

©.1993\_DeLorme.Mapping

CLIENT FEMA

PROJ Bloomfield Township, Franklin Branch, MI

REVISION NO

DES BY

SCALE

NOT TO SCALE

DR BY

FILE P:\89-FEMA4138.00\10013\13-Figure 1-Vicinity.ppt

CHK BY

TITLE

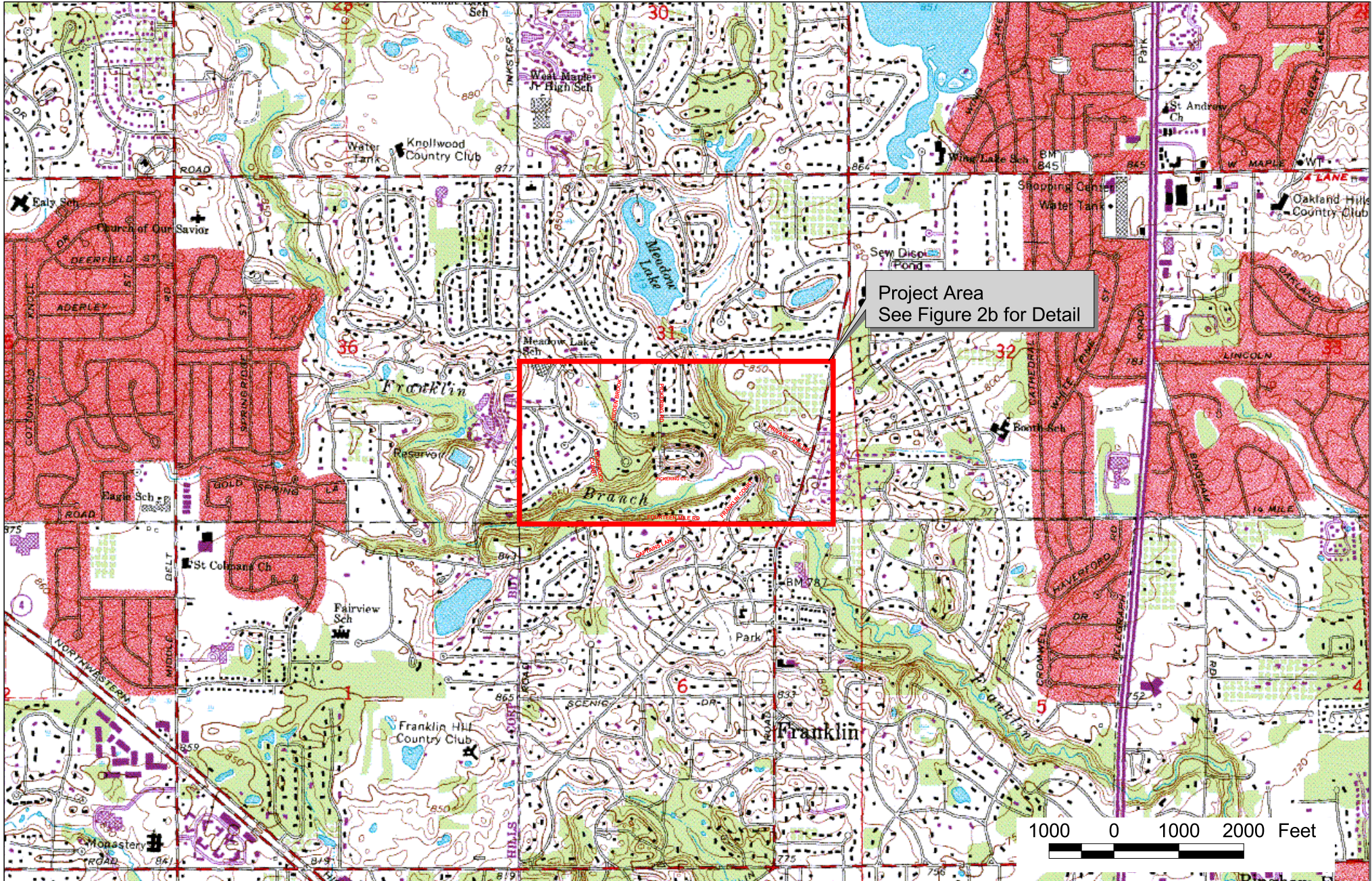
REGIONAL MAP



PROJ NO 89-FEMA4138.00

FIGURE

1



Project Area  
See Figure 2b for Detail



A1346.13 - Bloomfield Township, MI  
USGS Quad: Redford, MI  
Digital Wetland Mapping Information Downloaded  
from Michigan Department of Natural Resources

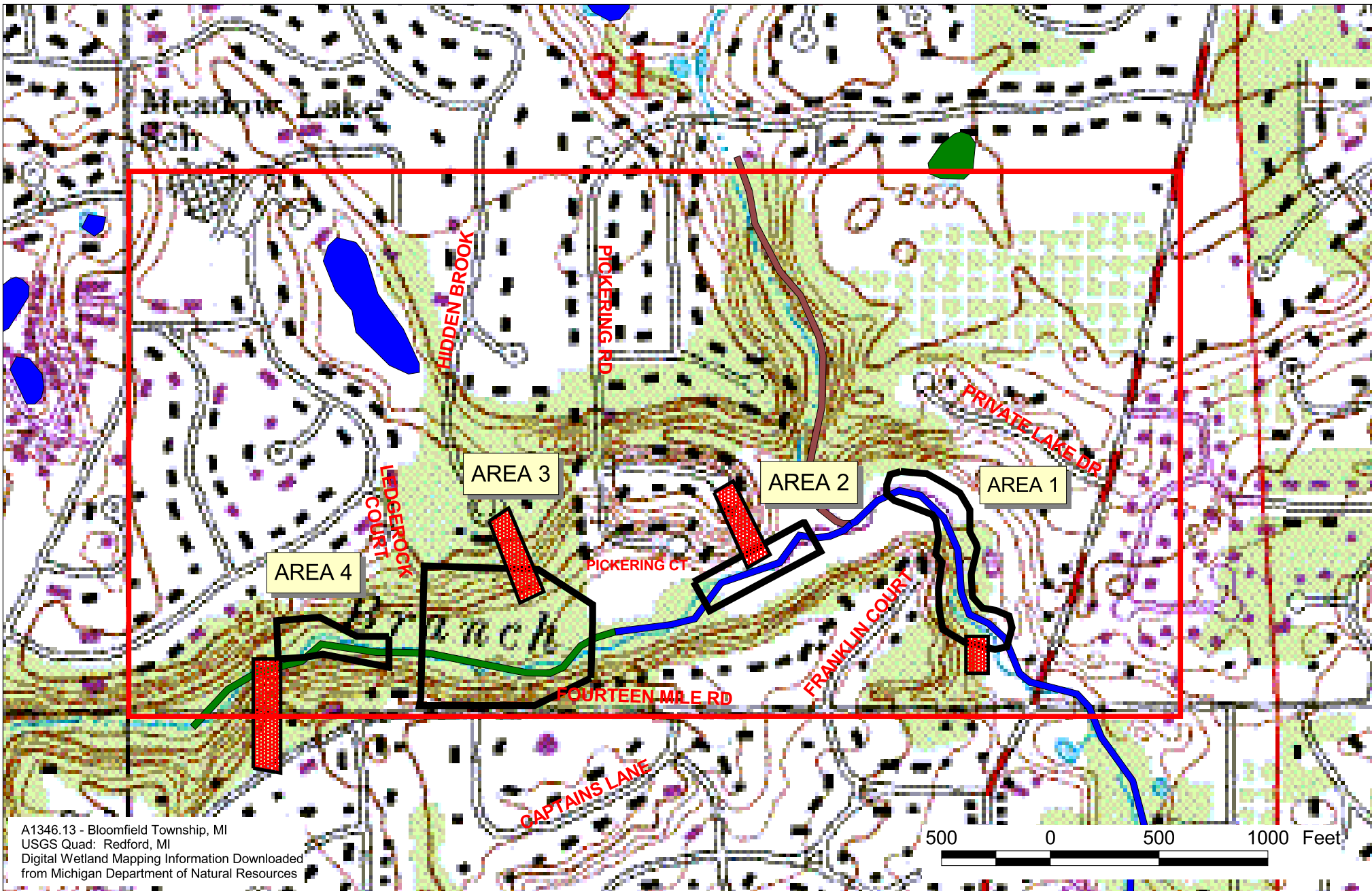


|                                  |   |       |    |
|----------------------------------|---|-------|----|
| CLIENT:                          | FEMA                                      |       |    |
| PROJ:                            | Bloomfield Township, MI - Franklin Branch |       |    |
| REVISION NO:                     | DES BY                                    | SK    |    |
| SCALE:                           | 1" : 2000'                                | DR BY | SK |
| G:\89FEMA4138\PROJECTS\SITE3.APR | CHK BY                                    | TH    |    |

TITLE: Vicinity Map








PROJ NO: 89-FEMA4138  
FIGURE: 2a



A1346.13 - Bloomfield Township, MI  
 USGS Quad: Redford, MI  
 Digital Wetland Mapping Information Downloaded  
 from Michigan Department of Natural Resources

**LEGEND**

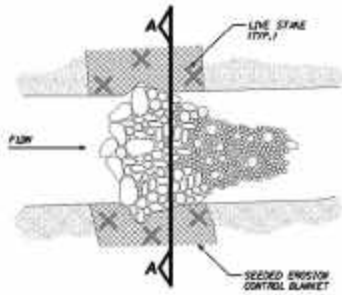
-  Proposed Access
-  Area of Work
- Wetlands**
-  Forested
-  Open Water/Unknown Bottom
-  Scrub-Shrub



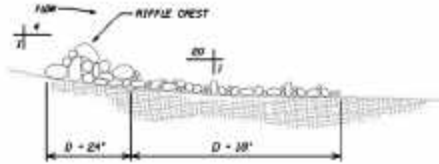
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|---|-----------|
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| PROJ: Bloomfield Township, MI - Franklin Branch |           |
| REVISION NO:                                    | DES BY SK |
| SCALE: 1" : 600'                                | DR BY SK  |
| G:\89FEMA4138\PROJECT\SITE3.APR                 | CHK BY TH |

|   |
|---|
| TITLE: <b>Proposed Project and Wetlands Locations</b> |
| PROJ NO: 89-FEMA4138                                  |
| FIGURE: 2b  |

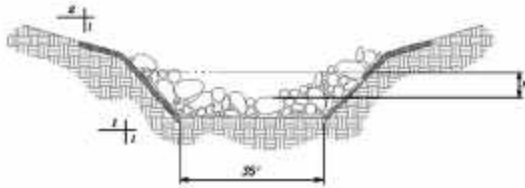




**PLAN VIEW**



**PROFILE VIEW**



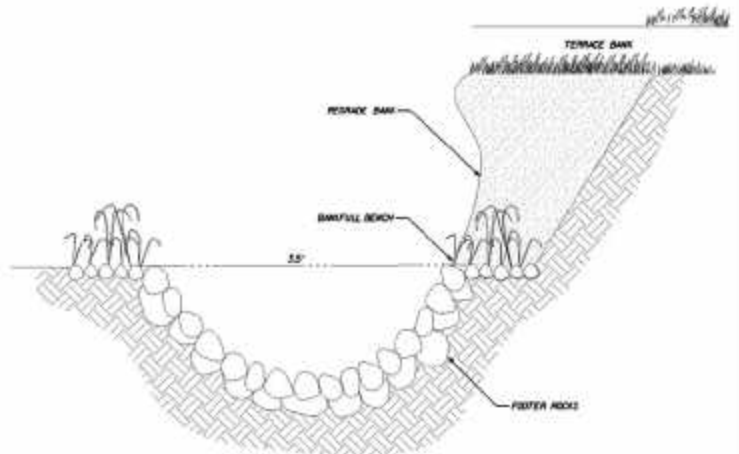
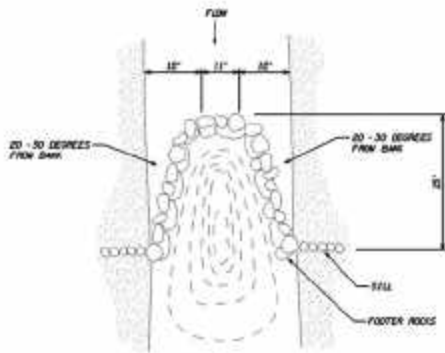
**CROSS SECTION VIEW A-A**

**NOTES**

1. EXCAVATE A 12" TRENCH ALONG THE UPSTREAM EDGE OF THE RIFFLE.
2. USE 18"-24" NATURAL OR EXISTING FIELD STONE ON THE UPSTREAM EDGE OF THE RIFFLE AT A 4:1 SLOPE TO DIRECT FLOW TO THE CENTER OF THE CHANNEL.
3. POSITION STONES IN A V-SHAPE TOWARD AT THE CREST OF THE CHANNEL, AND AROUND THE BANKS WITH SMALLER COBBLE RANGING FROM 4"-10" IN DIAMETER TO PREVENT SUBSEQUENT BANK EROSION.
3. BE SURE TO ALLOW WATER TO SPILL OVER THE RIFFLE STRUCTURE DURING HIGH FLOW PERIODS.
4. TAKE OFF THE RIFFLE DOWNSTREAM AT A 60:1 SLOPE.
5. DIMENSIONS WILL VARY FOR EACH RIFFLE.



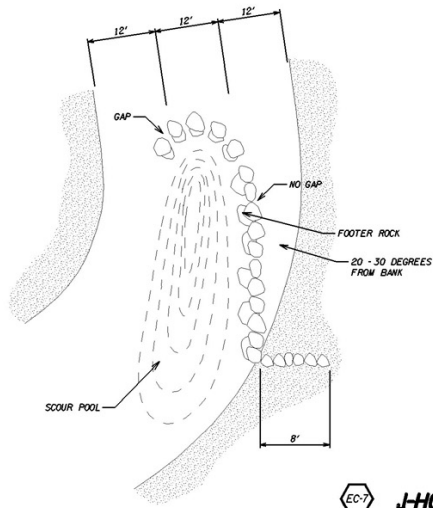
**ARTIFICIAL RIFFLE**  
NO SCALE



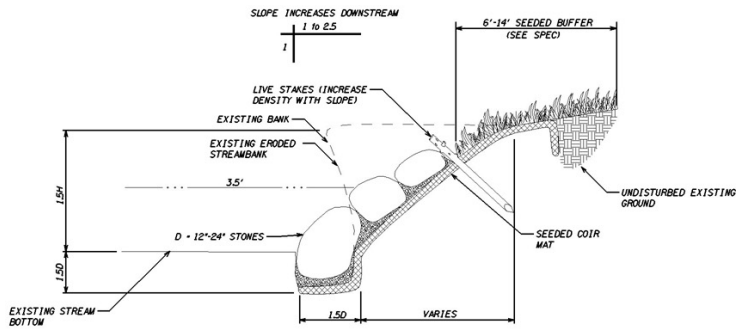
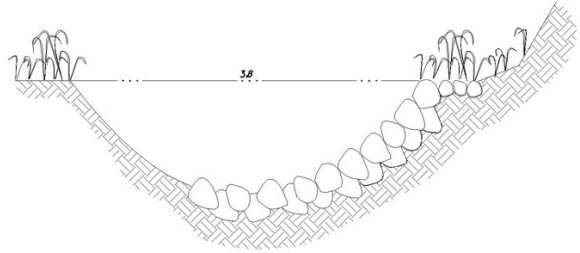
**BOULDER CROSS VANE**  
NO SCALE

|        |   |
|--------|---|
| CLIENT | FEMA  |
| PROJ   | Bloomfield Township, Franklin Branch        |
| FILE   | 89-FEMA4138\REPORTS\Draft\10013\13-FIGURE 3 |

|            |  |
|------------|--|
| TITLE      | <b>SCHEMATICS OF ACTIONS</b><br>Courtesy HRC |
| <b>URS</b> |  |
| PROJ NO    | 89-FEMA4138.00                               |
| FIGURE     | <b>3</b>                                     |



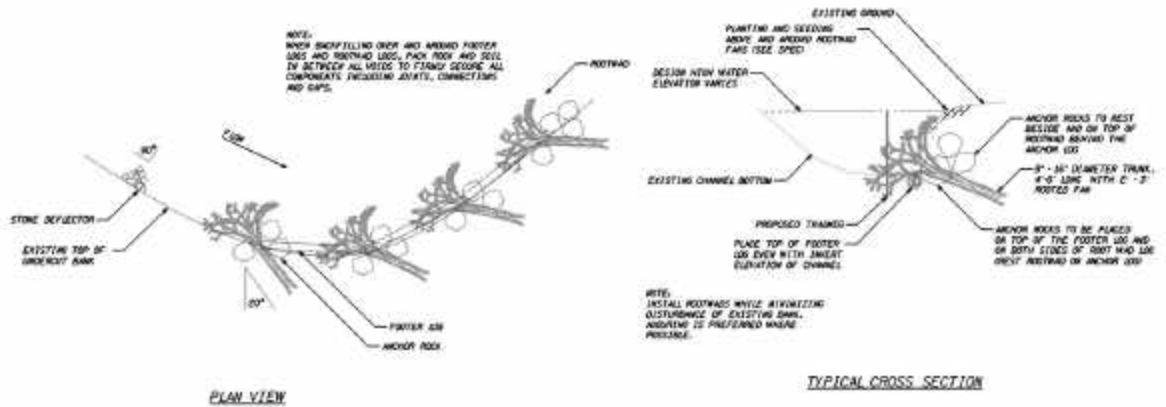
EC-7 **HOOK VANE**  
NO SCALE



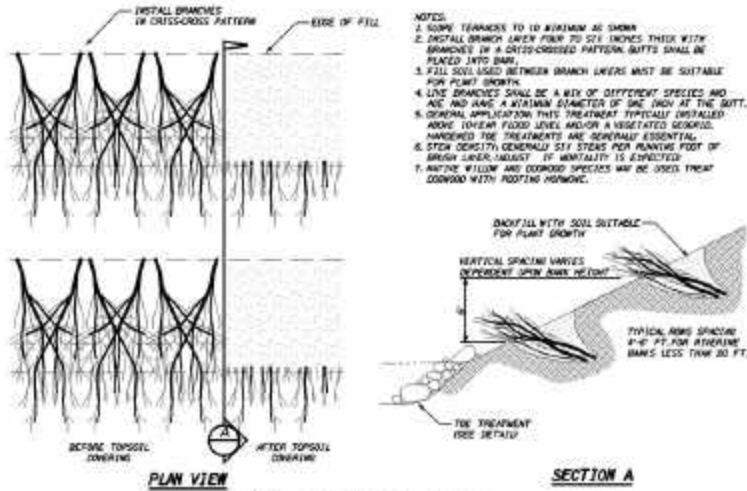
EC-1 **STONE BANK STABILIZATION**  
NO SCALE

|        |  |
|--------|--|
| CLIENT | FEMA   |
| PROJ   | Bloomfield Township, Franklin Branch           |
| FILE   | P:\89-FEMA4138\REPORTS\Draft\10013\13-FIGURE 4 |

|         |  |
|---------|--|
| TITLE   | <b>SCHEMATICS OF ACTIONS</b><br>Courtesy HRC |
|         | <b>URS</b>                                   |
| PROJ NO | 89-FEMA4138.00                               |
| FIGURE  | 4  |



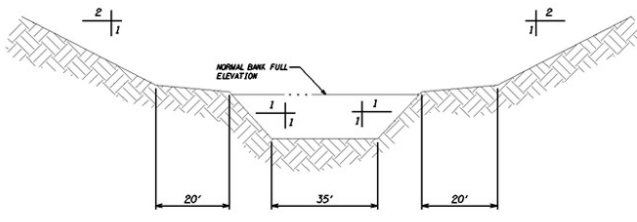
**EC-3 ROOTWAD REVETMENT**  
 1/2" SCALE



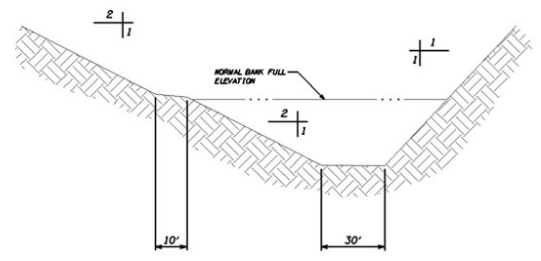
**EC-3 BRUSH MATTRESS**  
 1/2" SCALE

|        |   |
|--------|---|
| CLIENT | FEMA  |
| PROJ   | Bloomfield Township, Franklin Branch                  |
| FILE   | P:\89-FEMA4138.00\REPOTRS\DRAFT\10013\13-Figure 5.ppt |

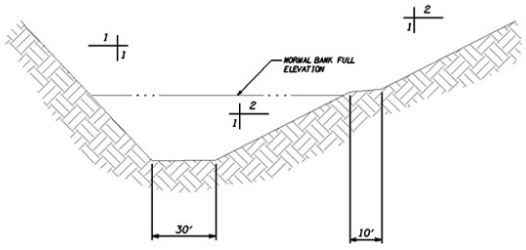
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|--------|--|
| TITLE  | <b>SCHEMATICS OF ACTIONS</b><br>Courtesy HRC |
| FIGURE | <b>URS</b>                                   |
|        | PROJ N089-FEMA4138.00<br>5                   |



CS-30 **GRADE SECTION A**  
LOOKING DOWNSTREAM



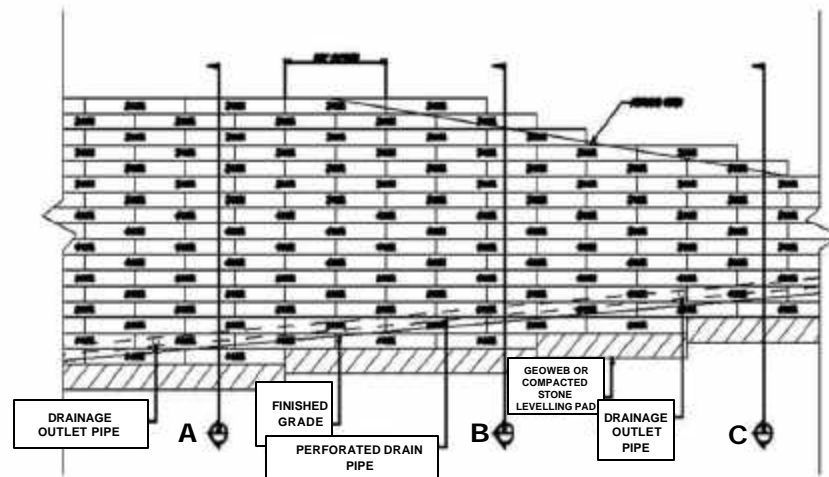
CS-30 **GRADE SECTION B**  
LOOKING DOWNSTREAM



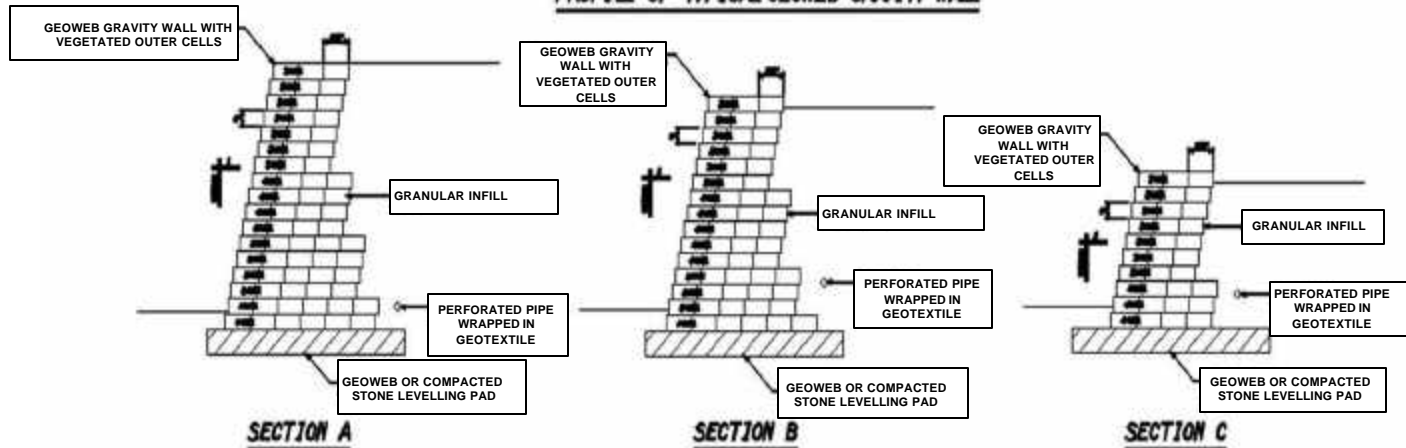
CS-30 **GRADE SECTION C**  
LOOKING DOWNSTREAM

**TYPICAL CHANNEL SECTIONS**  
NO SCALE

|  |  |                       |
|--|--|-----------------------|
| CLIENT FEMA  | TITLE <b>SCHEMATICS OF ACTIONS</b><br>Courtesy HRC |                       |
| PROJ Bloomfield Township, Franklin Branch                  | <b>URS</b>   | PROJ N089-FEMA4138.00 |
| FILE P:\89-FEMA4138.00\REPOTRS\DRAFT\10013\13-Figure 6.ppt |  | FIGURE <b>6</b>       |



**PROFILE OF TYPICAL GEOWEB GRAVITY WALL**



**GEOWEB RETAINING WALL**  
IN SCALE

|        |   |
|--------|---|
| CLIENT | FEMA  |
| PROJ   | Bloomfield Township, Franklin Branch                  |
| FILE   | P:\89-FEMA4138.00\REPORTS\DRAFT\10013\13-Figure 7.ppt |

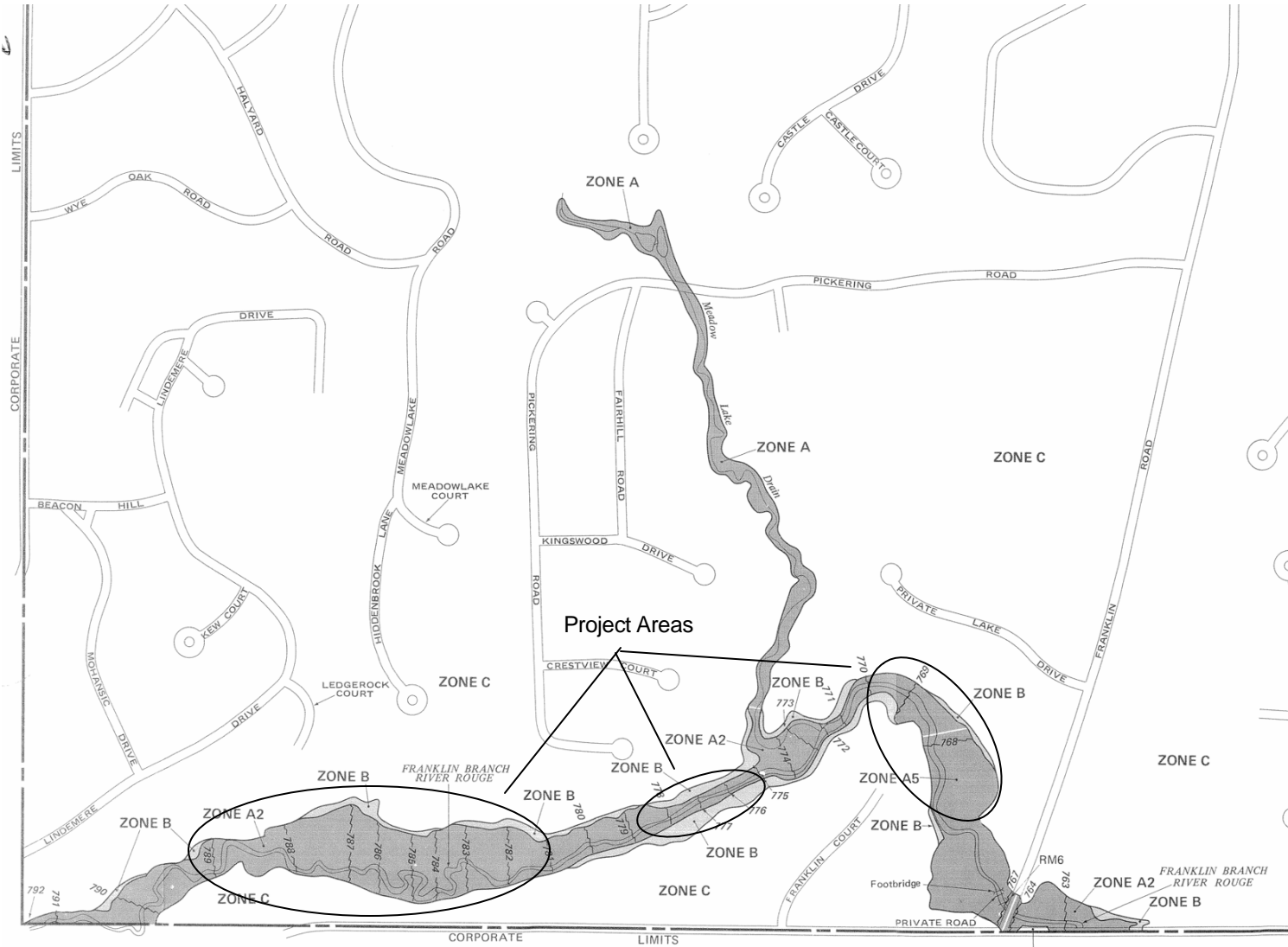
|       |  |
|-------|--|
| TITLE | <b>SCHEMATICS OF ACTIONS</b><br>Courtesy HRC |
|       | <b>URS</b>                                   |
|       | PROJ NO 89-FEMA4138.00                       |
|       | FIGURE <b>7</b>                              |





Source: USDA, 1982. Soil Survey of Oakland County, MI.

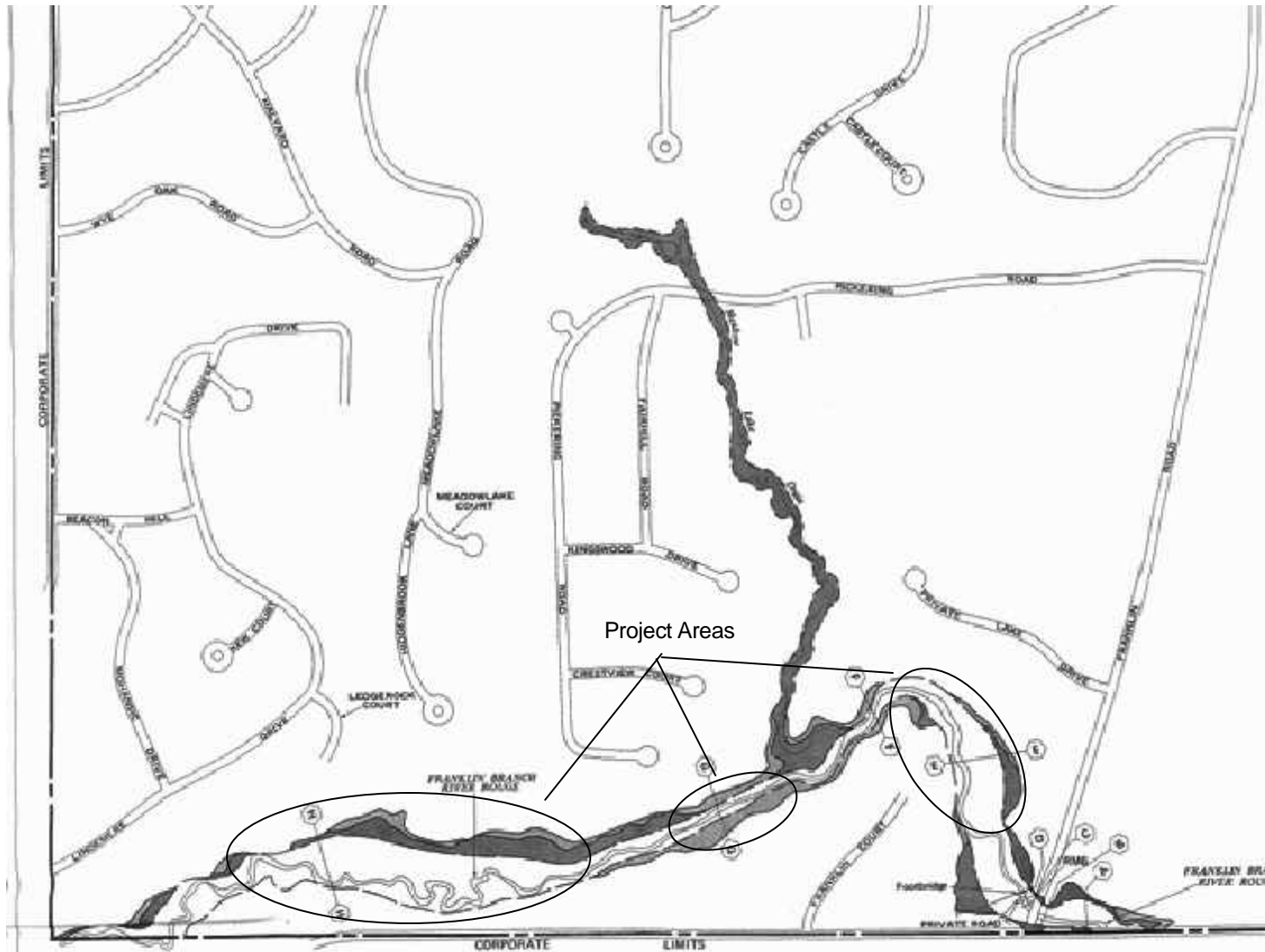
|  |                           |                       |
|--|---------------------------|-----------------------|
| CLIENT FEMA  | TITLE<br><b>SOILS MAP</b> |                       |
| PROJ<br>Bloomfield Township, Franklin Branch               | <b>URS</b>                | PROJ NO89-FEMA4138.00 |
| FILE P:\89-FEMA4138.00\REPORTS\DRAFT\10013\13-Figure 8.ppt |                           | FIGURE<br><b>8</b>    |



COMMUNITY PANEL #260169 0013B  
EFFECTIVE: NOVEMBER 19, 1987

|             |   |        |    |         |
|-------------|---|--------|----|---------|
| CLIENT      | FEMA                                      |        |    |         |
| PROJ        | Bloomfield Township, MI – Franklin Branch |        |    |         |
| REVISION NO | DES BY                                    |        |    |         |
| SCALE       | NOT TO SCALE                              | DR BY  | DK | 7-24-02 |
| FILE        | 13-Figure 9A.ppt                          | CHK BY | TH | 7-24-02 |

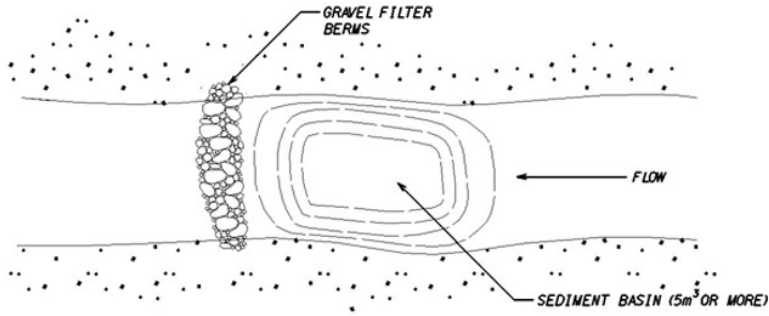
|   |                          |         |             |
|---|--------------------------|---------|-------------|
| TITLE   | FLOOD INSURANCE RATE MAP |         |             |
|  |                          | PROJ NO | 89-FEMA4138 |
|   |                          | FIGURE  | 9A          |



COMMUNITY PANEL #260169 0013  
EFFECTIVE: JANUARY 6, 1983

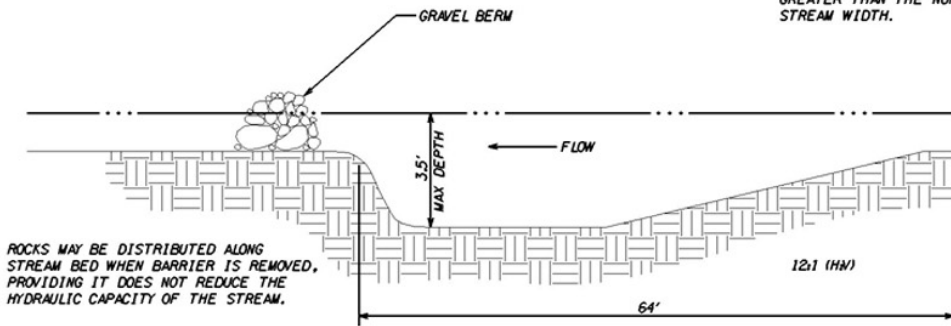
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| CLIENT      | FEMA                                      |        |    |         |
| PROJ        | Bloomfield Township, MI – Franklin Branch |        |    |         |
| REVISION NO | DES BY                                    |        |    |         |
| SCALE       | NOT TO SCALE                              | DR BY  | DK | 1-17-03 |
| FILE        | 13-Figure 9B.ppt                          | CHK BY | RT | 1-17-03 |

|         |  |  |
|---------|--|--|
| TITLE   | <b>FLOOD BOUNDARY AND FLOODWAY MAP</b> |  |
|         | <b>URS</b>                             |  |
| PROJ NO | 89-FEMA4138                            |  |
| FIGURE  | <b>9B</b>                              |  |



**PLAN VIEW**

WIDTH OF BASIN SHOULD NOT EXTEND BEYOND THE NORMAL STREAM BANKS. MINIMUM LENGTH OF BASIN SHALL BE TWO TIMES GREATER THAN THE NORMAL STREAM WIDTH.



**PROFILE VIEW**

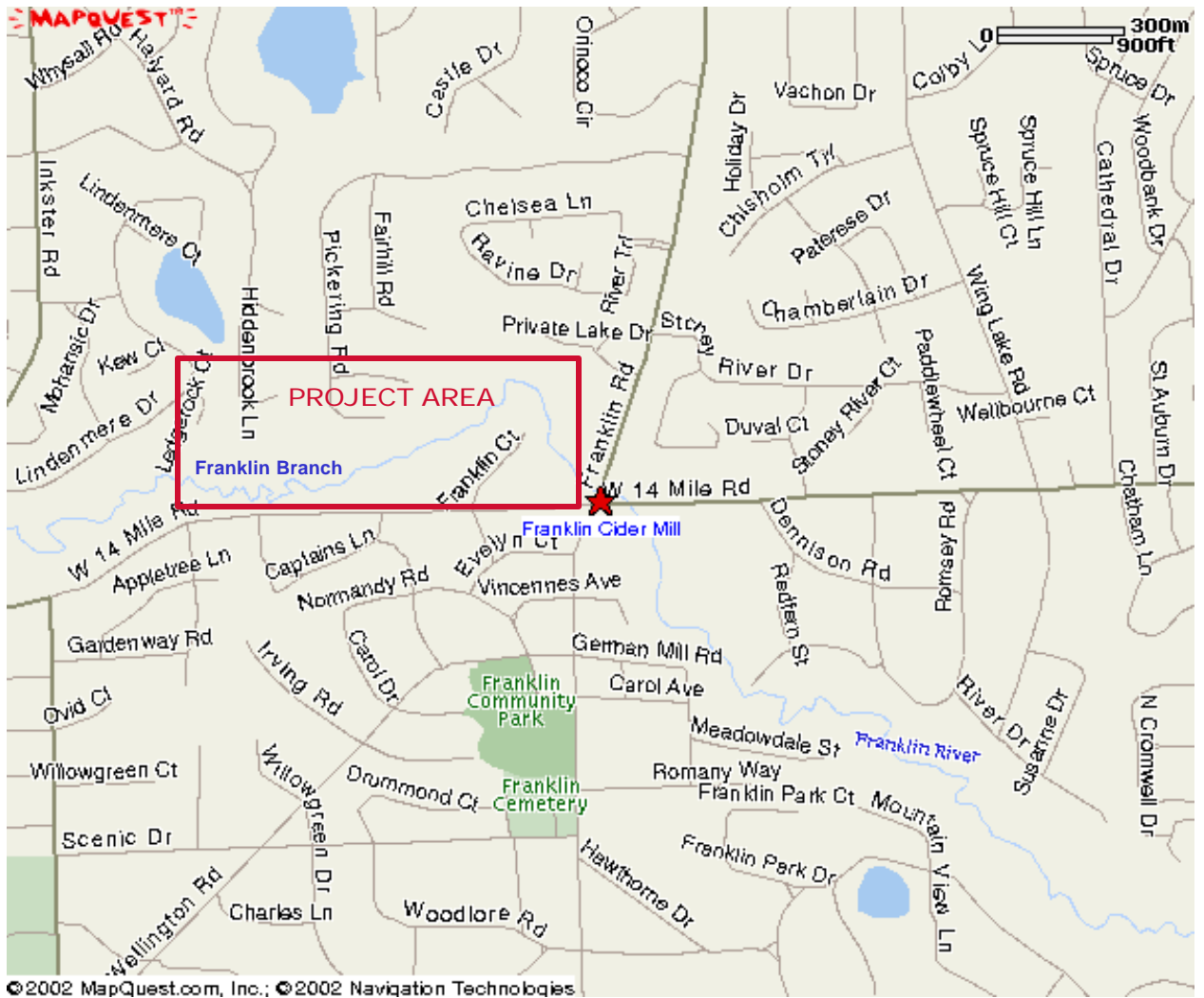


**INSTREAM SEDIMENT TRAP**

NO SCALE

|        |   |
|--------|---|
| CLIENT | FEMA  |
| PROJ   | Bloomfield Township, Franklin Branch            |
| FILE   | P:\89-FEMA4138\REPORTS\Draft\10013\13-FIGURE 10 |

|       |                                       |                       |
|-------|---------------------------------------|-----------------------|
| TITLE | SCHEMATICS OF ACTIONS<br>Courtesy HRC |                       |
|       | <b>URS</b>                            | PROJ N089-FEMA4138.00 |
|       |                                       | FIGURE 10             |



|        |  |
|--------|--|
| CLIENT | FEMA   |
| PROJ   | Bloomfield Township, Franklin Branch                   |
| FILE   | P:\89-FEMA4138.00\REPORTS\DRAFT\10013\13-Figure 11.ppt |

|  |                                 |
|--|---------------------------------|
| TITLE  | Location of Franklin Cider Mill |
|  | PROJ N089-FEMA4138.00           |
|  | FIGURE 11                       |