




NOTE:
 1. SEE DRAINAGE SHEET 29 FOR RIPRAP PLACEMENT AT 3'X3' CULVERT.

LEGEND

	SEEDING CLASS 4 SEEDING CLASS 5A HEAVY DUTY EROSION CONTROL BLANKET COMPOST FURNISH AND PLACE, 2"
	SEEDING CLASS 4B SEEDING CLASS 5B HEAVY DUTY EROSION CONTROL BLANKET COMPOST FURNISH AND PLACE, 2"
	SEEDING CLASS 2A EROSION CONTROL BLANKET TOPSOIL FURNISH AND PLACE, 4"

△- REVISED SHEET

COLLINS ENGINEERS

USER NAME : rgo11	DESIGNED -	REVISED -
PLOT SCALE : 40,0000' / in.	DRAWN -	REVISED -
PLOT DATE : 7/13/2016	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

IL ROUTE 171 OVER EQUESTRIAN PATH
 PAVEMENT MARKING, LANDSCAPING, AND SIGNING PLAN

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
372	2015-042B	COOK	60	33
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 62B01	

SCALE: SHEET NO. OF SHEETS STA. TO STA.

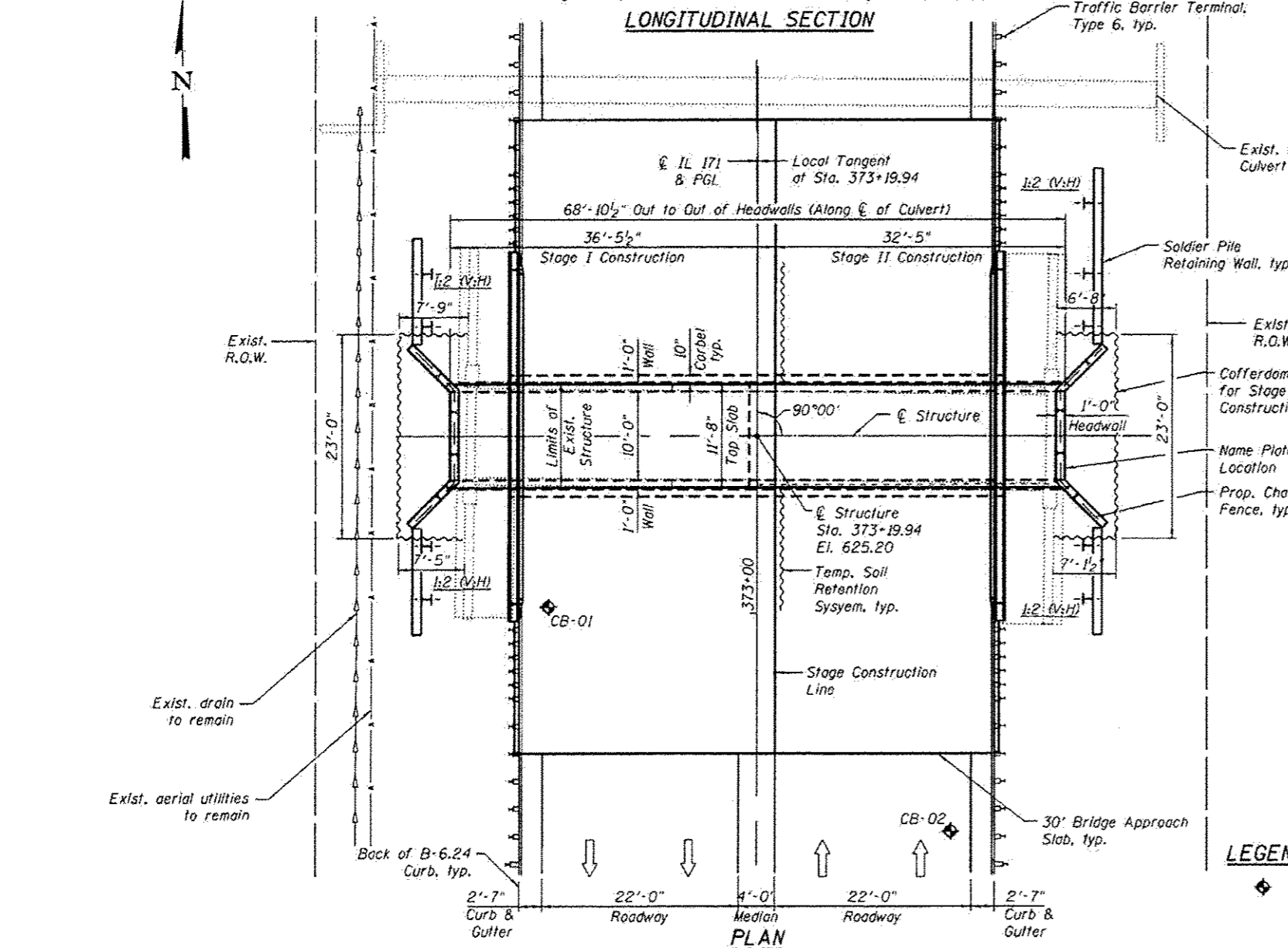
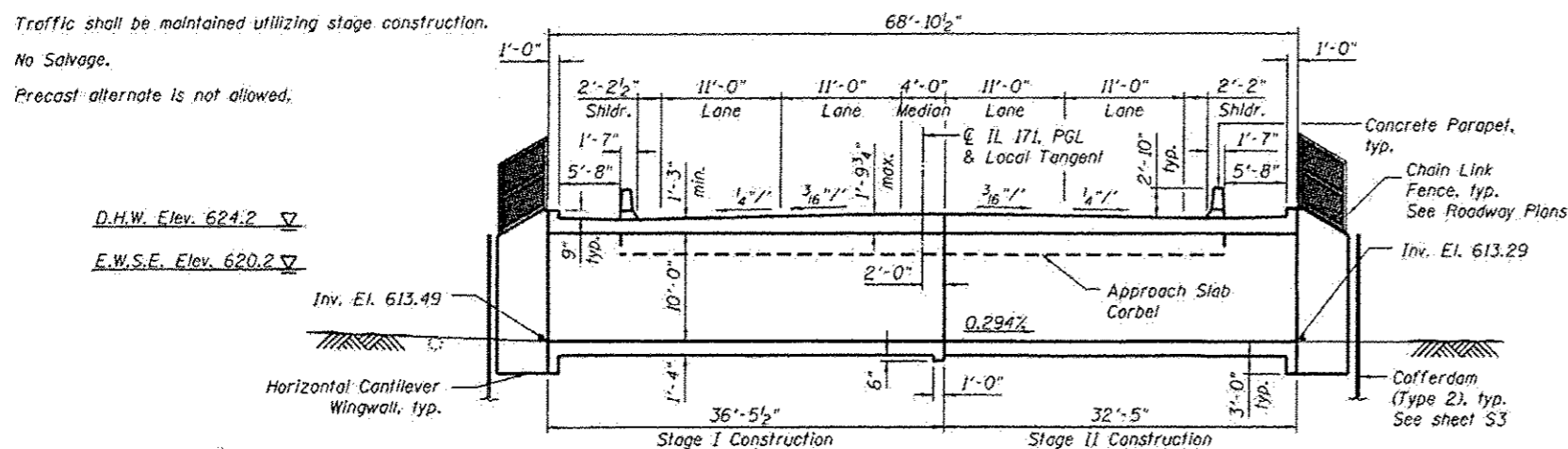
Benchmark: Chisled square on top of east wingwall, Sta. 373+15.15, offset 32.81' Rt., Elev. 625.97.

Existing Structure: S.N. 016-2150 built in 1933. Section 031-0606.3-15D as a single barrel concrete box culvert with 10'x10' opening having and total length of 64'-0". Another concrete box 3'x3' is located north of the 10'x10' culvert. The 3'x3' culvert drains the area before water enters the 10'x10' culvert. The Existing structure will be removed and replaced.

Traffic shall be maintained utilizing stage construction.

No Salvage.

Precast alternate is not allowed.



WATERWAY INFORMATION

(Accounting for Backwater From Des Plaines River)

Flood Event/ Freq. Yr.	Discharge (cfs)		Waterway Opening (Sq. Ft.)		Wat. H.W.E.	Head - Ft.		Headwater El.	
	Prop.	Existing	Proposed	Existing		Exist.	Prop.	Exist.	Prop.
Main Channel		9	9						
Relief Structure	10	89	89		622.3	0.0	0.0	622.3	622.3
Total		135	98						
Main Channel		9	9						
Relief Structure	50	100	100		624.2	0.0	0.0	624.2	624.2
Total		204	109						
Main Channel		9	9						
Relief Structure	100	100	100		625.1	0.0	0.0	625.1	625.1
Total		242	109						
Main Channel		9	9						
Relief Structure	Overlapping	100	100		623.5	0.0	0.0	623.5	623.5
Total		109	109						
Main Channel		9	9						
Relief Structure	500	100	100		626.4	0.0	0.0	626.4	626.4
Total		292	109						

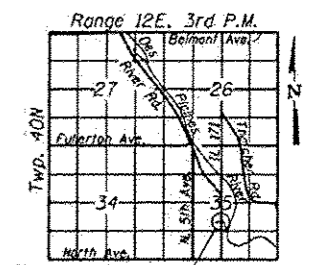
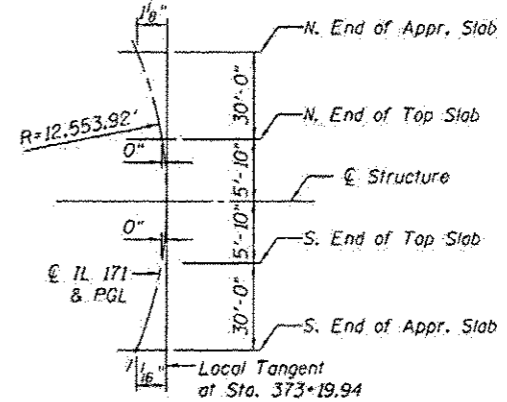
10-Year Velocity through Existing Structure = 1.5 fps
 10-Year Velocity through Proposed Structure = 1.6 fps

2-year peak flow = 86.1 cfs
 2-year peak elevation = 620.2

2-year bypass waterway opening = 77 sf total
 9 sf Main Channel
 68 sf Relief Structure

CURVE DATA

(Existing IL Rte. 171)
 P.I. Sta. = 373+05.50
 $\Delta = 1^{\circ}08'36''$ (L.I.)
 $D = 0^{\circ}27'23''$
 $R = 12,553.92'$
 $T = 125.26'$
 $L = 250.50'$
 $E = 0.62'$
 P.C. Sta. = 371+80.24
 P.T. Sta. = 374+30.75



DESIGN STRESSES

FIELD UNITS
 $f'_c = 3,500$ psi
 $f'_c = 4,000$ psi (Concrete Class BS for Culvert top slab and Bridge Approach slabs)
 $f_y = 60,000$ psi (Reinforcement)

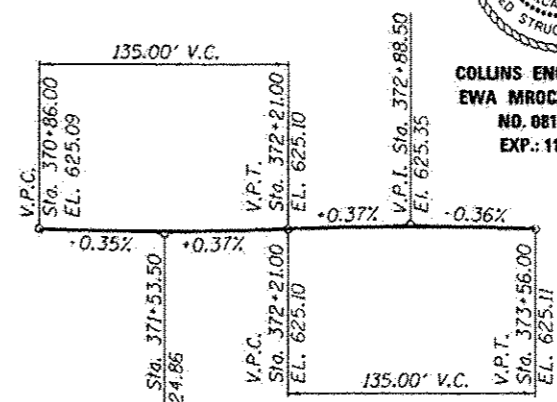


COLLINS ENGINEERS, INC.
 EWA MROZCEK, P.E., S.E.
 NO. 081-006067
 EXP.: 11/30/2016

DESIGN SPECIFICATIONS
 2014 AASHTO Bridge Design Specifications,
 7th Edition with 2015 Interims

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.



LEGEND
 ♦ Soil Boring Location

GENERAL PLAN & ELEVATION
IL ROUTE 171 / FIRST AVE.
OVER EQUESTRIAN PATH
FAP 372 - SECTION 2015-042B
COOK COUNTY
STATION 373+19.94
STRUCTURE NO. 016-2283