

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	D-T	WILL	44	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 60B10		

D-91-265-06

PROJECT LOCATED IN THE CITY OF
LOCKPORT IN WILL COUNTY, IL

FOR INDEX OF SHEETS, SEE SHEET NO. 2

DIVISION OF HIGHWAYS
**PROPOSED HIGHWAY PLANS
CULVERT REHAB AND
REPLACEMENT**

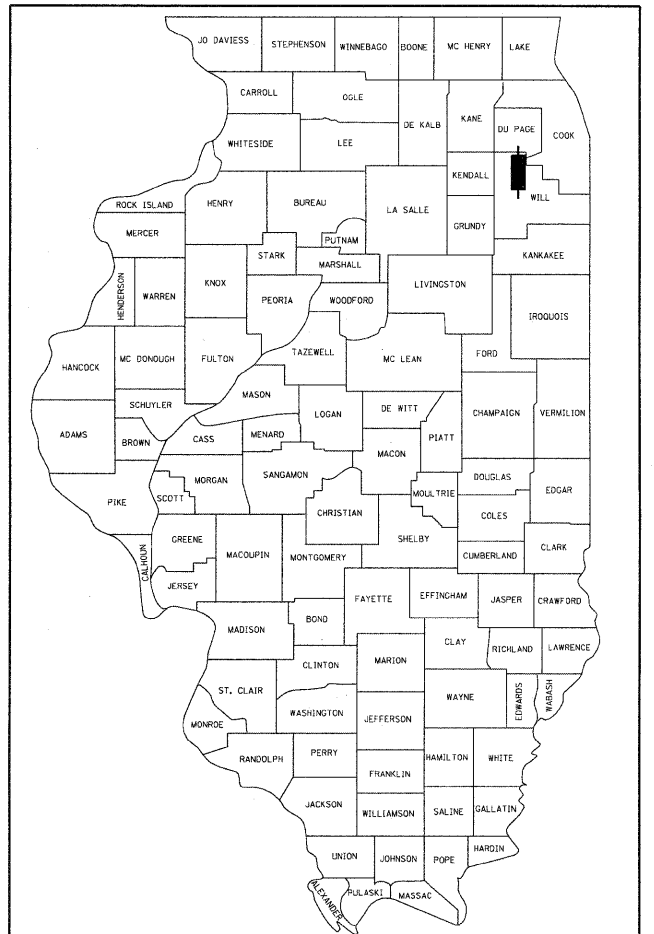
FAP RTE 577: ILLINOIS ROUTE 171 (STATE ST)
OVER MILNE CREEK
(NORTH OF 8th ST.)
SECTION D-T
WILL COUNTY
C-91-265-06

Proj. ACF-0577 (293)

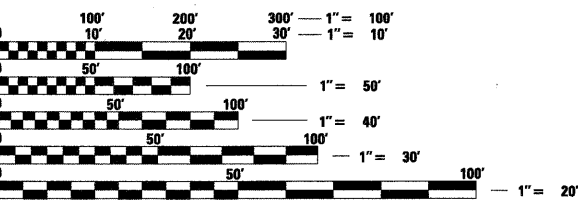
DESIGN DESIGNATION
OTHER PRINCIPAL ARTERIAL (URBAN)
CLASS II TRUCK ROUTE
ADT 17500 (2001)
SPEED LIMIT 30 MPH

THE PROPOSED WORK TO BE PERFORMED CONSISTS OF CONSTRUCTING A STEEL LINER ARCH AT BOTH ENDS WITHIN THE RIGHT OF WAY IN THE EXISTING STONE ARCH CULVERT AT STATION 61+42. GROUTING THE SPACE IN BETWEEN THE EXISTING STONE ARCH AND THE PROPOSED STEEL LINER AND RECONSTRUCTING THE MIDDLE SECTION OF THE EXISTING ARCH CULVERT UNDER IL 171 WITH A 20' X 10' PRE-CAST THREE SIDED CONCRETE CULVERT WITH NON-PHASED DEMOLITION AND CONSTRUCTION. IL ROUTE 171 WILL BE CLOSED DURING THE INSTALLATION OF THE PRE-CAST CONCRETE SECTIONS, UTILIZING A DETOUR

EXISTING STRUCTURE NUMBER - SN 099-4639
PROPOSED STRUCTURE NUMBER - SN 099-0538



LOCATION OF SECTION INDICATED THUS: - [rectangle] -

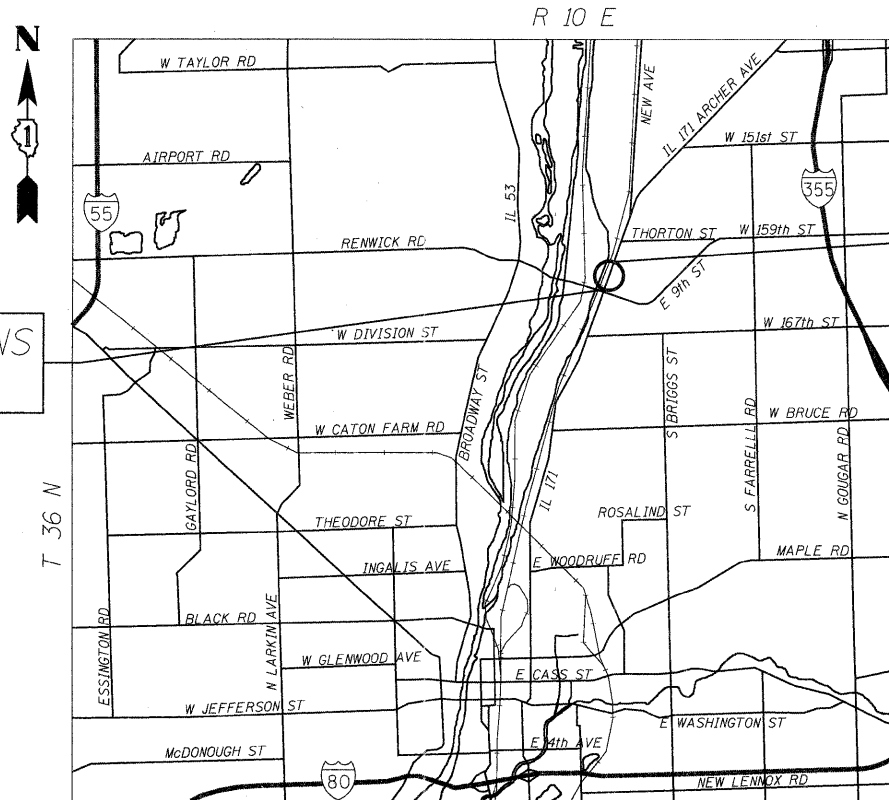


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PROJECT MANAGER: ISSAM RAYYAN (847) 705-4178
PROJECT ENGINEER: ROBERT BORO (847) 705-4237

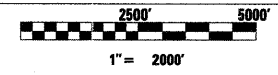
CONTRACT NO. 60B10



PROJECT BEGINS
STA. 60+40.00

PROJECT ENDS
STA. 63+68.00

TOWNSHIP: LOCKPORT
LOCATION MAP



NET AND GROSS LENGTH OF PROJECT = 328' = 0.062 MI

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED *October 14 20 11*

Diana M. O'Keefe
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

December 9 20 11
Scott E. Stitt, P.E.
acting ENGINEER OF DESIGN AND ENVIRONMENT

December 9 20 11
William R. Freyer
interim DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

LOVCO, INC.
CONSULTING ENGINEERS
1560 WALL ST., SUITE 222
NAPEVILLE, ILLINOIS 60563 PH: (630) 577-9100

STATE OF ILLINOIS
WILLIAM H. BORO
REGISTERED PROFESSIONAL ENGINEER
081-005150

STATE OF ILLINOIS
WILLIAM H. BORO
REGISTERED PROFESSIONAL ENGINEER
083-047827
081-005150

Exp 11/30/12 *Exp 11/30/13*

SHEET NO. TITLE

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2	GENERAL NOTES, STATE STANDARDS AND INDEX OF SHEETS
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STATE STANDARDS

<u>SHEET NO.</u>	<u>TITLE</u>
000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT REBARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-06	TEMPORARY EROSION CONTROL SYSTEMS
424001-06	CURB RAMPS FOR SIDEWALK
442201-03	CLASS C AND CLASS D PATCHES
515001-03	NAME PLATE FOR BRIDGE
602001-02	CATCH BASIN, TYPE A
602301-03	INLET, TYPE A
602401-03	MANHOLE TYPE A
602501-02	VALVE VAULT, TYPE A
604001-03	FRAME AND LIDS TYPE 1
604091-02	FRAME AND GRATE TYPE 24
606001-04	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
667101-02	PERMANENT SURVEY MARKERS
701101-02	OFF-RD OPERATIONS, MULTILANE, 15' (4.5 m) TO 24' (600 mm) FROM PAVEMENT EDGE
701106-02	OFF-RD OPERATIONS, MULTILANE, MORE THAN 15' (4.5 m) AWAY
701301-04	LANE CLOSURE 2L, 2W SHORT TIME OPERATIONS
701427	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPER., FOR SPEEDS < 40 MPH
701901-02	TRAFFIC CONTROL DEVICES
720001-01	SIGN PANEL MOUNTING DETAILS
720006-03	SIGN PANEL ERECTION DETAILS
720011-01	METAL POSTS FOR SIGNS, MARKERS AND DELINEATORS
729001-01	APPLICATION OF TYPES A & B METAL POSTS (FOR SIGN & MARKERS)
780001-03	TYPICAL PAVEMENT MARKINGS
814001-02	HANDHOLES
836001-01	LIGHT POLE FOUNDATION

GENERAL NOTES

ALL ELEVATIONS ARE BASED ON UNITED STATES COAST AND GEODETIC SURVEY DATUM.

DIMENSIONS ARE IN ENGLISH UNITS UNLESS OTHERWISE NOTED.

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT 800-892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE, AND GAS FACILITIES (48 HOURS NOTIFICATION IS REQUIRED).

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

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING MATERIALS.

ANY REFERENCE TO STANDARDS IN THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED TO BE THE LATEST STANDARDS.

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

THE RESIDENT ENGINEER SHALL CONTACT MR. LAWRENCE HILL, AREA TRAFFIC ENGINEER, AT (815) 485-6475 AT A MINIMUM OF 2 WEEKS PRIOR TO THE PLACEMENT OF PERMANENT PAVEMENT MARKINGS.

THE CONTRACTOR SHALL CONTACT THE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 A MINIMUM OF 72 HOURS PRIOR TO BEGINNING WORK.

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

THIS PROJECT REQUIRES AN US ARMY CORPS OF ENGINEERS 404 PERMIT. THE PERMIT ISSUED TO THE DEPARTMENT DOES NOT COVER THE IN STREAM WORK BY THE CONTRACTOR. THEREFORE AFTER AWARD, THE CONTRACTOR WILL NEED TO SUBMIT THE WORK PLAN TO THE CORPS. THE CORPS WILL NOT BE PROVIDING AN APPROVAL UNLESS STATED OTHERWISE IN THE PERMIT AND IN STREAM WORK CAN COMMENCE AT THE CONTRACTOR'S DISCRETION. GUIDELINES ON ACCEPTABLE IN STREAM WORK TECHNIQUES CAN BE FOUND ON THE CORPS WEBSITE: [HTTP://WWW.LRC.USACE.ARMY.MIL/](http://www.lrc.usace.army.mil/)

CONSTRUCTION ACTIVITIES ON THE RAILROAD'S ROW SHALL BE PERFORMED IN ACCORDANCE WITH THE DEPARTMENT'S POLICIES AND PROCEDURES FOR CONSTRUCTION PROJECTS INVOLVING RAILROADS. THE TEMPORARY EASEMENT ACQUIRED FROM THE CN SHALL BE USED FOR ACCESS ONLY AND ARTICLE 107.32 OF IDOT'S 2012 STANDARDS SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SHALL APPLY.

THE WORK TO INSTALL THE PROPOSED STEEL LINER AT BOTH THE UPSTREAM AND DOWNSTREAM LOCATIONS MUST BE COMPLETED PRIOR TO ANY REMOVAL OPERATION, INCLUDING EXCAVATION, AND THE REMOVAL OF THE EXISTING STONE ARCH CULVERT BETWEEN THE STEEL LINED SECTIONS. THE STEEL LINER WORK MAY BEGIN ONCE THE CONTRACTOR HAS BEEN GIVEN THE NOTICE TO PROCEED. THIS WORK IS LIMITED TO INSIDE THE EXISTING BOX CULVERT. NO OTHER WORK MAY BEGIN WITH REGARD TO THE BOX CULVERT REPLACEMENT SEGMENT ADJACENT TO IL ROUTE 171 UNTIL AFTER JULY 5, 2012. SEE THE STRUCTURAL SHEETS, SHEET 19, FOR THE RECOMMENDED CONSTRUCTION SEQUENCE.

ACCESS TO THE CULVERT TO INSTALL THE LINER WILL BE LIMITED FROM THE WEST SIDE OF IL ROUTE 171. THE CONTRACTOR SHALL HAVE ACCESS TO THE PROJECT LOCATION FROM COMMERCE STREET THROUGH THE RR TEMPORARY EASEMENTS, AND THEN THROUGH THE CREEK AREA WHERE ACCESS TO BOTH SIDES OF THE CULVERT BECOMES AVAILABLE TO IMPLEMENT THE WORK.

ALL MANPOWER, EQUIPMENT, TOOLS, AND CONSTRUCTION MATERIALS MUST BE BROUGHT THROUGH THE EXISTING CULVERT TO INSTALL THE LINER FROM THE RR ACCESS ROAD AND THEN UP THROUGH THE CREEK AREA WHERE TEMPORARY EASEMENTS ARE IN PLACE.

CONTRACTOR IS TO MAINTAIN ACCESS TO THE CAT CLINIC ON THE WEST SIDE, AND THE HOT DOG STAND ON THE EAST SIDE AT ALL TIMES DURING CONSTRUCTION.

ALL WORK IS TO BE COMPLETED BY THE COMPLETION DATE. THE COMPLETION DATE FOR THIS CONTRACT IS OCTOBER 1, 2012.

GENERAL NOTES (CONT'D)

THERE EXISTS A 15 TON MAXIMUM ALLOWABLE WEIGHT LIMIT ON SN 099-6502, COMMERCE STREET OVER MILNE CREEK. EXISTING SIGNING AS SHOWN IN THE FIELD IS INCORRECT. THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO MOVING ANY HEAVY EQUIPMENT OR MATERIALS ACROSS THE BRIDGE. STORAGE OF EQUIPMENT AND MATERIALS ON THE BRIDGE WILL NOT BE ALLOWED.

CONTRACTOR TO ONLY USE SMALL TOOLS, SUCH AS JACKHAMMERS, TO BREAK UP THE CONCRETE CURB AND GUTTER. CONTRACTOR MUST KEEP SMALL BULLDOZERS, JACKHAMMERS AND ALL OTHER SMALL CONSTRUCTION EQUIPMENT AT LEAST 15 FEET AWAY FROM THE BUILDING ON THE WEST SIDE. CONTRACTOR MUST KEEP FULLY LOADED TRUCKS AND LARGE BULLDOZERS/CONSTRUCTION EQUIPMENT AT LEAST 20 FEET AWAY FROM THE BUILDING ON THE WEST SIDE.



DESIGNED - SLV	REVISED -
DRAWN - SLV	REVISED -
CHECKED - MJY, ST	REVISED -
DATE - 10/14/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES, STATE STANDARDS AND INDEX OF SHEETS
IL ROUTE 171 OVER MILNE CREEK

SCALE: NONE SHEET NO. 1 OF 1 SHEET STA. 60+40 TO STA. 63+68

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	D-T	WILL	44	2
D-91-265-06			CONTRACT NO. 60B10	
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

SUMMARY OF QUANTITIES				80% FEDERAL, 20% STATE		
CODE NO.	ITEM	UNIT	TOTAL	ROADWAY 0004	BRIDGE 0011	
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	74	74		
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	60	60		
20101000	TEMPORARY FENCE	FOOT	193	193		
20200100	EARTH EXCAVATION	CU YD	2773	2773		
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	156		156	
21101815	COMPOST FURNISH AND PLACE, 4"	SQ YD	836	836		
25000310	SEEDING, CLASS 4	ACRE	0.2	0.2		
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	18	18		
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	18	18		
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	18	18		
25100630	EROSION CONTROL BLANKET	SQ YD	836	836		
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	20	20		
28000305	TEMPORARY DITCH CHECKS	FOOT	82	82		
28000400	PERIMETER EROSION BARRIER	FOOT	899	899		
28000500	INLET AND PIPE PROTECTION	EACH	6	6		
28000510	INLET FILTERS	EACH	4	4		
40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	2	2		
40600400	MIXTURE FOR CRACKS, JOINTS AND FLANGEWAYS	TON	3	3		
40600635	LEVELING BINDER (MACHINE METHOD) N70	TON	49	49		
40600982	HOT-MIX ASPHALT SURFACE REMOVAL-BUTT JOINT	SQ YD	45	45		
40601005	HOT-MIX ASPHALT REPLACEMENT OVER PATCHES	TON	13	13		
40603085	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70	TON	324	324		
40603340	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	TON	184	184		
42300400	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8 INCH	SQ YD	128	128		

* SPECIALTY ITEMS

SUMMARY OF QUANTITIES				80% FEDERAL, 20% STATE		
CODE NO.	ITEM	UNIT	TOTAL	ROADWAY 0004	BRIDGE 0011	
42400200	PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH	SQ FT	1496	1496		
44000100	PAVEMENT REMOVAL	SQ YD	567	567		
44000159	HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/2"	SQ YD	874	874		
44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	128	128		
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	216	216		
44000600	SIDEWALK REMOVAL	SQ FT	1496	1496		
44002210	HOT-MIX ASPHALT REMOVAL OVER PATCHES, 2 1/2"	SQ YD	100	100		
44201749	CLASS D PATCHES, TYPE I, 9 INCH	SQ YD	50	50		
44201753	CLASS D PATCHES, TYPE II, 9 INCH	SQ YD	50	50		
44300200	STRIP REFLECTIVE CRACK CONTROL TREATMENT	FOOT	984	984		
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1		1	
50200100	STRUCTURE EXCAVATION	CU YD	621.9		621.9	
* 50200400	ROCK EXCAVATION FOR STRUCTURES	CU YD	4		4	
50300225	CONCRETE STRUCTURES	CU YD	45.0		45.0	
50300300	PROTECTIVE COAT	SQ YD	315	315		
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	1780		1780	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	11460		11460	
50800515	BAR SPLICERS	EACH	86		86	
51500100	NAME PLATES	EACH	1		1	
54003000	CONCRETE BOX CULVERTS	CU YD	19.8		19.8	
60200205	CATCH BASINS, TYPE A, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1	1		
60221000	MANHOLES, TYPE A, 5'-DIAMETER, TYPE 1 FRAME, OPEN LID	EACH	4	4		
60234200	INLETS, TYPE A, TYPE 1 FRAME, OPEN LID	EACH	1	1		
60237470	INLETS, TYPE A, TYPE 24 FRAME AND GRATE	EACH	3	3		

LOCO, INC.
CONSULTING ENGINEERS
1560 WALL ST, SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

DESIGNED - SLV
DRAWN - SLV
CHECKED - MJY, ST
DATE - 10/14/2011

REVISED -
REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES
IL ROUTE 171 OVER MILNE CREEK**

SCALE: NONE SHEET NO. 1 OF 2 SHEETS STA. 60+40 TO STA. 63+68

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	D-T	WILL	44	3
D-91-265-06			CONTRACT NO. 60B10	
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

SUMMARY OF QUANTITIES				80% FEDERAL, 20% STATE		
CODE NO.	ITEM	UNIT	TOTAL	ROADWAY 0004	BRIDGE 0011	LANDSCAPING 0031
60248900	VALVE VAULTS, TYPE A, 5'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1	1		
60266600	VALVE BOXES TO BE ADJUSTED	EACH	2	2		
60500040	REMOVING MANHOLES	EACH	5	5		
60500050	REMOVING CATCH BASINS	EACH	1	1		
60500060	REMOVING INLETS	EACH	4	4		
60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	216	216		
66700205	PERMANENT SURVEY MARKERS, TYPE 1	EACH	2	2		
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	8	8		
67100100	MOBILIZATION	L SUM	1	1		
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	30	30		
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	10	10		
* 78000200	THERMOPLASTIC PAVEMENT MARKING-LINE 4"	FOOT	816	816		
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	32	32		
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	32	32		
81012700	CONDUIT IN TRENCH, 2 1/2" DIA., PVC	FOOT	37	37		
81021340	CONDUIT PUSHED, 2 1/2" DIA., PVC	FOOT	102	102		
81028360	UNDERGROUND CONDUIT, PVC, 2 1/2" DIA.	FOOT	139	139		
* 81400100	HANDHOLE	EACH	1	1		
* 84200804	REMOVAL OF POLE FOUNDATION	EACH	1	1		
* 85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	10	10		
* 89502380	REMOVE EXISTING HANDHOLE	EACH	1	1		
* X0322918	PROPOSED MANHOLE/CATCH BASIN CONNECTION OVER EXISTING STORM SEWER	EACH	6	6		
* X0325003	REMOVE EXISTING VALVE AND VAULT	EACH	1	1		
* X0502600	TEMPORARY LIGHTING	L SUM	1	1		
* X4022000	TEMPORARY ACCESS (COMMERCIAL ENTRANCE)	EACH	2	2		

* SPECIALTY ITEMS

SUMMARY OF QUANTITIES				80% FEDERAL, 20% STATE		
CODE NO.	ITEM	UNIT	TOTAL	ROADWAY 0004	BRIDGE 0011	LANDSCAPING 0031
△ X5539700	STORM SEWERS TO BE CLEANED	FOOT	216	216		
X6022830	MANHOLES, SANITARY, 6' DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1	1		
X6026054	SANITARY MANHOLES TO BE REMOVED	EACH	1	1		
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1		
* X8163090	UNIT DUCT, 600V, 3-1C NO.4, 1/C NO.6 GROUND, (XLP-TYPE USE), 1 1/2" DIA. POLYETHYLENE	FOOT	419	419		
* X8190205	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	278	278		
* X8360310	LIGHT POLE FOUNDATION, 30" DIAMETER, SPECIAL	FOOT	8	8		
* X8440120	REMOVE AND RE-ERECT EXISTING LIGHTING UNIT	EACH	1	1		
Z0001050	AGGREGATE SUBGRADE, 12"	SQ YD	353	353		
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1		
△ Z0018500	DRAINAGE STRUCTURES TO BE CLEANED	EACH	9	9		
Z0030850	TEMPORARY INFORMATION SIGNING	SO FT	200	200		
* Z0033024	MAINTAIN EXISTING LIGHTING SYSTEM	L SUM	1	1		
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	1		
Z0073002	TEMPORARY SOIL RETENTION SYSTEM	SO FT	67		67	
* Z0073510	TEMPORARY TRAFFIC SIGNAL TIMING	EACH	10	10		
X2090210	POROUS GRANULAR BACKFILL (SPECIAL)	CU YD	1680	1680		
Z0038135	THREE-SIDED PRECAST CONCRETE STRUCTURES, 20' X 10'	FOOT	48		48	
X5430110	CORRUGATED STEEL ARCH LINER	FOOT	48		48	
X0327365	RIVETED CORRUGATED STEEL PIPE	L SUM	1		1	
X0327357	CONSTRUCTION VIBRATION MONITORING	L SUM	1		1	

△NON-PARTICIPATING (100% STATE)

LONCO, INC.
CONSULTING ENGINEERS
1560 WALL ST, SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

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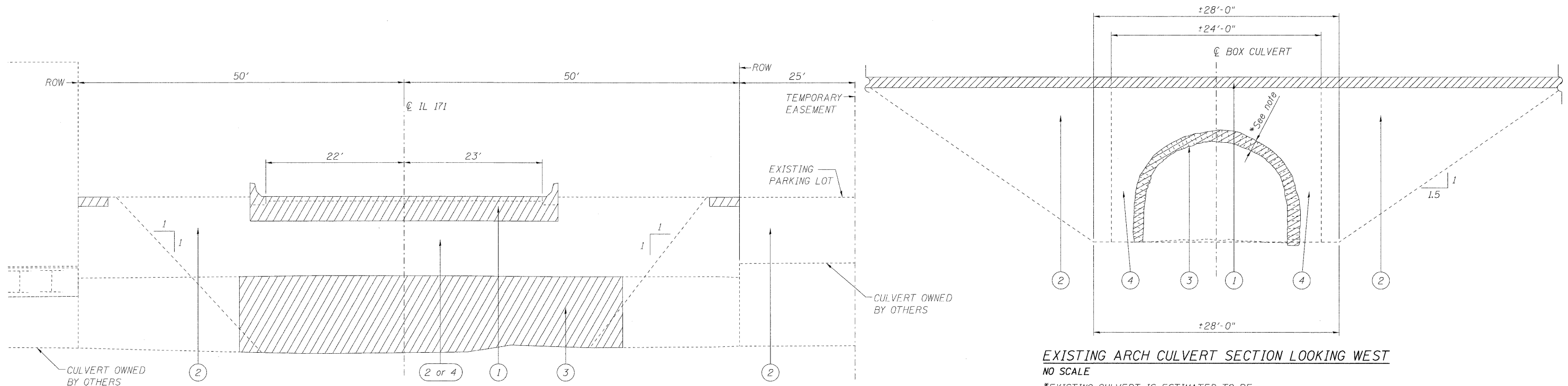
REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES
IL ROUTE 171 OVER MILNE CREEK

SCALE: NONE SHEET NO. 2 OF 2 SHEETS STA. 60+40 TO STA. 63+68

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	D-T	WILL	44	4
D-91-265-06			CONTRACT NO. 60B10	
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

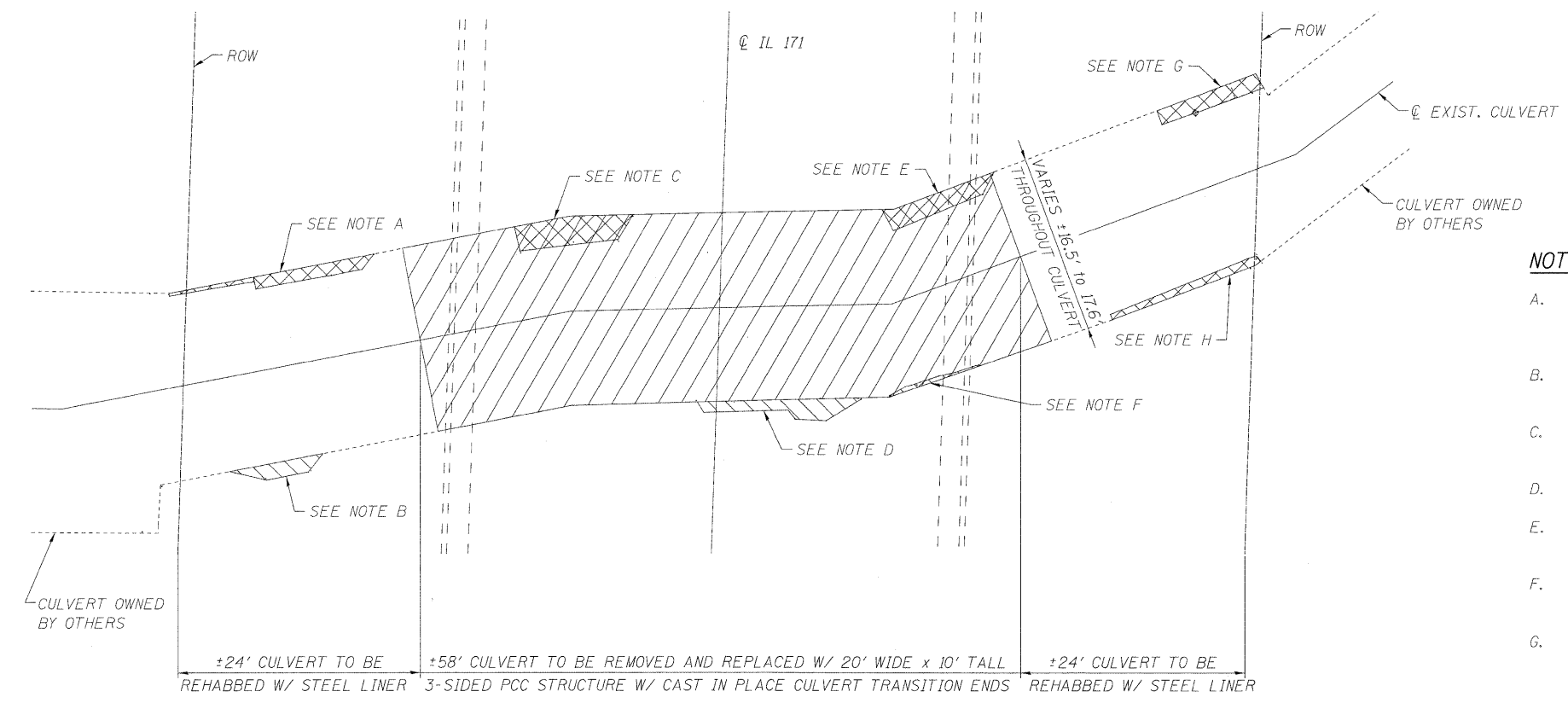


EXISTING CULVERT LONGITUDINAL SECTION LOOKING NORTH
NO SCALE

EXISTING ARCH CULVERT SECTION LOOKING WEST
NO SCALE

*EXISTING CULVERT IS ESTIMATED TO BE APPROXIMATELY 2'-0" IN THICKNESS

NOTE:
DO NOT REMOVE ANY PORTION OF ARCH, FOOTING SOILS, OR BACKFILL SOILS WHERE THE ARCH IS TO BE REHABBED W/ STEEL LINER PLATE.



PLAN VIEW OF EXISTING ARCH CULVERT
NO SCALE

- LEGEND**
- ① PAVEMENT REMOVAL
 - ② EARTH EXCAVATION
 - ③ REMOVAL OF EXISTING STRUCTURES
 - ④ STRUCTURE EXCAVATION

- NOTES**
- A. Existing concrete repairs may need to be chipped away (which may include steel reinforcement to be cut) just enough to fit the new concrete footings and steel liner. See sheet 25 for details. Existing concrete patch is approximately 10'x2'x11' long.
 - B. Collapsed wall void to be filled with grout after steel liner is in place, while the grout is pumped in behind the steel liner. See sheet 25 for details.
 - C. Existing concrete repairs to be removed during Removal of Existing Structures. Existing concrete patch to be removed is approximately 9'x2'x10' long.
 - D. Collapsed wall will be removed during Removal of Existing Structures.
 - E. Existing concrete repairs to be removed during Removal of Existing Structures. Existing concrete patch to be removed is approximately 8'x2'x11' long.
 - F. Existing concrete repairs to be removed during Removal of Existing Structures. Existing concrete patch to be removed is approximately 5'x2'x7' long.
 - G. Existing concrete repairs may need to be chipped away (which may include steel reinforcement to be cut) just enough to fit the new concrete footings and steel liner. See sheet 25 for details. Existing concrete patch is approximately 5'x2'x6' long.
 - H. Existing concrete repairs may need to be chipped away (which may include steel reinforcement to be cut) just enough to fit the new concrete footings and steel liner. See sheet 25 for details. Existing concrete patch is approximately 8'x2'x8' long.

LOCO, INC.
CONSULTING ENGINEERS
1560 WALL ST, SUITE 222
NAPERVILLE, ILLINOIS 60563 Ph: 1630/ 571-9100

DESIGNED - SLV	REVISED -
DRAWN - SLV	REVISED -
CHECKED - MJY, ST	REVISED -
DATE - 10/14/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS
IL ROUTE 171 OVER MILNE CREEK

SCALE: NONE SHEET NO. 1 OF 3 SHEETS STA. 60+40 TO STA. 63+68

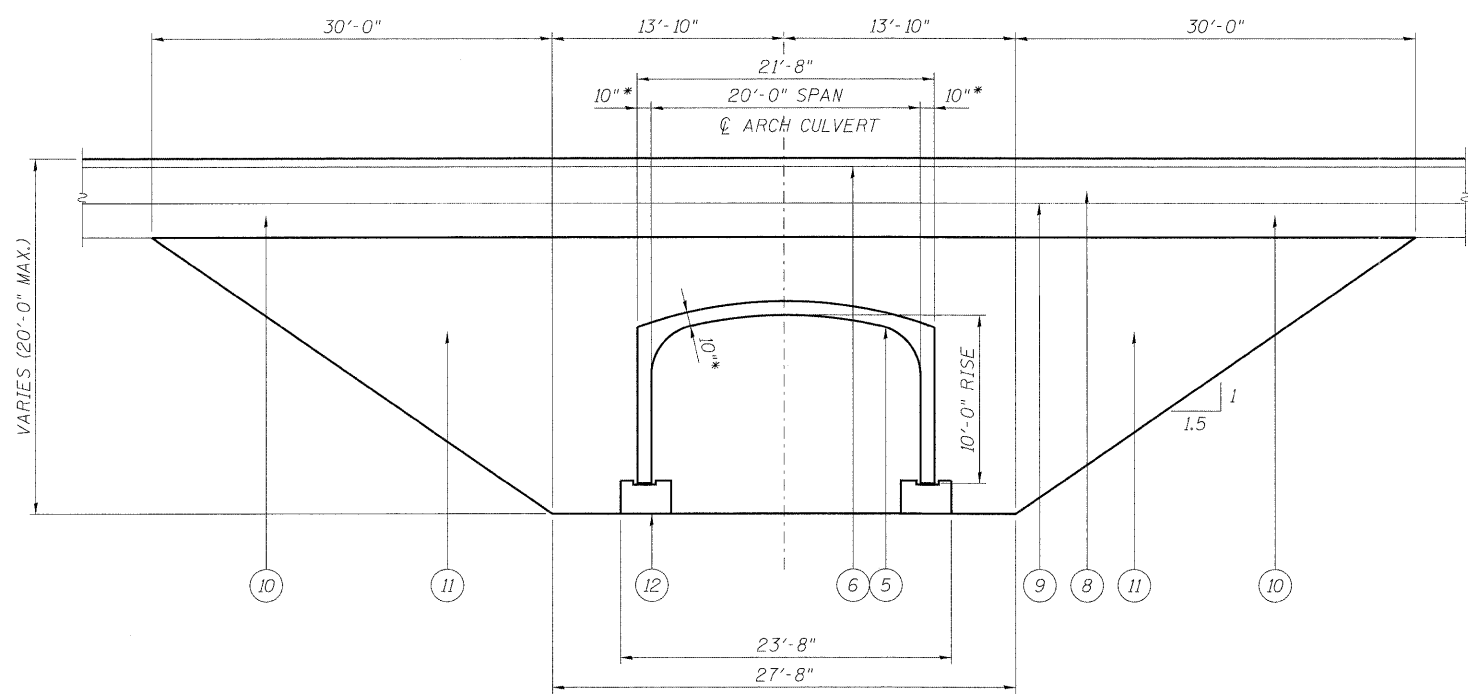
F.A.P. RTE. 577	SECTION D-T	COUNTY WILL	TOTAL SHEETS 44	SHEET NO. 5
D-91-265-06		CONTRACT NO. 60B10		
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

LEGEND

- ⑤ THREE-SIDED PRECAST CONCRETE STRUCTURES, 20' x 10'
- ⑥ PROPOSED HMA SURFACE COURSE, MIX "D", N70, 2"
- ⑦ PROPOSED LEVELING BINDER (MACHINE METHOD), N70, 3/4"
- ⑧ PROPOSED HMA BINDER COURSE IL-19.0, N70, 12" (IN 4 LIFTS)
- ⑨ BITUMINOUS MATERIALS (PRIME COAT)
- ⑩ AGGREGATE SUBGRADE, 12"
- ⑪ COARSE AGGREGATE BACKFILL (SPECIAL)
- ⑫ PROPOSED CONCRETE FOOTINGS FOR 3-SIDED STRUCTURE *
- ⑬ PROPOSED CORRUGATED STEEL ARCH LINER
- ⑭ PROPOSED CONCRETE PAD AND FOOTINGS FOR STEEL LINER *
- ⑮ PROPOSED GROUT TO FILL VOIDS **

* PAID AS CONCRETE STRUCTURES

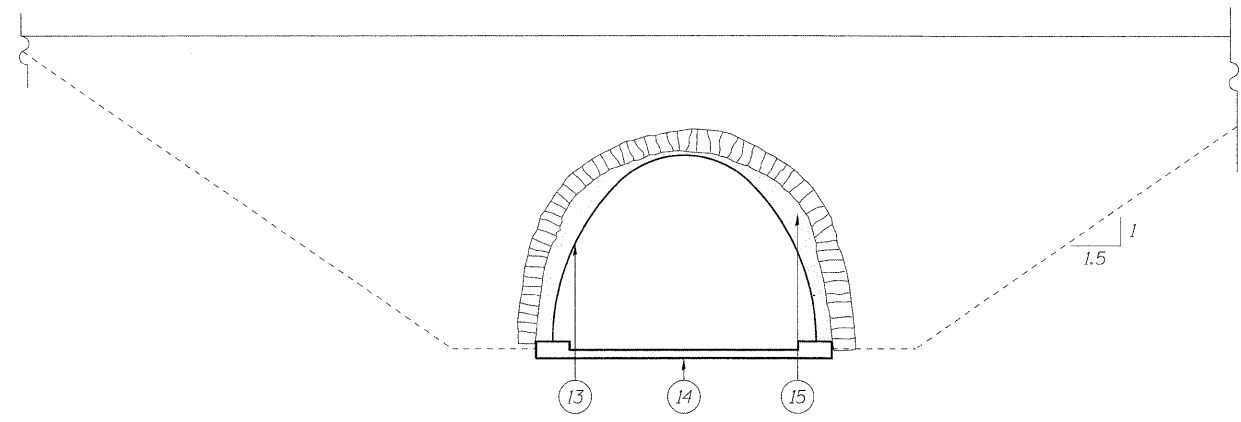
** NOT PAID FOR SEPERATELY, BUT INCLUDED IN THE COST OF CORRUGATED STEEL ARCH LINER



PROPOSED 3-SIDED PCC STRUCTURE SECTION LOOKING WEST

NO SCALE
STREAM STA. 2+60 TO 3+17.42

NOTE:
SLAB AND WALL THICKNESSES MAY VARY AS PER MANUFACTURER'S DESIGN



PROPOSED STEEL LINER REHAB SECTION LOOKING WEST

NO SCALE
STREAM STA. 2+36.26 TO 2+60 AND STA. 3+17.42 TO 3+41.85

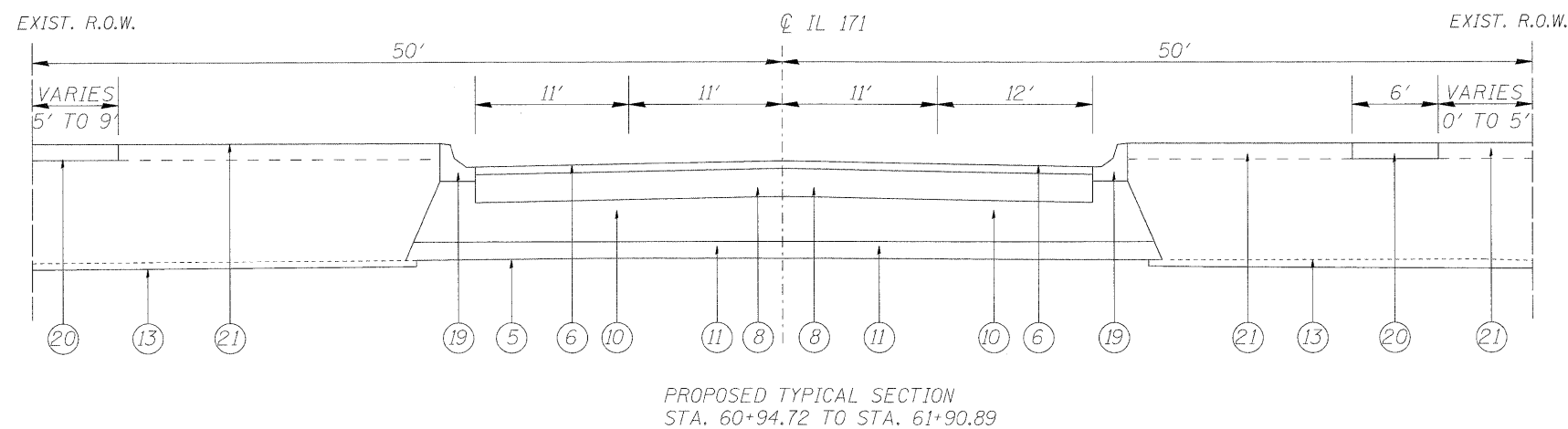
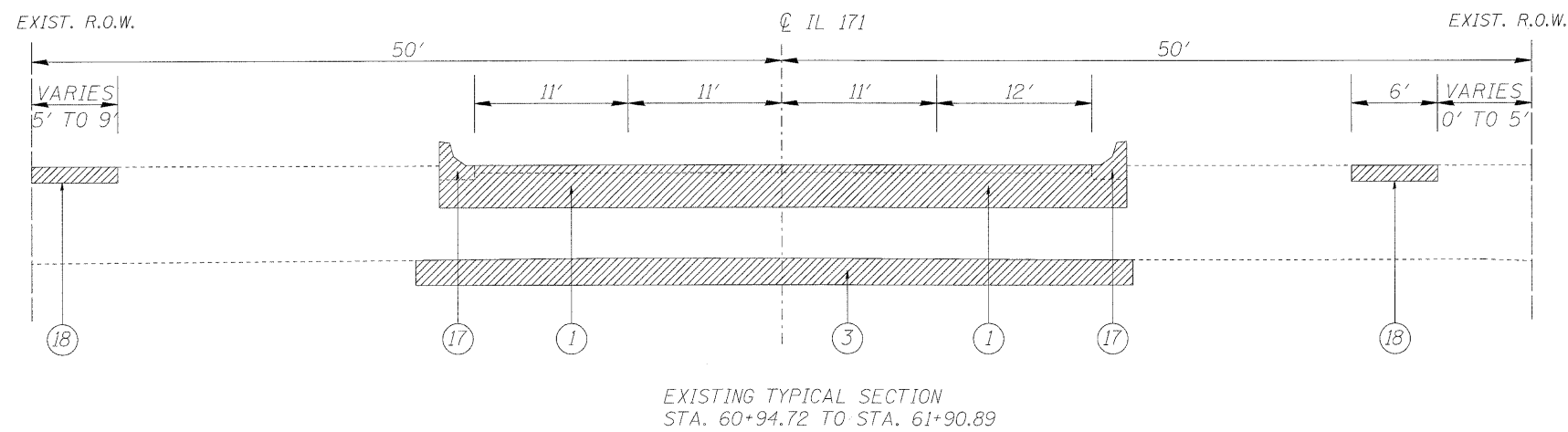
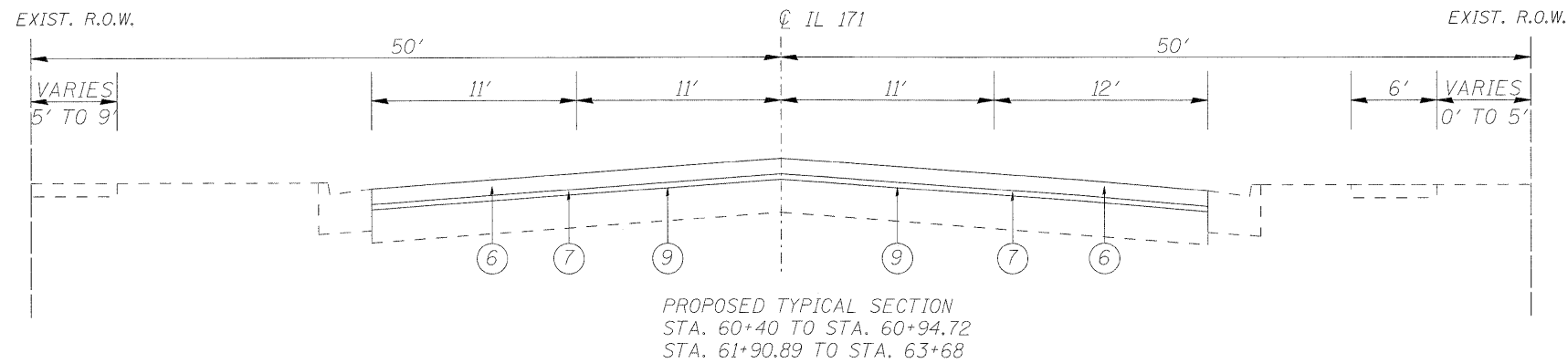
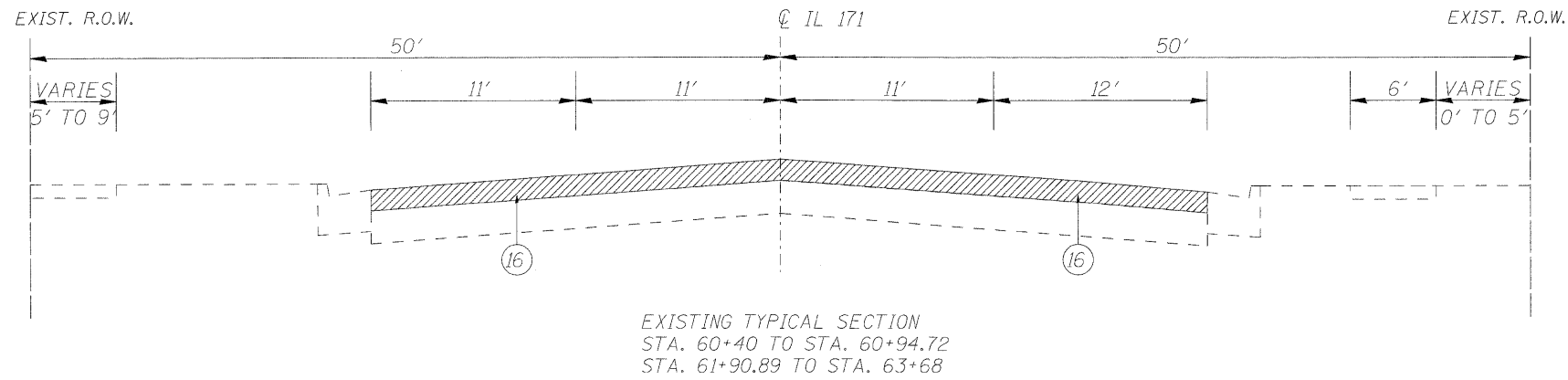
HOT-MIX ASPHALT MIXTURE REQUIREMENTS		
MIXTURE TYPE	DESIGN AIR VOIDS	THICKNESS
ROADWAY RECONSTRUCTION		
HMA SURFACE COURSE, MIX "D", N70 (IL-9.5 mm)	4% @ 70 GYR	2"
HMA BINDER COURSE, IL-19.0, N70	4% @ 70 GYR	12"
ROADWAY RESURFACING		
HMA SURFACE COURSE, MIX "D", N70 (IL-9.5 mm)	4% @ 70 GYR	2"
LEVELING BINDER (MACHINE METHOD), N70	4% @ 70 GYR	3/4"
PAVEMENT PATCHING		
CLASS D PATCH (HMA BINDER IL-19 mm)	4% @ 70 GYR	9"
HMA REPLACEMENT OVER PATCHES (HMA BINDER IL-19 mm)	4% @ 70 GYR	2 1/2"

NOTES:

THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE COURSE MIXTURES IS 112 LBS/SQ-YD/IN.

THE CONTRACTOR SHALL PATCH FIRST BEFORE MILLING

THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 76 -22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64 -22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS.
FOR "PERCENT OF RAP" SEE DISTRICT ONE SPECIAL PROVISIONS.



LEGEND

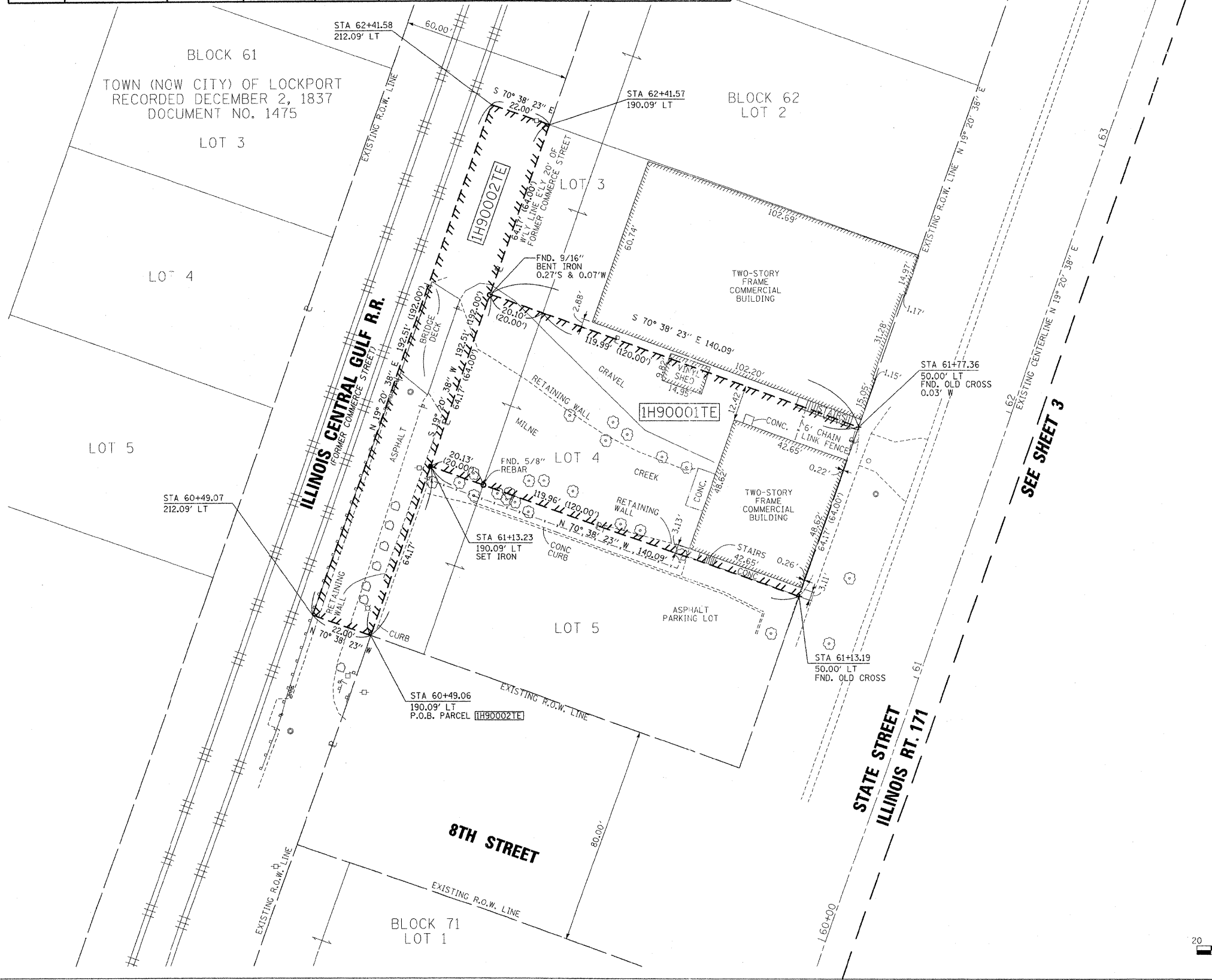
- ① PAVEMENT REMOVAL
- ③ REMOVAL OF EXISTING STRUCTURES
- ⑤ THREE-SIDED PRECAST CONCRETE STRUCTURES, 20' x 10'
- ⑥ PROPOSED HMA SURFACE COURSE, MIX "D", N70, 2"
- ⑦ PROPOSED LEVELING BINDER (MACHINE METHOD), N70, 3/4"
- ⑧ PROPOSED HMA BINDER COURSE IL-19.0, N70, 12" (IN 4 LIFTS)
- ⑨ BITUMINOUS MATERIALS (PRIME COAT)
- ⑩ AGGREGATE SUBGRADE, 12"
- ⑪ COARSE AGGREGATE BACKFILL (SPECIAL)
- ⑬ PROPOSED CORRUGATED STEEL ARCH LINER
- ⑯ HMA SURFACE REMOVAL, 2 1/2"
- ⑰ EXISTING COMBINATION CURB AND GUTTER REMOVAL
- ⑱ EXISTING SIDEWALK REMOVAL
- ⑲ PROPOSED COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24
- ⑳ PROPOSED PCC SIDEWALK, 5"
- ㉑ PROPOSED COMPOST FURNISH AND PLACE, 4", WITH SEEDING, CLASS 4

* PAID AS CONCRETE STRUCTURES

** NOT PAID FOR SEPERATELY, BUT INCLUDED IN THE COST OF CONCRETE STRUCTURES

PART OF THE NORTHWEST QUARTER SECTION 23, T.36N., R.10E., OF THE 3rd. P.M. WILL COUNTY, ILLINOIS

PARCEL NO.	OWNER	TOTAL HOLDING ACRES	PART TAKEN ACRES	REMAINDER ACRES	PREVIOUSLY DED. ACRES	EASEMENT ACRES	EASEMENT PURPOSE	PERMANENT ID. NO.	PROPERTY ACQUIRED BY
1H90001	DONALD F. & JANICE A. ROSE	0.206	N/A	0.206	N/A	0.206	DRAINAGE	04-23-147-004 04-23-147-007 04-23-147-011 04-23-147-012	-
1H90002	ILLINOIS CENTRAL GULF RAILROAD	N/A	N/A	N/A	N/A	0.097	CONSTRUCTION	04-23-503-010	-



LEGEND

- SECTION CORNER
 - QUARTER SECTION CORNER
 - TYPICAL COORDINATE POINT NUMBER
 - SECTION LINE
 - QUARTER SECTION LINE
 - QUARTER, QUARTER SECTION LINE
 - PLATTED LOT LINES
 - PROPERTY (DEED) LINE
 - APPARENT PROPERTY LINE
 - CENTERLINE
 - EXISTING RIGHT OF WAY LINE
 - PROPOSED RIGHT OF WAY LINE
 - PROPOSED PERMANENT EASEMENT
 - MEASURED DIMENSION
 - COMPUTED DIMENSION
 - RECORDED DIMENSION
 - RECORDED DIMENSION
 - EXISTING BUILDING
 - DENOTES TYPICAL I.S.H.T.A. PARCEL NUMBER
 - IRON PIPE OR ROD FOUND
 - "MAG" NAIL SET
 - CUT CROSS FOUND OR SET
 - IRON PIPE SET
 - T1 THESE STAKES REFERENCE FOUND MONUMENTATION. SET 5/8 INCH IRON ROD FLUSH WITH GROUND TO TIE FOUND IRON STAKE IDENTIFIED BY COLORED PLASTIC CAP BEARING SURVEYORS REGISTRATION NUMBER.
 - BT1 THESE STAKES, IN CULTIVATED AREAS, REFERENCE FOUND MONUMENTATION. BURIED 5/8 INCH IRON ROD 20 INCHES BELOW GROUND TO TIE TP FOUND IRON STAKE. IDENTIFIED BY COLORED PLASTIC CAP BEARING SURVEYORS REGISTRATION NUMBER.
 - M STAKING OF PROPOSED RIGHT OF WAY. SET DIVISION OF HIGHWAYS SURVEY MARKER TO MONUMENT THE POSITION SHOWN. IDENTIFIED BY INSCRIPTION DATA AND SURVEYORS REGISTRATION NUMBER.
 - M STAKING OF PROPOSED RIGHT OF WAY IN CULTIVATED AREAS. BURIED 5/8 INCH METAL ROD 20 INCHES BELOW GROUND TO MARK FUTURE SURVEY DISK POSITION IDENTIFIED BY COLORED PLASTIC CAP BEARING SURVEYORS REGISTRATION NUMBER.
 - P PERMANENT SURVEY MARKER, I.D.O.T. STD. 2135 (TO BE SET BY OTHERS).
 - R RIGHT OF WAY STAKING PROPOSED TO BE SET.
- OTHERWISE NOTED. ALL DISTANCES ARE MEASURED UNLESS.

STATE OF ILLINOIS)
 COUNTY OF WILL)
 THIS IS TO CERTIFY THAT I, ROBERT A. ROGINA, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, HAVE SURVEYED THE PLAT OF HIGHWAYS SHOWN HERE ON BETWEEN SECTION 23, TOWNSHIP 36 NORTH, AND RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, WILL COUNTY; THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF; THAT THE PLAT CORRECTLY REPRESENTS SAID SURVEY, THAT ALL MONUMENTS FOUND AND ESTABLISHED ARE OF PERMANENT QUALITY AND OCCUPY THE POSITIONS SHOWN THEREON AND THAT THE MONUMENTS ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED, MADE FOR THE DEPARTMENT OF TRANSPORTATION, STATE OF ILLINOIS.
 THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT MINIMUM ILLINOIS STANDARDS FOR A BOUNDARY SURVEY.

DATED AT JOLIET, ILLINOIS THIS _____ DAY OF _____, 2010 A.D.

PROFESSIONAL ILLINOIS LAND SURVEYOR NO. 2017
 LICENSE EXPIRES 11/30/12

NOTE:
 BASIS OF BEARINGS IS THE ILLINOIS STATE PLANE COORDINATE SYSTEM EAST ZONE, NAD 83.
 SHEET ONE IS A COVER SHEET AND IS NOT RECORDED.

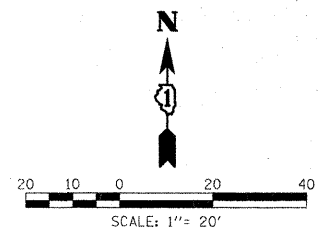


RECEIVED
 FEB 08 2011
 PLATS & LEGALS

PREPARED BY: **ROGINA & ASSOCIATES, LTD.**
 ENGINEERS SURVEYORS PLANNERS
 93 Caterpillar Drive - Joliet, Illinois - 815/729-0777 - FAX 815/729-0782
 PROFESSIONAL DESIGN FIRM LICENSE NO. 184-001108

REVISION		ILLINOIS DEPT. OF TRANSPORTATION PLAT OF HIGHWAYS
DATE	DESCRIPTION	
9/17/09	PER IDOT	
1/11/10	PER IDOT	
2/07/11	PER IDOT	

ROUTE: IL. ROUTE 171
 SECTION: OVER MILNE CREEK
 COUNTY: WILL
 JOB#: R-91-026-08 PROJECT#: SEC 23 T 36N, R 10E OF 3rd P.M.
 STA. 60+00 TO STA. 63+50
 DRAWN: M.MILTON CHECKED: J.KELLA
 SCALE: 1"= 20' SHEET NO. 2 OF 3

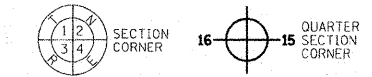


PLOT DATE = 2/08/2011
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 PLOT SCALE = 800/1
 USER NAME = R08/11/11

86 44

PART OF THE NORTHWEST QUARTER SECTION 23, T.36N., R.10E., OF THE 3rd. P.M. WILL COUNTY, ILLINOIS

LEGEND



- TYPICAL COORDINATE POINT NUMBER
- SECTION LINE
- QUARTER SECTION LINE
- QUARTER, QUARTER SECTION LINE
- PLATTED LOT LINES
- PROPERTY (DEED) LINE
- APPARENT PROPERTY LINE
- CENTERLINE
- EXISTING RIGHT OF WAY LINE
- PROPOSED RIGHT OF WAY LINE
- PROPOSED PERMANENT EASEMENT
- 129.32' MEASURED DIMENSION
- 129.32' (COMP) COMPUTED DIMENSION
- (129.32') RECORDED DIMENSION
- 129.322m RECORDED DIMENSION
- EXISTING BUILDING
- T-9A-05-010 DENOTES TYPICAL I.S.H.T.A. PARCEL NUMBER

- IRON PIPE OR ROD FOUND ⊕ "MAG" NAIL SET
 - + CUT CROSS FOUND OR SET ● IRON PIPE SET
 - T1 THESE STAKES REFERENCE FOUND MONUMENTATION. SET 5/8 INCH IRON ROD FLUSH WITH GROUND TO TIE FOUND IRON STAKE IDENTIFIED BY COLORED PLASTIC CAP BEARING SURVEYORS REGISTRATION NUMBER.
 - BT1 THESE STAKES, IN CULTIVATED AREAS, REFERENCE FOUND MONUMENTATION. BURIED 5/8 INCH IRON ROD 20 INCHES BELOW GROUND TO TIE TP FOUND IRON STAKE. IDENTIFIED BY COLORED PLASTIC CAP BEARING SURVEYORS REGISTRATION NUMBER.
 - STAKING OF PROPOSED RIGHT OF WAY. SET DIVISION OF HIGHWAYS SURVEY MARKER TO MONUMENT THE POSITION SHOWN. IDENTIFIED BY INSCRIPTION DATA AND SURVEYORS REGISTRATION NUMBER.
 - M STAKING OF PROPOSED RIGHT OF WAY IN CULTIVATED AREAS. BURIED 5/8 INCH METAL ROD 20 INCHES BELOW GROUND TO MARK FUTURE SURVEY DISK POSITION IDENTIFIED BY COLORED PLASTIC CAP BEARING SURVEYORS REGISTRATION NUMBER.
 - ⊙ PERMANENT SURVEY MARKER, I.D.O.T. STD. 2135 (TO BE SET BY OTHERS).
 - RIGHT OF WAY STAKING PROPOSED TO BE SET.
- OTHERWISE NOTED, ALL DISTANCES ARE MEASURED UNLESS.

STATE OF ILLINOIS)
) SS
 COUNTY OF WILL)

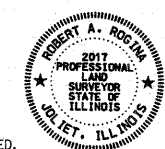
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THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT MINIMUM ILLINOIS STANDARDS FOR A BOUNDARY SURVEY.

DATED AT JOLIET, ILLINOIS THIS _____ DAY OF _____, 2010 A.D.

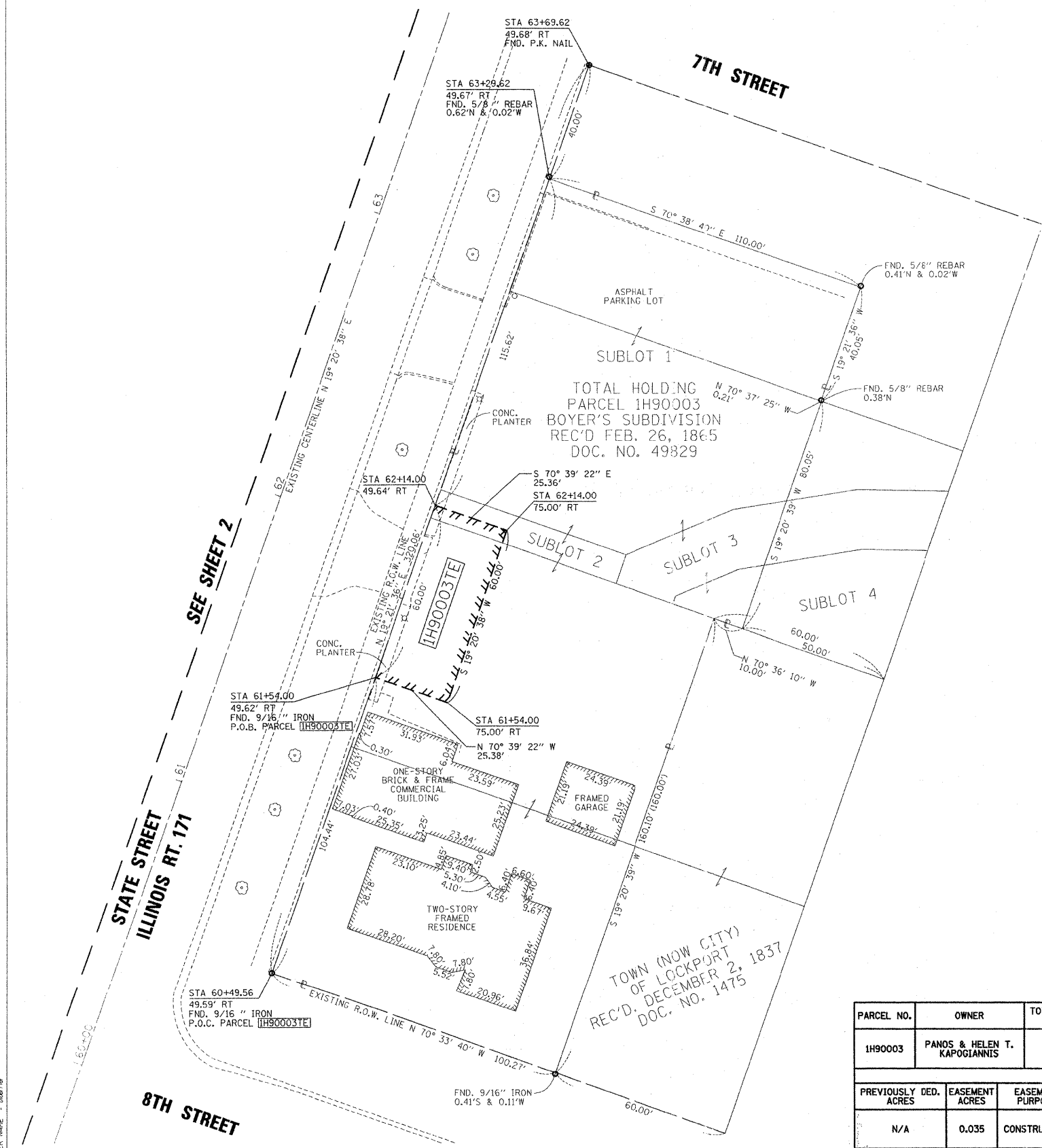
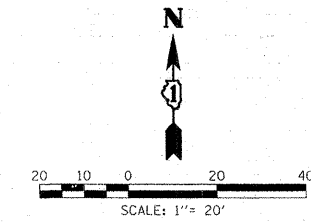
PROFESSIONAL ILLINOIS LAND SURVEYOR NO. 2017
 LICENSE EXPIRES 11/30/10

NOTE:
 BASIS OF BEARINGS IS THE ILLINOIS STATE PLANE COORDINATE SYSTEM EAST ZONE, NAD 83.
 SHEET ONE IS A COVER SHEET AND IS NOT RECORDED.



PREPARED BY: **ROGINA & ASSOCIATES, LTD.**
 ENGINEERS SURVEYORS PLANNERS
 93 Caterpillar Drive • Joliet, Illinois • 815/729-0777 • FAX 815/729-0782
 PROFESSIONAL DESIGN FIRM LICENSE NO. 184-001106

REVISION		ILLINOIS DEPT. OF TRANSPORTATION PLAT OF HIGHWAYS
DATE	DESCRIPTION	
		ROUTE: IL. ROUTE 171
		SECTION: OVER MILNE CREEK
		COUNTY: WILL
		JOB#: R-91-026-08 PROJECT#:
		SEC 23 T 36N, R10E OF 3rd P.M.
		STA. 60+00 TO STA. 63+50
		DRAWN: M.MILTON CHECKED: J.KELLA
		SCALE: 1"=20' SHEET NO. 3 OF 3



PARCEL NO.	OWNER	TOTAL HOLDING ACRES	PART TAKEN ACRES	REMAINDER ACRES
1H90003	PANOS & HELEN T. KAPOGIANNIS	0.672	N/A	0.672

PREVIOUSLY DED. ACRES	EASEMENT ACRES	EASEMENT PURPOSE	PERMANENT ID. NO.	PROPERTY ACQUIRED BY
N/A	0.035	CONSTRUCTION	04-23-151-002 04-23-151-004 04-23-151-006	-

PLOT DATE = 05/11/2010
 FILE NAME = I:\WORK\2010\118_1425\118_1425.dwg
 PLOT SCALE = 1/4"=20'
 USER NAME = bobr/10

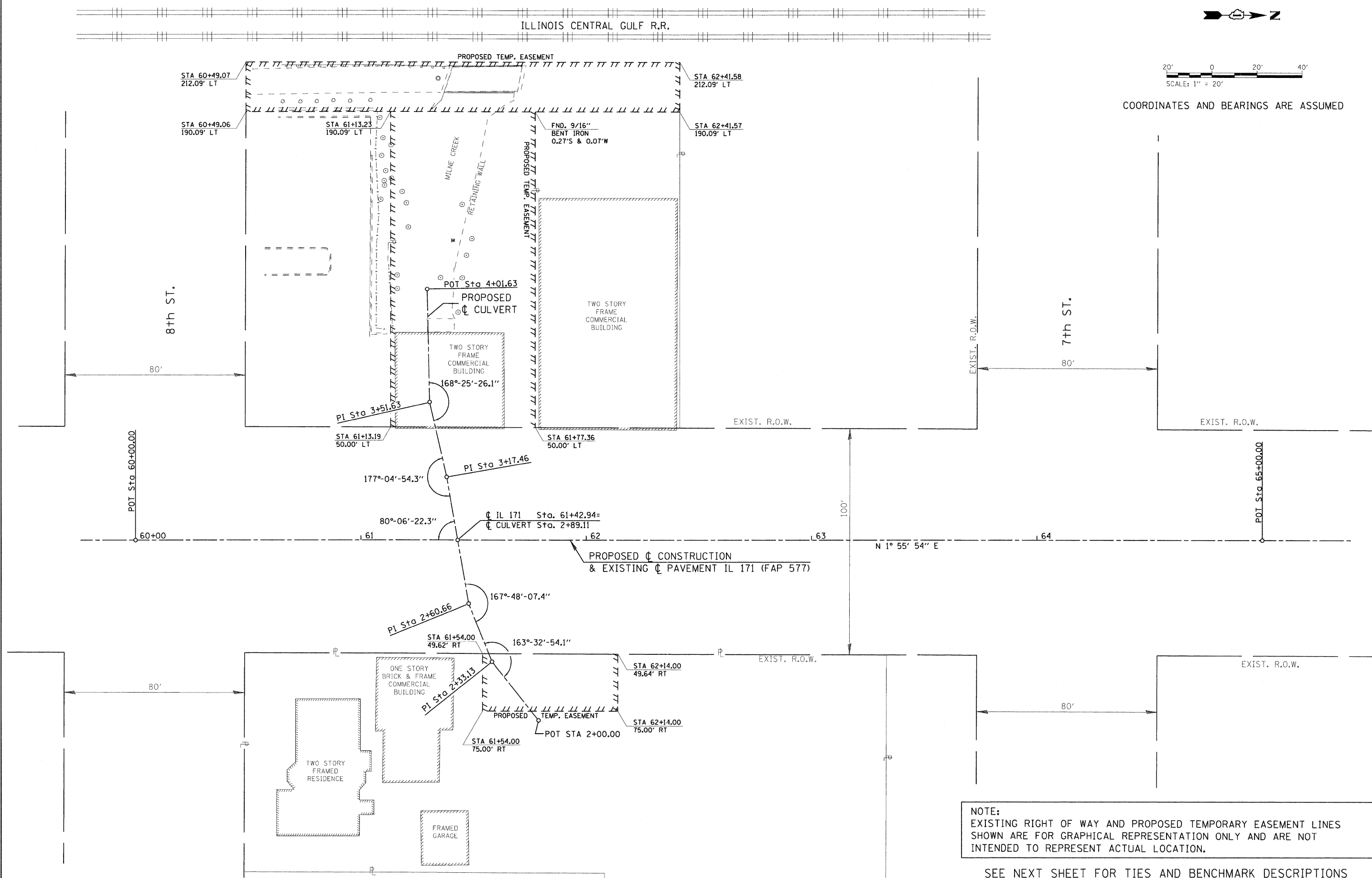
9 of 44

ILLINOIS CENTRAL GULF R.R.



20' 0 20' 40'
SCALE: 1" = 20'

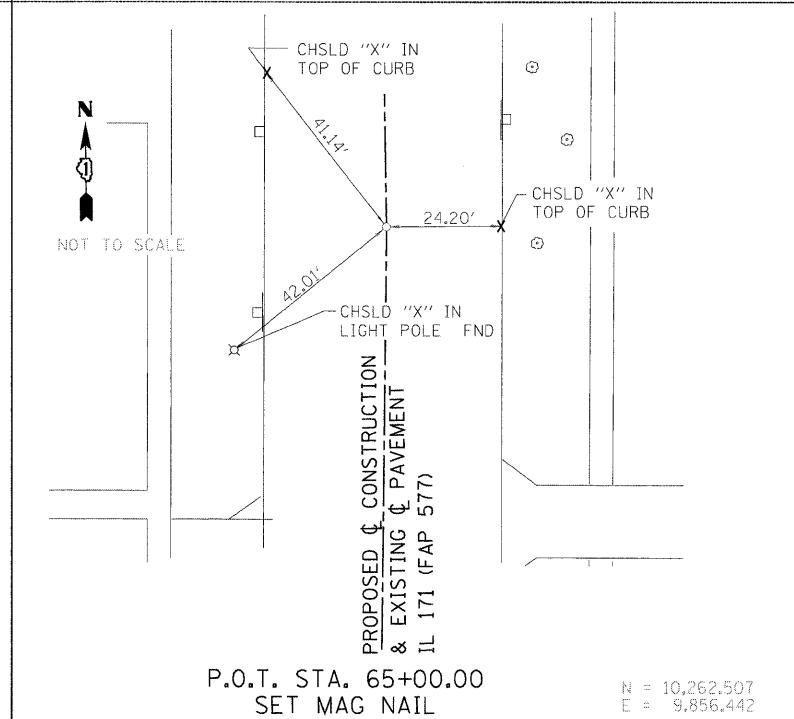
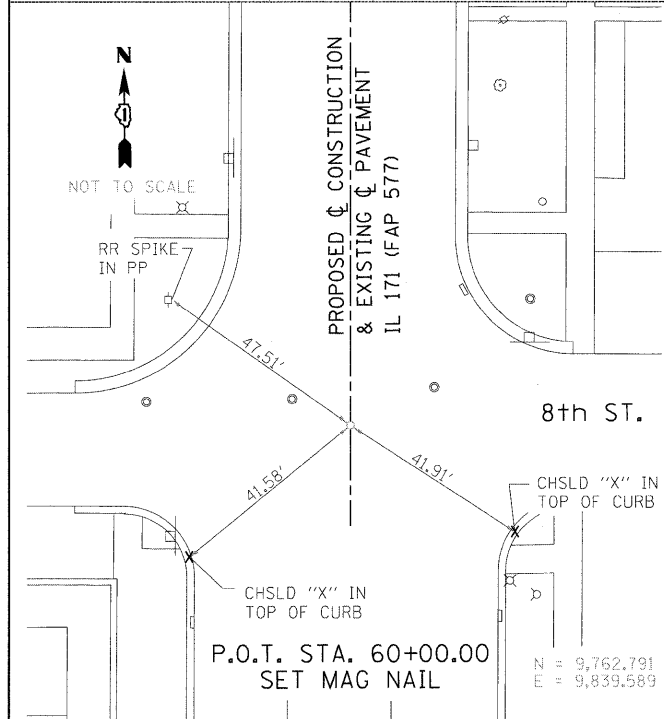
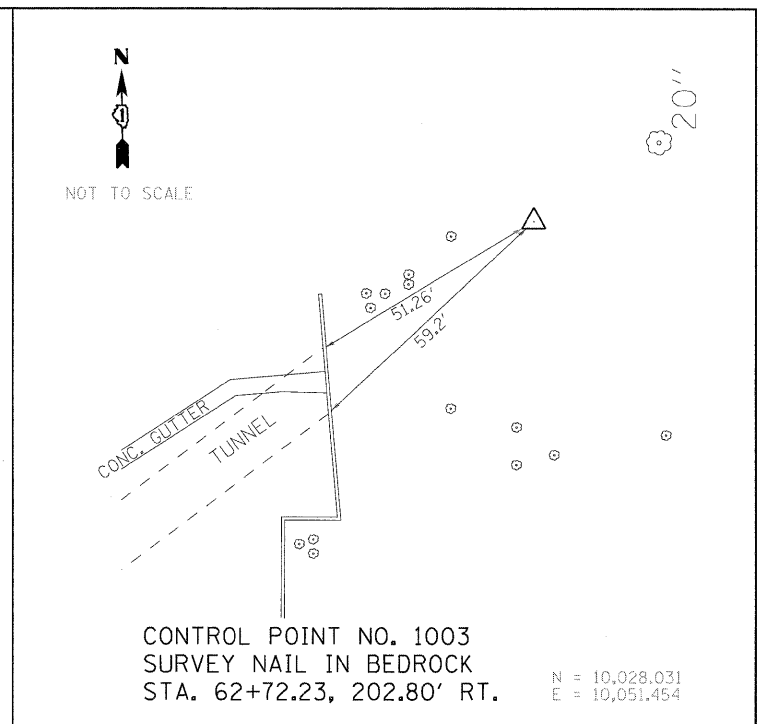
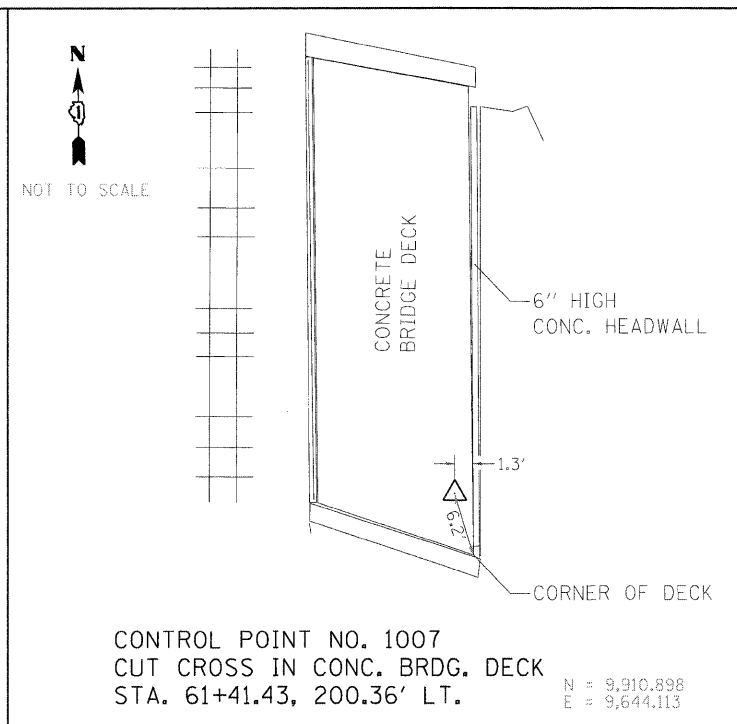
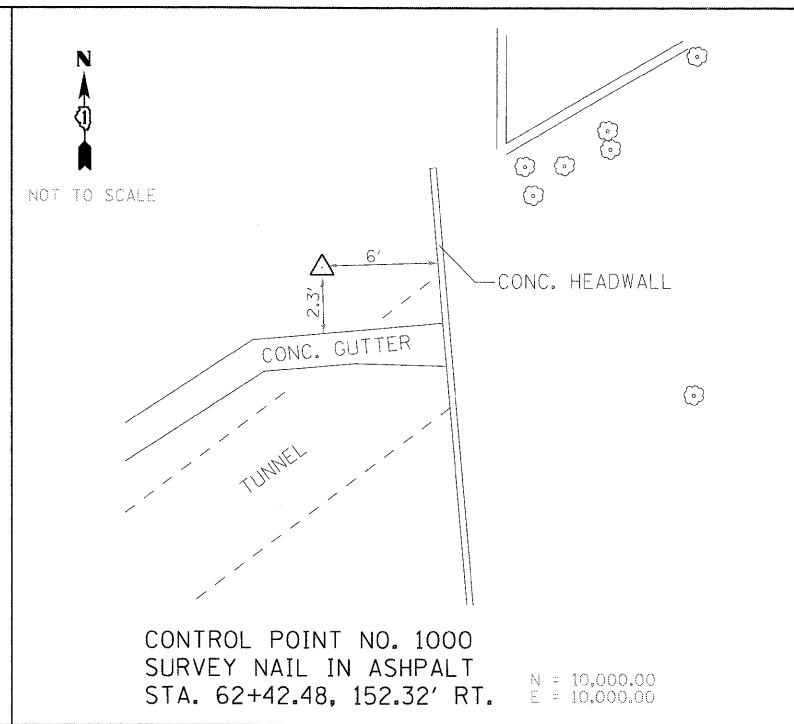
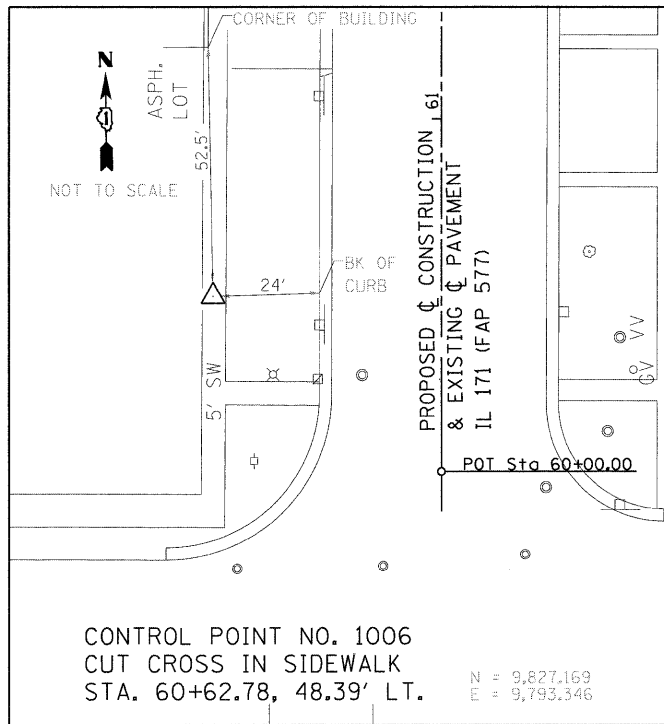
COORDINATES AND BEARINGS ARE ASSUMED



NOTE:
EXISTING RIGHT OF WAY AND PROPOSED TEMPORARY EASEMENT LINES SHOWN ARE FOR GRAPHICAL REPRESENTATION ONLY AND ARE NOT INTENDED TO REPRESENT ACTUAL LOCATION.

SEE NEXT SHEET FOR TIES AND BENCHMARK DESCRIPTIONS

FILE NAME #FILEL#	USER NAME = #USER#	DESIGNED - GLW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ALIGNMENT, TIES & BENCHMARKS IL ROUTE 171 OVER MILNE CREEK	F.A.P. RTE. 577	SECTION D-T	COUNTY WILL	TOTAL SHEETS 44	SHEET NO. 10	
PLOT SCALE = #SCALE#	CHECKED - MJY	DATE - 10/14/2011	REVISED -			SCALE: 1" = 20'	SHEET NO. 1 OF 2 SHEETS	D-91-265-06		CONTRACT NO. 60B10	
PLOT DATE = #DATE#						STA. 60+00.00 TO STA. 65+00.00		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			



BENCHMARK BM #1001
CUT CROSS IN TOP OF EAST HEADWALL OF CULVERT
IL 171 CULVERT OVER MILNE CREEK; STA. = 62+42.7,
OFFSET = 158.78' RIGHT
ELEV. = 602.87

BENCHMARK #14
RR SPIKE IN EAST SIDE OF POWER POLE IN NW CORNER
OF IL 171 AND 8TH AVE; STA. = 60+27.7, OFFSET = 38.64' LEFT
ELEV. = 601.34

NOTE: STATION/OFFSETS ARE BASED ON THE PROPOSED & CONSTRUCTION
NOTE: ELEVATIONS ARE REFERENCED TO NGVD 1929

COORDINATES AND BEARINGS ARE ASSUMED

FILE NAME	USER NAME * #USER*	DESIGNED - CLW	REVISED -	<p align="center">STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</p>	<p align="center">ALIGNMENT, TIES & BENCHMARKS IL ROUTE 171 OVER MILNE CREEK</p>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILE#	PLOT SCALE = #SCALE#	DRAWN - GLW	REVISED -			577	D-T	WILL	44	11	
	PLOT DATE = #DATE#	CHECKED - MJY	REVISED -			D-91-265-06		CONTRACT NO. 60B10			
		DATE - 10/14/2011	REVISED -			SCALE: 1" = 20'	SHEET NO. 2 OF 2 SHEETS	STA. 60+00.00 TO STA. 65+00.00	ILLINOIS FED. AID PROJECT		



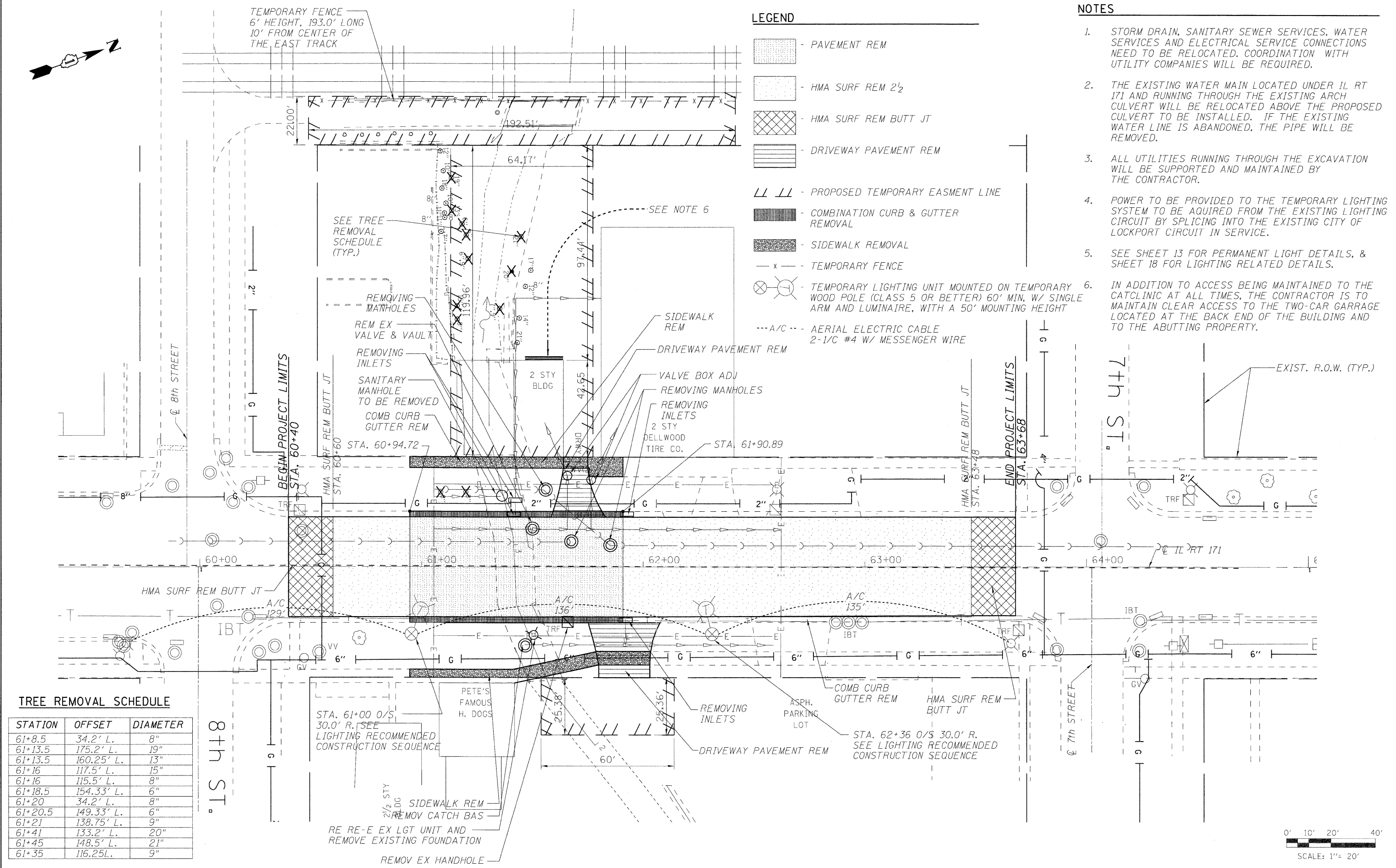
TEMPORARY FENCE
6' HEIGHT, 193.0' LONG
10' FROM CENTER OF
THE EAST TRACK

LEGEND

- PAVEMENT REM
- HMA SURF REM 2 1/2
- HMA SURF REM BUTT JT
- DRIVEWAY PAVEMENT REM
- PROPOSED TEMPORARY EASEMENT LINE
- COMBINATION CURB & GUTTER REMOVAL
- SIDEWALK REMOVAL
- TEMPORARY FENCE
- TEMPORARY LIGHTING UNIT MOUNTED ON TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 60' MIN. W/ SINGLE ARM AND LUMINAIRE, WITH A 50' MOUNTING HEIGHT
- AERIAL ELECTRIC CABLE 2-1/C #4 W/ MESSENGER WIRE

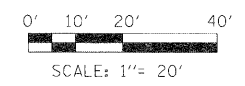
NOTES

1. STORM DRAIN, SANITARY SEWER SERVICES, WATER SERVICES AND ELECTRICAL SERVICE CONNECTIONS NEED TO BE RELOCATED. COORDINATION WITH UTILITY COMPANIES WILL BE REQUIRED.
2. THE EXISTING WATER MAIN LOCATED UNDER IL RT 171 AND RUNNING THROUGH THE EXISTING ARCH CULVERT WILL BE RELOCATED ABOVE THE PROPOSED CULVERT TO BE INSTALLED. IF THE EXISTING WATER LINE IS ABANDONED, THE PIPE WILL BE REMOVED.
3. ALL UTILITIES RUNNING THROUGH THE EXCAVATION WILL BE SUPPORTED AND MAINTAINED BY THE CONTRACTOR.
4. POWER TO BE PROVIDED TO THE TEMPORARY LIGHTING SYSTEM TO BE ACQUIRED FROM THE EXISTING LIGHTING CIRCUIT BY SPLICING INTO THE EXISTING CITY OF LOCKPORT CIRCUIT IN SERVICE.
5. SEE SHEET 13 FOR PERMANENT LIGHT DETAILS, & SHEET 18 FOR LIGHTING RELATED DETAILS.
6. IN ADDITION TO ACCESS BEING MAINTAINED TO THE CATCLINIC AT ALL TIMES, THE CONTRACTOR IS TO MAINTAIN CLEAR ACCESS TO THE TWO-CAR GARAGE LOCATED AT THE BACK END OF THE BUILDING AND TO THE ABUTTING PROPERTY.



TREE REMOVAL SCHEDULE

STATION	OFFSET	DIAMETER
61+8.5	34.2' L.	8"
61+13.5	175.2' L.	19"
61+13.5	160.25' L.	13"
61+16	117.5' L.	15"
61+16	115.5' L.	8"
61+18.5	154.33' L.	6"
61+20	34.2' L.	8"
61+20.5	149.33' L.	6"
61+21	138.75' L.	9"
61+41	133.2' L.	20"
61+45	148.5' L.	21"
61+35	116.25' L.	9"



LONCO, INC.
CONSULTING ENGINEERS
1560 WALL ST., SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 571-9100

DESIGNED - SLV	REVISED -
DRAWN - SLV	REVISED -
CHECKED - MJY, ST	REVISED -
DATE - 10/14/2011	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

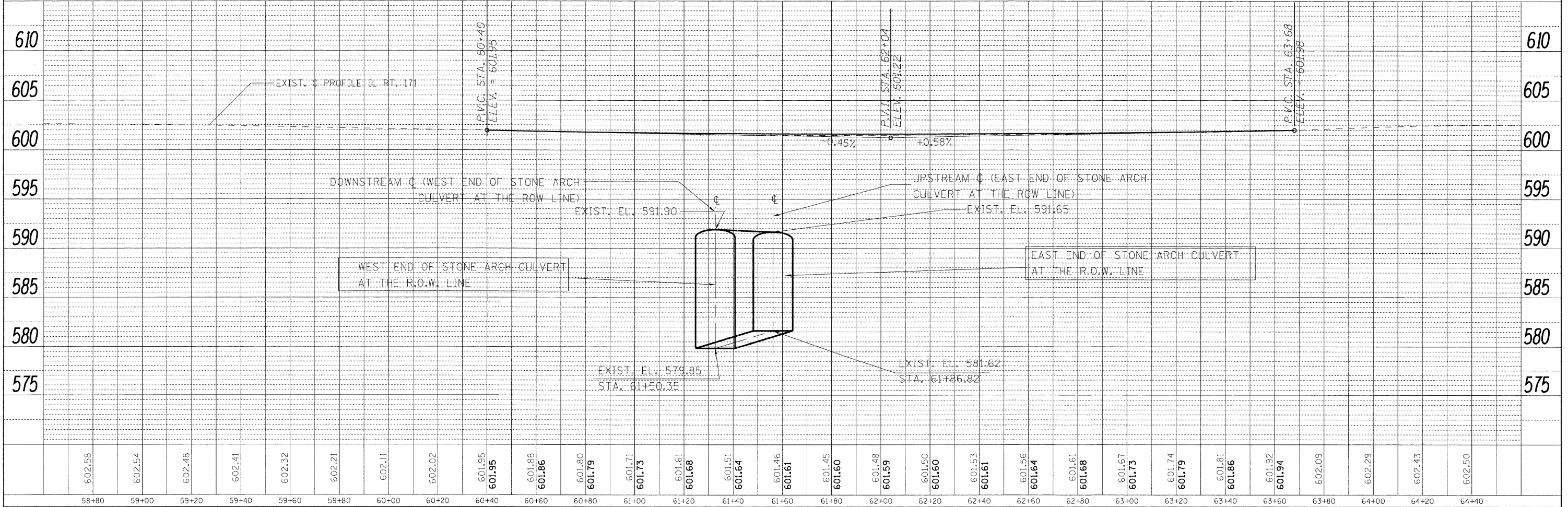
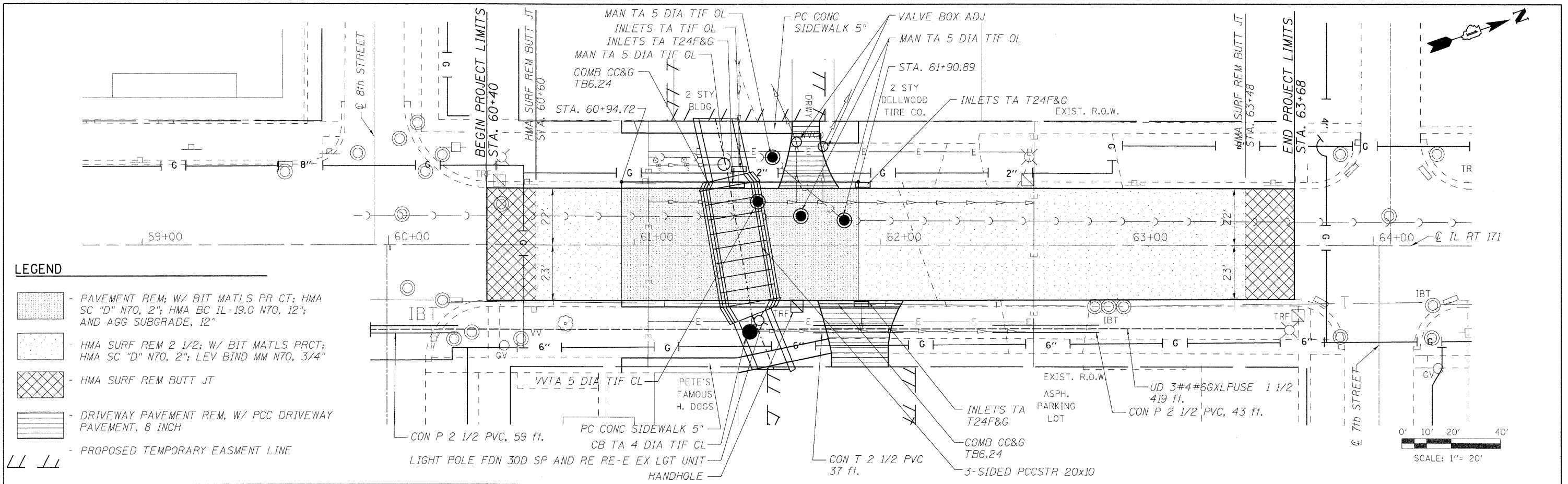
**DEMOLITION AND UTILITY PLAN
IL ROUTE 171 OVER MILNE CREEK**

SCALE: NONE SHEET NO. 1 OF 1 SHEET STA. 60+40 TO STA. 63+68

F.A.P. RTE. 577	SECTION D-T	COUNTY WILL	TOTAL SHEETS 44	SHEET NO. 12
D-91-265-06		CONTRACT NO. 60B10		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

DATE	
PLAN	
SURVEYED	
ALIGNED	
CHECKED	
BY	
NO.	
NOTE BOOK	
NO.	
NO.	

DATE	
BY	
PROFILE	
SURVEYED	
GRADES	
CHECKED	
BY	
NO.	
NOTE BOOK	
NO.	
NO.	



LOWCO, INC.
CONSULTING ENGINEERS
1560 WALL ST, SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: 630/577-9100

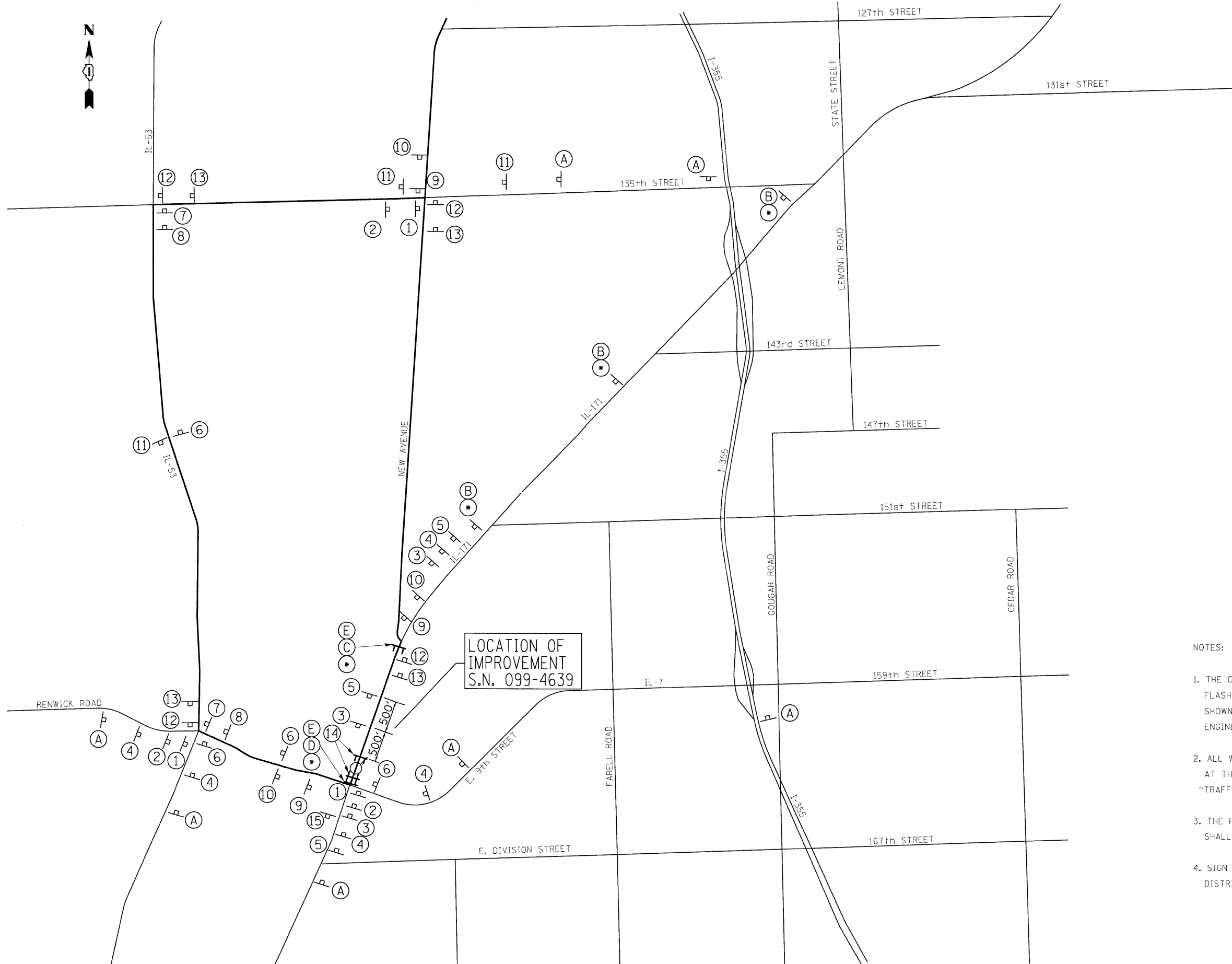
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DRAWN	- ST	REVISED	-
CHECKED	- MJY, SLV	REVISED	-
DATE	- 10/14/2011	REVISED	-

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**




**PLAN AND PROFILE
IL ROUTE 171 OVER MILNE CREEK**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. 60+40 TO 63+68

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	D-T	WILL	44	13
D-91-265-06			CONTRACT NO. 60B10	
ILLINOIS FED. AID PROJECT				



LEGEND:

-  SIGN
-  TYPE III BARRICADE WITH TWO FLASHING LIGHTS
-  SIGN MOUNTED ON TYPE III BARRICADE

NOTES:

1. THE CONTRACTOR SHALL FURNISH ALL SIGNS, POSTS, FLASHING LIGHTS AND ERECT SIGNS AT THE LOCATIONS SHOWN ON THE PLANS, AS DIRECTED BY THE RESIDENT ENGINEER.
2. ALL WORK SHOWN ON THIS SHEET SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LUMP SUM, FOR "TRAFFIC CONTROL AND PROTECTION (SPECIAL)".
3. THE HEIGHT TO THE BOTTOM OF THE LOWEST SIGN SHALL NOT BE LESS THAN 6'.
4. SIGN PLACEMENT SHALL BE DONE ACCORDING TO DISTRICT STANDARD TC-21. SEE SHEET 15B FOR DETAILS.

Lin Engineering, Ltd.
Consulting Engineers
Chatham, Illinois
Westmont, Illinois

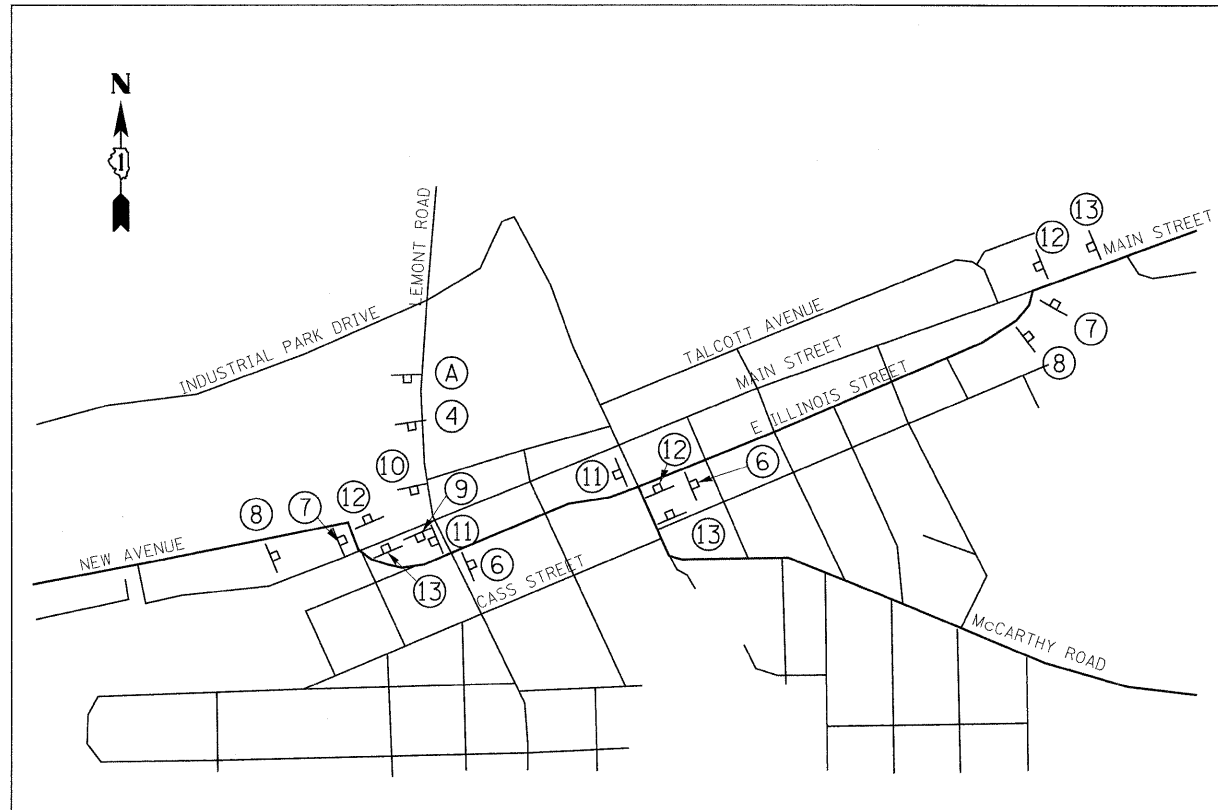
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PLOT SCALE : #SCALE#	DRAWN - RWK, ST	REVISED -
PLOT DATE : #DATE#	CHECKED - ST	REVISED -
	DATE - 10/14/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETOUR PLAN
IL ROUTE 171 OVER MILNE CREEK

SCALE: N/A SHEET NO. 1 OF 3 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	D-T	WILL	44	14
D-91-265-06		CONTRACT NO. 60B10		
ILLINOIS FED. AID PROJECT				



DETAIL A



USER NAME = #USER#	DESIGNED - RWK	REVISED -
PLOT SCALE = #SCALE#	DRAWN - RWK, ST	REVISED -
PLOT DATE = #DATE#	CHECKED - ST	REVISED -
	DATE - 10/14/2011	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DETOUR PLAN	
IL ROUTE 171 OVER MILNE CREEK	
SCALE: N/A	SHEET NO. 2 OF 3 SHEETS
STA.	TO STA.

F.A.P. RTE. 577	SECTION D-T	COUNTY WILL	TOTAL SHEETS 44	SHEET NO. 15
D-91-265-06		CONTRACT NO. 60B10		
ILLINOIS FED. AID PROJECT				

CONTRACTOR FURNISHED SIGNS

①

DETOUR	M4-8-2412
NORTH	M3-1-2412
ILL 171	M1-50-2424
←	M6-1-2115

②


DETOUR	M4-8-2412
NORTH	M3-1-2412
ILL 171	M1-50-2424
↙	M5-1L-2115

③



W20-3-4848

④



W20-2-4848

⑤

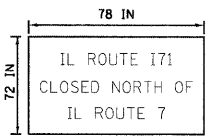


W20-3-4848

⑥

DETOUR	M4-8-2412
NORTH	M3-1-2412
ILL 171	M1-50-2424
↑	M6-3-2115

⑧



SPECIAL 78" x 72" 10" BLACK LETTERS ON WHITE REFLECTIVE BACKGROUND

⑦

DETOUR	M4-8-2412
NORTH	M3-1-2412
ILL 171	M1-50-2424
→	M6-1-2115

⑧

DETOUR	M4-8-2412
NORTH	M3-1-2412
ILL 171	M1-50-2424
↘	M5-1R-2115

⑨

DETOUR	M4-8-2412
SOUTH	M3-3-2412
ILL 171	M1-50-2424
→	M6-1-2115

⑩

DETOUR	M4-8-2412
SOUTH	M3-3-2412
ILL 171	M1-50-2424
↘	M5-1R-2115

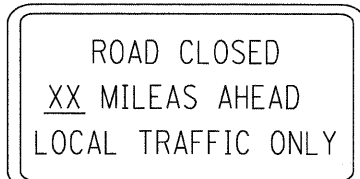
⑪

DETOUR	M4-8-2412
SOUTH	M3-3-2412
ILL 171	M1-50-2424
↑	M6-3-2115

⑫

DETOUR	M4-8-2412
SOUTH	M3-3-2412
ILL 171	M1-50-2424
←	M6-1-2115

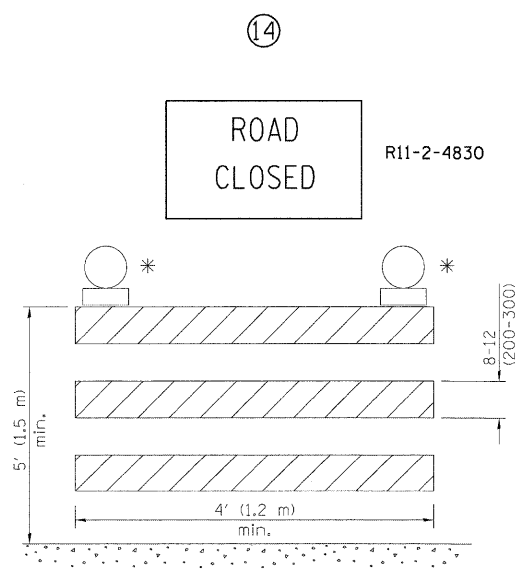
⑨




R11-3A 6030

⑬

DETOUR	M4-8-2412
SOUTH	M3-3-2412
ILL 171	M1-50-2424
↙	M5-1L-2115




⑮



M4-8A 2418


NOTE:
IF A TYPE III BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 REQUIREMENTS IS NOT AVAILABLE, THE SIGNS SHALL BE MOUNTED, ABOVE THE BARRICADES, ON SEPARATE SIGNS SUPPORTS THAT MEET NCHRP 350 REQUIREMENTS.

⑩



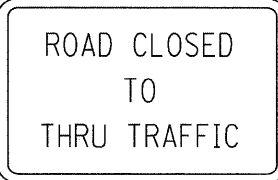
M4-10R 4818

⑪

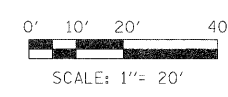
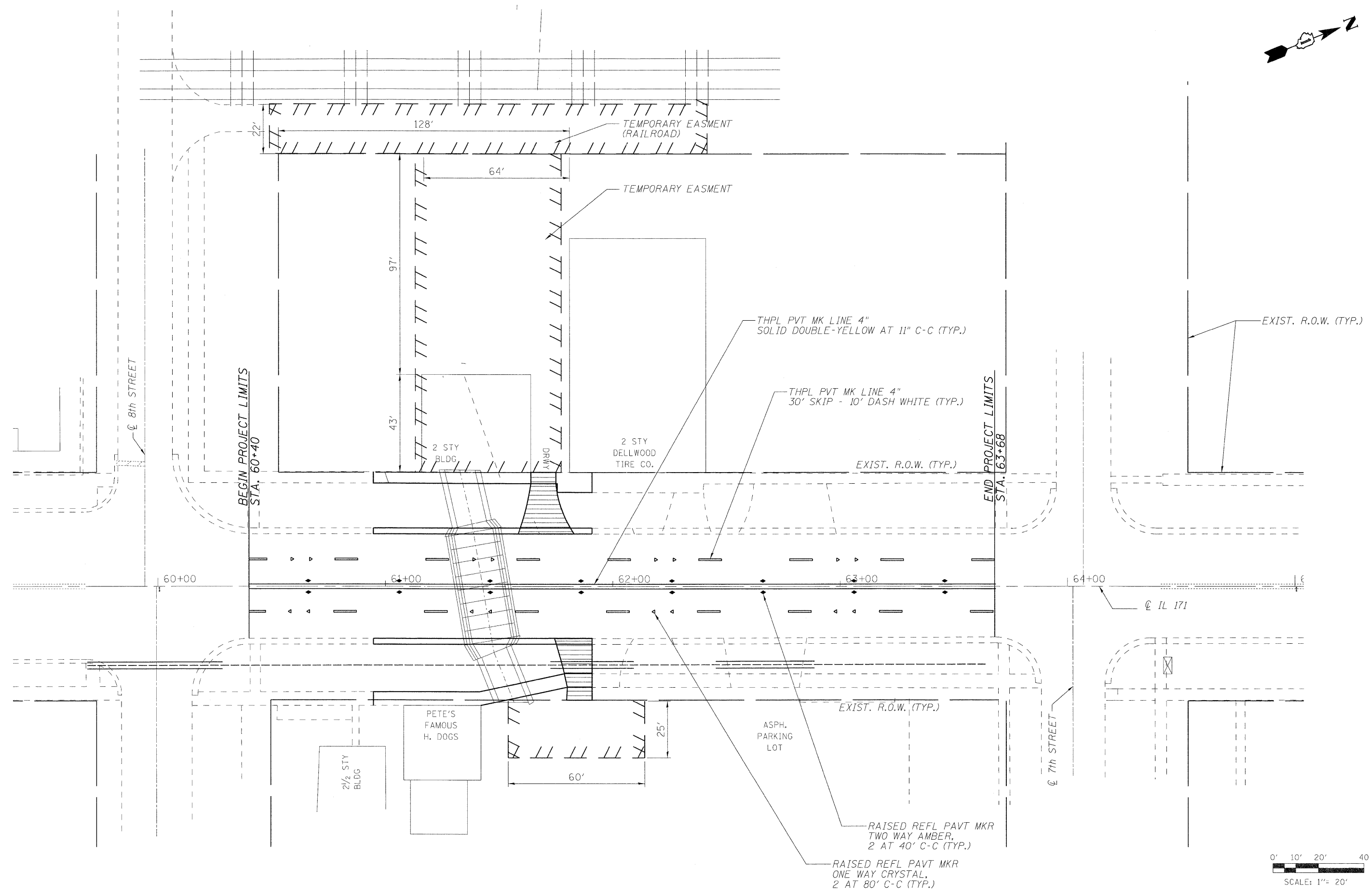
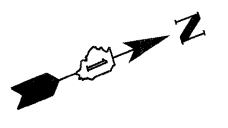


M4-10L 4818

⑫



R11-4 6030



LONCO, INC.
 CONSULTING ENGINEERS
 1560 WALL ST., SUITE 222
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CHECKED -	MJY, ST	REVISED -	
DATE -	10/14/2011	REVISED -	

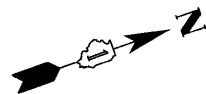
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DRAWN -	SLV	REVISED -	
CHECKED -	MJY, ST	REVISED -	
DATE -	10/14/2011	REVISED -	

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING PLAN
 IL ROUTE 171 OVER MILNE CREEK**

SCALE: NONE SHEET NO. 1 OF 1 SHEET STA. 60+40 TO STA. 63+68

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	D-T	WILL	44	17
D-91-265-06		CONTRACT NO. 60B10		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				









TEMPORARY EROSION CONTROL NOTES

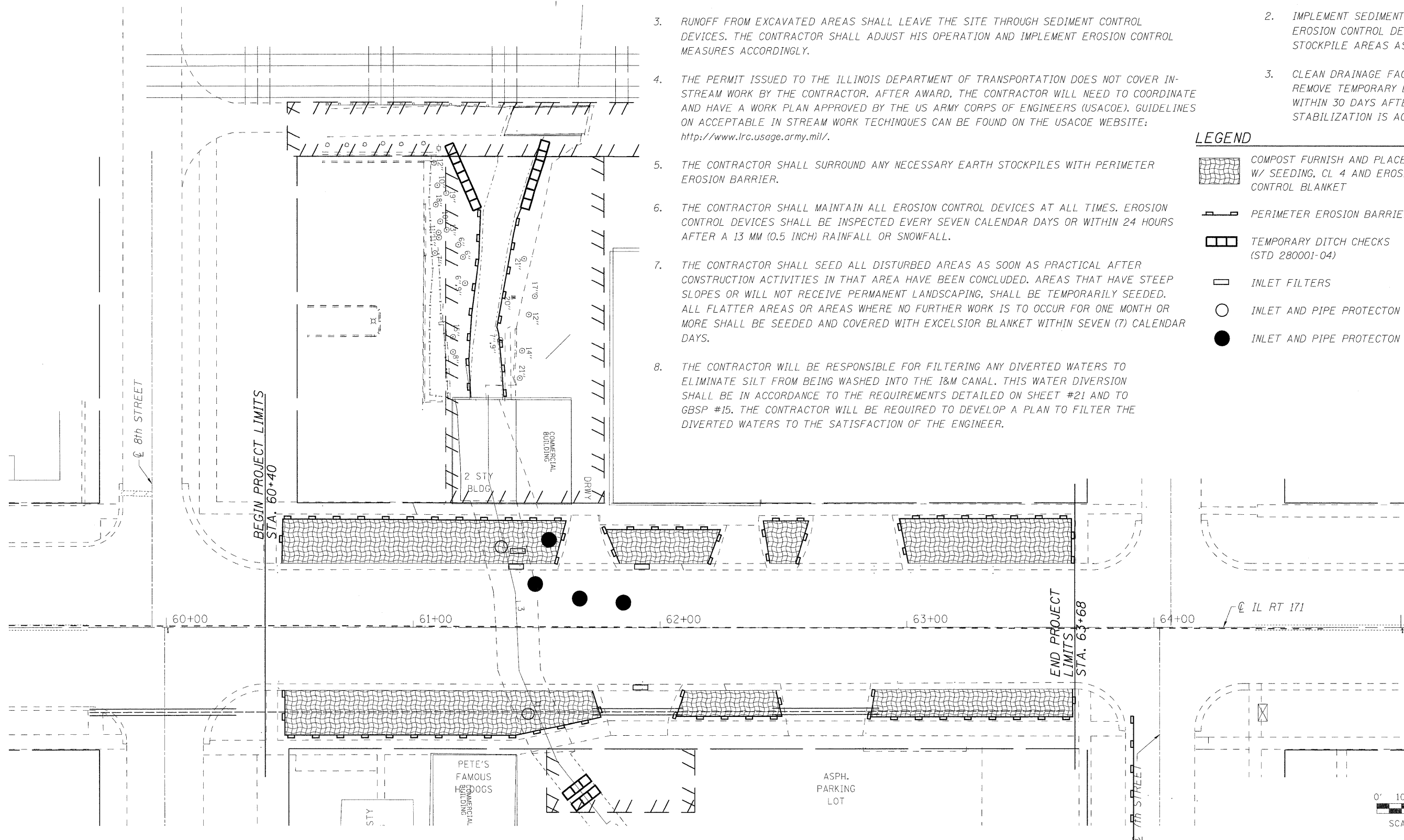
1. THE CONTRACTOR SHALL INSTALL PERIMETER EROSION BARRIER PRIOR TO STRIPPING OF VEGETATION.
2. TEMPORARY DITCH CHECKS SHALL BE INSTALLED IMMEDIATELY AFTER GRADING IS COMPLETED. DITCH CHECKS ARE BASED ON ONE (1) INSTALLATION AND THREE (3) REPLACEMENTS OVER THE DURATION OF THE CONTRACT. THESE ITEMS WILL BE PAID FOR PER LINEAL FOOT FOR THE ORIGINAL INSTALLATION, REGARDLESS OF THE TYPE OF CONFIGURATION USED.
3. RUNOFF FROM EXCAVATED AREAS SHALL LEAVE THE SITE THROUGH SEDIMENT CONTROL DEVICES. THE CONTRACTOR SHALL ADJUST HIS OPERATION AND IMPLEMENT EROSION CONTROL MEASURES ACCORDINGLY.
4. THE PERMIT ISSUED TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION DOES NOT COVER IN-STREAM WORK BY THE CONTRACTOR. AFTER AWARD, THE CONTRACTOR WILL NEED TO COORDINATE AND HAVE A WORK PLAN APPROVED BY THE US ARMY CORPS OF ENGINEERS (USACOE). GUIDELINES ON ACCEPTABLE IN STREAM WORK TECHNIQUES CAN BE FOUND ON THE USACOE WEBSITE: <http://www.lrc.usage.army.mil/>.
5. THE CONTRACTOR SHALL SURROUND ANY NECESSARY EARTH STOCKPILES WITH PERIMETER EROSION BARRIER.
6. THE CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES AT ALL TIMES. EROSION CONTROL DEVICES SHALL BE INSPECTED EVERY SEVEN CALENDAR DAYS OR WITHIN 24 HOURS AFTER A 13 MM (0.5 INCH) RAINFALL OR SNOWFALL.
7. THE CONTRACTOR SHALL SEED ALL DISTURBED AREAS AS SOON AS PRACTICAL AFTER CONSTRUCTION ACTIVITIES IN THAT AREA HAVE BEEN CONCLUDED. AREAS THAT HAVE STEEP SLOPES OR WILL NOT RECEIVE PERMANENT LANDSCAPING, SHALL BE TEMPORARILY SEEDED. ALL FLATTER AREAS OR AREAS WHERE NO FURTHER WORK IS TO OCCUR FOR ONE MONTH OR MORE SHALL BE SEEDED AND COVERED WITH EXCELSIOR BLANKET WITHIN SEVEN (7) CALENDAR DAYS.
8. THE CONTRACTOR WILL BE RESPONSIBLE FOR FILTERING ANY DIVERTED WATERS TO ELIMINATE SILT FROM BEING WASHED INTO THE I&M CANAL. THIS WATER DIVERSION SHALL BE IN ACCORDANCE TO THE REQUIREMENTS DETAILED ON SHEET #21 AND TO GBSP #15. THE CONTRACTOR WILL BE REQUIRED TO DEVELOP A PLAN TO FILTER THE DIVERTED WATERS TO THE SATISFACTION OF THE ENGINEER.

TEMPORARY EROSION CONTROL SEQUENCE OF CONSTRUCTION

1. ESTABLISH TEMPORARY EROSION CONTROL AND ERECT PERIMETER EROSION CONTROL BARRIER AS SHOWN ON THE PLANS PRIOR TO EARTHWORK.
2. IMPLEMENT SEDIMENT AND EROSION CONTROL DEVICES FOR STOCKPILE AREAS AS REQUIRED.
3. CLEAN DRAINAGE FACILITIES AND REMOVE TEMPORARY EROSION DEVICES WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED.

LEGEND

-  COMPOST FURNISH AND PLACE, 4" W/ SEEDING, CL 4 AND EROSION CONTROL BLANKET
-  PERIMETER EROSION BARRIER
-  TEMPORARY DITCH CHECKS (STD 280001-04)
-  INLET FILTERS
-  INLET AND PIPE PROTECTON
-  INLET AND PIPE PROTECTON



LONCO, INC.
 CONSULTING ENGINEERS
 1560 WALL ST, SUITE 222
 NAPERVILLE, ILLINOIS 60563 Ph: 630/ 577-9100

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DATE - 10/14/2011	REVISED -

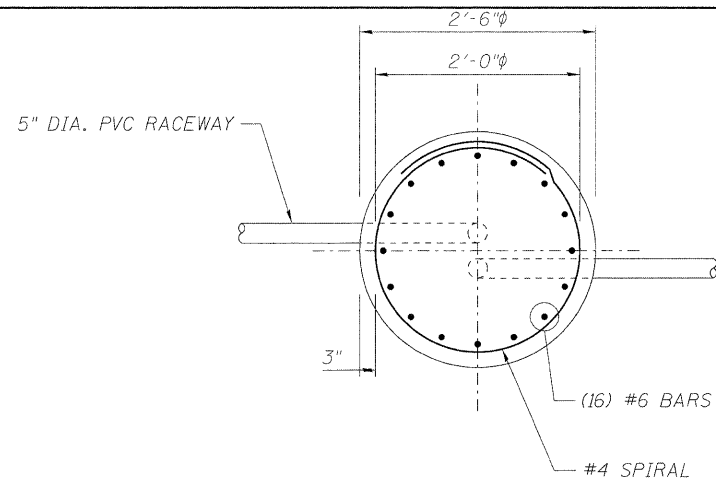
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DATE - 10/14/2011	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

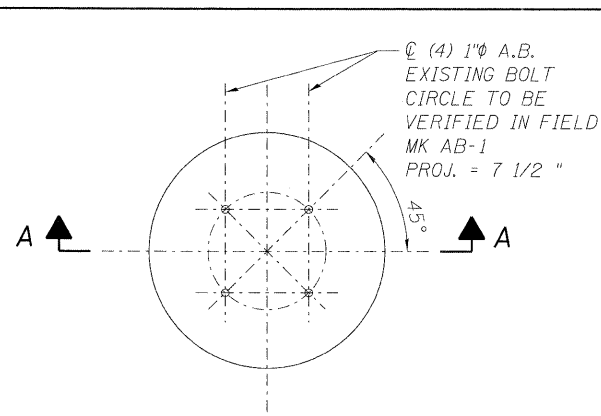
**EROSION CONTROL PLAN
 IL ROUTE 171 OVER MILNE CREEK**

SCALE: NONE SHEET NO. 1 OF 1 SHEET STA. 60+40 TO STA. 63+68

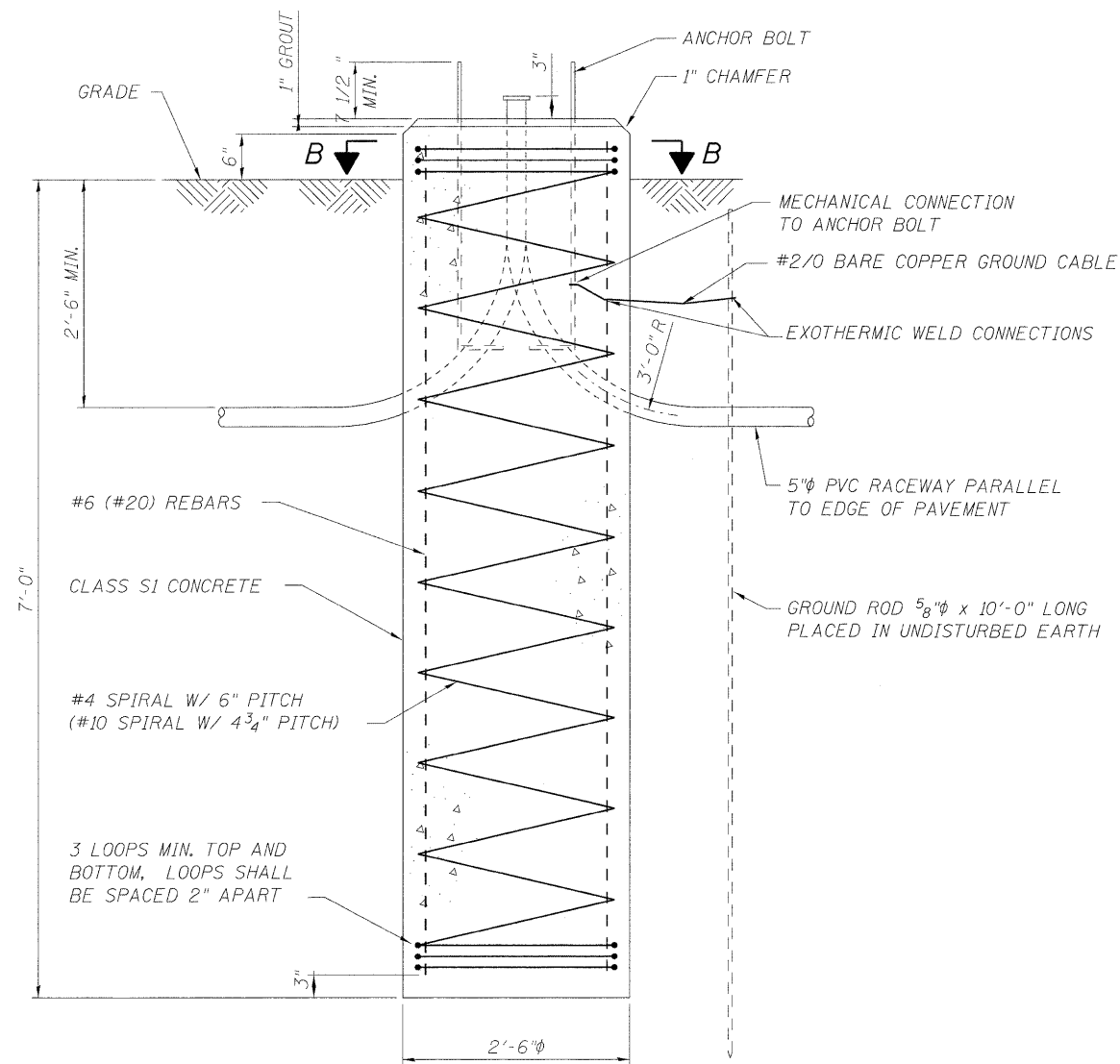
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	D-T	WILL	44	18
D-91-265-06			CONTRACT NO. 60B10	
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



SECTION "B-B"



STANDARD LIGHTING POLE FOUNDATION PLAN



STANDARD SECTION "A-A"

FOR USE WITH ALL POLES EXCEPT AS NOTED
A2, A3, B2, C2, D1, D2, E2, F2, G2, & H2

GENERAL NOTES / TEMPORARY LIGHTING

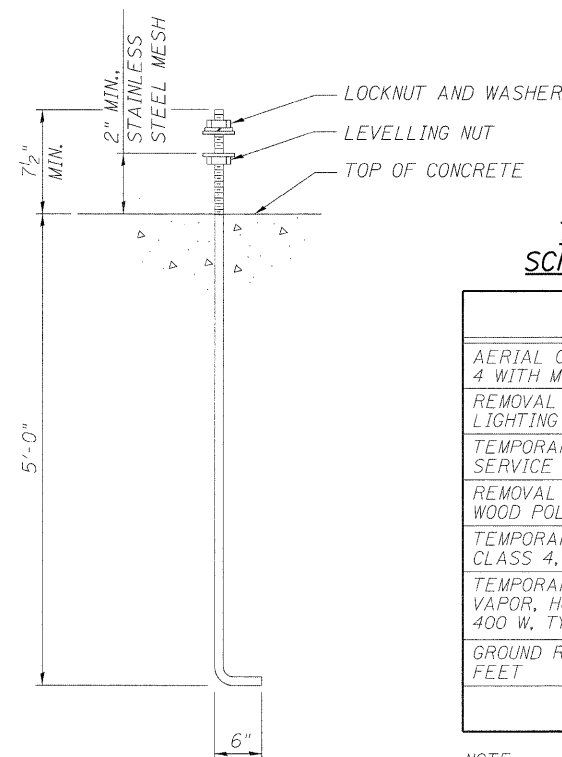
1. TEMPORARY LUMINAIRE, SODIUM VAPOR, 400 WATT, 240V, HORIZONTAL-MOUNT, PHOTO-CELL, TYPE II DISTRIBUTION.
2. TEMPORARY POLES SHALL BE 60 FEET UNLESS OTHERWISE NOTED.
3. ALL WORK SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE AND ANY APPLICABLE STATE AND LOCAL CODES.
4. THE CONTRACTOR IS TO VERIFY THE LOCATIONS OF ALL UNDERGROUND UTILITIES BEFORE BEGINNING ANY TRENCHING OR AUGERING OPERATIONS.
5. PRIOR TO INSTALLING WOOD POLES NEAR ANY EXISTING OVERHEAD ELECTRICAL FACILITIES, THE CONTRACTOR IS TO NOTIFY COMED OF THE WORK IN PROGRESS, AND OBTAIN COMED'S APPROVAL OF LOCATION.
6. FOR LOCATION OF ANY UNDERGROUND ELECTRICAL FACILITIES, THE CONTRACTOR IS TO NOTIFY COMED OF THE WORK IN PROGRESS, AND OBTAIN COMED'S APPROVAL OF LOCATION.
7. ALL ELECTRICAL CONDUITS ARE TO BE TWO AND ONE HALF INCHES IN DIAMETER, UNLESS OTHERWISE NOTED ON THE PLANS.
8. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO RESTORE ANY SPECIALIZED LANDSCAPING, (i.e. DECORATIVE ROCKS, SHRUBS, PLANTS, SOUNDWALLS, ETC.) OR SHALL REPLACE IT, WITH THE COSTS SHALL BE CONSIDERED INCIDENTAL TO THIS CONTRACT.
9. ALL SPLICES SHALL OCCUR IN POLES OR IN ABOVE GROUND JUNCTION BOXES.
10. TEMPORARY LIGHTING TO BE REMOVED AS DIRECTED BY IDOT WHEN ROADWAY CONSTRUCTION IS COMPLETE.

RECOMMENDED CONSTRUCTION SEQUENCE

1. CONTRACTOR TO MAINTAIN THE EXISTING LIGHTING OPERATION DURING CONSTRUCTION.
2. POWER IS TO BE CUT TO THE LIGHT POLE TO BE REMOVED.
3. INSTALL TEMPORARY WOOD POLE W/ 400W, 240V HORIZONTAL MOUNT MCII HIGH PRESSURE SODIUM FIXTURE, WITH PHOTOCELL.
4. MAINTAIN TEMPORARY LIGHTING DURING CONSTRUCTION.
5. THE EXISTING LIGHT POLE IS TO BE REMOVED AND STORED SAFELY UNTIL SUCH TIME THE EXISTING POLE CAN BE RE-ERECTED.
6. EXISTING LIGHT POLE FOUNDATION IS TO BE REMOVED WHILE PROTECTING THE EXISTING ELECTRICAL CABLE FOR LATER USE.
7. CULVERT AND EMBANKMENT WORK IS TO BE COMPLETED. SEE STRUCTURAL SHEETS FOR RECOMMENDED CONSTRUCTION SEQUENCE.
8. NEW LIGHT POLE FOUNDATION IS TO BE INSTALLED AND EXISTING ELECTRICAL CABLE INSTALLED THROUGH THE NEW FOUNDATION CONDUIT SYSTEM. GROUND ROD TO BE INSTALLED.
9. EXISTING LIGHT POLE TO BE RE-ERECTED AND BOLTED INTO THE TOP OF THE NEW FOUNDATION.
10. RECONNECT ELECTRICAL CABLES AND RE-ESTABLISH INTEGRATION WITH EXISTING LIGHTING SYSTEM. THE SPLICES TO RECONNECT THE CIRCUIT FOR THE RE-ERECTED LIGHT POLE WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST FOR REMOVE AND RE-ERECT EXISTING LIGHTIN UNIT.
11. REMOVE TEMPORARY LIGHTING SYSTEM.

NOTES:

1. CONTRACTOR SHALL VERIFY ALL EXISTING FIELD CONDITIONS AND IMMEDIATELY REPORT ANY DISCREPANCIES TO IDOT.
2. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,500 PSI AT 14 DAYS.
3. REINFORCING STEEL BARS SHALL BE OF NEW BILLET STEEL AND SHALL CONFORM TO ASTM A615, GRADE 60.
4. ANCHOR BOLTS SHALL CONFORM TO ASTM A687 PER STD. 1085.10.
5. THE CONTRACTOR MAY USE #4 (#10) SPIRAL AT 4 3/4" PITCH.
6. THE ANCHOR BOLTS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IS PLACED IN THE FORM.
7. THE ENTIRE LENGTH OF THE ANCHOR BOLTS AS WELL AS THE NUTS AND WASHERS SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM DESIGNATION A153.
8. CONCRETE SHALL BE CLASS "SI". CONCRETE FOUNDATION MUST BE CURED FOR (10) DAYS BEFORE THE LIGHT POLE IS ERECTED.
9. THE CABLE TRENCH SHALL BE BACKFILLED AND FIRMLY COMPACTED BEFORE THE ROADWAY LIGHTING POLE IS ERECTED.
10. RACEWAYS SHALL PROJECT 3" ABOVE THE TOP OF THE FOUNDATION.
11. THE FOUNDATION IS DESIGNED FOR AN AVERAGE COMPRESSIVE STRENGTH OF SOIL (Qu) OF 2000 PSF. THIS STRENGTH SHALL BE VERIFIED BY BORING DATA PRIOR TO CONSTRUCTION OR WITH TESTING BY THE ENGINEER DURING FOUNDATION DRILLING.



1" phi ANCHOR BOLT DETAIL

TEMPORARY LIGHTING SCHEDULE OF QUANTITIES

ITEM	UNIT	TOTAL
AERIAL CABLE, 2-1/8" NO. 4 WITH MESSENGER WIRE	FOOT	512
REMOVAL OF TEMPORARY LIGHTING UNITS	EACH	2
TEMPORARY ELECTRIC SERVICE CONNECTION	EACH	1
REMOVAL OF TEMPORARY WOOD POLE, SALVAGE	EACH	2
TEMPORARY WOOD POLE, 60 FT. CLASS 4, 20 FT. MAST ARM	EACH	2
TEMPORARY LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 400 W, TYPE II DISTRIBUTION	EACH	2
GROUND ROD, 5/8" DIA, X 10 FEET	EACH	2

NOTE:
THIS WORK SHOWN IS FOR ESTIMATING PURPOSES ONLY. ALL TEMPORARY LIGHTING ITEMS WILL NOT BE PAID FOR SEPARATELY, BUT WILL BE INCLUDED IN "TEMPORARY LIGHTING".

Benchmark : Cut Cross in top of wall at Sta 1+00, offset 7.2' RT.
Actual Elevation = 602.87'

Existing Structure: Exist. structure was built in late 1800's or early 1900's as a Stone Arch Culvert and carries IL Rt. 171 over Milne Creek. A few emergency repairs were done in 1997 and 2001. The structure is not historic. A portion of the existing structure will be retrofitted with a steel liner and the remainder will be removed and replaced with a 3-sided PCC Structure. Road to be closed during construction.

No Salvage

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (Ft.)	Downstream	Upstream
	579.39	580.20

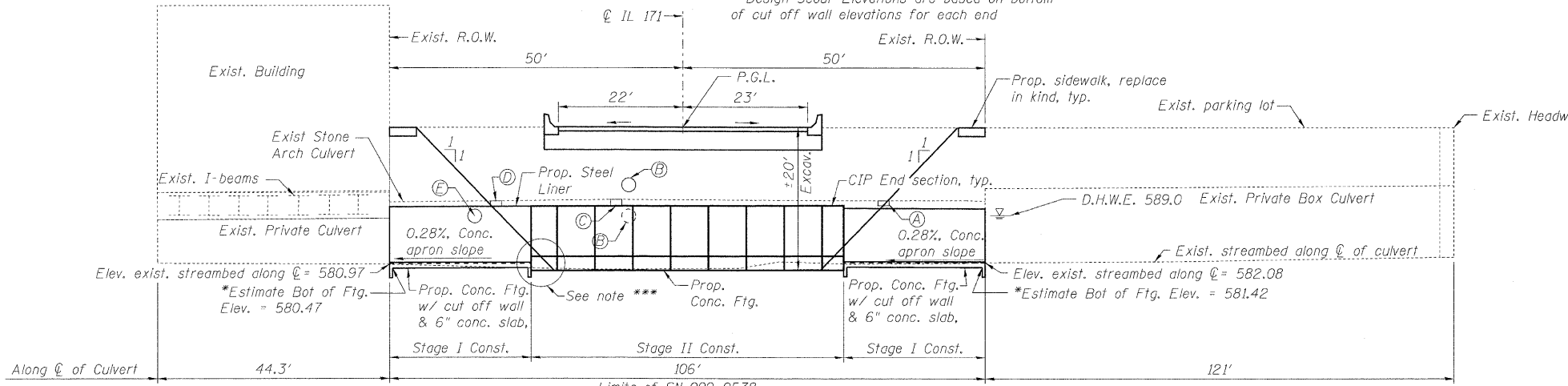
NOTE:
Design Scour Elevations are based on bottom of cut off wall elevations for each end

WATERWAY INFORMATION

Drainage Area = 2.0 mi² Exist. Low Grade Elev. = 600.56 ft. @ Sta. 62+00
Prop. Low Grade Elev. = 600.56 ft. @ Sta. 62+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater E.I.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	10	409	93	88	585.6	1.6	1.6	587.2	587.2
Base	50	634	107	101	586.6	2.4	2.4	589.0	589.0
Overtopping	100	732	113	105	587.0	2.7	2.7	589.7	589.7
Max. Calc.	500	961	125	116	588.0	3.5	3.5	591.5	591.5

10 Yr. velocity through Exist. Culvert = 4.4 fps.
10 Yr. velocity through Prop. Culvert = 4.6 fps.
Max. Recorded H.W.E. = 591.0 July, 1957



***Temporary soil retention of approximately 4' will be required at the north footing for the west side steel liner and 6' at the south footing for the east side steel liner. Riprap to be placed to match top of 6" concrete slab apron at cut off wall, typ.

*Btm. ftg. elev. varies based on min. allowable bearing capacity (Qmin = 5.6 ksf)

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
William H. Epp, S.E.
ENGINEER OF BRIDGES AND STRUCTURES

SEISMIC DATA
Seismic Performance Category (SPC) = A
Horizontal Bedrock Acceleration = 0.04g
Site Coefficient = 1.0

LOADING HS20-44
Allow 50 psf for future wearing surface

DESIGN SPECIFICATIONS
2002 AASHTO

DESIGN STRESSES
FIELD UNITS

f'c = 3,500 psi
fy = 33,000 psi (AASHTO M167, Steel Plate Liner)
fy = 50,000 psi (AASHTO M270, Structural Steel)
fy = 60,000 psi (reinforcement)

PRECAST UNITS
f'c = 5,000 psi
fy = 65,000 psi (welded wire fabric)
fy = 60,000 psi (reinforcement)



William H. Epp, S.E.
WILLIAM H. EPP, S.E.
IL. LIC. NO. 081-005150
EXP. 11/30/12
DATE 10/14/11

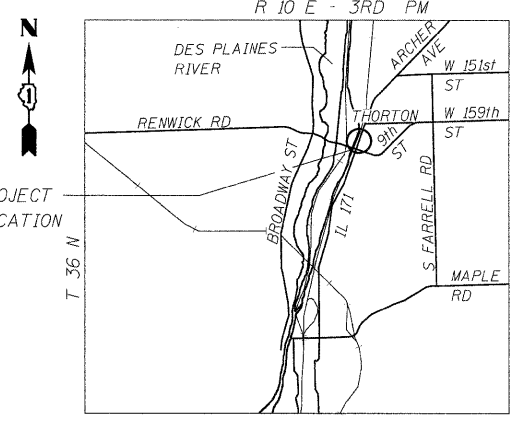
RECOMMENDED CONSTRUCTION SEQUENCE

1. Remove debris from inside of culvert, including any silt or loose material from the streambed.
2. Repair scour within the culvert (see sheet S3).
3. Excavate and place footings for the proposed steel arch liners.
4. Install steel liner at downstream and upstream end of stone arch culvert and pump grout into void between liner and existing culvert wall.
5. Remove the existing stone arch culvert between the steel lined sections.
6. Place footings for the proposed 3-sided CIP and PCC structures.
7. Install riprap between steel lined sections.
8. Install a three-sided precast concrete structure in a straight chord between the steel lined sections with cast in place concrete culvert transition (both ends).
9. Compact fill above the three-sided precast concrete structure and reconstruct Illinois Route 171.

PIPE DESCRIPTION TABLE

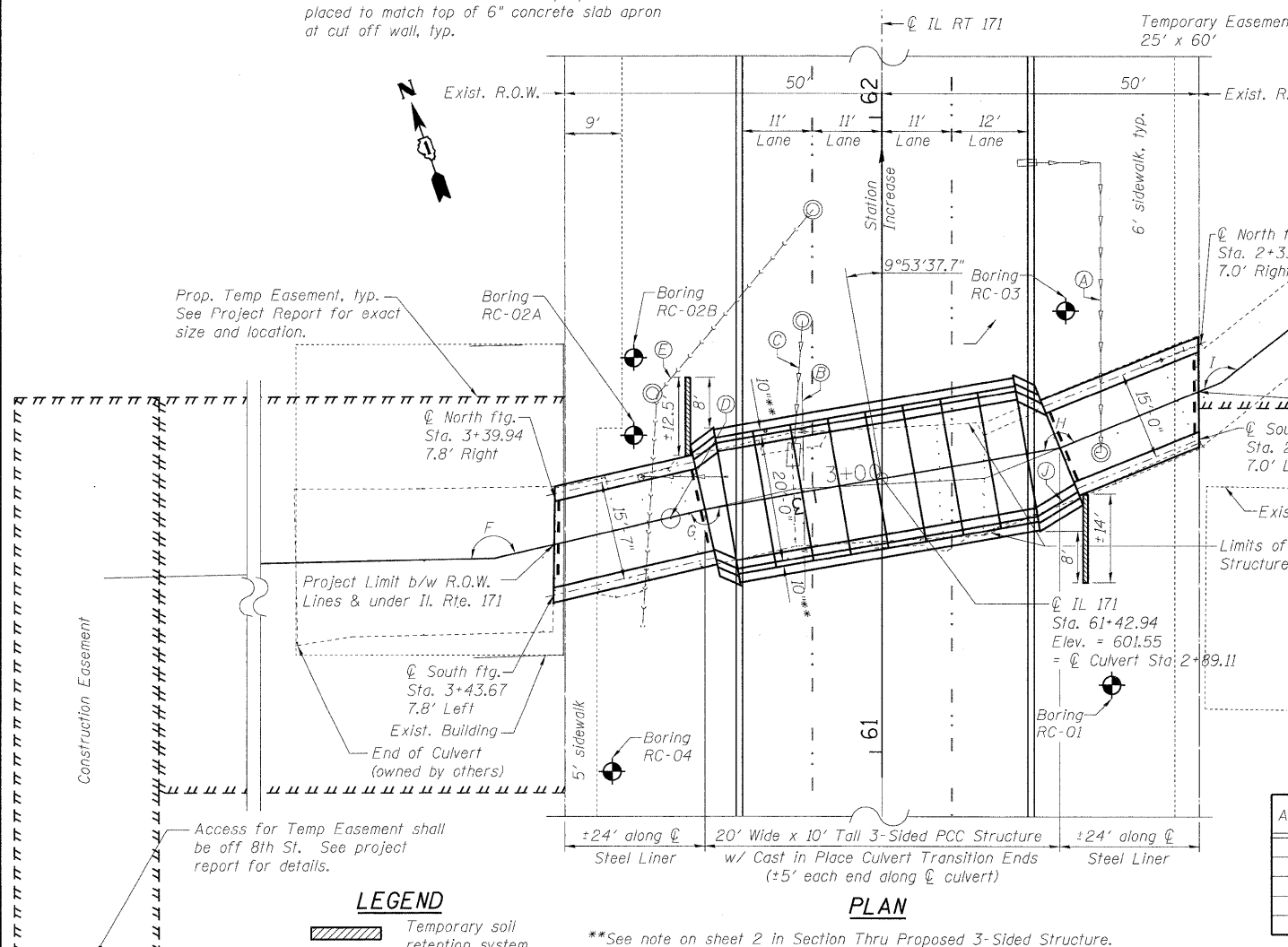
LOCATION	DESCRIPTION	STATION	SKEW
A	12" φ Ceiling Penetration for Storm Drain	2+54.97	N.A.
B ①	12" φ water main, may not be in use	3+01.56	92°28'59"
C	24" φ storm sewer ceiling/wall penetration	3+03.00	N.A.
D	24" φ Ceiling Penetration for Storm Drain	3+23.00	N.A.
E ②	24" φ sanitary sewer, in use	3+26.45	102°51'18"

NOTE:
① Watermain to be relocated, by others, above proposed 3-sided PCC structure within a larger diameter sleeve, to allow for future increase in pipe size if ever needed.
② Sewermain to remain in place with larger diameter riveted corrugated steel pipe sleeve installed around sewermain to allow for future maintenance/repairs, or increased pipe size. Proposed steel liner shall be cut in field to fit around sewer main sleeve.



LOCATION SKETCH

GENERAL PLAN & ELEVATION
IL RT 171 OVER MILNE CREEK
F.A.P. RT. 577
SECTION D-T
WILL COUNTY
STA. 61+42.94
STRUCTURE NO. 099-0538



LEGEND
Temporary soil retention system

**See note on sheet 2 in Section Thru Proposed 3-Sided Structure.

ANGLE	DIMENSION
F	168°25'26.1"
G	177°4'54.3"
H	167°48'7.4"
I	163°32'54.1"

LONCO, INC.
CONSULTING ENGINEERS
1560 WALL ST., SUITE 222
NAPERVILLE, ILLINOIS 60563 Ph: (630) 577-9100

DESIGNED - SLV	REVISED -
CHECKED - MJM	REVISED -
DRAWN - SLV	REVISED -
CHECKED - MJM	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURE NO. 099-0538
SHEET NO. S1 OF S11 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	D-T	WILL	44	20
D-91-265-06		CONTRACT NO. 60B10		
ILLINOIS FED. AID PROJECT				

GENERAL NOTES

1. Calculated Weight of Structural Steel = 1,780 pounds which includes the angle and steel plate for the end of steel liner detail on sheet S8.
2. Structural steel for Corrugated Steel Arch Liner shall be AASHTO M167. All other structural steel shall be AASHTO M270. All steel shall be galvanized according to AASHTO M111 or M232 as applicable.
3. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60.
4. Reinforcement bars designated (E) shall be epoxy coated.
5. Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
6. Layout of slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
7. The foundation design is based on the following maximum reactions applied at the top of the footing:

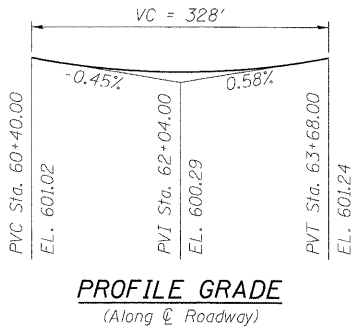
Corrugated Steel Liner Footings: 10.9 k/ft (vertical), 0.0 k/ft (horizontal), (west end)
 Corrugated Steel Liner Footings: 10.5 k/ft (vertical), 3.1 k/ft (horizontal), (east end)
 3-Sided PCC Structure Footings: 12.6 k/ft (vertical), 2.4 k/ft (horizontal)

The Contractor shall verify that the selected structure meets these design parameters. If the design parameters are exceeded, a complete foundation design with calculations, details, and the required structural seals shall be submitted for review and approval.
8. The Contractor is advised that the existing Stone Arch Culvert is in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the Stone Arch when developing construction procedures for removal and replacement of the structure, including excavation for the footings to be installed for the corrugated steel liner within the existing stone arch.
9. The option of using a precast footing is not allowed.
10. Removal of excavated materials and other miscellaneous debris from inside of culvert, including any silt or loose material from the streambed shall not be paid for separately, but shall be included in the cost of Removal and Disposal of Unsuitable Material. It is assumed that the depth of removal will be 2 Foot. This depth is to be verified in the field.

STATION 61+42.94
 BUILT 20_ _ BY
 STATE OF ILLINOIS
 F.A.P. ROUTE 577 SEC D-T
 LOADING HS20-44
 STRUCTURE NO. 099-0538

NAME PLATE
 See Std. 515001

NOTE:
 Existing Name Plate, if present, shall be cleaned and relocated next to new Name Plate. Cost included with Name Plates.

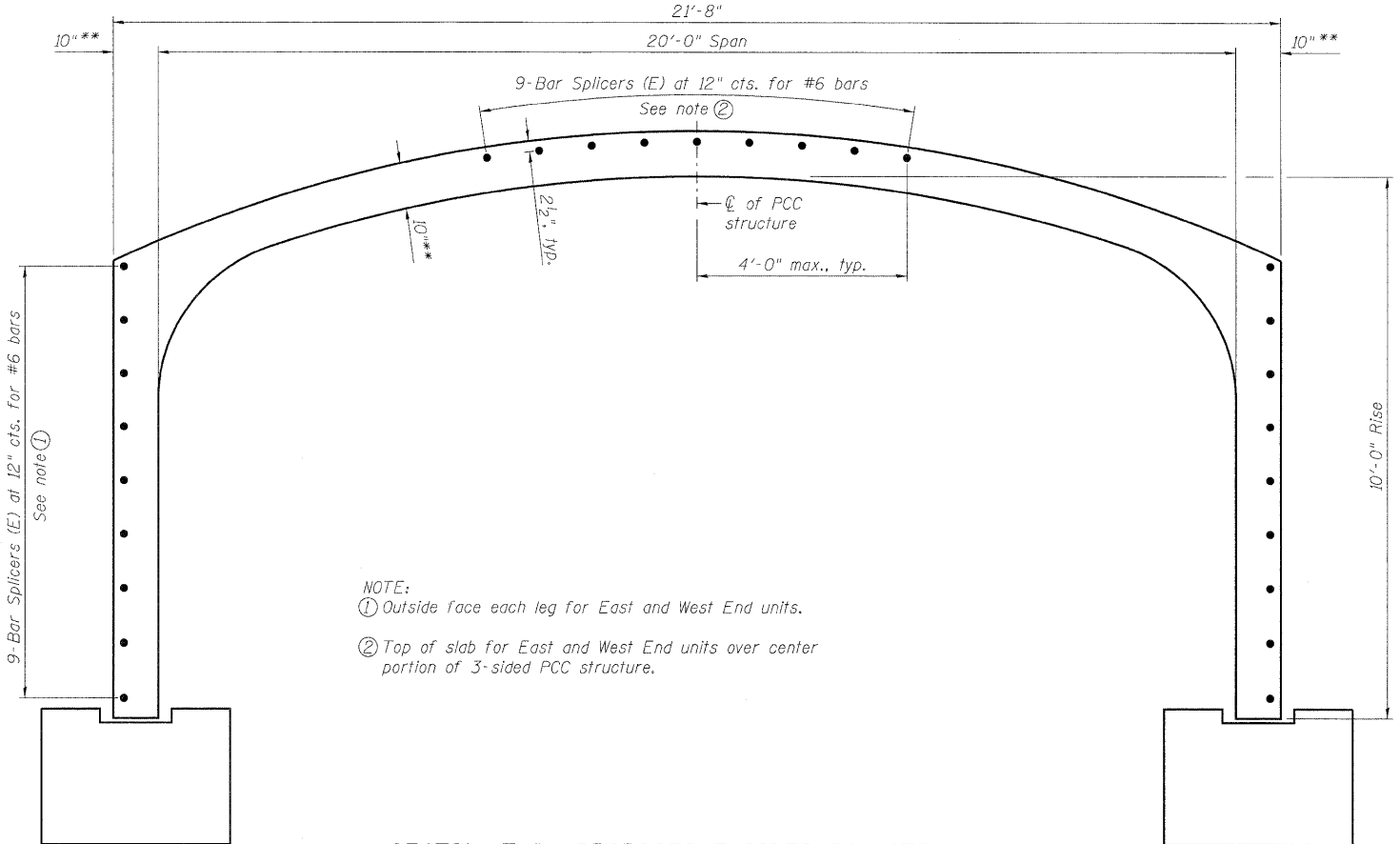


INDEX OF SHEETS

- S1. General Plan and Elevation
- S2. General Data and Bill of Material
- S3. Foundation Plan
- S4. Foundation Details
- S5. Cast-in-Place Transition West End
- S6. Cast-in-Place Transition East End
- S7. Corrugated Steel Plate Liner Details (1 of 2)
- S8. Corrugated Steel Plate Liner Details (2 of 2)
- S9. Bar Splicer Assembly and Mechanical Splicer Details
- S10. Boring Log (1 of 2)
- S11. Boring Log (2 of 2)

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Removal and Disposal of Unsuitable Material	Cu. Yd.	156
Removal of Existing Structures	Each	1
Structure Excavation	Cu. Yd.	621.9
Rock Excavation for Structures	Cu. Yd.	4
Concrete Structures	Cu. Yd.	45.0
Furnishing and Erecting Structural Steel	Pound	1780
Reinforcement Bars, Epoxy Coated	Pound	11460
Bar Splicers	Each	86
Name Plates	Each	1
Concrete Box Culverts	Cu. Yd.	19.8
Temporary Soil Retention System	Sq. Ft.	67
Three-Sided Precast Concrete Structures, 20' x 10'	Foot	48
Corrugated Steel Arch Liner	Foot	48
Riveted Corrugated Steel Pipe	L.Sum	1
Construction Vibration Monitoring	L.Sum	1



NOTE:
 ① Outside face each leg for East and West End units.
 ② Top of slab for East and West End units over center portion of 3-sided PCC structure.

SECTION THRU PROPOSED 3-SIDED PCC STRUCTURE

**Slab and wall thicknesses may vary as per manufacturer's design

Notes:
 Bar Splicers are used to tie together C.I.P. and PCC 3-Sided structures.
 Precast Manufacturer to coordinate with Contractor and contract documents once the final shape of the 3 sided structure has been determined to verify that the bar splicers will be accommodated within the CIP sections.

LONCO, INC.
 CONSULTING ENGINEERS
 1560 WALL ST., SUITE 222
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DESIGNED - SLV	REVISED -
CHECKED - MJM	REVISED -
DRAWN - SLV	REVISED -
CHECKED - MJM	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**GENERAL DATA AND BILL OF MATERIAL
 STRUCTURE NO. 099-0538**

SHEET NO. 52 OF 511 SHEETS

F.A.P. RTE. 577	SECTION D-T	COUNTY WILL	TOTAL SHEETS 44	SHEET NO. 21
D-91-265-06		CONTRACT NO. 60B10		
ILLINOIS FED. AID PROJECT				

Note:

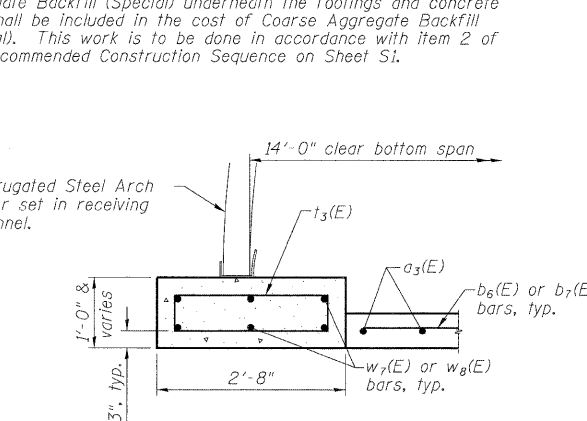
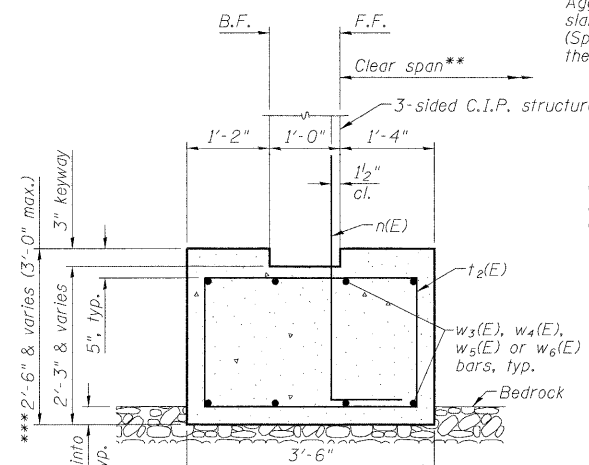
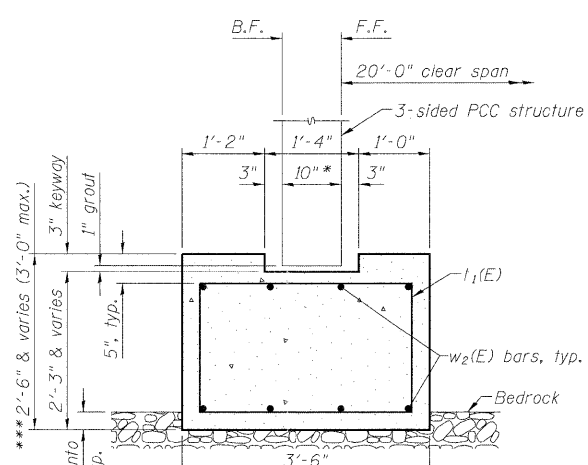
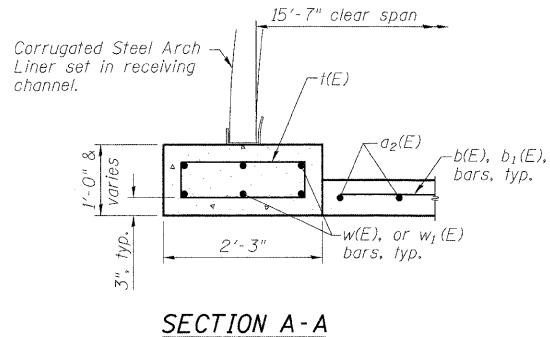
- ① 4'-5 1/2" along C of footing
4-#5 w₃(E) bars top and bot.
5-#5 t₂(E) bars @ 12" cts.
9-#6 n(E) bars @ 6" cts.
- ② 3'-8 1/4" along C of footing
4-#5 w₄(E) bars top and bot.
5-#5 t₂(E) bars @ 12" cts.
8-#6 n(E) bars @ 6" cts.
- ③ 4'-5" along C of footing
4-#5 w₅(E) bars top and bot.
5-#5 t₂(E) bars @ 12" cts.
9-#6 n(E) bars @ 6" cts.
- ④ 7'-6" along C of footing
4-#5 w₆(E) bars top and bot.
8-#5 t₂(E) bars @ 12" cts.
15-#6 n(E) bars @ 6" cts.

NOTES

See sht. S4 of S11 for Sections E-E, F-F & G-G and Bill of Material.
Bars indicated thus 4 x 3-#5 etc. indicates 4 lines of bars with 3 lengths per line.
See sht. S9 of S11 for Bar Splicer Details.
Section C-C is typ. for both footings, both ends.
The Contractor shall be responsible for diverting the water in order to place the footings for the steel liner. This work shall not be paid for separately, but shall be included in the cost of Three-Sided Precast Concrete Structures, 20' x 10'. See Three-Sided Precast Concrete Structure Special Provision for more details regarding the water diversion.
Class A4 Riprap shall be placed within the 3-sided CIP and PCC structure. Top of riprap shall match the top of concrete slab at both ends, and connected in a straight chord.
Footings for the 3-sided CIP & PCC structures and concrete cut off walls shall be socketed into bedrock 3" min.
The maximum applied service bearing pressure under the footings is as follows: West footing = 5.02 ksf, Central footing = 5.33 ksf and East footing = 4.08 ksf.

ELEVATION TABLE

Mark	Elevation	Description
A	581.56	Top of steel liner ftg
B	581.06	Top of concrete slab
C	579.39	Bot of conc cutoff wall
D	581.63	Top of steel liner ftg
E	581.13	Top of concrete slab & riprap
F	579.46	Bot of wall & 3-sided ftg
G	581.98	Top of 3-sided structure ftg
H	582.65	Top of 3-sided structure ftg
I	582.30	Top of steel liner ftg
J	581.80	Top of concrete slab & riprap
K	580.13	Bot of wall & 3-sided ftg
L	582.36	Top of steel liner ftg
M	581.86	Top of concrete slab
N	580.20	Bot of conc cutoff wall



*** If the proposed footings for the 3-sided & CIP structures needs to be more than 3' thick in order to socket the footings into bedrock, then the Contractor shall have the footings and reinforcement redesigned for the taller footings. This work shall not be paid for separately, but shall be included in the cost of Concrete Structures. The Contractor shall submit three sets of design calculations and shop drawings to the Engineer for review. The calculations and shop drawings shall be sealed by an Illinois Licensed Structural Engineer.

SECTION B-B

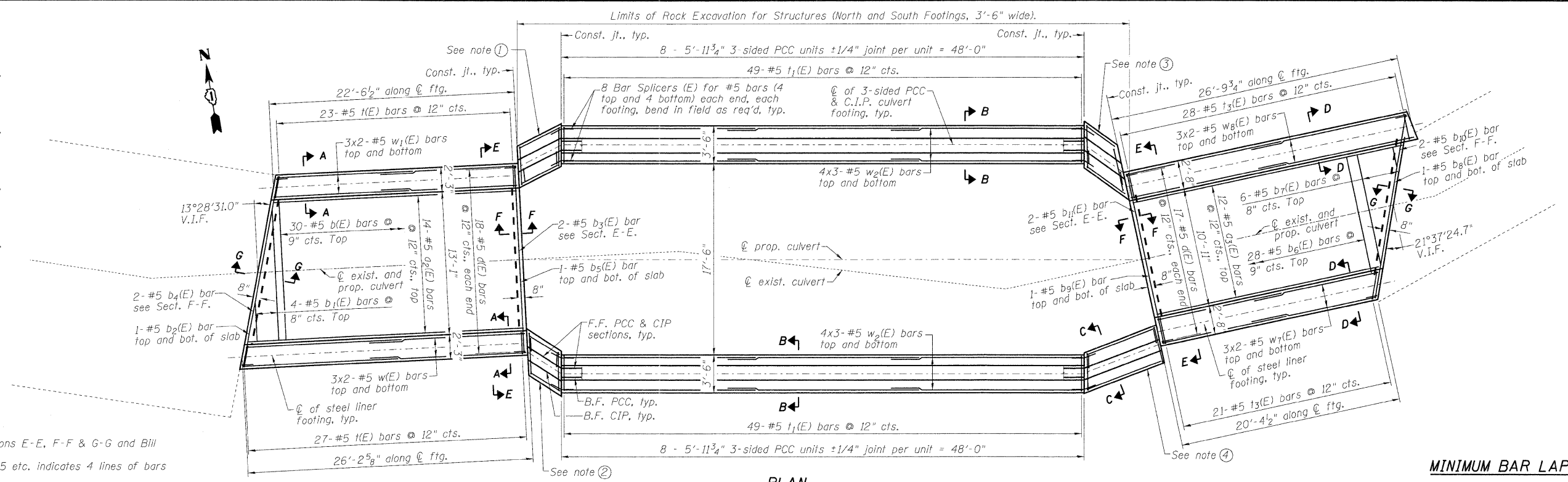
*Wall thickness may vary as per manufacturer's design.

SECTION C-C

**Clear span varies from 16'-20' on west side and from 15'-20' on east side transitions.

SECTION D-D

Note:
C of arch leg to be offset from C of ftg. by 2 1/2" to the outside of the footing.

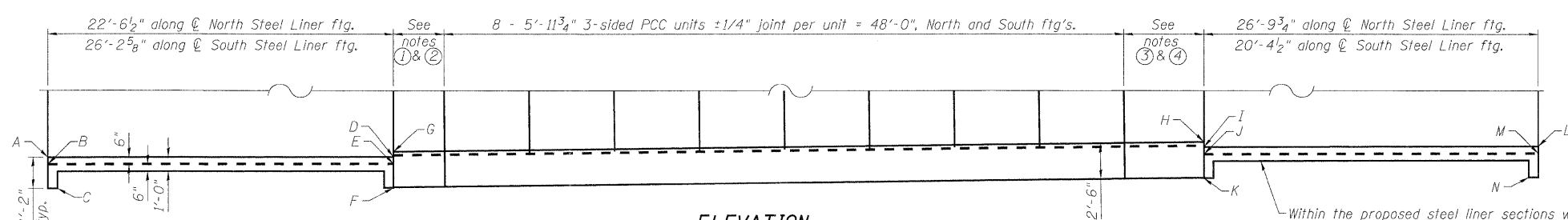


PLAN

MINIMUM BAR LAPS
#5 = 2'-7"

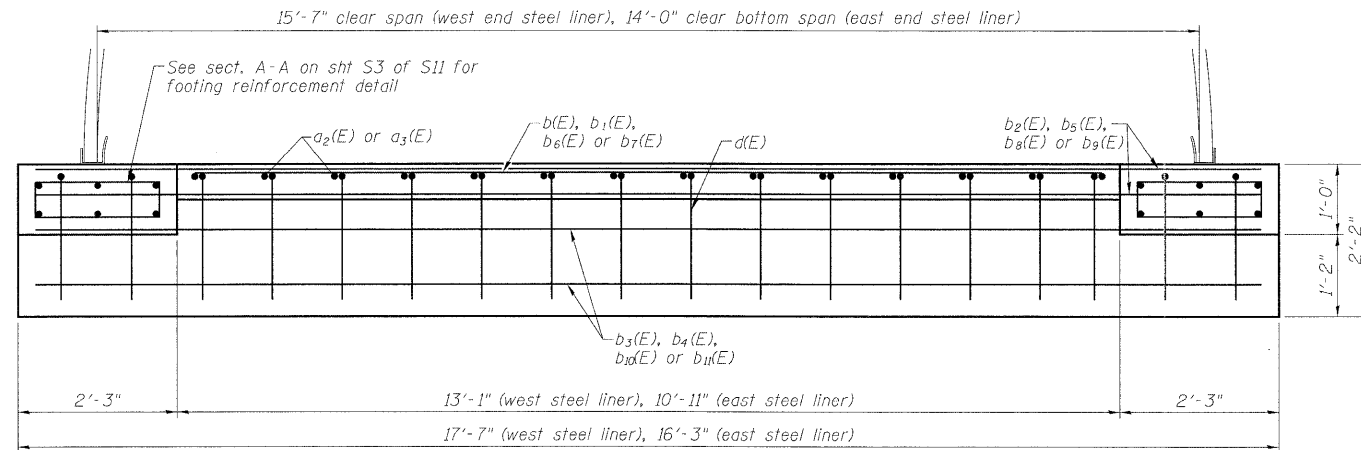
LEGEND

B.F. = Back Face
F.F. = Front Face



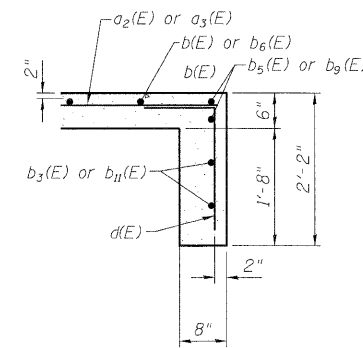
ELEVATION

Within the proposed steel liner sections where existing ground has scoured away, Coarse Aggregate Backfill (Special) or approved equal shall be used to backfill the existing streambed to appropriate grade to place the footing and slab for the steel liner sections. Coarse Aggregate Backfill (Special) shall be compacted to 95% of the modified proctor test underneath the slab and footings, typ. The cost including all material, equipment and labor to install Coarse Aggregate Backfill (Special) underneath the footings and concrete slab shall be included in the cost of Coarse Aggregate Backfill (Special). This work is to be done in accordance with item 2 of the Recommended Construction Sequence on Sheet S1.

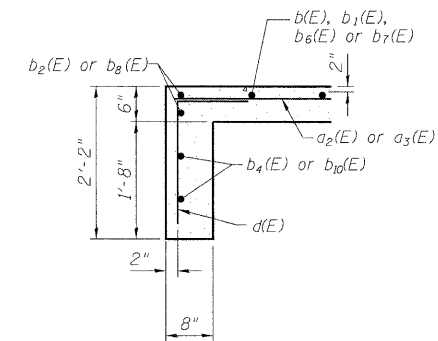


SECTION E-E

(East cut off wall shown for west steel liner, other 3 cut off walls similar).



SECTION F-F



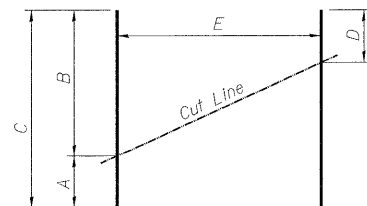
SECTION G-G

NOTES

See sht. S9 of S11 for Bar Splicer Details.
Coordinate this sheet with sheet S3 of S11.

BILL OF MATERIAL

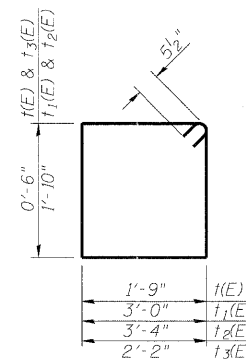
Bar	No.	Size	Length	Shape
a ₂ (E)	7	#5	47'-9"	—
a ₃ (E)	6	#5	46'-2"	—
b(E)	30	#5	12'-7"	—
b ₁ (E)	2	#5	15'-6"	—
b ₂ (E)	2	#5	17'-8"	—
b ₃ (E)	2	#5	17'-2"	—
b ₄ (E)	2	#5	17'-8"	—
b ₅ (E)	2	#5	17'-2"	—
b ₆ (E)	28	#5	10'-5"	—
b ₇ (E)	3	#5	12'-11"	—
b ₈ (E)	2	#5	16'-11"	—
b ₉ (E)	2	#5	15'-9"	—
b ₁₀ (E)	2	#5	16'-11"	—
b ₁₁ (E)	2	#5	15'-9"	—
d(E)	70	#5	2'-9"	—
n(E)	41	#6	6'-1"	—
t(E)	50	#5	5'-5"	□
t ₁ (E)	98	#5	10'-7"	□
t ₂ (E)	23	#5	11'-3"	□
t ₃ (E)	49	#5	6'-3"	□
w(E)	12	#5	14'-4"	—
w ₁ (E)	12	#5	12'-6"	—
w ₂ (E)	48	#5	17'-7"	—
w ₃ (E)	8	#5	3'-11"	—
w ₄ (E)	8	#5	3'-1"	—
w ₅ (E)	4	#5	7'-4"	—
w ₆ (E)	4	#5	13'-11"	—
w ₇ (E)	12	#5	11'-8"	—
w ₈ (E)	12	#5	14'-7"	—
Rock Excavation for Structures			Cu. Yd.	4
Concrete Structures			Cu. Yd.	45.0
Reinforcement Bars, Epoxy Coated			Pound	5910
Bar Splicers			Each	32



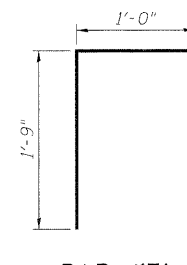
FIELD CUTTING DIAGRAM

Order a₂(E), a₃(E), b₁(E), b₇(E), w₅(E) & w₆(E) bars full length. Cut as shown and use remainder of bars in opposite face.

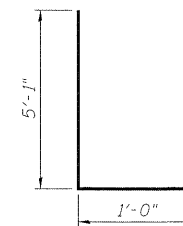
Bar	A	B	C	D	E
a ₂ (E)	22'-4"	25'-5"	47'-9"	24'-0"	14- #5 a ₂ (E) bars
a ₃ (E)	20'-10"	25'-4"	46'-2"	23'-3"	12- #5 a ₃ (E) bars
b ₁ (E)	3'-7"	11'-11"	15'-6"	9'-2"	4- #5 b ₁ (E) bars
b ₇ (E)	2'-3"	10'-8"	12'-11"	7'-4"	6- #5 b ₇ (E) bars
w ₅ (E)	3'-1"	4'-3"	7'-4"	3'-1"	4- #5 w ₅ (E) bars
w ₆ (E)	6'-7"	7'-4"	13'-11"	6'-7"	4- #5 w ₆ (E) bars



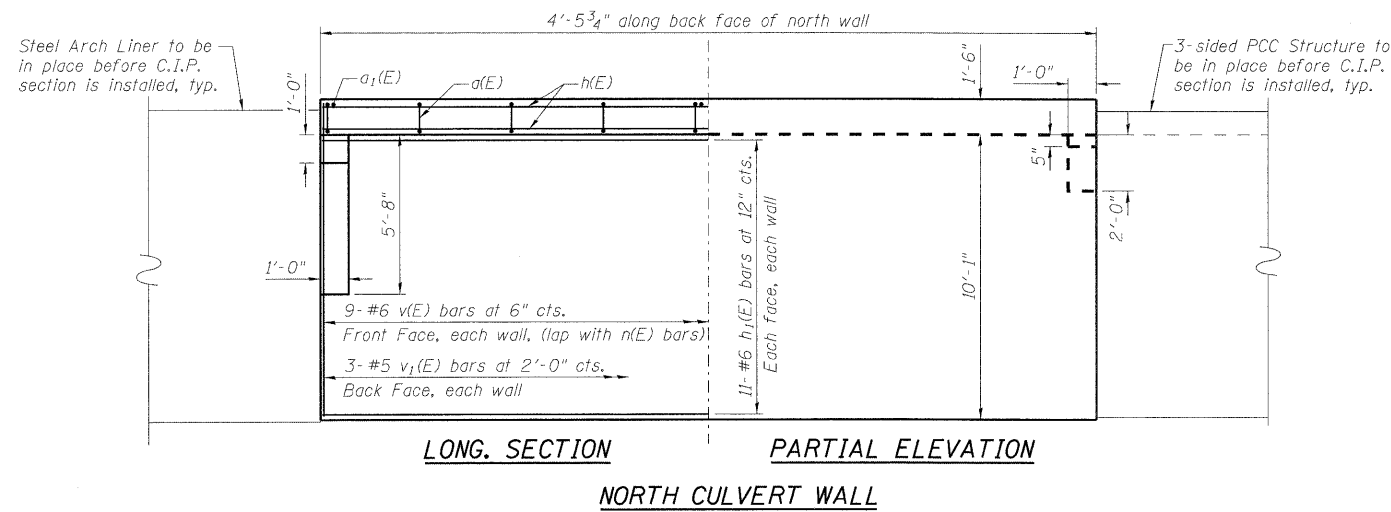
BARS t(E), t₁(E), t₂(E), & t₃(E)



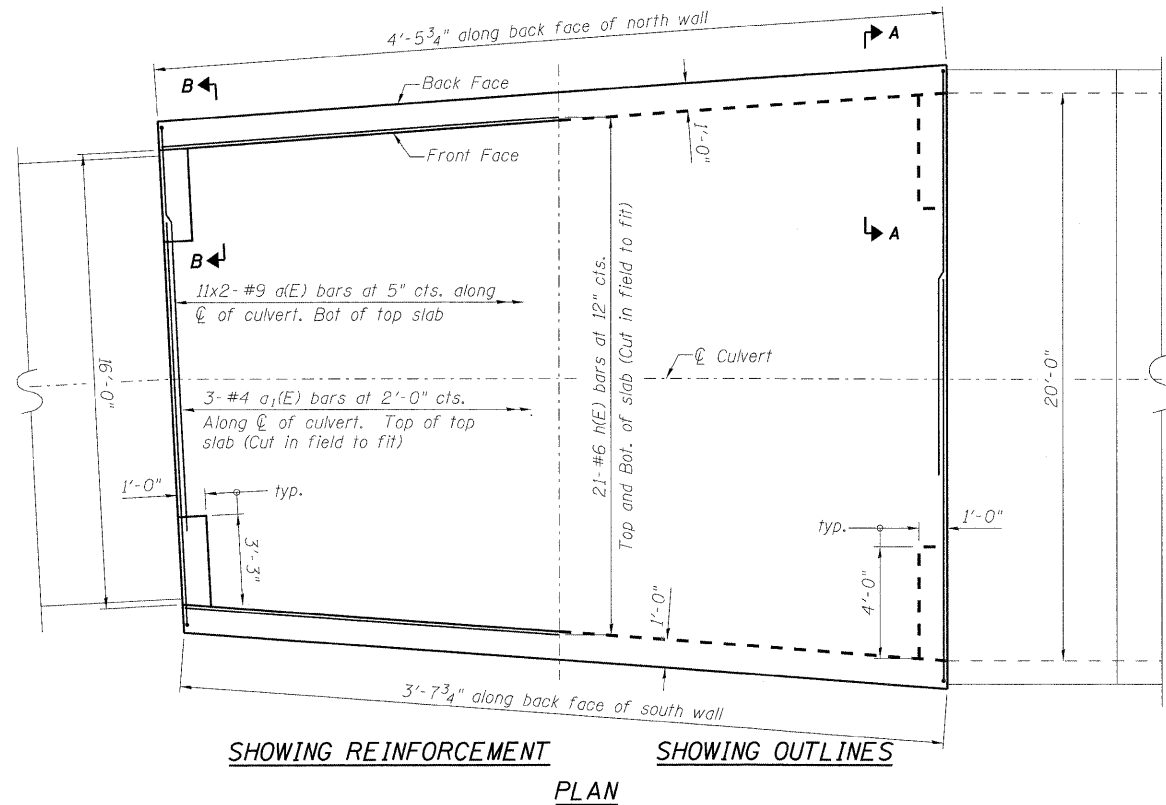
BAR d(E)



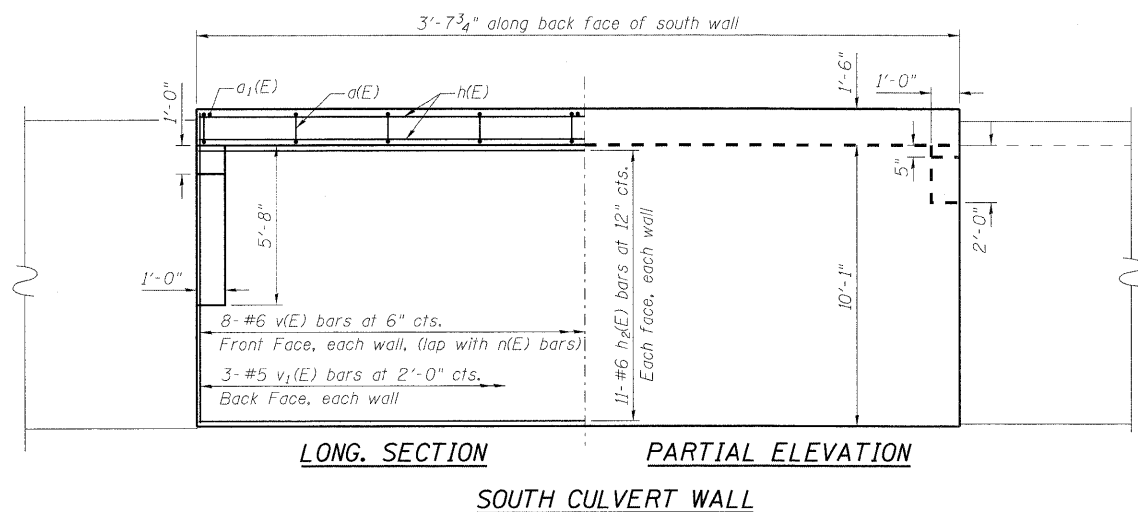
BAR n(E)



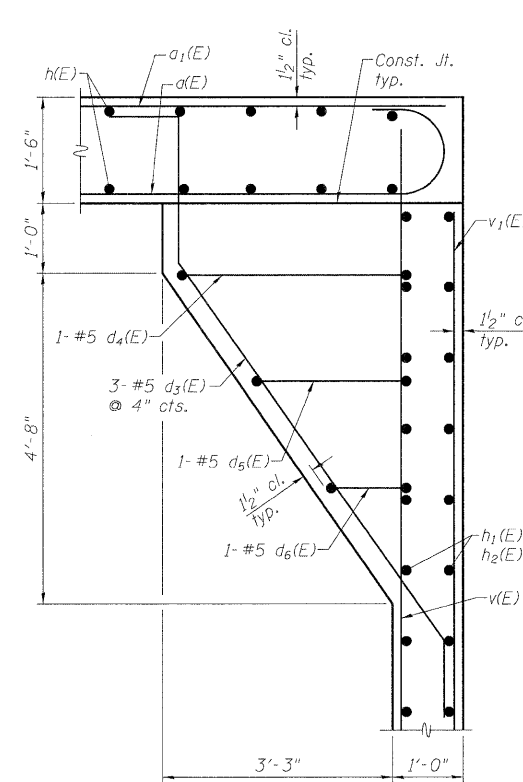
**LONG. SECTION PARTIAL ELEVATION
NORTH CULVERT WALL**



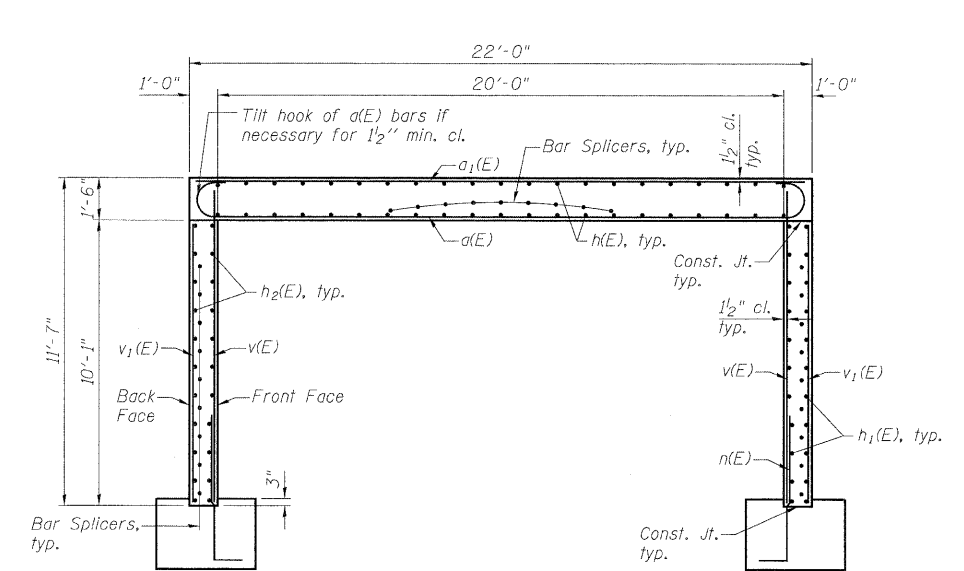
**SHOWING REINFORCEMENT SHOWING OUTLINES
PLAN**



**LONG. SECTION PARTIAL ELEVATION
SOUTH CULVERT WALL**

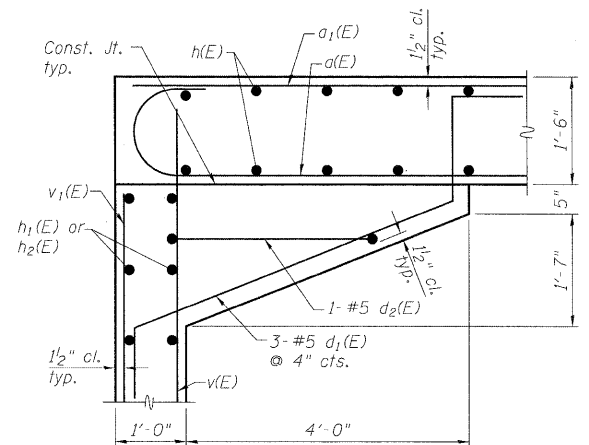


**SECTION B-B
(Looking at NW corner,
SW corner similar)**

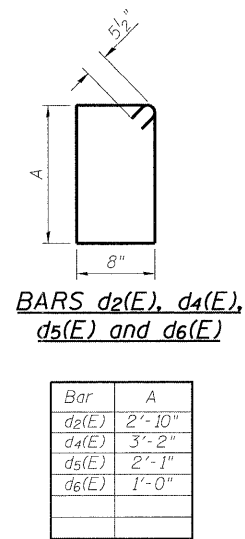


**SECTION THRU C.I.P. 3-SIDED CULVERT
(Looking West)**

NOTES
See sht S3 of S11 for C.I.P. footing details and reinforcement, including bar n(E).
Bars indicated thus 11 x 2-#9 etc. indicates 11 lines of bars with 2 lengths per line.
The Contractor shall vary the cross section of the CIP sections accordingly to match the cross sections of the Corrugated Steel Arch Liner and Three Sided Precast Concrete Structures. The Contractor shall provide revised concrete dimensions and rebar details to the Engineer for review prior to ordering the reinforcement. This work associated with varying the cross section of the CIP sections shall not be paid for separately, but shall be included in the cost of the Concrete Box Culverts.



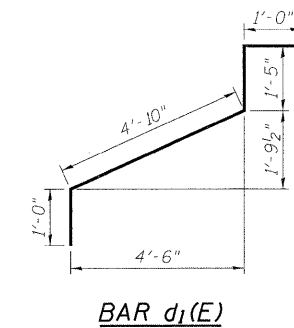
**SECTION A-A
(Looking at NE corner,
SE corner similar)**



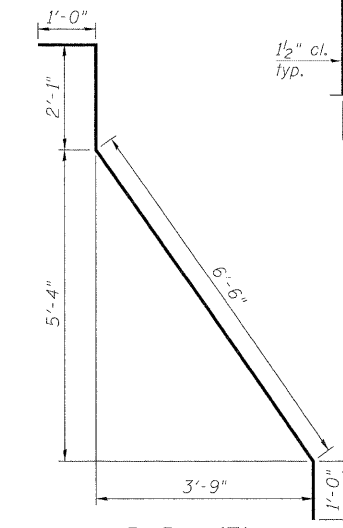
Bar	A
d2(E)	2'-10"
d4(E)	3'-2"
d5(E)	2'-1"
d6(E)	1'-0"

MINIMUM BAR LAPS

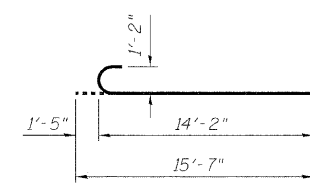
#9 = 6'-10"



BAR d1(E)



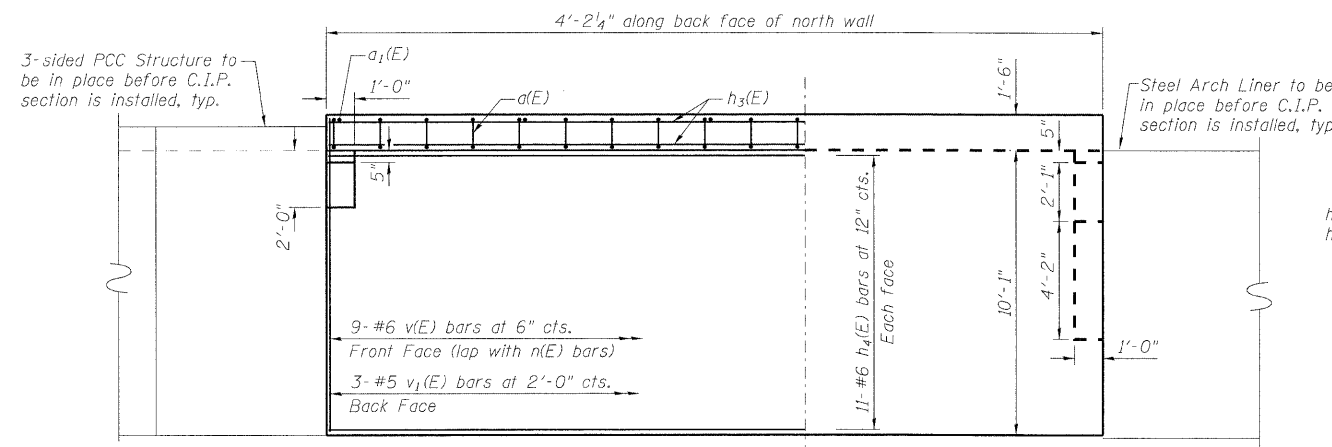
BAR d3(E)



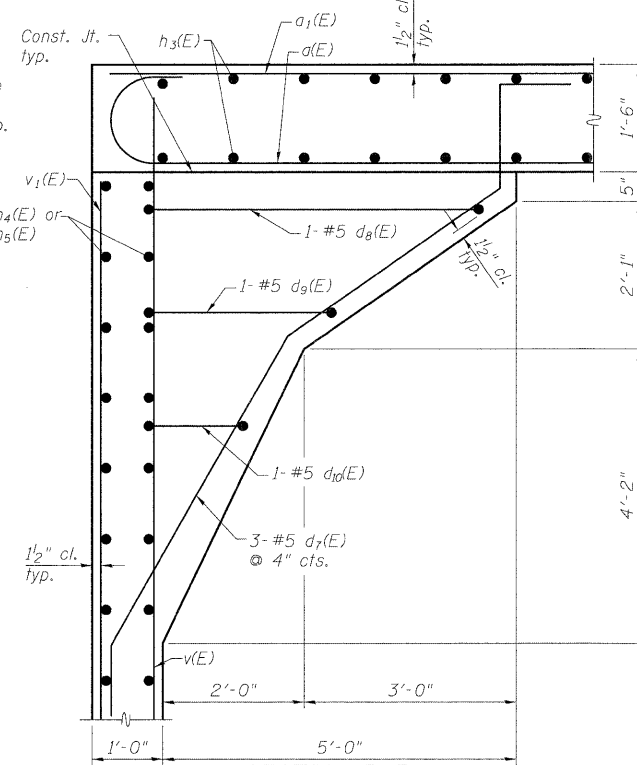
BAR a(E)

BILL OF MATERIAL

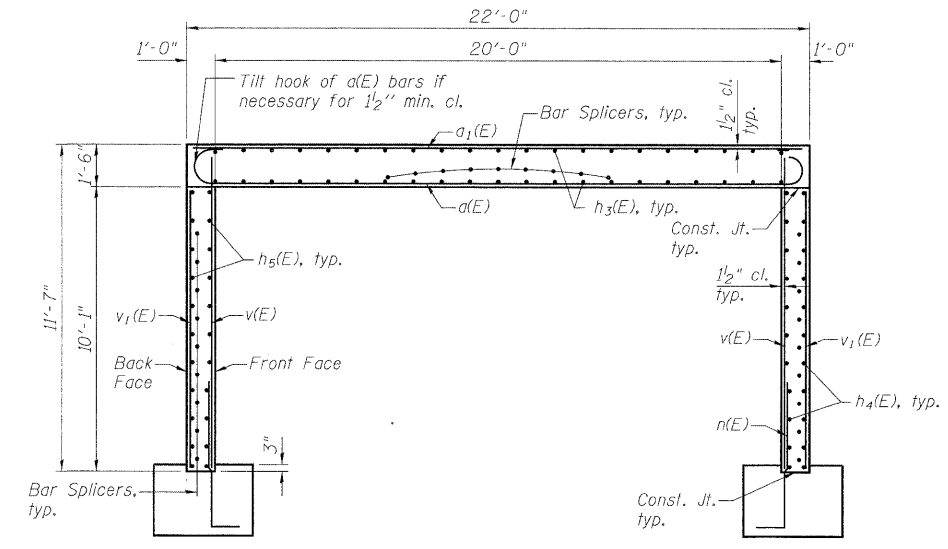
Bar	No.	Size	Length	Shape
a(E)	22	#9	15'-7"	┌
a1(E)	3	#4	21'-6"	—
d1(E)	6	#5	8'-3"	┌
d2(E)	2	#5	7'-11"	┌
d3(E)	6	#5	10'-7"	┌
d4(E)	2	#5	8'-7"	┌
d5(E)	2	#5	6'-5"	┌
d6(E)	2	#5	4'-3"	┌
h(E)	42	#6	3'-10"	—
h1(E)	22	#6	4'-0"	—
h2(E)	22	#6	3'-2"	—
v(E)	17	#6	11'-3"	—
v1(E)	6	#5	9'-9"	—
Concrete Box Culverts			Cu. Yd.	8.2
Reinforcement Bars, Epoxy Coated			Pound	2210



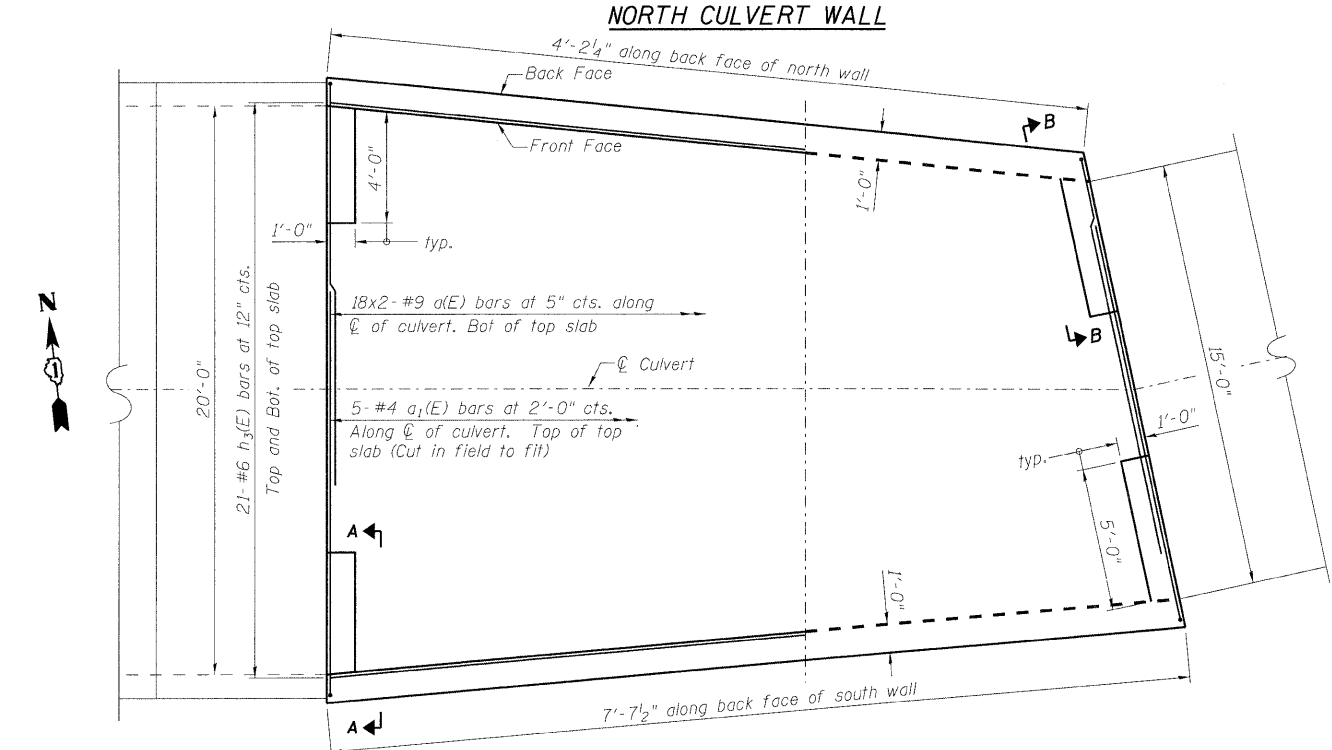
LONG. SECTION PARTIAL ELEVATION NORTH CULVERT WALL



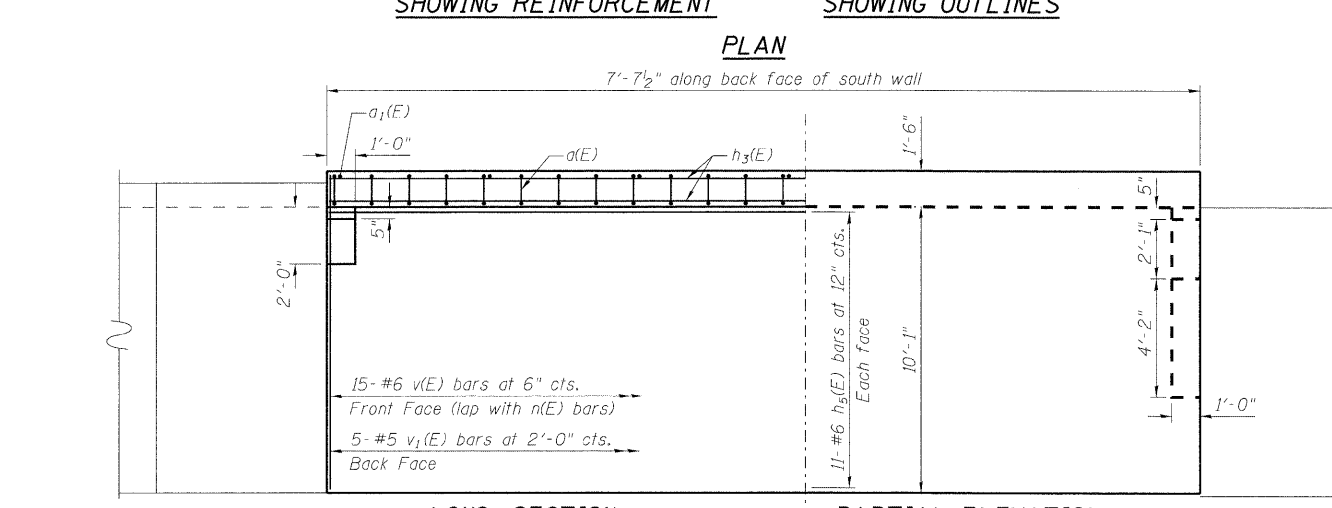
SECTION B-B (Looking at NE corner, SE corner similar)



SECTION THRU C.I.P. 3-SIDED CULVERT (Looking West)

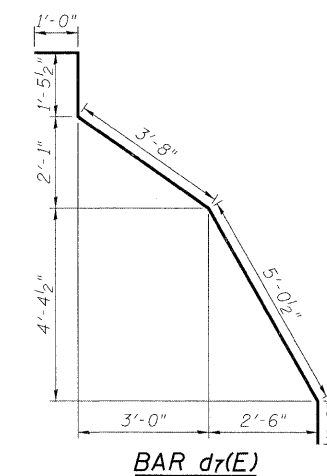


PLAN SHOWING REINFORCEMENT SHOWING OUTLINES

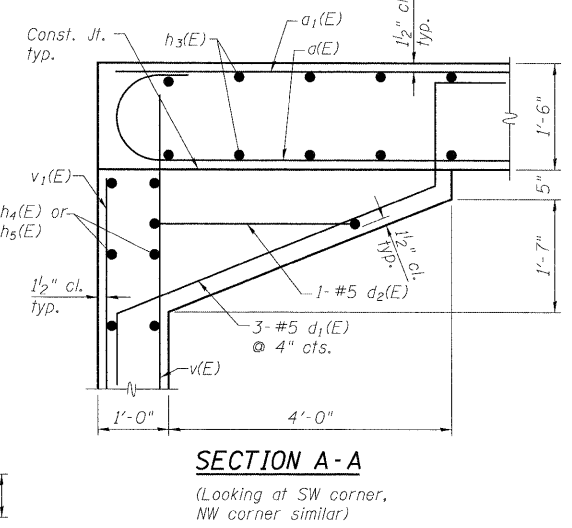


LONG. SECTION PARTIAL ELEVATION SOUTH CULVERT WALL

NOTES
 See sht S3 of S11 for C.I.P. footing details and reinforcement, including bar n(E).
 Bars indicated thus 18 x 2-#9 etc. indicates 18 lines of bars with 2 lengths per line.
 The Contractor shall vary the cross section of the CIP sections accordingly to match the cross sections of the Corrugated Steel Arch Liner and Three Sided Precast Concrete Structures. The Contractor shall provide revised concrete dimensions and rebar details to the Engineer for review prior to ordering the reinforcement. This work associated with varying the cross section of the CIP sections shall not be paid for separately, but shall be included in the cost of the Concrete Box Culverts.

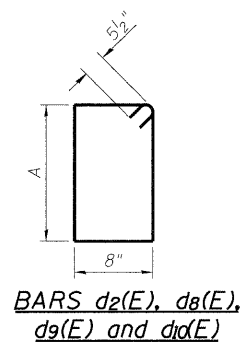


BAR d7(E)



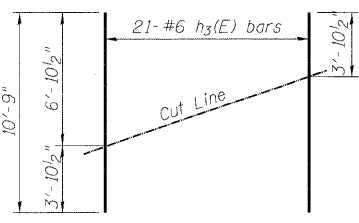
SECTION A-A (Looking at SW corner, NW corner similar)

MINIMUM BAR LAPS
 #9 = 6'-10"

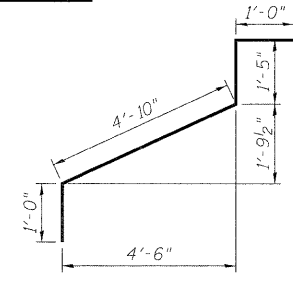


BARS d2(E), d8(E), d9(E) and d10(E)

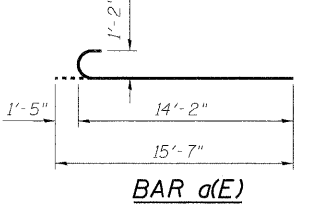
Bar	A
d2(E)	2'-10"
d8(E)	4'-8"
d9(E)	2'-7"
d10(E)	1'-4"



FIELD CUTTING DIAGRAM
 Order h3(E) bars full length. Cut as shown and use remainder of bars in opposite face.



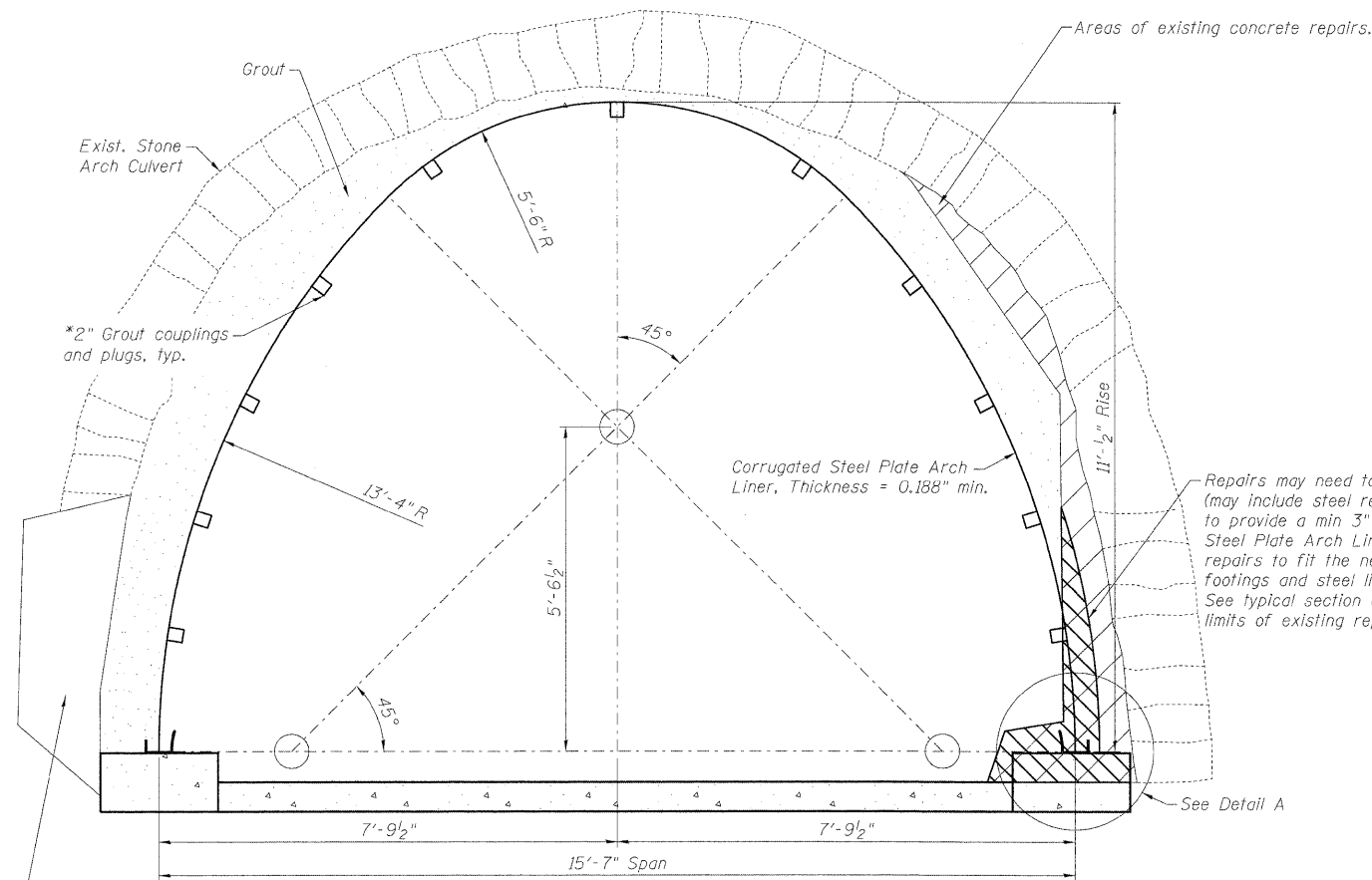
BAR d1(E)



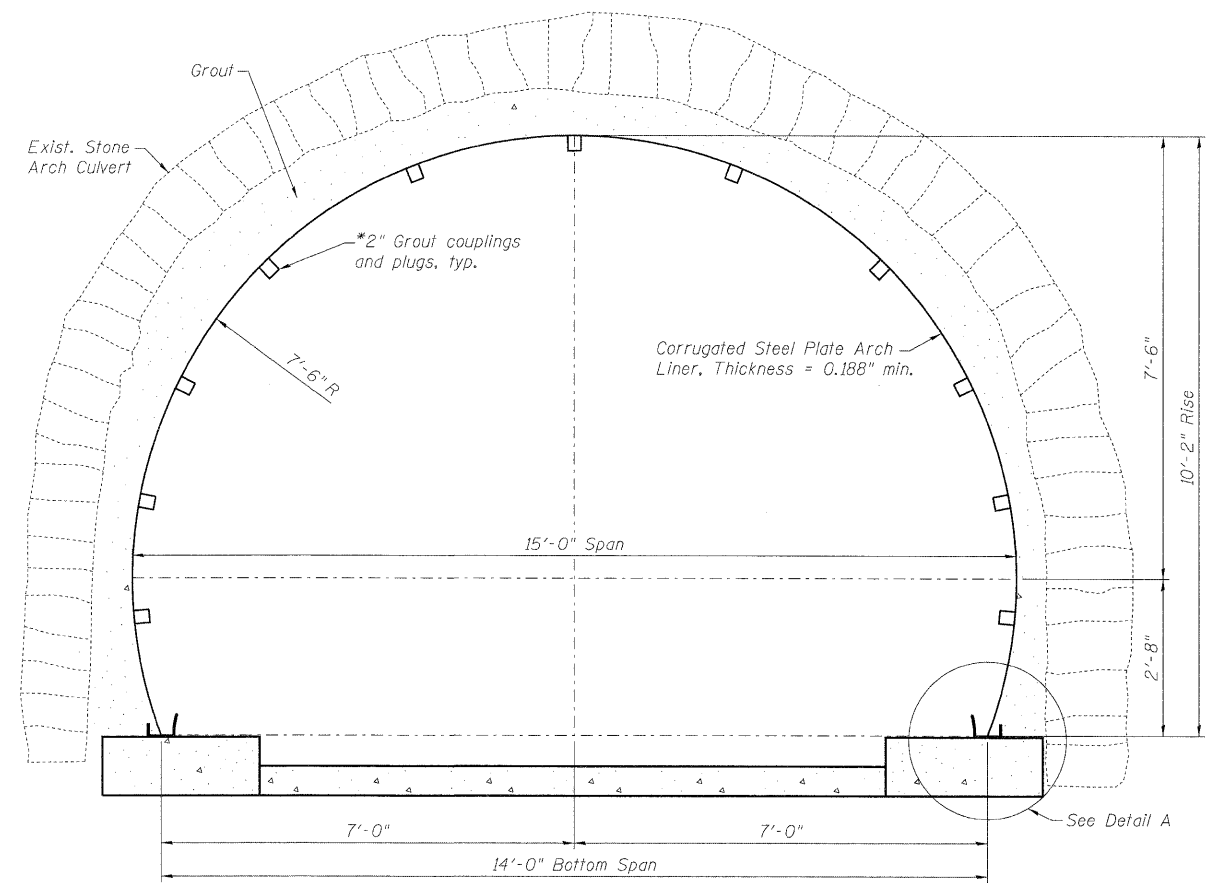
BAR a(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	36	#9	15'-7"	
a1(E)	5	#4	21'-6"	
d1(E)	6	#5	6'-5"	
d2(E)	2	#5	7'-11"	
d7(E)	6	#5	12'-2"	
d8(E)	2	#5	11'-7"	
d9(E)	2	#5	7'-5"	
d10(E)	2	#5	4'-11"	
h3(E)	21	#6	10'-9"	
h4(E)	22	#6	3'-8"	
h5(E)	22	#6	7'-1"	
v(E)	24	#6	11'-3"	
v1(E)	8	#5	9'-9"	
Concrete Box Culverts			Cu. Yd.	11.6
Reinforcement Bars, Epoxy Coated			Pound	3340



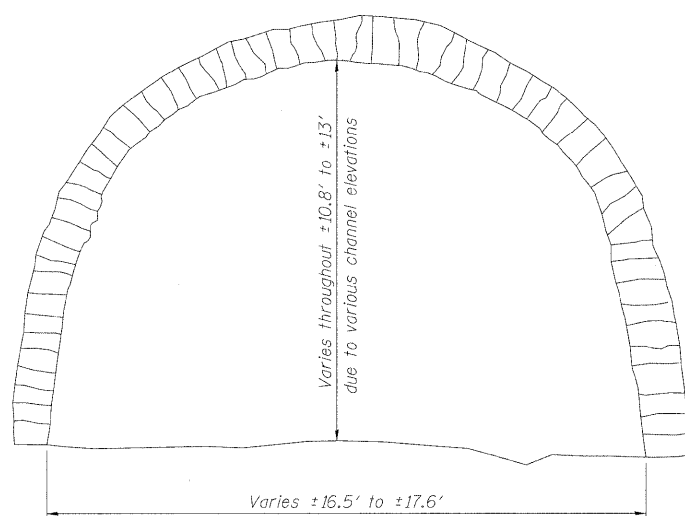
WEST END STEEL LINER SECTION



EAST END STEEL LINER SECTION

SECTION THROUGH PROPOSED CORRUGATED STEEL PLATE ARCH LINER

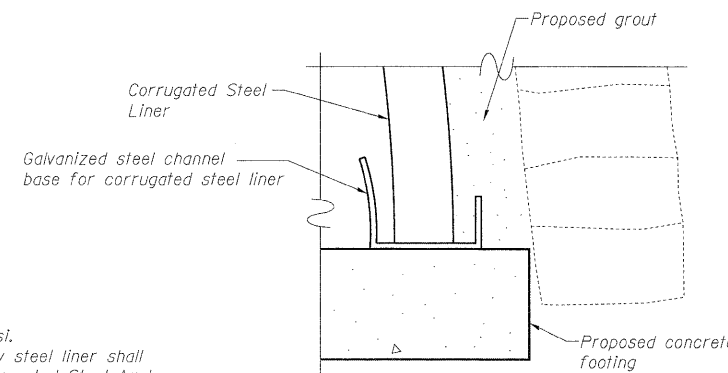
* Location and spacing of grout couplings shall be in accordance with manufacturer's recommendations. Typically, grouting proceeds from bottom to top with a two foot maximum per lift. Both sides of the arch may be done simultaneously or alternately, but sides must be allowed to set before beginning the next lift.



SECTION THROUGH EXISTING STONE ARCH CULVERT

GENERAL NOTES

The grout shall be pumped in at a pressure no greater than 5 psi. Cost of concrete removal and reinforcement cutting to fit the new steel liner shall not be paid for separately, but shall be included in the cost of Corrugated Steel Arch Liner.
 The cost including all material, equipment and labor to install the steel arch liner, anchor bolts, connecting bolts, grout, and all other material required to build the steel arch liner shall be included in the cost of Corrugated Steel Arch Liner.
 Bottom of proposed footings shall not be set below the elevation of existing footings. The Engineer and Contractor are to evaluate the condition of the base of stone arch culvert for possible undermining prior to footing excavation. The Contractor is responsible for maintaining the stability of the existing stone arch culvert walls. If excavation below the level of the bottom of the stone arch is determined to be required, any work necessary to maintain stability should be paid for Article 109.04.



DETAIL A

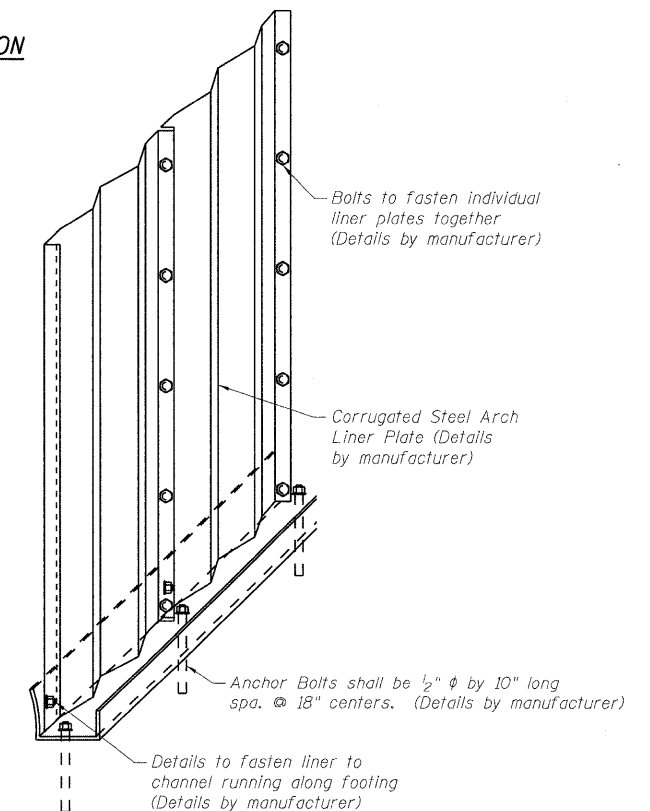
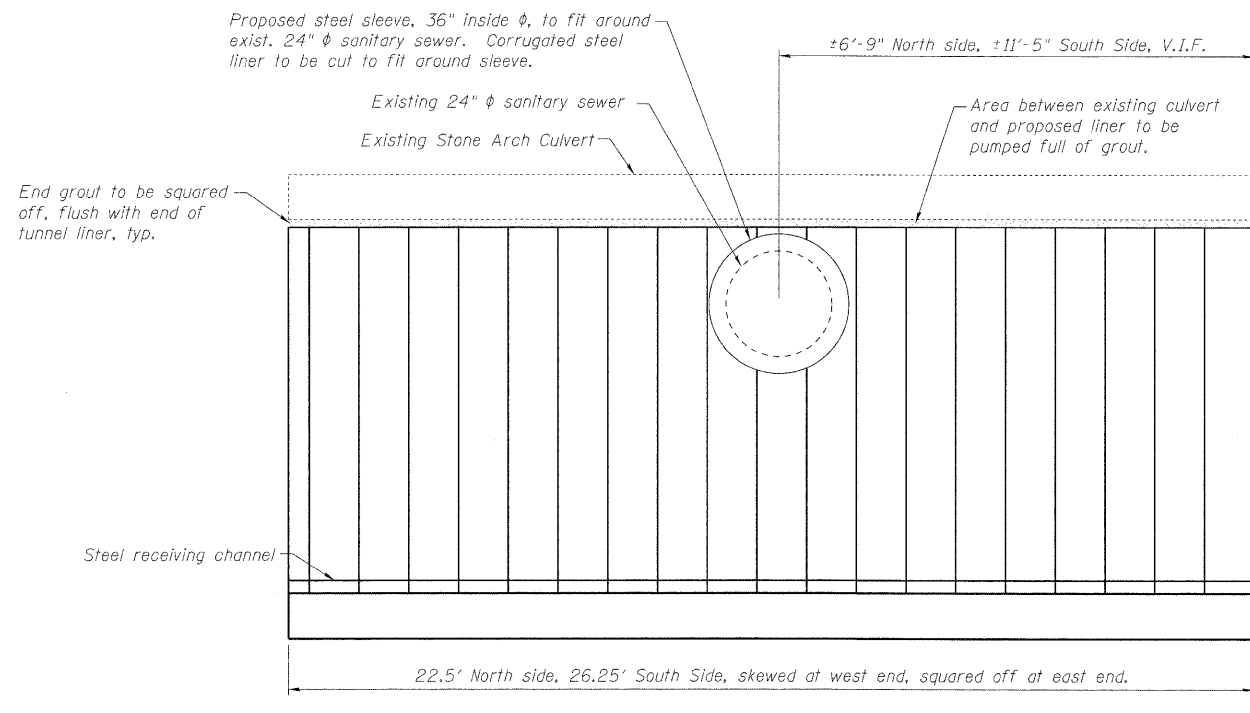
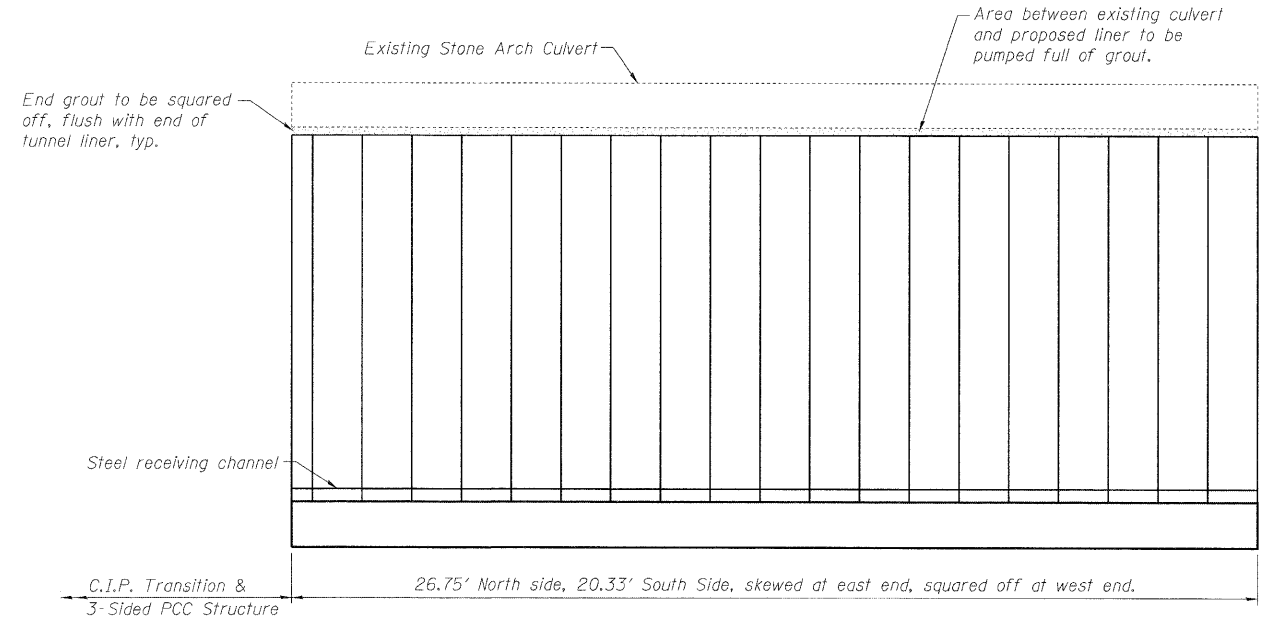


PLATE CONNECTION DETAILS

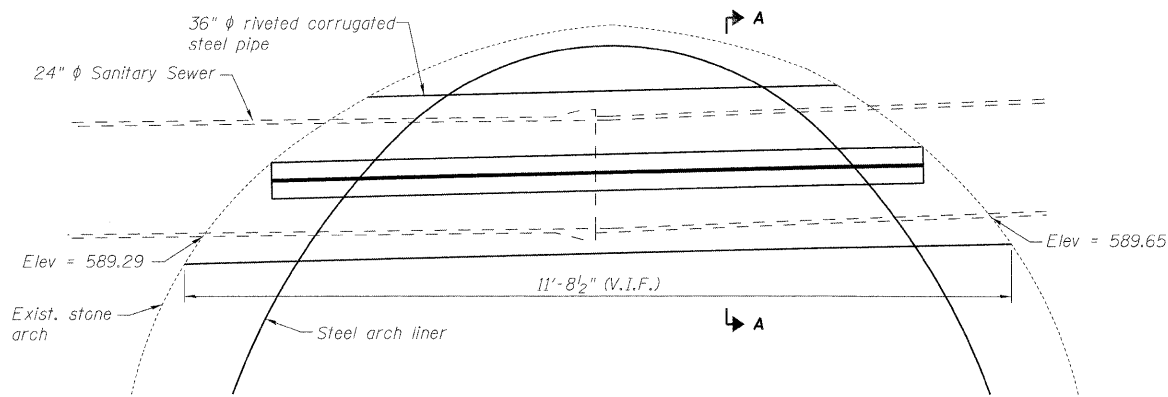


WEST END STEEL LINER

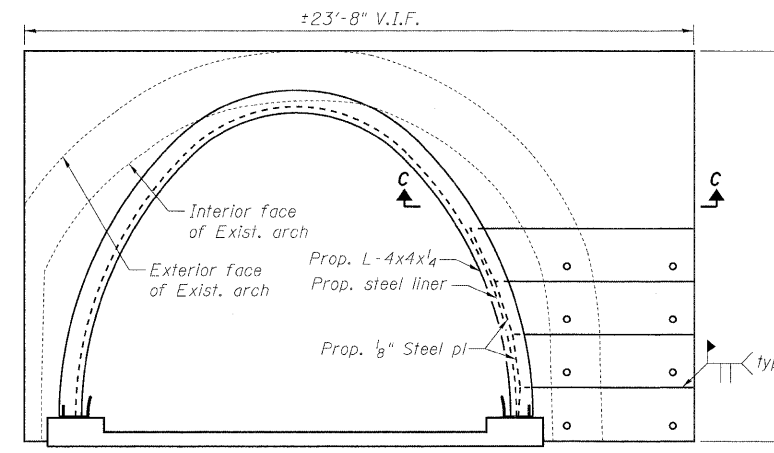


EAST END STEEL LINER

ELEVATION PROPOSED CORRUGATED STEEL PLATE ARCH LINER

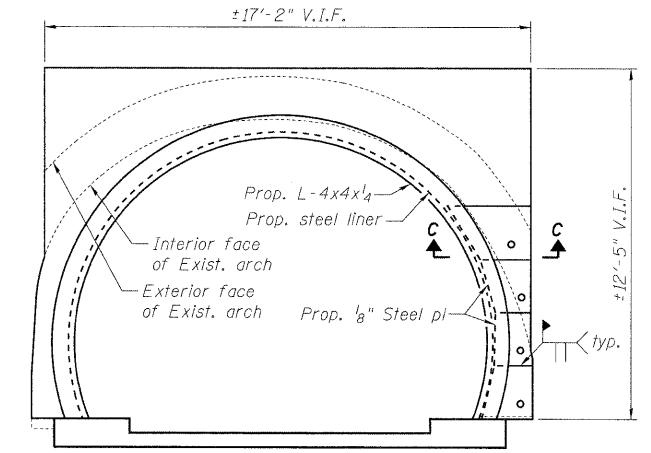


ELEVATION STEEL SLEEVE FOR SANITARY SEWER AT STA 3+26.45



WEST END

(Looking east at west end steel liner at west end ROW)



EAST END

(Looking west at east end steel liner at east end ROW)

BILL OF MATERIAL

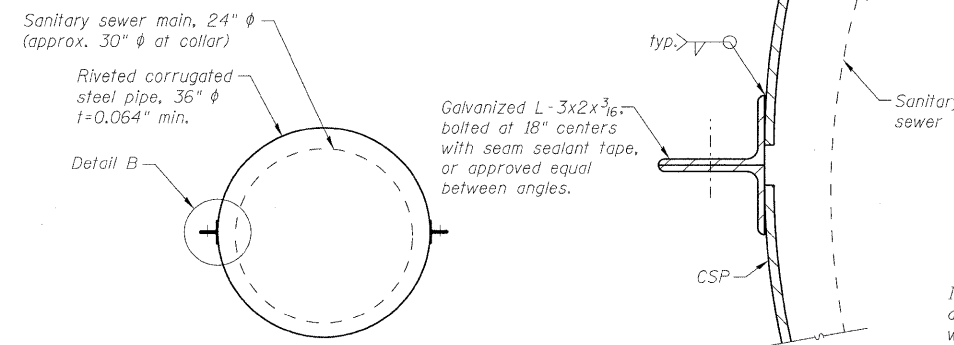
Item	Unit	Total
Corrugated Steel Arch Liner	Foot	48
Riveted Corrugated Steel Pipe	L. Sum	1

ELEVATION END OF STEEL LINER DETAIL

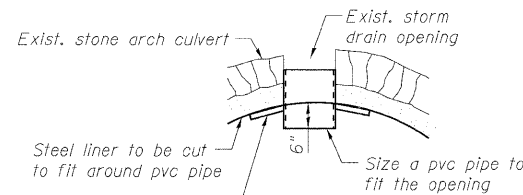
Note:
Dimensions of the steel liner end plate are approximate and shall be field verified before any materials are ordered. Based on the approximate dimensions, it is estimated that the end of steel liner plate with cover an area of 268 sq ft. The angle and steel plate for the end of steel liner detail shall be included in the cost of Furnishing and Erecting Structural Steel.

NOTES

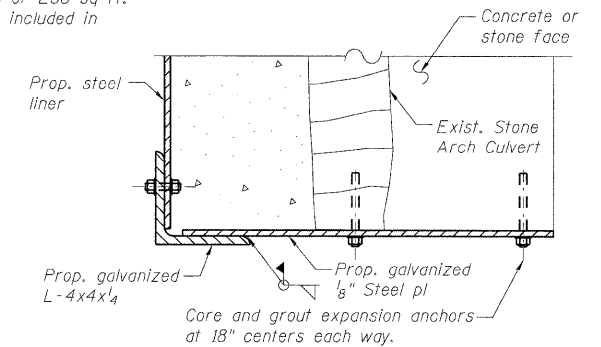
Steel plate for end of liner detail shall be hot dipped galvanized according to AASHTO M111 or M232 as applicable. Steel plate shall be sized and cut in field to allow for better fit.
There shall be no splice in the Riveted Corrugated Steel Pipe. The pipe shall be long enough to span the entire length required.
The cost including all material, equipment and labor to install the PVC for the existing storm drains shall not be paid for separately, but shall be included in the cost of Corrugated Steel Arch Liner.
The Riveted Corrugated Steel Pipe shall be temporarily supported until the Steel Arch Liner has been installed around the sleeve, and the grout has been pumped in behind the liner, therefore securing the sleeve in place. This work shall not be paid for separately, but shall be included in the cost of Riveted Corrugated Steel Pipe.



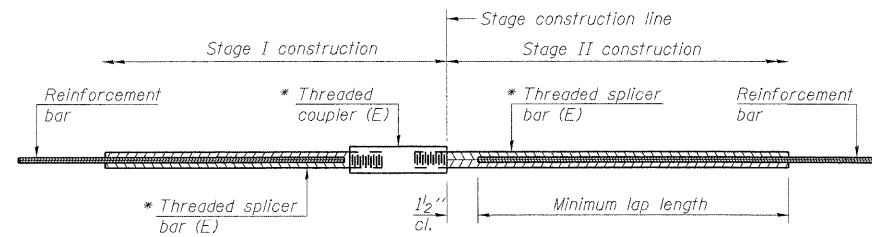
DETAIL B



STORM DRAIN DETAIL



SECT C-C



STANDARD BAR SPLICER ASSEMBLY

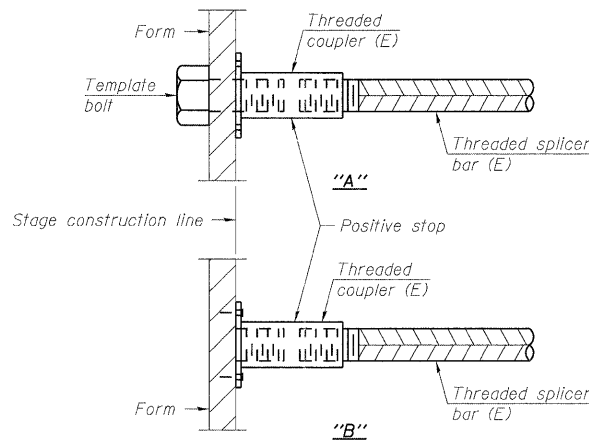
Minimum Lap Lengths					
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-3"
5	1'-9"	2'-5"	2'-7"	2'-11"	2'-10"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-4"
7	2'-9"	3'-10"	4'-2"	4'-8"	4'-6"
8	3'-8"	5'-1"	5'-5"	6'-2"	5'-10"
9	4'-7"	6'-5"	6'-10"	7'-9"	7'-5"

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Top bar lap, Class B

Threaded splicer bar length = min. lap length + 1/2" + thread length

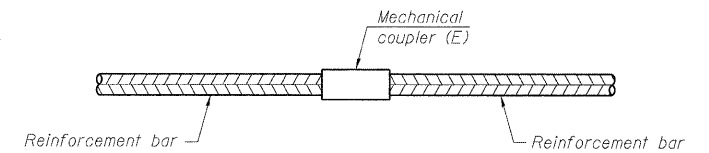
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
North Footing	#5	16	Table 3
South Footing	#5	16	Table 3



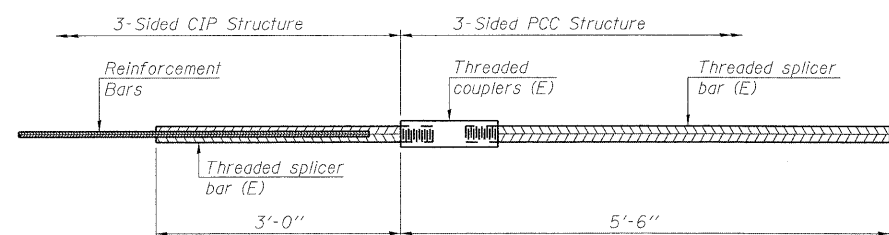
INSTALLATION AND SETTING METHODS

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



STANDARD MECHANICAL SPLICER

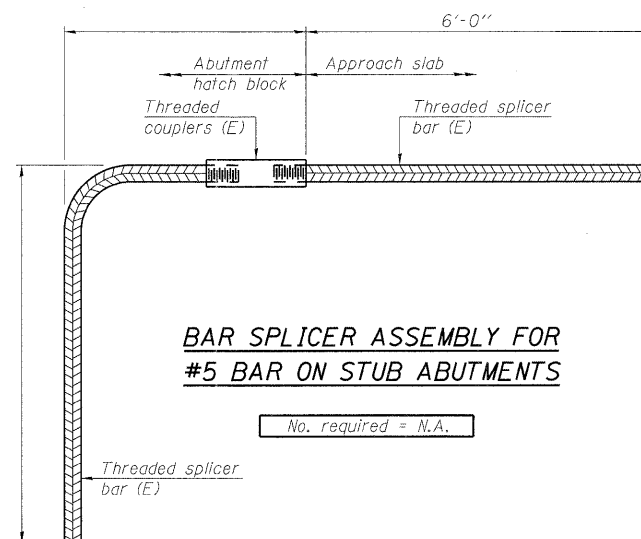
Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #6 BAR FOR 3 SIDED CIP & PCC STRUCTURE

(Bend in field as required)

No. required = 54

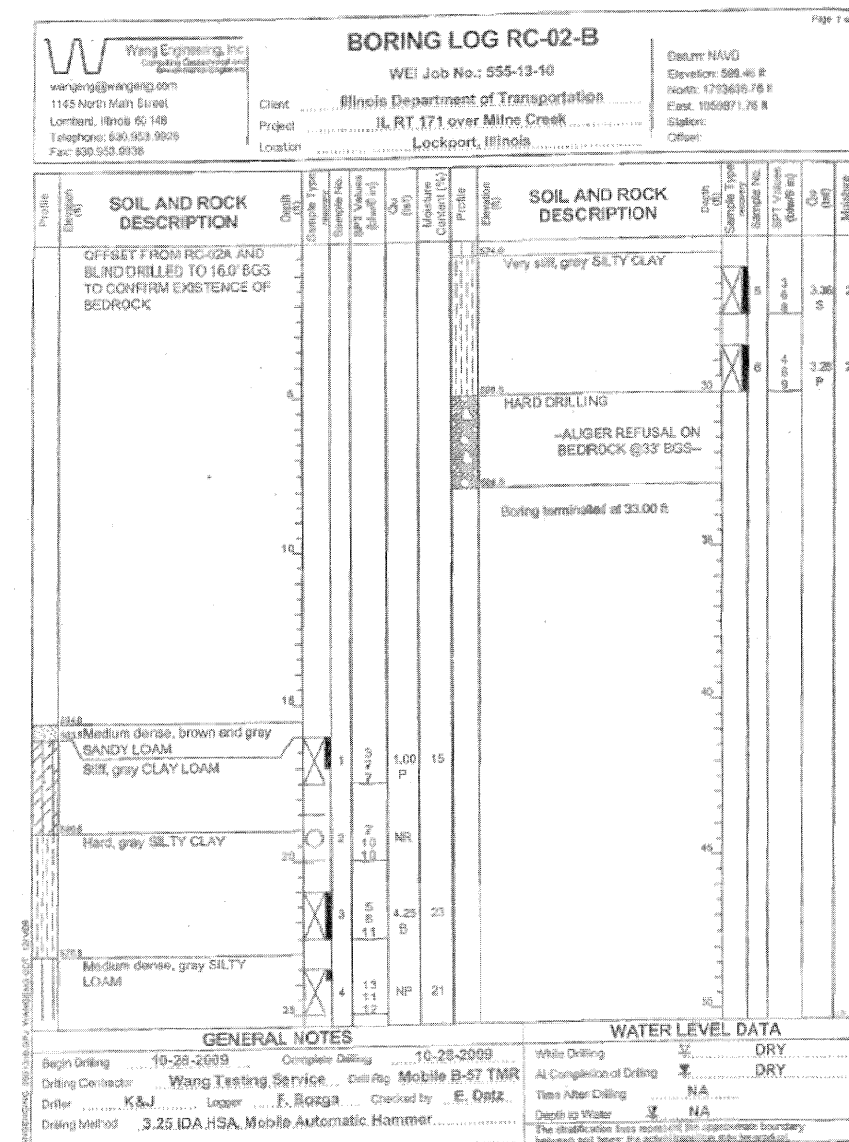
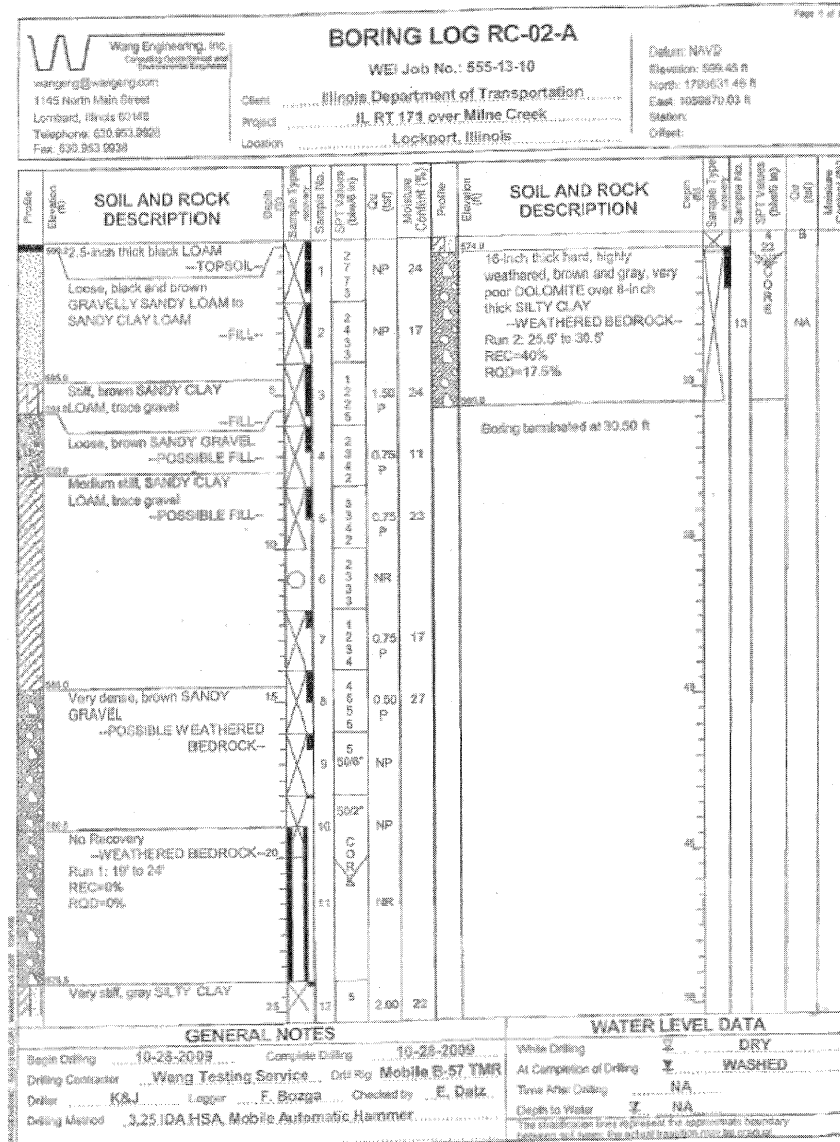
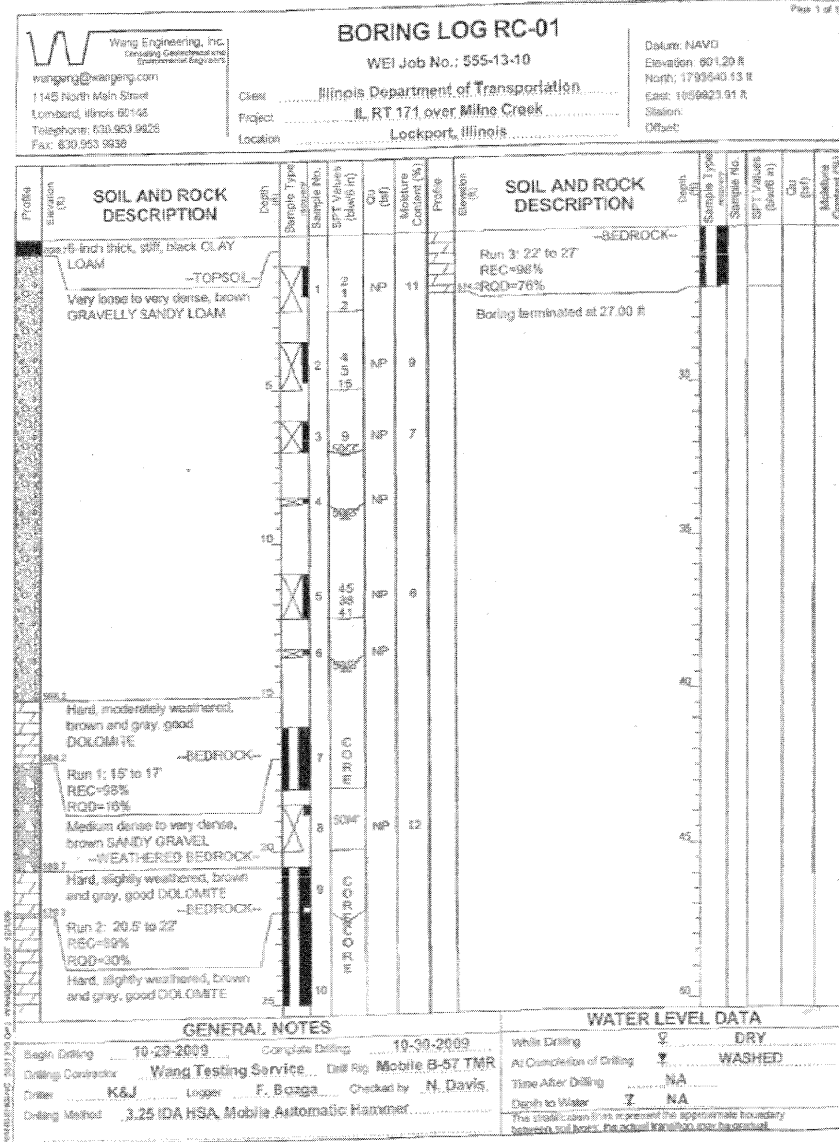


BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required = N.A.

NOTES

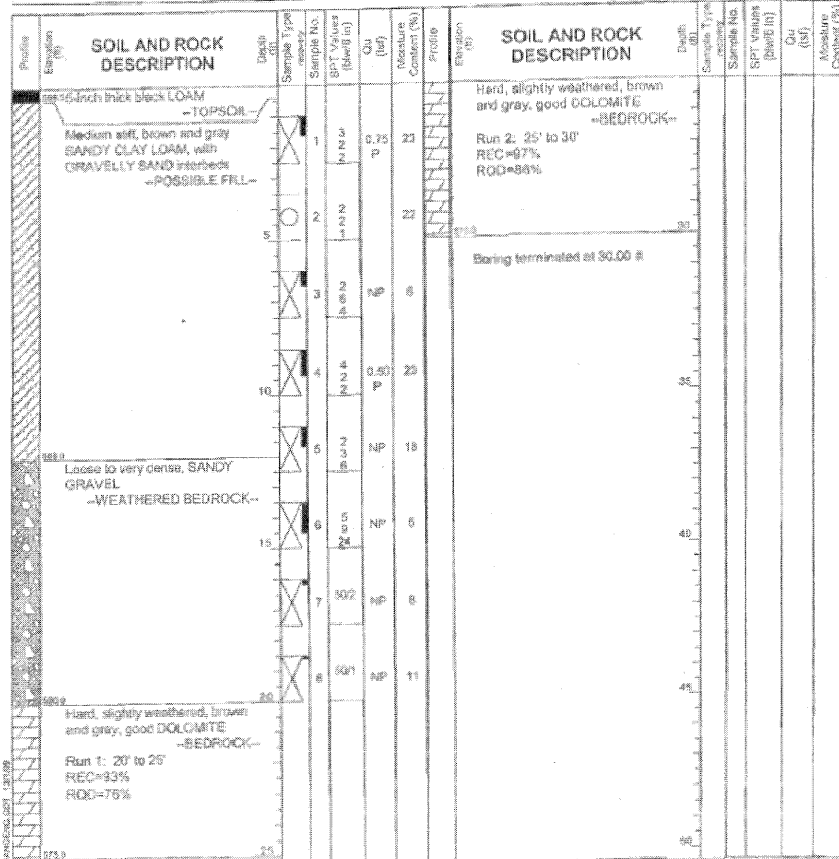
- Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
- All reinforcement shall be lapped and tied to the splicer bars.
- Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
- See approved list of bar splicer assemblies and mechanical splicers for alternatives.



BORING LOG RC-03
 WBE Job No.: 555-13-10
 Client: Illinois Department of Transportation
 Project: IL RT. 171 over Milne Creek
 Location: Lockport, Illinois

Date: NAD
 Elevation: 809.05 ft
 North: 1793331.00 ft
 East: 1099943.55 ft
 Station: Offset

Wang Engineering, Inc.
 1145 North Main Street
 Lombard, Illinois 60148
 Telephone: 630.953.9928
 Fax: 630.953.9936



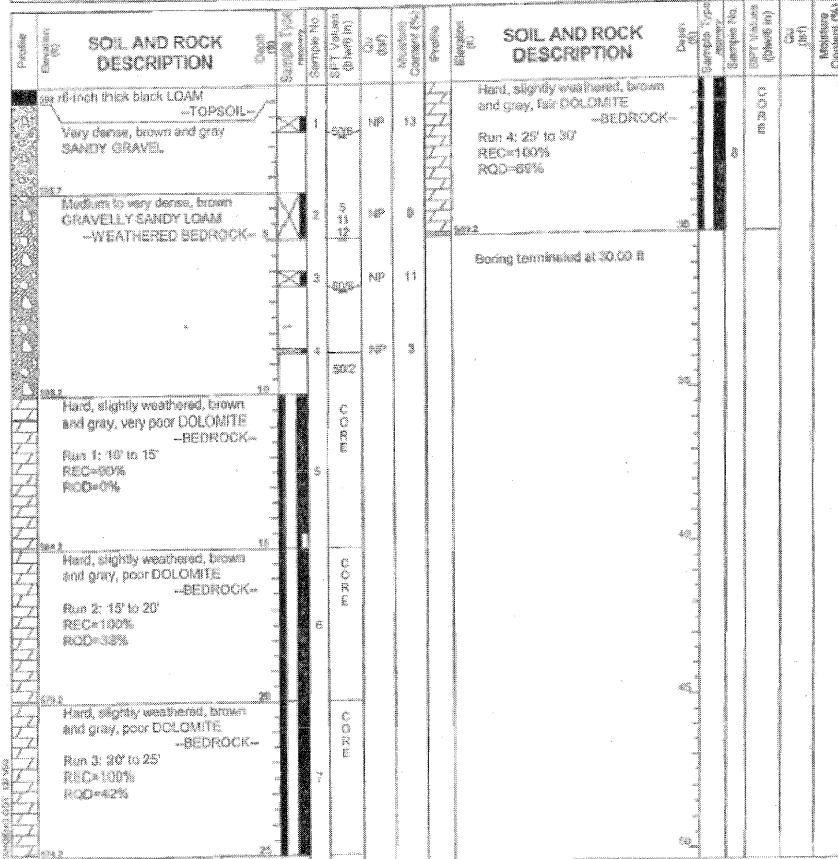
GENERAL NOTES
 Begin Drilling: 11-18-2009
 Complete Drilling: 11-18-2009
 Drilling Contractor: Wang Testing Service
 Driller: K&J
 Drilling Method: 3.25 IDA HSA, Mobile Automatic Hammer

WATER LEVEL DATA
 While Drilling: DRY
 At Completion of Drilling: DRY
 Time After Drilling: NA
 Depth to Water: NA

BORING LOG RC-04
 WBE Job No.: 555-13-10
 Client: Illinois Department of Transportation
 Project: IL RT. 171 over Milne Creek
 Location: Lockport, Illinois

Date: NAD
 Elevation: 899.20 ft
 North: 1783338.84 ft
 East: 1059822.89 ft
 Station: Offset

Wang Engineering, Inc.
 1145 North Main Street
 Lombard, Illinois 60148
 Telephone: 630.953.9928
 Fax: 630.953.9936

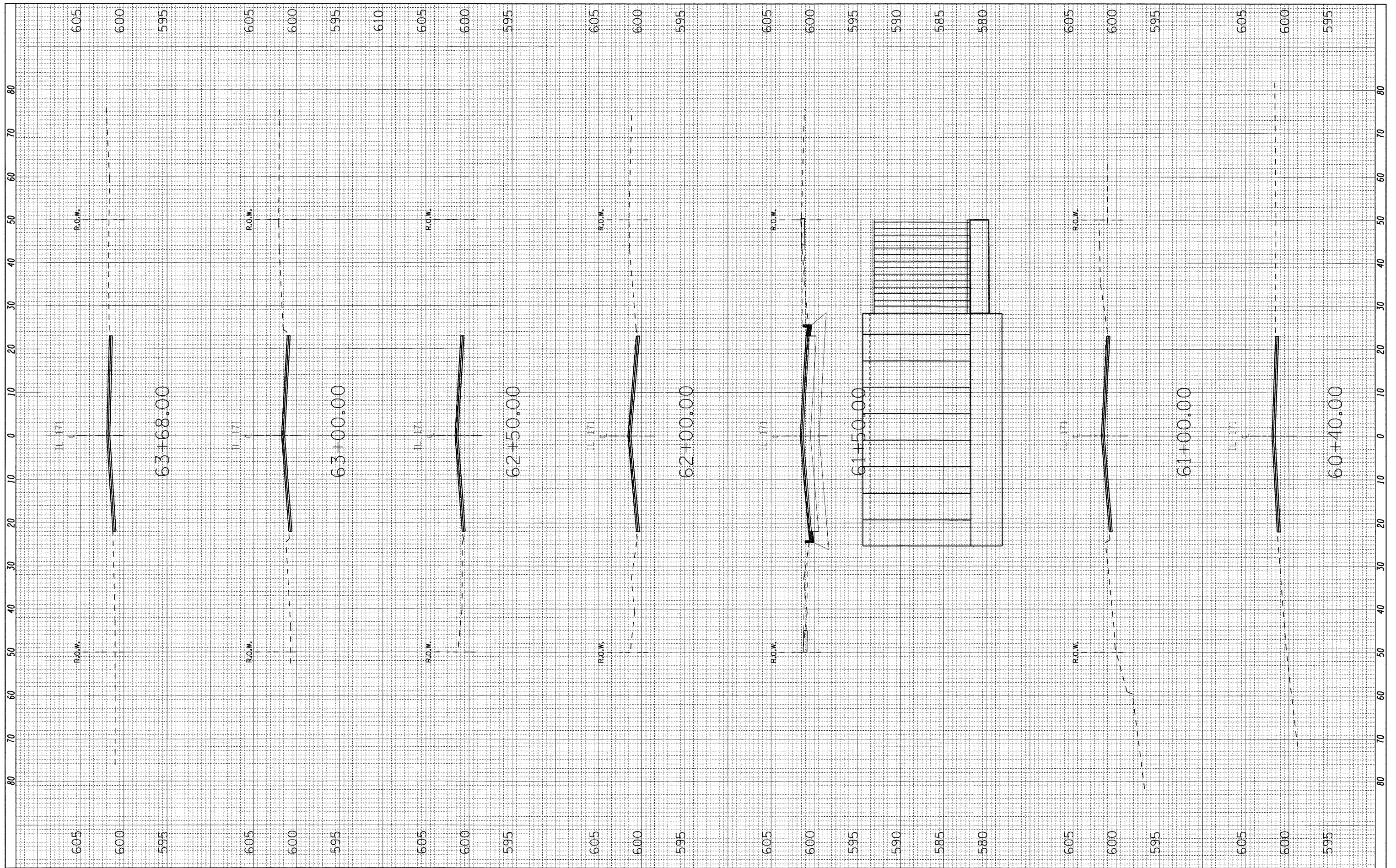


GENERAL NOTES
 Begin Drilling: 11-18-2009
 Complete Drilling: 11-19-2009
 Drilling Contractor: Wang Testing Service
 Driller: K&J
 Drilling Method: 3.25 IDA HSA, Mobile Automatic Hammer

WATER LEVEL DATA
 While Drilling: DRY
 At Completion of Drilling: DRY
 Time After Drilling: NA
 Depth to Water: NA

FINAL SURVEY NO.	BY	DATE
SURVEYED		
NOTE BOOK		
AREAS CHECKED		

ORIGINAL SURVEY NO.	BY	DATE
SURVEYED		
NOTE BOOK		
AREAS CHECKED		



LOCO, INC.
 CONSULTING ENGINEERS
 1560 WALL ST, SUITE 222
 NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

DESIGNED - ST
 DRAWN - ST
 CHECKED - MJY, SLV
 DATE - 10/14/2011

REVISED -
 REVISED -
 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**IL 171 CROSS SECTIONS
 IL ROUTE 171 OVER MILNE CREEK**

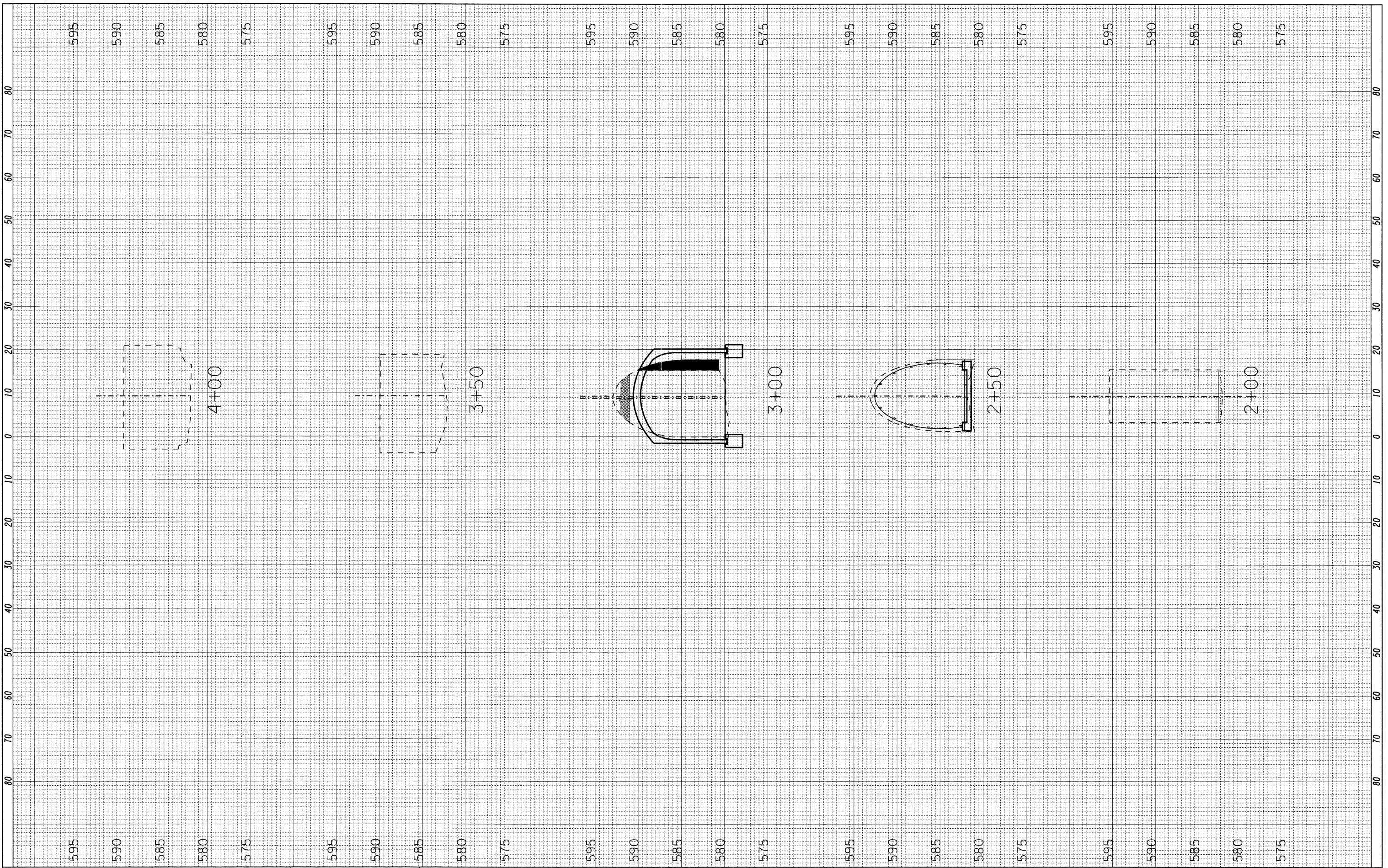
SCALE: 1" = 20' SHEET NO. 1 OF 1 SHEETS STA. 60+40 TO STA. 63+68

F.A.P. FILE NO. 577	SECTION D-T	COUNTY WILL	TOTAL SHEETS 44	SHEET NO. 31
D-91-438-08		CONTRACT NO. 60B10		

ILLINOIS FED. AID PROJECT

FINAL SURVEY NO.	SURVEYED BY	DATE
NOTE BOOK NO.	TEMP. DATE	
	AREAS CHECKED	

ORIGINAL SURVEY NO.	SURVEYED BY	DATE
NOTE BOOK NO.	TEMP. DATE	
	AREAS CHECKED	



LONGO, INC.
CONSULTING ENGINEERS
1560 WALL ST., SUITE 222
NAPERVILLE, ILLINOIS 60563 PH 16301 577-9100

DESIGNED - ST
DRAWN - ST
CHECKED - MJY, SLV
DATE - 10/14/2011

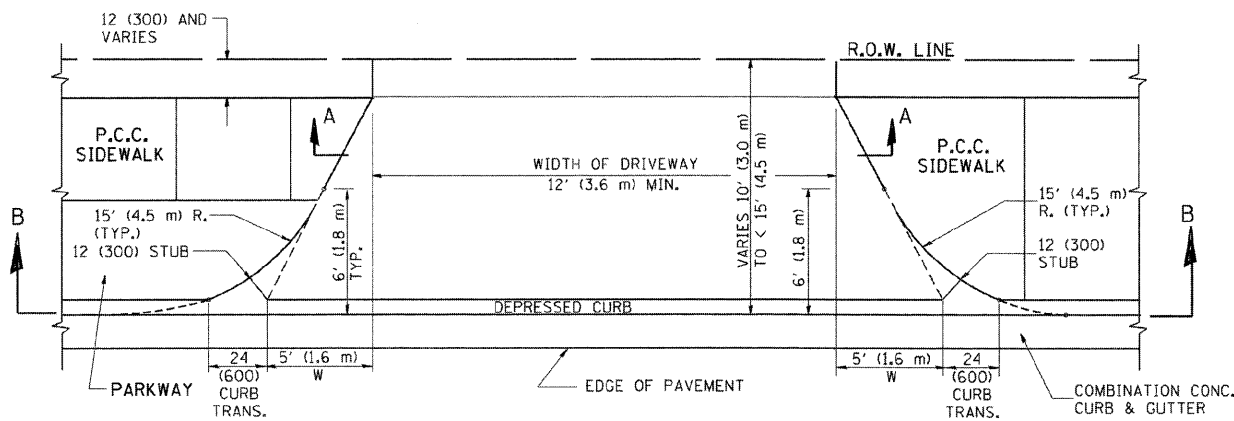
REVISED
REVISED
REVISED
REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

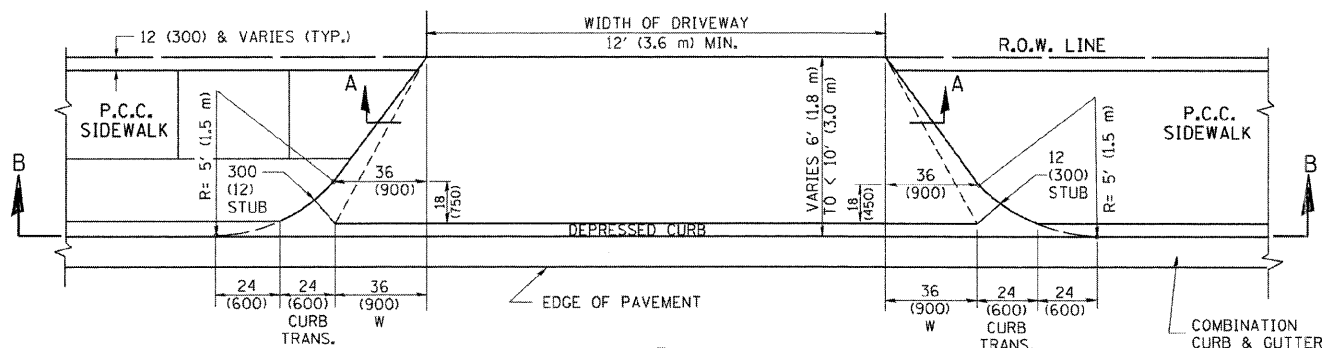
**MILNE CREEK CROSS SECTIONS
IL ROUTE 171 OVER MILNE CREEK**

SCALE: 1" = 20' SHEET NO. 1 OF 1 SHEETS STA. 2+00 TO STA. 4+00

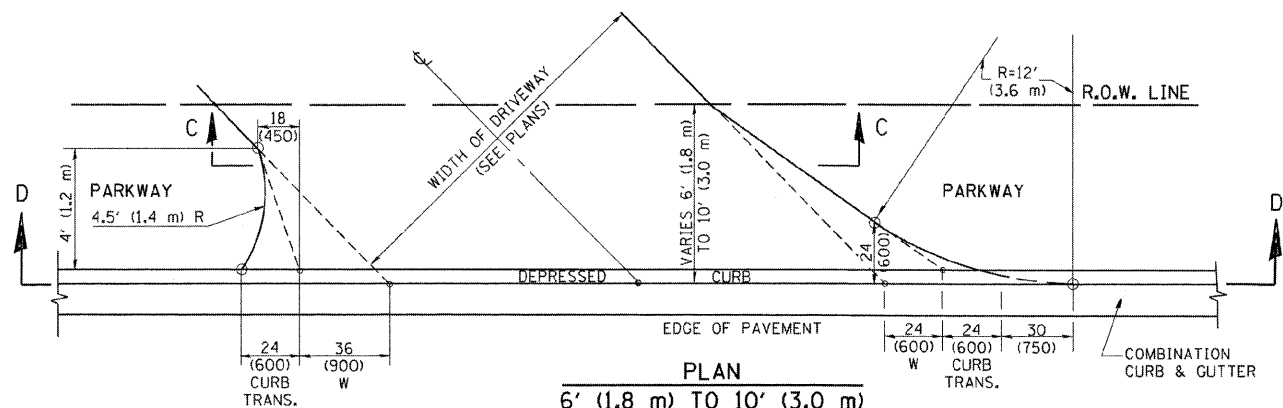
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	D-T	WILL	44	32
D-91-438-08		CONTRACT NO. 60B10		
ILLINOIS FED. AID PROJECT				



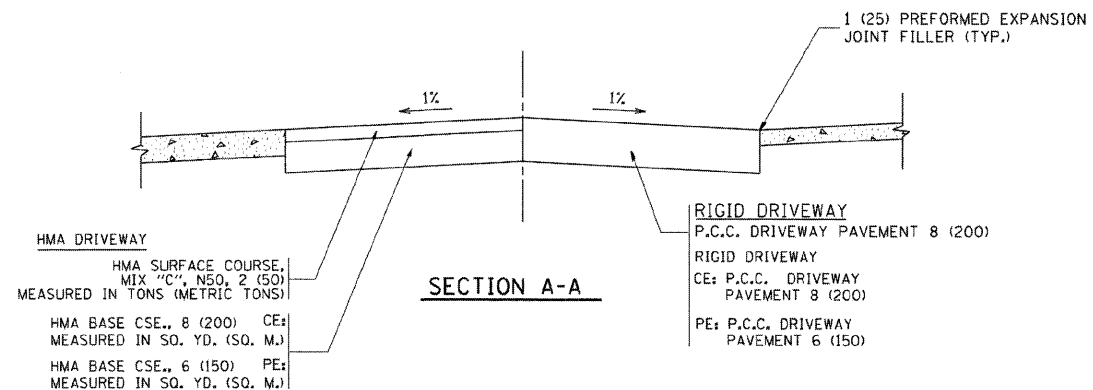
PLAN
10' (3.0 m) TO < 15' (4.5 m)



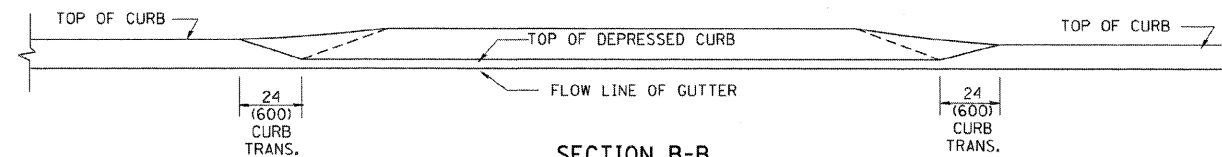
PLAN
6' (1.8 m) TO < 10' (3.0 m)



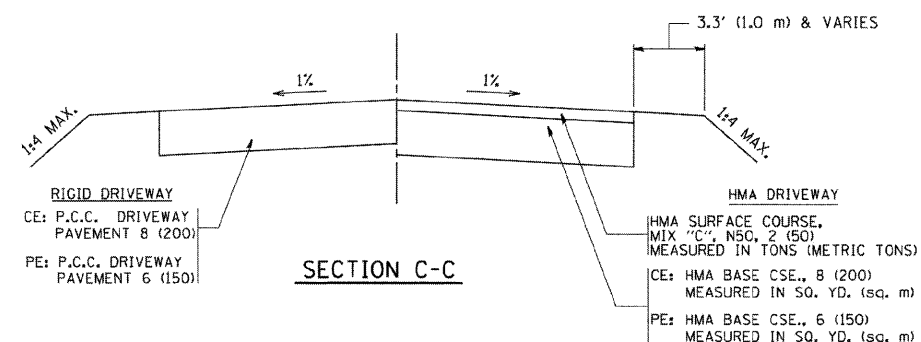
PLAN
6' (1.8 m) TO 10' (3.0 m)



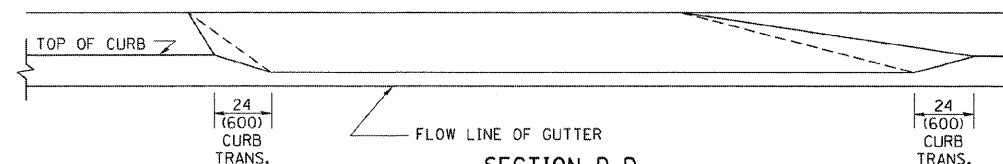
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

GENERAL NOTES

REVISED	-	T. HOLTZ 04-08-97
REVISED	-	M. GOMEZ 04-06-01
REVISED	-	P. LAFLEUR 04-15-03
REVISED	-	R. BORO 01-01-07

DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATION 10 IN THE PERMIT HANDBOOK. WHERE SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED WITH RIGID PAVEMENT. WHERE NO SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED IN KIND. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.

WHEN THE DISTANCE BETWEEN R.O.W. AND THE BACK OF CURB IS EQUAL TO OR LESS THAN 8' (2.4 m), THE P.C.C. SIDEWALK SHALL EXTEND TO THE BACK OF CURB.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT 847/ 705-4131 FOR ANY QUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS; SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY.

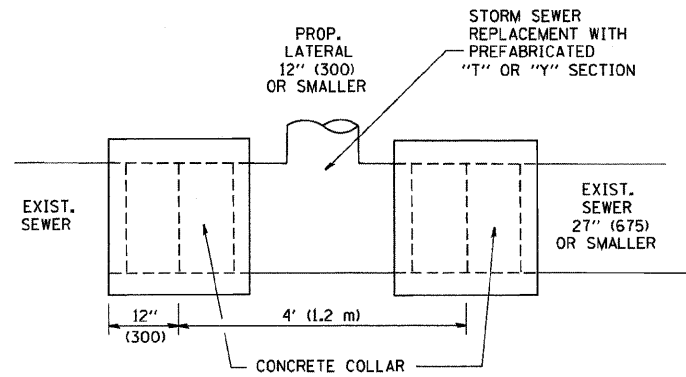
COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.

THE 1 (25) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK.

"W" VARIES FROM 36 (900) TO 5' (1.5 m) PROPORTIONAL TO THE LENGTH (L), FROM 6' (1.8 m) TO 10' (3 m).

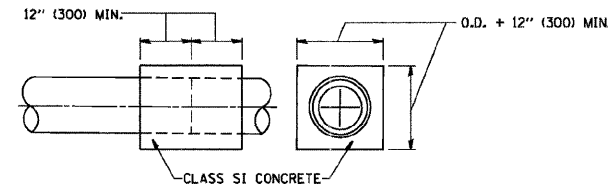
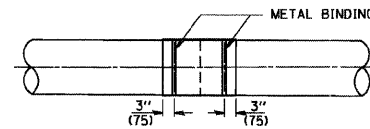
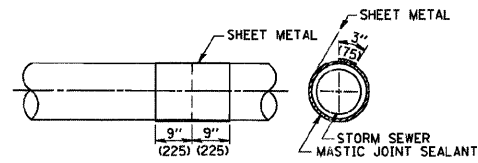
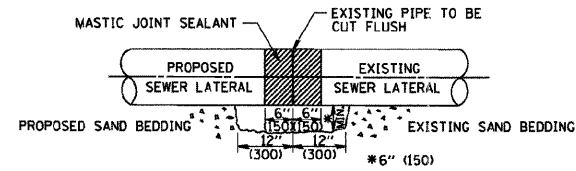
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE NOTED.

DRIVEWAY DETAILS – DISTANCE BETWEEN R.O.W. AND FACE OF CURB IS LESS THAN 15" (4.5 m)



DETAIL "A"

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

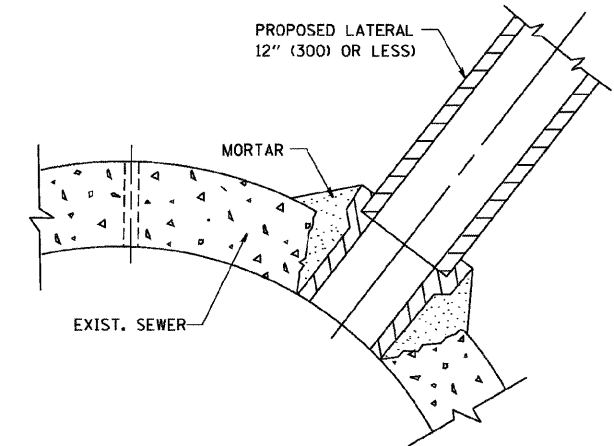


DETAIL "B"

CLASS SI CONCRETE COLLAR

CONSTRUCTION SEQUENCE

- CUT THE EXISTING END OF THE PIPE SO AS TO PRESENT A FLUSH BUTT JOINT. BRUSH AND CLEAN ALL PIPES.
- APPLY THE MASTIC JOINT SEALANT TO THE FIRST 6" (150) OF EACH PIPE.
- BUTT THE PIPES TOGETHER LEAVING A MINIMUM OF 12" x 6" (300 x 150) DEEP EXCAVATION UNDER AND AROUND EACH PIPE END.
- CUT A PIECE OF SHEET METAL GAGE NO. 19 1.1 (0.0418) 18" (450) WIDE BY THE OUTSIDE CIRCUMFERENCE OF THE PIPE PLUS 3" (75) LONG.
- WRAP THE SHEET METAL AROUND THE PIPES, 9" (225) ON EACH SIDE OF THE JOINT, STARTING AT THE TOP OF THE PIPE.
- LAP THE SHEET METAL AT LEAST 3" (75) AT THE TOP OF THE PIPE AND PLACE THE MASTIC JOINT SEALANT BETWEEN THE LAP.
- PLACE TWO METAL BANDS AROUND THE SHEET METAL AND TIGHTEN.
- WIPE OFF ANY EXCESS MASTIC JOINT SEALANT THAT OOOZES OUT FROM BETWEEN THE SHEET METAL AND THE PIPES.
- 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 SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR STORM SEWER TEE OR WYE 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.

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

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.

REVISED	- M. DE YONG	05-08-92
REVISED	- R. SHAH	09-09-94
REVISED	- R. SHAH	10-25-94
REVISED	- R. SHAH	06-12-96

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

STORM SEWER CONNECTION TO EXISTING SEWER

LOWCO, INC.
CONSULTING ENGINEERS
1560 WALL ST., SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

DESIGNED - SLV
DRAWN - SLV
CHECKED - MJY, ST
DATE - 10/14/2011

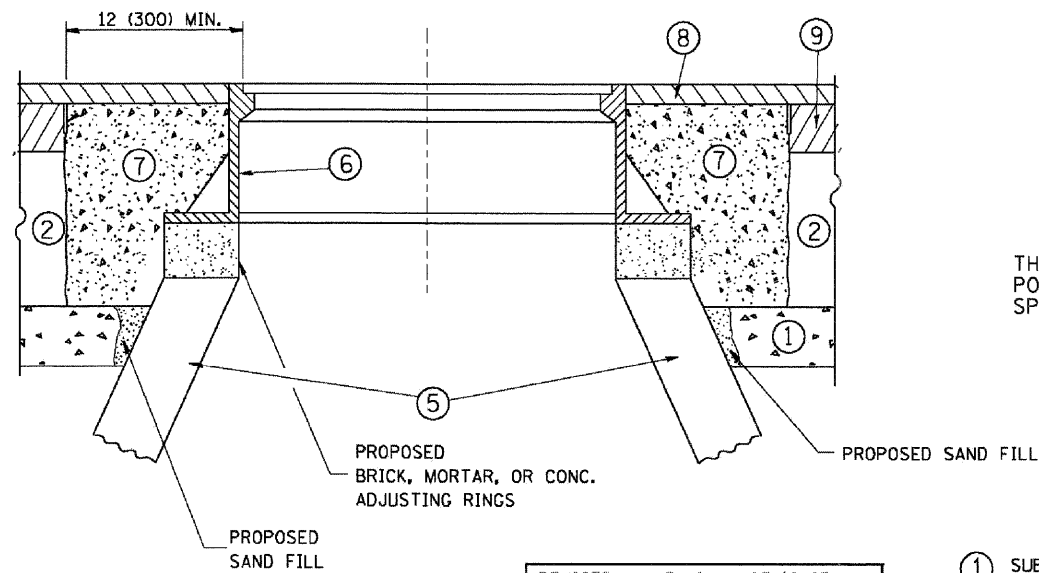
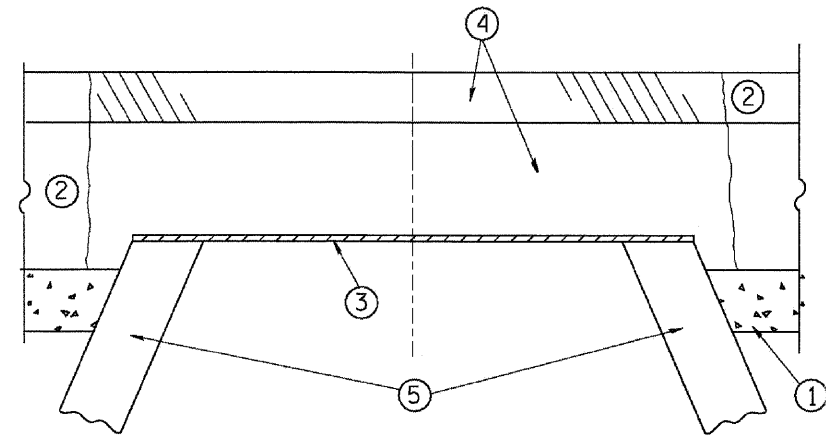
REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE DETAIL SHEETS
IL ROUTE 171 OVER MILNE CREEK

SCALE: SHEET NO. 2 OF 12 SHEETS STA. 60+40 TO STA. 63+68

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	D-T	WILL	44	34
D-91-265-06			CONTRACT NO. 60B10	
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



REVISED	- R. SHAH 03-10-95
REVISED	- A. ABBAS 03-21-97
REVISED	- R. WIEDEMAN 05-14-04
REVISED	- R. BORO 01-01-07

NOTES:

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

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

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

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

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

CONSTRUCTION PROCEDURES

STAGE 1 (BEFORE PAVEMENT MILLING)

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

STAGE 2 (AFTER PAVEMENT MILLING)

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

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

LEGEND

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

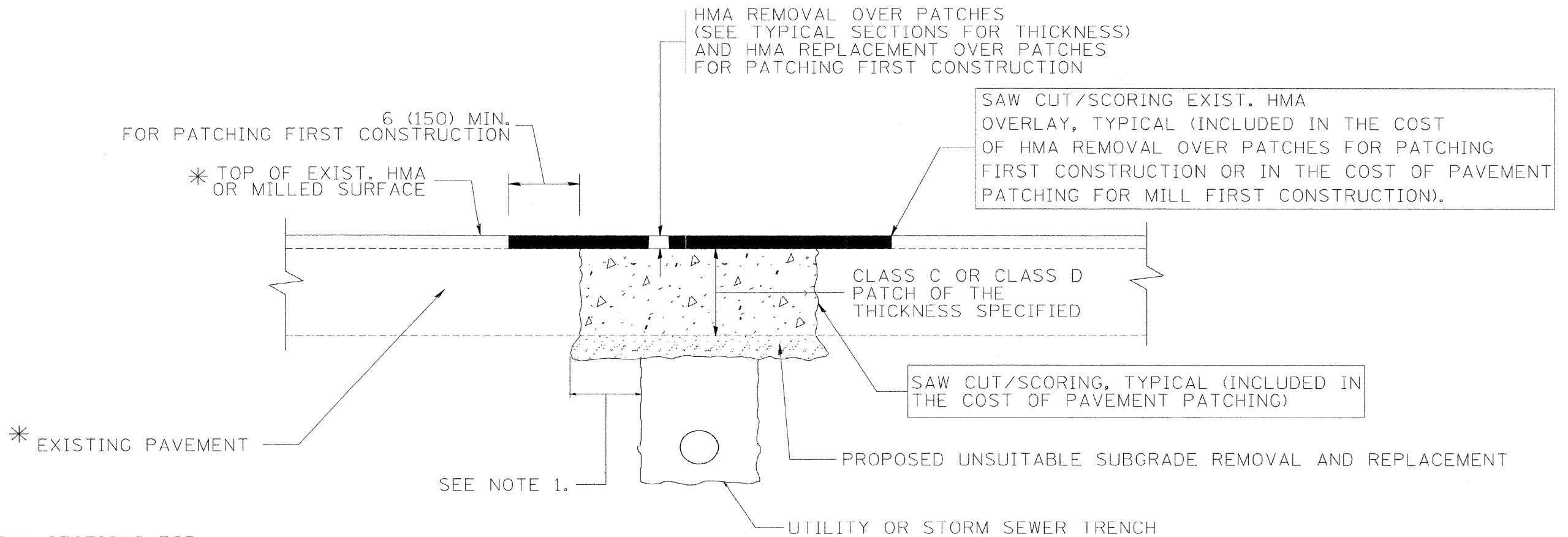
LOCATION OF STRUCTURES:

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

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

NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.

FRAMES AND LIDS ADJUSTMENT WITH MILLING



* SEE TYPICAL SECTIONS FOR THICKNESS AND MATERIALS

NOTES:

1. THE WIDTH OF THE FULL DEPTH PATCH OVER A TRENCH SHALL BE 12 (300) WIDER ON EACH SIDE OF THE TRENCH.
2. FOR METHOD OF MEASUREMENT AND BASIS OF PAYMENT, SEE RECURRING SPECIAL PROVISION "PATCHING WITH HOT-MIX ASPHALT OVERLAY REMOVAL".

SEQUENCE OF CONSTRUCTION (PATCHING FIRST)

1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
2. REMOVE AND REPLACE WITH CLASS C OR D PATCH.
3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

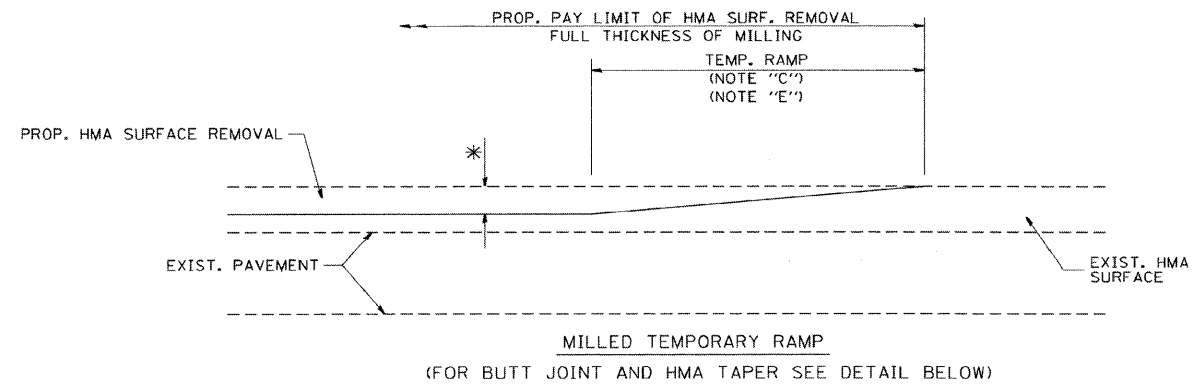
SEQUENCE OF CONSTRUCTION (MILLING FIRST)

1. MILL HMA FIRST IF THERE IS AT LEAST 4 1/2 INCHES OR MORE OF HMA MATERIAL ON TOP OF THE EXISTING PAVEMENT OR IF THE PAVEMENT IS FULL DEPTH HMA. A MINIMUM OF 2 INCHES OF HMA MATERIAL SHALL BE IN PLACE AFTER MILLING.
2. REMOVE AND REPLACE WITH FULL DEPTH CLASS D PATCHES TO TOP OF MILLED SURFACE.

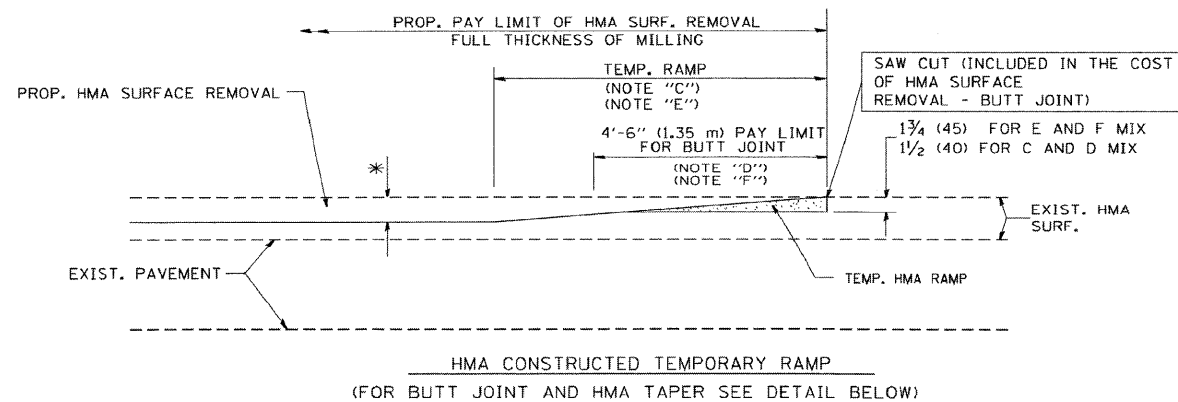
REVISED	-	A. ABBAS 04-27-98
REVISED	-	R. BORO 01-01-07
REVISED	-	R. BORO 09-04-07
REVISED	-	K. ENG 10-27-08

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

PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT



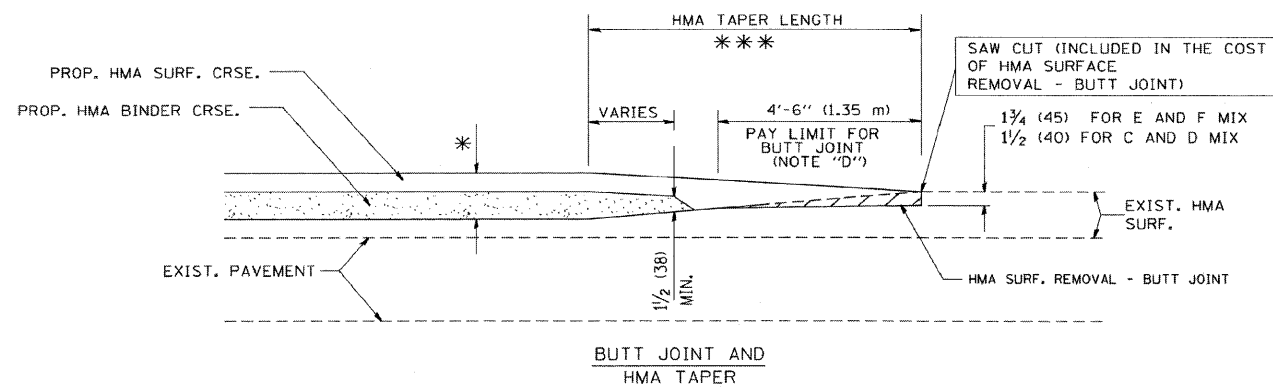
OPTION 1



**HMA CONSTRUCTED TEMPORARY RAMP
(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)**

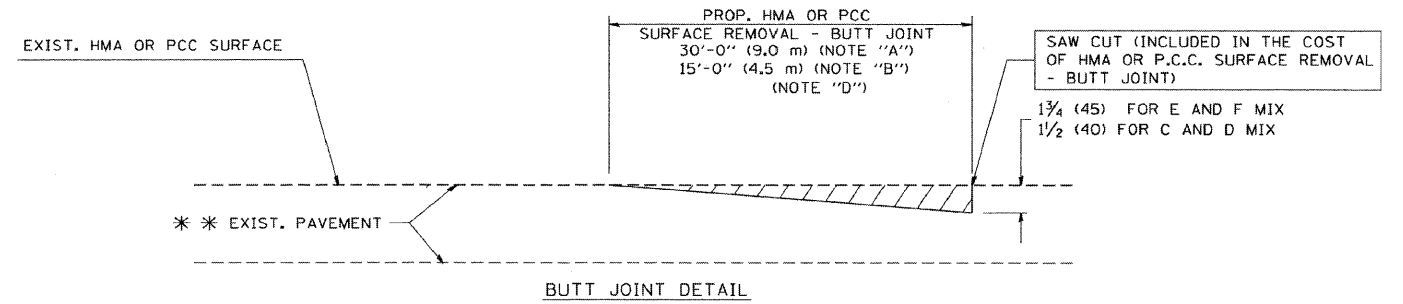
OPTION 2

TYPICAL TEMPORARY RAMP

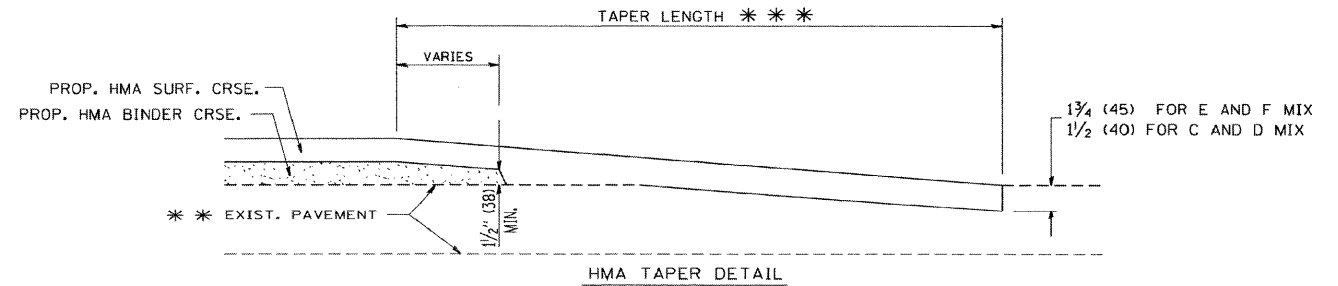


**TYPICAL BUTT JOINT AND HMA TAPER
FOR MILLING AND RESURFACING**

REVISED	-	R. SHAH	10-25-94
REVISED	-	A. ABBAS	03-21-97
REVISED	-	M. GOMEZ	04-06-01
REVISED	-	R. BORO	01-01-07



BUTT JOINT DETAIL



HMA TAPER DETAIL

**TYPICAL BUTT JOINT AND HMA TAPER
FOR RESURFACING ONLY**

*** PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

NOTES

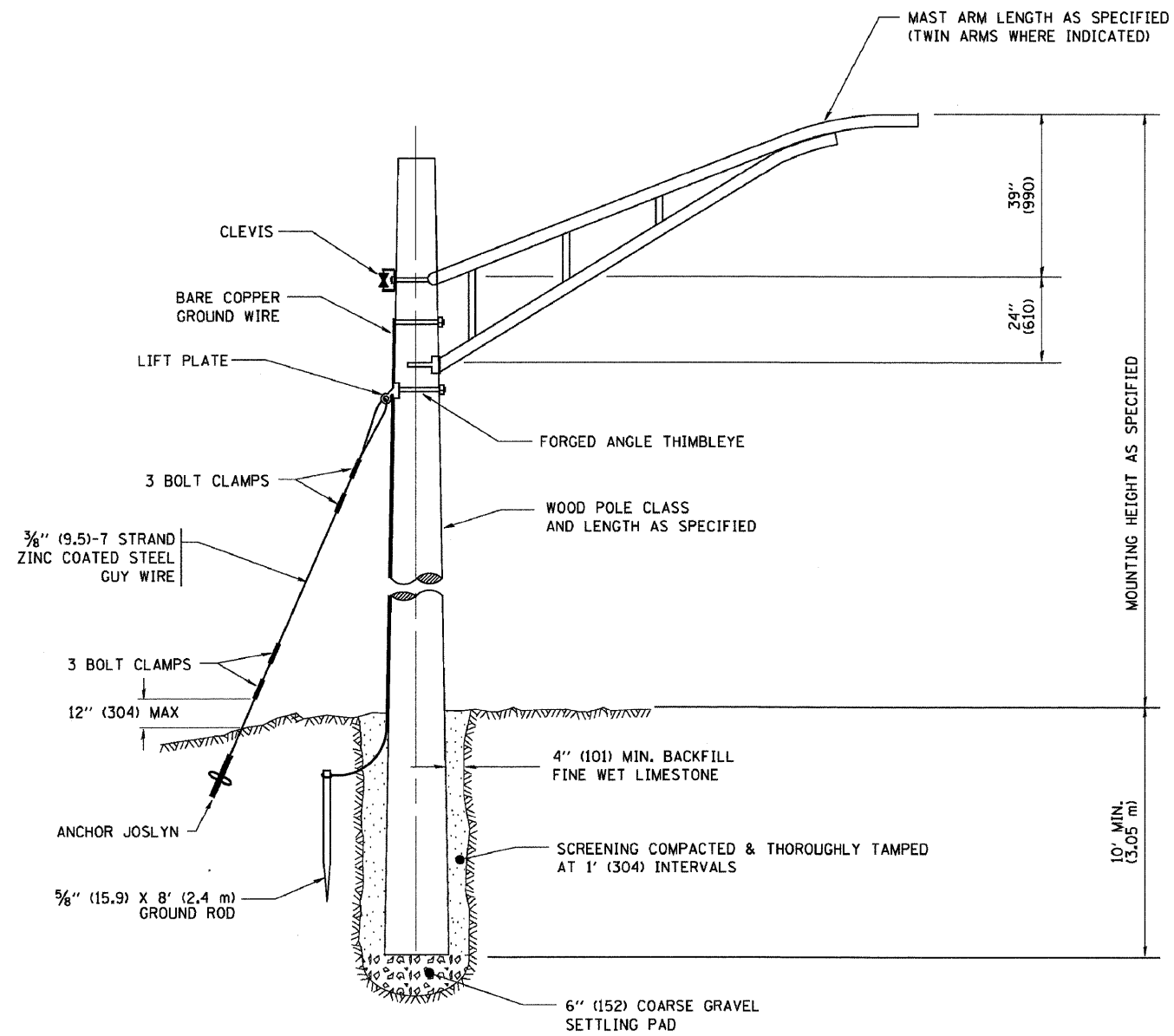
- A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.
- B: MINOR SIDE ROADS.
- C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.
- D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.
- E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.
- F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT
- G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".
- * SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- *** 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

BASIS OF PAYMENT:

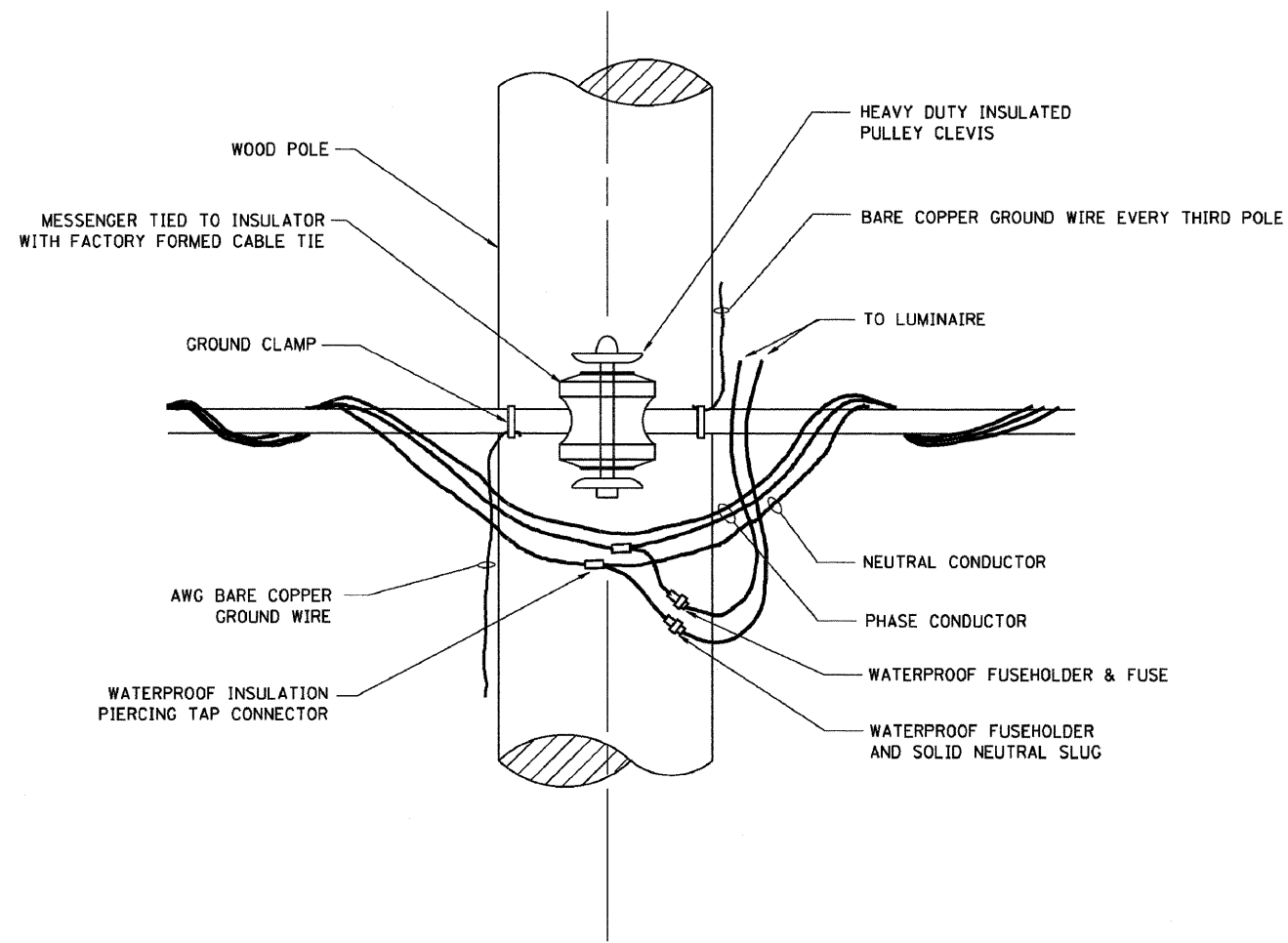
THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT".

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

BUTT JOINT AND HMA TAPER DETAILS



TEMPORARY LIGHT POLE DETAIL



TEMPORARY LIGHT POLE ATTACHMENT DETAIL

REVISED	-	08-08-03
REVISED	-	
REVISED	-	
REVISED	-	

NOTES:

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

TEMPORARY LIGHT POLE DETAIL

LOXCO, INC.
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1560 WALL ST., SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

DESIGNED - SLV
DRAWN - SLV
CHECKED - MJY, ST
DATE - 10/14/2011

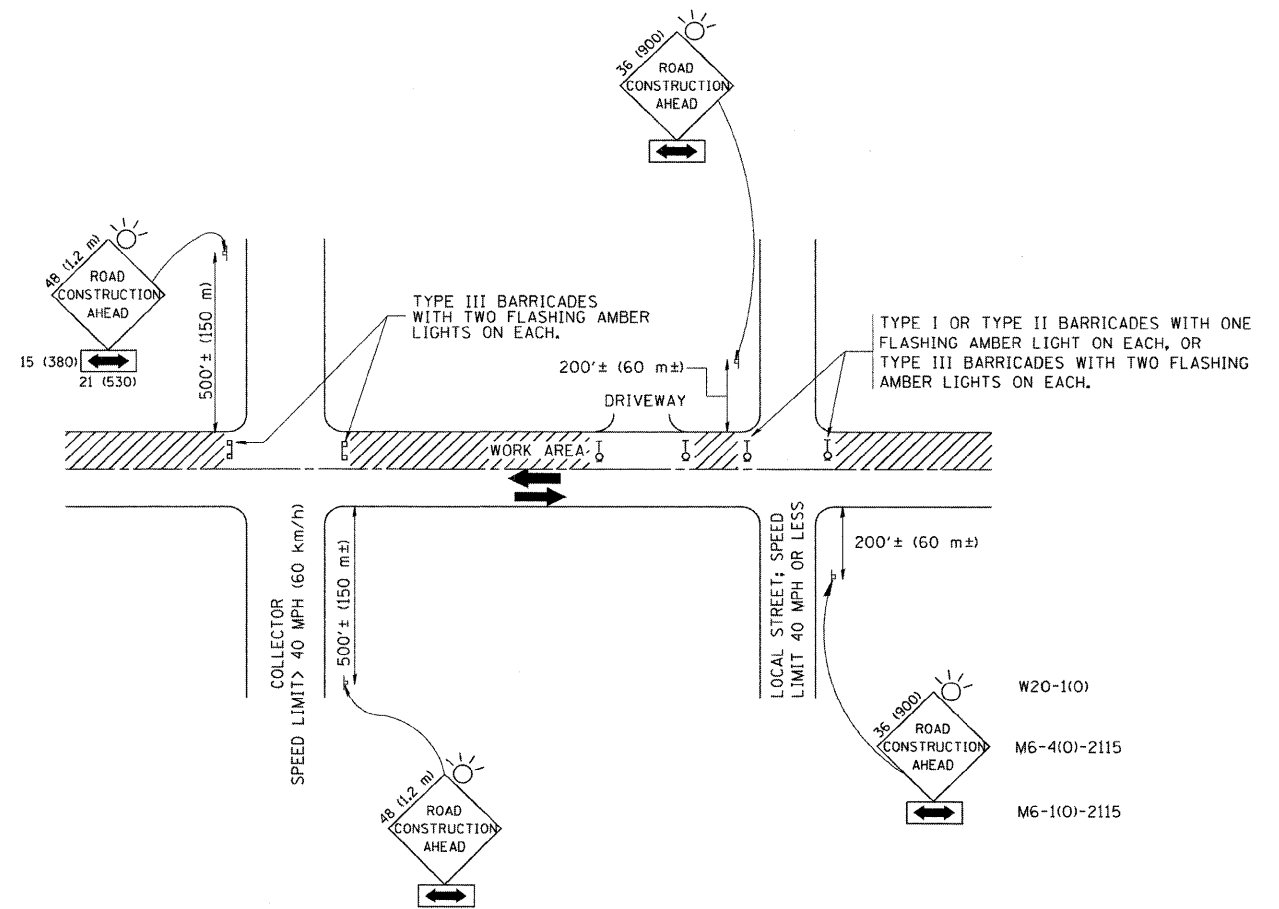
REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE DETAIL SHEETS
IL ROUTE 171 OVER MILNE CREEK

SCALE: SHEET NO. 6 OF 12 SHEETS STA. 60+40 TO STA. 63+68

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	D-T	WILL	44	38
D-91-265-06		CONTRACT NO. 60B10		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



NOTES:

- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS**
- 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:
 - 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.
 - 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.
 - SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - ONE ROAD CONSTRUCTION AHEAD SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
 - 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.
- 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.**

REVISED	- J. OBERLE	10-18-95
REVISED	- A. HOUSEH	03-06-96
REVISED	- A. HOUSEH	10-15-96
REVISED	- T. RAMMACHER	01-06-00

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

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

LOCO, INC.
CONSULTING ENGINEERS
1560 WALL ST, SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: 630/577-9100

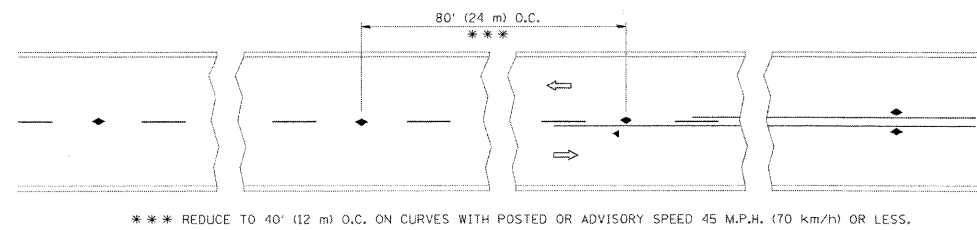
DESIGNED	- SLV	REVISED	-
DRAWN	- SLV	REVISED	-
CHECKED	- MJY, ST	REVISED	-
DATE	- 10/14/2011	REVISED	-

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

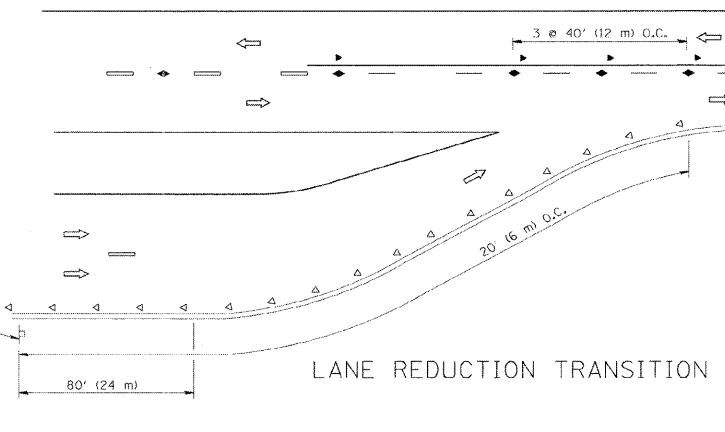
**DISTRICT ONE DETAIL SHEETS
IL ROUTE 171 OVER MILNE CREEK**

SCALE: SHEET NO. 7 OF 12 SHEETS STA. 60+40 TO STA. 63+68

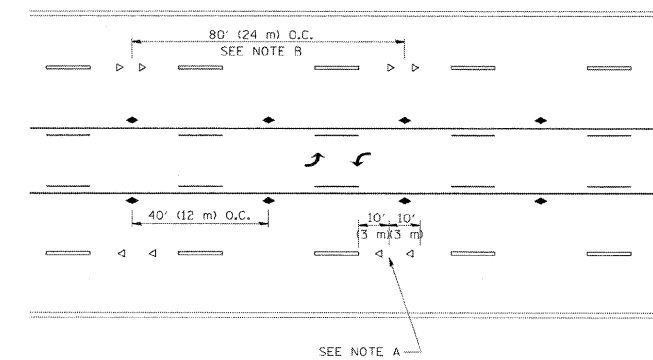
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	D-T	WILL	44	39
D-91-265-06			CONTRACT NO. 60B10	
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



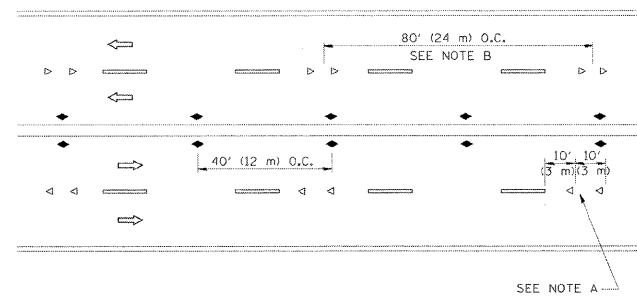
TWO-LANE/TWO-WAY



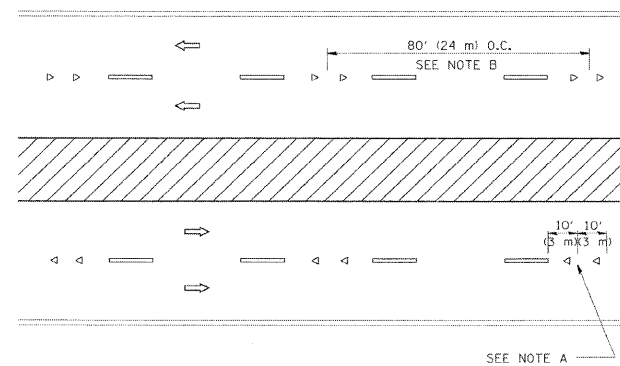
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 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.

SYMBOLS

- YELLOW STRIPE
- WHITE STRIPE
- ◀ ONE-WAY AMBER MARKER
- < ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

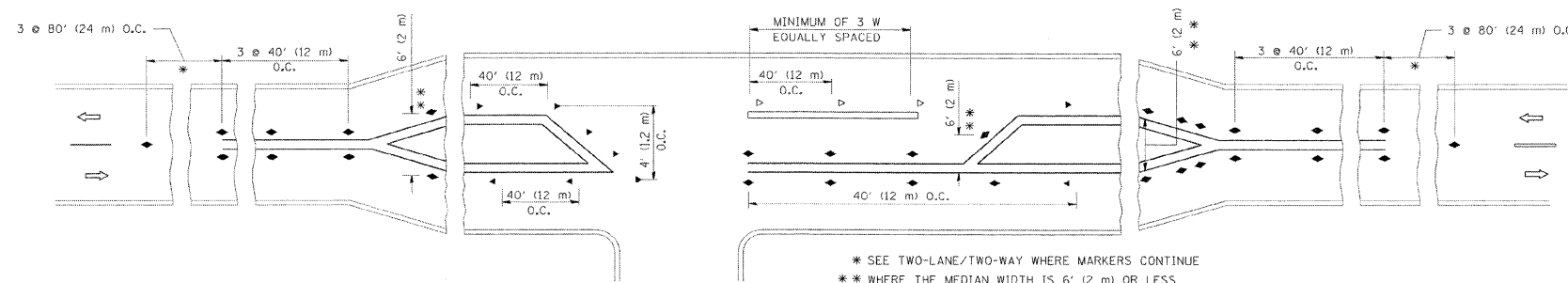
LANE MARKER NOTES

- 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 (16 km/h) LOWER THAN POSTED SPEEDS.

DESIGN NOTES

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

REVISED	- T. RAMMACHER	09-19-94
REVISED	- T. RAMMACHER	03-12-99
REVISED	- T. RAMMACHER	01-06-00
REVISED	- C. JUCLUS	09-09-09

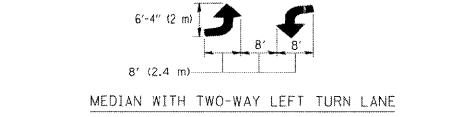
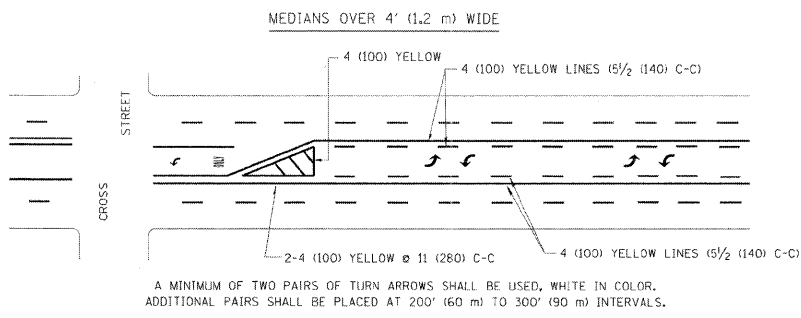
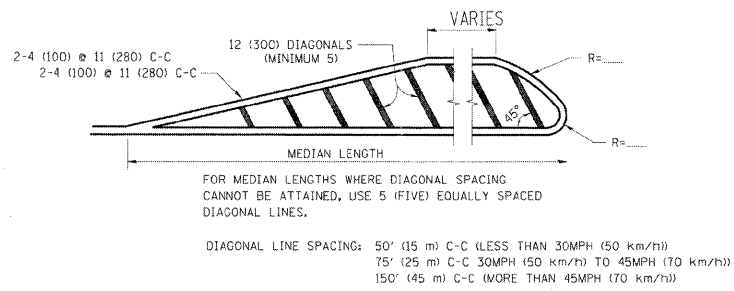
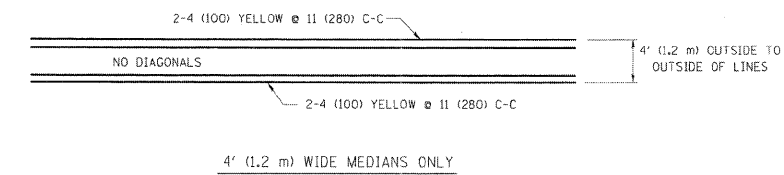
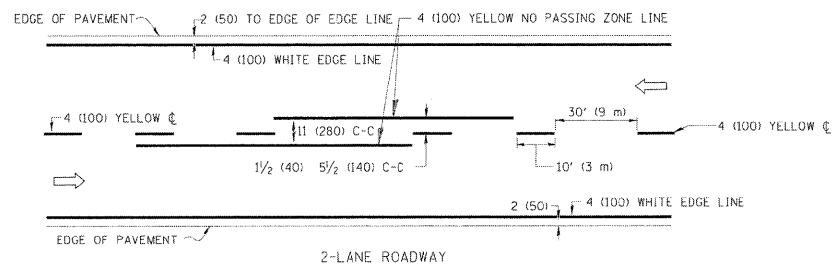


LEFT TURN

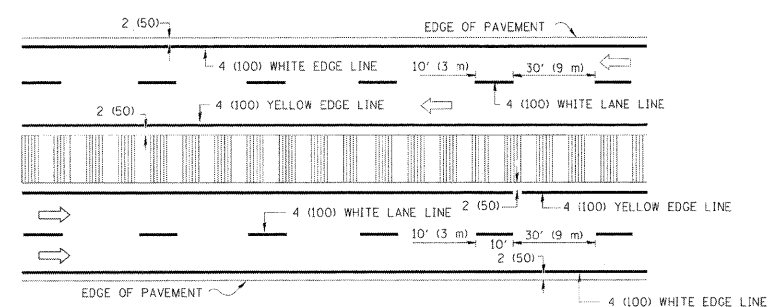
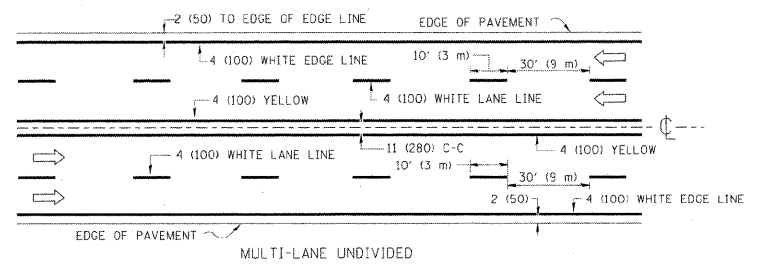
* SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE
 ** WHERE THE MEDIAN WIDTH IS 6' (2 m) OR LESS USE TWO-WAY MARKERS.

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

RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)

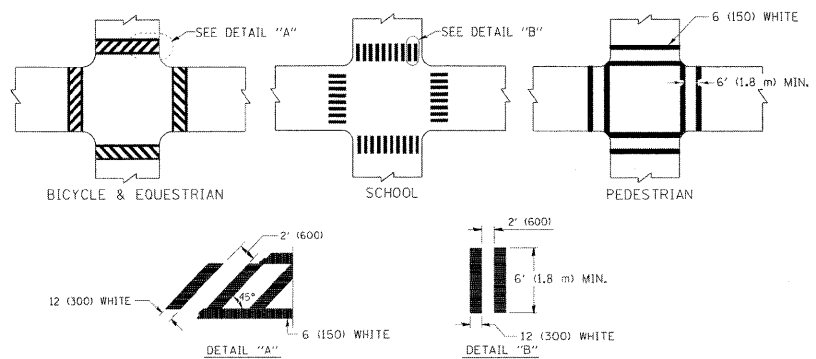


TYPICAL PAINTED MEDIAN MARKING

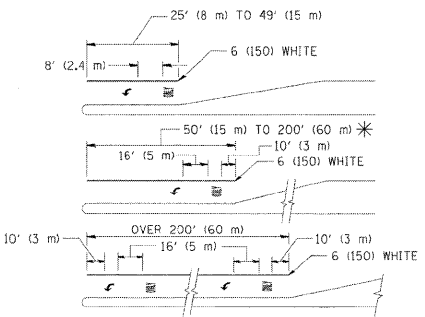


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

TYPICAL LANE AND EDGE LINE MARKING



TYPICAL CROSSWALK MARKING



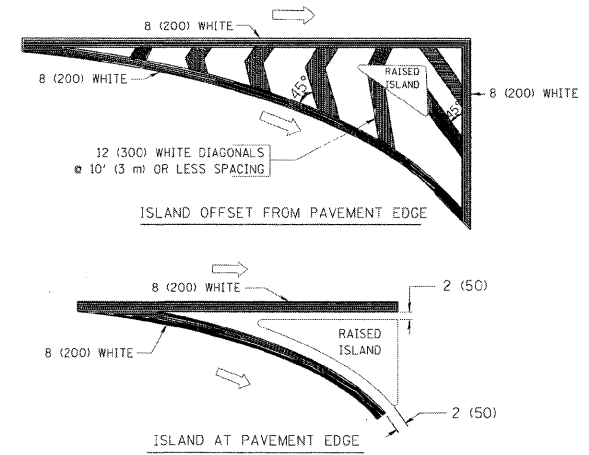
FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
AREA = 15.6 SQ. FT. (1.5 m²) ONLY AREA = 20.8 SQ. FT. (1.9 m²)

* 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

REVISED	-T. RAMMACHER	10-27-94
REVISED	-C. JUCIUS	09-09-09
REVISED	-	
REVISED	-	



TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5/2 (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 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 m) 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' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) 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 CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT, PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	11 (280) 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: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h) 30' (9 m) C-C (OVER 45MPH (70 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 78000; AREA OF: "R"=3.6 SQ. FT. (0.33 m ²) EACH "X"=54.0 SQ. FT. (5.0 m ²)
SHOULDER DIAGONALS	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 78000.

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

DISTRICT ONE TYPICAL PAVEMENT MARKINGS

ROUTE MARKERS

FOR U.S. ROUTES
M1-40-2424

FOR ILLINOIS ROUTES
M1-50-2424

R.R. UNMARKED ROUTES
SPECIAL 24" x 18" VARIABLE
4" BLACK LETTERS ON WHITE
REFLECTIVE BACKGROUND

ARROWS SIGNS

M5-1L-2115

M5-1R-2115

M6-1-2115

M6-1-2115

M6-3-2115

CARDINAL DIRECTION & DETOUR SIGNS

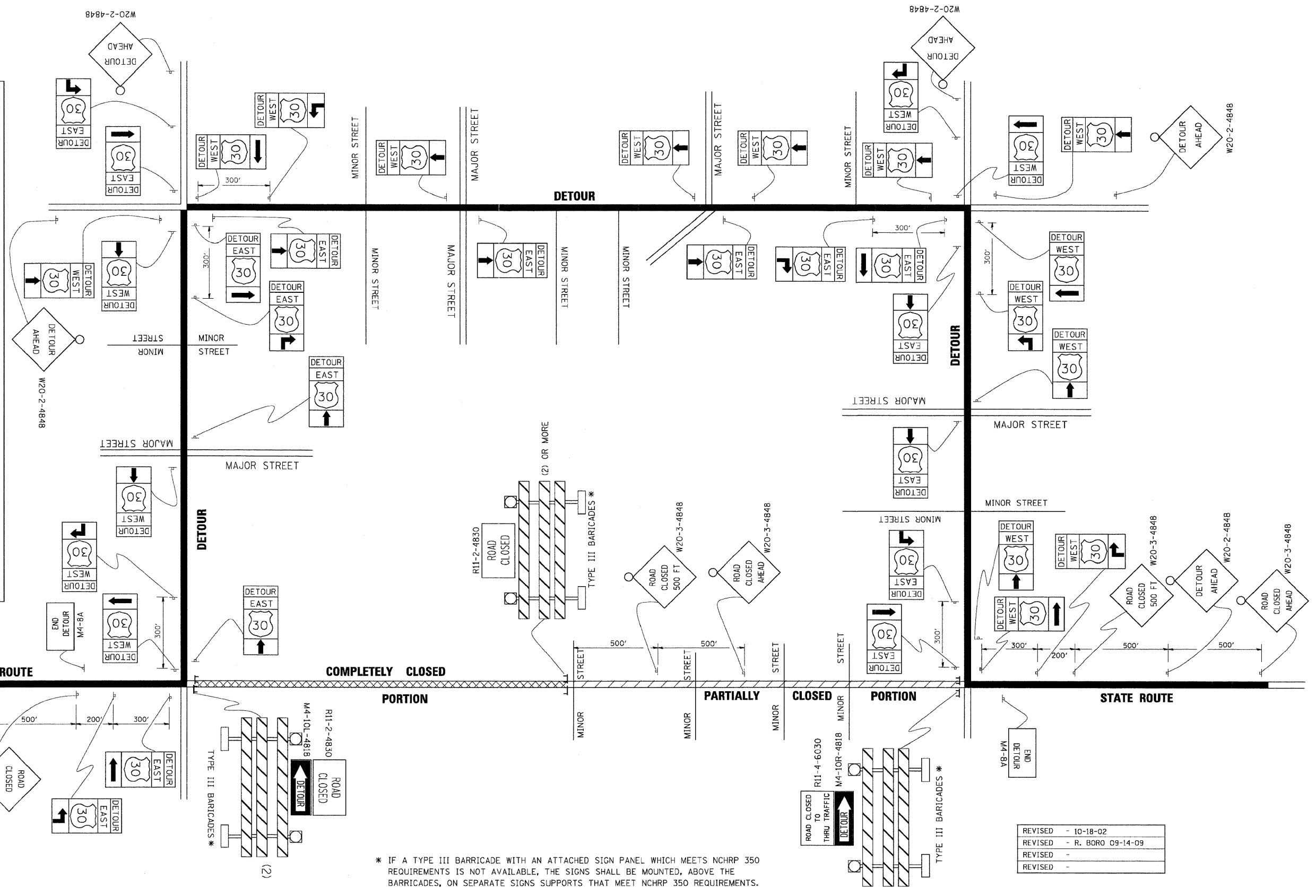
NORTH M3-1-2412

EAST M3-2-2412

SOUTH M3-3-2412

WEST M3-4-2412

DETOUR M4-8-2412



* IF A TYPE III BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 REQUIREMENTS IS NOT AVAILABLE, THE SIGNS SHALL BE MOUNTED, ABOVE THE BARRICADES, ON SEPARATE SIGNS SUPPORTS THAT MEET NCHRP 350 REQUIREMENTS.

DETOUR SIGNING FOR CLOSING STATE HIGHWAYS

REVISED	- 10-18-02
REVISED	- R. BORO 09-14-09
REVISED	-
REVISED	-

LOVCO, INC.
CONSULTING ENGINEERS
1560 BALL ST., SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

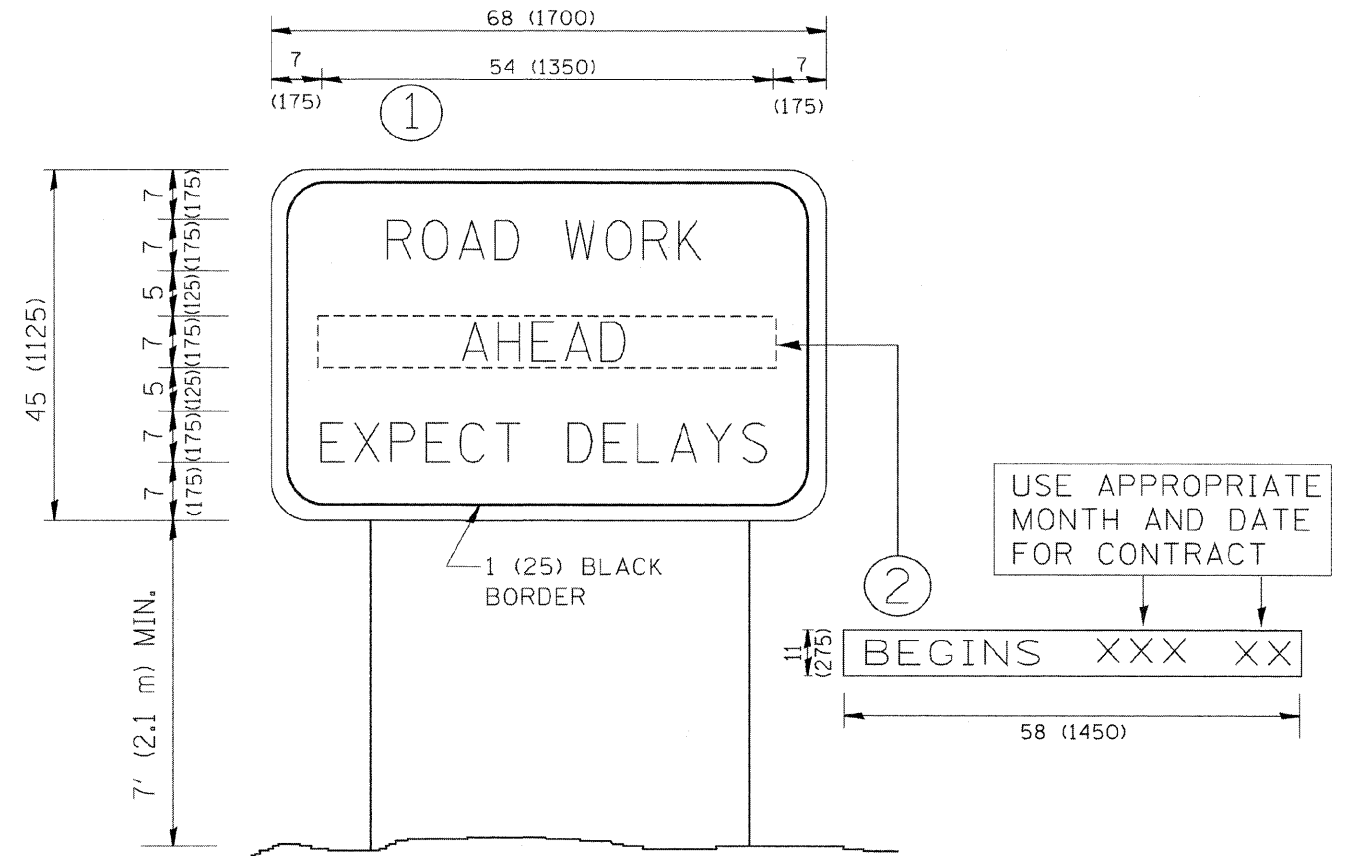
DESIGNED	- SLV	REVISED	-
DRAWN	- SLV	REVISED	-
CHECKED	- MJY, ST	REVISED	-
DATE	- 10/14/2011	REVISED	-

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE DETAIL SHEETS
IL ROUTE 171 OVER MILNE CREEK**

SCALE: SHEET NO. 10 OF 12 SHEETS STA. 60+40 TO STA. 63+68

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
577	D-T	WILL	44	42
D-91-265-06		CONTRACT NO. 60B10		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



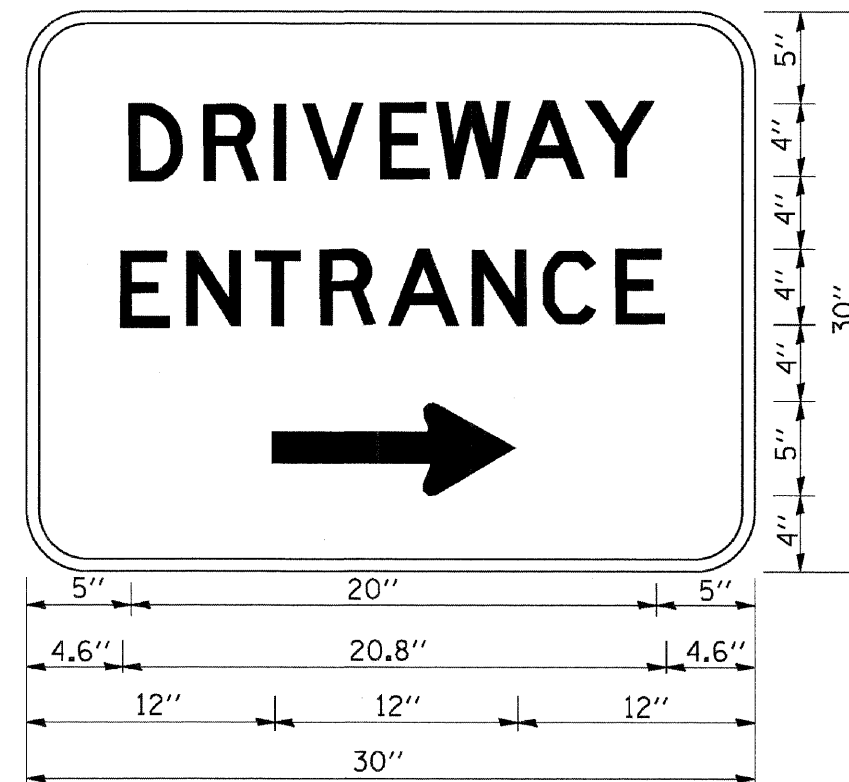
NOTES:

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN ① WITH INSTALLED PANEL ② ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL ② SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

REVISED	-	R. MIRS 09-15-97
REVISED	-	R. MIRS 12-11-97
REVISED	-	T. RAMMACHER 02-02-99
REVISED	-	C. JUCIUS 01-31-07

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

ARTERIAL ROAD INFORMATION SIGN



3.0" RADIUS, 0.5" BORDER, WHITE ON GREEN; REFLECTORIZED "DRIVEWAY" D; "ENTRANCE" D; STANDARD ARROW CUSTOM 12.0" x 5.0"

NOTES:

1. HALF OF THE SIGNS WILL REQUIRE A LEFT HAND FACING ARROW.
2. TWO SIGNS SHALL BE USED AT EACH COMMERCIAL ENTRANCE PLACED BACK-TO-BACK: ONE WITH A RIGHT HAND ARROW (SHOWN) SHALL BE PLACED ON THE NEAR RIGHT SIDE THE DRIVEWAY AND ONE WITH A LEFT HAND ARROW SHALL BE PLACED ON THE FAR LEFT SIDE OF THE DRIVEWAY.
3. SIGNS TO BE PAID FOR AS ITEM "TEMPORARY INFORMATION SIGNING".

REVISED	-	C. JUCIUS 02-15-07
REVISED	-	
REVISED	-	
REVISED	-	

DRIVEWAY ENTRANCE SIGNING