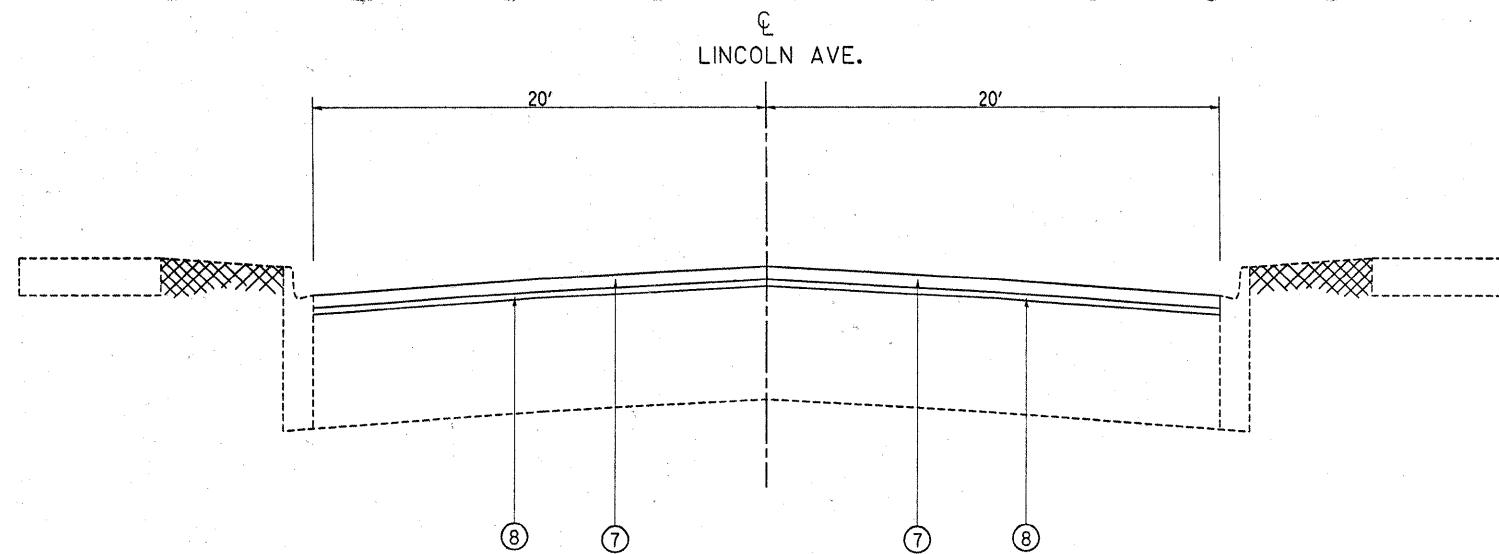


**EXISTING TYPICAL SECTION  
LINCLON AVE.  
STA. 6+72 TO STA. 68+82**



**PROPOSED TYPICAL SECTION  
LINCLON AVE.  
STA. 6+72 TO STA. 68+82**

**LEGEND**

- ① PROPOSED HOT-MIX ASPHALT SURFACE REMOVAL - 2 1/4 "
- ② EXISTING REMAINING HMA AFTER MILLING, (±)3/4 "
- ③ EXISTING PCC BASE COURSE, (±)9"
- ④ EXISTING COMBINATION CONCRETE CURB AND GUTTER TYPE B-6.12
- ⑤ EXISTING PARKWAY
- ⑥ EXISTING P.C.C. SIDEWALK, 5"
- ⑦ PROPOSED HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, 1 1/2 "
- ⑧ PROPOSED POLYMERIZED LEVELING BINDER (MM), IL-4.75, N50, 3/4 "

**HMA MIXTURE REQUIREMENTS**

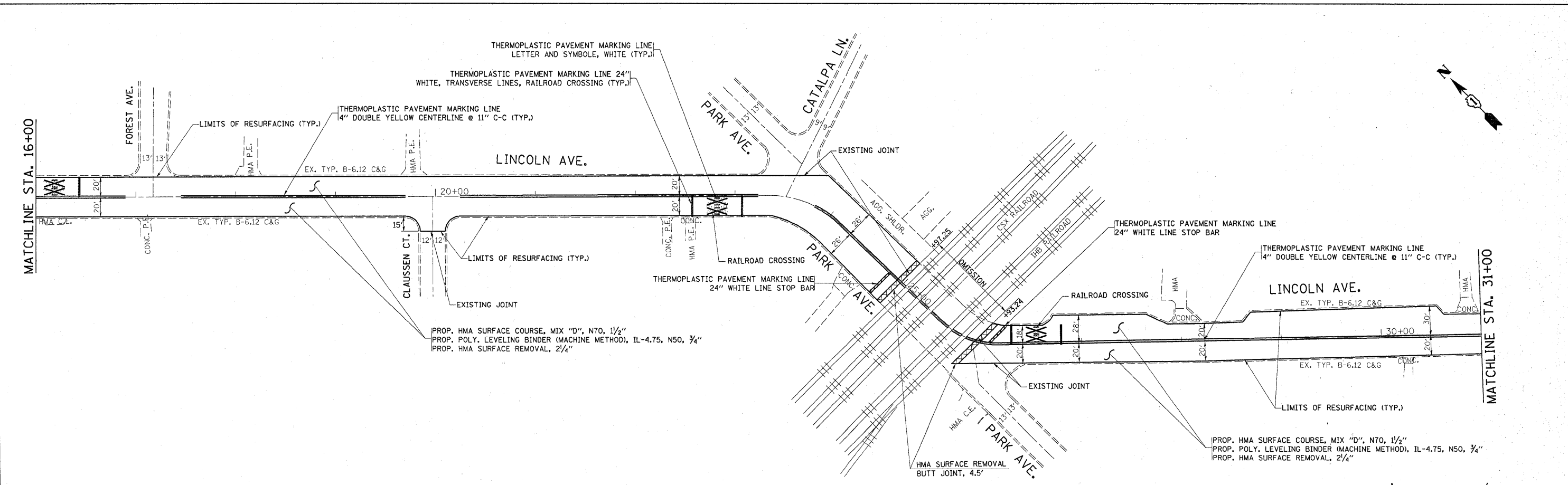
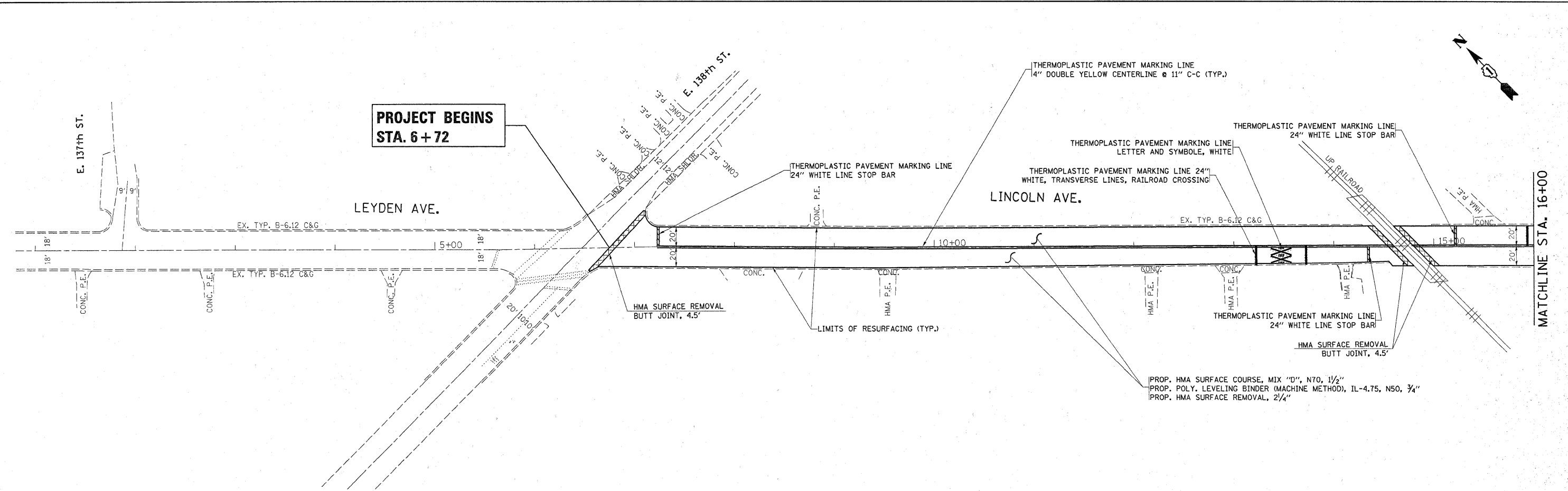
| MIXTURE TYPE   | AIR VOIDS @ NDES |
|--|------------------|
| HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70 (IL 9.5 mm)                   | 4% @ 70 GYR      |
| POLYMERIZED LEVELING BINDER, (MM), IL-4.75, N50                            | 4% @ 50 GYR      |
| CLASS D PATCHES, (HMA BINDER IL-19 mm)                                     | 4% @ 70 GYR      |
| HOT-MIX ASPHALT REPLACEMENT OVER PATCHES (HOT-MIX ASPHALT BINDER IL-19 mm) | 4% @ 70 GYR      |

THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURE QUANTITIES IS 112 LBS/SQYD/IN.

THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 70 -22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64 -22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS. FOR "PERCENT OF RAP" SEE DISTRICT ONE SPECIAL PROVISIONS.

**NOTE:**  
**THE CONTRACTOR SHALL PATCH FIRST BEFORE MILLING**

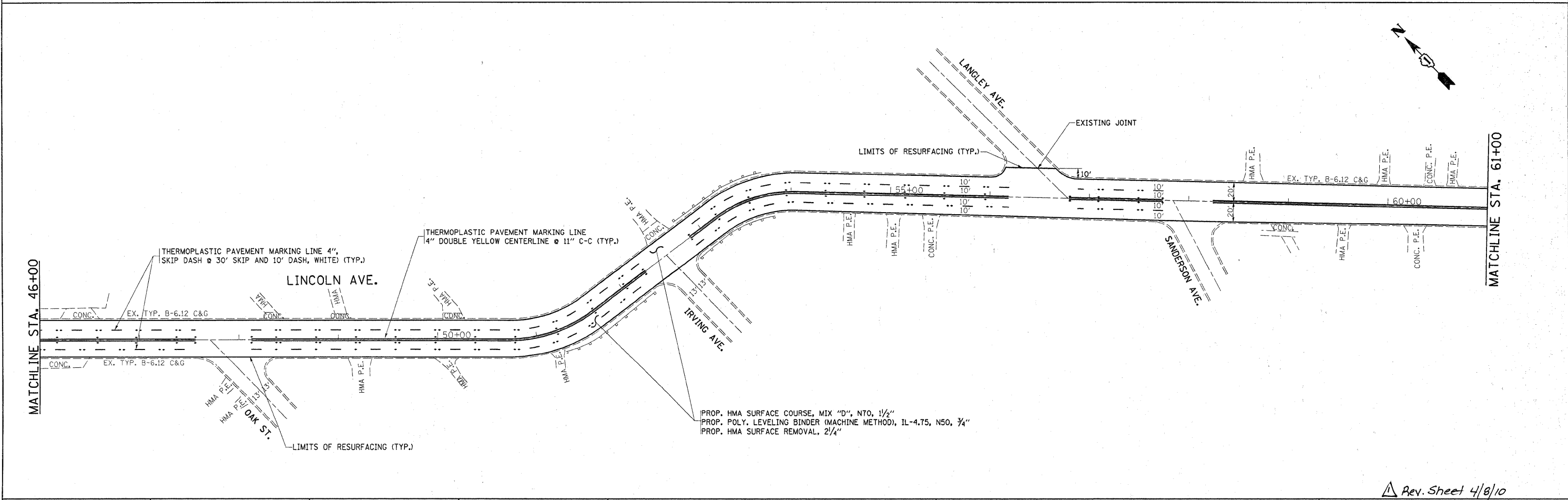
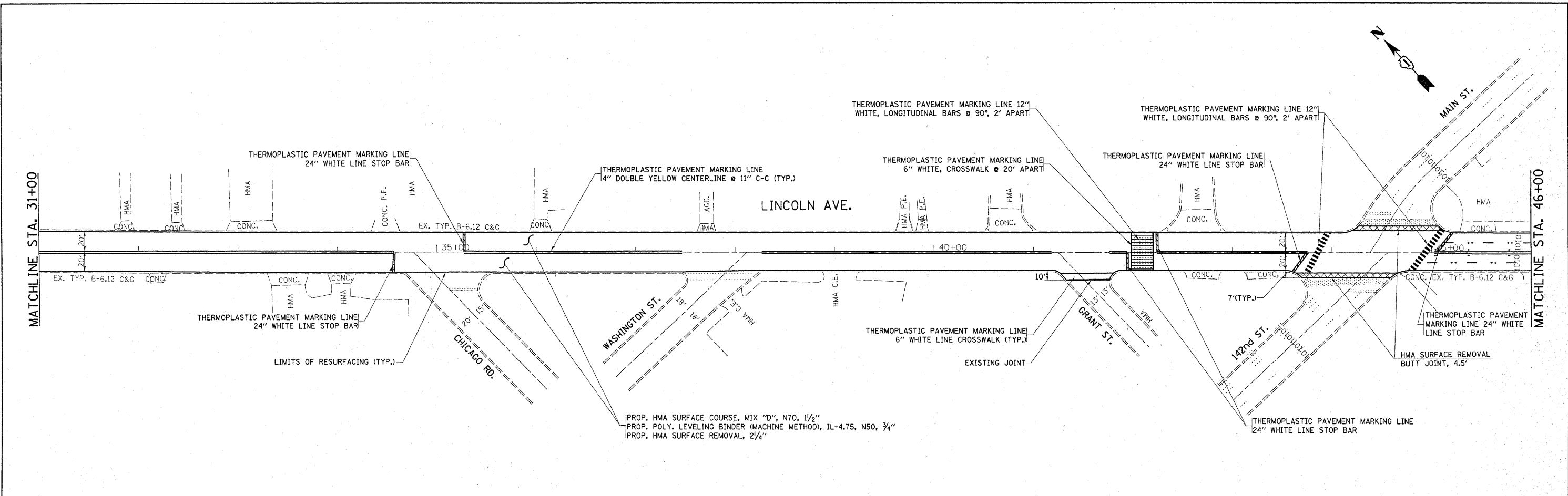
Rev. Sheet 4/8/10



Rev. Sheet 4/8/10

|   |                      |            |           |   |   |                           |             |        |              |           |  |
|---|----------------------|------------|-----------|---|---|---------------------------|-------------|--------|--------------|-----------|--|
| FILE NAME =   | USER NAME = hamdanah | DESIGNED - | REVISED - | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b> | <b>ROADWAY AND PAVEMENT MARKING PLAN<br/>LINCOLN AVE. (138th ST. TO COTTAGE GROVE AVE.)</b> | F.A.U. RTE.               | SECTION     | COUNTY | TOTAL SHEETS | SHEET NO. |  |
| c:\pwwork\pawid\hamdanah\0176891\0128810-sht-plan.dgn |                      | DRAWN -    | REVISED - |   |   | 3593                      | 2009-124 RS | COOK   | 19           | 5         |  |
| PLOT SCALE = 50.0000' / IN.                           |                      | CHECKED -  | REVISED - |   |   | CONTRACT NO. 60J78        |             |        |              |           |  |
| PLOT DATE = 2/18/2010                                 |                      | DATE -     | REVISED - |   |   | ILLINOIS FED. AID PROJECT |             |        |              |           |  |

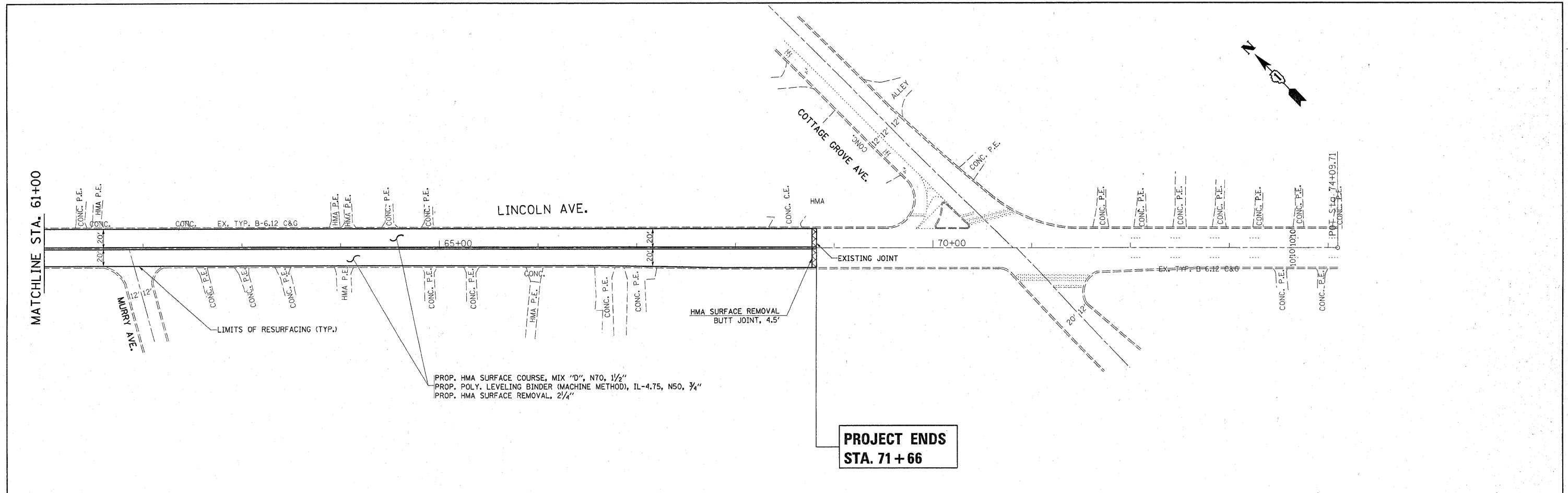
SCALE: 1"=50' SHEET NO. 1 OF 3 SHEETS STA. 1+00 TO STA. 31+00



|  |                      |            |           |   |   |             |      |                 |         |        |              |           |
|--|----------------------|------------|-----------|---|---|-------------|------|-----------------|---------|--------|--------------|-----------|
| FILE NAME =  | USER NAME = hamdanah | DESIGNED - | REVISED - | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b> | <b>ROADWAY AND PAVEMENT MARKING PLAN<br/>LINCOLN AVE. (138th ST. TO COTTAGE GROVE AVE.)</b> |             |      | F.A.U. R.T.E. = | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| ca:\pwwork\pwwid\hamdanah\d8176891\0126810-sh-t-plan.dgn |                      | DRAWN -    | REVISED - |   | 3593  | 2009-124 RS | COOK | 19              | 6       |        |              |           |
| PLOT SCALE = 50.0000' / IN.                              |                      | CHECKED -  | REVISED - |   | CONTRACT NO. 60J78  |             |      |                 |         |        |              |           |
| PLOT DATE = 2/18/2010                                    |                      | DATE -     | REVISED - |   | ILLINOIS FED. AID PROJECT   |             |      |                 |         |        |              |           |

Rev. Sheet 4/8/10

SCALE: 1"=50' SHEET NO. 2 OF 3 SHEETS STA. 31+00 TO STA. 61+00

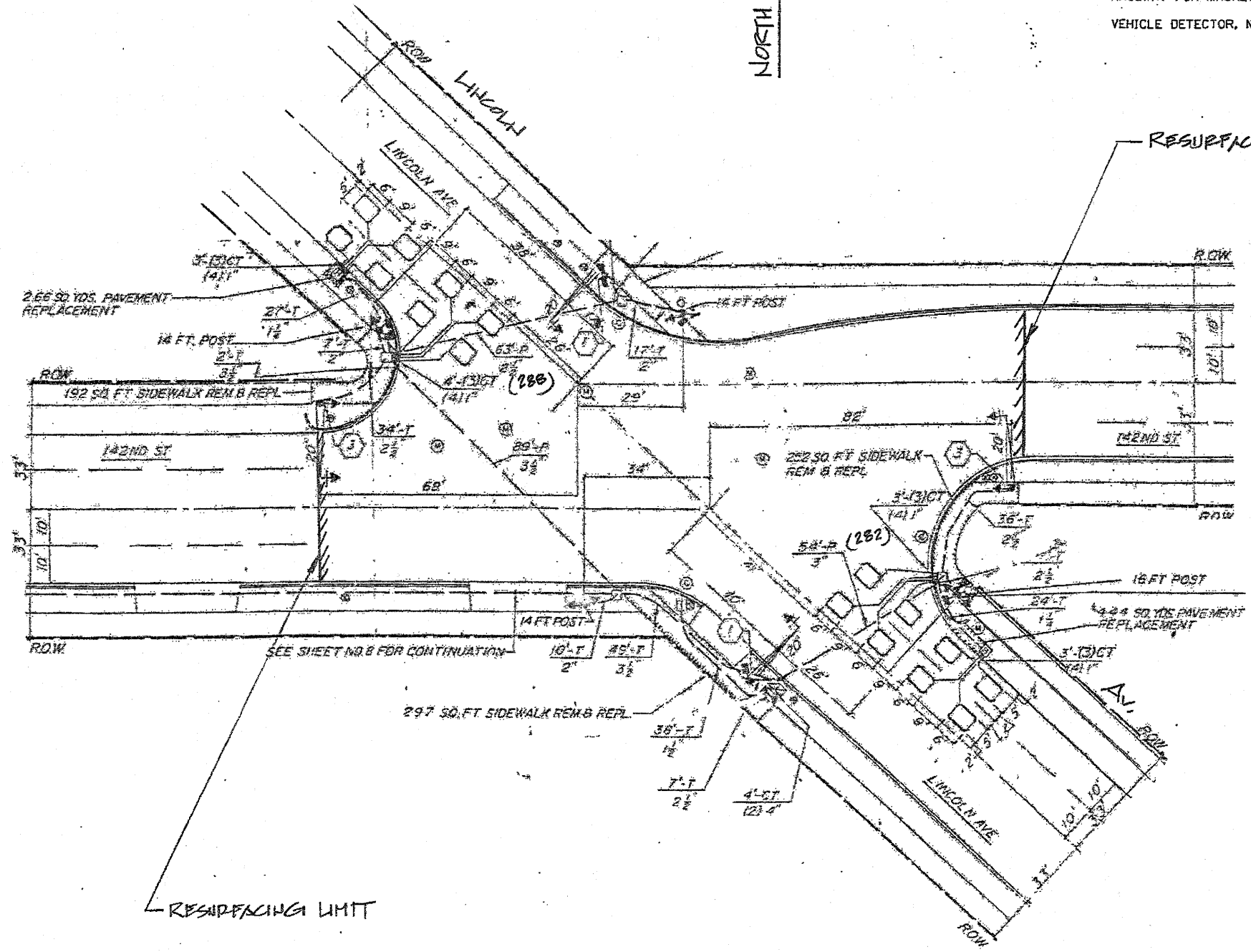
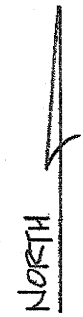


|  |                      |            |           |   |   |                           |             |                          |              |           |  |
|--|----------------------|------------|-----------|---|---|---------------------------|-------------|--------------------------|--------------|-----------|--|
| FILE NAME =                            | USER NAME = hamdanah | DESIGNED - | REVISED - | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b> | <b>ROADWAY AND PAVEMENT MARKING PLAN<br/>LINCOLN AVE. (138th ST. TO COTTAGE GROVE AVE.)</b> | F.A.U. RTE.               | SECTION     | COUNTY                   | TOTAL SHEETS | SHEET NO. |  |
| ca:\pw\work\p\id\hamdanah\0176891\0126 | 810-sh-t-plan.dgn    | DRAWN -    | REVISED - |   |   | 3593                      | 2009-124 RS | COOK                     | 19           | 7         |  |
| PLOT SCALE = 50,0000 ' / IN.           |                      | CHECKED -  | REVISED - |   |   | CONTRACT NO. 60J78        |             |                          |              |           |  |
| PLOT DATE = 2/18/2010                  |                      | DATE -     | REVISED - |   |   | ILLINOIS FED. AID PROJECT |             |                          |              |           |  |
|  |                      |            |           |   | SCALE: 1"=50'   | SHEET NO. 3 OF 3 SHEETS   |             | STA. 61+00 TO STA. 71+66 |              |           |  |

Rev. Sheet 4/8/10

**TRAFFIC SIGNAL LEGEND**

|   | PROPOSED | EXISTING |
|---|----------|----------|
| DETECTOR LOOP                                   |          |          |
| SIGNAL HEAD                                     |          |          |
| G.S. CONDUIT IN TRENCH OR PUSHED                |          |          |
| SIGNAL HEAD WITH BACKPLATE                      |          |          |
| RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR II     |          |          |
| VEHICLE DETECTOR, NON-COMPENSATED MAGNETIC TYPE |          |          |



THIS PLAN IS FOR THE SOLE PURPOSE OF DETECTOR LOOP REPLACEMENTS ONLY

REPLACE ALL DETECTOR LOOPS AS SHOWN (WITHIN THE RESURFACING LIMITS)

| CODE     | QUANTITY | UNIT | ITEM                       |
|----------|----------|------|----------------------------|
| 86600600 | 570      | FOOT | DETECTOR LOOP, REPLACEMENT |

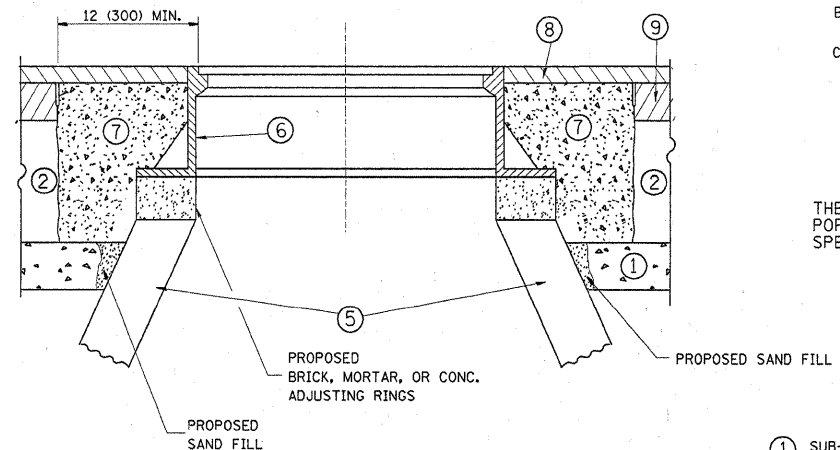
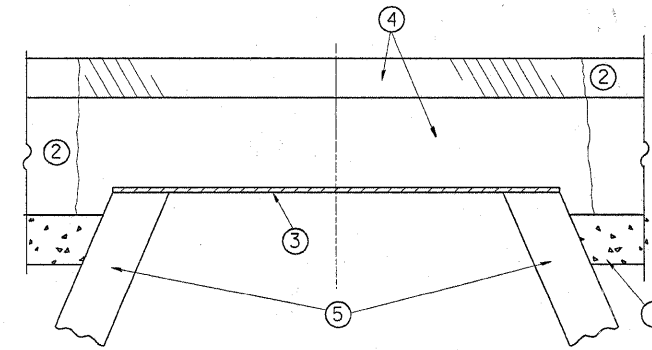
|  |                            |                |           |
|--|----------------------------|----------------|-----------|
| FILE NAME =                              | USER NAME = kenthaphiroybo | DESIGNED - BCK | REVISED - |
| \\pwork\work\PH\DOT\KANTHAPHIROYBO\01126 | 1\traff\legand_v7.dgn      | DRAWN - BCK    | REVISED - |
|  | PLOT SCALE = 3/4" = 1' DL  | CHECKED - DAD  | REVISED - |
|  | PLOT DATE = 4/3/2009       | DATE           | REVISED - |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE - DETECTOR LOOP REPLACEMENT  
LINCOLN AVE. @ 142ND ST.

|                     |             |        |                           |           |
|---------------------|-------------|--------|---------------------------|-----------|
| F.A.M. RTE.         | SECTION     | COUNTY | TOTAL SHEETS              | SHEET NO. |
| 3593                | 2009-124 RS | COOK   | 19                        | 8         |
| FED. ROAD DIST. NO. |             |        | ILLINOIS FED. AID PROJECT |           |
|                     |             |        | 60384                     |           |

SCALE: NONE SHEET NO. OF SHEETS STA. TO STA.



**CONSTRUCTION PROCEDURES**

**STAGE 1 (BEFORE PAVEMENT MILLING)**

- A) REMOVE A MINIMUM OF 12 (300) OF THE PAVEMENT FROM AROUND THE STRUCTURE.
- B) REMOVE THE EXISTING FRAME AND LID FROM THE STRUCTURE.
- C) COVER THE STRUCTURE OPENING WITH A 36 (900) DIAMETER METAL PLATE.
- D) BACKFILL WITH CRUSHED STONE AND A MINIMUM 1/2 (40) THICK HMA SURFACE MIX APPROVED BY THE ENGINEER.

**STAGE 2 (AFTER PAVEMENT MILLING)**

- A) REMOVE THE HMA SURFACE MIX AND CRUSHED STONE.
- B) INSTALL THE FRAME AND LID; ADJUST THE FRAME TO ITS FINAL SURFACE ELEVATION.
- C) THE SURROUNDING SPACE SHALL BE FILLED WITH CLASS SI CONCRETE, OR HMA SURFACE COURSE OR HMA BINDER COURSE TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.

THE PROCEDURE EXPLAINED ABOVE SHALL CONFORM TO THE APPLICABLE PORTIONS OF SECTIONS 353, 406, 602, AND 603 OF THE STANDARD SPECIFICATIONS.

**LEGEND**

- ① SUB-BASE GRANULAR MATERIAL
- ② EXISTING PAVEMENT
- ③ 36 (900) DIAMETER METAL PLATE
- ④ PROPOSED CRUSHED STONE AND HMA SURFACE MIX
- ⑤ EXISTING STRUCTURE
- ⑥ FRAME AND LID (SEE NOTES)
- ⑦ CLASS SI CONCRETE, HMA SURFACE COURSE OR HMA BINDER COURSE
- ⑧ PROPOSED HMA SURFACE COURSE
- ⑨ PROPOSED HMA BINDER COURSE

**NOTES:**

EXISTING BROKEN FRAMES AND LIDS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AND SHALL BE REPLACED AS DIRECTED BY THE ENGINEER. REPLACEMENT FRAMES AND LIDS WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS UNLESS A SEPARATE PAY ITEM HAS BEEN PROVIDED.

IF THE EXISTING LIDS ARE OPEN, THE FRAME WILL BE ADJUSTED TO THE ELEVATION OF THE MILLED PAVEMENT SURFACE PRIOR TO THE MILLING OPERATION. THE FRAME WILL NOT BE REMOVED AND COVERED BY THE METAL PLATE.

CITY OF CHICAGO CASTINGS ARE THE PROPERTY OF THE CITY AND THE CONTRACTOR SHALL NOTIFY THE CITY FOR REMOVAL AND DISPOSITION OF THE CASTINGS.

THE METAL PLATE USED TO COVER THE STRUCTURE SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.

WHEN STRUCTURES ARE TO BE ADJUSTED OR RECONSTRUCTED, THE LOWERING AND RAISING OF THE FRAMES AND LIDS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST OF THE CORRESPONDING PAY ITEM.

**LOCATION OF STRUCTURES:**

THE CONTRACTOR WILL BE REQUIRED TO KEEP A RECORD OF THE LOCATIONS OF THE BURIED STRUCTURES ACCORDING TO THE STATION AND DISTANCE LEFT OR RIGHT OF THE CENTERLINE OF PAVEMENT. UPON COMPLETION OF THE WORK, THE CONTRACTOR WILL DELIVER THE RECORD TO THE ENGINEER.

**BASIS OF PAYMENT:** THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR "FRAMES AND LIDS TO BE ADJUSTED, SPECIAL"  
NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.

**DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING**

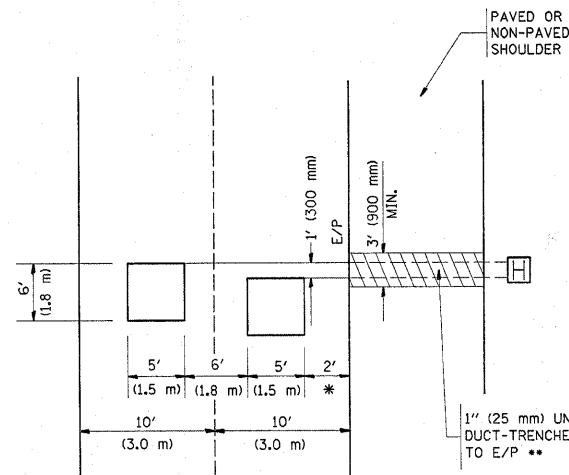
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

|  |                      |                    |                                |   |  |                         |              |   |         |        |              |           |
|--|----------------------|--------------------|--------------------------------|---|--|-------------------------|--------------|---|---------|--------|--------------|-----------|
| FILE NAME =                                    | USER NAME = hamdanah | DESIGNED - R. SHAH | REVISED - R. SHAH 03-10-95     | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b> | <b>DETAILS FOR<br/>FRAMES AND LIDS ADJUSTMENT WITH MILLING</b> |                         |              | F.A.U. RTE.                                     | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| cr:\pw\work\p\dot\hamdanah\0176891\01s\Std.dgn |                      | DRAWN -            | REVISED - A. ABBAS 03-21-97    |   | 3593   | 2009-124 RS             | COOK         | 19  | 9       |        |              |           |
| PLOT SCALE = 50.0000 ' / IN.                   |                      | CHECKED -          | REVISED - R. WIEDEMAN 05-14-04 |   | <b>BD600-03 (BD-8)</b>   |                         |              | <b>CONTRACT NO. 60J78</b>                       |         |        |              |           |
| PLOT DATE = 2/18/2010                          |                      | DATE - 10-25-94    | REVISED - R. BORO 01-01-07     |   | SCALE: NONE  | SHEET NO. 1 OF 1 SHEETS | STA. TO STA. | FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |         |        |              |           |

Rev. Sheet 4/8/10

**LOOPS NEXT TO SHOULDERS**

PROVIDE A PAVEMENT REPLACEMENT NOTE WHICH SHOULD EQUAL 3' (900 mm) X WIDTH OF PAVED SHOULDER.

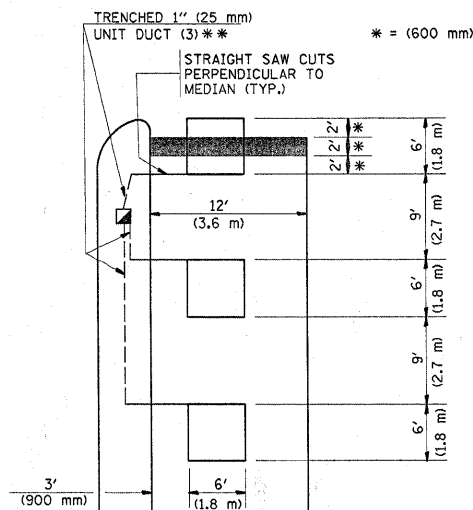


\* = (600 mm)

\*\* UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

**LEFT TURN LANES WITH MEDIANS  
VOLUME DENSITY ("FAR OUT" DETECTION)  
ON SAME APPROACH  
(PROTECTED / PERMITTED LEFT TURN PHASING)**

HANDHOLE LOCATION MAY VARY DEPENDING ON GEOMETRICS AND DESIGN OF TRAFFIC SIGNALS. HEAVY-DUTY HANDHOLES TO BE USED WHEN THE MEDIAN IS MOUNTABLE. REFER TO STANDARD 814001 TO ENSURE THAT HANDHOLE FITS IN MEDIAN.

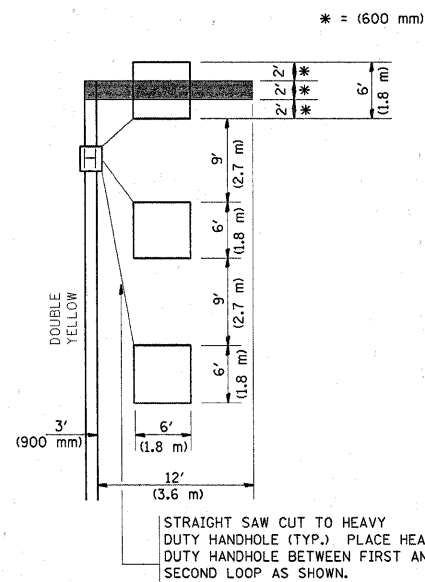


\* = (600 mm)

\*\* UNIT DUCT IS TO BE SHOWN ON PLAN SHEETS BUT SHALL NOT BE INCLUDED IN THE PAY ITEMS.

NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

**LEFT TURN LANES WITHOUT MEDIANS  
VOLUME DENSITY ("FAR OUT" DETECTION)  
ON SAME APPROACH  
(PROTECTED / PERMITTED LEFT TURN PHASING)**



\* = (600 mm)

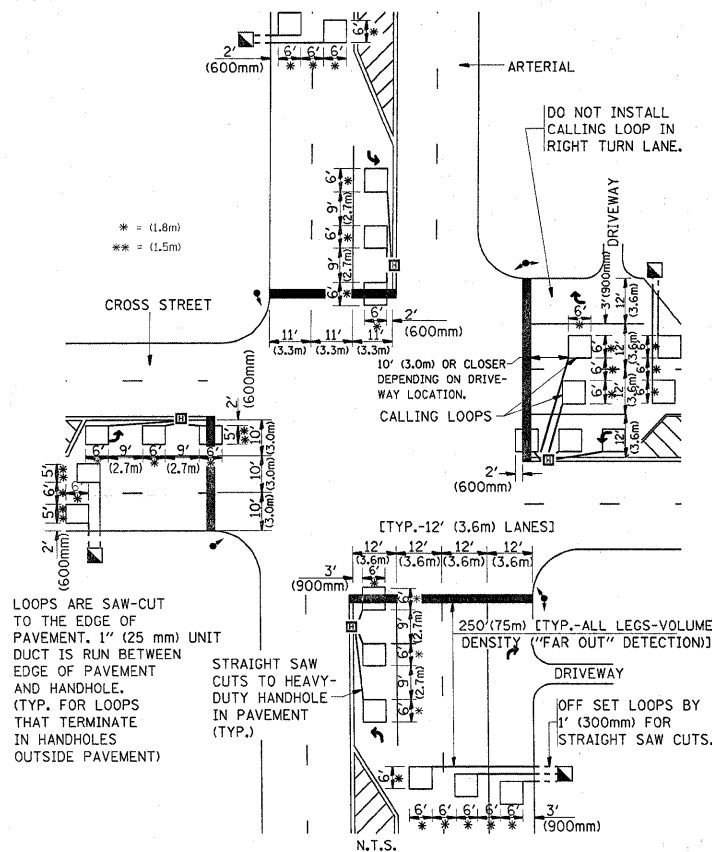
NOTE: DUAL LEFT TURNS NOT SHOWN REFER TO PLAN SHEET FOR DETECTOR LOOP REPLACEMENT

**NOTES:**

**VEHICLES LOOP DETECTORS**

- \* ALL LEAD IN CABLE SHALL BE TWO CONDUCTOR NO. 14 TWISTED, SHIELDED.
- \* EACH DETECTOR LOOP SHALL HAVE ITS OWN SAW CUT FROM THE LOOP TO THE EDGE OF PAVEMENT OR TO A HANDHOLE IN THE PAVEMENT.
- \* EACH DETECTOR LOOP SHALL HAVE ITS OWN ONE INCH (25 mm) UNIT DUCT BETWEEN THE EDGE OF PAVEMENT AND THE FIRST HANDHOLE OR JUNCTION BOX. EACH UNIT DUCT RUN SHALL BE SHOWN ON THE PLANS BY THE DESIGNER, BUT SHALL NOT BE PAID FOR SEPARATLY. THIS ITEM IS INCIDENTAL TO THE PAY ITEM FOR DETECTOR LOOPS.
- \* ONE DIMENSION OF ALL DETECTOR LOOPS SHALL BE SIX FEET (1.8 m)
- \* EACH LANE OF NON-LOCKING, PRESENCE DETECTION AND EACH LANE OF A DOUBLE LEFT TURN LANE REQUIRES A SEPARATE INDUCTIVE LOOP DETECTOR AND LEAD IN CABLE.
- \* WHEN NON-LOCKING, PRESENCE DETECTION IS USED, MORE THAN ONE LOOP PER LANE IS REQUIRED BEHIND THE STOP BAR (i.e. 1-1/2, 1-3/4, 2).
- \* WHEN SYSTEM LOOPS ARE REQUIRED ON AN APPROACH OF AN INTERSECTION, THE LOOPS USED FOR VOLUME DENSITY AND INTERSECTION TIMING SHALL ALSO BE USED AS SYSTEM DETECTORS. EACH ONE OF THESE TYPE OF LOOPS REQUIRES A SEPARATE TWO CONDUCTOR NO. 14 TWISTED SHIELDED CABLE AND A SEPARATE INDUCTIVE LOOP DETECTOR WHEN NEW CONTROLLERS ARE UTILIZED. THE DESIGNER SHALL LABEL THESE TYPES OF LOOPS AS "INTERSECTION AND SAMPLING (SYSTEM) DETECTORS" ON THE SIGNAL LAYOUT, THE INTERCONNECT PLAN AND THE SYSTEM CABLE PLAN. WHEN AN EXISTING CONTROLLER IS UTILIZED FOR THIS TYPE OF DETECTION, THE PAY ITEM "INDUCTIVE LOOP DETECTOR WITH SYSTEM OUTPUT" SHOULD BE USED.

**ARTERIAL-VOLUME DENSITY ("FAR OUT" DETECTION)  
CROSS STREET-VOLUME DENSITY ("FAR OUT" DETECTION)**

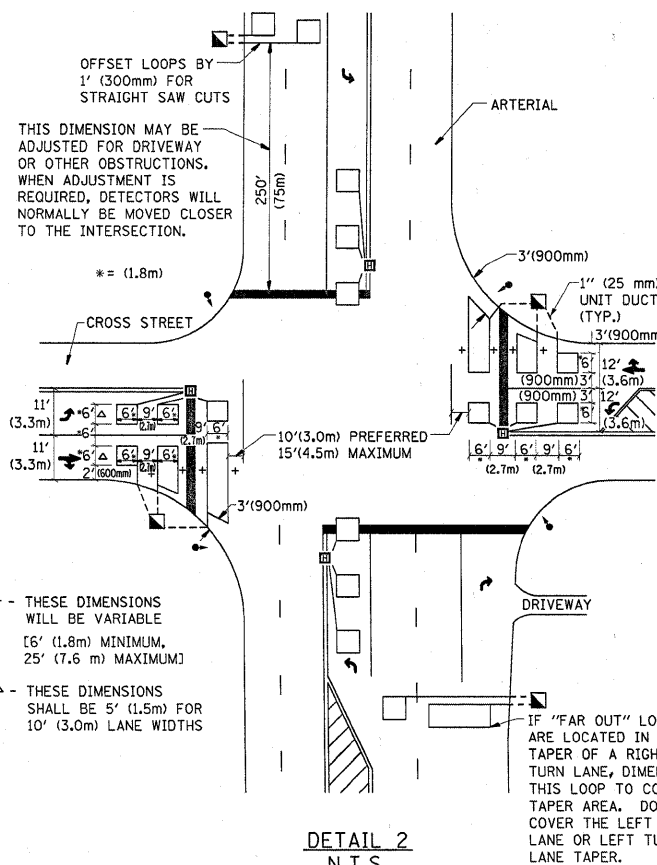


LOOPS ARE SAW-CUT TO THE EDGE OF PAVEMENT. 1" (25 mm) UNIT DUCT IS RUN BETWEEN EDGE OF PAVEMENT AND HANDHOLE. (TYP. FOR LOOPS THAT TERMINATE IN HANDHOLES OUTSIDE PAVEMENT)

STRAIGHT SAW CUTS TO HEAVY-DUTY HANDHOLE IN PAVEMENT (TYP.)

**DETAIL 1**  
N.T.S.

**ARTERIAL-VOLUME DENSITY ("FAR OUT" DETECTION)  
CROSS STREET-NON VOLUME DENSITY ("UPTIGHT" PRESENCE DETECTION)**



+ THESE DIMENSIONS WILL BE VARIABLE [6' (1.8m) MINIMUM, 25' (7.6 m) MAXIMUM]

- THESE DIMENSIONS SHALL BE 5' (1.5m) FOR 10' (3.0m) LANE WIDTHS

**DETAIL 2**  
N.T.S.

**PLACEMENT OF DETECTORS**

THE FOLLOWING FIGURES REPRESENT THE MOST COMMON DETECTOR LOOP LOCATIONS AND SIZES. ADJUSTMENTS WILL BE NECESSARY FOR SPECIFIC GEOMETRIC CONSIDERATIONS.

LOCATIONS AND DIMENSIONS OF DETECTOR LOOPS ARE REQUIRED ON ALL SIGNAL LAYOUT PLAN SHEETS.

"FAR OUT" DETECTION REFERS TO LOCKING, PRESENCE TYPE DETECTION LOCATED IN THRU LANES, RIGHT TURN LANES, AND RIGHT TURN LANE TAPER AREAS (IF APPLICABLE), USUALLY 250' (75 m) IN ADVANCE OF STOP BARS. "UPTIGHT" DETECTION REFERS TO NON-LOCKING PRESENCE TYPE DETECTION LOCATED IN ALL LANES AND 10'-15' (3.0 m-4.5 m) BEHIND THE CROSSING STREET'S EDGE OF PAVEMENT EXTENDED.

**NOTE:**

ALL DETAILS AND NOTES SHOWN ARE FROM THE I.D.O.T. DISTRICT 1 TRAFFIC SIGNAL DESIGN GUIDELINES DATED JANUARY 1995

THIS DRAWING HAS BEEN PREPARED TO ASSIST THE RESIDENT ENGINEER FOR ALL ROADWAY RESURFACING OR S.M.A.R.T. PROJECTS WHERE THE DIMENSIONS ARE NOT SHOWN ON THE PLANS AND THE FINAL LOCATIONS FOR CROSSWALKS OR STOP BARS ARE NOT DETERMINED.

Rev. Sheet 4/8/10

|   |                      |                  |           |   |  |                         |             |              |              |   |
|---|----------------------|------------------|-----------|---|--|-------------------------|-------------|--------------|--------------|---|
| FILE NAME =                                     | USER NAME = hamdanah | DESIGNED -       | REVISED - | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b> | <b>DISTRICT 1 - DETECTOR LOOP INSTALLATION<br/>DETAILS FOR ROADWAY RESURFACING</b> | F.A.U. RTE.             | SECTION     | COUNTY       | TOTAL SHEETS | SHEET NO.                                       |
| ct:\pw\work\paw\dos\hamdanah\08176891\Dist1.dgn |                      | DRAWN -          | REVISED - |   |  | 3593                    | 2009-124 RS | COOK         | 19           | 19  |
| PLOT SCALE = 50.0000' / IN.                     |                      | CHECKED - R.K.F. | REVISED - |   |  | <b>TS-07</b>            |             |              |              |   |
| PLOT DATE = 2/18/2010                           |                      | DATE -           | REVISED - |   |  | CONTRACT NO. 60J78      |             |              |              |   |
| SCALE: NONE                                     |                      |                  |           |   |  | SHEET NO. 1 OF 1 SHEETS |             | STA. TO STA. |              | FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT |