AN URBAN DEVELOPMENT CENTER

BY

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CERTIFIED BY

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DEAR DEAN ANDERSON:

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARCHITECTURE I HEREBY SUBMIT THIS THESIS ENTITLED,

"AN URBAN DEVELOPMENT CENTER"

RESPECTFULLY,

JOSEPH C. SCHIDLOWSKI
ABSTRACT

The thesis topic was selected as a vehicle for an investigation into the general character of today's city. However, the ills and shortcomings of the current city structure soon turned a passive investigation into an active search for better systems upon which to hang our city structure.

A city should provide for the richest interaction of free individuals and at the same time permit the growth and change that is essential to life.

The interaction of parts as dominated by the general character of a city does not lie in its shape alone but in the human activities within it. However, this does not imply that the physical form of the city is accidental. It is one of the most significant and vibrant of elements, since it is all that survives as evidence of one's logic.

The purpose of architecture is enlightenment. This spiritual or mental enlightenment of society when fed back into society produces change. This change may be bad or good, but all contains both. However, this variation produced by architecture is valid. A positive reaction encourages change while a negative one discourages change. In turn for a change to come about we need a positive reaction which is produced by the city.
THE RIGID DISPERSION OF HUMAN ELEMENTS WITHIN THE CITY TENDS TO TAKE AWAY ONES INDIVIDUALITY THEREBY CREATING A MASS SOCIETY. THERE MUST BE A MEANS OF GIVING MAN A PLACE IN A NEW ENVIRONMENT WHICH WILL BE ADVANTAGEOUS AND ENHANCE HIM IN ALL ASPECTS OF LIFE.

THE ARCHITECT SHOULD TAKE PART IN THIS NEW ENVIRONMENT TO DO THIS ONE MUST LOOK AHEAD TO THE POTENTIALITIES OF THE FUTURE AND AT TIMES THINK AHEAD OF WHAT IS NOW ACCEPTED BY THE WORLD. BY DOING THIS, ONES IMAGINATION TODAY MAY BECOME TOMORROW'S ACTUALITY.

IT IS MY HOPE THAT THE GOALS AND OBJECTIVES OF THIS THESIS HAVE MATERIALIZED ON THE BASIS OF THIS PHILOSOPHY.
ACKNOWLEDGEMENTS

I WOULD LIKE TO EXPRESS MY GRATITUDE TO THE FOLLOWING PEOPLE WHOSE GUIDANCE, CRITICISM AND DEVOTION HAVE BEEN MOST VALUABLE IN THE DEVELOPMENT OF THIS THESIS.

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MRS. JOSEPH C. SCHIDLOWSKI
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6.
SCOPE OF THE PROJECT

The expansion and adaptation of existing urban centers is leading to confused results which neither guarantee preservation of the best in the past nor enable the cities to be re-equipped to meet the requirements of the future. In the city regions, there are relatively few obstructive influences from the past and it is possible to create new urban forms which meet as far as possible the requirements of a new society and technology.

The new urban development is located in the midst of the most unique areas in the United States today. Washington D.C. is the fastest growing large metropolitan area in the country and Baltimore is close behind. It is estimated that the entire Washington D.C. Baltimore Metropolitan area will double its population in the next thirty-five years adding more than three million people in the region.

To achieve an ultimate plan, the initial project or "catalyst" must be carefully located and must generate a proper pattern and sequence of incremental growth. This growth must be designed to achieve cohesion and to overcome existing fragmentation, the units of incremental growth must be sufficiently large to ensure compliance with the total concept.

Only a uniform but flexible system of development on a large scale can
TAKE ADVANTAGE OF ALL TECHNOLOGICAL ADVANCES IN PROVIDING NEW FACILITIES FOR THE VARIED AND DIVERSE USES WHICH ARE NOW APPROPRIATE TO A NEW URBAN DEVELOPMENT.

MANY INTERESTS AND INDIVIDUAL ACTIONS MUST PARTICIPATE TO GENERATE A NEW URBAN DEVELOPMENT, BUT TO BEGIN, A LARGE PROJECT MUST SET STANDARDS AND INITIATE PROCEDURES WHICH WILL FACILITATE A CONTROLLED CHAIN REACTION AND TO CONTROL IT, I OFFER SEVERAL MECHANISMS IN THIS PROPOSAL. ONE IS A MULTI-LEVEL ORGANIZATION WHICH SHOULD ULTIMATELY EXPAND AND CHARACTERIZE THE CITY. ANOTHER IS THE PROTOTYPE HOUSING CREATING THE DESIRED DENSITY TO ESTABLISH A RICH URBAN LIFE AND ALSO THE PROPER MOVEMENT SYSTEMS TO ENSURE THE SOLIDIFICATION OF THE CITY.
CRITERIA

CRITERIA USED IN ESTABLISHING THE PLACEMENT OF ACTIVITIES IN THE CITY.

1. THE DOMINANT ACTIVITIES SHOULD BE THOSE PRODUCING HIGHLY SPECIALIZED GOODS AND SERVICES AND WHICH SERVE NOT ONLY THE CITY BUT THE REGION IF DESIRED. SOME OF THESE MAY BE FINANCING, RETAILING AND GOVERNMENT.

2. CLOSELY RELATED TO EACH OF THESE DOMINANT ACTIVITIES SHOULD BE A GROUP OF SUBORDINATE OR AUXILIARY ACTIVITIES, SUCH AS FINANCIAL, LEGAL, HOTELS, MANAGEMENT, AND OTHER BUSINESS SERVICES. ALSO HOUSING, CULTURAL, AND RECREATIONAL FACILITIES.

3. SERVICE ESTABLISHMENTS SHOULD BE PROVIDED IN CLOSE PROXIMITY TO THESE MAJOR AND AUXILIARY ACTIVITIES.

4. THE DOMINANT ACTIVITIES AND THEIR AUXILIARY AND SERVICE ESTABLISHMENTS CONSTITUTE THE HEART OF THE CITY AND SHOULD BE GROUPED IN CONSONANCE WITH THEIR RELATIONSHIPS TO EACH OTHER. DOING SO HELPS ACHIEVE CONCENTRATION WITHOUT CONGESTION BY REDUCING THE MOVEMENT IN THE AREA TO A MINIMUM.

ONCE THE SELECTION AND DETERMINING OF PLACEMENT OF ACTIVITIES HAS BEEN STUDIED AND READY TO BE ACTED UPON A SYSTEM OF COORDINATED DEVELOPMENT MUST BE PROVIDED AS A GUIDE.
1. This system must incorporate every adaptation to modern technology now possible of land and building.

2. It must provide for expansion of the physical inventory of improvements as the market grows.

3. This system must be adaptable to uses other than those which they are originally intended.

4. The scale of the first increment must be large enough to establish the new center and incorporate all the features essential to demonstrate the validity of the objectives.

In the society of today, the structure of which is ever changing and becoming more complicated, it has become necessary, whether one is laying a plan for a single building or a whole city, to discover a clear relationship that will link together people, automobiles, goods, and urban facilities.

Therefore, only if these criteria are met will the massive volume of public and private capital necessary to do the job be protected against early and disastrous erosion by obsolescence.
MULTI-LEVEL ORGANIZATION

TO PREVENT CONGESTION SO THE CONCENTRATION OF PEOPLE AND THEIR ACTIVITIES IN THE CITY WILL INCREASE THE USEFULNESS AND VALUE OF THE REAL ESTATE, MULTI-LEVEL ORGANIZATION MAKES OPTIMUM CONCENTRATION POSSIBLE WITHOUT CONGESTION.

IF UNNECESSARY USAGE AND THE CONFUSION OF CONFLICTING FUNCTION OF STREETS IS TO BE ALLEVIATED, SEVERAL LEVELS MUST EXTEND OVER STREETS WITH VERTICAL RIGHTS-OF-WAY ESTABLISHED, REAL ESTATE IS USED THREE DIMENSIONALLY AND VERTICAL ZONING IS NECESSARY TO IMPLEMENT ITS PROPER DEVELOPMENT.

BELOW GRADE WILL BE PROPOSED UTILITIES. THESE UTILITIES WILL HAVE ACCESS AT THE CITY VAULTS WHICH OCCUR AT THE BOTTOM OF THE PUBLIC CORES. THE NEXT LEVEL IS ONE OF THE SERVICE LEVELS. THIS LEVEL WOULD BE USED FOR STORING GOODS BEING MOVED INTO OR OUT OF THE AREA AND FOR TRUCKS DELIVERING OR RECEIVING SUCH GOODS. ENTRANCE TO THIS LEVEL IS THROUGH TUNNELS WHICH ARE PARALLEL TO THE LOOP. BY PLACING THESE FACILITIES BELOW GROUND AND MAKING PROVISION FOR ENTRY AND EXIT, THE FIRST STEP IS TAKEN TOWARD REMOVAL OF ALL HEAVY HIGHWAY VEHICLES FROM THE STREETS OF THE CORE.

THE NEXT SERIES OF LEVELS PROVIDES AUTOMOBILE STORAGE. THIS STORAGE IS PROVIDED IN THE FORM OF FLAT PARKING WHICH CAN BE MADE AVAILABLE
TO OCCUPANTS OF THE DEVELOPMENT ON A MONTHLY OR YEARLY BASIS. THERE IS SUFFICIENT PARKING SPACE TO ASSURE PROSPECTIVE TENANTS AND VISITORS THAT THEY WILL BE ABLE TO STORE THEIR CAR WITHOUT DELAY WITHIN A FEW HORIZONTAL FEET OF VERTICAL TRANSPORTATION TO ANY DESTINATION IN THE AREA.

THE NEXT LEVEL IS THE MAJOR VEHICULAR CIRCULATION PLANE. THIS LEVEL WOULD BE GIVEN TO THE MOVEMENT, LOADING AND UNLOADING OF AUTOMOBILES, TAXIS, INTRA-CITY BUSES AND EMERGENCY VEHICLES. PIT PARKING IS ALSO PROVIDED INTO SOME OF THE PUBLIC CORES WHICH WILL SERVE AS SHORT TERM PARKING.

THE NEXT LEVEL IS THE MAIN PEDESTRIAN CONCOURSE: IT CONSISTS OF A SERIES OF NODAL POINTS WHICH ARE PHYSICALLY CONNECTED. THESE NODAL POINTS ARE PRIMARILY CONCENTRATIONS OF SHOPPING, BUSINESS, EDUCATION AND AMUSEMENT ACTIVITIES. THEY ALSO ACT AS LARGER CONNECTORS BETWEEN MAJOR ELEMENTS OF THE CITY. IT IS LIKE A RIVER RUNNING THROUGH THE MATRIX OF THE CITY TEXTURE.

ALSO OCCURRING AT THIS LEVEL IS THE CITY ROOM: THE PLACE WHERE MANY MOVEMENT SYSTEMS (MINI-BUSES, TAXIS, PEDESTRIAN REINFORCING SYSTEM, INTRA-CITY TRANSIT) JOIN AND FORM AN EXCHANGE WITH EACH OTHER. ONCE THEY ARE RELATED THIS WILL BECOME THE PLACE OF GREATEST PEDESTRIAN CONCENTRATION WITH THE CITY. THIS CONCENTRATION FORMS THE POTENTIAL TO GENERATE MANY FURTHER KINDS AND FORMS OF ACTIVITY.
The pedestrian decks will be at a variety of levels each linked by conveyor, escalator, and public cores. These can be weather controlled if desired. They have ready available transport because the pedestrian reinforcing system would be immediately available and yet segregated from the pedestrian.

A master form of shopping, amusement, offices, housing etc. has been established. But the overall form is somewhat loose. This master form is not a static composition but a state of equilibrium sustained by given elements.

Above the sub-structure will be the super-structure which consists mainly of residential units and office space. From this matrix of new urban habitat supported and supplied by the public cores and sub-structure has emerged a new physical form.

The multi-level concentration can be confusing to people within it unless a system is designed for limiting directional decisions.
MOVEMENT SYSTEMS

THE THREE TYPES OF MOVEMENT COMMON TO A STREET ARE SEGREGATED ON DIFFERENT LEVELS: ON THE LEVEL EXPOSED TO THE SKY ARE THE PEDESTRIAN AND SLOW MOVING CONVEYOR. IN THE MIDDLE LEVEL MAN IS SEPARATED FROM HIS TRAVEL CONTAINER. ON THE LOWER LEVEL ARE CREATURES OF THE HIGHWAY (TRUCKS). SANDWICHED IN BETWEEN PEOPLE AND CONTAINERS IS AN ADDITIONAL PEDESTRIAN REINFORCING MOVEMENT SYSTEM.

THE PEDESTRIAN MOVEMENT SYSTEM, LIKE DISTRICT HEATING OR COMMUNICATIONS LINES WOULD BE COMBINED INTO THE SUB-STRUCTURES AS AN ESSENTIAL PART OF THEIR ORGANISM. THIS MOVEMENT SYSTEM WOULD HANDLE A LARGE PROPORTION OF PEOPLE-A KIND OF CROSS-CITY MOVEMENT, WHEN USING THE CAR IS NOT ESSENTIAL.

TO SUMMARIZE: THE SYSTEM WOULD HAVE
1. SEPARATION FROM ALL VEHICLES AND PEDESTRIAN MOVEMENT
2. EASY ACCESSIBILITY FOR PEDESTRIANS
3. CONTINUOUS RUNNING
4. FREE TO RIDE ON
5. ACCESS TO ANY PART OF THE CENTRAL CITY

PEOPLE, GOODS AND UTILITIES ARE DISTRIBUTED VERTICALLY WITHOUT INTERFERING WITH MOVEMENT IN THE HORIZONTAL PLANES. TO ACCOMPLISH THIS, VERTICAL- RIGHTS-OF-WAY MUST BE SYSTEMATICALLY PROVIDED FOR THE
EXCLUSIVE USE OF PEOPLE, GOODS AND UTILITIES. THIS IS PROVIDED WITHIN THE PUBLIC CORES AND THE FLEXIBILITY OF THE SUB-STRUCTURE.
HIGH DENSITY

IT HAS BECOME EVIDENT TO ME THAT THE FABRIC AND TEXTURE OF THE CITY DEPENDS ALMOST ENTIRELY ON THE DENSITY AND POPULATION.

LET US LOOK AT A FEW EXAMPLES. AT 20-30 P.P.A., SPECIAL PROVISION FOR SEPARATION OF PEOPLE AND CARS IS NOT ESSENTIAL. THE NUMBER OF ENCOUNTERS IS TOO SMALL TO MAKE IT FEASIBLE. A DENSITY AS LOW AS THIS IS UNABLE TO SUPPORT WITHIN WALKING DISTANCE, ANY REQUIREMENTS OF AN URBAN LIFE.

THE NUMBER OF VEHICULAR PEDESTRIAN ENCOUNTERS INCREASES AS DENSITY GOES UP AND OVER 100 P.P.A. IT IS A VERY REAL PROBLEM. UP TO THIS DENSITY, A SYSTEM OF HORIZONTAL SEGREGATION IS POSSIBLE. IN DENSITIES OF THIS NATURE THE VEHICLE IS A NECESSITY, ACCESS TO COMMUNAL FACILITIES REQUIRES THE USE OF A CAR. DENSITIES BETWEEN 100 AND 200 P.P.A. CREATES A VEHICULAR-PEDESTRIAN DILEMMA BECAUSE THE COST OF PRODUCING THE NECESSARY VERTICAL SEGREGATION CAN NOT BE SPREAD OUT OVER A SUFFICIENT NUMBER OF PEOPLE. ALSO TO PROVIDE CAR STORAGE ON THIS SCALE MEANS HOUSING PATTERNS MUST BE RETHOUGHT AND VERTICAL SEGREGATION IS BASIC.

THIS IN TURN MAKES ECONOMIC AND ARCHITECTURAL SENSE ONLY IF DENSITIES ARE HIGHER SO THE TOTAL COST OF THE INFRASTRUCTURES, LEVELS, MOVEMENT SYSTEMS AND NEW URBAN HABITAT CAN BE SPREAD OUT OVER A GREATER NUMBER OF PEOPLE. THEREFORE DENSITIES OF 200-300 P.P.A. ARE A MUST.
ONE WAY OF CREATING THIS HIGH DENSITY IS AN INFRASTRUCTURE. THIS INFRASTRUCTURE CAN PROVIDE:

1. A LARGE STRUCTURAL FRAMEWORK IN WHICH ALL THE FUNCTIONS OF THE CITY OR PART OF THE CITY ARE HOUSED.

2. IT IS MADE POSSIBLE BY PRESENT DAY TECHNOLOGY.

3. MANY DIVERSE FUNCTIONS MAY BENEFICIALLY BE CONCENTRATED IN ONE PLACE.

4. OFFERS A WAY TO ORDER MASSIVE GROUPED FUNCTIONS.

5. IT CAN HELP US DO AWAY WITH THE IDEA THAT A BUILDING SHOULD BE DESIGNED TO FULFILL ONE SPECIFIC PURPOSE BY CONTRIBUTING TO THE CONCEPT OF MULTI-FUNCTIONALISM.

6. A NEW TYPE OF PHYSICAL STRUCTURE WILL EMERGE

7. PUBLIC INVESTMENT CAN BE MADE IN THE SKELETON OF THE INFRASTRUCTURE IN ORDER TO GUIDE AND STIMULATE STRUCTURE AROUND THEM. THIS STRATEGY CAN BE FURTHER EXTENDED TO A THREE DIMENSIONAL CONCEPT OF LAND USE WHERE PUBLIC OFFICES WILL MAINTAIN THE OWNERSHIP AND UPKEEP
FOR BOTH HORIZONTAL AND VERTICAL CIRCULATION SYSTEMS.

8. INFRASTRUCTURE REQUIRES A NEW DIMENSION IN CONCEIVING CONSTRUCTION METHODS AND STRUCTURAL AND MECHANICAL SYSTEMS. THE AESTHETICS OF THIS FORM NECESSITATE NEW DEFINITIONS OF SCALE AND PROPORTION OF BUILDINGS.

9. INFRASTRUCTURE IS NOT A STATIC COMPOSITION, BUT IT IS A STATE OF EQUILIBRIUM SUSTAINED BY GIVEN ELEMENTS. THE CONCEPT OF MASTER PLANNING HAS OFTEN BEEN CRITICIZED FOR SEVERAL REASONS. FIRST, THE WHOLE PLAN CAN NOT BE COMPREHENDED UNTIL IT IS COMPLETED. SECOND, WHEN COMPLETED IT MAY WELL BECOME SOCIA LLY OBSOLETE OR AT LEAST OBSOLESCENT. AT WORST, THE PLAN IS NEVER COMPLETED. A MASTER PLAN IS BASICALLY A STATIC CONCEPT, WHEREAS THE CONCEPT OF INFRASTRUCTURE IS MORE ELASTIC AND ENDURING THROUGH THE CHANGES IN OUR SOCIETY. MASTER FORM IS ONE OF THE PRINCIPLES OF A MORE DYNAMIC APPROACH IN URBAN DESIGN.
PROTOTYPE

1. DIMENSIONAL MAN MADE LAND: THE ENVIRONMENTAL MEANING OF WALLS WILL BE RADICALLY TRANSFERRED FROM UNIT DIVIDER TO PROPERTY DIVIDER AND A CORRIDOR BECOMES A STREET.

2. PREFABRICATION: VARIETY OF UNIT TYPES IS AVAILABLE; THE RESIDENT CAN PARTICIPATE IN THE BUILDING OF THE HOME IN WHICH HE IS TO LIVE.

3. UNITS OR ARCHITECTURAL PARTS, SOMETIMES HAVE SHORT LIVES AND MUST BE REPLACED, BUT THIS DOES NOT MEAN THAT THE ENTIRE BUILDING MUST BE TORN DOWN.

4. PREFABRICATED ELEMENTS GIVE A GREATER VARIETY AND FREEDOM OF CHOICE. IT IS NOT A SIMPLIFICATION BUT A DIVERSIFICATION PROCESS.

5. PLATFORMS AND INFRASTRUCTURES HAVE NOT GIVEN RELATIONSHIP WITH NATURE: THIS IS NOT TRUE. WE ARE BUILDING TO PROTECT NATURE. IT IS A COMPROMISE SO ALL CAN ENJOY NATURE RATHER THAN A FEW.
IMPLEMENTATION

TIME AND LACK OF KNOWLEDGE DID NOT PERMIT ME TO DEAL WITH THE COMPLEX
TECHNIQUES, LEGAL PROCEDURE, ADMINISTRATIVE AND FINANCIAL MACHINERY
TO TRANSFORM CONCEPTS AND PLANS INTO BUILT ENVIRONMENT. BUT I WILL
SAY THAT THE TOOLS WHICH ARE AT OUR DISPOSAL TODAY TO RESHAPE OUR
CITIES AND CREATE NEW ONES ARE SORELY INADEQUATE AND MUST THEMSELVES
BE RESHAPED IN ORDER TO CHANGE OUR TRADITIONAL IDEAS OF THE CHARACTER
OF OUR CITIES TO A DYNAMIC CENTER FOR URBAN DEVELOPMENT.
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SITE PLAN

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COMMERCIAL
OFFICE
HABITAT
RECREATION
ENTERTAINMENT
EDUCATION
RELIGIOUS

INDUSTRY
SERVICE
STORAGE
PARKING
PEDESTRIAN
VEHICULAR
LAND COVERAGE

50,000-PHASE

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RECREATION
ENTERTAINMENT
EDUCATION
RELIGIOUS

INDUSTRY
SERVICE
STORAGE
PARKING
PEDESTRIAN
VEHICULAR
LAND COVERAGE

CENTRAL STORAGE

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SERVICE
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ACCESS LEVEL

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OFFICE  SERVICE
HABITAT  STORAGE
RECREATION  PARKING
ENTERTAINMENT  PEDESTRIAN
EDUCATION  VEHICULAR
RELIGIOUS  LAND COVERAGE

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SUPER STRUCTURE

COMMERCIAL | OFFICE | HABITAT | RECREATION | ENTERTAINMENT | EDUCATION | RELIGIOUS

INDUSTRY | SERVICE | STORAGE | PARKING | PEDESTRIAN | VEHICULAR | LAND COVERAGE

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SUB-STRUCTURE

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STRUCTURAL PLAN

UTILITIES PLAN

FLOOR PLAN

SECTION

ELEVATION SECTION

ELEVATION

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