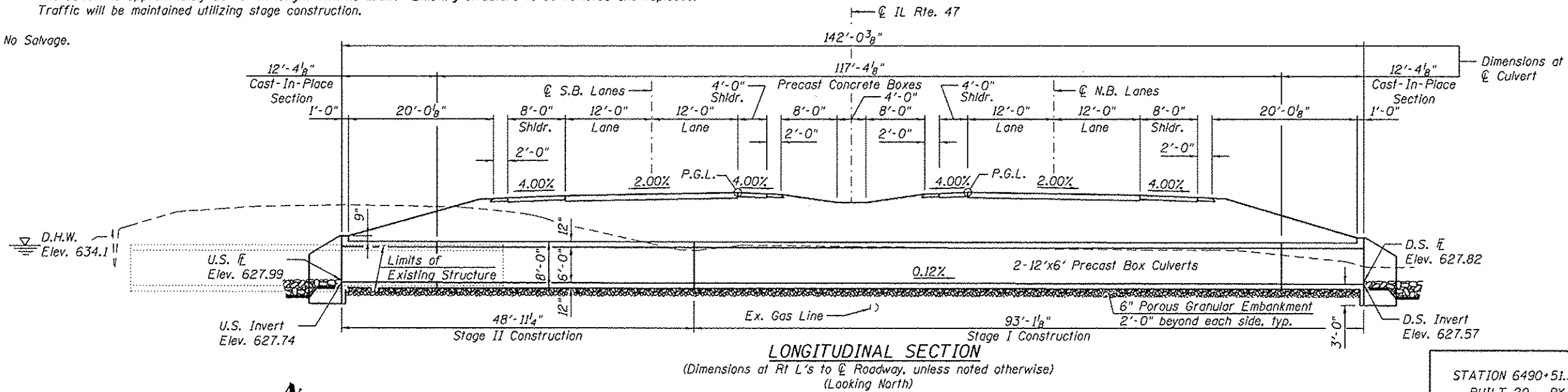


Benchmark: B.M. 7008. Found cut "+" north end of easterly headwall on box culvert 1385' south of Lisbon Center Road, Elevation 635.44.

Existing Structure: The existing structure consists of a double 7'x6' concrete box culvert with concrete wingwalls. The culvert is approximately 60'-0" in length with no skew. Existing structure to be removed and replaced. Traffic will be maintained utilizing stage construction.

No Salvage.



INDEX OF SHEETS

1. General Plan & Elevation
2. General Data
3. Culvert Details
- 4-5. Soil Borings

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition

LOADING HL-93

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

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)

PRECAST UNITS

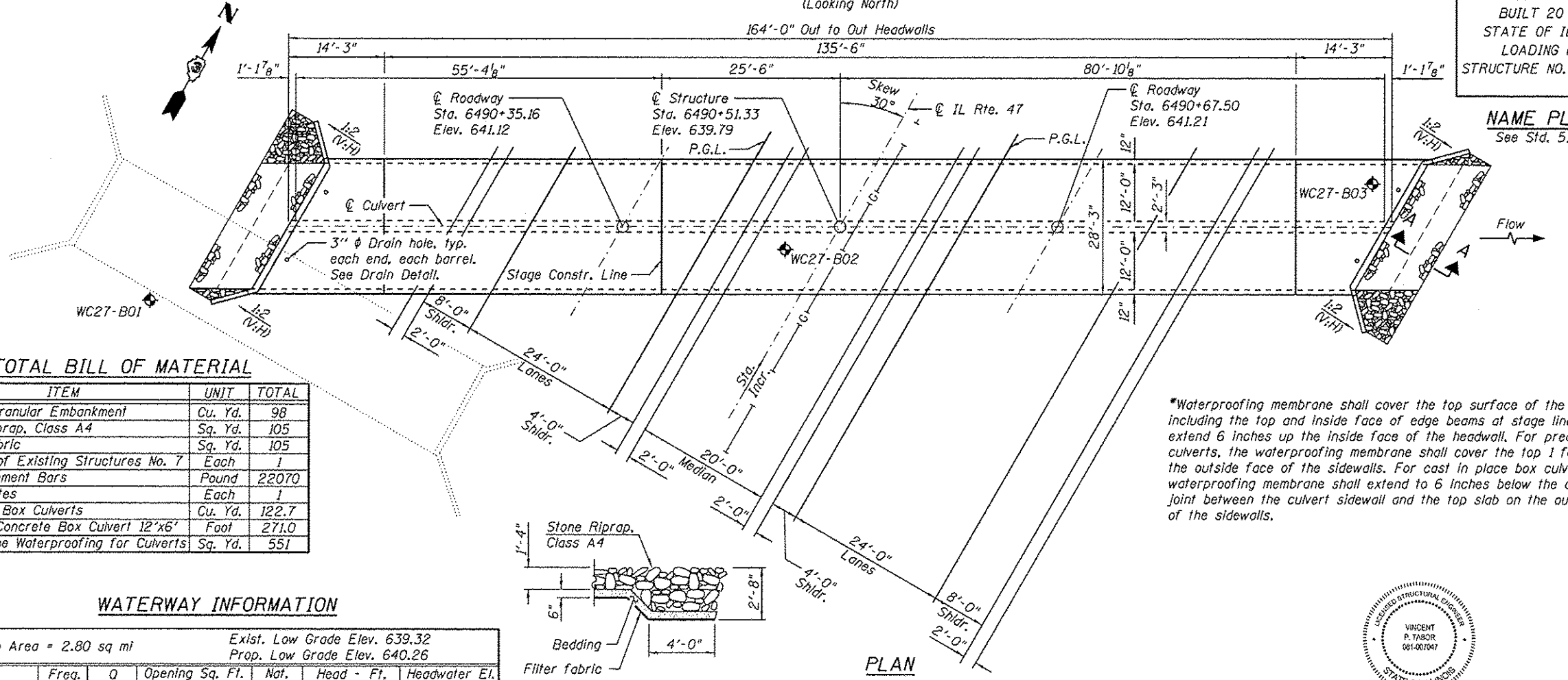
$f'_c = 5,000$ psi
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 65,000$ psi (Welded Wire Fabric)

GENERAL NOTES

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer. The last section of precast culvert on each end shall have reinforcing bars extending from the precast culvert to be incorporated into the cast-in-place end sections as shown on sheet 3 of 5. Precast concrete box culverts shall conform to the design requirements of ASTM C1577.

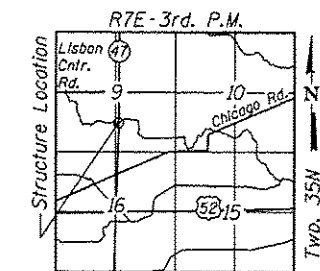
STATION 6490+51.33
BUILT 20 BY
STATE OF ILLINOIS
LOADING HL-93
STRUCTURE NO. 047-2032

NAME PLATE
See Std. 515001



PROFILE GRADE

(Along IL Rte. 47 P.G.)



GENERAL PLAN & ELEVATION

**IL RTE. 47 OVER
DRAINAGE DITCH
F.A.P. RTE. 326
SEC-(109, 110)R-1
KENDALL COUNTY
STATION 6490+51.33
STRUCTURE NO. 047-2032**

TOTAL BILL OF MATERIAL

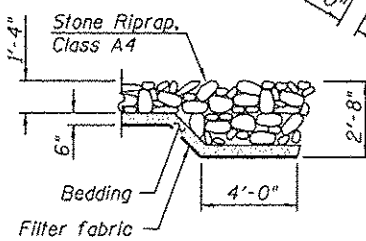
ITEM	UNIT	TOTAL
Porous Granular Embankment	Cu. Yd.	98
Stone Riprap, Class A4	Sq. Yd.	105
Filter Fabric	Sq. Yd.	105
Removal of Existing Structures No. 7	Each	1
Reinforcement Bars	Pound	22070
Name Plates	Each	1
Concrete Box Culverts	Cu. Yd.	122.7
Precast Concrete Box Culvert 12'x6'	Foot	271.0
Membrane Waterproofing for Culverts	Sq. Yd.	551

WATERWAY INFORMATION

Flood		Q		Opening Sq. Ft.		Nat. Head - Ft.		Headwater El.	
Freq. Yr.	C.F.S.	Exist.	Prop.	H.W.E.	Exist.	Prop.	Exist.	Prop.	
10	335	84	118	633.9	0.2	0.0	634.1	633.9	
Design	504	84	120	634.1	0.6	0.1	634.7	634.2	
Base	572	84	120	634.3	1.1	0.5	635.4	634.8	
Overlapping	-	-	-	-	-	-	-	-	
Max. Calc.	500	734	84	120	634.5	1.9	1.0	636.5	

10 year velocity through Existing Structure = 4.0 fps
10 year velocity through Proposed Structure = 2.8 fps

SECTION A-A



DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	U.S. Invert	D.S. Invert
	624.74	624.57

REVISED -	USER NAME =	DESIGNED - PSS
REVISED -	FILE NAME =	CHECKED - VPT
REVISED -	PLOT SCALE =	DRAWN - AJF
REVISED -	PLOT DATE =	CHECKED - VPT

LE LIN ENGINEERING, LTD.
Consulting Engineers
Springfield, Illinois

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN & ELEVATION
STRUCTURE NO. 047-2032**

SHEET NO. 1 OF 5 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
326	(109, 110)R-1	KENDALL	619	384

CONTRACT NO. 66884
ILLINOIS FED. AID PROJECT

Vincent P. Tabor 7/14/2014
Date
Vincent P. Tabor
Licensed Structural Engineer
State of Illinois No. 081-007047
Expires 11/30/2014