

| F.A.U. R.T.E. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------|--------------|--------|--------------|-----------|
| 1238 | 125_SB-1-1-1 | LAKE | 13 | 1 |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS**

**PROPOSED
HIGHWAY PLANS**

**FAU ROUTE 1238: IL 176 (ROCKLAND RD)
OVER US 41 (SKOKIE HWY); (SN 049-0131)**

SECTION: 125 SB-1-1-1

PPC DECK BEAM REPLACEMENT

LAKE COUNTY

C-91-392-06

FOR INDEX OF SHEETS, SEE SHEET NO. 2

THE IMPROVEMENT IS LOCATED IN THE VILLAGE OF LAKE BLUFF

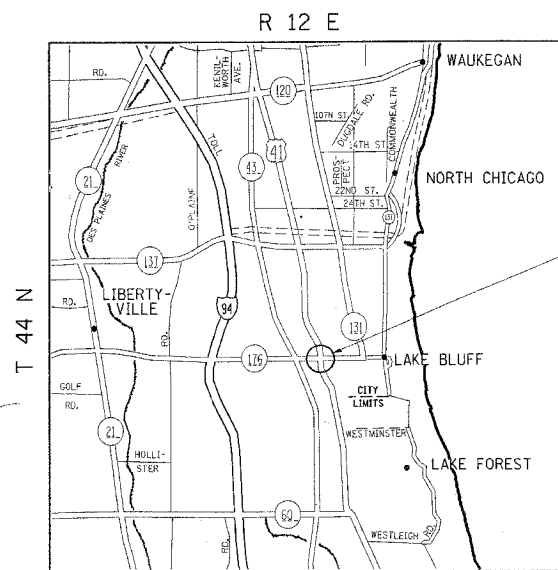
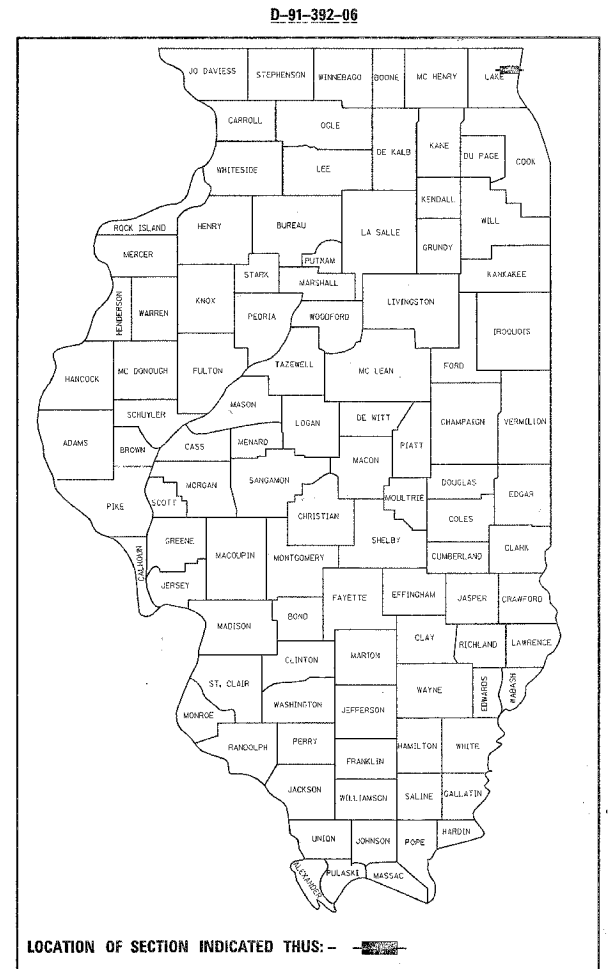
TRAFFIC DATA

IL 176:

2005 ADT = 15,900
SPEED LIMIT = 30 MPH

US 41:

2005 ADT = 46,900
SPEED LIMIT = 45 MPH



LOCATION OF IMPROVEMENT
IL 176 OVER US 41
SN 049-0131

SHIELDS TOWNSHIP

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED June 1, 2006
Diane M. O'Keefe/Cad
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
June 30, 2006
Mike Hine
 ENGINEER OF DESIGN AND ENVIRONMENT
June 30, 2006
Milton R. Sess, P.E.
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**

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

CONTRACT NO. 60B67

DISTRICT ONE DESIGN PLAN PREPARATION ENGINEER:
KEN ENG/ROBERT BORO (847)705-4178

| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|--------------|---------------------------|--------------|-----------|
| 1238 | 125_SB-1:1-1 | LAKE | 13 | 2 |
| STA. _____ | | TO STA. _____ | | |
| FED. ROAD DIST. NO. _____ | | ILLINOIS FED. AID PROJECT | | |

INDEX OF SHEETS

1. COVER PAGE
2. INDEX OF SHEETS, GENERAL NOTES, STATE STANDARDS
3. SUMMARY OF QUANTITIES
- 4.-6. STAGING PLANS
- 7.-10. BRIDGE PLANS (LOC. 1: SN 049-0131)
11. US 41 DETOUR PLAN
12. TYPICAL APPLICATION RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)
13. TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS AND DRIVEWAYS

LIST OF STATE STANDARDS

- | | |
|-----------|---|
| 701301-02 | LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS |
| 701601-04 | URBAN LANE CLOSURE, MULTILANE, 2W WITH NONTRAVERSABLE MEDIAN |
| 701801-03 | LANE CLOSURE, MULTILANE, 1W OR 2W CORSSWALK OR SIDEWALK CLOSURE |
| 702001-06 | TRAFFIC CONTROL DEVICES |
| 704001-02 | TEMPORARY CONCRETE BARRIER |

BITUMINOUS MIXTURE REQUIREMENTS

| MIXTURE USE | AC/PG | AIR VOIDS | RAP % (MAX.) |
|---|----------|----------------|--------------|
| BIT. CONC. SURFACE COURSE, SUPERPAVE MIX "D", N50 | PG 64-22 | 4.0% @ 50 GYR. | 15 |

NOTE: THE UNIT WEIGHT USED FOR ALL BITUMINOUS SURFACE MIXTURES IS 112 LBS./SQ.YD./IN.

GENERAL NOTES

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "J.U.L.I.E." AT (800) 892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS UTILITIES. 48 HOUR NOTIFICATION IS REQUIRED.

THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.

ALL DAMAGE TO EXISTING PAVEMENT MARKINGS OR RAISED REFLECTIVE PAVEMENT MARKERS OUTSIDE THE REMOVAL LINE SHOWN ON THE PLANS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RETAIN AND RECORD FOR FUTURE REFERENCE, ALL EXISTING PAVEMENT MARKING LINES AND RAISED REFLECTIVE PAVEMENT MARKERS IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPING. EXACT LOCATIONS OF ALL PAVEMENT MARKINGS SHALL BE AS DIRECTED BY THE ENGINEER.

IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.

THE CONTRATOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.

THE CONTRACTOR SHALL CONTACT DEBBIE HANLON AT (847) 438-2300 TWO (2) WEEKS PRIOR TO PLACEMENT OF PERMANENT PAVEMENT MARKINGS.

THESE PLANS HAVE BEEN PREPARED FROM NOTES RECIEVED FROM BRIDGE INSPECTORS

THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.

DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.

DOUBLE LANE MARKERS ARE TO BE USED AS SHOWN ON THE DISTRICT ONE DETAIL FOR TYPICAL APPLICATION OF RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT) SHOWN IN THE PLANS.

THE THICKNESS OF BITUMINOUS MIXTURE SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE BITUMINOUS MIXTURE IS PLACED.

CONCRETE SUPERSTRUCTURES SHALL HAVE A SEVEN DAY MINIMUM CURE.

THE CONTRATOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.

THE CONTRATOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES.

WHEN ARTIFICIAL LIGHTING IS UTILIZED IN NIGHT OPERATIONS, THE CONTRACTOR SHALL EXERCISE THE UTMOST PRECAUTIONS IN PREVENTING ADVERSE VISIBILITY TO THE MOTORING PUBLIC AND ADJOINING RESIDENTIAL AREAS.

THE CONTRATOR SHALL BE RESPONSIBLE, DURING THE DETOUR OF US 41, FOR THE NOTIFICATION OF ALL EMERGENCY SERVICES, SCHOOL DISTRICTS, I.D.O.T.'S COMMUNICATIONS CENTER, SPRINGFIELD TRUCK PERMIT SECTION AND OTHER AGENCIES AFFECTED BY THE CLOSURE. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR POSTING SIGNS THAT WILL INDICATE THE DATES THE CLOSURE WILL BE IN PLACE.

| REVISIONS | |
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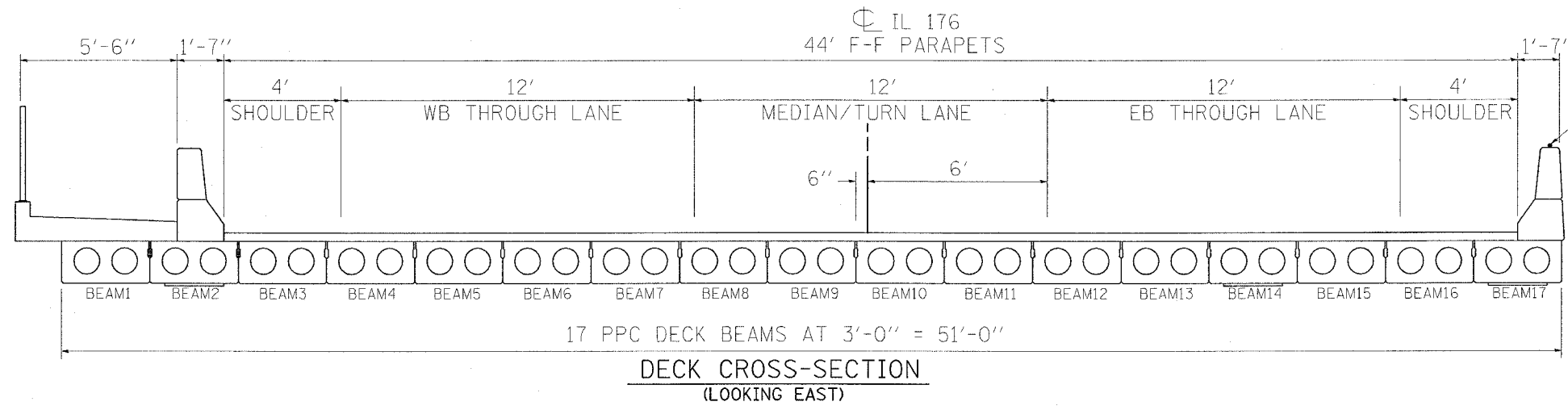
ILLINOIS DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS
GENERAL NOTES
AND STATE STANDARDS
IL RT. 176 / US 41

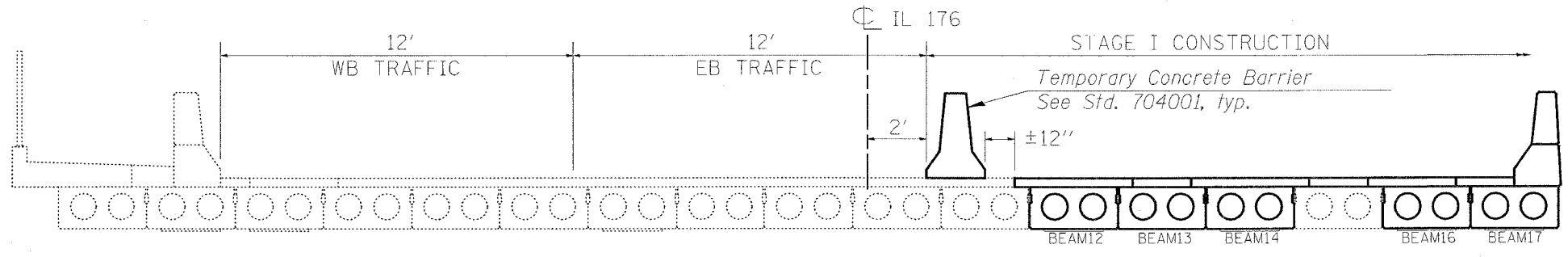
SCALE: VERT.
HORIZ.
DATE

DRAWN BY
CHECKED BY

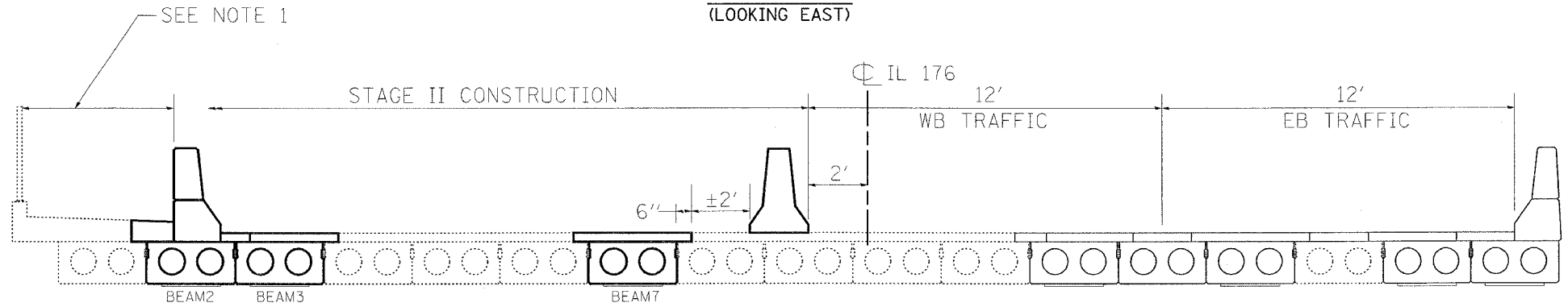
| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|--------------|---------------|--------------|-----------|
| 1238 | 125_SB-1-1-1 | LAKE | 13 | 4 |
| STA. _____ | | TO STA. _____ | | |
| FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT | | | | |



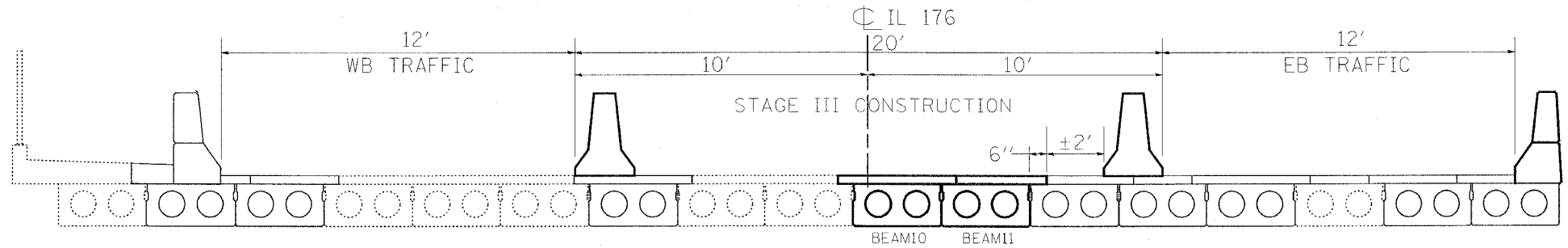
SEE NOTE 2



STAGE I
(LOOKING EAST)



STAGE II
(LOOKING EAST)



STAGE III
(LOOKING EAST)

NOTE:

1. CLOSE SIDEWALK PER STD 701801 AND DETOUR ACROSS TO BIKE/PEDESTRIAN PATH AT TRAFFIC LIGHTS AT SHAGBARK & SKOKIE VALLEY RDS
2. EXISTING 2" Ø CONDUIT TO BE REMOVED BY OTHERS

| REVISIONS | |
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| NAME | DATE |
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ILLINOIS DEPARTMENT OF TRANSPORTATION

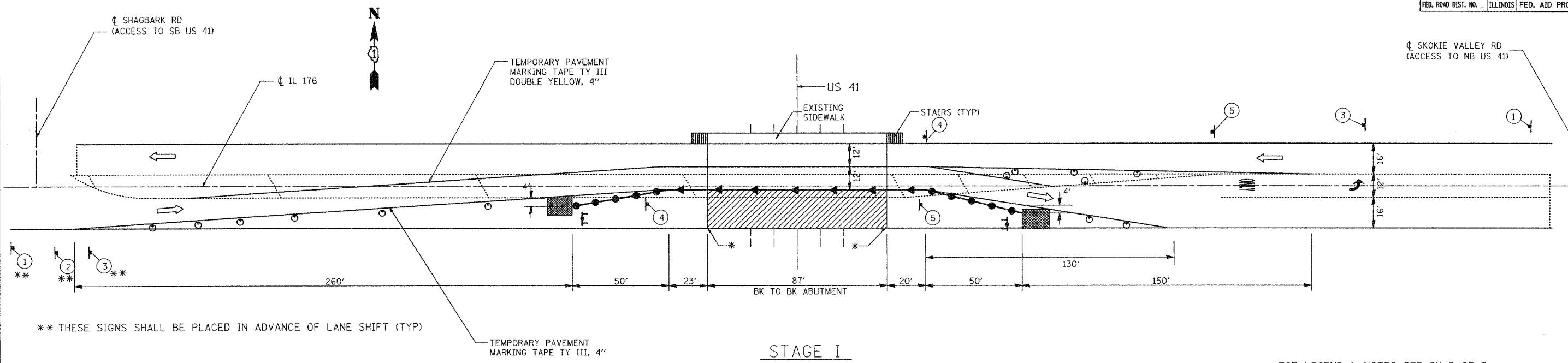
TRAFFIC STAGING
IL RT. 176 / US 41
SN 049-0131
1 OF 3

SCALE: VERT. _____
HORIZ. _____

DATE _____ DRAWN BY _____
CHECKED BY _____

PLOT DATE = 6/2/2006
FILE NAME = c:\pwork\1238\1238265\design.dwg
USER NAME = gulloneurp

| | | | | |
|---------------------------|--------------|---------------------------|--------------|-----------|
| CONTRACT NO. 60667 | | | | |
| F.A.U. R.T.E. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 1238 | 125_SB-1-1-1 | LAKE | 13 | 5 |
| STA. _____ | | TO STA. _____ | | |
| FED. ROAD DIST. NO. _____ | | ILLINOIS FED. AID PROJECT | | |

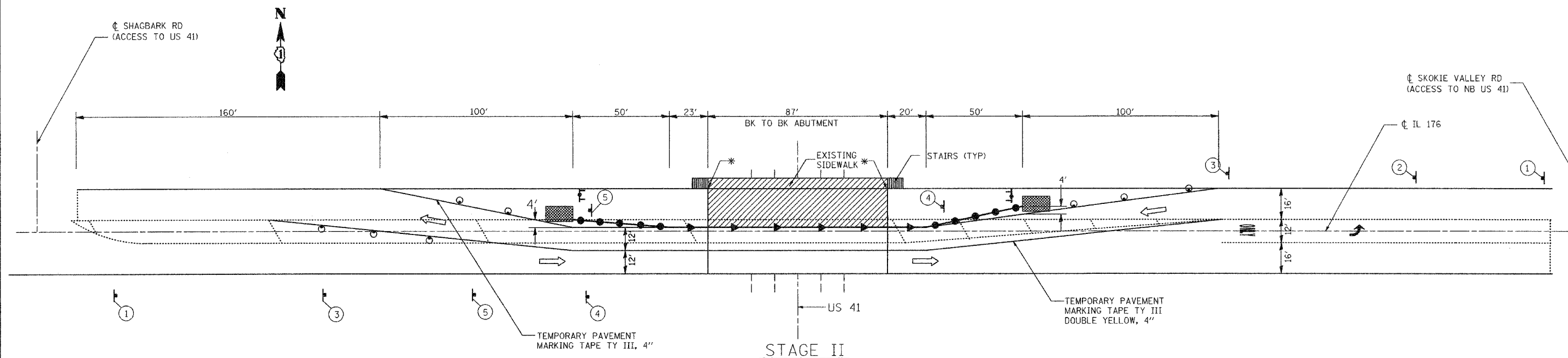


** THESE SIGNS SHALL BE PLACED IN ADVANCE OF LANE SHIFT (TYP)

STAGE I

FOR LEGEND & NOTES SEE SH 3 OF 3

* DISCONNECT & RECONNECT EXISTING GUARDRAIL TO PARAPET. COST INCLUDED IN " TRAFFIC CONTROL & PROTECTION (SPECIAL) "



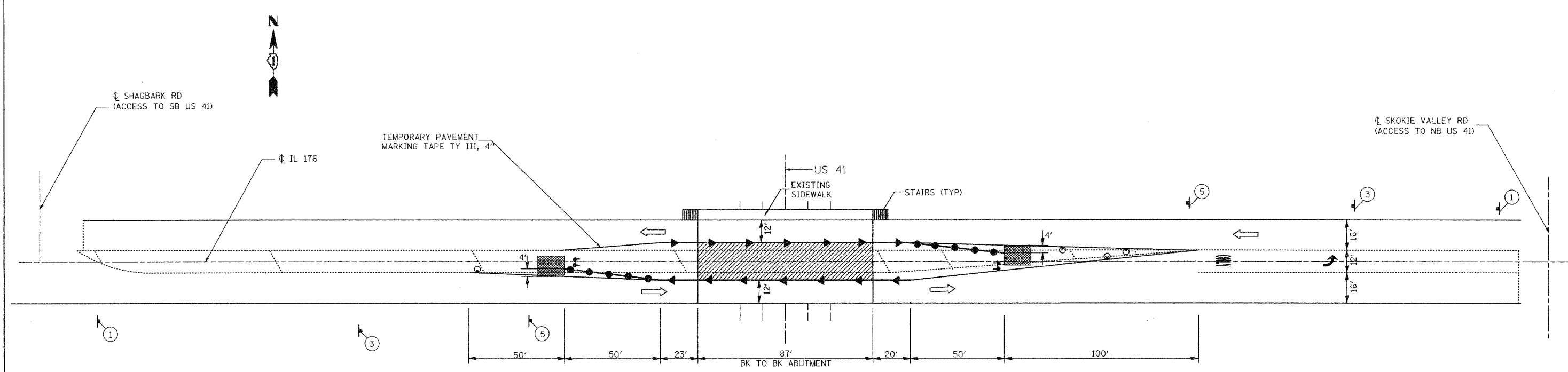
STAGE II

PLOT DATE = 6/16/2006
 FILE NAME = c:\projects\60667\design\stage.dgn
 PLOT SCALE = 1/8" = 1'-0"
 USER NAME = gml11111111

| REVISIONS | |
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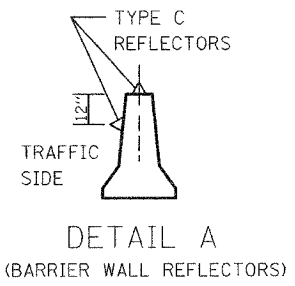
ILLINOIS DEPARTMENT OF TRANSPORTATION
 STAGING LAYOUT FOR
 TEMPORARY CONCRETE BARRIER
 AND TEMPORARY PAVEMENT MARKINGS
 SN 049-0131
 2 of 3
 VERT. SCALE: _____
 HORIZ. SCALE: _____
 DATE _____
 DRAWN BY _____
 CHECKED BY _____

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|---|--------------|---------------|--------------|-----------|
| CONTRACT NO. 60857 | | | | |
| F.A.M. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 123B | 125_SB-1-1-1 | LAKE | 13 | 6 |
| STA. _____ | | TO STA. _____ | | |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT | | | | |



STAGE III

- TYPE II BARRICADE, DRUM OR VERTICAL BARRICADE WITH STEADY BURNING MONODIRECTIONAL LIGHT @ 25' CTS
- ⊢ SIGN ON PORTABLE OR PERMANENT SUPPORT
- ⊢ TYPE III BARRICADE WITH 2 STEADY BURNING LIGHTS
- ▨ WORK ZONE
- ▩ IMPACT ATTENUATORS
- ← TEMP. CONCRETE BARRIER WITH TYPE C MONODIRECTIONAL REFLECTOR ON TANGENT PORTION AT BARRIER AT 50' CENTERS (SEE DETAIL A)
- TEMP. CONCRETE BARRIER WITH VERTICAL PANELS AT 25' CENTERS WITH STEADY BURN MONODIRECTIONAL LIGHT
- DIRECTION OF TRAFFIC

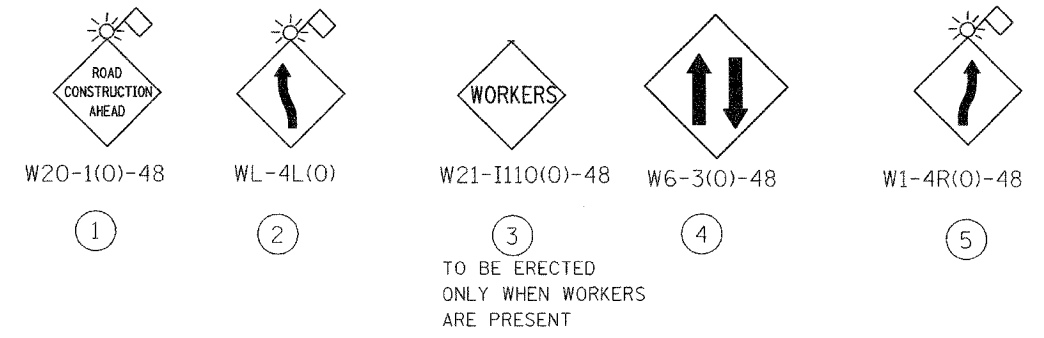


NOTES: LANE CLOSURE AND ADDITIONAL TRAFFIC CONTROL ITEMS SHOWN ON THESE SHEETS ARE INCLUDED IN THE COST OF "TRAFFIC CONTROL & PROTECTION (SPECIAL)"

THE TYPE III TAPE SHOWN SHALL MEET THE REQUIREMENTS OF THE SPECIAL PROVISION "TYPE III TEMPORARY TAPE FOR WET CONDITIONS". COVER CONFLICTING EXISTING PAVEMENT MARKINGS WITH BLACK TYPE III TAPE TAPE. THE COST OF THE TYPE III TAPE AND ITS REMOVAL IS INCLUDED IN THE COST OF "TRAFFIC CONTROL & PROTECTION (SPECIAL)"

ADVANCED WARNING SIGNAGE FOR IL 176 SHALL BE ACCORDING TO THE SPECIAL PROVISION "TEMP. INFO. SIGNING FOR LANE CLOSURES"

ADVANCED WARNING FOR LANE CLOSURES & TEMP. DETOUR ON US 41 SHALL USE "PORTABLE CHANGEABLE MESSAGE SIGNS."



| REVISIONS | |
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ILLINOIS DEPARTMENT OF TRANSPORTATION

STAGING LAYOUT FOR
TEMPORARY CONCRETE BARRIER
AND TEMPORARY PAVEMENT MARKINGS
SN 049-0131
3 of 3

SCALE: VERT. _____
HORIZ. _____

DATE _____ DRAWN BY _____
CHECKED BY _____

PLOT DATE = 6/16/2006
 PLOT SCALE = 1/8" = 1'-0"
 USER NAME = gulllaumej

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Temporary Concrete Barrier
See Standard 704001

| | | | | |
|-------------------------|----------|-------------------|--------------|-----------|
| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | | Lake | 7 | 1 |
| SHEET NO. 1 4 SHEETS | | | | |
| FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT- | | |
| Contract Number: 60B67 | | | | |

GENERAL NOTES

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field 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 the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

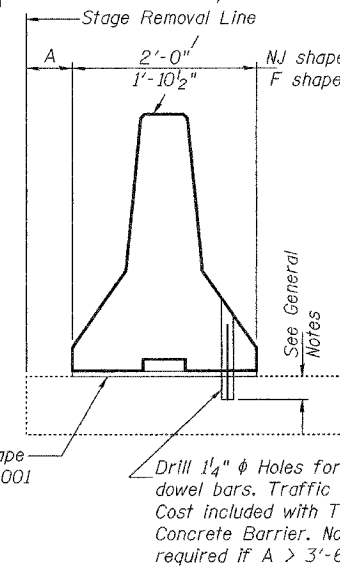
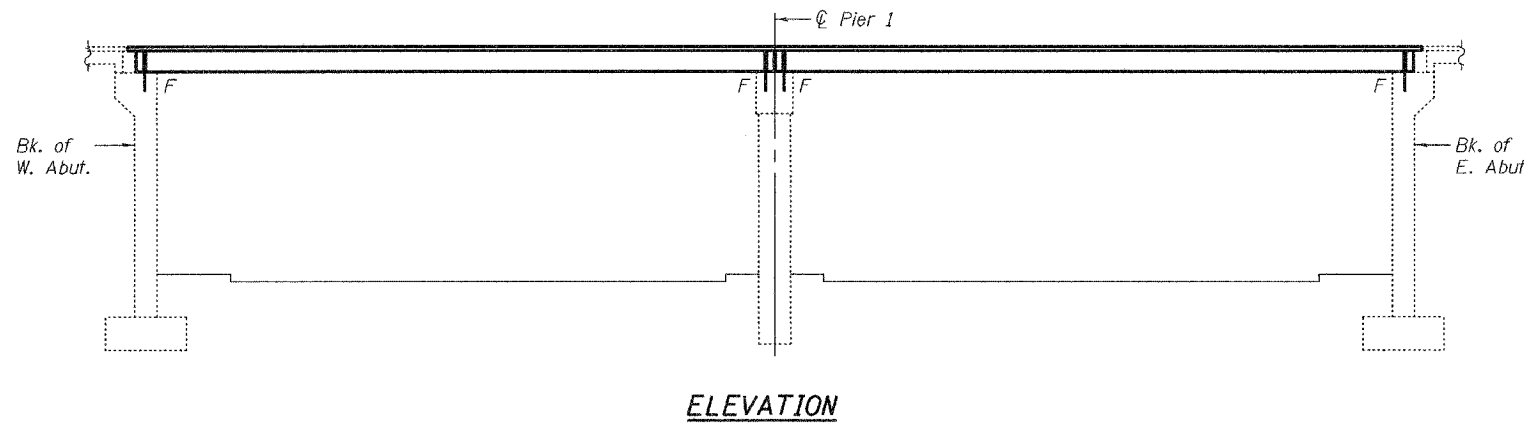
Any damage done to the bridge during beam removal shall be repaired by the Contractor. Cost to be included in the cost of "Removal of Existing P.P.C. Deck Beams".

The top surface of the beams shall be finished in accordance with Article 504.06 of the Standard Specifications except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners, and the top edge of keys shall be rounded or chamfered a minimum of 1/4".

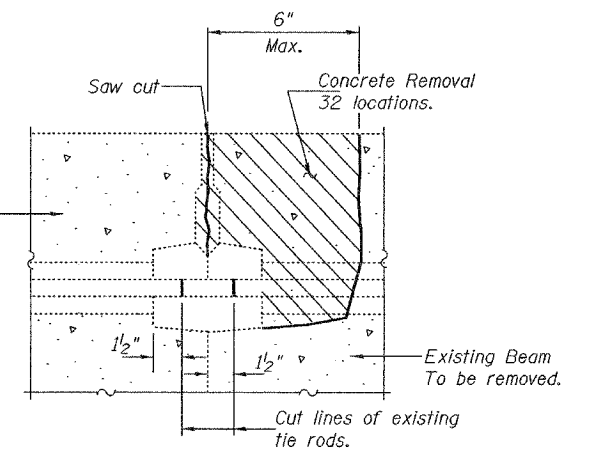
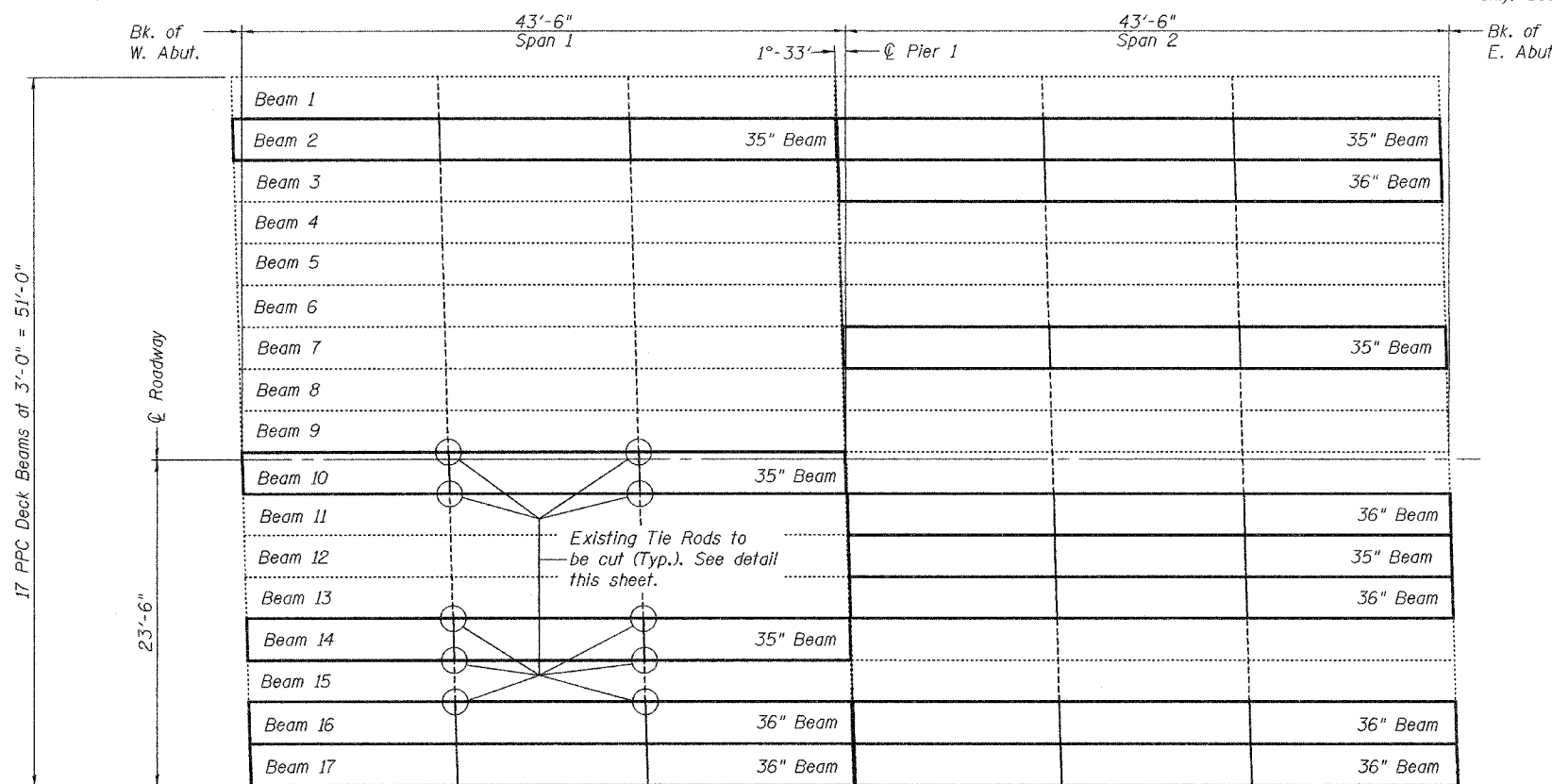
For quantities of Temporary Concrete Barrier, see Roadway Plans. If required to be anchored, temporary concrete barrier shall only be anchored into the overlay and not the PPC Deck Beams. Holes shall be patched with bituminous material following relocation / removal of barrier. Cost included in Temporary Concrete Barrier.

The cut strands at each beam end shall be given two coats of zinc dust spray or paint meeting the requirements of ASTM A780. The zinc dust spray or paint shall be applied before corrosion appears and allowed to dry according to the manufacturer's specifications prior to another coat of zinc. This work shall be performed by the producer and included with the cost of the beam.

All construction joints shall be banded.



BARRIER ANCHORAGE



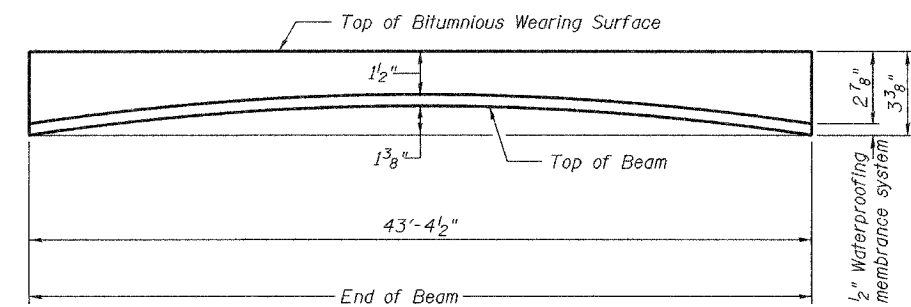
BEAM REMOVAL DETAIL AT TRANSVERSE TIES

DESIGN STRESSES
PRECAST UNITS

$f'_c = 5,000$ psi
 $f'_{ci} = 4,000$ psi
 $f'_s = 270,000$ psi (1/2" ϕ low lax strands)
 $f'_{si} = 201,960$ psi (1/2" ϕ low lax strands)

TOTAL BILL OF MATERIAL

| ITEM | UNIT | QUANTITY |
|---|---------|----------|
| Concrete Removal | Cu. Yd. | 25.4 |
| Removal of Existing PPC Deck Beams | Sq. Ft. | 1,695 |
| Concrete Superstructure | Cu. Yd. | 25.4 |
| PPC Deck Beams (17" Depth) | Sq. Ft. | 1,670 |
| Reinforcement Bars, Epoxy Coated | Pound | 2,280 |
| Bituminous Concrete Surface Course, Superpave Mix "D" N50 | Tons | 22 |
| PC Mortar Fairing Course | Foot | 737 |
| Waterproofing Membrane System | Sq. Yd. | 195 |
| Protective Coat | Sq. Yd. | 142 |
| Bituminous Concrete Surface Removal | Sq. Yd. | 45 |



ANTICIPATED INITIAL CAMBER DIAGRAM

PLAN AND ELEVATION
IL. RT. 176 / U.S. 41
LAKE COUNTY
SN 049-0131

DESIGNED Paul S. Johnson
CHECKED Adrian T. Hallaway
DRAWN Drew Christy
CHECKED PSJ AFH

EXAMINED John A. Morris
PASSED Ralph E. Anderson

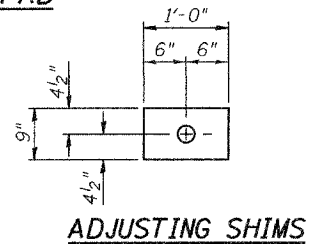
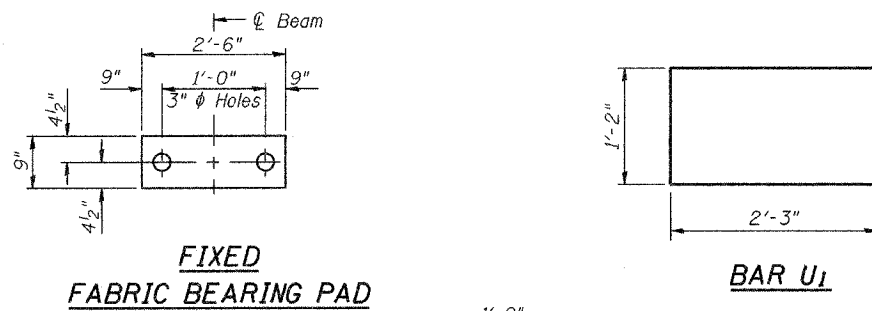


Expires: November 30, 2006

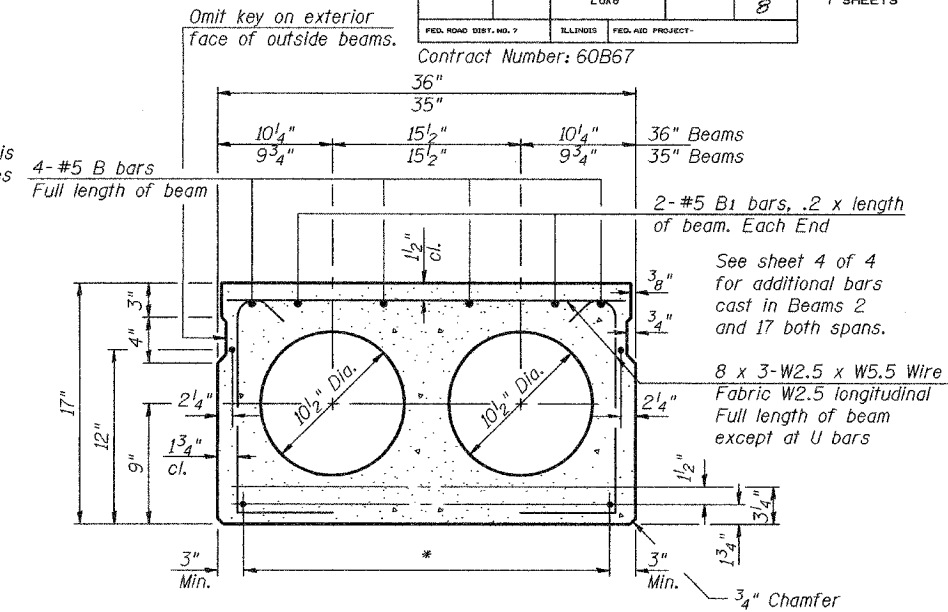
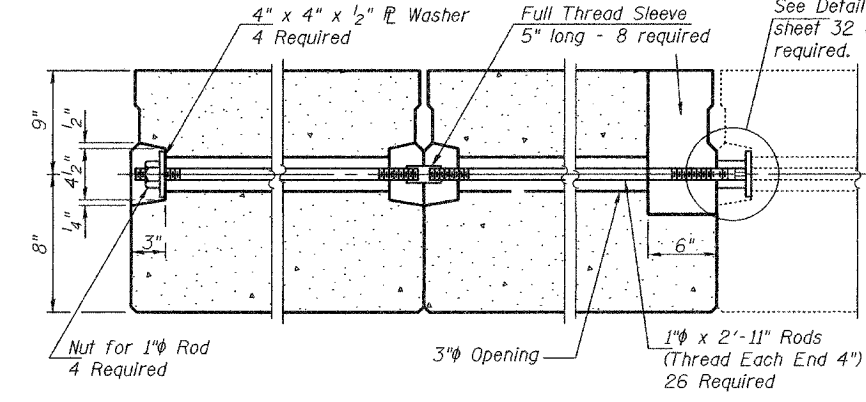
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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|-----------------------|---------|----------|------------------|-------------|
| ROUTE NO. | SECTION | COUNTY | SHEET | SHEET NO. 2 |
| | | Lake | 8 | 4 SHEETS |
| FED. ROAD DIST. NO. 7 | | ILLINOIS | FED. AID PROJECT | |

Contract Number: 60B67

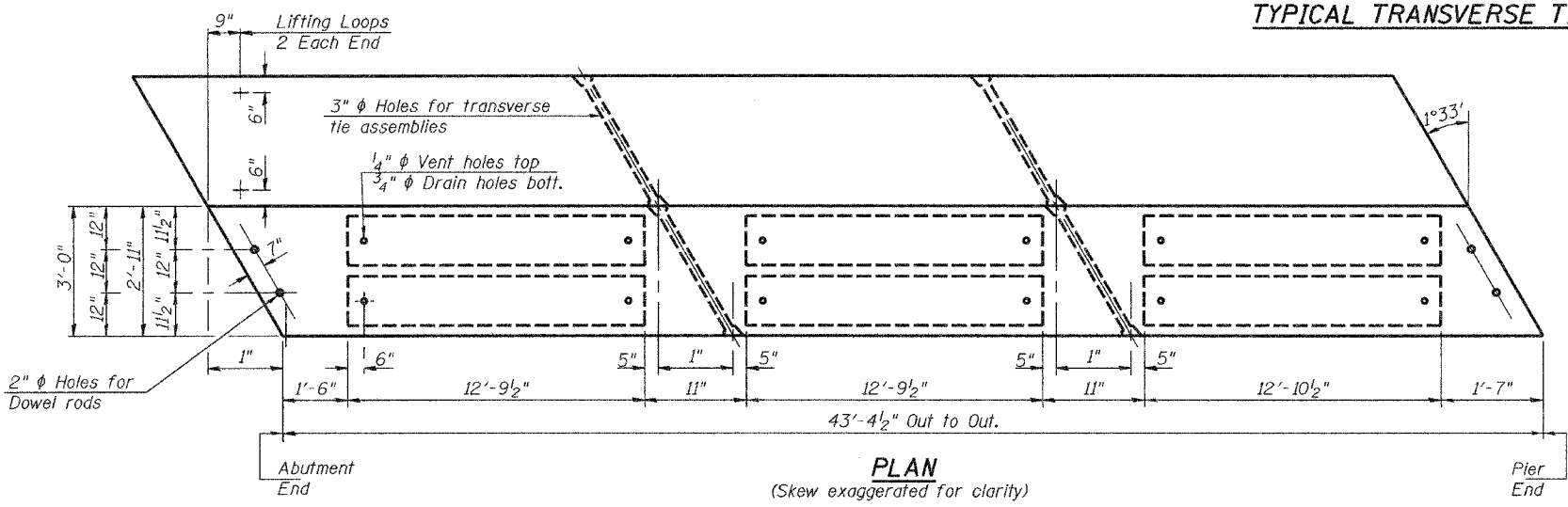


6" x 6" x 1 1/2" Blockout to be filled with Class BD Concrete after Beams have been installed. Cost shall be included in the cost of Concrete Superstructure. Omit on exterior face of beam 17 and between beams 16 & 17 in both spans, and between beams 2 & 3, and 12 & 13 in Span 2.

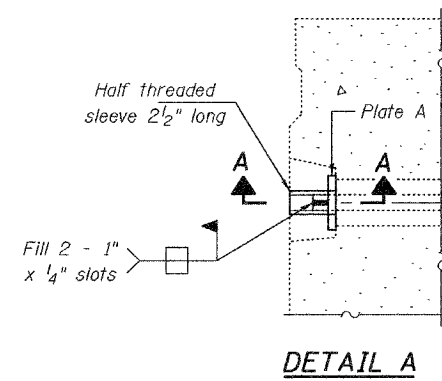


TYPICAL SECTION

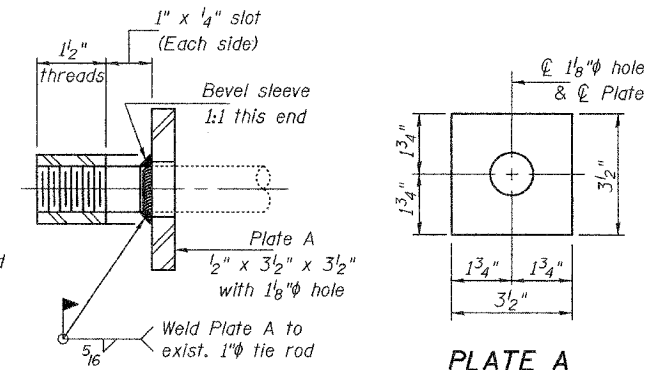
1/2" ϕ Strands, Each Strand Stressed to 30,900 Lbs.
9-Strands 1 3/4" up, 4-Strands 3/4" up, 2-Strands 12" up



PLAN
(Skew exaggerated for clarity)

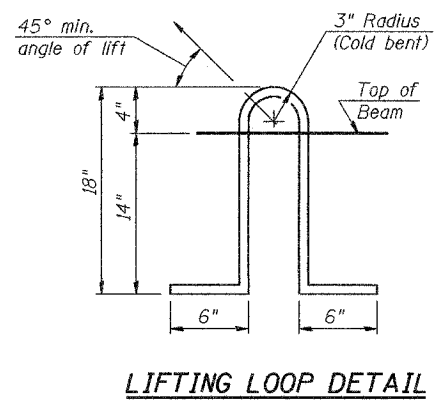


DETAIL A



SECTION A-A

PLATE A



LIFTING LOOP DETAIL

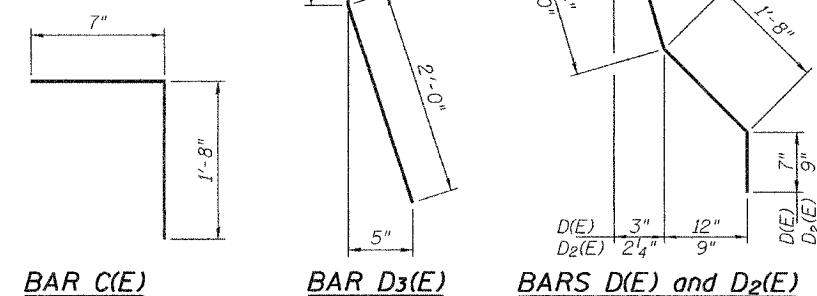
NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. Lifting loops shall be 2 - 1/2" ϕ -270 ksi strands, as shown. The 1" ϕ rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place. The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8" fabric adjusting shims of the dimensions shown shall be provided for each bearing. Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key. Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams. Required Release Strength, f'ci, shall be 4,000 p.s.i.

* TRANSVERSE PLACEMENT GUIDELINES

1. Place strands symmetrically about centerline of beam.
2. The minimum distance from center to center of strands in all directions shall be 2".
3. The minimum clearance from strand to dowel hole shall be 1/2".
4. The minimum clearance from strand to void shall be 1/2".

Vertical placement of strands shall not be adjusted to satisfy the above guidelines.



BILL OF MATERIAL

| Bar | No. | Size | Length | Shape |
|-------------------------------------|-----|---------|--------|-------|
| b(E) | 6 | #5 | 30'-6" | |
| e(E) | 72 | #4 | 14'-3" | |
| e1(E) | 16 | #8 | 24'-0" | |
| e2(E) | 16 | #5 | 22'-9" | |
| Precast Prestressed Conc. Deck Bms. | | Sq. Ft. | 1,670 | |
| Reinforcement Bars, Epoxy Coated | | Pound | 2,280 | |
| Concrete Superstructure | | Cu. Yd. | 25.4 | |

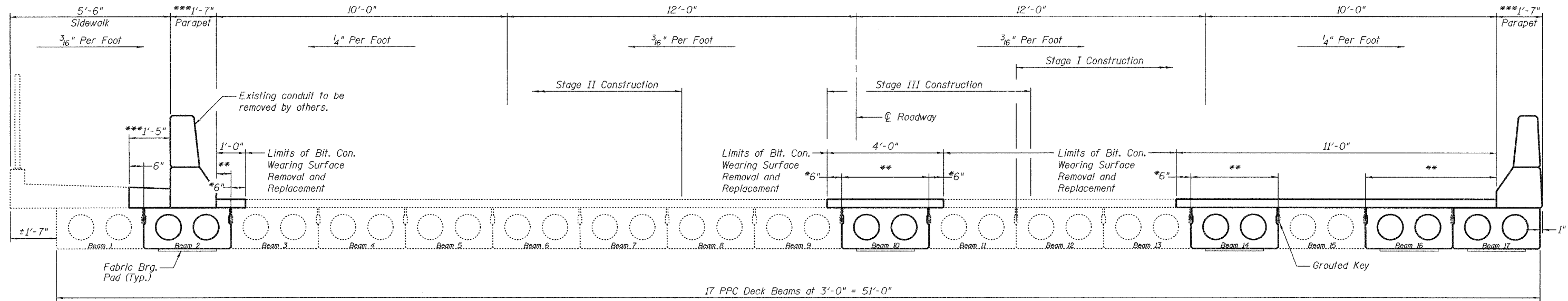
BEAM DETAILS
PLAN AND ELEVATION
IL. RT. 176 / U.S. 41
LAKE COUNTY
SN 049-0131

| | | |
|----------|------------------|---|
| DESIGNED | P.S.J. | JUNE 26, 2006 |
| CHECKED | A.T.H. | EXAMINED <i>John A. Morris</i> ENGINEER OF STRUCTURAL SERVICES |
| DRAWN | Drew Christopher | PASSED <i>Ralph E. Anderson</i> ENGINEER OF BRIDGES AND STRUCTURES |
| CHECKED | P.S.J. A.T.H. | |
| PD-3-R | 10-22-04 | |

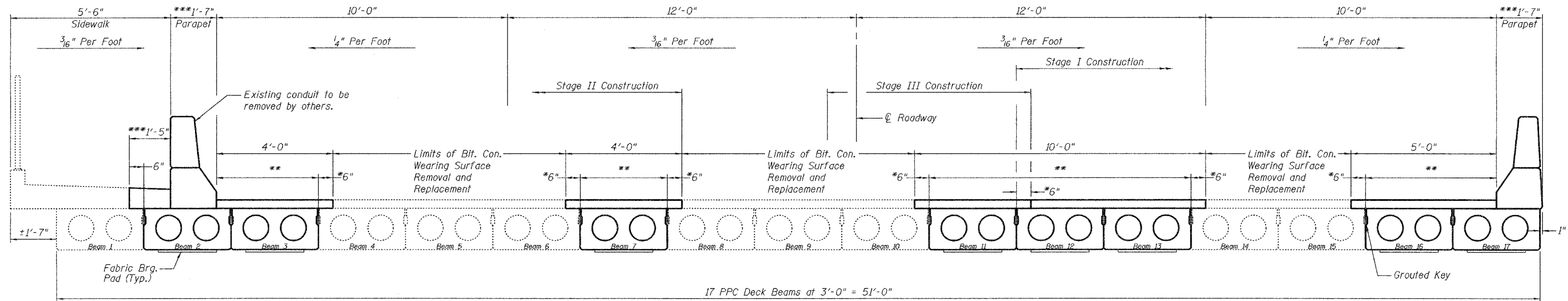
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | | Lake | - | g |
| SHEET NO. 3 4 SHEETS | | | | |
| FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT- | | |

Contract Number: 60B67



SPAN 1 DECK CROSS-SECTION
(Looking East)



SPAN 2 DECK CROSS-SECTION
(Looking East)

*Existing waterproofing to remain. Lap new waterproofing membrane system with existing waterproofing.
**Cost of removal in these areas is included with Removal of PPC Deck Beams.
***Quantity Included in Concrete Removal and Concrete Superstructure.

| | |
|----------|------------------|
| DESIGNED | P.S.J. |
| CHECKED | A.T.H. |
| DRAWN | Drew Christopher |
| CHECKED | P.S.J. A.T.H. |

JUNE 26, 2006
EXAMINED *John A. Morris*
ENGINEER OF STRUCTURAL SERVICES
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

DECK CROSS-SECTIONS
IL. RT. 176 / U.S. 41
LAKE COUNTY
SN 049-0131

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

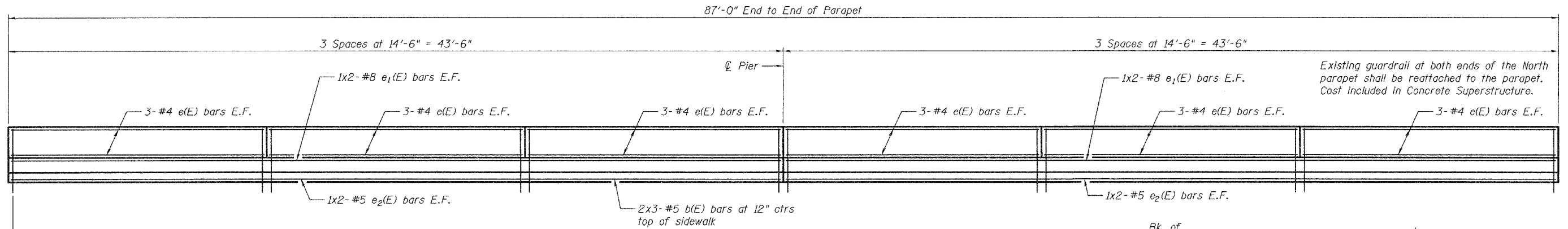
Existing name plate in North Parapet to be removed, cleaned, and re-installed in same location of new parapet. Cost included in Concrete Superstructure.

| | | | | |
|-----------------------|----------|-------------------|-----------|-----------|
| ROUTE NO. | SECTION | COUNTY | SHEET NO. | SHEET NO. |
| | | Lake | 10 | 4 |
| FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT- | | |

Contract Number: 60B67

SHEET NO. 4

4 SHEETS



- 88-#4 D₃(E) bars at 12" ctrs outside face North Parapet
- 88-#4 D₁(E) bars at 12" ctrs outside face South Parapet
- 96-#5 D(E) bars at 11" ctrs inside face North Parapet
- 96-#5 D₂(E) bars at 11" ctrs inside face South Parapet
- 88-#5 C(E) bars at 12" ctrs in sidewalk

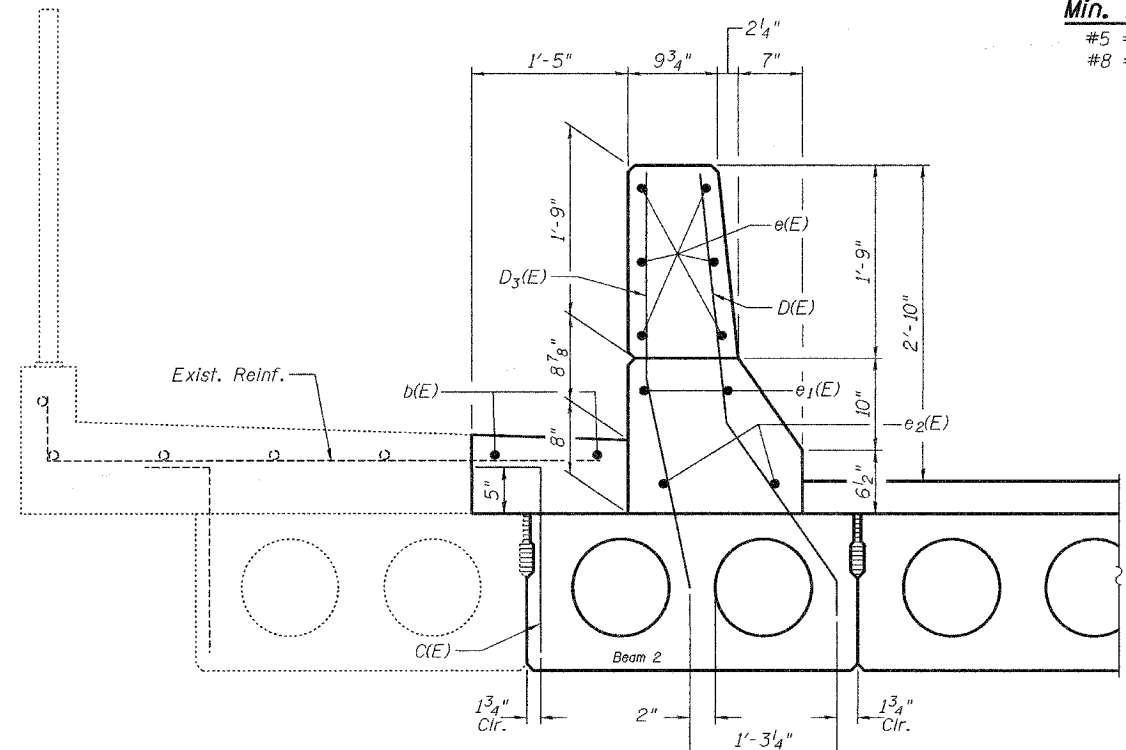
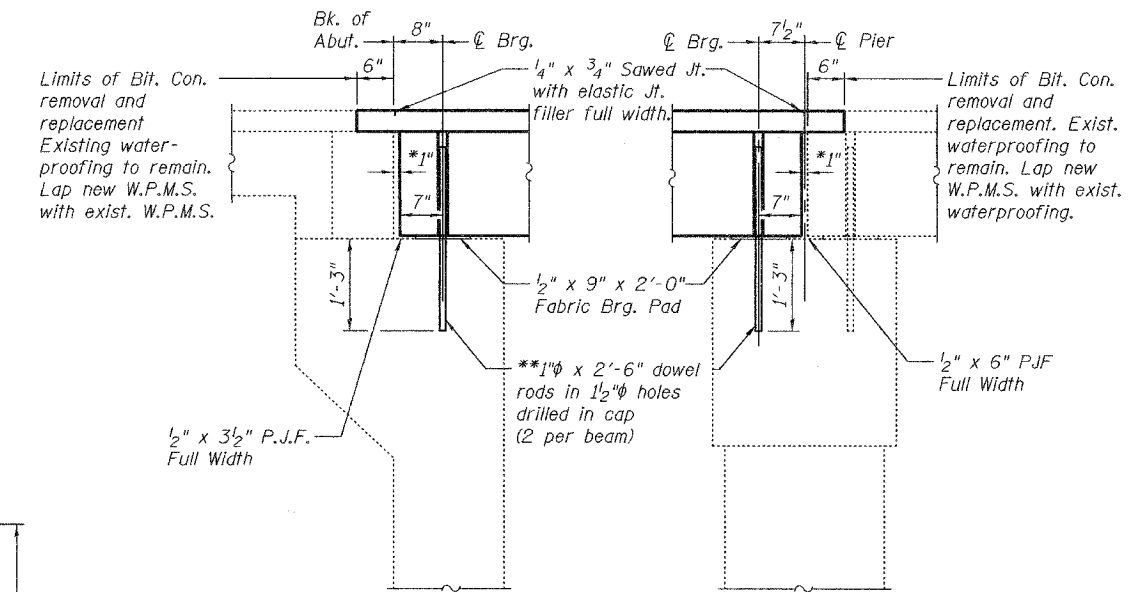
Existing reinforcement extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost shall be included with Concrete Removal.

*1" Joint shall be filled with non-shrink grout. Dimension may vary to accommodate tolerance in beam lengths.

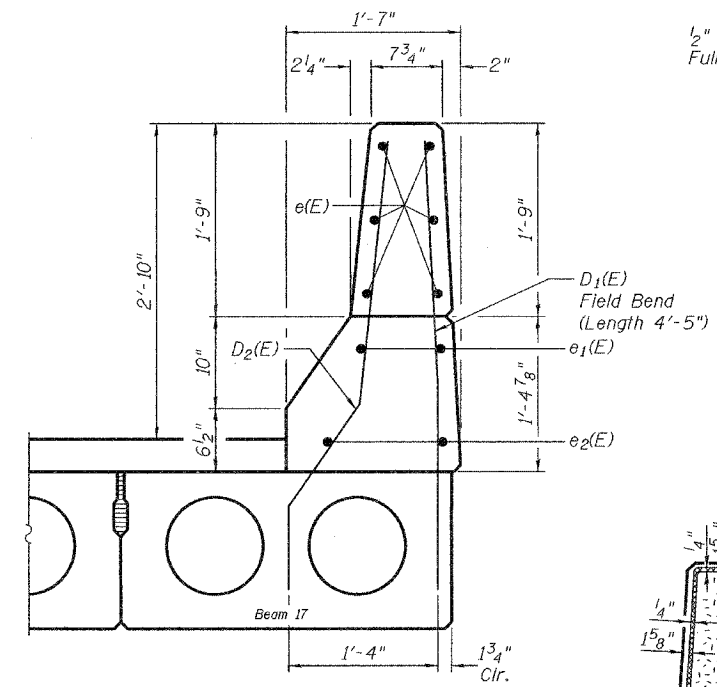
INSIDE PARAPET ELEVATION

**Existing dowel rods are to be burned off, ground flush, and sealed with epoxy prior to placement of new beams. Cost included in Removal of Existing PPC Deck Beams. After beams have been erected holes shall be drilled into cap and dowel rods placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure a minimum of 24 hours prior to grouting the shear keys.

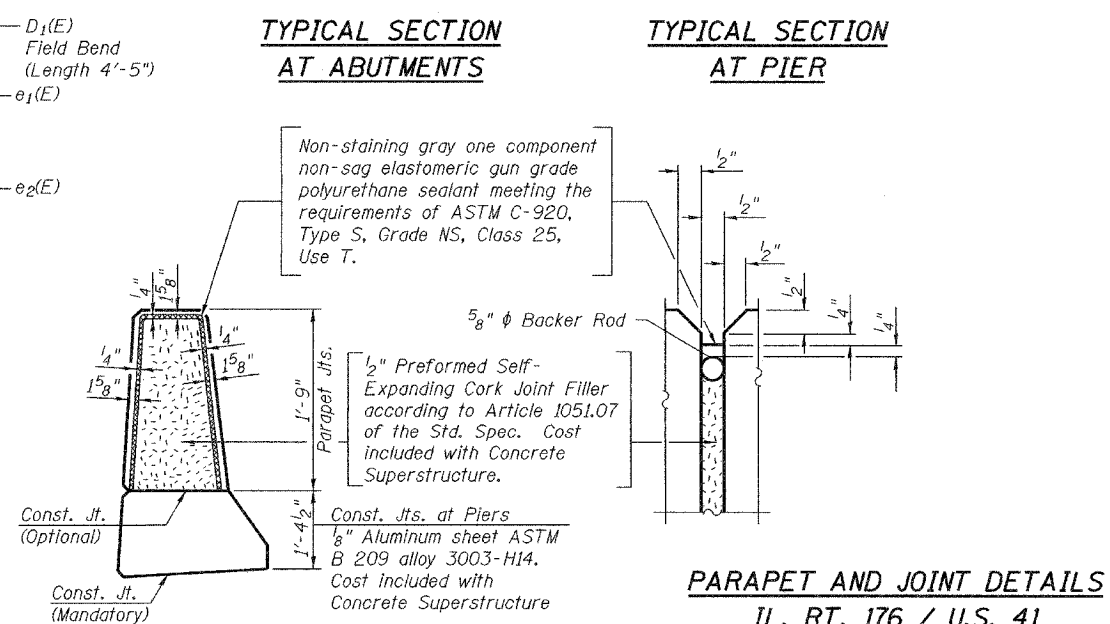
Min. Bar Lap
#5 = 2'-2"
#8 = 4'-6"



NORTH SIDEWALK TYPICAL SECTION



SOUTH PARAPET TYPICAL SECTION



PARAPET JOINT DETAILS

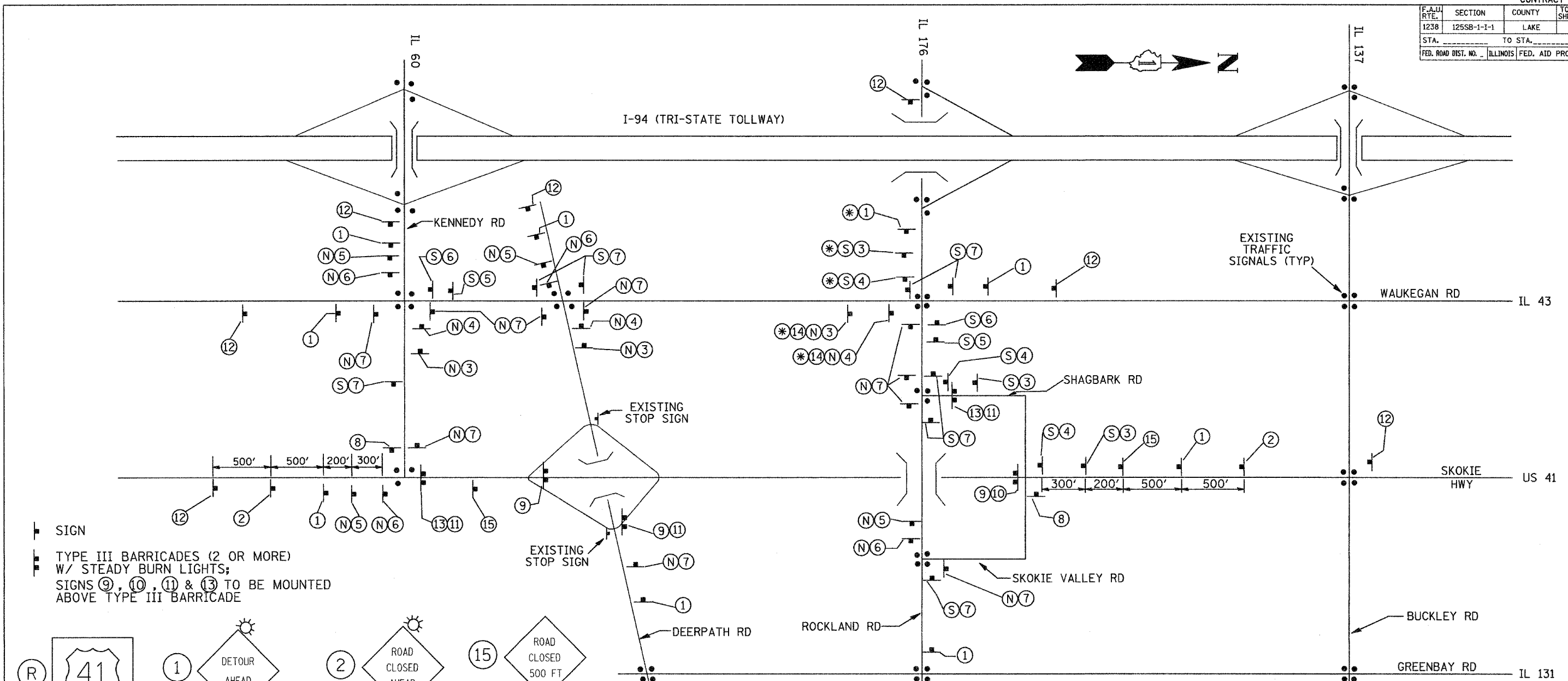
PARAPET AND JOINT DETAILS
IL. RT. 176 / U.S. 41
LAKE COUNTY
SN 049-0131

See sheet 2 of 4 for bars, bar lists and quantities for parapet.

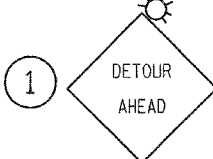
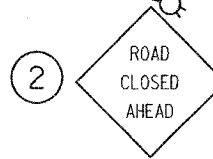
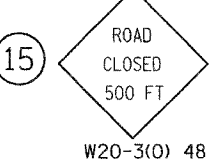
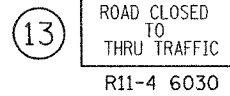

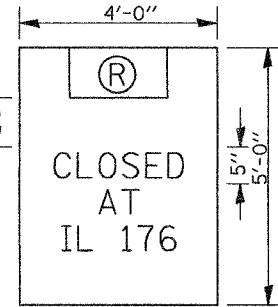
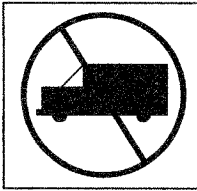
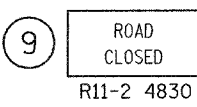
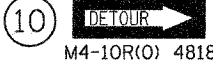

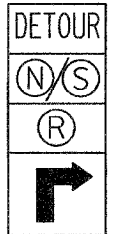
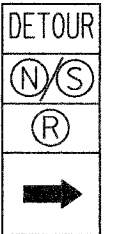
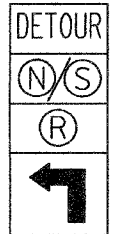
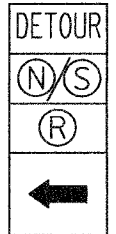
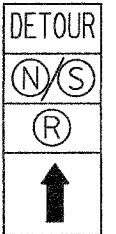
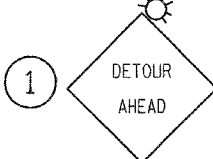
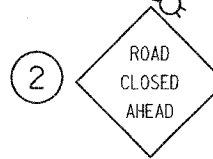
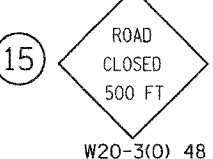
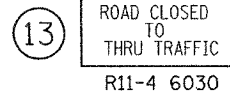

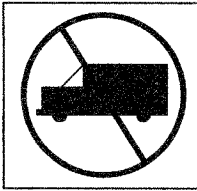
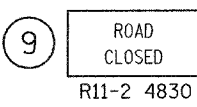
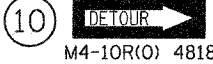

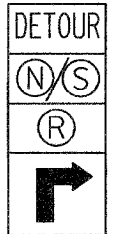
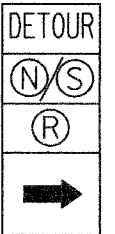
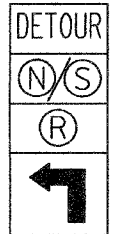
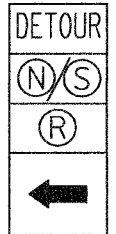
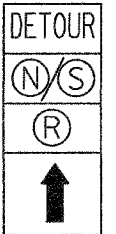
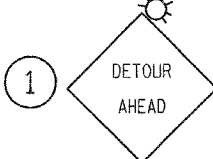
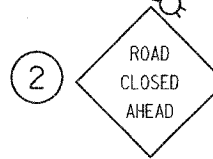
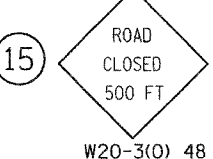
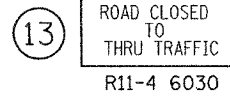

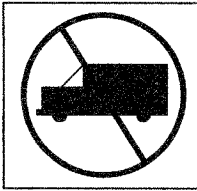
| | |
|----------|------------------|
| DESIGNED | P.S.J. |
| CHECKED | A.T.H. |
| DRAWN | Drew Christopher |
| CHECKED | P.S.J. A.T.H. |

JUNE 26, 2006
EXAMINED *John A. Morris*
ENGINEER OF STRUCTURAL SERVICES
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|-------------|---------------------------|--------------|-----------|
| 1238 | 125SB-1-1-1 | LAKE | 13 | 11 |
| STA. _____ TO STA. _____ | | | | |
| FED. ROAD DIST. NO. _____ | | ILLINOIS FED. AID PROJECT | | |



SIGN
 TYPE III BARRICADES (2 OR MORE) W/ STEADY BURN LIGHTS;
 SIGNS 9, 10, 11 & 13 TO BE MOUNTED ABOVE TYPE III BARRICADE

| | | | | | | |
|--|---|---|---|--|---|--|
|  W20-2(O) 48 |  W20-3(O) 48 |  W20-3(O) 48 |  R11-4 6030 |  M4-8a |  12 |  R5-2 2424 |
|  R11-2 4830 |  M4-10R(O) 4818 |  M4-10L(O) 4818 |  3 |  4 |  5 |  6 |
|  7 |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

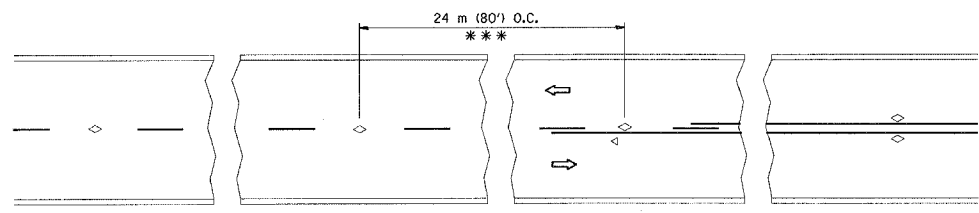
* COORDINATE SIGNAGE W/ EXISTING 15 TON POSTED DETOUR FOR IL 176

| REVISIONS | |
|-----------|------|
| NAME | DATE |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

ILLINOIS DEPARTMENT OF TRANSPORTATION
PROPOSED US 41 DETOUR PLAN
 SCALE: VERT. _____ HORIZ. _____
 DATE _____ DRAWN BY _____ CHECKED BY _____

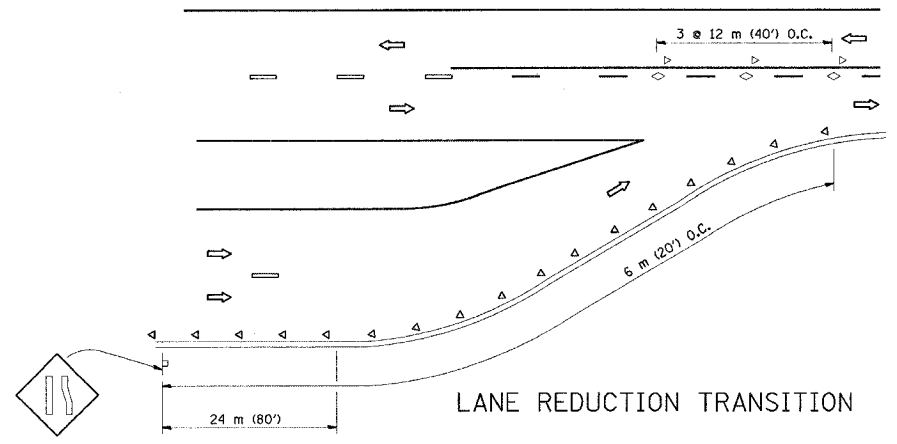
PLOT DATE = 6/16/2006
 PLOT SCALE = 1/8"=1'-0"
 USER NAME = mduffy

| F.A.V. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------|---------------------------|--------|--------------|-----------|
| 1236 | 125 SB-1-I-1 | Lake | 13 | 12 |
| STA. | TO STA. | | | |
| FED. ROAD DIST. NO. | ILLINOIS FED. AID PROJECT | | | |

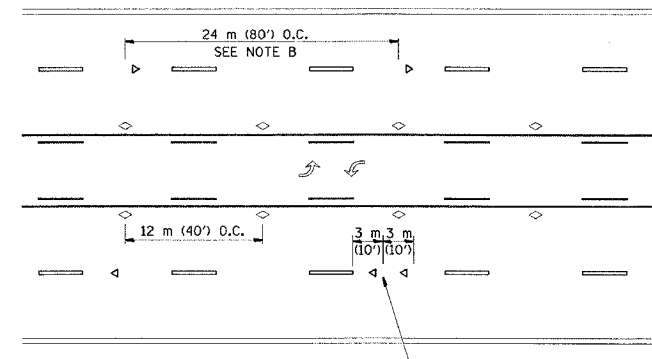


*** REDUCE TO 12 m (40') O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 70 km/h (45 M.P.H.) OR LESS.

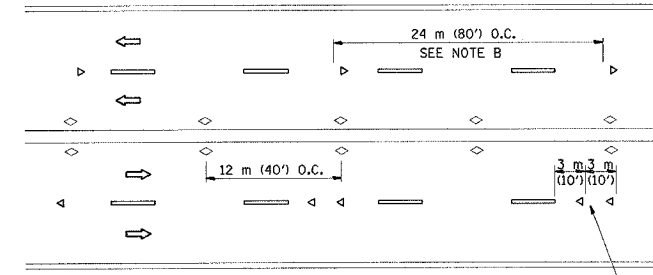
TWO-LANE/TWO-WAY



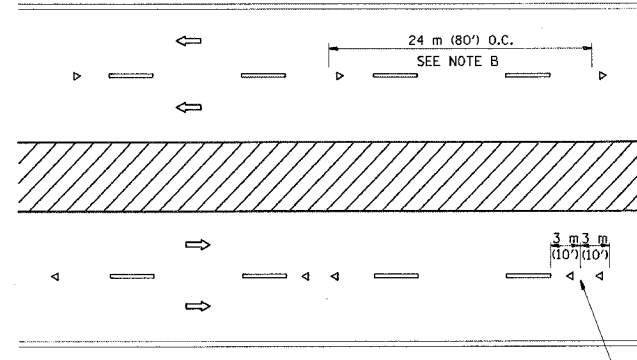
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 50 TO 75 (2 TO 3) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 150 m (500') IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

LANE MARKER NOTES

- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.
- B. REDUCE TO 12 m (40') O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 20 km/h (10 M.P.H.) LOWER THAN POSTED SPEEDS.

SYMBOLS

- YELLOW STRIPE
- WHITE STRIPE
- ◁ ONE-WAY AMBER MARKER
- ◁ ONE-WAY CRYSTAL MARKER (W/O)
- ◊ TWO-WAY AMBER MARKER

DESIGN NOTES

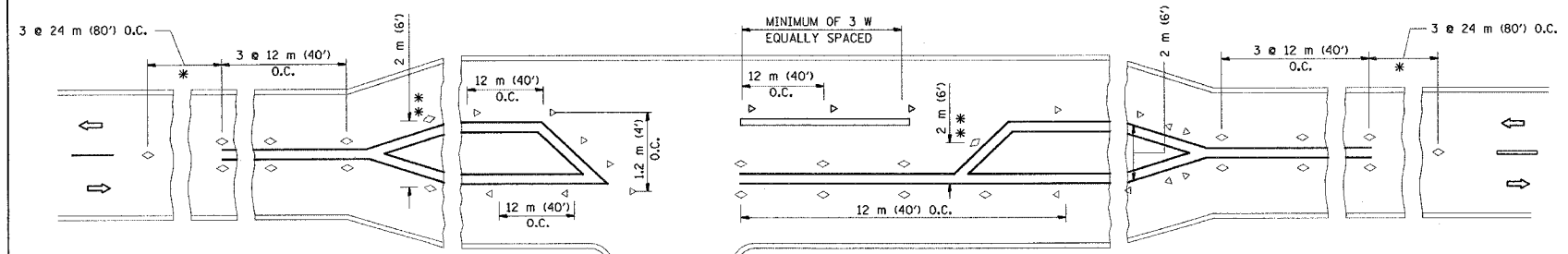
1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHOULD BE INCLUDED IN THE PLANS.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.

All dimensions are in millimeters (inches) unless otherwise shown.

| REVISIONS | |
|--------------|----------|
| NAME | DATE |
| T. RAMMACHER | 09-19-94 |
| T. RAMMACHER | 03-12-99 |
| T. RAMMACHER | 01-06-00 |
| | |
| | |
| | |
| | |

ILLINOIS DEPARTMENT OF TRANSPORTATION
TYPICAL APPLICATIONS
RAISED REFLECTIVE PAVEMENT
MARKERS (SNOW-PLOW RESISTANT)

SCALE: NONE
DATE: 6/2/2006
DRAWN BY CADD
CHECKED BY
TC-11

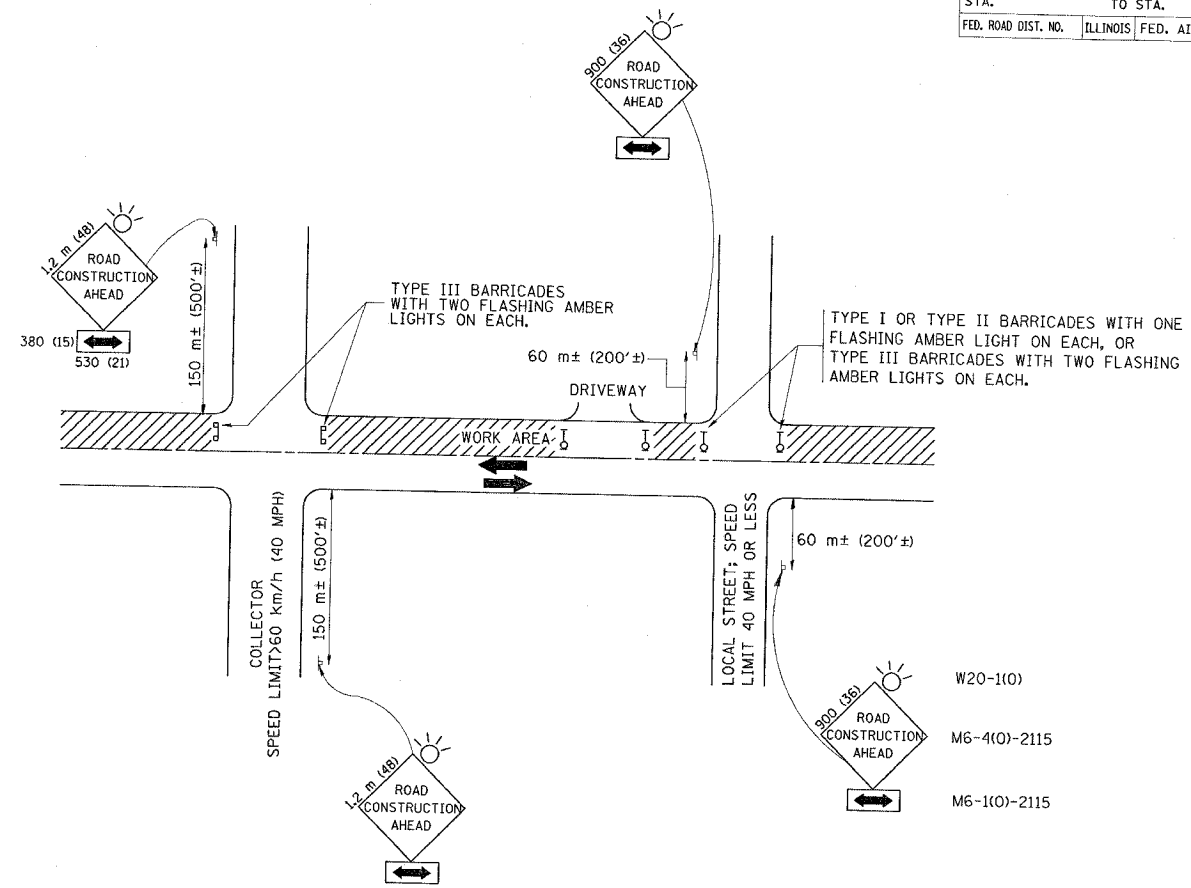


LEFT TURN

- * SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE
- ** WHERE THE MEDIAN WIDTH IS 2 m (6') OR LESS USE TWO-WAY MARKERS.

PLOT DATE = 6/2/2006
PLOT SCALE = 1/8" = 1'-0"
USER NAME = gullbeamfp

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------|-----------|---------------------------|--------------|-----------|
| 1258 | 1255B-1-1 | Lake | 13 | 13 |
| STA. | | TO STA. | | |
| FED. ROAD DIST. NO. | | ILLINOIS FED. AID PROJECT | | |



TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS
 1. SIDE ROAD WITH A SPEED LIMIT OF 60 km/h (40 MPH) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - a) ONE ROAD CONSTRUCTION AHEAD SIGN 900x900 (36x36) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 60 m (200') IN ADVANCE OF THE MAIN ROUTE.
 - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
 2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 60 km/h (40 MPH) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - a) ONE ROAD CONSTRUCTION AHEAD SIGN 1.2 m x 1.2 m (48x48) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 150 m (500') IN ADVANCE OF THE MAIN ROUTE.
 - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
 3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
- B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.

 - C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.
 - D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

| REVISIONS | | |
|--------------|----------|--|
| NAME | DATE | |
| LHA | 6/89 | |
| T. RAMMACHER | 09/08/94 | |
| J. OBERLE | 10/18/95 | |
| A. HOUSEH | 03/06/96 | |
| A. HOUSEH | 10/15/96 | |
| T. RAMMACHER | 01/06/00 | |
| | | |
| | | |
| | | |

ILLINOIS DEPARTMENT OF TRANSPORTATION
 TRAFFIC CONTROL AND PROTECTION
 FOR
 SIDE ROADS, INTERSECTIONS, AND
 DRIVEWAYS

SCALE:
 DATE: 6/2/2006

DRAWN BY
 CHECKED BY
 TC-10
 REVISION DATE: 01/06/00

PLOT DATE = 6/2/2006
 FILE NAME = 60B67.dgn
 PLOT SCALE = 50.0000 / IN.
 USER NAME = gulliammfp