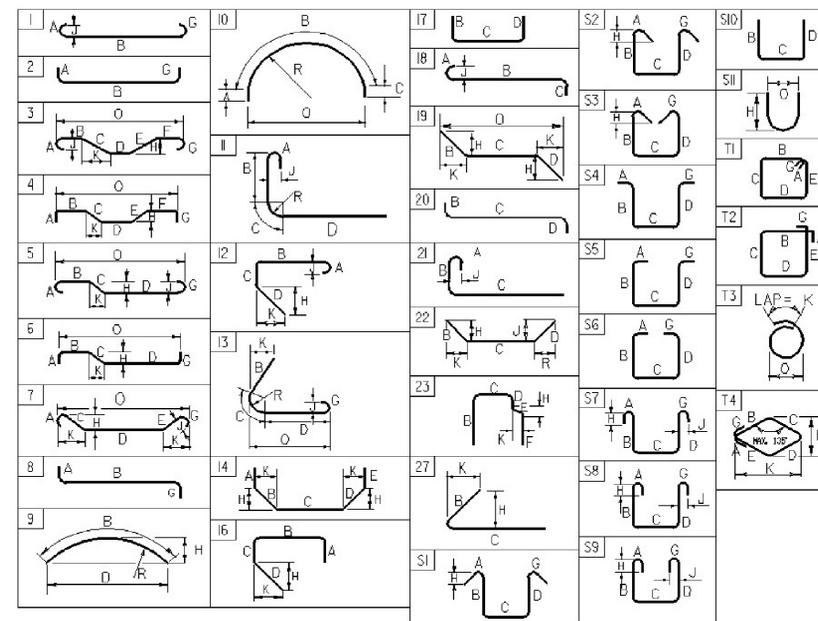


ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O	ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
ASU #1																																			
8	9	20'-6"	1AP901	1	1'-0"	19'-6"																													
8	6	19'-6"	1AP601	STR	19'-6"																														
4	6	4'-2"	1AP602	4	--	1'-5"	0'-8"	--	0'-8"	1'-5"	--	5 3/8"																							
4	5	19'-6"	1AP501	STR	19'-6"																														
21	5	13'-10"	1AP503	S11									6'-9"				0'-7"																		
ASU #2																																			
*	8	9	20'-6"	1AP901	1	1'-0"	19'-6"																												
8	6	19'-6"	1AP601	STR	19'-6"																														
4	6	4'-2"	1AP602	4	--	1'-5"	0'-8"	--	0'-8"	1'-5"	--	5 3/8"																							
4	5	19'-6"	1AP501	STR	19'-6"																														
42	5	12'-3"	1AP502	S11									5'-11"				0'-7"																		
ASU #3																																			
8	9	20'-6"	1AP901	1	1'-0"	19'-6"																													
8	6	19'-6"	1AP601	STR	19'-6"																														
4	6	4'-2"	1AP602	4	--	1'-5"	0'-8"	--	0'-8"	1'-5"	--	5 3/8"																							
4	5	19'-6"	1AP501	STR	19'-6"																														
42	5	12'-3"	1AP502	S11									5'-11"				0'-7"																		
ASU #4																																			
8	9	20'-6"	1AP901	1	1'-0"	19'-6"																													
8	6	19'-6"	1AP601	STR	19'-6"																														
4	6	4'-2"	1AP602	4	--	1'-5"	0'-8"	--	0'-8"	1'-5"	--	5 3/8"																							
21	5	13'-10"	1AP503	S11									6'-9"				0'-7"																		
ASU #5																																			
*	8	9	20'-5"	2AP901	1	1'-0"	19'-6"																												
8	6	19'-5"	2AP601	STR	19'-6"																														
4	6	4'-2"	1AP602	4	--	1'-5"	0'-8"	--	0'-8"	1'-5"	--	5 3/8"																							
4	5	19'-5"	2AP501	STR	19'-6"																														
2	5	15'-1"	2AP511	S11									7'-4"				0'-7"																		
2	5	14'-11"	2AP512	S11									7'-3"				0'-7"																		
2	5	14'-10"	2AP513	S11									7'-3"				0'-7"																		
2	5	14'-8"	2AP514	S11									7'-2"				0'-7"																		
2	5	14'-7"	2AP515	S11									7'-1"				0'-7"																		
2	5	14'-5"	2AP516	S11									7'-0"				0'-7"																		
2	5	14'-4"	2AP517	S11									6'-11"				0'-7"																		
2	5	14'-2"	2AP518	S11									6'-10"				0'-7"																		
2	5	14'-1"	2AP519	S11									6'-9"				0'-7"																		
2	5	13'-11"	2AP520	S11									6'-9"				0'-7"																		
2	5	13'-10"	2AP521	S11									6'-9"				0'-7"																		
ASU #6																																			
8	9	20'-6"	2AP901	1	1'-0"	19'-6"																													
8	6	19'-6"	2AP601	STR	19'-6"																														
4	6	4'-2"	1AP602	4	--	1'-5"	0'-8"	--	0'-8"	1'-5"	--	5 3/8"																							
4	5	19'-6"	2AP501	STR	19'-6"																														
42	5	12'-3"	2AP502	S11									5'-11"				0'-7"																		
ASU #7																																			
8	9	20'-6"	2AP901	1	1'-0"	19'-6"																													
8	6	19'-6"	2AP601	STR	19'-6"																														
4	6	4'-2"	1AP602	4	--	1'-5"	0'-8"	--	0'-8"	1'-5"	--	5 3/8"																							
4	5	19'-6"	2AP501	STR	19'-6"																														
42	5	12'-3"	2AP502	S11									5'-11"				0'-7"																		
ASU #8																																			
8	9	20'-6"	2AP901	1	1'-0"	19'-6"																													
8	6	19'-6"	2AP601	STR	19'-6"																														
4	6	4'-2"	1AP602	4	--	1'-5"	0'-8"	--	0'-8"	1'-5"	--	5 3/8"																							
2	5	13'-9"	2AP501	S11									6'-8"				0'-7"																		
2	5	13'-8"	2AP501	S11									6'-8"				0'-7"																		
2	5	13'-6"	2AP501	S11									6'-7"				0'-7"																		
2	5	13'-5"	2AP502	S11									6'-6"				0'-7"																		
2	5	13'-4"	2AP503	S11									6'-6"				0'-7"																		
2	5	13'-2"	2AP504	S11									6'-5"				0'-7"																		
2	5	13'-1"	2AP506	S11									6'-4"				0'-7"																		
2	5	12'-11"	2AP507	S11									6'-3"				0'-7"																		
2	5	12'-10"	2AP508	S11									6'-3"				0'-7"																		
2	5	12'-8"	2AP509	S11									6'-2"				0'-7"																		
2	5	12'-7"	2AP510	S11									6'-1"				0'-7"																		

~ NOTES ~

- UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING NO. 18 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31 (ASTM A 615-SI). ALL BARS SHALL BE GRADE 60, UNLESS OTHERWISE DESIGNATED.
- FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS, AND OTHER STANDARD PRACTICE, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
- BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
- ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.
- "J" DIMENSION ON 180 DEGREE HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
- "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
- WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
- ▲ DENOTES BARS TO BE CUT IN FIELD.
- * DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
- △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
- .3 IN BAR MARK SUFFIX DENOTES LEVEL III REINFORCING STEEL.



ASTM STANDARD REINFORCING BARS				
BAR SIZE DESIGNATION	WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS ROUND SECTION DIAMETER INCHES	AREA INCHES ²	PERIMETER INCHES
#3	0.376	0.375	0.11	1.178
#4	0.668	0.500	0.20	1.571
#5	1.043	0.625	0.31	1.963
#6	1.502	0.750	0.44	2.356
#7	2.044	0.875	0.60	2.749
#8	2.670	1.000	0.79	3.142
#9	3.400	1.128	1.00	3.544
#10	4.303	1.270	1.27	3.990
#11	5.313	1.410	1.56	4.430
#14	7.65	1.693	2.25	5.32
#18	13.60	2.257	4.00	7.09



Vermont Agency of Transportation
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 CK'D BY D.PETERSON OK'D BY C. CARLSON
 June 9, 2015
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 BY C. CARLSON DATE 06/11/2015

REV. NO.	DATE:
3	06/08/15
2	05/21/15
1	05/08/15

RENAUD BROS. INC.
 283 FT. BRIDGEMAN RD. VERNON VT. 05354
 PH. (802) 251-7585 FAX (802) 251-7508

SHEET NAME: APPROACH SLAB PLANS		SHEET NO. 2
PROJECT NAME: ANDOVER		OF 6
PROJECT NO: BHF 016-1 (29)		
DRAWN BY: CE	CHK'D BY: CE	DATE: 04/29/2015

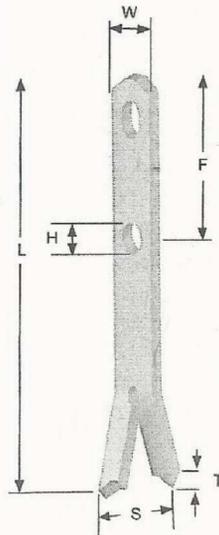
REINFORCING SCHEDULE

FLAT STEEL



SPREAD ANCHOR GALVANIZED

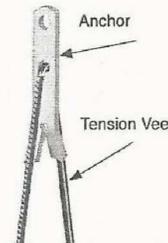
Used for both stripping and erecting. With proper edge distances can be pulled in any direction.



TON	SYS CODE	PART NUMBER	BODY LENGTH (L)	BODY WIDTH (W)	BODY THICK. (T)	BASE SPREAD (S)	HOLE LOCA. (F)	HOLE DIA. (H)	SWL TENSION (LBS)	UML TENSION (LBS)
2	2.5	F SP 02 048	4-3/4"	1-1/4"	3/16"	2-3/4"	None	None	2000	8000
2	2.5	F SP 02 040	4"	1-1/4"	3/8"	2-3/4"	None	None	2530	16000
2	2.5	F SP 02 055	5-1/2"	1-1/4"	3/8"	2-3/4"	None	None	4000	16000
4	5	F SP 04 040	4"	1-1/2"	1/2"	3-3/8"	None	None	2670	24000
4	5	F SP 04048	4-3/4"	1-1/2"	1/2"	3-3/8"	3-3/4"	7/8"	3590	24000
4	5	F SP 04 068	6-3/4"	1-1/2"	1/2"	3-3/8"	3-3/4"	7/8"	4960	32000
4	5	F SP 04 063	6-1/4"	1-1/2"	5/8"	3-3/8"	3-3/4"	11/16"	5850	32000
4	5	F SP 04 095	9-1/2"	1-1/2"	5/8"	3-3/8"	3-3/4"	11/16"	8000	32000
6	10	F SP 06 110	11"	2-1/2"	5/8"	5-1/4"	5"	1"	12000	48000
8	10	F SP 08 110	11"	2-1/2"	3/4"	5-1/4"	5"	1"	16000	64000
22	22	F SP 22 150	15"	3-1/8"	3/4"	6-1/4"	9"	1-3/8"	32800	136000
22	22	F SP 22 189	18-7/8"	3-1/8"	1"	6-1/4"	13"	1-3/8"	44000	176000

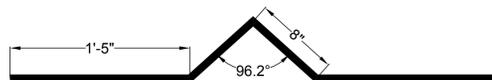
UML= Ultimate Mechanical Load in tension
Safe working loads based on 4:1 Safety Factor in 3,500 psi normal weight concrete.

TENSION VEES	REQUIRED TO DEVELOPE REINFORCED ALLOWABLE TENSION CAPACITY	Concrete Strength [psi]				
		2,000	3,000	4,000	5,000	6,000
		Length of rebar before bending [in]				
2 Ton	#3	31	25	22	19	18
4 Ton	#4	41	33	29	26	24
6 Ton	#5	51	42	36	32	29
8 Ton	#6	61	50	43	39	35
22 Ton	#9	114	93	81	72	66



USE #6 BAR AND BEND AS NECESSARY TO MAINTAIN 3" MIN AT BOTTOM OF SLAB

1AP602 LIFTING DEVICE HOLD DOWN



Ronald K. Bell

BELL ENGINEERING CIVIL & ENVIRONMENTAL
17 ECHO COVE WAY SPOFFORD, NEW HAMPSHIRE 03462 (603) 363-9966

PROJECT NAME/LOCATION: ANDOVER BHF 016-1 (29)
SHEET #: 1 OF 1
CALCULATED BY: Ron Bell DATE: 5-28-2015
CHECKED BY: DATE:
SCALE:

Check concrete breakout strength of a single anchor in cracked concrete shall not exceed

$$N_b = K_c \lambda \sqrt{f_c'} h_{ef}^{1.5}$$

When anchors are less than 1.5 hef from 3 or more edges $h_{ef} = C_{max}/1.5$

$h_{ef} = \frac{15.53}{1.5} = 10.35$

$N_b = (24)(1.0)(\sqrt{3500})(10.35)^{1.5} = 48,516 \#s$ for one anchor OK

D-35 accounts for an anchor welded to a min 3/8" rebar which is similar to this anchor design which has a #6 bar 50" long threaded through a hole in the anchor, d_a can be conservatively taken as 1.0

$$V_b = \left(8 \left(\frac{d_a}{d_n}\right)^{0.2} \sqrt{d_n}\right) \lambda \sqrt{f_c'} (C_{cr})^{1.5}$$

$$= \left(8 \left(\frac{1.0}{1.0}\right)^{0.2} \sqrt{1}\right) (1.0) (\sqrt{3500}) (15.53)^{1.5} = 47,612 \#s$$
 OK for single anchor


BELL ENGINEERING CIVIL & ENVIRONMENTAL
17 ECHO COVE WAY SPOFFORD, NEW HAMPSHIRE 03462 (603) 363-9966

PROJECT NAME/LOCATION: ANDOVER BHF 016-1 (29)
SHEET #: 1 OF 1
CALCULATED BY: Ron Bell DATE: 4-26-2015
CHECKED BY: DATE:
SCALE:

APPROACH SLABS & CALCULATE CENTRIDS OF TRAPEZOIDAL SLABS TO LOCATE LIFTING HOOK LOCATIONS:

$$A = \frac{1}{2}(a+b)h$$

$$A\bar{x} = \int_0^h x^2 dx = \frac{1}{3}x^3 \Big|_0^h = \frac{1}{3}h^3$$

$$\bar{x} = \frac{\frac{1}{3}h^3}{\frac{1}{2}h(a+b)} = \frac{2}{3} \frac{h^2}{(a+b)}$$

ASU #5 CENTROID = 9.853, 3.315
ASU #8 CENTROID = 9.838, 3.002

LIFTING HOOK LOCATIONS TO HAVE SAME RADIUS DIMENSION FROM CENTROID WITH EQUAL ANGLES ABOUT X-Y AXIS

FOR LARGEST SLAB 8'x20'x1.25'x150 PCF = 30,000#
 $\frac{30,000\#}{4 \text{ hook}} = 7,500$
USE 8 TON ANCHOR
7500 MIN. ALLOWABLE RIGGING ANGLE

CONAC Concrete Product Solutions
Concrete Accessories of GA Inc.
4475 River Green Pkwy, Suite 100
Duluth, GA 30096
Tel: 800-336-2598
Fax: 770-417-1820

Invoice
Invoice Number: 0123626-IN
Invoice Date: 4/24/2015
Order Number: 0121218
Order Date: 4/22/2015
Customer Number: RS214

Sold To: RENAUD BROTHERS
174 LILLY POND RD
Vernon, VT 05354

Ship To: RENAUD BROTHERS
283 FORT BRIDGEMAN ROAD
VERNON, VT 05354

Confirm To: MICHAEL RENAUD

Customer P.O.	Ship Via	F.O.B.	Terms	Due Date
MIKE	UPS PACKAGING		CREDIT CARD	04/24/2015

Item Code	Description	Ordered	Shipped	Loc	Back Ordered	Unit	Unit Price	Amount
FSP08110	SPREAD ANCHOR 8T 11" GALVANIZ	50	50	001	0	EA	9.59	479.50

Andover

Net Invoice: 479.50
Freight: 112.92
Sales Tax: 0.00
Invoice Total: 592.42

Vermont Agency of Transportation
RECEIVED
CK'D BY D.PETERSON OK'D BY C. CARLSON
June 9, 2015
RESUBMIT NO Approved
BY C. CARLSON DATE 06/11/2015

REV. NO. DATE: 2 06/08/15, 1 05/21/15

RENAUD BROS. INC.
283 FT. BRIDGEMAN RD. VERNON VT. 05354
PH: (802) 251-7585 FAX: (802) 251-7308

SHEET NAME: APPROACH SLAB PLANS
PROJECT NAME: ANDOVER
PROJECT NO: BHF 016-1 (29)
DRAWN BY: CE
CHK'D BY: DATE: 05/08/2015

SHEET NO. 3 OF 6

CHECK IF THERE IS SUFFICIENT REINFORCEMENT IN SLABS TO RESIST MOMENTS + SHEARS WHEN LIFTING SLABS FROM PROPOSED LIFTING POINTS

WORST CASE IS 8' x 20' SLAB
 PROPOSED LIFT POINTS: 1.5' FROM SIDES
 4 POINTS 3.0' FROM ENDS

FACTORED GRAVITY LOADS:
 $q_u = 1.2 \text{ WD}$
 $= (1.2) (15/12) (150)$
 $= 225 \text{ lb/ft}^2$

FROM ACI DIRECT DESIGN METHOD

ACI EQ. 13-4 GIVES STATIC MOMENT FOR A PANEL AS

$$M_o = \frac{q_u l_2 l_n^2}{8}$$

$l_2 = \perp$ to long span between supports
 $l_n =$ long.itudinal length between supports

$$= \frac{225 \text{ lb/ft}^2 (5 \text{ ft}) (14 \text{ ft})^2}{8}$$

$$= \frac{275.6 \text{ KIP-FT}}{1000 \text{ lb/kip}}$$



FROM ACI 13.6.3 THE TOTAL POSITIVE MOMENT ACROSS THE PANEL IS:

$$M_m = 0.35 M_o$$

$$= 9.646 \text{ KIP-FT}$$

FROM ACI 13.6.4 THE COLUMN STRIP (i.e. pick point strip) positive moment is

$$M_{cm} = 0.60 M_m$$

$$= 5.788 \text{ KIP-FT (CONTROLS)}$$

FROM ACI 13.6.6 THE MIDDLE STRIP POSITIVE MOMENT IS:

$$M_{MN} = M_m - M_{cm}$$

$$= 3.858 \text{ FT-KIIP}$$

FROM ACI 13.6.3 THE TOTAL NEGATIVE MOMENT IS:

$$M_c = 0.65 M_o$$

$$= 17.914 \text{ FT-KIP}$$

FROM 13.6.4 THE NEGATIVE MOMENT AT THE SUPPORT (I.E. PICK POINT) IS:

$$= 0.75 M_c$$

$$= 13.43 \text{ (CONTROLS)}$$


FROM 13.6.6 THE NEGATIVE MOMENT IN THE MIDDLE STRIP IS

$$M_{mc} = M_c - M_{cm}$$

$$= 4.479 \text{ KIP-FT}$$

THE NOMINAL RESISTANCE IS CALCULATED:

$$M_N = A_s f_y d \left(1 - \frac{0.59 A_s f_y}{b_w d \rho_c}\right)$$

FOR THE POSITIVE MOMENT:

$$A_s = \#9 \text{ BARS @ } 12" \text{ O.C.} = 1.00 \text{ in}^2$$

$$d = 13"$$

$$M_n = (1.0) \left(\frac{60 \text{ KIPS}}{\text{ft}}\right) (13 \text{ in}) \times \left(1 - \frac{(0.59) (1.00 \text{ in}^2) (60 \text{ KIPS})}{(12 \text{ in}) (13 \text{ in}) (3.5 \text{ KIPS/IN}^2)}\right)$$

$$= 60.78 \text{ KIPS-FT}$$

60.78 >>> 5.788 OK



FOR THE NEGATIVE MOMENT:

$$A_s \pm \#7 \text{ BARS @ } 12" \text{ O.C.} = 0.60 \text{ in}^2$$

$$d = 14"$$

$$M_n = \frac{(0.60) (60) (14) \times \left(1 - \frac{(0.59) (0.60) (60)}{(12) (14) (3.5)}\right)}{12}$$

$$= 40.49$$

40.49 >>> 13.43 OK

CHECK IF SHEAR STRENGTH OK

THE FACTORED LOAD FROM PREVIOUS = 225 lb/ft²

IN WIDE BEAM SHEAR, THE ENTIRE WIDTH OF A CRITICAL SECTION - TAKEN AT A DISTANCE d FROM THE FACE OF SUPPORT GIVES A DESIGN RESISTANCE OF:

$$V_u = q_u l_2 \left(\frac{l_n}{2} - d\right)$$

$$= 225 \text{ lb/ft}^2 (5 \text{ ft}) \left(\frac{14 \text{ ft}}{2} - 15 \text{ in}\right)$$

$$= 6468.75 \text{ lbs}$$



$$\phi V_c = 2 \phi \sqrt{f'_c} B d$$

$$= (2) (0.75) \sqrt{\frac{3500}{\text{psi}}} (12 \text{ in}) (15 \text{ in})$$

$$= 29,867.08$$

29,867.08 lbs >>> 6,468.75 lbs OK



Vermont Agency of Transportation

RECEIVED

CK'D BY D. PETERSON OK'D BY C. CARLSON

June 9, 2015

RESUBMIT NO Approved

BY C. CARLSON DATE 06/11/2015

REV. NO.	DATE:
2	06/08/15
1	05/21/15

RENAUD BROS. INC.
 283 FT. BRIDGEMAN RD. VERNON VT. 05354
 PH. (802) 251-7585 FAX (802) 251-7508

SHEET NAME: APPROACH SLAB PLANS		SHEET NO. 4
PROJECT NAME: ANDOVER		OF 6
PROJECT NO: BHF 016-1 (29)		
DRAWN BY: CE	CHK'D BY:	DATE: 05/08/2015

ANDOVER BHF 016-1 (29) - CONTRACTOR FABRICATED APPROACH SLABS QUALITY CONTROL PLAN

THE QUALITY CONTROL MANAGER FOR THIS PROJECT IS MIKE RENAUD. HE WILL BE CHECKING THE FORMS, REINFORCING, CONCRETE PLACEMENT, CURING, STORAGE, TRANSPORTATION, FINAL SETTING, AND JOINING IN THE FIELD. THE USE OF SUPPLIERS AND EMPLOYEES TO ASSIST IN THE PERFORMANCE OF THE WORK WILL BE NECESSARY. RENAUD BROTHERS HAS BEEN PLACING CONCRETE FOR VERMONT AGENCY OF TRANSPORTATION WITH SUCCESS FOR OVER TEN YEARS. DUE TO THE LIMITED SPACE OF RENAUD BROTHERS CASTING BEDS ONLY TWO UNITS WILL BE CAST AT ONE TIME.

CARROLL CONCRETE WILL BE RESPONSIBLE FOR SUPPLYING THE HIGH PERFORMANCE CLASS B CONCRETE MIX DESIGN AND THE QUALITY CONTROL TESTING ON THE MIX. THE ONSITE TECHNICAN WILL PERFORM AIR AND TEMPERATURE TESTING ON THE CONCRETE AND TAKE NECESSARY CYLINDERS FOR THE SUPPLIERS USE AND FOUR EXTRA CYLINDERS FOR EARLY BREAKS ON EACH PLACEMENT DAY. THE CYLINDERS WILL BE TESTED BY CERTIFIED TECHNICIAN ON CALIBRATED EQUIPMENT. THE QUALITY CONTROL TECHNICIAN WILL MONITOR THE CONCRETE FROM ITS RAW MATERIAL STATE TO IT'S PLACEMENT IN THE FORMS. THE QUALITY CONTROL TECHNICIAN WILL COMMUNICATE ANY PROBLEMS OR ADJUSTMENTS WITH THE CONCRETE MIX TO RENAUD BROTHERS AND THE RESIDENT ENGINEER.

A PRE-PRODUCTION MEETING WILL BE SCHEDULED UPON ACEPTANCE OF THIS SUBMITTAL WHERE VERMONT AGENCY OF TRANSPORTATION WILL PERFORM THEIR INITIAL QUALITY ASSURANCE CHECKS. THE ATTACHED INSPECTION FORM WILL BE UTILIZED BY RENAUD BROTHERS FOR THE MEETING. THE CONCRETE PLACEMENT WILL BE SCHEDULED FOR THE FOLLOWING DAY AT A TIME ESTABLISHED AT THE PRE-PRODUCTION MEETING. RENAUD BROTHERS ONLY HAS A CASTING BED BIG ENOUGH FOR TWO PIECECES OF THIS APPROACH SLAB SYSTEM WHICH IS WHY WE ARE REQUESTING PLACEMENT THE FOLLOWING DAY. WAITING THE FULL SEVEN DAYS AFTER THE FORM AND REINFORCING INSPECTION IS COMPLETE WILL NOT POVIDE ENOUGH TIME FOR THE SLABS TO BE CAST AND CURED FOR THE CLOSURE PERIOD. AT THIS TIME THEIR ARE TWO SLABS FORMED AND REINFORCED AWAITING PRE-PRODUCTION INSPECTION. THE LARGEST POUR WE WILL HAVE IS 15CY, TWO CENTER SLABS. DURING EACH PLACEMENT VERMONT AGENCY OF TRANSPORTATION WILL HAVE THE OPORTUNITY TO PERFORM THEIR CONCRETE QUALITY ASSURANCE TESTING.

THE BEDS FOR THE SLABS ARE FLAT STEEL DECKS SET LEVEL. THE FORM WORK IS SMOOTH FACED PLYWOOD AND DIMENSIONAL LUMBER. THE FORMWORK WILL BE INSPECTED PRIOR TO INITIAL FORMING FOR CLEANLINES AND FLATNESS. ONCE ERECTED THE DIMENSIONS WILL BE CHECKED FOR COMPLIANCE. JUST BEFORE REINFORCING IS INSTALLED A RELEASE AGENT WILL BE APPLIED TO THE FORMS.

THE REINFORCING STEEL WILL BE CHECKED FOR PROPER DIMENSIONS, AND CONFIGURATION PRIOR TO PLACEMENT IN THE FORMS. IF ANY REINFORCING IS FOUND TO BE OUT OF COMPLIANCE IT WILL BE REMOVED FROM THE WORK LOCATION AND REPLACED WITH NEW REINFORCING. THE REINFORCING WILL BE INSTALLED WITH THE TOLERANCE OF 1/4" +- ON PLACEMENT AND 1/4" +- ON CLEAR COVER AND CLEARENCE TO AN EXTERIOR EDGE.

THE LIFTING ANCHORS WILL BE PLACED IN THE SLABS DURING THE REINFORCING PHASE. THE ANCHORS WILL BE CHECKED FOR LOCATION AND HEIGHT COMPARED TO THE SURFACE OF THE SLAB. THE TOLLERANCES WILL BE 1/4" +- HORIZONTAL AND 1/4" +- VERTICAL. THE ANCHORS SPECIFIED WILL BE THE ANCHORS USED.

ONCE ALL CHECKS HAVE BEEN MADE AND RENAUD BROTHERS HAS PERMISSION TO PLACE THE CONCRETE WILL BE BATCHED AND PLACED. THERE WILL BE INDIVIDUALS DEDICATED TO EACH TASK OF THE PLACEMENT ie VIBRATOR, HAND SCREED, RAKERS, AND FINISHERS. THE SURFACE FINISH FOR THE APPROACH SLABS WILL BE A MAG FLOAT FINISH OBTAINED BY USE OF MAG FLOATS AND A BULL FLOAT. A TAG WITH THE PIECE MARK AND DATE CAST WILL BE ATTACHED TO A HAIRPIN REINFORCING BAR FOR EACH SLAB SECTION.

WET BURLAP AND CLEAR PLASTIC SHEETING WILL BE PLACED ON THE SLABS WHEN THEY HAVE CURED ENOUGH SO PLACEMENT WILL NOT DAMAGE THE FINISH. THE SLABS WILL BE WET CURED FOR TEN DAYS BY ADDING WATER WHEN NECESSARY, PER SPECIFICATION 501.17A(5).

AFTER FOUR DAYS THE FIRST SET OF CYLINDERS WILL BE TESTED. IF THE TESTING YEILDS 85% OF DESIGN STRENGTH THE FORMS WILL BE STRIPED AND THE SLABS WILL BE MOVED TO THE FINAL CURING LOCATION. THE SLABS WILL REST ON WOOD SUPPORTS SPACED FIVE FEET APART UNTIL TRANSPORT.

BEFORE THE SLABS ARE LOADED FOR TRANSPORT THEY SHALL BE CHECKED BY RENAUD BROTHERS AND VERMONT AGENCY OF TRANSPORTATION FOR CONFORMANCE. THE TOLERENCES ON THE FINAL SIZING COMPARED TO THE DESIGN SIZE ARE AS FOLLOWS: 1/4" +- LENGTH AND WIDTH AND 1/2" +- ON SQUARENESS. ALL CONNECTING KEYWAYS WILL BE SAND BLASTED AND AIR BLASTED PRIOR TO SETTING AND CLOSURE PLACEMENT. THE REINFORCING WILL NOT BE PROTECTED ON THIS PROJECT AS IT IS BARE BLACK REINFORCING. ANY HOLES, HONEYCOMBING OR SPALLS WHICH ARE BIGGER THEN 5/8" AND SMALLER THEN 6 INCHS IN DIAMETER AND PENETRATE A 1/4 INCH BUT NO DEEPER THAN 1 INCH INTO THE CONCRETE WILL BE REPAIRED. ANY DEFECTS LARGER THEN 6 INCHES AND DEEPER THEN 1 INCH WILL BE CAUSE FOR REJECTION. ANY CRACKING WILL BE EVALUATED AND REPAIRED IF NECESSARY. ALL REPAIR MATERIAL WILL BE SIKA REPAIR 224 AND INSTALLED PER MANUFACTURERS INSTRUCTIONS. THE SLAB FLATNESS WILL BE 1/2" +- IN A TEN FOOT SPAN. THE SLABS WILL BE PROFILED FOR THE FLATNESS MEASURMENTS.

THE PIECES WILL BE SUPPORTED DURING TRANSPORT ON WOOD EVERY FIVE FEET OR CONTIUOUSLY BY THE TRAILER DECK. RUBBER MATS MAY BE USED BETWEEN THE SLABS AND TRAILER DECK. THE PIECES WILL BE SECURED TO THE TRAILER WITH EVENNLY SPACED ROAD WORTHY NYLON STRAPS OR PROTECTED CHAINS. THE SLABS WILL BE INSPECTED ONCE MORE UPON ARIVAL AT THE SITE FOR CHIPS AND CRACKING.

AFTER THE SUBGRADE HAS BEEN PREPARED TO THE APROPRIATE GRADE AND COMPACTION THE SLABS WILL BE SET TO THEIR FINAL LOCATION. THE CLOSURE POUR LONGITUDINAL REINFORCEMENT WILL BE INSTALLED AND THE HIGH PERFORMANCE RAPID SET WILL BE PLACED IN THE CLOSURE VOIDS.

Vermont Agency of Transportation
RECEIVED
 CK'D BY D.PETERSON OK'D BY C. CARLSON
 June 9, 2015
 RESUBMIT NO Approved
 BY C. CARLSON DATE 06/11/2015



REV. NO.	DATE
2	06/08/15
1	05/21/15

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SHEET NAME: APPROACH SLAB PLANS		
PROJECT NAME: ANDOVER	SHEET NO. 5	
PROJECT NO: BHF 016-1 (29)	OF 6	
DRAWN BY: CE	CHK'D BY:	DATE: 05/08/2015

