

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**PROPOSED  
HIGHWAY PLANS**

FAP ROUTE 330: US 45 (LAGRANGE ROAD)  
131ST STREET TO 159TH STREET  
SECTION: 2012-088-1

PROJECT: NHF-0330(072)  
(ADVANCE CONTRACT) MEDIAN REMOVAL,  
TEMPORARY PAVMENT, BOX CULVERT & TREE REMOVAL  
E COOK COUNTY  
C-91-169-13

|             |            |        |              |            |
|-------------|------------|--------|--------------|------------|
| F.A.P. RTE. | SECTION    | COUNTY | TOTAL SHEETS | SHEET NO.  |
| 330         | 2012-088-1 | COOK   | *152         | 1          |
| ILLINOIS    |            |        | CONTRACT NO. | 60W09      |
| D-91-436-12 |            |        | *152-7=145   | *145+1=146 |

\*146 + 1 = 147

FOR INDEX OF SHEETS, SEE SHEET NO. 2

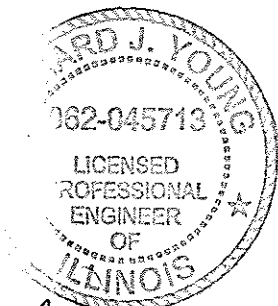
**DESIGN DESIGNATION:**

US 45 (LAGRANGE ROAD): 2550 (20) OTHER PRINCIPAL ARTERIAL AND STRATEGIC REGIONAL ARTERIAL (SRA) - CLASS II TRUCK ROUTE 11.85 (JPCP-20)

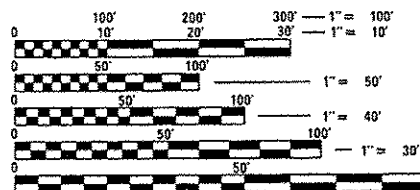
131ST STREET: 620 (20) MINOR ARTERIAL 8.68 (FD-20)  
135TH STREET: 450 (20) MINOR ARTERIAL 8.68 (FD-20)  
CREEK ROAD: 2200 (12) LOCAL (RESIDENTIAL) 8.68 (FD-20)

**DESIGN TRAFFIC DATA:**

US 45 (LAGRANGE ROAD) = 45 MPH  
ADT = 47,000 (2000, 143RD ST TO 135TH ST)  
ADT = 52,000 (2000, 135TH ST TO 131ST ST)  
ADT = 52,000 (2030, 143RD ST TO 135TH ST)  
ADT = 57,000 (2030, 135TH ST TO 131ST ST)  
131ST STREET = 45 MPH  
MHV = 3,893 (2000)  
135TH STREET = 45 MPH  
MHV = 3,695 (2000)  
CREEK RD = 35 MPH



*Richard J. Young*  
Sheets 12136, 139-145  
Dec 20, 2012

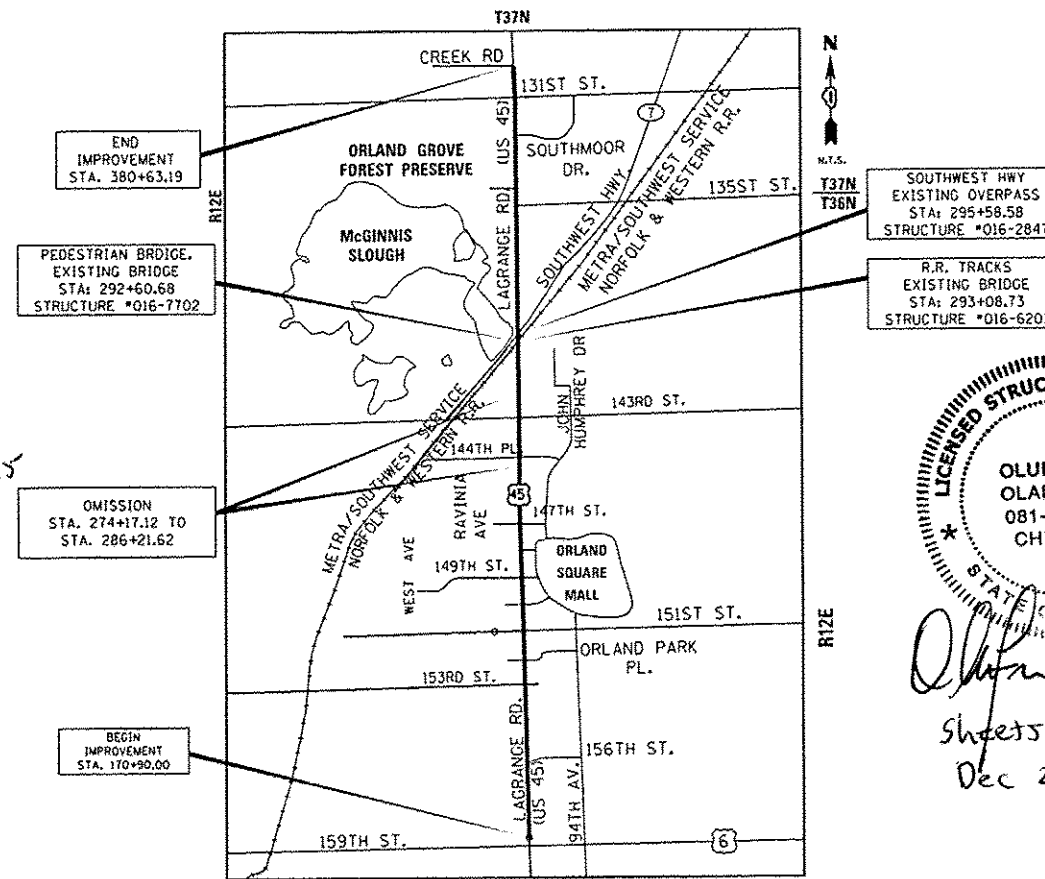


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PROJECT MANAGER: RAJENDRA SHAH  
1-847-705-4555

CONTRACT NO. 60W09



GROSS LENGTH = 19,768.84 FT. = 3.744 MILE  
NET LENGTH = 19,768.84 FT. = 3.744 MILE



LOCATION OF SECTION INDICATED THUS: —



*Olufemi A. Oladeinde*  
Sheets 137-138  
Dec 20, 2012

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
SUBMITTED *December 21, 2012*  
*John Fortmann Jr.*  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER  
*Feb 1, 2013*  
*John D. Baranecoli P.E. Jr.*  
ENGINEER OF DESIGN AND ENVIRONMENT  
*Feb 1, 2013*  
*Omer Osman, P.E. Jr.*  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS

PLANS PREPARED BY:  
**URS** 100 S. WACKER DR., SUITE 500 TEL (312)-939-1000  
CHICAGO IL, 60606 FAX (312)-939-4198

*Rev. 2-26-13*

# INDEX OF SHEETS


| SHEET NO. | DRAWING NO.    | DESCRIPTION   |
|-----------|----------------|---|
| 1         | CV-01          | COVER SHEET   |
| 2         | IS-01          | INDEX OF SHEETS AND HIGHWAY STANDARDS               |
| 3         | GN-01          | GENERAL NOTES                                       |
| 4-6A      | SQ-01 to SQ-04 | SUMMARY OF QUANTITIES                               |
| 7-9       | TS-01 to TS-08 | TYPICAL SECTIONS                                    |
| 10-20     | AT-01 to AT-11 | ALIGNMENTS, TIES AND BENCHMARKS                     |
| 21-25     | MN-01 to MN-04 | MAINTENANCE OF TRAFFIC AT MARLEY CREEK              |
| 26-62     | P-01 to P-37   | REMOVAL, TEMPORARY PAVEMENT, AND DRAINAGE PLAN      |
| 63        | P-01 to P-37   | DRAINAGE DETAIL                                     |
| 64-67     | PP-01 to PP-04 | PROPOSED DRAINAGE PROFILE                           |
| 68-95     |                | PLAT OF HIGHWAYS                                    |
| 96-132    | PM-01 to PM-37 | PAVEMENT MARKING PLAN                               |
| * 133-138 | S-01 to S-06   | GENERAL PLAN AND ELEVATION MARLEY CREEK BOX CULVERT |
| * 139-152 | DT-01 to DT-07 | DISTRICT 1 DETAILS                                  |

\* 150 DELETED  
\* 133-138 DELETED

\* 133 ADDED 

# HIGHWAY STANDARDS

| STANDARD NO. | TITLE  |
|--------------|--|
| 000001-06    | STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS  |
| 001001-02    | AREAS OF REINFORCEMENT BARS  |
| 602401-03    | MANHOLE, TYPE A  |
| 602406-05    | MANHOLE, TYPE A, 6' (1.8 M) DIAMETER   |
| 602601-02    | PRECAST REINFORCED CONCRETE FLAT SLAB TOP  |
| 602701-02    | MANHOLE STEPS  |
| 604001-03    | FRAME AND LIDS, TYPE 1   |
| 643001-01    | SAND MODULE IMPACT ATTENUATORS   |
| 666001-01    | RIGHT-OF-WAY MARKERS   |
| 701101-03    | OFF-ROAD OPERATIONS, MULTILANE, LESS THAN 15' (4.5 M) TO 24" (600 MM) FROM PAVEMENT EDGE |
| 701106-02    | OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 15' (4.5 M) AWAY                               |
| 701201-04    | LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS > 45 MPH                                      |
| 701301-04    | LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS  |
| 701311-03    | LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY                                       |
| 701427-01    | LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATION, FOR SPEEDS < 40 MPH           |
| 701602-06    | URBAN LANE CLOSURE, MULTILANE, 2W WITH BIDIRECTIONAL LEFT TURN LANE                      |
| 701606-08    | LANE CLOSURE, MULTILANE, 2W, WITH MOUNTABLE MEDIAN                                       |
| 701701-08    | LANE CLOSURE, MULTILANE, INTERSECTION  |
| 701901-02    | TRAFFIC CONTROL DEVICES  |
| 704001-07    | TEMPORARY CONCRETE BARRIER   |


 701601-08 URBAN LANE CLOSURE, MULTILANE, 1W OR 2W W/ NONTRAVERSABLE MEDIAN

# INDEX OF DISTRICT ONE DETAILS (PLAN SHEETS 139-152)

| STANDARD NO. | TITLE  |
|--------------|--|
| BD-07        | STORM SEWER CONNECTION TO EXISTING SEWER                                   |
| BD-08        | FRAMES AND LIDS ADJUSTMENT WITH/WITHOUT MILLING                            |
| BD-22        | PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT                                |
| BD-29        | CONCRETE BARRIER WALL & PIER SLOPE WALL PROTECTION DETAIL                  |
| BD-32        | BUTT JOINTS AND HMA TAPER  |
| BD-33        | HMA TAPER AT EDGE OF PCC PAVEMENT  |
| TC-10        | TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS AND DRIVEWAYS |
| TC-13        | DISTRICT ONE TYPICAL PAVEMENT MARKINGS                                     |
| TC-14        | TRAFFIC CONTROL AND PROTECTION AT TURNBAYS (TO REMAIN OPEN TO TRAFFIC)     |
| TC-16        | PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING                   |
| TC-18        | SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS                      |
| TC-22        | ARTERIAL ROAD INFORMATION SIGN   |
| TC-26        | DRIVEWAY ENTRANCE SIGNING  |

URS  
 100 S. WACKER DR.  
 SUITE 500  
 CHICAGO, IL 60606  
 TEL. (312) 339-4000  
 FAX (312) 339-4998

|                                       |                           |                |                 |   |                                       |                           |                      |                |                     |                |                    |
|---------------------------------------|---------------------------|----------------|-----------------|---|---------------------------------------|---------------------------|----------------------|----------------|---------------------|----------------|--------------------|
| FILE NAME :<br>D:\60W09\SHI-INDEX.dgn | USER NAME : Anthony.Plutz | DESIGNED - MJT | REVISED -       | STATE OF ILLINOIS<br>DEPARTMENT OF TRANSPORTATION | INDEX OF SHEETS AND HIGHWAY STANDARDS | F.A.P. RTE.<br>330        | SECTION<br>2012-0881 | COUNTY<br>COOK | TOTAL SHEETS<br>152 | SHEET NO.<br>2 |                    |
| PLT SCALE : 2.0000' / in.             | CHECKED - ---             | REVISOR -      | DATE - 01/02/13 |   |                                       | SCALE: N.T.S.             | SHEET 1 OF 1 SHEETS  | STA. TO STA.   | IS-01               |                | CONTRACT NO. 60W09 |
| PLT DATE : 1/18/2013                  | DATE - 01/02/13           | REVISOR -      |                 |   |                                       | ILLINOIS FED. AID PROJECT |                      |                |                     |                |                    |
| SHI_PLAN                              |                           |                |                 |   |                                       |                           |                      |                |                     |                |                    |

 Rev. 2-26-13 Rev.

THORNRIDGE  
FUNERAL HOME

NOONAN  
CHIROPRACTIC

GEORDANO'S

143RD ST

US 45 (LAGRANGE RD)

1040 FT. TEMPORARY  
PAVEMENT  
MARKING - LINE 4" (DOUBLE  
YELLOW AT 11" C-C)

32 FT. TEMPORARY PAVEMENT  
MARKING - LINE 12" (YELLOW)  
AT 45" AND 75' SPACING

STA. 271+75

STA. 272+50

STA. 274+27

270+00

271

272

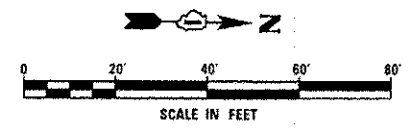
273

274

275+00

SEE DRAWING PM-17  
MATCH LINE STA. 270+00.00

SEE DRAWING PM-19  
MATCH LINE STA. 276+00.00



NEW SHEET

**URS**  
800 S. WACKER DR.  
SUITE 400  
CHICAGO, IL 60606  
TEL (312) 539-0000  
FAX (312) 539-4998

|                                      |                                 |                   |                       |
|--------------------------------------|---------------------------------|-------------------|-----------------------|
| FILE NAME =<br>0160v89-SHT-PNK18.dgn | USER NAME = james.pugh          | DESIGNED - EJD    | REVISED -  02/25/2013 |
|                                      |                                 | DRAWN - EJD       | REVISED -             |
|                                      | PLOT SCALE = 40.0000 1/16" = 1' | CHECKED - JWM     | REVISED -             |
|                                      | PLOT DATE = 2/25/2013           | DATE - 01/02/2013 | REVISED -             |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING PLAN - US 45 (LAGRANGE ROAD)

SCALE: 1"=20' SHEET 18 OF 37 SHEETS STA. 270+00.00 TO STA. 276+00.00

| F.A.P. RTE.               | SECTION   | COUNTY | TOTAL SHEETS       | SHEET NO. |
|---------------------------|-----------|--------|--------------------|-----------|
| 330                       | 2012-0881 | COOK   | 152                | 113       |
| PM-18                     |           |        | CONTRACT NO. 60W09 |           |
| ILLINOIS FED. AID PROJECT |           |        |                    |           |

D:\110W09-SHT-PNK18.dgn 2/25/2013 5:23:38 PM

Benchmark: TBM "C" #5659 Southwest bottom of light pole  
#93-15 +/ 300' north of 155th St. on the west side of LaGrange Rd.  
E1 699.946

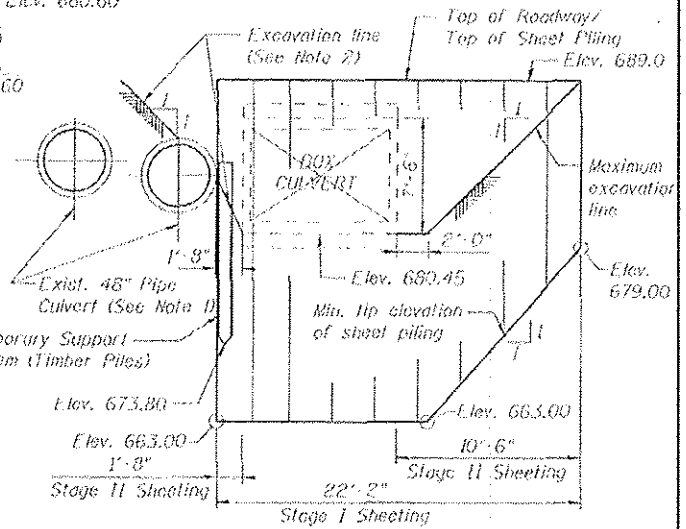
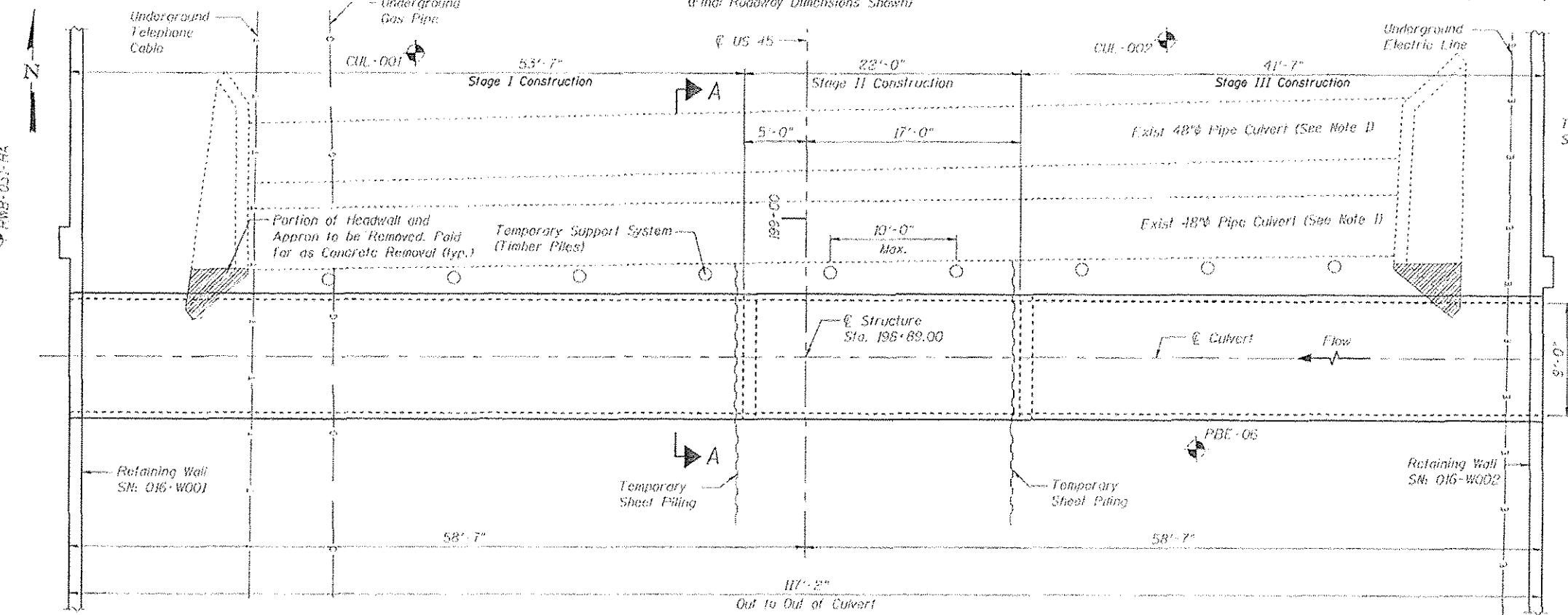
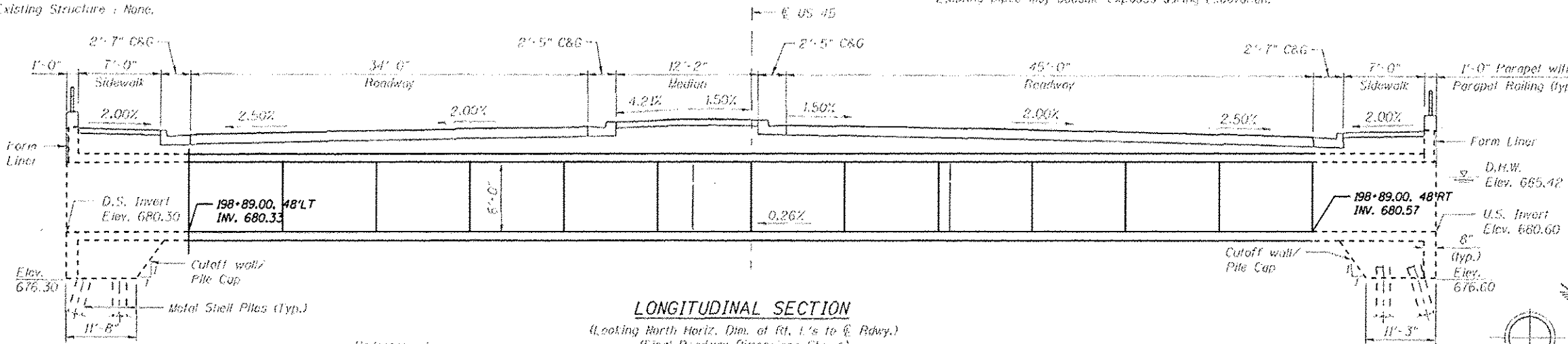
Traffic shall be maintained at all times utilizing Stage Construction.

Existing Structure: None.

Note 1: Flow to be maintained through existing pipe culverts during construction of proposed box culvert. Existing pipes to be removed at a later stage during roadway construction.  
Note 2: Timber piles of the Temporary Support System need to be driven before excavation.  
Existing pipes may become exposed during excavation.

**TOTAL BILL OF MATERIALS**

| ITEM                                  | UNIT    | TOTAL |
|---------------------------------------|---------|-------|
| Porous Granular Embankment            | Cu. Yd. | 220   |
| Concrete Removal                      | Cu. Yd. | 4.0   |
| Structure Excavation                  | Cu. Yd. | 590   |
| Precast Concrete Box Culverts 9' X 6' | Foot    | 96    |
| Temporary Sheet Piling                | Sq. Ft. | 1008  |
| Temporary Support System              | L. Sum  | 1     |



**SECTION A-A**

Minimum Section Modulus = 11.0 in<sup>3</sup>/ft.  
If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submitted including plan details and calculations will be required for review and acceptance by the Engineer.

**NOTES:**

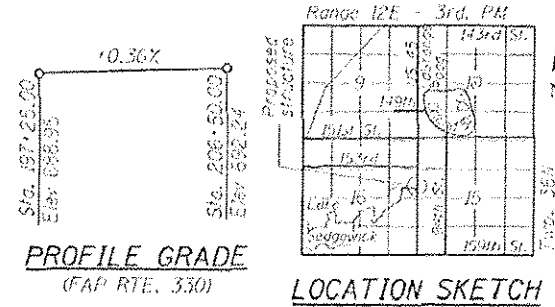
- The precast concrete box culvert shall be designed by the Contractor.
- Design and drawings shall be sealed by an Illinois Licensed Structural Engineer.
- The precast concrete box culvert units shall meet IDOT policy Memorandum "Quality Control/Quality Assurance Program for Precast Concrete Products."
- The Contractor shall submit shop drawings for the precast concrete culvert to the District Office according to the applicable requirements of Article 504.04 of the Standard Specifications.

**WATERWAY INFORMATION**

| Flood        |      | Freq. Yr. | Q C.F.S. | Opening Sz. Ft. | Vel. Ft./Sec. | Hood - Ft. | Headwater Ft. |
|--------------|------|-----------|----------|-----------------|---------------|------------|---------------|
| Design       | 50   | 190       | 53.4     | 43.38           | 685.42        | 0.39       | 685.80        |
| Base         | 100  | 235       | 53.6     | 47.34           | 685.86        | 0.57       | 686.43        |
| Over topping | 2500 |           |          |                 |               |            | 688.47        |
| Max. Calc.   | 500  | 399.5     | 53.6     | 54              | 687.22        | 1.21       | 688.65        |

**DESIGN STRESSES**

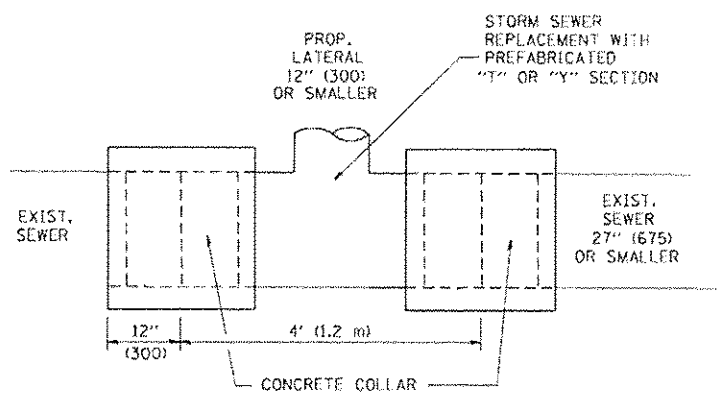
**PRECAST UNITS**  
f'c = 5,000 psi  
fy = 65,000 psi (Welded Wire Fabric)  
Max. Soil Pressure under footing = 1300 psf  
**LOADING HL 93**  
Design by AASHTO LRFD applying the standard designs of ASTM C 1577



**GENERAL PLAN & ELEVATION**  
US 45 (LaGRANGE ROAD)  
FAP RTE. 330 - SEC 103R-4  
COOK COUNTY  
STATION 198+89.00

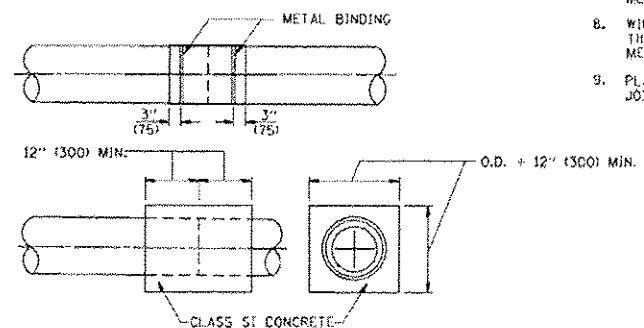
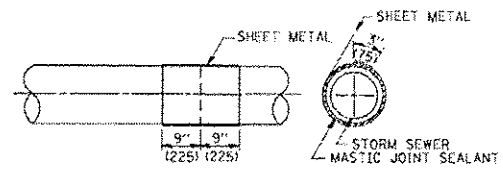
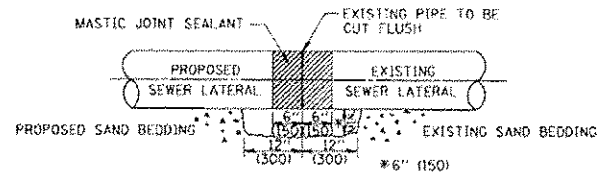
URS  
100 S. Wacker Dr.  
Chicago, IL 60606  
TEL: 312-939-4000  
FAX: 312-939-4000

|                                |                       |                 |                              |   |  |                 |                     |             |                  |                    |                           |
|--------------------------------|-----------------------|-----------------|------------------------------|---|--|-----------------|---------------------|-------------|------------------|--------------------|---------------------------|
| FILE NAME: 0160W09-SHT-5-1.dgn | USER NAME: james.push | DESIGNED: _____ | REVISED: $\Delta$ 02/25/2013 | STATE OF ILLINOIS<br>DEPARTMENT OF TRANSPORTATION | GENERAL PLAN & ELEVATION<br>MARLEY CREEK BOX CULVERT | F.A.P. RTE. 330 | SECTION 2012-0881   | COUNTY COOK | TOTAL SHEETS 152 | SHEET NO. 133      |                           |
| PLT SCALE: 1/8" = 1'-0"        | PLT DATE: 2/25/2013   | DRAWN: _____    | REVISED: _____               |   |  | SCALE: _____    | SHEET 1 OF 6 SHEETS | STA. _____  | TO STA. _____    | CONTRACT NO. 60W09 | ILLINOIS FED. AID PROJECT |
|                                |                       | CHECKED: _____  | REVISED: _____               |   |  |                 |                     |             |                  |                    |                           |
|                                |                       | DATE: 1/02/2012 | REVISED: _____               |   |  |                 |                     |             |                  |                    |                           |



DETAIL "A"

LATERAL CONNECTION TO EXISTING SEWER OF 27" (675) OR SMALLER

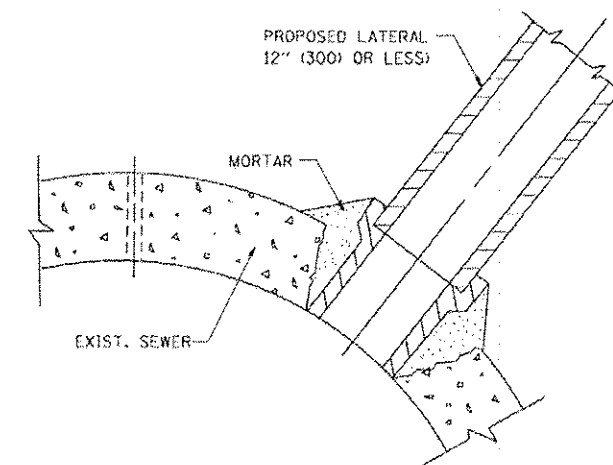


DETAIL "B"

CLASS SI CONCRETE COLLAR

CONSTRUCTION SEQUENCE

1. CUT THE EXISTING END OF THE PIPE SO AS TO PRESENT A FLUSH BUTT JOINT. BRUSH AND CLEAN ALL PIPES.
2. APPLY THE MASTIC JOINT SEALANT TO THE FIRST 6" (150) OF EACH PIPE.
3. BUTT THE PIPES TOGETHER LEAVING A MINIMUM OF 12" X 6" (300 X 150) DEEP EXCAVATION UNDER AND AROUND EACH PIPE END.
4. CUT A PIECE OF SHEET METAL GAGE NO. 19 (10,041B) 18" (450) WIDE BY THE OUTSIDE CIRCUMFERENCE OF THE PIPE PLUS 3" (75) LONG.
5. WRAP THE SHEET METAL AROUND THE PIPES, 9" (225) ON EACH SIDE OF THE JOINT, STARTING AT THE TOP OF THE PIPE.
6. LAP THE SHEET METAL AT LEAST 3" (75) AT THE TOP OF THE PIPE AND PLACE THE MASTIC JOINT SEALANT BETWEEN THE LAP.
7. PLACE TWO METAL BANDS AROUND THE SHEET METAL AND TIGHTEN.
8. WIPE OFF ANY EXCESS MASTIC JOINT SEALANT THAT OZZLES OUT FROM BETWEEN THE SHEET METAL AND THE PIPES.
9. PLACE CLASS SI CONCRETE AROUND THE JOINT.



DETAIL "C"

PROPOSED LATERAL CONNECTION TO EXISTING SEWER OF 30" (750) OR LARGER

NOTES

MATERIAL

MATERIAL USED FOR THE TEE OR WYE SECTION SHALL BE COMPATIBLE WITH THE EXISTING STORM SEWER OR THE PROPOSED STORM SEWER.

CONSTRUCTION METHODS

- THIS WORK SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE APPLICABLE PORTIONS OF SECTION 550 OF THE STANDARD SPECIFICATIONS.
- CONNECTION TO AN EXISTING STORM SEWER SHALL BE BY EITHER OF THE FOLLOWING METHODS:
  - PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 27" (675) OR SMALLER SEE DETAIL "A" AND "B".
  - PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 30" (750) OR LARGER SEE DETAIL "C".

IF THE EXISTING SEWER PIPE IS CRACKED, BROKEN OR OTHERWISE DAMAGED BY THE CONTRACTOR IN MAKING THE CIRCULAR OPENING, THE CONTRACTOR SHALL REPLACE THAT SECTION OF PIPE WITH PIPE EQUAL AND SIMILAR IN ALL RESPECTS TO THE PIPE IN THE EXISTING SEWER, IN A CAREFUL WORKMANLIKE MANNER, WITHOUT EXTRA COMPENSATION.

GENERAL

CARE MUST BE TAKEN TO PREVENT DEBRIS FROM ENTERING THE SEWER. ALL DEBRIS WHICH ENTERS THE SEWER MUST BE REMOVED. THE SEWER MUST BE LEFT CLEAN AND UNOBSTRUCTED UPON COMPLETION OF THE CONTRACT.

CARE MUST BE TAKEN TO PREVENT ANY PART OF THE NEW PIPE CONNECTION FROM PROJECTING INTO THE EXISTING SEWER.

BASIS OF PAYMENT

TEE OR WYE CONNECTIONS WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE PROPOSED STORM SEWER OF THE TYPE AND SIZE SPECIFIED IN THE PLANS. THIS PRICE SHALL INCLUDE ALL EXCAVATION OF THE TRENCH, REMOVAL OF THE EXISTING STORM SEWER, FURNISHING AND INSTALLING THE SPECIFIED TEE OR WYE SECTION, FURNISHING AND INSTALLING THE REQUIRED CONCRETE COLLAR, AND ALL OTHER MATERIAL NECESSARY TO COMPLETE THIS WORK AS SHOWN AND SPECIFIED.

REMOVAL AND REINSTALLATION OF EXISTING STORM SEWER ADJACENT TO THE PROPOSED TEE OR WYE SECTION, FOR THE PURPOSE OF FACILITATING THE INSTALLATION OF THE TEE OR WYE SECTION, WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE WORK.

CONCRETE COLLAR FOR CONNECTING A PROPOSED STORM SEWER TO AN EXISTING STORM SEWER WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE PROPOSED STORM SEWER.

TRENCH BACKFILL, EXCAVATION IN ROCK AND REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL BELOW PLAN BEDDING GRADE WILL BE PAID FOR SEPARATELY.

URS  
40 S. WACKER DR.  
SUITE 500  
CHICAGO, IL 60606  
TEL 312-851-0000  
FAX 312-851-4686

|  |                       |                  |                      |
|--|-----------------------|------------------|----------------------|
| FILE NAME : D:\60489-SHT-DISTANDARD-0007.dgn | USER NAME : jama.pant | DESIGNED -       | REVISED - 02/25/2013 |
|  |                       | DRAWN -          | REVISED -            |
|  |                       | CHECKED -        | REVISED -            |
|  |                       | DATE - 1/02/2012 | REVISED -            |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DETAIL OF STORM SEWER  
CONNECTION TO EXISTING SEWER

|  |                   |             |                                  |               |
|--|-------------------|-------------|----------------------------------|---------------|
| F.A.P. RTE. 330                              | SECTION 2012-0881 | COUNTY COOK | TOTAL SHEETS 152                 | SHEET NO. 139 |
| SCALE: NONE                                  |                   |             | SHEET 1 OF 1 SHEETS STA. TO STA. |               |
| ILLINOIS FED. AID PROJECT CONTRACT NO. 60W09 |                   |             |                                  |               |