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INTRODUCTION

During May of 2000, the Catawba County Board of Commissioners received and accepted the *Long Range Facilities Plan-Phase II* that addressed the space needs of three (3) of its major buildings;

- The Justice Center
- The Government Center
- The Mental Health Center

Since that time numerous, pressing fiscal demands, including the construction of a major new Detention Center, have not permitted the County an opportunity to address the space needs and recommendations identified in that study.

A. Justice Center

Although the County considers the Justice Center “site” to include the Detention Center and the land area designated for its future expansion, the Detention Center *was not* part of this study. In the context of this study, the “Justice Center”, when referenced will refer to the Courts facilities and adjacent spaces which *currently* house the following agencies and departments:

- District Court
- Clerk of Court
- Superior Court
- District Attorney
- Sheriff’s Department
- Register of Deeds
- NC Probation & Parole
- Repay
- Family Court
- Communications Center
- Emergency Operations Center (EOC)

In view of the fact that the May 2000 study is already more than eight (8) years old numerous operational and management changes have occurred since that time. Subsequently, the County requested that a new and updated study of the Justice Center’s space needs be developed to address the current as well as 20-year projected space needs of the occupant agencies. And, that recommendations be developed to address the needs identified; i.e. *a space needs assessment that identifies the general requirements for space and how that space might be provided were it decided that a building effort should be undertaken.*

B. Public Safety Facility

In addition to an assessment of the Justice Center’s general space needs, the County is anticipating the development of a new Public Safety facility to include space at a single location for several of its major public safety and emergency response functions; which currently are not collocated but rather occupy space separately within the Justice Center, the Government Center, and the Agriculture Resource Center.

The functions anticipated for inclusion within a new Public Safety facility would include:

- 911/Emergency Communications Center
- Emergency Operations Center (EOC)

- Emergency Services Department
- EMS Administration
- Newton EMS Base
- Newton-Conover Rescue Squad

In this instance, in addition to an assessment of the current and projected space needs for each of these functions, a detailed “facility program” was requested and has been prepared that defines the requirements, space-by-space and area-by-area, for the entire facility, including the provision of corresponding adjacency and site concept diagrams and specific requirements regarding architectural, engineering, communications, and security systems applicable to all or sections of the facility to be built.

The preceding Table of Contents outlines the format and organization of this document. The two primary sections that make up the body of this report include:

Section 1- Justice Center Space Needs Assessment

Section 2- Facility Program for a New County Public Safety Center

The tasks undertaken and the information developed in these two sections are described in detail in the report’s narrative. The Executive Summary, which follows this introduction, provides an abbreviated discussion of the document’s key findings and identified building needs, together with development, phasing and the probable costs associated with the County’s immediate and long-range Justice and Public Safety agency space needs.

EXECUTIVE SUMMARY

JUSTICE CENTER

Upon completion of the assessment activities undertaken to arrive at the findings that follow, summary data was calculated and formatted for each of the major building tenants under the following categories:

Existing Space-is that currently assigned

Current Deficit-is that space that the named agency was determined to be “short of” based upon the number of staff, public customers/clients seen, position and office responsibilities and activities, and records retention and storage requirements.

Future Space-refers to the additional space needed to accommodate future personnel, increased levels of public participation, and similar records retention, equipment, and storage requirements; in most instances for the approximate time period of 2008-2028.

Total Space Need-is the sum of the previous three (3) columns.

*It is important to note that ALL square foot space totals illustrated in the tables that follow are stated as interior building gross square feet which includes all net spaces measured within an assigned agency’s area, **plus** interior walls, common interior circulation, shared spaces; i.e. restrooms, etc.*

In Figure 1, the major agencies that occupy space within the Justice Center are listed along with their current assigned (existing), deficit, future and total 20 year space needs as determined for each during the study.

**Figure 1
Total Space Need Requirements
2008-2028**

Agency	Existing Space	Current Deficit	Future Need	Total Space Need
Clerk of Court	8,523	10,295	6,500	25,318
District Attorney	3,943	3,441	2,074	9,458
District Court	13,400	14,648	29,197	57,245
Register of Deeds	4,912	2,591	416	7,919
Sheriff	15,628	7,493	14,450	37,571
Superior Court	13,400	5,498	11,297	30,195
Totals:	59,806	43,966	63,934	167,706

It is also important to note that the “Total Space Needs” identified for each agency *does* in fact include “Existing Space”. Meaning, that the manner in which an agency’s total 2028 space needs are addressed may take different forms, depending upon the amount of the agency’s existing space that can continue to be used, or the extent to which a given agency may be able to assume additional space within the existing building via renovation, or the vacating of existing space that is currently occupied by others.

The total new space recommended for each of these major tenants was based on various assessments of existing space, the existing building’s capabilities to sustain renovation, the current location of each agency within the building, the total amount of space needed, and the urgency of the need for additional space.

Figure 2 summarizes the total *new* space that is recommended for each agency, as well as the type of space and/or manner in which it would best be provided.

In each instance that “new construction” is recommended an overall building multiplier of 20 percent has been applied that anticipates the additional square footage that would be required to accommodate exterior walls, mechanical spaces, common and required building entrances, fire exits, etc.

**Figure 2
Total New Space & Type of Construction**

Agency	Total New Space	EF	Construction GSF	Type
Clerk of Court	16,795	1.20	20,154	New Construction
District Attorney	5,515	1.00	5,515	Internal Renovation
District Court	43,845	1.20	52,614	New Construction
Register of Deeds	3,007	1.00	3,007	Internal Renovation
Sheriff	21,943	1.20	26,332	New Construction
Superior Court	16,795	1.20	20,154	New Construction
Totals:	107,900		119,254	(New Construction)

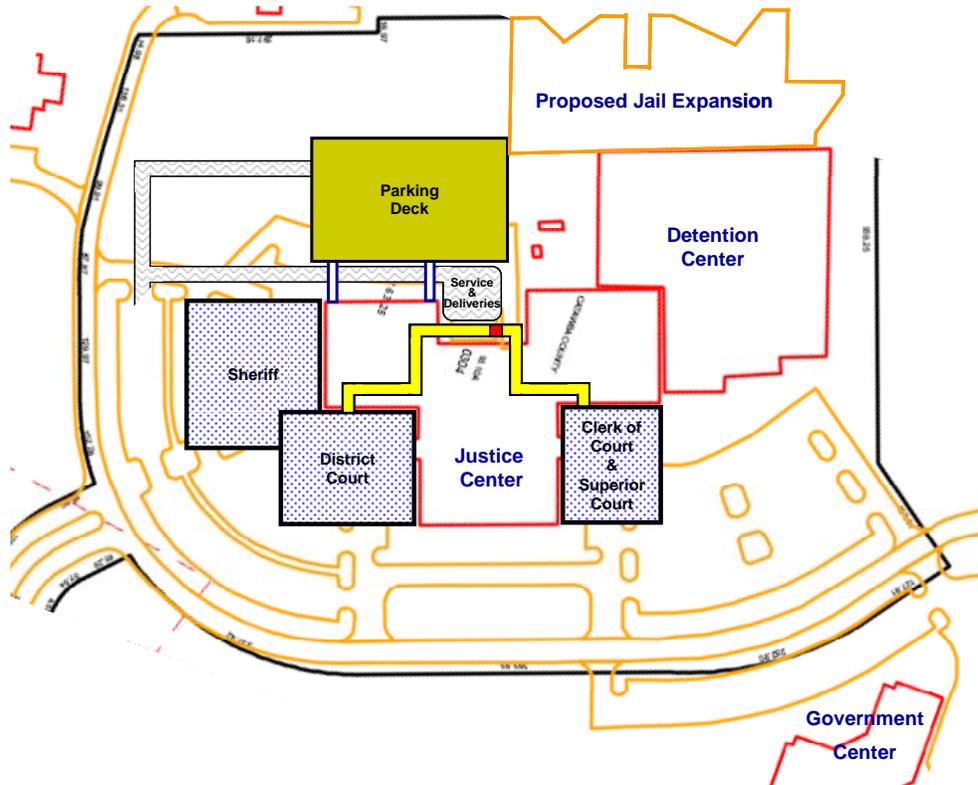
In order for these changes to work and the principal agencies identified be able to remain in the Justice Center through at least 2028, several current occupants will need to be relocated; most likely in the order of the recommendations that follow:

- Relocate the Communications Center and the Emergency Operations Center (EOC) to space in a new County Public Safety Facility.
- Relocate the NC Department of Correction/Probation & Parole offices and the Repay program elsewhere off site; for example the Repay Program may relocate to what is now the District Court Annex.
- Provide as new construction, major building additions adjacent and attached to the current Justice Center for the Clerk of Court, District Court, the Sheriff, and Superior Court.
- Once current occupants have been relocated, provide renovations for the expansion of the District Attorney and the Register of Deeds into space adjacent their existing locations.

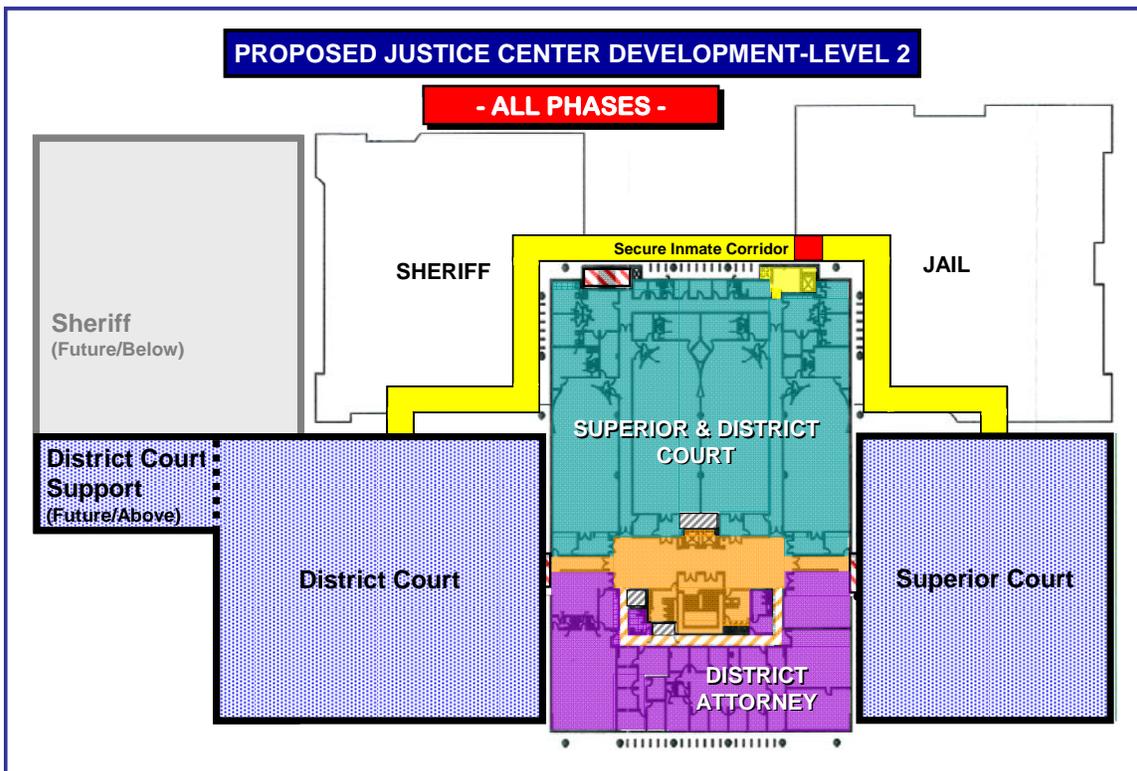
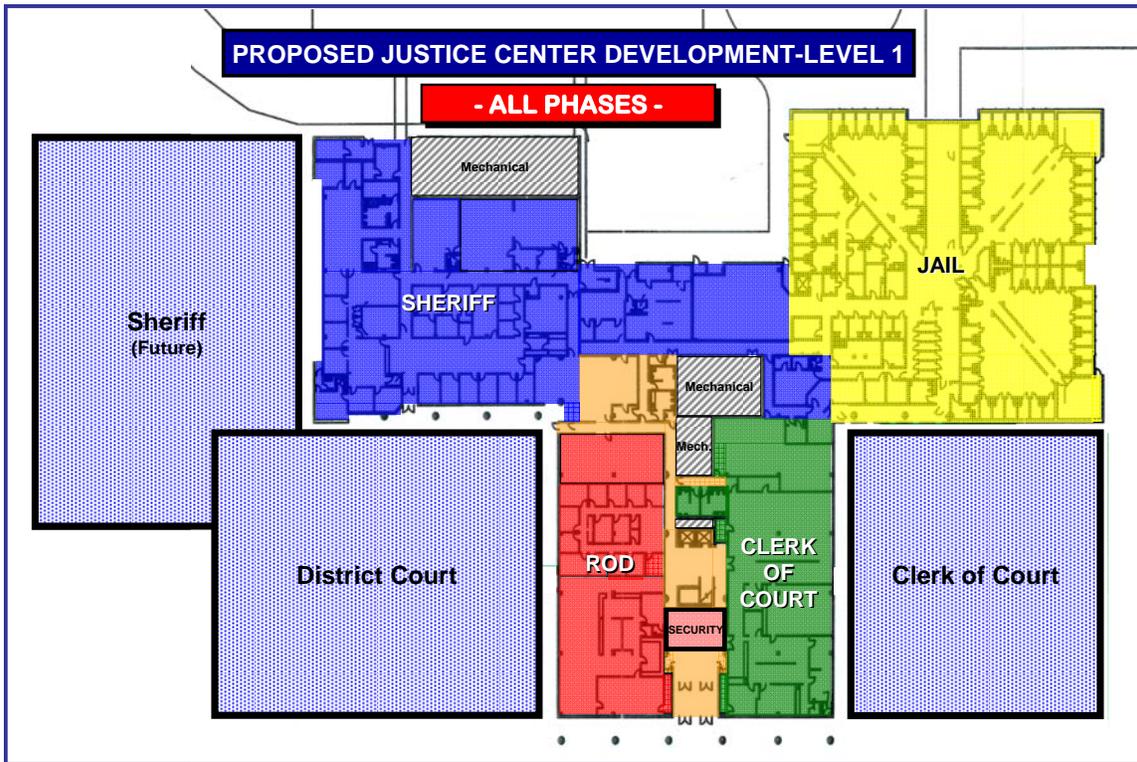
Once the assessment was complete and the needs identified, the “big picture” or long-term impact on the site was considered. The diagram that follows illustrates the location and approximate proportional size of the building additions suggested. The District Court addition and the Clerk of Court/Superior Court addition footprints illustrated would require two-level structures to accommodate the square footage identified.

In addition, the diagram illustrates the suggested location for a staff only, limited access Parking Deck should future needs exceed available or developable surface parking.

Figure 3
Catawba County Justice Center
Proposed Long-Term Site Development Concept-ALL PHASES



The diagrams that follow illustrate the interior renovations that would coincide with the new construction at both Level 1 and Level 2.



Justice Center Development Summary

Throughout the course of this study considerable concern was expressed by various Court officials that additional courtrooms were urgently needed. While many details remain to be discussed prior to the commencement of design, the report's recommendations include the following with regards to additional courtrooms:

District Court

In addition to two (2) current courtrooms, three (3) additional courtrooms at the upper level and one (1) additional large courtroom and a formal Hearing Room (Clerk of Court, Magistrate) would be added at the lower level.

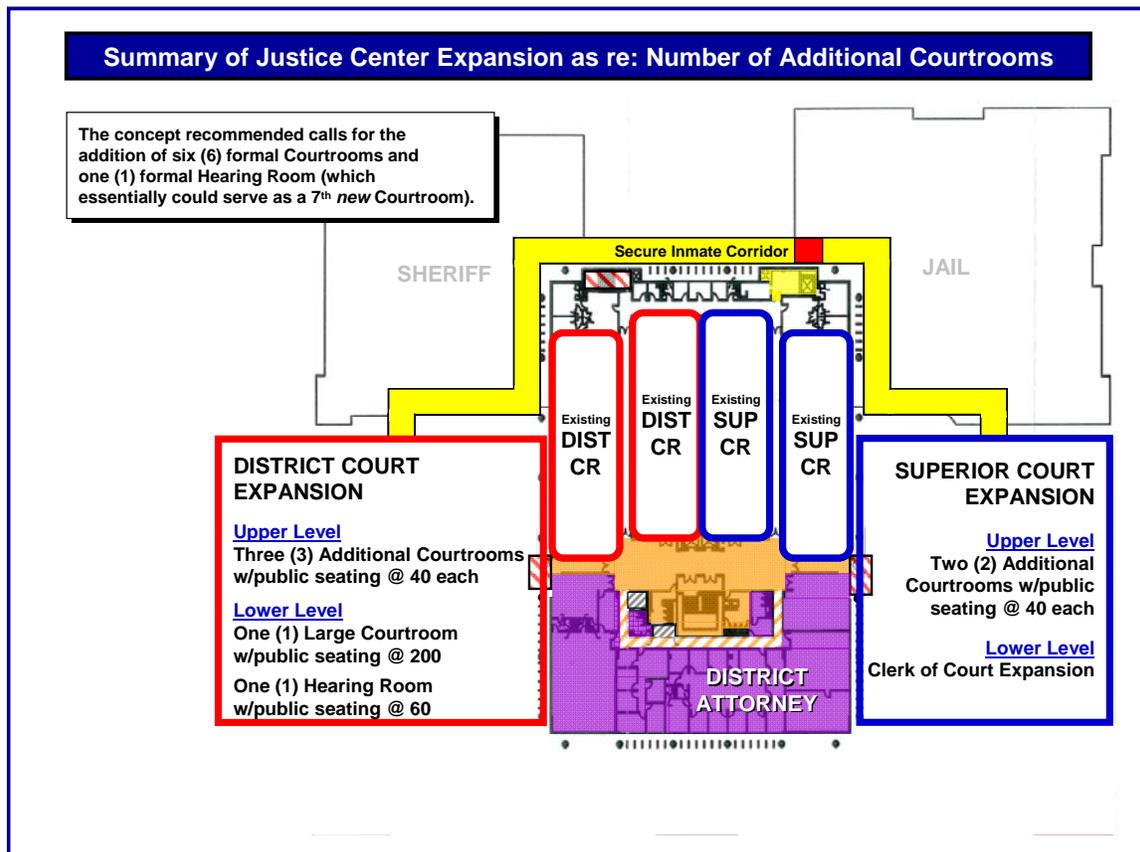
Superior Court

In addition to two (2) current courtrooms, two (2) additional courtrooms would be added.

Of course, as illustrated in the diagrams included in the body of the report, considerable additional support space would be included as well for both District and Superior Court.

In this regard "support space" will include such areas as public waiting/courtroom lobby space, offices, programs space, support staff, meeting and interview rooms, jury assembly, grand jury, and central security control, as well as dedicated lounge/work areas for both attorneys and law enforcement personnel.

The diagram that follows highlights the proposed location, size and number of the additional courtrooms that coincide with the overall space needs recommended.



Public Safety Facility

While a “space needs assessment” identifies current and future “needs” in general terms, a Facility Program document developed for a *new* building involves considerably more detail. Essentially a Facility Program becomes the “statement of requirements for a building project”; in this case, a new County Public Safety Facility.

Separately, the major functions included in the new Public Safety building for which various facilities are described included:

- Emergency Communications
Administration & Support
911 Call Center
- Emergency Operations Center (EOC)
- Emergency Services Department
Emergency Services Administration
Fire-Rescue Services
Veteran’s Services
EMS Administration
Newton EMS Base
- Newton-Conover Rescue Squad

The manner in which the individual and area square footage is calculated, while more detailed than that for a needs assessment, still requires the application of appropriate multipliers to account for internal walls, common areas, building structural systems and mechanical spaces. The results of those calculations are summarized here.

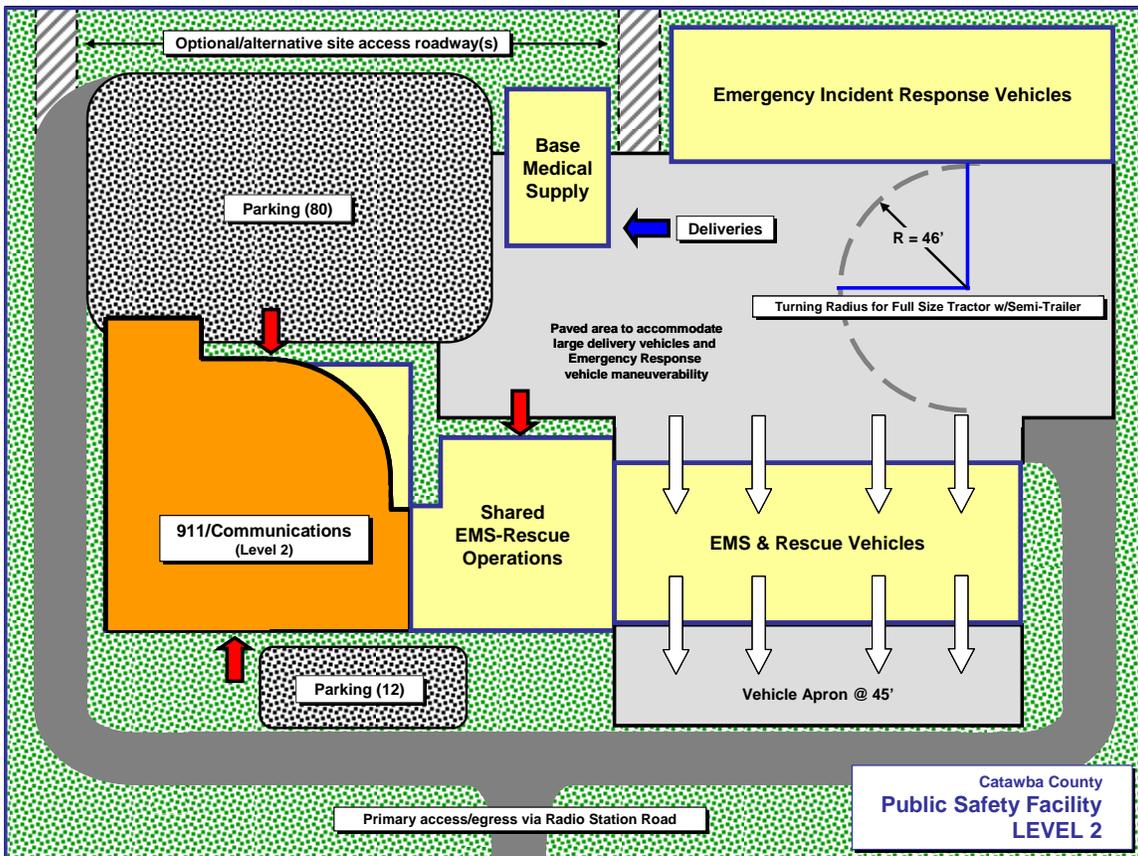
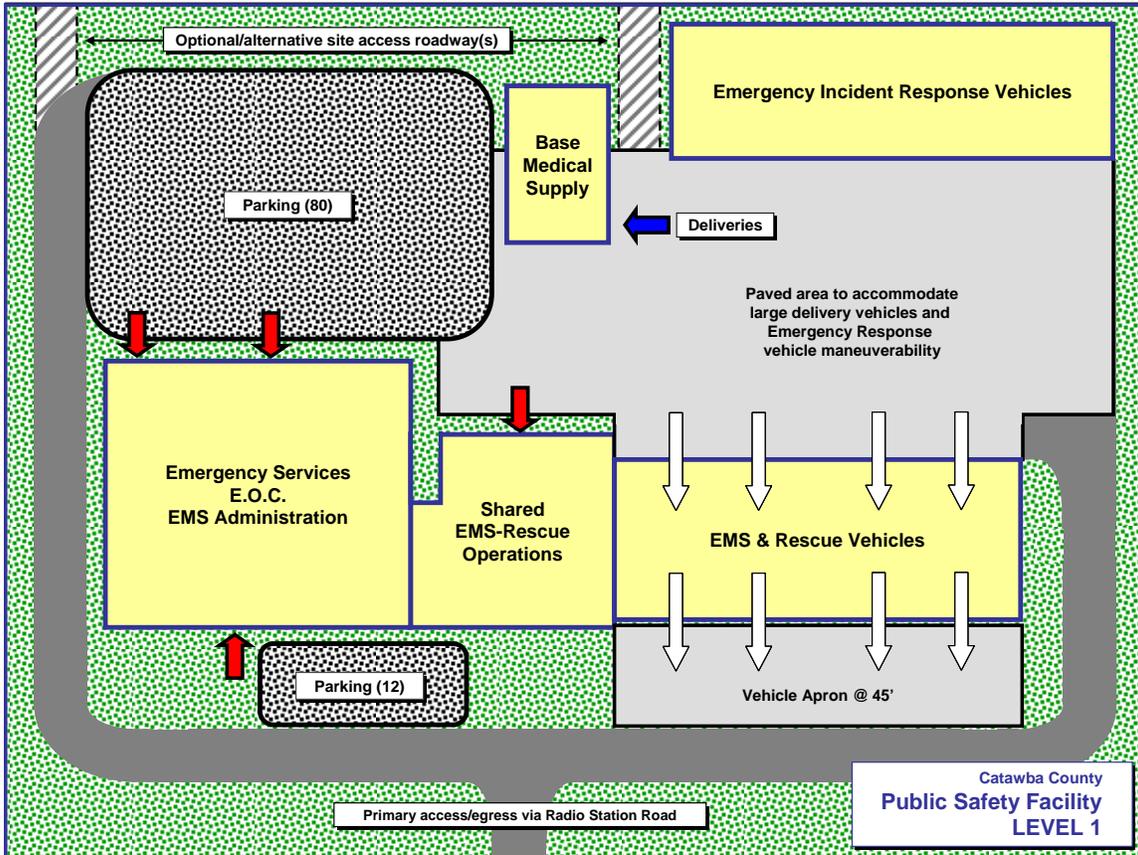
**Figure 7
New County Public Safety Facility**

Building Component	Building Level	Building Area Total Space
Emergency Services & Rescue	First	22,706
Vehicles & Medical Supply	First	28,140
Emergency Communications	Second	10,039
Total Building GSF:		60,885

The lower level of the structure will include the EOC, Emergency Services, EMS Administration, and the EMS-Rescue Base. The Communications Center has been located on the second level; functionally to address security and circulation issues, and reduce interruptions, as well as make for a more design efficient building footprint on the site identified.

It is proposed that the Central Storage & Base Medical Supply facility and an Emergency Incident Response Vehicle Garage be separate but convenient to/from the main building.

Including paved parking for visitors and users of the facilities, appropriate vehicle turn-arounds, emergency vehicle roadways, and with at least nominal consideration of planted and/or appropriate “green” spaces, the total land area required is estimated at 176,760 square feet or, approximately four (4) acres. Site concept diagrams for both building levels follow.



Site & Location

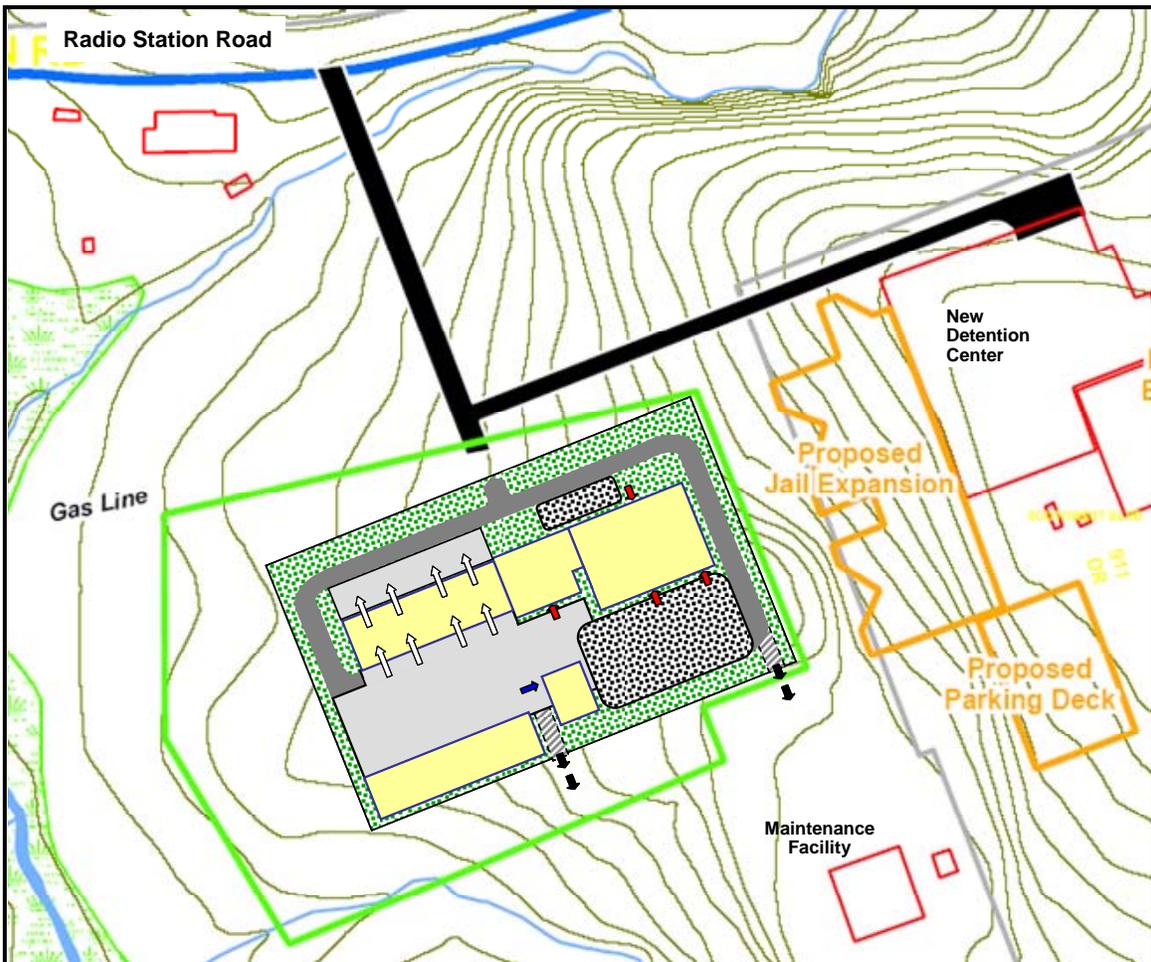
An 8-acre site located behind and to the west of the new Detention Center and north of the County Maintenance Garage has been proposed. It is County owned property and is directly accessible to Radio Station Road via a new roadway that currently services the Detention Center.

The site is heavily wooded and judging from available topographic information slopes to the north and west from the upper portion of the site proximate the Maintenance Garage and Detention Center. The noted grade differential does not appear severe or as though it would hinder development of the site for the Public Safety Facility.

The illustration that follows places the previous site concept and building diagram on the referenced site, thus suggesting building locations and general orientation on the property. It is significant to note that the placement as shown, offers at least two options for an alternate, and very necessary, secondary means of access to and from the site by emergency vehicles; (refer to black arrows).

Of course once the buildings are designed, soil samples taken and analyzed and appropriate civil engineering completed, the configuration of the building(s) on the site may vary from the concept illustrated. It is safe to assume, however, that the suggested site is of adequate size and shape and will have very good access to and from major roadways in the area.

Figure 10
Proposed Public Safety Facility Site Concept



Project Timelines

The table that follows identifies the estimated time frames for the major phases associated with each project. These development phases include:

- Facility Programming
- Architectural & Engineering Design
- Bidding
- Construction

The **Approximate Completion** dates assume sequential development of the various phases and a start date for Phase 1 of July 2008

Figure 11
Estimated Project Schedules by Phase

PHASE 1-IMMEDIATE-DISTRICT COURT EXPANSION	
Facility Programming	3-4 months
A&E Design	13-14 months**
Bidding	4-6 weeks
Construction	12-14 months
PHASE 1-IMMEDIATE-PUBLIC SAFETY FACILITY	
Facility Programming	n/a*
A&E Design	10-11 months**
Bidding	4-6 weeks
Construction	9-10 months
PHASE 2-NEAR TERM-CLERK OF COURT & SUPERIOR COURT EXPANSION	
Facility Programming	2-3 Months
A&E Design	12-13 months**
Bidding	4-6 weeks
Construction	12-14 months
PHASE 3-FUTURE-SHERIFF'S OFFICE EXPANSION & DISTRICT COURT SUPPORT	
Facility Programming	2-3 Months
A&E Design	9-10 months**
Bidding	4-6 weeks
Construction	8-9 months

NOTE: * Section 2 of this report represents the Facility Program for the Public Safety Facility
 ** The time allotted for "A&E Design" includes project advertisement, selection of architect, and negotiation of the contract.

Probable Construction Costs of Phased Development

Three (3) major phases of development are recommended for the construction of new Justice Center building additions and the Public Safety Facility. These phases and their corresponding total building area, unit costs, and total estimated base construction costs are provided in the table that follows. All costs identified are for building construction only and are as of summer 2008; e.g. inflation *has not* been anticipated for future year projects.

Figure 12
New Construction Development by Phase & Probable Costs

PHASE 1-IMMEDIATE-District Court Expansion

Area	Building Level	Area GSF	Unit Cost	Base Const. Cost
District Court	First	23,400	\$ 225	\$ 5,265,000
District Court	Second	23,400	\$ 225	\$ 5,265,000
				\$ 10,530,000

PHASE 1-IMMEDIATE-Public Safety Center

Area	Building Level	Area GSF	Unit Cost	Base Const. Cost
Emergency Services	First	22,706	\$ 170	\$ 3,859,586
Vehicles & Supply	First	28,140	\$ (*)	\$ 2,908,350
Communications Center	Second	10,039	\$ 185	\$ 1,857,141
				\$ 8,625,077

PHASE 2-NEAR TERM-Clerk of Court & Superior Court Expansion

Area	Building Level	Area GSF	Unit Cost	Base Const. Cost
Clerk of Court	First	20,154	\$ 225	\$ 4,534,650
Superior Court	Second	20,154	\$ 225	\$ 4,534,650
				\$ 9,069,300

PHASE 3-FUTURE-Sheriff & District Court Support Expansion

Area	Building Level	Area GSF	Unit Cost	Base Const. Cost
Sheriff	First	26,331	\$ 185	\$ 4,871,235
District Court	Second	5,814	\$ 185	\$ 1,075,590
				\$ 5,946,825

(*) Refer to "NOTE" at bottom of page 52.

Associated Costs

In addition to the costs cited for new construction various other costs associated with the development suggested should be anticipated as well.

Most notable of course will be **renovation costs** within the Justice Center as moves and changes occur. Based on the figures provide in Figure 2, (page 4) the District Attorney and the Register of Deeds are to get 5,515 and 3,007 SF respectively of new renovated space within the existing Justice Center. That is space *in addition to* that which they already occupy. In each case neither office is slated to get "new" space; i.e. newly constructed space, but rather assume additional space adjacent to where they each already are. The space they will assume is currently occupied by others that use it differently than the District Attorney or Register of Deeds will. Renovations will be required. The probable costs of those renovations (without the benefit of a detailed Facility Program) are estimated as follows:

Figure 13
Renovation Costs-A

Agency	Renovation Area/GSF	Unit Cost	Total Cost
District Attorney	5,515	\$ 60	\$ 330,900
Register of Deeds	3,007	\$ 60	\$ 180,420

The second type of renovation (and renovation cost) will occur in areas where the referenced agency will, in addition to getting major new space, also retain use of their existing space. Inevitably, the combination of old and new space will require that at least a portion of the old space be re-worked to coincide effectively with the new. Examples of these types of renovation costs will occur following the development of the new space for the Clerk of Court and for the Sheriff's Office.

Figure 14
Renovation Costs-B

Agency	Existing Space	Portion Renovated	Unit Cost	Total Cost
Clerk of Court	8,523	4,262	\$ 45	\$ 191,768
Sheriff	15,628	7,814	\$ 45	\$ 351,630

Also, there will be **project related costs** pertaining first to the site costs immediately associated with the building to be constructed; then, to facility programming, architectural and engineering fees, site development, materials testing during construction, contingencies, etc.

The following table illustrates a basis for estimating and formatting the construction and project related costs for a major building project. While *it is an example*, the format can be repeated with some variation, for each phase or project undertaken. The example addressed is the recommended Phase 1-District Court Expansion. The major sub-headings are *Construction Costs* and *Project Related Costs* and are described as follows:

Figure 15
Estimated Total Construction & Project Related Costs

Construction Costs	GSF	\$/SF	Est. Cost
Phase 1-District Court Expansion	46,800	\$ 225.00	\$ 10,530,000
Site Development		2%	\$ 210,600
Sub-Total Construction Costs:			\$ 10,740,600
Project Related Costs		Percent/Amt.	Est. Cost
Programming		0.5%	\$ 53,703
Design Fees		7%	\$ 751,842
Furnishings & Equipment		4%	\$ 429,624
Reimbursable Expenses		est. Lump Sum	\$ 30,000
Contingencies		5%	\$ 537,030
Sub-Total Project Related Costs:			\$ 1,802,199
TOTAL PROJECT COST			\$ 12,542,799

A more detailed explanation and breakdown of all costs associated with both new construction and the referenced renovations is provided in the body of the report at Section 3, beginning on page 51.

SECTION 1. JUSTICE CENTER SPACE NEEDS ASSESSMENT

Project Scope

The work plan approved by the County included the following primary tasks:

- Develop an organized inventory of existing agencies and their currently assigned building space
- Meet personally with each major agency head and/or their designated representatives
- Identify & document existing space needs, including deficiencies, of each agency
- Identify and document additional space requirements beyond current; at least through 2008-2020
- Provide a Space Needs Summary matrix for each major Justice Center occupant agency
- Summarize overall Justice Center Space needs
- Identify options for development of additional/expanded space on current Justice Center site
- Assess additional space/buildings that may be suggested for alternate and/or temporary space options; for example the historic (1924) County Courthouse in Newton.
- Prepare Justice Center site plan concept to illustrate recommendations
- Meet with County to present information and materials developed to date;
- Prepare estimate of probable development, construction, and project costs based on the approved building concept and site plan

Methodology

The work on this study took place between January and May of 2008. The information collected and developed during the study process and assembled for this report involved a variety of activities and numerous sources. The most predominant of which included;

- Site visits
- Building assessments
- Operations audits
- Personal interviews
- Client/work unit information
- Construction & architectural drawings
- Physical measurements
- Consultant data base comparisons

Space Calculations

In North Carolina there are currently no published or otherwise provided uniform space standards for local government buildings. In some instances individual municipalities and counties have developed minimum requirements for various types of spaces commonly required within the jurisdiction; in others there are none whatsoever.

At the State level several agencies will provide assistance to a limited degree;

- The Administrative Office of the Courts in Raleigh does provide some general guidelines regarding Courtroom and Court Support activity space

Currently, the most prominent guidelines available with regards to Court facilities are:

- *The Planning & Design Guide for Court Facilities*, published by the National Center for State Courts

Ultimately, there is no single formula for calculating square footage requirements for a given function, department, agency, or building. Every jurisdiction is different. While operational guidelines and existing local and State laws dictate the requirements and services that must be addressed and/or provided, little regard is given to specific space requirements.

Therefore the methods utilized to calculate both the *Current Deficit* and *Future Space Needs* were the consultant's. Subjective, yes; however, by no means arbitrary. The specific information and methods used included:

- Observation of work activities in progress and a personal audit of existing Justice Center and related facilities identified for study, including all accessible internal spaces.
- Physical measurements of individual spaces and activity areas for assessment, comparison, and determination of options and space standards wherever applicable.
- Application of space requirements suggested by the National Center for State Courts for judicial and court/courtroom related spaces.
- The consultant's personal experience in having evaluated the functional requirements and corresponding office/work space requirements of over 600 local government buildings and the resultant data base acquired during same.

The essential concern should be and was the identification of the functional and service utilization requirements of the spaces studied. Examples of several commonly applied space "standards" used for planning purposes are:

- Formal conference room @ 25 net square feet /person
- Typical Classroom @ 25-30 net square feet/person
- Minimum for enclosed private office @ 100 net square feet
- Open work space @ no less than 80 net square feet/person

Finally, it is important to recognize that the numbers and areas identified are based on a *Needs Assessment* level of study.

Current Space

The following table identifies the usable square footage currently occupied by each of the major agencies located in the Justice Center. In the majority of cases, the original building's construction drawings were used to obtain "take-offs" of the interior area square footage. Where as-built drawings of building modifications were not available, physical measurements were taken.

The number to the right of each agency designation is the current interior building *gross square feet* which includes all *net* spaces measured within an assigned agency's area, *including* interior walls, common interior circulation, and all shared spaces.

Figure 16
Currently Assigned Space of Existing Justice Center Agencies

Clerk of Court	8,523	Register	4,912
District Attorney	3,943	Sheriff	15,628
District Court	13,400	Superior	13,400
Total Existing Space Assigned:			59,806

Current Deficit

This section addresses current conditions and issues regarding existing spaces that effect service delivery and/or efficiency of operations, not the least of which includes existing space deficits.

The table that follows includes observations regarding the conditions that were found to exist during the audits of each agency's current assigned space within the Justice Center.

NOTE: The emphasis of this area of assessment is **space needs**. Specific building code issues or structural, electrical, mechanical and plumbing systems *were not* evaluated as part of this process. In cases where observations relative these areas of concern were made by the consultant during the course of the study, they were noted.

Figure 17
Existing Conditions-Justice Center

Agency	Current Space	Conditions Found
District Court	13,400	<ul style="list-style-type: none"> ▪ The most significant space needs among the Justice Center's current occupant agencies is District Court ▪ Current courtrooms, originally built in 1980, are no longer adequate to accommodate the demand brought on by ever increasing justice system caseloads ▪ Space to accommodate the numerous programs and variously named responsibilities statutorily assigned to District Court is desperately needed ▪ There is not an inadequate number of private attorney/client meeting rooms ▪ There is no designated waiting area for either attorney's or law enforcement personnel ▪ Public waiting areas are not large enough to accommodate the number of individuals scheduled for court ▪ Dual Hickory-Newton Court locations are inefficient both in terms of time and cost
Clerk of Court	8,523	<ul style="list-style-type: none"> ▪ Overall space generally is <i>very</i> crowded for the number of State personnel assigned ▪ Public access and circulation is inefficient ▪ Existing space offers little in terms of secure work space for employees ▪ Individual, open, employee workstations are inadequate; w/extent of crowding potentially hazardous ▪ Adequate photo copy, employee work areas, separate from public access spaces are needed ▪ The work area which includes public access now should not be accessible to the public ▪ Additional individual offices are needed for employees who deal regularly with the public regarding personal financial and/or estate issues

Agency	Current Space	Conditions Found
Clerk of Court-Continued		<ul style="list-style-type: none"> ▪ The evidence storage room is too small ▪ Current space lacks adequate storage areas for paper files that must remain accessible to employees ▪ The area that is publicly accessible is too small for the number of people visiting and the records stored and available within ▪ Dual Hickory-Newton Court locations are inefficient both in terms of time and cost
Superior Court	13,400	<ul style="list-style-type: none"> ▪ Access to Judge's offices and related support areas is not secure ▪ Circulation is very poor with regards to inmate, Judge, attorney, and visitor "cross-traffic" ▪ Additional private attorney/client meeting space is needed ▪ Grand Jury witnesses should be provided with a separate, secure waiting area ▪ Grand Jury Room/area should have a secure entry vestibule and adjacent Bailiff's work station to control and monitor access
District Attorney	3,943	<ul style="list-style-type: none"> ▪ Public reception/waiting area is much too small to accommodate number of visitors who must now line up in the hallway ▪ A separate area for public visitors to complete paperwork is needed ▪ Private interview rooms convenient to public reception are needed ▪ Acoustics in the internal work areas adjacent to Reception are poor ▪ Additional secure space(s) are needed within for evidence, computer server, equipment, etc. ▪ Inadequate number of private offices for the number of professional personnel who must use the space ▪ Storage throughout is inadequate ▪ Available "Victim/Witness" space does not comply with statutory requirements ▪ Addition of internal restroom would benefit visiting victims, witnesses and staff ▪ It is doubtful secondary exit available is compliant with existing Life Safety codes ▪ Additional unassigned meeting space is needed within the office
Sheriff's Office	15,628	<ul style="list-style-type: none"> ▪ Current area lacks staff support and training space ▪ Secure evidence storage space is inadequate ▪ Administrative area adjacent front counter is crowded for assigned employees ▪ Additional common and easily accessed work space is needed for administrative activities

Figure 18
Existing Space Deficit

Clerk of Court	10,295	Register of Deeds	2,591
District Attorney	3,441	Sheriff	7,493
District Court	14,648	Superior Court	5,498
Total Identified Space Deficit:		43,966	

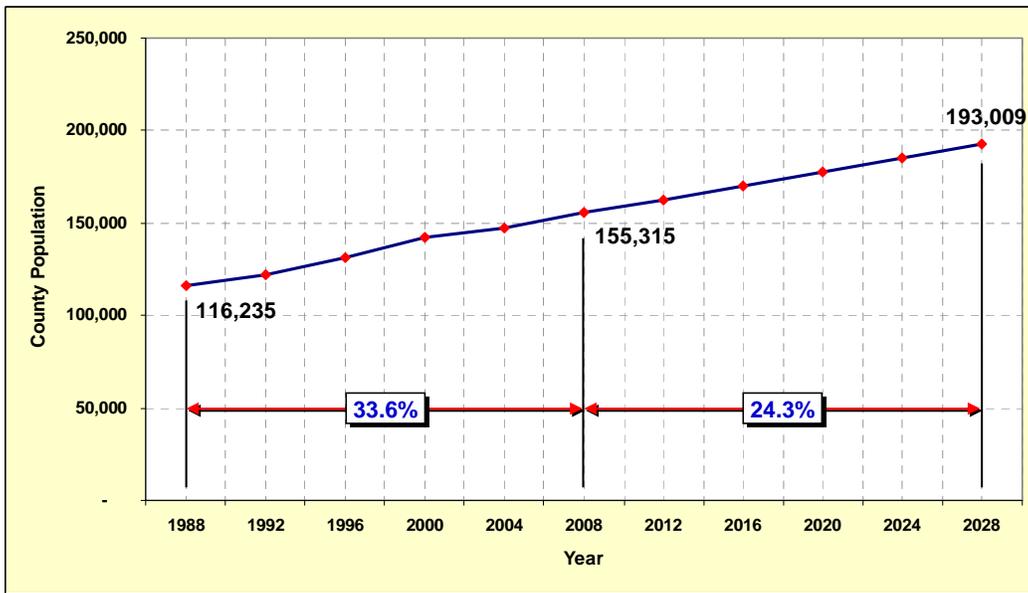
Future Space Needs

Following the calculation of current space deficits, further study was undertaken to identify the additional future space requirements that might be anticipated. In this case “future” encompassed the period of 2008-2028. The principal factors considered were anticipated workloads that were expected to coincide with the County’s projected population increases.

Additional information reviewed included the resources of the North Carolina Office of Budget & Management, the Administrative Office of the Courts, and the North Carolina State Bureau of Investigation. Of course staff interviews with department heads, unit supervisors and support personnel, in conjunction with assessments of annual and current workload information, was the primary source of the projected space needs eventually identified.

As stated, the significant “driver” of future workload, and thus space needs, will be the projected population growth of the County. The following table identifies the State of North Carolina’s Office of Budget and Management’s documented past and projected growth for Catawba County for the years 1988-2028.

Figure 19
Experienced & Projected County Population
1988-2028



This current data indicates that the County’s population growth during 1988-2008 was almost 34 percent. Likewise, for the *next* 20 years (2008-2028), the State has projected an increase of an additional 24.3 percent; or approximately 37,700 people.

It is not uncommon to find that the State must adjust County projections *upwards* following the 10-year U.S. census, reflective of the fact that the previous ten years of projections offered by the State were more conservative than the growth experienced. It is quite possible then that the County’s increase in population by 2028 could be closer to 28-30 percent versus the 24.3 percent currently projected.

With regards to space needs, the additional amounts required by then (2028) will be what are necessary, *in addition to* the previously identified “current” and “deficit” space, to accommodate year 2028 needs.

Current Space + Current Deficit + Additional Future Need = 2028 Space Needs

The table that follows identifies each of these category totals for the agencies studied. It is important to note that ALL square foot space totals illustrated in the tables that follow are stated as interior building *gross square feet* which includes all *net* spaces measured within an assigned agency’s area, *including* interior walls, common interior circulation, and shared spaces such as restrooms.

**Figure 20
Justice Center Agency Space Needs Summary**

Agency	Existing Space	Current Deficit	Future Need	Total 2028 Space Need
Clerk of Court	8,523	10,295	6,500	25,318
District Attorney	3,943	3,441	2,074	9,458
District Court	13,400	14,648	29,197	57,245
Register of Deeds	4,912	2,591	416	7,919
Sheriff	15,628	7,493	14,450	37,571
Superior Court	13,400	5,498	11,297	30,195
Totals:	59,806	43,966	63,934	167,706

Continued Use of Existing Space

It is also important to note that the “Total 2028 Space Need” identified above for each agency *does* in fact include “Existing Space”. Meaning, that the manner in which an agency’s total 2028 space needs are addressed may take different forms, depending upon the amount of the agency’s existing space that can continue to be used, or the extent to which a given agency may be able to assume additional space within the existing building via renovation, or vacating existing space that is currently occupied.

The total *new* space recommended for each of these major tenants was based on various assessments of existing space, the existing building’s capabilities to sustain renovation, the current location of each agency within the building, the total amount of space needed, as well as the urgency of the need for additional space.

Figure 21 summarizes the total *new* space that is recommended for each agency, as well as the type of space and/or manner in which it would best be provided. In each instance that “new construction” is recommended an overall building multiplier of 20 percent has been applied that anticipates the additional square footage that would be required to accommodate exterior walls, mechanical spaces, common and required building entrances, fire exits, etc.

Figure 21
Total Space that needs to be built by 2028

Agency	Total New Space	EF	Construction GSF	Type
Clerk of Court	16,795	1.20	20,154	New Construction
District Attorney	5,515	1.00	5,515	Internal Renovation
District Court	43,845	1.20	52,614	New Construction
Register of Deeds	3,007	1.00	3,007	Internal Renovation
Sheriff	21,943	1.20	26,332	New Construction
Superior Court	16,795	1.20	20,154	New Construction
Totals:	107,900		119,254	(New Construction)

Briefly then, to accommodate the new construction and building renovations originally identified in Figure 14 (page 13) the following will need to occur:

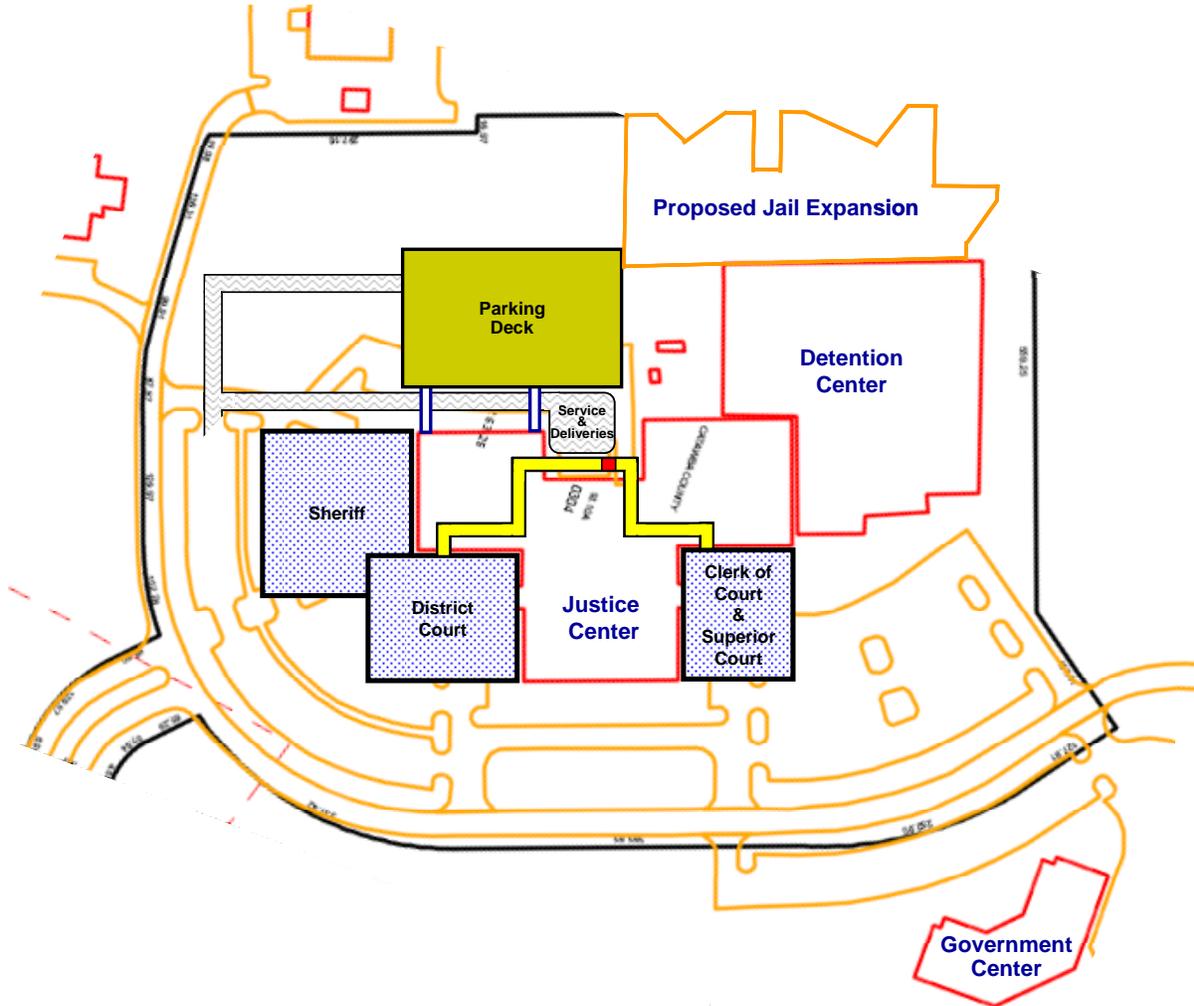
- Relocate the Communications Center and the Emergency Operations Center (EOC) to space in a new County Public Safety Facility.
- Relocate the NC Department of Correction/Probation & Parole offices and the Repay program elsewhere off site; for example the Repay Program may relocate to what is now the District Court Annex.
- Provide as new construction, building additions adjacent and attached to the current Justice Center for the Clerk of Court, District Court, the Sheriff, and Superior Court.
- Once current occupants of the Justice Center have been relocated, provide renovation and expansion into the areas vacated for the District Attorney and the Register of Deeds as expansion space, adjacent their existing locations.

Site Development Concept

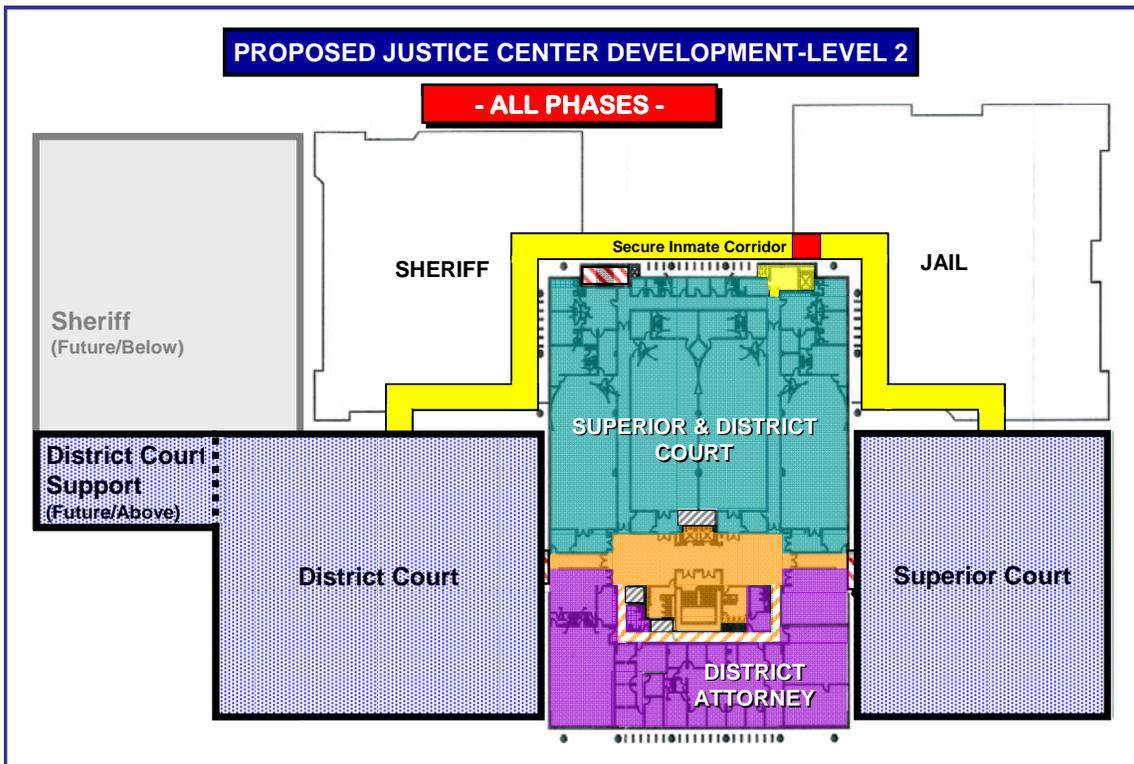
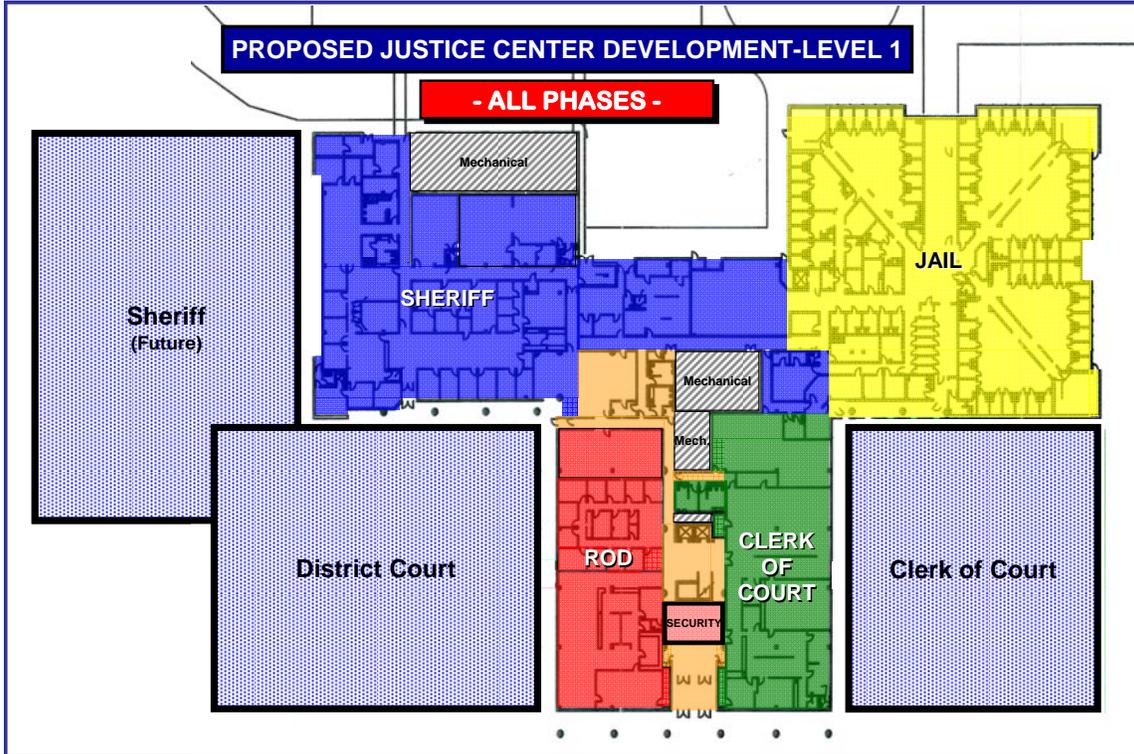
The diagram that follows illustrates the location and approximate proportional size of the building additions suggested. The District Court addition and the Clerk of Court/Superior Court addition footprints illustrated would require two-level structures to accommodate the total square footage identified.

In addition, the diagram illustrates the suggested location for a staff only, limited access Parking Deck should future needs exceed available or developable surface parking.

Figure 22
Proposed Justice Center Site Development Concept

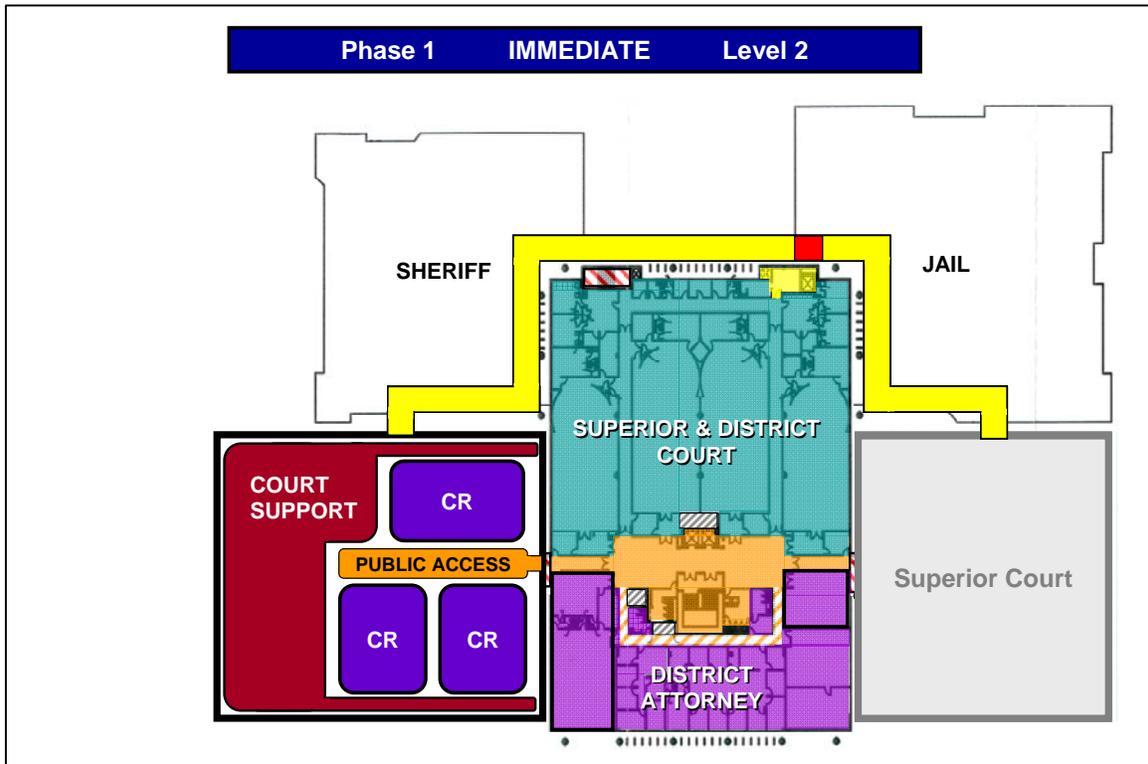
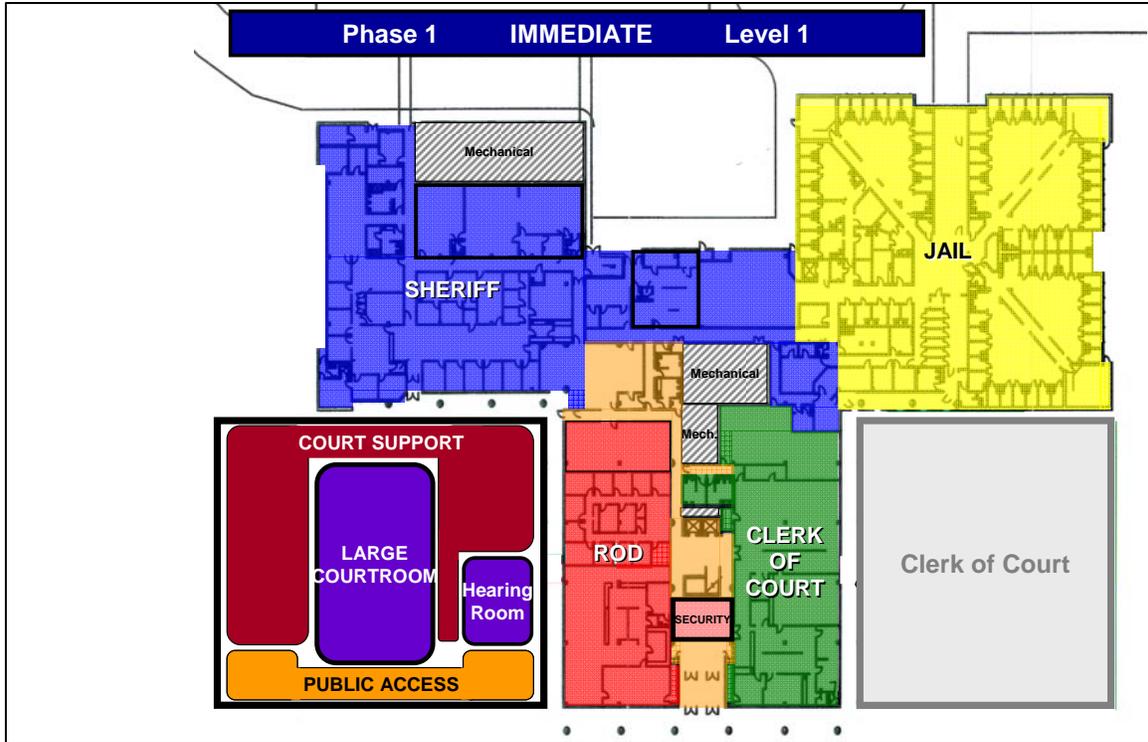


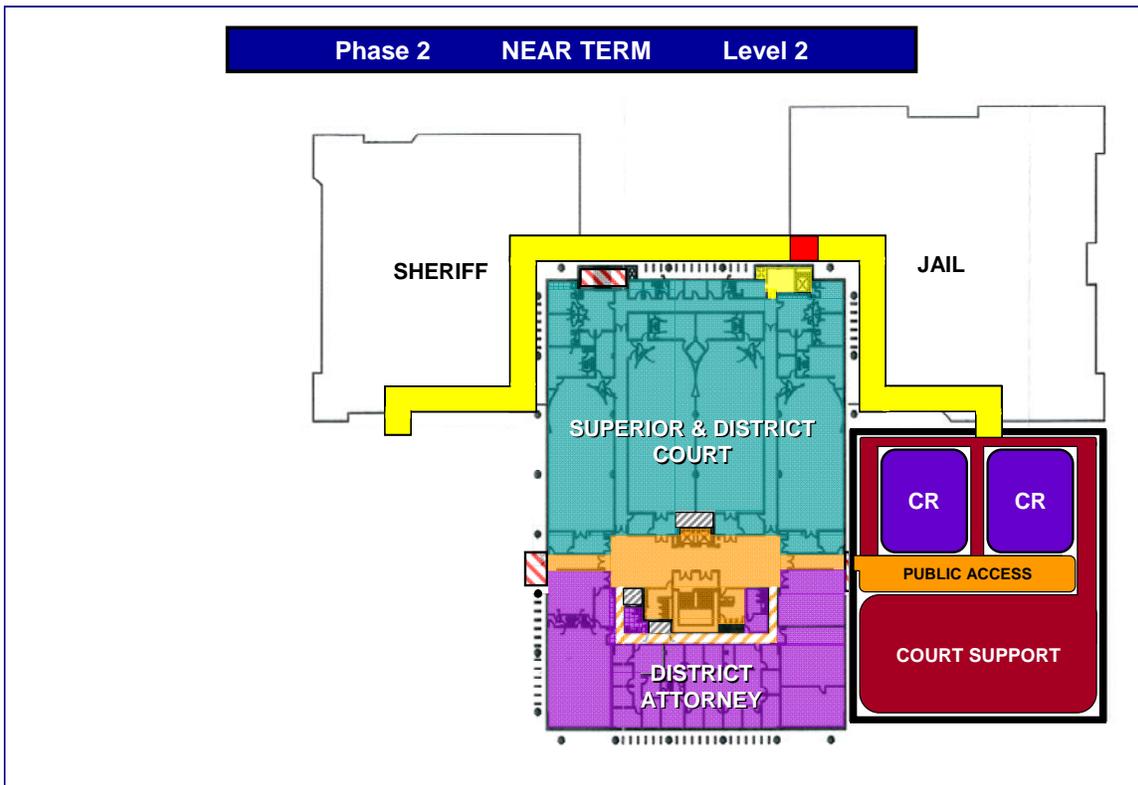
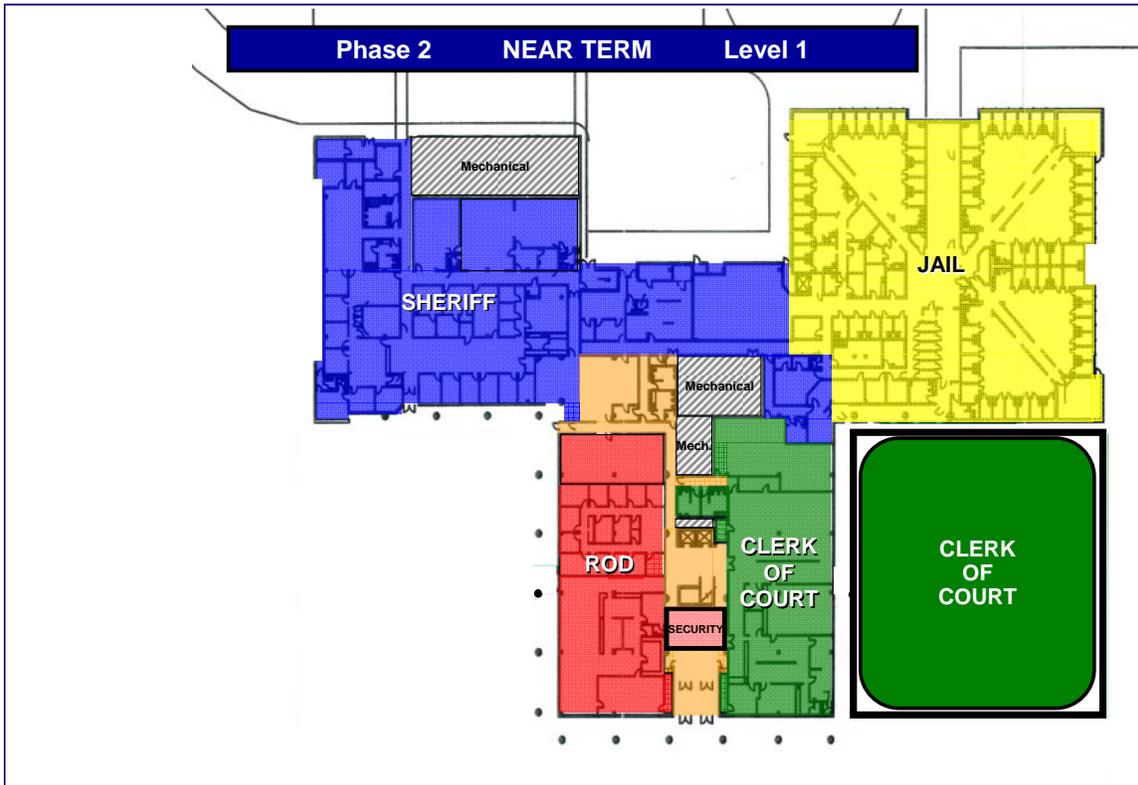
The diagrams that follow illustrate the interior renovations that would coincide with the new construction at both Level 1 and Level 2.

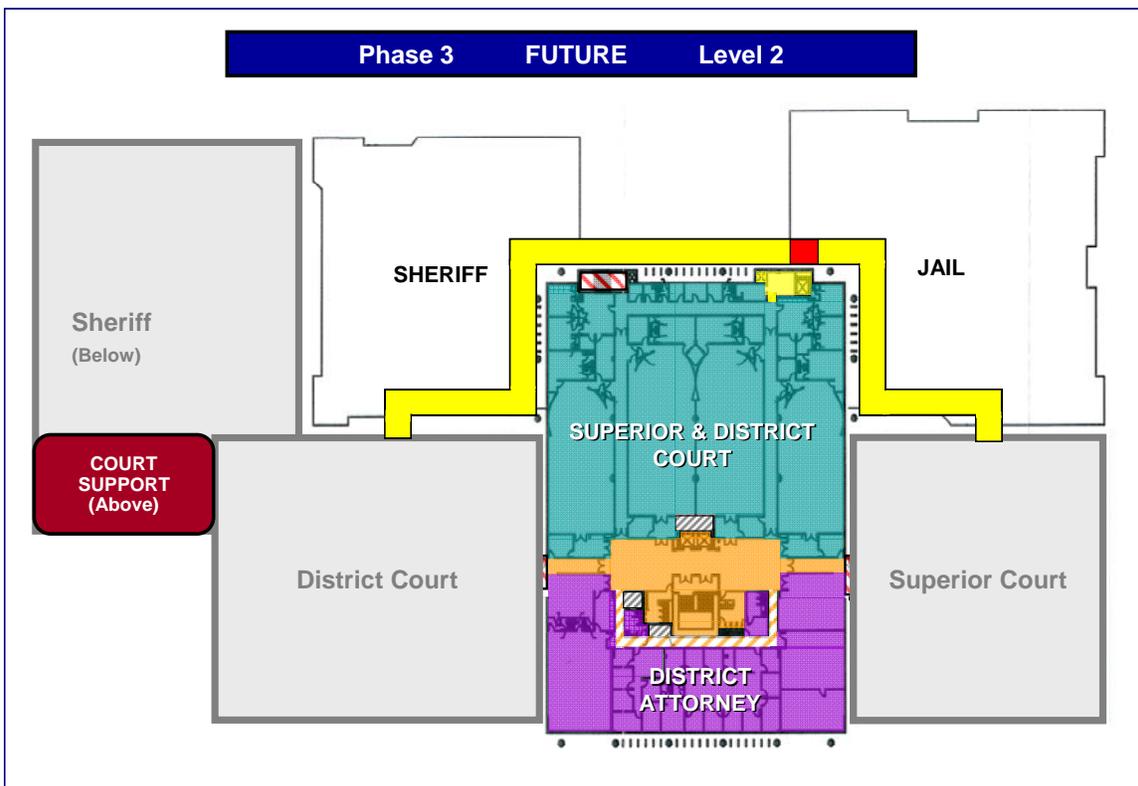
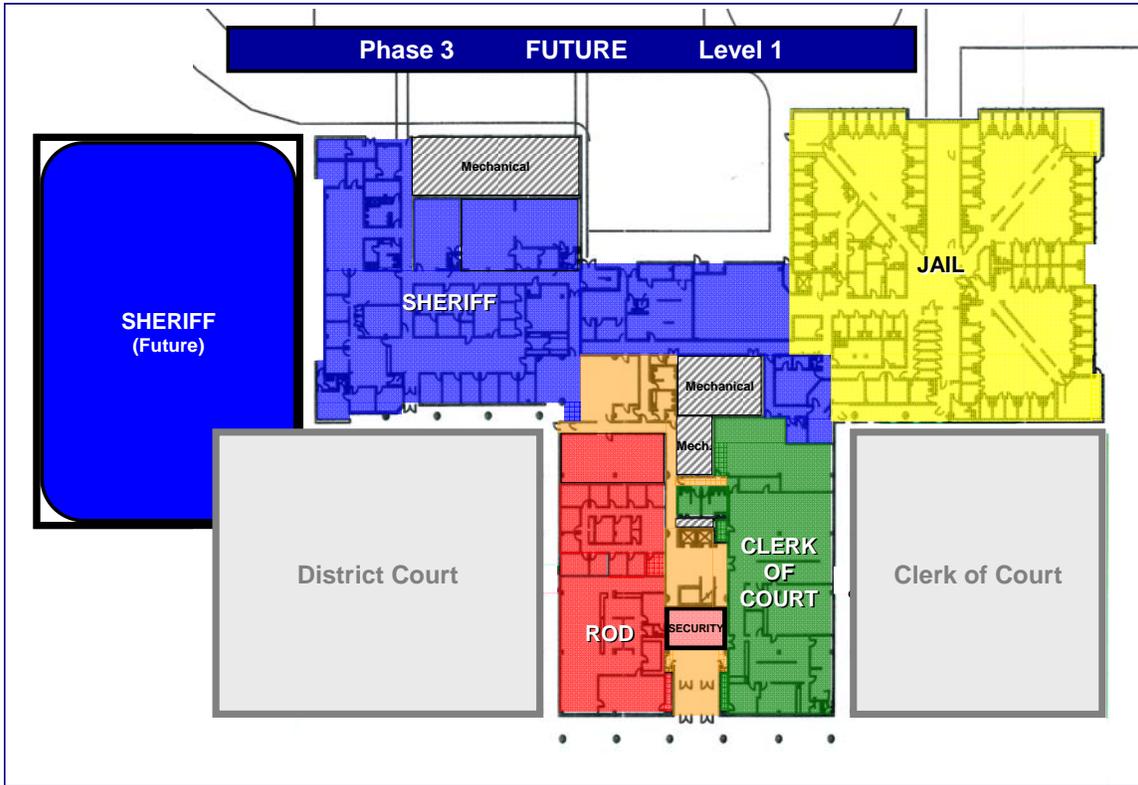


Phase Development by Level (Justice Center)

The phased development suggested in pages 11-12 (Executive Summary) is illustrated by phase and building level in the diagrams that follow. In this instance Phases 1, 2 and 3 are included. The Public Safety Facility (also Phase 1) will be illustrated in Section 2.







SECTION 2. FACILITY PROGRAM-NEW PUBLIC SAFETY CENTER

Overview

The purpose of this report Section is to document the requirements for a new County Public Safety Facility. These requirements will include specific operational space needs, and the general architectural, engineering, security, and communications criteria of the Departments and included functions that will occupy the facility once it is built.

The principal occupants of this facility upon its completion are to be the County's Technology Department's 911 Emergency Communications Center, the Emergency Operations Center (EOC), and the Emergency Services Department. The Newton-Conover Rescue Squad will also be provided office and related support space within the operations area of the facility as well as shared personnel support space and vehicle bays with the Newton EMS Base personnel and vehicles.

Separately, the major functions included in the new building for which various types of facilities are described will include:

- Emergency Communications
Administration & Support
911 Call Center
- Emergency Operations Center
- Emergency Services Department
Emergency Services Administration
Fire-Rescue Services
Veteran's Services
EMS Administration
Newton EMS Base
- Newton-Conover Rescue Squad

This Document

For purposes of this document, a *Facility Program* is defined as;

“A statement of the requirements for a building project”

This “statement”, includes operational and facility objectives, descriptions of what will happen in the building, user needs, and various problems to be addressed during design. Since it is intended to serve as the formal communication of the owner's project requirements to the designer and/or builder, **it must** (*and did*) involve the primary facility users in its development. Ultimately, the document that follows is not only about operational and facility design objectives, but human objectives as well.

The people who will occupy and use the facilities know the most about their activities and needs; thus, the rationale for involving them in the programming effort. The programming process is intended to provide an orderly method for gathering people's input, addressing opinions, policies, and alternative operational scenarios, and documenting them in an organized format.

The information included here was developed during several meetings, observations of department activities occurring in existing spaces, audits of existing spaces, and considerable calculations and related documentation activities.

The issues addressed with the various Department representatives during programming included discussions having to do with day-to-day activities as well as concerns and objectives for the “mechanics” of the facility and its ultimate design.

Within each major functional area included, the following subsection headings were addressed:

Operational Requirements

- Purpose
- Activities
- Hours of Operations
- Users
- Communications

Facility Requirements

- Adjacencies & Circulation
- Security
- Architecture/Engineering
- Space Requirements
- Adjacency Diagrams

In addition, as the various rounds of meetings were conducted a number of issues came up repeatedly with regards to specific conditions that participants felt strongly should not only be addressed specifically in the program document, but be considered as essential and integral to the facility itself. These included:

Essential Building Criteria

Security

- Separate Staff/Public Parking
- Card Key Access
- Lighting
- Video/Camera Monitoring
- Alarm Annunciation

Building Systems

- HVAC Zones
- Public Access
- Separate Public/Staff Restrooms
- Emergency Power Sources
- Fire Protection

Technology

- WI-FI
- Video Conferencing
- Meeting Rooms AV Equipped
- VOIP
- Interoperability Enhancement

Support Space

- Receiving & Mail
- Warehouse Medical Storage
- Break Area
- Locker/Shower Area
- Secure & General Storage

Staff participants were provided several opportunities to review the work produced as well as offer input throughout the programming process.

OPERATIONAL REQUIREMENTS

Emergency Communications Center

The Emergency Communications Center or “911 Center” is the County’s primary Public Safety Answering Point (PSAP) for the receipt and dispatch of all emergency calls placed to 911 in Catawba County. Major responsibilities of the center’s personnel include but are not limited to:

- Receive, handle and dispatch calls for EMS, Fire, Rescue, all law enforcement agencies operating within the County and the Animal Control Department.

- Alert the appropriate law enforcement agency, EMS unit, or Fire station of an emergency and provide dispatch information and instructions
- Continue to monitor and support the call and the responding service by maintaining on-going communications and following the efforts of those responder(s) to the incident and throughout the incident scene activities that follow.
- Implement emergency medical dispatch (EMD) protocols during medical emergencies
 - ✓ Remain on the line with the caller to obtain as much additional patient/victim information as possible
 - ✓ Simultaneously and continuously alert the responding Paramedics as to the patient's condition
 - ✓ Provide actual medical/first aid instructions to the caller in an effort to help the victim
- Receive and handle non-emergency ("administrative") calls requesting assistance or information; including:
 - ✓ License tag checks
 - ✓ Inquiries regarding outstanding warrants
 - ✓ Request for information; directions, phone numbers, names, etc.
 - ✓ Requests for at a crime or accident scene
 - ✓ Duplicate calls
 - ✓ Nefarious or misplaced calls

Recent year data (2006) suggests that a total of 155,472 calls were received during the year; a ratio of approximately 666 calls per 1,000 County residents.

Emergency Services

By statute, the County is responsible for emergency management within its geographical boundaries. The **Emergency Services Department** is charged with the implementation and coordination of these efforts, including activities of the municipalities within the County. Significant sub-units within the Department include Administration, Fire-Rescue Services, Veteran's Services, and EMS; all of which will have assigned space in this plan.

At present the duties assumed by the Emergency Services Department with regards to ***Emergency Management*** include but are not limited to:

- Continuously update and maintain the County's Emergency Operations Plan
- Distribute and provide appropriate training with regards to the Plan's requirements and procedures, and individual responsibilities of designated incident participants
- Conduct emergency operations drills to familiarize key individuals with the proper procedures and responsibilities in the event of an emergency
- Coordinate County-wide emergency operations response to incidents that actually occur
- Overseeing of County Emergency Operations Center (EOC)
- Continuously monitor the "readiness" of the EOC with regards to communications, and equipment capabilities, and the availability of necessary supplies
- Oversight and support of the Fire-Rescue Services Office whose responsibilities include
 - ✓ Assisting incorporated volunteer fire departments in developing and improving their fire-fighting or fire prevention capabilities

- ✓ Coordination with County Planning Department in reviewing building plans for compliance with State fire and life-safety codes
 - ✓ Conducting fire (prevention) inspections of public facilities (schools, day-care, assisted living, etc.) and businesses (restaurants, retail stores, etc.)
 - ✓ Conducting investigations with regards to fires having suspicious origins to determine if arson or similar criminal activity were involved with regards to the fire's origin/cause
 - ✓ Coordination & oversight of Rescue Services throughout the County
 - ✓ Coordinating fire-fighting training activities
 - ✓ Coordinating fire prevention activities
 - ✓ Advising the County Board of Commissioners on the needs and necessary improvements in existing fire-fighting or fire prevention activities
- Oversight and support of the Veteran's Services office which assists veterans and their dependents in filing claims with the Veterans Administration for benefits and service

Emergency Medical Services

By definition Emergency Medical Services includes "all services rendered in responding to the individual's need for immediate medical care in order to prevent loss of life or further aggravation of physiological or psychological illness or injury"; [NCGS 143-507].

The Division's published three-fold Mission is:

1. To maintain an average response time of eight minutes or less county-wide.
2. To operate in a financially responsible manner, making the best use of our resources, equipment, and personnel.
3. To remain a leader in the field of emergency medical services.

In Catawba County, responding EMS personnel are Emergency Medical Technicians (EMT's); certified at the Paramedic Level (EMT-P). The Division's duties include but are not limited to:

- Staffing emergency vehicles (ambulances) in assigned areas of deployment throughout the county, 24 hours per day
- Respond to medical emergencies when dispatched to do so
- Stand by at major events to render emergency medical assistance if/as required
- Maintain communications with 911 Communications Center telecommunicators with regards to on scene information and patient condition
- Treat patient on the scene and/or transport patient to the appropriate hospital facility
- Communicate with hospital emergency room personnel regarding the incoming patient's condition and circumstances
- Assist with patient triage if/as requested to do so by hospital personnel
- Complete all reports and necessary paperwork associated with the incident responded to
- Replenish and maintain appropriate inventory of medical supplies on assigned vehicles
- Relay "back in service" status to Communications Center and be available to respond to any call for service
- Participate in required and continuing education training activities on a monthly basis

- Coordinate specialty services assigned the Department; i.e. prime time coverage, scheduled transfers, contract services and various non-emergency services

It is important to note that a Logistics function and staff position is planned for and facilities for this function are included in the sections that follow. Although not identified previously as a specific *function* within EMS or the Emergency Services Department, the responsibilities assigned the Logistics Officer will serve to support and assist the major operational divisions of the Department. These responsibilities will most likely include at least:

- Receiving and distribution of all supplies, equipment and related materials purchased and received by the department.
- Supervision of the Warehouse & Base Medical Supply facility including, organization and maintenance of inventory and security of materials maintained
- Maintenance and periodic testing of emergency equipment
- Maintenance and service records of all department vehicles
- Secure storage of department files, call records, reports, etc. in either paper or electronic form
- Transport emergency equipment to incident scenes and assist with staging and mobilization of response personnel

Considering the implications with regards to vehicle and equipment storage requirements as well as various types of equipment and maintenance/testing there will be significant space assigned to logistics.

Catawba County EMS currently stages Ambulances at six (6) locations throughout the County.

EMS personnel are required to participate in continuing education classes to maintain and update their training on an annual basis. Continuing education requirements typically will average 40-50 hours per person per year.

During Fiscal Year 2007-2008, EMS County-wide was dispatched to 22,222 calls. The Newton Base responded to 3,576 of those calls.

Rescue

According to NCGS 58-87-5; "Rescue" means "the removal of individuals facing external, non-medical and non patient related peril to areas of relative safety. A rescue unit or rescue squad means a group of individuals who are not necessarily trained in emergency medical services, fire fighting, or law enforcement, but who expose themselves to an external, non medical, and non patient related peril to affect the removal of individuals facing the same type of peril to area of relative safety. The unit or squad must comply with existing state statutes and with the eligibility criteria established by the North Carolina Association of Rescue and Emergency Medical Services, Inc."

The Newton Conover Rescue Squad is one of six (6) incorporated volunteer squads operating in Catawba County.

County Ordinance 311.070 General Provisions states; "There are six volunteer rescue squads within the county. The rescue squads within the County shall be considered backup to the county emergency medical services (EMS). They shall be dispatched when all county units are on calls or when the response time for a county unit may be too long for the best interest of the sick and injured. Rescue squads shall be dispatched to assist with wrecks where there are persons trapped".

In addition to serving as medical first responders, the County Rescue Squads also respond to a variety of emergency situations involving individuals in peril. Collectively, these perilous situations include vehicle extrication, dive rescue, swift water rescue, high angle rescue, confined space rescue, trench rescue, and urban search & rescue activities.

The Fire-Rescue Manager with the Emergency Services Department serves as the liaison with the County's Rescue Squads.

Hours of Operation

Administrative office hours for the Emergency Services Department and principal administrative personnel are Monday-Friday from 8:00am-5:00 pm. However, personnel must be available during any activation of the EOC and are expected to be available to assist and coordinate activities during any significant emergency event.

Emergency Medical Services personnel will staff vehicles with certified EMTs' in each of the County's six (6) EMS response districts 24 hours per day.

The Emergency Communications Center also operates 24 hours per day and will typically (now) have five (5) telecommunicators on duty during 1st and 2nd shifts and four (4) on duty during third shift.

Users

Access to the Communications Center will be restricted to assigned personnel and designated Emergency Services employees.

The Emergency Operations Center (EOC) may be used for various meetings, typically involving public safety personnel. However, during an emergency full activation of the EOC may involve participation of as many as 40-60 individuals; including County Management, public officials, law enforcement and public safety personnel and communications and possibly public utilities representatives depending upon the circumstances of the emergency.

The primary users of the space occupied by the various operational units of the facility will be the employees themselves; and of course volunteer Rescue Squad members.

Administrative offices will be visited by various individuals wishing to meet with the Emergency Services Director, the Fire-Rescue Manager, the Veteran's Services Officer, and the EMS Manager. The EMS base may receive occasional visitors, for example law enforcement personnel wishing to follow up on an accident investigation, or other related business.

Staffing

The personnel for whom space has been allocated include current as well as projected future staff positions as follows:

<u>Unit/Title</u>	<u>No. Positions</u>	<u>FT/PT</u>
Emergency Services		
Emergency Services Director	1	FT
Administrative Assistant	1	FT
Emergency Management Coordinator	1	FT
Fire-Rescue Manager	1	FT
Fire Inspector (Current)	2	FT

Fire Inspector (Future)*	2	FT
Veteran's Services Officer	1	FT
Receptionist/Veteran's Services Asst.*	1	FT
EMS Manager	1	FT
Operations Officer*	1	FT
Quality Assurance Officer	1	FT
Training Officer	1	FT
Logistics Officer*	1	FT
Shift Supervisor	4 @ 1/shift	FT
Assistant Shift Supervisor*	4 @ 1/shift	FT
 EMS Base Operations		
Crew #1 EMT's	2/shift	FT
Crew #2 EMT's	2/shift	FT
 911 Communications Center		
Communications Administrator	1	FT
Training Officer	1	FT
EMD Quality Assurance*	1	FT
Administrative Assistant	1	FT
Communications Supervisor	3	FT
Senior Telecommunicators	3	FT
Telecommunicators	9	FT
Office*	1	FT
Total Positions		

NOTE: * indicates positions identified in Department's 8-Year Plan

Communications

The principal means of communications among personnel occupying the facility will include: "person-to-person", telephone, mobile radio, and e-mail.

For communications with other departments, vendors, and those having business with Emergency Services and 911 Communications personnel, methods will typically include: telephone, e-mail, conventional mail, and fax.

FACILITY REQUIREMENTS

It is recommended that the Public Safety Facility include two (2) building levels. The first being the operational components of the Emergency Services Department and the Newton-Conover Rescue Squad; the second level - directly above the Emergency Services Administration area and the EOC-to include the County's 911/Emergency Communications Center. The comments that follow correspond with the Space Lists and Adjacency Diagrams included in later in this Section.

Adjacencies & Circulation

Administration & Emergency Operations Center-Lower level

- The external Vestibule (building entrance) will be convenient to Public Parking.
- The Public Lobby *may* also serve as the secure entry to the Emergency Operations Center (EOC) for those individuals who will participate in emergency operations in the event of activation.
- Other County Departments may have the opportunity to utilize the EOC as a training/meeting venue providing it is not in use or otherwise scheduled for use

- by the Emergency Services Department, EMS Training Officer or the Communications Center.
- An open counter will permit the Administrative Assistant located adjacent the primary Public Entrance and the Public Lobby to see visitors as they enter the building.
 - Seating will be provided in the Public Lobby convenient to and visible from the adjacent Administrative Assistant's work station.
 - It is not intended at this time that the EOC and Administration "sides" of the Emergency Services Department's space be separated in any major way; i.e., Department personnel should be able to access the EOC and its associated Breakout Rooms, Restrooms, etc. as required.
 - The Copy/Work Area which is to include a Service Counter for daily access and use by staff, may also be accessible from the EOC side of the space.
 - The individual offices of the Department's administrative personnel should be arranged so as to facilitate communications and efficiency in day-to-day operations.
 - Staff will have access to Restrooms outside the secure perimeter of the EOC.
 - Public Restrooms will be provided and be accessible to/from the Public Lobby.
 - Breakout Rooms will be most convenient to the EOC.
 - One (1) Breakout Room will provide a formal Conference Room environment and be accessible from outside the EOC's secure perimeter.
 - One (1) Breakout Room will include a Telecommunicator work station to facilitate direct emergency communications during Center activations.
 - The Kitchen will be convenient to the EOC and directly accessible from the Dining/Break Room.
 - The Kitchen space identified in the Adjacency Diagram will include a storage pantry within.
 - Male and Female Restrooms and Bunkrooms will be convenient, if not adjacent to the EOC, however, located in order to accommodate quiet and rest when needed.
 - Restrooms will also include within each, a shower and drying area.
 - Staff Parking will be provided convenient to the primary Staff Entrance doorway.
 - The primary Staff Entrance for personnel assigned to the facility will require an identification "key card" to access.
 - In addition, access to the inner doors leading directly into the EOC will be electronically controlled from within, unless the individual wishing to enter has been approved for access via their individual key card code.
 - The EMS-Rescue shared operations space will be directly accessible from the Vehicle bays and from the Rescue Entrance Vestibule.
 - The Medical Records Room will be convenient to staff assigned control and use of records and shall be securely locked when not in use.
 - The EMS Training Equipment Room should be convenient to the Training Officer and to an easily accessible exit that is convenient for loading and unloading equipment and training materials.
 - Spaces designated for Shift Supervisors and Assistant Shift Supervisors should be convenient to the Operations area adjoining Vehicle Bays but within the EMS Administration Area.
 - The Restroom/Shower, Locker, Fitness, Dayroom, and Kitchen areas within the Operations Area will be shared and accessible to both EMS and Rescue personnel.
 - Access to the EMS side of the Operations Area will be through doors from the shared spaces and the Vehicle Bays via electronic card-keys issued to EMS personnel only.

- The Decontamination & Laundry Area will be shared and convenient to both the EMS and Rescue sides of the Vehicle Bays
- The Receiving Area/Loading Dock and Staging & Distribution Area will be located with the General Storage & Base Medical Supply building.
- While vendors and delivery vehicles will be able to access the Receiving Area (Loading Dock), movement to and from the Receiving Area to the Staging and Distribution Area will be controlled from within the Staging and Distribution Area unless authorized department personnel are present.
- The Emergency Incident Response Vehicle Garage is intended for the storage of the vehicles designated and may be located on the site other than where currently shown on the Site Concept Diagram, however, should the location change a minimum of 55 feet clearance in front of the building needs to be provided for the safe movement and maneuvering of the vehicles assigned.

Communications Center-Upper Level

- Communications Center personnel will typically enter the building at the Staff Entrance, adjacent to the designated Staff Parking Area and proceed to the upper level via elevator or stairs.
- The area(s) designated as “Allowance for Fire Stairs” is for illustration purposes at this time as the eventual design will determine the actual location. It is provided here to illustrate circulation, provide an allocation of space, and to identify security access requirements to/from the Communications Center above.
- Access to the Communications Center itself will be monitored visually and controlled from within the Center’s Administration Area and/or from within the Call Center itself by employees on duty.
- Visitors and personnel exiting the stairs or elevator from the lower level onto the upper level, will first enter a Security Vestibule, and be visually observed and communicated with prior to being allowed entry to the Communications Administration Area and its adjoining areas or into the Call Center itself.
- The area designated on the Adjacency Diagram as the “Call Center” is that area that will include initially eight (8) Telecommunicator workstations, including one (1) workstation that is elevated to facilitate supervisory and training activities simultaneous with Call Center operations.
- It is intended that the area within the Call Center remain as “open” space, and that it include ample glazing to permit natural light and views to the outside.
- Acoustics within the Center will be important and should be a serious consideration in the selection of the floor, ceiling and wall finishes.
- Male and Female Restrooms will be convenient to the Call Center and the Administration areas.
- Lockers will be provided to all employees and be located convenient to Restrooms and the Break Area.
- The Meeting Room will be convenient to Administrative and Call Center staff and to the primary Communications Center entrance from below for visitors that may participate in meetings.
- Glazing will be provided in the walls between the Call Center and the Administration Area as well as designated Administrative offices to permit views to and from the respective areas.

Security

- Access from the Public Lobby into Emergency Services space will be controlled from within the Administrative Assistant’s Office.
- Entry into the Public Lobby can be electronically controlled if necessary from the Administrative Assistant’s desk.

- The second restricted entry from the Public Lobby will be that door/entry utilized in the event of EOC activation by personnel assigned to participate; this door will also be controlled from within the Administrative Assistant's office.
- The Administrative Assistant's Office adjacent the Public Lobby will provide convenient and "customer friendly" access, however, must also be securable after normal business hours.
- Camera surveillance will be provided designated work stations within the Call Center to monitor the Communications Center floor entrances, as well as the primary entrances to Emergency Services, the EOC and EMS Administration offices.
- A security alarm button will be located at the Administrative Assistant's office.
- At least one (1) secondary means of egress from the offices will be provided
- Provide telephones at each work station and office.
- All individual offices should have locks and be individually keyed and with a master key unless otherwise designated.
- All windows should be of designated security grade glazing and vandal-resistant.
- Locking file cabinets should be provided in each individual office as well as within designated storage areas.
- Access to Emergency Services administrative, office, work, and meeting areas will be restricted to authorized personnel and visitors having business within the area with Department personnel.
- Access to the EOC, once activation occurs will be strictly limited to those individuals designated in the County's Emergency Procedures Manual and authorized to be present.
- All doors into the EOC will be controlled from within and closely monitored.
- All doors into the Administration areas and the EOC will require card-key identification to access.
- Depending upon the final design configuration of the space, cameras may be utilized to monitor various access doors to the building and/or sensitive areas of operation.
- Access to the Communications Center will be very limited and discourage "drop-in" visitors for any purpose other than for Communications business.
- Electronic controls to the area will be controlled from within the Communications Administration and Call Center areas.
- Ample glazing will be provided in the Public Entrance vestibule to permit recognition of visitors wishing to enter.
- An intercom device or telephone will be provided within the Public Entrance vestibule for communication with Center personnel.
- Security grade doors and hardware should be used in the Communications Center.
- Window glazing, where views from the Communications Center can be provided to the out of doors, should be security grade glass/polycarbonate composite.

Architecture

- ***The County is interested in pursuing LEED certification for this facility; i.e. "Leadership in Energy and Environmental Design".***
- Materials and finishes should include:
 - ✓ Commercial grade carpeting
 - ✓ Sheetrock
 - ✓ Paint and designated wall coverings
 - ✓ The EOC Kitchen, the Service Counter area, and a portion of the Communications Center Break Room should include vinyl tile or similar floor covering.

- The Administration areas should have the atmosphere of a professional business office environment.
- Acoustical treatment should be provided in ceilings and, where appropriate, between work areas and/or within the walls to assure privacy.
- Natural lighting and views to the outdoors should be provided wherever possible.
- Offices should provide individual privacy; however, in general layout should yield a feeling of openness and freedom of movement between individual offices.
- The entire building should be handicapped accessible to both staff and visitors.
- Garages should include hard surfaces and ceiling heights able to accommodate the weight and size of large, heavy duty emergency vehicles.
- The Staging and Distribution Area may be an enclosed room or open to the Loading Dock providing it is immediately adjacent the large Storage Area.
- The Kitchen should include materials, equipment, built-ins, and finishes common to a small commercial kitchen facility; as well as enclosed storage pantry within.
- Male and Female Bunk Rooms will accommodate sleeping and be directly accessible to their respective Restrooms.
- Breakout Rooms, in addition to tables and chairs, will include tack-board and marking board surfaces on the walls.
- The Communications Call Center should include ample wall space for large video monitors placed to be easily viewed by Telecommunicators on duty.
- The Break Room is intended to include “quiet” space with comfortable seating, a small counter to accommodate a coffee maker, sink, and microwave, and a view to the outside.

Engineering

- ***The County is interested in pursuing LEED certification for this facility; i.e. “Leadership in Energy and Environmental Design”.***

Plumbing

- Toilet and lavatory fixtures in restrooms to be commercial grade vitreous china.
- The designated Male and Female Restrooms in the EOC will each include a shower and drying area within and include ventilation.
- The Male and Female Restrooms in the Communications Center will include toilet and lavatory facilities within each.
- The sinks to be included in the EOC Kitchen, the Restrooms, and the Communications Center Restrooms and Break Room, may be commercial grade vitreous china or stainless steel.
- A garbage disposal should be provided in the Kitchen.
- Include appropriate connections and drainage for an ice machine, separate and in addition to a normal refrigerator in the EOC Kitchen.
- Floor drains shall be provided in the Restrooms, the EOC Kitchen, appropriate to the Service Counter, and in the Communications Center Restrooms and Break Room.
- Considering the nature of EOC operations, gas may be the preferred fuel for the oven(s) in the Kitchen.
- Janitor Closets will include deep sinks and/or bucket/mop wash basins, floor drains and ventilation.

Lighting and Electrical

- Vital to the Department’s responsibilities during emergencies, will be a back-up power generation system (or systems) that will activate upon loss of power from normal sources.
- Overhead fluorescent lighting will be provided in all common areas and individual offices; options ***other than*** fluorescent should be considered for the Call Center.

- Incandescent task lighting will be available at all designated work stations and individual offices.
- A rheostat should be provided to control the level of lighting in the Communications Call Center/Telecommunicator work areas.
- Wiring to permit both computer and telephone connections will be available at all designated offices and workstations.
- The EOC and adjacent Breakout Rooms will require multiple line telephone systems and (in the EOC) as many as 30 phone jacks or equivalent capabilities.
- Television cabling will be provided in the EOC, each Breakout Room, the Director's Office, and in the Communications Center Administration Area and within the Call Center.
- Provide communications via intercom to enable direct communications between the EOC and the Call Center.
- All personnel shall have access, at their individual work stations, to the internet as well as to the County's intranet, preferably via secure, wireless modem.
- Access to the internet and the County's intranet will also be available in all EOC areas, anywhere there is likely to be an individual working and/or stationed during an emergency response period.
- Specialized grounding and lightning diversion must be addressed in the Communications Center.

Fire & Life Safety

- All office and work areas will be sprinkled.
- The Kitchen and the Call Center will likely require a dry system of fire suppression.
- Fire exits should be provided with signage per codes.
- Fire alarm (pull devices or other) to be located at locations/intervals per code requirements.
- Provide for smoke removal.

Electronics

- Upon activation, security alarms will be annunciated in the Call Center with back-up annunciation off premises to be determined at time of design.
- An emergency Alarm Panel should be located within the Call Center, however may not necessarily have to be integrated with each individual Telecommunicator work station.
- Monitoring of cameras utilized for security purpose will also occur in the Call Center; preferably with activation pending detected movement.
- Wiring and related audio visual controls for computer and projector presentations will be provided in the EOC, the Breakout/Conference Room, the Rescue Assembly Area and the Communications Center Meeting Room and include an electronically controlled drop-down type projection screen in each.
- Electronic door controls will be activated from within the EOC and designated Emergency Services, EMS and Communications work spaces personnel who are able to see who they are admitting.
- Electronic door controls will be activated from within the Call Center by personnel who are able to see who they are admitting.

Mechanical

- Entire building must be air conditioned, heated, and adequately ventilated.
- An exhaust system for smoke removal should be provided.
- The EOC, Emergency Services, EMS spaces, the Communications Center, the Communications Equipment Room, and the Central Storage and Base Medical Supply building will be zoned separately.

- The individual zones should be thermostatically controlled from within each area.

Space Requirements

The space lists that follow identify those spaces necessary to accommodate the operational requirements identified and documented that will comprise the new Public Safety Facility.

They are formatted in such a way as to assist the eventual facility designer in addressing the requirements of the overall facility as well as each functional area or individual's specific needs. The Space Lists included are just that, *spaces* only. The same lists, with extensive notes corresponding to each space or area identified, are included in the Appendix of this document; and correspond with their companion Adjacency Diagrams that follow.

The Space Lists include a number of column headings that are intended to clarify and support the square footage called for. These include:

“Area/Space”-Identifies the department or activity area for which the space is designated

“# Persons per Area”-refers to the *typical number of persons* (usually maximum) that might be expected to occupy or be present in the referenced space at any one time

“No. of Areas”-the *number of areas/spaces* of the designated type; i.e., restroom, interview room, etc.

“NSF per Area”-the *interior* dimensions of the space designated; NOT including wall thicknesses, common circulation areas, etc. and expressed as *net square feet* or NSF

“Total NSF”-the product of *the “NSF per Area” and the “No. of Areas”*; i.e., two (2) offices @ 125 net square feet (NSF) each = 250 “Total Net Space”

“Notes/Comments”- (this heading is included in the “detailed” Space Lists in Appendix only); provides *additional information specific to the designated area or space*; i.e., built-in shelving or cabinetry, adjacency requirements, type of space (private, open, shared), special requirements regarding plumbing, mechanical or electrical needs, etc.

“Net” vs. “Gross” Square Footage

As stated, the interior, usable dimensions of a space or work area constitute the area's “Net Square Feet” or NSF. When wall thicknesses, stairwells, common circulation areas, interior mechanical space, etc. is all considered, the total individual space or building area that results is referred to as the total “Gross Square Feet”, or GSF.

The factor used to calculate the net-to-gross difference in a building is called the *efficiency factor*; or “EF”. This number will vary depending on the type and complexity of a building's design requirements. In this instance, a “multiplier” or EF of 30% has been used throughout; the exception being the garage, wherein an EF of 20% was used. Both factors are included in the calculations discussed in Section 3-*Probable Costs*.

The Master Space Lists that follow summarize the *internal NSF only* and are the culmination of the many space and area analyses developed and studied for this report

and are intended to serve as the basis for the facilities that will ultimately be designed and built.

LEVEL 1-NEW PUBLIC SAFETY FACILITY

EMERGENCY SERVICES

Area/Space	# Persons per Area	No. of Areas	NSF per Area	Total NSF
Emergency Services & Veterans				
Entry Vestibule	4	1	120	120
Public Lobby/Waiting	6	1	165	165
Reception Area	3	1	120	120
Photo/ID Processing	3	1	110	110
IT/Data Work/Service Space	2	1	110	110
Restrooms-Public	2	2	120	240
Restrooms-Staff	1	2	80	160
Fire-Rescue Manager	1	1	165	165
Fire Inspector	2	2	135	270
Future Office	2	2	135	270
Fire-Rescue Accessible Storage	1	1	150	150
Veteran's Services Officer	1	1	150	150
Veteran's Files/Records Room	1	1	150	150
Administrative Assistant	1	1	120	120
Future Office	1	1	135	135
Emergency Services Director	1	1	200	200
Emergency Management Coordinator	2	1	135	135
EM File Room	2	1	150	150
Copy/Work Room	1	1	220	220
Service Counter	3	1	20	20
EMS Administration				
EMS Manager	1	1	165	165
EMS Operations Manager	1	1	135	135
EMS Specialty Services Coordinator	1	1	135	135
EMS Training Officer	1	1	135	135
EMS Quality Assurance Officer	1	1	135	135
EMS Logistics (Future)	1	1	*	*
EMS Shift Supervisors	4	1	320	320
EMS Asst. Shift Supervisors (Future)	4	1	320	320
Medical Records	1	1	300	300
Training Equipment	2	1	300	300
Staff Entrance	4	1	100	100
Elevator	4	1	175	175
Elevator Lobby	8	1	150	150
Allowance for Fire Stairs/Exit Vestibule	2	1	250	250
				5,780

NOTE: * Indicates space for Logistics Officer is identified in Central Storage & Base medical Supply space list that follows

EMERGENCY OPERATIONS CENTER

Area/Space	# Persons per Area	No. of Areas	NSF per Area	Total NSF
Vestibule/Entry	4	1	120	120
Coat Room	2	1	60	60
PIO's/Press Room	8	1	320	320
IT/Data Work/Service Space	2	1	0	0
Operations Center				
Local-Full activation	40	1	AR	AR
Federal/State Activation	60	1	1200	1200
Breakout Rooms				
Operations	12	1	300	300
Logistics	12	1	300	300
Planning	12	1	300	300
Admin/Finance	12	1	300	300
Restrooms w>Showers	3	2	225	450
Dining/Break Room	16	1	320	320
Kitchen w/Pantry	3	1	150	150
Bunkrooms	4	2	240	480
				4,300

EMS & RESCUE

Area/Space	# Persons per Area	No. of Areas	NSF per Area	Total NSF
EMS Personnel & Operations				
Mudroom & Gear	4	1	125	125
EMT Team Work /Report Rooms	2	2	125	250
Multi-Use Office	4	1	125	125
EMS General Storage	1	1	300	300
Janitor Closet	1	1	80	80
Rescue Personnel & Operations				
Staff Entrance	3	1	80	80
Rescue Chief	4	1	125	125
Rescue Work Room	4	1	200	200
Supply	1	1	200	200
Janitor Closet	1	1	80	80
Mudroom & Gear	3	1	125	125
Assembly/Staging Area	40	1	800	800
Shared Space				
Dayroom	12	1	480	480
Kitchen/Dining	12	1	375	375
Fitness	5	1	250	250
Lockers	32	1	250	250
Restroom/Shower	3	2	225	450
Decontamination & Laundry Area	3	1	180	180
				4,475

VEHICLE BAYS & GARAGE

Area/Space	# Persons per Area	No. of Areas	NSF per Area	Total NSF
Vehicle Bay				
EMS Vehicles	8	1	4600	4,600
Rescue Vehicles	8	1	6200	6,200
Equipment	2	2	200	400
				11,200

CENTRAL STORAGE & BASE MEDICAL SUPPLY

Area/Space	# Persons per Area	No. of Areas	NSF per Area	Total NSF
Central Storage & Receiving				
EMS Logistics (Future)	1	1	135	135
Restroom	1	1	80	80
Supplies/Files/Office Storage	1	1	80	80
Clean-up Area, Eyewash, Floor sink	4	1	150	150
Loading Dock	3	1	175	175
Receiving & Breakdown	3	1	200	200
Central Supply (incl. Base Medical Supply)	3	1	1600	1600
				2,420

EMERGENCY INCIDENT VEHICLE GARAGE

Area/Space	# Persons per Area	No. of Areas	NSF per Area	Total NSF
Special Operations Vehicles	4	1	9500	9500
				9,500

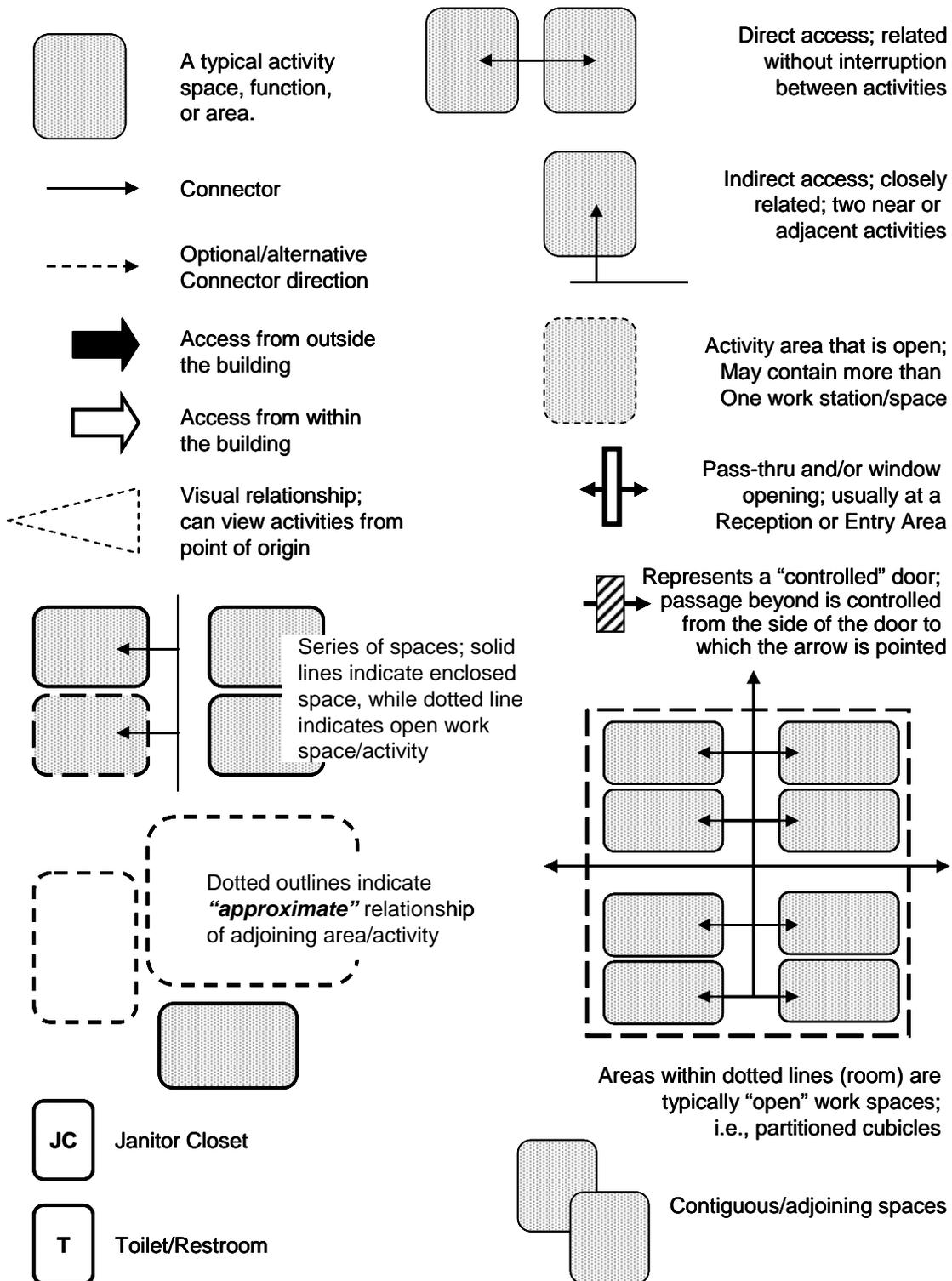
Adjacency Diagrams

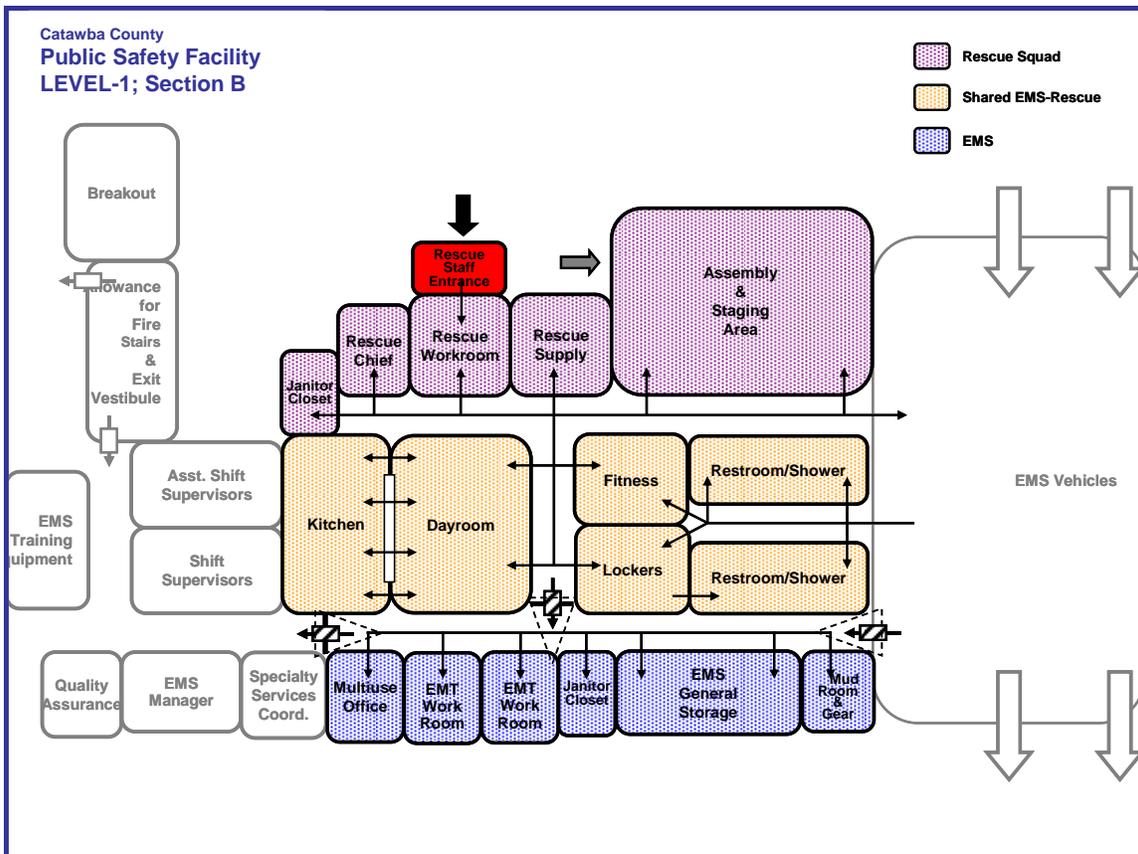
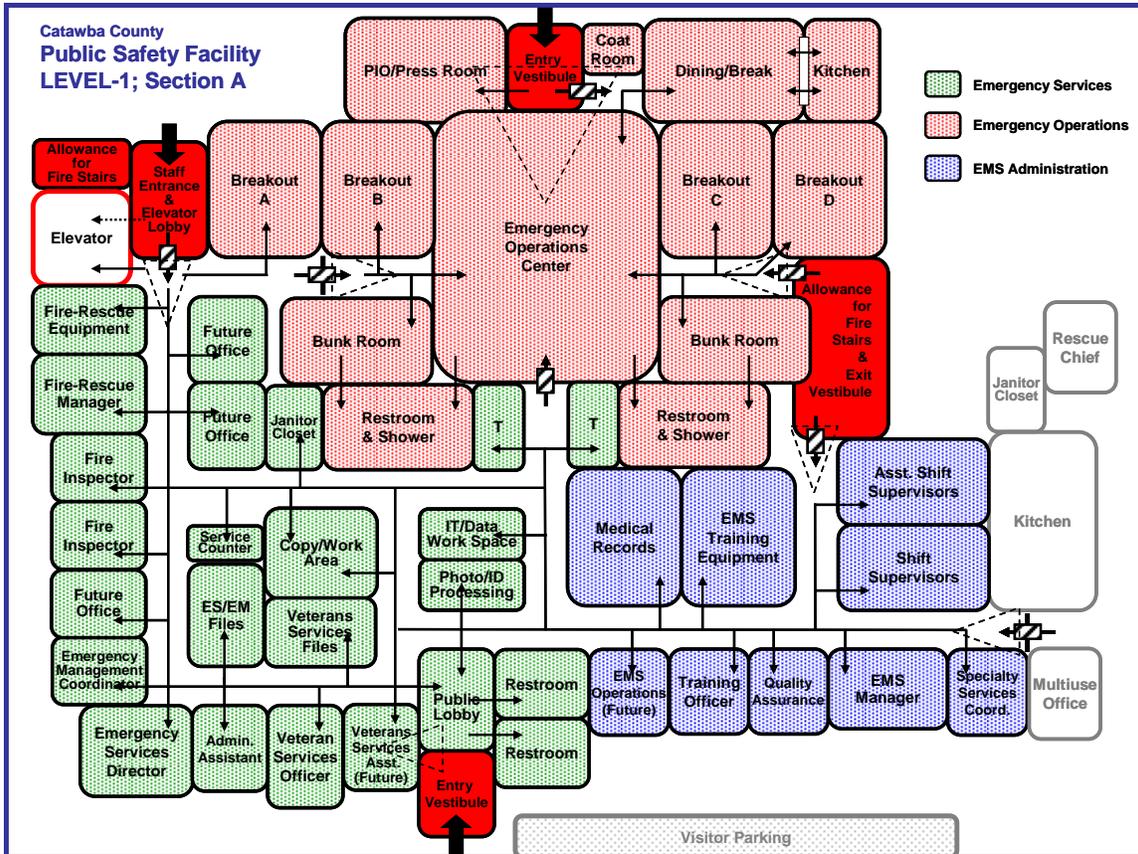
The Adjacency Diagrams that follow; Level 1, Sections A-E, correspond with the above referenced space lists for Level 1 of the proposed new Public Safety Facility and refer to each of the areas and spaces described.

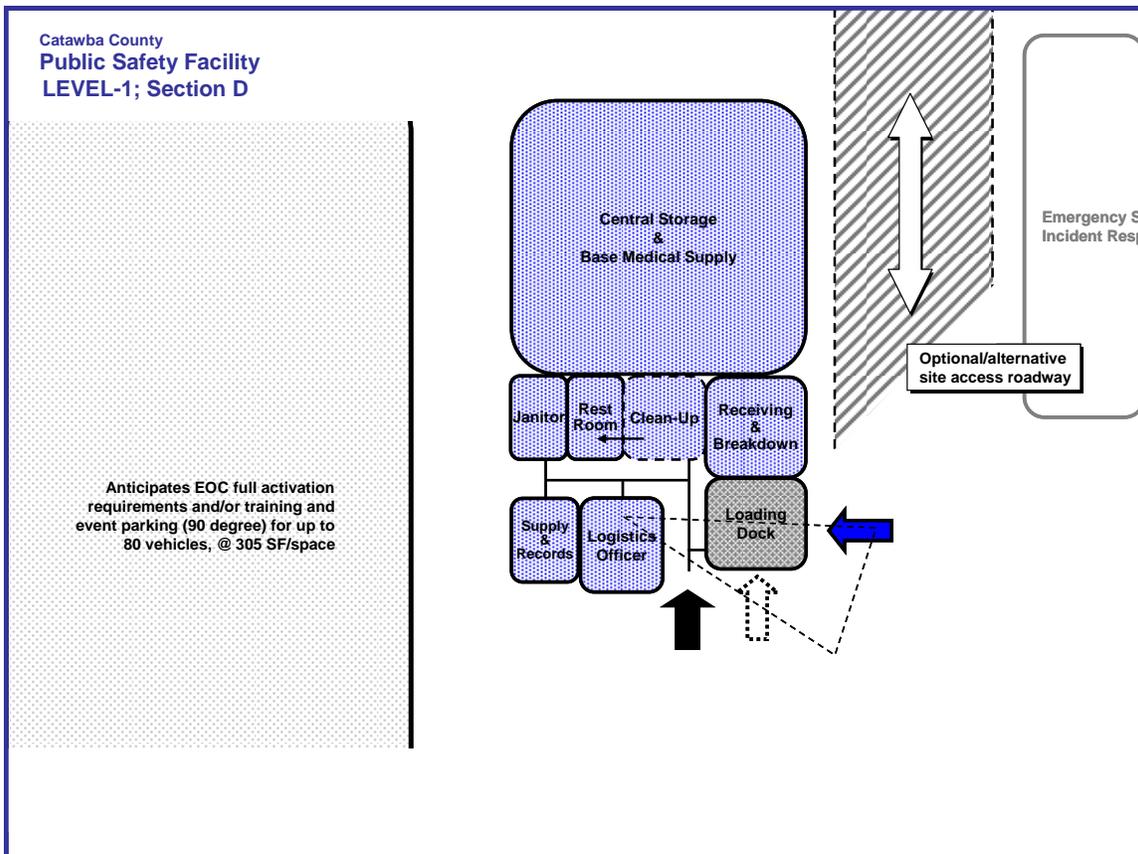
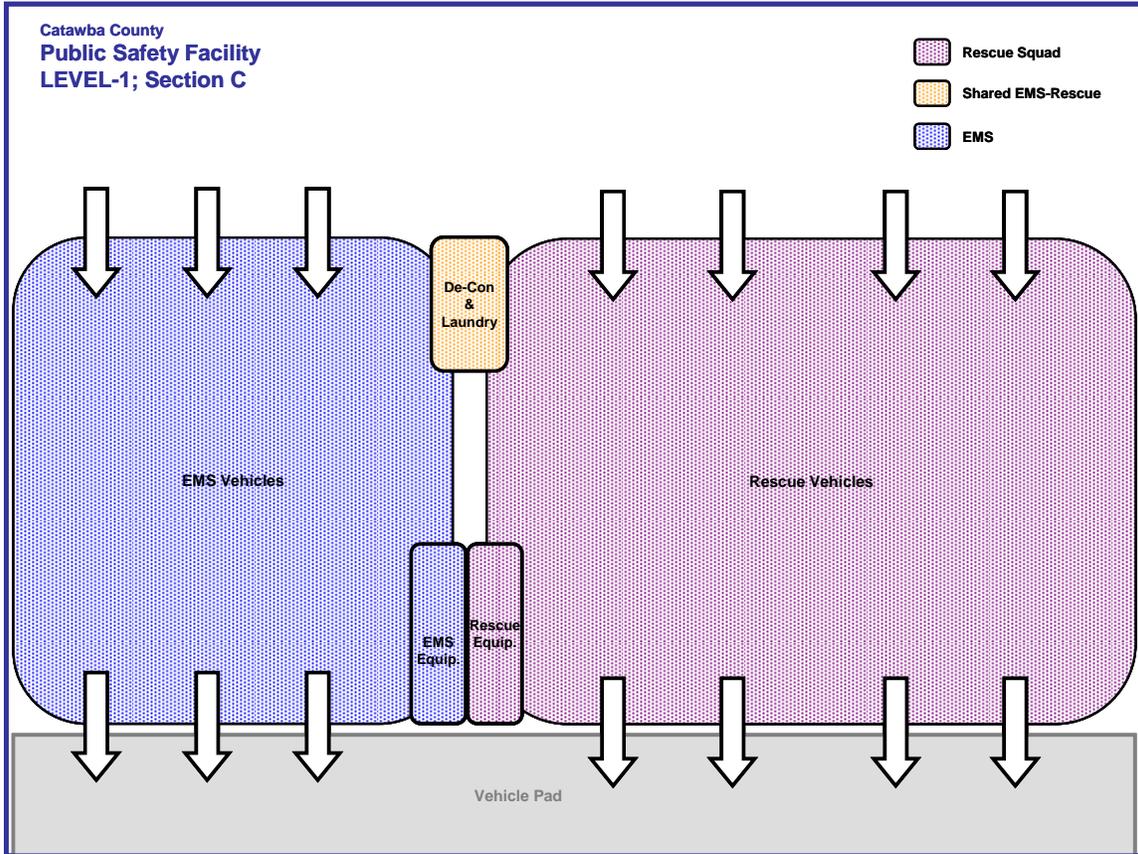
Each of the diagrams is intended to represent the user's preferences. Various symbols are used consistently throughout the diagrams; their meanings are addressed in the Symbol Key diagram on the following page.

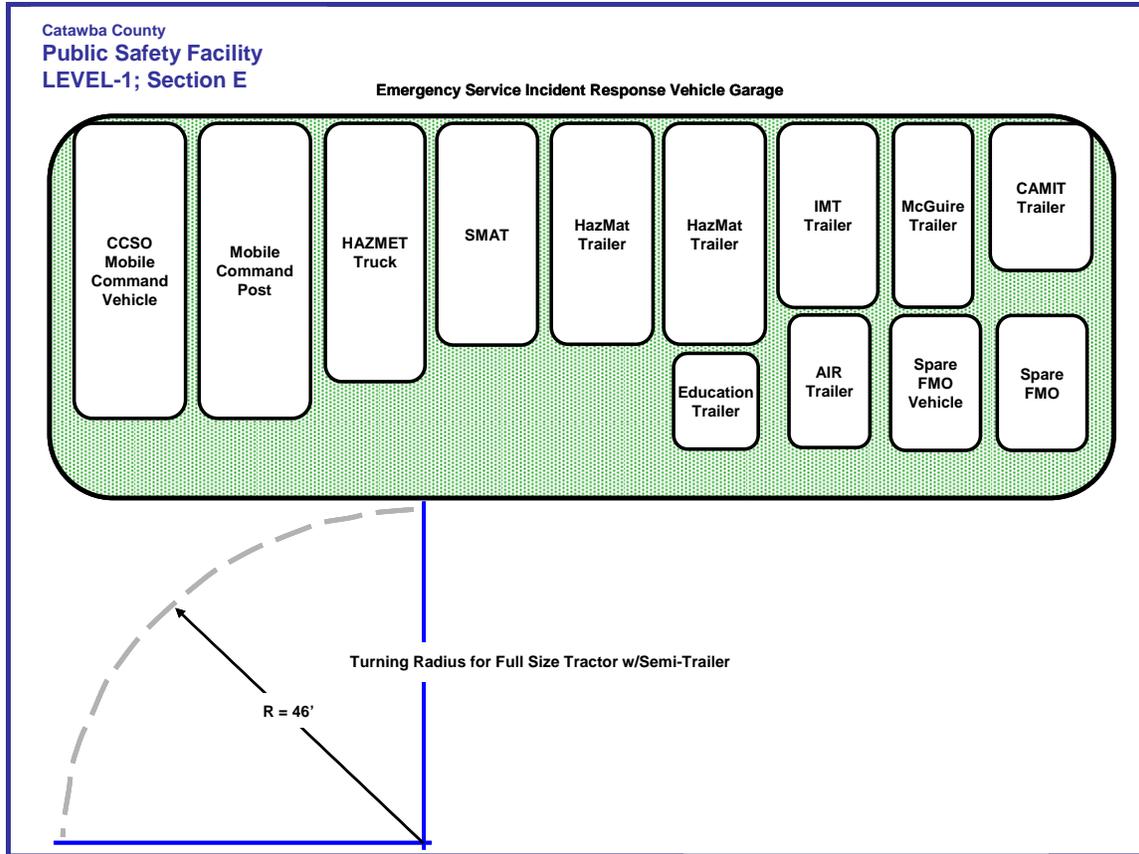
The space list and related adjacency diagrams that correspond to the 911 Communications Center proposed for Level 2 will follow these Level 1 adjacencies.

Symbol Key to Adjacency Diagrams









Building Location(s)

The Public Safety Facility adjacency diagrams D and E above, as well as the Site Concept diagrams on page 49, suggest two separate buildings for the Storage & Base Medical Supply facility and the Incident Response Vehicle Garage. The basis for this concept at this phase of planning anticipates the following:

- The Base Medical Supply facility will require thermostatically controlled heating and air conditioning; subsequently construction will likely be similar to the main building.
- The Vehicle Garage is intended to be a “metal” building that will not require central HVAC.
- The Base Medical Supply facility will require a loading dock and maneuvering clearance for delivery vehicles as large as traditional tractor-trailers.
- The Vehicle Garage will have several vehicles that will extend 30-40 feet or more beyond the garage opening into the anticipated paved drive lanes.
- Separate facilities have been anticipated in order to accommodate these access and circulation requirements simultaneously.

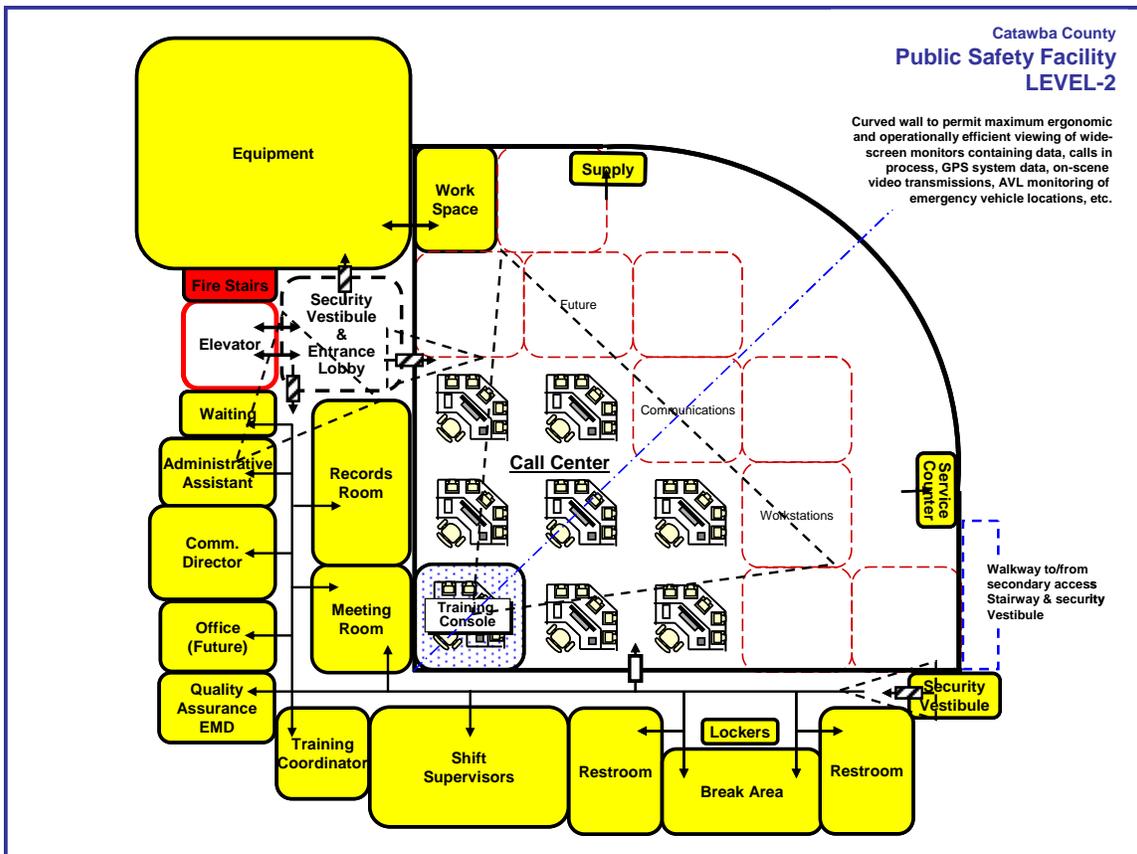
Once the selected design architect has had an opportunity to examine a detailed site survey and topographic map he/she may determine and subsequently chose to recommend a single building configuration for these (now) separate structures

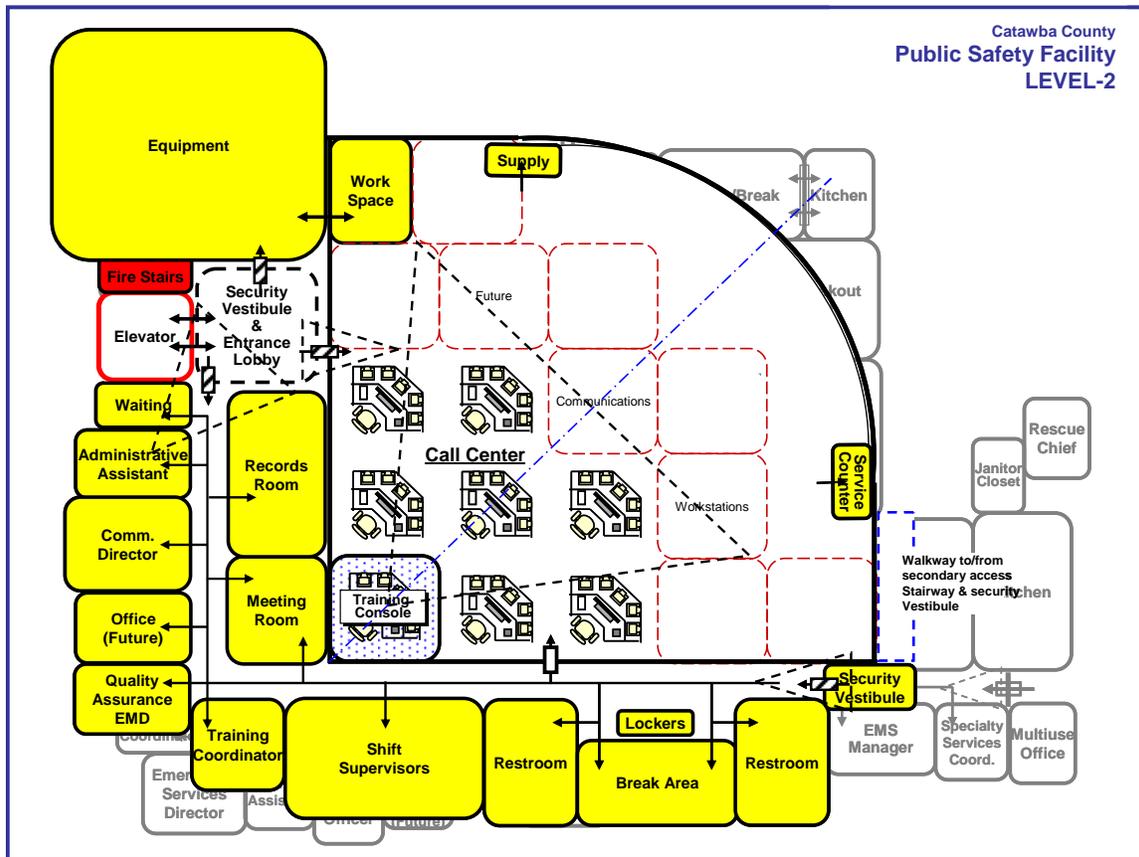
LEVEL 2- NEW PUBLIC SAFETY FACILITY

The space list for the 911 Communications Center (Level 2) follows. The two Adjacency Diagrams that follow the list refer first to the Communications Center itself and second, to the Communications Center’s suggested orientation and relationship to the Level below.

COMMUNICATIONS CENTER

Area/Space	# Persons per Area	No. of Areas	NSF per Area	Total NSF
Common Entry				
Staff/Service Entrance/Exit	4	1	120	120
Secondary Egress/Fire Stairs	6	1	120	120
WITHIN Call Center				
Secure Entrance Vestibule	2	1	60	60
Call Center	1	16	175	2800
Supervisor	2	1	120	120
Small Supply	1	1	40	40
Service Counter	2	1	40	40
NOT within Call Center				
Administrative Assistant	3	1	120	120
Waiting Area	4	1	80	80
Administrator	4	1	175	175
Office (Future)	3	1	135	135
Supervisor's Office	4	1	320	320
Training Officer	3	1	120	120
Quality Assurance/EMD	3	1	120	120
Data/IT Service/Work Space	1	1	100	100
File/Records Room & Gen. Storage	2	1	200	200
Small Meeting Room	8	1	180	180
Break Room	4	1	160	160
Restrooms	4	2	225	450
Lockers	4	1	175	175
Equipment Room	3	1	800	800
Total NSF				6,435





Area Required for Development

The major structure will be the Public Safety Center itself consisting of Emergency Services, the EOC, EMS Administration, and the EMS-Rescue Base on level one, with the 911 Communications Center on level two.

Outbuildings will include a Central Storage & Base Medical Supply facility and an Emergency Incident Response Vehicle Garage.

An 80 vehicle parking area is suggested adjacent the EOC and is based upon a full (federal/State) level activation with up to 60 personnel on site in addition to approximately 20 Emergency Services-Communications-EMS on-duty staff vehicles.

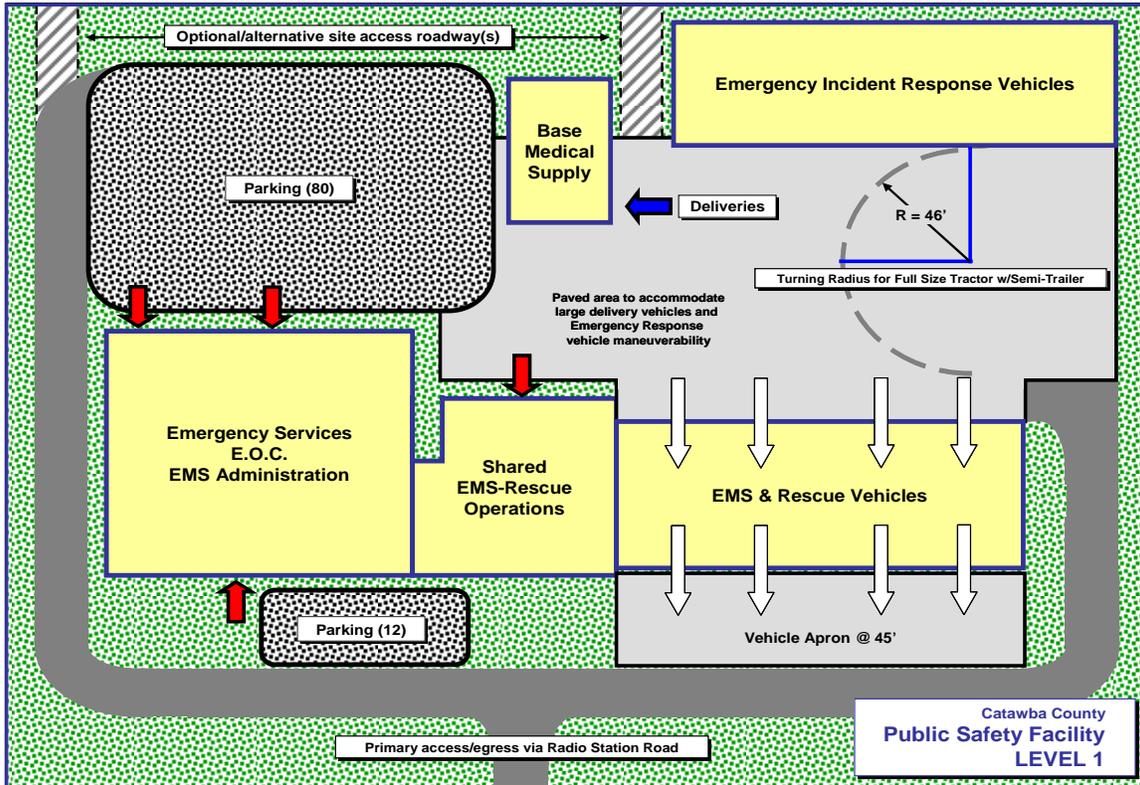
Including paved parking for visitors and users of the facilities, appropriate vehicle turn-arounds, vendor vehicles, emergency vehicle site access and egress roadways, and with at least nominal consideration of planted and/or appropriate “green” spaces, the total land area required is estimated at 176,760 square feet or, approximately four (4) acres.

Location

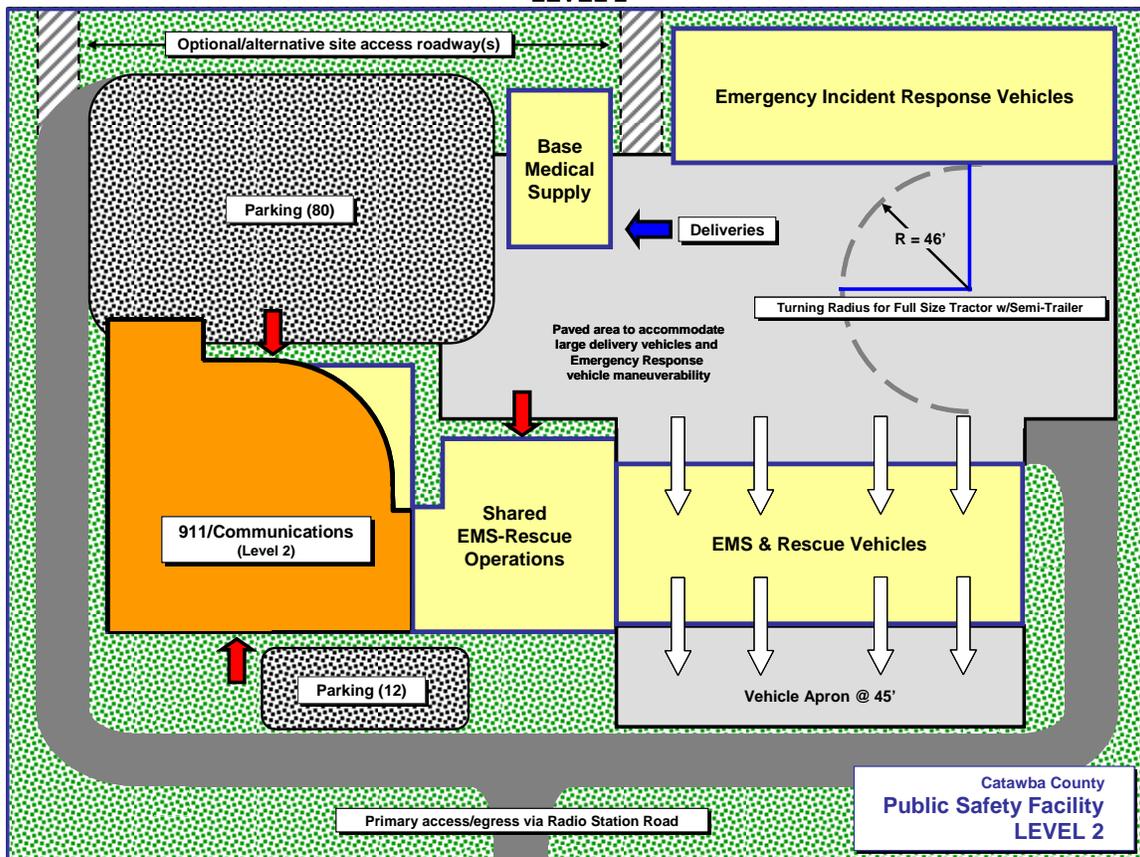
An 8-acre site located behind and to the west of the new Detention Center and north of the County Maintenance Garage has been proposed. It is County owned property and is directly accessible to Radio Station Road via a new roadway that currently services the Detention Center.

The site is heavily wooded and judging from available topographic information slopes to the north and west from the upper portion of the site (near the Maintenance Garage and Detention Center). The noted grade differential does not appear severe or as though it would hinder development of the site for the Public Safety Facility.

**Public Safety Facility Site Concept
LEVEL 1**



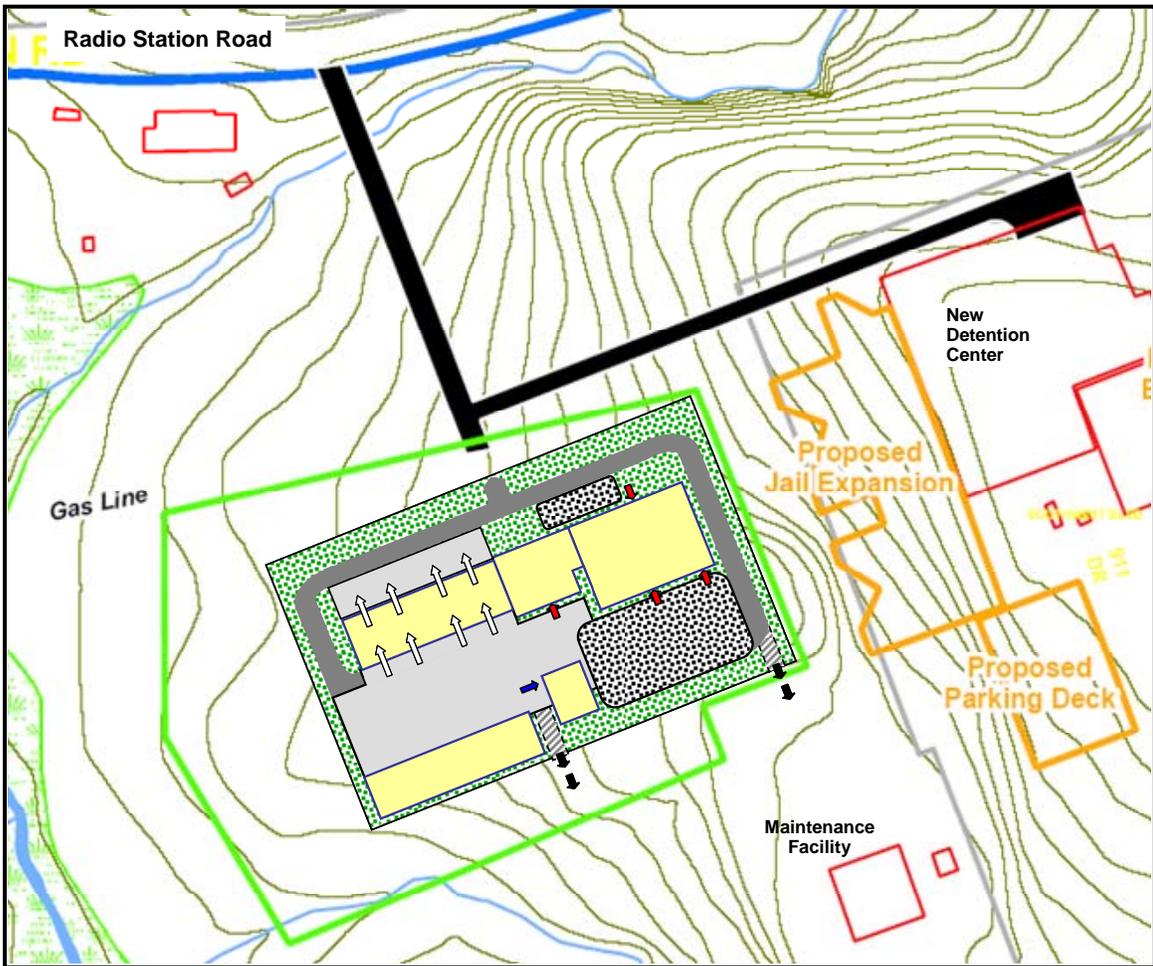
**Public Safety Facility Site Concept
LEVEL 2**



The illustration that follows places the previous site concept and building diagram on the referenced site, thus suggesting building locations and general orientation on the property. It is significant to note that the placement as shown, offers at least two options for an alternate, and very necessary, secondary means of access to and from the site by emergency vehicles; (refer to black arrows).

Of course once the buildings are designed, soil samples taken and analyzed and appropriate civil engineering completed, the configuration of the building(s) on the site may vary from the illustrated concept. It is safe to assume, however, that the suggested site is of adequate size and shape and will have very good access to and from major roadways in the area.

Figure 49
Proposed Public Safety Facility Site & Building Concept



SECTION 3. PROBABLE COSTS

This Section addresses the probable costs of the various recommended phases of development including both the Justice Center and the Public Safety Facility.

It is important to distinguish at this point that the Justice Center numbers with regards to the recommended square footage of building area are “needs assessment” level estimates based upon the general analyses of needs identified.

The Public Safety Center and its included spaces and functions on the other hand have been discussed and the various building areas calculated based upon considerably more information and subsequent detail; i.e. a “facility program” level of study. The space lists on pages 40-42 and 47 (unlike the estimates for the Justice Center) offer itemized lists of specific spaces and are followed by likewise detailed adjacency diagrams related to *how* all of the included spaces will and should work together.

While the “New Construction Development by Phase & Probable Costs” table illustrated in the Executive Summary (page 12) and later in this Section identifies the total “Area GSF” (gross square feet of building to be constructed) for the Justice Center and the Public Safety Facility, the basis for the “Area GSF” that is listed for the Public Safety Center was calculated based upon application of the previously discussed multipliers (Efficiency Factors) to the *itemized* summary calculations of the detailed NSF calculated for each major building component as follows:

**Figure 50
Basis of Total Building Area Calculations for Public Safety Center**

Area	Area NSF	Area Multiplier	Area GSF	Building Multiplier	Total Bldg. GSF	Total Area GSF Subtotal
Emergency Services						
Emergency Services-Administration	5,780	1.30	7,514	1.20	9,017	
Emergency Operations Center (EOC)	4,300	1.30	5,590	1.20	6,708	
EMS-Rescue Operations	4,475	1.30	5,818	1.20	6,981	22,706
Vehicles & Supply						
EMS-Rescue Vehicles & Garage	11,200	1.00	11,200	1.20	13,440	
Central Storage & Base Medical Supply	2,420	1.30	3,146	1.20	3,775	
Emergency Incident Vehicle Garage	9,500	1.00	9,500	1.15	10,925	28,140
Communications Center						
Administration & Call Center	6,435	1.30	8,366	1.20	10,039	10,039

In turn, the cost per square foot calculated for each building varied as well based upon the function(s) it was planned to provide. While the Base Construction Costs for the Emergency Services and Communications components of the Public Safety Center are included in Figure 52 on the next page, the “Vehicle and Supply Building” costs were grouped as one total. The breakdowns of those costs are:

**Figure 51
Breakdown of Vehicle & Supply Building Costs**

Area	Area NSF	Total Bldg. GSF	Est. Cost per GSF	Building Base Construction Cost
Vehicles & Supply				
EMS-Rescue Vehicles & Garage	11,200	13,440	\$ 115	\$ 1,545,600
Central Storage & Base Medical Supply	2,420	3,775	\$ 115	\$ 434,125
Emergency Incident Vehicle Garage	9,500	10,925	\$ 85	\$ 928,625

As suggested, three (3) major phases of development are recommended for new construction of the suggested Justice Center building additions and for the new the Public Safety Center. These phases and their corresponding total building area, unit costs, and total estimated base construction costs are provided in the table that follows.

All costs identified are for building construction only and are as of “**summer 2008**” and *do not consider inflation* to the yet to be determined future bid dates of construction.

**Figure 52
New Construction Development by Phase & Probable Costs**

PHASE 1-IMMEDIATE-District Court Expansion

Area	Building Level	Area GSF	Unit Cost	Base Const. Cost
District Court	First	23,400	\$ 225	\$ 5,265,000
District Court	Second	23,400	\$ 225	\$ 5,265,000
				\$ 10,530,000

PHASE 1-IMMEDIATE-Public Safety Center

Area	Building Level	Area GSF	Unit Cost	Base Const. Cost
Emergency Services	First	22,706	\$ 170	\$ 3,859,586
Vehicles & Supply	First	28,140	\$ (*)	\$ 2,908,350
Communications Center	Second	10,039	\$ 185	\$ 1,857,141
				\$ 8,625,077

PHASE 2-NEAR TERM-Clerk of Court & Superior Court Expansion

Area	Building Level	Area GSF	Unit Cost	Base Const. Cost
Clerk of Court	First	20,154	\$ 225	\$ 4,534,650
Superior Court	Second	20,154	\$ 225	\$ 4,534,650
				\$ 9,069,300

PHASE3-FUTURE-Sheriff & District Court Support Expansion

Area	Building Level	Area GSF	Unit Cost	Base Const. Cost
Sheriff	First	26,331	\$ 185	\$ 4,871,235
District Court	Second	5,814	\$ 185	\$ 1,075,590
				\$ 5,946,825

(*) NOTE: “Vehicles & Supply” under the “Area” heading includes three (3) buildings wherein the costs per square foot varied depending upon the type of building and its intended use. The breakdown of those costs is included in Figure 51 on the previous page.

Associated Costs

In addition to the costs cited for new construction various other costs associated with the development suggested should be anticipated as well. Most notable of course will be renovation costs within the Justice Center as moves and changes occur. Also, there will be project related costs pertaining to architectural and engineering fees, site development, materials testing, contingencies, etc. As well, it is very likely that interim or temporary facilities will need to be built or otherwise provided to continue to accommodate both staff and public visitors in space that gets interrupted or changed during construction. Last, must be consideration of parking options and the associated costs for either temporary or permanent construction of additional parking space or facilities

Renovation Costs

Based on the figures provide in Figure 2, the District Attorney and the Register of Deeds are to get 5,515 and 3,007 SF respectively of new renovated space within the existing Justice Center. That is space in addition to that which they already occupy. In each case neither office is slated to get “new” space; i.e. newly constructed space, but rather assume additional space adjacent to where they each already are. The space they will assume is currently occupied by others that use it differently than the District Attorney or Register of Deeds will. Renovations will be required. The probable costs of those renovations (without the benefit of a detailed Facility Program) are estimated in summer 2008 dollars and *do not include inflation* to yet to be determined construction bid dates.

**Figure 53
Renovation Costs-A**

Agency	Renovation Area/GSF	Unit Cost	Total Cost
District Attorney	5,515	\$ 60	\$ 330,900
Register of Deeds	3,007	\$ 60	\$ 180,420

Of course the second type of renovation (and renovation cost) will occur in areas where the referenced agency will, in addition to getting major new space, also retain use of their existing space. Inevitably, the combination of old and new space will require that at least a portion of the old space be re-worked to coincide effectively with the new. Examples of these types of renovation costs will occur following the development of the new space for the Clerk of Court and for the Sheriff's Office. Again, costs are in summer 2008 dollars and *do not include inflation* to yet to be determined construction bid dates.

**Figure 54
Renovation Costs-B**

Agency	Existing Space	Portion Renovated	Unit Cost	Total Cost
Clerk of Court	8,523	4,262	\$ 45	\$ 191,768
Sheriff	15,628	7,814	\$ 45	\$ 351,630

The costs identified in Figures 52, 53, and 54 are estimates of probable costs based on the total facility square footage identified in this document. Depending upon the urgency given these projects by the County, it could be as long as a year before design is completed and the first project is bid for construction; i.e., Summer 2009.

With this in mind, it should be anticipated that construction costs will more than likely be higher than those being experienced currently. It is recommended that the County require a detailed construction cost estimate of the architect once he/she has completed Design Development phase drawings and an anticipated construction bid date can be established.

Project Costs

The table that follows includes two major sub-headings for which there are dollars/costs identified. These sub-headings are *Construction Costs* and *Project Related Costs* and are described as follows:

Construction Costs are based on projected unit cost per square foot times the total gross square feet identified for the building. The construction costs per square foot identified are based on both the consultant's data base of similar projects as well as various national publications regarding cost indexing for these types of facilities.

Once again, these numbers, both the total square feet and the cost per square foot, are likely to change somewhat as the details of the project are further refined during design development.

Site Development costs become important because together with the base construction cost, they comprise the *Total Construction Cost* upon which various other project related fees are based; for example design fees and contingency set asides.

At the same time site development costs cannot be allocated a flat or simple formula or percentage of the estimated cost of construction because there are many variables that will come into play. For example, the site development costs for the suggested Phase 1 development at the Justice Center should be quite reasonable in that surface parking is and will continue to be available during construction, utilities are readily available and from all appearances site grading in preparation for construction should be minimal. With an estimated base construction cost for Phase I of \$10,530,000 and a site development allotment of say 2-3% of that amount, the site costs *could* be estimated at perhaps \$210,600 to \$315,900.

On the other hand, the site recommended for the Public Safety Facility (Phase 2) is heavily wooded and essentially undeveloped. It will require the extension of utilities and most likely considerably more grading and paving than that of Phase 1. In this instance it would be safer at this point to suggest that \$200,000 an acre be budgeted for site development; i.e. if 3 acres of the 8 available are developed: \$600,000; or in this case, approximately 5.7% of the base construction cost of the building.

Of course these are program level estimates and do not carry the weight of an engineering evaluation and the incorporation of specific civil and site design requirements.

Project Related Costs are provided as general estimates at this time of the various but commonly occurring project related expenses not otherwise included in the building or site construction cost categories. The figures included are intended to give the County a general idea of what to expect and budget for with regards to professional design fees, reimbursable project expenses, materials testing, site surveys, soils testing, required contingencies, and furnishings and equipment not otherwise provided by the contractor.

At this level of project planning, these costs are typically projected as a percentage of the total construction costs identified and will typically vary between 16-22%. While

these costs are typically a product of the size and complexity of the project undertaken, significant categories of these costs are also discretionary as far as the County is concerned; specifically amounts allocated for the contingency maintained, amount spent on furnishings, negotiation of design fees, etc.

The following table illustrates a means of estimating and formatting the construction and project related costs for a major building project. While *it is an example*, the format can be repeated with some variation, for each phase or project undertaken. The example addressed is the recommended Phase 1-District Court Expansion.

Figure 55
Phase 1-District Court Expansion
Estimated Total Construction & Project Related Costs

Construction Costs	GSF	\$/SF	Est. Cost
Phase 1-District Court Expansion	46,800	\$ 225.00	\$ 10,530,000
Site Development		2%	\$ 210,600
Sub-Total Construction Costs:			\$ 10,740,600
Project Related Costs			
		Percent/Amt.	Est. Cost
Programming		0.5%	\$ 53,703
Design Fees		7%	\$ 751,842
Furnishings & Equipment		4%	\$ 429,624
Reimbursable Expenses		est. Lump Sum	\$ 30,000
Contingencies		5%	\$ 537,030
Sub-Total Project Related Costs:			\$ 1,802,199
TOTAL PROJECT COST			\$ 12,542,799

Interim or Temporary Facilities

Often times these costs can not be identified until pre-architectural facility programming is underway. A notable example in this instance will be the Sheriff’s Office. Currently, the main entrance faces east and is directly in front of the area identified for the District Court Addition, identified as the first phase of development. Yet, the Sheriff’s Office expansion is not scheduled to occur until Phase 3. A new, albeit temporary, main entrance will need to be provided for the Sheriff’s Office; most likely on the south side of the building. This in turn will require re-working of the current space to the extent that the new “temporary” space will be able to accommodate the public and staff until the new “permanent facility addition is developed.

Upon review of the construction drawings of the Sheriff’s Office current space, it is conceivable that the square footage required to provide an appropriate entrance and the accompanying internal changes that would need to occur within the building could require an as much as an additional 2,000-3,000 GSF. Depending upon the amount of that space that is new construction versus renovation of existing space; and the manner in which it might be incorporate into the Phase 1 design and construction schedule; the additional cost of construction alone could range from \$300,000-\$600,000.

The Facility Program that is developed for the District Court Expansion should include study and recommendations as to how the “re-work” and addition of the Sheriff’s current space would be accomplished.

Parking Costs

The Justice Center proposed site development concept first presented on page 5 of the Executive Summary included a Parking Deck at the back (west) of the current Justice Center. The thought being, that once completed, Phases 1, 2, and 3 will consume considerable amounts of existing surface parking area. Also, that with expanded facilities there would be even more visitors to the site, which in turn would increase the demand for parking. Looking at the existing Justice Center-Government Center complex there did not appear to be an equivalent amount of relatively flat area available for expanding parking capacity; thus, the proposal; albeit *long-term proposal*; for a Parking Deck.

The basis for it being located at the back of the Justice Center was that separate, secure and limited access “staff only “ parking could then be provided with perhaps direct connection to the upper level of the Justice Center from the Parking Deck.

The remaining surface areas available on the complex could be developed wherever convenient to accommodate the long term visitor parking requirements anticipated.

The two tables that follow identify the estimated probable costs of both a 2-level/192 space, and a 3-level/288 space parking deck.

Note: Once again the costs identified are in summer 2008 dollars and *do not* anticipate inflation to any future date. Particularly since the Parking Deck, once the site is reengineered to accommodate the building additions suggested, may not be needed any time soon. The illustrated garage/deck areas with their associated vehicle numbers are provided as an option for consideration when the long-term parking requirements of the site are studied.

Figure 56
Estimated Cost-2 Level-192 Space Parking Deck

Parking Option-A

Area	Number of Levels	Total Vehicles	Area GSF	Unit Cost per GSF	Base Const. Cost
Parking Deck	2	192	70,000	\$ 75	\$ 5,250,000

Estimated Cost-2 Level-192 Space Parking Deck

Figure 57
Estimated Cost-3 Level-288 Space Parking Deck

Parking Option-B

Area	Number of Levels	Total Vehicles	Area GSF	Unit Cost per GSF	Base Const. Cost
Parking Deck	3	288	105,000	\$ 72	\$ 7,560,000

SECTION 4. PROJECT SCHEDULING

Inevitably a factor in the long-term planning of these development phases will be **time** and the associated schedules for development each will require.

The table that follows identifies the estimated time frames for each major phase of time associated with each project. These development phases include:

- Facility Programming
- Architectural & Engineering Design
- Bidding
- Construction

In addition to the project phases identified in Figure 58, the County should also anticipate, *for each building*, a **transition period** of at least three (3) to four (4) weeks following completion of the construction and acceptance of the building from the contractor.

Figure 58
Estimated Project Schedule of Time Requirements

PHASE 1-IMMEDIATE-DISTRICT COURT EXPANSION	
Facility Programming	3-4 months
A&E Design	13-14 months**
Bidding	4-6 weeks
Construction	12-14 months
PHASE 1-IMMEDIATE-PUBLIC SAFETY FACILITY	
Facility Programming	n/a*
A&E Design	10-11 months**
Bidding	4-6 weeks
Construction	9-10 months
PHASE 2-NEAR TERM-CLERK OF COURT & SUPERIOR COURT EXPANSION	
Facility Programming	2-3 Months
A&E Design	12-13 months**
Bidding	4-6 weeks
Construction	12-14 months
PHASE 3-FUTURE-SHERIFF'S OFFICE EXPANSION & DISTRICT COURT SUPPORT	
Facility Programming	2-3 Months
A&E Design	9-10 months**
Bidding	4-6 weeks
Construction	8-9 months

NOTE: * Section 2 of this report represents the Facility Program for the Public Safety Facility
 ** The time allotted for "A&E Design" includes project advertisement, selection of architect, and negotiation of the contract.

SECTION 5. OPTIONS

In evaluating both the costs and the time involved in implementing the building recommendations included in this report the County may wish to consider several options that *may* offer opportunities to save time or money depending upon the priorities for development that are ultimately agreed upon.

1. Availability of Space Elsewhere

Court facilities are complex buildings. Circulation within a courthouse, access and egress issues, security and the management of public, staff and “secure” populations is simultaneously a planning, design, **and** operational challenge. That does not mean that certain courts related activities or even certain types of court proceedings themselves could not occur, at least on a temporary basis, elsewhere; i.e. at a location other than within the current Justice Center.

1.a The large courtroom in the Historic Courthouse in Newton is available now

- It has been well preserved and maintained
- It has considerable seating capacity
- Ancillary/support spaces are adjacent and available
- ADA requirements can be accommodated via the elevator
- The County already owns the building
- It is essentially “across the street” from the current Justice Center

1.b Adaptive reuse of existing buildings

For example the County was recently invited to look at vacant space in a former “box store” relatively close to the current Justice Center. It was a large facility, of two adjoining sections of approximately 40,000 and 20,000 square feet. The building appeared to be in relatively good shape and had adjacent parking for approximately 200 vehicles.

Advantages

- The space is available now
- It could be up-fitted to suite the needs of
 - ✓ District Court support staff and programs
 - ✓ Agencies currently in the Justice Center recommended for relocation
 - ✓ Courtrooms-for non-criminal proceedings
- Parking

Disadvantages

- It appears the owner is not interested in selling the property, which likely will bring into question and subsequent discussions the benefit of leasing vs. buying or building.
- Investing considerable funds towards establishing another “satellite” Court related function, regardless of how close it is to the Justice Center, would essentially repeat the inefficiencies already experienced with the Hickory Courthouse.
- There is no vehicle access at the back of the building and no means of providing it due to property lines and existing physical site conditions.

- Without a thorough engineering and systems evaluation, the costs to renovate the building to meet the functional, facility, and security concerns common in Courts spaces anywhere cannot be determined. Conceivably square foot costs could vary by as much as \$100 dollars per square foot depending upon the building and operational needs identified, despite the availability of the existing super structure.
- Due to the age of the structure, testing for lead, asbestos, and site/property environmental conditions would be required prior to occupying the building.
- In short; the time and efforts required to renovate this building for the purposes identified **would not be a prudent use of tax dollars.**

2. Combining Projects

District Court, Emergency Communications, the EOC, and the Clerk of Court have serious needs NOW.

Considered in sequence, the projects and time frames depicted in Figure 58, could easily take 5-6 or more years to complete.

Combining projects would certainly save time; however, in some instances it may also actually save money:

- For the obvious reason that money doesn't get any "cheaper" over time
- Economies of scale may go into effect as re: unit costs and single versus multiple overhead and profit calculations by contractors
- Contractor costs, which are passed on to the owner, for materials storage and equipment staging could be reduced

3. "Shell Space"

The proposed Justice Center Development, "All Phases" diagrams, first illustrated on page 6 of the Executive Summary show future Sheriff's Office space on Level 1 and a much smaller area for District Court Support expansion on Level 2.

According to Figure 12 (page 12) the Level 1 footprint of the Sheriff's proposed space is to be 26,331 square feet. The District Court Support expansion footprint on Level 2 is proposed to be 5,814 square feet. The remaining "roof space" above the Sheriff's Office once the District Court Support expansion space is completed would be approximately 20,500 square feet.

Why not shell in the remaining space at the time the addition is being built to allow for future expansion or additional needs that may arise in the future?

- The completed two-level addition would blend well with the magnitude and context of the expanded Justice Center.
- "Shell-in" costs would not be as expensive at the time of original construction as they would be later-when the space is needed.
- Once shelled, the space, would be relatively easy to up-fit without interruption of work in adjacent offices
- Up-fitting the shelled space would be much less expensive than building an entirely new building.

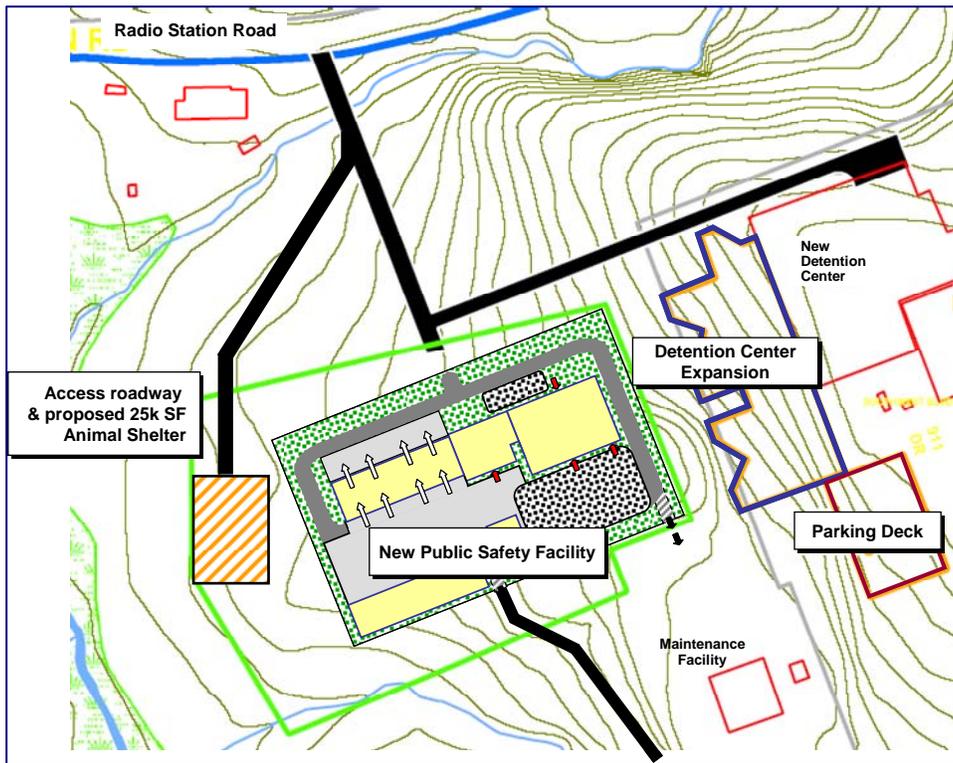
4. Parking

The Justice Center-Government Center complex does offer some opportunities for the expansion of surface parking areas. In some cases, although few, parking spaces furthest from the building are frequently empty now.

Subsequently, the Parking Deck discussed on pages 56 is just that, an “option” for consideration. Although as the new buildings come on line vehicle traffic and parking needs will increase. In addition, the original suggestion to develop and locate a parking deck at the back of the existing Justice Center was prompted by expressed concerns for staff safety, vehicle security, and building accessibility by Court staff, Sheriff’s Office personnel, and as needed secure access for crime victims and perhaps witnesses.

The turn-around time for the construction of a Parking Deck, including design and construction could vary considerably depending on any number of factors; however, for the 2-level facility described, 12-15 months should be anticipated.

Figure 59
20-Year Accessibility & Collocation Concept for Public Safety Site



APPENDIX

- **Public Safety Facility Detailed Space Lists**
- **Supplemental Public Safety Facility Adjacency/Space Concept Diagrams**