

STATE OF MAINE DEPARTMENT OF TRANSPORTATION



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SMYRNA AROOSTOOK DUNN BROOK BRIDGE OVER DUNN BROOK U. S. ROUTE 2 FEDERAL AID PROJECT NO. STP-1787(800)X CULVERT INVERT LINING BRIDGE NO. 5837

TRAFFIC DATA

Current (2011) AADT	1,420
Future (2031) AADT	1,700
DHV - % of AADT	11
Design Hour Volume.....	187
Heavy Trucks (% of AADT).....	10
Heavy Trucks (% of DHV).....	9
Directional Distribution (% of DHV).....	56
18 kip Equivalent P 2.0.....	189
18 kip Equivalent P 2.5.....	180
Design Speed (mph).....	50

HYDROLOGIC DATA

Drainage Area.....	4.08 sq mi
Design Discharge (Q50).....	650.7 cfs
Check Discharge (Q100).....	766.7 cfs
Headwater Elevation (Q50).....	525.22 ft
Headwater Elevation (Q100).....	525.42 ft
Discharge Velocity (Q50).....	16.34 fps
Discharge Velocity (Q100).....	16.31 fps
Headwater Elevation (Q1.1).....	517.15 ft
Discharge Velocity (Q1.1).....	11.17 fps
Headwater Elevation (Q25).....	524.19 ft

MATERIALS

Concrete.....	Class "A" or Shotcrete
Reinforcing Steel.....	ASTM A 615/A 615M, Grade 60

BASIC DESIGN STRESSES

Concrete.....	f 'c = 5,000 psi
Reinforcing Steel.....	f y = 60,000 psi

UTILITIES

Maine Public Service Company
Northland Telephone (Fairpoint Classic)

MAINTENANCE OF TRAFFIC

Maintain two - way traffic during construction. When needed, single lane closures will be maintained by flaggers.

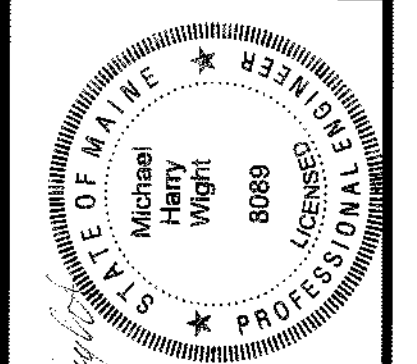
PROJECT LOCATION:	Rehabilitation of Dunn Brook bridge culvert (#5837) which carries US #2 over Dunn Brook in Smyrna. 46° 08' 34.10"N, 68° 03' 05.60"W
PROGRAM AREA:	Bridge
OUTLINE OF WORK:	Bridge Culvert Rehabilitation

STP-1787(800)X WIN 17878.00

SMYRNA
DUNN BROOK BRIDGE

TITLE SHEET

SHEET NUMBER
1
OF 7



Michael Wright
SIGNATURE
8089
P.E. NUMBER
10/17/2011
DATE

PROGRAM	BRIDGE
PROJECT MANAGER	STEPHEN BOGGE
DESIGNER	DAVID SULLIVAN
CONSULTANT	
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

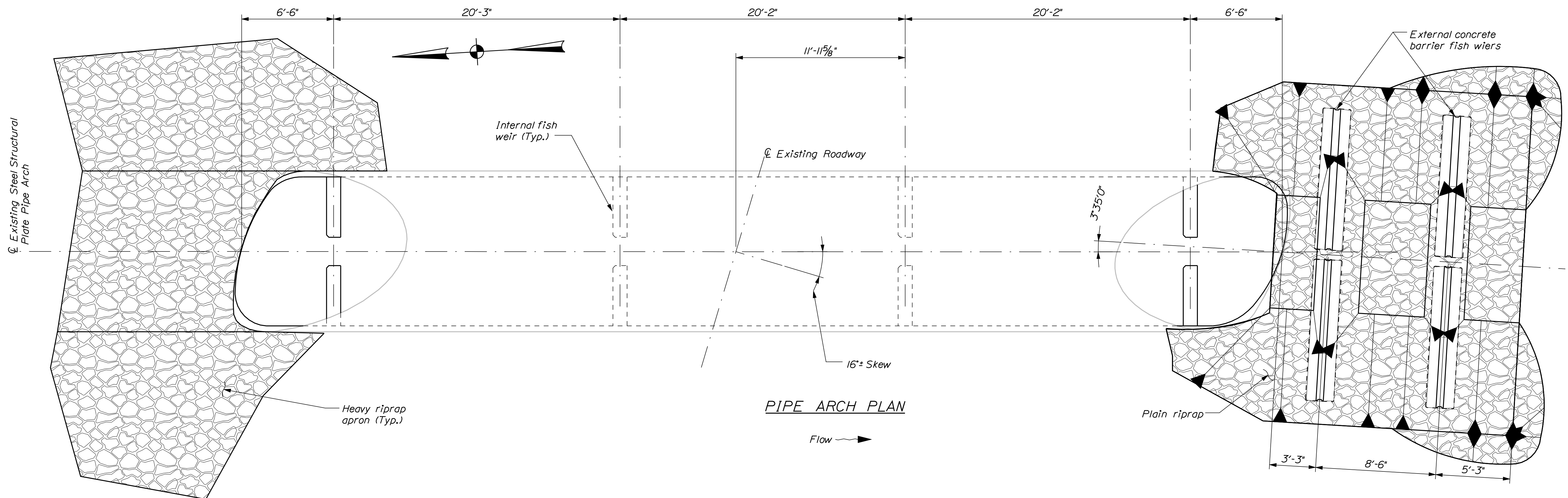
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
APPROVED
COMMISSIONER: *D.B.A.*
DATE: 10/18/11
CHIEF ENGINEER: *Angie Noel Taylor* 10-17-11

Date: 10/17/2011

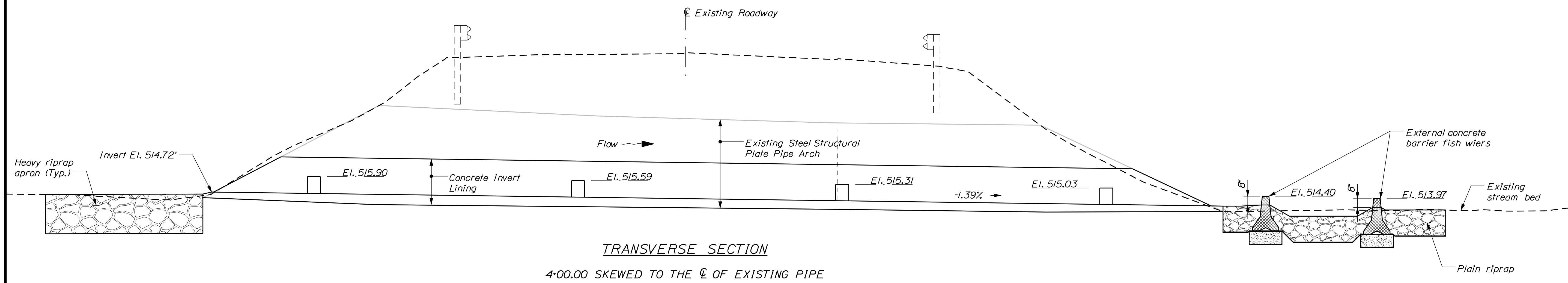
Username: david.sullivan

Division: BRIDGE

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PIPE ARCH PLAN



TRANSVERSE SECTION
4+00.00 SKEWED TO THE CL OF EXISTING PIPE

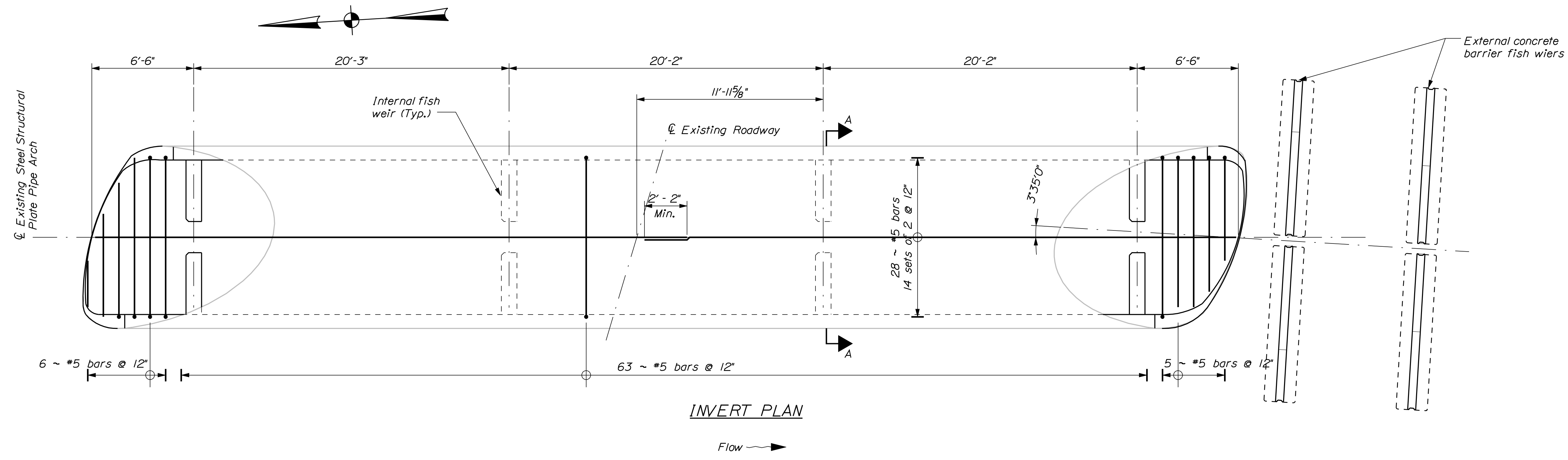
STATE OF MAINE		DEPARTMENT OF TRANSPORTATION	
DUNN BROOK BRIDGE		STP-1787(800)X	
DUNN BROOK		WIN	
SMYRNA		BRIDGE NO. 6637	
AROOSTOOK		17876.00	
INVERT LINING PLANS		BRIDGE PLANS	
PROJ. MANAGER	STEPHEN BOGGE	DATE	
DESIGN-DETAILED	D. Sullivan	BY	D. Sullivan
CHECKED-REVIEWED	M. Wright	DATE	OCT 2011
DESIGN-DETAILED		SIGNATURE	
REVISIONS 1		P.E. NUMBER	
REVISIONS 2		DATE	
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			
SHEET NUMBER		4	
		OF 7	

Date: 10/17/2011

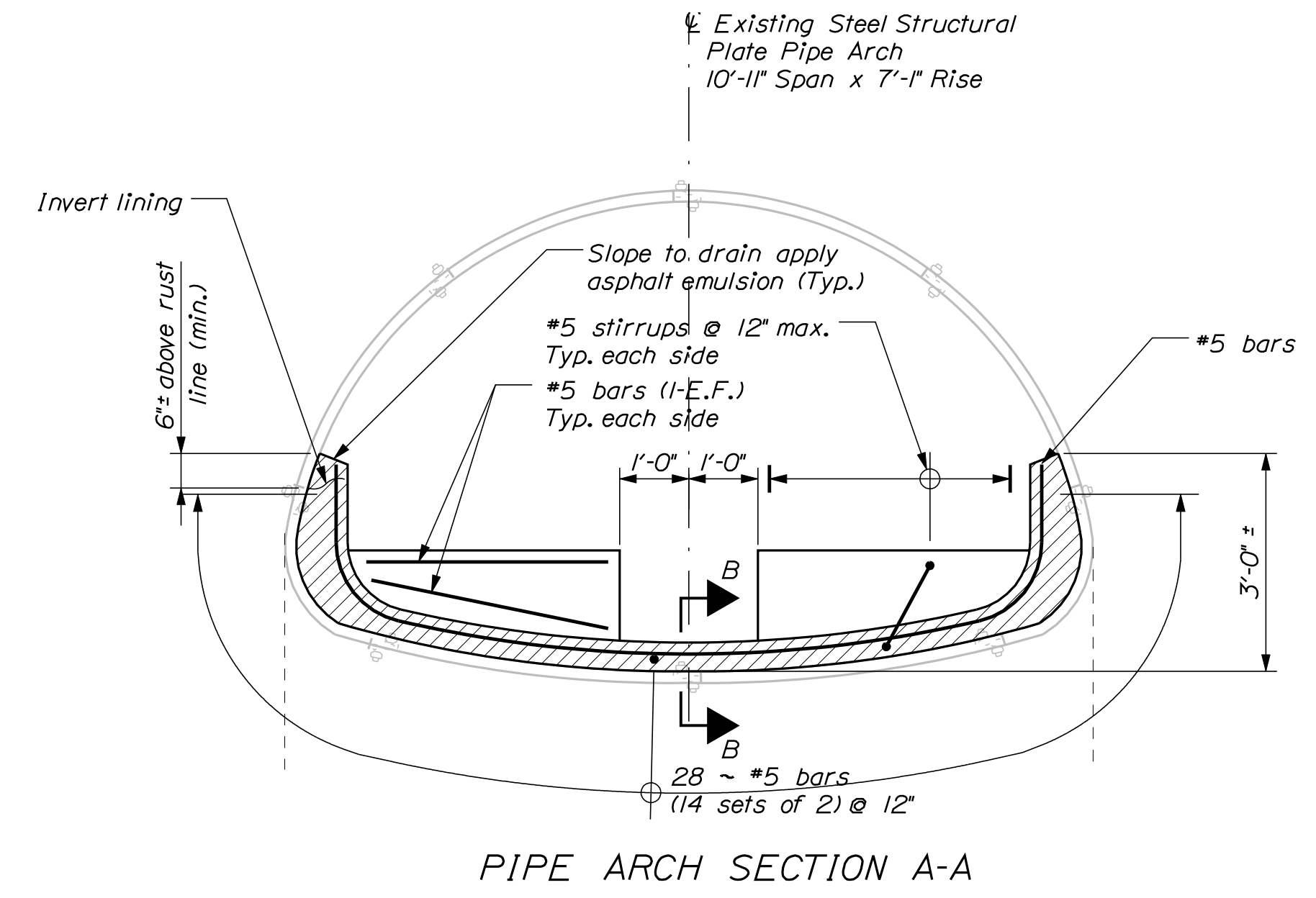
Username: david.sullivan

Division: BRIDGE

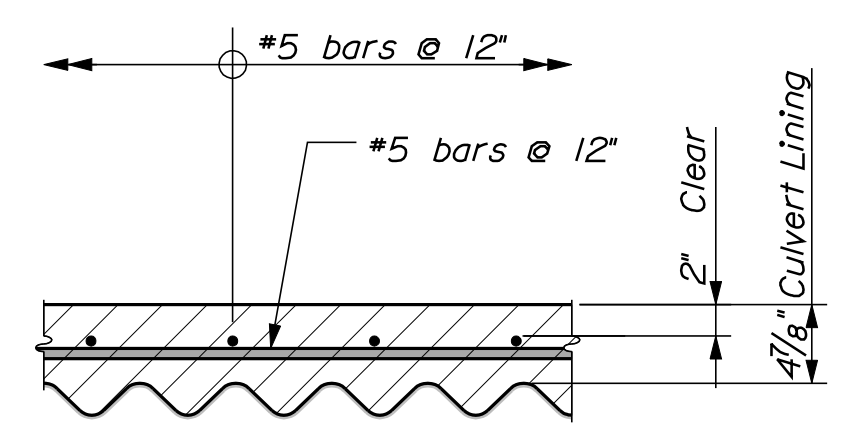
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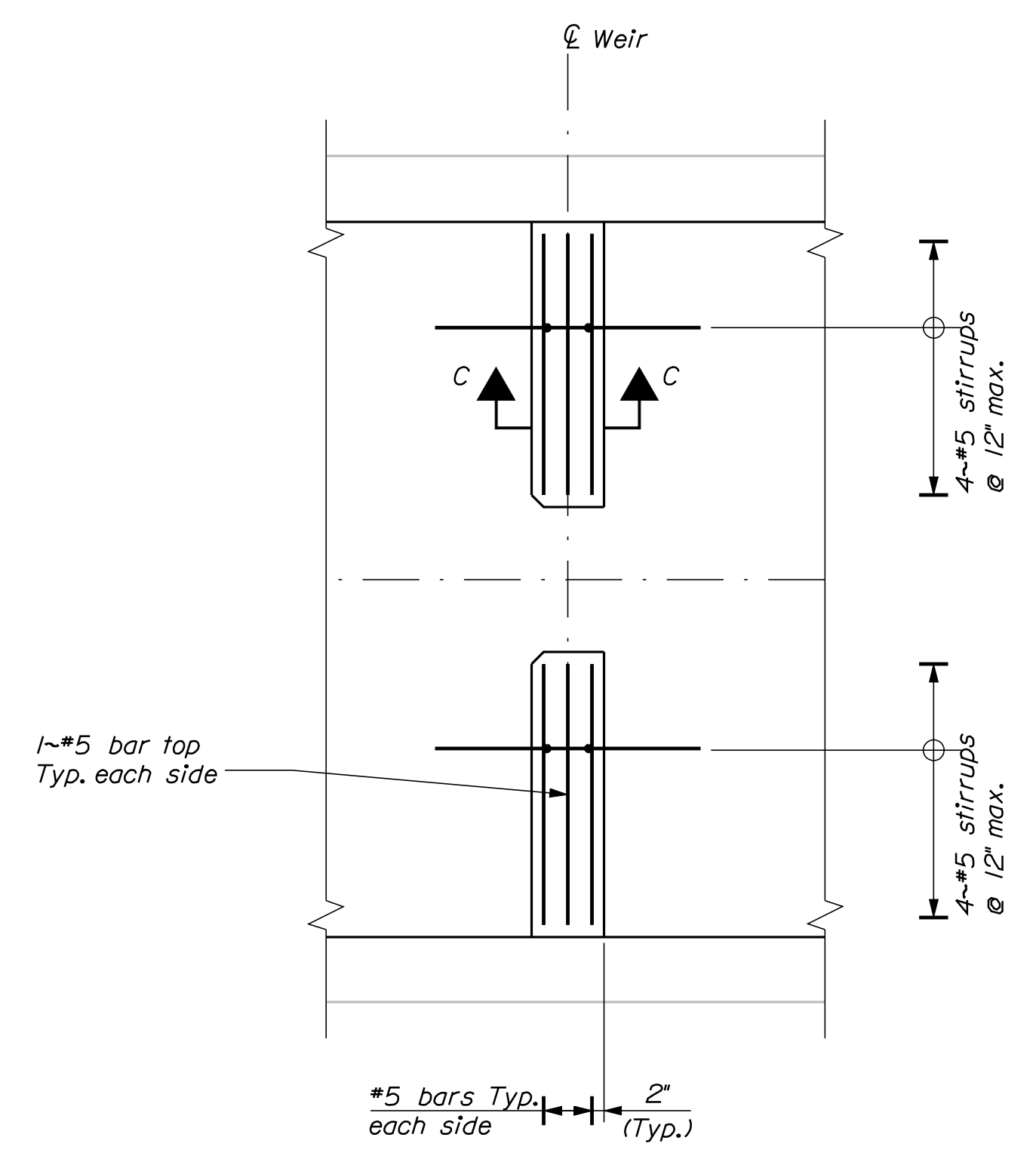
INVERT PLAN



PIPE ARCH SECTION A-A

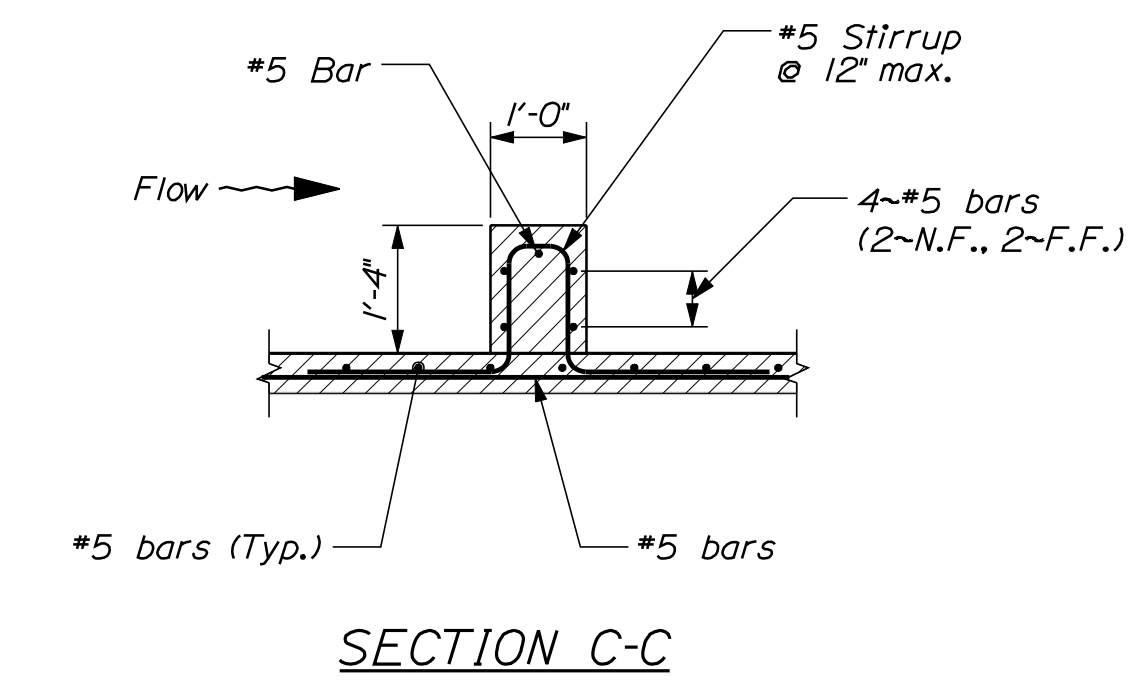


SECTION B-B



TYPICAL FISH WEIR PLAN

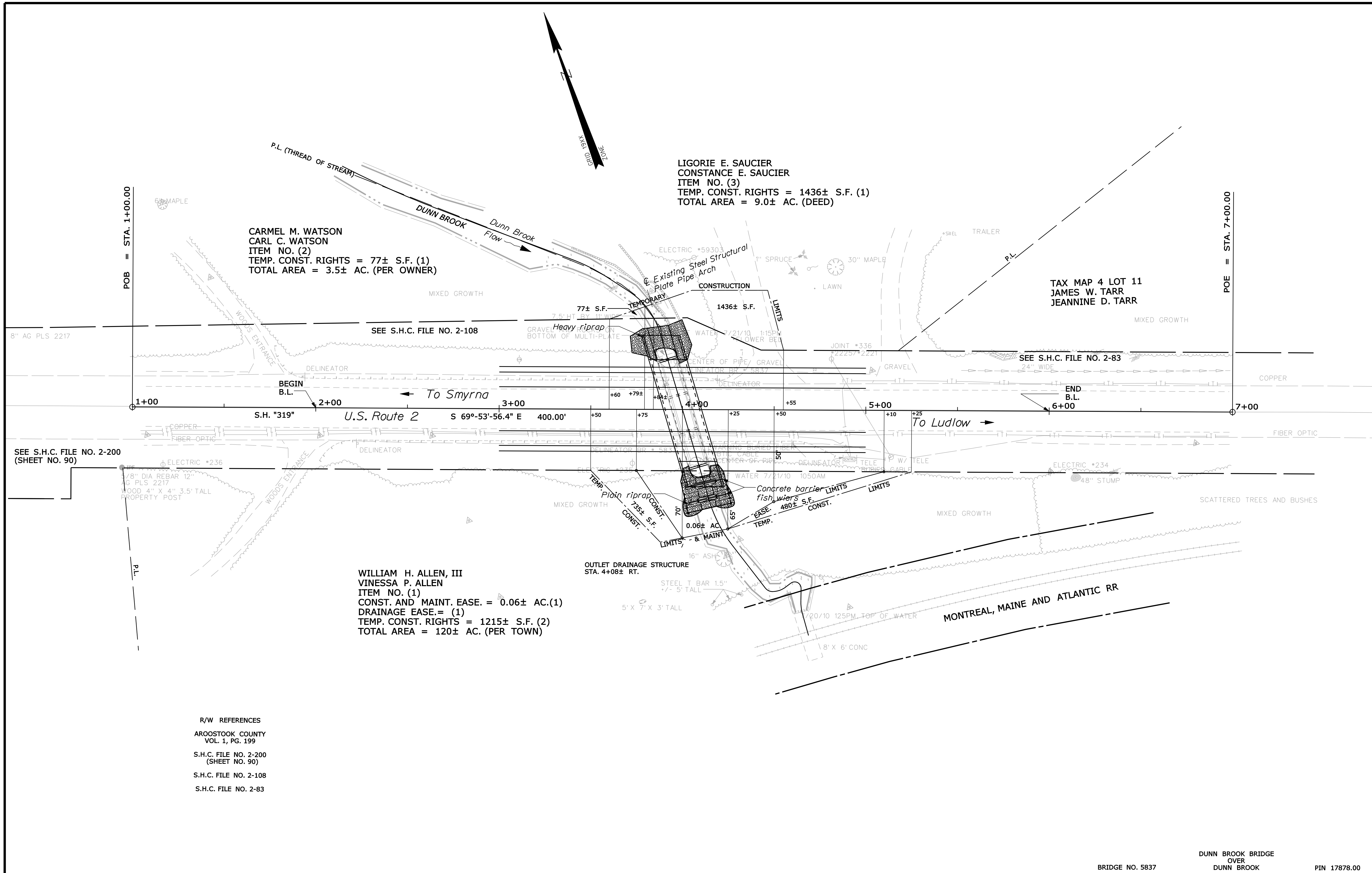
Only fish weir reinforcing steel shown for clarity.



SECTION C-C

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION	
DUNN BROOK BRIDGE		STP-1787(800)X	
DUNN BROOK		WIN	
SMYRNA		17876.00	
AROOSTOOK		BRIDGE NO. 6637	
INVERT LINING DETAILS		BRIDGE PLANS	
PROJ. MANAGER	STEPHEN BOGGE	DATE	
DESIGN DETAILED	D. Sullivan	BY	D. Sullivan
CHECKED-REVIEWED	M. Wight	DATE	OCT 2011
DESIGNS DETAILED		SIGNATURE	
REVISIONS 1		P.E. NUMBER	
REVISIONS 2		DATE	
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			
SHEET NUMBER			
5			
OF 7			

Filename: ... \00\ROW\MSTA\001_RWPLAN1.dgn
 Division: BRIDGE
 Username: dovid.sullivan
 Date: 10/17/2011



R/W REFERENCES
 AROOSTOOK COUNTY
 VOL. 1, PG. 199
 S.H.C. FILE NO. 2-200
 (SHEET NO. 90)
 S.H.C. FILE NO. 2-108
 S.H.C. FILE NO. 2-83

SYMBOLS

●	IP or OP	(IRON PIPE OR PIN FOUND)
○	WELL	
—	GRADING LIMIT LINE	
—	CONSTRUCTION LIMIT LINE	
—	PROPERTY LINE	
—	LIMITS OF WROUGHT PORTION (L.O.W.P.)	
—	EXISTING RIGHT OF WAY	
—	NEW RIGHT OF WAY	
—	NEW ROW WITHIN EXIST. ROW	
—	CONTROL OF ACCESS	
—	WATER LINE	
—	GAS LINE	
—	ELECTRIC LINE	
—	TELEPHONE LINE	
—	SEWER LINE	

ITEM	TECH	CHECKED
BASE MAP		
EXIST. R/W	R/W	
PROP. LINES	D.S.G.	
AREAS		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
 16 STATE HOUSE STATION - AUGUSTA, ME. 04333-0016
SMYRNA
RIGHT OF WAY MAP

NO.	DATE	REVISIONS DESCRIPTION	BY	PLAN FILED IN PLAN BOOK				COUNTY RECORD							
				NO.	GRANTOR	INSTRUMENT	DATE	BOOK	PAGE	INSTRUMENT	DATE	BOOK	PAGE		

DAVID BERNHARDT
 COMMISSIONER
 KENNETH L. SWEENEY
 CHIEF ENGINEER
 DATE

BRIDGE NO. 5837
 DUNN BROOK BRIDGE
 OVER
 DUNN BROOK
 PIN 17878.00

STATE HIGHWAY "319"
 (U.S. ROUTE 2)
SMYRNA AROOSTOOK COUNTY
FEDERAL AID PROJECT NO. STP-1787(800)X

AUGUST 2011
 SCALE 1" = 25'

RIGHT-OF-WAY MAP
 SHEET 1 OF 1

D.O.T. FILE NO. 2-538

SHEET NUMBER
 7
 OF 7