

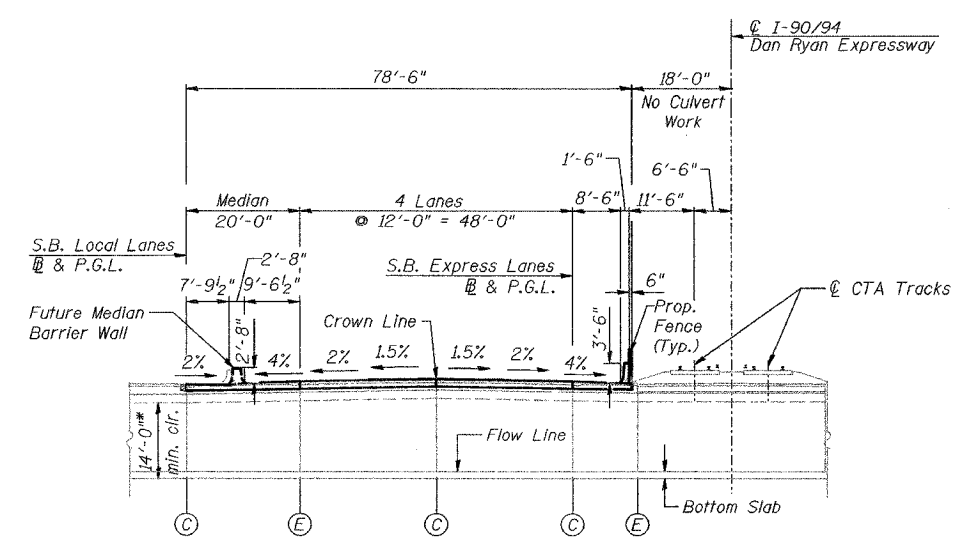
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	598	475
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
62302	• (1818, ETC, 2324.6-IPR-9			

Benchmark: BM No. 3540

"□" Cut on the Southwest corner of traffic control box at the Northeast corner of 39th and LaSalle Streets. E.I. 12.33

**Existing Structure:** The existing structure was built in 1962 under Section S-2323.2-4B and is identified as S.N. 016-2625. The structure is a 12'-0" clear span by 14'-0" clear height double barrel reinforced concrete box culvert. It conveys sanitary and storm water under the Dan Ryan Expressway for the MWRDGC. The length of culvert under the expressway is 325'-0" and the culvert transitions horizontally, vertically and in cross section to connect to an existing circular brick sewer under the centerline of 39th Street. The top slab of the culvert is the expressway pavement and consists of a minimum of 1'-3" of reinforced concrete with an approximately 5" thick overlay (either concrete or bituminous). The centerline of the culvert has no skew relative to the Dan Ryan baselines. There are 20'-6" long approach slabs on each side of the culvert over the width of the traffic lanes. Barrier wall is attached to the top slab and separates the express and local lanes of the expressway and the expressway from the CTA tracks. The barrier is supported by PCC shoulders outside the limits of the culvert. The culvert will be rehabilitated utilizing stage construction. Portions of the top slab and all components of the culvert below grade shall be re-used.

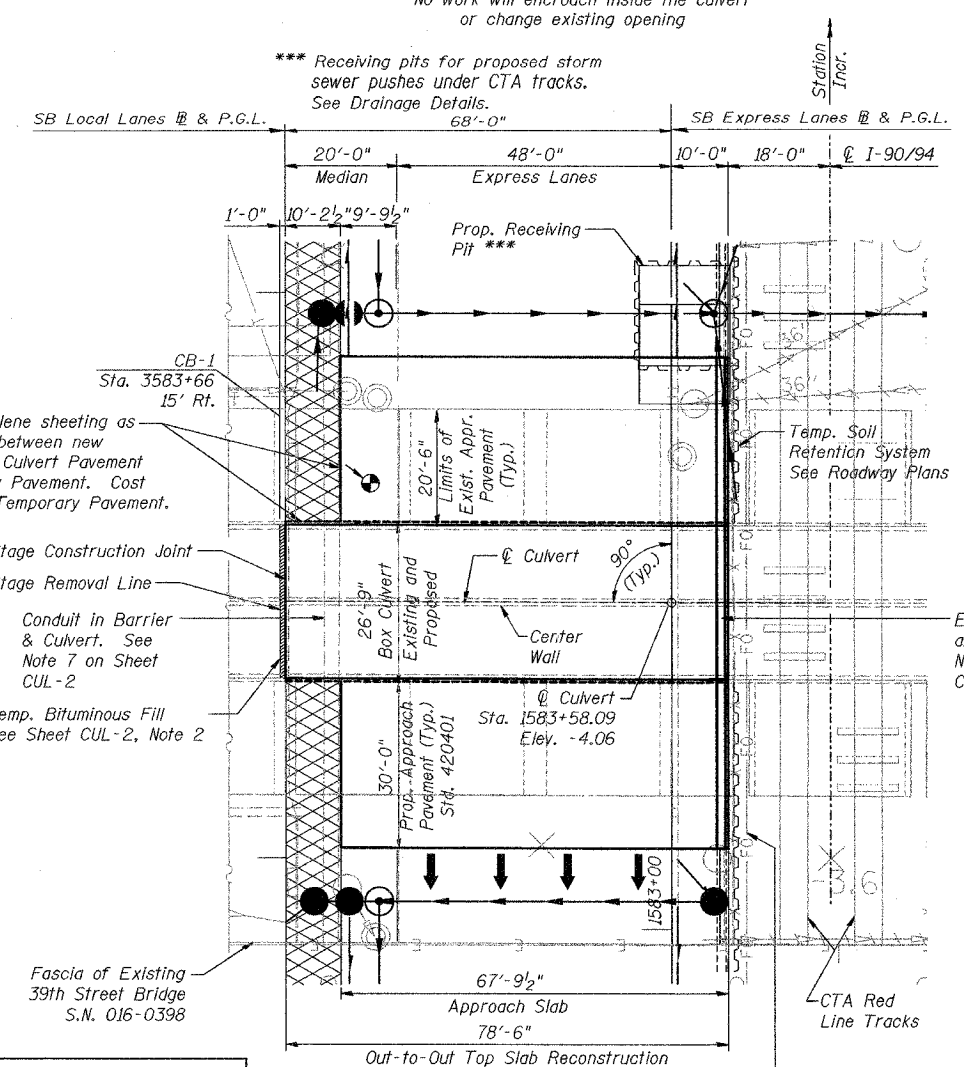
All elevations are based on the Chicago City Datum (C.C.D.)



**LONGITUDINAL SECTION THRU CULVERT**

\* No work will encroach inside the culvert or change existing opening

\*\*\* Receiving pits for proposed storm sewer pushes under CTA tracks. See Drainage Details.



**PARTIAL PLAN**

**GENERAL NOTES**

Reinforcement bars shall conform to the requirements of AASHTO M 31 or M 322 Grade 60.

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

All construction joints shall be bonded.

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	QTY.
Bridge Approach Pavement	Sq. Yd.	452
Bituminous Surface Removal, 5"	Sq. Yd.	143
Bituminous Surface Removal (Variable Depth)	Sq. Yd.	82
Approach Slab Removal	Sq. Yd.	219
Concrete Superstructure	Cu. Yd.	112.2
Bridge Deck Grooving	Sq. Yd.	218
Protective Coat	Sq. Yd.	265
Reinforcement Bars, Epoxy Coated	Pound	21,450
Bar Splicers	Each	257
Concrete Slab Hydro-Demolition	Sq. Yd.	237
CTA Fence	Foot	87
Video Taping of MWRD Culvert	Foot	245
Temporary CTA Ballast Retention	L. Sum	1

**DESIGN SPECIFICATIONS**

2002 AASHTO

**LOADING HS20-44 & ALT.**

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

**DESIGN STRESSES**

**FIELD UNITS**

New:  
 f'c = 3,500 psi  
 fy = 60,000 psi (Reinforcement)

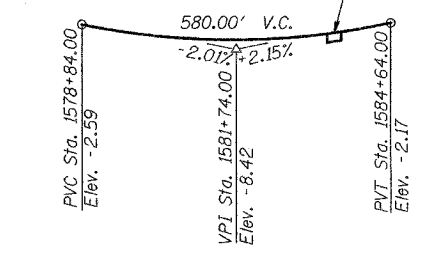
Existing:  
 f'c = 3,500 psi  
 fy = 40,000 psi (Reinforcement)

**LEGEND**

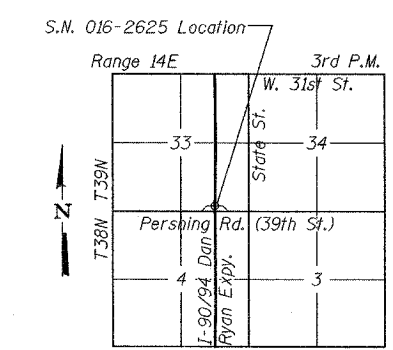
- CB-1 = Soil Boring Location
- = Exist. Catch basin
- ⊙ = Exist. Manhole
- = Exist. Inlet
- = Exist. Storm sewer
- = Exist. Underdrain
- = Prop. Catch basin
- ⊙ = Prop. Manhole
- = Prop. Storm sewer
- = Prop. Underdrain
- ▨ = Temporary Pavement
- ▩ = Temporary Bituminous Fill

**ABBREVIATIONS**

- MWRDGC = Metropolitan Water Reclamation or MWRD District of Greater Chicago
- CTA = Chicago Transit Authority
- E = Expansion Joint
- C = Construction Joint
- P.G.L. = Profile Grade Line
- NB = Northbound
- SB = Southbound



**PROFILE GRADE LINE ALONG S.B. EXPRESS LANES**



**LOCATION SKETCH**

**APPROVED**  
FOR STRUCTURAL ADEQUACY ONLY

*Ralph E. Adams*  
ENGINEER OF BRIDGES AND STRUCTURES



*Brian L. Umbright*  
Date: July 7, 2005  
License Expires: November 30, 2006

REVISIONS	
NAME	DATE
ADDENDUM 1	8/12/05

**BOWMAN, BARRETT & ASSOCIATES INC.**  
CONSULTING ENGINEERS  
Chicago, Illinois  
312.228.0100  
www.bbainc.com

SHEET CUL-1 OF CUL-14  
 ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 31ST STREET TO 71ST STREET  
 SB EXPRESS LANE RECONSTRUCTION  
 MWRD CULVERT, N. OF 39TH ST.,  
 COOK COUNTY, S.N. 016-2625  
 GENERAL PLAN  
 SCALE: N.T.S. DRAWN BY: DJM  
 DATE: 07/07/05 CHECKED BY: BLU