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## Creating Identity within a Residential Community using Open Space

Jason W. Harr  
*Utah State University*

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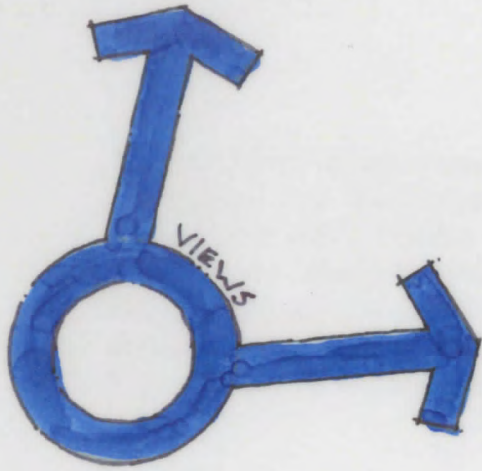
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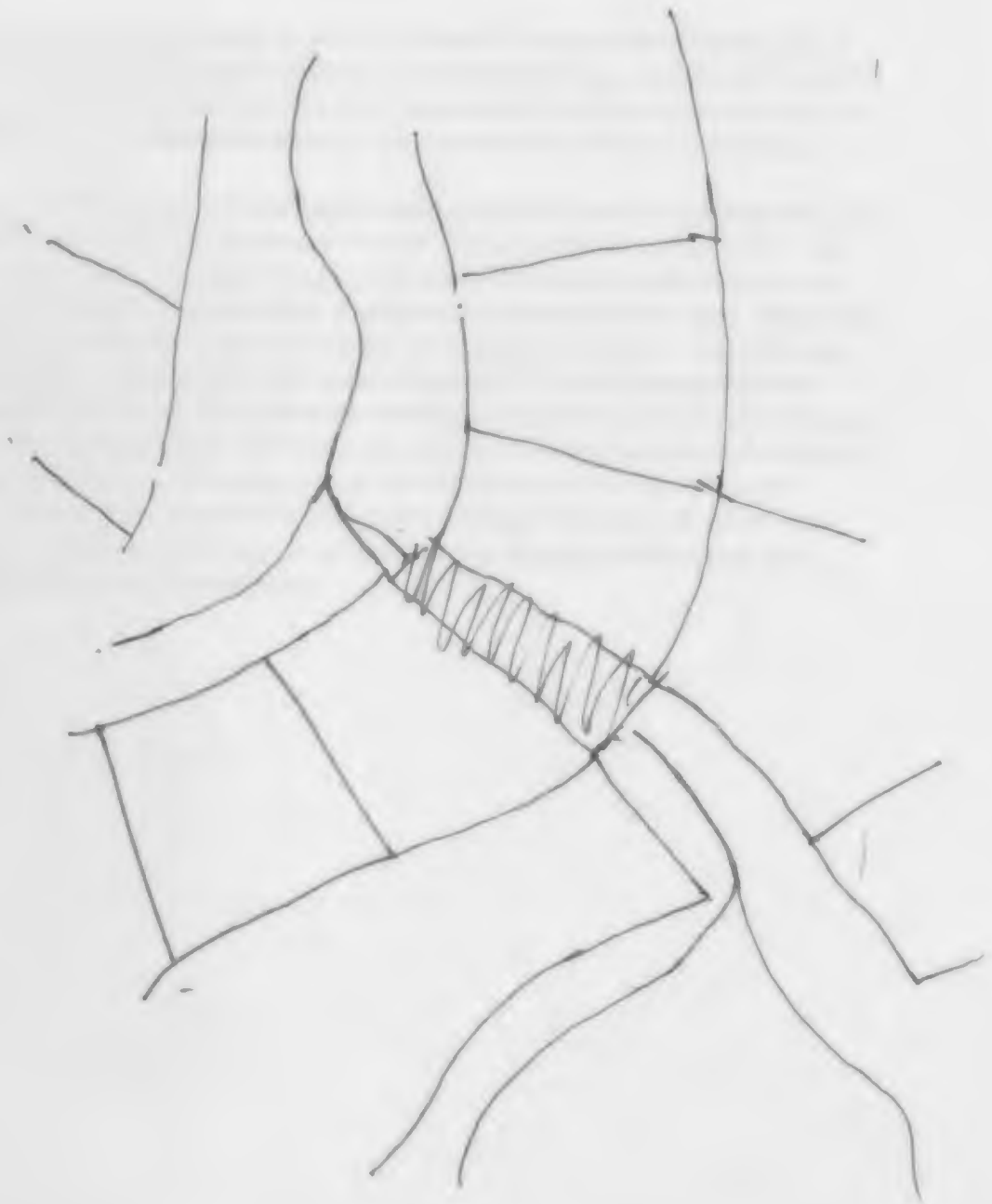
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# Creating Identity Within a Community Using Open Space

a Thesis Project  
by  
Jason W. Harr



**CREATING IDENTITY WITHIN A RESIDENTIAL  
COMMUNITY USING OPEN SPACE**

by

**Jason W. Harr**

**Thesis submitted in partial fulfillment  
of the requirements for the degree**

of

**DEPARTMENT HONORS**

in

**Landscape Architecture and Environmental Planning**

**Approved:**

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**Thesis/Project Advisor**

*Dave Bell*

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**Department Honors Advisor**

*Michael Timmons*

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**Director of Honors Program**

*David Lancy*

**UTAH STATE UNIVERSITY  
Logan, UT**

**2005**

## **Preface**

In recent years, the importance of providing and managing adequate housing on the local and regional scale has increased due to continuous population growth and environmental impacts. In order to facilitate basic human needs, the general public needs to learn how to conserve and manage the space they inhabit to the best of their ability. This report is a basic outlook on how to make better local residential communities through open space design for purposes of creating more lasting values and a higher standard of living in future residential developments.

## **Summary**

Popularity of suburban developments is not new to most communities of today. Many have come to the understanding that suburbia is the only way to go, and the only place to live and raise a family. What suburbanites don't understand and choose to avoid are the demanding requirements suburbia requires of our natural resources and open space.

In recent years, many have come to the understanding that our natural resources and open space are very valuable and must be preserved now and in the future. People have also noticed that implementation of basic design principles of residential communities are advantageous to them and the community. Residential communities that have integrated open space and environmental design principles have proven to be more cost efficient, beautiful, maintainable, economical, and water conserving. The design approach to achieve a successful and beautiful residential community includes: planning and design to help create community identity, sufficient site analysis, creating ample outdoor areas, appropriate plant selection, and incorporating the surrounding landscape into each individual lot. Application of these basic residential design principles will allow the general public as well as professionals to achieve quality design, quality living and preserve nature's most precious resources.

## **1.0 Introduction**

This report is about basic residential development design principles that can help improve our local and regional residential communities and how they provide for basic human needs. Quality residential community planning and design have positive impacts on the community and the environment.

The concept of quality residential development planning is an attempt to begin the process of change in suburban developments which would lessen the effects of negative environmental impacts and create a better lifestyle for residents. Its purpose is to focus attention on the surrounding natural amenities of the landscape and to utilize these amenities in ways that enhance the standard of living in residential developments.

This report contains a study of the North 40 Subdivision of Brigham City, Utah, that is presently being constructed (see insert A). The study will include a brief comparison between what is being built and what can be built by applying some basic residential community design principles.

The North 40 Subdivision study includes basic principles essential to a community design. This comparison and all successful development designs incorporate all of these steps:

1. Site analysis
2. Preservation of open space and natural amenities
3. Creation of an identity
4. View lots

## **2.0 Site Analysis**

Site analysis is a key step in the design process of developments that is often overlooked and neglected. Conducting a thorough analysis of the site being developed is advantageous to developers, designers and homeowners. Completing this vital step, allows for the development of many positive opportunities that may have been overlooked. Positive opportunities that can be discovered through site analysis enhance the overall quality of the community by preserving natural amenities and planning appropriately for basic human needs. Through sufficient site analysis, positive opportunities can be maximized and negative impacts and constraints can be lessened through proper planning and design.

By conducting a site analysis of the North 40 Subdivision (see insert B), I was able to acquire sufficient knowledge to understand and make judgments on what is important to the site and to the future development. Opportunities that I found that will enhance the quality of the future development were great views that surrounded the site, existing vegetation (especially the mature trees), existing wildlife, and the natural open spaces available for future recreational activities (see figures 1,2,3,4,5 and 6).



**Figure 1.** Illustrates nice southeast view



**Figure 2.** Illustrates nice northeast view



**Figure 3.** Area is surrounded by agricultural land



**Figure 4.** Illustrates existing mature trees



**Figure 5.** Illustrates potential for recreational space



**Figure 6.** Illustrates existing wildlife that inhabit the site

As shown in the site analysis (see insert B), there are also a few critical elements on the site that might cause concern. A couple of these concerns include the wet soil conditions and the minimal slope of the site. Bordering a wetland, this site should be considered a possibility for flooding and if not taken care of properly, could cause future problems.

Site analysis can be a very effective tool in the design process and can often times guide the design if done correctly. "Every new development should be based upon a fairly thorough (but not necessarily costly) analysis of the site's special features, both those offering opportunities and those involving constraints" (Arendt, 30).

### **3.0 Greenspace/Trails**

Completing a thorough site analysis plays a very important role in the identification of land use. Understanding the site allows a planner to maximize certain areas of the site that will function better for that use. One of the most important land uses of any development is that of open or greenspace.

Greenspace provides a number of benefits to a planned residential community. Greenspace can be functional, recreational, and aesthetic to homeowners and at the same time, be economically beneficial to the developer and provide a refuge to wildlife. As shown in insert A, there was no planning to preserve any of the natural habitat. This lack of open space diminishes any hope for recreational and aesthetic opportunities within the development. Not only is the development solely functional for sleeping and eating, but another 50 acres of natural habitat has been destroyed.

Development of land can be designed and built differently without great change to accommodate all land uses. Insert C shows a conceptual diagram of how this can be done with minor changes. The minor changes include shrinking of some lots and redirecting some of the streets and utilities to accommodate for open space. Once open space has been created, a designer can begin to designate where open space should be and how they connect throughout the community. Insert D and E show how this can be done relatively easy.

Because of the efforts to preserve and connect open space throughout the development, other opportunities to improve the quality of the development take form. A nature trail can be created for the use of the city and residents of the development for educational and physical purposes. Community common areas can be used for other outdoor activities within the community that encourage social interactions.

When comparing insert A with inserts D and E, it is obvious which designed community provides more opportunity for social and physical interactions between neighbors and the environment. "As an observant layman who had thought quite a lot about the subject but who had never studied it formally, Ron Hastings concluded that the most pleasant kind of rural neighborhood he could create would be one in which about half the land remained in its natural state" (Arendt, 29).

#### **4.0 View Lots**

Preserving and creating open space allows for beneficial opportunities for both the developer and homeowner. As discussed before, the homeowner benefits from recreational activities, social activities, and aesthetics that open space offers. Developers benefit from preserved open space economically. "Developers usually wish to maximize attractive views outward from potential homesites... From a developers point of view, it is desirable for sales purposes to maximize the number of homes with attractive views. This can often be achieved in creative ways that are less disruptive than the results produced through conventional platting" (Arendt, 37). View lots are very important to the success of a community. Such lots offer the homeowner a view that is most likely incomparable to other houses in the city. It is only advantageous for the developer to maximize his views and create as many view lots as possible.

Referring back to insert A, we can see that there are only a few lots that abut against greenspace and these are lots on the perimeter of the site. This means that all of the lots inside the community face each other and have no open space to look at or enter. However, we can see through minor changes of the original design, it is possible to provide every lot with an open space view, or lots that abut or face some kind of open space area (see insert D and E). "The adjoining open space psychologically enlarges their actual dimensions to include some of those meadows, woodlands, or wetlands that are within direct view of the houses. In addition, the open space creates a welcome buffer on at least one boundary of each of these lots, which is preferable to being closed in on all sides by other people's yards... Given the options of a conventional development, where one-third of the lots have immediate views of the water and the other two-thirds have immediate views of their neighbors' picture windows or backyards, and a conservation subdivision, where the vast majority of lots enjoy views of water, meadows, greens, woods, or other natural features, the choice seems clear" (Arendt, 29,37).

#### **5.0 Create Identity**

After generating view lots, preserving open space and completing a site analysis, a planner can begin to create an identity specific to the residential community that is being designed. As shown in insert E, an identity can already be detected just from looking at the map. Insert E shows that there are three different areas of the community that all focus on the natural habitats that exists in and around the area. The trail system that meanders through Sunset Greens and Sunrise Greens allows for pedestrian access throughout the entire site. Narrower curvilinear streets help minimize conflicts between pedestrians and vehicles causing transit to slow.

Comparing the original design (see insert A) with the revised design of North 40 Subdivision (see insert E), one can see a drastic change in identity and sense of place. It is this ambience or sense of place that will allow a community to prosper and provide a quality standard of living for years to come.



## 6.0 Comparisons

Table 1. Chart illustrating comparisons between Insert A and Insert E

Comparisons	Insert A Design	Insert E Design
Total Lots	130	129
View Lots	62	112
Lots With Trail Access	0	112
Range of Lot Size	9,000sq.ft. - 13,000sq.ft.	8,000sq.ft. - 12,000sq.ft.
Length of Roads/Utilities	8,000 Lin. Ft. Est.	8,000 Lin. Ft. Est.
Lin. Ft. of Trail	0'	6,240 Lin. Ft. Est.
Street Widths	40'	30'
Access Points	6	9
Other Amenities		3 Island Parks 2 Wetland/Retention Ponds

## 7.0 Why This Project?

Preserving open space within a residential development has always been an interest of mine. Over years I have seen developments designed and constructed incorrectly. It is ugly and painful to see development after development be built this way. Not because of the homes or landscapes, but because of the laziness and irresponsibility of those in charge. As shown through this study of the North 40 Subdivision, a lot can be accomplished without great change. Minor changes in plot layouts and street direction can eliminate user conflict and provide great opportunities for communities and their residents.

Our impact on the natural environment is dependent on the type of settlements we form and the technologies which serve them. The way we build suburbs effects the viability and vitality of our city centers. And the quality of our cities effects the cultural underpinnings of the American Dream and therefore the nature and location of the growth we choose. They are each interdependent and connected at the root by our concept of community” (Calthorpe, 9).

## 8.0 Works Cited

Calthorpe, Peter. The Next American Metropolis.  
New York: Princeton Architectural Press, 1993.

Arendt, Randall G. Conservation Design for Subdivisions.  
Washington, D.C., Covelo, California: Island Press, 1996.

# Insert A

## SURVEY CERTIFICATE

I, WAYNE L. CROW, DO HEREBY CERTIFY THAT I AM A REGISTERED LAND SURVEYOR AND THAT I HOLD CERTIFICATE NO. 6182 AS PRESCRIBED UNDER THE LAWS OF THE STATE OF UTAH. I FURTHER CERTIFY THAT BY THE AUTHORITY OF THE OWNERS, I HAVE MADE SURVEY OF THE TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED BELOW, AND HAVE SUBDIVIDED SAID TRACT INTO LOTS AND STREETS, HEREINAFTER TO BE KNOWN AS:

SAID TRACT OF LAND AND THE SAME HAS BEEN CORRECTLY SURVEYED AND ALL STREETS, EASEMENTS, THE DIMENSIONS SHOWN.

WAYNE L. CROW, REGISTERED LAND SURVEYOR, No. 6182, STATE OF UTAH, DATE

## BOUNDARY DESCRIPTION

PART OF SECTIONS 11 AND 12, TOWNSHIP 9 NORTH, RANGE 2 WEST, OF THE SALT LAKE BASE AND MERIDIAN.

BEGINNING AT A POINT LOCATED NORTH 01°13'34" WEST ALONG THE SECTION LINE 2163.90 FEET (NORTH 01°12'20" WEST 2163.04 FEET BY RECORD) AND NORTH 89°28'12" WEST 550.19 FEET (548.97 FEET BY RECORD) FROM THE SOUTHWEST CORNER OF SAID SECTION 12 AND RUNNING THENCE NORTH 00°10'24" WEST INTERSECTING AN EXISTING FENCE AT 649.39 FEET AND CONTINUING FOR A TOTAL DISTANCE OF 1378.76 FEET TO THE SOUTH RIGHT-OF-WAY LINE OF A COUNTY ROAD;

THENCE SOUTH 89°17'11" EAST (SOUTH 89°19'00" EAST BY RECORD) ALONG SAID RIGHT-OF-WAY LINE 1326.13 FEET (1325.72 FEET BY RECORD) TO AN EXISTING FENCE LINE BEING THE WEST RIGHT-OF-WAY LINE OF 500 WEST STREET;

THENCE SOUTH 02°15'35" WEST (SOUTH 00°14'36" WEST BY RECORD) ALONG SAID FENCE AND RIGHT-OF-WAY LINE 1327.30 FEET (1328.00 FEET BY RECORD) TO AN EXISTING FENCE CORNER;

THENCE NORTH 88°31'06" WEST ALONG SAID FENCE AND PROPERTY LINE 571.00 FEET TO AN EXISTING FENCE LINE;

THENCE SOUTH 00°26'55" WEST ALONG SAID FENCE LINE 665.94 FEET (665.94 FEET BY RECORD) TO THE POINT OF BEGINNING;

CONTAINING 49.76 ACRES.

## LEGEND

### EX. CONDITIONS

- EX. WATER LINE
- EX. SAN. SEWER LINE
- EX. DRAIN PIPE
- EX. OVERHEAD POWER
- EX. GAS LINE
- EX. FLOWLINE OF DITCH
- EX. CURB AND GUTTER
- EX. FENCE
- EX. FIRE HYDRANT
- EX. MANHOLE
- EX. VALVE
- EX. TELEPHONE BOX
- EX. POWER POLE

### NEW CONSTRUCTION

- BOUNDARY LINE
- ADJACENT PROPERTY
- ROAD CENTER LINE
- SETBACK LINE
- UTILITY EASEMENT LINE
- NEW CURB & GUTTER
- NEW WATER LINE
- NEW SAN. SEWER LINE
- NEW DRAIN/IRRIGATION
- NEW ASPHALT PAVING
- GATE VALVE
- BEND FITTING
- TEE FITTING
- CROSS FITTING
- FIRE HYDRANT
- SEWER MANHOLE
- DRAINAGE
- CONTROL
- SET MARKER
- FOUND MARKER
- SECTION CORNER
- MONUMENT

REVISION	DATE

**KNIGHTON & CROW, INC.**  
 95 West Golf Course Road, Suite 101 Logan, UT 84301  
 (435) 752-8801 Fax: (435) 752-8597

Project Title:  
**NORTH FORTY SUBDIVISION**  
 BRIGHAM CITY, BOX ELDER COUNTY, UTAH

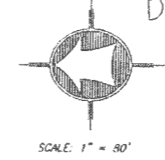
## AMENDED PRELIMINARY PLAT

Drawn By: S. MOGINS	Project Number: 03-116	Sheet No.:
Designed By: W. CROW	Date: 10/12/04	1
Reviewed By: W. CROW	Sheet Scale: 1"=80'	1 of 1
03-116/03-116.DWG PRELIM		

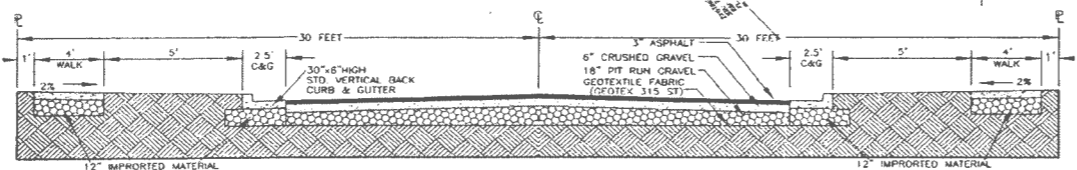
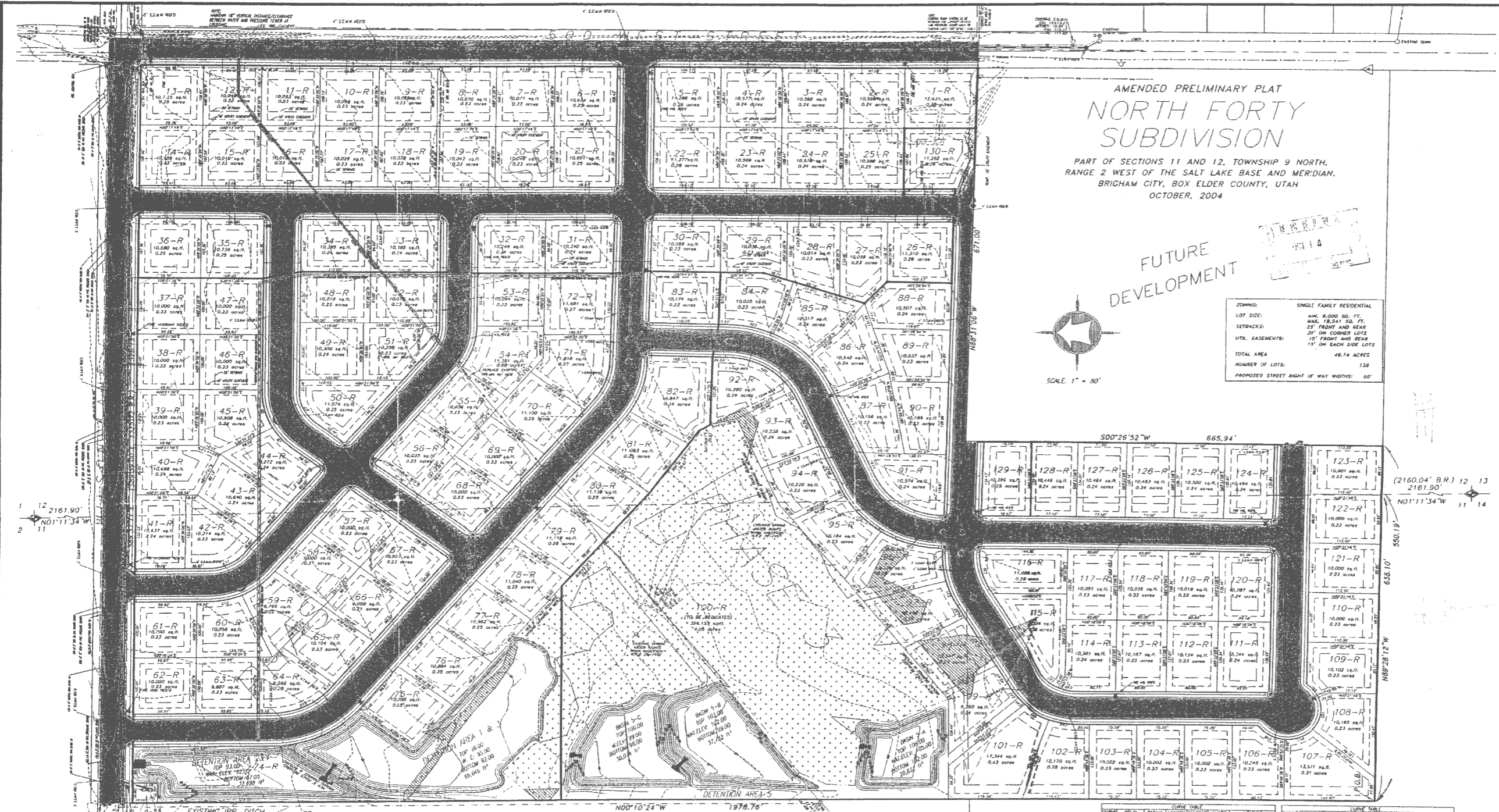
# AMENDED PRELIMINARY PLAT NORTH FORTY SUBDIVISION

PART OF SECTIONS 11 AND 12, TOWNSHIP 9 NORTH, RANGE 2 WEST OF THE SALT LAKE BASE AND MERIDIAN, BRIGHAM CITY, BOX ELDER COUNTY, UTAH  
OCTOBER, 2004

FUTURE DEVELOPMENT



ZONING:	SINGLE FAMILY RESIDENTIAL
LOT SIZE:	MIN. 9,000 SQ. FT.
SETBACKS:	MIN. 18,241 SQ. FT., 25' FRONT AND REAR 20' ON CORNER LOTS
UTIL. EASEMENTS:	10' FRONT AND REAR 10' ON EACH SIDE LOTS
TOTAL AREA:	49.74 ACRES
NUMBER OF LOTS:	130
PROPOSED STREET RIGHT OF WAY WIDTHS:	60'



INTERIOR STREET CROSS SECTION NOTE: ALL EXISTING SUBDRAINS WILL BE MAINTAIN AS THEY ARE LOCATED AND WILL BE MAPPED.

STATION	PC	PVI	PT	LEN	AREA	PERCENT	START	END	START	END	START	END	START	END
0+00	0+00	0+00	0+00	0+00	0+00	0+00	0+00	0+00	0+00	0+00	0+00	0+00	0+00	0+00

PLANNING COMMISSION APPROVAL

APPROVED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_ A.D., 20\_\_\_\_  
 BY THE \_\_\_\_\_ PLANNING COMMISSION.

CHAIRPERSON

ENGINEER'S CERTIFICATE

I CERTIFY THAT I HAVE EXAMINED THIS PLAT AND FIND IT TO BE CORRECT AND IN ACCORDANCE WITH THE INFORMATION ON FILE IN THIS OFFICE.

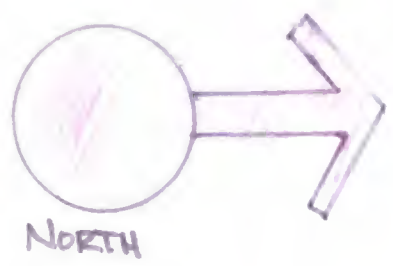
DATE \_\_\_\_\_ ENGINEER \_\_\_\_\_

UTILITY COMPANY APPROVALS

THE UTILITY EASEMENTS SHOWN ON THIS PLAT ARE APPROVED.

LOCAL FUEL SUPPLY CO. LOCAL POWER CO.  
 LOCAL COMMUNICATIONS CO. LOCAL CABLE TELEVISION CO.

TING\CJ\03-116\BRIGHAM1.bmp



NORTH

WET SOIL COND.  
POTENTIAL OPEN SPACE

Insert B

WHOLE SITE IS  
FLAT

EXISTING MATURE  
TREES SCATTERED  
DUE TO EXISTING  
GOLF COURSE



ACCESS



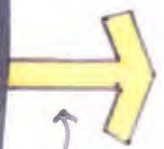
GOOD VIEWS

ACCESS POINTS

AGRICULTURAL  
LAND



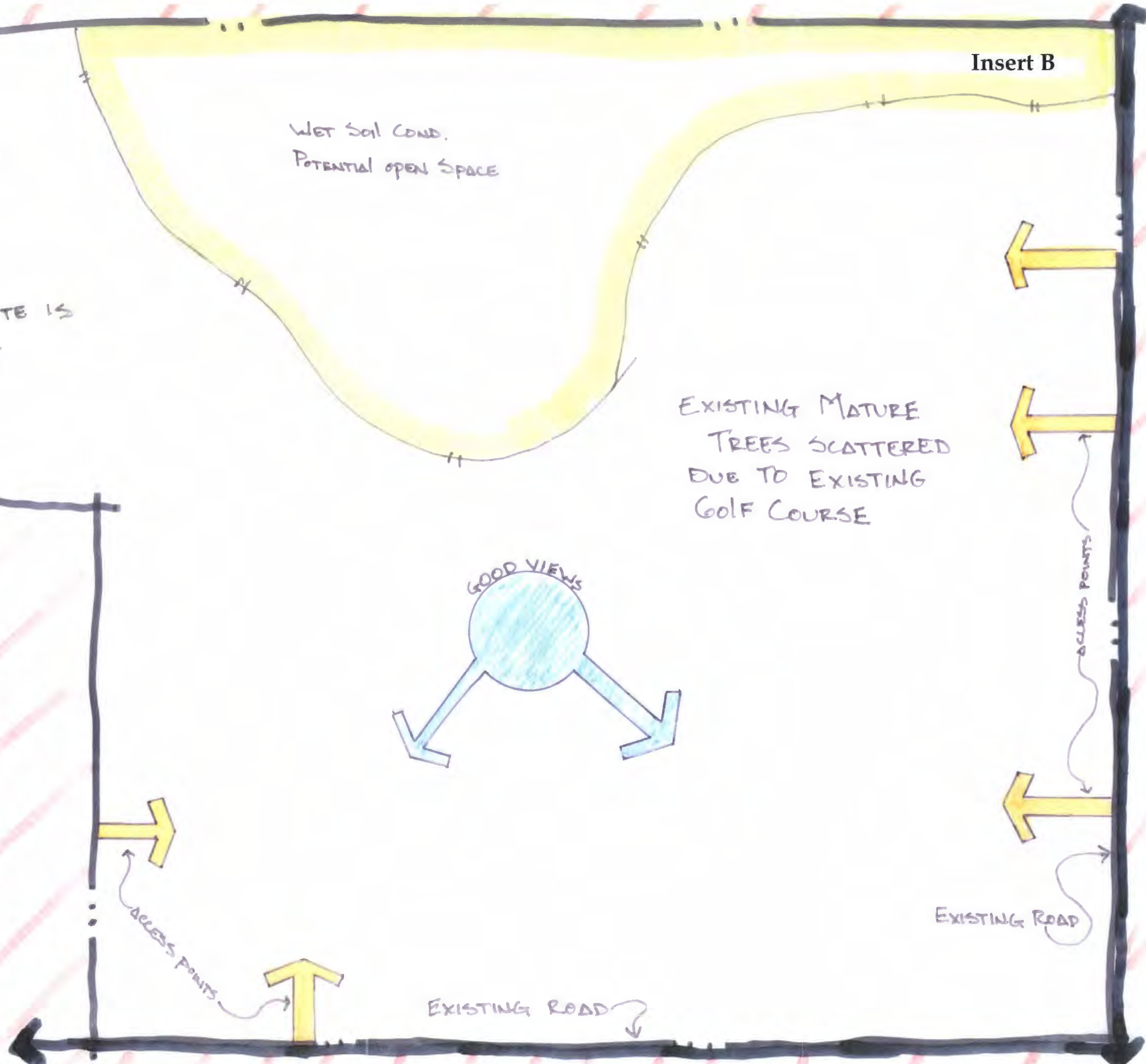
EXISTING ROAD

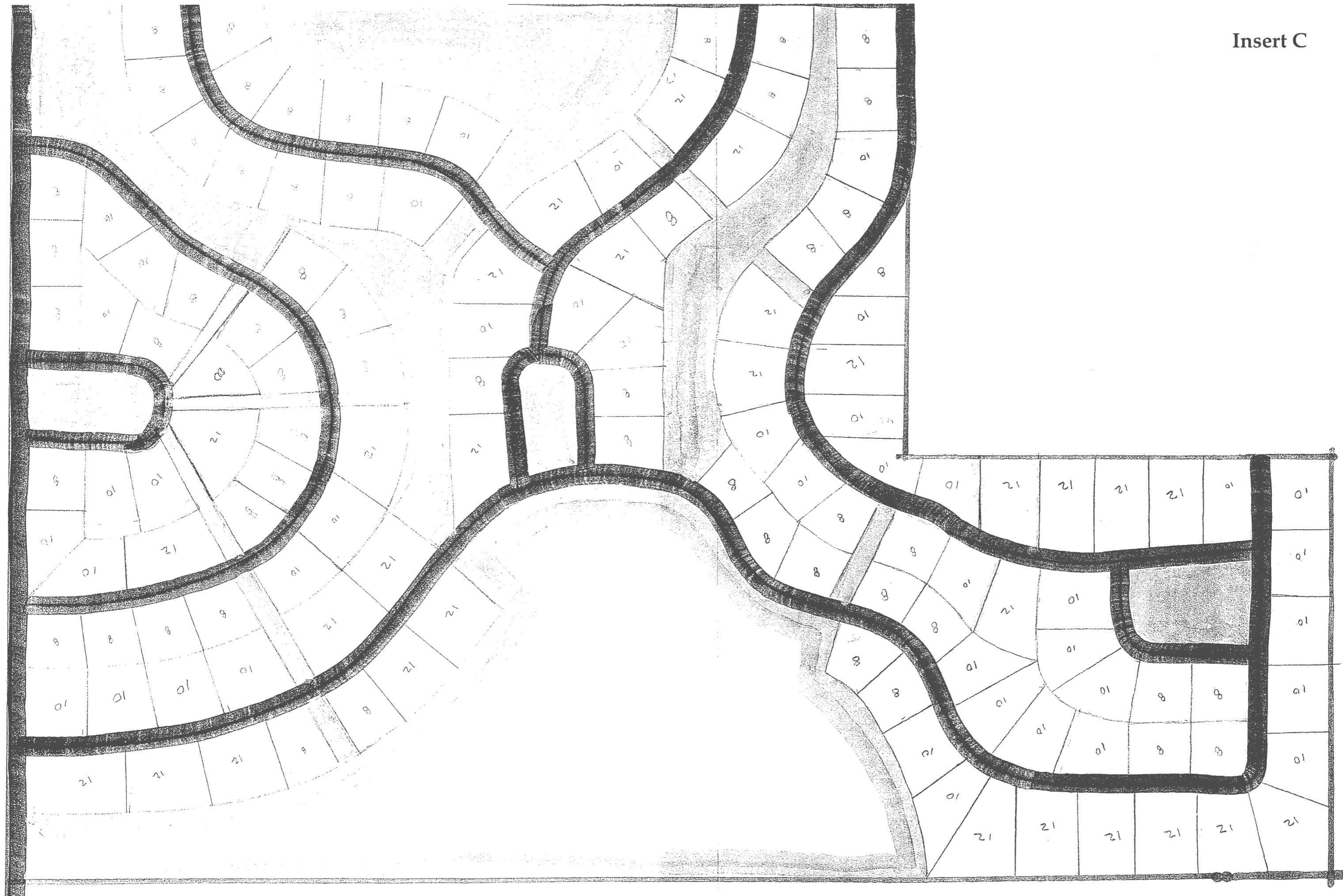


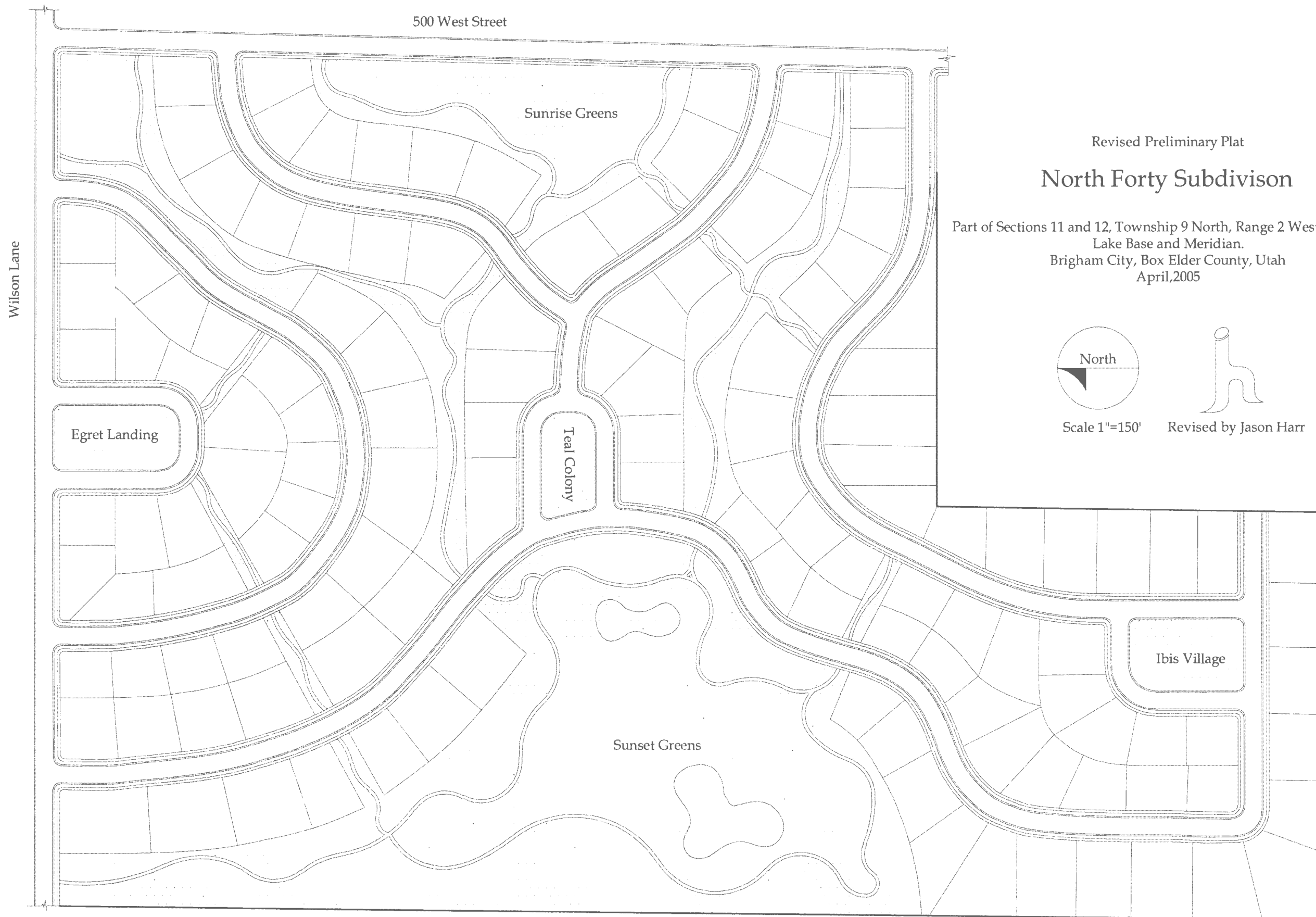
ACCESS POINTS



EXISTING ROAD

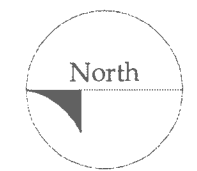




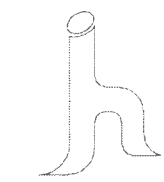


Revised Preliminary Plat  
**North Forty Subdivision**

Part of Sections 11 and 12, Township 9 North, Range 2 West of the Salt  
Lake Base and Meridian.  
Brigham City, Box Elder County, Utah  
April, 2005



Scale 1"=150'



Revised by Jason Harr

500 West Street

Wilson Lane

Sunrise Greens

Revised Preliminary Plat

# North Forty Subdivision

Part of Sections 11 and 12, Township 9 North, Range 2 West of the Salt Lake Base and Meridian.  
Brigham City, Box Elder County, Utah  
April, 2005



Revised by Jason Harr

- 8,000 sq. ft. lots est.
- 10,000 sq. ft. lots est.
- 12,000 sq. ft. lots est.

Egret Landing

Teal Colony

Ibis Village

Sunset Greens

