Benchmarks: BM 3550 Set "+" westerly flange bolt of hydrant at southwest intersection of 91st St. and Lafayette Ave. El. 22.88

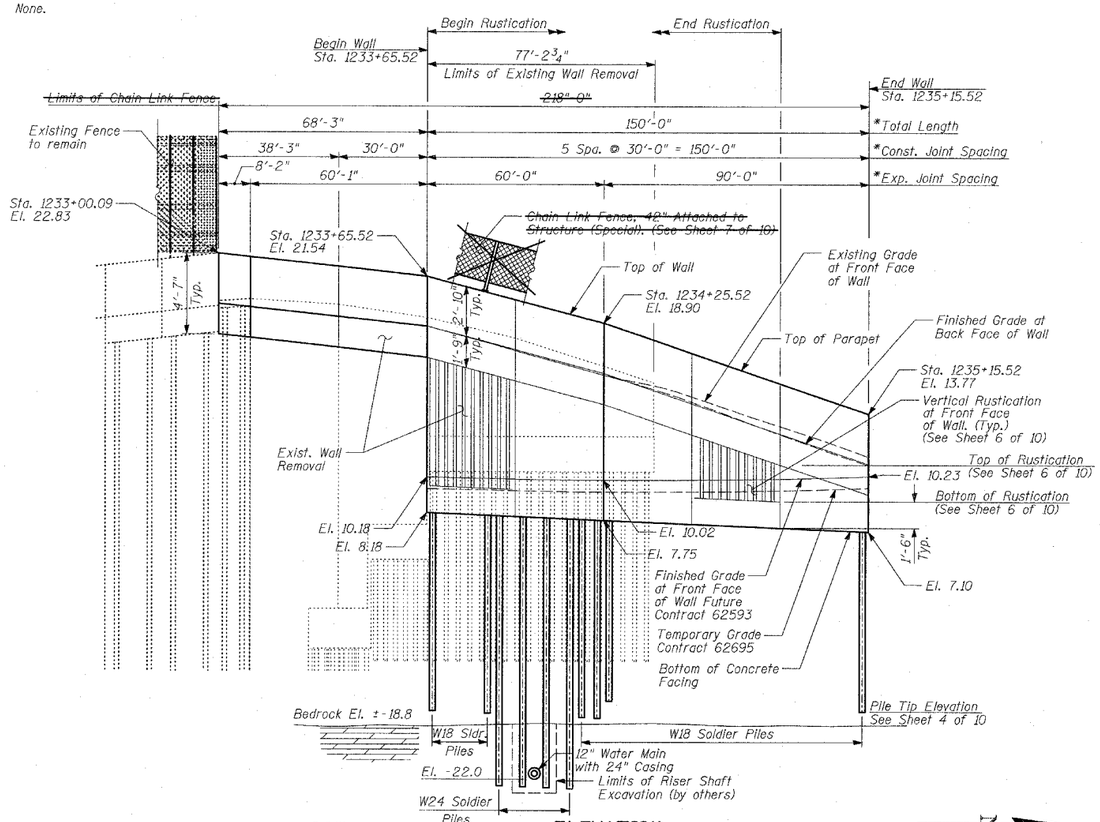
Existing Structure: Reinforced concrete cantilever retaining wall, supported on concrete pile footings, along Southbound Dan Ryan, East edge of Lafayette Avenue, 91ST Street to CRI&P RR. Built in 1960. Total length ±137'**

Salvage: None.

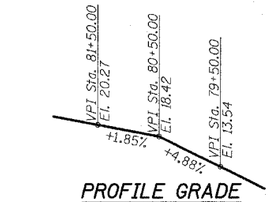
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	•	COOK	907	507
STA. 1200+00.00		TO STA. 1365+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• (1516.1, 1717 & 1818) R-9

62695

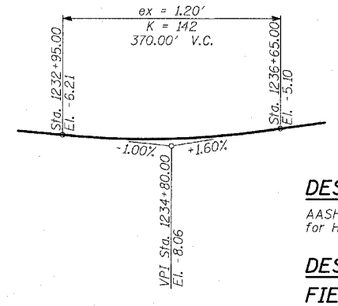


ELEVATION



PROFILE GRADE

(Lafayette Av.)



PROFILE GRADE

(S.B. I-94)

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Removal of Existing Structures No. 2	EACH	1
Structure Excavation	CU YD	84
Concrete Structures	CU YD	83
Protective Coat	SQ YD	283
Rustication Finish	SQ FT	976
Stud Shear Connectors	EACH	276
Untreated Timber Lagging	SQ FT	912
Furnishing Soldier Piles (W Section)	FOOT	841
Reinforcement Bars, Epoxy Coated	POUND	10,450
Geocomposite Wall Drain	SQ YD	110
Pipe Underdrains for Structures, 6"	FOOT	150
Drilling and Setting Soldier Piles (in Rock)	CU FT	103
Drilling and Setting Soldier Piles (in Soil)	CU FT	4,024
~~Chain Link Fence, 42" Attached to Structure (Special)~~	~~FOOT~~	~~218~~

DESIGN SPECIFICATION

AASHTO 2002 Standard Specifications for Highway Bridges

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 36,000 psi (M270 Grade 36) Soldier Piles

INDEX OF SHEETS

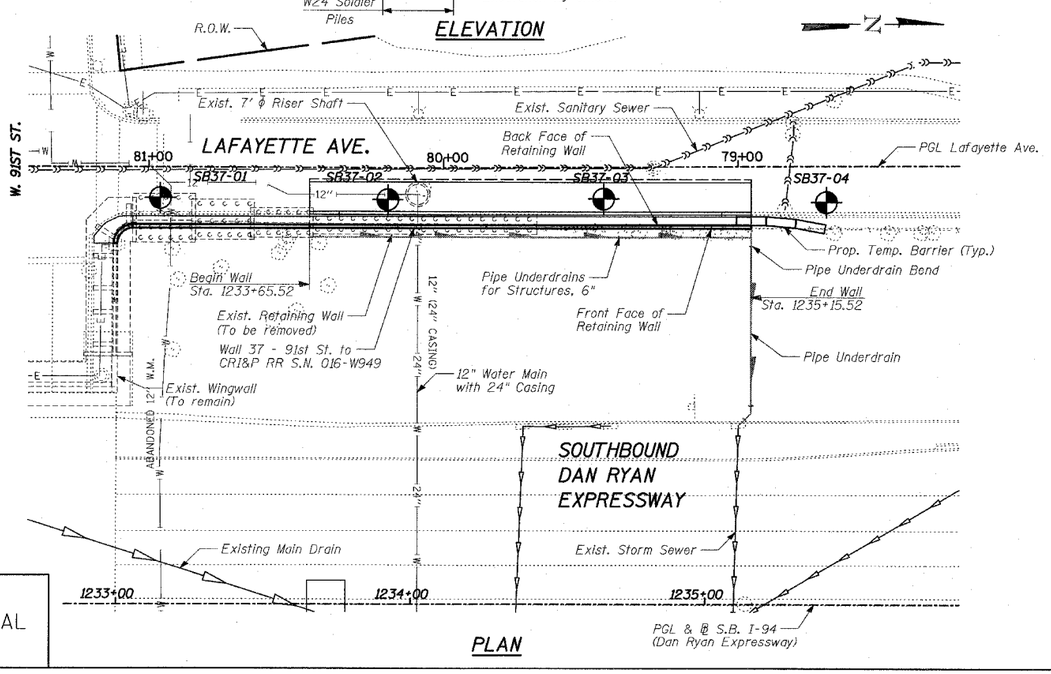
1. GENERAL PLAN
2. REMOVAL PLAN AND DETAILS
3. PLAN AND ELEVATION STA. 1233+00.09 TO STA. 1234+25.52
4. PLAN AND ELEVATION STA. 1234+25.52 TO STA. 1235+15.52, PILE LAYOUT, DETAILS & BILL OF MATERIAL
5. WALL CROSS SECTIONS & DETAILS
6. RUSTICATION DETAILS
7. ~~CHAIN LINK FENCE, 42" ATTACHED TO STRUCTURE (SPECIAL)~~
8. BORING LOGS SB37-01 & SB37-02
9. BORING LOGS SB37-03 & SB37-04
10. EXISTING RETAINING WALL

GENERAL NOTES:

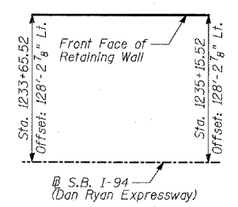
1. Reinforcement bars shall conform to the requirements of AASHTO M31 or M322 Grade 60.
2. Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions 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 finished at the unit price bid for the work.
3. The Contractor is responsible for the design and performance of the lagging using no less than 3" nominal rough-sawn thickness and the minimum tabulated unit stress in bending (f_b), used in the design of timber lagging shall be 1000 psi.
4. The soldier piles shall be cleaned and given one shop coat of Inorganic Zinc-Rich primer.
5. All exposed concrete edges shall be chamfered ¾" except as noted.
6. Protective Coat shall be applied to exposed surfaces of the concrete facing.
7. Existing utilities in conflict with soldier pile wall construction shall be abandoned or relocated according to directions given on the roadway plans.
8. If existing piles conflict with the proposed wall, the existing piles shall be cut off no more than 1'-0" below the proposed concrete facing. Soil disturbance below the cutoff elevation must be minimized.
9. All construction joints shall be bonded.
10. All elevations shown are based on the Chicago City Datum of 0.00, which is 579.19 feet above mean tide New York. (NAVD 88)
11. The wall shall be backfilled (where applicable) prior to placing the concrete facing.
12. Riser Shaft and Jacking Pit to have been constructed by others in Contract 62692.
13. The Contractor is responsible to coordinate all electrical crossings with this Contract and with Contract 62583.
14. The Contractor is responsible to verify the locations of the existing piles prior to drilling for the soldier piles. Any discrepancies in the locations of the existing piles are to be immediately reported to the Engineer. Proposed piles are to be placed between existing piles under the supervision of the Engineer.

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson (TJD)
ENGINEER OF BRIDGES AND STRUCTURES



PLAN



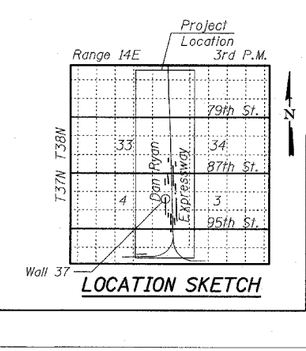
OFFSET SKETCH

LEGEND

Boring Location

* Measured along Front Face of Wall.

** Portions of existing walls to be removed to accomodate proposed walls.



LOCATION SKETCH

STATE OF ILLINOIS — PHILLIP D. FREY 081-004826 CHICAGO, ILLINOIS — LICENSED STRUCTURAL ENGINEER

Signed Phillip D. Frey
Phillip D. Frey, S.E. Il. Lic. No. 081-004826 Expires 11-30-2006.
For drawings 1 thru 10 of 10

Date 3/25/05

SHEET 1 OF 10

REVISIONS	
NAME	DATE
REVISED	04/15/05

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. 94 (DAN RYAN EXPRESSWAY)
RETAINING WALL ALONG LAFAYETTE AVE.
91ST ST. TO CRI&P RR
WALL 37 - GENERAL PLAN
STA. 1233+65.52 TO STA. 1235+15.52

S.N. 016-W949 — DESIGNED BY: MI, DJR
SCALE: N.T.S. — DRAWN BY: DJR, TB
DATE: MARCH 25, 2005 — CHECKED BY: TD, MI

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