

Village of Oregon

Incorporated in 1883

GERALD R. LUEBKE
VILLAGE PRESIDENT

May 23, 2006

Mr. Kamran Mesbah
Community Analysis and Planning Division
City-County Building, Room 362
210 Martin Luther King, Jr. Blvd.
Madison, WI 53703

Re: Request for addition to the Village of Oregon urban service area boundary

Dear Mr. Mesbah:

The Village of Oregon is requesting a 9.34-acre addition to the urban service area. The land area specified in this amendment request has been dedicated by the Village to develop a community sports arena, which will accommodate an indoor ice-rink, basketball courts, a health club, and community meeting rooms. There has been broad support for the development of this recreational facility, and this proposal is consistent with the goals, objectives, and policies documented in the Village's 2004 Comprehensive Plan.

To date, the Village of Oregon has been diligent in requiring that new development occur within urban service area boundaries, and has adopted the toughest stormwater ordinance in Dane County. In order to ensure that development of this facility can begin this year, we are interested in having this amendment request approved as soon as possible.

Please contact the Village with any questions or concerns that may arise during your review of the enclosed materials. We look forward to a supportive response.

Sincerely,



Gerald R. Luebke
President, Village of Oregon

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MAY 30 2006

Village of Oregon

Urban Service Area Amendment Request

May 23, 2006

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Prepared by
VANDEWALLE & ASSOCIATES

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I. Introduction

The purpose of the proposed amendment is to allow the Village of Oregon to provide sanitary sewer, water, and other urban services to a parcel of land located on North Perry Parkway on the East side of the Village.

The Village of Oregon has been working on plans for continued growth of the Village since the early 1990's. This work includes the *Village of Oregon Comprehensive Plan (2004)*, and the *Village of Oregon Outdoor Recreation Plan (2002)*.

II. Location and Description of the Proposed Addition to the Urban Service Area

The proposed addition to the Urban Service Area includes a parcel of approximately 9.34 acres of land located adjacent to the current Urban Service Area at the current southern end of North Perry Parkway. The property is within the Village of Oregon and is currently owned by the Village. The property is primarily undeveloped, the exception being a small gravel parking area. The property has grassy vegetation with a drainage swale running in a north to south direction. The Oregon Branch of the Badfish Creek adjoins the property to the south and is the current receiving water body for stormwater runoff. The wastewater treatment plant facility also drains into Badfish Creek.

The proposed addition is located directly east of the municipal wastewater treatment plant and adjoins recreational property to the north and east. This land is currently used as baseball and soccer fields. The Village of Oregon Comprehensive Plan shows this land as planned for active recreation. Map 1 shows the location of the proposed expansion area in relation to the Village.

Map 1: Project Location and Planned Land Use

III. Need

A. Village Master Plan

The Village's Comprehensive Plan designates the land proposed for addition to the USA as "Active Recreation", defined as "park and open space facilities devoted to playgrounds, play fields, play courts, trails, picnic areas, and related recreational activities" (See Map 1). However, this property was originally purchased by the Village to accommodate an expansion of the wastewater treatment plant. More recently, the Village engineer surveyed the area and determined that there are other possible locations for plant expansion. The Village decided that this land would be better used for the development of a community recreational facility.

On June 1, 2006, the Plan Commission will pass resolution # 06-08 stating that the proposal for the sports arena is consistent with the goals and objectives of the Comprehensive Plan. On June 5, 2006, the Village Board will pass resolution # 06-09 approving the USA amendment application.

The Village of Oregon has been very consistent in requiring new growth to be in the USA. It is the Village's intent to grow in a compact and orderly manner rather than to "leap frog". The proposed expansion area is adjacent to the current USA.

B. Proposed Amendment

The Village is proposing to add approximately 9.34 acres to the Urban Service Area. Road, parking, and right of way comprise 2.97 acres, and 4.67 acres is open space and stormwater management.

The development provides a full-size indoor ice rink, two indoor basketball courts, and related uses, such as concessions, locker facilities, storage, and offices. Additional indoor space is available for a community room, health club, physical therapy and chiropractic offices, and future athletic-related uses such as martial arts and aerobics, and future athletic support uses, such as medical therapy. The following adjacent communities have been notified of this urban service area amendment request: Town of Rutland, Town of Dunn, Town of Oregon, and the City of Fitchburg.

The table below shows details regarding the planned land uses for the area.

According to Dane County Community Analysis and Planning Division, the Oregon USA should not exceed 3,782 acres. With the current Oregon USA at 2,685 acres, the Village has the potential to add 1,097 acres to the USA. (See Attachment 1: Oregon Urban Service Area Housing Unit and Land Use Analysis, prepared by the Dane County Community Analysis and Planning Division).

IV. Proposed Development Pattern

Planned Land Uses	Gross Acres	% of Total Acres	Existing Dev.	Environmental Corridor
Building Footprint	1.7	18.2%	0	0
Parking Lot, Sidewalk	0.2	2.1%	0	0
Roadway	2.77	29.7%	0	0
Open Space including Stormwater Management	4.67	50%	0	4.67
Total	9.34	100%	0	4.67

V. Development Phasing

The majority of the project will be built at once. An additional ice area may be built in the future. Some areas of the building may remain vacant until future tenants are found. Within 5 years the project is expected to be fully occupied. Market demand will dictate this full occupation.

VI. Urban Service Provisions

It is intended that the proposed USA expansion areas be provided with the full range of urban services when urban development occurs. The full range of services would include public sanitary sewer, public water, police and fire protection, and streets and public works maintenance and management services.

A. Utility Services

1. Sanitary Sewer

a. Wastewater Collection

The proposed Urban Service Area (USA) expansion will be served by an existing sewer line along North Perry Parkway.

b. Wastewater Treatment

The Village's treatment plant has a rated capacity of 1.80 MGD, average daily flow. Currently the plant receives an average of about 1.12 MGD per day. The present reserve capacity is 0.68 MGD that we estimate can support an additional 5,600 people. The rated capacity was adjusted to these levels as the result of Wisconsin Department of Natural Resources concurrence with a Capacity Study completed by the Village Engineer in June 2000.

A Facility Plan Amendment was completed in 2002 that evaluated cost effective alternatives for all the plant processes based upon a twenty-year planning period. This document provided the Village a long-term plan for wastewater treatment needs and incorporated and expanded upon the capacity analysis. The Facility Plan confirmed a conclusion from the Capacity Study that solids handling systems are currently near

capacity. As a result of the Plan recommendations and the Dane County Regional Planning Commission Resolution No. 945, the Village modified the existing aerobic digesters in 2003 to provide the necessary capacity to match the capacity of the liquid process train.

2. Water

a. Distribution

Water service to the expanded USA will be provided by existing Village mains that adjoin the property. The property will be served by a network of 8" and 12" water mains connected to the village's Primary Pressure Zone (PPZ). Static pressures during peak hour demands are approximately 65 pounds per square inch (psi). Anticipated fire flows during maximum daily demand are approximately 2000 gallons per minute (gpm)

The Village developed a Water System Master Plan in 1988. Updates to this master plan were made in 1996 and 2003 to account for recent USA expansions on the west side of the Village. The 2003 Water System Master Plan update shows a proposed 12" water main loop that would cross USH 14 at Netherwood Street, run south to STH 138 and connect to the existing 12" at Park Street. If improved water service is necessary within the proposed USA amendment area prior to this 12" water main loop east of USH 14 being installed, a 12" water main loop along North Perry Parkway from Nygaard Street to Park Street may be pursued.

b. Supply

The village currently operates three groundwater wells (3, 4, and 5) for water supply. Each well yields between 800 and 1000 gallons per minute (gpm). The current well pumping capacity with all three wells operating simultaneously is 2,500 gpm.

c. Storage

The village currently operates the following three reservoirs for water storage: North Standpipe (400,000 Gallon) in the Primary Pressure Zone (PPZ), South Standpipe (400,000 Gallon) in the Primary Pressure Zone (PPZ), and the Lincoln Road Water Tower (300,000 Gallon) in the High Pressure Zone (HPZ). The maximum storage capacity is 1,100,000 gallons and the effective storage capacity is approximately 915,000 gallons.

d. Other

The Village has a wellhead protection ordinance in place and underwent a leak detection study in 1998, with additional sectional studies and repairs since then. In 2002, the unaccounted for water was 17.42%.

The condition and operation of the system has consistently received highly complimentary annual reviews from the Department of Natural Resources.

B. Natural, and Cultural Resources

1. Natural Resources

The proposed USA addition has grassy vegetation with a drainage swale running in a north to south direction, located on the eastern edge of the property. This drainage area will be retained to serve as part of the stormwater management plan. A site specific determination will be made regarding the locations of wetlands and floodplains. The Village is confident that none of the areas currently planned for development are within potential wetland or

floodplain areas. However, if this turns out to be incorrect, a revised site plan will be submitted.

2. Cultural Resources

No known historic structures or archeological resources are located in the proposed USA addition area.

C. Public Safety

1. Fire Department/Emergency Medical Services

The proposed USA addition will be served by an existing fire hydrant on North Perry Parkway. The Oregon Area Fire-EMS District provides fire protection and emergency medical services to the Village of Oregon, Town of Oregon, Town of Dunn, and the Town of Rutland. This protection area covers forty-four (44) square miles, and also provides mutual aid to surrounding communities. The District Department is a combination agency that is mostly made up of paid on call personnel that is supplemented with full time Captains staffing the station twenty-four hours per day, six days per week. Training for both fire and emergency medical services is offered six days a week.

The fire station is located nearby at 131 Spring Street in the Village of Oregon. A new 2 million-dollar addition has given the Fire District room to face the challenges of the future. This facility includes increased areas for training, dormitory rooms for full time staff as well as interns and increased space for apparatus. As the Village expands to the west, it is anticipated that a new satellite Fire/EMS Station will be located on the north side of CTH CC.

The Oregon Area Fire-EMS District operates from a budget generated by the participating entities of the District. Each entity pays a portion of the total budget based on property valuation.

The District has two engines, one rescue squad, one tanker, one brush truck, three command cars, one ATV utility for rescue/brush fires, and 2 ambulances.

The District has a very aggressive public education program that gets the department out to the community. The District also provides fire inspections of all occupancies as required by the Department of Commerce.

In 2002, the ISO fire rating for the Village was determined to be 4. This is an improvement over the previous rating of 5.

2. Police

The proposed USA addition will be served by the Village of Oregon Police Department. The Police department facility, new in 2000, is located nearby at 383 Park Street. The 20,000 square foot building provides dual functions as the police department and municipal court building.

The department provides coverage to the community 24 hours a day. Current full time sworn officer staffing is at 14 (1.8 officers/1,000 persons). The department strives to embrace problem oriented and community policing methods as a means to be proactive in addressing life and property safety issues and concerns. The department staffs a full-time school liaison officer for the Oregon Senior High School and the Oregon Middle School.

D. Public Works

The Village offers a full range of services, including storm water management, an integrated transportation system, a park and open space system. These systems are described in more detail below. The Village also provides snow removal and refuse collection. Refuse and recycling pickup is accomplished through contract with a private waster hauler. The Village collects recyclables as required by the State of Wisconsin.

1. Storm Water Management

The Village of Oregon has taken a proactive approach to addressing stormwater management needs. The Village recognizes the necessity for properly managing stormwater runoff from existing, and new development because of its location along the Oregon Branch of the Badfish Creek. The Village had experienced significant flooding and property damage during heavy rain events in various areas in the past. Several steps have been taken over the past several years to remedy these conditions.

In 1998-99 the Village conducted a comprehensive stormwater management study. The study divided the Village in sub-watersheds, and modeled stormwater runoff, and conveyance capacities for each system. Also, where capacity problems were identified, the study analyzed alternative management approaches, and recommendations were developed. An implementation plan prioritized the recommendations, and established a schedule. At this point in time, the Village has expended over \$1,000,000 in stormwater management projects.

For the past several years, the Village has enforced a policy of stormwater management on all new development and redevelopment. The requirements of the policy addressed both stormwater quantity and quality. In 2003, the Village codified this policy, as well as other Dane County storm water and erosion control requirements, into Chapter 22 of the Oregon Municipal Code of Ordinances. This ordinance is currently being updated again to address recent Dane County storm water requirements. The Village approved the update to Chapter 22 in May 2006.

The proposed USA expansion would be developed in compliance with the Village's stormwater management ordinance. The developer has submitted a permanent stormwater management plan (included with this submission), which incorporates a variety of infiltration, sedimentation, and detention techniques to accomplish the stormwater management requirements. Roof drainage will be directed to downspouts that will discharge to infiltration areas. Parking areas will sheet flow to dolomitic limestone filter basins for oil and grease removal. A detention pond designed per local ordinance will detain the post-developed 2-year, 10-year, and the 100-year, 24-hour storm events to pre-settlement rates. The outflow structure also includes an emergency spillway that will safely pass storm events greater than the 100-year storm event. The detention pond will be installed prior to land disturbing activities. Also, post-development sediment loads will be reduced by more than 80% compared to the development with no BMPs. The stormwater management system on the development will maintain or reduce the downstream flooding potential.

The stormwater system within the proposed Oregon Community Sports Arena site will be owned, managed, and maintained privately by Oregon Community Sports Arena, LLC.

2. Transportation

The transportation system for the proposed urban service area expansion will follow the Village's May 2006 Transportation Plan, the May 1998 Official Map, the June 2001 Conceptual Bicycle Plan, and updates currently under discussion. Sidewalks will be provided between the building and North Perry Parkway, as required in the Village's land division ordinances.

Two parking lots provide a total of 140 regular stalls and 6 accessible stalls. An additional 54 stalls can be built if and when needed.

Current Village planning for transportation improvements in the area of the proposed USA addition include extending North Perry Parkway south to the existing intersection of Park Street and Perry Parkway. This is currently anticipated to be constructed in 2010 or 2011, depending on the available Capital Improvements Plan (CIP) budget. A transportation impact analysis (TIA) is currently being prepared and reviewed to determine whether this timeframe will need to be revised, as well as whether any additional improvements are necessary.

3. Parks And Open Space

The proposed development provides a total of 4.67 acres of open space, mainly the detention ponds, which will be designated as environmental corridor. The area is adjacent to current Village park and open space, and provides a recreational use that blends well with the current surrounding uses.

4. Schools

The proposed development is within the Oregon School District boundary. Netherwood Knoll and Prairie View Elementary are located north of the downtown, and are approximately one mile west of the proposed development. Oregon Middle School is located on the south side of the Village, west of CTH MM, and is approximately 1.7 miles southeast of the proposed development. Oregon High school is located on the east side of the Village, west of STH 14, approximately 1.5 miles north of the proposed development. Rome Corners Intermediate School is located along Perry Parkway just east of the new golf course development, less than a mile southwest of the proposed development.

The proposed USA addition will not generate additional students. However, the facility will be utilized by area school children and will provide a valuable community recreation amenity.

Attachment 1: Oregon Urban Service Area Housing Unit and Land Use Analysis

Data Item	Within the Municipality					Forecast	
	Census				Change	Change	
	1970	1980	1990	2000	1970-2000	2000-2030	2030
1) Total Population	2,553	3,876	4,519	7,514	4,961	5,649	13,163
<i>2) Persons Per Housing Unit</i>	3.39	2.75	2.7	2.6			2.6
2) Total Housing Units	753	1,412	1,672	2,895	2,142	2,168	5,063
<i>3) Single Family % of Total H.U.</i>					63.50%	63.50%	
3) No. of Single Family Units	585	956	1,154	1,945	1,360	1,376	3,321
<i>3) Multifamily % of Total H. U.</i>					36.50%	36.50%	
3) No. of Multifamily Units	169	456	518	950	781	791	1,741
No. of Single Family Units	585	956	1,154	1,945	1,360	1,376	
<i>4) Housing Density (Units/Acre)</i>					3.3	3.3	
4) Single Family Land (Ac)	172	305	365	579	406	417	996
Number of Multifamily Units	169	456	518	950	781	791	
<i>5) Housing Density (Units/Acre)</i>					9.7	9.7	
5) Multifamily Land (Ac)	17	35	50	97	80	82	179
6) Commercial Land Use (Ac)	19	55	56	67	48	55	122
<i>6) Acres / 1,000 Persons</i>					9.7	9.7	
7) Industrial Land Use (Ac)	1	15	48	59	58	66	125
<i>7) Acres / 1,000 Persons</i>					11.6	11.7	
8) Street Right-of-Way (Ac)*	133	207	177	280	148	155	435
<i>8) Percent of Developed Area: 4-7</i>					25%	25%	
9) Transport, Com. & Utl. (Ac)	25	26	41	47	22	25	72
<i>9) Acres / 1,000 Persons</i>					4.4	4.4	
10) Institutional Land (Ac)	80	88	79	117	37	42	159
<i>10) Acres / 1,000 Persons</i>					7.4	7.4	
11) Recreation Land (Ac)**	2	65	71	142	141	85	227
<i>11) Acres / 1,000 Persons</i>					28.3	15	
12) Developed Land (Ac)	448	795	887	1,387	939	927	2,313
13) Other Development not shown above							108
14) Environmental Corridor not including Recreation Land above							434
15) Flexibility Margin: 100% of 2000-2030 Land Demand							927
16) Maximum 2030 Urban Service Area							3,782
17) Adopted Urban Service Area							2,685
18) Maximum USA Addition							1,097

*Street ROW, 33 acres are not included in urban service area.

** Equals one acre of park land per 20 persons

All steps are numbered and assumptions are italicized.

Source: U.S. Bureau of the Census and Dane County Regional Planning Commission

4/3/2006

SPECIFIC IMPLEMENTATION PLAN FOR
OREGON COMMUNITY SPORTS ARENA,

May 7, 2006

Oregon Community Sports Arena, Inc (herein, the "OCSA") submits this Specific Implementation Plan for a New Sports Arena (herein, the "Project"), to be constructed on Lot 1, CSM # in the Village of Oregon, Dane County, Wisconsin (herein, the "Village").

1. GENERAL CHARACTER OF INTENDED DEVELOPMENT.

The Project will be developed as 2 Story Building. The first floor of the building will consist of approximately 73,225,000 SF of Arena and Rental Space. The second floor will have approximately 21,669 SF of Rental Space of Viewing areas. The site contains two parking lots with a total of 142 parking stalls. The plans also allows for an additional 54 stalls if needed. The building will be designed to meet all existing building codes. The building will be completely sprinklered.

The proposed project meets all the requirements of the approved General Development Plan (GDP). This project complies and follows the traffic and storm water plan that was approved in GDP.

2. SITE PLAN.

The attached Site Plan and Schematic Utility Plan, each prepared by Concepts in Architecture, LLC (herein, "CIA"), and elevations and floor plans for the Project, prepared by Renschler, contain the information requested in Section 17.25(5)(c) 1-6, of the Village Ordinances.

3. RECREATIONAL AND OPEN AREAS.

The Site Plan shows the location, size and character of recreational and open space areas. No improved recreational areas or special recreational amenities are included in the Project.

4. PARKING.

A total of 140 regular stalls and 2 accessible stalls are provided in the development. An additional 54 stalls can be built if needed.

6. UTILITIES.

OCSA is coordinating the provision of utilities with Renschler, CIA and the appropriate utilities. Water and sewer will be provided by public water and sewer system on North Perry Parkway.

7. STORM WATER.

OSCA will use build two new storm water detention basin's on out lot 1. One Basin will be built on the north end of the site and one on the south end of the site. Rain gardens are proposed to provide infiltration of roof water.

8. TRASH PICKUP.

OSCA will provide for weekly trash pickup and recycling with a private contractor. There will be an enclosed dumpster area attached to the building. The enclosure will match the building exterior.

9. SIGNAGE.

OSCA will install signs identifying the building on West, East and South sides. The size, design and illumination of signs will be submitted to the Village for approval. Building signage for the commercial spaces will designed per Village Ordinance.

10. MAIL BOXES.

Developer will consult with the Postal Service regarding the number, size and location of mailbox pedestals serving units within the Project.

11. ILLUMINATION.

Parking Lot and walkway illumination is planned for the Project. Lighting plan and types are attached.

12. LANDSCAPING.

A landscape plan for the Project is attached.

13. DEVELOPMENT SCHEDULE.

OCSA intends to begin the development of the site with the construction of utilities, including water, sanitary sewer, storm sewer, gas, electric, phone and cable, to be installed simultaneous with the building foundation. Construction of the building should begin on or about June 6, 2006.

14. OUTLINE OF PROPOSED ORGANIZATIONAL STRUCTURE.

Oregon Community Sports Arena, Inc a non-profit 503(c) Corporation has been set up to own and maintain the facility.

SITE DEVELOPMENT REPORT
INCLUDING STORMWATER MANAGEMENT
AND EROSION AND SEDIMENT CONTROL

**Oregon Community
Sports Arena
North Perry Parkway
Oregon Wisconsin**

Prepared by:

**Tom Aschenbrenner
McFarland WI. 53558**

May, 2006

NARRATIVE:

General:

The proposed development will consist of a new freestanding 93,000 square foot multi purpose sports facility that will accommodate activities including ice hockey, basketball as well as a fitness center. Asphalt paved parking lots will be constructed immediately north and south of the proposed facility. The north lot will include parking for approximately 43 vehicles while the south lot has a currently planned capacity of 144 stalls. The building has a planned 4500 square foot future expansion attached to the north side of the proposed facility. Additional parking is also included in the proposed development and will include parking for approximately 55 vehicles.

The parcel is located immediately east of the existing Village of Oregon wastewater treatment plant at the current southern end of North Perry Parkway. The parcel is adjoined by recreational property to the north and east with much of the land being used as baseball and soccer fields.

The property consists of approximately 9.35 acres of land and is primarily undeveloped but does include a small gravel parking area. The property has grassy vegetation with a drainage swale running in a north to south direction and is located on the eastern edge of the property. Visual observation suggests the swale may serve as a drainage path for the property to the north. The site is fairly flat but gently slopes from north to the south with an average pitch of about 0.50%. The Oregon Branch of the Badfish Creek adjoins the property to the south and is the current receiving water body for the stormwater runoff.

The sports facility will be a single story steel-frame structure founded on standard spread footings. There will be asphalt paved parking and drive areas consisting of a total of 187 parking stalls. Access to the site will be via two new entry drives from North Perry Parkway. The building footprint will require small fill depths to achieve finish subgrade elevation. The parking areas in general will need to have only very small cut and fill grade revisions to meet design elevations.

Erosion & Sediment Control:

According to the Dane County USGS soil maps the predominant soil types in the area of the development consist of Sable silty clay loam. Soil borings performed on the property for foundation design purposes confirm the Dane county mapping unit. The subsoil stratification across the property is fairly consistent and consists of approximately 18" of topsoil followed by stiff gray/brown lean clay (CL) to a depth of 5' below present ground surface. The lean clay is underlain by medium dense fine to medium sand (SM/SP) On average, groundwater was encountered about 7' below present ground surface. The TR55 reference manual does not define the hydrologic soil group for Sable silty clay loam. However according to the hydrologic soil group definitions outlined in Appendix "A" of TR 55 and based on the geotechnical soil classification I would classify the lean clay as a hydrologic soil group "C".

Erosion and sediment control will be provided throughout the duration of construction activities. Initially, silt fence will be installed along the west and south property lines as a barrier to North Perry parkway and the Oregon Branch of the Badfish Creek. A gravel

construction entrance will be installed at the southern and northern entry drives. A temporary sediment basin will then be constructed in the location of the future permanent detention pond. The outlet structure will be installed and a stone riprap filter will be placed to surround the outlet. The site will be graded such that run off from disturbed areas will be directed to the sediment basin. Silt fence or gravel filters will protect all stormwater inlets after the storm sewer piping is installed. The plan calls for the installation of "Verti-Pro" fabric inlet protection devices as manufactures by Alpine Stormwater Management Co. Disturbed areas that are not to be worked immediately will be seeded and mulched. Areas that reach their final grade will have permanent seeding applied.

A schedule of erosion and sediment control activities can be found on the "Site Erosion Control Plan" sheet of the construction plans set. In addition and as part of this submittal, please reference the Dane County Land Conservation's Universal Soil Loss Equation for Construction Sites spread sheet. The spreadsheet show's that the land disturbing activities do not require any additional erosion control requirements other than defined above.

Stormwater Management:

A permanent stormwater management plan has been provided. Stormwater runoff will be managed using a variety of infiltration, sedimentation and detention techniques. Dane County requires that downspouts be directed to pervious areas to promote infiltration. For this project roof drainage will be directed to downspouts that will discharge on grade. The grading and drainage plan identifies three main roof drainage infiltration areas. **It is by design that all of the roof runoff will be infiltrated into the granular substratum and in general conformance with Dane County and DNR NR151 ordinances.** Roof runoff will flow over grass lawn and will be collected at inlet structures. At the base of the inlet structure and set on native granular soil, 6" perforated pipe will be laid flat and surrounded by 3" dolomitic limestone. **Each infiltration area has been sized to accommodate the first ½" of runoff from the respective roof area.**

Parking areas will sheet flow to dolomitic limestone filter basins. The limestone serves as a grease and oil filter prior to being released into the sedimentation basin. The parking lot filter basins are also sized to accommodate the first ½" of runoff. The south parking lot filter basin then discharges into a sediment basin that has been designed to retain all soil particles greater than 5 microns for the 1-year 24 hour storm event per Village of Oregon standards and provides **for more than** the 80% reduction in total suspended solids (TSS) after development. The north parking lot will utilize the filter basin as the primary sedimentation reduction device.

Oregon Village stormwater management **regulations require that the 2, 10 & 100-year storm events are detained** and that post- developed outflows not exceed pre-developed **levels.** This will be achieved with the construction of a detention facility located immediately south of the south parking lot. The pond was designed per local ordinance using the TR-55 methodology and a restricted outflow structure has been designed to detain the post-developed 2, 10 and 100-year storm events to the pre-developed flow rates. The outflow structure also includes an emergency spillway that will pass the 100-year storm event.

The actual calculated flow rates are as follows:

<i>2-Year Pre-Developed = 5.13 CFS</i>	<i>2-Year Post-Developed (Routed) = 3.92 CFS</i>
<i>10-Year Pre-Developed = 12.29 CFS</i>	<i>10-Year Post-Developed (Routed) = 6.10 CFS</i>
<i>100-Year Pre-Developed = 23.82 CFS</i>	<i>100-Year Post-Developed (Routed) = 24.14 CFS</i>

The permanent drainage plan was conceived to promote natural infiltration and minimize the length of piping required. It is also the design intent of the retention/detention pond to promote infiltration and evaporation of the majority of small runoff events

Attached are the soils survey maps and definitions, the pond design output using TR-55 with a standard software package along with miscellaneous calculations.

MAINTENANCE AND INSPECTION PLAN FOR THE OREGON COMMUNITY SPORTS ARENA STORMWATER MANAGEMENT FACILITIES

A. INTRODUCTION

This "Annual Maintenance and Inspection Plan" provides information on regular maintenance tasks required to keep the stormwater facilities at the Oregon Community Sports Arena development on North Perry Parkway operating efficiently and maintaining an attractive appearance. The stormwater facilities consist of inlet structures, the stone filled infiltration trenches with perforated pipe, the forebay sedimentation basin, the dry bottom detention pond and the outlet control structure.

General facility observations should be made during normal business activities and after rain events. Comprehensive semi-annual facility investigations should take place in the spring and fall. The semi-annual investigations should include a detailed inspection for erosion, and document the structural condition of the outlet structures and infiltration trenches.

B. POST CONSTRUCTION MAINTENANCE

The following shall be done upon completion of construction:

- Clean all catch basin and manhole sumps and standpipes in the project area with a vac-all type truck.
- Inspect and repair any eroded or slumping area on or around the embankments, spillways, inlets, and outlets of the stormwater infiltration trenches and detention facility.
- Check the infiltration areas for obvious accumulation of sediment. Remove sediment as necessary

C. GENERAL MAINTENANCE

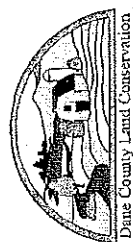
Routine Inspection and Housekeeping

- Mow and maintain all planted areas to control undesirable plant species and tree seedlings. Rake off and remove the mowed material. If mowing does not control tree seedlings and other undesirable plant and weed growth, areas should be spot sprayed with a water-soluble herbicide such as "Rodeo".
- Clean inlets and outlets of accumulated debris. Remove debris such as leaves and litter. Visually inspect at least quarterly, in early spring and after major rainfall events.

D. SPECIAL MAINTENANCE EFFORTS

- Monitor the ability of storm runoff water to seep in to the infiltration trenches and observe the sedimentation basin forebay for excessive accumulations of sediment. If water is standing on the surface of the infiltration trench without soaking in, clogging of the infiltration stone could be suspected. Monitor water seepage into the filter areas after/during a rainfall event twice a year. If the infiltration area becomes clogged or appears overly stained with oil and grease deposits first try replacing a portion of the infiltration stone. The stone should allow the relatively free passage of runoff water. Stone replacement should occur as necessary until the infiltration area functions normally.

- Monitor the ability of the below grade roof infiltration areas to collect and disperse storm runoff water into the subgrade soils. If the collection basins and perforated pipes become clogged with leaves, debris and/or other sediment, the basin should be cleaned using a vac-all type truck. The below grade pipes are accessible from the cleanouts provided or from the catchbasin.



Designed By:	T.M.A.
Date	5/13/2006
Checked By:	
Date	

STORMWATER DETENTION CALCULATIONS

FOR

**OREGON COMMUNITY
SPORTS ARENA
OREGON WI.**

Prepared By:
Thomas Aschenbrenner P.E.

Hydrograph Summary Report

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (cuft)	Hydrograph description
1	SCS Runoff	5.13	6	732	23,879	---	---	---	predeveloped
2	SCS Runoff	12.46	6	726	51,067	---	---	---	postdeveloped
3	Reservoir	3.92	6	756	50,978	2	91.82	20,291	pond/rink

Hydrograph Summary Report

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (cuft)	Hydrograph description
1	SCS Runoff	12.29	6	732	52,019	---	-----	-----	predeveloped
2	SCS Runoff	22.06	6	726	89,511	---	-----	-----	postdeveloped
3	Reservoir	6.10	6	756	89,422	2	93.10	37,111	pond/rink
					rocky rink project.gpw		Return Period: 10 Year		Tuesday, May 16 2006, 8:13 AM

Hydrograph Summary Report

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (cuft)	Hydrograph description
1	SCS Runoff	23.82	6	726	98,385	---	----	----	predeveloped
2	SCS Runoff	35.77	6	726	146,030	---	----	----	postdeveloped
3	Reservoir	24.14	6	744	145,941	2	93.84	48,004	pond/rink
hockey rink project.gpw					Return Period: 100 Year		Tuesday, May 16 2006, 8:13 AM		

PREDEVELOPED RUNOFF CONDITIONS

TR55 Tc Worksheet

Hydraflow Hydrographs by Intelisolve

Hyd. No. 1

predeveloped

<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>
Sheet Flow				
Manning's n-value	= 0.240	0.011	0.011	
Flow length (ft)	= 150.0	0.0	0.0	
Two-year 24-hr precip. (in)	= 2.90	0.00	0.00	
Land slope (%)	= 1.00	0.00	0.00	
Travel Time (min)	= 27.36	+	0.00	+
			0.00	= 27.36
Shallow Concentrated Flow				
Flow length (ft)	= 200.00	0.00	0.00	
Watercourse slope (%)	= 1.00	0.00	0.00	
Surface description	= Unpaved	Paved	Paved	
Average velocity (ft/s)	= 1.61	0.00	0.00	
Travel Time (min)	= 2.07	+	0.00	+
			0.00	= 2.07
Channel Flow				
X sectional flow area (sqft)	= 0.00	0.00	0.00	
Wetted perimeter (ft)	= 0.00	0.00	0.00	
Channel slope (%)	= 0.00	0.00	0.00	
Manning's n-value	= 0.015	0.015	0.015	
Velocity (ft/s)	= 0.00	0.00	0.00	
Flow length (ft)	= 0.0	0.0	0.0	
Travel Time (min)	= 0.00	+	0.00	+
			0.00	= 0.00
Total Travel Time, Tc				
	29.40 min			

Hydrograph Report

Hydraflow Hydrographs by Intelisolve

Tuesday, May 16 2006, 8:13 AM

Hyd. No. 1

predeveloped

Hydrograph type = SCS Runoff
 Storm frequency = 2 yrs
 Drainage area = 9.35 ac
 Basin Slope = 0.0 %
 Tc method = TR55
 Total precip. = 2.90 in
 Storm duration = 24 hrs

Peak discharge = 5.13 cfs
 Time interval = 6 min
 Curve number = 71
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 29.4 min
 Distribution = Type II
 Shape factor = 484

Hydrograph Volume = 23,879 cuft

(Printed values >= 5% of Qp.)

Hydrograph Discharge Table

Time -- Outflow (hrs cfs)	Time -- Outflow (hrs cfs)
11.80 0.42	15.20 0.41
11.90 1.50	15.30 0.41
12.00 3.22	15.40 0.40
12.10 4.72	15.50 0.39
12.20 5.13 <<	15.60 0.38
12.30 4.47	15.70 0.37
12.40 3.67	15.80 0.36
12.50 2.76	15.90 0.36
12.60 1.87	16.00 0.35
12.70 1.33	16.10 0.34
12.80 1.17	16.20 0.33
12.90 1.04	16.30 0.32
13.00 0.95	16.40 0.32
13.10 0.88	16.50 0.31
13.20 0.82	16.60 0.31
13.30 0.78	16.70 0.31
13.40 0.74	16.80 0.31
13.50 0.70	16.90 0.30
13.60 0.67	17.00 0.30
13.70 0.64	17.10 0.30
13.80 0.61	17.20 0.29
13.90 0.58	17.30 0.29
14.00 0.56	17.40 0.29
14.10 0.53	17.50 0.28
14.20 0.51	17.60 0.28
14.30 0.50	17.70 0.28
14.40 0.48	17.80 0.28
14.50 0.47	17.90 0.27
14.60 0.46	18.00 0.27
14.70 0.45	18.10 0.27
14.80 0.45	18.20 0.26
14.90 0.44	18.30 0.26
15.00 0.43	18.40 0.26
15.10 0.42	

...End

Hydrograph Report

Hydraflow Hydrographs by Intellisolve

Tuesday, May 16 2006, 8:13 AM

Hyd. No. 1

predeveloped

Hydrograph type = SCS Runoff
 Storm frequency = 10 yrs
 Drainage area = 9.35 ac
 Basin Slope = 0.0 %
 Tc method = TR55
 Total precip. = 4.20 in
 Storm duration = 24 hrs

Peak discharge = 12.29 cfs
 Time interval = 6 min
 Curve number = 71
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 29.4 min
 Distribution = Type II
 Shape factor = 484

Hydrograph Volume = 52,019 cuft

(Printed values >= 5% of Qp.)

Hydrograph Discharge Table

Time -- Outflow (hrs cfs)	Time -- Outflow (hrs cfs)
11.70 1.04	15.10 0.80
11.80 2.20	15.20 0.78
11.90 5.05	15.30 0.77
12.00 8.95	15.40 0.75
12.10 11.96	15.50 0.74
12.20 12.29 <<	15.60 0.72
12.30 10.34	15.70 0.70
12.40 8.16	15.80 0.69
12.50 5.89	15.90 0.67
12.60 3.82	16.00 0.65
12.70 2.67	16.10 0.64
12.80 2.33	16.20 0.62
12.90 2.07	
13.00 1.87	
13.10 1.72	...End
13.20 1.61	
13.30 1.52	
13.40 1.43	
13.50 1.36	
13.60 1.29	
13.70 1.23	
13.80 1.17	
13.90 1.12	
14.00 1.07	
14.10 1.03	
14.20 0.98	
14.30 0.95	
14.40 0.92	
14.50 0.90	
14.60 0.88	
14.70 0.86	
14.80 0.85	
14.90 0.83	
15.00 0.82	

Hydrograph Report

Hydraflow Hydrographs by Intelisolve

Tuesday, May 16 2006, 8:13 AM

Hyd. No. 1

predeveloped

Hydrograph type = SCS Runoff
 Storm frequency = 100 yrs
 Drainage area = 9.35 ac
 Basin Slope = 0.0 %
 Tc method = TR55
 Total precip. = 6.00 in
 Storm duration = 24 hrs

Peak discharge = 23.82 cfs
 Time interval = 6 min
 Curve number = 71
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 29.4 min
 Distribution = Type II
 Shape factor = 484

Hydrograph Volume = 98,385 cuft

(Printed values >= 5% of Qp.)

Hydrograph Discharge Table

Time -- Outflow (hrs cfs)	Time -- Outflow (hrs cfs)
11.50 1.39	14.90 1.41
11.60 1.81	15.00 1.38
11.70 2.92	15.10 1.36
11.80 5.51	15.20 1.33
11.90 11.23	15.30 1.30
12.00 18.54	15.40 1.27
12.10 23.82 <<	15.50 1.24
12.20 23.82	15.60 1.21
12.30 19.70	
12.40 15.23	
12.50 10.74	...End
12.60 6.80	
12.70 4.70	
12.80 4.08	
12.90 3.61	
13.00 3.25	
13.10 2.99	
13.20 2.79	
13.30 2.62	
13.40 2.47	
13.50 2.34	
13.60 2.22	
13.70 2.11	
13.80 2.01	
13.90 1.92	
14.00 1.83	
14.10 1.75	
14.20 1.68	
14.30 1.62	
14.40 1.57	
14.50 1.53	
14.60 1.50	
14.70 1.47	
14.80 1.44	

POSTDEVELOPED RUNOFF CONDITIONS

TR55 Tc Worksheet

Hydraflow Hydrographs by Intelisolve

Hyd. No. 2

postdeveloped

<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>
Sheet Flow				
Manning's n-value	= 0.240	0.011	0.011	
Flow length (ft)	= 100.0	0.0	0.0	
Two-year 24-hr precip. (in)	= 2.90	0.00	0.00	
Land slope (%)	= 1.00	0.00	0.00	
Travel Time (min)	= 19.78	+ 0.00	+ 0.00	= 19.78
Shallow Concentrated Flow				
Flow length (ft)	= 150.00	0.00	0.00	
Watercourse slope (%)	= 1.50	0.00	0.00	
Surface description	= Paved	Paved	Paved	
Average velocity (ft/s)	= 2.49	0.00	0.00	
Travel Time (min)	= 1.00	+ 0.00	+ 0.00	= 1.00
Channel Flow				
X sectional flow area (sqft)	= 0.00	0.00	0.00	
Wetted perimeter (ft)	= 0.00	0.00	0.00	
Channel slope (%)	= 0.00	0.00	0.00	
Manning's n-value	= 0.015	0.015	0.015	
Velocity (ft/s)	= 0.00	0.00	0.00	
Flow length (ft)	= 0.0	0.0	0.0	
Travel Time (min)	= 0.00	+ 0.00	+ 0.00	= 0.00
Total Travel Time, Tc				20.80 min

Hydrograph Report

Hydraflow Hydrographs by Intelisolve

Saturday, May 13 2006, 10:28 AM

Hyd. No. 2

postdeveloped

Hydrograph type = SCS Runoff
 Storm frequency = 2 yrs
 Drainage area = 9.35 ac
 Basin Slope = 0.0 %
 Tc method = TR55
 Total precip. = 2.90 in
 Storm duration = 24 hrs

Peak discharge = 12.46 cfs
 Time interval = 6 min
 Curve number = 85
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 20.8 min
 Distribution = Type II
 Shape factor = 484

Hydrograph Volume = 51,067 cuft

(Printed values >= 5% of Qp.)

Hydrograph Discharge Table

Time -- Outflow (hrs) cfs)	Time -- Outflow (hrs) cfs)
11.40 0.69	14.80 0.72
11.50 0.80	14.90 0.71
11.60 1.03	15.00 0.70
11.70 1.63	15.10 0.68
11.80 3.02	15.20 0.67
11.90 6.01	15.30 0.65
12.00 9.78	15.40 0.64
12.10 12.46 <<	15.50 0.62
12.20 12.39	
12.30 10.20	
12.40 7.85	...End
12.50 5.51	
12.60 3.46	
12.70 2.38	
12.80 2.07	
12.90 1.83	
13.00 1.65	
13.10 1.51	
13.20 1.41	
13.30 1.32	
13.40 1.25	
13.50 1.18	
13.60 1.12	
13.70 1.07	
13.80 1.02	
13.90 0.97	
14.00 0.92	
14.10 0.88	
14.20 0.85	
14.30 0.82	
14.40 0.79	
14.50 0.77	
14.60 0.75	
14.70 0.74	

Hydrograph Report

Hydraflow Hydrographs by Intelisolve

Saturday, May 13 2006, 10:28 AM

Hyd. No. 2

postdeveloped

Hydrograph type = SCS Runoff
 Storm frequency = 10 yrs
 Drainage area = 9.35 ac
 Basin Slope = 0.0 %
 Tc method = TR55
 Total precip. = 4.20 in
 Storm duration = 24 hrs

Peak discharge = 22.06 cfs
 Time interval = 6 min
 Curve number = 85
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 20.8 min
 Distribution = Type II
 Shape factor = 484

Hydrograph Volume = 89,511 cuft

(Printed values >= 5% of Qp.)

Hydrograph Discharge Table

Time -- Outflow (hrs cfs)	Time -- Outflow (hrs cfs)
11.20 1.21	14.60 1.21
11.30 1.36	14.70 1.18
11.40 1.54	14.80 1.16
11.50 1.76	14.90 1.14
11.60 2.21	15.00 1.11
11.70 3.37	
11.80 5.96	
11.90 11.29	...End
12.00 17.71	
12.10 22.06 <<	
12.20 21.58	
12.30 17.58	
12.40 13.35	
12.50 9.23	
12.60 5.71	
12.70 3.90	
12.80 3.38	
12.90 2.98	
13.00 2.68	
13.10 2.46	
13.20 2.28	
13.30 2.14	
13.40 2.02	
13.50 1.91	
13.60 1.81	
13.70 1.72	
13.80 1.64	
13.90 1.56	
14.00 1.49	
14.10 1.42	
14.20 1.36	
14.30 1.31	
14.40 1.27	
14.50 1.24	

Hydrograph Report

Hydraflow Hydrographs by Intelisolve

Saturday, May 13 2006, 10:28 AM

Hyd. No. 2

postdeveloped

Hydrograph type = SCS Runoff
 Storm frequency = 100 yrs
 Drainage area = 9.35 ac
 Basin Slope = 0.0 %
 Tc method = TR55
 Total precip. = 6.00 in
 Storm duration = 24 hrs

Peak discharge = 35.77 cfs
 Time interval = 6 min
 Curve number = 85
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 20.8 min
 Distribution = Type II
 Shape factor = 484

Hydrograph Volume = 146,030 cuft

(Printed values \geq 5% of Qp.)

Hydrograph Discharge Table

Time -- Outflow (hrs cfs)	Time -- Outflow (hrs cfs)
11.00 1.93	14.40 1.92
11.10 2.11	14.50 1.87
11.20 2.32	14.60 1.83
11.30 2.58	14.70 1.79
11.40 2.89	
11.50 3.25	
11.60 4.03	...End
11.70 6.03	
11.80 10.37	
11.90 19.02	
12.00 29.15	
12.10 35.77 <<	
12.20 34.63	
12.30 28.01	
12.40 21.08	
12.50 14.42	
12.60 8.83	
12.70 6.00	
12.80 5.18	
12.90 4.57	
13.00 4.10	
13.10 3.76	
13.20 3.49	
13.30 3.27	
13.40 3.08	
13.50 2.91	
13.60 2.76	
13.70 2.62	
13.80 2.49	
13.90 2.37	
14.00 2.26	
14.10 2.16	
14.20 2.06	
14.30 1.99	

ROUTING COMPUTATIONS

Hydrograph Report

Hydraflow Hydrographs by Intelisolve

Tuesday, May 16 2006, 8:16 AM

Hyd. No. 3

pond/rink

Hydrograph type = Reservoir
Storm frequency = 2 yrs
Inflow hyd. No. = 2
Max. Elevation = 91.82 ft

Peak discharge = 3.92 cfs
Time interval = 6 min
Reservoir name = pond2
Max. Storage = 20,291 cuft

Storage Indication method used.

Outflow hydrograph volume = 50,978 cuft

Hydrograph Discharge Table

(Printed values >= 5% of Qp.)

Time (hrs)	Inflow cfs	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	Clv D cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	Outflow cfs
11.60	1.03	90.22	0.21	----	----	----	----	----	----	----	----	0.21
11.70	1.63	90.26	0.28	----	----	----	----	----	----	----	----	0.28
11.80	3.02	90.33	0.44	----	----	----	----	----	----	----	----	0.44
11.90	6.01	90.46	0.82	----	----	----	----	----	----	----	----	0.82
12.00	9.78	90.69	1.62	----	----	----	----	----	----	----	----	1.62
12.10	12.46 <<	90.98	2.63	----	----	----	----	----	----	----	----	2.63
12.20	12.39	90.88	2.34	----	----	----	----	----	----	----	----	2.34
12.30	10.20	91.55	3.22	----	----	----	----	----	----	----	----	3.22
12.40	7.85	91.72	3.67	----	----	----	----	----	----	----	----	3.67
12.50	5.51	91.80	3.88	----	----	----	----	----	----	----	----	3.88
12.60	3.46	91.82 <<	3.92	----	----	----	----	----	----	----	----	3.92 <<
12.70	2.38	91.79	3.86	----	----	----	----	----	----	----	----	3.86
12.80	2.07	91.75	3.74	----	----	----	----	----	----	----	----	3.74
12.90	1.83	91.70	3.61	----	----	----	----	----	----	----	----	3.61
13.00	1.65	91.64	3.47	----	----	----	----	----	----	----	----	3.47
13.10	1.51	91.59	3.32	----	----	----	----	----	----	----	----	3.32
13.20	1.41	91.53	3.17	----	----	----	----	----	----	----	----	3.17
13.30	1.32	91.48	3.01	----	----	----	----	----	----	----	----	3.01
13.40	1.25	91.43	2.85	----	----	----	----	----	----	----	----	2.85
13.50	1.18	91.38	2.69	----	----	----	----	----	----	----	----	2.69
13.60	1.12	90.94	2.52	----	----	----	----	----	----	----	----	2.52
13.70	1.07	90.89	2.37	----	----	----	----	----	----	----	----	2.37
13.80	1.02	90.84	2.21	----	----	----	----	----	----	----	----	2.21
13.90	0.97	90.80	2.05	----	----	----	----	----	----	----	----	2.05
14.00	0.92	90.76	1.90	----	----	----	----	----	----	----	----	1.90
14.10	0.88	90.72	1.75	----	----	----	----	----	----	----	----	1.75
14.20	0.85	90.68	1.60	----	----	----	----	----	----	----	----	1.60
14.30	0.82	90.65	1.47	----	----	----	----	----	----	----	----	1.47
14.40	0.79	90.61	1.34	----	----	----	----	----	----	----	----	1.34
14.50	0.77	90.58	1.23	----	----	----	----	----	----	----	----	1.23
14.60	0.75	90.55	1.12	----	----	----	----	----	----	----	----	1.12
14.70	0.74	90.52	1.03	----	----	----	----	----	----	----	----	1.03
14.80	0.72	90.50	0.96	----	----	----	----	----	----	----	----	0.96
14.90	0.71	90.48	0.88	----	----	----	----	----	----	----	----	0.88
15.00	0.70	90.46	0.83	----	----	----	----	----	----	----	----	0.83
15.10	0.68	90.45	0.79	----	----	----	----	----	----	----	----	0.79
15.20	0.67	90.44	0.75	----	----	----	----	----	----	----	----	0.75
15.30	0.65	91.00	2.67	----	----	----	----	----	----	----	----	2.67

Continues on next page...

pond/rink

Hydrograph Discharge Table

Time (hrs)	Inflow cfs	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	Clv D cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	Outflow cfs
15.40	0.64	90.93	2.51	----	----	----	----	----	----	----	----	2.51
15.50	0.62	90.88	2.33	----	----	----	----	----	----	----	----	2.33
15.60	0.61	90.82	2.14	----	----	----	----	----	----	----	----	2.14
15.70	0.60	90.78	1.96	----	----	----	----	----	----	----	----	1.96
15.80	0.58	90.73	1.80	----	----	----	----	----	----	----	----	1.80
15.90	0.57	90.70	1.66	----	----	----	----	----	----	----	----	1.66
16.00	0.55	90.66	1.53	----	----	----	----	----	----	----	----	1.53
16.10	0.54	90.63	1.41	----	----	----	----	----	----	----	----	1.41
16.20	0.52	90.60	1.31	----	----	----	----	----	----	----	----	1.31
16.30	0.51	90.58	1.22	----	----	----	----	----	----	----	----	1.22
16.40	0.50	90.56	1.14	----	----	----	----	----	----	----	----	1.14
16.50	0.50	90.54	1.07	----	----	----	----	----	----	----	----	1.07
16.60	0.49	90.52	1.00	----	----	----	----	----	----	----	----	1.00
16.70	0.48	90.50	0.95	----	----	----	----	----	----	----	----	0.95
16.80	0.48	90.49	0.90	----	----	----	----	----	----	----	----	0.90
16.90	0.47	90.47	0.85	----	----	----	----	----	----	----	----	0.85
17.00	0.47	90.46	0.81	----	----	----	----	----	----	----	----	0.81
17.10	0.46	90.45	0.78	----	----	----	----	----	----	----	----	0.78
17.20	0.46	90.44	0.75	----	----	----	----	----	----	----	----	0.75
17.30	0.45	90.43	0.72	----	----	----	----	----	----	----	----	0.72
17.40	0.45	90.42	0.69	----	----	----	----	----	----	----	----	0.69
17.50	0.44	90.41	0.67	----	----	----	----	----	----	----	----	0.67
17.60	0.44	90.40	0.64	----	----	----	----	----	----	----	----	0.64
17.70	0.43	90.40	0.62	----	----	----	----	----	----	----	----	0.62
17.80	0.43	90.39	0.61	----	----	----	----	----	----	----	----	0.61
17.90	0.42	90.38	0.59	----	----	----	----	----	----	----	----	0.59
18.00	0.42	90.38	0.57	----	----	----	----	----	----	----	----	0.57
18.10	0.41	90.37	0.56	----	----	----	----	----	----	----	----	0.56
18.20	0.41	90.37	0.55	----	----	----	----	----	----	----	----	0.55
18.30	0.40	90.36	0.53	----	----	----	----	----	----	----	----	0.53
18.40	0.40	90.36	0.52	----	----	----	----	----	----	----	----	0.52
18.50	0.39	90.36	0.51	----	----	----	----	----	----	----	----	0.51
18.60	0.39	90.35	0.50	----	----	----	----	----	----	----	----	0.50
18.70	0.38	90.35	0.49	----	----	----	----	----	----	----	----	0.49
18.80	0.37	90.34	0.48	----	----	----	----	----	----	----	----	0.48
18.90	0.37	90.34	0.47	----	----	----	----	----	----	----	----	0.47
19.00	0.36	90.34	0.46	----	----	----	----	----	----	----	----	0.46
19.10	0.36	90.33	0.45	----	----	----	----	----	----	----	----	0.45
19.20	0.35	90.33	0.44	----	----	----	----	----	----	----	----	0.44
19.30	0.35	90.33	0.44	----	----	----	----	----	----	----	----	0.44
19.40	0.34	90.32	0.43	----	----	----	----	----	----	----	----	0.43
19.50	0.34	90.32	0.42	----	----	----	----	----	----	----	----	0.42
19.60	0.33	90.32	0.41	----	----	----	----	----	----	----	----	0.41
19.70	0.33	90.32	0.41	----	----	----	----	----	----	----	----	0.41
19.80	0.32	90.31	0.40	----	----	----	----	----	----	----	----	0.40
19.90	0.31	90.31	0.39	----	----	----	----	----	----	----	----	0.39
20.00	0.31	90.31	0.39	----	----	----	----	----	----	----	----	0.39
20.10	0.30	90.30	0.38	----	----	----	----	----	----	----	----	0.38
20.20	0.30	90.30	0.38	----	----	----	----	----	----	----	----	0.38
20.30	0.30	90.30	0.37	----	----	----	----	----	----	----	----	0.37
20.40	0.29	90.30	0.36	----	----	----	----	----	----	----	----	0.36

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pond/rink

Hydrograph Discharge Table

Time (hrs)	Inflow cfs	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	Clv D cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	Outflow cfs
20.50	0.29	90.29	0.36	----	----	----	----	----	----	----	----	0.36
20.60	0.29	90.29	0.35	----	----	----	----	----	----	----	----	0.35
20.70	0.29	90.29	0.35	----	----	----	----	----	----	----	----	0.35
20.80	0.29	90.29	0.34	----	----	----	----	----	----	----	----	0.34
20.90	0.29	90.29	0.34	----	----	----	----	----	----	----	----	0.34
21.00	0.28	90.28	0.34	----	----	----	----	----	----	----	----	0.34
21.10	0.28	90.28	0.33	----	----	----	----	----	----	----	----	0.33
21.20	0.28	90.28	0.33	----	----	----	----	----	----	----	----	0.33
21.30	0.28	90.28	0.32	----	----	----	----	----	----	----	----	0.32
21.40	0.28	90.28	0.32	----	----	----	----	----	----	----	----	0.32
21.50	0.28	90.28	0.32	----	----	----	----	----	----	----	----	0.32
21.60	0.28	90.28	0.31	----	----	----	----	----	----	----	----	0.31
21.70	0.28	90.27	0.31	----	----	----	----	----	----	----	----	0.31
21.80	0.28	90.27	0.31	----	----	----	----	----	----	----	----	0.31
21.90	0.28	90.27	0.31	----	----	----	----	----	----	----	----	0.31
22.00	0.27	90.27	0.31	----	----	----	----	----	----	----	----	0.31
22.10	0.27	90.27	0.30	----	----	----	----	----	----	----	----	0.30
22.20	0.27	90.27	0.30	----	----	----	----	----	----	----	----	0.30
22.30	0.27	90.27	0.30	----	----	----	----	----	----	----	----	0.30
22.40	0.27	90.27	0.30	----	----	----	----	----	----	----	----	0.30
22.50	0.27	90.27	0.30	----	----	----	----	----	----	----	----	0.30
22.60	0.27	90.27	0.29	----	----	----	----	----	----	----	----	0.29
22.70	0.27	90.26	0.29	----	----	----	----	----	----	----	----	0.29
22.80	0.27	90.26	0.29	----	----	----	----	----	----	----	----	0.29
22.90	0.27	90.26	0.29	----	----	----	----	----	----	----	----	0.29
23.00	0.26	90.26	0.29	----	----	----	----	----	----	----	----	0.29
23.10	0.26	90.26	0.29	----	----	----	----	----	----	----	----	0.29
23.20	0.26	90.26	0.28	----	----	----	----	----	----	----	----	0.28
23.30	0.26	90.26	0.28	----	----	----	----	----	----	----	----	0.28
23.40	0.26	90.26	0.28	----	----	----	----	----	----	----	----	0.28
23.50	0.26	90.26	0.28	----	----	----	----	----	----	----	----	0.28
23.60	0.26	90.26	0.28	----	----	----	----	----	----	----	----	0.28
23.70	0.26	90.26	0.28	----	----	----	----	----	----	----	----	0.28
23.80	0.26	90.26	0.27	----	----	----	----	----	----	----	----	0.27
23.90	0.25	90.26	0.27	----	----	----	----	----	----	----	----	0.27
24.00	0.25	90.26	0.27	----	----	----	----	----	----	----	----	0.27
24.10	0.23	90.25	0.27	----	----	----	----	----	----	----	----	0.27
24.20	0.19	90.25	0.27	----	----	----	----	----	----	----	----	0.27
24.30	0.13	90.25	0.26	----	----	----	----	----	----	----	----	0.26
24.40	0.08	90.24	0.25	----	----	----	----	----	----	----	----	0.25
24.50	0.04	90.24	0.24	----	----	----	----	----	----	----	----	0.24
24.60	0.01	90.23	0.22	----	----	----	----	----	----	----	----	0.22
24.70	0.00	90.22	0.21	----	----	----	----	----	----	----	----	0.21
24.80	0.00	90.21	0.20	----	----	----	----	----	----	----	----	0.20

...End

Hydrograph Report

Hydraflow Hydrographs by Intelisolve

Tuesday, May 16 2006, 8:16 AM

Hyd. No. 3

pond/rink

Hydrograph type = Reservoir
 Storm frequency = 10 yrs
 Inflow hyd. No. = 2
 Max. Elevation = 93.10 ft

Peak discharge = 6.10 cfs
 Time interval = 6 min
 Reservoir name = pond2
 Max. Storage = 37,111 cuft

Storage Indication method used.

Outflow hydrograph volume = 89,422 cuft

(Printed values >= 5% of Qp.)

Hydrograph Discharge Table

Time (hrs)	Inflow cfs	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	Clv D cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	Outflow cfs
10.80	0.82	90.28	0.33	----	----	----	----	----	----	----	----	0.33
10.90	0.90	90.30	0.37	----	----	----	----	----	----	----	----	0.37
11.00	0.99	90.32	0.41	----	----	----	----	----	----	----	----	0.41
11.10	1.09	90.34	0.47	----	----	----	----	----	----	----	----	0.47
11.20	1.21	90.36	0.52	----	----	----	----	----	----	----	----	0.52
11.30	1.36	90.39	0.59	----	----	----	----	----	----	----	----	0.59
11.40	1.54	90.41	0.67	----	----	----	----	----	----	----	----	0.67
11.50	1.76	90.45	0.77	----	----	----	----	----	----	----	----	0.77
11.60	2.21	90.49	0.90	----	----	----	----	----	----	----	----	0.90
11.70	3.37	90.55	1.10	----	----	----	----	----	----	----	----	1.10
11.80	5.96	90.66	1.51	----	----	----	----	----	----	----	----	1.51
11.90	11.29	90.88	2.33	----	----	----	----	----	----	----	----	2.33
12.00	17.71	90.85	2.24	----	----	----	----	----	----	----	----	2.24
12.10	22.06 <<	91.78	3.81	----	----	----	----	----	----	----	----	3.81
12.20	21.58	92.28	4.89	----	----	----	----	----	----	----	----	4.89
12.30	17.58	92.67	5.57	----	----	----	----	----	----	----	----	5.57
12.40	13.35	92.93	5.89	----	----	----	----	----	----	----	----	5.89
12.50	9.23	93.06	6.05	----	----	----	----	----	----	----	----	6.05
12.60	5.71	93.10 <<	6.10	----	----	----	----	----	----	----	----	6.10 <<
12.70	3.90	93.07	6.06	----	----	----	----	----	----	----	----	6.06
12.80	3.38	93.01	5.98	----	----	----	----	----	----	----	----	5.98
12.90	2.98	92.93	5.90	----	----	----	----	----	----	----	----	5.90
13.00	2.68	92.85	5.80	----	----	----	----	----	----	----	----	5.80
13.10	2.46	92.77	5.70	----	----	----	----	----	----	----	----	5.70
13.20	2.28	92.68	5.59	----	----	----	----	----	----	----	----	5.59
13.30	2.14	92.59	5.47	----	----	----	----	----	----	----	----	5.47
13.40	2.02	92.51	5.31	----	----	----	----	----	----	----	----	5.31
13.50	1.91	92.42	5.15	----	----	----	----	----	----	----	----	5.15
13.60	1.81	92.33	4.99	----	----	----	----	----	----	----	----	4.99
13.70	1.72	92.24	4.82	----	----	----	----	----	----	----	----	4.82
13.80	1.64	92.15	4.65	----	----	----	----	----	----	----	----	4.65
13.90	1.56	92.07	4.48	----	----	----	----	----	----	----	----	4.48
14.00	1.49	91.99	4.30	----	----	----	----	----	----	----	----	4.30
14.10	1.42	91.91	4.12	----	----	----	----	----	----	----	----	4.12
14.20	1.36	91.83	3.95	----	----	----	----	----	----	----	----	3.95
14.30	1.31	91.76	3.77	----	----	----	----	----	----	----	----	3.77
14.40	1.27	91.69	3.59	----	----	----	----	----	----	----	----	3.59
14.50	1.24	91.62	3.41	----	----	----	----	----	----	----	----	3.41

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pond/rink

Hydrograph Discharge Table

Time (hrs)	Inflow cfs	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	Clv D cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	Outflow cfs
14.60	1.21	91.56	3.23	----	----	----	----	----	----	----	----	3.23
14.70	1.18	91.50	3.06	----	----	----	----	----	----	----	----	3.06
14.80	1.16	91.44	2.88	----	----	----	----	----	----	----	----	2.88
14.90	1.14	91.39	2.71	----	----	----	----	----	----	----	----	2.71
15.00	1.11	90.95	2.55	----	----	----	----	----	----	----	----	2.55
15.10	1.09	90.89	2.39	----	----	----	----	----	----	----	----	2.39
15.20	1.07	90.85	2.23	----	----	----	----	----	----	----	----	2.23
15.30	1.04	90.81	2.08	----	----	----	----	----	----	----	----	2.08
15.40	1.02	90.77	1.94	----	----	----	----	----	----	----	----	1.94
15.50	1.00	90.73	1.80	----	----	----	----	----	----	----	----	1.80
15.60	0.97	90.70	1.68	----	----	----	----	----	----	----	----	1.68
15.70	0.95	90.67	1.56	----	----	----	----	----	----	----	----	1.56
15.80	0.93	90.64	1.44	----	----	----	----	----	----	----	----	1.44
15.90	0.90	90.61	1.34	----	----	----	----	----	----	----	----	1.34
16.00	0.88	90.59	1.25	----	----	----	----	----	----	----	----	1.25
16.10	0.85	90.56	1.17	----	----	----	----	----	----	----	----	1.17
16.20	0.83	90.54	1.09	----	----	----	----	----	----	----	----	1.09
16.30	0.82	90.52	1.02	----	----	----	----	----	----	----	----	1.02
16.40	0.80	90.51	0.97	----	----	----	----	----	----	----	----	0.97
16.50	0.79	90.49	0.92	----	----	----	----	----	----	----	----	0.92
16.60	0.78	90.48	0.88	----	----	----	----	----	----	----	----	0.88
16.70	0.77	90.47	0.85	----	----	----	----	----	----	----	----	0.85
16.80	0.76	90.46	0.82	----	----	----	----	----	----	----	----	0.82
16.90	0.75	90.46	0.80	----	----	----	----	----	----	----	----	0.80
17.00	0.74	90.45	0.79	----	----	----	----	----	----	----	----	0.79
17.10	0.74	90.45	0.77	----	----	----	----	----	----	----	----	0.77
17.20	0.73	90.44	0.76	----	----	----	----	----	----	----	----	0.76
17.30	0.72	90.44	0.75	----	----	----	----	----	----	----	----	0.75
17.40	0.71	91.00	2.67	----	----	----	----	----	----	----	----	2.67
17.50	0.70	90.94	2.52	----	----	----	----	----	----	----	----	2.52
17.60	0.69	90.88	2.34	----	----	----	----	----	----	----	----	2.34
17.70	0.69	90.83	2.16	----	----	----	----	----	----	----	----	2.16
17.80	0.68	90.79	2.00	----	----	----	----	----	----	----	----	2.00
17.90	0.67	90.74	1.84	----	----	----	----	----	----	----	----	1.84
18.00	0.66	90.71	1.70	----	----	----	----	----	----	----	----	1.70
18.10	0.65	90.67	1.58	----	----	----	----	----	----	----	----	1.58
18.20	0.64	90.65	1.47	----	----	----	----	----	----	----	----	1.47
18.30	0.63	90.62	1.37	----	----	----	----	----	----	----	----	1.37
18.40	0.63	90.60	1.28	----	----	----	----	----	----	----	----	1.28
18.50	0.62	90.58	1.21	----	----	----	----	----	----	----	----	1.21
18.60	0.61	90.56	1.14	----	----	----	----	----	----	----	----	1.14
18.70	0.60	90.54	1.08	----	----	----	----	----	----	----	----	1.08
18.80	0.59	90.52	1.03	----	----	----	----	----	----	----	----	1.03
18.90	0.58	90.51	0.98	----	----	----	----	----	----	----	----	0.98
19.00	0.57	90.50	0.94	----	----	----	----	----	----	----	----	0.94
19.10	0.57	90.49	0.90	----	----	----	----	----	----	----	----	0.90
19.20	0.56	90.47	0.86	----	----	----	----	----	----	----	----	0.86
19.30	0.55	90.46	0.83	----	----	----	----	----	----	----	----	0.83
19.40	0.54	90.45	0.80	----	----	----	----	----	----	----	----	0.80
19.50	0.53	90.45	0.77	----	----	----	----	----	----	----	----	0.77
19.60	0.52	90.44	0.75	----	----	----	----	----	----	----	----	0.75

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pond/rink

Hydrograph Discharge Table

Time (hrs)	Inflow cfs	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	Clv D cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	Outflow cfs
19.70	0.51	90.43	0.72	----	----	----	----	----	----	----	----	0.72
19.80	0.51	90.42	0.70	----	----	----	----	----	----	----	----	0.70
19.90	0.50	90.42	0.68	----	----	----	----	----	----	----	----	0.68
20.00	0.49	90.41	0.66	----	----	----	----	----	----	----	----	0.66
20.10	0.48	90.40	0.65	----	----	----	----	----	----	----	----	0.65
20.20	0.47	90.40	0.63	----	----	----	----	----	----	----	----	0.63
20.30	0.47	90.39	0.62	----	----	----	----	----	----	----	----	0.62
20.40	0.46	90.39	0.60	----	----	----	----	----	----	----	----	0.60
20.50	0.46	90.38	0.59	----	----	----	----	----	----	----	----	0.59
20.60	0.46	90.38	0.58	----	----	----	----	----	----	----	----	0.58
20.70	0.45	90.38	0.56	----	----	----	----	----	----	----	----	0.56
20.80	0.45	90.37	0.55	----	----	----	----	----	----	----	----	0.55
20.90	0.45	90.37	0.55	----	----	----	----	----	----	----	----	0.55
21.00	0.45	90.37	0.54	----	----	----	----	----	----	----	----	0.54
21.10	0.45	90.36	0.53	----	----	----	----	----	----	----	----	0.53
21.20	0.45	90.36	0.52	----	----	----	----	----	----	----	----	0.52
21.30	0.44	90.36	0.52	----	----	----	----	----	----	----	----	0.52
21.40	0.44	90.36	0.51	----	----	----	----	----	----	----	----	0.51
21.50	0.44	90.35	0.50	----	----	----	----	----	----	----	----	0.50
21.60	0.44	90.35	0.50	----	----	----	----	----	----	----	----	0.50
21.70	0.44	90.35	0.49	----	----	----	----	----	----	----	----	0.49
21.80	0.44	90.35	0.49	----	----	----	----	----	----	----	----	0.49
21.90	0.43	90.35	0.48	----	----	----	----	----	----	----	----	0.48
22.00	0.43	90.34	0.48	----	----	----	----	----	----	----	----	0.48
22.10	0.43	90.34	0.47	----	----	----	----	----	----	----	----	0.47
22.20	0.43	90.34	0.47	----	----	----	----	----	----	----	----	0.47
22.30	0.43	90.34	0.47	----	----	----	----	----	----	----	----	0.47
22.40	0.43	90.34	0.46	----	----	----	----	----	----	----	----	0.46
22.50	0.42	90.34	0.46	----	----	----	----	----	----	----	----	0.46
22.60	0.42	90.34	0.46	----	----	----	----	----	----	----	----	0.46
22.70	0.42	90.33	0.45	----	----	----	----	----	----	----	----	0.45
22.80	0.42	90.33	0.45	----	----	----	----	----	----	----	----	0.45
22.90	0.42	90.33	0.45	----	----	----	----	----	----	----	----	0.45
23.00	0.41	90.33	0.45	----	----	----	----	----	----	----	----	0.45
23.10	0.41	90.33	0.44	----	----	----	----	----	----	----	----	0.44
23.20	0.41	90.33	0.44	----	----	----	----	----	----	----	----	0.44
23.30	0.41	90.33	0.44	----	----	----	----	----	----	----	----	0.44
23.40	0.41	90.33	0.44	----	----	----	----	----	----	----	----	0.44
23.50	0.41	90.33	0.43	----	----	----	----	----	----	----	----	0.43
23.60	0.40	90.33	0.43	----	----	----	----	----	----	----	----	0.43
23.70	0.40	90.32	0.43	----	----	----	----	----	----	----	----	0.43
23.80	0.40	90.32	0.43	----	----	----	----	----	----	----	----	0.43
23.90	0.40	90.32	0.42	----	----	----	----	----	----	----	----	0.42
24.00	0.40	90.32	0.42	----	----	----	----	----	----	----	----	0.42
24.10	0.36	90.32	0.42	----	----	----	----	----	----	----	----	0.42
24.20	0.30	90.32	0.41	----	----	----	----	----	----	----	----	0.41
24.30	0.20	90.31	0.40	----	----	----	----	----	----	----	----	0.40
24.40	0.12	90.30	0.38	----	----	----	----	----	----	----	----	0.38
24.50	0.06	90.29	0.36	----	----	----	----	----	----	----	----	0.36
24.60	0.02	90.28	0.33	----	----	----	----	----	----	----	----	0.33
24.70	0.00	90.27	0.31	----	----	----	----	----	----	----	----	0.31

Continues on next page...

Hydrograph Report

Hydraflow Hydrographs by Intelisolve

Tuesday, May 16 2006, 8:16 AM

Hyd. No. 3

pond/rink

Hydrograph type = Reservoir
 Storm frequency = 100 yrs
 Inflow hyd. No. = 2
 Max. Elevation = 93.84 ft

Peak discharge = 24.14 cfs
 Time interval = 6 min
 Reservoir name = pond2
 Max. Storage = 48,004 cuft

Storage Indication method used.

Outflow hydrograph volume = 145,941 cuft

(Printed values >= 5% of Qp.)

Hydrograph Discharge Table

Time (hrs)	Inflow cfs	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	Clv D cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	Outflow cfs
11.10	2.11	90.59	1.25	----	----	----	----	----	----	----	----	1.25
11.20	2.32	90.62	1.36	----	----	----	----	----	----	----	----	1.36
11.30	2.58	90.65	1.49	----	----	----	----	----	----	----	----	1.49
11.40	2.89	90.69	1.64	----	----	----	----	----	----	----	----	1.64
11.50	3.25	90.74	1.81	----	----	----	----	----	----	----	----	1.81
11.60	4.03	90.79	2.02	----	----	----	----	----	----	----	----	2.02
11.70	6.03	90.88	2.35	----	----	----	----	----	----	----	----	2.35
11.80	10.37	90.60	1.29	----	----	----	----	----	----	----	----	1.29
11.90	19.02	91.48	3.00	----	----	----	----	----	----	----	----	3.00
12.00	29.15	92.08	4.49	----	----	----	----	----	----	----	----	4.49
12.10	35.77 <<	92.82	5.76	----	----	----	----	----	----	----	----	5.76
12.20	34.63	93.50	6.54	----	----	----	5.36	----	----	----	----	11.90
12.30	28.01	93.83	6.90	----	----	----	16.49	----	----	----	----	23.39
12.40	21.08	93.84 <<	6.91	----	----	----	17.23	----	----	----	----	24.14 <<
12.50	14.42	93.74	6.81	----	----	----	13.25	----	----	----	----	20.06
12.60	8.83	93.60	6.65	----	----	----	8.35	----	----	----	----	15.00
12.70	6.00	93.46	6.51	----	----	----	4.45	----	----	----	----	10.96
12.80	5.18	93.36	6.39	----	----	----	2.10	----	----	----	----	8.50
12.90	4.57	93.29	6.31	----	----	----	0.83	----	----	----	----	7.14
13.00	4.10	93.22	6.24	----	----	----	0.13	----	----	----	----	6.37
13.10	3.76	93.16	6.17	----	----	----	----	----	----	----	----	6.17
13.20	3.49	93.10	6.10	----	----	----	----	----	----	----	----	6.10
13.30	3.27	93.03	6.02	----	----	----	----	----	----	----	----	6.02
13.40	3.08	92.96	5.93	----	----	----	----	----	----	----	----	5.93
13.50	2.91	92.88	5.84	----	----	----	----	----	----	----	----	5.84
13.60	2.76	92.81	5.74	----	----	----	----	----	----	----	----	5.74
13.70	2.62	92.73	5.64	----	----	----	----	----	----	----	----	5.64
13.80	2.49	92.65	5.54	----	----	----	----	----	----	----	----	5.54
13.90	2.37	92.56	5.41	----	----	----	----	----	----	----	----	5.41
14.00	2.26	92.48	5.27	----	----	----	----	----	----	----	----	5.27
14.10	2.16	92.40	5.12	----	----	----	----	----	----	----	----	5.12
14.20	2.06	92.32	4.97	----	----	----	----	----	----	----	----	4.97
14.30	1.99	92.24	4.82	----	----	----	----	----	----	----	----	4.82
14.40	1.92	92.16	4.66	----	----	----	----	----	----	----	----	4.66
14.50	1.87	92.08	4.51	----	----	----	----	----	----	----	----	4.51
14.60	1.83	92.01	4.35	----	----	----	----	----	----	----	----	4.35
14.70	1.79	91.94	4.20	----	----	----	----	----	----	----	----	4.20
14.80	1.76	91.87	4.04	----	----	----	----	----	----	----	----	4.04

Continues on next page...

pond/rink

Hydrograph Discharge Table

Time (hrs)	Inflow cfs	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	Clv D cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	Outflow cfs
14.90	1.72	91.81	3.89	----	----	----	----	----	----	----	----	3.89
15.00	1.69	91.75	3.74	----	----	----	----	----	----	----	----	3.74
15.10	1.65	91.69	3.59	----	----	----	----	----	----	----	----	3.59
15.20	1.62	91.63	3.44	----	----	----	----	----	----	----	----	3.44
15.30	1.58	91.58	3.29	----	----	----	----	----	----	----	----	3.29
15.40	1.54	91.53	3.14	----	----	----	----	----	----	----	----	3.14
15.50	1.51	91.48	3.00	----	----	----	----	----	----	----	----	3.00
15.60	1.47	91.44	2.86	----	----	----	----	----	----	----	----	2.86
15.70	1.43	91.40	2.72	----	----	----	----	----	----	----	----	2.72
15.80	1.40	90.96	2.59	----	----	----	----	----	----	----	----	2.59
15.90	1.36	90.92	2.46	----	----	----	----	----	----	----	----	2.46
16.00	1.33	90.88	2.33	----	----	----	----	----	----	----	----	2.33
16.10	1.29	90.84	2.21	----	----	----	----	----	----	----	----	2.21
16.20	1.26	90.81	2.09	----	----	----	----	----	----	----	----	2.09
16.30	1.23	90.78	1.98	----	----	----	----	----	----	----	----	1.98
16.40	1.21	90.75	1.87	----	----	----	----	----	----	----	----	1.87
16.50	1.19	90.72	1.77	----	----	----	----	----	----	----	----	1.77
16.60	1.17	90.70	1.67	----	----	----	----	----	----	----	----	1.67
16.70	1.16	90.68	1.59	----	----	----	----	----	----	----	----	1.59
16.80	1.15	90.66	1.51	----	----	----	----	----	----	----	----	1.51
16.90	1.14	90.64	1.45	----	----	----	----	----	----	----	----	1.45
17.00	1.12	90.62	1.39	----	----	----	----	----	----	----	----	1.39
17.10	1.11	90.61	1.33	----	----	----	----	----	----	----	----	1.33
17.20	1.10	90.60	1.29	----	----	----	----	----	----	----	----	1.29
17.30	1.08	90.59	1.24	----	----	----	----	----	----	----	----	1.24
17.40	1.07	90.58	1.21	----	----	----	----	----	----	----	----	1.21
20.20	0.71	91.00	2.67	----	----	----	----	----	----	----	----	2.67
20.30	0.70	90.94	2.52	----	----	----	----	----	----	----	----	2.52
20.40	0.69	90.88	2.34	----	----	----	----	----	----	----	----	2.34
20.50	0.69	90.83	2.16	----	----	----	----	----	----	----	----	2.16
20.60	0.68	90.79	2.00	----	----	----	----	----	----	----	----	2.00
20.70	0.68	90.74	1.85	----	----	----	----	----	----	----	----	1.85
20.80	0.68	90.71	1.71	----	----	----	----	----	----	----	----	1.71
20.90	0.68	90.68	1.58	----	----	----	----	----	----	----	----	1.58
21.00	0.67	90.65	1.47	----	----	----	----	----	----	----	----	1.47
21.10	0.67	90.62	1.38	----	----	----	----	----	----	----	----	1.38
21.20	0.67	90.60	1.30	----	----	----	----	----	----	----	----	1.30
21.30	0.67	90.58	1.22	----	----	----	----	----	----	----	----	1.22

...End

POND & OUTLET STRUCTURE DATA

Pond Report

Hydraflow Hydrographs by Intelisolve

Tuesday, May 16 2006, 8:11 AM

Pond No. 1 - pond2

Pond Data

Bottom LxW = 100.0 x 100.0 ft Side slope = 3.0:1 Bottom elev. = 90.00 ft Depth = 5.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	90.00	10,000	0	0
0.25	90.25	10,302	2,538	2,538
0.50	90.50	10,609	2,614	5,152
0.75	90.75	10,920	2,691	7,843
1.00	91.00	11,236	2,769	10,612
1.25	91.25	11,556	2,849	13,461
1.50	91.50	11,881	2,930	16,391
1.75	91.75	12,210	3,011	19,402
2.00	92.00	12,544	3,094	22,496
2.25	92.25	12,882	3,178	25,674
2.50	92.50	13,225	3,263	28,938
2.75	92.75	13,572	3,350	32,287
3.00	93.00	13,924	3,437	35,724
3.25	93.25	14,280	3,525	39,249
3.50	93.50	14,641	3,615	42,864
3.75	93.75	15,006	3,706	46,570
4.00	94.00	15,376	3,798	50,368
4.25	94.25	15,750	3,891	54,259
4.50	94.50	16,129	3,985	58,243
4.75	94.75	16,512	4,080	62,324
5.00	95.00	16,900	4,176	66,500

Culvert / Orifice Structures

	[A]	[B]	[C]	[D]
Rise (in)	= 12.00	0.00	0.00	0.00
Span (in)	= 12.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 90.00	0.00	0.00	0.00
Length (ft)	= 20.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	0.00
N-Value	= .013	.013	.013	.013
Orif. Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 10.00	0.00	0.00	0.00
Crest El. (ft)	= 93.20	0.00	0.00	0.00
Weir Coeff.	= 3.33	0.00	0.00	0.00
Weir Type	= Rect	—	—	—
Multi-Stage	= No	No	No	No

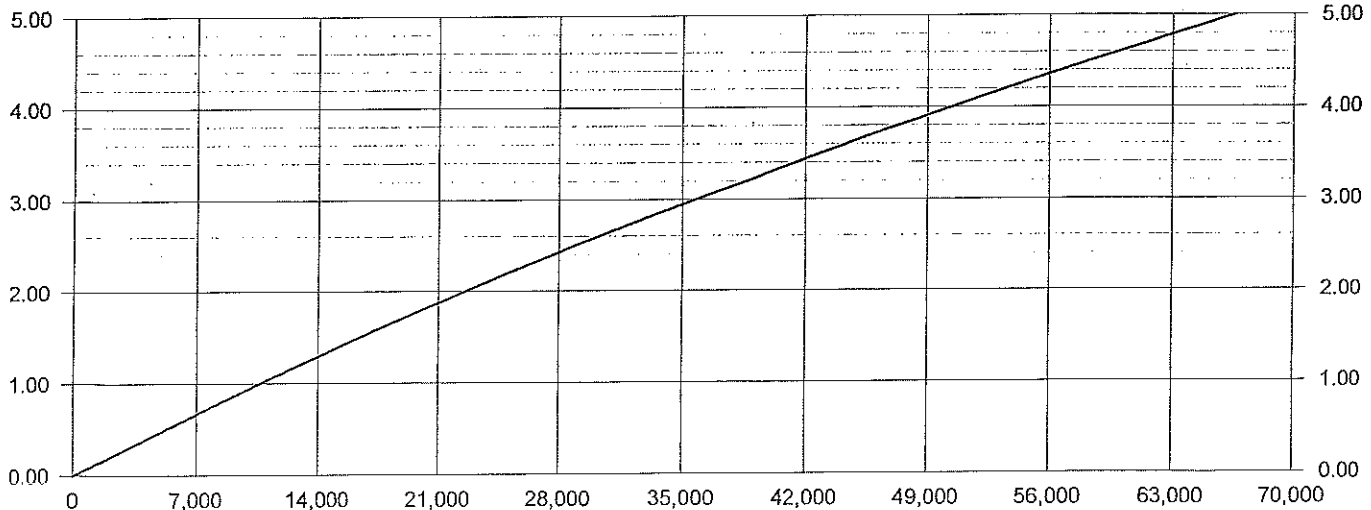
Exfiltration = 0.000 in/hr (Wet area) Tailwater Elev. = 0.00 ft

Note: Culvert/Orifice outflows have been analyzed under inlet and outlet control.

Stage (ft)

Stage / Storage

Stage (ft)



— Storage

Storage (cuft)

RESOLUTION # 06-09 AUTHORIZING
THE REQUEST TO AMEND THE URBAN SERVICE AREA

WHEREAS, the Village of Oregon Plan Commission has reviewed the plans for the property within the Northwest ¼ and part of the Northeast ¼ of the Northeast ¼ of Section 12, Township 5 North, Range 9 East, and being also part of Outlots 75 and 75, of the Assessor's Plat of the Village of Oregon, all in the Village of Oregon, Dane County, Wisconsin, and

WHEREAS, the Village of Oregon Plan Commission approved Resolution # 06-08 finding that the proposed uses on the site are consistent with the recommendations of the *Village of Oregon Comprehensive Plan*, and

WHEREAS, the Village of Oregon Planning Commission also approved the site plan for the Multi-Use Sports and Community Facility,

WHEREAS, the Village Board of Trustees approved the Multi-Use Sports and Community Facility Site Agreement, Re-Zoning, General Development Plan and the Specific Implementation Plan for the property,

NOW, THEREFORE, BE IT HEREBY RESOLVED, that the Village Board of Trustees unanimously requests that the Community Analysis and Planning Division of the Dane County Department of Planning and Development and the Wisconsin Department of Natural Resources consider this application to amend its Urban Service Area.

Dated this 6th day of June 2006.

Signed: Gerald R. Luebke
Gerald R. Luebke, Village President

ATTESTED: Georgia Johnson
Georgia Johnson, Village Clerk

PLANNING COMMISSION RESOLUTION #06-08

**AUTHORIZING THE REQUEST TO AMEND
THE URBAN SERVICE AREA**

WHEREAS, the Village of Oregon Plan Commission has reviewed the plans for the property within the Northwest ¼ and part of the Northeast ¼ of the Northeast ¼ of Section 12, Township 5 North, Range 9 East, and being also part of Outlots 75 and 75, of the Assessor's Plat of the Village of Oregon, all in the Village of Oregon, Dane County, Wisconsin, and

WHEREAS, the Village of Oregon Plan Commission has found that the proposed uses on the site are consistent with the recommendations of the *Village of Oregon Comprehensive Plan*, and

NOW, THEREFORE, BE IT HEREBY RESOLVED, that the Village of Oregon Planning unanimously requests that the Community Analysis and Planning Division of the Dane County Department of Planning and Development and the Wisconsin Department of Natural Resources consider this application to amend its Urban Service Area.

Dated this 1st day of June 2006.

Signed:


Greg Schaele, Chair

ATTESTED:


Rebecca Reilly, Planning Commission Clerk



VILLAGE OF OREGON

DEPARTMENT OF PUBLIC WORKS

VILLAGE HALL, 117 SPRING STREET
OREGON, WISCONSIN 53575

Mark W. Below
Director of Public Works
Telephone: (608) 835-6290
FAX: (608) 835-6503
E-Mail: mbelow@vil.oregon.wi.us

August 15, 2006

RECEIVED
AUG 16 2006

C.A.P.D.
c/o Kamran Mesbah
Deputy Administrator & Director
of Environmental Resources and Planning
210 Martin Luther King Jr. Blvd. Rm. 362
Madison WI 53703

Re: Grass swale from athletic fields

Dear Kamran:

Per our recent phone conversation regarding the grass swale to the east of the proposed sports facility, I have the following information that will hopefully help your organization as well as the DNR in reviewing this project.

I was hoping I would be able to find a written agreement to send you with this letter between the Village of Oregon and the Army National Guard. To date, the Village Clerk has not been able to find an agreement with this organization or there simply may not be a written agreement. I have included the attached newspaper article dated June 13, 1995, and hope this enclosure will be satisfactory.

As I stated in our phone conversation, the grass swale was part of a regrading project as it was being constructed. Prior to creating the athletic fields this area was part of a grassy mowed area of Jaycee Park and used as practice fields for soccer, softball, and other open field activities. At that time the area would sheet drain to the south and eventually into the east branch of the Bad Fish Creek.

As part of the regrading of the athletic fields and construction of the bike/walking paths around the fields, the grass swale was created to discharge water from these field to the area in question. As I stated earlier, this grass swale was man made because of and as part of the athletic fields project.

I hope this letter and article help you with your determination as it pertains to the sports facility project and the amendment to the U.S.A. request.

If you need additional information or have additional questions about this issue please do not hesitate to contact me.

Sincerely,



Mark W. Below
Director of Public Works

cc: Village Board
Public Works Committee
Planning Commission
Mike Gracz, Village Administrator
Jeff Groenier, Oregon Community Sports Arena Inc. Representative

Kamran
Aug. 17, 06

Oregon VSA Amend. Request 2006

included in E.C. as well as Trib.
of Badfish Creek with a 75' buffer from the top of bank
(navigable stream). If DNR makes a different
determination we will have to adjust the E.C.

Mark Belton's letter and attached
newspaper article are helpful.

I checked the 1990 & 1980
aerial photographs of the area
~~above~~ do not show a defined
ditch or stream near the east
boundary of the Amendment area

The 1978 and 1986 DNR wetland
inventory maps of the area do not
show a stream ~~ditch~~ or ditch at
the location; nor do they show
wetlands in the amendment
area. The wetlands have

consistently been mapped south
of the tributary of Badfish Creek.
O.K. to proceed with amendment
process based on proposed drainage by

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Army builds Oregon ball diamonds

WSJ 6/13/95

Village rewarded for letting National Guard develop wartime skills in park

By Valeria Humphrey
Suburban reporter

OREGON — Camouflage tents and heavy equipment pushing mounds of soil at Jaycee Park this week are the unusual signs of a partnership between the Army National Guard and the village and school district in Oregon.

The village will get about \$45,000 in free engineering and grading for baseball diamonds and soccer fields by letting Guard members practice wartime skills.

About 24 of the more than 200 members of Wisconsin Army National Guard 229th Engineering Co. have been training since last week. The company, which has served in Desert Storm, Honduras and Central America, is one of the first units to arrive in a military conflict or occupation, literally paving the way for aircraft, tanks, trucks and supplies to support troops.

"Our main mission in the time of war would be to build airstrips

'We get our training and they end up with a ballpark, soccer field or runway.'

Steve Fauver
National Guard

and roads. We also support armor elements or tanks and dig ditches to establish fighting positions," said Sgt. 1st Class Steve Fauver.

The summer training session is a drill in engineering and building an airstrip. Peacetime practice sites, like Jaycee Park in Oregon, are cherished on a continent unscarred by war, he said.

Based in Platteville and Prairie du Chien, the engineering group had planned to hold the training to help build an airport in Platteville, but local contractor unions protested the Guard providing free services in their area.

The partnership benefits everyone involved, Fauver said. The company needs real world practice and communities need to save

money developing community resources.

Communities, schools and nonprofit groups throughout the state offer sites for practice, he said. The encampment on the east edge of the park in Oregon is part of the exercise, although the company is spending nights in the high school next door.

"We get our training and they end up with a ballpark, soccer field or runway," Fauver said. Three years ago, their company regraded Hometown U.S.A. Park for the city of Verona. The unit is constantly training as Guard members move through the levels of experience, he said.

"It's an amazing process to help everyone reach their potential. If a

person has the time, this is a good way to better yourself," Fauver said.

For Fauver, serving with the Army National Guard is an extension of his profession as a heavy equipment operator and assistant field foreman for the state Department of Natural Resources.

When Guard members finish regrading the park to provide better drainage, the village and school district will spend \$12,000 to mulch and seed three baseball diamonds and room for two soccer fields, said Oregon Public Works Director Mark Below. The project also will create a walking path around the periphery of the athletic fields, Fauver said.

"The village and the school district have worked together on projects for the past 15 years. It's much more efficient to share projects and equipment," Below said.

The new fields will be shared between the schools and village recreation program.

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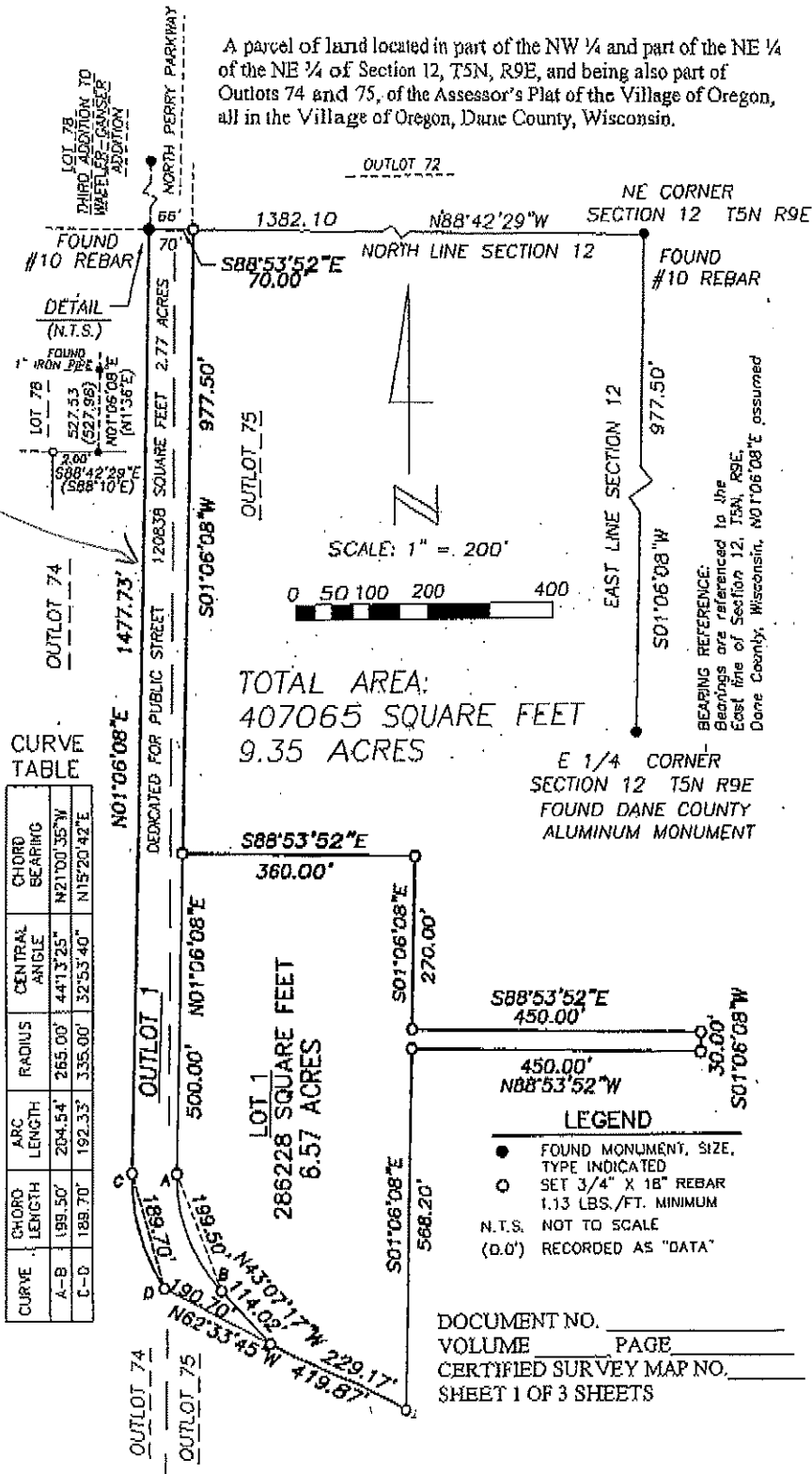
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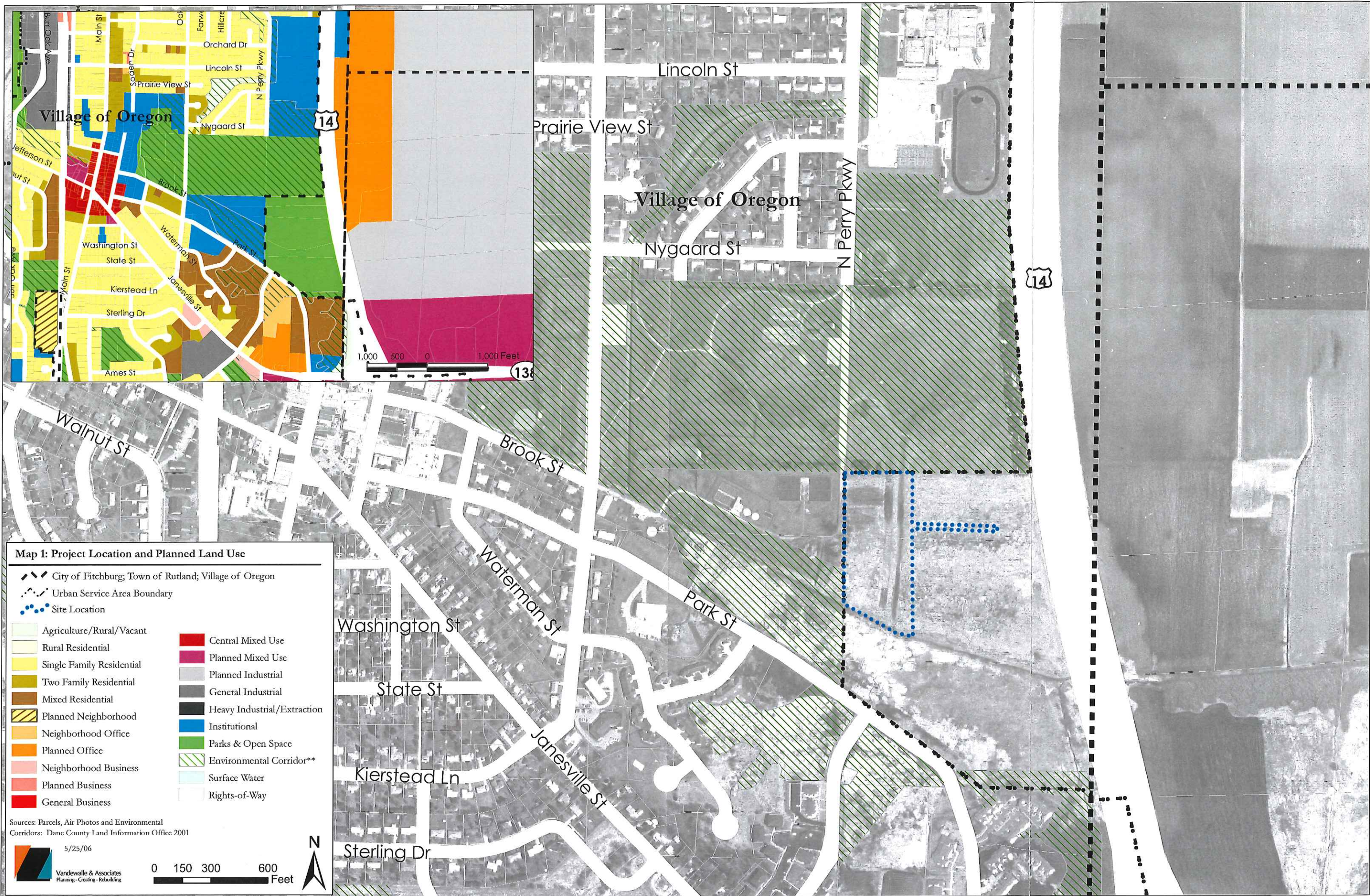
Please see T1

CERTIFIED SURVEY MAP

A parcel of land located in part of the NW 1/4 and part of the NE 1/4 of the NE 1/4 of Section 12, T5N, R9E, and being also part of Outlots 74 and 75, of the Assessor's Plat of the Village of Oregon, all in the Village of Oregon, Dane County, Wisconsin.

gready in

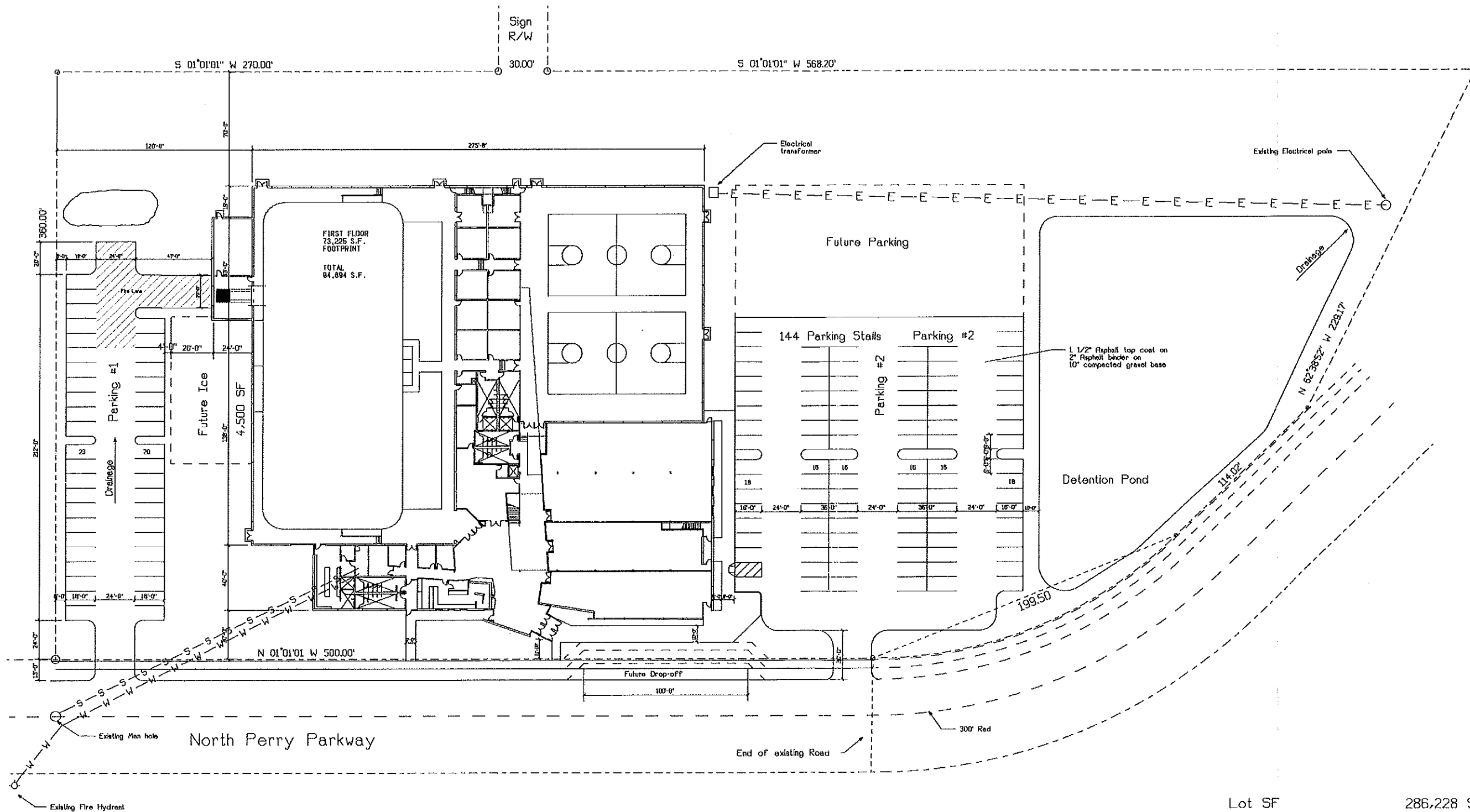




Map 1: Project Location and Planned Land Use

- City of Fitchburg; Town of Rutland; Village of Oregon
- Urban Service Area Boundary
- Site Location
- Agriculture/Rural/Vacant
- Rural Residential
- Single Family Residential
- Two Family Residential
- Mixed Residential
- Planned Neighborhood
- Neighborhood Office
- Planned Office
- Neighborhood Business
- Planned Business
- General Business
- Central Mixed Use
- Planned Mixed Use
- Planned Industrial
- General Industrial
- Heavy Industrial/Extraction
- Institutional
- Parks & Open Space
- Environmental Corridor**
- Surface Water
- Rights-of-Way

Sources: Parcels, Air Photos and Environmental
Corridors: Dane County Land Information Office 2001



Site Plan
Scale = 1"=30'-0"
North

Lot SF	286,228 SF
Building Footprint	73,225 SF
Parking #1 SF	3,450 SF
Parking #2 SF	1,460 SF
Concrete Sidewalk SF	3,500 SF
Open Space SF	204,593 SF

Jeffery Groenier, Architect
830 S. Main Street
Oregon, WI 53575
608-835-3196
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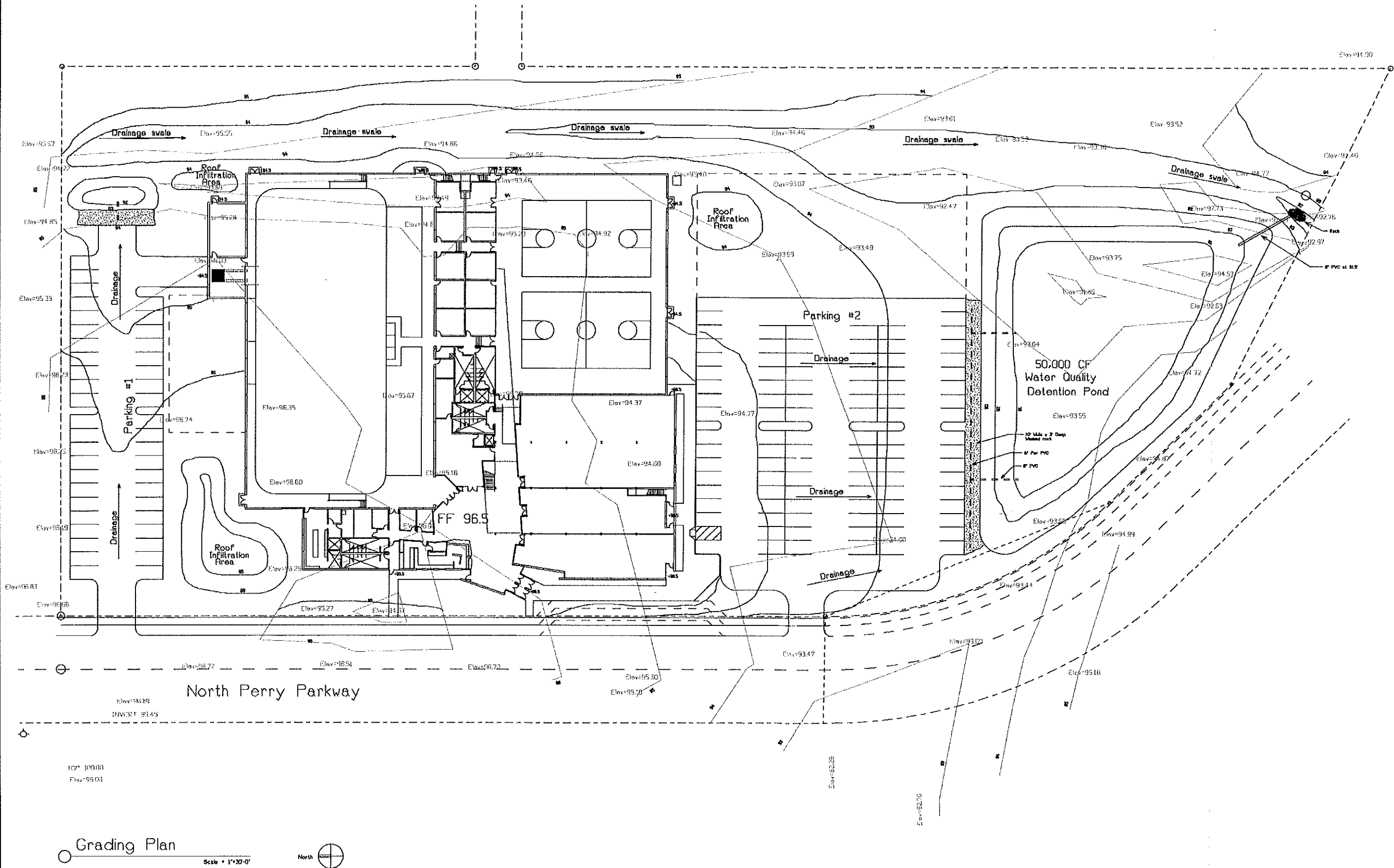
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in
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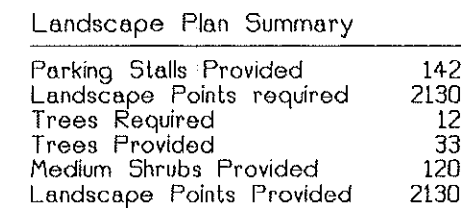
Proposed for:
Oregon Community Sports Arena, Inc.
P.O. Box 304
Oregon, WI 53575
Address:

Project: Oregon Arena
Address: Oregon, WI
Sheet Title: Site Plan

Date: 05-05-2006
Scale: As Noted
Job #: 05-02

SHEET
C1





PLAN NOTES

ALL FOUNDATION PLANTING BEGS TO RECEIVE HARDWOOD SHIPPED SAME WEEK ASBEGINS TO A 3'-6" DEPTH UNIL FUMIGER WOOD APPLIED. SUCH TREES TO RECEIVE 4" DIAMETER BRN RING. COATING OF HARDWOOD SHIPPED SAME WEEK APPLIED TO A 3'-6" DEPTH. PLANTING BEGS TO BE LOGED WITH BLACK DIAMOND LOGGING.

ALL LAMB ARKS TO BE FINE BRACED AND NEEDED WITH PREMIUM HAZARDOUS PAYS IN LOG BEDD AND STAIN WOOD.

STATE LAW REQUIRES YOU TO NOTIFY OWNERS AND OPERATORS OF TRANSMISSION FACILITIES AT LEAST THREE WORKING DAYS BEFORE YOU DO.

DIGGERS HOTLINE
TOLL-FREE 1-800-242-85

**Concepts
In
Architecture, LLC**

**Oregon Community
Sports Arena, Inc.**
P.O. Box 304
Oregon, WI 53575

Proposed for:

Address:

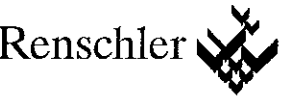
Project:	Oregon Arena
Address:	Oregon, WI
Sheet Title:	Landscape Plan

Date: 05.05.2006

Scale: As Noted

Job #: 05.02

SHEET
C3



Three Point Place
Madison, WI 53719
608-833-2321
608-833-7954 Fax

CONSULTANTS

PROJECT
**OREGON
COMMUNITY
SPORTS
ARENA**

OREGON, WI.

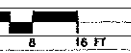
ISSUED
4-28-06 BUDGET REV PLANS
6-5-06 BOARD MEETING

REVISED

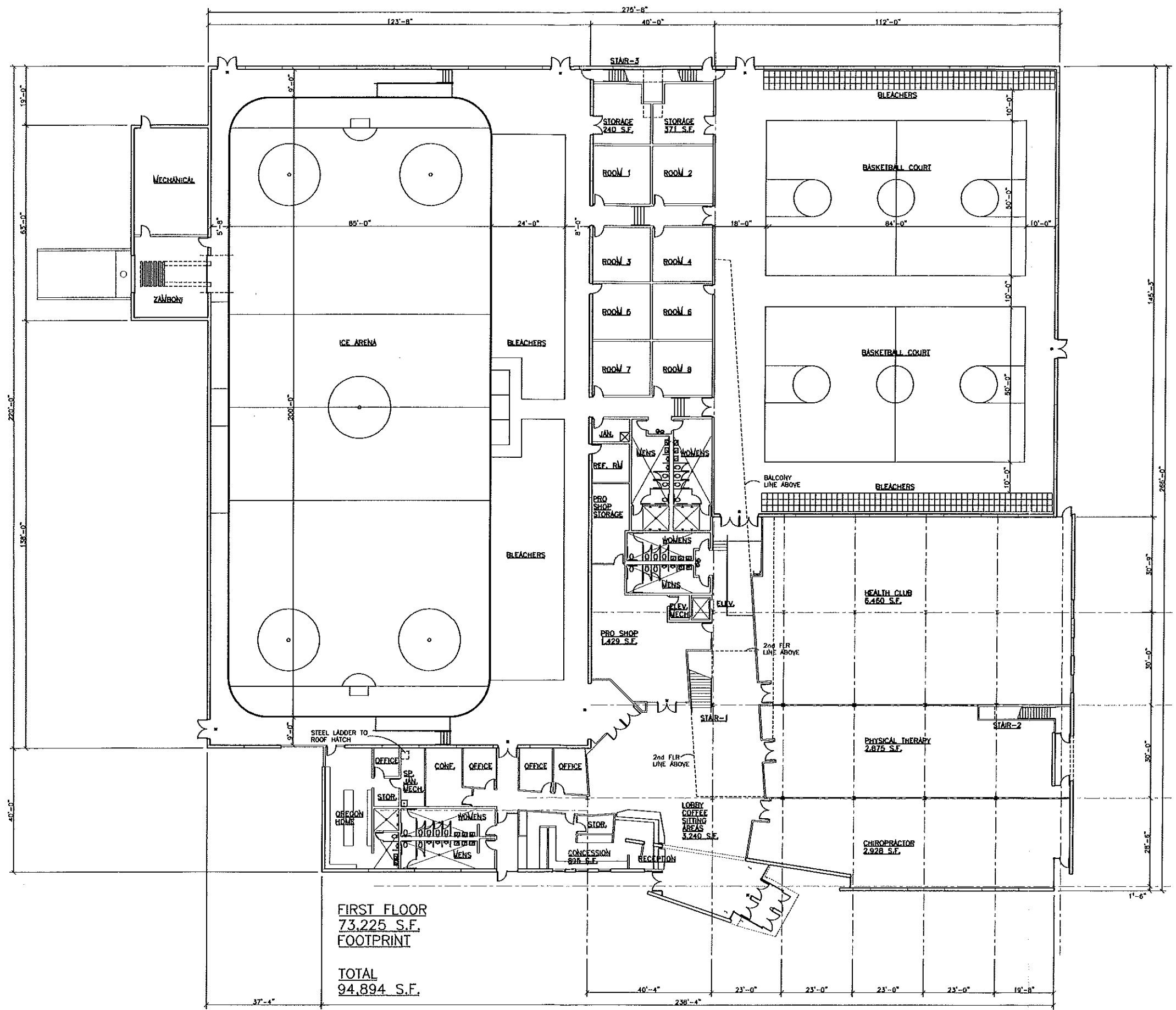
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PROJECT NUMBER 00637

FLOOR PLAN



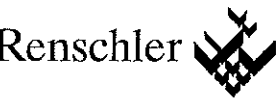
A1.0
SHEET



FIRST FLOOR
73,225 S.F.
FOOTPRINT

TOTAL
94,894 S.F.

FIRST FLOOR PLAN
SCALE: 1/16" = 1'-0"



Three Point Place
Madison, WI 53710
608-833-2321
608-833-7964 Fax

CONSULTANTS

PROJECT
**OREGON
COMMUNITY
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ARENA**

OREGON, WI.

ISSUED
4-18-08 BUDGET RFP PLANS

REVISED

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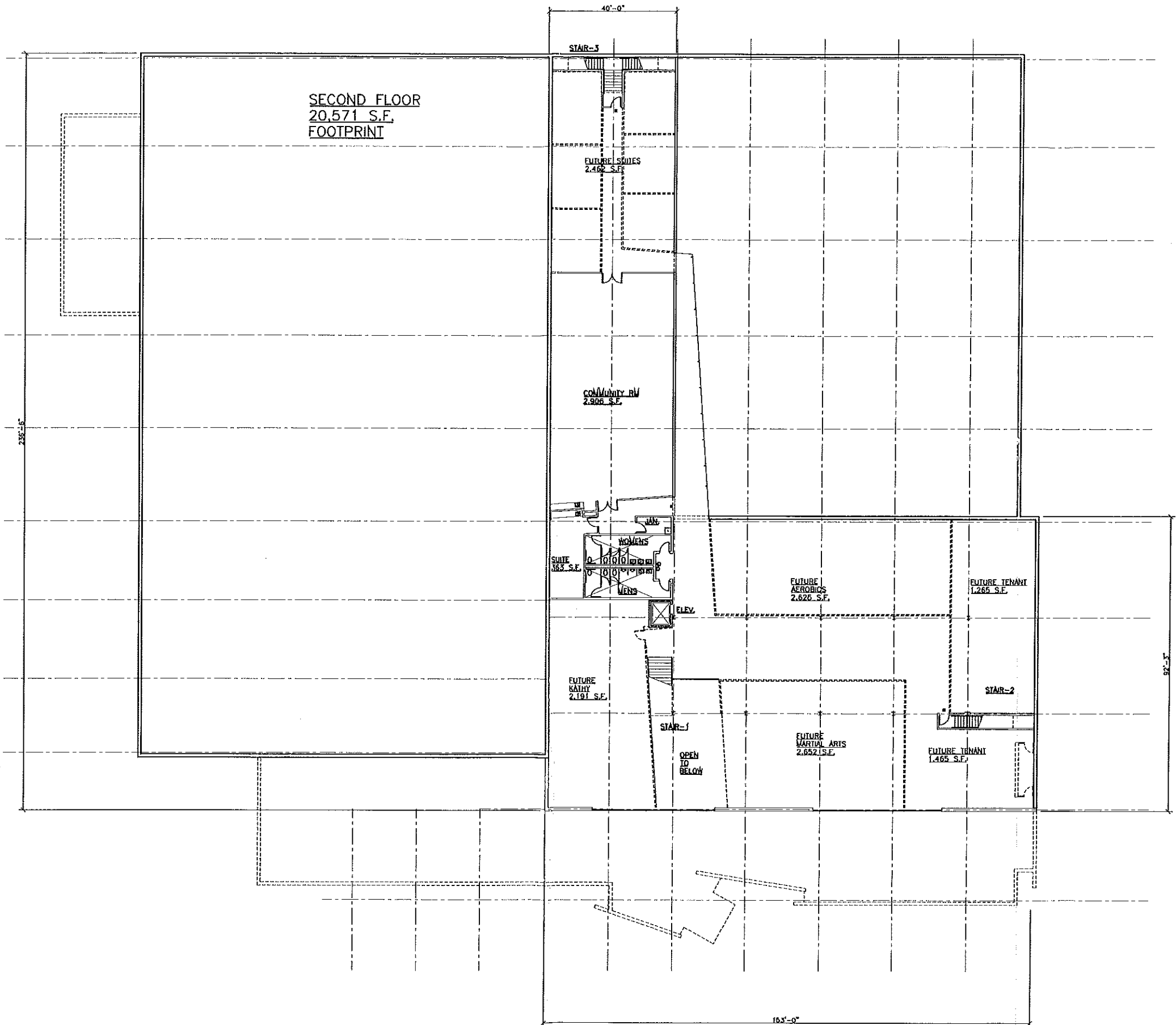
PROJECT NUMBER 60657

**SECOND
FLOOR PLAN**

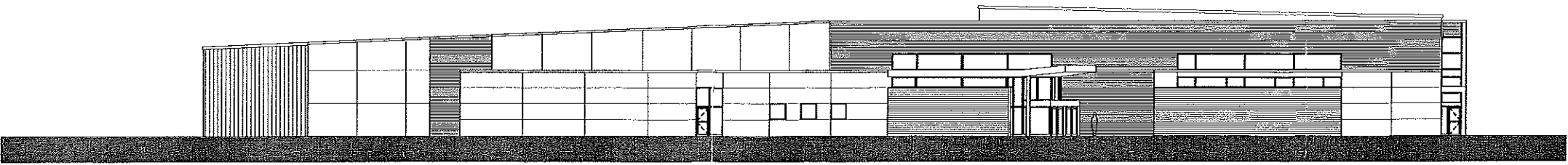
0 8 16 FT

SHEET

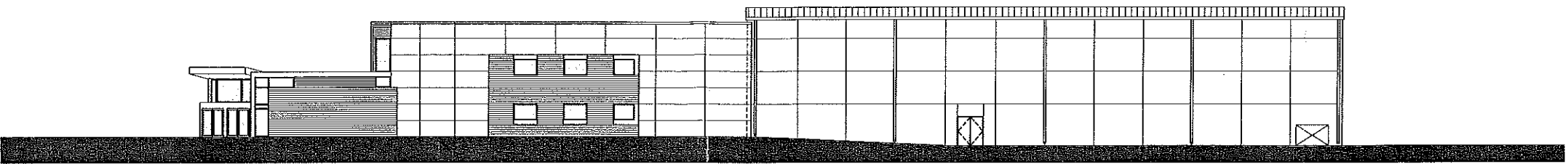
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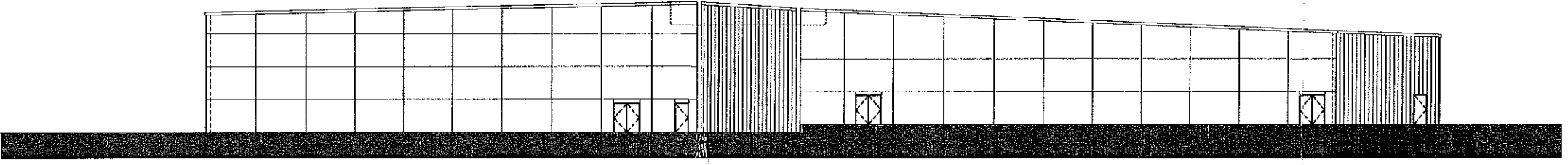
SECOND FLOOR PLAN
SCALE: 1/16" = 1'-0"



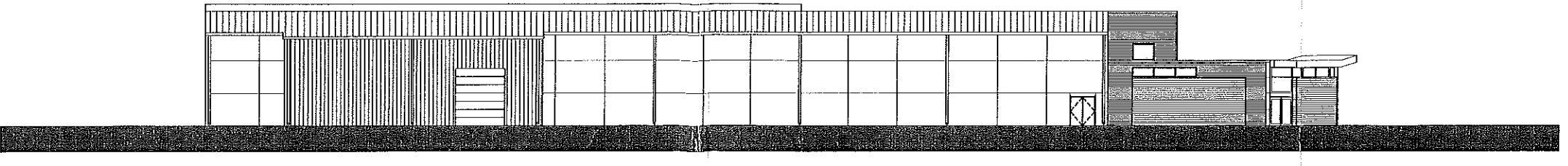
WEST ELEVATION
SCALE: 1/16" = 1'-0"



SOUTH ELEVATION
SCALE: 1/16" = 1'-0"

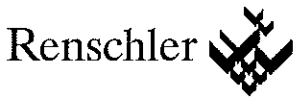


EAST ELEVATION
SCALE: 1/16" = 1'-0"



NORTH ELEVATION
SCALE: 1/16" = 1'-0"

Design/Build Construction Services
Architecture
Engineering



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Madison, WI 53719
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CONSULTANTS

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**OREGON
COMMUNITY
SPORTS
ARENA**

OREGON, WI.

ISSUED
4-28-06 BUDGET RFP PLANS
5-3-06 BOARD MEETING

REVISED

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PROJECT NUMBER 00057

**BUILDING
ELEVATIONS**

0 4 8 FT

A2.0

SHEET