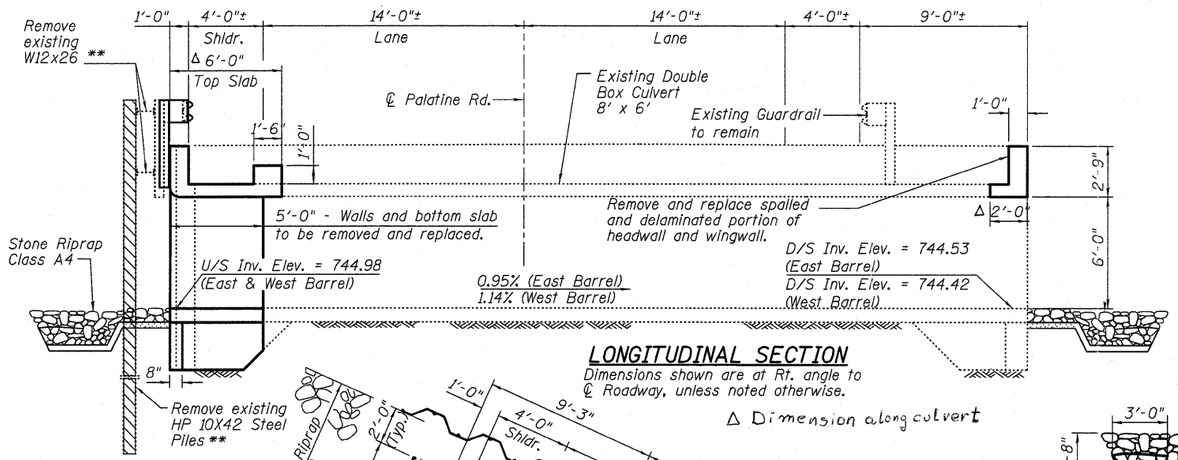
Benchmark:
Cross cut on northwest bolt of Hydrant at NW corner of Palatine Road and Middleton Ave. Elev. 750.66.

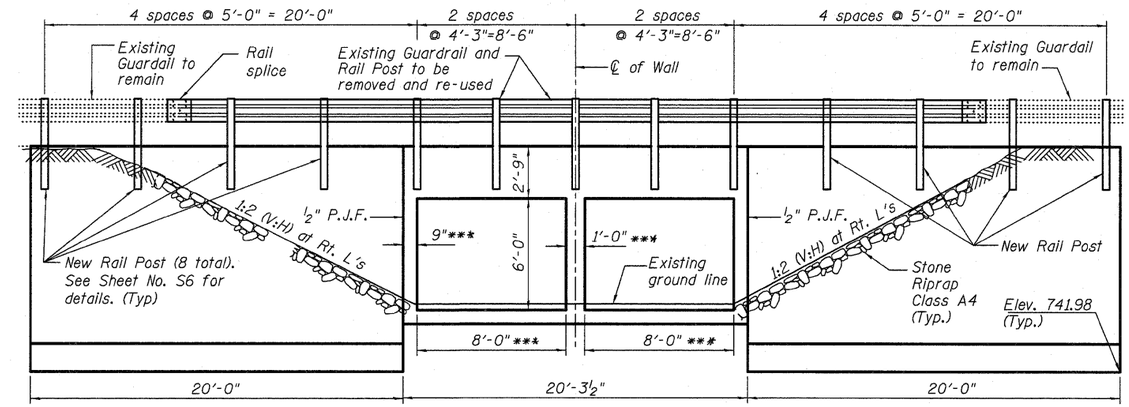
Existing Structure:
S.N. 016-2860 is a double barrel reinforced concrete box culvert measured 6 ft. clear height and 8 ft clear span. The total length of the structure is 48'-4". Traffic is to be maintained utilizing staged construction.



LONGITUDINAL SECTION

Dimensions shown are at Rt. angle to ℄ Roadway, unless noted otherwise.

Δ Dimension along culvert

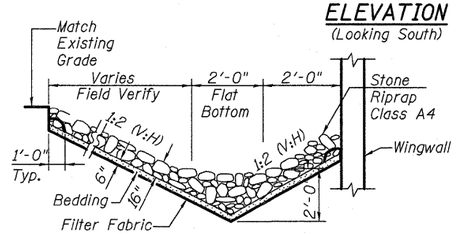


ELEVATION

(Looking South)

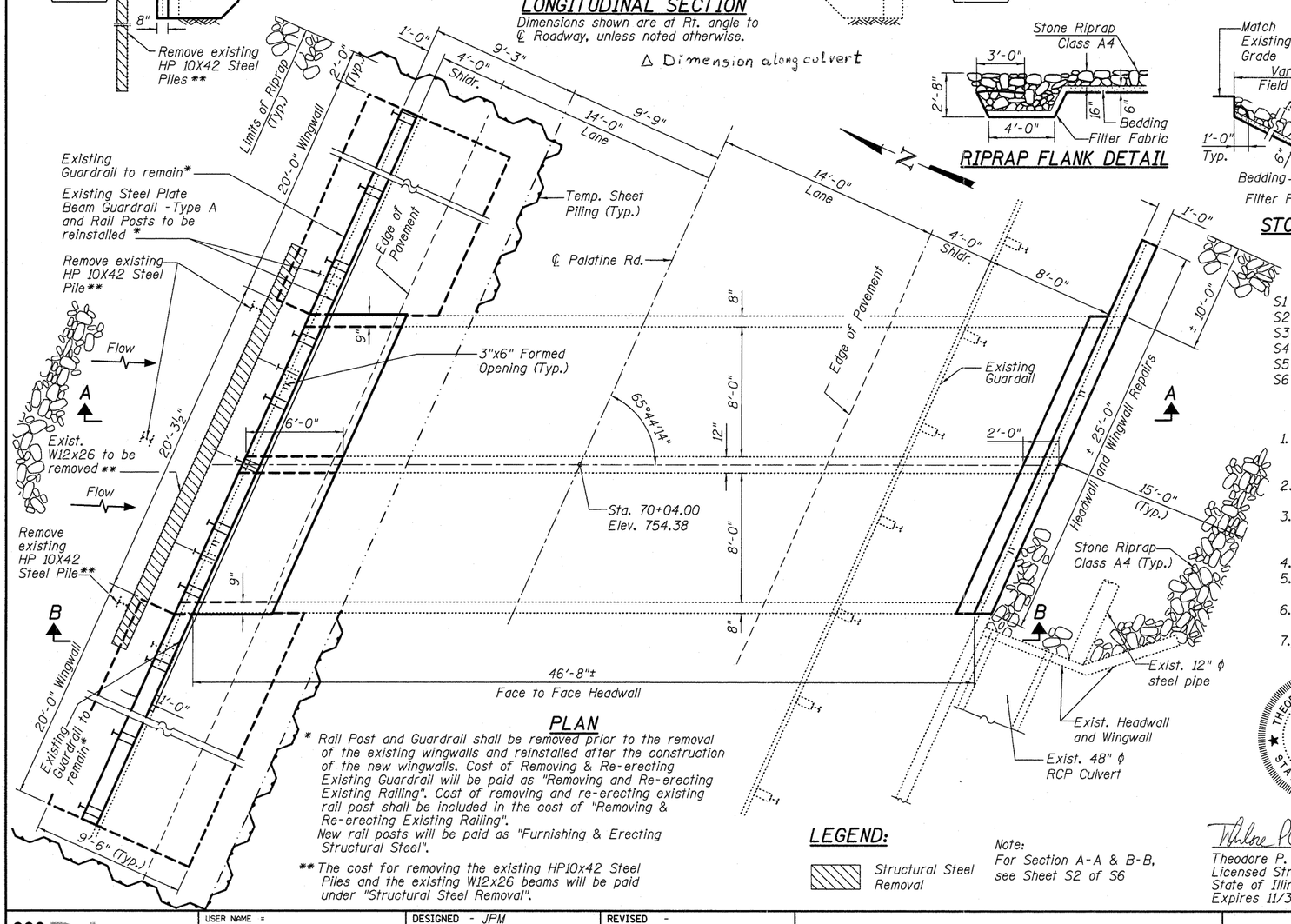
*** Measurement at right angle. To be verified in field.

RIPRAP FLANK DETAIL



STONE RIPRAP ANCHOR DETAIL

(Section Perpendicular to Wall)



PLAN

* Rail Post and Guardrail shall be removed prior to the removal of the existing wingwalls and reinstalled after the construction of the new wingwalls. Cost of Removing & Re-erecting Existing Guardrail will be paid as "Removing and Re-erecting Existing Railing". Cost of removing and re-erecting existing rail post shall be included in the cost of "Removing & Re-erecting Existing Railing".
New rail posts will be paid as "Furnishing & Erecting Structural Steel".

** The cost for removing the existing HP10x42 Steel Piles and the existing W12x26 beams will be paid under "Structural Steel Removal".

LEGEND:

Structural Steel Removal

Note:
For Section A-A & B-B, see Sheet S2 of S6

INDEX OF SHEETS

S1 General Plan
S2 Stage Removal and Construction Details
S3 Temporary Concrete Barrier
S4 Plan and Details
S5 Wingwall Details
S6 Boring Log & Guardrail Details

SCOPE OF WORK

1. Remove and replace HMA and sub-base pavement at the North side of the road, right above the North end of the box culvert.
2. Remove the existing HP 10x42 Steel Piles and W12x26 beams.
3. Repair portion of the box culvert's top and bottom slab, exterior and center walls, and reconstruct the headwall at North end.
4. Remove and replace wingwalls at North end.
5. Repair top portion of the headwall and wingwall at South end of the box culvert.
6. Remove and reinstall "Steel Plate Beam Guardrail - Type A" and Guardrail Posts at North side of the road.
7. Remove all debris/soil from the inside of culvert boxes.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Box Culverts	Cu. Yd.	15.4
Reinforcement Bars, Epoxy Coated	Pound	8,080
Riprap, Class A4	Sq. Yd.	168
Filter Fabric	Sq. Yd.	168
Structural Steel Removal	Pound	5,010
Removing and Re-erecting Existing Railing	Foot	60
Concrete Structures	Cu. Yd.	40.0
Temporary Sheet Piling	Sq. Ft.	1,802
Concrete Removal	Cu. Yd.	25.0
Structure Excavation	Cu. Yd.	261
Furnishing & Erecting Structural Steel	Pound	380
Debris Removal	L. Sum	1

Note:
Dimensions for the existing culvert were obtained by field measurements. The Contractor shall verify the dimensions of the culvert prior to start of work.

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges, 17th Edition.

DESIGN STRESSES

FIELD UNITS

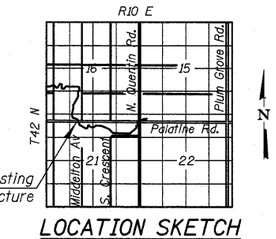
f'c = 3,500 psi
fy = 60,000 psi

LAST DELAMINATION SURVEY

June 21, 2005

THEODORE P. GEORGAS
081-004609
REGISTERED STRUCTURAL ENGINEER
STATE OF ILLINOIS

10-11-11
Theodore P. Georgas Date
Licensed Structural Engineer
State of Illinois 081-4609
Expires 11/30/2012



LOCATION SKETCH

GENERAL PLAN
FAU 1285 (PALATINE ROAD)
OVER SALT CREEK
COOK COUNTY
STA. 70+04.00
STRUCTURE NO. 016-2860

Primera
160 S. WACKER DRIVE SUITE 700 . CHICAGO IL 60606 . P:312-405-0202 F:312-405-0415

USER NAME =	DESIGNED - JPM	REVISED -	
	CHECKED - JXH	REVISED -	
PLOT SCALE =	DRAWN - MPS	REVISED -	
PLOT DATE =	CHECKED - JXH/TPG	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
STRUCTURE NO. 016-2860 STA. 70+04.00
SHEET NO. S1 OF S6 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1285	2011-033-T	COOK	18	9
		CONTRACT NO. 60P39		

DATE: OCTOBER 6-2011 | ILLINOIS | FED. AID PROJECT