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PART I.

UNDERGRADUATE THESIS IN ARCHITECTURAL DESIGN

BY

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ZONING ORDINANCE

INTRODUCTION

INTRODUCTION

HISTORY: A HISTORY OF YMCA FUNCTIONS: GYMNASIUMS, LIBRARIES, THEATERS, SHOPS, AND BATHS. THE BATHS

WITH THE ADVENT OF CIVILIZATION, THE HUMAN PROVIDES COMPLETE FACILITIES FOR A LITERARY LEISURE BEING HAS DEVELOPED IN THREE FUNDAMENTAL DIRECTIONS: IN VIGOROUS EXERCISE AND GAMES, BOTH FOR THE HIS SPIRIT, MIND, AND BODY. HE DEVELOPED HIS BODY IN RITUAL OF HIS BATHS. ALL OF THIS IN AND AMONGST GREAT ORDER TO SERVICE IN A HOSTILE AND HARSH ENVIRONMENT, WORKS OF ART. HE DEVELOPED HIS MIND, THE MOST WONDERFUL GIFT OF GOD, THE LINK BETWEEN THE MIND, SPIRIT AND BODY WAS AND RULED THE WORLD BY VIRTUE OF HIS POWER TO REASON. BECOMES THE BASIS OF THE YOUNG MEN'S CHRISTIAN ASSOCIATION AND HE DEVELOPED A SPIRITUAL AWARENESS, THE IDEA OF CIVILIZATION, BETTER KNOWN AS THE YMCA OF THE YEAR, PROVIDED GOD AND THE ALL POWERFUL.

AS A RESULT OF THE PRESSURE OF THE MODERN CITY, WHOSE DIRTY AND UNHEALTHY ENVIRONMENT WAS APPALLING TO THE RECOGNIZED BY THE ANCIENT GREEKS WHO DEVELOPED THE NUMEROUS YOUNG MEN WHO HAD COME TO THE CITY FROM THE BASIS FOR WESTERN CIVILIZATION. IN THE EAST, OTHER COUNTRY, WHERE LIFE WAS STRONGLY RELATED TO THE FAMILY CULTURES SUCH AS THE HINDER TOGO INCORPORATE CONTROL AND CHURCH, AN OPEN AIR ENVIRONMENT FULL OF MUSCULAR OF THEIR BODY BY THE MIND AS PART OF THEIR RELIGION. ACTIVITY, THE YMCA SOUGHT TO FULFILL THE GAP IN THE YOUNG

THE ROMAN BATHS PROVIDE A CLASSIC EXAMPLE OF THE MEN'S LIFE. FOUNDED ON JUNE 8, 1844 BY GEORGE WILLIAMS, DEVELOPMENT OF THE MIND AND BODY IN AN ARCHITECTURAL A CLERK, THE YMCA WAS A RELIGIOUS MOVEMENT OF LAYMEN SETTING. AT THE BATHS THE ROMANS LEARNED TO ADMIRE ORGANIZED FOR THE PURPOSE OF HOLDING RELIGIOUS SERVICES PHYSICAL CLEANLINESS, USEFUL SPORTS, AND CULTURE, THE AND BIBLE READING CLASSES.

GOAL BEING A HEALTHY MIND IN A HEALTHY BODY.

WITHIN THE NEXT DECADE, THE "Y" SPREAD ALL OVER PROVIDED BY PHILANTHROPISTS AS PART OF THEIR EUROPE AND TO AMERICA, IN 1851 IN BOSTON. INITIALLY A PATERNOL ROLE IN THE EMPIRE, HUNDREDS OF BATHS WERE RELIGIOUS ORGANIZATION, IT RECOGNIZED THE PRINCIPLE THAT BUILT IN ROME ITSELF. CONSISTING OF HOT AND COLD SWIMMING MINISTERING TO THE NEEDS OF MAN IS ONE OF THE BEST WAYS TO

AND TUB BATHS, HEAT ROOMS, MASSAGE ROOMS, GYMNASIUMS, LIBRARIES, THEATRES, SHOPS, AND PLAYGROUNDS, THE BATHS PROVIDE COMPLETE FACILITIES FOR A CITIZEN TO ENGAGE IN VIGOROUS EXERCISE AND GAMES, THEN GO THROUGH THE RITUAL OF HIS BATH, ALL OF THIS IN AND AMONGST GREAT WORKS OF ART. THE LINK BETWEEN THE MIND, SPIRIT AND BODY HAS BECOME THE BASIS OF THE YOUNG MEN'S CHRISTIAN ASSOCIATION, BETTER KNOWN AS THE YMCA OR THE "Y". FOUNDED AS A RESULT OF THE GROWTH OF THE MODERN CITY, WHOSE DINGY AND UNHEALTHY ENVIRONMENT WAS APPALLING TO THE NUMEROUS YOUNG MEN WHO HAD COME TO THE CITY FROM THE COUNTRY, WHERE LIFE WAS STRONGLY RELATED TO THE FAMILY AND CHURCH, AN OPEN AIR ENVIRONMENT FULL OF MUSCULAR ACTIVITY, THE YMCA SOUGHT TO FULFILL THE GAP IN THE YOUNG MEN'S LIFE. FOUNDED ON JUNE 6, 1844 BY GEORGE WILLIAMS, A CLERK, THE YMCA WAS A RELIGIOUS MOVEMENT OF LAYMEN ORGANIZED FOR THE PURPOSE OF HOLDING RELIGIOUS SERVICES AND BIBLE READING CLASSES. COMMUNITY NEEDS AND INTERESTS. THUS WITHIN THE NEXT DECADE, THE "Y" SPREAD ALL OVER EUROPE AND TO AMERICA, IN 1851 IN BOSTON. INITIALLY A RELIGIOUS ORGANIZATION, IT RECOGNIZED THE PRINCIPLE THAT MINISTERING TO THE NEEDS OF MAN IS ONE OF THE BEST WAYS TO

PROMOTE HIS RELIGIOUS LIFE. CHRISTIAN LIFE DEMANDS THE DEVELOPMENT OF ALL HUMAN POWERS AND THEIR APPLICATION TO THE SERVICE OF GOD.

SINCE THE FIRST MEETING IN 1844 OF THE TWELVE YOUNG MEN WHO SOUGHT A MEETING PLACE OTHER THAN A SALOON, THE "Y" HAS SOUGHT TO DISCOVER THE NEEDS AND INTERESTS OF YOUTH AND ADULTS, AND TO FULFILL THEIR NEEDS. WORKING MEN WHO HAD BEEN DENIED THE ADVANTAGES OF SCHOOLING NEEDED FURTHER TRAINING, SO THE "Y" DEVELOPED NIGHT SCHOOLS, FOR BOYS WHO HAD TOO MUCH SPARE TIME IN THE SUMMER. THE "Y" FIRST ORGANIZED SUMMER CAMPS. IT DEVELOPED THE GYMNASIUM AS A RESULT OF THE NEED FOR MORE INDOOR RECREATION^{al} SPACE, AND IT INVENTED BASKETBALL AND VOLLEYBALL. IN ORDER TO SECURE THE GREATEST COMMUNITY SERVICE, THE "Y" HAS HELPED MEET THE NEEDS OF RAILROAD MEN, NEGRO YOUTHS, URBAN AND RURAL CHILDREN, AND ADULTS. IT CO-FOUNDED THE U.S.O. AND HAS HELPED SERVICE MEN SINCE THE CIVIL WAR. ALL OF THIS WAS A RESULT OF COMMUNITY NEEDS AND INTERESTS. THUS EVERY YMCA IS DIFFERENT, NOT ALL HAVE SWIMMING POOLS, FOR EXAMPLE, OR EVEN SIMILIAR PROGRAMS.

ONE COMMUNITY DEFINED THE "Y" AS A CHRISTIAN EDUCATION ENTERPRISE. ITS EXTENT IS WORLD-WIDE. ITS

MAJOR SERVICE IS WITH YOUTH. ITS IDEALS AND PURPOSES ARE BASED UPON THE TEACHINGS OF CHRIST AND FIND EXPRESSION IN PROGRAMS INTENDED TO DEVELOP PHYSICAL FITNESS AND SKILL, ACTIVE AND INFORMED MINDS, REGARD FOR THE RIGHTS OF OTHERS, APPRECIATION AND EXPRESSION OF CULTURAL VALUES, UNDERSTANDING AND USE OF RELIGION IN DAILY LIFE, VOLUNTEER SERVICE TO A SOCIETY BEYOND REGULAR VOCATION, INTELLIGENT PARTICIPATION IN ADVANCING SOCIAL JUSTICE, BALANCED LIVING--MENTALLY, PHYSICALLY, SOCIALLY, AND SPIRITUALLY.

ORGANIZED IN 80 COUNTRIES, WITH A MEMBERSHIP OF OVER 4 MILLION, THE YMCA OFFERS 7 BASIC GOALS TO HELP ITS MEMBERS:

1. TO DEVELOP SELF-CONFIDENCE AND SELF-RESPECT AND AN APPRECIATION OF THEIR OWN WORTH AS INDIVIDUALS.

2. TO DEVELOP A FAITH FOR DAILY LIVING BASED UPON THE TEACHINGS OF JESUS, THAT THEY MAY THEREBY BE HELPED IN ACHIEVING THEIR HIGHEST POTENTIAL OF CHILDREN OF GOD.

3. TO GROW AS RESPONSIBLE MEMBERS OF THEIR FAMILIES AND CITIZENS OF THEIR COMMUNITIES.

4. TO APPRECIATE THAT HEALTH OF MIND AND BODY IS A SACRED GIFT AND THAT PHYSICAL FITNESS AND MENTAL WELL-BEING ARE CONDITIONS OF WHICH TO ACHIEVE AND MAINTAIN.

5. TO RECOGNIZE THE WORTH OF ALL PERSONS,
AND TO WORK FOR INTERRACIAL AND
INTERGROUP UNDERSTANDINGS.
6. TO DEVELOP A SENSE OF WORLD-MINDEDNESS,
AND TO WORK FOR WORLD-WIDE UNDERSTANDING.
7. TO DEVELOP THEIR CAPACITIES FOR
LEADERSHIP AND USE THEM RESPONSIBLY IN
THEIR OWN GROUPS AND IN COMMUNITY LIFE.

THE YMCA IN A LAY CHRISTIAN ORGANIZATION OF
MEMBERS, LOOSELY KNITTED TOGETHER BY AREA AND NATIONAL
COMMITTEES; EVERY COMMUNITY YMCA IS OWNED, OPERATED, AND
DIRECTED BY RESPONSIBLE MEMBERS OF THE COMMUNITY,
WHO ARE ALSO RESPONSIBLE FOR RAISING FUNDS, ETC. THIS
ALLOWS ADAPTABILITY TO LOCAL CONDITIONS, THE FREEDOM TO
EXPERIMENT, AND THE OPPORTUNITY TO INITIATE. THE LIGHT-
HOUSE YMCA IN TUCSON IS SUCH AN EXAMPLE, BEING THE FIRST
FAMILY CENTERED YMCA. SEVEN BASIC GROUPS OF ACTIVITIES ARE CARRIED OUT
BY THE "Y". THEY ARE:

1. CLUBS AND GROUPS--THE HI-Y, Y'S
MEN'S CLUB ALL SELF-GOVERNING
GROUPS WITH QUALIFIED CHRISTIAN
LEADERS.

2. CLASSES AND INSTRUCTION--LOCAL
COMMUNITY INTERESTS DETERMINE THE
NEED, INCLUDES GYM CLASSES TO
SPANISH CLASSES TO DANCING CLASSES.

3. HEALTH, PHYSICAL EDUCATION, AND RECREATION--THE PROVISION OF ORGANIZED CLEAN SPORTS AND GOOD TIMES FOR ALL.
4. PERSONAL COUNSELING--MARRIAGE COUNSELING--THE SOLVING OF SPECIAL PROBLEMS.
5. SPECIAL EVENTS--THE FATHER AND SON BANQUET, YOUTH WEEK ACTIVITIES, COMMUNITY INTEREST EVENTS.
6. CO-OPERATIVE PROJECTS-- PLANNING WITH SCHOOLS, CHURCHES, ETC. FOR PROJECTS OF WIDE INTEREST AND VALUE, SUCH AS A VOTER'S FORUM, LEARNING-TO-SWIM CAMPAIGNS, ETC.
7. INTER-ASSOCIATION EVENTS--PARTICIPATION IN AREA AND NATIONAL CONVENTIONS TO KEEP ABREAST OF PROBLEMS AND NEW TECHNIQUES.

THE YMCA SEEKS NOT TO DEFINE CHRISTIANITY IN DOCTRINAL TERMS, BUT TO SEEK TO DEMONSTRATE WHAT IT MEANS TO BE A CHRISTIAN IN DAILY LIVING; THE PRIMARY CONCERN IS TO HELP THE INDIVIDUAL GROW IN INTEGRITY OF CHARACTER, STRENGTH OF PURPOSE, THE ABILITY TO LEAD, FAITH IN GOD, AND FRIENDLINESS AND GOODWILL TO OTHERS.

NO ONE IS BARRED FROM A "Y", THE HOPE BEING TO STIMULATE INTEREST IN THE PERSON'S OWN CHURCH BY THE DEMONSTRATION OF CHRISTIAN LIVING IN A CHRISTIAN SOCIETY. HOWEVER, POLICY MAKING DECISIONS ARE RESEARCHED IN THE

HANDS OF REPRESENTATIVE CITIZENS WHO BELIEVE IN THE PRINCIPLES OF JESUS CHRIST.

TRADITIONALLY, THE "Y" HAS BEEN FINANCED BY MEMBERSHIP FEES, DORMITORY UNITS, FOOD SERVICE, AND HEALTH CLUBS. IN ECONOMICALLY DEPRESSED AREAS, ADDITIONAL AID IS SUPPLIED TO LESS-CHANCE PERSONS BY CHARITIES.

WHILE THE PROGRAMS AND POLICIES OF THE YMCA ARE NUMEROUS AND OFTEN COMPLEX, THEIR OBJECTIVES REMAIN THE SAME--TO DEVELOP THE SPIRIT, MIND, AND BODY. IN ORDER TO DO THIS, CHANGE HAS BEEN IMPERATIVE, AS THE WORLD CHANGES, SO DOES THE "Y". THE "Y" MUST REACT TO THE BASIC CHANGES TAKING PLACE TODAY: THE POPULATION EXPLOSION, THE GROWTH OF URBANIZATION, THE DRIVE FOR EQUALITY AND RIGHTS AND OPPORTUNITIES, THE DEMAND FOR ECONOMIC IMPROVEMENT, THE KNOWLEDGE EXPLOSION, AND THE REBELLION OF YOUNGER PEOPLE AGAINST OLDER GENERATIONS. IT IS APPAR CHANGES ARE EVERYWHERE; THE CONCEPT OF THE "Y" BEING A BOY'S AND MEN'S FACILITY IS NEARLY OBSOLETE. WOMEN ARE JOINING THE EVER INCREASING NUMBERS WITH THE NEW EMPHASIS BEING ON THE FAMILY. THE "Y" MUST BE FLEXABLE ENOUGH TO PROVIDE SERVICES THE COMMUNITY REQUIRES. ANOTHER SIGNIFICANT CHANGE HAS BEEN IN THE COMING TOGETHER OF

OF SEVERAL COMMUNITY SERVICE GROUPS TO BUILD JOINT FACILITIES, THUS ELIMINATING WASTEFUL DUPLICATION. WHILE STILL A THOUGHT TO MANY PERSONS, THE EVENTUAL MERGER OF THE YMCA AND YWCA IS NOT TOO REMOTE. COOPERATION WITH LOCAL GOVERNMENTAL AGENCIES, THE SCOUTS, SCHOOLS AND CHURCHES WILL BECOME STRONGER IF THE NEED OF THE PEOPLE IS TO BE ADEQUATELY SERVED.

IN THE FUTURE, NEW NEEDS WILL ARISE, AND THE YMCA WILL ADAPT TO THE NEW SITUATIONS AND PROVIDE THOSE NEEDED SERVICES. AND IN THIS CHARACTERISTIC, HOPEFULLY, THE YOUNG MEN'S CHRISTIAN ASSOCIATION WILL NEVER CHANGE.

"GENERALLY SPEAKING, WORKING WITH THE FAMILIES IN THE YMCA WOULD BE CONCEIVED AS WORKING WITH INDIVIDUALS, FAMILY SEGMENTS OR TOTAL FAMILY UNITS IN WHICH THE DIRECT GOAL IS THE MORE EFFECTIVE FUNCTIONING OF THESE PERSONS IN ENRICHENING OR STRENGTHENING FAMILY LIFE." IT IS APPARENT, IN THIS DAY AND AGE, THAT THERE IS A NEED FOR THE YMCA AND THE YWCA, TO COMBINE, AND MAKE, FAMILY FACILITIES TO MEET THE NEEDS OF THE SUBURBAN COMMUNITY SPRAWLES, AND THIS IS THE INTENT OF THIS THESIS PROBLEM-- TO DESIGN A FAMILY SERVING AGENCY--OFFERING RECREATIONAL, EDUCATIONAL AND SPIRITUAL EXPERIENCES FOR ALL.

LOCAL CONDITIONS

INTRODUCTION

STRUCTURING AND IDENTIFYING THE ENVIRONMENT IS A VITAL ABILITY AMONG ALL MOBILE ANIMALS. MANY KINDS OF CUES ARE USED. THE VISUAL SENSATIONS OF COLOR, SHAPE, MOTION, OR POLARIZATION OF LIGHT AS WELL AS OTHER SENSES AS SMELL, SOUND, TOUCH, KINESTHESIA, SENSE OF GRAVITY, AND PERHAPS OF ELECTRIC OR MAGNETIC FIELDS. THESE TECHNIQUES OR ORIENTATION, FROM THE POLAR FLIGHT OF A BIRD TO THE PATH-FINDING OF A LIMPET OVER THE MICRO-TOPOGRAPHY OF A ROCK, ARE DESCRIBED AND THEIR IMPORTANCE UNDERSCORED IN AN EXTENSIVE LITERATURE. PSYCHOLOGISTS HAVE ALSO STUDIED THIS ABILITY IN MAN, ALTHOUGH RATHER SKETCHILY OR UNDER LIMITED LABORATORY CONDITIONS. DESPITE A FEW REMAINING PUZZLES, IT NOW SEEMS UNLIKELY THAT THERE IS ANY MYSTIC "INSTINCT" OF WAY-FINDING. RATHER THERE IS A CONSISTENT USE AND ORGANIZATION OF DEFINITE SENSORY CUES FROM THE EXTERNAL ENVIRONMENT. THIS ORGANIZATION IS FUNDAMENTAL TO THE EFFICIENCY AND TO THE VERY SURVIVAL OF FREE-MOVING LIFE. STRONGEST WHEN HOME IS NOT ONLY FAMILIAR BUT IN THE PROCESS OF WAY-FINDING, THE STRATEGIC LINK IS THE ENVIRONMENTAL IMAGE, THE GENERALIZED MENTAL PICTURE OF THE EXTERIOR PHYSICAL WORLD THAT IS HELD BY

AN INDIVIDUAL. THIS IMAGE IS THE PRODUCT BOTH OF IMMEDIATE SENSATION AND OF THE MEMORY OF PAST EXPERIENCE AND IT IS USED TO INTERPRET INFORMATION AND TO GUIDE ACTION. THE NEED TO RECOGNIZE AND PATTERN OUR SURROUNDINGS IS SO CRUCIAL AND HAS SUCH LONG ROOTS IN THE PAST, THAT THIS IMAGE HAS WIDE PRACTICAL AND EMOTIONAL IMPORTANCE TO THE INDIVIDUAL.

A VIVID AND INTEGRATED PHYSICAL SETTING, CAPABLE OF PRODUCING A SHARP IMAGE, PLAYS A SOCIAL ROLE AS WELL. IT CAN FURNISH THE RAW MATERIAL FOR THE SYMBOLS AND COLLECTIVE MEMORIES OF GROUP COMMUNICATION. A STRIKING LANDSCAPE IS THE SKELETON UPON WHICH MANY PRIMITIVE RACES ERECT THEIR SOCIALLY IMPORTANT MYTHS.

A GOOD ENVIRONMENTAL IMAGE GIVES ITS POSSESSOR AN IMPORTANT SENSE OF EMOTIONAL SECURITY. HE CAN ESTABLISH AN HARMONIOUS RELATIONSHIP BETWEEN HIMSELF AND THE OUTSIDE WORLD. THIS IS THE OBVERSE OF THE FEAR THAT COMES WITH DISORIENTATION; IT MEANS THAT THE SWEET SENSE OF HOME IS STRONGEST WHEN HOME IS NOT ONLY FAMILIAR BUT DISTINCTIVE AS WELL. IN THIS REPORT I WILL TRY TO DISCOVER THE NEEDS OF THE CITY OF TUCSON BY RESEARCH DATA OBTAINED FROM

REPORTS THAT HAVE BEEN WRITTEN AND FURNISHED BY THE CITY. MAIN SOURCES BEING FROM THE CITY PLANNERS, MODEL CITY OFFICE, AND URBAN PLANNERS OFFICE. IN TRYING TO KEEP FROM BEING BIAS AS TO WHAT MY FINAL DISCOVERY WILL BE FOR THE SITE, I AM GOING TO CONDENSE THESE REPORTS INTO WRITTEN AND GRAPHIC FORM TAKING THE INFORMATION DIRECTLY FROM THE SOURCE, AND WILL LIST THESE IN A BIBLIOGRAPHY. WHILE DOING THIS GENERAL RESEARCH THE NEEDS FOR THE SITE WILL COME ABOUT ITSELF. IT MUST BE UNDERSTOOD THAT ALL OF THE MATERIAL CAN'T BE CONDENSED IN THE TIME ALLOTTED. THEREFORE, THE MAIN SUBJECTS THAT I WILL RESEARCH TO BRING ABOUT THIS DISCOVERY IS:

SHAPI *TUCSON AND IT'S VISUAL ENVIRONMENT
LOCATED W *LAND USAGE ANTA CRUZ RIVER AND SOUTH OF
RILLITO CH *CIRCULATION BY FOUR MOUNTAIN RANGES THE
CITY IS SI *CBD'S GENERAL CONDITIONS 2,400 FEET ABOVE
SEA-LEVEL. *ECONOMIC ANAYLSIS AND PROJECTION SOLE
SOURCE I AM DOING THIS TYPE OF A RESEARCH SO THAT ANYONE
READING THIS SHOULD BE ABLE TO UNDERSTAND THE NEEDS
OF PIMA COUNTY AND MORE SO THE TUCSON AREA., AND THE
MISSION. THE WALLED PRESTID WAS ROUGHLY BOUNDED BY

TUCSON AND IT'S VISUAL ENVIRONMENT

A CITY IF IT IS TO IMPROVE MUST PROVIDE BOTH VISUAL ENJOYMENT AN DIVERSITY FOR ITS CITIZENS AND VISITORS, AND IT MUST PRESERVE THE BEAUTY OF ITS NATURAL AND HISTORICAL SETTING.

THE IMAGE OR MENTAL PICTURE THAT A CITIZEN HAS OF HIS CITY IS THE COMMON DENOMINATOR BY WHICH TO MEASURE ITS QUALITY.

FOR HIS IMMEDIATE ENVIRONMENT HOWEVER, EACH PERSON CONSTRUCTS HIS OWN MENTAL PICTURE OF THE PARTS OF THE CITY IN PHYSICAL RELATIONSHIP TO ONE ANOTHER. THIS MOSAIC OF MENTAL IMAGES HELD BY A LARGE NUMBER OF THE CITY'S INHABITANTS IS CALLED THE "PUBLIC IMAGE" OF TUCSON.

IN TUCSON'S SHAPING FORCES--THE SITE OF TUCSON WAS ORIGINALLY LOCATED WEST OF THE SANTA CRUZ RIVER AND SOUTH OF RILLITO CREEK, SURROUNDED BY FOUR MOUNTAIN RANGES THE CITY IS SITUATED AT AN ALTITUDE OF 2,400 FEET ABOVE SEA LEVEL. UNDER-GROUND WATER PROVIDES THE SOLE SOURCE OF WATER FOR THE COMMUNITY. MUNICIPAL AIRPORT IN THE TWO MOST SIGNIFICANT INSTITUTIONS OF SPANISH RULE WERE THE PRESIDIO OR MILITARY GARRISON, AND THE MISSION. THE WALLED PRESIDIO WAS ROUGHLY BOUNDED BY

PENNINGTON, CHURCH, WASHINGTON, AND MAIN STREETS. THIS AREA, THE HUB FROM WHICH THE CITY HAS GROWN, SET THE GENERAL LOCATIONS OF THE MUNICIPAL AND COUNTY GOVERNMENTAL OFFICES OF TUCSON AND TUCSON'S CENTRAL BUSINESS DISTRICT. TUCSON IS NOT SEEN UNTIL VERY CLOSE BY.

THE SOUTHERN PACIFIC RAILROAD REACHED TUCSON FROM THE WEST, AND BY 1882, CONNECTION WAS MADE WITH THE EAST, AND THUS TUCSON BECAME A MAJOR LINK IN THE NEW TRANS-CONTINENTAL SYSTEM. THE COMING OF THE RAILROAD WAS ACCOMPANIED BY INCREASED ACTIVITY IN MINING AND AGRICULTURE.

IN 1891 THE UNIVERSITY OF ARIZONA WAS ESTABLISHED IN TUCSON. THE GROWTH OF THE UNIVERSITY SPARKED THE DEVELOPMENT OF LAND IN ITS SURROUNDING AREA. THE NEED FOR STUDENT HOUSING RESULTED IN THE PRESENT, IS DENSITY OF MULTIPLE FAMILY AND APARTMENT TYPE UNITS THAT CHARACTERIZE THE AREA.

TUCSON ESTABLISHED THE FIRST MUNICIPAL AIRPORT IN THE UNITED STATES AT THE SITE OF THE PRESENT DAVIS-MONTHAN AIR FORCE BASE. THE BASE IS ONE OF THE MAJOR SOURCES IN INCOME IN TUCSON. OF ITS LOCATION IN THE RESPONDING TO THIS AREA.

SOUTHEASTERN SECTION OF THE TUCSON AREA IS HIGHLY RESPONSIBLE FOR THE SINGLE FAMILY RESIDENTIAL TRACT DEVELOPMENT OCCURRING PRIMARILY IN THE EAST. THE GENERATION OF EMPLOYMENT AT THE AIRPORT SPARKED RESIDENTIAL DEVELOPMENT IN THE MISSION MANOR AND ADJACENT AREAS.

VISUAL ELEMENTS--

1. PATHS: PATHS MAY BE STREETS, WALKWAYS, ALLEYS, RAILROADS AND OTHER CHANNELS ALONG WHICH AN OBSERVER MOVES. OTHER ENVIRONMENTAL ELEMENTS ARE ARRANGED AND RELATED ALONG THESE PATHS. SPEEDWAY IS ONE OF THE MOST INTENSIVELY TRAVELED PATHS IN TUCSON. FROM WILMOT TO COUNTRY CLUB ROAD, SPEEDWAY CREATES THE IMAGE OF A LINEAR DISTRICT. BROADWAY'S IMAGE FROM KOLB ROAD TO ALVERNON, IS THAT OF A PATH PUNCTILATED BY SINGLE AND IRREGULAR GROUPINGS OF BUILDINGS. CONCENTRATION OF MAJOR SHOPPING NODES ALONG BROADWAY ITS WIDENING AND LANDSCAPING IN RECENT YEARS AND ITS IDENTIFICATION AS THE MAJOR STREET LEADING INTO THE DOWNTOWN AREA GIVES IT PROMINENCE IN THE MINDS OF MOST CITIZENS RESPONDING TO THIS AREA.

AS A PATH, 22ND STREET'S MAJOR DISTINCTION IS ITS SECONDARY ROLE AS AN EDGE MOVING FROM SIDE TO SIDE. THE LARGE VACANT PARCELS, THE DEEP SETBACKS, AND DIFFERENT USES ON OPPOSITE SIDES OF THE PATH ARE THE ELEMENTS OF THIS EDGE. RESIDENTIAL AND COMMERCIAL BOARDER THE PATH FURTHER EAST.

GRANT ROAD HAS THE SAME VISUAL CHARACTERISTICS AS 22ND STREET.

2. EDGES: EDGES ARE LINEAR BREAKS IN CONTINUITY BETWEEN TWO KINDS OF AREAS. THEY MAY BE THE BOUNDARIES OR LIMITS OF DISTRICTS, RIVERS, ROADS, WALLS, RAILROAD CUTS. WHEN TWO DISTRICTS ARE JOINED AT AN EDGE THEY FORM A SEAM. BOTH THE FREEWAY AND THE RAILROAD TRACKS ARE

TUCSON IS CHARACTERIZED BY CLEARLY DISCERNIBLE AND VISIBLY IMPENETRABLE BARRIERS AT ITS EXTREMITIES AND VERY WEAK EDGES WITHIN THE CITY ITSELF. IN THESE PARTS OF TOPOGRAPHICAL EDGES ARE REINFORCED BY NATURAL AND MAN-MADE ELEMENTS. TO THE WEST, THE TUCSON MOUNTAINS FORM THE FIRST, OR MOST DISTANT FRAME, THIS IS AMPLIFIED BY THE PROXIMITY OF "A" MOUNTAIN, THE SANTA CRUZ RIVER AND THE FREEWAY. TO THE NORTH, THE CATALINAS THEIR FOOTHILLS AND RILLITO RIVER BED DELINEATE AND BORDER

AREAS OF DECLINING DENSITIES AND PHYSICAL DEVELOPMENT. DEVELOPMENT SEEMS TO GRADUALLY FADE WITH SCATTERED POCKETS OF EXTENSIVE USES INTERSPERSED. THERE IS, AS A RESULT, THE LACK OF AN INCISIVE EDGE ON THE EAST. THE SOUTH HAS NO VISIBLE EDGE EXCEPT ALONG THE DAVIS MONTHAN AIR FORCE BASE AND THE TUCSON INTERNATIONAL AIRPORT. THIS SOUTHERN BORDER IS FRAGMENTED, LACKS CONTINUITY AND THE EXACT PLACEMENT OF ELEMENTS, IS EXTREMELY DIFFICULT.

THE FREEWAY AND THE SOUTHERN PACIFIC RAILROAD TRACKS ARE THE DOMINANT EDGES. THE TRACKS ARE SPATIALLY PROMINENT AT THE ENTRANCES TO THE DOWNTOWN AREA. BOTH THE FREEWAY AND THE RAILROAD TRACKS ARE STRONG EDGES, CONTINUOUS IN FORM HIGHLY IMPENETRABLE TO CROSS TRAFFIC, AND ISOLATING BARRIERS AT A NUMBER OF POINTS. IT IS DIFFICULT TO TRAVEL IN ALL PARTS OF THE CITY WHERE THE STREETS CANNOT CONTINUE THROUGH BECAUSE OF RAILROAD TRACKS, THE FREEWAY AND ARROYOS. AN UNUSUAL EDGE WHICH IS EXTREMELY FRAGMENTED AND WHICH VARIES IN VISUAL PROMINENCE IS THE NETWORK OF ARROYOS AND DRAINAGEWAYS THROUGHOUT THE CITY. ADJACENT PROPERTY OWNERS HAVE TRIED TO IMPROVE THE

LANDSCAPE BY DEVELOPMENT. DEVELOPMENT SEEMS TO GRADUALLY FADE WITH SCATTERED POCKETS OF EXTENSIVE USES INTERPERSEA. THERE IS, AS A RESULT, THE LACK OF AN INCISIVE EDGE ON THE EAST. THE SOUTH HAS NO VISIBLE EDGE EXCEPT ALONG THE DAVIS MONTHAN AIR FORCE BASE AND THE TUCSON INTERNATIONAL AIRPORT. THIS SOUTHERN BORDER IS FRAGMENTED, LACKS CONTINUITY AND THE EXACT PLACEMENT OF ELEMENTS, IS EXTREMELY DIFFICULT.

THE FREEWAY AND THE SOUTHERN PACIFIC RAILROAD TRACKS ARE THE DOMINANT EDGES. THE TRACKS ARE SPATIALLY PROMINENT AT THE ENTRANCES TO THE DOWNTOWN AREA. BOTH THE FREEWAY AND THE RAILROAD TRACKS ARE STRONG EDGES, CONTINUOUS IN FORM HIGHLY IMPENETRABLE TO CROSS TRAFFIC, AND ISOLATING BARRIERS AT A NUMBER OF POINTS. IT IS DIFFICULT TO TRAVEL IN ALL PARTS OF THE CITY WHERE THE STREETS CANNOT CONTINUE THROUGH BECAUSE OF RAILROAD TRACKS, THE FREEWAY AND ARROYOS. AN UNUSUAL EDGE WHICH IS EXTREMELY FRAGMENTED AND WHICH VARIES IN VISUAL PROMINENCE IS THE NETWORK OF ARROYOS AND DRAINAGEWAYS THROUGHOUT THE CITY. ADJACENT PROPERTY OWNERS HAVE

TRIED TO IMPROVE THE LANDSCAPE BY USING STONE AND OTHER MATERIALS TO CREATE A STRIKING APPEARANCE.

3. NODES: NODES ARE CENTERS OF ACTIVITY OR STRATEGIC POINTS IN THE CITY WHICH AN OBSERVER CAN TRAVEL TO, THROUGH OR FROM. THEY MAY BE JUNCTIONS OR INTERSECTIONS BREAK POINTS IN TRANSPORTATION, ENCLOSED SQUARES, DISTINCT HUBS OF ACTIVITY.

ALTHOUGH IT HAS UNDERGONE CONTINUOUS CHANGES IN FUNCTION PHYSICAL APPEARANCE AND ACCESSIBILITY THE DOWNTOWN AREA REMAINS THE SINGLE MOST IMPORTANT ACTIVITY CENTER IN THE CITY. THE DOWNTOWN AREA WAS EXPERIENCED NOT AS A HOMOGENEOUS DISTRICT BUT AS THREE LINEAR NODES OF ACTIVITY: THE RETAIL ACTIVITIES ON PENNINGTON AND CONGRESS, THE BANK AND OFFICE AND ESTABLISHMENTS ON STONE AND ALAMEDA, AND THE GOVERNMENTAL ACTIVITIES AROUND EL PRESIDIO PARK. THE INTERSECTION OF STONE AND PENNINGTON IS THE FOCAL POINT OF THE DIVERSE SECTORS AND ACTIVITIES IN THE DOWNTOWN AREA. ON CHAPATHE UNIVERSITY FUNCTIONS AS A THEMATIC CONCENTRATION WITH MINOR NODES OF MOVEMENT AND ACTIVITY. THE UNIVERSITY IS LESS INTENSE THAN THE "DOWNTOWN CORE" IN NUMBERS OF PEOPLE AND DIVERSITY OF ACTIVITIES.

THE INTERSECTIONS ARE OF SUFFICIENT PROMINENCE ON OR AROUND THE CAMPUS TO BE IMAGED AS MORE THAN THE INCIDENTAL CROSSINGS OF PATHS.

THE EL CON NODE IS A MAJOR ACTIVITY HUB. THIS AREA IS LOCATED ON MAJOR TRAFFIC CARRIERS AND IS DEPENDENT UPON THESE FOR SUPPORT. AS THIS NODE GROWS IT WILL PROBABLY BE LINEAR ALONG MAJOR TRAFFIC STREAMS.

THE VICINITY OF THE INTERSECTION OF 1-19 AND SOUTH 6TH AVENUE IS DEVELOPING INTO A DISTRICT. THE FOCAL POINT IS THE INTERSECTION OF TWO TRAFFIC CARRIERS AND DEVELOPMENT IS HEAVIEST ALONG THESE-- IN A NORTH-SOUTH DIRECTION. DISTRICT IS A LARGE AREA OF 1/4. DISTRICTS: DISTRICTS ARE THE SUBAREAS AND COMPONENT NEIGHBORHOODS OF A CITY: THE DOWNTOWN AREA, THE INTOWN RESIDENTIAL AREAS, ETC. THESE ARE MEDIUM TO LARGE AREAS OF THE CITY INTO WHICH AN OBSERVER CAN MENTALLY ENTER AND WHICH HAVE SOME COMMON CHARACTERISTICS SUCH AS BUILDING TYPES, USE ACTIVITY, COLOR, TEXTURE, FORM, ETC. THE PHYSICAL ELEMENTS THAT DETERMINE DISTRICTS ARE THEMATIC, THAT IS, REPEATED ELEMENTS THAT ARE CONTINUOUS THROUGHOUT

AN AREA AND GIVE IT HOMOGENEITY.

THE AREAS THAT HAVE THE STRONGEST DISTRICT IMAGES ARE THE UNIVERSITY AND DOWNTOWN AREAS. THE UNIVERSITY ACTS AS A LANDMARK.

SPEEDWAY IS A LINEAR DISTRICT CHARACTERIZED BY A CONGLOMERATION OF USES ARCHITECTURAL TYPES AND LANDSCAPING.

THE MANZO AREA IS A MINOR DISTRICT WITH A POPULATION THAT IS PREDONIMANTLY LOW INCOME AND MEXICAN-AMERICAN. DUE TO THE LACK OF THRU TRAFFIC, THE COMMERCIAL ACTIVITY ON GRANDE HAS DEFINITE NEIGHBORHOOD SCALE AND ORIENTATION.

THE CATALINA FOOTHILLS DISTRICT IS A LARGE AREA OF LOW DENSITY RESIDENTIAL DEVELOPMENT, NOTED FOR ITS LARGER HOMES AND THE BEAUTY OF THE FOOTHILLS THAT OVERLOOK THE CITY BELOW. WITH PRESENT DENSITIES MAINTAINED, THE AREA PRESERVES THE ENVIRONMENT FOR THE PUBLIC, AND AT THE SAME TIME SERVES A SOCIAL FUNCTION.

5. LANDMARKS: LANDMARKS ARE PROMINENT VISUAL FEATURES OF THE CITY. SOME LANDMARKS ARE LARGE AND ARE SEEN FROM GREAT DISTANCES SUCH AS HIGH-RISE

STRUCTURES, MOUNTAINS, CHURCHES, LARGE SIGNS, ETC. SOME LANDMARKS ARE SMALL AND CAN ONLY BE SEEN CLOSE UP SUCH AS A STREET CLOCK, A FOUNTAIN, A STATUE, ETC. LANDMARKS HELP PEOPLE TO ORIENT THEMSELVES IN THE CITY AND HELP TO IDENTIFY AN AREA.

THE MOST PROMINENT LANDMARKS WITHIN THE TUCSON VISUAL ENVIRONMENT ARE THE MOUNTAIN RANGES AND INDIVIDUAL PEAKS. THE VISUAL RELATIONSHIP OF THE HIGH RISE STRUCTURES IN THE DOWNTOWN AREA AND THE MOUNTAIN CONTINUALLY CHANGE AS ONE'S POSITION CHANGES WITHIN THE COMMUNITY. BY AN AWARENESS OF THIS RELATIONSHIP THE OBSERVER IS ABLE TO DETERMINE HIS GENERAL LOCATION IN REFERENCE TO THE DOWNTOWN AREA.

MOST OF TUCSON'S TALLER BUILDINGS ARE LOCATED IN THE DOWNTOWN AREA AND ITS IMMEDIATE VICINITY TO THE NORTH. THE UNIVERSITY FUNCTIONS AS A LANDMARK ON TWO SCALES. FIRST, IN ITS VISUAL IMPACT, AS A DISTRICT, AND SECOND IN ITS INDIVIDUAL PARTS AS SPECIFIC ELEMENTS WITHIN THE DISTRICT. AS HAVING A IMAGE:ING SYSTEM OF STREETS, AND MUCH TRAFFIC TUCSON IS A CITY OF LOW IMAGEABILITY, DIFFICULT TO DESCRIBE AS TO FORM, AND DOMINATED BY THE BEAUTY

OF ITS SURROUNDING NATURAL ENVIRONMENT. WHEN ASKED TO DESCRIBE OR SYMBOLIZE THE CITY AS A WHOLE, RESPONDENTS TO THIS QUESTION BY TUCSONENS MIGHT BE--"THE CLIMATE, THE DESERT AND THE MOUNTAINS ARE THE MOST IMPORTANT THINGS THAT COME TO MY MIND WHEN I PICTURE TUCSON."

1. LOW DENSITY DEVELOPMENT:

LOW DENSITY HAS SCATTERED RESIDENTIAL DEVELOPMENT AND RESULTING IN MONOTONY AND DISORIENTATION.

2. THE ROLE OF THE DOWNTOWN AREA:

THE CORE OF THE DOWNTOWN AREA WAS IDENTIFIED AS HAVING A MEANINGFUL IMAGE BECAUSE OF ITS HIGH-RISE STRUCTURES, AND INTENSIVE DAYTIME ACTIVITIES. RESPONSES FROM RESIDENTS INDICATE, HOWEVER, THAT A NUMBER OF FACTORS OPERATE TO MAKE THIS IMAGE LESS SHARP THAN IT COULD BE. FIRST, DECENTRALIZATION AND THE GROWTH OF MAJOR OUTLYING SHOPPING FACILITIES HAVE REDUCED THE "TRADE ROLE" THAT THE DOWNTOWN AREA PLAYS. SECOND, THE AREA WAS CITED AS HAVING A CONFUSING SYSTEM OF STREETS, AND MUCH TRAFFIC CONGESTION, AND THIRD, EAST CONGRESS STREET AND OTHER AREAS WERE "GOING DOWNHILL" AND NEEDED TO BE

REVITALIZED. THESE FACTORS STRESS THAT MUCH NEEDS TO BE DONE TO STRENGTHEN THE SYMBOLIC IMPORTANCE OF THE DOWNTOWN AREA.

3. LINDIFFERENTIATED GRID SYSTEM: FOR MOST PEOPLE IN TUCSON PATHS ARE THE PRINCIPAL ELEMENTS IN THEIR IMAGE OF A CITY. ON THE WHOLE, HOWEVER, PATHS LACK MAJOR IDENTITY WITH THE EXCEPTION OF SPEEDWAY AND BROADWAY. WHEN ENTERING RESIDENTIAL AREAS MANY RESPONSES REFLECTED THE LOW IMAGE-ABILITY OF THE AREAS MANIFESTED IN POOR ORIENTATION, AND INABILITY TO DESCRIBE DIFFERENT PARTS, AND A SHIFTING FROM PHYSICAL APPEARANCE TO CONCEPTUAL QUALITY.

IN AN UNDIFFERENTIATED ENVIRONMENT THERE IS A RELIANCE ON USE-LOCATIONS STREET SIGNS, AND REGIONAL LANDMARKS SUCH AS MOUNTAINS. THE LONG COMMERCIAL STRIPS GIVE LITTLE EVIDENCE TO THE OBSERVER THAT HE IS ENTERING A SPECIAL AREA. THE DOWNTOWN'S QUALITY VARIETY ORIENTATION. THE DOWNTOWN SHOULD COMPARE AGAINST OUTLYING COMMERCIAL CENTERS BY BEING BETTER AND MORE DIFFERENT. IN THIS REGARD, DEVELOPMENT RESEARCH ASSOCIATION RECOMMENDS ENCOURAGEMENT OF THE SPANISH/MEXICAN MOTIF.

LAND OWNERSHIP

THE RELATIONSHIPS BETWEEN LAND OWNERSHIP, LAND USE, AND THE ACTUAL INTENSITY OF SUCH USE ARE HIGHLY SIGNIFICANT WHEN THE DEVELOPMENT POTENTIALS OF AN AREA ARE BEING CONSIDERED.

THE PRELIMINARY ANALYSIS OF LAND OWNERSHIP IN THE CENTRAL CITY AREA OF TUCSON FOCUSED ON THREE MAJOR OWNERSHIP CATEGORIES: 1. LARGE PRIVATE PROPERTIES, 2. SCATTERED PRIVATE PARCELS IN SINGLE OWNERSHIP WHICH ARE IMPORTANT DUE TO THEIR SIZE OR LOCATION, AND 3. PUBLIC AND QUASI-PUBLIC OWNERSHIP.

THERE IS AN INCREASING DEMAND FOR GENERAL OFFICE SPACE FOR PROFESSIONAL SERVICES IN THE NORTHERN AND NORTHWESTERN SECTORS OF THE CENTRAL AREA.

MAJOR POINTS OF EMPHASIS: THERE IS NOT ENOUGH DEMAND FOR NEW CONSTRUCTION ACTIVITY TO COMPLETELY "REDO" THE ENTIRE DOWNTOWN AREA.

MAJOR ATTENTION SHOULD BE GIVEN TO RETENTION OF THE DOWNTOWN'S QUALITY VARIETY ORIENTATION. THE DOWNTOWN SHOULD COMPETE AGAINST OUTLYING COMMERCIAL CENTERS BY BEING BETTER AND MORE DIFFERENT. IN THIS REGARD, DEVELOPMENT RESEARCH ASSOCIATION RECOMMENDS ENCOURAGEMENT OF THE SPANISH/MEXICAN MOTIF.

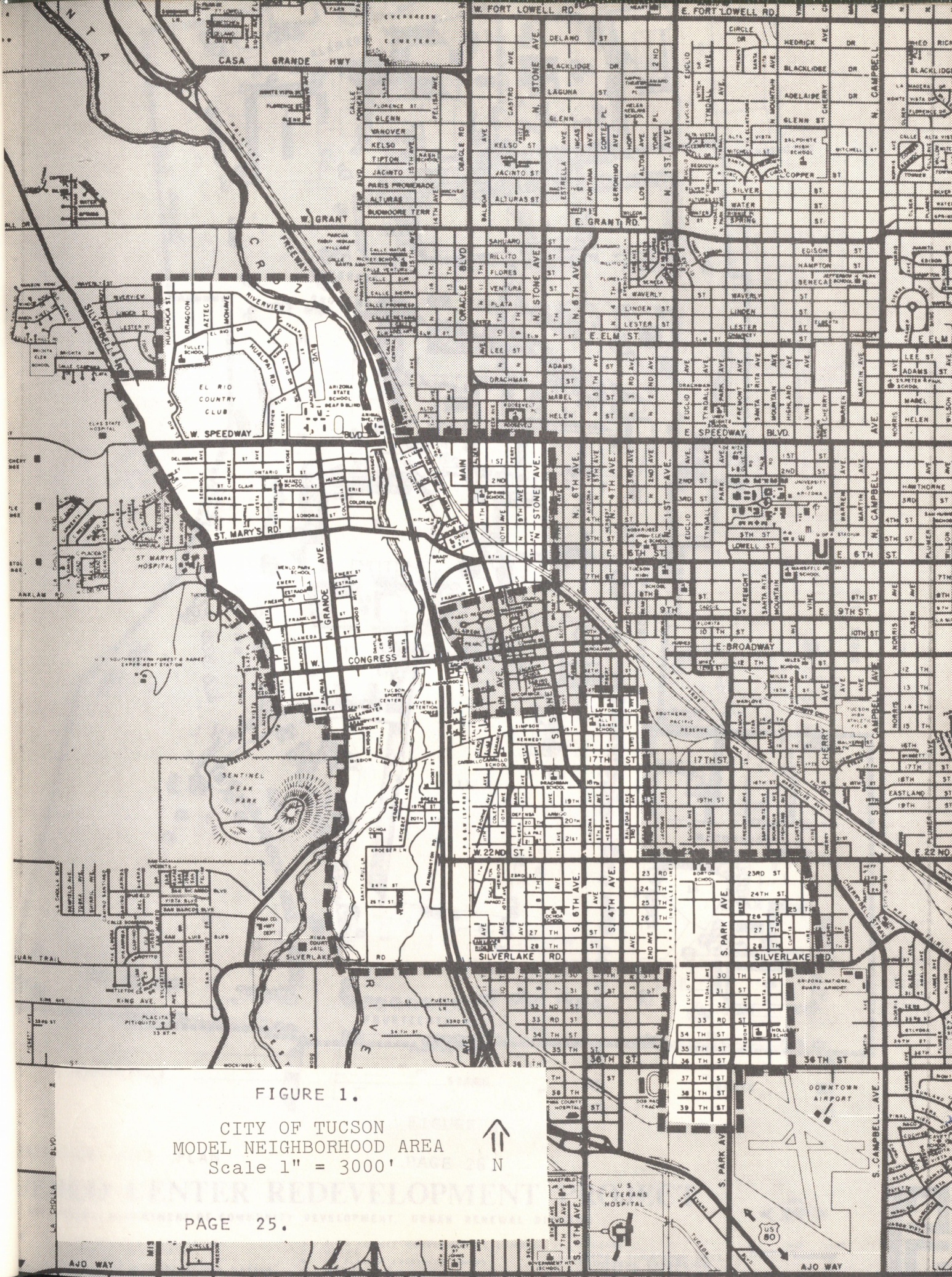




FIGURE 2.

PAGE 26.

ILLUSTRATIVE SITE PLAN

UEBLO CENTER REDEVELOPMENT PROJECT

OFFICE OF TUCSON, DEPARTMENT OF COMMUNITY DEVELOPMENT, URBAN RENEWAL DIVISION

- NO
1. ART CENTER & PLANETARIUM
 2. FEDERAL BUILDING
 3. CITY HALL
 4. EL PRESIDIO UNDERGROUND GARAGE
 5. COURTHOUSE

6. PIMA COUNTY GOVERNMENTAL COMPLEX
7. HOTEL
8. LA PLACITA SPECIALTY SHOPS
9. MUSIC HALL
10. FREMONT & OTERO HOMES

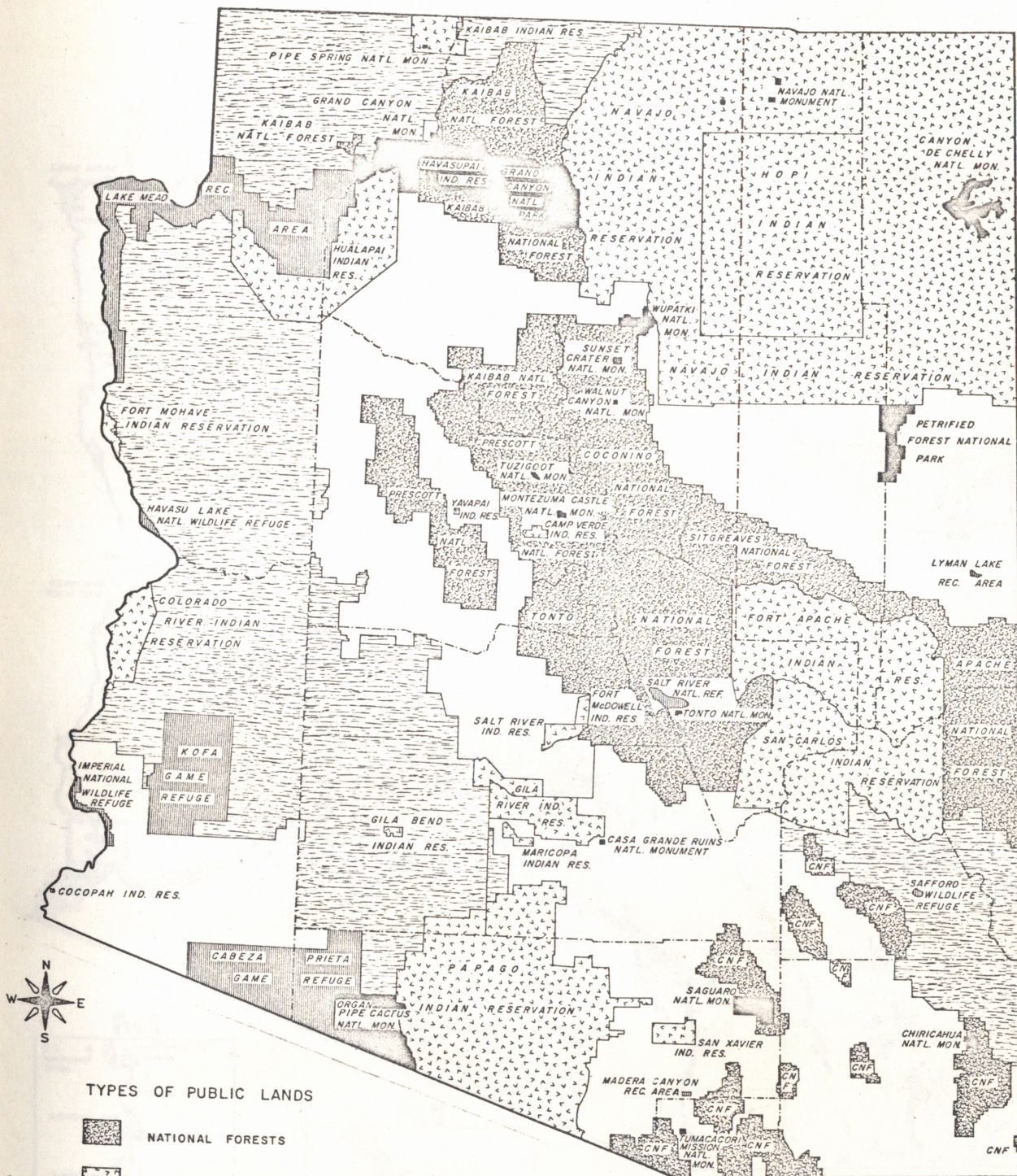
11. THEATRE
12. ARENA & EXHIBITION HALL
13. CATHEDRAL EXPANSION
14. CENTRAL FIRE STATION
15. POLICE STATION



0 100 200



PUBLIC LANDS



TYPES OF PUBLIC LANDS

-  NATIONAL FORESTS
-  INDIAN RESERVATIONS
-  NATIONAL MONUMENTS AND PARKS
-  GAME REFUGES AND RECREATION AREAS
-  BUREAU OF LAND MANAGEMENT AREAS

0 10 20 30
MILES

CNF - CORONADO NATIONAL FOREST
--- COUNTY BOUNDARY

SOURCES: GENERAL HIGHWAY MAP, ARIZONA STATE HIGHWAY DEPT., 1962
AND ARIZONA PUBLIC LANDS, U.S. DEPT. OF THE INTERIOR, 1953

FIGURE 3.

SUSAN ANGELON

MAJOR DAMS AND IRRIGATED AREAS

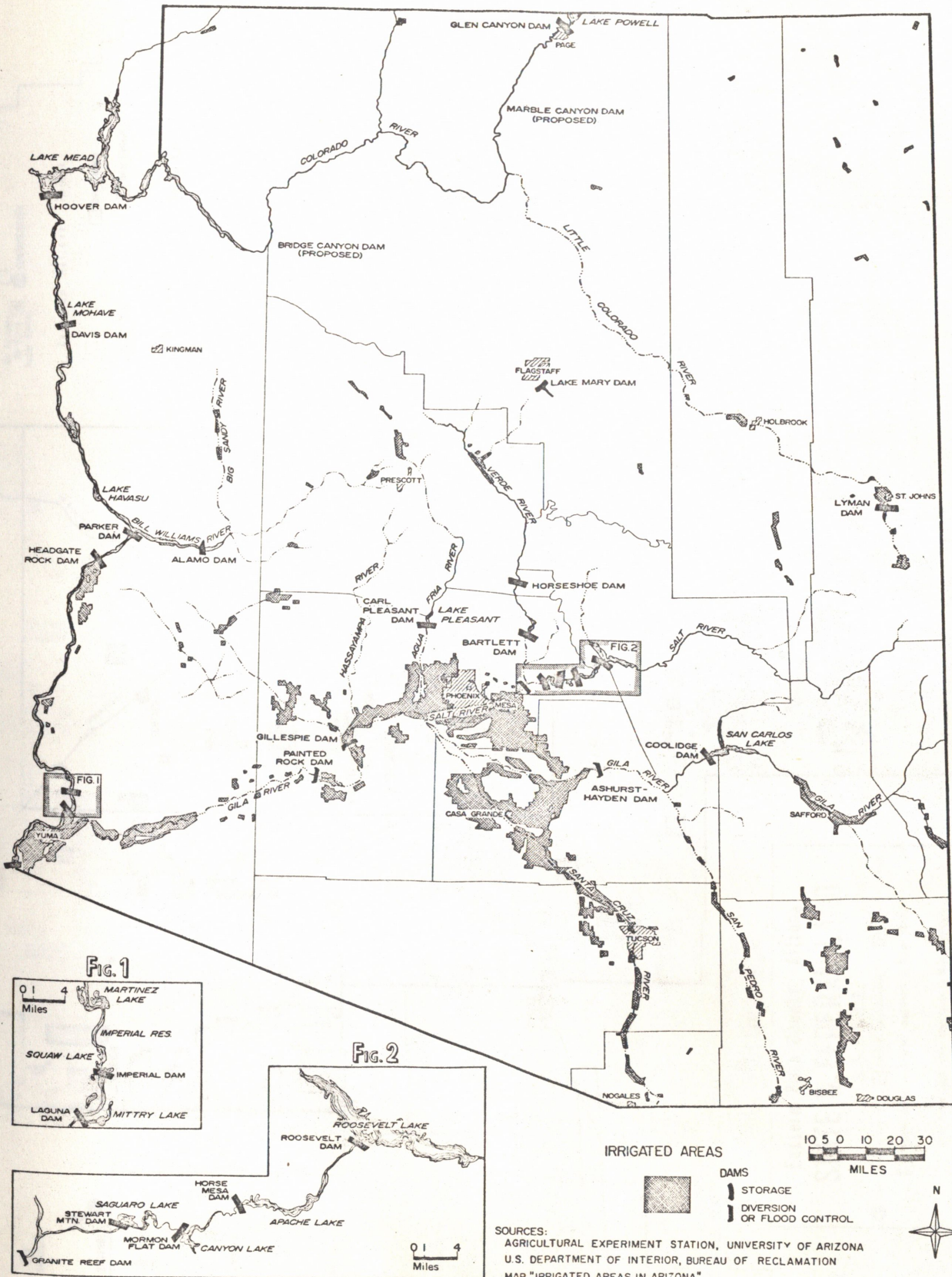
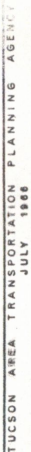
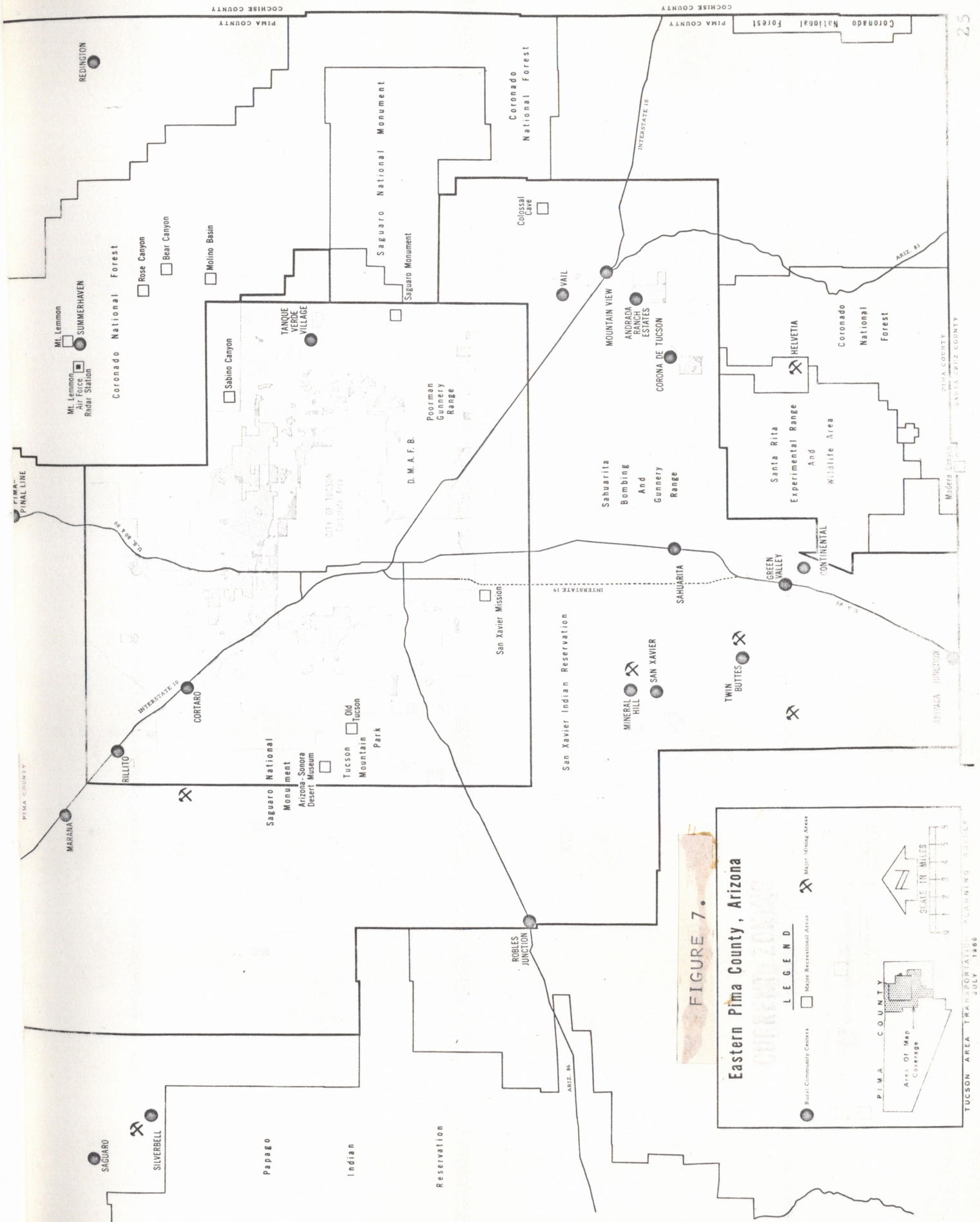


FIGURE 4.







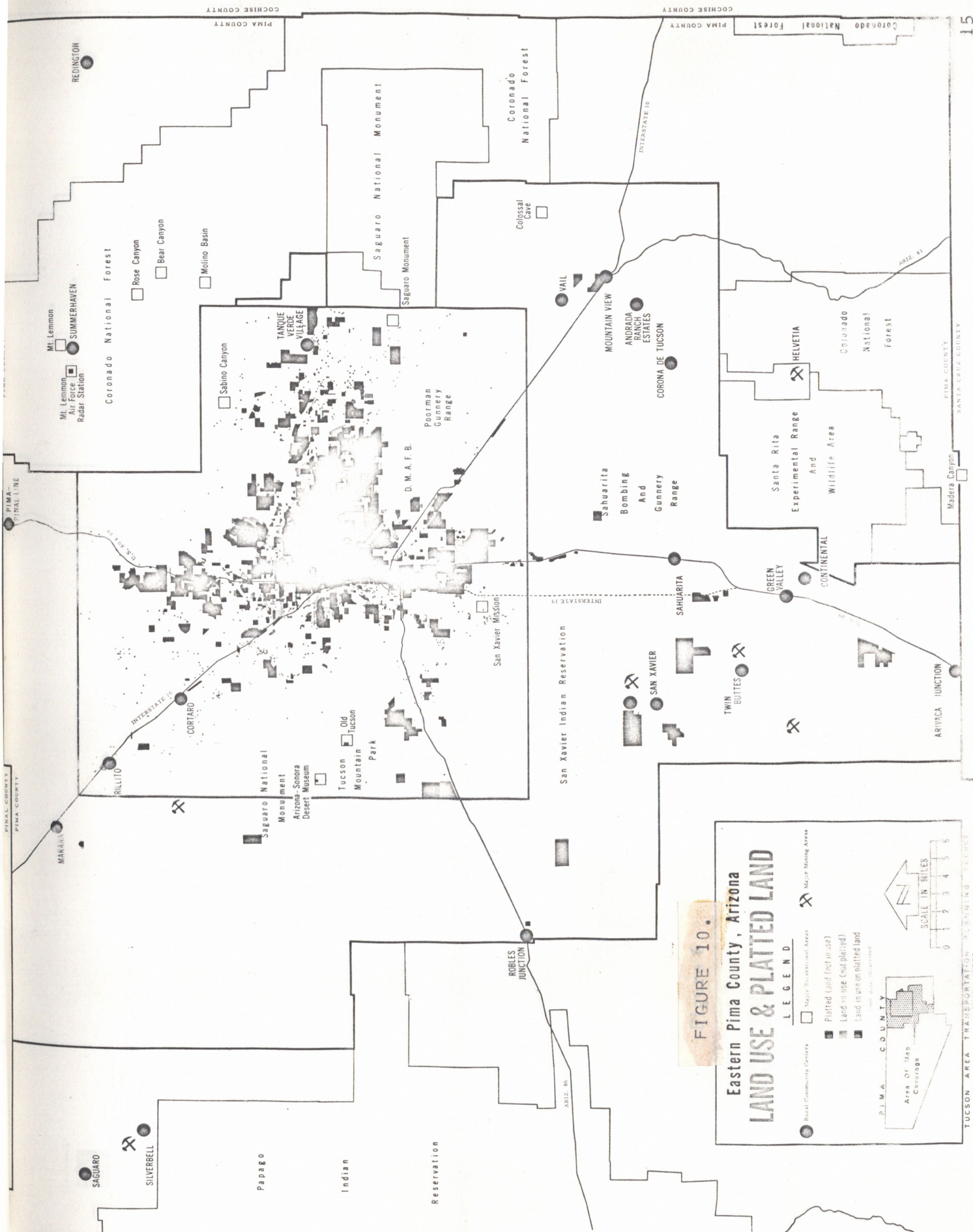


FIGURE 10.

Eastern Pima County, Arizona
LAND USE & PLATTED LAND

LEGEND

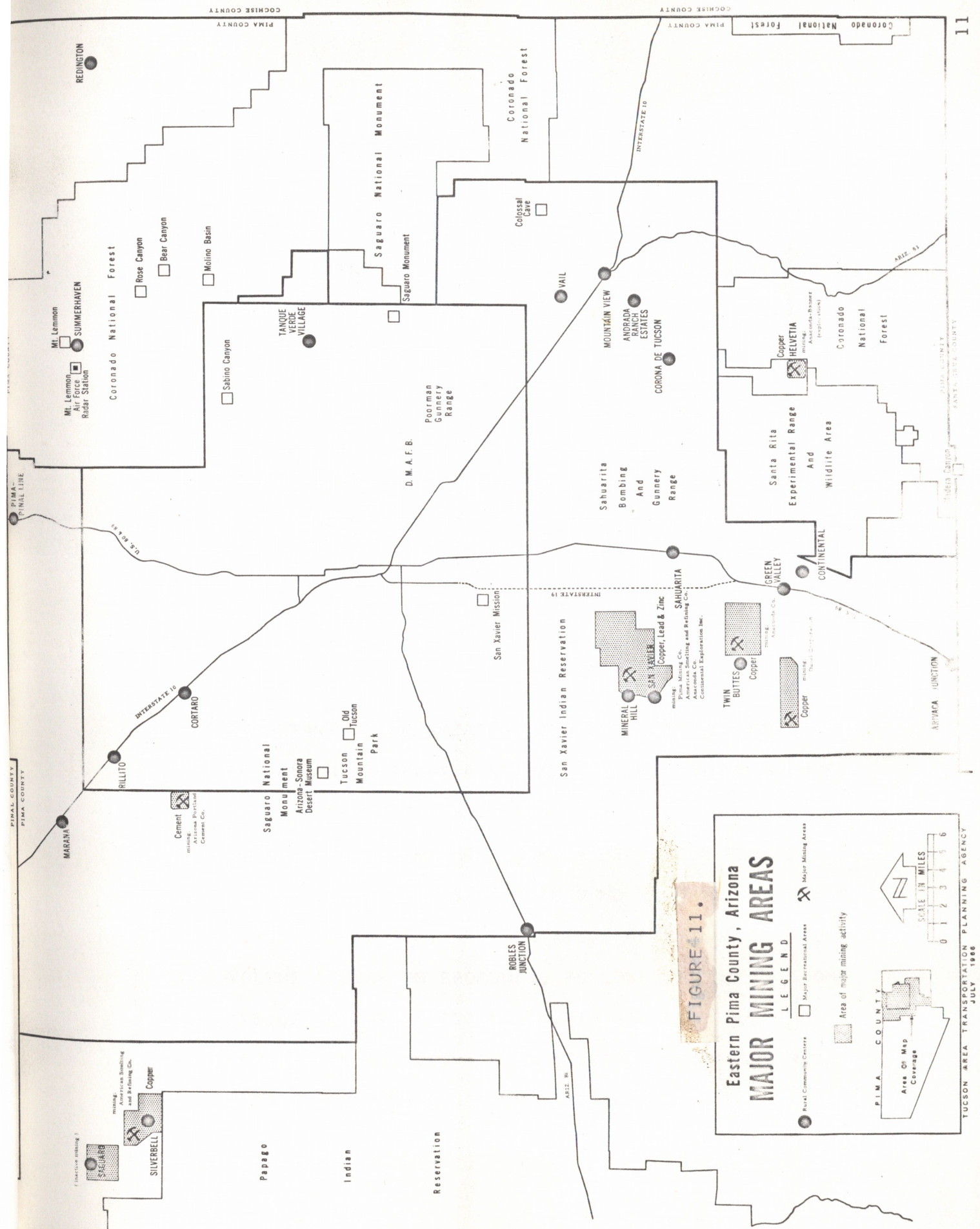
- Rural Community Centers
- Major Recreational Areas
- ✕ Major Mining Areas
- Platted Land (not in use)
- ▨ Land in use (not platted)
- ▩ Land in use on platted land

Area Of Map Coverage

Scale in Miles: 0 1 2 3 4 5 6

PIMA COUNTY

TUCSON AREA TRANSPORTATION PLANNING RESEARCH
 JULY 1995



CIRCULATION

1. TRAFFIC VOLUMES: JUST OVER 60,000 VEHICLES ENTERED THE DOWNTOWN AREA ON AN AVERAGE WEEKDAY. THE HEAVIEST VOLUME STREETS ARE ON THE EAST, NORTH AND WEST. BROADWAY HAS THE HIGHEST VOLUME FOLLOWED BY NORTH STONE AVENUE, NORTH SIXTH AVENUE, AND CONGRESS STREET. THE PEAK ACCUMULATION OF TRAFFIC, THE TOTAL OF PARKED VEHICLES, THOSE MOVING ON THE STREETS, AND OTHERS BEING SERVICED--OCCURRED AT 11:00 A.M. WITH A TOTAL OF 6,245 VEHICLES. THESE VOLUMES REMAINED HIGH UNTIL 3:00 P.M.

PEAK PERIODS OF TRAFFIC FLOW IS PARTICULARLY IMPORTANT. THE GREATEST INBOUND PEAK VOLUME OCCURS ON BROADWAY FOLLOWED BY NORTH STONE AVENUE, CONGRESS STREET, NORTH SIXTH AVENUE, AND NORTH MAIN AVENUE. THE MOST COMMON PEAK HOUR PERIOD SELECTED ON THE BASIS OF INBOUND VOLUMES, WAS 7:30 A.M. TO 8:30 A.M. THE GREATEST AFTERNOON OUTBOUND

3. PARKING SPACE USAGE: ANALYSIS INDICATES VOLUME OCCURS ON BROADWAY, FOLLOWED BY NORTH STONE AVENUE, CONGRESS STREET, NORTH SIXTH AVENUE AND NORTH MAIN AVENUE. THE MOST COMMON OUTBOARD PEAK HOUR PERIOD WAS 4:30 P.M. TO 5:30 P.M.

I HAVE MY DOUBTS ABOUT THIS LAST STATEMENT IN AS MUCH AS TO ACCESS TO EACH PARKING AREA.

HISTORICAL RECORDS OF TRAFFIC VOLUME CHANGES ARE BASIC INPUTS TO THE PLANNING OF CIRCULATION FACILITIES. FOR THE ENTIRE AREA THERE HAS BEEN A NET DECREASE IN TOTAL TRAFFIC OF APPROXIMATELY FIVE PERCENT.

2. PARKING INVENTORY: THE INVENTORY OF PARKING SPACE IN THE DOWNTOWN WAS TAKEN ON MARCH, 1968.

A TOTAL OF 10,674 PARKING SPACES EXISTED DURING THE INVENTORY PERIOD. OF THESE SPACES, APPROXIMATELY TWO THIRDS (7,217) WERE OFF-STREETS AND ONE THIRD (3,457) WERE ON-STREETS. A COMPARISON OF 1960 AND 1968 OFF-STREETS PARKING FACILITIES REVEALED A SPACE INCREASE OF 1,036 OR A 17 PER CENT INCREASE. A COMPARISON BETWEEN 1960 AND 1968 ON-STREET SPACES REVEALED A RELATIVELY STABLE SITUATION.

3. PARKING SPACE USAGE: ANALYSIS INDICATES THAT SUPPLY OF PARKING SPACES FAR EXCEEDS ACTUAL ACCUMULATION OF VEHICLES. HOWEVER, THIS DOES NOT MEAN THAT PARKING SUPPLY IS EXCEEDINGLY PLENTIFUL. I HAVE MY DOUBTS ABOUT THIS LAST STATEMENT IN AS MUCH AS TO ACCESS TO EACH PARKING AREA.

WITHIN THE CENTRAL BUSINESS DISTRICT AREA OF PARKING INFLUENCE ON-STREET SPACES ARE USED MORE FULLY THAN OFF-STREET SPACES--70 PER CENT OCCUPIED COMPARED WITH 60 PER CENT.

COMPARISON OF THE 1968 DATA WITH A SIMILIAR STUDY DONE IN 1960 REVEALED THAT WHILE FEWER VEHICLES TRAVEL IN AND OUT OF THE CENTRAL BUSINESS DISTRICT IN 1968, MORE VEHICLES PARKED EACH HOUR IN 1968 THAN IN 1960.

4. CENTRAL BUSINESS DISTRICT PARKING "IMAGE": DESPITE THE RELATIVELY POSITIVE PRELIMINARY INDICATIONS OF THE TATPA PARKING STUDY, EVIDENCE EXISTS THAT THE GENERAL PUBLIC HOLDS A NEGATIVE IMAGE OF THE DOWNTOWN PARKING SITUATION. RESPONDENTS CITED INADEQUATE PARKING AS THEIR MAJOR COMPLAINT ABOUT SHOPPING IN THE TUCSON CENTRAL BUSINESS DISTRICT.

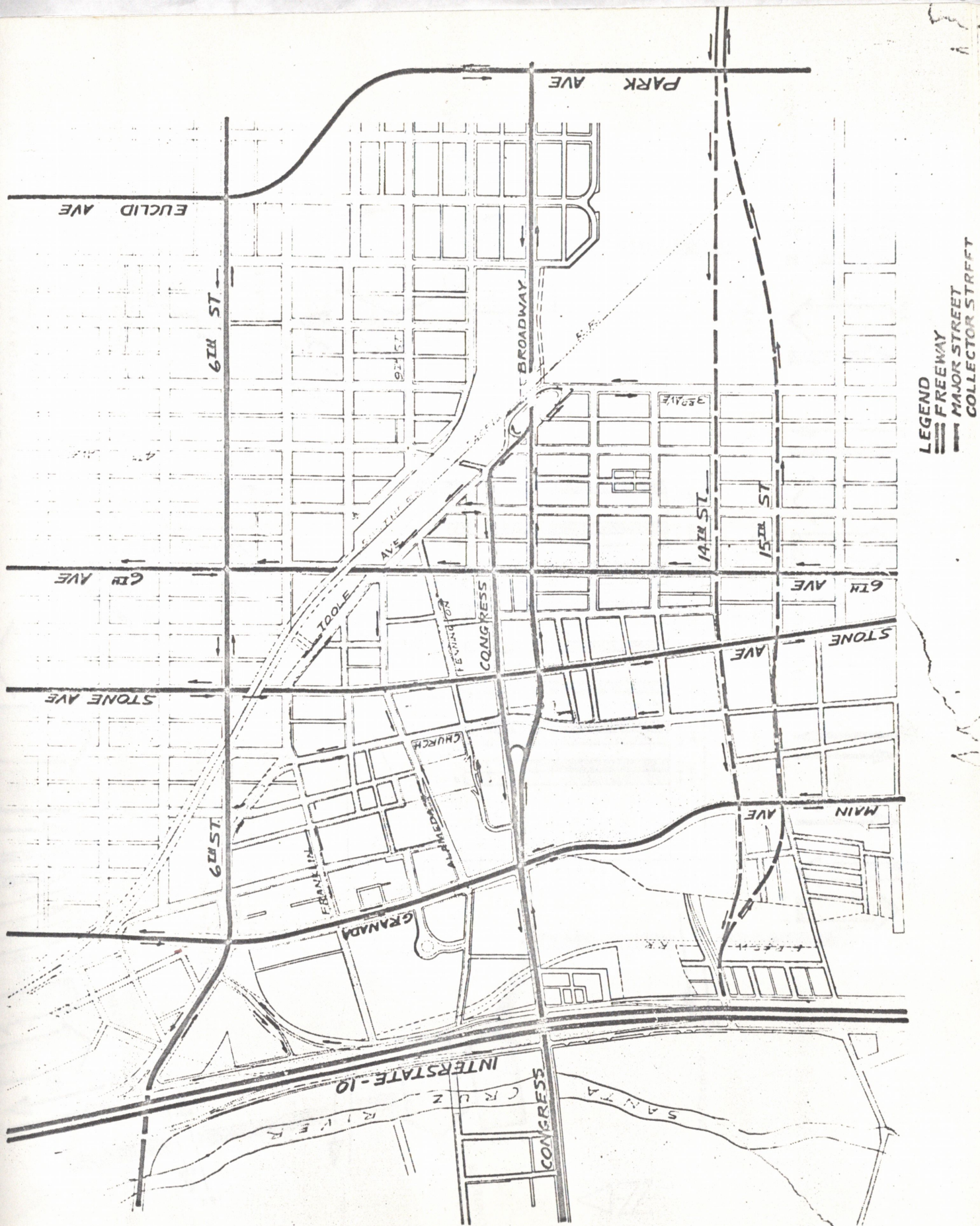


FIGURE 12.

24-Hour Traffic Volumes

DIRECTIONAL WEEKDAY AVERAGES - April 1-5, 1968
Tucson Area Transportation Planning Agency - April 1968

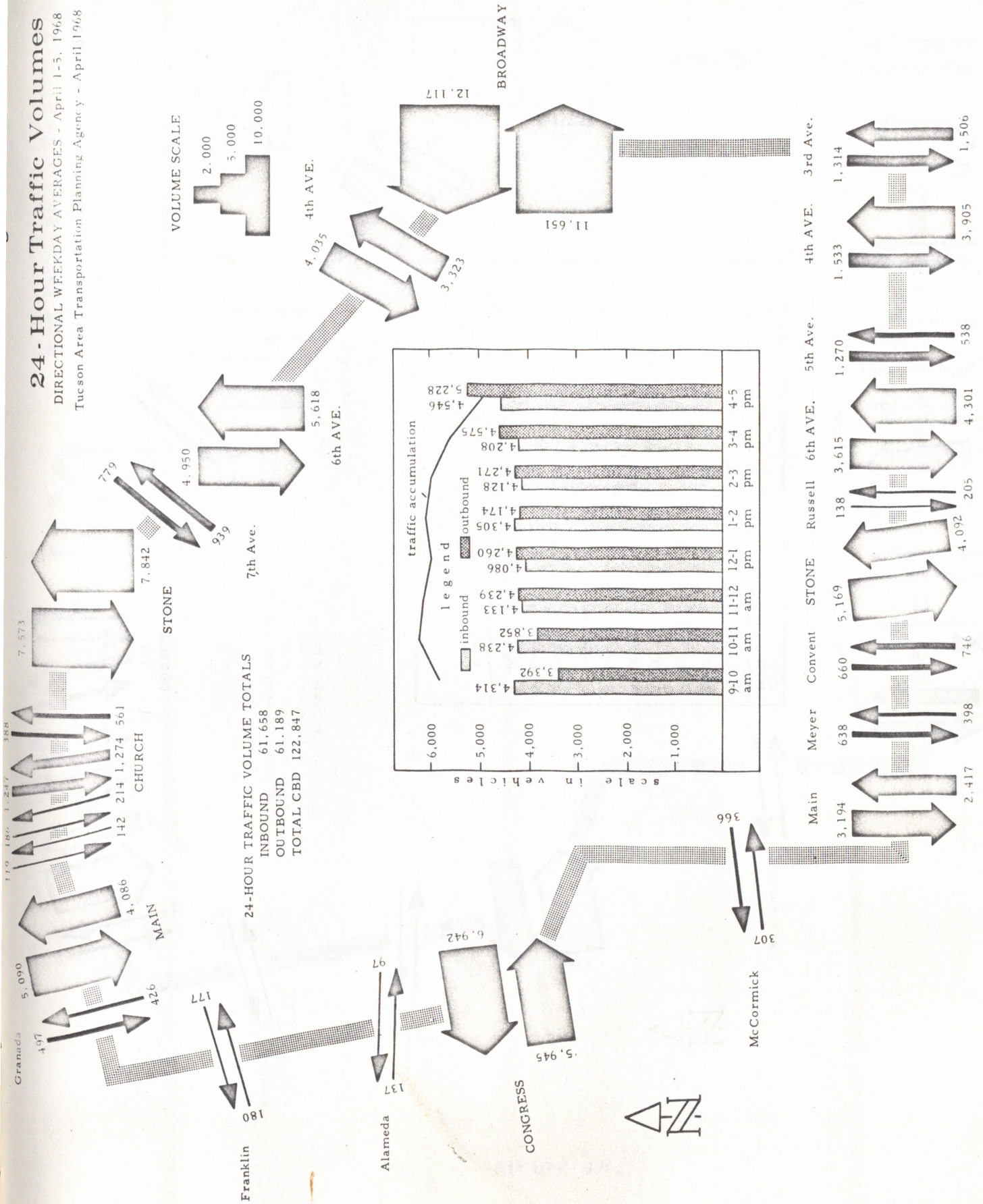


FIGURE 13.

AM Peak Hour Traffic Volumes

DIRECTIONAL WEEKDAY AVERAGES - April 1-5, 1968
Tucson Area Transportation Planning Agency - April 1968

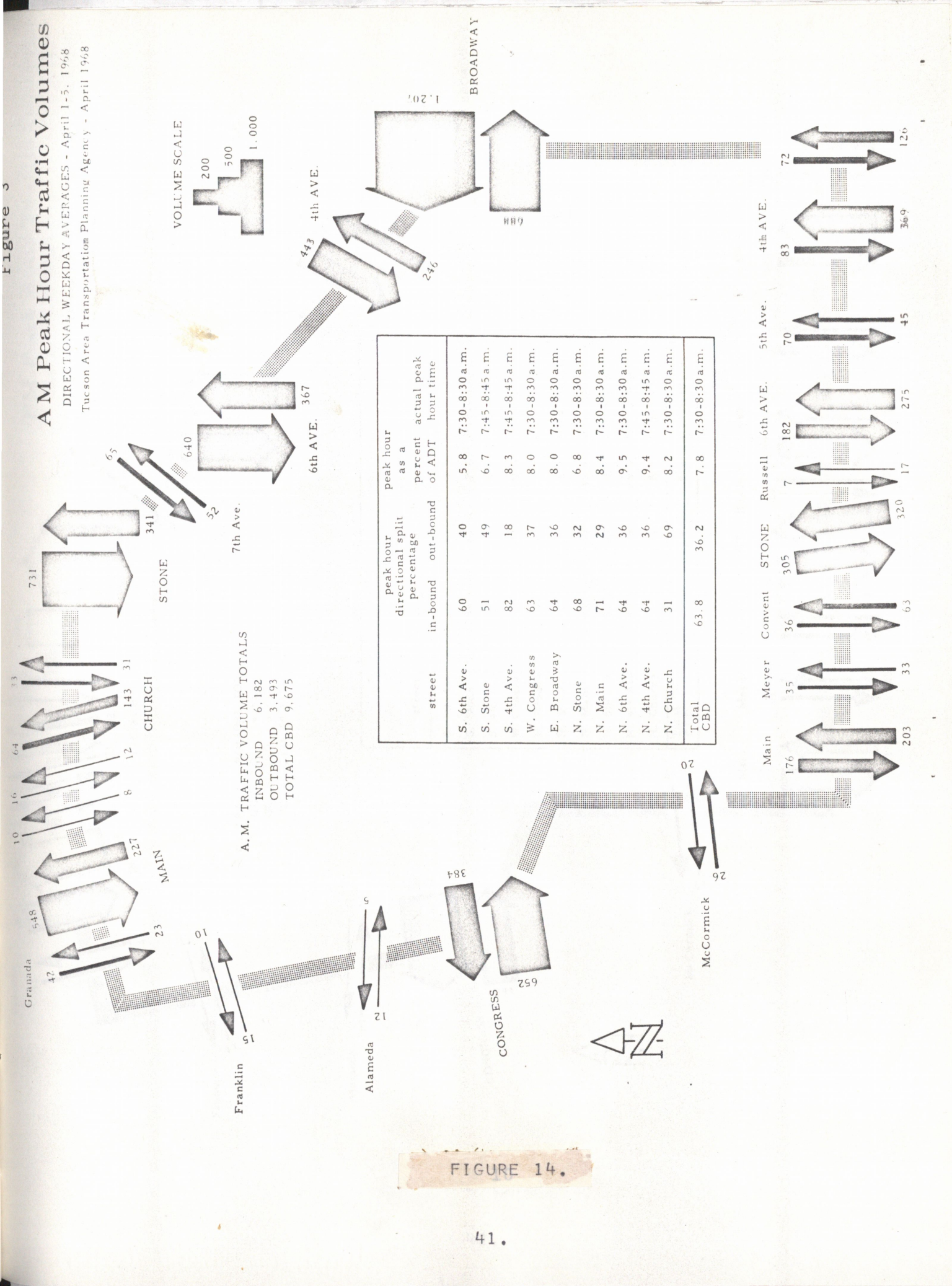


FIGURE 14.

PM Peak Hour Traffic Volumes

DIRECTIONAL WEEKDAY AVERAGES - April 1-5, 1968
Tucson Area Transportation Planning Agency - April 1968

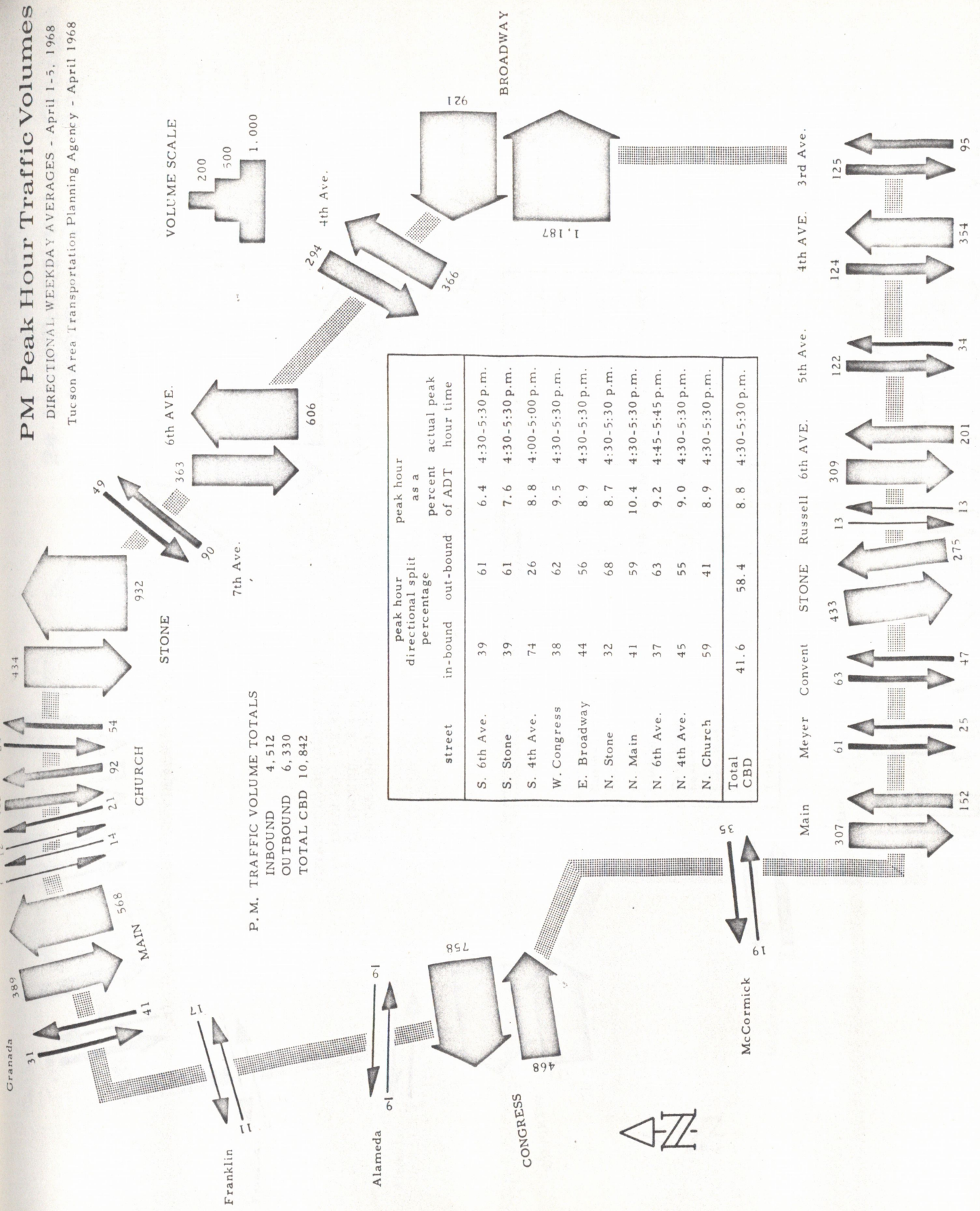


FIGURE 15.

24-Hour Traffic Volume Changes 1960 Compared to 1968

BASED ON APRIL 1960 & 1968 COUNTS
Tucson Area Transportation Planning Agency

VOLUME SCALE

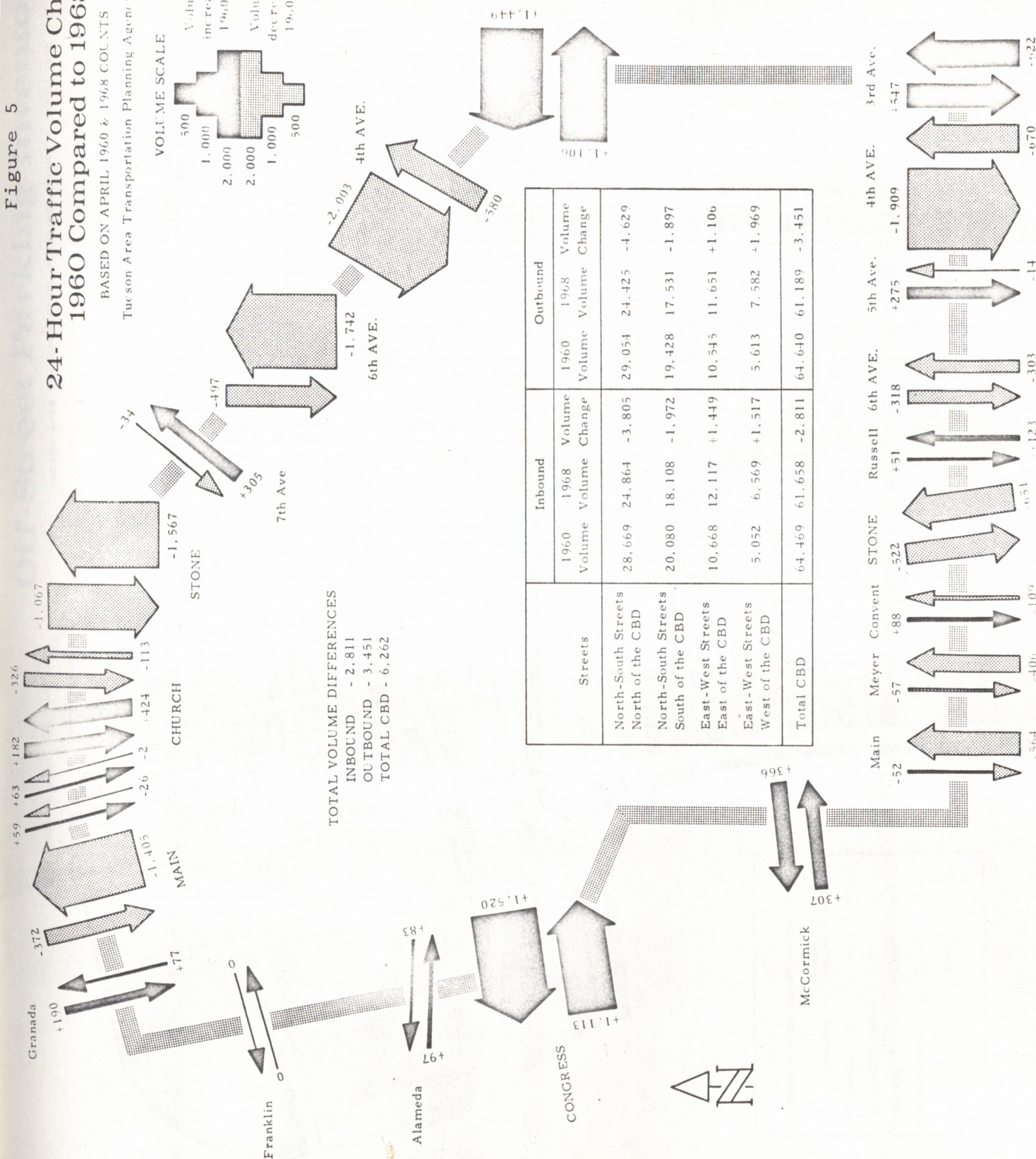
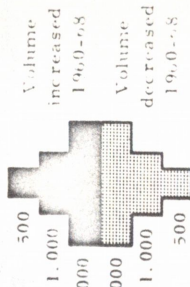
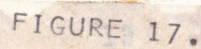


FIGURE 16.

TUCSON AREA TRANSPORTATION PLANNING AGENCY - MARCH 1968



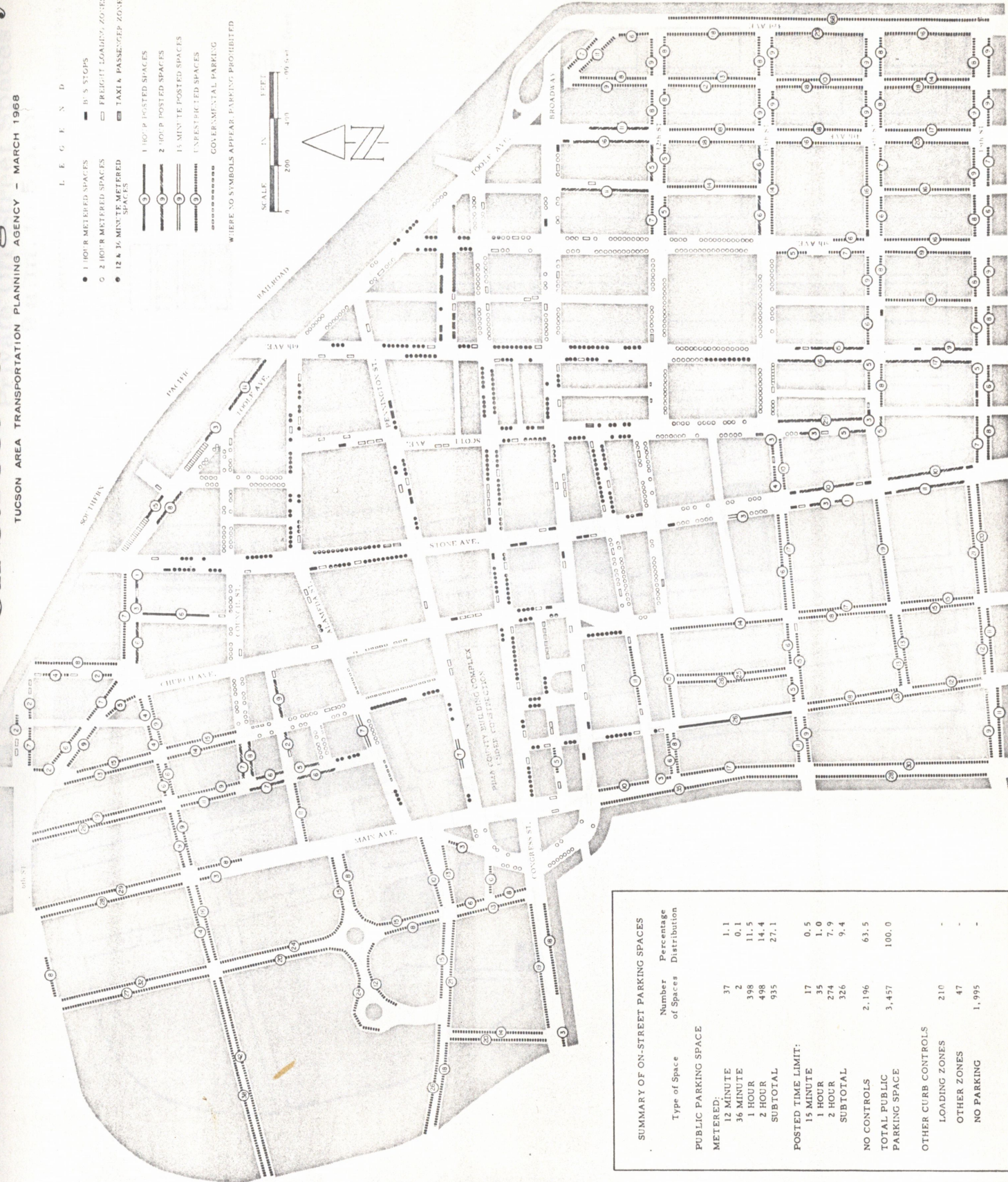
On-Street Parking Inventory

TUCSON AREA TRANSPORTATION PLANNING AGENCY - MARCH 1968

L E G E N D

- 1 HOUR METERED SPACES
- 2 HOUR METERED SPACES
- 12 & 15 MINUTE METERED SPACES
- 1 HOUR POSTED SPACES
- 2 HOUR POSTED SPACES
- 15 MINUTE POSTED SPACES
- UNRESTRICTED SPACES
- GOVERNMENTAL PARKING
- WHERE NO SYMBOLS APPEAR PARKING PROHIBITED

SCALE
IN FEET
0 200 400 600



SUMMARY OF ON-STREET PARKING SPACES

Type of Space	Number of Spaces	Percentage Distribution
PUBLIC PARKING SPACE		
METERED:		
12 MINUTE	37	1.1
36 MINUTE	2	0.1
1 HOUR	398	11.5
2 HOUR	498	14.4
SUBTOTAL	935	27.1
POSTED TIME LIMIT:		
15 MINUTE	17	0.5
1 HOUR	35	1.0
2 HOUR	274	7.9
SUBTOTAL	326	9.4
NO CONTROLS	2,196	63.5
TOTAL PUBLIC PARKING SPACE	3,457	100.0
OTHER CURB CONTROLS		
LOADING ZONES	210	-
OTHER ZONES	47	-
NO PARKING	1,995	-

FIGURE 18.

Average Occupancy Private Off-Street Spaces 9 a.m. to 5 p.m.

Tucson Area Transportation Planning Agency - April 1968

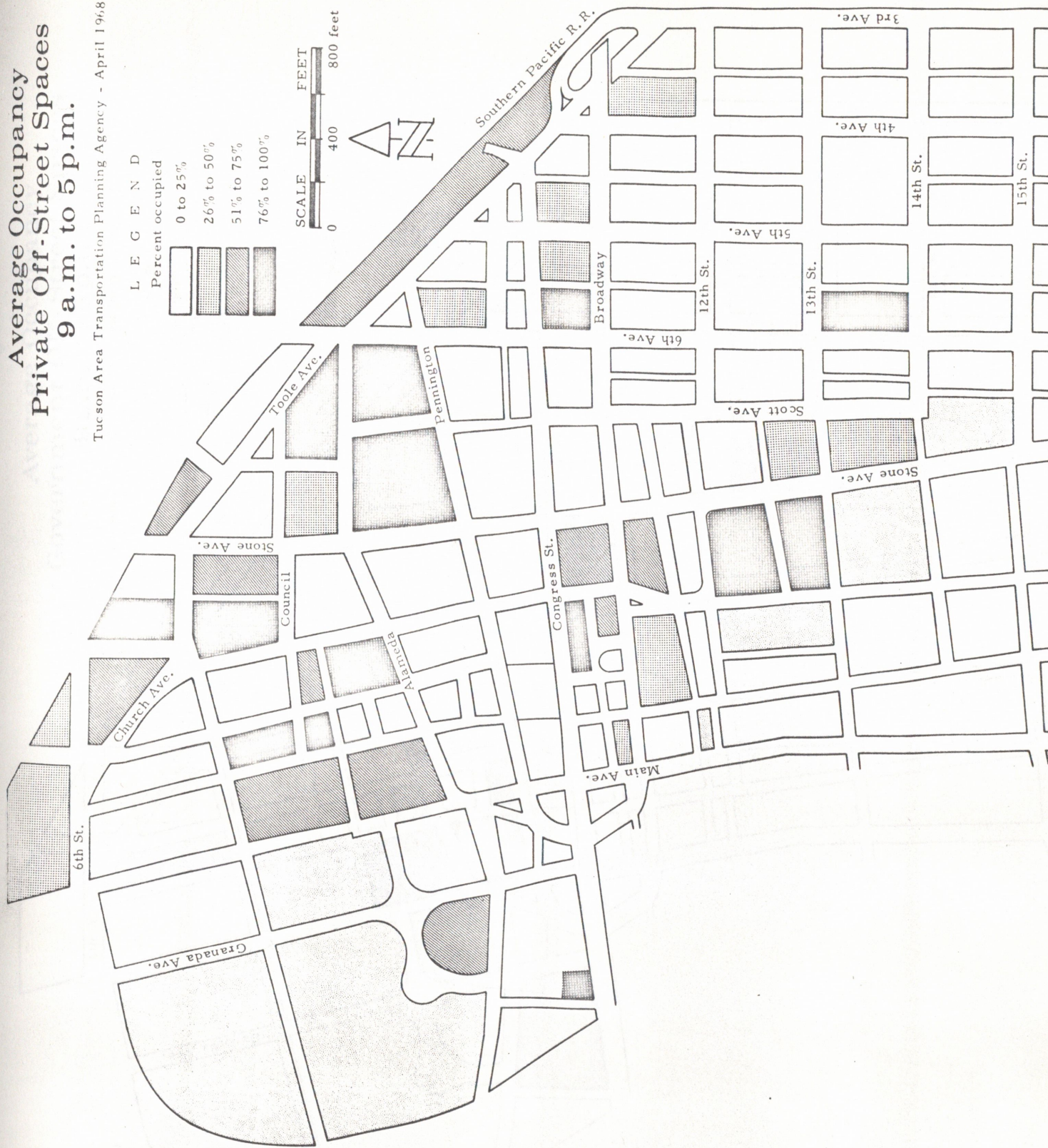


FIGURE 19.

Average Occupancy Government Off-Street Spaces 9 a.m. to 5 p.m.

Tucson Area Transportation Planning Agency - April 1968

LEGEND

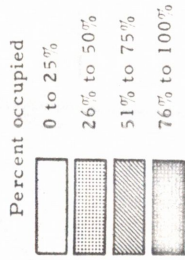
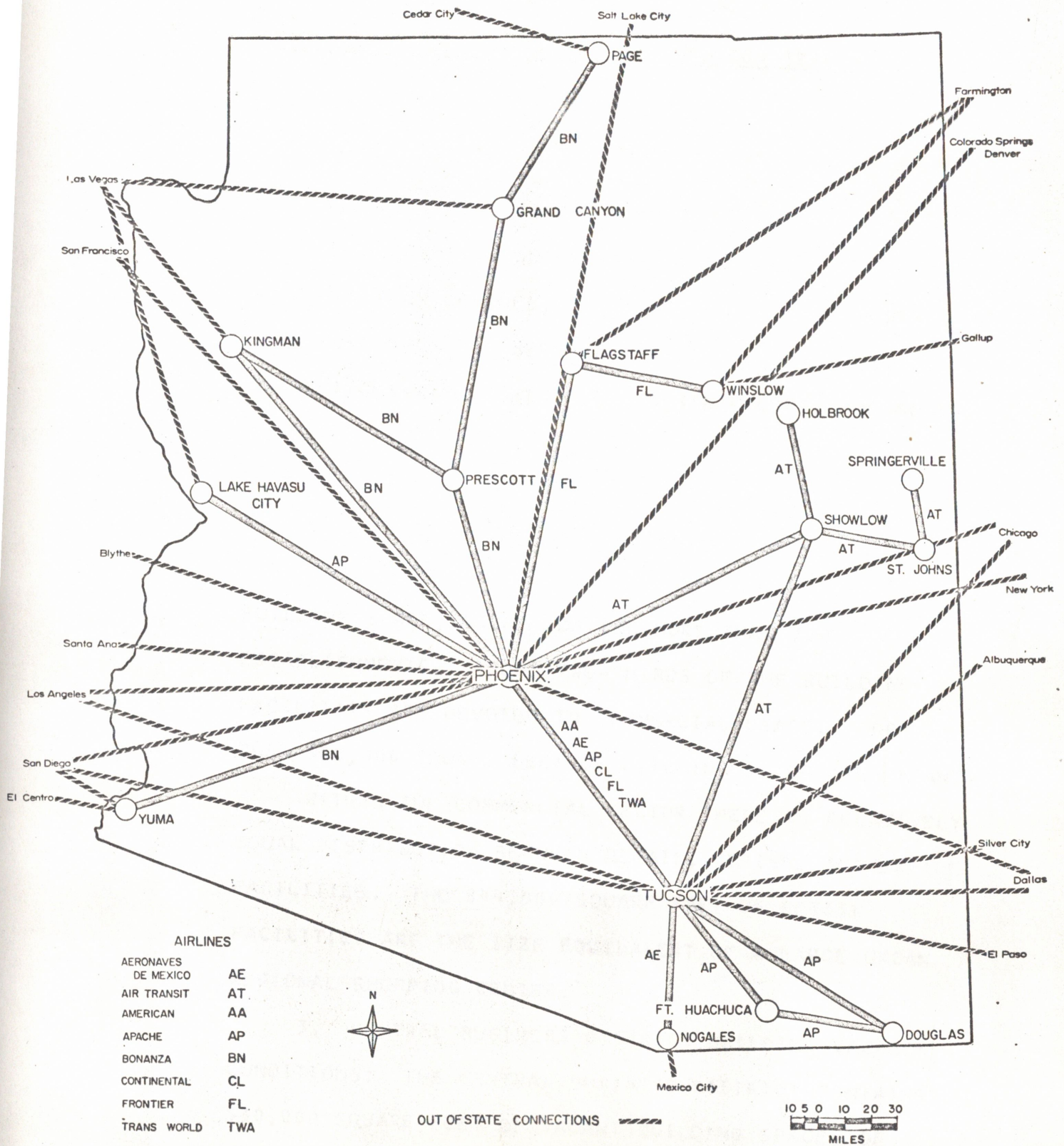


FIGURE 20.

AIRLINE ROUTES



SOURCE: OFFICIAL AIRLINE GUIDE, MAY, 1966

STEPHEN BAHR

FIGURE 21.

CENTRAL BUSINESS DISTRICT GENERAL CONDITIONS

DESIGNED PRIMARILY FOR RETAIL AND SERVICE OPERATIONS.
1. CENTRAL BUSINESS DISTRICT CORE AREAS:
WITHIN THE CENTRAL BUSINESS DISTRICT, A CORE AREA HAS BEEN DEFINED, AS INDICATED BY THE CHARTS. THIS CORE AREA HAS BEEN FURTHER DIVIDED INTO THREE SUBSECTIONS--THE NORTH CORE, CENTRAL CORE, AND SOUTH CORE.

2. CENTRAL BUSINESS DISTRICT BUILDING FACILITIES: AS SHOWN THE CENTRAL BUSINESS DISTRICT CONTAINS APPROXIMATELY 3.3 MILLION SQUARE FEET OF BUILDING SPACE, ACCOMMODATING MORE THAN 700 ESTABLISHMENTS. ABOUT TWO-THIRDS OF THE BUILDING FACILITIES ARE DEVOTED TO COMMERCIAL USAGE. MORE THAN 500,000 SQUARE FEET OF BUILDING SPACE ARE VACANT.

WITHIN THE COMMERCIAL SECTOR THERE IS RELATIVELY EQUAL DISTRIBUTION BETWEEN RETAIL, SERVICE, AND OFFICE FACILITIES. THE 844,000 SQUARE FEET OF RETAIL FACILITIES ARE THE SIZE EQUIVALENT OF A LARGE URBAN REGIONAL SHOPPING CENTER.

3. CENTRAL BUSINESS DISTRICT BUILDING VACANCY CONDITIONS: THE CENTRAL BUSINESS DISTRICT CONTAINS 530,000 SQUARE FEET OF VACANT BUILDING SPACE, OF WHICH 337,000 SQUARE FEET WAS IN COMMERCIAL BUILDINGS,

DESIGNED PRIMARILY FOR RETAIL AND SERVICE OPERATIONS.
OFFICE TYPE BUILDINGS CONTAINED ALL ADDITIONAL
180,000 SQUARE FEET OF VACANT SPACE.

MAP OF BLOCKS AND CORE AREAS



FIGURE 23.

SUMMARY OF BUILDING FACILITIES
IN THE TUCSON CBD

Type of Establishment	Building Space ^a					Number of Establishments				
	Thousands of Square Feet				Total CBD	Central Core	North Core	South Core	3-Core	Total
	Central Core	North Core	South Core	Total						
Commercial										
Retail	544	20	128	692	844	66	13	25	104	154
Services	247	13	24	284	651	19	11	3	33	76
Office	445	172	128	745	807	62	87	32	181	294
Total Commercial	1,236	205	280	1,721	2,302	147	111	60	318	524
Governmental-Institutional	41	40	70	151	250	5	16	13	34	59
Industrial	^b --	91	1	92	116	2	8	1	11	16
Residential	--	--	2	2	112	--	--	1	1	29
Vacant	241	58	43	342	530	26	5	12	43	87
Grand Total	1,518	394	396	2,308	3,310	180	140	87	407	715

^aGross floor area.
^bLess than 500 square feet.

Source: City of Tucson (CBD Land Use Survey, February, 1968),
Development Research Associates

FIGURE 24.

VACANT BUILDING SPACE
IN THE TUCSON CBD

Type of Building	Building Space ^a				Number of Buildings				
	Central Core	North Core	South Core	Total	Central Core	North Core	South Core	3-Core Total	Other C
	-----Thousands of Square Feet-----								
Retail-Commercial Services									
Levy's	65	--	--	65	1	--	--	1	--
Other	85	3	36	124	16	1	10	27	26
Total	150	3	36	189	17	1	10	28	26
Commercial Offices									
32 N. Stone	51	--	--	51	1	--	--	1	--
100 E. Alameda	--	45	--	45	--	1	--	1	--
45 W. Pennington	20	--	--	20	1	--	--	1	--
117 N. Church	--	--	--	--	--	--	--	--	1
Other	20	10	7	37	7	3	2	12	14
Total	91	55	7	153	9	4	2	15	15
Residential	--	--	--	--	--	--	--	--	3
Grand Total	241	58	43	342	26	5	12	43	44
*Distribution:									
	East of Core	76,000							
	South of Core	57,000							
	North of Core	15,000							
	Total	148,000							

^aGross Floor Area.

Source: City of Tucson (CBD Land Use Survey, February, 1968),
Development Research Associates

OVER THE COMMERCIAL TYPE VACANCY IS FAIRLY WELL SCATTERED, WHEREAS OFFICE VACANCY IS HEAVILY CONCENTRATED IN FOUR OF THE CITY'S PRINCIPAL "HIGH RISE" OFFICE STRUCTURES. FURTHER ANALYSIS OF VACANT BUILDING SPACE INDICATES THAT THE PRINCIPAL COMMERCIAL VACANCIES, EXCLUDING THE LARGE LEVY'S DEPARTMENT STORE BUILDING, ARE ON CONGRESS STREET AND TO THE SOUTH AND EAST OF THE CORE. TWO-THIRDS OF THE CONGRESS STREET VACANCY IS EAST OF SIXTH STREET AND OUTSIDE THE CORE.

4. CENTRAL BUSINESS DISTRICT BLIGHT CONDITIONS: INCLUDED IN THE DETAILED CENTRAL BUSINESS DISTRICT, LAND USE SURVEY WAS AN EVALUATION OF THE PHYSICAL CONDITION OF EACH BUILDING.

OF THE 209 BUILDINGS RATED IN THE CENTRAL BUSINESS DISTRICT, ONLY ONE BUILDING WAS RATED AS SUBSTANDARD. A TOTAL OF 37 BUILDINGS WERE RATED AS HAVING DEFICIENCIES WITH THE REMAINING 171 HAVING BEEN RATED AS BEING STANDARD.

5. CENTRAL BUSINESS DISTRICT EMPLOYMENT: BASED ON CURRENT BUILDING SPACE IN USE IN THE CENTRAL BUSINESS DISTRICT AND OUR ESTIMATES OF

AVERAGE SPACE REQUIREMENTS PER EMPLOYEE, IT IS ESTIMATED THAT CENTRAL BUSINESS DISTRICT ESTABLISHMENTS PRESENTLY EMPLOY APPROXIMATELY 8,500 PERSONS. WITHIN TWO TO THREE BLOCKS OF THE DEFINED CENTRAL BUSINESS DISTRICT THERE ARE PROBABLY AN ADDITIONAL 1,500 EMPLOYEES PRINCIPALLY IN THE EXISTING GOVERNMENTAL BUILDINGS IMMEDIATELY WEST OF THE CENTRAL BUSINESS DISTRICT. THUS, IT WOULD APPEAR THAT THE CENTRAL BUSINESS DISTRICT HAS DIRECT ECONOMIC "EXPOSURE" TO APPROXIMATELY 10,000 EMPLOYEES DAILY.

FIGURE 25.

RETAIL FACILITIES IN THE TUCSON CBD

Type of Establishment	Building Space ^a				Number of Establishments				
	Central Core	North Core	South Core	Total	Central Core	North Core	South Core	Total	Total CBD
	-----Thous. and of Square Feet-----				-----				
Pedestrian Shopper Goods	187	--	30	217	3	--	1	4	4
Department Stores	118	--	--	118	4	--	--	4	4
Variety Stores	161	1	11	174	26	1	4	31	33
Apparel Stores	32	3	18	59	22	6	10	38	56
Specialty Stores	--	--	--	--	--	--	--	--	--
Total Pedestrian Shopper Goods	505	4	59	558	55	7	15	77	97
Non-Pedestrian Shopper Goods	9	2	41	52	5	2	4	11	21
Drugstores	20	--	19	39	2	--	1	3	7
Food and Liquor Stores	2	1	11	14	1	1	3	5	7
Eating and Drinking Places	8	13	8	29	3	3	2	8	18
Automotive Outlets	--	--	--	--	--	--	--	--	4
Grand Total	544	20	128	692	66	13	25	104	154

^aGross floor area.

Source: City of Tucson (CBD Land Use Survey) and
Development Research Associates

FIGURE 26.

COMMERCIAL OFFICE FACILITIES
IN THE TUCSON CBD

Type of Establishment	Building Space ^a					Number of Establishments				
	Thousands of Square Feet				Total CBD	Total				Total CBD
	Central Core	North Core	South Core	3-Core		Central Core	North Core	South Core	3-Core	
Financial Offices										
Bank	81	30	52	163	b	3	2	1	6	8
Savings and Loan	28	2	2	32		1	1	1	3	5
Other Financial	37	11	2	50	b	9	11	1	21	30
Total Financial	146	43	56	245	262	13	14	3	30	43
Medical Offices	--	1	9	10	31	--	1	8	9	28
Other Professional Offices	120	124	60	304	319	40	67	19	126	204
Transportation, Communications, and Utilities Offices	179	4	3	186	195	9	5	2	16	19
Grand Total	445	172	128	745	807	62	87	32	181	294

^aGross floor area.

Source: City of Tucson (CBD Land Use Survey) and
Development Research Associates

FIGURE 27.

PROJECTED CBD COMMERCIAL OFFICE SPACE DEMAND

	Percent CBD to				Increase			
	County			1967	1967-1985			
	1967	1975	1985		1967-1975	1975-1985	Total	
Thousands of Square								
-----Feet-----								
Maximum Conditions								
Financial	262	300	357	53%	27%	38	57	95
Medical	31	50	68	6	10	19	28	47
Other Professional	319	500	745	39	60	181	245	426
TCU Offices	195	220	255	59	25	25	35	60
Total	807	1,070	1,435	38%	36%	263	365	628
Minimum Conditions								
Financial	262	280	308	53%	13%	18	28	46
Medical	31	20	15	6	a	(11)	(5)	(16)
Other Professional	319	400	511	39	27	81	111	192
TCU Offices	195	200	207	59	5	5	7	12
Total	807	900	1,041	38%	13%	93	141	234

^a Negative.

Source: Development Research Associates

**DOWNTOWN TUCSON MULTIPLE FAMILY
HOUSING DEMAND (INCREASE)
1967-1985**

	Number of Units		Percent Downtown to County	
	1967-1975	1975-1985	1967-1975	1975-1985
Pima County Demand^a				
University Students	2,490	3,115	5.0%	5.0%
Retirement Households	3,920	5,080	15.0	15.0
Other	6,961	20,805	7.0	9.3
Total	13,371	29,000	2.0%	10.3%
				Total
				1967-1985
Downtown Demand Under				
Maximum Improvement				
Conditions				
University Students	125	155		280
Retirement Households	590	760		1,350
Other	490	2,080		2,570
Total	1,205	2,995		4,200
Average Annual Rate	150	300		233
Downtown Demand Under				
Minimum Improvement				
Conditions				
University Students	50	60	2.0%	2.0%
Retirement Households	315	405	8.0	8.0
Other	210	730	3.0	3.5
Total	575	1,195	4.3%	4.1%
Average Annual Rate	72	120		98

^aSee Table 42. Calendarization based on Economic Base Analysis.

Source: Development Research Associates

FIGURE 29.

COMMERCIAL SERVICE FACILITIES
IN THE TUCSON CBD

Type of Establishment	Building Space ^a					Number of Establishments						
	Thousands of Square Feet-----			Total		Central Core	North Core	South Core	Total 3-Core	Other	Total CBD	
	Central Core	North Core	South Core	3-Core	Other							CBD
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Hotel-Motor Hotel	181	--	21	202	304	506	2	--	1	3	10	13
Recreational Services	23	1	--	24	8	32	1	1	--	2	2	4
Personal Services	15	1	--	16	8	24	8	1	--	9	16	25
Automotive	--	2	2	4	42	46	--	1	1	2	3	5
Other	28	9	1	38	5	43	8	8	1	17	12	29
Grand Total	247	13	24	284	367	651	19	11	3	33	43	76

^a Gross floor area.

Source: City of Tucson (CBD Land Use Survey) and
Development Research Associates

ECONOMIC ANALYSIS AND PROJECTION

DEVELOPMENT 1. RETAIL FACILITIES IN THE CENTRAL BUSINESS DISTRICT: IT SHOULD BE NOTED THAT THE DOWNTOWN'S VARIETY OF RETAIL FACILITIES IS MUCH GREATER THAN NORMALLY FOUND IN A REGIONAL SHOPPING CENTER. TO ILLUSTRATE, THE CENTRAL CORE ALONE CONTAINS 66 RETAIL ESTABLISHMENTS--APPROXIMATELY DOUBLE THE NUMBER OF ESTABLISHMENTS FOUND IN A MAJOR URBAN SHOPPING CENTER.

THE PEDESTRIAN SHOPPER GOODS FACILITIES (DEPARTMENT STORES, APPAREL STORES, AND SPECIALTY STORES) DOMINATE THE CENTRAL BUSINESS DISTRICT RETAIL PICTURE. AS SHOWN IN THE TABLE, THESE FACILITIES ACCOUNT FOR 589,000 SQUARE FEET OF RETAIL SPACE, OR APPROXIMATELY 70% OF THE CENTRAL BUSINESS DISTRICT'S TOTAL. THIS SITUATION IS COMMON TO MOST CENTRAL BUSINESS DISTRICTS AND REGIONAL SHOPPING CENTERS, WHERE MAJOR EMPHASIS IS ON PEDESTRIAN AS OPPOSED TO A VARIETY OF NON-PEDESTRIAN ESTABLISHMENTS.

(A). PHYSICAL CONSIDERATIONS: SEVERAL MAJOR STORES HAVE BEEN LOCATED AWAY FROM THE MAJOR RETAIL STREET, CONGRESS STREET. INCLUDED ARE LEVY'S DEPARTMENT STORE (NOW VACATED), AND OTHER SHOPS

DEVELOPED ONE BLOCK NORTH OF PENNINGTON, AND THE
PENNEY'S, JACOME'S AND STEINFELDS FACILITIES,
LOCATED ON STONE AVENUE, ONE BLOCK NORTH OF
CONGRESS.

THESE LATTER THREE STORES COMBINED WITH THE
CONGRESS AND PENNINGTON FACILITIES, SERVE TO MAKE
A PRESENT "L-SHAPED" RETAIL CONFIGURATION IN
DOWNTOWN TUCSON. AFTER POSSIBLE ENLARGEMENT OF
THE MYERSON'S STORE, DOWNTOWN RETAIL CONFIGURATION
WOULD BE THAT OF A "T".

FIGURE 30.

RETAIL FACILITIES IN THE TUCSON CBD

Type of Establishment	Building Space ^a					Number of Establishments				
	Central Core	North Core	South Core	Total 3-Core	Total	Central Core	North Core	South Core	Total 3-Core	Total
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Pedestrian Shopper Goods										
Department Stores	187	--	30	217	207	3	--	1	4	4
Variety Stores	118	--	--	118	118	4	--	--	4	4
Apparel Stores	161	1	11	174	198	26	1	4	31	33
Specialty Stores	29	3	18	59	76	22	6	10	38	56
Total Pedestrian Shopper Goods	505	4	59	558	589	55	7	15	77	97
Non-Pedestrian Shopper Goods										
Drugstores	9	2	41	52	108	5	2	4	11	21
Food and Liquor Stores	20	--	19	39	45	2	--	1	3	7
Eating and Drinking Places	2	1	11	14	15	1	1	3	5	7
Automotive Outlets	8	13	8	29	51	3	3	2	8	18
Grand Total	544	20	128	692	844	66	13	25	104	154

^aGross floor area.Source: City of Tucson (CBD Land Use Survey) and
Development Research Associates

FIGURE 31.

PIMA COUNTY RETAIL SALES GROWTH

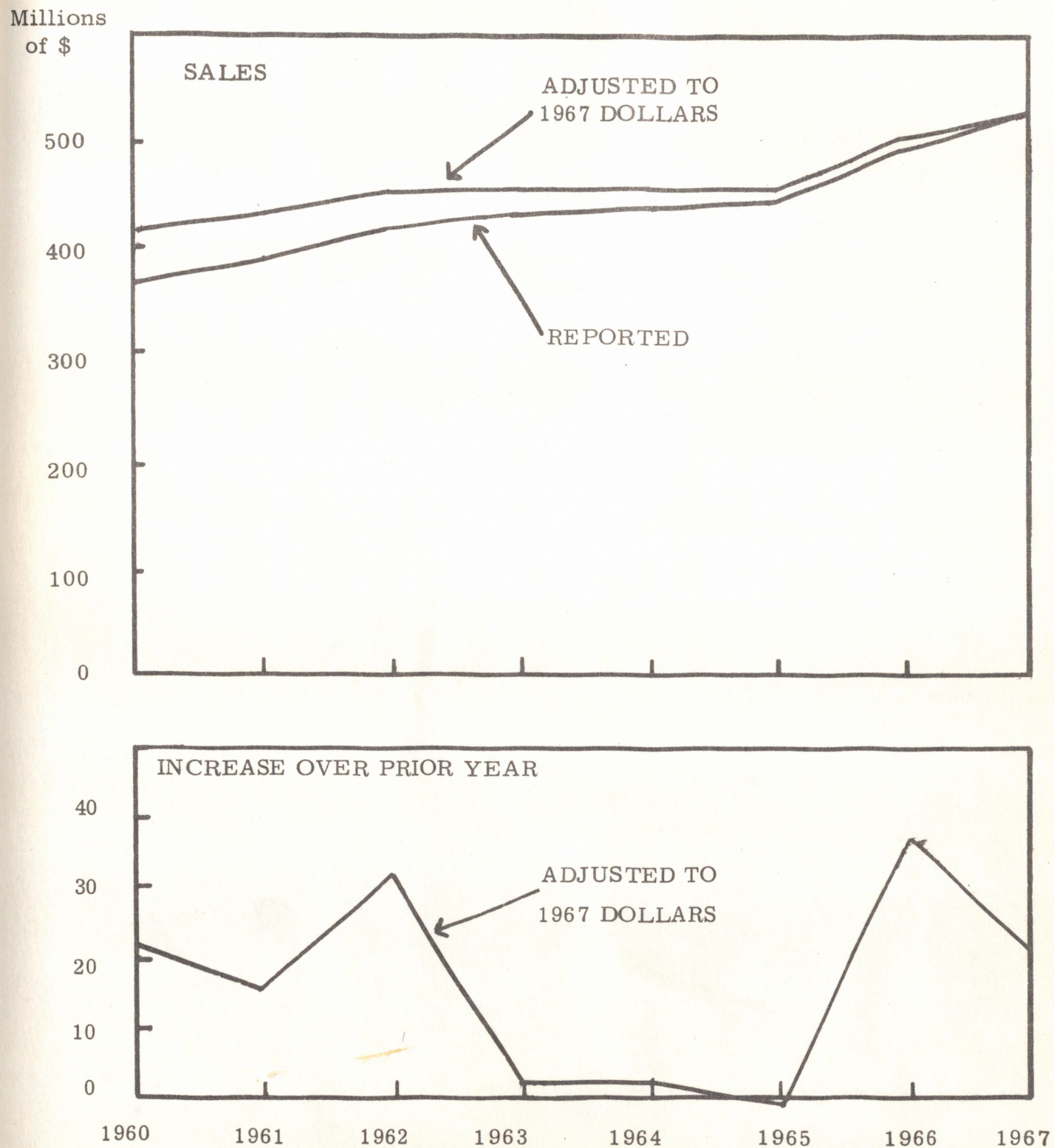


FIGURE 32.

ESTIMATED PIMA COUNTY RETAIL
SALES DISTRIBUTION IN 1967, BASED ON 1963 DATA

<u>Types of Stores for Which Comparable Data Are Available</u>	<u>1963^a</u>	<u>1967</u>	<u>Percent of Total</u>
	<u>-Thousands of Dollars-</u>		
Pedestrian Shopper Goods**	\$ 72,003	\$ 88,500	16.8%
Non-pedestrian Shopper Goods	44,092	54,259	10.3
Convenience Goods	108,946	134,330	25.5
Eating and Drinking	30,626	37,402	7.1
Auto Dealers	83,838	103,250	19.6
Service Stations	32,705	40,036	7.6
All Other	<u>24,170</u>	<u>30,027</u>	<u>5.7</u>
Total per Bureau of the Census	\$390,800	\$487,804	92.6%
Additional per Valley Bank	<u>31,573</u>	<u>38,982</u>	<u>7.4</u>
Grand Total	\$427,953	\$526,786	100.0%
<u>**Pedestrian Shopper Goods</u>			
CBD Stores ^b	\$30,849	\$30,000 ^b	
Other Stores	<u>41,154</u>	<u>58,500</u>	
Total	\$72,003	\$88,500	
Percent CBD to Total	42.8%	33.9%	

^aSee Table 10.

^b1967 CBD sales excludes those of Levy's which is in operation during part of year.

Source: U.S. Bureau of the Census (1963 data),
Valley National Bank (1963 and 1967 grand totals only),
Development Research Associates

(B). OVERALL SALES PERFORMANCE: IN 1963
PIMA COUNTY HAD REPORTED RETAIL SALES OF APPROXIMATELY
\$396 MILLION. OF THIS AMOUNT, APPROXIMATELY \$40
MILLION WAS REALIZED BY TUCSON'S CENTRAL BUSINESS
DISTRICT STORES OR ABOUT 12% OF THE COUNTY'S TOTAL
BY COMPARISON, IN 1958 THE CENTRAL BUSINESS DISTRICT
ACCOUNTED FOR 18% OF THE COUNTY'S TOTAL SALES AND
REALIZED DOLLAR SALES \$4 MILLION GREATER THAN THOSE
OF 1963.

PEDESTRIAN SHOPPER GOODS STORES ACCOUNTED FOR
ALMOST TWO-THIRDS OF THE CENTRAL BUSINESS DISTRICT'S
1963 SALES, GENERALLY IN LINE WITH SPACE RELATION-
SHIPS. THESE FIGURES ARE BASED UPON IDENTIFIED SALES
OF PEDESTRIAN SHOPPER GOODS ESTABLISHMENTS. THERE
ARE A NUMBER OF SPECIALITY SHOP SALES WHICH ARE
NOT INCLUDED BUT THE AMOUNT OF SALES OF "ALL
OTHER" OUTLETS IN WHICH SUCH SPECIALITY SHOP SALES
WERE INCLUDED, AMOUNTED TO ONLY ABOUT 5% OF THE
CENTRAL BUSINESS DISTRICT'S TOTAL.

PRINCIPAL CENTRAL BUSINESS DISTRICT DECLINES
FROM 1958 TO 1963 OCCURRED IN THE PEDESTRIAN SHOPPER

GOODS CATEGORY AND WITHIN THIS CATEGORY PARTICULARLY IN THE APPAREL GROUP. DEPARTMENT STORE SALES IN TUCSON'S DOWNTOWN DISTRICT ACTUALLY INCREASED ABOUT 10%, BUT APPAREL STORES REALIZED A DECLINE OF ABOUT 41%.

THE VALLEY NATIONAL BANK ESTIMATES THAT THE PIMA COUNTY SALES IN 1967 WERE APPROXIMATELY \$527 MILLION, COMPARED TO APPROXIMATELY \$428 MILLION IN 1963. THE 1963 FIGURES DIFFER BY APPROXIMATELY \$32 MILLION FROM THOSE PRESENTED BY THE U.S. DEPARTMENT OF COMMERCE.

Table 4
COMPARATIVE RETAIL SALES^a

	Tucson CBD		City of Tucson		Pima County		Percent CBD to County		Percent City to County	
	1958	1963	1958	1963	1958	1963	1958	1963	1958	1963
-----Thousands of Dollars-----										
<u>Pedestrian Shopper Goods</u>										
Department Store	\$ 18,177	\$ 20,047	\$ 18,177	\$ 31,137	\$ 18,177	\$ 35,137	100.0%	57.1%	100.0%	100.0%
Other General Merchandise	3,091	2,420	6,959	11,746	11,310	12,716	27.3	19.0	61.5	92.4
Apparel	11,674	6,831	19,364	21,142	19,700	21,320	59.3	32.0	98.3	99.2
Jewelry	2,262	1,551	c	c	2,656	2,830	85.2	54.8	c	c
Total Identified	\$ 35,204	\$ 30,849	\$ 44,500	\$ 61,025	\$ 51,843	\$ 72,003	67.9%	42.8%	85.8%	94.5%
<u>Non-Pedestrian Shopper Goods</u>										
Hardware	\$ 2,063	\$ 2,364	\$ 17,119	\$ 21,217	\$ 20,328	\$ 22,918	10.1%	10.3%	84.2%	92.6%
Furniture and Household	3,373	2,505	11,132	12,037	18,872	21,174	17.9	11.8	90.8	97.5
Total Identified	\$ 5,436	\$ 4,869	\$ 34,251	\$ 41,854	\$ 39,188	\$ 44,092	13.9%	11.0%	87.4%	94.9%
<u>Convenience Goods</u>										
Food	\$ 1,490	\$ 1,506	\$ 58,900	\$ 71,622	\$ 70,696	\$ 87,817	2.1%	2.2%	83.3%	88.4%
Drug	3,576	3,222	12,106	20,568	13,388	21,129	26.7	15.2	90.4	97.3
Total Identified	\$ 5,066	\$ 5,128	\$ 71,006	\$ 98,190	\$ 84,084	\$ 108,946	6.0%	4.7%	84.4%	90.1%
<u>Eating and Drinking</u>										
Auto Dealers	2,557	2,496	17,776	26,951	22,402	30,626	11.4	1.1	79.4	88.0
Service Stations	527	1,819	42,603	80,302	46,633	83,838	1.1	3.2	91.4	95.8
All Other	1,098	549	18,699	27,775	25,528	32,705	4.3	1.7	73.2	84.9
Grand Total	2,457	2,307	14,831	23,391	14,902	24,170	16.5	9.5	99.5	96.8
	\$ 52,345	\$ 48,017	\$ 243,666	\$ 366,488	\$ 284,540	\$ 396,380 ^d	18.4%	12.1%	85.6%	92.5%

^aTo extent identifiable from census data.

^bDefined by U.S. Bureau of the Census. Generally equivalent to that of defined CBD per this report.

^cNot available.

^dDiffers by 7% from \$427,953,000 reported by Valley National Bank.

Source: U.S. Bureau of the Census and Development Research Associates

FIGURE 33.

FIGURE 34.

HOUSEHOLD SURVEY RESPONDENT'S COMPLAINTS ABOUT SHOPPING IN THE TUCSON CBD

Distribution of Complaints	Location of Respondent's Residence			
	East	Far East	All Other	All Respondents
----- Percent of Total Responses-----				
Physical:				
Parking ^a	36.4%	31.1%	48.8%	40.4%
Traffic	11.4	18.0	13.2	13.4
Too far from residence	12.9	32.8	3.9	13.0
Unpleasant atmosphere	2.3	1.6	4.7	3.1
Distance between stores	2.3	1.6	3.1	2.5
Total Physical	65.3%	85.1%	73.7%	72.4%
Merchandising:				
Inadequate variety of stores	3.8%	4.9%	9.3%	6.2%
Inadequate variety of merchandise	9.8	1.6	3.9	5.9
Unpleasant sales personnel	3.0	1.6	4.7	3.4
Quality of merchandise	3.8	1.6	0.8	2.2
Total Merchandising	20.4%	9.6%	18.7%	17.6%
All Other	14.3%	5.3%	7.6%	10.0%
Total All Complaints	100.0%	100.0%	100.0%	100.0%

^a Inadequate, inconvenient, too expensive.

Source: Development Research Associates
(Household Survey)

FIGURE 35.

PROJECTED PIMA COUNTY PEDESTRIAN
SHOPPER GOODS RETAIL FACILITIES

	<u>1967</u>	<u>1970</u>	<u>1975</u>	<u>1985</u>
	-----Thousands of Dollars-----			
Projected Sales	\$88,500	\$108,200	\$144,500	\$249,000
	-----Thousands of Square Feet-----			
Building Space Required				
At \$45 per square foot sales	1,970□	2,400□	3,210□	5,530□
At \$50 per square foot sales	1,770	2,160	2,890	4,980
Present and Prospective Building Space	2,200	2,700	2,700	2,700
Indicated Net Building Space Shortage or (Excess)				
At \$45 per square foot sales	70	--	810	3,130
At \$50 per square foot sales	(130)	(340)	490	2,580

^aStores for which sales data were not available, but which were included in space inventory figures.

Source: Development Research Associates

ON THE BASIS UTILIZED IT IS SEEN THAT 1967
PEDESTRIAN SHOPPER GOODS SALES IN THE COUNTY AREA
ARE ESTIMATED TO HAVE BEEN ABOUT \$89 MILLION.

IT IS ESTIMATED THAT ABOUT \$ 30 MILLION OF
THIS AMOUNT WAS REALIZED BY CENTRAL BUSINESS
DISTRICT STORES--A VERY SLIGHT DECLINE OVER
1963 FIGURES.

(C) CONSUMER BUYING PATTERNS: THE DOWNTOWN'S
GREATEST DRAWING POWER IS AMONG LOWER INCOME
FAMILIES AND ALSO FAMILIES WHO RESIDE IN THE NORTHERN,
WESTERN, CENTRAL, AND SOUTHERN PORTIONS OF THE CITY.

INDICATIONS ARE CLEAR THAT NEITHER THE
CENTRAL BUSINESS DISTRICT NOR THE EL CON CENTER IS A
MAJOR FACTOR WITH RESPECT TO SALES OF NON-PEDESTRIAN
SHOPPER GOODS. IN COMMON WITH MANY OTHER CITIES, THE
BULK OF THESE SALES OCCUR AT STORES SITUATED AT
MORE "HIGHWAY" ORIENTED LOCATIONS.

(1). ACCEPTANCE OF CENTRAL BUSINESS DISTRICT
FACILITIES: FROM THE SURVEY RESPONSES, THE DEVELOPMENT
RESEARCH ASSOCIATION CONCLUDES THAT CONSUMER ACCEPTANCE
OF CENTRAL BUSINESS DISTRICT RETAIL FACILITIES

REMAINS "RELATIVELY HIGH" IN THE TUCSON AREA.
ACCEPTANCE IS MUCH HIGHER IN TUCSON THAN MANY OTHER
CENTRAL BUSINESS DISTRICT COMPLEXES ELSEWHERE
IN THE WEST AND THE NATION. LOCAL CONSUMERS TOWARD
THE C. ALTHOUGH THERE IS A RELATIVELY SOLID LEVEL OF
ACCEPTANCE THERE NEVERTHELESS REMAINS DISCONTENT
WITH SHOPPING CONDITIONS IN THE CENTRAL BUSINESS
DISTRICT. THIS DISCONTENT EXHIBITS ITSELF BY THE
LESS FREQUENT SHOPPING VISITS TO THE DOWNTOWN AREA.
BY FAR, THE GREATEST COMPLAINT IS INADEQUATE OR
INCONVENIENT PARKING, AS 40% OF THE RESPONSES
CONSIDERED THIS SUBJECT. AND PER CAPITA SALES
TUCSON ANOTHER MAJOR COMPLAINT, INDICATED PRINCIPALLY
BY "EASTERN" RESPONDENTS, IS THAT THE CENTRAL BUSINESS
IS TOO FAR FROM THEIR RESIDENCE. MEXICAN NATIONALS.
THESE ALTHOUGH MERCHANDISING PROBLEMS DO NOT APPEAR
TO BE THE MAJOR FACTOR THERE NEVERTHELESS WAS
CONSIDERABLE INDICATION OF A NEED FOR SOME MERCHAN-
DISING IMPROVEMENTS. RESPONSES INDICATE THAT THE TWO
PRINCIPAL FACILITIES APPARENTLY DESIRED BY LOCAL
RESIDENTS ARE ADDITIONAL PEDESTRIAN SHOPPER GOODS

ESTABLISHMENTS (DEPARTMENT STORES, CLOTHING STORES, AND SPECIALITY SHOPS) AND EATING AND DRINKING FACILITIES.

GENERALLY, RESPONSES OF LOCAL CONSUMERS TOWARD THE CENTRAL BUSINESS DISTRICT GENERATE ENCOURAGEMENT. AS NOTED EARLIER, THERE IS A RELATIVELY HIGH DEGREE OF ACCEPTANCE OF EXISTING DOWNTOWN RETAIL FACILITIES. ALSO, THE PRINCIPAL COMPLAINTS ARE OF A PHYSICAL NATURE. EXPERIENCE INDICATES THAT PHYSICAL PROBLEMS ARE MUCH MORE "CORRECTIBLE" THAN MERCHANDISING PROBLEMS.

2. SHOPPER ORIGINS AND PER CAPITA SALES:

TUCSON'S CENTRAL BUSINESS DISTRICT MERCHANTS ARE ESTIMATED TO BE LESS DEPENDENT ON LOCAL RESIDENTS AND THUS MORE DEPENDENT ON TOURISTS AND MEXICAN NATIONALS. THESE TWO GROUPS COMBINED TO ACCOUNT FOR ONLY 11% OF THE COUNTY'S TOTAL SALES, COMPARED TO ABOUT 22% FOR THE CENTRAL BUSINESS DISTRICT. OF THE TOTAL AMOUNT SPENT BY THESE TWO GROUPS OF SHOPPERS, 65% WENT TO THE CENTRAL BUSINESS DISTRICT.

3. PEDESTRIAN SHOPPER GOODS POTENTIALS FOR THE TUCSON CENTRAL BUSINESS DISTRICT: IT IS UNREALISTIC TO EXPECT THAT SIGNIFICANT SPACE INCREASES ARE FEASIBLE IN THE CENTRAL BUSINESS DISTRICT. RATHER, UNDER "OPTIMUM" CIRCUMSTANCES, A REALISTIC GOAL WOULD BE TO RETAIN EXISTING SPACE LEVELS.

RETENTION OF EXISTING SPACE LEVELS WILL REQUIRE SIGNIFICANT IMPROVEMENTS TO BE MADE IN THE CENTRAL BUSINESS DISTRICT AREA. IMPROVEMENT ELEMENTS WHICH WOULD FACILITATE RETENTION OF EXISTING SPACE LEVELS WILL INVOLVE PEDESTRIAN MOVEMENT BEAUTIFICATION, AND TRAFFIC CIRCULATION.

POSSIBLE SPACE REDUCTIONS OF ALMOST 200,000 SQUARE FEET ARE FORESEEN BY 1975 AND 300,000 SQUARE FEET. TEN YEARS BEYOND THAT, IF IMPROVEMENTS ARE NOT MADE. IN ADDITION, OPERATIONAL EFFICIENCY OF THE REMAINING RETAILERS WOULD DECLINE.

THE PRIMARY GAINS TO BE MADE BY DOWNTOWN IMPROVEMENTS ARE PREVENTION OF DECLINE. SUCH DECLINE WILL BE EVIDENCED NOT MERELY BY REDUCTIONS OF CENTRAL

CENTRAL BUSINESS DISTRICT'S PEDESTRIAN SHOPPER GOODS BUILDING SPACE AND SALES, BUT ALSO BY CONTINUED INCREASE IN STORE VACANCIES. IF TYPICAL EXPERIENCE PREVAILS, A NUMBER OF THE EXISTING OCCUPIED BUILDINGS WILL BE DIVERTED TO VERY LOW QUALITY, SECONDARY RETAIL USAGE, WHICH WILL FURTHER REDUCE THE RETAIL ATTRACTIVENESS OF THE DOWNTOWN AREA AS A WHOLE.

4. OTHER RETAIL POTENTIALS FOR THE TUCSON CENTRAL BUSINESS DISTRICT: UNDER MAXIMUM IMPROVEMENT CONDITIONS, PEDESTRIAN SHOPPER GOODS WILL REMAIN THE PRINCIPAL ELEMENT OF DOWNTOWN RETAIL ACTIVITY. NEVERTHELESS, THERE WILL BE DEMAND FOR ADDITIONAL RETAIL FACILITIES TO HELP "ROUND OUT" THE CENTRAL BUSINESS DISTRICT'S TOTAL RETAIL IMPACT.

THE DEVELOPMENT RESEARCH ASSOCIATION SEES A NEED SOMETIME IN THE 1970-1975 PERIOD FOR ONE AND POSSIBLY TWO CONVENIENCE SHOPPING COMPLEXES IN THE PERIPHERY OF THE CENTRAL BUSINESS DISTRICT OR ELSEWHERE IN THE DOWNTOWN AREA. PROPERLY LOCATED WITH RESPECT TO AUTOMOTIVE ACCESS, SUCH A FACILITY COULD

CONTAIN 40,000 TO 50,000 SQUARE FEET OF BUILDING SPACE. PRINCIPAL ANCHORS WOULD BE A MODERN SUPER-MARKET AND VARIETY TYPE DRUGSTORE.

THE POSSIBILITY EXISTS--UNDER MAXIMUM CONDITIONS--OF AN INTRODUCTION OF ONE TO TWO MODERN TYPE COFFEE SHOPS AND THREE OR FOUR DINNER TYPE RESTAURANTS BY 1975, AND APPROXIMATELY DOUBLE THIS AMOUNT BY 1985. FOR PLANNING PURPOSES IT IS REASONABLE TO ASSUME THAT SUCH FACILITIES WOULD HAVE AN AVERAGE BUILDING SIZE OF 4,000 TO 5,000 SQUARE FEET EACH.

5. PRESENT COMMERCIAL OFFICE FACILITIES IN THE CENTRAL BUSINESS DISTRICT: THE CENTRAL BUSINESS DISTRICT PRESENTLY HAS ABOUT 38% OF PIMA COUNTY'S TOTAL COMMERCIAL OFFICE SPACE UTILIZING COUNTY ESTIMATES BASED UPON RATIOS DEVELOPED FROM HELD SURVEYS IN A LARGE NUMBER OF OTHER COMMUNITIES AND EXAMINATION OF VARIOUS EMPLOYMENT RELATIONSHIPS AND BUILDING SPACE REQUIREMENTS PER EMPLOYEE, THE TOTAL COMMERCIAL OFFICE USAGE IN THE DOWNTOWN IS APPROXIMATELY 38% OF COMPARABLE COUNTY SPACE. THE CENTRAL BUSINESS DISTRICT CONTINUES TO CONTAIN A RATHER SUBSTANTIAL

PORTION OF THE COUNTY'S TOTAL COMMERCIAL OFFICE SPACE, WITH THE EXCEPTION OF MEDICAL FACILITIES. COMMERCIAL OFFICE FACILITIES PRESENTLY FOUND IN PIMA COUNTY EQUAL ABOUT 6.5 SQUARE FEET PER CAPITA. RESEARCH IN OTHER CITIES INDICATES THAT THIS IS ABOUT "AVERAGE" FOR AN ECONOMIC AREA COMPARABLE TO PIMA COUNTY.

TWO 6. VACANCY CONDITIONS: THE CENTRAL BUSINESS DISTRICT'S COMMERCIAL OFFICE TYPE BUILDINGS PRESENTLY (AS OF TIME OF THE LAND USE SURVEY) CONTAINS APPROXIMATELY 180,000 SQUARE FEET OF VACANT SPACE.

FOUR OF THE SIX DOWNTOWN HIGH RISE BUILDINGS ACCOUNT FOR 130,000 SQUARE FEET OF THE 180,000 SQUARE FEET OF VACANT SPACE.

THE CURRENT HIGH RISE VACANCIES EXIST MAINLY BECAUSE OF THE FOLLOWING REASONS:

* HIGHER RENTALS REQUIRED TO COVER A POSITIVE HIGHER COST CONSTRUCTION, AND SIMPLY A LACK OF CURRENT DEMAND FOR THIS HIGHER PRICED SPACE.

THE DOWNTOWN AREA.

* NEARBY PARKING AND INCONVENIENCE RESULTING THEREFROM.

* POSSIBLE BUILDING DEFICIENCIES IN SOME CASES, PARTICULARLY WITH

NEW CIVIL RESPECT TO NOISE CONTROL.

7. DOWNTOWN POTENTIALS: ONLY ABOUT ONE-HALF OF THE CENTRAL BUSINESS DISTRICT'S DEMAND POTENTIAL WILL PROBABLY BE REALIZED BY HIGH RISE TYPE SPACE. THE REMAINDER PRIMARILY BECAUSE OF ACCESS PARKING AND RENTAL LEVEL CONSIDERATIONS WILL BE MORE SUITABLE FOR LOWER INTENSITY BUILDING--PROBABLY TWO TO THREE FLOORS IN HEIGHT. AS A CONSEQUENCE EVEN UNDER MAXIMUM DEMAND CONDITIONAL "HIGH-RISE" SPACE THROUGH ABOUT 1975. HOWEVER, THERE SHOULD BE A MARKET FOR LOW INTENSITY SPACE OF 100,000 TO 125,000 SQUARE FEET BY 1975.

8. IMPROVEMENT CONSIDERATIONS: WITH RESPECT TO CIVIC CENTER PROXIMITY, RESIDENTIAL DEMAND PRESSURES AS WELL AS THE OFFICE DEMAND PRESSURES WILL BE STIMULATED. FLEXIBILITY OF BOTH OFFICE AND RESIDENTIAL USAGE IN A GIVEN AREA CAN BE A POSITIVE FACTOR IN ENCOURAGING MAXIMUM NEW DEVELOPMENT IN THE DOWNTOWN AREA.

DOWNTOWN TUCSON'S PRESENT HIGH RISE DOMINANCE COUPLED WITH ENVIRONMENTAL AND MARKET IMPACTS OF THE

NEW CIVIC AND CONVENTION CENTERS WILL SERVE TO LIMIT
THREE-FOURTHS OF THE TOTAL COMMERCIAL SPACE
MAJOR "OUTLYING" HIGH RISE CONSTRUCTION TO CON-
FACILITIES FOUND IN THE CENTRAL BUSINESS DISTRICT
SIDERABLY LESS THAN DOWNTOWN DEVELOPMENT. THE NEW
BROADWAY STRUCTURE IS NOT SEEN AS A SERIOUS THREAT
TO THE DOWNTOWN. THE MAJOR THREAT IS FOR LOWER
INTENSITY SPACE TO BE LOST TO OUTLYING AREAS.

9. DOWNTOWN POTENTIALS: IN TERMS OF DOWNTOWN
IMPROVEMENT POTENTIALS, IT IS ASSUMED THAT NO DEMAND
WILL EXIST FOR NEW SINGLE FAMILY TYPE CONSTRUCTION.

HIGHER DEMAND ESTIMATES FOR LATER YEARS REFLECT
DEVELOPMENT RESEARCH ASSOCIATION'S JUDGEMENT CONCERNING
THE IMPACT OF COMPLETION OF THE CIVIC CENTER AND
CONVENTION CENTER COMPLEXES DURING THE NEXT FEW YEARS.

RESIDENTIAL IMPROVEMENT CONSIDERATION IF A
DEVELOPER SHOULD BE INTERESTED IN PLACING RESIDENTIAL
UNITS ABOVE COMMERCIAL FACILITIES AND IF PROPER PARKING
AND COMPATIBILITY FACTORS CAN BE MET WE BELIEVE THAT
SUCH DEVELOPMENT WOULD BE BENEFICIAL TO OVERALL DOWNTOWN
REVITALIZATION OBJECTIVES.

10. HOTEL-MOTEL FACILITIES: IT WILL BE NOTED
THAT HOTEL-MOTEL FACILITIES ACCOUNT FOR MORE THAN

THREE-FOURTHS OF THE TOTAL COMMERCIAL SERVICE
FACILITIES FOUND IN THE CENTRAL BUSINESS DISTRICT.

FIGURE 36.

PROJECTED INDUSTRIAL BUILDING SPACE DEMAND IN PIMA COUNTY

	<u>Manufacturing</u>	<u>Wholesale</u>	<u>Total</u>
	- - - - - Square Feet - - - - -		
Present Building Space (1967) ^a	3,730,000	1,680,000	5,410,000
1985 Projection			
Minimum	5,400,000	2,160,000	7,560,000
Maximum	14,000,000	3,760,000	17,760,000
Midpoint	9,600,000	2,880,000	12,480,000
Average Annual Increase			
Minimum	93,000	27,000	120,000
Maximum	571,000	116,000	687,000
Midpoint	326,000	67,000	393,000

^aEstimated based on present employment using 400 square feet per manufacturing employee and 800 square feet per wholesale employee.

Source: Development Research Associates

Source: Development Research Associates

FIGURE 37.

PROJECTED RETAIL AND COMMERCIAL BUILDING SPACE
DEMAND IN PIMA COUNTY

	<u>Minimum Projection</u>	<u>Maximum Projection</u>	<u>Midpoint Projection</u>
<u>Total Increase</u>			
Pedestrian Shopper Goods	730,000	2,870,000	1,660,000
Furniture and Appliances	290,000	1,150,000	660,000
Convenience Goods	520,000	2,050,000	1,190,000
Eating and Drinking	360,000	1,440,000	830,000
All Other Retail	570,000	2,260,000	1,300,000
Commercial Services	520,000	2,050,000	1,190,000
<u>Average Annual Increase</u>			
Pedestrian Shopper Goods	40,600	159,400	92,200
Furniture and Appliances	16,100	63,900	36,700
Convenience Goods	28,900	113,900	66,100
Eating and Drinking	20,000	80,000	46,100
All Other Retail	31,700	125,600	72,200
Commercial Services	28,900	113,900	66,100

Source: Development Research Associates

FIGURE 38.

PROJECTED COMMERCIAL OFFICE SPACE DEMAND
IN PIMA COUNTY

	<u>Medical</u>	<u>Financial</u>	<u>Other</u>	<u>Total</u>
	----- Square Feet -----			
<u>Projected Increase, 1967-1985</u>				
Minimum	210,000	160,000	310,000	680,000
Maximum	820,000	620,000	1,230,000	2,670,000
Midpoint	470,000	360,000	710,000	1,540,000
<u>Projected Average Annual Increase, 1967-1985</u>				
Minimum	11,700	8,800	17,200	37,800
Maximum	45,600	34,400	68,300	148,300
Midpoint	26,100	20,000	39,400	85,600

Source: Development Research Associates

FIGURE 39.

PROJECTED GOVERNMENTAL-INSTITUTIONAL BUILDING
SPACE DEMAND IN PIMA COUNTY

Projected Increase,
1967-1985

Minimum	602,000□
Maximum	2,460,000
Midpoint	1,420,000

Projected Average Annual
Increase, 1967-1985

Minimum	34,400□
Maximum	136,700
Midpoint	78,900

Source: Development Research Associates

FIGURE 40.

PROJECTED TRANSIENT FACILITIES DEMAND
IN PIMA COUNTY

Present Number of Units (1967)	5,300 rooms
1985 Projection	
Minimum	7,100 rooms
Maximum	10,700
Midpoint	8,000
Average Annual Increase	
Minimum	100 rooms
Maximum	300
Midpoint	150

Source: Development Research Associates

FIGURE 41.

PIMA COUNTY GROWTH RATE COMPARISONS
- % Increase Over Prior Years -

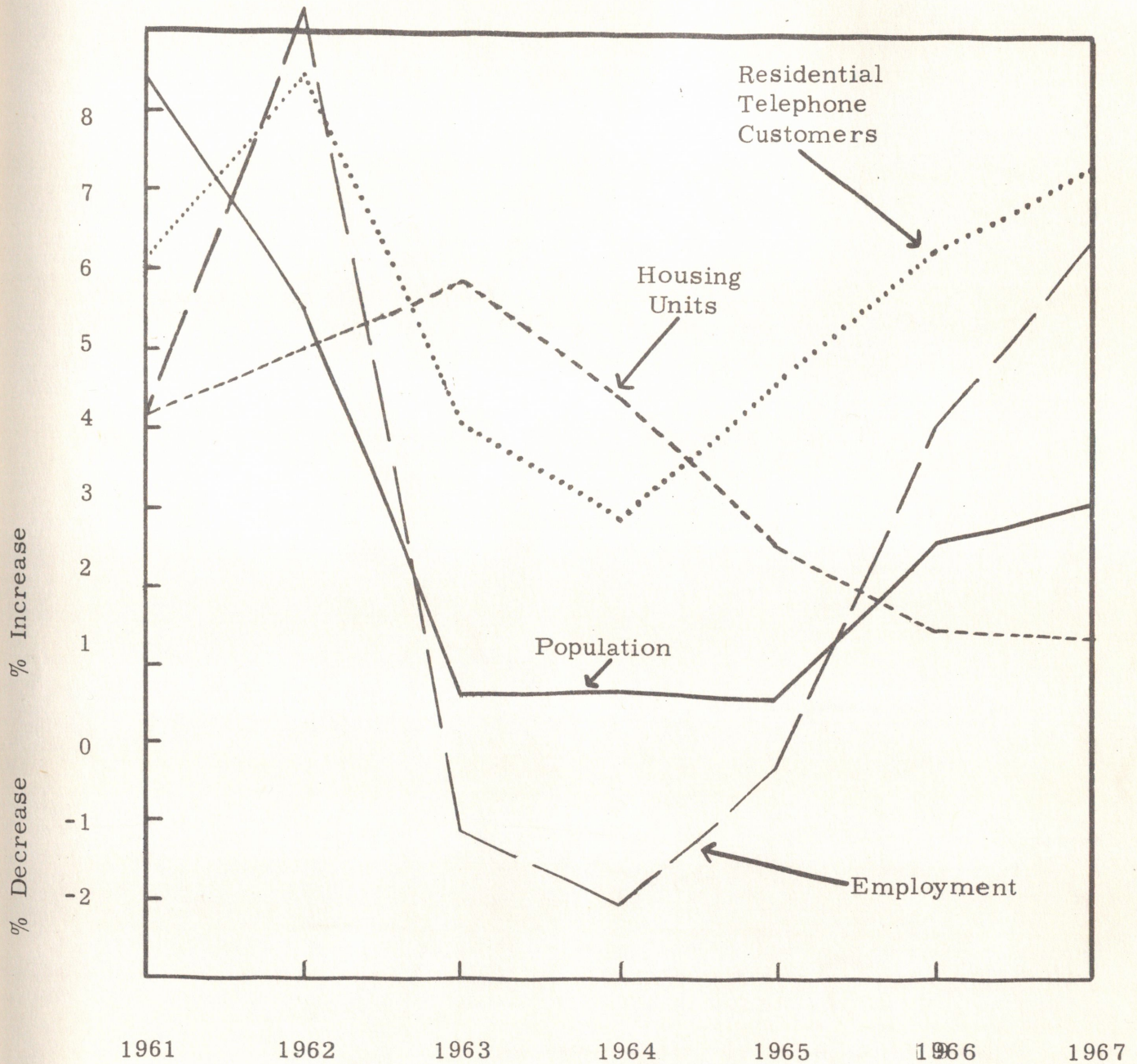
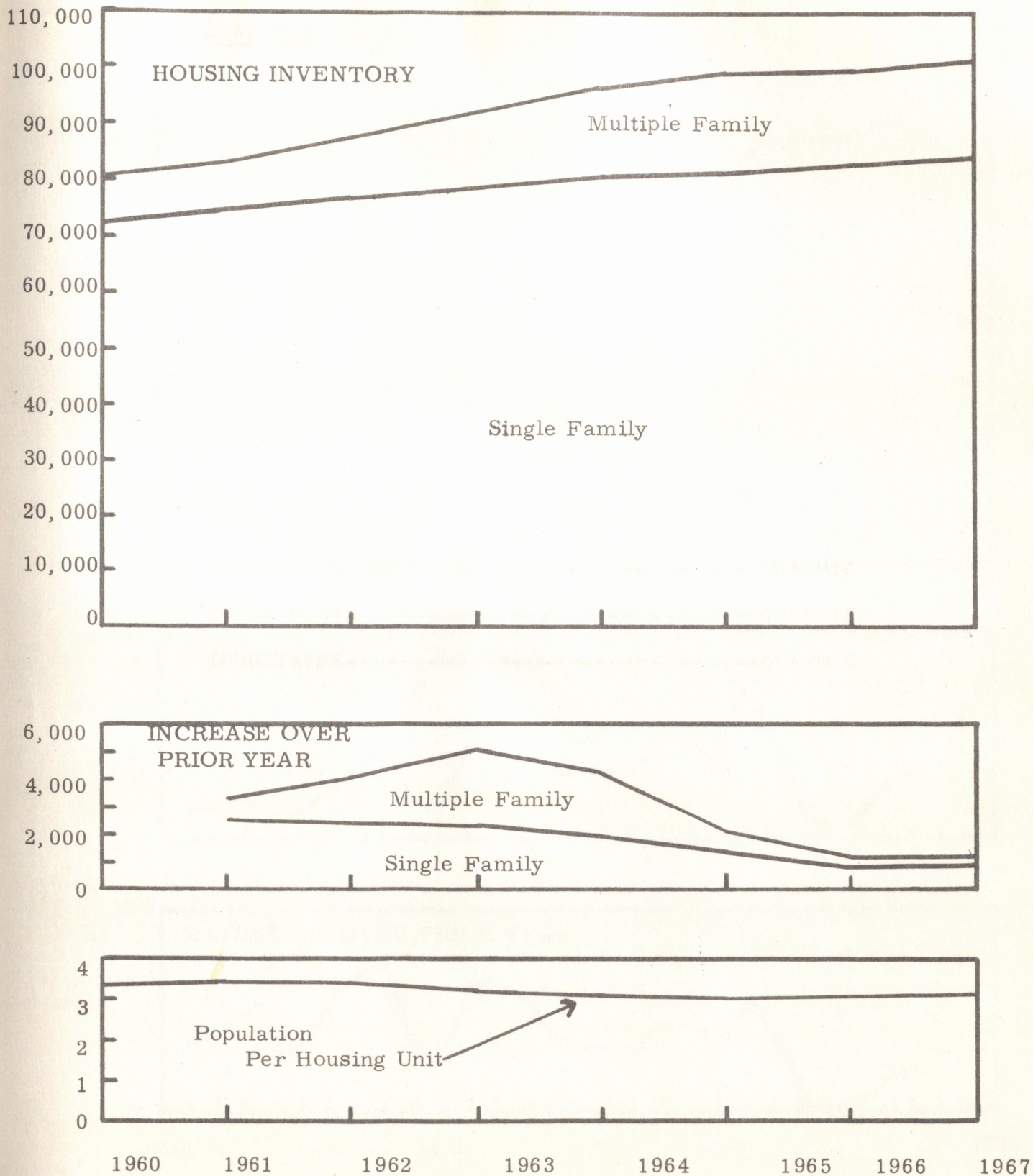


FIGURE 42.

PIMA COUNTY HOUSING GROWTH



APPENDIX

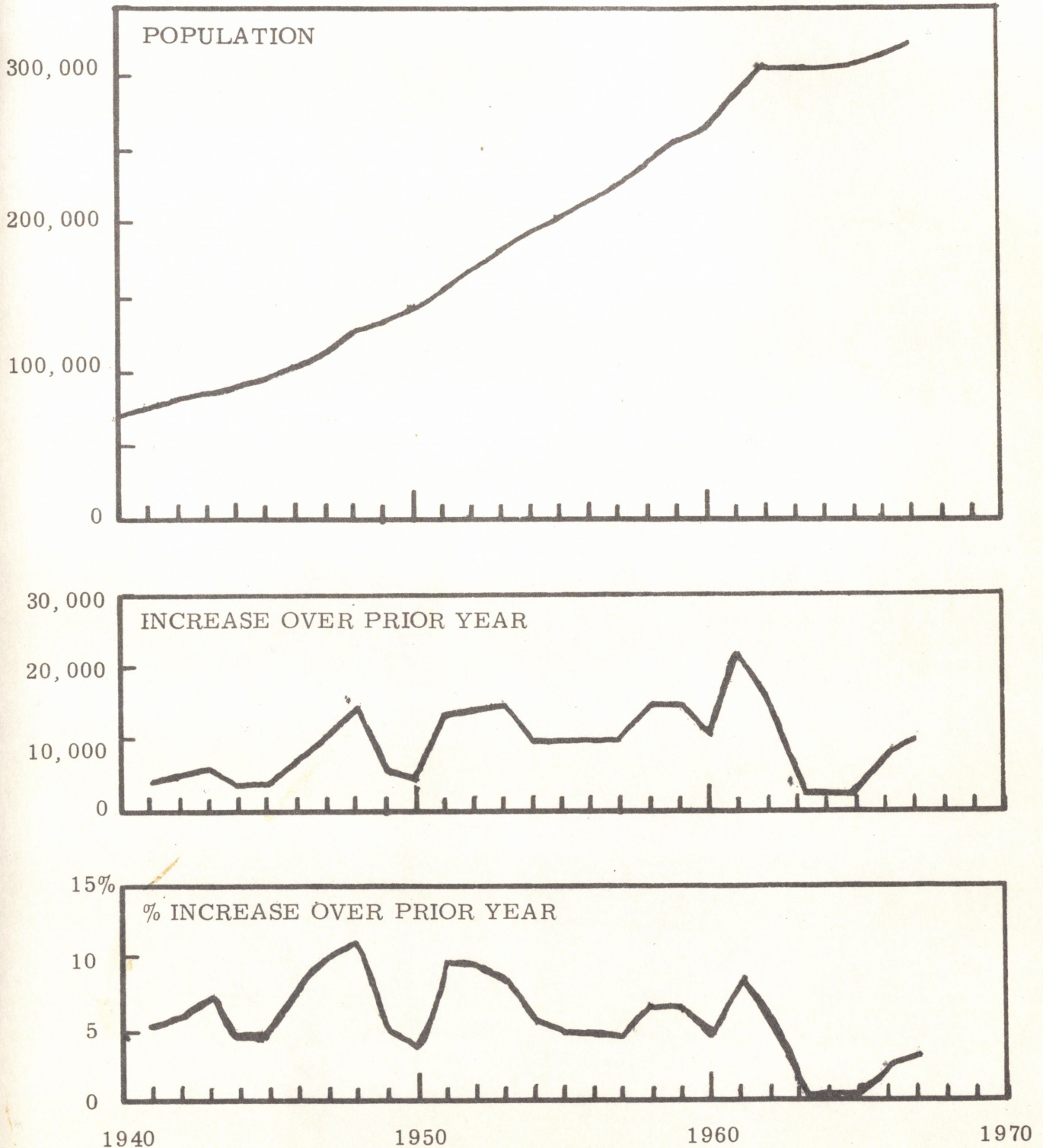
POPULATION GROWTH-----GRAPHIC

EMPLOYMENT-----GRAPHIC

INDUSTRIES-----GRAPHIC

FIGURE 43.

PIMA COUNTY POPULATION GROWTH



Source: Development Research Associates

Exhibit 2

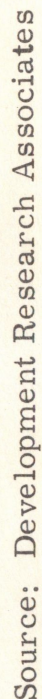


FIGURE 44.

FIGURE 45.

COMPARATIVE POPULATION GROWTH AREAS
--% AVERAGE ANNUAL INCREASE--

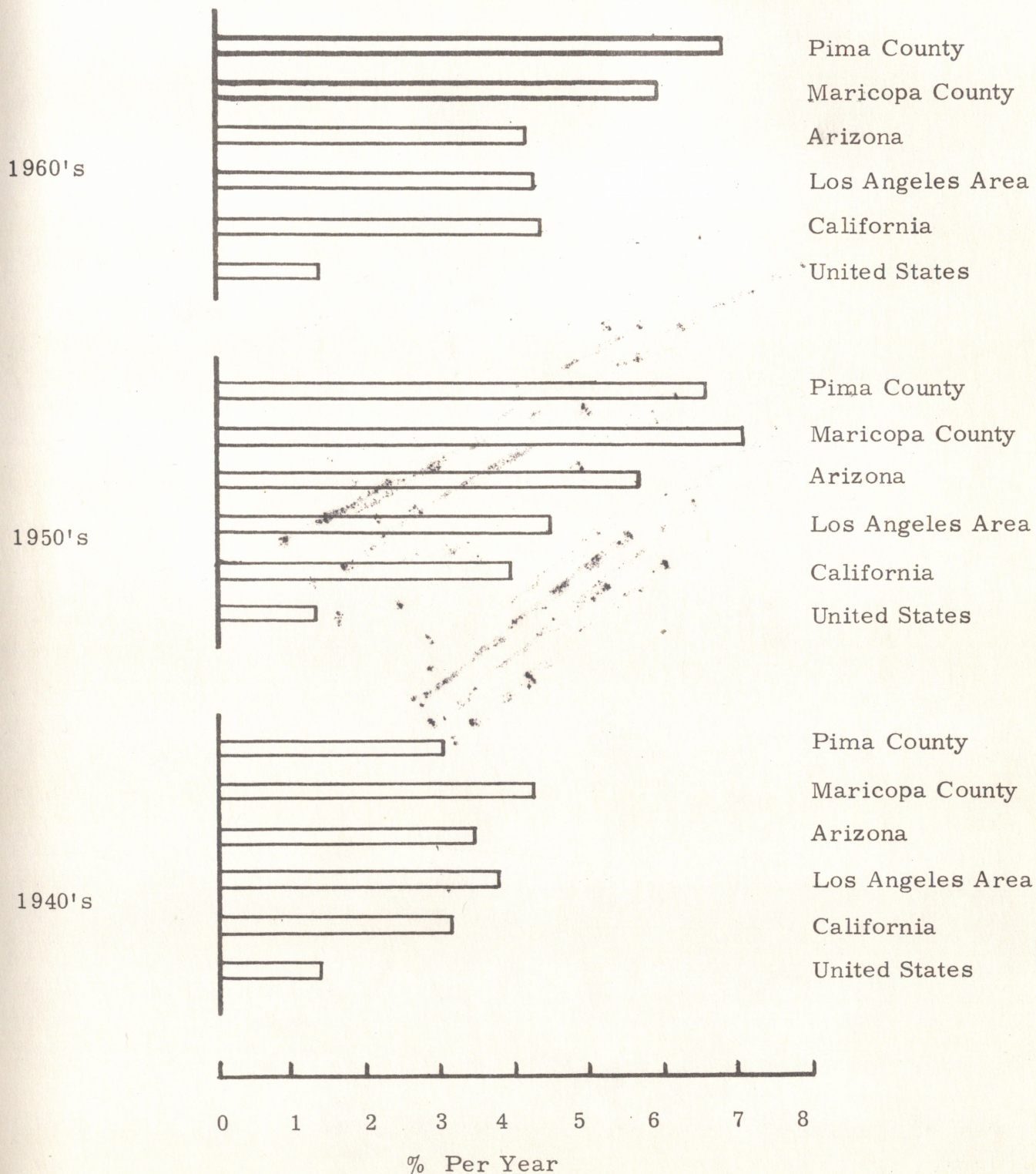


FIGURE 46.

PIMA COUNTY CIVILIAN EMPLOYMENT

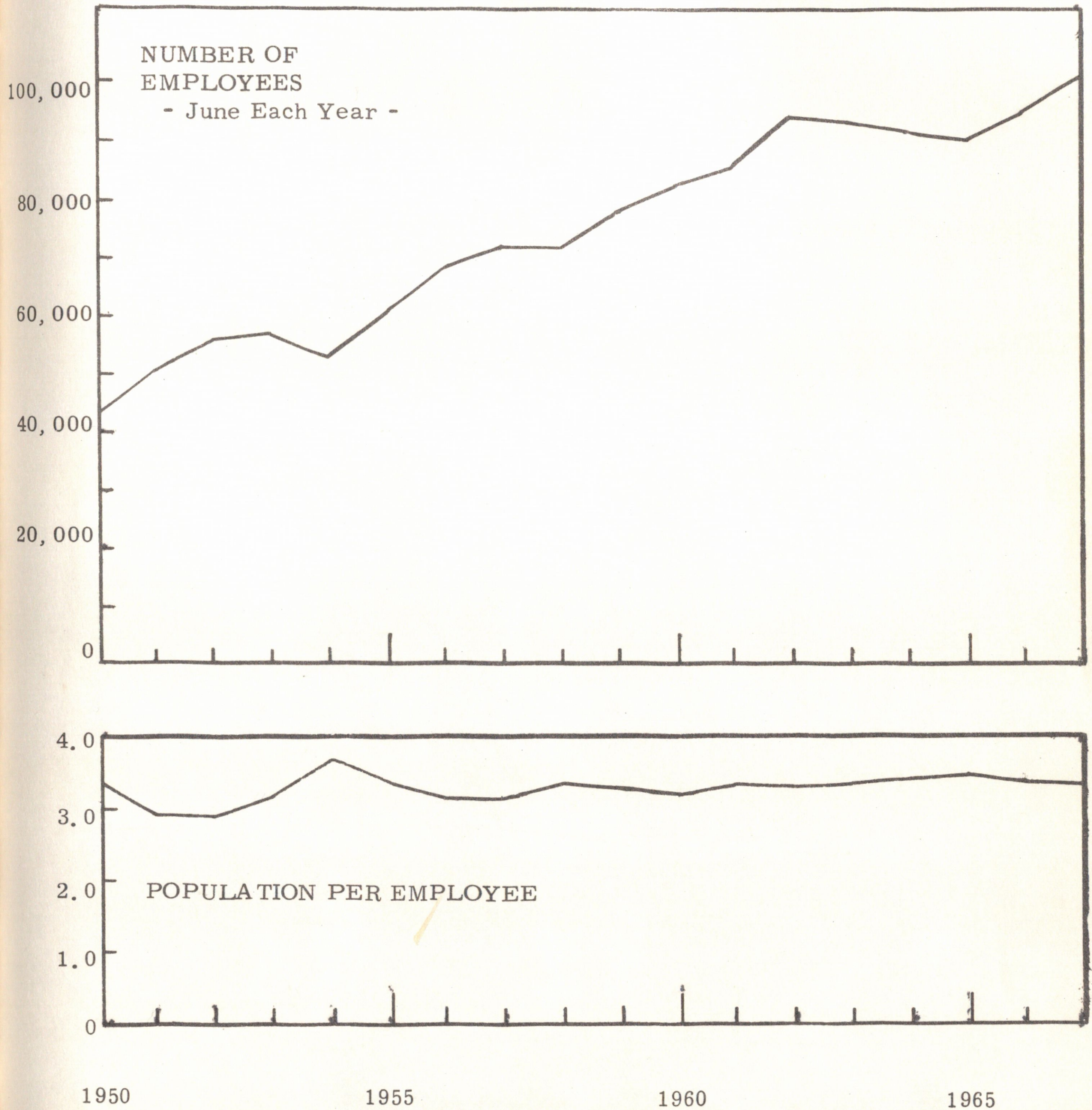


Exhibit 5
COMPARATIVE CIVILIAN EMPLOYMENT DISTRIBUTION
- Wage and Salary Workers Only -
-1967-

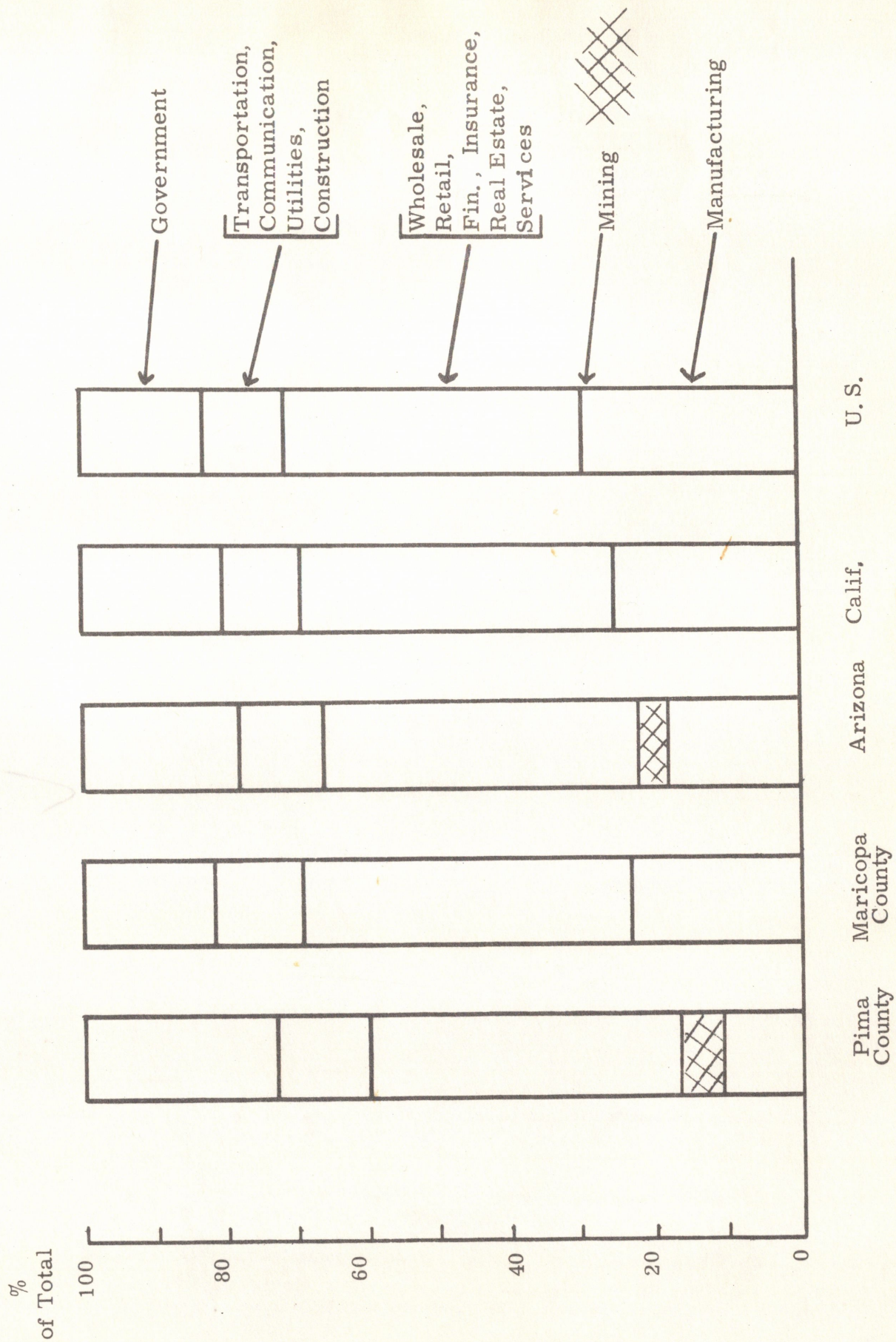


FIGURE 47.

Source: Development Research Associates

FIGURE 48.

DISTRIBUTION OF PIMA COUNTY'S "EXPORT" JOBS
-1967-

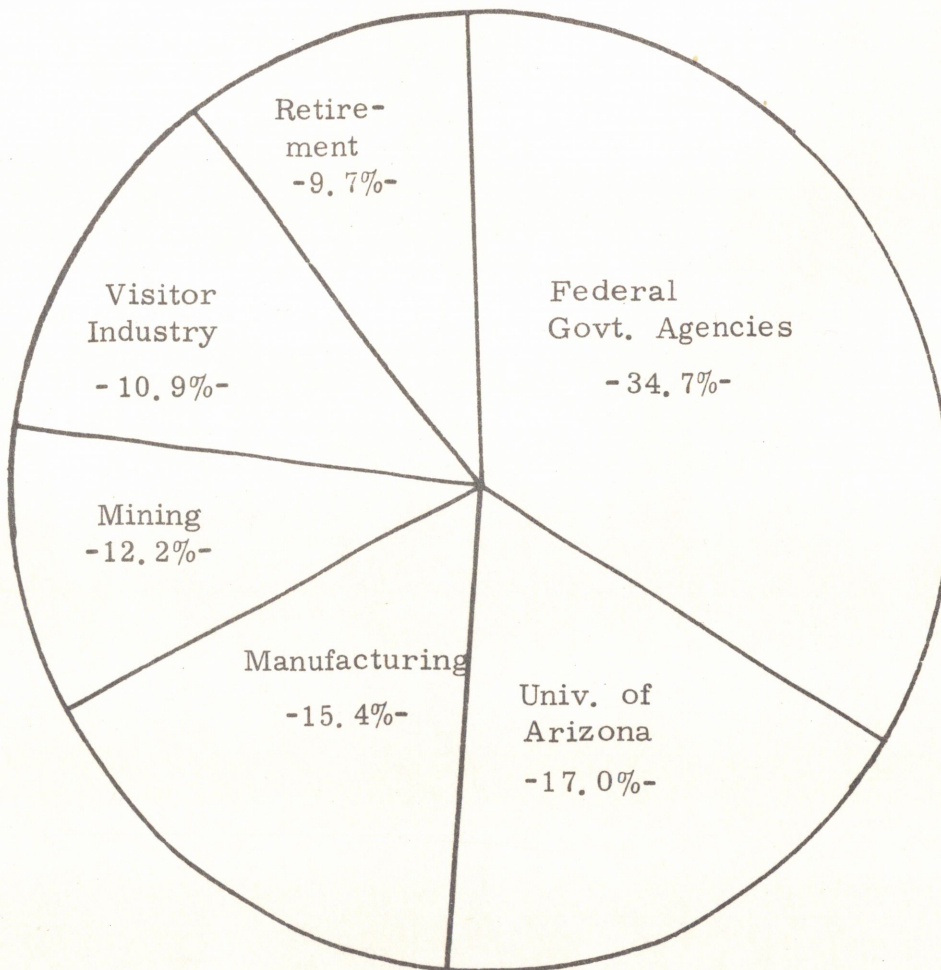


FIGURE 49.

PIMA COUNTY POPULATION PROJECTIONS
(And Past Projections)

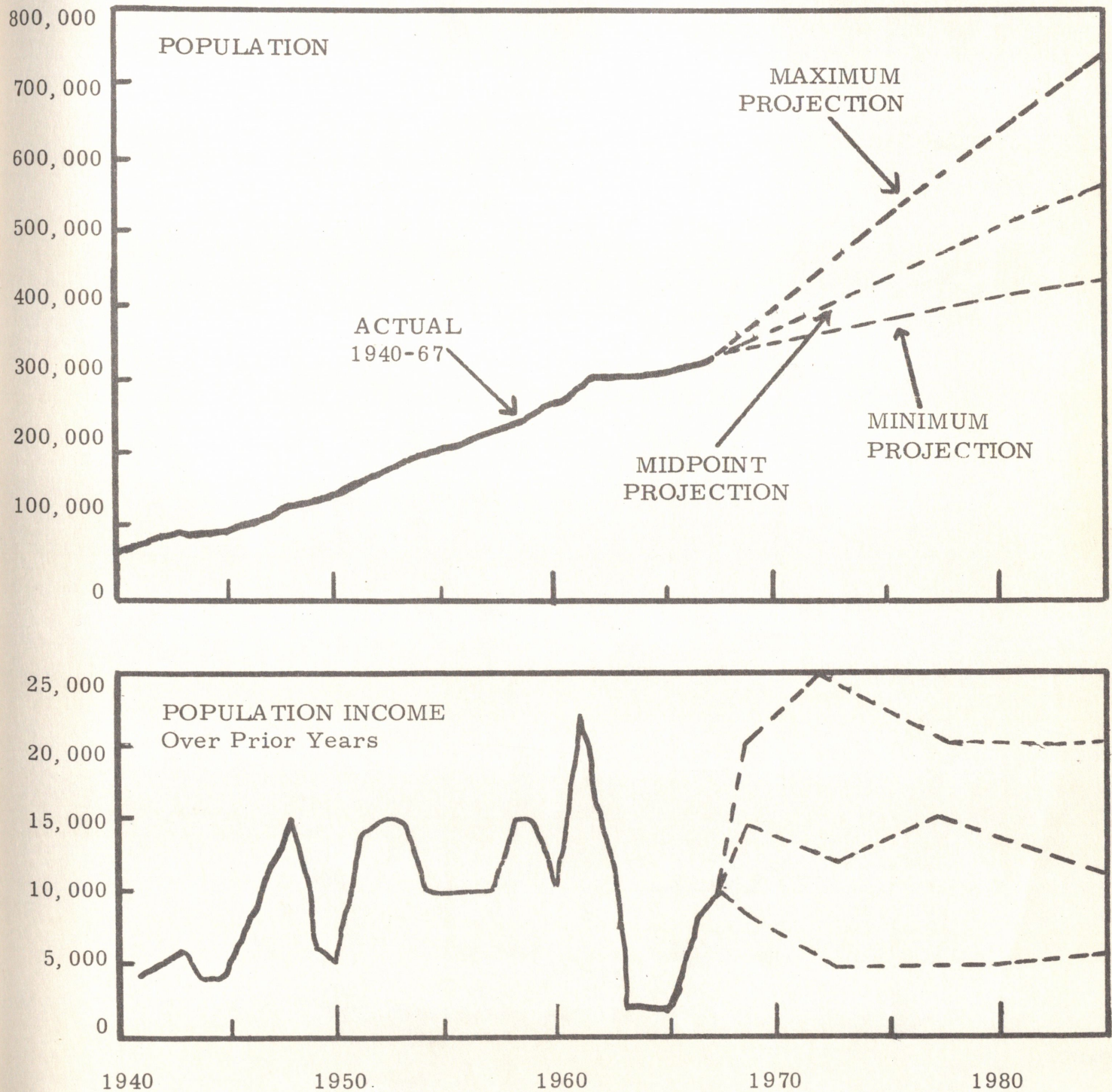


Exhibit 11
 PROJECTED INCREASES IN PIMA COUNTY'S EXPORT JOBS
 - 1967 to 1985 -

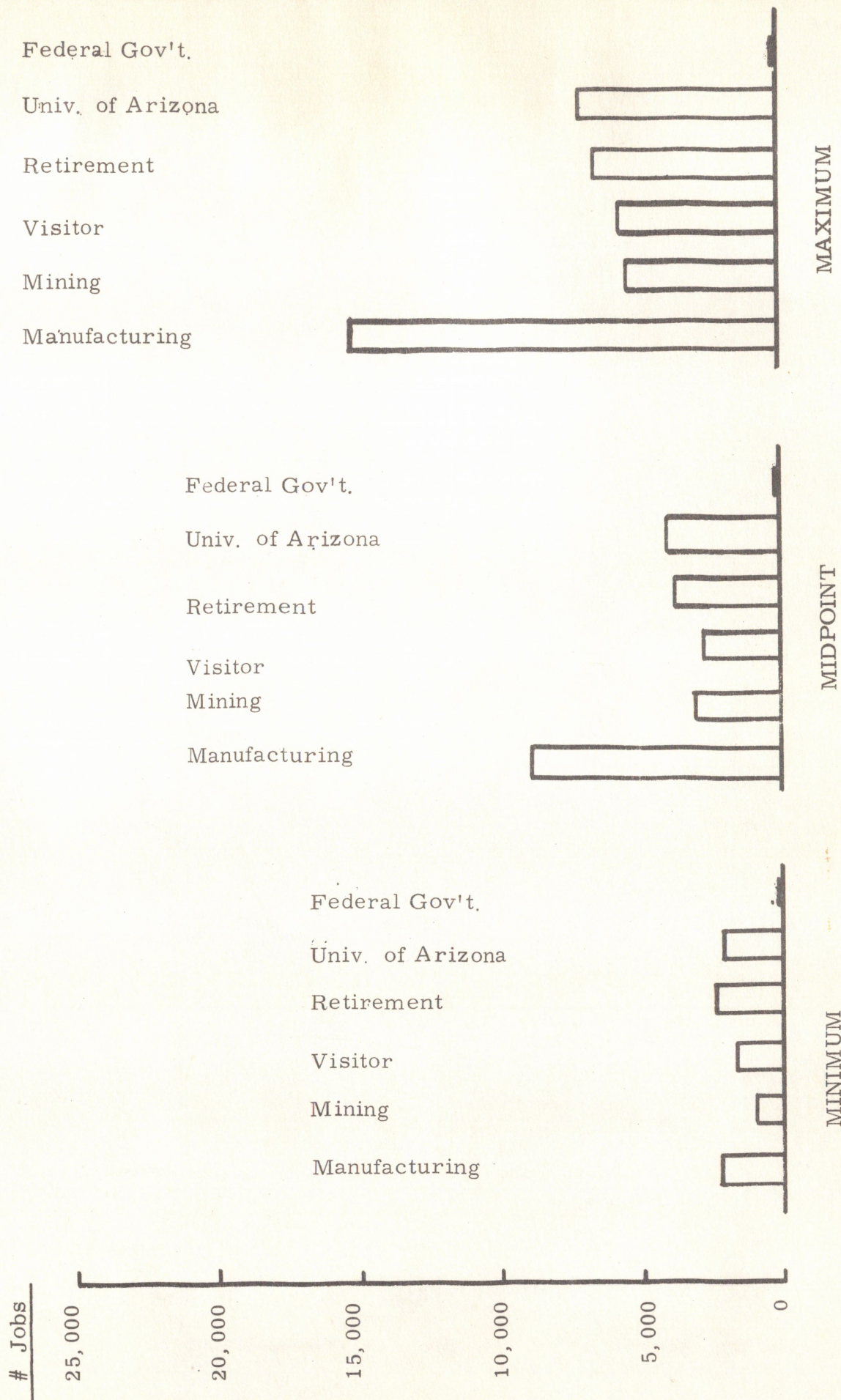


FIGURE 50.

Source: Development Research Associates

FIGURE 51.

PIMA COUNTY ANNUAL GROWTH RATES
FOR MAJOR ECONOMIC INDICATORS

	Population ^a	Employment ^b	Housing Units ^c	Adjusted Retail Sales ^d	Residential Utility Customers	
					Telephone	Electricity
1960-1961	8.4%	4.2%	4.2%	4.0%	6.2%	5.5%
1961-1962	5.6	9.3	5.0	7.5	8.5	5.9
1962-1963	0.7	(1.2)	5.9	0.4	4.1	4.0
1963-1964	0.7	(2.0)	4.5	0.3	2.9	2.3
1964-1965	0.6	(0.3)	2.6	(0.1)	4.6	2.7
1965-1966	2.6	4.1	1.5	7.9	6.4	3.2
1966-1967	3.1	6.3	1.4	4.5	7.3	3.1
Average Annual Rate, 1960-1967	3.1%	2.9%	3.6%	3.4%	5.7%	3.8%
Total Percentage In- crease, 1960-1967	23.3%	22.0%	27.8%	26.7%	47.5%	30.0%
						30.5%

^aSee Table 1.

^bSee Table 4.

^cSee Table 8.

^dAdjusted to 1967 dollars, per Table

^eNumber of residential telephone numbers in use.

Source: Tables listed above, Mountain States Telephone Company,
Tucson Gas and Electric Company, and
Development Research Associates

FIGURE 52.

PROJECTED PIMA COUNTY POPULATION
AND CIVILIAN EMPLOYMENT
Summary Comparison

	<u>Population</u>	<u>Civilian Employment</u>	<u>Ratio of Population to Civilian Employment</u>
Annual Levels			
1940 Actual	72,838	a	a
1950 Actual	141,216	42,900	3.29
1960 Actual	265,660	82,400	3.22
1967 Actual	328,000	100,500	3.26
1985 Projection			
Minimum	432,000	132,800	3.25
Maximum	738,000	234,300	3.15
Midpoint	565,000	176,500	3.20
Average Annual Increase			
1940-1950 Actual	6,838	a	
1950-1960 Actual	12,444	3,950	3.15
1960-1967 Actual	8,900	2,586	3.44
1967-1985 Projection			
Minimum	5,800	1,790	3.24
Maximum	22,800	7,430	3.07
Midpoint	13,200	4,220	3.13
Average Annual Percent Increase			
1940-1950 Actual	6.8%	a	b
1950-1960 Actual	6.6	6.7%	b
1960-1967 Actual	3.1	2.8	b
1967-1985 Projection			
Minimum	1.6	1.6	b
Maximum	4.6	4.8	b
Midpoint	3.1	3.2	b

^aNot available.

^bNot applicable.

Source: Tables 1 and 4, Development Research Associates

Table 13
PROJECTED PIMA COUNTY EXPORT EMPLOYMENT GROWTH
Summary Comparison

	1967 Actual ^a		1985 Projection		Increase from 1967 to 1985	
	Number of Employees	Percent of Total	Number of Employees	Percent of Total	Number of Employees	Percent of Total
<u>Minimum Projection</u>						
Manufacturing	5,668	15.4%	8,100	17.3%	2,432	24.1%
Mining	4,510	12.3	5,650	12.1	1,140	11.3
Visitor	4,000	10.9	5,750	12.3	1,750	17.4
Retirement	3,540	9.7	6,040	12.9	2,500	24.8
University of Arizona	6,235	17.0	8,495	18.2	2,260	22.4
Federal Government						
Agencies	12,725	34.7	12,725	27.2	--	--
Total	36,678	100.0%	46,760	100.0%	10,082	100.0%
<u>Maximum Projection</u>						
Manufacturing			21,000	27.5%	15,332	38.6%
Mining	(Same as above)		9,865	12.9	5,355	13.5
Visitor			9,670	12.7	5,670	14.3
Retirement			10,000	13.1	6,460	16.2
University of Arizona			13,180	17.2	6,945	17.4
Federal Government						
Agencies			12,725	16.6	--	--
Total			76,440	100.0%	39,762	100.0%
<u>Midpoint Projection</u>						
Manufacturing			14,400	24.3%	8,732	38.7%
Mining			7,670	12.9	3,160	14.0
Visitor			6,830	11.5	2,830	12.5
Retirement	(Same as above)		7,290	12.3	3,750	16.6
University of Arizona			10,340	17.5	4,105	18.2
Federal Government						
Agencies			12,725	21.5	--	--
Total			59,255	100.0%	22,577	100.0%

^a Estimate of principal sectors, per Table 11.

Source: Development Research Associates

FIGURE 53.

Table 14
PIMA COUNTY EMPLOYMENT AND POPULATION PROJECTIONS
MINIMUM PROJECTION

	1967	1970	1975	1980	1985	Percent Increase 1967-1985	Percent Average Annual Increase 1967-1985
<u>Export Employment</u>							
Manufacturing	5,668	6,000	6,600	7,200	8,100	43%	2.0%
Mining	4,510	5,630	5,640	5,650	5,650	25	1.3
Visitor Industry	4,000	4,250	4,750	5,250	5,750	44	2.0
Retirement	3,540	3,960	4,640	5,350	6,040	71	3.0
University of Arizona	6,235	6,570	7,190	7,880	8,495	36	1.7
Federal Government Agencies	12,725	12,725	12,725	12,725	12,725	--	--
Total	36,678	39,135	41,545	44,055	46,760	27%	1.4%
All Employment	109,250	117,400	125,000	133,000	141,600	30%	1.5%
Less Military Employment	8,750	8,800	8,800	8,800	8,800	--	--
Net Civilian Employment	100,500	108,600	116,200	124,200	132,800	32	1.6
Population	328,000	353,000	378,000	404,000	432,000	32	1.6
<u>Projection Ratios</u>							
All Employment to Export Employment	2.98	3.00	3.01	3.02	3.03		
Population to Net Civilian Employment	3.26	3.25	3.25	3.25	3.25		

Source: Development Research Associates

FIGURE 54.

Table 15
PIMA COUNTY EMPLOYMENT AND POPULATION PROJECTIONS
MAXIMUM PROJECTION

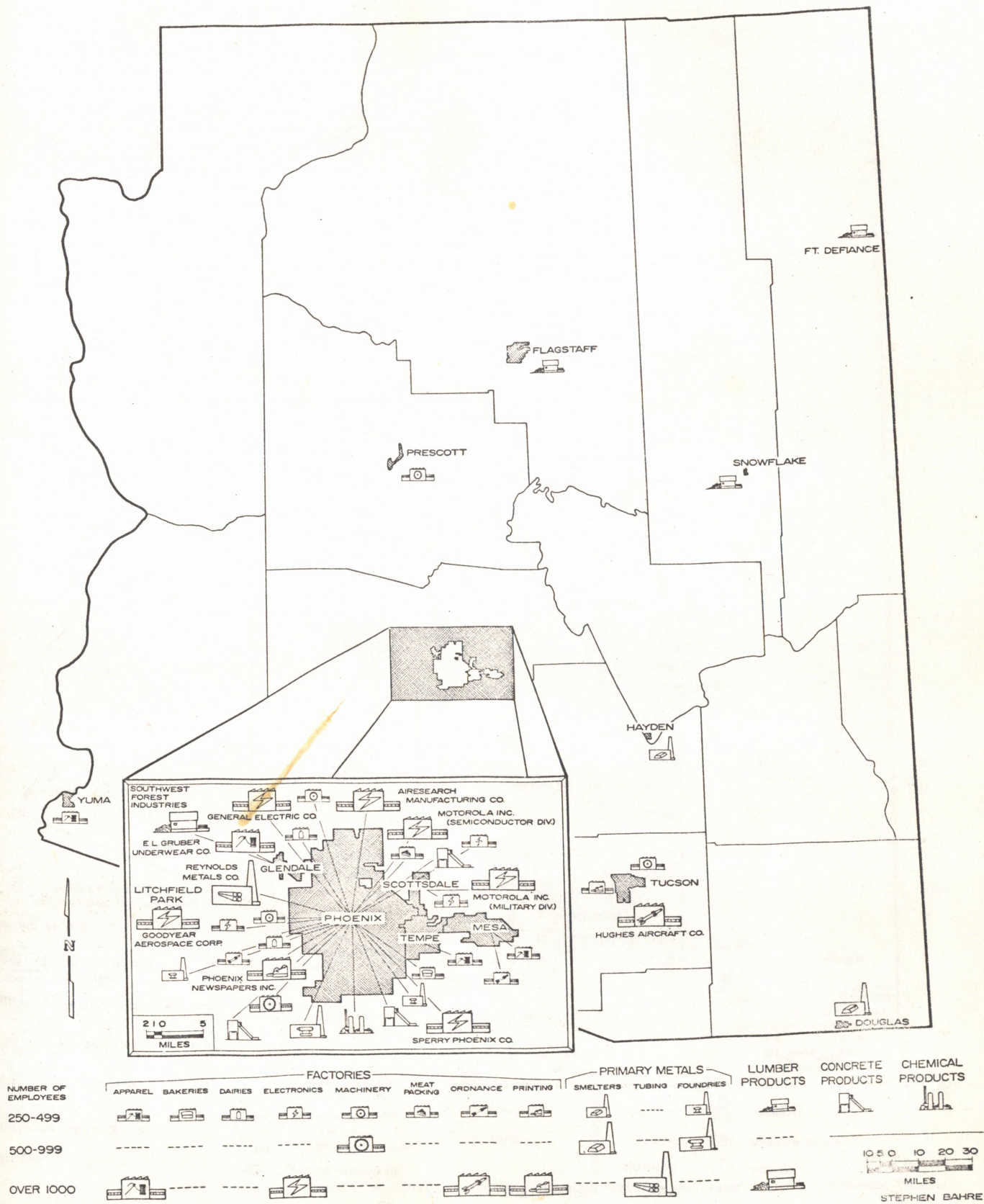
	1967	1970	1975	1980	1985	Percent Increase 1967-1985	Percent Average Annual Increase 1967-1985
<u>Export Employment</u>							
Manufacturing	5,668	7,200	11,400	16,200	21,000	271%	7.6%
Mining	4,510	5,635	7,645	8,755	9,865	119	4.5
Visitor Industry	4,000	4,920	6,500	8,080	9,670	142	5.0
Retirement	3,540	4,620	6,410	8,200	10,000	183	6.0
University of Arizona	6,235	7,730	10,340	11,810	13,180	111	4.2
Federal Government Agencies	12,725	12,725	12,725	12,725	12,725	--	--
Total	36,678	42,830	55,020	65,770	76,440	108%	4.2%
All Employment	109,250	129,300	170,100	206,800	243,100	123%	4.6%
Less Military Employment	8,750	8,800	8,800	8,800	8,800	--	--
Net Civilian Employment	100,500	120,500	161,300	198,000	234,300	133	4.8
Population	328,000	390,000	518,000	630,000	738,000	125%	4.6%
<u>Projection Ratios</u>							
All Employment to Export Employment	2.98	3.02	3.09	3.14	3.18		
Population to Net Civilian Employment	3.26	3.24	3.21	3.18	3.15		

Source: Development Research Associates

FIGURE 55.

FIGURE 56.

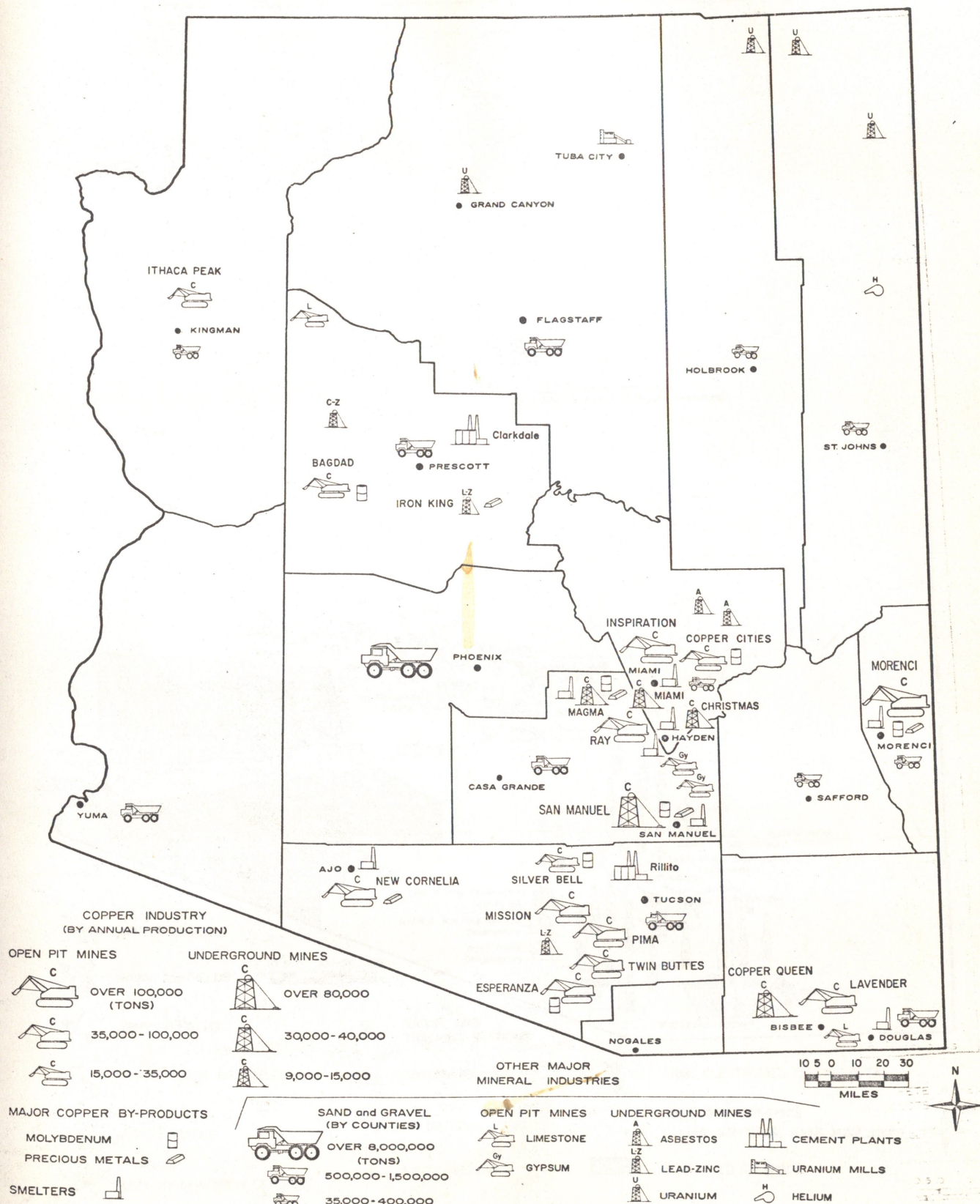
PRINCIPAL MANUFACTURING OPERATIONS



SOURCE: UNEMPLOYMENT COMPENSATION DIVISION, EMPLOYMENT SECURITY COMMISSION, PHOENIX

FIGURE 57.

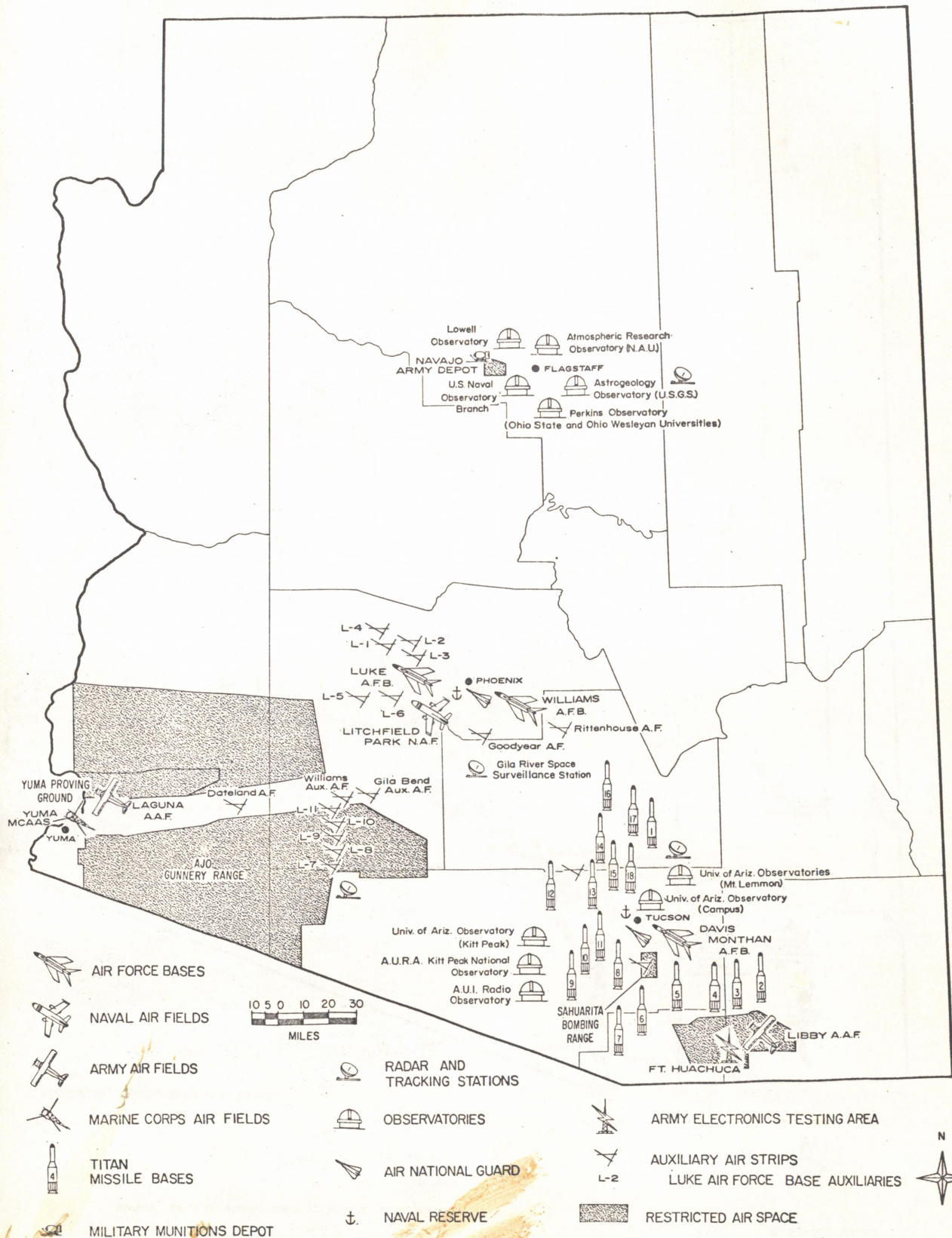
MAJOR MINERAL INDUSTRIES



SOURCE: U.S. BUREAU OF MINES & DIVISION OF ECONOMIC & BUSINESS RESEARCH, UNIV. of ARIZ.

STEPHEN BAHRÉ

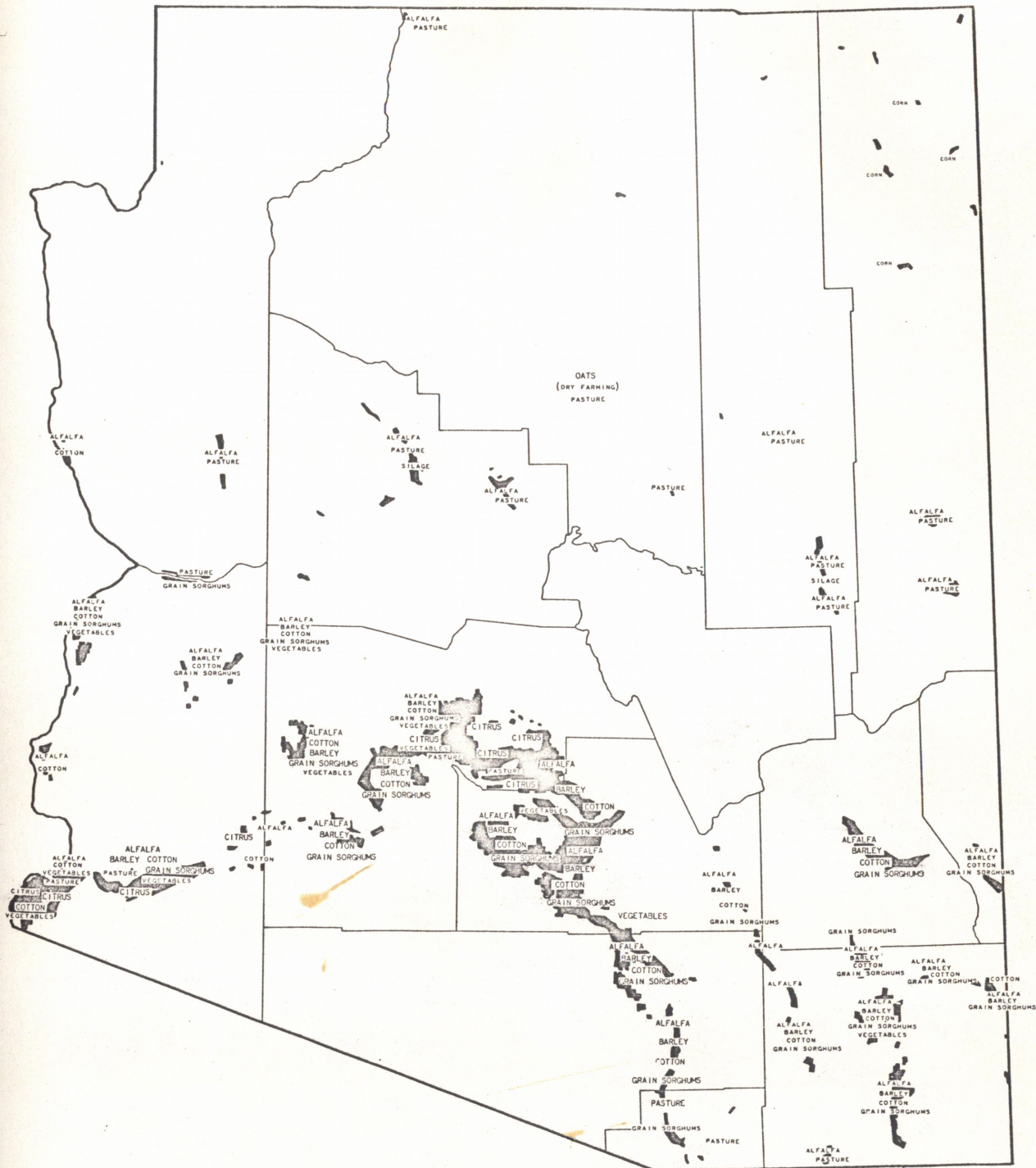
MILITARY, SPACE AND ASTRONOMICAL INSTALLATIONS



STEPHEN BAHRE

FIGURE 59.

CROP DISTRIBUTION



IRRIGATED AREAS SHOWN IN BLACK

0 10 20 30
MILES



SOURCE: DEPT. OF AGRICULTURAL ECONOMICS, GENE WRIGHT

STEPHEN BAHRE

CONDITIONS CREATING A NEED

CONDITIONS CREATING A NEED

THE SUBURBAN Y.M.C.A.

WITH ROOTS FIRMLY FIXED IN THE SOLID SOIL OF SPIRITUAL VALUES, THE YOUNG MEN'S CHRISTIAN ASSOCIATION AND THE YOUNG WOMEN'S CHRISTIAN ASSOCIATION OF TUCSON AND THROUGHOUT THE WORLD, HAVE A ROLE IN STRENGTHENING THE FAMILY. THE "Y" GIVES THE FAMILY AN OPPORTUNITY TO GROW TOGETHER--BECOME MORE WHOLE AS INDIVIDUALS--TO DEVELOP SIMUTANEOUSLY. TIME HAS MADE IT EVIDENT THAT PARENTS AS WELL AS YOUTH NEED TO BE DRAWN INTO THE PROCESS OF BUILDING "SPIRITUALLY, MENTALLY AND PHYSICALLY." TUCONS'S YMCA AND YWCA HAVE BECOME FAMTLY SERVING AGENCIES, OFFERING RECREATIONAL, EDUCATIONAL AND SPIRITUAL EXPERIENCES FOR ALL. BETTER "TOOLS" FOR THIS TASK IN SUPPLYING NEW AND EXPANDED FAMILY BUILDINGS BECOMES THE RESPONSIBILITY OF ALL OF TUCSON.

WITH THE INCREASING TENDENCY FOR FAMILIES TO MOVE TO THE SUBURBS, THE YMCA HAS FOLLOWED SUIT, IN ORDER TO PROVIDE SERVICES TO THESE PERSONS, BUT IN DOING SO THERE HAVE BEEN SEVERAL SIGNIFICANT CHANGES,

BOTH IN PROGRAMS AND IN MEMBERSHIP COMPOSITION.

SINCE THE GENERAL MAKEUP OF SUBURBIA IS CENTERED IN FAMILY GROUPS, THE "Y" HAS ADOPTED A FAMILY-CENTERED PROGRAM, APPEALING TO THE FAMILY, AND NOT JUST THE INDIVIDUALS HERE AND THERE. EQUAL, IF NOT MORE EMPHASIS MUST BE GIVEN TO WOMEN, WHO OFTEN HAVE MORE SPARE TIME THAN THEIR EQUALS. MOTHER-DAUGHTER EVENTS NEED TO BE INCREASED, AS WELL AS GIRL'S AND WOMEN'S CLUBS TO SUPPLEMENT EXISTING MEN'S AND BOY'S CLUBS.

TRADITIONAL FACILITIES REQUIRED HAVE NOT CHANGED, CHURCH LEAGUE BASKETBALL AND HI-Y GROUPS WILL STILL MEET AT THE SUBURBAN "Y"; THE PRIMARY CHANGE IN PHYSICAL USE BEING IN PROGRAM EMPHASIS TOWARDS THE FEMALE. SPECIAL AREA NEEDS, SUCH AS SEX EDUCATION CLASSES, NEED TO BE DISCOVERED AND PROVIDED.

ANOTHER SIGNIFICANT CHANGE IS IN THE FINANCIAL BASES OF THE NEW "Y", THE DORM UNITS, FOOD SERVICE, AND HEALTH CLUBS WOULD NOT BE ABLE TO MAKE MONEY IN THE SUBURBS.

THUS, AS THE TENDENCY TOWARD URBAN SPRAWL CONTINUES, THE "Y" WILL BE PLACED IN A MORE PRECARIOUS POSITION, BEING MORE DEPENDENT ON THE WHIMS OF ITS MEMBERSHIP. TO SUCCEED, THE "Y" MUST PROVIDE THE SERVICES DESIRED BY ITS MEMBERS, MORE SO THAN EVER BEFORE.

TO ADEQUATELY SERVE YOUTH AND FAMILIES ON TUCSON'S NORTH SIDE, THE CITY RECREATION DEPARTMENT JOINS WITH THE YMCA AND YWCA IN PROVIDING AN ALL-PURPOSE BUILDING WITH AN OPEN INVITATION TO OTHER COMMUNITY AGENCIES TO JOIN IN THIS SERVICE. WITH THE CITY AND THE YMCA-YWCA EACH PROVIDING \$85,000, THIS \$170,000 COMMUNITY SERVICE FACILITY WILL PROVIDE A GYMNASIUM, AN ALL-PURPOSE ROOM AND KITCHEN, CLUB ROOMS AND LOCKER ROOMS AND ADMINISTRATIVE OFFICES. THE MAIN PROGRAM THRUST OF THIS VENTURE WILL BE YOUTH OF ALL AGES AND YOUNG FAMILIES.

ECONOMICS OF PROJECT

ECONOMIC ANALYSIS OF PROJECT

THE TUCSON NORTH SIDE YMCA WILL BE FINANCED BY THE CITY AND YMCA-YWCA EACH PROVIDING \$85,000; THIS \$170,000 WILL PROVIDE FOR THE FACILITIES NECESSARY TO ACCOMMODATE THIS PART OF THE CITY.

THE "Y'S" PORTION OF THE FINANCING IS ACCOMPLISHED BY CAPITAL FUNDS WHICH ARE PLEDGED BY THE COMMUNITY IMMEDIATE TO THE LOCATION OF THE PROJECT. THE PLEDGE PAYMENT PROCEDURE APPLIES IN THE SAME MANNER AS THE PURCHASE OF A HOME, AUTOMOBILE, ETC. THE PLEDGER MERELY DECLARES THEIR TOTAL AMOUNT OF THE PLEDGE AND PAYS IT OUT OF HIS PERSONAL INCOME FOR A THREE TO FIVE YEAR PERIOD. THIS CAMPAIGN IS ESSENTIALLY A LONG-RANGE, NON-RECURRING CAPITAL INVESTMENT.

ONCE THE CAPITAL FUNDS WE ESTABLISHED FOR THE INITIAL CAPITAL EXPANSION, THE UNITED COMMUNITY CAMPAIGN FUNDS PLUS THE "Y" MEMBERSHIP DUES ARE USED FOR THE CURRENT OPERATING EXPENSES.

CLIMATIC CONDITIONS

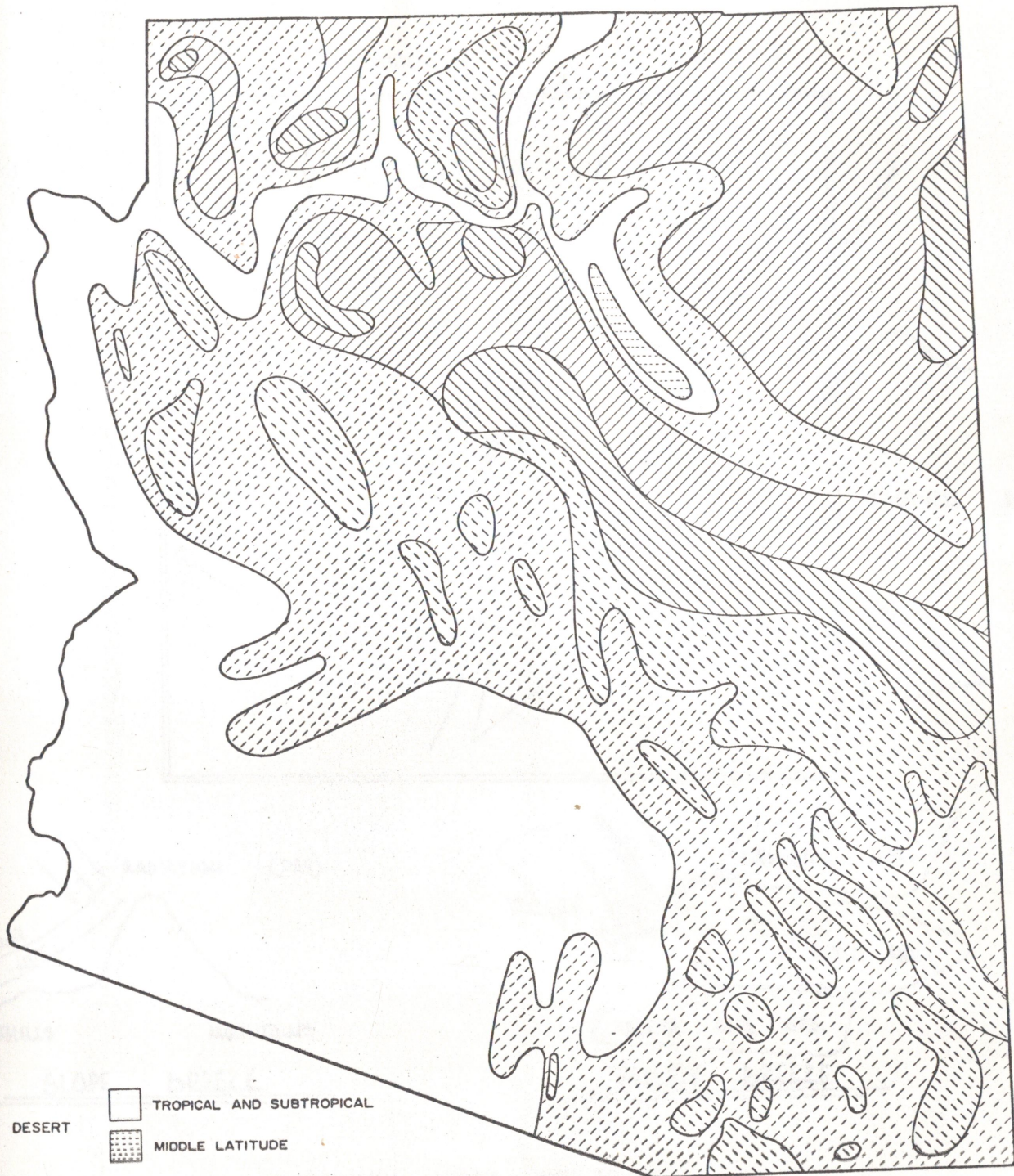
TUCSON'S TEMPERATURE VARIATION IS TYPICAL OF
TEMPERATURES IN THE DESERT OFTEN ARE HIGHER THAN
THOSE AT THE EQUATOR, WHILE MINIMUMS IN ARIZONA'S
MOUNTAINS NOT INFREQUENTLY ARE THE LOWEST RECORDED
IN THE UNITED STATES ON A GIVEN DAY. TUCSON,
TYPICAL OF THE LESS EXTREME DESERT REGIONS, IS 1,117
FEET ABOVE SEA LEVEL, AND HAS AN ANNUAL AVERAGE
TEMPERATURE OF 69 DEGREES F. ITS ANNUAL 7.20 INCHES
OF PRECIPITATION COMES PRINCIPALLY IN JULY, AUGUST AND
SEPTEMBER AND DECEMBER, JANUARY AND FEBRUARY. ANNUAL
RELATIVE HUMIDITY IS FAIRLY CONSTANT THROUGH THE
YEAR AT 38%, WHILE TUCSON ENJOYS AN ANNUAL AVERAGE OF
86% OF POSSIBLE HOURS OF SUNSHINE.

RAINFALL COMES FROM THE GULF OF MEXICO IN
SUMMER AND FROM THE PACIFIC OCEAN OR THE GULF OF
CALIFORNIA IN WINTER. HEAVY THUNDERSTORMS AND
ACCOMPANYING CLOUDBURSTS ARE NOT UNCOMMON IN SEASON,
AND FREQUENTLY CONVERT THE ARROYOS (DRY STREAM BEDS)
THROUGHOUT THE STATE INTO SWIRLING, MUDDY TORRENTS,
OCCASIONALLY CAUSING FLOOD DAMAGE.

TUCSON'S TEMPERATURE VARIATION IS TYPICAL OF
ARID AND SEMIARID REGIONS WHERE RADIATIONS ARE RAPID.
FREQUENTLY IT IS AS MUCH AS 50 DEGREES TO 60 DEGREES
F. THE DRY CLEAR AIR IS ONE OF TUCSON'S MAJOR
ATTRACTIVE.

FIGURE 60.

CLIMATIC REGIONS



- DESERT
- TROPICAL AND SUBTROPICAL
 - MIDDLE LATITUDE
- STEPPE
- TROPICAL AND SUBTROPICAL
 - MIDDLE LATITUDE
- HIGHLANDS
- MESOTHERMAL FOREST
 - MICROTHERMAL SNOW FOREST



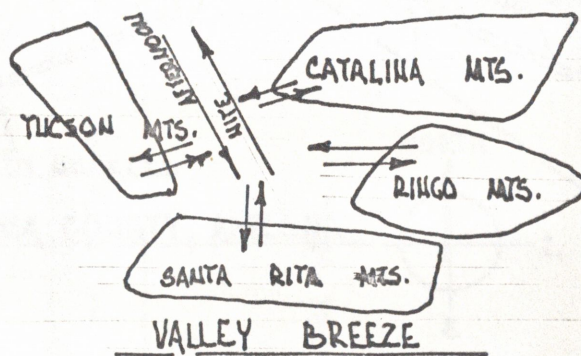
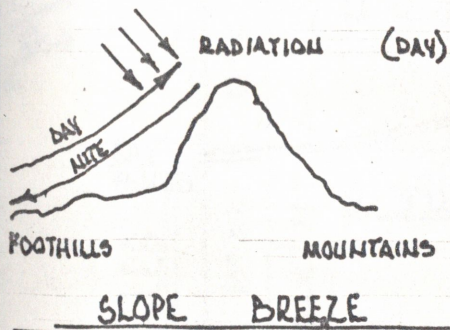
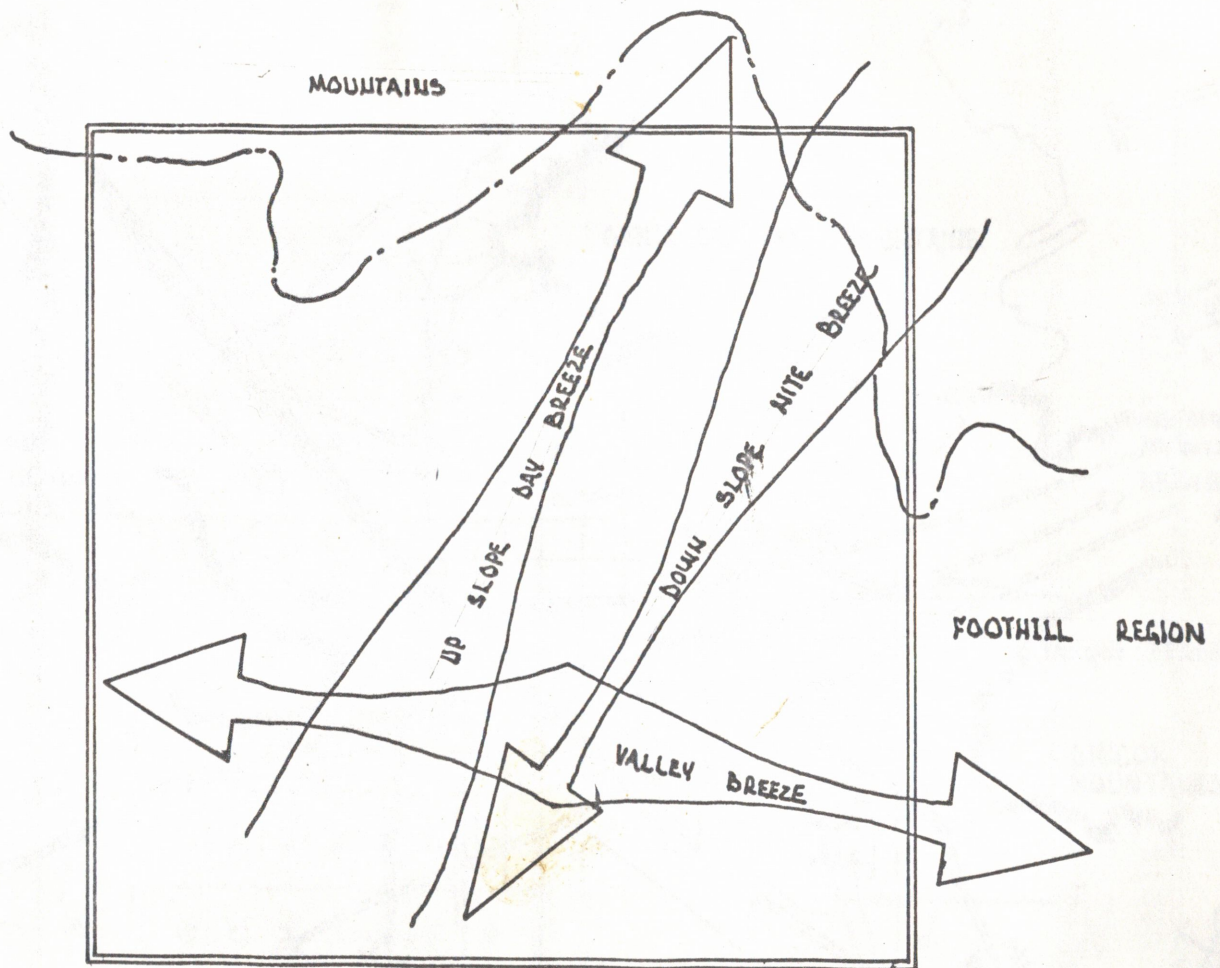
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SOURCE: ATMOSPHERIC PHYSICS LAB, U of A

STEPHEN BAHRE

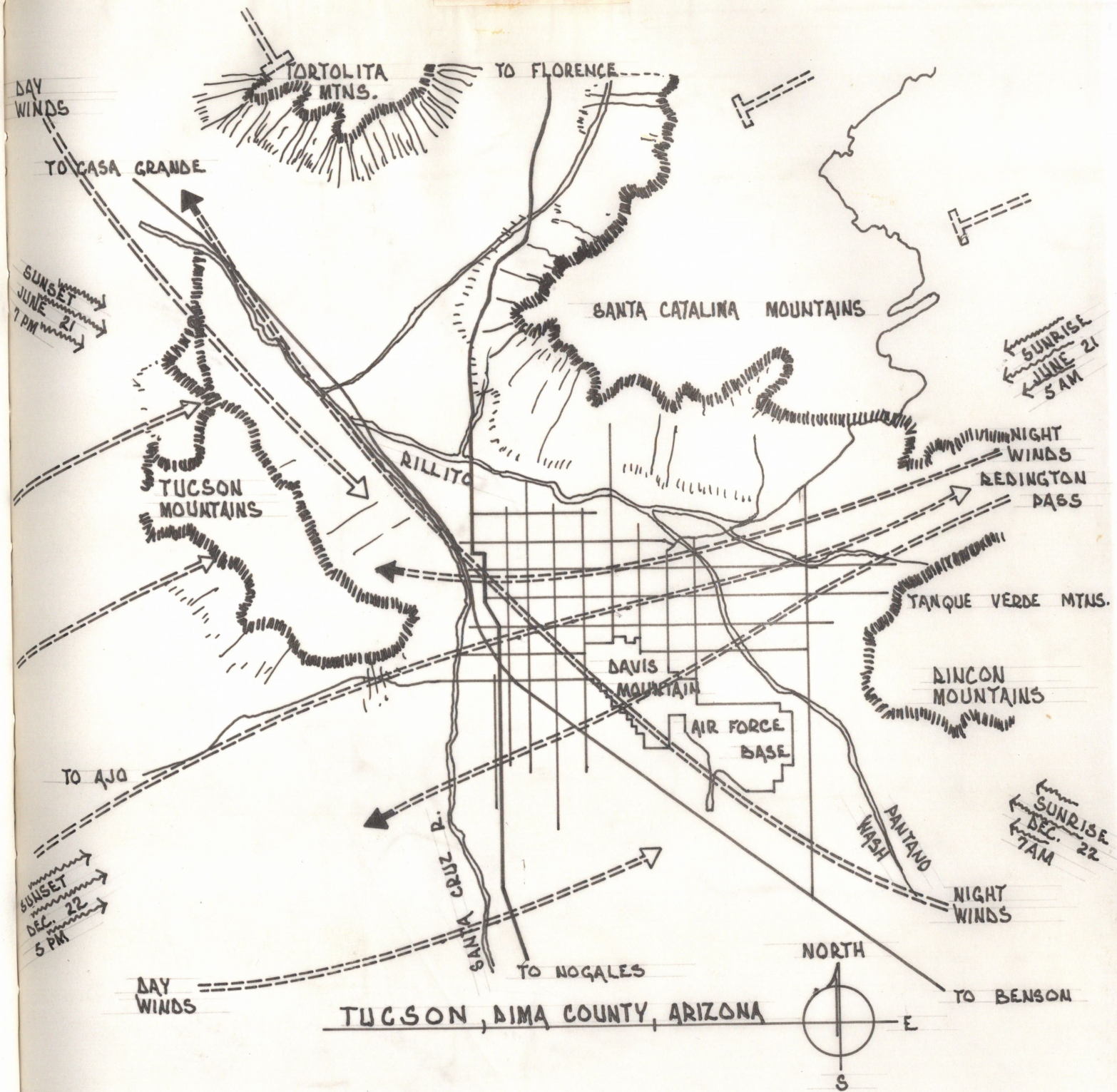
FIGURE 61.

W I N D
CONVECTION CAUSES LOCAL AIR MOVEMENT



PREVAILING BREEZE ARE TO BE
CONSIDERED WITHIN THE TOTAL
DESIGN : TO THE ADVANTAGE OF THE
DESIGNER TO USE COOLING BREEZES
WITH AN OBJECTIVE OF MAKING
SPACE INHABITABLE.

FIGURE 62.



"In any event, sun is a primary fact. The other morning when I walked out under cloudless sky an hour or so before noon I realized that never before in my life had light ever been so bright, so nearly a physical, a tangible presence."

The Desert Year by Joseph Wood Krutch

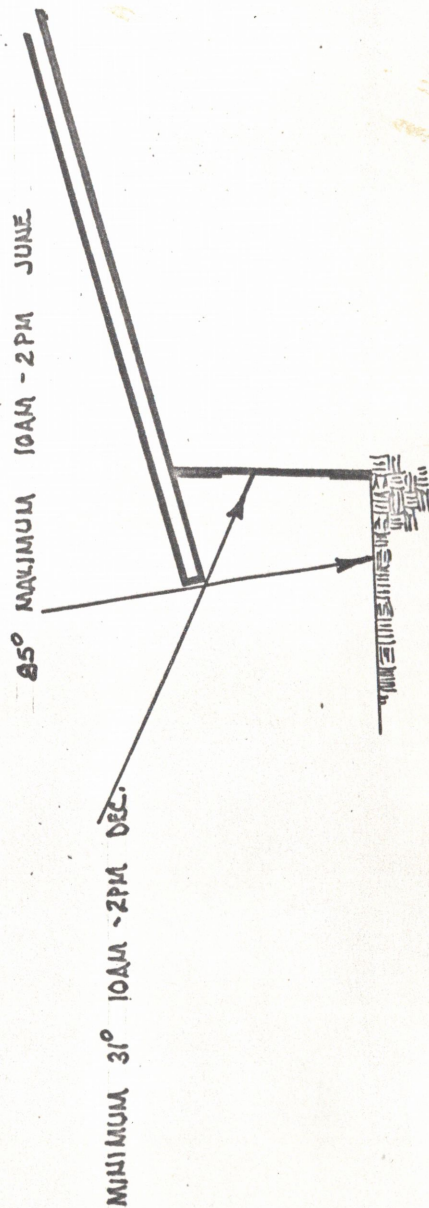
SUN PROFILE ANGLES

10° S.W.		45° S.W.		30° S.W.		FACING TRUE SOUTH		30° S.E.		45° S.E.		60° S.E.	
10 A.M.	2 P.M.	10 A.M.	2 P.M.	10 A.M.	2 P.M.	10 A.M.	2 P.M.	10 A.M.	2 P.M.	10 A.M.	2 P.M.	10 A.M.	2 P.M.
	30	65	28	44	27	31	31	27	46	28	65	30	
	33	70	31	52	30	35	35	30	52	31	70	33	
	40	82	38	65	38	45	45	38	65	38	82	40	
	48	92	48	78	47	57	57	47	78	48	92	48	
	55	98	55	90	60	72	72	60	90	55	98	55	
	62	104	64	97	67	82	82	67	97	64	104	62	
	64	105	66	100	71	85	85	71	100	66	105	64	
NOTE : WHEN SUN ANGLE IS GREATER THAN 90° THE SUN IS ON THE OPPOSITE OF BUILDING													

COMPUTED AT 32° LATITUDE
 & BALANCED TO BE APPROPRIATE
 FOR DESIGN AT 30° THRU 34°
 LATITUDE.

COMPUTED FOR THE 22ND DAY
 OF EACH MONTH.

INTERPOLATE FOR DATES AND
 TIMES BETWEEN THOSE CHARTS.



NORTH AND SOUTH ORIENTATION

FIGURE 63.

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EXCERPTS FROM THE CITY OF TUCSON ZONING ORDINANCE:

DIVISION B. URBAN RANCH DISTRICTS

SEC. 23-165 (4) OTHER PUBLIC AND SEMI-PUBLIC USES

SUCH USES INCLUDE--COMMUNITY SERVICE AGENCIES,--
PLAYGROUNDS OR ATHLETIC FIELDS,--PRIVATE
ATHLETIC, SPORT OR RECREATION CLUBS OR LODGES.
SUBJECT TO:

- (A) MINIMUM SIZE OF SITE 10 ACRES
- (B) MAXIMUM LOT COVERAGE OF ALL IMPROVEMENTS: 30% OF SITE AREA
- (C) MINIMUM DISTANCE OF PLAYGROUND OR ATHLETIC FIELD TO ANY PROPERTY LINE: 100 FEET (WE RECOMMEND THAT THIS BE APPEALED.)
- SEC. 23-165 (5) (D) SIGNS: ONLY ONE IDENTIFICATION SIGN IS PERMITTED. IT SHALL BE UNLIGHTED OR INDIRECTLY LIGHTED AND SHALL NOT EXCEED 20 SQUARE FEET IN AREA.

SEC. 23-166 PARKING SPACE REQUIREMENTS

ALL PLACES OF PERIODIC PUBLIC ASSEMBLY SHALL HAVE
PARKING SPACE ON THE SAME LOT OR WITHIN 300 FEET
THEREOF CONSISTING OF AN AREA NOT LESS THAN 600
SQUARE FEET FOR EACH TEN SEATS IN SUCH PLACE OR FOR
AN AREA EQUAL TO THAT REQUIRED TO SEAT TEN PEOPLE
IF NOT SEATS ARE PROVIDED.

SEC. 23-167 (4) SWIMMING POOLS

SUBJECT TO:

- (A) NOT PERMITTED IN A REQUIRED FRONT PUBLIC YARD

(B) MINIMUM DISTANCE TO ANY LOT
BUILDING LINE: 4 FEET
STREET OR ON THE ACCESS

SEC. 23-168 HEIGHT AND AREA REQUIREMENTS GENERALLY

- (1) MAXIMUM BUILDING OR STRUCTURE HEIGHT:
2 STORIES AND 30 FEET
- (5) MINIMUM FRONT YARD: 30 FEET
- (6) MINIMUM SIDE YARDS: 10 FEET
- (8) MINIMUM REAR YARD: 50 FEET
- (9) MINIMUM DISTANCE BETWEEN PRINCIPAL BUILDINGS: 20 FEET

SEC. 23-169 HEIGHT AND AREA REQUIREMENTS-ACCESSORY BUILDINGS

- (2) MAXIMUM HEIGHT: 20 FEET
- (3) MINIMUM DISTANCE TO PRINCIPAL BUILDING: 7 FEET
- (4) MINIMUM DISTANCE TO FRONT LOT LINE: 60 FEET

THE CITY OF TUCSON HAS ADOPTED THE 1964 EDITION OF THE UNIFORM BUILDING CODE WITH AMENDMENTS. THIS CODE CLASSIFIES THE YMCA AS B-3 FOR THE ASSEMBLY SPACES AND B-4 FOR THE POOL AND GYMNASIUM SPECTATOR AREAS. THE SIGNIFICANT LIMITATIONS IMPOSED BY THIS CODE ARE AS FOLLOWS:

1. ALL BUILDINGS SHALL BE ONE HOUR FIRE-RESISTIVE CONSTRUCTION THROUGHOUT.
2. ALL BUILDINGS HOUSING GROUP B OCCUPANCIES SHALL FRONT DIRECTLY OR HAVE ACCESS TO A PUBLIC STREET. THE MAIN ENTRANCE TO THE

BUILDING SHALL BE LOCATED ON THE PUBLIC
STREET OR ON THE ACCESS WAY.

SITE

SITE DESCRIPTION

THE SITE IS BORDERED WITH MEDIUM CLASS BRICK HOMES. TUCSON'S GEOGRAPHIC LOCATION-- $32^{\circ}15'$ WEST LONGITUDE. FURTHER SOUTH ARE TRAILER HOMES. THE TUCSON NORTH BRANCH YMCA-YWCA IS LOCATED ON DEL NORTE PARK, APPROXIMATELY FIVE MILES DUE NORTH OF TUCSON'S CENTRAL BUSINESS DISTRICT. THE PROPERTY SLOPES DOWN GENTLY TO THE NORTH. FOR ALL PRACTICAL PURPOSES THE SLOPE IS SO GENTLE THAT THE SITE IS FLAT WITH NO PRODOMINATE CONTOUR CHANGES.

DEL NORTE PARK IS A SITE CONSISTING OF GREEN GRASS AND DECIDUOUS TREES. THERE ARE BASEBALL DIAMONDS, PICNIC AND PLAYGROUND AREAS, AND THREE SWIMMING POOLS--ONE STANDARD POOL FOR GENERAL USE, ONE DIVING POOL, AND ONE WADING POOL WHICH WERE CONSTRUCTED BY THE CITY. THESE POOLS ARE TO HOUSE THE NORTHSIDE FAMILY-BUILDING. IT MAYBE NECESSARY HOWEVER TO RELOCATE THE WADING POOL BECAUSE IT IS LOCATED APART FROM THE OTHER TWO POOLS, (SEE DRAWINGS).

THE SITE IS BORDERED ON THE EAST BY HOLY HOPE CEMETERY, BUT THERE IS A STORM DITCH BETWEEN THE TWO THAT STOPS THE VIEW OF THE CEMETERY. THE CEMETERY EXTENDS EAST FOR ONE MILE WHERE THE OLD HIGHWAY 80-89 RAN. THE SOUTH SIDE OF

SITE ANALYSIS

THE SITE IS BORDERED WITH MEDIUM CLASS BRICK HOMES.

IT WILL BE NECESSARY TO ALLOW AUTOMOBILES TO
FURTHER SOUTH ARE TRAILER COURTS WHICH LINE WEST MIRACLE
MILE HAVING HEAVY EAST-WEST TRAFFIC. WEST MIRACLE MILE
IS THE TIE FROM THE OLD # 89 HIGHWAY TO THE NEW # 10
INTERSTATE, WHICH IS TO THE WEST OF THE SITE, ABOUT TWO
MILES. THERE ARE AGAIN MIDDLE CLASS BRICK HOMES BETWEEN
#10 INTERSTATE AND THE WEST BOUNDARY OF THE SITE. OPEN
FIELDS BOUND THE SITE TO THE NORTH. THESE EXTEND FOR
ONE MILE TO PRINCE ROAD, WHICH IS A MAIN ARTERIAL FOR THE
SURROUNDING RESIDENTIAL AREA AND IS LINED ON THE NORTH
SIDE BY COMMERCIAL BUILDINGS.

THE PREDOMINATE VIEW FROM THE SITE IS NORTH AND
NORTHEAST TO THE CATALINA MOUNTAINS.

THE ADVANTAGE TO THE BUILDING IS THAT NOT ONLY ARE THE VIEWS OF
THE BUILDING BETTER BUT ALSO THE VIEW FROM THE
BUILDING TAKE ADVANTAGE OF THE VIEWS OF THE CATALINA MOUNTAINS
PREVIOUSLY. THIS VIEW WOULD BE ENHANCED BY THE
VIEWS OF THE GRASS AND TREES IN THE FIELDS. ALSO OPENINGS ON THE
DESIGN BECAUSE OF THE ADVANTAGE OF THE VIEW FROM THE

SITE ANALYSIS

IT WILL BE NECESSARY TO ALLOW AUTOMOBILES TO PENETRATE THE ENTIRE SITE IN ORDER TO PERMIT MAXIMUM USE OF THE FACILITIES. PARENTS BUSSING THEIR CHILDREN TO DAY CAMP, BALL GAMES, ETC., AND FAMILIES ON A PICNIC WILL WANT TO DRIVE RIGHT UP TO THE SITE OF THEIR ACTIVITIES BEFORE UNLOADING. ALSO SERVICE AND MAINTENANCE VEHICLES WILL HAVE TO HAVE DIRECT ACCESS TO THEIR DESTINATIONS. THE SOUTH AND EAST PORTIONS OF THE LOT LINES SEEM BEST SUITED TO THIS PURPOSE. SINCE THE SOUTH FACADE OF THE BUILDINGS WOULD HAVE THE SUN ON IT MOST OF THE DAY, THE RESULTANT MODELING BROUGHT OUT BY THE CHANGING LIGHTS AND SHADOWS WOULD BE QUITE PLEASANT.

THE ADVANTAGES TO THE NORTH-SOUTH ORIENTATION OF THE BUILDING IS THAT NOT ONLY ARE THE VIEWS OF THE EXTERIOR OF THE BUILDING BETTER BUT ALSO THE VIEWS FROM INSIDE OF THE BUILDING TAKE ADVANTAGE OF THE VIEW TO THE NORTH DESCRIBED PREVIOUSLY. THIS VIEW WOULD BE ENHANCED BY IMMEDIATE VIEWS OF THE GRASS AND TREES OF THE PARKS AND PLAYING FIELDS. ALSO OPENINGS ON THE NORTH ARE MUCH EASIER TO DESIGN BECAUSE OF THE ABSENCE OF ANY DIRECT RADIANT HEAT

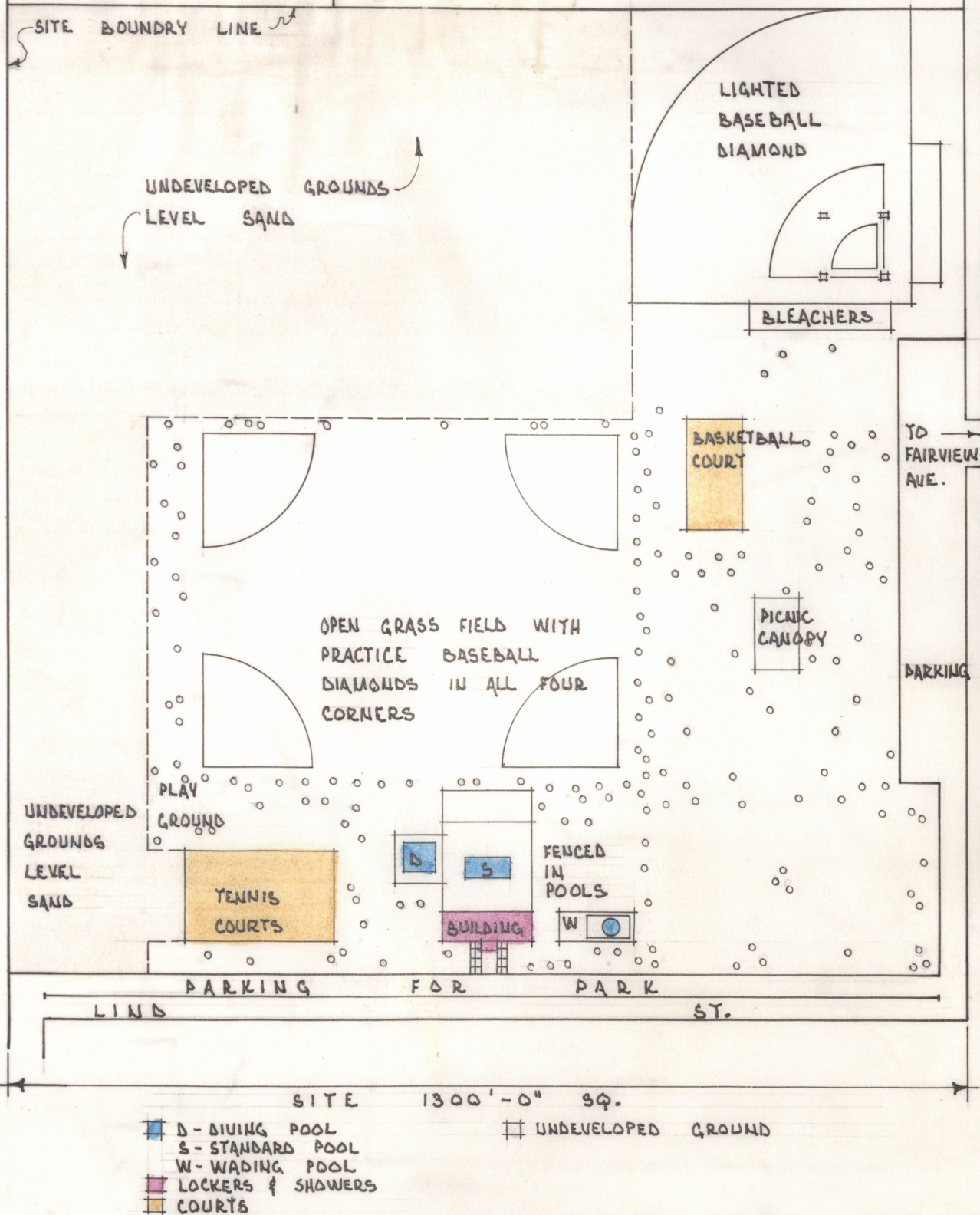
LOAD OF SUNLIGHT, THUS ELIMINATING THE NEED FOR DRAPES OR COSTLY SUN CONTROL DEVICES.

ALSO TO BE CONSIDERED IS THAT THE WEST SUN CONTRIBUTES THE MOST SERIOUS HEAT LOADS AND CONSEQUENTLY ANY OPENINGS IN THE WEST WALLS SHOULD BE KEPT TO AN ABSOLUTE MINIMUM. OPENINGS ON THE SOUTH CAN BE PROTECTED WITH LARGE OVERHANGS, WHICH WOULD ENHANCE AN ENTRANCE AREA.

FIGURE 64.

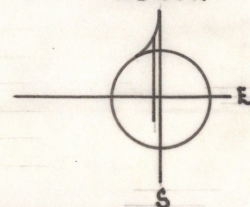
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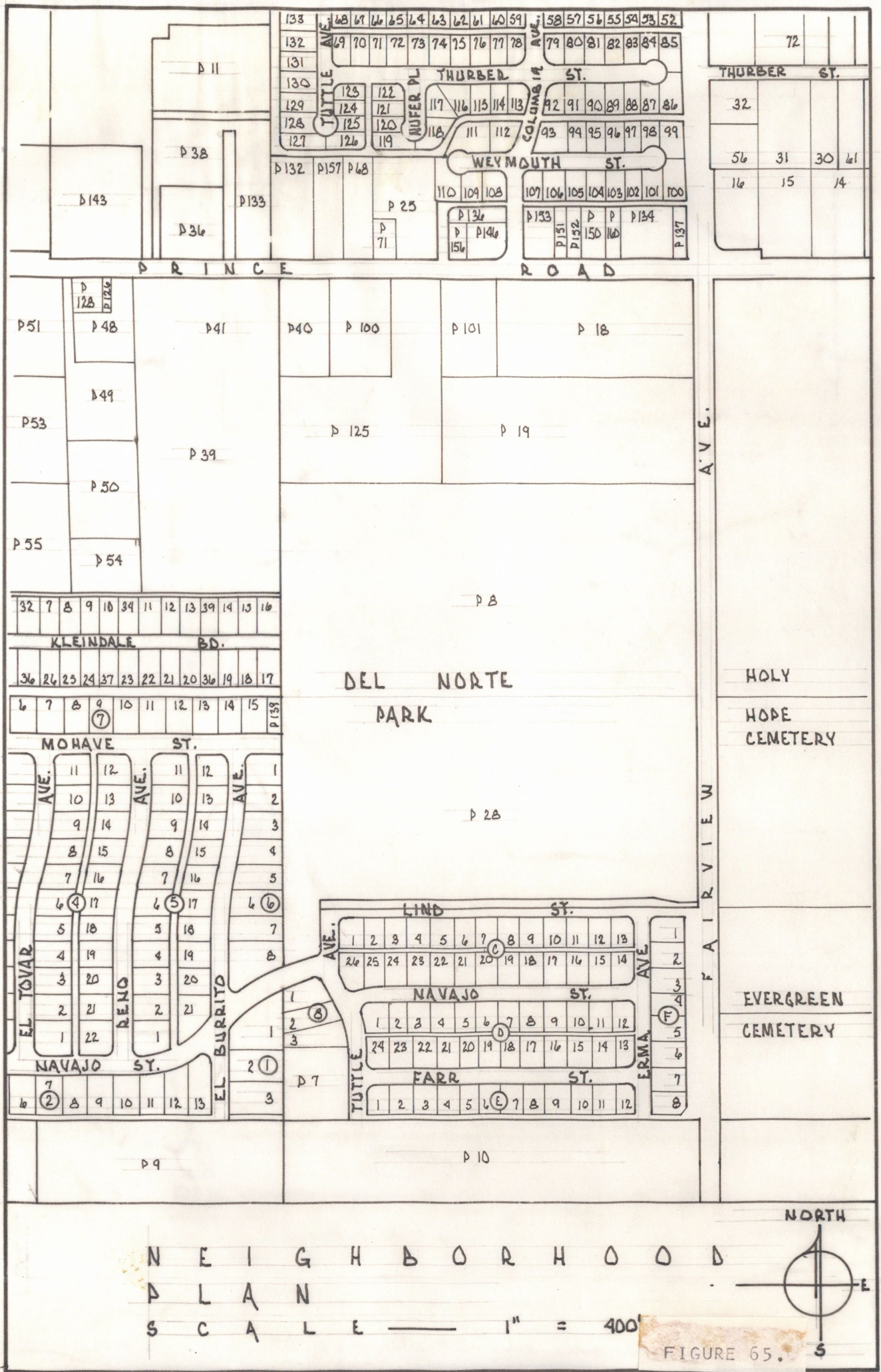
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EXISTING DEL NORTE
PARK PLAN
SCALE 1" = 200'

NORTH





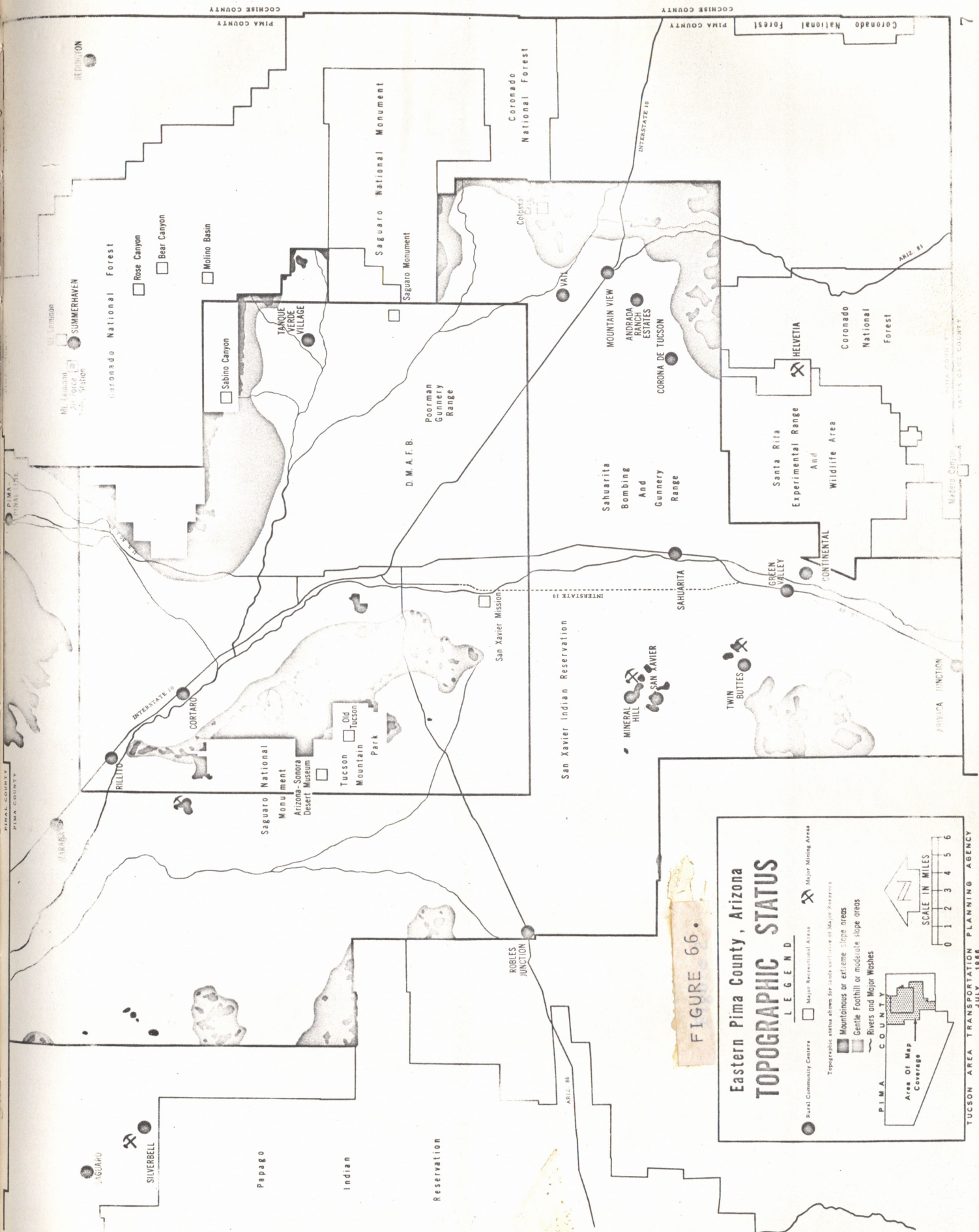


FIGURE 66.

Eastern Pima County, Arizona
TOPOGRAPHIC STATUS

LEGEND

- Rural Community Centers
- Major Recreational Areas
- ✕ Major Mining Areas

Topographic status shown for each section of Major Features

- Mountainous or extreme slope areas
- ▨ Gentle Foothill or moderate slope areas
- Rivers and Major Washes

Area Of Map Coverage

SCALE IN MILES

0 1 2 3 4 5 6

PIMA COUNTY

TUCSON AREA TRANSPORTATION PLANNING AGENCY
 JULY 1966

SOIL CONDITIONS

SOIL CONDITIONS

SOIL CONDITIONS ARE FROM THE CITY OF TUCSON,
ARIZONA, DEPARTMENT OF PUBLIC WORKS, ENGINEERING DIVISION.
DRILL CHART 2144, PLAN NO. G-65-1.

TOP SOIL (5'-0") DEPTH--CLAY SILT, CONSIDERABLE
SAND, WELL GRADED, BROWN, MEDIUM PLASTICITY. SUB-SOIL
(5'-0") DEPTH--SAND, SMALL AMOUNT OF SILT, POORLY
GRADED FINES, BROWN, NON-PLASTIC WITH LENSES OF SILTY
CLAY.

THE BEARING CAPACITY OF THE SOIL AS OUTLINED IN THE
CRSI DESIGN HANDBOOK, VOLUME II, 1963 ACI CODE APPROXIMATE
AT 6 KIP'S PER SQUARE FOOT FOR THE SITE AT DEL NORTE
PARK.

CONTEXT CONSIDERATIONS

A VAREVERY BUILDING SHOULD RESPECT THE CLIMATE IT IS SITUATED IN. IN TUCSON, THE CLIMATE IS A MAJOR DESIGN DETERMINANT AND THIS SHOULD BE REFLECTED IN THE BUILDING. THE EFFECTIVE CONTROL OF SOLAR RADIATION IS DESIRABLE NOT ONLY AS A RESPONSIBLE DESIGN DECISION, BUT TO MINIMIZE THE REQUIREMENT FOR THE SOUTHWEST AND WOULD BE WELL TO CONSIDER. IN MODERN MATERIALS BUT SPAN THE YMCA PROGRAMS OFTEN REQUIRE CONSIDERABLE INSIDE-OUTSIDE ACTIVITY. A STRONG INDOOR-OUTDOOR RELATIONSHIP WOULD BE DESIRABLE TO EXPLOIT THE BEAUTY OF THE DESERT AND MOUNTAINS, TO AVOID HAVING ALL OF THE ACTIVITIES TAKE PLACE IN A HERMETICALLY SEALED SPACE, AND TO PROVIDE A VISUAL, AS WELL AS A SPATIAL AND CLIMATIC TRANSITION FROM THE INSIDE TO THE OUTSIDE. THIS RELATIONSHIP WOULD TEND TO WEAKEN THE BUILDINGS CLIMATIC CONTROL, BUT IF INCORPORATED UNDER A LARGE ROOF, FOR EXAMPLE, THE OUTSIDE CLIMATE WOULD HAVE ONLY A MINIMAL EFFECT ON THE INSIDE. THE AESTHETIC GAINS WOULD MORE THAN OFFSET HEAT GAIN. ALSO THIS WOULD SUBJECT THE INSIDE TO SLIGHT (IF PROPERLY DESIGNED) VARIATIONS IN TEMPERATURE WHICH IS DESIRABLE AS

A VARIED CLIMATIC CONDITION HAS PROVEN TO BE HEALTHY
AND STIMULATION TO THE MIND AND BODY.

IT SHOULD BE EXPRESSED BY THE CLIMATIC AND STRUCTURAL
REQUIREMENTS, THAT THIS BUILDING TAKE ON THE TRADITIONAL
SPANISH-AMERICAN INFLUENCES THAT IS SO PREDOMINANT IN
THIS SOUTHWESTERN AREA. IMPLYING THAT THE STRUCTURE CAN
BE DONE IN MODERN MATERIALS BUT HOLDING ON TO THE STRONG
SPANISH-AMERICAN INFLUENCES IN THE DESIGN OF THE STRUCTURE.

FUNCTIONS OF THE Y.M.C.A.
SPIRITUAL, MENTAL, PHYSICAL

BASED ON COMMUNITY NEED, THE YMCA OFFERS A VARIETY
SPIRITUAL
OF CLASSES AND SOCIAL ACTIVITIES. CLASSES MAY BE HELD
THE YOUNG MEN'S CHRISTIAN ASSOCIATION IS A CHRISTIAN
IN THE EVENING FOR MEN, IN THE MORNING FOR WOMEN, YOUTH, AND
ORGANIZATION AND ITS PRIMARY PURPOSE IS TO PROVIDE A
ETC. THEY MAY VARY IN SCOPE, FROM A SMALL GROUP, TO
CHRISTIAN ATMOSPHERE FOR THE DEVELOPMENT OF CHRISTIAN
SEX EDUCATION, TO GYM. CLASSES, ACTIVITIES SUCH AS
LIVING IN A CHRISTIAN SOCIETY. THIS IS ACHIEVED BY
BRIDGE CLUBS, AND COMMUNITY MEETINGS. YOUNG MEN'S ARE
DEMONSTRATING CHRISTIAN LIFE IN DAILY LIVING.

ALSO INCLUDED IN THE GENERAL PURPOSE
VOLUNTEER LEADERS PROVIDE MUCH OF THIS EMPHASIS
SEVERAL CLASSROOMS, AND A LARGE HALL, AND A LARGE SOCIAL
THROUGH THEIR ACTIONS AND DEEDS; BASICALLY, THE PROVIDING
SPECIAL PURPOSE ROOMS FOR MEETINGS, AND A LARGE SOCIAL
OF CHRISTIAN LEADERS FOR YOUTH, AND ADULTS TO FOLLOW
HALL ARE USUALLY REQUIRED FOR THE FUNCTION. SMALLER
THEIR EXAMPLE. PRAYERS AND RELIGIOUS TEACHERS, AND
CLASSES CAN MEET IN THE CLASS ROOMS WHILE THE SOCIAL HALL
BIBLE CLASSES ALSO FURTHER THIS PURPOSE. THE CLEAN,
CAN BE USED TO DELIVER LARGE GROUP LECTURES OR COMMUNITY
HEALTHY, AND ACTIVE ENVIRONMENT IDEALLY FOUND AT A
INTEREST TOPICS SUCH AS VOTER FORUMS, DANCES AND OTHER
YMCA ALSO CONTRIBUTE TO THE SPIRITUAL EMPHASIS.

SOCIAL FUNCTIONS ALSO TAKE PLACE IN THIS LARGE GENERAL
OTHER THAN THE USE OF OCCASIONAL SYMBOLS AND
PURPOSE ROOM.
POSTERS, THE PHYSICAL PROVISION FOR SPIRITUAL EMPHASIS
PHYSICAL
IS FOUND IN THE CHAPEL. USUALLY A SMALL, SIMPLE SPACE
THE PRIMARY FUNCTION OF THE YMCA, AS SEEN BY THE PUBLIC,
TO PROVIDE A PLACE FOR GROUP PRAYER, INDIVIDUAL
IS TO PROVIDE EXERCISE AND PHYSICAL ACTIVITY FOR EVERYONE
MEDICATION, AND EVEN A SMALL MEETING PLACE. WHILE, SMALL
USING THE YMCA, THIS COMBINES SPECIFIC ATHLETIC AND
IN PHYSICAL SIZE, THE CHAPEL SERVES AS THE FOCAL POINT
RECREATIONAL FACILITIES SUCH AS THE FAMILIAR SWIMMING
FOR THE BIGGEST TASK OF THE YMCA.

POOL AND GYMNASIUM, AND LESS OBVIOUS FORMS, SUCH AS THE

WALKING DISTANCE BETWEEN FACILITIES. INCLUDED IN THIS
MENTAL

ACTIVITIES ARE THE AUXILIARY FACILITIES SUCH AS LOCKER
ROOMS, TOILETS AND SHOWERS.

OUTDOOR FACILITIES INCLUDE SAME AREA AND A PLAY-
BASED ON COMMUNITY NEED, THE YMCA OFFERS A VARIETY
GROUND LINKED TO THE ATHLETIC FACILITIES. IDEALLY,
OF CLASSES AND SOCIAL ACTIVITIES. CLASSES MAY BE HELD
EVERYONE WHO GOES TO THE Y. MAY EFFECTIVE SOME FORM
IN THE EVENING FOR MEN, IN THE MORNING FOR YOUNG MOTHERS,
OF EXERCISE.

ETC. THEY MAY VARY IN SUBJECT MATTER FROM SPANISH, TO
IN USING THE YMCA FACILITIES. THE Y. OFFERS Seldom
SEX EDUCATION, TO GYM. CLASSES-ACTIVITIES SUCH AS
PARTICIPATES IN ALL "Y" ACTIVITIES. MANY COME
BRIDGE CLUBS, AND COMMUNITY SERVICE COMMITTEE'S ARE
FOR THE ATHLETIC-RECREATION. OTHERS FOR THE
ALSO INCLUDED IN THE GENERAL AREAS.

OPPORTUNITY TO FURTHER EDUCATION. FOR MANY, THE
SEVERAL CLASSROOMS, OR SIMILARLY SIZED ROOMS,
Y. IN AN INEXPENSIVE SERVICE. FEW, IF ANY,
SPECIAL PURPOSE ROOMS FOR HOBBIES, AND A LARGE SOCIAL
HALL ARE USUALLY REQUIRED TO SERVE THIS FUNCTION. SMALLER
WHILE IT IS THE POLICY OF THE Y. TO PROVIDE THESE
CLASSES CAN MEET IN THE CLASSROOMS WHILE THE SOCIAL HALL
FACILITIES, ACCORDING TO THE DEMAND OF THE PEOPLE; IN
CAN BE USED TO DELIVER LARGE GROUP LECTURES OR COMMUNITY
AN IDEAL SITUATION, ALL THREE OF THE GOALS OF THE "Y"
INTEREST TOPICS SUCH AS VOTER FORUMS. DANCES AND OTHER
SHOULD INTERPLAY TO SOME DEGREE. THIS INTERPLAY IS READILY
SOCIAL FUNCTIONS ALSO TAKE PLACE IN THIS LARGE GENERAL
SEEN AT CAMPS WHERE "CAPTIVE" YOUTH ENGAGE IN PHYSICAL
PURPOSE ROOM.

AND MENTAL ACTIVITY AND BIBLE READING CLASSES, ALL CON-
PHYSICAL

DUCTED WITHIN THE CHRISTIAN ENVIRONMENT MENTIONED PREVIOUSLY.
THE PRIMARY FUNCTION OF THE YMCA, AS SEEN BY THE PUBLIC,
THUS, THE YMCA IS A VERY UNIQUE INSTITUTION. NEXT
IS TO PROVIDE EXERCISE AND PHYSICAL ACTIVITY FOR EVERYONE
TO THE FAMILY ORGANIZATION, THE "Y" IS ONE OF THE BEST
USING THE YMCA. THIS COMBINES SPECIFIC ATHLETIC AND
AND FEW INSTITUTIONS THAT PROVIDES FOR THE TOTAL NEEDS OF
RECREATIONAL FACILITIES SUCH AS THE FAMILIAR SWIMMING
EVERYONE IN THE COMMUNITY.
POOL AND GYMNASIUM, AND LESS OBVIOUS FORMS, SUCH AS THE

WALKING DISTANCE BETWEEN FACILITIES. INCLUDED IN THIS ACTIVITY ARE THE ANCILLARY FUNCTIONS SUCH AS LOCKER ROOMS, TOILETS AND SHOWERS.

OUTDOOR FACILITIES INCLUDE GAME AREAS AND A PLAYGROUND LINKED TO THE ATHLETIC FACILITIES. IDEALLY, EVERYONE WHO GOES TO THE "Y" SHOULD RECEIVE SOME FORM OF EXERCISE.

IN USING THE YMCA FACILITIES, THE PUBLIC SELDOM PARTICIPATES IN ALL "Y" ACTIVITIES EQUALLY. MANY COME FOR THE ATHLETIC-RECREATIONAL FACILITIES, OTHERS FOR THE OPPORTUNITY TO FURTHER THEIR EDUCATION. FOR MANY, THE "Y" IS AN INEXPENSIVE BABYSITTING SERVICE. FEW, IF ANY, COME FOR SPECIFIC RELIGIOUS REASONS.

WHILE IT IS THE ROLE OF THE "Y" TO PROVIDE THESE FACILITIES, ACCORDING TO THE DEMAND OF THE PEOPLE; IN AN IDEAL SITUATION, ALL THREE OF THE GOALS OF THE "Y" SHOULD INTERPLAY TO SOME DEGREE. THIS INTERPLAY IS READILY SEEN AT CAMPS WHERE "CAPTIVE" YOUTH ENGAGE IN PHYSICAL AND MENTAL ACTIVITY AND BIBLE READING CLASSES, ALL CONDUCTED WITHIN THE CHRISTIAN ENVIRONMENT MENTIONED PREVIOUSLY.

THUS, THE YMCA IS A VERY UNIQUE INSTITUTION. NEXT TO THE FAMILY ORGANIZATION, THE "Y" IS ONE OF THE BEST AND FEW INSTITUTIONS THAT PROVIDES FOR THE TOTAL NEEDS OF EVERYONE IN THE COMMUNITY.

MOVEMENT

DUE TO ITS UNIQUE CHARACTER, ONE IMMEDIATELY TENDS TO DIVIDE THE YMCA INTO ITS THREE MAJOR PARTS, ATHLETICS, SOCIAL-EDUCATION, AND WORSHIP, IN ANALYZING ITS SYSTEMS. BUT, BECAUSE THE "Y" IS THE ONE ORGANIZATION TO COMBINE ALL THREE ASPECTS OF DAILY LIFE, THIS ANALYSIS WILL NOT SEPARATE THE FUNCTIONS AND DEAL WITH ONE AT A TIME, BUT RATHER WILL CONSIDER THE YMCA AS A WHOLE THEN FUNCTION, WHICH IT IS. THE RELATIVE IMPORTANCE OF EACH SYSTEM IS INDICATED IN THE ORDER THEY ARE CONSIDERED.

PEOPLE.

WHILE NOT PRIMARILY A SOCIAL WORK AGENCY, THE YMCA IS A CHRISTIAN MOVEMENT WITH A BROAD SOCIAL WORK PROGRAM-- IT IS DESIGNED TO SERVE PEOPLE. AS SUCH, THE MOST IMPORTANT SYSTEM IN A YMCA IS THE CIRCULATION OF PEOPLE, FROM THE PARKING LOT TO AND THROUGH THE BUILDING AND BACK OUT AGAIN. BUT FOR PERSONS THERE REAL MOST PERSONS, OVER SIXTEEN, USING THE "Y" WOULD THEN MEAN MANY PERSONS WOULD COME BY BIKE OR ON FOOT. FROM THE POINTS OF ARRIVAL, MOST PERSONS WOULD GO TO ONE OF THE THREE MAJOR FUNCTIONS, THE SWIMMING POOL, THE

GYMNASIUM AND THE SOCIAL ACTIVITY HALL. FEWER PERSONS WOULD GO TO THE CLASSROOMS, ADMINISTRATIVE OFFICES AND CHAPEL. ADDITIONALLY, VERY LARGE CROWDS WOULD FREQUENTLY COME TO WATCH SWIM MEETS, GYM EVENTS, AND TO ATTEND TEEN-AGE DANCES.

THUS, A CIRCULATION SYSTEM DEVELOPS THAT WOULD LUMP TOGETHER THE POOL, GYM, AND SOCIAL HALL AND PLACE THEM NEAR THE MAJOR PUBLIC PLACE OF ARRIVAL. ANOTHER CONSIDERATION WOULD BE THE RELATIONSHIP OF GYM TO OUTDOOR PLAYGROUND. BUT, IT IS VERY IMPORTANT THAT THE YMCA MEMBER HAVE A SENSE OF BELONGING TO THE WHOLE COMPLEX, THAT THEY DO NOT JUST COME TO SWIM AND WONDER WHAT THE REST OF THE BUILDINGS ARE FOR. THE LIGHTHOUSE YMCA OF TUCSON IS A PERFECT EXAMPLE OF THE WRONG WAY TO RELATE FUNCTIONS, ALTHOUGH IT IS NO FAULT OF THE LIGHTHOUSE AS THEIR FACILITIES ARE VERY LIMITED. BUT FEW PERSONS THERE REALLY REALIZE THAT THERE IS MORE TO THE LIGHTHOUSE THEN A POOL.

IT IS A PRIMARY DUTY OF THE CIRCULATION SYSTEM TO CREATE THE FEELING OF BELONGING, BY MANIPULATING THE

PERSON IN SUCH A WAY HE CAN NOT IGNORE THE REST OF THE "Y", AND IDEALLY, HE WOULD USE SEVERAL FACILITIES EVERY TIME HE GOES TO THE "Y".

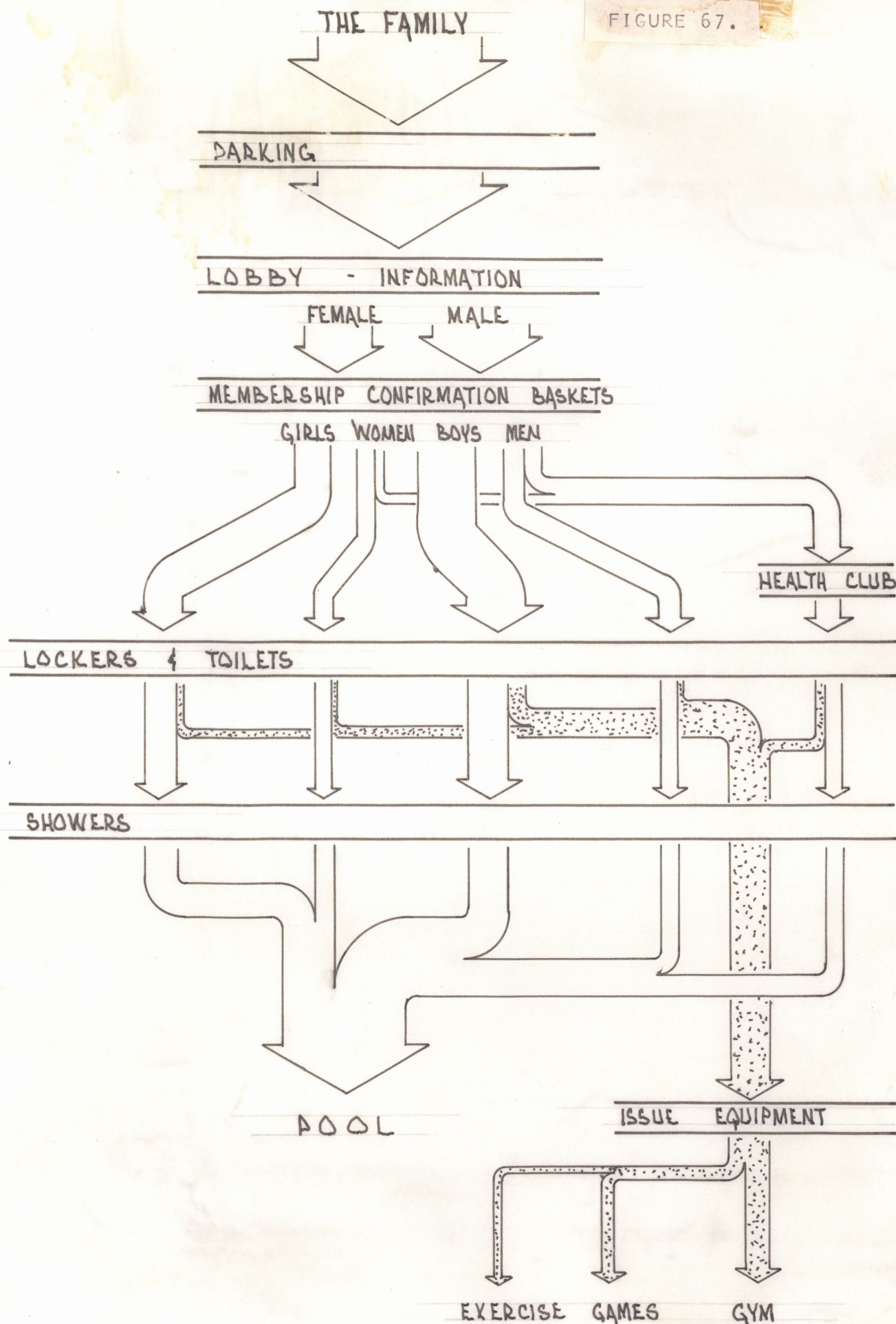
STAFF

THERE ARE NO SPECIAL STAFF REQUIREMENTS. THE INTERMINGLING OF STAFF AND MEMBERS IS DESIRABLE AND BOTH CAN USE THE SAME CIRCULATION PATTERNS.

SERVICE

THE MAJOR FACILITIES REQUIRING SERVICE ARE THE PRIMARY USE FACILITIES THE POOL, GYM, AND SOCIAL HALL (AND KITCHEN). THE SERVICE CIRCULATION SHOULD BE SEPARATED FROM PUBLIC CIRCULATION SHOULD BE SEPARATED FROM PUBLIC CIRCULATION WHENEVER POSSIBLE.

FIGURE 67.



ACTIVITY FLOW & CONTROL DIAGRAM

MATERIALS

MATERIAL ANALYSIS

THE BASIC FACTORS WHICH LIMIT THE RANGE OF MATERIALS APPROPRIATE FOR THIS PROJECT ARE SPAN, THE HUMID CONDITIONS AROUND THE POOL AND THE COSTS. THERE ARE WOOD AND STEEL SYSTEMS THAT CAN EFFICIENTLY SPAN ONE HUNDRED FEET BUT BOTH ARE SUBJECT TO SERIOUS DAMAGE WHEN EXPOSED TO CONDITIONS OF HIGH HUMIDITY. REINFORCED CONCRETE ARCHES, RIGID FRAMES AND PRECAST MEMBERS CAN ALL WORK EFFICIENTLY OVER SUCH SPANS AND IN ADDITION TO BEING RELATIVELY IMPERVIOUS TO MOISTURE ARE ALSO FIRE RESISTANT.

CONCRETE MASONRY UNITS FOR THE WALLS WILL ALSO ANSWER THE PROBLEMS OF HUMIDITY AND FIRE RESISTENCE AND WILL BE QUITE ECONOMICAL.

ANOTHER ADVANTAGE OF CONCRETE FOR THIS PROJECT IS THAT IT IS ESSENTIALLY A NEUTRAL MATERIAL THAT CAN BE WORKED AND FINISHED IN A VARIETY OF WAYS TO SERVE EITHER AS A BACKDROP FOR OTHER MATERIALS OR TO PROVIDE A STRONG CHARACTER OF ITS OWN.

SPANISH COLONIAL ARCHITECTURE IS THE ONLY INDIGENOUS ARCHITECTURE IN THIS AREA EXCEPT, OF COURSE, FOR THE PRIMITIVE INDIAN HABITATIONS. THIS COLONIAL BAROQUE

IS CHARACTERIZED BY ITS PURE WHITENESS OF SURFACE AND THE FULL ALMOST RIPE CHARACTER OF ITS DECORATION. THE FORMS ARE CLASSICAL, BUT COMPLETELY TRANSFORMED BY PRIMITIVE LABOR, THE LIMITATIONS OF POOR BUILDING MATERIALS AND THE ISOLATION OF THE REGION IN THE SIXTEENTH CENTURY. THE RESULT IS A MONACHROMATIC ARCHITECTURE OF EXTREME SIMPLICITY AND RICHNESS. CONTEMPORARY CONCRETE CONSTRUCTION CAN BECOME A FITTING EXTENSION OF THIS TRADITION.

RADIANT HEAT IS A STRONG DETERMINANT ON THE CHOICE OF MATERIALS. MASS IS A SUCCESSFUL INSULATOR, BUT REQUIRES A LONG COOLING PERIOD AFTER BEING EXPOSED TO HEAT AND A WALL FACING WEST MAY ACT AS A RADIATOR UNTIL MIDNIGHT AND AFTER. MATERIALS WITH DEAD AIR SPACES AND OF LOW DENSITY LOSE STORED HEAT RAPIDLY BUT ARE LESS EFFECTIVE AGAINST RADIANT HEAT THAN AGAINST CONVECTED AND INDUCTED HEAT.

NONE OF THE EXISTING STRUCTURES NEAR THE SITE IMPOSE ANY STRONG INFLUENCES ON MATERIALS. THEY ARE OF MASONRY AND WOOD WITH NEITHER PREDOMINATING.

FACILITIES

THE DYNAMIC CHARACTER OF THE "Y" PRECLUDES ANY ATTEMPT TO PRECISELY CATALOG THE SPACES THAT MAY BE REQUIRED TO SERVE ITS PROGRAM. THE FOLLOWING LIST DOES SHOW THE KINDS OF SPACES AND THEIR SUGGESTED SIZES THAT CAN BE EXPECTED AND ESTABLISHES THE SCALE AND CHARACTER OF THE PROJECT. AND MAXIMUM CAPACITY OF 25-100 TO 300 SQ. FT.

PUBLIC

LIBRARY (CONSIDER RELATING CLOSELY WITH LOUNGE) SPECIAL AND INTER-ASSOCIATION EVENTS SUCH AS INDUCTIONS, BANQUETS, CEREMONIES, SKITS, COOPERATIVE PROJECTS; CLASSES AND INSTRUCTION IN MUSIC, READING, HUNTER SAFETY, SCUBA, LEADERSHIP, ETC.; HI-Y, GRADE-Y, INTERGROUP COUNCILS AND Y'S MEN CLUB.

"KIVA" AS CLUB ROOM WITH ENTRANCE FROM TOP DOWN SHIP LOBBY MAY BE SEPARATED FROM LOUNGE AND GAME ROOMS DEVELOP WITH ADJACENT CAMP SITE. BY SCREENS.

RECREATION, HEALTH AND PHYSICAL EDUCATION

	<u>AREA</u>
GYMNASIUM (DISPLAY AREA FOR TROPHIES AND HANDICRAFTS)	500 SQ. FT.
1. BASKETBALL COURTS VARY WIDELY WITH MEN'S TOILET 10' X 94' SIZE REQUIRED BY HIGH SCHOOLS AND A 50' X 94' COURT USED	150
WOMEN'S POWDER ROOMS AND TOILET A.U.	200
2. MINIMUM 8' MINIMUM RUN-OFF AT ENDS LOUNGE (INTIMATE, INFORMAL MEETING PLACE) WITH POSSIBLY A SEPARATE YOUTH LOUNGE	1200

AROUND THE COURT IS OPTIMAL.

AREA

MULTI-PURPOSE-AUDITORIUM WITH STAGE (300 PERSON CAPACITY TABLES) RELATE THIS SPACE TO THE KITCHEN AND TO THE PATIO FOR OVER-FLOW AND INDOOR-OUTDOOR ACTIVITY 3600 SQ. FT.

COUNCIL-CONFERENCE ROOM-CHAPEL (ALTER IN ALCOVE WITH CURTAIN) "TOKONOMA" 600

CONFERENCE-MEETING-CLUB ROOMS (CAN USE VARIOUS SIZES) (NO FOLDING DOORS, MINIMUM CAPACITY OF 12-15 AND MAXIMUM CAPACITY OF 25-30) @ 300 SQ. FT. 2700, 350

LIBRARY (CONSIDER RELATING CLOSELY WITH LOUNGE) 300, 800

NURSERY (ONE OR TWO WITH 30 CHILDREN CAPACITY @ 15 SQ. FT./CHILD) 900

NOTE: IT IS NOT INTENDED TO ESTABLISH A KINDERGARTEN AT THIS LOCATION. CONSEQUENTLY EVEN ONE SMALLER SPACE MAY BE SUFFICIENT.

"KIVA" AS CLUB ROOM WITH ENTRANCE FROM TOP DOWN SHIP'S LADDER, NOT LOCATED IN MAIN BUILDING. DEVELOP WITH ADJACENT CAMP SITE. 600

GAMES (TABLE TENNIS, BILLIARDS, ETC.) WITH A RECREATION, HEALTH AND PHYSICAL EDUCATION 2,000

GYMNASIUM (AFTER 20 300 SQ. FT., INCLUDES POWER NOTES: 11,500

1. BASKETBALL COURTS VARY WIDELY WITH A 40' X 94' SIZE REQUIRED BY HIGH SCHOOLS AND A 50' X 94' COURT USED BY COLLEGES AND THE A.A.U. 420

NOTE: 2. MINIMUM 8' MINIMUM RUN-OFF AT ENDS AND 6' MINIMUM AT SIDES SHOULD BE PROVIDED AND A 12' SPACE ALL AROUND THE COURT IS OPTIMAL.

3. AISLE WIDTH 4' X 8'

AREA

3. A GYMNASIUM SIZE OF 100' X 120' WILL PERMIT TWO FULL CROSS-COURTS WHEN THE MAIN COURT IS NOT IN USE. A FLOOR TO CEILING NET SHOULD BE PROVIDED BETWEEN THE CROSS COURTS.
4. PROVIDE SPECTATOR SEATING SPACE WITH ACCESS FROM THE PUBLIC AREAS. 3.5 SQ. FT. PERSON.
5. MINIMUM LIGHT LEVELS SHALL BE 30 FOOT CANDLES.

EXERCISE	1,350
WEIGHT	300
HANDBALL AND SQUASH 2 @ 20X50X20 AND 1@ 50X24 X25	2,800

NOTE:

SOME OF THESE SPACES MAY BE OUTDOOR COURTS INITIALLY AND ENCLOSED LATER.

HEALTH CLUB (TO BE USED BY MEN AND WOMEN	
STEAM (2@400 SQ. FT.)	800
DRYHEAT	100
WORKOUT	200
GAMES (TABLE TENNIS, BILLIARDS, ETC.) WITH A SEPARATE GAME ROOM FOR YOUTH.	2,000
ARTS AND CRAFTS (2@ 300 SQ. FT., INCLUDES POWER TOOLS)	600
BASKETS AND TOWELS-SELF SERVICE CHECKROOM	420

NOTE:

1. TOTE BASKETS ARE NOT RECOMMENDED FOR WOMEN AND GIRLS.
2. ALLOW 1'-1" X 1' 1/2" X 9 1/4" BASKETS (8 ROWS HIGH EQUALS 6' - 2")
3. AISLE WIDTH 3' - 0"

2,880 SQ. FT.

AREA

SWIMMING POOLS

NOTE:

1. DIVING POOL, STANDARD LENGTH POOL, AND WADING POOL DONATED TO THE "Y" BY THE CITY.
2. THE POOLS ARE GIVEN ON THE SITE AS PART OF DEL NORTE PARK.
3. ENTRY FROM THE LOCKER ROOMS SHOULD BE AT THE SHALLOW END OF THE POOL AND SMALL CHILDREN SHOULD NOT GO BY THE POOL TO GET TO THE WADING POOL.
4. NO UNDERWATER OBSERVATION ROOMS ARE TO BE PROVIDED.
5. PROVIDE SPECTATOR SPACE SEPARATE FROM THE POOL PROPER WITH ACCESS FROM THE PUBLIC AREA. $3/5$ SQ. FT./ PERSON.
6. THERE SHOULD BE NO STEPS IN THE POOL-LOCKER ROOM AREA.
7. ABSOLUTE MINIMUM WATER TEMPERATURE REGULATED BY THE STATE HEALTH DEPARTMENT IN WINTER IS 70°F . THIS IS NOT ACCEPTABLE TO MOST ADULTS-OPTIMUM IS $75-80^{\circ}\text{F}$.
8. HEATING COSTS (1965):
 - A. 50 METER POOL: \$800-\$1,000/MONTH OF OCTOBER.
 - B. 25 YD. POOL: \$150/MONTH OF OCTOBER.
 - C. MULTIPLY ABOVE FIGURES BY 10 FOR MONTH OF DECEMBER.
 - D. HEATING WATER TO 80 DEGREES COSTS TWICE AS MUCH AS HEATING WATER TO 75 DEGREES.

LOCKER (MEN, WOMEN, GIRLS AND BOYS)

2,880 SQ.FT.

AREA

NOTES:

1. LOCKER ROOMS OPEN TO SUNLIGHT AND FRESH AIR ARE OPTIMUM FOR SANITATION.
 2. ALLOW 8 SQ. FT./PERSON/LOCKER AND 5 BASKETS/LOCKER.
 3. USE 5' HGT. LOCKERS FOR MEN AND WOMEN AND 3' HGT. LOCKERS (DOUBLE) FOR BOYS AND GIRLS.
 4. DESIGN CAPACITIES: 100 MEN, 75 WOMEN, 100/50 DOUBLES, GIRLS AND 150 (75 DOUBLES) BOYS.
 5. PROVIDE A FULL HEIGHT MIRROR IN EACH LOCKER ROOM.
- TOILETS AND SHOWERS (4) 1,680

NOTES:

1. NAT'L. SWIMMING POOL INST. REQUIREMENTS:
- | | <u>WATER CLOSETS</u> | <u>URINALS</u> | <u>LAVATORIES</u> | <u>SHOWERS</u> |
|--------|----------------------|----------------|-------------------|----------------|
| MEN: | 1 EA/FIRST 100 | 1/EA ADD 150 | 1/100 PLUS | 1/50 |
| WOMEN: | 2/100 PLUS | 1/ADD 75 | 1/75 | 1/50 |

NOTE:

- OFFICES SHOULD BE LOCATED CLOSE TO THE POOL
- | | | | | |
|--------|----------------|--------------|------------|------|
| MEN: | 1 EA/FIRST 100 | 1/EA ADD 150 | 1/100 PLUS | 1/50 |
| WOMEN: | 2/100 PLUS | 1/ADD 75 | 1/75 | 1/50 |

SERV 2. ARIZONA STATE HEALTH DEPARTMENT REQUIREMENTS:

- | | | | | |
|--------|------|------|------|------------|
| MEN: | 1/60 | 1/60 | 1/60 | 1/40 |
| WOMEN: | 1/40 | 1/60 | 1/60 | 1/3 PUPILS |

FOR VENDING MACHINES IN AT LEAST TWO LOCATIONS.

3. RATIO LOCKER TO TOILET FACILITIES: 1 WATER CLOSET/10 LOCKERS: 1 SHOWER/5 LOCKERS.

4. PROVIDE STALL SHOWERS AND PRIVATE DRESSINGS BOOTHS FOR WOMEN (32 SQ. FT. EA.); ALSO HAIR DRYERS, MAKE-UP COUNTERS AND MIRRORS.

5. SCALE TOILET FIXTURES TO USERS.

6. WALL HUNG URINALS ARE OPTIMAL.

STAFF:

AREA

PERSONAL COUNSELING, TRAINING, AND ADMINISTRATION

RECEPTION (RELATED CLOSELY TO ENTRANCE AND LOBBY)

9075 SQ. FT.

SECRETARIAL POOL 400

BRANCH EXECUTIVE DIRECTOR 300

PROGRAM SECRETARY (ONE MAN AND ONE WOMAN @150 SQ. FT./EACH) 300

YOUTH SECRETARY 240

PHYSICAL EDUCATION DIRECTOR 15070

PART-TIME STAFF (4 OFFICES @100 SQ. FT.) 400

WORK ROOM NOT INCLUDING STORAGE CABINETS IN CLUB 4000MS, ETC.)

BUSINESS MACHINES (MINEO, COPYING, MAILING ETC.) 30080 SQ. FT.

AQUATICS INSTRUCTOR 12020

LOCKER ATTENDANT 15050

MAINTENANCE SUPERINTENDENT 12010

KITCHEN (RELATED TO MULTI-PURPOSE ROOM,

NOTE: MINIMAL, KITCHEN IS SERVING RATHER

THAN RECREATORY KITCHEN AND POSSIBLY

OFFICES SHOULD BE LOCATED CLOSE TO THE FACILITIES THEY ARE RELATED TO AND NOT ALL IN ONE PLACE.

SERVICES (THIS INCLUDES YARD TOOLS AT SEVERAL AREA SEPARATE LOCATIONS) 220

SNACK BAR (2@50 SQ. FT. EACH. ALCOVE SPACES FOR VENDING MACHINES IN AT LEAST TWO LOCATIONS. 500

ONE ADJACENT TO SWIMMING POOL AND ONE ACCESSIBLE FROM LOBBY-LOUNGE) 1000 SQ. FT.

AUDIO VISUAL 150

FIRST AID 3080

KITCHEN-WILL BE A SERVING KITCHEN 600

STAFF LOCKERS 120

MAINTENANCE SHOP 200

CIRCULATION RTMENT SHOULD BE LOCATED ON THE 1,000 BUT AWAY FROM THE MAJOR FACILITIES.

AREA

OUTDOOR AREA

<u>ACTIVITIES</u>	A. FILTER AND HEATER ROOM, DEPENDS ON SIZE OF POOL (10'X8' FOR 25 YD. POOL UP TO 15) 15' X 25' X 10' FOR 50 METER POOL)	375
HANDBALL AND WRESTLING (A GYMNASTICS (A JUDO (A RUBIN (A CR CAMES SOFTBALL BASKETBALL (C VOLLEYBALL (C	B. SURGER TANK, DEPENDS ON BATHING LOAD AND/OR SIZE OF POOL (10'X7'X6') ENABLES POOL LEVEL TO BE LOWERED TO 2'- 6" FOR TEACHING SMALL CHILDRED TO SWIM.	70
<u>STORAGE</u> (NOT INCLUDING STORAGE CABINETS IN CLUBROOMS, ETC.)		
TENNIS (CONCRETE COURTS) PROGRAM (PUTTING GREEN MIGHT BE PROVIDED)		80 SQ. FT.
OFFICE SUPPLIES		120
SALES AND CHECKING		80
CHAIR		120
KITCHEN (RELATED TO MULTI-PURPOSE ROOM, AIR RIF MINIMAL, KITCHEN IS SERVING RATHER OBSTACLE THAN PREPARATORY KITCHEN AND POSSIBLY ORGANIZED FOR SEPARATE SNACK PREPARATION FACILITIES) (RELATED TO INDOOR ACTIVITY AREAS)		
<u>PATIOS</u>		
MAINTENANCE (THIS INCLUDES YARD TOOLS AT SEVERAL GAME SEPARATE LOCATIONS)		220
POOL STORAGE (THIS ASSUMES NO UNDERWATER LOUNGE OBSERVATION)		500
GYMNASIUM		300
DAY CAMP AREA (FOR PICKING UP AND DROPPING OFF L AUDIO VISUAL GROUPS BY BUSES AND/OR CARS)		150
NURSERY	NOTE: MINIMUM 45'-6" MINIMUM TURNING FOR BUSES (OUTSIDE DIAMETER) AND 18'-0" WIDE DRIVE.	80
<u>CARETAKER</u>		
<u>SERVICE YARD</u> (INCLUDING SPACE FOR UTILITIES AND STORAGE)		
AN APARTMENT SHOULD BE LOCATED ON THE PROPERTY BUT AWAY FROM THE MAJOR FACILITIES. ACES, AND TABLES)		
<u>PLAYGROUND</u> (WITH SWINGS, SEE-SAWS, JUNGLE GYMS, ETC.)		

OUTDOOR FACILITIES

ACTIVITIES:

HANDBALL AND SQUASH (ONE WALL CONCRETE COURTS)
WRESTLING (A SOFT LAWN AREA)
GYMNASTICS (A SOFT LAWN AREA)
JUDO (A SOFT LAWN AREA)
RUNNING (A CROSS COUNTRY TRACK SHOULD BE LOCATED
AROUND THIS PORTION OF THE PROPERTY)
GAMES
SOFTBALL
BASKETBALL (CONCRETE COURTS)
VOLLEYBALL (CONCRETE COURTS)
SHUFFLEBOARD (CONCRETE COURTS)
TENNIS (CONCRETE COURTS)
GOLF (A PUTTING GREEN MIGHT BE PROVIDED)

DAY CAMP

ARCHERY RANGE
AIR RIFLE RANGE
OBSTACLE COURSE

PATIOS (CLOSELY RELATED TO INDOOR ACTIVITY AREAS)

YOUTH
GAME
SUN BATHING
LOUNGE

LOADING AREA (FOR PICKING UP AND DROPPING OFF LARGE
GROUPS BY BUSES AND/OR CARS)
NOTE: MINIMUM 45'-6" MINIMUM TURNING CIRCLE
FOR BUSES (OUTSIDE DIAMETER) AND
18'-0" WIDE DRIVE.

SERVICE YARD (INCLUDING SPACE FOR UTILITIES AND STORAGE)

PICNIC AREA (WITH RAMADAS, FIREPLACES, AND TABLES)

PLAYGROUND (WITH SWINGS, SEE-SAWS, JUNGLE GYMS, ETC.)

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JANUARY, 1967

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