

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**PROPOSED  
HIGHWAY PLANS**

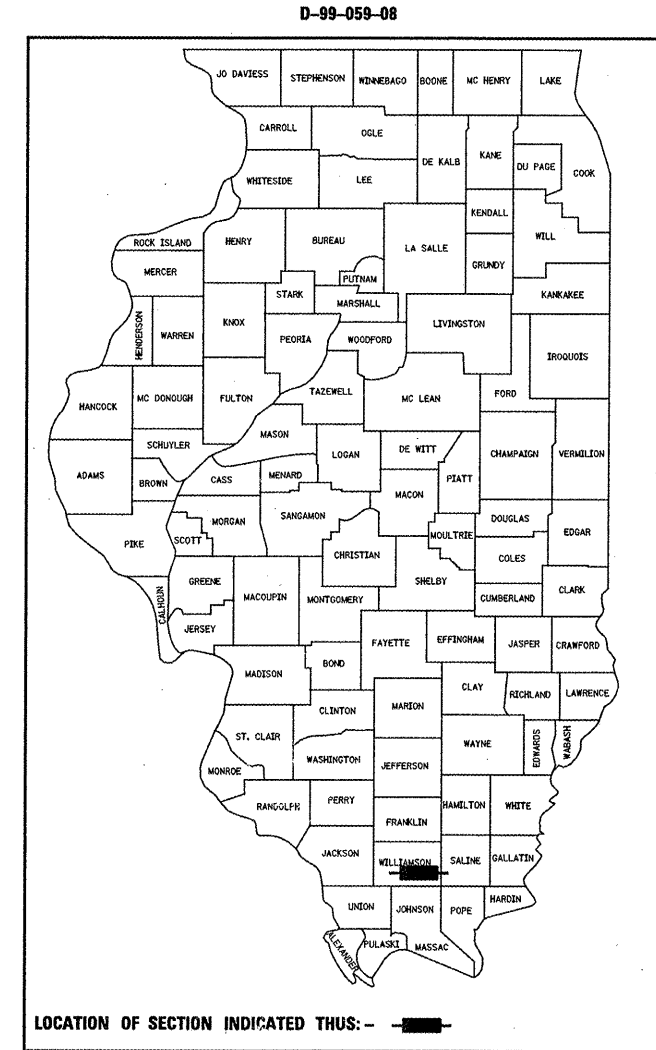
**ROUTE SBI 13B (OLD IL 13)  
SECTION 6B-1  
PROJECT ACF-0013(011)  
STRUCTURE REPLACEMENT OVER BRANCH  
OF LITTLE CRAB ORCHARD CREEK  
WILLIAMSON COUNTY**

C-99-077-08

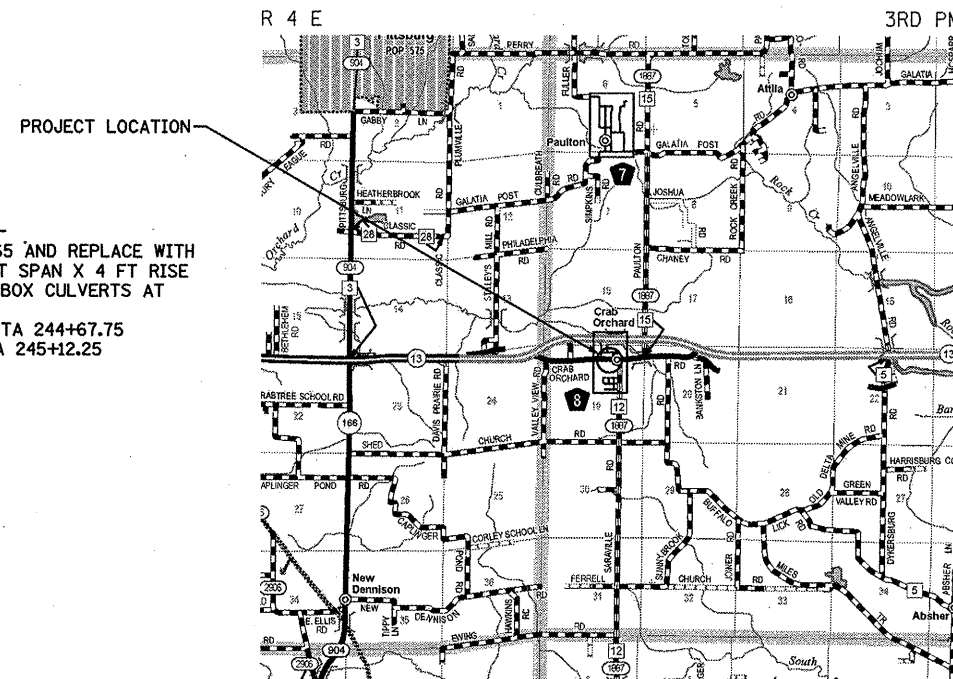
| S.B.I. | SECTION | COUNTY     | TOTAL SHEETS       | SHEET NO. |
|--------|---------|------------|--------------------|-----------|
| 13B    | 6B-1    | WILLIAMSON | 19                 | 1         |
|        |         | ILLINOIS   | CONTRACT NO. 78090 |           |

**INDEX OF SHEETS**

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- 10 RIGHT OF WAY PLAN
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- 15 STANDARDS 9-12, 9-79 AND TYPICAL LIMITS OF POROUS GRANULAR EMBANKMENT
- 16-19 CROSS SECTIONS



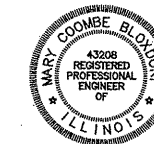
**DESIGN CLASS: LOCAL ROAD, NON-URBAN**  
**ADT: 1470 (2011), 1800 (2031)**  
**11.56% TRUCKS**  
**DESIGN SPEED: 35 MPH**



**AREA LOCATION PLAN**

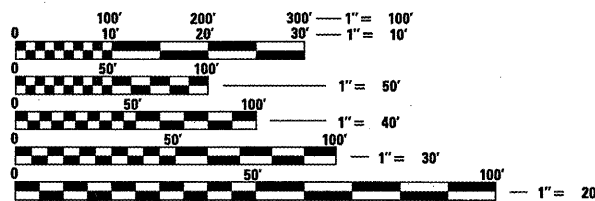


GROSS LENGTH = 44.5 FT. = 0.008 MILE  
NET LENGTH = 44.5 FT. = 0.008 MILE



*Mary Coombe Bloxdorf*  
ILLINOIS PROFESSIONAL NO 43208  
EXPIRES 11-30-13  
DATE: 12-23-11

**CB** Coombe-Bloxdorf P.C.  
-CIVIL ENGINEERS-  
-STRUCTURAL ENGINEERS-  
-LAND SURVEYORS-  
Design Firm License No. 184-002703



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD  
ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT  
CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS  
ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.  
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
1-800-892-0123  
OR 811

PROJECT ENGINEER DAVID PICHE (618) 549-2171  
CO. UNIT ROAD DIST.

CONTRACT NO. 78090

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED *Jan 23rd 2012*  
*John D. Baranzelli*  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

*March 23 2012*  
*John D. Baranzelli P.E.*  
ENGINEER OF DESIGN AND ENVIRONMENT

*March 23 2012*  
*William R. Frey*  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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**HIGHWAY STANDARDS**

000001-06 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS  
 001001-02 AREAS OF REINFORCEMENT BARS  
 001006 DECIMAL OF AN INCH AND OF A FOOT  
 280001-06 TEMPORARY EROSION CONTROL SYSTEMS  
 420001-07 PAVEMENT JOINTS  
 420101-04 24' (7.2 M) JOINTED PCC PAVEMENT  
 482006-03 HMA SHOULDER ADJACENT TO RIGID PAVEMENT  
 542301-03 PRECAST REINFORCED CONCRETE FLARED END SECTION  
 542401-01 METAL END SECTION FOR PIPE CULVERTS  
 666001-01 RIGHT-OF-WAY MARKERS  
 701901-02 TRAFFIC CONTROL DEVICES  
 780001-03 TYPICAL PAVEMENT MARKINGS  
 BLR 21-9 TYPICAL APPLICATIONS OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

**MIX REQUIREMENTS**

|                     |               |
|---------------------|---------------|
| PG                  | HMA SHOULDERS |
| DESIGN AIR VOIDS    | PG 58-22      |
| MIXTURE COMPOSITION | 2% @ N30      |
| FRICTION AGGREGATE  | HMA SHOULDERS |
| RAP % MAX           | N/A           |
|                     | 50%           |

**GENERAL NOTES**

FACTORS USED FOR ESTIMATING PLAN QUANTITIES ARE AS FOLLOWS AND SHALL NOT BE USED FOR THE BASIS OF FINAL QUANTITIES:

|                               |   |
|-------------------------------|---|
| ALL HOT MIX ASPHALT           | 2.392 METRIC TONS/CU. METER (2.016 TONS/CU.YD.)   |
| ALL AGGREGATE                 | 2.43 METRIC TONS/CU. METER (2.05 TONS/CU.YD.)     |
| BITUMINOUS MATERIALS:         |   |
| ON PAVEMENT                   | 0.41 LITERS/SQ. METER (0.09 GAL./SQ.YD.)          |
| INTERMEDIATE LIFTS (FOG COAT) | 0.20 LITERS/SQ. METER (0.04 GAL./SQ.YD.)          |
| ON AGGREGATE SURFACE          | 1.45 LITERS/SQ. METER (0.32 GAL./SQ.YD.)          |
| AGGREGATE (PRIME COAT)        | 0.0016 METRIC TONS/SQ. METER (0.0015 TONS/SQ.YD.) |
| RIPRAP                        | 1.78 METRIC TONS/CU. METER (1.50 TONS/CU.YD.)     |

EARTHWORK COMPACTION SHALL BE TO THE SATISFACTION OF THE ENGINEER.

THE LIMITS OF ROCK AND EARTH SLOPES SHOWN IN THE CROSS SECTIONS ARE APPROXIMATE. THE ACTUAL SLOPE USED SHALL BE DETERMINED BY THE MATERIAL CLASSIFICATION AS DEFINED IN ARTICLE 202.04, AND AS DIRECTED BY THE ENGINEER.

PRIOR TO EXTENDING ANY CULVERT, THE ENTIRE LENGTH OF THE EXISTING CULVERT SHALL BE CLEANED OF ALL EARTH AND DEBRIS BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER. THE COST OF THIS WORK SHALL BE PAID ACCORDING TO ARTICLE 109.04.

ALL OBSTRUCTIONS WHICH ARE WITHIN THE CLEAR ZONE SHOWN ON THE TYPICAL SECTION, AND ARE NOT SHIELDED BY THE PROPOSED GUARDRAIL, SHALL BE REMOVED BETWEEN STATION 244+67.75 AND STATION 245+12.25. TYPICAL OBSTRUCTIONS ARE HEADWALLS, FOUNDATIONS, ETC. WHICH PROJECT 4 IN. OR MORE ABOVE THE GROUNDLINE; AND TREES WHICH WILL MATURE TO A DIAMETER OF 4 IN. OR GREATER.

**COMMITMENTS**

NO COMMITMENTS AS OF 2-3-2012

**UTILITIES**

AMEREN ILLINOIS  
 P.O. BOX 460  
 MARION, IL 62959  
 ATTN: JOE REINHARD

COAL VALLEY WATER  
 19310 CRAB ORCHARD ROAD  
 MARION, IL 62959  
 ATTN: BILL PATE

GALAXY CABELVISION  
 P.O. BOX 728  
 WICKLIFFE, KY 42087  
 ATTN: AUDIE MURPHY

FRONTIER COMMUNICATIONS  
 208 W. UNION  
 MARION, IL 62959  
 ATTN: RICK SHAW

SOUTHEASTERN ILLINOIS ELEC. COOP.  
 P.O. BOX 371  
 ELDORADO, IL 62930  
 ATTN: ERIC JUNG

|              |   |
|--------------|---|
| Prepared By: | <i>Joe Blawie</i><br>DISTRICT STUDIES & PLANS ENGINEER            |
| Examined By: | <i>James Harris Emery</i><br>DISTRICT LAND ACQUISITION ENGINEER   |
| Examined By: | <i>Cassie Nelson</i><br>DISTRICT PROGRAM DEVELOPMENT ENGINEER     |
| Examined By: | <i>Cell</i><br>DISTRICT OPERATIONS ENGINEER                       |
| Examined By: | <i>CS</i><br>DISTRICT PROJECT IMPLEMENTATION ENGINEER             |
| Examined By: | <i>David J. Nelson</i><br>DISTRICT CONSTRUCTION ENGINEER          |
| Examined By: | <i>Bruce P. Pyles</i><br>DISTRICT MATERIALS ENGINEER              |
| Approved By: | <i>Tommy J.</i><br>DEPUTY DIRECTOR OF HIGHWAYS, REGION 5 ENGINEER |
| DATE         | 1/23/2012 20  |

**CB** Coombe-Bloxdorf P.C.  
 -CIVIL ENGINEERS-  
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 -LAND SURVEYORS-  
 Design Firm License No. 184-002703

|                                 |                              |               |           |
|---------------------------------|------------------------------|---------------|-----------|
| FILE NAME =                     | USER NAME = CFC...           | DESIGNED -    | REVISED - |
| ...d978090-shr-002-gennotes.dgn |                              | DRAWN - CFC   | REVISED - |
|                                 | PLOT SCALE = 2.000000 "/ IN. | CHECKED - GLS | REVISED - |
| CB PROJECT NO 08055-15          | PLOT DATE = 12/28/2011       | DATE - / /    | REVISED - |

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**GENERAL NOTES AND HIGHWAY STANDARDS  
 CRAB ORCHARD ROAD / OLD IL 13**

SCALE: SHEET NO. OF SHEETS STA. TO STA.

|                           |         |            |                    |           |
|---------------------------|---------|------------|--------------------|-----------|
| S.B.I.                    | SECTION | COUNTY     | TOTAL SHEETS       | SHEET NO. |
| 13B                       | 6B-1    | WILLIAMSON | 19                 | 2         |
|                           |         |            | CONTRACT NO. 78090 |           |
| ILLINOIS FED. AID PROJECT |         |            |                    |           |

| SUMMARY OF QUANTITIES |   |       | STP FUNDING                      |
|-----------------------|---|-------|----------------------------------|
| CODE NO.              | ITEM  | UNIT  | 80% FEDERAL<br>20% STATE<br>0040 |
| 20200100              | EARTH EXCAVATION                                    | CU YD | 149                              |
| 20201200              | REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL         | CU YD | 42                               |
| 20700110              | POROUS GRANULAR EMBANKMENT                          | TON   | 225                              |
| * 25000210            | SEEDING, CLASS 2A                                   | ACRE  | 0.25                             |
| * 25000350            | SEEDING, CLASS 7                                    | ACRE  | 0.25                             |
| * 25000400            | NITROGEN FERTILIZER NUTRIENT                        | POUND | 2                                |
| * 25000500            | PHOSPHORUS FERTILIZER NUTRIENT                      | POUND | 2                                |
| * 25000600            | POTASSIUM FERTILIZER NUTRIENT                       | POUND | 2                                |
| * 25000700            | AGRICULTURAL GROUND LIMESTONE                       | TON   | 0.1                              |
| * 25100115            | MULCH, METHOD 2                                     | ACRE  | 0.25                             |
| 28000250              | TEMPORARY EROSION CONTROL SEEDING                   | POUND | 25                               |
| * 28000315            | AGGREGATE DITCH CHECKS                              | TON   | 6                                |
| 28000400              | PERIMETER EROSION BARRIER                           | FOOT  | 157                              |
| 28100109              | STONE RIPRAP, CLASS A5                              | SO YD | 109                              |
| 28200200              | FILTER FABRIC                                       | SO YD | 109                              |
| 42000301              | PORTLAND CEMENT CONCRETE PAVEMENT 8" (JOINTED)      | SO YD | 129                              |
| 42001300              | PROTECTIVE COAT                                     | SO YD | 129                              |
| 44000100              | PAVEMENT REMOVAL                                    | SO YD | 77                               |
| 44213200              | SAW CUTS  | FOOT  | 52                               |
| 48203029              | HOT-MIX ASPHALT SHOULDERS, 8"                       | SO YD | 30                               |
| 50100100              | REMOVAL OF EXISTING STRUCTURES                      | EACH  | 1                                |
| 50105220              | PIPE CULVERT REMOVAL                                | FOOT  | 20                               |
| 50800205              | REINFORCEMENT BARS, EPOXY COATED                    | POUND | 19390                            |
| 51500100              | NAME PLATES   | EACH  | 1                                |
| 54003000              | CONCRETE BOX CULVERTS                               | CU YD | 85.9                             |
| 542A0223              | PIPE CULVERTS, CLASS A, TYPE 1 18"                  | FOOT  | 7                                |
| 542D0220              | PIPE CULVERTS, CLASS D, TYPE 1 15"                  | FOOT  | 21                               |
| 542D0223              | PIPE CULVERTS, CLASS D, TYPE 1 18"                  | FOOT  | 5                                |
| 54213663              | PRECAST REINFORCED CONCRETE FLARED END SECTIONS 18" | EACH  | 1                                |
| 54215550              | METAL END SECTIONS 15"                              | EACH  | 1                                |
| 54215553              | METAL END SECTIONS 18"                              | EACH  | 1                                |

\* SPECIALTY ITEM

| SUMMARY OF QUANTITIES |   |        | STP FUNDING                      |
|-----------------------|---|--------|----------------------------------|
| CODE NO.              | ITEM  | UNIT   | 80% FEDERAL<br>20% STATE<br>0040 |
| 54248510              | CONCRETE COLLAR                                 | CU YD  | 1.0                              |
| 63200310              | GUARDRAIL REMOVAL                               | FOOT   | 127                              |
| 67000400              | ENGINEER'S FIELD OFFICE, TYPE A                 | CAL MO | 2                                |
| 67100100              | MOBILIZATION                                    | L SUM  | 1                                |
| 70101830              | TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21 | L SUM  | 1                                |
| 70106800              | CHANGEABLE MESSAGE SIGN                         | CAL MO | 2                                |
| 70300220              | TEMPORARY PAVEMENT MARKING - LINE 4"            | FOOT   | 99                               |
| 70301000              | WORK ZONE PAVEMENT MARKING REMOVAL              | SO FT  | 33                               |
| * 78001110            | PAINT PAVEMENT MARKING - LINE 4"                | FOOT   | 99                               |
| * Z0016702            | DETOUR SIGNING                                  | L SUM  | 1                                |
| * Z0054406            | ROCK FILL - FOUNDATION                          | CU YD  | 42                               |

\* SPECIALTY ITEM

|   |                            |               |           |
|---|----------------------------|---------------|-----------|
| FILE NAME :<br>...v8-rns\d978090-sh-t-003-soq.dgn | USER NAME : CFC..          | DESIGNED -    | REVISED - |
|   | PLOT SCALE = 2.0000' / IN. | DRAWN - CFC   | REVISED - |
| CB PROJECT NO 08055-15                            | PLOT DATE = 1/4/2012       | CHECKED - GLS | REVISED - |
|   |                            | DATE - / /    | REVISED - |

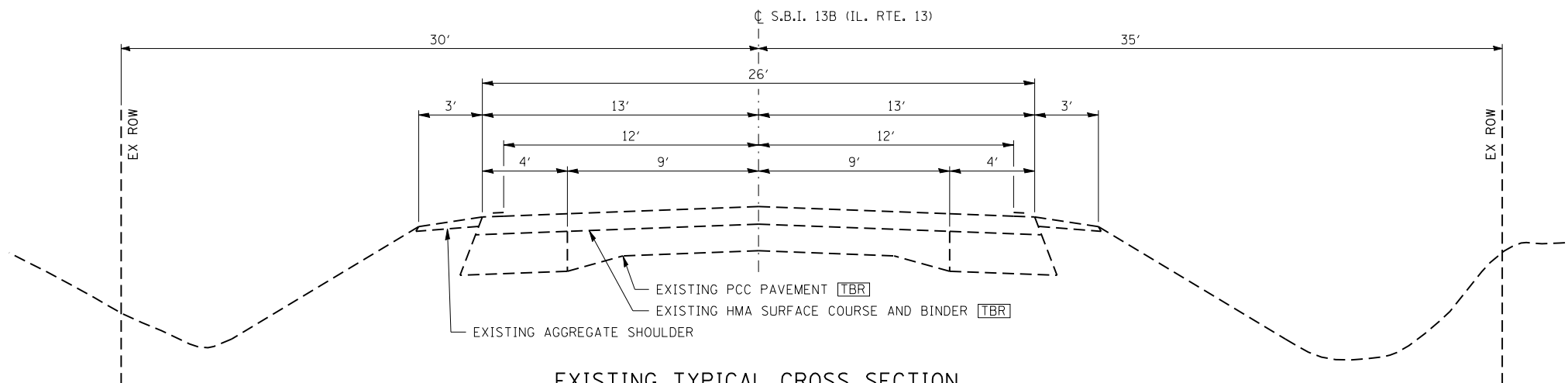
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

|        |                               |    |        |              |
|--------|-------------------------------|----|--------|--------------|
| S.B.I. | SUMMARY OF QUANTITIES         |    |        |              |
|        | CRAB ORCHARD ROAD / OLD IL 13 |    |        |              |
| SCALE: | SHEET NO.                     | OF | SHEETS | STA. TO STA. |

**CB** Coombe-Bloxdorf P.C.  
- CIVIL ENGINEERS -  
- STRUCTURAL ENGINEERS -  
- LAND SURVEYORS -  
Design Firm License No. 184-002703

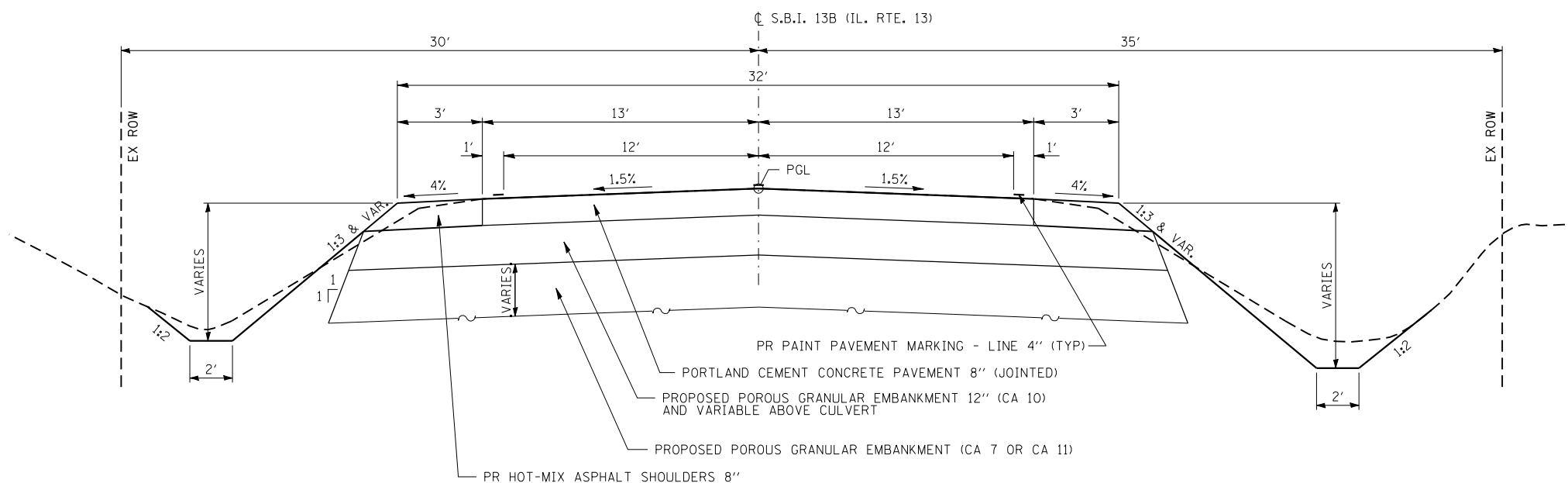
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|---------|--------|--------------|--------------------|
| SECTION | COUNTY | TOTAL SHEETS | SHEET NO.          |
| 13B     | 68-1   | 19           | 3                  |
|         |        | WILLIAMSON   | CONTRACT NO. 78090 |

[ILLINOIS] FED. AID PROJECT



**EXISTING TYPICAL CROSS SECTION**

STA. 244+67.75 TO STA. 244+81  
 BRIDGE OMISSION STA 244+81 TO STA 244+99  
 STA 244+99 TO STA 245+12.25



**PROPOSED TYPICAL CROSS SECTION**

STA. 244+67.75 TO STA. 245+12.25

**CB** Coombe-Bloxdorf P.C.  
 - CIVIL ENGINEERS -  
 - STRUCTURAL ENGINEERS -  
 - LAND SURVEYORS -  
 Design Firm License No. 184-002703

|  |                              |            |           |
|--|------------------------------|------------|-----------|
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|  |                              | DRAWN -    | REVISED - |
|  | PLOT SCALE = 2.000000' / IN. | CHECKED -  | REVISED - |
| CB PROJECT NO 08055-15                           | PLOT DATE = 12/23/2011       | DATE - / / | REVISED - |

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**TYPICAL SECTIONS  
 CRAB ORCHARD ROAD / OLD IL 13**

SCALE: SHEET NO. OF SHEETS STA. TO STA.

| S.B.I.                    | SECTION | COUNTY     | TOTAL SHEETS       | SHEET NO. |
|---------------------------|---------|------------|--------------------|-----------|
| 13B                       | 6B-1    | WILLIAMSON | 19                 | 4         |
|                           |         |            | CONTRACT NO. 78090 |           |
| ILLINOIS FED. AID PROJECT |         |            |                    |           |

| DRAINAGE SCHEDULE                                |                      |                                   |                                   |                                   |                             |                        |                        |                 |
|--|----------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------|------------------------|------------------------|-----------------|
| LOCATION   | 50105220             | 542A0223                          | 542D0220                          | 542D0223                          | 54213663                    | 54215550               | 54215553               | 54248510        |
|  | PIPE CULVERT REMOVAL | PIPE CULVERTS CLASS A, TYPE 1 18" | PIPE CULVERTS CLASS D, TYPE 1 15" | PIPE CULVERTS CLASS D, TYPE 1 18" | PRC FLARED END SECTIONS 18" | METAL END SECTIONS 15" | METAL END SECTIONS 18" | CONCRETE COLLAR |
|  | FOOT                 | FOOT                              | FOOT                              | FOOT                              | EACH                        | EACH                   | EACH                   | CU YD           |
| 23.5' LT STA 244+67 TO 24.0' LT STA 244+73       |                      | 7                                 |                                   |                                   |                             |                        |                        | 0.32            |
| 23.5' LT STA 244+67 TO 24.5' LT STA 244+86       | 20                   |                                   |                                   |                                   |                             |                        |                        |                 |
| 24.0' LT STA 244+73 TO 25.0' LT STA 244+79.75    |                      |                                   |                                   |                                   | 1                           |                        |                        |                 |
| 24.67' LT STA 245+00.25 TO 24.0' LT STA 245+02.5 |                      |                                   |                                   |                                   |                             |                        | 1                      |                 |
| 24.0' LT STA 245+02.5 TO 23.5' LT STA 245+07.5   |                      |                                   |                                   | 5                                 |                             |                        |                        | 0.32            |
| 24.33' RT STA 245+00.25 TO 24.0' RT STA 245+02.5 |                      |                                   |                                   |                                   | 1                           |                        |                        |                 |
| 24.0' RT STA 245+02.5 TO 22.5' RT STA 245+23.5   |                      |                                   | 21                                |                                   |                             |                        |                        | 0.29            |
| TOTALS   | 20                   | 7                                 | 21                                | 5                                 | 1                           | 1                      | 1                      | 1.0             |

| SEEDING                     |                   |                  |                              |                                 |                               |                               |                 |
|-----------------------------|-------------------|------------------|------------------------------|---------------------------------|-------------------------------|-------------------------------|-----------------|
| LOCATIONS                   | 25000210          | 25000350         | 25000400                     | 25000500                        | 25000600                      | 25000700                      | 25100115        |
|                             | SEEDING, CLASS 2A | SEEDING, CLASS 7 | NITROGEN FERTILIZER NUTRIENT | PHOSPHOROUS FERTILIZER NUTRIENT | POTASSIUM FERTILIZER NUTRIENT | AGRICULTURAL GROUND LIMESTONE | MULCH, METHOD 2 |
|                             | ACRE              | ACRE             | POUND                        | POUND                           | POUND                         | TON                           | ACRE            |
| LT STA 244+54 TO STA 245+25 | 0.007             | 0.007            | 1                            | 1                               | 1                             | 0.01                          | 0.007           |
| RT STA 244+54 TO STA 245+25 | 0.011             | 0.011            | 1                            | 1                               | 1                             | 0.02                          | 0.011           |
| TOTALS                      | 0.25              | 0.25             | 2                            | 2                               | 2                             | 0.1                           | 0.25            |

| EARTHWORK                |                  |                  |                      |                     |                      |
|--------------------------|------------------|------------------|----------------------|---------------------|----------------------|
| LOCATION                 | 20200100         | SHRINKAGE FACTOR | AVAILABLE EXCAVATION | EMBANKMENT REQUIRED | FURNISHED EXCAVATION |
|                          | EARTH EXCAVATION |                  |                      |                     |                      |
|                          | CU YD            | CU YD            | CU YD                | CU YD               | CU YD                |
| STA 244+60 TO STA 245+20 | 39               | 30%              | 27                   | 18                  | 0                    |
| EXCAVATION FOR PGE       | 110              |                  | 77                   | 0                   | 0                    |
| TOTALS                   | 149              |                  | 104                  | 18                  | 0                    |

| EROSION CONTROL             |                                   |                        |                           |
|-----------------------------|-----------------------------------|------------------------|---------------------------|
| LOCATION                    | 28000250                          | 28000315               | 28000400                  |
|                             | TEMPORARY EROSION CONTROL SEEDING | AGGREGATE DITCH CHECKS | PERIMETER EROSION BARRIER |
|                             | POUND                             | TON                    | FOOT                      |
| LT STA 244+54 TO STA 245+25 | 12.5                              |                        | 87                        |
| RT STA 244+54 TO STA 245+25 | 12.5                              |                        | 70                        |
| 32' LT STA 244+93           |                                   | 6                      |                           |
| TOTALS                      | 25                                | 6                      | 157                       |

| PAVING                                     |                  |                            |                           |                 |                  |          |
|--|------------------|----------------------------|---------------------------|-----------------|------------------|----------|
| LOCATION                                   | 44000100         | 20700110                   | 42000301                  | 42001300        | 48203029         | 44213200 |
|  | PAVEMENT REMOVAL | POROUS GRANULAR EMBANKMENT | PCC PAVEMENT 8" (JOINTED) | PROTECTIVE COAT | HMA SHOULDERS 8" | SAW CUTS |
|  | SQ YD            | TON                        | SQ YD                     | SQ YD           | SQ YD            | FOOT     |
| STA 244+67.75                              |                  |                            |                           |                 |                  | 26       |
| STA 244+67.75 TO STA 244+81                | 38.3             |                            |                           |                 |                  |          |
| 13-16 FT LT STA 244+67.75 TO STA 245+12.25 |                  |                            |                           |                 | 14.8             |          |
| 13-16 FT RT STA 244+67.75 TO STA 245+12.25 |                  |                            |                           |                 | 14.8             |          |
| STA 244+67.75 TO STA 245+12.25             |                  | 225.4                      | 128.6                     | 128.6           |                  |          |
| STA 244+90 TO STA 245+12.25                | 38.3             |                            |                           |                 |                  |          |
| STA 245+12.25                              |                  |                            |                           |                 |                  | 26       |
| TOTALS                                     | 77               | 225                        | 129                       | 129             | 30               | 26       |

| RIPRAP                            |                        |               |
|-----------------------------------|------------------------|---------------|
| LOCATION                          | 28100109               | 28200200      |
|                                   | STONE RIPRAP, CLASS A5 | FILTER FABRIC |
|                                   | SQ YD                  | SQ YD         |
| LT STA 244+67.75 TO STA 245+12.25 | 57.2                   | 57.2          |
| RT STA 244+67.75 TO STA 245+12.25 | 52.1                   | 52.1          |
| TOTALS                            | 109                    | 109           |

| GUARDRAIL                         |                   |
|-----------------------------------|-------------------|
| LOCATION                          | 63200310          |
|                                   | GUARDRAIL REMOVAL |
|                                   | FOOT              |
| RT STA 244+58.22 TO STA 245+21.55 | 63.33             |
| LT STA 244+58.28 TO STA 245+21.94 | 63.66             |
| TOTALS                            | 127               |


| PAVEMENT MARKING                             |                                      |                                    |                                  |
|--|--------------------------------------|------------------------------------|----------------------------------|
| LOCATION                                     | 70300220                             | 70301000                           | 78001110                         |
|  | TEMPORARY PAVEMENT MARKING - LINE 4" | WORK ZONE PAVEMENT MARKING REMOVAL | PAINT PAVEMENT MARKING - LINE 4" |
|  | FOOT                                 | SQ FT                              | FOOT                             |
| 12 FEET LEFT STA 244+67.75 TO STA 245+12.25  | 44.5                                 | 14.8                               | 44.5                             |
| CENTERLINE STA 244+67.75 TO STA 245+12.25    | 10                                   | 3.3                                | 10                               |
| 12 FEET RIGHT STA 244+67.75 TO STA 245+12.25 | 44.5                                 | 14.8                               | 44.5                             |
| TOTALS                                       | 99                                   | 33                                 | 99                               |

|                                 |                              |               |           |
|---------------------------------|------------------------------|---------------|-----------|
| FILE NAME =                     | USER NAME = CFC..            | DESIGNED -    | REVISED - |
| ...d978090-shr-005-schedule.dgn |                              | DRAWN - CFC   | REVISED - |
|                                 | PLOT SCALE = 2.000000' / IN. | CHECKED - GLS | REVISED - |
| CB PROJECT NO 08055-15          | PLOT DATE = 1/4/2012         | DATE - / /    | REVISED - |

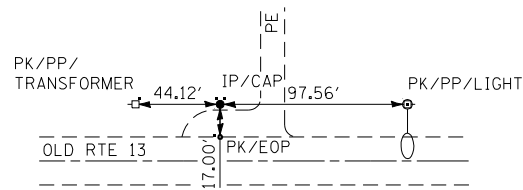
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SCHEDULE OF QUANTITIES  
CRAB ORCHARD ROAD / OLD IL 13**

SCALE: SHEET NO. OF SHEETS STA. TO STA.

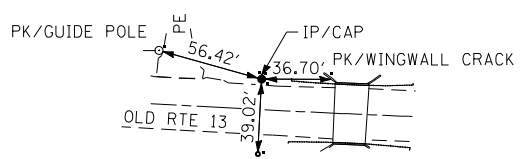

**Coombe-Bloxdorf P.C.**  
 - CIVIL ENGINEERS -  
 - STRUCTURAL ENGINEERS -  
 - LAND SURVEYORS -  
 Design Firm License No. 184-002703

| S.B.I.                    | SECTION | COUNTY     | TOTAL SHEETS       | SHEET NO. |
|---------------------------|---------|------------|--------------------|-----------|
| 13B                       | 6B-1    | WILLIAMSON | 19                 | 5         |
|                           |         |            | CONTRACT NO. 78090 |           |
| ILLINOIS FED. AID PROJECT |         |            |                    |           |



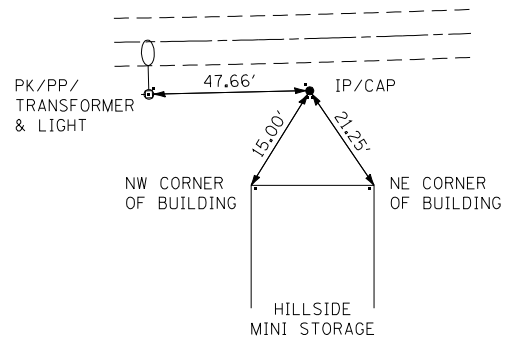
**CONTROL POINT 2803**

IP/CAP  
 STA 235+95.33, 29.62' LT  
 N 387382.9396  
 E 846724.9599  
 EL 497.263



**CONTROL POINT 2804**

IP/CAP  
 STA 244+42.76, 15.87' LT  
 N 387352.1173  
 E 847573.5429  
 EL 481.442



**CONTROL POINT 2805**

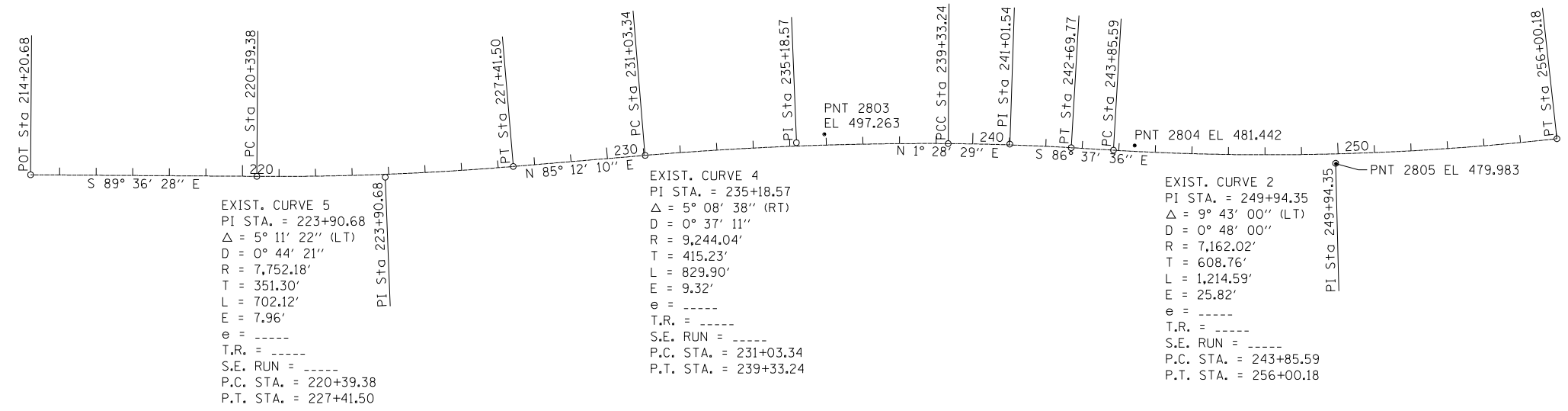
IP/CAP  
 STA 249+93.95, 27.19' RT  
 N 387302.2486  
 E 848124.4547  
 EL 479.983

**BENCHMARK 102**

EL 481.009  
 CHISELED "□" ON THE  
 S.E. CORNER OF SN 100-0065  
 STA 244+70, 18' RT

| ALIGNMENT COORDINATES - OLD IL 13 |           |             |             |
|-----------------------------------|-----------|-------------|-------------|
| OLD IL 13                         | STATION   | N           | E           |
| PT                                | 242+69.77 | 387346.2215 | 847400.0274 |
| PC                                | 243+85.59 | 387339.4061 | 847515.6515 |
| PI                                | 249+94.35 | 387303.5850 | 848123.3519 |
| PT                                | 256+00.18 | 387370.8431 | 848728.3801 |

EXIST. CURVE 3  
 PI STA. = 241+01.54  
 $\Delta = 2^\circ 55' 00''$  (RT)  
 D = 0° 52' 00"  
 R = 6,611.12'  
 T = 168.30'  
 L = 336.53'  
 E = 2.14'  
 e = -----  
 T.R. = -----  
 S.E. RUN = -----  
 P.C. STA. = 239+33.24  
 P.T. STA. = 242+69.77



EXIST. CURVE 5  
 PI STA. = 223+90.68  
 $\Delta = 5^\circ 11' 22''$  (LT)  
 D = 0° 44' 21"  
 R = 7,752.18'  
 T = 351.30'  
 L = 702.12'  
 E = 7.96'  
 e = -----  
 T.R. = -----  
 S.E. RUN = -----  
 P.C. STA. = 220+39.38  
 P.T. STA. = 227+41.50

EXIST. CURVE 4  
 PI STA. = 235+18.57  
 $\Delta = 5^\circ 08' 38''$  (RT)  
 D = 0° 37' 11"  
 R = 9,244.04'  
 T = 415.23'  
 L = 829.90'  
 E = 9.32'  
 e = -----  
 T.R. = -----  
 S.E. RUN = -----  
 P.C. STA. = 231+03.34  
 P.T. STA. = 239+33.24

EXIST. CURVE 2  
 PI STA. = 249+94.35  
 $\Delta = 9^\circ 43' 00''$  (LT)  
 D = 0° 48' 00"  
 R = 7,162.02'  
 T = 608.76'  
 L = 1,214.59'  
 E = 25.82'  
 e = -----  
 T.R. = -----  
 S.E. RUN = -----  
 P.C. STA. = 243+85.59  
 P.T. STA. = 256+00.18

**CB** Coombe-Bloxdorf P.C.  
 - CIVIL ENGINEERS -  
 - STRUCTURAL ENGINEERS -  
 - LAND SURVEYORS -  
 Design Firm License No. 184-002703

|                                  |                        |               |           |
|----------------------------------|------------------------|---------------|-----------|
| FILE NAME =                      | USER NAME = CFC..      | DESIGNED -    | REVISED - |
| ...v8-ns\d978090-sh1-006-0tb.dgn |                        | DRAWN - CFC   | REVISED - |
|                                  |                        | CHECKED - GLS | REVISED - |
| CB PROJECT NO 08055-15           | PLOT DATE = 12/23/2011 | DATE - / /    | REVISED - |

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**ALIGNMENT, TIES AND BENCHMARKS  
 CRAB ORCHARD ROAD / OLD IL 13**

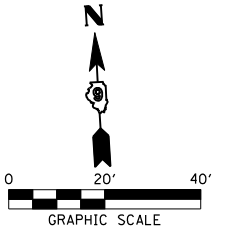
SCALE: SHEET NO. OF SHEETS STA. TO STA.

| S.B.I.                    | SECTION | COUNTY     | TOTAL SHEETS | SHEET NO. |
|---------------------------|---------|------------|--------------|-----------|
| 13B                       | 6B-1    | WILLIAMSON | 19           | 6         |
| CONTRACT NO. 78090        |         |            |              |           |
| ILLINOIS FED. AID PROJECT |         |            |              |           |

PROP. CURVE 3  
 PI STA. = 241+01.54  
 $\Delta = 2^\circ 55' 00''$  (RT)  
 $D = 0^\circ 52' 00''$   
 $R = 6,611.12'$   
 $T = 168.30'$   
 $L = 336.53'$   
 $E = 2.14'$   
 $e = NC$   
 $T.R. = 0$   
 $S.E. RUN = 0$   
 $P.C. STA = 239+33.24$   
 $P.T. STA = 242+69.77$

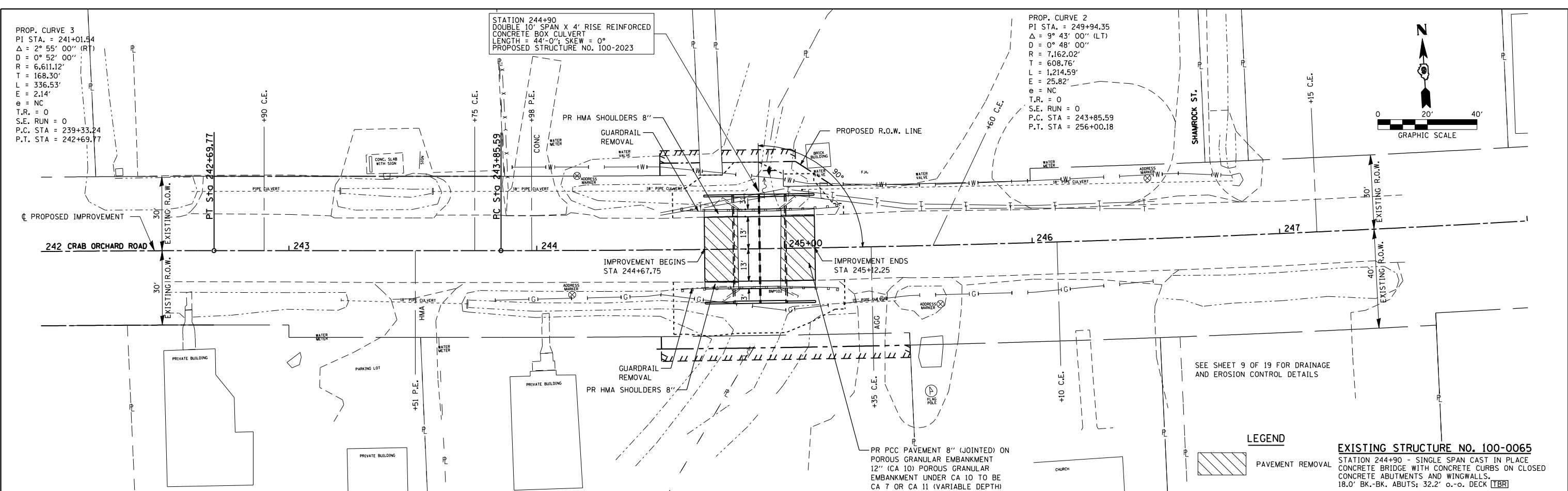
STATION 244+90  
 DOUBLE 10' SPAN X 4' RISE REINFORCED  
 CONCRETE BOX CULVERT  
 LENGTH = 44'-0"; SKEW = 0°  
 PROPOSED STRUCTURE NO. 100-2023

PROP. CURVE 2  
 PI STA. = 249+94.35  
 $\Delta = 9^\circ 43' 00''$  (LT)  
 $D = 0^\circ 48' 00''$   
 $R = 7,162.02'$   
 $T = 608.76'$   
 $L = 1,214.59'$   
 $E = 25.82'$   
 $e = NC$   
 $T.R. = 0$   
 $S.E. RUN = 0$   
 $P.C. STA = 243+85.59$   
 $P.T. STA = 256+00.18$

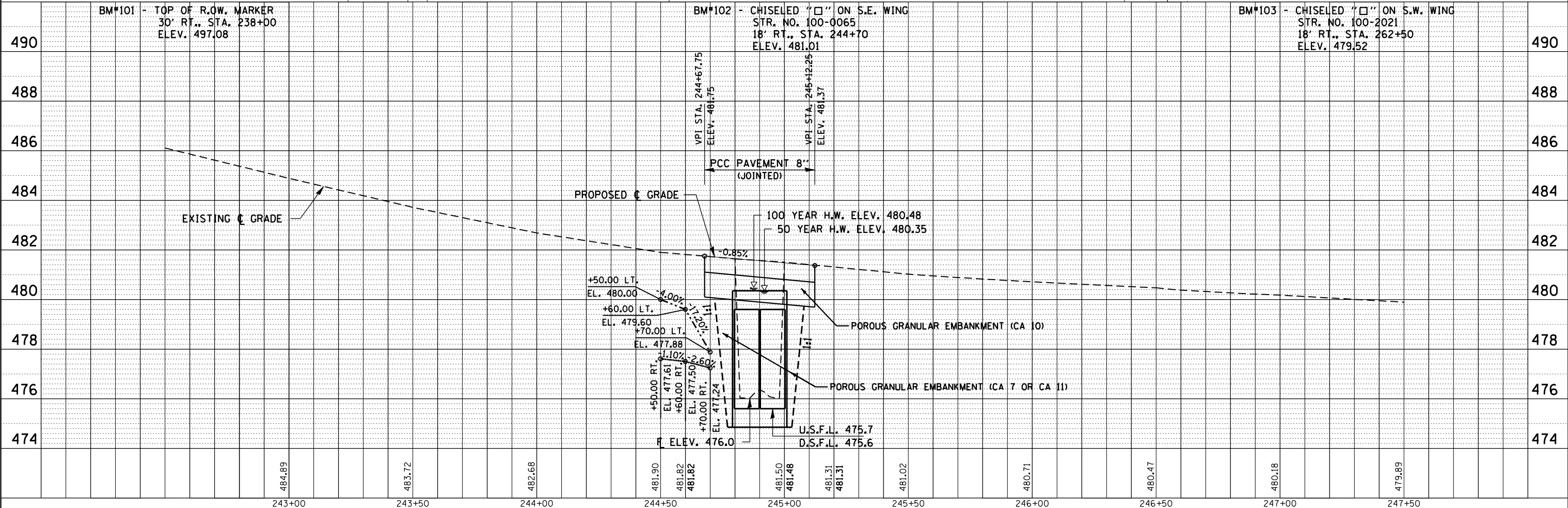


|      |          |      |
|------|----------|------|
| PLAN | SURVEYED | DATE |
|      | PLOTTED  |      |
|      | CHECKED  |      |
|      | AT       |      |
|      | BY       |      |
|      | NO.      |      |

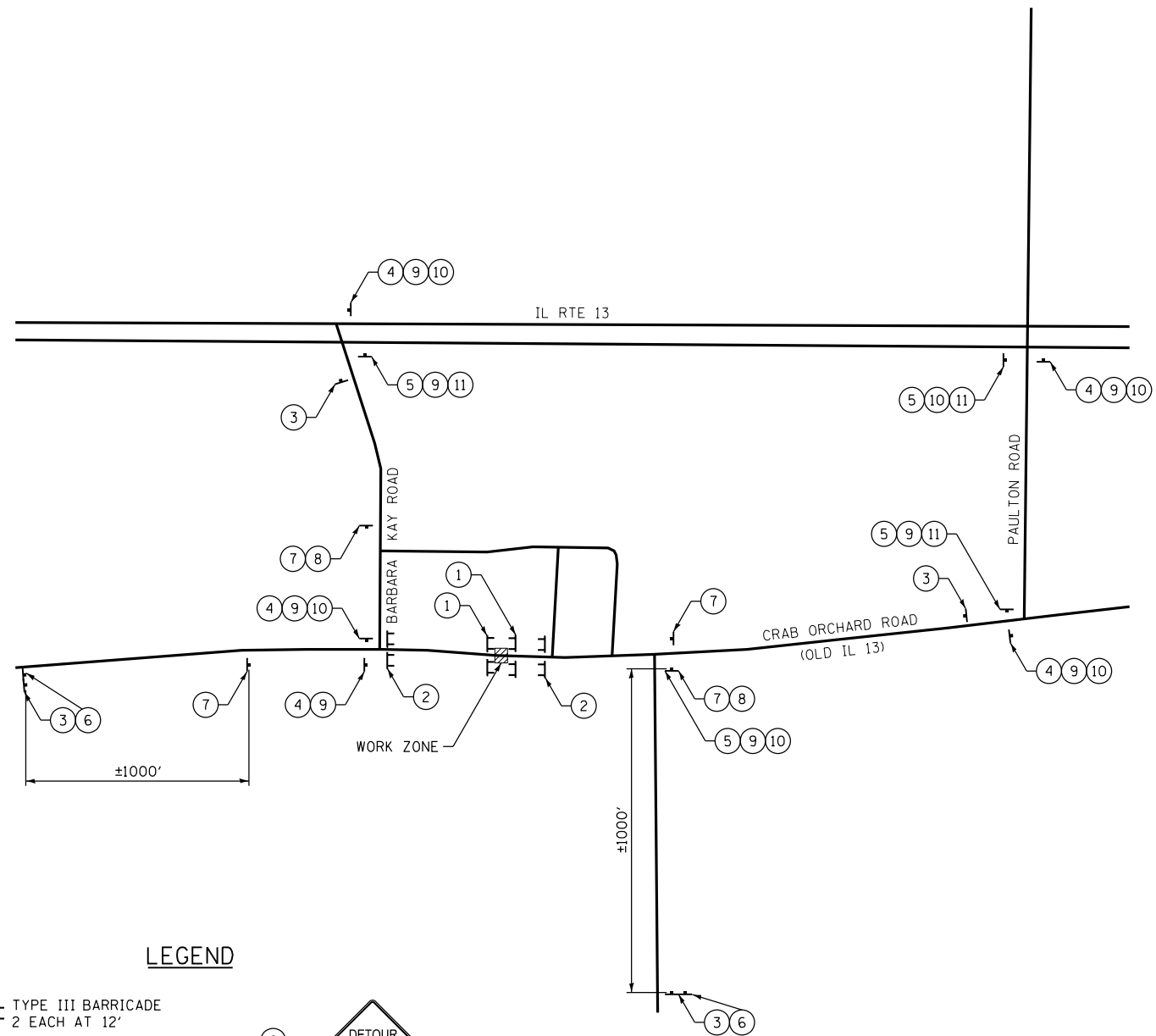
|         |          |      |
|---------|----------|------|
| PROFILE | SURVEYED | DATE |
|         | PLOTTED  |      |
|         | CHECKED  |      |
|         | AT       |      |
|         | BY       |      |
|         | NO.      |      |



**LEGEND**  
 PAVEMENT REMOVAL  
**EXISTING STRUCTURE NO. 100-0065**  
 STATION 244+90 - SINGLE SPAN CAST IN PLACE  
 CONCRETE BRIDGE WITH CONCRETE CURBS ON CLOSED  
 CONCRETE ABUTMENTS AND WINGWALLS.  
 18.0' BK.-BK. ABUTS; 32.2' o.-o. DECK [TBR]



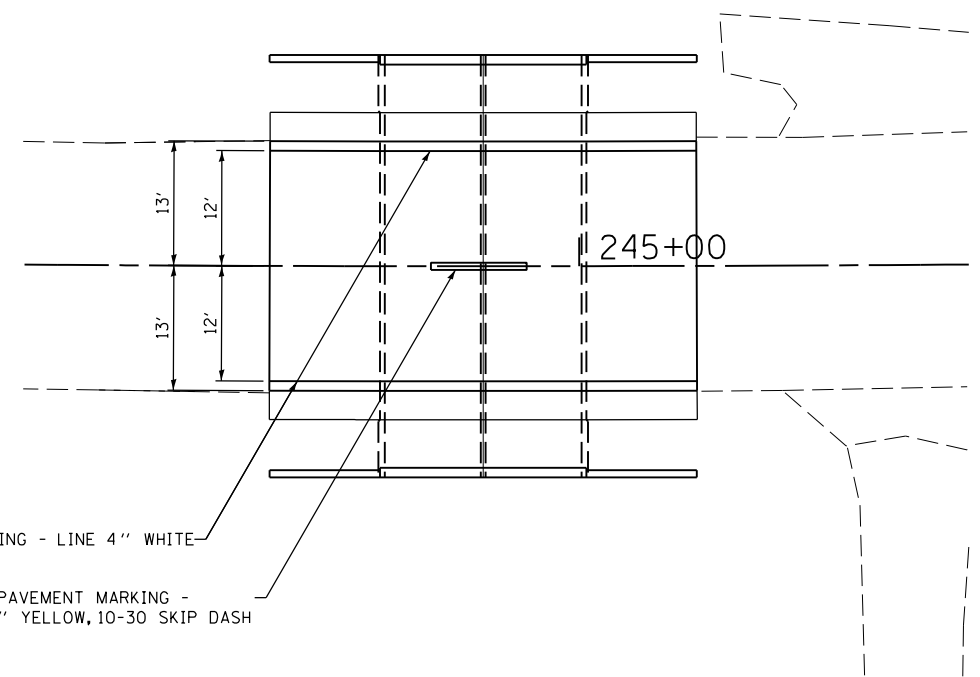
|                               |                    |            |           |   |   |  |  |                           |         |            |              |           |
|-------------------------------|--------------------|------------|-----------|---|---|--|--|---------------------------|---------|------------|--------------|-----------|
| FILE NAME =                   | USER NAME = CFC... | DESIGNED - | REVISED - | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b> | <b>PLAN AND PROFILE<br/>CRAB ORCHARD ROAD / OLD IL 13</b> |  |  | S.B.I.                    | SECTION | COUNTY     | TOTAL SHEETS | SHEET NO. |
| ...d978090-shr-007-plnprf.dgn |                    | DRAWN -    | REVISED - |   |   |  |  | 13B                       | 6B-1    | WILLIAMSON | 19           | 7         |
| PLOT SCALE = 40.0000' / IN.   |                    | CHECKED -  | REVISED - |   |   |  |  | CONTRACT NO. 78090        |         |            |              |           |
| PLOT DATE = 12/23/2011        |                    | DATE - / / | REVISED - |   |   |  |  | ILLINOIS FED. AID PROJECT |         |            |              |           |



**LEGEND**

- ① TYPE III BARRICADE  
2 EACH AT 12'
- ② TYPE III BARRICADE  
2 EACH AT 12'
- ③
- ④
- ⑤
- ⑥
- ⑦
- ⑧
- ⑨
- ⑩
- ⑪

**DETOUR SIGNING & ROUTE**



PAINT PAVEMENT MARKING - LINE 4" WHITE  
 PAINT PAVEMENT MARKING - LINE 4" YELLOW, 10-30 SKIP DASH

**PAVEMENT MARKING PLAN**

|  |                                |               |           |
|--|--------------------------------|---------------|-----------|
| FILE NAME =  | USER NAME = lavenderba         | DESIGNED -    | REVISED - |
| et:\pw\work\p1dot\lavenderba\d0293378\0778090-sht-008-sign_pmk.dgn |                                | DRAWN - CFC   | REVISED - |
| CB PROJECT NO 08055-15   | PLOT SCALE = 20.000000 ' / in. | CHECKED - GLS | REVISED - |
|  | PLOT DATE = 1/23/2012          | DATE - / /    | REVISED - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**DETOUR ROUTE AND PAVEMENT MARKING PLAN  
CRAB ORCHARD ROAD / OLD IL 13**

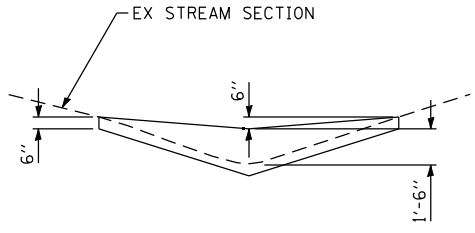
SCALE: SHEET NO. OF SHEETS STA. TO STA.

**CB** Coombe-Bloxdorf P.C.  
 - CIVIL ENGINEERS -  
 - STRUCTURAL ENGINEERS -  
 - LAND SURVEYORS -  
 Design Firm License No. 184-002703

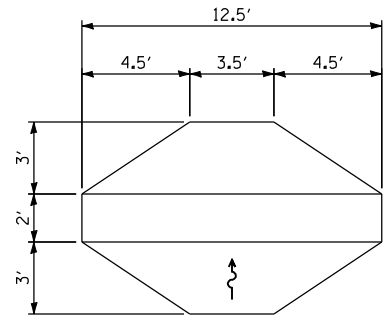
| S.B.I. | SECTION | COUNTY     | TOTAL SHEETS | SHEET NO. |
|--------|---------|------------|--------------|-----------|
| 13B    | 6B-1    | WILLIAMSON | 19           | 8         |

CONTRACT NO. 78090  
 ILLINOIS FED. AID PROJECT



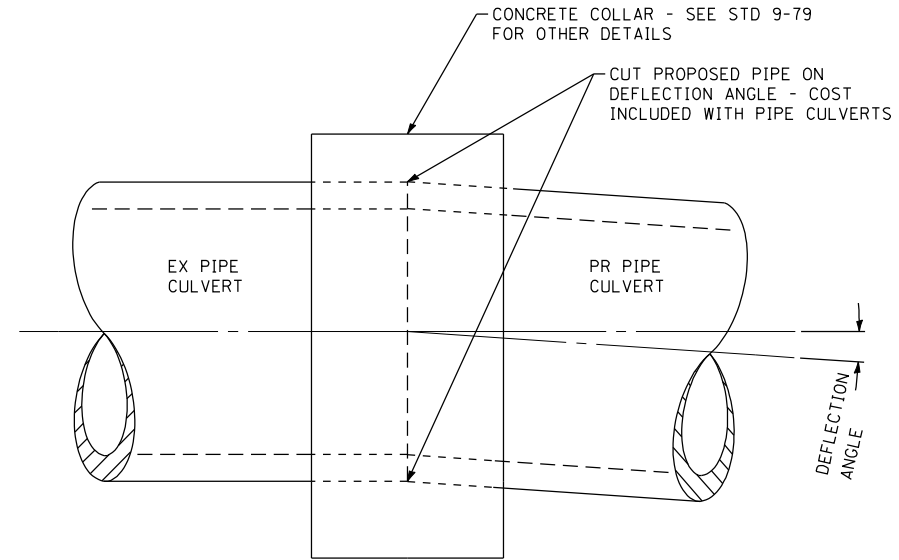


ELEVATION



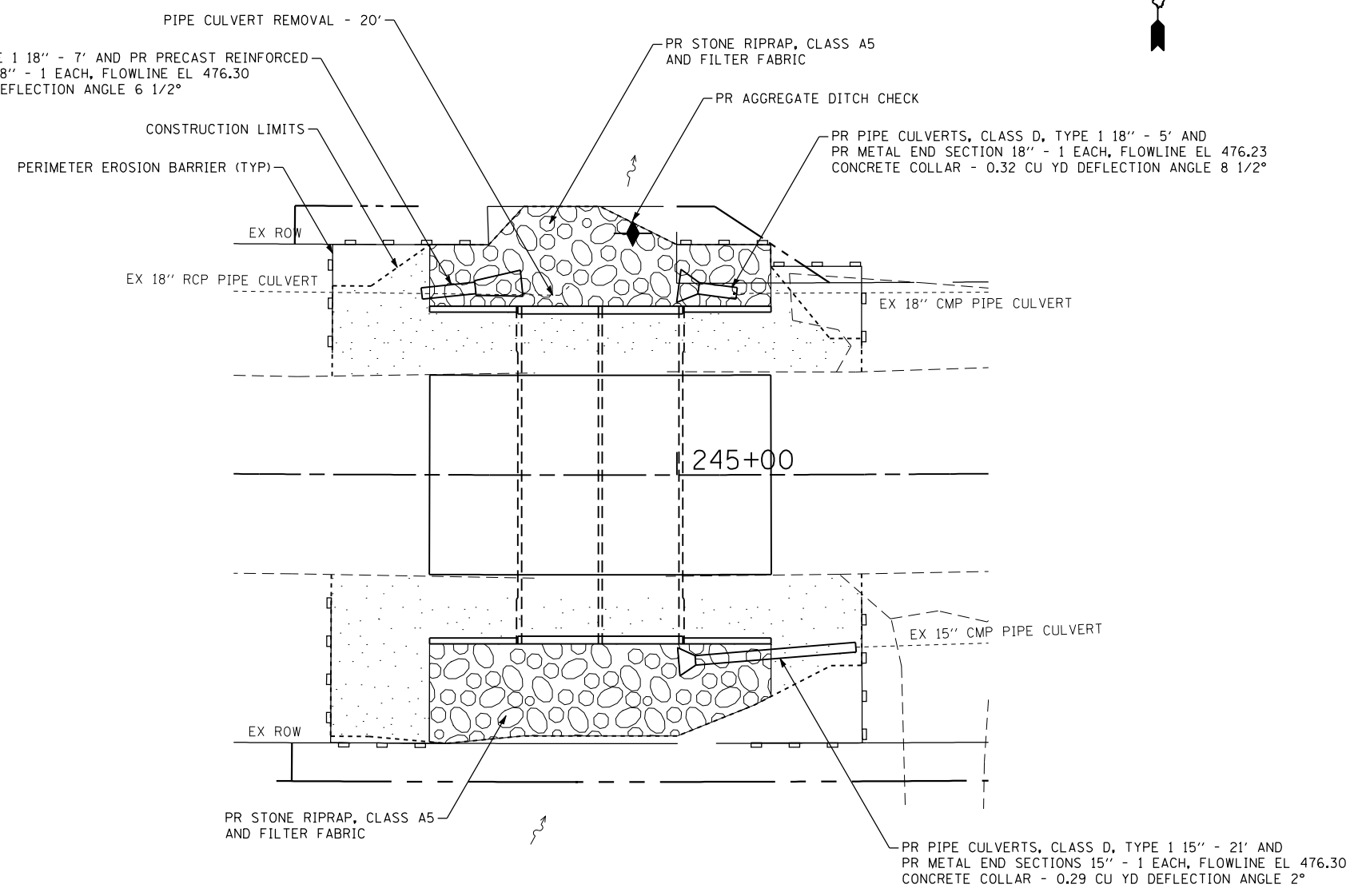
PLAN

AGGREGATE DITCH CHECK



CONCRETE COLLAR  
PLAN VIEW

PR PIPE CULVERTS, CLASS A, TYPE 1 18" - 7' AND PR PRECAST REINFORCED CONCRETE FLARED END SECTIONS 18" - 1 EACH, FLOWLINE EL 476.30  
CONCRETE COLLAR - 0.32 CU YD DEFLECTION ANGLE 6 1/2°



EROSION CONTROL AND DRAINAGE PLAN

TEMPORARY EROSION CONTROL SEEDING AND SEEDING, CLASS 7

**CB** Coombe-Bloxdorf P.C.  
- CIVIL ENGINEERS -  
- STRUCTURAL ENGINEERS -  
- LAND SURVEYORS -  
Design Firm License No. 184-002703

|  |                   |               |           |
|--|-------------------|---------------|-----------|
| FILE NAME =<br>...d978090-sht-009-eros.drain.dgn | USER NAME = CFC.. | DESIGNED -    | REVISED - |
|  |                   | DRAWN - CFC   | REVISED - |
|  |                   | CHECKED - GLS | REVISED - |
|  |                   | DATE - / /    | REVISED - |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**EROSION CONTROL & DRAINAGE PLAN AND DETAILS**  
**CRAB ORCHARD ROAD / OLD IL 13**

|        |           |           |      |         |
|--------|-----------|-----------|------|---------|
| SCALE: | SHEET NO. | OF SHEETS | STA. | TO STA. |
|--------|-----------|-----------|------|---------|

|                           |         |            |                    |           |
|---------------------------|---------|------------|--------------------|-----------|
| S.B.I.                    | SECTION | COUNTY     | TOTAL SHEETS       | SHEET NO. |
| 13B                       | 6B-1    | WILLIAMSON | 19                 | 9         |
|                           |         |            | CONTRACT NO. 78090 |           |
| ILLINOIS FED. AID PROJECT |         |            |                    |           |

**COORDINATE POINTS**

|        |   |             |   |             |
|--------|---|-------------|---|-------------|
| PT J1  | N | 387368.5541 | E | 847631.4134 |
| PT J2  | N | 387368.3424 | E | 847636.3845 |
| PT J3  | N | 387367.7363 | E | 847650.8976 |
| PT J4  | N | 387300.9487 | E | 847578.2210 |
| PT J5  | N | 387295.9549 | E | 847577.9717 |
| PT J6  | N | 387370.8616 | E | 847581.7114 |
| PT J7  | N | 387365.8678 | E | 847581.4621 |
| PT J8  | N | 387370.0755 | E | 847597.8246 |
| PT J9  | N | 387365.0748 | E | 847597.7169 |
| PT J10 | N | 387375.8554 | E | 847581.9607 |
| PT J11 | N | 387375.0757 | E | 847597.9417 |
| PT J12 | N | 387374.6083 | E | 847606.8303 |
| PT J13 | N | 387373.3379 | E | 847636.5974 |
| PT J14 | N | 387290.9869 | E | 847577.7244 |
| PT J15 | N | 387299.0571 | E | 847618.3574 |
| PT J16 | N | 387294.1976 | E | 847615.0941 |
| PT J17 | N | 387289.5085 | E | 847611.9452 |
| PT J18 | N | 387296.6497 | E | 847678.3091 |
| PT J19 | N | 387286.6520 | E | 847678.0639 |
| PT J20 | N | 387364.6520 | E | 847606.7125 |
| PT J21 | N | 387358.5634 | E | 847630.9858 |
| PT J22 | N | 387369.6546 | E | 847606.7717 |
| PT J23 | N | 387373.7901 | E | 847625.9843 |
| PT J24 | N | 387368.8390 | E | 847624.8502 |
| PT J25 | N | 387291.6487 | E | 847678.2469 |

NW 1/4 NE 1/4  
SECTION 19  
T9S R4E 3rd. pm

| PARCEL NO. | PROPERTY OWNER              | PURPOSE              | ACRES            |
|------------|-----------------------------|----------------------|------------------|
| 26         | PAMELA GAINES               | NEW ROW<br>TEMP EASE | 0.002±<br>0.004± |
| 27         | METHODIST CHURCH            | NEW ROW<br>TEMP EASE | 0.007±<br>0.007± |
| 27A        | GARY AND CHRISTINE ODOM     | NEW ROW<br>TEMP EASE | 0.004±<br>0.004± |
| 28         | SHAWN AND JENNIFER GALLOWAY | NEW ROW<br>TEMP EASE | 0.003±<br>0.001± |

PARCEL 26  
PAMELA GAINES

PARCEL 26  
PAMELA GAINES

PARCEL 28  
SHAWN AND JENNIFER  
GALLOWAY

GARY AND  
CHRISTINE ODOM  
PARCEL 27A

PARCEL 27  
METHODIST CHURCH

PARCEL 27  
METHODIST CHURCH

NW 1/4 NE 1/4  
SECTION 19  
T9S R4E 3rd. pm

ILLINOIS OLD ROUTE 13

EXIST. CURVE CURVE3  
PI STA. = 241+01.54  
Δ = 2° 55' 00" (RT)  
D = 0° 52' 00"  
R = 6,611.12'  
T = 168.30'  
L = 336.53'  
E = 2.14'  
P.C. STA. = 239+33.24  
P.T. STA. = 242+69.77

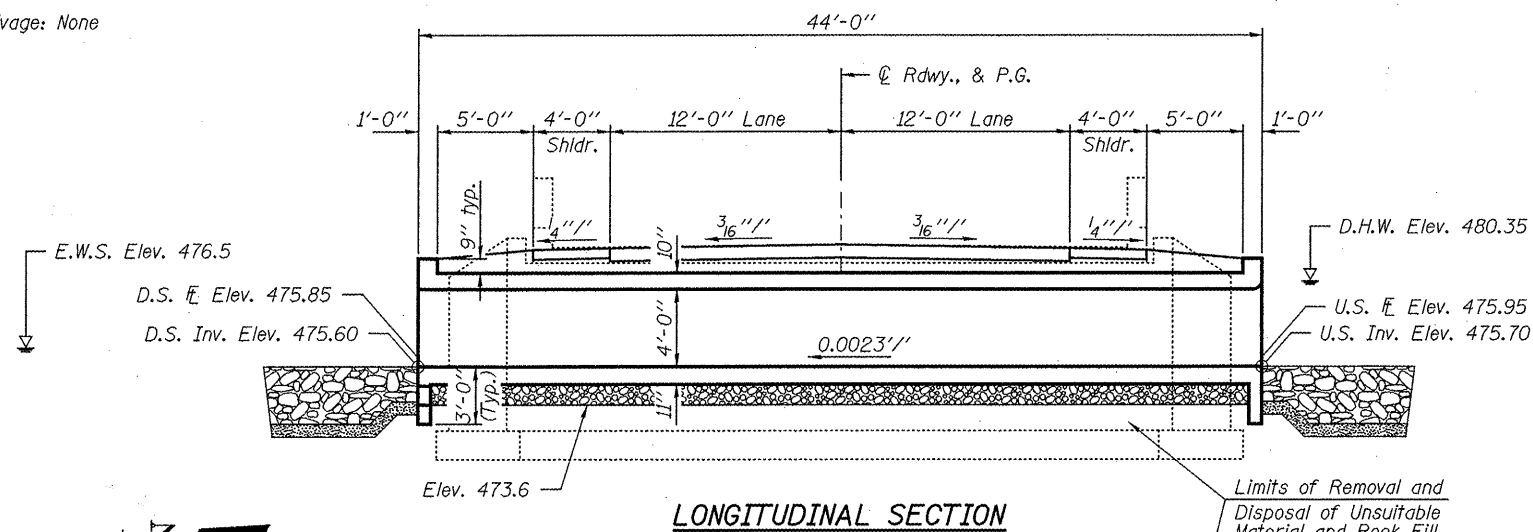
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|-----|---------------|
| PTN | 08-19-202-028 |
| PTN | 08-19-202-029 |
| PTN | 08-19-202-030 |
| PTN | 08-19-202-031 |



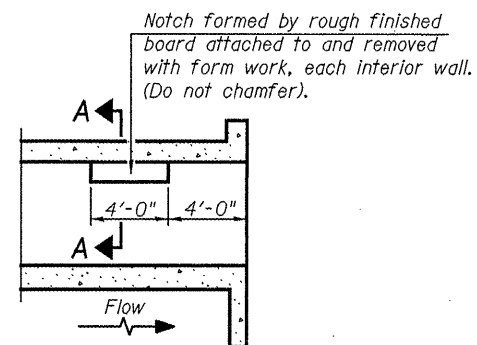
BENCHMARK: BM#102 - Chiseled "square" on S.E. wing SN 100-0065 18' Rt., Sta. 244+70, Elev. 481.01.

EXISTING STRUCTURE: SN 100-0065 was originally built in 1921 as SBI 13 Section 6B. The bridge is a one span RC slab on closed abutments. The structure is 18.0' bk.-bk. abutments and 32.0' o.-o. slab. The bridge will be removed and replaced using road closure. Traffic will be detoured during construction.

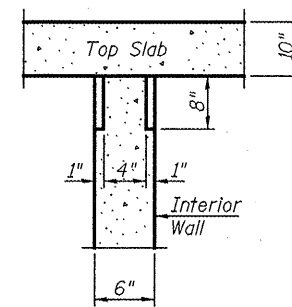
Salvage: None



LONGITUDINAL SECTION



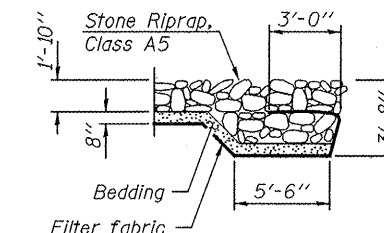
LONGITUDINAL SECTION



SECTION A-A

STA. 244+90.00  
BUILT 2011 BY  
STATE OF ILLINOIS  
SBI ROUTE 13B SEC 6B-1  
LOADING HS20  
STRUCTURE NO. 100-2023

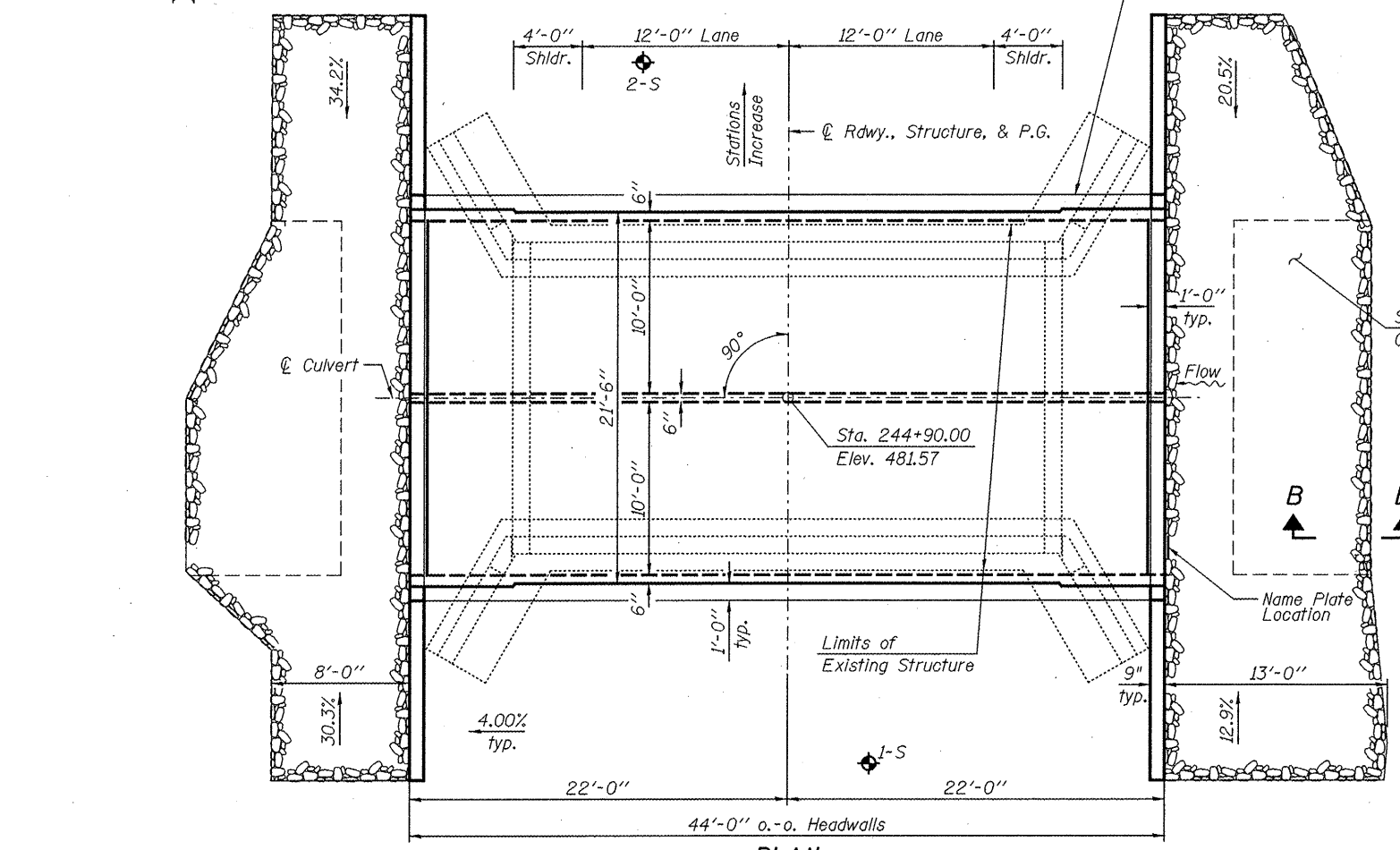
NAME PLATE  
See Std. 515001



SECTION B-B

GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. Reinforcement bars designated (E) shall be epoxy coated. Layout of slope protection system may be varied to suit ground conditions in the field as directed by the Engineer. Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure. Precast alternate not allowed.



PLAN

**APPROVED**  
For Structural Adequacy Only  
*Mary Coombe Bloxdorf*  
Engineer of Bridges & Structures

PHOEBE NESTING  
SITE DETAILS  
(Downstream End Only)

TOTAL BILL OF MATERIAL

| ITEM  | UNIT    | TOTAL  |
|---|---------|--------|
| Stone Riprap Class A5                       | Sq. Yd. | 109    |
| Filter Fabric                               | Sq. Yd. | 109    |
| Removal of Existing Structures              | Each    | 1      |
| Reinforcement Bars, Epoxy Coated            | Pound   | 19,390 |
| Name Plates                                 | Each    | 1      |
| Concrete Box Culverts                       | Cu. Yd. | 85.9   |
| Removal and Disposal of Unsuitable Material | Cu. Yd. | 42     |
| Rockfill - Foundation                       | Cu. Yd. | 42     |

INDEX OF SHEETS

- General Plan
- Culvert Plan
- Culvert Details
- Boring Logs

DESIGN SPECIFICATIONS

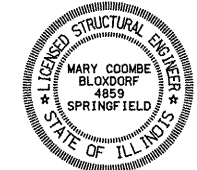
2002 AASHTO Standard Specifications for Highway Bridges

LOADING HS-20-44

Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES

$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (Reinf.)



*Mary Coombe Bloxdorf*  
ILLINOIS STRUCTURAL NO. 4859  
EXPIRES 11/30/12  
DATE: 12/23/11

GENERAL PLAN  
OLD IL ROUTE 13  
OVER BRANCH OF LITTLE CRAB ORCHARD CREEK  
SBI ROUTE 13B - SECTION 6B-1  
WILLIAMSON COUNTY  
STATION 244+90.00  
STRUCTURE NUMBER 100-2023

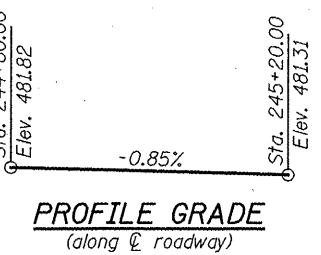
WATERWAY INFORMATION

Drainage Area = 0.26 Sq. Mi. Proposed Low Grade Elev. 479.4 @ Sta. 248+50

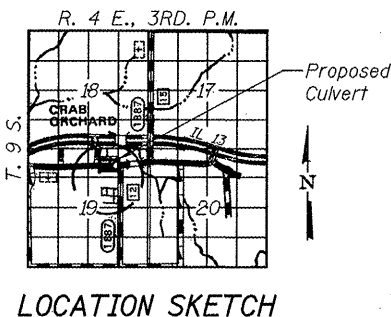
| Flood      | Freq. Yr. | Q C.F.S. | Opening Sq. Ft. |        | Natural Head - Ft. |        | Headwater El. |        |
|------------|-----------|----------|-----------------|--------|--------------------|--------|---------------|--------|
|            |           |          | Exist.          | Prop.  | H.W.E.             | Exist. | Prop.         | Exist. |
| 10         | 235       | 60       | 70              | 479.98 | 0.00               | 0.00   | 479.98        | 479.98 |
| Design     | 50        | 397      | 60              | 70     | 480.35             | 0.00   | 0.00          | 480.35 |
| Base       | 100       | 472      | 60              | 70     | 480.48             | 0.02   | 0.00          | 480.50 |
| Max. Calc. | 500       | 667      | 60              | 70     | 480.74             | 0.09   | 0.00          | 480.83 |

DESIGN SCOUR ELEVATION TABLE

| Design Scour Elevation (ft.) | Downstream | Upstream |
|------------------------------|------------|----------|
|                              | 472.6      | 472.7    |



PROFILE GRADE  
(along  $\hat{c}$  roadway)



LOCATION SKETCH

|  |                        |                |           |
|--|------------------------|----------------|-----------|
| FILE NAME = ...1002023-78090-001-culvert.dgn | USER NAME = _CFC_      | DESIGNED - GJB | REVISED - |
| PLOT SCALE = 2.0000' / IN.                   | PLOT DATE = 12/28/2011 | CHECKED - MCB  | REVISED - |
|  |                        | DRAWN - MML    | REVISED - |
|  |                        | CHECKED - MCB  | REVISED - |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

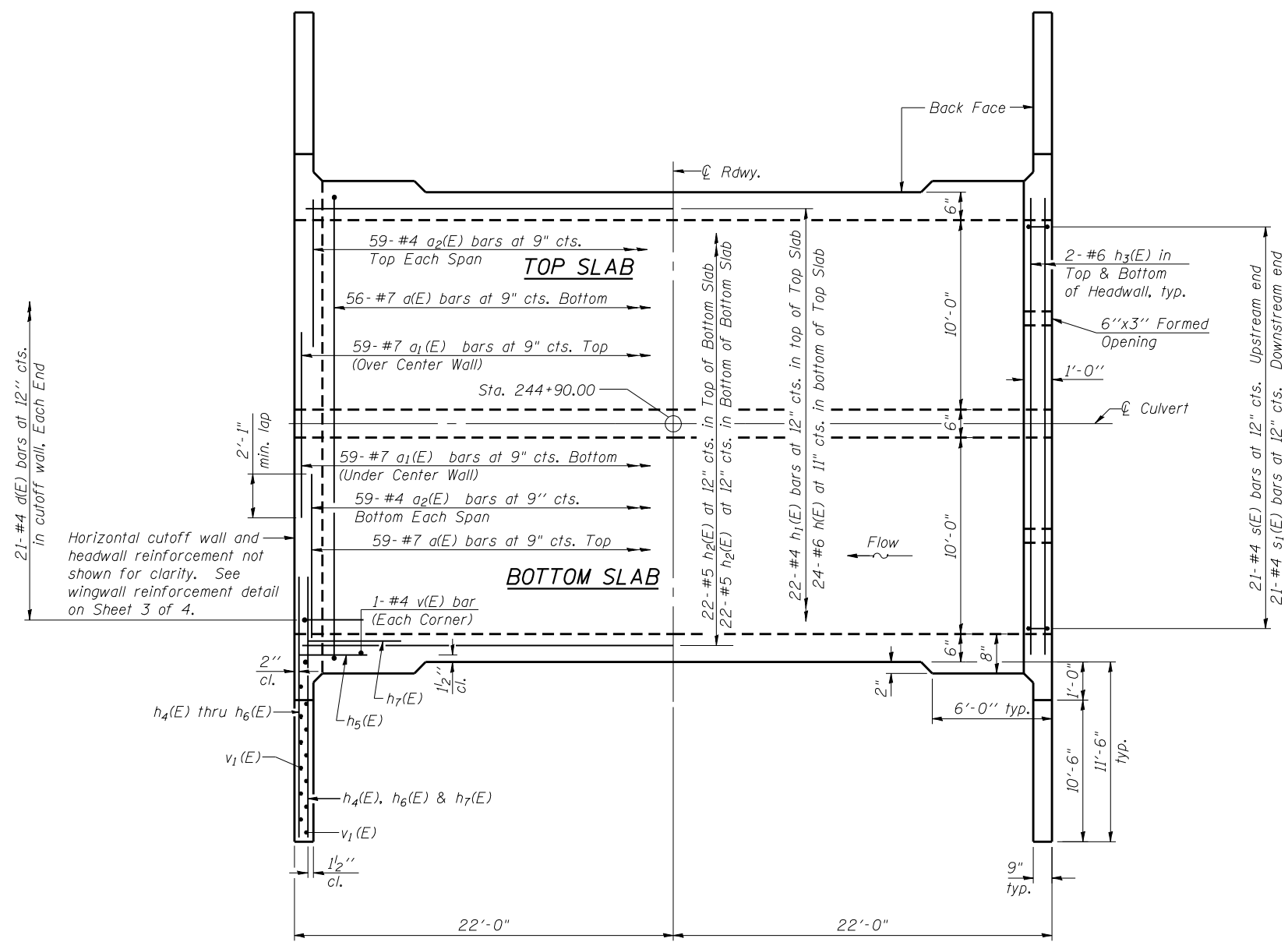
GENERAL PLAN  
STRUCTURE NO. 100-2023

SHEET NO. 1 OF 4 SHEETS

**CB** Coombe-Bloxdorf P.C.  
- CIVIL ENGINEERS -  
- STRUCTURAL ENGINEERS -  
- LAND SURVEYORS -  
Design Firm License No. 184-002703

| F.A. RTE. | SECTION | COUNTY     | TOTAL SHEETS | SHEET NO. |
|-----------|---------|------------|--------------|-----------|
| 13B       | 6B-1    | WILLIAMSON | 19           | 11        |

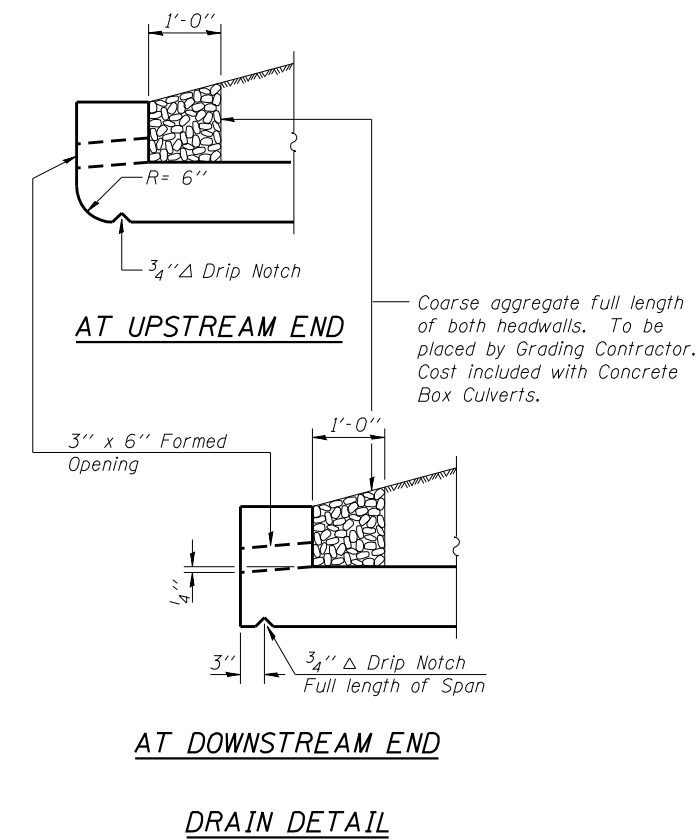
CONTRACT NO. 78090  
ILLINOIS FED. AID PROJECT



SHOWING  
REINFORCEMENT

SHOWING  
OUTLINES

PLAN



Notes:  
A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.  
See Sheet 3 of 4 for Culvert Details.

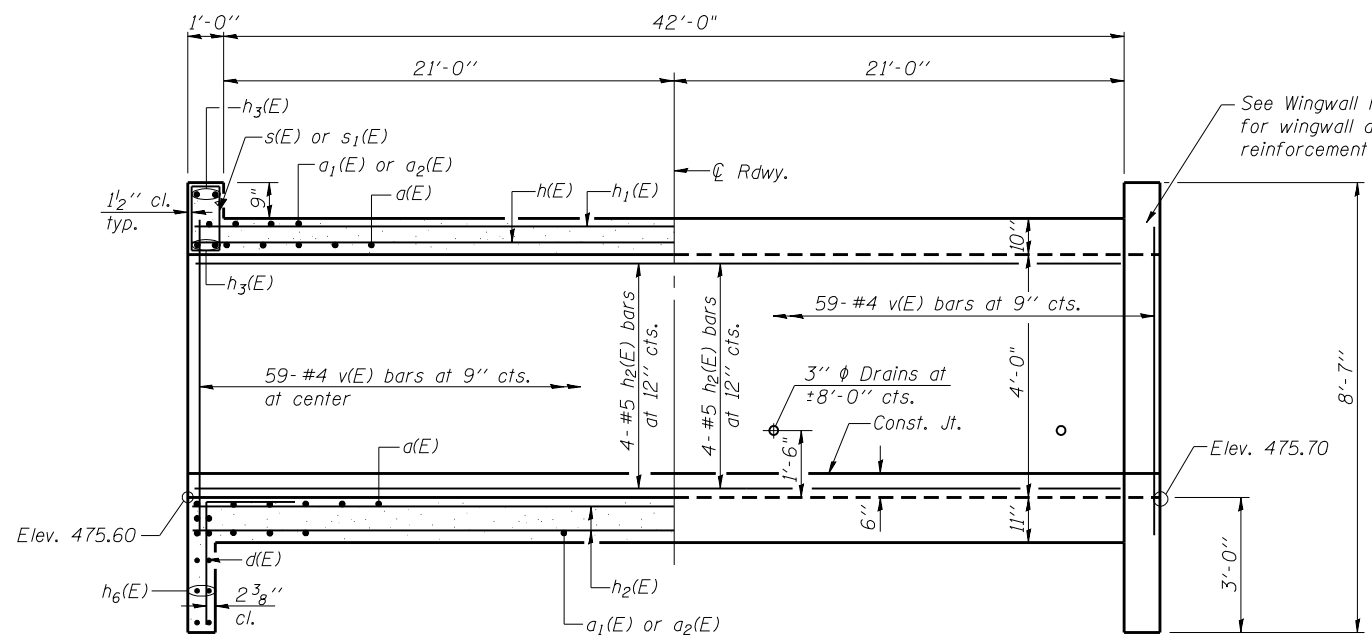
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| FILE NAME =                        | USER NAME = .CFC.                 | DESIGNED - GJB | REVISED - |
| ...\\1002023-78090-002-culvert.dgn |                                   | CHECKED - MCB  | REVISED - |
|                                    | PLOT SCALE = 0:1.999200 '1' / IN. | DRAWN - MML    | REVISED - |
| CB PROJECT NO 08055-15             | PLOT DATE = 12/23/2011            | CHECKED - MCB  | REVISED - |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

CULVERT PLAN  
STRUCTURE NO. 100-2023

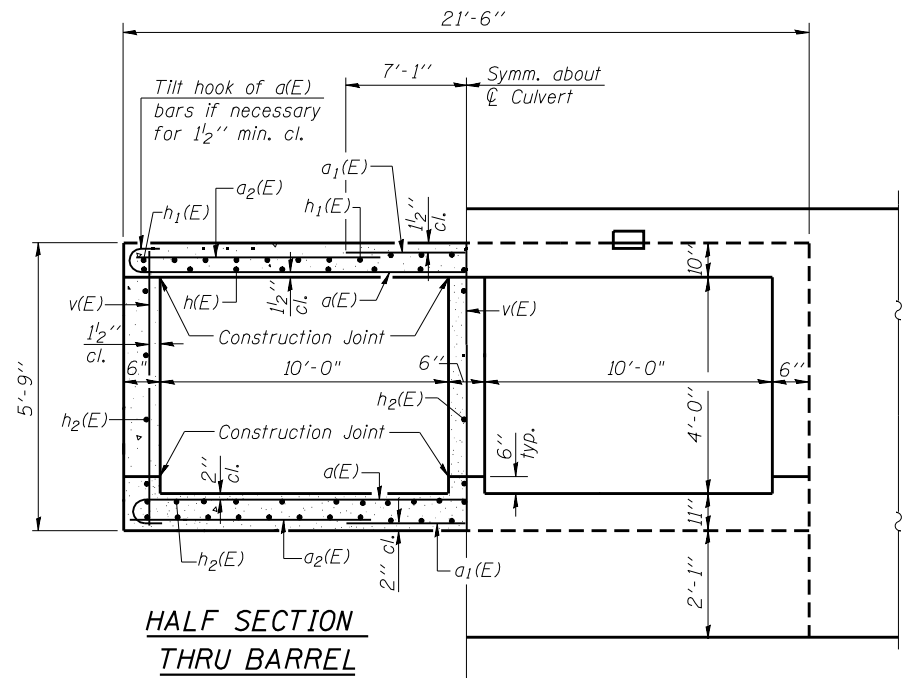
SHEET NO. 2 OF 4 SHEETS

|                                    |  |   |  |
|------------------------------------|--|---|--|
|                                    |  | COUNTY TOTAL SHEETS SHEET NO.<br>WILLIAMSON 19 12 |  |
|                                    |  | CONTRACT NO. 78090                                |  |
| Design Firm License No. 184-002703 |  | ILLINOIS FED. AID PROJECT                         |  |



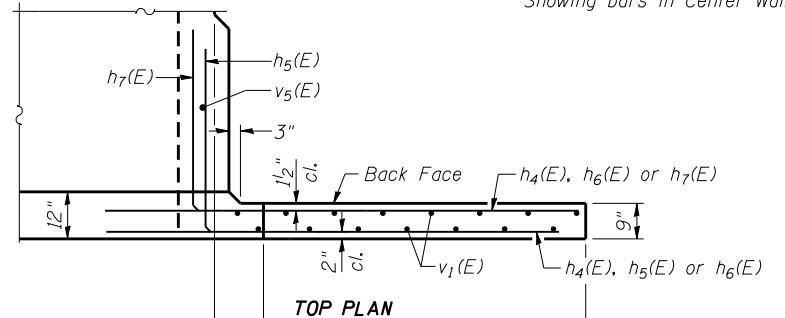
**HALF LONG SECTION**  
Showing bars in Center Wall

**HALF ELEVATION**  
Showing bars in Outside Wall

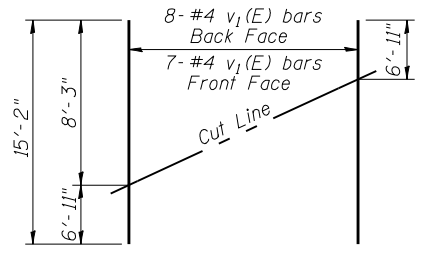


**HALF SECTION THRU BARREL**

**HALF END ELEVATION**

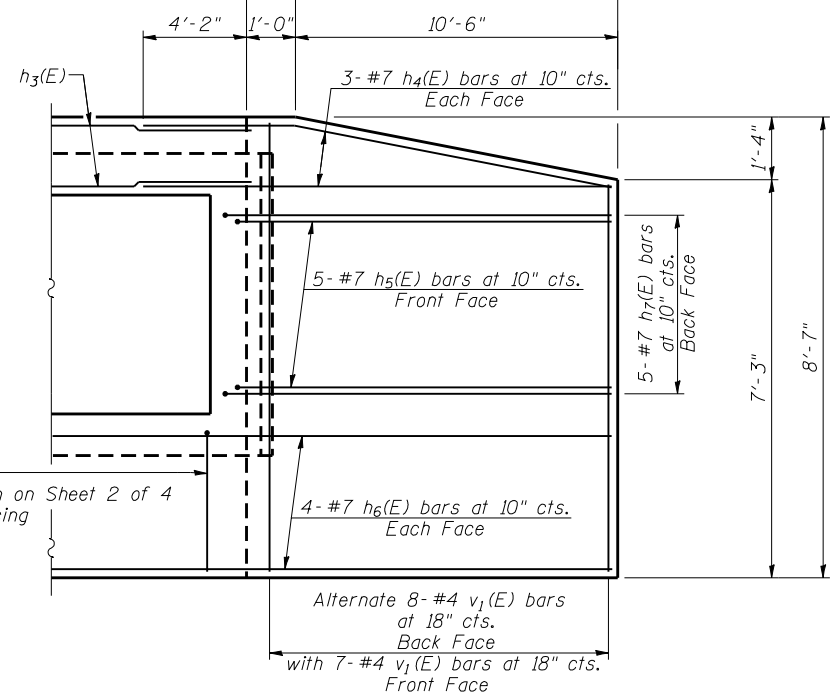


**TOP PLAN**



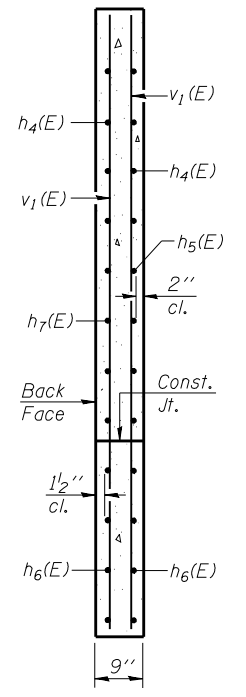
**FIELD CUTTING DIAGRAM**

Order v<sub>1</sub>(E) full length. Cut as shown and use remainder of bars in opposite wingwall.

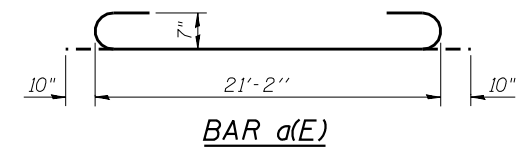


**END ELEVATION**

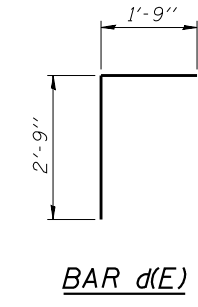
**WINGWALL REINFORCEMENT DETAIL**



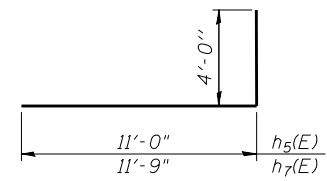
**SECTION**



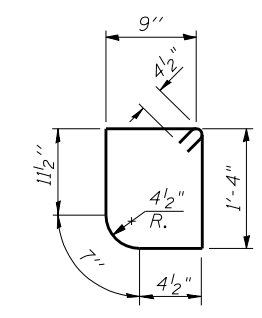
**BAR d(E)**



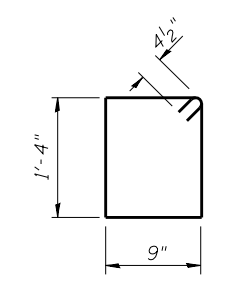
**BAR d(E)**



**BAR h<sub>5</sub>(E) & h<sub>7</sub>(E)**



**BAR s(E)**



**BAR s<sub>1</sub>(E)**

**BILL OF MATERIAL**

| Bar                              | No. | Size | Length  | Shape  |
|----------------------------------|-----|------|---------|--------|
| d(E)                             | 115 | #7   | 22'-10" | U      |
| a <sub>1</sub> (E)               | 118 | #7   | 14'-2"  | —      |
| a <sub>2</sub> (E)               | 236 | #4   | 5'-9"   | —      |
| d(E)                             | 42  | #4   | 4'-6"   | L      |
| h(E)                             | 24  | #6   | 43'-8"  | —      |
| h <sub>1</sub> (E)               | 22  | #4   | 43'-8"  | —      |
| h <sub>2</sub> (E)               | 56  | #5   | 43'-8"  | —      |
| h <sub>3</sub> (E)               | 8   | #6   | 21'-2"  | —      |
| h <sub>4</sub> (E)               | 24  | #7   | 15'-6"  | —      |
| h <sub>5</sub> (E)               | 20  | #7   | 15'-0"  | —      |
| h <sub>6</sub> (E)               | 16  | #7   | 44'-2"  | —      |
| h <sub>7</sub> (E)               | 20  | #7   | 15'-9"  | —      |
| s(E)                             | 21  | #4   | 4'-9"   | □      |
| s <sub>1</sub> (E)               | 21  | #4   | 4'-11"  | □      |
| v(E)                             | 181 | #4   | 5'-5"   | —      |
| v <sub>1</sub> (E)               | 30  | #4   | 15'-2"  | —      |
| Concrete Box Culverts            |     |      | Cu. Yd. | 85.9   |
| Reinforcement Bars, Epoxy Coated |     |      | Pound   | 19,390 |

**CB Coombe-Bloxdorf P.C.**  
- CIVIL ENGINEERS -  
- STRUCTURAL ENGINEERS -  
- LAND SURVEYORS -  
Design Firm License No. 184-002703

|                                    |                        |                |           |
|------------------------------------|------------------------|----------------|-----------|
| FILE NAME =                        | USER NAME = .CFC.      | DESIGNED - GJB | REVISED - |
| ...\\1002023-78090-003-culvert.dgn |                        | CHECKED - MCB  | REVISED - |
|                                    |                        | DRAWN - MML    | REVISED - |
| CB PROJECT NO 08055-15             | PLOT DATE = 12/23/2011 | CHECKED - MCB  | REVISED - |

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**CULVERT DETAILS**  
**STRUCTURE NO. 100-2023**

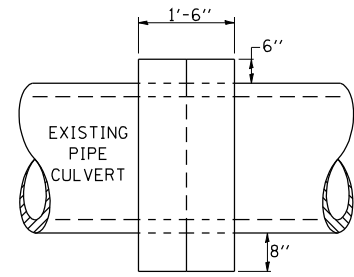
SHEET NO. 3 OF 4 SHEETS

| F.A. RTE.                 | SECTION | COUNTY     | TOTAL SHEETS       | SHEET NO. |
|---------------------------|---------|------------|--------------------|-----------|
| 13B                       | 6B-1    | WILLIAMSON | 19                 | 13        |
|                           |         |            | CONTRACT NO. 78090 |           |
| ILLINOIS FED. AID PROJECT |         |            |                    |           |

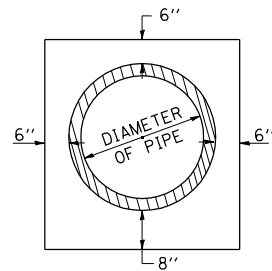


### DETAILS OF CONCRETE COLLAR

PIPE TO PIPE



SIDE VIEW



END VIEW

#### TABULATION

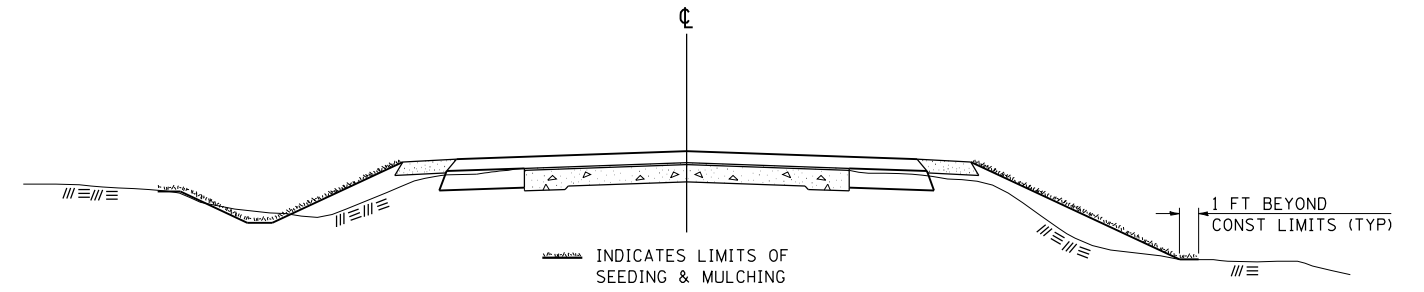
| DIAMETER OF PIPE | CL SI CONC CU YDS EST |
|------------------|-----------------------|
| 12"              | 0.24                  |
| 15"              | 0.29                  |
| 18"              | 0.32                  |
| 24"              | 0.44                  |
| 30"              | 0.56                  |
| 36"              | 0.66                  |
| 42"              | 0.80                  |
| 48"              | 0.93                  |
| 54"              | 1.07                  |
| 60"              | 1.22                  |
| 72"              | 1.55                  |

THE CONCRETE COLLAR SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC YARD FOR CONCRETE COLLAR, AS SHOWN ON THE PLANS, WHICH PRICE SHALL INCLUDE THE REMOVAL OF SUCH PORTIONS THE EXISTING HEADWALLS AS MAY BE REQUIRED.

CLASS SI CONCRETE SHALL BE USED THROUGHOUT.

STD. 9-79

### SEEDING & MULCHING



#### GENERAL NOTES

IN GENERAL, ALL EARTH SURFACES DISTURBED DURING CONSTRUCTION OPERATIONS SHALL BE SEEDED AND MULCHED UPON COMPLETION OF ALL GRADING OPERATIONS.

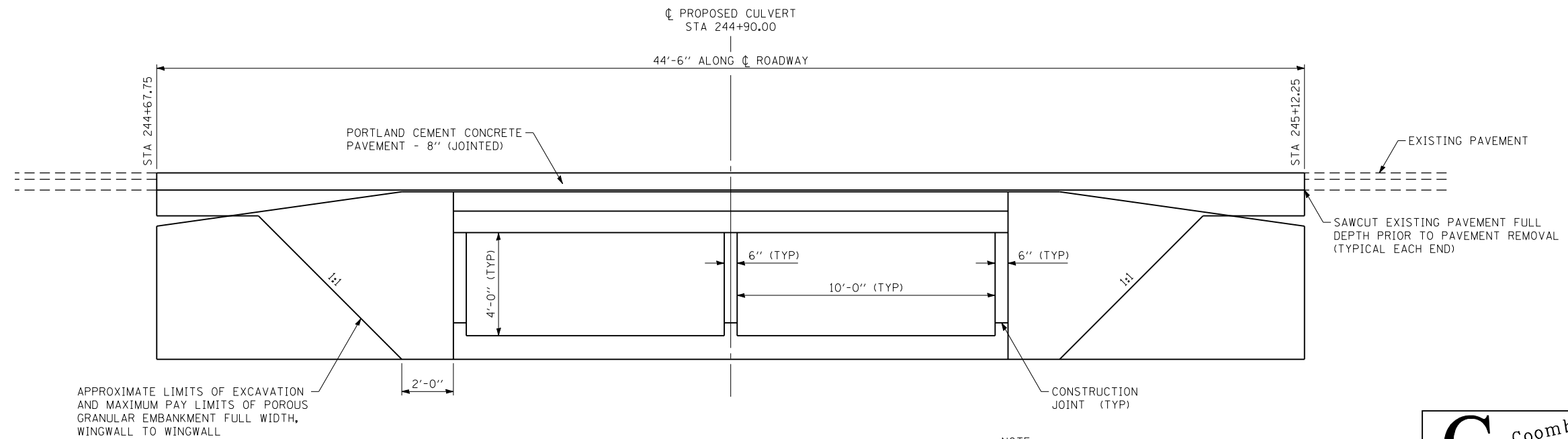
FERTILIZER NUTRIENTS AND LIMESTONE SHALL BE APPLIED TO ALL SEEDED AREAS.

THE RATES OF APPLICATION OF FERTILIZER, MULCH AND LIMESTONE SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS.

SECTIONS 250 AND 251 OF THE STANDARD SPECIFICATIONS SHALL GOVERN THIS WORK EXCEPT AS SPECIFIED HEREIN OR AS NOTED IN THE SPECIAL PROVISIONS.

STD. 9-12

### TYPICAL LIMITS OF POROUS GRANULAR EMBANKMENT AT 100-2023



NOTE:  
POROUS GRANULAR EMBANKMENT SHALL BE CA 7 OR CA 11 WITH THE TOP 1' CONSISTING OF CA 10

**CB** Coombe-Bloxdorf P.C.  
- CIVIL ENGINEERS -  
- STRUCTURAL ENGINEERS -  
- LAND SURVEYORS -  
Design Firm License No. 184-002703

FILE NAME =  
... \d978090-sht-015-std-9-79.dgn  
CB PROJECT NO 08055-15

| USER NAME = CFC..            | DESIGNED -    | REVISED - |
|------------------------------|---------------|-----------|
| DRAWN -                      | REVISOR -     |           |
| PLOT SCALE = 5.000000' / IN. | CHECKED - GLS | REVISOR - |
| PLOT DATE = 12/23/2011       | DATE - / /    | REVISOR - |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

STANDARD 9-12 AND 9-79  
TYPICAL LIMITS OF POROUS GRANULAR EMBANKMENT

SCALE: SHEET NO. OF SHEETS STA. TO STA.

| S.B.I.                    | SECTION | COUNTY     | TOTAL SHEETS       | SHEET NO. |
|---------------------------|---------|------------|--------------------|-----------|
| 13B                       | 6B-1    | WILLIAMSON | 19                 | 15        |
|                           |         |            | CONTRACT NO. 78090 |           |
| ILLINOIS FED. AID PROJECT |         |            |                    |           |

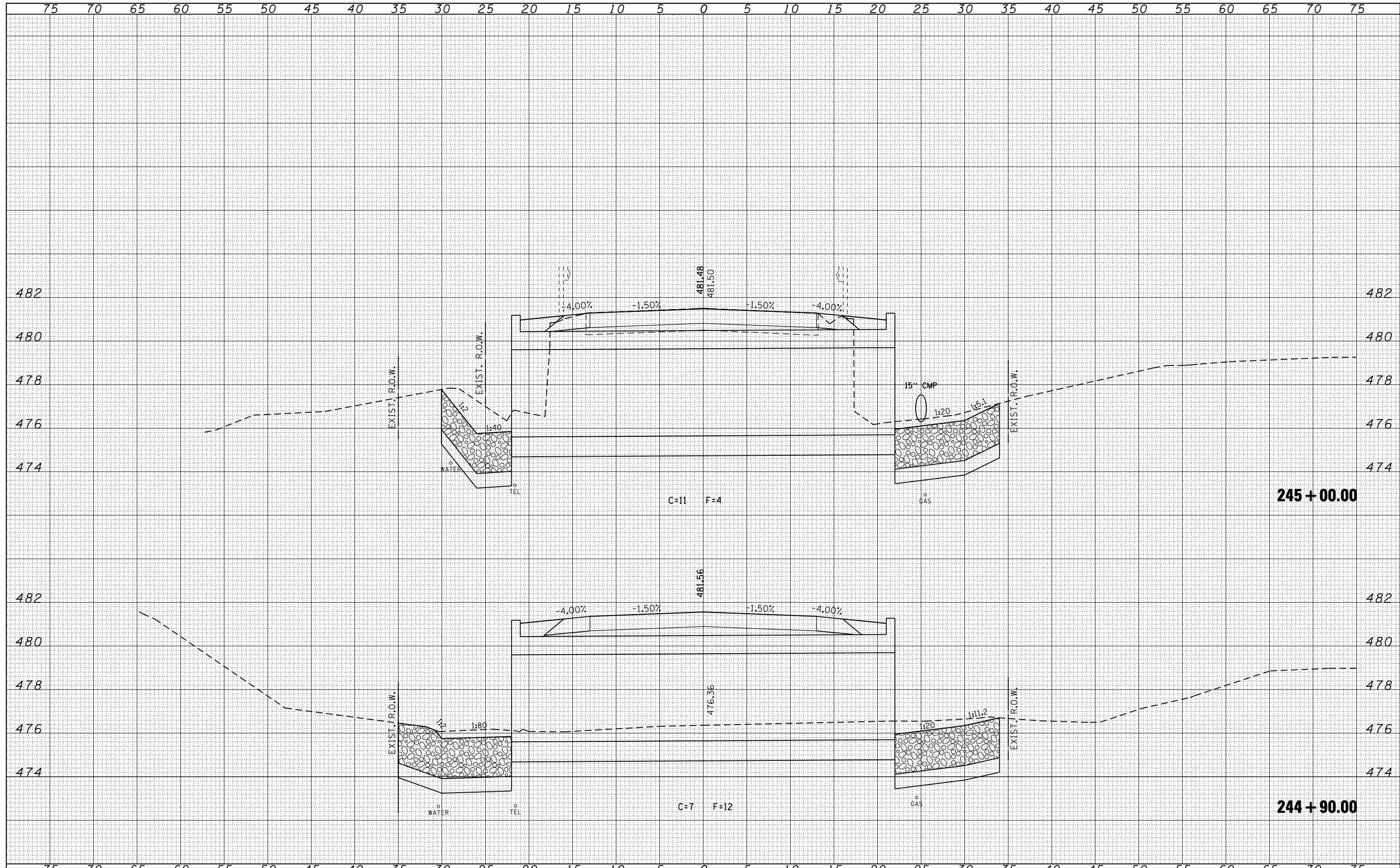






|               |      |
|---------------|------|
| BY            | DATE |
| SURVEYED      |      |
| PLOTTED       |      |
| TEMPLATE      |      |
| AREAS CHECKED |      |
| NO.           |      |

|               |      |
|---------------|------|
| BY            | DATE |
| SURVEYED      |      |
| PLOTTED       |      |
| TEMPLATE      |      |
| AREAS CHECKED |      |
| NO.           |      |



FILE NAME = ...  
 USER NAME = CFC...  
 PLOT SCALE = 10.0000' / IN.  
 PLOT DATE = 12/23/2011

DESIGNED - L.F.S.  
 DRAWN - T.W.K.  
 CHECKED - M.D.C.  
 DATE - / /

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
 CRAB ORCHARD ROAD / OLD IL 13**  
 SCALE: SHEET NO. OF SHEETS STA. 244+90.00 TO STA. 245+00.00

| S.B.I.             | SECTION | COUNTY     | TOTAL SHEETS              | SHEET NO. |
|--------------------|---------|------------|---------------------------|-----------|
| 13B                | 6B-1    | WILLIAMSON | 19                        | 18        |
| CONTRACT NO. 78090 |         |            | ILLINOIS FED. AID PROJECT |           |

