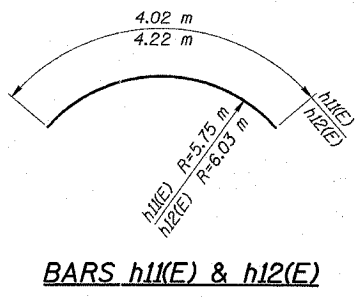
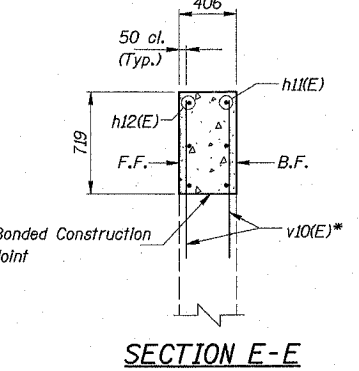
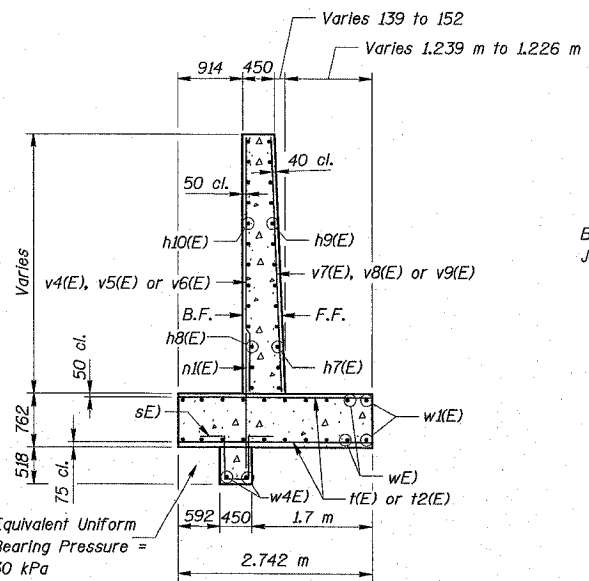
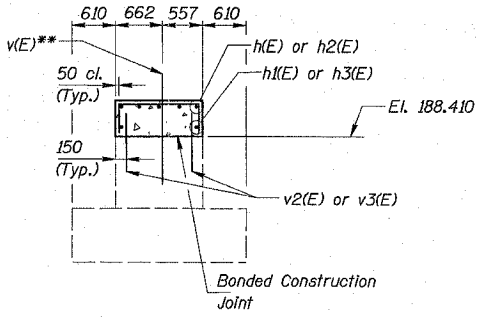
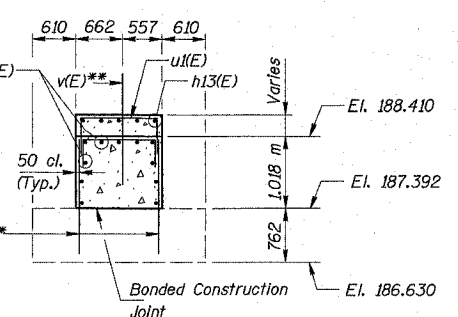
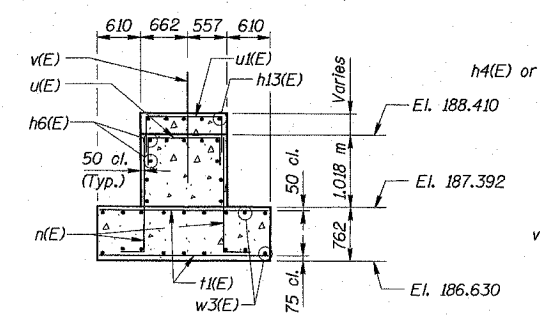


BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH (m)	SHAPE
h1(E)	5	#15	7.30	—
h2(E)	5	#15	12.92	—
h3(E)	5	#15	4.33	—
h4(E)	8	#15	12.01	—
h5(E)	22	#15	0.80	—
h6(E)	11	#15	0.60	—
h7(E)	3	#10	6.01	—
h8(E)	3	#10	6.32	—
h9(E)	9	#10	6.46	—
h10(E)	9	#10	5.91	—
h11(E)	3	#15	6.50	—
h12(E)	3	#15	4.02	—
h13(E)	3	#15	4.22	—
h13(E)	10	#15	8.21	—
n(E)	20	#15	1.91	L
n1(E)	29	#20	2.19	—
n2(E)	8	#15	0.94	—
s(E)	19	#15	1.94	—
s1(E)	12	#15	3.39	—
t(E)	52	#25	2.64	—
t1(E)	36	#25	2.33	—
t2(E)	8	#25	2.80	—
t3(E)	8	#25	1.83	—
u(E)	40	#15	1.70	—
u1(E)	139	#15	1.30	—
v(E)	70	#15	1.31	—
v1(E)	20	#15	1.27	—
v2(E)	84	#15	0.63	—
v3(E)	72	#15	0.66	—
v4(E)	3	#20	3.50	—
v5(E)	6	#20	6.52	—
v6(E)	2	#20	3.10	—
v7(E)	1	#10	3.48	—
v8(E)	2	#10	6.52	—
v9(E)	1	#10	3.10	—
v10(E)	30	#15	1.12	—
v11(E)	8	#15	3.58	—
w(E)	9	#15	12.40	—
w1(E)	2	#15	5.93	—
w2(E)	18	#20	1.2	—
w3(E)	18	#20	3.94	—
w4(E)	2	#15	5.45	—
Concrete Structures			m³	52.8
Reinforcement Bars				
Epoxy Coated			kg	3,470
Structure Excavation			m³	453
Porous Granular Embankment			m³	426
High Performance Enhanced Shotcrete			m²	0.2
Furnished Excavation			m³	45



BAR	A	B	C	D
v5(E)	3.48	3.04	3.26	3.26
v8(E)	3.48	3.04	3.26	3.26
t2(E)	2.5	0.30	0.30	2.5
w(E)	7.15	5.25	5.25	7.15

BAR	A	B	C	D	E
h7(E)	2.80	4.00	4.88	380	1.06
h8(E)	3.097	4.423	5.40	—	1.06
h9(E)	2.80	4.00	4.88	380	5.10
h10(E)	3.097	4.423	5.4	—	5.10
w1(E)	2.942	4.20	5.13	—	800

Minimum Bar Laps

#15 Bars = 640

#20 Bars = 790

* Drill and epoxy grout bars 300 (Min.) into existing structure according to Section 584 of the Standard Specifications.

** Field cut bars as required to fit.

▲ Use cut-offs in bottom of footing.

Notes:
 Reinforcement bars designated (E) shall be epoxy coated.
 All dimensions are in millimeters (mm) except as noted.
 Work this sheet with Sheet S26.

COLLINS ENGINEERS
 123 N. WACKER DR., SUITE 300
 CHICAGO, IL 60606
 (312) 704-9300
 ILLINOIS PROFESSIONAL DESIGN FIRM
 LICENSE NO. 184-000993

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 F.A.I. 90 (I-90)
 AT NAGLE AVENUE
 F.A.U. RTE. 2783 SEC 1314B
 COOK COUNTY STATION 0+998.813
 STRUCTURE NO. 016-0708

SOUTH ABUTMENT DETAILS

DRAWN BY KAC
 CHECKED BY LDB/DGS
 DATE: DEC. 2004