NOTES

- 1. CABINET SHALL BE FABRICATED FROM 0.125-INCH (3.175) SHEET ALUMINUM #3003H14, FORMED AND ARC WELDED.
- 2. ALL SCREWS AND HARDWARE SHALL BE PLATED, GALVANIZED, OR MADE OF BRASS, ALUMINUM OR STAINLESS STEEL, UNLESS OTHERWISE NOTED.
- 3. NAME PLATE SHALL HAVE ENGRAVED 0.75-INCH (19.05) HIGH LETTERS FILLED IN BLACK: "STATE OF ILLINOIS LIGHTING CONTROLS" UNLESS OTHERWISE SPECIFIED.
- 4. ONE INCH THICK POLYISOCYANURATE INSULATION SHALL BE INSTALL AND PERMANENTLY CEMENTED ON ALL SIDES OF THE CABINET AND DOORS.
- 5. CABINET SHALL BE PRIMED AND PAINTED AS SPECIFIED.
- 6. ELECTRIC UTILITY METER BOX SHALL BE MOUNTED ON THE SIDE OF CONTROL CABINET AS SHOWN ON THE PANEL LAYOUT DIAGRAM.
- 7. THE COMPLETED CONTROLLER SHALL BE U.L. LISTED AS AN INDUSTRIAL CONTROL PANEL UNDER UL508.
- 8. METAL MOUNTING PANEL SHALL BE FABRICATED FROM THE SAME MATERIAL AS THE CABINET AND SHALL BE FLANGED BACK 0.75-INCHES I.D. ON 4 SIDES.
- 9. CIRCUIT BREAKERS AND CONTACTORS AND OTHER COMPONENTS SHALL BE MOUNTED ON 0.125-INCH (3.175) THICK GLASTIC INSULATION BACK PANEL.
- 10. ALL DEVICES SHALL BE FRONT REMOVABLE.
- 11. TIME CLOCK CHANNEL 1 N.O. CONTACT IS CLOSED NIGHT AND OPEN DAY (LIGHTS ON).
- 12. SET LATITUDE TO 42 DEGREES. SET CH.1 TO 23 MINUTES AFTER ASTRONOMICAL SUNSET,
 50 MINUTES BEFORE ASTRONOMICAL SUNRISE. SET CH.2 TO 60 MINUTES AFTER ASTRONOMICAL
 SUNSET (WITH A SIGNAL LENGTH OF 1 SECOND), +28 MINUTES AFTER ASTRONOMICAL SUNRISE (WITH
 A SIGNAL LENGTH OF 7 SECONDS.)
- 13. BUS BAR SHALL HAVE 22 LUG TERMINALS SIZED TO ACCOMMODATE REQUIRED WIRE SIZES. 240V NEUTRAL BUS SHALL BE PAINTED WHITE, GROUND BUS SHALL BE PAINTED GREEN, AND THE 120V NEUTRAL BUS SHALL BE PAINTED GREY.
- 14. ALL LUGS SHALL BE OF COPPER SCREWS AND CONNECTORS, SPRING HELD.
- 15. ALL WIRING TERMINATIONS SHALL BE RATED NOT LESS THAN 75 DEGREE CENTIGRADE.
- 16. ALL CONTROL WIRING SHALL BE 600V #12 TYPE MTW, SCADA WIRING SHALL BE #18.
- 17. ALL POWER WIRING SHALL BE 600V TYPE RHH/RHW.
- 18. ALL WIRING WITHIN THE CABINET SHALL BE COLOR CODED AS INDICATED:

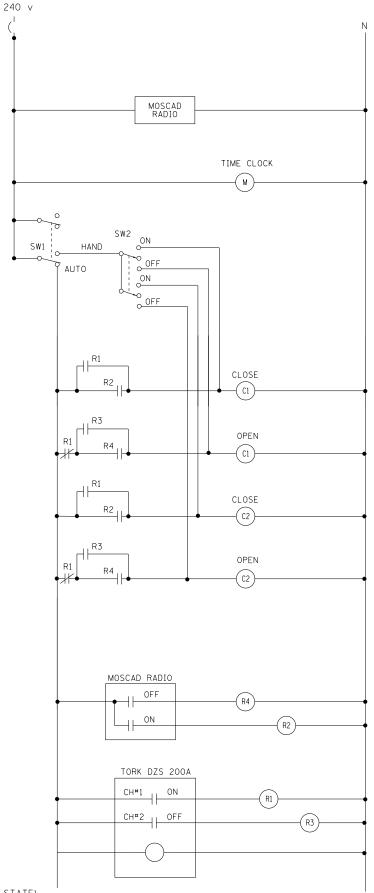
19. MOSCAD I/O WIRING SHALL BE:

DIGITAL INPUT (DI) WIRING SHALL BE #18 MTW PURPLE.

ANALOG INPUT (AI) WIRING SHALL BE #18, 2/C SHIELDED.

AI AND DI WIRING MAY BE BUNDLED TOGETHER, BUT SHALL NOT BE BUNDLED WITH OTHER WIRING.

- 20. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE INDICATED.
- 21. SCHEMATIC SHOWN WITH BREAKER OPEN, CONTACTOR OPEN, CABINET DOOR CLOSED, CLOCK NOT ACTIVE (DE-ENERGIZED STATE).
- 22. A LAMINATED COPY OF THE CIRCUIT SCHEMATIC AND SCADA I/O DIAGRAM (NO SMALLER THAN 11"x17" EACH) SHALL BE ATTACHED TO THE INSIDE OF THE CONTROLLER WITH STAINLESS STEEL SCREWS.



| CONTROL | CIRCUIT | LADDER | LUGIC | DIAGRAM | |
|---------|---------|--------|-------|---------|--|
| | | | | | |

| | MOSCAD I/O ASS | IGNMENTS |
|------|--------------------|-------------------------|
| TERM | MOSCAD DESTINATION | DESCRIPTION OF INPUT |
| 1 | DIGITAL INPUT 1 | ALARM KNOWLEDGE |
| 2 | DIGITAL INPUT 2 | DOOR OPEN |
| 3 | DIGITAL INPUT 3 | MAIN(S) BREAKER OPEN |
| 4 | DIGITAL INPUT 4 | CONTACTOR 1 OPEN |
| 5 | DIGITAL INPUT 5 | CONTACTOR 2 OPEN |
| 6 | DIGITAL INPUT 6 | CABINET IN NON-AUTO |
| 7 | DIGITAL INPUT 7 | BACK-UP CLOCK OFF CALL |
| 8 | DIGITAL INPUT 8 | BACK-UP CLOCK ON CALL |
| 17 | 24 V+ | 24+VDC |
| 18 | DI COMMON | соммон |
| 21 | K1 C | K1 COMMON |
| 22 | K1 N0 | LIGHTS ON CALL |
| 24 | K2 C | K2 COMMON |
| 25 | K2 N0 | LIGHTS OFF CALL |
| 32 | ANALOG INPUT 1 (+) | CABINET NEUTRAL CURRENT |
| 33 | ANALOG INPUT 1 (-) | CABINET NEUTRAL CURRENT |
| 34 | ANALOG INPUT 2 (+) | CABINET SERVICE VOLTAGE |
| 35 | ANALOG INPUT 2 (-) | CABINET SERVICE VOLTAGE |
| 40 | P. GROUND | GROUND |

ALL ANALOG INPUTS WILL BE 4-20 MA ONLY. DIGITAL OUTPUT RELAYS WILL BE ELECTRICALLY ENERGIZED AND MOMENTARILY HELD

COUNTY

886 801

CONTRACT NO. 60L70

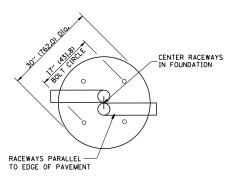
MIXED I/O MODULE MODEL NUMBER V436

| FILE NAME = | USER NAME = drivakosgn | DESIGNED | - | REVISED | - F | R. TOMSONS | 08-19-04 |
|--|----------------------------|----------|---------|---------|------------|------------|----------|
| c:\pw_work\pwidot\drivakosgn\d0108315\be | DRAWN | - | REVISED | - F | R. TOMSONS | 05-11-09 | |
| | PLOT SCALE = 50.000 '/ in. | CHECKED | - | REVISED | - F | R. TOMSONS | 03-10-10 |
| | DLOT DATE - 2/29/2012 | DATE | _ | DEVICED | _ [| ZIOMSONS | 03-29-12 |

| | | | | | (DULL) DADIO 004D4 | F.A RTE. | SECTION |
|---|--------------|--------------------|--------------|------------|--------------------|-------------|---------------------------------|
| ı | LIGHTING CON | IRULLER, BASE MOUN | IIED, 480VOL | LI, ZUUAMP | (DUAL) RADIO SCADA | · _ | |
| ı | | | | | | | BE-205 |
| ı | SCALE: NONE | SHEET NO. 4 OF 4 | SHEETS S | STA. | TO STA. | FED. RO | DAD DIST, NO. 1 ILLINOIS FED. A |

CENTER RACEWAYS IN FOUNDATION RACEWAYS PARALLEL TO EDGE OF PAVEMENT

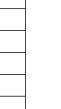




TOP VIEW

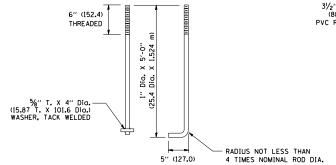
LIGHT POLE FOUNDATION DEPTH TABLE 40 FT. (12.192 m) TO 47.5 FT. (14.478 m) MOUNTING HEIGHT

| SOIL CONDITIONS | DESIGN DEPTH "I | D" OF FOUNDATION |
|----------------------------------|---------------------|------------------------------|
| SOIL COMPITIONS | SINGLE ARM POLE | TWIN ARM POLE |
| SOFT CLAY Ou = 0.375 TON/SO. FT. | 13'-0'' (3.96 m) | 15'-0'' (4 . 57 m) |
| MEDIUM CLAY | 9'-6'' | 10'-9" |
| Qu = 0.75 TON/SQ.FT | (2 . 09 m) | (3.23 m) |
| STIFF CLAY | 7'-0'' | 8'-0'' |
| Ou = 1.50 TON/SO. FT. | (2.13 m) | (2.44 m) |
| LOOSE SAND | 9'-0'' | 10'-0'' |
| Ø = 34° | (2.74 m) | (3 . 05 m) |
| MEDIUM SAND | 8'-3'' | 9'-0'' |
| Ø = 37.5° | (2.52 m) | (2.74 m) |
| DENSE SAND | 7'-9'' | 9'-0'' |
| Ø = 40° | (2,36 m) | (2.74 m) |

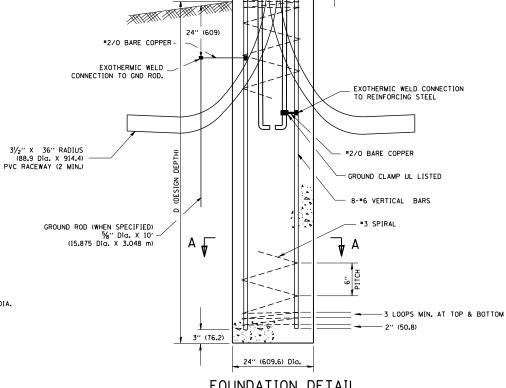


TOP VIEW ANCHOR ROD 4-1" Dia. X 5'-0" (4-25.4 Dia. X 1.524 m) 3/4" (19) CHAMFER

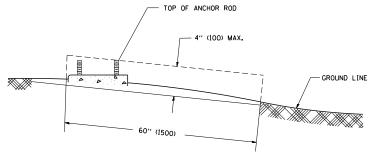
#2/0 BARE COPPER EXOTHERMIC WELD CONNECTION TO GND ROD.



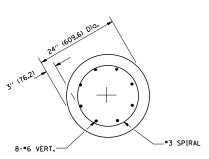
ANCHOR ROD DETAIL



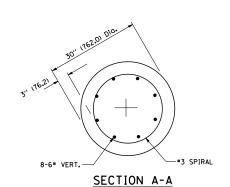
FOUNDATION DETAIL



FOUNDATION EXTENSION DETAIL



SECTION A-A



SCALE: NONE

NOTES

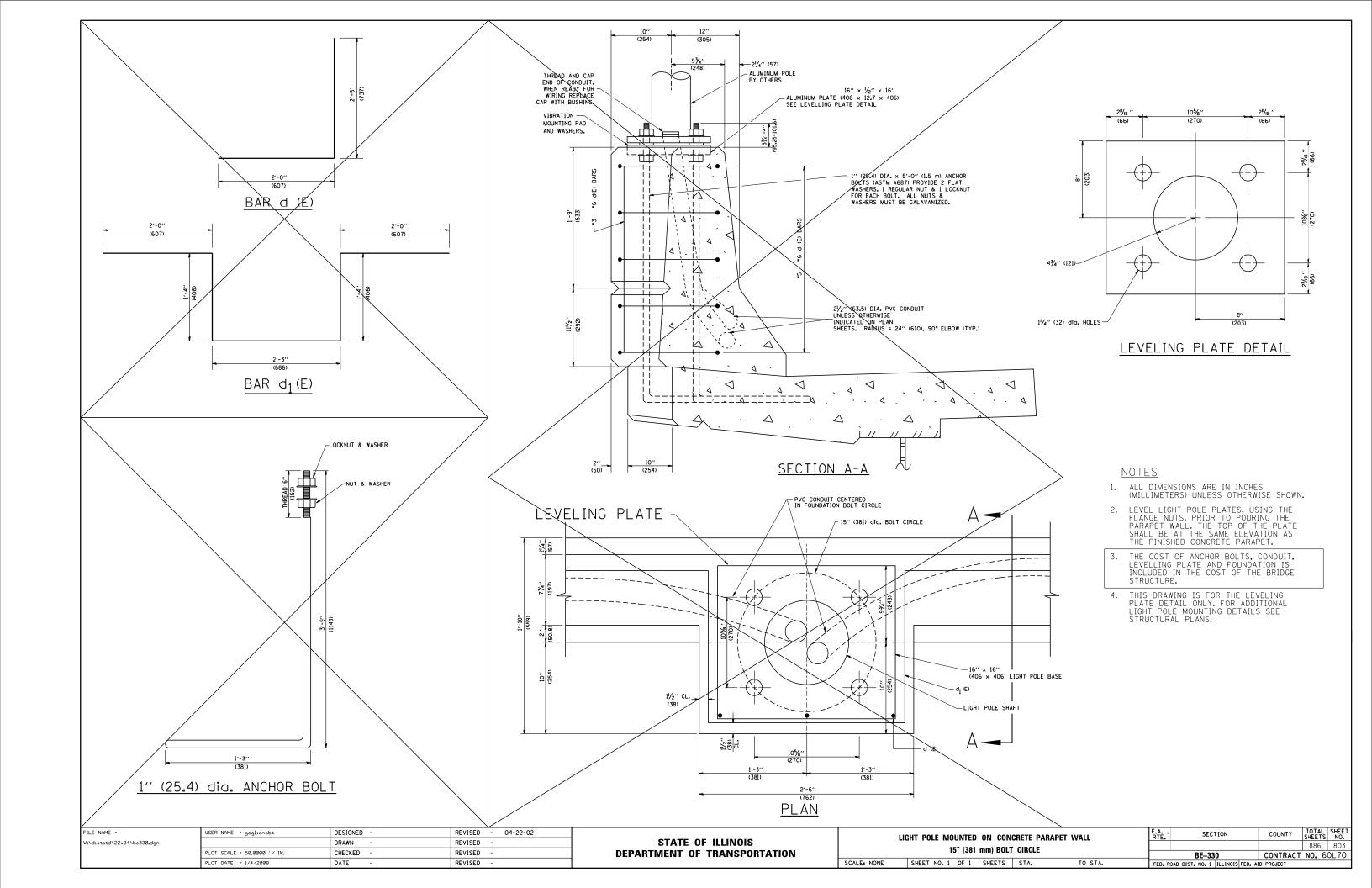
- 1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
- THE ANCHOR RODS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IN PLACED.
- THE FOUNDATION SHALL NOT PROTRUDE MORE THAN 100MM (4 IN.) ABOVE THE FINISHED GRADE WITHIN A 60 IN. (1.5 m) CHORD ACROSS THE FOUNDATION, WITH ANCHOR RODS INCLUDED, IN ACCORDANCE WITH AASHTO GUIDELINES, IF THE FOUNDATION HEIGHT, INCLUDING ANCHOR RODS, EXTENDS BEYOND THESE SPECIFIED LIMITS, THE FOUNDATION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. SEE FOUNDATION EXTENSION DETAIL.
- 4. THE HOLE FOR THE FOUNDATION SHALL BE MADE BY DRILLING WITH AN AUGER, OF THE SAME DIAMETER AS THE FOUNDATION. IF SOIL CONDITIONS REQUIRE THE USE OF A LINER TO FORM THE HOLE, THE LINER SHALL BE WITHDRAWN AS THE CONCRETE IS DEPOSITED.
- THE TOP OF THE FOUNDATION SHALL BE CONSTRUCTED LEVEL. A LINER OR FORM SHALL BE USED TO PRODUCE A UNIFORM SMOOTH SIDE TO THE TOP OF THE FOUNDATION. FOUNDATION TOP
- 6. THE CONCRETE SHALL BE CLASS SI. CONCRETE SHALL CURE ACCORDING TO ARTICLE 1020.13 BEFORE LIGHT POLES ARE INSTALLED.
- THE ANCHOR ROD SHALL BE A HOOK ROD TYPE. COLD BENDING OF THE ANCHOR ROD WILL NOT BE ALLOWED. THE RADIUS OF THE HOOK BEND SHALL NOT BE LESS THAN 4 TIMES THE NOMINAL DIAMETER OF THE ANCHOR ROD. A TACK WELDED ANCHOR ROD MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER.
- 8. THE ANCHOR RODS SHALL BE ACCORDING TO ASTM F1554 GRADE 725 (GRADE 105). NUTS SHALL BE HEXAGON NUTS ACCORDING TO ASTM A 194 2H OR ASTM A 563 DH, AND WASHERS SHALL BE
- ANCHOR RODS, NUTS AND WASHERS SHALL BE COMPLETELY GALVANIZED BY EITHER THE HOT-DIPPED PROCESS CONFORMING WITH AASHTO M 232, THE MECHANICAL PLATING METHOD CONFORMING TO AASHTO M 298, CLASS 50 WITH A MAXIMUM COATING THICKNESS OF 150 UM(6 MILS) OR THE ELECTROLYTIC PROCESS ACCORDING TO ASTM F 1136.
- 10. THE ANCHOR RODS SHALL BE THREADED A MINIMUM OF 6 INCHES (150 mm) WITH A MINIMUM OF 3 INCHES (75 mm) OF THREADED ANCHOR ROD EMBEDDED IN THE FOUNDATION.
- 11. ANCHOR RODS SHALL PROJECT 2¾" (69.9 mm) ABOVE THE TOP OF THE FOUNDATION. IF BREAKAWAY COUPLINGS ARE SPECIFIED, THE CONTRACTOR SHALL CAREFULLY COORDINATE THE ANCHOR ROD PROJECTION WITH THE INSTALLATION REQUIREMENTS OF THE BREAKAWAY COUPLINGS.
- 12. THE CONTRACTOR SHALL USE A *3 SPIRAL AT 6" (152.4 mm) PITCH OR MAY SUBSTITUTE *3 TIES AT 12" (304.8 mm) O.C. WITH THE APPROVAL OF THE ENGINEER.
- 13. THE CABLE TRENCHES AND FOUNDATION SHALL BE BACK FILLED AND COMPACTED AS SPECIFIED BEFORE THE LIGHT POLE IS ERECTED.
- 14. THE RACEWAYS SHALL PROJECT 1" (25.4 mm) ABOVE THE TOP OF THE FOUNDATION.

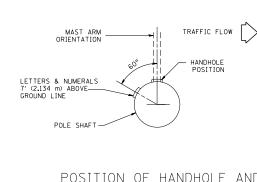
FILE NAME =

W:\diststd\22×34\be301.dqr

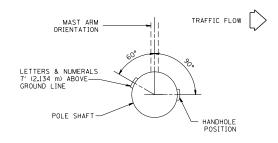
| USER NAME = gaglianobt | DESIGNED - | REVISED - 04-22-02 |
|-----------------------------|------------|--------------------|
| | DRAWN - | REVISED - |
| PLOT SCALE = 50.0000 '/ IN. | CHECKED - | REVISED - |
| PLOT DATE = 1/4/2008 | DATE - | REVISED - |

| | LIGHT PO | DLE FOUN | DATION | | F.A RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|--|-----------------------|-----------|------------|-----------------|-------------|-----------------------------------|------------|-----------------|--------------|
| /12 10 | 2 m) TO 47 1/2' /14 4 | 72 m\ M I | J 15" /201 | mm\ ROLT CIRCLE | | | | 886 | 802 |
| (12.192 m) TO 47 1/2' (14.478 m) M.H. 15" (381 mm) BOLT CIRCLE | | | | BE-301 | CONTRACT | NO. 60 | L70 | | |
| | SHEET NO. 1 OF 1 | SHEETS | STA. | TO STA. | FED. R | DAD DIST. NO. 1 ILLINOIS FED. A | ID PROJECT | | |

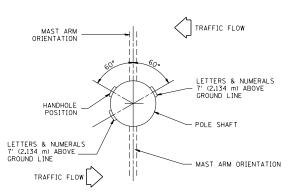




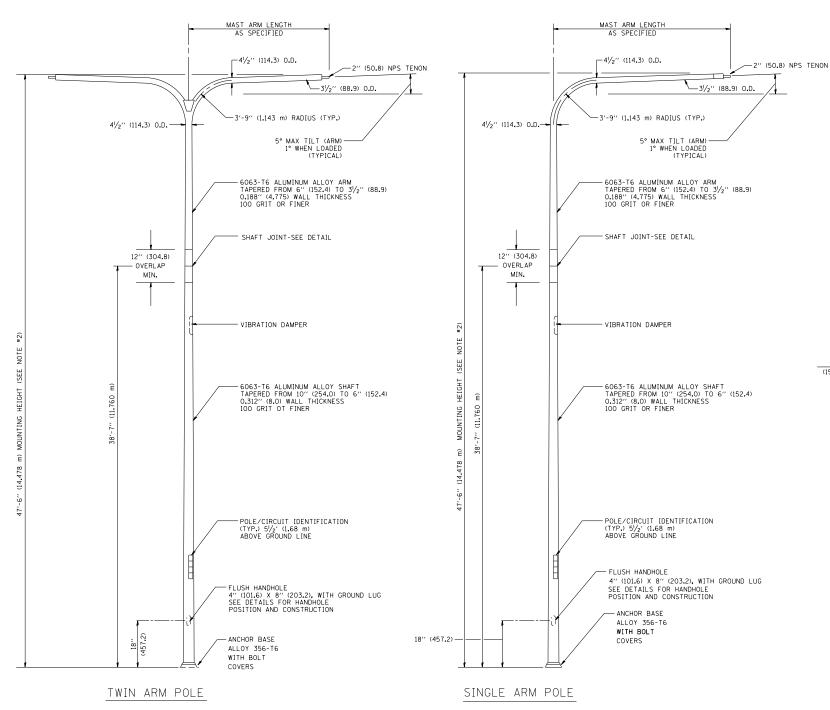
POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES MOUNTED ON BRIDGE PARAPET OR BARRIER WALL



POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES



POSITION OF HANDHOLE AND POLE NUMBER FOR TWIN MAST ARM POLES



- POLE SHAFT 3%" (9.525)-16 TAPPED BOLT HOLE FOR GROUNDING CONNECTOR 4" (101.6) × 8" (203.2) HAND HOLE HANDHOLE DETAIL (N.T.S.)

SCALE: NONE

NOTES:

- 1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
- 2. MOUNTING HEIGHT IS DEFINED AS THE DISTANCE FROM THE CENTERLINE OF THE TENON TO THE BOTTOM OF THE ANCHOR BASE.
- 3. TWO PIECE SHAFT WILL BE MATCHED MARKED AND INTERCHANGEABLE BETWEEN DIFFERENT UNITS. FIELD DRILLING OF THE HOLES WILL NOT BE ALLOWED.
- NOT BE ALLOWED.

 4. THE LIGHT POLE WILL MEET AASHTO DESIGN CRITERIA AS SPECIFIED.

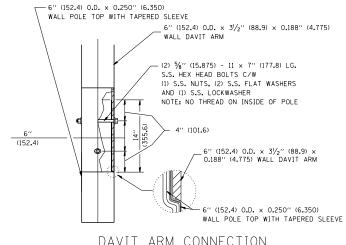
 5. THE INSTALLING CONTRACTOR WILL PROVIDE A UL LISTED GROUNDING CONNECTOR, BURNDY K2C23, T&B SP4DL OR APPROVED EQUAL.

 6. LIGHT POLES WILL NOT BE INSTALLED WITHOUT MAST ARMS AND LUMINAIRES.

 7. LIGHT POLES WILL BE SET PLUMB ON THE FOUNDATION WITHOUT THE USE OF LEVELING NUTS, WASHERS OR SHIMS.

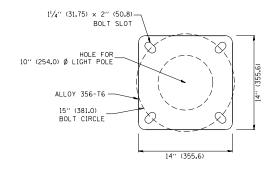
 8. LIGHTING UINTI DEPUTIFICATION NUMBERS

- 8. LIGHTING UNIT IDENTIFICATION NUMBERS
 SHALL BE INSTALLED BEFORE THE LIGHTING
 UNIT IS ENERGIZED.



DAVIT ARM CONNECTION

[14" (355.6) OVERLAP SHOWN]



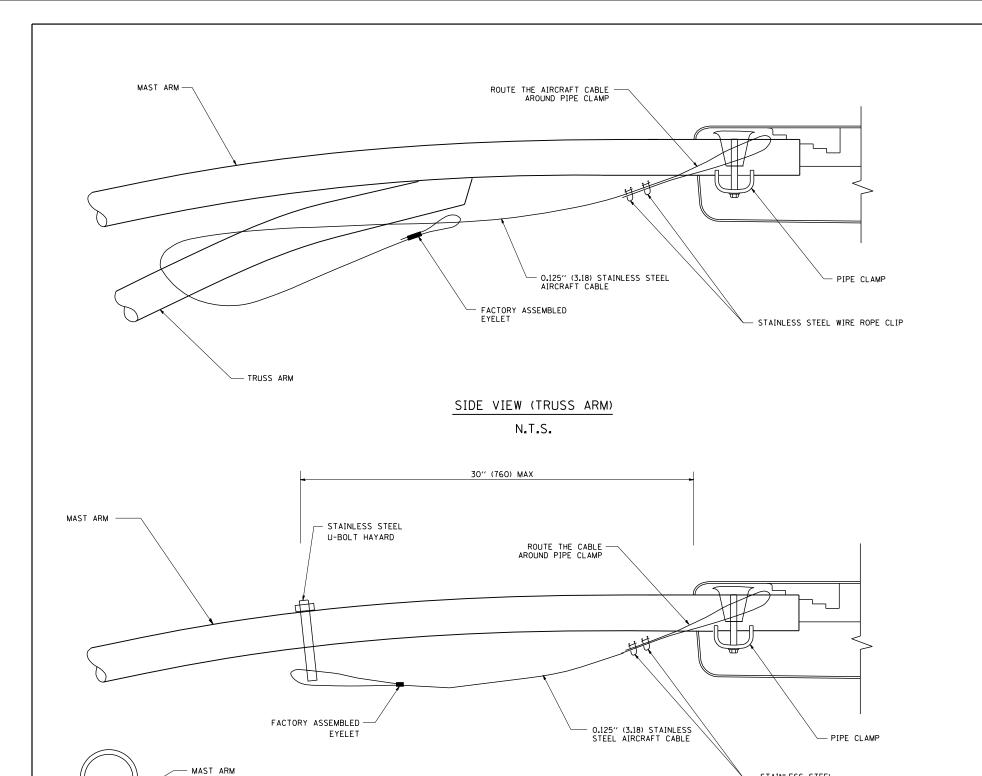
LIGHT POLE BASE PLATE DETAIL

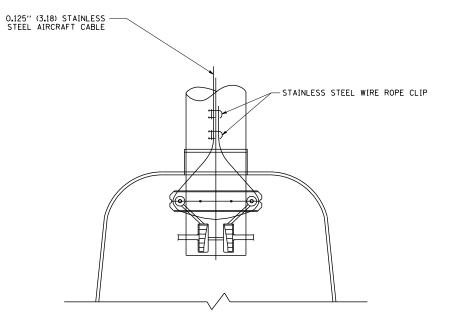
(FOR POLE MOUNTED ON 15 INCH (381.0) BOLT CIRCLE FOUNDATION)

| FILE NAME = | USER NAME = leyso | DESIGNED - | REVISED | - | D. DREW 05-07-92 |
|---|-----------------------------|-------------|---------|---|---------------------|
| c:\pw_work\pwidot\leysa\d0108315\be410.dg | n | DRAWN - LEY | REVISED | - | R. TOMSONS 09-06-00 |
| | PLOT SCALE = 50.0000 '/ in. | CHECKED - | REVISED | - | R. TOMSONS 09-02-03 |
| | PLOT DATE = 4/4/2013 | DATE - | REVISED | - | R. TOMSONS 01-18-13 |

| STATE OF ILLINOIS | |
|------------------------------|--|
| DEPARTMENT OF TRANSPORTATION | |

| DAVIT LIGHT POLE | F.A RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|--------------------------------------|-------------|-----------------------------------|------------|-----------------|--------------|
| 47'-6" (14,478 m) MOUNTING HEIGHT | | | | 886 | 804 |
| 47-0 (14.476 III) WOONTING REIGHT | | BE-410 | CONTRACT | NO. 60 | L70 |
| SHEET NO. 1 OF 1 SHEETS STA. TO STA. | FED. R | OAD DIST. NO. 1 ILLINOIS FED. A | ID PROJECT | | |





BOTTOM VIEW N.T.S.

NOTES:

- 1. ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.
- 2. CONTRACTOR SHALL ADJUST THE WIRE CLIP TO ELIMINATE ANY SLACK FROM THE WIRE ROPE.
- 3. THE 0.125" (3.18) STAINLESS STEEL AIRCRAFT CABLE SHALL REMAIN VISIBLE FROM THE GROUND LEVEL.
- 4. THE BREAKING STRENGTH OF THE CABLE SHALL BE 1700 LBS. MIN.

SIDE VIEW (SINGLE MEMBER OR DAVIT ARM)

-S.S. NUT &

STAINLESS STEEL U-BOLT HAYARD LOCK WASHER

N.T.S.

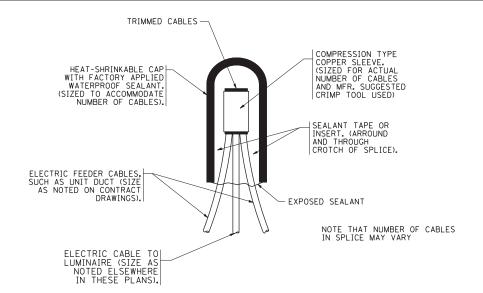
| FILE NAME = | USER NAME = gaglianobt | DESIGNED - | REVISED - 08-08-03 | | | LUMINAIRE SAFETY CABLE ASSEMBLY | | F.A | SECTION | COUNTY TOTAL SHEE |
|----------------------------|----------------------------|------------|--------------------|------------------------------|-------------|---------------------------------|---------|-------------|------------------------------|--------------------|
| W:\diststd\22x34\be701.dgn | | DRAWN - | REVISED - | STATE OF ILLINOIS | | LUMINAINE SAFETT GADLE ASSEMBLY | | 111111 | | 886 805 |
| | PLOT SCALE = 50.000 '/ IN. | CHECKED - | REVISED - | DEPARTMENT OF TRANSPORTATION | | | | | BE-701 | CONTRACT NO. 60L70 |
| | PLOT DATE = 1/4/2008 | DATE - | REVISED - | | SCALE: NONE | SHEET NO. 1 OF 1 SHEETS STA. | TO STA. | FED. ROAD I | DIST. NO. 1 ILLINOIS FED. AT | D PROJECT |

- STAINLESS STEEL WIRE ROPE CLIP

CONTRACT NO. 60L70 F.A. SECTION COUNTY TOTAL SHEET SHEET NO.

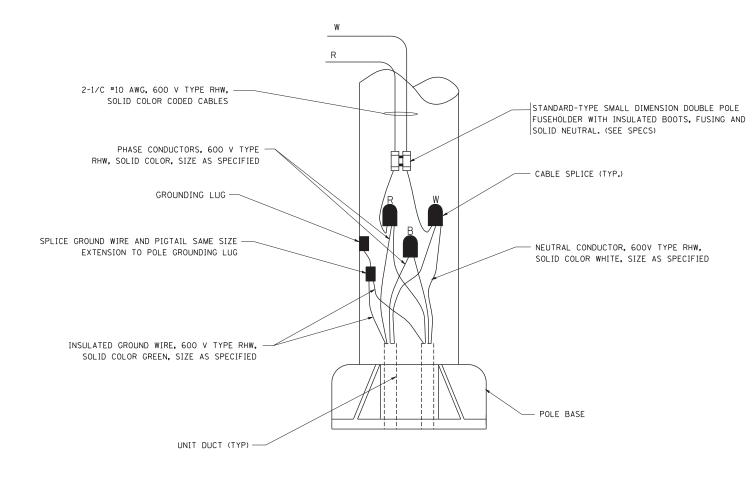
886 806 STA. TO STA.

FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT



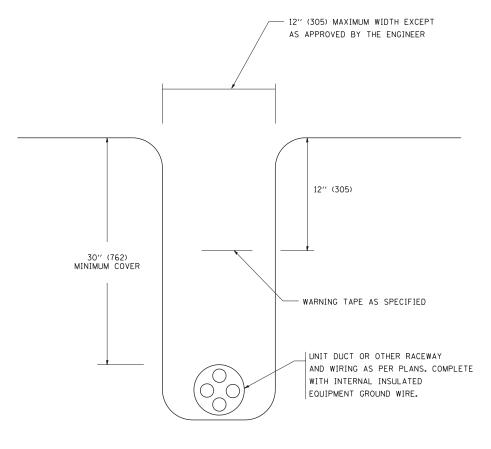
TYPICAL SPLICE DETAIL

N.T.S.



POLE WIRING DETAIL

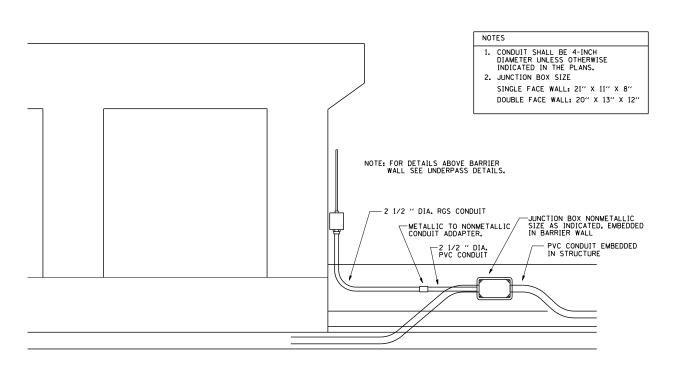
N.T.S.



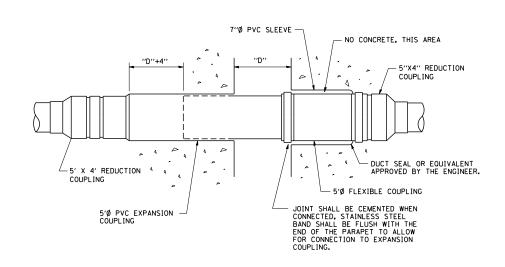
TYPICAL WIRING IN TRENCH DETAIL N.T.S.

| REVISIONS | | ILLINOIS DEPARTMENT OF TRANSPORTATION | | | | | |
|-----------|------|---------------------------------------|-------------|--------------|--|--|--|
| NAME | DATE | ILLINOIS DEPART | MIENT OF IK | ANSFORTATION | | | |
| | | | | | | | |
| | | | | | | | |
| | | MICC FLE | CTDICAL | DETAILS | | | |
| | | MISC. ELE | | DETAILS | | | |
| | | l S | SHEET A | | | | |
| | | | | | | | |
| | | | | | | | |
| | | SCALE: VERT. | | DRAWN BY | | | |
| | | HORIZ. | | | | | |
| | | DATE: 2/27/2007 | | CHECKED BY | | | |
| | | | | BF-702 | | | |

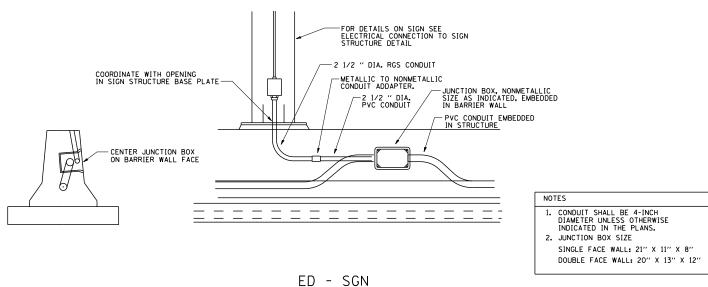
REVISION DATE: 01/01/07



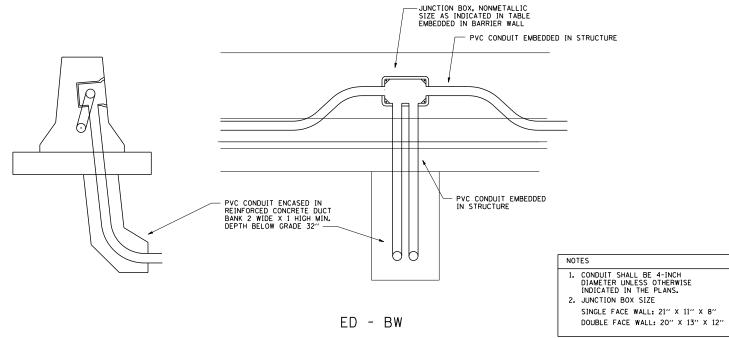
ED - BWD
ELECTRIC CONNECTION TO UNDERPASS LIGHTING



INSTALLATION OF CONDUIT
IN BRIDGE PARAPET EXPANSION JOINT
(N.T.S.)

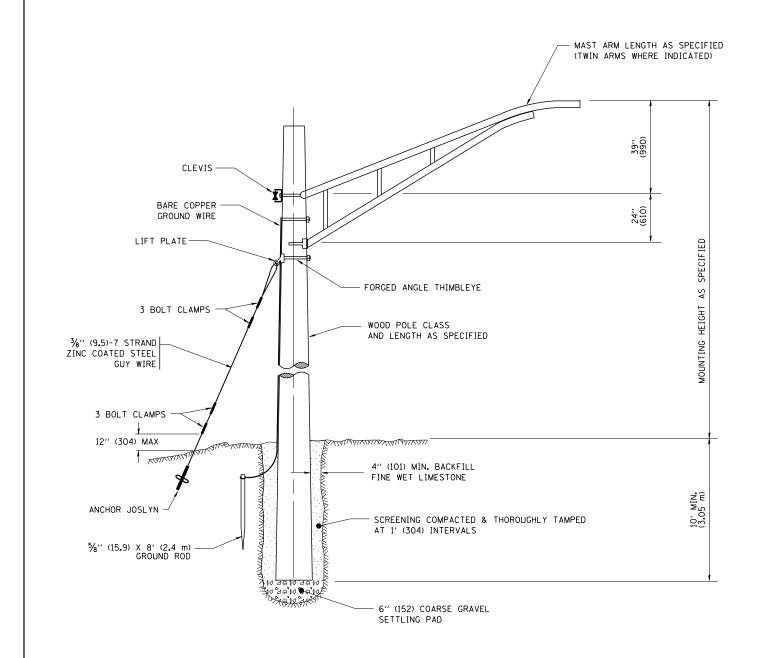


JUNCTION BOX EMBEDDED IN BARRIER WALL FOR SIGN LIGHTING

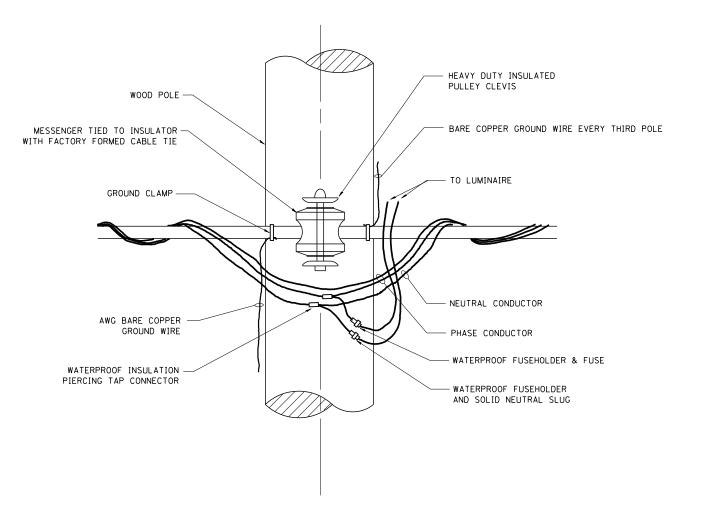


JUNCTION BOX EMBEDDED IN BARRIER WALL

| FILE NAME = | USER NAME = gaglianobt | DESIGNED - | REVISED - | | | MISCELLANEOUS | ELECTRICAL | . DETAILS, SH | IEET B | F.A. | SECTION | COUNTY | TOTAL SHEET |
|-------------|-----------------------------|-------------------|-----------|------------------------------|---------------|-------------------|-------------------|---------------|----------------------|-----------|---------|----------|-------------|
| be703.dgn | | DRAWN - | REVISED - | STATE OF ILLINOIS | J BOX EMBED | DED IN BARRIER V | vall – inst | TALLATION O | OF CONDUIT IN BRIDGE | | | | 886 807 |
| | PLOT SCALE = 50.0000 '/ IN. | CHECKED - | REVISED - | DEPARTMENT OF TRANSPORTATION | Parapet Expai | vsion joint – Eli | ECTRIC CON | INECTION TO | UNDERPASS LIGHTING | | BE-703 | CONTRACT | NO. 60L70 |
| | PLOT DATE = 2/5/2009 | DATE - 01-20-2009 | REVISED - | | SCALE: NONE | SHEET NO. 1 OF 1 | SHEETS | STA. | TO STA. | FED. ROAD | | | -111 002.0 |



TEMPORARY LIGHT POLE DETAIL

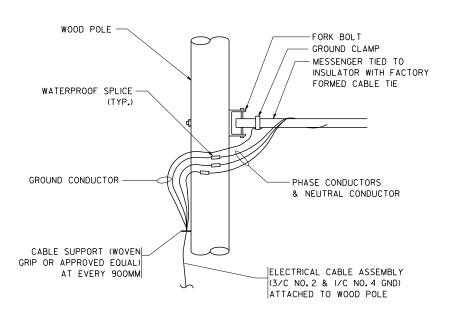


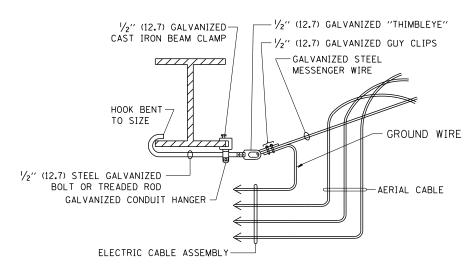
TEMPORARY LIGHT POLE ATTACHMENT DETAIL

NOTES:

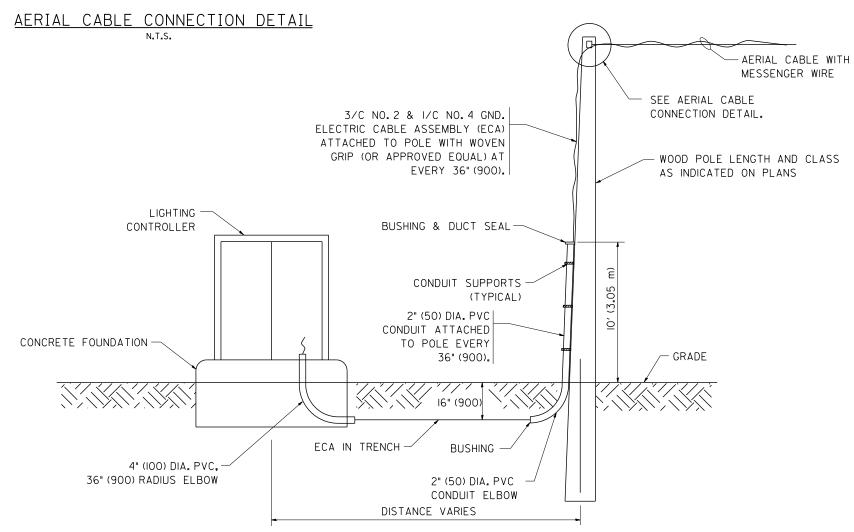
1. ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE INDICATED

| FILE NAME = | USER NAME = gaglianobt | DESIGNED - | REVISED - 08-08-03 | | | TEMPORARY LIGHT POLE DETAILS | | F.A | SECTION | COUNTY | TOTAL SHEET |
|----------------------------|----------------------------|------------|--------------------|------------------------------|-------------|------------------------------|---------|---|----------------------------------|----------|-------------|
| W:\diststd\22x34\be800.dgn | | DRAWN - | REVISED - | STATE OF ILLINOIS | | ILMFORARI LIGHT FOLL DETAILS | | ,,,, <u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u> | | | 886 808 |
| | PLOT SCALE = 50.000 '/ IN. | CHECKED - | REVISED - | DEPARTMENT OF TRANSPORTATION | | | | | BE-800 | CONTRACT | |
| | PLOT DATE = 1/4/2008 | DATE - | REVISED - | | SCALE: NONE | SHEET NO. 1 OF 1 SHEETS STA. | TO STA. | FED. ROAD | D DIST. NO. 1 ILLINOIS FED. AI | | |





AERIAL CABLE ATTACHED TO STRUCTURE NOT TO SCALE



NOTES:

- 1. ALL DIMENSIONS IN INCHES (MILLIMETERS)
 UNLESS OTHERWISE INDICATED.
- SEE PROPOSED LIGHTING PLAN FOR CONDUIT, CABLE AND ROUTING.
- 3. THE CONTRACTOR SHALL PROVIDE INTERMEDIATE SUPPORTS TO MAINTAIN MINIMUM CLEARANCES. REFER TO AERIAL AERIAL CABLE ATTACHED TO STRUCTURE DETAIL.
- 4. COST OF SPLICES AND MOUNTING HARDWARE SHALL BE INCLUDED IN THE UNIT PRICE FOR AERIAL CABLE.

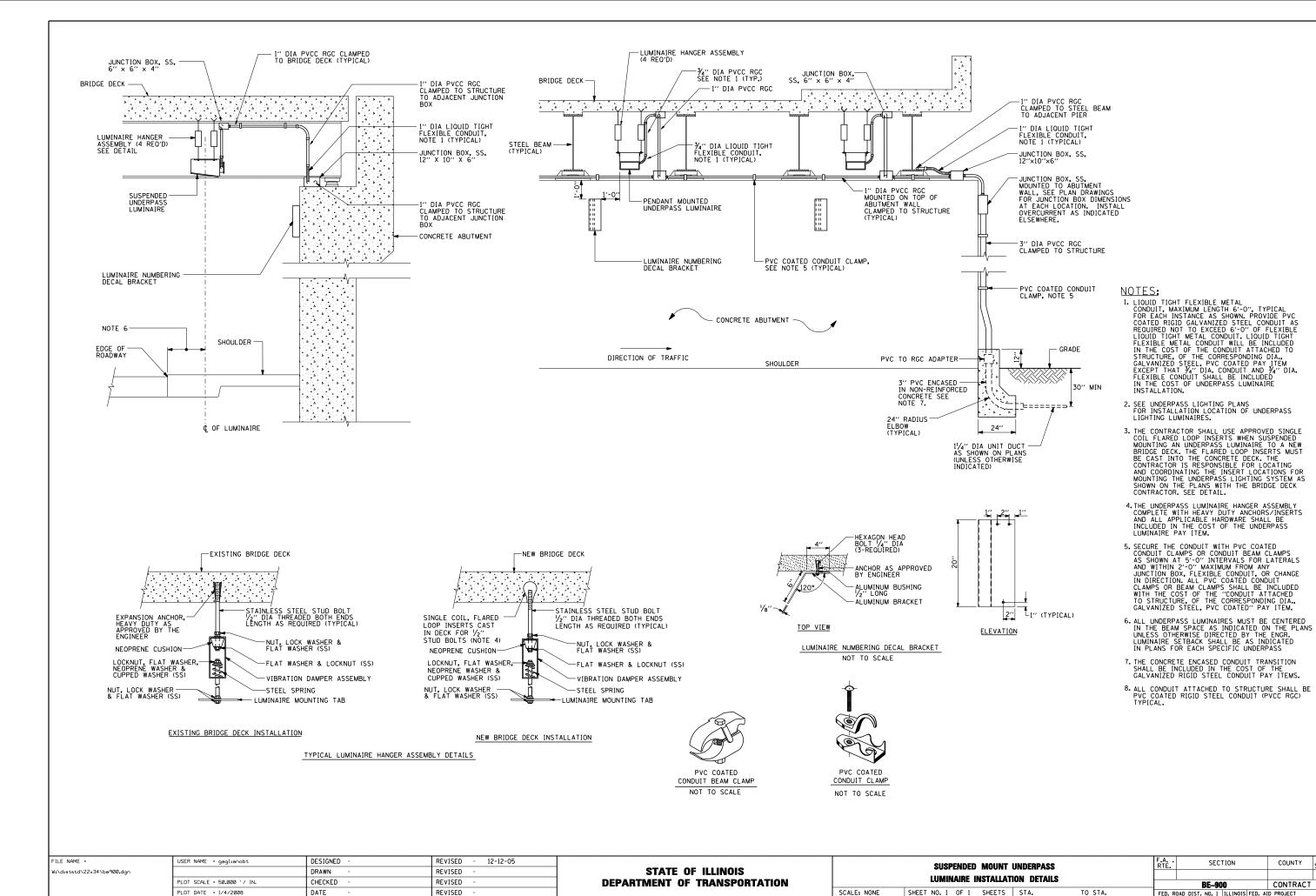
WOOD POLE TO LIGHTING CONTROLLER WIRING CONNECTION DETAIL

N.T.S.

| FILE NAME = | USER NAME = gaglianobt | DESIGNED - | REVISED - 08-08-03 |
|----------------------------|----------------------------|------------|--------------------|
| W:\diststd\22x34\be801.dgn | | DRAWN - | REVISED - |
| | PLOT SCALE = 50.000 '/ IN. | CHECKED - | REVISED - |
| | PLOT DATE = 1/4/2008 | DATE - | REVISED - |

| STATE 0 | F ILLINOIS |
|---------------|-----------------------|
| DEPARTMENT OF | TRANSPORTATION |

| | TEMPORARY AERIAL CABL | E INSTALLATION | | F.A RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-------------|-------------------------|----------------|---------|-------------|-----------------------------------|-----------|-----------------|--------------|
| | | | | | | | 886 | 809 |
| | | | | | BE-801 | CONTRACT | NO. 60 | L70 |
| SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA. | FED. R | OAD DIST. NO. 1 ILLINOIS FED. A | D PROJECT | | |



TOTAL SHEE SHEETS NO.

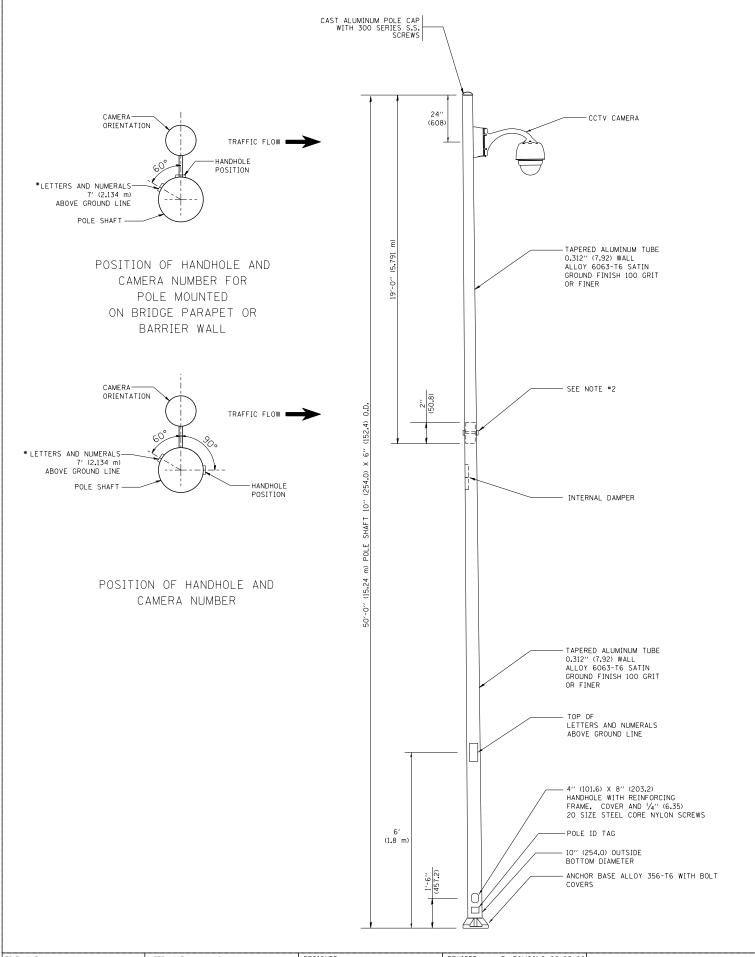
886 810

CONTRACT NO. 60L70

COUNTY

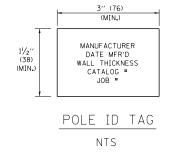
SECTION

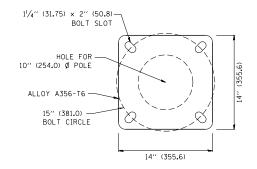
BE-900



NOTES:

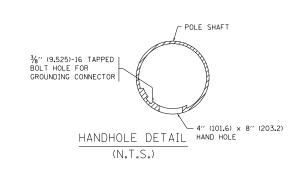
- 1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
- 2. TWO PIECE SHAFT WILL BE MATCHED MARKED AND INTERCHANGEABLE BETWEEN DIFFERENT UNITS. FIELD DRILLING OF THE HOLES WILL NOT BE ALLOWED.
- 3. THE POLE WILL MEET AASHTO DESIGN CRITERIA AS SPECIFIED.
- 4. THE INSTALLING CONTRACTOR WILL PROVIDE A UL LISTED GROUNDING CONNECTOR. BURNDY K2C23, T&B SP4DL OR APPROVED EQUAL.
- 5. POLES WILL BE INSTALLED IN ACCORDANCE TO MANUFACTURER'S INSTRUCTIONS.
- 6. POLES WILL BE SET PLUMB ON THE FOUNDATION WITHOUT THE USE OF LEVELING NUTS, WASHERS OR SHIMS.





POLE BASE PLATE DETAIL

15 INCH (381.0) BOLT CIRCLE



SCALE: NONE

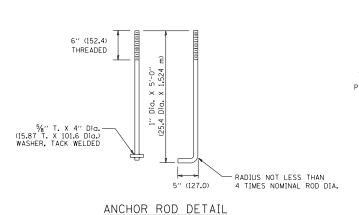
| FILE NAME = | USER NAME = bauerdl | DESIGNED | - | REVISED | - | R. | TOMSONS | 09-06-0 |
|--|----------------------------|----------|---|---------|---|----|---------|----------|
| c:\pw_work\pwidot\bauerdl\d0108315\be100 | 0.dgn | DRAWN | - | REVISED | - | R. | TOMSONS | 09-03-03 |
| | PLOT SCALE = 50.000 '/ in. | CHECKED | - | REVISED | - | R. | TOMSONS | 02-27-13 |
| | PLOT DATE = 2/27/2013 | DATE | _ | REVISED | _ | | | |

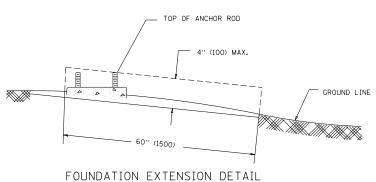
| CCTV CAMERA STRUCTURE | F.A RTE. | SEC. | LION | COUNTY | TOTAL SHEETS | SHEET NO. |
|------------------------------------|-------------|-----------------|------------------|-----------|-----------------|--------------|
| 50' (15,24 m) MOUNTING HEIGHT | | | | | 886 | 811 |
| 50 (15.24 III) MIOONTING HEIGHT | | BE-100 |) | CONTRACT | NO. 60 | L70 |
| SHEET NO. 1 OF 1 SHEETS STA. TO ST | A. FED. R | OAD DIST. NO. 1 | ILLINOIS FED. AI | D PROJECT | | |

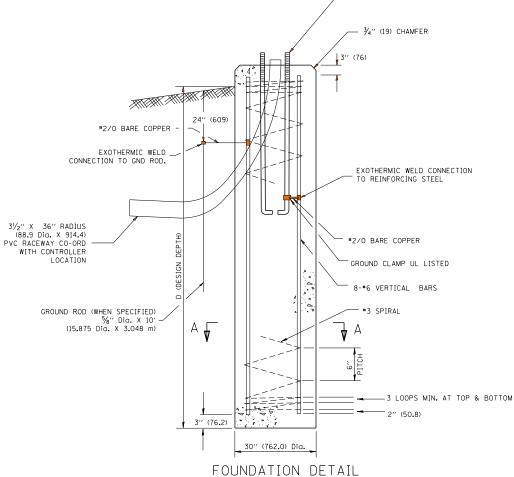
RACEWAYS PARALLEL TO EDGE OF PAVEMENT TOP VIEW ANCHOR ROD 4-1" Dia. x 5'-0" (4-25,4 Dia. x 1,524 m)

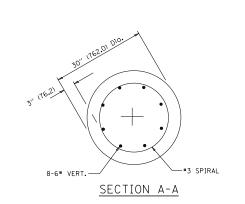
DESIGN DEPTH "D" OF FOUNDATION 13'-0" (3.96 m) Qu = 0.375 TON/SQ. FT MEDIUM CLAY 9'-6" (2.09 m) Qu = 0.75 TON/SQ.FTSTIFF CLAY 7'-0" (2.13 m) Qu = 1.50 TON/SQ. FT. LOOSE SAND Ø = 34° 9'-0" (2.74 m) MEDIUM SAND 8'-3" (2.52 m) Ø = 37.5° DENSE SAND 7'-9" (2.36 m)

CCTV CAMERA POLE FOUNDATION DEPTH TABLE



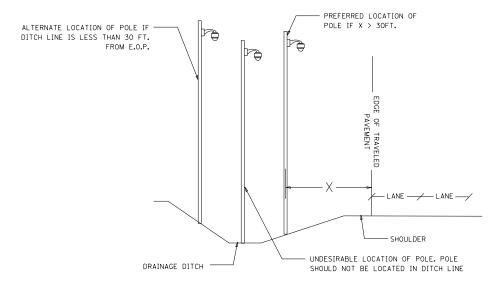






NOTES

- 1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
- 2. THE ANCHOR RODS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IN PLACED.
- 3. THE FOUNDATION SHALL NOT PROTRUDE MORE THAN 100MM (4 IN.) ABOVE THE FINISHED GRADE WITHIN A 60 IN. (1.5 m) CHORD ACROSS THE FOUNDATION, WITH ANCHOR RODS INCLUDED, IN ACCORDANCE WITH AASHTO GUIDELINES. IF THE FOUNDATION HEIGHT, INCLUDING ANCHOR RODS, EXTENDS BEYOND THESE SPECIFIED LIMITS, THE FOUNDATION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. SEE FOUNDATION EXTENSION DETAIL.
- 4. THE HOLE FOR THE FOUNDATION SHALL BE MADE BY DRILLING WITH AN AUGER, OF THE SAME DIAMETER AS THE FOUNDATION. IF SOIL CONDITIONS REQUIRE THE USE OF A LINER TO FORM THE HOLE, THE LINER SHALL BE WITHDRAWN AS THE CONCRETE IS DEPOSITED.
- THE TOP OF THE FOUNDATION SHALL BE CONSTRUCTED LEVEL. A LINER OR FORM SHALL BE USED TO PRODUCE A UNIFORM SMOOTH SIDE TO THE TOP OF THE FOUNDATION. FOUNDATION TOP SHALL BE CHAMFERED ¾-IN. (20 mm).
- THE CONCRETE SHALL BE CLASS SI. CONCRETE SHALL CURE ACCORDING TO ARTICLE 1020.13 BEFORE LIGHT POLES ARE INSTALLED.
- 7. THE ANCHOR ROD SHALL BE A HOOK ROD TYPE. COLD BENDING OF THE ANCHOR ROD WILL NOT BE ALLOWED. THE RADIUS OF THE HOOK BEND SHALL NOT BE LESS THAN 4 TIMES THE NOMINAL DIAMETER OF THE ANCHOR ROD. A TACK WELDED ANCHOR ROD MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER.
- 8. THE ANCHOR RODS SHALL BE ACCORDING TO ASTM F1554 GRADE 725 (GRADE 105). NUTS SHALL BE HEXAGON NUTS ACCORDING TO ASTM A 194 2H OR ASTM A 563 DH, AND WASHERS SHALL BE ACCORDING TO ASTM F 436.
- 9. ANCHOR RODS, NUTS AND WASHERS SHALL BE COMPLETELY GALVANIZED BY EITHER THE HOT-DIPPED PROCESS CONFORMING WITH AASHTO M 232, THE MECHANICAL PLATING METHOD CONFORMING TO AASHTO M 298, CLASS 50 WITH A MAXIMUM COATING THICKNESS OF 150 UM(6 MILS) OR THE ELECTROLYTIC PROCESS ACCORDING TO ASTM F 1136.
- 10. THE ANCHOR RODS SHALL BE THREADED A MINIMUM OF 6 INCHES (150 mm) WITH A MINIMUM OF 3 INCHES (75 mm) OF THREADED ANCHOR ROD EMBEDDED IN THE FOUNDATION.
- 11. ANCHOR RODS SHALL PROJECT 2¾" (69.9 mm) ABOVE THE TOP OF THE FOUNDATION. IF BREAKAWAY COUPLINGS ARE SPECIFIED, THE CONTRACTOR SHALL CAREFULLY COORDINATE THE ANCHOR ROD PROJECTION WITH THE INSTALLATION REQUIREMENTS OF THE BREAKAWAY COUPLINGS.
- 12. THE CONTRACTOR SHALL USE A #3 SPIRAL AT 6" (152.4 mm) PITCH OR MAY SUBSTITUTE #3 TIES AT 12" (304.8 mm) O.C. WITH THE APPROVAL OF THE ENGINEER.
- 13. THE CABLE TRENCHES AND FOUNDATION SHALL BE BACK FILLED AND COMPACTED AS SPECIFIED BEFORE THE LIGHT POLE IS ERECTED.
- 14. THE RACEWAYS SHALL PROJECT 1" (25.4 mm) ABOVE THE TOP OF THE FOUNDATION.
- 15. ANCHOR ROD BOLT CIRCLE TO BE COORDINATED WITH CAMERA STRUCTURE



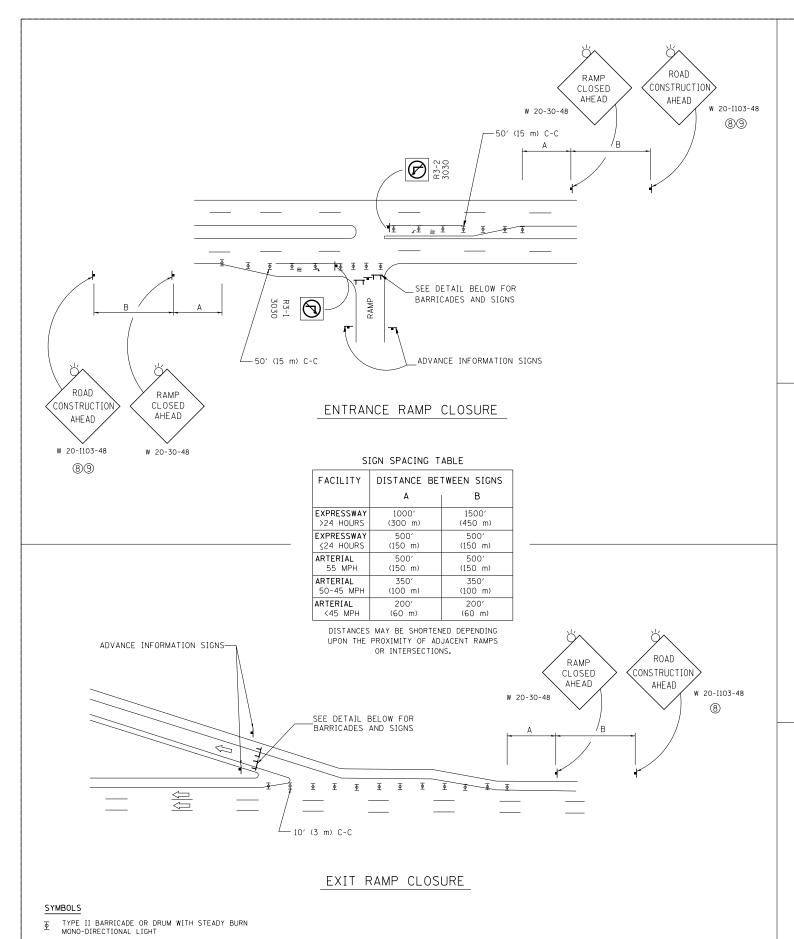
CAMERA POLE PLACEMENT

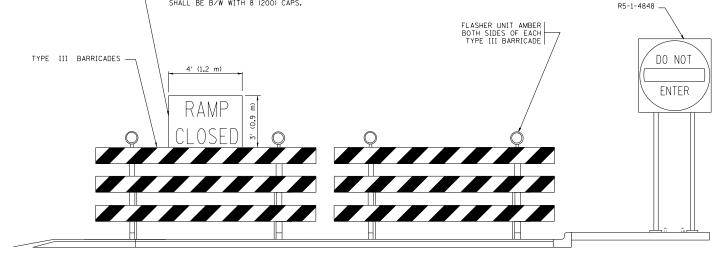
| İ | | | |
|--|------------------------------|--------------------|-----------|
| FILE NAME = | USER NAME = footemj | DESIGNED - TOMSONS | REVISED - |
| c:\pw_work\pwidot\footemj\d0108315\be100 | 1.dgn | DRAWN - | REVISED - |
| | PLOT SCALE = 50.0001 ' / in. | CHECKED - | REVISED - |
| | DLOT DATE - 4/2/2012 | DATE - 03-11-13 | DEVISED - |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE: NONE

| CCTV CAMERA STRUCT | JRE FOUNDAT | TION | F.A RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|--------------------------------|-------------|---------|-------------|----------------------------|-------------|-----------------|--------------|
| 50' (15 - 24m) MOUNTING HEIGHT | | | | | | 886 | 812 |
| 30 (13 - 24111) 101001 | TING HEIGHT | | | BE-1001 | CONTRACT | NO. 60 |)L70 |
| SHEET NO. 1 OF 1 SHEETS | STA. | TO STA. | FFD. R | OAD DIST NO 1 ILLINOIS FED | AID PROJECT | | |





DETAIL FOR REQUIRED BARRICADES & SIGNS

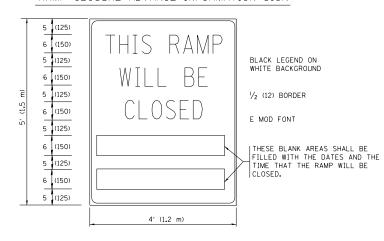
RAMP CLOSURE ADVANCE INFORMATION SIGN



BACKGROUND MOUNTED DIAGONALLY E MOD FONT 1 (25) BORDER

THE "RAMP CLOSED" SIGN
SHALL BE B/W WITH 8 (200) CAPS.

THESE SIGNS ARE REQUIRED ON ALL THE EXIT GUIDE SIGNS FOR EXIT RAMPS THAT WILL BE CLOSED FOR MORE THAN FOUR (4) CONSECUTIVE DAYS.



THESE SIGNS ARE REQUIRED ON BOTH SIDES OF THE RAMP, MINIMUM OF 1 WEEK IN ADVANCE OF THE CLOSURE.

THESE SIGNS SHALL BE FABRICATED AND PAID FOR ACCORDING TO THE TEMPORARY INFORMATION SIGNING SPECIAL PROVISION

GENERAL NOTES:

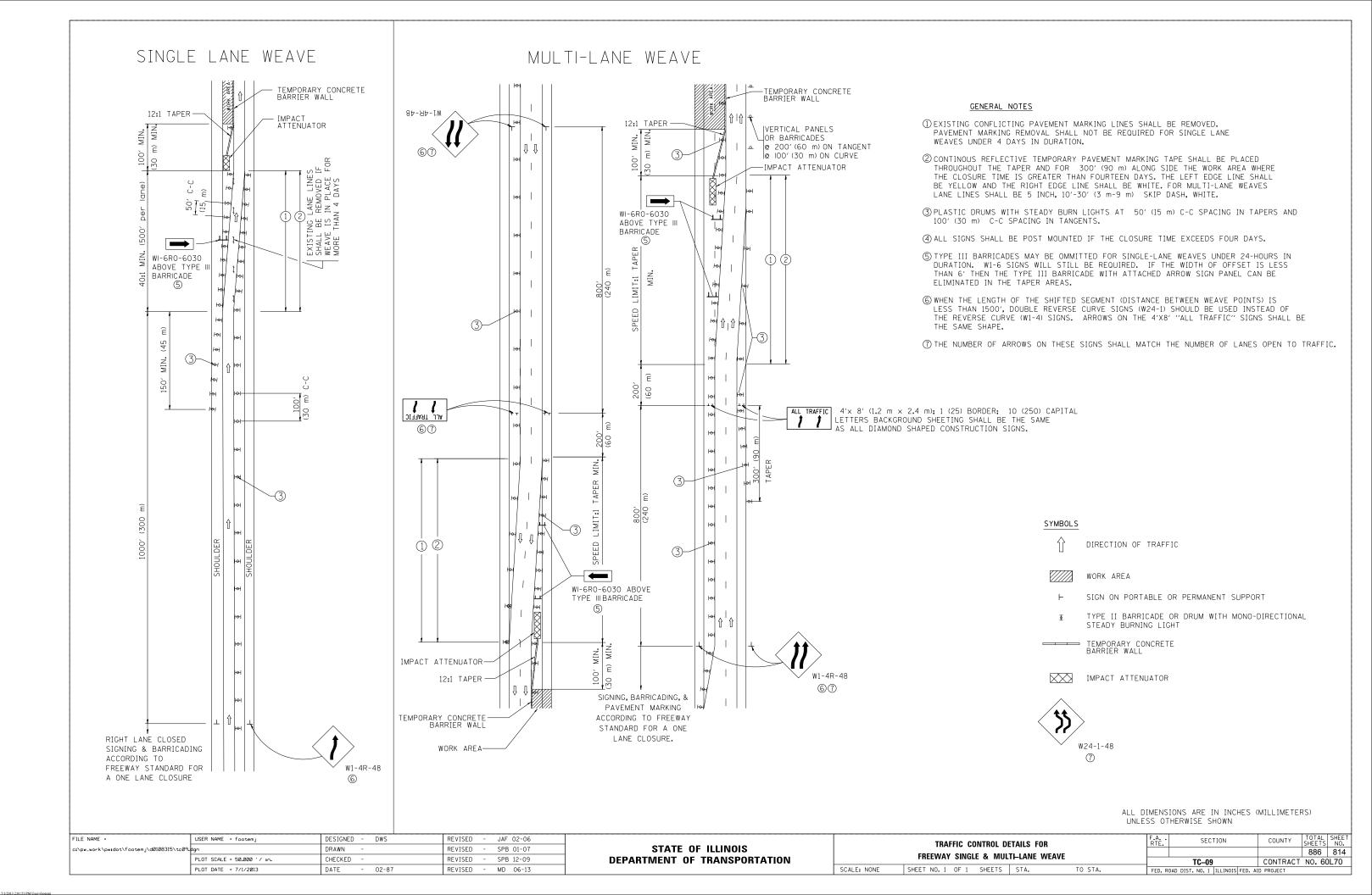
- ① CONES MAY BE SUBSTITUTED FOR DRUMS OR TYPE II BARRICADES DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (700) HIGH.
- (2) STEADY BURN LIGHTS WILL NOT BE REQUIRED FOR DAY OPERATIONS.
- 3 A FLAGGER SHALL BE POSITIONED AT EACH CLOSED RAMP THAT IS OPEN TO CONSTRUCTION VEHICLES, PRECEEDED BY A W20-7 FLAGGER WARNING SIGN.
- 4 ALL ROUTE MARKERS AND TRAILBLAZER ASSEMBLIES WHICH DIRECT MOTORISTS TO A CLOSED ENTRANCE RAMP SHALL BE COVERED WHEN THE RAMP IS CLOSED FOR MORE THAN FOUR (4) DAYS.
- 5 THE SIGNING AND BARRICADING WHICH IS REQUIRED BY THIS DETAIL SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS).

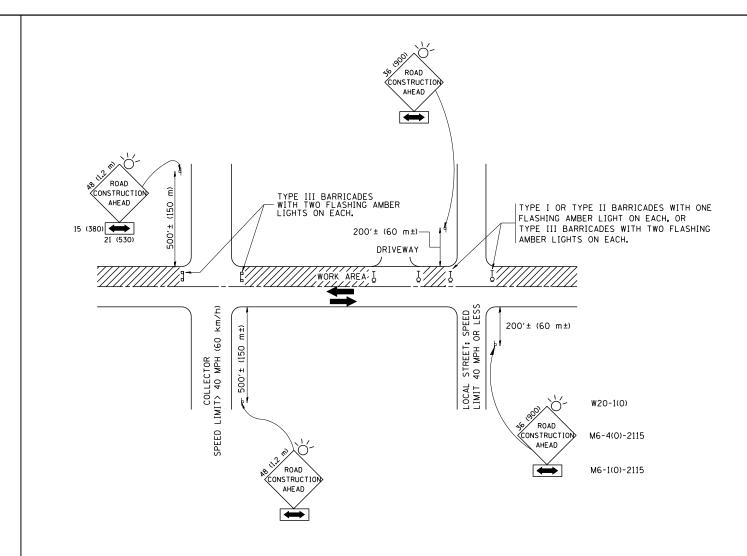
- 6 AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL RAMP CLOSURES.
- (7) THE RAMP CLOSURE ADVANCE INFORMATION SIGNS SHALL BE ERECTED IF THE CLOSURE TIME EXCEEDS TWENTY-FOUR (24) HOURS, ADDITIONAL ADVANCE WARNING SIGNS ON EXIT GLIDE SIGNING WILL BE REQUIRED FOR EXIT RAMP CLOSURES THAT EXCEED FOUR (4) DAYS IN LENGTH
- (8) ROAD CONSTRUCTION AHEAD SIGNS MAY BE OMITTED WHEN THIS DETAIL IS USED IN CONJUNCTION WITH OTHER TRAFFIC CONTROL THAT ALREADY INCLUDES A ROAD CONSTRUCTION AHEAD SIGN.
- ARTERIAL ROAD CONSTRUCTION AHEAD SIGNS SHALL BE INSTALLED ON THE LEFT SIDE OF TRAFFIC IF THE MEDIAN IS MORE THAN 10 FT WIDE.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)
UNLESS OTHERWISE SHOWN.

| FILE NAME = | USER NAME = footemj | DESIGNED - DWS | REVISED - JAF 02-06 | | ENTRANCE AND EXIT RAMP | F.A. | · SECTION | COUNTY | TOTAL | SHEET | 7 |
|--|----------------------------|----------------|---------------------|------------------------------|--|--------|--------------------------------------|----------|--------|-------|---|
| c:\pw_work\pwidot\footemj\d0108315\tc08. | dgn | DRAWN - | REVISED - SPB 01-07 | STATE OF ILLINOIS | | 1112. | | | 886 | 813 | - |
| | PLOT SCALE = 50.000 '/ in. | CHECKED - | REVISED - SPB 12-09 | DEPARTMENT OF TRANSPORTATION | CLOSURE DETAILS | | TC-08 | CONTRACT | NO. 60 |)L70 | _ |
| | PLOT DATE = 7/8/2013 | DATE - 02-83 | REVISED - MD 06-13 | | SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA. | FFD. I | ROAD DIST, NO. 1 ILLINOIS FED. AIL | PROJECT | | | - |

TYPE III BARRICADE WITH 2 FLASHING LIGHTS





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 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
- O) ONE ROAD CONSTRUCTION AHEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) 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 40 MPH (60 km/h)
 AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
- d) ONE ROAD CONSTRUCTION AHEAD SIGN 48 \times 48 (1.2 m \times 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) 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 (MG-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (MG-4).

SCALE: NONE

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.

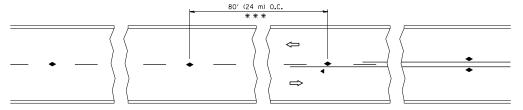
- C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.
- D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

| FILE NAME = | USER NAME = gaglianobt | DESIGNED - LHA | REVISED - J. OBERLE 10-18-95 |
|---------------------------|----------------------------|----------------|--------------------------------|
| W:\diststd\22x34\tc10.dgn | | DRAWN - | REVISED - A. HOUSEH 03-06-96 |
| | PLOT SCALE = 50.000 '/ IN. | CHECKED - | REVISED - A. HOUSEH 10-15-96 |
| | PLOT DATE = 1/4/2008 | DATE - 06-89 | REVISED -T. RAMMACHER 01-06-00 |

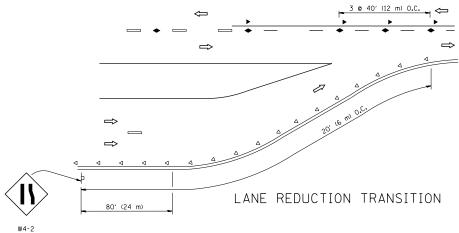
| STATI | E OF | F ILLINOIS |
|------------|-----------|----------------|
| DEPARTMENT | OF | TRANSPORTATION |

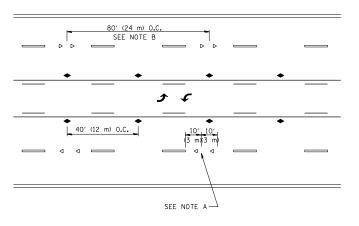
| TRAFFIC | CONTRO | L AND P | ROTECTIO | N FOR | F.A RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-------------|---------|-----------|-----------|-----------|-------------|-----------------------------------|-----------|-----------------|--------------|
| SIDE ROADS | INTER | SECTIONS | AND DE | IVEWAVE | | | | 886 | 815 |
| SIDE HUADS | , INTER | SECTIONS, | , AILU DI | IIVEVVAIS | | TC-10 | CONTRACT | NO. 60 | L70 |
| SHEET NO. 1 | OF 1 | SHEETS | STA. | TO STA. | FED. R | DAD DIST. NO. 1 ILLINOIS FED. A | D PROJECT | | |



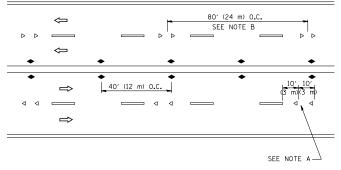
*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

TWO-LANE/TWO-WAY

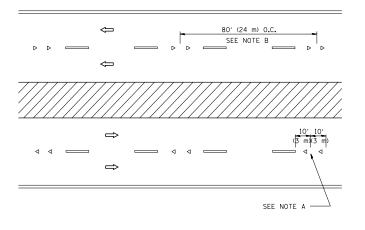




TWO-WAY LEFT TURN







MULTI-LANE/DIVIDED

GENERAL NOTES

- MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
- 2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
- 3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) 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 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H (20 km/h) LOWER THAN POSTED SPEEDS.

SYMBOLS

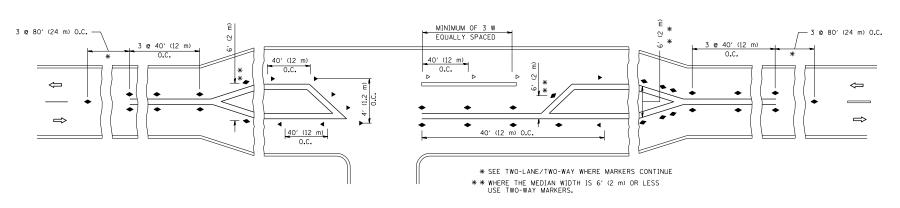
---- YELLOW STRIPE

── WHITE STRIPE

- ONE-WAY AMBER MARKER
- ONE-WAY CRYSTAL MARKER (₩/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 SHALL BE INCLUDED IN THE PLANS WHEN STANDARD SPECIFICATIONS ARE NOT BEING USED.
- 4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE



LEFT TURN

unless otherwise shown.

TOTAL SHEET NO. 886 816

COUNTY

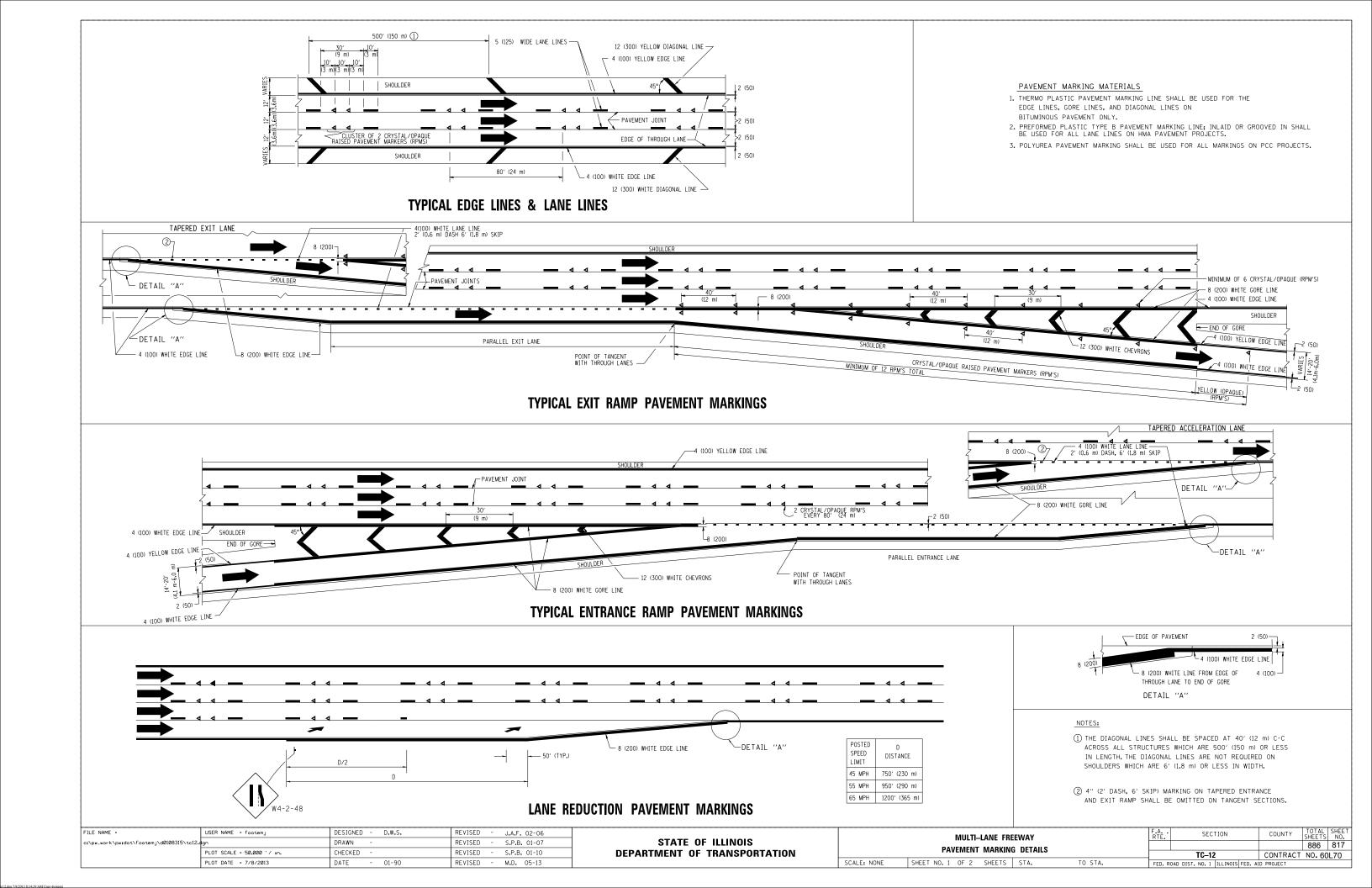
CONTRACT NO. 60L70

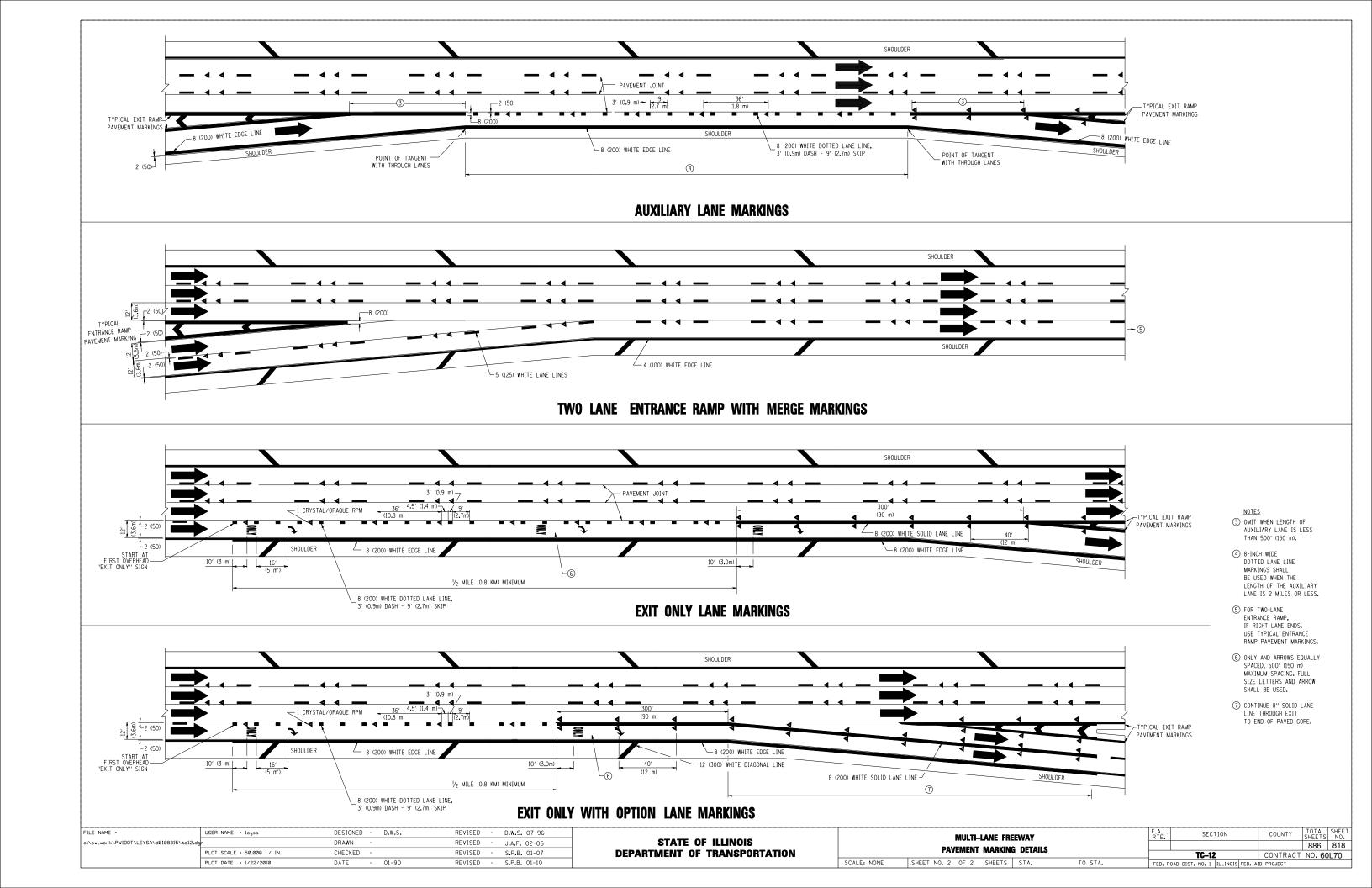
| FILE NAME = | USER NAME = leyso | DESIGNED - | REVISED | -T. RAMMACHER 09-19-94 |
|---|-----------------------------|------------|---------|------------------------|
| c:\pw_work\pwidot\leysa\d0108315\tcl1.dgn | | DRAWN - | REVISED | -T. RAMMACHER 03-12-99 |
| | PLOT SCALE = 50.000 ' / IN. | CHECKED - | REVISED | -T. RAMMACHER 01-06-00 |
| | PLOT DATE = 3/2/2011 | DATE - | REVISED | - C. JUCIUS 09-09-09 |

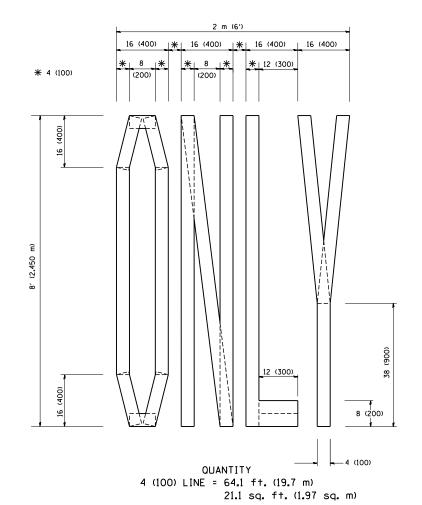
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

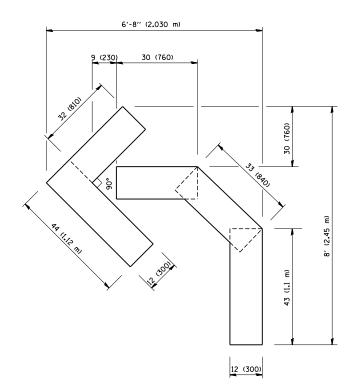
| | TYPICAL | . APPLICA | TIONS | | F.A RTE. | SEC | TION | |
|-------------|---------------------|-----------|--------------|------------|-------------|-----------------|----------|-----|
| RAISED F | REFLECTIVE PAVEMENT | MARKER | S (SNOW-PLOW | RESISTANT) | | TC-11 | | _ |
| SCALE: NONE | SHEET NO. 1 OF 1 | SHEETS | STA. | TO STA. | FED. RO | DAD DIST. NO. 1 | ILLINOIS | FEI |

All dimensions are in inches (millimeters)

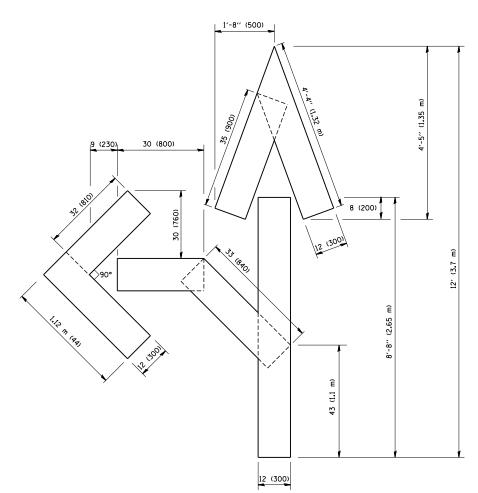








OUANTITY 4 (100) LINE = 45.5 ft. (13.9 m) 15.2 sq. ft. (1.39 sq. m)



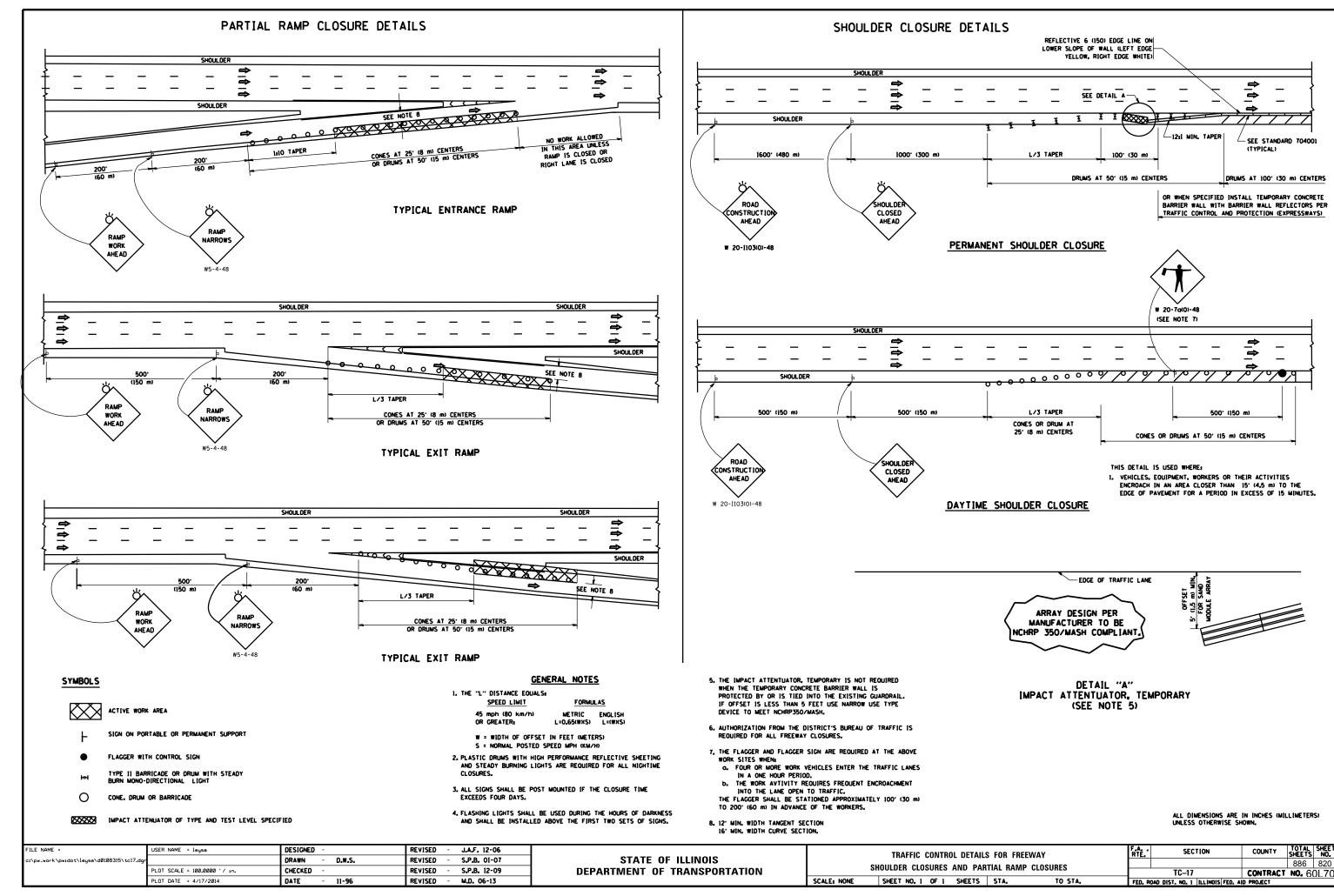
QUANTITY 4 (100) LINE = 82.5 ft. (25.3 m) 27.5 sq. ft. (2.53 sq. m)

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

| FILE NAME = | USER NAME = gaglianobt | DESIGNED - | REVISED -T. RAMMACHER 06-05-96 |
|---------------------------|-----------------------------|-----------------|--------------------------------|
| v:\diststd\22x34\tc16.dgn | | DRAWN - | REVISED -T. RAMMACHER 11-04-97 |
| | PLOT SCALE = 50.0000 '/ IN. | CHECKED - | REVISED -T. RAMMACHER 03-02-98 |
| | PLOT DATE = 1/4/2008 | DATE - 09-18-94 | REVISED - E. GOMEZ 08-28-00 |

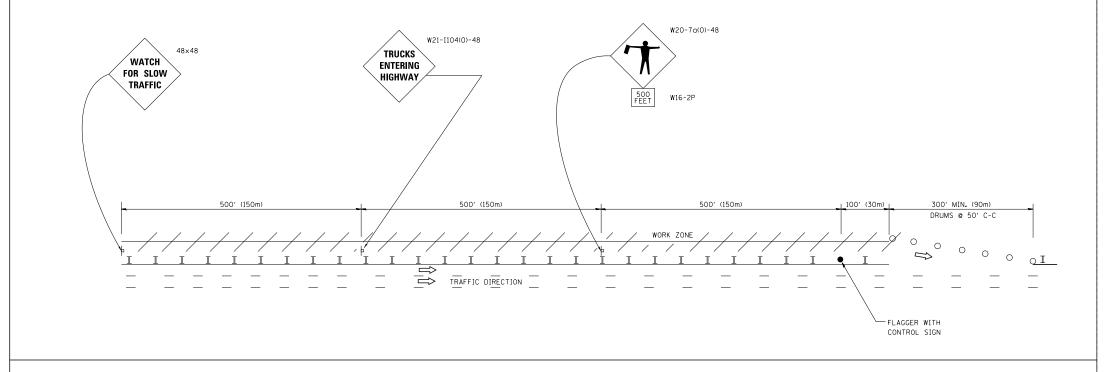
| STATE 0 | F ILLINOIS |
|---------------|----------------|
| DEPARTMENT OF | TRANSPORTATION |

| | PAVEMENT MA | ARKIN | IG LETTER | IS AND | SYMBOLS | RTE. | SECTION | COUNTY | SHEETS | |
|-------------|----------------|-------|-----------|--------|---------|--------|------------------------------------|-----------|--------|------|
| | En | D TD | AFFIC ST | ACING | | | | | 886 | 819 |
| | | n in | MFFIG 31 | MUINU | | | TC-16 | CONTRACT | NO. 6 | 0L70 |
| SCALE: NONE | SHEET NO. 1 OF | - 1 | SHEETS | STA. | TO STA. | FED. R | OAD DIST. NO. 1 ILLINOIS FED. AI | D PROJECT | | |

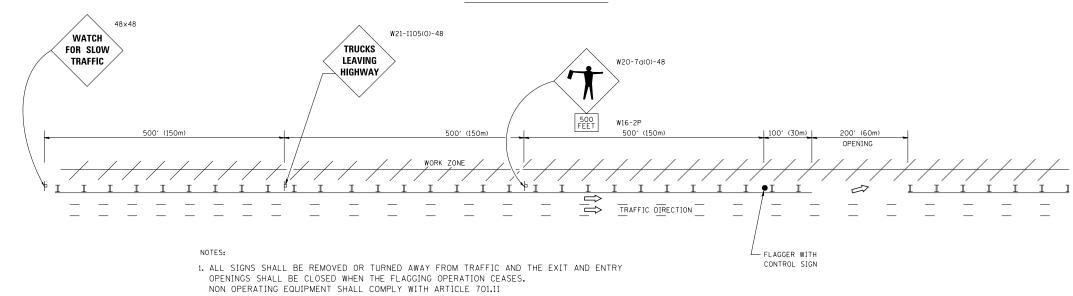


SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS

WORK ZONE EXIT OPENING



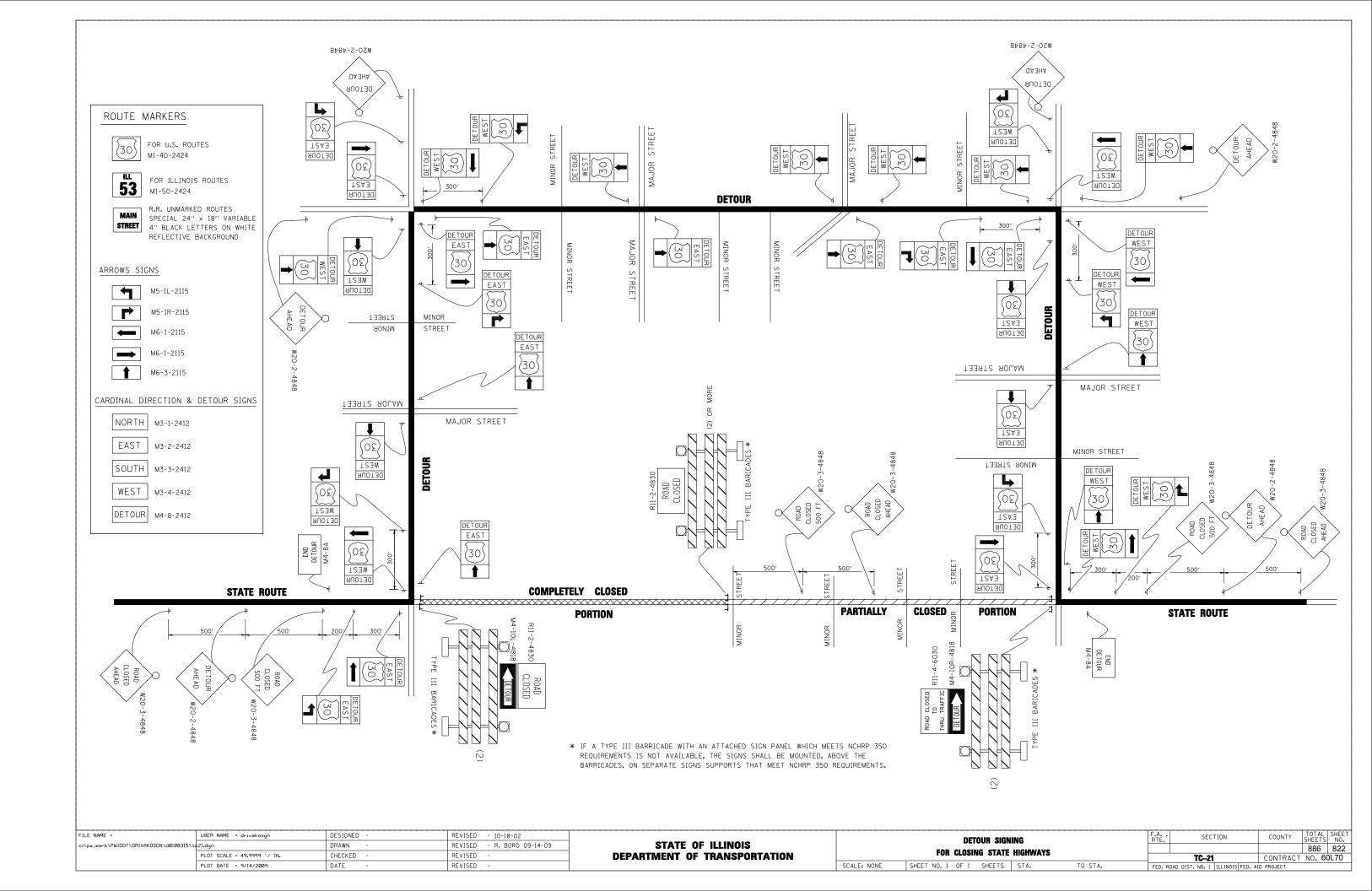
WORK ZONE ENTRY OPENING

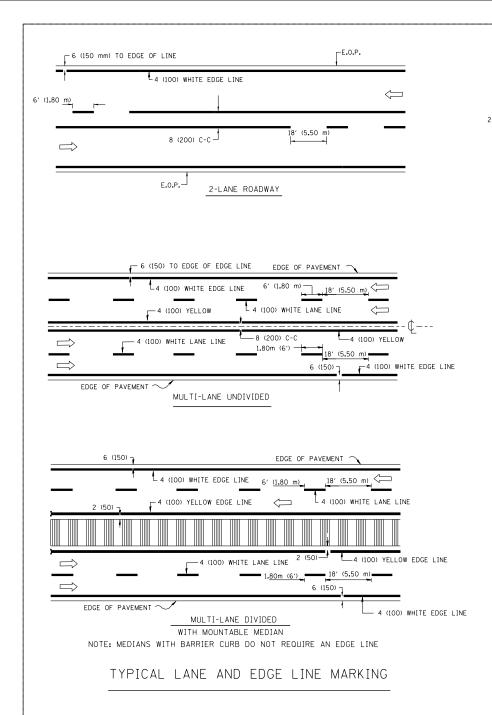


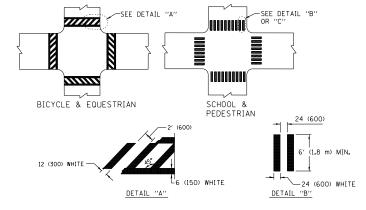
- 2. WORK ZONE OPENINGS SHALL BE A MINIMUM OF ONE HALF MILE APART AND A MINIMUM OF ONE QUARTER MILE FROM ALL ENTRANCE AND EXIT RAMPS.
- 3. EXITING THE WORK ZONE AT ANY PLACE OTHER THAN AT A WORK ZONE EXIT OPENING WILL BE PROHIBITED.
- 4. ALL VEHICLES SHALL ENTER THE WORK ZONE AT ENTRY OPENINGS, USING THEIR TURN SIGNALS TO WARN MOTORISTS
- 5. FLAGGERS SHALL NOT STOP TRAFFIC OR DIRECT TRAFFIC INTO AN ADJACENT LANE.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)
UNLESS OTHERWISE SHOWN

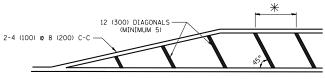
| FILE NAME = | USER NAME = footemj | DESIGNED - | REVISED - J.A.F. 02-06 | | EDEEN | NAY/EXPRESSWAY S | SIGNING FO | DE ELVEGI | INC ODERATIONS | F.A | SECTION | COUNTY | TOTAL | SHEET |
|--|----------------------------|------------|------------------------|------------------------------|-------------|------------------|------------|-----------|----------------|--------|----------------------------------|----------|--------|-------|
| c:\pw_work\pwidot\footemj\d0108315\tc18. | gn | DRAWN - | REVISED - S.P.B. 01-07 | STATE OF ILLINOIS | 1 | WORK ZONE OPENI | | | | | | | 886 | 821 |
| | PLOT SCALE = 50.000 '/ in. | CHECKED - | REVISED - S.P.B. 12-09 | DEPARTMENT OF TRANSPORTATION | AI | WORK ZONE OPENI | NGS UN F | REEWATS | EXPRESSIVATS | | TC-18 | CONTRACT | NO. 60 | JL70 |
| | PLOT DATE = 7/8/2013 | DATE - | REVISED - M.D. 06-13 | | SCALE: NONE | SHEET NO. 1 OF 1 | SHEETS | STA. | TO STA. | FED. R | OAD DIST. NO. 1 ILLINOIS FED. AI | PROJECT | | |







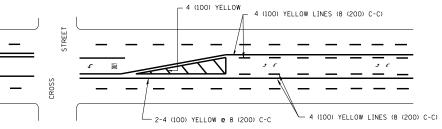
TYPICAL CROSSWALK MARKING



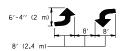
*FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.

* DIAGONAL LINE SPACING: 20' (6.1 m) C-C

PAINTED MEDIANS

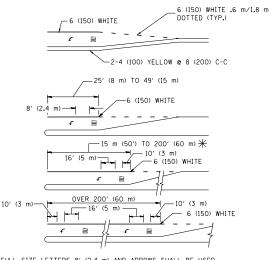


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

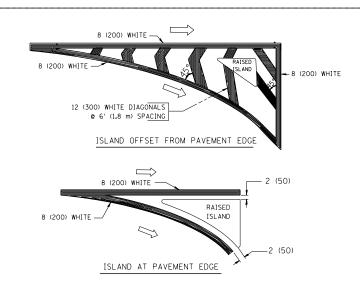


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED. $\uparrow \uparrow$ AREA = 15.8 SO. FT. (1.47 m²) ONLY AREA = 22.9 SO. FT. (2.13 m²)

* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



TYPICAL ISLAND MARKING

| TYPE OF MARKING | WIDTH OF LINE | PATTERN | COLOR | SPACING / REMARKS |
|---|---|------------------------|---|--|
| CENTERLINE ON 2 LANE PAVEMENT | 4 (100) | SKIP-DASH | YELLOW | 6' (1.80 m) LINE WITH 18' (5.50 m) SPACE |
| CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT | 2 @ 4 (100) | SOLID | YELLOW | 8 (200) C-C |
| NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS | 4 (100) 2 @ 4 (100) | SOLID SOLID | YELLOW YELLOW | 8 (200) C-C |
| LANE LINES | 4 (100) 5 (125) ON FREEWAYS | SKIP-DASH SKIP-DASH | WHITE WHITE | 6' (1.80 m) LINE WITH 18' (5.50 m) SPACE |
| DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS) | SAME AS LINE BEING EXTENDED | SKIP-DASH | SAME AS LINE BEING EXTENDED | 2' (600) LINE WITH 6' (1.8) SPACE |
| EDGE LINES | 4 (100) | SOLID | YELLOW-LEFT WHITE-RIGHT | OUTLINE MOUNTABLE MEDIANS IN YELLOW: EDGE LINES ARE NOT USED NEXT TO BARRIER CURB |
| TURN LANE MARKINGS | 6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4 m)) | SOLID | WHITE | SEE TYPICAL TURN LANE MARKING DETAIL |
| TWO WAY LEFT TURN MARKING | 2 @ 4 (100) EACH DIRECTION | SKIP-DASH AND SOLID | YELLOW | 6' (1.8 m) LINE WITH 18' (5.50 m) SPACE FOR SKIP-DASH; 8 (200) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE |
| | 8' (2.4 m) LEFT ARROW | IN PAIRS | WHITE | SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL |
| CROSSWALK LINES A. DIAGONALS (BIKE & EOUESTRIAN) B. LONGITUDINAL BARS (SCHOOL & PEDESTRIAN) | 12 (300) @ 45° 24 (600) @ 90° | SOLID SOLID | WHITE WHITE | 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS. |
| STOP LINES | 24 (600) | SOLID | WHITE | PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSMALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE |
| PAINTED MEDIANS | 2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° | SOLID | YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC | 8 (200) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING. |
| GORE MARKING AND CHANNELIZING LINES | 8 (200) WITH 12 (300) DIAGONALS @ 45° | SOLID | WHITE | DIAGONALS: 20' (6.1 m) (LESS THAN 30 MPH (50 km/h)) |
| RAILROAD CROSSING | 24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X" | SOLID | WHITE | SEE STATE STANDARD 780001 AREA OF: "R"-3.6 SO. FT. (0.33m²) EACH "X"-54.0 SO. FT. (5.0 m²) |

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STREET MARKING STANDARDS, PRINTED BY CITY OF CHICAGO, DEPARTMENT OF TRANSPORTATION, BUREAU OF TRAFFIC.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)
UNLESS OTHERWISE SHOWN.

| FILE NAME = | USER NAME = drivakosgn | DESIGNED - | REVISED | -T. RAMMACHER | 12-07-0 |
|--|----------------------------|------------|---------|---------------|---------|
| c:\pw_work\pwidot\drivakosgn\d0108315\tc | 24.dgn | DRAWN - | REVISED | - K. ENG | 02-28-1 |
| | PLOT SCALE = 50.000 '/ in. | CHECKED - | REVISED | - | |
| | PLOT DATE = 3/1/2012 | DATE - | REVISED | - | |

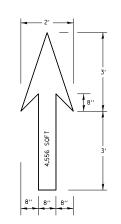
24 (600) WHITE

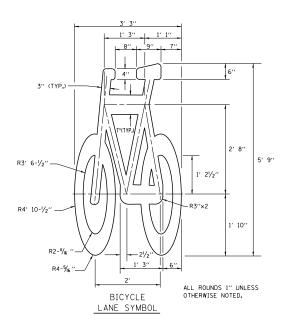
DETAIL "C"

CENTRAL DOWNTOWN

BUSINESS DISTRICT

| | CITY | OF CHICA | AGO | | F.A RTE. | SECTION | | COUNTY | TOTAL SHEETS | SHEET NO. |
|-------------|--------------------|-----------|------------|---------|-------------|----------------------------|----------|-----------|-----------------|--------------|
| | TYPICAL PA | VENJENIT | MARKINGS | | | | | | 886 | 823 |
| | ITTICAL FA | VEIVIEIVI | IVIANKINGS | | | TC-24 | | CONTRACT | NO. 60 |)L70 |
| SCALE: NONE | SHEET NO. 1 OF 3 | SHEETS | STA. | TO STA. | FED. R | OAD DIST. NO. 1 ILLINOIS | FED. AI | D PROJECT | | |
| SOMEE HOME | 011EE1 1101 1 01 0 | OTTLETO | 01711 | 10 3171 | I LU. I | OAD DIST. NO. 1 TEETHOIS | I LU. AI | D TROOLET | | |

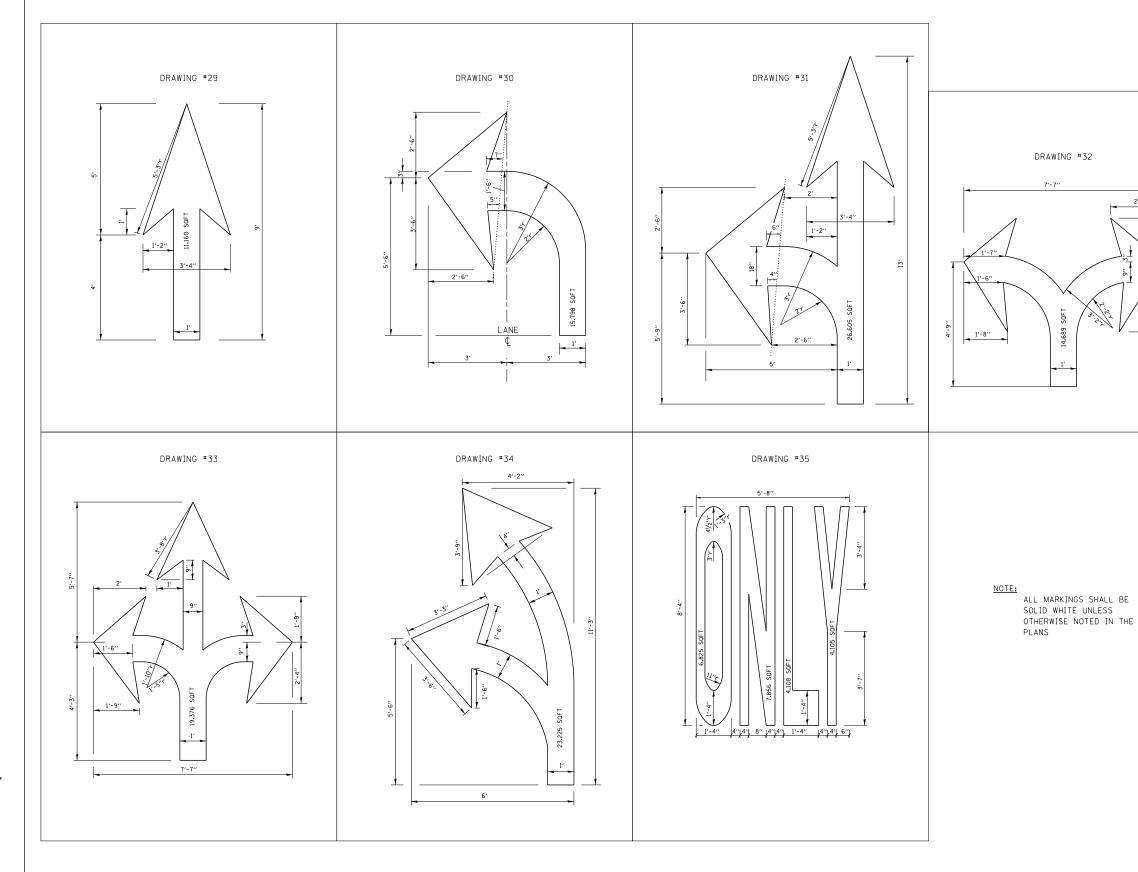




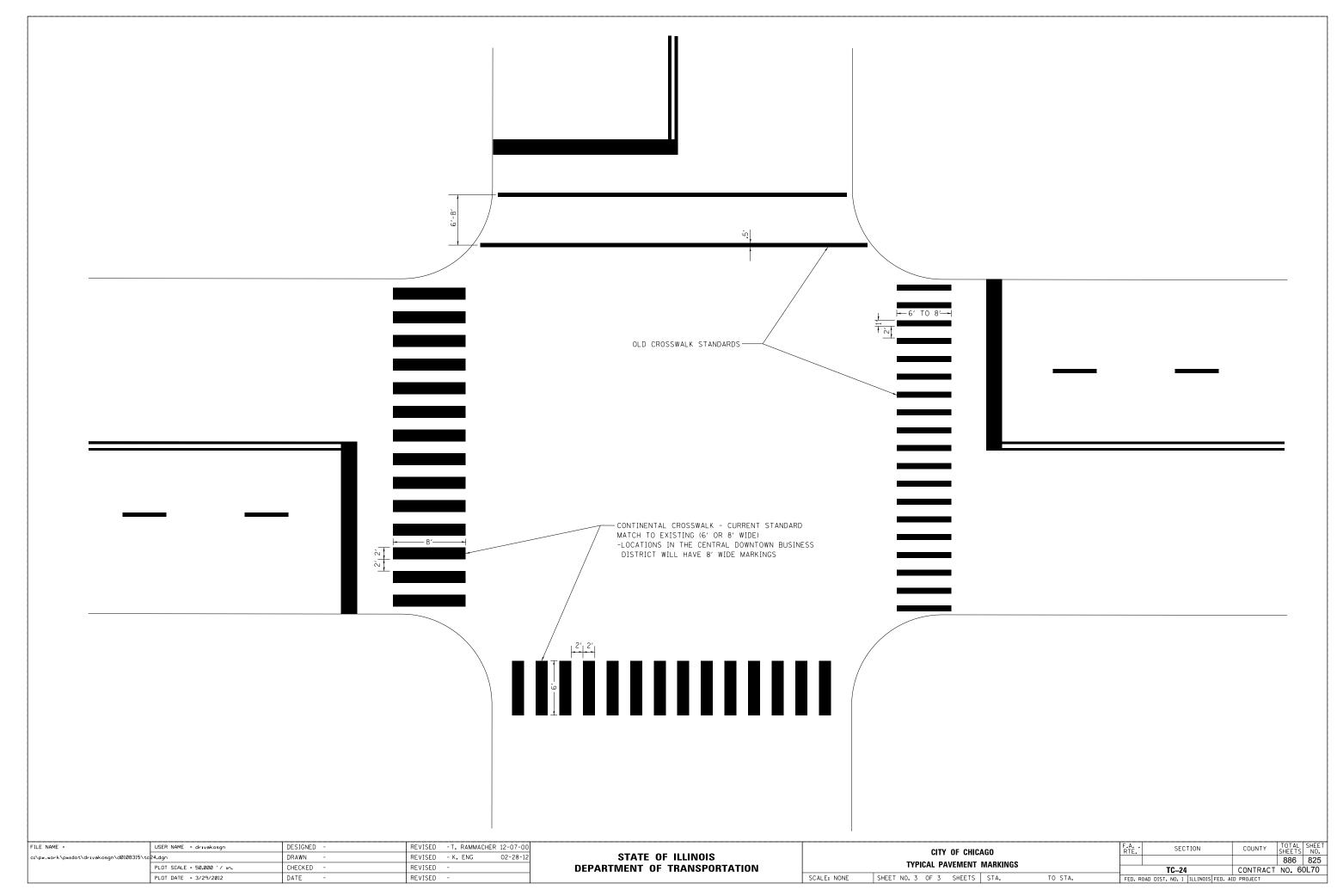
- NOTE:

 1.) FOR BIKE LANE SYMBOLS ONLY,
 USE PRE-FORMED THERMOPLASTIC
 WITH A MINIMUM THICKNESS OF 90 MILS,
 MINIMUM SKID RESISTANCE VALUE OF 60 BPN,
 & A MINIMUM INDEX OF REFRACTION OF 1.50.
- 2.) THE RESIDENT ENGINEER SHALL CONTACT MR. BEN GOMBERG AT 312-744-8093 AT LEAST ONE CALENDAR WEEK PRIOR TO INSTALLING BIKE LANE SYMBOLS.

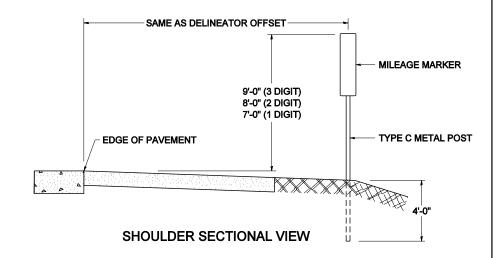
TYPICAL BIKE LANE SYMBOLS DRAWING #28

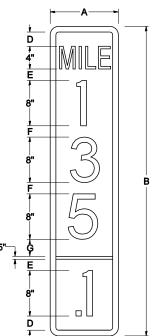


| FILE NAME = | USER NAME = drivakosgn | DESIGNED - | REVISED -T. RAMMACHER 12-07-00 | | CITY OF CHICAGO | F.A | SECTION | COUNTY TOTAL SHEET |
|--|----------------------------|------------|--------------------------------|------------------------------|--|-----------|---------------------------|--------------------|
| c:\pw_work\pwidot\drivakosgn\d0108315\tc | 24.dgn | DRAWN - | REVISED - K. ENG 02-28-12 | STATE OF ILLINOIS | | 1112 | | 886 824 |
| | PLOT SCALE = 50.000 '/ in. | CHECKED - | REVISED - | DEPARTMENT OF TRANSPORTATION | TYPICAL PAVEMENT MARKINGS | | TC-24 | CONTRACT NO. 60L70 |
| | PLOT DATE = 3/29/2012 | DATE - | REVISED - | | SCALE: NONE SHEET NO. 2 OF 3 SHEETS STA. TO STA. | FFD, ROAD | DIST, NO. 1 ILLINOIS FED. | AID PROJECT |



STANDARD DESIGN FOR MILE POST



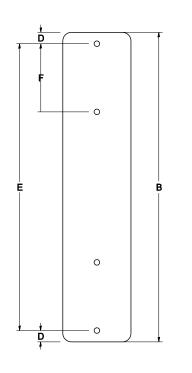


| | D † | | . o L | | <u> </u> | <u>,</u> | | |
|---------|--------|------|-------|-------|----------|----------|-----|-------|
| SIGN | | | | DIMEN | SIONS | | | |
| SIZE | Α | В | С | D | E | F | G | DIGIT |
| 12 × 24 | 12.0 | 24.0 | 1.5 | 1.5 | 1.5 | N/A | 1.5 | 1 |
| 12 × 36 | 12.0 | 36.0 | 1.5 | 2.0 | 2.0 | 2.0 | 1.5 | 2 |
| 12 × 48 | 12.0 | 48.0 | 1.5 | 2.5 | 2.0 | 2.0 | 2.5 | 3 |

| SIGN SIZE | | | SERIES | В | | | | |
|--------------|----|----|--------|-----|--------|---------------|---------|--|
| | | | LINES | | BORDER | BLANK STD. | | |
| | 1 | 2 | 3 | 4 | 5 | m | | |
| 12 × 24 | 4C | 8D | 4C | N/A | N/A | 0.5 | B9-1224 | |
| 12 × 36 | 4C | 8D | 8D | 4C | N/A | 0.5 | B9-1236 | |
| 12 × 48 | 4C | 8D | 8D | 8D | 4C | 0.5 | B9-1248 | |

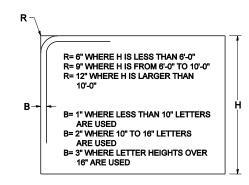
FILE NAME =

tc27.dgn

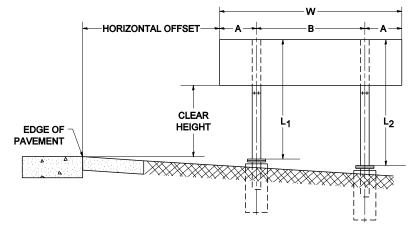


| | | | | | _ | _ |
|---------|------|------|-----|-----|------|------|
| BLANK | Α | В | С | D | E | F |
| B9-1224 | 12.0 | 24.0 | 1.5 | 2.0 | 20.0 | N/A |
| B9-1236 | 12.0 | 36.0 | 1.5 | 2.0 | 32.0 | 12.0 |
| B9-1248 | 12.0 | 48.0 | 1.5 | 2.0 | 44.0 | 12.0 |

BORDER AND RADIUS LAYOUT



MAJOR GUIDE SIGN LAYOUT



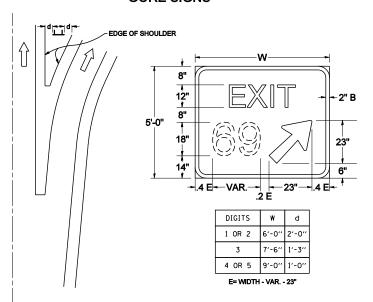
| NUMBER OF STEEL SUPPORTS | Α | В |
|-----------------------------|--------|-------|
| 2 | .2 W | .6 W |
| 3 | .15 W | .35 W |
| 4 | .125 W | .25 W |
| 5 | .1 W | .2 W |

"L₁IS THE LENGTH OF SUPPORT, NOT INCLUDING THE STUB PROJECTION, CLOSEST TO THE EDGE OF THE PAVEMENT.

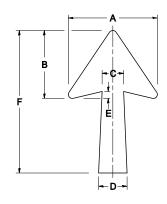
"A" IS THE DISTANCE FROM THE SIGN EDGE TO THE CENTERLINE OF THE NEAREST SUPPORT. "B" IS THE DISTANCE BETWEEN CENTERLINES OF SUPPORTS.

SCALE: NONE

GORE SIGNS

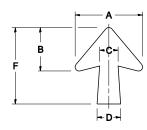


STANDARD ARROWS FOR INTERSTATE GUIDE SIGNS



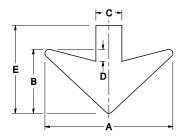
| ARROW SYMBOL | Α | В | С | D | E | F | R |
|---|-------|-----|------|------|-------|--------------------------------|-------|
| 24 ¹ / ₄ × 15 ¹ / ₈ | 151/8 | 11% | 3¾ | 5 | 15/16 | 241/4 | 13/16 |
| 29 ¹ / ₄ × 18 ¹ / ₄ | 181/4 | 14 | 41/2 | 6 | 11/2 | 291/4 | 3∕4 |
| 35% × 221/4 | 221/4 | 17 | 5¾ | 71/8 | 13/4 | 35% | 1 |
| 181/4 × 111/4 | 111/4 | 8¾ | 31/8 | 3% | | 18 ¹ / ₄ | |

NOTE: D & F ARE RECOMMENDED DIMENSIONS. TAPER SHOULD BE HELD CONSTANT FOR LONGER OR SHORTER SHAFT LENGTHS



| ARROW SYMBOL | Α | В | С | D | E | F | R |
|---|--------|--------|-------|--------|-------|-------|-----|
| 17 ¹ / ₄ × 14 ¹ / ₄ | 141/4 | 913//6 | 3% | 41/2 | 15/16 | 171/4 | 3∕4 |
| 201/4 × 171/4 | 171/4 | 113/4 | 43/8 | 5% | 11/2 | 201/4 | |
| 25 × 21 1/8 | 21 1/8 | 141/4 | 5 | 6¾ | 1¾ | 25 | 1 |
| 9% × 8% | 81/16 | 5½ | 25/16 | 215/16 | | 9% | 1/2 |

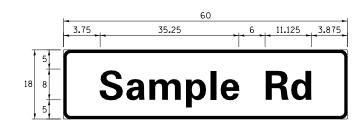
DOWN ARROWS

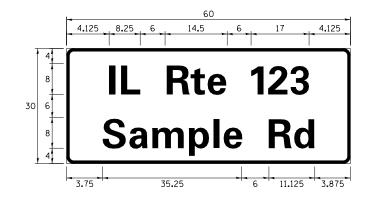


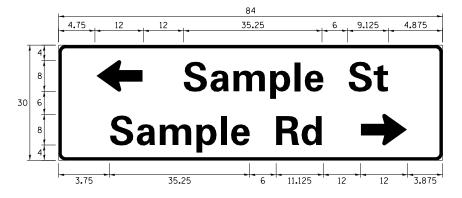
| ARROW SYMBOL | Α | В | С | D | E | R |
|--------------|----|----|------|------|-------|-----|
| 16½ × 24 | 24 | 12 | 5 | 11/2 | 161/2 | 3∕4 |
| 22 × 32 | 32 | 16 | 61/2 | 3 | 22 | 1 |

| MILE | POST M | IARKERS - | GORE SIG | NS | F.A RTE. | | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|----------------------------------|--------|-----------|-----------|--------|-------------|----------|-----------------------|-------------|-----------------|--------------|
| MAJOR GUIDE SIGN LAYOUT – ARROWS | | | | | | | | | 886 | 826 |
| | | | JUI - ANN | | | TC-27 | (TS-2341-1) | CONTRACT | NO. 6 | 0L70 |
| SHEET NO. | OF 1 | SHEETS | STA | TO STA | EED E | OAD DICT | NO 1 THE INOIS FED. A | UD DDO IECT | | |

SIGN PANEL – TYPE 1 OR TYPE 2







| DESIGN | | SIGN PANEL | SHEETING TYPF | QTY. REQUIRED |
|--------|---------|------------|------------------|------------------|
| SERIES | (SQ FT) | TIPE | TYPE | REGUIRED |
| D OR C | - | 1 OR 2 | ZZ | - |

COMMON STREET NAME ABBREVIATIONS AND WIDTHS

| NAME | ABBREVATION | WIDTH | (INCH) | |
|---------------|-------------|------------|------------|--|
| NAME | ADDREVATION | SERIES "C" | SERIES "D" | |
| AVENUE | Ave | 15.000 | 18.250 | |
| BOULEVARD | Blvd | 17.125 | 20.000 | |
| CIRCLE | Cir | 11.125 | 13.000 | |
| COURT | C† | 8. 250 | 9.625 | |
| DRIVE | Dr | 8.625 | 10.125 | |
| HIGHWAY | Hwy | 18.375 | 22.000 | |
| ILLINOIS | ΙL | 7.000 | 8. 250 | |
| LANE | L | 9.125 | 10.750 | |
| PARKWAY | Pkwy | 23.375 | 27.375 | |
| PLACE | PΙ | 7.125 | 7. 750 | |
| ROAD | Rd | 9.625 | 11.125 | |
| ROUTE | Rte | 12.625 | 14.500 | |
| STREET | S† | 8.000 | 9.125 | |
| TERRACE | Ter | 12.625 | 14.625 | |
| TRAIL | TRAIL Tr | | 9.125 | |
| UNITED STATES | US | 10.375 | 12.250 | |

GENERAL NOTES

- 1. WHERE MAST ARM MOUNTED STREET NAME SIGNS ARE SPECIFIED, THE MAST ARM ASSEMBLY AND POLES SHALL BE DESIGNED TO SUPPORT THE LOADINGS CALLED FOR ON STANDARDS 877001, 877002, 877006, 877011 AND 877012, AS APPLICABLE, PLUS TWO (2) SIGN PANELS 2'-6" x 8'-0" MOUNTED AS SHOWN. THE DESIGN SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS" AS PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS FOR 80 M.P.H. WIND VELOCITY.
- 2. ALL SIGNS SHALL CONSIST OF A WHITE LEGEND AND BORDER (TYPE ZZ SHEETING) ON A GREEN BACKGROUND (TYPE ZZ
- 3. THE SIGN LENGTH SHALL BE IN 6-INCH INCREMENTS, BUT THE OVERALL LENGTH SHALL NOT EXCEED 8'-O". ALL BORDERS SHALL BE 3/4" WIDE. CORNER RADIUS SHALL BE 1-7/8". THE SPACING BETWEEN THE WORDS SHOULD BE 6". IF POSSIBLE, BUT MAY BE REDUCED TO 5" WHEN SPACING IS CRITICAL. A MINIMUM OF 2-1/2" SHALL BE INCLUDED BETWEEN THE WORD AND THE RIGHT AND LEFT EDGES OF THE SIGN.
- 4. A PREFERRED METHOD FOR THE SIGN DESIGN IS TO USE SERIES "D" LETTER ON A ONE-LINE SIGN 18" IN HEIGHT AND A MAXIMUX OF 8'-O" IN WIDTH. IF SERIES "D" DOES NOT FIT ON A 8"-O" SIGN, THEN SERIES "C" SHOULD BE TRIED. IF SERIES "C" DOES NOT FIT ON A 8'-O" SIGN, A 30" HIGH TWO-LINE SIGN CAN BE USED. THE CROSSROAD DESIGNATION AS TO STREET, AVENUE, ETC. SHOULD BE SPELLED OUT ON THE SECOND LINE, IF THERE IS SPACE AVAILABLE.
- 5. LED ILLUMINATED STREET NAME SIGNS CAN BE USED IN PLACE OF REGULAR SIGN PANELS BUT ANY SPECIAL WORDING AND SYMBOLOGY MUST BE APPROVED BY THE DEPARTMENT. GENERAL DESIGN REQUIREMENT AS LISTED ABOVE (COLOR, FONT, SIZE, ETC.) MUST BE FOLLOWED.
- 6. SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM SHALL BE USED FOR ALL SIGNS ATTACHED TO SIGNAL POLES AND

LOCAL SUPPLIERS: PARTS LISTING:

- J.O. HERBERT COMPANY, INC MIDLOTHIAN, VA

- WESTERN REMAC, INC.

WOODRIDGE, IL

SIGN CHANNEL SIGN SCREWS BRACKETS

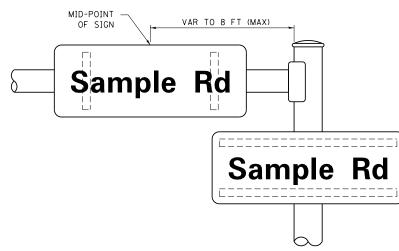
PART #HPN053 (MED. CHANNEL) 1/4" × 14 × 1" H_•W_•H_• #3 SELF TAPPING WITH NEOPRENE WASHER PART #HPN034 (UNIVERSAL) CHANNEL CLAMPS WITH STAINLESS STEEL STRAPPING

SCALE:

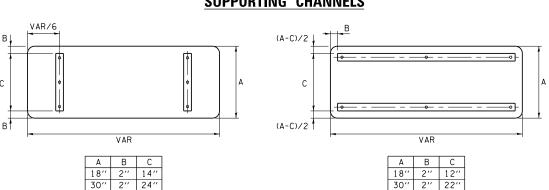
OTHER BRANDS OF MOUNTING HARDWARE ARE ACCEPTABLE, BASED UPON THE DEPARTMENT'S APPROVAL AND COMPATIBILITY WITH THE CHANNEL/BRACKET OF THE ABOVE PRODUCT.

MOUNTING LOCATION





SUPPORTING CHANNELS



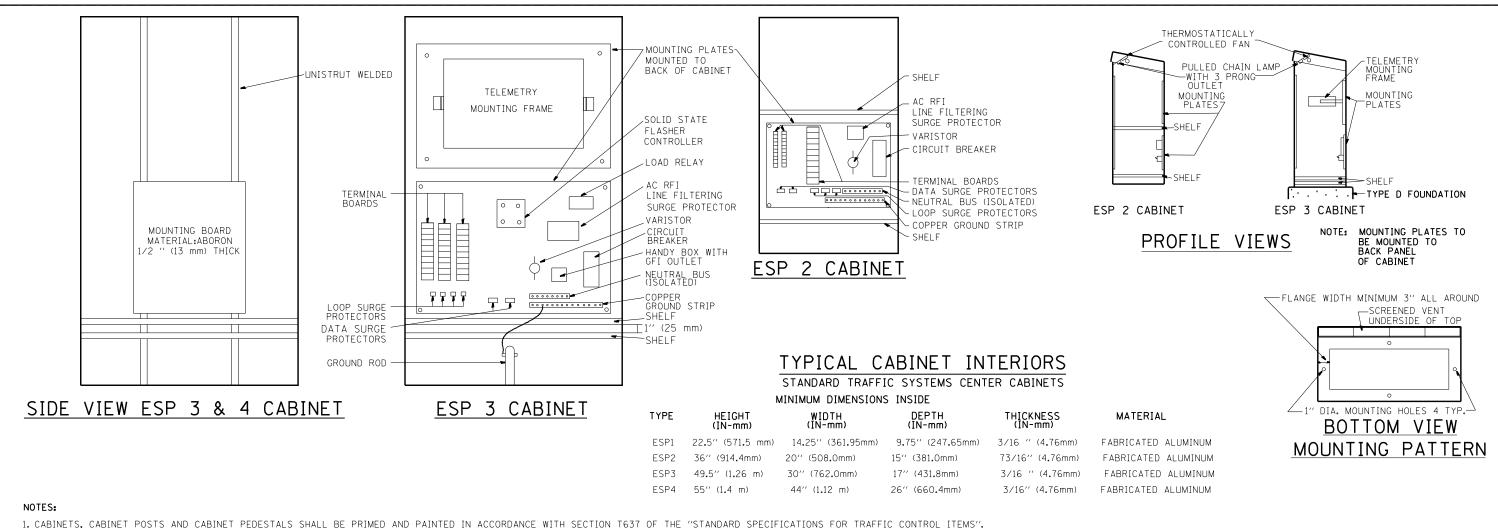
STANDARD ALPHABETS SPACING CHART

(8") UPPER CASE AND (6") LOWER CASE

| CHARACTER SPACING (INCH) (INCH | | FHWA SEF | RIES "C" | | FHWA SERIES "D" | | | | | |
|--|-----------|----------|----------|---------|-----------------|---------|--------|---------|--|--|
| B | CHARACTER | SPACING | | SPACING | CHARACTER | SPACING | | SPACING | | |
| C | А | 0.240 | 5.122 | 0.240 | Α | 0.240 | 6.804 | 0.240 | | |
| D | В | 0.880 | 4.482 | 0.480 | В | 0.960 | 5.446 | 0.400 | | |
| F | С | 0.720 | 4.482 | 0.720 | С | 0.800 | 5.446 | 0.800 | | |
| F | D | 0.880 | 4.482 | 0.720 | D | 0.960 | 5.446 | 0.800 | | |
| F | Е | 0.880 | 4.082 | 0.480 | E | | 4.962 | 0.400 | | |
| H | F | 0.880 | 4.082 | 0.240 | F | 0.960 | 4.962 | 0.240 | | |
| T | G | 0.720 | 4.482 | 0.720 | G | 0.800 | 5.446 | 0.800 | | |
| No. | Н | 0.880 | 4.482 | 0.880 | Н | 0.960 | 5.446 | 0.960 | | |
| K | I | 0.880 | 1.120 | 0.880 | I | 0.960 | 1.280 | 0.960 | | |
| L | J | 0.240 | 4.082 | 0.880 | J | 0.240 | 5.122 | 0.960 | | |
| L | | | | | | | | | | |
| M | L | | | | L | | | | | |
| N | М | | | | М | | 6.244 | | | |
| O 0. 720 4. 722 0. 720 P 0. 800 5. 684 0. 800 P 0. 880 4. 482 0. 720 P 0. 960 5. 446 0. 240 Q 0. 720 4. 722 0. 720 0. 800 5. 684 0. 800 R 0. 880 4. 482 0. 480 R 0. 960 5. 446 0. 400 S 0. 480 4. 482 0. 480 S 0. 400 5. 446 0. 400 T 0. 240 4. 082 0. 240 T 0. 240 4. 662 0. 240 U 0. 880 4. 482 0. 880 U 0. 960 5. 446 0. 960 V 0. 240 4. 962 0. 240 V 0. 240 6. 084 0. 240 V 0. 240 4. 962 0. 240 W 0. 240 5. 446 0. 240 X 0. 240 4. 722 0. 240 X 0. 400 5. 446 0. 400 Y 0. 240 | | | | | | | | | | |
| P | | | | | | | | | | |
| O 0.720 4.722 0.720 0 0.800 5.684 0.800 R 0.880 4.482 0.480 R 0.960 5.446 0.400 S 0.480 4.482 0.80 R 0.960 5.446 0.400 T 0.240 4.082 0.240 T 0.240 4.962 0.240 U 0.880 4.482 0.880 U 0.960 5.446 0.960 W 0.240 4.962 0.240 W 0.240 6.084 0.240 W 0.240 4.722 0.240 X 0.400 5.446 0.400 X 0.240 4.722 0.240 X 0.400 5.446 0.400 X 0.240 5.122 0.240 X 0.400 5.446 0.400 Z 0.480 4.482 0.480 Z 0.400 5.446 0.400 D 0.520 3.842 0.640 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> | | | | | | | | | | |
| R 0.880 4.482 0.480 R 0.960 5.446 0.400 S 0.480 4.482 0.480 S 0.400 5.446 0.400 T 0.240 4.982 0.240 T 0.240 4.962 0.240 U 0.880 4.482 0.880 U 0.960 5.446 0.960 V 0.240 4.962 0.240 V 0.240 6.084 0.240 W 0.240 6.884 0.240 W 0.240 6.884 0.240 W 0.240 6.884 0.240 Y 0.240 C 0.480 4.562 0.720 D 0.240 C 0.480 4.562 0.720 D 0.240 C 0.480 4.802 0.480 D 0.800 4.802 0.480 D 0.800 4.802 0.480 D 0.800 4.802 0.480 D 0.800 4.802 0.320 D 0.480 4.802 0.3800 D 0.480 4.802 0.3800 D 0.480 4.802 0.800 D 0.480 4.802 0.480 D 0.480 4.802 0.800 D 0.480 4.802 0.480 D 0.4800 5.446 0.800 | | | | | | | | | | |
| S 0.480 4.482 0.480 S 0.400 5.446 0.400 T 0.240 4.082 0.240 T 0.240 4.962 0.240 U 0.880 4.482 0.880 U 0.960 5.446 0.960 V 0.240 4.962 0.240 V 0.240 6.084 0.240 W 0.240 4.722 0.240 W 0.240 7.124 0.240 X 0.240 4.722 0.240 X 0.400 5.446 0.400 Y 0.240 5.122 0.240 Y 0.240 6.884 0.240 Z 0.480 4.882 0.480 Z 0.400 5.446 0.400 Z 0.480 4.882 0.640 a 0.400 5.466 0.400 Z 0.480 4.082 0.640 a 0.400 4.562 0.720 D 0.720 4.082 0.720 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> | | | | | | | | | | |
| T 0.240 4.082 0.240 T 0.240 4.962 0.240 U 0.880 4.482 0.880 U 0.960 5.446 0.960 V 0.240 4.962 0.240 V 0.240 7.124 0.240 W 0.240 6.084 0.240 W 0.240 7.124 0.240 X 0.240 4.722 0.240 X 0.400 5.446 0.400 Y 0.240 5.122 0.240 Y 0.240 6.884 0.240 T 0.240 5.446 0.400 S 0.480 1.200 S 0.480 | | | | | | | | | | |
| U 0.880 | | | | | | | | | | |
| V 0.240 4.962 0.240 V 0.240 6.084 0.240 W 0.240 7.124 0.240 X 0.240 4.722 0.240 X 0.400 7.124 0.240 Y 0.240 5.122 0.240 Y 0.240 6.884 0.240 Z 0.480 4.482 0.480 Z 0.400 5.446 0.400 D 0.720 4.082 0.480 Z 0.400 5.446 0.400 D 0.720 4.082 0.480 D 0.800 4.802 0.720 D 0.720 4.082 0.480 D 0.800 4.802 0.480 C 0.480 4.082 0.720 d 0.480 4.722 0.240 d 0.480 4.082 0.720 d 0.480 4.722 0.240 d 0.480 4.082 0.720 d 0.480 4.722 0.240 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<> | | | | | | | | | | |
| W 0.240 6.084 0.240 W 0.240 7.124 0.240 X 0.240 4.722 0.240 X 0.400 5.446 0.400 Y 0.240 4.722 0.240 X 0.400 5.446 0.400 Z 0.480 4.482 0.480 Z 0.400 5.446 0.400 a 0.320 3.842 0.640 a 0.400 4.562 0.720 b 0.720 4.082 0.480 b 0.800 4.802 0.480 c 0.480 4.082 0.720 d 0.480 4.722 0.240 d 0.480 4.082 0.720 d 0.480 4.802 0.800 e 0.480 4.082 0.720 d 0.480 4.802 0.800 f 0.320 2.480 0.160 f 0.320 2.882 0.160 g 0.480 4.082 0.640 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> | | | | | | | | | | |
| X | | | | | | | | | | |
| Y 0.240 5.122 0.240 Y 0.240 6.884 0.240 Z 0.480 4.482 0.480 Z 0.400 5.446 0.400 a 0.320 3.842 0.640 a 0.400 4.562 0.720 b 0.720 4.082 0.480 b 0.800 4.802 0.480 c 0.480 4.002 0.240 c 0.480 4.802 0.240 d 0.480 4.082 0.720 d 0.480 4.722 0.240 e 0.480 4.082 0.320 e 0.480 4.722 0.320 f 0.320 2.480 0.160 f 0.320 2.882 0.160 g 0.480 4.082 0.720 g 0.480 4.802 0.800 h 0.720 1.120 0.720 j 0.800 1.722 0.720 i 0.720 1.120 0.720 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> | | | | | | | | | | |
| Z 0.480 4.482 0.480 Z 0.400 5.446 0.400 a 0.320 3.842 0.640 a 0.400 4.562 0.720 b 0.720 4.082 0.480 b 0.800 4.802 0.480 c 0.480 4.002 0.240 c 0.480 4.722 0.240 d 0.480 4.082 0.720 d 0.480 4.802 0.800 e 0.480 4.082 0.320 e 0.480 4.722 0.320 f 0.320 2.480 0.160 f 0.320 2.882 0.160 g 0.480 4.082 0.640 h 0.800 4.722 0.720 i 0.720 1.120 0.720 i 0.800 4.722 0.720 j 0.000 2.320 0.720 j 0.000 2.642 0.800 j 0.000 2.320 0.720 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> | | | | | | | | | | |
| a 0.320 3.842 0.640 a 0.400 4.562 0.720 b 0.720 4.082 0.480 b 0.800 4.802 0.480 c 0.480 4.082 0.240 c 0.480 4.722 0.240 d 0.480 4.082 0.720 d 0.480 4.722 0.320 e 0.480 4.082 0.720 d 0.480 4.722 0.320 f 0.320 2.480 0.160 f 0.320 2.882 0.160 g 0.480 4.082 0.720 g 0.480 4.802 0.800 h 0.720 1.080 0.800 4.722 0.720 1 0.800 1.280 0.800 h 0.720 1.120 0.720 1 0.800 1.280 0.800 j 0.000 2.320 0.720 j 0.000 2.642 0.800 j 0.000 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> | | | | | | | | | | |
| b 0.720 4.082 0.480 b 0.800 4.802 0.480 c 0.480 4.002 0.240 c 0.480 4.722 0.240 d 0.480 4.082 0.720 d 0.480 4.802 0.800 e 0.480 4.082 0.320 e 0.480 4.722 0.320 f 0.320 2.480 0.160 f 0.320 2.882 0.160 g 0.480 4.082 0.720 g 0.480 4.802 0.800 h 0.720 4.082 0.640 h 0.800 4.722 0.720 i 0.720 1.120 0.720 i 0.800 1.280 0.800 k 0.720 4.322 0.160 k 0.800 5.122 0.160 I 0.720 4.082 0.640 m 0.800 1.280 0.800 m 0.720 4.082 0.640 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> | | | | | | | | | | |
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| d 0.480 4.082 0.720 d 0.480 4.802 0.800 e 0.480 4.082 0.320 e 0.480 4.722 0.320 f 0.320 2.480 0.160 f 0.320 2.882 0.160 g 0.480 4.082 0.720 g 0.480 4.802 0.800 h 0.720 4.082 0.640 h 0.800 4.722 0.720 i 0.720 1.120 0.720 i 0.800 1.280 0.800 j 0.000 2.320 0.720 j 0.000 2.642 0.800 k 0.720 4.322 0.160 k 0.800 1.280 0.800 j 0.000 2.320 0.720 j 0.000 2.642 0.800 j 0.000 2.320 0.720 j 0.0800 1.280 0.800 j 0.000 3.042 0.160 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> | | | | | | | | | | |
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| j 0.000 2.320 0.720 j 0.000 2.642 0.800 k 0.720 4.322 0.160 k 0.800 5.122 0.160 I 0.720 1.120 0.720 I 0.800 1.280 0.800 m 0.720 6.724 0.640 m 0.800 7.926 0.720 n 0.720 4.082 0.640 m 0.800 4.722 0.720 o 0.480 4.082 0.640 n 0.800 4.722 0.720 o 0.480 4.082 0.480 p 0.800 4.802 0.480 p 0.720 4.082 0.480 p 0.800 4.802 0.480 q 0.480 4.082 0.720 q 0.480 4.802 0.480 q 0.720 2.642 0.160 r 0.800 3.042 0.160 s 0.320 3.362 0.240 <td>h</td> <td></td> <td></td> <td></td> <td>h</td> <td>0.800</td> <td></td> <td></td> | h | | | | h | 0.800 | | | | |
| K 0.720 4.322 0.160 K 0.800 5.122 0.160 I 0.720 1.120 0.720 I 0.800 1.280 0.800 m 0.720 6.724 0.640 m 0.800 7.926 0.720 n 0.720 4.082 0.640 n 0.800 4.722 0.720 o 0.480 4.082 0.480 o 0.480 4.882 0.480 p 0.720 4.082 0.480 p 0.800 4.802 0.480 q 0.480 4.082 0.720 q 0.480 4.802 0.480 q 0.480 4.082 0.720 q 0.480 4.802 0.800 r 0.720 2.642 0.160 r 0.800 3.042 0.160 s 0.320 3.362 0.240 s 0.320 3.762 0.240 t 0.080 2.882 0.080 <td>ī</td> <td>0.720</td> <td></td> <td></td> <td>i</td> <td>0.800</td> <td></td> <td></td> | ī | 0.720 | | | i | 0.800 | | | | |
| 1 | j | 0.000 | 2.320 | 0.720 | j | 0.000 | 2.642 | 0.800 | | |
| m 0.720 6.724 0.640 m 0.800 7.926 0.720 n 0.720 4.082 0.640 n 0.800 4.722 0.720 o 0.480 4.082 0.480 o 0.480 4.882 0.480 p 0.720 4.082 0.480 p 0.800 4.802 0.480 q 0.480 4.082 0.720 q 0.480 4.802 0.480 q 0.480 4.082 0.720 q 0.480 4.802 0.800 r 0.720 2.642 0.160 r 0.800 3.042 0.160 s 0.320 3.362 0.240 s 0.320 3.762 0.240 t 0.080 2.882 0.080 t 0.080 3.202 0.080 u 0.640 4.082 0.720 u 0.720 4.722 0.800 v 0.160 4.722 0.160 <td>k</td> <td>0.720</td> <td>4.322</td> <td>0.160</td> <td>k</td> <td>0.800</td> <td>5.122</td> <td>0.160</td> | k | 0.720 | 4.322 | 0.160 | k | 0.800 | 5.122 | 0.160 | | |
| n 0.720 4.082 0.640 n 0.800 4.722 0.720 o 0.480 4.082 0.480 o 0.480 4.882 0.480 p 0.720 4.082 0.480 p 0.800 4.802 0.480 q 0.480 4.082 0.720 q 0.480 4.802 0.800 r 0.720 2.642 0.160 r 0.800 3.042 0.160 s 0.320 3.362 0.240 s 0.320 3.762 0.240 s 0.320 3.362 0.240 s 0.320 3.762 0.240 t 0.080 2.882 0.080 t 0.080 3.202 0.080 u 0.640 4.082 0.720 u 0.720 4.722 0.800 v 0.160 4.082 0.720 u 0.720 4.722 0.800 v 0.160 4.722 0.160 <td>1</td> <td>0.720</td> <td>1.120</td> <td>0.720</td> <td>1</td> <td>0.800</td> <td>1.280</td> <td>0.800</td> | 1 | 0.720 | 1.120 | 0.720 | 1 | 0.800 | 1.280 | 0.800 | | |
| O 0.480 4.082 0.480 0 0.480 4.882 0.480 p 0.720 4.082 0.480 p 0.800 4.802 0.480 q 0.480 4.082 0.720 q 0.480 4.802 0.800 r 0.720 2.642 0.160 r 0.800 3.042 0.160 s 0.320 3.362 0.240 s 0.320 3.762 0.240 t 0.080 2.882 0.080 t 0.080 3.202 0.080 u 0.640 4.082 0.720 u 0.720 4.722 0.800 v 0.160 4.082 0.720 u 0.720 4.722 0.800 v 0.160 4.722 0.160 v 0.160 5.684 0.160 w 0.160 7.524 0.160 w 0.160 9.046 0.160 x 0.000 5.202 0.000 <td>m</td> <td>0.720</td> <td>6.724</td> <td>0.640</td> <td>m</td> <td>0.800</td> <td>7.926</td> <td>0.720</td> | m | 0.720 | 6.724 | 0.640 | m | 0.800 | 7.926 | 0.720 | | |
| p 0.720 4.082 0.480 p 0.800 4.802 0.480 q 0.480 4.082 0.720 q 0.480 4.802 0.800 r 0.720 2.642 0.160 r 0.800 3.042 0.160 s 0.320 3.362 0.240 s 0.320 3.762 0.240 t 0.080 2.882 0.080 t 0.080 3.202 0.080 u 0.640 4.082 0.720 u 0.720 4.722 0.800 v 0.160 4.722 0.160 v 0.160 5.684 0.160 w 0.160 4.722 0.160 w 0.160 9.046 0.160 x 0.000 5.222 0.000 x 0.000 6.244 0.000 y 0.160 4.962 0.160 y 0.160 6.044 0.000 y 0.160 4.962 0.240 <td>n</td> <td>0.720</td> <td>4.082</td> <td>0.640</td> <td>n</td> <td>0.800</td> <td>4.722</td> <td>0.720</td> | n | 0.720 | 4.082 | 0.640 | n | 0.800 | 4.722 | 0.720 | | |
| q 0.480 4.082 0.720 q 0.480 4.802 0.800 r 0.720 2.642 0.160 r 0.800 3.042 0.160 s 0.320 3.362 0.240 s 0.320 3.762 0.240 t 0.080 2.882 0.080 t 0.080 3.202 0.080 u 0.640 4.082 0.720 u 0.720 4.722 0.800 v 0.160 4.082 0.720 u 0.160 9.046 0.160 x 0.000 5.202 0.000 x 0.000 6.244 0.000 y 0.160 4.962 0.160 <td>0</td> <td>0.480</td> <td>4.082</td> <td>0.480</td> <td>0</td> <td>0.480</td> <td>4.882</td> <td>0.480</td> | 0 | 0.480 | 4.082 | 0.480 | 0 | 0.480 | 4.882 | 0.480 | | |
| r 0.720 2.642 0.160 r 0.800 3.042 0.160 s 0.320 3.362 0.240 s 0.320 3.762 0.240 t 0.080 2.882 0.080 t 0.080 3.202 0.080 u 0.640 4.082 0.720 u 0.720 4.722 0.800 v 0.160 4.722 0.160 v 0.160 5.684 0.160 w 0.160 4.722 0.160 w 0.160 9.046 0.160 x 0.000 5.202 0.000 x 0.000 6.244 0.000 y 0.160 4.962 0.160 y 0.160 6.004 0.160 z 0.240 3.362 0.240 z 0.240 4.002 0.240 1 0.720 1.680 0.880 1 0.800 2.000 0.960 2 0.480 4.482 0.480 <td>Р</td> <td>0.720</td> <td>4.082</td> <td>0.480</td> <td>Р</td> <td>0.800</td> <td>4.802</td> <td>0.480</td> | Р | 0.720 | 4.082 | 0.480 | Р | 0.800 | 4.802 | 0.480 | | |
| S 0.320 3.362 0.240 S 0.320 3.762 0.240 t 0.080 2.882 0.080 t 0.080 3.202 0.080 u 0.640 4.082 0.720 u 0.720 4.722 0.800 v 0.160 4.722 0.160 v 0.160 5.684 0.160 w 0.160 7.524 0.160 w 0.160 9.046 0.160 x 0.000 5.202 0.000 x 0.000 6.244 0.000 y 0.160 4.962 0.160 y 0.160 6.004 0.160 z 0.240 3.362 0.240 z 0.240 4.002 0.240 z 0.240 3.362 0.240 z 0.240 4.002 0.240 z 0.480 4.482 0.480 2 0.800 5.446 0.800 3 0.480 4.482 0.480 <td>q</td> <td>0.480</td> <td>4.082</td> <td>0.720</td> <td>q</td> <td>0.480</td> <td>4.802</td> <td>0.800</td> | q | 0.480 | 4.082 | 0.720 | q | 0.480 | 4.802 | 0.800 | | |
| † 0.080 2.882 0.080 † 0.080 3.202 0.080 u 0.640 4.082 0.720 u 0.720 4.722 0.800 v 0.160 4.722 0.160 v 0.160 5.684 0.160 w 0.160 7.524 0.160 w 0.160 9.046 0.160 x 0.000 5.202 0.000 x 0.000 6.244 0.000 y 0.160 4.962 0.160 y 0.160 6.004 0.160 z 0.240 3.362 0.240 z 0.240 4.002 0.240 z 0.240 3.362 0.240 z 0.240 4.002 0.240 1 0.720 1.680 0.880 1 0.800 2.000 0.960 2 0.480 4.482 0.480 2 0.800 5.446 0.800 3 0.480 4.482 0.480 <td>r</td> <td>0.720</td> <td>2.642</td> <td>0.160</td> <td>r</td> <td>0.800</td> <td>3.042</td> <td>0.160</td> | r | 0.720 | 2.642 | 0.160 | r | 0.800 | 3.042 | 0.160 | | |
| U 0.640 4.082 0.720 U 0.720 4.722 0.800 V 0.160 4.722 0.160 V 0.160 5.684 0.160 W 0.160 7.524 0.160 W 0.160 9.046 0.160 X 0.000 5.202 0.000 X 0.000 6.244 0.000 Y 0.160 4.962 0.160 Y 0.160 6.004 0.160 Z 0.240 3.362 0.240 Z 0.240 4.002 0.240 I 0.720 1.680 0.880 1 0.800 2.000 0.960 2 0.480 4.482 0.480 2 0.800 5.446 0.800 3 0.480 4.962 0.720 4 0.160 6.004 0.960 4 0.240 4.962 0.720 4 0.160 6.004 0.960 5 0.480 4.482 0.480 <td>s</td> <td>0.320</td> <td>3. 362</td> <td>0.240</td> <td>s</td> <td>0.320</td> <td>3. 762</td> <td>0.240</td> | s | 0.320 | 3. 362 | 0.240 | s | 0.320 | 3. 762 | 0.240 | | |
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| | - | U. 24U | 2.802 | 0.240 | - | U. 24U | 2.802 | 0.240 | | |

FILE NAME = DESIGNED - LP/IP REVISED USER NAME = pociechal rials\CADD\Details\ts02.don DRAWN ΙP REVISED CHECKED -REVISED PLOT DATE = 9/22/2014 DATE - 10/01/2014 REVISED

| | | DI | STRICT ON | IE | DISTRICT ONE | | | | | SHEET NO. |
|------------------------------------|------------------------------------|----|-----------|------|--------------|-------|-----------------|-----------|-----|--------------|
| IV. | MAST ARM MOUNTED STREET NAME SIGNS | | | | | | | | 886 | 827 |
| MAGI ANN MOONIED STILLT NAME SIGNS | | | | | | TS-02 | CONTRACT | NO. 60 | L70 | |
| | SHEET | OF | SHEETS | STA. | TO STA. | | TILINOIS FED AT | D PROJECT | | |



- THE FINAL COAT SHALL BE (X) IN COLOR. THE INTERIOR SHALL BE PAINTED WHITE. SIGNAL POSTS AND HEADS TO BE FEDERAL YELLOW 89-19(MAUTZ).
- 2. CABINETS SHALL BE INSTALLED IN ACCORDANCE WITH APPLICABLE PORTIONS OF SECTION T400 OF THE "STANDARD SPECIFICATIONS FOR TRAFFIC CONTROL ITEMS".
- 3. ALL CABINETS WHICH ARE SERVICED BY 117 VOLTS A.C. POWER SHALL BE EQUIPPED WITH A 10 AMP CIRCUIT BREAKER, A.C. R.F.I. LINE FILTERING SURGE PROTECTOR, VARISTOR, DATA SURGE AND LOOP SURGE PROTECTORS AS INCIDENTAL TO THE COST OF THE CABINET. CMS CABINETS TYPE IV SHALL HAVE A 60 AMP. CIRCUIT BREAKER MINIMUM.
- 4. ESP 2/3/4 CABINETS SHALL BE FITTED WITH A THERMOSTATICALLY CONTROLLED FAN. IT SHALL BE MOUNTED AT THE TOP OF THE CABINET. THE FAN SHALL BE CAPABLE OF OPERATING AT 130 CPM AT 160' (48.8 m) OF STATIC WATER PRESSURE. A PORCLAIN BASED PULL CHAIN FIXTURE WITH 3 PRONG OUTLET SHALL ALSO BE PROVIDED.
- 5. RAMP METERING ESP 3 TYPE CABINETS SHALL ALSO BE EQUIPPED WITH A LOAD RELAY AND 2 CIRCUIT FLASHER, LAMPS, FAN, LOAD RELAY, AND 2 CIRCUIT FLASHER SHALL BE INCIDENTAL TO THE COST OF THE CABINET
- 6. INCIDENTAL TO THE COST OF EACH CABINET THE CONTRACTOR SHALL CONSTRUCT A 5 INCH (130mm) PCC SIDEWALK OF A RECTANGULAR AREA 3 FEET (915 mm) BY 4 FEET (1.25 m) IMMEDIATELY ADJACENT TO THE CABINET FOUNDATION ON THE SAME SIDE OF THE FOUNDATION AS THE CABINET DOOR TO PROVIDE FOOTING DURING INSTALLATION AND MAINTENANCE.
- 7. ANCHOR BOLTS FOR PEDESTAL AND BASE MOUNTED CABINETS SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE CABINET.
- 8. ALL CABINETS SHALL HAVE TERMINAL BLOCKS AND SHELVES AS SHOWN. THESE ITEMS SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE CABINET.
- 9. THE CABINET DOOR SHALL BE HINGED ON THE RIGHT SIDE WHEN FACING THE CABINET. THE DOOR SHALL BE FURNISHED WITH A GASKET THAT SHALL FORM A WEATHER TIGHT SEAL BETWEEN THE CABINET AND DOOR, THE HINGES SHALL BE CONTINUOUS AND BOLTED TO THE CABINET AND DOOR UTILIZING 1/4-20
 STAINLESS STEEL CARRIAGE BOLTS AND NY-LOCK NUTS. THE HINGES WILL BE MADE OF STAINLESS STEEL WITH A 0.25 INCH (6.35 mm) DIAMETER STAINLESS STEEL HINGE PIN. THE HINGE PIN SHALL BE CAPPED TOP AND BOTTOM BY WELD TO RENDER IT TAMPER PROOF.
- 10. THE LATCHING MECHANISM SHALL BE A 3 POINT DRAW ROLLER TYPE. THE CENTER CATCH AND PUSHRODS SHALL BE EITHER CADMIUM OR ZINC PLATED, TYPE II CLASS I. PUSHRODS WILL BE TURNED EDGEWISE AT THE OUTWARD SUPPORTS AND SHALL BE 0.25 INCH (6.35 mm) BY 0.75 INCH (19.05 mm), MINIMUM. ROLLERS SHALL HAVE A MINIMUM DIAMETER OF 0.875 INCH (22.22 mm) AND WILL BE MADE OF NYLON. THE CENTER CATCH SHALL BE FABRICATED FROM 0.14 INCH (3.55 mm) STEEL, MIMIMUM. WHEN THE DOOR IS CLOSED AND LATCHED, IT WILL BE LOCKED. THE LATCHING HANDLE SHALL HAVE A PROVISION FOR PADLOCKING IN THE CLOSED POSITION. AN OPERATING HANDLE SHALL BE FURNISHED WITH EACH LOCK. THE HANDLE WILL BE STAINLESS STEEL WITH A 0.75 INCH (19.05 mm) DIAMETER SHANK.
- 11. THE ENCLOSURE SHALL BE EQUIPPED WITH TWO ADJUSTABLE "C" MOUNTING CHANNELS WELDED ON BOTH SIDE WALLS AND BACK WALL OF THE ENCLOSURE, ALLOWING VERSATILE POSITIONING OF SHELVES OR PANELS, MOUNTING CHANNELS SHALL BE FACTORY PAINTED SAME COLOR AS INTERIOR OF CABINET.
- 12. CABINET DOOR SHALL NOT HAVE COMPARTMENT DOORS OR LOUVERS.
- 13. ALL FIELD CABINETS SHALL BE FITTED WITH BRASS LOCKS.

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- 14. ESP TYPE 2 & 3 CABINETS FITTED WITH TWO SHELVES AS SHOWN.
- 15. POST TOP MOUNTED CABINETS, SHALL HAVE A 0.25 INCH (6.3 mm) BOTTOM OF CABINET WELDED.
- 16. THE CONTROL CABINET SHALL BE SET PLUMB ON THE FOUNDATION AND FASTENED TO THE ANCHOR BOLTS WITH NUTS AND WASHERS. FLAT WASHERS SHALL BE INSTALLED BELOW AND ABOVE THE BASE PLATE OF THE CONTROL CABINET. LOCKWASHERS SHALL BE INSTALLED ON TOP OF THE TOP FLAT WASHER.

FILE NAME DESIGNED - R.L. **REVISED** - 12/94 JSER NAME = mezag ::\pw_work\pwidot\mezag\d0287541\TSC DRAWN - G.M. REVISED 09/96 LOT SCALE = 100.0000 '/ in. CHECKED - R.L. REVISED 02/98 PLOT DATE = 2/7/2013 DATE - Ø6/21/94 REVISED

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** TRAFFIC SYSTEMS CENTER

CABINET DETAIL SHEET SCALE: NONE SHEET NO. OF SHEETS STA.

SECTION TO STA.

COUNTY 886 828 CONTRACT NO. 60L70 FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

TRAFFIC SYSTEMS CENTER (TY-17

(X)

KENNEDY

RYAN

I-55

I-57

I-80

CAL-KING

EISENHOWER

I-290/IL53/I-355

LAKE SHORE DR.

WAI NUT *

BLUE STREAK **

CARIBBEAN BLUE *

YELLOW STONE II **

STATUARY BRONZE **

MEDIUM BRONZE *

RED BARON **

NO ADDITIONAL COMPENSATION SHALL BE

GREEN *

MORTON POWDER PAINT COLOR OR EQUIVALENT.
O'BRIEN POWDER PAINT COLOR OR EQUIVALENT.
BENJAMIN MOORE ENAMEL COLOR OR EQUIVALENT.

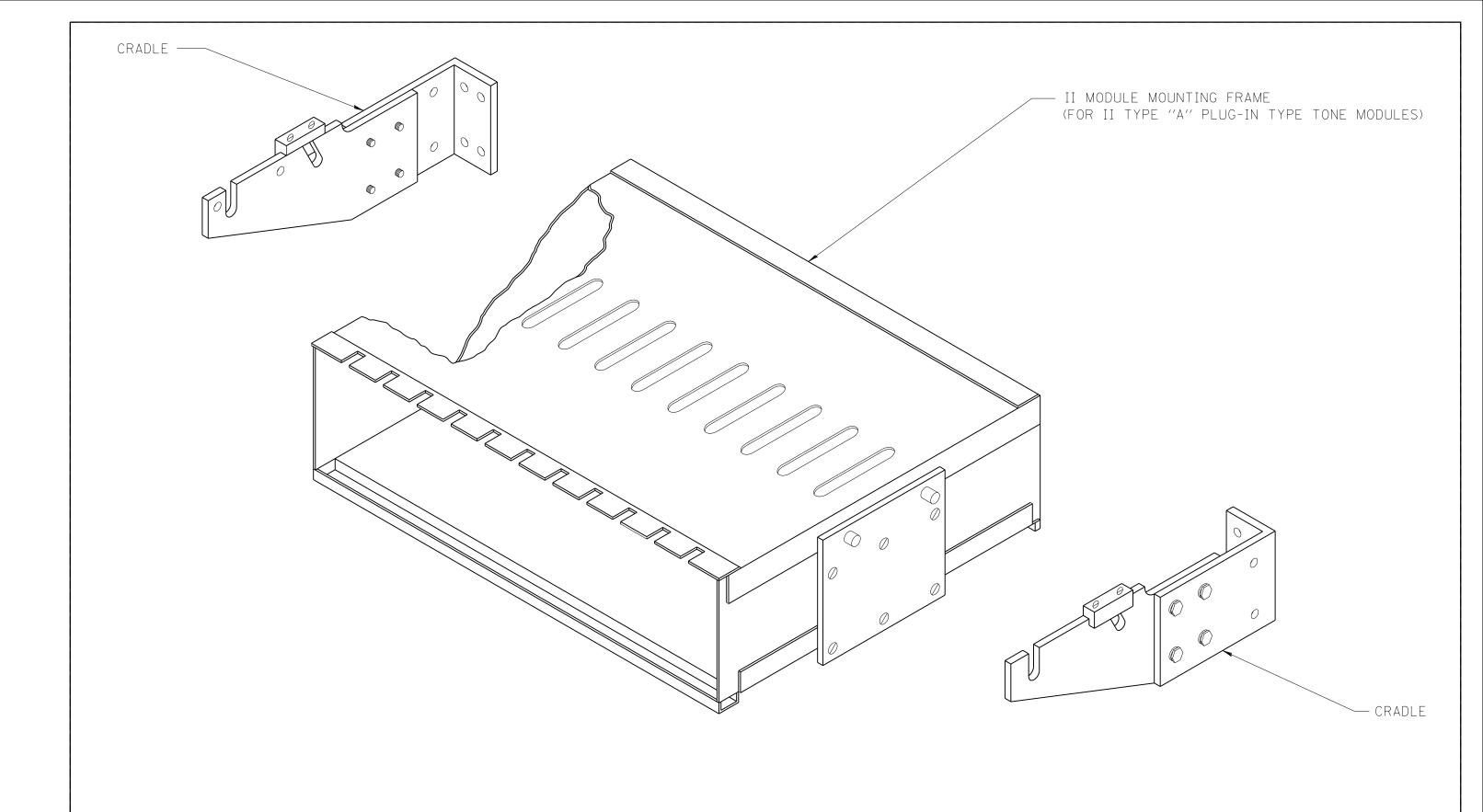
ALLOWED FOR CONFORMING TO COLOR REQUIREMENTS

ALL RAMP METERING CABINETS LIME GREEN ***. ALL POSTS,

T.S. HEADS AND SERVICES WILL BE PAINTED FEDERAL YELLOW.

BLUE STREAK **

POST OFFICE BLUE **



NOTE:

TYPE "A" TONE MODULES ARE PLUG

IN UNIT MEASURING 5-7/32" (132.55 mm) X 1.5" (38.1 mm) X 13-3/4" (349.25 mm)

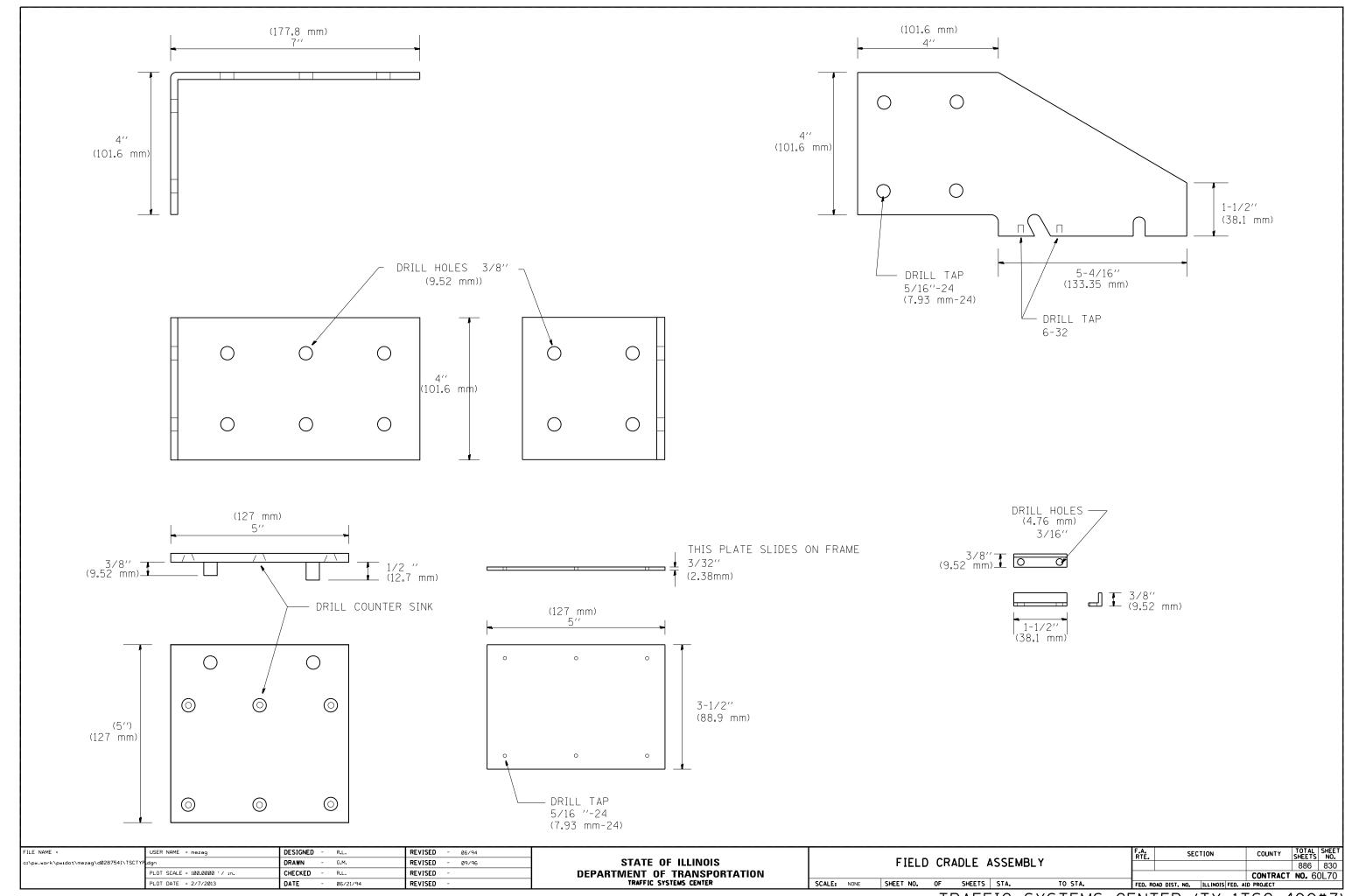
| ILC NAME - | OSEN NAME - Mezag | DESTONED - N.L. | NEVISED - 06/94 | |
|--|-------------------------------|-----------------|-----------------|------------------------------|
| :\pw_work\pwidot\mezag\d0287541\TSCTYP | .dgn | DRAWN - G.M. | REVISED - 09/96 | STATE OF ILLINOIS |
| | PLOT SCALE = 100.0000 ' / in. | CHECKED - R.L. | REVISED - | DEPARTMENT OF TRANSPORTATION |
| | PLOT DATE = 2/7/2013 | DATE - Ø6/21/94 | REVISED - | TRAFFIC SYSTEMS CENTER |

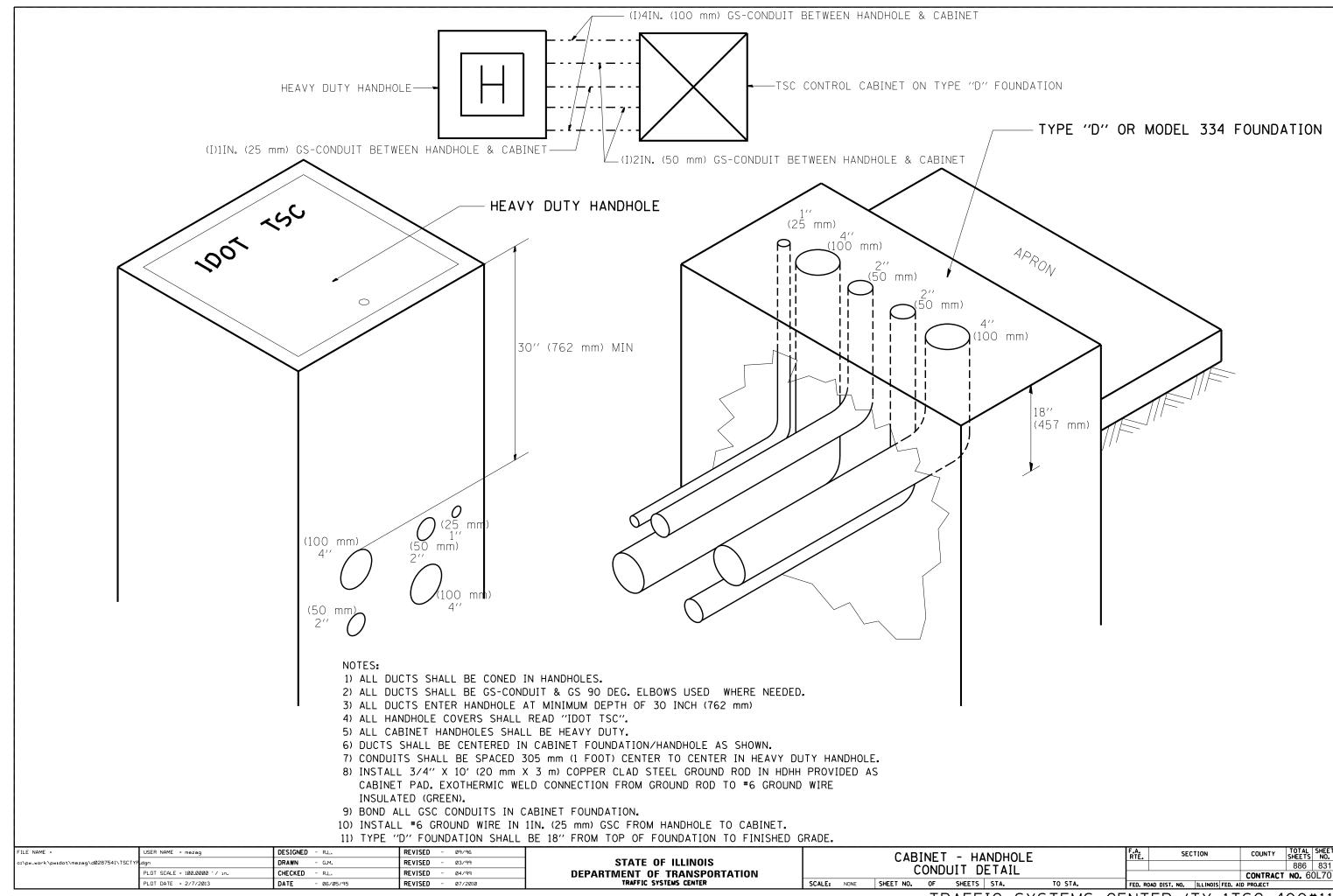
| | FIELD MOUNTING FRAME WITH CRADLE ASSEMBLY | | | | | | | | | |
|-------|--|-----------|----|--------|------|---------|--|--|--|--|
| CALE: | NONE | SHEET NO. | OF | SHEETS | STA. | TO STA. | | | | |

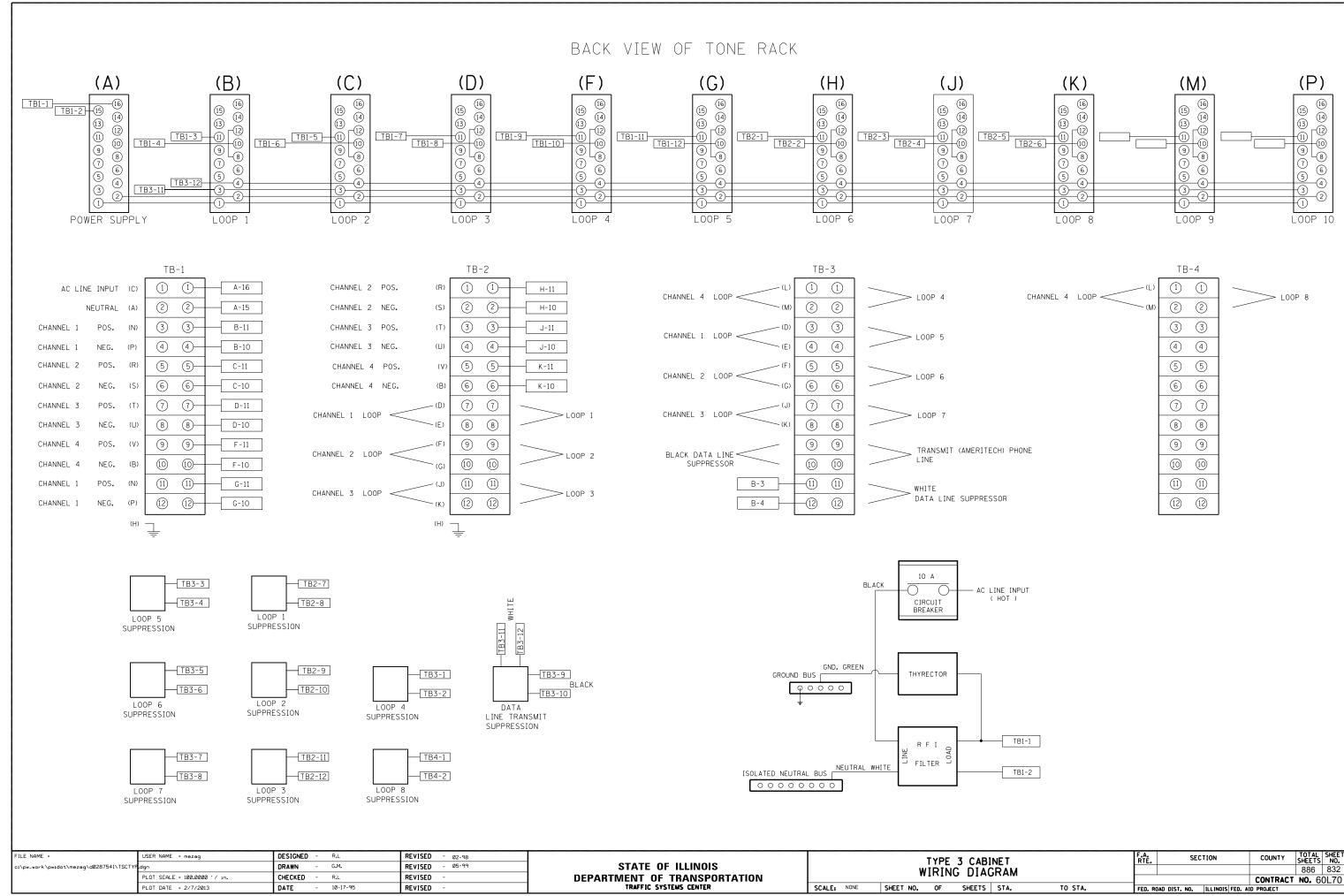
MOUNTING FRAME
CRADLE ASSEMBLY

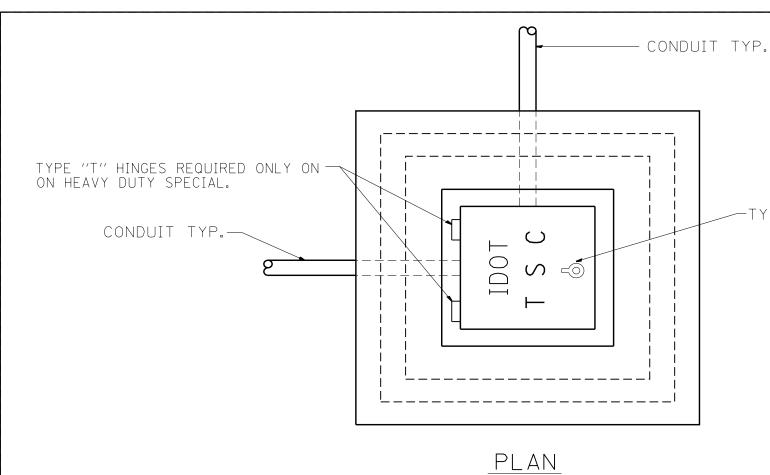
OF SHEETS STA. TO STA.

TRAFFIC SYSTEMS CENTER (TY-1TSC-400#6)









-TYPE "G" HANDLE FOR BOTH HDHH AND HDHH SPECIAL

HEAVY DUTY HANDHOLE MINIMUM DIMENSIONS (UNHINGED)

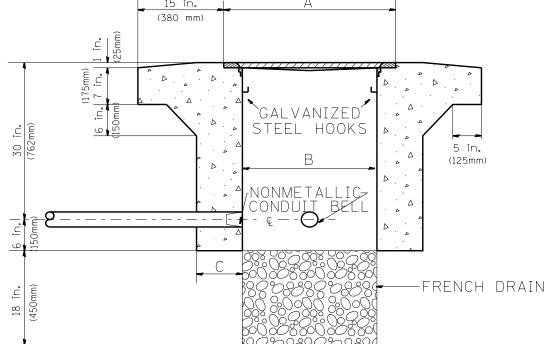
| А | 28'' (711 mm) |
|---|---------------|
| В | 22'' (559 mm) |
| С | 8'' (200 mm) |

(FRAME AND COVER 260 LBS. (118 Kg.) MIN.)

HEAVY DUTY HANDHOLE SPECIAL MINIMUM DIMENSIONS

| А | 31.5′′ (800 mm) |
|---|-----------------|
| В | 30.0" (762 mm) |
| С | 10.0′′ (250 mm) |

(FRAME AND COVER 405 LBS. (184 Kg. (405))



ELEVATION

PC CONCRETE - HEAVY DUTY HAND HOLE

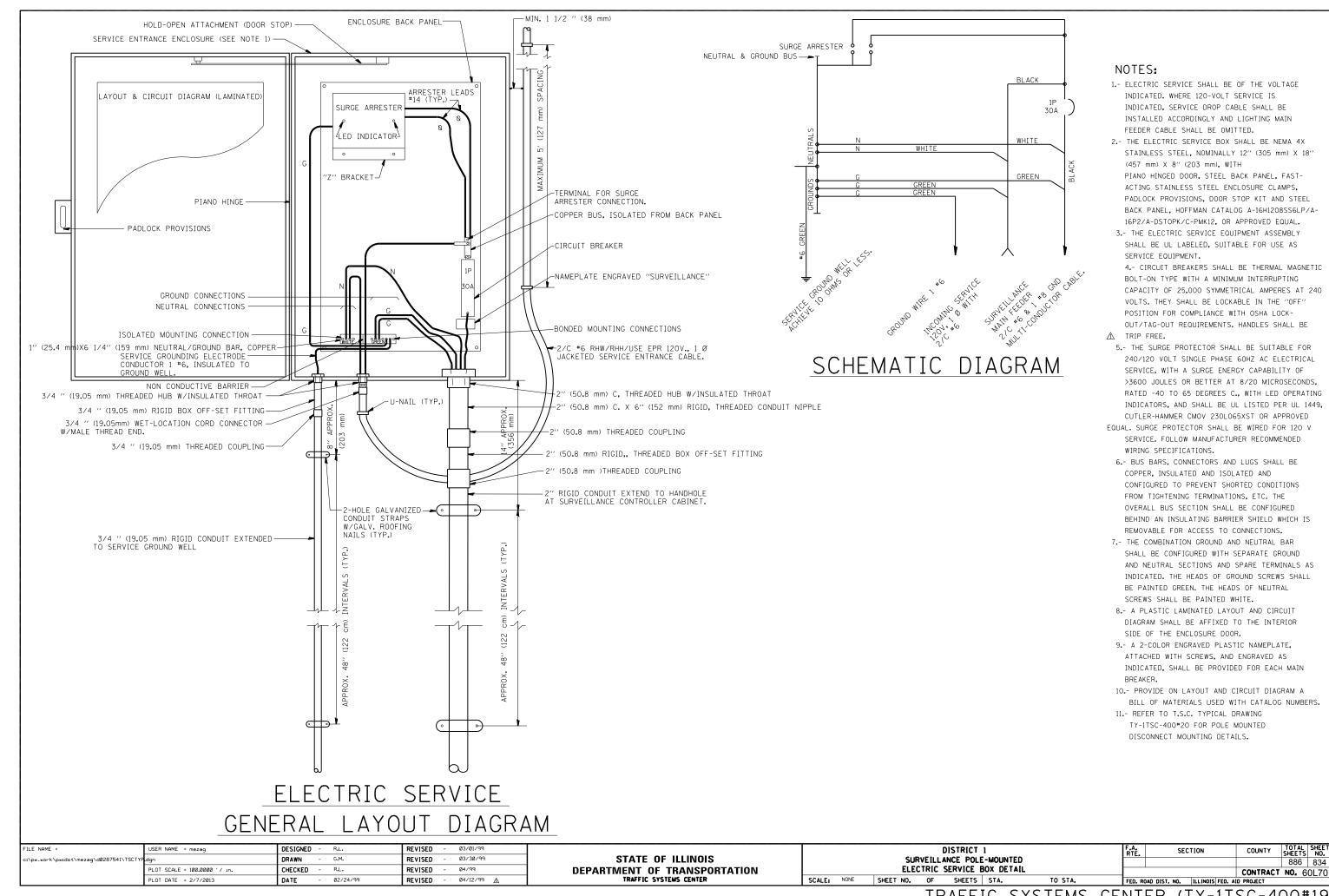
| FILE NAME = | USER NAME = mezag | DESIGNED - R.L. | REVISED - 04/97 |
|---|------------------------------|-----------------|-----------------|
| c:\pw_work\pwidot\mezag\d0287541\TSCTYP | .dgn | DRAWN - G.M. | REVISED - |
| | PLOT SCALE = 100.0000 '/ in. | CHECKED - R.L. | REVISED - |
| | PLOT DATE = 2/7/2013 | DATE - 09/11/96 | REVISED - |

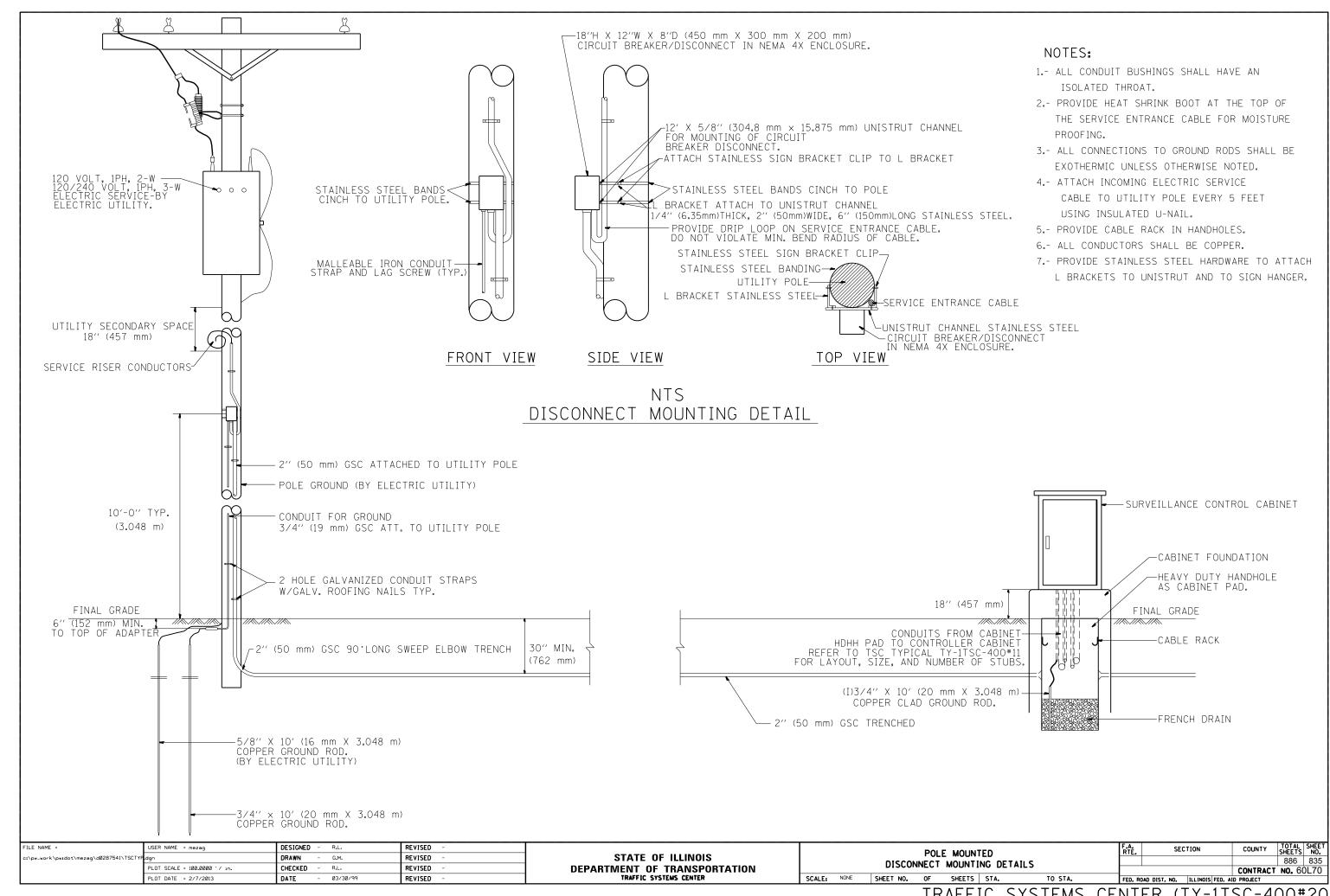
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
TRAFFIC SYSTEMS CENTER

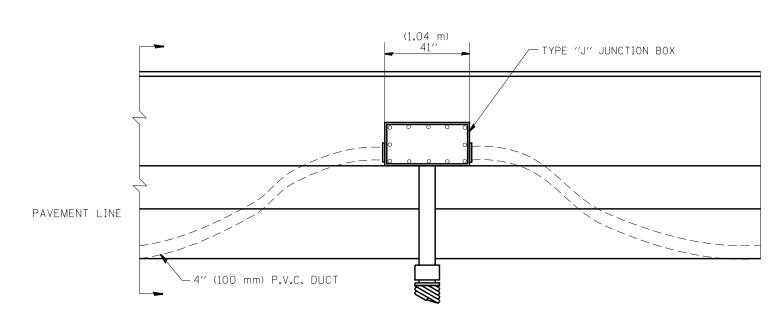
PC CONCRETE - HEAVY DUTY
HAND HOLE

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

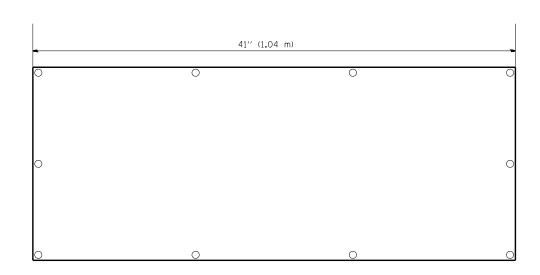
TRAFFIC SYSTEMS CENTER (TY-1TSC-400#15)







ELEVATION BARRIER WALL DUCT DETAIL



FRONT VIEW

ALL WELDS SHALL BE CONTINUOUS AND LEAK PROOF BOX AND COVER SHALL BE 0.25" (6.4 mm) TYPE 316 STAINLESS STEEL

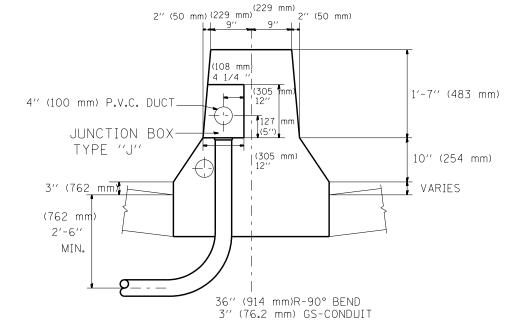
BARRIER WALL SHALL BE GAPPED A MINIMUM OF 15' (4.57 m) FOR PROPER PLACEMENT OF JUNCTION BOX TYPE "J" AND FOR A SMOOTH TRANSITION OF 4" (100 mm) PVC SURVEILLANCE DUCT(S) FROM BARRIER WALL FOOTER INTO JUNCTION BOX.

DESIGNED - J.G. REVISED DRAWN - G.M. REVISED PLOT SCALE = 100.0000 '/ in. CHECKED - J.G. REVISED PLOT DATE = 2/7/2013 - 04-19-05 DATE REVISED

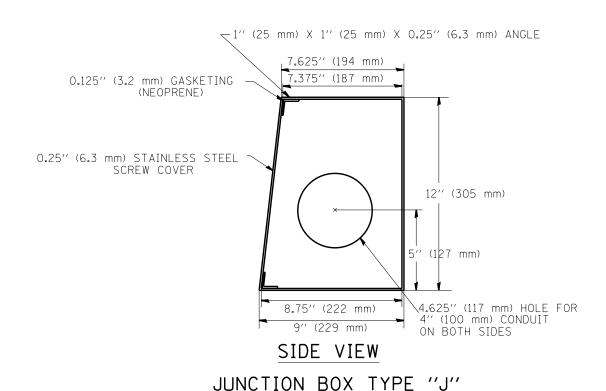
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION TRAFFIC SYSTEMS CENTER

JUCTION BOX "TYPE J" IN DOUBLE FACED BARRIER WALL SCALE: NONE SHEET NO. OF SHEETS STA. TO STA.

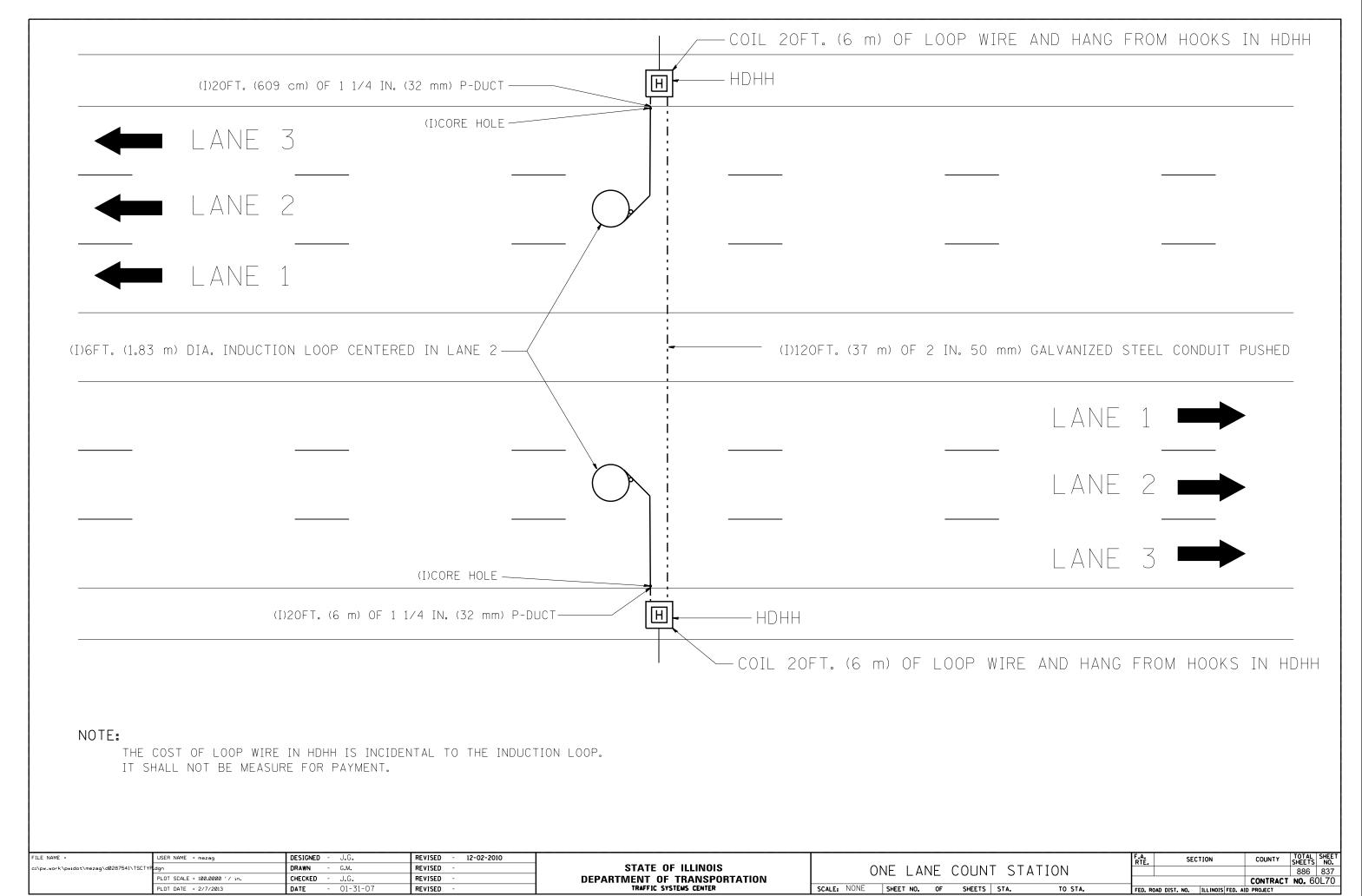
SECTION COUNTY 886 836 CONTRACT NO. 60L70

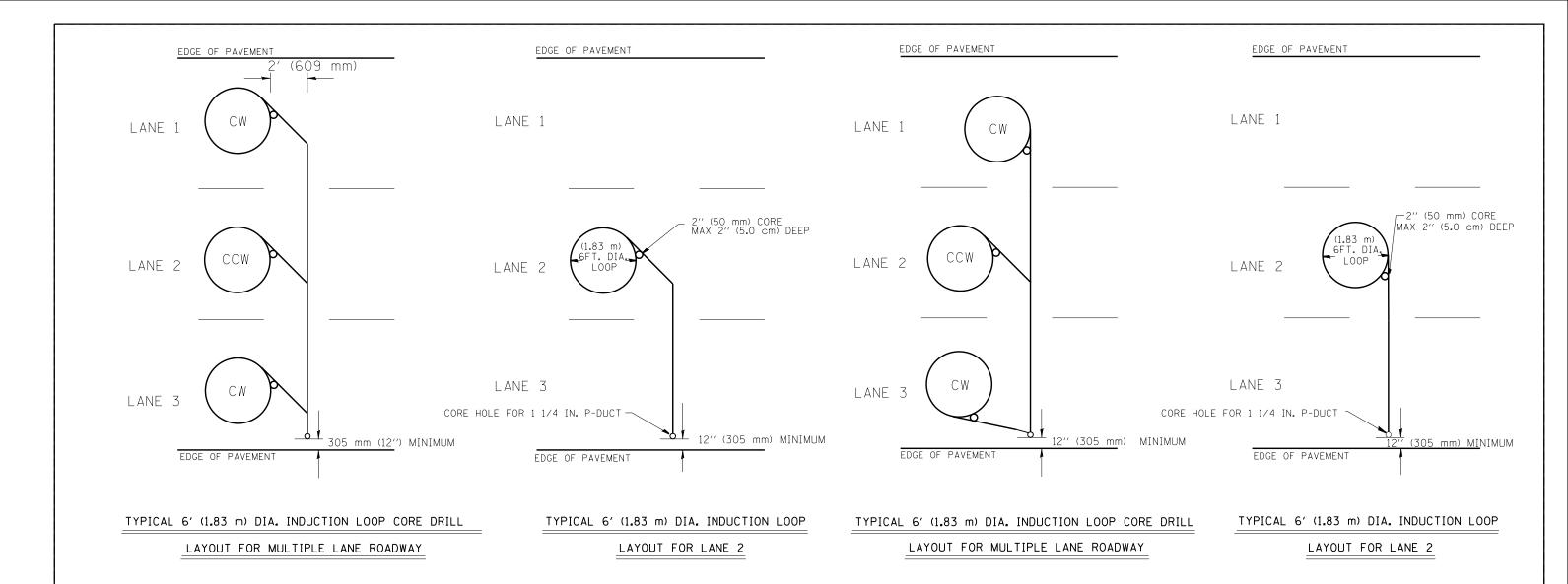


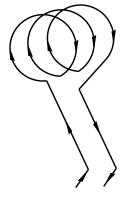
DOUBLE FACED BARRIER WALL



TRAFFIC SYSTEMS CENTER (TY-1TSC-400#30)





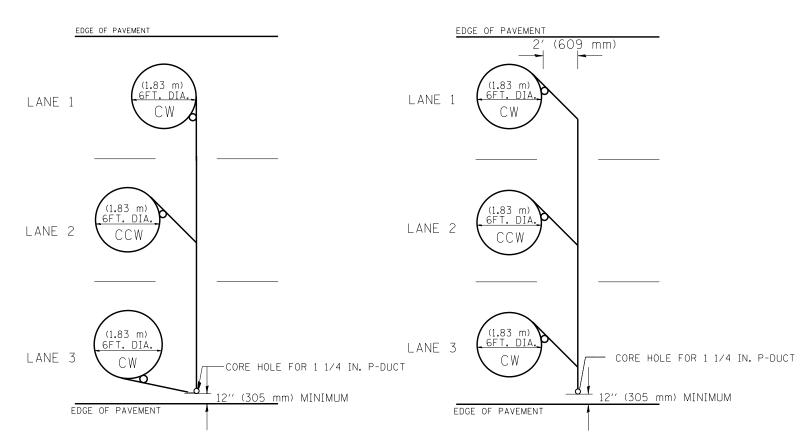


WIRING DETAILS

NOTES

- 1. EACH LOOP SHALL BE SPLICED TO A 4-C NO.18 TWISTED SHIELDED LEAD IN WHEN 150' (45 m) OR MORE FROM CABINET.
- 2. LOOPS SHALL BE SPLICED IN HANDHOLES ONLY, OTHERWISE WRITTEN PERMISSION SHALL BE OBTAINED FROM TSC ENGINEER.
- 3. LOOPS SHALL NOT BE SPLICED IN SERIES.
- 4. EACH LOOP LEAD IN SHALL BE IDENTIFIED AND PERMANENTLY COLOR CODED IN THE COREHOLE, HANDHOLE & CABINETS THRU WHICH THEY ENTER OR PASS AND TAGGED WITH THE CORRECT NOMENCLATURES.

| FILE NAME = | USER NAME = mezag | DESIGNED - R.L. | REVISED - 6/94 | | EXISTING ROUND LOOP | F.A. SECTION | COUNTY TOTAL SHEET |
|--|------------------------------|-----------------|-------------------------------|------------------------------|--|---------------------------------------|--------------------|
| c:\pw_work\pwidot\mezag\d0287541\TSCTY | dgn | DRAWN - G.M. | REVISED - 9/96 | STATE OF ILLINOIS | INSTALLATION | NIL. | 886 838 |
| | PLOT SCALE = 100.0000 '/ in. | CHECKED - R.L. | REVISED - R.L. 03/2011 | DEPARTMENT OF TRANSPORTATION | INSTALLATION | | CONTRACT NO. 60L70 |
| | PLOT DATE = 2/3/2012 | DATE - 6-22-94 | REVISED - | TRAFFIC SYSTEMS CENTER | SCALE: NONE SHEET NO. OF SHEETS STA. TO STA. | FED. ROAD DIST. NO. ILLINOIS FED. AII | |



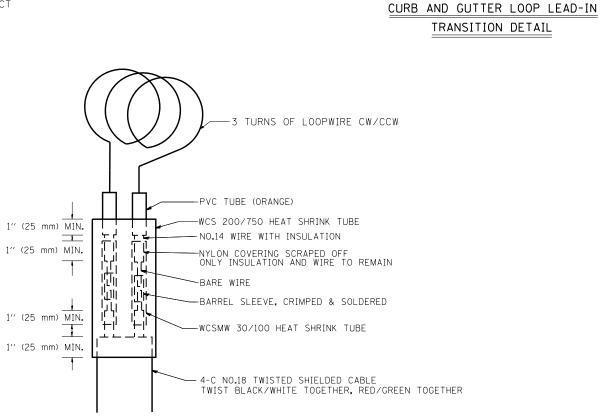
TYPICAL 6FT. (1.83 m) DIA. INDUCTION LOOP CORE DRILL TYPICAL 6FT. (1.83 m) DIA. INDUCTION LOOP CORE DRILL

LAYOUT FOR MULTIPLE LANE ROADWAY

LAYOUT FOR MULTIPLE LANE ROADWAY

NOTES

- 1. EACH LOOP SHALL BE SPLICED TO A 4-C NO.18 TWISTED SHIELDED LEAD IN WHEN 150FT. (45 m) OR MORE FROM CABINET.
- 2. LOOPS SHALL BE SPLICED IN HANDHOLES ONLY, OTHERWISE WRITTEN PERMISSION SHALL BE OBTAINED FROM TSC ENGINEER.
- 3. LOOPS SHALL NOT BE SPLICED IN SERIES.
- 4. EACH LOOP LEAD IN SHALL BE IDENTIFIED AND PERMANENTLY COLOR CODED IN THE COREHOLE, HANDHOLE & CABINETS THRU WHICH THEY ENTER OR PASS AND TAGGED WITH THE CORRECT NOMENCLATURES.



MINIMUM 1" (25 mm) HEAT SHRINK TUBING OVERLAP ON WIRE, PVC & SHIELDED CABLE TO FORM WATER TIGHT SEAL

LOOP SPLICING REQUIREMENTS

| FILE NAME = | USER NAME = mezag | DESIGNED | - | R.L. | REVISED | - | 6/94 | | |
|---|------------------------------|----------|---|---------|---------|---|-------|---------|--|
| c:\pw_work\pwidot\mezag\d028754!\TSCTYF | .dgn | DRAWN | - | G.M. | REVISED | - | 10/96 | 5 | |
| | PLOT SCALE = 100.0000 '/ in. | CHECKED | - | R.L. | REVISED | - | R.L. | 03/2011 | |
| | PLOT DATE = 2/3/2012 | DATE | - | 6-22-94 | REVISED | - | | | |

| STATE OF ILLINOIS |
|---|
| DEPARTMENT OF TRANSPORTATION TRAFFIC SYSTEMS CENTER |

| EXISTING | | | | | | F.A. RTE. | SEC | TION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-------------|-----------|----|-----------|------|---------|--------------|--------------|------------------|-----------|-----------------|--------------|
| | ROL | | INDUCTION | | | | | | | 886 | 839 |
| | | | TYPICALS |) | | | | | CONTRACT | NO. 6 | 0L70 |
| SCALE: NONE | SHEET NO. | OF | SHEETS | STA. | TO STA. | FED. RO | AD DIST. NO. | ILLINOIS FED. AI | D PROJECT | | |

CONCRETE CURB

AND GUTTER

12" (305 mm) MIN.

CONCRETE CURB

AND GUTTER

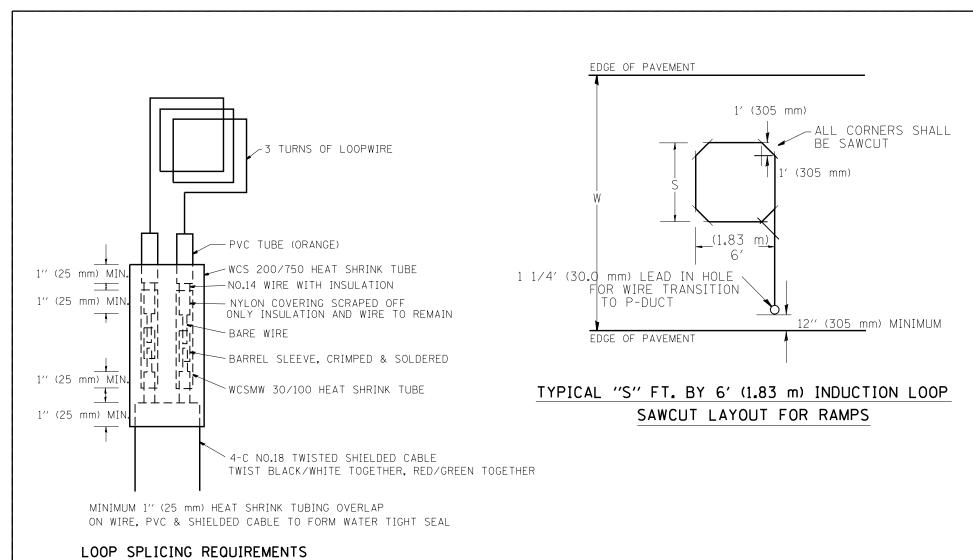
PAVEMENT

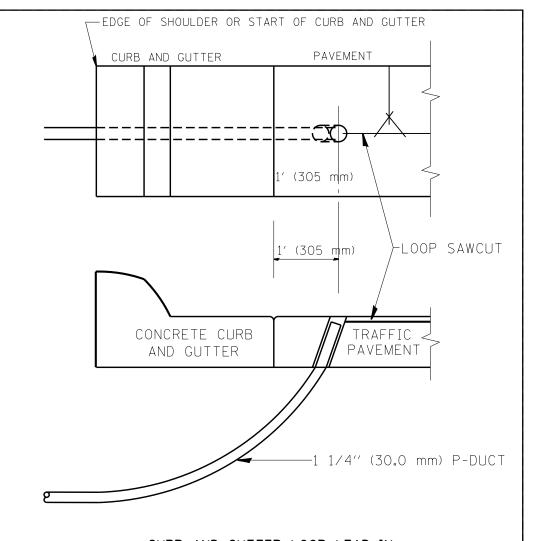
TRAFFIC

PAVEMENT

-1 1/4" (32.0 mm) P-DUCT

-LOOP SAWCUT





CURB AND GUTTER LOOP LEAD-IN

TRANSITION DETAIL

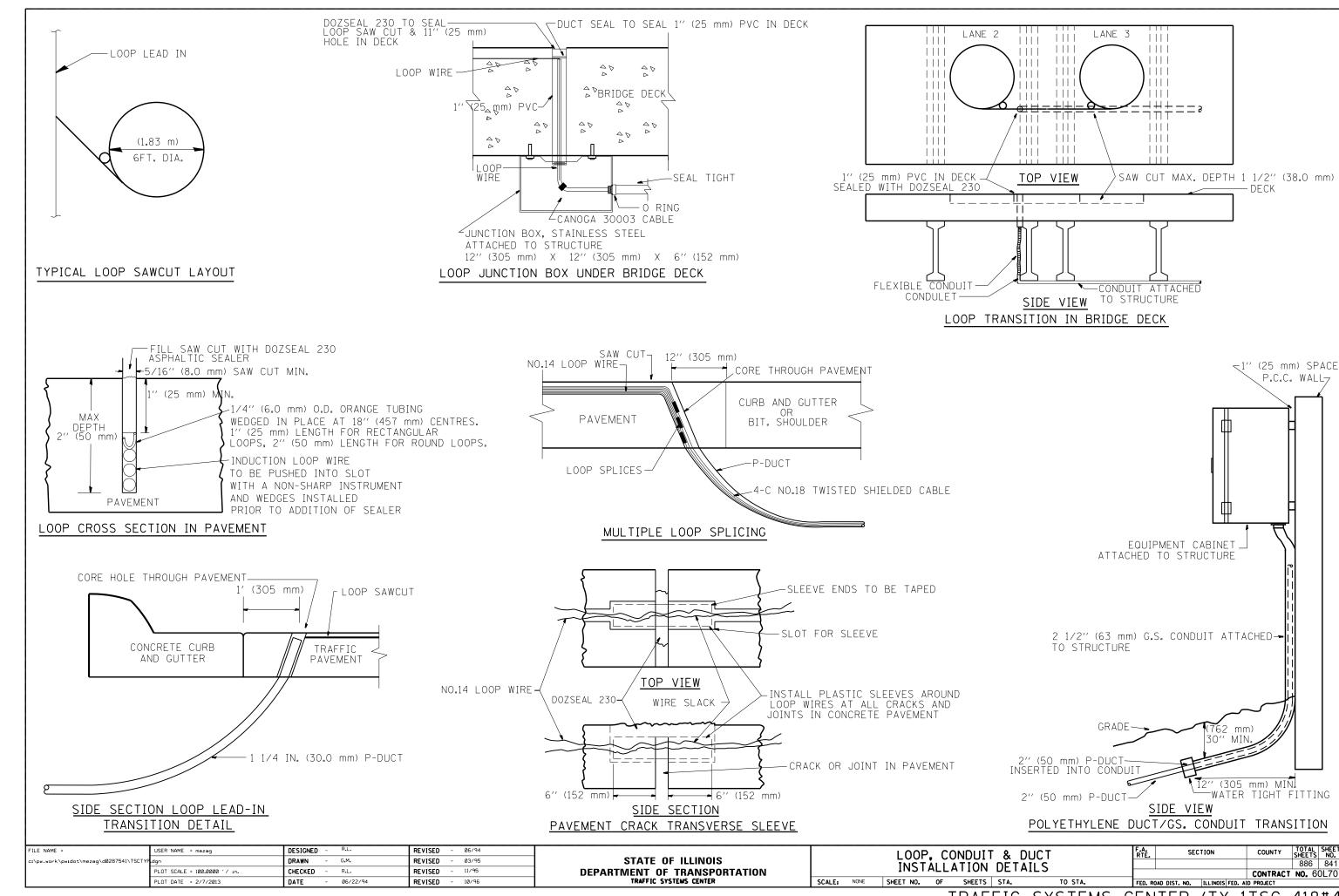
| TAB | LE 1 | | | | |
|-------------|-------------|--|--|--|--|
| WIDTH (W) | WIDTH (S) | | | | |
| 12′ (3.7 m) | 8′ (2.5 m) | | | | |
| 13′ (4.0 m) | 9′ (2.8 m) | | | | |
| 14′ (4.3 m) | 10′ (3.1 m) | | | | |
| 15′ (4.6 m) | 11′ (3.4 m) | | | | |
| 16′ (4.9 m) | 12′ (3.7 m) | | | | |
| 17′ (5.2 m) | 13. (4.0 m) | | | | |
| 18′ (5.5 m) | 14′ (4.3 m) | | | | |
| 19′ (5.8 m) | 15′ (4.6 m) | | | | |
| 20′ (6.1 m) | 18′ (4.9 m) | | | | |
| 21′ (6.4 m) | 17′ (5.2 m) | | | | |
| 22′ (6.7 m) | 18′ (5.5 m) | | | | |
| 23′ (7.0 m) | 19′ (5.8 m) | | | | |
| 24′ (7.3 m) | 20′ (6.1 m) | | | | |
| 25′ (7.6 m) | 21′ (6.4 m) | | | | |

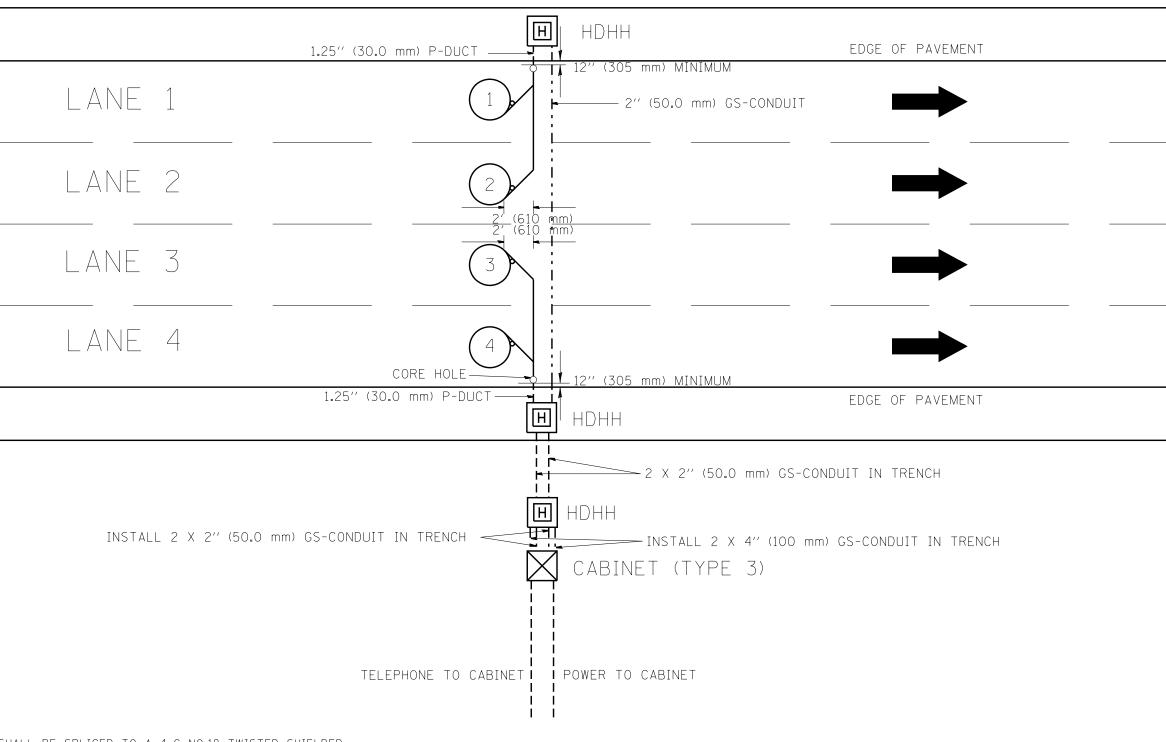
NOTES

- 1. EACH LOOP SHALL BE SPLICED TO A 4-C NO.18 TWISTED SHIELDED LEAD IN WHEN 150' (45 m) OR MORE FROM CABINET.
- 2. LOOPS SHALL BE SPLICED IN HANDHOLES ONLY, OTHERWISE WRITTEN PERMISSION SHALL BE OBTAINED FROM TSC ENGINEER.
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- 4. EACH LOOP LEAD IN SHALL BE IDENTIFIED AND PERMANENTLY COLOR CODED IN THE COREHOLE, HANDHOLE & CABINETS THRU WHICH THEY ENTER OR PASS AND TAGGED WITH THE CORRECT NOMENCLATURES.

| FILE NAME = | USER NAME = mezag | DESIGNED - R.L. | REVISED - 6/94 | | RECTANGULAR INDUCTION LOOP | F.A. SECTION | COUNTY TOTAL SHEET |
|---------------------------------------|-------------------------------|-----------------|------------------------|------------------------------|--|---------------------------------------|--------------------|
| c:\pw_work\pwidot\mezag\d0287541\TSCT | (P.dgn | DRAWN - G.M. | REVISED - 11/95 | STATE OF ILLINOIS | TYPICAL | NIE. | 886 840 |
| | PLOT SCALE = 100.0000 ' / in. | CHECKED - R.L. | REVISED - 05/96 | DEPARTMENT OF TRANSPORTATION | TIFICAL | ' | CONTRACT NO. 60L70 |
| | PLOT DATE = 2/7/2013 | DATE - 6-22-94 | REVISED - 10/96 | TRAFFIC SYSTEMS CENTER | SCALE: NONE SHEET NO. OF SHEETS STA. TO STA. | FED. ROAD DIST. NO. ILLINOIS FED. AID | |

TRAFFIC SYSTEMS CENTER (TY-1TSC-418#3)

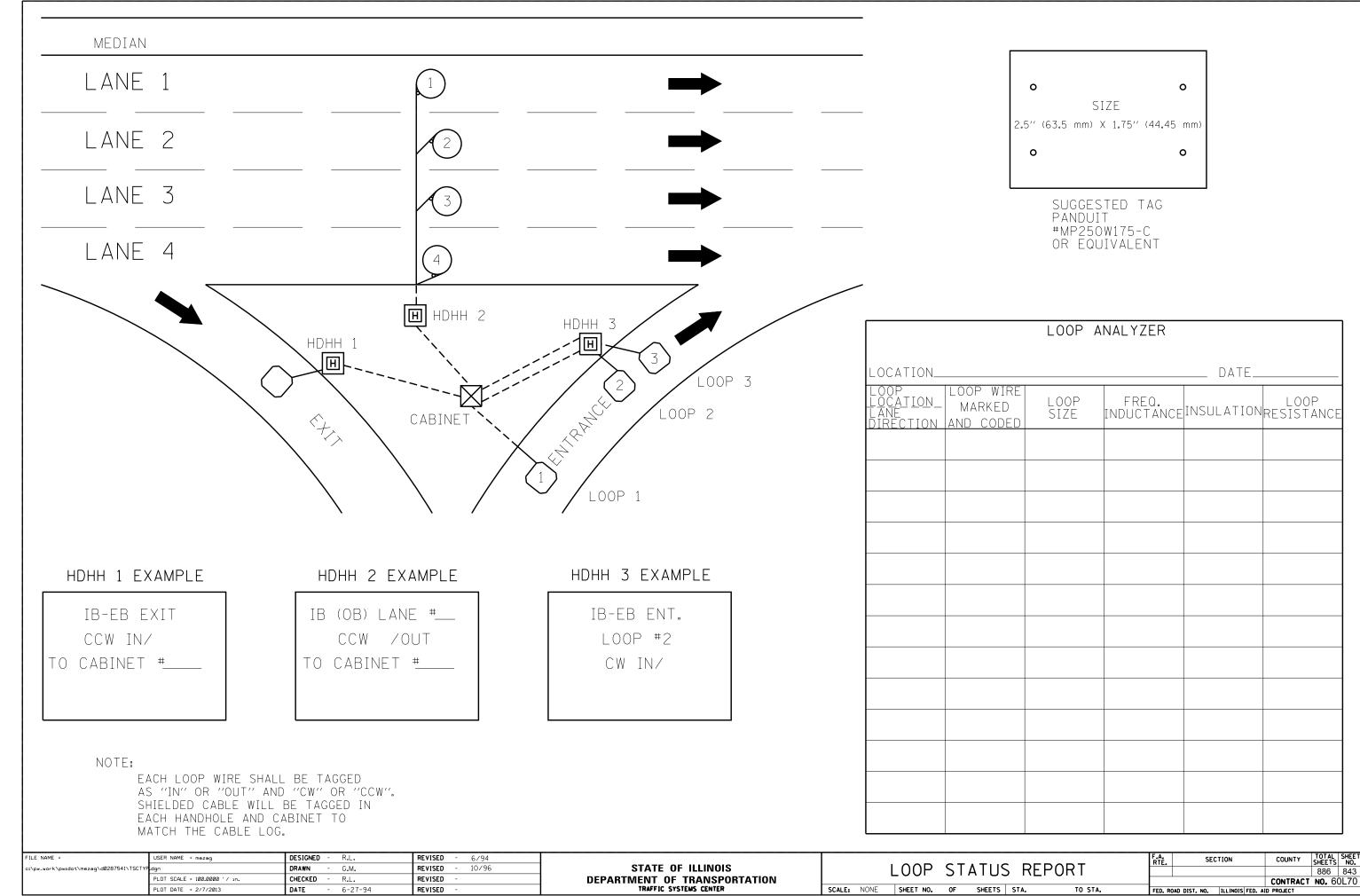


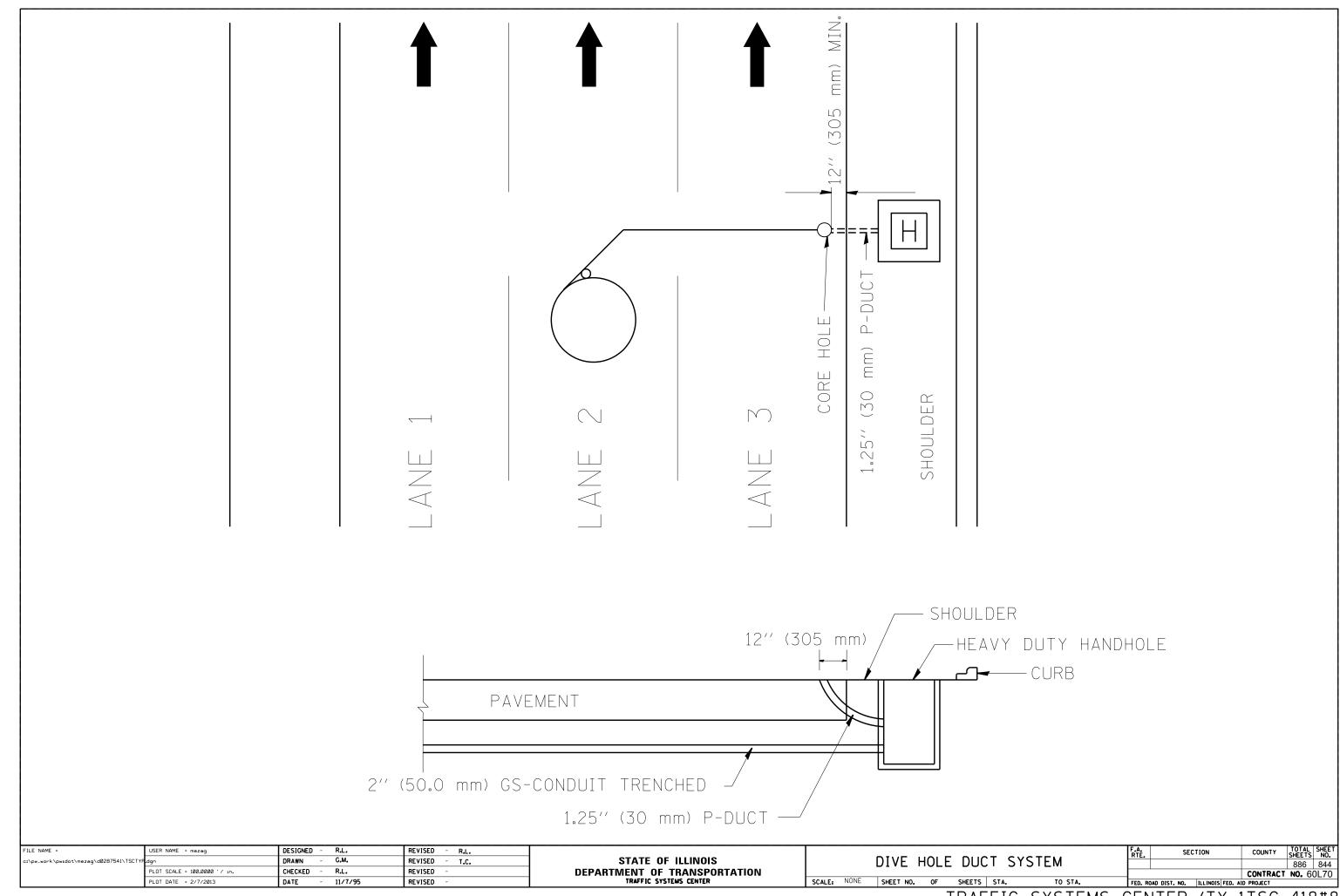


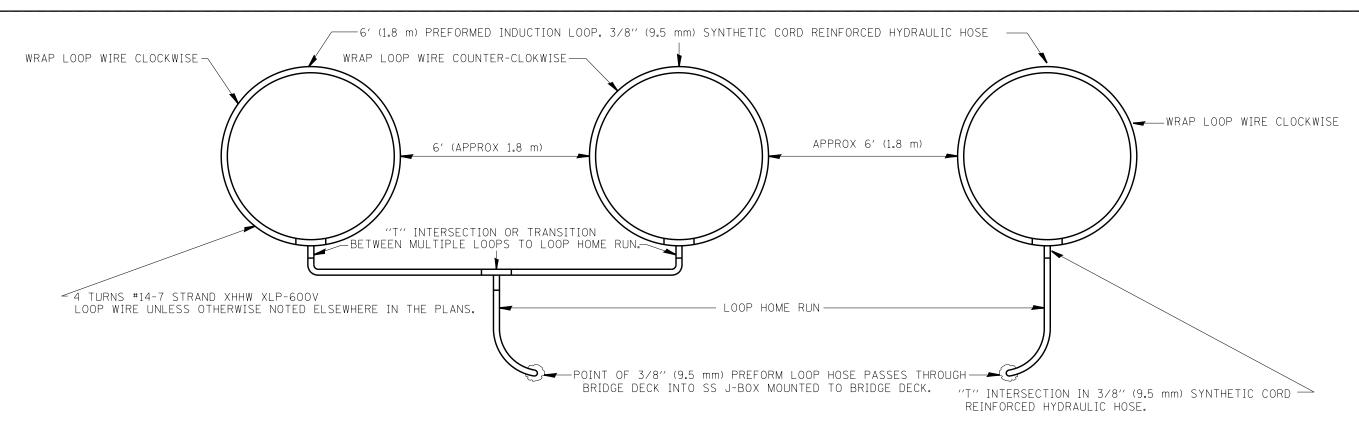
NOTES

- 1. EACH LOOP SHALL BE SPLICED TO A 4-C NO.18 TWISTED SHIELDED LEAD IN WHEN 150' (45 m) OR MORE FROM CABINET.
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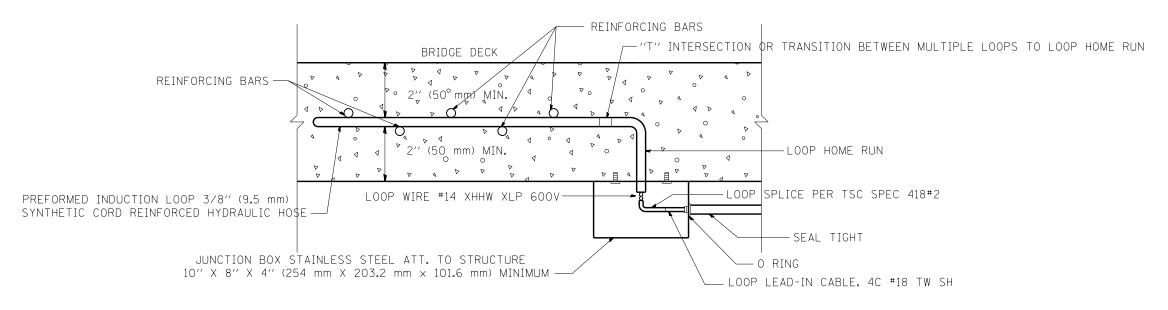
| FILE NAME = | USER NAME = mezag | DESIGNED - R.L. | REVISED - R.L. 03/2011 | | NEW CONSTRUCTION | F.A. SECTION | COUNTY TOTAL SHEET SHEET NO. |
|--|------------------------------|-----------------|-------------------------------|------------------------------|--|--------------------------------------|------------------------------|
| c:\pw_work\pwidot\mezag\d0287541\TSCTY | P.dgn | DRAWN - G.M. | REVISED - | STATE OF ILLINOIS | ROUND INDUCTION LOOP | NIL. | 886 842 |
| | PLOT SCALE = 100.0000 '/ in. | CHECKED - R.L. | REVISED - | DEPARTMENT OF TRANSPORTATION | TYPICAL INSTALLATION | | CONTRACT NO. 60L70 |
| | PLOT DATE = 2/7/2013 | DATE - 6-27-94 | REVISED - | TRAFFIC SYSTEMS CENTER | SCALE: NONE SHEET NO. OF SHEETS STA. TO STA. | FED. ROAD DIST. NO. ILLINOIS FED. AI | |







TYPICAL 3 LANE COUNT STATION EMBEDDED IN BRIDGE DECK

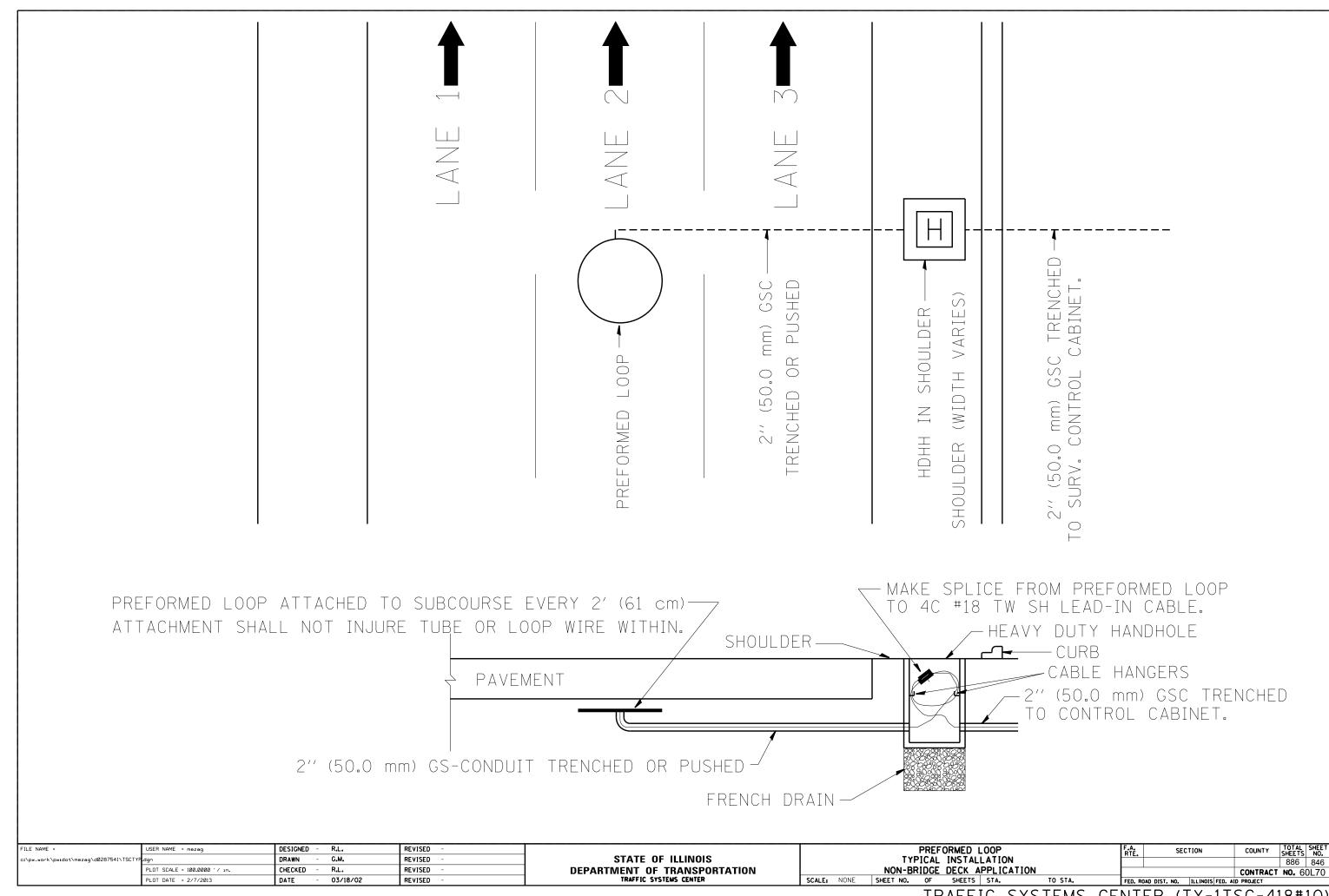


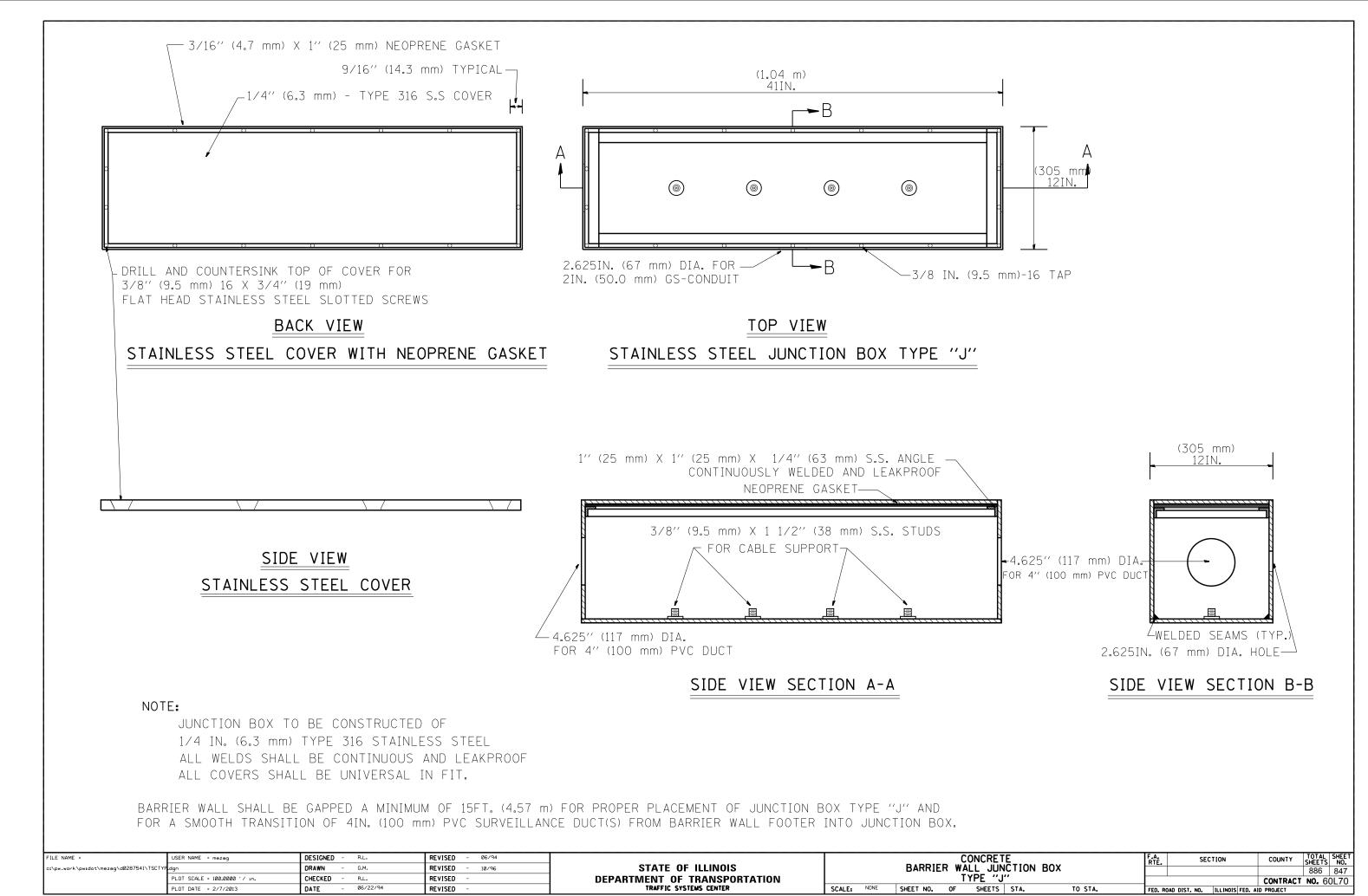
LOOP JUNCTION BOX UNDER BRIDGE DECK

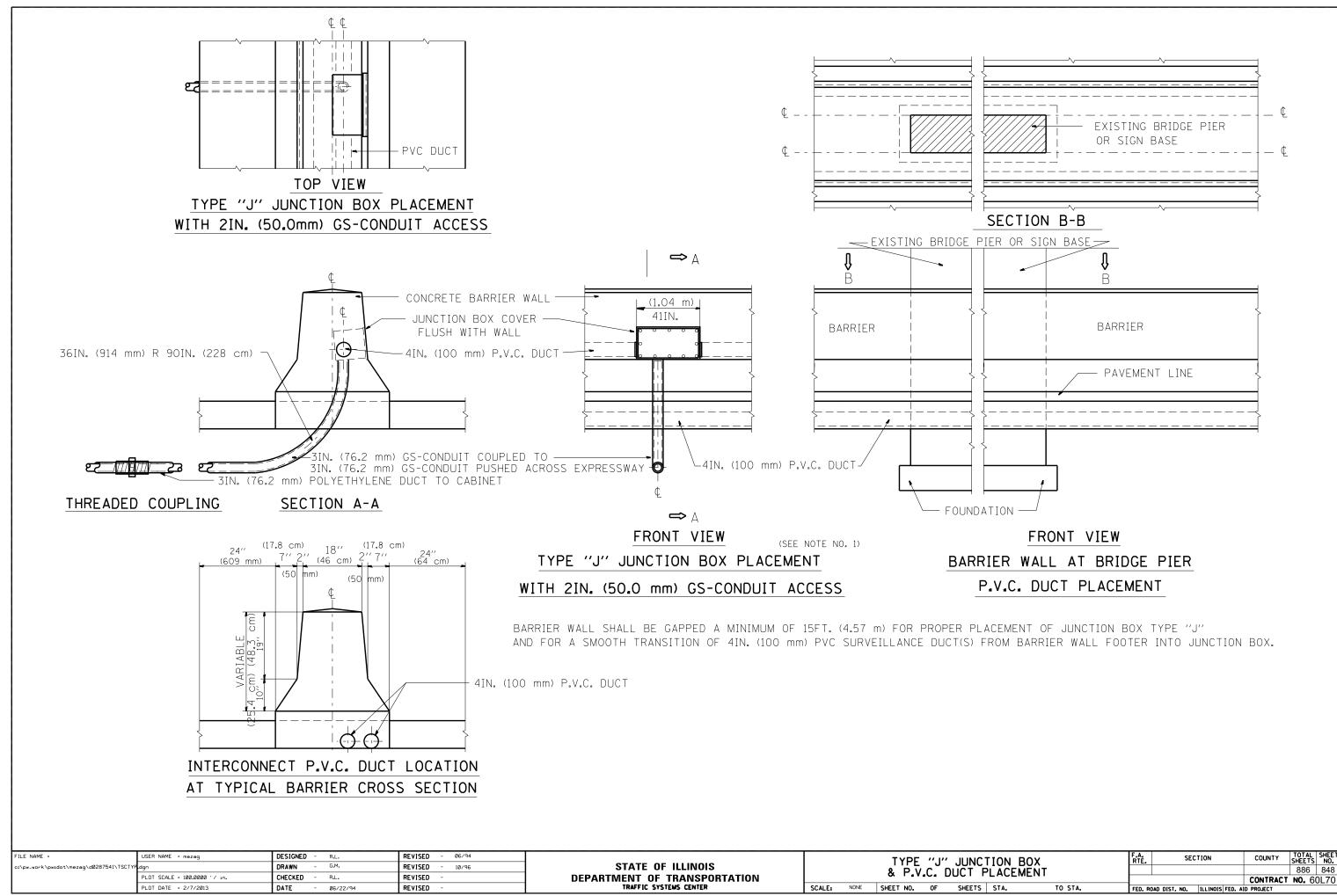
NOTES:

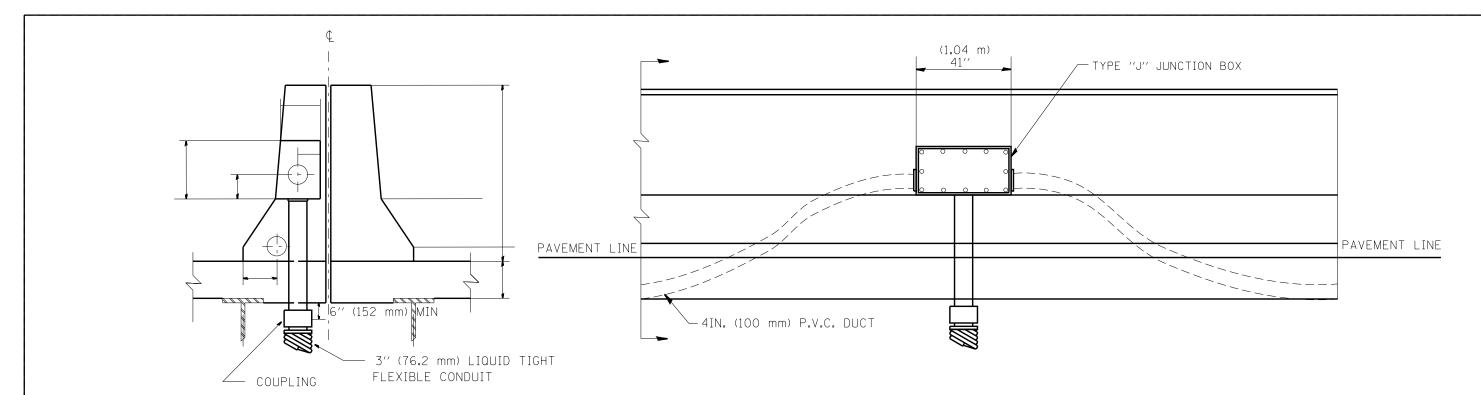
- 1.- EACH INDUCTION LOOP SHALL HAVE ITS OWN LEAD-IN CABLE TO CABINET.
- 2.- INDUCTION LOOPS SHALL NOT BE CONNECTED IN SERIES WITH OTHER LOOPS.
- 3.- LOOPS LOCATED OVER 1000' (300 m) FROM CABINET SHALL REQUIRE 5 TURNS OF #14 WIRE.

| FILE NAME = | USER NAME = mezag | DESIGNED - R.L. | REVISED - | | PREFORMED LOOP INSTALLATION | F.A. SECTION | COUNTY TOTAL SHEET SHEET NO. |
|---|------------------------------|-----------------|-----------|------------------------------|--|-------------------------------------|------------------------------|
| c:\pw_work\pwidot\mezag\d0287541\TSCTYP | dgn | DRAWN - G.M. | REVISED - | STATE OF ILLINOIS | ĪN | NIL. | 886 845 |
| | PLOT SCALE = 100.0000 '/ in. | CHECKED - R.L. | REVISED - | DEPARTMENT OF TRANSPORTATION | BRIDGE DECK | | CONTRACT NO. 60L70 |
| | PLOT DATE = 2/7/2013 | DATE - 2-97 | REVISED - | TRAFFIC SYSTEMS CENTER | SCALE: NONE SHEET NO. OF SHEETS STA. TO STA. | FED. ROAD DIST. NO. ILLINOIS FED. A | |







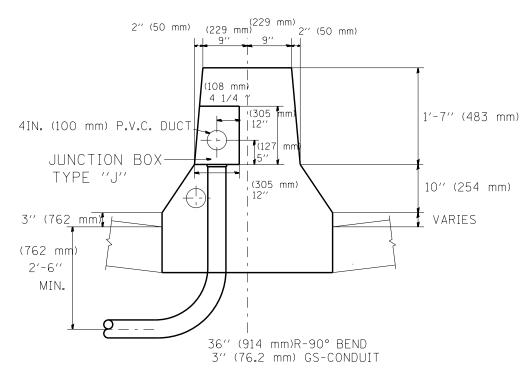


DOUBLE SINGLE FACED BARRIER WALL ON BRIDGE DECK

ELEVATION

BARRIER WALL DUCT DETAIL

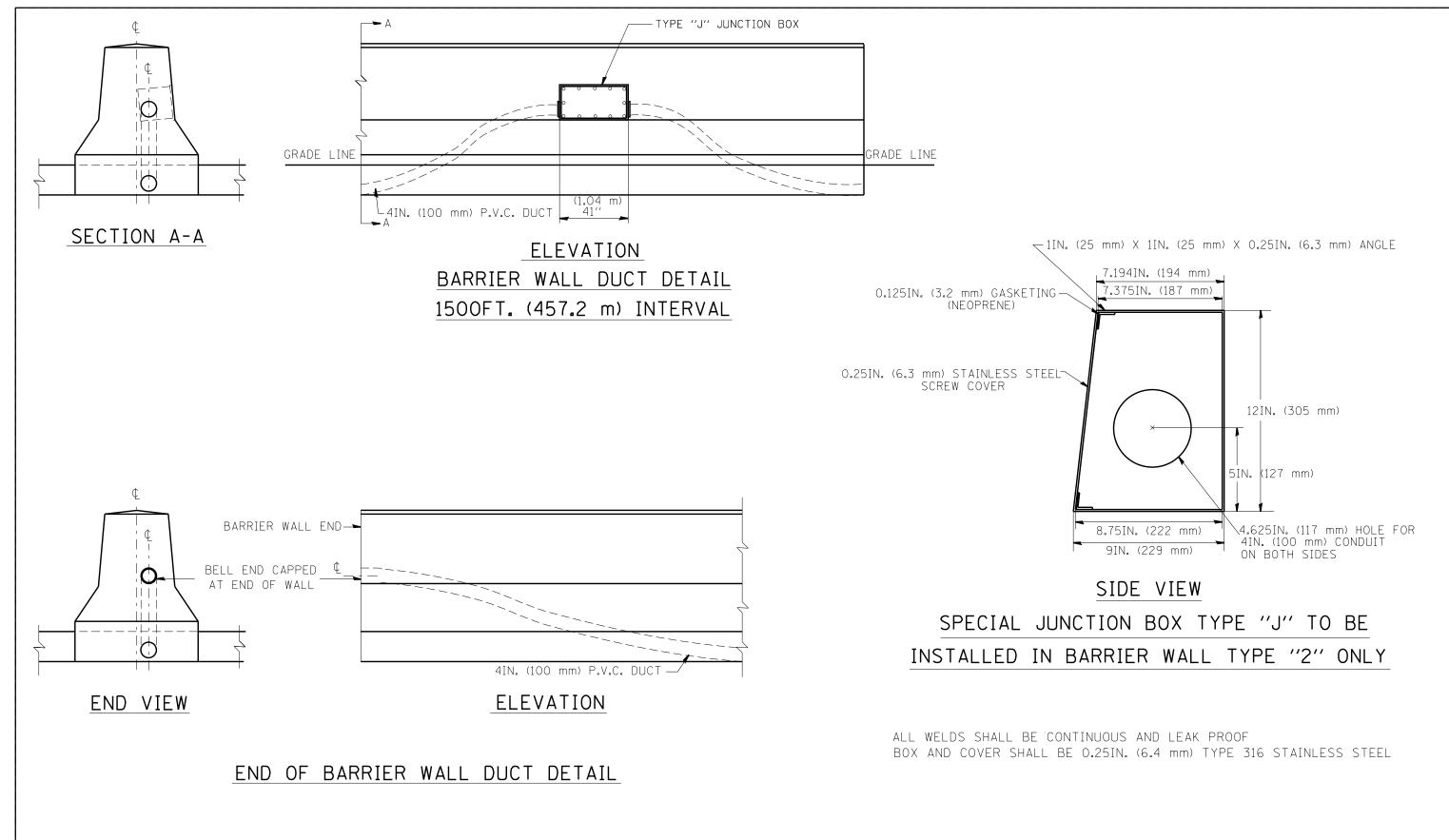
ON BRIDGE DECK



DOUBLE FACED BARRIER WALL

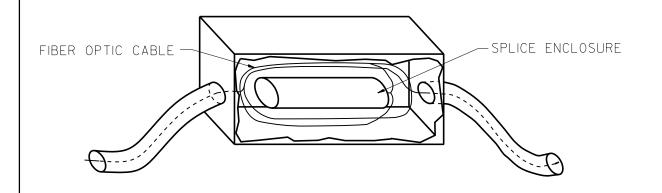
BARRIER WALL SHALL BE GAPPED A MINIMUM OF 15FT. (4.57 m) FOR PROPER PLACEMENT OF JUNCTION BOX TYPE "J" AND FOR A SMOOTH TRANSITION OF 4IN. (100 mm) PVC SURVEILLANCE DUCT(S) FROM BARRIER WALL FOOTER INTO JUNCTION BOX.

| Γ | ILE NAME = | USER NAME = mezag | DESIGNED - R.L. | REVISED - 06/94 | | | TRAFFIC | SURVEILLA | NCE | F.A. | SEC | TION | COUNTY | TOTAL SHEET SHEETS NO. |
|---|--|-------------------------------|-----------------|------------------------|------------------------------|-------------------|-----------|------------|-----------|------|----------------|-------------------|----------|---------------------------|
| | :\pw_work\pwidot\mezag\d028754[\TSCTYP | dgn | DRAWN - G.M. | REVISED - 10/96 | STATE OF ILLINOIS | [| BARRIER W | ALL DUCT | DETAIL | N. | • | | | 886 849 |
| | | PLOT SCALE = 100.0000 ' / in. | CHECKED - R.L. | REVISED - 02/98 | DEPARTMENT OF TRANSPORTATION | | ON B | RIDGE DECK | | | | | CONTRACT | NO. 60L70 |
| | | PLOT DATE = 2/7/2013 | DATE - 06/22/94 | REVISED - | TRAFFIC SYSTEMS CENTER | SCALE: NONE SHEET | T NO. OF | SHEETS STA | . TO STA. | FED. | ROAD DIST. NO. | ILLINOIS FED. AID | | |



BARRIER WALL SHALL BE GAPPED A MINIMUM OF 15FT. (4.57 m) FOR PROPER PLACEMENT OF JUNCTION BOX TYPE "J" AND FOR A SMOOTH TRANSITION OF 4IN. (100 mm) PVC SURVEILLANCE DUCT(S) FROM BARRIER WALL FOOTER INTO JUNCTION BOX.

TRAFFIC SURVEILLANCE BARRIER WALL DUCT DETAILS DESIGNED - R.L. REVISED - 06/94 SECTION COUNTY **REVISED** - 10/96 STATE OF ILLINOIS DRAWN - G.M. DEPARTMENT OF TRANSPORTATION
TRAFFIC SYSTEMS CENTER LOT SCALE = 100.0000 '/ in. CHECKED - R.L. REVISED 02/94 CONTRACT NO. 60L70 PLOT DATE = 2/7/2013 SHEET NO. OF SHEETS STA. TO STA. DATE - 06/22/94 REVISED



STAINLESS STEEL STRENGTH MEMBER

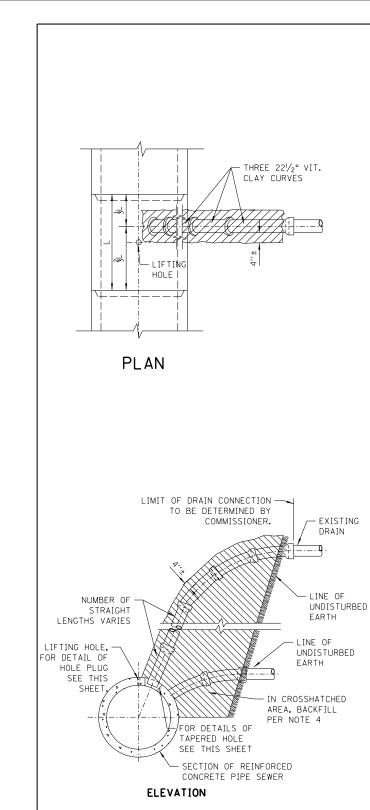
BUFFER JACKET

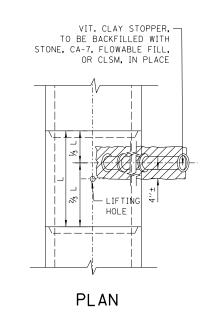
FIBER

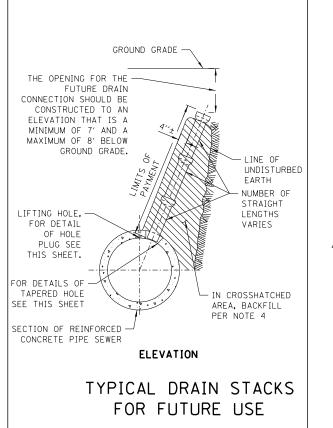
JUNCTION BOX DETAIL

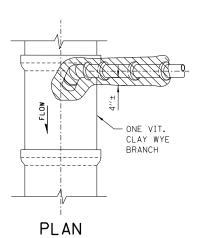
FIBER SPLICE DETAIL

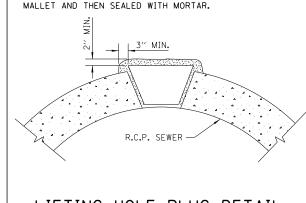
FILE NAME : SUSERS DESIGNED - D.S. REVISED - DRAWN - G.M. REVISED - DEPARTMENT OF TRANSPORTATION - TRAFFIC SYSTEMS CENTER - DRAWN COUNTY SHEETS NO. WIRING DETAIL.

| FILE NAME : SUSERS OPTIC | SHEET






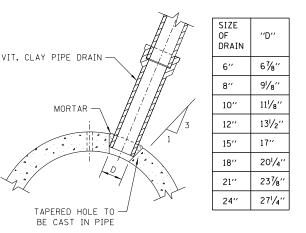




PLUG TO BE COATED WITH MORTAR AND

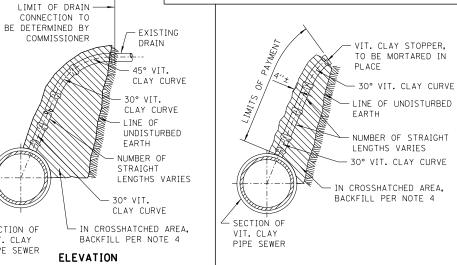
DRIVEN INTO PLACE WITH A WOODEN

LIFTING HOLE PLUG DETAIL FOR CONCRETE PIPE

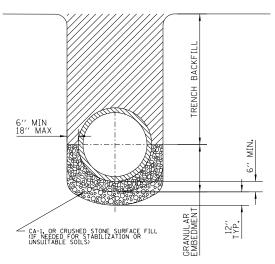


DETAIL OF TAPERED HOLE

GRANULAR MATERIAL WILL BE USED AS BEDDING FOR ALL PIPE SEWERS: SEE SPECIFICATIONS, BOOK 3,



ELEVATION TYPICAL DRAIN STACKS FOR FUTURE USE



DETAIL OF GRANULAR EMBEDMENT AND STABILIZATION FOR PIPE SEWERS

FOR STABILIZATION OF TRENCH BOTTOM AND PROVISIONS RELATING TO TRENCH BOX SUPPORT SEE SPECIFICATIONS, BOOK 3

- 1. ALL DRAIN CONNECTION JOINTS MUST BE MADE AS SPECIFIED IN SPECIFICATIONS..
- 2. FOR DUCTILE IRON PIPE DRAIN CONNECTIONS SEE SHEET NO. A.2.

TYPICAL DRAIN CONNECTIONS

FOR EXISTING DRAINS

- 3. FOR ALL GRANULAR EMBANKMENT, USE CA-7 OR CA-11
- 4. FOR BACKFILL OF HATCHED SUPPORT AREAS, USE CONCRETE. CA-11, FLOWABLE FILL, OR CLSM.

| AECOM | |
|--|--|
| 303 EAST WACKER DRIVE, SUITE 1400 CHICAGO, IL 60601-5276 PHONE: (312) 373-7700 FAX: (312) 373-6800 | |

| USER NAME = augeungh | DESIGNED - | REVISED - |
|-----------------------------|-------------------|-----------|
| | DRAWN - | REVISED - |
| PLOT SCALE = 1.0000 ' / in. | CHECKED - | REVISED - |
| PLOT DATE = 11/19/2014 | DATE - 11/14/2014 | REVISED - |
| | | |

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

- SECTION OF

VIT. CLAY

PIPE SEWER

TYPICAL DRAIN

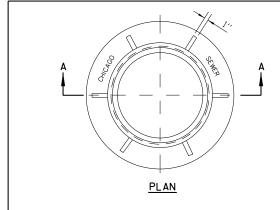
CONNECTIONS FOR

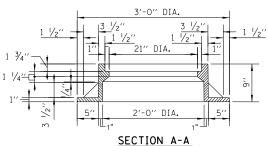
EXISTING DRAINS

| STAND | ARD REVISIONS | PERCENT COMPLETE | DATE | CITY OF CHICAGO | DRAWN: SBW DESIGNED: | |
|---------|---------------|------------------|------|--|-------------------------|------------|
| DATE | DESCRIPTION | 30 | | DEPARTMENT OF WATER MANAGEMENT BUREAU OF ENGINEERING SERVICES | CHECKED: GD. GC. SO | A.I |
| 1/22/14 | APPROVED PLAN | 60 | | | REVIEWED: | |
| | | 75 | | VITRIFIED CLAY PIPE | | ۸- ا |
| | | 90 | | DRAIN CONNECTIONS | | OF |
| | | 100 | | | l _{PN} | |
| | | BULLETIN | | | I FIN | |
| | · | | · | FAI | T(| OTAL SHEET |

CHICAGO DEPARTMENT OF WATER MANAGEMENT STANDARD DETAILS SCALE: NTS SHEET NO. 1 OF 5 SHEETS STA. TO STA.

| F.A.I. RTE. | SECTION | CC | UNTY | TOTAL SHEETS | SHEE NO. |
|----------------|------------------|-------|--------|-----------------|-------------|
| 55 | 2010-080-B | C | оок | 886 | 852 |
| | | CO | NTRACT | NO. 6 | 50L70 |
| | THE INDISCRED AT | n ppn | IECT | | |

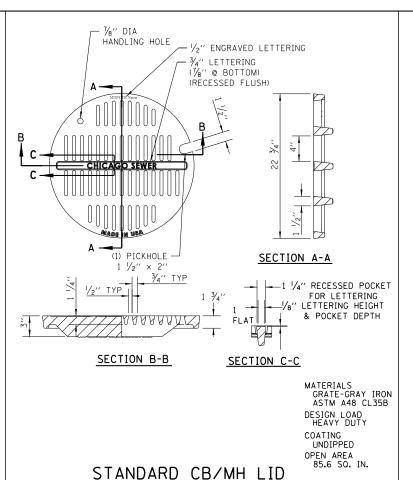


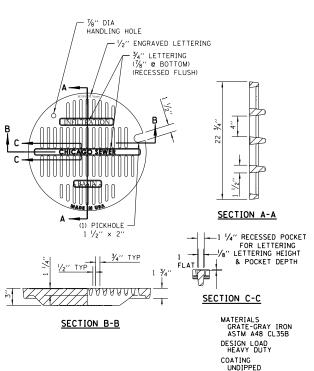


NOTE: METAL PLATES MUST BE FURNISHED FOR PERFORATED LIDS ON MANHOLES.

HEAVYWEIGHT MANHOLE FRAME

MATERIAL: CAST IRON





STANDARD LID FOR INFILTRATION SYSTEMS

HICAGO

NFILTRATIO

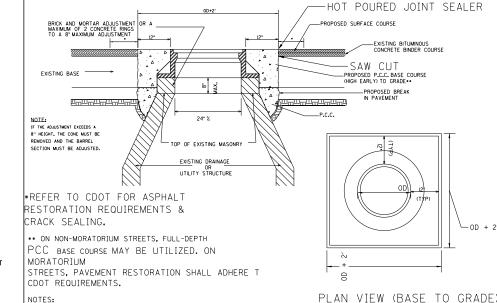
BASIN

-1 ½" LETTERS (TYP) (RECESSED FLUSH)

1" LETTERS

(1) LARGE OPEN PICKHOLE

(RECESSED FLUSH)



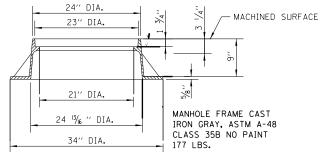
IF THE ADJUSTMENT EXCEEDS AN 8" HEIGHT, THE CONE MUST BE REMOVED AND THE BARREL SECTION MUST BE ADJUSTED.

THE CONTRACTOR IS REQUIRED TO REPLACE ANY BROKEN
FRAMES AND LIDS OF SEWER STRUCTURES WITH STANDARD
FRAMES AND LIDS OF THE DWM. IN ADJUSTMENT OR RECONSTRUCTION OF SEWER STRUCTURES, ANY
NON-STANDARD FRAMES AND LIDS MUST BE REPLACED WITH STANDARD FRAMES AND LIDS. IN ADJUSTMENT OR RECONSTRUCTION OF INLETS, ANY NON-STANDARD INLETS (GUTTER BOXES) MUST BE REPLACED WITH DWM STANDARD INLETS.

THE FRAMES AND LIDS OF SEWER STRUCTURES TO BE ABANDONED, REMOVED, OR FILLED MUST BE SALVAGED AND THE DWM NOTIFIED FOR PICK UP.

MANHOLES, CATCH BASINS AND INLETS MUST BE PROTECTED FROM THE ENTRY OF ASPHALT/DEBRIS INTO THE SEWER SYSTEM DURING CONSTRUCTION. THE CONTRACTOR MUST MARK LOCATIONS OF ALL SEWER STRUCTURES ON THE SIDEWALK BEFORE STARTING PAVEMENT REMOVAL/REPLACEMENT. ADJUSTMENT OF FRAMES AND LIDS OF SEWER STRUCTURES MUST BE COMPLETED PRIOR TO STREET RESURFACING.

1" DIA. HANDLING HOLE 24" DIA. 23" DIA



LIGHTWEIGHT MANHOLE FRAME

DESIGNED REVISED USER NAME = augeungh DRAWN REVISED CHECKED REVISED PLOT DATE = 11/19/2014 DATE - 11/14/2014 REVISED

HANDLING HOLE 1/2" ENGRAVED LETTERING · 3/4" LETTERING (%" @ BOTTOM) (RECESSED FLUSH) CHICAGO SEWER SECTION A-A --1 ¼" RECESSED POCKET FOR LETTERING
—'/8" LETTERING HEIGHT FLAT & POCKET DEPTH SECTION C-C SECTION B-B MATERIALS GRATE-GRAY IRON ASTM A48 CL35B

ADA MANHOLE LID

NOT TO BE USED WITHOUT

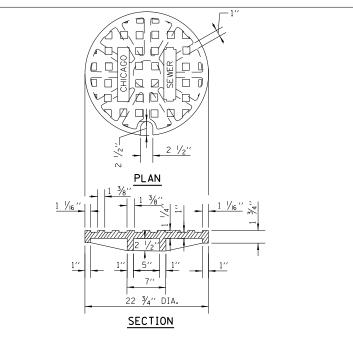
PRIOR APPROVAL OF CDWM

NOTE:

COVER SECTION INFILTRATION SOLID LID FOR CATCH BASIN DATE

22 ¾" DIA.

DETAIL OF FRAME ADJUSTMENT



SOLID LID FOR MANHOLES

CITY OF CHICAGO STANDARD REVISIONS PERCENT COMPLETE DEPARTMENT OF WATER MANAGEMENT BUREAU OF ENGINEERING SERVICES DESCRIPTION 1/22/14 Approved MANHOLE OF LIDS AND FRAMES

TO STA.

SCALE: NTS

CHICAGO DEPARTMENT OF WATER MANAGEMENT STANDARD DETAILS SHEET NO. 2 OF 5 SHEETS STA.

| | | | | | | PN | | | |
|----------------|-------|----------|------|-----|------|--------|------|---|-----|
| F.A.I. RTE. | SEC. | TION | | | СО | UNTY | TOTA | | SHE |
| 55 | 2010- | 080-B | | | С | :00K | 886 | | 85 |
| | | | | | COI | NTRACT | ΓNO. | 6 | OL. |
| | | ILLINOIS | FED. | AID | PR0. | JECT | | | |

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

DESIGN LOAD HEAVY DUTY

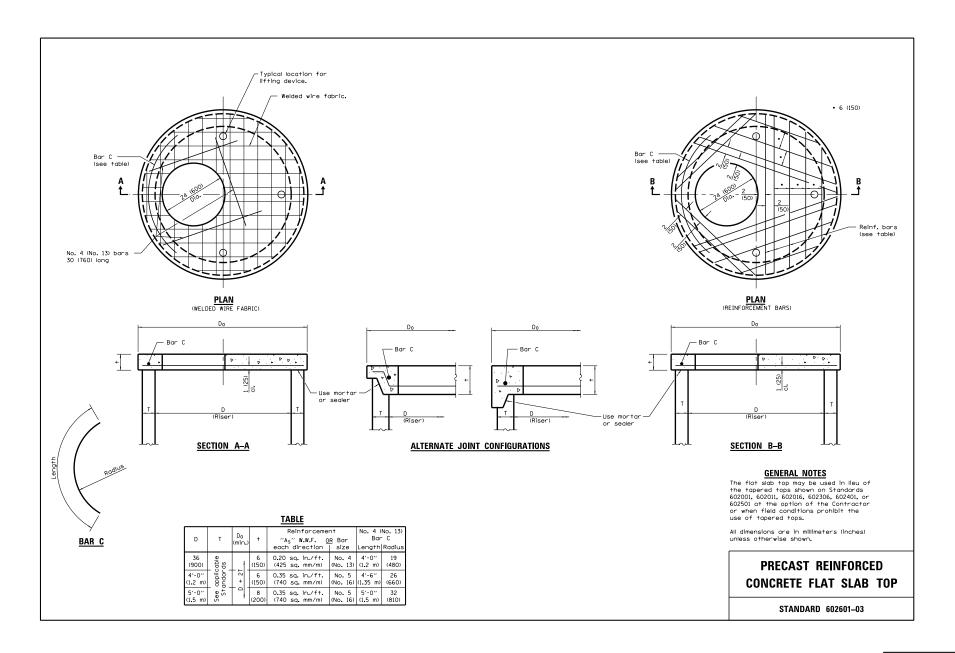
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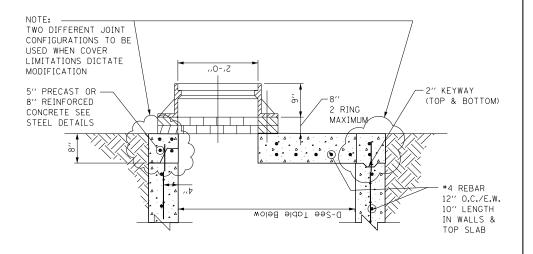
85.6 SQ. IN.

OPEN AREA

COATING

SPECIAL DRAINAGE STRUCTURES FOR PUBLIC STREETS AND ALLEYS





STANDARD FLAT TOP SLAB
FOR CATCH BASINS

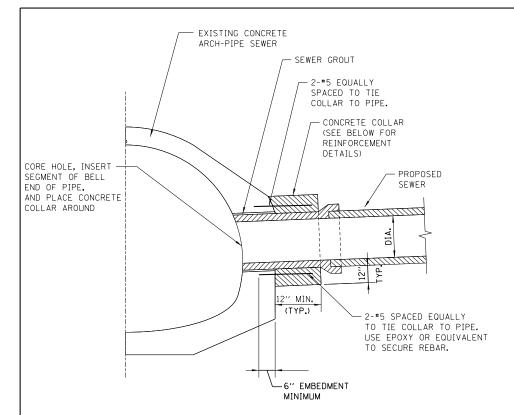
NOTES:
FLAT TOP SLAB CAN ONLY BE USED WITH WRITTEN PERMISSION FROM CDWM.
USE LATEST IDOT DETAIL, #602601

| STAND. | ARD REVISIONS | | |
|---------|---------------|--|--|
| DATE | DESCRIPTION | | |
| 1/22/14 | APPROVED PLAN | | |
| | | | |
| | | | |
| | | | |

| PERCENT COMPLETE | DATE | CITY OF CHICAGO DEPARTMENT OF WATER MANAGEMENT | DRAWN: SE DESIGNED: CHECKED: |
|------------------|------|--|------------------------------------|
| 30 | | BUREAU OF ENGINEERING SERVICES | |
| 60 | | 5, 17, 700, 6, 10, 05711, 6 | REVIEWED: |
| 75 | | FLAT TOP SLAB DETAILS | |
| 90 | | | |
| 100 | | | DNI |



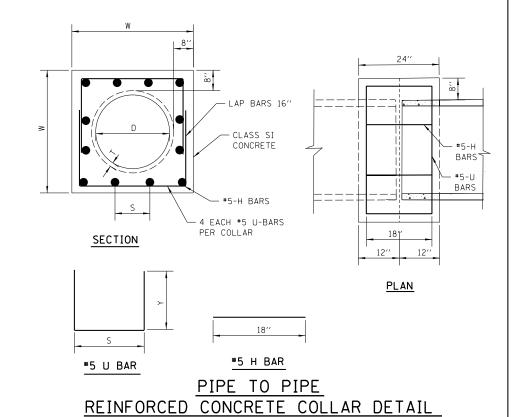
| USER NAME = augeungh | DESIGNED - | REVISED - |
|-----------------------------|-------------------|-----------|
| | DRAWN - | REVISED - |
| PLOT SCALE = 1.00000 '/ in. | CHECKED - | REVISED - |
| PLOT DATE = 11/19/2014 | DATE - 11/14/2014 | REVISED - |
| | | |



EXAMPLE TYPICAL CONNECTION DETAIL

EXISTING BRICK SEWER, 52" OR LARGER BREAK THROUGH HOLE, INSERT SEGMENT OF DIAMETER OF THE CONNECTION BELL END OF PIPE, AND SHOULD BE LESS THAN PLACE CONCRETE COLLAR 1/2 OF THE DIAMETER OF THE AROUND TO SEAL RECEIVING BRICK SEWER CONNECTION -AT SPRINGLINE INVERT ELEVATION OF EXISTING SEWER <u>/: ::\</u> CONCRETE COLLAR (SEE REINFORCEMENT DETAILS BELOW) INVERT OF PROPOSED DRAIN CONNECTION

EXAMPLE TYPICAL BRICK SEWER CONNECTION FOR CONNECTING PIPE SIZES GREATER THAN 12" DIA.

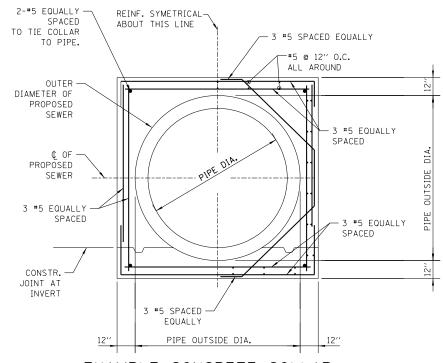


SCALE: N.T.S.

TOTAL Class SI

CONRETE COLLAR NOTES:

- 1. ALL ITEMS AND MATERIALS SHALL CONFORM TO THE LATEST IDOT SSRBC SPECIFICATIONS, UNLESS OTHERWISE NOTED IN SUPPLEMENTAL SPECIFICATIONS FOR THE SPECIFIC PROJECT BEING CONSTRUCTED.
- 2. ALL CONCRETE SHALL CONFORM TO IDOT SSRBC ARTICLE 1020.04, CLASS SI, WITH A COMPRESSIVE STRENGTH OF 3500 PSI.
- 3. ALL EPOXY COATED REINFORCEMENT BARS SHALL CONFORM TO IDOT SSRBC SECTION 508. AND ARTICLE 1006.10.
- 4. UNLESS OTHERWISE SHOWN, THE COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS: CONCRETE CAST AGAINST PERMANENTLY EXPOSE EARTH: 3" B.) ALL OTHER REINFORCING
- CONCRETE COLLARS SHALL BE USED AT ALL EXISTING/PROPOSED PIPE CONNECTIONS. TRIM EXISTING PIPE END TO PROVIDE FLUSH BUTT JOINT, INSTALL REBAR, AND PLACE CONCRETE
- 6. THE CONTRACTOR SHALL PROVIDE ALL MEASURES AND PRECAUTIONS NECESSARY TO PREVENT DAMAGE TO THE EXISTING SEWER DURING CONSTRUCTION. CONTRACTOR SHALL ADEQUATELY BRACE OR SHORE EXISTING SEWER IF REQUIRED TO MAINTAIN INTEGRITY OF SEWER DURING CONSTRUCTION. SUBMIT DESIGN AND DETAILS, SEALED AND SIGNED BY AN ILLINOIS LICENSED STRUCTURAL ENGINEER, SHOWING TEMPORARY BRACING FOR THE EXISTING SEWER DURING CONSTRUCTION FOR REVIEW PRIOR TO CONSTRUCTION. ANY DAMAGE TO EXISTING STRUCTURE IS RESPONSIBILITY OF THE CONTRACTOR.
- 7. CONTRACTOR SHALL DIVERT ALL FLOW FROM THE EXISTING SEWER PRIOR TO CONSTRUCTION SO THAT THE WORK CAN BE PERFORMED IN THE DRY CONDITION. SEWER MUST BE MAINTAINED IN SERVICE AT ALL TIMES. SUBMIT MEANS OF FLOW DIVERSION FOR REVIEW PRIOR BREAKING INTO EXISTING BRICK SEWER, ALL EXCAVATION SHALL BE KEPT DEWATERED DURING CONSTRUCTION OPERATIONS UNTIL BACKFILL IN PLACE. PROVISIONS SHALL BE MADE TO PREVENT THE BOTTOM OF ALL EXCAVATIONS FROM FREEZING OR FLOODING AT ALL TIMES. PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE SHALL BE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF THE WORK, HOWEVER, CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE OF THE WORK.



| | PIPE | | | | | | | | | | | |
|------------------------------------|-----------|-------|-------|-------|--------|--------|--------|--------|--------|----------|----------------|--|
| RCP DIA. | THICKNESS | WIDTH | х | Υ | QTY | LENGTH | S | QTY | LENGTH | Concrete | #5 Epoxy Rebar | |
| (IN) | (IN) | (IN) | (IN) | (IN) | (EACH) | (FT) | (IN) | (EACH) | (FT) | (CU YD) | (LBS) | |
| 12* | 2.00 | 32.0 | 26.00 | 21.00 | 4 | 22.7 | 8 1/8 | 12.0 | 18.0 | 0.42 | 42.5 | |
| 15* | 2.25 | 35.5 | 29.50 | 22.75 | 4 | 25.0 | 93/8 | 12.0 | 18.0 | 0.49 | 44.8 | |
| 18* | 2.50 | 39.0 | 33.00 | 24.50 | 4 | 27.3 | 10 1/2 | 12.0 | 18.0 | 0.57 | 47.2 | |
| 21* | 2.75 | 42.5 | 36.50 | 26.25 | 4 | 29.7 | 8 3/4 | 16.0 | 24.0 | 0.65 | 56.0 | |
| 24 | 3.00 | 46.0 | 40.00 | 28.00 | 4 | 32.0 | 9 5/8 | 16.0 | 24.0 | 0.72 | 58.4 | |
| 27 | 3.25 | 49.5 | 43.50 | 29.75 | 4 | 34.3 | 10 1/2 | 16.0 | 24.0 | 0.81 | 60.8 | |
| 30 | 3.50 | 53.0 | 47.00 | 31.50 | 4 | 36.7 | 11 3/8 | 16.0 | 24.0 | 0.89 | 63.3 | |
| 33 | 3.75 | 56.5 | 50.50 | 33.25 | 4 | 39.0 | 9 4/5 | 20.0 | 30.0 | 0.98 | 72.0 | |
| 36 | 4.00 | 60.0 | 54.00 | 35.00 | 4 | 41.3 | 10 1/2 | 20.0 | 30.0 | 1.07 | 74.4 | |
| 42 | 4.50 | 67.0 | 61.00 | 38.50 | 4 | 46.0 | 97/8 | 24.0 | 36.0 | 1.26 | 85.5 | |
| 48 | 5.00 | 74.0 | 68.00 | 42.00 | 4 | 50.7 | 11 1/8 | 24.0 | 36.0 | 1.46 | 90.4 | |
| *Note: Option to use without Rebar | | | | | | | | | | | | |

TOTAL

EXAMPLE CONCRETE COLLAR REINFORCEMENT - SECTION (NOT TO SCALE)

STANDARD REVISIONS DESCRIPTION 1/22/14 APPROVED PLAN

CITY OF CHICAGO PERCENT COMPLETE DATE DESIGNED: CHECKED: DEPARTMENT OF WATER MANAGEMENT BUREAU OF ENGINEERING SERVICES CONCRETE COLLAR / OF CONNECTION DETAILS PΝ

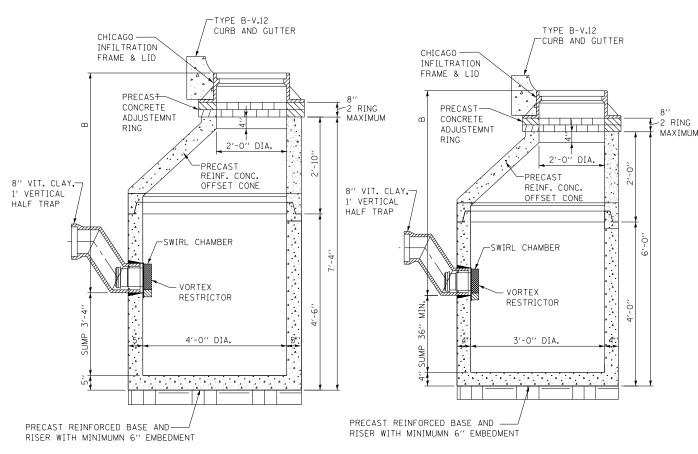
SCALE: NTS

TOTAL SHEE SHEETS NO. SECTION COUNTY CHICAGO DEPARTMENT OF WATER MANAGEMENT 55 2010-080-B COOK 886 855 STANDARD DETAILS CONTRACT NO. 60L70 SHEET NO. 4 OF 5 SHEETS STA. TO STA.

DESIGNED REVISED USER NAME = augeungh DRAWN REVISED CHECKED REVISED PLOT DATE = 11/19/2014 DATE - 11/14/2014 REVISED

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

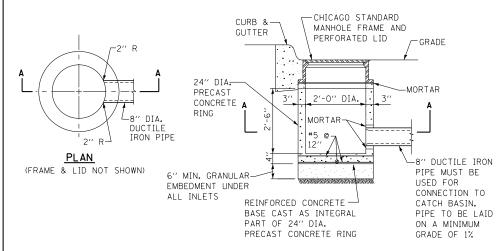
STANDARD DRAINAGE STRUCTURES FOR PUBLIC STREETS



STANDARD CATCH BASIN-4' DIA.

STANDARD CATCH BASIN-3' DIA.

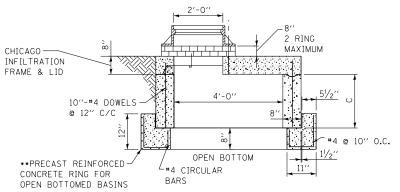
NOTES:



STANDARD INLET-2' DIA.

INLETS AND 3' DIAMETER CATCH BASINS ARE TO BE USED ONLY WITH PRIOR APPROVAL OF DWM SEWER ENGINEER OR FIELD INSPECTOR.

STANDARD DRAINAGE STRUCTURES FOR PUBLIC ALLEYS



GREEN ALLEY OPEN BOTTOM CATCH BASIN

TO BE USED IF STANDARD CONE WITH REQUIRED SUMP DEPTH INSTALLATION IS IMPOSSIBLE.

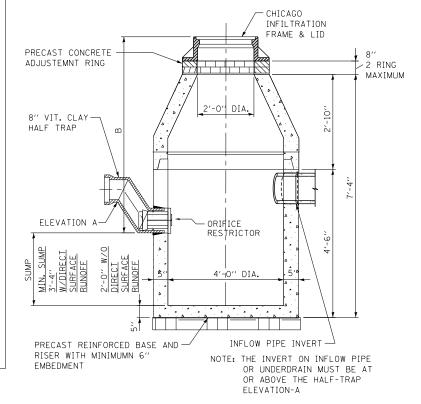
**IF FLAT TOP SLAB CATCH BASIN IS USED IN AN OPEN BOTTOM APPLICATION, THE FOLLOWING CRITERIA MUST BE FOLLOWED:

-"C" MUST BE A MINIMUM OF 3 FEET.

PROVIDE A MINIMUM AGGREGATE BASE OF 1.0 FEET BELOW PRECAST REINFORCED CONCRETE RING.

-GEOTECH FABRIC MUST BE PLACED ON SIDES AND BOTTOM OF AGGREGATE SURROUNDING BASIN.

-AGGREGATE BASE MUST PROVIDE ADEQUATE STORMWATER STORAGE CAPACITY PER THE APPROVED/PERMITTED PLANS.

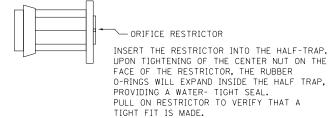


1. FOR ANY DRAIN TILE CONNECTION, THE WATER TABLE MUST BE AT LEAST 3.5 FEET BELOW ELEVATION A.

2. PVC UNDERDRAINS MUST BE 4" MINIUMUM DIAMETER, (6" RECOMMENDED) AND MUST BE WRAPPED IN GEOTECH FABRIC.

CATCH BASIN-ORIFICE RESTRICTOR

DRAINAGE STRUCTURES RESTRICTORS





VORTEX RESTRICTOR

PULL ON RESTRICTOR TO VERIFY THAT A TIGHT FIT IS MADE.

INSERT THE RESTRICTOR WITH THE OPENING DOWN. UPON TIGHTENING OF THE 2 BOLTS ON THE FACE OF THE RESTRICTOR, THE RUBBER O-RINGS WILL PROVIDE A WATER- TIGHT SEAL.

GENERAL NOTES:

1. CATCH BASIN TO CATCH BASIN CONNECTIONS ARE ALLOWED IN PRIVATE SITES & ALLEYS. ONLY THE DOWNSTREAM CATCH BASIN IS REQUIRED TO HAVE A HALF-TRAP.

2. IF B < 4 FEET, THEN USE A DUCTILE IRON PIPE HALF TRAP AND FLAT TOP SLAB CATCH BASIN AS NECESSARY.

3. INLETS AND 3' DIAMETER CATCH BASINS ARE TO BE USED ONLY WITH PRIOR APPROVAL OF DWM FIELD INSPECTOR.

RESTRICTOR NOTES:

THE DWM'S RAIN BLOCKER RESTRICTOR PROGRAM MUST BE MAINTAINED WITH ANY ROADWAY IMPROVEMENT.

THE DESIGN OF ANY ROADWAY IMPROVEMENT MUST CONSIDER LIMITING THE NUMBER OF CATCH BASINS TO THE EXTENT PRACTICAL. THE NUMBER OF EXISTING STRUCTURES SHOULD NOT BE INCREASED.

THE RESTRICTORS CAN BE OBTAINED FROM DWM CENTRAL DISTRICT AT 3901 S. ASHLAND AVE. THE CONTRACTOR SHOULD ARRANGE FOR PICK UP BY CONTACTING 312-747-1177 (7AM TO 3PM. M-F)

FLOW RESTRICTORS MUST BE INSTALLED IN ALL CATCH BASINS OUTSIDE OF THE CENTRAL BUSINESS DISTRICT. RESTRICTORS MUST NOT BE INSTALLED IN CATCH BASINS IN CLOSE PROXIMITY TO VIADUCT AREAS, BUS STOPS, OR EMERGENCY ENTRANCES. THE DWM MUST APPROVE THE NON-INSTALLATION OR REMOVAL OF ANY RESTRICTOR. REQUIREMENTS FOR RESTRICTOR INSTALLATION ARE AS FOLLOWS:

*ARTERIAL STREETS: 3-INCH ORIFICE RESTRICTOR *BUS ROUTES: 3-INCH ORIFICE RESTRICTOR *RESIDENTIAL STREETS: 3-INCH VORTEX RESTRICTOR *ALLEYS: 3-INCH ORIFICE RESTRICTOR IN THE LAST CB. *CLOSED LIDS ARE REQUIRED ON ALL MANHOLES EXCEPT AT INTERSECTIONS WHERE A PERFORATED LID SHALL BE

| N.T.S. | • | | |
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| STAND | ARD REVISIONS | | |
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| DATE | DESCRIPTION | | |
| 1/22/14 | APPROVED | | |
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| PERCENT COMPLETE | DATE | CITY OF CHICAGO DEPARTMENT OF WATER MANAGEMEN |
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| 30 | | BUREAU OF ENGINEERING SERVICES |
| 60 | | |
| 75 | | DRAINAGE STRUCTURE DETAI |
| 90 | | |
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| O NAGEMENT VICES | DRAWN: SBW DESIGNED: CHECKED: | A.15 |
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DESIGNED REVISED USER NAME = augeungh DRAWN REVISED CHECKED REVISED PLOT DATE = 11/19/2014 DATE - 11/14/2014 REVISED

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

CHICAGO DEPARTMENT OF WATER MANAGEMENT STANDARD DETAILS SCALE: NTS SHEET NO. 5 OF 5 SHEETS STA. TO STA.

SECTION COUNTY 2010-080-B COOK 886 856 CONTRACT NO. 60L70

