

170 MILL STREET, GAHANNA, OHIO 43230-3036 614-471-5150 • FAX 614-471-9286

August 8, 2002

Mr. Karl Wetherholt City of Gahanna 200 South Hamilton Road Gahanna, Ohio 43230

COPY

RE:

Impervious Area Determination

Dear Karl:

We are pleased to provide the City of Gahanna with this proposal for the "Computation of Equivalent Residential Unit and Comprehensive Non-Residential Impervious Area Delineation" as discussed in our meeting yesterday with Jerry Isler.

Please note that we have crafted the proposal so that the non-residential accounts will be aggregated from the non-residential parcel information. In this way, the data should be compatible with the City's billing process.

Should you have any questions, please call me.

Sincerely,

EVANS, MECHWART, HAMBLETON & TILTON, INC.

Kim\S. Keefer, PE Project Manager

c.

Derek Mair

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SCOPE OF SERVICES

PHASE 1- THE COMPUTATION OF EQUIVALENT RESIDENTIAL UNIT (ERU) AND COMPREHENSIVE NON-RESIDENTIAL IMPERVIOUS AREA DELINEATION

Project Approach

EMH&T proposes to undertake our efforts in a phased approach to assure the efficient and effective completion of our tasks.

Part 1: Setup Phase (Setup Project Parameters and Production Environment)

During this part, the production environment will be configured (initially), loaded with data, and then customized, as necessary, to carry out the remaining phases of the project.

1. Acquire Updated Information

It is anticipated that the Franklin County Auditor's Appraisal GIS will be the primary resources in this study. Updated information, if available, will be acquired from the respective entity. EMH&T has access to both the vector parcel information as well as the 2000 raster orthophoto information.

For the newer or updated sites that are not covered on the 2000 orthophoto base, EMH&T will use up to 15 development plan sheets in CADD or scanned format. These plans will be identified and supplied by the City for inclusion in this work. The use of the development plans will allow the impervious area delineation in the absence of up-to-date orthophoto information.

2. Prepare Updated Information for Production Environment

The scope of this project is limited to the City of Gahanna. Information and data to be used will be filtered, to the extent possible, to these limits. This will streamline the remaining phases, especially production, since orthophotos can demand excessive resources, even on high-powered workstations.

3. Set up Production Environment

EMH&T proposes to use ArcVIEW© as the production environment.

4. Customize Environment

The production environment will be customized to simplify the production phase tasks as well as to support the analysis and delivery phases. Desired layers for impervious area classification will be defined and configured. The anticipated layers will include:

- Building/Structure
- Sidewalk/Pedestrian
- Parking (paved)
- Parking (unpaved)

Software routines and user interfaces will be developed, as necessary, to assist in all aspects of the production phase, including locating parcels and preparing exhibits displaying the results.

5. Select Parcels for Analysis

A complete collection of the parcels for overall analysis will be developed. This list will take into account all the parameters deemed necessary in preparing a representative sample for the residential development as well as all other commercial/industrial parcels to be included in the study. This list will be prepared in a digital format that will be useful in cycling through all parcels of interest during the production phase.

Part II: Production Phase (Delineate Impervious Features)

1. Display Parcel

Locate the parcel and display appropriate layers including the vector parcel information and raster orthophoto image.

2. Capture Impervious Features

On each specific layer as defined during the setup phase, the operator will digitize the information as it can be obtained from the orthophoto backdrop. Where available, existing planimetric graphics will be captured for use as impervious features graphics. This will be done in place of digitizing, and the captured features will be assigned to the appropriate layer. We will perform random QA/QC checks by comparing our final information with the actual site.

3. Prepare Parcel Exhibit

Each non-residential parcel will have an exhibit prepared. This will be used firstly as a product for quality assurance steps that EMH&T will implement. The exhibit will include the relevant GIS information loaded as well as the impervious area information digitized. The exhibits will be produced in color.

Part III: Analysis Phase (Tabulate and Summarize Parcel Characteristics)

During this phase, the parcel information will be overlaid and intersected with the digitized impervious information to summarize the total acreage, by category, of each type of impervious area. The setup phase and production phase will be configured so as to provide as much flexibility as possible in the definition of analyses during this phase.

Part IV: Delivery (Deliver Updated Information)

EMH&T will deliver both hardcopy exhibits and specific components of the production environment. This will include, but not be limited to the digitized impervious boundary information and the parcel listing. The City has expressed that all information be prepared and delivered in state plane coordinates, EMH&T will ensure that happens.

The deliverables will be:

- A. Calculations for the sample of 300 residential (single family and duplex only) properties.

 A summary tabulation and worksheet showing ERU calculation will be provided.

 These items will be delivered within three (3) weeks of the Notice to Proceed.
- B. Exhibits and calculations for approximately 660 non-residential accounts. A summary tabulation and worksheet showing ERU calculation will be provided. One copy of these items will be delivered within six (6) months of the Notice to Proceed. A sample exhibit is attached to this document.

City's Obligations

For the purpose of this proposal, it is assumed that the City of Gahanna will:

- a) support the identification of all non-residential properties to be considered by the consultant;
- b) provide the information for all non-residential properties added/modified since orthophoto coverage;
- c) provide timely responses to questions and requests for information; and,
- d) work closely with the consultant in the development of the format of the presentation of the final work products.

Proposed Fee

EMH&T will determine the impervious area and total parcel area, completing the efforts noted in the Project Approach, for 300 residential properties, selected at random, but evenly distributed throughout the City. We will complete similar efforts for all 660 (±) non-residential accounts (should the number of non-residential accounts exceed 660, we reserve the right to request additional funds to complete the work). We will provide deliverables as noted within this proposal.

We propose to provide the services described herein, and all associated reimbursable costs, on an hourly basis, for a fee not exceed \$82,400 (eighty two thousand and four hundred dollars and no cents) without prior written authorization from the City. Invoices will be submitted monthly based on progress of the work and are payable on receipt.

We are prepared to begin the work immediately upon receipt of the Notice to Proceed.