1-20-2012 LETTING ITEM 094

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

FOR INDEX OF SHEETS, SEE SHEET NO. 2

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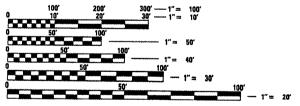
# PROPOSED HIGHWAY PLANS

FAP ROUTE 805 (IL 161) SECTION 125BR-2

STRUCTURE REPAIRS – CM ST. CLAIR COUNTY

C-98-065-11

DESIGN DESIGNATION N/A

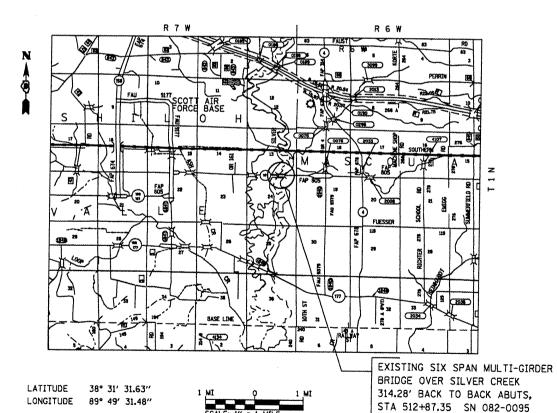


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

CONTRACT NO. 76E99

PROJECT ENGINEER: PATTI LeBEAU (618)346-3179
PROJECT MANAGER: ARTHUR MUEHLFELD (618)346-3209



GROSS LENGTH = 314.25 FT. = 0.060 MILE NET LENGTH = 314.25 FT. = 0.060 MILE D-98-061-11



ADT 7500 2032 9200 SU 2.1% MU 1.4%

DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

UBMITTED October 3/ 20 //
DEPUTY DIRECTOR OF HIGHWAYS, REGION 5 ENGINEER

20 //
STATE OF DESIGN AND ENVIRONMENT

20 //
DIRECTOR OF HIGHWAYS, CHIEF CHIGHNEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

# GENERAL NOTES

- I ILLINOIS STATE LAW REQUIRES A 48-HOUR NOTICE BE GIVEN TO ALL UTILITIES WITHIN THE PROJECT AREA BEFORE DIGGING. FIELD MARKING OF FACILITIES MAY BE OBTAINED BY CONTACTING J.U.L.I.E. OR FOR NON-MEMBERS, THE UTILITY COMPANY DIRECTLY. AGENCIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT AREA ARE AS FOLLOWS:
  - \* AMEREN ILLINOI:
  - \* AT&T ILLINOIS
  - \* CHARTER COMMUNICATIONS, INC.
  - \* FRONTIER NORTH, INC.

MEMBERS OF J.U.L.I.E. CALL TOLL FREE (800) 892-0123 OR 811 AND ARE INDICATED BY

•. NON- J.U.L.I.E. MEMBERS MUST BE NOTIFIED INDIVIDUALLY.

- 2 THE CONTRACTOR AND THE ENGINEER SHALL BE AWARE THAT NO SURVEY WAS PERFORMED FOR THIS PROJECT. THE STATIONING AND TOPOGRAPHY SHOWN IN THE PLANS WAS CREATED USING MICROFILM AND FIELD MEASUREMENTS. BOTH SHALL BE ASSUMED TO BE APPROXIMATE. THE CONTRACTOR SHALL VERIFY DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS. THE STATIONING WAS ESTABLISHED FROM THE WEST ABUTMENT STATION 511+30.21.
- 3 A QUANTITY OF 1050 FOOT OF "TEMPORARY PAVEMENT MARKING LINE 6" WHITE HAS BEEN INCLUDED IN THE PLANS FOR PAINTING THE BOTTOM 6" OF THE TEMPORARY CONCRETE BARRIER.
- 4 THE PROPOSED PAVEMENT MARKING SHALL MATCH THE LOCATIONS OF THE EXISTING PAVEMENT MARKING, AS DIRECTED BY THE ENGINEER.
- 5 PAVEMENT MARKING REMOVAL IS BASED ON THE LAYOUT OF HIGHWAY STANDARD 701321 AND ALL CONFLICTING PAVEMENT MARKING SHALL BE REMOVED FROM STOP BAR, STATION 508+37.48 TO STOP BAR, STATION 517+29.70.
- 6 IF THE CONTRACTOR, FOR HIS CONSTRUCTION ACTIVITY, REMOVES TREES WITHIN THE RIGHT-OF-WAY LIMITS WHICH ARE NOT DESIGNATED ON THE PLANS FOR REMOVAL, I.E. IN ORDER TO GAIN ACCESS TO THE PROJECT SITE; IT WILL BE HIS RESPONSIBILITY TO REPLACE THE TREES AT A 1:1 RATIO. THE TREES WILL BE REPLACED WITH A 1 GALLON NATIVE ILLINOIS TREE SPECIES AND SHALL BE APPROVED BY THE ENGINEER. THE TREE REMOVAL AND TREE REPLACEMENT WILL BE AT THE CONTRACTOR'S EXPENSE, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- 7 ALL EXISTING AND PROPOSED RIGHT-OF-WAY LINES AND PROPERTY LINES SHOWN ON THE PLAN SHEETS ARE GRAPHICAL REPRESENTATIONS AND SHALL NOT BE USED AS A MEANS TO ESTABLISH OWNERSHIP. IN ALL MATTERS RELATING TO RIGHT-OF-WAY, THE PLAT OF HIGHWAYS SHALL BE THE CONTROLLING DOCUMENT.
- 8 EXISTING PAVEMENT MARKING SHALL BE TEMPORARILY COVERED PRIOR TO APPLICATION OF THE DECK SURFACE TREATMENT, TO PREVENT THE MATERIAL FROM BEING APPLIED TO THE MARKINGS. THE TEMPORARY COVERING SHALL BE REMOVED AFTER APPLICATION OF THE DECK SURFACE TREATMENT AND PRIOR TO OPENING TO TRAFFIC. COST IS INCLUDED WITH THE DECK SURFACE TREATMENT SPECIFIED.
- 9 TWO CHANGEABLE MESSAGE BOARDS SHALL BE REQUIRED FOR THIS PROJECT. THEY SHALL BE PLACED ONE WEEK PRIOR TO ANY LANE CLOSURE. THE CHANGEABLE MESSAGE BOARDS SHALL BE PLACED ALONG THE EASTBOUND AND WESTBOUND LANES OF IL ROUTE 161 ONE QUARTER MILE FROM THE STRUCTURE AS DIRECTED OF THE ENGINEER.
- 10 OVERNIGHT DROP-OFFS WILL NOT BE PERMITTED ADJACENT TO AN OPEN LANE OF TRAFFIC.
- 11 BARRIER WALL MARKERS, TYPE B WILL BE PLACED ON THE FACE OF THE PARAPET AND BARRIER WALL MARKERS TYPE C WILL BE PLACED ON TOP OF THE PARAPET.
- THE DEPARTMENT STRONGLY ENCOURAGES THE PRIME CONTRACTOR AND THEIR APPROVED SUB-CONTRACTORS TO HIRE MINORITY, WOMEN AND DISADVANTAGED INDIVIDUALS FROM ITS FEDERALLY FUNDED HIGHWAY CONSTRUCTION CAREERS TRAINING PROGRAM (HCCTP) TO HELP MEET WORKFORCE AND TRAINEE GOALS. THIS PROGRAM IS TRAINING MINORITIES, WOMEN AND DISADVANTAGED INDIVIDUALS IN HIGHWAY CONSTRUCTION-RELATED SKILLS, E.G., MATH FOR THE TRADES, JOB READINESS, TECHNICAL SKILLS COURSEWORK (CARPENTRY, CONCRETE FLATWORK, BLUEPRINT READING, SITE PLANS, SITE WORK, TOOLS USE, ETC.) AND OSHA 10 HOUR CERTIFICATION, TO PREPARE THEM FOR A CAREER IN THE HIGHWAY CONSTRUCTION TRADES. GRADUATES ARE WELL-TRAINED AND READY TO BECOME PRODUCTIVE ENTRY-LEVEL CONSTRUCTION WORKERS. CONTACT THE DISTRICT 8 EEO OFFICE AT 618-346-3360 AND/OR THE HCCTP COORDINATOR AT 618-874-6528 TO LEARN MORE ABOUT THE PROGRAM AND FOR ASSISTANCE IN MEETING WORKFORCE AND TRAINEE GOALS.

# INDEX OF SHEETS

- COVER SHEET
- INDEX OF SHEETS, HIGHWAY STANDARDS, GENERAL NOTES & COMMITMENTS
- 3 SUMMARY OF QUANTITIES
- 4 TYPICAL SECTIONS
- 5 SCHEDULE OF QUANTITIES
- 6 PLAN SHEET
- 7 16 BRIDGE PLANS
- 17 STAGE CONSTRUCTION DETAILS

## HIGHWAY STANDARDS

000001-06 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

001001-02 AREAS OF REINFORCEMENT BARS

001006 DECIMAL OF AN INCH AND OF A FOOT

630001-10 STEEL PLATE BEAM GUARDRAIL

630301-05 SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS

63/031-10 TRAFFIC BARRIER TERMINAL, TYPE 6

635006-03 REFLECTOR AND TERMINAL MARKER PLACEMENT

635011-02 REFLECTOR MARKER AND MOUNTING DETAIL

701001-02 OFF ROAD OPERATIONS

701201-04 LANE CLOSURE, 2L, 2W, DAY ONLY FOR SPEEDS GREATER THAN 45 MPH

701311-03 LANE CLOSURE 2L, 2W, MOVING OPERATIONS - DAY ONLY

701321-12 LANE CLOSURE BRIDGE REPAIR WITH BARRIER

701326-04 LANE CLOSURE, PAVEMENT WIDENING >= 45MPH

701901-02 TRAFFIC CONTROL DEVICES

704001-07 TEMPORARY CONCRETE BARRIER

780001-03 TYPICAL PAVEMENT MARKINGS

781001-03 TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

COMMITMENTS

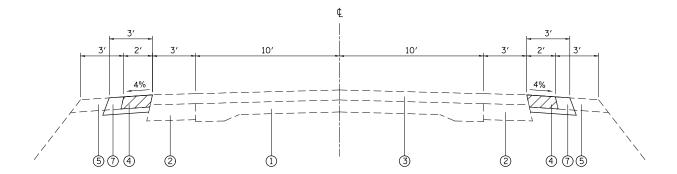
NONE

| FILE NAME =               | USER NAME = muchlfeldac                | DESIGNED - ACM | REVISED - |                              | INDEX OF SHEETS, HIGHWAY STANDARDS,              | F.A.P SECTION   | COUNTY TOTAL SHEET |
|---------------------------|--|----------------|-----------|------------------------------|--|-----------------|--------------------|
| c:\pwwwork\pwidot\muehlfe | eldac\d0260835\d876e99~sht-gennote.dgn | DRAWN - ACM    | REVISED - | STATE OF ILLINOIS            | GENERAL NOTES, COMMITMENTS                       | 805 125BR-2     | ST. CLAIR 17 2     |
|                           | PLOT SCALE = 100.0000 '/ in.           | CHECKED -      | REVISED - | DEPARTMENT OF TRANSPORTATION |  |                 | CONTRACT NO. 76E99 |
| L                         | PLOT DATE = 10/31/2011                 | DATE -         | REVISED - |                              | SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA. | ILLINOIS FED. # | AID PROJECT        |

# SUMMARY OF QUANTITIES

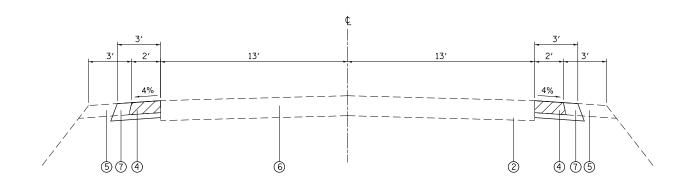
|          | SUMMARY OF QUANTITIE                                | <u>s</u> |                     | CONSTRUC           | ON TYPE CODE         | SUMMARY OF QUANTIT   | TES           |                 | CONST      | RUCTION TYPE CODE |
|----------|---|----------|---------------------|--------------------|----------------------|--|---------------|-----------------|------------|-------------------|
| DE NO    | ITEM  | UNIT     | TOTAL<br>QUANTITIES | 100% STATE<br>0014 | CODE NO              | ITEM   | <del></del>   | TOTAL           | 100% STATE |                   |
| 200500   | EARTH EXCAVATION (WIDENING)                         | CU YD    | 24                  | 24                 | ₹ 78100100           | RAISED REFLECTIVE PAVEMENT MARKER                            | UNIT          | QUANTITIES<br>8 | 0014       |                   |
| 20400800 | FURNISHED EXCAVATION                                | CU YD    | 526                 | 526                | 78100105             | RAISED REFLECTIVE PAVEMENT MARKER                            | EACH          | 4               | 4          |                   |
| 35650400 | BASE COURSE WIDENING 9"                             | SQ YD    | 177                 | 177                |                      | (BRIDGE)   |               |                 |            |                   |
| 44004250 | PAVED SHOULDER REMOVAL                              | SQ YD    | 118                 | 118                | 78200410             |  | EACH          | 14              | 14         |                   |
| 50102400 | CONCRETE REMOVAL                                    | CU YD    | 19.2                | 19.2               | 78200520             | BARRIER WALL MARKERS, TYPE B                                 | EACH          | 8               | 8          |                   |
| 50300255 | CONCRETE SUPERSTRUCTURE                             | CU YD    | 52.8                | 52.8               | 78200530             | BARRIER WALL MARKERS, TYPE C                                 | EACH          | 8               | 8          |                   |
| 50300300 | PROTECTIVE COAT                                     | SQ YD    | 59.5                | 59.5               | 78201000             | TERMINAL MARKER - DIRECT APPLIED                             | EACH          | 4               | 4          |                   |
| 50500405 | FURNISHING AND ERECTING STRUCTURAL. STEEL           | POUND    | 2790                | 2790               | 78300100<br>78300200 | PAVEMENT MARKING REMOVAL  RAISED REFLECTIVE PAVEMENT MARKER  | SQ FT<br>EACH | 670<br>12       | 670        |                   |
| 50800205 | REINFORCEMENT BARS, EPOXY COATED                    | POUND    | 3800                | 3800               | N v7200200           | REMOVAL WIDE LOAD SYCHING                                    |               |                 |            |                   |
| 50800515 | BAR SPLICERS  | EACH     | 75                  | 75                 | X7200200             | WIDE LOAD SIGNING  | L SUM         | 1               | 1          |                   |
| 52000110 | PREFORMED JOINT STRIP SEAL                          | FOOT     | 68                  | 68                 | Z0001899             | JACK AND REMOVE EXISTING BEARINGS                            | EACH          | 10              | 10         |                   |
| 52100010 | ELASTOMERIC BEARING ASSEMBLY, TYPE I                | EACH     | 5                   | 5                  | Z0001905             | STRUCTURAL STEEL REPAIR  IMPACT ATTENUATORS, TEMPORARY (NON~ | POUND         | 2730            | 2730       |                   |
| 52100020 | ELASTOMERIC BEARING ASSEMBLY, TYPE II               | EACH     | 5                   | 5                  | Z0030250             | REDIRECTIVE), TEST LEVEL 3                                   | EACH          | 2               | 2          |                   |
| 52100520 | ANCHOR BOLTS, 1"                                    | EACH     | 20                  | 20                 | Z0030350             | IMPACT ATTENUATORS, RELOCATE (NON-                           | EACH          | 2               | 2          |                   |
| 63000001 | STEEL PLATE BEAM GUARDRAIL, TYPE A, 6<br>FOOT POSTS | FOOT     | 688                 | 688                |                      | REDIRECTIVE), TEST LEVEL 3                                   |               |                 |            |                   |
| 63100085 | TRAFFIC BARRIER TERMINAL, TYPE 6                    | EACH     | 4                   | 4                  |                      |  |               |                 |            |                   |
| 63100167 | TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT  | EACH     | 4                   | 4                  |                      |  |               |                 |            |                   |
| 63200310 | GUARDRAIL REMOVAL                                   | FOOT     | 1209                | 1209               |                      |  | 1             |                 |            |                   |
| 67000400 | ENGINEER'S FIELD OFFICE, TYPE A                     | CAL MO   | 9                   | 9                  |                      |  |               |                 |            |                   |
| 67100100 | MOBILIZATION  | L SUM    | 1                   | 1                  |                      |  |               |                 |            |                   |
| 70100405 | TRAFFIC CONTROL AND PROTECTION,<br>STANDARD 701321  | EACH     | 1                   | 1                  |                      |  |               |                 |            |                   |
| 70100500 | TRAFFIC CONTROL AND PROTECTION,<br>STANDARD 701326  | L SUM    | 1                   | 1                  |                      |  |               |                 |            |                   |
| 70106500 | TEMPORARY BRIDGE TRAFFIC SIGNALS                    | EACH     | 1                   | 1                  |                      |  |               |                 |            |                   |
| 70106700 | TEMPORARY RUMBLE STRIPS                             | EACH     | 6                   | 6                  |                      |  |               |                 |            |                   |
| 70106800 | CHANGEABLE MESSAGE SIGN                             | CAL MO   | 0.5                 | 0.5                |                      |  |               |                 |            |                   |
| 70300220 | TEMPORARY PAVEMENT MARKING - LINE 4"                | FOOT     | 2015                | 2015               |                      |  |               |                 |            |                   |
| 70300240 | TEMPORARY PAVEMENT MARKING - LINE 6"                | FOOT     | 1050                | 1050               |                      |  |               |                 |            |                   |
| 70301000 | WORK ZONE PAVEMENT MARKING REMOVAL                  | SQ FT    | 672                 | 672                |                      |  |               |                 |            |                   |
| 70400100 | TEMPORARY CONCRETE BARRIER                          | FOOT     | 525                 | 525                |                      |  |               |                 |            |                   |
| 70400200 | RELOCATE TEMPORARY CONCRETE BARRIER                 | FOOT     | 525                 | 525                |                      |  |               |                 |            |                   |
| 78000200 | THERMOPLASTIC PAVEMENT MARKING - LINE 4"            | FOOT     | 856                 | 856                |                      |  |               |                 |            |                   |
| 78008210 | POLYUREA PAVEMENT MARKING TYPE I - LINE<br>4"       | FOOT     | 1159                | 1159               |                      |  |               |                 |            |                   |
|          |   |          |                     |                    |                      | *SPECIALTY ITEM  |               |                 |            |                   |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



## TYPICAL SECTION

STA. 510+00.00 TO STA 510+30.21 STA. 514+44.99 TO STA 515+80.00



# TYPICAL SECTION

STA. 510+30.21 TO STA 511+30.21 STA. 514+44.99 TO STA 514+44.49

DENOTES PAVED SHOULDER REMOVAL

## 

# STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SCALE: 20'

# PLAN AND TYPICAL SECTION SHEET F.A.P. RTE. SECTION COUNTY SHEETS NO. TOTAL SHEETS NO. 805 125BR-2 ST. CLAIR 17 4 CONTRACT NO. 76E99 SHEET NO. 1 OF 1 SHEETS STA. 510+00.00 TO STA. 515+80.00 | ILLINOIS| FED. AID PROJECT

# LEGEND

- ① EXISTING PCC PAVEMENT, 9-6-9
- ② EXISTING HMA WIDENING' 8"
- 3 EXISTING HMA SURFACE, 5"±
- 4 EXISTING HMA SHOULDERS, 6"
- (5) EXISTING AGG. SHOULDERS, 6"
- 6 EXISTING BRIDGE APPROACH PAVEMENT
- 7 PROPOSED BASE COURSE WIDENING, 9"

# MIX REQUIREMENT CHART

| MIXTURE USE        | BINDER/BASE COURSE |
|--------------------|--------------------|
| AC/PG              | PG 64-22           |
| RAP % (MAX)        | SEE SPEC.          |
| DESIGN AIR VOIDS   | 4.0% @ Ndes=70     |
| MIX COMPOSITION    |                    |
| GRADATION MIXTURE) | IL 19.0            |
| RICTION AGG        | MIXTURE "B"        |
|                    |                    |

|           |    | SHOU      | LDER WIDENING | SCHEDULE         |             |
|-----------|----|-----------|---------------|------------------|-------------|
|           |    |           | PAVED SHLDR   | EARTH EXCAVATION | BASE COURSE |
| STATION   | ТО | STATION   | REMOVAL       | (WIDENING)       | WIDENING 9" |
|           |    |           | SQ YD         | CU YD            | SQ YD       |
| 510+00.00 | ТО | 511+30.21 | 57.87         | 11.57            | 86.81       |
| 514+45.26 | ТО | 515+80.00 | 59.87         | 11.97            | 89.81       |
|           |    |           |               |                  |             |
| TOTAL     |    |           | 117.74        | 23.55            | 176.61      |
| ROUNDED   |    |           | 118           | 24               | 177         |

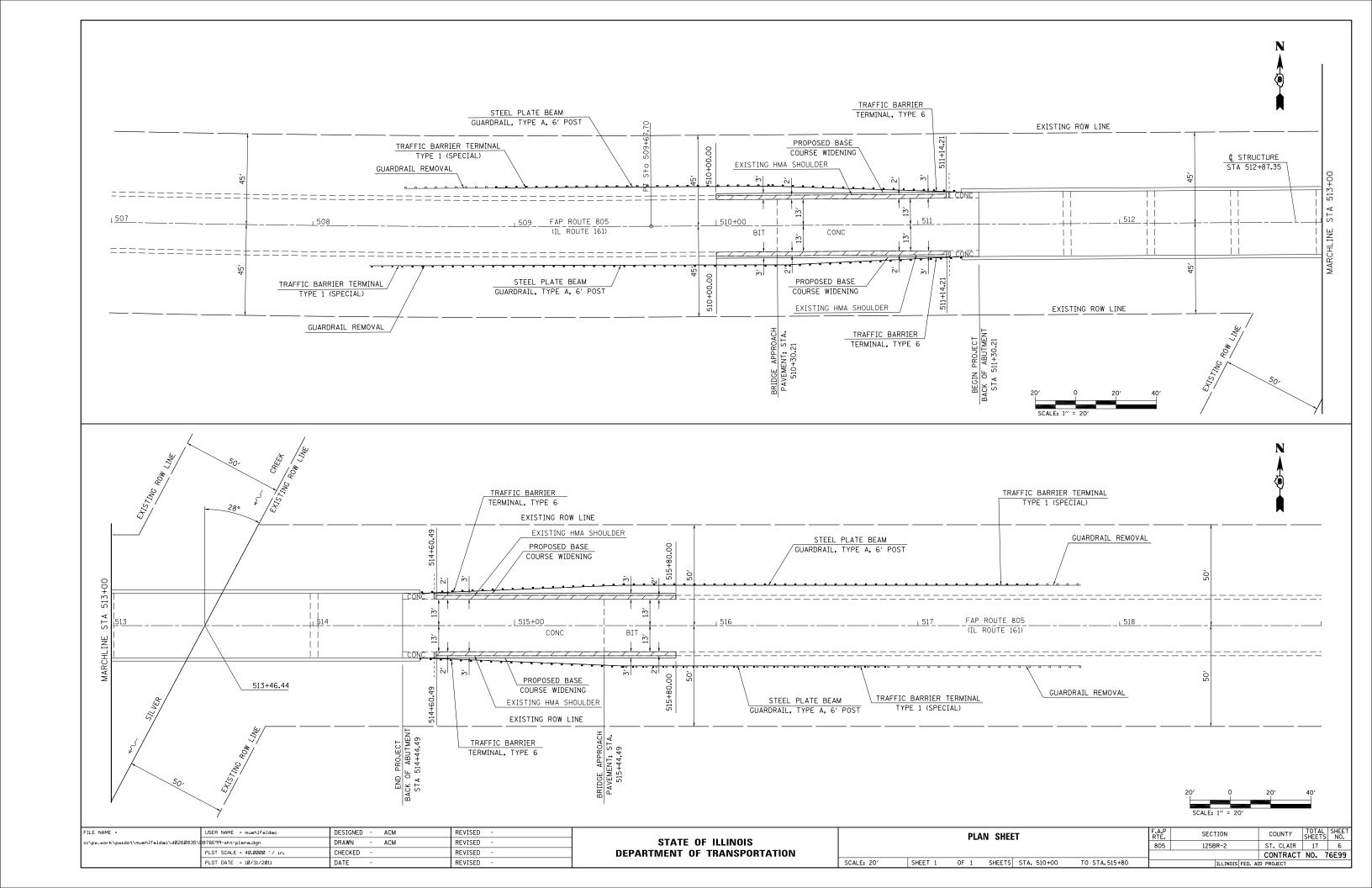
|              | STAGING SCHEDULE |           |                  |                    |                    |           |                |  |  |  |  |  |  |
|--------------|------------------|-----------|------------------|--------------------|--------------------|-----------|----------------|--|--|--|--|--|--|
|              | TEMPORARY        | RELOCATE  | TEMPORARY        | IMPACT ATTENUATORS | IMPACT ATTENUATORS | TEMPORARY | TEMPORARY      |  |  |  |  |  |  |
|              | CONCRETE         | TEMPORARY | PAVEMENT MARKING | TEMPORARY          | RELOCATE           | RUMBLE    | BRIDGE TRAFFIC |  |  |  |  |  |  |
| STAGE        | BARRIER          | CONCRETE  | LINE - 6 INCH    | (NON-REDIRECTIVE)  | (NON-REDIRECTIVE)  | STRIP     | SIGNALS        |  |  |  |  |  |  |
|              |                  | BARRIER   |                  | TEST LEVEL 3       | TEST LEVEL 3       |           |                |  |  |  |  |  |  |
|              | FOOT             | FOOT      | FOOT             | EACH               | EACH               | EACH      | EACH           |  |  |  |  |  |  |
| STAGE I      | 525              |           | 525              | 2                  |                    |           |                |  |  |  |  |  |  |
| STAGE II     |                  | 525       | 525              |                    | 2                  |           |                |  |  |  |  |  |  |
| STAGE I & II |                  |           |                  |                    |                    | 6         | 1              |  |  |  |  |  |  |
|              |                  |           |                  |                    |                    |           |                |  |  |  |  |  |  |
| TOTAL        | 525              | 525       | 1050             | 2                  | 2                  | 6         | 1              |  |  |  |  |  |  |

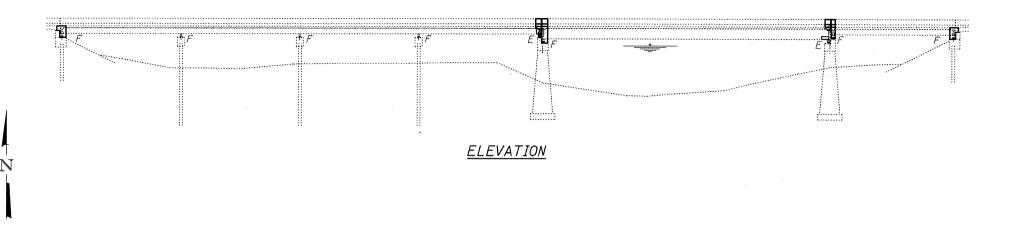
|           | PAVEMENT MARKING SCHEDULE |           |          |               |                   |                     |                     |                   |                   |                       |                  |                  |
|-----------|---------------------------|-----------|----------|---------------|-------------------|---------------------|---------------------|-------------------|-------------------|-----------------------|------------------|------------------|
|           |                           |           | PAVEMENT | THERMOPLASTIC | THERMOPLASTIC     | POLYUREA            | POLYUREA            | RAISED REFLECTIVE | AMBER             | AMBER                 | TEMPORARY        | WORK ZONE        |
| STATION   | ТО                        | STATION   | MARKING  | P.M. LINE 4"  | P.M. LINE 4"      | P.M. TY I - LINE 4" | P.M. TY I - LINE 4" | PVMT MARKER       | RAISED REFLECTIVE | RAISED REFLECTIVE     | PAVEMENT MAKRING | PAVEMENT MARKING |
|           |                           |           | REMOVAL  | SOLID, WHITE  | SKIP-DASH, YELLOW | SOLID, WHITE        | SKIP-DASH, YELLOW   | REMOVAL           | PVMT MARKER       | PVMT MARKING (BRIDGE) | LINE - 4 INCH    | REMOVAL          |
|           |                           |           | SQ FT    | FOOT          | F00T              | FOOT                | F00T                | EACH              | EACH              | EACH                  | F00T             | SQ FT            |
| 508+37.48 | TO                        | 510+30.21 | 144.55   | 385.46        | 50.000            |                     |                     | 3                 | 3                 |                       | 435.46           | 145.15           |
| 510+30.21 | TO                        | 515+44.49 | 385.71   |               |                   | 1028.56             | 130                 | 6                 | 2                 | 4                     | 1159.00          | 386.19           |
| 515+44.49 | TO                        | 517+29.70 | 138.91   | 370.42        | 50.000            |                     |                     | 3                 | 3                 |                       | 420.42           | 140.14           |
|           |                           |           |          |               |                   |                     |                     |                   |                   |                       |                  |                  |
| TOTALS    |                           |           | 669.16   | 755.88        | 100               | 1028.56             | 130                 | 12                | 8                 | 4                     | 2014.88          | 671.48           |
| ROUNDED   |                           |           | 670      |               | 356               | 1:                  | 159                 | 12                | 8                 | 4                     | 2015             | 672              |

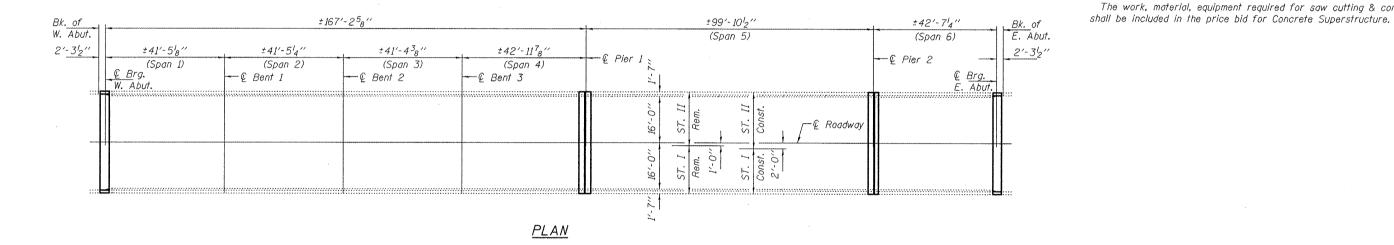
|           |    |           |       |            |           | GU                   | ARDRAIL SCHEDULE  | -               |           |              |              |               |
|-----------|----|-----------|-------|------------|-----------|----------------------|-------------------|-----------------|-----------|--------------|--------------|---------------|
|           |    |           |       | FURNISHED  | GUARDRAIL | STEEL PLATE BEAM     | TRAFFIC BARRIER   | TRAFFIC BARRIER | GUARDRAIL | BARRIER WALL | BARRIER WALL | TERMINAL      |
| LOCATION  |    | ON        | SIDE  | EXCAVATION | REMOVAL   | GUARDRAIL,           | TERMINAL, TYPE 1  | TERMINAL,       | MARKERS,  | MARKERS,     | MARKERS,     | MARKER -      |
|           |    |           |       |            |           | TYPE A, 6 FOOT POSTS | (SPECIAL) TANGENT | TYPE 6          | TYPE A    | TYPE B       | TYPE C       | DIRECT APPLIE |
| STATION   | ТО | STATION   | RT/LT | SQ YD      | FOOT      | F00T                 | EACH              | EACH            | EACH      | EACH         | EACH         | EACH          |
| 508+45.46 | ТО | 511+21.77 | LT    |            | 276.3     |                      |                   |                 |           |              |              |               |
| 508+45.46 | ТО | 511+21.77 | RT    |            | 276.3     |                      |                   |                 |           |              |              |               |
| 508+90.08 | TO | 511+21.77 | LT    | 114.42     |           | 137.5                | 1                 | 1               | 3         |              |              | 1             |
| 508+28.67 | ТО | 511+21.71 | RT    | 144.96     |           | 200.0                | 1                 | 1               | 4         |              |              | 1             |
| 511+21.71 | ТО | 514+52.99 | RT/LT |            |           |                      |                   |                 |           | 8            | 8            |               |
| 514+52.99 | TO | 517+59.24 | LT    | 149.75     |           | 212.5                | 1                 | 1               | 4         |              |              | 1             |
| 514+52.99 | ТО | 516+84.24 | RT    | 116.05     |           | 137.5                | 1                 | 1               | 3         |              |              | 1             |
| 514+52.99 | ТО | 517+80.79 | LT    |            | 327.8     |                      |                   |                 |           |              |              |               |
| 514+52.99 | ТО | 517+80.79 | RT    |            | 327.8     |                      |                   |                 |           |              |              |               |
| Total     |    |           |       | 525.2      | 1208.2    | 687.5                | 4                 | 4               | 14        | 8            | 8            | 4             |
| Rounded   |    |           |       | 526        | 1209      | 688                  | 4                 | 4               | 14        | 8            | 8            | 4             |

FROM FIELD MEASUREMENTS IT APPEARS THERE IS ENOUGH AREA TO PLACE FURNISHED EXCAVATION. IF THE RESIDENT ENGINEER DETERMINES THERE IS NOT ENOUGH AREA REMOVE THE FURNISHED EXCAVATION AND STEEL PLATE BEAM GUARDRAIL, 9 FOOT POSTS.

| FILE NAME =                             | USER NAME = muehlfeldac       | DESIGNED - ACM | REVISED - |                              |             | SCHEDULE OF QUANTITIES       |         | F.A.P<br>RTF | SECTION       | COUNTY        | TOTAL SHEET |
|---|-------------------------------|----------------|-----------|------------------------------|-------------|------------------------------|---------|--------------|---------------|---------------|-------------|
| c:\pw_work\pwidot\muehlfeldac\d0260835\ | 1876e99-sht-Schedules.dgn     | DRAWN - ACM    | REVISED - | STATE OF ILLINOIS            |             | CONEDULE OF COARTIFIES       |         | 805          | 125BR-2       | ST. CLAIR     | 17 5        |
|   | PLOT SCALE = 100.0000 ' / in. | CHECKED -      | REVISED - | DEPARTMENT OF TRANSPORTATION |             |                              |         |              |               | CONTRACT      | NO. 76E99   |
|   | PLOT DATE = 10/31/2011        | DATE -         | REVISED - |                              | SCALE: NONE | SHEET NO. 1 OF 1 SHEETS STA. | TO STA. |              | ILLINOIS FED. | . AID PROJECT |             |









## EXPIRES 11-30-2012

|        | aA     |             |          |   |       |                   |
|--------|--------|-------------|----------|---|-------|-------------------|
| SIGNED | Adison | J. Halloway | EXAMINED | lan F I I II                              | DATE  | NOVEMBER 23, 2011 |
| HECKED | Ultin  | J. fors     |          | ACTING ENGINEER OF ATHUCTURAL SERVICES    |       |                   |
| RAWN   | baliva |             | PASSED   | La Carl Dringe                            | REVIS |                   |
| HECKED | ATH    | <i></i> するし |          | ACTING ENGINEER OF BRIDGES AND STRUCTURES | REVIS |                   |
|        |        |             |          |   |       |                   |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN AND ELEVATION
IL 161 OVER SILVER CREEK
SN 082-0095
SHEET NO. 1 OF 10 SHEETS

F.A. RTE. SECTION COUNTY SHEETS NO.

805 1258R-2 ST. CLAIR 17 7

CONTRACT NO. 76E99

# TOTAL BILL OF MATERIAL

| TOTAL BILL OF MAT                        | <u>ERIAL</u> |       |
|--|--------------|-------|
| ITEM                                     | UNIT         | TOTAL |
| Concrete Removal                         | Cu. Yd.      | 19.2  |
| Concrete Superstructure                  | Cu. Yd.      | 52.8  |
| Reinforcement Bars, Epoxy Coated         | Pound        | 3800  |
| Structural Steel Repair                  | Pound        | 2730  |
| Preformed Joint Strip Seal               | Foot         | 68    |
| Elastomeric Bearing Assembly, Type I     | Each         | 5     |
| Elastomeric Bearing Assembly, Type II    | Each         | 5     |
| Jack and Remove Existing Bearings        | Each         | 10    |
| Furnishing and Erecting Structural Steel | Pound        | 2790  |
| Anchor Bolts 1″∮                         | Each         | 20    |
| Bar Splicers                             | Each         | 75    |
| Protective Coat                          | Sq. Yd.      | 59.5  |
| Now apparate grade and                   |              |       |

\* New concrete areas only

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36,

Fasteners shall be high strength bolts. Bolts  ${}^{7}8''$ , open holes  ${}^{15}_{16}''$ ,

Reinforcement bars designated (E) shall be epoxy coated.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project. Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

All structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M300, Type 1. Cost included with Furnishing and Erecting Structural

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar

The deck surface shall have its final finish tined according to Article 420.09(e)(1) of the Standard Specifications. Cost included with Concrete Superstructure. Joint openings shall be adjusted according to Article 520.04 of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

The work, material, equipment required for saw cutting & concrete removal

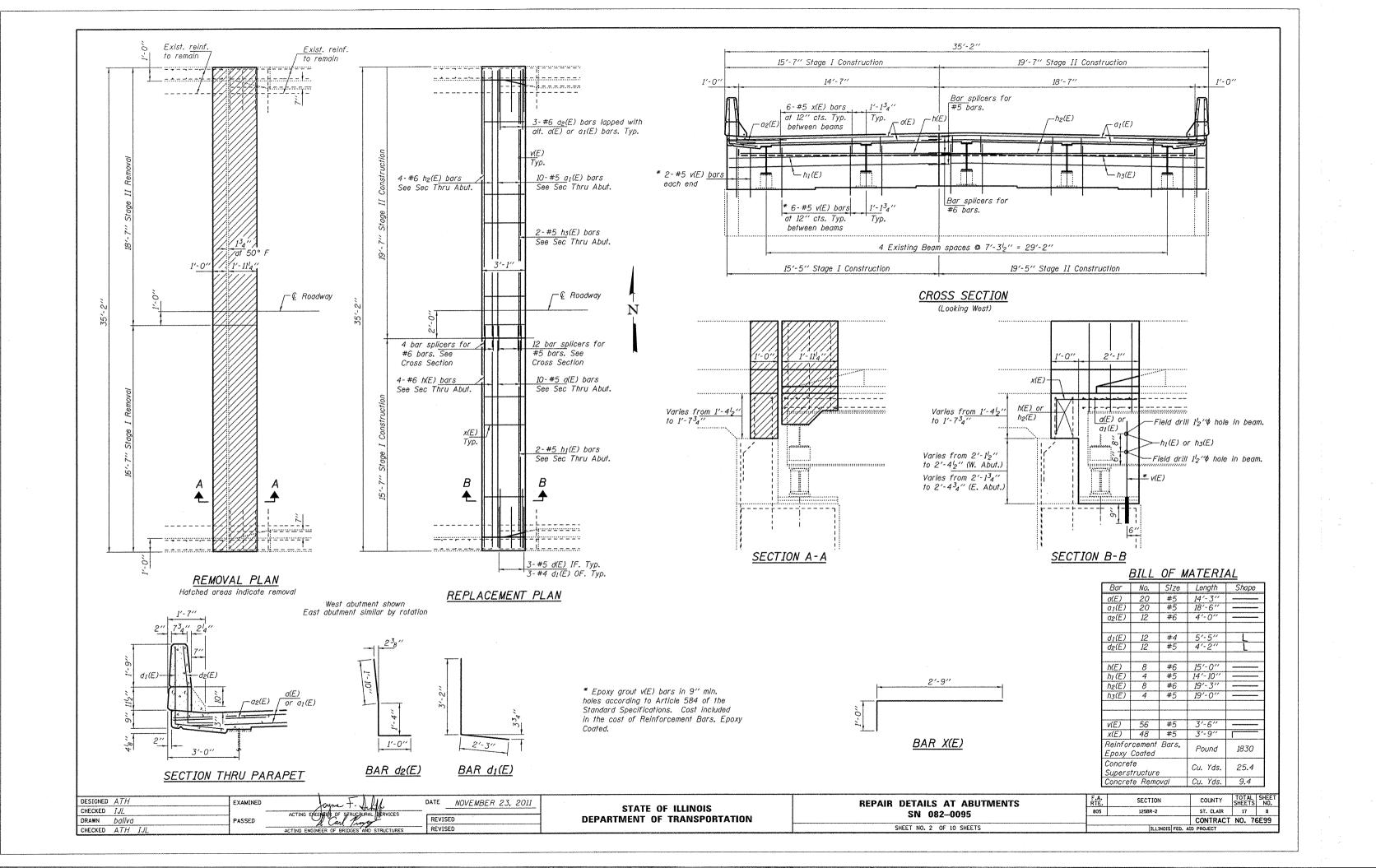
splicer or anchorage system. Cost included with Concrete Removal.

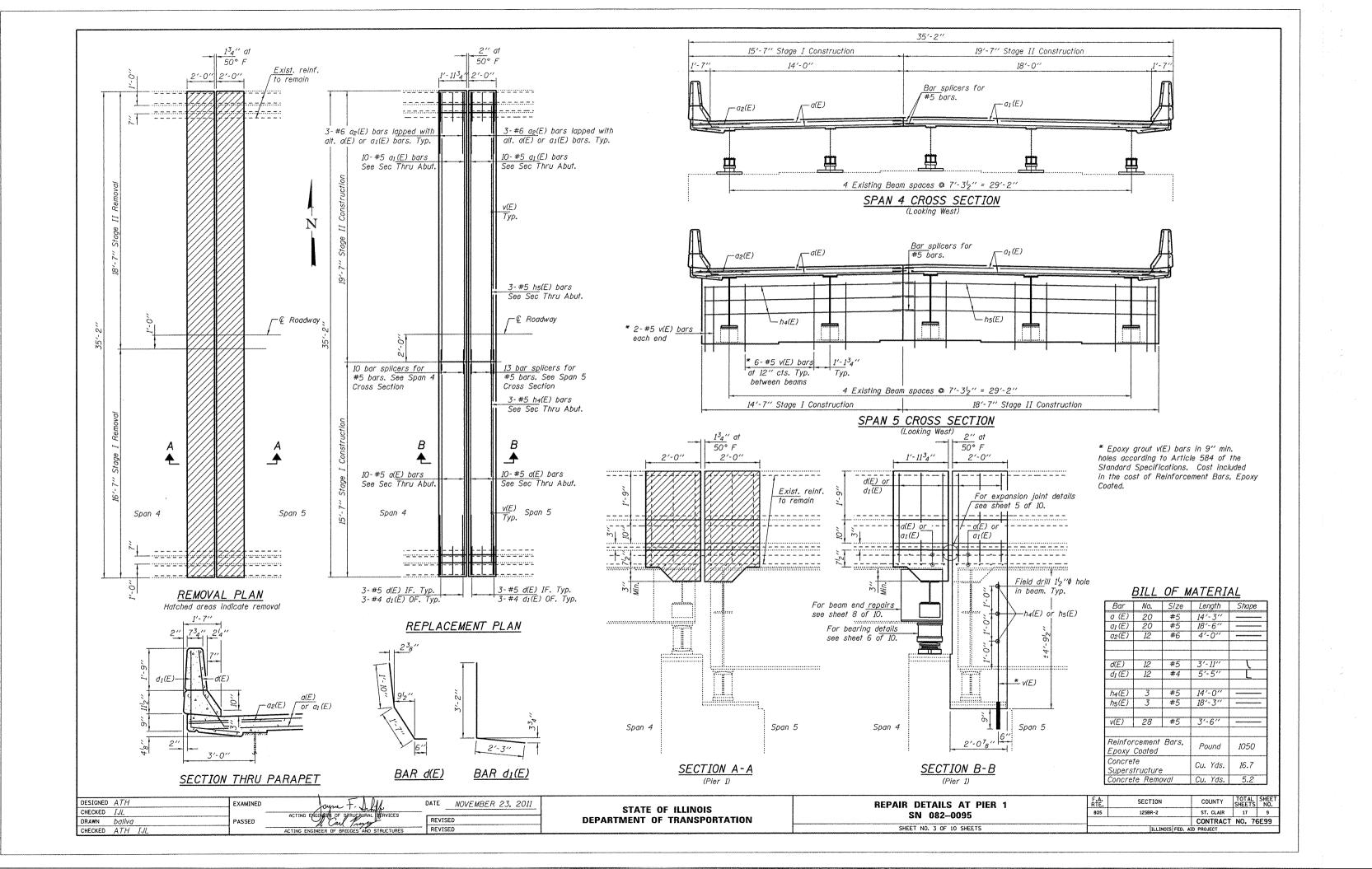
unless otherwise noted.

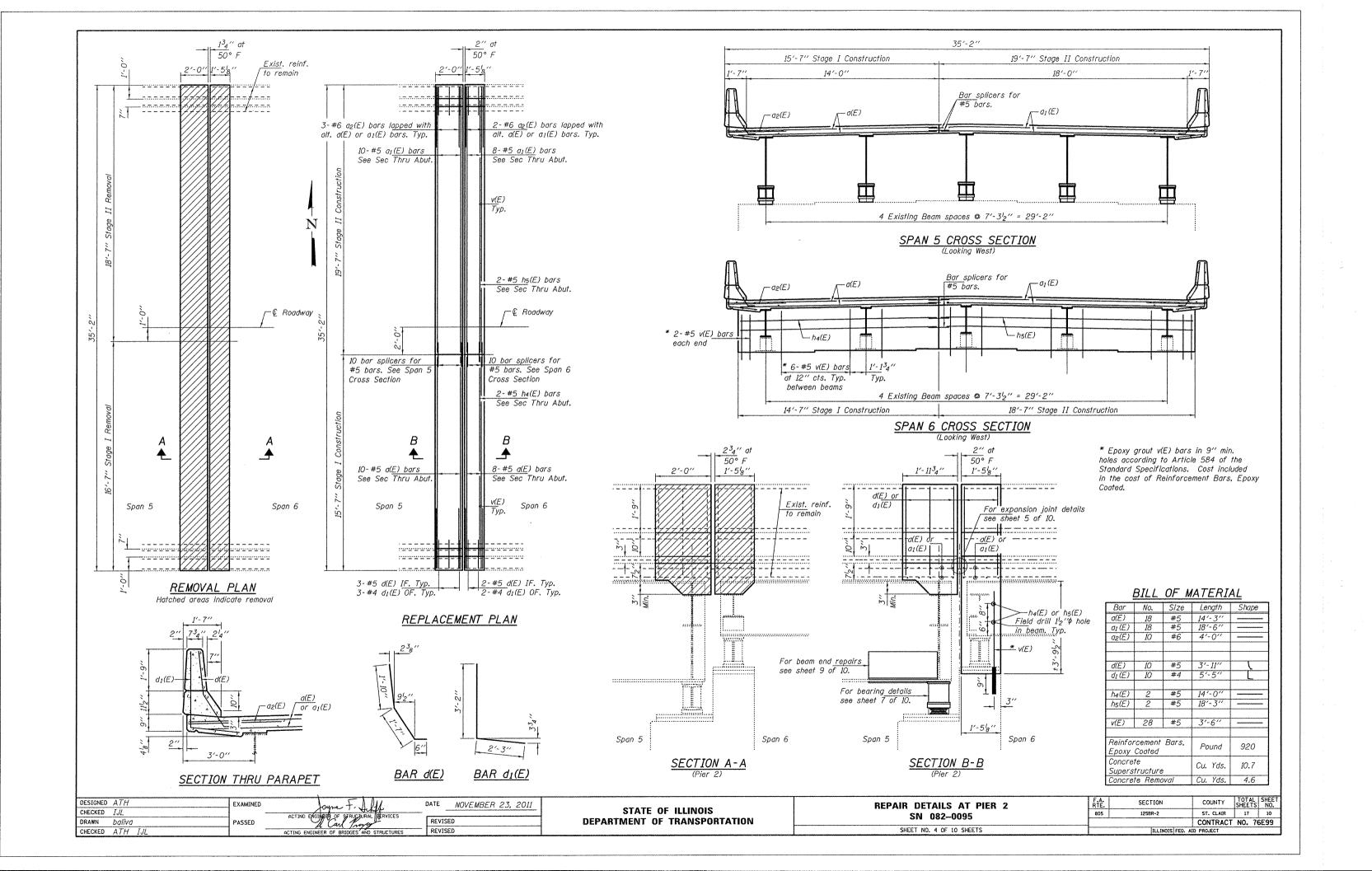
unless otherwise noted.

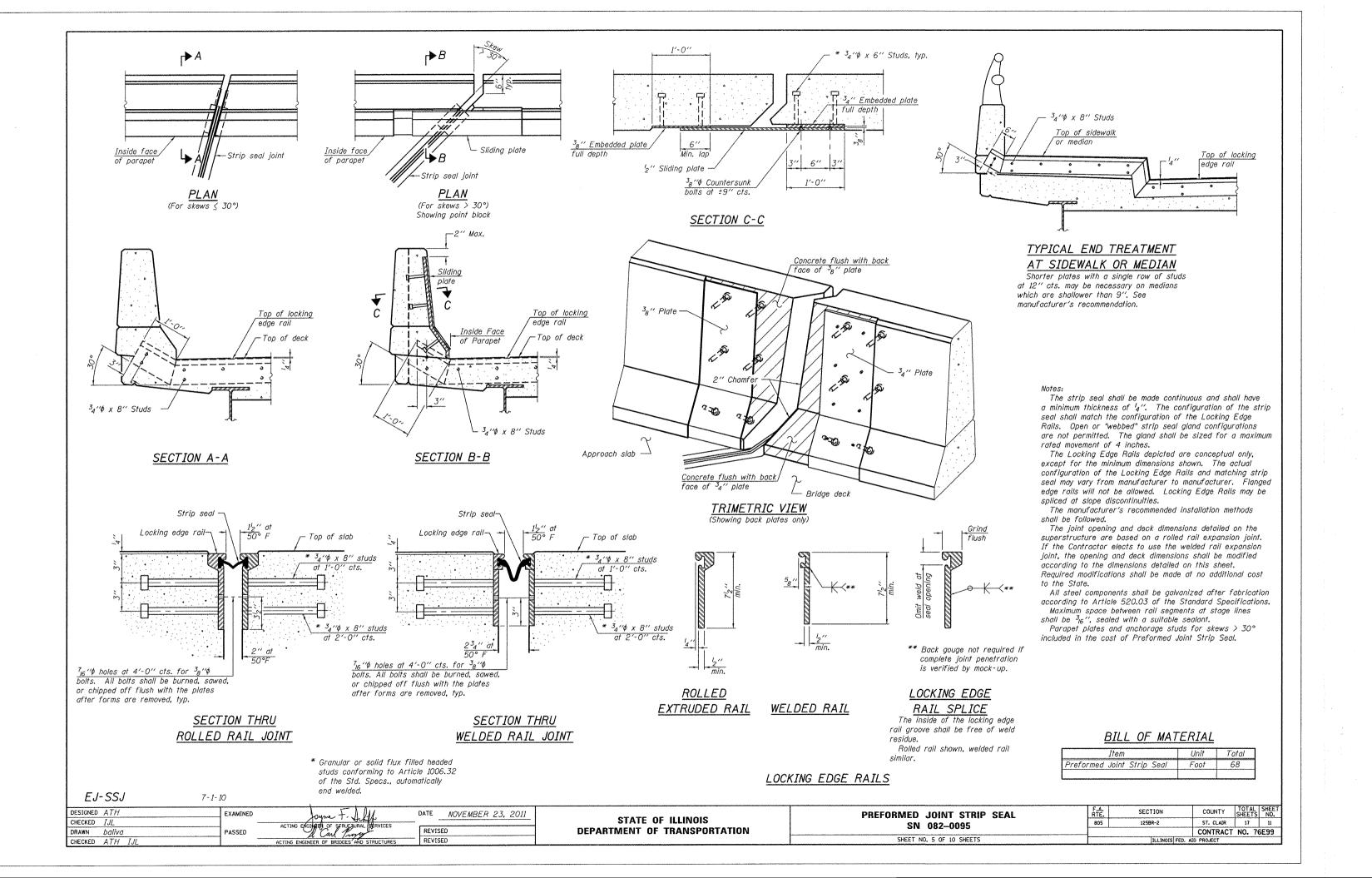
See Special Provisions.

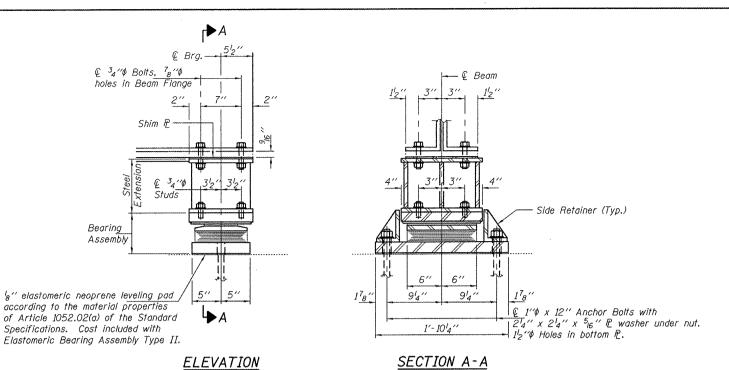
Steel or Structural Steel Repair.











14" Dimples on 12" centers

— PTFE Surface

deep, or equivalent.

 $\circ$ 

000

 $\bigcirc$ 

PLAN-PTFE SURFACE

TYPE II TFE ELASTOMERIC EXP. BRG.

34" Threaded Stud with flat washer &

\* In" PTFE dimpled, unlubricated

7 Layers of 3<sub>8</sub>" Elastomer (55 Durometer)

332 " Steel Plates

hex nut. (4-Read.)

l<sub>le</sub>" Stainless Steel

# BEAM REACTIONS

| •         |     |      |
|-----------|-----|------|
| R₽        | (K) | 18.4 |
| RŁ        | (K) | 35.7 |
| Imp.      | (K) | 10.7 |
| R (Total) | (K) | 64.8 |

Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.

New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel. Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Min. jack capacity = 35 Tons. Anchor bolts shall be ASTM F1554 all-thread (or an

Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

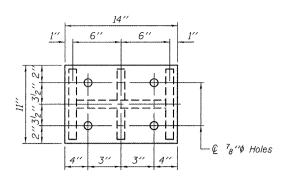
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Anchor bolts for Type II bearings shall be placed in holes drilled through the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.

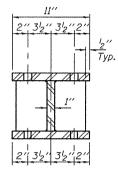
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications. Side retainers shall be included in the cost of Elastomeric Bearing Assembly, Type II.

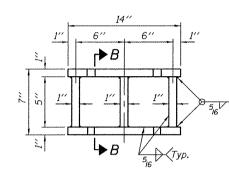
The '8" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 'g" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



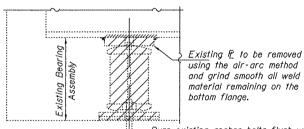
# PLAN TOP AND BOTTOM PLATE





# SECTION B-B

# STEEL EXTENSION DETAIL

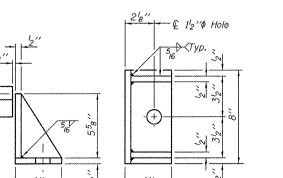


material remaining on the bottom flanae.

Burn existing anchor bolts flush with existing concrete surface. Grind existing anchor bolt smooth and seal with epoxy.

# EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.



SECTION THRU PTFE

18" PTFE with dimpled,

unlubricated surface

# C Bott. Brg. ---BELOW 50° F.

. 5½" € Top Brg.

ABOVE 50° F. (Move bott, brg. away from fixed brg.) (Move bott, brg. toward fixed brg.)

:5½" € Top Brg.

## Unit Total Elastomeric Bearina Each 5 Assembly, Type II lack and Remove Each Existing Bearings Furnishing and Erecting Structural Steel 740 Pound Each Anchor Bolts 1"4

BILL OF MATERIAL

# SIDE RETAINER

SETTING ANCHOR BOLTS AT EXP. BRG. Equivalent rolled angle with stiffeners " per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F. will be allowed in lieu of welded plates.

← P 1 x 10 x 1'-10'4"

BOTTOM BEARING ASSEMBLY

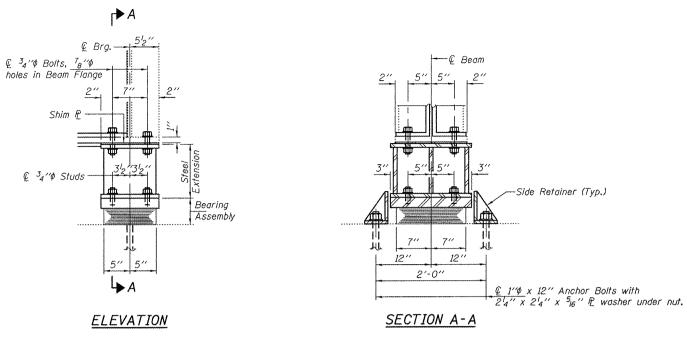
TOP BEARING ASSEMBLY

| TYII/REPS 12-03-2008 |              | 1                              |        |                   |
|----------------------|--------------|--------------------------------|--------|-------------------|
| DESIGNED ATH         | EXAMINED     | Jayme F. All                   | DATE   | NOVEMBER 23, 2011 |
| CHECKED IJL          | ACTING ENG   | INSTEND OF STRUCTURAL PERVICES | -      |                   |
| DRAWN baliva         | PASSED       | d Carl Proper                  | REVISI | ED                |
| CHECKED ATH IJI      | ACTING ENGIN | IEER OF BRIDGES AND STRUCTURES | REVISI | ED                |

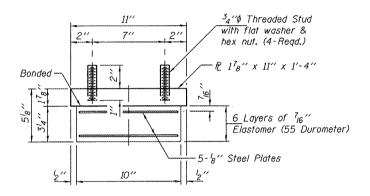
STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**  **BEARING DETAILS PIER 1, SPAN 4** SN 082-0095 SHEET NO. 6 OF 10 SHEETS

€ Bott. Brg. --

| <br>F.A.<br>RTE. | SECTION          | COUNTY     | TOTAL<br>SHEETS | SHEET<br>NO. |
|------------------|------------------|------------|-----------------|--------------|
| 805              | 125BR-2          | ST. CLAIR  | 17              | 12           |
|                  |                  | CONTRACT   | NO. 70          | 6E99         |
|                  | THE THOTO COD AT | O DDO ICCT |                 |              |

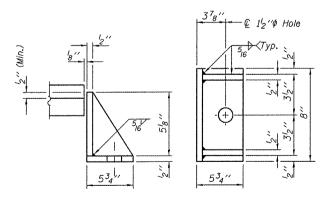


# TYPE I ELASTOMERIC EXP. BRG.



# BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly.



# SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

# BEAM REACTIONS

| RQ        | (K) | 60.2  |
|-----------|-----|-------|
| R4        | (K) | 43.3  |
| Imp.      | (K) | 9.6   |
| R (Total) | (K) | 113.1 |

Notes:
Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.
New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
Min. jack capacity = 65 Tons.
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer approved alternate material) of the grade(s)

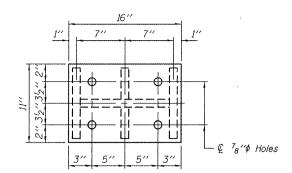
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

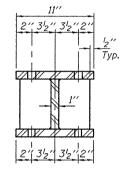
member is in place.

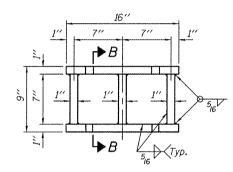
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Side retainers shall be included in the cost of Elastomeric Bearing Assembly, Type I.



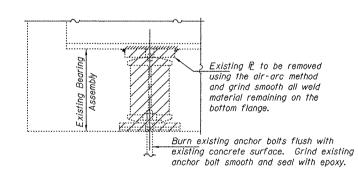
# PLAN TOP AND BOTTOM PLATE





SECTION B-B

STEEL EXTENSION DETAIL



# EXISTING BEARING REMOVAL DETAIL

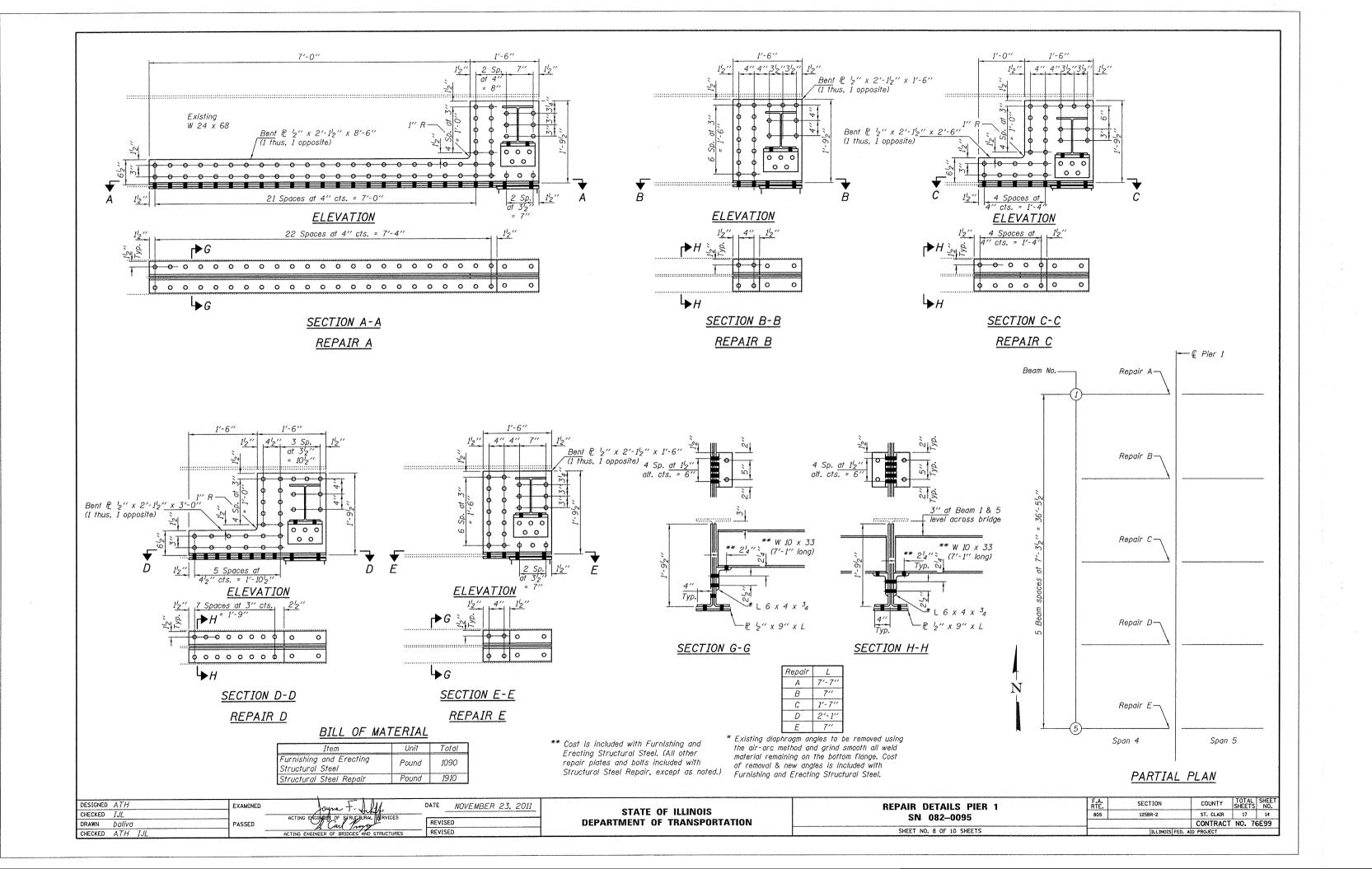
Cost included with Jack and Remove Existing Bearings.

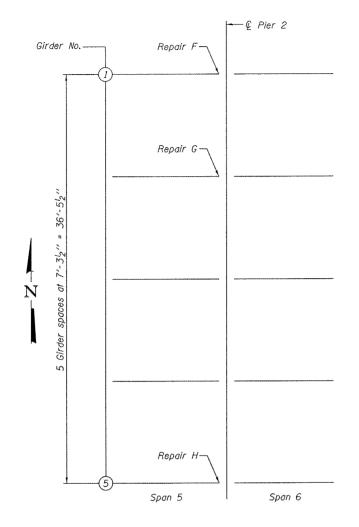
# BILL OF MATERIAL

| Item  | Unit  | Total |
|---|-------|-------|
| Elastomeric Bearing<br>Assembly, Type I     | Each  | 5     |
| Jack and Remove<br>Existing Bearings        | Each  | 5     |
| Furnishing and Erecting<br>Structural Steel | Pound | 960   |
| Anchor Bolts I''¢                           | Each  | 10    |

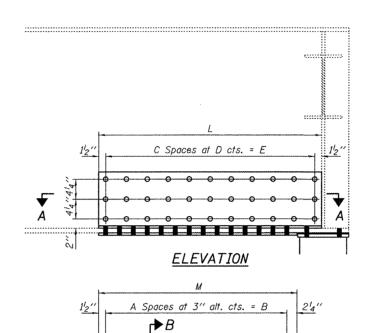
# TYI/REPS 12-03-2008

| DESIGNED ATH EX | XAMINED Journe F. J. III.                 | DATE NOVEMBER 23, 2011 | OTATE OF HEIDOG                                | BEARING DETAILS PIER 2, SPAN 5 | F.A. SECTION | COUNTY TOTAL SHEET NO. |
|-----------------|---|------------------------|--|--------------------------------|--------------|------------------------|
| CHECKED IJL     | ACTING ENGINEER OF STRUCTURAL HERVICES    | REVISED                | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | SN 082-0095                    | 805 125BR-2  | ST. CLAIR 17 13        |
| DRAWN baliva PA | ACTING ENGINEER OF BRIDGES AND STRUCTURES | REVISED                | DEPARTMENT OF TRANSPORTATION                   | SHEET NO. 7 OF 10 SHEETS       | ILLINOIS FE  | D. AID PROJECT         |



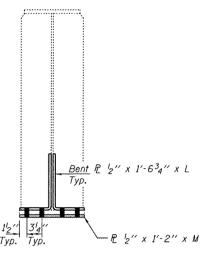


PARTIAL PLAN

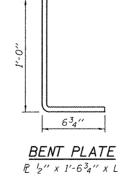


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SECTION A-A



SECTION B-B

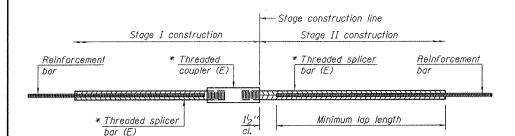


| Repair | М       | Α  | В     | L     | С  | D    | Ε     |
|--------|---------|----|-------|-------|----|------|-------|
| F      | 3'-634" | 13 | 3'-3" | 4'-0" | 10 | 412" | 3'-9" |
| G      | 1'-634" | 5  | 1'-3" | 2'-0" | 6  | 32"  | 1'-9" |
| Н      | 2'-634" | 9  | 2'-3" | 3'-0" | 8  | 418" | 2'-9" |

# BILL OF MATERIAL

| Item                    | Unit  | Total |
|-------------------------|-------|-------|
| Structural Steel Repair | Pound | 820   |

| DESIGNED ATH    | XAMINED           | on Filly                  | DATE NOVEMBER 23, 2011 |                              | REPAIR DETAILS PIER 2    | RTE.     | SECTION       | COUNTY      | SHEETS NO. |
|-----------------|-------------------|---------------------------|------------------------|------------------------------|--------------------------|----------|---------------|-------------|------------|
| CHECKED [JL     | ACTING ENGINEER   | OF STRUCTURAL BERVICES    |                        | STATE OF ILLINOIS            | SN 082-0095              | 805      | 125BR-2       | ST. CLAIR   | 17 15      |
| DRAWN baliva P. | ASSED             | and Proper                | REVISED                | DEPARTMENT OF TRANSPORTATION | CUECT HA A OF TO CUECTO  |          |               | CONTRACT    | NO. 76E99  |
| CHECKED ATH IJL | ACTING ENGINEER ( | OF BRIDGES AND STRUCTURES | REVISED                |                              | SHEET NO. 9 OF 10 SHEETS | <u> </u> | ILLINOIS FED. | AID PROJECT |            |



# STANDARD BAR SPLICER ASSEMBLY

|                           | Minim   | um Lap Leng | ths     |         |         |
|---------------------------|---------|-------------|---------|---------|---------|
| Bar size to<br>be spliced | Table 1 | Table 2     | Table 3 | Table 4 | Table 5 |
| 3, 4                      | 1'-5''  | 1'-11''     | 2'-1"   | 2'-4''  | 2'-3"   |
| 5                         | 1'-9''  | 2'-5"       | 2'-7"   | 2'-11'' | 2'-10"  |
| 6                         | 2'-1"   | 2'-11''     | 3'-1"   | 3'-6''  | 3'-4"   |
| 7                         | 2'-9"   | 3'-10''     | 4'-2"   | 4'-8''  | 4'-6"   |
| 8                         | 3'-8''  | 5'-1"       | 5′-5′′  | 6'-2"   | 5'-10'' |
| a                         | 1'-7"   | 6'-5"       | 6'-10"  | 7'-9"   | 71-511  |

Table 1: Black bar, 0.8 Class C

Table 2: Black bar, Top bar lap, 0.8 Class C

Table 3: Epoxy bar, 0.8 Class C

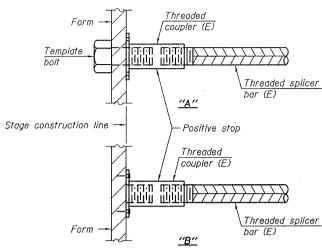
Table 4: Epoxy bar, Top bar lap, 0.8 Class C

Table 5: Epoxy bar, Top bar lap, Class B

Threaded splicer bar length = min. lap length +  $1_2^{l}$ " + thread length

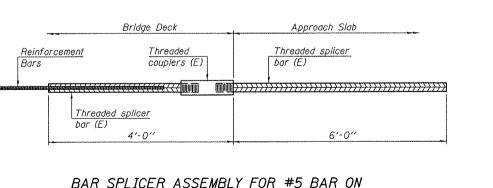
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

| / continu     | Bar  | No. assemblies | Table for minimum |
|---------------|------|----------------|-------------------|
| Location      | size | required       | lap length        |
| W. Abut.      | #5   | 12             | 3                 |
| W. Abut.      | #6   | 4              | 3                 |
| E. Abut.      | #5   | 12             | 3 .               |
| E. Abut.      | #6   | 4              | 3                 |
| Pier 1-Span 4 | #5   | 10             | 3                 |
| Pier 1-Span 5 | #5   | 13             | 3                 |
| Pier 2-Span 5 | #5   | 10             | 3                 |
| Pier 2-Span 6 | #5   | 10             | 3                 |



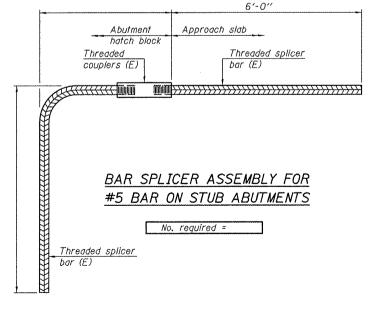
# INSTALLATION AND SETTING METHODS

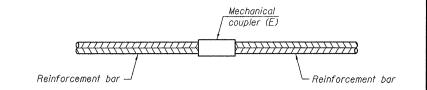
"A": Set bar splicer assembly by means of a template bolt. "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms. (E): Indicates epoxy coating.



# BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required =





# STANDARD MECHANICAL SPLICER

| Location                               | Bar<br>size  | No. assemblies<br>required |
|--|--------------|----------------------------|
|  |              |                            |
| ~~~                                    |              |                            |
| ······································ | <del> </del> | <b> </b>                   |

<u>NOTES</u>

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars. Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications. See special provision for Mechanical Splicers.

See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

7-1-10

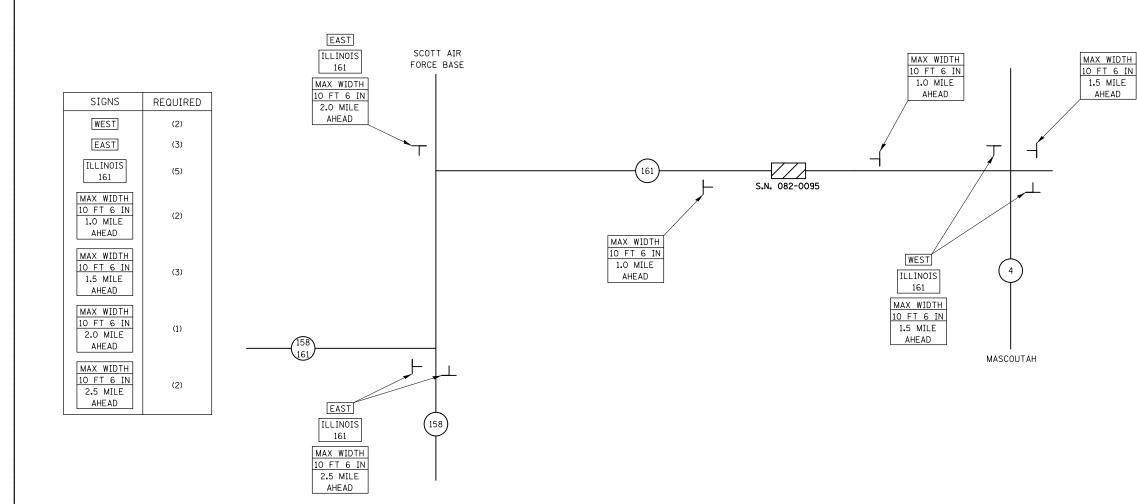
DESIGNED ATH EXAMINED CHECKED [JL DRAWN baliva PASSED CHECKED ATH IJ

DATE NOVEMBER 23, 2011 REVISED

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**  BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS SN 082-0095 SHEET NO. 10 OF 10 SHEETS

COUNTY TOTAL SHEET NO.

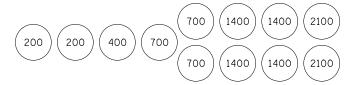
ST. CLAIR 17 16 SECTION





## NOTES

- 1. ALL SIGNS REQUIRED WILL BE SUPPLIED TO THE CONTRACTOR BY I.D.O.T.
- THE CONTRACTOR SHALL FURNISH THE POSTS AND ERECT SIGNS AT THE LOCATIONS SHOWN ON THIS SHEET, AS DIRECTED BY THE R.E./R.T. THE POSTS SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.
- 3. THE CONTRACTOR SHALL GIVE ILLINOIS DEPARTMENT OF TRANSPORTATION, BUREAU OF OPERATIONS TWO WEEKS NOTICE FOR SIGNS. THE CONTRACTOR SHALL PICK UP SIGNS AT THE T.M. BUILDING IN FAIRVIEW HEIGHTS, AND RETURN THEM UPON COMPLETION OF THE CONTRACT. CONTACT JEAN SLAPE, PHONE (618) 346-3289.
- 4. THE ABOVE NOTED WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE, LUMP SUM, FOR WIDE LOAD SIGNING AND NO OTHER COMPENSATION WILL BE ALLOWED.
- 5. SIGN SPACING WILL BE 400' OR TO FIT FIELD CONDITIONS.
- 6. THE HEIGHT TO THE BOTTOM OF THE LOWEST SIGN SHALL NOT BE LESS THAN  $6^\prime$



SAND MODULE IMPACT ATTENUATOR LAYOUT (IF OPTION USED)

| FILE NAME =                             | USER NAME = muehlfeldac   | DESIGNED - ACM | REVISED - |                              | STAGE CONSTI |                                      | F.A.P | P SECTION       | COUNTY      | TOTAL SHEET |
|---|---|----------------|-----------|------------------------------|--------------|--------------------------------------|-------|-----------------|-------------|-------------|
| c:\pw_work\pwidot\muehlfeldac\d0260835\ | \pw_work\pwidot\muehlfeldac\d0260835\d876e99-sht-WideLoad.dgn DRAWN - ACM |                | REVISED - | STATE OF ILLINOIS            |              | OTAGE CONCINCOTION DETAILS           |       |                 | ST. CLAIR   | GIILLIG III |
|   | PLOT SCALE = 100.0000 '/ in.  | CHECKED -      | REVISED - | DEPARTMENT OF TRANSPORTATION |              |                                      |       | 5 125BR-2       | CONTRACT    |             |
|   | PLOT DATE = 10/31/2011  | DATE -         | REVISED - |                              | SCALE: NONE  | SHEET NO. 1 OF 1 SHEETS STA. TO STA. |       | ILLINOIS FED. A | AID PROJECT |             |