CHAPTER 5: EXPERIENCING

Chapter Five addresses what it is like to experience Noble – to go to school, to drive on its roads, to experience its natural surroundings, and to drink its water, for example. Its sub-sections cover Noble's Natural Infrastructure, Physical Infrastructure (transportation, sewer, water and utilities), and Social Infrastructure (education, health care, police and fire services, etc.). Noble's Parks and a desired Community Center are explored in a special sub-section on Playing in Noble. Please note: Noble's cultural experiences are covered in Chapter 4.

Natural Infrastructure

250 million years ago, the area now known as Noble was located at the bottom of a shallow sea. When the sea dried, it left high terraces created by silt and mud deposits. This sea was drained by the Canadian and Little Rivers. Eventually, heavily wooded areas, called cross timbers, grew along the western border of present-day Noble. The cross-timbers stretch along the Canadian River in five to thirty-mile wide stretches. The cross-timber area separated the Eastern Lowlands from the Western Prairies in Cleveland County. These phenomena contributed to the topography and lay of the land currently present in Noble.

Ecoregions/Species
An ecoregion is an area that can be defined by topography, soils, land use, geology, climate, and natural vegetation. The US Environmental Protection Agency defines ecoregions at different scales or levels. The City of Noble falls under two different Level III ecoregions, the Central Great Plains in the west and the Cross Timbers in the east. Within the Central Great Plains ecoregion, Noble is in the Cross Timbers Transition Level IV ecoregion, and within the Cross Timbers ecoregion, Noble is in the Northern Cross Timbers Level IV ecoregion. See Figure 5.1 for a map of Noble's ecoregions.

According to the US EPA's *Ecoregions of Oklahoma*, the Central Great Plains' Cross Timbers Transition ecoregion is made up of rough plains with incised streams that have rocky or muddy substrates. Vegetation in the Cross Timbers Transition ecoregion includes

> Potential natural vegetation: mixed grass prairie (dominants: little bluestem, side-oats grama, blue grama, and Indian grass), cross timbers (dominants: blackjack oak, post oak, hickory, and little bluestem), and tall grass prairie (dominants: big bluestem, little bluestem, switchgrass, and Indiangrass). In the early 19th century, stream banks supported hardwood forest. Since the early 19th century, the abundance of upland trees has greatly increased, the number of upland tree species has increased, and many riparian forests and wetlands have been degraded or lost due to

channelization or land use changes. Today, on uplands: scattered oaks, hickories, and increasingly, eastern red cedar occur. In riparian areas: cottonwood, willow, elm, ash, walnut, and pecan are common.

Land cover and land use in the Cross Timbers Transition ecoregions are a

Mixture of rangeland and cropland. The main crops are small grains, grain sorhum, alfalfa, and soybeans. Oil and gas fields occur. Overgrazing, channelization, and releases of water from upstream flood control reservoirs have promoted channel incision. Today, channel incision is much more pronounced than it was in the early nineteenth century.

The Northern Cross Timbers ecoregion is made up of

Rolling hills, cuestas, ridges, and ledges. Stream flow varies from year to year, and season to season. Shallow streams with sandy substrates are typical, but some stream reaches have deep pools, riffles, and bedrock, boulder, cobble or gravel substrates. In headwater streams, sandstone blocks create isolated, enduring pools.

Vegetation in the Northern Cross Timbers ecoregion includes

Potential natural vegetation: cross timbers (dominants: post oak, blackjack oak, and little bluestem), tall grass prairie (dominants: big bluestem, little bluestem, switchgrass, and Indian grass), and a mosaic of tall grass prairie and oak-history forest. Native on clayey soils from limestone or shale: mostly tall grasses; drier shallower soils support short grass prairies. Native on shaly lowlands: savanna. Native on porous, coarse-textured, sloping upland soils derived from sandstone: mostly post oak, blackjack oak, and understory grasses; also black hickory, black oak, persimmon, redbud, sumac, and increasingly, eastern red cedar. Native in riparian areas: hackberry, American elm, post oak, black walnut, green ash, willow, sycamore, and cottonwood. Today, scrubby oak forests, oak savannas, riparian forests, and prairie openings occur.

Land cover and land use in the Northern Cross Timbers ecoregion includes

Woodland, grassland, rangeland, pastureland, and limited cropland. The main crops are small grains, grain sorghum, hay, and soybeans. Abandoned farmland is common. Fire suppression and passive land use have allowed the woodland distribution to greatly expand. Extensive, but declining, oil fields occur; associated brine, drilling mud, and petroleum waste products have increased salinity in many streams. Small impoundments are common.

Understanding the ecoregions of a city can assist with decisions regarding appropriate vegetation for parks and other landscaping. It can also help identify special areas with unique landscapes or where remnants of earlier landscapes, relatively unchanged by agricultural or urban development, remain. A map describing land cover in Noble circa 1871, found in the plan's section on maps, may also assist with these types of identifications and decisions.

Figure 5.1 Ecoregions in the City of Noble

Central Great Plains/Cross Timbers Transition in West Cross Timbers/Northern Cross Timbers in East

Source: U.S. Environmental Protection Agency, www.epa.gov/wed/pages/ecoregions/ok_eco.htm.

The Oklahoma Department of Wildlife also uses the ecoregion concept when planning for the conservation of wildlife and plant species. In its most recent Comprehensive Wildlife Conservation Strategy (approved by the US Fish and Wildlife Service October 12, 2005), the Oklahoma Department of Wildlife takes a habitat approach to protecting endangered and threatened species. By identifying and prioritizing "conservation landscapes," the strategy aims to advance the conservation of the species dependent upon these landscapes. For wildlife planning purposes, Noble is in the Cross Timbers Region. For this region, the strategy prioritizes conservation landscapes as follows:

Very High Priority Conservation Landscapes
- Small River
- Large River

High Priority Conservation Landscapes
- Oak and Hickory Bottomland Hardwood Forest
- Post Oak/Blackjack Oak/Hickory Woodland and Forest
- Tallgrass Prairie
- Small Gravel (hard)-bottom Streams and Associated Riparian Forest
- Herbaceous Wetlands
- Sandstone Canyonlands and Post Oak and Blackjack Oak Shrubland

Moderate Priority Conservation Landscapes

- Small Sandy (soft)-bottom Streams and Associated Riparian Forest
- Mixed-grass Prairie
- Limestone Cave
- Springs

The Strategy identifies the Canadian River as one of the large rivers on the Very Highest Priority Conservation Landscape list. The Strategy determined that the Canadian River, which makes up Noble's western border, is in "poor" condition with a "declining trend." Because of its seasonal fluctuation of water, the landscape of conservation concern includes the river channel itself and "the smaller ephemeral habitats" along the channel created by flooding and scouring flows. Conservation issues for the large river conversation landscapes include altered patterns of water flow (from flood control or water reservoir projects), water quality changes from run-off pollution and grazing, invasive and exotic plants and animals, and heavy recreational use. The Noble comprehensive planning study did not attempt to identify whether Noble contains any of the high priority or medium priority conservation landscapes.

Watersheds and Water Quality

A watershed is the land area that contributes surface water to a given location. Noble has two watersheds: most of the city drains to the southwest and eventually into the Canadian River, but a small area in the northeast corner of the city, west of 60th Avenue, drains to the northeast into Lake Thunderbird. According to the Oklahoma Water Resources Board, both Lake Thunderbird and this segment of the Canadian River are considered "impaired" waters. The problem, primarily, is excessive nutrients from run-off. These nutrients can come from agricultural uses and from fertilizers and other applications to lawns, yards and developed land. The amount of run-off will increase as an area develops and as the amount of land with impervious cover increases. Impervious covers are the areas, such as parking lots, streets, and even roofs, where infiltration of water into the underlying soil is prevented. Instead of being filtered by the soils, the pollutants in water run-off rush to the creeks and, eventually, to the streams and rivers.

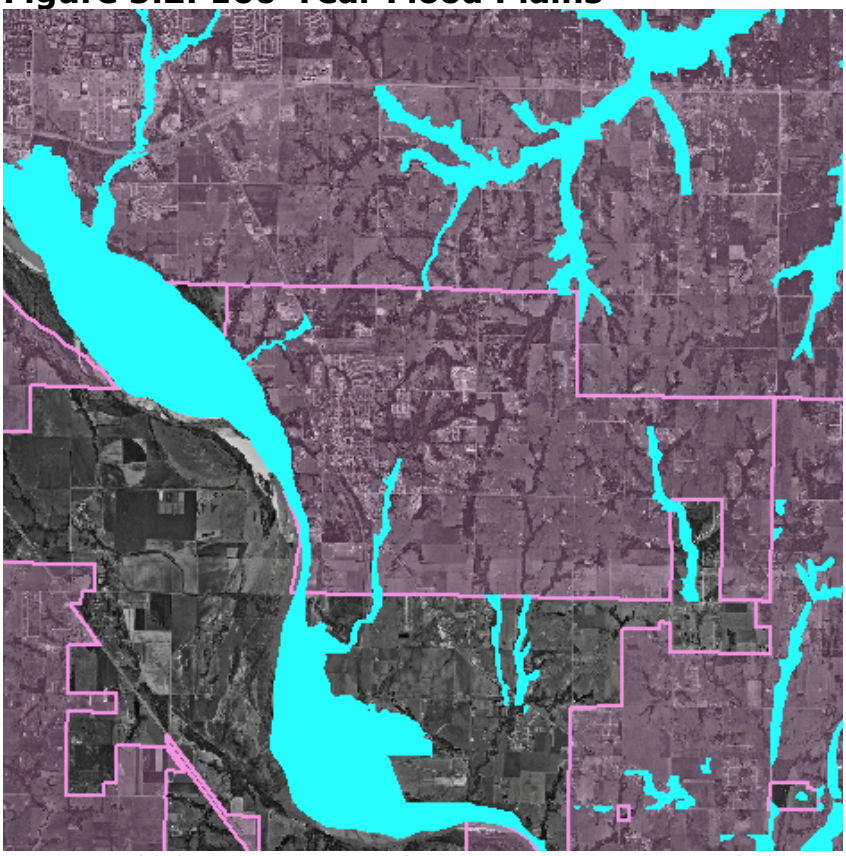
Flood Plains

Floods are caused when storm water flow exceeds the nearby channel capacity. Flood plains consist of the floodway and floodway fringe. The floodway is a narrow area close to the stream banks that must remain open so that flood waters can pass through. The floodway fringe is the area within the 100-year flood plain that can be subject to filling without causing more than a foot surcharge in the height of a 100-year flood carried by the floodway. The 100-year flood event has a one percent

chance of occurring in a given year. The Canadian River and several other streams in the city experience 100-year floods. See Figure 5.2.

Flood plains, being prone to inundation, are areas that are not usually suitable for urban development. While land may be filled to remove it from the floodplain, the water that would have flooded the heightened land still needs to go somewhere. Instead of being released and slowed in the floodplain, it instead rushes faster, potentially worsening erosion and flooding downstream. The increase in impervious surface area, a consequence of urbanization described above, typically means an increase in rushing run-off and often leads to increases in local stream flooding, making maintaining even small floodplains important as an area develops. The floodplain is also part of maintaining water quality, allowing water run-off in streams to slow down and filter through the soils and be drawn into the plants in the wetlands that typically adjoin rivers and streams.

Figure 5.2: 100-Year Flood Plains



Source: Oklahoma Data Warehouse Mapper. geo.ou.edu/cgi-bin/redesign.cgi?ft=db&template=Map_OKSTATE40.htm

The second community meeting of the Noble comprehensive planning effort featured a presentation on floodplains, watersheds, water run-off, and their

relationship to water quality and summarized the information provided above. As part of the future land use mapping exercise, participants were given the opportunity to mark environmentally sensitive areas on the aerial maps. Participants at most tables outlined the area around Noble's creeks, including the wooded areas of the riparian corridors.

Playing in Noble

Throughout the Noble comprehensive planning study, the need to provide more recreational opportunities appeared frequently in the various public input forums: the survey, the steering committee meetings and the community meetings. Recreation had already been identified as an issue in the Century Community strategic planning process that the city had undergone before embarking on the comprehensive planning study. In fall 2004/spring 2005, the Culture and Recreation Council of the Noble Chamber of Commerce conducted an informal survey of Noble high school students and attendees at Noble community events asking them what recreational activities they participate in and what additional activities and facilities they would like to see in Noble. The objective was to gather information for a Community Events Calendar and to develop future activities for Noble community members. Of the 1,500 surveys collected, the top four responses to the question inquiring about public recreational or cultural facilities needed in Noble were a city pool, fitness center, parks/playgrounds, and a gymnasium.

The Noble Community Survey conducted as part of this comprehensive planning study also provided opportunities for Noble community members to indicate how important park and recreational facilities were to them. In the top ten list of responses to the open-ended question about one thing respondents would like to change about Noble, "parks" came in fourth (25) and "recreation for kids" came in eighth (14). Ten respondents specifically identified a community center. In the responses to a series of questions inquiring what additional services Noble community members desire, "more places to recreate indoors" and "more places to recreate outdoors" tied (53) for the fourth most popular response. Comments relating to the parks showed up with the second most frequency in the survey's additional comments and concerns section. Reinforcing these results, Noble community members expressed dissatisfaction with facilities related to recreation (parks, sidewalks, and bike routes) ranking them as three of the four lowest items in terms of satisfaction with municipal services and infrastructure. This gap between desire and satisfaction helps explain why Noble's parks ranked relatively low on a list of factors affecting respondents' quality of life. (See Appendix 3 for Noble Community Survey results).

Parks

Current thinking on park planning envisions a system of parks that serve different purposes and needs. The National Recreation and Parks Association endorses this approaching noting

> A shift away from reliance on an absolute national standard, i.e. the long standing notion of 10 acres/1000 persons, to increasing community self-direction where the number of acres for park and recreation land is based on what the citizens determine is best for themselves (NRPA, 1996).

Present-day park plans are instead often hierarchical, ranging from small, frequent neighborhood parks to large community parks to even larger regional parks. However, current thinking also recommends that each city look at its own neighborhood configurations, school lands, and recreational facilities, in addition to the park resources of the larger region, in order to develop its own park plan. Thus, park standards vary from place to place. Park standards from the city of Lawton, OK are presented in Table 5.1, and the "Sources of Information" section at the end of this chapter provides links to websites that discuss different municipal and regional standards.

Noble looks to areas outside the city for its regional parks. Lake Thunderbird State Park is the closest park that meets this definition. Noble residents can access some of the functions found in the metropolitan park category in Norman (the amphitheater in Andrews Park and the ball fields in Griffin Park) or Oklahoma City (zoo and historical sites). Noble's Riley Park, because it is on the opposite side of U.S. 77 from most of Noble's housing and is surrounded by industrial land, cannot really function as a neighborhood park. Instead it serves the role of a community park. It is, however, too small to host all the functions typically found in a community park and, with its interesting natural features and topography, is more suited to passive (walking, picnicking) rather than active (sports) recreation.

Dane Park and Kenneth L. King Park are both in the process of being developed for park and recreational use by the city. Members of the OU Planning Team conducted a special design study for these parks that can be found in Appendix 7. The natural features of Kenneth L. King Park – it is heavily wooded and a creek forms its western boundary – complicate developing it as intensively as required for a community park dedicated to active recreation. It is of the minimum size, however, for a community park.

Table 5.1 Park Standards Adopted by the City of Lawton, OK

Type	Description	Typical Facilities	Service Areas	Acres Required
Neighbor-hood Park	Provides recreational opportunities for all ages of the neighborhood. When possible, neighborhood parks should be separate facilities; however, they may be located adjacent to elementary schools or linear parks.	Play apparatus for all ages of children, multi-use paved surfaces, picnic areas with shelters, informal ball fields, walkways, tennis courts, restrooms and landscaping.	One-quarter to one-half mile radius.	Five acres minimum. Five acres per 1,000.
Community Park	Provides recreational facilities for the community to utilize. Facilities should be provided for people of all ages. Should be located on arterial streets and accessible by pedestrians and bicyclists.	Swimming pools, lighted athletic fields and tennis courts, pedestrian and exercise trails, large picnic areas with shelters, landscaped areas to buffer adjacent developments, areas of natural value and water areas.	One-third to three-mile radius.	Twenty acres minimum. Three acres per 1,000.
Metropolitan Park	To accommodate social, cultural, educational, and physical activities of particular interest to the community.	Lighted athletic complex, large swimming pool, nature center, zoo, community center, museum, golf course, historical sites and amphitheater.	The entire metropolitan community.	Acreage needs vary depending on facilities.
Regional Park	Provides extensive areas for passive recreation and regional recreation facilities that compliment urban services.	Campgrounds, picnic areas, nature centers, wildlife sanctuaries and golf courses.		250 acres minimum. Five acres per 1,000 people in a metro region.

Source: City of Lawton, OK (www.cityof.lawton.ok.us/parksnrec/fpstandards.htm).

Table 5.2: Municipal Park Areas in Noble

Park Category	Area (Acres)	Existing/Potential
Riley Park	12	Existing
Ball field		Existing
Dane Park	5	Potential
Kenneth L. King Park	20	Potential
Library Park	Pocket	Under Development

Dane Park is in the right location and of adequate size to be a neighborhood park. Like Riley Park, the ball fields (next to the rodeo grounds) are too isolated from most of the existing residential development to serve as a neighborhood park. The housing developments east of U.S. 77 in Noble's north and center are not currently served by potential neighborhood parks. The 2025 future growth scenarios indicate a need for one to four additional neighborhood parks.

Community Center

Interest in an official community center pre-dated this comprehensive planning study. Among the action steps in Noble's Century Community strategy plan is to "assess possibilities for a community center, programs, parks, lighting, signage, landscaping, and cultural & recreational activities by 2006." This interest has maintained its momentum. The L.A.N.D. 2025 exercise conducted as part of the first community meeting highlighted a community center's continuing importance. Groups of 6-8 gathered around tables and discussed what they perceived to be Noble's liabilities, assets, needs, and dreams for the year 2025. The groups each reached a separate consensus on their top liabilities, assets, needs and dreams, and members of the OU Planning Team documented each group's top priority for each category for all to see. Each individual then had a chance to "vote" for what he or she believed to be the most important item, choosing from any category. Overwhelmingly, the votes were for a dream: a community center. (Complete discussion of the L.A.N.D. 2025 exercise and its results can be found in Appendix 2.)

For many years the Noble School Administration Building has served as the unofficial community center for the city of Noble. Advantages of the Noble School Administration Building are its central and accessible location within Noble's urban district. Many of Noble's businesses and homes, two of the city's schools, and the new library are all within walking distance. The building is very familiar to Noble's residents. The site is currently used for typical community center activities: plays, sports activities, community vaccinations and community meetings. If the city of Noble were to decide to adopt the School Administration Building as its official community center, one advantage would be the ability to develop the Community

Center incrementally over time using existing facilities rather than building all new facilities. The specifications of the School Administration Building are:

- 29,776 square feet
- Offices—10
- Lounge—1
- Storage—3
- Meeting—4
- Restrooms—3
- Auditorium seating—425 seats
- Gymnasium capacity—unknown (large).

Other buildings on the site of the School Administration Building are:

- Maintenance/Food Services—4,500 square feet
- Cafeteria—4,104 square feet
- Football Locker Building—1,976 square feet
- Wrestling Building—2,800 square feet
- Band Building—3,800 square feet

Source: Dr. Greg Kasbaum, Superintendent of Noble Public Schools

Disadvantages of using existing facilities rather than building new ones, especially in a central location, include a limitation on space and the age of the facilities, as well as the creation of a need for new facilities for the Noble Public Schools. The Noble Public Schools may currently be graciously allowing the School Administration Building to function as an unofficial community center, but the building is vital to Noble Public Schools' operation.

Although the School Administration Building has served for many years as a community center in an unofficial capacity, the response of Noble's residents to the survey and to the L.A.N.D. 2025 exercise indicate that the residents of Noble may be hoping for something more. Research of community centers throughout the country yielded some further insight into what community centers offer. Community centers usually include such amenities as pre-school rooms, gymnasiums, kitchens, libraries, meeting rooms, multi-purpose rooms, weight-training/fitness rooms, and offices. Outdoor facilities generally include ball fields, walking/biking trails, playgrounds, tennis courts, swimming pools/splash parks, and picnic areas. Often a variety of organized activities and classes are offered through a community center. The size of a community center, including outdoor recreation, puts the complex on par with a community park.

A prudent question for the city of Noble to ask its residents is, "What facilities would you like to see in a community center?" A series of meetings could be scheduled to glean from the residents exactly what they hope for in a community center in order to plan consistently with the needs and hopes of the residents. A

strategic plan for the envisioning, funding, building, and maintaining of a community center would be a helpful process to ensure a good outcome.

Physical Infrastructure -- Transportation

This sub-section describes the current transportation system in the City of Noble. It also describes the current commute patterns, significant vehicle traffic generators, and analysis of the public input on transportation.

Primer on Transportation Planning
According to the American Planning Association's *Planning and Urban Design Standards*, effective transportation systems are central to maintaining the productivity, health, and safety of communities and regions. A transportation plan guides a community's mobility, accessibility, safety, economic, and quality of life concerns. According to *Urban Transportation Planning,* 2nd edition, a multi-modal system is used to describe a transportation system that utilizes more than one type of transportation system. Noble's types of transportation include pedestrian and automobile infrastructure. A multimodal system integrates these various types of transportation into a seamless system. Calculating trip generation is another important transportation planning tool. It allows the prediction, based on surveys of past developments of its type and size, of the number of vehicle trips to and from a proposed land use or designated zone. Traffic generation can be predicted for any type of land use. The table below can be used to estimate the trips generated by different land uses.

The functional classification system developed by the Federal Highway Administration (FHWA) in 1962 is widely used to define the traffic-carrying function of streets. Currently, Noble has no assigned street classification system or map for individual classification of its streets. The OU Planning Team considered three types of street classifications when studying Noble. The first was the street classification in *Planning and Urban Design Standards*, which gives a definition and a hierarchy of different streets. The other two were the Noble Subdivision Ordinance and Noble's "Standard Specifications for Street Construction and Typical Street Paving Sections." Noble's subdivision ordinance contains definitions for different types of streets. According to the Noble's subdivision ordinance, a collector street is a minor street collecting traffic from other minor streets and serving as the most direct route to a major street or community facility. A local street is a minor street that collects and distributes traffic between parcels of land and collector or arterial streets, with the principal purpose to provide access to abutting property. The subdivision ordinance gives good definitions and descriptions of street types in Noble, but no classification or hierarchy is assigned to individual streets. Noble's "Standard Specifications for Street Construction and Typical Street Paving Sections"

seems to be more about recommended construction standards for different roadway functions than about identifying the separate uses.

Table 5.3: Vehicle Trip Generation by Land Use

Facility/Development	Size of Development			Traffic Direction
City Park	**50 Acres**	**100 Acres**	**150 Acres**	**Entering / Exiting**
Weekday	75	155	245	50% / 50%
Specialty Retail Center	**20K Sq. Ft**	**30K Sq. Ft**	**40K Sq. Ft**	**Entering / Exiting**
Weekday	893	1,321	1,749	50% / 50%
Saturday	850	1,265	1,685	50% / 50%
Sunday	410	615	820	50% / 50%
High-Turnover (Sit-Down) Restaurant	**5K Sq. Ft**	**8K Sq. Ft**	**10K Sq. Ft**	**Entering / Exiting**
Weekday	645	1,115	1,270	50% / 50%
Saturday	792	n/a	n/a	50% / 50%
Sunday	649	n/a	n/a	50% / 50%
Single Family Detached Housing	**100 Units**	**300 Units**	**500 Units**	**Entering / Exiting**
Weekday	1,040	2,857	4,571	50% / 50%
Saturday	1,052	2,956	4,778	50% / 50%
Sunday	883	2,639	4,405	50% / 50%

Source: Institute of Transportation Engineers, *Trip Generation Manual*, 2003

A functional classification system can be used in two ways: to analyze how segments of the existing road system are currently functioning and to plan for how segments should function in the future. Once a segment is designated in a plan to fulfill a certain function, improvements can then be made that help the segment meet its function. From a system-wide perspective, with a functional classification plan, improvements to the existing system can be targeted to those segments most needing changes to match their functional designation.

The OU Planning Team decided to use the street classification system in *Planning and Urban Design Standards*. There are four classifications: principal arterials, minor arterials, collector streets, and local streets. Table 5.4 provides the definitions used in *Planning and Urban Design Standards* and streets in Noble that are representative of the various classifications. Note, however, that functional classification systems are dependent upon a reference area. For example, from the point of view of the entire Oklahoma City metropolitan region, only the interstates and the expressways would be considered representative of principal arterials. U.S. 77 would be a minor arterial and Noble's east-west section line roads would be minor collectors. From the perspective of Noble, on the other hand, U.S. 77 is the principal arterial and section line routes also serve important urban backbone functions. Table 5.4 uses Noble as

the reference region for analyzing representative streets in a functional classification system.

Table 5.4 Functional Classification System as Defined in *Planning and Urban Design Standards*

Type of Street	Definition	Streets in Noble Representative of the Function
Principal arterials	Provide long-distance "trunk line" continuous routes within and between urban areas. Typically, but with some important exceptions, they carry high volumes of traffic at high speeds. Freeways, including interstates, are principal arterials.	➢ State Highway 77
Minor arterials	The backbones of the urban street network, minor arterials are continuous routes through urban areas. Accounting for 10% of street mileage, they carry more than half of vehicle miles traveled. They may be state, county, or city streets. Most trips include arterial streets. They contain most of the city's commercial and institutional uses. The traffic function of minor arterial streets is challenged because of their attractiveness as business addresses, an attractiveness fostered by the traffic function of the street itself.	➢ Post Oak ➢ Etowah ➢ Maguire ➢ Cemetery ➢ 8th ➢ 60th ➢ 72nd ➢ 84th
Collector streets	With connectivity over short segments (one fourth to one-half mile), collector streets are minor tributaries, gathering traffic from numerous smaller (local) streets and delivering it to and from minor arterials. Collectors are usually city and county streets. Most collectors are bordered by properties (both businesses and residential) with driveways to the street.	➢ 2nd ➢ 4th ➢ 5th, and section north of Etowah ➢ 48th ➢ Chestnut ➢ Maple ➢ Front ➢ Parkwood
Local streets	Local streets include all streets not at a "higher" system. They comprise 90% of the street mileage but carry less than 10% of the total vehicle miles of travel. These streets may be short in length or frequently interrupted by traffic control devices (stop signs or signals). Travel distance on local streets is short, typically to the nearest collector street. Speeds are low (20 to 30 mph). Usually, local streets are city streets. Local streets often have numerous driveways, as they are addresses for most homes, as well as many nonresidential land uses (professional office, small industrial, churches) not requiring visibility to large number of passing motorists.	➢ All streets not at a "higher" system

Source: American Planning Association, *Planning and Urban Design Standards; Hierarchy of Streets and Roads*, pg. 226, 2006.

Description of Noble's Existing Transportation System
Noble accesses the Oklahoma City metropolitan area and other regions of the state through U.S. 77 and State Highway 9. The Canadian River, which makes up Noble's western boundary, blocks Noble's most direct access to Interstate 35 and the Oklahoma City metro area's growing southwestern suburbs. The nearest bridges over the Canadian are in Norman and in Lexington. To access Interstate 35, Noble residents would need to take U.S. 77 north to State Highway 9 westbound, and then connect to Interstate 35. The trip is a 7.7 miles from downtown Noble. Alternatively, they could travel U.S. 77 south to Purcell; this trip is longer in distance (over ten miles) but for traffic going to destinations further south on I-35 it avoids going out of one's way.

U.S. 77 is a major thoroughfare for southern Cleveland County. U.S. 77 is also Noble's Main Street; the segment between Etowah road and Maguire road makes up the city's traditional downtown. North of Etowah road, commercial strip development of a more suburban style lines U.S. 77. Currently, U.S. 77 is four lanes with a continuous left turn lane from State Highway 9 in Norman to Ash St. in downtown Noble. Starting at Post Oak road, the speed limits drops down from highway speeds, eventually reaching 25 mph in Noble's traditional downtown.

Traffic counts are only available for U.S. 77. Table 5.5 provides information on traffic counts for the years 1991-2002 on U.S. 77. All three traffic points indicate a steady increase in traffic into Noble. Point 2 is of particular interest as it is a US 77 hub. U.S. 77 traffic has gradually increased by 1.4 -2% yearly over the six year period included in this analysis and is expected to continue to rise in coming years.

Table 5.5: Annual Average Daily Traffic (AADT) Volumes on US 77 through Noble: 2000-2005

Points	Segment	2000 AADT	2001 AADT	2002 AADT	2003 AADT	2004 AADT	2005 AADT
1	North of Noble	15,473	15,704	15,977	16,254	16,709	16,907
2	Downtown	13,300	13,400	15,200	14,600	14,800	14,800
3	South of Noble				7,900	8,300	8,400

Source: Oklahoma Department of Transportation

Section line roads at one-mile intervals divide Noble into a grid-iron of through streets. North-south roads include (from west to east): Front, 8th, 48th, 60th, 72nd, and 84th. East-west roads include (from north to south): Post Oak Road, Etowah, Maguire, and Cemetery Road. The east-west section line roads connect to US 77. The north-south section line roads (8th, 60th, 72nd, and 84th) connect to Highway 9, which then connects to Norman.

Local streets in a grid-iron pattern dominate within the one square mile original plat of the city. As stated in the street hierarchy table, local streets comprise 90% of the street mileage but carry less than 10% of the total vehicle miles of travel. Outside of the original downtown grid, local streets in Noble are comprised of a diverse assortment of subdivisions containing cul-de-sacs, which do not allow through traffic onto the section line roads. Some subdivisions do contain local streets that allow direct access to section line roads.

Currently there is no public transit service in Noble. The closest public service agency to Noble would be Metro Transit operated through Cleveland Area Regional Transit (CART) authority in Norman. Currently, no local taxi service is available in Noble. Amtrak provides passenger rail service on the Heartland Flyer, which runs one round trip daily between Oklahoma City and Ft. Worth, TX. The closest stops to Noble are in Norman to the north and in Purcell to the south. The Amtrak train itself passes through Noble's downtown on rail lines that are part of the BNSF main line system. This system also carries extensive freight rail traffic.

Sidewalks are not uniformly provided along Noble streets. There are sidewalks in Noble's traditional downtown area, but not where U.S. 77 becomes characterized by more suburban-style commercial strip development. Many of the residential streets in the original town plat lack sidewalks. While some of the newer housing additions have sidewalks, the section line roads connecting the neighborhoods to community facilities, such as schools, and to commercial areas typically do not have sidewalks. There are no specially designated bicycle facilities that serve a transportation role.

Table 5.6 Commute Patterns of Noble Community Survey Respondents

Worker Commute Patterns		
Norman	130	27.84%
Retired	66	14.13%
Oklahoma City	34	7.28%
Self Employed	16	3.43%
Tinker	5	1.07%
Lexington/Purcell	4	0.86%
Disabled	3	0.64%
Moore	2	0.43%
Seminole	1	0.21%
Edmond	1	0.21%
Shawnee	1	0.21%
Ardmore	1	0.21%
Purcell	1	0.21%

Source: Noble Community Survey, 2006

Description of Noble's Commute Patterns
According to the 2000 Census, the average work commute time for Noble residents is 24 minutes. Although the Noble Community Survey did not use statistical sampling, a glimpse of Noble residents' commute patterns can still be seen. Close to 28% of the respondents to the survey work in the city of Norman, Oklahoma, which is a 6.6-mile trip (about 13 minutes). Around 7% of the respondents work in Oklahoma City, a 28-mile trip (about 35 minutes).

Description of Noble's Significant Vehicle Traffic Generators
When analyzing a transportation system, understanding the major traffic generators is important. According to the Noble Public Schools' website, they currently employ 195 people and educate 2,775 students. All the schools are located within the city. The individual schools, and the school system as a whole, constitute Noble's greatest traffic generators. Moreover, they raise multimodal transportation issues as students and employees may access the schools by auto, bus, bicycle, and walking. There are two ways to calculate vehicle trip generation for schools: by student numbers and by square feet of educational space. Tables 5.7 and 5.8 show the possible peak hour vehicle trip generation that is created by each school under each calculation method. For example, the total student population for John K. Hubbard Elementary School is 426 students. The *Trip Generation Manual* indicates .42 vehicle trips per student will occur during the weekday A.M. hour for an elementary school. When 426 students is multiplied by .42, 179 vehicle trips are generated. Please keep in mind that the numbers provided by the *Trip Generation Manual* are determined by compiling many studies together to get trip generation averages of different land uses.

For an example using the square feet method, the total square footage for John K. Hubbard Elementary School is 46,916 square feet. The *Trip Generation Manual* indicates 4.69 vehicle trips per 1000 square feet will occur during the weekday A.M. hour for an elementary school. When 46,916 is multiplied by 4.69, 220 vehicle trips are generated.

A third way to get an idea of how many trips are generated by each school is to look at bus service eligibility. Table 5.7 also shows the number of students eligible for bus service to their school. All students not eligible for bus service get to school another way generating vehicle, walking or bicycling trips. For Noble Schools the percent of students not eligible for bus service ranges from a low of 27% for the middle school and a high of 52% for the K.I.D. Elementary School. In total, 1,122 students are not eligible for bus service and reach their schools by some other means. This should be taken as a minimum number because of the likelihood that many bus-eligible students also travel to school by other means.

Table 5.7: Vehicle Trip Generation for Noble Schools Using Student Population (as of December 2006)

School	Eligible for Bus Service	Student Population	Grades	Weekday A.M. Peak Hour Trips Generated	Weekday P.M. Peak Hour Trips Generated
K. I. D. Elementary	272	562	PreK- 1	236	157
John K. Hubbard Elementary	225	426	2-3	179	119
Pioneer Intermediate	286	442	4-5	234	133
Curtis Inge Middle School	461	633	6-8	335	190
Noble High School	539	842	9-12	345	236

Source: Noble Public Schools; Institute of Transportation Engineers, *Trip Generation Manual*, 2003.

Table 5.8: Vehicle Trip Generation for Noble Schools Using School Square Footage

School	Square Footage	Grades	Weekday A.M. Peak Hour Trips Generated	Weekday P.M. Peak Hour Trips Generated
K.I.D Elementary	42,261	PreK- 1	197	131
John K. Hubbard Elementary	46,914	2-3	220	147
Pioneer Intermediate	44,569	4-5	196	113
Curtis Inge Middle School	79,890	6-8	348	202
Noble High School	119,540	9-12	367	254

Source: Noble Public Schools; Institute of Transportation Engineers, *Trip Generation Manual*, 2003.

Description of Noble's Transportation Planning Context

Currently, all transportation planning in Nobel is administered by the City Manager. Noble is a member of the Association of Central Oklahoma Governments (ACOG), which is the Oklahoma City Metropolitan Planning Organization (MPO). MPOs have the direct responsibility of preparing regional transportation plans. ACOG

currently has 34 member governments, consisting of city, town and county jurisdictions ranging in size from Luther (500 people) to Oklahoma City (463,030 people). In addition, Tinker Air Force Base maintains an associate membership. In total, the ACOG region represents a population of 926,316 persons encompassing an area of just over 2,900 square miles. Transportation planning is difficult as city roads are maintained by the City of Noble and the Oklahoma Department of Transportation (ODOT) maintains highways. This split in responsibility affects transportation system management as planning for road improvements and performing general maintenance are often not coordinated. In general, Noble's transportation plan for streets and highways also involve coordination with Cleveland County as the city falls in the county and has unincorporated land on its borders.

Public Input on Transportation Issues

The first public community meeting for Noble was on October 17, 2006. Citizens were informed on what the OU Planning Team was going to be producing for Noble. In return, the OU Planning Team was going to need feedback from citizens. Because of the relatively little data on transportation in Noble, one of the exercises the community participated in was the Transportation Hotspots Mapping Exercise. Participants were asked to mark places on a Noble street map where they fear accidents, where speeding is a problem, and where pedestrian safety was a concern.

A map containing all areas of concern was created after analyzing the nineteen maps received from participants. One of the areas that stood out was Noble's Main Street. The findings of the Transportation Hotspots Mapping Exercise indicate the downtown area as having all three main concerns associated with it. Other areas that stood out were the section line roads of Etowah and Maguire. Etowah's main concern was speeding. Maguire also had a large amount of speeding concerns along with pedestrian concerns near Hubbard Elementary. The north and south ends of the downtown area along U.S. 77 also had speeding concerns. Another area with a large pedestrian concern was 8th street near Curtis Inge Middle School and the area between Etowah and Maguire. A complete map of the Transportation Hotspots results can be found in the map section of this document.

Other public inputs on transportation issues in the Noble Community Survey related to street conditions, traffic congestion, sidewalks, bike routes, and parking. Respondents to the survey were split on their satisfaction with the transportation system in Noble. "Location/proximity" (which is in part dependent on the transportation system) made number three (with 122 "votes") on the Top 10 List of *three things* respondents *like* about Noble. "Less traffic" received 17 votes. "Street/road maintenance" (27 votes, third place) and "traffic problems (14 votes, ninth place) also made the Top Ten List of *one thing* respondents would like to *change* about Noble. "Sidewalks" received ten votes and "higher speed limits"

received five votes for one thing change. "Sidewalks" and "streets and road maintenance" were also tied (16 mentions each) for the third most frequent topic raised in the additional comments and concerns section. (Complete results of the Noble Community Survey can be found in Appendix 3.)

When specifically asked about how satisfied they were with municipal services and infrastructure, of the 13 factors identified, "traffic congestion" ranked fairly high (sixth) with 79% satisfied or very satisfied. "Parking" achieved 73% satisfied or very satisfied. Street conditions, sidewalks, and bike routes made up the bottom three on the satisfaction scale with only 54%, 44% and 29%, respectively, satisfied or very satisfied. Yet when asked how important transportation alternatives to cars were to respondents' quality of life, this one ranked last of all queried factors. The most frequent answer was "not at all." Noble Community Survey respondents seem to be saying that street maintenance is a significant concern and that traffic issues in specific locations are a concern, but congestion in general is not. A desire for improved and expanded sidewalks appeared frequently; perhaps though, respondents do not see "sidewalks" as a transportation alternative since pedestrians do not require some sort of vehicle.

In the additional comments and concerns section, respondents often identified specific transportation concerns. The need for street improvements on Etowah Road appeared frequently, as did concerns about sidewalks accessing the schools.

Future Expansion of U.S. 77

Currently the State of Oklahoma Department of Transportation plans to widen U.S. 77 to five lanes. Currently, U.S. 77 is five lanes from Post Oak to Ash St. Expansion is scheduled from the south side of downtown (approx. Cherry St.) to Slaughterville. Start dates are slated for 2009-2010. Special studies looking at expansion options for U.S. 77 and how to accommodate an expanded U.S. 77 in Noble's downtown can be found in Appendix 4 and Appendix 5. How the expansion of U.S. 77 affects Noble's downtown is a serious concern for the future economic development of this area. The expansion project may, however, open up additional commercial areas for development south of Noble's current downtown.

Physical Infrastructure – Water, Sewer, Telecommunication and other Utilities

This sub-section describes the current state of the water and sewer infrastructure in the City of Noble. Maps of Noble's current water and sewer infrastructure can be found in the maps section of this document.

1. Sewer Element

The sewage handling system consists of a conventional set of pipes, most of which drain to a lift station on the south side of the city. The lift station pumps the sewage to a water treatment facility on the west side of town. A map of existing sewer facilities is available as a layer on the main city map. Sewer services are limited to areas within the city limits (mostly areas surrounding the core city), with no coverage beyond 48th Street. The city is in the process of setting up an Access database to record and monitor frequent trouble spots.

a. Pipes

Sewage is transported in pipes of various materials laid down at various times in the city's history, according to the city's pattern of development. Main lines tend to be 6-, 8-, or 10-inch. The sewer line map in the map section of this document shows the pipelines of different sizes in different colors.

b. Lift Station

A Lift Station exists near the south end of SE 8th Street. The Lift Station is accompanied by two lagoons, only one of which is in use.

c. Sewer Treatment Facility

The Sewer Treatment Facility is located halfway down a hill at the end of W. Etowah Road. The facility was built in 1991, making it about 15 years old. Treated water is released into the South Canadian River, while solid wastes are sold to private interests as fertilizer. The city is in the process of setting up a system of programmed maintenance for the facility. Estimated current usage is 2000 households; the public works director estimates capacity for another 2,000 households, which adequately meets the highest 2025 Future Growth Scenario of 4,000 additional people or 1,500 additional households.

d. Public Input

The Noble Community Survey showed that thirteen percent of the total (356) respondents are very satisfied with the sewer service and seventy-six percent of the respondents are satisfied with the sewer service. The survey further reveals that six percent of the respondents are unsatisfied and five percent of the total respondents are very unsatisfied with the sewer system of Noble. The high levels of satisfaction with the sewer service rank it third on the list of thirteen items related to municipal services and infrastructure.

e. Municipal Regulations

Section 12-641 of the city of Noble's subdivision regulations requires that the subdivider install and construct the sanitary sewers in conformance with the standards and specifications of this code.

Section 12-654 of the code requires that "for any structure to be located on any lot within an urban, platted subdivision," the required sanitary sewer improvements for that lot have to be installed in accordance with standards and specifications as adopted by the City Council. If there is no city sewer facility available in that area then a treatment system needs to be installed which has to be approved by the City Manager, City Engineer and the Oklahoma Department of Environment Quality. In those tracts of land where city water is available but which does not have city sewer service available, "the owner may install a private sewer or septic system to serve his particular property and no other." And when the city sewer service becomes available within five hundred feet of the tract land involved, "the owner of the tract has to discontinue his private system and connect to the city sewer line."

In case of variations and exceptions, under section 12-676 of the code, it says that a building permit will be issued if the method of sanitary disposal is by connection to the city sanitary sewer system and, if that is not available, then under section 12-667, it requires a septic tank under the following conditions:

I. Approval of the construction of a private system acquired from the Oklahoma Department of Environment Quality; and
II. The septic system be installed and inspected in accordance with the Oklahoma Department of Environment Quality; and
III. Minimum lot sizes are as required by the Oklahoma Department of Environmental Quality.

2. Water Element

Water service is limited to areas within the city limits, again concentrated near the core area and along Etowah Road. Some areas within the city limits depend on private wells. The water line map in the map section of this document shows the extent of the municipal water system.

a. Pipes

Water is provided through a variety of lines, usually PVC, with the age of the pipes in any one area dependent on the time that area was developed and also on any replacement projects that have occurred in the area. The diameter of the pipe also varies from 1- , 2-, 4-, 6-, 8- or 10 inches. The water line map shows the pipelines of different sizes in different colors.

b. Pumps and Wells

The city is dependent on water from two city-owned wells and five privately owned wells, from which the city buys the water. A small number of existing wells are inoperative and must be capped due to noncompliant levels of arsenic

contamination. Usually only three wells are in use at any given time, though this usage may rise to four or five in peak circumstances. The wells are currently turned on manually, but the city is working on turning them into automatic wells. The city-owned wells are located near 48th and Etowah Road, just east of Morningside, and on McGuire and Reese. The five privately owned wells are in fact south of town, south of Cemetery along Burkett Road (on same alignment as 8th Street).

The public work director, Mike Blanton, estimates that city wells could handle 50% more population, which indicates an adequate supply for the low and medium 2025 Future Growth Scenarios (1,000 and 2,000 additional people), but falls short of the needs for the high scenario (4,000 additional people). He reported that the city is looking to add wells all the same.

c. Towers

The city is served by three water towers. A water tower off Etowah Road was built in 1978 and holds 500,000 gallons with a base elevation of about 1,210 ft. A water tower on Maguire (about 1600 ft east of 8th Street) also holds 500,000 gallons with a base elevation of 1,203 feet. A water tower on Chestnut, just east of Main holds 30,000 gallons with a base elevation of about 1,190 ft.

d. Municipal Regulations

Section 12-641 of the city of Noble's subdivision regulations requires that the subdivider install and construct the water mains in conformance with the standards and specifications of this code.

Section 12-657 of the code requires that the "subdivider install the water lines and fire hydrants in compliance with this code" and until the required water lines for the lot have been installed in accordance with standard specifications for the improvements as adopted by the City Council, no building permit shall be issued for any structure. The code also requires that "in both urban and rural areas in which water lines are installed by the developer, the developer shall install a minimum twelve inch water main along all section line roads and all highways and major thoroughfares. Larger mains may be required as determined by the City Administrator and Fire Chief."

In case of variations and exceptions, under section 12-676 of the code, it says that a building permit will be issued if water lines and water hydrants are in place as a part of the city system. In those tracts where city water is not available, a private well may be utilized if it meets the following conditions:

I. Approval of water well drilling by the Oklahoma Department of Environment Quality, and acquiring a permit from the City Council for private water well.

II. All private water wells must meet the locational criteria and established by the Oklahoma Department of Environmental Quality and the Oklahoma Water Resources Board for the construction of private water wells.

e. Public Input

According to responses to the Noble Community Survey's question about one thing people would like to change in Noble, twenty-two respondents mentioned something related to water. This ranked "water" sixth on the top 10 list of one thing to change. Water-related comments were the *most frequent* topic raised in the "additional comments and concerns" section of the Noble Community Survey (27 comments). When asked to rate their satisfaction with Noble's water service, 74% indicated they were satisfied or very satisfied, ranking this item seventh out of thirteen items related to municipal service or infrastructure. Water service issues also appeared in the L.A.N.D. 2025 exercise in the first community meeting.

Specific concerns about the water service include the bad taste of the water; others mentioned the high water bills. Respondents mentioned the same concerns on water again in their "additional comments and concerns" about the city. Water from the municipal well needs to be chlorinated before distribution and that may be the cause of the poor taste of water. Similarly, the Noble Community Survey results reveal that water pressure also continues to be an issue in some neighborhoods that have elevations approaching the elevations of the water towers. Thus it can be concluded that even though most of the respondents are satisfied with water services, those who are not have specific concerns about the quality and taste of water along with the cost of water.

3. Other Utilities

a. Garbage

Garbage service is contracted out. The public works manager thinks the landfill is in Norman. A question asked on the survey about the level of satisfaction of garbage collection within the City of Noble revealed that fifteen percent of respondents out of 399 respondents are very satisfied with the garbage collection service; seventy-six percent are satisfied with the garbage collection service; and nine percent are either unsatisfied or very unsatisfied with the garbage collection service. With 91% satisfied or very satisfied, garbage service ranked second in terms of satisfaction out of thirteen items related to municipal service or infrastructure.

b. Natural Gas

Natural Gas service in Noble is managed by ONG.

c. Electricity
Responsibility for electrical service in Noble is split between the Oklahoma Energy Cooperative and OG&E.

d. Recycling
Recycling services consist of dumpsters at Main and Pecan and at Seventh and Ash to receive magazines and newspapers. The service is operated by Abitibi Consolidated. The survey reveals that, out of 415 respondents, 192 respondents do not use this service, 118 respondents use this service out of Noble, 59 respondents use this service within Noble, and 46 respondents use this service out of Noble. 53 respondents revealed that they would like to see more recycling services within the city of Noble, ranking this item third out of sixteen services respondents desired more of in Noble. For survey respondents living outside of Noble, this item ranked first.

e. Communication
Land-line telephone service is provided by AT&T for both business and residential customers. The provider for Cable services is Classic Cable. Dial-up service is available throughout the city. DSL and Cable Modem services are available, but based on responses to the Noble Community Survey, not all areas of the city are covered. The Noble Community Survey results indicate that there is a demand for the COX service and high speed internet in the Noble area. Although two or three respondents had specific concerns about availability of high speed internet in some areas of Noble, the question asked on the satisfaction level for internet and cell phone services revealed that, out of 354 respondents, seven percent of respondents are very satisfied with the service, sixty- three percent are satisfied, twenty percent are unsatisfied and ten percent are very unsatisfied. With 70% indicating they are satisfied or very satisfied with internet and cell phone service, this item ranked ninth in terms of satisfaction out of thirteen items related to municipal service or infrastructure.

SOCIAL INFRASTRUCTURE

Social infrastructure is the network of organizations and facilities that provide the framework for a community's needs and includes a community's health care facilities, police and fire facilities, school system, libraries, and social services.

Solid social infrastructure expresses the strength of a community and its commitment to its citizens to provide facilities to meet their needs. Through social infrastructure, a community can achieve safety, education, recreation, health care, and financial support for citizens in need. Social infrastructure creates a stable underpinning to support economic development, housing, and transportation; the

facilities available to a community are often a deciding factor for people and businesses seeking to relocate.

Century Community Status

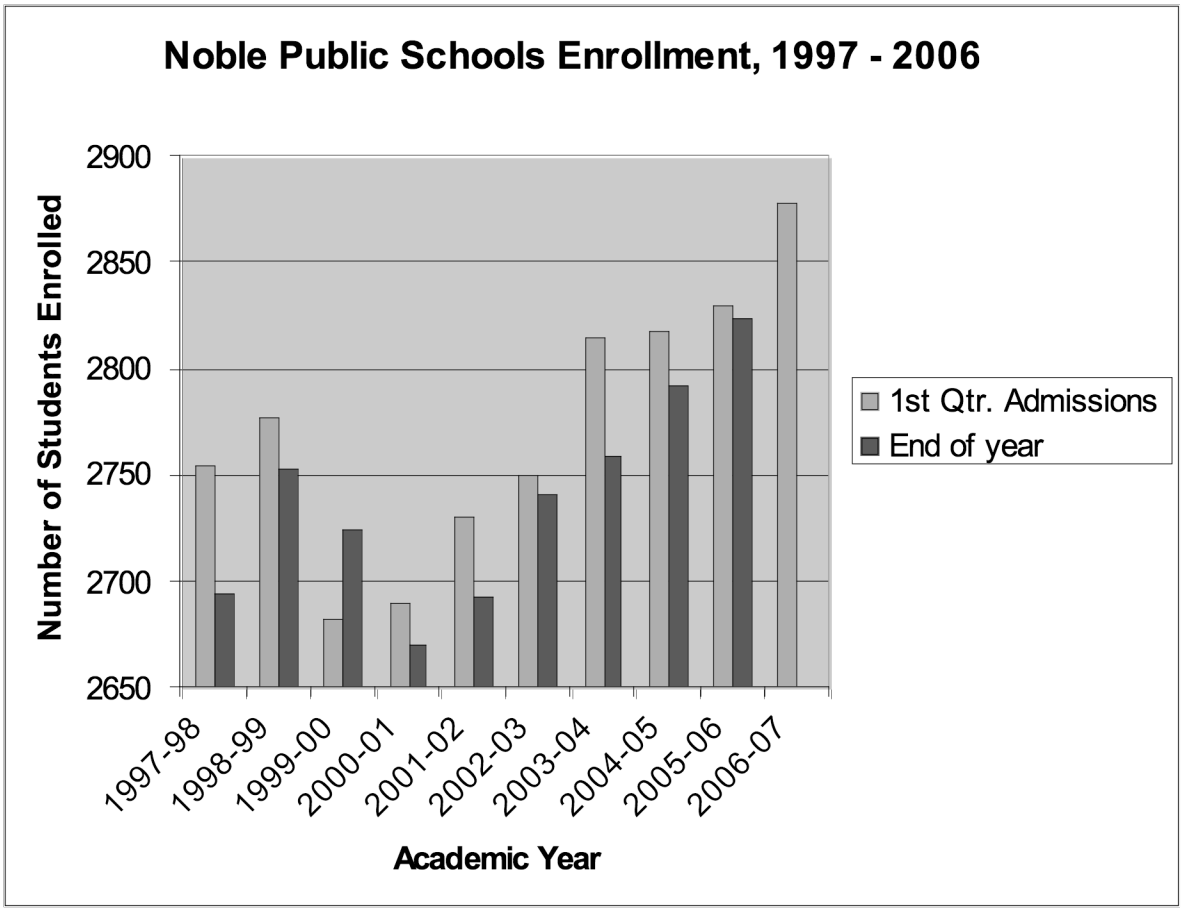
In 2005, the Noble Chamber of Commerce submitted a report for The Oklahoma Community Institute that outlined the city's goals for economic development through Century Community status. Oklahoma's Century Community Program is designed to help communities achieve economic development and requires communities to strategically plan community and business development improvements (www.okcommerce.gov). Economic development is the overreaching goal of these business and community improvements. Among Noble's items with long range plan goals listed in the final report for the Oklahoma Community Institute are culture & recreation and education, both of which directly address community facilities. Goals from the report for The Oklahoma Community Institute are reported in the relevant sections.

Education

The Noble Public Schools district encompasses 140 square miles in area and serves approximately 2,860 students. It employs 195 certified employees and 100 support employees. The district had an operating budget of 15.5 million dollars for the year ending June 30, 2005. Noble's school system serves not only the city of Noble but surrounding areas as well. The Noble Public Schools district has approximately 14,000 residents with 5,260 inhabitants within the Noble City Limits (www.nobleps.com). Enrollment in Noble's public schools has been increasing each year since the 2000-2001 school year. See Figure 5.3.

Each of Noble's schools is currently operating at full capacity. Each of Noble's schools serves a limited age range of children. Table 5.9 gives the attendance, grade levels, and square footage for each of Noble's schools. According to Dr. Greg Kasbaum, the superintendent of Noble Public Schools, all of the schools except the middle school are finding it necessary to utilize modular buildings to meet overflow and auxiliary needs.

Figure 5.3



Source: Noble Public Schools

Table 5.9: Noble Public Schools

Schools	Grades	Students	Square Feet
High School	9-12	842	119,540
Middle School	6-8	633	79,890
Pioneer Intermediate	4-5	442	44,569
Hubbard Elementary	2-3	426	46,914
Katharine I. Daily Elementary School	Pre-K-1	562	42,261

Source: Dr. Greg Kasbaum, Superintendent of Noble Public Schools

The district's schools are all located in the city of Noble and all are within two miles of the other schools. In Noble's subdivision regulations, Section 12-625, "Urban Design Principles" number 1, the neighborhood "is intended as an area principally

for residential use, and of size that can be served by one elementary school." Noble's neighborhoods may indeed be of a size to be served by one elementary school, but Noble's elementary schools are not designed to serve one neighborhood. Instead of neighborhood elementary schools, Noble divides the elementary schools by grade level. In addition the clustering of schools prevents them from serving as neighborhood anchors in the way the subdivision ordinance envisions. On the other hand, the relative schools' clustering allows one to envision a network connecting the schools. (See Table 5.9 and the Connecting Community Places map in the maps section).

Noble Public Schools are funded by property taxes. Table 5.10 shows an expanding tax base for the Noble Public Schools district. Assessed valuation has shown healthy increases over the last decade.

Table 5.10: Noble Public Schools District, Annual Assessed Valuations

Fiscal Year	Net Assessed Valuation	Annual Amount	% Change from Previous Year
1997	25,922,812	1,195,2231	4.8%
1998	27,111,020	1,188,208	4.6%
1999	28,639,796	1,528,776	5.6%
2000	31,573,893	2,934,097	10.3%
2001	33,958,167	2,384,274	7.6%
2002	36,275,108	2,316,941	6.8%
2003	38,954,981	2,679,873	7.4%
2004	41,947,480	2,992,499	7.7%
2005	45,733,839	3,786,359	9.0%
2006	48,834,864	3,101,025	6.8%

Source: Dr. Greg Kasbaum, Superintendent of Noble Public Schools

The City of Noble's goal, as stated in the Final Report for the Oklahoma Community Institute, is to have a nationally recognized education system. Their objectives in the Final Report for The Oklahoma Community Institute are to increase the academic performance index by 7% annually, to reduce drug, alcohol, and tobacco use among students by 5% annually, and to increase parental participation at Noble Public Schools by 10% each year. The Academic Performance Index (API), a rating given under the No Child Left Behind Act, is lower for Noble Public Schools than for surrounding school districts. The API for Noble is 1,232, higher than the state average of 1,180, but lower than all other school districts in Cleveland County, except for the Lexington Schools, at 1,166.

Over 60 Noble Community Survey respondents listed schools among the three things they liked about Noble, ranking second on the Top 10 List of three things respondents like about Noble. The Noble Public Schools also ranked highest among respondents living within and living outside of Noble in a list of items pertaining to respondents' quality of life. On a scale of importance, that schools were considered "extremely important" to their quality of life was the most frequent response. Issues related to schools, however, also showed up on the Top 10 List of one thing respondents would like to change about Noble, ranking "Schools" fifth with 23 "votes." Specifically, respondents noted overcrowded classrooms, outdated facilities, and lack of funds as concerns needing attention.

Educational attainment among adults in Noble is increasing. From 1990 to 2000, Noble's population became more educated at both the high school diploma level and the some college level. More of the adults had at least finished high school, but the percent of residents with a college degree remained stable. When compared to the entire state in 2000, Noble's educational attainment profile shows a higher percent with only a high school diploma and a lower percent with a college degree. (Table 5.11).

Table 5.11 Educational Attainment, 1990 and 2000, as a Percent of Population 25 Years and Older

Educational Attainment	1990		2000	
	Noble	Oklahoma	Noble	Oklahoma
No High School Diploma	28.6	25.4	17.6	19.4
High School Diploma	31.4	30.5	36.2	31.5
Some College	23.0	26.3	29.5	28.8
College Degree	17.1	17.8	16.7	20.3

Source: US Census 1990, 2000.

Police Department

Major Kris Albertson of the Noble Police Department graciously communicated information regarding the operation and needs of the Noble Police Department. The City of Noble Police Department operates 24 hours per day, 7 days per week. When fully staffed, the Noble Police Department employs 11 full-time certified officers, 4 full-time civilian dispatchers and 1 or 2 part-time civilian dispatchers. As of December 6, 2006, the department is operating with 8 officers, 3 full-time dispatchers, and 3 part-time dispatchers. The City of Noble also employs one part-time animal control officer.

The dispatch center handles all emergency and non-emergency calls for police, fire, and EMS services within the city limits of Noble, and also dispatches for Slaughterville and Cedar Country Volunteer Fire Departments. The dispatch center also handles records requests, data entry, all walk-in traffic to the police department,

and switchboard operator/receptionist responsibilities. In addition to the calls for service shown in Table 5.12, the dispatch center handles approximately 250 9-1-1 calls per month.

Table 5.12: Calls for Police and Fire/EMS Service

	2006 (January thru November)	2005	2004
All Calls	10,586	10,750	6,396
Police Calls	90.5%	91.4%	86.4%
Fire/EMS Calls	9.5%	8.6%	13.6%

Source: Major Kris Albertson, Noble Police Department

The building that houses the Police Department is currently adequate and the department intends to focus on maintenance, as well as completing repairs to the roof and the heating and cooling system. Three jail cells in the current building do not meet code specifications and are not in use. The Animal Control facility has recently been expanded to include an indoor cat room and an outdoor dog run. The department expressed that the animal control facility will need to be replaced and/or remodeled within 10-15 years.

85% of Noble Community Survey respondents expressed satisfaction with police services in the city of Noble.

Table 5.13 shows the number of reports filed with the police department, including both reports of crimes and arrest reports. Table 5.14 shows the specific crime statistics for the city of Noble.

Table 5.13: Police Reports Filed

	2006	2005	2004
Reports Taken	655	719	651
Collision Reports	74	122	91
Fatality	0	0	1

Source: Major Kris Albertson, Noble Police Department

The department plans to resume normal staffing levels as soon as possible. The police department intends to increase the number of patrol/traffic officers by three in order to provide better coverage for the community and allow for a proactive approach to law enforcement. The department also expresses a need to create a detective position in the department to investigate cases that have a high number of solvability factors, and a narcotics investigation and enforcement officer. The Police Department anticipates the need for a full-time clerk, a full-time animal control

officer, and the need to staff two civilian dispatchers per shift to effectively handle ever-increasing call volume.

Table 5.14: Specific Crime Statistics (According to UCR Reports)

Type of Crime	2006	2005	2004
Drug Arrests	62	69	100
Homicide	0	0	0
Assaults	76	76	60
Burglary	59	60	63
Forgery/Fraud/Embezzlement	39	51	50
Larceny	65	73	80
Sexual Assault	5	11	8
Stolen Property	16	17	17
Threats/Intimidation	11	29	17
Vandalism	52	42	46
Weapons Violations	12	5	11
DUI	51	34	49
Public Intoxication	14	23	22
Liquor Law Violations	10	3	11
Runaway	25	29	15

Source: Major Kris Albertson, Noble Police Department

As Noble grows, the Police Department anticipates modification or relocation in order to maintain the existing level of service. Needed improvements listed by the Noble Police Department are an interview room, a larger property custody storage facility, a larger records room, office space, and additional parking. Equipment needs are an ongoing concern for the department. Needs listed by the department are police vehicles and associated lighting, cages, radios, and cameras. The department hopes to re-establish a take-home car program for its officers and acknowledges the need to increase their fleet in order to maintain a sufficient number of modern, safe vehicles.

Fire Department

Noble's fire department has a service area that is bound by Post Oak and Etowah on the North, Cemetery Road on the South, the Canadian River on the West, and 84th Street on the East. The fire department has three fire engines, one of which is a 2004 model; three brush trucks for wildfires; two tankers for water supply; and two ambulances. The water/hydrant system has been expanded within the last five years to extend service to new development. The pressure of the hydrants is tested yearly and is maintained by the City of Noble. Noble's fire department employs twelve full-time firefighters and one fire chief, as well as ten volunteer firefighters. Noble's fire department is the sole ambulance service provider for Noble. Ambulance coverage is the same area as the fire service area, but extended east to

Pottawotamie County Line, and south to Slaughterville Road. Noble's ambulance service is rated as an intermediate ambulance service and employs three paramedics with individual protocols.

In order to fully serve the residents of the city of Noble, the fire department plans to add two new ambulances within the next eight months and another tanker during 2007, to replace an out-of-service fire engine, and to repair a ladder truck that was donated to the fire department.

96% of community survey respondents expressed satisfaction with fire protection services in the city of Noble.

Library

Noble's public library is part of the Pioneer Library System, which serves more than 301,000 residents in Cleveland, McClain, and Pottawotamie counties in Oklahoma. The Pioneer Library System is a tax-funded institution and receives approximately 92% of its funding from property taxes in the communities it serves. In 1985 the city of Noble passed a bond election to construct a public library building that was opened in 1986. In December 2006 the city of Noble opened a new and expanded library, which was made possible by a gift left to the library in the will of a Noble resident, Coman Culbert, whose entire estate was bequeathed to the city of Noble's public library. Culbert's gift enabled the public library of Noble to expand to nearly twice its former size.

The Pioneer Library Sytem offers technology training, in-home services, literacy services, interlibrary loan, services specifically for children, teens, and adults, and equipment for people with disabilities.

Social Services

The Oklahoma Department of Human Services opened a branch office in Noble at 1600 N. Main Street. Social services are a vital component of the social infrastructure in Noble. 48% of Noble's residents receive some type of state assistance through the Oklahoma Department of Human Services.

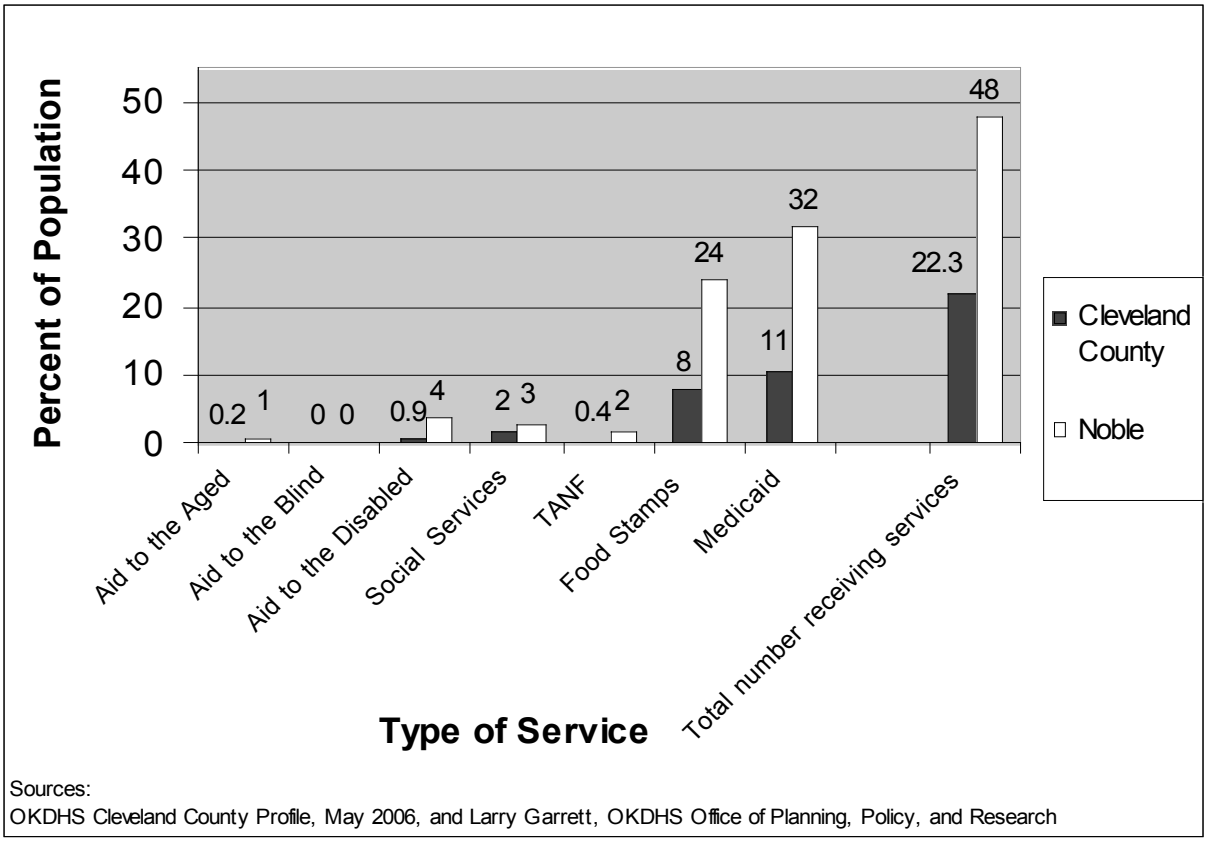
Figure 5.4 shows a comparison of Noble's use of social services as compared to Cleveland County. Noble's population is more heavily dependent on social services than Cleveland County's population as a whole.

Table 5.15 Subsidized Housing for Seniors

	Noble Senior Housing	Southwind
Number of tenants living in these facilities	56	60
Total capacity of the facilities	52	60
All tenants receive a subsidized rate of rent	Yes	Yes

Source: Oklahoma Property Management

Figure 5.4 Comparison of Social Service Use in Noble to Cleveland County



Sources:
OKDHS Cleveland County Profile, May 2006, and Larry Garrett, OKDHS Office of Planning, Policy, and Research

Health Care Facilities

Access to quality health care is vitally important to a community's maintenance and growth. Drawing good medical facilities and an adequate number of medical professionals to a community increases the community's attractiveness and can help foster growth. Although no hospital is currently located within Noble, Noble is part

of a regional health care system that includes Norman and Oklahoma City. The nearest hospitals to Noble are located in Norman. Hospitals in Norman are very accessible to Noble, and may continue to be adequate to meet the needs of Noble as the population grows and ages. Residents of Noble can travel to hospitals in Norman as quickly as residents in a large city can generally access the hospitals in their own community.

Health care facilities did not present a significant issue in the Noble Community Survey. Medical and pharmacy services ranked only thirteenth and fourteenth, respectively, on a list of sixteen service-related items that Noble community members would like to see more of in Noble. Many respondents get their pharmacy needs met in Noble, while most visit the doctor, dentist, or get other medical needs met outside of Noble. Noble does have several health care and dental clinics to meet the health care needs of its residents:

Discussion

The chapter covered the experience of Noble community members today and looked into what the experience might be or could be over the next twenty years. The key will be how Noble responds to two different issues: current community members' desires and the pressures caused by population growth and demographic change. Through the Noble Community Survey and other public involvement exercises, conducted as part of this comprehensive planning study, community members expressed desires for improved services in certain areas. The study's population projections show the likelihood that Noble faces a growing elderly population at the same time the population as a whole will increase. The aging population will have different needs from the relatively youthful population of Noble's past. The growing population will test the adequacy of Noble's services.

Riparian Areas and Water Bodies are Assets and Areas of Concern
Cross Timbers define the ecoregions to which the city of Noble belongs. Most of Noble's streams and creeks flow into the Canadian River, although a portion of Noble drains northeast into Lake Thunderbird. Both the Canadian River and Lake Thunderbird are considered "impaired" waters and excessive nutrients from run-off are the main culprit. The Canadian River and several of the creeks in Noble are prone to flooding at the 100-year level. The Canadian River is also a "Very High Priority Conservation Landscape" according to the Oklahoma Department of Wildlife. To the extent that future population growth and its associated land development increase Noble's impervious surface area, increased water run-off may worsen surface water quality and flooding. Noble community members expressed support for maintaining the integrity of riparian areas during the second community meeting's land use mapping exercise.

More Parks and Recreational Facilities Desired
Noble community members expressed strong interest, throughout the comprehensively planning study process, in bringing additional park and recreational opportunities to Noble. Community members identified three areas where improvements are desired: more parks, a community center, and more sidewalks.

Under current thinking about park planning, small communities such as Noble are encouraged to have neighborhood parks easily accessible to most residents and at least one community park. Riley Park currently serves Noble's community park needs and Kenneth King Park, when developed, could also meet community park needs. Dane Park, when developed, is more suitable as a neighborhood park, although if connected to Kenneth King Park, it could bolster this latter park as a community park. The significant natural features in both Riley Park and Kenneth King Park pose challenges to developing either one of them as a full-scale community park that provides for active (sports) recreation. Additional neighborhood parks that would serve existing housing in north-central and central Noble would increase Noble's park assets. The expanding population under the Future Growth Scenarios may also seek to be served by neighborhood parks.

The Noble School Administration Building serves as an unofficial community center. While its central location and existing facilities support this unofficial designation, the strong interest Noble residents expressed for a community center, featuring indoor and outdoor recreation and meeting places, indicate that in the long run a stand alone community center complex is desired.

Two Networks Define Noble's Street and Highway System
The analysis of the transportation system showed that two different traffic patterns dominate Noble's streets and highway. The first is based on US 77/Main St as the backbone that connects Noble's neighborhoods to the regional highway system. As a major traffic route, it is also, not surprisingly, Noble's commercial corridor. The second traffic pattern is focused on Noble's schools. Because Noble's schools, even at the elementary level, are divided by grade-level, not neighborhood, each school serves the entire district. The traffic focused on the schools is not as dependent on US 77/Main St., but puts stress on the section line roads. The east-west section line roads, especially Etowah and Maguire, are crucial elements of both the "regional" and the "school" traffic pattern networks.

Community Members Concerned about Walking and Bicycling
Community members' significant concerns for sidewalks, especially as they would enhance safe access to the schools, indicate a desire for multiple ways – or transportation modes – to navigate around Noble. Additional facilities for walking

and bicycling would also meet community members' desires for more recreational opportunities.

Future Expansion of US 77 a Significant Opportunity, But One with Challenges
The Oklahoma Department of Transportation's plans to widen US 77 south of Noble's downtown will be a significant change to Noble's transportation infrastructure, to Noble's connectivity to the region, and to Noble's downtown. Done with careful planning, the highway expansion can enhance Noble in many ways. This careful planning needs to include the effects of the expansion on Noble's traditional downtown area.

Water and Sewer Capacity Adequate for Now, Some Challenges in Long Run
The analysis of water and sewer capacity indicate that the sewer treatment facility has adequate capacity to meet the high 2025 Future Growth Scenario. Water supply appears adequate to meet the low and medium 2025 Future Growth Scenarios, but not the high scenario (4,000 additional people).

Community Members Concerned about Water Service
While community members expressed satisfaction with the city's sewer service, water service problems and consumer dissatisfaction surfaced in the Noble Community Survey and during the community meetings. Concerns varied, with taste, pressure and cost leading the list.

Schools – Loved, Crowded and Expanding
The Noble Public Schools are extremely important to community members' quality of life and second on the Top Ten List of one thing community members like about Noble. Enrollment in the school district is growing. The property tax base upon which the school district depends is also increasing. Still, the schools are crowded, requiring the use of modular buildings to meet overflow needs.

Summary of Community Members Satisfaction with other Municipal Services
Community members expressed satisfaction with police, fire, garbage collection and health services. They requested additional opportunities to recycle household waste. A small number voiced specific complaints with internet service.

Service Delivery and Future Growth Scenarios
As Noble's population grows and ages, the city will either have to maintain and expand existing infrastructure and services or community members will be faced with service decline. Discussions regarding additional park and recreation space, including the desired community center, should take Noble's potential future demographic profile and residential development patterns into account. Police, fire, emergency and health services will also face increasing demands. The school district will be looking to update and expand its facilities too. Water and sewer service will

need to be expanded, perhaps testing the available capacity of existing infrastructure. The roads will experience additional traffic and new demands for walking and bicycling.

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