



City of Las Cruces
Federal Emergency Management Agency
Cooperating Technical Community
Mapping Activity Statement

Agreement #001- Refinement of Approximate Zone A Boundaries

In accordance with the Cooperating Technical Community (CTC) Memorandum of Agreement dated May 17, 2000 between the City of Las Cruces and the Federal Emergency Management Agency (FEMA), Agreement #001 is as follows:

1. **Objective and Scope:** The objective of this Mapping Activity is to refine and/or establish approximate Zone A flood zone boundaries in City of Las Cruces. Analyses will be of the 1% annual chance flood representing existing conditions and will encompass approximately 0.40 square miles of drainage area and 0.15 linear miles of flooding including the following flooding sources: at Second Street and Parker Road and at Salano Drive and Madrid Avenue.

2. **Period of Performance:**

{For Locally Funded Agreements} This Mapping Activity will begin on November 1, 2000 and end no later than November 1, 2001. This Mapping Activity may be terminated at the option of FEMA or City of Las Cruces in accordance with the provisions of the May 17, 2000 CTC Memorandum of Agreement.

{For FEMA Funded Agreements} The period of performance will be in accordance with Agreement Article II.

3. **Funding/Cost-Sharing:**

FEMA:	\$
City of Las Cruces:	\$ _____
Total	\$

4. **Standards:** The following standards and documents are relevant to this Mapping Activity:

- 1% annual chance (100-year) water surface elevations for approximate Zone A floodplain mapping will be determined using analyses consistent with the methods detailed in FEMA 265, *Managing Floodplain Development in Approximate Zone A Areas* (April 1995) and Chapter 6 of FEMA 37, *Guidelines and Specifications for Study Contractors* (January 1995). (FEMA 37 and FEMA 265 are available at FEMA's web site at http://www.fema.gov/mit/tsd/EN_reg.htm) City of Las Cruces may expand on the approaches for analyzing Zone A areas outlined in FEMA 37 and FEMA 265 and/or develop new approaches. Such approaches should be coordinated with the FEMA Project Officer prior to commencement of analysis and mapping.
- Computer models used for hydrologic and/or hydraulic analyses will meet the requirements of 44 CFR 65.6(a)(6) and be listed on FEMA's *Numerical Models Accepted by FEMA for NFIP Usage* (http://www.fema.gov/mit/tsd/EN_modl.htm).

July 9, 1999

Refinement of Approximate Zone A Boundaries

- Topographic mapping used to delineate the Zone A floodplain boundaries will be of adequate scale and topographic definition to provide reasonable accuracy. Planimetric features will be compatible with the base map (with respect to horizontal accuracy) to be used by FEMA for Digital FIRM production. Topographic mapping taken from aerial photogrammetry or surveys will comply with the requirements of Appendix 4 of FEMA 37. The selection of the topographic mapping source to be used will be coordinated with the FEMA Project Officer prior to analysis and mapping.
- For areas depicted as Zone A on the effective FIRM that have been altered by the placement of earthen fill, the requirements of 44 CFR 65.5(a) apply.
- Work maps depicting the revised Zone A boundaries will comply with the requirements outlined in Chapter 9 of FEMA 37.
- Digital mapping submissions will comply with the requirements of Chapter 9 and Appendix 7 of FEMA 37.

5. Products: City of Las Cruces shall make the following products available:

- Topographic work maps depicting the revised 1% annual chance approximate floodplain boundaries, designated as Zone A.
- Written summary of the analysis methodologies used.
- All back-up data, including supporting calculations and assumptions for any computed 1% annual chance water surface elevations. If computer models are utilized, input and output should be provided in both hardcopy and digital (CD-ROM, 3.5" diskette, or zip disk) format.
- If automated GIS-based models are applied, then all input data, output data, intermediate data processing products, and GIS data layers.
- Completed form numbers 1 through 5 of *Revisions to National Flood Insurance Program Maps, Application/Certification Forms and Instructions (MT-2)*.

6. Schedule and Milestones:

Milestone 1: Upon completion, products for the first milestone will be provided to the FEMA Project Officer. These include:

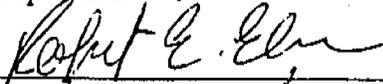
- Annotated copies of effective FIRMs depicting limits of proposed revisions and/or Zone A areas to be added.
- Documentation of the proposed source of topographic data, including: scale; contour interval; source/methodology; date of survey/data collection; vertical and horizontal datums; and comparison of planimetric features with the Digital FIRM base map planned for use by FEMA.
- A written description of the proposed analysis methodology.

Milestone 2 (Final Product): Upon completion, final products will be provided to the FEMA Project Officer. These include:

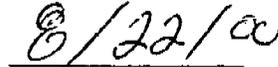
- Topographic work maps depicting 1% annual chance (Zone A) floodplain boundaries.
- All supporting computations, including computer model input and output.

- Completed form numbers 1 through 5 of *Revisions to National Flood Insurance Program Maps, Application/Certification Forms and Instructions* (MT-2).
 - If GIS-based models are applied, all input and output data, intermediate data processing products, and GIS data layers. A Quality Assurance/Quality Control (QA/QC) report documenting the results of the independent review of all computational and data processing procedures were independently reviewed will also be submitted.
7. **Certification:** The following certifications apply to this Mapping Activity (as appropriate):
- Hydrologic and/or hydraulic analyses and data will be certified by a registered professional engineer or licensed land surveyor in accordance with 44 CFR 65.6(f).
 - Topographic information will be certified by a registered professional engineer or licensed land surveyor in accordance with 44 CFR 65.5(c).
 - If fill is to be considered in the mapping to raise land areas above the 1% annual chance flood elevation, certification of the fill will be provided in accordance with 44 CFR 65.5(a)(6) by the community's NFIP permit official, a registered professional engineer, or a licensed land surveyor.
8. **Technical Assistance and Resources:** City of Las Cruces may obtain copies of FEMA-issued Letters of Map Change (LOMCs), archived engineering back-up data, and data collected as part of the Five-Year Mapping Needs Assessment from FEMA's Mapping Coordination Contractor (MCC)/Technical Evaluation Contractor (TEC). The MCC/TEC may be contacted at 1-877 FEMA MAP. General technical and programmatic information, such as FEMA 265, the Quick-2 computer program, and the MT-2 forms can be downloaded from FEMA's Flood Hazard Mapping web site (www.fema.gov/mit/tsd/). Specific technical and programmatic support may be provided through FEMA's MCC/TEC; such assistance should be requested through the FEMA Project Officer specified in Section 12 of this Mapping Activity Statement.
9. **Subcontractors:** "not applicable". Procurement of subcontractors using Federal funds provided as part of this Mapping Activity will comply with the requirements of 44 CFR 13.36.
10. **QA/QC Procedures:** The QA/QC procedures outlined in Chapter 10 of FEMA 37 should be followed during the development of the approximate Zone A analyses and mapping. Analyses and mapping should be independently reviewed for compliance with the standards defined in Section 4 of this Mapping Activity Statement. This independent review will be conducted by Mr. David B Church of the City of Las Cruces.
11. **Reporting:**
Reporting requirements will be in accordance with Agreement Articles V & VI.
12. **Points of Contact:** The FEMA Project Officer is Mr. James Orwatt and the CTC's Project Manager is Mr. Robert E. Ebler, or subsequent personnel of comparable experience who are appointed to fulfill these responsibilities.

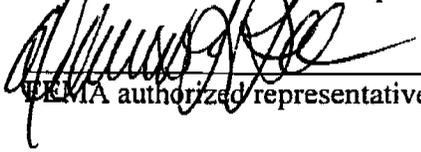
Each party has caused this Mapping Activity Statement to be executed by its duly authorized representatives.



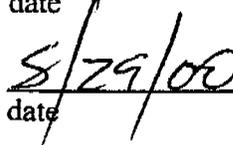
CTC/Partner's authorized representative



date



FEMA authorized representative



date

State representative

date

* In States where statutory and/or regulatory requirements require the State's review and/or approval of new flood hazard data, the State will be a signatory to a community's Mapping Activity Statement.