Neenah
Parks & Recreation

Creating Community
Through People, Parks & Programs

NUTRIENT MANAGEMENT PLAN

By
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Superintendent of Parks
City of Neenah, Wisconsin

March 2, 2012

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The order of and material presented in this report are specified in the WDNR NR 151 Section 1100 Interim Turf Nutrient Management Technical Standards date May 2006 (Appendix A).

Site Narrative Description

Memorial Park is a large, multi-purpose community park located in the southwest section of the city of Neenah. At just over 105-acres, it is the largest park in the city of Neenah. The park is bounded by Tullar Road and Neenah High School along the east, Gay Drive along the south, Pendleton and farmland along the west, and Appleblossom Drive and Neenah High School along the north. The park contains eight high use athletic fields consisting of five soccer fields and three softball diamonds. A twenty-five acre woods is centrally located in the park with oak and maple being the predominant species. Asphalt walking trails meander through and around all areas of the park.

Southview Park is a medium-sized community park located in the southeast section of the city of Neenah. This 27-acre park is a highly sports-organized, with a ten-acre forested area comprised predominantly of hickory is located in the east central portion of the park. The park is bordered by Bell Street to the north, Marathon Avenue to the west, Parkwood Drive to the south, and Bruce Street to the east. This park contains four ball diamonds, one soccer field, a basketball court and six lighted tennis courts. Asphalt walking trails surround and bisect the park.

No drain tile or storm sewer catch basins exist on or near any of the fertilized athletic fields in either park. All athletic fields are surrounded by at least five-foot of non-fertilized turf area that buffers fertilized areas from any non-porous surface. They all are relatively flat with all surface drainage directed to surrounding turf areas. One exception is soccer field 4 that was rebuilt with a 2% crown in 2001. Originally, the field was very uneven and was unplayable after minor rainfalls. Due to complaints from the soccer club, the field's crown was reduced in 2003 to one percent. Most of the soccer fields do have surface water that will collect in small pockets after snowmelt and heavy rains. Most of this is due to compaction from over-play in these areas, although some small natural depressions do exist.

Phosphorous fertilizer has not been used on any athletic field since 2002. Soil samples taken at that time indicated optimum to very high levels of phosphorous. Although much of that P may have been in an unusable form, the Neenah Parks and Recreation Department (NPRD) made the choice to discontinue its use. Because of this, NPRD has been aggressive with our cultural and maintenance practices. Turfgrass is mowed at a height of 3" every three to four days and the clippings are left on the fields. Consistent soil moisture is supplemented by underground irrigation and sprinklers on the Memorial Park soccer fields. Additional moisture for Memorial Park's ball diamonds and all of Southview Park's athletic fields is supplemented using the department's water reel. Other cultural practices include core aerating (3 – 5 times/year), over-seeding during the season and after the season, rotating over-used fields out of playfield, and effective timing of fertilizer and herbicide applications.

Site Maps

The site maps required for this nutrient management plan were obtained from the USDA Natural Resources Conservation Service web site. These include soil, topographic, slope, hydrologic, depth to restrictions and depth to water table maps. They appear in this plan as figures 1A – 6A for Memorial Park and 1B-6B for Southview Park.

Four soil series, each with a single phase, are found in Memorial Park (Fig. 1A). The areas around the park are at the same elevation as the park itself (Fig. 2A). The park is generally level to gently sloping, with representative slopes from zero to five percent (Fig. 3A). All soils in Memorial Park have a hydrological rating of C (Fig. 4A), signifying that they have a slow infiltration rate when thoroughly wet. None of the soils in the park are recognized as having restrictive layers within 200 cm (78 inches) of their surfaces (Fig. 5A). If restrictive layers were present, they would seriously impede drainage. None of the athletics fields have any serious drainage issues, other than in areas of with small pockets of soil compaction from wear (play) and small natural depressions. These only tend to be saturated seasonally, such as after the spring snow melt or during extended periods of heavy rains.

Three soil series, each with a single phase, are found in Southview Park (Fig. 1B). The areas around the park are approximately at the same elevations as the park (Fig. 2B). The park is generally level to gently sloping, with representative slopes from zero to five percent (Fig. 3B). All soils in Southview Park have a hydrological rating of C (Fig. 4B), signifying that they have a slow infiltration rate when thoroughly wet. None of the soils in the park are recognized as having restrictive layers within 200 cm (78 inches) of their surfaces (Fig. 5B). If restrictive layers were present, they would seriously impeded drainage. None of the athletics fields have any serious drainage issues, other than in areas of with small pockets of soil compaction from wear (play) and small natural depressions. These only tend to be saturated seasonally, such as after the spring snow melt or during extended periods of heavy rains.

MEMORIAL PARK

FIG. 1A

Soil Map—Winnebago County, Wisconsin

Natural Resources Conservation Service

Web Soil Survey 2.0
National Cooperative Soil Survey

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MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Units

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other

Special Line Features
- Gully
- Short Steep Slope
- Other

Political Features

Municipalities
- Cities
- Urban Areas

Water Features
- Oceans
- Streams and Canals

Transportation
- Rails

Roads
- Interstate Highways
- US Routes
- State Highways
- Local Roads
- Other Roads

MAP INFORMATION

Original soil survey map sheets were prepared at publication scale. Viewing scale and printing scale, however, may vary from the original. Please rely on the bar scale on each map sheet for proper map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 16N

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Winnebago County, Wisconsin
Survey Area Data: Version 5, Feb 14, 2007

Date(s) aerial images were photographed: 1992

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Fig. 1A

Page 4

Map Unit Legend

Winnebago County, Wisconsin (WI139)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
KnB	Kewaunee silt loam, 2 to 6 percent slopes	59.3	58.8%
NhA	Neenah silty clay loam, 0 to 3 percent slopes	17.1	16.9%
OmB	Omro clay loam, 2 to 6 percent slopes	1.1	1.1%
WnB	Winneconne silty clay loam, 1 to 4 percent slopes	23.5	23.3%
Totals for Area of Interest (AOI)		101.0	100.0%

FIG 1A

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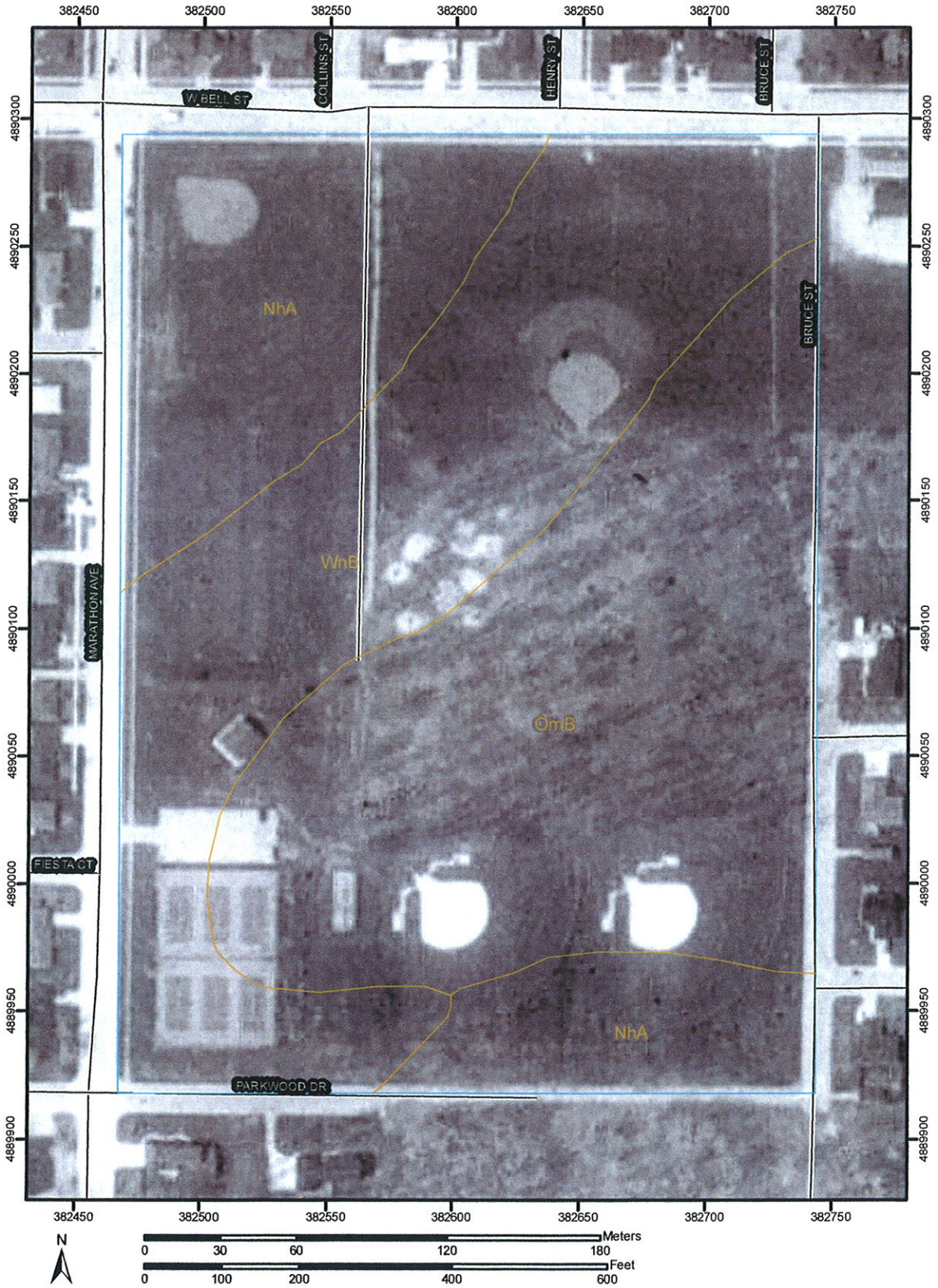
Soil Map–Winnebago County, Wisconsin

SOUTHVIEW PARK



USDA Natural Resources Conservation Service

Web Soil Survey 2.0
National Cooperative Soil Survey

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FIG. 1B

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MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Units

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other

Special Line Features
- Gully
- Short Steep Slope
- Other

Political Features

Municipalities
- Cities
- Urban Areas

Water Features
- Oceans
- Streams and Canals

Transportation
- Rails

Roads
- Interstate Highways
- US Routes
- State Highways
- Local Roads
- Other Roads

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FIG. 18

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Map Unit Legend

Winnebago County, Wisconsin (WI139)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
NhA	Neenah silty clay loam, 0 to 3 percent slopes	6.6	25.1%
OmB	Omro clay loam, 2 to 6 percent slopes	10.6	40.4%
WnB	Winneconne silty clay loam, 1 to 4 percent slopes	9.0	34.4%
Totals for Area of Interest (AOI)		26.2	100.0%

MEMORIAL PARK

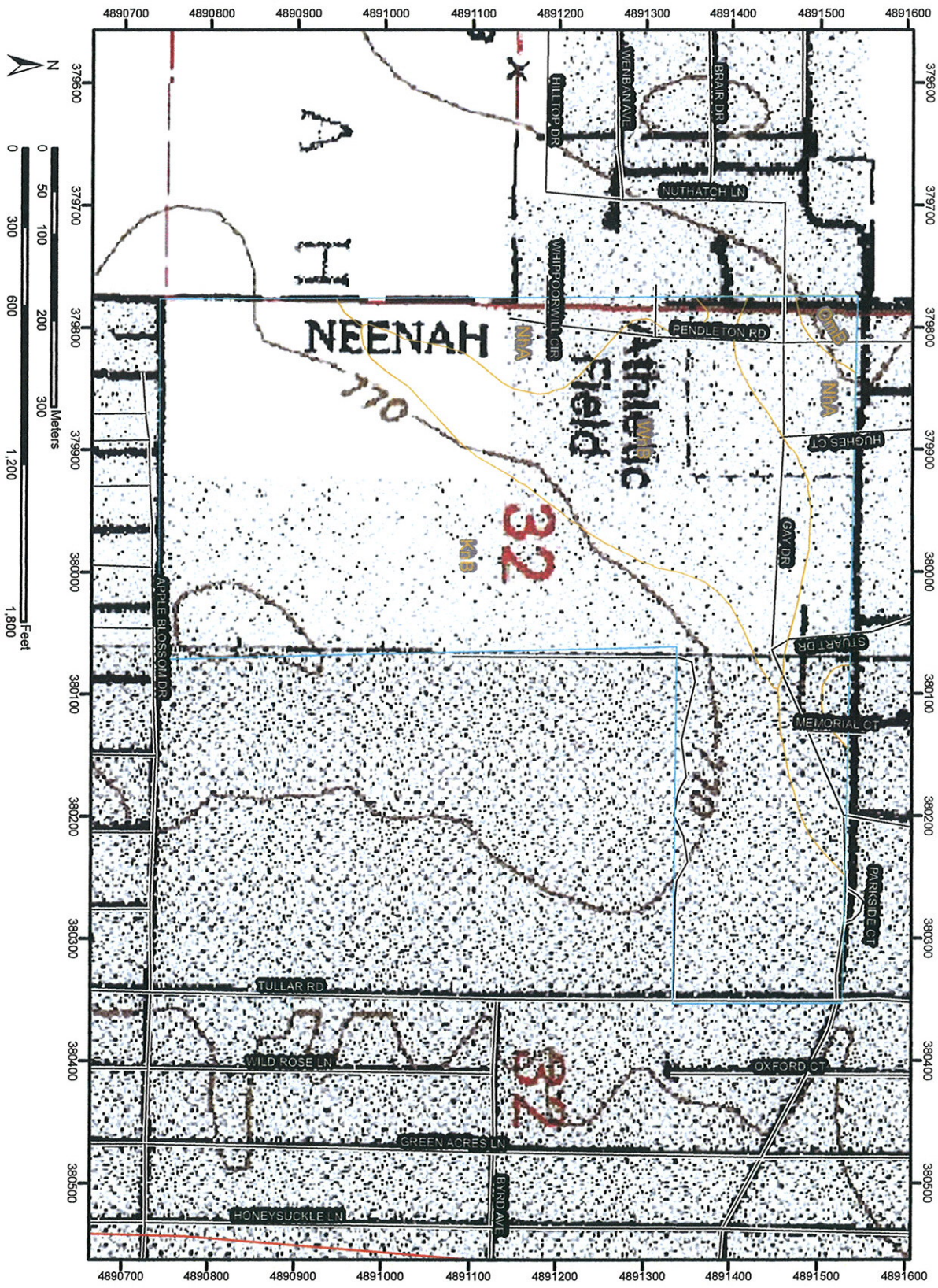

FIG. 2A

Soil Map–Winnebago County, Wisconsin

USDA Natural Resources Conservation Service

Web Soil Survey 2.0
National Cooperative Soil Survey

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SOUTHVIEW PARK

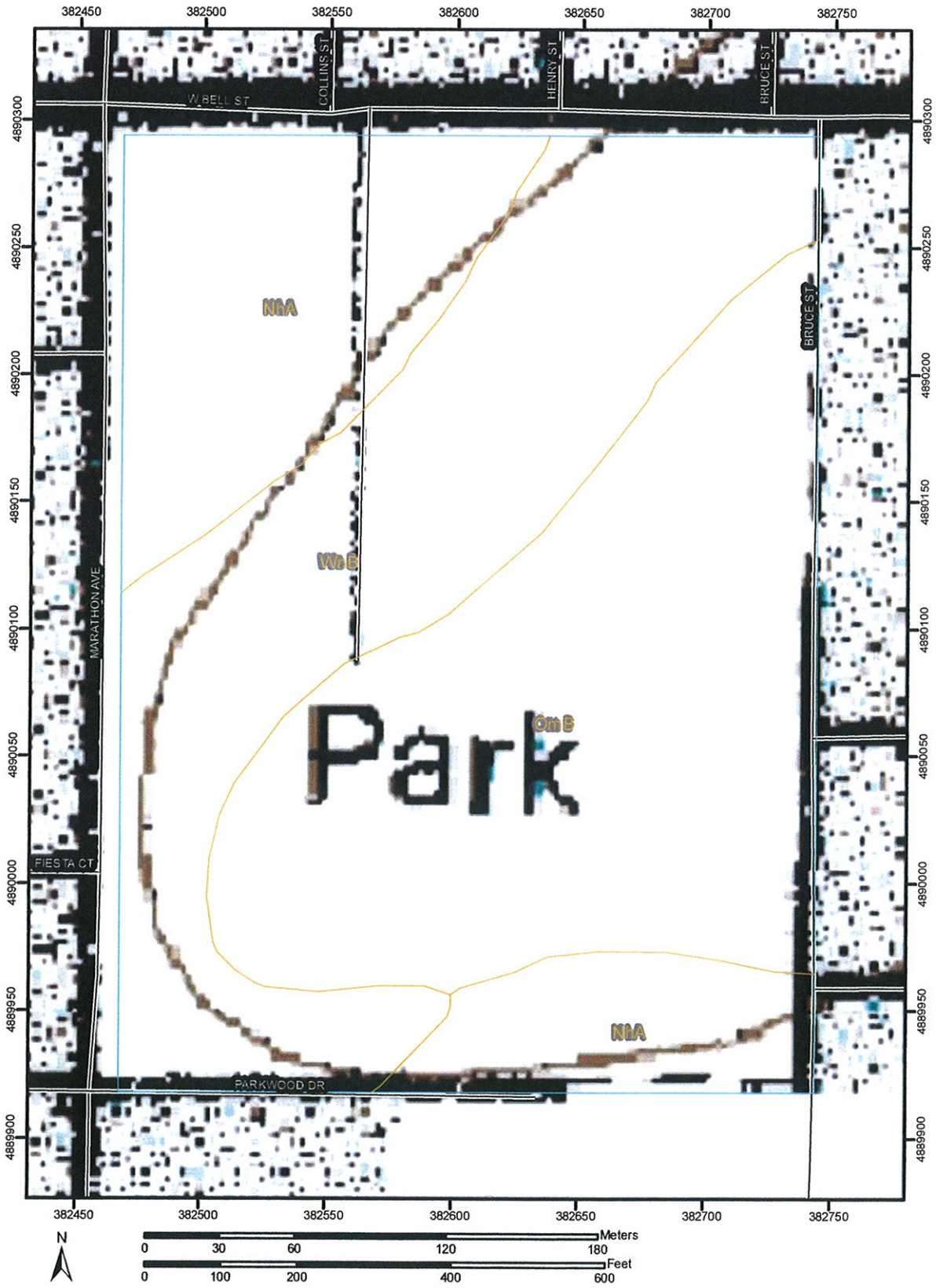
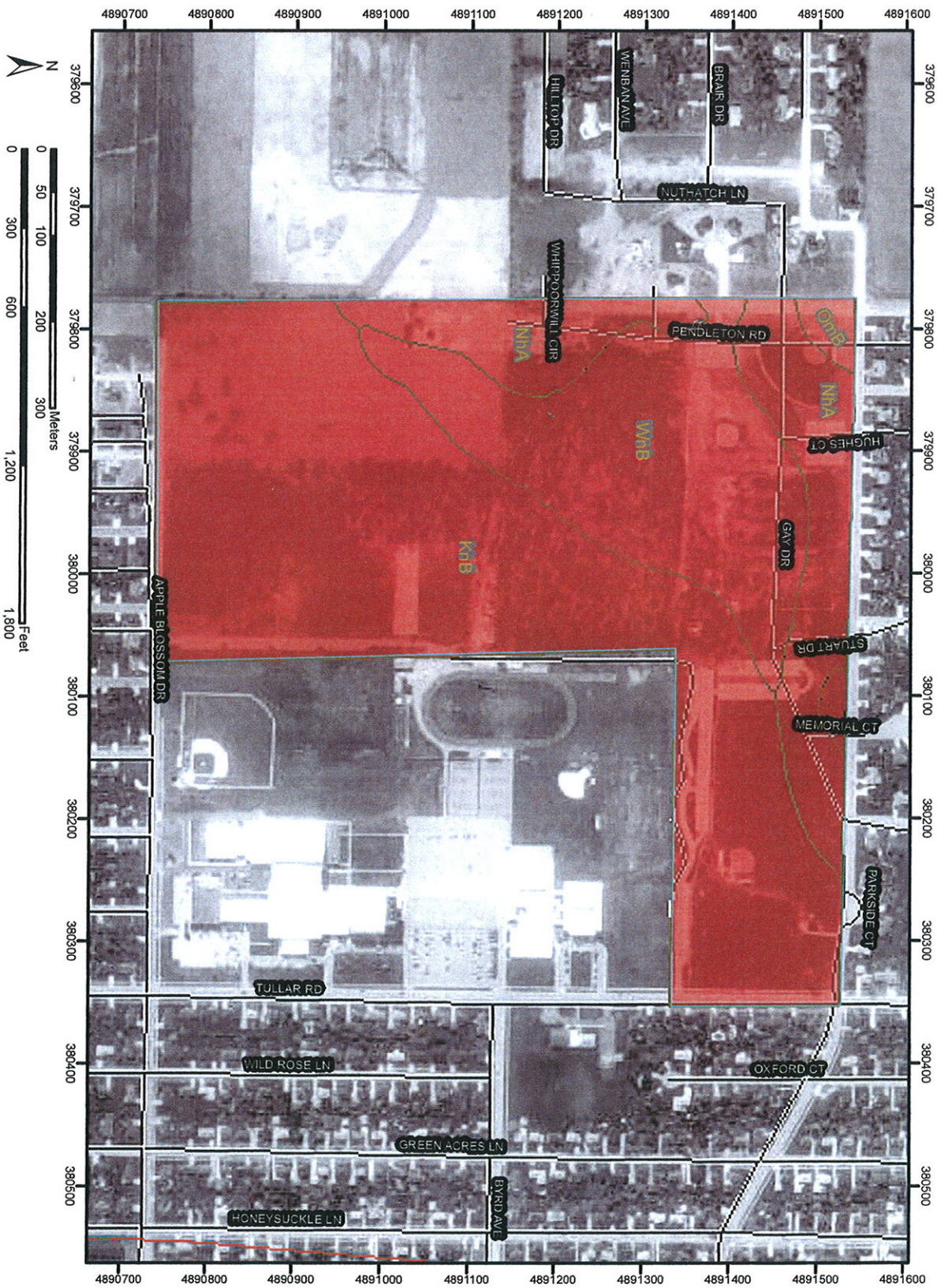


FIG. 2B

MEMORIAL PARK



Representative Slope–Winnebago County, Wisconsin

USDA Natural Resources Conservation Service

Web Soil Survey 2.0
National Cooperative Soil Survey

11/28/2007
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FIG. 3A

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Units

Soil Ratings
- 0 - 5
- 5 - 15
- 15 - 30
- 30 - 45
- 45 - 60
- Not rated or not available

Political Features

Municipalities
- Cities
- Urban Areas

Water Features
- Oceans
- Streams and Canals

Transportation
- Rails

Roads
- Interstate Highways
- US Routes
- State Highways
- Local Roads
- Other Roads

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Fig. 3A

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Representative Slope

Representative Slope— Summary by Map Unit — Winnebago County, Wisconsin				
Map unit symbol	**Map unit name**	**Rating (percent)**	**Acres in AOI**	**Percent of AOI**
KnB	Kewaunee silt loam, 2 to 6 percent slopes	4.0	59.3	58.8%
NhA	Neenah silty clay loam, 0 to 3 percent slopes	1.5	17.1	16.9%
OmB	Omro clay loam, 2 to 6 percent slopes	4.0	1.1	1.1%
WnB	Winneconne silty clay loam, 1 to 4 percent slopes	2.5	23.5	23.3%
Totals for Area of Interest (AOI)			101.0	100.0%

Description

Slope gradient is the difference in elevation between two points, expressed as a percentage of the distance between those points.

The slope gradient is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Rating Options

Units of Measure: percent

Aggregation Method: Dominant Component

Component Percent Cutoff: *None Specified*

Tie-break Rule: Higher

Interpret Nulls as Zero: No

FIG. 3A

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Representative Slope–Winnebago County, Wisconsin

SOUTHVIEW PARK

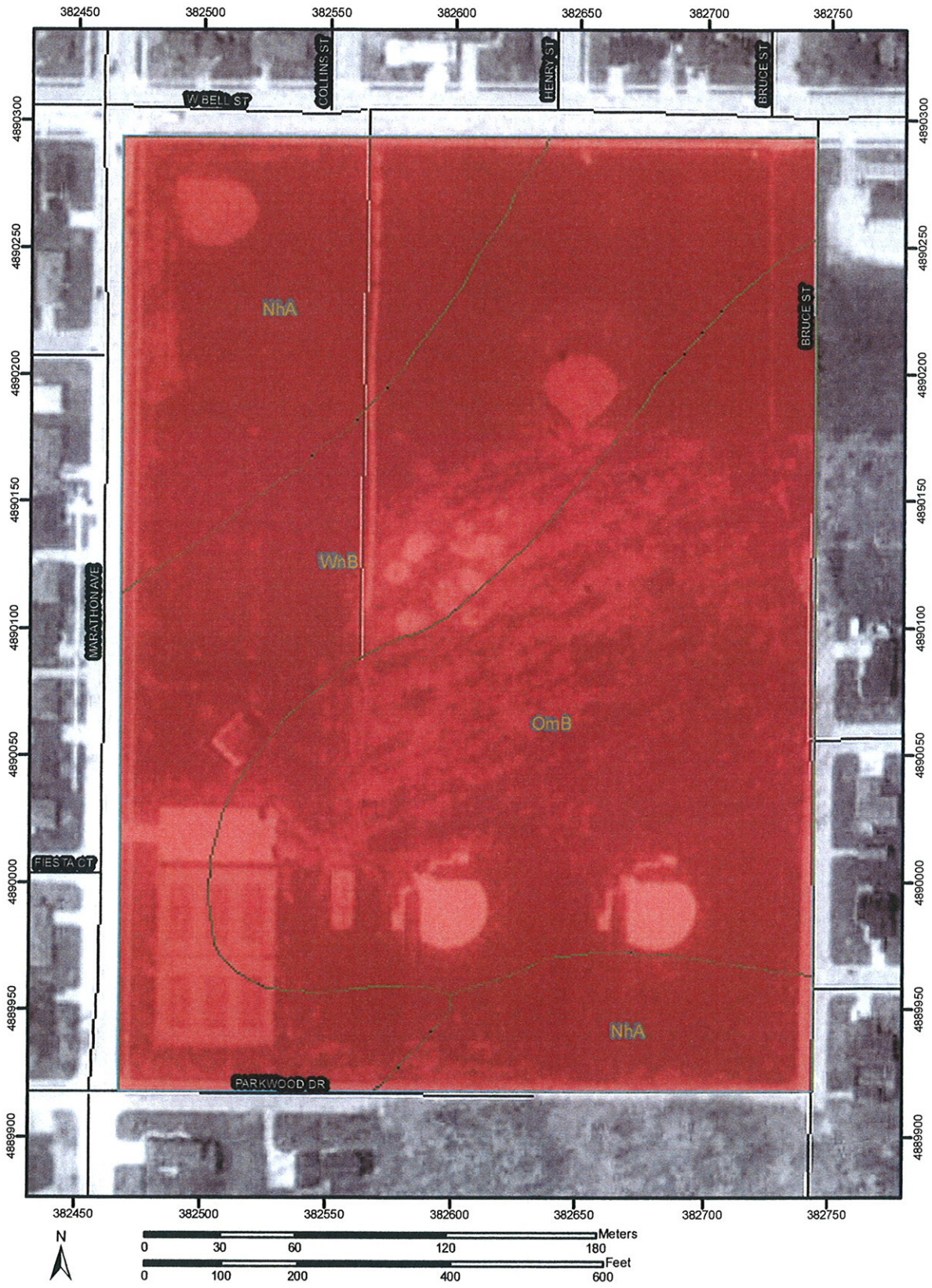

FIG. 3B

FIG. 3B

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Units

Soil Ratings
- 0 - 5
- 5 - 15
- 15 - 30
- 30 - 45
- 45 - 60
- Not rated or not available

Political Features

Municipalities
- Cities
- Urban Areas

Water Features
- Oceans
- Streams and Canals

Transportation
- Rails

Roads
- Interstate Highways
- US Routes
- State Highways
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Representative Slope

Representative Slope— Summary by Map Unit — Winnebago County, Wisconsin				
Map unit symbol	**Map unit name**	**Rating (percent)**	**Acres in AOI**	**Percent of AOI**
NhA	Neenah silty clay loam, 0 to 3 percent slopes	1.5	6.6	25.1%
OmB	Omro clay loam, 2 to 6 percent slopes	4.0	10.6	40.4%
WnB	Winneconne silty clay loam, 1 to 4 percent slopes	2.5	9.0	34.4%
Totals for Area of Interest (AOI)			26.2	100.0%

Description

Slope gradient is the difference in elevation between two points, expressed as a percentage of the distance between those points.

The slope gradient is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Rating Options

Units of Measure: percent

Aggregation Method: Dominant Component

Component Percent Cutoff: *None Specified*

Tie-break Rule: Higher

Interpret Nulls as Zero: No

Fig. 3B

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MEMORIAL PARK

Hydrologic Soil Group–Winnebago County, Wisconsin

Natural Resources Conservation Service

Web Soil Survey 2.0
National Cooperative Soil Survey

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FIG. 4A

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Units

Soil Ratings
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Political Features

Municipalities
- Cities
- Urban Areas

Water Features
- Oceans
- Streams and Canals

Transportation
- Rails

Roads
- Interstate Highways
- US Routes
- State Highways
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FIG. 44

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Hydrologic Soil Group

Hydrologic Soil Group— Summary by Map Unit — Winnebago County, Wisconsin				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
KnB	Kewaunee silt loam, 2 to 6 percent slopes	C	59.3	58.8%
NhA	Neenah silty clay loam, 0 to 3 percent slopes	C	17.1	16.9%
OmB	Omro clay loam, 2 to 6 percent slopes	C	1.1	1.1%
WnB	Winneconne silty clay loam, 1 to 4 percent slopes	C	23.5	23.3%
Totals for Area of Interest (AOI)			101.0	100.0%

FIG. 4A

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Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: *None Specified*

Tie-break Rule: Lower

FIG. 4A

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SOUTHVIEW PARK

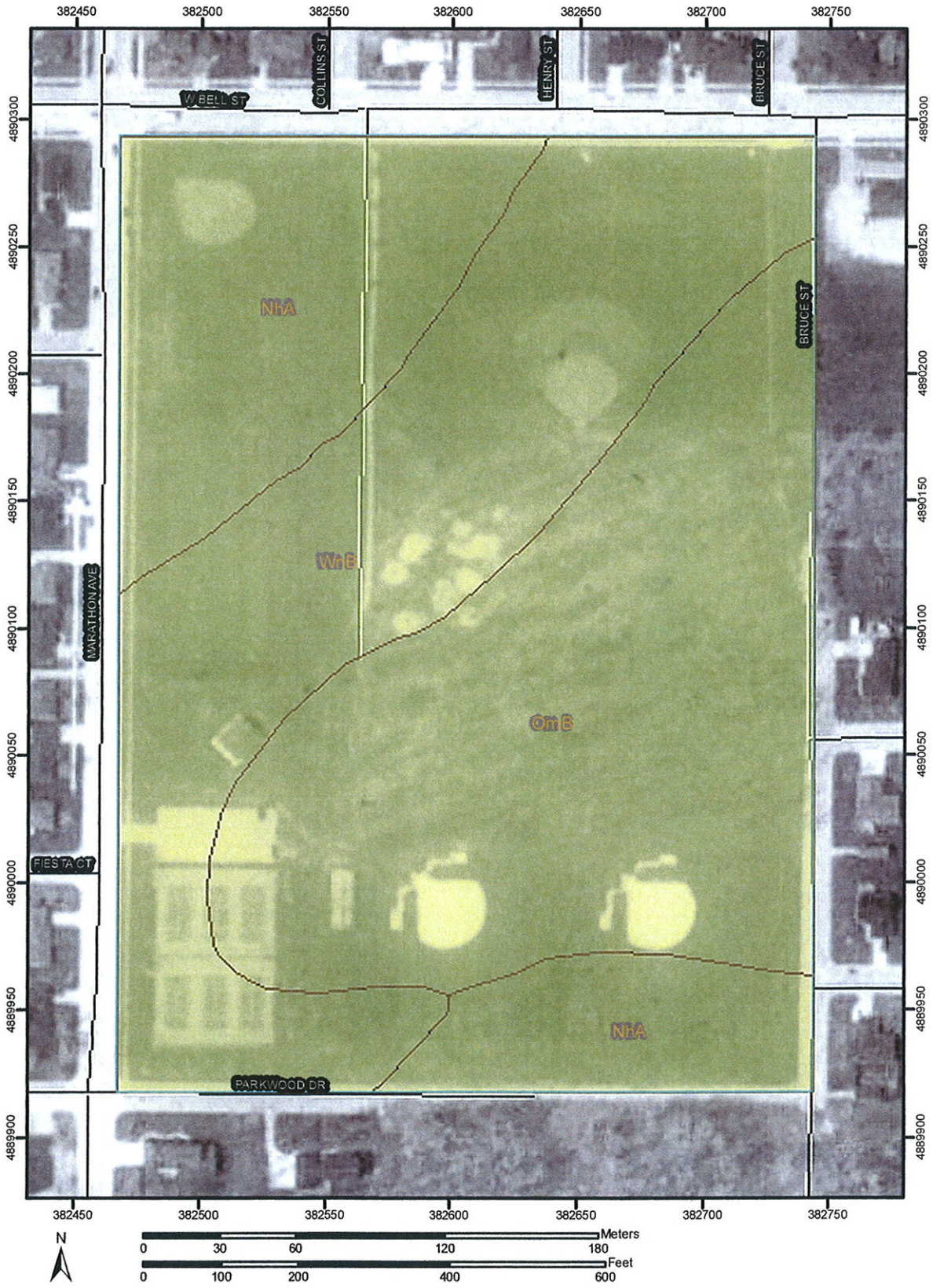

FIG. 4B

Fig. 48

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Units

Soil Ratings
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Political Features

Municipalities
- Cities
- Urban Areas

Water Features
- Oceans
- Streams and Canals

Transportation
- Rails

Roads
- Interstate Highways
- US Routes
- State Highways
- Local Roads
- Other Roads

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Hydrologic Soil Group

Hydrologic Soil Group— Summary by Map Unit — Winnebago County, Wisconsin				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
NhA	Neenah silty clay loam, 0 to 3 percent slopes	C	6.6	25.1%
OmB	Omro clay loam, 2 to 6 percent slopes	C	10.6	40.4%
WnB	Winneconne silty clay loam, 1 to 4 percent slopes	C	9.0	34.4%
Totals for Area of Interest (AOI)			26.2	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: *None Specified*

Tie-break Rule: Lower

FIG. 4B

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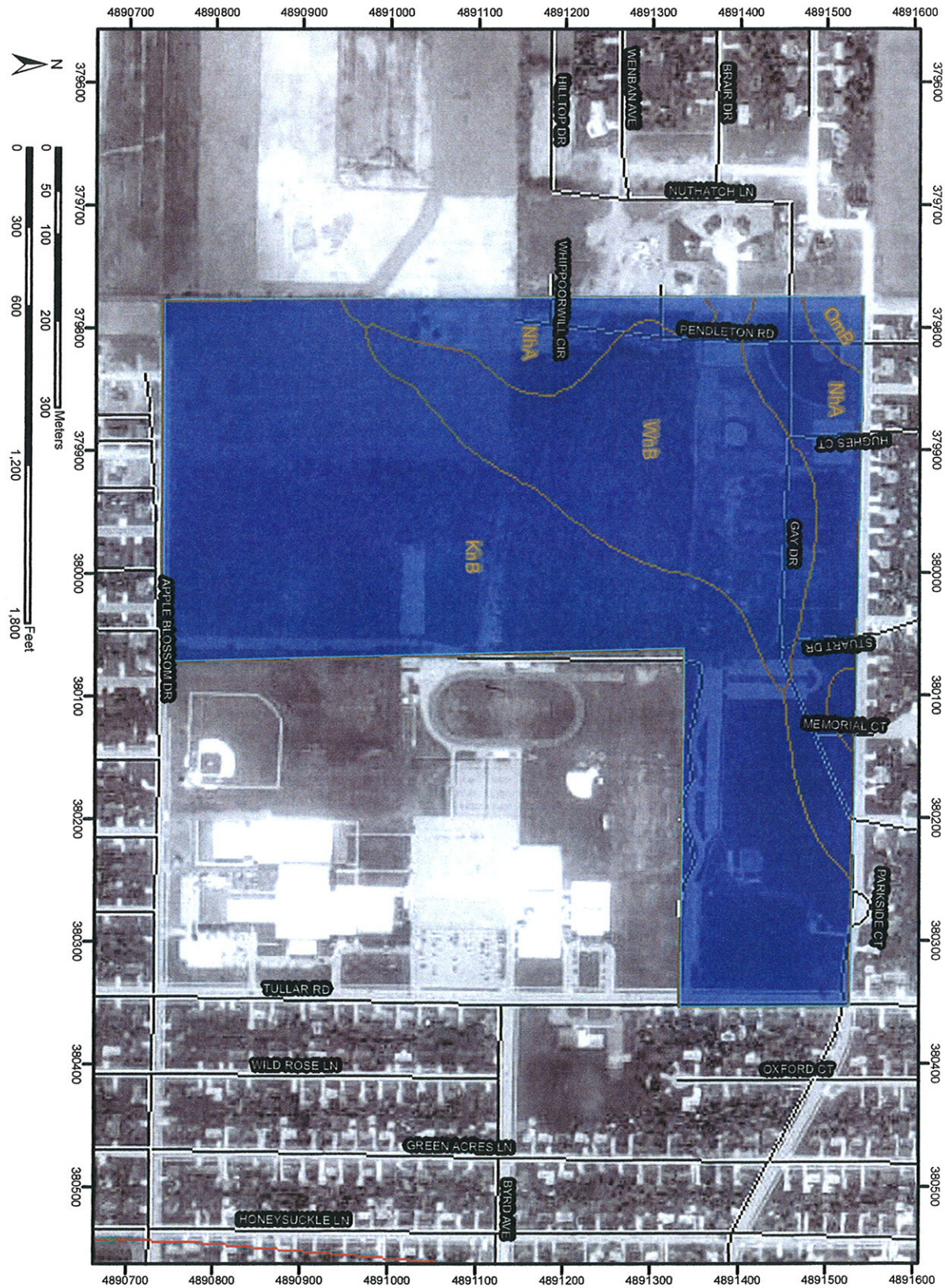
MEMORIAL PARK



Depth to Any Soil Restrictive Layer–Winnebago County, Wisconsin

USDA Natural Resources Conservation Service

Web Soil Survey 2.0
National Cooperative Soil Survey

11/28/2007
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FIG. 5A

Fig. 5A

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Units

Soil Ratings
- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200

Political Features

Municipalities
- Cities
- Urban Areas

Water Features
- Oceans
- Streams and Canals

Transportation
- Rails

Roads
- Interstate Highways
- US Routes
- State Highways
- Local Roads
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Date(s) aerial images were photographed: 1992

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Depth to Any Soil Restrictive Layer

Depth to Any Soil Restrictive Layer— Summary by Map Unit — Winnebago County, Wisconsin				
Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
KnB	Kewaunee silt loam, 2 to 6 percent slopes	>200	59.3	58.8%
NhA	Neenah silty clay loam, 0 to 3 percent slopes	>200	17.1	16.9%
OmB	Omro clay loam, 2 to 6 percent slopes	>200	1.1	1.1%
WnB	Winneconne silty clay loam, 1 to 4 percent slopes	>200	23.5	23.3%
Totals for Area of Interest (AOI)			101.0	100.0%

Description

A "restrictive layer" is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers.

This theme presents the depth to any type of restrictive layer that is described for each map unit. If more than one type of restrictive layer is described for an individual soil type, the depth to the shallowest one is presented. If no restrictive layer is described in a map unit, it is represented by the "> 200" depth class.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Rating Options

Units of Measure: centimeters

Aggregation Method: Dominant Component

Component Percent Cutoff: *None Specified*

Tie-break Rule: Lower

Interpret Nulls as Zero: No

SOUTHVIEW PARK

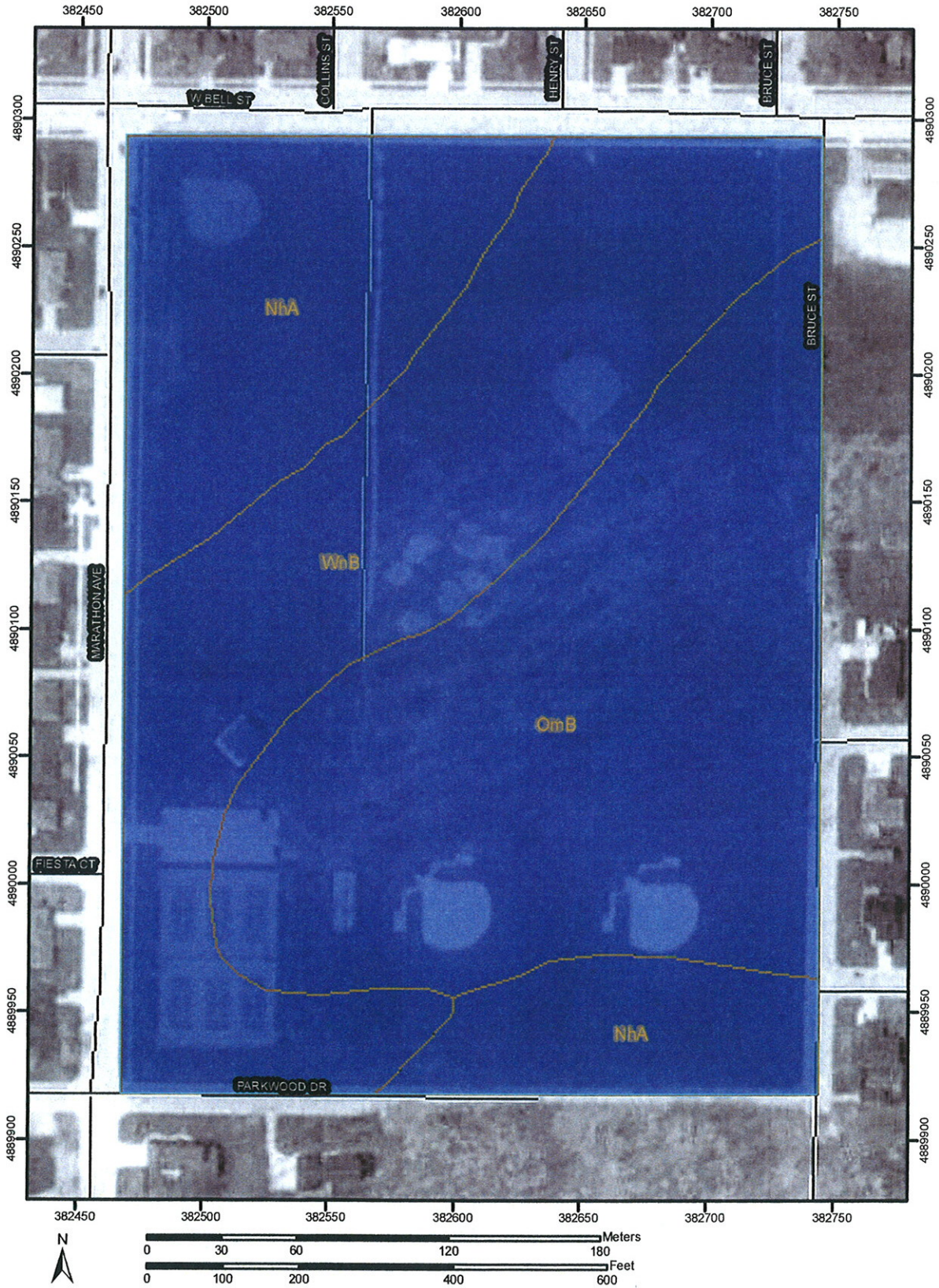

FIG. 5B

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FIG. 5B

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Units

Soil Ratings
- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200

Political Features

Municipalities
- Cities
- Urban Areas

Water Features
- Oceans
- Streams and Canals

Transportation
- Rails

Roads
- Interstate Highways
- US Routes
- State Highways
- Local Roads
- Other Roads

MAP INFORMATION

Original soil survey map sheets were prepared at publication scale. Viewing scale and printing scale, however, may vary from the original. Please rely on the bar scale on each map sheet for proper map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 16N

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Winnebago County, Wisconsin
Survey Area Data: Version 5, Feb 14, 2007

Date(s) aerial images were photographed: 1992

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

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Depth to Any Soil Restrictive Layer

Depth to Any Soil Restrictive Layer— Summary by Map Unit — Winnebago County, Wisconsin				
Map unit symbol	**Map unit name**	**Rating (centimeters)**	**Acres in AOI**	**Percent of AOI**
NhA	Neenah silty clay loam, 0 to 3 percent slopes	>200	6.6	25.1%
OmB	Omro clay loam, 2 to 6 percent slopes	>200	10.6	40.4%
WnB	Winneconne silty clay loam, 1 to 4 percent slopes	>200	9.0	34.4%
Totals for Area of Interest (AOI)			26.2	100.0%

Description

A "restrictive layer" is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers.

This theme presents the depth to any type of restrictive layer that is described for each map unit. If more than one type of restrictive layer is described for an individual soil type, the depth to the shallowest one is presented. If no restrictive layer is described in a map unit, it is represented by the "> 200" depth class.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Rating Options

Units of Measure: centimeters

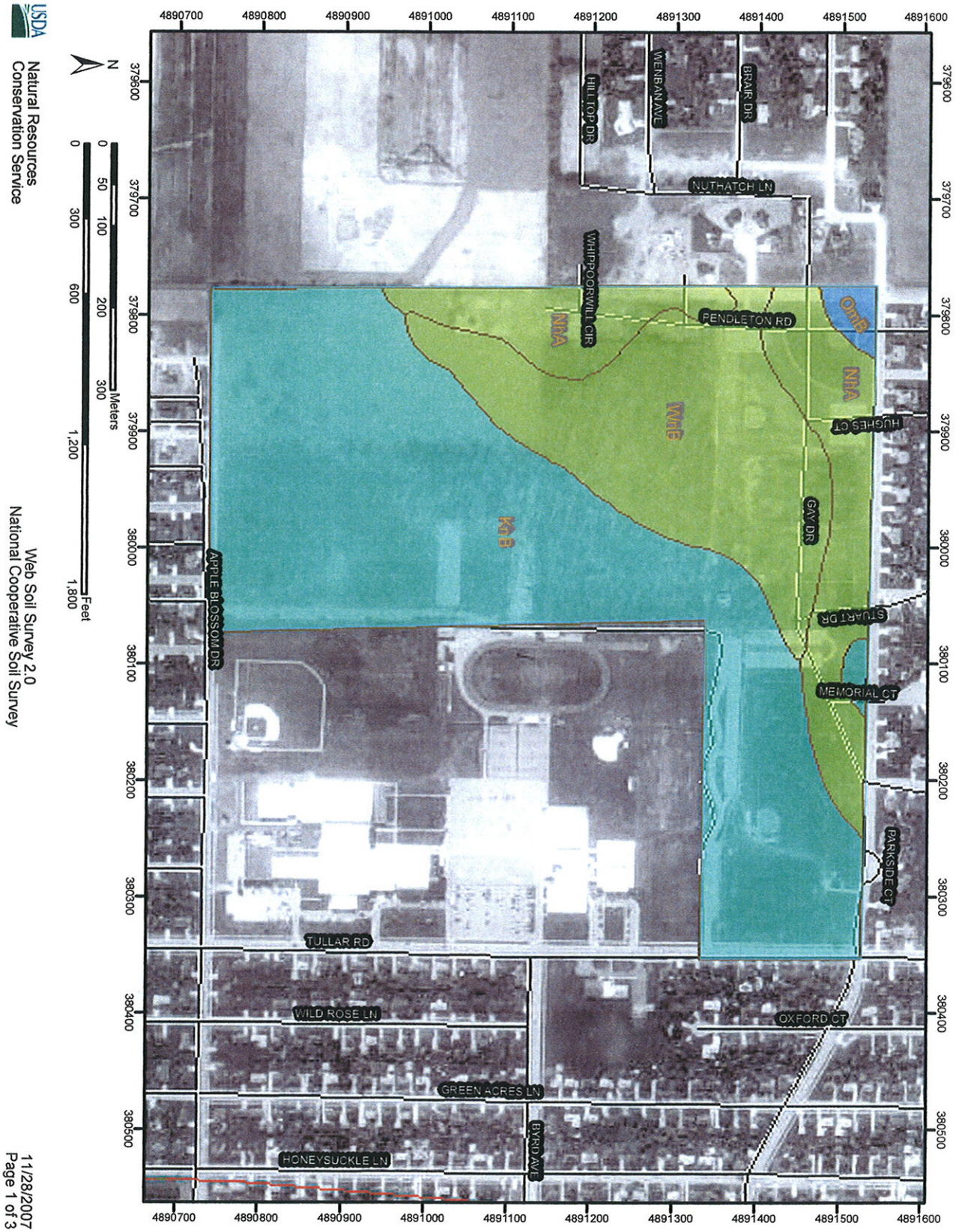
Aggregation Method: Dominant Component

Component Percent Cutoff: *None Specified*

Tie-break Rule: Lower

Interpret Nulls as Zero: No

MEMORIAL PARK



Depth to Water Table–Winnebago County, Wisconsin

USDA Natural Resources Conservation Service

Web Soil Survey 2.0
National Cooperative Soil Survey

11/28/2007
Page 1 of 3

FIG. 6A

Fig. 6A

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Units

Soil Ratings
- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200

Political Features

Municipalities
- Cities
- Urban Areas

Water Features
- Oceans
- Streams and Canals

Transportation
- Rails

Roads
- Interstate Highways
- US Routes
- State Highways
- Local Roads
- Other Roads

MAP INFORMATION

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Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 16N

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Winnebago County, Wisconsin
Survey Area Data: Version 5, Feb 14, 2007

Date(s) aerial images were photographed: 1992

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Depth to Water Table

Depth to Water Table— Summary by Map Unit — Winnebago County, Wisconsin				
Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
KnB	Kewaunee silt loam, 2 to 6 percent slopes	102	59.3	58.8%
NhA	Neenah silty clay loam, 0 to 3 percent slopes	61	17.1	16.9%
OmB	Omro clay loam, 2 to 6 percent slopes	178	1.1	1.1%
WnB	Winneconne silty clay loam, 1 to 4 percent slopes	98	23.5	23.3%
Totals for Area of Interest (AOI)			101.0	100.0%

Description

"Water table" refers to a saturated zone in the soil. It occurs during specified months. Estimates of the upper limit are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Rating Options

Units of Measure: centimeters

Aggregation Method: Dominant Component

Component Percent Cutoff: *None Specified*

Tie-break Rule: Lower

Interpret Nulls as Zero: No

Beginning Month: May

Ending Month: November

Depth to Water Table–Winnebago County, Wisconsin

SOUTHVIEW PARK

Fig. 6B

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Units

Soil Ratings
- 0 - 25
- 25 - 50
- 50 - 100
- 100 - 150
- 150 - 200
- > 200

Political Features

Municipalities
- Cities
- Urban Areas

Water Features
- Oceans
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- Rails

Roads
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MAP INFORMATION

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Page 35

Depth to Water Table

Depth to Water Table— Summary by Map Unit — Winnebago County, Wisconsin				
Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
NhA	Neenah silty clay loam, 0 to 3 percent slopes	61	6.6	25.1%
OmB	Omro clay loam, 2 to 6 percent slopes	178	10.6	40.4%
WnB	Winneconne silty clay loam, 1 to 4 percent slopes	98	9.0	34.4%
Totals for Area of Interest (AOI)			26.2	100.0%

Description

"Water table" refers to a saturated zone in the soil. It occurs during specified months. Estimates of the upper limit are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Rating Options

Units of Measure: centimeters

Aggregation Method: Dominant Component

Component Percent Cutoff: *None Specified*

Tie-break Rule: Lower

Interpret Nulls as Zero: No

Beginning Month: May

Ending Month: November

Fertilizer Application Restrictions

The restrictions being considered in this section agree with the criteria found in WDNR Administrative Code NR 151, Section 1100, Interim Turf Nutrient Management Technical Standards of May 6, 2007 (Appendix A).

Subsection D. Criteria to Minimize Entry of Nutrients to Groundwater.

1. Do not apply fertilizer on saturated soils.
   According to the soil map (Figs. 1A & 1B) *and information associated with depth to water table* (Figs. 6A & 6B), *saturated soils are not present at either park location. Seasonal saturation may exist in April and May due to snow melt and heavy rains during this period. Saturated soils do not typically occur during the rest of the year and are not present according to the soil maps. Fertilizer is not applied to athletic fields until after Memorial Day.*
2. Do not apply fertilizer to frozen soils.
   Athletic fields are only fertilized during the growing season.
3. Minimize N leaching to ground water.
   Restrictive fertilization practices apply only if the soils are highly permeable, have less than 20 inches to bedrock or have less than 12 inches to an apparent water table. None of these conditions exist at Memorial Park or Southview Park athletic fields, respectively.

None of the criteria in this subsection impose fertilizer use restrictions on Memorial Park or Southview Park.

Subsection E. Criteria to Minimize the Entry of Nutrients to Surface Water.

1. Do not apply fertilizer on saturated soils or impervious surfaces.
   No evidence exists that saturated soils exist on any athletic field at either park after mid-May. Impervious surfaces near the athletic field at each park include asphalt walking trails and parking lots, however, buffered grass areas exist between the fertilized athletic fields and these impervious surfaces. There are no storm water drains in close proximity to any athletic field in either park to cover during fertilizer applications.
2. Take action to avoid drift of fertilizer into water bodies.
   No water bodies exist in or near any of the athletic fields at either park.
3. Minimize entry of nutrients to surface water in surface water quality management areas.
   These criteria do not apply to any of the athletic fields in either park since they are not adjacent to any navigable waters.

None of the criteria in this subsection impose fertilizer use restrictions on Memorial Park or Southview Park.

Soil Sample Locations and Test Results

Soil samples were collected from all athletic fields in April of 2002. Memorial Park field #4 was under construction at that time so no sample was taken from there. Since the field was being re-graded with existing soil from the park and the proximity to other the other athletic fields, the assumption is results would be relatively similar to other athletic fields at Memorial Park. Memorial ball diamond #2 was not constructed at this time either, but the same assumption is used for that field as well.

The soil test results are summarized below. The individual sample reports received from MMSD Central Laboratory (Milorganite or Milwaukee Municipal Sanitary District) are compiled in Appendix B. Since all P levels were noted as being optimum or very high, the determination was made in 2002 to discontinue and use of P on the athletic fields.

FIG. 7A

Site	Soil pH	P - lb/acre	P interpretation	K - lb/acre	K interpretation
M – Soccer 1	6.6	600	Very High	1500	Very High
M – Soccer 2	5.6	260	Very High	1200	Very High
M – Soccer 3	6.0	140	Very High	1300	Very High
M – Soccer 4	N/A	N/A	N/A	N/A	N/A
M – Soccer 5	5.6	150	Very High	1000	Very High
M – BD 1	6.3	240	Very High	1000	Very High
M – BD 2	N/A	N/A	N/A	N/A	N/A
M – BD 3	6.3	190	Very High	1100	Very High
SV – Soccer	6.2	86	Optimum	1100	Very High
SV – BD 1	6.5	150	Very High	880	Very High
SV – BD 2	6.1	88	Optimum	880	Very High
SV – Mueller	6.5	150	Very High	1000	Very High
SV – Pedersen	6.5	100	Very High	880	Very High

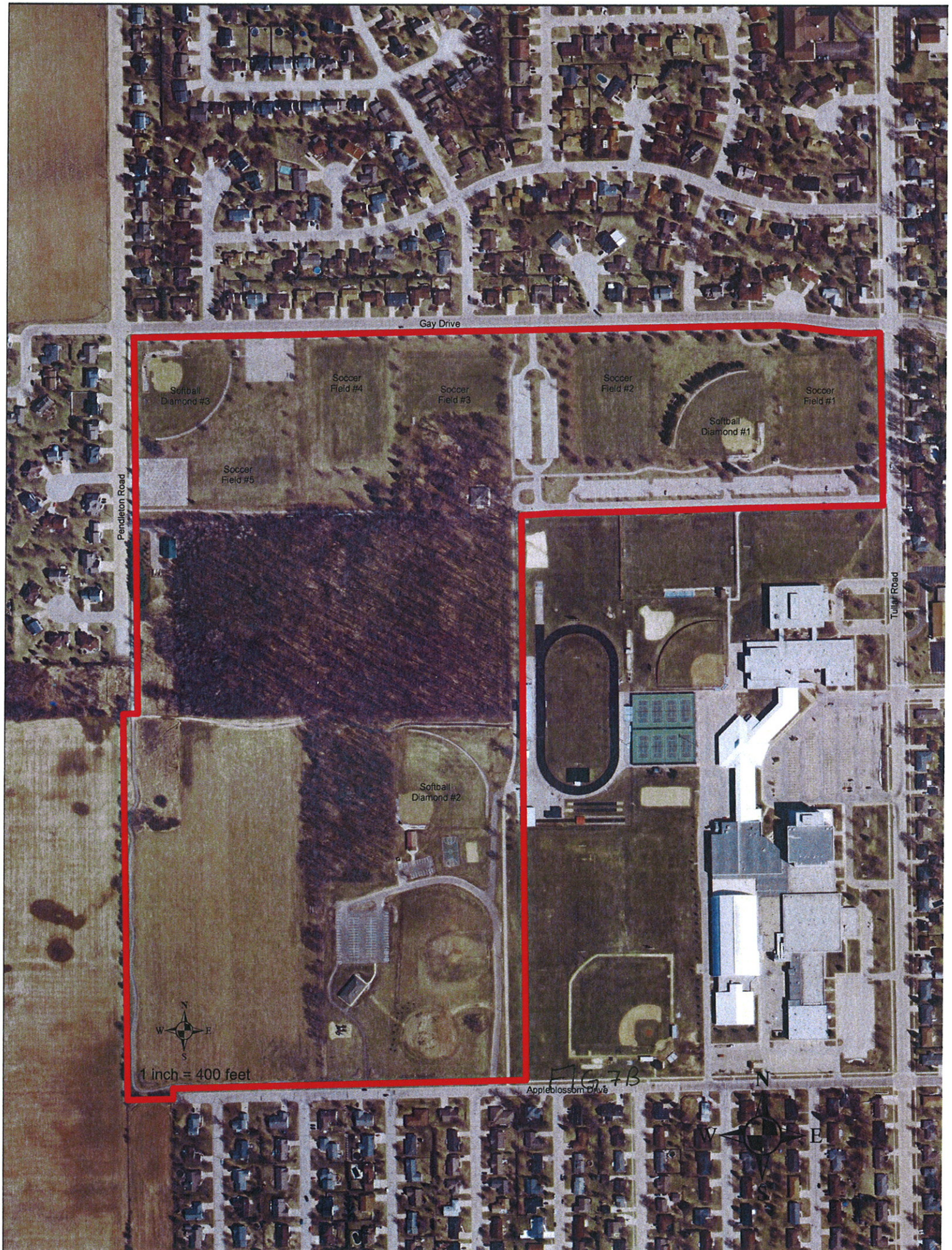
Gay Drive
Softball Diamond #3
Soccer Field #4
Soccer Field #3
Soccer Field #2
Soccer Field #1
Softball Diamond #1
Soccer Field #5
Pendleton Road
Tullar Road
Softball Diamond #2
N
W
E
S
1 inch = 400 feet
Appleblossom Drive
N
W
E
S

FIG. 7B


Bell Street
Ball Diamond #1
Ball Diamond #2
Soccer Field
Marathon Avenue
Bruce Street
Mueller Field
Pedersen Field
N
W
E
S
1 inch = 200 feet
Parkwood Drive

FIG. 7C