8<sup>th</sup> Edition of the ITE Trip Generation Manual.

For purposes of estimating trip generation for this project site, ITE Code 220 – Apartments (ITE Trip Generation Manual 8<sup>th</sup> Edition, pages 1228-1246), with the independent variable dwelling units used to estimate project generated trips.

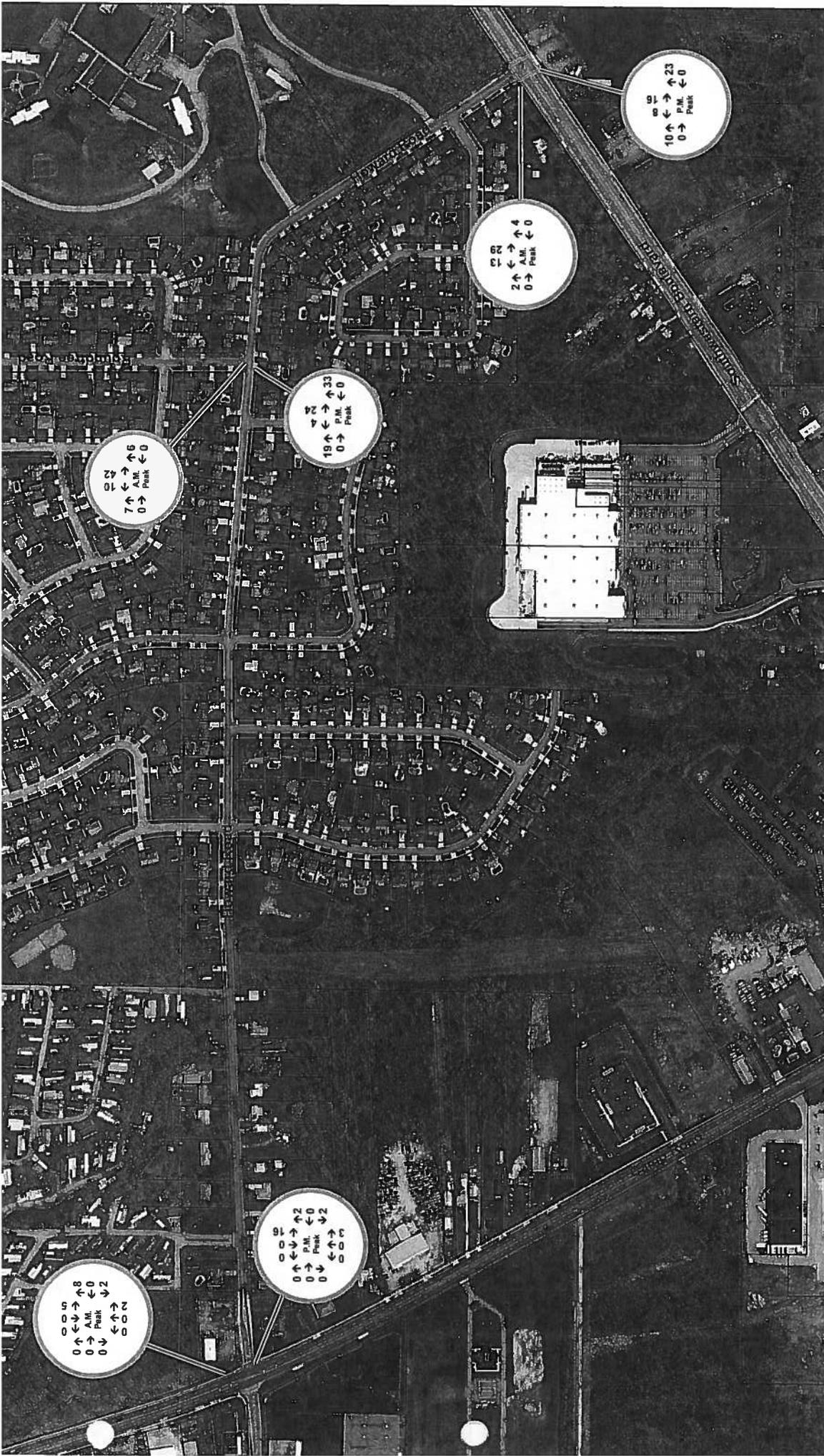
For reference purposes, **Table 4** shows the trips generated by the proposed Sherwood Apartments for the AM and PM Peaks, and the total weekday daily volumes using the ITE Code.

Table 4 - Project Trip Generation-ITE 8th Edition											
Site Information						Adjacent Highway PassBy Information					
Name of Development	Sherwood Apartments					North/ South Roadway					
Name of Applicant	David Burke					Roundtree Road					
Date	2/11/2013					East/ West Roadway					
Development Phase	N/A					Heatherwood Drive					
Analysis Year	2018										
AM Peak Trips											
ITE Code	Land Type	# Units/S q. Ft	Independent Variable	Unit Conversion	Trip Rate Per Unit	Total Single Use Trips	Directional Distribution		Trip Generation		Method
							In	Out	In	Out	
220	Apartments	128	dwelling unit	1	0.51	65	0.2	0.8	13	52	Rt
PM Peak Trips											
ITE Code	Land Type	# Units	Independent Variable	Unit Conversion	Trip Rate Per Unit	Total Single Use Trips	Directional Distribution		Trip Generation		Method
							In	Out	In	Out	
220	Apartments	128	dwelling unit	1	0.62	79	0.65	0.35	52	28	Rt
Daily Trips											
ITE Code	Land Type	# Units	Independent Variable	Unit Conversion	Trip Rate Per Unit	Total Single Use Trips	Directional Distribution		Trip Generation		Method
							In	Out	In	Out	
220	Apartments	128	dwelling unit	1	6.65	851	0.5	0.5	426	426	Rt

4.5 Trip Distribution

The directional distribution of trips to and from the Sherwood Apartments site was determined through existing traffic counts performed at the intersections counted in the study area. For the purposes of this traffic analysis, traffic distribution patterns identified through the traffic counts and observations available for this study period were reviewed and applied to derive trip distribution patterns specifically for 2018 when the full build-out and occupancy would occur.

Based on the 2013 existing background traffic volumes at the analyzed intersections, traffic trip distribution patterns were identified that would be assumed to represent trip distribution to and from the proposed Sherwood Apartments. From the observations and counts taken at these intersections, trip distribution patterns were developed to determine where the project generated trips would be assigned at the 2018 build-out year. **Figure 6** shows the project generated distribution estimated trips.



**Figure - 6**

0 100 200 400 Feet

N  
E  
W  
S

**2018 Trip Generation**  
**Sherwood Apartments**  
**Town of Hamburg, New York**  
 Source: NYS GIS Clearinghouse - 2011

## 5.0 TRAFFIC ANALYSIS

The capacity analyses and levels of service center on the analyses of the intersections as opposed to the arterial or highway proper. Capacity and levels of service analyses were undertaken for all identified intersections in the study during the morning and afternoon weekday peak periods.

The intersections identified under **Section 3.1.2** of this report were analyzed during the weekday morning and afternoon peak periods for the 2013 existing traffic.

The results of the 2013 existing traffic analyses concluded that both peak periods had varying worst conditions, i.e., the worst case scenario. All intersections were analyzed for 2018 future background traffic and the 2018 background plus project generated traffic during the weekday AM and PM peak periods

For signalized intersections, the level of service is evaluated on the basis of "control delay per vehicle" where control delay is the portion of the total delay attributed to traffic signal operations at the intersection. Mitigation is considered at the intersection when the level of service is lower than the minimal acceptable "Level of Service D", i.e., when the control delay per vehicle is greater than fifty-five (55) seconds per vehicle.

These analyses utilized the existing 2013 lane configurations, pavement markings and signal operations, e.g., phasing, sequencing, timing, and head locations, when projecting 2018 traffic conditions.

For un-signalized intersections, the level of service is evaluated on the basis of "control delay per vehicle" where control delay is the portion of the delay attributed to vehicles on the stop sign approach and/or turn lane approaches. Mitigation is considered at the intersection when the level of service is lower than the minimal acceptable "Level of Service D", i.e., when the control delay per vehicle is greater than fifty-five (55) seconds per vehicle and observations show this to be true.

Certain approaches at un-signalized intersections when analyzed may indicate poor levels of service; however, this condition may not require mitigation due to a proposed project. A poor level of service is an indicator that visual on-site observations are necessary to determine if a problem is really occurring. Field conditions such as gaps from nearby signalized intersections may indicate that no mitigation is needed. Many un-signalized intersections have at least one approach that operates at a poor level of service; however, on-site observations may show that no major problems exist.

### 5.1 Intersection Capacity Analysis

#### Camp Road at Howard Road/Queens Lane

Existing 2013: The intersection operates at a LOS A during the morning peak period. The eastbound left turn approach experiences the highest delay of all movements with 26.2 seconds per vehicle (LOS D). The intersection operates at a LOS A during the afternoon peak period, while the eastbound left turn approach experiences the highest delay of all movements with 37.4 seconds per vehicle (LOS E). The morning peak period is the worst-case scenario.

Projected 2018 Background: The intersection operates at a LOS A during the morning peak period. The eastbound left turn approach experiences the highest delay of all movements with 27.7 seconds per vehicle (LOS D). The intersection operates at a LOS A during the afternoon peak period, while the eastbound left turn approach experiences the highest delay of all movements with 42.8 seconds per vehicle (LOS E). The morning peak period is the worst-case scenario.

Projected 2018 Background plus Development: The intersection operates at a LOS A during the morning peak period. The eastbound left turn approach experiences the highest delay of all movements with 30.4 seconds per vehicle (LOS D). The intersection operates at a LOS A during the afternoon peak period, while the eastbound left turn approach experiences the highest delay of all movements with 42.8 seconds per vehicle (LOS E). The morning peak period is the worst-case scenario.

Conclusion: There is little to no impact at this intersection as a result of the overall project. The intersection operates at an acceptable level of service.

#### Southwestern Avenue at Howard Road

Existing 2013: The intersection operates at a LOS B during the morning peak period. The southbound approach experiences the highest delay of all movements with 47.4 seconds per vehicle (LOS D). The intersection operates at a LOS A during the afternoon peak period, while the southbound approach experiences the highest delay of all movements with 43.6 seconds per vehicle (LOS D). The morning peak period is the worst-case scenario.

Projected 2018 Background: The intersection operates at a LOS B during the morning peak period. The eastbound left turn approach experiences the highest delay of all movements with 47.5 seconds per vehicle (LOS D). The intersection operates at a LOS A during the afternoon peak period, while the eastbound left turn approach experiences the highest delay of all movements with 43.9 seconds per vehicle (LOS D). The morning peak period is the worst-case scenario.

Projected 2018 Background plus Development: The intersection operates at a LOS B during the morning peak period. The southbound approach experiences the highest delay of all movements with 48.4 seconds per vehicle (LOS D). The intersection operates at a LOS A during the afternoon peak period, while the southbound approach experiences the highest delay of all movements with 45.7 seconds per vehicle (LOS D). The morning peak period is the worst-case scenario.

Conclusion: There is little to no impact at this intersection as a result of the overall project. The intersection operates at an acceptable level of service.

#### Howard Road at Roundtree Road

Existing 2013: The intersection operates at a LOS A during the morning peak period. The southbound approach experiences the highest delay of all movements with 9.8 seconds per vehicle (LOS A). The intersection operates at a LOS A during the afternoon peak period, while the southbound approach experiences the highest delay of all movements with 10.3 seconds per vehicle (LOS B). The morning peak period is the worst-case scenario.

Projected 2018 Background: The intersection operates at a LOS A during the morning peak period. The southbound approach experiences the highest delay of all movements with 9.9 seconds per vehicle (LOS A). The intersection operates at a LOS A during the afternoon peak period, while the southbound approach experiences the highest delay of all movements with 10.3 seconds per vehicle (LOS B). The morning peak period is the worst-case scenario.

Projected 2018 Background plus Development: The intersection operates at a LOS A during the morning peak period. The southbound approach experiences the highest delay of all movements with 10.6 seconds per vehicle (LOS B). The intersection operates at a LOS A during the afternoon peak period, while the southbound approach experiences the highest delay of all movements with 11.6 seconds per vehicle (LOS B). The morning peak period is the worst-case scenario.

Conclusion: There is little to no impact at this intersection as a result of the overall project. The intersection operates at an acceptable level of service.

**Tables 5A through 5C** summarize the results of the Synchro 7 capacity/level of service analysis of the various intersection locations analyzed for the study. **Appendix B** provides copies of full Synchro reports of the LOS analyses.

**Table 5A - Level Of Service & Vehicle Delay**

Camp Road and Howard Road	2013 Volumes		2018 Background		2018 Background With Project	
	AM	PM	AM	PM	AM	PM
<b>Camp Road (North Approach)</b>	LOS	LOS	LOS	LOS	LOS	LOS
Northbound Left Turn	A	B	A	B	A	B
	Delay	Delay	Delay	Delay	Delay	Delay
	8.2	11.7	8.2	11.9	8.2	11.9
	LOS	LOS	LOS	LOS	LOS	LOS
Northbound Through/Right Turn	A	A	A	A	A	A
	Delay	Delay	Delay	Delay	Delay	Delay
	0	0	0	0	0	0
	LOS	LOS	LOS	LOS	LOS	LOS
<b>Camp Road (South Approach)</b>	AM	AM	AM	PM	AM	PM
Southbound Left Turn	LOS	LOS	LOS	LOS	LOS	LOS
	B	A	B	A	B	A
	Delay	Delay	Delay	Delay	Delay	Delay
	12.1	9.5	12.4	9.8	12.5	9.8
Southbound Through/Right Turn	LOS	LOS	LOS	LOS	LOS	LOS
	A	A	A	A	A	A
	Delay	Delay	Delay	Delay	Delay	Delay
	0	0	0	0	0	0
<b>Queen's Lane (East Approach)</b>	AM	AM	AM	PM	AM	PM
Eastbound Left Turn	LOS	LOS	LOS	LOS	LOS	LOS
	D	E	D	E	D	E
	Delay	Delay	Delay	Delay	Delay	Delay
	26.2	37.4	27.7	42.8	30.4	42.8
Eastbound Through/Right Turn	LOS	LOS	LOS	LOS	LOS	LOS
	B	B	B	B	B	B
	Delay	Delay	Delay	Delay	Delay	Delay
	10	13.6	10	13.8	10	13.8
<b>Howard Road (West Approach)</b>	AM	AM	AM	PM	AM	PM
Westbound Left Turn	LOS	LOS	LOS	LOS	LOS	LOS
	C	D	D	D	D	D
	Delay	Delay	Delay	Delay	Delay	Delay
	24.9	27	26	30.9	26.4	30.9
Westbound Through/Right Turn	LOS	LOS	LOS	LOS	LOS	LOS
	C	B	C	B	C	B
	Delay	Delay	Delay	Delay	Delay	Delay
	16.3	13.9	16.8	14.5	17.3	14.5
<b>Overall Intersection</b>	AM	AM	AM	PM	AM	PM
	LOS	LOS	LOS	LOS	LOS	LOS
	A	A	A	A	A	A
	Delay	Delay	Delay	Delay	Delay	Delay
	2.6	1.7	2.7	1.9	2.9	1.9

Table 5B - Level Of Service & Vehicle Delay						
Southwestern Blvd and Howard Road	2013 Volumes		2018 Background		2018 Background With Project	
<b>Southwestern Blvd (Northeast Approach)</b>	AM	PM	AM	PM	AM	PM
	LOS	LOS	LOS	LOS	LOS	LOS
Northeastbound Left Turn	A	A	A	A	A	A
	Delay	Delay	Delay	Delay	Delay	Delay
	5.5	4.1	5.6	4.2	7.1	5.2
Northeastbound Through/Right Turn	LOS	LOS	LOS	LOS	LOS	LOS
	A	A	A	A	A	A
	Delay	Delay	Delay	Delay	Delay	Delay
	5.1	3.2	5.3	3.3	6.8	4.2
<b>Southwestern Blvd (Southwest Approach)</b>	AM	PM	AM	PM	AM	PM
	LOS	LOS	LOS	LOS	LOS	LOS
Southwestbound Left Turn	A	A	A	A	A	A
	Delay	Delay	Delay	Delay	Delay	Delay
	0	0	0	0	0	0
Southwestbound Through/Right Turn	LOS	LOS	LOS	LOS	LOS	LOS
	A	A	A	A	B	B
	Delay	Delay	Delay	Delay	Delay	Delay
	8.3	8.1	8.5	8.4	11	10
<b>Howard Road (South Approach)</b>	AM	PM	AM	PM	AM	PM
	LOS	LOS	LOS	LOS	LOS	LOS
Southbound Left/Through/Right Turn	D	D	D	D	D	D
	Delay	Delay	Delay	Delay	Delay	Delay
	47.4	43.6	47.5	43.9	48.4	45.7
Overall Intersection	AM	PM	AM	PM	AM	PM
	LOS	LOS	LOS	LOS	LOS	LOS
	B	A	B	A	B	A
	Delay	Delay	Delay	Delay	Delay	Delay
	11.5	8	11.7	8.2	14.6	9.9

Table 5C - Level Of Service & Vehicle Delay						
Howard and Roundtree Roads	2013 Volumes		2018 Background		2018 Background With Project	
<b>Howard Road (East Approach)</b>	AM	PM	AM	PM	AM	PM
	LOS	LOS	LOS	LOS	LOS	LOS
Eastbound Left Turn/Through	A	A	A	A	A	A
	Delay	Delay	Delay	Delay	Delay	Delay
	0.6	2.4	0.6	2.3	1.5	3.9
<b>Howard Road (West Approach)</b>	AM	PM	AM	PM	AM	PM
	LOS	LOS	LOS	LOS	LOS	LOS
Westbound Through/Right Turn	A	A	A	A	A	A
	Delay	Delay	Delay	Delay	Delay	Delay
	0	0	0	0	0	0
<b>Roundtree Road (South Approach)</b>	AM	PM	AM	PM	AM	PM
	LOS	LOS	LOS	LOS	LOS	LOS
Southbound Left/Right Turn	A	B	A	B	B	B
	Delay	Delay	Delay	Delay	Delay	Delay
	9.8	10.3	9.9	10.3	10.6	11.6
Overall Intersection	AM	PM	AM	PM	AM	PM
	LOS	LOS	LOS	LOS	LOS	LOS
	A	A	A	A	A	A
	Delay	Delay	Delay	Delay	Delay	Delay
	3.5	2.7	3.6	2.7	5	3.7

## 6.0 FINDINGS, RECOMMENDATIONS & CONCLUSION

For the signalized and un-signalized intersections analyzed in this study, there are minimal or virtually no change in levels of service as a result of the proposed Sherwood Apartments project.

As mentioned in Section 5 of this report, certain approaches at un-signalized intersections when analyzed may indicate poor levels of service; however, this condition may not require mitigation due to a proposed project. A poor level of service is an indicator that visual on-site observations are necessary to determine if a problem is really occurring. Field conditions such as gaps from nearby signalized intersections may indicate that no mitigation is needed. Many un-signalized intersections have at least one approach that operates at a poor level of service; however, on-site observations may show that no major problems exist.

While the eastbound left turn approach of Queens Lane at the intersection with Camp Road has a LOS E during the afternoon peak, the proposed project does not contribute to increased traffic at this approach and does not increase the overall delay. Field observations observed during traffic counts at this location also indicated appropriate gaps in traffic volumes on Camp Road for vehicles to exit Queens Lane.

Overall, this project has been determined to have no significant effects on the existing transportation system or roadway network and does not result in any significant negative impacts to traffic operations in the vicinity of the project. It is concluded that, based on the estimated trips generated by the proposed Sherwood Apartments project at this site, this project is anticipated to have minimum or no impacts to the studied intersections as a result of the traffic generated by the proposed project.

## 7.0 STUDY CONTACT

For questions or comments regarding this traffic impact study, contact:

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Fax: (716) 826-7958  
jpaananen@nussclarke.com

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**APPENDIX A**

**Traffic Count Data/Intersection Manual Turning Counts/Signal  
Timings**

**For the**

**Sherwood Apartments  
Heatherwood Drive**

**Located in the**

**TOWN OF HAMBURG  
ERIE COUNTY, NEW YORK**

*Prepared for:*

**David Burke**  
DATO DEVELOPMENT, LLC  
S-5540 Southwestern Boulevard  
Hamburg, NY 14075

*Prepared by:*



3556 LAKE SHORE ROAD  
BUFFALO, NY 14219-1494  
(716) 827-8000 PHONE  
(716) 826-7958 FAX

Counter: D1-0333  
 Counted By: JP  
 Weather: Cloudy 30s  
 Municipality: Hamburg

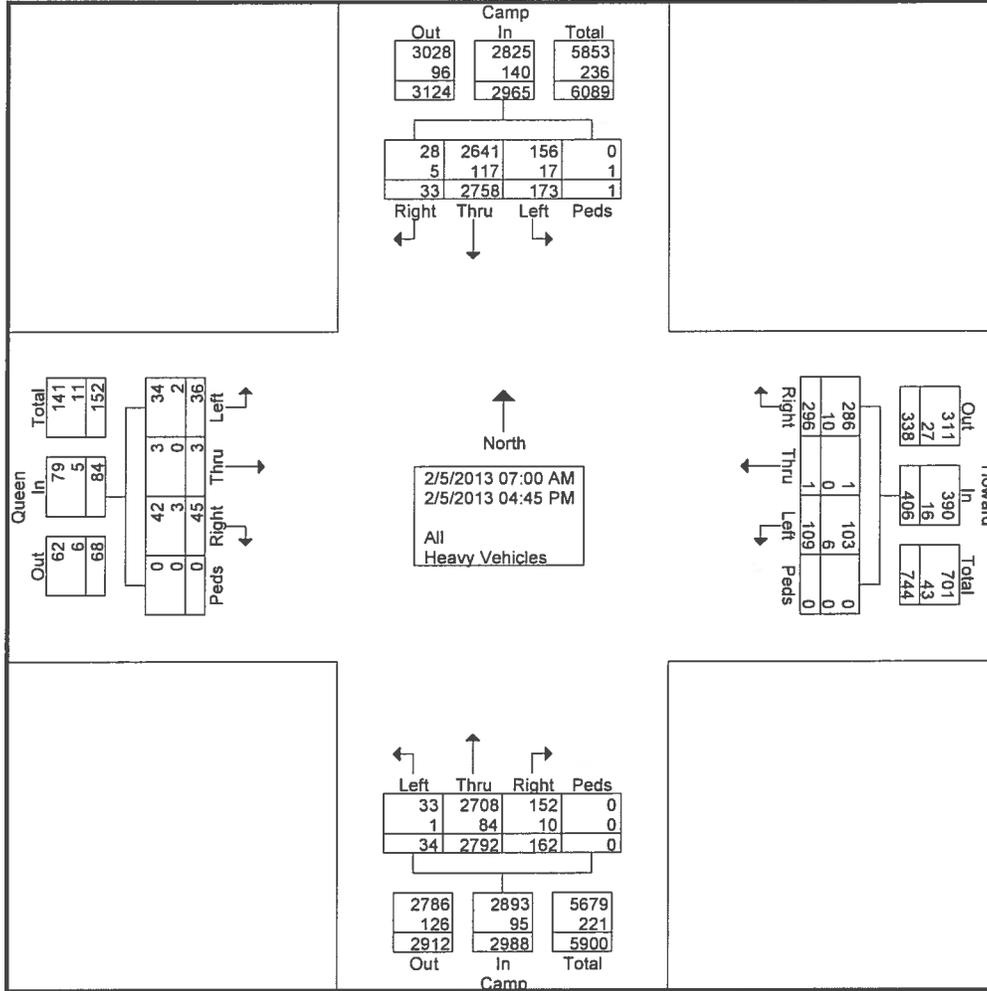
File Name : Camp & Howard  
 Site Code : 00000012  
 Start Date : 2/5/2013  
 Page No : 1

Groups Printed- All - Heavy Vehicles

Start Time	Camp Southbound					Howard Westbound					Camp Northbound					Queen Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
07:00 AM	4	67	1	0	72	6	0	31	0	37	1	255	4	0	260	5	0	1	0	6	375
07:15 AM	9	80	0	0	89	8	0	39	0	47	0	265	3	0	268	3	0	3	0	6	410
07:30 AM	12	101	6	0	119	9	0	24	0	33	0	259	4	0	263	3	0	8	0	11	426
07:45 AM	13	105	0	0	118	8	0	26	0	34	1	269	4	0	274	5	0	5	0	10	436
<b>Total</b>	<b>38</b>	<b>353</b>	<b>7</b>	<b>0</b>	<b>398</b>	<b>31</b>	<b>0</b>	<b>120</b>	<b>0</b>	<b>151</b>	<b>2</b>	<b>1048</b>	<b>15</b>	<b>0</b>	<b>1065</b>	<b>16</b>	<b>0</b>	<b>17</b>	<b>0</b>	<b>33</b>	<b>1647</b>
08:00 AM	12	103	1	0	116	8	0	28	0	36	0	206	3	0	209	4	0	2	0	6	367
08:15 AM	8	107	2	0	117	5	0	14	0	19	1	183	5	0	189	1	0	3	0	4	329
08:30 AM	9	94	0	0	103	6	0	26	0	32	1	182	7	0	190	2	1	4	0	7	332
08:45 AM	4	121	0	0	125	6	0	17	0	23	4	143	3	0	150	3	0	2	0	5	303
<b>Total</b>	<b>33</b>	<b>425</b>	<b>3</b>	<b>0</b>	<b>461</b>	<b>25</b>	<b>0</b>	<b>85</b>	<b>0</b>	<b>110</b>	<b>6</b>	<b>714</b>	<b>18</b>	<b>0</b>	<b>738</b>	<b>10</b>	<b>1</b>	<b>11</b>	<b>0</b>	<b>22</b>	<b>1331</b>
*** BREAK ***																					
03:00 PM	13	175	4	0	192	4	0	9	0	13	7	132	20	0	159	2	1	3	0	6	370
03:15 PM	15	237	2	0	254	8	0	10	0	18	2	150	12	0	164	2	1	3	0	6	442
03:30 PM	15	241	3	1	260	9	1	11	0	21	6	142	18	0	166	0	0	1	0	1	448
03:45 PM	17	274	1	0	292	9	0	14	0	23	3	131	17	0	151	3	0	3	0	6	472
<b>Total</b>	<b>60</b>	<b>927</b>	<b>10</b>	<b>1</b>	<b>998</b>	<b>30</b>	<b>1</b>	<b>44</b>	<b>0</b>	<b>75</b>	<b>18</b>	<b>555</b>	<b>67</b>	<b>0</b>	<b>640</b>	<b>7</b>	<b>2</b>	<b>10</b>	<b>0</b>	<b>19</b>	<b>1732</b>
04:00 PM	19	235	5	0	259	7	0	15	0	22	3	126	25	0	154	1	0	2	0	3	438
04:15 PM	23	307	3	0	333	8	0	11	0	19	2	132	13	0	147	2	0	1	0	3	502
04:30 PM	0	259	3	0	262	4	0	10	0	14	1	108	11	0	120	0	0	3	0	3	399
04:45 PM	0	252	2	0	254	4	0	11	0	15	2	109	13	0	124	0	0	1	0	1	394
<b>Total</b>	<b>42</b>	<b>1053</b>	<b>13</b>	<b>0</b>	<b>1108</b>	<b>23</b>	<b>0</b>	<b>47</b>	<b>0</b>	<b>70</b>	<b>8</b>	<b>475</b>	<b>62</b>	<b>0</b>	<b>545</b>	<b>3</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>10</b>	<b>1733</b>
<b>Grand Total</b>	<b>173</b>	<b>2758</b>	<b>33</b>	<b>1</b>	<b>2965</b>	<b>109</b>	<b>1</b>	<b>296</b>	<b>0</b>	<b>406</b>	<b>34</b>	<b>2792</b>	<b>162</b>	<b>0</b>	<b>2988</b>	<b>36</b>	<b>3</b>	<b>45</b>	<b>0</b>	<b>84</b>	<b>6443</b>
<b>Apprch %</b>	<b>5.8</b>	<b>93</b>	<b>1.1</b>	<b>0</b>		<b>26.8</b>	<b>0.2</b>	<b>72.9</b>	<b>0</b>		<b>1.1</b>	<b>93.4</b>	<b>5.4</b>	<b>0</b>		<b>42.9</b>	<b>3.6</b>	<b>53.6</b>	<b>0</b>		
<b>Total %</b>	<b>2.7</b>	<b>42.8</b>	<b>0.5</b>	<b>0</b>	<b>46</b>	<b>1.7</b>	<b>0</b>	<b>4.6</b>	<b>0</b>	<b>6.3</b>	<b>0.5</b>	<b>43.3</b>	<b>2.5</b>	<b>0</b>	<b>46.4</b>	<b>0.6</b>	<b>0</b>	<b>0.7</b>	<b>0</b>	<b>1.3</b>	
<b>All</b>	<b>156</b>	<b>2641</b>	<b>28</b>	<b>0</b>	<b>2825</b>	<b>103</b>	<b>1</b>	<b>286</b>	<b>0</b>	<b>390</b>	<b>33</b>	<b>2708</b>	<b>152</b>	<b>0</b>	<b>2893</b>	<b>34</b>	<b>3</b>	<b>42</b>	<b>0</b>	<b>79</b>	<b>6187</b>
<b>% All</b>	<b>90.2</b>	<b>95.8</b>	<b>84.8</b>	<b>0</b>	<b>95.3</b>	<b>94.5</b>	<b>100</b>	<b>96.6</b>	<b>0</b>	<b>96.1</b>	<b>97.1</b>	<b>97</b>	<b>93.8</b>	<b>0</b>	<b>96.8</b>	<b>94.4</b>	<b>100</b>	<b>93.3</b>	<b>0</b>	<b>94</b>	<b>96</b>
<b>Heavy Vehicles</b>	<b>17</b>	<b>117</b>	<b>5</b>	<b>1</b>	<b>140</b>	<b>6</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>16</b>	<b>1</b>	<b>84</b>	<b>10</b>	<b>0</b>	<b>95</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>5</b>	<b>256</b>
<b>% Heavy Vehicles</b>	<b>9.8</b>	<b>4.2</b>	<b>15.2</b>	<b>100</b>	<b>4.7</b>	<b>5.5</b>	<b>0</b>	<b>3.4</b>	<b>0</b>	<b>3.9</b>	<b>2.9</b>	<b>3</b>	<b>6.2</b>	<b>0</b>	<b>3.2</b>	<b>5.6</b>	<b>0</b>	<b>6.7</b>	<b>0</b>	<b>6</b>	<b>4</b>

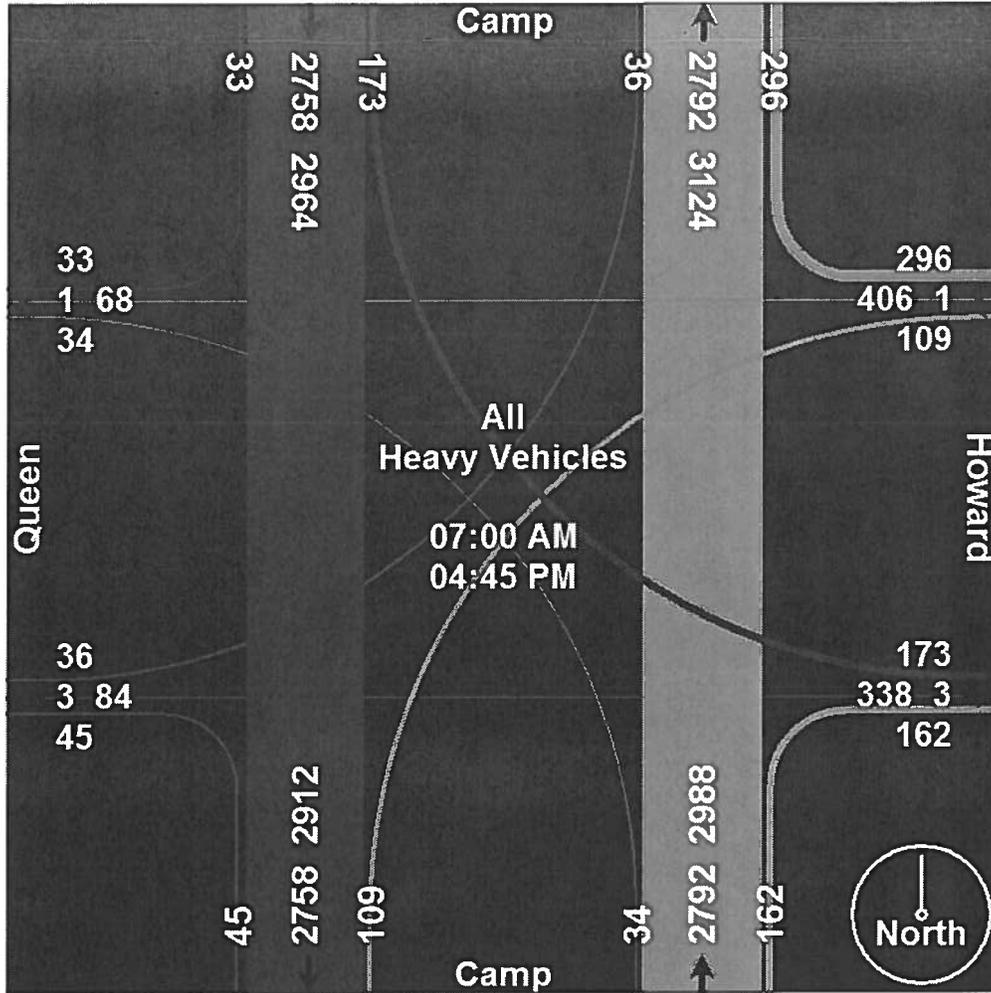
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 Municipality: Hamburg

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 Site Code : 00000012  
 Start Date : 2/5/2013  
 Page No : 2



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Municipality: Hamburg

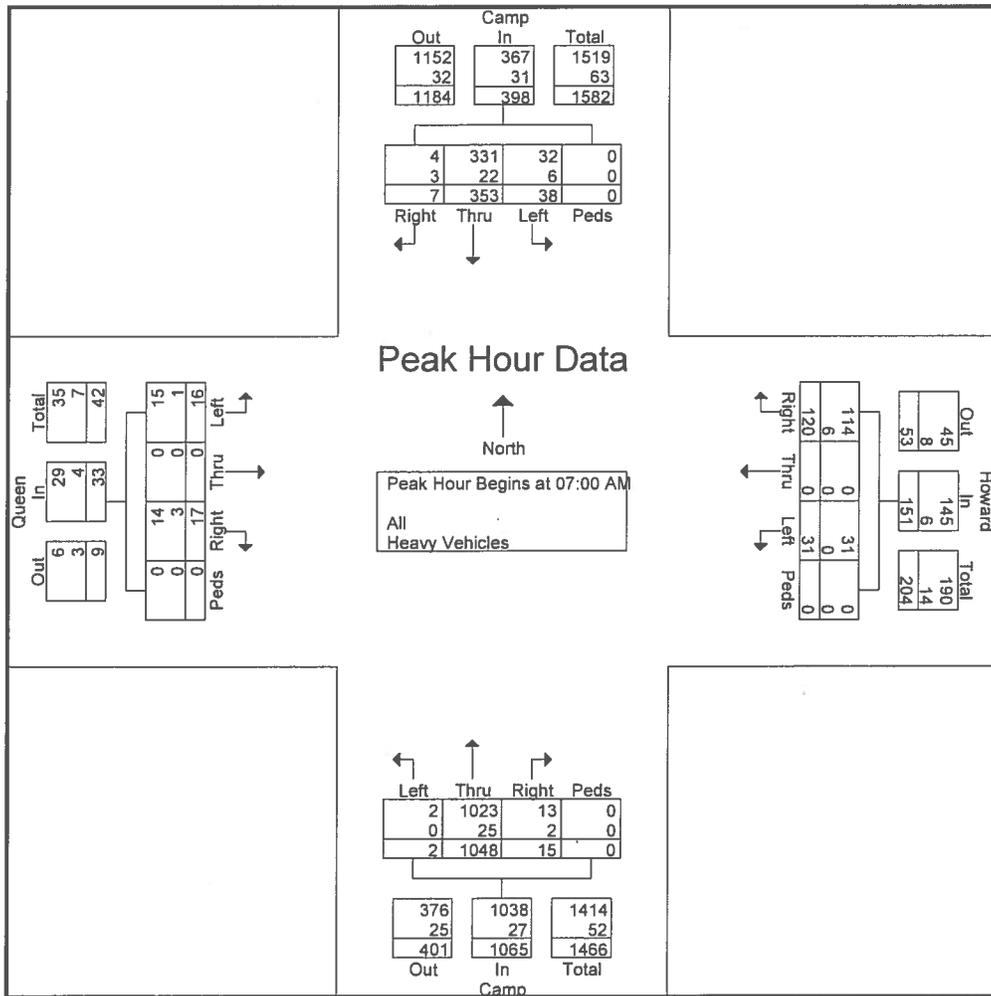
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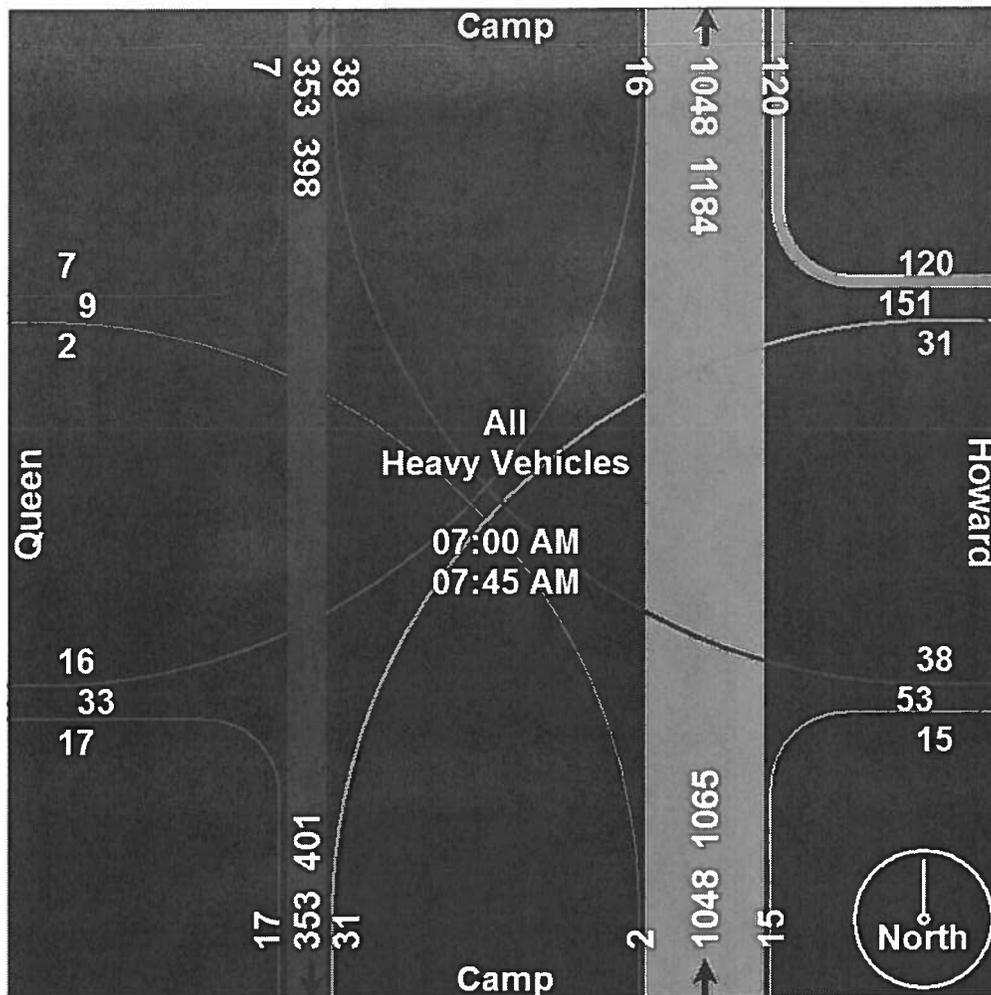
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 Page No : 4

Start Time	Camp Southbound					Howard Westbound					Camp Northbound					Queen Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	4	67	1	0	72	6	0	31	0	37	1	255	4	0	260	5	0	1	0	6	375
07:15 AM	9	80	0	0	89	8	0	39	0	47	0	265	3	0	268	3	0	3	0	6	410
07:30 AM	12	101	6	0	119	9	0	24	0	33	0	259	4	0	263	3	0	8	0	11	426
07:45 AM	13	105	0	0	118	8	0	26	0	34	1	269	4	0	274	5	0	5	0	10	436
Total Volume	38	353	7	0	398	31	0	120	0	151	2	1048	15	0	1065	16	0	17	0	33	1647
% App. Total	9.5	88.7	1.8	0		20.5	0	79.5	0		0.2	98.4	1.4	0		48.5	0	51.5	0		
PHF	.731	.840	.292	.000	.836	.861	.000	.769	.000	.803	.500	.974	.938	.000	.972	.800	.000	.531	.000	.750	.944
All	32	331	4	0	367	31	0	114	0	145	2	1023									
% All	84.2	93.8	57.1	0	92.2	100	0	95.0	0	96.0	100	97.6	86.7	0	97.5	93.8	0	82.4	0	87.9	95.9
Heavy Vehicles	6	22	3	0	31	0	0	6	0	6	0	25	2	0	27	1	0	3	0	4	68
% Heavy Vehicles	15.8	6.2	42.9	0	7.8	0	0	5.0	0	4.0	0	2.4	13.3	0	2.5	6.3	0	17.6	0	12.1	4.1



Counter: D1-0333  
 Counted By: JP  
 Weather: Cloudy 30s  
 Municipality: Hamburg

File Name : Camp & Howard  
 Site Code : 00000012  
 Start Date : 2/5/2013  
 Page No : 5



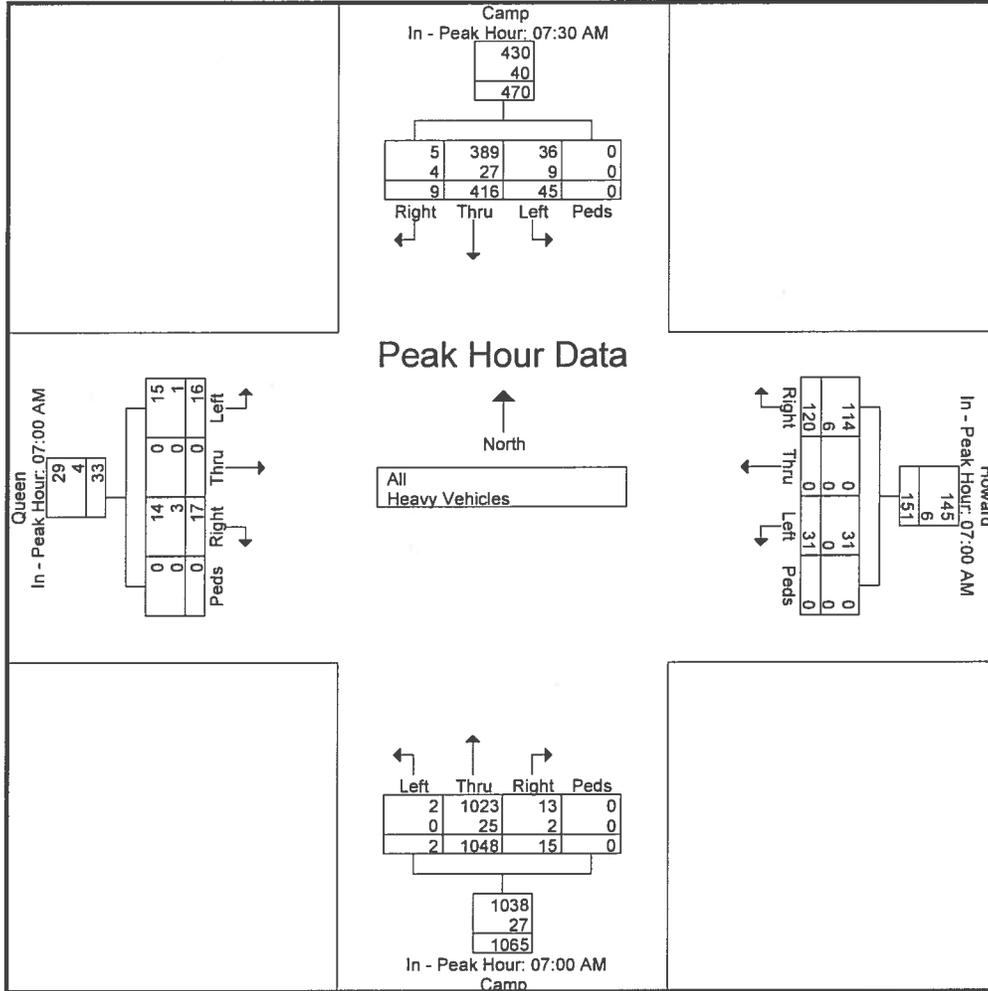
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

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+0 mins.	12	101	6	0	119	6	0	31	0	37	1	255	4	0	260	5	0	1	0	6
+15 mins.	13	105	0	0	118	8	0	39	0	47	0	265	3	0	268	3	0	3	0	6
+30 mins.	12	103	1	0	116	9	0	24	0	33	0	259	4	0	263	3	0	8	0	11
+45 mins.	8	107	2	0	117	8	0	26	0	34	1	269	4	0	274	5	0	5	0	10
Total Volume	45	416	9	0	470	31	0	120	0	151	2	1048	15	0	1065	16	0	17	0	33
% App. Total	9.6	88.5	1.9	0		20.5	0	79.5	0		0.2	98.4	1.4	0		48.5	0	51.5	0	
PHF	.865	.972	.375	.000	.987	.861	.000	.769	.000	.803	.500	.974	.938	.000	.972	.800	.000	.531	.000	.750
All	36	389	5	0	430	31	0	114	0	145	2	1023	13	0	1038	15	0	14	0	29
% All	80	93.5	55.6	0	91.5	100	0	95	0	96	100	97.6	86.7	0	97.5	93.8	0	82.4	0	87.9
Heavy Vehicles																				
% Heavy Vehicles	20	6.5	44.4	0	8.5	0	0	5	0	4	0	2.4	13.3	0	2.5	6.2	0	17.6	0	12.1

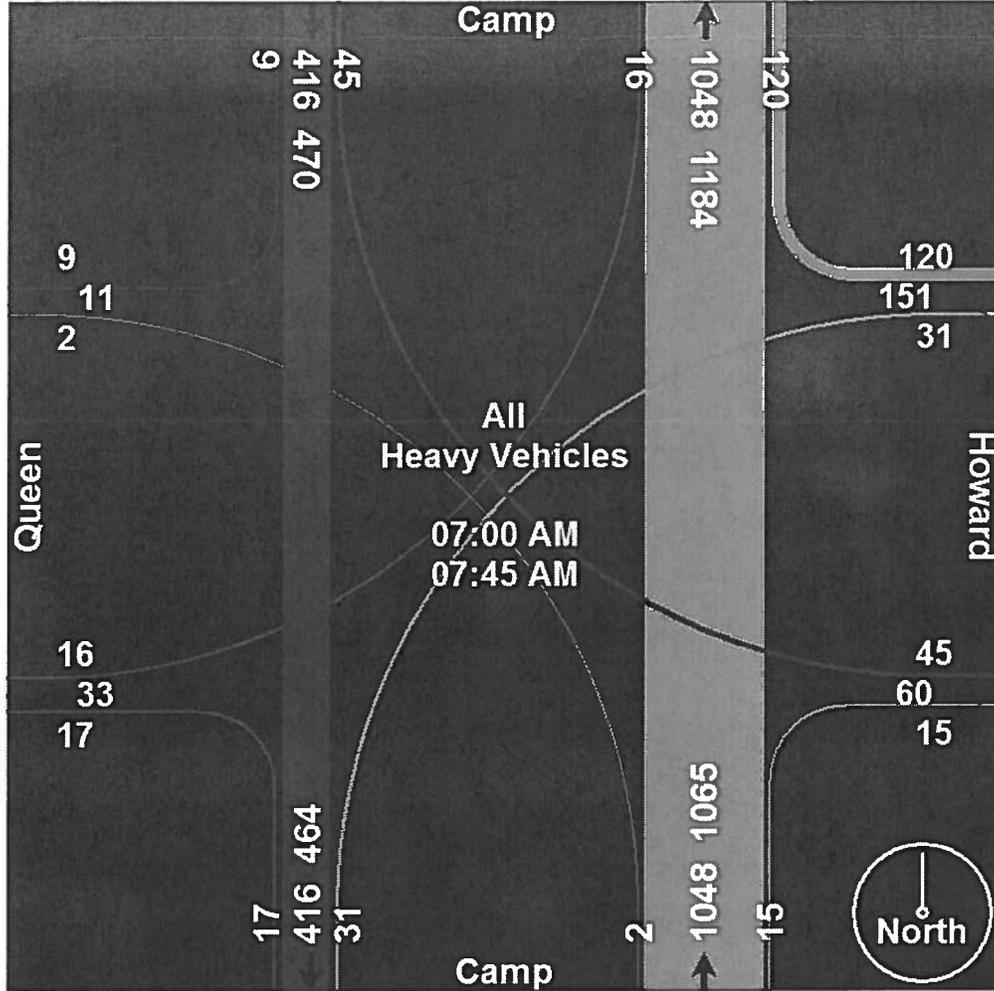
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 Municipality: Hamburg

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Weather: Cloudy 30s  
Municipality: Hamburg

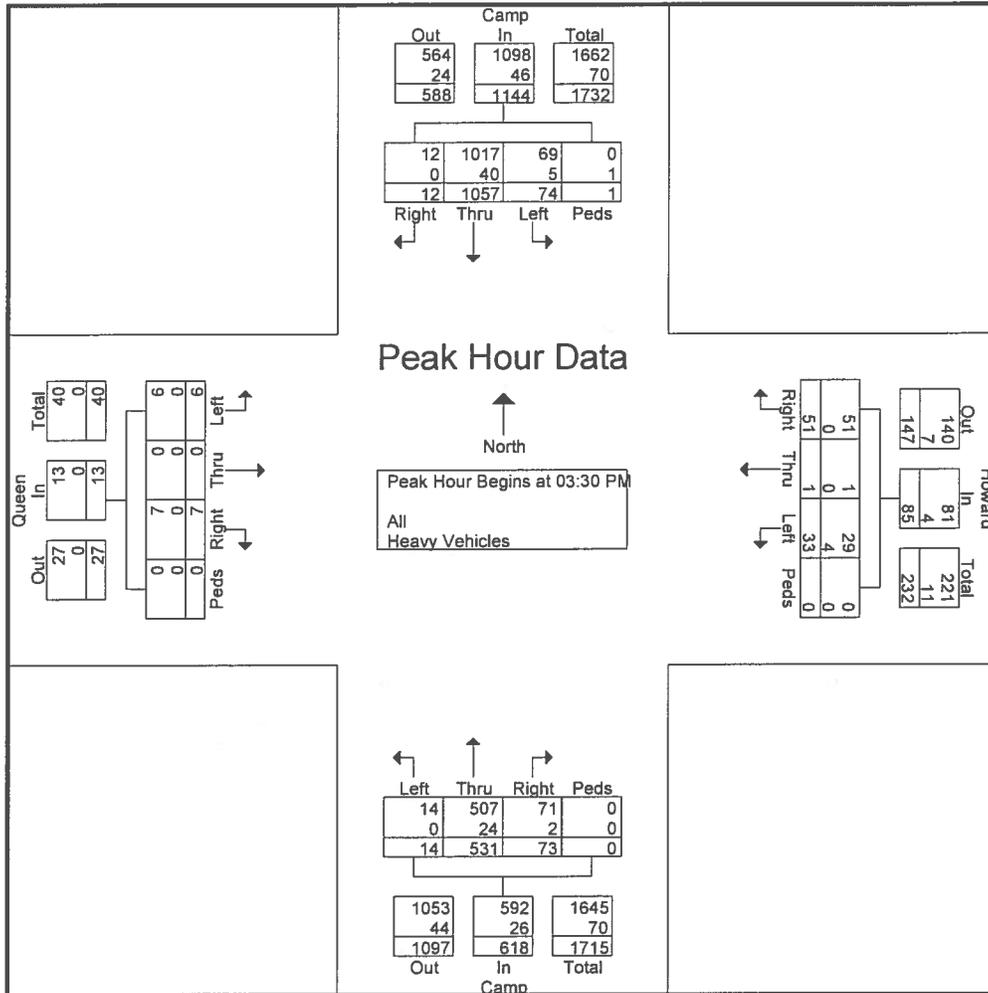
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Start Date : 2/5/2013  
Page No : 7



Counter: D1-0333  
 Counted By: JP  
 Weather: Cloudy 30s  
 Municipality: Hamburg

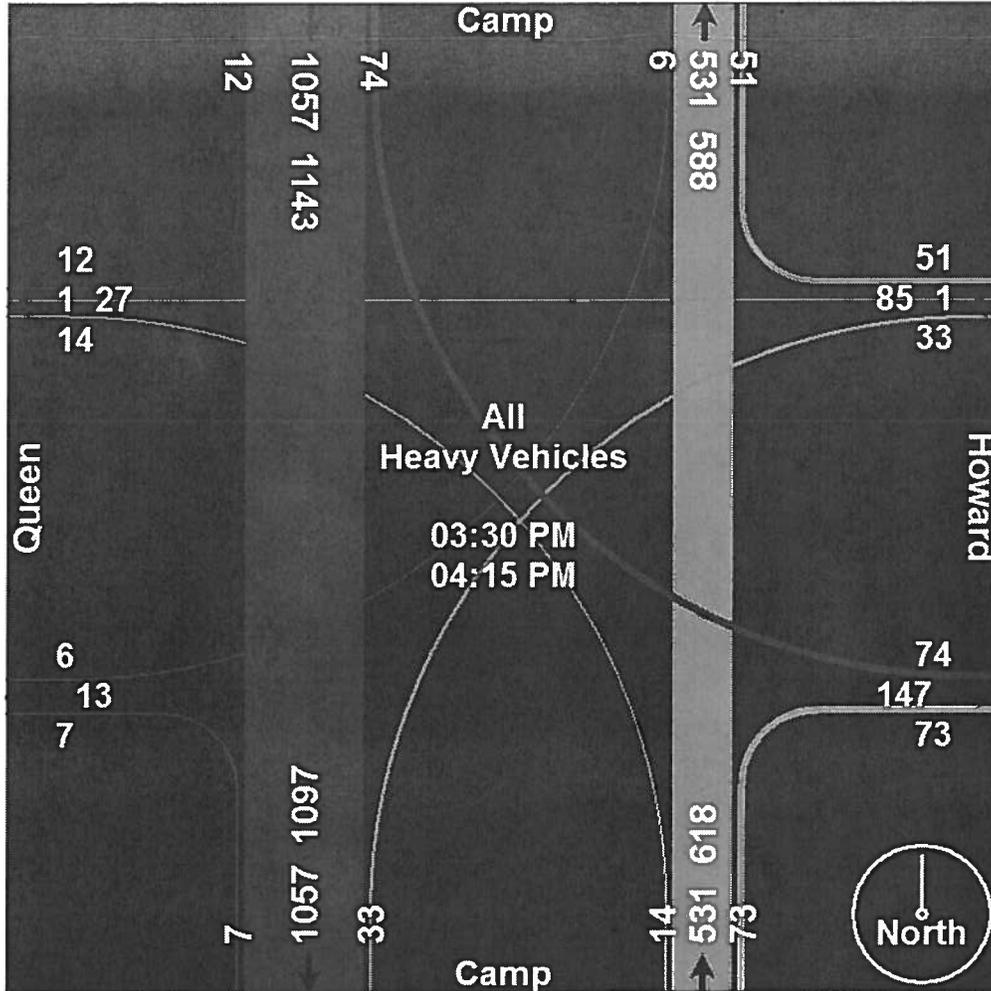
File Name : Camp & Howard  
 Site Code : 00000012  
 Start Date : 2/5/2013  
 Page No : 8

Start Time	Camp Southbound					Howard Westbound					Camp Northbound					Queen Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 03:00 PM to 04:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 03:30 PM																					
03:30 PM	15	241	3	1	260	9	1	11	0	21	6	142	18	0	166	0	0	1	0	1	448
03:45 PM	17	274	1	0	292	9	0	14	0	23	3	131	17	0	151	3	0	3	0	6	472
04:00 PM	19	235	5	0	259	7	0	15	0	22	3	126	25	0	154	1	0	2	0	3	438
04:15 PM	23	307	3	0	333	8	0	11	0	19	2	132	13	0	147	2	0	1	0	3	502
Total Volume	74	1057	12	1	1144	33	1	51	0	85	14	531	73	0	618	6	0	7	0	13	1860
% App. Total	6.5	92.4	1	0.1		38.8	1.2	60	0		2.3	85.9	11.8	0		46.2	0	53.8	0		
PHF	.804	.861	.600	.250	.859	.917	.250	.850	.000	.924	.583	.935	.730	.000	.931	.500	.000	.583	.000	.542	.926
All	69	1017																			
% All	93.2	96.2	100	0	96.0	87.9	100	100	0	95.3	100	95.5	97.3	0	95.8	100	0	100	0	100	95.9
Heavy Vehicles	5	40	0	1	46	4	0	0	0	4	0	24	2	0	26	0	0	0	0	0	76
% Heavy Vehicles	6.8	3.8	0	100	4.0	12.1	0	0	0	4.7	0	4.5	2.7	0	4.2	0	0	0	0	0	4.1



Counter: D1-0333  
 Counted By: JP  
 Weather: Cloudy 30s  
 Municipality: Hamburg

File Name : Camp & Howard  
 Site Code : 00000012  
 Start Date : 2/5/2013  
 Page No : 9



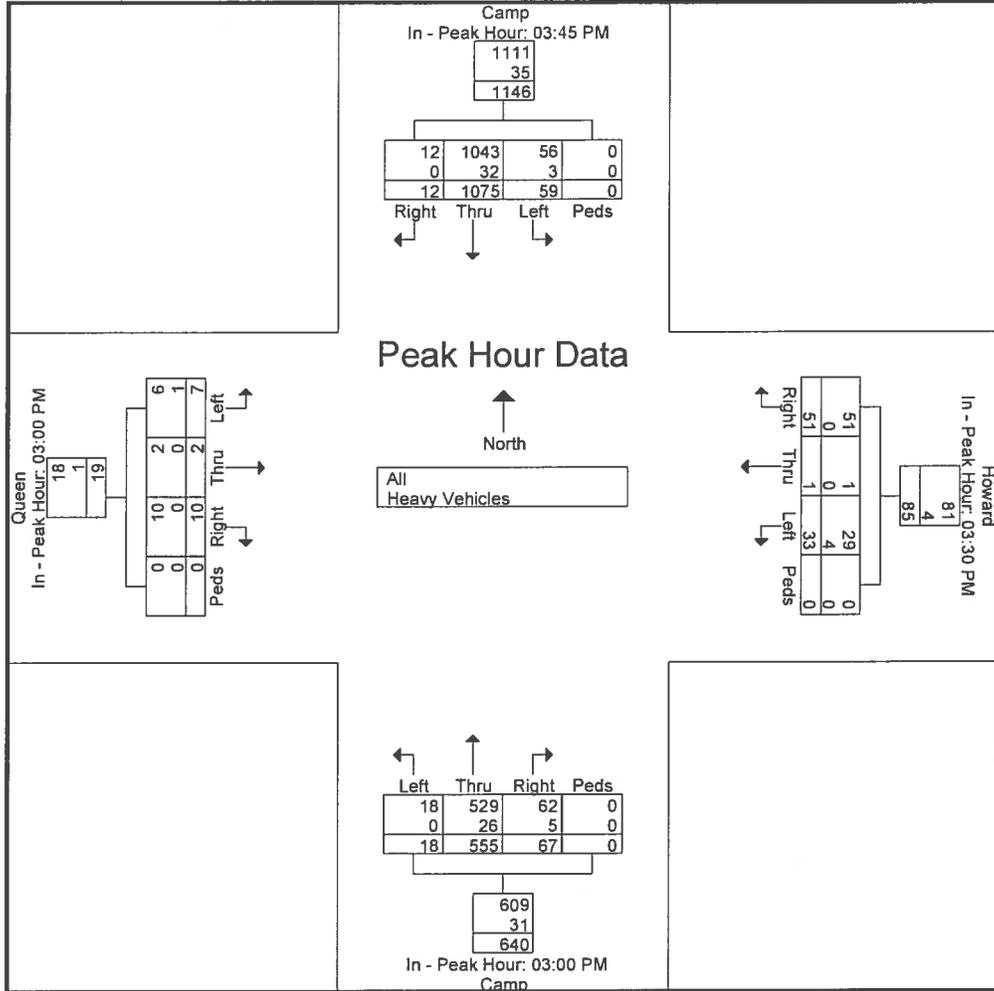
Peak Hour Analysis From 03:00 PM to 04:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	03:45 PM					03:30 PM					03:00 PM									
+0 mins.	17	274	1	0	292	9	1	11	0	21	7	132	20	0	159	2	1	3	0	6
+15 mins.	19	235	5	0	259	9	0	14	0	23	2	150	12	0	164	2	1	3	0	6
+30 mins.	23	307	3	0	333	7	0	15	0	22	6	142	18	0	166	0	0	1	0	1
+45 mins.	0	259	3	0	262	8	0	11	0	19	3	131	17	0	151	3	0	3	0	6
Total Volume	59	1075	12	0	1146	33	1	51	0	85	18	555	67	0	640	7	2	10	0	19
% App. Total	5.1	93.8	1	0		38.8	1.2	60	0		2.8	86.7	10.5	0		36.8	10.5	52.6	0	
PHF	.641	.875	.600	.000	.860	.917	.250	.850	.000	.924	.643	.925	.838	.000	.964	.583	.500	.833	.000	.792
All	56	1043	12	0	1111	29	1	51	0	81	18	529	62	0	609	6	2	10	0	18
% All	94.9	97	100	0	96.9	87.9	100	100	0	95.3	100	95.3	92.5	0	95.2	85.7	100	100	0	94.7
Heavy Vehicles																				
% Heavy Vehicles	5.1	3	0	0	3.1	12.1	0	0	0	4.7	0	4.7	7.5	0	4.8	14.3	0	0	0	5.3

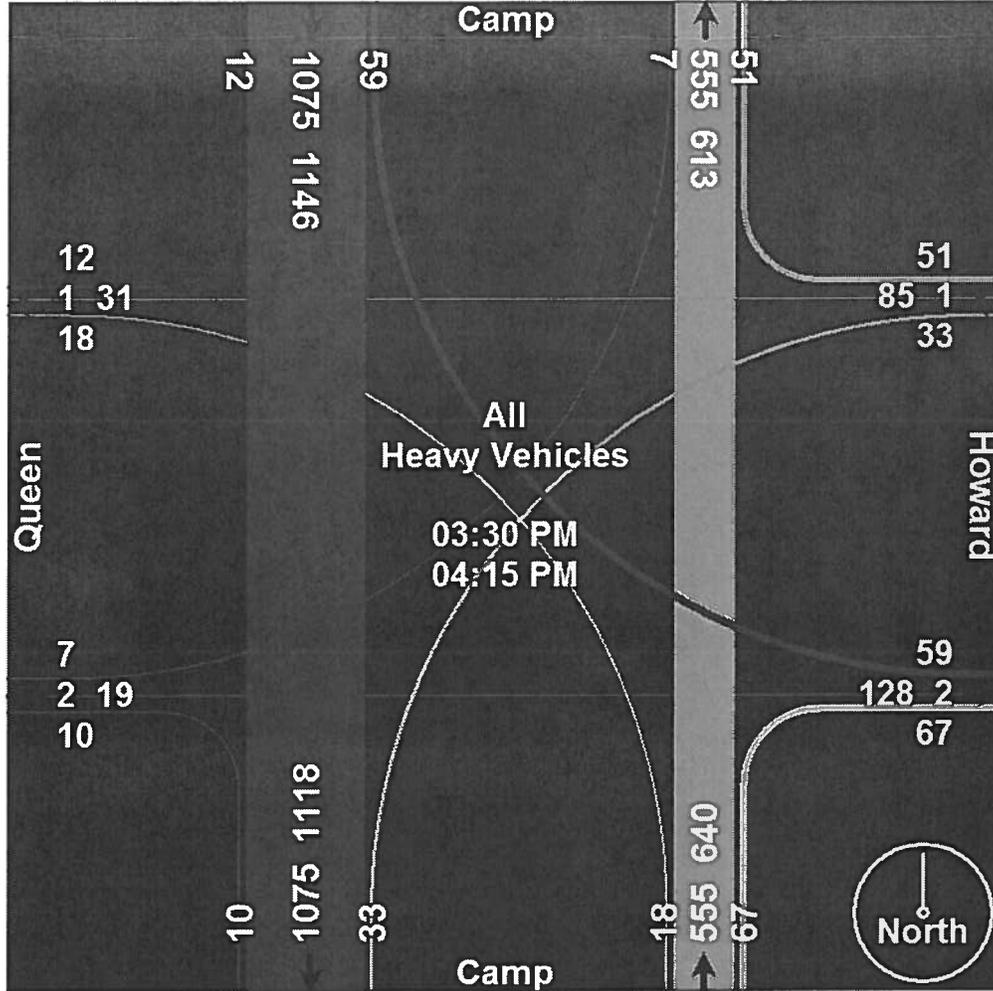
Counter: D1-0333  
 Counted By: JP  
 Weather: Cloudy 30s  
 Municipality: Hamburg

File Name : Camp & Howard  
 Site Code : 00000012  
 Start Date : 2/5/2013  
 Page No : 10



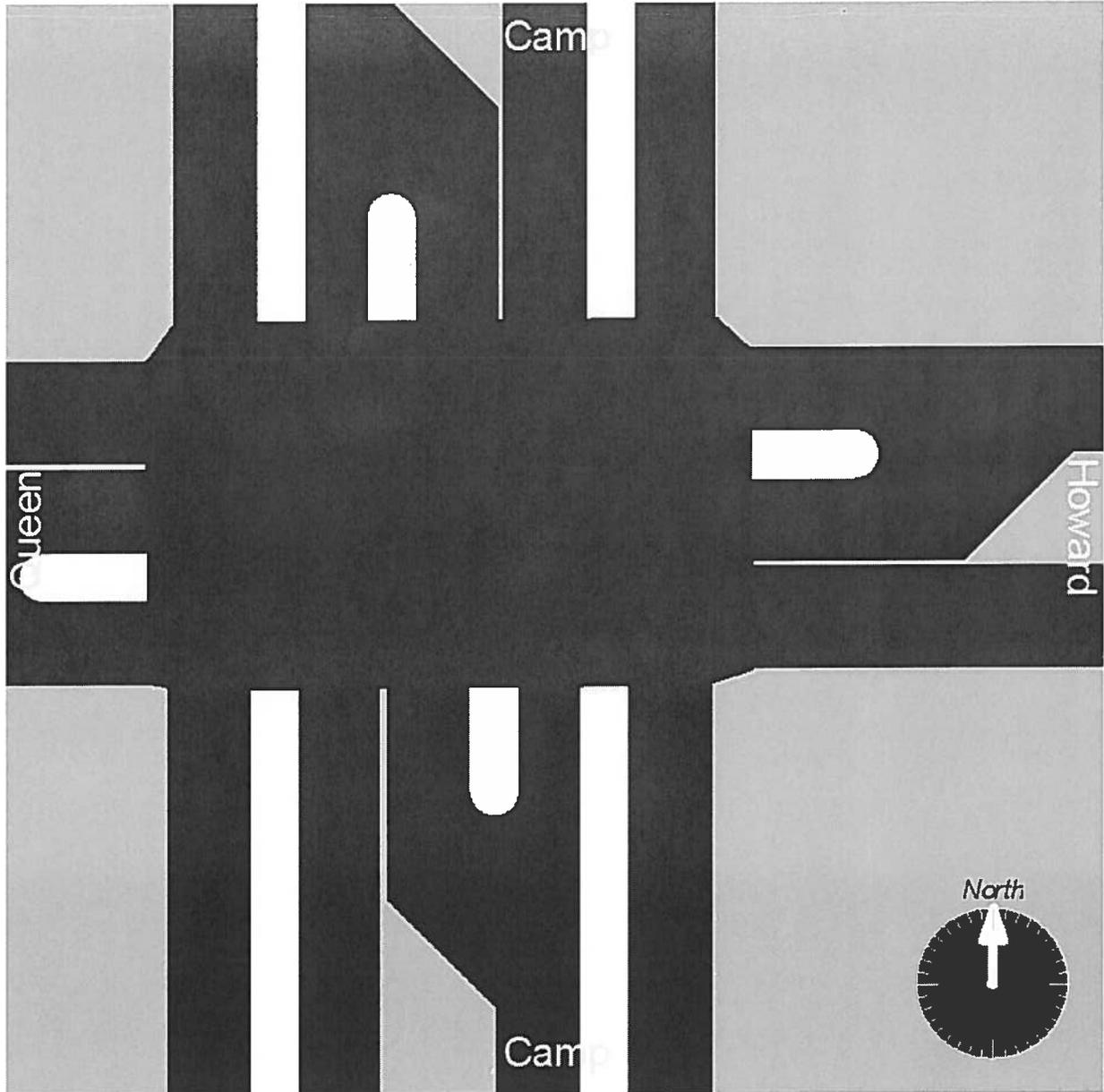
Center: D1-0333  
Counted By: JP  
Weather: Cloudy 30s  
Municipality: Hamburg

File Name : Camp & Howard  
Site Code : 00000012  
Start Date : 2/5/2013  
Page No : 11



Counter: D1-0333  
Printed By: JP  
Weather: Cloudy 30s  
Municipality: Hamburg

File Name : Camp & Howard  
Site Code : 0000012  
Start Date : 2/5/2013  
Page No : 12



Counter: D1-0330  
 Counted By: JG  
 Weather: Cloudy 30s  
 Municipality: Hamburg

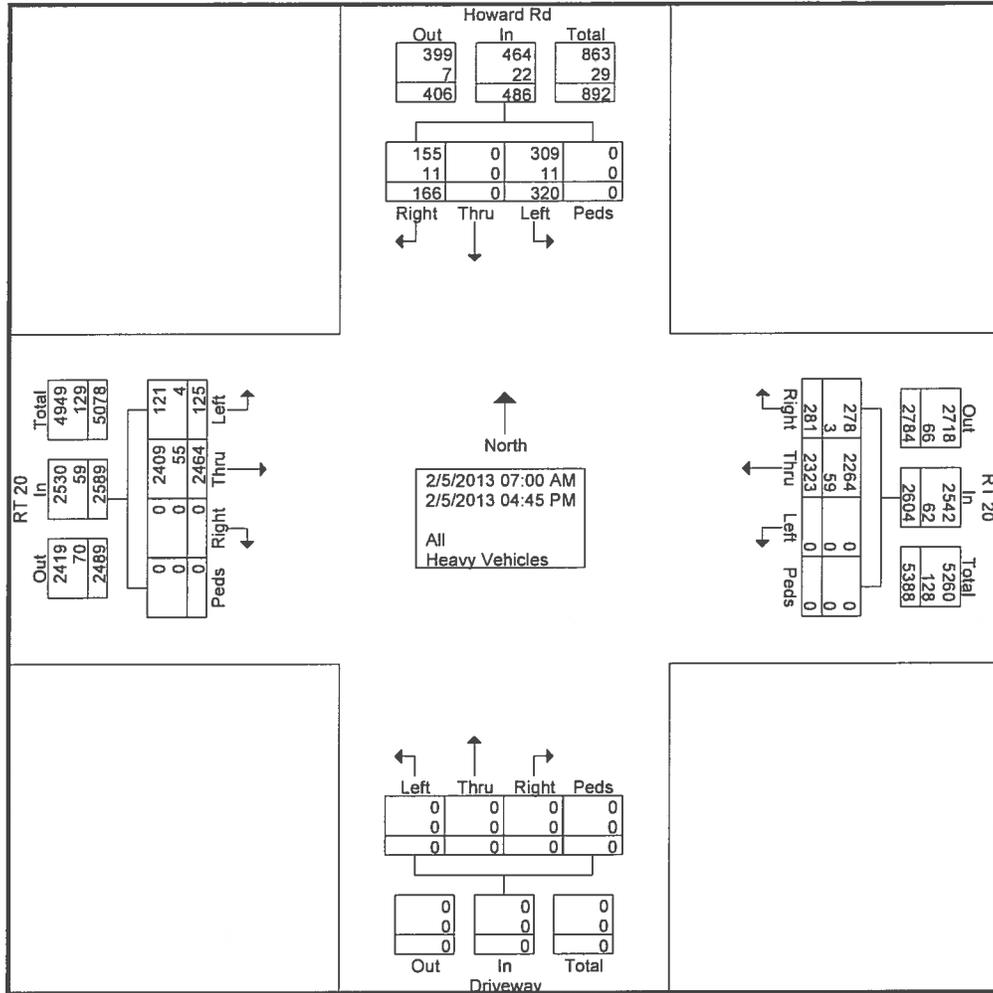
File Name : RT 20 & Howard  
 Site Code : 00000011  
 Start Date : 2/5/2013  
 Page No : 1

Groups Printed- All - Heavy Vehicles

Start Time	Howard Rd Southbound					RT 20 Westbound					Driveway Northbound					RT 20 Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Factor	0.84	0.84	0.84	0.84		0.84	0.84	0.84	0.84		0.84	0.84	0.84	0.84		0.84	0.84	0.84	0.84		
07:00 AM	24	0	5	0	29	0	96	10	0	106	0	0	0	0	0	3	129	0	0	132	267
07:15 AM	23	0	13	0	36	0	94	15	0	109	0	0	0	0	0	4	139	0	0	143	288
07:30 AM	30	0	14	0	44	0	91	11	0	102	0	0	0	0	0	11	157	0	0	168	314
07:45 AM	22	0	14	0	36	0	97	13	0	110	0	0	0	0	0	12	177	0	0	189	335
Total	99	0	46	0	145	0	378	49	0	427	0	0	0	0	0	30	602	0	0	632	1204
08:00 AM	25	0	12	0	37	0	76	9	0	85	0	0	0	0	0	6	134	0	0	140	262
08:15 AM	18	0	8	0	26	0	76	13	0	89	0	0	0	0	0	3	130	0	0	133	248
08:30 AM	25	0	7	0	32	0	82	7	0	89	0	0	0	0	0	3	144	0	0	147	268
08:45 AM	12	0	14	0	26	0	108	8	0	116	0	0	0	0	0	3	142	0	0	145	287
Total	80	0	41	0	121	0	342	37	0	379	0	0	0	0	0	15	550	0	0	565	1065
*** BREAK ***																					
03:00 PM	27	0	18	0	45	0	192	22	0	214	0	0	0	0	0	12	142	0	0	154	413
03:15 PM	13	0	8	0	21	0	168	25	0	193	0	0	0	0	0	11	145	0	0	156	370
03:30 PM	18	0	12	0	30	0	194	28	0	222	0	0	0	0	0	9	170	0	0	179	431
03:45 PM	19	0	10	0	29	0	217	21	0	238	0	0	0	0	0	5	162	0	0	167	434
Total	77	0	48	0	125	0	771	96	0	867	0	0	0	0	0	37	619	0	0	656	1648
04:00 PM	18	0	11	0	29	0	193	24	0	217	0	0	0	0	0	15	190	0	0	205	451
04:15 PM	13	0	11	0	24	0	195	31	0	226	0	0	0	0	0	7	167	0	0	174	424
04:30 PM	18	0	4	0	22	0	226	17	0	243	0	0	0	0	0	12	163	0	0	175	440
04:45 PM	15	0	5	0	20	0	218	27	0	245	0	0	0	0	0	9	173	0	0	182	447
Total	64	0	31	0	95	0	832	99	0	931	0	0	0	0	0	43	693	0	0	736	1762
Grand Total	320	0	166	0	486	0	2323	281	0	2604	0	0	0	0	0	125	2464	0	0	2589	5679
Apprch %	65.8	0	34.2	0		0	89.2	10.8	0		0	0	0	0	0	4.8	95.2	0	0		
Total %	5.6	0	2.9	0	8.6	0	40.9	4.9	0	45.9	0	0	0	0	0	2.2	43.4	0	0	45.6	
All	309	0	155	0	464	0	2264	278	0	2542	0	0	0	0	0	121	2409	0	0	2530	5536
% All	96.6	0	93.4	0	95.5	0	97.5	98.9	0	97.6	0	0	0	0	0	96.8	97.8	0	0	97.7	97.5
Heavy Vehicles	11	0	11	0	22	0	59	3	0	62	0	0	0	0	0	4	55	0	0	59	143
% Heavy Vehicles	3.4	0	6.6	0	4.5	0	2.5	1.1	0	2.4	0	0	0	0	0	3.2	2.2	0	0	2.3	2.5

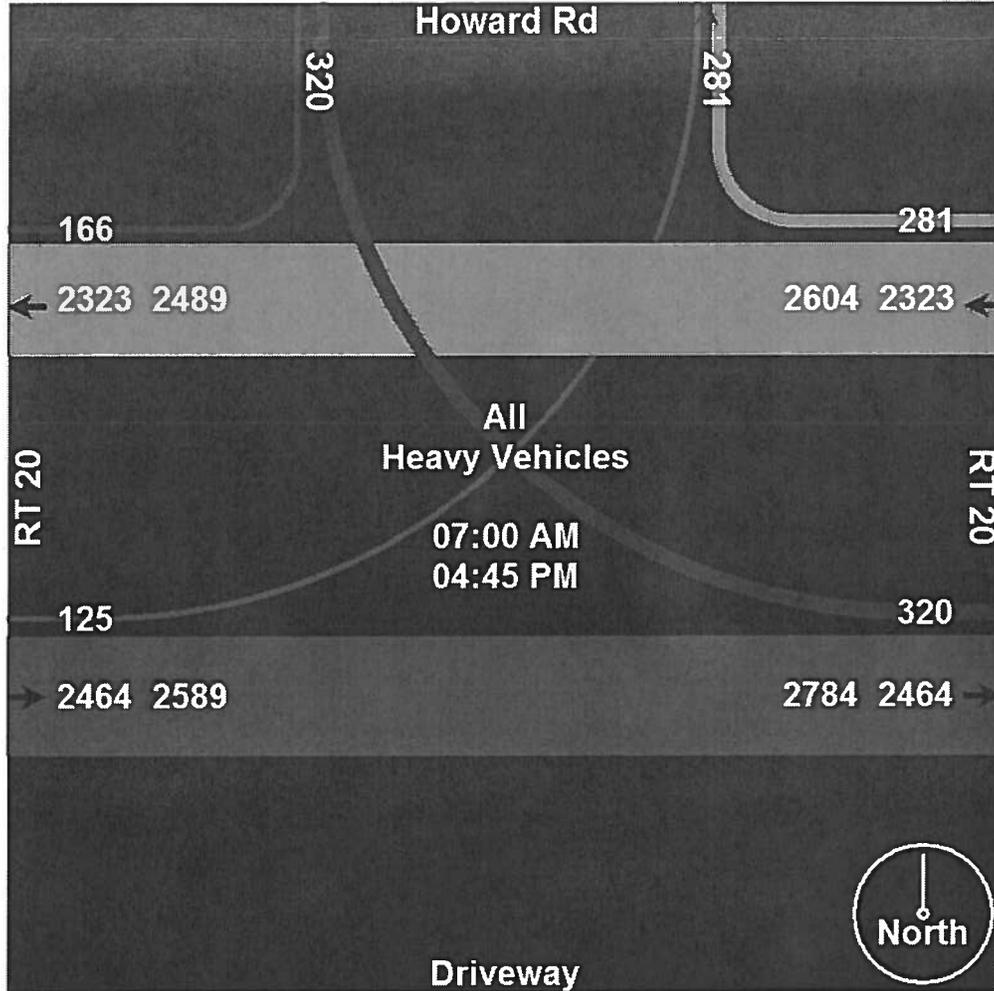
Counter: D1-0330  
 Counted By: JG  
 Weather: Cloudy 30s  
 Municipality: Hamburg

File Name : RT 20 & Howard  
 Site Code : 0000011  
 Start Date : 2/5/2013  
 Page No : 2



Counter: D1-0330  
Printed By: JG  
Weather: Cloudy 30s  
Municipality: Hamburg

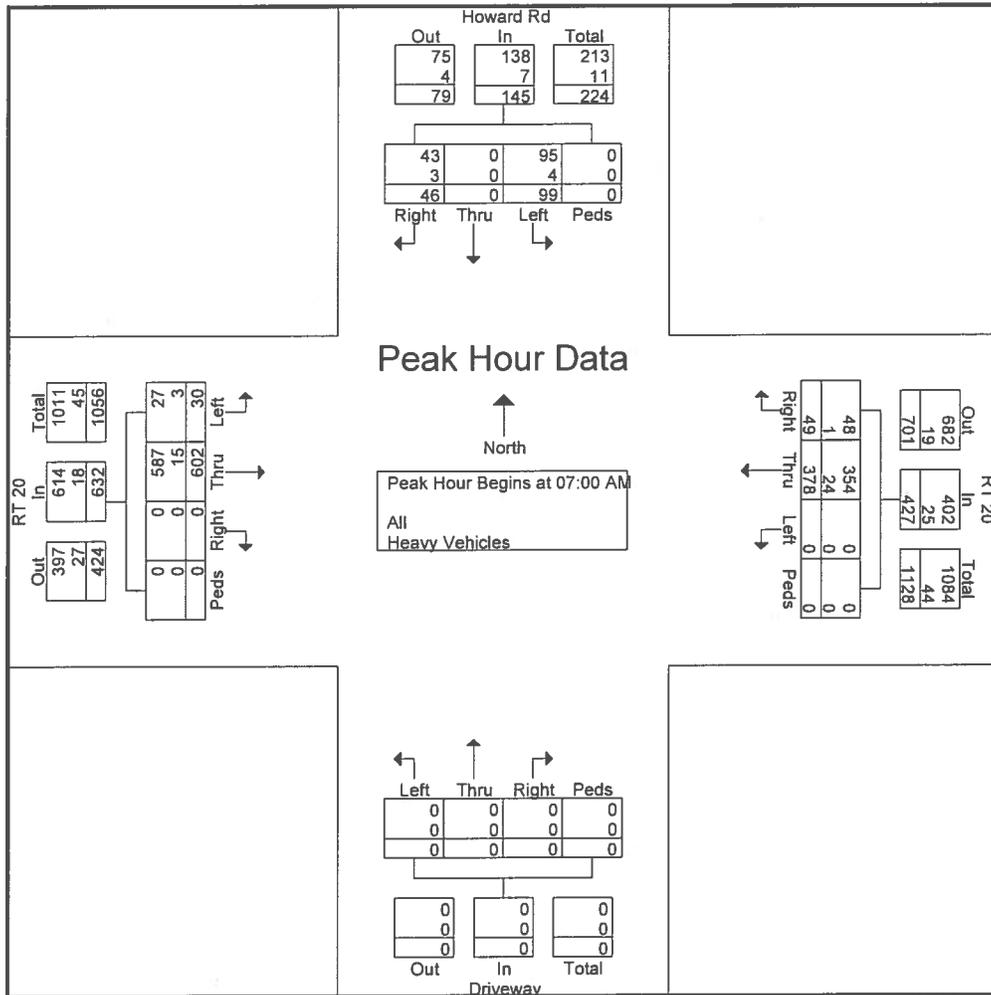
File Name : RT 20 & Howard  
Site Code : 00000011  
Start Date : 2/5/2013  
Page No : 3



Counter: D1-0330  
 Counted By: JG  
 Weather: Cloudy 30s  
 Municipality: Hamburg

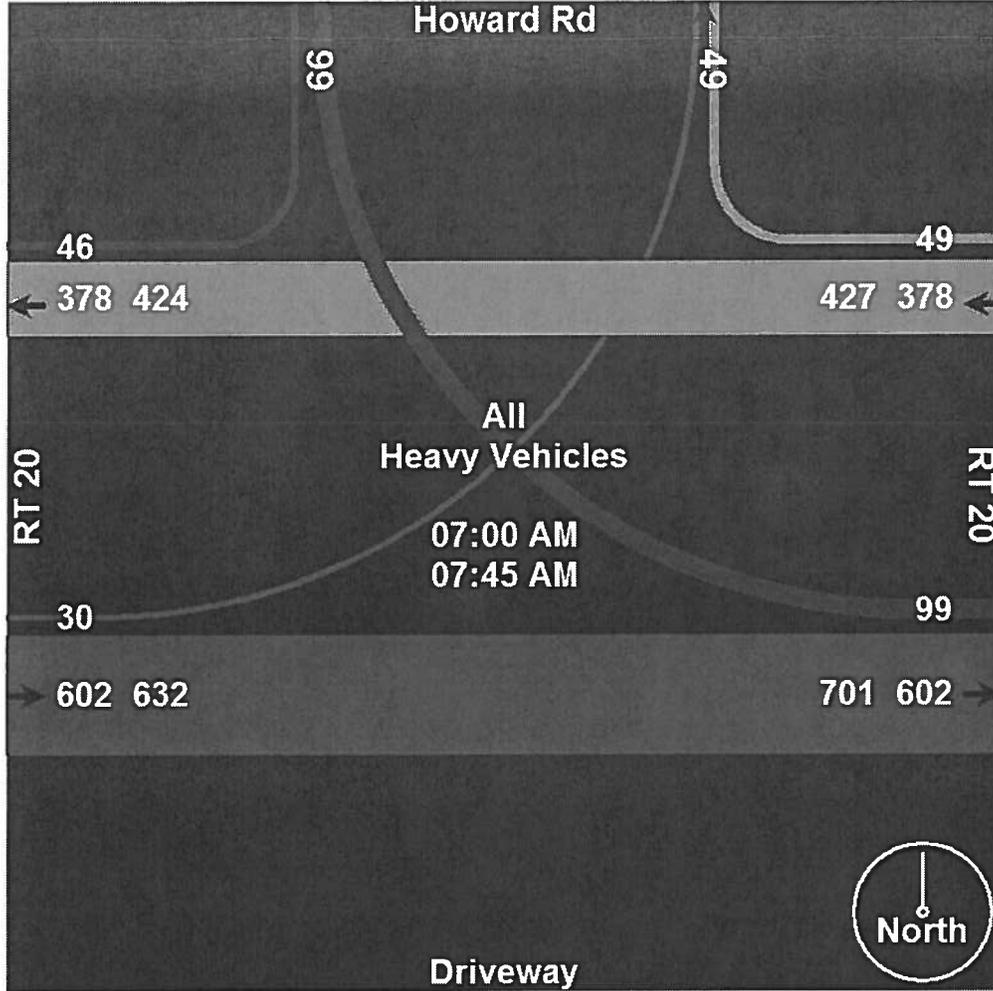
File Name : RT 20 & Howard  
 Site Code : 00000011  
 Start Date : 2/5/2013  
 Page No : 4

Start Time	Howard Rd Southbound					RT 20 Westbound					Driveway Northbound					RT 20 Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	24	0	5	0	29	0	96	10	0	106	0	0	0	0	0	3	129	0	0	132	267
07:15 AM	23	0	13	0	36	0	94	15	0	109	0	0	0	0	0	4	139	0	0	143	288
07:30 AM	30	0	14	0	44	0	91	11	0	102	0	0	0	0	0	11	157	0	0	168	314
07:45 AM	22	0	14	0	36	0	97	13	0	110	0	0	0	0	0	12	177	0	0	189	335
Total Volume	99	0	46	0	145	0	378	49	0	427	0	0	0	0	0	30	602	0	0	632	1204
% App. Total	68.3	0	31.7	0		0	88.5	11.5	0		0	0	0	0	0	4.7	95.3	0	0		
PHF	.825	.000	.821	.000	.824	.000	.974	.817	.000	.970	.000	.000	.000	.000	.000	.625	.850	.000	.000	.836	.899
All	95	0	43	0	138	0	354	48	0	402	0	0	0	0	0	27	587	0	0	614	1154
% All	96.0	0	93.5	0	95.2	0	93.7	98.0	0	94.1	0	0	0	0	0	90.0	97.5	0	0	97.2	95.8
Heavy Vehicles																					
% Heavy Vehicles	4.0	0	6.5	0	4.8	0	6.3	2.0	0	5.9	0	0	0	0	0	10.0	2.5	0	0	2.8	4.2



Counter: D1-0330  
 Counted By: JG  
 Weather: Cloudy 30s  
 Municipality: Hamburg

File Name : RT 20 & Howard  
 Site Code : 00000011  
 Start Date : 2/5/2013  
 Page No : 5



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

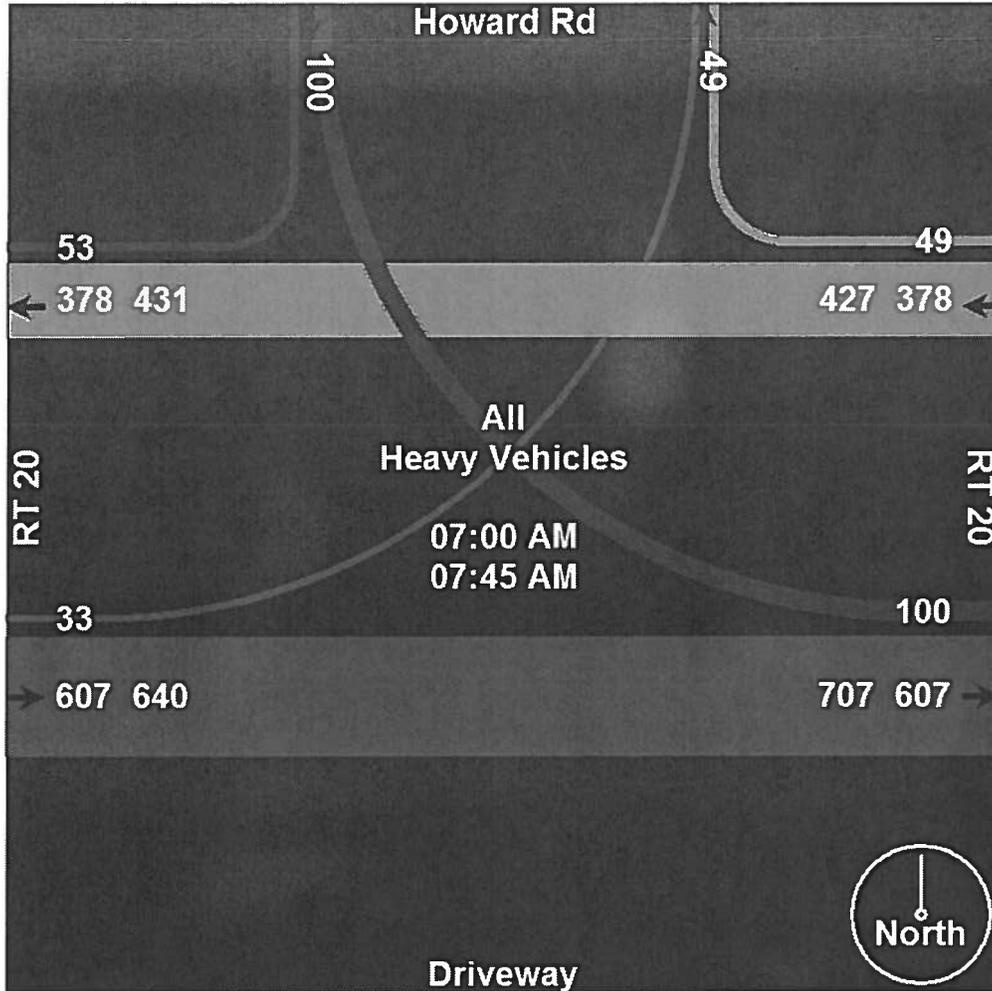
Peak Hour for Each Approach Begins at:

	07:15 AM					07:00 AM					07:00 AM					07:15 AM				
+0 mins.	23	0	13	0	36	0	96	10	0	106	0	0	0	0	0	4	139	0	0	143
+15 mins.	30	0	14	0	44	0	94	15	0	109	0	0	0	0	0	11	157	0	0	168
+30 mins.	22	0	14	0	36	0	91	11	0	102	0	0	0	0	0	12	177	0	0	189
+45 mins.	25	0	12	0	37	0	97	13	0	110	0	0	0	0	0	6	134	0	0	140
Total Volume	100	0	53	0	153	0	378	49	0	427	0	0	0	0	0	33	607	0	0	640
% App. Total	65.4	0	34.6	0		0	88.5	11.5	0		0	0	0	0	0	5.2	94.8	0	0	
PHF	.833	.000	.946	.000	.869	.000	.974	.817	.000	.970	.000	.000	.000	.000	.000	.688	.857	.000	.000	.847
All	95	0	48	0	143	0	354	48	0	402	0	0	0	0	0	30	590	0	0	620
% All	95	0	90.6	0	93.5	0	93.7	98	0	94.1	0	0	0	0	0	90.9	97.2	0	0	96.9
Heavy Vehicles																				
% Heavy Vehicles	5	0	9.4	0	6.5	0	6.3	2	0	5.9	0	0	0	0	0	9.1	2.8	0	0	3.1



Counter: D1-0330  
Counted By: JG  
Weather: Cloudy 30s  
Municipality: Hamburg

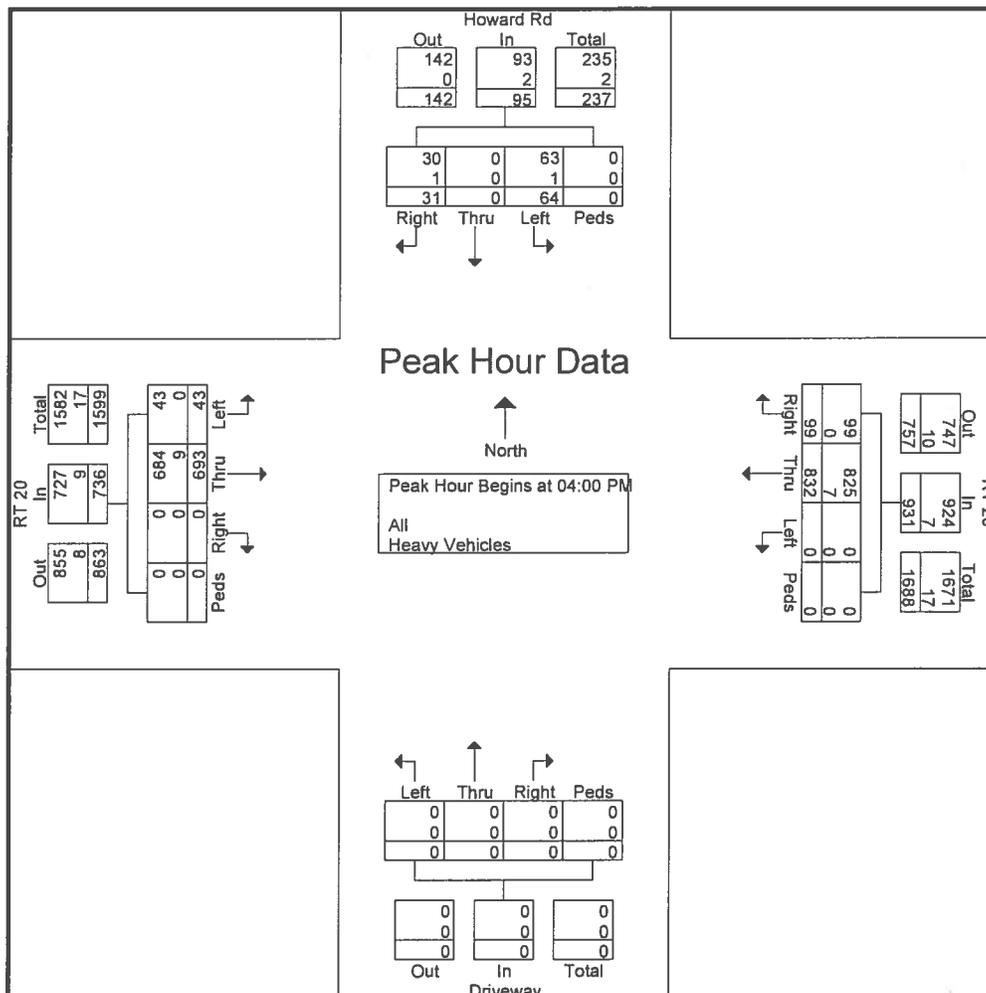
File Name : RT 20 & Howard  
Site Code : 00000011  
Start Date : 2/5/2013  
Page No : 7



Counter: D1-0330  
 Counted By: JG  
 Weather: Cloudy 30s  
 Municipality: Hamburg

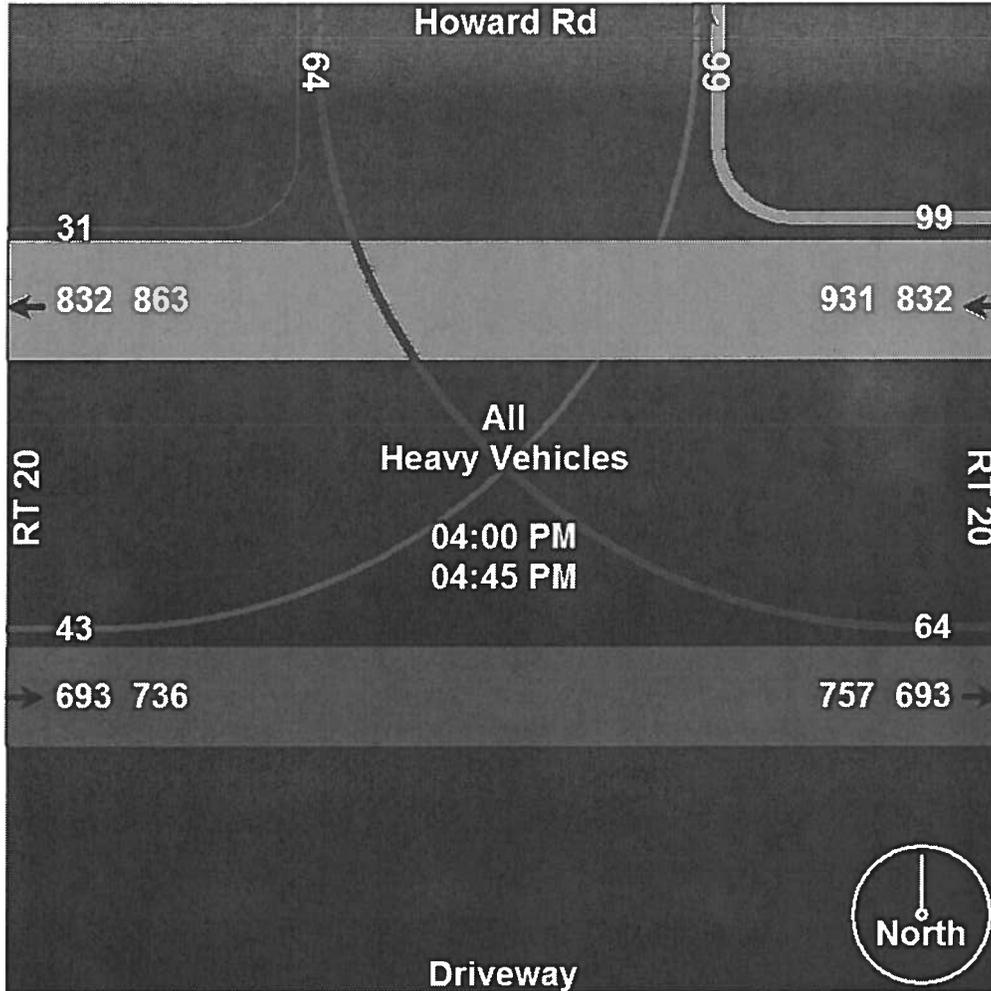
File Name : RT 20 & Howard  
 Site Code : 0000011  
 Start Date : 2/5/2013  
 Page No : 8

Start Time	Howard Rd Southbound					RT 20 Westbound					Driveway Northbound					RT 20 Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 03:00 PM to 04:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	18	0	11	0	29	0	193	24	0	217	0	0	0	0	0	15	190	0	0	205	451
04:15 PM	13	0	11	0	24	0	195	31	0	226	0	0	0	0	0	7	167	0	0	174	424
04:30 PM	18	0	4	0	22	0	226	17	0	243	0	0	0	0	0	12	163	0	0	175	440
04:45 PM	15	0	5	0	20	0	218	27	0	245	0	0	0	0	0	9	173	0	0	182	447
Total Volume	64	0	31	0	95	0	832	99	0	931	0	0	0	0	0	43	693	0	0	736	1762
% App. Total	67.4	0	32.6	0		0	89.4	10.6	0		0	0	0	0		5.8	94.2	0	0		
PHF	.889	.000	.705	.000	.819	.000	.920	.798	.000	.950	.000	.000	.000	.000	.000	.717	.912	.000	.000	.898	.977
All	63	0	30	0	93	0	825	99	0	924	0	0	0	0	0	43	684	0	0	727	1744
% All	98.4	0	96.8	0	97.9	0	99.2	100	0	99.2	0	0	0	0	0	100	98.7	0	0	98.8	99.0
Heavy Vehicles																					
% Heavy Vehicles	1.6	0	3.2	0	2.1	0	0.8	0	0	0.8	0	0	0	0	0	0	1.3	0	0	1.2	1.0



Counter: D1-0330  
 Counted By: JG  
 Weather: Cloudy 30s  
 Municipality: Hamburg

File Name : RT 20 & Howard  
 Site Code : 00000011  
 Start Date : 2/5/2013  
 Page No : 9



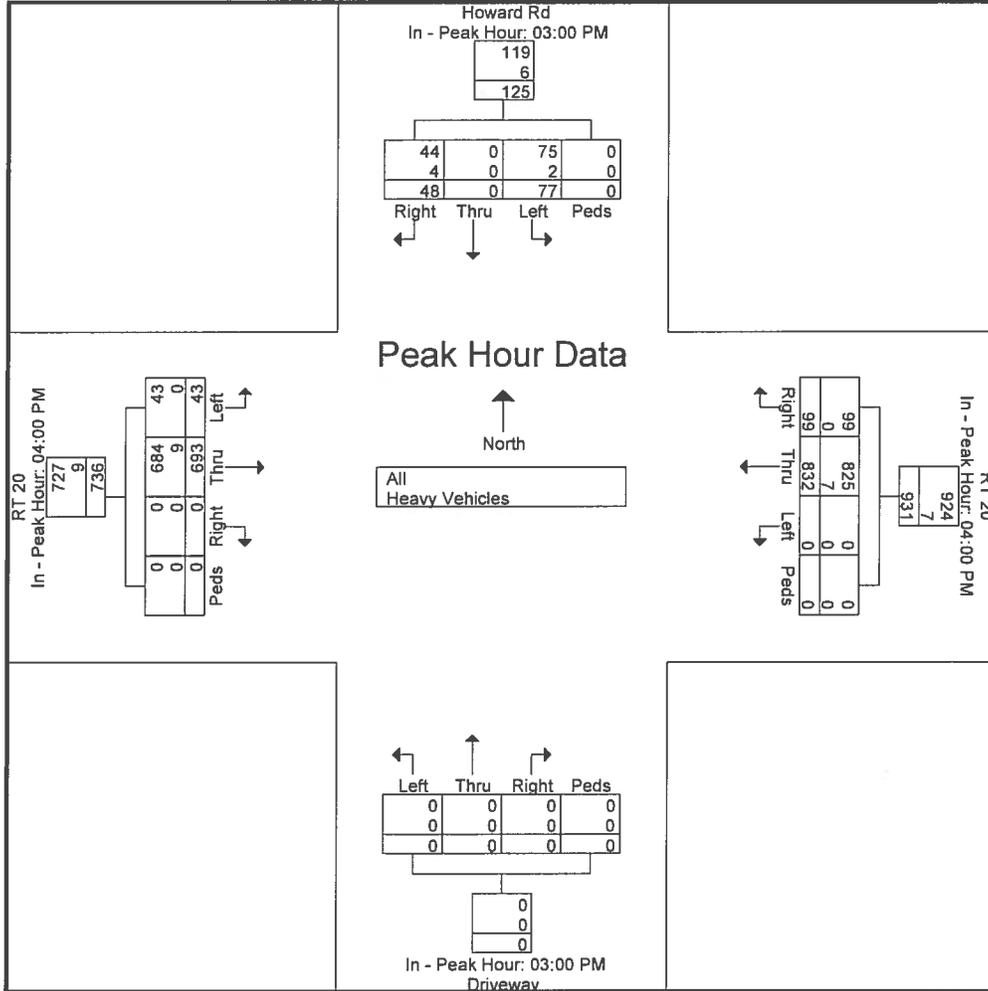
**Peak Hour Analysis From 03:00 PM to 04:45 PM - Peak 1 of 1**

Peak Hour for Each Approach Begins at:

	03:00 PM					04:00 PM					03:00 PM					04:00 PM				
+0 mins.	27	0	18	0	45	0	193	24	0	217	0	0	0	0	0	15	190	0	0	205
+15 mins.	13	0	8	0	21	0	195	31	0	226	0	0	0	0	0	7	167	0	0	174
+30 mins.	18	0	12	0	30	0	226	17	0	243	0	0	0	0	0	12	163	0	0	175
+45 mins.	19	0	10	0	29	0	218	27	0	245	0	0	0	0	0	9	173	0	0	182
Total Volume	77	0	48	0	125	0	832	99	0	931	0	0	0	0	0	43	693	0	0	736
% App. Total	61.6	0	38.4	0		0	89.4	10.6	0		0	0	0	0	0	5.8	94.2	0	0	
PHF	.713	.000	.667	.000	.694	.000	.920	.798	.000	.950	.000	.000	.000	.000	.000	.717	.912	.000	.000	.898
All	75	0	44	0	119	0	825	99	0	924	0	0	0	0	0	43	684	0	0	727
% All	97.4	0	91.7	0	95.2	0	99.2	100	0	99.2	0	0	0	0	0	100	98.7	0	0	98.8
Heavy Vehicles																				
% Heavy Vehicles	2.6	0	8.3	0	4.8	0	0.8	0	0	0.8	0	0	0	0	0	0	1.3	0	0	1.2

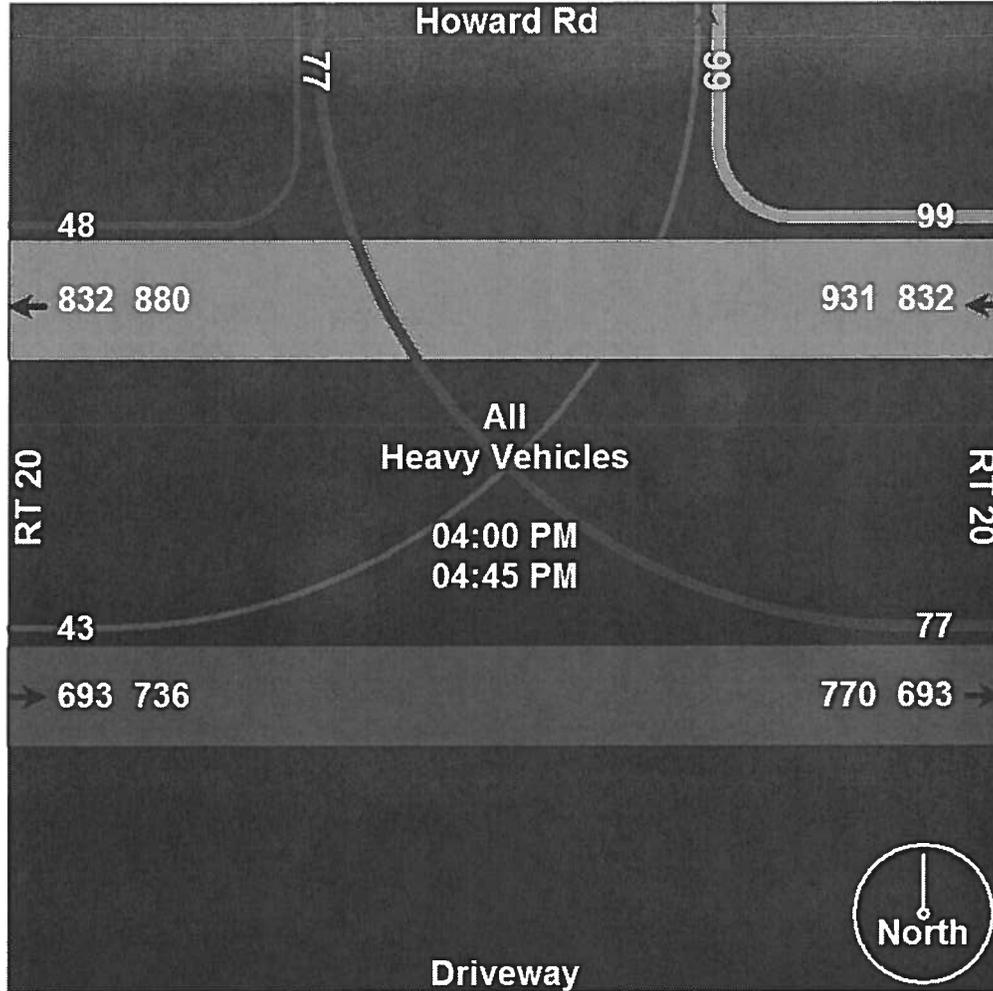
Counter: D1-0330  
 Counted By: JG  
 Weather: Cloudy 30s  
 Municipality: Hamburg

File Name : RT 20 & Howard  
 Site Code : 00000011  
 Start Date : 2/5/2013  
 Page No : 10



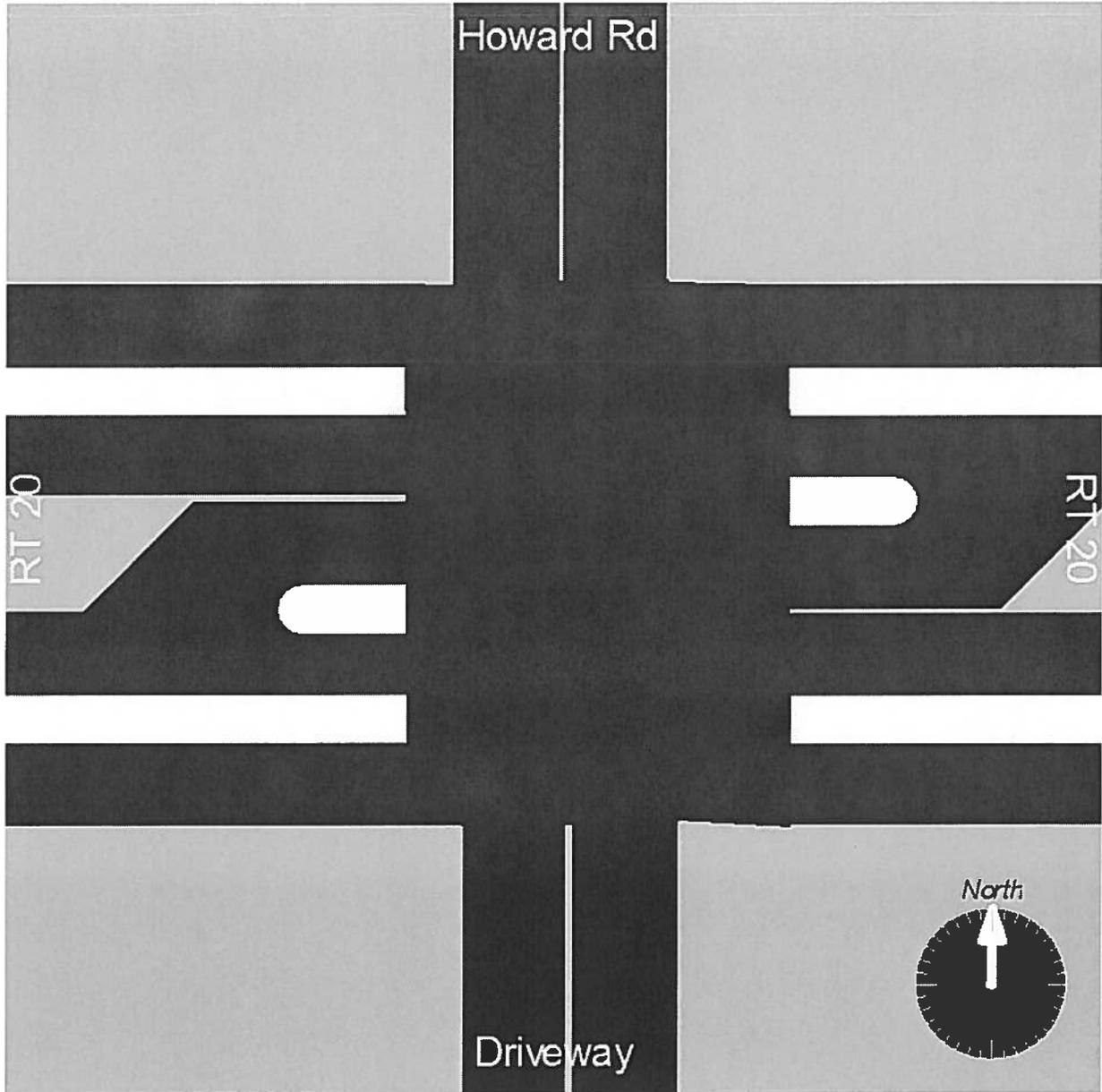
Counter: D1-0330  
Counted By: JG  
Weather: Cloudy 30s  
Municipality: Hamburg

File Name : RT 20 & Howard  
Site Code : 00000011  
Start Date : 2/5/2013  
Page No : 11



Counter: D1-0330  
Printed By: JG  
Weather: Cloudy 30s  
Municipality: Hamburg

File Name : RT 20 & Howard  
Site Code : 00000011  
Start Date : 2/5/2013  
Page No : 12



Counter: D1-0392  
 Counted By: JC  
 Weather: Cloudy, 20s  
 Municipality: Hamburg

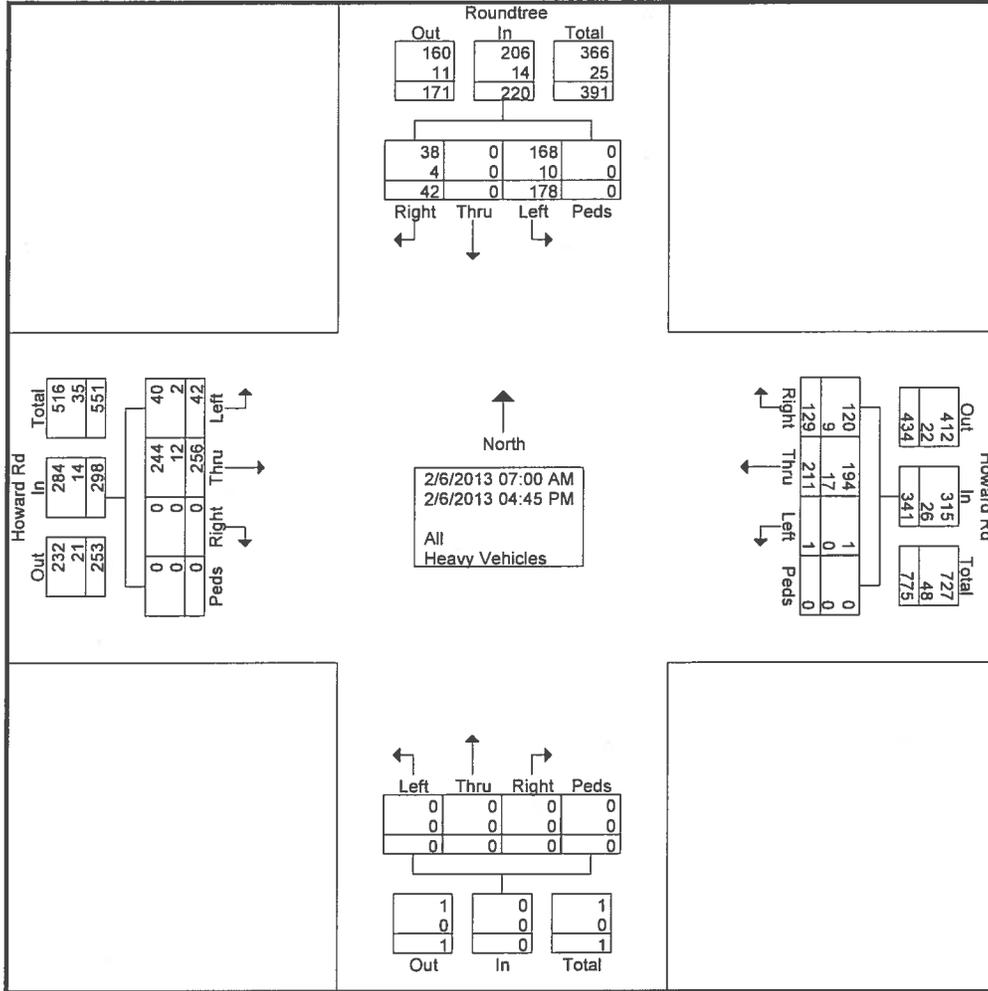
File Name : Howard & Roundtree  
 Site Code : 00000013  
 Start Date : 2/6/2013  
 Page No : 1

Groups Printed- All - Heavy Vehicles

Start Time	Roundtree Southbound					Howard Rd Westbound					Northbound					Howard Rd Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Factor	0.84	0.84	0.84	0.84		0.84	0.84	0.84	0.84		0.84	0.84	0.84	0.84		0.84	0.84	0.84	0.84		
07:00 AM	18	0	5	0	23	0	10	3	0	13	0	0	0	0	0	0	15	0	0	15	51
07:15 AM	11	0	5	0	16	0	9	1	0	10	0	0	0	0	0	2	20	0	0	22	48
07:30 AM	17	0	3	0	20	0	11	9	0	20	0	0	0	0	0	0	23	0	0	23	63
07:45 AM	17	0	3	0	20	0	7	4	0	11	0	0	0	0	0	2	18	0	0	20	51
Total	63	0	16	0	79	0	37	17	0	54	0	0	0	0	0	4	76	0	0	80	213
08:00 AM	9	0	3	0	12	0	10	2	0	12	0	0	0	0	0	1	15	0	0	16	40
08:15 AM	6	0	2	0	8	0	7	2	0	9	0	0	0	0	0	2	20	0	0	22	39
08:30 AM	16	0	7	0	23	0	6	8	0	14	0	0	0	0	0	4	20	0	0	24	61
08:45 AM	9	0	2	0	11	0	10	4	0	14	0	0	0	0	0	2	16	0	0	18	43
Total	40	0	14	0	54	0	33	16	0	49	0	0	0	0	0	9	71	0	0	80	183
*** BREAK ***																					
03:00 PM	11	0	0	0	11	0	16	11	0	27	0	0	0	0	0	2	13	0	0	15	53
03:15 PM	7	0	1	0	8	1	17	6	0	24	0	0	0	0	0	2	13	0	0	15	47
03:30 PM	9	0	1	0	10	0	20	10	0	30	0	0	0	0	0	7	17	0	0	24	64
03:45 PM	11	0	2	0	13	0	19	13	0	32	0	0	0	0	0	3	12	0	0	15	60
Total	38	0	4	0	42	1	72	40	0	113	0	0	0	0	0	14	55	0	0	69	224
04:00 PM	13	0	1	0	14	0	15	22	0	37	0	0	0	0	0	0	14	0	0	14	65
04:15 PM	9	0	3	0	12	0	15	9	0	24	0	0	0	0	0	6	14	0	0	20	56
04:30 PM	5	0	2	0	7	0	19	12	0	31	0	0	0	0	0	8	14	0	0	22	60
04:45 PM	10	0	2	0	12	0	20	13	0	33	0	0	0	0	0	1	12	0	0	13	58
Total	37	0	8	0	45	0	69	56	0	125	0	0	0	0	0	15	54	0	0	69	239
Grand Total	178	0	42	0	220	1	211	129	0	341	0	0	0	0	0	42	256	0	0	298	859
Apprch %	80.9	0	19.1	0		0.3	61.9	37.8	0		0	0	0	0		14.1	85.9	0	0		
Total %	20.7	0	4.9	0	25.6	0.1	24.6	15	0	39.7	0	0	0	0	0	4.9	29.8	0	0	34.7	
All	168	0	38	0	206	1	194	120	0	315	0	0	0	0	0	40	244	0	0	284	805
% All	94.4	0	90.5	0	93.6	100	91.9	93	0	92.4	0	0	0	0	0	95.2	95.3	0	0	95.3	93.7
Heavy Vehicles	10	0	4	0	14	0	17	9	0	26	0	0	0	0	0	2	12	0	0	14	54
% Heavy Vehicles	5.6	0	9.5	0	6.4	0	8.1	7	0	7.6	0	0	0	0	0	4.8	4.7	0	0	4.7	6.3

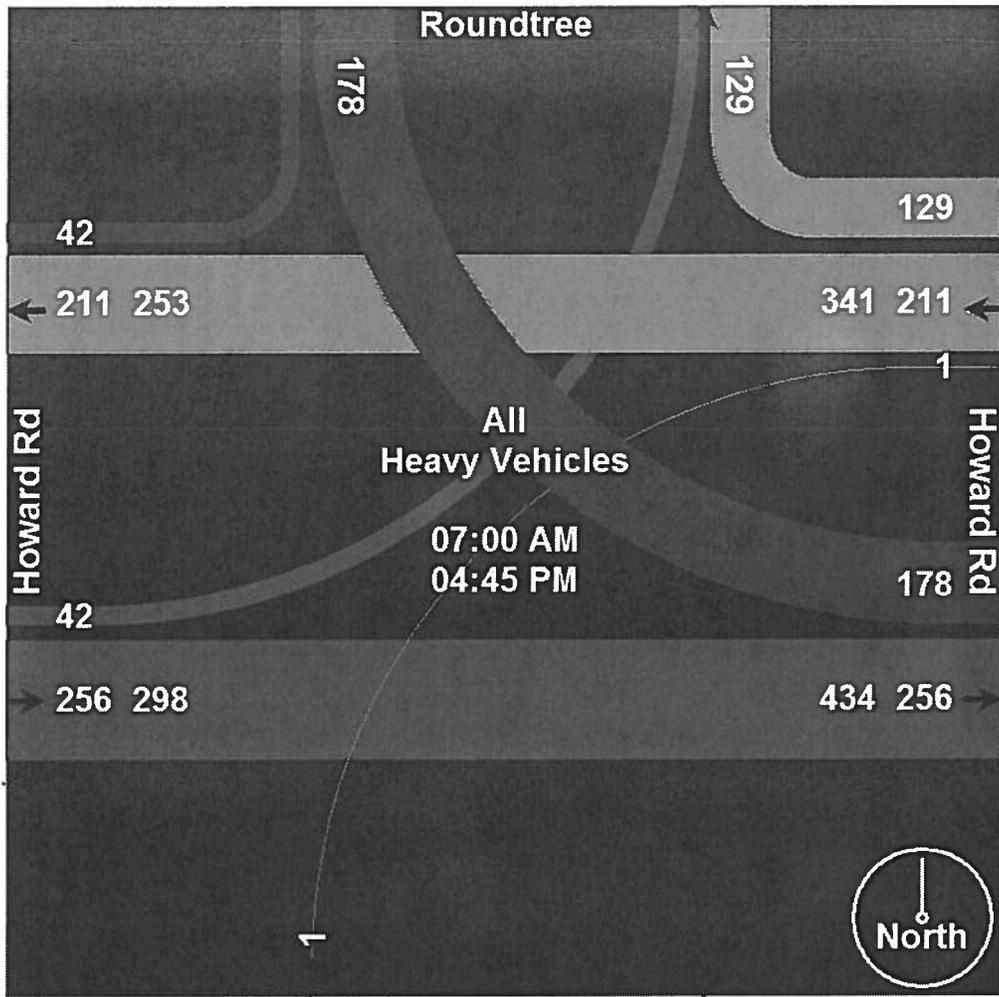
Counter: D1-0392  
 Counted By: JC  
 Weather: Cloudy, 20s  
 Municipality: Hamburg

File Name : Howard & Roundtree  
 Site Code : 0000013  
 Start Date : 2/6/2013  
 Page No : 2



Counter: D1-0392  
Counted By: JC  
Weather: Cloudy, 20s  
Municipality: Hamburg

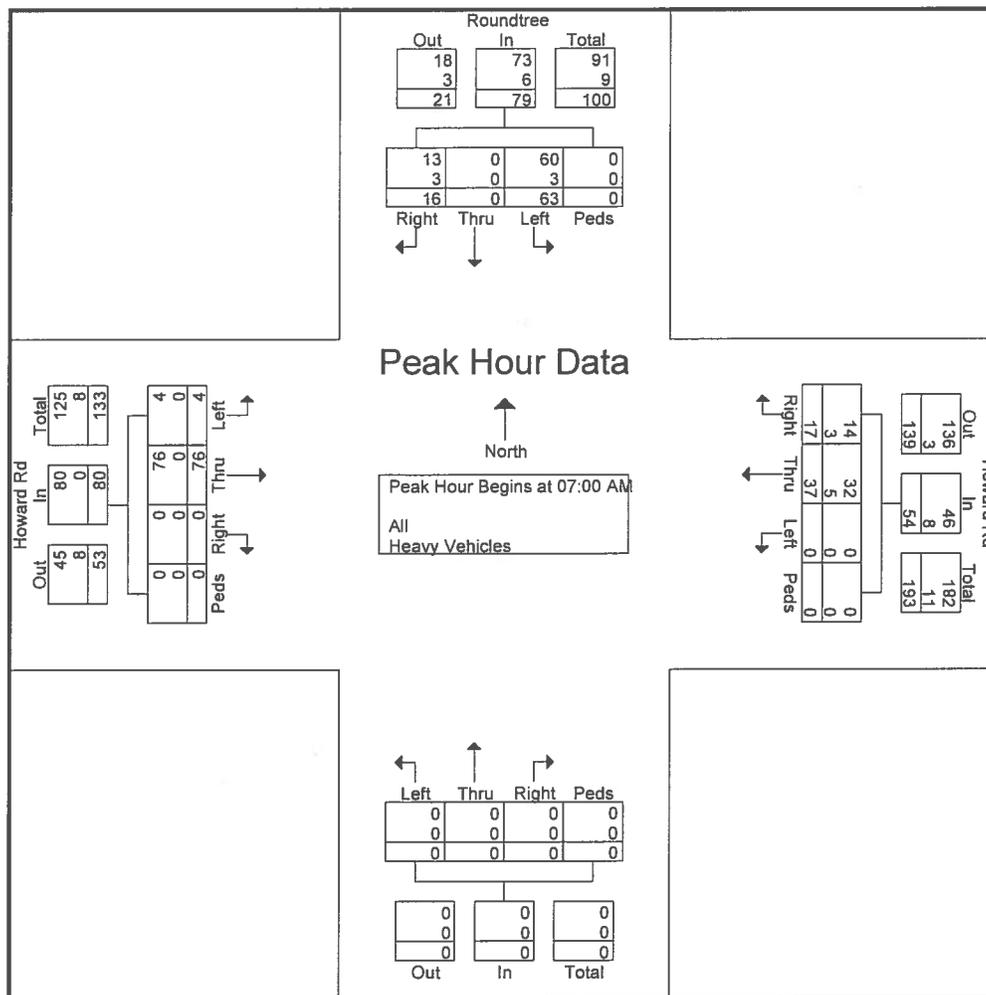
File Name : Howard & Roundtree  
Site Code : 00000013  
Start Date : 2/6/2013  
Page No : 3



Counter: D1-0392  
 Counted By: JC  
 Weather: Cloudy, 20s  
 Municipality: Hamburg

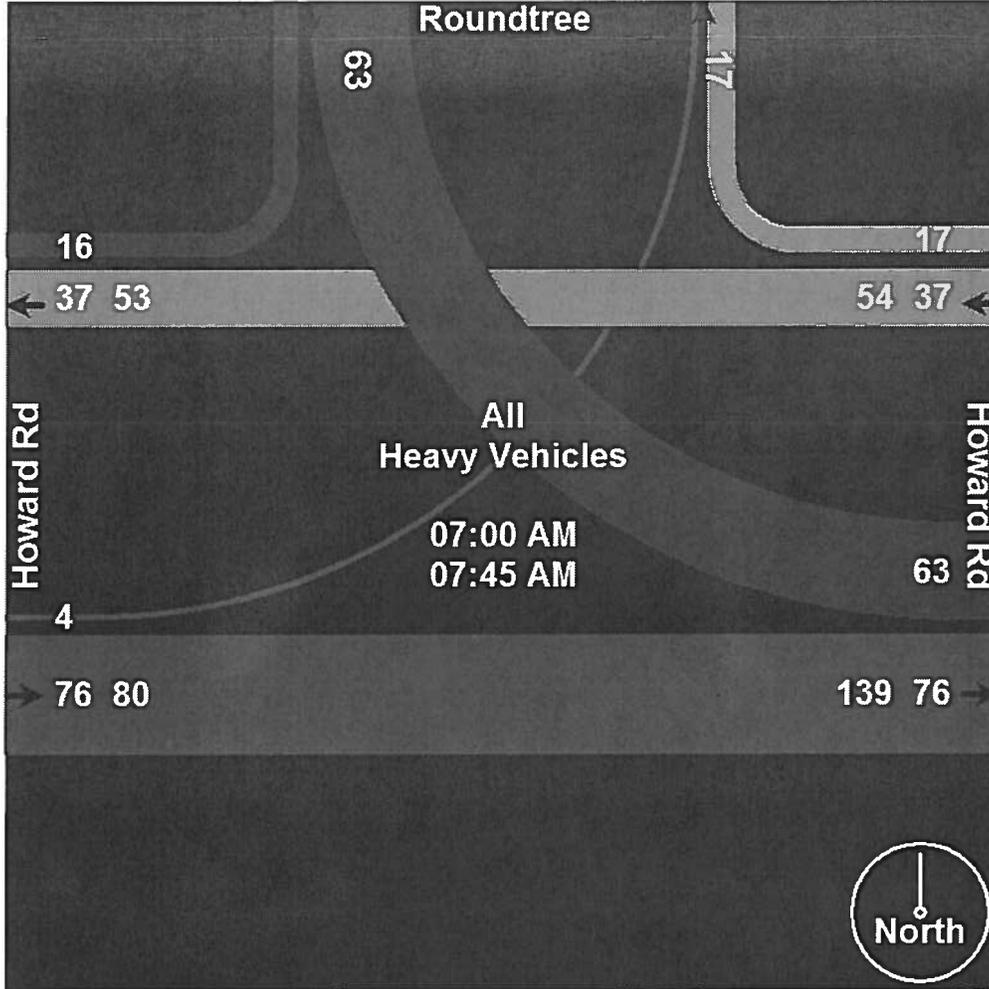
File Name : Howard & Roundtree  
 Site Code : 00000013  
 Start Date : 2/6/2013  
 Page No : 4

Start Time	Roundtree Southbound					Howard Rd Westbound					Northbound					Howard Rd Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	18	0	5	0	23	0	10	3	0	13	0	0	0	0	0	0	15	0	0	15	51
07:15 AM	11	0	5	0	16	0	9	1	0	10	0	0	0	0	0	2	20	0	0	22	48
07:30 AM	17	0	3	0	20	0	11	9	0	20	0	0	0	0	0	0	23	0	0	23	63
07:45 AM	17	0	3	0	20	0	7	4	0	11	0	0	0	0	0	2	18	0	0	20	51
Total Volume	63	0	16	0	79	0	37	17	0	54	0	0	0	0	0	4	76	0	0	80	213
% App. Total	79.7	0	20.3	0		0	68.5	31.5	0		0	0	0	0	0	5	95	0	0		
PHF	.875	.000	.800	.000	.859	.000	.841	.472	.000	.675	.000	.000	.000	.000	.000	.500	.826	.000	.000	.870	.845
All	60	0	13	0	73	0	32	14	0	46	0	0	0	0	0	4	76	0	0	80	199
% All	95.2	0	81.3	0	92.4	0	86.5	82.4	0	85.2	0	0	0	0	0	100	100	0	0	100	93.4
Heavy Vehicles																					
% Heavy Vehicles	4.8	0	18.8	0	7.6	0	13.5	17.6	0	14.8	0	0	0	0	0	0	0	0	0	0	6.6



Counter: D1-0392  
 Counted By: JC  
 Weather: Cloudy, 20s  
 Municipality: Hamburg

File Name : Howard & Roundtree  
 Site Code : 00000013  
 Start Date : 2/6/2013  
 Page No : 5



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

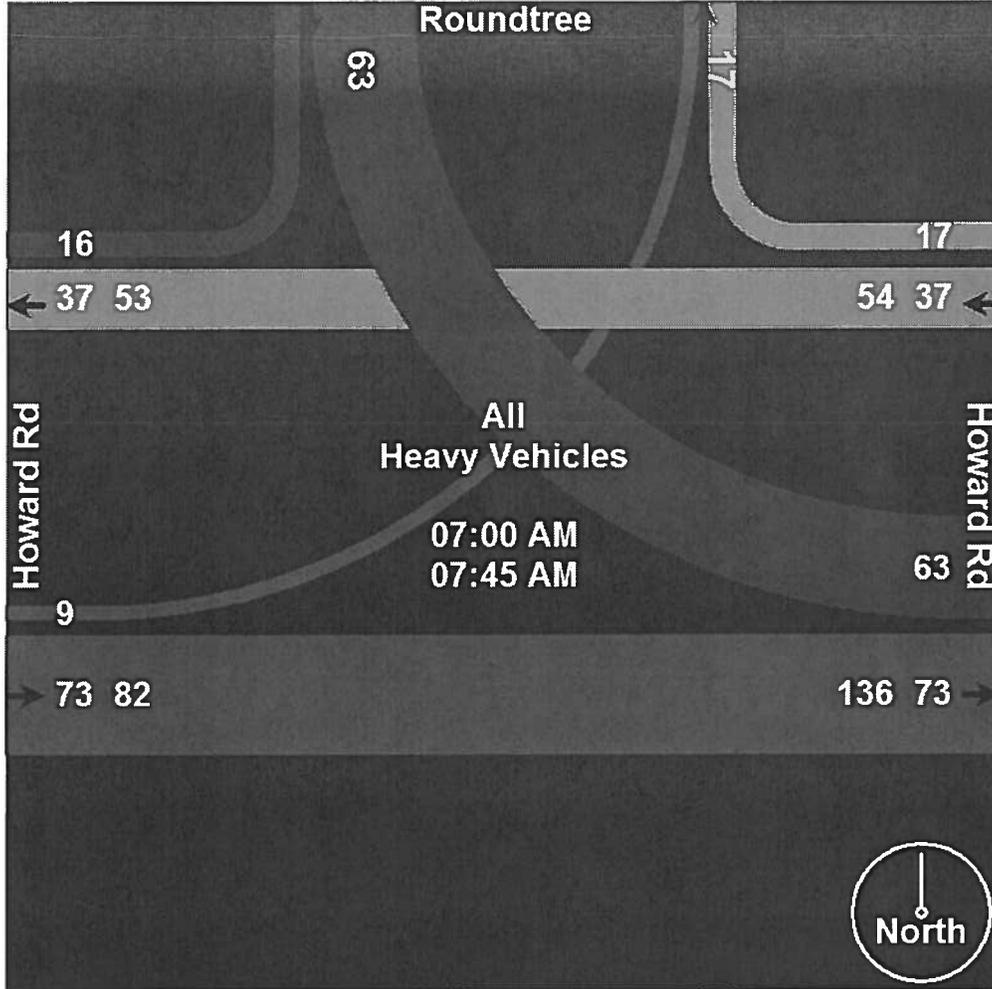
Peak Hour for Each Approach Begins at:

	07:00 AM					07:00 AM					07:00 AM					07:45 AM				
+0 mins.	18	0	5	0	23	0	10	3	0	13	0	0	0	0	0	2	18	0	0	20
+15 mins.	11	0	5	0	16	0	9	1	0	10	0	0	0	0	0	1	15	0	0	16
+30 mins.	17	0	3	0	20	0	11	9	0	20	0	0	0	0	0	2	20	0	0	22
+45 mins.	17	0	3	0	20	0	7	4	0	11	0	0	0	0	0	4	20	0	0	24
Total Volume	63	0	16	0	79	0	37	17	0	54	0	0	0	0	0	9	73	0	0	82
% App. Total	79.7	0	20.3	0		0	68.5	31.5	0		0	0	0	0	0	11	89	0	0	
PHF	.875	.000	.800	.000	.859	.000	.841	.472	.000	.675	.000	.000	.000	.000	.000	.563	.913	.000	.000	.854
All	60	0	13	0	73	0	32	14	0	46	0	0	0	0	0	8	67	0	0	75
% All	95.2	0	81.2	0	92.4	0	86.5	82.4	0	85.2	0	0	0	0	0	88.9	91.8	0	0	91.5
Heavy Vehicles																				
% Heavy Vehicles	4.8	0	18.8	0	7.6	0	13.5	17.6	0	14.8	0	0	0	0	0	11.1	8.2	0	0	8.5



Counter: D1-0392  
Counted By: JC  
Weather: Cloudy, 20s  
Municipality: Hamburg

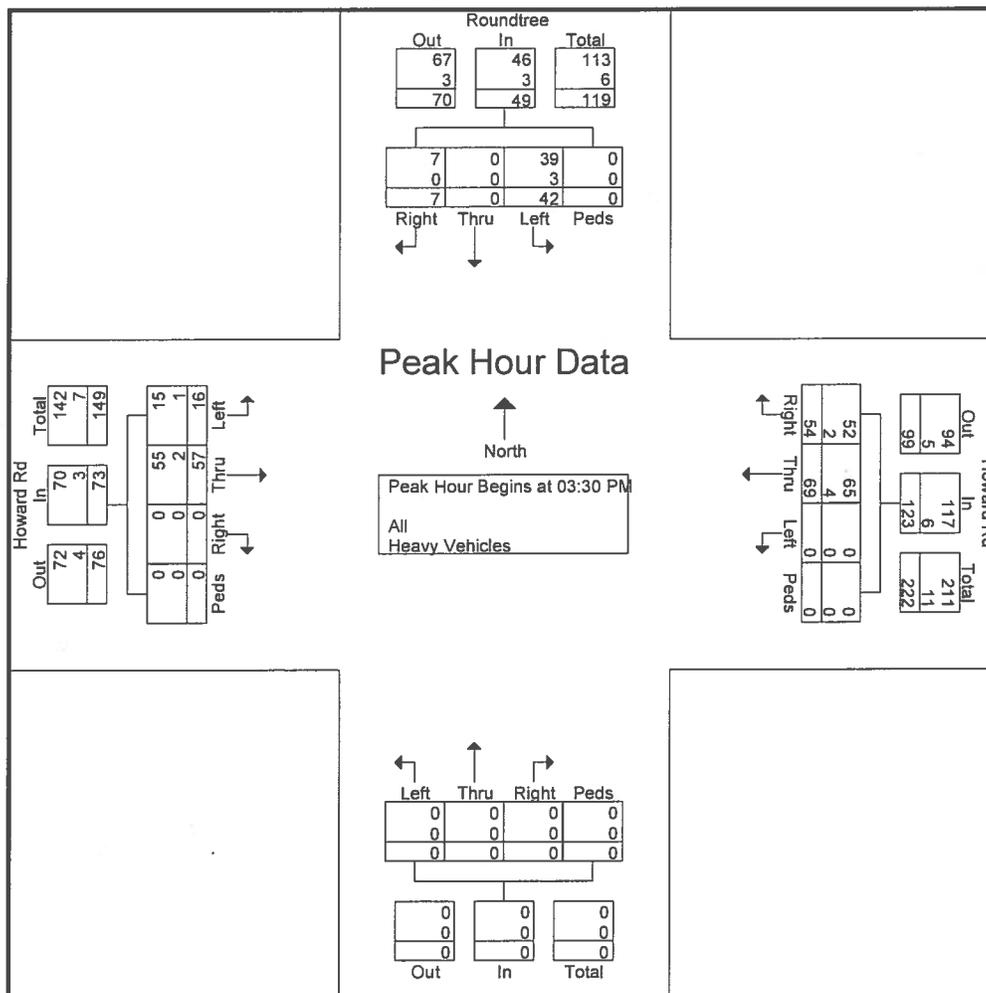
File Name : Howard & Roundtree  
Site Code : 00000013  
Start Date : 2/6/2013  
Page No : 7



Counter: D1-0392  
 Counted By: JC  
 Weather: Cloudy, 20s  
 Municipality: Hamburg

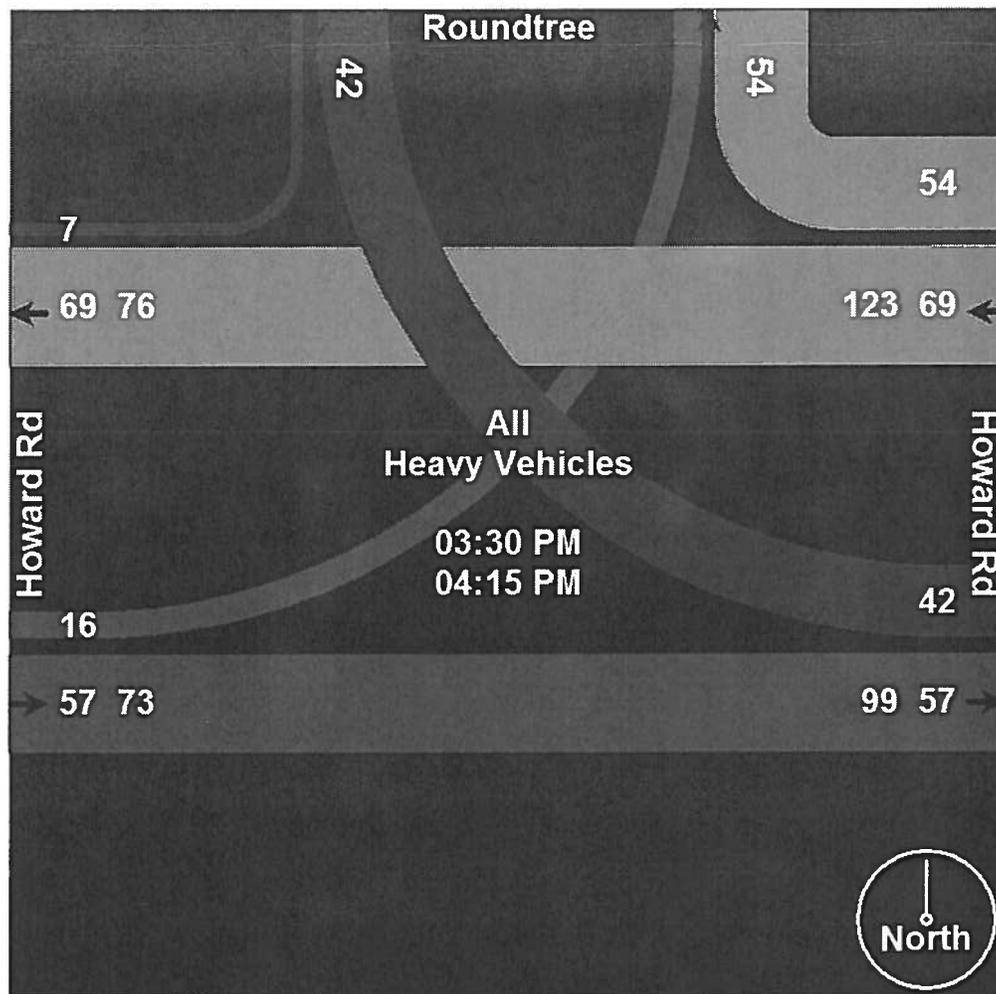
File Name : Howard & Roundtree  
 Site Code : 00000013  
 Start Date : 2/6/2013  
 Page No : 8

Start Time	Roundtree Southbound					Howard Rd Westbound					Northbound					Howard Rd Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 03:00 PM to 04:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 03:30 PM																					
03:30 PM	9	0	1	0	10	0	20	10	0	30	0	0	0	0	0	7	17	0	0	24	64
03:45 PM	11	0	2	0	13	0	19	13	0	32	0	0	0	0	0	3	12	0	0	15	60
04:00 PM	13	0	1	0	14	0	15	22	0	37	0	0	0	0	0	0	14	0	0	14	65
04:15 PM	9	0	3	0	12	0	15	9	0	24	0	0	0	0	0	6	14	0	0	20	56
Total Volume	42	0	7	0	49	0	69	54	0	123	0	0	0	0	0	16	57	0	0	73	245
% App. Total	85.7	0	14.3	0		0	56.1	43.9	0		0	0	0	0		21.9	78.1	0	0		
PHF	.808	.000	.583	.000	.875	.000	.863	.614	.000	.831	.000	.000	.000	.000	.000	.571	.838	.000	.000	.760	.942
All	39	0	7	0	46	0	65	52	0	117	0	0	0	0	0	15	55	0	0	70	233
% All	92.9	0	100	0	93.9	0	94.2	96.3	0	95.1	0	0	0	0	0	93.8	96.5	0	0	95.9	95.1
Heavy Vehicles																					
% Heavy Vehicles	7.1	0	0	0	6.1	0	5.8	3.7	0	4.9	0	0	0	0	0	6.3	3.5	0	0	4.1	4.9



Counter: D1-0392  
 Counted By: JC  
 Weather: Cloudy, 20s  
 Municipality: Hamburg

File Name : Howard & Roundtree  
 Site Code : 00000013  
 Start Date : 2/6/2013  
 Page No : 9



Peak Hour Analysis From 03:00 PM to 04:45 PM - Peak 1 of 1

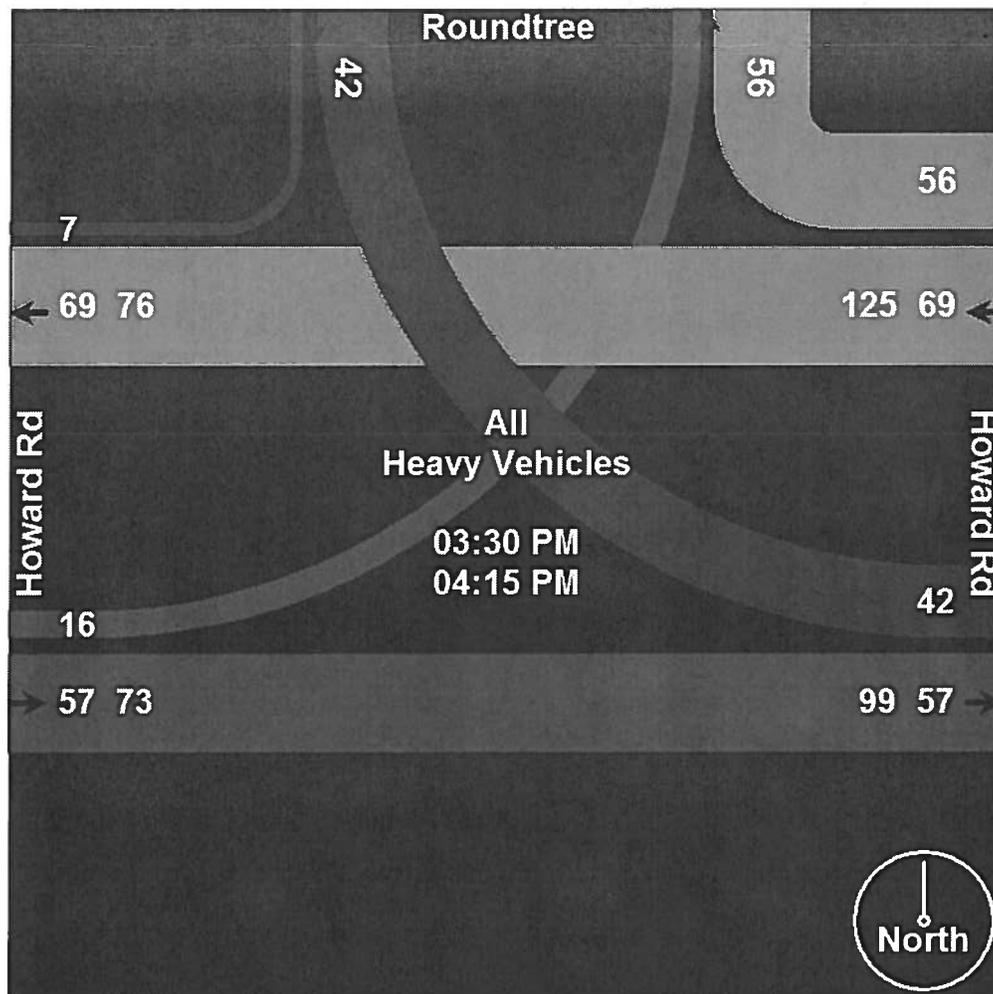
Peak Hour for Each Approach Begins at:

	03:30 PM					04:00 PM					03:00 PM					03:30 PM				
+0 mins.	9	0	1	0	10	0	15	22	0	37	0	0	0	0	0	7	17	0	0	24
+15 mins.	11	0	2	0	13	0	15	9	0	24	0	0	0	0	0	3	12	0	0	15
+30 mins.	13	0	1	0	14	0	19	12	0	31	0	0	0	0	0	0	14	0	0	14
+45 mins.	9	0	3	0	12	0	20	13	0	33	0	0	0	0	0	6	14	0	0	20
Total Volume	42	0	7	0	49	0	69	56	0	125	0	0	0	0	0	16	57	0	0	73
% App. Total	85.7	0	14.3	0		0	55.2	44.8	0		0	0	0	0	0	21.9	78.1	0	0	
PHF	.808	.000	.583	.000	.875	.000	.863	.636	.000	.845	.000	.000	.000	.000	.000	.571	.838	.000	.000	.760
All	39	0	7	0	46	0	65	55	0	120	0	0	0	0	0	15	55	0	0	70
% All	92.9	0	100	0	93.9	0	94.2	98.2	0	96	0	0	0	0	0	93.8	96.5	0	0	95.9
Heavy Vehicles																				
% Heavy Vehicles	7.1	0	0	0	6.1	0	5.8	1.8	0	4	0	0	0	0	0	6.2	3.5	0	0	4.1



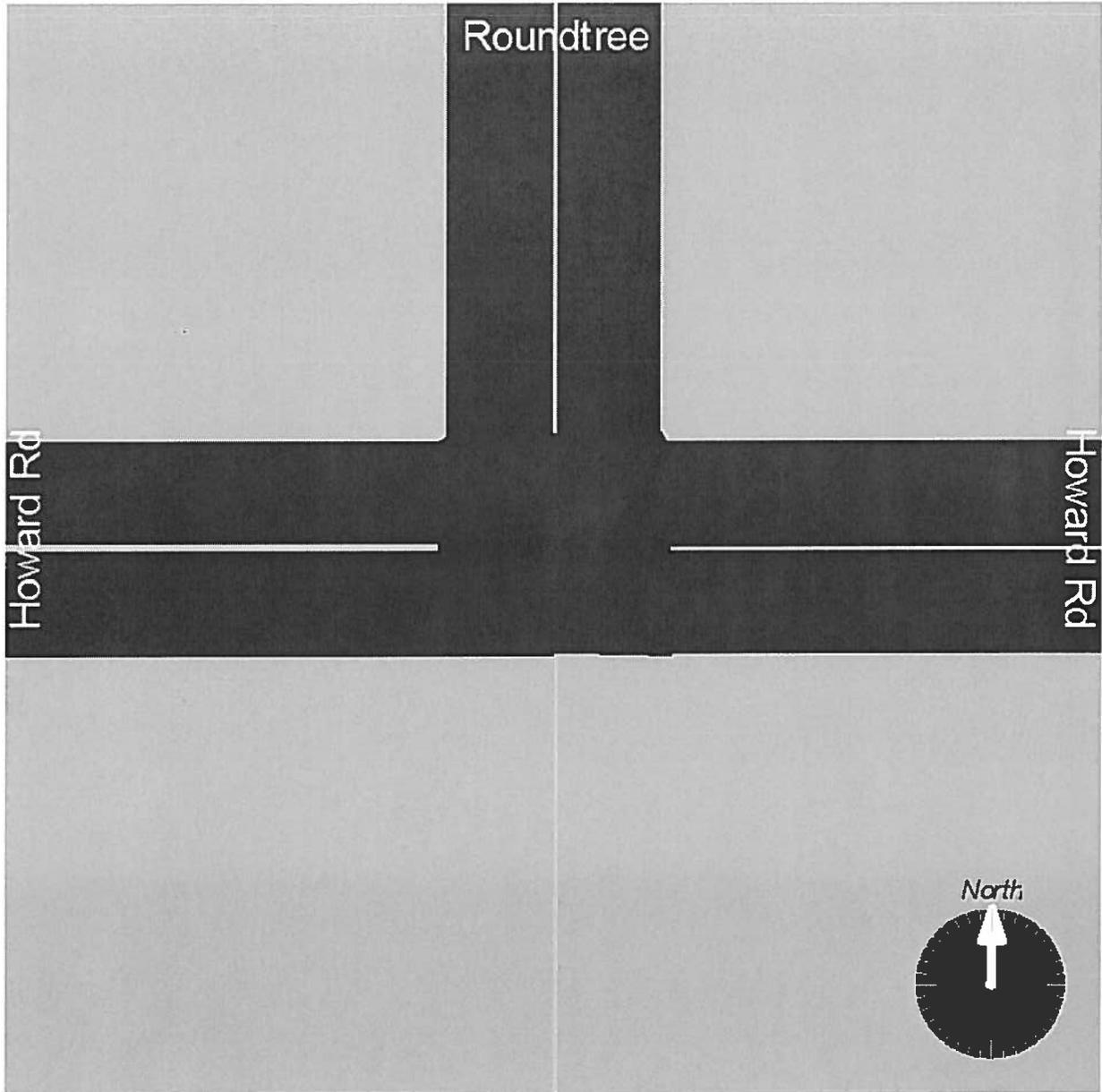
Counter: D1-0392  
Counted By: JC  
Weather: Cloudy, 20s  
Municipality: Hamburg

File Name : Howard & Roundtree  
Site Code : 00000013  
Start Date : 2/6/2013  
Page No : 11



Counter: D1-0392  
Printed By: JC  
Weather: Cloudy, 20s  
Municipality: Hamburg

File Name : Howard & Roundtree  
Site Code : 00000013  
Start Date : 2/6/2013  
Page No : 12



# SEASONAL ADJUSTMENT FACTORS FOR TRAFFIC COUNT PROCESSING 2012

Based on Continuous Count Site Data 2009 - 2011

## FULL WEEK

FACTOR GROUP	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Commuter 30	0.885	0.921	0.978	1.010	1.038	1.065	1.046	1.042	1.039	1.027	0.982	0.951
Non Commuter 40	0.778	0.821	0.882	0.960	1.050	1.102	1.223	1.203	1.089	1.030	0.949	0.869
Seasonal 60	0.652	0.691	0.729	0.792	1.030	1.221	1.663	1.571	1.128	0.938	0.772	0.691

The FHWA Traffic Monitoring Guide 2001 states:

% Precision with  
95% Confidence

*The reliability levels recommended are 10 percent precision with 95 percent confidence, 95-10, for each individual seasonal group, excluding recreational groups where 70 percent precision requirement is specified.*

Factor Group  
Commuter - 30 1.7%  
Non Commuter - 40 2.9%  
Seasonal - 60 9.0%

For each factor group, the percent precision value is the maximum value out of all months.

New York State Department of Transportation  
Highway Data Services Bureau  
MO-TrafficDataViewer@dot.state.ny.us

(518) 457-1965

8/1/2012

SEASONAL ADJUSTMENT FACTORS FOR TRAFFIC COUNT PROCESSING 2012

Based on Continuous Count Site Data 2009 - 2011

WEEKEND

FACTOR GROUP	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Commuter 30	0.759	0.809	0.858	0.891	0.935	0.992	0.927	0.908	0.933	0.920	0.855	0.808
Non Commuter 40	0.706	0.767	0.832	0.909	1.025	1.078	1.222	1.185	1.090	0.994	0.890	0.777
Seasonal 60	0.589	0.697	0.681	0.793	1.039	1.275	1.819	1.699	1.208	0.931	0.711	0.601

The FHWA Traffic Monitoring Guide 2001 states:  
 The reliability levels recommended are 10 percent precision with 95 percent confidence, 95-10, for each individual seasonal group, excluding recreational groups where 170 precision requirement is specified.

For each factor group, the percent precision value is the maximum value out of all months.

New York State Department of Transportation  
 Highway Data Services Bureau  
 MO-TrafficDataViewer@dot.state.ny.us  
 (518) 457-1965

8/1/2012

**SEASONAL ADJUSTMENT FACTORS FOR TRAFFIC COUNT PROCESSING 2012**

Based on Continuous Count Site Data 2009 - 2011

**WORK WEEK**

FACTOR GROUP	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
<b>Commuter 30</b>	0.950	0.970	1.024	1.061	1.086	1.113	1.100	1.104	1.078	1.077	1.037	1.016
<b>Non Commuter 40</b>	0.811	0.838	0.893	0.971	1.050	1.096	1.196	1.191	1.066	1.031	0.964	0.906
<b>Seasonal 60</b>	0.680	0.700	0.738	0.801	0.997	1.162	1.532	1.467	1.047	0.912	0.791	0.730

The FHWA Traffic Monitoring Guide 2001 states:  
 The reliability levels recommended are 10 percent precision with 95 percent confidence. 95-10, for each individual seasonal group, excluding recreational groups where 170 precision requirement is specified.

For each factor group, the percent precision value is the maximum value out of all months.

New York State Department of Transportation  
 Highway Data Services Bureau  
 MO-TrafficDataViewer@dot.state.ny.us  
 (518) 457-1965

8/1/2012

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**APPENDIX B**

**Synchro/Levels of Service Analyses**

For the

**Sherwood Apartments  
Heatherwood Drive**

Located in the

**TOWN OF HAMBURG  
ERIE COUNTY, NEW YORK**

*Prepared for:*

**David Burke**  
DATO DEVELOPMENT, LLC  
S-5540 Southwestern Boulevard  
Hamburg, NY 14075

*Prepared by:*



3556 LAKE SHORE ROAD  
BUFFALO, NY 14219-1494  
(716) 827-8000 PHONE  
(716) 826-7958 FAX

Lanes, Volumes, Timings  
3: Queens Lane & Camp Road

2013 AM Volumes  
2/22/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	0	7	31	0	120	2	1048	15	38	353	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	150		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50		25	50		25	50		25	50		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Fr t		0.850			0.850			0.998			0.992	
Fit Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1703	1369	0	1805	1538	0	1805	3527	0	1556	3316	0
Fit Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1703	1369	0	1805	1538	0	1805	3527	0	1556	3316	0
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		372			436			1034			571	
Travel Time (s)		8.5			9.9			15.7			8.7	
Peak Hour Factor	0.80	0.92	0.53	0.86	0.92	0.77	0.50	0.97	0.94	0.73	0.84	0.29
Heavy Vehicles (%)	6%	0%	18%	0%	0%	5%	0%	2%	13%	16%	6%	43%
Adj. Flow (vph)	20	0	13	36	0	156	4	1080	16	52	420	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	20	13	0	36	156	0	4	1096	0	52	444	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	46.6%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
3: Queens Lane & Camp Road

2013 AM Volumes  
2/22/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	16	0	7	31	0	120	2	1048	15	38	353	7
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.92	0.53	0.86	0.92	0.77	0.50	0.97	0.94	0.73	0.84	0.29
Hourly flow rate (vph)	20	0	13	36	0	156	4	1080	16	52	420	24
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage (veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1240	1641	222	1424	1645	548	444			1096		
vC1, stage 1 conf vol	536	536		1096	1096							
vC2, stage 2 conf vol	704	1104		327	548							
vCu, unblocked vol	1240	1641	222	1424	1645	548	444			1096		
tC, single (s)	7.6	6.5	7.3	7.5	6.5	7.0	4.1			4.4		
tC, 2 stage (s)	6.6	5.5		6.5	5.5							
tF (s)	3.6	4.0	3.5	3.5	4.0	3.3	2.2			2.4		
p0 queue free %	89	100	98	83	100	67	100			91		
cM capacity (veh/h)	190	217	734	217	253	473	1126			557		
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3		
Volume Total	20	13	36	156	4	720	376	52	280	164		
Volume Left	20	0	36	0	4	0	0	52	0	0		
Volume Right	0	13	0	156	0	0	16	0	0	24		
cSH	190	734	217	473	1126	1700	1700	557	1700	1700		
Volume to Capacity	0.11	0.02	0.17	0.33	0.00	0.42	0.22	0.09	0.16	0.10		
Queue Length 95th (ft)	9	1	15	36	0	0	0	8	0	0		
Control Delay (s)	26.2	10.0	24.9	16.3	8.2	0.0	0.0	12.1	0.0	0.0		
Lane LOS	D	A	C	C	A			B				
Approach Delay (s)	19.7		17.9		0.0			1.3				
Approach LOS	C		C									
<b>Intersection Summary</b>												
Average Delay			2.6									
Intersection Capacity Utilization			46.6%		ICU Level of Service				A			
Analysis Period (min)			15									

Lanes, Volumes, Timings  
 10: Howard Road & Roundtree Road

2013 AM Volumes  
 2/22/2013



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Volume (vph)	4	76	37	17	63	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.939		0.971	
Flt Protected		0.996			0.962	
Satd. Flow (prot)	0	1855	1541	0	1643	0
Flt Permitted		0.996			0.962	
Satd. Flow (perm)	0	1855	1541	0	1643	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1021	412		873	
Travel Time (s)		23.2	9.4		19.8	
Peak Hour Factor	0.50	0.83	0.84	0.47	0.88	0.80
Heavy Vehicles (%)	2%	2%	14%	18%	5%	19%
Adj. Flow (vph)	8	92	44	36	72	20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	100	80	0	92	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	18.4%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
 10: Howard Road & Roundtree Road

2013 AM Volumes  
 2/22/2013



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Volume (veh/h)	4	76	37	17	63	16
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.50	0.83	0.84	0.47	0.88	0.80
Hourly flow rate (vph)	8	92	44	36	72	20
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	80				170	62
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	80				170	62
tC, single (s)	4.1				6.4	6.4
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.5
p0 queue free %	99				91	98
cM capacity (veh/h)	1518				809	957
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	100	80	92			
Volume Left	8	0	72			
Volume Right	0	36	20			
cSH	1518	1700	838			
Volume to Capacity	0.01	0.05	0.11			
Queue Length 95th (ft)	0	0	9			
Control Delay (s)	0.6	0.0	9.8			
Lane LOS	A		A			
Approach Delay (s)	0.6	0.0	9.8			
Approach LOS			A			
<b>Intersection Summary</b>						
Average Delay			3.5			
Intersection Capacity Utilization			18.4%		ICU Level of Service	A
Analysis Period (min)			15			

Lanes, Volumes, Timings  
15: Howard Road & RT 20

2013 AM Volumes  
2/22/2013

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	99	0	46	0	0	0	30	602	0	0	378	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	50		25	50		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Fr t		0.957									0.980	
Fit Protected		0.967					0.950					
Satd. Flow (prot)	0	1675	0	0	1863	0	1641	3505	0	1863	3354	0
Fit Permitted		0.796					0.440					
Satd. Flow (perm)	0	1379	0	0	1863	0	760	3505	0	1863	3354	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24									22	
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		1164			148			1140			362	
Travel Time (s)		26.5			3.4			17.3			5.5	
Peak Hour Factor	0.83	0.92	0.82	0.92	0.92	0.92	0.63	0.85	0.92	0.92	0.97	0.82
Heavy Vehicles (%)	4%	2%	7%	2%	2%	2%	10%	3%	2%	2%	6%	2%
Adj. Flow (vph)	119	0	56	0	0	0	48	708	0	0	390	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	175	0	0	0	0	48	708	0	0	450	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		3			3		1	6		5	2	
Permitted Phases	3			3			6			2		

Lanes, Volumes, Timings  
15: Howard Road & RT 20

2013 AM Volumes  
2/22/2013

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	3	3		3	3		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	20.0		6.0	20.0	
Minimum Split (s)	11.6	11.6		11.6	11.6		11.7	25.5		11.7	25.5	
Total Split (s)	30.6	30.6	0.0	30.6	30.6	0.0	20.7	45.5	0.0	20.7	45.5	0.0
Total Split (%)	31.6%	31.6%	0.0%	31.6%	31.6%	0.0%	21.4%	47.0%	0.0%	21.4%	47.0%	0.0%
Maximum Green (s)	25.0	25.0		25.0	25.0		15.0	41.5		15.0	41.5	
Yellow Time (s)	3.2	3.2		3.2	3.2		4.7	3.5		4.7	3.5	
All-Red Time (s)	2.4	2.4		2.4	2.4		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6	4.0	5.6	5.6	4.0	5.7	4.0	4.0	5.7	4.0	4.0
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	C-Min	
Walk Time (s)								5.0			5.0	
Flash Dont Walk (s)								11.0			11.0	
Pedestrian Calls (#/hr)								0			0	
Act Effct Green (s)		16.0					69.5	71.2			63.6	
Actuated g/C Ratio		0.17					0.72	0.74			0.66	
v/c Ratio		0.71					0.08	0.27			0.20	
Control Delay		47.4					5.5	5.1			8.3	
Queue Delay		0.0					0.0	0.0			0.0	
Total Delay		47.4					5.5	5.1			8.3	
LOS		D					A	A			A	
Approach Delay		47.4						5.1			8.3	
Approach LOS		D						A			A	

Intersection Summary

Area Type: Other  
 Cycle Length: 96.8  
 Actuated Cycle Length: 96.8  
 Offset: 8 (8%), Referenced to phase 2:SWTL, Start of Green  
 Natural Cycle: 55  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.71  
 Intersection Signal Delay: 11.5  
 Intersection LOS: B  
 Intersection Capacity Utilization 41.2%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 15: Howard Road & RT 20

ø1	ø2	ø3
20.7 s	45.5 s	30.6 s
ø5	ø6	
20.7 s	45.5 s	

Lanes, Volumes, Timings  
3: Queens Lane & Camp Road

2013 PM Volumes  
2/22/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	0	7	33	2	51	14	531	73	74	1057	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	150		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50		25	50		25	50		25	50		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Fr <sub>t</sub>		0.850			0.868			0.977			0.997	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1615	0	1467	1649	0	1805	3369	0	1687	3463	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1805	1615	0	1467	1649	0	1805	3369	0	1687	3463	0
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		372			436			1034			571	
Travel Time (s)		8.5			9.9			15.7			8.7	
Peak Hour Factor	0.50	0.92	0.58	0.92	0.25	0.85	0.58	0.94	0.73	0.80	0.86	0.60
Heavy Vehicles (%)	0%	0%	0%	23%	0%	0%	0%	5%	3%	7%	4%	0%
Adj. Flow (vph)	12	0	12	36	8	60	24	565	100	93	1229	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	12	12	0	36	68	0	24	665	0	92	1251	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	51.5%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
 3: Queens Lane & Camp Road

2013 PM Volumes  
 2/22/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	0	7	33	2	51	14	531	73	74	1057	13
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.50	0.92	0.58	0.92	0.25	0.85	0.58	0.94	0.73	0.80	0.86	0.60
Hourly flow rate (vph)	12	0	12	36	8	60	24	565	100	92	1229	22
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage (veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1820	2138	625	1475	2099	332	1251			665		
vC1, stage 1 conf vol	1425	1425		663	663							
vC2, stage 2 conf vol	395	713		812	1436							
vCu, unblocked vol	1820	2138	625	1475	2099	332	1251			665		
tC, single (s)	7.5	6.5	6.9	8.0	6.5	6.9	4.1			4.2		
tC, 2 stage (s)	6.5	5.5		7.0	5.5							
tF (s)	3.5	4.0	3.3	3.7	4.0	3.3	2.2			2.3		
p0 queue free %	90	100	97	82	95	91	96			90		
cM capacity (veh/h)	123	159	432	199	146	669	563			887		
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3		
Volume Total	12	12	36	68	24	377	288	92	819	431		
Volume Left	12	0	36	0	24	0	0	92	0	0		
Volume Right	0	12	0	60	0	0	100	0	0	22		
cSH	123	432	199	471	563	1700	1700	887	1700	1700		
Volume to Capacity	0.10	0.03	0.18	0.14	0.04	0.22	0.17	0.10	0.48	0.25		
Queue Length 95th (ft)	8	2	16	13	3	0	0	9	0	0		
Control Delay (s)	37.4	13.6	27.0	13.9	11.7	0.0	0.0	9.5	0.0	0.0		
Lane LOS	E	B	D	B	B			A				
Approach Delay (s)	25.5		18.5		0.4			0.7				
Approach LOS	D		C									
<b>Intersection Summary</b>												
Average Delay			1.7									
Intersection Capacity Utilization			51.5%		ICU Level of Service				A			
Analysis Period (min)			15									

Lanes, Volumes, Timings  
 10: Howard Road & Roundtree Road

2013 PM Volumes  
 2/22/2013



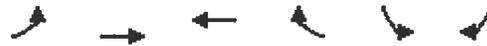
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↘	
Volume (vph)	16	57	69	54	42	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.929		0.975	
Flt Protected		0.986			0.961	
Satd. Flow (prot)	0	1791	1682	0	1684	0
Flt Permitted		0.986			0.961	
Satd. Flow (perm)	0	1791	1682	0	1684	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1021	412		873	
Travel Time (s)		23.2	9.4		19.8	
Peak Hour Factor	0.57	0.84	0.86	0.61	0.81	0.58
Heavy Vehicles (%)	6%	4%	6%	4%	7%	0%
Adj. Flow (vph)	28	68	80	89	52	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	96	169	0	64	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	24.1%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
 10: Howard Road & Roundtree Road

2013 PM Volumes  
 2/22/2013



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Volume (veh/h)	16	57	69	54	42	7
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.57	0.84	0.86	0.61	0.81	0.58
Hourly flow rate (vph)	28	68	80	89	52	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	169				248	124
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	169				248	124
tC, single (s)	4.2				6.5	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.3
p0 queue free %	98				93	99
cM capacity (veh/h)	1385				714	932

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	96	169	64
Volume Left	28	0	52
Volume Right	0	89	12
cSH	1385	1700	747
Volume to Capacity	0.02	0.10	0.09
Queue Length 95th (ft)	2	0	7
Control Delay (s)	2.4	0.0	10.3
Lane LOS	A		B
Approach Delay (s)	2.4	0.0	10.3
Approach LOS			B

Intersection Summary			
Average Delay		2.7	
Intersection Capacity Utilization		24.1%	ICU Level of Service A
Analysis Period (min)		15	

Lanes, Volumes, Timings  
15: Howard Road & RT 20

2013 PM Volumes  
2/22/2013

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕		↙	↕		↙	↕	
Volume (vph)	64	0	31	0	0	0	43	693	0	0	832	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	50		25	50		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frnt		0.958									0.982	
Flt Protected		0.967					0.950					
Satd. Flow (prot)	0	1720	0	0	1863	0	1805	3574	0	1863	3514	0
Flt Permitted		0.793					0.221					
Satd. Flow (perm)	0	1411	0	0	1863	0	420	3574	0	1863	3514	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22										19
Link Speed (mph)		30			30			45				45
Link Distance (ft)		1164			148			1140				362
Travel Time (s)		26.5			3.4			17.3				5.5
Peak Hour Factor	0.89	0.92	0.97	0.92	0.92	0.92	0.72	0.91	0.92	0.92	0.92	0.80
Heavy Vehicles (%)	2%	2%	3%	2%	2%	2%	0%	1%	2%	2%	1%	0%
Adj. Flow (vph)	72	0	32	0	0	0	60	762	0	0	904	124
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	104	0	0	0	0	60	762	0	0	1028	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru										
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	CI+Ex	CI+Ex										
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		3			3		1	6		5	2	
Permitted Phases	3			3			6			2		

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	3	3		3	3		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	20.0		6.0	20.0	
Minimum Split (s)	11.6	11.6		11.6	11.6		11.7	25.5		11.7	25.5	
Total Split (s)	30.6	30.6	0.0	30.6	30.6	0.0	20.7	45.5	0.0	20.7	45.5	0.0
Total Split (%)	31.6%	31.6%	0.0%	31.6%	31.6%	0.0%	21.4%	47.0%	0.0%	21.4%	47.0%	0.0%
Maximum Green (s)	25.0	25.0		25.0	25.0		15.0	41.5		15.0	41.5	
Yellow Time (s)	3.2	3.2		3.2	3.2		4.7	3.5		4.7	3.5	
All-Red Time (s)	2.4	2.4		2.4	2.4		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6	4.0	5.6	5.6	4.0	5.7	4.0	4.0	5.7	4.0	4.0
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	C-Min	
Walk Time (s)								5.0			5.0	
Flash Dont Walk (s)								11.0			11.0	
Pedestrian Calls (#/hr)								0			0	
Act Effct Green (s)		11.1					76.8	79.3			69.4	
Actuated g/C Ratio		0.11					0.79	0.82			0.72	
v/c Ratio		0.57					0.14	0.26			0.41	
Control Delay		43.6					4.1	3.2			8.1	
Queue Delay		0.0					0.0	0.0			0.0	
Total Delay		43.6					4.1	3.2			8.1	
LOS		D					A	A			A	
Approach Delay		43.6						3.2			8.1	
Approach LOS		D						A			A	

**Intersection Summary**

Area Type: Other  
 Cycle Length: 96.8  
 Actuated Cycle Length: 96.8  
 Offset: 8 (8%), Referenced to phase 2:SWTL, Start of Green  
 Natural Cycle: 50  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.57  
 Intersection Signal Delay: 8.0  
 Intersection Capacity Utilization 49.2%  
 Analysis Period (min) 15  
 Intersection LOS: A  
 ICU Level of Service A

Splits and Phases: 15: Howard Road & RT 20

ø1	ø2	ø3
20.7 s	45.5 s	30.6 s
ø5	ø6	
20.7 s	45.5 s	

Lanes, Volumes, Timings  
3: Queens Lane & Camp Road

2018 AM Background  
2/22/2013

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	0	7	32	0	123	2	1074	15	39	362	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	150		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50		25	50		25	50		25	50		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Fr <sub>t</sub>		0.850			0.850			0.998			0.992	
Fl <sub>t</sub> Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1703	1369	0	1805	1538	0	1805	3527	0	1556	3317	0
Fl <sub>t</sub> Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1703	1369	0	1805	1538	0	1805	3527	0	1556	3317	0
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		372			436			1034			571	
Travel Time (s)		8.5			9.9			15.7			8.7	
Peak Hour Factor	0.80	0.92	0.53	0.86	0.92	0.77	0.50	0.97	0.94	0.73	0.84	0.29
Heavy Vehicles (%)	6%	0%	18%	0%	0%	5%	0%	2%	13%	16%	6%	43%
Adj. Flow (vph)	20	0	13	37	0	160	4	1107	16	53	431	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	20	13	0	37	160	0	4	1123	0	53	455	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	52.4%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
3: Queens Lane & Camp Road

2018 AM Background  
2/22/2013



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	16	0	7	32	0	123	2	1074	15	39	362	7
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.92	0.53	0.86	0.92	0.77	0.50	0.97	0.94	0.73	0.84	0.29
Hourly flow rate (vph)	20	0	13	37	0	160	4	1107	16	53	431	24
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							TWLT			TWLT		
Median storage veh							2			2		
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1271	1681	228	1459	1685	562	455			1123		
vC1, stage 1 conf vol	550	550		1123	1123							
vC2, stage 2 conf vol	721	1131		336	562							
vCu, unblocked vol	1271	1681	228	1459	1685	562	455			1123		
tC, single (s)	7.6	6.5	7.3	7.5	6.5	7.0	4.1			4.4		
tC, 2 stage (s)	6.6	5.5		6.5	5.5							
tF (s)	3.6	4.0	3.5	3.5	4.0	3.3	2.2			2.4		
p0 queue free %	89	100	98	82	100	65	100			90		
cM capacity (veh/h)	178	209	728	209	246	463	1116			543		

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	20	13	37	160	4	738	385	53	287	168
Volume Left	20	0	37	0	4	0	0	53	0	0
Volume Right	0	13	0	160	0	0	16	0	0	24
cSH	178	728	209	463	1116	1700	1700	543	1700	1700
Volume to Capacity	0.11	0.02	0.18	0.35	0.00	0.43	0.23	0.10	0.17	0.10
Queue Length 95th (ft)	9	1	16	38	0	0	0	8	0	0
Control Delay (s)	27.7	10.0	26.0	16.8	8.2	0.0	0.0	12.4	0.0	0.0
Lane LOS	D	B	D	C	A			B		
Approach Delay (s)	20.7		18.5		0.0			1.3		
Approach LOS	C		C							

Intersection Summary	
Average Delay	2.7
Intersection Capacity Utilization	52.4%
ICU Level of Service	A
Analysis Period (min)	15



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↘	↘
Volume (vph)	4	78	38	17	65	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>			0.940		0.971	
Fl <sub>t</sub> Protected		0.996			0.962	
Satd. Flow (prot)	0	1855	1543	0	1644	0
Fl <sub>t</sub> Permitted		0.996			0.962	
Satd. Flow (perm)	0	1855	1543	0	1644	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1021	412		873	
Travel Time (s)		23.2	9.4		19.8	
Peak Hour Factor	0.50	0.83	0.84	0.47	0.88	0.80
Heavy Vehicles (%)	2%	2%	14%	18%	5%	19%
Adj. Flow (vph)	8	94	45	36	74	20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	102	81	0	94	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	18.6%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
 10: Howard Road & Roundtree Road

2018 AM Background  
 2/22/2013



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Volume (veh/h)	4	78	38	17	65	16
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.50	0.83	0.84	0.47	0.88	0.80
Hourly flow rate (vph)	8	94	45	36	74	20
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	81				173	63
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	81				173	63
tC, single (s)	4.1				6.4	6.4
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.5
p0 queue free %	99				91	98
cM capacity (veh/h)	1516				806	955

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	102	81	94
Volume Left	8	0	74
Volume Right	0	36	20
cSH	1516	1700	833
Volume to Capacity	0.01	0.05	0.11
Queue Length 95th (ft)	0	0	9
Control Delay (s)	0.6	0.0	9.9
Lane LOS	A		A
Approach Delay (s)	0.6	0.0	9.9
Approach LOS			A

Intersection Summary			
Average Delay		3.6	
Intersection Capacity Utilization		18.6%	ICU Level of Service A
Analysis Period (min)		15	

Lanes, Volumes, Timings  
15: Howard Road & RT 20

2018 AM Background  
2/22/2013

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕		↙	↕		↙	↕	
Volume (vph)	101	0	47	0	0	0	31	617	0	0	387	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	50		25	50		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Fr <sub>t</sub>		0.957									0.980	
Fl <sub>t</sub> Protected		0.967					0.950					
Satd. Flow (prot)	0	1675	0	0	1863	0	1641	3505	0	1863	3354	0
Fl <sub>t</sub> Permitted		0.796					0.434					
Satd. Flow (perm)	0	1379	0	0	1863	0	750	3505	0	1863	3354	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23										22
Link Speed (mph)		30			30			45				45
Link Distance (ft)		1164			148			1140				362
Travel Time (s)		26.5			3.4			17.3				5.5
Peak Hour Factor	0.83	0.92	0.82	0.92	0.92	0.92	0.63	0.85	0.92	0.92	0.97	0.82
Heavy Vehicles (%)	4%	2%	7%	2%	2%	2%	10%	3%	2%	2%	6%	2%
Adj. Flow (vph)	122	0	57	0	0	0	49	726	0	0	399	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	179	0	0	0	0	49	726	0	0	460	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru										
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	CI+Ex	CI+Ex										
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		3			3		1	6		5	2	
Permitted Phases	3			3			6			2		



Lanes, Volumes, Timings  
3: Queens Lane & Camp Road

2018 PM Background  
2/22/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	0	7	36	2	54	14	544	78	92	1083	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	150		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50		25	50		25	50		25	50		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Fr <sub>t</sub>		0.850			0.867			0.977				0.997
Fl <sub>t</sub> Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1615	0	1467	1647	0	1805	3369	0	1687	3463	0
Fl <sub>t</sub> Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1805	1615	0	1467	1647	0	1805	3369	0	1687	3463	0
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		372			436			1034			571	
Travel Time (s)		8.5			9.9			15.7			8.7	
Peak Hour Factor	0.50	0.92	0.58	0.92	0.25	0.85	0.58	0.94	0.73	0.80	0.86	0.60
Heavy Vehicles (%)	0%	0%	0%	23%	0%	0%	0%	5%	3%	7%	4%	0%
Adj. Flow (vph)	12	0	12	39	8	64	24	579	107	115	1259	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	12	12	0	39	72	0	24	686	0	115	1281	0
Enter Blocked Intersection	No	No	No									
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	52.3%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
 3: Queens Lane & Camp Road

2018 PM Background  
 2/22/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	0	7	36	2	54	14	544	78	92	1083	13
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.50	0.92	0.58	0.92	0.25	0.85	0.58	0.94	0.73	0.80	0.86	0.60
Hourly flow rate (vph)	12	0	12	39	8	64	24	579	107	115	1259	22
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage (veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1905	2234	640	1552	2191	343	1281			686		
vC1, stage 1 conf vol	1500	1500		680	680							
vC2, stage 2 conf vol	405	734		872	1511							
vCu, unblocked vol	1905	2234	640	1552	2191	343	1281			686		
tC, single (s)	7.5	6.5	6.9	8.0	6.5	6.9	4.1			4.2		
tC, 2 stage (s)	6.5	5.5		7.0	5.5							
tF (s)	3.5	4.0	3.3	3.7	4.0	3.3	2.2			2.3		
p0 queue free %	89	100	97	78	94	90	96			87		
cM capacity (veh/h)	107	141	423	178	128	659	549			871		
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3		
Volume Total	12	12	39	72	24	386	300	115	840	441		
Volume Left	12	0	39	0	24	0	0	115	0	0		
Volume Right	0	12	0	64	0	0	107	0	0	22		
cSH	107	423	178	451	549	1700	1700	871	1700	1700		
Volume to Capacity	0.11	0.03	0.22	0.16	0.04	0.23	0.18	0.13	0.49	0.26		
Queue Length 95th (ft)	9	2	20	14	3	0	0	11	0	0		
Control Delay (s)	42.8	13.8	30.9	14.5	11.9	0.0	0.0	9.8	0.0	0.0		
Lane LOS	E	B	D	B	B			A				
Approach Delay (s)	28.2		20.3		0.4			0.8				
Approach LOS	D		C									
<b>Intersection Summary</b>												
Average Delay			1.9									
Intersection Capacity Utilization			52.3%		ICU Level of Service					A		
Analysis Period (min)			15									



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Volume (vph)	16	58	71	55	43	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.930		0.975	
Flt Protected		0.986			0.961	
Satd. Flow (prot)	0	1791	1684	0	1684	0
Flt Permitted		0.986			0.961	
Satd. Flow (perm)	0	1791	1684	0	1684	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1021	412		873	
Travel Time (s)		23.2	9.4		19.8	
Peak Hour Factor	0.57	0.84	0.86	0.61	0.81	0.58
Heavy Vehicles (%)	6%	4%	6%	4%	7%	0%
Adj. Flow (vph)	28	69	83	90	53	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	97	173	0	65	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	24.4%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
 10: Howard Road & Roundtree Road

2018 PM Background  
 2/22/2013



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Volume (veh/h)	16	58	71	55	43	7
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.57	0.84	0.86	0.61	0.81	0.58
Hourly flow rate (vph)	28	69	83	90	53	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	173				253	128
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	173				253	128
tC, single (s)	4.2				6.5	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.3
p0 queue free %	98				93	99
cM capacity (veh/h)	1380				710	928
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>SB 1</b>			
Volume Total	97	173	65			
Volume Left	28	0	53			
Volume Right	0	90	12			
cSH	1380	1700	743			
Volume to Capacity	0.02	0.10	0.09			
Queue Length 95th (ft)	2	0	7			
Control Delay (s)	2.3	0.0	10.3			
Lane LOS	A		B			
Approach Delay (s)	2.3	0.0	10.3			
Approach LOS			B			
<b>Intersection Summary</b>						
Average Delay			2.7			
Intersection Capacity Utilization			24.4%	ICU Level of Service		A
Analysis Period (min)			15			

Lanes, Volumes, Timings  
15: Howard Road & RT 20

2018 PM Background  
2/22/2013

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕		↙	↕		↙	↕	
Volume (vph)	66	0	32	0	0	0	44	710	0	0	853	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	50		25	50		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Fr't		0.958									0.982	
Fit Protected		0.967					0.950					
Satd. Flow (prot)	0	1720	0	0	1863	0	1805	3574	0	1863	3514	0
Fit Permitted		0.793					0.214					
Satd. Flow (perm)	0	1411	0	0	1863	0	407	3574	0	1863	3514	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22										19
Link Speed (mph)		30			30			45				45
Link Distance (ft)		1164			148			1140				362
Travel Time (s)		26.5			3.4			17.3				5.5
Peak Hour Factor	0.89	0.92	0.97	0.92	0.92	0.92	0.72	0.91	0.92	0.92	0.92	0.80
Heavy Vehicles (%)	2%	2%	3%	2%	2%	2%	0%	1%	2%	2%	1%	0%
Adj. Flow (vph)	74	0	33	0	0	0	61	780	0	0	927	126
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	107	0	0	0	0	61	780	0	0	1053	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru										
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	CI+Ex	CI+Ex										
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		3			3		1	6		5	2	
Permitted Phases	3			3			6			2		

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	3	3		3	3		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	20.0		6.0	20.0	
Minimum Split (s)	11.6	11.6		11.6	11.6		11.7	25.5		11.7	25.5	
Total Split (s)	30.6	30.6	0.0	30.6	30.6	0.0	20.7	45.5	0.0	20.7	45.5	0.0
Total Split (%)	31.6%	31.6%	0.0%	31.6%	31.6%	0.0%	21.4%	47.0%	0.0%	21.4%	47.0%	0.0%
Maximum Green (s)	25.0	25.0		25.0	25.0		15.0	41.5		15.0	41.5	
Yellow Time (s)	3.2	3.2		3.2	3.2		4.7	3.5		4.7	3.5	
All-Red Time (s)	2.4	2.4		2.4	2.4		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6	4.0	5.6	5.6	4.0	5.7	4.0	4.0	5.7	4.0	4.0
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	C-Min	
Walk Time (s)								5.0			5.0	
Flash Dont Walk (s)								11.0			11.0	
Pedestrian Calls (#/hr)								0			0	
Act Effct Green (s)		11.2					76.6	79.1			69.2	
Actuated g/C Ratio		0.12					0.79	0.82			0.71	
v/c Ratio		0.58					0.15	0.27			0.42	
Control Delay		43.9					4.2	3.3			8.4	
Queue Delay		0.0					0.0	0.0			0.0	
Total Delay		43.9					4.2	3.3			8.4	
LOS		D					A	A			A	
Approach Delay		43.9						3.3			8.4	
Approach LOS		D						A			A	

**Intersection Summary**

Area Type:	Other
Cycle Length:	96.8
Actuated Cycle Length:	96.8
Offset:	8 (8%), Referenced to phase 2:SWTL, Start of Green
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.58
Intersection Signal Delay:	8.2
Intersection LOS:	A
Intersection Capacity Utilization:	50.2%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 15: Howard Road & RT 20

ø1	ø2	ø3
20.7 s	45.5 s	30.6 s
ø5	ø6	
20.7 s	45.5 s	

Lanes, Volumes, Timings  
3: Queens Lane & Camp Road

2018 AM Background with Project  
2/22/2013

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	0	7	34	0	131	2	1074	17	44	362	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	150		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50		25	50		25	50		25	50		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Fr t		0.850			0.850			0.998			0.992	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1703	1369	0	1805	1538	0	1805	3526	0	1556	3317	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1703	1369	0	1805	1538	0	1805	3526	0	1556	3317	0
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		372			436			1034			571	
Travel Time (s)		8.5			9.9			15.7			8.7	
Peak Hour Factor	0.80	0.92	0.53	0.86	0.92	0.77	0.50	0.97	0.94	0.73	0.84	0.29
Heavy Vehicles (%)	6%	0%	18%	0%	0%	5%	0%	2%	13%	16%	6%	43%
Adj. Flow (vph)	20	0	13	40	0	170	4	1107	18	60	431	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	20	13	0	40	170	0	4	1125	0	60	455	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 56.5%

ICU Level of Service B

Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis  
3: Queens Lane & Camp Road

2018 AM Background with Project  
2/22/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	16	0	7	34	0	131	2	1074	17	44	362	7
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.92	0.53	0.86	0.92	0.77	0.50	0.97	0.94	0.73	0.84	0.29
Hourly flow rate (vph)	20	0	13	40	0	170	4	1107	18	60	431	24
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage (veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1295	1697	228	1473	1700	563	455			1125		
vC1, stage 1 conf vol	564	564		1124	1124							
vC2, stage 2 conf vol	732	1133		349	576							
vCu, unblocked vol	1295	1697	228	1473	1700	563	455			1125		
tC, single (s)	7.6	6.5	7.3	7.5	6.5	7.0	4.1			4.4		
tC, 2 stage (s)	6.6	5.5		6.5	5.5							
tF (s)	3.6	4.0	3.5	3.5	4.0	3.3	2.2			2.4		
p0 queue free %	88	100	98	81	100	63	100			89		
cM capacity (veh/h)	162	202	728	207	243	462	1116			542		
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3		
Volume Total	20	13	40	170	4	738	387	60	287	168		
Volume Left	20	0	40	0	4	0	0	60	0	0		
Volume Right	0	13	0	170	0	0	18	0	0	24		
cSH	162	728	207	462	1116	1700	1700	542	1700	1700		
Volume to Capacity	0.12	0.02	0.19	0.37	0.00	0.43	0.23	0.11	0.17	0.10		
Queue Length 95th (ft)	10	1	17	42	0	0	0	9	0	0		
Control Delay (s)	30.4	10.0	26.4	17.3	8.2	0.0	0.0	12.5	0.0	0.0		
Lane LOS	D	B	D	C	A			B				
Approach Delay (s)	22.3		19.0		0.0			1.5				
Approach LOS	C		C									
<b>Intersection Summary</b>												
Average Delay			2.9									
Intersection Capacity Utilization			56.5%		ICU Level of Service					B		
Analysis Period (min)			15									



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Volume (vph)	11	78	38	23	107	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.930		0.972	
Frt Protected		0.991			0.962	
Satd. Flow (prot)	0	1846	1522	0	1646	0
Frt Permitted		0.991			0.962	
Satd. Flow (perm)	0	1846	1522	0	1646	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1021	412		873	
Travel Time (s)		23.2	9.4		19.8	
Peak Hour Factor	0.50	0.83	0.84	0.47	0.88	0.80
Heavy Vehicles (%)	2%	2%	14%	18%	5%	19%
Adj. Flow (vph)	22	94	45	49	122	33
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	116	94	0	154	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	25.6%
ICU Level of Service	A
Analysis Period (min)	15



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Volume (veh/h)	11	78	38	23	107	26
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.50	0.83	0.84	0.47	0.88	0.80
Hourly flow rate (vph)	22	94	45	49	122	32
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	94				208	70
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	94				208	70
iC, single (s)	4.1				6.4	6.4
tC, 2 stage (s)						
iF (s)	2.2				3.5	3.5
p0 queue free %	99				84	97
cM capacity (veh/h)	1500				763	948
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>WB 1</b>	<b>SB 1</b>			
Volume Total	116	94	154			
Volume Left	22	0	122			
Volume Right	0	49	32			
cSH	1500	1700	795			
Volume to Capacity	0.01	0.06	0.19			
Queue Length 95th (ft)	1	0	18			
Control Delay (s)	1.5	0.0	10.6			
Lane LOS	A		B			
Approach Delay (s)	1.5	0.0	10.6			
Approach LOS			B			
<b>Intersection Summary</b>						
Average Delay			5.0			
Intersection Capacity Utilization		25.6%		ICU Level of Service		A
Analysis Period (min)			15			

Lanes, Volumes, Timings  
15: Howard Road & RT 20

2018 AM Background with Project  
2/22/2013

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕		↙	↕		↙	↕	
Volume (vph)	130	0	60	0	0	0	33	617	0	0	387	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	50		25	50		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frnt		0.957									0.979	
Flt Protected		0.967					0.950					
Satd. Flow (prot)	0	1675	0	0	1863	0	1641	3505	0	1863	3352	0
Flt Permitted		0.796					0.421					
Satd. Flow (perm)	0	1379	0	0	1863	0	727	3505	0	1863	3352	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23									24	
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		1164			148			1140			362	
Travel Time (s)		26.5			3.4			17.3			5.5	
Peak Hour Factor	0.83	0.92	0.82	0.92	0.92	0.92	0.63	0.85	0.92	0.92	0.97	0.82
Heavy Vehicles (%)	4%	2%	7%	2%	2%	2%	10%	3%	2%	2%	6%	2%
Adj. Flow (vph)	157	0	73	0	0	0	52	726	0	0	399	66
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	230	0	0	0	0	52	726	0	0	465	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru										
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	CI+Ex	CI+Ex										
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		3			3		1	6		5	2	
Permitted Phases	3			3			6			2		

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	3	3		3	3		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	20.0		6.0	20.0	
Minimum Split (s)	11.6	11.6		11.6	11.6		11.7	25.5		11.7	25.5	
Total Split (s)	30.6	30.6	0.0	30.6	30.6	0.0	20.7	45.5	0.0	20.7	45.5	0.0
Total Split (%)	31.6%	31.6%	0.0%	31.6%	31.6%	0.0%	21.4%	47.0%	0.0%	21.4%	47.0%	0.0%
Maximum Green (s)	25.0	25.0		25.0	25.0		15.0	41.5		15.0	41.5	
Yellow Time (s)	3.2	3.2		3.2	3.2		4.7	3.5		4.7	3.5	
All-Red Time (s)	2.4	2.4		2.4	2.4		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6	4.0	5.6	5.6	4.0	5.7	4.0	4.0	5.7	4.0	4.0
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	C-Min	
Walk Time (s)								5.0			5.0	
Flash Dont Walk (s)								11.0			11.0	
Pedestrian Calls (#/hr)								0			0	
Act Effct Green (s)		19.8					65.7	67.4			57.3	
Actuated g/C Ratio		0.20					0.68	0.70			0.59	
v/c Ratio		0.77					0.09	0.30			0.23	
Control Delay		48.4					7.1	6.8			11.0	
Queue Delay		0.0					0.0	0.0			0.0	
Total Delay		48.4					7.1	6.8			11.0	
LOS		D					A	A			B	
Approach Delay		48.4						6.8			11.0	
Approach LOS		D						A			B	

**Intersection Summary**

Area Type:	Other
Cycle Length:	96.8
Actuated Cycle Length:	96.8
Offset:	8 (8%), Referenced to phase 2:SWTL, Start of Green
Natural Cycle:	55
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.77
Intersection Signal Delay:	14.6
Intersection Capacity Utilization:	45.7%
Analysis Period (min):	15
Intersection LOS:	B
ICU Level of Service:	A

Splits and Phases: 15: Howard Road & RT 20

ø1	ø2	ø3
20.7 s	45.5 s	30.6 s
ø5	ø6	
20.7 s	45.5 s	

Lanes, Volumes, Timings  
3: Queens Lane & Camp Road

2018 PM Background with Project  
2/22/2013

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	0	7	36	2	54	14	544	78	92	1083	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	150		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50		25	50		25	50		25	50		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.850			0.867			0.977			0.997	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1615	0	1467	1647	0	1805	3369	0	1687	3463	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1805	1615	0	1467	1647	0	1805	3369	0	1687	3463	0
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		372			436			1034			571	
Travel Time (s)		8.5			9.9			15.7			8.7	
Peak Hour Factor	0.50	0.92	0.58	0.92	0.25	0.85	0.58	0.94	0.73	0.80	0.86	0.60
Heavy Vehicles (%)	0%	0%	0%	23%	0%	0%	0%	5%	3%	7%	4%	0%
Adj. Flow (vph)	12	0	12	39	8	64	24	579	107	115	1259	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	12	12	0	39	72	0	24	686	0	115	1281	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

**Intersection Summary**

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 52.3%

ICU Level of Service A

Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis  
3: Queens Lane & Camp Road

2018 PM Background with Project  
2/22/2013



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	0	7	36	2	54	14	544	78	92	1083	13
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.50	0.92	0.58	0.92	0.25	0.85	0.58	0.94	0.73	0.80	0.86	0.60
Hourly flow rate (vph)	12	0	12	39	8	64	24	579	107	115	1259	22
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage (veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1905	2234	640	1552	2191	343	1281			686		
vC1, stage 1 conf vol	1500	1500		680	680							
vC2, stage 2 conf vol	405	734		872	1511							
vCu, unblocked vol	1905	2234	640	1552	2191	343	1281			686		
tC, single (s)	7.5	6.5	6.9	8.0	6.5	6.9	4.1			4.2		
tC, 2 stage (s)	6.5	5.5		7.0	5.5							
tF (s)	3.5	4.0	3.3	3.7	4.0	3.3	2.2			2.3		
p0 queue free %	89	100	97	78	94	90	96			87		
cM capacity (veh/h)	107	141	423	178	128	659	549			871		
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>EB 2</b>	<b>WB 1</b>	<b>WB 2</b>	<b>NB 1</b>	<b>NB 2</b>	<b>NB 3</b>	<b>SB 1</b>	<b>SB 2</b>	<b>SB 3</b>		
Volume Total	12	12	39	72	24	386	300	115	840	441		
Volume Left	12	0	39	0	24	0	0	115	0	0		
Volume Right	0	12	0	64	0	0	107	0	0	22		
cSH	107	423	178	451	549	1700	1700	871	1700	1700		
Volume to Capacity	0.11	0.03	0.22	0.16	0.04	0.23	0.18	0.13	0.49	0.26		
Queue Length 95th (ft)	9	2	20	14	3	0	0	11	0	0		
Control Delay (s)	42.8	13.8	30.9	14.5	11.9	0.0	0.0	9.8	0.0	0.0		
Lane LOS	E	B	D	B	B			A				
Approach Delay (s)	28.2		20.3		0.4			0.8				
Approach LOS	D		C									
<b>Intersection Summary</b>												
Average Delay			1.9									
Intersection Capacity Utilization			52.3%		ICU Level of Service					A		
Analysis Period (min)			15									

Lanes, Volumes, Timings  
 10: Howard Road & Roundtree Road

2018 PM Background with Project  
 2/22/2013



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Volume (vph)	35	58	71	88	67	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.914		0.975	
Flt Protected		0.977			0.961	
Satd. Flow (prot)	0	1769	1658	0	1684	0
Flt Permitted		0.977			0.961	
Satd. Flow (perm)	0	1769	1658	0	1684	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		1021	412		873	
Travel Time (s)		23.2	9.4		19.8	
Peak Hour Factor	0.57	0.84	0.86	0.61	0.81	0.58
Heavy Vehicles (%)	6%	4%	6%	4%	7%	0%
Adj. Flow (vph)	61	69	83	144	83	19
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	130	227	0	102	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	28.5%
ICU Level of Service	A
Analysis Period (min)	15



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↗		↙	
Volume (veh/h)	35	58	71	88	67	11
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.57	0.84	0.86	0.61	0.81	0.58
Hourly flow rate (vph)	61	69	83	144	83	19
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	227				347	155
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	227				347	155
tC, single (s)	4.2				6.5	6.2
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.3
p0 queue free %	95				86	98
cM capacity (veh/h)	1318				610	896
<b>Direction, Lane #</b>						
	EB 1	WB 1	SB 1			
Volume Total	130	227	102			
Volume Left	61	0	83			
Volume Right	0	144	19			
cSH	1318	1700	649			
Volume to Capacity	0.05	0.13	0.16			
Queue Length 95th (ft)	4	0	14			
Control Delay (s)	3.9	0.0	11.6			
Lane LOS	A		B			
Approach Delay (s)	3.9	0.0	11.6			
Approach LOS			B			
<b>Intersection Summary</b>						
Average Delay			3.7			
Intersection Capacity Utilization		28.5%		ICU Level of Service		A
Analysis Period (min)			15			

Lanes, Volumes, Timings  
15: Howard Road & RT 20

2018 PM Background with Project  
2/22/2013

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕		↖	↗		↖	↗	
Volume (vph)	82	0	40	0	0	0	55	710	0	0	853	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	50		25	50		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.958									0.979	
Flt Protected		0.967					0.950					
Satd. Flow (prot)	0	1720	0	0	1863	0	1805	3574	0	1863	3504	0
Flt Permitted		0.793					0.197					
Satd. Flow (perm)	0	1411	0	0	1863	0	374	3574	0	1863	3504	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22									24	
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		1164			148			1140			362	
Travel Time (s)		26.5			3.4			17.3			5.5	
Peak Hour Factor	0.89	0.92	0.97	0.92	0.92	0.92	0.72	0.91	0.92	0.92	0.92	0.80
Heavy Vehicles (%)	2%	2%	3%	2%	2%	2%	0%	1%	2%	2%	1%	0%
Adj. Flow (vph)	92	0	41	0	0	0	76	780	0	0	927	155
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	133	0	0	0	0	76	780	0	0	1082	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru										
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	CI+Ex	CI+Ex										
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		3			3		1	6		5	2	
Permitted Phases	3			3			6			2		

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	3	3		3	3		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	20.0		6.0	20.0	
Minimum Split (s)	11.6	11.6		11.6	11.6		11.7	25.5		11.7	25.5	
Total Split (s)	30.6	30.6	0.0	30.6	30.6	0.0	20.7	45.5	0.0	20.7	45.5	0.0
Total Split (%)	31.6%	31.6%	0.0%	31.6%	31.6%	0.0%	21.4%	47.0%	0.0%	21.4%	47.0%	0.0%
Maximum Green (s)	25.0	25.0		25.0	25.0		15.0	41.5		15.0	41.5	
Yellow Time (s)	3.2	3.2		3.2	3.2		4.7	3.5		4.7	3.5	
All-Red Time (s)	2.4	2.4		2.4	2.4		1.0	0.5		1.0	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6	4.0	5.6	5.6	4.0	5.7	4.0	4.0	5.7	4.0	4.0
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	C-Min	
Walk Time (s)								5.0			5.0	
Flash Dont Walk (s)								11.0			11.0	
Pedestrian Calls (#/hr)								0			0	
Act Effct Green (s)		13.0					72.5	74.2			64.0	
Actuated g/C Ratio		0.13					0.75	0.77			0.66	
v/c Ratio		0.64					0.20	0.28			0.47	
Control Delay		45.7					5.2	4.1			10.0	
Queue Delay		0.0					0.0	0.0			0.0	
Total Delay		45.7					5.2	4.1			10.0	
LOS		D					A	A			B	
Approach Delay		45.7						4.2			10.0	
Approach LOS		D						A			B	

**Intersection Summary**

Area Type: Other  
 Cycle Length: 96.8  
 Actuated Cycle Length: 96.8  
 Offset: 8 (8%), Referenced to phase 2:SWTL, Start of Green  
 Natural Cycle: 55  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.64  
 Intersection Signal Delay: 9.9  
 Intersection Capacity Utilization 52.3%  
 Analysis Period (min) 15

Intersection LOS: A  
 ICU Level of Service A

Splits and Phases: 15: Howard Road & RT 20

ø1	ø2	ø3
20.7 s	45.5 s	30.6 s
ø5	ø6	
20.7 s	45.5 s	

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**APPENDIX C**

**Study Area Photographs**

**For the**

**Sherwood Apartments  
Heatherwood Drive**

**Located in the**

**TOWN OF HAMBURG  
ERIE COUNTY, NEW YORK**

*Prepared for:*

**David Burke**  
DATO DEVELOPMENT, LLC  
S-5540 Southwestern Boulevard  
Hamburg, NY 14075

*Prepared by:*



3556 LAKE SHORE ROAD  
BUFFALO, NY 14219-1494  
(716) 827-8000 PHONE  
(716) 826-7958 FAX

Looking south on Camp Road at intersection with Howard Road.



Looking east from Queens Lane towards Camp Road intersection.



Looking north towards intersection of Camp and Howard Roads.



Looking north on Camp Road at intersection with Howard Road.



Looking east from Howard Road towards Roundtree Road.



Looking south on Roundtree Road towards Howard Road



Looking south on Howard Road towards Southwestern Boulevard.



Looking north towards Howard Road from business driveway at intersection.



Looking southwest down Southwestern Boulevard from Howard Road intersection.



Looking northeast down Southwestern Boulevard from Howard Road intersection.



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# **EXHIBIT P**

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**WETLAND DELINEATION REPORT**  
**Hopevale Townhouses**  
**Town of Hamburg**

**prepared for**  
**DATO Development**



**CLIENT:**  
MR. DAVID BURKE  
DATO DEVELOPMENT  
S-5540 SOUTHWESTERN BLVD.  
HAMBURG, NEW YORK 14075

**PROJECT NAME:**  
HOPEVALE TOWNHOUSES

**PROJECT LOCATION:**  
NORTH OF HOPEVALE SCHOOL  
EAST OF HEATHERWOOD DRIVE  
TOWN OF HAMBURG  
ERIE COUNTY, NEW YORK

**ACTION:**  
SECTION 404 WETLAND DELINEATION REPORT

**PREPARED BY:**  
WILSON ENVIRONMENTAL TECHNOLOGIES, INC.  
2805 WHERLE DRIVE, SUITE 2  
WILLIAMSVILLE, NEW YORK 14221  
(716) 595-3000 FAX (716) 595-9994

**DATE:**  
NOVEMBER 1, 2006

**WET PROJECT NO.:**  
3320.001

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## EXECUTIVE SUMMARY

Wilson Environmental Technologies, Inc. (WET) has been retained DATO Development, S-5540 Southwestern Boulevard, Hamburg, New York, 14075, to evaluate and define wetlands subject to jurisdiction under Section 404 of the Clean Water Act on an approximately 14.93± acre parcel in the Town of Hamburg, Erie County, New York. The proposed project is for the construction of residential townhouse subdivision. The wetland delineation results were based on the presence of hydric soils, hydrophytic vegetation and wetland hydrology found within the site boundaries as depicted on the attached Wetlands Survey prepared by the firm of Nussbaumer & Clarke, Inc., 3556 Lake Shore Road, Suite 500, Buffalo, New York 14219-8000.

The site is being proposed for a 56 unit townhouse subdivision. The development plan, as designed by Nussbaumer & Clarke, Inc., the project engineer, shows a single entrance, private road development. The easterly portion of the parcel will be left undisturbed.

WET conducted the Federal Wetlands Delineation of the site during several days in September, 2006. The result of the wetland delineation shows one (1) wetland totaling approximately 0.75 acres within the development portion of the site. The wetlands were flagged at the time of the field work and their locations surveyed by a licenced land surveying firm. The following technical report addresses the one (1) wetland within the site. The wetland is associated with an unnamed tributary to Lake Erie. It is our professional opinion that the wetland is jurisdictional based on a direct connection to this tributary.

This report is intended for the use of DATO Development, their agents and assigns as a planning aid in the development of this parcel. Results of the Federal Wetlands Delineation are subject to the review of the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act, and the New York State Department of Environmental Conservation as the Regulatory Agencies, along with the Town of Clarence. This Wetland Delineation Report is a representation of Federal Wetlands only, as the New York State Department of Environmental Conservation is solely responsible for the delineation of wetlands under Article 24 of the New York State Freshwater Wetlands Act. The review of this document by the U.S. Army Corps of Engineers could produce alterations to the delineated boundary as determined by WET. The wetlands as delineated by WET were completed to the best of our ability and in compliance with the guidelines presented in the Corps of Engineers Wetlands Delineation Manual Technical Report Y-87-1 (U.S. Army Corps Waterways Experiment Station, 1987), accepted as the current methodology.

## 1.0 INTRODUCTION

Wilson Environmental Technologies, Inc. (WET) has been retained by Mr. David Burke, DATO Development, S-5540 Southwestern Drive, Hamburg, New York, to evaluate and define wetlands subject to jurisdiction under Section 404 of the Clean Water Act on an approximately 14.93 ± acre parcel in the Town of Hamburg, Erie County, New York (Figure 1). This report presents the results of the on-site field investigation which was conducted to determine if a United States Army Corps of Engineers (USACE) permit relative to Section 404 of the Clean Water Act would be required for any proposed development within the parcel. Based on the results of the investigation, WET determined that one (1) Federally jurisdictional wetland totaling approximately 0.75 acres are located within the site. The determination was based on the presence of hydric soils, hydrophytic vegetation and wetland hydrology.

The result of the wetlands delineation was surveyed by the firm of Nussbaumer & Clarke, Inc., 3556 Lake Shore Road, Suite 500, Buffalo, New York 14219-8000. and contained in Appendix D of this report.

The site is located north of the Hopevale School and east of Heatherwood Drive, Town of Hamburg, Erie County, New York. The site is for a proposed residential townhouses subdivision.

### 1.1 Current Regulations

The Code of Federal Regulations defines a wetland as an area having hydric soils, wetland hydrology and supporting vegetation dominated by hydrophytes. All three of these criteria must be present for an area to qualify as a wetland. Hydrophytic vegetation has been defined as species which due to morphological, physiological, and/or reproductive adaptation(s), have the ability to grow, effectively compete, reproduce, and/or persist in anaerobic soil conditions. These species have been given an indicator status defining their probability of occurring in a wetland. These indicator statuses are defined as Obligate Wetland (OBL), Facultative Wetland (FACW) and Facultative (FAC). Non-hydrophytic species are assigned an indicator status of Facultative Upland (FACU) or Obligate Upland (UPL).

On August 17, 1991, Former President Bush signed into law the 1992 Energy and Water Development Appropriations Act. The provisions within the Act contained an amendment to the Corps of Engineers Regulatory appropriation that resulted in the suspended use of the 1989 Federal Manual for Identifying and Delineating Jurisdictional Wetlands (Federal Interagency Committee for Wetland Delineation, 1989) while proposed revision of the 1989 Manual is being reviewed and field tested. Until a revised manual is developed and adopted by the reviewing agencies, the guidelines presented in the Corps of Engineers Wetlands Delineation Manual - Technical Report Y-87-1 (U.S. Army Corps Waterways Experiment Station, 1987) are accepted as the current methodology.

## 2.0 AGENCY RESOURCE INFORMATION

Prior to initiation of the on-site investigation, available environmental information was gathered and reviewed. The results of the review are summarized as follows:

### 2.1 USGS Quadrangle Map (Figure 1)

The U.S. Geological Service has produced geological maps for every county of the United States. These maps are useful in wetland delineation for the purposes of identifying areas of concern within a parcel. In addition to civil works and boundaries, indicators of marshes, swamps, perennial and intermittent streams, and contours are depicted. The Buffalo SE, New York (7.5 minute) quadrangle map were referenced for this parcel.

### 2.2 National Wetlands Inventory Map (Figure 2)

NWI maps were produced by the U.S. Department of the Interior, Fish and Wildlife Service in the years 1977 to present day. These maps provide the approximate configurations and community types of suspected Federal wetlands. Although they serve as useful guidelines, they are incomplete due to compilation methods primarily utilizing aerial photography which contain an inherent margin of error, only reflect conditions the year in which they were taken and some wetland areas too small or obscured by dense forest may not be depicted. The Buffalo SE, New York (1978 ) NWI map was referenced for this parcel. No Federal regulated wetlands are indicated on or within the vicinity of the parcel.

### 2.3 NYSDEC Freshwater Wetlands Map (Figure 3)

The New York State Department of Environmental Conservation (DEC) has developed criterion for wetland identification based on vegetation cover with minimum acreage requirements. Identified wetlands have been promulgated with the production and distribution of Freshwater Wetlands Maps. The boundaries of identified wetlands are approximations and require surveying of a field delineation performed by a DEC representative to determine exact boundaries and acreage. The Buffalo SE, New York (1975) map was referenced for this site. No New York State regulated wetlands are indicated on or within the vicinity of the parcel.

### 2.4 U.S. Soil Conservation Service Soils Map (Figure 4)

The U.S. Soil Conservation Service has performed a soils identification study on a county by county basis. Aerial photography plates have been utilized in conjunction with field testing to identify soil types and locations within various counties. The results have been compiled and published in County-Specific Soil Surveys. Also included in the surveys is information pertaining to the various soils identified within the county which includes, but is not limited to, texture, range of chroma colors, range of mottle colors, subgroup and drainage classification. Most counties in New York State have been completed and published though a few are still in progress. The Soil Survey of Erie County, sheet number 60 was referenced to determine the likelihood of encountering soils with hydric characteristics or which may contain

hydric inclusions. The following soil series are mapped on or in the vicinity of the site:

SYMBOL	SERIES	SUBGROUP	DRAINAGE CLASS
RfA	Remsen silt loam	Aeric Ochraqualfs	somewhat poorly
Cb	Canadice silt loam	Typic Ochraqualfs	poorly
Wd	Wayland silt loam	Mollic Fluvaquents	poorly to very poorly

The site is located within the Darien-Remsen-Angola soil map unit. This soils unit is defined as dominantly nearly level and gently sloping, deep and moderately deep, somewhat poorly drained, medium textured and moderately fine textured soils; on uplands underlain by alkaline shale bedrock. The soils in this map unit formed in shaly glacial lakelaid till at the northernmost fringe of the upland plateau.. The landscape undulating.. Slope is mainly 0 to 8 percent but ranges from 0 to 15 percent.

The soil symbols associated with the detailed soils map indicates the soil series and the slope associated with that mapped unit. For example, RfA identifies the soil series as Remsen (Rf). The last capital letter of the symbol (A) identifies the slope ranging for that soil unit, 0 to 3 percent slope. An B represents 3 to 8 percent slope, C represents 8 to 15 percent, D – 15 to 25 percent and E represents a slope of 25 to 35 percent. No third letter designation indicates a nearly level landscape.

The Remsen series consists of deep, somewhat poorly drained soils on till plains in the northern and western part of the county. This soil formed in clayey glacial till deposits. Slope ranges from 0 to 15 per cent, but 0 to 8 per cent is most common. The Ap Horizon is a dark brown 10YR4/2 silt loam. Soil colorations in the B Horizon consist of a dark grayish brown 2.5Y4/2 with common fine distinct yellowish brown 10YR4/4 and olive brown 2.5Y4/4 mottles. The B2 Horizon has a hue of 2.5Y or 5Y, values of 4 to 5, and chroma of 2 to 4. Texture in the B2 horizon is silty clay or clay. Associated soils include Darien, Derb, Erie, Brockport, and Canadice soils.

The Canadice series consists of deep, poorly drained soils formed in slight depressions of old glacial lake basins. These soils formed in glacial lake sediments having a high content of clay and are underlain by calcareous, shaly glacial till in some areas. Slopes range from 0 to 3 percent. Soil colorations in the B Horizon are a grayish brown 2.5Y5/2 with many common distinct olive brown 2.5Y5/8 mottles. The B2 Horizon of these soils has a hue ranging from 2.5Y to 10YR, value of 4 to 5, and chroma of 1 or 2. Texture is a silt loam. The Ap Horizon is a very dark grayish brown 10YR4/2 silt loam. Associated soils include Canandaigua, Collamer, and Niagara series.

The Wayland series consists of deep, poorly drained and very poorly drained soils found in the lowest part of flood plains, commonly in slack water areas farthest from the stream. These soils formed in recent alluvial deposits on flood plains. Slope ranges from 0 to 3 per cent. Soil colorations in the B Horizon are a dark brown

10YR4/1 with common 10YR4/6 mottling. The B2 Horizon of these soils has a hue ranging from 7.5YR to 5Y value of 3 through 6, and chroma of 1 through 2. Texture is silt loam. The Ap Horizon is a very dark grayish brown 10YR3/2 silt loam. Associated soils include Chenango, Tioga, Hamlin, Middlebury, and Teel soils.

## **2.5 Agency Resource Conclusions**

The indication of a somewhat poorly drained soil within the easterly portion of the site indicated the necessity to perform a field investigation at the site to ascertain the extent to which, if any, Federally protected wetland exist on the parcel. The wetlands delineation was performed in accordance with the Corps of Engineers Wetlands Delineation Manual (January 1987). Procedures, results and conclusions of the wetlands delineation field study are presented in the remainder of this report.

### 3.0 SITE DESCRIPTION

The subject site consists of 14.8 ± acres of land situated north of Hopevale School and east of Heatherwood Drive in the Town of Hamburg. Vacant land lies to the north and east of the parcel. The entire parcel consists of vacant land. An existing sanitary sewer line bisects the parcel in an east/west direction along the northerly extent of the parcel. Existing subdivisions form the east and west property line. The Hopevale School complex forms the southerly property limits. Vacant land exists to the north of the site.

The topography of the site is gently sloping east to west to with the lowest elevations within the southeast portion of the site. Site elevations range from 700 feet USGS in the north portion of the site to 690 feet USGS along the unnamed tributary and it's associated floodplain.

### 3.1 SITE ECOLOGY

The ecology of the site consists of successional shrubland and one (1) wetland. The majority of the site is successional shrubland with the wetland running along and past the eastern boundary. The wetland is best defined as palustrine shrub-scrub, broad leaved deciduous, seasonally saturated (PSS1E) . Prior to the delineation transect lines were cut into the site with a brushhog.

Successional shrubland is best defined as a community that occurs on sites that have been cleared or otherwise disturbed. Typically this community will have at least a 50% cover of shrubs. Species commonly found in this community would include stiff dogwood (*Cornus foemina*, FAC), glossy buckthorn (*Rhamnus frangula*, FAC), cockspur hawthorn (*Crataegus crus-gallii*, FACU) and common buckthorn (*Rhamnus cathartica*, FACU) in the dense shrub layer with the occasional appearance of trembling aspen (*Populus tremula*, FACU) in the tree strata. With the dense overstory of shrubs the herbaceous layer was limited but we did identify the following species, old field cinquefoil (*Potentilla simplex*, FACU), Virginia strawberry (*Fragaria virginiana*, FACU), small white aster (*Aster vimineus*, FAC), loose flowered sedge, (*Carex laxiflora*, FACU), Virginia creeper (*Parthenocissus quinquefolia*, FACU), white avens (*Geum canadense*, FACU) and others.

In addition, one(1) wetland was located along the eastern boundary of the parcel. This wetland a palustrine shrub-scrub, broad leaved deciduous, seasonally saturated (PSS1E) is associated with the floodplain along a small tributary to Rush Creek. Shrub species associated with this wetland would include silky dogwood (*Cornus amomum*, FACW) and red-osier dogwood (*Cornus stolonifera*, FACW) . Tree species mixed in with the shrub layer would include green ash (*Fraxinus pennsylvanica*, FACW) and eastern cottonwood (*Populus deltoides*, FAC). Species identified in the sometime dense herbaceous layer would include spotted-touch-me-not (*Impatiens capensis*, FACW), creeping jennie (*Lysimachia nummularia*, OBL), panicled aster (*Aster simplex*, FACW), sensitive fern (*Onoclea sensibilis*, FACW),

melic manna grass (*Glyceria melicaria*, OBL), yellow avens (*Geum aleppicum*, FAC)  
and others

A complete list of vegetation at the site is presented in Table One of this report.

## 4.0 METHODS

The Code of Federal Regulations defines a wetland as an area having hydric soils, wetland hydrology and supporting vegetation dominated by hydrophytes. All three of these criteria must be present for an area to qualify as a wetland. The Routine On-site Method for areas greater than five acres in size described in Section D of Chapter IV in the USACE 1987 manual was determined appropriate to delineate jurisdictional wetlands on the site. The areal dominance method described in the USACE 1989 manual was used to generate vegetation data.

Prior to initiating sampling, a site walk-over was performed to identify the general site topography relative to drainage patterns, major plant communities, and potential areas of disturbance. Two (2) transect was established along the site in an east-west orientation utilizing the south property line as the baseline. Sampling points were established at intervals of 200 feet or in areas of differing vegetation communities. Sampling points were marked in the field with survey flags as 1A, 1B, etc. When a wetland area was encountered the area was flagged as W1, W2, etc. along the wetland/upland perimeter. Information on vegetation, soils and hydrology was collected at each sampling point and recorded on field data forms which are included as Appendix B to this report.

Vegetation units were sampled using standard quadrat analysis procedures. Herbaceous and bryophyte species were identified within a five foot radius of the soil boring. Trees, saplings, shrubs and woody vines, were sampled within a 30 foot radius of the soil boring. Vegetation data was recorded for all strata at each data point. Dominance was measured by visually estimating the per cent areal coverage occupied by each species. Each species was ranked in order by decreasing value of per cent areal cover.

The dominant species for each strata category are defined as those plants with the highest ranking which, when cumulatively totaled, immediately exceed 50 per cent of the total dominance measure for the category; plus any additional plant species comprising 20 per cent or more of the total dominance measure for the category. The Federal Indicator status of each species was determined by referencing the National List of Plant Species That Occur in Wetlands: Northeast (Region I) (Reed 1988). A data point was considered to have wetland vegetation if 50 per cent or more of all dominant species were assigned facultative (FAC), facultative wetland (FACW), or obligate (OBL) indicator status.

Soil samples and hydrology information were also collected at each data point. Soil samples were obtained through the use of a stainless steel hand auger. The borings were examined below the Ap or B1 Horizon, typically at a depth of between 10 and 12 inches. Using the Munsell soil color chart, soil samples were checked for hydric soil colorations. Samples were further examined for other physical indicators of hydric soils and a determination was made as to whether the hydric soils criterion was met. Hydrology information was visually assessed during the soils investigation and included, but was not limited to, observations of inundation, soil saturation, water

marks on trees, wetland drainage patterns, drift lines, water-stained leaves, and oxidized root channels within the Ap Horizon.

Data forms for all sampling points were summarized on a separate form, entitled Summary Sheets. Summary Sheets include a listing of dominant plant species in descending order of rank by strata. Also included are the conclusions for all three wetland criteria. Summary Sheets are presented in Appendix C of this report.

Photographs were taken at representative locations throughout the site during the delineation study and are presented in Appendix C. The location of each photograph was selected to best characterize upland and wetland areas on the site. A site map indicating site photograph locations and sampling point locations is presented in Appendix D.

## 5.0 RESULTS

Field work for the Federal delineation was conducted in September 7, 2006. A total of 16 field points, of which 8 delineated the wetland/upland boundary, were sampled to determine the presence or absence of jurisdictional wetlands. Based on the results of the sampling, one (1) Federally jurisdictional wetland were identified on the subject parcel.

Wetlands A is depressional in nature and its hydrology appears to be derived from a combination of, run-off from surrounding uplands, groundwater intrusion, precipitation and high water events along a tributary to Rush Creek. Positive hydrology in this wetland was indicated by primary and secondary indicators such as oxidized root channels in the Ap Horizon of the soils, reduced soil conditions, and hummocky ground conditions. Total acreage for wetland A is 0.75+/- acres

Wetland A located along a tributary to Rush Creek on the eastern boundary of the property. This wetland is a palustrine shrub-scrub, broad leaved deciduous, seasonally saturated (PSS1E) is associated with the floodplain along a small tributary to Rush Creek. Shrub species associated with this wetland would include silky dogwood (*Cornus amomum*, FACW) and red-osier dogwood (*Cornus stolonifera*, FACW). Tree species mixed in with the shrub layer would include green ash (*Fraxinus pennsylvanica*, FACW) and eastern cottonwood (*Populus deltoides*, FAC). Species identified in the sometime dense herbaceous layer would include spotted-touch-me-not (*Impatiens capensis*, FACW), creeping jennie (*Lysmachia nummularia*, OBL), panicled aster (*Aster simplex*, FACW), sensitive fern (*Onoclea sensibilis*, FACW), melic manna grass (*Glyceria melicaria*, OBL), yellow avens (*Geum aleppicum*, FAC) and others

Soils identified within the wetland area A of the site correspond to the somewhat poorly drained Wayland series. The Wayland series consists of deep, poorly drained and very poorly drained soils found in the lowest part of flood plains, commonly in slack water areas farthest from the stream. These soils formed in recent alluvial deposits on flood plains. Slope ranges from 0 to 3 per cent. Soil colorations in the B Horizon are a dark brown 10YR4/1 with common 10YR4/6 mottling. The B2 Horizon of these soils has a hue ranging from 7.5YR to 5Y value of 3 through 6, and chroma of 1 through 2. Texture is silt loam. The Ap Horizon is a very dark grayish brown 10YR3/2 silt loam. Associated soils include Chenango, Tioga, Hamlin, Middlebury, and Teel soils.

Soils identified within the upland areas of the site corresponded to the Remsen series. The Remsen series consists of deep, somewhat poorly drained soils on till plains in the northern and western part of the county. This soil formed in clayey glacial till deposits. Slope ranges from 0 to 15 per cent, but 0 to 8 per cent is most common. The Ap Horizon is a dark brown 10YR4/2 silt loam. Soil colorations in the B Horizon consist of a dark grayish brown 2.5Y4/2 with common fine distinct yellowish brown 10YR4/4 and olive brown 2.5Y4/4 mottles. The B2 Horizon has a hue of 2.5Y or 5Y, values of 4 to 5, and chroma of 2 to 4. Texture in the B2 horizon

is silty clay or clay. Associated soils include Darien, Derb, Erie, Brockport, and Canadice soils.

Hydrology in the wetlands appears to be derived from a combination of, run-off from surrounding uplands, groundwater intrusion, precipitation and high water events associated with a tributary to Rush Creek. Positive hydrology in this wetland was indicated by primary and secondary indicators such as oxidized root channels in the Ap Horizon of the soils, reduced soil conditions, and hummocked ground conditions.

## 6.0 CONCLUSIONS and RECOMMENDATIONS

### 6.1 Conclusions

Based on the results of the field investigation, one (1) Federally jurisdictional wetland has been identified on the parcel. The wetland areas is best defined as:

WETLAND AREA	SIZE (ACRES)	FEDERAL DESIGNATION
Wetland Area A	0.75 +/-	PSS1E

Wetlands A is depressional in nature and its hydrology appears to be derived from a combination of, run-off from surrounding uplands, groundwater intrusion, precipitation and high water events along a tributary to Rush Creek. Positive hydrology in this wetland was indicated by primary and secondary indicators such as oxidized root channels in the Ap Horizon of the soils, reduced soil conditions, and hummocky ground conditions. Total acreage for wetland A is 0.75+/- acres

Wetland A located along a tributary to Rush Creek on the eastern boundary of the property. This wetland is a palustrine shrub-scrub, broad leaved deciduous, seasonally saturated (PSS1E) is associated with the floodplain along a small tributary to Rush Creek. Shrub species associated with this wetland would include silky dogwood (*Cornus amomum*, FACW) and red-osier dogwood (*Cornus stolonifera*, FACW). Tree species mixed in with the shrub layer would include green ash (*Fraxinus pennsylvanica*, FACW) and eastern cottonwood (*Populus deltoides*, FAC). Species identified in the sometime dense herbaceous layer would include spotted-touch-me-not (*Impatiens capensis*, FACW), creeping jennie (*Lysimachia nummularia*, OBL), panicled aster (*Aster simplex*, FACW), sensitive fern (*Onoclea sensibilis*, FACW), melic manna grass (*Glyceria melicaria*, OBL), yellow avens (*Geum alleppicum*, FAC) and others.

### 6.2 Recommendations

With the issuance of Federal Register Vol. 65, No. 47, pp. 12818-12899, the U.S. Army Corps of Engineers amended its Nationwide Permit program (NWP). The reason for the amendment was to reduce the impacts to wetlands as well as reduce the regulatory effort expended in governing the activities associated with minimal environmental impacts. These amendments went into effect on March 9, 2000 when the Corps of Engineers reissued the existing NWPs.

The NWP most often utilized by the public is the Nationwide permit (NWP 39) for the discharge of dredged or fill material waters of the United States including wetlands. This permit allows for the placement of fill material into "waters of the United States including wetlands" as long as that discharge does not result in the loss (negative impact) of greater than ½ acre, nor cause the loss of waters of the United State for a distance of greater than 300 linear feet of stream bed.

If the loss of a jurisdictional area is less than 1/10 acre the individual may disturb that area without receiving, in the form of a permit, written authorization from the USACE. However, the USACE, through the Federal Register, directs for activities affecting less than one-third acre of waters of the United States including wetlands a report be submitted within 30 days of completion of the work. The report must contain the following information: a) Name, address, and telephone number of the permittee; b) Location of the work; c) Description of the work and; d) Type of acreage (or square feet) of the waters of the United States disturbed (e.g., one-twelve acre of marsh and 60 square feet of a stream). A delineation of the affected area must be submitted along with the report.

If the impact to the wetland area is to be greater than 1/10 acre, the individual must notify the District Engineer in accordance with the "Notification" general condition prior to the initiation of the project. The "Notification" procedure also requires that the applicant provide compensatory wetland mitigation to offset adverse environmental impacts resulting from the filling of wetlands.

On January 9, 2001, the U.S. Supreme Court issued a ruling that affected the Corps of Engineers authority to regulate isolated, non-navigable, intrastate waters under the Clean Water Act (Solid Waste Agency of Northern Cook County vs. the U.S. Army Corps of Engineers, No.99-1178). Specifically, the case involved statutory and constitutional challenges to the assertion of the Clean Water Act jurisdiction over isolated, non-navigable, intrastate waters where use of the site by migratory birds alone is **not** sufficient to establish Federal jurisdiction over isolated wetlands, and that such areas are not waters of the United States and are **not** subject to regulation under Section 404 of the Clean Water Act. It is the U.S. Army Corps of Engineers (USACE) responsibility to make this jurisdictional determination.

Should you elect to submit this report to the U.S. Army Corps of Engineers (USACE) for review, a site visit may be scheduled to verify the report findings. If the USACE agrees with the results of the delineation, a letter of agreement will then be forwarded to you which you can use to satisfy a portion of the Federal wetland regulatory concerns of the Town of Hamburg. This release from USACE jurisdiction does not relieve you from the necessity of complying with other Federal, State or local regulations that may be applicable at the site.

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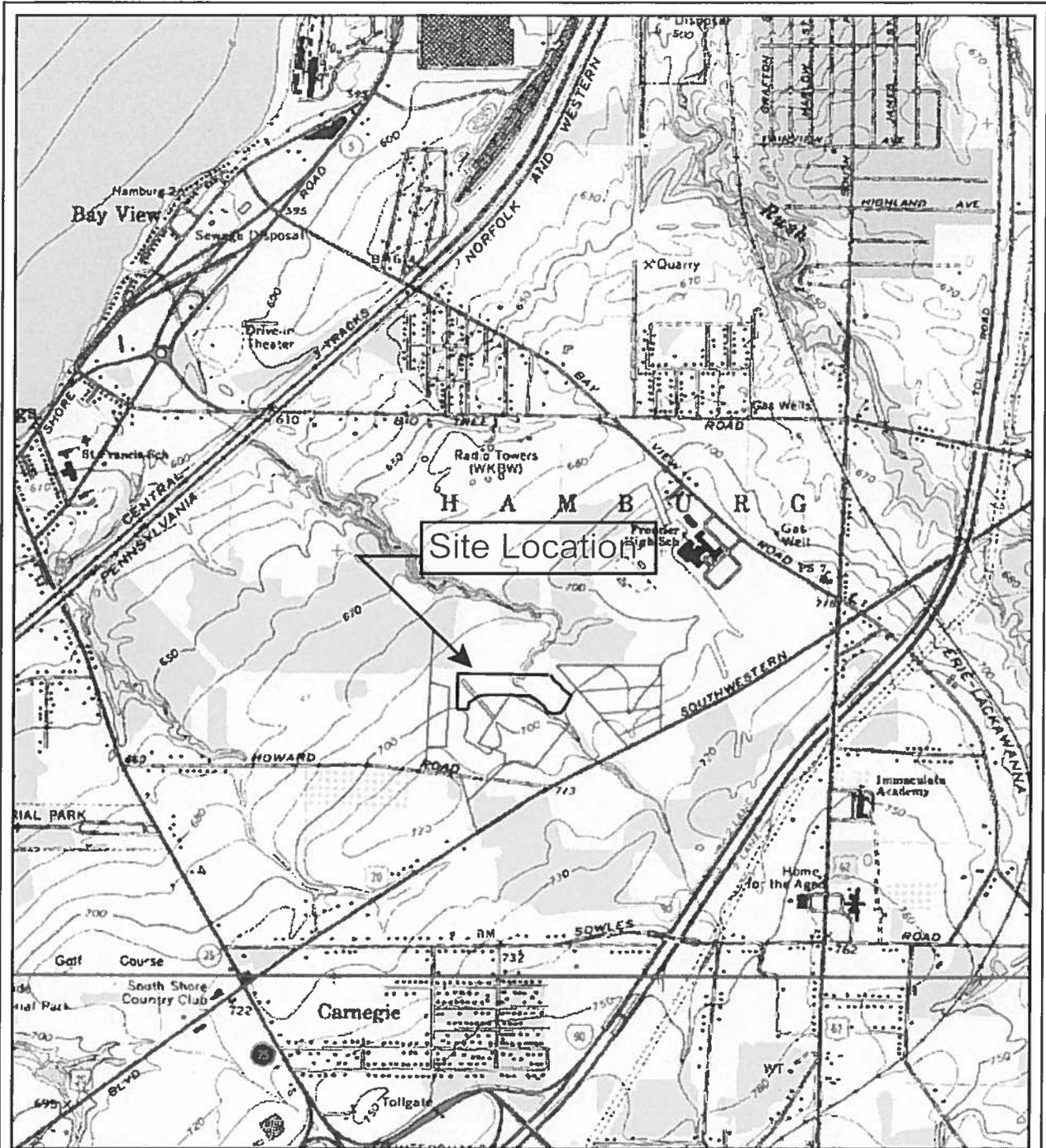


Figure 1.  
 USGS Quadrangle Map  
 Buffalo SE, NY Quadrangle  
 Scale 1:24000



Hopevale Townhouse Project  
 DATO Development  
 Town of Hamburg  
 Erie County, New York

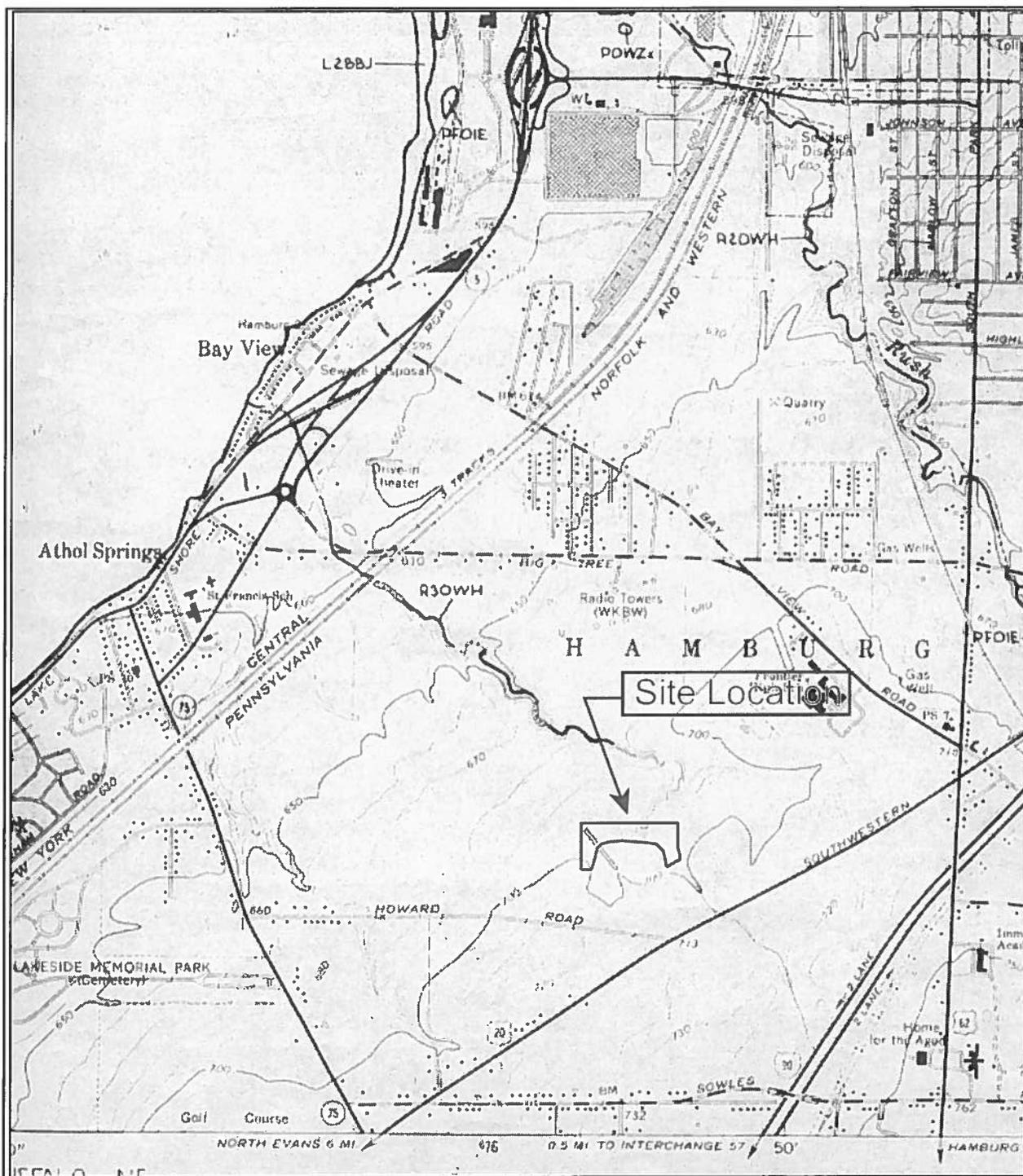


Figure 2.  
 National Wetlands Inventory  
 Map  
 Buffalo SE, NY Quadrangle  
 Scale 1:24000



Hopevale Townhouse Project  
 DATO Development

Town of Hamburg  
 Erie County, New York

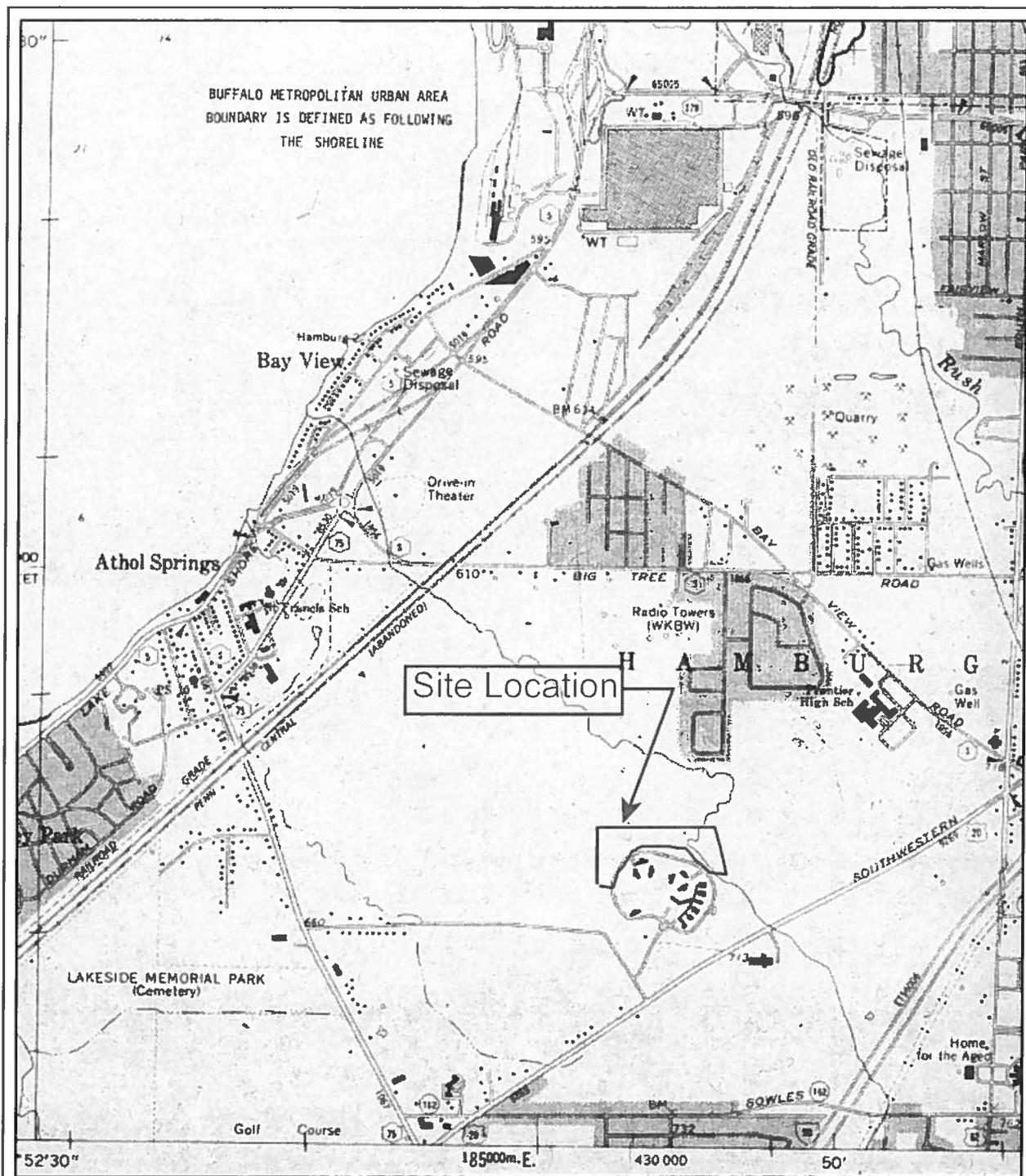


Figure 3.  
 NYSDEC Freshwater  
 Wetlands Map  
 Buffalo SE, NY Quadrangle  
 Scale 1:24000



Hopevale Townhouse Project  
 DATO Development  
 Town of Hamburg  
 Erie County, New York



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**Data Form**  
**Routine Wetland Determination**

 Project/Site: Hopevale Townhouses  
 Applicant/Owner: DATO Development  
 Investigator: Wilson/Eckwahl

Date: September 07, 2006

County: Erie

State: New York

- Do normal circumstances exist on the site?  
 Have vegetation, soils, or hydrology been disturbed?  
 Is the area a potential problem area?

Community ID: PSS

Station ID: A10

Plot ID: W1W

**Vegetation**

Dominant Species	Common Name	% Cover	Indicator
<b>Herbaceous</b>			
X <i>Geum aleppicum</i>	Avens, Yellow	5	FAC
X <i>Impatiens capensis</i>	Touch-Me-Not, Spotted	10	FACW
X <i>Aster simplex</i>	Aster, Panicked	10	FACW
X <i>Lysimachia nummularia</i>	Jennie, Creeping	35	OBL
X <i>Cornus stolonifera</i>	Dogwood, Red-Osier	60	FACW+
<b>Tree</b>			
X <i>Populus deltoides</i>	Cotton-Wood, Eastern	5	FAC
<b>Vine</b>			
X <i>Vitis riparia</i>	Grape, River-Bank	20	FACW

% Species that are OBL, FACW, or FAC (except FAC-): 100

Cowardin Classification:

Remarks

**Hydrology**

- Recorded Data (describe in remarks)  
 Stream, Lake, or Tide Gage  
 Aerial Photograph  
 Other (describe in remarks)

Field Observations:

 Depth of Surface Water(in.): 0  
 Depth to Free Water in Pit(in.): >16  
 Depth to Saturated Soils(in.): >4
**Primary Wetland Hydrology Indicators**

- Inundated  
 Saturated in upper 12 inches  
 Water marks  
 Drift lines  
 Sediment deposits  
 Drainage patterns in wetlands

**Secondary Hydrology Indicators**

- Oxidized root channels  
 Water-stained leaves  
 Local soil survey data  
 FAC-Neutral test  
 Other (explain in remarks)

Remarks

Hydrology data collected at end of sampling to allow for infiltration. Depth of auger hole, 16"

**Soils**

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle			Texture, Structure, etc.
			Color	Abundance	Contrast	
6-14	B	10YR 4/1	7.5YR 5/8	common	distinct	Silt loam

**Hydric Soils Indicators**

- Histosol  
 Histic Epipedon  
 Sulfidic Odor  
 Probable Aquatic Moist Regime  
 Reducing Conditions  
 Gleyed or Low-Chroma Colors
- Concretions  
 High Organic % in Surface Layer  
 Organic Streaking  
 Listed on Local Hydric Soils List  
 Listed on National Hydric Soils List  
 Other (explain in remarks)

Unit Name: Wayland

Taxonomy:

Drainage Class: Poorly

 Field Observations match map

Remarks

Sample taken at 10". Depth of auger hole 16". No mottles in the Ap Horizon.

**Wetland Determination**

- Hydrophytic Vegetation Present  
 Hydric Soils Present  
 Wetland Hydrology Present
- This Data Point is a Wetland

Remarks

**Data Form**  
**Routine Wetland Determination**

 Project/Site: Hopevale Townhouses  
 Applicant/Owner: DATO Development  
 Investigator: Wilson/Eckwahl

Date: September 07, 2006

County: Erie

State: New York

- Do normal circumstances exist on the site?  
 Have vegetation, soils, or hydrology been disturbed?  
 Is the area a potential problem area?

Community ID: PFO

Station ID: A15

Plot ID: W2W

**Vegetation**

Dominant Species	Common Name	% Cover	Indicator
<b>Herbaceous</b>			
X <i>Solidago rugosa</i>	Golden-Rod, Wrinkled	5	FAC
X <i>Onoclea sensibilis</i>	Fern, Sensitive	10	FACW
X <i>Aster simplex</i>	Aster, Panicked	10	FACW
X <i>Lysimachia nummularia</i>	Jennie, Creeping	20	OBL
X <i>Glyceria melicaria</i>	Grass, Melic Manna	50	OBL
<b>Shrub</b>			
X <i>Fraxinus pennsylvanica</i>	Ash, Green	5	FACW
X <i>Cornus stolonifera</i>	Dogwood, Red-Osier	5	FACW+
<b>Tree</b>			
X <i>Fraxinus pennsylvanica</i>	Ash, Green	25	FACW
X <i>Fagus grandifolia</i>	Beech, American	3	FACU
<b>Vine</b>			
X <i>Vitis riparia</i>	Grape, River-Bank	10	FACW

% Species that are OBL, FACW, or FAC (except FAC-): 100

Cowardin Classification:

Remarks

**Hydrology**

	Primary Wetland Hydrology Indicators	Secondary Hydrology Indicators
<input checked="" type="checkbox"/> Recorded Data (describe in remarks)	<input type="checkbox"/> Inundated	<input checked="" type="checkbox"/> Oxidized root channels
<input type="checkbox"/> Stream, Lake, or Tide Gage	<input checked="" type="checkbox"/> Saturated in upper 12 inches	<input checked="" type="checkbox"/> Water-stained leaves
<input checked="" type="checkbox"/> Aerial Photograph	<input type="checkbox"/> Water marks	<input checked="" type="checkbox"/> Local soil survey data
<input type="checkbox"/> Other (describe in remarks)	<input type="checkbox"/> Drift lines	<input type="checkbox"/> FAC-Neutral test
Field Observations:	<input type="checkbox"/> Sediment deposits	<input type="checkbox"/> Other (explain in remarks)
Depth of Surface Water(in.): 0	<input checked="" type="checkbox"/> Drainage patterns in wetlands	
Depth to Free Water in Pit(in.): >16		
Depth to Saturated Soils(in.): >6		

Remarks

Hydrology data collected at end of sampling to allow for infiltration. Depth of auger hole, 16"

**Soils**

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
8-16	B	10YR 4/1	7.5YR 5/1	common	distinct	Silt loam

**Hydric Soils Indicators**

- Histosol  
 Histic Epipedon  
 Sulfidic Odor  
 Probable Aquatic Moist Regime  
 Reducing Conditions  
 Gleyed or Low-Chroma Colors  
 Concretions  
 High Organic % in Surface Layer  
 Organic Streaking  
 Listed on Local Hydric Soils List  
 Listed on National Hydric Soils List  
 Other (explain in remarks)

Unit Name: Wayland

Taxonomy:

Drainage Class: Poorly

 Field Observations match map

Remarks

Sample taken at 10". Depth of auger hole 16". No mottles in the Ap Horizon.

**Wetland Determination**

- Hydrophytic Vegetation Present  
 Hydric Soils Present  
 Wetland Hydrology Present  
 This Data Point is a Wetland

Remarks

**Data Form**  
**Routine Wetland Determination**

Project/Site: Hopevale Townhouses  
 Applicant/Owner: DATO Development  
 Investigator: Wilson/Eckwahl

Date: September 07, 2006  
 County: Erie  
 State: New York  
 Community ID: PSS  
 Station ID: A26  
 Plot ID: W3W

- Do normal circumstances exist on the site?  
 Have vegetation, soils, or hydrology been disturbed?  
 Is the area a potential problem area?

**Vegetation**

Dominant Species	Common Name	% Cover	Indicator
<b>Herbaceous</b>			
X Aster simplex	Aster, Panicked	5	FACW
X Lysimachia nummularia	Jennie, Creeping	25	OBL
<b>Shrub</b>			
X Rhamnus cathartica	Buckthorn, Common	5	UPL
X Cornus amomum	Dogwood, Silky	10	FACW
X Cornus stolonifera	Dogwood, Red-Osier	50	FACW+
<b>Tree</b>			
X Populus tremula	Aspen, Quaking	5	FACU
X Fraxinus pennsylvanica	Ash, Green	3	FACW

% Species that are OBL, FACW, or FAC (except FAC-): 66

Cowardin Classification:

Remarks

**Hydrology**

- Recorded Data (describe in remarks)  
 Stream, Lake, or Tide Gage  
 Aerial Photograph  
 Other (describe in remarks)

*Primary Wetland Hydrology Indicators*

- Inundated  
 Saturated in upper 12 inches  
 Water marks  
 Drift lines  
 Sediment deposits  
 Drainage patterns in wetlands

*Secondary Hydrology Indicators*

- Oxidized root channels  
 Water-stained leaves  
 Local soil survey data  
 FAC-Neutral test  
 Other (explain in remarks)

Field Observations:

Depth of Surface Water(in.): 0  
 Depth to Free Water in Pit(in.): >16  
 Depth to Saturated Soils(in.): >4

Remarks

Hydrology data collected at end of sampling to allow for infiltration. Depth of auger hole, 16".

**Soils**

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle			Texture, Structure, etc.
			Color	Abundance	Contrast	
8-16	B	10YR 5/2	7.5YR 5/8	common	distinct	Silt loam

*Hydric Soils Indicators*

- |   |  |
|---|--|
| <input type="checkbox"/> Histosol                                 | <input type="checkbox"/> Concretions                                     |
| <input type="checkbox"/> Histic Epipedon                          | <input checked="" type="checkbox"/> High Organic % in Surface Layer      |
| <input type="checkbox"/> Sulfidic Odor                            | <input checked="" type="checkbox"/> Organic Streaking                    |
| <input checked="" type="checkbox"/> Probable Aquatic Moist Regime | <input checked="" type="checkbox"/> Listed on Local Hydric Soils List    |
| <input checked="" type="checkbox"/> Reducing Conditions           | <input checked="" type="checkbox"/> Listed on National Hydric Soils List |
| <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors   | <input type="checkbox"/> Other (explain in remarks)                      |

Unit Name: Wayland

Taxonomy:

Drainage Class: Poorly

Field Observations match map

Remarks

Sample taken at 10". Depth of auger hole 16". No mottles in the Ap Horizon.

**Wetland Determination**

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Hydrophytic Vegetation Present | <input checked="" type="checkbox"/> This Data Point is a Wetland |
| <input checked="" type="checkbox"/> Hydric Soils Present           |  |
| <input checked="" type="checkbox"/> Wetland Hydrology Present      |  |

Remarks

**Wilson Environmental Technologies, Inc.**

Job Number: 320.001  
 City: Hamburg  
 Wetland Data Point: W4W

**Data Form  
 Routine Wetland Determination**

Project/Site: **Hopevale Townhouses**  
 Applicant/Owner: **DATO Development**  
 Investigator: **Wilson/Eckwahl**

Date: **September 07, 2006**  
 County: **Erie**  
 State: **New York**  
 Community ID: **PSS**  
 Station ID: **A29**  
 Plot ID: **W4W**

- Do normal circumstances exist on the site?  
 Have vegetation, soils, or hydrology been disturbed?  
 Is the area a potential problem area?

**Vegetation**

Dominant Species	Common Name	% Cover	Indicator
<b>Herbaceous</b>			
X <i>Impatiens capensis</i>	Touch-Me-Not, Spotted	10	FACW
X <i>Lysimachia nummularia</i>	Jennie, Creeping	25	OBL
<b>Shrub</b>			
X <i>Cornus amomum</i>	Dogwood, Silky	10	FACW
X <i>Cornus stolonifera</i>	Dogwood, Red-Osier	50	FACW+
<b>Tree</b>			
X <i>Fraxinus pennsylvanica</i>	Ash, Green	5	FACW
<b>Vine</b>			
X <i>Vitis riparia</i>	Grape, River-Bank	10	FACW

% Species that are OBL, FACW, or FAC (except FAC-): **100** Cowardin Classification:  
 Remarks

**Hydrology**

- |  |  |  |
|--|--|--|
| <p><input checked="" type="checkbox"/> Recorded Data (describe in remarks)<br/> <input type="checkbox"/> Stream, Lake, or Tide Gage<br/> <input checked="" type="checkbox"/> Aerial Photograph<br/> <input type="checkbox"/> Other (describe in remarks)</p> <p>Field Observations:<br/>                 Depth of Surface Water(in.): <b>0</b><br/>                 Depth to Free Water in Pit(in.): <b>&gt;16</b><br/>                 Depth to Saturated Soils(in.): <b>&gt;10</b></p> | <p><i>Primary Wetland Hydrology Indicators</i></p> <p><input type="checkbox"/> Inundated<br/> <input checked="" type="checkbox"/> Saturated in upper 12 inches<br/> <input checked="" type="checkbox"/> Water marks<br/> <input type="checkbox"/> Drift lines<br/> <input type="checkbox"/> Sediment deposits<br/> <input checked="" type="checkbox"/> Drainage patterns in wetlands</p> | <p><i>Secondary Hydrology Indicators</i></p> <p><input checked="" type="checkbox"/> Oxidized root channels<br/> <input checked="" type="checkbox"/> Water-stained leaves<br/> <input checked="" type="checkbox"/> Local soil survey data<br/> <input type="checkbox"/> FAC-Neutral test<br/> <input type="checkbox"/> Other (explain in remarks)</p> |
|--|--|--|

Remarks  
 Hydrology data collected at end of sampling to allow for infiltration. Depth of auger hole, 16"

**Soils**

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle		Texture, Structure, etc.	
			Color	Abundance	Contrast	
8-16	B	2.5Y 5/2	10YR 5/6	common	distinct	Silt loam

*Hydric Soils Indicators*

- |   |   |
|---|---|
| <p><input type="checkbox"/> Histosol<br/> <input type="checkbox"/> Histic Epipedon<br/> <input type="checkbox"/> Sulfidic Odor<br/> <input checked="" type="checkbox"/> Probable Aquatic Moist Regime<br/> <input checked="" type="checkbox"/> Reducing Conditions<br/> <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors</p> | <p><input type="checkbox"/> Concretions<br/> <input checked="" type="checkbox"/> High Organic % in Surface Layer<br/> <input checked="" type="checkbox"/> Organic Streaking<br/> <input checked="" type="checkbox"/> Listed on Local Hydric Soils List<br/> <input checked="" type="checkbox"/> Listed on National Hydric Soils List<br/> <input type="checkbox"/> Other (explain in remarks)</p> |
|---|---|

Unit Name: **Wayland** Taxonomy:  
 Drainage Class: **Poorly**  Field Observations match map

Remarks  
 Sample taken at 10". Depth of auger hole 16". No mottles in the Ap Horizon.

**Wetland Determination**

- Hydrophytic Vegetation Present  This Data Point is a Wetland  
 Hydric Soils Present  
 Wetland Hydrology Present  
 Remarks

**Data Form**  
**Routine Wetland Determination**
City: **Hamburg**Wetland Data Point: **2A**
 Project/Site: **Hopevale Townhouses**  
 Applicant/Owner: **DATO Development**  
 Investigator: **Wilson/Eckwahl**
Date: **September 07, 2006**County: **Erie**State: **New York**

- Do normal circumstances exist on the site?  
 Have vegetation, soils, or hydrology been disturbed?  
 Is the area a potential problem area?

Community ID: **sapling/shrubland**Station ID: **A**Plot ID: **2****Vegetation**

Dominant Species	Common Name	% Cover	Indicator
<b>Herbaceous</b>			
X <i>Glyceria melicaria</i>	Grass, Melic Manna	3	OBL
X <i>Solidago rugosa</i>	Golden-Rod, Wrinkled	5	FAC
X <i>Aster vimineus</i>	Aster, Small White	10	FAC
X <i>Fragaria virginiana</i>	Strawberry, Virginia	20	FACU
X <i>Potentilla simplex</i>	Cinquefoil, Old Field	20	FACU-
<b>Shrub</b>			
X <i>Fraxinus pennsylvanica</i>	Ash, Green	5	FACW
X <i>Cornus foemina</i>	Dogwood, Stiff	5	FAC
X <i>Rhamnus frangula</i>	Buckthorn, Glossy	25	FAC

% Species that are OBL, FACW, or FAC (except FAC-): **75**

Cowardin Classification:

**Remarks**

Area of mixed sapling/shrub vegetation communities over somewhat poorly drained soils.

**Hydrology**

	Primary Wetland Hydrology Indicators	Secondary Hydrology Indicators
<input type="checkbox"/> Recorded Data (describe in remarks)	<input type="checkbox"/> Inundated	<input type="checkbox"/> Oxidized root channels
<input type="checkbox"/> Stream, Lake, or Tide Gage	<input type="checkbox"/> Saturated in upper 12 inches	<input type="checkbox"/> Water-stained leaves
<input type="checkbox"/> Aerial Photograph	<input type="checkbox"/> Water marks	<input type="checkbox"/> Local soil survey data
<input type="checkbox"/> Other (describe in remarks)	<input type="checkbox"/> Drift lines	<input type="checkbox"/> FAC-Neutral test
Field Observations:	<input type="checkbox"/> Sediment deposits	<input type="checkbox"/> Other (explain in remarks)
Depth of Surface Water(in.): <b>0</b>	<input type="checkbox"/> Drainage patterns in wetlands	
Depth to Free Water in Pit(in.): <b>&gt;16</b>		
Depth to Saturated Soils(in.): <b>&gt;12</b>		

**Remarks**

Hydrology data collected at end of sampling to allow for infiltration. Depth of auger hole, 16"

**Soils**

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
8-16	B	2.5Y 5/3	10YR 5/6	common	distinct	Silty clay loam

**Hydric Soils Indicators**

- Histosol  
 Histic Epipedon  
 Sulfidic Odor  
 Probable Aquatic Moist Regime  
 Reducing Conditions  
 Gleyed or Low-Chroma Colors
- Concretions  
 High Organic % in Surface Layer  
 Organic Streaking  
 Listed on Local Hydric Soils List  
 Listed on National Hydric Soils List  
 Other (explain in remarks)

Unit Name: **Remsen**

Taxonomy:

Drainage Class: **Somewhat poorly** Field Observations match map**Remarks**

Sample taken at 10". Depth of auger hole 16" No mottles in the Ap Horizon

**Wetland Determination**

- Hydrophytic Vegetation Present  
 Hydric Soils Present  
 Wetland Hydrology Present
- This Data Point is a Wetland

**Remarks**

Fails to meet all necessary Federal criteria.

**Wilson Environmental Technologies, Inc.**

Job Number: 320.001  
 City: Hamburg  
 Wetland Data Point: 2B

**Data Form  
 Routine Wetland Determination**

Project/Site: Hopevale Townhouses  
 Applicant/Owner: DATO Development  
 Investigator: Wilson/Eckwahl

Date: September 07, 2006  
 County: Erie  
 State: New York  
 Community ID: sapling/shrubland  
 Station ID: B  
 Plot ID: 2

- Do normal circumstances exist on the site?  
 Have vegetation, soils, or hydrology been disturbed?  
 Is the area a potential problem area?

**Vegetation**

Dominant Species	Common Name	% Cover	Indicator
<b>Herbaceous</b>			
X Aster vimineus	Aster, Small White	5	FAC
X Solidago rugosa	Golden-Rod, Wrinkled	5	FAC
X Fragaria virginiana	Strawberry, Virginia	10	FACU
X Potentilla simplex	Cinquefoil, Old Field	15	FACU-
X Glyceria melicaria	Grass, Melic Manna	3	OBL
<b>Shrub</b>			
X Rhamnus frangula	Buckthorn, Glossy	10	FAC
X Cornus foemina	Dogwood, Stiff	15	FAC
X Fraxinus pennsylvanica	Ash, Green	10	FACW
<b>Tree</b>			
X Populus tremula	Aspen, Quaking	10	FACU

% Species that are OBL, FACW, or FAC (except FAC-): 62 Cowardin Classification:

**Remarks**

Area of sapling shrubland mix over somewhat poorly drained soils.

**Hydrology**

	Primary Wetland Hydrology Indicators	Secondary Hydrology Indicators
<input checked="" type="checkbox"/> Recorded Data (describe in remarks)	<input type="checkbox"/> Inundated	<input type="checkbox"/> Oxidized root channels
<input type="checkbox"/> Stream, Lake, or Tide Gage	<input type="checkbox"/> Saturated in upper 12 inches	<input type="checkbox"/> Water-stained leaves
<input checked="" type="checkbox"/> Aerial Photograph	<input type="checkbox"/> Water marks	<input type="checkbox"/> Local soil survey data
<input type="checkbox"/> Other (describe in remarks)	<input type="checkbox"/> Drift lines	<input type="checkbox"/> FAC-Neutral test
Field Observations:	<input type="checkbox"/> Sediment deposits	<input type="checkbox"/> Other (explain in remarks)
Depth of Surface Water(in.): 0	<input type="checkbox"/> Drainage patterns in wetlands	
Depth to Free Water in Pit(in.): >16		
Depth to Saturated Soils(in.): >16		

**Remarks**

Hydrology collected at end of sample to allow for infiltration. Depth of auger hole, 16"

**Soils**

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
8-16	B	2.5Y 4/3	10YR 6/6	common	distinct	Silty clay loam

**Hydric Soils Indicators**

- |  |   |
|--|---|
| <input type="checkbox"/> Histosol                      | <input type="checkbox"/> Concretions                          |
| <input type="checkbox"/> Histic Epipedon               | <input type="checkbox"/> High Organic % in Surface Layer      |
| <input type="checkbox"/> Sulfidic Odor                 | <input type="checkbox"/> Organic Streaking                    |
| <input type="checkbox"/> Probable Aquatic Moist Regime | <input type="checkbox"/> Listed on Local Hydric Soils List    |
| <input type="checkbox"/> Reducing Conditions           | <input type="checkbox"/> Listed on National Hydric Soils List |
| <input type="checkbox"/> Gleyed or Low-Chroma Colors   | <input type="checkbox"/> Other (explain in remarks)           |

Unit Name: Remsen

Taxonomy:

Drainage Class: Somewhat poorly

Field Observations match map

**Remarks**

Sample taken at 10". Depth of auger hole, 16". No mottles in the Ap Horizon

**Wetland Determination**

- Hydrophytic Vegetation Present  This Data Point is a Wetland  
 Hydric Soils Present  
 Wetland Hydrology Present

**Remarks**

Fails to meet all necessary Federal criteria.

**Wilson Environmental Technologies, Inc.**

Job Number: 320.001  
 City: Hamburg  
 Wetland Data Point: 2C

**Data Form  
 Routine Wetland Determination**

Project/Site: Hopevale Townhouses  
 Applicant/Owner: DATO Development  
 Investigator: Wilson/Eckwahl

Date: September 07, 2006  
 County: Erie  
 State: New York  
 Community ID: Sapling/shrubland  
 Station ID: C  
 Plot ID: 2

- Do normal circumstances exist on the site?  
 Have vegetation, soils, or hydrology been disturbed?  
 Is the area a potential problem area?

**Vegetation**

Dominant Species	Common Name	% Cover	Indicator
<b>Herbaceous</b>			
X <i>Carex laxiflora</i>	Sedge, Loose-Flowered	5	FACU*
X <i>Euthamia graminifolia</i>	Fragrant-Golden-Rod, Flat-Top	5	FAC
X <i>Solidago canadensis</i>	Golden-Rod, Canada	20	FACU
<b>Shrub</b>			
X <i>Cornus foemina</i>	Dogwood, Stiff	5	FAC
X <i>Crataegus crus-galli</i>	Hawthorn, Cockspur	10	FACU
X <i>Rhamnus cathartica</i>	Buckthorn, Common	20	UPL

% Species that are OBL, FACW, or FAC (except FAC-): 33 Cowardin Classification:  
 Remarks

Area of sapling/shrubland mix over an area of somewhat poorly drained soils.

**Hydrology**

	Primary Wetland Hydrology Indicators	Secondary Hydrology Indicators
<input checked="" type="checkbox"/> Recorded Data (describe in remarks)	<input type="checkbox"/> Inundated	<input type="checkbox"/> Oxidized root channels
<input type="checkbox"/> Stream, Lake, or Tide Gage	<input type="checkbox"/> Saturated in upper 12 inches	<input type="checkbox"/> Water-stained leaves
<input checked="" type="checkbox"/> Aerial Photograph	<input type="checkbox"/> Water marks	<input type="checkbox"/> Local soil survey data
<input type="checkbox"/> Other (describe in remarks)	<input type="checkbox"/> Drift lines	<input type="checkbox"/> FAC-Neutral test
Field Observations:	<input type="checkbox"/> Sediment deposits	<input type="checkbox"/> Other (explain in remarks)
Depth of Surface Water(in.): 0	<input type="checkbox"/> Drainage patterns in wetlands	
Depth to Free Water in Pit(in.): >16		
Depth to Saturated Soils(in.): >12		

Remarks  
 Hydrology collected at end of sampling to allow for infiltration. Depth of auger hole 16 "

**Soils**

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle		Texture, Structure, etc.
			Color	Abundance Contrast	
8-16	B	2.5Y 5/4	7.5YR 5/8	common distinct	Silty clay loam

**Hydric Soils Indicators**

- |  |   |
|--|---|
| <input type="checkbox"/> Histosol                      | <input type="checkbox"/> Concretions                          |
| <input type="checkbox"/> Histic Epipedon               | <input type="checkbox"/> High Organic % in Surface Layer      |
| <input type="checkbox"/> Sulfidic Odor                 | <input type="checkbox"/> Organic Streaking                    |
| <input type="checkbox"/> Probable Aquatic Moist Regime | <input type="checkbox"/> Listed on Local Hydric Soils List    |
| <input type="checkbox"/> Reducing Conditions           | <input type="checkbox"/> Listed on National Hydric Soils List |
| <input type="checkbox"/> Gleyed or Low-Chroma Colors   | <input type="checkbox"/> Other (explain in remarks)           |

Unit Name: Remsen Taxonomy:  
 Drainage Class: Somewhat poorly [X] Field Observations match map

Remarks  
 Sample taken at 10". Depth of auger hole, 16" No mottles in the Ap Horizon.

**Wetland Determination**

- Hydrophytic Vegetation Present  This Data Point is a Wetland  
 Hydric Soils Present  
 Wetland Hydrology Present

Remarks  
 Fails to meet all necessary Federal criteria

**Wilson Environmental Technologies, Inc.**

Job Number: 320.001  
City: Hamburg  
Wetland Data Point: 00x

**Data Form  
Routine Wetland Determination**

Project/Site: Hopevale Townhouses  
Applicant/Owner: DATO Development  
Investigator: Wilson/Eckwahl

Date: November 20, 2006  
County: Erie  
State: New York

- Do normal circumstances exist on the site?  
 Have vegetation, soils, or hydrology been disturbed?  
 Is the area a potential problem area?

Community ID:  
Station ID:  
Plot ID:

**Vegetation**

Dominant Species	Common Name	% Cover	Indicator
------------------	-------------	---------	-----------

X

% Species that are OBL, FACW, or FAC (except FAC-):  
Remarks

Cowardin Classification:

**Hydrology**

- Recorded Data (describe in remarks)  
 Stream, Lake, or Tide Gage  
 Aerial Photograph  
 Other (describe in remarks)

*Primary Wetland Hydrology Indicators*

- Inundated  
 Saturated in upper 12 inches  
 Water marks  
 Drift lines  
 Sediment deposits  
 Drainage patterns in wetlands

*Secondary Hydrology Indicators*

- Oxidized root channels  
 Water-stained leaves  
 Local soil survey data  
 FAC-Neutral test  
 Other (explain in remarks)

Field Observations:

Depth of Surface Water(in.): 0  
Depth to Free Water in Pit(in.): >24  
Depth to Saturated Soils(in.): >24

Remarks

**Soils**

Depth (in.)	Hor. Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
-------------	-------------------	---------------------------	-----------	----------	--------------------------

*Hydric Soils Indicators*

- |  |   |
|--|---|
| <input type="checkbox"/> Histosol                      | <input type="checkbox"/> Concretions                          |
| <input type="checkbox"/> Histic Epipedon               | <input type="checkbox"/> High Organic % in Surface Layer      |
| <input type="checkbox"/> Sulfidic Odor                 | <input type="checkbox"/> Organic Streaking                    |
| <input type="checkbox"/> Probable Aquatic Moist Regime | <input type="checkbox"/> Listed on Local Hydric Soils List    |
| <input type="checkbox"/> Reducing Conditions           | <input type="checkbox"/> Listed on National Hydric Soils List |
| <input type="checkbox"/> Gleyed or Low-Chroma Colors   | <input type="checkbox"/> Other (explain in remarks)           |

Unit Name:

Taxonomy:

Drainage Class:

- Field Observations match map

Remarks

**Wetland Determination**

- Hydrophytic Vegetation Present  
 Hydric Soils Present  
 Wetland Hydrology Present
- This Data Point is a Wetland

Remarks

**Wilson Environmental Technologies, Inc.**

Job Number: 3320.001  
 City: Hamburg  
 Wetland Data Point: 2D

**Data Form  
 Routine Wetland Determination**

Project/Site: Hopevale Townhouses  
 Applicant/Owner: DATO Development  
 Investigator: Wilson/Eckwahl  
 Date: September 07, 2006  
 County: Erie  
 State: New York  
 Community ID: Sapling/shrubland  
 Station ID: D  
 Plot ID: 2

**Vegetation**

Dominant Species	Common Name	% Cover	Indicator
<b>Herbaceous</b>			
X <i>Solidago canadensis</i>	Golden-Rod, Canada	5	FACU
X <i>Aster vimineus</i>	Aster, Small White	20	FAC
X <i>Potentilla simplex</i>	Cinquefoil, Old Field	30	FACU-FACU*
	<i>Carex laxiflora</i>	4	FACU*
<b>Shrub</b>			
X <i>Crataegus crus-galli</i>	Hawthorn, Cockspur	20	FACU
X <i>Cornus foemina</i>	Dogwood, Stiff	10	FAC
<b>Tree</b>			
X <i>Fraxinus pennsylvanica</i>	Ash, Green	5	FACW

% Species that are OBL, FACW, or FAC (except FAC-): 50 Cowardin Classification:

**Remarks**

Area of sapling / shrub vegetation communities over somewhat poorly drained soils.

**Hydrology**

<input type="checkbox"/> Recorded Data (describe in remarks)	<b>Primary Wetland Hydrology Indicators</b>	<b>Secondary Hydrology Indicators</b>
<input type="checkbox"/> Stream, Lake, or Tide Gage	<input type="checkbox"/> Inundated	<input type="checkbox"/> Oxidized root channels
<input checked="" type="checkbox"/> Aerial Photograph	<input type="checkbox"/> Saturated in upper 12 inches	<input type="checkbox"/> Water-stained leaves
<input type="checkbox"/> Other (describe in remarks)	<input type="checkbox"/> Water marks	<input type="checkbox"/> Local soil survey data
Field Observations:	<input type="checkbox"/> Drift lines	<input type="checkbox"/> FAC-Neutral test
Depth of Surface Water(in.): 0	<input type="checkbox"/> Sediment deposits	<input type="checkbox"/> Other (explain in remarks)
Depth to Free Water in Pit(in.): >16	<input type="checkbox"/> Drainage patterns in wetlands	
Depth to Saturated Soils(in.): >12		

**Remarks**

Hydrology data collected at end of sampling to allow for infiltration. Depth of auger hole, 16"

**Soils**

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle			Texture, Structure, etc.
			Color	Abundance	Contrast	
8-16	B	2.5Y 5/4	10YR 5/6	common	distinct	Silty clay loam

**Hydric Soils Indicators**

<input type="checkbox"/> Histosol	<input type="checkbox"/> Concretions
<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> High Organic % in Surface Layer
<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> Organic Streaking
<input type="checkbox"/> Probable Aquatic Moist Regime	<input type="checkbox"/> Listed on Local Hydric Soils List
<input type="checkbox"/> Reducing Conditions	<input type="checkbox"/> Listed on National Hydric Soils List
<input type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Other (explain in remarks)

Unit Name: **Remsen**

Drainage Class: **Somewhat poorly**

Taxonomy:

Field Observations match map

**Remarks**

Sample taken at 10" Depth of auger hole 16" No mottles in the Ap Horizon.

**Wetland Determination**

Hydrophytic Vegetation Present  
 Hydric Soils Present  
 Wetland Hydrology Present  
 This Data Point is a Wetland

**Remarks**

Fails to meet necessary Federal criteria.

**Wilson Environmental Technologies, Inc.**

Job Number: 320.001  
City: Hamburg  
Wetland Data Point: 00x

**Data Form  
Routine Wetland Determination**

Project/Site: Hopevale Townhouses  
Applicant/Owner: DATO Development  
Investigator: Wilson/Eckwahl

Date: November 20, 2006  
County: Erie  
State: New York

- Do normal circumstances exist on the site?
- Have vegetation, soils, or hydrology been disturbed?
- Is the area a potential problem area?

Community ID:  
Station ID:  
Plot ID:

**Vegetation**

**Dominant Species** **Common Name** **% Cover** **Indicator**

X

% Species that are OBL, FACW, or FAC (except FAC-):  
Remarks

Cowardin Classification:

**Hydrology**

- Recorded Data (describe in remarks)
  - Stream, Lake, or Tide Gage
  - Aerial Photograph
  - Other (describe in remarks)

*Primary Wetland Hydrology Indicators*

- Inundated
- Saturated in upper 12 inches
- Water marks
- Drift lines
- Sediment deposits
- Drainage patterns in wetlands

*Secondary Hydrology Indicators*

- Oxidized root channels
- Water-stained leaves
- Local soil survey data
- FAC-Neutral test
- Other (explain in remarks)

Field Observations:

Depth of Surface Water(in.): 0  
Depth to Free Water in Pit(in.): >24  
Depth to Saturated Soils(in.): >24

Remarks

**Soils**

Depth (in.) Hor. Matrix Color Mottle / 2nd Mottle Color Abundance Contrast Texture, Structure, etc.

*Hydric Soils Indicators*

- Histosol
- Histic Epipedon
- Sulfidic Odor
- Probable Aquatic Moist Regime
- Reducing Conditions
- Gleyed or Low-Chroma Colors
- Concretions
- High Organic % in Surface Layer
- Organic Streaking
- Listed on Local Hydric Soils List
- Listed on National Hydric Soils List
- Other (explain in remarks)

Unit Name:

Drainage Class:

Taxonomy:

- Field Observations match map

Remarks

**Wetland Determination**

- Hydrophytic Vegetation Present
- Hydric Soils Present
- Wetland Hydrology Present
- This Data Point is a Wetland

Remarks

**Wilson Environmental Technologies, Inc.**

Job Number: 332.001  
 City: Hamburg  
 Wetland Data Point: 1A

**Data Form  
 Routine Wetland Determination**

Project/Site: Hopevale Townhomes  
 Applicant/Owner: DATO Development  
 Investigator: Wilson/Eckwahl  
 Date: September 07, 2006  
 County: Erie  
 State: NY  
 Community ID: Sapling/shrubland mix  
 Station ID: Transect 1  
 Plot ID: 1A

**Vegetation**

Dominant	Species	Common Name	% Cover	Indicator
<b>Herbaceous</b>				
X	<i>Solidago canadensis</i>	Golden-Rod, Canada	15	FACU
X	<i>Aster vimineus</i>	Aster, Small White	10	FAC
X	<i>Potentilla simplex</i>	Cinquefoil, Old Field	15	FACU-
X	<i>Parthenocissus quinquefolia</i>	Creeper, Virginia	10	FACU
X	<i>Geum canadense</i>	Avens, White	10	FACU
X	<i>Fragaria virginiana</i>	Strawberry, Virginia	10	FACU
<b>Shrub</b>				
X	<i>Fraxinus pennsylvanica</i>	Ash, Green	5	FACW
X	<i>Cornus amomum</i>	Dogwood, Silky	15	FACW
X	<i>Cornus foemina</i>	Dogwood, Stiff	10	FAC
<b>Tree</b>				
X	<i>Fraxinus pennsylvanica</i>	Ash, Green	2	FACW
X	<i>Populus deltoides</i>	Cotton-Wood, Eastern	10	FAC
<b>Vine</b>				
X	<i>Vitis aestivalis</i>	Grape, Summer	10	FACU
X	<i>Parthenocissus quinquefolia</i>	Creeper, Virginia	10	FACU

% Species that are OBL, FACW, or FAC (except FAC-): 41

Cowardin Classification:

**Remarks**

Area of mixed woodlot and sapling/shrub vegetation communities over somewhat poorly drained soils.

**Hydrology**

	Primary Wetland Hydrology Indicators	Secondary Hydrology Indicators
<input checked="" type="checkbox"/> Recorded Data (describe in remarks)	<input type="checkbox"/> Inundated	<input type="checkbox"/> Oxidized root channels
<input type="checkbox"/> Stream, Lake, or Tide Gage	<input type="checkbox"/> Saturated in upper 12 inches	<input type="checkbox"/> Water-stained leaves
<input type="checkbox"/> Aerial Photograph	<input type="checkbox"/> Water marks	<input type="checkbox"/> Local soil survey data
<input type="checkbox"/> Other (describe in remarks)	<input type="checkbox"/> Drift lines	<input type="checkbox"/> FAC-Neutral test
Field Observations:	<input type="checkbox"/> Sediment deposits	<input type="checkbox"/> Other (explain in remarks)
Depth of Surface Water(in.): 0	<input type="checkbox"/> Drainage patterns in wetlands	
Depth to Free Water in Pit(in.): >24		
Depth to Saturated Soils(in.): >24		

**Remarks**

Hydrology data collected at end of sampling to allow for infiltration. Depth of auger hole at 16".

**Soils**

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-8	Ap	10YR 4/2				Silty Clay Loam roots
8-16	B1	2.5Y 3/3	10YR 5/6	common	distinct	Silty Clay Loam blocky

**Hydric Soils Indicators**

- |  |   |
|--|---|
| <input type="checkbox"/> Histosol                      | <input type="checkbox"/> Concretions                          |
| <input type="checkbox"/> Histic Epipedon               | <input type="checkbox"/> High Organic % in Surface Layer      |
| <input type="checkbox"/> Sulfidic Odor                 | <input type="checkbox"/> Organic Streaking                    |
| <input type="checkbox"/> Probable Aquatic Moist Regime | <input type="checkbox"/> Listed on Local Hydric Soils List    |
| <input type="checkbox"/> Reducing Conditions           | <input type="checkbox"/> Listed on National Hydric Soils List |
| <input type="checkbox"/> Gleyed or Low-Chroma Colors   | <input type="checkbox"/> Other (explain in remarks)           |

Unit Name: Remsen

Taxonomy: **Aeric Ochraqualfs**

Drainage Class: Somewhat Poorly

Field Observations match map

**Remarks**

Sample taken at 10". Depth of auger hole 16". No mottles in the Ap Horizon.

**Wilson Environmental Technologies, Inc.**

Job Number: 332.001  
City: Hamburg  
Wetland Data Point: 1A

**Data Form  
Routine Wetland Determination**

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**Wetland Determination**

- Hydrophytic Vegetation Present
- Hydric Soils Present
- Wetland Hydrology Present

This Data Point is a Wetland

**Remarks**

Fails to meet all necessary Federal criteria.

**Wilson Environmental Technologies, Inc.**

Job Number: 332.001  
 City: Hamburg  
 Wetland Data Point: 1B

**Data Form  
 Routine Wetland Determination**

Project/Site: Hopevale Townhomes  
 Applicant/Owner: DATO Development  
 Investigator: Wilson/Eckwahl  
 Date: September 07, 2006  
 County: Erie  
 State: NY  
 Community ID: Shrubland  
 Station ID: Transect 1  
 Plot ID: 1B

**Vegetation**

Dominant	Species	Common Name	% Cover	Indicator
<b>Herbaceous</b>				
X	<i>Fragaria virginiana</i>	Strawberry, Virginia	25	FACU
<b>Shrub</b>				
X	<i>Fraxinus pennsylvanica</i>	Ash, Green	5	FACW
X	<i>Rhamnus frangula</i>	Buckthorn, Glossy	60	FAC
X	<i>Cornus amomum</i>	Dogwood, Silky	5	FACW
X	<i>Cornus foemina</i>	Dogwood, Stiff	15	FAC
<b>Tree</b>				
	<i>Populus deltoides</i>	Cotton-Wood, Eastern	2	FAC

% Species that are OBL, FACW, or FAC (except FAC-): 80 Cowardin Classification:

Remarks  
 Area of dense shrubland. Data point taken adjacent to cut transect line.

**Hydrology**

	Primary Wetland Hydrology Indicators	Secondary Hydrology Indicators
<input checked="" type="checkbox"/> Recorded Data (describe in remarks)	<input type="checkbox"/> Inundated	<input type="checkbox"/> Oxidized root channels
<input type="checkbox"/> Stream, Lake, or Tide Gage	<input type="checkbox"/> Saturated in upper 12 inches	<input type="checkbox"/> Water-stained leaves
<input type="checkbox"/> Aerial Photograph	<input type="checkbox"/> Water marks	<input type="checkbox"/> Local soil survey data
<input type="checkbox"/> Other (describe in remarks)	<input type="checkbox"/> Drift lines	<input type="checkbox"/> FAC-Neutral test
Field Observations:	<input type="checkbox"/> Sediment deposits	<input type="checkbox"/> Other (explain in remarks)
Depth of Surface Water(in.): 0	<input type="checkbox"/> Drainage patterns in wetlands	
Depth to Free Water in Pit(in.): >16		
Depth to Saturated Soils(in.): >12		

Remarks  
 Hydrology data collected at end of sampling to allow for infiltration. Depth of auger hole at 16".

**Soils**

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-8	Ap	10YR 4/2				Silty Clay Loam roots
8-16	B1	2.5Y 4/4	10YR 4/6	common	distinct	Silty Clay Loam blocky

**Hydric Soils Indicators**

<input type="checkbox"/> Histosol	<input type="checkbox"/> Concretions
<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> High Organic % in Surface Layer
<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> Organic Streaking
<input type="checkbox"/> Probable Aquatic Moist Regime	<input type="checkbox"/> Listed on Local Hydric Soils List
<input type="checkbox"/> Reducing Conditions	<input type="checkbox"/> Listed on National Hydric Soils List
<input type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Other (explain in remarks)

Unit Name: Remsen Taxonomy: **Aeric Ochraqualfs**  
 Drainage Class: **Somewhat Poorly**  Field Observations match map

Remarks

**Wetland Determination**

Hydrophytic Vegetation Present  This Data Point is a Wetland  
 Hydric Soils Present  
 Wetland Hydrology Present

Remarks  
 Fails to meet all necessary Federal criteria.

**Wilson Environmental Technologies, Inc.**

Job Number: 332.001  
 City: Hamburg  
 Wetland Data Point: 1C

**Data Form  
 Routine Wetland Determination**

Project/Site: Hopevale Townhomes  
 Applicant/Owner: DATO Development  
 Investigator: Wilson/Eckwahl  
 Do normal circumstances exist on the site?  
 Have vegetation, soils, or hydrology been disturbed?  
 Is the area a potential problem area?

Date: September 07, 2006  
 County: Erie  
 State: NY  
 Community ID: Sapling/shrubland mix  
 Station ID: Transect 1  
 Plot ID: 1C

**Vegetation**

Dominant	Species	Common Name	% Cover	Indicator
<u>Herbaceous</u>				
X	<i>Potentilla simplex</i>	Cinquefoil, Old Field	10	FACU-
X	<i>Rhamnus frangula</i>	Buckthorn, Glossy	25	FAC
X	<i>Fragaria virginiana</i>	Strawberry, Virginia	10	FACU
X	<i>Rubus idaeus</i>	Raspberry, Common Red	5	FAC-
<u>Shrub</u>				
X	<i>Fraxinus pennsylvanica</i>	Ash, Green	15	FACW
X	<i>Cornus foemina</i>	Dogwood, Stiff	25	FAC
X	<i>Crataegus crus-galli</i>	Hawthorn, Cockspur	10	FACU
X	<i>Rhamnus cathartica</i>	Buckthorn, Common	5	FACU
X	<i>Rhamnus frangula</i>	Buckthorn, Glossy	5	FAC
<u>Tree</u>				
X	<i>Fraxinus pennsylvanica</i>	Ash, Green	2	FACW
X	<i>Pyrus malus</i>	Domestic apple	5	UPL

% Species that are OBL, FACW, or FAC (except FAC-): 40 Cowardin Classification:

**Remarks**

Area of data point associated with existing sanitary sewer line. Old fill material - concrete and earthen fill over upland, somewhat poorly drained soils.

**Hydrology**

<input checked="" type="checkbox"/> Recorded Data (describe in remarks) <input type="checkbox"/> Stream, Lake, or Tide Gage <input type="checkbox"/> Aerial Photograph <input type="checkbox"/> Other (describe in remarks)  Field Observations: Depth of Surface Water(in.): 0 Depth to Free Water in Pit(in.): >12 Depth to Saturated Soils(in.): >16	<b>Primary Wetland Hydrology Indicators</b> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in upper 12 inches <input type="checkbox"/> Water marks <input type="checkbox"/> Drift lines <input type="checkbox"/> Sediment deposits <input type="checkbox"/> Drainage patterns in wetlands	<b>Secondary Hydrology Indicators</b> <input type="checkbox"/> Oxidized root channels <input type="checkbox"/> Water-stained leaves <input type="checkbox"/> Local soil survey data <input type="checkbox"/> FAC-Neutral test <input type="checkbox"/> Other (explain in remarks)
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**Remarks**

Hydrology data collected at end of sampling to allow for infiltration. Depth of auger hole at 16". Soils disturbed, mixed horizons.

**Soils**

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
-						

**Hydric Soils Indicators**

- |  |   |
|--|---|
| <input type="checkbox"/> Histosol                      | <input type="checkbox"/> Concretions                          |
| <input type="checkbox"/> Histic Epipedon               | <input type="checkbox"/> High Organic % in Surface Layer      |
| <input type="checkbox"/> Sulfidic Odor                 | <input type="checkbox"/> Organic Streaking                    |
| <input type="checkbox"/> Probable Aquatic Moist Regime | <input type="checkbox"/> Listed on Local Hydric Soils List    |
| <input type="checkbox"/> Reducing Conditions           | <input type="checkbox"/> Listed on National Hydric Soils List |
| <input type="checkbox"/> Gleyed or Low-Chroma Colors   | <input type="checkbox"/> Other (explain in remarks)           |

Unit Name: Remsen

Taxonomy: Aerlic Ochraqualfs

Drainage Class: Somewhat Poorly

Field Observations match map

**Remarks**

No soil sample taken at this location based on disturbed soil conditions associated with sanitary sewer and old fill material. Adjacent areas are upland.

**Wetland Determination**

- |   |   |
|---|---|
| <input type="checkbox"/> Hydrophytic Vegetation Present | <input type="checkbox"/> This Data Point is a Wetland |
| <input type="checkbox"/> Hydric Soils Present           |   |
| <input type="checkbox"/> Wetland Hydrology Present      |   |

**Remarks**

Fails to meet all necessary Federal criteria.

**Wilson Environmental Technologies, Inc.**

Job Number: 332.001  
 City: Hamburg  
 Wetland Data Point: 1D

**Data Form  
 Routine Wetland Determination**

Project/Site: Hopevale Townhomes  
 Applicant/Owner: DATO Development  
 Investigator: Wilson/Eckwahl

Date: September 07, 2006  
 County: Erie  
 State: NY  
 Community ID: Sapling/shrubland mix  
 Station ID: Transect 1  
 Plot ID: 1D

- Do normal circumstances exist on the site?  
 Have vegetation, soils, or hydrology been disturbed?  
 Is the area a potential problem area?

**Vegetation**

Dominant Species	Common Name	% Cover	Indicator
<b>Herbaceous</b>			
X <i>Solidago rugosa</i>	Golden-Rod, Wrinkled	5	FAC
X <i>Rubus idaeus</i>	Raspberry, Common Red	10	FAC-
X <i>Aster prenanthoides</i>	Aster, Crooked-Stem	5	FAC
X <i>Rhamnus cathartica</i>	Buckthorn, Common	15	FACU
X <i>Potentilla simplex</i>	Cinquefoil, Old Field	10	FACU-
X <i>Fragaria virginiana</i>	Strawberry, Virginia	5	FACU
<b>Shrub</b>			
X <i>Cornus foemina</i>	Dogwood, Stiff	2	FAC
X <i>Fraxinus pennsylvanica</i>	Ash, Green	5	FACW
X <i>Rhamnus frangula</i>	Buckthorn, Glossy	30	FAC
X <i>Cornus foemina</i>	Dogwood, Stiff	20	FAC
X <i>Crataegus crus-galli</i>	Hawthorn, Cockspur	10	FACU
<b>Tree</b>			
X <i>Fraxinus pennsylvanica</i>	Ash, Green	2	FACW

% Species that are OBL, FACW, or FAC (except FAC-): 50

Cowardin Classification:

**Remarks**

Area of mixed sapling/shrub vegetation communities over somewhat poorly drained soils.

**Hydrology**

	Primary Wetland Hydrology Indicators	Secondary Hydrology Indicators
<input checked="" type="checkbox"/> Recorded Data (describe in remarks)	<input type="checkbox"/> Inundated	<input type="checkbox"/> Oxidized root channels
<input type="checkbox"/> Stream, Lake, or Tide Gage	<input type="checkbox"/> Saturated in upper 12 inches	<input type="checkbox"/> Water-stained leaves
<input type="checkbox"/> Aerial Photograph	<input type="checkbox"/> Water marks	<input type="checkbox"/> Local soil survey data
<input type="checkbox"/> Other (describe in remarks)	<input type="checkbox"/> Drift lines	<input type="checkbox"/> FAC-Neutral test
Field Observations:	<input type="checkbox"/> Sediment deposits	<input type="checkbox"/> Other (explain in remarks)
Depth of Surface Water(in.): 0	<input type="checkbox"/> Drainage patterns in wetlands	
Depth to Free Water in Pit(in.): >16		
Depth to Saturated Soils(in.): >12		

**Remarks**

Hydrology data collected at end of sampling to allow for infiltration. Depth of auger hole at 16".

**Soils**

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-8	Ap	10YR 4/2				Silty Clay Loam roots
8-16	B1	2.5Y 4/3	2.5Y 4/6	few	faint	Silty Clay Loam blocky

**Hydric Soils Indicators**

- |  |   |
|--|---|
| <input type="checkbox"/> Histosol                      | <input type="checkbox"/> Concretions                          |
| <input type="checkbox"/> Histic Epipedon               | <input type="checkbox"/> High Organic % in Surface Layer      |
| <input type="checkbox"/> Sulfidic Odor                 | <input type="checkbox"/> Organic Streaking                    |
| <input type="checkbox"/> Probable Aquatic Moist Regime | <input type="checkbox"/> Listed on Local Hydric Soils List    |
| <input type="checkbox"/> Reducing Conditions           | <input type="checkbox"/> Listed on National Hydric Soils List |
| <input type="checkbox"/> Gleyed or Low-Chroma Colors   | <input type="checkbox"/> Other (explain in remarks)           |

Unit Name: Remsen

Taxonomy: Aerlic Ochraqualfs

Drainage Class: Somewhat Poorly

Field Observations match map

**Remarks**

Sample taken at 10". Depth of auger hole 16". No mottles in the Ap Horizon.

**Wetland Determination**

- Hydrophytic Vegetation Present  
 Hydric Soils Present  
 Wetland Hydrology Present
- This Data Point is a Wetland

**Remarks**

Fails to meet all necessary Federal criteria.

**Wilson Environmental Technologies, Inc.**

Job Number: 332.001  
 City: Hamburg  
 Wetland Data Point: W1U

**Data Form  
 Routine Wetland Determination**

Project/Site: Hopevale Townhomes  
 Applicant/Owner: DATO Development  
 Investigator: Wilson/Eckwahl  
 Do normal circumstances exist on the site?  
 Have vegetation, soils, or hydrology been disturbed?  
 Is the area a potential problem area?

Date: September 07, 2006  
 County: Erie  
 State: NY  
 Community ID: Sapling/shrubland mix  
 Station ID: A9  
 Plot ID: W1U

**Vegetation**

Dominant	Species	Common Name	% Cover	Indicator
<b>Herbaceous</b>				
X	<i>Solidago canadensis</i>	Golden-Rod, Canada	15	FACU
X	<i>Aster vimineus</i>	Aster, Small White	10	FAC
X	<i>Potentilla simplex</i>	Cinquefoil, Old Field	15	FACU-
X	<i>Parthenocissus quinquefolia</i>	Creeper, Virginia	10	FACU
X	<i>Geum canadense</i>	Avens, White	10	FACU
X	<i>Fragaria virginiana</i>	Strawberry, Virginia	10	FACU
<b>Shrub</b>				
X	<i>Fraxinus pennsylvanica</i>	Ash, Green	5	FACW
X	<i>Cornus amomum</i>	Dogwood, Silky	10	FACW
X	<i>Cornus foemina</i>	Dogwood, Stiff	10	FAC
<b>Tree</b>				
X	<i>Fraxinus pennsylvanica</i>	Ash, Green	2	FACW
X	<i>Populus deltoides</i>	Cotton-Wood, Eastern	10	FAC
<b>Vine</b>				
X	<i>Vitis aestivalis</i>	Grape, Summer	10	FACU
X	<i>Parthenocissus quinquefolia</i>	Creeper, Virginia	10	FACU

% Species that are OBL, FACW, or FAC (except FAC-): 41

Cowardin Classification:

**Remarks**

Elevational change. Wetland is associated with a drainage swale.

**Hydrology**

Recorded Data (describe in remarks)  
 Stream, Lake, or Tide Gage  
 Aerial Photograph  
 Other (describe in remarks)

**Primary Wetland Hydrology Indicators**

Inundated  
 Saturated in upper 12 inches  
 Water marks  
 Drift lines  
 Sediment deposits  
 Drainage patterns in wetlands

**Secondary Hydrology Indicators**

Oxidized root channels  
 Water-stained leaves  
 Local soil survey data  
 FAC-Neutral test  
 Other (explain in remarks)

**Field Observations:**

Depth of Surface Water(in.): 0  
 Depth to Free Water in Pit(in.): >16  
 Depth to Saturated Soils(in.): >12

**Remarks**

Hydrology data collected at end of sampling to allow for infiltration. Depth of auger hole at 16".

**Soils**

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle			Texture, Structure, etc.
			Color	Abundance	Contrast	
0-8	Ap	10YR 4/2				Silty Clay Loam roots
8-10	B1	2.5Y 3/3	10YR 5/6	common	distinct	Silty Clay Loam plastic

**Hydric Soils Indicators**

Histosol  
 Histic Epipedon  
 Sulfidic Odor  
 Probable Aquatic Moist Regime  
 Reducing Conditions  
 Gleyed or Low-Chroma Colors  
 Concretions  
 High Organic % in Surface Layer  
 Organic Streaking  
 Listed on Local Hydric Soils List  
 Listed on National Hydric Soils List  
 Other (explain in remarks)

Unit Name: Remsen

Taxonomy: **Aeric Ochraqualfs**

Drainage Class: Somewhat Poorly

Field Observations match map

**Remarks**

Sample taken at 10". Depth of auger hole 16". No mottles in the Ap Horizon.

**Wilson Environmental Technologies, Inc.**

Job Number: 332.001

**Data Form  
Routine Wetland Determination**

City: Hamburg

Wetland Data Point: W1U

---

**Wetland Determination**

Hydrophytic Vegetation Present

This Data Point is a Wetland

Hydric Soils Present

Wetland Hydrology Present

Remarks

Fails to meet all necessary Federal criteria.

**Wilson Environmental Technologies, Inc.**

Job Number: 332.001  
 City: Hamburg  
 Wetland Data Point: W2U

**Data Form  
 Routine Wetland Determination**

Project/Site: Hopevale Townhomes  
 Applicant/Owner: DATO Development  
 Investigator: Wilson/Eckwahl  
 [X] Do normal circumstances exist on the site?  
 [ ] Have vegetation, soils, or hydrology been disturbed?  
 [ ] Is the area a potential problem area?

Date: September 07, 2006  
 County: Erie  
 State: NY  
 Community ID: Woodlot  
 Station ID: A20  
 Plot ID: W2U

**Vegetation**

Dominant	Species	Common Name	% Cover	Indicator
<b>Herbaceous</b>				
	<i>Fraxinus pennsylvanica</i>	Ash, Green	2	FACW
X	<i>Rhamnus cathartica</i>	Buckthorn, Common	10	FACU
X	<i>Cornus foemina</i>	Dogwood, Stiff	5	FAC
<b>Shrub</b>				
X	<i>Populus deltoides</i>	Cotton-Wood, Eastern	10	FAC
X	<i>Fagus grandifolia</i>	Beech, American	5	FACU
X	<i>Cornus foemina</i>	Dogwood, Stiff	5	FAC
<b>Tree</b>				
X	<i>Populus deltoides</i>	Cotton-Wood, Eastern	25	FAC
X	<i>Fagus grandifolia</i>	Beech, American	15	FACU
X	<i>Fraxinus pennsylvanica</i>	Ash, Green	5	FACW

% Species that are OBL, FACW, or FAC (except FAC-): 62 Cowardin Classification:

Remarks  
 Elevational change. Wetland is associated with a drainage swale.

**Hydrology**

	Primary Wetland Hydrology Indicators	Secondary Hydrology Indicators
[X] Recorded Data (describe in remarks)	[ ] Inundated	[ ] Oxidized root channels
[ ] Stream, Lake, or Tide Gage	[ ] Saturated in upper 12 inches	[ ] Water-stained leaves
[ ] Aerial Photograph	[ ] Water marks	[ ] Local soil survey data
[ ] Other (describe in remarks)	[ ] Drift lines	[ ] FAC-Neutral test
Field Observations:	[ ] Sediment deposits	[ ] Other (explain in remarks)
Depth of Surface Water(in.): 0	[ ] Drainage patterns in wetlands	
Depth to Free Water in Pit(in.): >16		
Depth to Saturated Soils(in.): >12		

Remarks  
 Hydrology data collected at end of sampling to allow for infiltration. Depth of auger hole at 16".

**Soils**

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-8	Ap	2.5YR 5/3				Silty Clay Loam roots
8-16	B1	10YR 5/4	2.5Y 5/6	common	distinct	Silty Clay Loam plastic

**Hydric Soils Indicators**

[ ] Histosol	[ ] Concretions
[ ] Histic Epipedon	[ ] High Organic % in Surface Layer
[ ] Sulfidic Odor	[ ] Organic Streaking
[ ] Probable Aquatic Moist Regime	[ ] Listed on Local Hydric Soils List
[ ] Reducing Conditions	[ ] Listed on National Hydric Soils List
[ ] Gleyed or Low-Chroma Colors	[ ] Other (explain in remarks)

Unit Name: Remsen Taxonomy: **Aeric Ochraqualfs**  
 Drainage Class: **Somewhat Poorly** [ ] Field Observations match map

Remarks  
 Sample taken at 10". Depth of auger hole 16". No mottles in the Ap Horizon.

**Wetland Determination**

[X] Hydrophytic Vegetation Present [ ] This Data Point is a Wetland  
 [ ] Hydric Soils Present  
 [ ] Wetland Hydrology Present

Remarks  
 Fails to meet all necessary Federal criteria.

**Wilson Environmental Technologies, Inc.**

Job Number: 332.001  
 City: Hamburg  
 Wetland Data Point: W3U

**Data Form  
 Routine Wetland Determination**

Project/Site: Hopevale Townhomes  
 Applicant/Owner: DATO Development  
 Investigator: Wilson/Eckwahl  
 Date: September 07, 2006  
 County: Erie  
 State: NY  
 Community ID: Woodlot  
 Station ID: A25  
 Plot ID: W3U

- Do normal circumstances exist on the site?  
 Have vegetation, soils, or hydrology been disturbed?  
 Is the area a potential problem area?

**Vegetation**

Dominant	Species	Common Name	% Cover	Indicator
<b>Herbaceous</b>				
X	<i>Rhamnus cathartica</i>	Buckthorn, Common	30	FACU
X	<i>Prunus virginiana</i>	Cherry, Choke	5	FACU
X	<i>Cornus foemina</i>	Dogwood, Stiff	10	FAC
X	<i>Potentilla simplex</i>	Cinquefoil, Old Field	5	FACU-
X	<i>Solidago canadensis</i>	Golden-Rod, Canada	5	FACU
<b>Shrub</b>				
	<i>Fagus grandifolia</i>	Beech, American	2	FACU
X	<i>Populus tremula</i>	Aspen, Quaking	10	FACU
X	<i>Quercus rubra</i>	Oak, Northern Red	5	FACU-
X	<i>Cornus foemina</i>	Dogwood, Stiff	15	FAC
<b>Tree</b>				
X	<i>Populus tremula</i>	Aspen, Quaking	25	FACU
X	<i>Carpinus caroliniana</i>	Hornbeam, American	5	FAC

% Species that are OBL, FACW, or FAC (except FAC-): 30 Cowardin Classification:

Remarks  
 Elevational change. Wetland is associated with a drainage swale.

**Hydrology**

<p><input checked="" type="checkbox"/> Recorded Data (describe in remarks)  <input type="checkbox"/> Stream, Lake, or Tide Gage  <input type="checkbox"/> Aerial Photograph  <input type="checkbox"/> Other (describe in remarks)</p> <p>Field Observations:                  Depth of Surface Water(in.): 0                  Depth to Free Water in Pit(in.): &gt;16                  Depth to Saturated Soils(in.): &gt;12</p>	<p><i>Primary Wetland Hydrology Indicators</i></p> <p><input type="checkbox"/> Inundated  <input type="checkbox"/> Saturated in upper 12 inches  <input type="checkbox"/> Water marks  <input type="checkbox"/> Drift lines  <input type="checkbox"/> Sediment deposits  <input type="checkbox"/> Drainage patterns in wetlands</p>	<p><i>Secondary Hydrology Indicators</i></p> <p><input type="checkbox"/> Oxidized root channels  <input type="checkbox"/> Water-stained leaves  <input type="checkbox"/> Local soil survey data  <input type="checkbox"/> FAC-Neutral test  <input type="checkbox"/> Other (explain in remarks)</p>
--	---	---

Remarks  
 Hydrology data collected at end of sampling to allow for infiltration. Depth of auger hole at 16".

**Soils**

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-8	Ap	10YR 4/2				Silty Clay Loam roots
8-16	B1	2.5Y 5/4	10YR 5/6	common	distinct	Silty Clay Loam blocky

*Hydric Soils Indicators*

<input type="checkbox"/> Histosol	<input type="checkbox"/> Concretions
<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> High Organic % in Surface Layer
<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> Organic Streaking
<input type="checkbox"/> Probable Aquatic Moist Regime	<input type="checkbox"/> Listed on Local Hydric Soils List
<input type="checkbox"/> Reducing Conditions	<input type="checkbox"/> Listed on National Hydric Soils List
<input type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Other (explain in remarks)

Unit Name: Remsen Taxonomy: Aeric Ochraqualfs  
 Drainage Class: Somewhat Poorly  Field Observations match map

Remarks  
 Sample taken at 10". Depth of auger hole 16". No mottles in the Ap Horizon.

**Wetland Determination**

- Hydrophytic Vegetation Present  This Data Point is a Wetland  
 Hydric Soils Present  
 Wetland Hydrology Present

Remarks  
 Fails to meet all necessary Federal criteria.

**Wilson Environmental Technologies, Inc.**

Job Number: 332.001  
 City: Hamburg  
 Wetland Data Point: W4U

**Data Form  
 Routine Wetland Determination**

Project/Site: Hopevale Townhomes  
 Applicant/Owner: DATO Development  
 Investigator: Wilson/Eckwahl

Date: September 07, 2006  
 County: Erie  
 State: NY

- Do normal circumstances exist on the site?
- Have vegetation, soils, or hydrology been disturbed?
- Is the area a potential problem area?

Community ID: Shrubland  
 Station ID: A29  
 Plot ID: W4U

**Vegetation**

Dominant	Species	Common Name	% Cover	Indicator
<b>Herbaceous</b>				
X	<i>Potentilla simplex</i>	Cinquefoil, Old Field	10	FACU-
X	<i>Fragaria virginiana</i>	Strawberry, Virginia	5	FACU
X	<i>Rhamnus cathartica</i>	Buckthorn, Common	10	FACU
<b>Shrub</b>				
X	<i>Fraxinus pennsylvanica</i>	Ash, Green	5	FACW
X	<i>Rhamnus cathartica</i>	Buckthorn, Common	30	FACU
X	<i>Cornus foemina</i>	Dogwood, Stiff	25	FAC
X	<i>Cornus amomum</i>	Dogwood, Silky	10	FACW
<b>Tree</b>				
X	<i>Fraxinus pennsylvanica</i>	Ash, Green	5	FACW
X	<i>Acer rubrum</i>	Maple, Red	5	FAC

% Species that are OBL, FACW, or FAC (except FAC-): 55

Cowardin Classification:

**Remarks**

Elevational change between wetland and upland. Wetland associated with drainage swale.

**Hydrology**

	Primary Wetland Hydrology Indicators	Secondary Hydrology Indicators
<input checked="" type="checkbox"/> Recorded Data (describe in remarks)	<input type="checkbox"/> Inundated	<input type="checkbox"/> Oxidized root channels
<input type="checkbox"/> Stream, Lake, or Tide Gage	<input type="checkbox"/> Saturated in upper 12 inches	<input type="checkbox"/> Water-stained leaves
<input type="checkbox"/> Aerial Photograph	<input type="checkbox"/> Water marks	<input type="checkbox"/> Local soil survey data
<input type="checkbox"/> Other (describe in remarks)	<input type="checkbox"/> Drift lines	<input type="checkbox"/> FAC-Neutral test
Field Observations:	<input type="checkbox"/> Sediment deposits	<input type="checkbox"/> Other (explain in remarks)
Depth of Surface Water(in.): 0	<input type="checkbox"/> Drainage patterns in wetlands	
Depth to Free Water in Pit(in.): >16		
Depth to Saturated Soils(in.): >12		

**Remarks**

Hydrology data collected at end of sampling to allow for infiltration. Depth of auger hole at 16".

**Soils**

Depth (in.)	Hor.	Matrix Color	Mottle / 2nd Mottle Color	Abundance	Contrast	Texture, Structure, etc.
0-8	Ap	7.5YR 5/2				Silty Clay Loam blocky
8-16	B1	2.5Y 5/4	10YR 4/3	few	faint	Silty Clay Loam blocky

**Hydric Soils Indicators**

- Histosol
- Histic Epipedon
- Sulfidic Odor
- Probable Aquatic Moist Regime
- Reducing Conditions
- Gleyed or Low-Chroma Colors
- Concretions
- High Organic % in Surface Layer
- Organic Streaking
- Listed on Local Hydric Soils List
- Listed on National Hydric Soils List
- Other (explain in remarks)

Unit Name: Remsen

Taxonomy: **Aeric Ochraqualfs**

Drainage Class: Somewhat Poorly

Field Observations match map

**Remarks**

Sample taken at 10". Depth of auger hole 16". No mottles in the Ap Horizon.

**Wetland Determination**

- Hydrophytic Vegetation Present
- Hydric Soils Present
- Wetland Hydrology Present
- This Data Point is a Wetland

**Remarks**

Fails to meet all necessary Federal criteria.

A  
P  
P  
E  
N  
D  
I  
X  
  
C



PHOTO LOCATION P1:

Viewing north in the vicinity of Wetland Area A and field data point W2W. Refer to Field Data Form W2W and W2U for information on soils, hydrology, and vegetation.



PHOTO LOCATION P2:

Viewing south from the vicinity of 1A in a shrubland upland portion of the site west of Wetland Area A. Refer to Field Data Form 1A for information on soils, hydrology, and vegetation.



PHOTO LOCATION P3:

Viewing north in the vicinity of Wetland Area A and field data point W3W. Refer to Field Data Form W3W and W3U for information on soils, hydrology, and vegetation.

PHOTO LOCATION P4:

Viewing south from the vicinity of 2D in a shrubland upland



portion of the site west of Wetland Area A. Refer to Field Data Form 2D for information on soils, hydrology, and vegetation.

PHOTO LOCATION P5:



Viewing north in the vicinity of wetland boundary of Wetland Area A and field data point W1W. Refer to Field Data Form W1W and W1U for information on soils, hydrology, and vegetation.

A  
P  
P  
E  
N  
D  
I  
X  
  
D



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# EXHIBIT Q

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**DEPARTMENT OF THE ARMY**  
BUFFALO DISTRICT, CORPS OF ENGINEERS  
1776 NIAGARA STREET  
BUFFALO, NEW YORK 14207-3199

REPLY TO

April 10, 2008

Regulatory Branch

SUBJECT: Jurisdictional Determination for Department of the Army Application No. 2008-00529

Mr. David Burke  
Dato Development  
S-5540 Southwestern Blvd.  
Hamburg, New York 14207

Dear Mr. Burke:

I have reviewed the wetland delineation map you submitted for your proposal to construct townhouses in the future north of Hopevale School and East of Heatherwood Drive, in the Town of Hamburg, Erie County, New York.

I am hereby verifying the Federal wetland boundary as shown on the attached wetland delineation map dated November 1, 2006. Please note that the area east of the tributary is not included in this determination, and may contain Federal wetlands. It has been indicated that there will be no development proposed in this area. This verification was confirmed in the field on 08/01/2007 and will remain valid for a period of five (5) years from the date of this correspondence unless new information warrants revision of the delineation before the expiration. At the end of this period, a new wetland delineation will be required if a project has not been completed on this property and additional impacts are proposed for waters of the United States. Further, this delineation/determination has been conducted to identify the limits of the Corps Clean Water Act jurisdiction for the particular site identified in this request. This delineation/determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resource Conservation Service prior to starting work.

Based upon my review of the submitted delineation and on-site observations, I have determined that the 0.75 acre wetland identified on the subject parcel is part of a surface water tributary system to a navigable water of the United States as noted on the attached Jurisdictional Determination form. In addition, the entire length of the tributary located on site (approximately 1000 feet) has been determined to be a regulated water of the U.S. Therefore, the wetland and

Regulatory Branch

SUBJECT: Jurisdictional Determination for Department of the Army Application No. 2008-00529

the tributary are regulated under Section 404 of the Clean Water Act. Department of the Army authorization is required if you propose a discharge of dredged or fill material in these areas. If any work is proposed in the area east of the tributary, a wetland delineation should be performed to determine the extent of potential Federal wetlands.

Finally, this letter contains an approved jurisdictional determination for the subject parcel. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal the above determination, you must submit a completed RFA form within 60 days of the date on this letter to the Great Lakes/Ohio River Division Office at the following address:

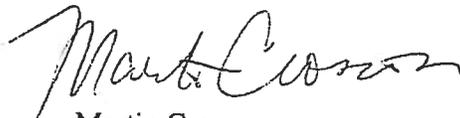
Mr. Mike Montone, Regulatory Review Officer  
Great Lakes and Ohio River Division  
CELRD-PDS-O  
550 Main Street, Room 10032  
Cincinnati, OH 45202-3222  
Phone: 513-684-6212

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 C.F.R. part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by June 9, 2008.

It is not necessary to submit an RFA to the Division office if you do not object to the determination in this letter.

Questions pertaining to this matter should be directed to me at (716) 879-4346, by writing to the following address: U.S. Army Corps of Engineers, 1776 Niagara Street, Buffalo, New York 14207, or by e-mail at: [martin.h.crosson@usace.army.mil](mailto:martin.h.crosson@usace.army.mil)

Sincerely,



Martin Crosson  
Biologist

Enclosures

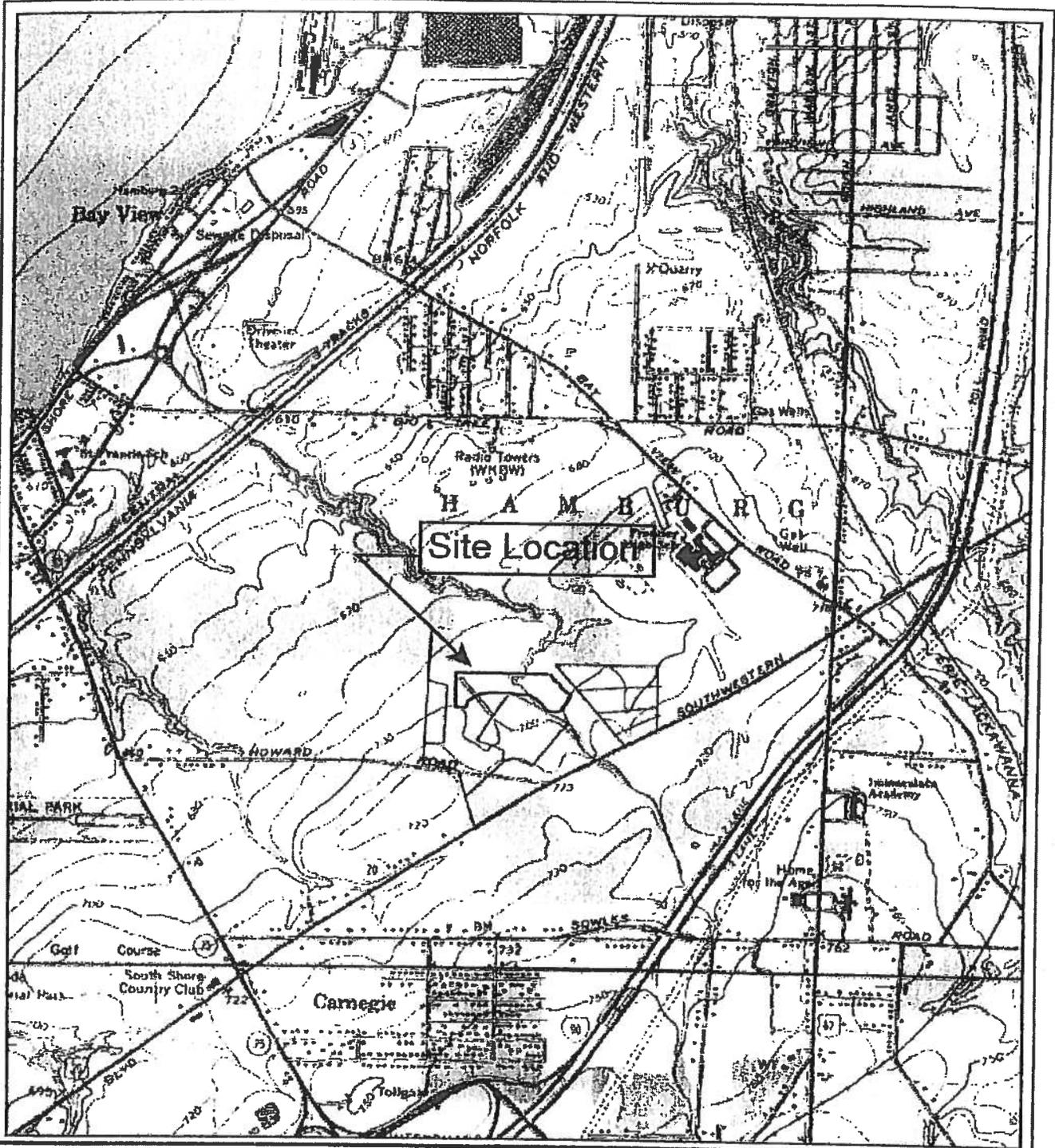


Figure 1.

USGS Quadrangle Map  
 Buffalo SE, NY Quadrangle  
 Scale 1:24000



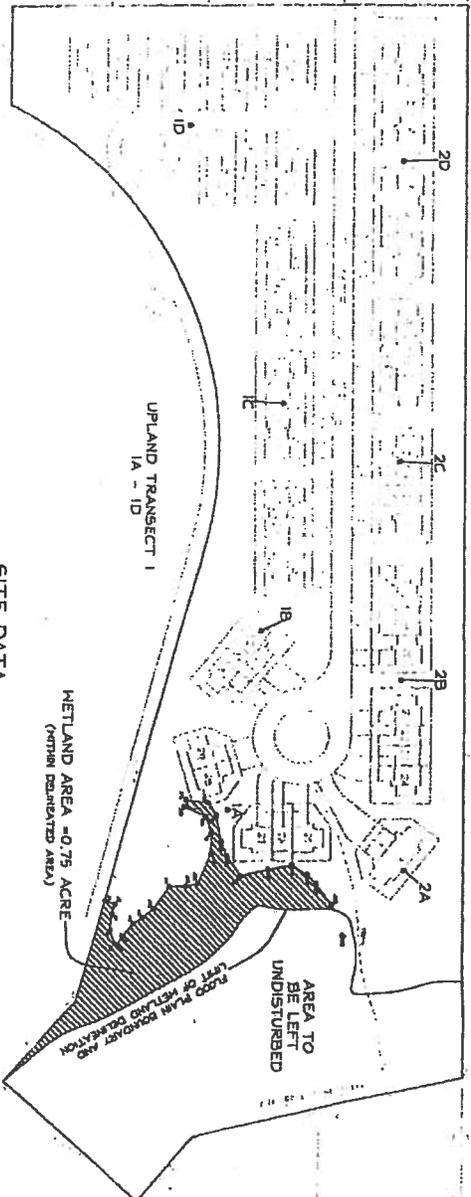
Hopevale Townhouse Project  
 DATO Development

Town of Hamburg  
 Erie County, New York

David Burk, Dato Development  
 D/A Processing No. 2008-00529  
 Erie County, New York  
 Quad: Buffalo SE NY  
 Sheet 1 of 2



UPLAND TRANSECT 2  
2A - 2D



SITE DATA  
TOTAL SITE AREA = 14.98 ACRES  
TOTAL METLAND = 0.75 ACRES

- Unnamed tributary on parcel is jurisdictional  
- 0.75 acre wetland is jurisdictional  
- Area east of tributary is not included in this determination

METLAND EXHIBIT MAP	
HOPEVALE TOWNSHIP	
TOWN OF ALBANY	
COUNTY OF ALBANY	
STATE OF NEW YORK	
DATE OF FIELD WORK	DATE OF PREPARATION
PROJECT NO.	PROJECT NAME
SCALE	DATE

David Burk, Dato Development  
D/A Processing No. 2008-00529  
Erie County, New York  
Quad: Buffalo SE NY  
Sheet 2 of 2



**NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND  
REQUEST FOR APPEAL**

Applicant: David Burke, DATO Development		File Number: 2008-00529	Date: 04/10/2008
Attached is:			See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)		A
	PROFFERED PERMIT (Standard Permit or Letter of permission)		B
	PERMIT DENIAL		C
X	APPROVED JURISDICTIONAL DETERMINATION		D
	PRELIMINARY JURISDICTIONAL DETERMINATION		E

**SECTION I -** The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at <http://usace.army.mil/incl/functions/cw/cecwo/reg> or Corps regulations at 33 CFR Part 331.

**A: INITIAL PROFFERED PERMIT:** You may accept or object to the permit.

● **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

● **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

**B: PROFFERED PERMIT:** You may accept or appeal the permit

● **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

● **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

**C: PERMIT DENIAL:** You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

**D: APPROVED JURISDICTIONAL DETERMINATION:** You may accept or appeal the approved JD or provide new information.

● **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.

● **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

**E: PRELIMINARY JURISDICTIONAL DETERMINATION:** You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

**SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT**

**REASONS FOR APPEAL OR OBJECTIONS:** (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

**ADDITIONAL INFORMATION:** The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

**POINT OF CONTACT FOR QUESTIONS OR INFORMATION:**

If you have questions regarding this decision and/or the appeal process you may contact:

Martin Crosson  
U.S. Army Corps of Engineers  
1776 Niagara Street  
Buffalo, New York 14207  
(716) 879-4346  
martin.h.crosson@usace.army.mil

If you only have questions regarding the appeal process you may also contact:

Mr. Michael Montone  
U.S. Army Corps of Engineers  
Great Lakes and Ohio River Division  
550 Main Street, Room 10032  
Cincinnati, OH 45202-3222  
(513) 684-6212; FAX(513) 684-2460  
michael.g.montone@lrdor.usace.army.mil

**RIGHT OF ENTRY:** Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

\_\_\_\_\_  
Signature of appellant or agent.

Date:

Telephone number:

**APPROVED JURISDICTIONAL DETERMINATION FORM**  
**U.S. Army Corps of Engineers**

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

**SECTION I: BACKGROUND INFORMATION**

**A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): 03/20/2008**

**B. DISTRICT OFFICE, FILE NAME, AND NUMBER: LRB Buffalo, Burk, David, Dato Development, Hopevale Townhouses, 2008-00529**

**C. PROJECT LOCATION AND BACKGROUND INFORMATION:**

State: New York County/parish/borough: Erie City: Hamburg  
Center coordinates of site (lat/long in degree decimal format): Lat. 42.761176° N Long. 78.841001° W  
Universal Transverse Mercator:

Name of nearest waterbody: Lake Erie

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Lake Erie

Name of watershed or Hydrologic Unit Code (HUC): Buffalo River

Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

**D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):**

Office (Desk) Determination. Date:

Field Determination. Date(s): 08/01/2007

**SECTION II: SUMMARY OF FINDINGS**

**A. RHA SECTION 10 DETERMINATION OF JURISDICTION.**

There **Pick List** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

Waters subject to the ebb and flow of the tide.

Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.  
Explain:

**B. CWA SECTION 404 DETERMINATION OF JURISDICTION.**

There **Are** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

**1. Waters of the U.S.**

**a. Indicate presence of waters of U.S. in review area (check all that apply):<sup>1</sup>**

TNWs, including territorial seas

Wetlands adjacent to TNWs

Relatively permanent waters<sup>2</sup> (RPWs) that flow directly or indirectly into TNWs

Non-RPWs that flow directly or indirectly into TNWs

Wetlands directly abutting RPWs that flow directly or indirectly into TNWs

Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs

Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs

Impoundments of jurisdictional waters

Isolated (interstate or intrastate) waters, including isolated wetlands

**b. Identify (estimate) size of waters of the U.S. in the review area:**

Non-wetland waters: 250 linear feet: 10 width (ft) and/or acres.

Wetlands: 0.75 acres.

**c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual**

Elevation of established OHWM (if known):

**2. Non-regulated waters/wetlands (check if applicable):<sup>3</sup>**

Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.  
Explain:

<sup>1</sup> Boxes checked below shall be supported by completing the appropriate sections in Section III below.

<sup>2</sup> For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

<sup>3</sup> Supporting documentation is presented in Section III.F.

### SECTION III: CWA ANALYSIS

#### A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

#### B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody<sup>4</sup> is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

##### 1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:

Watershed size: **Pick List**

Drainage area: **Pick List**

Average annual rainfall: inches

Average annual snowfall: inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **Pick List** river miles from TNW.

Project waters are **Pick List** river miles from RPW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Project waters are **Pick List** aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW<sup>5</sup>: The subject tributary flows directly into Lake Erie (TNW).

Tributary stream order, if known:

<sup>4</sup> Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

<sup>5</sup> Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tributary Characteristics (check all that apply):

Tributary is:  Natural  
 Artificial (man-made). Explain:  
 Manipulated (man-altered). Explain:

Tributary properties with respect to top of bank (estimate):

Average width: feet  
Average depth: feet  
Average side slopes: **Pick List**.

Primary tributary substrate composition (check all that apply):

Silts  Sands  Concrete  
 Cobbles  Gravel  Muck  
 Bedrock  Vegetation. Type/% cover:  
 Other. Explain:

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain:

Presence of run/riffle/pool complexes. Explain:

Tributary geometry: **Pick List**

Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: **Pick List**

Estimate average number of flow events in review area/year: **Pick List**

Describe flow regime:

Other information on duration and volume:

Surface flow is: **Pick List**. Characteristics:

Subsurface flow: **Pick List** Explain findings:

Dye (or other) test performed:

Tributary has (check all that apply):

Bed and banks  
 OHWM<sup>6</sup> (check all indicators that apply):  
 clear, natural line impressed on the bank  the presence of litter and debris  
 changes in the character of soil  destruction of terrestrial vegetation  
 shelving  the presence of wrack line  
 vegetation matted down, bent, or absent  sediment sorting  
 leaf litter disturbed or washed away  scour  
 sediment deposition  multiple observed or predicted flow events  
 water staining  abrupt change in plant community  
 other (list):  
 Discontinuous OHWM.<sup>7</sup> Explain:

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

High Tide Line indicated by:  Mean High Water Mark indicated by:  
 oil or scum line along shore objects  survey to available datum;  
 fine shell or debris deposits (foreshore)  physical markings;  
 physical markings/characteristics  vegetation lines/changes in vegetation types.  
 tidal gauges  
 other (list):

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: water quality appears good. Water was clear at time of site visit.

Identify specific pollutants, if known:

<sup>6</sup>A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

<sup>7</sup>Ibid.

(iv) **Biological Characteristics. Channel supports (check all that apply):**

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
  - Federally Listed species. Explain findings:
  - Fish/spawn areas. Explain findings:
  - Other environmentally-sensitive species. Explain findings:
  - Aquatic/wildlife diversity. Explain findings:

2. **Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW**

(i) **Physical Characteristics:**

(a) General Wetland Characteristics:

Properties:

Wetland size:        acres

Wetland type. Explain:

Wetland quality. Explain:

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: Pick List. Explain:

Surface flow is: Pick List

Characteristics:

Subsurface flow: Pick List. Explain findings:

Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain:

Ecological connection. Explain:

Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are Pick List river miles from TNW.

Project waters are Pick List aerial (straight) miles from TNW.

Flow is from: Pick List.

Estimate approximate location of wetland as within the Pick List floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain:

Identify specific pollutants, if known:

(iii) **Biological Characteristics. Wetland supports (check all that apply):**

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Habitat for:
  - Federally Listed species. Explain findings:
  - Fish/spawn areas. Explain findings:
  - Other environmentally-sensitive species. Explain findings:
  - Aquatic/wildlife diversity. Explain findings:

3. **Characteristics of all wetlands adjacent to the tributary (if any)**

All wetland(s) being considered in the cumulative analysis: Pick List

Approximately (        ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)      Size (in acres)      Directly abuts? (Y/N)      Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

### C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
2. Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
3. Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

### D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area:
  - TNWs: linear feet width (ft), Or, acres.
  - Wetlands adjacent to TNWs: acres.
2. RPWs that flow directly or indirectly into TNWs.
  - Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: tributary is 2<sup>nd</sup> order tributary; water flow was observed at time of field work; consultant indicated year-round flow. The National Wetland Inventory indicates the tributary to be upper perennial and permanently flooded.
  - Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:

Provide estimates for jurisdictional waters in the review area (check all that apply):

Tributary waters: linear feet width (ft).

Other non-wetland waters: acres.

Identify type(s) of waters: .

3. **Non-RPWs<sup>8</sup> that flow directly or indirectly into TNWs.**

- Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

Tributary waters: linear feet width (ft).

Other non-wetland waters: acres.

Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
- Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: **wetland is contiguous with tributary located within a low-lying floodplain area.**
- Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: 0.75 acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**

- Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**

- Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.<sup>9</sup>**

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- Demonstrate that impoundment was created from "waters of the U.S.," or
- Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
- Demonstrate that water is isolated with a nexus to commerce (see E below).

E. **ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):<sup>10</sup>**

- which are or could be used by interstate or foreign travelers for recreational or other purposes.
- from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- which are or could be used for industrial purposes by industries in interstate commerce.
- Interstate isolated waters. Explain: .
- Other factors. Explain: .

<sup>8</sup>See Footnote # 3.

<sup>9</sup>To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

<sup>10</sup>Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

**Identify water body and summarize rationale supporting determination:**

Provide estimates for jurisdictional waters in the review area (check all that apply):

Tributary waters: linear feet width (ft).

Other non-wetland waters: acres.

Identify type(s) of waters:

Wetlands: acres.

**F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):**

If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.

Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.

Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).

Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:

Other: (explain, if not covered above):

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

Non-wetland waters (i.e., rivers, streams): linear feet width (ft).

Lakes/ponds: acres.

Other non-wetland waters: acres. List type of aquatic resource:

Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).

Lakes/ponds: acres.

Other non-wetland waters: acres. List type of aquatic resource:

Wetlands: acres.

**SECTION IV: DATA SOURCES.**

**A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):**

Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Wetland Delineation Dated 11/06/2006.

Data sheets prepared/submitted by or on behalf of the applicant/consultant.

Office concurs with data sheets/delineation report.

Office does not concur with data sheets/delineation report.

Data sheets prepared by the Corps:

Corps navigable waters' study:

U.S. Geological Survey Hydrologic Atlas:

USGS NHD data.

USGS 8 and 12 digit HUC maps.

U.S. Geological Survey map(s). Cite scale & quad name: 1:24000 Buffalo SE NY.

USDA Natural Resources Conservation Service Soil Survey. Citation: Erie Count NY.

National wetlands inventory map(s). Cite name: Buffalo SE NY.

State/Local wetland inventory map(s): NYSDEC Freshwater Wetlands Map, Buffalo SE NY.

FEMA/FIRM maps:

100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)

Photographs:  Aerial (Name & Date): various current web based photographs.

or  Other (Name & Date):

Previous determination(s). File no. and date of response letter:

Applicable/supporting case law: "SWANCC" and "RAPANOS".

Applicable/supporting scientific literature:

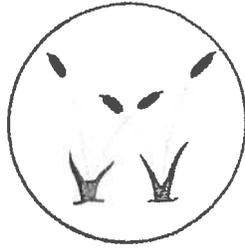
Other information (please specify):

**B. ADDITIONAL COMMENTS TO SUPPORT JD:**

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# **EXHIBIT R**

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**WILSON  
ENVIRONMENTAL  
TECHNOLOGIES, INC.**

**WETLAND DELINEATION REPORT  
SHERWOOD MEADOWS  
TOWN OF HAMBURG**

**PREPARED FOR  
DATO DEVELOPMENT, LLC**

**CLIENT:**

DATO DEVELOPMENT, LLC  
5540 SOUTHWESTERN BOULEVARD  
HAMBURG, NEW YORK 14075

**PROJECT NAME:**

SHERWOOD MEADOWS

**PROJECT LOCATION:**

EAST OF AND ADJACENT TO HEATHERWOOD DRIVE  
NORTH OF SOUTHWESTERN BOULEVARD  
TOWN OF HAMBURG  
ERIE COUNTY, NEW YORK

**ACTION:**

SECTION 404 WETLAND DELINEATION REPORT

**PREPARED BY:**

WILSON ENVIRONMENTAL TECHNOLOGIES INC.  
2805 WEHRLE DRIVE, SUITE 12  
WILLIAMSVILLE, NEW YORK 14221  
OFFICE (716) 565-3000 FAX (716) 565-9994

**DATE:**

May 24, 2013

**WET PROJECT NO.:**

332.05

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### TABLE 1. VEGETATION IDENTIFIED DURING FIELD STUDY

*Includes common and scientific names and indicator statuses*

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## EXECUTIVE SUMMARY

Wilson Environmental Technologies, Inc (WET) has been retained by Dato Development LLC, 5540 Southwestern Boulevard, Hamburg, New York 14075 to evaluate and define wetlands subject to jurisdiction under Section 404 of the Clean Water Act and Article 24 of the New York State Environmental Conservation Law on lands east of and adjacent to Heatherwood Drive, north of Southwestern Boulevard, in the Town of Hamburg. Approximately 14.9 ± acres of undeveloped woodland was delineated as the scope of this project.

WET conducted the delineation of State and Federal wetlands within the site during April, 2013. As a result of the on-site field investigation one (1) wetland totaling approximately 3.9± acres was identified within the site. The wetlands were flagged at the time of the field work and the locations of the wetlands were surveyed by a licensed land surveying firm. The wetland delineation results were based on the presence of hydric soils, hydrophytic vegetation and wetland hydrology found within the site boundaries as depicted on the attached Wetland Survey as prepared by the firm of Nussbaumer & Clarke, Inc.

This site was previously delineated in 2006. Since then, construction has commenced in accordance with the site plan, created by Nussbaumer & Clarke, Inc. Progress includes one 16-unit apartment building, streets, sewer, and detention basin No.1. There are minor variances to the wetland boundary since the previous delineation. The on-site wetlands are associated with an unnamed stream that leads northwest to Lake Erie. Lands to the East of the stream will remain undisturbed.

This report is intended for the use of the property owner(s), their agents and assigns as a planning aid in the development of this parcel. Results of the Wetland Delineation are subject to review by both the New York State Department of Environmental Conservation under Article 24 of the NYS Environmental Conservation Law, and the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act, along with the Town of Hamburg. This Wetland Delineation Report is a representation of WET's assessment of Federal and State wetlands. The review of this document by the U.S. Army Corps of Engineers and State Department of Conservation could produce alterations in the delineated boundary as determined by WET. The wetlands, as delineated by WET, were completed to the best of our ability and in compliance with the guidelines presented in the Corps of Engineers Wetlands Delineation Manual Technical Report Y-87-1 (U.S. Waterways Experiment Station, 1987) and the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region*, dated October 2009; accepted as the current methodology in delineation practice.



## 1.0 INTRODUCTION

Wilson Environmental Technologies, Inc. (WET) has been retained by Dato Development, LLC 5540 Southwestern Boulevard, Hamburg, New York 14075 to evaluate and define wetlands subject to jurisdiction under Section 404 of the Clean Water on a 14.9± acre area in the Town of Hamburg, Erie County, New York. This report presents the results of the on-site field investigation which was conducted to determine if the United States Army Corps of Engineers (USACE) and New York State Department of Environmental Conservation (NYSDEC) permit relative to Section 404 of the Clean Water Act and Article 24 of the New York State Environmental Conservation Law would be required for proposed completion of a residential apartment complex or other disturbances within the parcel. Based on the results of the investigation, WET determined that one (1) federally jurisdictional wetland totaling 3.9± acres is located within the site. The determination was based on the presence of hydric soils, hydrophytic vegetation and wetland hydrology.

The subject site consists of an area of ongoing construction to the west and successional woodlot to the east. Residential subdivisions border the parcel to the east and west. The western subdivision acts as the developments only entrance. The old Hopevale School building is located directly south of the parcel. Undeveloped woodland exists to the north of the site. The results of the Wetland Delineation was surveyed and contained in Appendix D of this report.

### 1.1 CURRENT REGULATION

The Code of Federal Regulations defines a wetland as an area having hydric soils, wetland hydrology and supporting vegetation dominated by hydrophytes. All three of these criteria must be present for an area to qualify as a wetland. Hydrophytic vegetation has been defined as species which due to morphological, physiological, and/or reproductive adaptation(s), have the ability to grow, effectively compete, reproduce, and/or persist in anaerobic soil conditions. These species have been given an indicator status defining their probability of occurring in a wetland. These indicators statuses are defined as Obligate Wetland (OBL), Facultative Wetland (FACW) and Facultative (FAC). Non-hydrophytic species are assigned an indicator status of Facultative Upland (FACU) or Obligate Upland (UPL).

WET performs wetland delineations in accordance with the 1987 *Corps of Engineers Wetland Delineation Manual* and the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region*, dated October 2009. The development of this supplement follows the recommendations of the National Research Council to increase the regional sensitivity of wetland delineation methods.



## **2.0 AGENCY RESOURCE INFORMATION**

Prior to initiation of the on-site investigation, available environmental information was gathered and reviewed. The results of the review are summarized as follows.

### **2.1 USGS QUADRANGLE MAP (FIGURE 1)**

The U.S. Geological Service has produced geological maps for every county of the United States. These maps are useful in wetland delineation for the purpose of identifying areas of concern within a parcel. In addition to civil works and boundaries, indicators of marshes, swamps, perennial and intermittent streams, and contours are depicted. The Buffalo SE Quadrangle was referenced for this parcel.

### **2.2 NATIONAL WETLANDS INVENTORY MAP (FIGURE 2)**

NWI maps were produced by the U.S. Department of the interior, Fish and Wildlife Service in the years 1977 to present day. These maps provide the approximate configurations and community types of suspected Federal wetlands. Although they serve as useful guidelines, they are incomplete due to compilation methods primarily utilizing aerial photography which contain an inherent margin of error, only reflect conditions the year in which they were taken and some wetlands areas too small or obscured by dense forest may not be depicted. The Erie County On-Line Mapping System was referenced for this parcel. Federally regulated wetlands are mapped within the north-central area of the parcel.

### **2.3 NYSDEC FRESHWATER WETLANDS MAP (FIGURE 3)**

The New York State Department of Environmental Conservation (DEC) has developed criterion for wetland identification based on vegetation cover with minimum acreage requirements. Identified wetlands have been promulgated with the production and distribution of Freshwater Wetlands Maps (FWW). The boundaries of identified wetlands are approximations and require surveying of a field delineation performed by a DEC representative to determine exact boundaries and acreage. The Erie County On-Line Mapping System was reference for this parcel. No state wetlands are mapped within the parcel.

### **2.4 NRCS SOILS MAP (FIGURE 4)**

The Natural Resources Conservation Service (former U.S. Soil Conservation Service) has performed a soils identification study on a county by county basis. Aerial photography plates have been utilized in conjunction with field testing to identify soil types and locations in various counties. The results have been compiled and published in county-specific Soil Surveys. Also included in the surveys is information pertaining to the various soils identified within the county which includes, but is not limited to, texture, range of chroma colors, range of mottle colors, subgroup and drainage classification. Most counties in New York State have been completed and published, though a few are still in progress. The NRCS Web Soil Survey along with the Soil Survey of Erie County were referenced to determine the likelihood of encountering soils with hydric characteristic or which may contain hydric inclusions.



The site is located within the Darien-Remsen-Angola soil map unit. This unit is defined as dominantly nearly level and gently sloping, deep and moderately deep, somewhat poorly drained, medium textured and moderately fine textured soils; on uplands underlain by alkaline shale bedrock.

The following soil series are mapped within the limits of the delineation area:

SYMBOL	SERIES	SUBGROUP	DRAINAGE
Nh	Niagara silt loam, till substratum	Aeric Ochraqualfs	Somewhat poor
RfA	Remsen silt clay loam	Aeric Ochraqualfs	Somewhat poor
Wd	Wayland silt loam	Mollic Fluvaquents	Poor - very poor

The soil symbols associated with the detailed soils map indicates the soil series and the slope associated with that mapped unit. For example, Rf identified the soil series as Remsen. The last capital letter of any symbol identifies the slope range for that soil unit. A represents a slope of 0 to 3 percent, B represents 3 to 8 percent slope, C represents 8 to 15 percent, D corresponds to a slope of 15 to 25 percent and E represents a slope of 25 to 35 percent. No third letter designation indicates no slope or nearly level.

The Niagara series consists of deep, somewhat poorly drained soils found on lowland lake plains. This soil formed in silty lacustrine sediments which were laid down in former glacial lakes. Some are on silty alluvial fans along valley bottoms. A few areas of the Niagara soils have a glacial till substrate. Slope ranges from 0 to 8 percent but is dominantly 0 to 3 percent. Soil colorations in the B Horizon are a yellowish brown 10YR5/4 with common medium distinct strong brown 7.5YR 5/6 and few fine faint pale brown 10YR 6/3 mottles. The B2 Horizon of these soils has a hue ranging from 5YR to 2.5Y, value of 2 through 4, and chroma of 2 through 3. Texture is silt loam. The Ap Horizon is a very dark brown 10YR3/3 silt loam. Associated soils include Canandaigua, Collamer, Cosad, Raynham, Swormville and Odessa soils.

The Remsen series consists of deep, somewhat poorly drained soils on till plains in the northern and western part of the county. This soil formed in clayey glacial till deposits. Slope ranges from 0 to 15 percent, but 0 to 8 percent is most common. The Ap Horizon is a dark brown 10YR 4/2 silt loam. Soil colorations in the B Horizon consist of a dark grayish brown 2.5Y 4/2 with common fine distinct yellowish brown 10YR 4/4 and olive brown 2.5Y 4/4 mottles. The B2 Horizon has a hue of 2.5Y or 5Y, values of 4 to 5, and chroma of 2 to 4. Texture in the B2 horizon is silty clay or clay. Associated soils include Darien, Derb, Erie, Brockport, and Canadice soils.

The Wayland series consists of deep, poorly drained and very poorly drained soils found in the lowest part of flood plains, commonly in slack water areas farthest from the stream. These soils formed in recent alluvial deposits on flood plains.



Slope ranges from 0 to 3 per cent. Soil colorations in the B Horizon are a dark brown 10YR4/1 with common 10YR 4/6 mottling. The B2 Horizon of these soils has a hue ranging from 7.5YR to 5Y value of 3 through 6, and chroma of 1 through 2. Texture is silt loam. The Ap Horizon is a very dark grayish brown 10YR3/2 silt loam. Associated soils include Chenango, Tioga, Hamlin, Middlebury, and Teel soils.

## 2.5 AGENCY RESOURCE CONCLUSIONS

The mapping of federal wetlands and poorly drained soils indicated the necessity to perform a field investigation at the site to ascertain the extent of any federally protected wetlands that may exist on the parcel. The wetlands delineation was performed in accordance with the 1987 *Corps of Engineers Wetland Delineation Manual* and the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region*, dated October 2009. Procedures, results and conclusions of the wetland delineation field study are presented in the remainder of this report.



### 3.0 SITE DESCRIPTION

The subject site consists of 14.9± acres of land situated east of and adjacent to Heatherwood Drive, north of Southwestern Boulevard. The parcel as represented is irregular in shape. Residential subdivisions border the parcel to the east and west. The western subdivision acts as the developments only entrance. The old Hopevale School building is located directly south of the parcel. Undeveloped woodland exists to the north of the parcel.

A large percentage of the site has been cleared of vegetation in preparation for development. Several areas of the site contain large piles of soil and fill material. Disturbed areas within the site were conducted in accordance with the permit issued in 2006.

The topography of the site is relatively flat; between 690 and 700 feet AMSL (Above Mean Sea Level) according to the Buffalo SE Quadrangle Map (Figure 1).

#### 3.1 SITE ECOLOGY

The majority of the site has been cleared in preparation for development. Construction has begun on the western half of the parcel. The parcel consists of a successional woodlot that contains an unnamed stream that flows northwest to Lake Erie.

The upland areas of the site are defined by red oak (*Quercus rubra*, FACU), trembling aspen (*Populus deltoides*, FAC), and cock-spur hawthorn (*Crataegus crus-galli*, FAC) in the tree stratum; with common buckthorn (*Rhamnus cathartica*, FAC), and rambler rose (*Rosa multiflora*, FACU) in the shrub stratum. Dominant herbaceous species include oldfield cinquefoil (*Potentilla simplex*, FACU) Kentucky blue grass (*Poa pratensis*, FACU), common strawberry (*Fragaria virginiana*, FACU), and field horsetail (*Equisetum arvense*, FAC).

Wetland A is defined by green ash (*Fraxinus pennsylvanica*, FACW), eastern cottonwood (*Populus deltoides*, FAC), and black willow (*Salix nigra*, OBL) in the tree stratum; with silky dogwood (*Cornus amomum*, FACW) and nannyberry (*Viburnum lentago*, FAC) in the shrub stratum. Dominant herbaceous species include melic manna grass (*Glyceria melicaria*, OBL), creeping jennie (*Lysimachia nummularia*, FACW), soft rush (*Juncus effusus*, FACW), and poison ivy (*Toxicodendron radicans*, FAC).

A complete list of vegetation identified on both parcels is presented in *Table 1* of this report.



## 4.0 METHODS

The Code of Federal Regulations defines a wetland as an area having hydric soils, wetland hydrology and supporting vegetation dominated by hydrophytes. All three of these criteria must be present for an area to qualify as a federal wetland. The routine determination methods for onsite investigations are described in Subsection 2, Section D of Chapter IV in the *Wetland Delineation Manual, 1987*.

Prior to initiating sampling, a site walk-over was performed to identify the general site topography relative to drainage patterns, major plant communities, and potential areas of disturbance. Wetlands were marked in the field with survey flags and labeled as A1, A2, etc. (for those flags demarcating 'Wetland A') along the wetland/upland perimeter. The sample points, which support the location of the wetland/upland perimeter, were labeled with the first letter representing the wetland being sampled; the following number corresponds to the boundary flag in between the sample pair; the second letter signifies whether it is an upland (U) or wetland (W) sample; and the final number represents the order in which the samples were taken. Information on vegetation, soils, and hydrology was collected at each sample point and recorded on field data forms which are included as Appendix B of this report.

Vegetation units were sampled using standard quadrat analysis procedures. For sampling purposes vegetation is divided into separate strata; a stratum being defined as having 5 percent or more total plant cover. The tree stratum consists of woody plants 3 in. (7.6 cm) or more in diameter; a diameter less than 3 inches would designate a plant as part of the sapling/shrub stratum. The herbaceous stratum consists of all non-woody plants regardless of size and woody plants less than 3.28 feet tall. Woody vines consist of all woody vines greater than 3.28 feet in height. Trees and woody vines are observed within a 30 foot radius, saplings and shrubs are observed within a radius of 15 feet, and herbaceous vegetation is observed at a range of 5 feet. Vegetation data was recorded for all strata at each data point. Dominance was measured by visually estimating the percent areal coverage occupied by each species. Each species was ranked in order by decreasing value of percent areal cover.

The dominant species for each strata category are defined as those plants with the highest ranking which, when cumulatively totaled, immediately exceed 50 percent of the total dominance measuring for the category; plus any additional plant species comprising 20 percent or more of the total dominance measure for the category. The federal indicator status of each species was determined by referencing the *National List of Plant Species That Occur in Wetlands: Northeast (Region 1)* (Reed 1988). A data point was considered to have wetland vegetation if it met one of four indicators (1)Rapid, (2)Dominance, (3)Prevalence index, (4)Morphological adaptations). These indicators are applied in numerical order until one is met; if one is not met the data point is designated as upland. Further information on the procedure for using hydrophytic vegetation indicators can be found in Chapter 2 of the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region*.

Soil samples and hydrology information were also collected at each data point. Soil samples were obtained through the use of a stainless steel drain spade. The soil pits were examined to depths of at least 16 inches. The soil samples were inspected for the presence of hydric soil indicators; introduced in the 2009, *Interim Regional Supplement Manual*. The presence of one or more indicators would



identify the soil as hydric, while the absence of any indicators would conclude that the soil is non-hydric. Hydrology information was visually assessed during the soils investigation and included, but was not limited to, observations of inundation, soil saturation, water marks on trees, drainage patterns, drift lines, water-stained leaves, and oxidized rhizospheres on living roots.



## 5.0 RESULTS

Field work for the federal delineation was conducted during May, 2013. A total of 8 field points were sampled and recorded which support the location of the wetland/upland boundary. Based on the results of the sampling, one (1) federal jurisdictional wetland was identified on the subject parcel.

Wetland A is located in the eastern region of the site. Hydrology for Wetland A appears to be derived from precipitation, runoff from adjacent uplands, and flooding of the unnamed stream, in combination with poorly drained soils. Positive hydrology indicators include surface water, sparsely vegetated concave surfaces, drainage patterns, microtopographical relief, and saturated soil conditions. Total on-site area of Wetlands A totals approximately 3.9± acres.

Wetland A is classified as a palustrine, broad-leaf deciduous forest, that is saturated (PFO1B). Wetland A is defined by green ash (*Fraxinus pennsylvanica*, FACW), eastern cottonwood (*Populus deltoides*, FAC), and black willow (*Salix nigra*, OBL) in the tree stratum; with silky dogwood (*Cornus amomum*, FACW) and nannyberry (*Viburnum lentago*, FAC) in the shrub stratum. Dominant herbaceous species include melic manna grass (*Glyceria melicaria*, OBL), creeping jennie (*Lysimachia nummularia*, FACW), soft rush (*Juncus effusus*, FACW), and poison ivy (*Toxicodendron radicans*, FAC).

Soils sampled in upland areas of the site corresponded well with the somewhat poorly drained Remsen series. The Remsen series consists of deep, somewhat poorly drained soils on till plains in the northern and western part of the county. This soil formed in clayey glacial till deposits. Slope ranges from 0 to 15 percent, but 0 to 8 percent is most common. The Ap Horizon is a dark brown 10YR 4/2 silt loam. Soil colorations in the B Horizon consist of a dark grayish brown 2.5Y 4/2 with common fine distinct yellowish brown 10YR 4/4 and olive brown 2.5Y 4/4 mottles. The B2 Horizon has a hue of 2.5Y or 5Y, values of 4 to 5, and chroma of 2 to 4. Texture in the B2 horizon is silty clay or clay. Associated soils include Darien, Derb, Erie, Brockport, and Canadice soils.

Soils sampled in wetlands areas of the site corresponded well with the poorly drained Wayland series. The Wayland series consists of deep, poorly drained and very poorly drained soils found in the lowest part of flood plains, commonly in slack water areas farthest from the stream. These soils formed in recent alluvial deposits on flood plains. Slope ranges from 0 to 3 per cent. Soil colorations in the B Horizon are a dark brown 10YR4/1 with common 10YR 4/6 mottling. The B2 Horizon of these soils has a hue ranging from 7.5YR to 5Y value of 3 through 6, and chroma of 1 through 2. Texture is silt loam. The Ap Horizon is a very dark grayish brown 10YR3/2 silt loam. Associated soils include Chenango, Tioga, Hamlin, Middlebury, and Teel soils.



## 6.0 CONCLUSIONS AND RECOMMENDATIONS

### 6.1 CONCLUSIONS

Based on the results of the field investigation, one (1) federally jurisdictional wetland has been identified on the parcel. The wetland area is best defined as:

WETLAND AREA	SIZE (ACRES)	FEDERAL DESIGNATION
Wetland Area A	3.9 ±	PFO1B

Wetland A is directly associated with an unnamed stream that flows through the eastern region of the site. This stream leads northwest to Lake Erie. The unnamed stream provides a direct nexus between Wetland A and waters of the United States.

Total wetland area within the site is 3.9± acres. The New York State Department of Environmental Conservation requires a wetland be 12.4 acres in order to regulate under Article 24 of the Freshwater Wetlands Act. Therefore, New York State does not have jurisdiction over the on-site wetlands.

### 6.2 RECOMMENDATIONS

It is our professional opinion that Wetland A is federally jurisdictional due to the direct connection to an unnamed stream that leads to Lake Erie. It is the U.S. Army Corps of Engineers responsibility to make this jurisdictional determination.

With the issuance of Federal Register Vol. 65, no. 47, pp. 12818-12899, the U.S. Army Corps of Engineers amended it Nationwide Permit program (NWP). The reason for the amendment was to reduce the impacts to wetland as well as reduce the regulatory effort expended in governing the activities associated with minimal environmental impacts. These amendments went into effect on March 9, 2007 when the Corps of Engineers reissued the existing NWPs.

The NWP most often utilized by the public is the Nationwide 29 permit (NWP 29) for the discharge of dredge or fill material into waters of the United States; this includes wetlands. This permit allows for the placement of fill material into waters of the United States as long as that discharge does not result in the loss (negative impact) of greater than 0.5 acres, nor cause the loss of waters of the United States for a distance of greater than 300 linear feet of stream bed. An application must be submitted to the USACE for approval prior to any disturbance of jurisdictional area.

On January 9, 2001, the U.S. Supreme Court issued a ruling that affected the Corps of Engineers authority to regulate isolated, non-navigable, intrastate waters under the Clean Water Act (Solid Waste Agency of Northern Cook County vs. the U.S. Army Corps of Engineers, No. 99-1178). Specifically, the case involved statutory and constitutional challenges to assertion of Clean Water Act jurisdiction over isolated, non-navigable, intrastate waters where use of the site



by migratory birds alone is not sufficient to establish federal jurisdiction over isolated wetlands, and that such areas are not waters of the United States and, therefore, are **not** subject to regulation under Section 404 of the Clean Water Act.

Should you elect to submit this report to the U.S. Army Corps of Engineers (USACE) for review, a site visit may be scheduled to verify the reported findings. If the USACE agrees with the results of the delineation, a letter of agreement will then be forwarded to you that you can use to satisfy a portion of the federal wetland regulatory concerns of the Town of Hamburg. This release from the USACE jurisdiction does not relieve you from the necessity of complying with other federal, state, or local regulations that may be applicable at the site.



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United States Geological Survey maps, Denver, Colorado

**Table 1**  
Vegetation Identified  
During the Wetland Delineation

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>FEDERAL STATUS</u>
<b>HERBACEOUS VEGETATION</b>		
<i>Agrimonia pubescens</i>	Agrimony	FACU
<i>Carex laxiflora</i>	Loose-flowered sedge	UPL
<i>Equisetum arvense</i>	Field horsetail	FAC
<i>Euthamia graminifolia</i>	Flat-top goldentop	FAC
<i>Fragaria virginiana</i>	Common strawberry	FACU
<i>Geum canadense</i>	White avens	FAC
<i>Geum laciniatum</i>	Rough avens	FACW
<i>Glyceria melicaria</i>	Melic manna grass	OBL
<i>Junucus effusus</i>	Soft rush	FACW
<i>Lysimachia nummularia</i>	Creeping jennie	FACW
<i>Poa pratensis</i>	Kentucky blue grass	FACU
<i>Potentilla simplex</i>	Oldfield cinquefoil	FACU
<i>Solidago canadensis</i>	Canada goldenrod	FACU
<i>Solidago rugosa</i>	Rough goldenrod	FAC
<i>Symphyotrichum falcatum</i>	Rough white prairie aster	FAC
<i>Toxicodendron radicans</i>	Poison ivy	FAC
<b>SHRUB</b>		
<i>Cornus amomum</i>	Silky dogwood	FACW
<i>Cornus racemosa</i>	Gray dogwood	FAC
<i>Frangula alnus</i>	Glossy false-buckthorn	FAC
<i>Rhamnus cathartica</i>	Common buckthorn	FAC
<i>Rosa multiflora</i>	Rambler rose	FACU
<i>Salix discolor</i>	Pussy willow	FACW
<i>Viburnum lentago</i>	Nannyberry	FAC
<b>TREE</b>		
<i>Acer rubrum</i>	Red maple	FAC
<i>Crataegus crus-galli</i>	Cock-spur hawthorn	FAC
<i>Fagus grandifolia</i>	American beech	FACU
<i>Fraxinus pennsylvanica</i>	Green ash	FACW
<i>Malus pumila</i>	Paradise apple	UPL
<i>Nyssa sylvatica</i>	Black tupelo	FAC
<i>Populus deltoides</i>	Eastern cottonwood	FAC
<i>Populus tremuloides</i>	Trembling aspen	FACU
<i>Quercus rubra</i>	Red oak	FACU
<i>Salix nigra</i>	Black willow	OBL
<i>Ulmus Americana</i>	American elm	FACW
<b>WOODY VINES</b>		
<i>Vitis riparia</i>	Riverbank grape	FACW

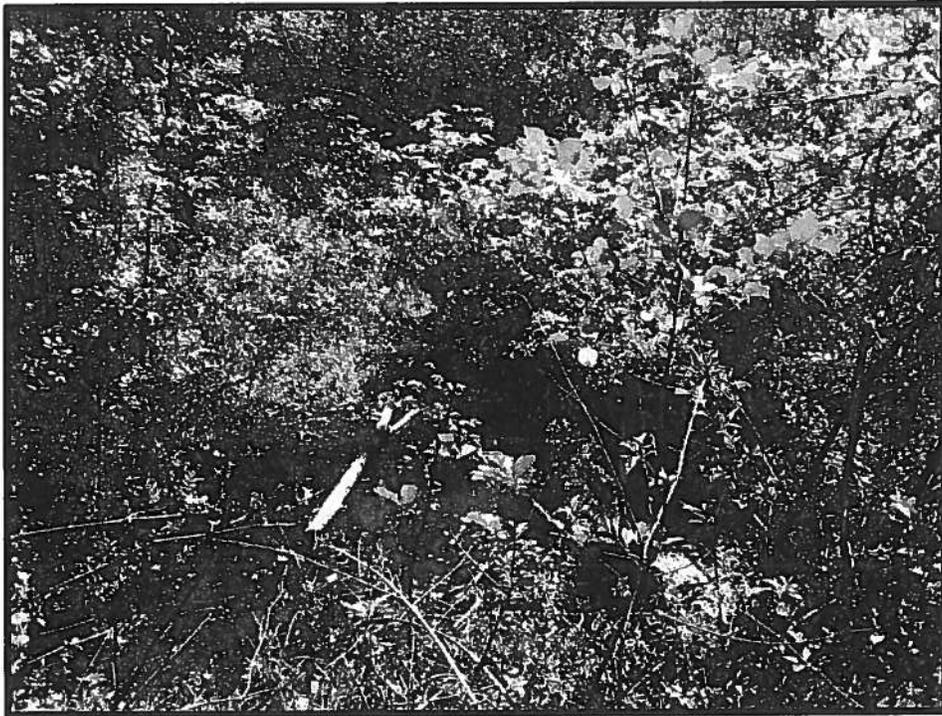
# SITE PHOTOS



Upland soil sample taken at A2U1.



West; into upland woodlot from sample point A2U1.



East; into Wetland A from sample point A2W2.



Upland soil sample from A6U4.



East; into Wetland A from sample point A10W5.



Southeast; along parcel southern boundary.



Northwest; from central region of the parcel.



Northeast; from central region of the parcel.

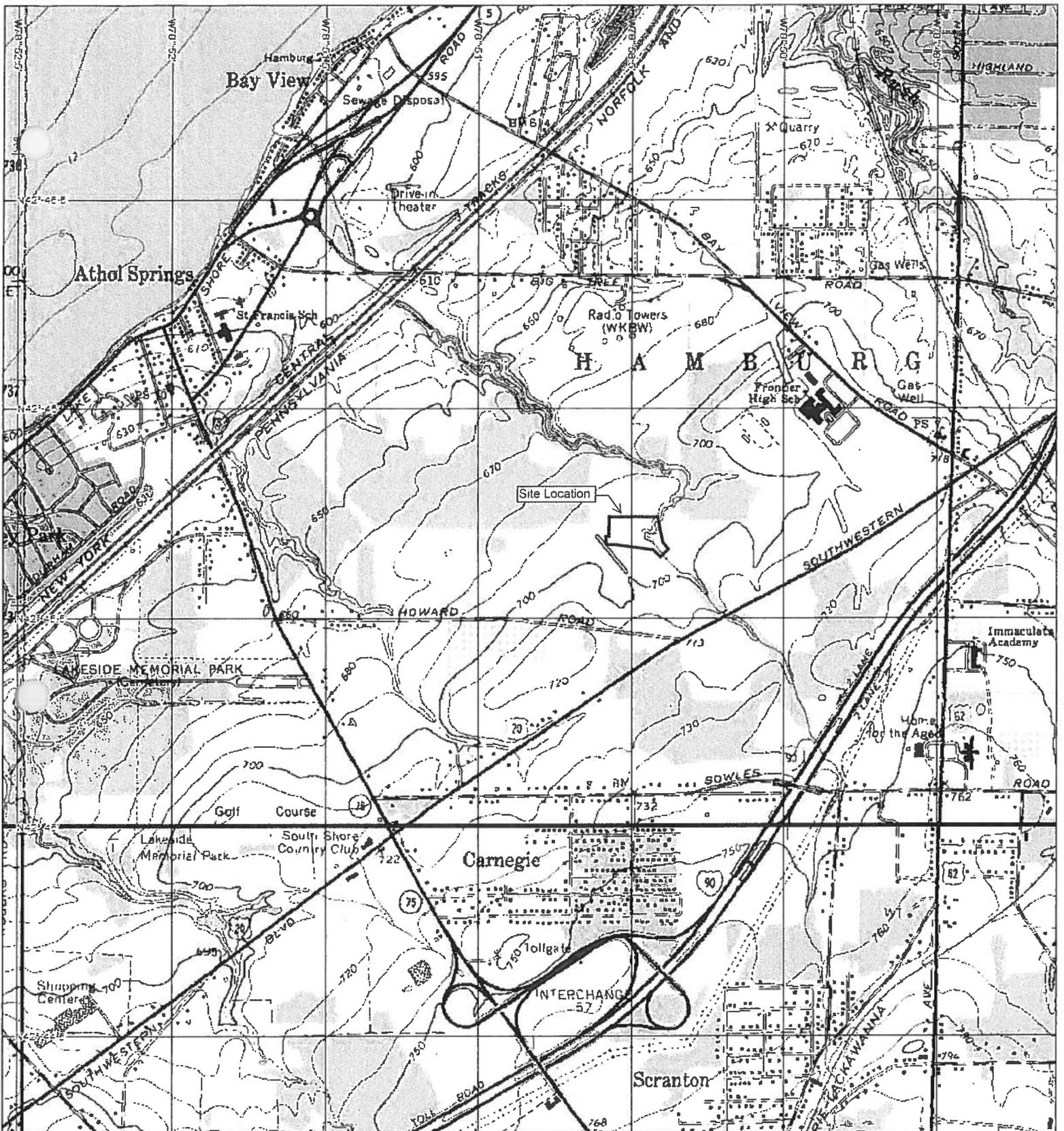


Figure 1: USGS Quadrangle Map

Buffalo SE Quadrangle

Scale 1:24,000

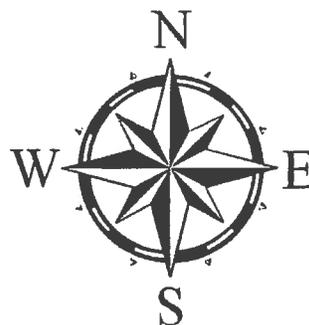


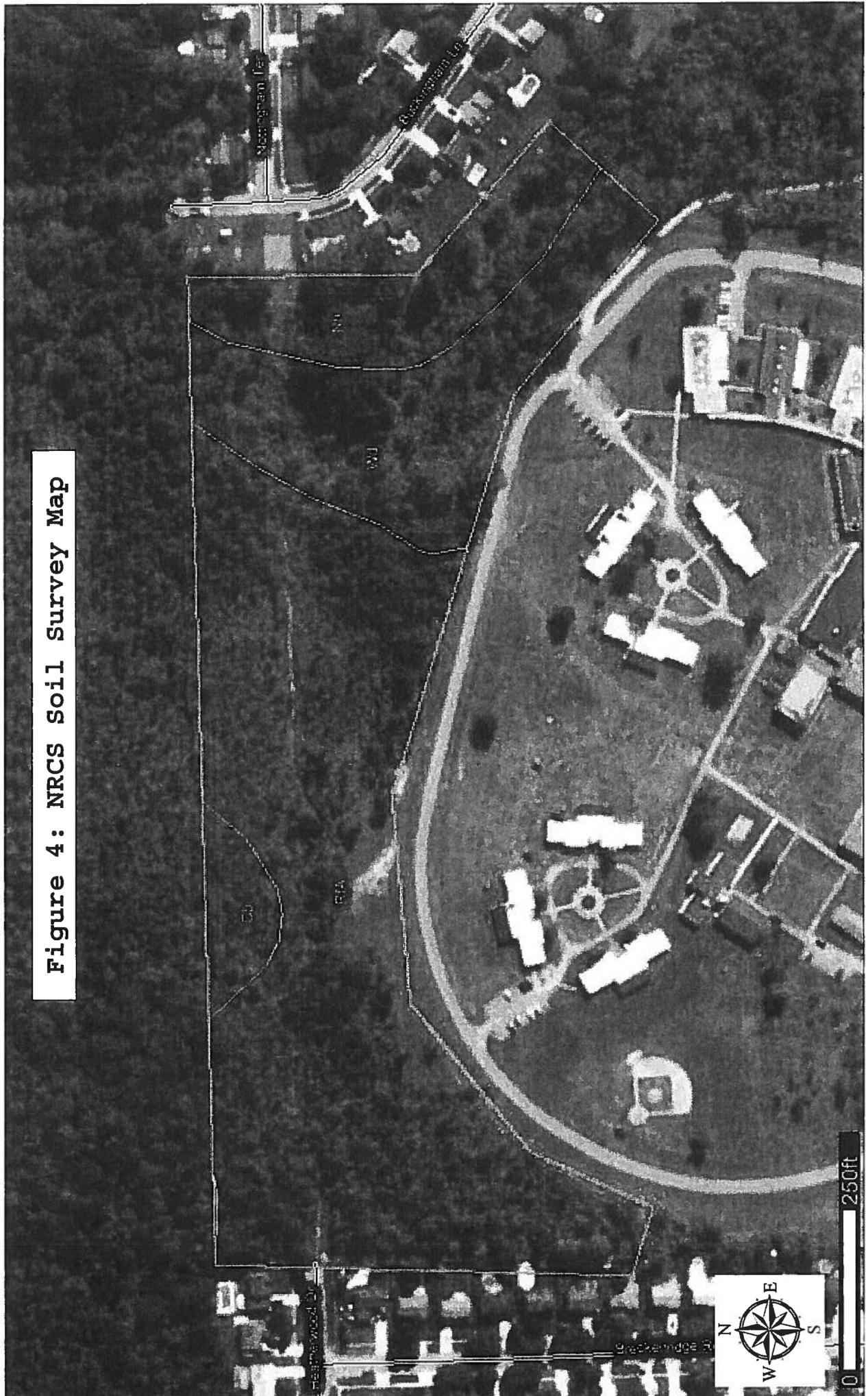
Figure 2: National Wetlands Inventory Map



Figure 3: NYSDEC Freshwater Wetlands Map



**Figure 4: NRCS Soil Survey Map**



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Sherwood Meadows City/County: Erie Sampling Date: 05/17/13

Applicant/Owner: Dato Development State: NY Sampling Point: A2U1

Investigator(s): D. Wilson & R. Feickert Section, Township, Range: Hamburg

Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_

Slope (%): 3 - 8 Lat: 42° 54' N Long: 78° 50' W Datum: \_\_\_\_\_

Soil Map Unit Name: Darien-Remsen-Angola NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)

Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_

Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)   	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1)                      ___ Water-Stained Leaves (B9) ___ High Water Table (A2)                      ___ Aquatic Fauna (B13) ___ Saturation (A3)                              ___ Marl Deposits (B15) ___ Water Marks (B1)                              ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2)                      ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3)                              ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4)                              ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5)                              ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7)                      ___ Other (Explain in Remarks) ___ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
--	---

<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
---	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
**No standing water. Up-slope from Wetland.**

**VEGETATION – Use scientific names of plants.**

Sampling Point: A2U1

	Absolute % Cover	Dominant Species?	Indicator Status															
<b>Tree Stratum</b> (Plot size: <u>30 ft</u> )																		
1. <u>Quercus rubra</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)  Total Number of Dominant Species Across All Strata: <u>8</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>62</u> (A/B)														
2. <u>Acer rubrum</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>															
3. <u>Malus pumila</u>	<u>5</u>		<u>UPL</u>															
4. <u>Ulmus americana</u>	<u>5</u>		<u>FACW</u>															
5. _____																		
6. _____																		
7. _____																		
	<u>45</u>			<b>Prevalence Index worksheet:</b> <table style="width:100%; border:none;"> <tr> <td style="text-align:right;">Total % Cover of:</td> <td style="text-align:right;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>5</u></td> <td>x 2 = <u>10</u></td> </tr> <tr> <td>FAC species <u>80</u></td> <td>x 3 = <u>240</u></td> </tr> <tr> <td>FACU species <u>60</u></td> <td>x 4 = <u>240</u></td> </tr> <tr> <td>UPL species <u>5</u></td> <td>x 5 = <u>25</u></td> </tr> <tr> <td>Column Totals: <u>150</u></td> <td>(A) <u>515</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.43</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>5</u>	x 2 = <u>10</u>	FAC species <u>80</u>	x 3 = <u>240</u>	FACU species <u>60</u>	x 4 = <u>240</u>	UPL species <u>5</u>	x 5 = <u>25</u>	Column Totals: <u>150</u>	(A) <u>515</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>5</u>	x 2 = <u>10</u>																	
FAC species <u>80</u>	x 3 = <u>240</u>																	
FACU species <u>60</u>	x 4 = <u>240</u>																	
UPL species <u>5</u>	x 5 = <u>25</u>																	
Column Totals: <u>150</u>	(A) <u>515</u> (B)																	
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft</u> )																		
1. <u>Rhamnus cathartica</u>	<u>35</u>	<u>Y</u>	<u>FAC</u>															
2. <u>Cornus racemosa</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>															
3. <u>Quercus rubra</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>															
4. _____																		
5. _____																		
6. _____																		
7. _____																		
	<u>55</u>																	
<b>Herb Stratum</b> (Plot size: <u>5 ft</u> )																		
1. <u>Potentilla simplex</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)														
2. <u>Solidago rugosa</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>															
3. <u>Rhamnus cathartica</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>															
4. <u>Poa pratensis</u>	<u>5</u>		<u>FACU</u>															
5. _____																		
6. _____																		
7. _____																		
8. _____																		
9. _____																		
10. _____																		
11. _____																		
12. _____																		
	<u>50</u>																	
<b>Woody Vine Stratum</b> (Plot size: <u>30 ft</u> )																		
1. _____				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
2. _____																		
3. _____																		
4. _____																		
	<u>0</u>			<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>														

Remarks: (Include photo numbers here or on a separate sheet.)  
**Dominance test skewed by abundant FAC vegetation.**

**SOIL**

Sampling Point: A2U1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0 - 9	10YR 3/2	100					Sandy clay loam	
9 - 16	2.5Y 5/3	50	5Y 6/2	30	D	M	Loamy clay	
			10YR 5/8	20	RM	M		

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No X

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Sherwood Meadows City/County: Erie Sampling Date: 05/17/13

Applicant/Owner: Dato Development State: NY Sampling Point: A2W2

Investigator(s): D. Wilson & R. Feickert Section, Township, Range: Hamburg

Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_

Slope (%): 0 - 3 Lat: 42° 54' N Long: 78° 50' W Datum: \_\_\_\_\_

Soil Map Unit Name: Darien-Remsen-Angola NWI classification: PFO1B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)

Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_

Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	If yes, optional Wetland Site ID: <u>Wetland A</u>
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	

Remarks: (Explain alternative procedures here or in a separate report.)  
Stream- minor floodplain

**HYDROLOGY**

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<u>Primary Indicators (minimum of one is required; check all that apply)</u>	
<input checked="" type="checkbox"/> Surface Water (A1)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	___ Moss Trim Lines (B16)
___ Water Marks (B1)	___ Dry-Season Water Table (C2)
___ Sediment Deposits (B2)	___ Crayfish Burrows (C8)
___ Drift Deposits (B3)	___ Saturation Visible on Aerial Imagery (C9)
___ Algal Mat or Crust (B4)	___ Stunted or Stressed Plants (D1)
___ Iron Deposits (B5)	___ Geomorphic Position (D2)
___ Inundation Visible on Aerial Imagery (B7)	___ Shallow Aquitard (D3)
___ Sparsely Vegetated Concave Surface (B8)	___ Microtopographic Relief (D4)
___ Water-Stained Leaves (B9)	___ FAC-Neutral Test (D5)
___ Aquatic Fauna (B13)	
___ Marl Deposits (B15)	
___ Hydrogen Sulfide Odor (C1)	
___ Oxidized Rhizospheres on Living Roots (C3)	
___ Presence of Reduced Iron (C4)	
___ Recent Iron Reduction in Tilled Soils (C6)	
___ Thin Muck Surface (C7)	
___ Other (Explain in Remarks)	

<b>Field Observations:</b>		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Surface Water Present? Yes <input checked="" type="checkbox"/> No _____	Depth (inches): <u>0 - 1/4</u>	
Water Table Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present? Yes <input checked="" type="checkbox"/> No _____	Depth (inches): _____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**VEGETATION – Use scientific names of plants.**

Sampling Point: A2W2

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Fraxinus pennsylvanica</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Cornus racemosa</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>
2. <u>Viburnum lentago</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>
3. <u>Fraxinus pennsylvanica</u>	<u>5</u>	_____	<u>FACW</u>
4. <u>Nyssa sylvatica</u>	<u>5</u>	_____	<u>FAC</u>
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Herb Stratum (Plot size: <u>5 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Glyceria melicaria</u>	<u>40</u>	<u>Y</u>	<u>OBL</u>
2. <u>Agrimonia pubescens</u>	<u>10</u>	_____	<u>FACU</u>
3. <u>Geum laciniatum</u>	<u>10</u>	_____	<u>FACW</u>
4. <u>Lysimachia nummularia</u>	<u>10</u>	_____	<u>FACW</u>
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

Woody Vine Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is  $\leq 3.0^1$

Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**

**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes  No

Remarks: (Include photo numbers here or on a separate sheet.)

**SOIL**

Sampling Point: A2W2

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0 - 10	2.5Y 4/1	97	10YR 4/6	3	RM	M	Loamy Clay	
10 - 16	2.5Y 4/1	90	10YR 5/8	10	RM	M	Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

**Remarks:**

**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Sherwood Meadows City/County: Erie Sampling Date: 05/17/13

Applicant/Owner: Dato Development State: NY Sampling Point: A6W3

Investigator(s): D. Wilson & R. Feickert Section, Township, Range: Hamburg

Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_

Slope (%): 0 - 3 Lat: 42° 54' N Long: 78° 50' W Datum: \_\_\_\_\_

Soil Map Unit Name: Darien-Remsen-Angola NWI classification: PFO1B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)

Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_

Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No _____	is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____	If yes, optional Wetland Site ID: _____	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____		

Remarks: (Explain alternative procedures here or in a separate report.)  
**Area of old stream bed.**

**HYDROLOGY**

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Shallow Aquitard (D3)
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input checked="" type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b>		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	
Water Table Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**VEGETATION – Use scientific names of plants.**

Sampling Point: A6W3

	Absolute % Cover	Dominant Species?	Indicator Status		
<b>Tree Stratum</b> (Plot size: <u>30 ft</u> )					
1. <u>Fraxinus pennsylvanica</u>	<u>5</u>	<u>Y</u>	<u>FACW</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: _____ (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)	
2. <u>Salix nigra</u>	<u>5</u>	<u>Y</u>	<u>FACW</u>		
3. <u>Populus deltoides</u>	<u>2</u>		<u>FAC</u>		
4. _____					
5. _____					
6. _____					
7. _____					
	<u>12</u>	= Total Cover		<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____	
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft</u> )					
1. <u>Cornus amomum</u>	<u>45</u>	<u>Y</u>	<u>FACW</u>		
2. <u>Populus tremuloides</u>	<u>10</u>		<u>FACU</u>		
3. <u>Rosa multiflora</u>	<u>10</u>		<u>FACU</u>		
4. _____					
5. _____					
6. _____					
7. _____					
	<u>65</u>	= Total Cover			
<b>Herb Stratum</b> (Plot size: <u>5 ft</u> )					
1. <u>Glyceria melicaria</u>	<u>30</u>	<u>Y</u>	<u>OBL</u>	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. <u>Lysimachia nummularia</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>		
3. <u>Toxicodendron radicans</u>	<u>10</u>		<u>FAC</u>		
4. <u>Equisetum arvense</u>	<u>10</u>		<u>FAC</u>		
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
	<u>70</u>	= Total Cover			
<b>Woody Vine Stratum</b> (Plot size: <u>30 ft</u> )					
1. <u>Vitis riparia</u>	<u>5</u>	<u>Y</u>	<u>FACW</u>	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
2. _____					
3. _____					
4. _____					
	<u>5</u>	= Total Cover			
<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____					
Remarks: (Include photo numbers here or on a separate sheet.) <b>Balance unvegetated.</b>					

**SOIL**

Sampling Point: A6W3

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0 - 10	2.5Y 4/2	98	10YR 5/6	2	RM	M	Clay	Shale sediment
10 - 16	5Y 5/1	95	10YR 4/6	5	RM	M	Clay	Larger shale sediment

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

**Remarks:**

**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Sherwood Meadows City/County: Erie Sampling Date: 05/17/13

Applicant/Owner: Dato Development State: NY Sampling Point: A6U4

Investigator(s): D. Wilson & R. Feickert Section, Township, Range: Hamburg

Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_

Slope (%): 0 - 3 Lat: 42° 54' N Long: 78° 50' W Datum: \_\_\_\_\_

Soil Map Unit Name: Darien-Remsen-Angola NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)

Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_

Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____ No <u>X</u>	
Wetland Hydrology Present?	Yes _____ No <u>X</u>	
If yes, optional Wetland Site ID: _____		

Remarks: (Explain alternative procedures here or in a separate report.)

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		<b>Secondary Indicators (minimum of two required)</b>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b>		Wetland Hydrology Present? Yes _____ No <u>X</u>
Surface Water Present? Yes _____ No <u>X</u>	Depth (inches): _____	
Water Table Present? Yes _____ No <u>X</u>	Depth (inches): _____	
Saturation Present? Yes _____ No <u>X</u>	Depth (inches): _____	
(includes capillary fringe)		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**VEGETATION – Use scientific names of plants.**

Sampling Point: A6U4

	Absolute % Cover	Dominant Species?	Indicator Status		
<b>Tree Stratum</b> (Plot size: <u>30 ft</u> )					
1. <u>Populus tremuloides</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>6</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33</u> (A/B)	
2. <u>Quercus rubra</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>		
3. <u>Fagus grandifolia</u>	<u>5</u>		<u>FACU</u>		
4. _____					
5. _____					
6. _____					
7. _____					
	<u>30</u>	= Total Cover		<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>70</u> x 3 = <u>210</u> FACU species <u>120</u> x 4 = <u>480</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>190</u> (A) <u>690</u> (B)  Prevalence Index = B/A = <u>3.63</u>	
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft</u> )					
1. <u>Rhamnus cathartica</u>	<u>35</u>	<u>Y</u>	<u>FAC</u>		
2. <u>Cornus racemosa</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>		
3. <u>Rosa multiflora</u>	<u>10</u>		<u>FACU</u>		
4. _____					
5. _____					
6. _____					
7. _____					
	<u>75</u>	= Total Cover			
<b>Herb Stratum</b> (Plot size: <u>5 ft</u> )					
1. <u>Potentilla simplex</u>	<u>45</u>	<u>Y</u>	<u>FACU</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. <u>Fragaria virginiana</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>		
3. <u>Poa pratensis</u>	<u>15</u>		<u>FACU</u>		
4. <u>Rhamnus cathartica</u>	<u>5</u>		<u>FAC</u>		
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
	<u>85</u>	= Total Cover			
<b>Woody Vine Stratum</b> (Plot size: <u>30 ft</u> )					
1. _____				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
2. _____					
3. _____					
4. _____					
	<u>0</u>	= Total Cover		<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>	
Remarks: (Include photo numbers here or on a separate sheet.)					

**SOIL**

Sampling Point: A6U4

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0 - 12	2.5Y 3/2	100					Loamy clay	
12 - 16	2.5Y 5/3	95	10YR 5/6	5	RM	M	Clay	

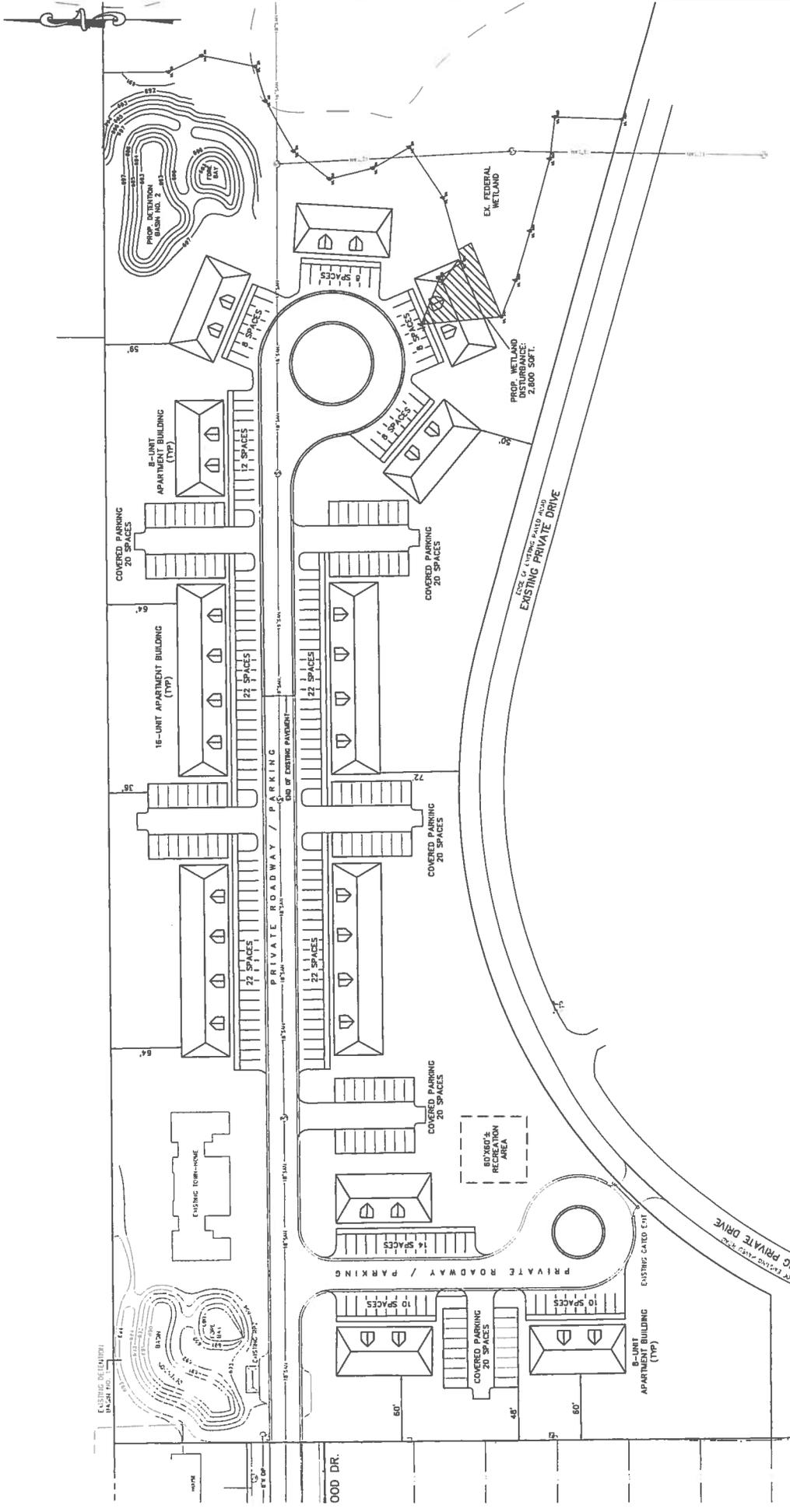
<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils <sup>3</sup> :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)	
<input type="checkbox"/> Histic Epipedon (A2)		<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)	
<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)		<input type="checkbox"/> Other (Explain in Remarks)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u>
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Remarks:



SHEET NO. 1  
 AREA: 14.89 ACRES  
 ZONING: RESIDENTIAL-3  
 MINIMUM UNIT SIZE: 3,500 SQFT  
 MAX. UNIT YIELD: 183  
 UNITS PROVIDED: 128  
 REQUIRED PARKING SPACES: 158  
 PARKING SPACES PROVIDED: 208

SHEPHERD MEADOWS APARTMENTS DAVYD BERENSON, LLC TOWN OF MANSFIELD		SHEET NO. 1 OF 1
NUSSEBAUMER & CLARKE, INC. A PROFESSIONAL CORPORATION PROFESSIONAL ENGINEERING & LAND SURVEYING IN THE STATE OF NEW YORK CORPORATE NO. _____		CHECKED BY: _____ DRAWN BY: AG DATE: 11/1/2012 JOB NO. 0505-0076 DRAWING NO. 0505-0076-3
REVISIONS NO. DATE COMMENT 1 11/01/12 ADDED REVISION 2 11/05/12 ADDED WETLAND INFO		NUSSEBAUMER & CLARKE, INC. 100 WEST 10TH STREET SUITE 200 MANSFIELD, OH 44870 TEL: 419-524-1100 FAX: 419-524-1101 WWW.NUSSEBAUMER-CLARKE.COM
UNAUTHORIZED ALTERATION OR REVISION TO THIS DRAWING IS PROHIBITED BY SECTION 2601 OF THE ENGINEERING LAW OF THE STATE OF NEW YORK		



BEFORE YOU SEAL, OR SEAL, OR SEAL IN WITNESS OF OFFICIAL  
 ACTION, YOU MUST FILE THIS SEAL WITH THE STATE OF NEW YORK