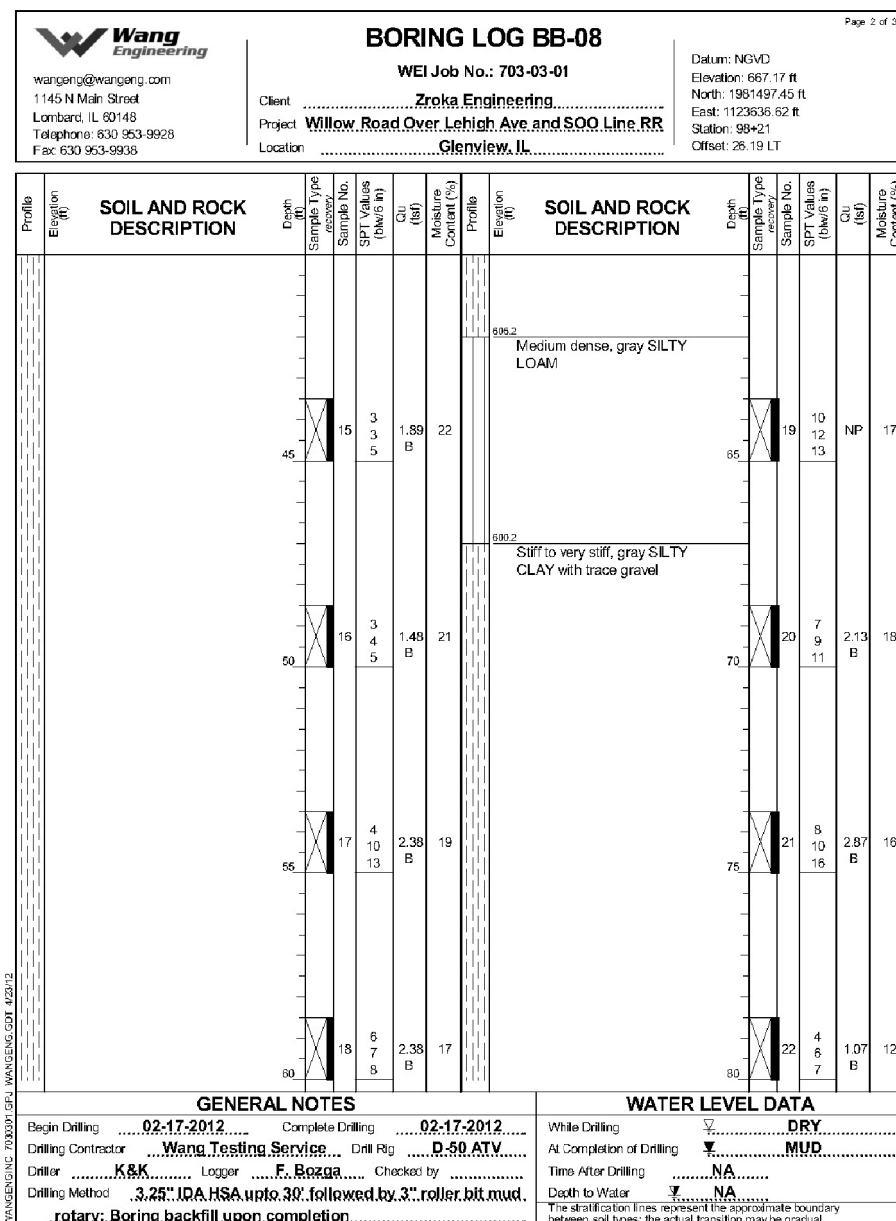
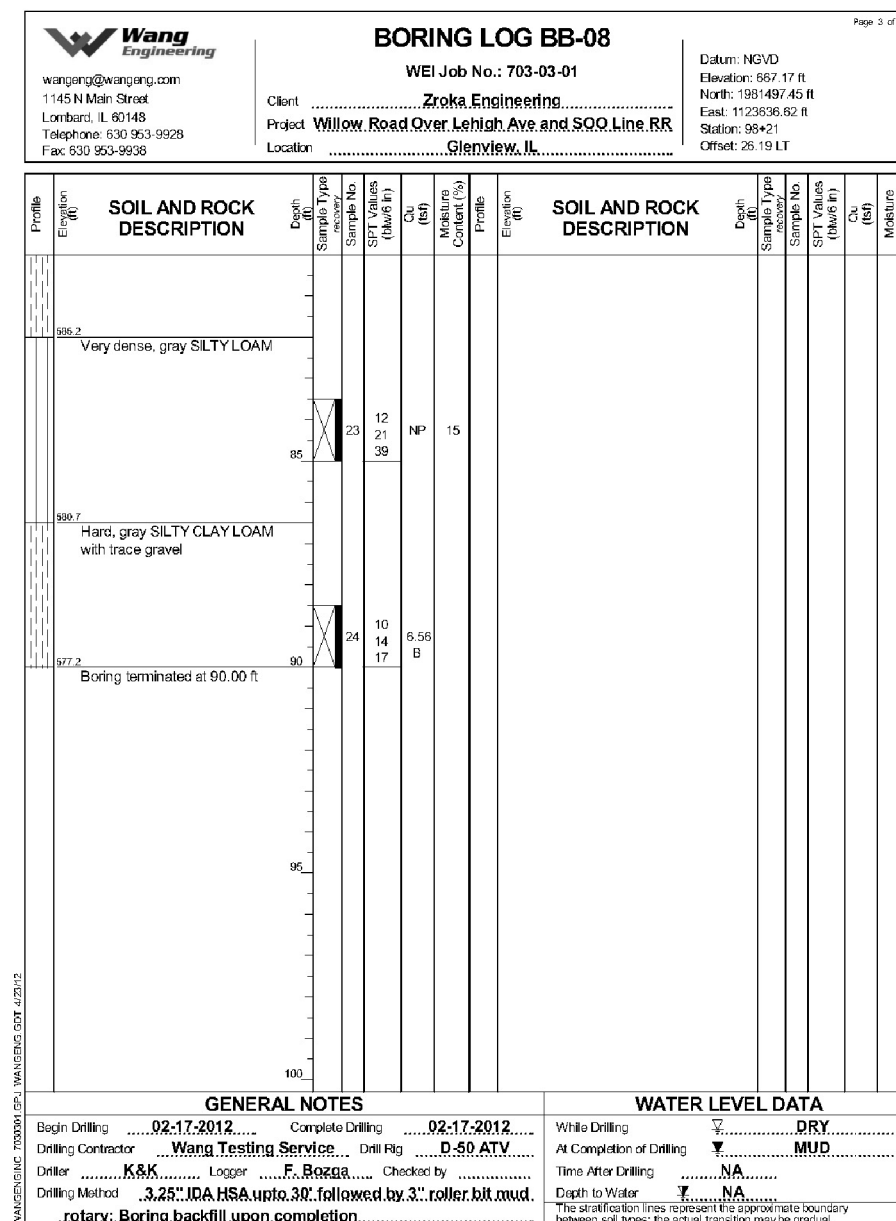


SOIL BORING BB-08 (Page 2 of 3)



SOIL BORING BB-08 (Page 3 of 3)



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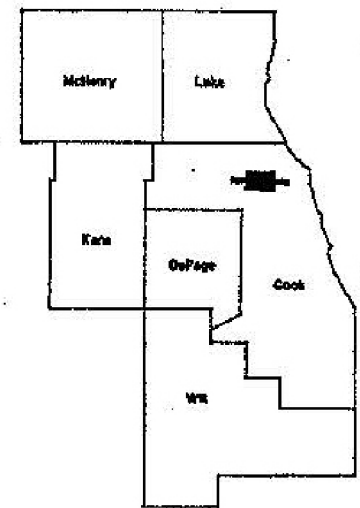
FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
305	1920.01-1	COOK	12	1

CONTRACT NO. 62772

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
DISTRICT ONE
PROPOSED HIGHWAY PLANS

FAP RTE 305: WILLOW RD. OVER
LEHIGH AVE. AND METRA
SN 016-0533
SECTION 1920.01-1
BRIDGE REPAIR
COOK COUNTY
C-91-238-04

D-91-238-04



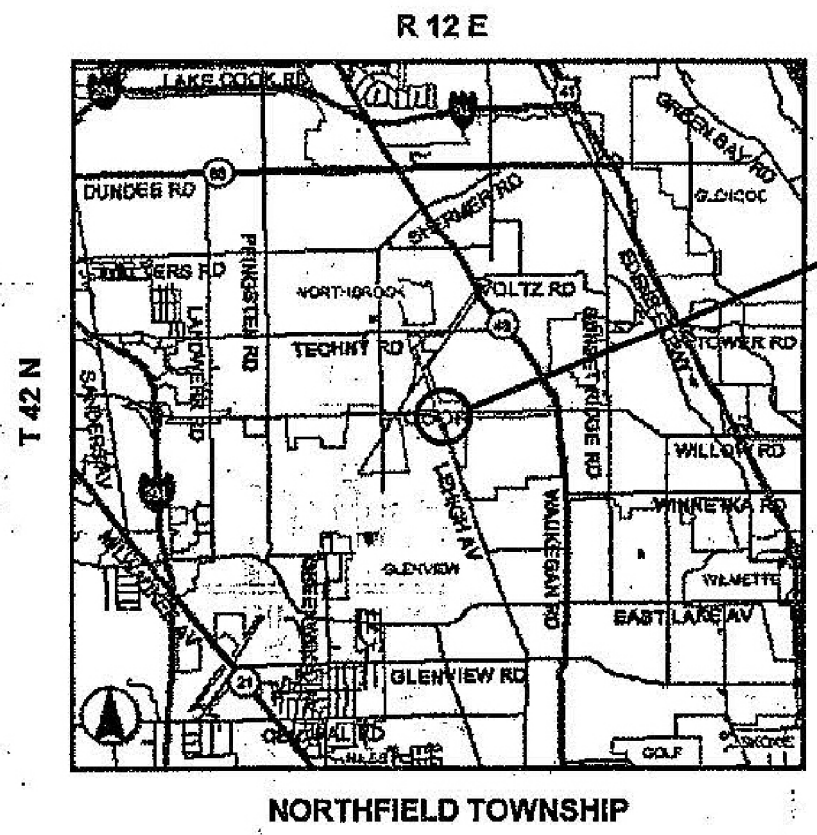
LOCATION OF IMPROVEMENT INDICATED THUS:

FOR INDEX OF SHEETS SEE SHEET 2

IMPROVEMENT IS LOCATED IN THE
VILLAGE OF GLENVIEW

TRAFFIC DATA

WILLOW ROAD - 2002 ADT = 42,100
POSTED SPEED LIMIT = 45 MPH



LOCATION OF WORK

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
SUBMITTED: *March 28 2006*
Diane M. O'Keefe
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
May 12, 2006
Mike Hine
ENGINEER OF DESIGN AND ENVIRONMENT
May 12, 2006
Milton L. Sees, P.E.
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

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

CONTRACT NO. 62772

DISTRICT ONE - PLAN PREPARATION ENGINEER: KEN ENGR. BORO (847) 705-4178

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS - 2006
FOR INFORMATION ONLY

SCALE: SHEET 1 OF 9 SHEETS STA. 96+61.4 TO STA. 103+52.5

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	102
				CONTRACT NO. 60N83
ILLINOIS FED. AID PROJECT				

FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
305	1920.01-I	COOK	12	2

CONTRACT 62772

INDEX OF SHEETS

STATE STANDARDS

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
1	TITLE SHEET
2	INDEX OF SHEETS AND STATE STANDARDS
3	GENERAL NOTES
4	SUMMARY OF QUANTITIES
5	GENERAL PLAN & ELEVATION
6	TRAFFIC STAGING
7	PROPOSED WORK
8	TYPICAL SECTION
9	BRIDGE DECK PATCHING LOCATIONS
10	TRAFFIC CONTROL & PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS
11	DISTRICT ONE TYPICAL PAVEMENT MARKINGS
12	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)

- 701301-02 Lane Closure 2L,2W Short Time Operations
- 701601-04 Urban Lane Closure Multilane 1-Way or 2-Way with non-traversable median
- 702001-06 Traffic Control Devices

BITUMINOUS MIXTURE REQUIREMENTS

MIXTURE	AC TYPE	MAX-RAP (%)	AIR VOIDS (%)
BIT. CONC. SURFACE CSE, SUPERPAVE, MIX "D", N50	PG 64-22	15%	4% @ 50 GYR.

UNIT WEIGHT OF 112 LBS/SQ YD/IN THICKNESS USED TO CALCULATE BITUMINOUS SURFACE MIXTURES

ILLINOIS DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS
STATE STANDARDS

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS - 2006
FOR INFORMATION ONLY

SCALE: SHEET 2 OF 9 SHEETS STA. 96+61.4 TO STA. 103+52.5

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	103
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				

FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
305	1920.01-I	COOK	12	3

CONTRACT 62772

GENERAL NOTES

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

TRANSITIONS SHALL BE USED TO MATCH PROPOSED CURB AND GUTTER AND MEDIAN ITEMS OF WORK TO EXISTING CURBS AND GUTTER AND MEDIANS IN THE FIELD, UNLESS OTHERWISE SHOWN. THE TRANSITIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PROPOSED ITEMS OF WORK SPECIFIED.

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

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

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

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

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

THE RESIDENT ENGINEER SHALL CONTACT WALTER GZARNY, AREA TRAFFIC FIELD ENGINEER, AT (773) 685-8386, AT LEAST TWO (2) WEEKS PRIOR TO PLACEMENT OF FINAL PERMANENT PAVEMENT MARKINGS.

THESE PLANS HAVE BEEN PREPARED FROM NOTES RECEIVED FROM THE MAINTENANCE BRIDGE INSPECTORS.

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

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

CONCRETE SUPERSTRUCTURE SHALL HAVE A SEVEN DAY MINIMUM CURE.

DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.

ALL DAMAGE TO EXISTING PAVEMENT MARKINGS OUTSIDE THE REMOVAL LINES SHOWN ON THE PLANS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

EXISTING SHIELDING OVER LEHIGH AVE. IS NOT INCLUDED IN THE TOTAL QUANTITY OF "PROTECTIVE SHIELD"

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

ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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PLOT DATE - 12/13/2018	DATE - 11/21/18	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS - 2006
FOR INFORMATION ONLY

SCALE: SHEET 3 OF 9 SHEETS STA. 96+61.4 TO STA. 103+52.5

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	104
				CONTRACT NO. 60N83
ILLINOIS FED. AID PROJECT				

FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
305	1920.01-I	COOK	12	4

CONTRACT 62772

SUMMARY OF QUANTITIES

CODE NUMBER	DESCRIPTION	UNIT	TOTAL	URBAN 100% STATE CONSTRUCTION TYPE CODE SFTY-2A (SN 016-0533) COOK CO.
44000910	BITUMINOUS CONCRETE REMOVAL (DECK)	SQ. YD.	1727	1727
X0325305	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5")	SQ. FT.	234	234
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ. YD.	1727	1727
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	2	2
67100100	MOBILIZATION	L SUM	1	1
70102630	TRAFFIC CONTROL AND PROTECTION, 701601	L SUM	1	1
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	1310	1310
* 78100105	RAISED REFLECTIVE PAVEMENT MARKERS (BRIDGE)	EACH	16	16
X0322467	TEMPORARY INFORMATION SIGNING FOR LANE CLOSURE	SQ. FT.	48	48
X4066424	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "D", N50	TON	145	145
Z0001700	APPROACH SLAB REPAIR (FULL DEPTH)	SQ. YD.	23	23
Z0047300	PROTECTIVE SHIELD	SQ. YD.	812	812
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	1
Z0016001	DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ. YD.	3	3
Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ. YD.	90	90
Z0016200	DECK SLAB REPAIR (PARTIAL)	SQ. YD.	330	330

* SPECIALTY ITEMS

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

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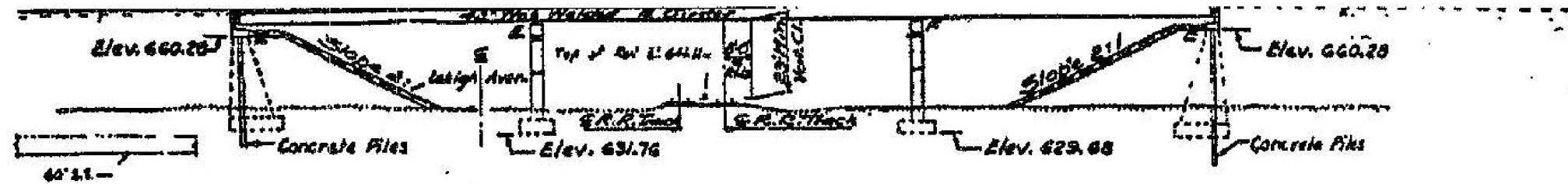
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

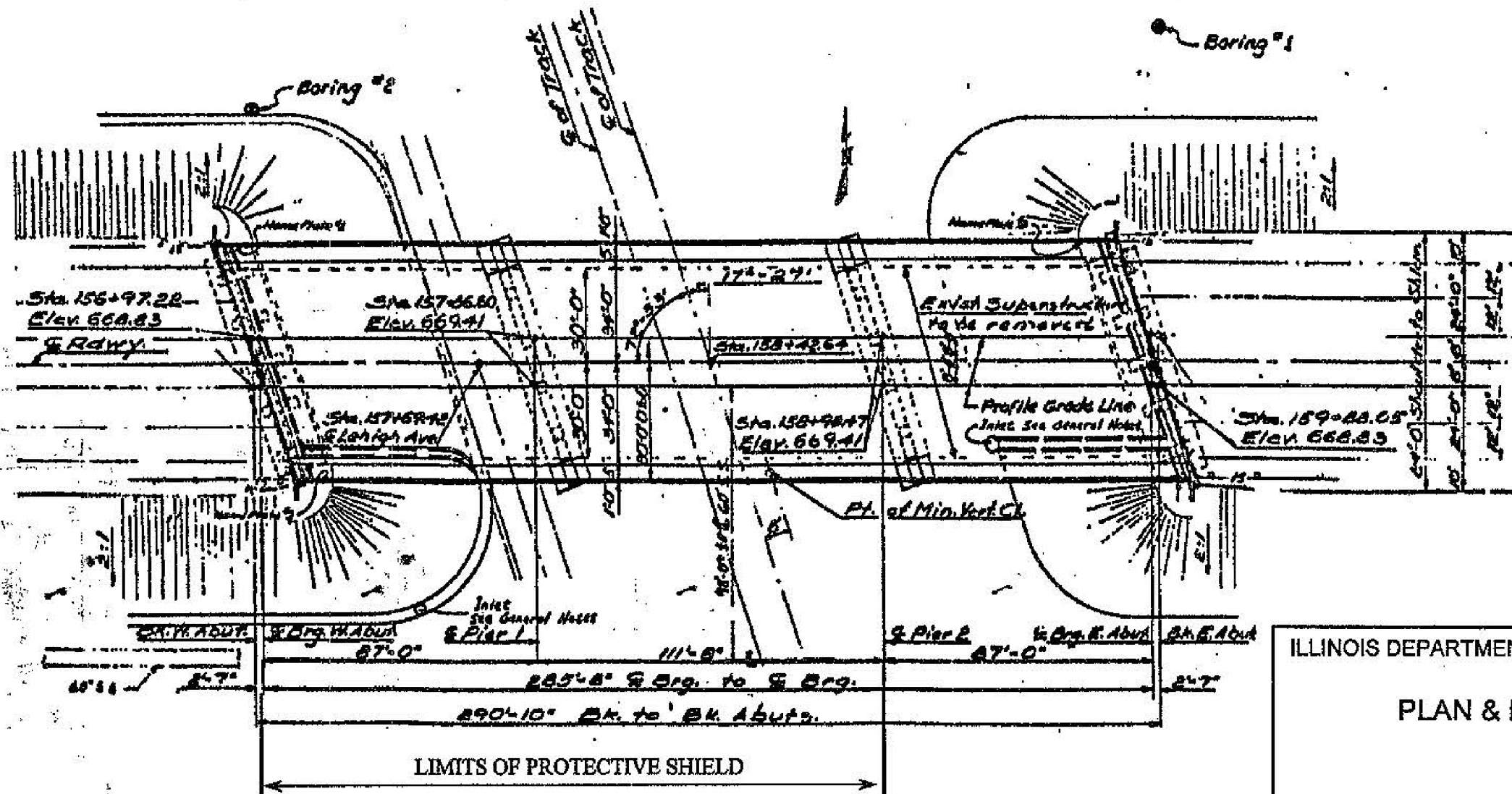
EXISTING BRIDGE PLANS - 2006
FOR INFORMATION ONLY

SCALE: SHEET 4 OF 9 SHEETS STA. 96+61.4 TO STA. 103+52.5

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	105
			CONTRACT NO. 60N83	
ILLINOIS FED. AID PROJECT				



ELEVATION



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

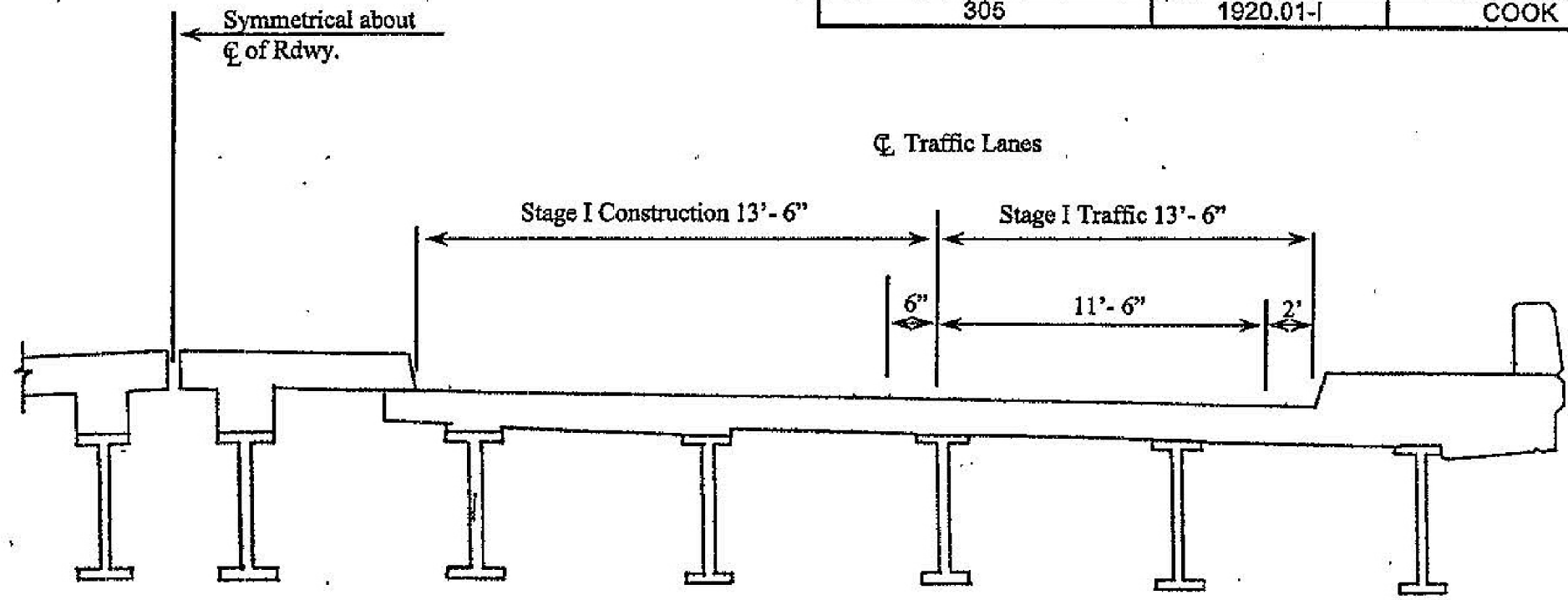
EXISTING BRIDGE PLANS - 2006
FOR INFORMATION ONLY

SCALE: SHEET 5 OF 9 SHEETS STA. 96+61.4 TO STA. 103+52.5

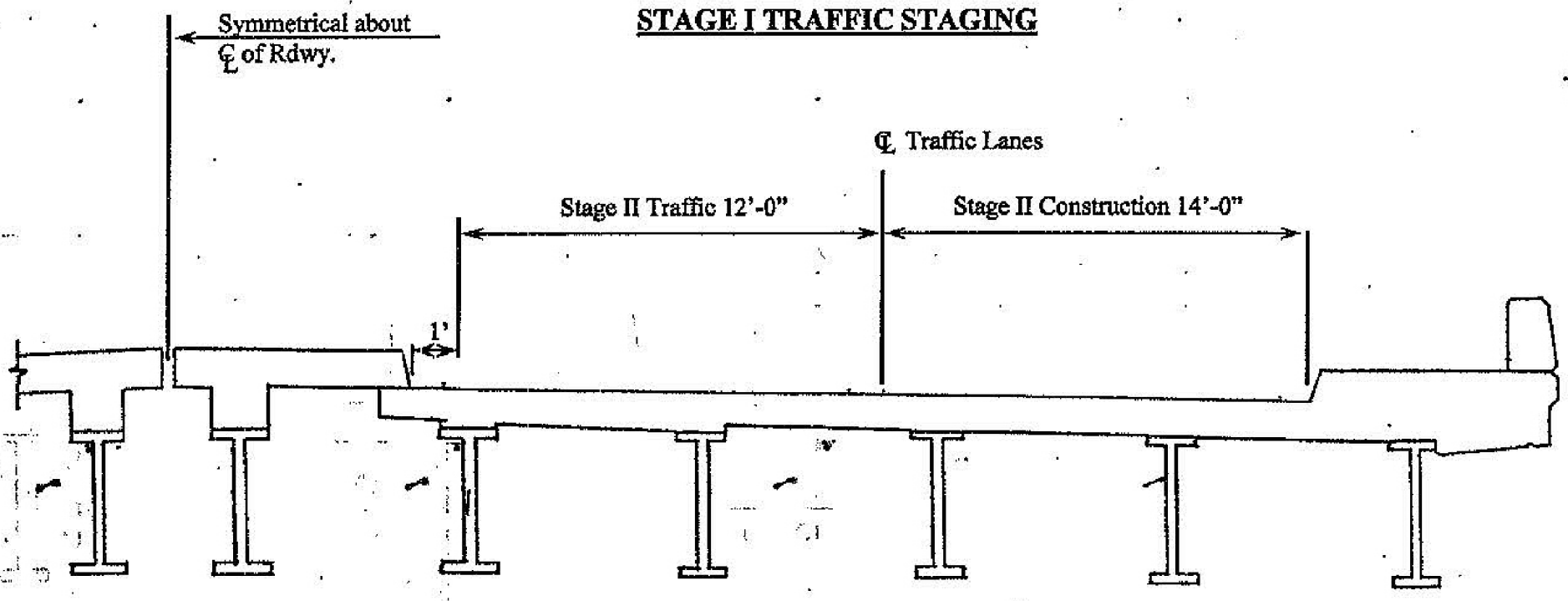
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305	1920.01-BR	COOK	194	106
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				

FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
305	1920.01-I	COOK	12	6

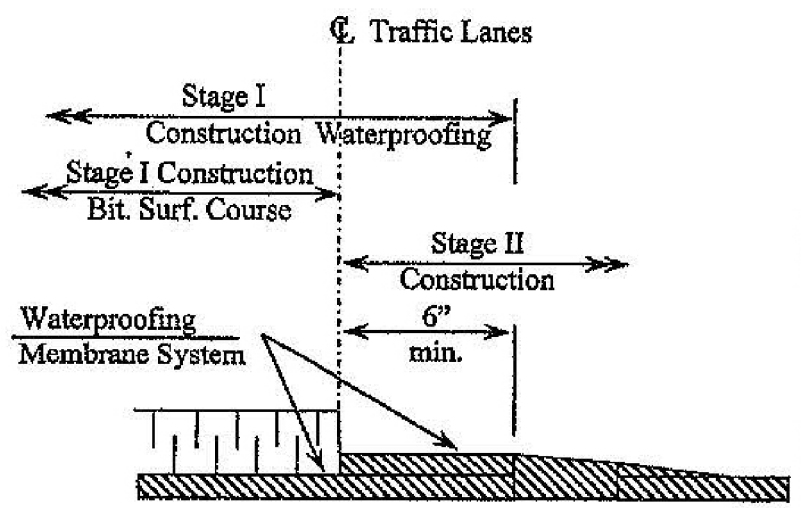
CONTRACT 62772



STAGE I TRAFFIC STAGING



STAGE II TRAFFIC STAGING



WATERPROOFING SYSTEM AT STAGE CONSTRUCTION

ILLINOIS DEPARTMENT OF TRANSPORTATION
TRAFFIC STAGING

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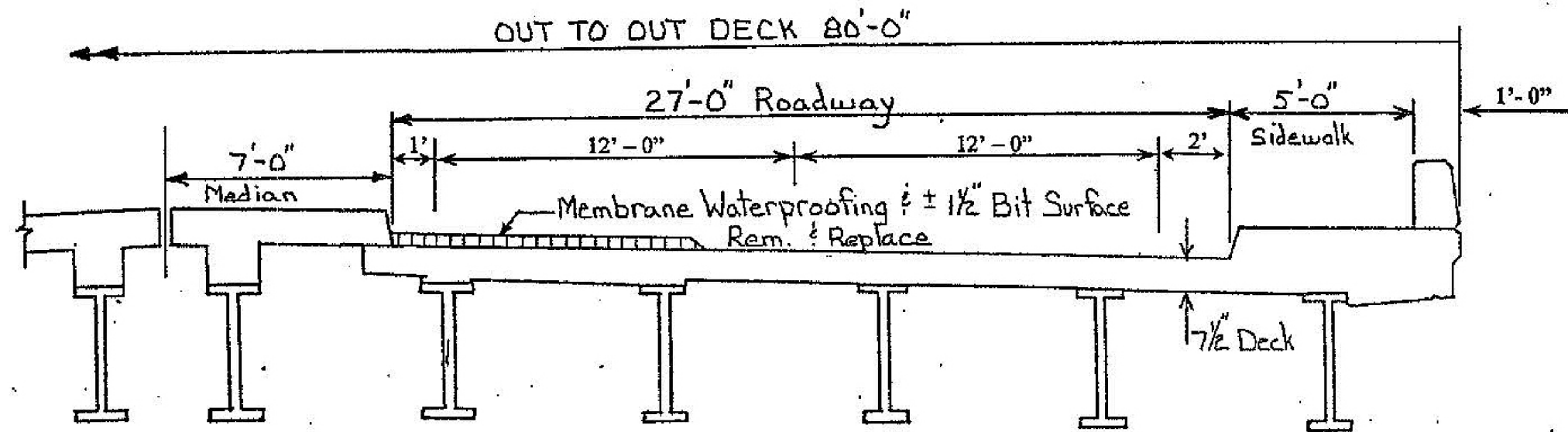
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS - 2006
FOR INFORMATION ONLY

SCALE: SHEET 6 OF 9 SHEETS STA. 96+61.4 TO STA. 103+52.5

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	107
				CONTRACT NO. 60N83
ILLINOIS FED. AID PROJECT				



ILLINOIS DEPARTMENT OF TRANSPORTATION
TYPICAL SECTION

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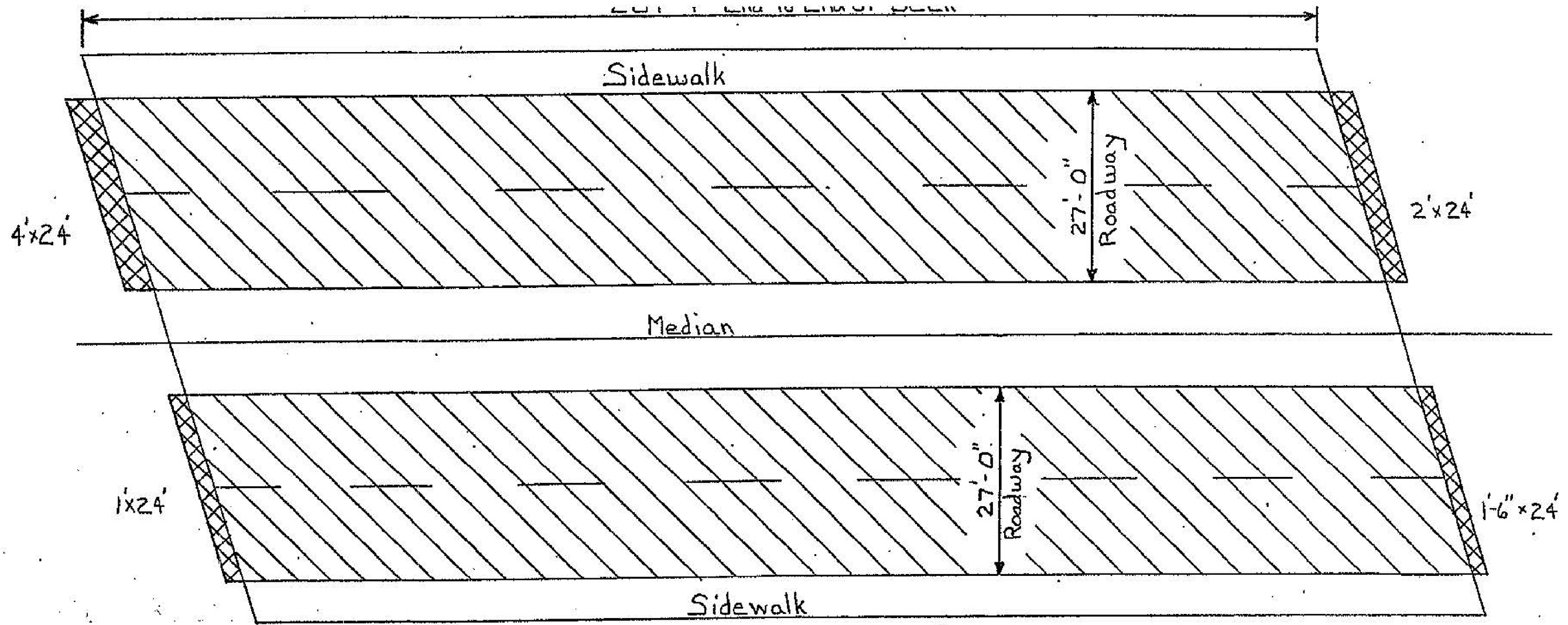
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS - 2006
FOR INFORMATION ONLY

SCALE: SHEET 7 OF 9 SHEETS STA. 96+61.4 TO STA. 103+52.5

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	108
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				



-  Bituminous surface removal & replacement
Membrane waterproofing removal & replacement
-  Approach Slab Repair (Full Depth)

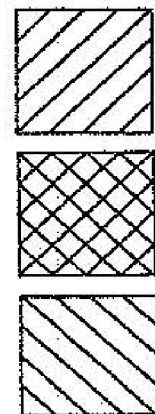
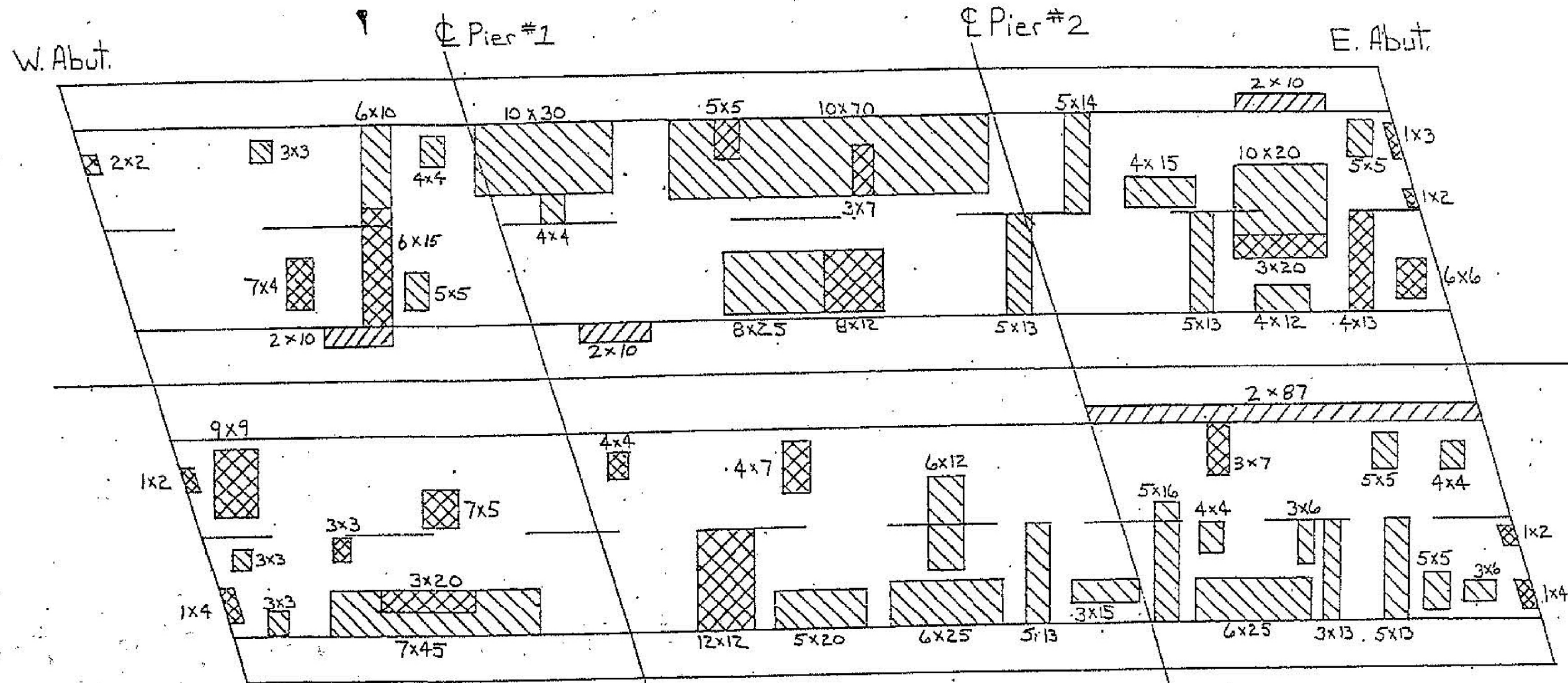
Notes
 Areas of approach slab repairs shown are estimated. The engineer shall show actual locations of approach slab repairs on As-built plans.

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED WORK

S:\Contracts-Maintenance\WPA1 1x17Plans\02772\June '06 PLANS - 11x17 DPW17-Proposed Work.doc

MILHOUSE	USER NAME = MS.USER	DESIGNED - LAB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING BRIDGE PLANS - 2006 FOR INFORMATION ONLY	F.A.P. RTE. 305	SECTION 1920.01-BR	COUNTY COOK	TOTAL SHEETS 194	SHEET NO. 109
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	PLOT DATE = 12/13/2018	DATE - 11/21/18	REVISED -							



CURB REMOVAL & REPLACE
(STRUCTURAL REPAIR OF
CONCRETE $\leq 5"$)

**DECK SLAB REPAIR (FULL
DEPTH)**

**DECK SLAB REPAIR (PARTIAL
DEPTH)**

Sidewalk and median curb repairs at various locations shall be done using formed concrete repair (less than or equal to 5 inches).

Locations to be determined in the field by the Engineer.

Areas of deck repairs shown are estimated. The Engineer shall show actual locations of deck repairs on As-Built Plans.

ILLINOIS DEPARTMENT OF TRANSPORTATION
**DECK SLAB
REPAIR LOCATIONS**

DATE OF SURVEY: MARCH 2006



USER NAME - MS.USER	DESIGNED - LAB	REVISED -
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PLOT SCALE - *SCALE*	CHECKED - E.JL	REVISED -
PLOT DATE - 12/13/2018	DATE - 11/21/18	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS - 2006
FOR INFORMATION ONLY

SCALE: SHEET 9 OF 9 SHEETS STA. 96+61.4 TO STA. 103+52.5

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	110
CONTRACT NO. 60N83			ILLINOIS FED. AID PROJECT	

INDEX OF SHEETS

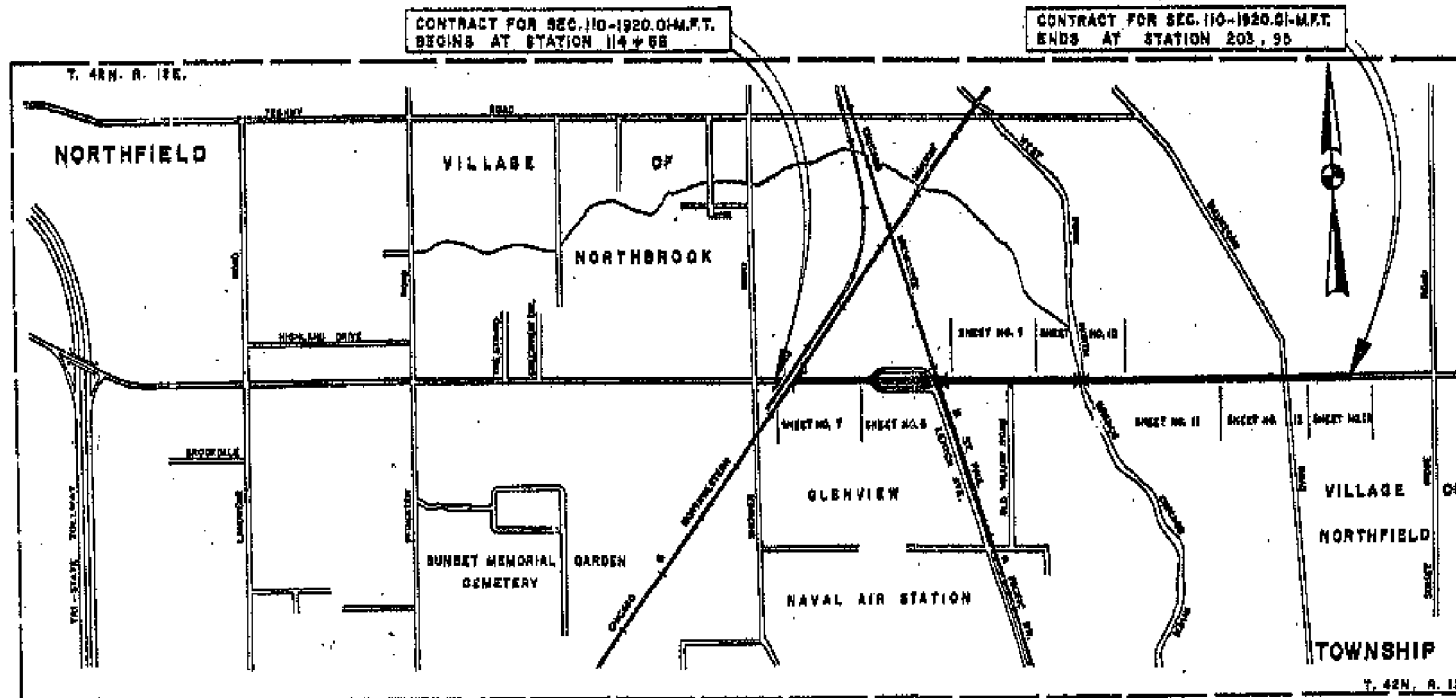
- SHEET NO. 1 TITLE PAGE
- 2 TYPICAL CROSS SECTIONS
- 3 GENERAL NOTES
- 4 SUMMARY OF QUANTITIES
- 5 DETOUR PLAN AND PAVEMENT STRUCTURAL DESIGN DATA
- 6 LOCATIONS OF CONTRACTION JOINTS
- 7-13 PLAN AND PROFILE
- 14-33 WILLOW ROAD BRIDGE OVER C.M. ST. P. & R.R.
CH. RT. 110(WILLOW ROAD) SEC. 110-1920.01-2-BW
- 34-44 WILLOW ROAD BRIDGE - WIDENING OVER THE WEST FORK OF THE
NORTH BRANCH OF THE CHICAGO RIVER SEC. 110-1920.01
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- 63-89 DRAINAGE PLAN AND UTILITIES
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DETAIL OF PRIVATE DRIVES ADJOINING CURB AND OUTER
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- 80 HEADWALL STD. RIGID
GRATE - TYPE 8
DETAIL OF PRECAST TRANSITION CIRCULAR TO CIRCULAR
PRECAST CONCRETE END SECTION
- 81 CURB & GUTTER, FRAME & GRATE TYPE-40.
- 82 DRAINAGE TREATMENT AT ABUTMENT - WILLOW RD.
BRIDGE OVER C. M. ST. P. & R. R.
- 83-84 DETAIL OF TRAFFIC CONTROL SIGNALS
- 85 FLUSH INLET BOX
- 86 HEADWALL STANDARDS

SYMBOLS	STANDARD SYMBOLS	EXISTING
---	PROPOSED GRADE LINE - PROFILE	---
---	EXISTING GRADE LINE - PROFILE	---
---	PROPOSED ROAD	---
---	APPROVED ROAD	---
---	UNAPPROVED ROAD	---
---	CONVENTIONAL SIGN FOR SHEET NO. 1	---

STATE OF ILLINOIS
COUNTY OF COOK
DEPARTMENT OF HIGHWAYS

PLANS FOR PROPOSED
COUNTY HIGHWAY
WILLOW ROAD

COUNTY HIGHWAY 110 SEC. 110-1920.01-M.F.T.



WILLOW ROAD

GROSS LENGTH 8929 LIN. FT.
NET LENGTH 8929 LIN. FT. 1.6911 MILES

CHRISTIAN - ROGE & ASSOCIATES, INC.
ENGINEERS

SHEET NO.	TOTAL SHEETS
110	111

SECTION 110-1920.01-M.F.T.

1740 59 Roadway

APPROVED
FOR PROFESSIONAL ARCHITECT ONLY
[Signature]

COUNTY OF COOK
DEPARTMENT OF HIGHWAYS

SUBMITTED: [Signature]

EXAMINED: [Signature]

APPROVED: [Signature]

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF HIGHWAYS

APPROVED: [Signature]

APPROVED: [Signature]

APPROVED
JUN 29 1969
[Signature]



USER NAME = MS.USER	DESIGNED - LAB	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

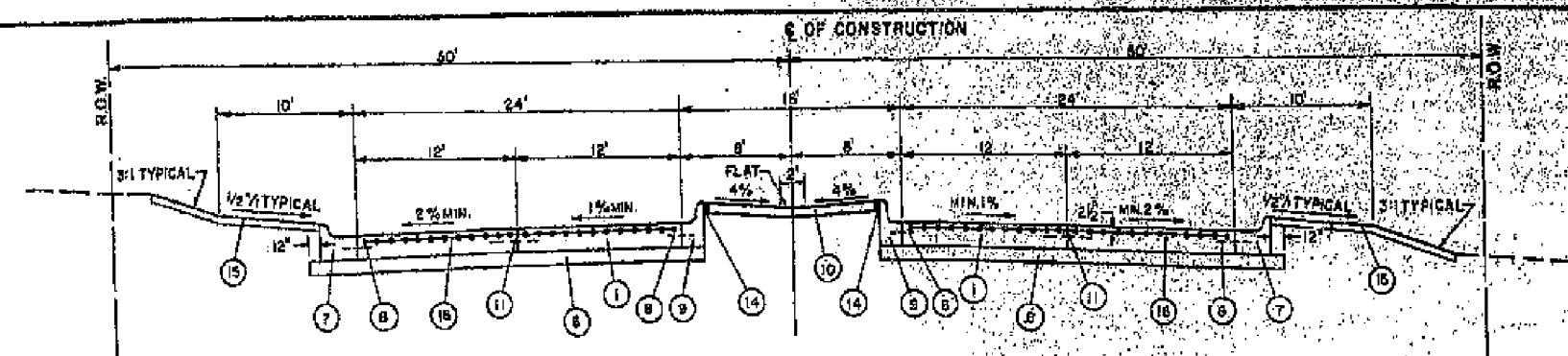
EXISTING BRIDGE PLANS - 1969
FOR INFORMATION ONLY

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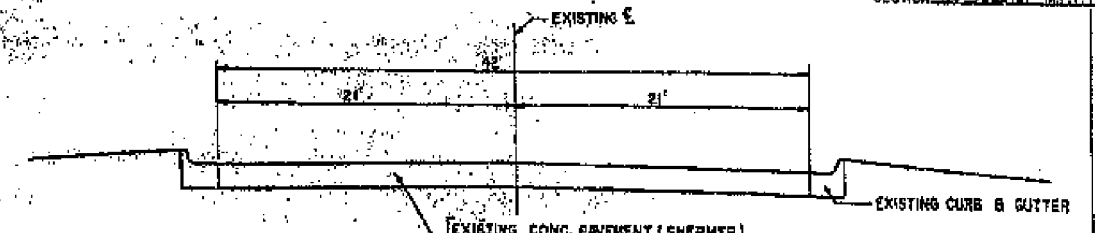
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305	1920.01-BR	COOK	194	111
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				

COUNTY HIGHWAY	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
110	1969	2	25

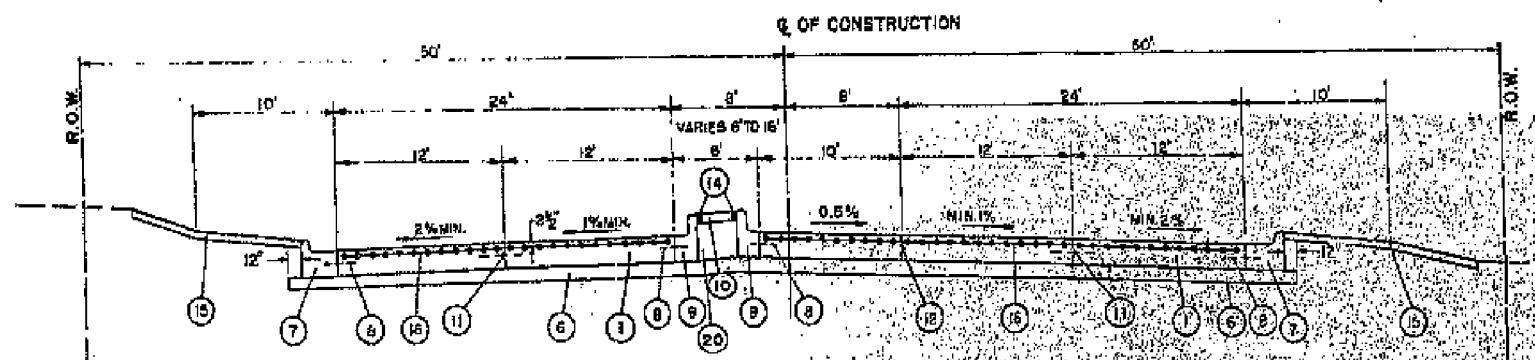
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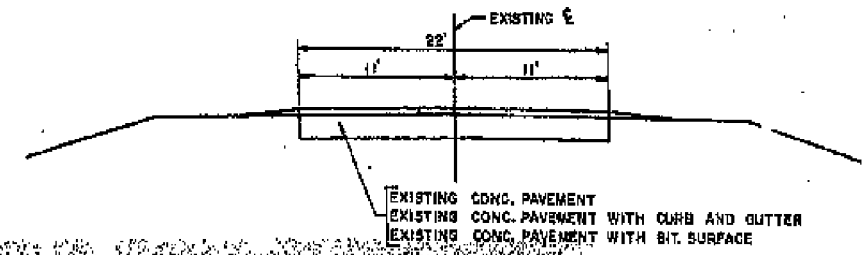
WILLOW ROAD (RECONSTRUCTION)



EXISTING WILLOW ROAD
 @ SHERMER RD. (W=42)
 @ WAUKEGAN RD. (W=44)



WILLOW ROAD (RECONSTRUCTION)
 LEFT-TURN LANE

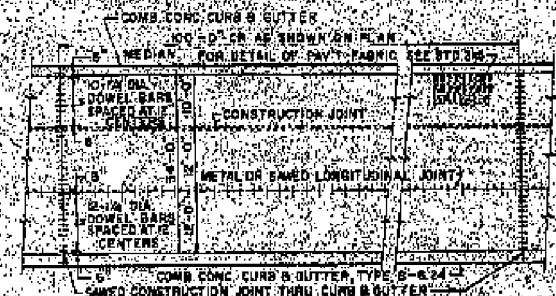


EXISTING WILLOW ROAD

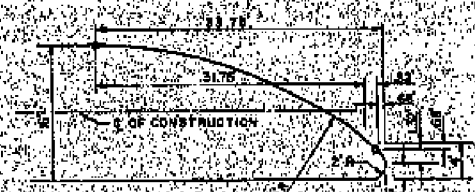
LEGEND

1. P.C. CONCRETE PAVEMENT 10"
2. 1" BIT CONCRETE SURFACE COURSE, CLASS I
3. 2" BIT. CONCRETE BINDER COURSE
- 4.
- 5.
6. SUB-BASE GRANULAR MATERIAL, TYPE A 6"
7. COMB. CONCRETE CURB & GUTTER, TYPE B-6.24
8. #4 TIE BARS, 2'-6" LONG @ 2'-6" CENTERS
9. COMB. CONCRETE CURB & GUTTER, TYPE B-9.12
10. CONCRETE MEDIAN SURFACE 4"
11. METAL OR SAWED LONGITUDINAL JOINT
12. LONGITUDINAL CONSTRUCTION JOINT
- 13.
14. 1/2" PREFORMED EXPANSION JOINT FILLER
15. 3" TOP SOIL & SEEDING CLASS I OR 3" TOP SOIL & SODDING
16. PAVEMENT FABRIC
- 17.
18. BITUMINOUS AGGREGATE MIXTURE BASE COURSE, 6"
19. STABILIZED SHOULDERS - B.A.M.
20. COMPACTED EARTH FILL

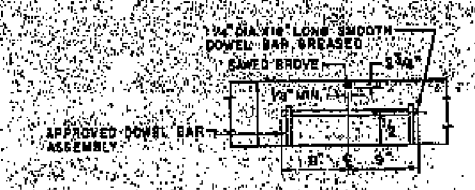
NOTE: PAVEMENT CROSS-SLOPE AT SUMMITS EQUALS 1/4" PER FOOT FROM INNER EDGE OF THRU LANE TO EDGE OF PAVEMENT. THE CURB GRADE SHALL BE PARALLEL TO THE APPLIED GRADE. BUTTER SLOPE ON MEDIAN CURBS IS SAME AS PAVEMENT SLOPE.



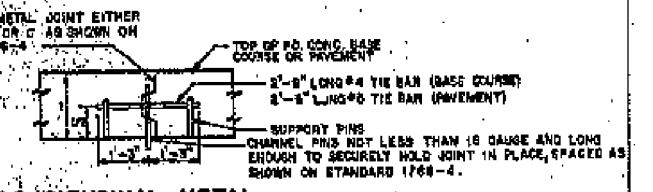
PLAN OF P.C.C. PAVEMENT
 (WITH LEFT TURN LANE DEVELOPED)



DETAIL OF MEDIAN ON WILLOW ROAD



SAWED CONTRACTION JOINT

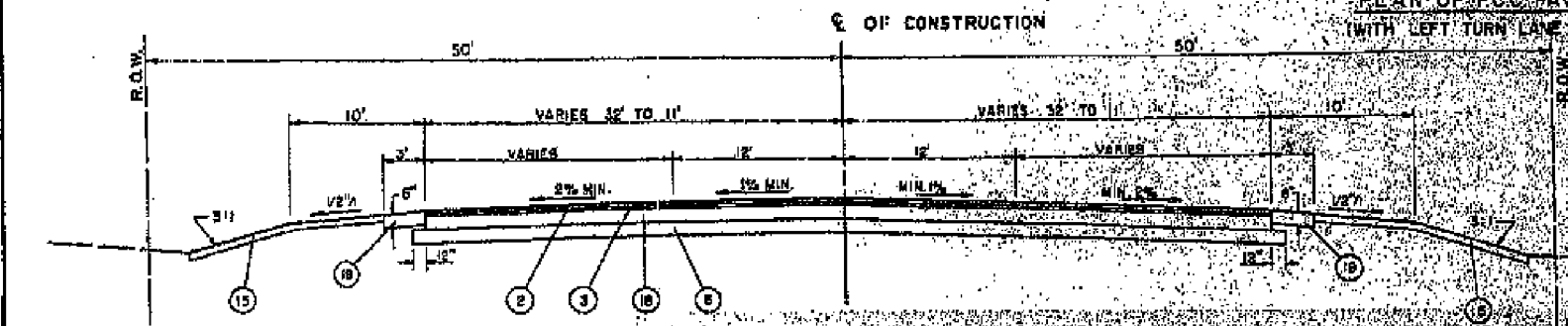


LONGITUDINAL METAL JOINT AND TIE BARS

SEAMS JOINTS SHALL BE SEALED WITH AN APPROVED SEALANT MATERIAL. THE JOINTS SHALL BE SEALED WITH AN APPROVED SEALANT MATERIAL. THE JOINTS SHALL BE SEALED WITH AN APPROVED SEALANT MATERIAL. THE JOINTS SHALL BE SEALED WITH AN APPROVED SEALANT MATERIAL.



SAWED LONGITUDINAL JOINT



WILLOW ROAD (RECONSTRUCTION)
 TEMPORARY TRANSITION SECTION - TO MEET EXISTING @ EAST END

COUNTY OF COOK	
DEPARTMENT OF HIGHWAYS	
TYPICAL CROSS SECTIONS	
APPROVED	DATE



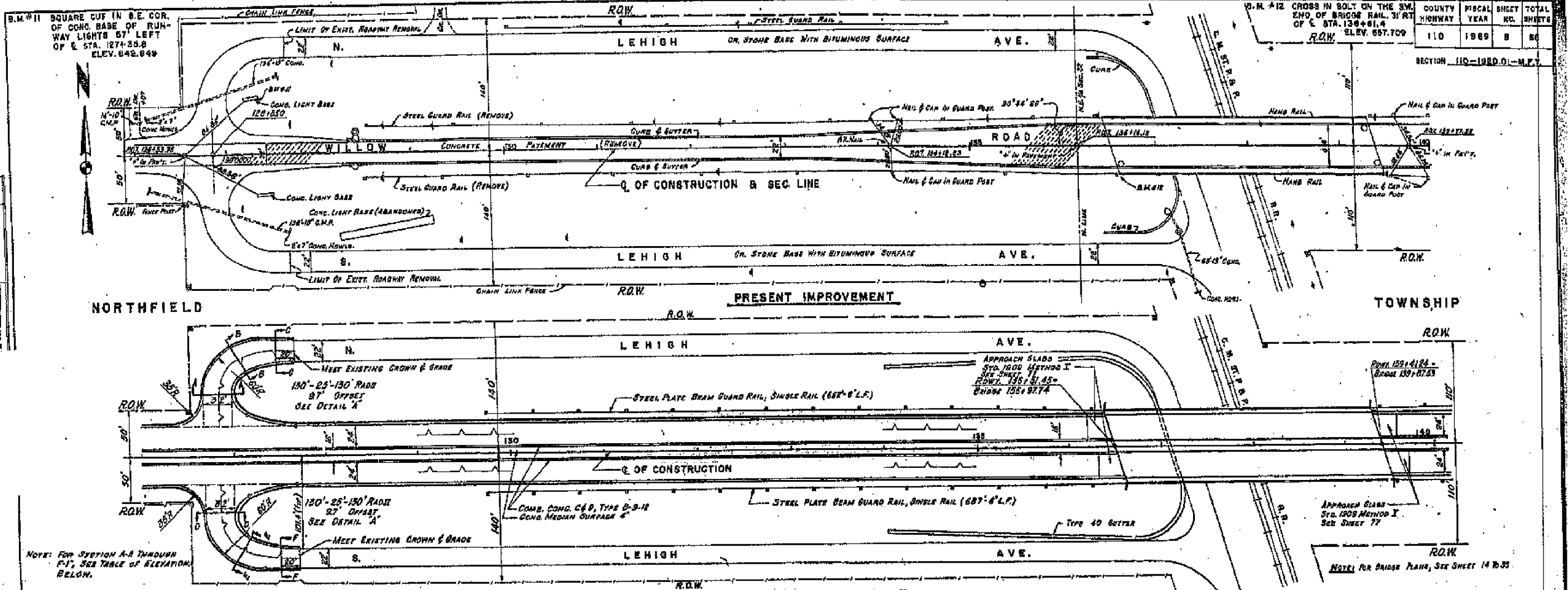
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PLOT SCALE - 1/4"=1'	DRAWN - LCR	REVISED -
PLOT DATE - 12/13/2018	CHECKED - E.JL	REVISED -
	DATE - 11/21/18	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

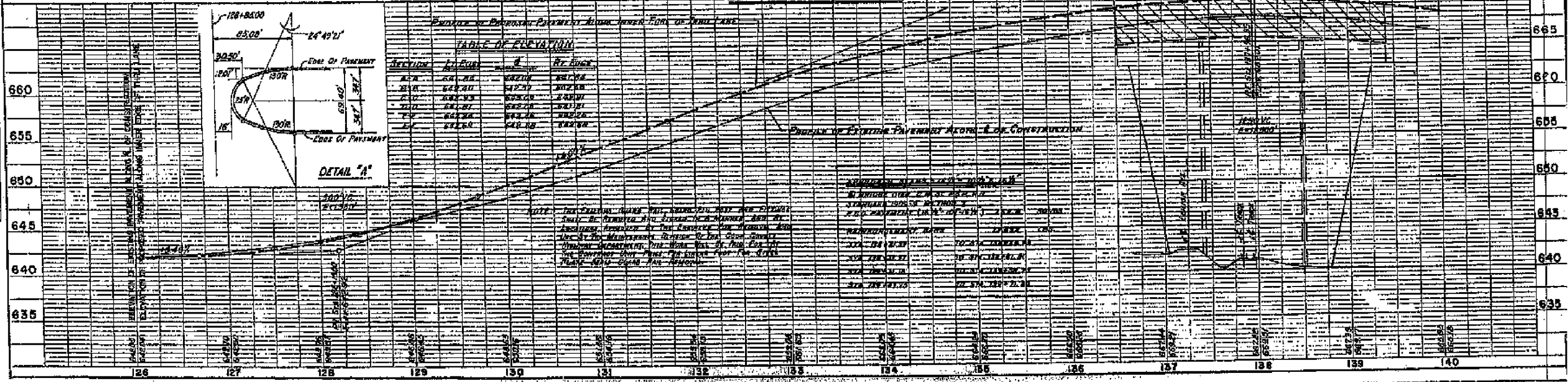
EXISTING BRIDGE PLANS - 1969
 FOR INFORMATION ONLY

SCALE: SHEET 2 OF 24 SHEETS STA. 96+61.4 TO STA. 103+52.5

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	112
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				



COUNTY	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
110	1989	8	86



USER NAME - MS.USER	DESIGNED - LAB	REVISED -
PLOT SCALE - 1/4"=1'	DRAWN - LCR	REVISED -
PLOT DATE - 12/13/2018	CHECKED - E.JL	REVISED -
	DATE - 11/21/18	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS - 1969
FOR INFORMATION ONLY

SCALE: SHEET 3 OF 24 SHEETS STA. 96+61.4 TO STA. 103+52.5

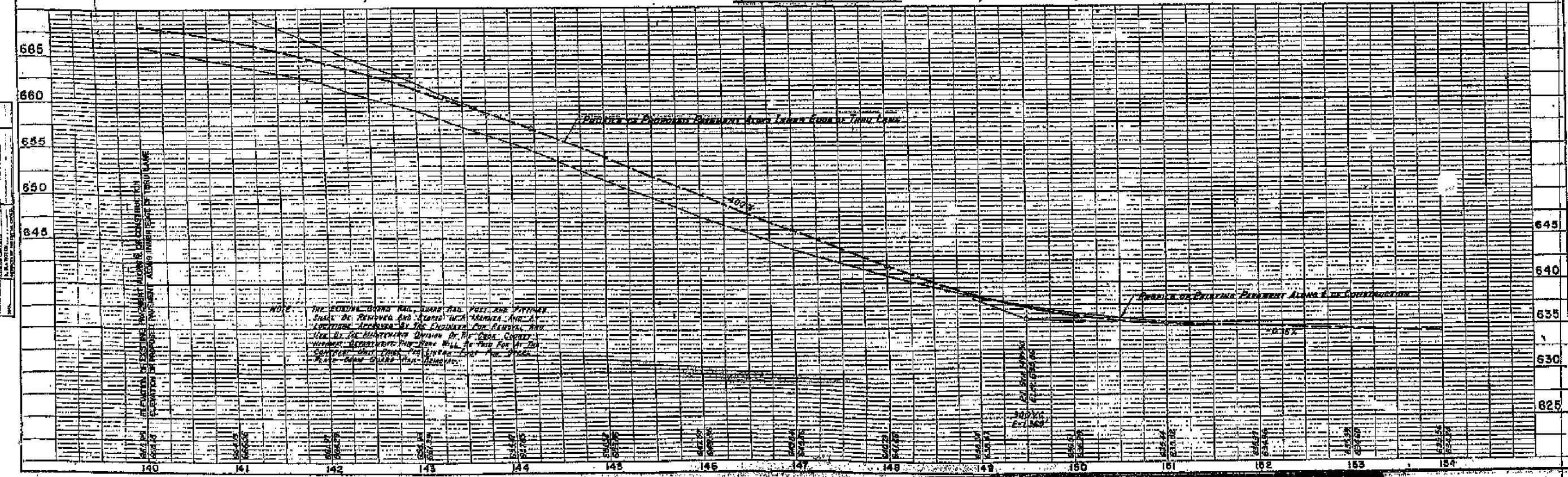
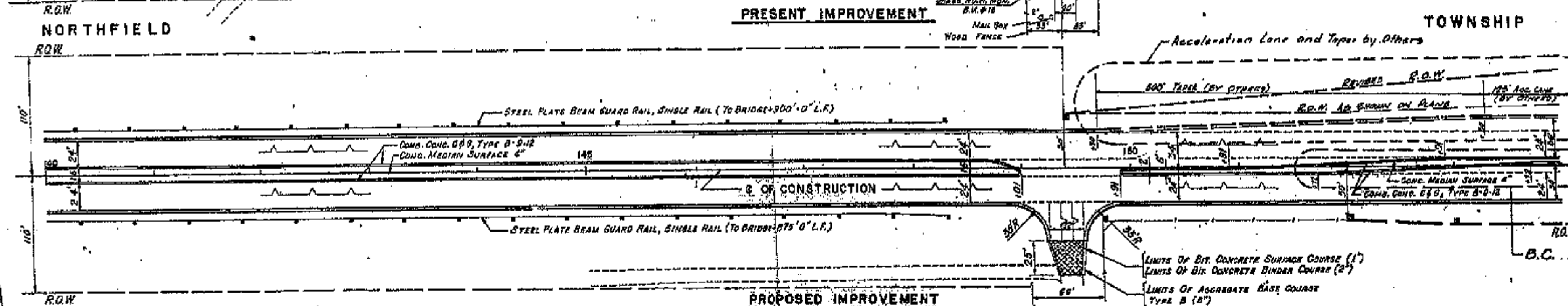
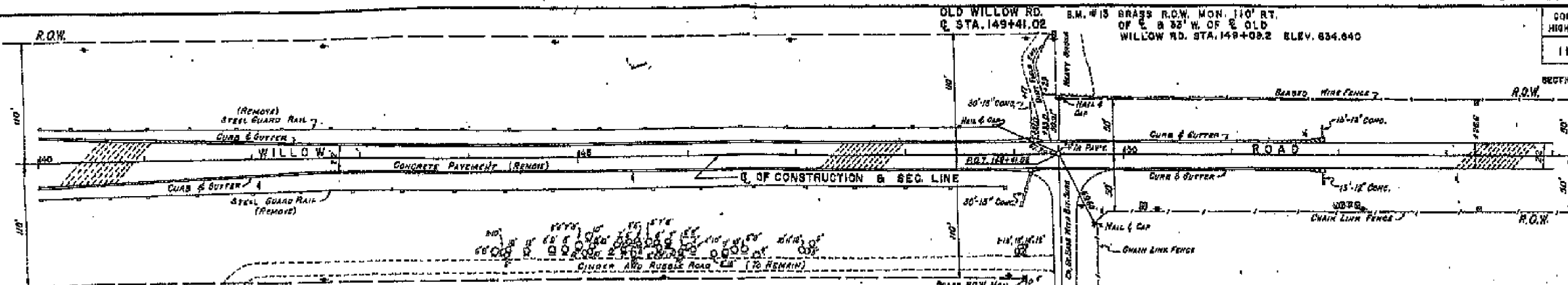
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	113

CONTRACT NO. 60N83
ILLINOIS FED. AID PROJECT

COUNTY HIGHWAY	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
110	1989	04	08

SECTION ID-1920.01-M.F.T.

B.C. 12-10-69
Sheet 1 of 2



NOTE: THE EXISTING GUARD RAIL, CURB RAIL, FOOT AND FITTINGS SHALL BE REMOVED AND STORED IN A SUITABLE AREA AT LOCATION APPROVED BY THE ENGINEER FOR BRIDGE AND USE BY THE MAINTENANCE DIVISION OF THE COUNTY. THE COUNTY DEPARTMENT OF PUBLIC WORKS WILL BE RESPONSIBLE FOR THE REMOVAL AND STORAGE OF THE GUARD RAIL, CURB RAIL, FOOT AND FITTINGS.



USER NAME = MS.USER	DESIGNED - LAB	REVISED -
PLOT SCALE = *SCALE*	DRAWN - LCR	REVISED -
PLOT DATE = 12/13/2018	CHECKED - E.JL	REVISED -
	DATE - 11/21/18	REVISED -

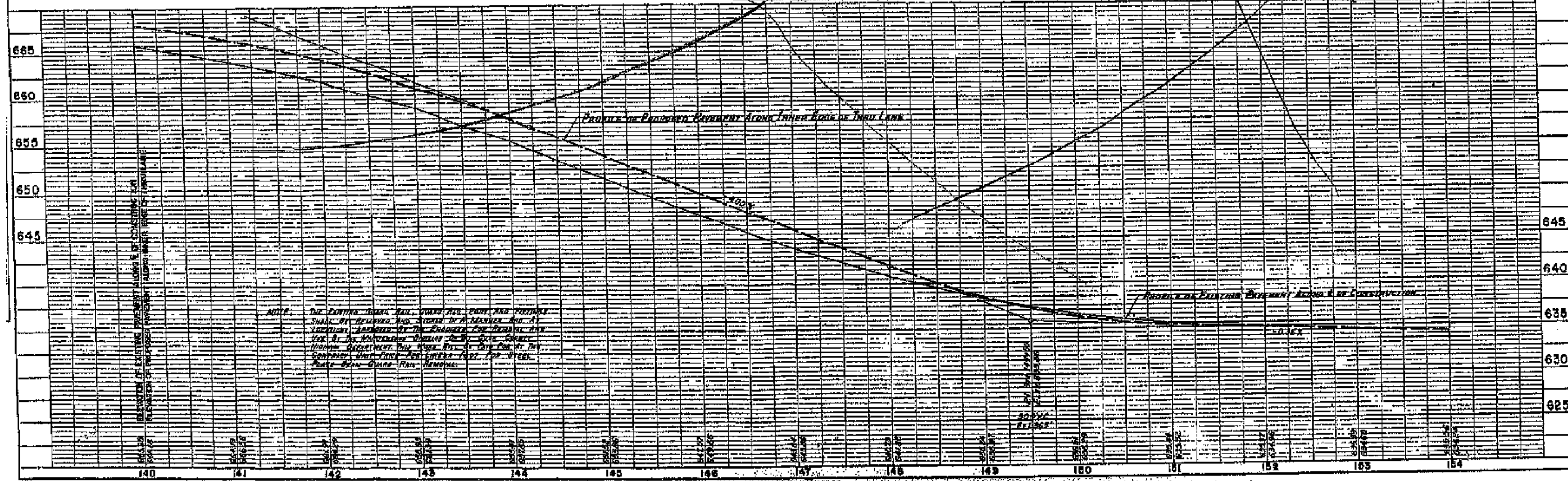
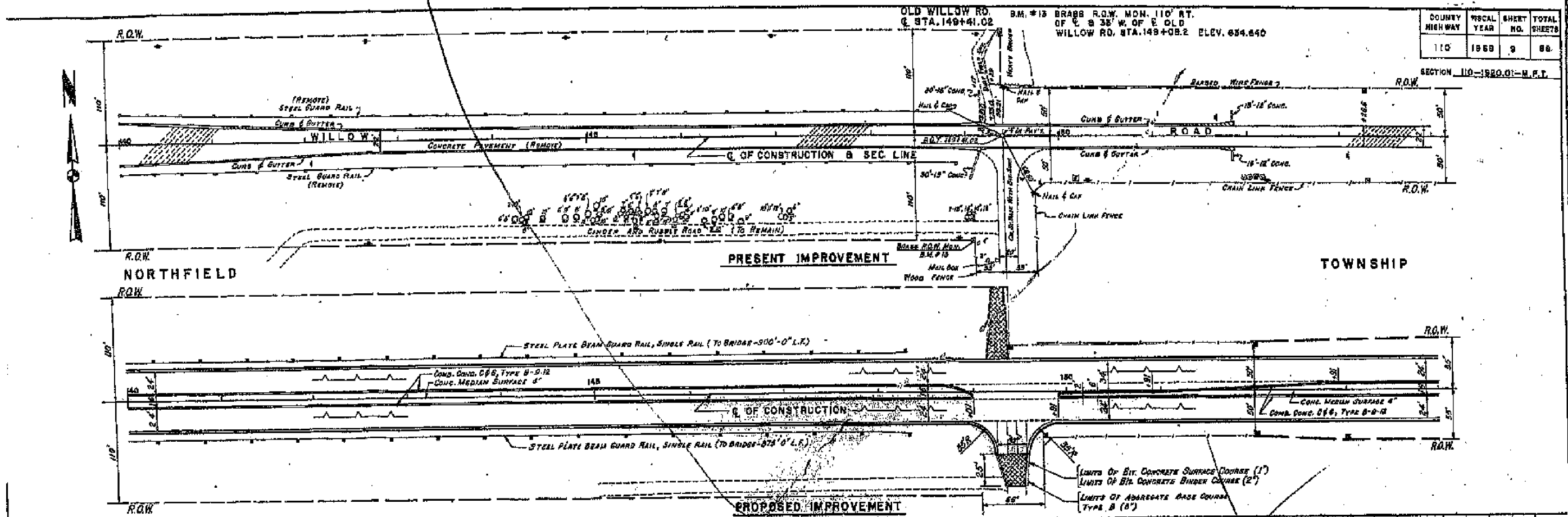
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS - 1969
FOR INFORMATION ONLY

SCALE: SHEET 4 OF 24 SHEETS STA. 96+61.4 TO STA. 103+52.5

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	114

CONTRACT NO. 60N83
ILLINOIS FED. AID PROJECT



NOTE: THE EXISTING BRIDGE WAS CONSTRUCTED BY THE STATE OF ILLINOIS IN 1920. THE BRIDGE WAS IN POOR CONDITION AND WAS TO BE REPLACED. THE BRIDGE WAS TO BE REPLACED WITH A BRIDGE WITH A SPAN OF 100 FEET. THE BRIDGE WAS TO BE REPLACED WITH A BRIDGE WITH A SPAN OF 100 FEET. THE BRIDGE WAS TO BE REPLACED WITH A BRIDGE WITH A SPAN OF 100 FEET.

COUNTY HIGHWAY	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
110	1969	9	88

SECTION 110-1920.01-M.P.T.

OLD WILLOW RD. STA. 149+41.02
 B.M. #13 BRASS R.O.W. MON. 110' RT. OF C & 38' W. OF E. OLD WILLOW RD. STA. 148+08.2 ELEV. 654.840



USER NAME = MS.USER	DESIGNED - LAB	REVISED -
PLOT SCALE = 1/4"=1'-0"	DRAWN - LCR	REVISED -
PLOT DATE = 12/13/2018	CHECKED - E.J.L.	REVISED -
	DATE - 11/21/18	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS - 1969
 FOR INFORMATION ONLY
 SCALE: SHEET 5 OF 24 SHEETS STA. 96+61.4 TO STA. 103+52.5

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	115
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				

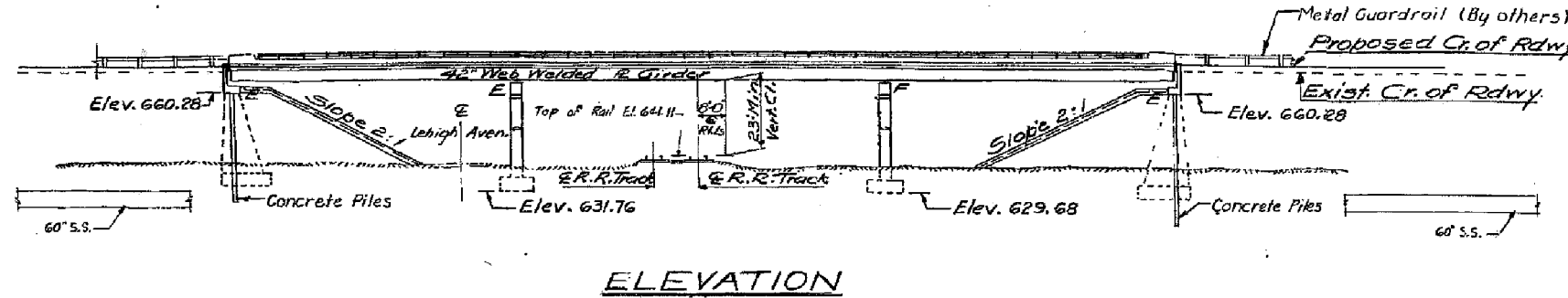
BM #119 (Damaged) Standard County Disk set in Concrete Monument on N.W. Corner of intersection. 51.25' W of E Lehigh Ave. & 31.8' N of E of East Bd. Lane Willow Road. Use Elev. 642.50

Existing structure - C.H. Route 110 - Section 110-1922.2 M.F.T. Sta. 158+42.64. Date built 1942. Existing superstructure 7" deck on 10-3/4 WF 182 Bms. 60'-0" wide to be removed.

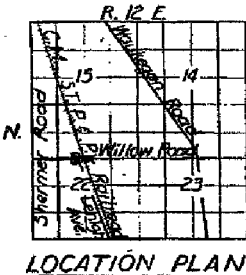
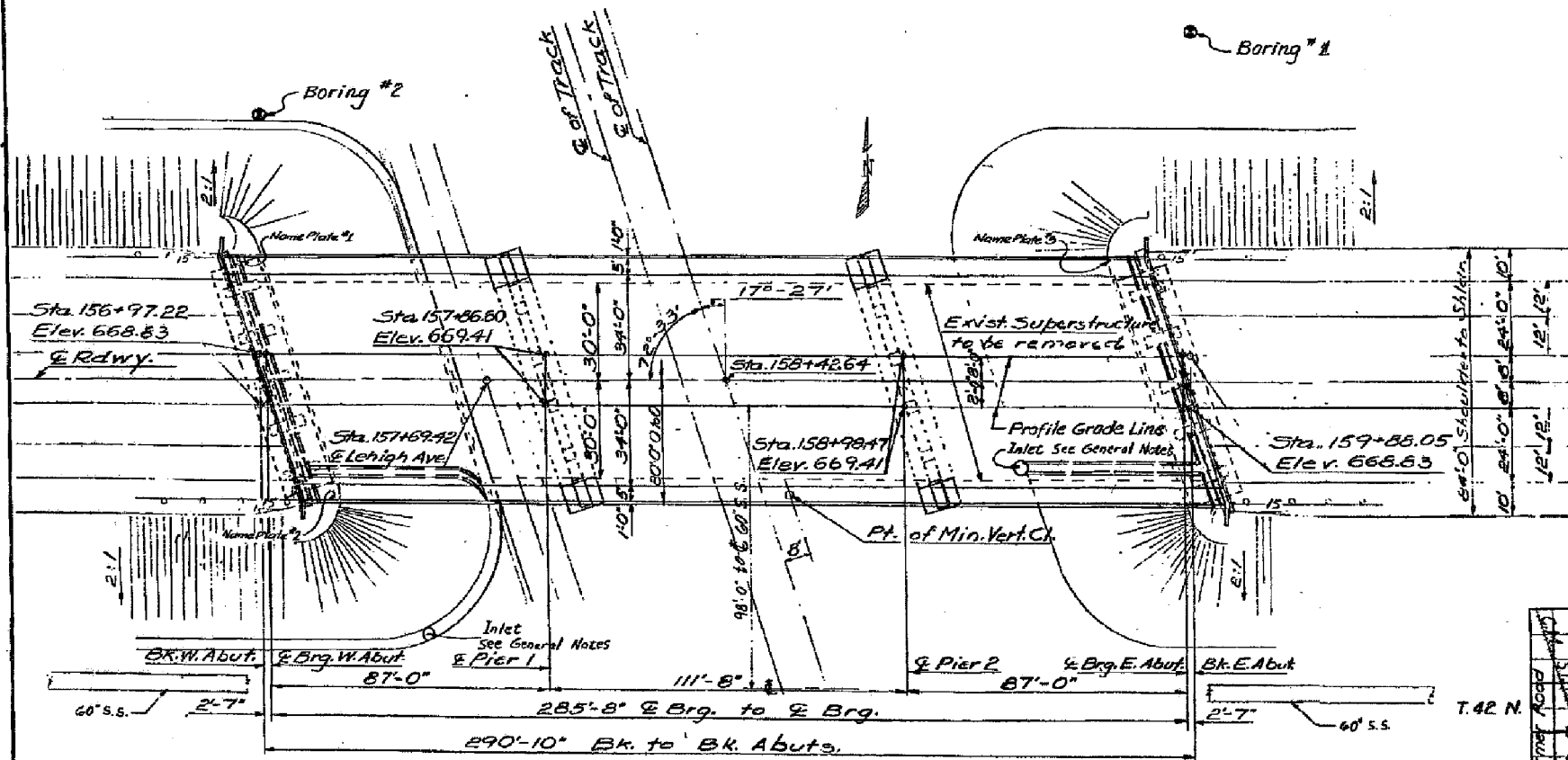
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

SECTION 110-1920.01 M.F.T. SHEETS SHEET NO. 14

MICROFILM from 1969



ELEVATION



GENERAL NOTES

- All reinforcement bars shall be lapped 24 diameters unless otherwise shown.
- Field connections shall be bolted using high strength bolts. Bolts #6 & open holes #4, unless otherwise noted.
- Roadway expansion guards shall be assembled in the shop in proper position with the ends in place and shall be left assembled for shop inspection.
- Field welding of construction accessories will not be permitted to the bottom flange of beams or girders nor to the top flange for a distance equal to one-fourth the span length, each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.
- Anchor bolts shall be set before bolting cross frames over supports.
- The concrete rail section above the mandatory construction joint at the top of the slab shall be constructed of Class X Concrete, except the aggregates shall conform to the requirements of Handrail Concrete.
- Protective Coat shall not be applied to surfaces to which Cool Tar Interlayer Protective Coat is applied.
- It shall be the responsibility of the Contractor to verify all dimensions and conditions existing in the field prior to construction and ordering of materials.
- The Contractor shall drive one test pile in a permanent location at the East Abutment as directed by the Engineer before ordering the remainder of piles.
- Except as otherwise provided, all structural steel shall receive one shop coat of red lead paint and two field coats of Aluminum paint.
- NOTE: Contractor may use either of the Shell Piles shown on Sheet #... For connection of Superstructure drainage to 6" Storm Sewer - See Sheets #...
- For drainage treatment at Abutment See Sheet #...
- * Note: Salvage value of Structural Steel will include the existing cast iron deck drains, and existing Rockers, Rollers, and Bearing Plates, etc.

BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB.	TOTAL
Furnishing Metal Pile Shells	Lin. Ft.		180	180
Driving and Filling Shells	Lin. Ft.		180	180
Test Pile	Each		1	1
Salvage Value of Structural Steel	Lump Sum			Lump Sum
Class A Excavation for Structures	Cu. Yds.		100	100
Class X Concrete	Cu. Yds.	733.7	205.9	939.6
Concrete Removal	Cu. Yds.		28	28
Reinforcement Bars	Lbs	161,540	18,130	179,670
Furnishing and Erecting Struct. Steel	Lbs	778,050		778,050
Stud Shear Connectors	Each	5,976		5,976
Aluminum Railing, Type L	Lin. Ft.	535		535
Protective Coat	Sq. Yds.	1,010		1,010
Expansion Bolts (3/8")	Each		252	252
Name Plates	Each		1	1
Removal of Existing Superstructure	Each		1	1
Relocation of Existing Name Plates	Each	2		2
Downspout Pipe (8")	Lin. Ft.			
Cool Tar Interlayer Protective Coat	Sq. Yds.	1,715		1,715
Bridge Seat Sealant	Sq. Yds.		100	100
Bit Concrete Surface Course Class I	Tons	144		144

REVISIONS

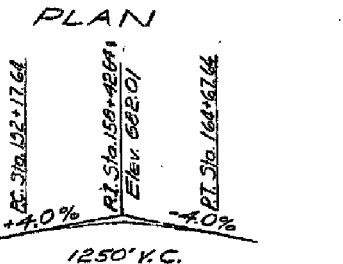
DATE	DESCRIPTION

Note: For Deck Drainage Details see Sht. N282

Note: All Deck elevations are on top of 1/2" Class I

DESIGNED: J. Engey
CHECKED: J. B. R...
DRAWN: BKR
CHECKED: J. B. R...

EXAMINED: [Signature]
PASSED: [Signature]
APPROVED: [Signature]



WILLOW ROAD BRIDGE WIDENING OVER C.M. ST. P. & P. R. R. BUILT 196X BY COOK COUNTY SECTION 110-1920.01 M.F.T. DESIGN LOADING HS. 20-44

NAME PLATE #3 (NEW) See Sht. 2113-1

DESIGN STRESSES

- $f_c = 1200$ p.s.i. (Deck Slab)
- $f_c = 1400$ p.s.i. (Parapet, Curb & Sub)
- $f_s = 20,000$ p.s.i. (Reinf.)
- $f_s = 20,000$ p.s.i. (Struct.)
- $f_c = 75$ p.s.i. (Footings)
- $n = 10$
- LOADING HS-20 (44)

GENERAL PLAN & ELEVATION
WILLOW ROAD OVER C.M. ST. P. & P. R. R.
COOK COUNTY

Allowable 4 Defl. L/11200 Comp.



USER NAME = MS.USER	DESIGNED - LAB	REVISED -
PLOT SCALE = #SCALE#	DRAWN - LCR	REVISED -
PLOT DATE = 12/13/2018	CHECKED - E.J.L	REVISED -
	DATE - 11/21/18	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

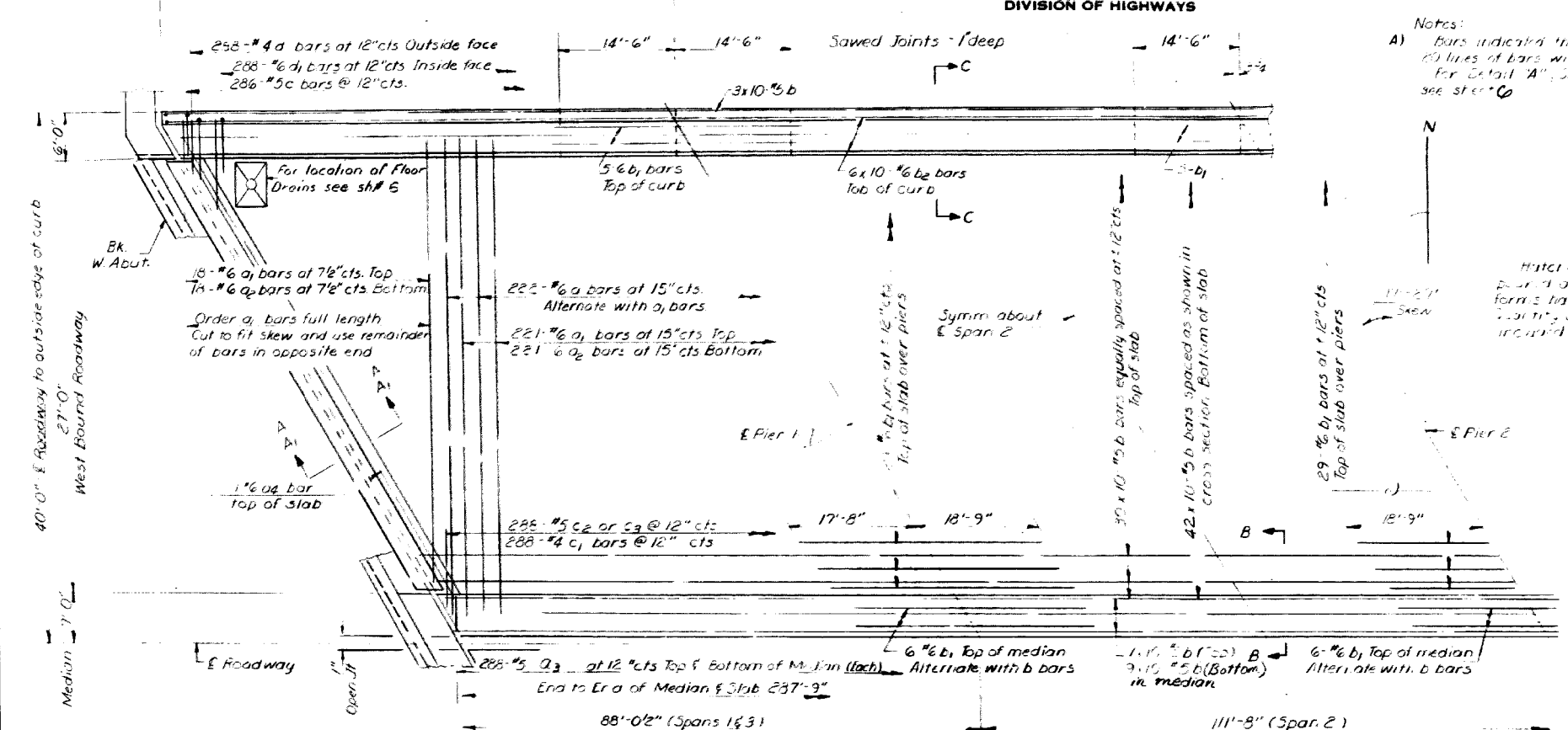
EXISTING BRIDGE PLANS - 1969 FOR INFORMATION ONLY

SCALE: SHEET 6 OF 24 SHEETS STA. 96+61.4 TO STA. 103+52.5

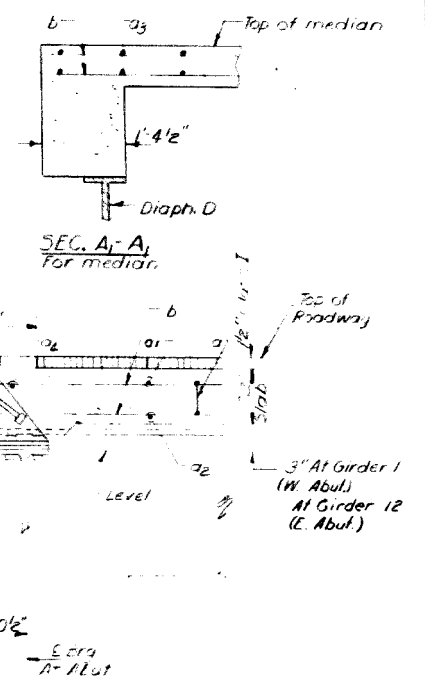
F.A.P. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	116

CONTRACT NO. 60N83
ILLINOIS FED. AID PROJECT

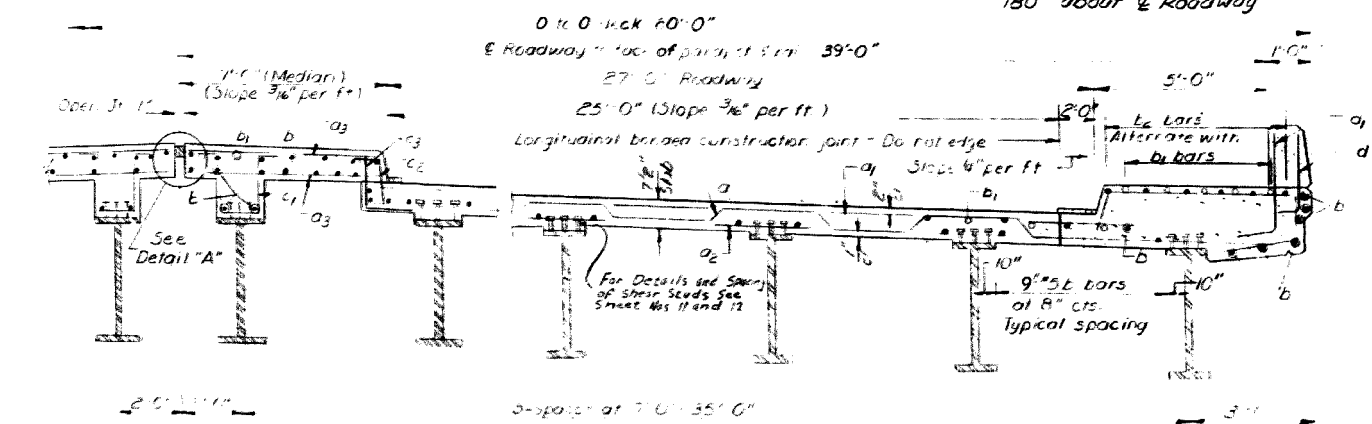
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS



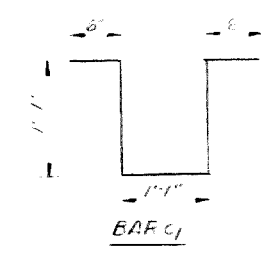
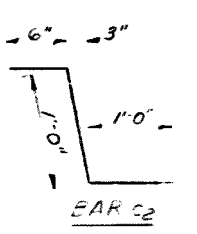
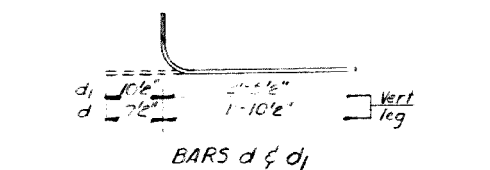
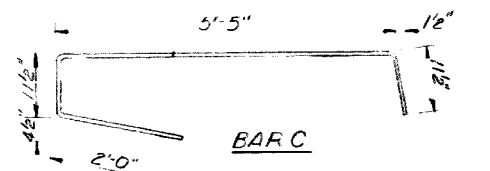
Notes:
A) Bars indicated "bars 2, 3, 4, etc." indicates 20 lines of bars with 3 locations per line. For Detail "A", Section "B-E" & Section "C-C" see sheet 17.



PARTIAL PLAN
West Bound Lane as shown.
East Bound Lane same by rotation
180° about E Roadway



BILL OF MATERIAL				
Bar No.	Size	Length	Shape	
a	444 #6	33'-5"		
a1	478 #6	29'-0"		
a2	478 #6	32'-3"		
a3	1152 #6	6'-6"		
b	4	31'-6"		
b1	1820 #5	30'-0"		
b2	180 #6	36'-5"		
b3	120 #6	30'-3"		
c	572 #5	2'-4"		
c1	376 #4	4'-3"		
c2	276 #5	2'-6"		
c3	576 #5	2'-9"		
d	576 #4	2'-6"		
d1	576 #6	3'-4"		
Reinforcement Bars				Lbs. 159,610
* For shear studs (Structural Steel)				Lbs. 778,050
Class X Concrete				Cu. Yds. 702.5



DESIGNED: A. Enger
CHECKED: [Signature]
DRAWN: Rev. [Signature]
CHECKED: [Signature]

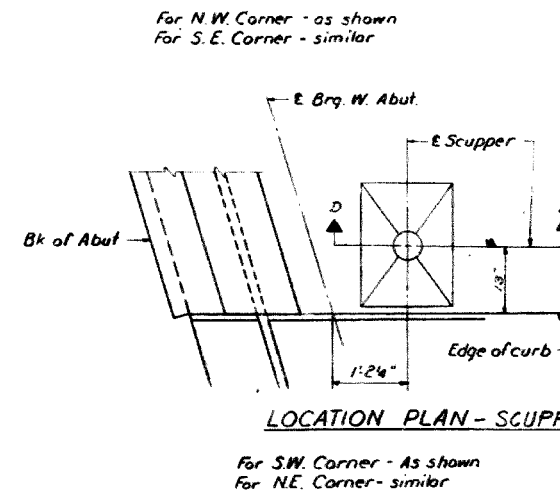
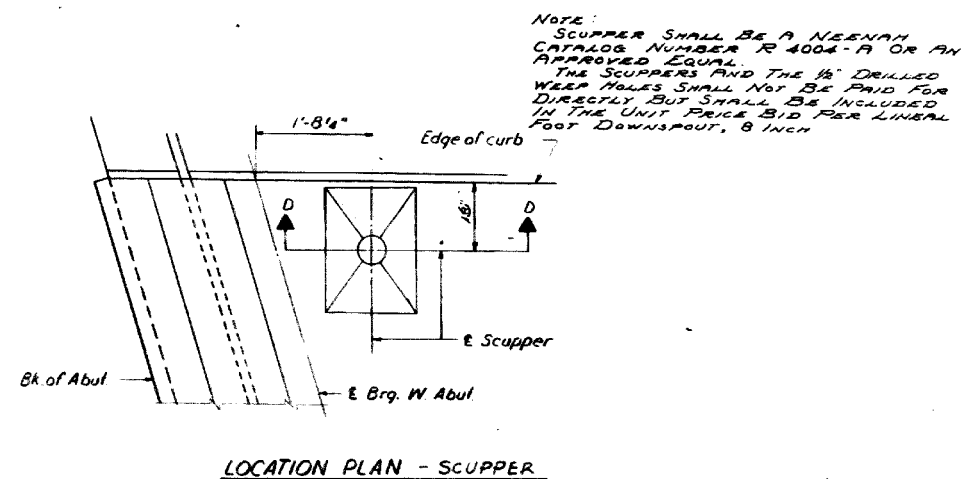
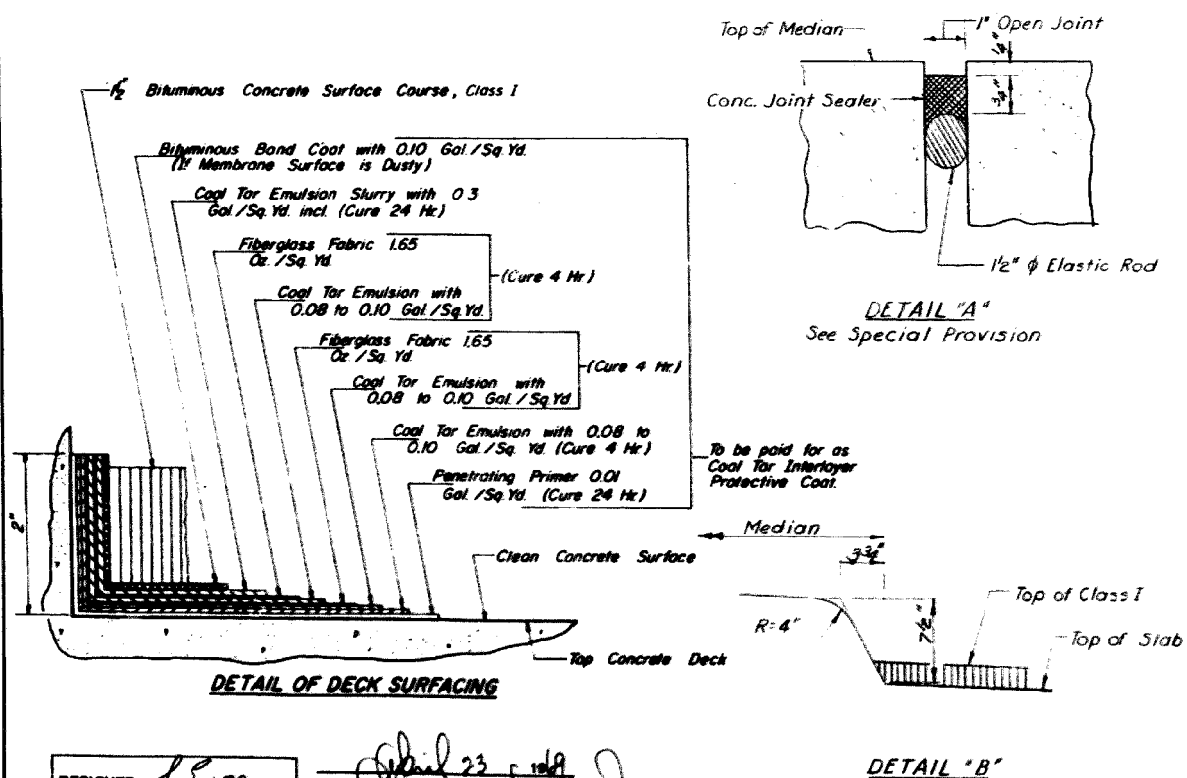
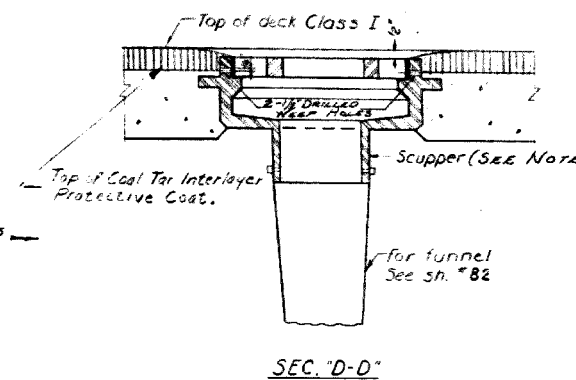
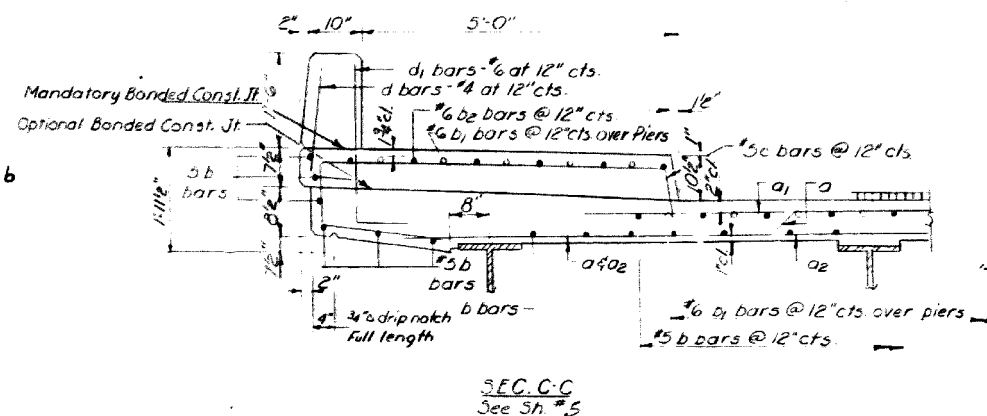
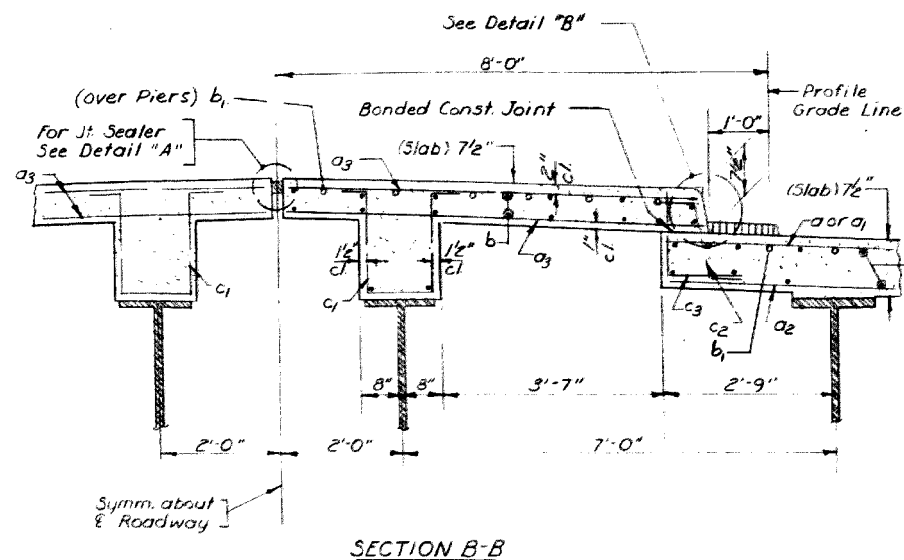
EXAMINED: [Signature]
PASSED: [Signature]
DATE: April 23, 1968

REVISIONS	
1	[Signature]
2	[Signature]
3	[Signature]
4	[Signature]
5	[Signature]

WELLOW ROAD BRIDGE OVER CH. ST. P. & P. R.
COOK COUNTY
SECTION 110-910.0 M.P.T.
REV. 6-9-69

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

SHEET NO. 19
SHEETS



DESIGNED *J. Enge*
CHECKED *S.E.L.*
DRAWN *Bev Robinson*
CHECKED *...*

EXAMINED *...*
PASSED *...*
APPROVED *...*



USER NAME = MS.USER	DESIGNED - LAB	REVISED -
PLOT SCALE = *SCALE*	DRAWN - LCR	REVISED -
PLOT DATE = 12/13/2018	CHECKED - E.J.L.	REVISED -
	DATE - 11/21/18	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS - 1969
FOR INFORMATION ONLY

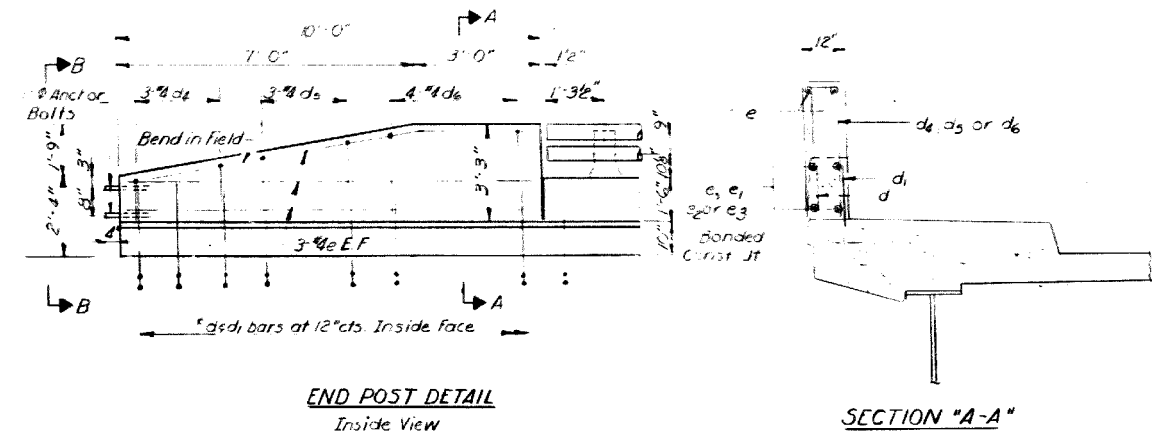
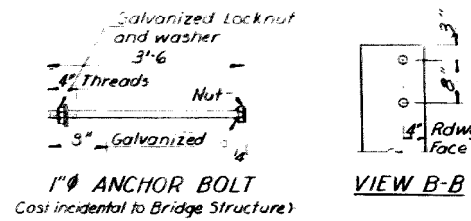
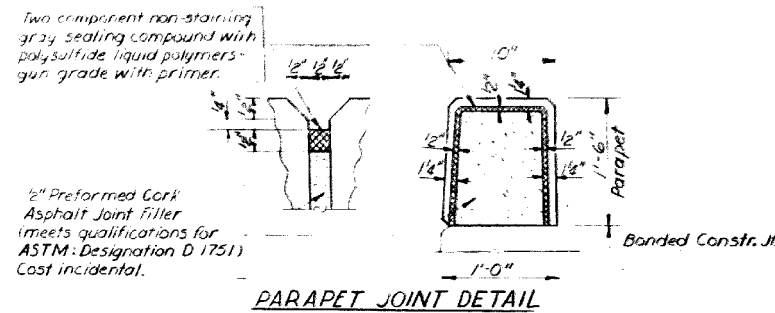
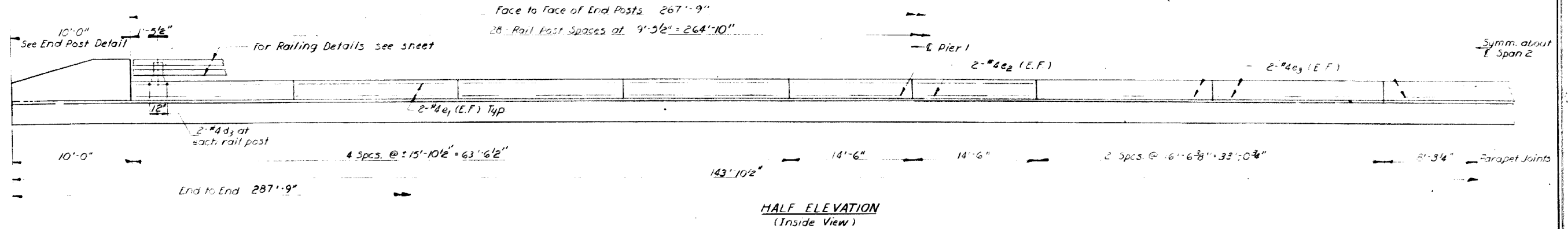
SCALE: SHEET 11 OF 24 SHEETS STA. 96+61.4 TO STA. 103+52.5

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	121
				CONTRACT NO. 60N83
ILLINOIS FED. AID PROJECT				

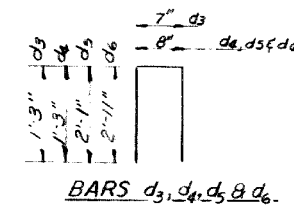
REV. 6-9-69

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

SHEET NO. 20
SHEETS



* d₃ d₁ bars are billed with superstructures



PARAPETS & END POSTS
BILL OF MATERIAL

Bar	No	Size	Length	Shape
d ₃	16	#4	3'-1"	□
d ₄	12	#4	3'-2"	□
d ₅	12	#4	4'-10"	□
d ₆	16	#4	6'-6"	□
e	24	#4	9'-9"	—
e ₁	24	#4	15'-7"	—
e ₂	32	#4	14'-3"	—
e ₃	40	#4	16'-3"	—

Reinforcement Bars Lbs 1930
Class X Concrete Cu Yds 31.2

DESIGNED	J. Enger
CHECKED	[Signature]
DRAWN	Bev Robinson
CHECKED	[Signature]

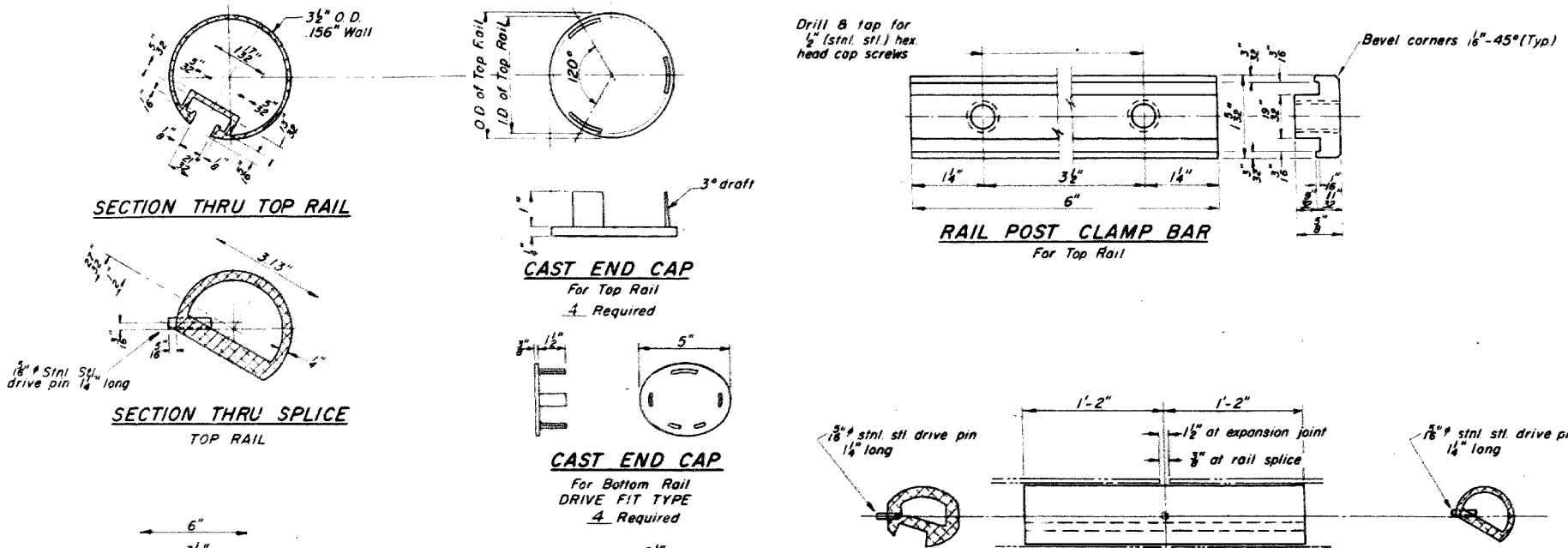
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APPROVED	[Signature]

DATE	NO	REVISIONS	DESCRIPTION

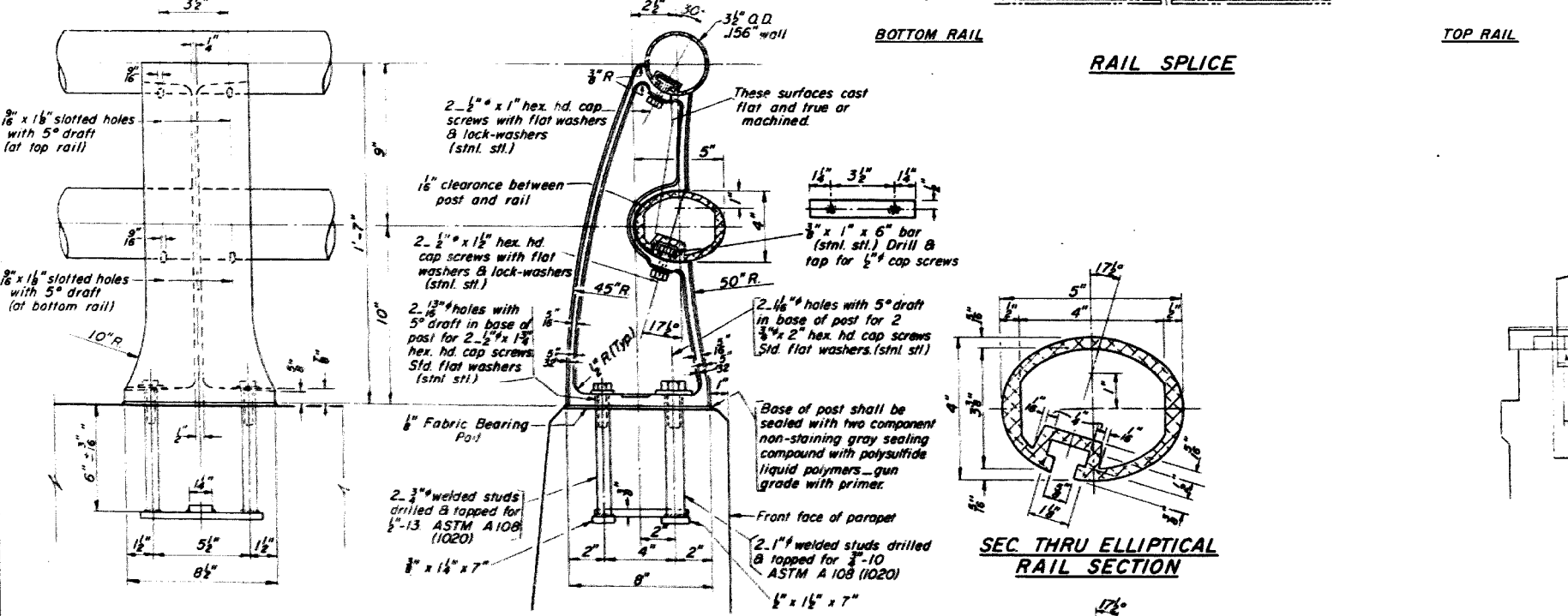
PARAPET & END POST DETAILS

COOK COUNTY

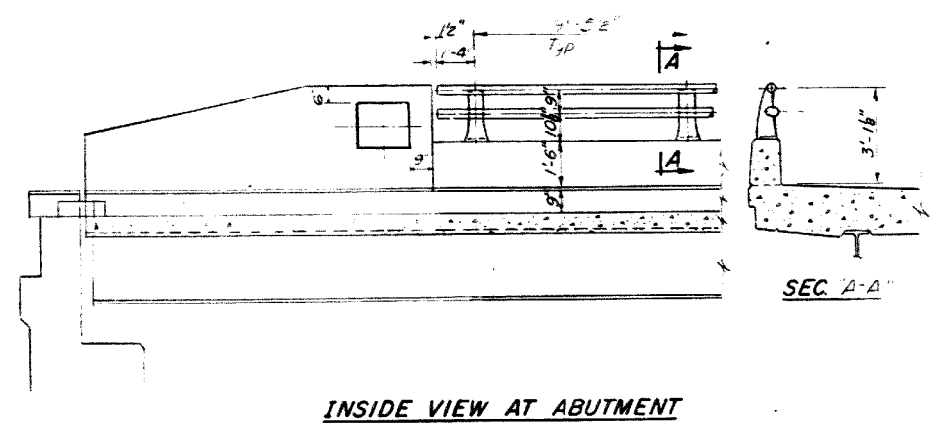
ILLINOIS FED. AID PROJECT



NOTES:
 All Posts shall be normal to parapet
 All Aluminum Alloy Extruded Rail shall be supplied in modular lengths of 30 feet, except at the end of bridge or over open joints in bridge deck where the rail shall be attached to a minimum of 2 posts. If the rail is on a horizontal curve of 2300 foot radius or less, the modular lengths may be reduced but shall be attached to a minimum of 2 posts.
 All joints in rail shall be spliced per detail.
 Provide 1-1/8" and 2-1/8" Aluminum Shims for 25% of the Posts. Rail elements shall be parallel to grade - high spots shall be ground and low spots shimmed.
 Railing shall be in accordance with Section 508 of the Standard Specifications, except as noted, and shall be paid for at the contract unit price per lineal foot for ALUMINUM RAILING, TYPE L.
 The Name Plates on the existing superstructure are to be carefully removed, cleaned, and the tags on the Name Plates are to be protected during this process. Cost of the cleaning, adding new tags, if necessary, and resetting these Name Plates will be at Contract unit price each for RE-LOCATION OF EXISTING NAME PLATES.



Place Old Name R#1 on N-W End Post (As shown)
 Place Old Name R#2 on S-W End Post (Opp name)
 Place New Name R#3 on N-E End Post (Opp hand)
 For Details of Name R#3 see Shts. No 1 & 20



BILL of MATERIALS

Item	Unit	Quantity
ALUMINUM RAILING, TYPE L	Lin R.	5.35

**TYPE L
ALUMINUM RAILING**
 WILLOW ROAD BRIDGE OVER ILL. ST. P. & O. R.R.
 COOK COUNTY
 SECT. ON 10-1420.01 MFT.

RAIL POST DETAILS

DESIGNED: S. Engey
 CHECKED: E. J. POLINSKI
 DRAWN: Wm M. Best

EXAMINED: June 23, 1968
 PASSED: W. E. Baumann
 APPROVED: [Signature]

R-20 2-8-67 5-20-68



USER NAME = MS.USER	DESIGNED - LAB	REVISED -
PLOT SCALE = *SCALE*	DRAWN - LCR	REVISED -
PLOT DATE = 12/13/2018	CHECKED - E.JL	REVISED -
	DATE - 11/21/18	REVISED -

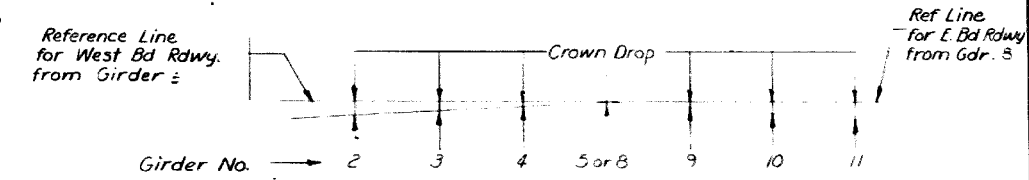
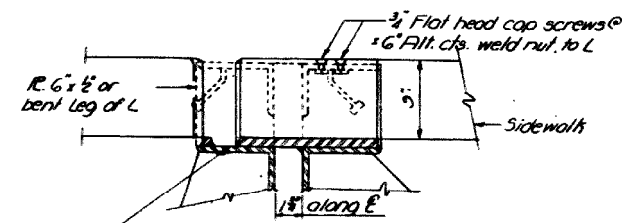
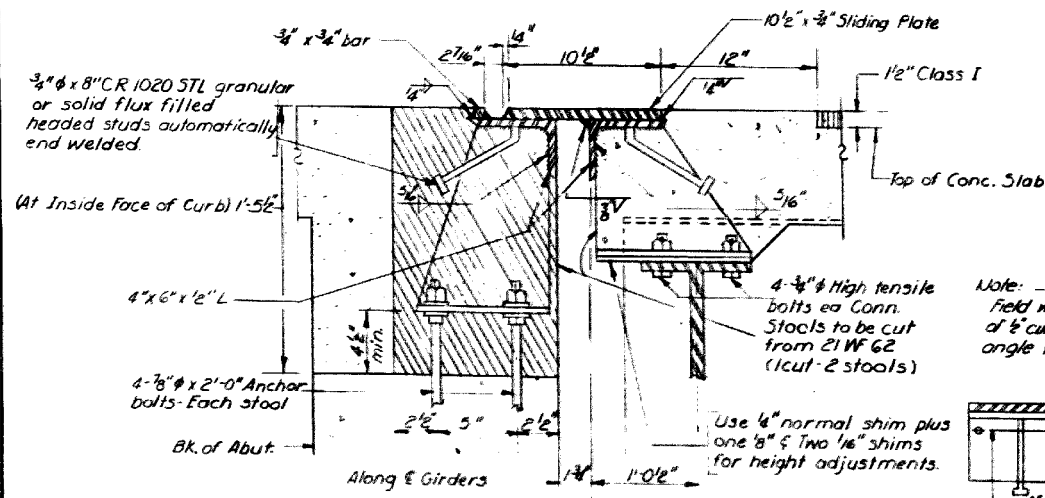
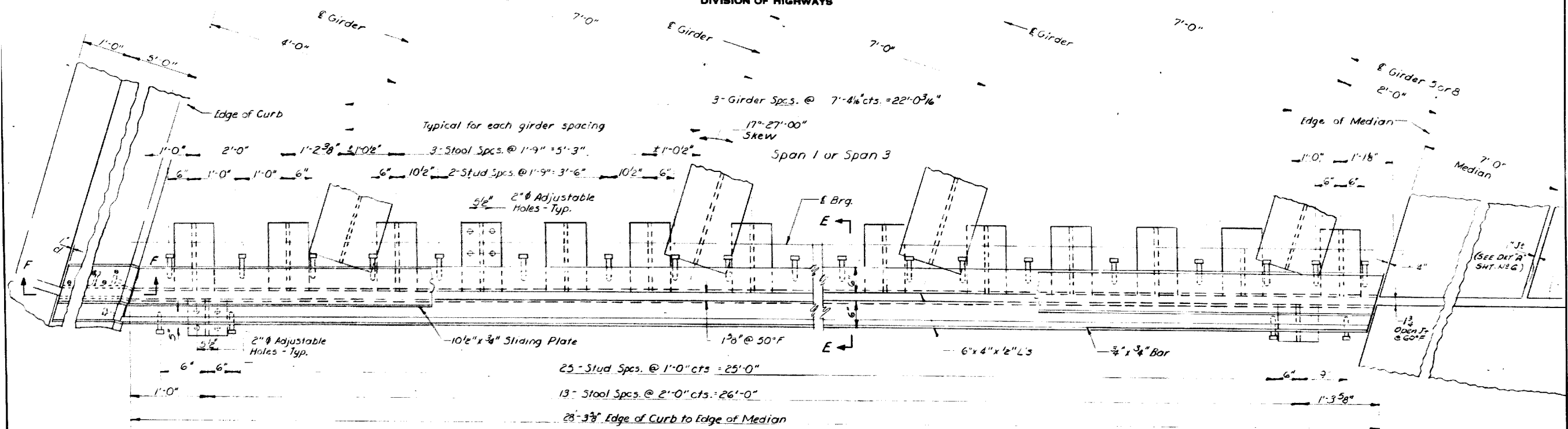
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS - 1969
FOR INFORMATION ONLY

SCALE: SHEET 13 OF 24 SHEETS STA. 96+61.4 TO STA. 103+52.5

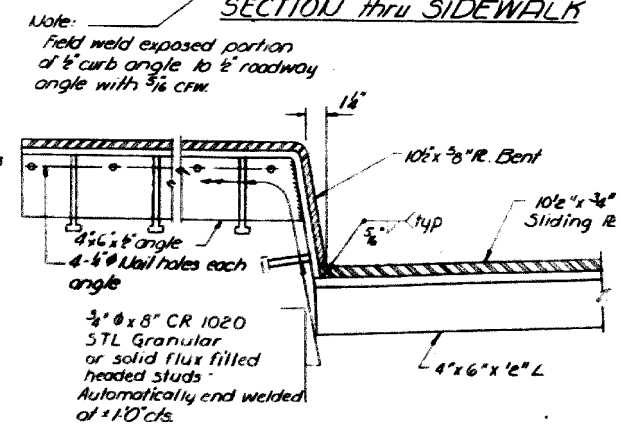
F.A.P. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	123
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS



	West Bd. Rdwy.			East Bd. Rdwy.		
Girder No.	2	3	4	9	10	11
West Abut.	4 1/16"	3 1/8"	1 3/16"	1 1/8"	2 1/8"	3 1/4"
East Abut.	3 1/4"	2 1/8"	1 1/8"	1 3/16"	3 1/8"	4 1/16"

TABLE OF CROWN DROP
See Key Sketch above
For Girder No's See Sheet 10



DESIGNED S. Enger
CHECKED J. H. Nelson
DRAWN Bev Robinson
CHECKED J. B. A.

EXAMINED April 23 1969
PASSED
APPROVED

EXPANSION DEVICE DETAILS
WILLOW ROAD BRIDGE OVER C.M. ST. & F.R.R.
COOK COUNTY
SECTION 11C-1920.01 V.F.T.

APR 25 1969



USER NAME = MS.USER	DESIGNED - LAB	REVISED -
PLOT SCALE = *SCALE*	DRAWN - LCR	REVISED -
PLOT DATE = 12/13/2018	CHECKED - E.JL	REVISED -
	DATE - 11/21/18	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

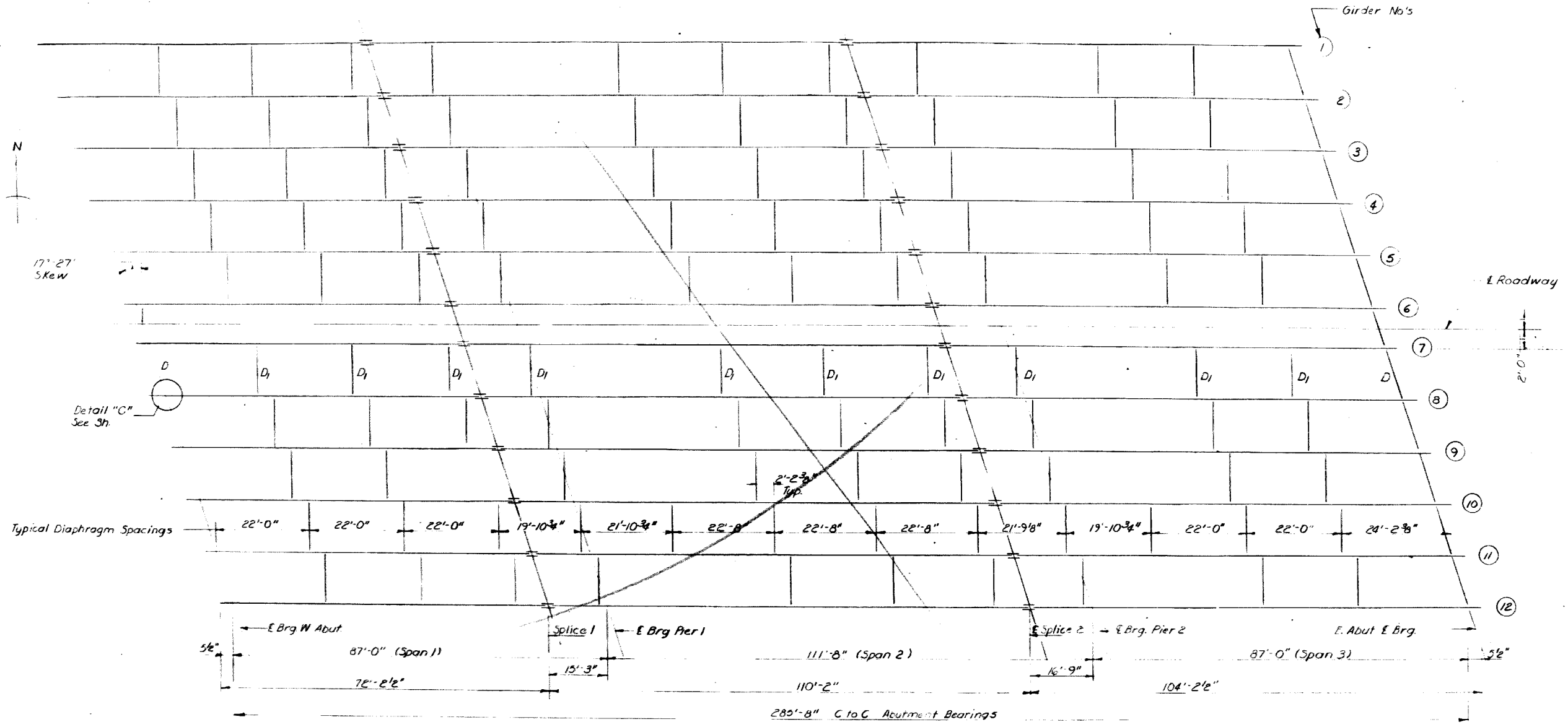
EXISTING BRIDGE PLANS - 1969
FOR INFORMATION ONLY

SCALE: SHEET 14 OF 24 SHEETS STA. 96+61.4 TO STA. 103+52.5

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	124
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

SHEET NO 23
SHEETS



PLAN

DESIGNED: *S. Enger*
 CHECKED: *J. B. [unclear]*
 DRAWN: *Bev Robinson*
 CHECKED: *DA*

EXAMINED: *[Signature]*
 PASSED: *[Signature]*
 APPROVED: *[Signature]*

April 23, 2018

LAYOUT
STRUCTURAL STEEL
WILLOW ROAD BRIDGE OVER C.M. ST. P. & P.R.
COOK COUNTY
SECTION 110-1920-01 M.F.T.



USER NAME = MS.USER	DESIGNED - LAB	REVISED -
PLOT SCALE = *SCALE*	DRAWN - LCR	REVISED -
PLOT DATE = 12/13/2018	CHECKED - E.JL	REVISED -
	DATE - 11/21/18	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

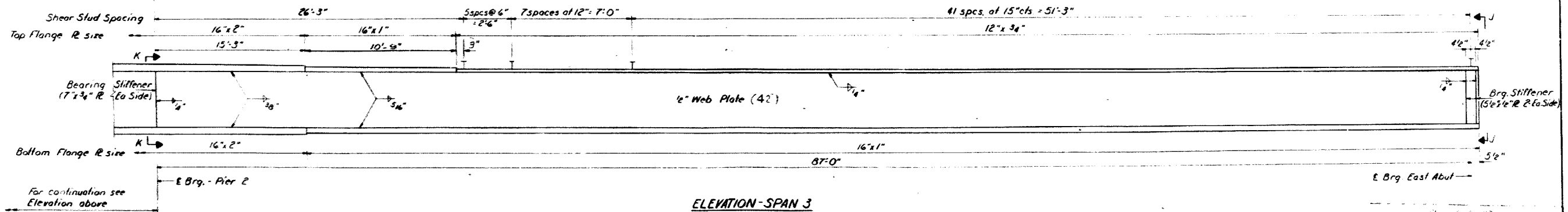
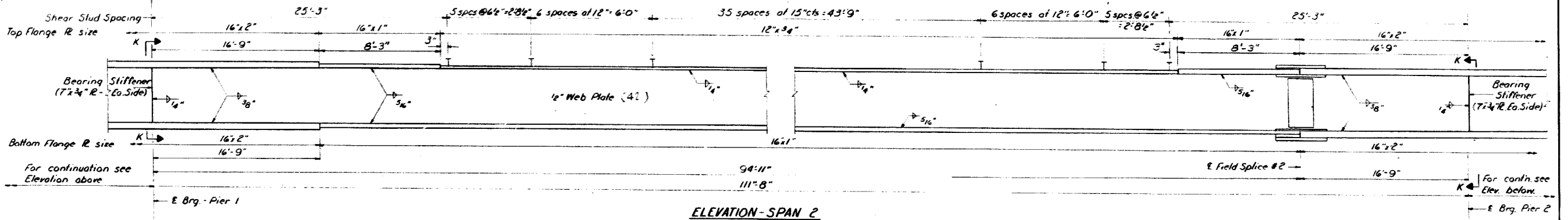
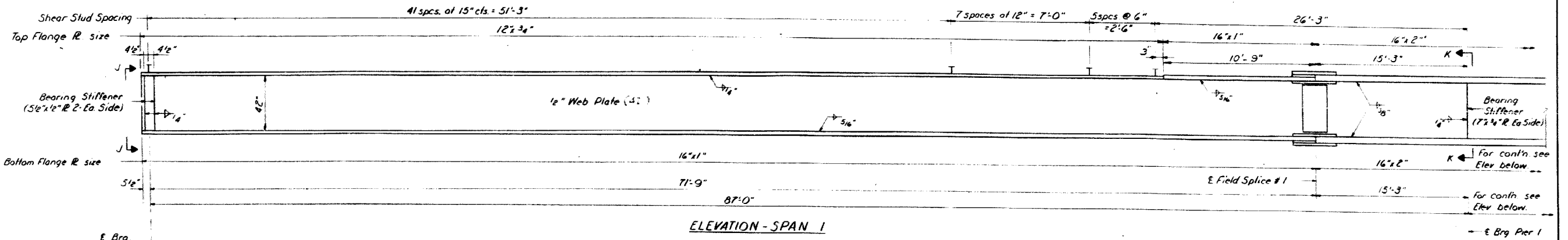
EXISTING BRIDGE PLANS - 1969
FOR INFORMATION ONLY

SCALE: SHEET 15 OF 24 SHEETS STA. 96+61.4 TO STA. 103+52.5

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	125
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

SHEET NO. 24
SHEETS



Note:
Work this sheet with sheet #12.

DESIGNED	S. Enger	EXAMINED	[Signature]
CHECKED	[Signature]	PASSED	[Signature]
DRAWN	S.E. Lindsey	APPROVED	[Signature]
CHECKED	[Signature]		

GIRDER DETAILS
WILLOW ROAD BRIDGE OVER C.M. ST. & P.R.R.
COOK COUNTY
SECTION 110 - 920. C.I.A.P.T.



USER NAME = MS.USER	DESIGNED - LAB	REVISED -
PLOT SCALE = #SCALE#	DRAWN - LCR	REVISED -
PLOT DATE = 12/13/2018	CHECKED - E.JL	REVISED -
	DATE - 11/21/18	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

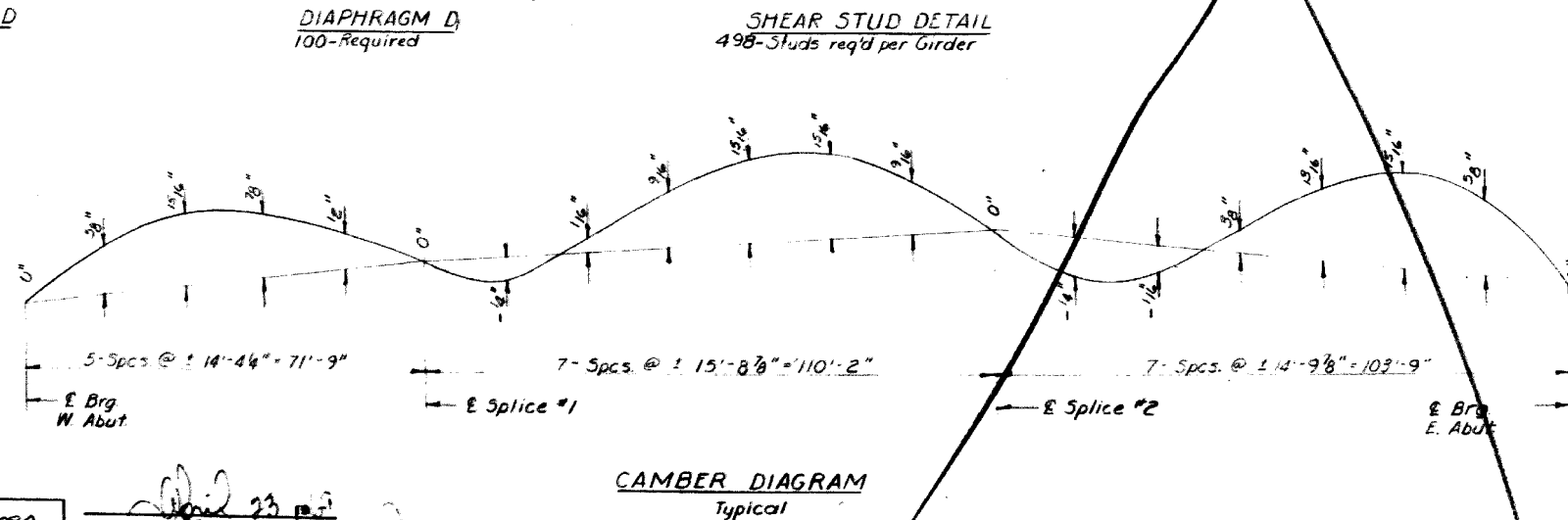
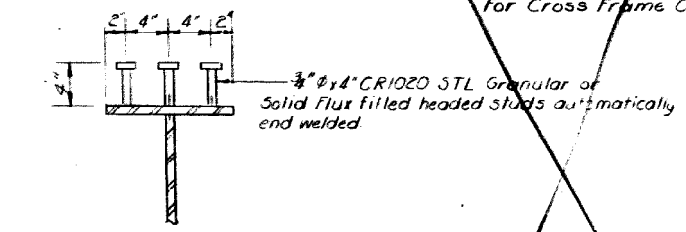
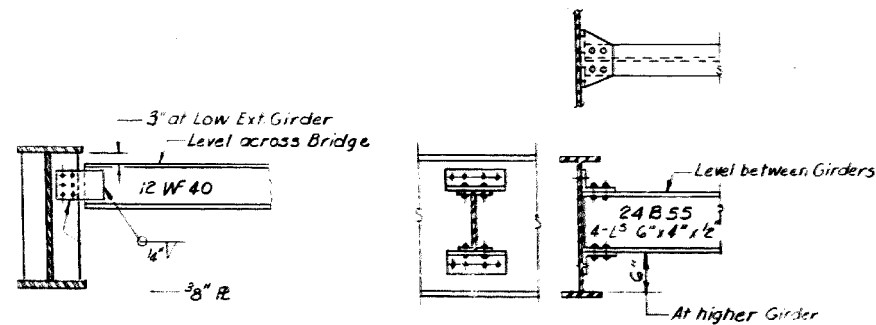
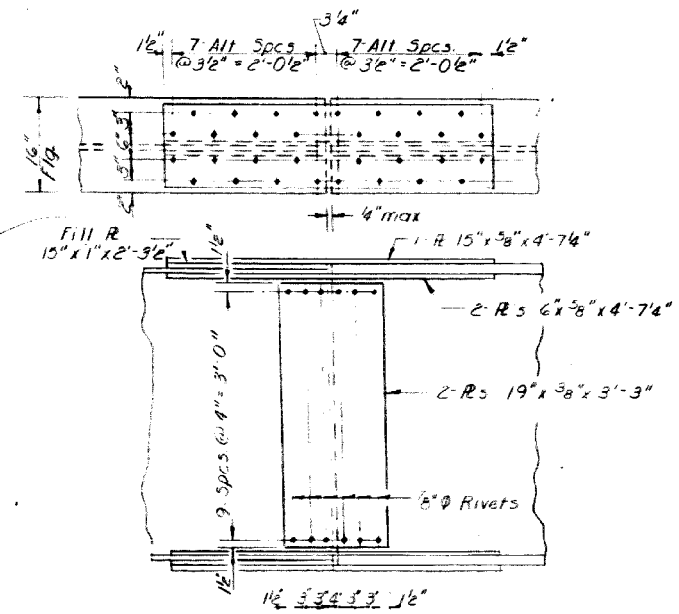
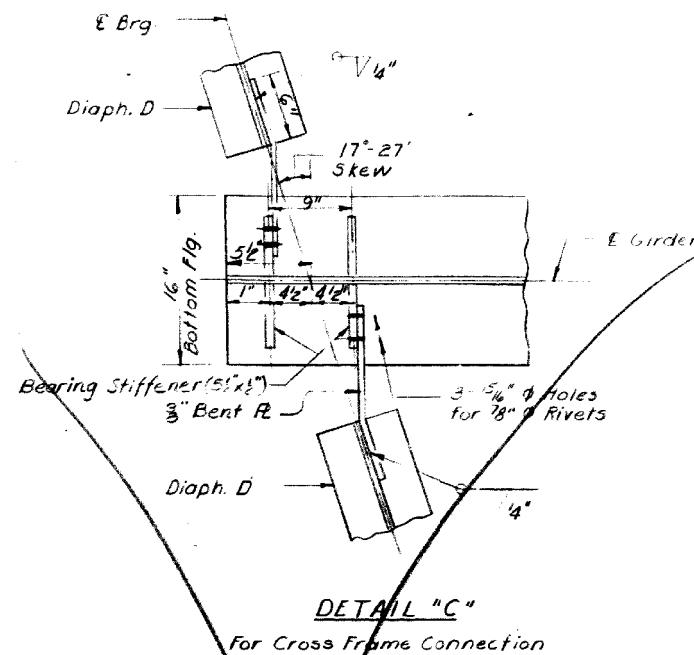
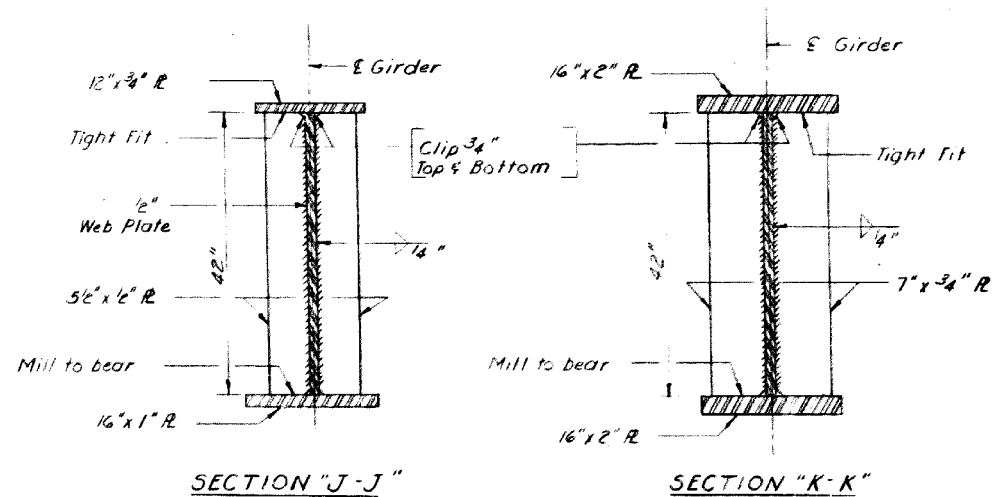
EXISTING BRIDGE PLANS - 1969
FOR INFORMATION ONLY

SCALE: SHEET 16 OF 24 SHEETS STA. 96+61.4 TO STA. 103+52.5

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	126
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

SHEET NO. 25
SHEETS



STRESS TABLE
TABLE OF MOMENTS AND REACTIONS (INTERIOR GIRDERS)

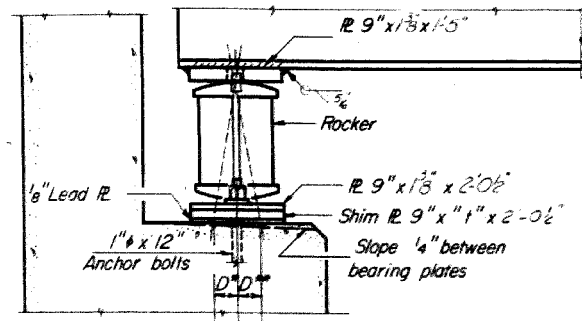
	Moments - Ft. Kips		Reactions - Kips	
	0.4 Sp. 1	0.5 Sp. 2	Abut	Pier
D.L.	389.8	1048.7	26.7	100.6
S.D.L.	223.4	420.3	13.9	47.6
L.L.	672.3	641.2	39.9	64.2
Imp.	158.0	143.0	9.4	14.3
Total	1443.5	2,253.2	89.9	226.7

Midspan I_s = 14097 in⁴, S_TS = 562.8 in³, S_BS = 753.7 in³
I_c = 34440 in⁴, S_TC = 43370 in³, S_BC = 10308 in³
Piers : I = 34,063 in⁴, S_TB = 1481.0 in³

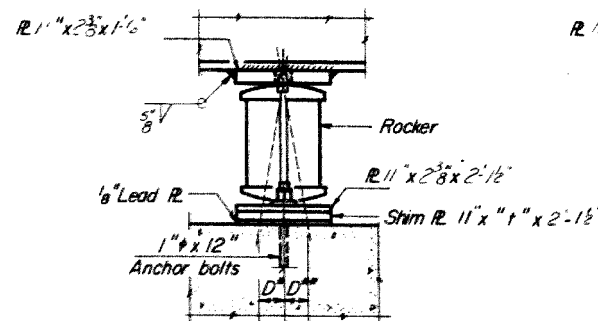
DESIGNED: S. Eger
CHECKED: [Signature]
DRAWN: Bev Robinson
CHECKED: [Signature]

EXAMINED: [Signature]
PASSED: [Signature]

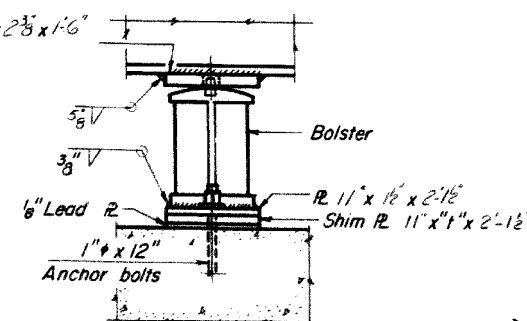
GIRDER DETAILS
MILWAUKEE ROAD BRIDGE OVER ILL. ST. P. & E. R.R.
COOK COUNTY
SECT. 04 110-920 01 M.F.



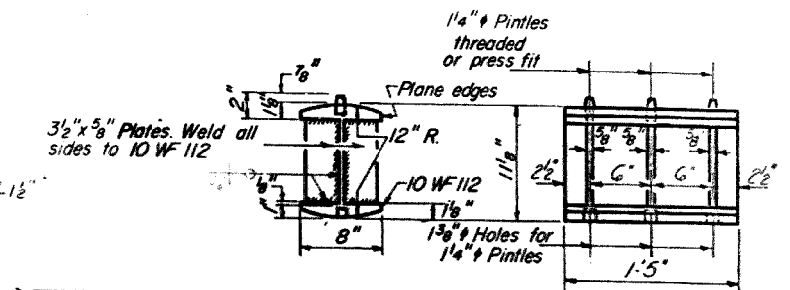
SECTION



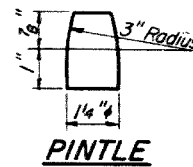
ELEVATION



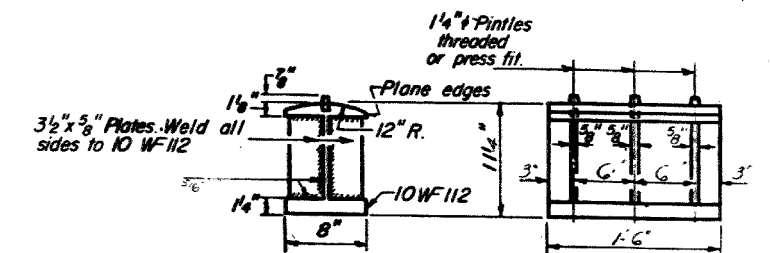
ELEVATION



ROCKER
EAST & WEST ABUTS.

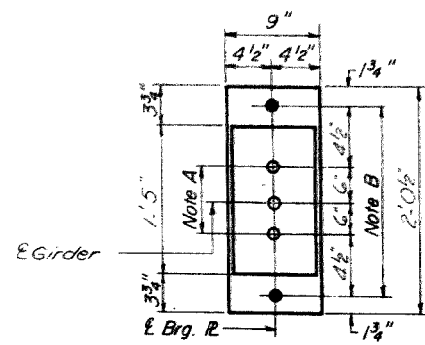


PINTLE

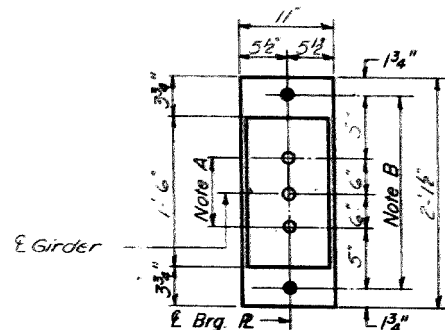


BOLSTER
PIER 2

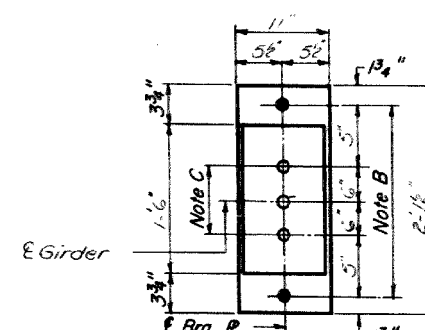
NOTE C
1 3/8" Holes 1" deep in top R.
only for 1 1/4" purlins.



PLAN
AT ABUTMENT



PLAN
AT PIER 1



PLAN
AT PIER 2

NOTE A
1 3/8" Holes - 1" deep in top R.
for purlins Thread or press fit
purlins into bottom R.

NOTE B
1 1/2" Holes for 1" anchor bolts.
2 1/2" x 2 1/2" x 1/8" R. Washers
under nut.

NOTES ON SETTING OF ANCHOR BOLTS AT EXP. BRGS.

- a) D* (Side of brg. away from fixed brg.)
D* = 1/8" per each 100' of expansion for every 15° fall below the normal temp. of 50°F
- D** (Side of brg. toward fixed brg.)
D** = 1/8" per each 100' of expansion for every 15° rise above the normal temp. of 50°F

- b) After beams have been erected and dimensions D* or D** determined, holes shall be drilled and anchor bolts shall be grouted in place. All fixed anchor bolts may be built into the masonry.

BEARING ASSEMBLY DETAILS

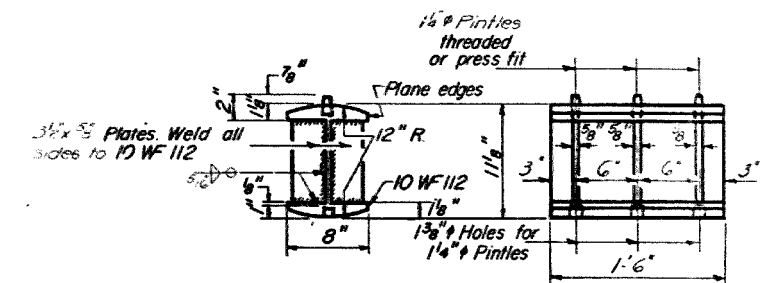
TABLE OF "t" DIMENSIONS

Girder	W. Abut.	Pier 1	Pier 2	E. Abut.
5 & 6	1/2"	0"	1/4"	0"
7 & 8	0"	1/4"	0"	1/2"
Others		0"		

* TOP OF WEB ELEVATIONS *

Girder	1	2	3	4	5	6	7	8	9	10	11	12
E Brg. West Abut.	667.45	667.61	667.74	667.87	668.00	668.00	668.05	668.05	667.96	667.87	667.78	667.66
E Splice 1	667.88	668.03	668.15	668.27	668.39	668.39	668.42	668.42	668.32	668.22	668.12	667.99
E Brg. Pier 1	667.83	668.00	668.16	668.27	668.39	668.39	668.43	668.41	668.31	668.21	668.11	667.98
E Splice 2	668.08	668.23	668.34	668.44	668.54	668.54	668.53	668.53	668.42	668.30	668.18	668.04
E Brg. Pier 2	668.01	668.14	668.24	668.34	668.44	668.44	668.42	668.42	668.31	668.19	668.07	667.92
E Brg. East Abut.	667.66	667.78	667.87	667.96	668.05	668.05	668.00	668.00	667.87	667.74	667.61	667.45

* For fabrication only.



ROCKER
PIER 1

NOTE:
See Sheet N25 for Structural Steel weight of Bearing Assemblies shown on this sheet.

BEARING DETAILS
WILLOW ROAD BRIDGE OVER CUM ST. P. & F. R.
COOK COUNTY
SECTION Q-1422.01 V. 1.2

DESIGNED: J. Enger
CHECKED: J. Downing
DRAWN: J. Downing
APPROVED: J. Downing

I-2-B 1-1-65

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

SHEET NO. 27
SHEETS

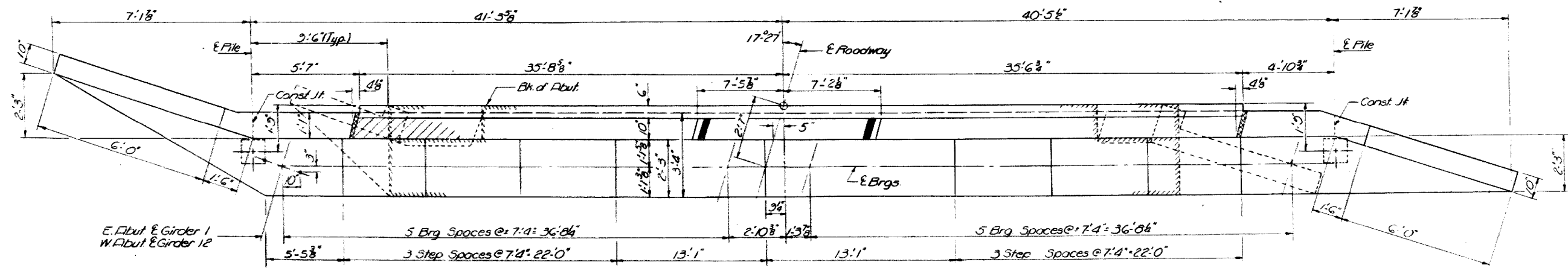
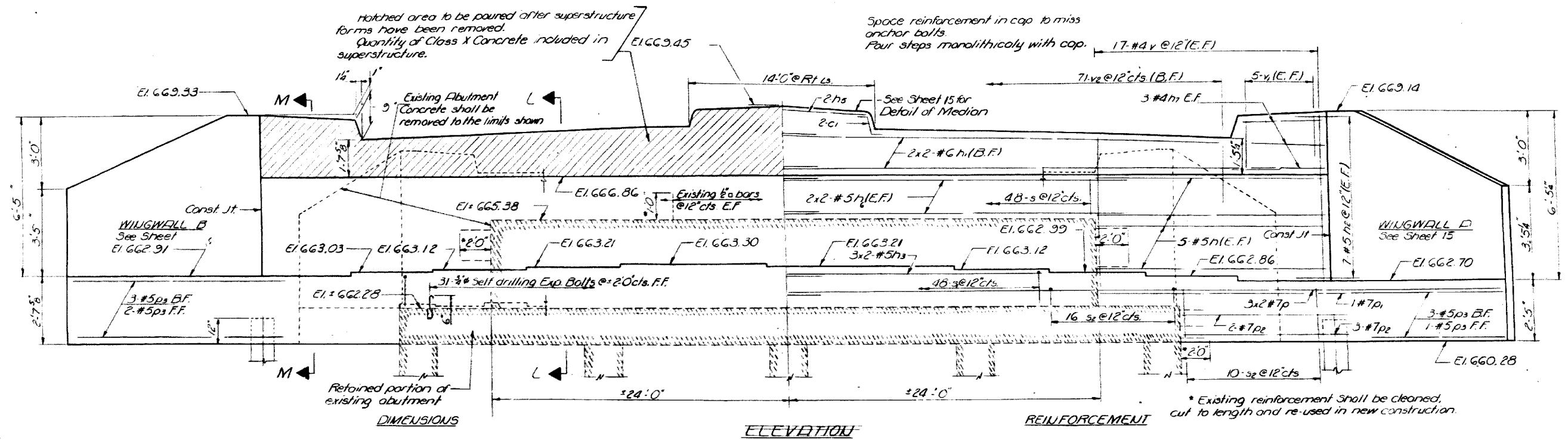


TABLE OF PILE LENGTHS

	EAST ABUTMENT	WEST ABUTMENT
Projecting Length	32 Ft	28 Ft
Supporting Length	28 Ft	32 Ft
Total Estimated Length	60 Ft	60 Ft

PILE DATA

Note: Work this sheet with Sheet # 15

NO. E: Holes for Metal Shell cast-in-place Concrete Piles including also the Test Pile shall be precored. For the West Abutment the holes shall be precored to Elev. 632.28±. For the East Abutment precore to El. 628.28±. See Section 513.09(e) of the State Standard Specifications.

PILE DATA
Type: See Sheet No 19
Capacity: 35 Tons
Est Length: See Table
No Required: 3 Piles plus one test pile

NO. E: Holes for Metal Shell cast-in-place Concrete Piles including also the Test Pile shall be precored. For the West Abutment the holes shall be precored to Elev. 632.28±. For the East Abutment precore to El. 628.28±. See Section 513.09(e) of the State Standard Specifications.

EAST & WEST ABUTMENTS
WILLOW ROAD BRIDGE OVER CN ST. F. & P. R.
COOK COUNTY
SECTION 110-1420 01 M.F.

DESIGNED: J. Engey
CHECKED: J. Downing
DRAWN: J. Downing
CHECKED: J. Downing

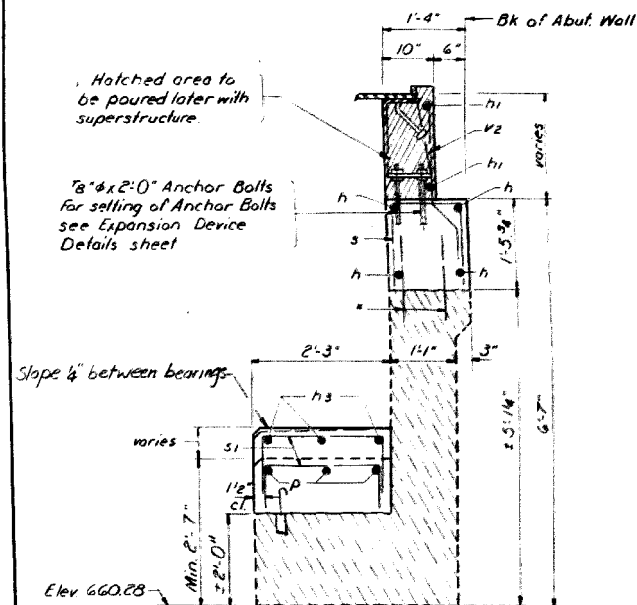
EXAMINED: [Signature]
PASSED: [Signature]
APPROVED: [Signature]

REVISIONS

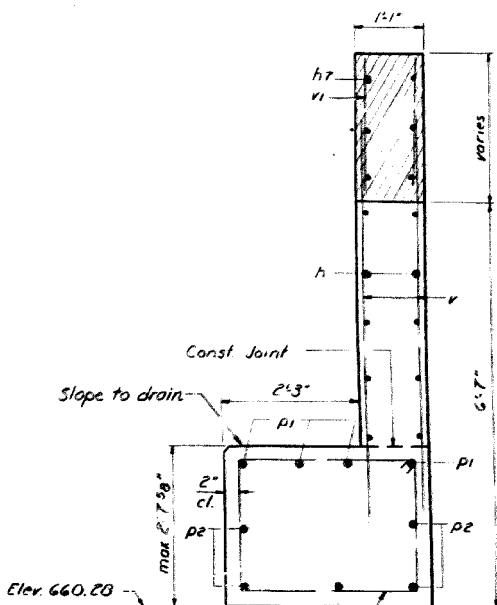
NO.	DESCRIPTION

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

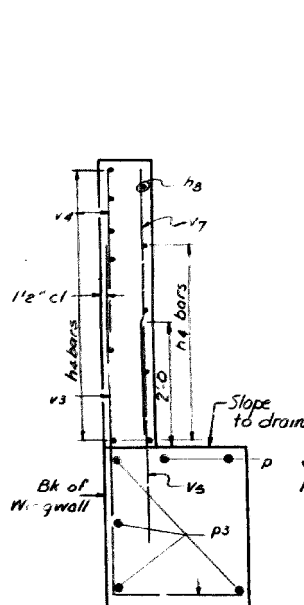
SHEET NO. 28
SHEETS



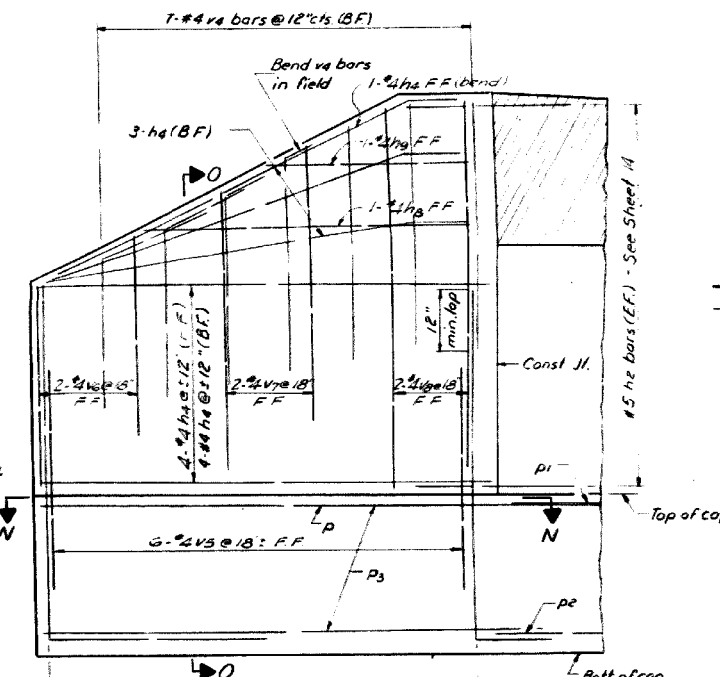
SECTION "L-L"



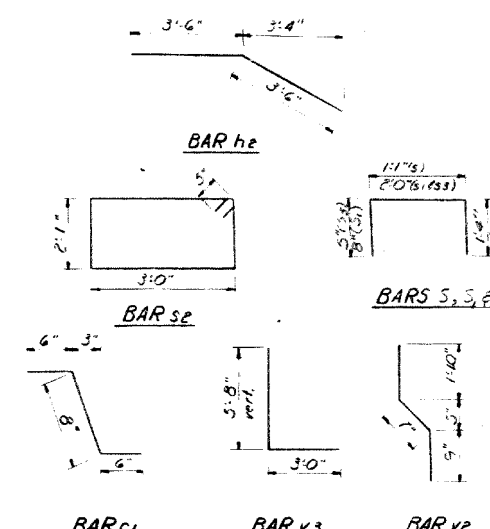
SECTION "M-M"



SECTION "O-O"

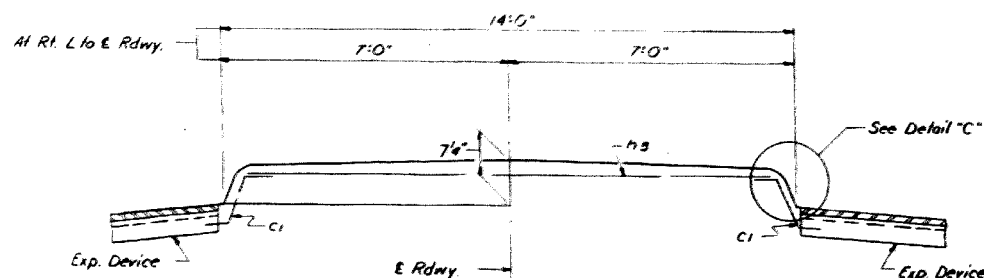


WING WALL ELEVATION

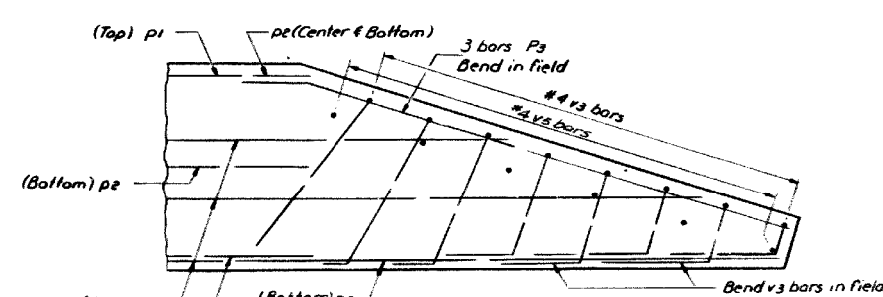


TWO ABUTMENTS
BILL OF MATERIAL

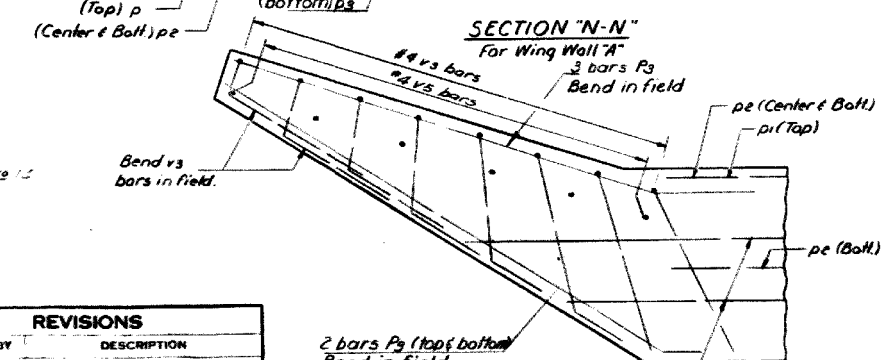
Bar	No.	Size	Length	Shape
ci	8	#4	1'-8"	
h	40	#5	10'-6"	
hi	8	#6	38'-0"	
he	56	#5	7'-0"	
h3	12	#5	25'-3"	
ha	48	#4	7'-3"	
h5	4	#4	13'-0"	
h6	16	#5	27'-0"	
h7	24	#4	4'-0"	
p	12	#7	45'-6"	
pi	4	#7	16'-0"	
pe	20	#7	9'-0"	
ps	18	#5	9'-0"	
s	96	#4	3'-9"	
si	96	#4	3'-4"	
se	40	#4	11'-0"	
ss	32	#4	2'-10"	
v	136	#4	5'-6"	
vi	40	#4	1'-9"	
ve	142	#4	3'-2"	
v3	32	#4	8'-8"	
v4	28	#4	4'-0"	
v5	24	#4	3'-6"	
v6	8	#4	3'-3"	
v7	8	#4	4'-6"	
v8	8	#4	6'-0"	
h8	4	#4	5'-3"	
h9	4	#4	3'-2"	
Test Pile	Each		1	
Class X Concrete	Cu Yds		49.9	
Reinforcement Bars	Lbs		6,510	
Concrete Removal	Cu Yds		19	
Forming Metal Pile Shells	Lin Ft		180	
Driving and Piling Shells	Lin Ft		180	
Exposure on Piles	Each		62	



MEDIAN ELEVATION



SECTION "N-N"
For Wing Wall "A"

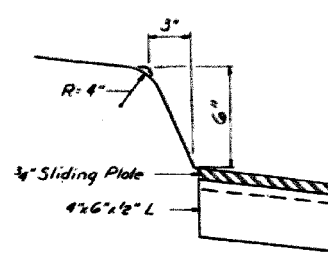


SECTION "N-N"
For Wing Wall "B"

DESIGNED: S. Enger
CHECKED: [Signature]
DRAWN: S.E. Lindsey
CHECKED: [Signature]

EXAMINED: [Signature]
PASSED: [Signature]
APPROVED: [Signature]

April 23 1969



DETAIL "C"

REVISIONS		
DATE	BY	DESCRIPTION
6-9-69	F.S.	Reinforcement in front face of wing walls changed from concrete to metal sheet piling

ABUTMENT DETAILS
WILLOW ROAD BRIDGE OVER C.V. ST. & P.R.R.
COOK COUNTY
SECTION 10-1970.01 A-1



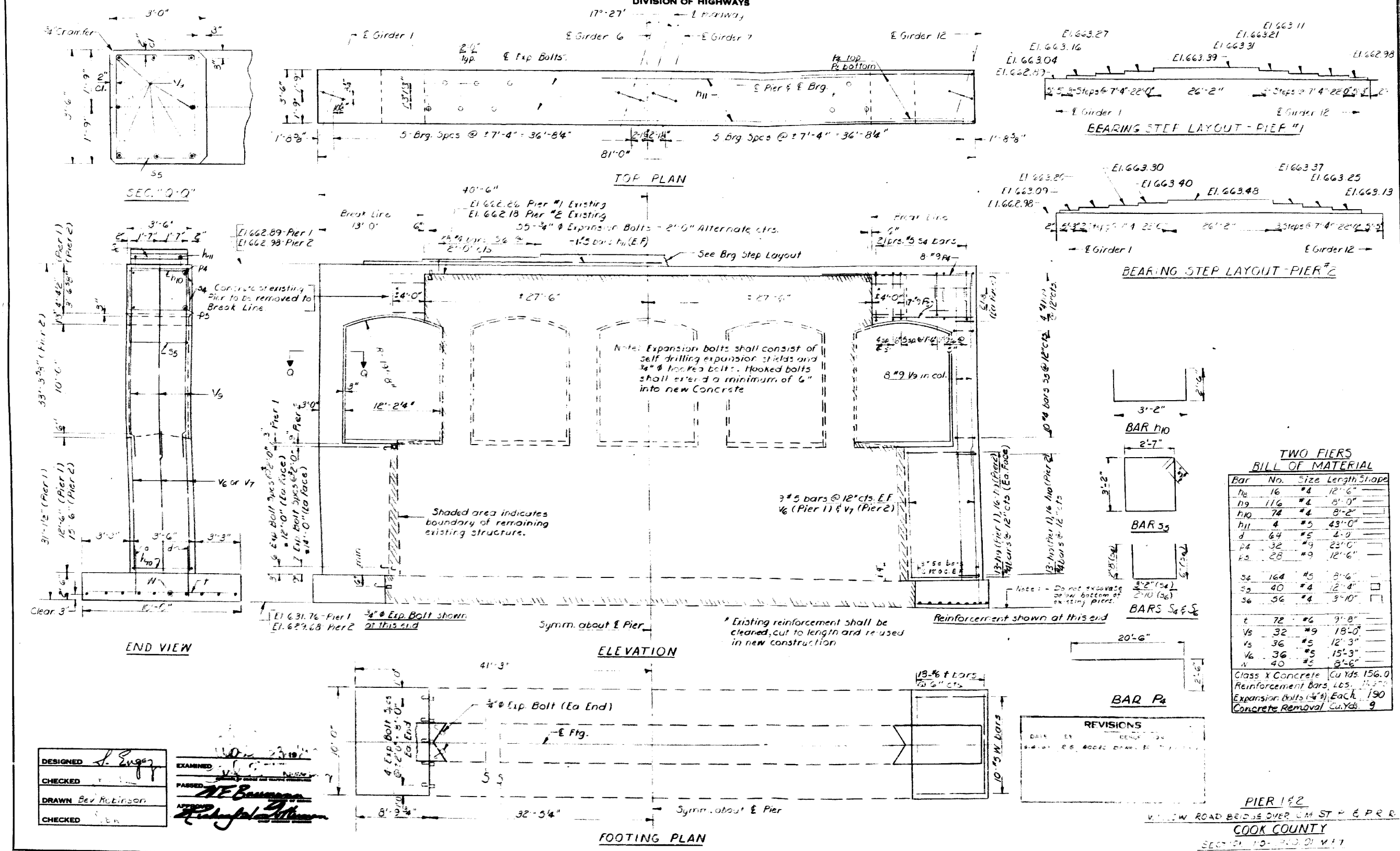
USER NAME = MS-USER	DESIGNED - LAB	REVISED -
PLOT SCALE = #SCALE#	DRAWN - LCR	REVISED -
PLOT DATE = 12/13/2018	CHECKED - E.J.L.	REVISED -
	DATE - 11/21/18	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS - 1969
FOR INFORMATION ONLY
SCALE: SHEET 20 OF 24 SHEETS STA. 96+61.4 TO STA. 103+52.5

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	130
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS



**TWO PIERS
BILL OF MATERIAL**

Bar No.	Size	Length	Shape
h8	#4	12'-6"	
h9	#4	8'-0"	
h10	#4	8'-2"	
h11	#5	43'-0"	
h12	#5	2'-0"	
h13	#9	23'-0"	
h14	#9	12'-6"	
h15	#5	8'-6"	
h16	#5	18'-0"	
h17	#5	12'-3"	
h18	#5	15'-3"	
h19	#5	5'-6"	

Class X Concrete Cu.Yds. 156.0
Reinforcement Bars, L.S. 11,570
Expansion Bolts (#4) Each 190
Concrete Removal Cu.Yds. 9

DESIGNED: J. Egan
CHECKED: [Signature]
DRAWN: Bev Robinson
CHECKED: [Signature]

EXAMINED: [Signature]
PASSED: [Signature]
APPROVED: [Signature]

REVISIONS

DATE	BY	REASON
11-21-18	RE	ADD CD DRAWING

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

SHEET NO 30
SHEETS

Boring No.	Station	Offset	Elevation	N	Q _u /ft	W	Surface Water El.	Groundwater El. at Completion	After Hours	Elevation	N	Q _u /ft	W
1	2	114'	632.4	0									
			627.9	7	1.1	22							
			625.4	11	2.6	20							
			622.9	27	5.3	17							
				18	3.1	18							
				15	2.1	19							
				7	2.0	18							
			612.9	11	2.1	19							
				8	1.7	19							
				9	1.9	18							
				7	1.3	19							
				10	1.6	18							
				17	1.3	19							
				11	1.3	18							
				10	1.3	18							
			602.9	12	1.7	17							
			590.4	11	1.7	16							
			587.9	11	1.7	16							
				11	1.7	16							

Boring No.	Station	Offset	Elevation	N	Q _u /ft	W	Surface Water El.	Groundwater El. at Completion	After Hours	Elevation	N	Q _u /ft	W
2	2	85.2'	637.2	0									
			636.2	9	1.8	9							
				13	3.3	18							
				15	3.9	18							
			630.5	19	4.1	17							
			628.0	19	3.2	15							
			625.5	18	3.3	16							
				17	3.0	15							
			620.1	8	1.3	20							
				8	1.2	20							
			615.5	5	1.5	20							
			612.5	3	1.2	20							
				8	1.1	19							
				6	1.0	19							
				8	1.3	19							
				6	1.1	20							
				8	1.3	18							
			595.0	12	2.4	17							
				1	1.6	17							
			591.7										

DESIGNED *L. Enger*
CHECKED *[Signature]*
DRAWN *[Signature]*
CHECKED *[Signature]*

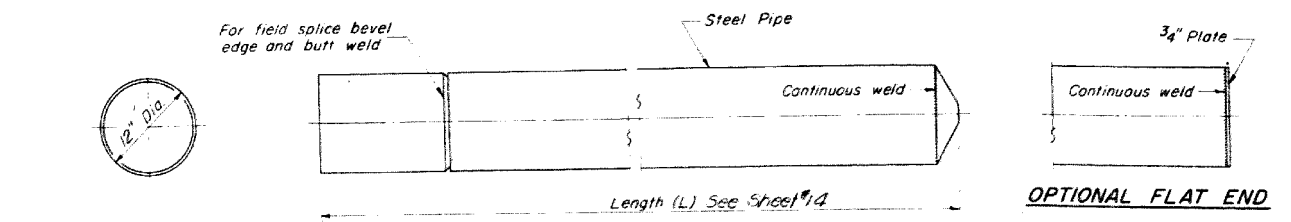
EXAMINED *[Signature]*
PASSED *[Signature]*
APPROVED *[Signature]*

N-Standard Penetration Test-
Blows per foot to drive 2"
O.D. Split Spoon Sampler 12" with
140 # hammer falling 30".

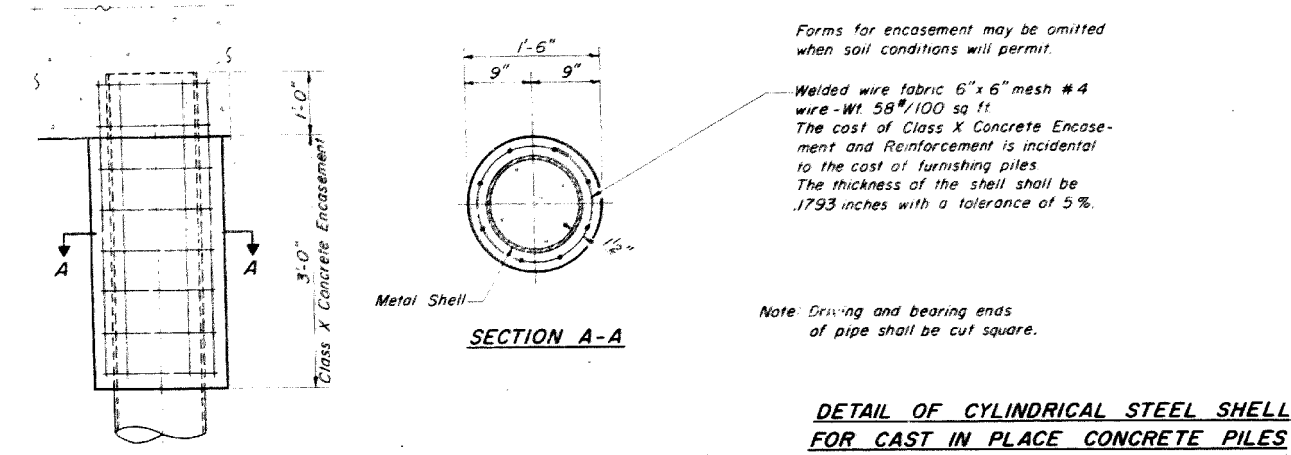
Q_u-Unconfined Compressive
Strength - 1/51
w-Water Content - percentage
of oven dry weight-%.

Type failure
B-Bulge Failure
S-Shear Failure
E-Estimated Value
P-Penetrometer

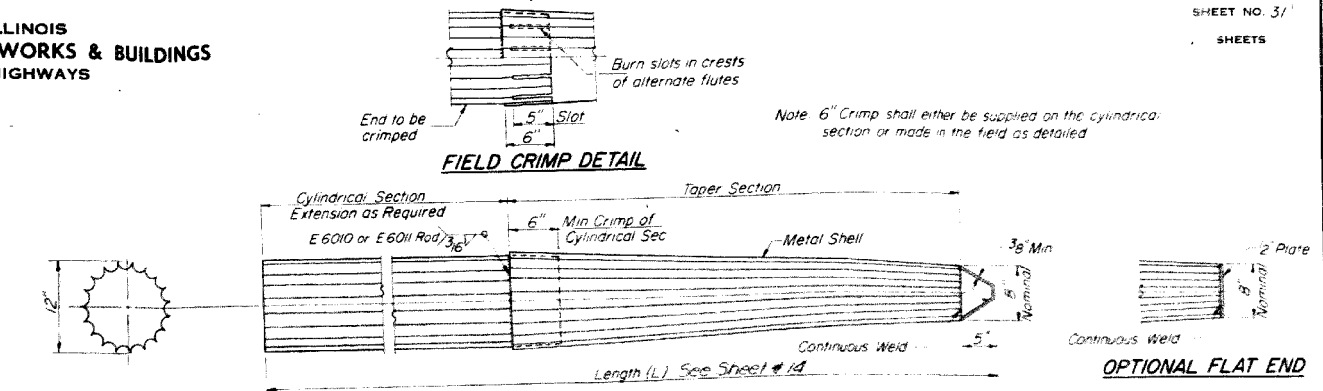
BORING
WILLOW ROAD BRIDGE OVER C.A. ST. & PARK
COOK COUNTY
SECTION 10-140 01 11 1



OPTIONAL FLAT END

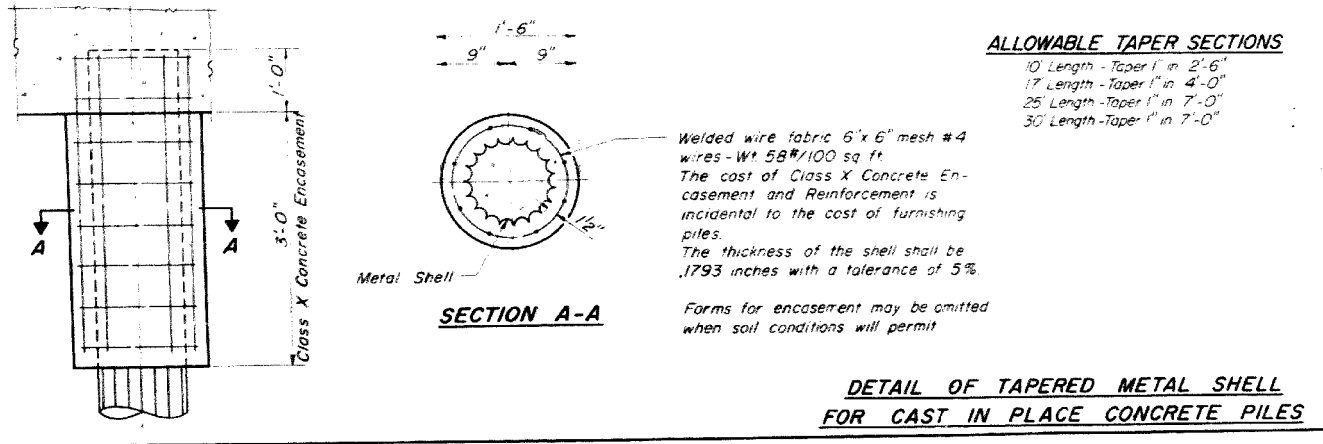


DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES

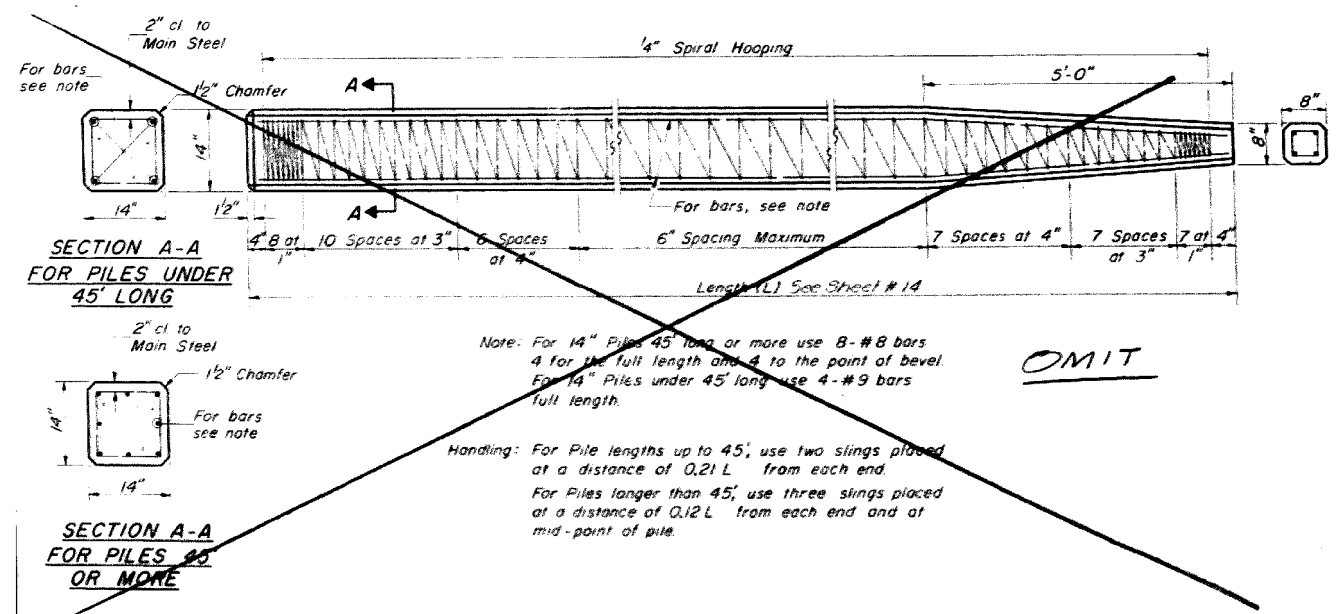


ALLOWABLE TAPER SECTIONS

- 10' Length - Taper 1" in 2'-6"
- 17' Length - Taper 1" in 4'-0"
- 25' Length - Taper 1" in 7'-0"
- 30' Length - Taper 1" in 7'-0"



DETAIL OF TAPERED METAL SHELL FOR CAST IN PLACE CONCRETE PILES

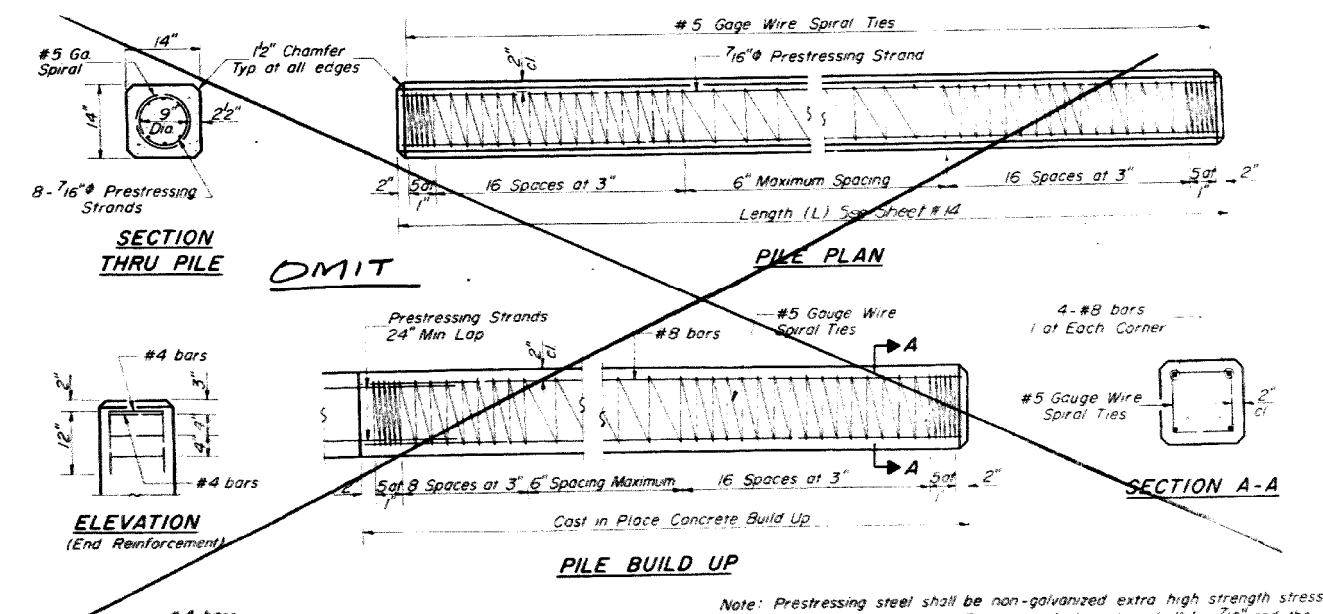


OMIT

SECTION A-A FOR PILES 65 OR MORE

DESIGNED	18
CHECKED	
DRAWN	
CHECKED	
EXAMINED	<i>[Signature]</i>
PASSED	<i>[Signature]</i>
APPROVED	<i>[Signature]</i>

DETAIL OF PRECAST CONCRETE PILES



SECTION THRU PILE

OMIT

PILE PLAN

ELEVATION (End Reinforcement)

PLAN (End Reinforcement)

PILE BUILD UP

DESIGN STRESSES
 $f_c' = 5,000 \text{ psi}$
 $f_t' = 4,000 \text{ psi}$
 $f_s' = 268,000 \text{ psi (31,000 lbs.)}$
 $f_s' = 188,000 \text{ psi (21,700 lbs.)}$

PILE DETAILS

WILLOW ROAD BRIDGE OVER C.V. ST. & E. R.R.
COOK COUNTY
SECTION 110-1920-C1 M.F.T.

DETAIL OF PRECAST PRESTRESSED CONCRETE PILES



USER NAME = MS.USER	DESIGNED - LAB	REVISED -
PLOT SCALE = *SCALE*	DRAWN - LCR	REVISED -
PLOT DATE = 12/13/2018	CHECKED - E.JL	REVISED -
	DATE - 11/21/18	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

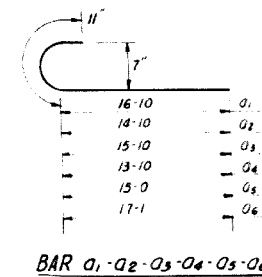
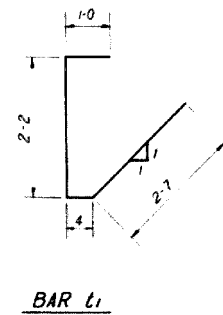
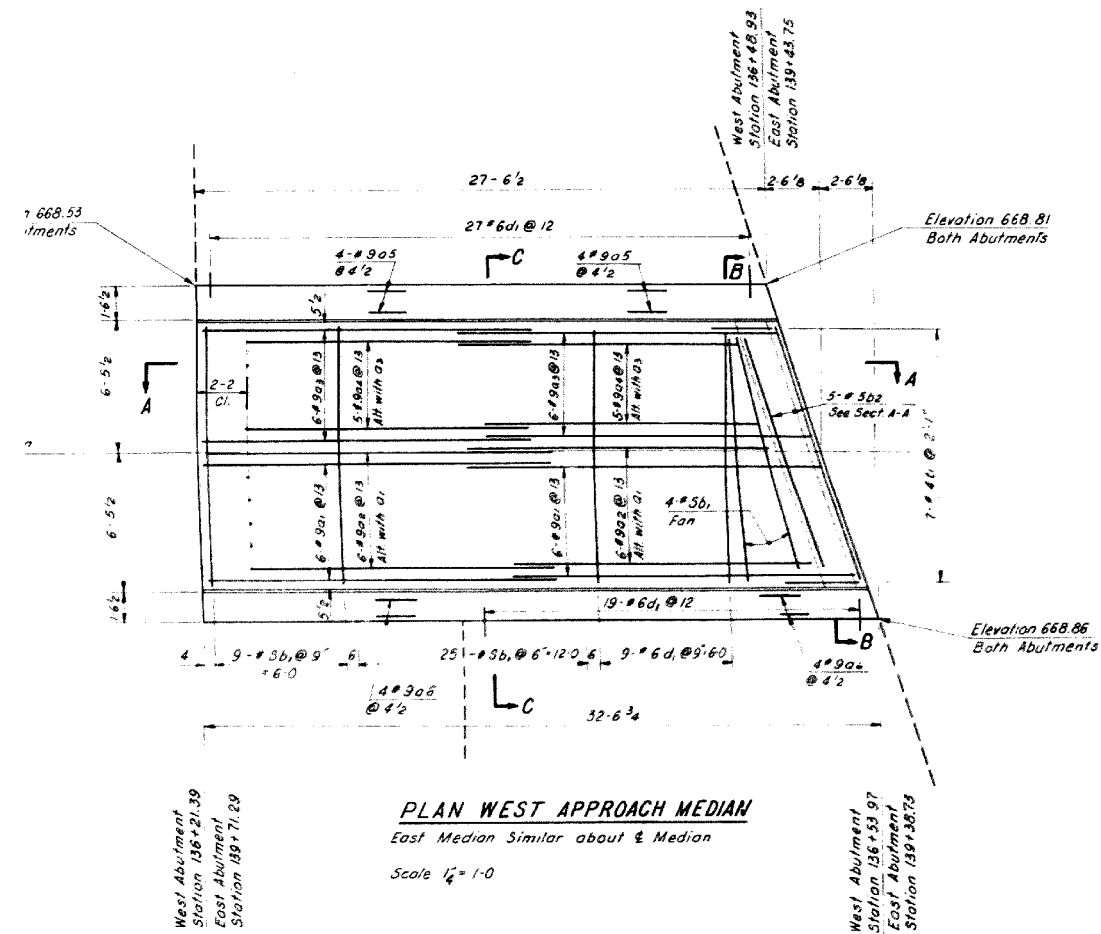
EXISTING BRIDGE PLANS - 1969
FOR INFORMATION ONLY

SCALE: SHEET 23 OF 24 SHEETS STA. 96+61.4 TO STA. 103+52.5

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	133
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				

COUNTY	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
110	1969	32	86

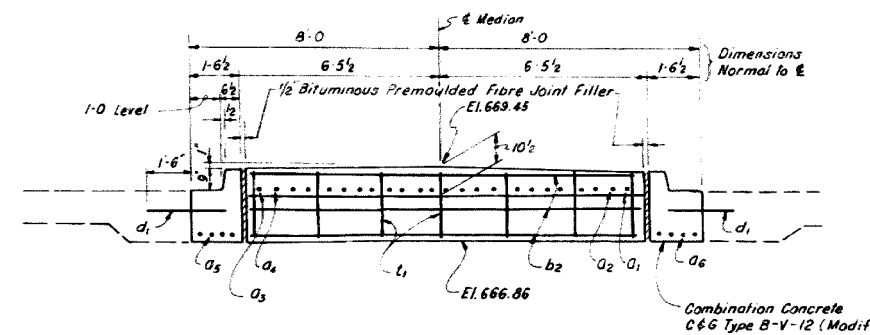
SECTION 110-1920.01-M.F.T.



BAR SCHEDULE *

Mark	Nº	Size	Length	Sketch
a1	24	# 9	17-9	
a2	24	# 9	15-9	
a3	24	# 9	16-9	
a4	20	# 9	14-9	
a5	16	# 9	15-11	
a6	16	# 9	18-0	
b1	94	# 5	12-7	
b2	10	# 5	13-0	
t1	14	# 4	6'-1	
d1	92	# 6	2'-9	

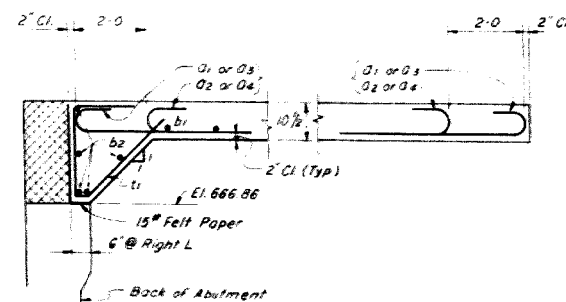
QUANTITIES ARE FOR EAST & WEST MEDIANS



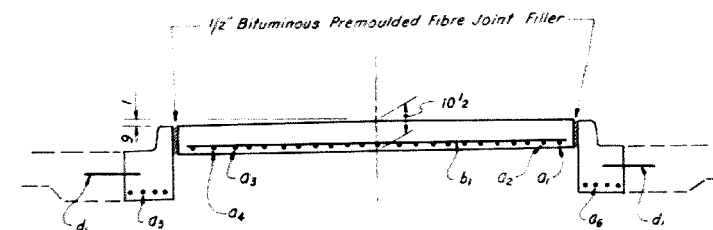
SECTION B-B

BILL OF MATERIAL

Item	Quantity	Unit
Reinforcement Bars	8760	Lbs.
Reinforced P.C.G. Median (10 1/2") Special	85.0	Sq. Yds.
Combination Conc. C&G Type B-V-12 (Modif)	120.0	Lin. Ft.
Protective Coat	107.0	Sq. Yds.



SECTION A-A



SECTION C-C

COUNTY OF COOK
DEPARTMENT OF HIGHWAYS
REINFORCED P.C.G. MEDIAN (10 1/2") SPECIAL
APPROVED _____ 19 _____
CHIEF ENGINEER



USER NAME = MS.USER	DESIGNED - LAB	REVISED -
PLOT SCALE = *SCALE*	DRAWN - LCR	REVISED -
PLOT DATE = 12/13/2018	CHECKED - E.JL	REVISED -
	DATE - 11/21/18	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS - 1969
FOR INFORMATION ONLY

SCALE: SHEET 24 OF 24 SHEETS STA. 96+61.4 TO STA. 103+52.5

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	134

CONTRACT NO. 60N83
ILLINOIS FED. AID PROJECT

REVISED TO STATE REQUIREMENTS
SEPT. 16, 1941.

Proj. No.	110	Year	1942	Sheet	25
SECTION 110-1922.2 M.F.T.					

1942

INDEX OF SHEETS

SHEET NO.	TITLE PAGE
2	PLAN & PROFILE
3	PLAN OF LEHIGH AVE CONNECTION
4	GENERAL PLAN & ELEVATION
5	SUPERSTRUCTURE CONCRETE DETAILS
6	SUPERSTRUCTURE STRUCTURAL STEEL
7	SUPERSTRUCTURE DETAILS, ROLLERS & PLATES
8	HANDRAIL DETAILS
9	EXPANSION DEVICES
10	ELAST PROTECTION PLATES
11	DRAINAGE DETAILS
12	PIER DETAILS
13	ABUTMENT OUTLINES
14	ABUTMENT REINFORCING I
15	ABUTMENT REINFORCING II
16-21	CROSS SECTIONS
22	NAME PLATES
23	SUMMARY OF QUANTITIES
24	FIELD OFFICE
25	STANDARDS I.A. 10 & 9A

STATE OF ILLINOIS
COUNTY OF COOK
DEPARTMENT OF HIGHWAYS

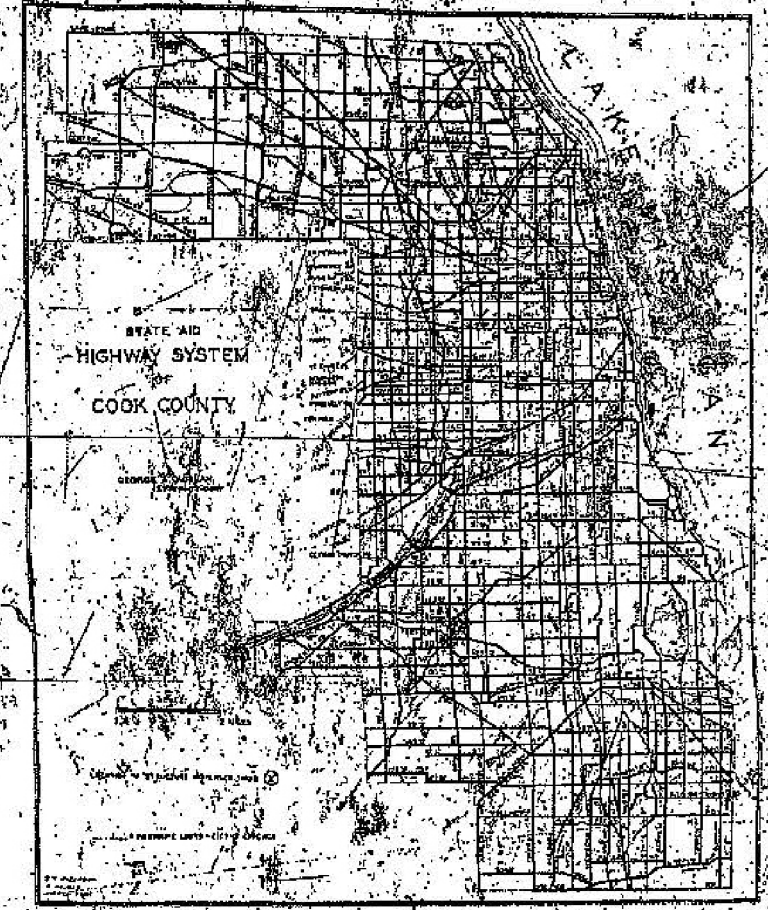
PLANS FOR PROPOSED
STATE AID HIGHWAY
STRUCTURE
WILLOW ROAD GRADE SEPARATION
OVER

C.M. ST.P. & P. R.R.
SECTION 110-1922.2 M.F.T.

SUMMARY OF QUANTITIES

SEC 110-1922.2 M.F.T.

446.7	CU.YDS. CLASS X CONCRETE
2819	BE.S. PORTLAND CEMENT
203,200	LBS. REINFORCEMENT BARS
3300	50 FT. WELDED WIRE FABRIC
2575	50 FT. STANDARD 6" STRUCTURAL GLAY FLOOR TILE
580	LIN.FT. WELDED STEEL HANDRAIL
698,915	LBS. STRUCTURAL STEEL (ERECT & PAINT ONLY)
200	LIN.FT. 8" CAST IRON PIPE
6	LIN.FT. 8" CAST IRON PIPE
105	LIN.FT. COPPER GUTTER
2	EACH NAME PLATES



500	CU.YDS. EARTH EXCAVATION
158,848	CU.YDS. BORROW EXCAVATION
13	EACH ROW. OR SURVEY MONUMENTS

THIS CONTRACT INCLUDES:
THE FURNISHING OF ALL MATERIALS FOR AND THE CONSTRUCTION OF PAVED APPROACHES, REINFORCED CONCRETE ABUTMENTS AND TWO REINFORCED CONCRETE PIERS FOR THE SUPPORT OF A CONTINUOUS 3 SPAN (270' 0" + 270' 0" + 270' 0") WIDE FLANGE SUPERSTRUCTURE WITH A REINFORCED CONCRETE DECK SLAB, HAVING A ROADWAY WIDTH OF 60 FEET BETWEEN CURBS AND TWO CONCRETE SIDEWALKS 6 FEET WIDE SIDE CURBS WITH METAL BARRIERS, INCLUDING THE FURNISHING AND APPLICATION OF TWO COAT FIELD COATS OF PAINT AS REQUIRED.
THIS CONTRACT ALSO REQUIRES THE CONSTRUCTION OF APPROACH, SUNDRIES AND DRAINAGE INCHES.
THE FURNISHING AND DELIVERY OF STRUCTURAL STEEL IS NOT INCLUDED IN THIS CONTRACT.

698,915	LBS. STRUCTURAL STEEL FURNISHED ONLY
---------	--------------------------------------

THIS CONTRACT INCLUDES:
THE FURNISHING AND DELIVERY OF ALL MATERIALS AND THE CONSTRUCTION OF A CONTINUOUS 3 SPAN (270' 0" + 270' 0" + 270' 0") WIDE FLANGE SUPERSTRUCTURE WITH A REINFORCED CONCRETE DECK SLAB, HAVING A ROADWAY WIDTH OF 60 FEET BETWEEN CURBS AND TWO CONCRETE SIDEWALKS 6 FEET WIDE SIDE CURBS WITH METAL BARRIERS, INCLUDING THE FURNISHING AND APPLICATION OF TWO COAT FIELD COATS OF PAINT AS REQUIRED.

CONVENTIONAL SIGNS

- STATE & NATIONAL LINE
- COUNTY LINE
- CITY, VILLAGE OR BOROUGH
- TOWNSHIP LINE
- GRANT LINE
- SECTION LINE
- UNFENCED PROPERTY
- RIGHT OF WAY LINE
- GUARD RAIL
- TRAVELING WAY
- RAILROADS
- RETAINING WALL
- BASE OF SURVEY LINE
- LEVEL
- CULVERT
- DROP INLET
- MARSH
- LEDGE
- GROUND ELEVATION
- GRADE ELEVATION
- BUR OR R I
- STAKE
- TROLLEY POLE
- POWER POLE
- TELEPHONE OR TELEGRAPH POLE
- ARC LAMP
- NEW CATCH BASIN
- EXISTING CATCH BASIN
- NEW INLET
- EXISTING INLET
- HYDRANT
- EXISTING SEWER MANHOLE
- DRAINAGE ANCHOR & SLIGHT

APPROVED _____ 1942

THE DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF HIGHWAYS

PASSED _____ 1942

APPROVED _____ 1942

APPROVED _____ 1942

APPROVED _____ 1942

RECOMMENDED FOR APPROVAL

CHEF ENGINEER _____

APPROVED _____

DIRECTOR _____



USER NAME - MS.USER	DESIGNED - LAB	REVISED -
PLOT SCALE - #SCALE#	DRAWN - LCR	REVISED -
PLOT DATE - 12/13/2018	CHECKED - E.JL	REVISED -
	DATE - 11/21/18	REVISED -

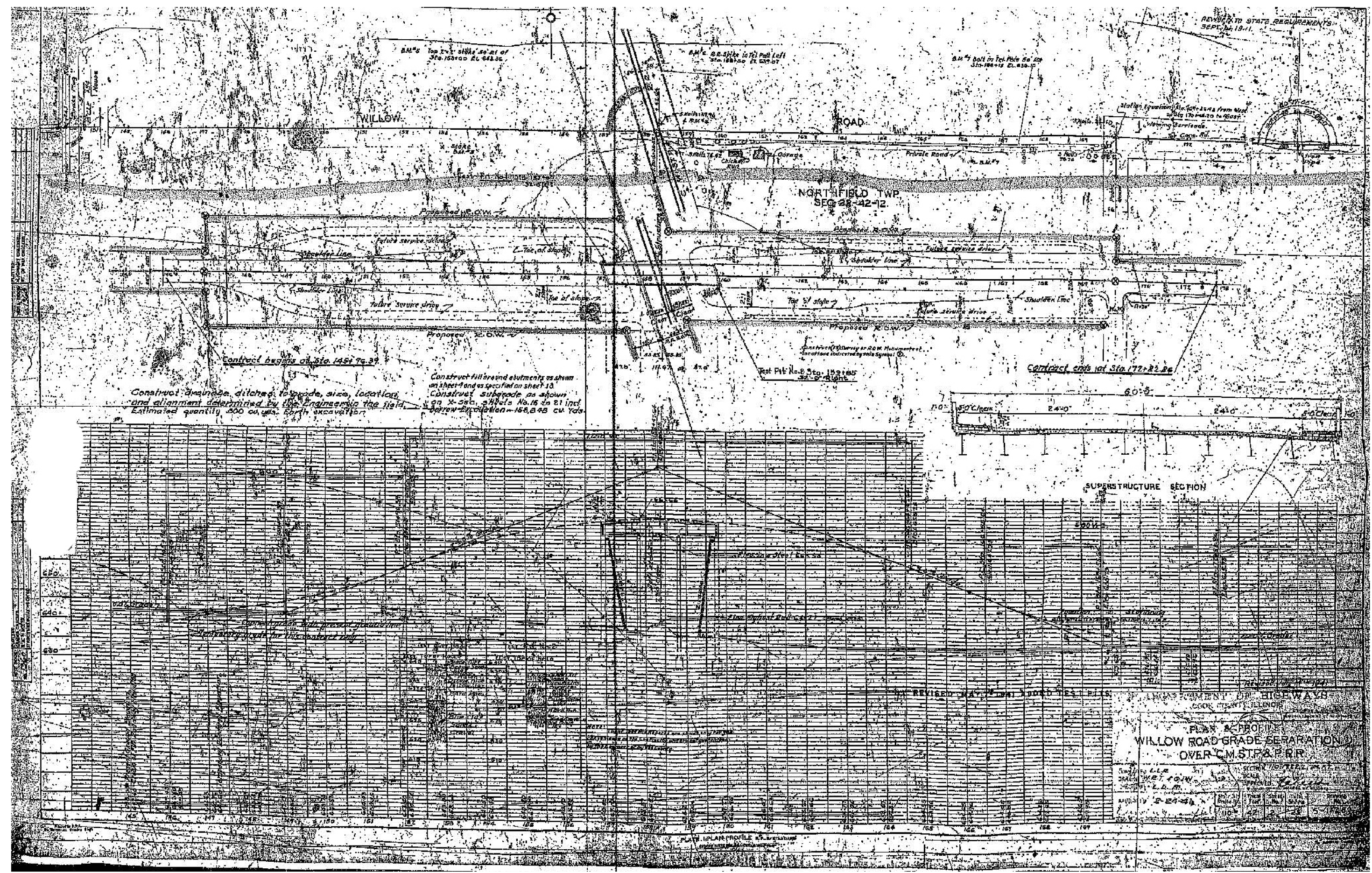
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS - 1942
FOR INFORMATION ONLY

SCALE: SHEET 1 OF 8 SHEETS STA. 96+61.4 TO STA. 103+52.5

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	135
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				

REVISED TO STATE REQUIREMENTS
SEPT. 14, 1911.



Construct drainage ditches to grade, size, location and alignment determined by the Engineer in the field. Estimated quantity 600 cu yds. Earth excavation.

Construct fill and abutments as shown on sheet 9 and as specified on sheet 10. Construct subgrade as shown on X-sec. sheets No. 16 to 21 incl. Approx. Excavation - 155,000 cu yds.

Contract ends at Sta. 177+22.86

SUPERSTRUCTURE SECTION

PLAN & PROFILE
WILLOW ROAD GRADE SEPARATION
OVER C.M. ST. & P.R.R.



USER NAME = MS.USER	DESIGNED - LAB	REVISED -
	DRAWN - LCR	REVISED -
PLOT SCALE = 1/4" = 1'	CHECKED - E.J.L.	REVISED -
PLOT DATE = 12/13/2018	DATE - 11/21/18	REVISED -

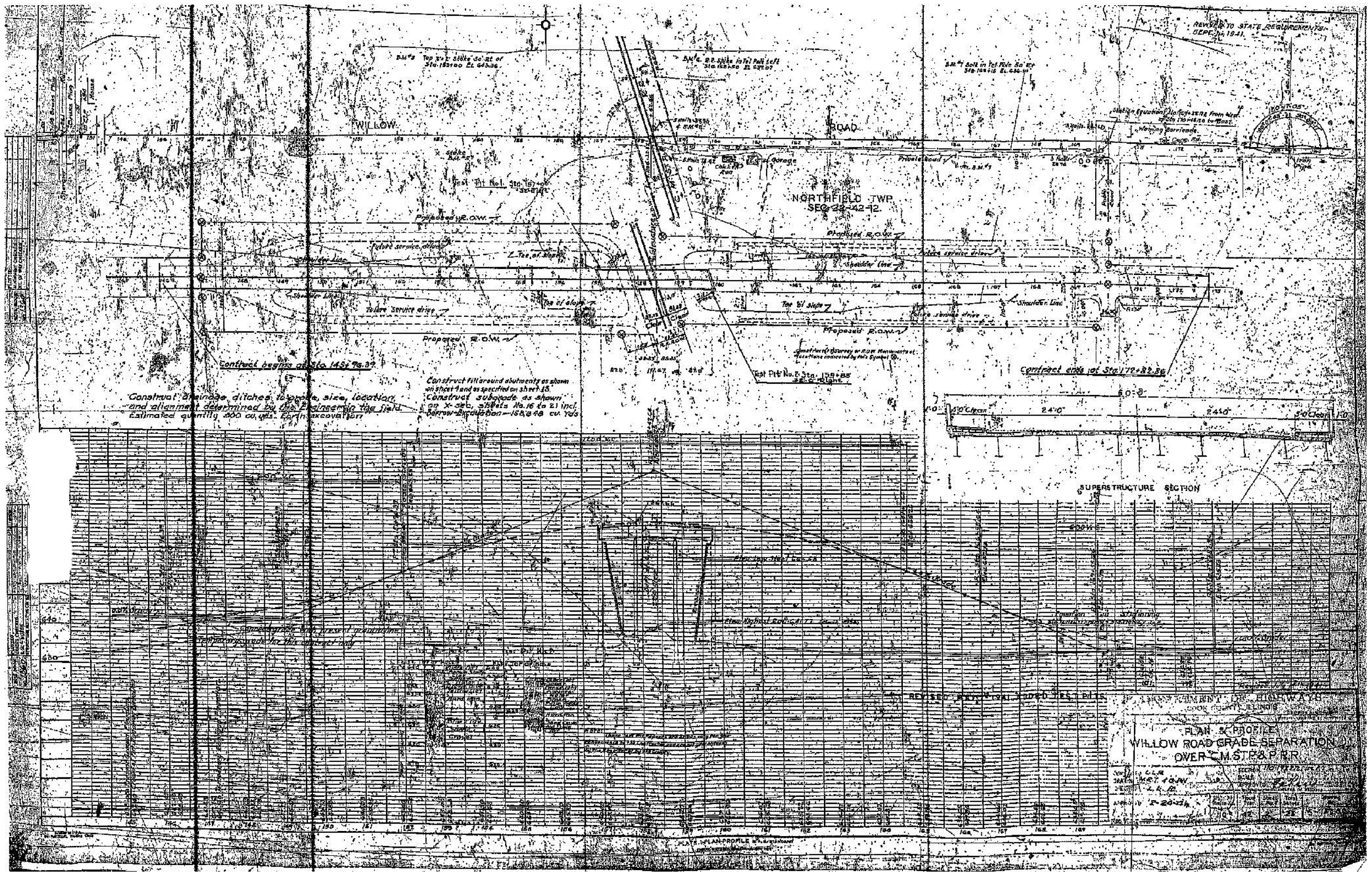
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS - 1942
FOR INFORMATION ONLY

SCALE: SHEET 2 OF 8 SHEETS STA. 96+61.4 TO STA. 103+52.5

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	136
				CONTRACT NO. 60N83

ILLINOIS FED. AID PROJECT



REVISOR TO STATE REQUIREMENTS
SEPT. 14, 1941.

NORTHFIELD TWP
SEC. 22-42-12

SUPERSTRUCTURE SECTION

PLAN & PROFILE
WILLOW ROAD GRADE SEPARATION
OVER C.M. & ST. P. RR.



USER NAME = MS-USER
DESIGNED - LAB
DRAWN - LCR
PLOT SCALE = 1/4" = 100'
PLOT DATE = 12/13/2018

DESIGNED - LAB
DRAWN - LCR
CHECKED - E.JL
DATE - 11/21/18

REVISOR TO STATE REQUIREMENTS
SEPT. 14, 1941.

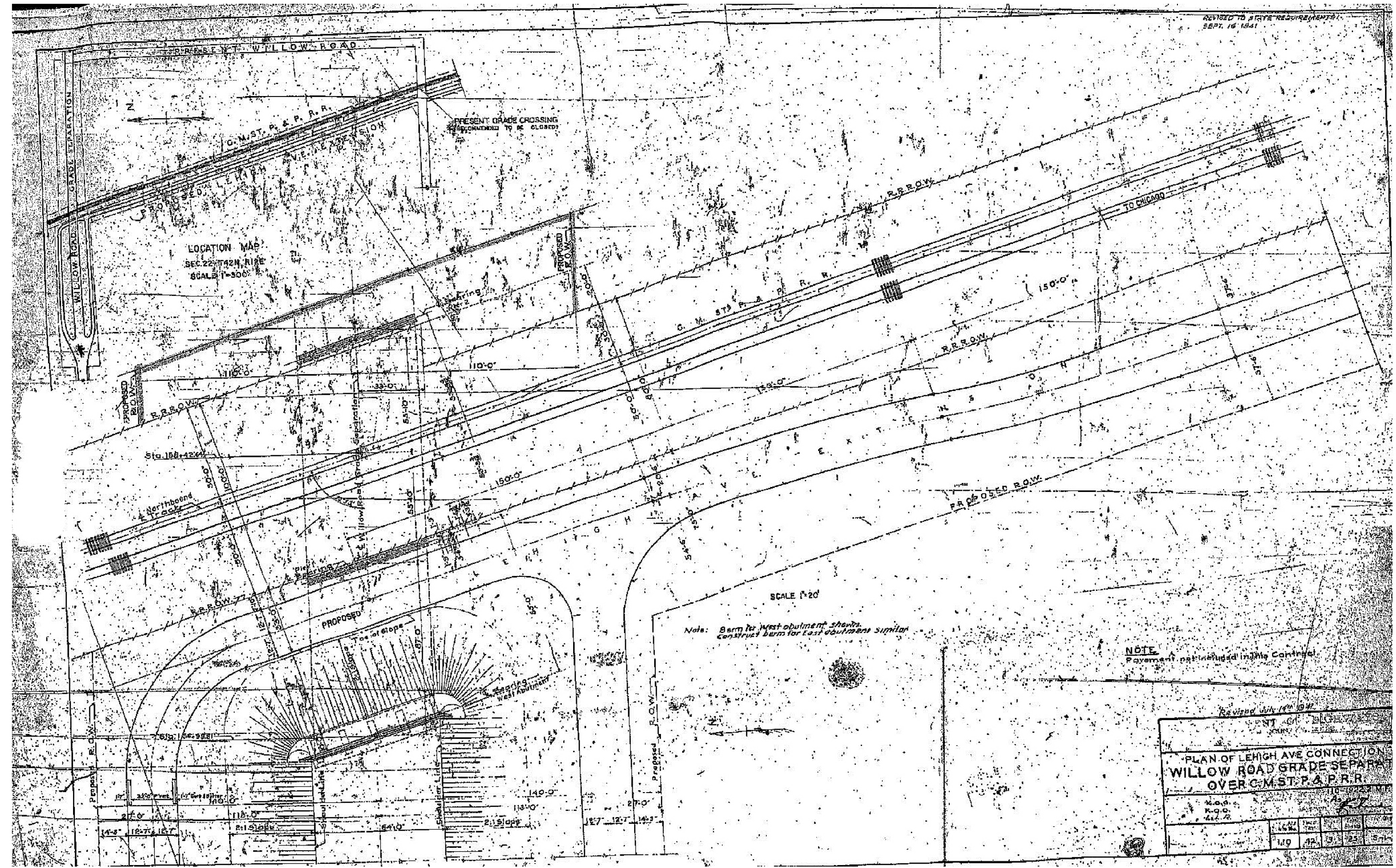
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS - 1942
FOR INFORMATION ONLY

SCALE: SHEET 3 OF 8 SHEETS STA. 96+61.4 TO STA. 103+52.5

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	137
				CONTRACT NO. 60N83
ILLINOIS FED. AID PROJECT				

REVISED TO STATE REQUIREMENTS
SEPT. 16 1941



Revised July 16th 1941

PLAN OF LEHIGH AVE CONNECTION WILLOW ROAD GRADE SEPARATION OVER G.M. ST. P. & P.R.R.				
NO. 6	NO. 6	NO. 6	NO. 6	NO. 6
10	12	12	12	12
10	12	12	12	12



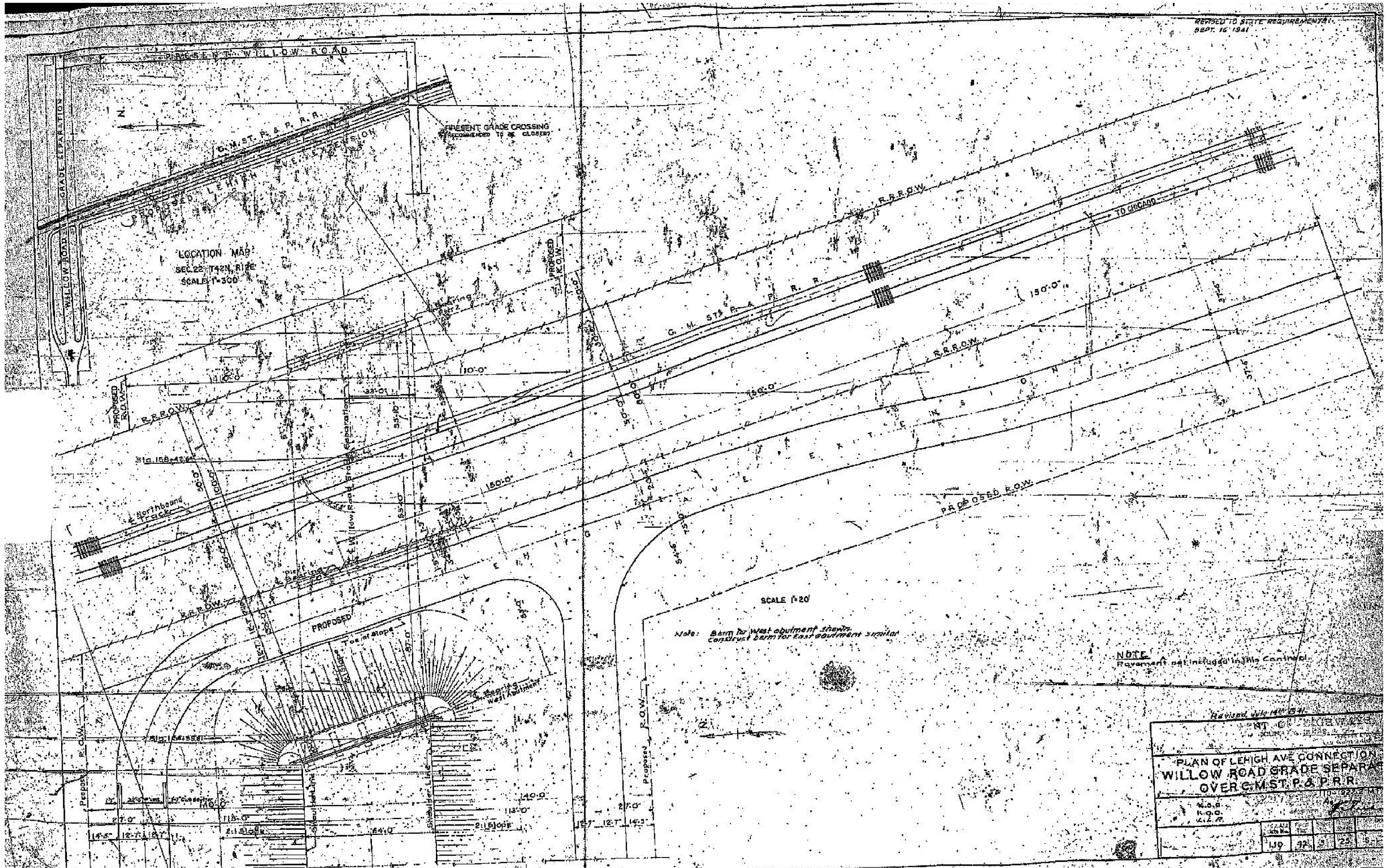
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PLOT SCALE - #SCALE#	DRAWN - LCR	REVISED -
PLOT DATE - 12/13/2018	CHECKED - E.J.L.	REVISED -
	DATE - 11/21/18	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS - 1942 FOR INFORMATION ONLY		
SCALE:	SHEET 4 OF 8 SHEETS	STA. 96+61.4 TO STA. 103+52.5

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	138
				CONTRACT NO. 60N83
ILLINOIS FED. AID PROJECT				

REVISED TO STATE REQUIREMENTS
SEPT. 16 1941



USER NAME = MS-USER	DESIGNED - LAB	REVISED -
	DRAWN - LCR	REVISED -
PLOT SCALE = *SCALE*	CHECKED - E.J.L.	REVISED -
PLOT DATE = 12/13/2018	DATE - 11/21/18	REVISED -

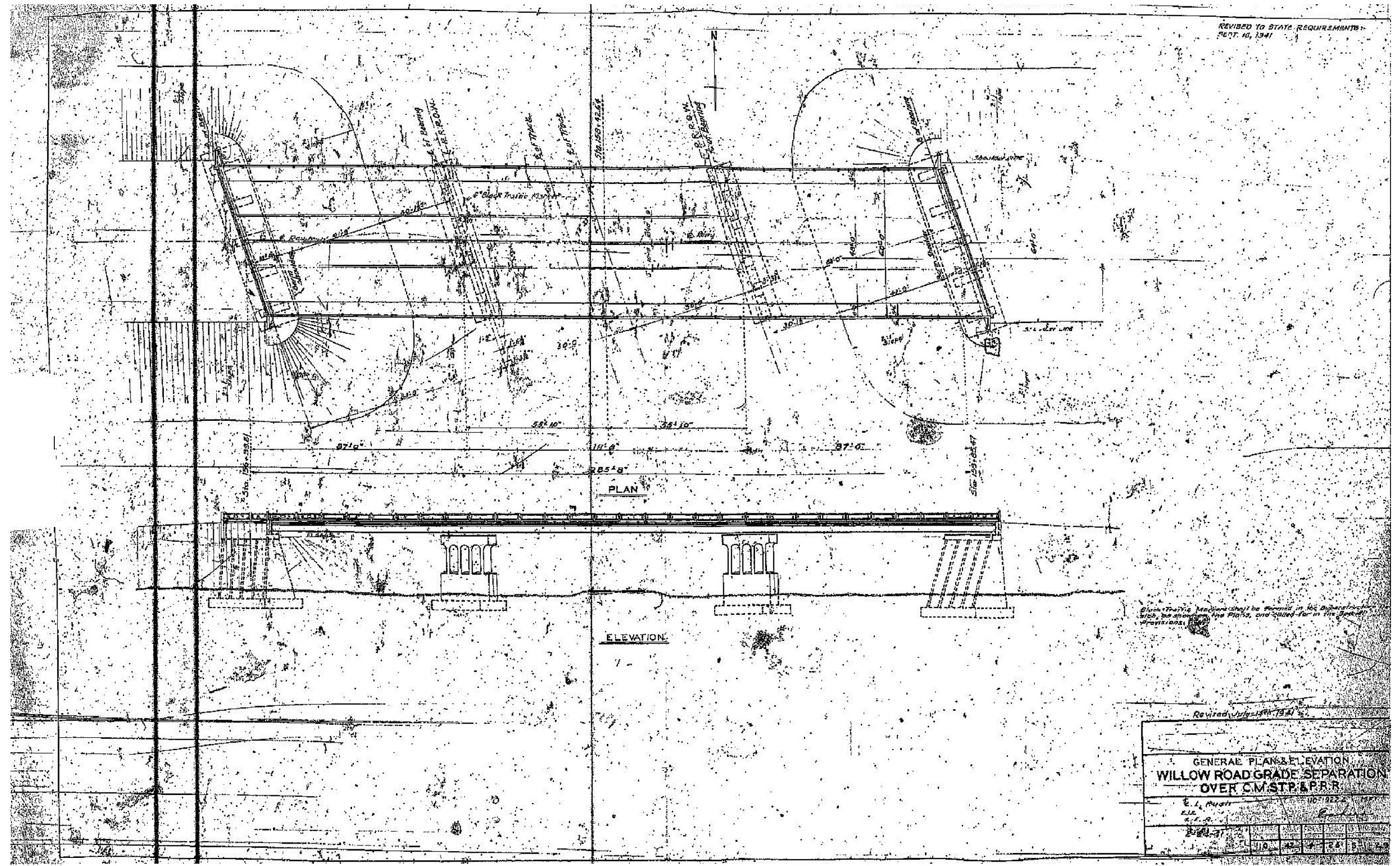
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS - 1942
FOR INFORMATION ONLY

SCALE: SHEET 5 OF 8 SHEETS STA. 96+61.4 TO STA. 103+52.5

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	139
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				

REVISED TO STATE REQUIREMENTS
SECT. 10, 1941



PLAN

ELEVATION

Black Traffic Markers shall be located in the Substructure with, be shown, the Plans, and called for in the Book of Provisions.

Revised July 1941

GENERAL PLAN & ELEVATION
WILLOW ROAD GRADE SEPARATION
OVER C.M. STP. & P.R.

E. L. Rugh
E.L.R.
E.L.R.

103+52.5	103+52.5	103+52.5	103+52.5	103+52.5	103+52.5
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USER NAME - MS.USER	DESIGNED - LAB	REVISED -
	DRAWN - LCR	REVISED -
PLOT SCALE - #SCALE#	CHECKED - E.JL	REVISED -
PLOT DATE - 12/13/2018	DATE - 11/21/18	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

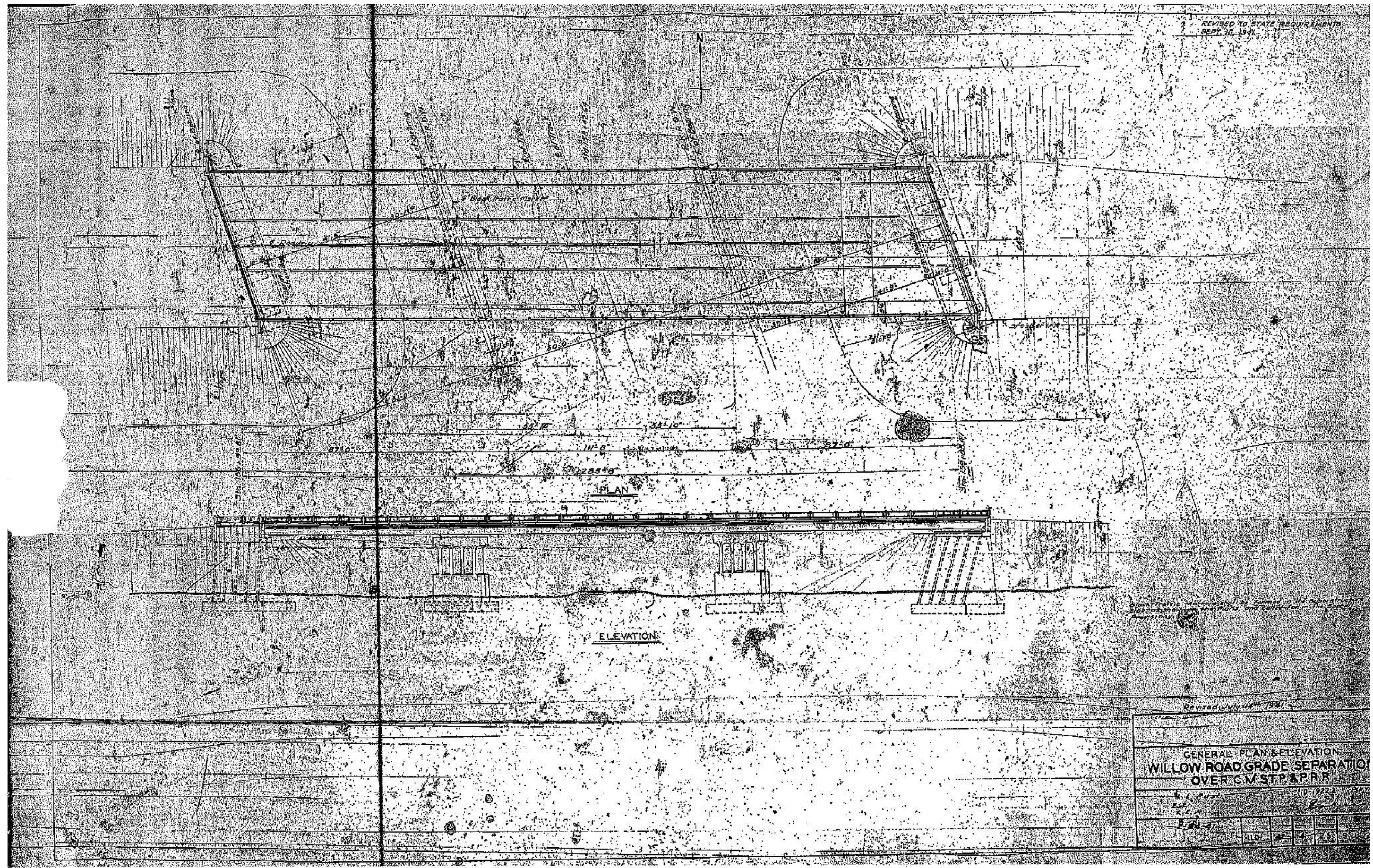
EXISTING BRIDGE PLANS - 1942
FOR INFORMATION ONLY

SCALE: SHEET 6 OF 8 SHEETS STA. 96+61.4 TO STA. 103+52.5

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	140
				CONTRACT NO. 60N83

ILLINOIS FED. AID PROJECT

REVISED TO STATE REQUIREMENTS
SEPT. 16, 1941



PLAN

ELEVATION

Revised July 4th 1941

GENERAL PLAN & ELEVATION
WILLOW ROAD GRADE SEPARATION
OVER C.M. ST. & P.R.R.

116	194	141	194	141
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USER NAME - MS_USER	DESIGNED - LAB	REVISED -
	DRAWN - LCR	REVISED -
PLOT SCALE - *SCALE*	CHECKED - E.JL	REVISED -
PLOT DATE - 12/13/2018	DATE - 11/21/18	REVISED -

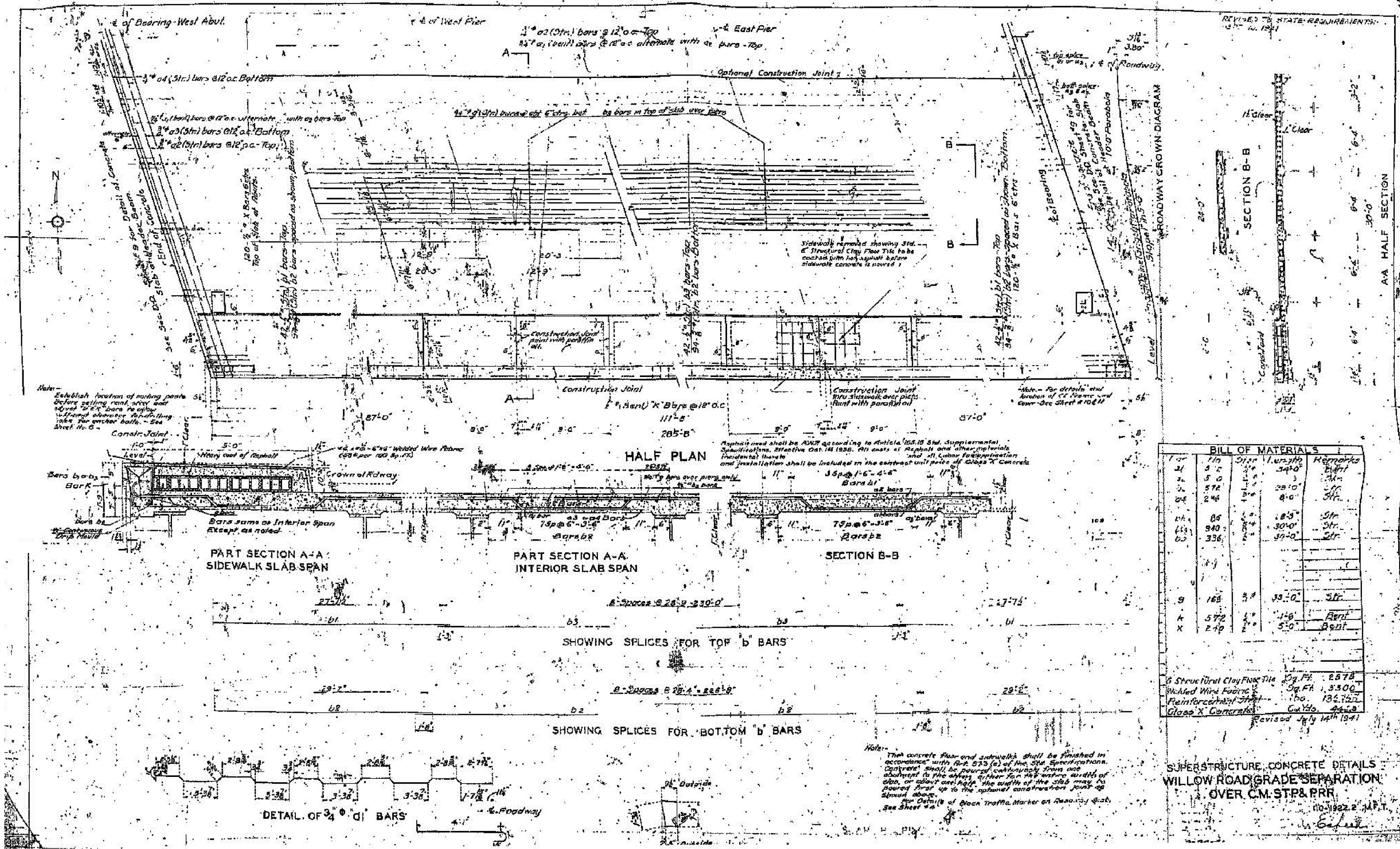
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS - 1942
FOR INFORMATION ONLY

SCALE: SHEET 7 OF 8 SHEETS STA. 96+61.4 TO STA. 103+52.5

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	141
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				

REVISED TO STATE REQUIREMENTS
12-11-1941



BILL OF MATERIALS				
1/4"	170	510	1,420	Remarks
3/8"	50	150	340	Str.
1/2"	30	90	200	Str.
3/4"	24	72	160	Str.
1"	80	240	540	Str.
1 1/4"	940	2,820	6,240	Str.
1 1/2"	336	1,008	2,240	Str.
2"	18	54	120	Str.
2 1/2"	168	504	1,120	Str.
3"	572	1,716	3,808	Bent
4"	240	720	1,600	Bent

Structural Clay Floor Tile Sq. Ft. 2,578
 Welded Wire Fabric Sq. Ft. 3,300
 Reinforcement Steel lbs. 134,720
 Class X Concrete Cu Yds. 440
 Revised July 14th 1941

SUPERSTRUCTURE CONCRETE DETAILS
 WILLOW ROADGRADE SEPARATION
 OVER C.M. STP & PRR



USER NAME - MS.USER	DESIGNED - LAB	REVISED -
PLOT SCALE - #SCALE#	DRAWN - LCR	REVISED -
PLOT DATE - 12/13/2018	CHECKED - E.JL	REVISED -
	DATE - 11/21/18	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS - 1942
 FOR INFORMATION ONLY

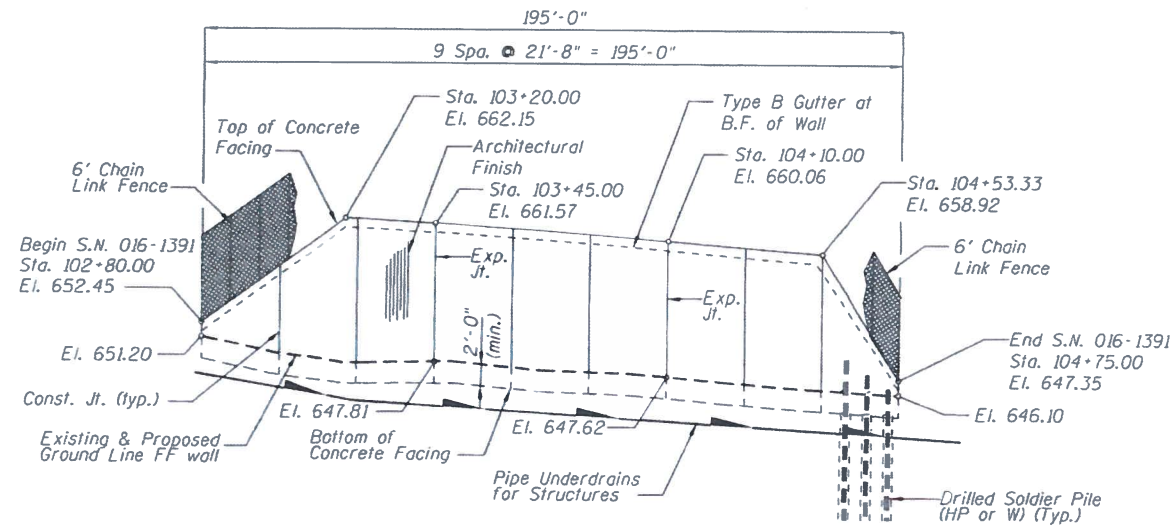
SCALE: SHEET 8 OF 8 SHEETS STA. 96+61.4 TO STA. 103+52.5

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	142
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				

Bench Mark BM1: Located on southwest wingwall of the Willow Road Bridge (S.N. 016-0533) over Lehigh Avenue & Soo Line Railroad, Sta. 98+74.59, 40.03' Rt., El. 669.03

Existing Structure: None

Construction will be completed utilizing staged construction as part of the Bridge SN 016-0533, Stage 1 Construction

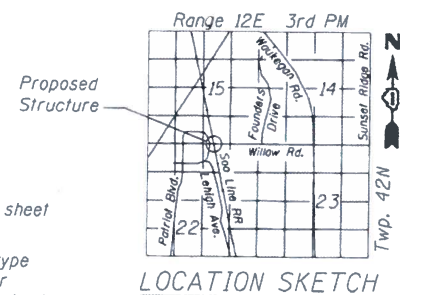
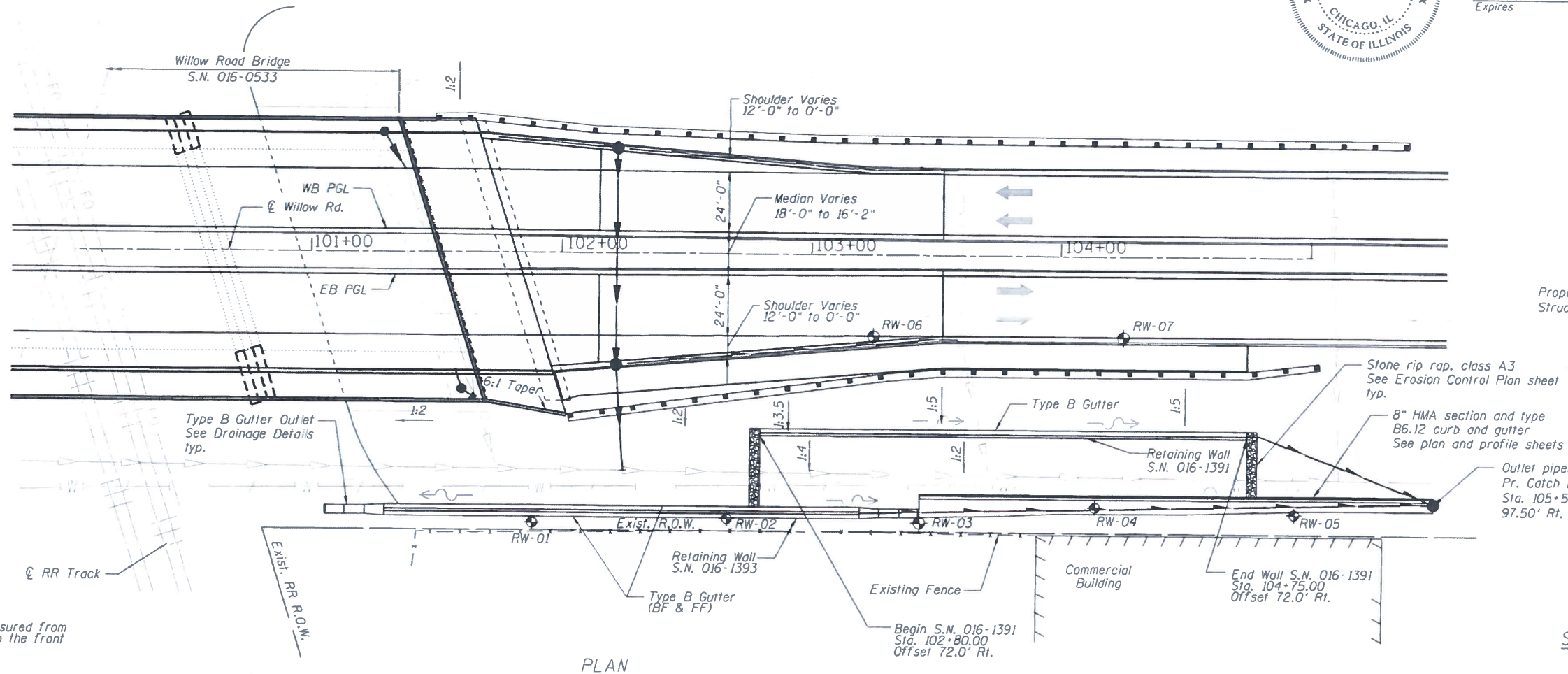


ELEVATION S.N. 016-1391

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Dr. Carl P. ...
ENGINEER OF BRIDGES AND STRUCTURES

Frederic C. Owens 11/31/19
Signature Date
November 30, 2020
Expires



GENERAL PLAN
WILLOW ROAD
FAP 305 SEC. 1920.01-BR
COOK COUNTY
STA. 102+80 TO STA. 104+75
STRUCTURE NO. 016-1391

Note:
Offsets are measured from
Willow Road to the front
face of wall.

FILE NAME: 016-1391



USER NAME = MS.USER	DESIGNED - LAS	REVISED -
	CHECKED - LS	REVISED -
PLOT SCALE = 1/8"=1'-0"	DRAWN - TCS	REVISED -
PLOT DATE = 1/31/2019	CHECKED - LAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STRUCTURE NUMBER 016-1391

SHEET NO. 1 OF 13 SHEETS

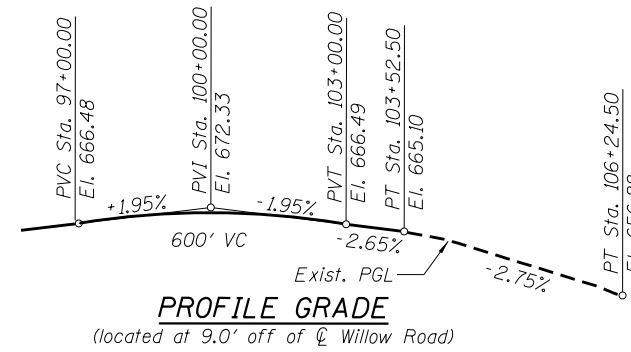
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	143
CONTRACT NO. 60N83			ILLINOIS FED. AID PROJECT	

INDEX OF SHEETS

1. General Plan & Elevation
2. General Data
3. Soldier Pile Layout
4. Typical Section
5. Details
6. Tie-Back Details
7. Concrete Facing
8. Concrete Facing and Details
9. Chain Link Fence Details
10. Architectural Finish Details
11. Boring Logs 1
12. Boring Logs 2
13. Boring Logs 3

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Structure Excavation	Cu. Yd.	80
Concrete Structures	Cu. Yd.	106.1
Form Liner Textured Surface	Sq. Ft.	1,960
Stud Shear Connectors	Each	590
Reinforcement Bars, Epoxy Coated	Pound	19,580
Name Plates	Each	1
Furnishing Soldier Piles (W Section)	Foot	52
Furnishing Soldier Piles (HP Section)	Foot	1,410
Drilling and Setting Soldier Piles (In Soil)	Cu. Ft.	6,233
Untreated Timber Lagging	Sq. Ft.	1,373
Geocomposite Wall Drain	Sq. Yd.	96
Permanent Ground Anchor	Each	20
Chain Link Fence, 6' Attached to Structure	Foot	195
Pipe Underdrains for Structures 4"	Foot	275



STATION 102+80.00
 BUILT 201_ BY
 STATE OF ILLINOIS
 F.A.P. RT. 305
 SEC. 1920.01-BR
 STR. NO. 016-1391

NAME PLATE
 See Std. 515001

DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design Specifications, 8th edition

DESIGN STRESSES

FIELD UNITS

f'_c = 3,500 psi
 f_y = 60,000 psi (reinforcement)
 f_y = 50,000 psi (M270 Grade 50)

GENERAL NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. The Contractor is responsible for the design and performance of the lagging using no less than 3" nominal rough-sawn thickness and timber with a minimum allowable bending stress of 1000 psi.

FILE NAME = RFILE18



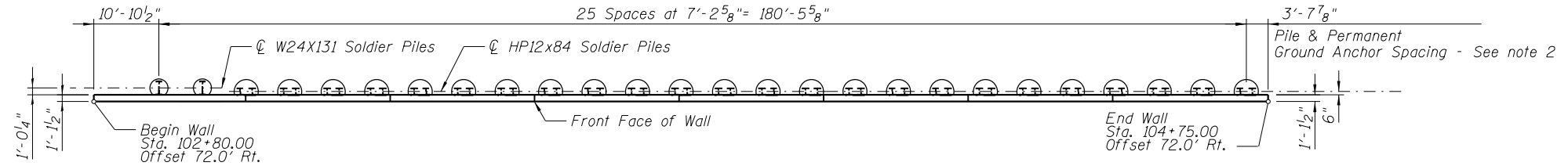
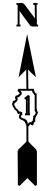
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

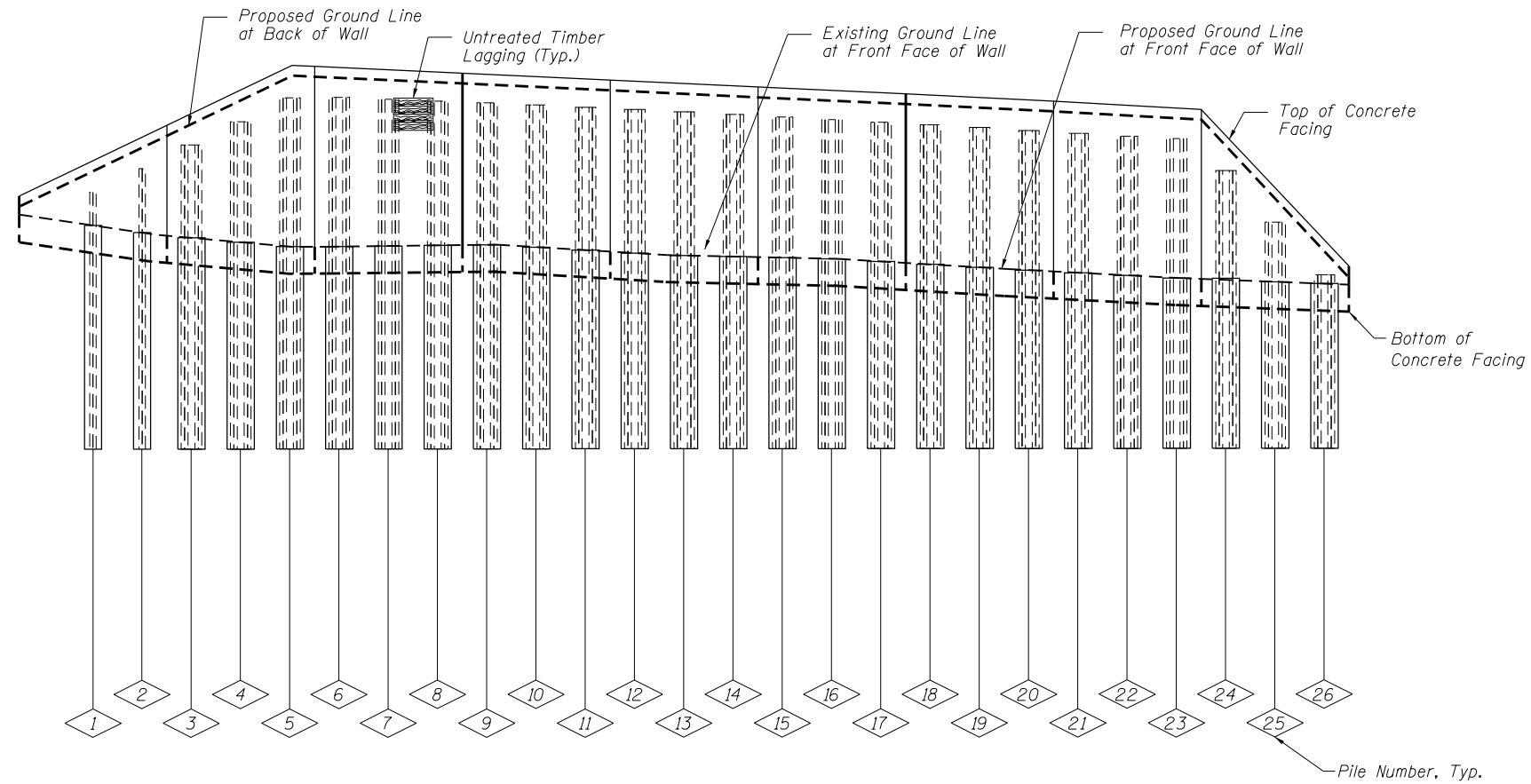
**GENERAL DATA
 STRUCTURE NO. 016-1391**

SHEET NO. 2 OF 13 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	144
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				



PLAN



ELEVATION

PILE SUMMARY

Pile No.	Station	Offset to C Pile	Pile Designation	Length	Top Elevation	Bottom Elevation	Pile No.	Station	Offset to C Pile	Pile Designation	Length	Top Elevation	Bottom Elevation	Pile No.	Station	Offset to C Pile	Pile Designation	Length	Top Elevation	Bottom Elevation
1	102+90.88	70.38	W24X131	24.84	652.84	628.00	12	103+70.28	70.38	2-HP12X84	30.73	658.73	628.00	23	104+49.69	70.38	2-HP12X84	28.77	656.77	628.00
2	102+98.09	70.38	W24X131	26.59	654.59	628.00	13	103+77.50	70.38	2-HP12X84	30.56	658.56	628.00	24	104+56.91	70.38	2-HP12X84	26.76	654.76	628.00
3	103+05.31	70.38	2-HP12X84	28.34	656.34	628.00	14	103+84.72	70.38	2-HP12X84	30.4	658.40	628.00	25	104+64.13	70.38	2-HP12X84	22.9	650.90	628.00
4	103+12.53	70.38	2-HP12X84	30.09	658.09	628.00	15	103+91.94	70.38	2-HP12X84	30.23	658.23	628.00	26	104+71.34	70.38	2-HP12X84	19.05	647.05	628.00
5	103+19.75	70.38	2-HP12X84	31.84	659.84	628.00	16	103+99.16	70.38	2-HP12X84	30.06	658.06	628.00							
6	103+26.97	70.38	2-HP12X84	31.74	659.74	628.00	17	104+06.38	70.38	2-HP12X84	29.89	657.89	628.00							
7	103+34.19	70.38	2-HP12X84	31.57	659.57	628.00	18	104+13.59	70.38	2-HP12X84	29.73	657.73	628.00							
8	103+41.41	70.38	2-HP12X84	31.40	659.40	628.00	19	104+20.81	70.38	2-HP12X84	29.56	657.56	628.00							
9	103+48.63	70.38	2-HP12X84	31.23	659.23	628.00	20	104+28.03	70.38	2-HP12X84	29.37	657.37	628.00							
10	103+55.84	70.38	2-HP12X84	31.07	659.07	628.00	21	104+35.25	70.38	2-HP12X84	29.17	657.17	628.00							
11	103+63.06	70.38	2-HP12X84	30.90	658.90	628.00	22	104+42.47	70.38	2-HP12X84	28.97	656.97	628.00							

BILL OF MATERIAL

Item	Unit	Quantity
Furnishing Soldier Piles (W Section)	Foot	52
Furnishing Soldier Piles (HP Section)	Foot	1,410
Drilling and Setting Soldier Piles (In Soil)	Cu Ft	6,233
Untreated Timber Lagging	Sq Ft	1,373
Stud Shear Connectors	Each	590

Notes:

- All offsets are to the right of centerline of Willow Road.
- Omit ground anchors for Piles 1, 2, 3, 24, 25, and 26.

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CHECKED - LS
DRAWN - TCS
CHECKED - LAS

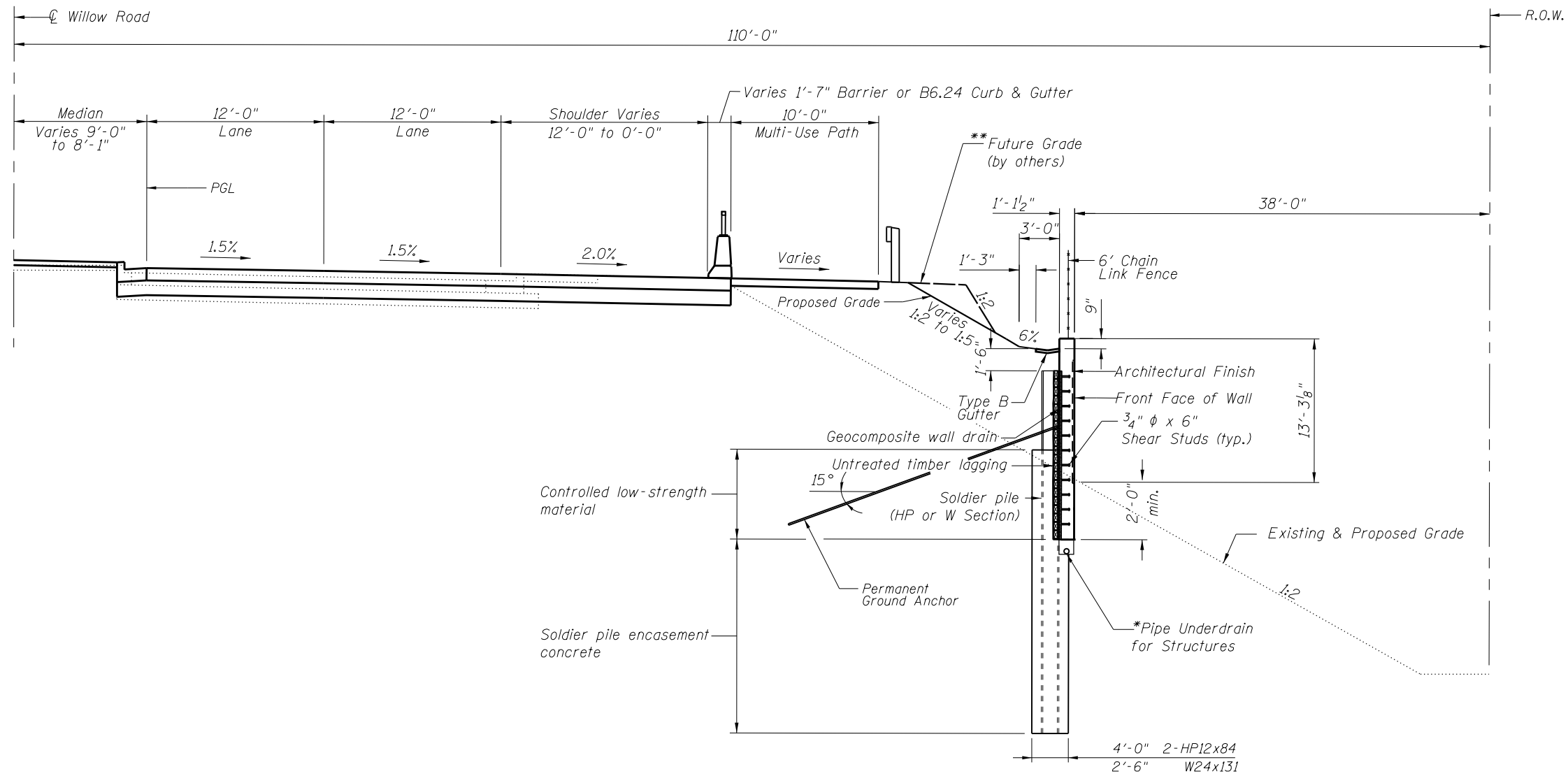
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REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOLDIER PILE LAYOUT
STRUCTURE NO. 016-1391

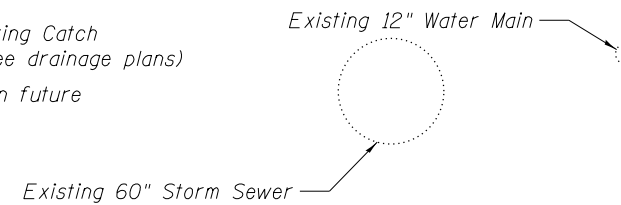
SHEET NO. 3 OF 13 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	145
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				



TYPICAL SECTION
Sta. 102+80.00 to Sta. 104+75.00
(Looking East)

*Pipe Underdrain to outlet into Existing Catch Basin located at Sta. 105+50.00. (See drainage plans)
**Top of wall elevations are based on future roadway widening.



FILE NAME = REF1E1.8



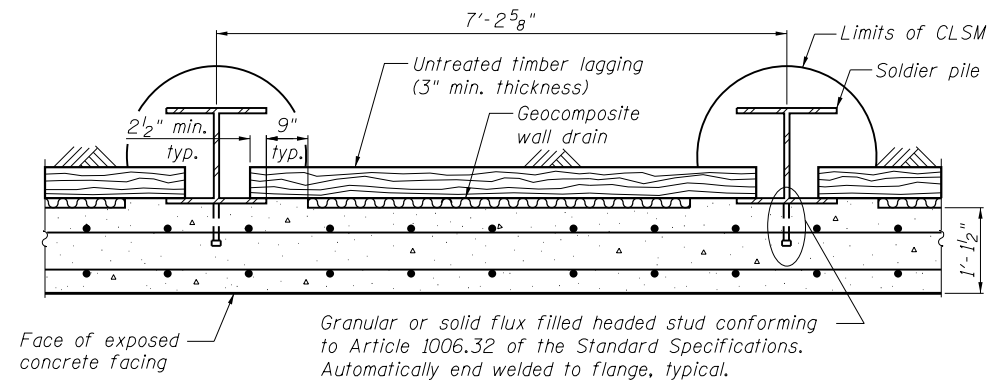
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

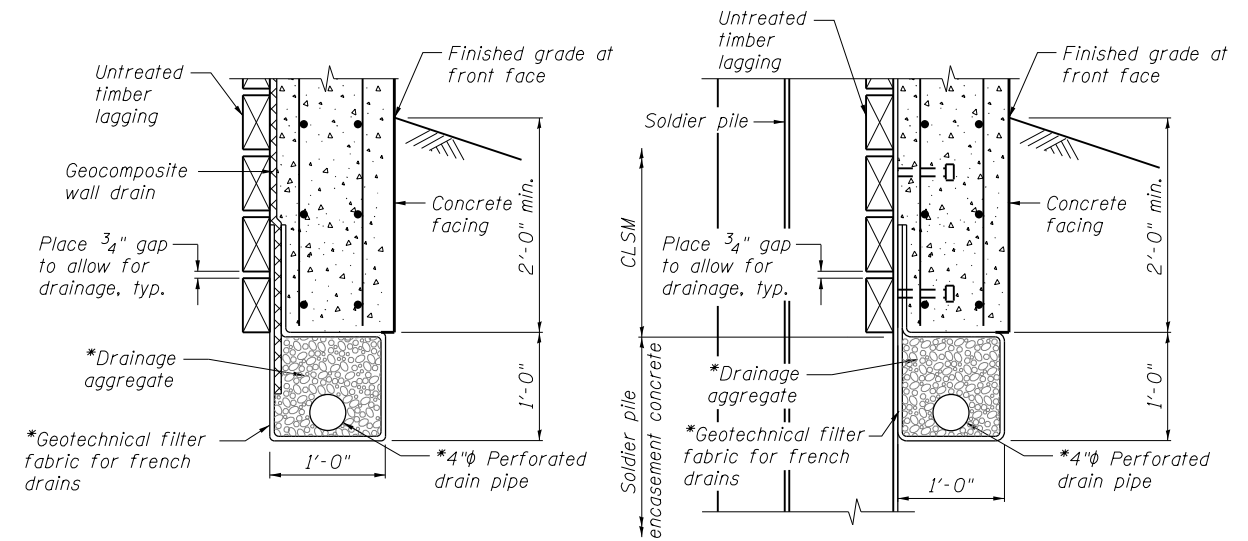
**TYPICAL SECTION
STRUCTURE NUMBER 016-1391**

SHEET NO. 4 OF 13 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				

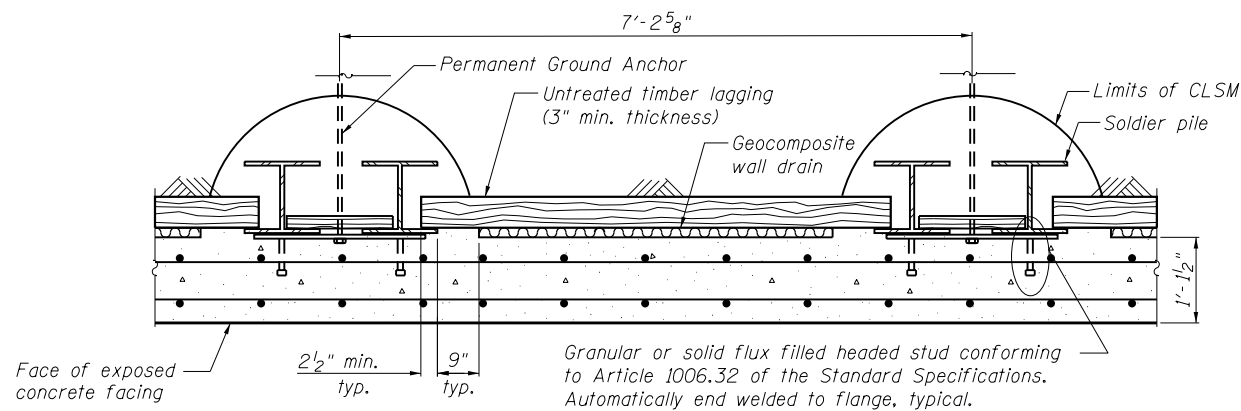


SECTION THRU DRILLED SOLDIER PILE WALL

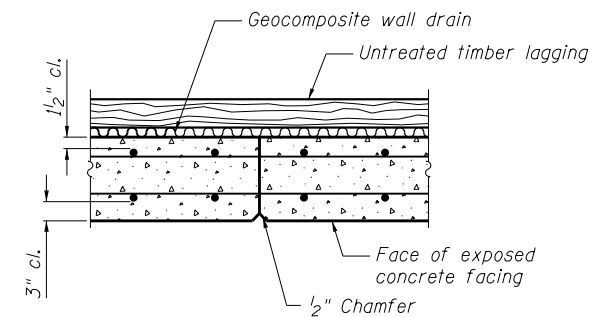


PIPE UNDERDRAIN DETAIL

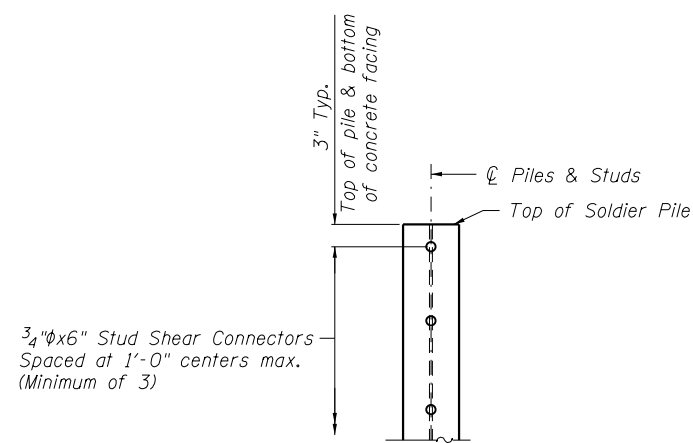
*Included in the cost of Pipe Underdrains for Structures 4"



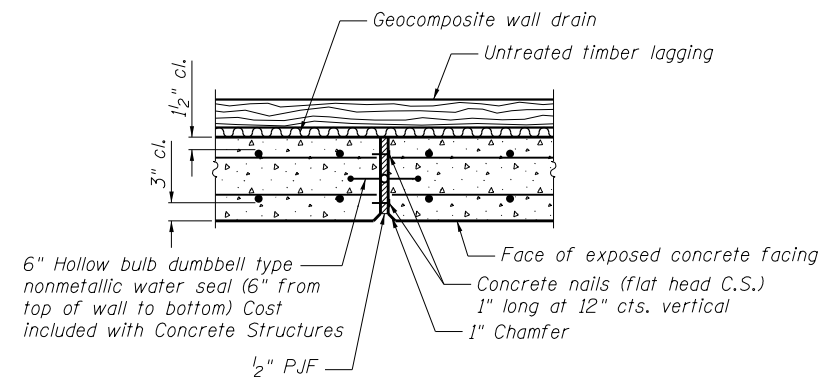
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CONSTRUCTION JOINT DETAIL



DETAIL OF SHEAR STUD PLACEMENT



EXPANSION JOINT DETAIL

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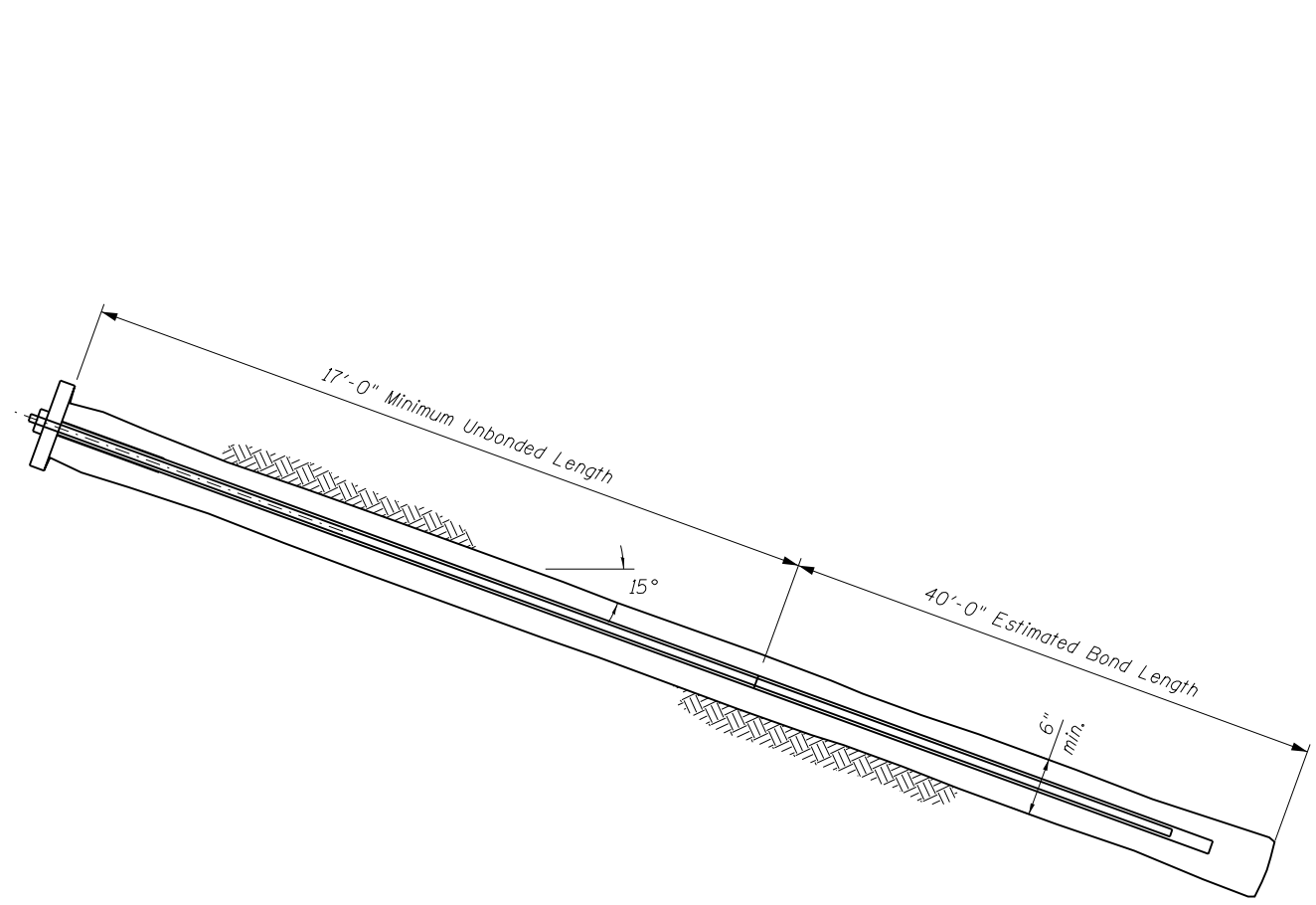
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILS
STRUCTURE NO. 016-1391

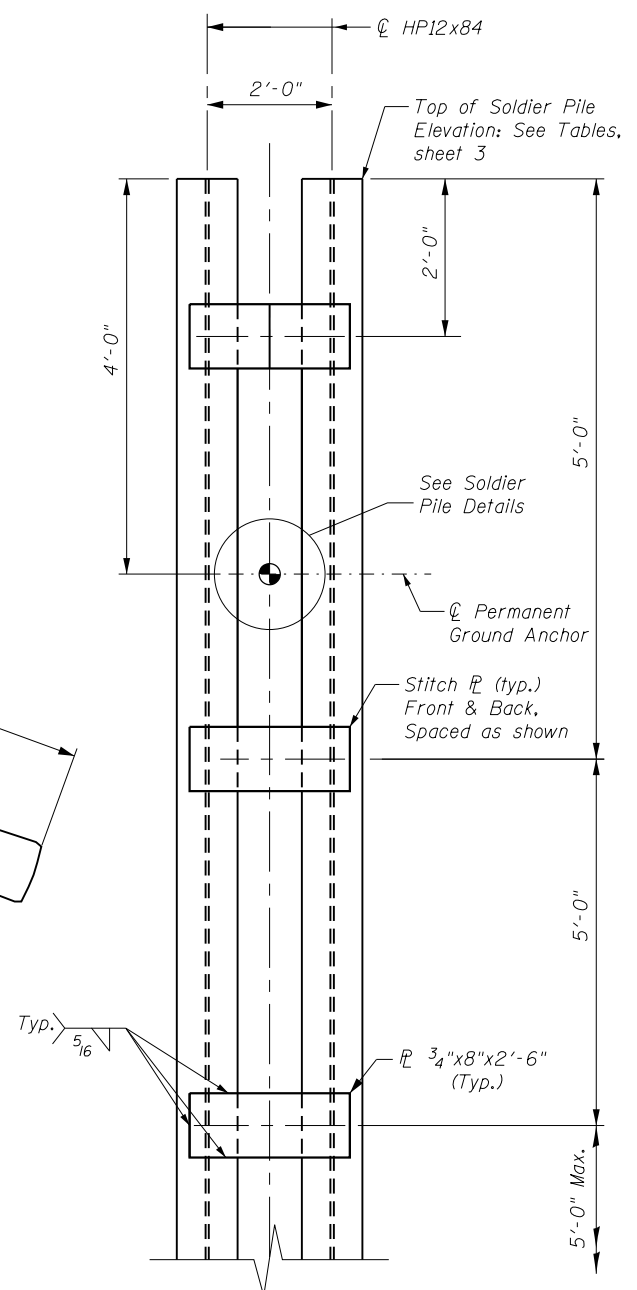
SHEET NO. 5 OF 13 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 60N83				

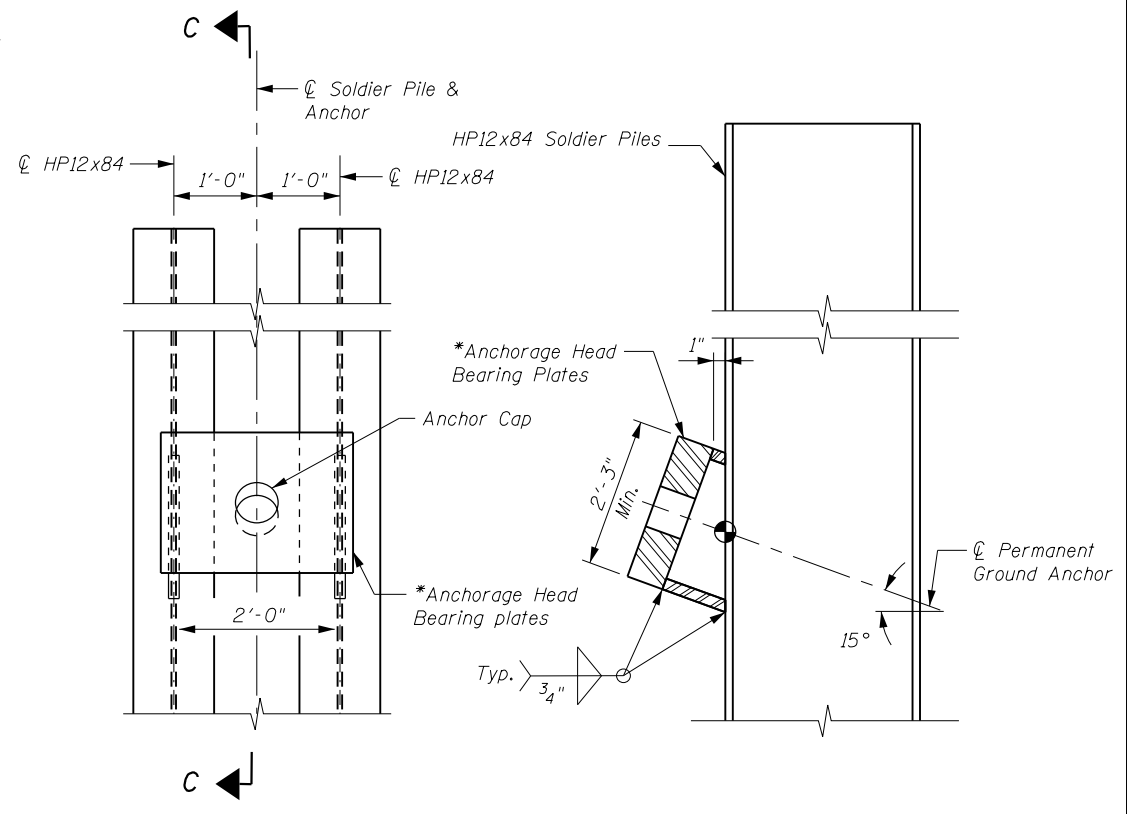
ILLINOIS FED. AID PROJECT



PERMANENT GROUND ANCHOR DETAIL



TYPICAL ELEVATION VIEW OF DOUBLE SOLDIER PILES



ELEVATION

SECTION C-C

SOLDIER PILE DETAILS

*Thickness and size to be provided by anchor manufacturer.

GROUND ANCHOR SUMMARY TABLE

Design Load (Kips)	Prestressing Steel**		Minimum Unbonded Length (ft.)	Estimated Bonded Length (ft.)***
	Nominal Strand Diameter (in.)	Number of Strands		
66	.217	3	17	40

**The Prestressing Steel Tendon must consist of one High-Strength Bar (AASHTO M 275) of the Nominal Diameter shown or the specified number of Seven-wire Strands (AASHTO M 203 Grade 270, 0.6"φ)

*** Estimated length only. The Contractor must determine the bonded length necessary to satisfy the Test Load Requirements.

FILE NAME = REF1E18



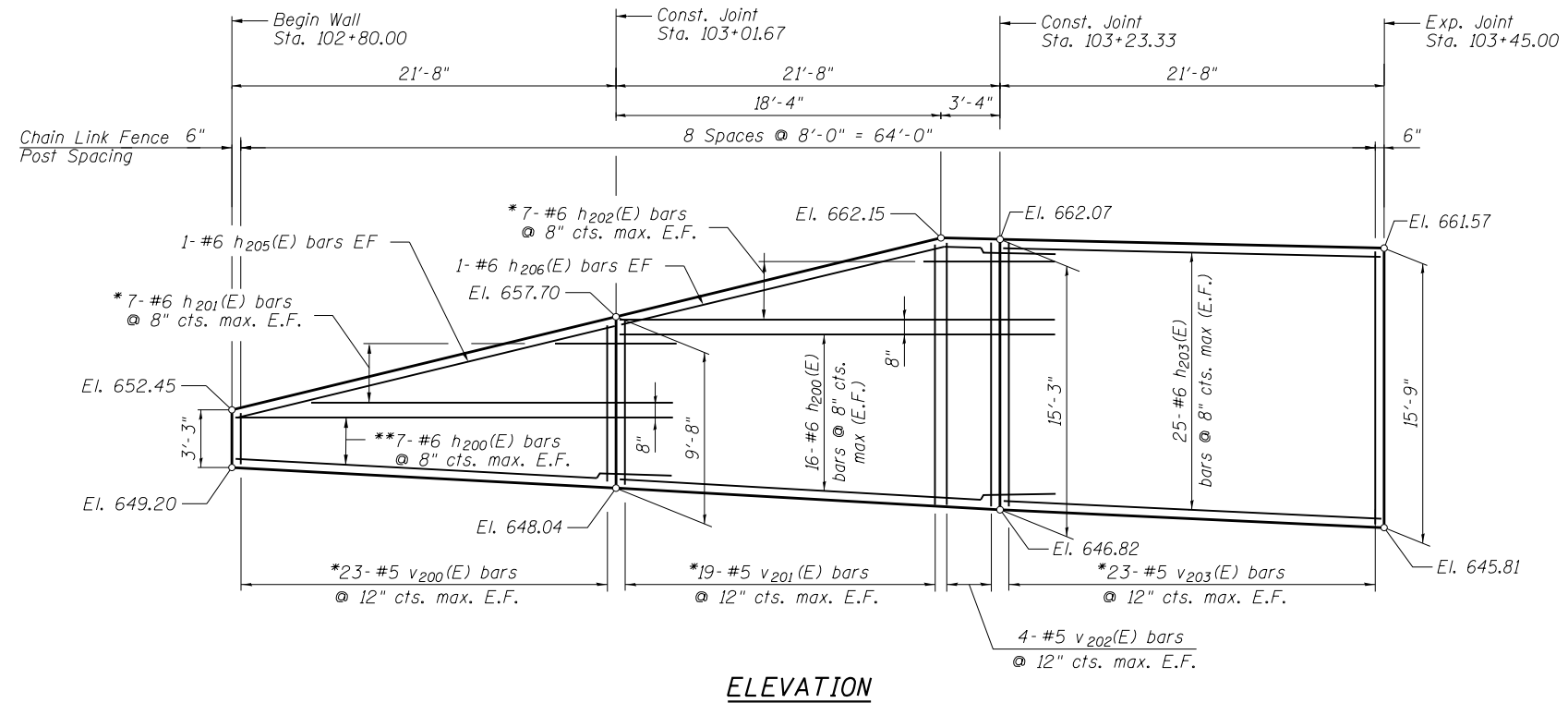
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

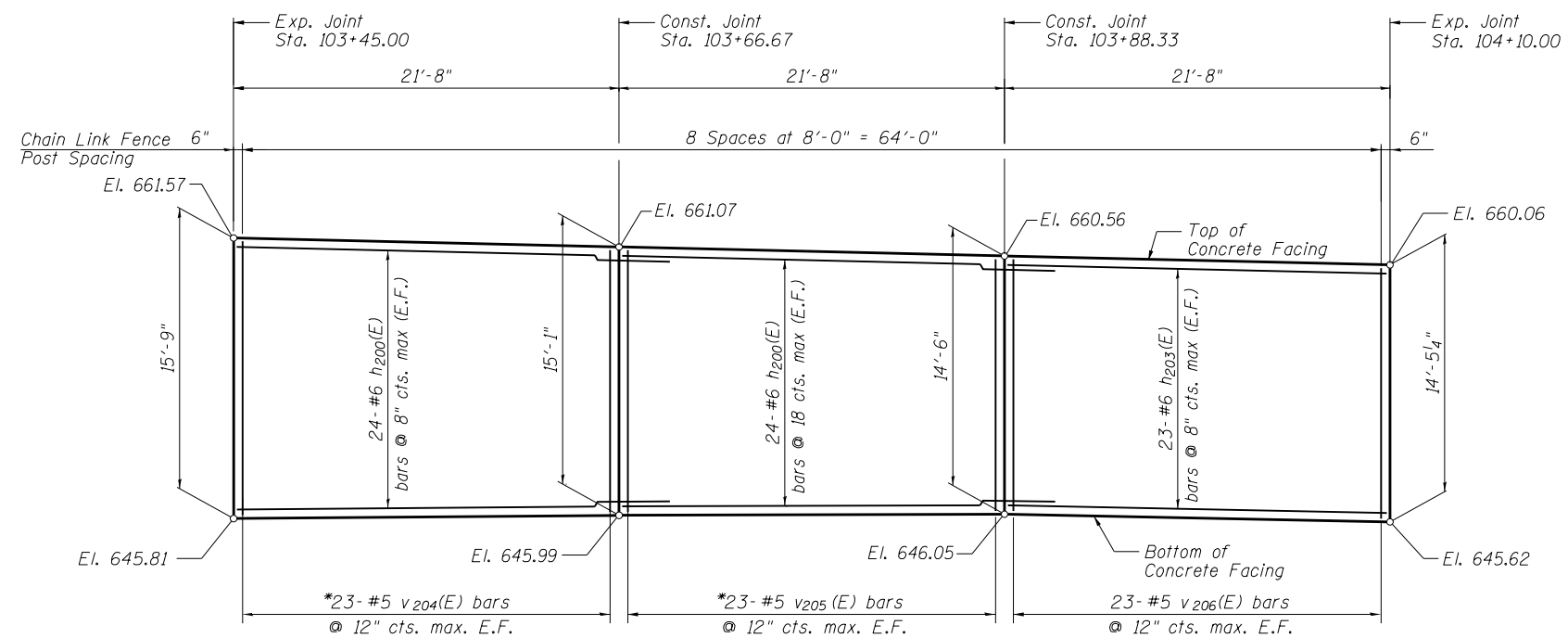
TIE-BACK DETAILS
STRUCTURE NO. 016-1391

SHEET NO. 6 OF 13 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	148
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				



ELEVATION



ELEVATION

Notes:

Minimum lap for #6 bar is 4'-4".

Space reinforcement in wall to miss shear studs.

* signifies cut bar. Order per length on Bill of Material. Cut as shown in Cutting Diagram and use half of bars in each face.

See Sheet 8 for Concrete Facing Details and Bill of Material.

** flare as needed for 10" spacing.

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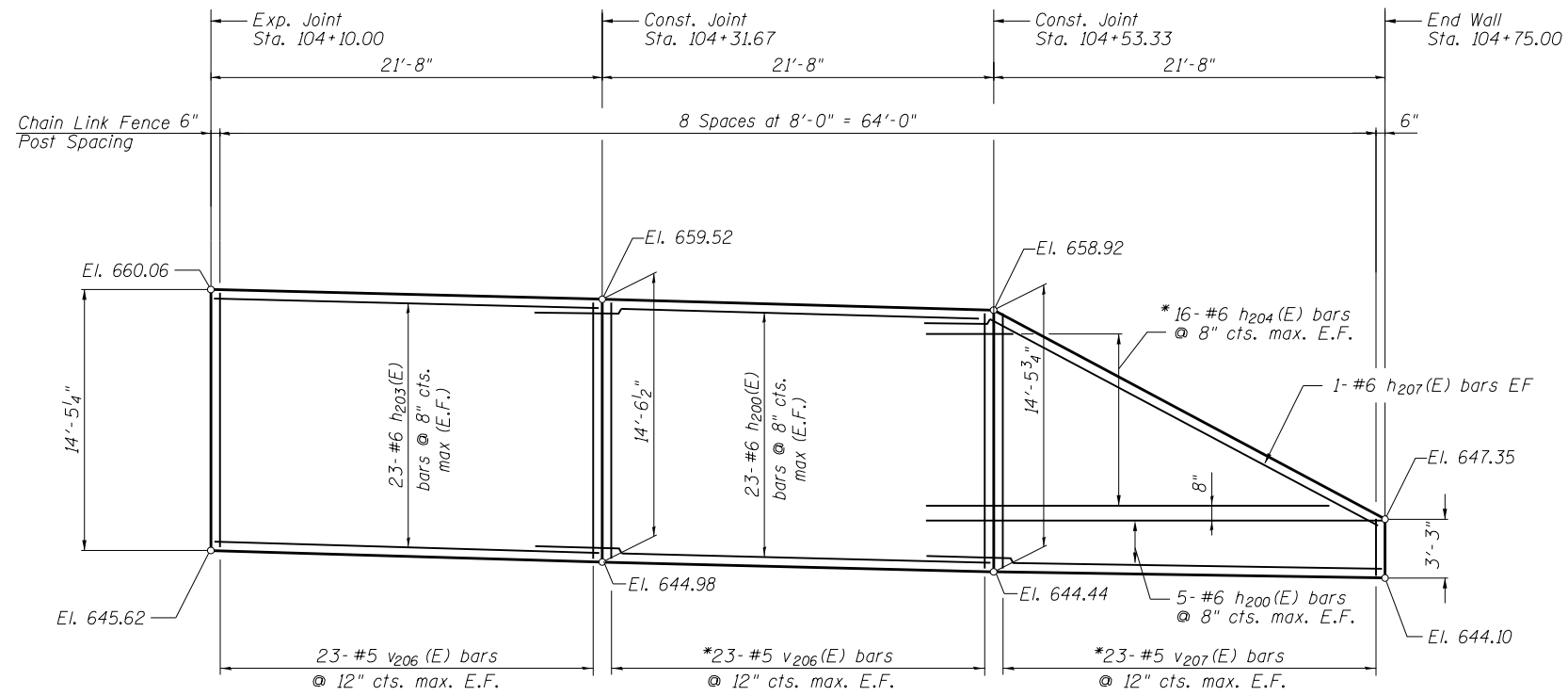
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CONCRETE FACING
STRUCTURE NO. 016-1391**

SHEET NO. 7 OF 13 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	149
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				



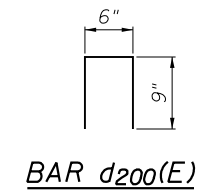
ELEVATION

Notes:

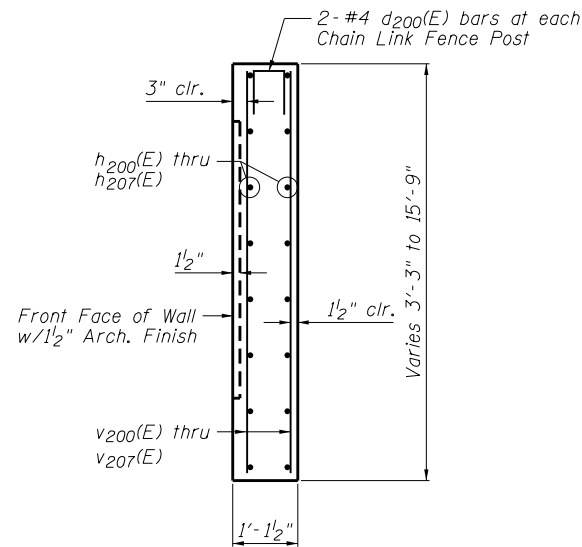
Minimum lap for #6 bar is 4'-4".

Space reinforcement in wall to miss shear studs.

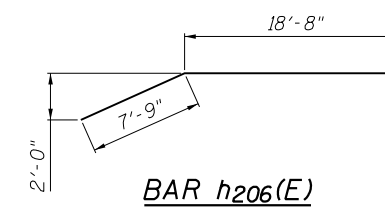
* signifies cut bar. Order per length on Bill of Material. Cut as shown in Cutting Diagram and use half of bars in each face.



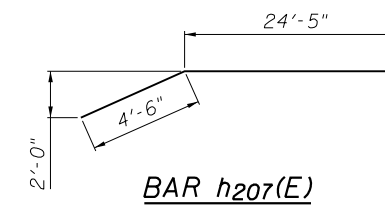
BAR d200(E)



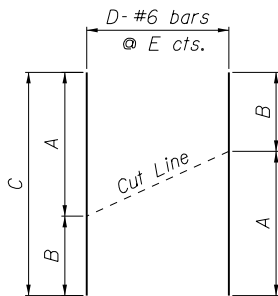
SECTION THRU CONCRETE FACING



BAR h206(E)



BAR h207(E)



CUTTING DIAGRAM

Bar	A	B	C	D	E
h201(E)	23'-0"	6'-6"	29'-6"	7	8"
h202(E)	25'-0"	11'-3"	36'-0"	7	8"
h204(E)	25'-0"	6'-3"	31'-3"	16	8"
v200(E)	9'-4"	2'-11"	12'-3"	23	12"
v201(E)	15'-0"	9'-4"	24'-4"	19	12"
v203(E)	14'-11"	15'-5"	30'-4"	23	12"
v204(E)	15'-5"	14'-9"	30'-2"	23	12"
v205(E)	14'-9"	14'-3"	29'-0"	23	12"
v207(E)	14'-2"	2'-11"	17'-1"	23	12"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d200(E)	54	#4	2'-0"	□
h200(E)	198	#6	26'-2"	—
h201(E)	7	#6	29'-6"	—
h202(E)	7	#6	36'-0"	—
h203(E)	142	#6	21'-4"	—
h204(E)	16	#6	31'-3"	—
h205(E)	2	#6	22'-0"	—
h206(E)	2	#6	26'-5"	—
h207(E)	2	#6	28'-11"	—
v200(E)	23	#5	12'-3"	—
v201(E)	19	#5	24'-4"	—
v202(E)	8	#5	14'-11"	—
v203(E)	23	#5	30'-4"	—
v204(E)	23	#5	30'-2"	—
v205(E)	23	#5	29'-0"	—
v206(E)	138	#5	14'-2"	—
v207(E)	23	#5	17'-1"	—
Item		Unit	Quantity	
Concrete Structures		Cu. Yd.	106.1	
Reinforcement Bars, Epoxy Coated		Pound	19,580	
Pipe Underdrains for Structures 4"		Foot	275	
Geocomposite Wall Drain		Sq. Yd.	96	

FILE NAME = REF1E18



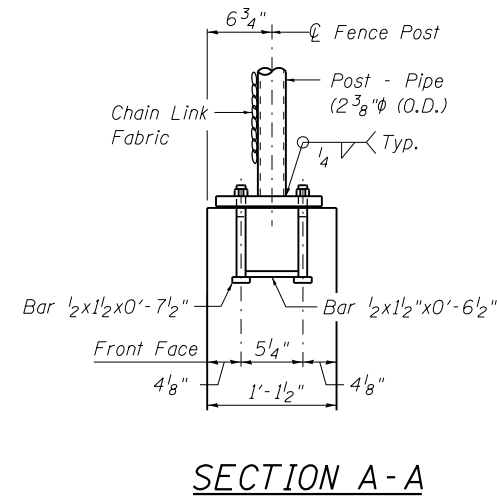
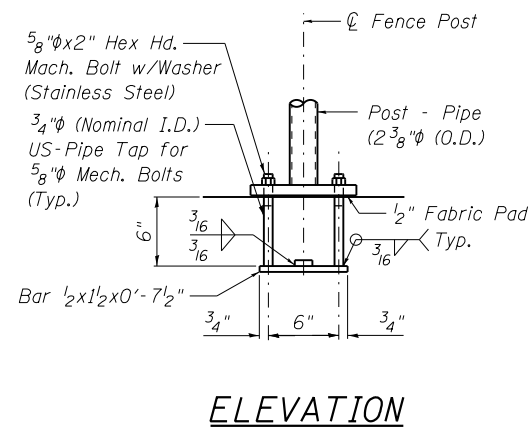
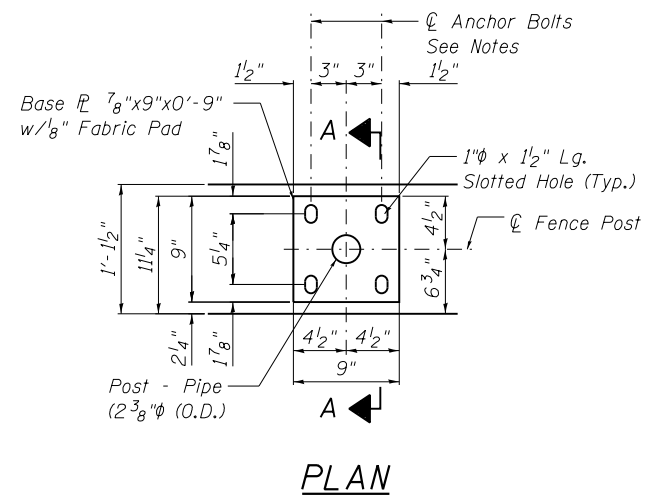
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

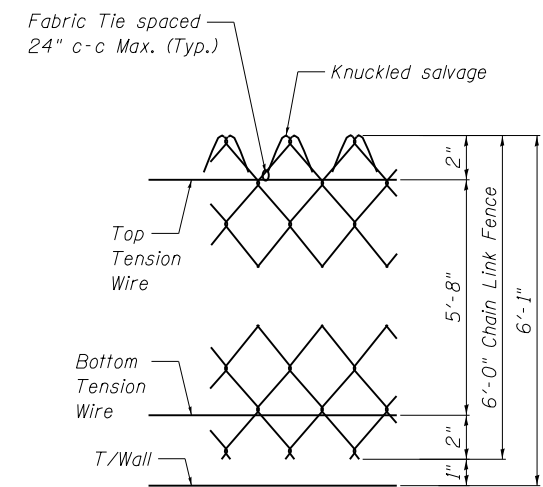
**CONCRETE FACING AND DETAILS
STRUCTURE NO. 016-1391**

SHEET NO. 8 OF 13 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	150
			CONTRACT NO. 60N83	
ILLINOIS FED. AID PROJECT				



In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 5/8" ϕ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.



FENCE POST ANCHOR ASSEMBLY DETAILS

FILE NAME = REFLEL.S



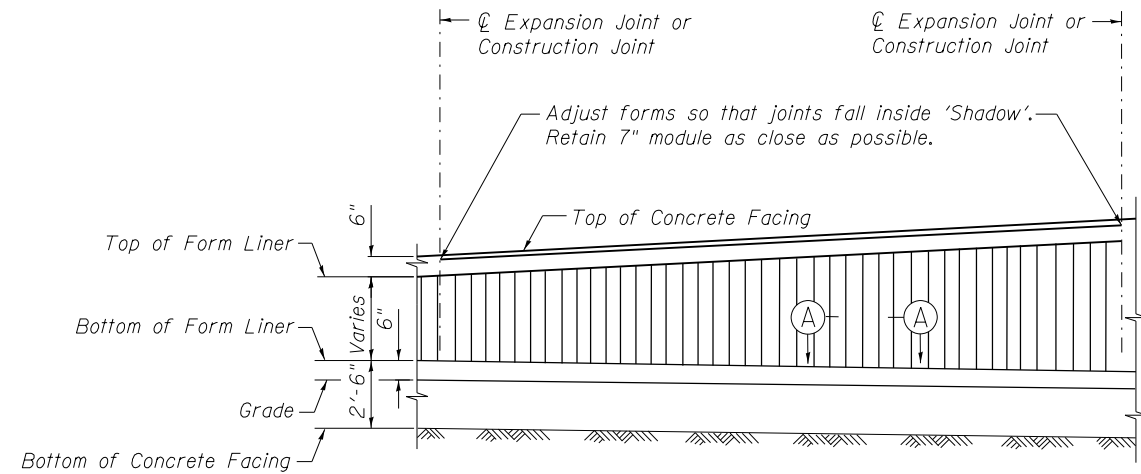
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

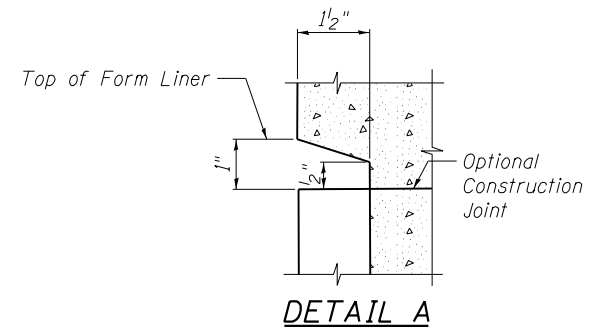
CHAIN LINK FENCE DETAILS
STRUCTURE NO. 016-1391

SHEET NO. 9 OF 13 SHEETS

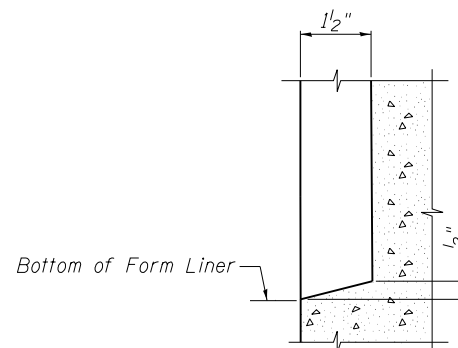
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305	1920.01-BR	COOK	194	151
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				



ELEVATION-TYPICAL FORM LINER FINISH



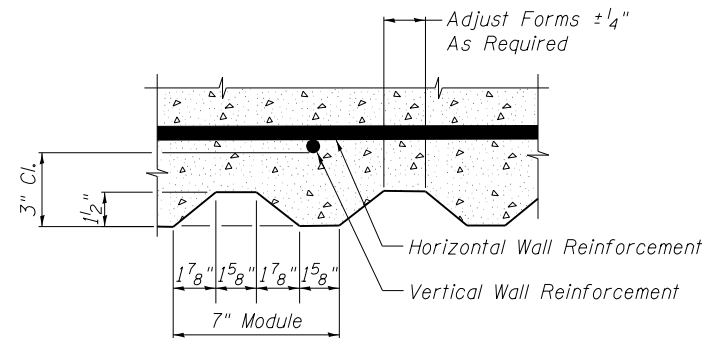
DETAIL A



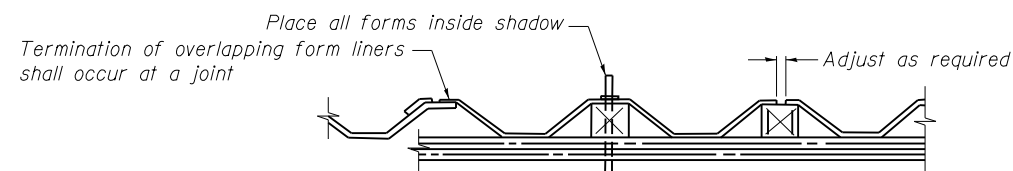
DETAIL B

FORM LINER ELEVATION TABLE

Station	Form Liner Top Elevation	Form Liner Bottom Elevation
102+80.00	651.95	651.70
103+01.67	657.20	650.54
103+20.00	661.65	649.30
103+23.33	661.57	649.32
103+45.00	661.07	648.31
103+66.67	660.57	648.49
103+88.33	660.06	648.55
104+10.00	659.56	648.12
104+25.00	659.21	647.66
104+31.67	659.02	647.48
104+53.33	658.42	646.94
104+75.00	646.85	646.60



SECTION A-A



SUGGESTED FORMWORK DETAIL

FILE NAME = REFLEL.S



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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ARCHITECTURAL FINISH DETAILS
STRUCTURE NO. 016-1391**

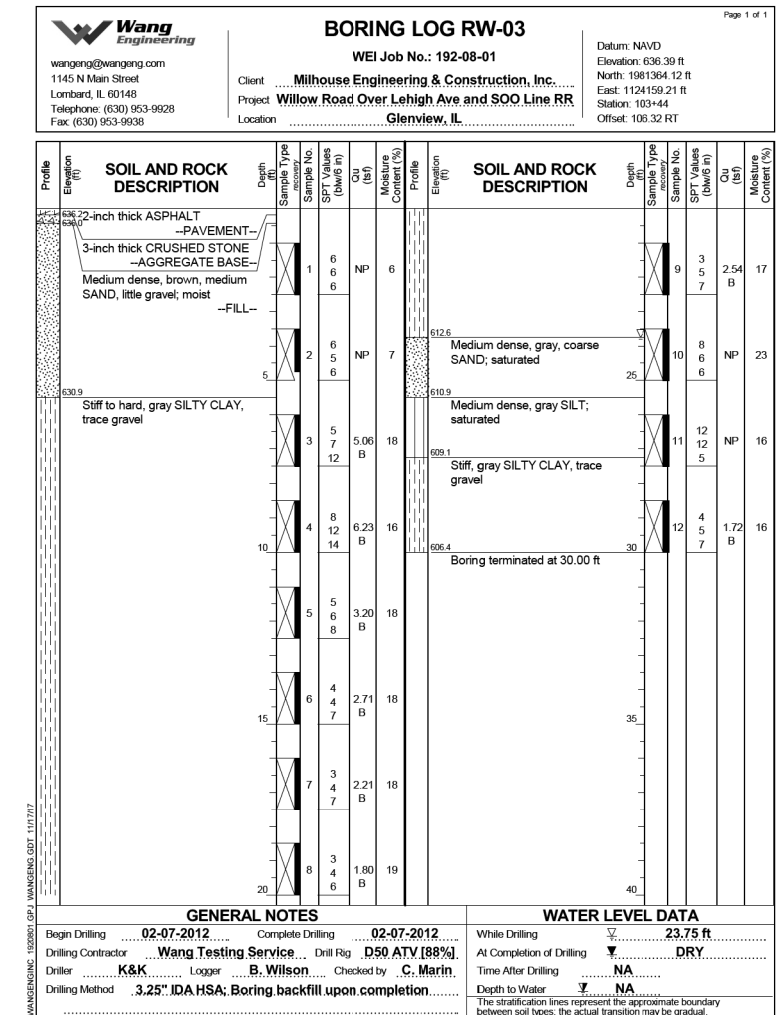
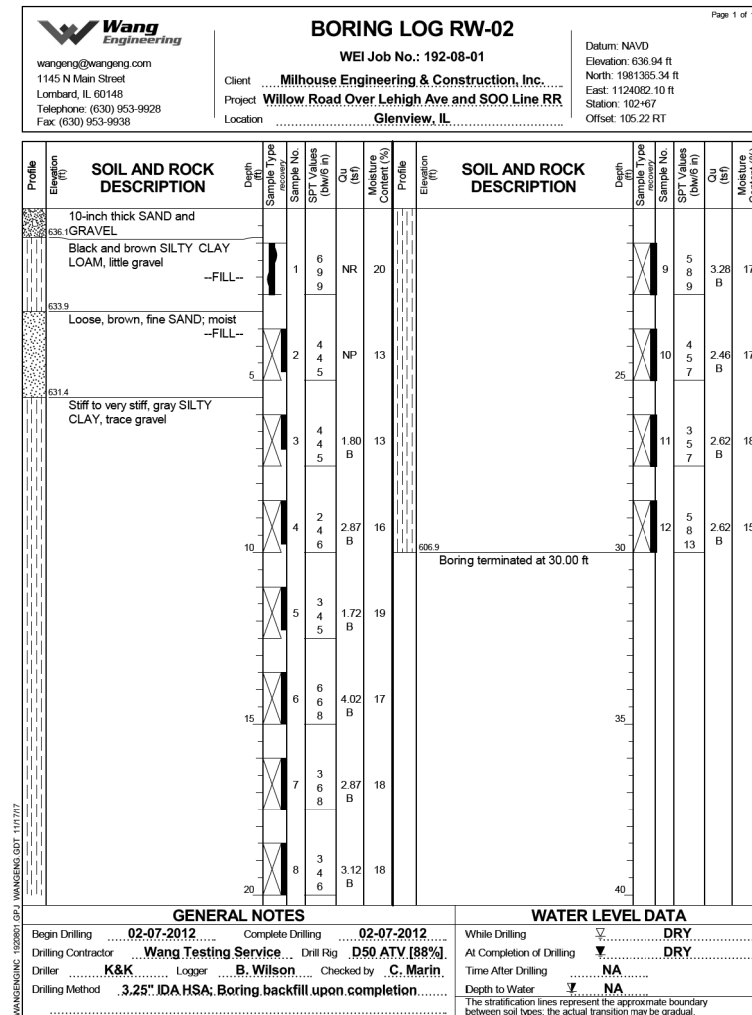
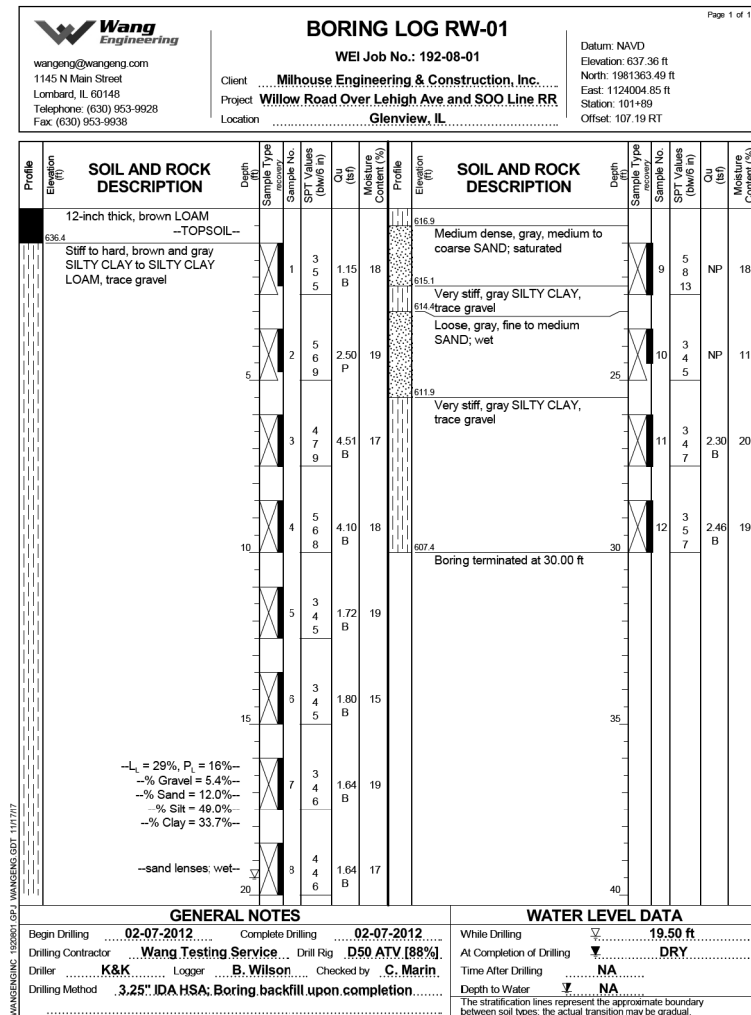
SHEET NO. 10 OF 13 SHEETS

F.A.P. RTE. 305	SECTION 1920.01-BR	COUNTY COOK	TOTAL SHEETS 194	SHEET NO. 152
CONTRACT NO. 60N83				ILLINOIS FED. AID PROJECT

BORING LOG RW-01

BORING LOG RW-02

BORING LOG RW-03



FILE NAME = REFLEL.S



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 PLOT SCALE = *SCALE*
 PLOT DATE = 12/13/2018

DESIGNED - LAS
 CHECKED - LS
 DRAWN - TCS
 CHECKED - LAS

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BORING LOGS 1
 STRUCTURE NO. 016-1391
 SHEET NO. 11 OF 13 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	153
CONTRACT NO. 60N83				

ILLINOIS FED. AID PROJECT

BORING LOG RW-04

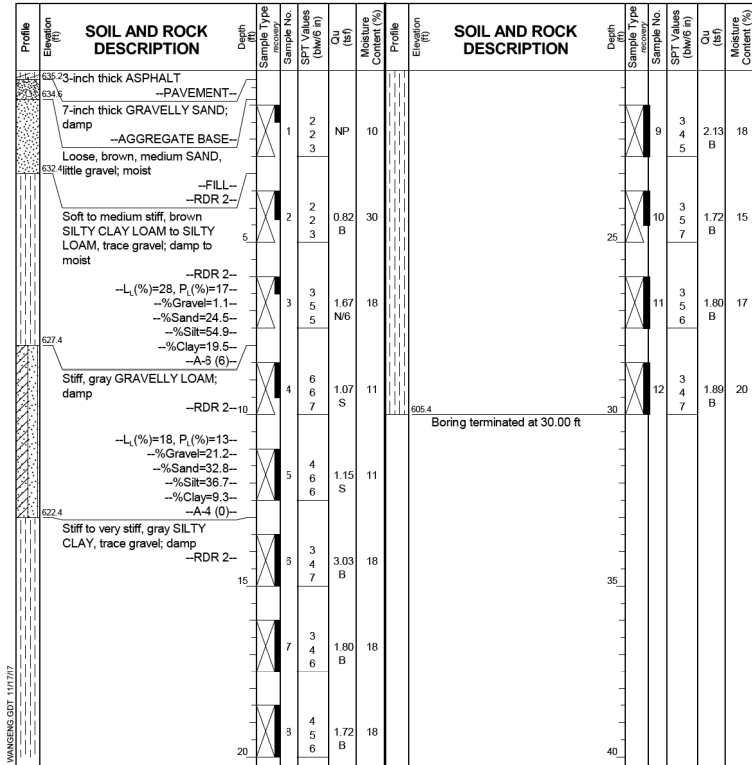
BORING LOG RW-05

Wang Engineering
 wengeng@wengeng.com
 1145 N Main Street
 Lombard, IL 60148
 Telephone: (630) 953-9928
 Fax: (630) 953-9938

BORING LOG RW-04
 WEI Job No.: 192-08-01
 Client: Milhouse Engineering & Construction, Inc.
 Project: Willow Road Over Lehigh Ave and SOO Line RR
 Location: Glenview, IL

Datum: NAVD
 Elevation: 635.40 ft
 North: 1981370.64 ft
 East: 1124229.76 ft
 Station: 104+14
 Offset: 99.69 RT

Page 1 of 1



GENERAL NOTES
 Begin Drilling 10-17-2017 Complete Drilling 10-17-2017
 Drilling Contractor Wang Testing Service Drill Rig D50 TMR [78%]
 Driller R&K Logger T. Rothschild Checked by C. Marin
 Drilling Method 3.25" IDA HSA; Boring backfill upon completion

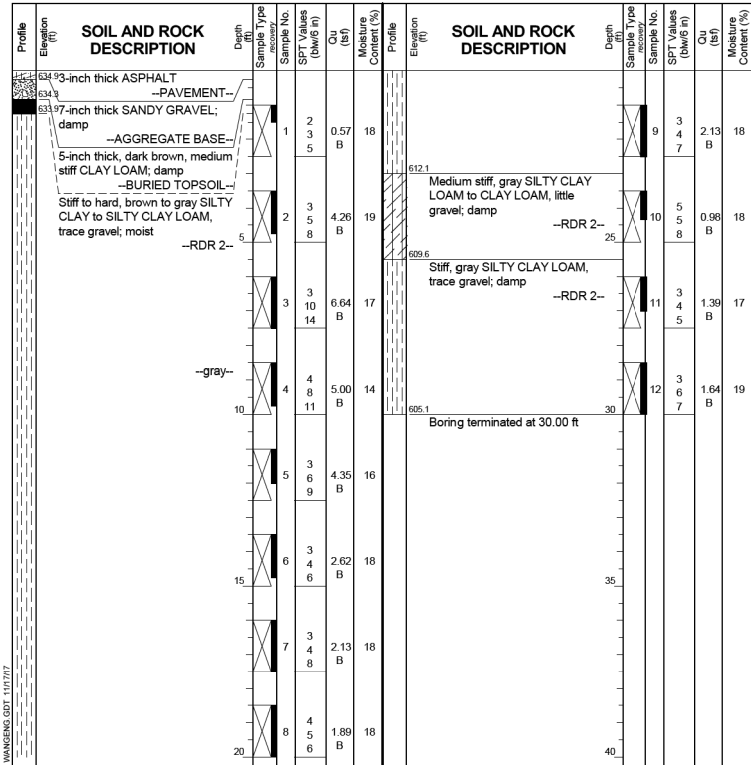
WATER LEVEL DATA
 While Drilling DRY
 At Completion of Drilling DRY
 Time After Drilling NA
 Depth to Water NA
 The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual

Wang Engineering
 wengeng@wengeng.com
 1145 N Main Street
 Lombard, IL 60148
 Telephone: (630) 953-9928
 Fax: (630) 953-9938

BORING LOG RW-05
 WEI Job No.: 192-08-01
 Client: Milhouse Engineering & Construction, Inc.
 Project: Willow Road Over Lehigh Ave and SOO Line RR
 Location: Glenview, IL

Datum: NAVD
 Elevation: 635.10 ft
 North: 1981368.10 ft
 East: 1124309.58 ft
 Station: 104+94
 Offset: 102.12 RT

Page 1 of 1



GENERAL NOTES
 Begin Drilling 10-17-2017 Complete Drilling 10-17-2017
 Drilling Contractor Wang Testing Service Drill Rig D50 TMR [78%]
 Driller R&K Logger T. Rothschild Checked by C. Marin
 Drilling Method 3.25" IDA HSA; Boring backfill upon completion

WATER LEVEL DATA
 While Drilling DRY
 At Completion of Drilling DRY
 Time After Drilling NA
 Depth to Water NA
 The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual

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PLOT SCALE = *SCALE*	CHECKED - LS	REVISED -
PLOT DATE = 12/13/2018	DRAWN - TCS	REVISED -
	CHECKED - LAS	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BORING LOGS 2
 STRUCTURE NO. 016-1391
 SHEET NO. 12 OF 13 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	154
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				

BORING LOG BB-04 (Sheet 1 of 3)

BORING LOG BB-04 (Sheet 2 of 3)

BORING LOG BB-04 (Sheet 3 of 3)

Wang Engineering wangeng@wangeng.com 1145 N Main Street Lombard, IL 60148 Telephone: 630 953-9928 Fax: 630 953-9938		BORING LOG BB-04 WEI Job No.: 703-03-01 Client: Zroka Engineering Project: Willow Road Over Lehigh Ave. and SOO Line RR Location: Glenview, IL		Datum: NGVD Elevation: 667.82 ft North: 1961445.15 ft East: 1124006.71 ft Station: 101+93 Offset: 25.25 RT	
SOIL AND ROCK DESCRIPTION Profile Elevation (ft) 667.82 2-inch thick ASPHALT over 8-inch thick CONCRETE --PAVEMENT-- 3-inch thick, brown, GRAVELLY SAND --AGGREGATE BASE-- Very stiff to hard, brown, gray and black SILTY CLAY to SILTY CLAY LOAM with trace gravel --FILL-- Profile Elevation (ft) 653.8 Very stiff, black SILTY CLAY LOAM with trace organic matter --BURIED TOPSOIL-- Profile Elevation (ft) 651.3 Stiff to very stiff, brown and gray SILTY CLAY with trace gravel			SOIL AND ROCK DESCRIPTION Depth (ft) Sample No. SPT (blows (ft/ft)) Cu (ksi) Moisture Content (%) 1 7 9 > 4.50 P 12 2 8 10 > 4.50 P 16 3 5 6 2.50 P 21 4 4 3 2.62 B 20 5 3 4 NR 6 3 4 2.87 B 18 7 3 4 2.38 B 16 8 3 5 2.13 B 19 9 5 8 2.87 B 16 10 5 6 2.87 B 18 11 5 6 NR 12 3 4 2.13 B 20 13 3 4 2.00 P 34 14 3 3 1.97 B 21		
GENERAL NOTES Begin Drilling 02-15-2012 Complete Drilling 02-15-2012 Drilling Contractor Wang Testing Service Drill Rig D-50 ATV Driller K&K Logger F. Bozza Checked by Drilling Method 3.25" IDA HSA upto 30', followed by 3" roller bit mud rotary. Boring backfill upon completion.			WATER LEVEL DATA While Drilling <input checked="" type="checkbox"/> DRY At Completion of Drilling <input checked="" type="checkbox"/> MUD Time After Drilling NA Depth to Water <input checked="" type="checkbox"/> NA The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.		

Wang Engineering wangeng@wangeng.com 1145 N Main Street Lombard, IL 60148 Telephone: 630 953-9928 Fax: 630 953-9938		BORING LOG BB-04 WEI Job No.: 703-03-01 Client: Zroka Engineering Project: Willow Road Over Lehigh Ave. and SOO Line RR Location: Glenview, IL		Datum: NGVD Elevation: 667.82 ft North: 1961445.15 ft East: 1124006.71 ft Station: 101+93 Offset: 25.25 RT	
SOIL AND ROCK DESCRIPTION Profile Elevation (ft) 651.3 Hard, gray SILTY CLAY LOAM with trace gravel			SOIL AND ROCK DESCRIPTION Depth (ft) Sample No. SPT (blows (ft/ft)) Cu (ksi) Moisture Content (%) 15 3 5 2.54 B 19 16 3 3 1.15 B 21 17 4 4 2.38 B 20 18 8 15 3.28 B 18		
GENERAL NOTES Begin Drilling 02-15-2012 Complete Drilling 02-15-2012 Drilling Contractor Wang Testing Service Drill Rig D-50 ATV Driller K&K Logger F. Bozza Checked by Drilling Method 3.25" IDA HSA upto 30', followed by 3" roller bit mud rotary. Boring backfill upon completion.			WATER LEVEL DATA While Drilling <input checked="" type="checkbox"/> DRY At Completion of Drilling <input checked="" type="checkbox"/> MUD Time After Drilling NA Depth to Water <input checked="" type="checkbox"/> NA The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.		

Wang Engineering wangeng@wangeng.com 1145 N Main Street Lombard, IL 60148 Telephone: 630 953-9928 Fax: 630 953-9938		BORING LOG BB-04 WEI Job No.: 703-03-01 Client: Zroka Engineering Project: Willow Road Over Lehigh Ave. and SOO Line RR Location: Glenview, IL		Datum: NGVD Elevation: 667.82 ft North: 1961445.15 ft East: 1124006.71 ft Station: 101+93 Offset: 25.25 RT	
SOIL AND ROCK DESCRIPTION Profile Elevation (ft) 677.8 Boring terminated at 90.00 ft			SOIL AND ROCK DESCRIPTION Depth (ft) Sample No. SPT (blows (ft/ft)) Cu (ksi) Moisture Content (%) 19 6 7 2.71 B 19 20 7 9 2.87 B 15 21 5 6 1.97 B 16 22 7 15 4.59 B 23 10 13 4.51 B 15 24 12 16 5.00 B 13		
GENERAL NOTES Begin Drilling 02-15-2012 Complete Drilling 02-15-2012 Drilling Contractor Wang Testing Service Drill Rig D-50 ATV Driller K&K Logger F. Bozza Checked by Drilling Method 3.25" IDA HSA upto 30', followed by 3" roller bit mud rotary. Boring backfill upon completion.			WATER LEVEL DATA While Drilling <input checked="" type="checkbox"/> DRY At Completion of Drilling <input checked="" type="checkbox"/> MUD Time After Drilling NA Depth to Water <input checked="" type="checkbox"/> NA The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.		

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	CHECKED - LAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

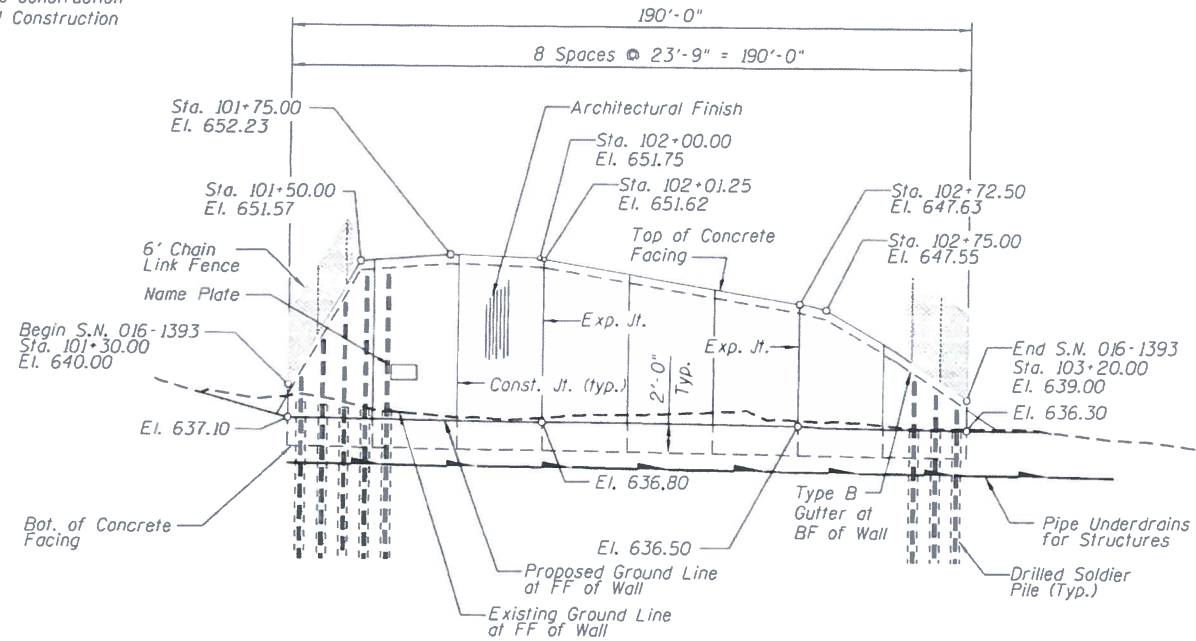
BORING LOGS 3
STRUCTURE NO. 016-1391
SHEET NO. 13 OF 13 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	155
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				

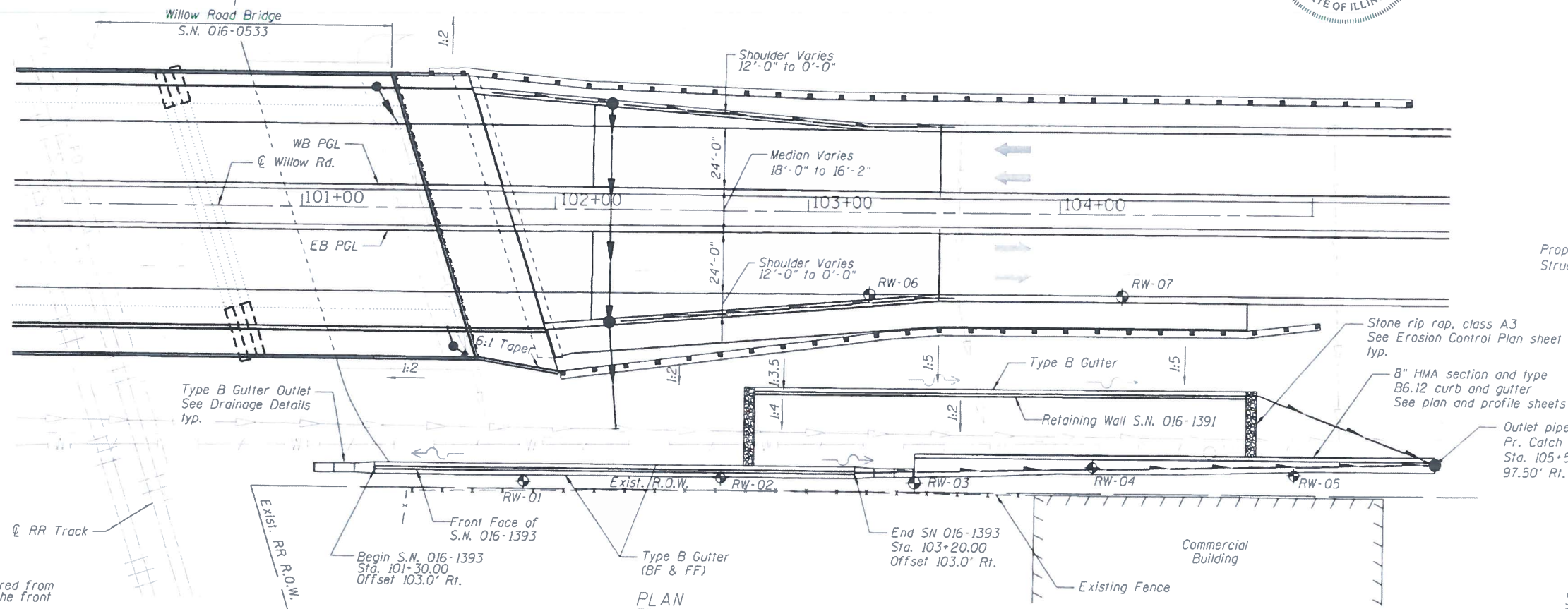
Bench Mark BMI: Located on southwest wingwall of the Willow Road Bridge (S.N. 016-0533) over Lehigh Avenue & Soo Line Railroad, Sta. 98+74.59, 40.03' Rt., El. 669.03

Existing Structure: None

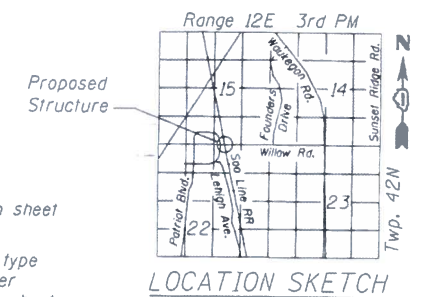
Construction will be completed utilizing staged construction as part of the Bridge SN 016-0533, Stage 1 Construction



ELEVATION S.N. 016-1393



PLAN



LOCATION SKETCH

GENERAL PLAN
WILLOW ROAD
FAP 305 SEC. 1920.01-BR
COOK COUNTY
STA. 101+30 TO STA. 103+20
STRUCTURE NO. 016-1393

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Dr. Carl P. ...
ENGINEER OF BRIDGES AND STRUCTURES

Frederic C. Owens 2/1/19
Signature Date

November 30, 2020
Expires



Note:
Offsets are measured from
the Willow Road to the front
face of wall.

FILE NAME = #FILES#



USER NAME = MS.USER	DESIGNED - LAS	REVISED -
	CHECKED - LS	REVISED -
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PLOT DATE = 2/1/2019	CHECKED - LAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STRUCTURE NUMBER 016-1393

SHEET NO. 1 OF 12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	156
CONTRACT NO. 60N83				

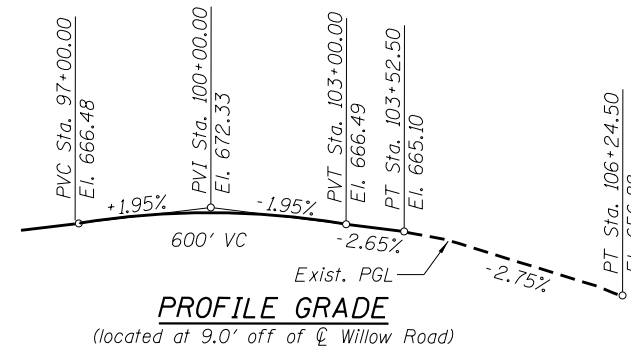
ILLINOIS FED. AID PROJECT

INDEX OF SHEETS

1. General Plan & Elevation
2. General Data
3. Soldier Pile Layout
4. Typical Section
5. Details
6. Concrete Facing
7. Concrete Facing and Details
8. Chain Link Fence Details
9. Architectural Finish Details
10. Boring Logs 1
11. Boring Logs 2
12. Boring Logs 3

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Structure Excavation	Cu. Yd.	90
Concrete Structures	Cu. Yd.	106.2
Form Liner Textured Surface	Sq. Ft.	1,979
Stud Shear Connectors	Each	397
Reinforcement Bars, Epoxy Coated	Pound	13,420
Name Plates	Each	1
Furnishing Soldier Piles (W Section)	Foot	1,440
Drilling and Setting Soldier Piles (In Soil)	Cu. Ft.	10,610
Untreated Timber Lagging	Sq. Ft.	1,873
Geocomposite Wall Drain	Sq. Yd.	135
Chain Link Fence, 6' Attached to Structure	Foot	190
Pipe Underdrains for Structures 4"	Foot	421



STATION 101+30.00
 BUILT 201_ BY
 STATE OF ILLINOIS
 F.A.P. RT. 305
 SEC. 1920.01-BR
 STR. NO. 016-1393

NAME PLATE
See Std. 515001

DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design Specifications, 8th edition

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)
 $f_y = 50,000$ psi (M270 Grade 50)

GENERAL NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. The Contractor is responsible for the design and performance of the lagging using no less than 3" nominal rough-sawn thickness and timber with a minimum allowable bending stress of 1000 psi.

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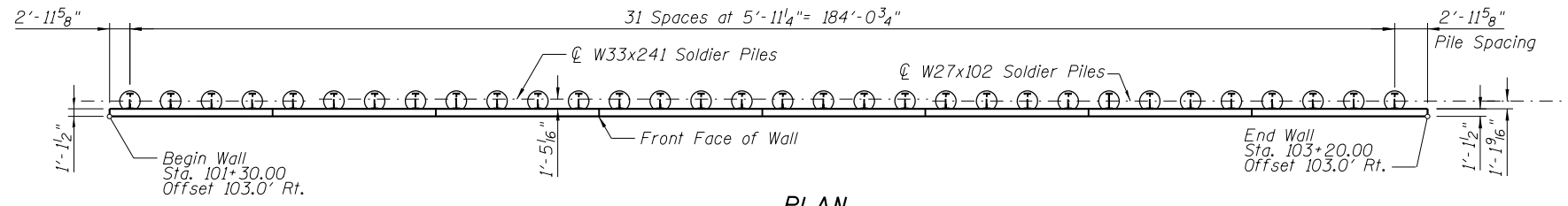
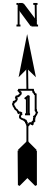
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

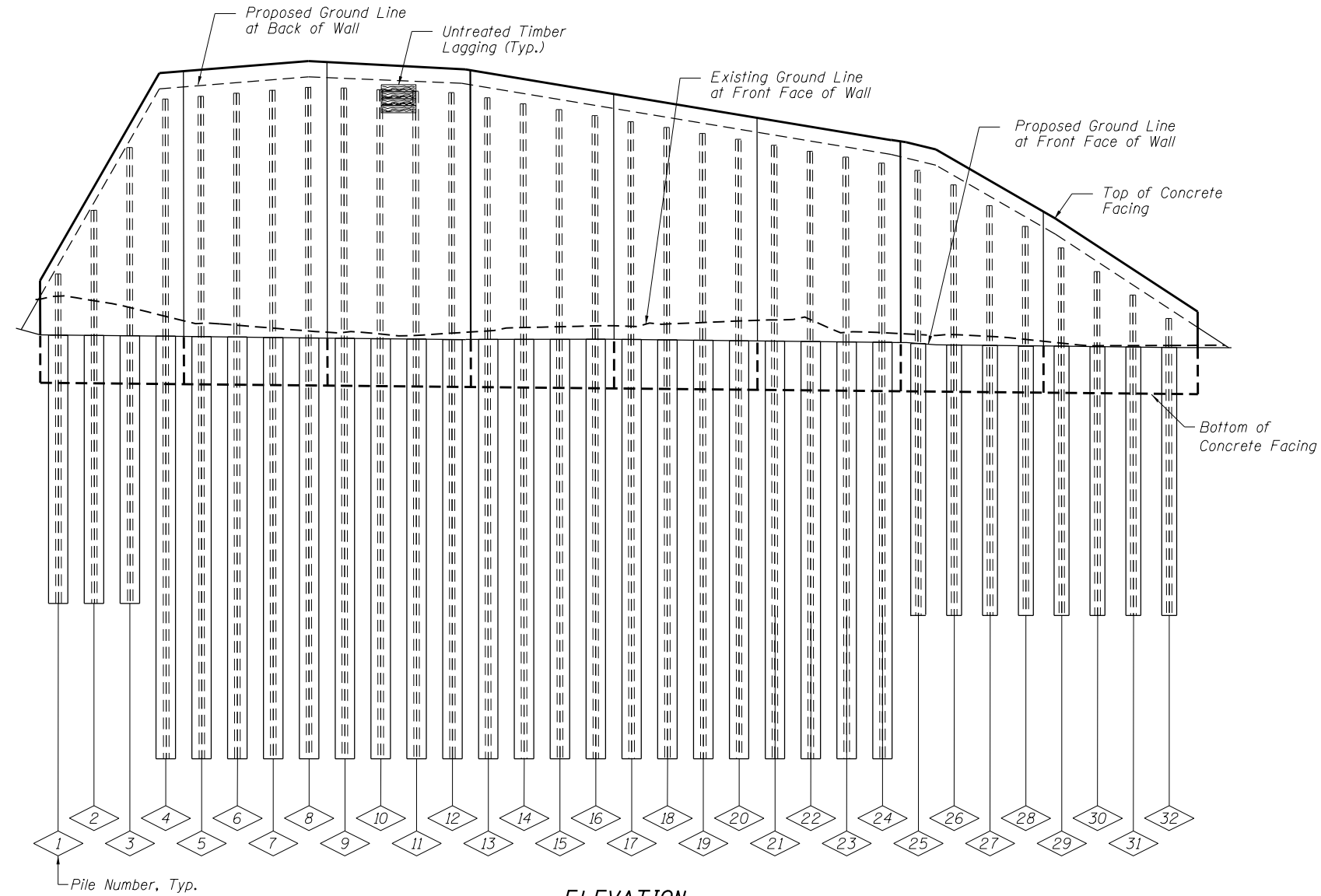
**GENERAL DATA
STRUCTURE NO. 016-1393**

SHEET NO. 2 OF 12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	157
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				



PLAN



ELEVATION

PILE SUMMARY

Pile No.	Station	Offset to ¢ Pile	Pile Designation	Length	Bottom Elevation	Top Elevation	Pile No.	Station	Offset to ¢ Pile	Pile Designation	Length	Bottom Elevation	Top Elevation	Pile No.	Station	Offset to ¢ Pile	Pile Designation	Length	Bottom Elevation	Top Elevation
1	101+32.97	100.45	W33X241	30.47	609.00	639.47	13	102+04.22	100.45	W33X241	52.26	597.00	649.26	25	102+75.47	100.74	W27X102	36.21	609.00	645.21
2	101+38.91	100.45	W33X241	33.90	609.00	642.90	14	102+10.16	100.45	W33X241	51.93	597.00	648.93	26	102+81.41	100.74	W27X102	35.08	609.00	644.08
3	101+44.84	100.45	W33X241	37.34	609.00	646.34	15	102+16.09	100.45	W33X241	51.60	597.00	648.60	27	102+87.34	100.74	W27X102	33.95	609.00	642.95
4	101+50.78	100.45	W33X241	52.34	597.00	649.34	16	102+22.03	100.45	W33X241	51.27	597.00	648.27	28	102+93.28	100.74	W27X102	32.83	609.00	641.83
5	101+56.72	100.45	W33X241	52.50	597.00	649.50	17	102+27.97	100.45	W33X241	50.93	597.00	647.93	29	102+99.22	100.74	W27X102	31.70	609.00	640.70
6	101+62.66	100.45	W33X241	52.65	597.00	649.65	18	102+33.91	100.45	W33X241	50.60	597.00	647.60	30	103+05.16	100.74	W27X102	30.57	609.00	639.57
7	101+68.59	100.45	W33X241	52.81	597.00	649.81	19	102+39.84	100.45	W33X241	50.27	597.00	647.27	31	103+11.09	100.74	W27X102	29.44	609.00	638.44
8	101+74.53	100.45	W33X241	52.97	597.00	649.97	20	102+45.78	100.45	W33X241	49.94	597.00	646.94	32	103+17.03	100.74	W27X102	28.31	609.00	637.31
9	101+80.47	100.45	W33X241	52.88	597.00	649.88	21	102+51.72	100.45	W33X241	49.60	597.00	646.60							
10	101+86.41	100.45	W33X241	52.76	597.00	649.76	22	102+57.66	100.45	W33X241	49.27	597.00	646.27							
11	101+92.34	100.45	W33X241	52.65	597.00	649.65	23	102+63.59	100.45	W33X241	48.94	597.00	645.94							
12	101+98.28	100.45	W33X241	52.53	597.00	649.53	24	102+69.53	100.45	W33X241	48.61	597.00	645.61							

BILL OF MATERIAL

Item	Unit	Quantity
Furnishing Soldier Piles (W Section)	Foot	1,440
Drilling and Setting Soldier Piles (In Soil)	Cu Ft	10,610
Untreated Timber Lagging	Sq Ft	1,873
Stud Shear Connectors	Each	397

Note: All offsets are to the right of centerline of Willow Road.

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 PLOT DATE = 12/13/2018

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 CHECKED - LS
 DRAWN - TCS
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 REVISÉD -
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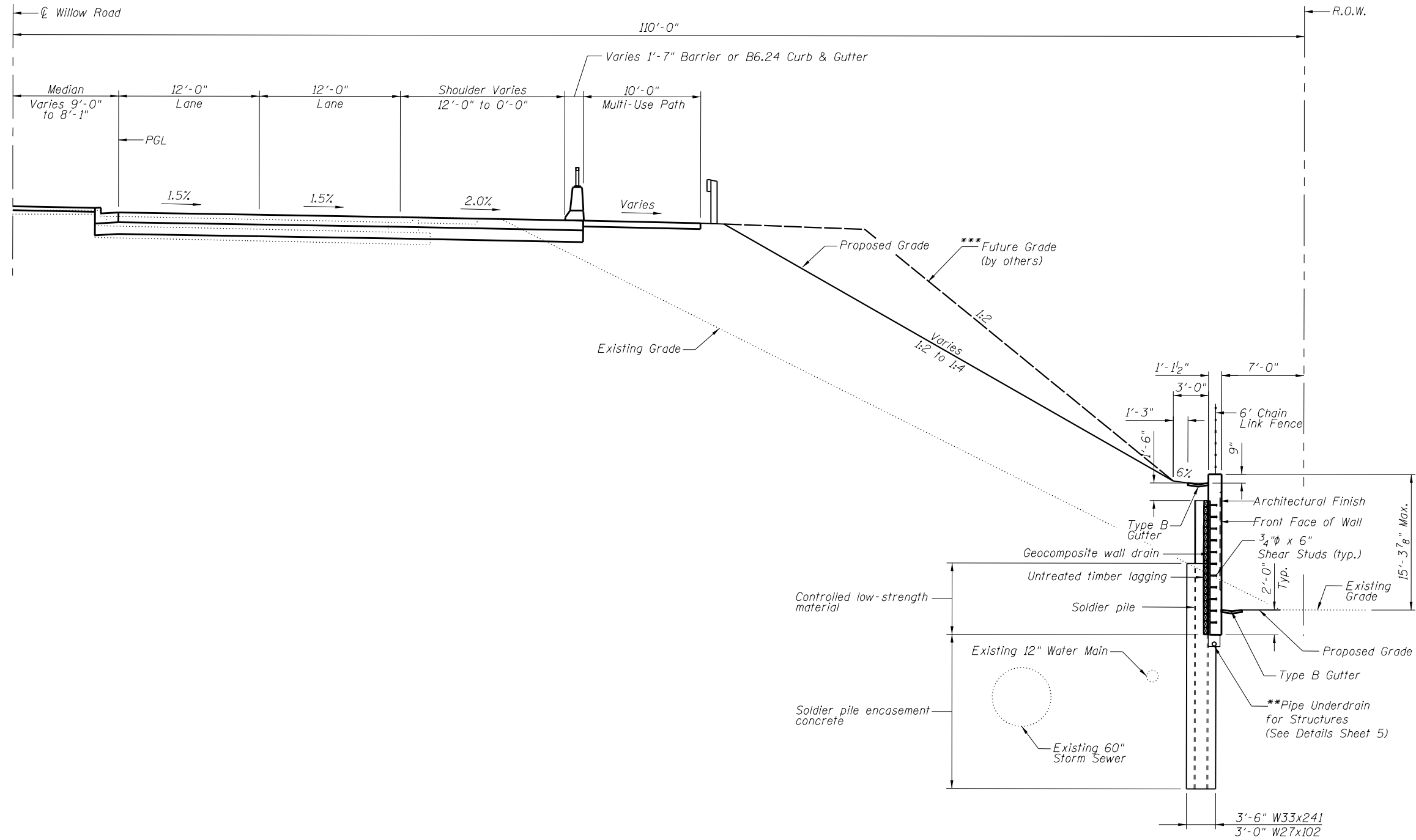
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SOLDIER PILE LAYOUT
 STRUCTURE NO. 016-1393

SHEET NO. 3 OF 12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	158

CONTRACT NO. 60N83
 ILLINOIS FED. AID PROJECT



TYPICAL SECTION
 Sta. 101+30.00 to Sta. 103+20
 (Looking East)

** Pipe Underdrain to outlet into Existing Catch Basin located at Sta. 105+50.00 (See Drainage Plans)
 *** Top of wall elevations are based on future roadway widening.

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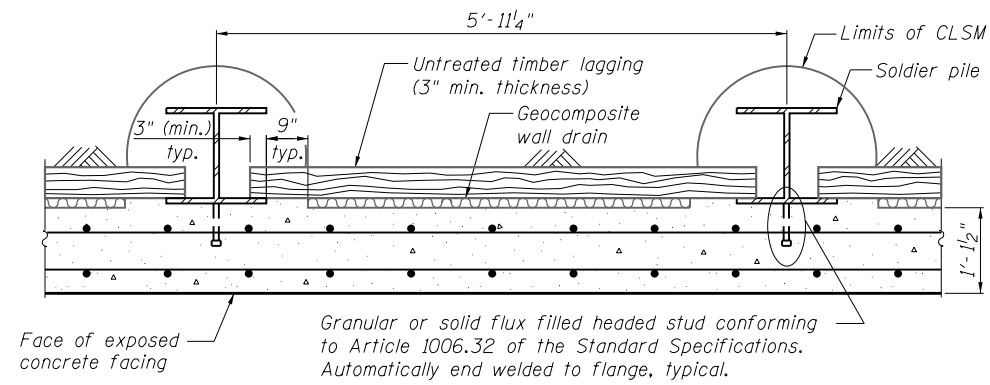
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

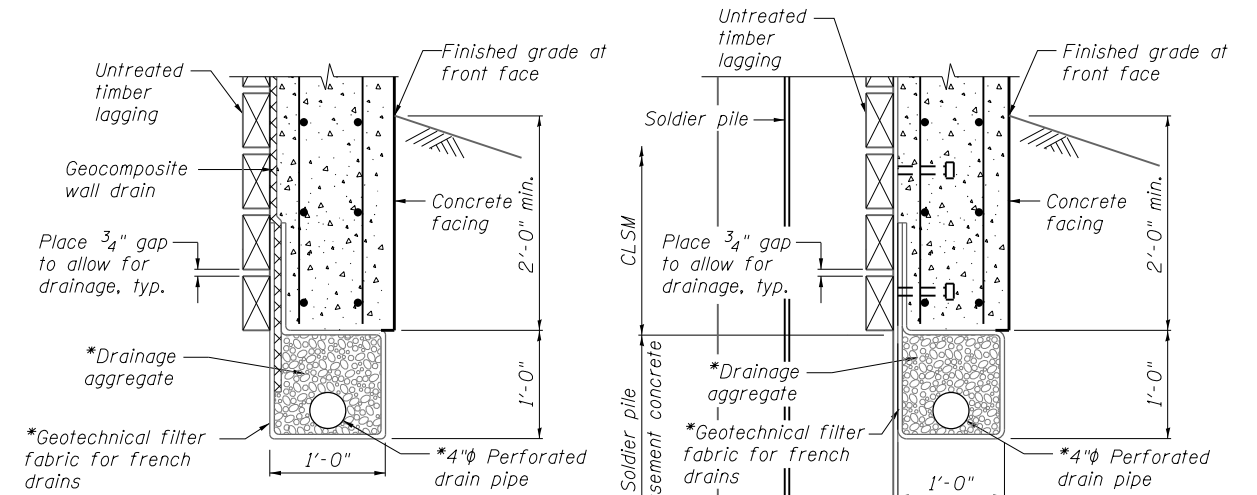
**TYPICAL SECTION
 STRUCTURE NUMBER 016-1393**

SHEET NO. 4 OF 12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	159
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				



SECTION THRU DRILLED SOLDIER PILE WALL

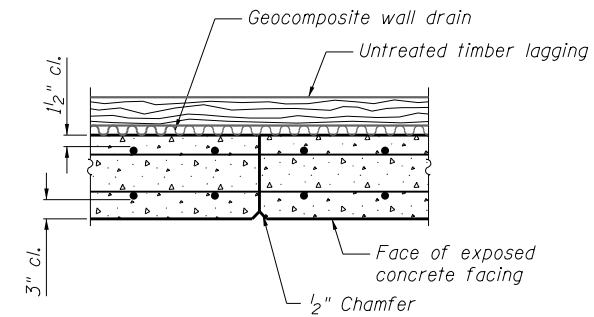


BETWEEN SOLDIER PILES

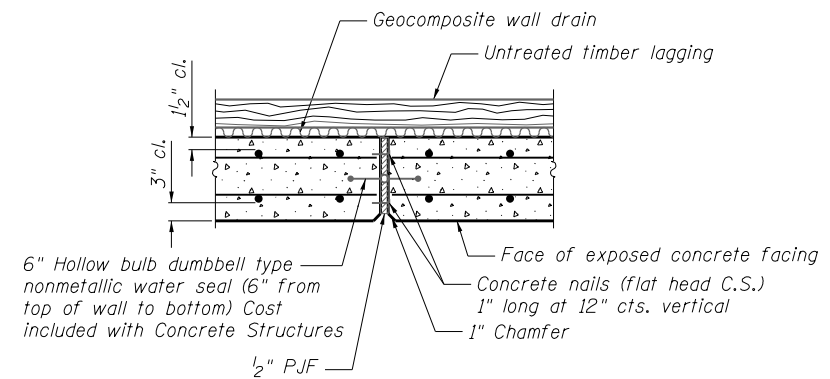
AT SOLDIER PILES

PIPE UNDERDRAIN DETAIL

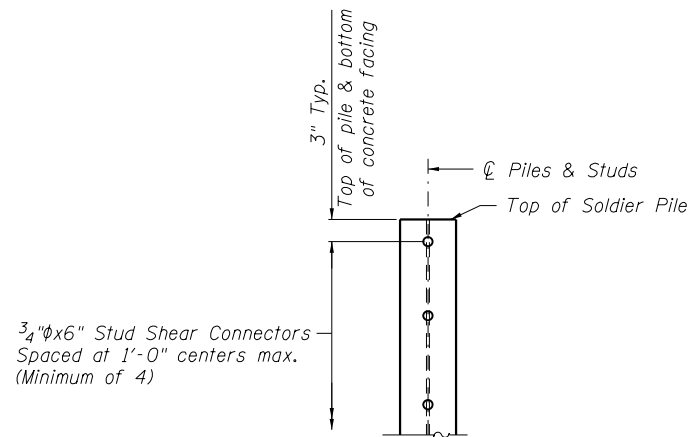
*Included in the cost of Pipe Underdrains for Structures 4"



CONSTRUCTION JOINT DETAIL



EXPANSION JOINT DETAIL



DETAIL OF SHEAR STUD PLACEMENT

FILE NAME = BFILEL\$



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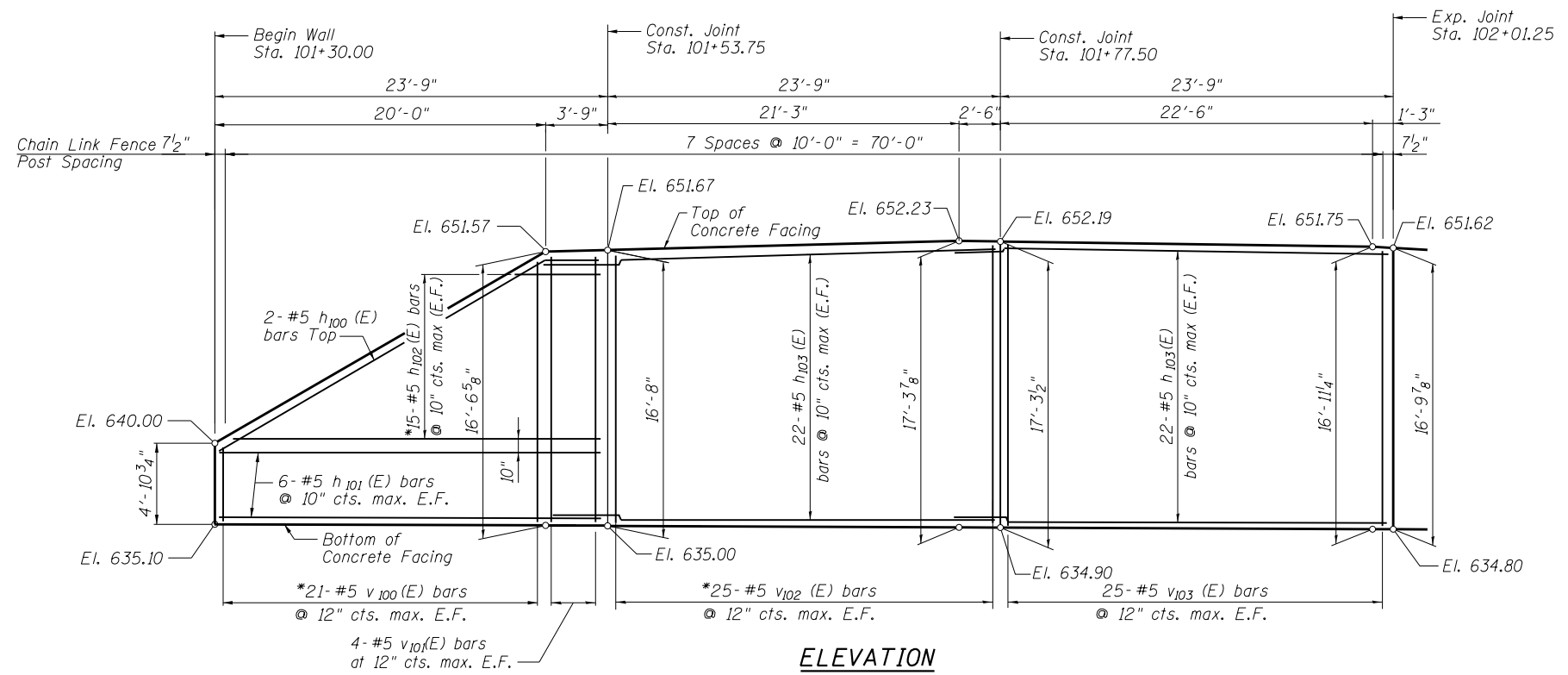
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DETAILS
STRUCTURE NO. 016-1393**

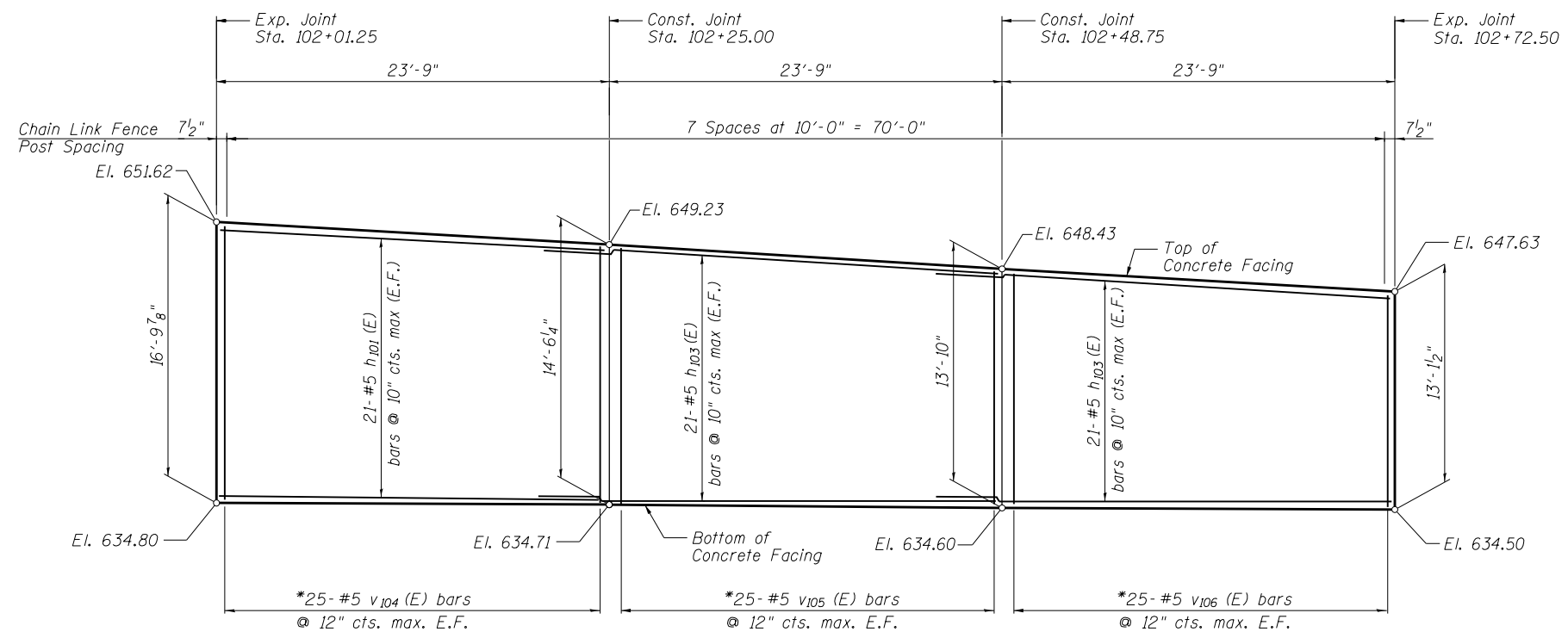
SHEET NO. 5 OF 12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	160
CONTRACT NO. 60N83				

ILLINOIS FED. AID PROJECT



ELEVATION



ELEVATION

Notes:
 Minimum lap for #5 bar is 3'-7".
 Space reinforcement in wall to miss shear studs.
 * signifies cut bar. Order per length on Bill of Material. Cut as shown in Cutting Diagram and use half of bars in each face.
 See Sheet 7 for Concrete Facing Details and Bill of Material.

FILE NAME = REF1E18



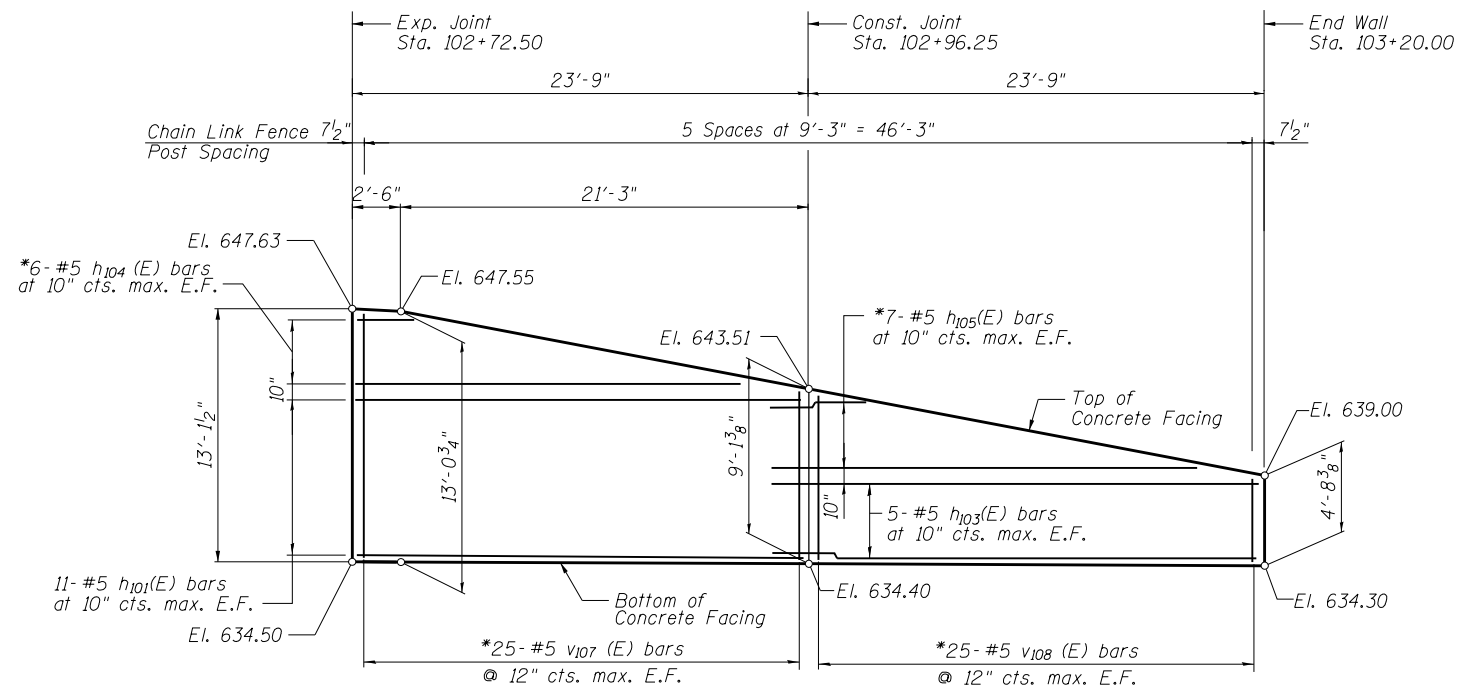
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**CONCRETE FACING
 STRUCTURE NO. 016-1393**

SHEET NO. 6 OF 12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	161
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				



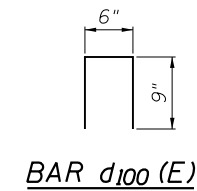
ELEVATION

Notes:

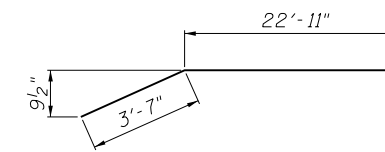
Minimum lap for #5 bar is 3'-7".

Space reinforcement in wall to miss shear studs.

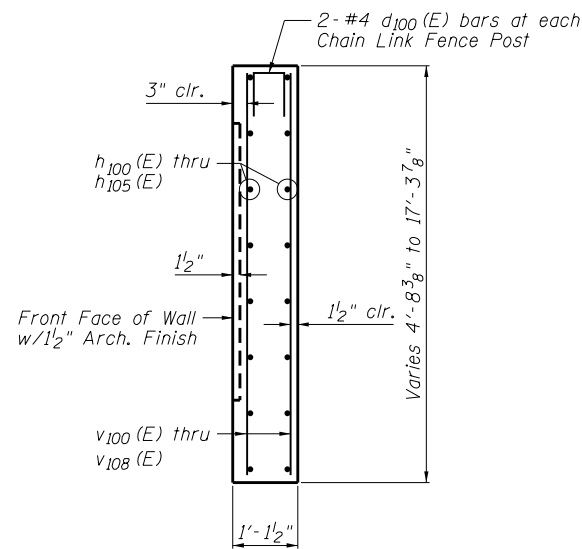
* signifies cut bar. Order per length on Bill of Material. Cut as shown in Cutting Diagram and use half of bars in each face.



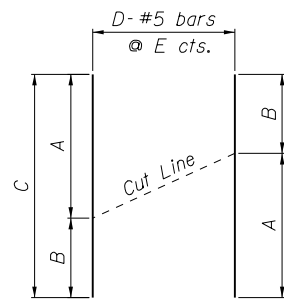
BAR d100 (E)



BAR h100 (E)



SECTION THRU CONCRETE FACING



CUTTING DIAGRAM

Bar	A	B	C	D	E
h ₁₀₂ (E)	22'-2"	5'-0"	27'-2"	15	10"
h ₁₀₄ (E)	21'-3"	2'-3"	23'-6"	6	10"
h ₁₀₅ (E)	26'-6"	4'-6"	31'-0"	7	10"
v ₁₀₀ (E)	16'-3"	4'-8"	20'-11"	21	12"
v ₁₀₂ (E)	17'-0"	16'-4"	33'-4"	25	12"
v ₁₀₄ (E)	16'-6"	14'-2"	30'-8"	25	12"
v ₁₀₅ (E)	14'-2"	13'-6"	27'-8"	25	12"
v ₁₀₆ (E)	13'-10"	12'-9"	26'-7"	25	12"
v ₁₀₇ (E)	12'-10"	8'-10"	21'-5"	25	12"
v ₁₀₈ (E)	8'-10"	4'-5"	13'-3"	25	12"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d ₁₀₀ (E)	44	#4	2'-0"	□
h ₁₀₀ (E)	2	#5	26'-6"	—
h ₁₀₁ (E)	76	#5	23'-5"	—
h ₁₀₂ (E)	15	#5	27'-2"	—
h ₁₀₃ (E)	182	#5	27'-4"	—
h ₁₀₄ (E)	6	#5	23'-6"	—
h ₁₀₅ (E)	7	#5	31'-0"	—
v ₁₀₀ (E)	21	#5	20'-11"	—
v ₁₀₁ (E)	8	#5	16'-3"	—
v ₁₀₂ (E)	25	#5	33'-4"	—
v ₁₀₃ (E)	50	#5	16'-9"	—
v ₁₀₄ (E)	25	#5	30'-8"	—
v ₁₀₅ (E)	25	#5	27'-8"	—
v ₁₀₆ (E)	25	#5	26'-7"	—
v ₁₀₇ (E)	25	#5	21'-8"	—
v ₁₀₈ (E)	25	#5	13'-3"	—
Item		Unit	Quantity	
Concrete Structures		Cu. Yd.	106.2	
Reinforcement Bars, Epoxy Coated		Pound	13,420	
Pipe Underdrains for Structures 4"		Foot	421	
Geocomposite Wall Drain		Sq. Yd.	135	

FILE NAME = REF11E18



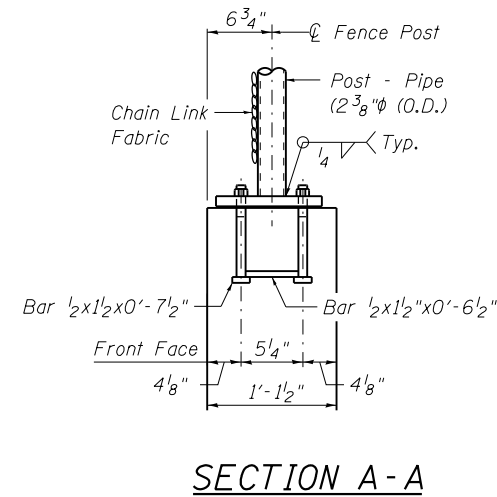
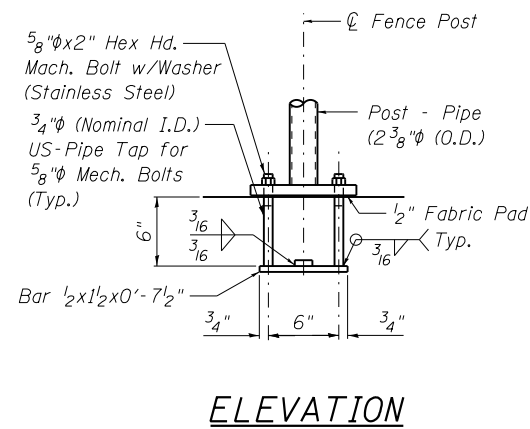
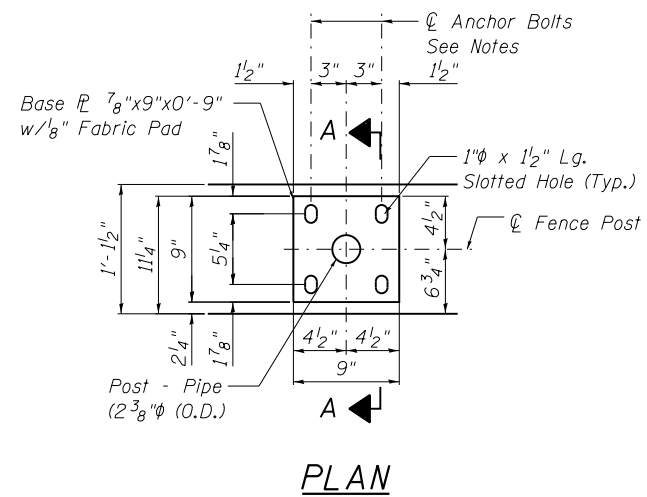
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

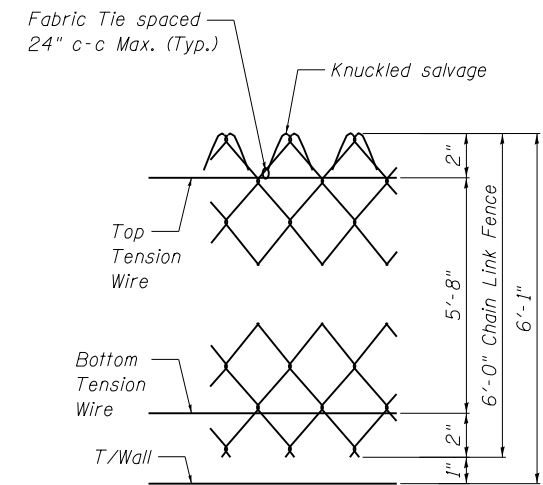
**CONCRETE FACING AND DETAILS
STRUCTURE NO. 016-1393**

SHEET NO. 7 OF 12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	162
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60N83	



In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 5/8" ϕ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.



FENCE POST ANCHOR ASSEMBLY DETAILS

FILE NAME = REFLEL.S



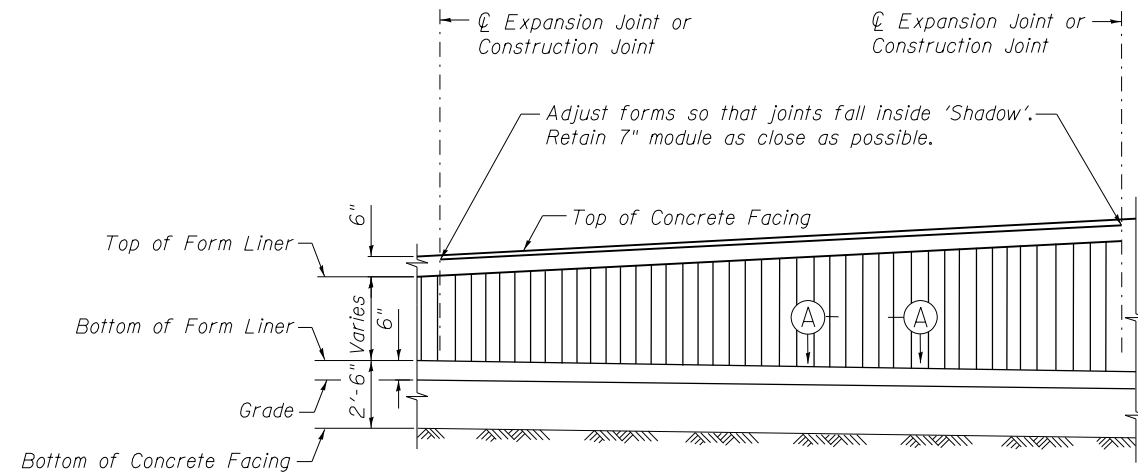
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

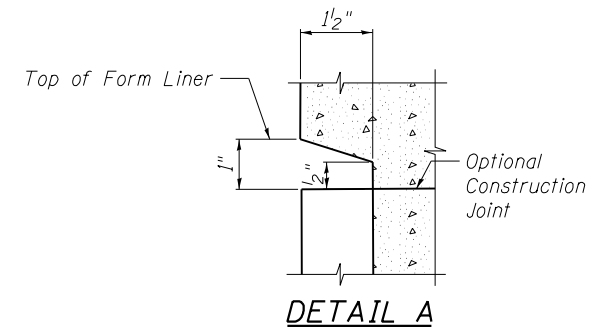
**CHAIN LINK FENCE DETAILS
STRUCTURE NO. 016-1393**

SHEET NO. 8 OF 12 SHEETS

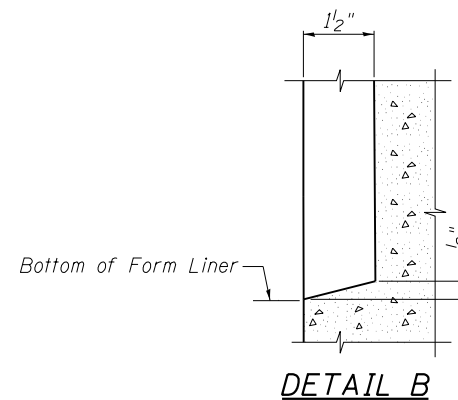
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	163
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				



ELEVATION-TYPICAL FORM LINER FINISH



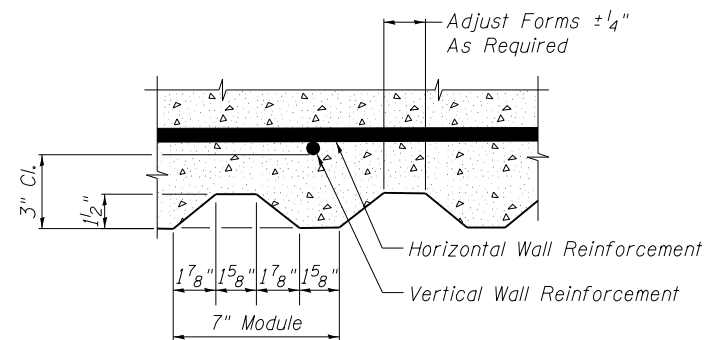
DETAIL A



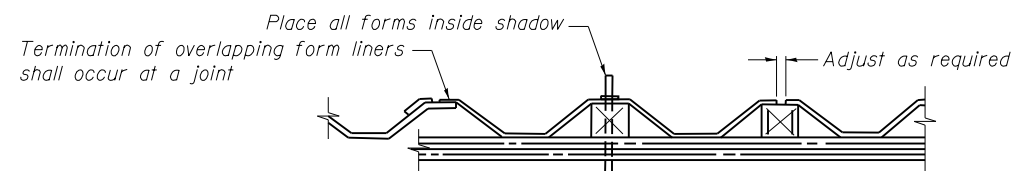
DETAIL B

FORM LINER ELEVATION TABLE

Station	Form Liner Top Elevation	Form Liner Bottom Elevation
101+30.00	639.50	637.60
101+50.00	651.07	637.52
101+53.75	651.17	637.50
101+75.00	651.73	637.41
101+77.50	651.69	637.40
102+00.00	651.25	637.31
102+01.25	651.12	637.30
102+25.00	648.73	637.21
102+48.75	647.93	637.10
102+72.50	647.13	637.00
102+75.00	647.05	637.00
102+96.25	643.01	636.90
103+20.00	638.50	636.80



SECTION A-A



SUGGESTED FORMWORK DETAIL

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

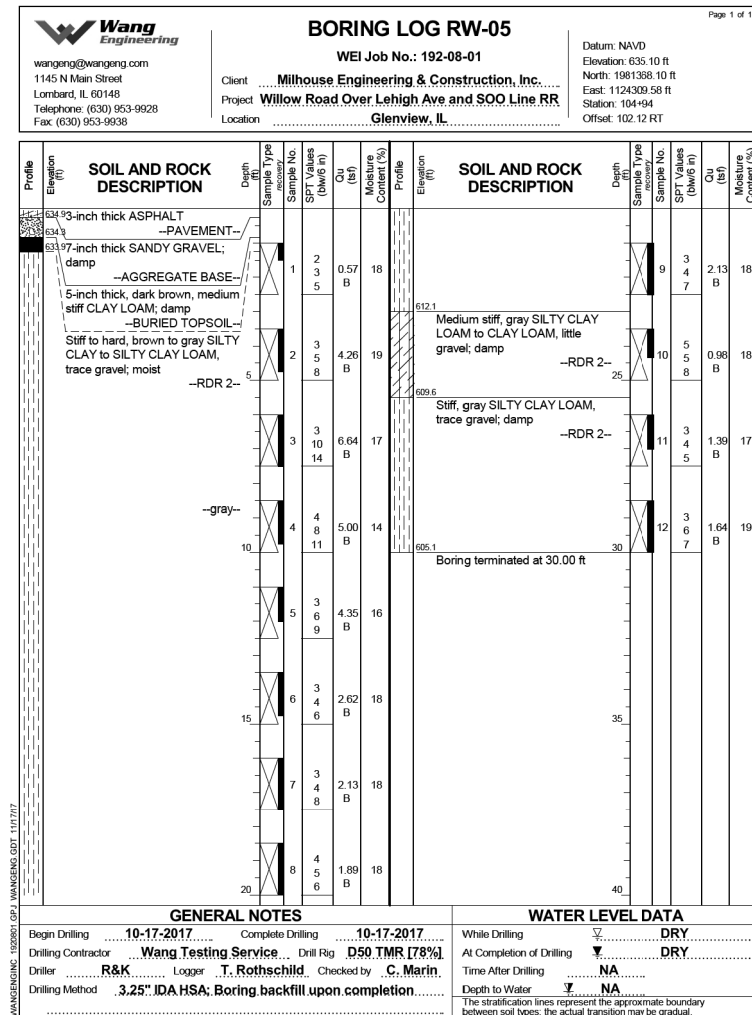
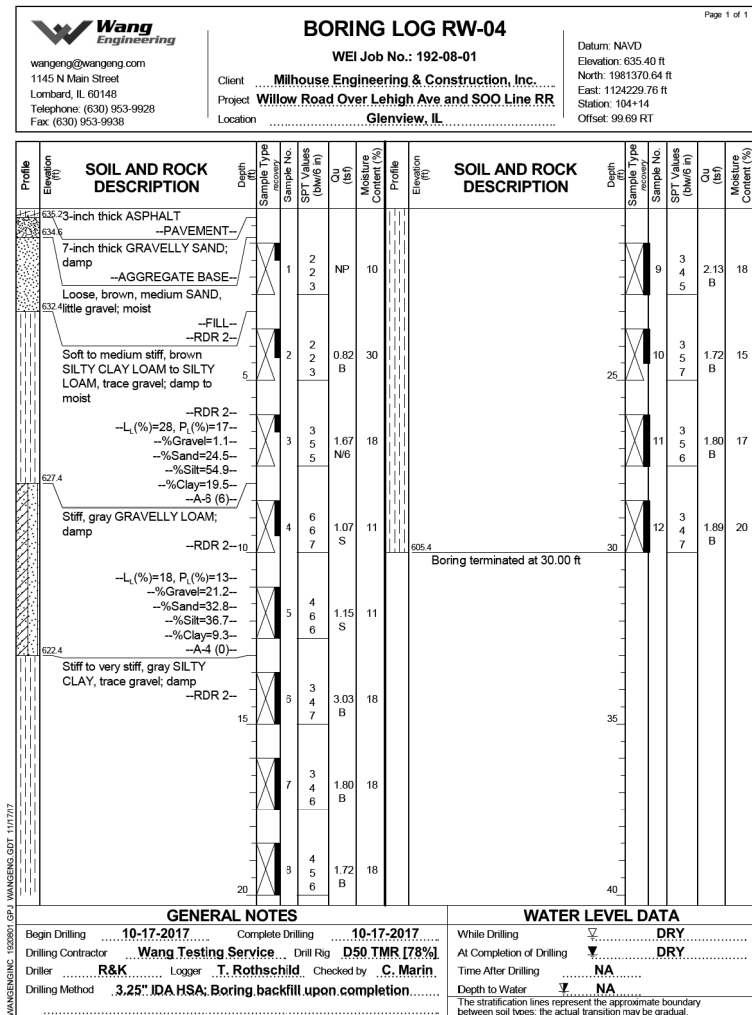
**ARCHITECTURAL FINISH DETAILS
STRUCTURE NO. 016-1393**

SHEET NO. 9 OF 12 SHEETS

F.A.P. RTE. 305	SECTION 1920.01-BR	COUNTY COOK	TOTAL SHEETS 194	SHEET NO. 164
				CONTRACT NO. 60N83
ILLINOIS FED. AID PROJECT				

BORING LOG RW-04

BORING LOG RW-05



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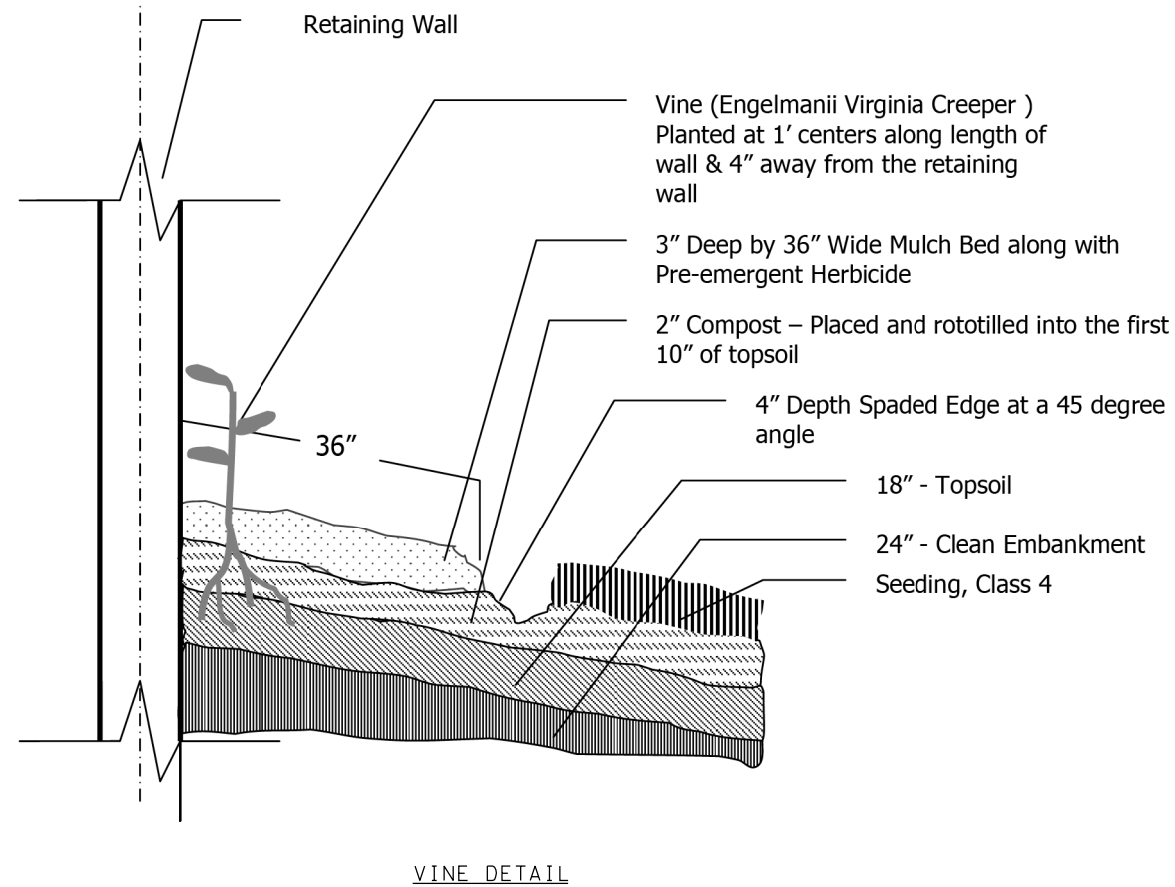
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

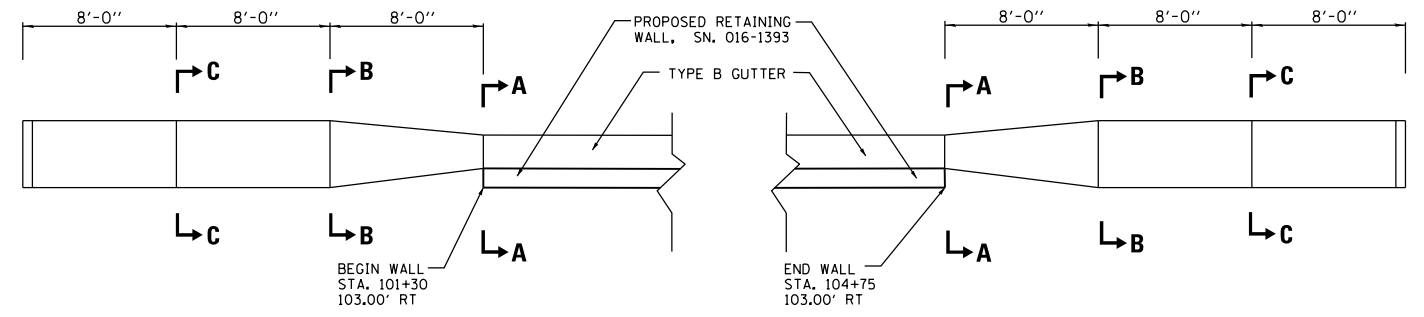
BORING LOGS 2
 STRUCTURE NO. 016-1393
 SHEET NO. 11 OF 12 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	166
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				



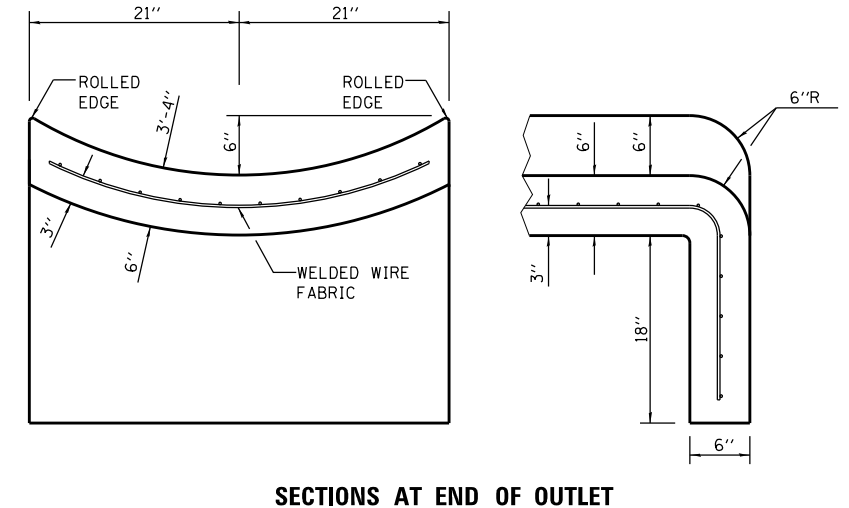
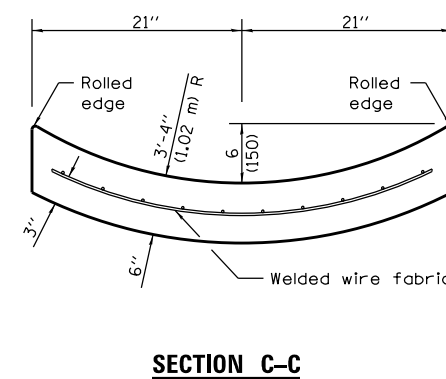
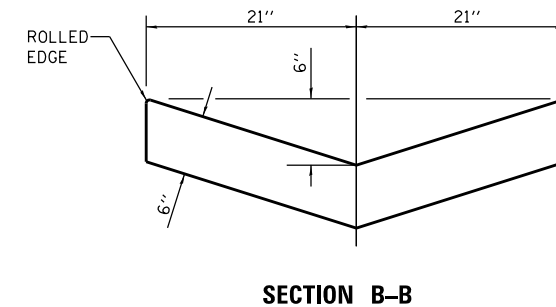
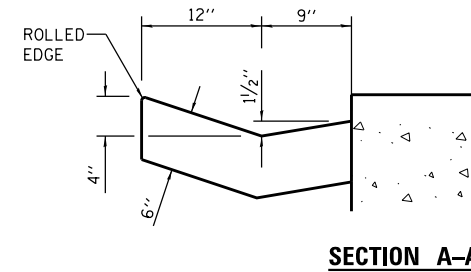
NOTES:

- SEE PAVEMENT MARKING, SIGNAGE AND LANDSCAPING PLAN FOR SPECIFIC LOCATIONS OF VINES.
- COMPOST AND TOPSOIL SHALL BE THOROUGHLY ROTOTILLED TO A DEPTH OF 10" PRIOR TO PLANTING.
- THE CONTRACTOR SHALL ORDER MATERIAL FOR ENGELMANII VIRGINIA CREEPER VINES IMMEDIATELY FOLLOWING EXECUTION OF THE CONTRACT TO ASSURE AVAILABILITY OF THE PLANT MATERIAL FOR SPRING PLANTING AT THE CONCLUSION OF THE CONTRACT.
- MULCH BED SHALL BE PLACED OVER ROTOTILLED COMPOST/TOPSOIL AS SHOWN IN VINE PLANTING DETAIL AND ACCORDING TO IDOT STANDARD SPECIFICATION 253.11 EXCEPT THAT NO WEED BARRIER FABRIC IS REQUIRED. COST OF MULCH COVER IS INCLUDED WITH PAYMENT FOR "VINE- PARTHENOCISSUS QUINQUEFOLIA ENGELMANII (ENGELMANII VIRGINIA CREEPER), 1-GALLON POT".
- PRE-EMERGENT HERBICIDE SHALL BE PLACED IN MULCHED BEDS ACCORDING TO THE SPECIAL PROVISION.



TYPE B OUTLET AT BEGIN OF WALL

TYPE B OUTLET AT END OF WALL



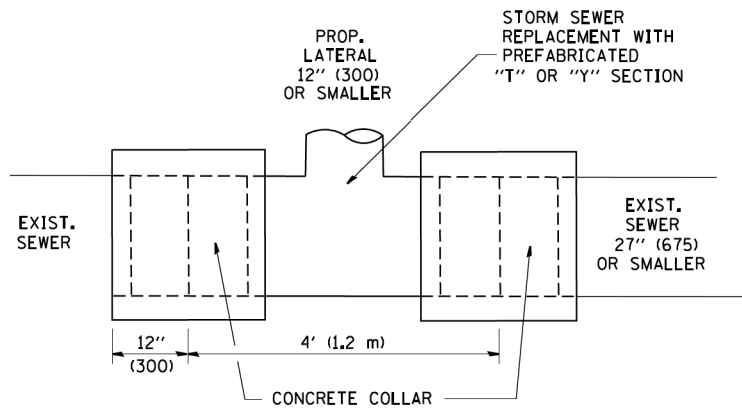
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DRAINAGE AND LANDSCAPING DETAILS

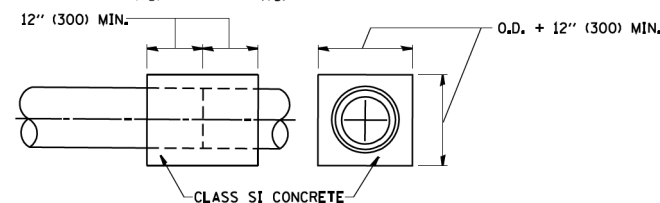
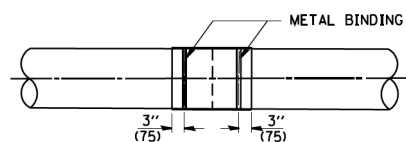
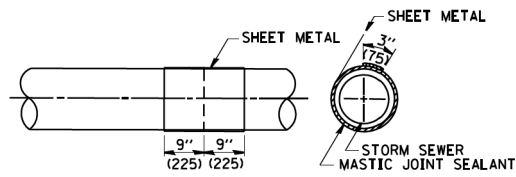
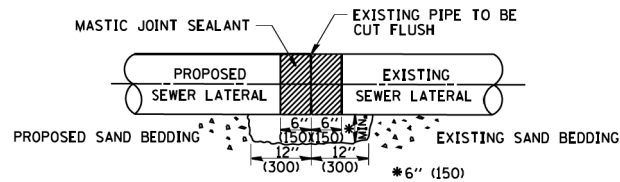
SCALE: SHEET OF SHEETS STA. 96+61.4 TO STA. 103+52.5

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	168
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				



DETAIL "A"

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

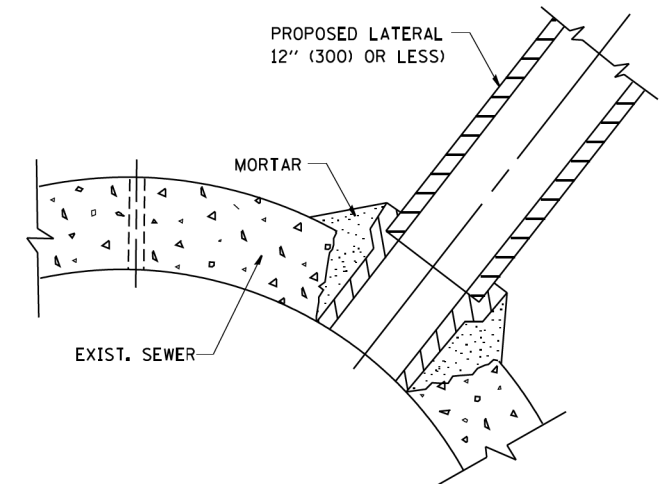


DETAIL "B"

CLASS SI CONCRETE COLLAR

CONSTRUCTION SEQUENCE

1. CUT THE EXISTING END OF THE PIPE SO AS TO PRESENT A FLUSH BUTT JOINT. BRUSH AND CLEAN ALL PIPES.
2. APPLY THE MASTIC JOINT SEALANT TO THE FIRST 6" (150) OF EACH PIPE.
3. BUTT THE PIPES TOGETHER LEAVING A MINIMUM OF 12" x 6" (300 x 150) DEEP EXCAVATION UNDER AND AROUND EACH PIPE END.
4. CUT A PIECE OF SHEET METAL GAGE NO. 19 1.1 (0.0418) 18" (450) WIDE BY THE OUTSIDE CIRCUMFERENCE OF THE PIPE PLUS 3" (75) LONG.
5. WRAP THE SHEET METAL AROUND THE PIPES, 9" (225) ON EACH SIDE OF THE JOINT, STARTING AT THE TOP OF THE PIPE.
6. LAP THE SHEET METAL AT LEAST 3" (75) AT THE TOP OF THE PIPE AND PLACE THE MASTIC JOINT SEALANT BETWEEN THE LAP.
7. PLACE TWO METAL BANDS AROUND THE SHEET METAL AND TIGHTEN.
8. WIPE OFF ANY EXCESS MASTIC JOINT SEALANT THAT OOOZES OUT FROM BETWEEN THE SHEET METAL AND THE PIPES.
9. PLACE CLASS SI CONCRETE AROUND THE JOINT.



DETAIL "C"

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

NOTES

MATERIAL

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

CONSTRUCTION METHODS

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

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

GENERAL

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

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

BASIS OF PAYMENT

TEE OR WYE CONNECTIONS 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.

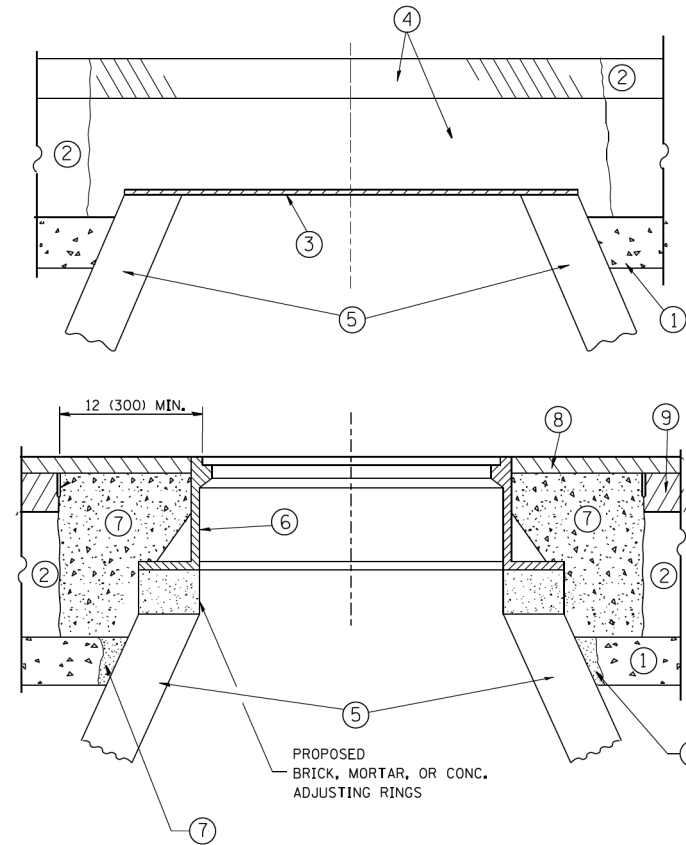
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

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		DRAWN -	REVISED - R. SHAH 09-09-94
	PLOT SCALE = 50.000' / IN.	CHECKED -	REVISED - R. SHAH 10-25-94
	PLOT DATE = 1/4/2008	DATE - 07-25-90	REVISED - R. SHAH 06-12-96

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DETAIL OF STORM SEWER CONNECTION TO EXISTING SEWER			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			194	170
BD500-01 (BD-7)			CONTRACT NO.	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



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 PP-1* CONCRETE TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.

* UNLESS OTHERWISE SPECIFIED IN THE PLANS.

THE PROCEDURE EXPLAINED ABOVE SHALL CONFORM TO THE APPLICABLE PORTIONS OF SECTIONS 353, 406, 602, AND 603 OF THE STANDARD SPECIFICATIONS EXCEPT THAT "THE CONTRACTOR SHALL ADJUST THE STRUCTURES TO THE FINISHED PAVEMENT ELEVATION NO MORE THAN 5 CALENDAR DAYS PRIOR TO PLACEMENT OF THE FINAL LIFT OF SURFACE UNLESS APPROVED BY THE ENGINEER."

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 PP-1* CONCRETE
- 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:

REMOVING FRAMES AND LIDS ON DRAINAGE AND UTILITY STRUCTURES IN THE PAVEMENT PRIOR TO MILLING, AND ADJUSTING TO FINAL GRADE PRIOR TO PLACING THE SURFACE COURSE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR "FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)."

THIS WORK WILL NOT BE PAID FOR WHEN DRAINAGE AND UTILITY STRUCTURES ARE SPECIFIED FOR PAYMENT AS STRUCTURE RECONSTRUCTION.

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

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.

DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

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	PLOT DATE = 12/6/2011	DATE - 10-25-94	REVISED - R. BORO 12-06-11

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			194	171
BD600-03 (BD-8)			CONTRACT NO.	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

VARIABLE - TO MEET EXISTING DIMENSIONS AND FIELD CONDITIONS (SEE NOTE ②)

PROP. CONC. CURB OR CURB AND GUTTER REPLACEMENT IN ACCORDANCE WITH STATE STANDARD 606001. (SEE NOTE ②)

SAW CUT FULL DEPTH - INCLUDED IN THE COST OF SIDEWALK, DRIVEWAY OR MEDIAN SURFACE REMOVAL PAY ITEM.

SEE STATE STANDARD 606001
EXISTING OR PROPOSED HMA SURFACE (IF APPLICABLE)

18" (450) MAX.

1/4" (5) **

EXISTING SIDEWALK, DRIVEWAY, MEDIAN SURFACE, SOD OR GROUND.

PROPOSED SIDEWALK, DRIVEWAY PAVEMENT, MEDIAN SURFACE OR SODDING SALT TOLERANT WITH TOP SOIL, 4" (100) SOD RESTORATION (SEE NOTE ①).

EXISTING CONCRETE PAVEMENT, CONCRETE BASE COURSE OR FLEXIBLE PAVEMENT

T/2 *

3" (75) MIN.

SUITABLE BACKFILL MATERIAL (INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT)

COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12

* 3" (75) MINIMUM FROM TOP AND BOTTOM OF THE CONCRETE PAVEMENT OR BASE COURSE.

** IF THE FINAL SURFACE OF THE PAVEMENT IS CONCRETE, THE GUTTER IS TO BE FLUSH WITH THE PAVEMENT.

PROPOSED 3/4" (20) PREFORMED EXPANSION JOINT AT CONCRETE SIDEWALKS, DRIVEWAYS, AND MEDIANS. (INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT)

COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12

NOTE: ① SIDEWALK, DRIVEWAY PAVEMENT OR MEDIAN SURFACE SHALL BE SIMILAR TO THE MATERIAL BEING REMOVED AND WILL BE PAID FOR SEPARATELY.

UNSUITABLE SUB-BASE MATERIAL TO BE REMOVED, IF DIRECTED BY THE ENGINEER, SHALL BE REPLACED WITH EITHER SUB-BASE GRANULAR MATERIAL, TYPE B OR ADDITIONAL THICKNESS OF CONCRETE.

SODDING, SALT TOLERANT AND TOP SOIL, FURNISH AND PLACE 4" WILL BE PAID FOR SEPARATELY,

REMOVAL AND REPLACEMENT 4" (100) OR LESS IS INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.

COMBINATION CURB AND GUTTER REMOVAL (SPECIAL)

② FERTILIZER FOR THE PLACEMENT OF THE SOD IS NOT REQUIRED

REMOVAL AND REPLACEMENT IN EXCESS OF 4" (100) WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.

③ CURB OR CURB AND GUTTER REPLACEMENT SHALL MATCH THE SHAPE OF THE EXISTING CURB OR CURB AND GUTTER UNLESS OTHERWISE SPECIFIED.

PROPOSED #6 (20) EPOXY COATED TIE BARS 24" (600) LONG AT 24" (600) CENTERS WILL NOT BE PAID FOR SEPARATELY. DELETE EPOXY COATED TIE BARS IF EXISTING TIE BARS ARE USUABLE AS DETERMINED BY THE ENGINEER. (SEE NOTE ③).

④ FOR CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT ADJACENT TO FLEXIBLE PAVEMENT DELETE EPOXY COATED TIE BARS.

⑤ LONGITUDINAL BARS, IF ENCOUNTERED IN THE EXISTING CURB OR CURB AND GUTTER, ARE NOT TO BE REPLACED. CUTTING AND REMOVING LONGITUDINAL BARS SHALL BE INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.

⑥ THE COST OF HMA SURFACE REMOVAL IN THE EXISTING GUTTER FLAG SHALL BE INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.

COMBINATION CURB AND GUTTER REMOVAL (SPECIAL)

BASIS OF PAYMENT:

THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT (METER) FOR CURB REMOVAL AND REPLACEMENT OR COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT.

COMBINATION CURB AND GUTTER REMOVAL (SPECIAL) AND COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12

⑦ THE REMOVAL AND REPLACEMENT OF THE EXISTING CURB OR CURB AND GUTTER SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 440 AND 606 OF THE STANDARD SPECIFICATIONS.

⑧ THE LOCATIONS OF REMOVAL AND REPLACEMENT OF EXISTING CURB OR CURB AND GUTTER SHALL BE DETERMINED BY THE RESIDENT ENGINEER AT THE TIME OF CONSTRUCTION.

CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

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

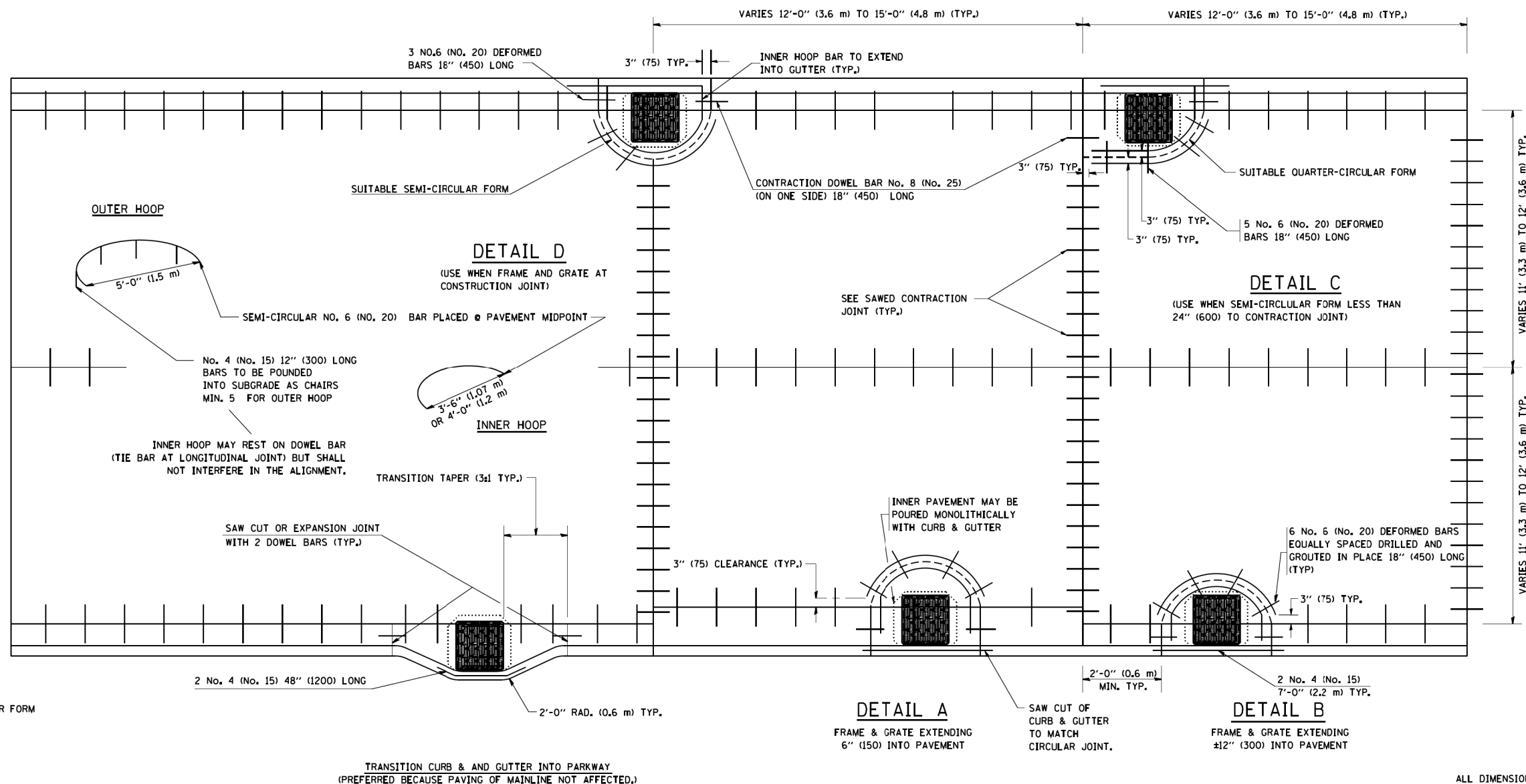
FILE NAME =	USER NAME = drivakosgn	DESIGNED - A. HOUSEH	REVISED - R. SHAH 10-03-96	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
es:\pwork\pwork\drivakosgn\d0108315\bc24.dgn	DRAWN -	REVISED - A. ABBAS 03-21-97	REVISED - M. GOMEZ 01-22-01					305	1920.01-BR	COOK	194	172
PLOT SCALE = 50.000' / IN.	CHECKED -	REVISED - R. BORO 12-15-09						BD600-06 (BD-24)			CONTRACT NO.	60N83
PLOT DATE = 12/15/2009	DATE - 03-11-94							FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
				SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.					

FRAME EXTENSION INTO PAVEMENT	INNER HOOP REINFORCEMENT DIAMETER	SEMI CIRCULAR FORM DIAMETER	OUTER HOOP REINFORCEMENT DIAMETER
UP TO 8" (200)	3'-6" (1.1 m)	4'-0" (1.2 m)	5'-0" (1.5 m)
> 8" (200) TO 14" (360)	4'-0" (1.2 m)	4'-6" (1.4 m)	5'-0" (1.5 m)

DESIGNER NOTE:
THIS DETAIL IS TO BE USED
WHEN THE GUTTER FLAG IS
LESS THAN 24"

NOTES :

1. THE ROUNDOUT AND ADDED REINFORCEMENT WILL NOT BE PAID SEPARATELY, BUT SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE PAVEMENT.
2. TRANSVERSE JOINTS MAY BE MOVED TO ACCOMMODATE ROUNDOUT. EDGE OF CIRCULAR JOINT SHALL BE MINIMUM 12" (300) FROM TRANSVERSE JOINT. RELOCATED TRANSVERSE JOINT SHALL BE CONTINUOUS FROM EDGE OF PAVEMENT TO EDGE OF PAVEMENT.
3. SEMI-CIRCULAR FORM SHALL BE REMOVED PRIOR TO DRILL AND GROUT OF TIE BARS.
4. ALL REINFORCED BARS SHALL BE EPOXY COATED.
5. DRILL AND GROUT IS PREFERRED, HOWEVER TIE BARS CAN BE POURED IN PLACE IF CLEARANCE IS PROVIDED TO OUTER EDGE OF FRAME. MINIMUM 2" (50) CLEARANCE.
6. WOOD SHIMS SHALL BE USED TO ADJUST ALL FRAMES. AFTER ADJUSTING MORTAR HAS CURED, THE WOOD SHIMS SHALL BE REMOVED AND THE VOIDS UNDER THE FRAMES FILLED WITH NON SHRINK GROUT.
7. HOOP REINFORCEMENT SHALL BE ONE PIECE CONSTRUCTION.
8. CIRCULAR FRAMES AND GRATES MAY BE SUBSTITUTED.
9. CURB DOWELS MUST BE PLACED LEVEL & TRUE TO ALLOW CONTRACTION MOVEMENT.



LEGEND:

- CASTING
- SUITABLE SEMI-CIRCULAR FORM

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE NOTED

FILE NAME = W:\dista\22x34\bd48.dgn

USER NAME = geglanoht
PLOT SCALE = 50.0000' / IN.
PLOT DATE = 1/4/2008

DESIGNED - A. ABBAS
DRAWN - TOM MATOUSEK
CHECKED - A. ABBAS
DATE - 01-04-99

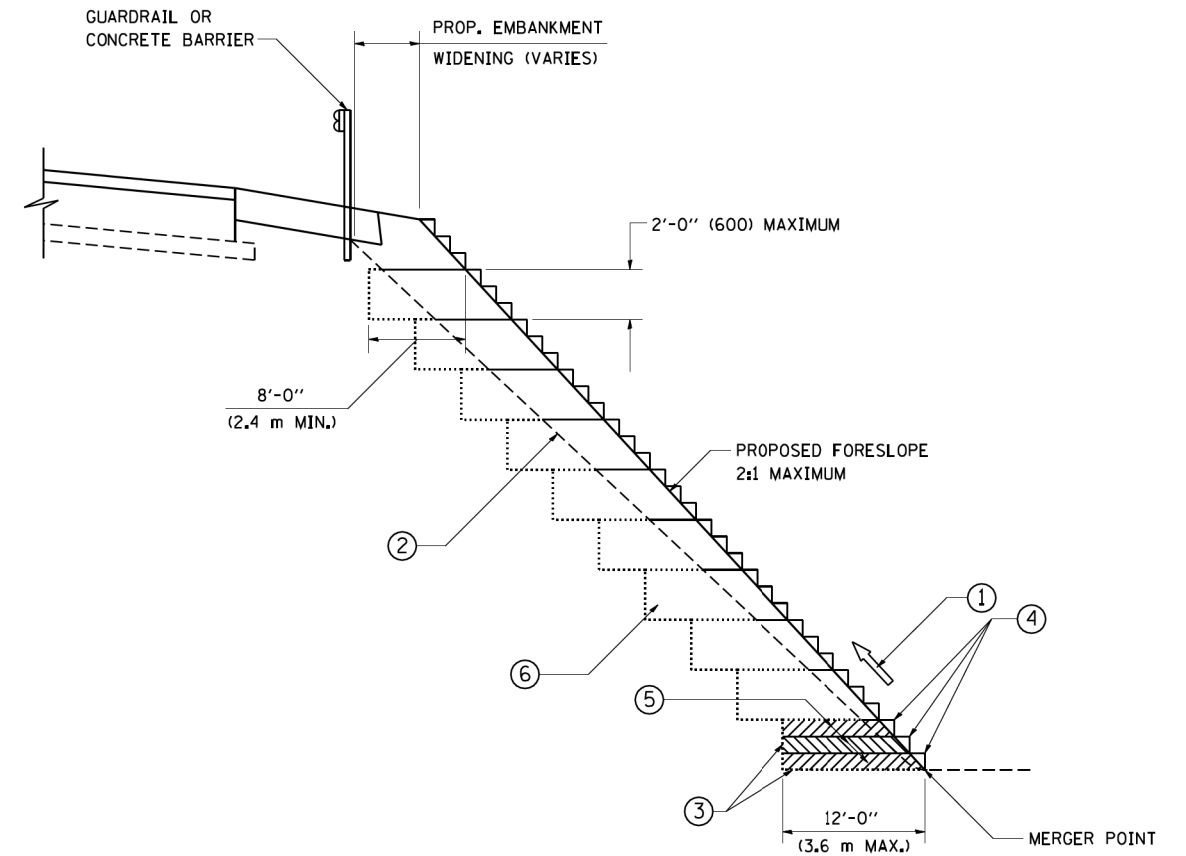
REVISED - T. MATOUSEK 08-28-00
REVISED - T. MATOUSEK 10-02-00
REVISED - T. MATOUSEK 04-25-02
REVISED - P. LAFLEUR 08-27-02

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PCC PAVEMENT ROUNDOUTS AT
CURB AND GUTTER**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	BD-48		194	173
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO.	



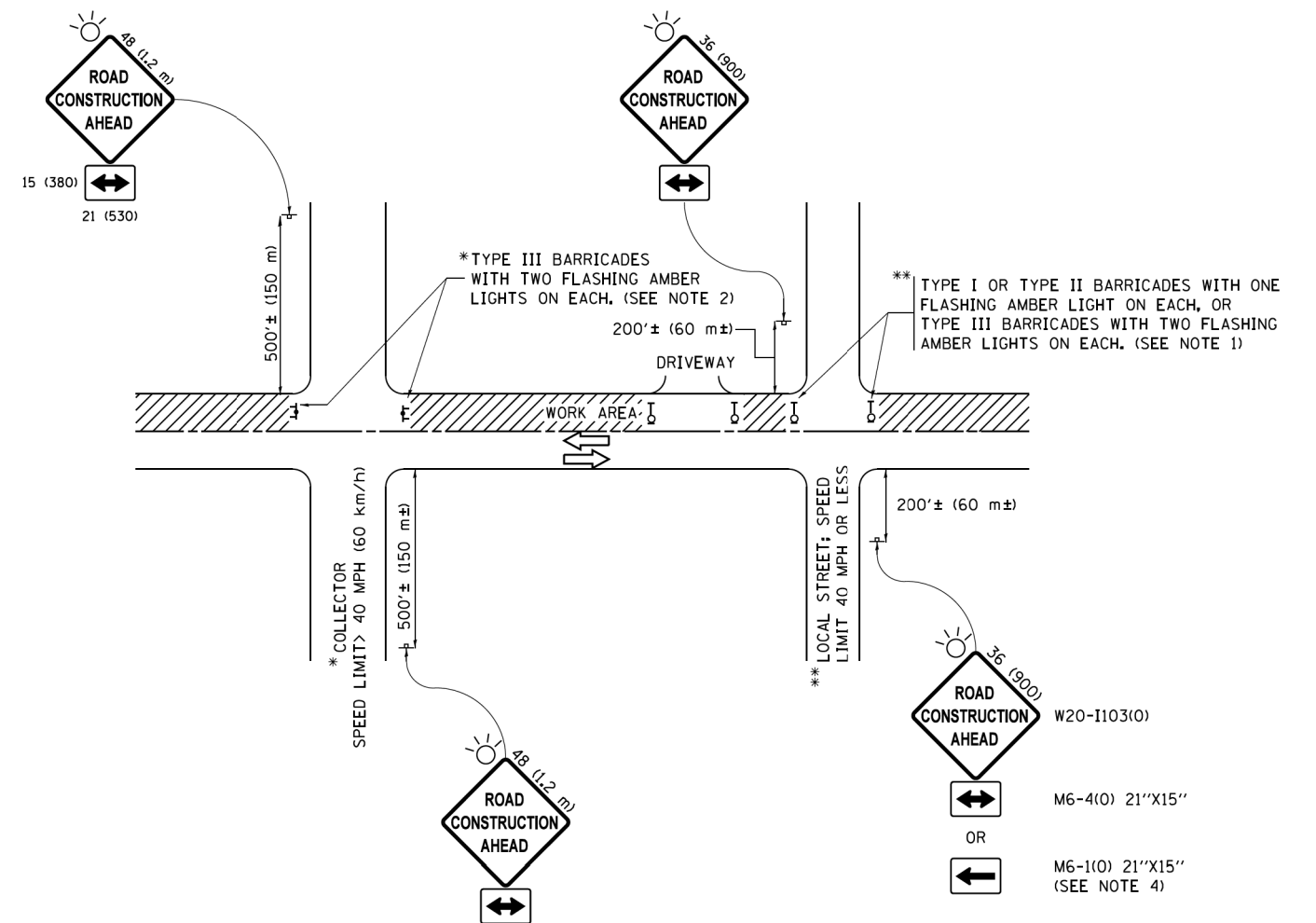
**TYPICAL BENCHING DETAIL
FOR EMBANKMENT**

NOTES:

- ① CONSTRUCT SUCCEEDING BENCH CUTS AND EMBANKMENT PLACEMENT AND COMPACTION FROM BOTTOM TO TOP IN STAIRSTEP FASHION.
- ② EXISTING FORESLOPE PREPARED IN ACCORDANCE WITH ARTICLE 205.03 OF THE STANDARD SPECIFICATIONS.
- ③ BENCH CUT EXISTING SLOPE TYPICAL FOR EACH STEP.
- ④ TRIM TO FINAL SLOPE.
- ⑤ EQUAL 8-INCH (200) LIFTS OF EMBANKMENT COMPACTED IN ACCORDANCE WITH ARTICLE 205.05 OF THE STANDARD SPECIFICATIONS.
- ⑥ EXCAVATION OF BENCH CUTS WITHIN EXISTING EMBANKMENT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC METER OR CUBIC YARD FOR "EARTH EXCAVATION". THIS PRICE WILL INCLUDE ALL LABOR AND MATERIAL, NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- ⑦ SLOPES SHALL BE BENCHED ACCORDING TO THIS DETAIL WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5' (1.5 m).

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

FILE NAME = W:\diststd\22x34\bd51.dgn	USER NAME = gegl1enobt	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BENCHING DETAIL FOR EMBANKMENT WIDENING			F.A. RTÉ.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 50.0000' / IN.	DRAWN - CADD	REVISED -		SCALE: NONE	SHEET NO. 1	OF 1	SHEETS	STA.	TO STA.	194	174
	PLOT DATE = 1/4/2008	CHECKED - S.E.B.	REVISED -		BD-51			CONTRACT NO.		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT		
		DATE - 06-16-04	REVISED -									



NOTES:

- 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 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.
- CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT.
- WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
- WHEN WORK IS BEING PERFORMED ON A SIDE ROAD OR DRIVEWAY, FOLLOW THE APPLICABLE STANDARD(S). THE DIRECTIONAL ARROW (M6-1 OR M6-4) SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE TRAFFIC CONTROL SET-UP.
- ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAYS UNLESS OTHERWISE SPECIFIED IN THE PLANS OR BY THE ENGINEER.
- THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

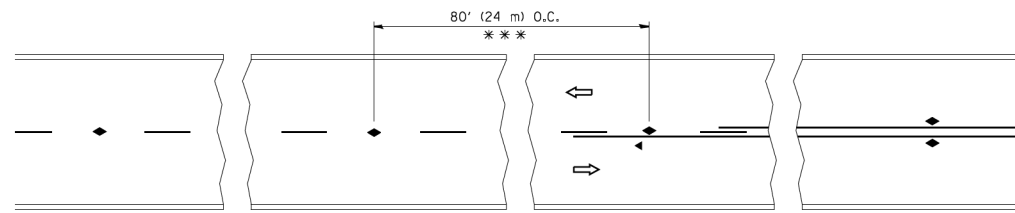
FILE NAME =	USER NAME = footemj	DESIGNED - L.H.A.	REVISED - A. HOUSEH 10-15-96
pw\1\084EBID\INTEG\illinois.gov\FWIDOT\Documents\IDOT Offices\District 1\Projects\Dist 1\CADD\cadd\CADsheets\tc10.dgn		DRAWN	REVISED - T. RAMMACHER 01-06-00
	PLOT SCALE = 50,000' / 1" =	CHECKED -	REVISED - A. SCHUETZE 07-01-13
Default	PLOT DATE = 9/15/2016	DATE - 06-89	REVISED - A. SCHUETZE 09-15-16

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

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

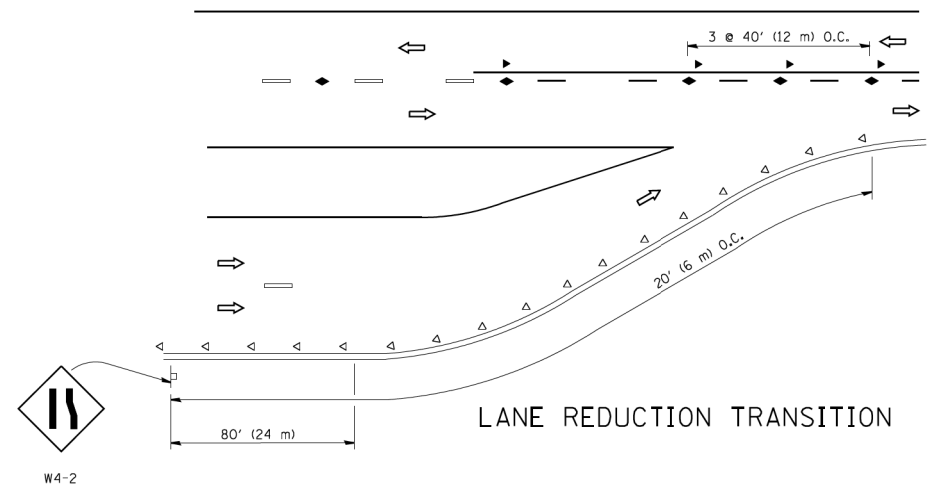
SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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		CONTRACT NO.		
ILLINOIS FED. AID PROJECT				

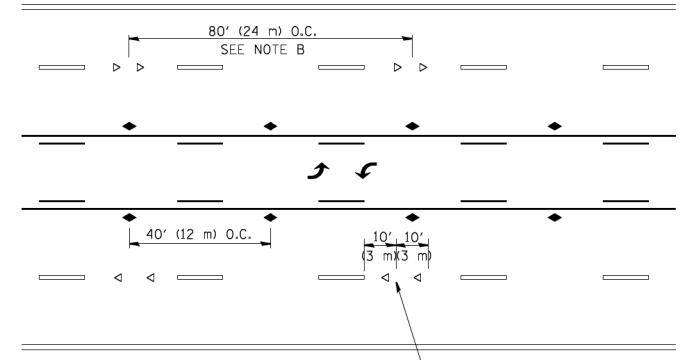


*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

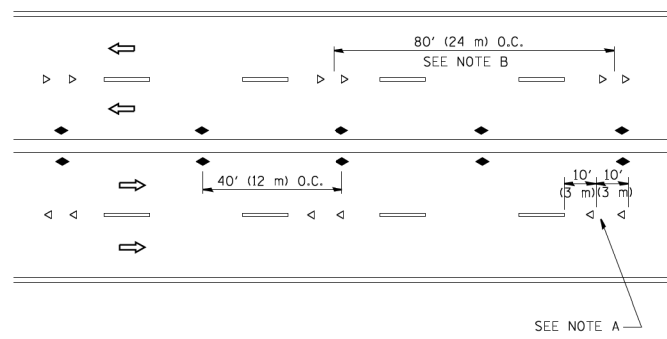
TWO-LANE/TWO-WAY



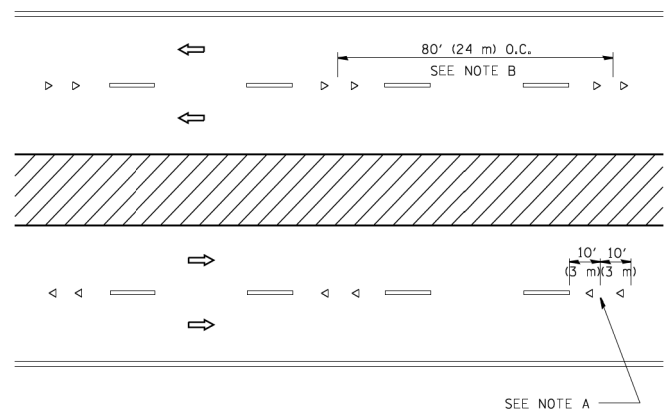
LANE REDUCTION TRANSITION



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.

LANE MARKER NOTES

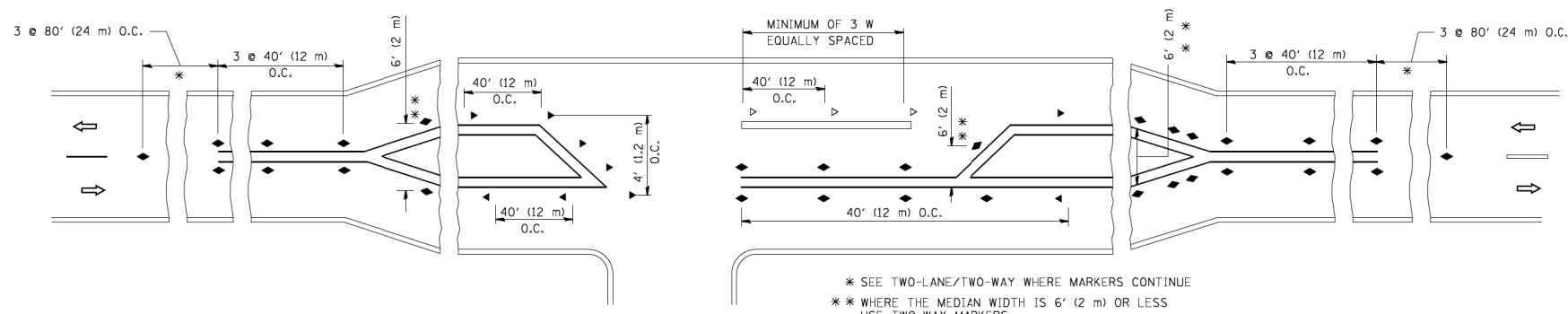
- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.
- B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H (20 km/h) LOWER THAN POSTED SPEEDS.

SYMBOLS

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

DESIGN NOTES

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

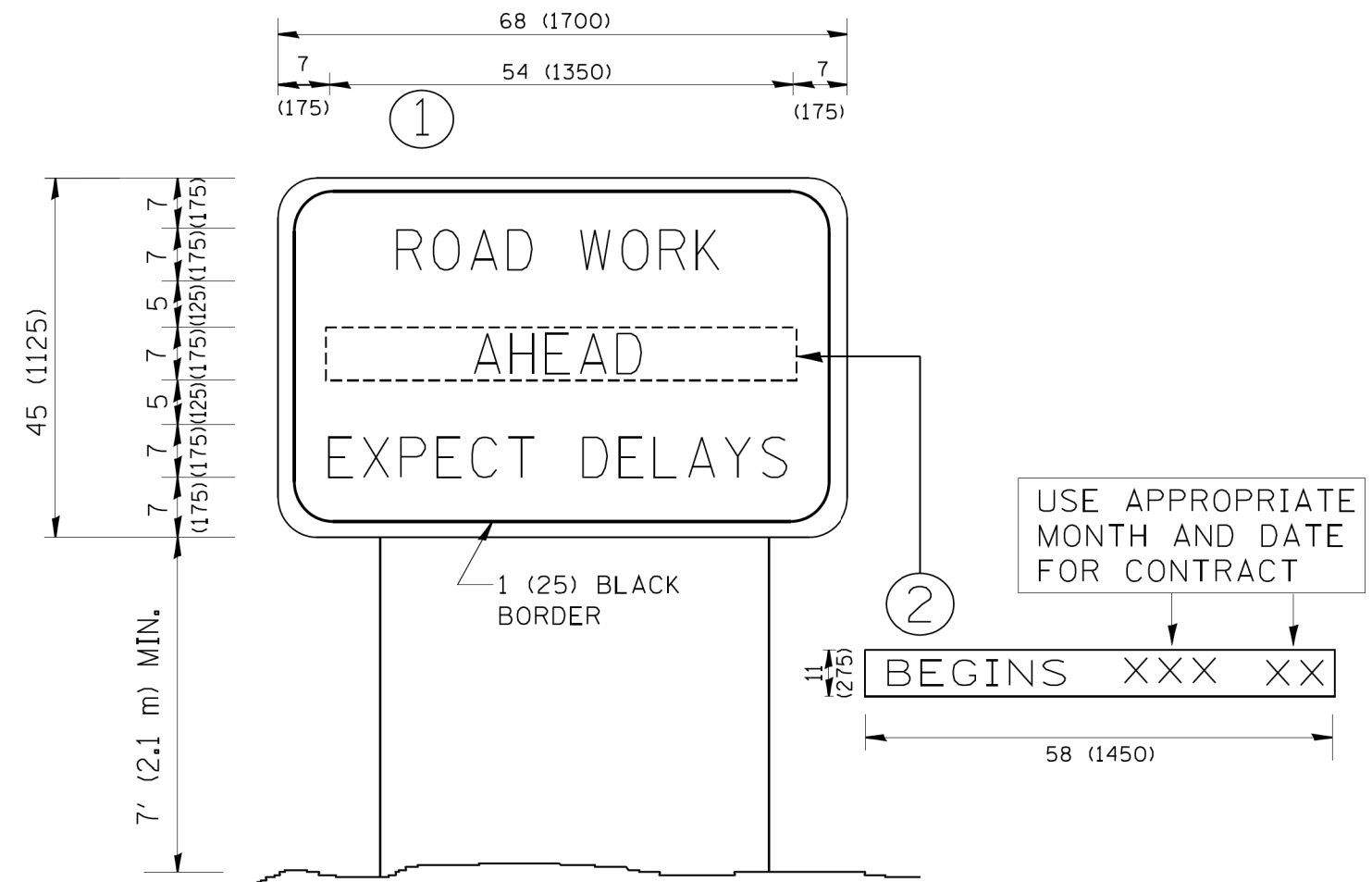


LEFT TURN

* 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.

FILE NAME =	USER NAME = lveysa	DESIGNED -	REVISED - T. RAMMACHER 09-19-94	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
ca:\pki\work\pki\dot\lveysa\d0108315\tcl1.dgn		DRAWN -	REVISED - T. RAMMACHER 03-12-99		SCALE: NONE	SHEET NO. 1	OF 1	SHEETS	STA.	TO STA.		194	176
		PLOT SCALE = 50.000' / IN.	REVISED - T. RAMMACHER 01-06-00		TC-11			CONTRACT NO.					
		PLOT DATE = 3/2/2011	REVISED - C. JUCIUS 09-09-09		FED. ROAD DIST. NO. 1 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.

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

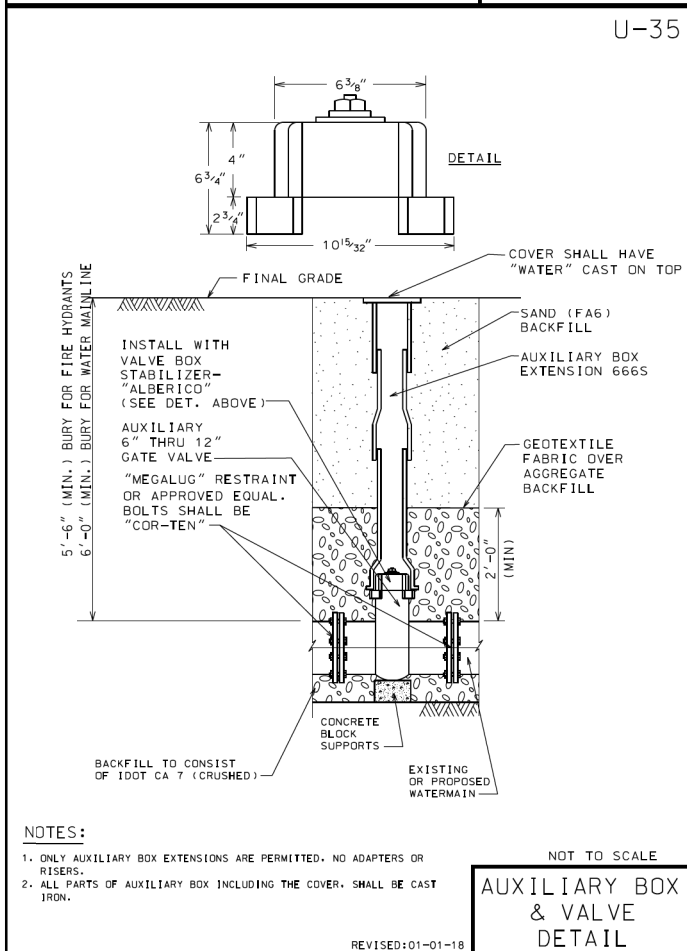
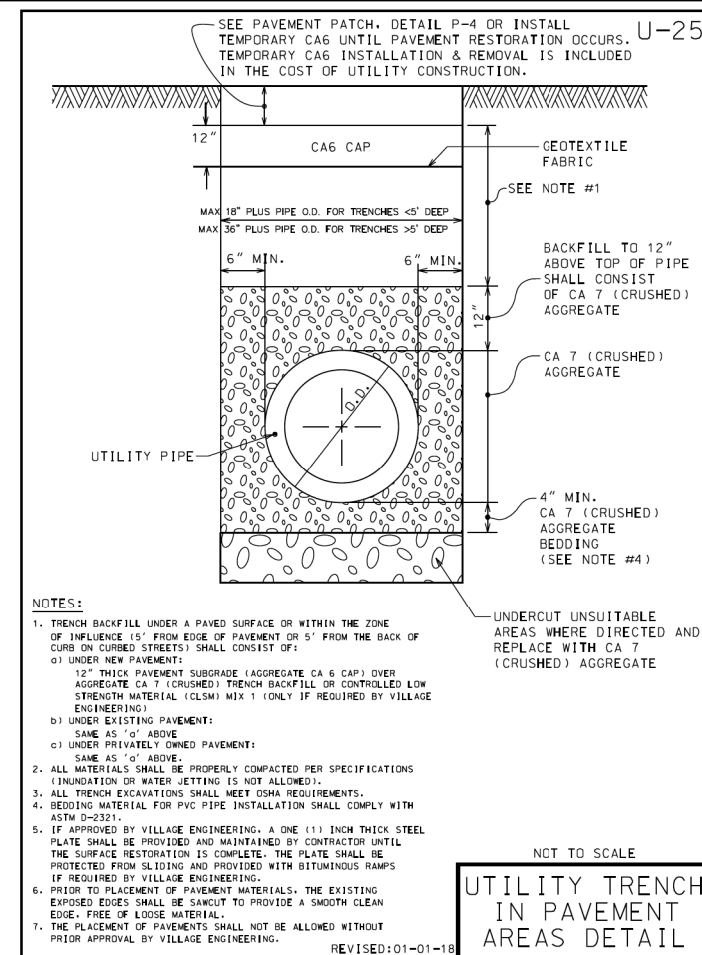
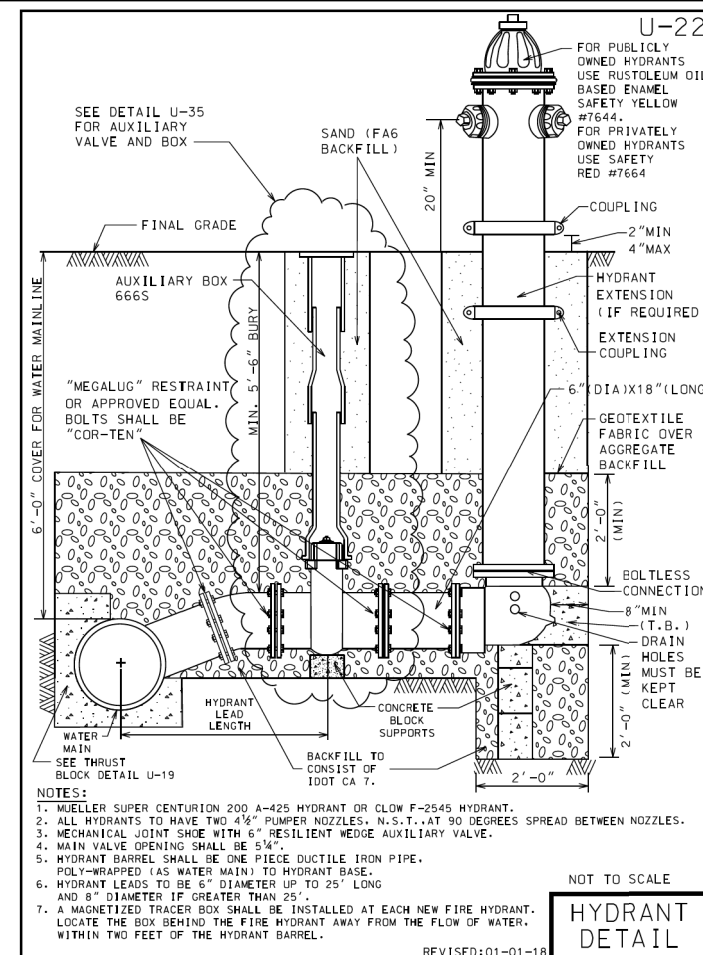
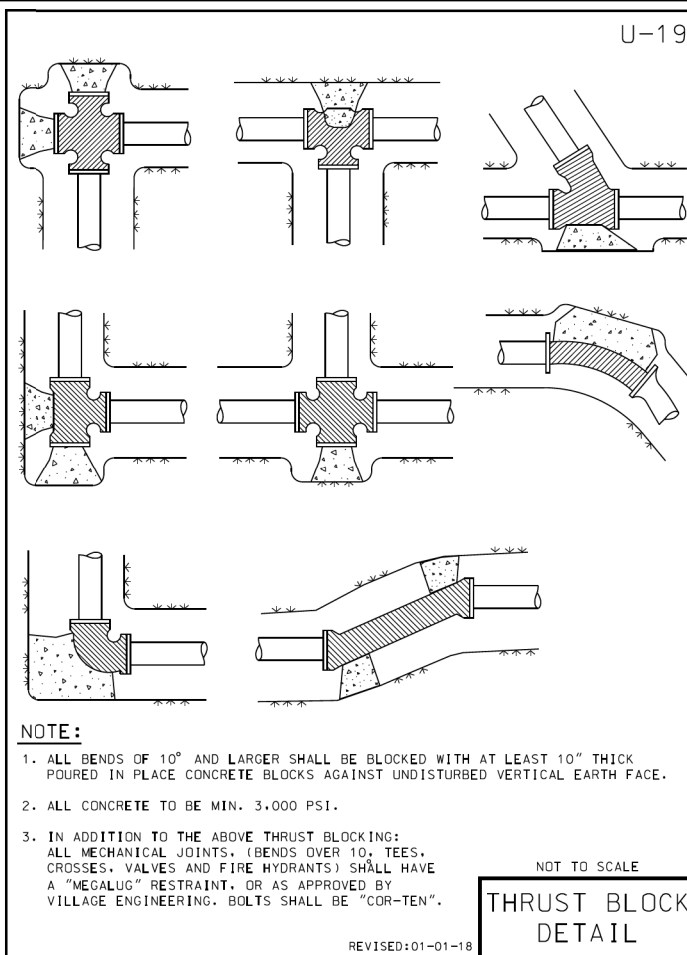
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		DRAWN -	REVISED - R. MIRS 12-11-97
	PLOT SCALE = 50.000' / IN.	CHECKED -	REVISED - T. RAMMACHER 02-02-99
	PLOT DATE = 1/4/2008	DATE -	REVISED - C. JUCIUS 01-31-07

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ARTERIAL ROAD
INFORMATION SIGN**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TC-22		194	178
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO.	



USER NAME = MS_USER	DESIGNED - LAB	REVISED -
PLOT SCALE = *SCALE*	DRAWN - LCR	REVISED -
PLOT DATE = 12/13/2018	CHECKED - E.JL	REVISED -
	DATE - 11/21/18	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

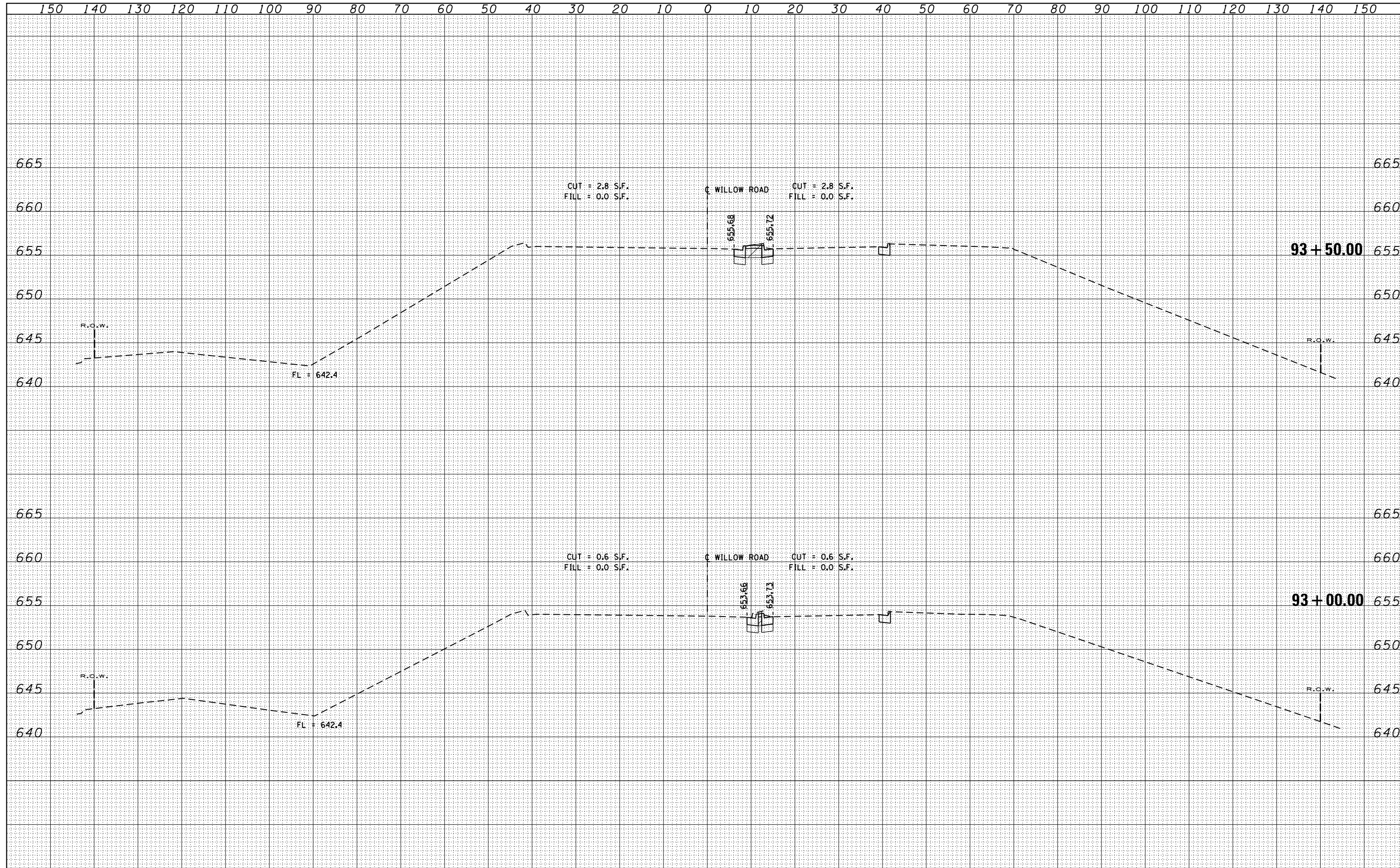
**VILLAGE OF GLENVIEW
WATER MAIN DETAILS**

SCALE: SHEET OF SHEETS STA. 96+61.4 TO STA. 103+52.5

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	179
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				

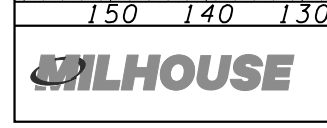
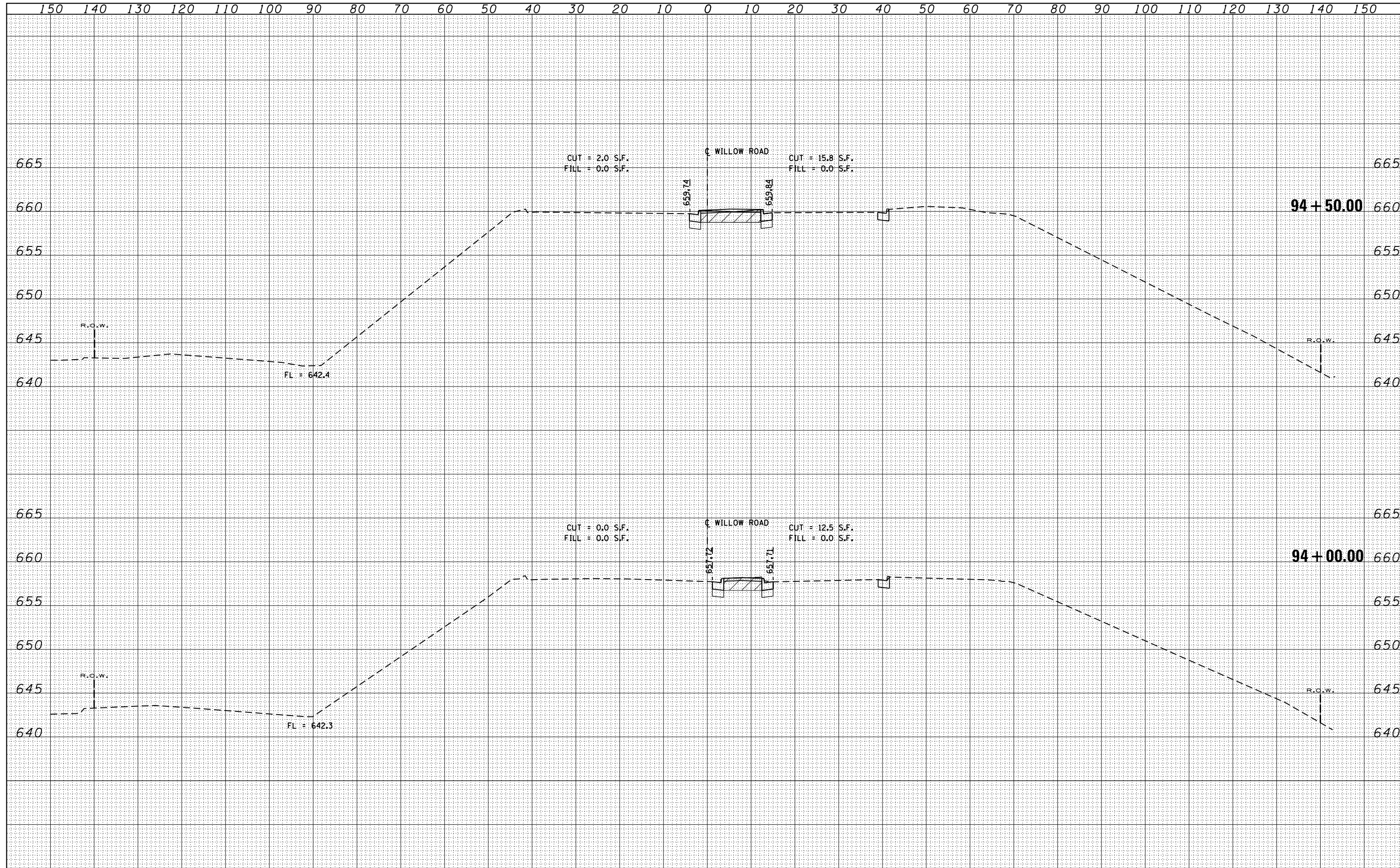
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BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED

DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED



DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	



USER NAME = MS_USER	DESIGNED - LAB	REVISED -
	DRAWN - YWA	REVISED -
PLOT SCALE = *SCALE*	CHECKED - E.JL	REVISED -
PLOT DATE = 12/13/2018	DATE - 11/21/18	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

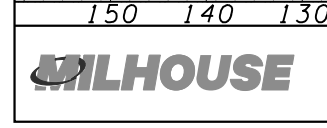
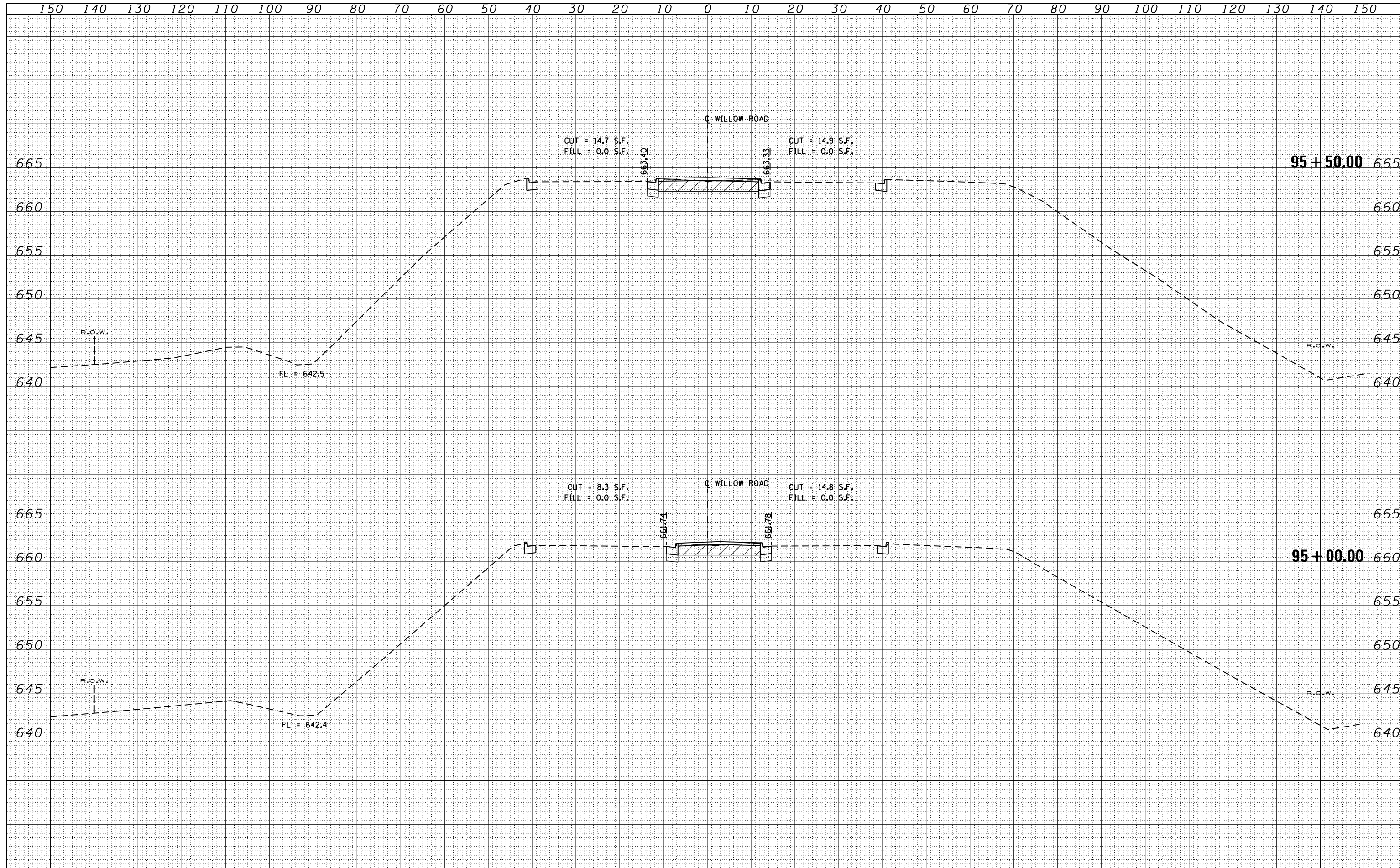
**CROSS SECTIONS
WILLOW RD. OVER SOO LINE R.R.**

SCALE: 1"=10' SHEET 2 OF 13 SHEETS STA. 94+00.00 TO STA. 94+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	181
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	



USER NAME = MS_USER	DESIGNED - LAB	REVISED -
	DRAWN - YWA	REVISED -
PLOT SCALE = *SCALE*	CHECKED - E.JL	REVISED -
PLOT DATE = 12/13/2018	DATE - 11/21/18	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

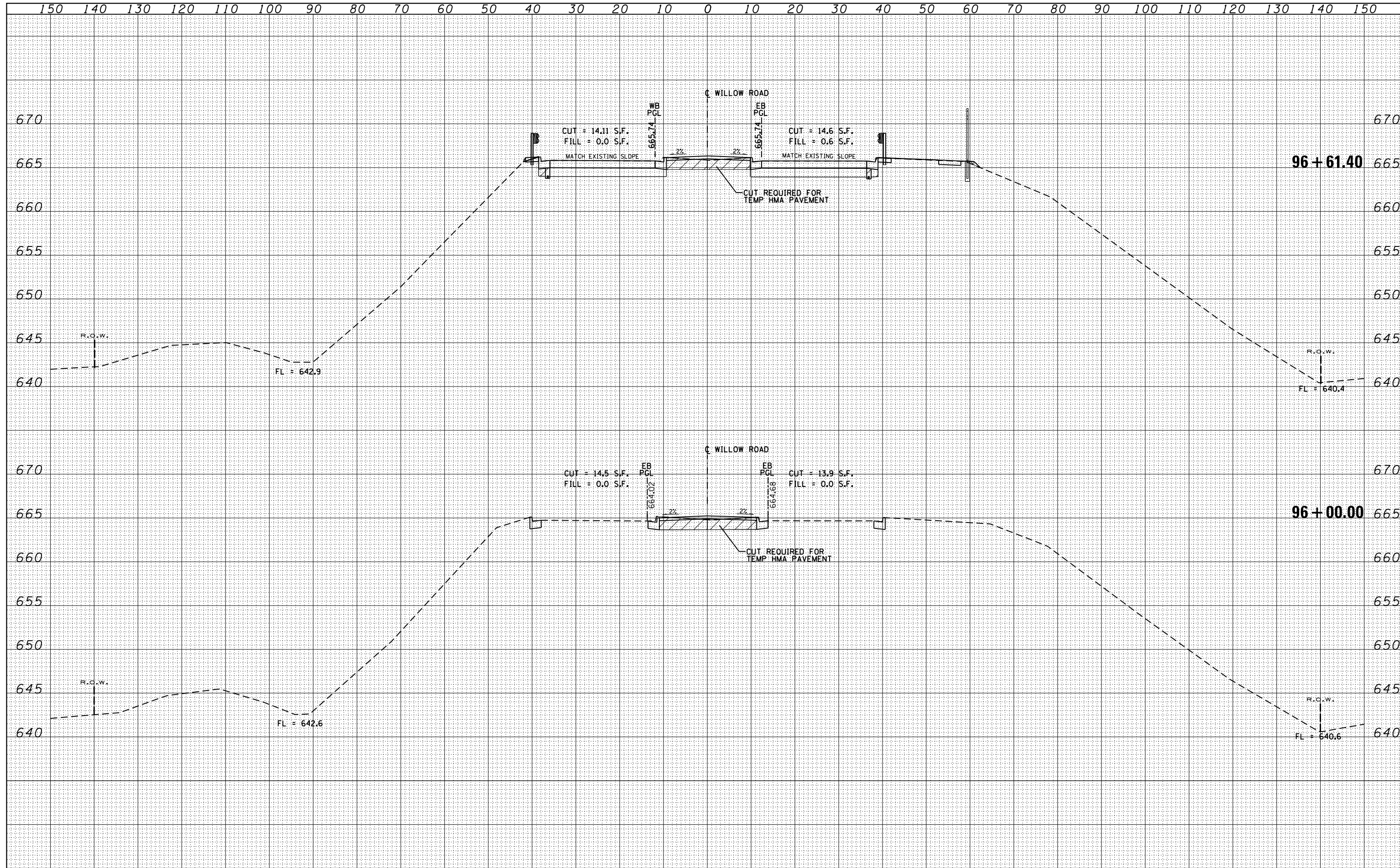
**CROSS SECTIONS
WILLOW RD. OVER SOO LINE R.R.**

SCALE: 1"=10' SHEET 3 OF 13 SHEETS STA. 95+00.00 TO STA. 95+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	182
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				

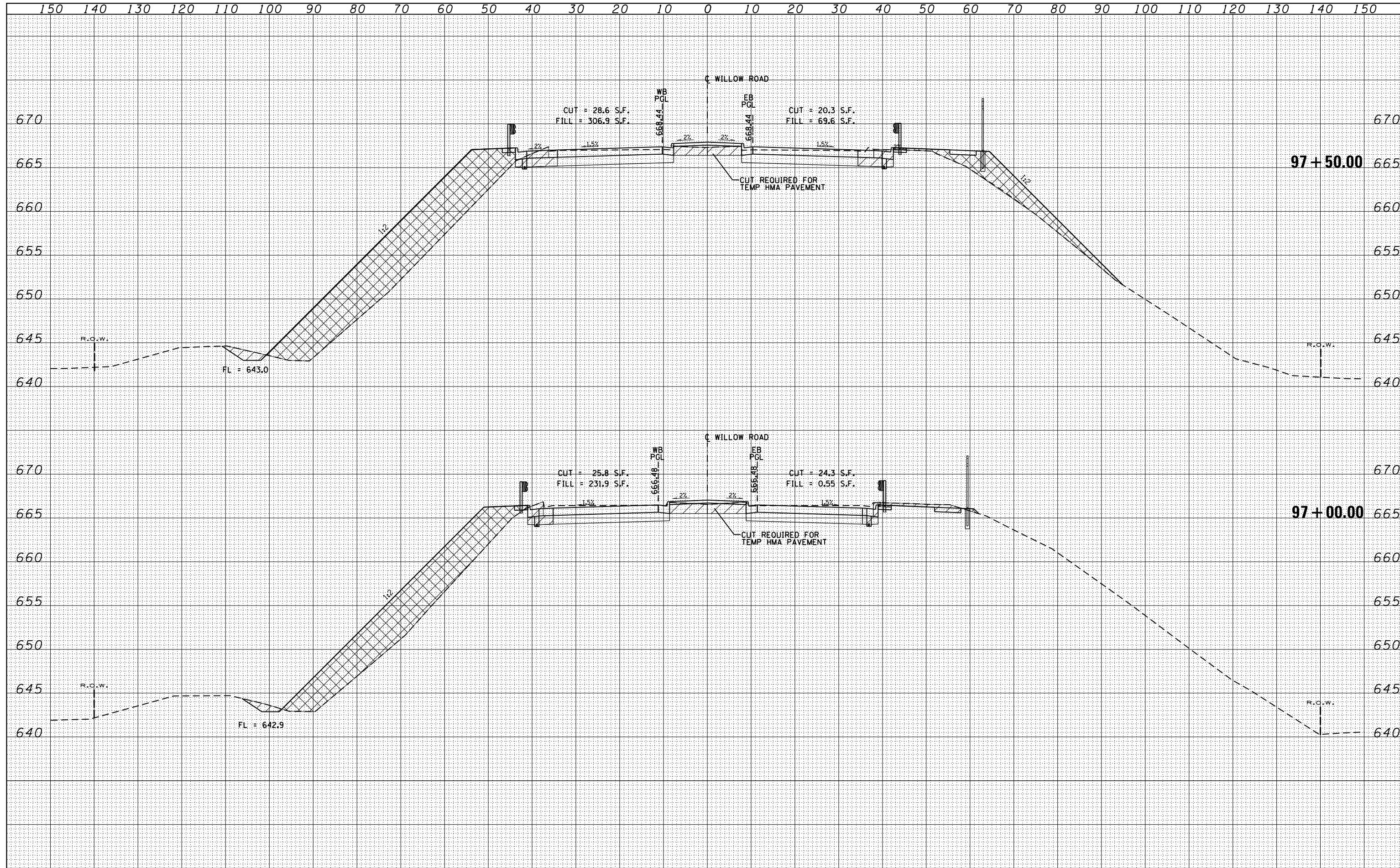
DATE	
BY	
ORIGINAL SURVEY NO.	
SURVEYED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	

DATE	
BY	
ORIGINAL SURVEY NO.	
SURVEYED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	



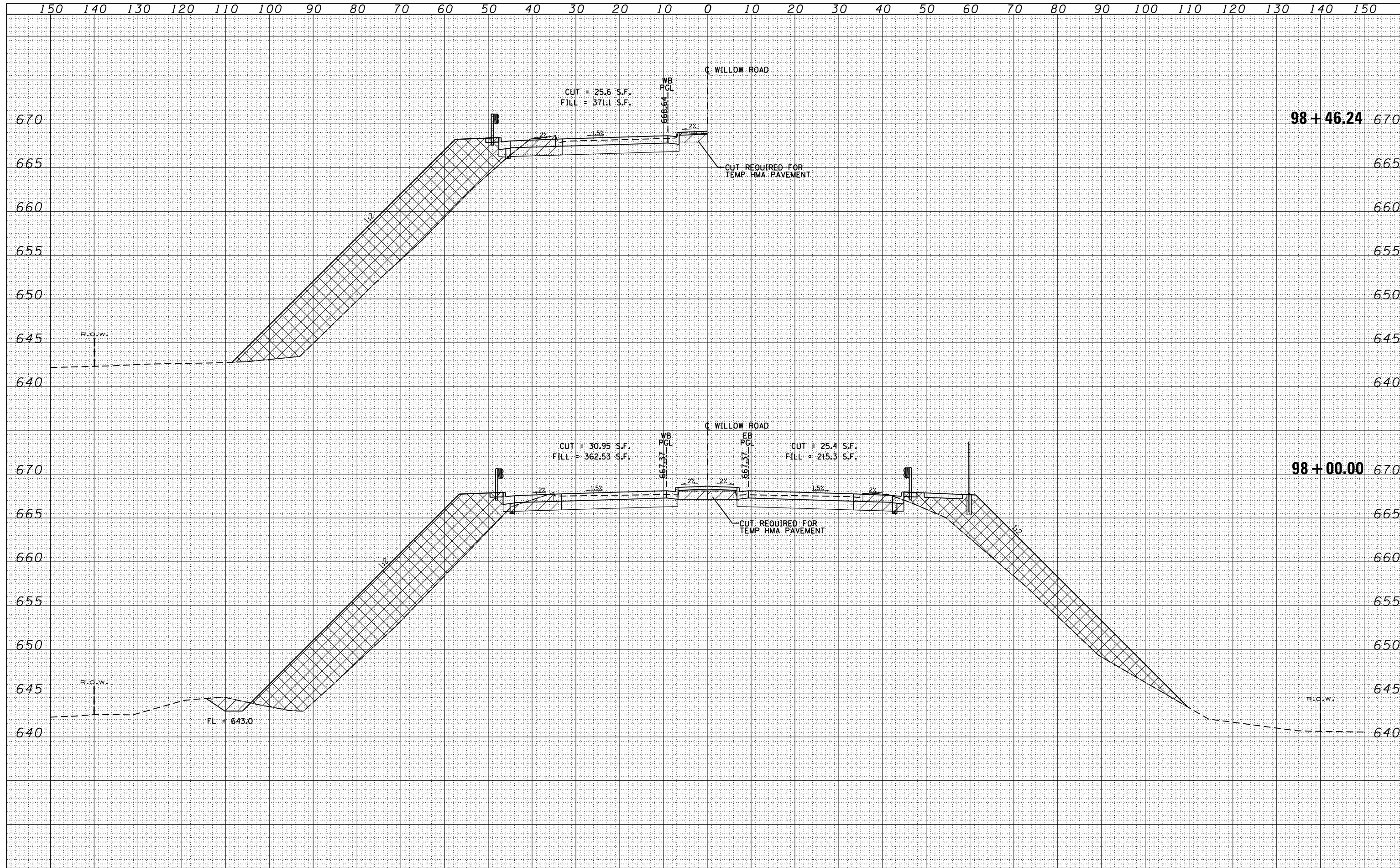
DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED

DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED



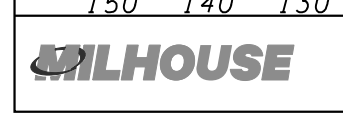
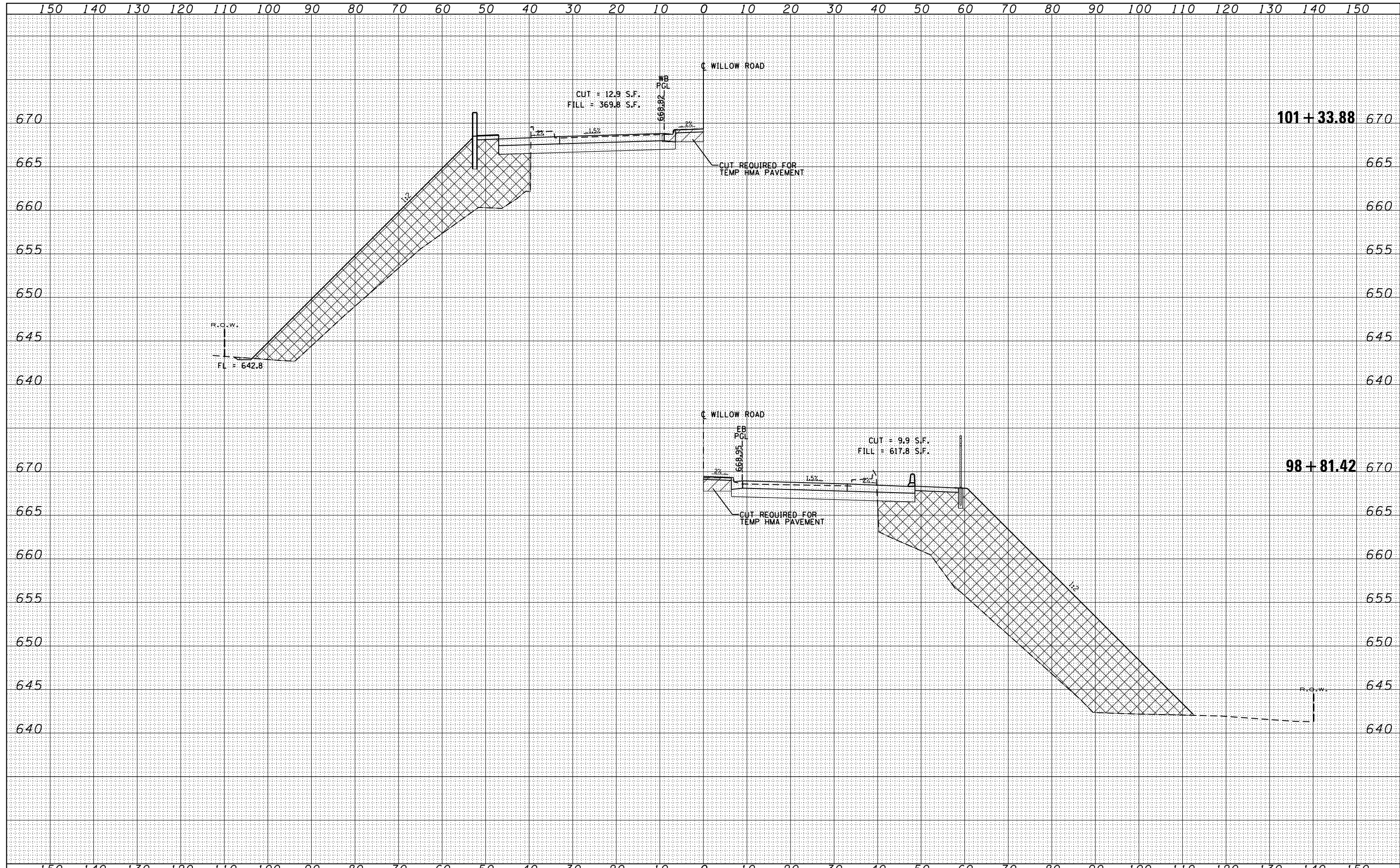
DATE	
BY	
FINISHED SURVEY	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	

DATE	
BY	
ORIGINAL SURVEY	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	



DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS
	CHECKED

DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS
	CHECKED



USER NAME - MS_USER	DESIGNED - LAB	REVISED -
	DRAWN - YWA	REVISED -
PLOT SCALE - *SCALE*	CHECKED - E.JL	REVISED -
PLOT DATE - 12/13/2018	DATE - 11/21/18	REVISED -

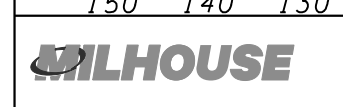
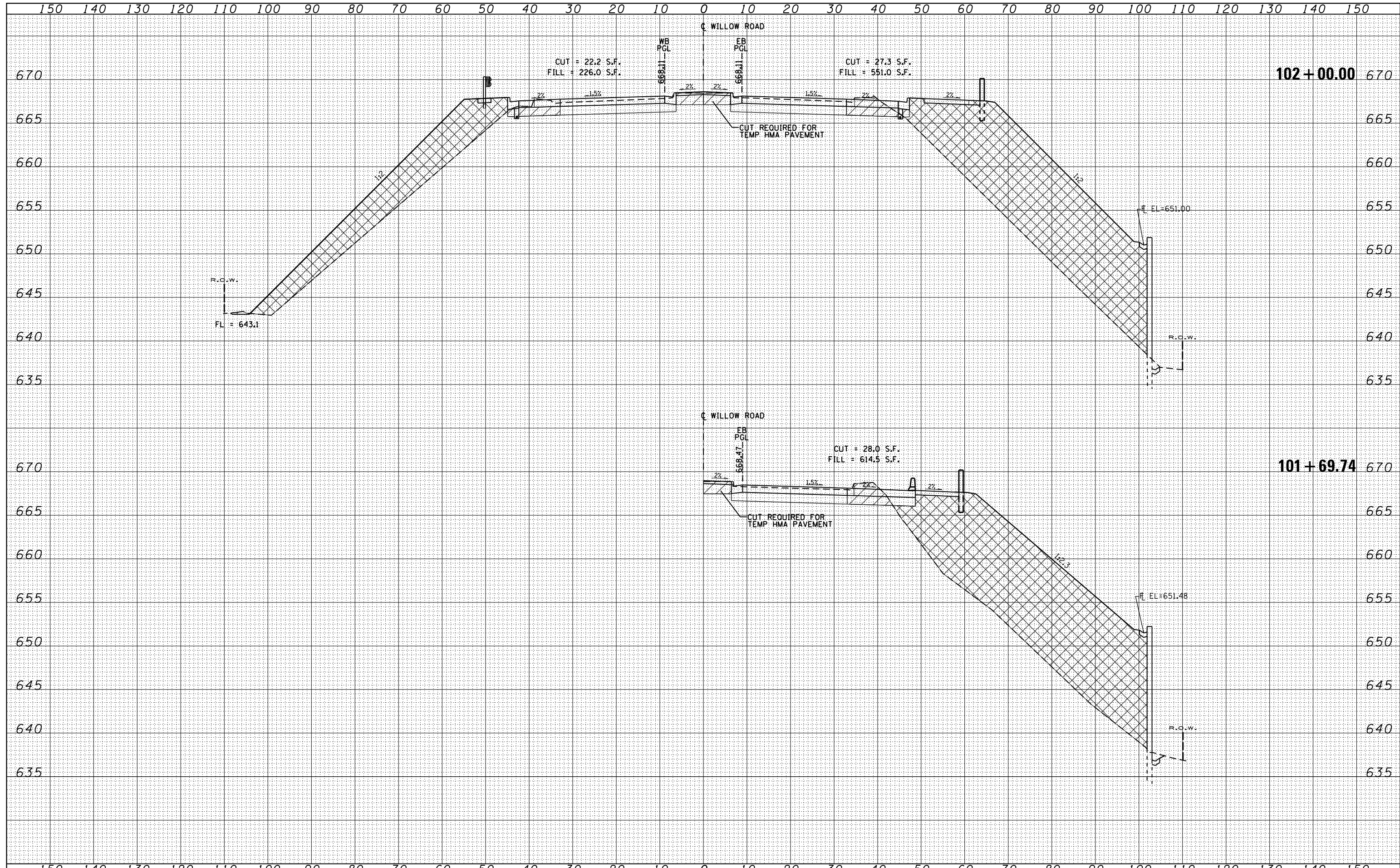
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS			
WILLOW RD. OVER SOO LINE R.R.			
SCALE: 1"=10'	SHEET 7 OF 13 SHEETS	STA. 98+81.42	TO STA. 101+33.88

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	186
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	



USER NAME - MS_USER	DESIGNED - LAB	REVISED -
	DRAWN - YWA	REVISED -
PLOT SCALE - *SCALE*	CHECKED - E.JL	REVISED -
PLOT DATE - 12/13/2018	DATE - 11/21/18	REVISED -

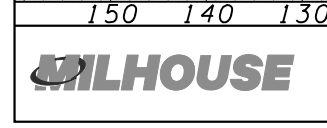
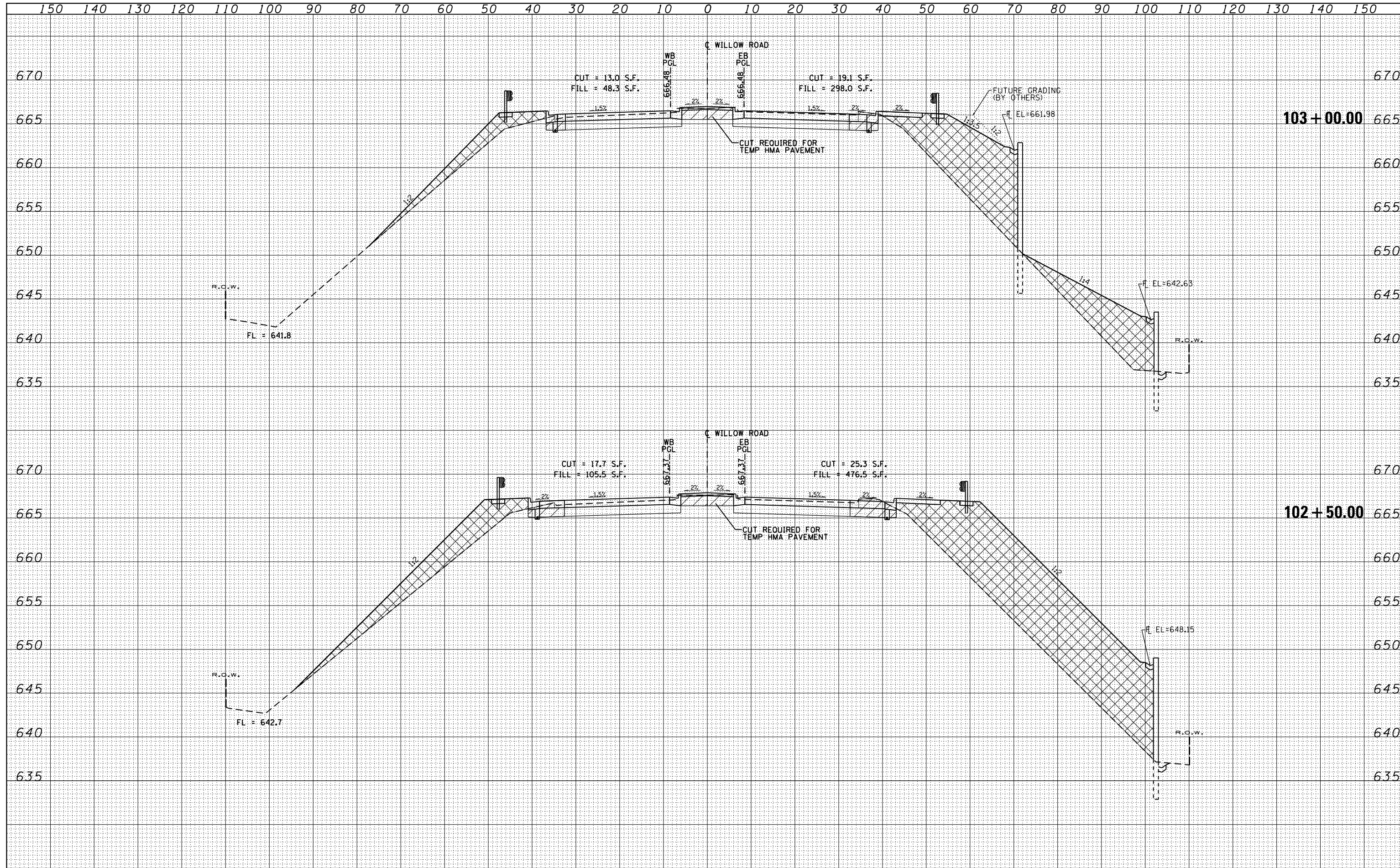
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS	
WILLOW RD. OVER SOO LINE R.R.	
SCALE: 1"=10'	SHEET 8 OF 13 SHEETS
STA. 101+69.74 TO STA. 102+00.00	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	187
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				

DATE	
BY	
FINISHED SURVEY	
PLOTTED	
TEMPLATE	
AREAS CHECKED	
NO.	

DATE	
BY	
ORIGINAL SURVEY	
PLOTTED	
TEMPLATE	
AREAS CHECKED	
NO.	



USER NAME = MS_USER	DESIGNED - LAB	REVISED -
	DRAWN - YWA	REVISED -
PLOT SCALE = *SCALE*	CHECKED - E.JL	REVISED -
PLOT DATE = 12/13/2018	DATE - 11/21/18	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

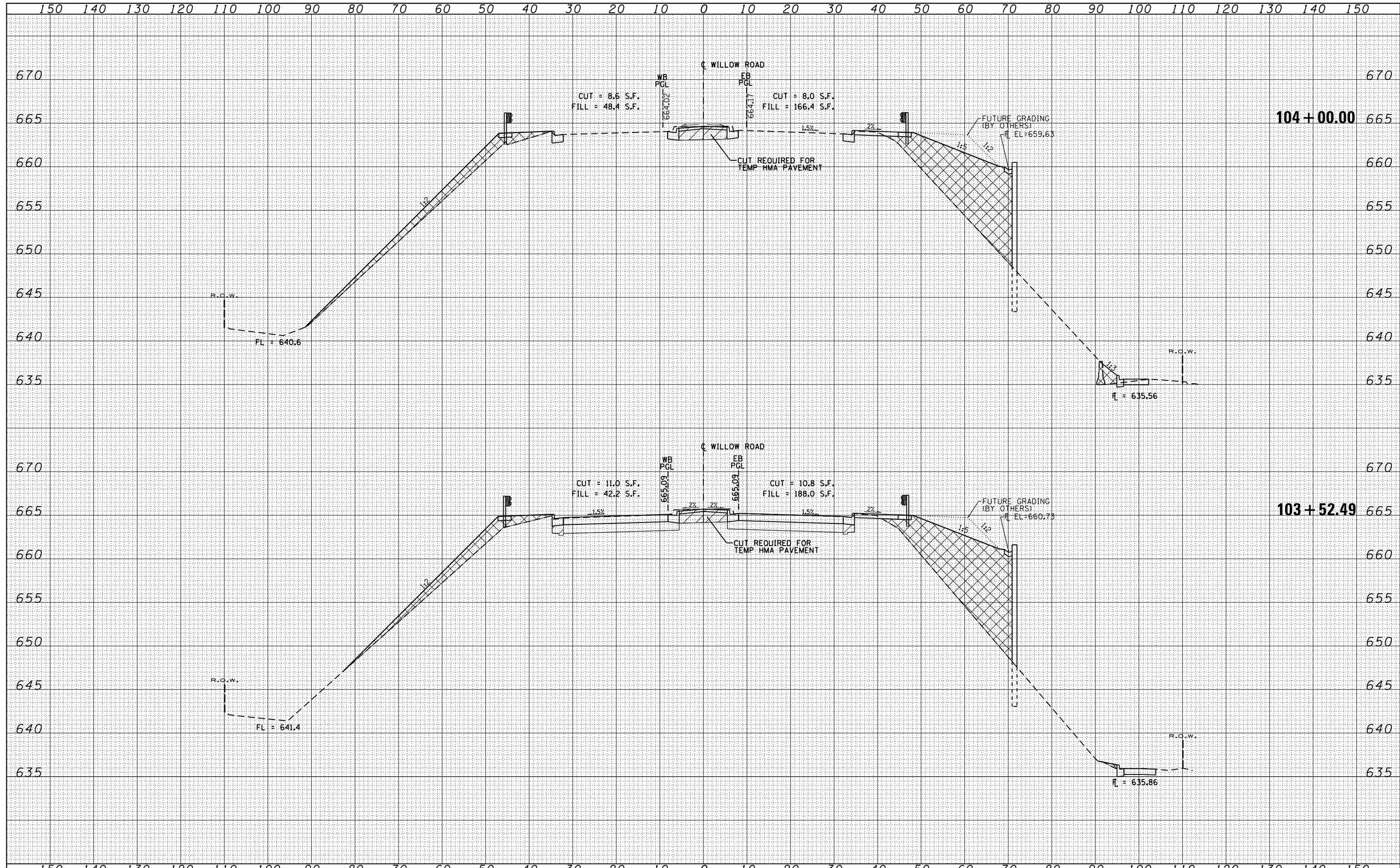
**CROSS SECTIONS
WILLOW RD. OVER SOO LINE R.R.**

SCALE: 1"=10' SHEET 9 OF 13 SHEETS STA. 102+50.00 TO STA. 103+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	188
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
FINAL SURVEY	
NOTE BOOK	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	



USER NAME = MS_USER	DESIGNED - LAB	REVISED -
	DRAWN - YWA	REVISED -
PLOT SCALE = *SCALE*	CHECKED - E.JL	REVISED -
PLOT DATE = 12/13/2018	DATE - 11/21/18	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

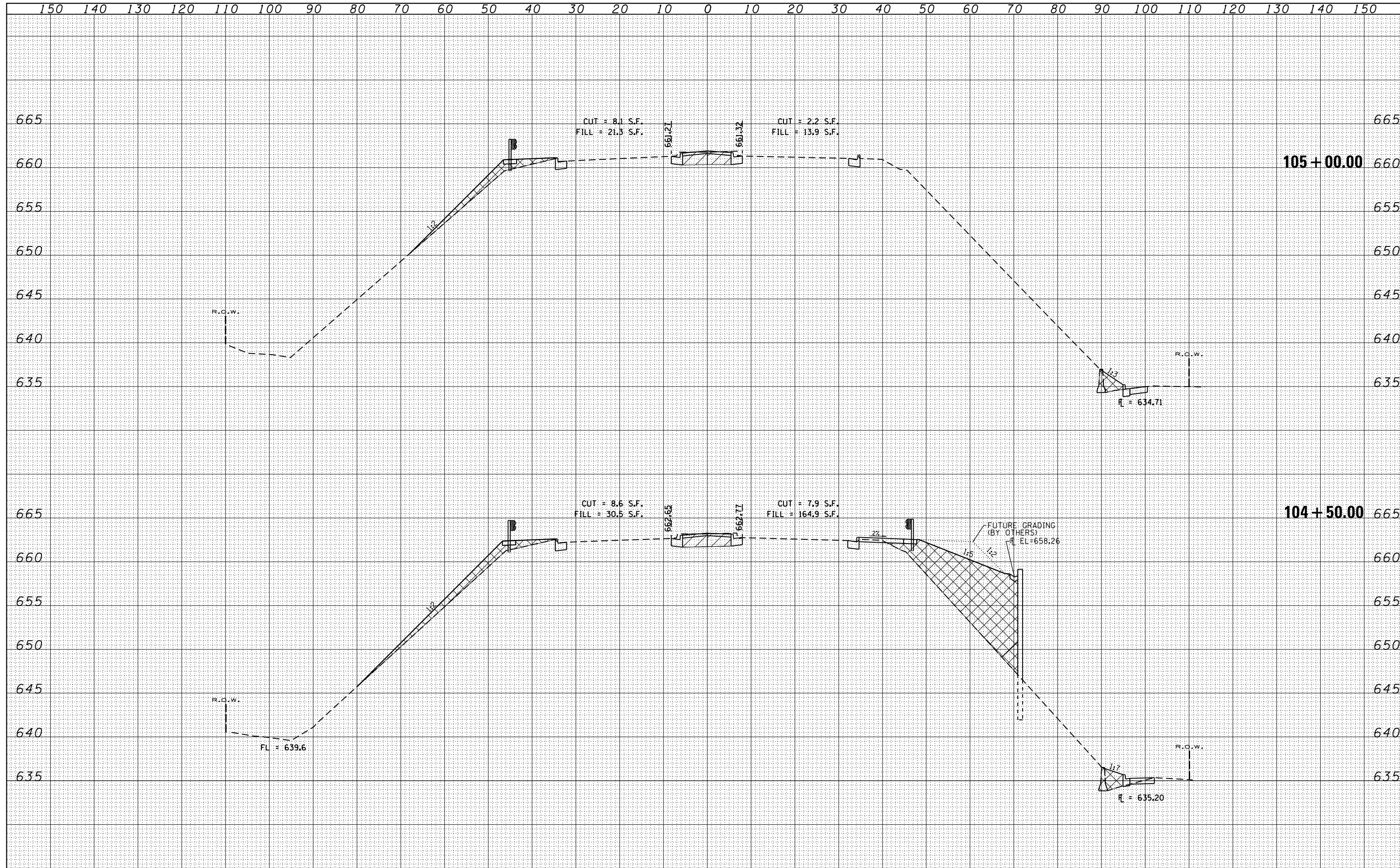
**CROSS SECTIONS
WILLOW RD. OVER SOO LINE R.R.**

SCALE: 1"=10' SHEET 10 OF 13 SHEETS STA. 103+52.50 TO STA. 104+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	189
				CONTRACT NO. 60N83
ILLINOIS FED. AID PROJECT				

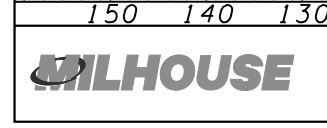
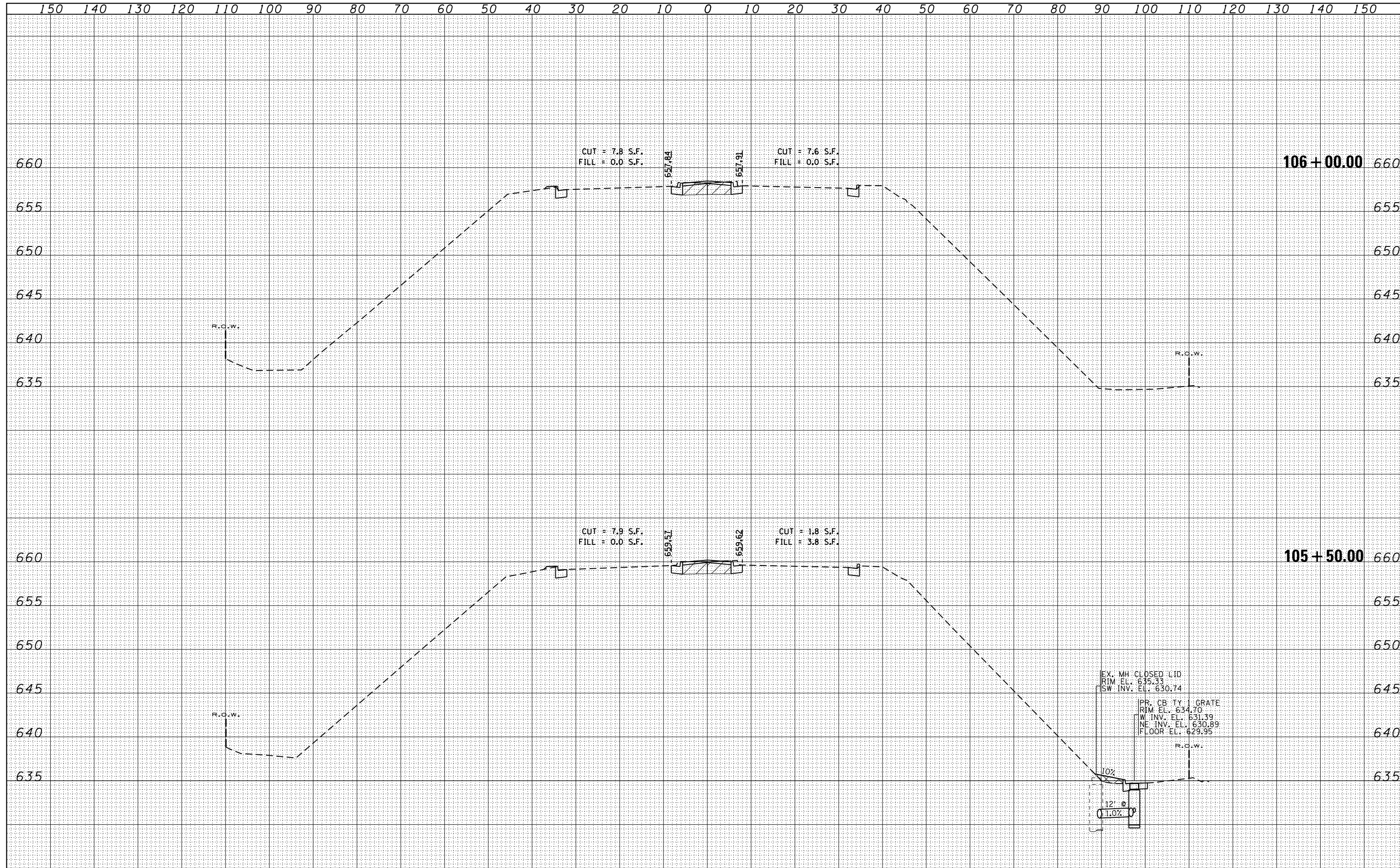
DATE	
BY	
FINISHED SURVEY	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	

DATE	
BY	
ORIGINAL SURVEY	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	



DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS CHECKED	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS CHECKED	
NO.	



USER NAME = MS_USER	DESIGNED - LAB	REVISED -
	DRAWN - YWA	REVISED -
PLOT SCALE = *SCALE*	CHECKED - E.JL	REVISED -
PLOT DATE = 12/13/2018	DATE - 11/21/18	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

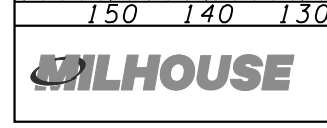
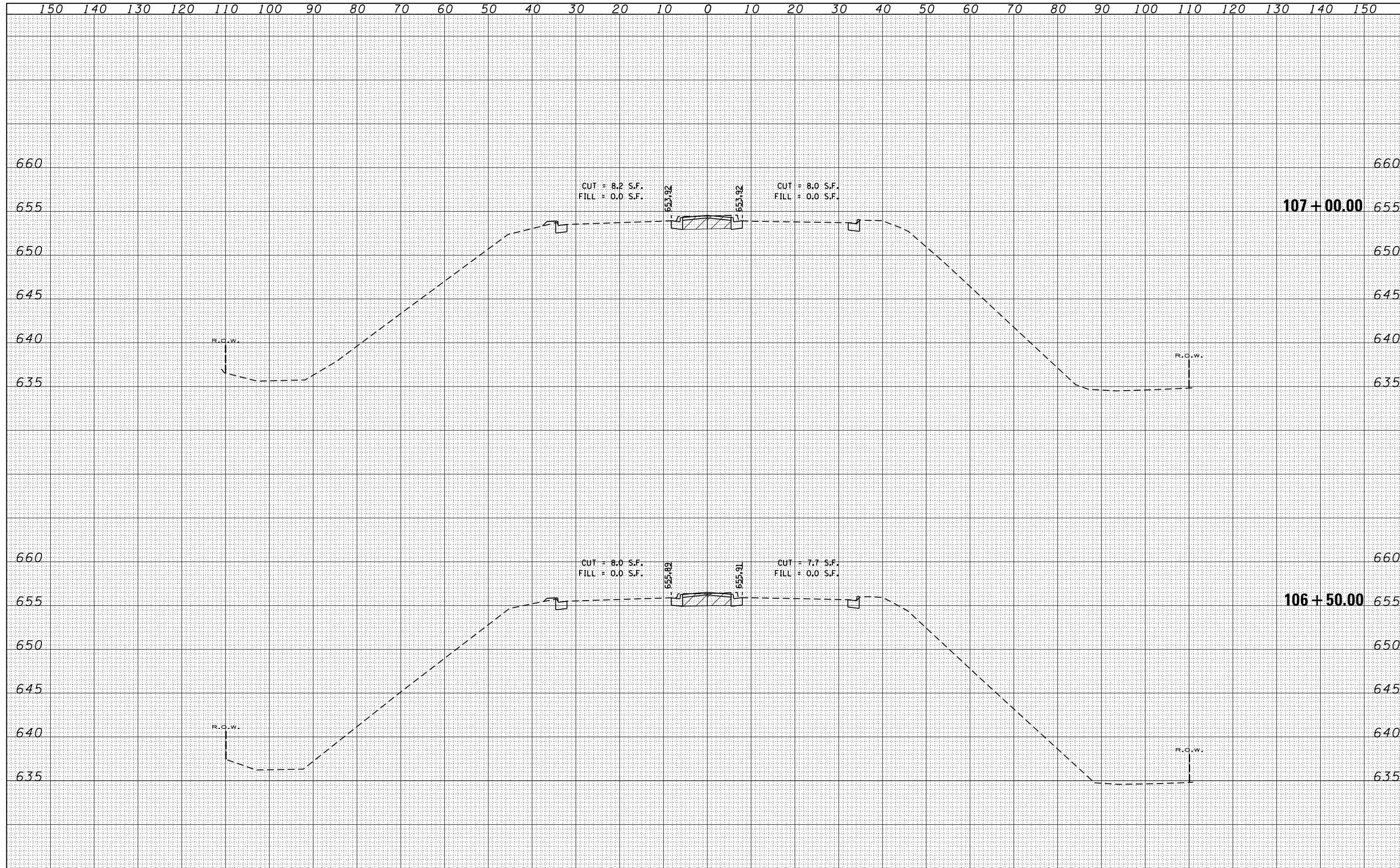
**CROSS SECTIONS
WILLOW RD. OVER SOO LINE R.R.**

SCALE: 1"=10' SHEET 12 OF 13 SHEETS STA. 105+50.00 TO STA. 106+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	191
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				

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

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



USER NAME = MS_USER	DESIGNED - LAB	REVISED -
	DRAWN - YWA	REVISED -
PLOT SCALE = *SCALE*	CHECKED - E.JL	REVISED -
PLOT DATE = 12/13/2018	DATE - 11/21/18	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

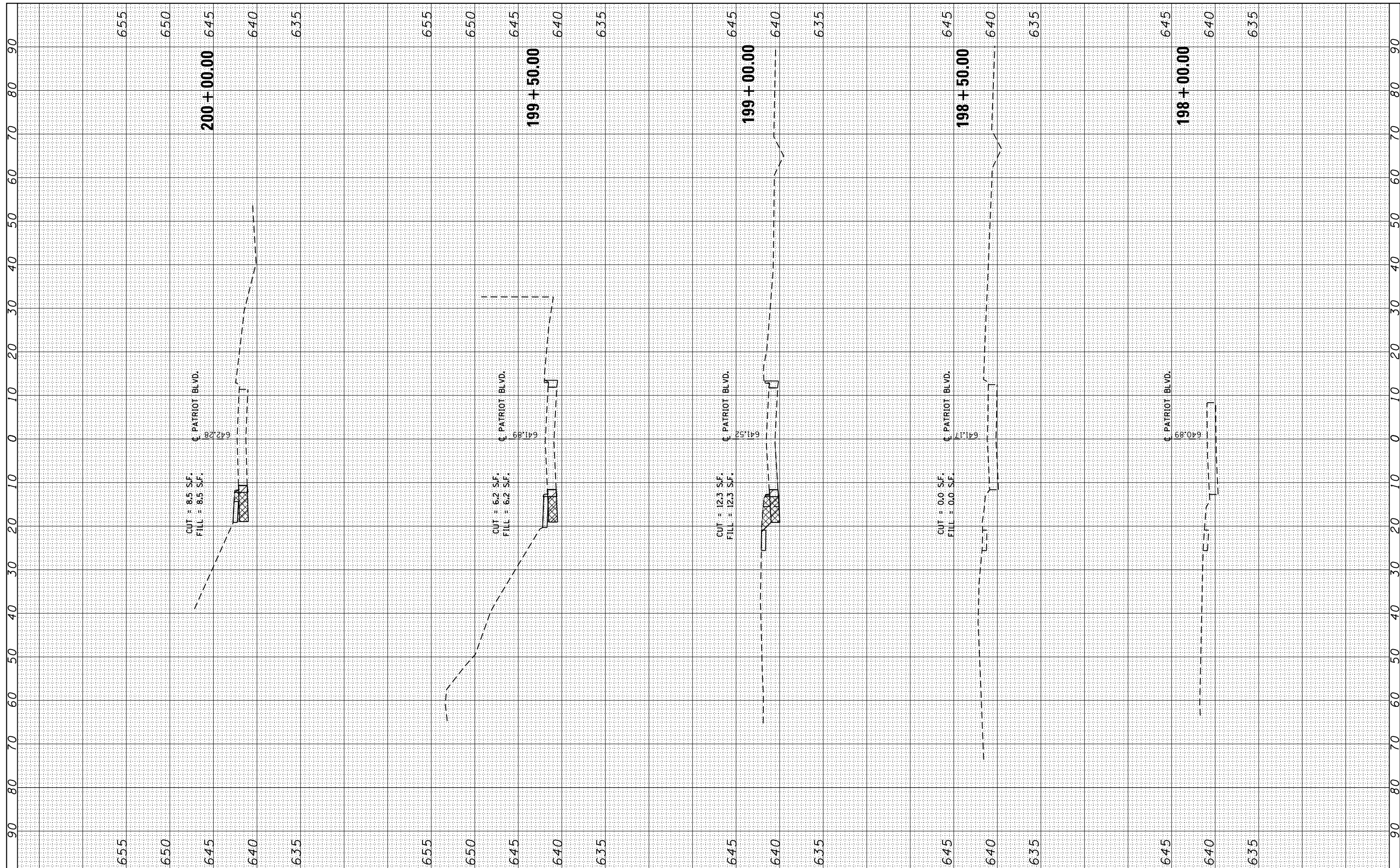
**CROSS SECTIONS
WILLOW RD. OVER SOO LINE R.R.**

SCALE: 1"=10' SHEET 13 OF 13 SHEETS STA. 106+50.00 TO STA. 107+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	192
CONTRACT NO. 60N83				
ILLINOIS FED. AID PROJECT				

FINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE



USER NAME = MS-USER
 PLOT SCALE = *SCALE*
 PLOT DATE = 12/13/2018

DESIGNED - RAC
 DRAWN - LCR
 CHECKED - DAZ
 DATE - 11/21/18

REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
 PATRIOT BLVD

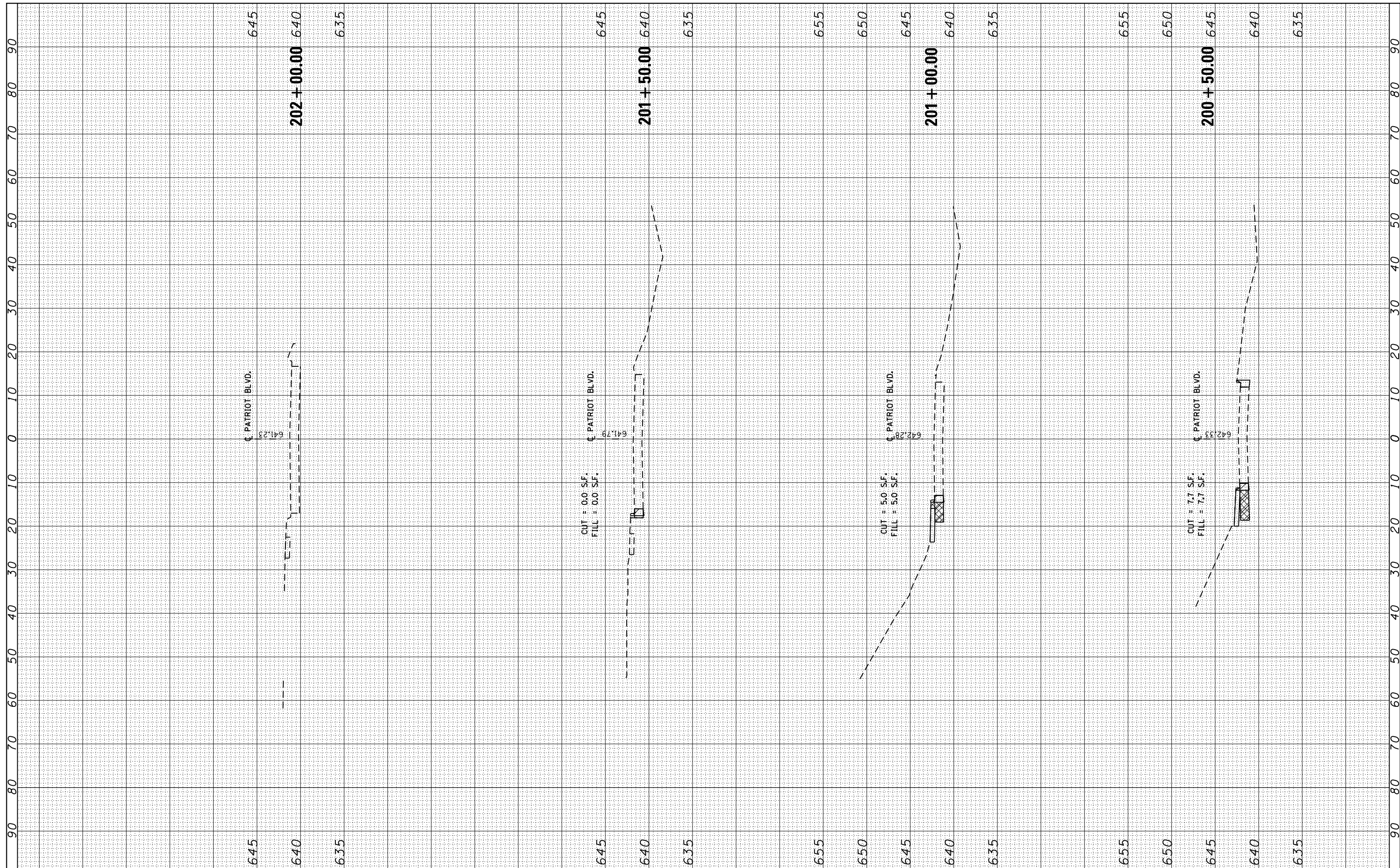
SCALE: 1"=10" SHEET 1 OF 2 SHEETS STA. 198+00.00 TO STA. 200+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	1920.01-BR	COOK	194	193
CONTRACT NO. 60N83				

ILLINOIS FED. AID PROJECT

FINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE



USER NAME = MS-USER	DESIGNED - RAC	REVISED -
	DRAWN - LCR	REVISED -
PLOT SCALE = *SCALE*	CHECKED - DAZ	REVISED -
PLOT DATE = 12/13/2018	DATE - 11/21/18	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS
PATRIOT BLVD**

SCALE: 1"=10" SHEET 2 OF 2 SHEETS STA. 200+50.00 TO STA. 202+00.00

F.A.P. RTE. 305	SECTION 1920.01-BR	COUNTY COOK	TOTAL SHEETS 194	SHEET NO. 194
CONTRACT NO. 60N83				

ILLINOIS FED. AID PROJECT