

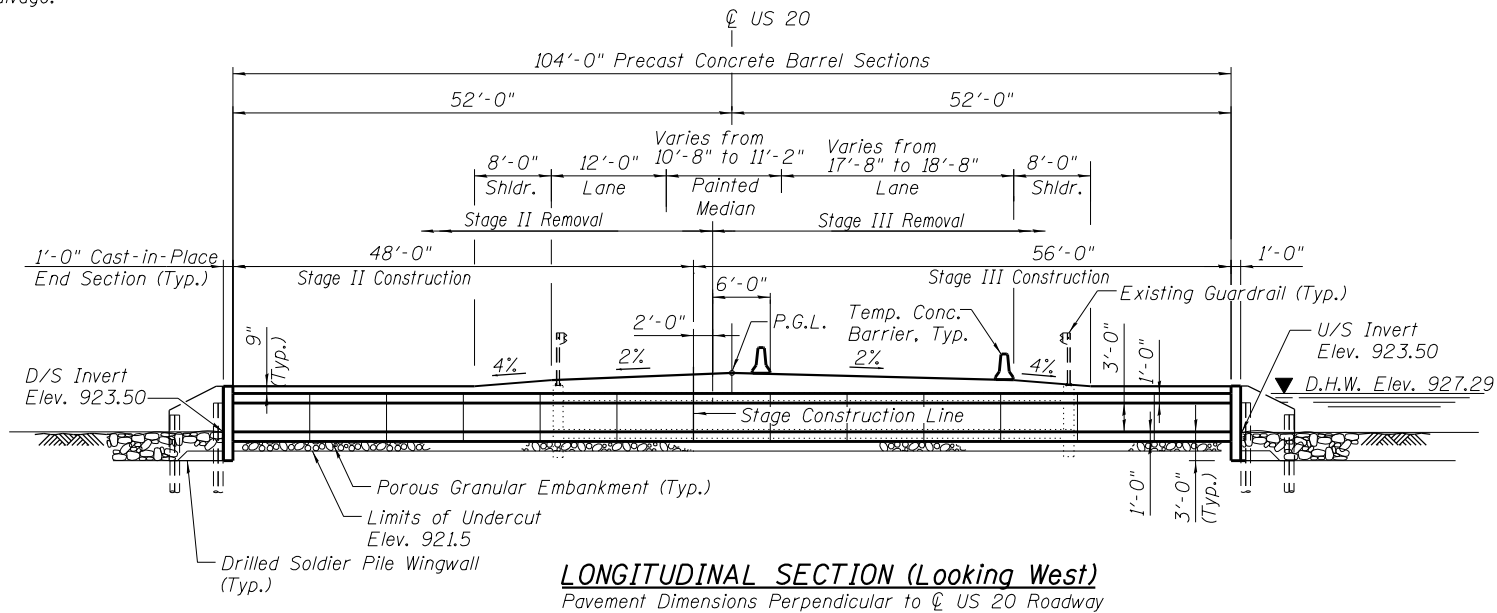
Bench Mark: BM #2 Set at Sta. 71+61.8, Elev 931.030. Spike in the northwesterly face of 32-inch tree at the northeast corner of U.S. Route 20 and IL Route 47 ±110' foot north of utility pole w/ transformer.

Existing Structure: SN 045-0251 was built as part of US Route 20, Section 106-S-N-2. The structure is a single cell cast-in-place concrete box culvert approximately 12 feet in length and 55 feet in width. The structure is not skewed to the roadway centerline and carries two 12-foot traffic lanes and two 6-foot shoulders. Structure to be removed and replaced. Traffic to be maintained utilizing stage construction.

No Salvage.

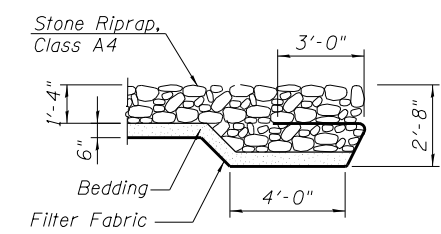
WATERWAY INFORMATION

Drainage Area = 1.06 Sq. Mi.		Existing Low Grade Elev. = 929.3 ft. @ Sta. 75+00		Proposed Low Grade Elev. = 929.3 ft. @ Sta. 75+00						
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Natural H.W.E.		Head - Ft.		Headwater El.	
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.		
Design	10	131	35.6	35.9	926.41	0.06	0.08	926.47	926.49	
Base	100	434	36.0	36.0	927.29	1.07	0.93	928.36	928.22	
Overtopping	N/A									
Max. Calc.	500	669	36.0	36.0	928.73	1.26	1.25	929.99	929.98	



STATION 75+15.47
BUILT 20... BY
STATE OF ILLINOIS
LOADING HL-93
STRUCTURE NO. 045-0260

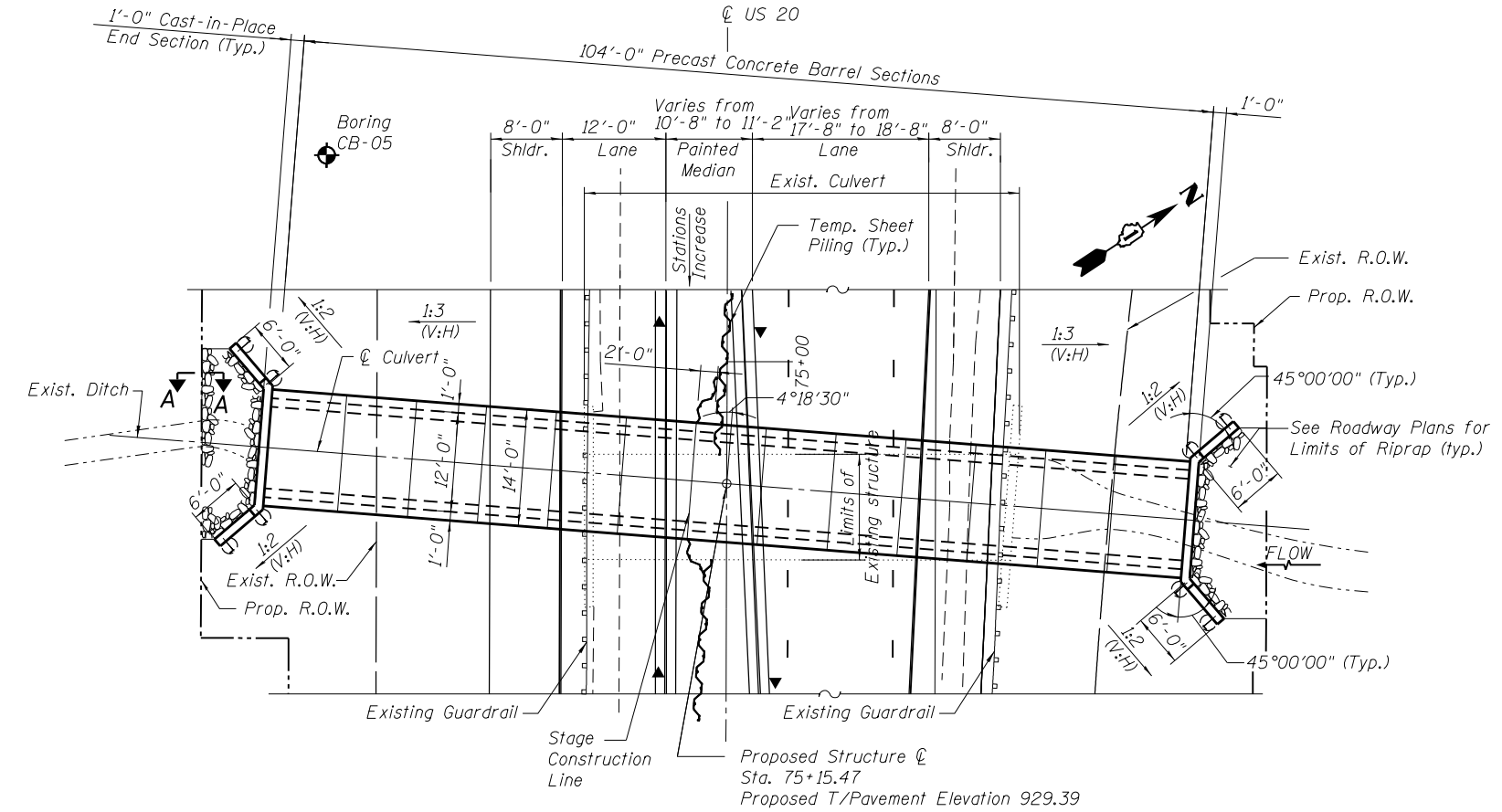
NAME PLATE
See Std. 515001



SECTION A-A

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Porous Granular Embankment	Cu. Yd.	72
Porous Granular Backfill	Cu. Yd.	0
Stone Riprap, Class A4	Sq. Yd.	33
Filter Fabric	Sq. Yd.	65
Removal of Existing Structures	Each	1
Structure Excavation	Cu. Yd.	128
Removal and Disposal of Unsuitable Material for Structures	Cu. Yd.	72
Concrete Structures	Cu. Yd.	9.9
Protective Coat	Sq. Yd.	4
Reinforcement Bars, Epoxy Coated	Pound	1290
Pipe Culverts, Class A, Type 1 24"	Foot	0
Drilling and Setting Soldier Piles (in soil)	Cu. Yd.	19.7
Precast Concrete Box Culverts 12'x3' (Special)	Foot	104
Furnishing Soldier Piles (HP Section)	Foot	108
Temporary Sheet Piling	Sq. Ft.	288



HIGHWAY CLASSIFICATION

F.A.P. Route 345, US Route 20,
Function Class: Other Principal Arterial
ADT: 7,550 vpd (2011)
ADTT: 1025 (2011) 14%
DHV: 755 (2007)
Design Speed: 60 mph
Posted Speed 55 mph

LOADING HL-93

Allow 50#/Sq ft. for Future Wearing Surface

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition

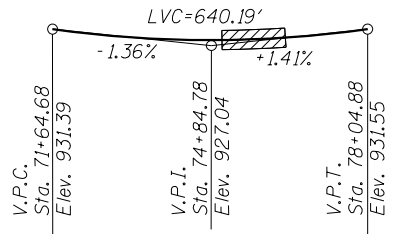
DESIGN STRESSES

FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

PRECAST UNITS
f'c = 5,000 psi
fy = 65,000 psi (Reinforcement)

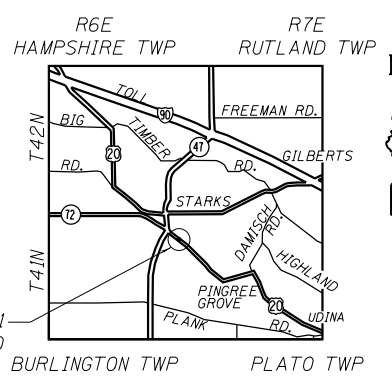
INDEX OF SHEETS

- S1 General Plan and Elevation
- S2 Stage Construction
- S3 Temporary Concrete Barrier for Stage Construction
- S4 Culvert Section and Headwall and Wingwall Details
- S5 Soil Boring Logs I
- S6 Soil Boring Logs II



PROFILE GRADE LINE

(IL US 20, Along CL Roadway)



LOCATION SKETCH

GENERAL PLAN

US ROUTE 20 OVER UN-NAMED DITCH
US ROUTE 20 SOUTH - SECTION 106-S-N-2
KANE COUNTY
STATION 75+15.47
STRUCTURE NO. 045-0260

LEGEND

- Soil Boring
- Sheet Piling

Note:
The contractor shall grade around the wingwalls in such manner to create a positive drainage away from the culvert.

USER NAME =	DESIGNED - MBC
PLOT SCALE =	DRAWN - BA/DS
PLOT DATE =	CHECKED - WPK
FILE NAME =	DATE - 5/19/2014

REVISED -
REVISED -
REVISED -
REVISED -

DBS DB STERLIN CONSULTANTS, INC.
122 N. WACKER DRIVE SUITE 2000
CHICAGO, ILLINOIS 60606
TEL. (312)857-1008 FAX. (312)857-1006

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 045-0260

SHEET NO. S1 OF S6 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	106-S-N-2	KANE	147	98
CONTRACT NO. 60T09				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				