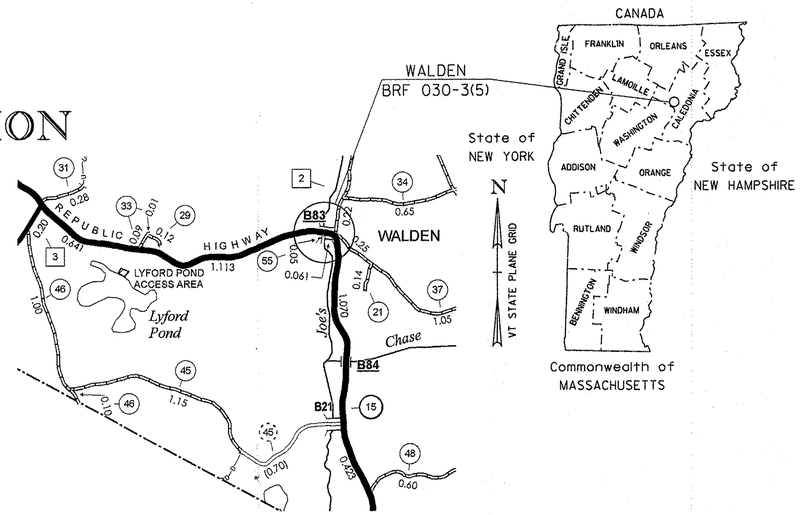
STATE OF VERMONT
AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT
BRIDGE PROJECT

TOWN OF WALDEN

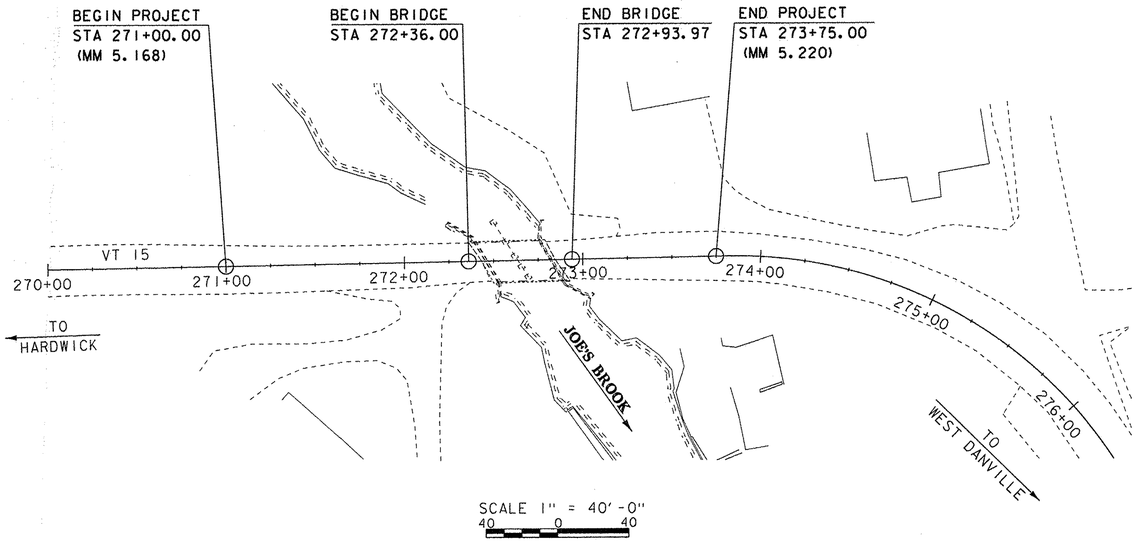
COUNTY OF CALEDONIA

ROUTE NO : VT 15 (MINOR ARTERIAL) BRIDGE NO : 83

PROJECT LOCATION : BEGINNING AT A POINT ON VT 15 APPROXIMATELY 5.15 MILES SOUTHEASTERLY OF THE HARDWICK/WALDEN TOWN LINE AND EXTENDING EAST 0.13 MILES

PROJECT DESCRIPTION : REPLACEMENT OF BRIDGE 83 WITH RELATED APPROACH ROADWAY AND CHANNEL WORK

LENGTH OF STRUCTURE :	57.97 FEET.
LENGTH OF ROADWAY :	217.03 FEET.
LENGTH OF PROJECT :	275.00 FEET.



CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JULY 20, 2011 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

QUALITY ASSURANCE PROGRAM : LEVEL 2	
SURVEYED BY :	R. GILMAN
SURVEYED DATE :	5/17/2010
DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83 (07)

RECORD PLANS

CONTRACTOR:	J. A. MCDONALD INC. – LYNDON CENTER, VT
RESIDENT ENGINEER:	KEVIN MCCLURE
CONSTRUCTION BEGAN:	JUNE 29, 2015
CONSTRUCTION COMPLETE:	AUGUST 31, 2015
RECORD PLANS BY:	KEVIN MCCLURE & KEVIN KING

I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.

BY Kevin McClure RESIDENT ENGINEER

DATE 8-22-16

NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives.

DIRECTOR OF PROJECT DELIVERY

APPROVED [signature] DATE 12/5/2014

PROJECT MANAGER : CAROLYN CARLSON, P.E.

PROJECT NAME : WALDEN

PROJECT NUMBER : BRF 030-3(5)

SHEET 1 OF 56 SHEETS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PRELIMINARY INFORMATION SHEET (BRIDGE)

Version
LRFD

INDEX OF SHEETS

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STANDARDS LIST

D-1	PRECAST REINFORCED CONCRETE DROP INLET DETAILS	06-01-1994
E-121	STANDARD SIGN PLACEMENT - CONVENTIONAL ROAD	08-08-1995
E-123	GUIDE SIGN PLACEMENT - MISCELLANEOUS DETAILS	03-16-2004
E-127	ROUTE MARKINGS AT RURAL INTERSECTIONS	08-08-1995
E-136B	STATE ROUTE MARKER SIGN DETAILS	08-08-1995
E-141	REGULATORY SIGN DETAILS	09-20-1995
E-143	REGULATORY SIGN DETAILS	06-15-2004
E-150	WARNING SIGN DETAILS	05-01-2004
E-151	WARNING SIGN DETAILS	05-01-2004
E-152	WARNING SIGN DETAILS	05-01-2004
E-191	PAVEMENT MARKING DETAILS	02-01-1999
E-193	PAVEMENT MARKING DETAILS	08-18-1995
G-1B	BOX BEAM GUARD RAIL	06-01-1994
G-19	GENERIC GRADING PLANS FOR GUARDRAIL END TERMINALS	11-15-2002
J-3	MAIL BOX SUPPORT DETAILS	08-07-1995
S-364A	BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM	04-23-2012
S-364B	GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM	04-23-2012
S-364C	GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM	04-23-2012
S-364D	GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM	04-23-2012
T-1	TRAFFIC CONTROL GENERAL NOTES	08-06-2012
T-10	CONVENTIONAL ROADS CONSTRUCTION APPROACH SIGNING	08-06-2012
T-17	TRAFFIC CONTROL MISCELLANEOUS DETAILS	08-06-2012
T-28	CONSTRUCTION SIGN DETAILS	08-06-2012
T-29	CONSTRUCTION SIGN DETAILS	08-06-2012
T-30	CONSTRUCTION SIGN DETAILS	08-06-2012
T-31	CONSTRUCTION SIGN DETAILS	08-06-2012
T-35	CONSTRUCTION ZONE LONGITUDNAL DROP-OFFS	08-06-2012
T-40	DELINEATORS AND MILEPOSTS	01-02-2013
T-42	BRIDGE NUMBER PLAQUE	04-09-2014
T-44	MILEMARKER DETAILS STATE AND TOWN HIGHWAYS	04-09-2014
T-45	SQUARE TUBE SIGN POST AND ANCHOR	01-02-2013

STRUCTURES DETAIL SHEETS

SD-501.00	CONCRETE DETAILS AND NOTES	5/7/2010
SD-502.00	CONCRETE DETAILS AND NOTES	5/7/2010
SD-516.10	BRIDGE JOINT ASHPALTIC PLUG	5/7/2010

FINAL HYDRAULIC REPORT

HYDROLOGIC DATA

Date: Sept. 2012

DRAINAGE AREA : 16.0 sq. mi.
CHARACTER OF TERRAIN : Hilly to mountainous
STREAM CHARACTERISTICS : Semi-alluvial, sinuous, laterally and vertically stable
NATURE OF STREAMBED : Mostly ledge

PEAK FLOW DATA

Q 2.33 =	500 cfs	Q 50 =	1900 cfs
Q 10 =	1150 cfs	Q 100 =	2250 cfs
Q 25 =	1550 cfs	Q 500 =	3150 cfs

DATE OF FLOOD OF RECORD : Unknown
ESTIMATED DISCHARGE: Uknown
WATER SURFACE ELEV.: Unknown
NATURAL STREAM VELOCITY : @ Q50 = 10.7 fps
ICE CONDITIONS : Light to moderate
DEBRIS: Light to moderate
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? No
IS ORDINARY RISE RAPID? No
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? No
IF YES, DESCRIBE:

WATERSHED STORAGE: 2% HEADWATERS: X
UNIFORM:
IMMEDIATELY ABOVE SITE:

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE: Single span concrete T-beam bridge
YEAR BUILT: 1933
CLEAR SPAN(NORMAL TO STREAM): 29'
VERTICAL CLEARANCE ABOVE STREAMBED: 13'
WATERWAY OF FULL OPENING: 375 sq. ft.
DISPOSITION OF STRUCTURE: Remove and replace
TYPE OF MATERIAL UNDER SUBSTRUCTURE: Ledge

WATER SURFACE ELEVATIONS AT:

Q2.33 =	1618.8'	VELOCITY =	6.3 fps
Q10 =	1620.9'	"	10.2 fps
Q25 =	1621.4'	"	12.0 fps
Q50 =	1622.3'	"	13.0 fps
Q100 =	1623.9'	"	14.5 fps

LONG TERM STREAMBED CHANGES: None known

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: Above Q100
RELIEF ELEVATION: 1631.3'
DISCHARGE OVER ROAD @Q100: None

UPSTREAM STRUCTURE

TOWN: Walden DISTANCE: 0.9 mi.
HIGHWAY # : TH 2 STRUCTURE #: 7
CLEAR SPAN: 70' CLEAR HEIGHT: 10'
YEAR BUILT: 1945 FULL WATERWAY: NA
STRUCTURE TYPE: Single span bridge

DOWNSTREAM STRUCTURE

TOWN: Walden DISTANCE: 1.1 mi.
HIGHWAY # : TH 45 STRUCTURE #: 21
CLEAR SPAN: 26' CLEAR HEIGHT: 9'
YEAR BUILT: NA FULL WATERWAY: NA
STRUCTURE TYPE: Single span bridge

LRFR LOAD RATING FACTORS

LOADING LEVELS	TRUCK						
	H-20	HL-93	3S2	6 AXLE	3A STR	4A STR	5A SEMI
TONNAGE	**20**	**36**	**36**	**66**	**30**	**34.5**	**38**
INVENTORY	2.99	1.12					
POSTING							
OPERATING	4.13	1.54	3.13	1.35	2.57	2.18	2.46
COMMENTS:							

PROPOSED STRUCTURE

STRUCTURE TYPE: Single span NEXT Beam bridge

CLEAR SPAN(NORMAL TO STREAM): 40'
VERTICAL CLEARANCE ABOVE STREAMBED: 14'
WATERWAY OF FULL OPENING: 475 sq. ft.

WATER SURFACE ELEVATIONS AT:

Q2.33 =	1618.5'	VELOCITY=	5.7 fps
Q10 =	1620.4'	"	9.3 fps
Q25 =	1621.4'	"	10.6 fps
Q50 =	1622.2'	"	11.7 fps
Q100 =	1623.1'	"	12.9 fps

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: Above Q100
RELIEF ELEVATION: 1631.3'
DISCHARGE OVER ROAD @Q100: None

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 1628.8'
VERTICAL CLEARANCE: @ Q50 = 6.6'

SCOUR: Abutments will be founded on sound ledge.

REQUIRED CHANNEL PROTECTION: Stone Fill, Type IV

PERMIT INFORMATION

AVERAGE DAILY FLOW:	30 cfs	
ORDINARY LOW WATER:	15 cfs	DEPTH OR ELEVATION: Elev. 1616'
ORDINARY HIGH WATER:	215 cfs	Elev. 1618'

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: No temporary bridge required.
CLEAR SPAN (NORMAL TO STREAM):
VERTICAL CLEARANCE ABOVE STREAMBED:
WATERWAY AREA OF FULL OPENING:

ADDITIONAL INFORMATION

TRAFFIC MAINTENANCE NOTES

1. MAINTAIN TRAFFIC ON AN OFF SITE DETOUR.
2. TRAFFIC SIGNALS ARE NOT NECESSARY.
3. SIDEWALKS ARE NOT NECESSARY

DESIGN VALUES

1. DESIGN LIVE LOAD		HL-93
2. FUTURE PAVEMENT	d_P:	3.0 INCH
3. DESIGN SPAN	L:	53.00 FT
4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS)	Δ:	2.802
5. PRESTRESSING STRAND (0.60 INCH DIAMETER - LOW RELAX)	f_y:	270 KSI
6. PRESTRESSED CONCRETE STRENGTH	f'_c:	10.0 KSI
7. PRESTRESSED CONCRETE RELEASE STRENGTH	f'_{ci}:	8.0 KSI
8. CONCRETE, HIGH PERFORMANCE CLASS AA	f'_c:	- - -
9. CONCRETE, HIGH PERFORMANCE CLASS A	f'_c:	- - -
10. CONCRETE, HIGH PERFORMANCE CLASS B	f'_c:	- - -
11. CONCRETE, CLASS C	f'_c:	3.0 KSI
12. REINFORCING STEEL	f_y:	60 KSI
13. STRUCTURAL STEEL AASHTO M270	f_y:	- - -
14. NOMINAL BEARING RESISTANCE OF SOIL	q_n:	4.0 KSF
15. SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	0.45
16. NOMINAL BEARING RESISTANCE OF ROCK	q_n:	SEE NOTE
17. ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	SEE NOTE
18. PILE RESISTANCE FACTOR	ϕ:	-
19. LATERAL PILE DEFLECTION	Δ:	- - -
20. BASIC WIND SPEED	V_{3s}:	- - -
21. MINIMUM GROUND SNOW LOAD	p_g:	- - -
22. SEISMIC DATA PGA: -	S_s:	- - -
	S_1:	- - -
23.		- - -
24.		- - -
25.		- - -
26.		- - -

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2013	2400	270	51	12.9	350
2033	2700	300	51	18.8	570

20 year ESAL for flexible pavement from 2013 to 2033 : 2877000
40 year ESAL for flexible pavement from 2013 to 2053 : 6650000
Design Speed : 30 mph

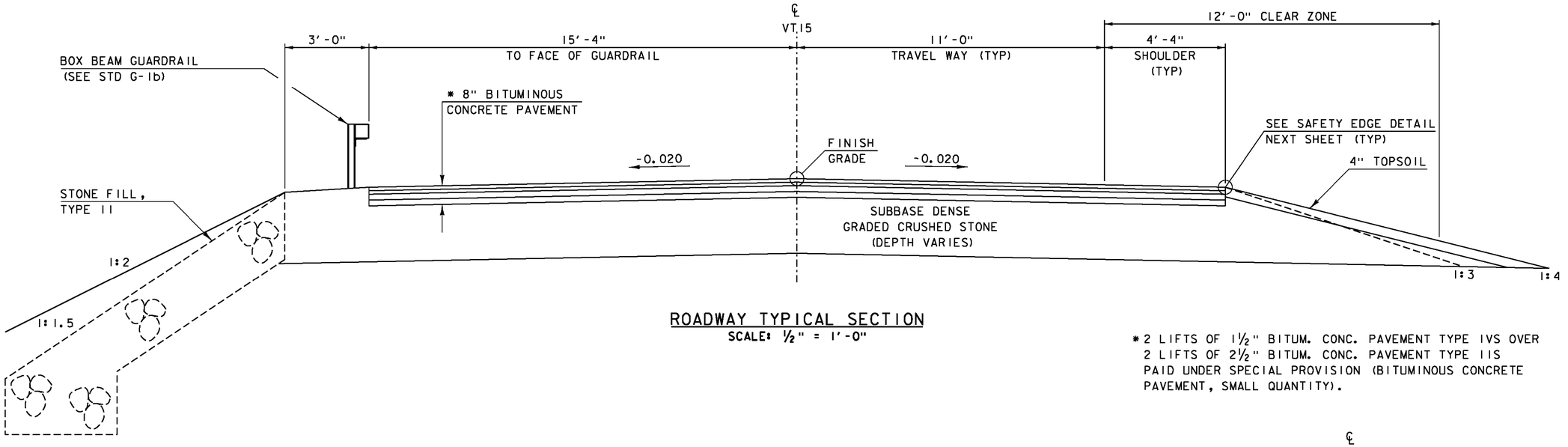
AS BUILT "REBAR" DETAIL

LEVEL I	LEVEL II	LEVEL III
TYPE:	TYPE:	TYPE:
GRADE:	GRADE:	GRADE:

NOTE FOR DESIGN VALUES # 16 & 17
NOMINAL BEARING RESISTANCE OF ROCK
ABUTMENT #1 70 KSF
ABUTMENT #2 40 KSF
ROCK BEARING RESISTANCE FACTORED (REFER TO AASHTO LRFD)
ABUTMENT #1 31.5 KSF
ABUTMENT #2 18 KSF

PROJECT NAME: **WALDEN**
PROJECT NUMBER: **BRF 030-3(5)**

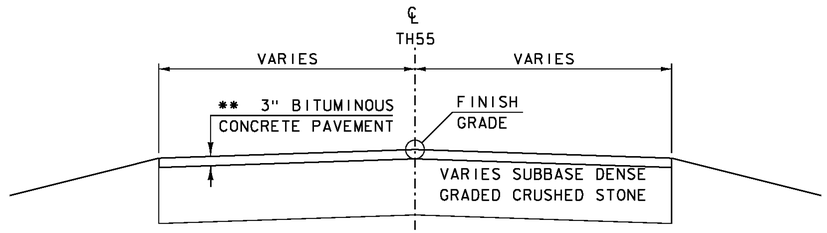
FILE NAME: **s09b308pi.xls** PLOT DATE: 12/4/2014
PROJECT LEADER: **C. CARLSON** DRAWN BY: **R. PELLETT**
DESIGNED BY: **H. SALLS** CHECKED BY: **H. SALLS**
PRELIMINARY INFORMATION SHEET 2 OF 56



ROADWAY TYPICAL SECTION

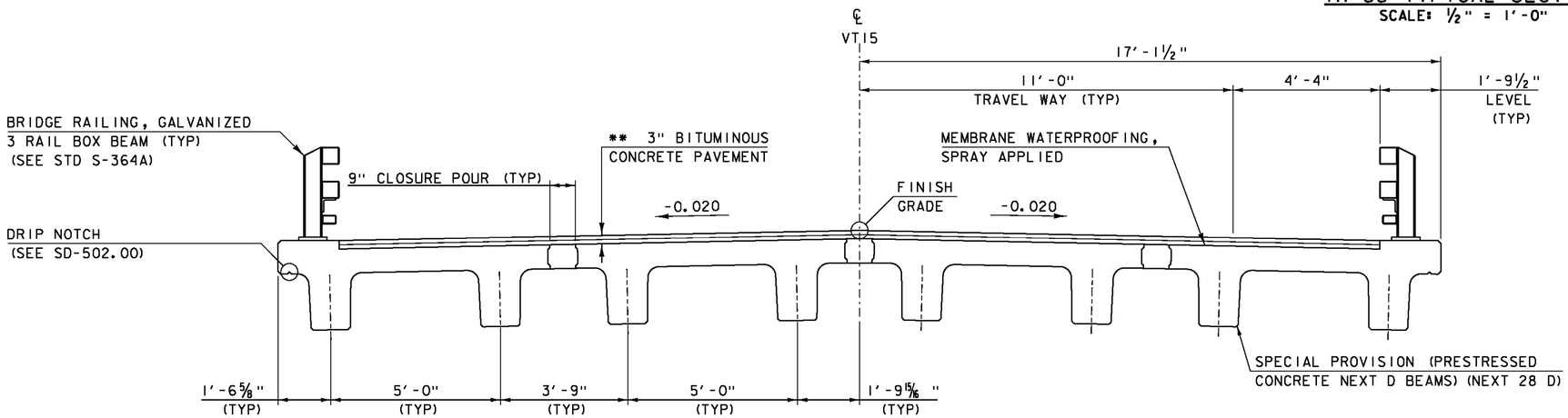
SCALE: ½" = 1'-0"

* 2 LIFTS OF 1½" BITUM. CONC. PAVEMENT TYPE IVS OVER 2 LIFTS OF 2½" BITUM. CONC. PAVEMENT TYPE IIS PAID UNDER SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY).



TH 55 TYPICAL SECTION

SCALE: ½" = 1'-0"



BRIDGE TYPICAL SECTION

SCALE: ½" = 1'-0"

** 2 LIFTS OF 1½" BITUM. CONC. PAVEMENT TYPE IVS PAID UNDER SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY).

MATERIAL TOLERANCES

(IF USED ON PROJECT)

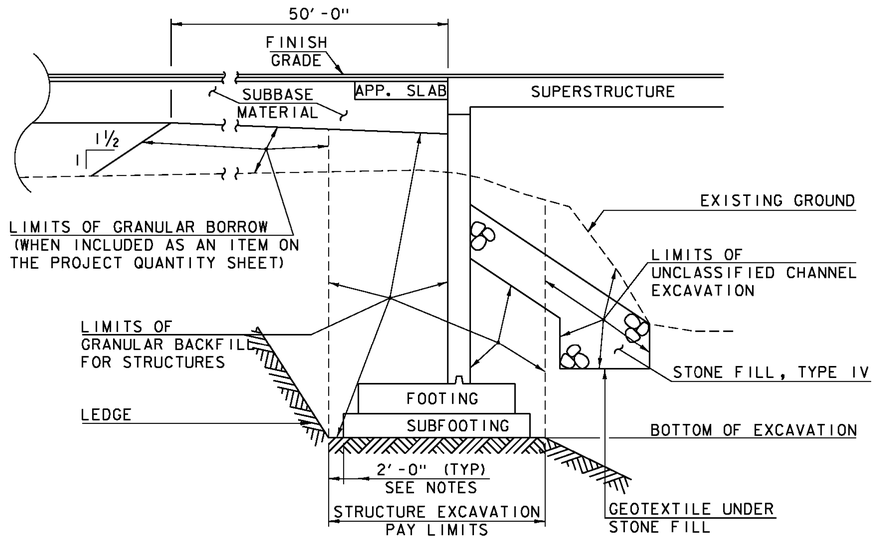
SURFACE	
- PAVEMENT (TOTAL THICKNESS)	+/- ¼"
- AGGREGATE SURFACE COURSE	+/- ½"
SUBBASE	+/- 1"
SAND BORROW	+/- 1"

BUILT AS DESIGNED

PROJECT NAME: WALDEN
PROJECT NUMBER: BRF 030-3(5)

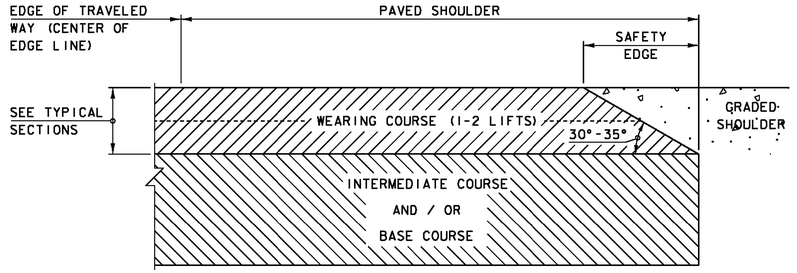
FILE NAME: s09b308_typ.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
TYPICAL SECTIONS 1

PLOT DATE: 19-DEC-2014
DRAWN BY: R. PELLETT
CHECKED BY: H. SALLS
SHEET 3 OF 56



ABUTMENT EARTHWORK TYPICAL SECTION

(NOT TO SCALE)

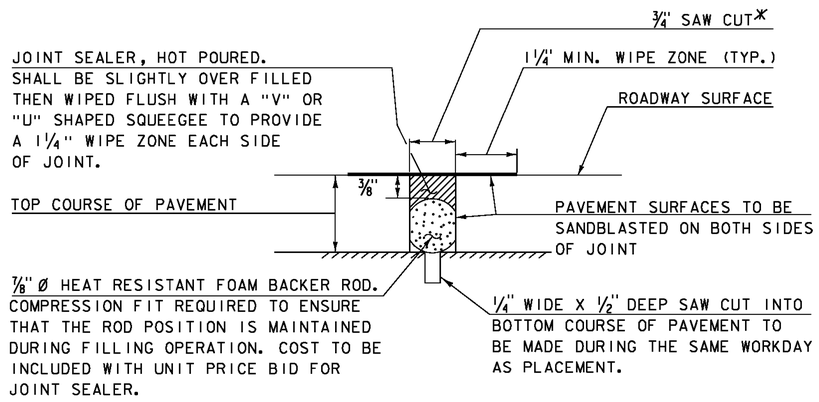


SAFETY EDGE DETAIL

NOT TO SCALE

1. THE EDGE OF PAVEMENT SHALL BE FORMED IN SUCH A WAY THAT THE BITUMINOUS CONCRETE PAVEMENT IS EXTRUDED OR COMPRESSED TO FORM THE 30 TO 35 DEGREE ANGLE. DEVICES THAT SIMPLY STRIKE-OFF THE MIX WITHOUT PROVIDING ANY COMPACTIVE EFFORT WILL NOT BE ALLOWED.

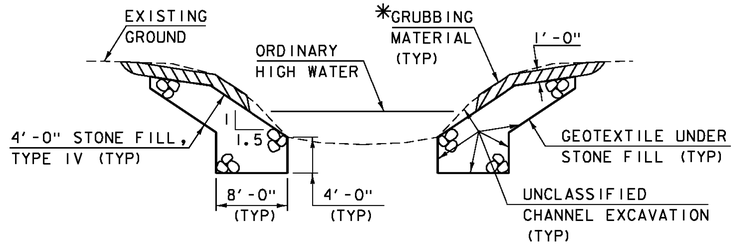
2. THE PAVED SHOULDER EXTENDS FROM THE EDGE OF TRAVELED WAY TO THE EDGE OF THE WEARING COURSE, INCLUDING THE "SAFETY EDGE".



SAWED PAVEMENT JOINT DETAIL

(NOT TO SCALE)

*JOINT IS TO BE LOCATED ACCURATELY BY STRING LINING, OR OTHER MEANS, PRIOR TO PAVING, SO THAT THE SAW CUTS WILL BE MADE DIRECTLY OVER THE END OF CONCRETE DECK. JOINT SHALL BE CUT DRY IN A SINGLE PASS AND BE SEALED WITHIN 24 HOURS OR PRIOR TO EXPOSURE TO TRAFFIC. JOINT SHALL BE CLEANED PRIOR TO APPLYING THE JOINT SEALER.



TYPICAL CHANNEL SECTION

(NOT TO SCALE)

*WHENEVER CHANNEL SLOPE INTERSECTS ROADWAY SUBBASE, GRUBBING MATERIAL SHALL BEGIN AT THE BOTTOM OF SUBBASE.

BUILT AS DESIGNED

PROJECT NAME: WALDEN	
PROJECT NUMBER: BRF 030-3(5)	
FILE NAME: s09b308_typ.dgn	PLOT DATE: 05-DEC-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: H. SALLS	CHECKED BY: H. SALLS
TYPICAL SECTIONS 2	SHEET 4 OF 56

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES

ROADWAY	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND
1				1		LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10	
410				410		CY	COMMON EXCAVATION	203.15	
		50		50		CY	SOLID ROCK EXCAVATION	203.16	
270				270		CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27	
110				110		CY	TRENCH EXCAVATION OF EARTH	204.20	
15				15		CY	TRENCH EXCAVATION OF ROCK	204.21	
1				1		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	
		1060		1060		CY	STRUCTURE EXCAVATION	204.25	
		450		450		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	
460				460		SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10	
660				660		CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	
10				10		CWT	EMULSIFIED ASPHALT	404.65	
1				1		LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50	
		384		384		LB	REINFORCING STEEL, LEVEL I	507.11	
		82		82		LF	DRILLING AND GROUTING DOWELS	507.16	
		20		20		GAL	WATER REPELLENT, SILANE	514.10	
		68		68		LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10	
		200		200		SY	MEMBRANE WATERPROOFING, SPRAY APPLIED	520.10	
		68		68		LF	JOINT SEALER, HOT POURED	524.11	
		120		120		LF	BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM	525.335	
		1		1		EACH	REMOVAL OF STRUCTURE (925 SF - EST.)	529.15	
		16		16		EACH	BEARING DEVICE ASSEMBLY, STEEL REINFORCED ELASTOMERIC PAD	531.17	
		1		1		LS	PRECAST CONCRETE STRUCTURE (ABUTMENT #1)	540.10	
		1		1		LS	PRECAST CONCRETE STRUCTURE (ABUTMENT #2)	540.10	
		1		1		LS	PRECAST CONCRETE STRUCTURE (APPROACH SLAB #1)	540.10	
		1		1		LS	PRECAST CONCRETE STRUCTURE (APPROACH SLAB #2)	540.10	
		1		1		LS	PRECAST CONCRETE STRUCTURE (FOOTING #1)	540.10	
		1		1		LS	PRECAST CONCRETE STRUCTURE (FOOTING #2)	540.10	
		1		1		LS	PRECAST CONCRETE STRUCTURE (WINGWALL #1)	540.10	
		1		1		LS	PRECAST CONCRETE STRUCTURE (WINGWALL #2)	540.10	
		1		1		LS	PRECAST CONCRETE STRUCTURE (WINGWALL #3)	540.10	
		1		1		LS	PRECAST CONCRETE STRUCTURE (WINGWALL #4)	540.10	
		124		124		CY	CONCRETE, CLASS C	541.30	
							BEGIN OPTION AA		
90				90		LF	18" CAAP .060 (2-2/3 X 1/2)	601.0215	7
90				90		LF	18" PCCSP .064 (2-2/3 X 1/2)	601.0415	7
90				90		LF	18" CPEP(SL)	601.2615	7
							END OPTION AA		
2				2		EACH	PRECAST REINFORCED CONCRETE DROP INLET WITH CAST IRON GRATE	604.18	
	1			1		TON	DUST AND ICE CONTROL WITH CALCIUM CHLORIDE	609.15	

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		EARTHWORKS SUMMARY
		FILL AVAILABLE
287	CY	COMMON EXCAVATION (0.70 x 410 CY)
81	CY	UNCLASSIFIED CHANNEL EXCAVATION (0.30 x 270)
77	CY	TRENCH EXCAVATION OF EARTH (0.70 x 110)
318	CY	STRUCTURE EXCAVATION (0.30 x 1060)
2	CY	ROUNDING
765	**CY**	**TOTAL FILL AVAILABLE**
		FILL REQUIRED
125	CY	FACTORED FILL (109 x 1.15)
5	CY	ROUNDING
130	**CY**	**TOTAL FILL REQUIRED**
635	**CY**	**TOTAL WASTE**

PROJECT NAME: WALDEN
PROJECT NUMBER: BRF 030-3(5)

FILE NAME: s09b308_qs.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
QUANTITY SHEET 1

PLOT DATE: 05-DEC-2014
DRAWN BY: R. PELLETT
CHECKED BY: H. SALLS
SHEET 6 OF 56

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 2

| SUMMARY OF ESTIMATED QUANTITIES | | |

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 3

SUMMARY OF ESTIMATED QUANTITIES					TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
ROADWAY	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS		GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
1					1		LS	SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)	900.645				
1					1		LU	SPECIAL PROVISION (INCENTIVE/DISINCENTIVE)(N.A.B.I.)	900.650				
1					1		LU	SPECIAL PROVISION (MAT DENSITY PAY ADJUSTMENT, SMALL QUANTITY) (N.A.B.I.)	900.650				
1					1		LU	SPECIAL PROVISION (MIXTURE PAY ADJUSTMENT) (N.A.B.I.)	900.650				
400					400		TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	900.680				

PROJECT NAME: WALDEN
PROJECT NUMBER: BRF 030-3(5)

FILE NAME: s09b308_qs.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
QUANTITY SHEET 3

PLOT DATE: 19-DEC-2014
DRAWN BY: R. PELLETT
CHECKED BY: H. SALLS
SHEET 8 OF 56

STATE OF VERMONT
AGENCY OF TRANSPORTATION

BRIDGE QUANTITY SHEET 1

| SUMMARY OF BRIDGE QUANTITIES | | |

GENERAL INFORMATION

SYMBOLOGY LEGEND NOTE

THE SYMBOLOGY ON THIS SHEET IS INTENDED TO COVER STANDARD CONVENTIONAL SYMBOLOGY. THE SYMBOLOGY IS USED FOR EXISTING & PROPOSED FEATURES WITH HEAVIER LINEWEIGHT, IN COMBINATION WITH PROJECT ANNOTATION, AS NOTED ON PROJECT PLAN SHEETS. THIS LEGEND SHEET COVERS THE BASICS. SYMBOLOGY ON PLANS MAY VARY, PLAN ANNOTATIONS AND NOTES SHOULD BE USED TO CLARIFY AS NEEDED.

R.O.W. ABBREVIATIONS (CODES) & SYMBOLS

POINT	CODE	DESCRIPTION
	CH	CHANNEL EASEMENT
	CONST	CONSTRUCTION EASEMENT
	CUL	CULVERT EASEMENT
	D&C	DISCONNECT & CONNECT
	DIT	DITCH EASEMENT
	DR	DRAINAGE EASEMENT
	DRIVE	DRIVEWAY EASEMENT
	EC	EROSION CONTROL
	HWY	HIGHWAY EASEMENT
	I&M	INSTALL & MAINTAIN EASEMENT
	LAND	LANDSCAPE EASEMENT
	R&RES	REMOVE & RESET
	R&REP	REMOVE & REPLACE
	SR	SLOPE RIGHT
	UE	UTILITY EASEMENT
	(P)	PERMANENT EASEMENT
	(T)	TEMPORARY EASEMENT
■	BNDNS	BOUND SET
⊡	BNDNS	BOUND TO BE SET
●	IPNS	IRON PIN SET
◎	IPNS	IRON PIN TO BE SET
⊠	CALC	EXISTING ROW POINT
○	PROW	PROPOSED ROW POINT
[LENGTH]		LENGTH CARRIED ON NEXT SHEET

COMMON TOPOGRAPHIC POINT SYMBOLS

POINT	CODE	DESCRIPTION
	APL	BOUND APPARENT LOCATION
	BM	BENCHMARK
	BND	BOUND
	CB	CATCH BASIN
	COMB	COMBINATION POLE
	DITHR	DROP INLET THROATED DNC
	EL	ELECTRIC POWER POLE
	FPOLE	FLAGPOLE
	GASFIL	GAS FILLER
	GP	GUIDE POST
	GSO	GAS SHUT OFF
	GUY	GUY POLE
	GUYW	GUY WIRE
	GV	GATE VALUE
	H	TREE HARDWOOD
	HCTRL	CONTROL HORIZONTAL
	HVCTRL	CONTROL HORIZ. & VERTICAL
	HYD	HYDRANT
	IP	IRON PIN
	IPIPE	IRON PIPE
	LI	LIGHT - STREET OR YARD
	MB	MAILBOX
	MH	MANHOLE (MH)
	MM	MILE MARKER
	PM	PARKING METER
	PMK	PROJECT MARKER
	POST	POST STONE/WOOD
	RRSIG	RAILROAD SIGNAL
	RRSL	RAILROAD SWITCH LEVER
	S	TREE SOFTWOOD
	SAT	SATELLITE DISH
	SHRUB	SHRUB
	SIGN	SIGN
	STUMP	STUMP
	TEL	TELEPHONE POLE
	TIE	TIE
	TSIGN	SIGN W/DOUBLE POST
	VCTRL	CONTROL VERTICAL
	WELL	WELL
	WSO	WATER SHUT OFF

THESE ARE COMMON VAOT SURVEY POINT SYMBOLS FOR EXISTING FEATURES, ALSO USED FOR PROPOSED FEATURES WITH HEAVIER LINEWEIGHT, IN COMBINATION WITH PROPOSED ANNOTATION.

PROPOSED GEOMETRY CODES

CODE	DESCRIPTION
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
CC	CENTER OF CURVE
PT	POINT OF TANGENCY
PCC	POINT OF COMPOUND CURVE
PRC	POINT OF REVERSE CURVE
POB	POINT OF BEGINNING
POE	POINT OF ENDING
STA	STATION PREFIX
AH	AHEAD STATION SUFFIX
BK	BACK STATION SUFFIX
D	CURVE DEGREE OF (100FT)
R	CURVE RADUIS OF
T	CURVE TANGENT LENGTH
L	CURVE LENGTH OF
E	CURVE EXTERNAL DISTANCE

UTILITY SYMBOLOGY

UNDERGROUND UTILITIES

- UTILITY (GENERIC-UNKNOWN)
- UT — TELEPHONE
- UE — ELECTRIC
- UC — CABLE (TV)
- UEC — ELECTRIC+CABLE
- UET — ELECTRIC+TELEPHONE
- UCT — CABLE+TELEPHONE
- UECT — ELECTRIC+CABLE+TELEP.
- G — GAS LINE
- W — WATER LINE
- S — SANITARY SEWER (SEPTIC)

ABOVE GROUND UTILITIES (AERIAL)

- AGU — UTILITY (GENERIC-UNKNOWN)
- T — TELEPHONE
- E — ELECTRIC
- C — CABLE (TV)
- EC — ELECTRIC+CABLE
- ET — ELECTRIC+TELEPHONE
- AER E&T — ELECTRIC+TELEPHONE
- CT — CABLE+TELEPHONE
- ECT — ELECTRIC+CABLE+TELEP.
- UTILITY POLE GUY WIRE

PROJECT CONSTRUCTION SYMBOLOGY

PROJECT DESIGN & LAYOUT SYMBOLOGY

- CZ — CLEAR ZONE
- PLAN LAYOUT MATCHLINE

PROJECT CONSTRUCTION FEATURES

- TOP OF CUT SLOPE
- TOE OF FILL SLOPE
- STONE FILL
- BOTTOM OF DITCH ℄
- CULVERT PROPOSED
- STRUCTURE SUBSURFACE
- PDF — PDF — PROJECT DEMARCATION FENCE
- BF — BF — BARRIER FENCE
- TREE PROTECTION ZONE (TPZ)
- STRIPING LINE REMOVAL
- SHEET PILES

CONVENTIONAL BOUNDARY SYMBOLOGY

BOUNDARY LINES

- TOWN LINE — TOWN BOUNDARY LINE
- COUNTY LINE — COUNTY BOUNDARY LINE
- STATE LINE — STATE BOUNDARY LINE
- PROPOSED STATE R.O.W. (LIMITED ACCESS)
- PROPOSED STATE R.O.W.
- STATE ROW (LIMITED ACCESS)
- STATE ROW
- TOWN ROW
- PERMANENT EASEMENT LINE (P)
- TEMPORARY EASEMENT LINE (T)
- SURVEY LINE
- P/L — PROPERTY LINE (P/L)
- SR SR SR — SLOPE RIGHTS
- 6F — 6F — 6F PROPERTY BOUNDARY
- 4F — 4F — 4F PROPERTY BOUNDARY
- HAZ — HAZ — HAZARDOUS WASTE

EPSC LAYOUT PLAN SYMBOLOGY

EPSC MEASURES

- FILTER CURTAIN
- SILT FENCE
- SILT FENCE WOVEN WIRE
- CHECK DAM
- DISTURBED AREAS REQUIRING RE-VEGETATION
- EROSION MATTING

ENVIRONMENTAL RESOURCES

- WETLAND BOUNDARY
- RIPARIAN BUFFER ZONE
- WETLAND BUFFER ZONE
- SOIL TYPE BOUNDARY
- T&E — THREATENED & ENDANGERED SPECIES
- HAZ — HAZ — HAZARDOUS WASTE AREA
- AG — AGRICULTURAL LAND
- HABITAT — FISH & WILDLIFE HABITAT
- FLOOD PLAIN — FLOOD PLAIN
- OHW — ORDINARY HIGH WATER (OHW)
- STORM WATER
- USDA FOREST SERVICE LANDS
- WILDLIFE HABITAT SUIT/CONN

ARCHEOLOGICAL & HISTORIC

- ARCH — ARCHEOLOGICAL BOUNDARY
- HISTORIC DIST — HISTORIC DISTRICT BOUNDARY
- HISTORIC — HISTORIC AREA
- Ⓗ HISTORIC STRUCTURE

CONVENTIONAL TOPOGRAPHIC SYMBOLOGY

EXISTING FEATURES

- ROAD EDGE PAVEMENT
- ROAD EDGE GRAVEL
- DRIVEWAY EDGE
- DITCH
- FOUNDATION
- FENCE (EXISTING)
- FENCE WOOD POST
- FENCE STEEL POST
- GARDEN
- ROAD GUARDRAIL
- RAILROAD TRACKS
- CULVERT (EXISTING)
- STONE WALL
- WALL
- WOOD LINE
- BRUSH LINE
- HEDGE
- BODY OF WATER EDGE
- LEDGE EXPOSED

PROJECT NAME: WALDEN
PROJECT NUMBER: BRF 030-3(5)

FILE NAME: s09b308_legend.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
CONVENTIONAL SYMBOLOGY LEGEND

PLOT DATE: 05-DEC-2014
DRAWN BY: R. PELLETT
CHECKED BY: H. SALLS
SHEET 10 OF 56

GPS CONTROL POINTS

HVCTRL #1

STANDARD DISK STAMPED
A02035

N = 705470.310
E = 1712976.600
Elev: = 1579.180

DESCRIBED BY VERMONT GEODETIC SURVEY 1998 (BJH) GENERAL LOCATION, WALDEN, VT., OWNERSHIP, JOHN WALLEK.
TO REACH FROM THE INTERSECTION OF VT ROUTE 15 AND U.S. ROUTE 2 IN WEST DANVILLE GO WEST ALONG VT ROUTE 15 FOR 2.7 MI (4.3 KM) TO THE SITE OF THE MARK ON THE RIGHT IN A FIELD. TO REACH FROM THE INTERSECTION OF VT 215 AND VT 15, IN WALDEN STATION, GO EAST ALONG VT 15 FOR 2.8 MI (4.5 KM) TO THE SITE OF THE MARK ON THE LEFT.
THE MARK IS SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A 1 FT DIAMETER ROCK OUTCROP. IT IS 47.2 FT EAST OF AND ABOUT 6.6 FT HIGHER THAN THE CENTERLINE OF VT 15, 100.4 FT NORTHEAST OF POLE L33/R21/516, AND 177.2 FT NORTH OF POLE R21/R1/L/7.

HVCTRL #2

STANDARD DISK STAMPED
Wallek

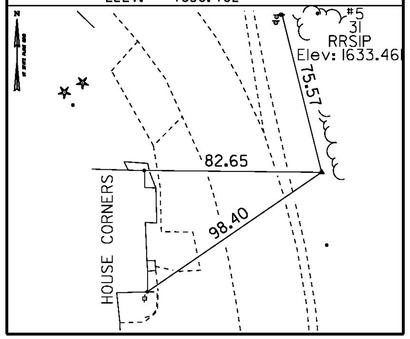
N = 710363.00
E = 1713103.92
Elev: = 1656.33

DESCRIBED BY VERMONT GEODETIC SURVEY 1998 (CHR) GENERAL LOCATION, WALDEN, VT., 0.2 MI (0.3 KM) WEST OF WALDEN VILLAGE, 3.3 MI (5.3 KM) NORTHWEST OF WEST DANVILLE, AND 8.0 MI (12.9 KM) SOUTHEAST OF HARDWICK. OWNERSHIP, JOHN WALLEK. TO REACH FROM THE INTERSECTION OF VT ROUTE 15 AND U.S. ROUTE 2 IN WEST DANVILLE GO WEST AND NORTH ALONG VT ROUTE 15 FOR 3.7 MI (6.0 KM) TO THE INTERSECTION OF TOWN HIGHWAY NO. 37 RIGHT, NOYESTAR ROAD STRAIGHT, AND VT ROUTE 15 LEFT, IN WALDEN VILLAGE. TURN RIGHT AND GO SOUTHEAST ALONG TOWN HIGHWAY NO. 37 FOR 0.1 MI (0.2 KM) TO MR WALLEKS ONE STORY HOUSE AND TWO CAR GARAGE ON THE RIGHT AND THE SITE OF THE MARK ON THE RIGHT IN A LAWN NORTH OF THE HOUSE. TO REACH FROM THE INTERSECTION OF VT ROUTES 15 AND 215 AT WALDEN STATION GO EAST ALONG VT ROUTE 15 FOR 1.75 MI (2.82 KM) THE ABOVE INTERSECTION IN WALDEN VILLAGE. THE MARK IS SET FLUSH WITH GROUND SURFACE IN THE TOP OF A 30 CM DIAMETER CONCRETE MONUMENT. IT IS 6.3 M (20.7 FT) SOUTHWEST OF AND ABOUT LEVEL WITH THE CENTERLINE OF TOWN HIGHWAY NO. 37, 9.1 M (29.9 FT) NORTHEAST OF A SATELLITE DISH ANTENNA POST, 25.9 M (85.0 FT) NORTH OF THE EAST CORNER OF MR WALLEKS HOUSE, AND 24.3 M (79.7 FT) WEST NORTHWEST OF POLE NO. R1/L2.

TRAVERSE TIES

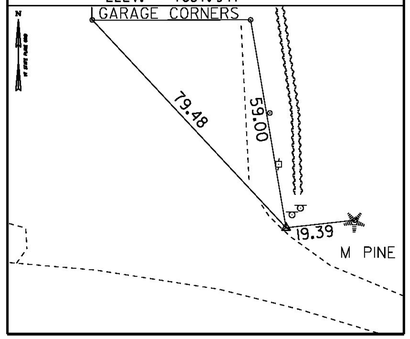
HVCTRL #6

NORTH = 710646.869
EAST = 1712770.108
ELEV. = 1630.182



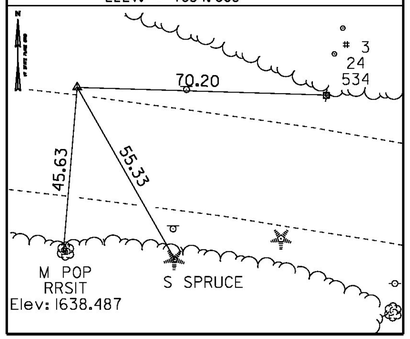
HVCTRL #7

NORTH = 710840.960
EAST = 1712551.095
ELEV. = 1631.947



HVCTRL #8

NORTH = 710888.689
EAST = 1712125.595
ELEV. = 1634.608



NORTH =
EAST =
ELEV. =

NORTH =
EAST =
ELEV. =

• MAIN TRAVERSE COMPLETED 01/26/2010 by R. Gilman P.C. & P. Winters

ALIGN COORD

VT 25B

	STATION	NORTHING	EASTING
PC	10+00.00	542269.8669	1734997.7962
PI	12+84.42	542302.8610	1735280.2994
	Radius:	2083.48	
	Delta:	15°32'49.86"	Left
	DOC:	2°45'00.00"	
	Length:	565.35	
	Tangent:	284.42	
	Chord:	563.62	
	Middle Ordinate:	19.15	
	External:	19.32	
PRC	15+65.35	542410.3677	1735543.6223
PI	16+56.37	542444.7720	1735627.8909
	Radius:	440.74	
	Delta:	23°20'14.63"	Right
	DOC:	13°00'00.00"	
	Length:	179.52	

TH 55

	STATION	NORTHING	EASTING
POB	750+00.00	710835.7110	1712367.2415
POE	751+58.07	710679.5876	1712342.4774

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83(07)
ADJUSTMENT COMPASS

PROJECT NAME: WALDEN
PROJECT NUMBER: BRF 030-3(5)

FILE NAME: s09b308_tie.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
TIE SHEET

PLOT DATE: 05-DEC-2014
DRAWN BY: R. PELLETT
CHECKED BY: H. SALLS
SHEET 11 OF 56

REMOVAL AND DISPOSAL OF GUARDRAIL
STA 271+08.75 - STA 272+34.42 LT
STA 272+26.69 - STA 272+48.18 RT
STA 272+80.89 - STA 273+13.50 LT
STA 272+92.93 - STA 273+53.34 RT

BRIDGE RAILING, GALVANIZED 3 RAIL
BOX BEAM
STA 272+27.58 - STA 272+87.58 LT
STA 272+42.42 - STA 273+02.39 RT

GUARDRAIL APPROACH SECTION - GALVANIZED 3 RAIL BOX BEAM
STA 271+93.58 - STA 272+27.58 LT
STA 750+39.16 SL - STA 272+42.42 RT
STA 272+87.58 - STA 273+16.00 LT
STA 273+02.39 - STA 273+36.39 RT

BOX BEAM GUARDRAIL
STA 270+92.25 - STA 271+93.58 LT
STA 750+53.16 - STA 750+39.16 SL RT
STA 273+16.00 - STA 273+17.08 LT
STA 273+36.39 - STA 273+77.72 RT

CONSTRUCT PAVED DRIVE
STA 750+36.80 - STA 750+54.30 RT - 17'-6"
STA 273+17.49 - STA 273+83.49 LT - 66'-0"

RELOCATE MAILBOX, MULTIPLE SUPPORT
STA 271+85.00 RT

STONE FILL, TYPE II W/ GEOTEXTILE UNDER STONE FILL & GRUBBING MATERIAL
STA 270+50.00 - STA 271+94.30 LT

SALVAGE EXISTING BENT
STA 272+65.00

N
VT STATE PLANE GRID

STA. 270+50.00
BEGIN APPROACH

STA. 271+00.00
BEGIN PROJECT

POB
270+00.00

BEGIN BRIDGE
STA 272+36.00

END BRIDGE
STA 272+93.97

STA. 273+75.00
END PROJECT

PC
273+81.60

STA. 274+25.00
END APPROACH

MAINLINE PI
STA 275+75.67 BK
STA 275+18.97 AHD

VT 15 STA 272+65.00 =
CHANNEL STA 500+75.00
Δ = 115° LT

VT 15 STA 272+12.00 =
TH 55 STA 750+00.00
Δ = 90° LT

R 18'-0"
R 11'-0"
R 20'-0"
R 15'-0"
R 8'-0"

500+00
501+00
501+50
751+00
751+50

270+00
271+00
272+00
273+00
274+00
275+00
276+00

S 80°59'13" E
S 69°13'20" E

EXISTING R.O.W.
455' EXISTING R.O.W.
VT15 TO HARDWICK
VT15 TO WEST DANVILLE

GARAGE
ABOVE GROUND FUEL TANK
TIE DIST IS 79.48 COR GAR
TIE DIST IS 59.58 COR GAR
HEDGE
HVCTRL
GUYW
EL #32/I/3/128
M PINE TIE DIST IS 19.39
M MAPLE STUMP
2 M MAPLE
HOUSE
SATELITE
15 FT HIGH CEDAR
STONE RETAINING WALL
3 S MAPLES
M MAPLE
3 S CEDARS
SPRUCES
GUYP #531S
S SPRUCE
TIE DIST IS 79.20 * 3/24/534
S SPRUCE TIE DIST IS 55.33
3 MAILBOXES
#125/533
STONE RETAINING WALL
SUBW
TEL #3/126
TEL #63/532
SHRUB
STONE FOUNDATION
#45/L32/L
RR SPIKE IN POLE TIE DIST IS 75.57
GARDEN
SHRUB
HOUSE
FOUNDATION
JOE'S BROOK
S SPRUCE
WELL
FLOWERS
TIE DIST IS 82.65 ON HOUSE

CURVE DATA
Δ = 74° 45' 53"
D = 22° 30' 00"
R = 254.65'
T = 194.57'
L = 332.29'
E = 65.82'

BENCH MARK
275+97.33, 40.7 FT LT
RR SPIKE IN POLE
ELEV. 1633.461

STA 751+00.00
END TH 55 CONSTRUCTION
MATCH EXISTING

TH 55

EXISTING BRIDGE DATA
CONCRETE T-BEAM
LENGTH = 43'-0"
WIDTH = 22.3' CURB TO CURB
BUILT IN 1933

LAYOUT
SCALE 1" = 20'-0"
20 0 20

PROJECT NAME: WALDEN
PROJECT NUMBER: BRF 030-3(5)

FILE NAME: s09b308_bdr.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
LAYOUT

PLOT DATE: 29-DEC-2014
DRAWN BY: R. PELLETT
CHECKED BY: H. SALLS
SHEET 12 OF 56

REMOVAL AND DISPOSAL OF GUARDRAIL
STA 271+08.75 - STA 272+34.42 LT
STA 272+26.69 - STA 272+48.18 RT
STA 272+80.89 - STA 273+13.50 LT
STA 272+92.93 - STA 273+53.34 RT

BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM
STA 272+27.58 - STA 272+87.58 LT
STA 272+42.42 - STA 273+02.39 RT

GUARDRAIL APPROACH SECTION - GALVANIZED 3 RAIL BOX BEAM
STA 271+93.58 - STA 272+27.58 LT
STA 750+39.16 SL - STA 272+42.42 RT
STA 272+87.58 - STA 273+16.00 LT
STA 273+02.39 - STA 273+36.39 RT

BOX BEAM GUARDRAIL
270+93.08 STA ~~270+92.25~~ - STA 271+93.58 LT
STA 750+53.16 - STA 750+39.16 SL RT
STA 273+16.00 - STA 273+17.08 LT
STA 273+36.39 - STA ~~273+77.72~~ RT 273+77.89

CONSTRUCT PAVED DRIVE
STA 750+36.80 - STA 750+54.30 RT - 17'-6"
STA 273+17.49 - STA 273+83.49 LT - 66'-0"

RELOCATE MAILBOX, MULTIPLE SUPPORT
STA 271+85.00 RT

STONE FILL, TYPE II W/ GEOTEXTILE UNDER STONE FILL & GRUBBING MATERIAL
STA 270+50.00 - STA 271+94.30 LT

SALVAGE EXISTING BENT
STA 272+65.00

N
VT STATE PLANE GRID

STA. 270+50.00
BEGIN APPROACH

STA. 271+00.00
BEGIN PROJECT

POB
270+00.00

BEGIN BRIDGE
STA 272+36.00

END BRIDGE
STA 272+93.97

VT 15 STA 272+65.00 =
CHANNEL STA 500+75.00
Δ = 115° LT

STA. 273+75.00
END PROJECT
PC
273+81.60

STA. 274+25.00
END APPROACH

MAINLINE PI
STA 275+75.67 BK
STA 275+18.97 AHD

VT15
TO HARDWICK

EXISTING R.O.W.

TIE DIST IS 70.20
@ 3/24/534

GARAGE

TIE DIST IS
79.48 COR GAR

TIE DIST IS
59.50 COR GAR

ABOVE GROUND
FUEL TANK

HEDGE

HVCTRL

GUYW

EL
#32/1/3/128+

M PINE
TIE DIST
IS 19.39

M MAPLE
STUMP

2 M
MAPLE

SATELITE

15 FT HIGH CEDAR

HOUSE

STONE RETAINING WALL

3 S
MAPLES

M MAPLE

3 S
CEDARS

GUYP
#53IS

SPRUCES

S SPRUCE

S 80°59'13" E

S 80°59'13" E

SUBW

RR SPIKE IN POLE
TIE DIST IS 73.573

R 18'-0"

R 11'-0"

R 20'-0"

R 15'-0"

VT 15 STA 272+12.00 =
TH 55 STA 750+00.00
Δ = 90° LT

3 MAILBOXES

SPRUCE

S SPRUCE
TIE DIST IS 55.33

TEL
#3/125/33

TEL
#3/126

TEL
#63/532

GUYW

SHRUB

GARDEN

HOUSE

STONE FOUNDATION

FOUNDATION

JOE'S BROOK

45/L32/L

S SPRUCE

WELL

FLOWERS

TIE DIST IS
82.65 ON HOUSE

VT15
TO WEST DANVILLE

STA 751+00.00
END TH 55 CONSTRUCTION
MATCH EXISTING

TH 55

CURVE DATA
Δ = 74° 45' 53"
D = 22° 30' 00"
R = 254.65'
T = 194.57'
L = 332.29'
E = 65.82'

BENCH MARK
275+97.33, 40.7 FT LT
RR SPIKE IN POLE
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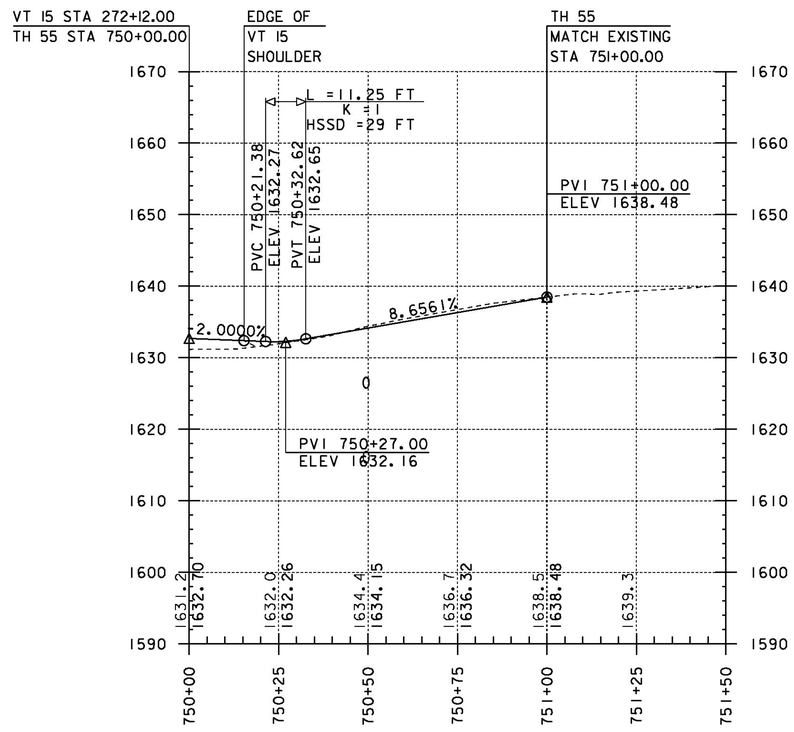
EXISTING BRIDGE DATA
CONCRETE T-BEAM
LENGTH = 43'-0"
WIDTH = 22.3' CURB TO CURB
BUILT IN 1933

LAYOUT
SCALE 1" = 20'-0"
20 0 20

PROJECT NAME: WALDEN
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FILE NAME: s09b308_bdr.dgn
PROJECT LEADER: C. CARLSON
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SHEET 12 OF 56



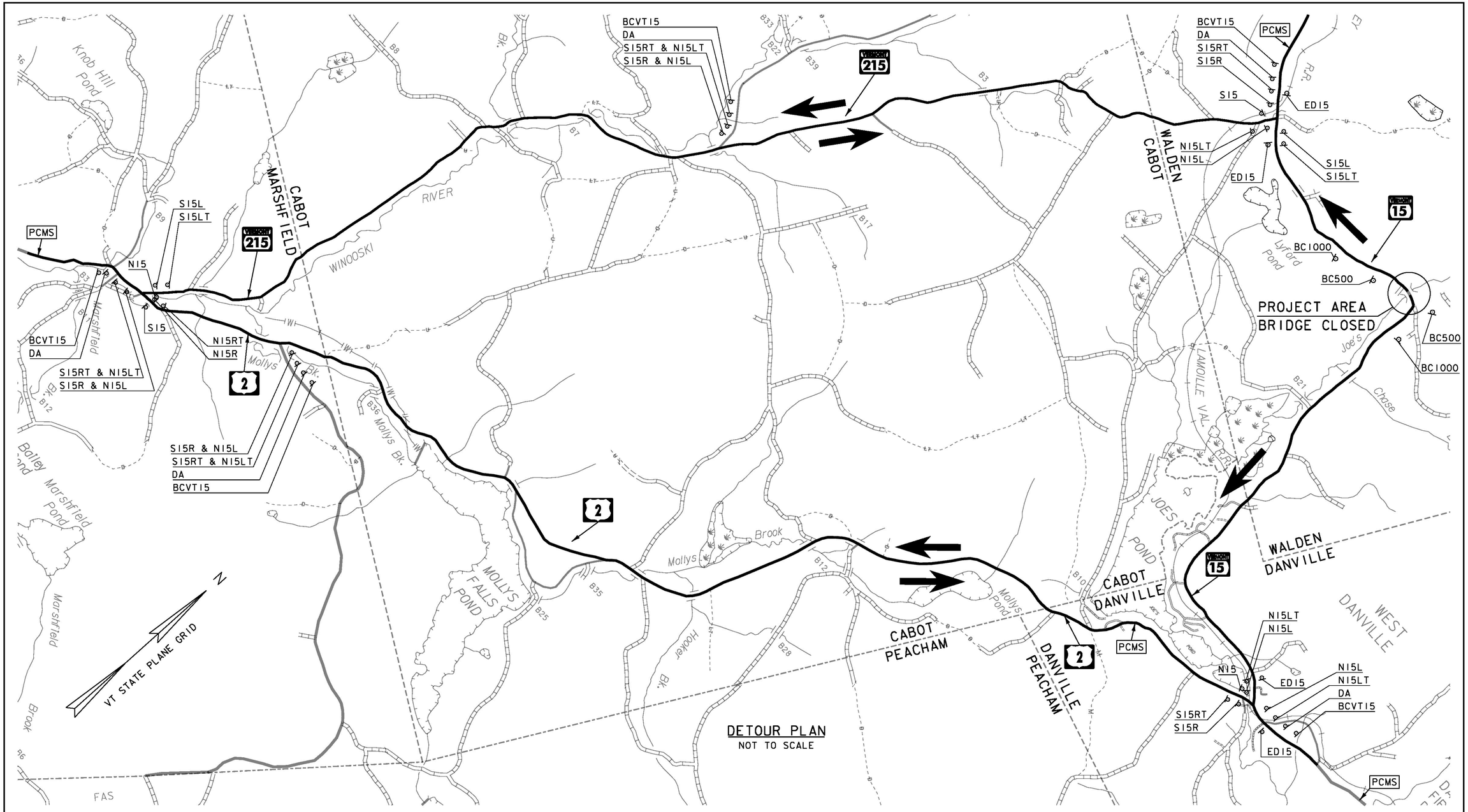
PROFILE TH 55

HORIZONTAL SCALE 1" = 20'-0"
VERTICAL SCALE 1" = 10'-0"

THE GRADES SHOWN TO THE NEAREST TENTH ARE THE ORIGINAL GROUND ELEVATIONS ALONG THE PROPOSED ALIGNMENT.

THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE FINISH GRADES ALONG THE PROPOSED ALIGNMENT.

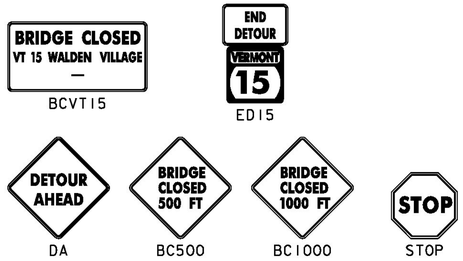
PROJECT NAME:	WALDEN
PROJECT NUMBER:	BRF 030-3(5)
FILE NAME: s09b308_pro.dgn	PLOT DATE: 05-DEC-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: H. SALLS	CHECKED BY: H. SALLS
TH 55 PROFILE	SHEET 14 OF 56



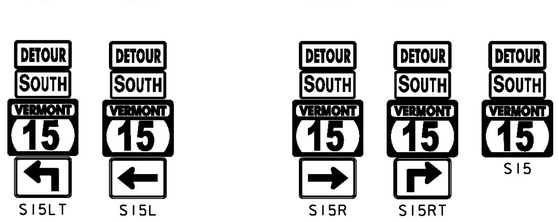
NOTE: SEE NEXT SHEET FOR SIGN DETAILING.

PROJECT NAME:	WALDEN
PROJECT NUMBER:	BRF 030-3(5)

FILE NAME: s09b308_detour.dgn	PLOT DATE: 19-DEC-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: H. SALLS	CHECKED BY: H. SALLS
DETOUR LAYOUT	SHEET 15 OF 56





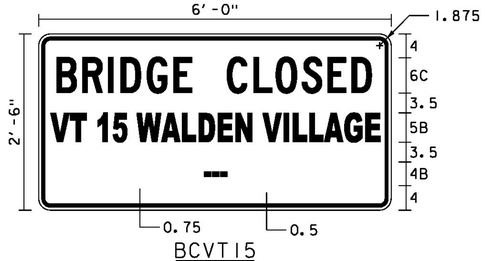


NOTES:

1. THE ACTUAL NUMBER OF TYPE III BARRICADES AND OTHER TRAFFIC CONTROL DEVICES ARE TO BE DETERMINED BASED ON INDIVIDUAL ROADWAY CLOSURE REQUIREMENTS.

2. PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE PLACED OFF THE EDGE OF THE ROADWAY, OUTSIDE THE CLEAR ZONE, BUT SHALL BE VISIBLE FROM THE ROADWAY. ANY VEGETATION THAT INTERFERES WITH VISIBILITY OF THE PCMS SHALL BE REMOVED. REMOVAL OF THE VEGETATION WILL BE INCIDENTAL TO ITEM 641.15, "PORTABLE CHANGEABLE MESSAGE SIGN".

3. SEE CONTRACT DOCUMENTS FOR CLOSURE DATES.



BCVT15
NOT TO SCALE

PCMS

MESSAGES FOR PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS)

MESSAGE 1	MESSAGE 2
VT 15	****DATE****
BRIDGE	**THRU**
CLOSED	****DATE****

PROJECT NAME: WALDEN
PROJECT NUMBER: BRF 030-3(5)

FILE NAME: s09b308_detour.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
DETOUR SIGNS

PLOT DATE: 05-DEC-2014
DRAWN BY: R. PELLETT
CHECKED BY: H. SALLS
SHEET 16 OF 56

NOTE: THE UTILITY RELOCATION WORK WILL BE DONE BY OTHERS.

N

VT STATE PLANE GRID

GUYW
GUYW
GUYW
REPLACE WITH LONGER POLE
EXISTING R.O.W.
3/24/534
VT15 TO HARDWICK
49.5' EXISTING R.O.W.
270+00
271+00
272+00
273+00
274+00
EXISTING R.O.W.
TEL #3/125/533
EXISTING POLE
NEW POLE
751+00
751+50
EXISTING R.O.W.
EXISTING R.O.W.
TH 55
ABOVE GROUND FUEL TANK
GUYW
EL #32/1/3/128-1
EXISTING R.O.W.
GUYP #531S
SUBW
275+00
TEL #3/126
GUYW
UT
TEL #63/532
GUYW
GUYW
#45/L32/L
GUYW
GUYW
276+00
WELL
JOE'S BROOK
VT15 TO WEST DANVILLE

1. REMOVE EXISTING 15" CGMP CULVERT (PLUGGED) (ITEM 204.20)
2. REMOVE EXISTING DROP INLET 2 THROAT 4X4 CONCRETE (ITEM 204.21)
3. PROPOSED 18" PIPE OPTION WITH A NEW DI WITH CAST IRON GRATE
   DI INLET INVERT ELEV = 1626.78
   OUTLET INVERT ELEV = 1624.64 ONTO STONE FILL, TYPE II
   PIPE LENGTH 48.00'
4. REMOVE EXISTING 15" CGMP CULVERT (ITEM 204.20)
5. REMOVE EXISTING DROP INLET 2 THROAT 4X4 CONCRETE (ITEM 204.21)
6. PROPOSED 18" PIPE OPTION WITH A NEW DI WITH CAST IRON GRATE
   DI INLET INVERT ELEV = 1630.06
   OUTLET INVERT ELEV = 1629.67 ONTO STONE FILL, TYPE II
   PIPE LENGTH 35.00'

DRAINAGE & UTILITIES LAYOUT

SCALE 1" = 20'-0"
20 0 20

PROJECT NAME:	WALDEN
PROJECT NUMBER:	BRF 030-3(5)
FILE NAME: s09b308_util.dgn	PLOT DATE: 29-DEC-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: H. SALLS	CHECKED BY: H. SALLS
DRAINAGE & UTILITIES LAYOUT	SHEET 17 OF 56

NOTE: THE UTILITY RELOCATION WORK WILL BE DONE BY OTHERS.

N

VT STATE PLANE GRID

GUYW
GUYW
GUYW
REPLACE WITH LONGER POLE
EXISTING R.O.W.
#3/24/534
VT15 TO HARDWICK
49.5' EXISTING R.O.W.
270+00
271+00
272+00
273+00
274+00
EXISTING R.O.W.
TEL #3/125/533
EXISTING POLE
NEW POLE
ABOVE GROUND FUEL TANK
GUYW
EL #32/1/3/128
EXISTING R.O.W.
GUYP #531S
UT
SUBW
275+00
TEL: #3/126
GUYW
TEL #63/532
GUYW
GUYW
#45/L32/L
GUYW
GUYW
276+00
WELL
VT15 TO WEST DANVILLE
EXISTING R.O.W.
EXISTING R.O.W.
751+00
751+50
TH 55
JOE'S BROOK

1. REMOVE EXISTING 15" CGMP CULVERT (PLUGGED) (ITEM 204.20)
2. REMOVE EXISTING DROP INLET 2 THROAT 4X4 CONCRETE (ITEM 204.21)
3. PROPOSED 18" PIPE OPTION WITH A NEW DI WITH CAST IRON GRATE
   DI INLET INVERT ELEV = 1626.78
   OUTLET INVERT ELEV = 1624.64 ONTO STONE FILL, TYPE II
   PIPE LENGTH 48.00'
4. REMOVE EXISTING 15" CGMP CULVERT (ITEM 204.20)
5. REMOVE EXISTING DROP INLET 2 THROAT 4X4 CONCRETE (ITEM 204.21)
6. PROPOSED 18" PIPE OPTION WITH A NEW DI WITH CAST IRON GRATE
   DI INLET INVERT ELEV = 1630.06
   OUTLET INVERT ELEV = 1629.67 ONTO STONE FILL, TYPE II
   PIPE LENGTH ~~35.00'~~ 40.00'

DRAINAGE & UTILITIES LAYOUT

SCALE 1" = 20'-0"
20 0 20

PROJECT NAME:	WALDEN
PROJECT NUMBER:	BRF 030-3(5)

FILE NAME: s09b308_util.dgn	PLOT DATE: 29-DEC-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: H. SALLS	CHECKED BY: H. SALLS
DRAINAGE & UTILITIES LAYOUT	SHEET 17 OF 56

STA 268+55.00 RT
NARROW BRIDGE
(OFF THE SHEET)

STA 269+94.00 LT
STA 269+97.00 RT
25 M.P.H.

STA 271+57.00 LT
WEST VERMONT 15

STA 272+31.00 LT

STA 272+81.00 LT

STA 272+85.00 LT
BRIDGE 83 RT 15

STA 273+00.00 LT
BRIDGE 83 RT 15

STA 273+90.00 LT

STA 274+00.00 LT

4" DOUBLE YELLOW LINE
STA 270+50.00 TO 271+90.00 (CL)
STA 272+40.00 TO 274+25.00 (CL)

4" WHITE LINE
STA 270+50.00 TO 274+25.00 LT
STA 270+50.00 ML TO STA 750+35.00 TH55 RT
STA 750+35.00 TH55 TO STA 274+25.00 ML RT

STA 281+72.30 RT
NARROW BRIDGE

STA 279+87.50 LT
STA 279+87.50 RT
25 M.P.H.

N

VT STATE PLANE GRID

EXISTING R.O.W.

VT15 TO HARDWICK

49.5' EXISTING R.O.W.

270+00 271+00 272+00 273+00 274+00 275+00 276+00

751+50

TH 55

JOE'S BROOK

VT15 TO WEST DANVILLE

SIGN LEGEND
N = NEW
R = REMOVE

EXISTING SIGNS

NEW SIGNS

Brookside Dr
BROOKSIDE DR
STA 271+86.00 RT

LEGAL LOAD LIMIT 24,000 POUNDS
STA 271+92.00 RT

STOP
STA 272+29.00 RT

STOP
STA 272+33.00 RT

0150 0315 0520
STA 272+39.00 RT

STA 272+45.00 RT

BRIDGE 83 RT 15
STA 272+42.00 RT

BRIDGE 83 RT 15
STA 272+47.00 RT

STA 272+98.00 RT

WALDEN SCHOOL
STA 273+71.00 RT

Walden School

TRAFFIC SIGNS & PAVEMENT MARKINGS

SCALE 1" = 20'-0"
20 0 20

PROJECT NAME: WALDEN
PROJECT NUMBER: BRF 030-3(5)

FILE NAME: s09b308_signs.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
TRAFFIC SIGNS & PAVEMENT MARKINGS

PLOT DATE: 05-DEC-2014
DRAWN BY: R. PELLETT
CHECKED BY: H. SALLS
SHEET 19 OF 56

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (in) lb/ft 1.75 1.88	2.0 2.42	2.5 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) lb/ft 3.0 1.3	4.0 1.7	4.0 MOD 1.7	TUBULAR STEEL Ø (in) FOUND-ATION	lb/ft 3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN REQUIRED FRAMED	REMARKS SHSM = FHWA STANDARD HIGHWAY SIGNS AND MARKINGS BOOK	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
269+94.00 LT		1	30	30	6.25						1					X		X																WI-1R		SHSM
		1	18	18	2.25																													WI3-1P		SHSM
269+97.00 RT		1	30	30	6.25						1					X		X																WI-1R		SHSM
		1	18	18	2.25																													WI3-1P		SHSM
271+86.00 RT		1	54	12	4.50						1					X		X																D3-1	NEXT SHEET	
271+92.00 RT		1	24	30	5						1					X		X																VR-017		E-141
272+33.00 RT		1	30	30	6.25						1					X		X																R1-1		SHSM
272+39.00 RT		1	6	8	0.33						1					X		X																VD-700		T-44
272+47.00 RT		1	6	8	0.33						1					X		X																VD-701		SHSM
273+00.00 LT		1	6	8	0.33						1					X		X																VD-701		SHSM
273+71.00 RT		1	72	12	6.00						2					X		X																VD1-1	NEXT SHEET	
271+57.00 LT		1	24	12	2.00						1					X		X																M3_4		SHSM
		1	24	24	4.00																													M1_6		SHSM
274+00.00 LT		1	24	48	8.00						2					X		X																WI-6D		SHSM
TOTALS		SF 53.74	SF	EA.	SF		FT		FT 130										EA	LB	LB	LB	EA.	LB	LB	LB	LB	EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD.

PROJECT NAME: WALDEN
PROJECT NUMBER: BRF 030-3(5)

FILE NAME: s09b308_signs.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
TRAFFIC SIGN SUMMARY 1

PLOT DATE: 05-DEC-2014
DRAWN BY: R. PELLETT
CHECKED BY: H. SALLS
SHEET 20 OF 56

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																				SIGN REQUIRED	REMARKS SHSM = FHWA STANDARD HIGHWAY SIGNS AND MARKINGS BOOK	SIGN DETAIL	
		EA	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE	NO. OF POSTS	FLANGED CHANNEL lb/ft			SQUARE STEEL (in) lb/ft			ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) lb/ft			FOUND-ATION	TUBULAR STEEL Ø (in) lb/ft				W-SHAPE STEEL FTG. SIZE		WEIGHT	POST SIZE			DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												1.12	2.0	3.0	1.75 1.88	2.0 2.42	2.5 3.35			3.0 1.3	4.0 1.7	4.0 MOD 1.7		3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	24"	30"						
269+94.00 LT		1	30	30	6.25						1					X 16.75'		X																WI-1R		SHSM
	25 M.P.H.	1	18	18	2.25																													WI3-1P		SHSM
269+97.00 RT		1	30	30	6.25						1					X 14.5'		X																WI-1R		SHSM
	25 M.P.H.	1	18	18	2.25																													WI3-1P		SHSM
271+86.00 RT	Brookside Dr	1	54	12	4.50						1 2					2@ X 10'		X																D3-1	NEXT SHEET	
271+92.00 RT	LEGAL LOAD LIMIT 24,000 POUNDS	1	24	30	5						1					X 13'		X																VR-017		E-141
272+33.00 RT	STOP	1	30	30	6.25						1					X 13'		X																RI-1		SHSM
272+39.00 RT	0150 0315 0520	1	6	10 ~~8~~	0.42 ~~0.33~~						1					X 8.5'		X																VD-700		T-44
272+47.00 RT	BRIDGE 83 RT 15	1	6	10 ~~8~~	0.42 ~~0.33~~						1					X 8.0'		X																VD-701		SHSM
273+00.00 LT	BRIDGE 83 RT 15	1	6	10 ~~8~~	0.42 ~~0.33~~						1					X 8.25'		X																VD-701		SHSM
273+71.00 RT	Walden School	1	72	12	6.00						2					10.75' X 10.50'		X																VD1-1	NEXT SHEET	
271+57.00 LT	WEST	1	24	12	2.00						1					X 13.75'		X																M3_4		SHSM
	VERMONT 15	1	24	24	4.00																													M1_6		SHSM
274+00.00 LT		1	24	48	8.00						2					12.50' X 12.75'		X																WI-6D		SHSM
TOTALS					SF ~~53.74~~ 54.01	SF	EA.	SF				FT			FT ~~130~~ 162.25					EA	LB			EA.	LB				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD.

PROJECT NAME: WALDEN
PROJECT NUMBER: BRF 030-3(5)

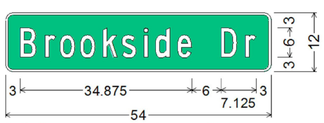
FILE NAME: s09b308_signs.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
TRAFFIC SIGN SUMMARY 1

PLOT DATE: 05-DEC-2014
DRAWN BY: R. PELLETT
CHECKED BY: H. SALLS
SHEET 20 OF 56

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (in) lb/ft 1.75 1.88	2.0 2.42	2.5 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) lb/ft 3.0 1.3	4.0 1.7	4.0 MOD 1.7	FOUNDATION	TUBULAR STEEL Ø (in) lb/ft 3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN REQUIRED FRAMED	REMARKS SHSM = FHWA STANDARD HIGHWAY SIGNS AND MARKINGS BOOK	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
279+87.50 LT		1	30	30	6.25						1					X 15.25'		X															WI-1R		SHSM
		1	18	18	2.25																												W13-1P		SHSM
279+87.50 RT		1	30	30	6.25						1					X 16.5'		X															WI-1R		SHSM
		1	18	18	2.25																												W13-1P		SHSM
												FT	FT	FT	FT	FT 20	FT		EA	LB	LB	LB		LB	LB	LB	LB								
	TOTALS				SF 17.00	SF	EA.	SF				FT			FT ~~20~~ 31.75					LB			EA.	LB				EA.	EA.	LB					



1.500" Radius, 0.500" Border, White on Green;
"Brookside Dr" C;



1.5" Radius, 0.5" Border, White on Green;
Standard Arrow Custom 9.0" X 6.1" 180";
"Walden School" C specified length;

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD.

												FT	FT	FT	FT	FT 150	FT		EA	LB	LB	LB		LB	LB	LB	LB								
PROJECT TOTALS		SF ~~70.74~~ 71.00	SF	EA.	SF							FT			FT ~~150~~ 194					LB			EA.	LB				EA.	EA.	LB					

PROJECT NAME: WALDEN
PROJECT NUMBER: BRF 030-3(5)

FILE NAME: s09b308_signs.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
TRAFFIC SIGN SUMMARY 2

PLOT DATE: 05-DEC-2014
DRAWN BY: R. PELLETT
CHECKED BY: H. SALLS
SHEET 21 OF 56

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING LOG

WALDEN
BRF 030-3(5)
VT-15 BR-83

Boring No.: B-101
Page No.: 1 of 1
Pin No.: 09B308
Checked By: NSM

Boring Crew: PORTER, DAVISON
Date Started: 4/26/12 Date Finished: 4/26/12
VTSPG NAD83: N 710823.78 ft E 1712397.75 ft
Station: 272+43 Offset: 7.00
Ground Elevation: 1630.91 ft

	Casing	Sampler
Type:	WB	SS
I.D.:	3 in	1.5 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:	Auto/AWJ	
Rig:	CME 45C SKID	CE = 1.33

Groundwater Observations

Date	Depth (ft)	Notes

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Asphalt Pavement, 0.0 ft – 0.5 ft								
		A-1-b, SaGr, brn-gry, Moist, Rec. = 0.5 ft				R@12.0"	9.3	48.6	36.3	15.1
		Visual Description:, Mostly Asphalt Pavement with silty sand, brn, Moist, Rec. = 0.9 ft				37-17-10-10 (27)	8.8			
5		Field Note:, No Recovery				6-7-6-7 (13)				
		Field Note:, No Recovery				6-4-4-8 (8)				
		A-4, SiSa, brn, Moist, Rec. = 1.1 ft				2-4-4-4 (8)	29.0	18.5	43.8	37.7
10		Field Note:, No Recovery, Lost water at 11.0 ft.				2-3-13-3 (16)				
BOTTOM OF FOOTING										
TOP OF SUBFOOTING		A-2-4, SiSa, brn, Moist, Rec. = 0.3 ft, Lots of Wood pieces were within sample.				4-4-5-4 (9)	80.3	5.9	67.2	26.9
ABUTMENT #1						R@2.5"				
ELEV 1619.00										
(SUBFOOTING 1' MIN)										
15		14.9 ft – 19.5 ft, Dark-gray-to silvery-gray, muscovite-biotite- quartz Phyllite, Moderately hard, Unweathered, Fair rock, BXMDC, RMR = 57	1 (30)	92 (46)	7 7 7 7 4	Top of Bedrock @ 14.9 ft				
20		19.5 ft – 21.3 ft, Dark-gray-to silvery-gray, muscovite-biotite- quartz Phyllite, Moderately hard, Unweathered, Good rock, BXMDC, RMR = 69, Note: Short core run due to rig machanical problems.	2 (30)	100 (94)	6 5					
		Hole stopped @ 21.3 ft								
25										

Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. CE is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING LOG 2 WALDEN BRF 030-3(5).GPJ VERMONT AOT.GDT 5/25/12

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING LOG

WALDEN
BRF 030-3(5)
VT-15 BR-83

Boring No.: B-102
Page No.: 1 of 1
Pin No.: 09B308
Checked By: NSM

Boring Crew: PORTER, DAVISON
Date Started: 4/24/12 Date Finished: 4/24/12
VTSPG NAD83: N 710838.62 ft E 1712444.65 ft
Station: 272+87 Offset: -15.00
Ground Elevation: 1630.57 ft

	Casing	Sampler
Type:	WB	SS
I.D.:	3 in	1.5 in
Hammer Wt:	N.A.	140 lb.
Hammer Fall:	N.A.	30 in.
Hammer/Rod Type:	Auto/AWJ	
Rig:	CME 55 TRACK	CE = 1.46

Groundwater Observations

Date	Depth (ft)	Notes

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		A-1-b, GrSa, brn, Moist, Rec. = 1.4 ft				3-5-6-6 (11)	15.2	25.7	55.8	18.5
		A-2-4, SiSa, brn, Moist, Rec. = 0.7 ft				4-5-5-5 (10)	22.0	16.9	48.8	34.3
5		A-4, SaSi, brn, Moist, Rec. = 1.9 ft				4-3-4-4 (7)	31.6	4.8	42.7	52.5
		A-4, SaSi, brn, Moist, Rec. = 1.7 ft, Pieces of Wood were within sample.				2-3-3-3 (6)	44.8	3.3	36.8	59.9
		A-4, SiSa, brn, Moist, Rec. = 1.0 ft, Pieces of Wood were within sample.				WH-1-1-1 (2)	55.7	14.7	42.7	42.6
10		Visual Description:, SiSa with Wood and Broken Rock, brn, Moist, Rec. = 0.1 ft, Insufficient sample for testing.				7-5-4-6 (9)				
BOTTOM OF FOOTING										
TOP OF SUBFOOTING		Field Note:, Wood in sampler				8-R@2.0"				
ABUTMENT #1										
ELEV 1619.00										
(SUBFOOTING 1' MIN)										
15		12.8 ft – 17.4 ft, Dark-bluish-gray micaceous Meta-Limestone, Hard, Unweathered, Good rock, BXMDC, RMR = 72	1 (NA)	100 (59)	5 6 6 6 5	Top of Bedrock @ 12.8 ft				
		17.4 ft – 20.1 ft, Dark-bluish-gray micaceous Meta-Limestone, Hard, Unweathered, Good rock, BXMDC, RMR = 76	2 (NA)	100 (78)	5 4 5					
20		20.1 ft – 22.4 ft, Dark-gray-to silvery-gray, muscovite-biotite- quartz Phyllite, Moderately hard, Unweathered	(30)		5 5					
		Hole stopped @ 22.4 ft								
25										

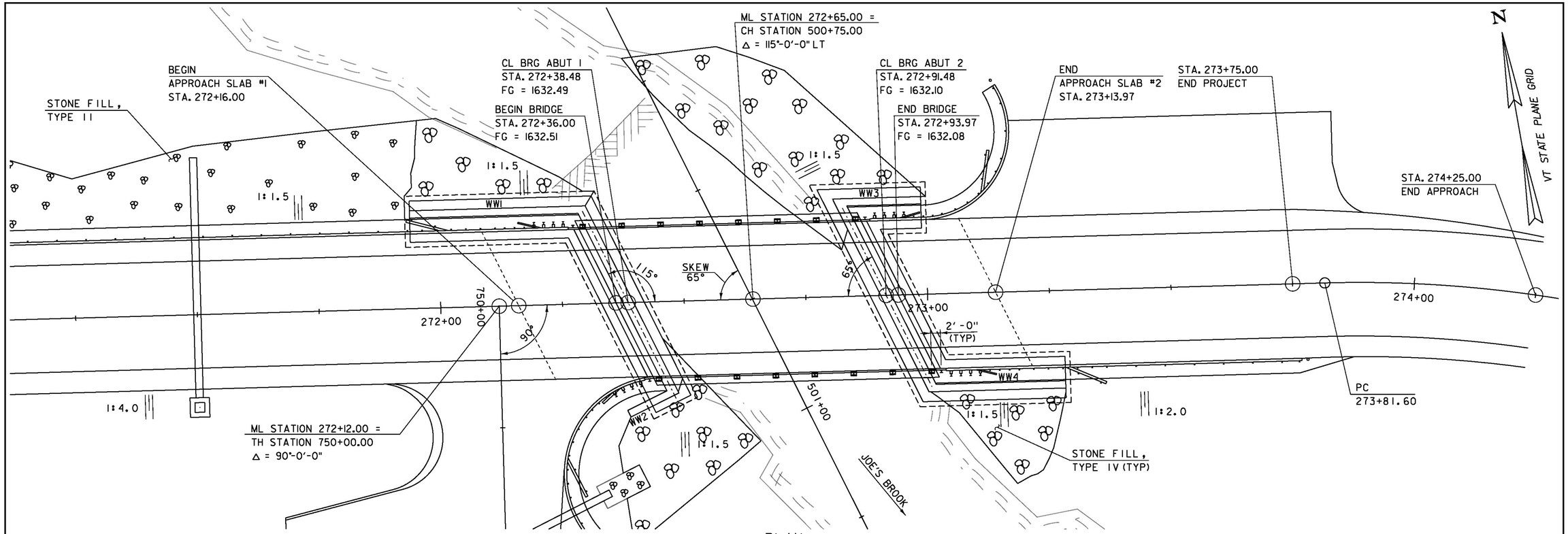
Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. CE is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING LOG 2 WALDEN BRF 030-3(5).GPJ VERMONT AOT.GDT 5/25/12

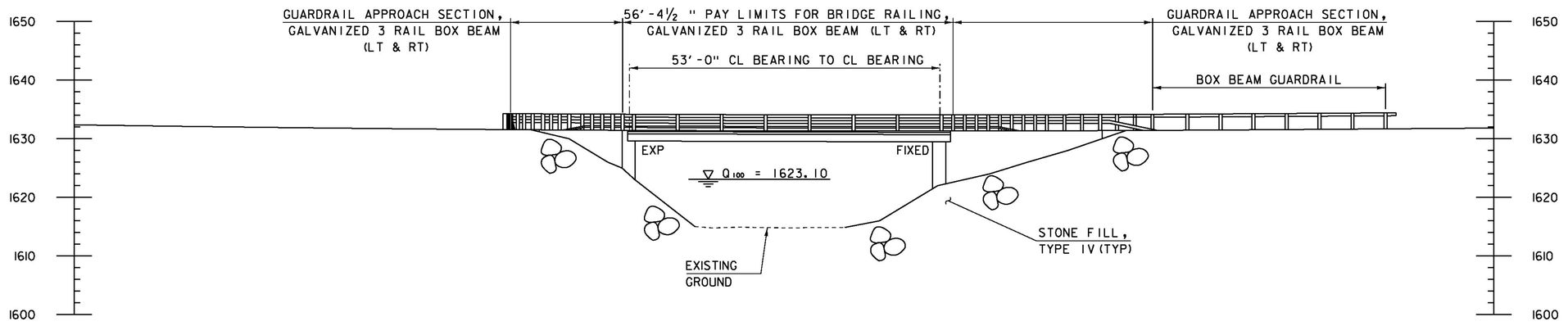
PROJECT NAME: WALDEN
PROJECT NUMBER: BRF 030-3(5)

FILE NAME: s09b308_bor.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
BORING LOG

PLOT DATE: 05-DEC-2014
DRAWN BY: R. PELLETT
CHECKED BY: H. SALLS
SHEET 23 OF 56



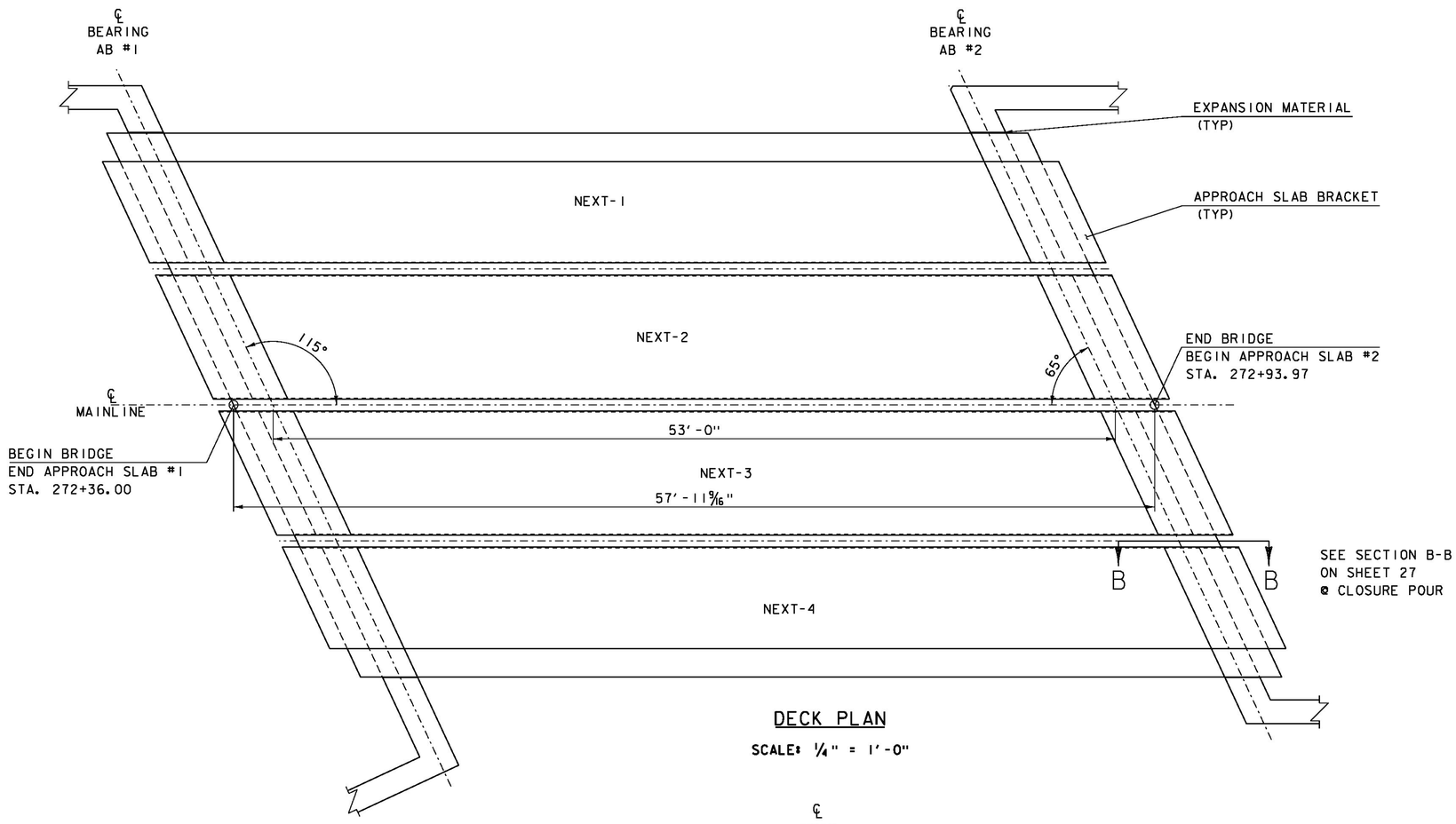
PLAN



ELEVATION

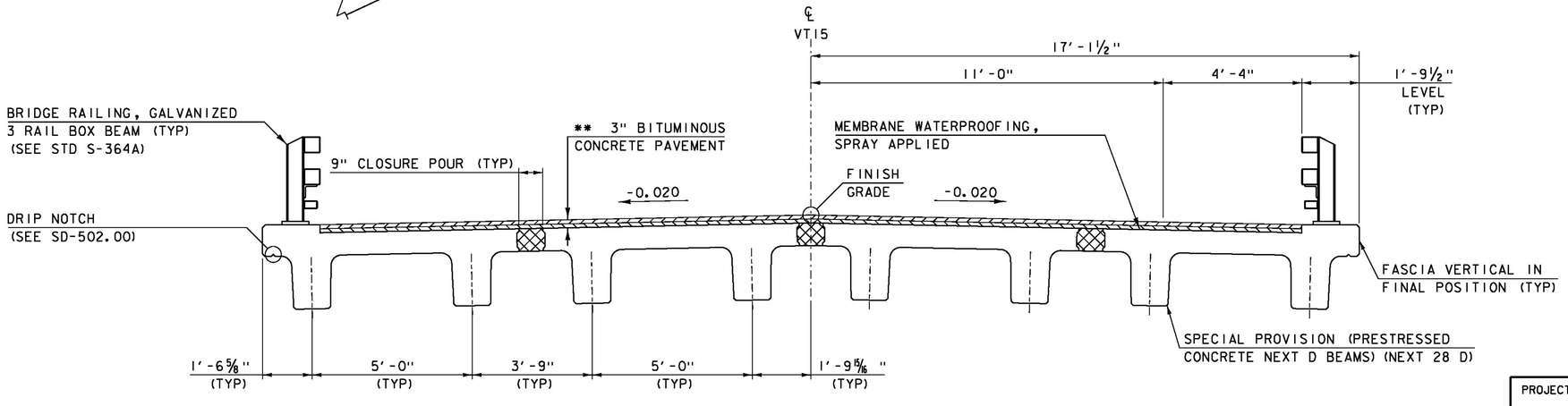
SCALE 1" = 10'-0"
10 0 10

PROJECT NAME: WALDEN	
PROJECT NUMBER: BRF 030-3(5)	
FILE NAME: s09b308_pe.dgn	PLOT DATE: 29-DEC-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: H. SALLS	CHECKED BY: H. SALLS
PLAN AND ELEVATION	SHEET 24 OF 56



DECK PLAN

SCALE: 1/4" = 1'-0"

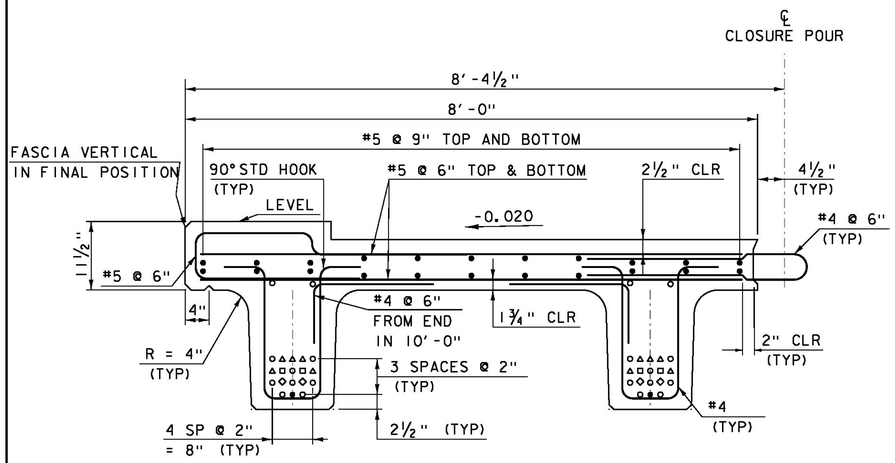


BRIDGE TYPICAL SECTION

SCALE: 1/2" = 1'-0"

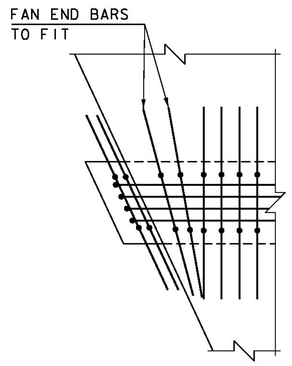
** 2 LIFTS OF 1 1/2" BITUM. CONC. PAVEMENT TYPE IVS PAID UNDER SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY).

PROJECT NAME:	WALDEN
PROJECT NUMBER:	BRF 030-3(5)
FILE NAME: s09b308_sup.dgn	PLOT DATE: 30-DEC-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: H. SALLS	CHECKED BY: H. SALLS
FRAMING PLAN	SHEET 25 OF 56



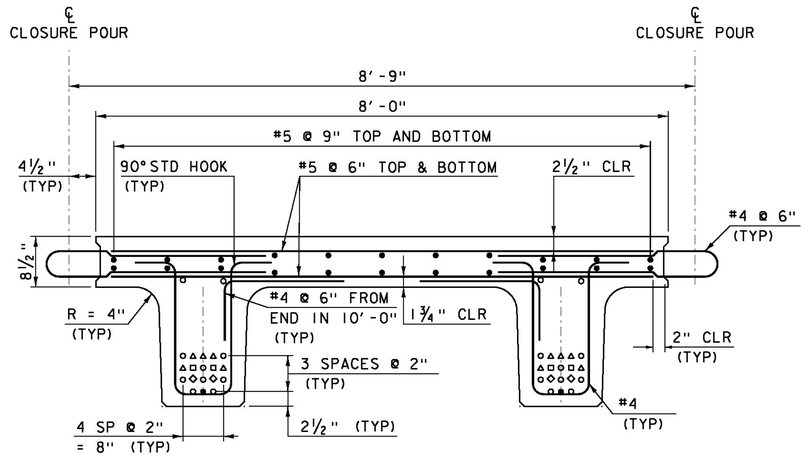
UNITS 1 & 4

(UNIT 1 SHOWN; UNIT 4 OPPOSITE HAND)
SCALE : 1"=1'-0"



SKEWED END DETAIL

SCALE : 1"=1'-0"

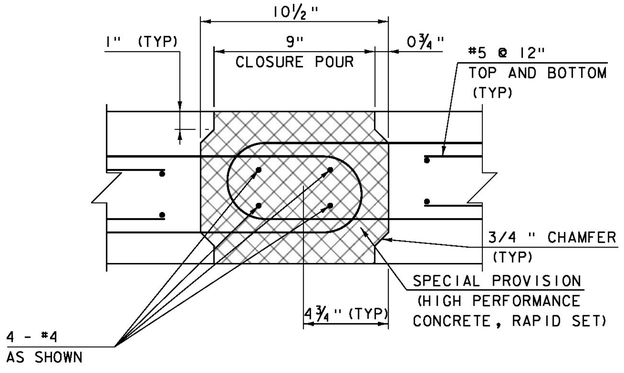


UNITS 2 & 3

SCALE : 1"=1'-0"

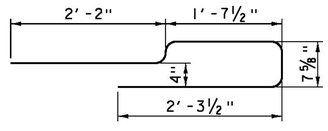
NOTE:

1. BARS IN DECK FLANGE OMITTED FOR CLARITY.
2. TRANSVERSE REINFORCING IN THE DECK SHALL BE PLACED PARALLEL TO THE SKEW.



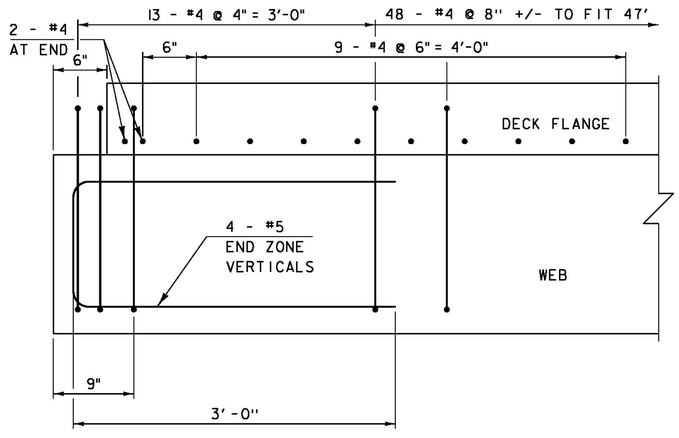
CONNECTION DETAIL SECTION

SCALE : 3" = 1'-0"



CURB BAR

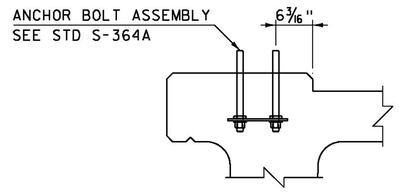
SCALE : 1"=1'-0"



ADDITIONAL END BEAM REINFORCING LONGITUDINAL SECTION

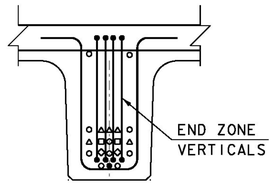
SCALE : 1½"=1'-0"

*BARS IN DECK FLANGE OMITTED FOR CLARITY



END SECTION

SCALE : 1"=1'-0"



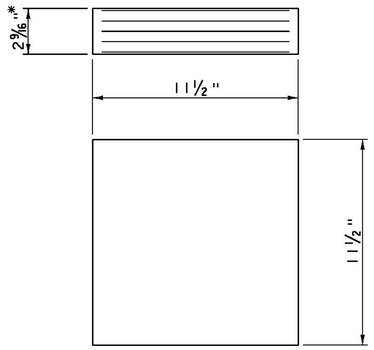
END SECTION

SCALE : 1"=1'-0"

STRAND LEGEND

- ○ STRAIGHT STRAND
- △ DEBONDED 0'-6"
- □ DEBONDED 4'-0"
- ◇ DEBONDED 8'-0"
- ● DEBONDED 12'-0"

PROJECT NAME:	WALDEN
PROJECT NUMBER:	BRF 030-3(5)
FILE NAME: s09b308_next.dgn	PLOT DATE: 05-DEC-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: H. SALLS	CHECKED BY: H. SALLS
NEXT BEAM TYPICAL SECTIONS	SHEET 26 OF 56



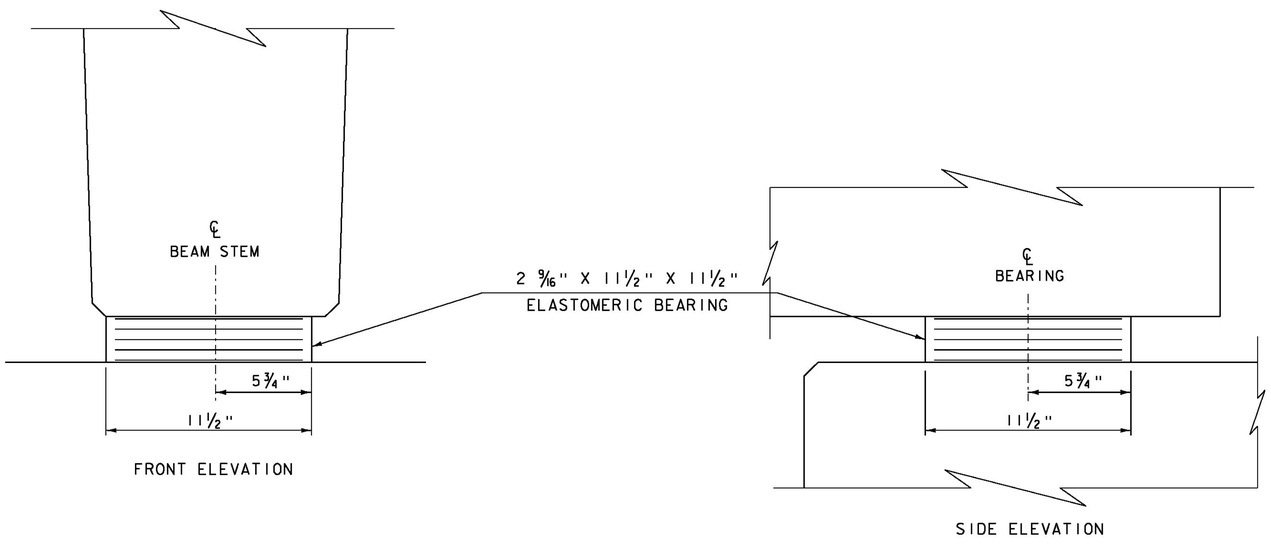
ELASTOMERIC BEARING DETAIL

SCALE 3" = 1'-0"

* 2 - 1/8" EXTERIOR LAYERS OF ELASTOMER
4 - 1/2" INTERIOR LAYERS OF ELASTOMER
5- 1/16" STEEL REINFORCING PLATES

BEARING NOTES

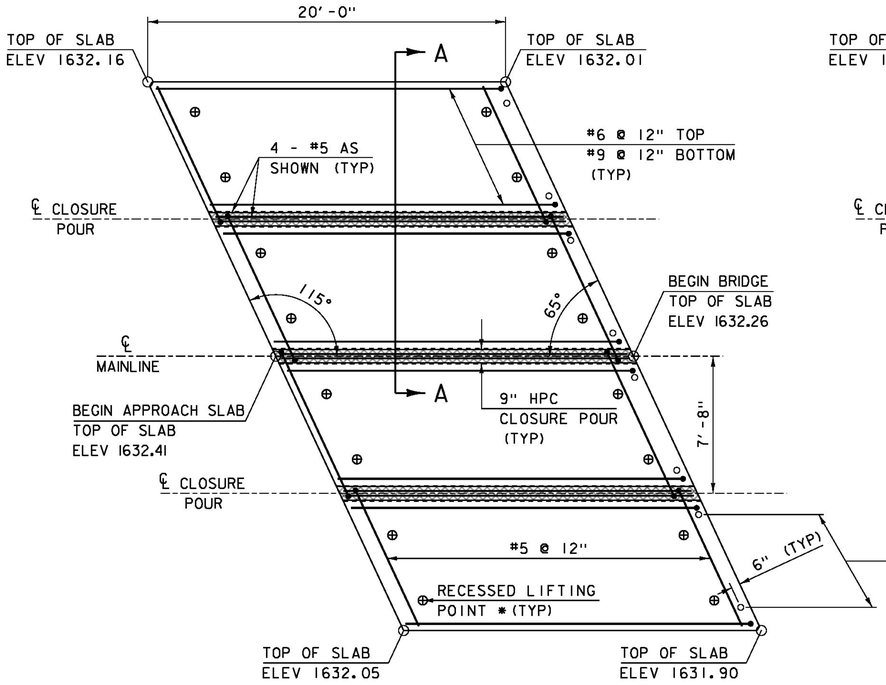
1. BEARINGS SHALL CONFORM TO THE APPLICABLE SUBSECTIONS OF SECTIONS 531 AND 731.
2. ALL REINFORCEMENT BETWEEN LAYERS OF ELASTOMER SHALL BE STEEL MEETING THE REQUIREMENTS OF SUBSECTION 714.02. ALL INTERNAL STEEL PLATES SHALL BE SAND BLASTED AND FREE OF COATINGS, RUST AND MILL SCALE. THE PLATES SHALL BE FREE OF SHARP EDGES AND BURRS.
3. STEEL REINFORCED ELASTOMERIC BEARINGS SHALL HAVE A MINIMUM 1/8" EDGE SEAL OF ELASTOMER INTEGRAL WITH BEARING OVER ALL INTERNAL PLATES.
4. THE ELASTOMER WAS DESIGNED WITH A SHEAR MODULUS OF 100 PSI +/- 15%.
5. THE CONCRETE UNDER THE BEARING DEVICE SHALL BE LEVEL.
6. THE CONTRACTOR IS ADVISED TO HAVE A MINIMUM OF 24 - 1/4"x12 1/2"x12 1/2" GALVANIZED STEEL SHIMS AVAILABLE FOR USE FOR ELEVATION ADJUSTMENTS UPON THE SETTING OF THE SUPERSTRUCTURE UNITS. THE SHIMS SHALL BE FABRICATED ACCORDING TO SECTION 531 AND SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 531.17,"BEARING DEVICE ASSEMBLY, STEEL REINFORCED ELASTOMERIC PAD".



ELASTOMERIC BEARING DETAILS

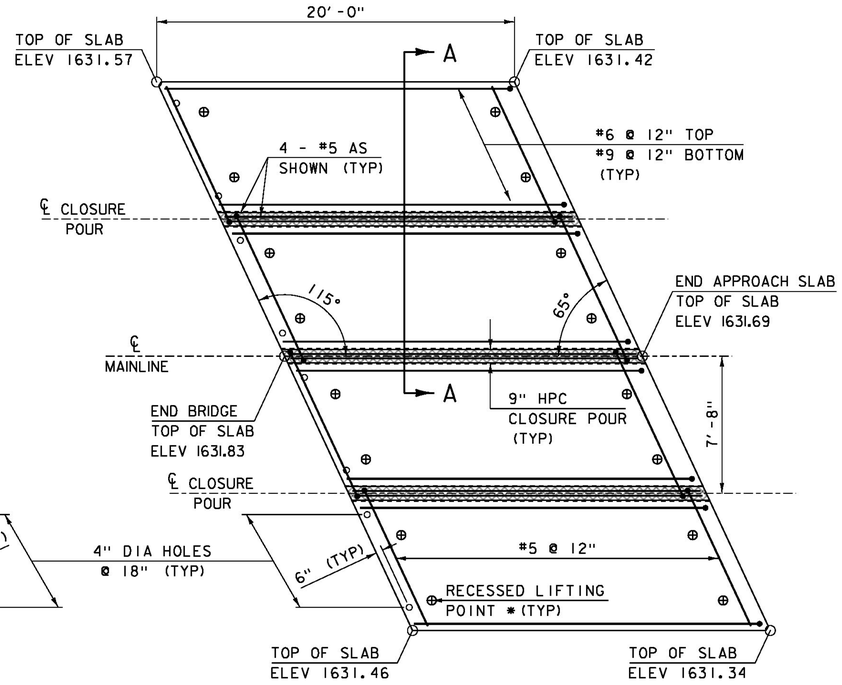
SCALE 3" = 1'-0"

PROJECT NAME:	WALDEN
PROJECT NUMBER:	BRF 030-3(5)
FILE NAME: s09b308_brg.dgn	PLOT DATE: 05-DEC-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: H. SALLS	CHECKED BY: H. SALLS
BEARING DETAILS	SHEET 28 OF 56



APPROACH SLAB #1 PLAN VIEW

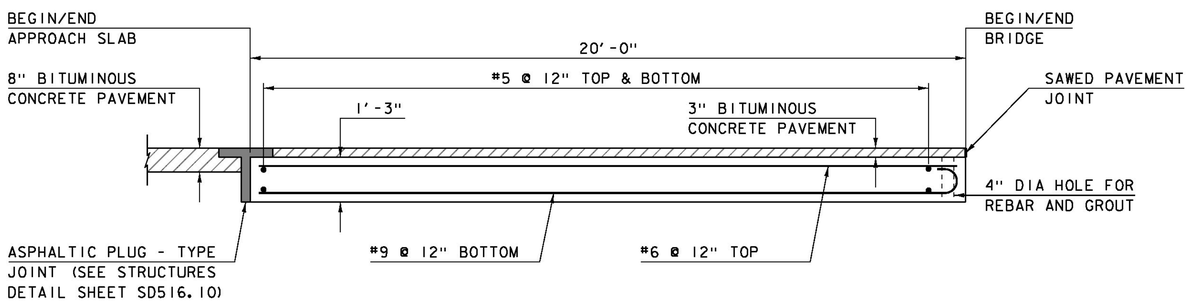
SCALE: 1/4" = 1'-0"



APPROACH SLAB #2 PLAN VIEW

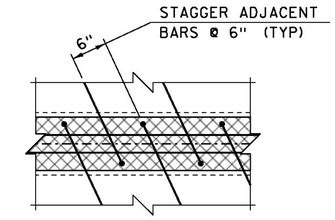
SCALE: 1/4" = 1'-0"

NOTE:
FABRICATOR TO DESIGN LIFTING POINTS AND INCLUDE CALCULATIONS WITH SUBMITTAL.



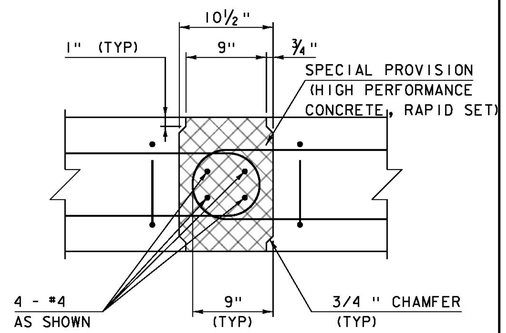
APPROACH SLAB ELEVATION VIEW

SCALE: 1/2" = 1'-0"



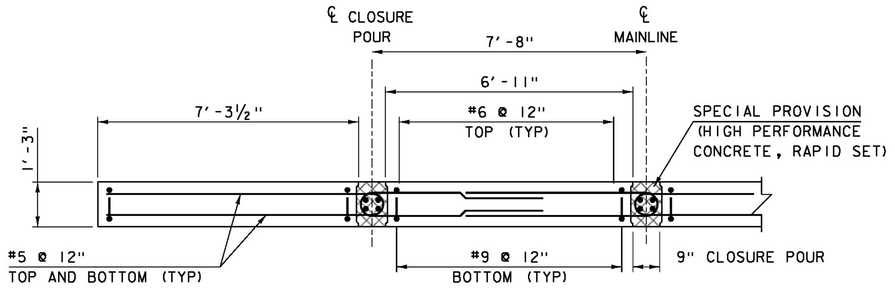
JOINT DETAIL PLAN

SCALE 1" = 1'-0"



JOINT DETAIL SECTION

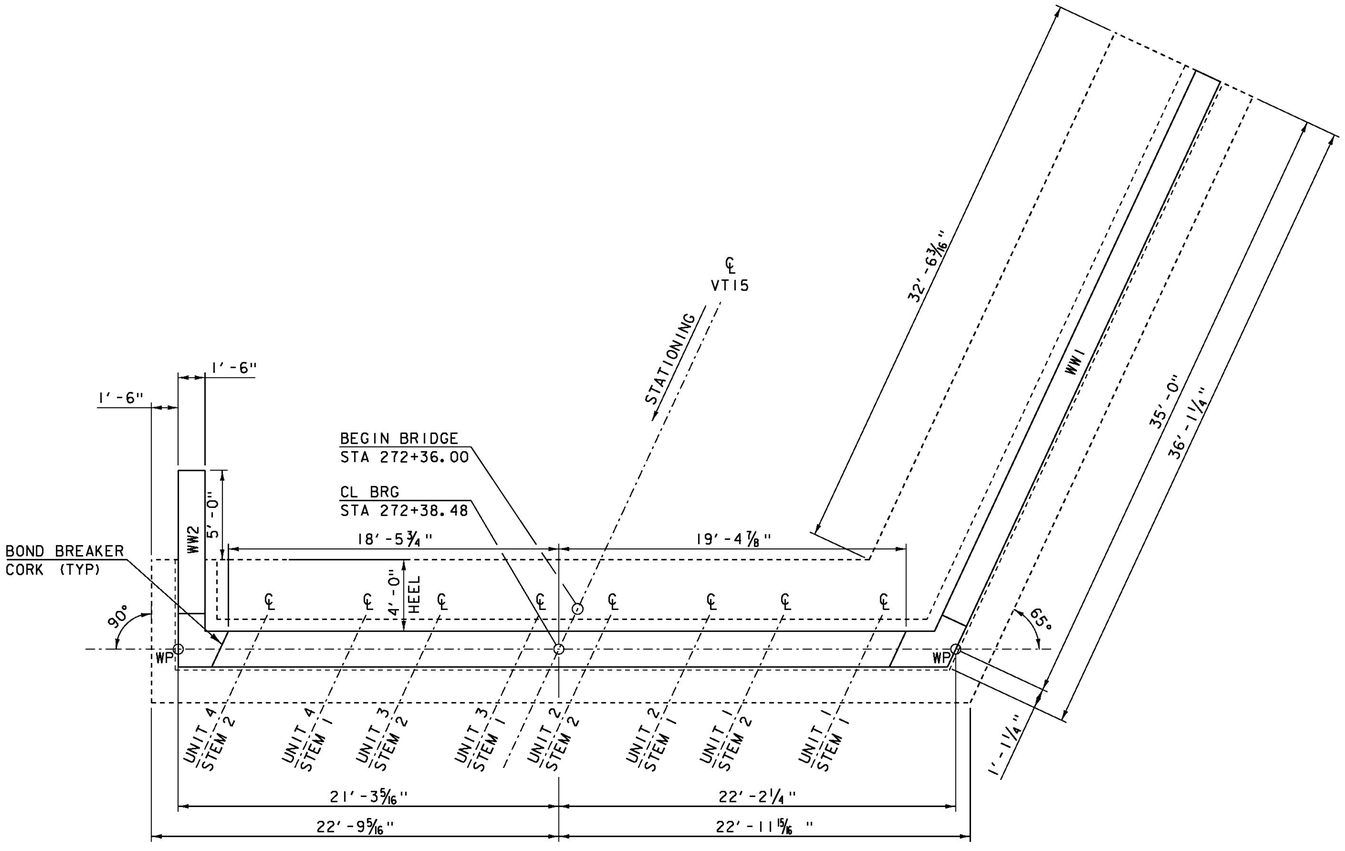
SCALE 1½" - 1'-0"



SECTION A-A

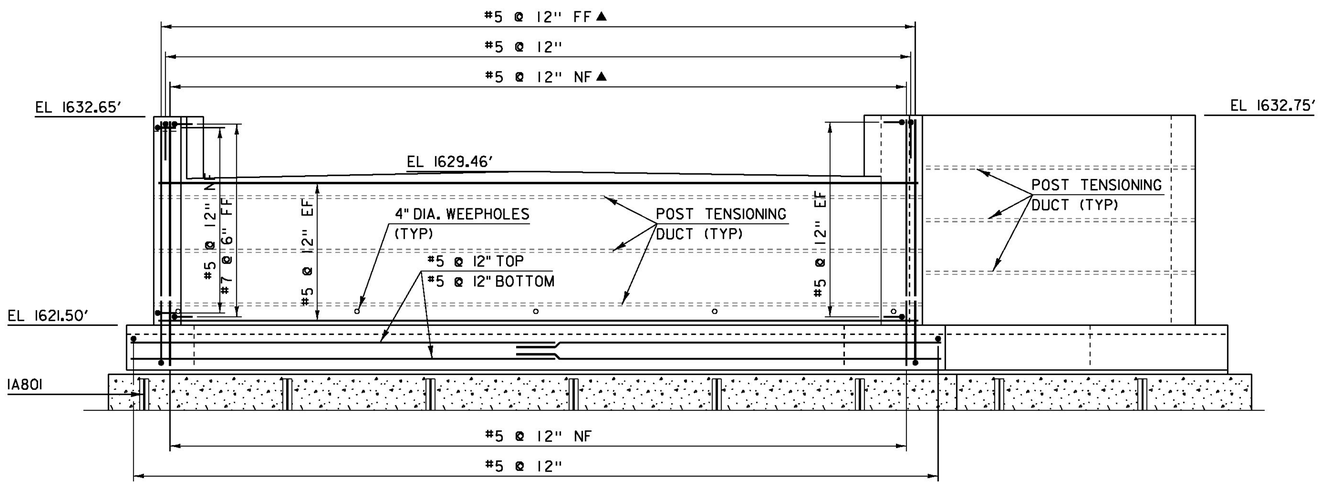
SCALE: 1/2" = 1'-0"

PROJECT NAME:	WALDEN
PROJECT NUMBER:	BRF 030-3(5)
FILE NAME: s09b308_slab.dgn	PLOT DATE: 05-DEC-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: H. SALLS	CHECKED BY: H. SALLS
APPROACH SLAB DETAILS	SHEET 29 OF 56



ABUTMENT #1 PLAN

SCALE: ¼" = 1'-0"



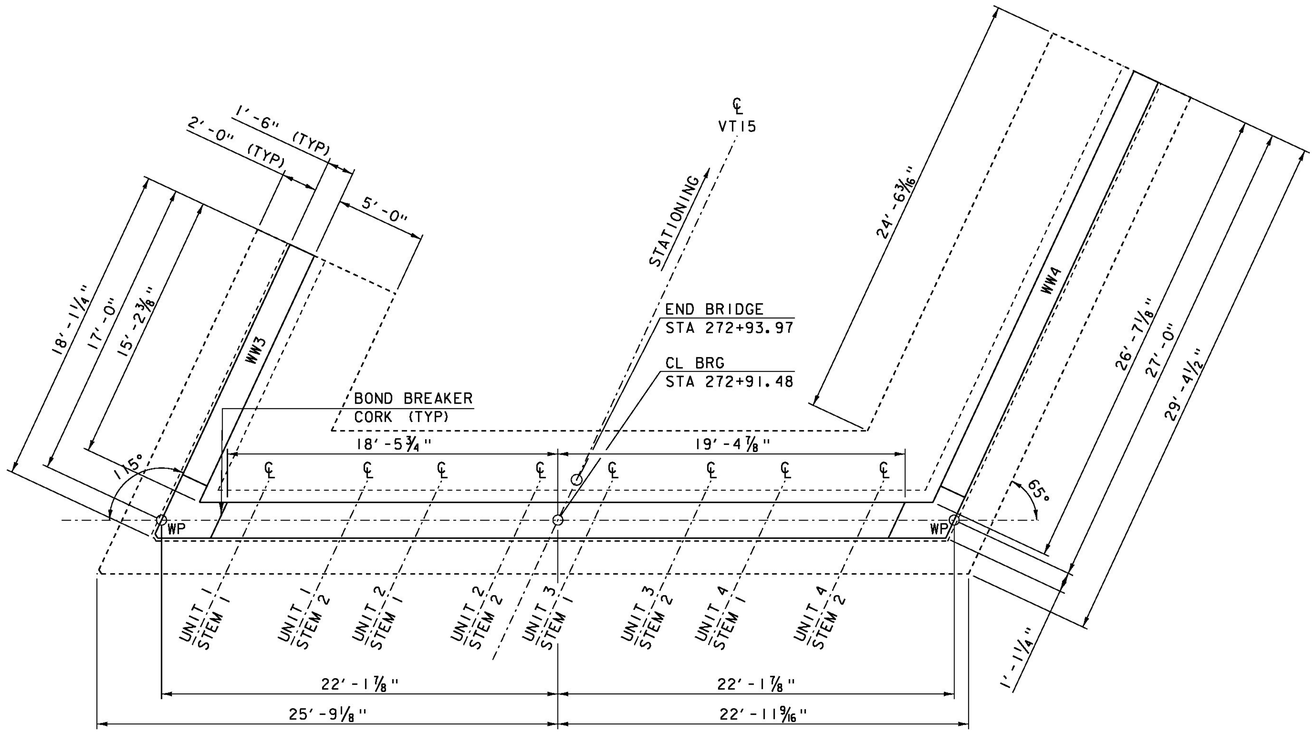
ABUTMENT #1 ELEVATION

SCALE : 1/4" = 1'-0"

NOTE:

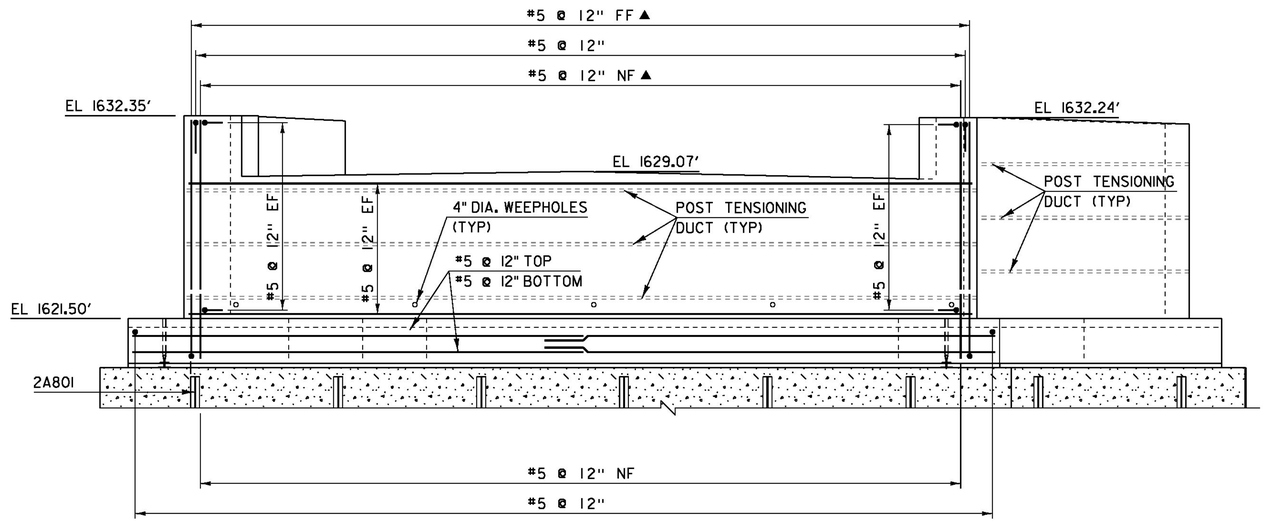
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROJECT NAME:	WALDEN
PROJECT NUMBER:	BRF 030-3(5)
FILE NAME: s09b308_sub.dgn	PLOT DATE: 05-DEC-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: H. SALLS	CHECKED BY: H. SALLS
ABUTMENT #1 PLAN & ELEVATION	SHEET 31 OF 56



ABUTMENT #2 PLAN

SCALE: ¼" = 1'-0"



ABUTMENT #2 ELEVATION

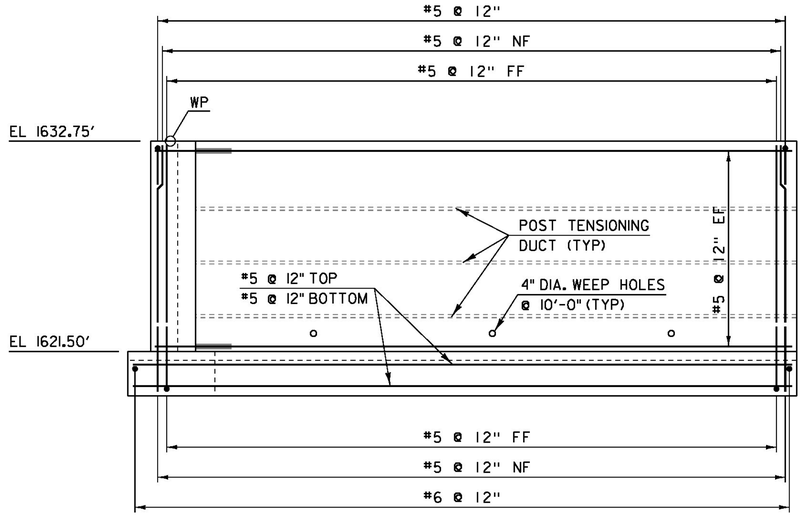
SCALE : 1/4" = 1'-0"

NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

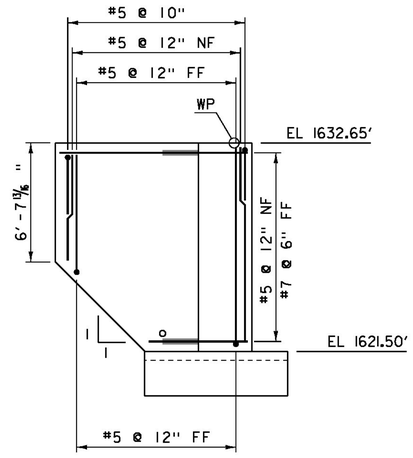
PROJECT NAME:	WALDEN
PROJECT NUMBER:	BRF 030-3(5)

FILE NAME: s09b308_sub.dgn	PLOT DATE: 05-DEC-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: H. SALLS	CHECKED BY: H. SALLS
ABUTMENT #2 PLAN & ELEVATION	SHEET 33 OF 56



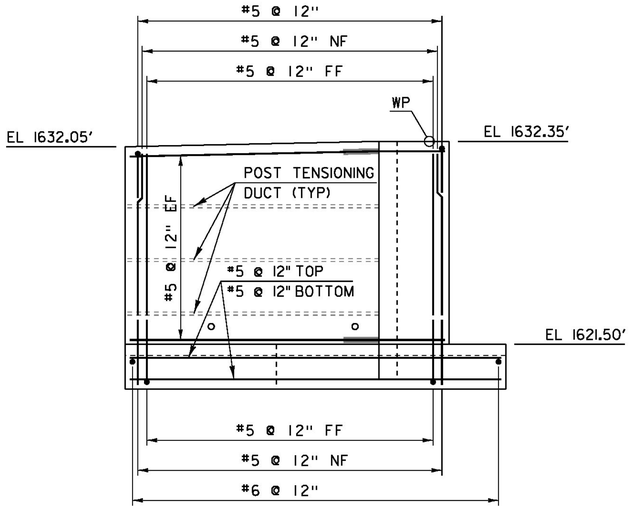
WINGWALL #1 ELEVATION

SCALE: 1/4" = 1'-0"



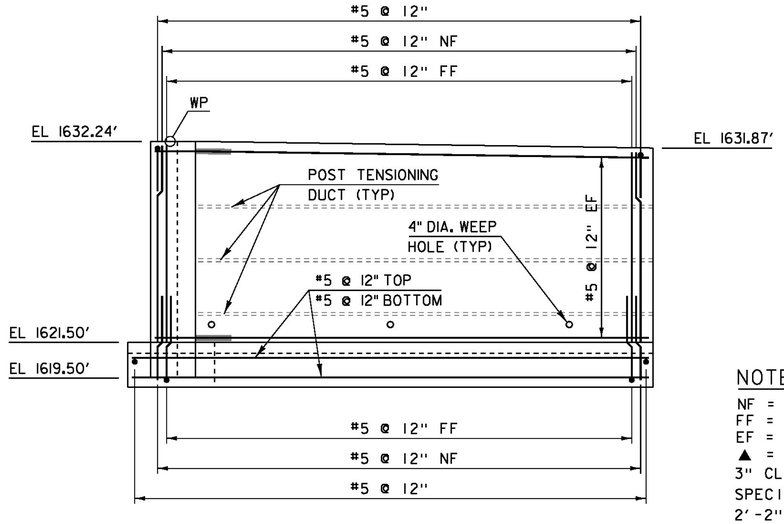
WINGWALL #2 ELEVATION

SCALE: 1/4" = 1'-0"



WINGWALL #3 ELEVATION

SCALE: 1/4" = 1'-0"



WINGWALL #4 ELEVATION

SCALE: 1/4" = 1'-0"

NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROJECT NAME:	WALDEN
PROJECT NUMBER:	BRF 030-3(5)

FILE NAME: s09b308_sub.dgn	PLOT DATE: 05-DEC-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: H. SALLS	CHECKED BY: H. SALLS
WINGWALL ELEVATIONS	SHEET 35 OF 56

STATE OF VERMONT
AGENCY OF TRANSPORTATION

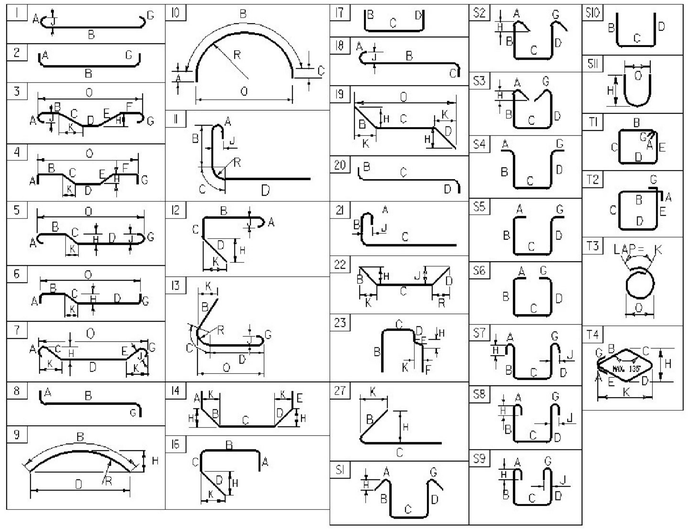
REINFORCING STEEL SCHEDULE

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	ABUTMENT #1																
✳	20	8	3'- 6"	1A801	STR	3'- 6"											
	ABUTMENT #2																
✳	21	8	3'- 6"	2A801	STR	3'- 6"											

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O

~ NOTES ~

1. 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.
2. 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".
3. BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.
5. "J" DIMENSION ON 180 DEGREE HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
6. "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
7. WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
8. ▲ DENOTES BARS TO BE CUT IN FIELD.
9. ✳ DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
10. △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
11. E IN BAR MARK PREFIX DENOTES EPOXY COATED REINFORCING STEEL.



ASTM STANDARD REINFORCING BARS

BAR SIZE NO. DESIGNATION	NOMINAL WEIGHT POUNDS PER FOOT	NOMINAL DIAMETER INCHES	NOMINAL AREA SQUARE INCHES	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	2.04	0.875	0.60	2.749
#8	2.670	1.000	0.79	3.14
#9	3.400	1.13	1.00	3.54
#10	4.3	1.270	1.27	3.990
#11	5.31	1.410	1.56	4.430
#14	7.65	1.69	2.25	5.32
#18	13.60	2.26	4.00	7.09

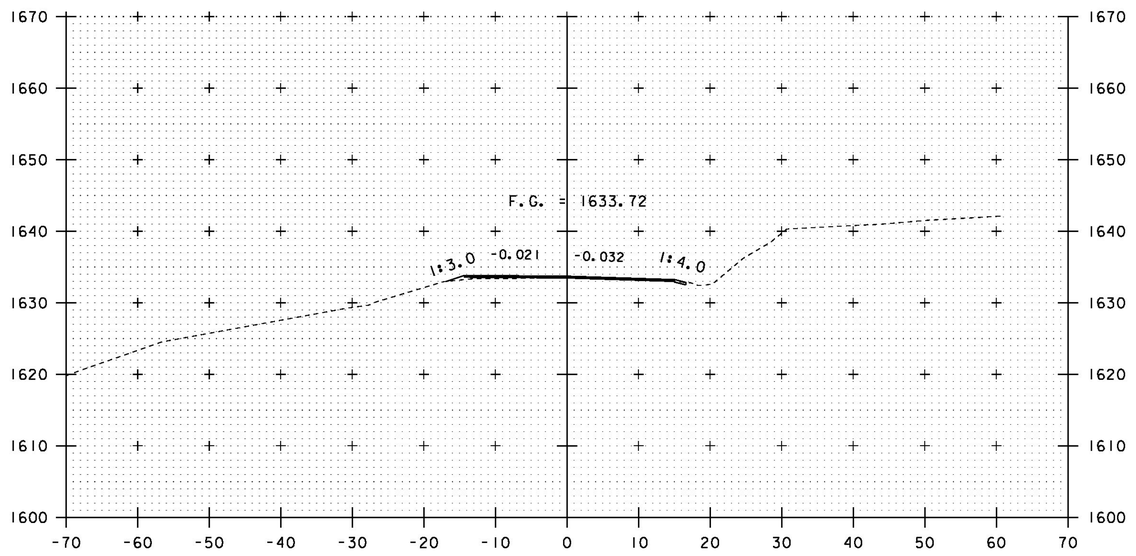
~ REINFORCING STEEL CORROSION RESISTANCE LEVEL ~

THE REINFORCING STEEL MARKS IN THIS SCHEDULE INDICATE THE REQUIRED BAR CORROSION RESISTANCE LEVEL. CORROSION RESISTANCE LEVEL IS DENOTED WITH A ,2 FOR LEVEL TWO SUFFIX OR ,3 FOR LEVEL THREE SUFFIX, ,1 FOR LEVEL ONE IS TO BE OMITTED. THE BAR MATERIAL TYPE AND BAR STEEL GRADE PROVIDED FOR EACH CORRIOSION LEVEL WILL BE RECORDED ON THE PLAN SET PI SHEET FOR AS-BUILT RECORD PLAN ARCHIVES.

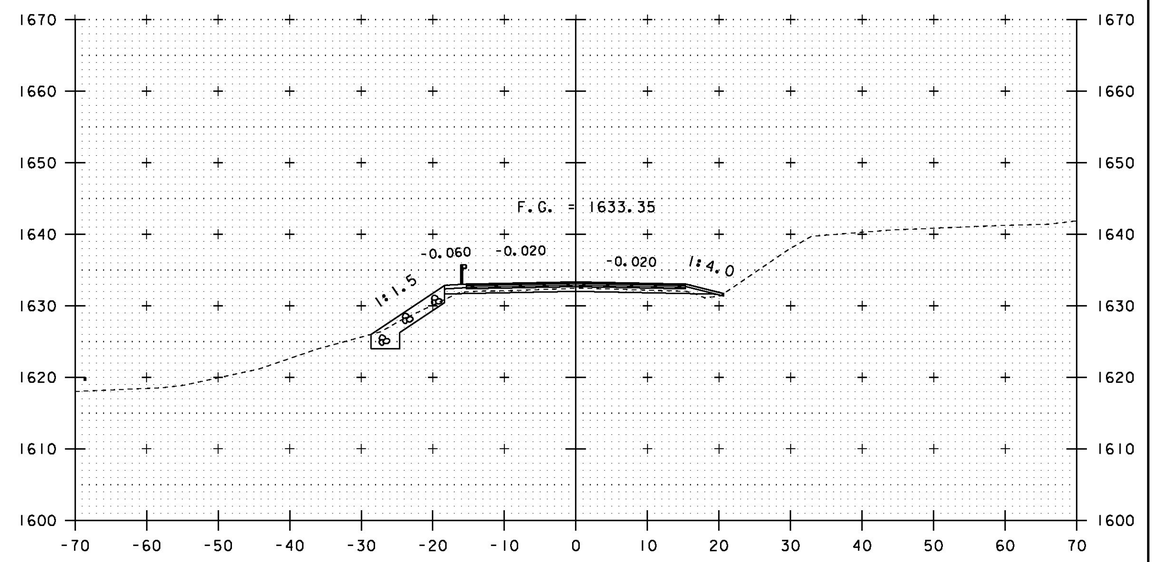
PROJECT NAME: **WALDEN**
PROJECT NUMBER: **BRF 030-3(5)**

FILE NAME: **s09b308rss.xls**
PROJECT MANAGER: **C. CARLSON**
DESIGNED BY: **H. SALLS**
REINFORCING STEEL SCHEDULE

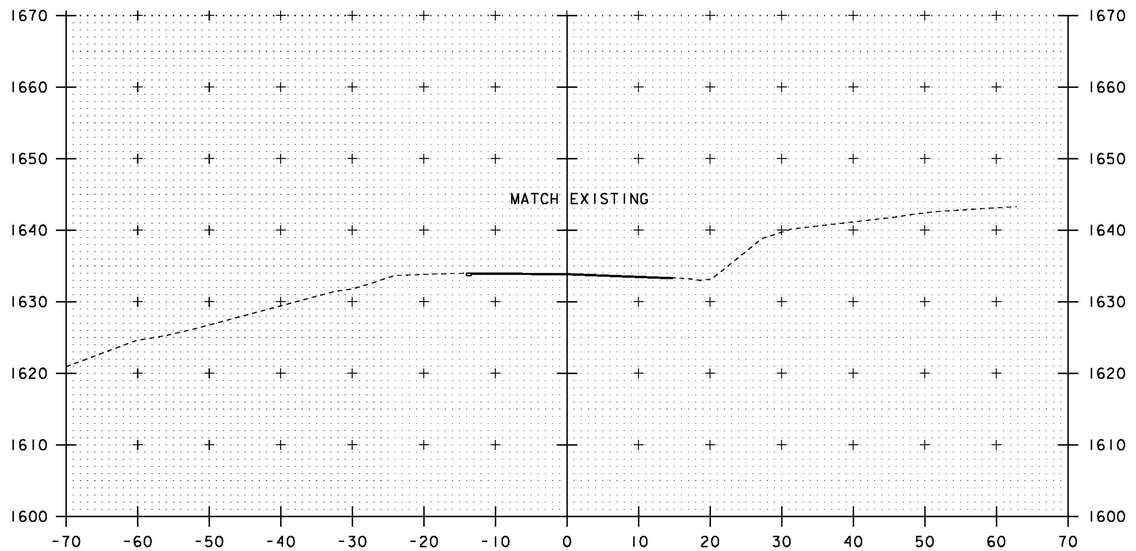
PLOT DATE: **12/04/14**
DRAWN BY: **R. PELLETT**
CHECKED BY: **H. SALLS**
SHEET **36** OF **56**



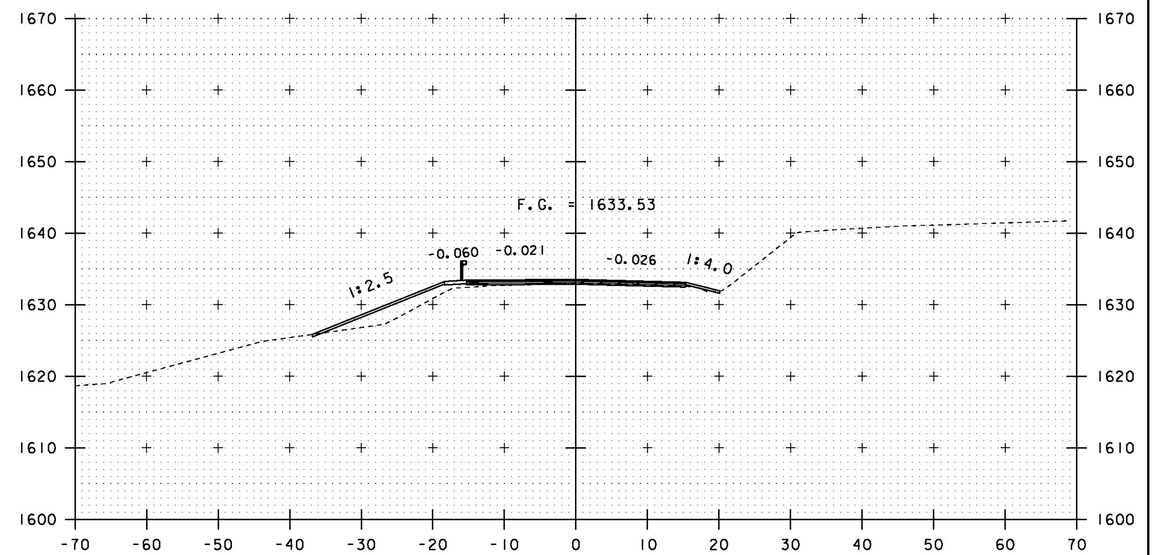
270+75



271+25



270+50
BEGIN APPROACH



271+00
BEGIN PROJECT

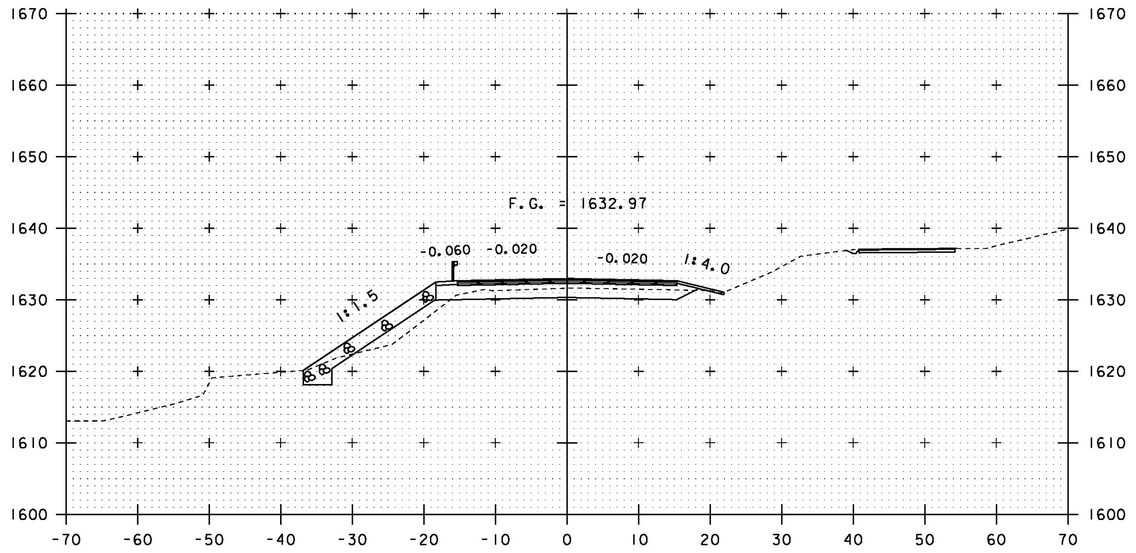
SCALE 1" = 10'-0"
10 0 10

STA. 270+50 TO STA. 271+25

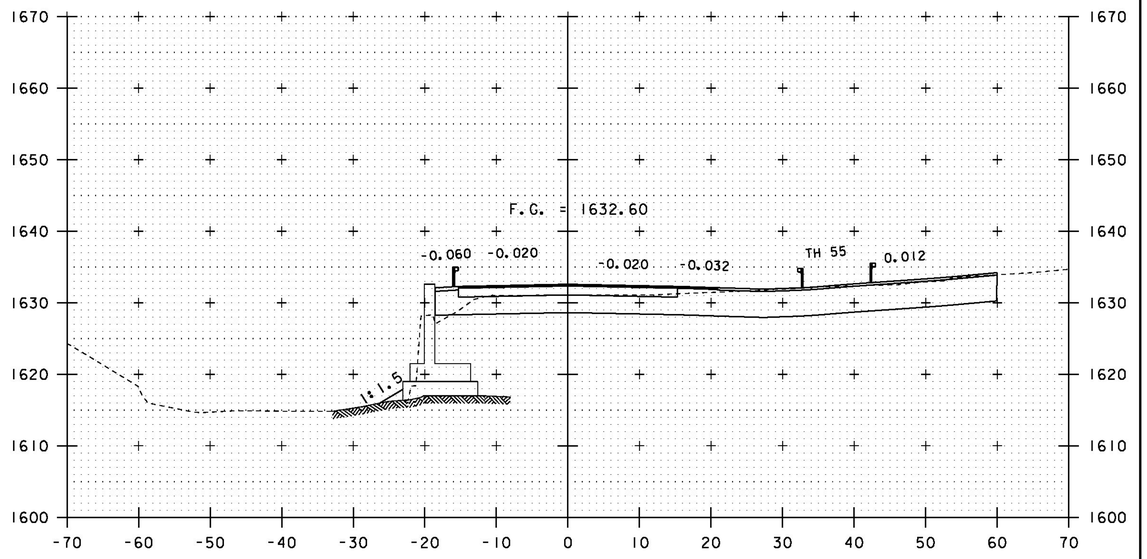
PROJECT NAME: WALDEN
PROJECT NUMBER: BRF 030-3(5)

FILE NAME: s09b308_xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
ROADWAY CROSS SECTIONS 1

PLOT DATE: 30-DEC-2014
DRAWN BY: R. PELLETT
CHECKED BY: H. SALLS
SHEET 37 OF 56

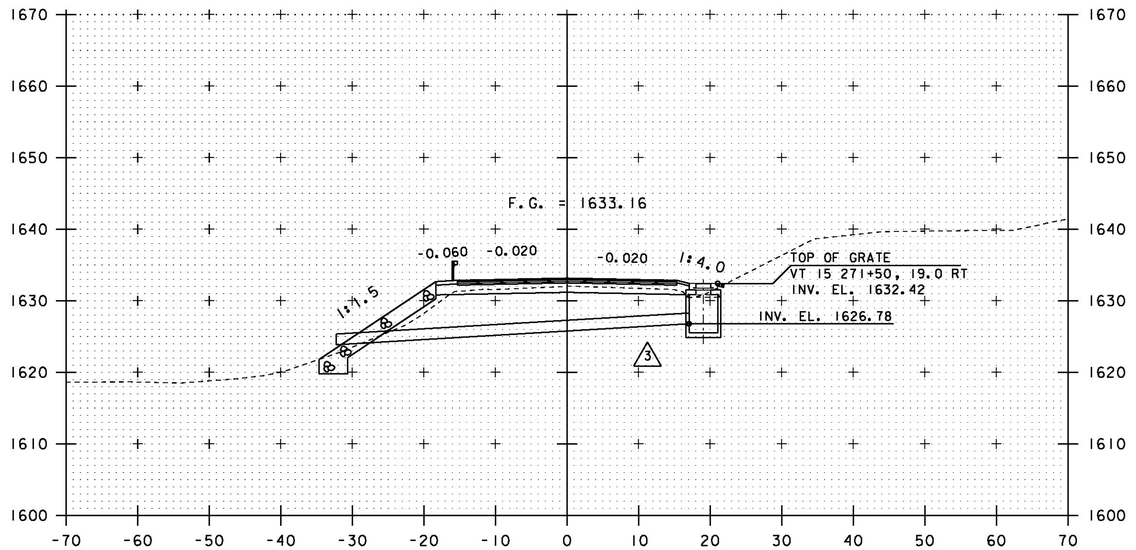


271+75

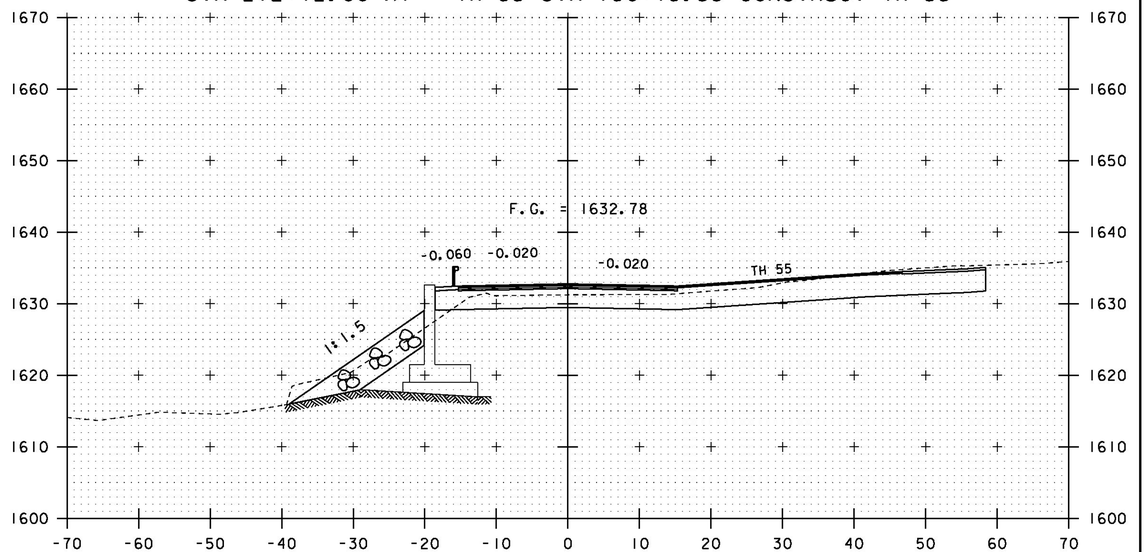


272+25

SEE SHEETS 43 - 44



271+50



272+00

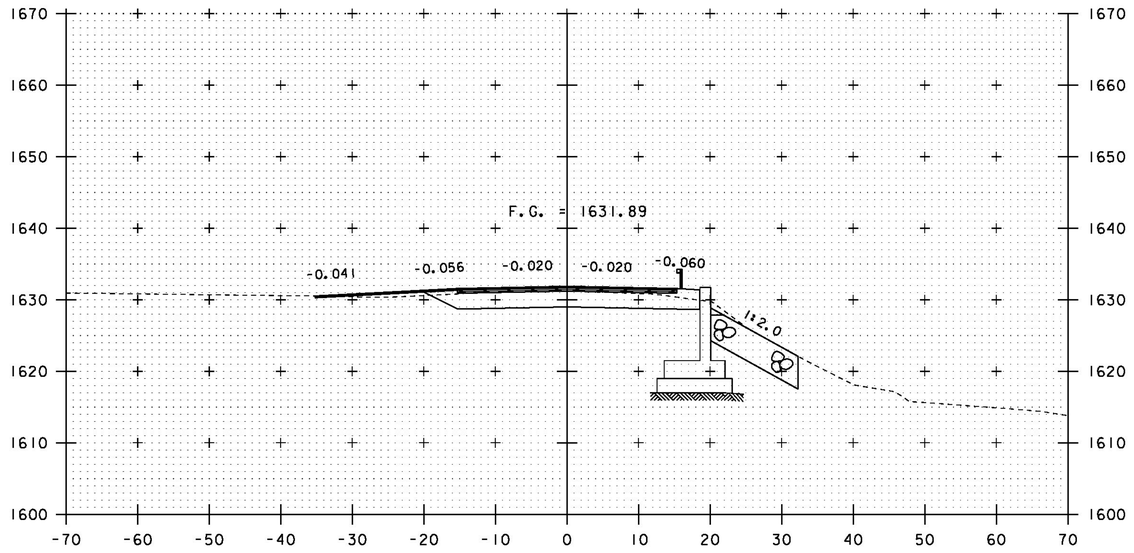
STA 272+12.00 RT = TH 55 STA 750+15.33 CONSTRUCT TH 55

SCALE 1" = 10'-0"
10 0 10

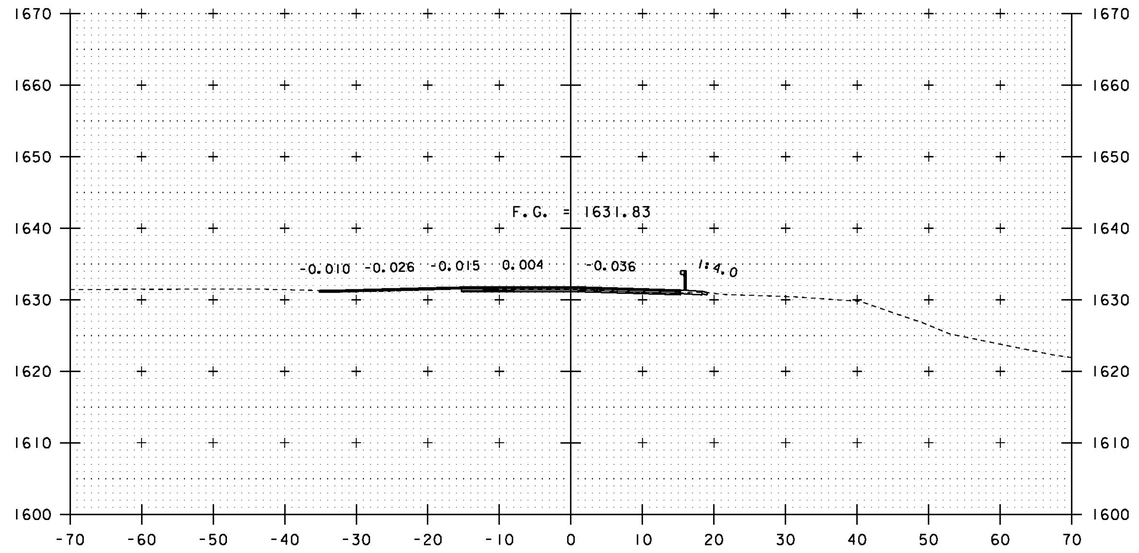
STA. 271+50 TO STA. 272+25

PROJECT NAME: WALDEN	
PROJECT NUMBER: BRF 030-3(5)	
FILE NAME: s09b308_xsl.dgn	PLOT DATE: 30-DEC-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: H. SALLS	CHECKED BY: H. SALLS
ROADWAY CROSS SECTIONS 2	SHEET 38 OF 56

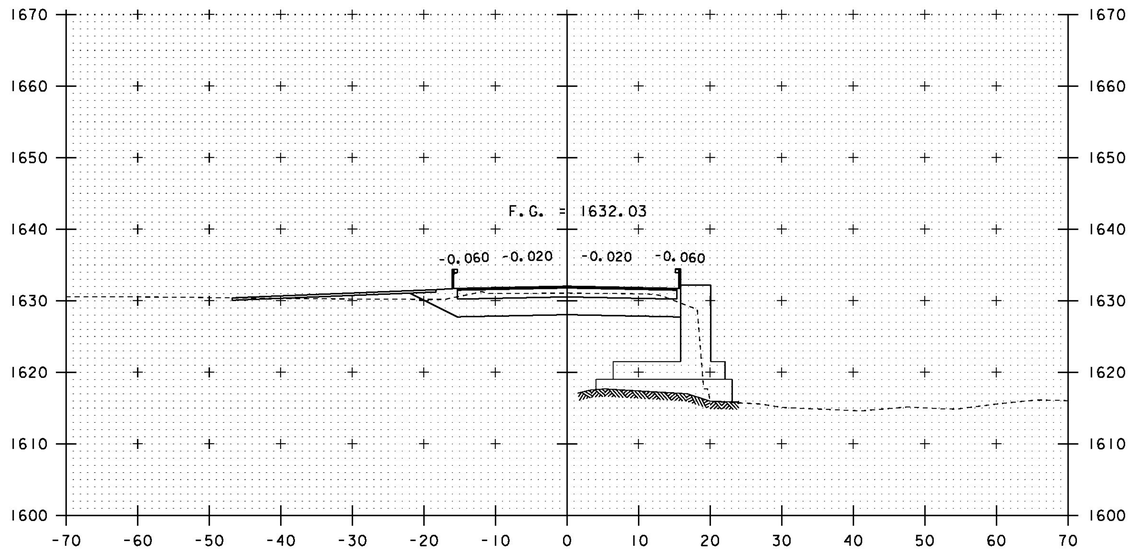
OMITTED



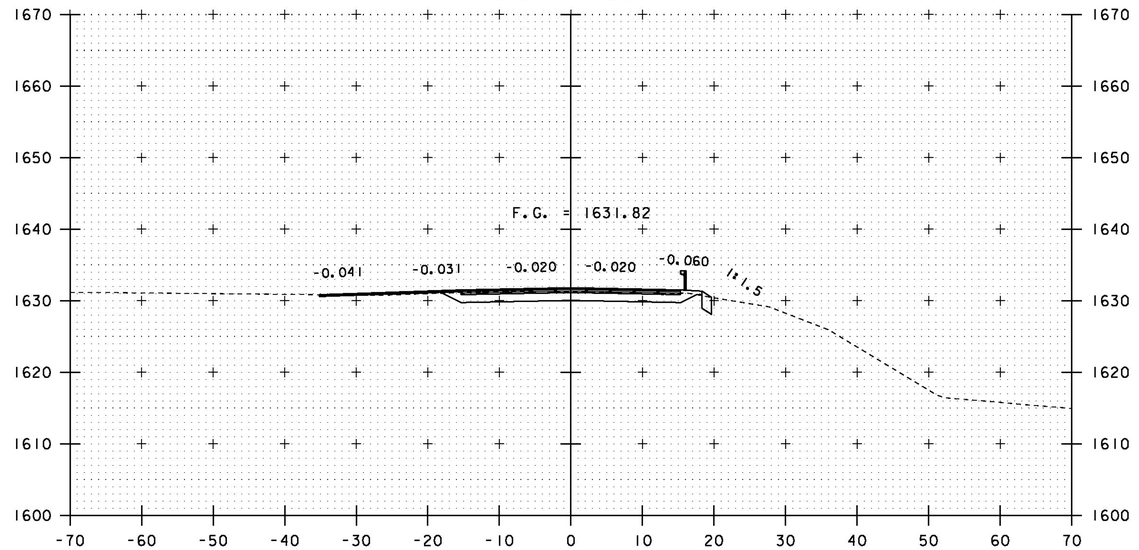
273+25



273+75



273+00



273+75
END PROJECT

273+50

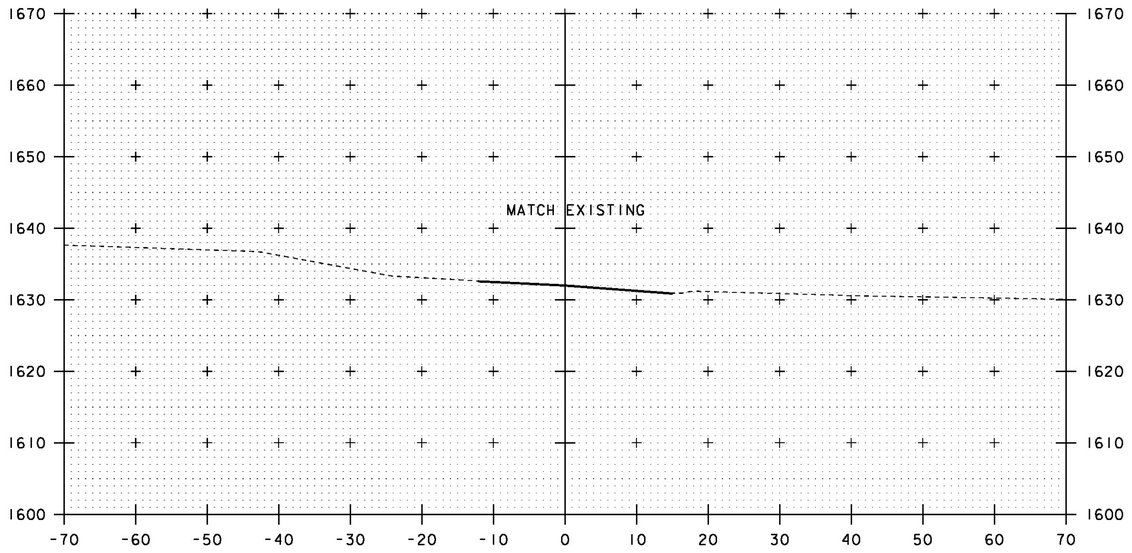
SCALE 1" = 10'-0"
10 0 10

STA. 273+00 TO STA. 273+75

PROJECT NAME: WALDEN
PROJECT NUMBER: BRF 030-3(5)

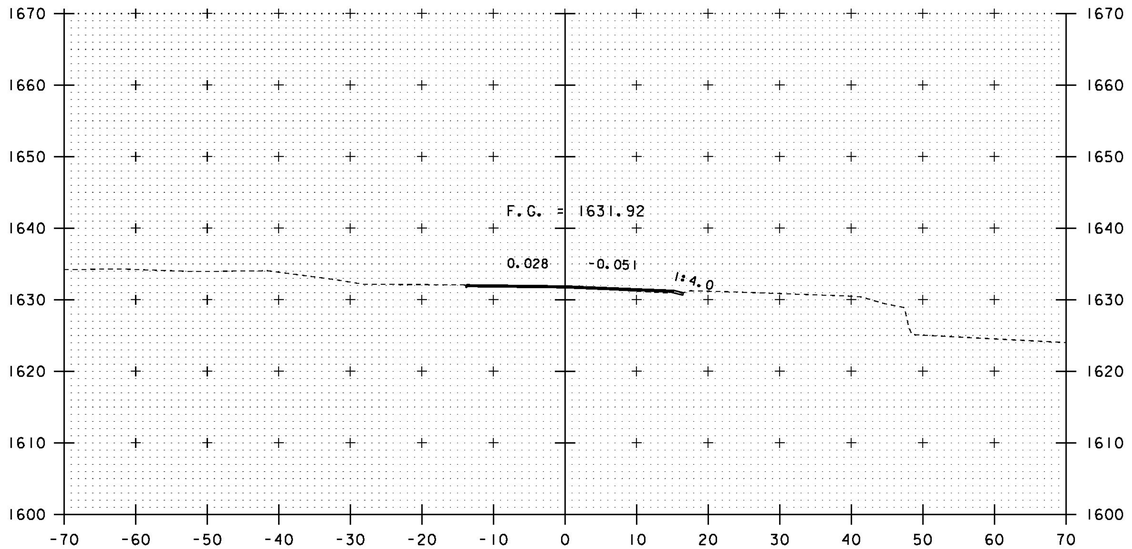
FILE NAME: s09b308_xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
ROADWAY CROSS SECTIONS 4

PLOT DATE: 30-DEC-2014
DRAWN BY: R. PELLETT
CHECKED BY: H. SALLS
SHEET 40 OF 56



274+25

END APPROACH



274+00

SCALE 1" = 10'-0"

10 0 10

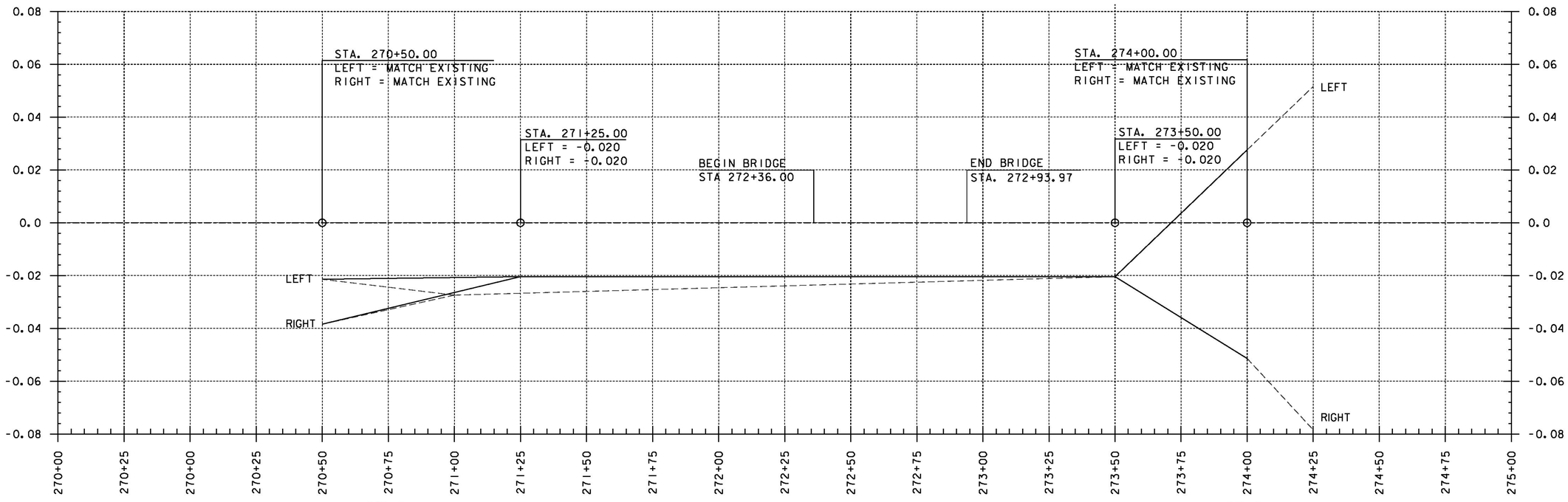
STA. 274+00 TO STA. 274+25

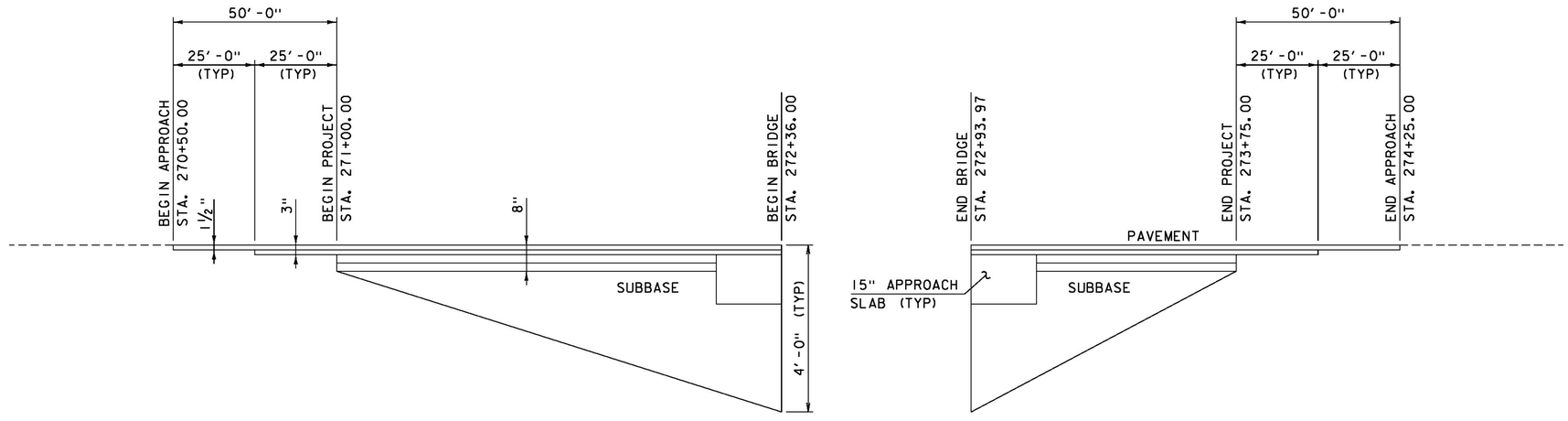
PROJECT NAME:	WALDEN
PROJECT NUMBER:	BRF 030-3(5)
FILE NAME: s09b308_xsl.dgn	PLOT DATE: 30-DEC-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: H. SALLS	CHECKED BY: H. SALLS
ROADWAY CROSS SECTIONS 5	SHEET 41 OF 56

PROPOSED BANKING ——————
EXISTING BANKING - - - - - - -

BANKING DIAGRAM

HORIZONTAL SCALE 1" = 20'-0"
NO VERTICAL SCALE





ROADWAY MATERIAL SECTION NOTE

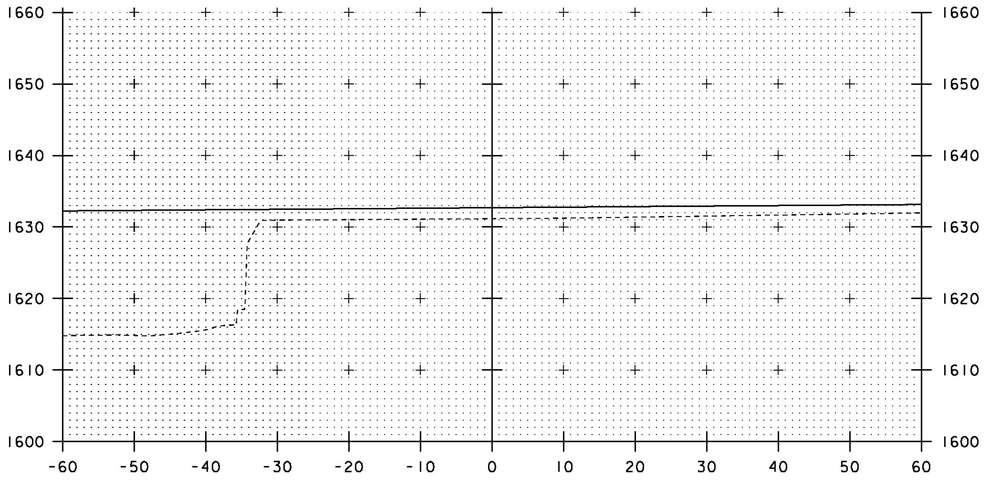
1 1/2" BITUMINOUS CONCRETE PAVEMENT, TYPE IVS
1 1/2" BITUMINOUS CONCRETE PAVEMENT, TYPE IVS
2 1/2" BITUMINOUS CONCRETE PAVEMENT, TYPE IIS
2 1/2" BITUMINOUS CONCRETE PAVEMENT, TYPE IIS
VARIES SUBBASE DENSE GRADED CRUSHED STONE

BCP SHALL BE READ AS BITUMINOUS CONCRETE PAVEMENT. PAYMENT WILL BE MADE UNDER ITEM 900.680 "SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)".

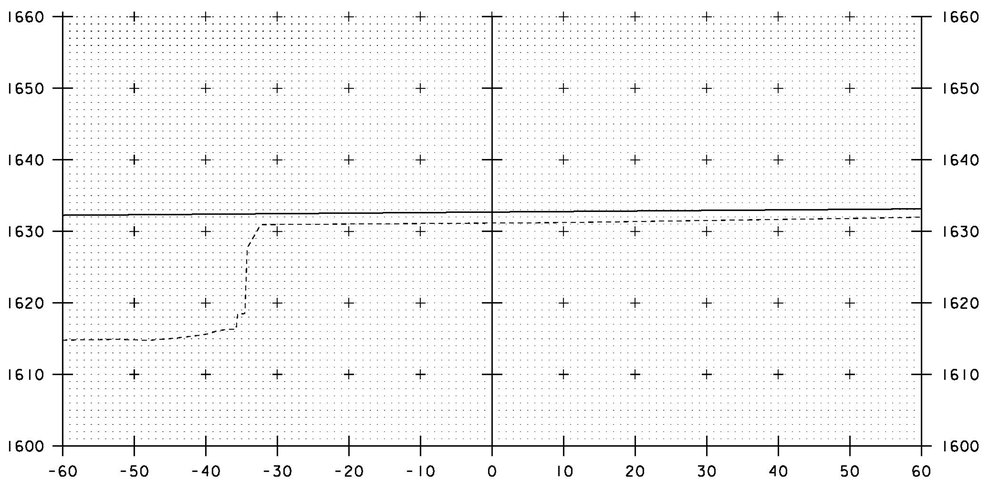
MATERIAL TRANSITION DIAGRAM

(NOT TO SCALE)

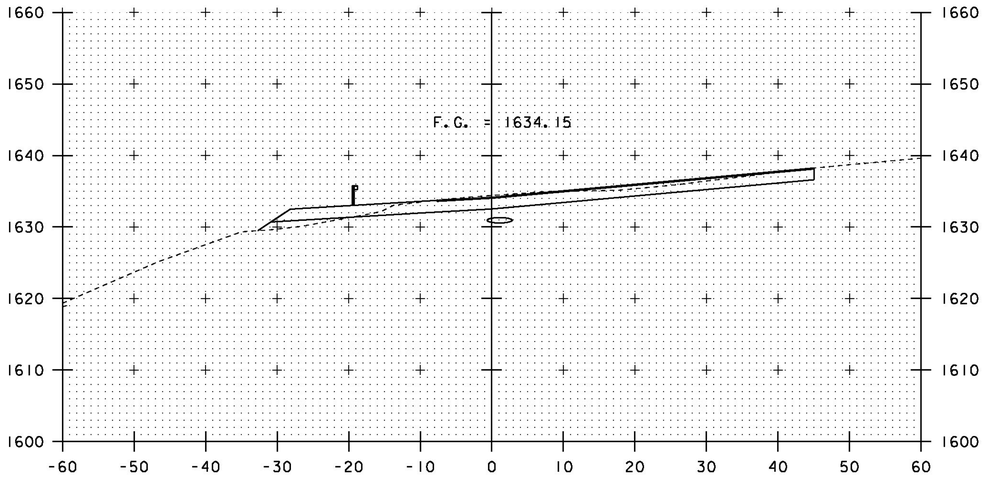
PROJECT NAME:	WALDEN
PROJECT NUMBER:	BRF 030-3(5)
FILE NAME: s09b308_xsl.dgn	PLOT DATE: 05-DEC-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: H. SALLS	CHECKED BY: H. SALLS
TRANSITION DIAGRAM DETAILS	SHEET 42 OF 56



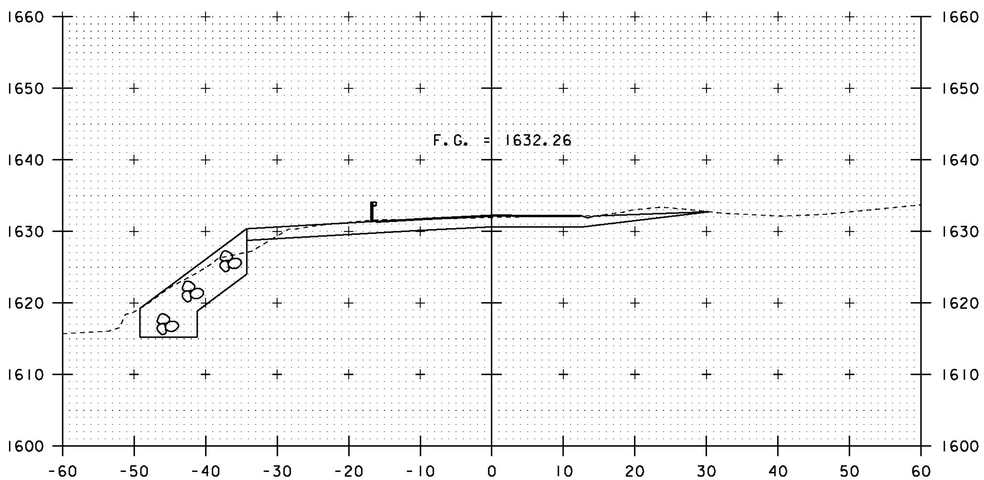
750+15.33



750+00
= VT 15 STA. 272+12.00



750+50

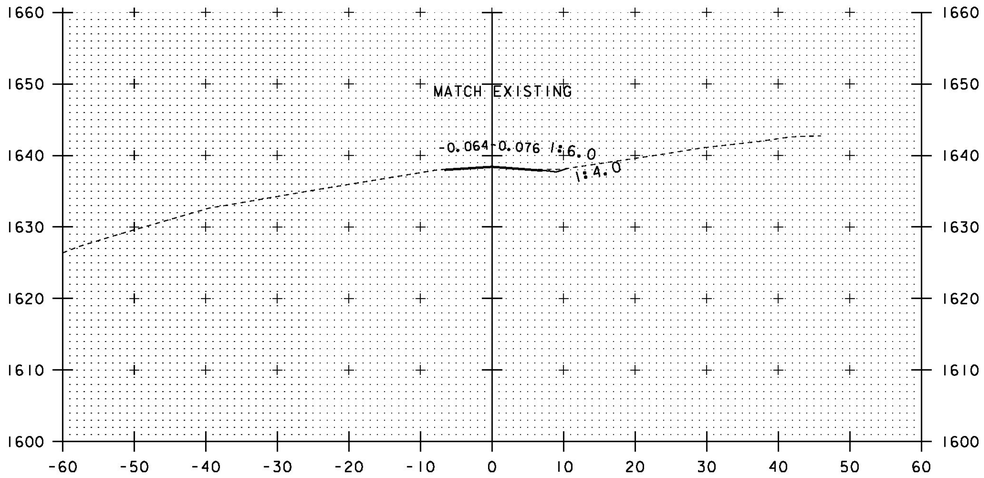


750+25
STA 750+15.33 RT
CONSTRUCT TH 55

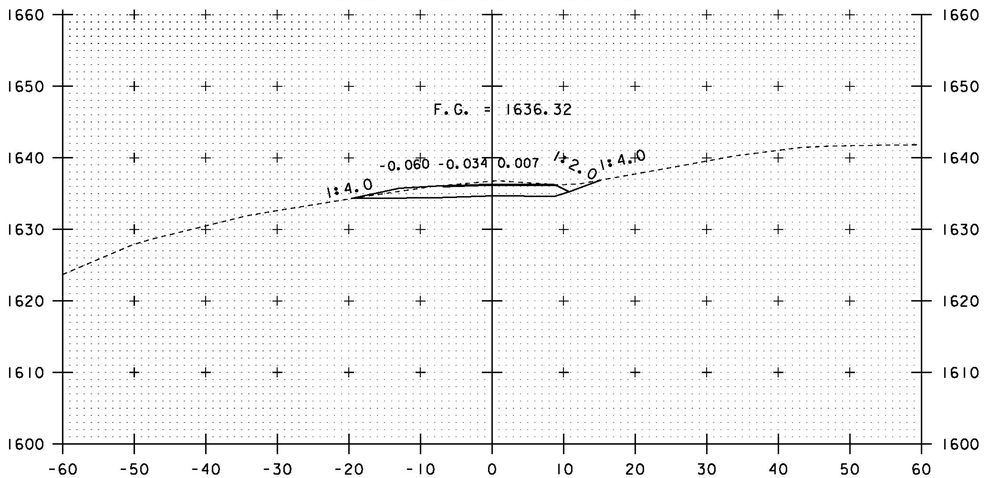
SCALE 1" = 10'-0"
10 0 10

STA. 750+00 TO STA. 750+50

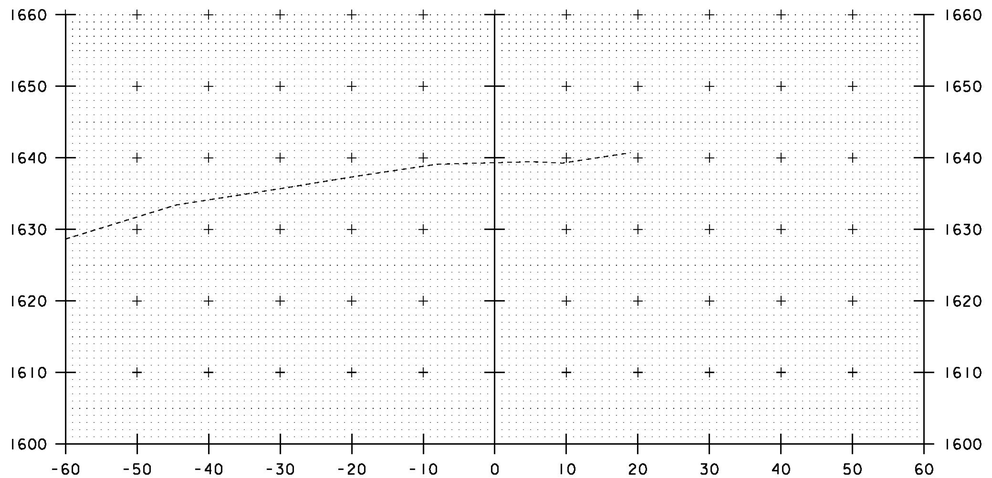
PROJECT NAME:	WALDEN
PROJECT NUMBER:	BRF 030-3(5)
FILE NAME: s09b308_xsl.dgn	PLOT DATE: 30-DEC-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: H. SALLS	CHECKED BY: H. SALLS
TH CROSS SECTIONS 1	SHEET 43 OF 56



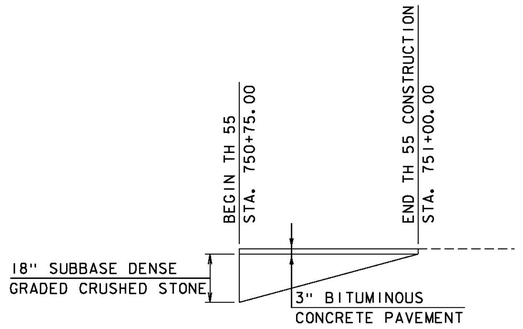
751+00
END TH 55 CONSTRUCTION



750+75



751+25



SUBBASE TRANSITION
(NOT TO SCALE)

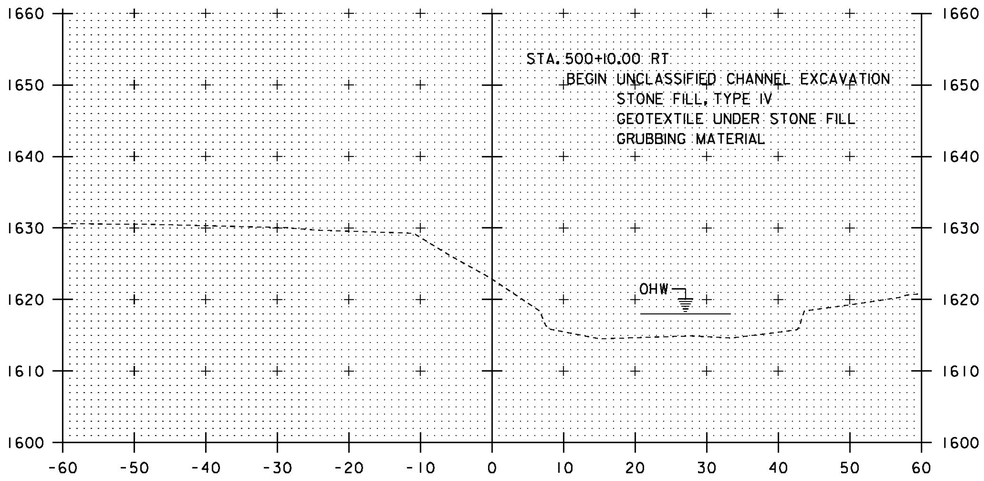
SCALE 1" = 10'-0"
10 0 10

STA. 750+75 TO STA. 751+25

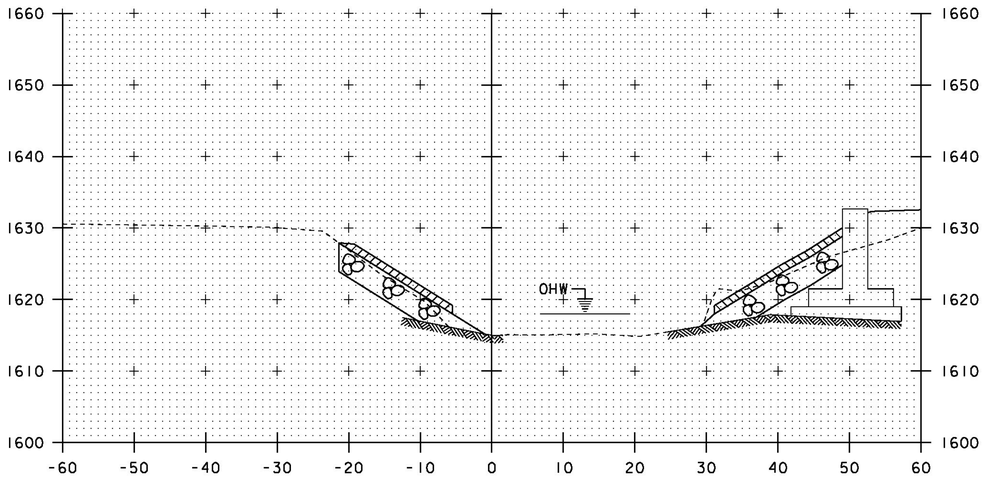
PROJECT NAME: WALDEN
PROJECT NUMBER: BRF 030-3(5)

FILE NAME: s09b308_xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
TH CROSS SECTIONS 2

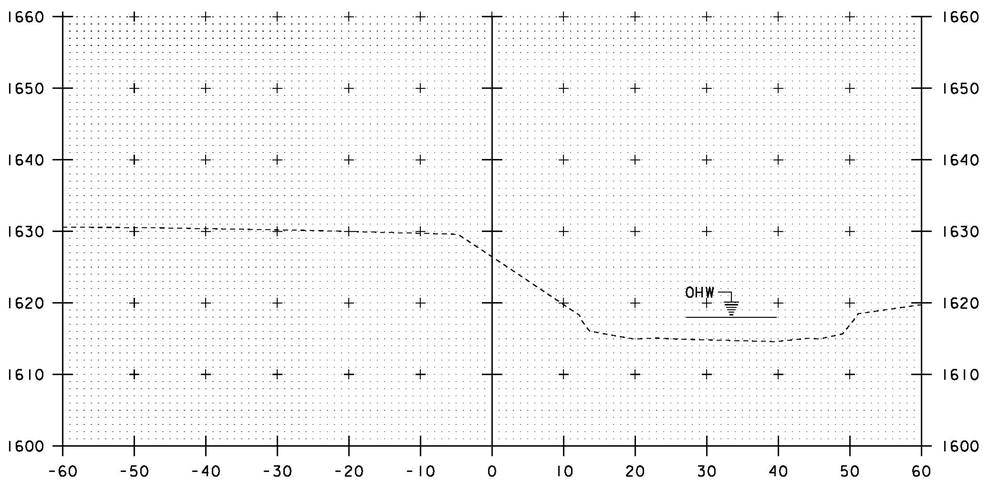
PLOT DATE: 30-DEC-2014
DRAWN BY: R. PELLETT
CHECKED BY: H. SALLS
SHEET 44 OF 56



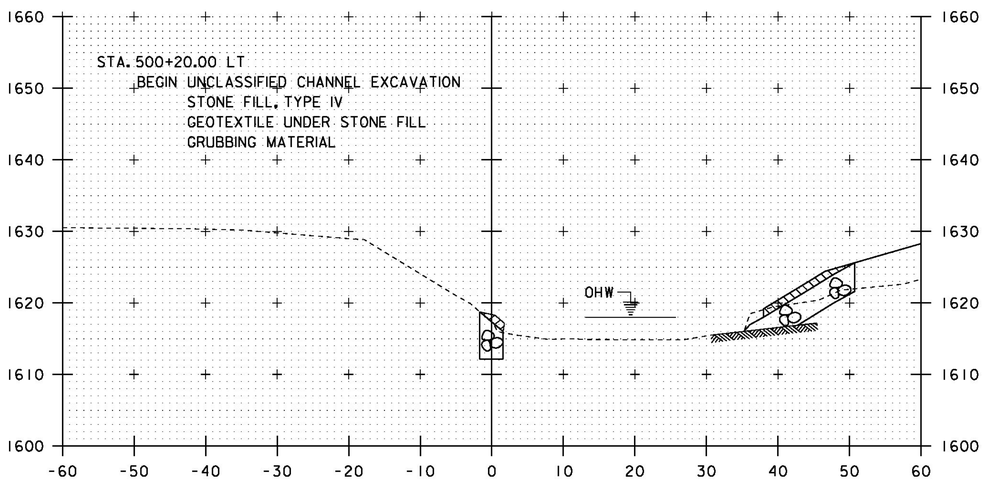
500+10



500+30



500+00

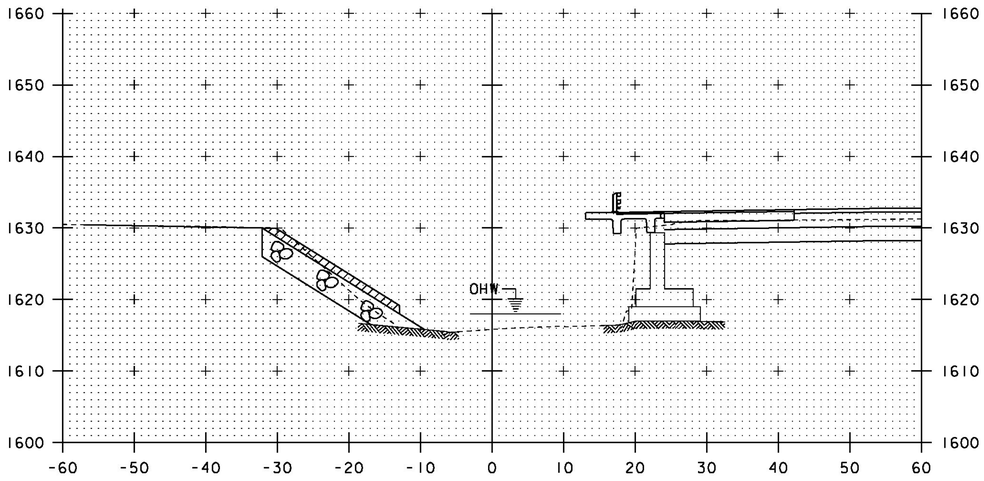


500+20

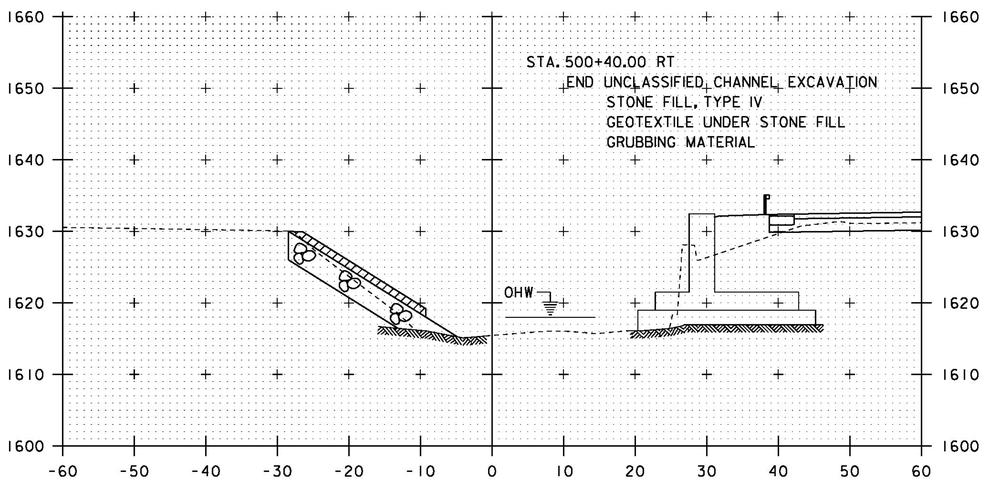
SCALE 1" = 10'-0"
10 0 10

STA. 500+00 TO STA. 500+30

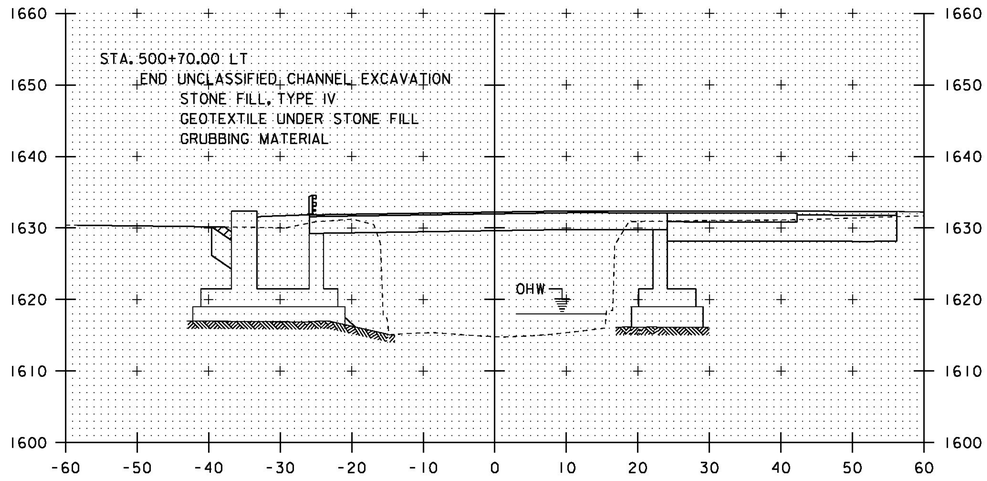
PROJECT NAME:	WALDEN
PROJECT NUMBER:	BRF 030-3(5)
FILE NAME: s09b308_xsl.dgn	PLOT DATE: 30-DEC-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: H. SALLS	CHECKED BY: H. SALLS
CHANNEL CROSS SECTIONS 1	SHEET 45 OF 56



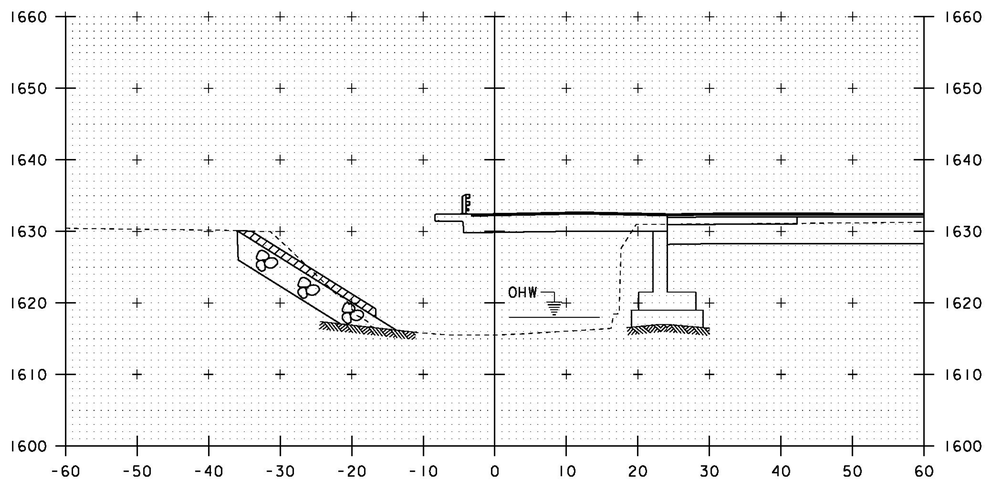
500+50



500+40



500+70

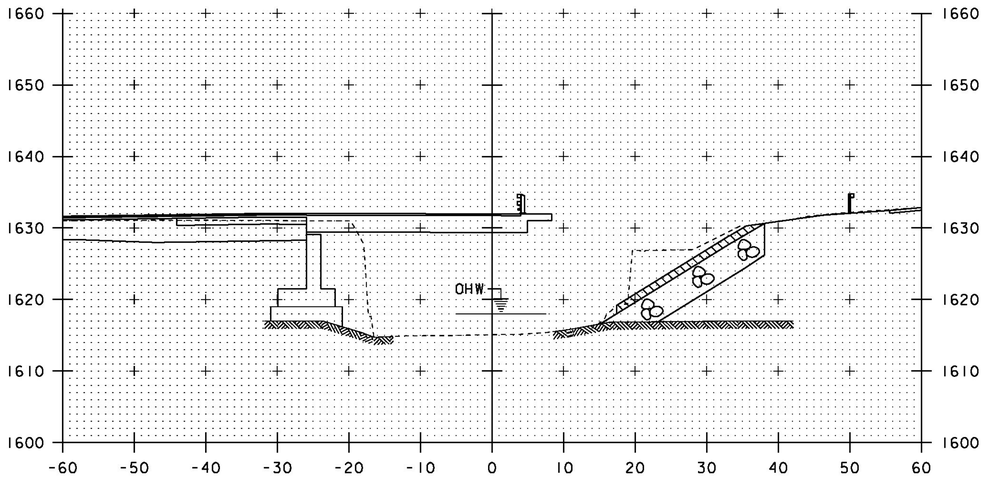


500+60

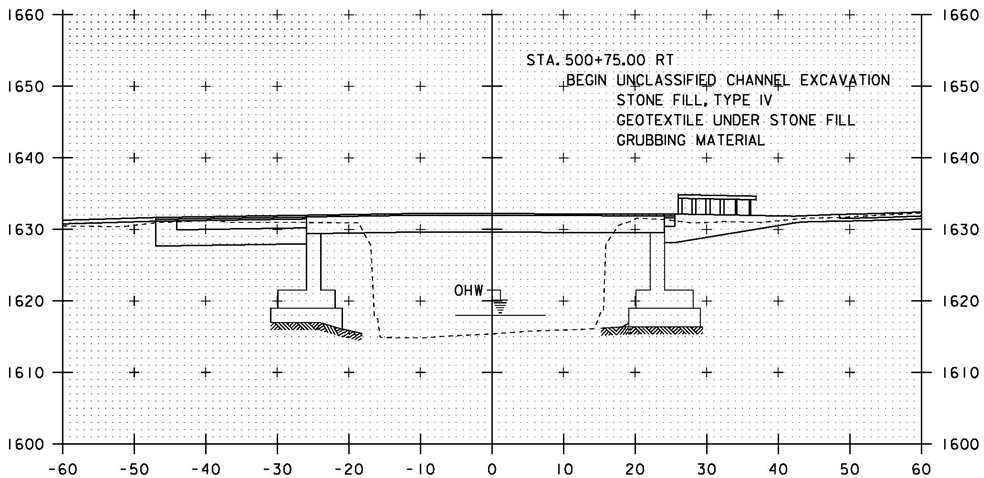
SCALE 1" = 10'-0"
10 0 10

STA. 500+40 TO STA. 500+70

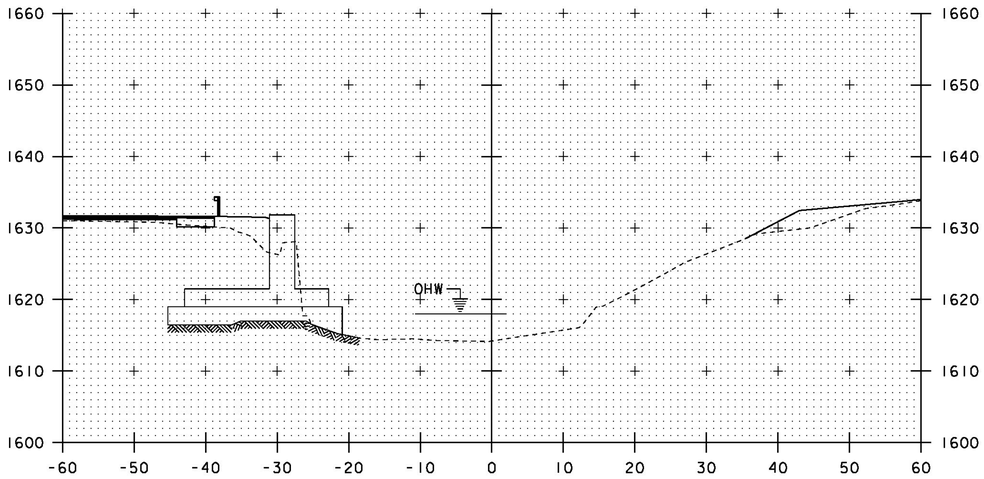
PROJECT NAME: WALDEN	
PROJECT NUMBER: BRF 030-3(5)	
FILE NAME: s09b308_xsl.dgn	PLOT DATE: 30-DEC-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: H. SALLS	CHECKED BY: H. SALLS
CHANNEL CROSS SECTIONS 2	SHEET 46 OF 56



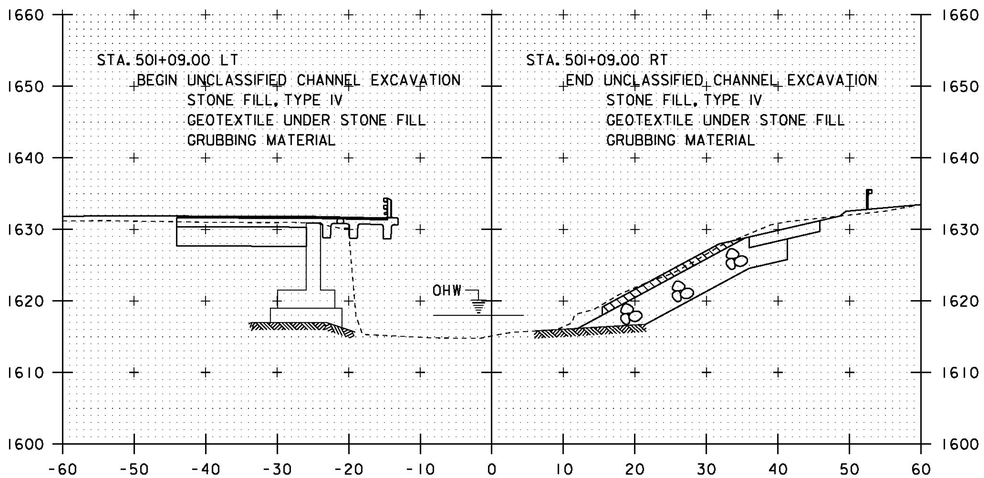
500+90



500+80



501+10



501+00

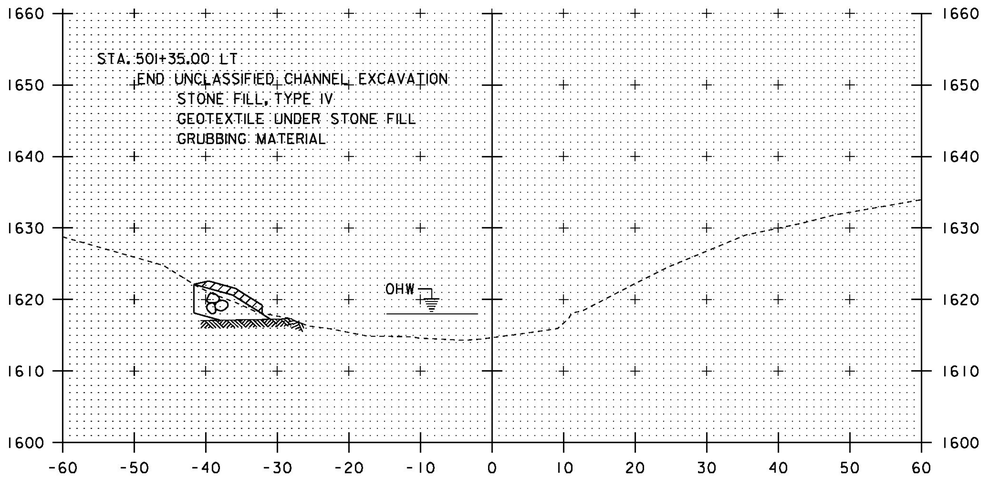
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10 0 10

STA. 500+80 TO STA. 501+10

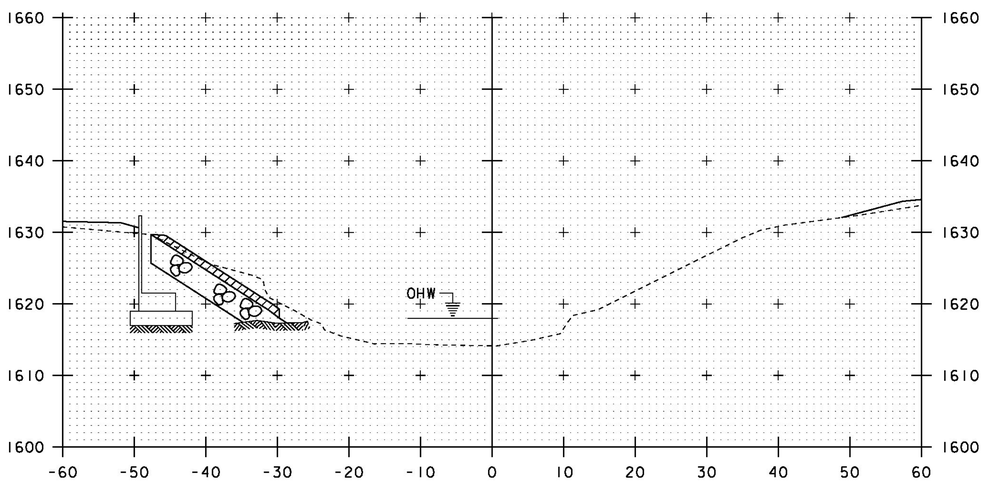
PROJECT NAME: WALDEN
PROJECT NUMBER: BRF 030-3(5)

FILE NAME: s09b308_xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
CHANNEL CROSS SECTIONS 3

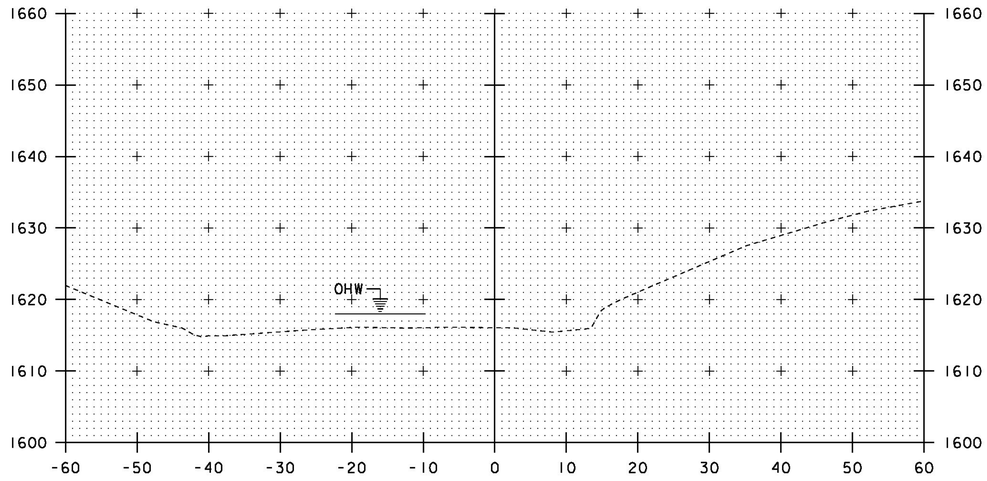
PLOT DATE: 30-DEC-2014
DRAWN BY: R. PELLETT
CHECKED BY: H. SALLS
SHEET 47 OF 56



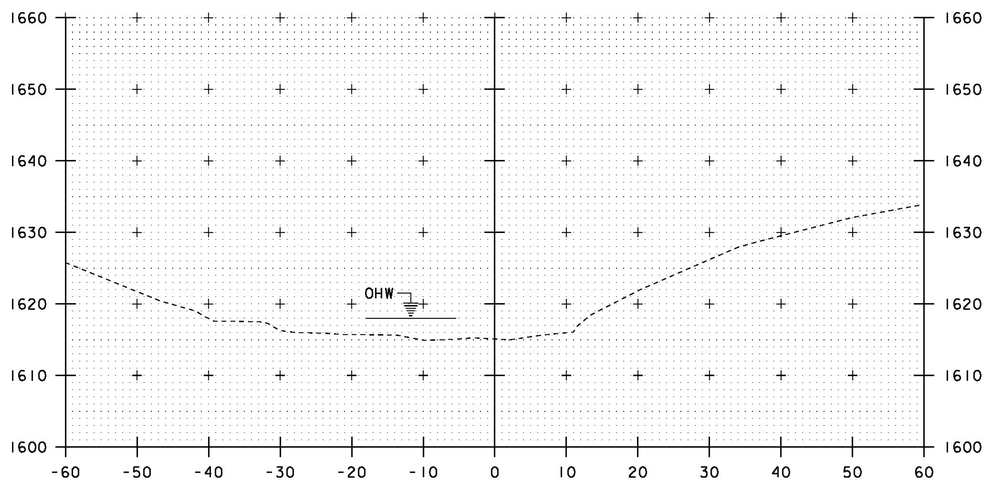
501+30



501+20



501+50



501+40

SCALE 1" = 10'-0"
10 0 10

STA. 501+20 TO STA. 501+50

PROJECT NAME: WALDEN	
PROJECT NUMBER: BRF 030-3(5)	
FILE NAME: s09b308_xsl.dgn	PLOT DATE: 30-DEC-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: H. SALLS	CHECKED BY: H. SALLS
CHANNEL CROSS SECTIONS 4	SHEET 48 OF 56

EPSC PLAN NARRATIVE

1.1 PROJECT DESCRIPTION

WALDEN BRF 030-3(5) IS FOR THE REPLACEMENT OF BRIDGE 83 CARRYING VT 15 OVER JOE'S BROOK IN WALDEN, VT. THE BRIDGE WILL BE REPLACED ON THE EXISTING ALIGNMENT WITH MINIMAL WIDENING AND APPROACH WORK NECESSARY TO MATCH IN TO EXISTING ROADWAY.

NOTE: AREA OF DISTURBANCE INCLUDES LIMITS OF EARTH DISTURBANCE WITHIN THE PROJECT AREA, AS WELL AS WASTE, BORROW AND STAGING AREAS, AND OTHER EARTH DISTURBING ACTIVITIES WITHIN OR DIRECTLY ADJACENT TO THE PROJECT LIMITS AS SHOWN ON THE ATTACHED EPSC PLAN.

TOTAL AREA OF DISTURBANCE AS SHOWN ON THE ATTACHED EPSC PLAN IS APPROXIMATELY 0.52 ACRES.

IT IS ANTICIPATED THAT THIS PROJECT WILL LAST ONE CONSTRUCTION SEASON.

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY

THE TOPOGRAPHY OF THE AREA IS A SADDLE THAT IS MOSTLY WELL ESTABLISHED FOREST WITH OCCASIONAL OPEN AREAS. VT ROUTE 15, BROOKSIDE DRIVE (TH 55) AND TOWN GARAGE GRAVEL DRIVEWAY ARE WITHIN THE PROJECT SITE. THERE ARE RESIDENCES ON THE SOUTH SIDE OF THE PROJECT.

1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER, AND PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES

JOE'S BROOK IS THE ONLY WATER SOURCE ON THE PROJECT SITE. THE BROOK IS CLASSIFIED AS STEEP, SINUOUS, NARROW, WITH A CONFINED CHANNEL AT THE SITE. THE STREAM BED CONSISTS OF MOSTLY LEDGE.

1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF HARDWOOD TREES AND UNDERGROWTH. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS DIRECTLY AFFECTED BY REPLACEMENT OF THE EXISTING BRIDGE. UPON PROJECT COMPLETION, THE CHANNEL WILL BE ARMORED WITH STONE FILL TYPE IV AS SPECIFIED ON THE PLANS.DISTURBED VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

1.2.4 SOILS

ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF CALEDONIA, VERMONT. SOILS ON THE PROJECT SITE ARE RUMNEY FINE SANDY LOAM, MONADNOCK FINE SANDY LOAM, VERSHIRE-LONBARD COMPLEX, 0% TO 25% SLOPES, "K FACTOR" = 0.28 TO 0.37. THE SOIL IS CONSIDERED HIGHLY ERODIBLE DUE TO SHALLOW SLOPES.

NOTE: K-VALUES GENERALLY INDICATE THE FOLLOWING:
0.0-0.23 = LOW EROSION POTENTIAL
0.24-0.36 = MODERATE EROSION POTENTIAL
0.37 AND HIGHER = HIGH EROSION POTENTIAL

1.2.5 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: NO
HISTORICAL OR ARCHEOLOGICAL AREAS: YES, SOUTHEAST AND SOUTHWEST ARCHEOLOGICAL AREAS
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: JOE'S BROOK
WETLANDS: YES - CLASS III WETLAND NORTHEAST OF THE BRIDGE

1.3 RISK EVALUATION

THIS PROJECT DOES NOT FALL UNDER THE JURISDICTION OF GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES. SHOULD CHANGES PRIOR TO OR DURING CONSTRUCTION RESULT IN ONE OR MORE ACRES OF EARTH DISTURBANCE OR SHOULD THE PROJECT BECOME PART OF A LARGER PLAN OF DEVELOPMENT, THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ADDITIONAL PERMITTING.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE PRINCIPLES OUTLINED IN THIS NARRATIVE CONSIST OF APPLYING MEASURES THROUGHOUT CONSTRUCTION OF THE PROJECT IN ORDER TO MINIMIZE SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION PRACTICES. THEY HAVE BEEN PROPOSED BY THE DESIGNER AS A BASIS FOR PROTECTING RESOURCES AND WILL NEED TO BE BUILT UPON BASED ON THE SPECIFIC MEANS AND METHODS OF THE CONTRACTOR. REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR SPECIFIC GUIDANCE AND CONSTRUCTION DETAILING.

ALL MEASURES SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT SHALL BE DISPOSED OF AT AN APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

1.4.1 MARK SITE BOUNDARIES

SITE BOUNDARIES AND AREAS CONSTRUCTION EQUIPMENT CAN ACCESS SHALL BE DELINEATED.

PROJECT DEMARCATION FENCING (PDF) SHALL BE USED TO PHYSICALLY MARK SITE BOUNDARIES.

1.4.2 LIMIT DISTURBANCE AREA

PREVENTING INITIAL SOIL EROSION BY MINIMIZING THE EXPOSED AREA IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. EARTH DISTURBANCE CAN BE MINIMIZED THROUGH CONSTRUCTION PHASING BY ONLY OPENING UP EARTH AS NECESSARY. THIS CAN LIMIT THE AREA THAT WILL BE DISTURBED AND EXPOSED TO EROSION. EMPLOY TEMPORARY CONSTRUCTION STABILIZATION PRACTICES IN INCREMENTAL STAGES AS PHASES CHANGE. FOR PROJECTS WHICH FALL UNDER THE CONSTRUCTION GENERAL PERMIT, ONLY THE ACREAGE LISTED ON THE PERMIT AUTHORIZATION MAY BE EXPOSED AT ANY GIVEN TIME.

MAINTAINING VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS OR OTHER SENSITIVE AREAS IS A CRUCIAL EROSION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE ESTABLISHED WHEREVER POSSIBLE.

1.4.3 SITE ENTRANCE/EXIT STABILIZATION

TRACKING OF SEDIMENT ONTO PUBLIC HIGHWAYS SHALL BE MINIMIZED TO REDUCE THE POTENTIAL FOR RUNOFF ENTERING RECEIVING WATERS. INSTALLATION SHALL COINCIDE WITH THE CONTRACTOR'S PROGRESS SCHEDULE.

STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AS PROPOSED ON THE EPSC PLAN AND ANYWHERE EQUIPMENT WILL BE GOING FROM AREAS OF EXPOSED SOILS TO PAVED SURFACES.

1.4.4 INSTALL SEDIMENT BARRIERS

SEDIMENT BARRIERS SHALL BE UTILIZED TO INTERCEPT RUNOFF AND ALLOW SUSPENDED SEDIMENT TO SETTLE OUT. THEY SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK.

SILT FENCE, FILTER CURTAIN AND DROP INLET PROTECTION WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN.

1.4.5 DIVERT UPLAND RUNOFF

DIVERSIONARY MEASURES SHALL BE USED TO INTERCEPT RUNOFF FROM ABOVE THE CONSTRUCTION AND DIRECT IT AROUND THE DISTURBED AREA SO THAT CLEAN WATER DOES NOT BECOME MUDDIED WHILE TRAVELING OVER EXPOSED SOILS ON THE CONSTRUCITON SITE.

1.4.6 SLOW DOWN CHANNELIZED RUNOFF

CHECK STRUCTURES SHALL BE UTILIZED TO REDUCE THE VELOCITY, AND THUS THE EROSIVE POTENTIAL, OF CONCENTRATED FLOW IN CHANNELS.

1.4.7 CONSTRUCT PERMANENT CONTROLS

PERMANENT STORMWATER TREATMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH PERMIT CONDITIONS.

1.4.8 STABILIZE EXPOSED SOILS DURING CONSTRUCTION

ALL AREAS OF DISTURBANCE MUST HAVE TEMPORARY STABILIZATION IN PLACE WITHIN 48 HOURS OF DISTURBANCE OR IN ACCORDANCE WITH THE CONSTRUCTION GENERAL PERMIT 3-9020 AUTHORIZATION.

SURFACE ROUGHENING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, SHALL BE UTILIZED ON A REGULAR BASIS. BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3.

THE FORECAST OF RAINFALL EVENTS SHALL TRIGGER IMMEDIATE PROTECTION OF EXPOSED SOILS.

1.4.9 WINTER STABILIZATION

VARIOUS MEASURES SPECIFIC TO WINTER MAY BE NECESSARY SHOULD THE PROJECT EXTEND INTO WINTER (OCTOBER 15 THROUGH APRIL 15). REFER TO THE LOW RISK SITE HANDBOOK FOR GUIDANCE.

1.4.10 STABILIZE SOIL AT FINAL GRADE

EXPOSED SOIL MUST BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE.

SEED, MULCH, FERTILIZER AND LIME SHALL BE USED TO ESTABLISH PERMANENT VEGETATION. FOR SLOPES STEEPER THAN 1:3, BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED INSTEAD OF MULCH.

1.4.12 INSPECT YOUR SITE

INSPECT THE PROJECT SITE BASED ON SPECIAL PROVISION REQUIREMENTS OR CONSTRUCTION GENERAL PERMIT AUTHORIZATION STIPULATIONS.

1.5 SEQUENCE AND STAGING

THIS SECTION WILL BE DEVELOPED BY THE CONTRACTOR USING THE GUIDANCE OUTLINED IN THE VTRANS EPSC PLAN CONTRACTOR CHECKLIST.

1.5.2 OFF-SITE ACTIVITIES

IN ADDITION TO THE CONTRACTOR CHECKLIST ANY ACTIVITIES OUTSIDE THE CONSTRUCTION LIMITS SHALL FOLLOW SUBSECTIONS 105.25- 105.29 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.

PROJECT NAME:	WALDEN
PROJECT NUMBER:	BRF 030-3(5)

FILE NAME: s09b308_epsc_narrative.dgn	PLOT DATE: 05-DEC-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: H. SALLS	CHECKED BY: H. SALLS
EPSC NARRATIVE	SHEET 49 OF 56

SOIL INFORMATION:
RUMNEY FINE SANDY LOAM
(NOT HIGHLY ERODIBLE)
K-FACTOR = 0.28, 0%-2% SLOPES
HYDROLOGICAL SOIL GROUP: C

SOIL INFORMATION:
MONADNACK FINE SANDY LOAM
(HIGHLY ERODIBLE)
K-FACTOR = 0.28, 15%-25% SLOPES
HYDROLOGICAL SOIL GROUP: B

N

VT STATE PLANE GRID

KONETZNY, TOM & PATRICIA

TOWN OF WALDEN

N/F ROWELL

GARAGE

GARAGE

ABOVE GROUND FUEL TANK

HEDGE

GUYW

EL #32/I/3/128-I

M MAPLE STUMP

2 M MAPLE

M PINE

SATELITE

HOUSE

15 FT HIGH CEDAR

M MAPLE

3 S CEDARS

STONE RETAINING WALL

3 S MAPLES

SPRUCES

GUYP #531S

S SPRUCE

EXISTING R.O.W.

T.B. #3/24/534

VT15 TO HARDWICK

49.5' EXISTING R.O.W.

270+00

271+00

272+00

273+00

274+00

275+00

276+00

S SPRUCE

SPRUCE

3 MAILBOXES

TEL #37/65/533

STONE RETAINING WALL

501+00

501+50

TEL #3/126

SHRUB

TEL #63/532

GUYW

1630

1640

1620

GARDEN

SHRUB

GARDEN

GARDEN

GAMMELL, HAROLD & MELONY

HOUSE

751+00

751+50

TH 55

SHRUB

ESTATE OF EVA HALE

TOWN OF WALDEN

STONE FOUNDATION

STONE FOUNDATION

GUYW

GUYW

FOUNDATION

JOE'S BROOK

S SPRUCE

S SPRUCE

WELL

N/F HOOKER

FLOWERS

SUBW

TO WEST DANVILLE VT15

ARCH

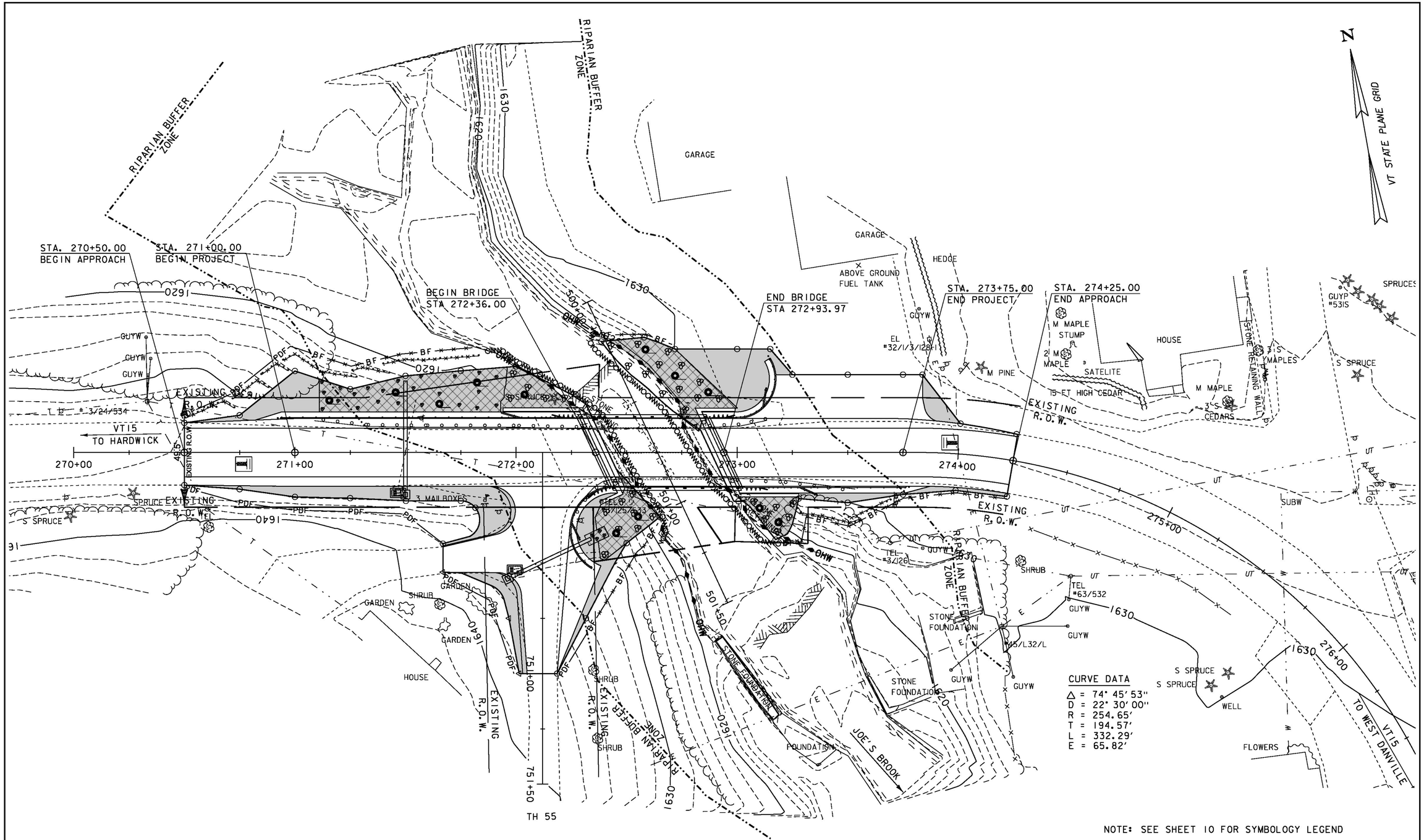
SOIL INFORMATION:
VERSHIRE-LOMBARD COMPLEX, ROCKY
(HIGHLY ERODIBLE)
K-FACTOR = 0.37, 15%-25% SLOPES
HYDROLOGICAL SOIL GROUP: C

SOIL INFORMATION:
MONADNACK FINE SANDY LOAM
(HIGHLY ERODIBLE)
K-FACTOR = 0.28, 15%-25% SLOPES
HYDROLOGICAL SOIL GROUP: B

EPSC EXISTING CONDITIONS

SCALE 1" = 20'-0"
20 0 20

PROJECT NAME:	WALDEN
PROJECT NUMBER:	BRF 030-3(5)
FILE NAME: s09b308_bdr_ero.dgn	PLOT DATE: 05-DEC-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: H. SALLS	CHECKED BY: H. SALLS
EPSC EXISTING CONDITIONS	SHEET 50 OF 56



CURVE DATA

Δ	= 74° 45′ 53″
D	= 22° 30′ 00″
R	= 254.65′
T	= 194.57′
L	= 332.29′
E	= 65.82′

NOTE: SEE SHEET 10 FOR SYMBOLOGY LEGEND

EPSC CONSTRUCTION CONDITIONS

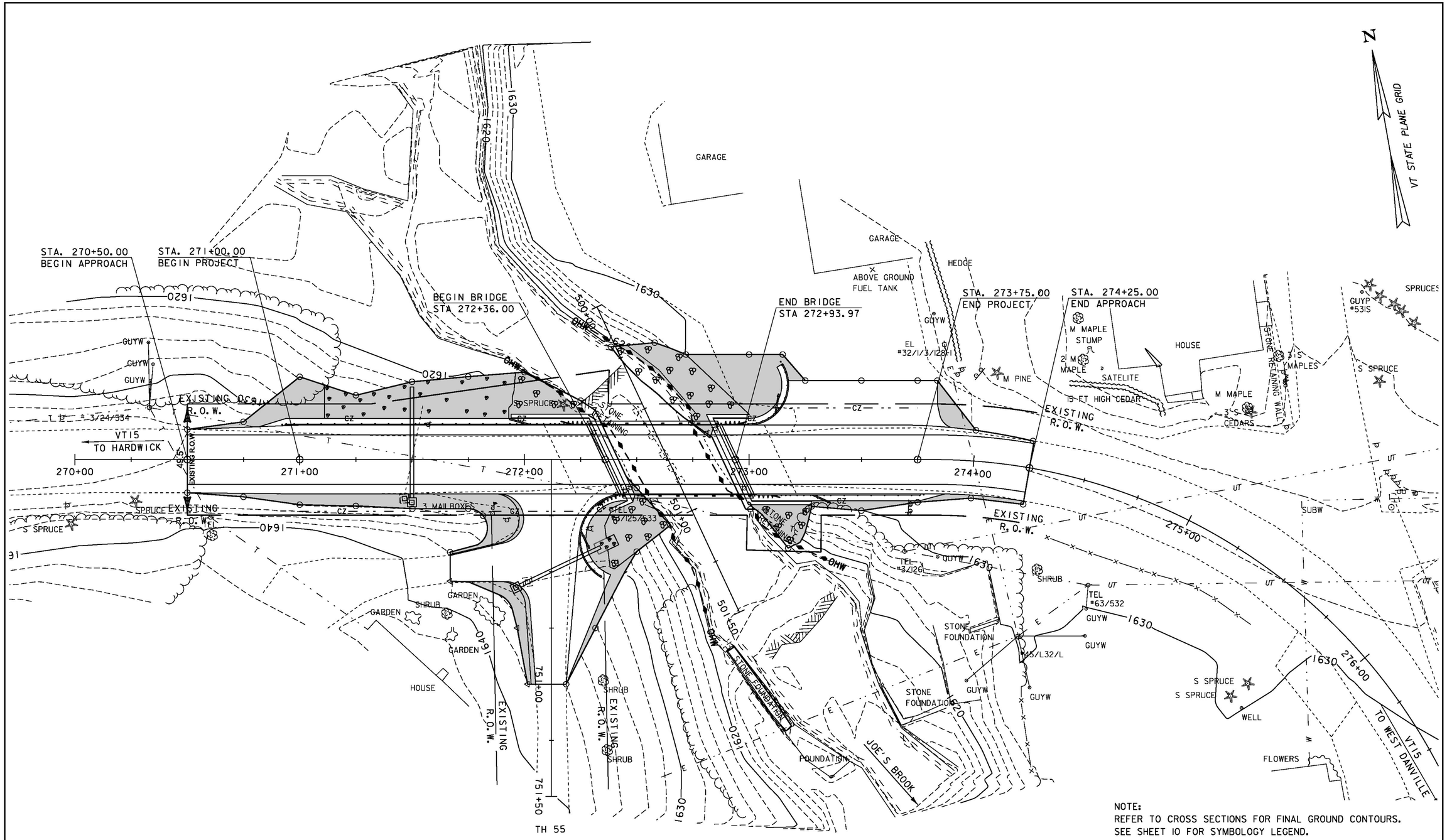
SCALE 1" = 20′-0"

20 0 20

STABALIZED CONSTRUCTION ENTRANCE

INLET PROTECTION

PROJECT NAME:	WALDEN
PROJECT NUMBER:	BRF 030-3(5)
FILE NAME: s09b308_bdr_ero.dgn	PLOT DATE: 05-DEC-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: H. SALLS	CHECKED BY: H. SALLS
EPSC CONSTRUCTION CONDITIONS	SHEET 51 OF 56

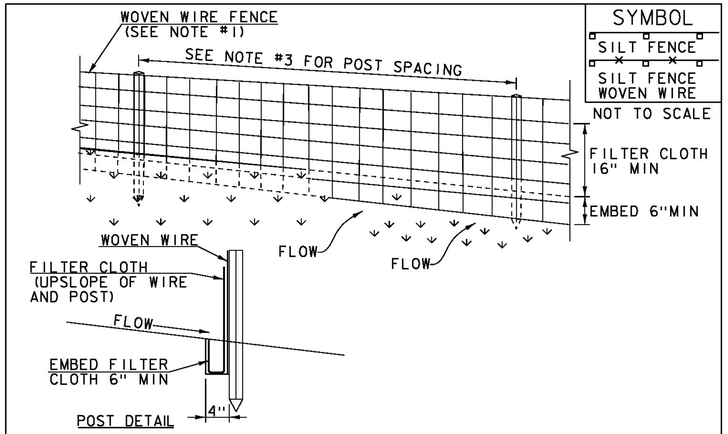


NOTE:
REFER TO CROSS SECTIONS FOR FINAL GROUND CONTOURS.
SEE SHEET 10 FOR SYMBOLOGY LEGEND.

EPSC FINAL CONDITIONS

SCALE 1" = 20'-0"
20 0 20

PROJECT NAME:	WALDEN
PROJECT NUMBER:	BRF 030-3(5)
FILE NAME: s09b308_bdr_ero.dgn	PLOT DATE: 05-DEC-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: H. SALLS	CHECKED BY: H. SALLS
EPSC FINAL CONDITIONS	SHEET 52 OF 56



SYMBOL

SILT FENCE

SILT FENCE WOVEN WIRE

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE REINFORCED FENCE IS REQUIRED WITHIN 100' UPSLOPE OF RECEIVING WATERS WHEN THE PROJECT FALLS UNDER A CONSTRUCTION STORMWATER PERMIT. WOVEN WIRE SHALL BE A MIN. 14 GAUGE WITH A 6" MAX. MESH OPENING.
2. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI100X, STABILINKA T140N OR APPROVED EQUIVALENT.
3. POST SPACING FOR WIRE-BACKED FENCE SHALL BE 10' MAXIMUM. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4' AND WHEN ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6'.
4. WOVEN WIRE FENCE IS TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. FILTER CLOTH IS TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY 6" AND FOLDED.
6. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT.

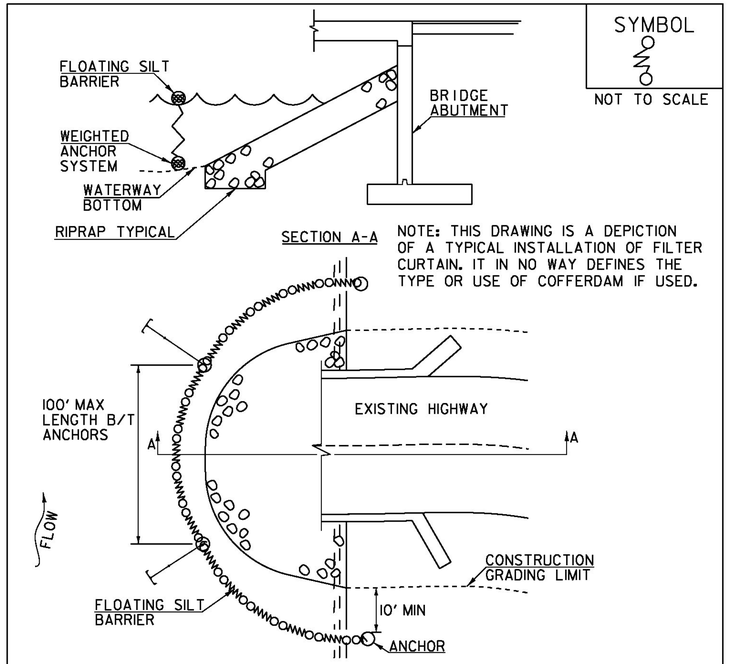
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SILT FENCE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 AND AS SHOWN IN THE PLANS FOR ~~GEOTEXTILE FOR SILT FENCE (PAY ITEM 649.511) OR~~ GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED (PAY ITEM 649.515).

REVISIONS	
MARCH 21, 2008	WHF
DECEMBER 11, 2008	WHF
JANUARY 13, 2009	WHF



SYMBOL

NOT TO SCALE

NOTE: THIS DRAWING IS A DEPICTION OF A TYPICAL INSTALLATION OF FILTER CURTAIN. IT IN NO WAY DEFINES THE TYPE OR USE OF COFFERDAM IF USED.

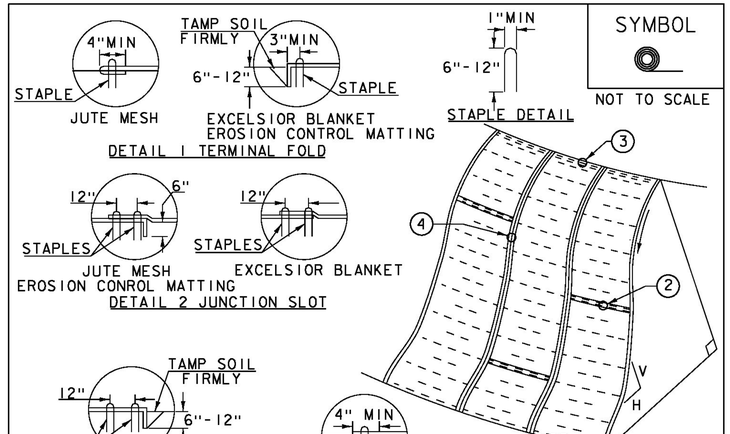
CONSTRUCTION SPECIFICATIONS

1. FILTER CURTAIN SHALL NOT BE PLACED ACROSS A FLOWING WATERWAY, OR IN A WATERWAY WITH STREAM VELOCITIES GREATER THAN 1.5 FEET/SECOND.
2. MAXIMUM 100' LENGTH BETWEEN ANCHORS.
3. LAST SECTION SHALL TERMINATE A MINIMUM OF 10' BEYOND LIMIT OF DISTURBANCE.
4. THE WEIGHTED ANCHOR SYSTEM SHALL BE A TYPE WHICH ALLOWS THE CURTAIN TO CONFORM TO THE BOTTOM OF THE WATERWAY.
5. THE CURTAIN SHALL BE REMOVED BY SLOWLY PULLING TOWARD THE SHORE MINIMIZING THE ESCAPE OF SEDIMENTS INTO WATERWAY.

FILTER CURTAIN

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 FOR GEOTEXTILE FOR FILTER CURTAIN (PAY ITEM 649.61).

REVISIONS	
APRIL 1, 2008	WHF
JANUARY 13, 2009	WHF
SEPTEMBER 4, 2009	WHF



SYMBOL

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. APPLY TO SLOPES GREATER THAN 3H: 1V OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.
2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4'X225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4'X150' ROLL OF MATERIAL.
4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

ROLLED EROSION CONTROL PRODUCT (RECP) SIDE SLOPE

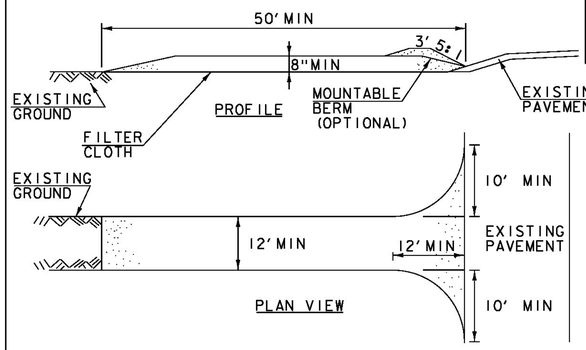
NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 AND AS SHOWN IN THE PLANS FOR TEMPORARY EROSION MATTING (PAY ITEM 653.20) ~~OR PERMANENT EROSION MATTING (PAY ITEM 653.21).~~

REVISIONS	
APRIL 16, 2007	JMF
JANUARY 13, 2009	WHF

PROJECT NAME:	WALDEN
PROJECT NUMBER:	BRF 030-3(5)
FILE NAME: s09b308_epsc_details.dgn	PLOT DATE: 05-DEC-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: H. SALLS	CHECKED BY: H. SALLS
EPSC DETAILS 1	SHEET 53 OF 56

SYMBOL

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

1. STONE SIZE- USE 1-4" STONE, RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH- NOT LESS THAN 50' (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30' MINIMUM LENGTH APPLIES).
3. THICKNESS- NOT LESS THAN 8".
4. WIDTH- 12' MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. 24' IF SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE MUST BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE.
6. SURFACE WATER- ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED ACCORDING TO PERMIT REQUIREMENTS.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

STABILIZED CONSTRUCTION ENTRANCE

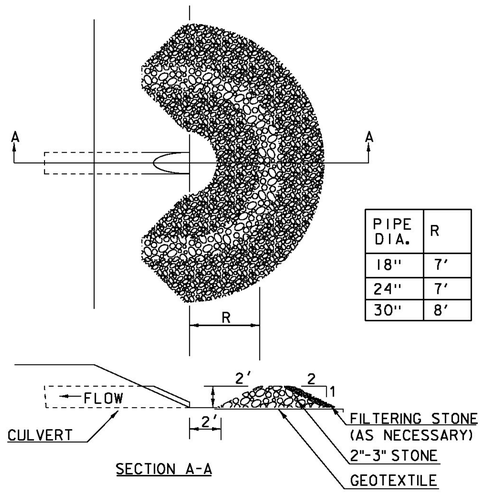
NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR VEHICLE TRACKING PAD (PAY ITEM 653.35) OR AS SPECIFIED IN THE CONTRACT.

REVISIONS	
MARCH 24, 2008	WHF
JANUARY 13, 2009	WHF

SYMBOL

NOT TO SCALE



PIPE DIA.	R
18"	7'
24"	7'
30"	8'

CONSTRUCTION SPECIFICATIONS

1. USE 2" TO 3" STONE. FILTERING STONE SHALL BE 3/4".
2. PLACE STONE OVER GEOTEXTILE.
3. ONCE THE AREAS UPSTREAM FROM THE CHECK DAM ARE STABILIZED WITH VEGETATION, THE SEDIMENT TRAPPED BEHIND THE DAM SHALL BE DISPOSED OF IN AN APPROVED WASTE AREA.
4. THE CHECK DAM(S) SHALL BE FLATTENED AND GRADED IN A MANNER WHICH PROTECTS THE AREA FROM EROSION AND CHANNEL BLOCKAGE . (GEOTEXTILE MUST BE REMOVED).
5. THE GEOTEXTILE MUST BE DISPOSED OF APPROPRIATELY.
6. THE AREA CONTRIBUTING TO THE CHECK DAM SHALL NOT EXCEED 4 ACRES.

ADAPTED FROM DETAILS PROVIDED BY: ILLINOIS USDA-NRCS
ORIGINALLY DEVELOPED BY USDA-NRCS

PIPE INLET PROTECTION

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR INLET PROTECTION DEVICE, TYPE I (PAY ITEM 653.40).

REVISIONS	
MARCH 6, 2008	WHF
JANUARY 13, 2009	WHF

VAOT RURAL AREA MIX

	LBS/AC				
% WEIGHT	BROADCAST	HYDROSEED	NAME	GERM %	PURITY %
37.5%	22.5	45	CREEPING RED FESCUE	85%	98%
37.5%	22.5	45	TALL FESCUE	90%	95%
5.0%	3	6	RED TOP	90%	95%
15.0%	9	18	BIRDSFOOT TREFOIL	85%	98%
5.0%	3	6	ANNUAL RYE GRASS	85%	95%
100%	60	120			

VAOT URBAN AREA MIX

	LBS/AC				
% WEIGHT	BROADCAST	HYDROSEED	NAME	GERM %	PURITY %
42.5%	34	68	CREEPING RED FESCUE	85%	98%
10.0%	8	16	PERENNIAL RYE GRASS	90%	95%
42.5%	34	68	KENTUCKY BLUE GRASS	85%	85%
5.0%	4	8	ANNUAL RYE GRASS	85%	95%
100%	80	160			

SOIL AMENDMENT GUIDANCE

FERTILIZER		LIME	
BROADCAST	HYDROSEED	BROADCAST	HYDROSEED
10-20-10	*FOLLOW*	PELLETIZED	*FOLLOW*
500 LBS/AC	*MANUFACTURER*	2 TONS/AC	*MANUFACTURER*

CONSTRUCTION GUIDANCE

1. RURAL SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED UPLAND (NON WETLAND) AREAS DISTURBED BY THE CONTRACTOR.
2. URBAN SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED LAWN AREAS DISTURBED BY THE CONTRACTOR.
3. ALL SEED MIXTURES: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.
4. FERTILIZER AND LIMESTONE: SHALL FOLLOW RATES SHOWN ON PLAN OR AS DIRECTED BY THE ENGINEER
5. HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, ACHIEVE 90% GROUND COVER OR AS DIRECTED BY THE ENGINEER.
6. TOPSOIL: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.
7. HYDROSEEDING: ALTHOUGH GUIDANCE IS GIVEN ABOVE THE SITE CONDITIONS AND THE TYPE OF HYDROSEED WILL ULTIMATELY DICTATE THE AMOUNTS AND TYPES OF SOIL AMENDMENTS TO BE APPLIED
8. TURF ESTABLISHMENT: PLACING SEED, FERTILIZER, LIME AND MULCH PRIOR TO SEPTEMBER 15 AND AFTER APRIL 15 CAN BETTER ENSURE A VIGOROUS GROWTH OF GRASS.

ADAPTED FROM VTRANS TECHNICAL LANDSCAPE MANUAL FOR ROADWAYS AND TRANSPORTATION FACILITIES

TURF ESTABLISHMENT

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 651 ~~FOR SEED (PAY ITEM 651.15)~~

REVISIONS	
JUNE 23, 2009	WHF
JANUARY 15, 2010	WHF
FEBRUARY 16, 2011	WHF

PROJECT NAME: WALDEN
PROJECT NUMBER: BRF 030-3(5)

FILE NAME: s09b308_epsc_details.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
EPSC DETAILS 2

PLOT DATE: 05-DEC-2014
DRAWN BY: R. PELLETT
CHECKED BY: H. SALLS
SHEET 54 OF 56

STATE OF VERMONT
AGENCY OF TRANSPORTATION

RIGHT - OF - WAY DETAIL SHEET

TABLE OF PROPERTY ACQUISITION

PARCEL NO.	PROPERTY OWNER	ROW LAYOUT NO.	BEGINNING STATION	ENDING STATION	TAKE	REMAINDER	RIGHT			RECORDING DATA					REMARKS
					AREA±	AREA±	TYPE	T / P	AREA ±	TITLE	DATE	TOWN / CITY	BOOK	PAGE	
1	KONETZNY, THOMAS J. & PATRICIA A.	1	VT15 270+67 LT	VT15 272+12 LT			CONSTRUCTION	T	1,340 SF	WDOE	08/06/14	WALDEN	70	319-320	INCL. PDF, BF & EC
			VT15 270+85 LT	VT15 271+96 LT			SLOPE	P	713 SF						INCL. STONE FILL
			VT15 271+50 LT				CULVERT & DRAINAGE	P							
			VT15 271+96 LT	VT15 272+07 LT			CHANNEL	P	35 SF						INCL. STONE FILL
2	GAMMELL, HAROLD & MELONY	1	VT15 270+90 RT	VT15 271+84 RT			CONSTRUCTION	T	505 SF	GTR	08/14/14	WALDEN	70	341-343	INCL. PDF
			TH55 750+25 RT	TH55 750+42 RT			SLOPE	T	57 SF						
			TH55 750+36.80 RT	TH55 750+54.30 RT			DRIVE	T							17' - 6" WIDE PAVED; MM 0001
			TH55 750+54 RT	TH55 750+66 RT			CONSTRUCTION	T	97 SF						INCL. PDF
3A	TOWN OF WALDEN	1	VT15 272+38 LT	VT15 272+72 LT			CONSTRUCTION	T	249 SF	QCD	08/14/14	WALDEN	70	344-346	INCL. BF & EC
			VT15 272+39 LT	VT15 272+94 LT			CHANNEL	P	802 SF						INCL. STONE FILL
			VT15 272+72 LT	VT15 273+25 LT			SLOPE	T	782 SF						
			VT15 273+12 LT	VT15 273+18 LT			INSTALL & MAINTAIN	P							GUARDRAIL
			VT15 273+17.49 LT	VT15 273+83.49 LT			DRIVE	T							66' WIDE PAVED; MM 0521
3B		1	VT15 272+82.03± RT	VT15 272+99.21 RT	179 SF ±										
			VT15 273+32 RT	VT15 273+67 RT			CONSTRUCTION	T	193 SF						INCL. BF & EC
3C		1	VT15 271+94 RT	VT15 272+35 RT			INSTALL	T							18" CULVERT; INCL. DI
			VT15 271+99 RT	VT15 272+26 RT			REMOVE	T							15" CGMP CULVERT
			VT15 272+29 RT	VT15 272+34.84 RT			INSTALL & MAINTAIN	P	31 SF						WINGWALL & FOOTINGS
			TH55 750+25 CL	TH55 751+00 CL			APPROACH	T							TH55
			TH55 750+25 LT	TH55 750+56 LT			INSTALL & MAINTAIN	P							GUARDRAIL
			TH55 750+59 RT	TH55 751+00 RT			CONSTRUCTION	T	202 SF						INCL. PDF
			TH55 750+76 LT	TH55 751+00 LT			CONSTRUCTION	T	105 SF						INCL. PDF & BF
4	ESTATE OF EVA M. HALE	1	VT15 272+34.84 RT	VT15 272+93.10± RT	1,093 SF ±					WDIF	09/22/14	WALDEN	70	454-455	
	CHURCHILL, AMANDA - ADMINISTRATOR		TH55 750+47 LT	TH55 750+76 LT			CONSTRUCTION	T	148 SF						INCL. BF & EC
			TH55 750+48 LT	TH55 750+67 LT			SLOPE	T	84 SF						
			TH55 750+50 LT	TH55 750+56 LT			INSTALL & MAINTAIN	P							GUARDRAIL
5	TELEPHONE OPERATING COMPANY OF VERMONT, LLC		VT15 270+67 LT	VT15 273+84 LT											UTILITY
6	WASHINGTON ELECTRIC COOPERATIVE, INC.		VT15 270+67 LT	VT15 273+84 LT											UTILITY

TABLE OF REVISIONS

REVISION NO.	ROW SET SHEET #	DESCRIPTION	DATE
1	3, 4	PARCEL 3, TOWN OF WALDEN - ADDED	05/21/14
		TEMP. AND PERM. RIGHTS FOR	
		PROPOSED WORK IN TH55 ROW.	
		COMPL. BY: MT CO 9885 APPR. BY: RC	
2	3	PARCEL 1, KONETZNY - REVISE SLOPE	05/30/14
		EASEMENT FROM TEMP. TO PERM.	
		COMPL. BY: MT CO 9889 APPR. BY: RC	

APPROVED: RYAN CLOUTIER DATE: 04-28-14
CHIEF, PLANS & TITLES

PROJECT NAME: **WALDEN**
PROJECT NUMBER: **BRF 030-3(5)**

FILE NAME: **r09b308detail.xls**
PROJECT LEADER: **C. CARLSON**
DESIGNED BY: **J. BLANCHARD**
R.O.W. DETAIL SHEET #1

PLOT DATE: **05-DEC-2014**
DRAWN BY: **M. TROTTIER**
CHECKED BY: **R. CLOUTIER**
SHEET **55** OF **56**

REMOVAL AND DISPOSAL OF GUARDRAIL
STA 271+08.75 - STA 272+34.42 LT
STA 272+26.69 - STA 272+48.18 RT
STA 272+80.89 - STA 273+13.50 LT
STA 272+92.93 - STA 273+53.34 RT

BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM
STA 272+27.58 - STA 272+87.58 LT
STA 272+42.42 - STA 273+02.39 RT

GUARDRAIL APPROACH SECTION - GALVANIZED 3 RAIL BOX BEAM
STA 271+93.58 - STA 272+27.58 LT
STA 750+39.16 SL - STA 272+42.42 RT
STA 272+87.58 - STA 273+16.00 LT
STA 273+02.39 - STA 273+36.39 RT

BOX BEAM GUARDRAIL
STA 270+92.25 - STA 271+93.58 LT
STA 750+53.16 - STA 750+39.16 SL RT
STA 273+16.00 - STA 273+17.08 LT
STA 273+36.39 - STA 273+77.72 RT

CONSTRUCT PAVED DRIVE
STA 750+36.80 - STA 750+54.30 RT - 17'-6"
STA 273+17.49 - STA 273+83.49 LT - 66'-0"

RELOCATE MAILBOX, MULTIPLE SUPPORT
STA 271+85.00 RT

STONE FILL, TYPE II W/ GEOTEXTILE UNDER STONE FILL & GRUBBING MATERIAL
STA 270+50.00 - STA 271+94.30 LT

SALVAGE EXISTING BENT
STA 272+65.00

N
VT STATE PLANE GRID

BEGIN R.O.W. PROJECT
BRF 030-3(5)
STA. 270+67 24.75' LT

END R.O.W. PROJECT
BRF 030-3(5)
STA. 273+84 24.75' LT

1 **KONETZNY, TOM & PATRICIA**

3A **TOWN OF WALDEN**

N/F ROWELL

2 **GAMMELL, HAROLD & MELONY**

4 **ESTATE OF EVA HALE**

3B **TOWN OF WALDEN**

3C **TOWN OF WALDEN**

N/F HOOKER

STA. 270+50.00 BEGIN APPROACH
STA. 271+00.00 BEGIN PROJECT
POB 270+00.00
BEGIN BRIDGE STA 272+36.00
END BRIDGE STA 272+93.97
STA. 273+75.00 END PROJECT
PC 273+81.60
STA. 274+25.00 END APPROACH
MAINLINE PI
STA 275+75.67 BK
STA 275+18.97 AHD
VT 15 STA 272+65.00 = CHANNEL STA 500+75.00 △= 115° LT
VT15 TO HARDWICK
TH 55 STA 750+00.00 △= 90° LT
STA 751+00.00 END TH 55 CONSTRUCTION MATCH EXISTING
TH 55
APPROACH(T)
EXISTING ROW 3 RODS 49.5'
EXISTING R.O.W.
48.5' EXISTING R.O.W.
CONST(T)
SR(T)
DRIVE(T)
INSTALL(T)
REM(T)
CULV& DR(P)
CH(P)
SR(P)
I&M(P)
N80°59'13"W 81.68'
N89°6'0"W 107.14'
N80°59'13"W 144.06'
S10°37'41"W 15.02'
S80°59'13"E 17.18'±
S80°59'13"E 49.50'
S80°59'13"E 47.19'±
S80°59'13"E 49.51'
S80°59'13"E 135.34'
S89°7'54"E 58.33'±
S 80°59'13" E
S 80°59'13" E
S 80°13'20" E
272+37.75 39.87 FT
270+50.00 24.75 FT
271+31.68 24.75 FT
272+37.54 24.75 FT
272+34.84 24.75 FT
272+99.21 24.75 FT
273+81.55 24.75 FT
273+32.08 24.75 FT
273+81.65 24.75 FT
272+82.03± 24.75 FT
271+85.34 24.75 FT
272+35.36 49.37 FT
272+93.10± 41.10 FT
272+98.83 40.28 FT
273+32.00 41.21 FT
270+00
271+00
272+00
273+00
274+00
275+00
276+00
500+00
501+00
501+50
751+00
751+50
R 18'-0"
R 11'-0"
R 15'
24.62'
57°48'16"
BF
PBF
CZ
EXISTING R.O.W.
HVCTRL
GUYW
SPRUCE
SHRUB
GARDEN
HOUSE
GARAGE
ABOVE GROUND FUEL TANK
HEDGE
M MAPLE STUMP
2 M MAPLE
SATELITE
15 FT HIGH CEDAR
M MAPLE
3 S CEDARS
3 S MAPLES
STONE RETAINING WALL
S SPRUCE
M PINE TIE DIST IS 19.39
TIE DIST IS 79.20 @ 3/24/534
TIE DIST IS 55.33
TIE DIST IS 79.48 COR GAR
TIE DIST IS 59.5 COR GAR
S SPRUCE TIE DIST IS 55.33
RR SPIKE IN POLE TIE DIST IS 73.57
TIE DIST IS 82.65 ON HOUSE
3 MAILBOXES
STONE FOUNDATION
FOUNDATION
SUBW
TEL #3/126
TEL #63/53
#35/L32/1
WELL
FLOWERS
TO WEST DANVILLE
S BRANCH BROOK
UT
OHW
W

CURVE DATA
△ = 74° 45' 53"
D = 22° 30' 00"
R = 254.65'
T = 194.57'
L = 332.29'
E = 65.82'

ROW BEARINGS
A N25°5'24"W 19.75'
B S89°7'54"E 5.79'±
C N10°16'18"E 15.53'
D S79°22'19"E 33.18'
E N9°19'9"E 16.41'

BENCH MARK
275+97.33, 40.7 FT LT
RR SPIKE IN POLE
ELEV. 1633.461

EXISTING BRIDGE DATA
CONCRETE T-BEAM
LENGTH = 43'-0"
WIDTH = 22.3' CURB TO CURB
BUILT IN 1933

LINES SHOWN ON THIS PLAN AS EXISTING PROPERTY LINES P/L ARE BELIEVED TO BE ACCURATE BUT SHOULD NOT BE RELIED UPON FOR PURPOSES UNRELATED TO THE STATE OF VERMONT'S ACQUISITION OF LAND AND RIGHTS FOR THIS PROJECT.

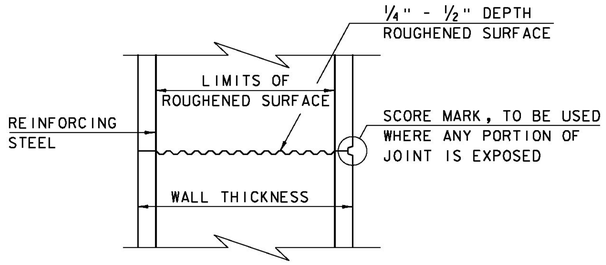
FOR R.O.W. USE ONLY

LAYOUT
SCALE 1" = 20'-0"
20 0 20

PROJECT NAME:	WALDEN
PROJECT NUMBER:	BRF 030-3(5)
FILE NAME: r09b308lay.dgn	PLOT DATE: 05-DEC-2014
PROJECT LEADER: C. CARLSON	DRAWN BY: J. BLANCHARD
DESIGNED BY: R. PELLETT	CHECKED BY: R. CLOUTIER
R.O.W. LAYOUT SHEET 1OF 1	SHEET 56 OF 56

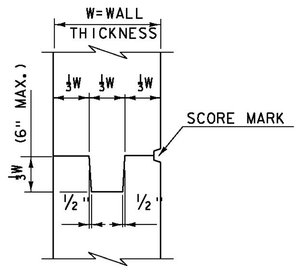
CONCRETE GENERAL NOTES

1. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1" x 1"
2. REINFORCING STEEL SIZE AND SPACING SHOWN IN THE PLANS IS BASED ON 60 KSI STEEL, UNLESS NOTED OTHERWISE. WITH THE ENGINEER'S PERMISSION, BAR SIZE AND SPACING MAY BE MODIFIED ACCORDING TO THE LATEST AASHTO LRFD BRIDGE DESIGN SPECIFICATION AND STRUCTURES DESIGN MANUAL WHEN USING HIGHER STRENGTH STEEL.

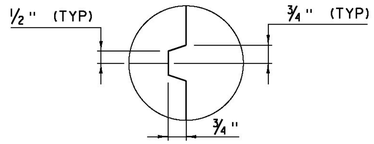


TYPICAL HORIZONTAL CONSTRUCTION JOINT
(NOT TO SCALE)

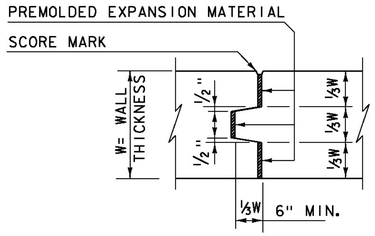
1. THE SURFACE OF THE CONCRETE CONSTRUCTION JOINTS SHALL BE CLEANED AND FREE OF LAITANCE.
2. IMMEDIATELY BEFORE NEW CONCRETE IS PLACED, ALL CONSTRUCTION JOINTS SHALL BE WETTED AND STANDING WATER REMOVED.



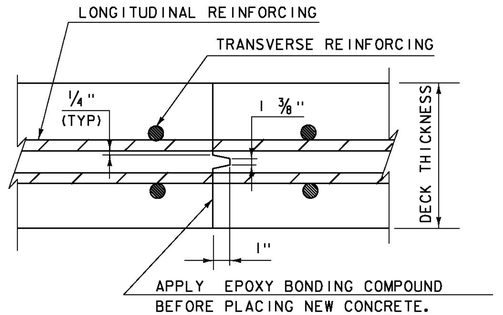
TYPICAL CONCRETE CONSTRUCTION JOINT
(NOT TO SCALE)



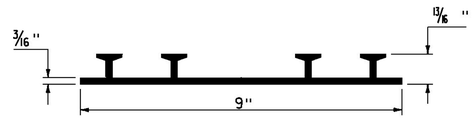
SCORE MARK DETAIL
(NOT TO SCALE)



TYPICAL CONCRETE EXPANSION JOINT
(NOT TO SCALE)



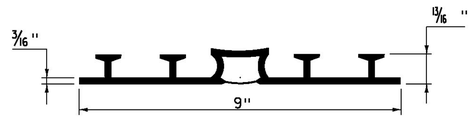
TRANSVERSE BRIDGE SLAB CONSTRUCTION JOINT DETAILS
(NOT TO SCALE)



P.V.C. WATERSTOP FOR CONSTRUCTION JOINTS
(NOT TO SCALE)

PAYMENT FOR THE P.V.C. WATERSTOP SHALL BE INCIDENTAL TO THE UNIT BID PRICE FOR THE ADJACENT CONCRETE.

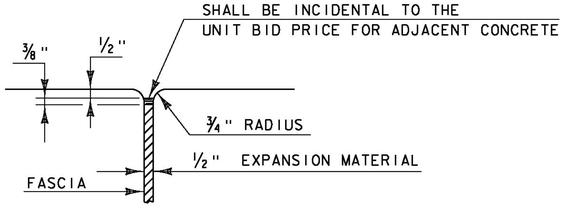
OTHER CONFIGURATIONS OF WATERSTOP MAY BE USED UPON APPROVAL OF THE ENGINEER.



P.V.C. WATERSTOP FOR EXPANSION JOINTS
(NOT TO SCALE)

PAYMENT FOR THE P.V.C. WATERSTOP SHALL BE INCIDENTAL TO THE UNIT BID PRICE FOR THE ADJACENT CONCRETE.

OTHER CONFIGURATIONS OF WATERSTOP MAY BE USED UPON APPROVAL OF THE ENGINEER.



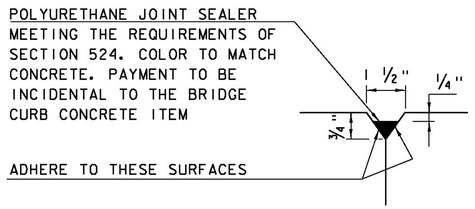
JOINT BETWEEN FASCIA AND WINGWALL
(NOT TO SCALE)

REVISIONS	
MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION
FEBRUARY 9, 2012	REBAR SUBSTITUTION ALLOWANCE ADDED TO CONCRETE GENERAL NOTES.

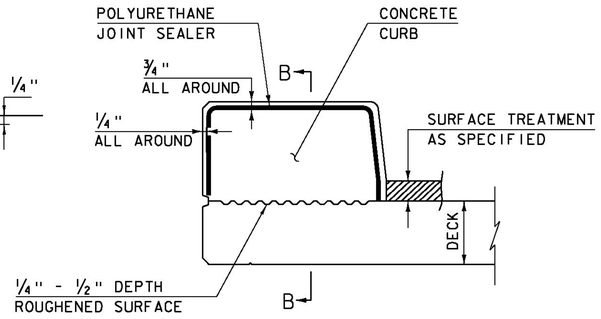
CONCRETE DETAILS AND NOTES

VERMONT AGENCY OF TRANSPORTATION
STRUCTURES SECTION

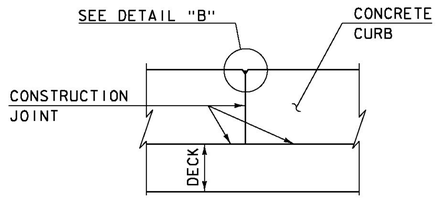
STRUCTURES DETAIL
SD-501.00



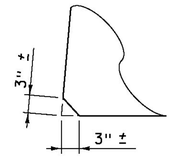
DETAIL "B"
(NOT TO SCALE)



CONCRETE CURB JOINT SECTION
(NOT TO SCALE)



SECTION B - B
(NOT TO SCALE)



ACUTE ANGLE CLIP DETAIL
(NOT TO SCALE)

1. SEE TYPICAL HORIZONTAL CONSTRUCTION JOINT DETAIL FOR ADDITIONAL INFORMATION

CONCRETE CURB JOINT NOTES

1. CONCRETE CURBS MAY BE PLACED IN ONE CONTINUOUS OPERATION IF AN APPROVED SHRINKAGE REDUCING ADMIXTURE LISTED IN THE SPECIAL PROVISIONS IS USED WITH THE CONCRETE MIX DESIGN. PAYMENT FOR THE SHRINKAGE REDUCING ADMIXTURE WILL BE INCIDENTAL TO THE BRIDGE CURB CONCRETE ITEM.

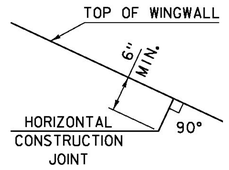
2. IF THE CONTRACTOR CHOOSES NOT TO USE AN APPROVED SHRINKAGE REDUCING ADMIXTURE, THE CURBS SHALL BE CONSTRUCTED WITH CONSTRUCTION JOINTS SPACED AT A MAXIMUM OF 15'-0" CENTER TO CENTER AND 2'-0" MINIMUM FROM THE CENTER OF NEAREST BRIDGE RAILING POST.

3. ON MULTI-SPAN CONTINUOUS SUPERSTRUCTURES, REGARDLESS OF WHETHER APPROVED SHRINKAGE REDUCING ADMIXTURE IS USED, CURB JOINTS SHALL BE LOCATED OVER THE CENTERLINE OF PIERS AND 7'-0" EACH SIDE OF THE CENTERLINE OF EACH PIER.

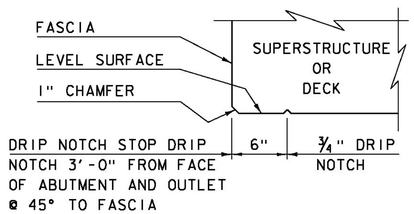
4. WHEN CURB JOINTS ARE USED THE CURBS SHALL BE PLACED IN ALTERNATE SECTIONS WITH A MINIMUM OF 48 HOUR DELAY BETWEEN ADJACENT PLACEMENTS.

5. LONGITUDINAL REINFORCING SHALL BE CONTINUOUS THROUGH CURB CONSTRUCTION JOINTS. CURB STIRRUP BARS SHALL BE TURNED AS NECESSARY TO MAINTAIN COVER IN THE FLARED CURB ENDS.

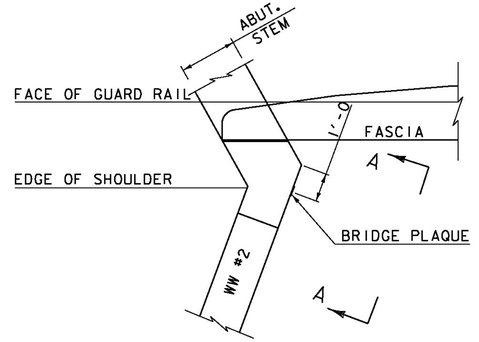
6. THE JOINT SPACING AND DETAILS SHOWN SHALL APPLY TO SIDEWALKS WHEN SHOWN IN THE PLANS.



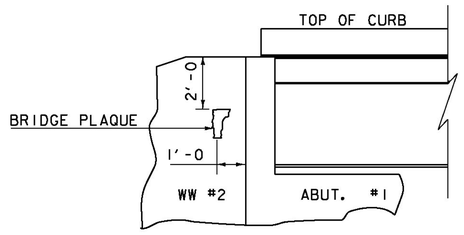
HORIZONTAL WINGWALL CONSTRUCTION JOINT
(NOT TO SCALE)



DRIP NOTCH DETAIL
(NOT TO SCALE)



PLAN



VIEW "A - A"

BRIDGE PLAQUE
(NOT TO SCALE)

THE BRIDGE PLAQUE WILL BE SUPPLIED BY THE AGENCY OF TRANSPORTATION AND SHALL BE INSTALLED BY THE CONTRACTOR AT ABUTMENT #1 ON THE RIGHT SIDE AS SHOWN OR AS DIRECTED BY THE ENGINEER.

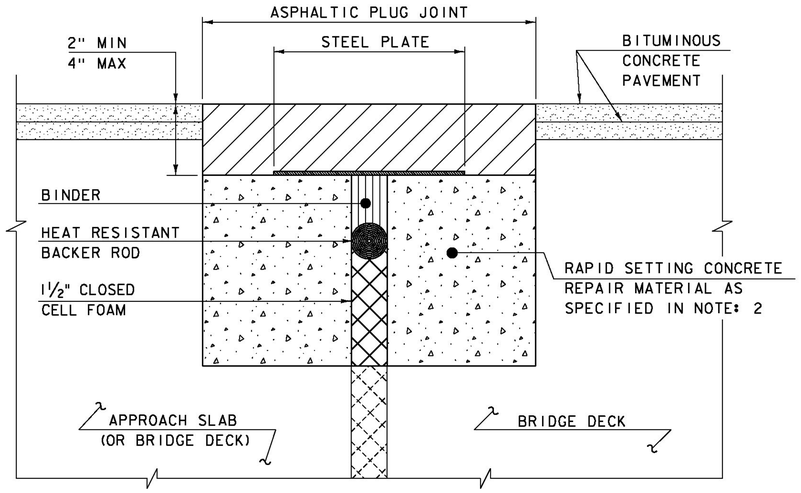
PAYMENT FOR INSTALLATION OF THE BRIDGE PLAQUE SHALL BE INCIDENTAL TO THE ADJACENT CONCRETE.

REVISIONS	
MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION
JUNE 4, 2010	MODIFIED AND ADDED TWO DETAILS
OCTOBER 10, 2012	MODIFIED HORZ. JOINT WINGWALL ADD 6" MIN. DIMENSION

CONCRETE DETAILS AND NOTES

VERMONT AGENCY OF TRANSPORTATION
STRUCTURES - SECTION

STRUCTURES DETAIL
SD-502.00



ASPHALTIC PLUG JOINT DETAIL - REHAB

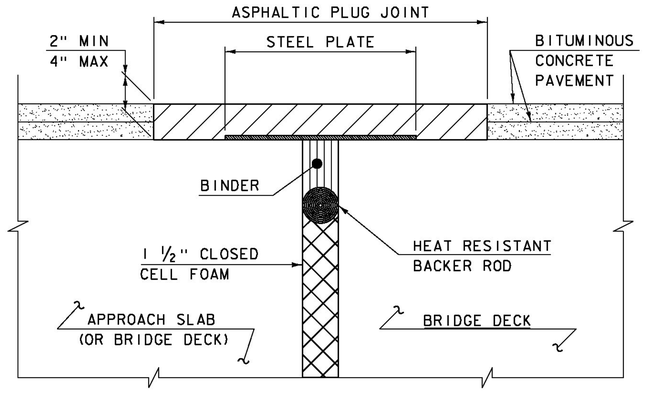
NOTES:

1. THE CONTRACTOR SHALL REMOVE ALL ASPHALTIC PLUG JOINT MATERIAL AND DETERIORATED CONCRETE AS DIRECTED BY THE ENGINEER. REMOVAL OF THE FIRST 4 INCHES OF MATERIAL SHALL BE INCLUDED IN THE BID PRICE FOR ITEM 516.10 BRIDGE EXPANSION JOINT, ASPHALTIC PLUG. ANY REMOVAL OF MATERIAL GREATER THAN 4 INCHES SHALL BE INCLUDED IN THE BID PRICE OF ITEM 580.20 RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE.

2. THE CONTRACTOR SHALL REPLACE REMOVED MATERIAL THAT IS LESS THAN 4" FROM FINISHED GRADE WITH ASPHALTIC PLUG JOINT MATERIAL MEETING THE REQUIREMENTS OF SUBSECTION 707.15. ALL REMOVED MATERIAL THAT IS GREATER THAN 4 INCHES FROM FINISHED GRADE SHALL BE REPLACED WITH RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE MEETING THE REQUIREMENTS OF SUBSECTION 780.04.

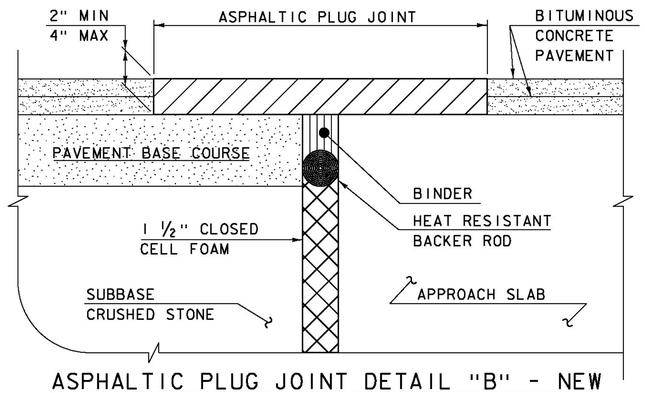
3. REINFORCING STEEL NOT SHOWN FOR CLARITY.

4. PLACE 1/4" THICK BY 8" WIDE SECTIONS OF STEEL PLATE OVER THE CENTER OF THE MOVEMENT GAP. SECURE THE PLATES FROM MOVING BY INSERTING LOCATING PINS THROUGH THE PRE-STAMPED HOLES INTO BACKER ROD AND COVER WITH HOT BINDER. THE STEEL PLATES MAY BE OMITTED WHERE THE ENGINEER DETERMINES THAT THE APPROACH SLAB OR BRIDGE DECK WILL PROVIDE INADEQUATE SUPPORT AND WHERE VERTICAL MOVEMENT OF THE PLATES MIGHT OCCUR.



ASPHALTIC PLUG JOINT DETAIL "A" - NEW

NOTE:
PLACE 1/4" THICK BY 8" WIDE SECTIONS OF STEEL PLATE OVER THE CENTER OF THE MOVEMENT GAP. SECURE THE PLATES FROM MOVING BY INSERTING LOCATING PINS THROUGH THE PRE-STAMPED HOLES INTO BACKER ROD AND COVER WITH HOT BINDER.



ASPHALTIC PLUG JOINT DETAIL "B" - NEW

ASPHALTIC PLUG JOINT NOTES

INSTALLATION:

1. LOCATE THE JOINT CENTRALLY OVER THE DECK OVERLAY EXPANSION GAP OR FIXED JOINT, MARKED OUT TO THE MANUFACTURER'S RECOMMENDED WIDTH.
2. REMOVE THE BITUMINOUS CONCRETE PAVEMENT FULL DEPTH AS SHOWN ON THE PLANS. THE PAVEMENT SHALL BE DRY AND SAW CUT TO THE LIMITS REQUIRED TO PLACE THE JOINT. A PNEUMATIC HAMMER AND CHISEL MAY BE USED ADJACENT TO THE CURB ONLY WHEN SAW CUTTING IS NOT POSSIBLE.
3. BLAST CLEAN THE JOINT AREA OF DEBRIS, ASPHALT AND SHEET MEMBRANE. THOROUGHLY DRY THE JOINT AREA WITH COMPRESSED AIR PRIOR TO APPLYING BINDER MATERIAL.
4. PLACE PROPERLY SIZED HEAT RESISTANT BACKER ROD IN THE MOVEMENT GAP ALLOWING FOR 1" +/- OF BINDER ABOVE THE ROD.
5. HEAT AND PLACE THE BINDER MATERIAL AS RECOMMENDED BY THE MANUFACTURER.
6. IMMEDIATELY AFTER TOP COATING, CAST AN ANTI-SKID MATERIAL OVER THE JOINT TO REDUCE THE RISK OF TRACKING.

WEATHER LIMITATIONS

APPLY BINDER MATERIAL ONLY WHEN THE FOLLOWING CONDITIONS PREVAIL OR AS RECOMMENDED BY THE MANUFACTURER:

1. THE AMBIENT AIR TEMPERATURE IS AT LEAST 10 DEG C (50 DEG F) AND RISING.
2. THE ROAD SURFACE IS DRY.
3. WEATHER CONDITIONS OR OTHER CONDITIONS ARE FAVORABLE AND ARE EXPECTED TO REMAIN SO FOR THE PERFORMANCE OF SATISFACTORY WORK.

DETAILS ON THIS SHEET ARE NOT TO SCALE.

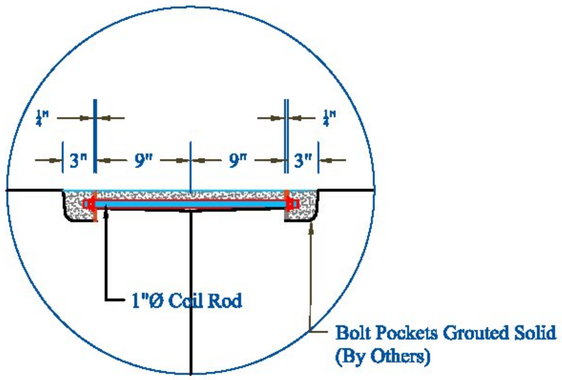
REVISIONS	
MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION
AUGUST 29, 2011	ADD DETAIL "B" AND REV. NOTES

BRIDGE JOINT
ASPHALTIC PLUG

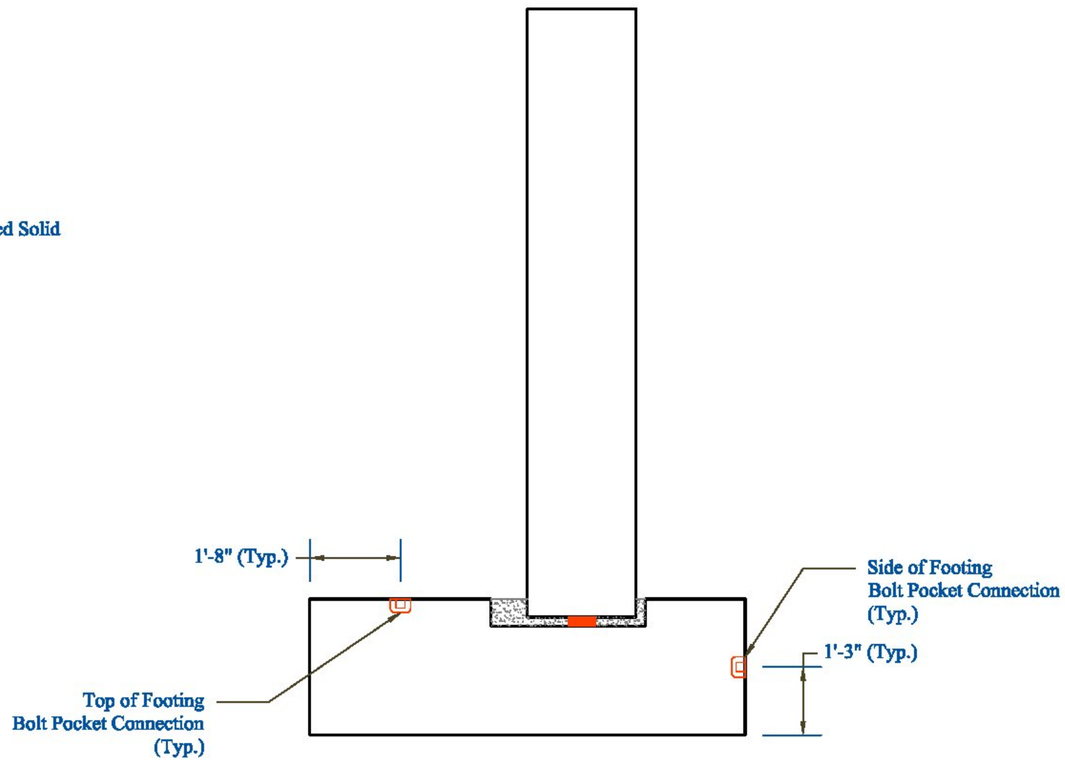
VERMONT AGENCY OF TRANSPORTATION
STRUCTURES - DIVISION

STRUCTURES DETAIL
SD-516.10

Bolt Pocket Connection Detail



Bolt Pocket Detail



Section View

Vermont Agency of Transportation

RECEIVED

#15801 - Abutments - Bolt Pocket Detail - 050515.pdf

CK'D BY HIS OK'D BY C. Carlson

May 5, 2015

RESUBMIT NO Approved

BY Carolyn Carlson DATE 5/6/2015

CONTRACTORS VISPE:	PRECAST CONCRETE ABUTMENT SHOP DRAWINGS (SDI JOB #15801)		INSTALLER: J.A. McDonald, Inc. PO Box 132 Lyndon Center, VT 05850	FABRICATOR: 193 INDUSTRIAL AVE. WILLISTON, VT 05495 Ph: (802) 658-0201 SD Ireland PRECAST	
	SUPERVISOR: E. Barendse DETAILER: I. ADAMS CHECKER: E. Barendse ENGINEER: VTAOT	PROJECT NAME: Walden BRF 030-3(5) PROJECT #: 030-3(5) LOCATION: Walden, VT	05/05/15	BOLT_POCKET_DETAIL	1_OF_1

Piece Schedule	
Piece	Weight (lbs)
AB1F1	52,040
AB1F2	52,990
AB1F3	58,520
AB1F4	58,520
WW-2	20,380
AB1S	53,300
AB1N	56,560
WW-1A	44,160
WW-1B	43,750
AB2F1	56,440
AB2F2	41,280
AB2F3	41,280
AB2F4	47,640
AB2F5	46,640
WW-3	38,600
AB2N	54,810
AB2S	53,290
WW-4A	32,700
WW-4B	31,850

Abutment 1: Plan View

Vermont Agency of Transportation

RECEIVED

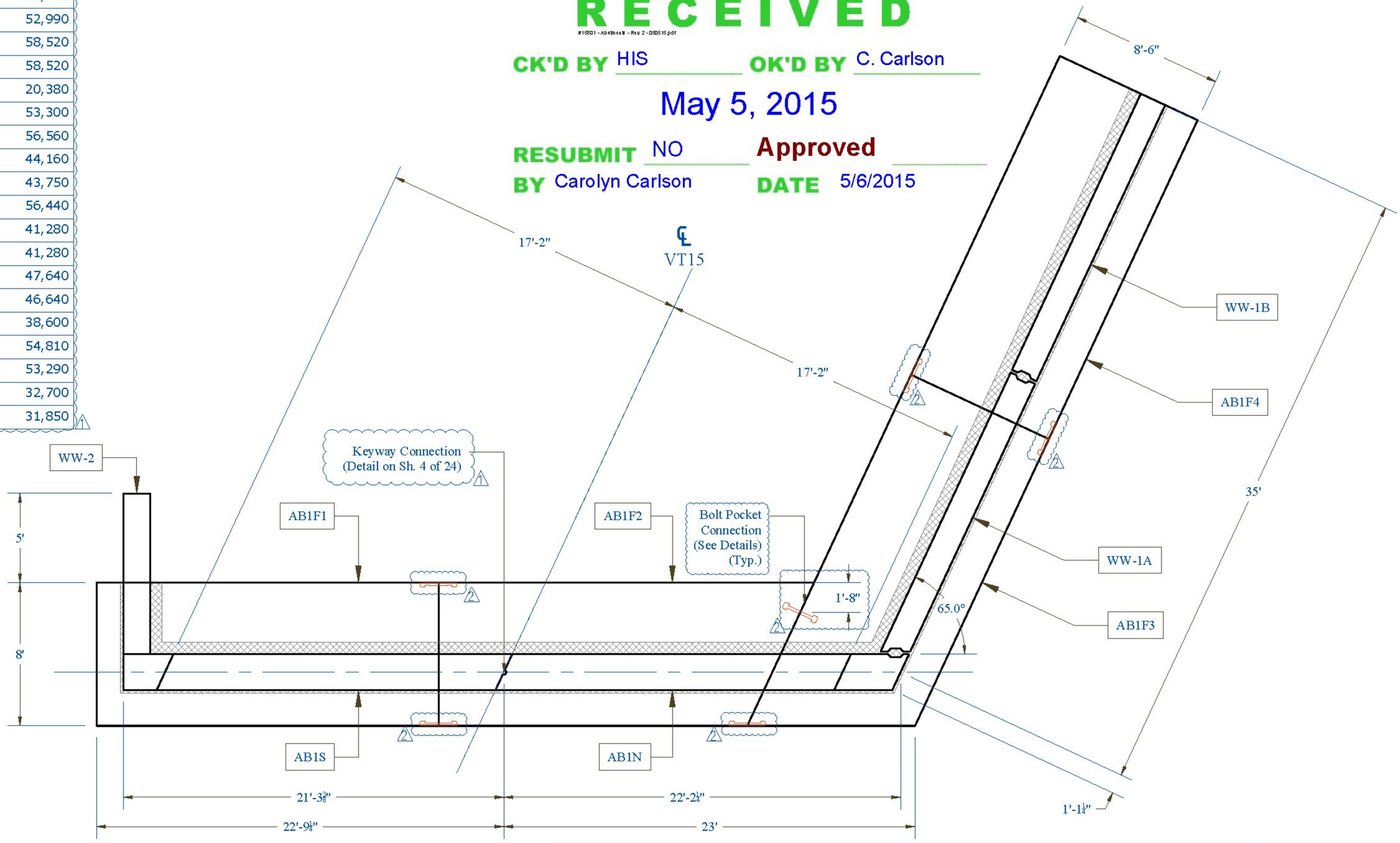
#15801 - Abutment 1 - Rev 2 - DSD515.pdf

CK'D BY HIS OK'D BY C. Carlson

May 5, 2015

RESUBMIT NO Approved

BY Carolyn Carlson DATE 5/6/2015



CONTRACTORS VTSPE:		Rev.	Date	By	Description
		1	04/16/15	IBA	Changes per State Review
		2	05/05/15	IBA	Production Changes

PRECAST CONCRETE ABUTMENT SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VTAOT

PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

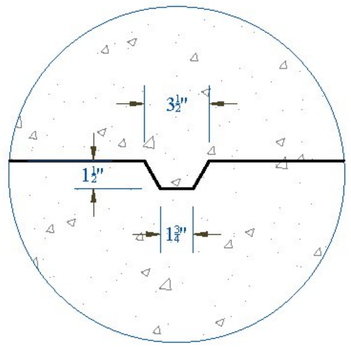
INSTALLER:
J.A. McDonald, Inc.
PO Box 132
Lyndon Center, VT 05850

FABRICATOR:
193 INDUSTRIAL AVE.
WILLISTON, VT 05495
Ph: (802) 658-0201

SD Ireland PRECAST

04/08/15 | AB1_PLAN | 2_OF_25

Abutment Stem Keyway Detail



Abutment 2: Plan View

Vermont Agency of Transportation

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#15801 - Abutments - Rev 2 - 050515.pdf

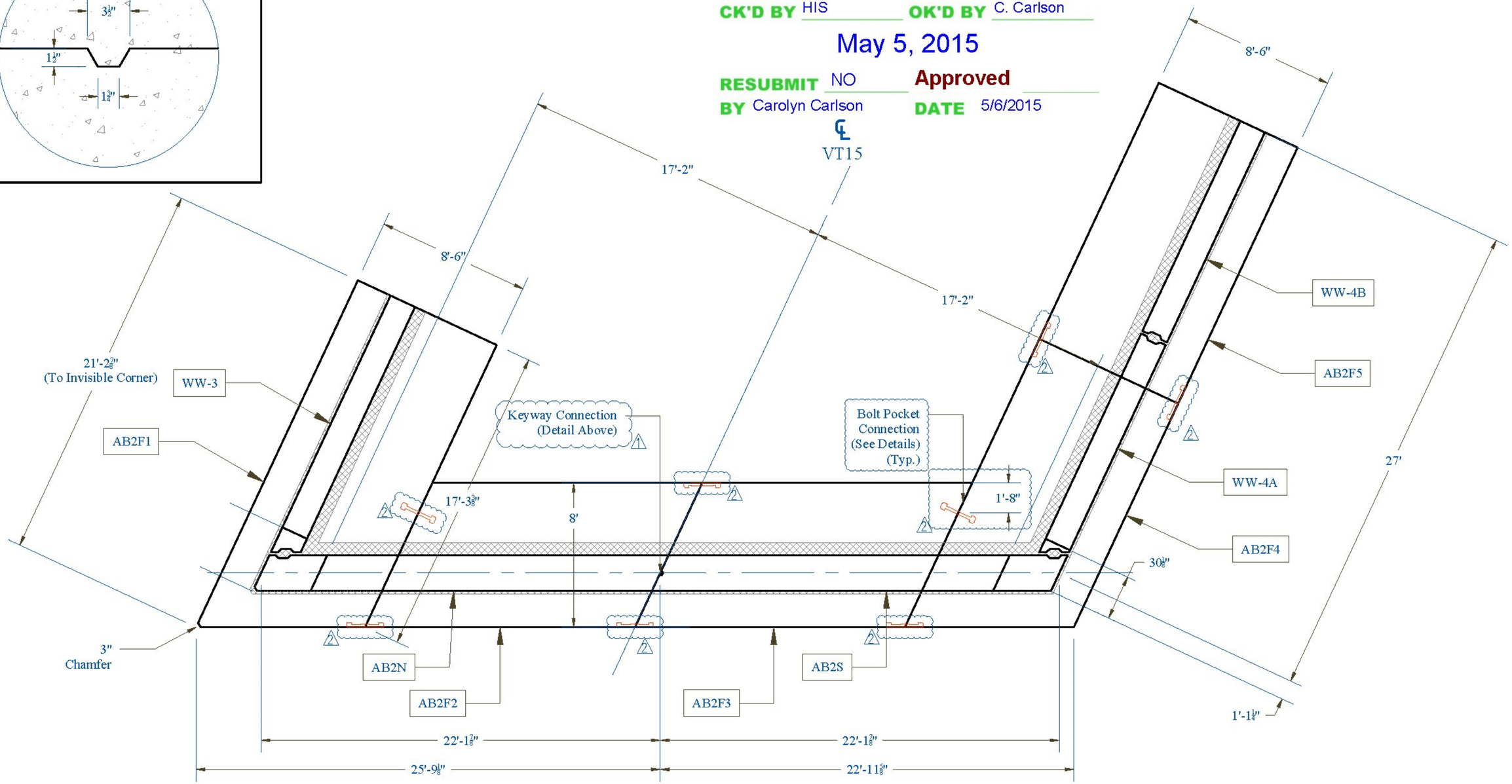
CK'D BY HIS OK'D BY C. Carlson

May 5, 2015

RESUBMIT NO Approved

BY Carolyn Carlson DATE 5/6/2015

℄ VT15



CONTRACTORS VTSPE:	Rev.	Date	By	Description
	1	04/16/15	IBA	Changes per State Review
	2	05/05/15	IBA	Production Changes

PRECAST CONCRETE ABUTMENT SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VTAOT

PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

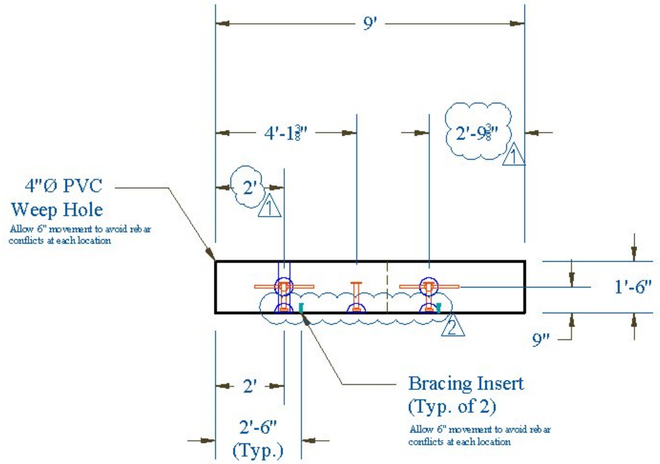
INSTALLER:
J.A. McDonald, Inc.
PO Box 132
Lyndon Center, VT 05850

FABRICATOR:
193 INDUSTRIAL AVE.
WILLISTON, VT 05495
Ph: (802) 658-0201

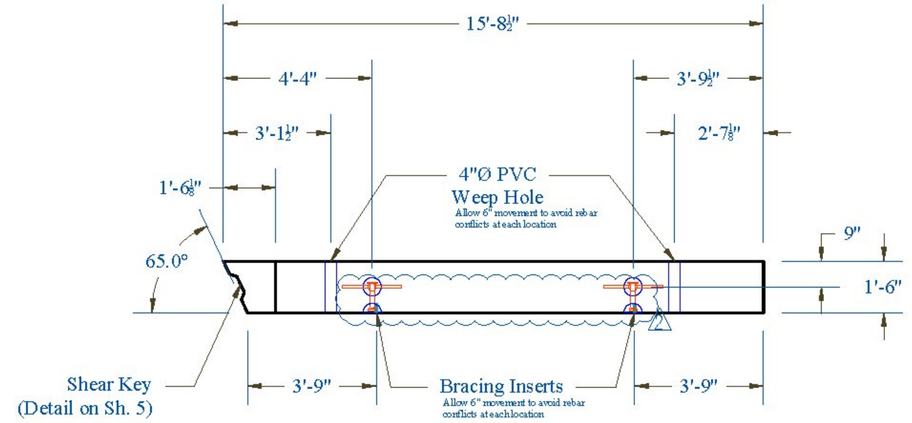
SD Ireland PRECAST

04/08/15 | AB2_PLAN | 4_OF_25

Wing Wall: WW2 - Plan View



Wing Wall: WW3 - Plan View



Vermont Agency of Transportation

RECEIVED

#15801 - Abutments - Rev 2 - 050515.pdf

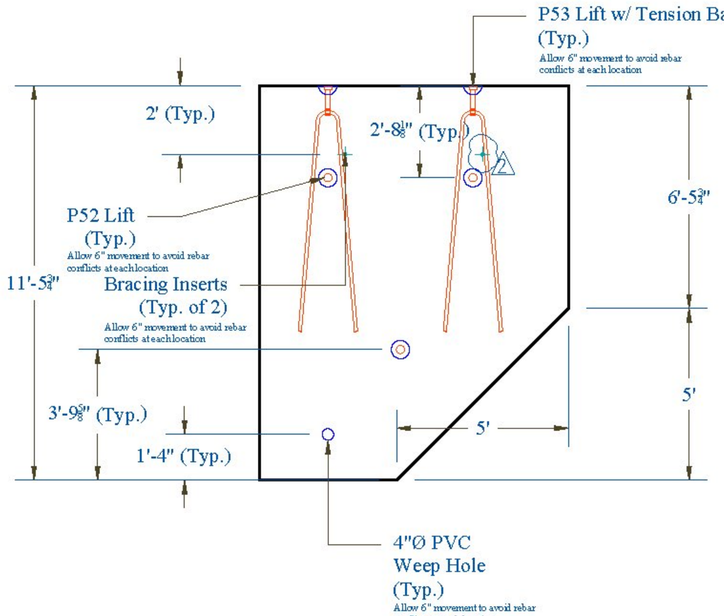
CK'D BY HIS OK'D BY C. Carlson

May 5, 2015

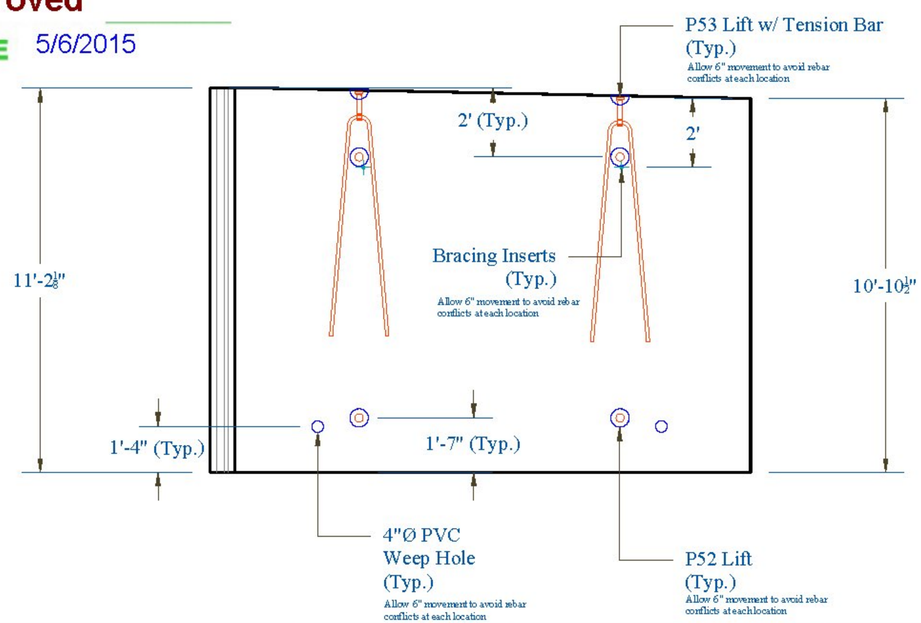
RESUBMIT NO Approved

BY Carolyn Carlson DATE 5/6/2015

Wing Wall: WW2 - Elevation View



Wing Wall: WW3 - Elevation View



CONTRACTORS VTSPE:

Rev.	Date	By	Description
1	04/16/15	IBA	Changes per State Review
2	05/05/15	IBA	Production Changes

PRECAST CONCRETE ABUTMENT SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VTAOT

PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

INSTALLER:
J.A. McDonald, Inc.
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Lyndon Center, VT 05850

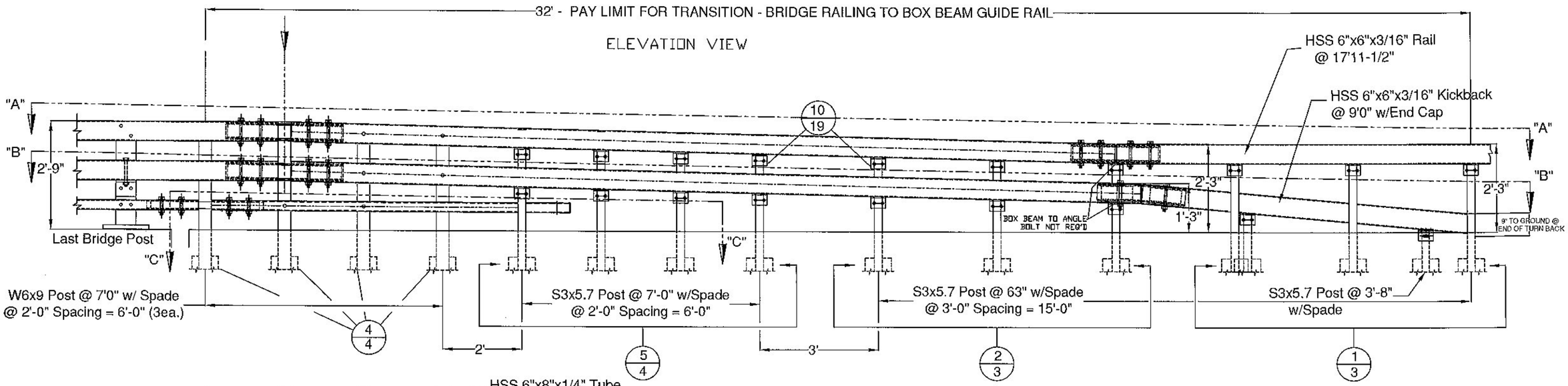
FABRICATOR:
193 INDUSTRIAL AVE.
WILLISTON, VT 05495
Ph: (802) 658-0201

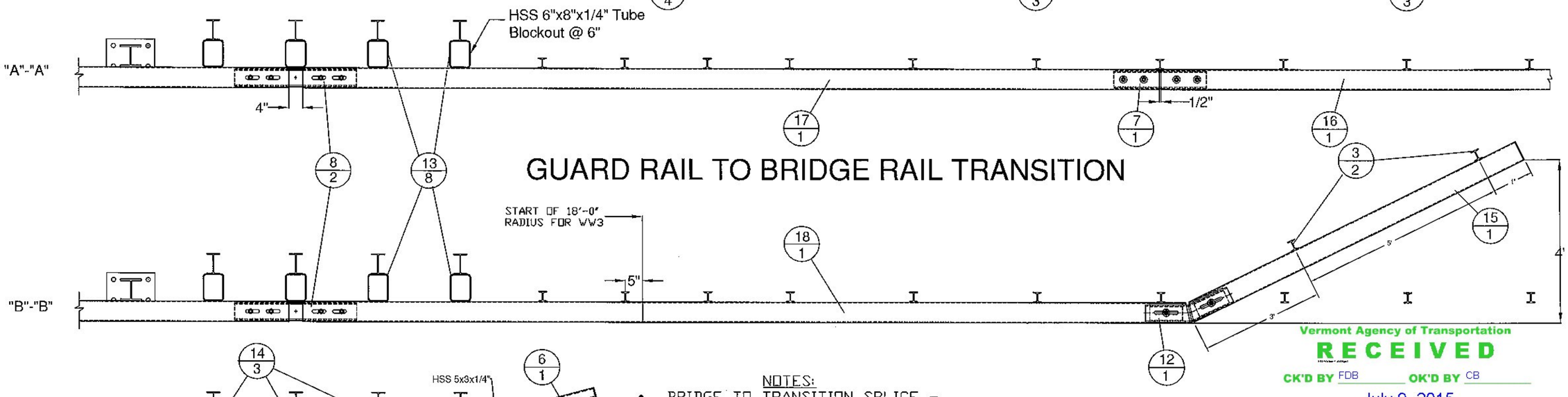
SD Ireland PRECAST

04/08/15 | WINGWALLS_2_&_3 | 9_OF_25

32' - PAY LIMIT FOR TRANSITION - BRIDGE RAILING TO BOX BEAM GUIDE RAIL

ELEVATION VIEW





GUARD RAIL TO BRIDGE RAIL TRANSITION

NOTES:

- BRIDGE TO TRANSITION SPLICE - 4" EXPANSION FOR WW1 & 2, 1/2" FIXED FOR WW3 & 4
- WW2 - FACE OF RAIL TO HAVE 20' CONVEX RADIUS.
- WW3 - FACE OF RAIL TO HAVE PARTIAL 18' CONVEX RADIUS.

Vermont Agency of Transportation

RECEIVED

CK'D BY FDB OK'D BY CB

July 9, 2015

RESUBMIT No Approved

BY Carolyn Carlson DATE 07/13/15

ITEM #: 621.725

SHEET 1 OF 7

STRUCTURAL STEEL TO COMPLY W/ ASTM A6

TOLERANCE UNLESS OTHERWISE NOTED:
FRACTIONS = ± 1/16"
ANGLES = ± 1/2°
DIAMETERS = ± 1/32"

GUARD RAIL TO BRIDGE RAIL TRANSITION DETAILS SHEET

ROUTE VT 15 (MINOR ARTERIAL), BRIDGE # 83
TOWN OF WALDEN, COUNTY OF CALEDONIA, VT.

REV	NO.	DATE	DESCRIPTION	BY

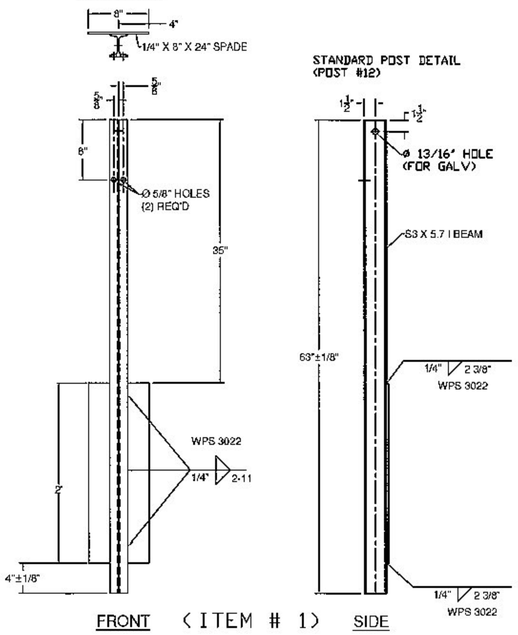
REV	NO.	DATE	DESCRIPTION	BY

ELDERLEE, INC.
CERTIFIED FABRICATOR
OAKS CORNERS, NEW YORK 14518
E-Mail: dlong@elderlee.com / epeek@elderlee.com
Tel: 315-789-6670 Fax: 315-789-6615

DRAWN	E.P.	2/20/15
CHECKED	D.L.	.
APPROVED	.	.
SCALE	SCHEMATIC	

DRAWING NO. F.R. LaFAYETTE-WALDEN

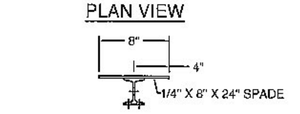
PLAN VIEW

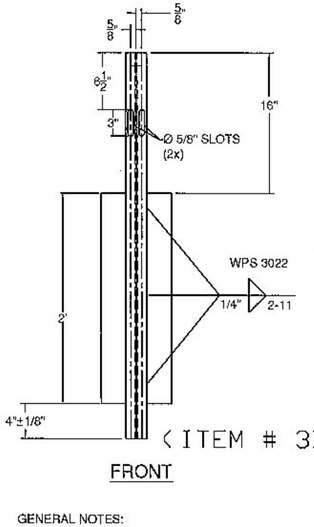


FRONT (ITEM # 1) SIDE

STANDARD POST DETAIL
(POST #12)

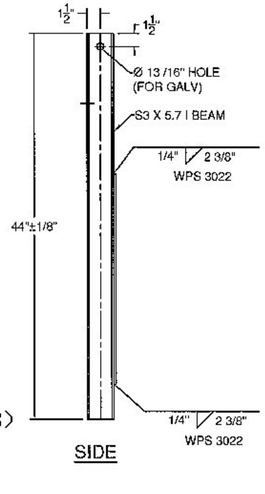
PLAN VIEW





FRONT (ITEM # 3)

END POST DETAIL

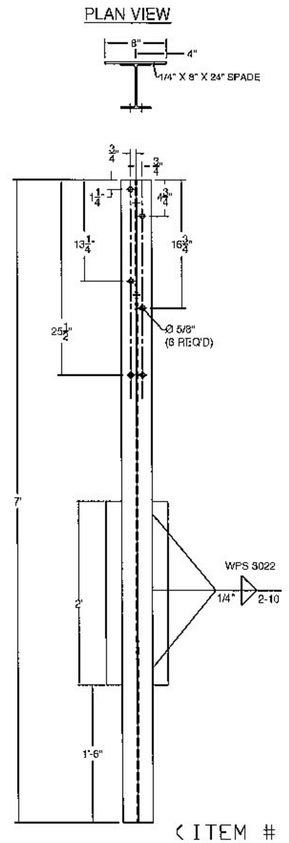


SIDE

GENERAL NOTES:

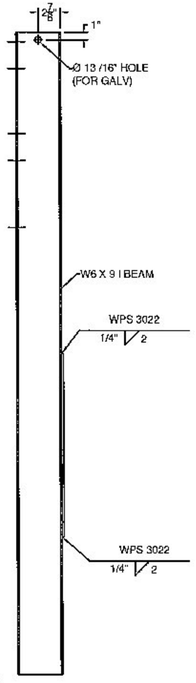
1) ALL RAILING IS TO BE FABRICATED AND ERECTED ACCORDING TO SECTION 525 OF THE STANDARD SPECIFICATIONS.
2) BOLTS SHALL BE TORQUED SNUG TIGHT (APPROXIMATELY 100 FT-LB).
3) PROTRUSIONS CAUSED BY WELDING OR GALVANIZING ARE NOT PERMITTED ON THE ADJOINING SURFACES OF THE BOX BEAM RAILS, SPLICE TUBES AND FILL PLATES.
4) BOX BEAM TUBE AND STEEL POST MATERIALS, DIMENSION SIZES AND NOTES SHALL BE THE SAME AS THOSE OF THE BRIDGE RAIL, UNLESS OTHERWISE NOTED.
5) ANY BENDING OF RAIL SHALL BE DONE AT THE FABRICATION PLANT. RADII GREATER THAN 21' TO BE CURVED ON A TUBE BENDING MACHINE, RADII EQUAL OR LESS THAN 21' TO BE "PIE CUT" AND WELDED. CURVED RAILING WILL HAVE AN 18" LENGTH ON EACH END STRAIGHT TO ACCOMADATE SPLICES. "PIE CUTS ARE LOCATED SO AS TO NOT CONFLICT WITH POST FASTENING HOLES. PIE CUTS WILL BE WELDED ACCORDING TO PROCEDURE WPS-3026.

PLAN VIEW



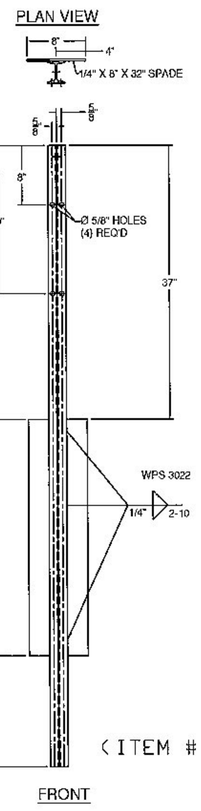
FRONT (ITEM # 4)

HEAVY POST DETAIL
(POST #1 ~ 4)



SIDE

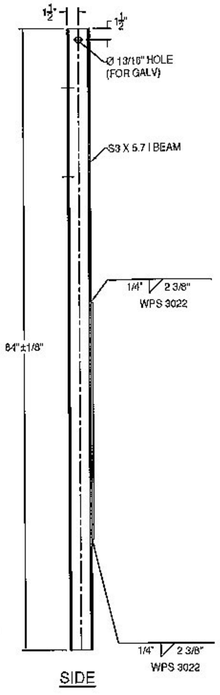
PLAN VIEW



(ITEM # 5)

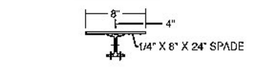
FRONT

TRANSITION POST DETAIL
(POST #5 ~ 8)

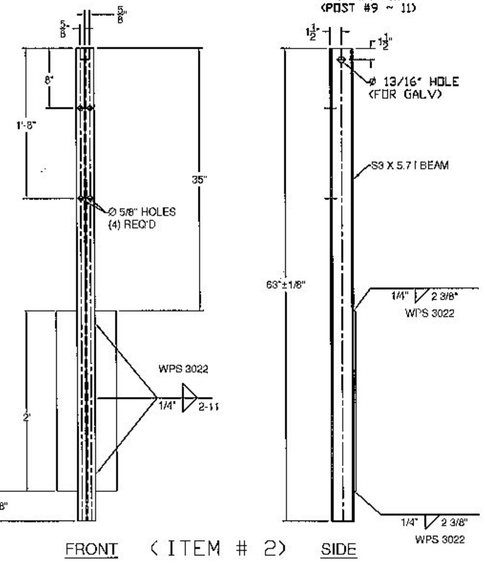


SIDE

PLAN VIEW



TRANSITION STANDARD POST DETAIL
(POST #9 ~ 11)



FRONT (ITEM # 2) SIDE

BILL OF MATERIALS FOR EACH CORNER

WW #	ITEM #	QTY.	COMPONENT #	DESCRIPTION	MATERIAL (ASTM)
1 ~ 4	1	3	0013.57021	S3 X 5.7 POST, PUNCH 8" W/SPD @ 63" LG	ASTM A572 Gr. 50
1 ~ 4	2	3	0013.57025	S3 X 5.7 POST, PUNCH 8", & 20" W/SPD @ 63" LG	ASTM A572 Gr. 50
1 ~ 4	3	2	0013.57060	S3 X 5.7 END POST W/SPD @ 3'-8" LG	ASTM A572 Gr. 50
1 ~ 4	4	4	0013.09001	W6 X 9 POST @ 7' W/SPD & 5/8" HOLES	ASTM A572 Gr. 50
1 ~ 4	5	4	0013.57010	S3 X 5.7 POST, PUNCH 8" & 20", W/8X32" SPADE @7'	ASTM A572 Gr. 50
1	6	1	0033.80403	3 X 5" BTM TRANS RAIL W/5'-0" KB, EXP END @ 15°	A500 Gr. B
2	6-2	1		3 X 5" BTM TRANS RAIL W/5'-0" KB, EXP END @ 20°	A500 Gr. B
3 & 4	6-3	1		3 X 5" BTM TRANS RAIL W/5'-0" KB, FIX. END @ 15°	A500 Gr. B
1 & 4	7	1	0033.08640	HSS 8X8 TUBE SPLICE @27° LG W/ 1/4" SHIMS	A500 Gr. B / A572 Gr 50
2 & 3	7-2	1	0033.80644	HSS 5X5 TUBE SPLICE @27° LG W/ 1/4" SHIMS W/ 4° BEND	A500 Gr. B / A572 Gr 50
1	8	1	0033.80739	HSS 5x5 EXP TUBE SPLICE @ 36" LG W/ 1/4" SHIMS	A500 Gr. B / A572 Gr 50
2	8-2	1	0033.80734	HSS 5x5 EXP TUBE SPLICE @ 36" LG W/ 1/4" SHIMS W/ 4° BEND	A500 Gr. B / A572 Gr 50
3 & 4	8-3	1	0033.08640	HSS 5x5 FIX. TUBE SPLICE @ 27° LG	A500 Gr. B / A572 Gr 50
1	9	1	0033.08930	BR EXP BAR SPLICE 2-1/8" X 4-1/4" @ 36" LG	ASTM A36
2	9-2	1	0033.08934	BR EXP BAR SPLICE 2-1/8" X 4-1/4" @ 36" LG W/ 4° BEND	ASTM A36
3 & 4	9-3	1	0033.08840	BR FIX. BAR SPLICE 2-1/8" X 4-1/4" @ 27° LG	ASTM A36
1 ~ 4	10	19	0054.08050	REC BB SHELF ANGLES @ 4-1/2"	ASTM A36
1 & 4	12	1	0054.80074	HSS 5 X 5 X 5/16" DBL BEND TUBE SPL @ 27° LG, "A"=26"	A500 Gr. B / A572 Gr 50
2 & 3	12-2	1		HSS 5 X 5 X 5/16" DBL BEND TUBE SPL @ 27° LG, "A"=42"	A500 Gr. B / A572 Gr 50
1 ~ 4	13	8	0054.08563	6 X 6 X 1/4" TRANS. TUBE B/B @ 6" LG	A500 Gr. B
1 ~ 4	14	3	0054.08565	6 X 6 X 1/4" TRANS. TUBE B/B @ 3" LG	A500 Gr. B
1 & 4	15	1	0054.05000	6 X 6 x 3/16" BB @ 5'-0" KICKBACK, W/ CAP, & 13° MITER	A500 Gr. B / A36
2 & 3	15-2	1		6 X 6 x 3/16" BB @ 5'-0" KICKBACK, W/ CAP, & 20° MITER	A500 Gr. B / A36
1 & 4	#16	1	0054.18000	6 X 6 x 3/16" BB @ 18'-0" (9'-0" THIS PAY ITEM), DRILL 3" CC)	A500 Gr. B
2	#16-2	1		6 X 6 x 3/16" BB @ 18'-0" (9'-0" THIS PAY ITEM), 20° RAD.	A500 Gr. B
3	#16-3	1		6 X 6 x 3/16" BB @ 18'-0" (9'-0" THIS PAY ITEM), 18° RAD.	A500 Gr. B
1	17	1	0054.90092	6 X 6 x 3/16" BB TOP TRANS @ 20'-9 5/8" LG W/EXP END	A500 Gr. B
2	17-2	1		6 X 6 x 3/16" BB TOP TRANS @ 20'-9 5/8" LG W/EXP END, 20° RAD.	A500 Gr. B
3	17-3	1		6 X 6 x 3/16" BB TOP TRANS @ 20'-9 5/8", FIX. END, PART. 18° RAD.	A500 Gr. B
4	17-4	1		6 X 6 x 3/16" BB TOP TRANS @ 20'-9 5/8" LG W/FIX. END	A500 Gr. B
1	18	1	0054.90093	6 X 6 x 3/16" BB BTM TRANS @ 21'-4 5/8" LG W/EXP END	A500 Gr. B
2	18-2	1		6 X 6 x 3/16" BB BTM TRANS @ 21'-4 5/8" LG W/EXP END, 20° RAD.	A500 Gr. B
3	18-3	1		6 X 6 x 3/16" BB BTM TRANS @ 21'-4 5/8", FIX. END, PART. 18° RAD.	A500 Gr. B
4	18-4	1		6 X 6 x 3/16" BB BTM TRANS @ 21'-4 5/8" LG W/FIX. END	A500 Gr. B
1 ~ 4	19	18	0080.03355	3/8" X 7 1/2" BOLT, NUT, & 2 FW	A307, A563 DH, F436
1 ~ 4	20	19	0080.04100	1/2" x 1-1/2" BOLT, NUT, & FW	A307, A563 DH, F436
1 ~ 4	21	22	0080.04120	1/2" x 1-1/2" BOLT, NUT, 2 FW & LW	A307, A563 DH, F436
1 ~ 4	22	4	0080.06255	3/4" X 4-1/2" BOLT, NUT, 2 FW	A325, A563 DH, F436
1 ~ 4	23	12	0080.06340	3/4" X 7-1/2" BOLT, NUT, 2 FW	A325, A563 DH, F436
1 ~ 4	24	6	0080.06370	3/4" X 8" CARR BOLT, NUT, FW & LW	A307, A563 DH, F436
1 ~ 4	25	2	0080.06400	3/4" X 8" BOLT, NUT, 2 FW, & LW	A325, A563 DH, F436

HARDWARE NOTES

ITEM #	FUNCTION
19	BOLT RAIL TO SHELF ANGLE (ITEM #10)
20	BOLT SHELF ANGLE (ITEM #'S 10 & 11) TO POST
21	BOLT BLOCK-OUTS (ITEM #'S 13 & 14) TO HEAVY POST
22	(4) PER SPLICE BAR (ITEM #9)
23	(4) PER SPLICE TUBING (ITEM #'S 7 & 8)
24	BOLT RAIL (ITEMS #'S 6,17, & 18 TO BLOCK-OUTS (ITEM #'S 13 & 14) (WHERE FASTENED)
25	BOLT DOUBLE BEND SPLICE TUBE (ITEM #12) TO RAIL (ITEM #18) & KICKBACK (ITEM #15)

Vermont Agency of Transportation

RECEIVED

CK'D BY FDB OK'D BY CB

July 9, 2015

RESUBMIT No Approved

BY Carolyn Carlson DATE 07/13/15

SHEET 2 OF 7

ITEM #: 621.725

STRUCTURAL STEEL TO COMPLY W/ ASTM A6

TOLERANCE UNLESS OTHERWISE NOTED:
FRACTIONS = ± 1/16"
ANGLES = ± 1/2°
DIAMETERS = ± 1/32"

GUARD RAIL TO BRIDGE RAIL TRANSITION DETAILS SHEET

ROUTE VT 15 (MINOR ARTERIAL), BRIDGE # 83
TOWN OF WALDEN, COUNTY OF CALEDONIA, VT.

R E V	NO.	DATE	DESCRIPTION	BY	R E V	NO.	DATE	DESCRIPTION	BY

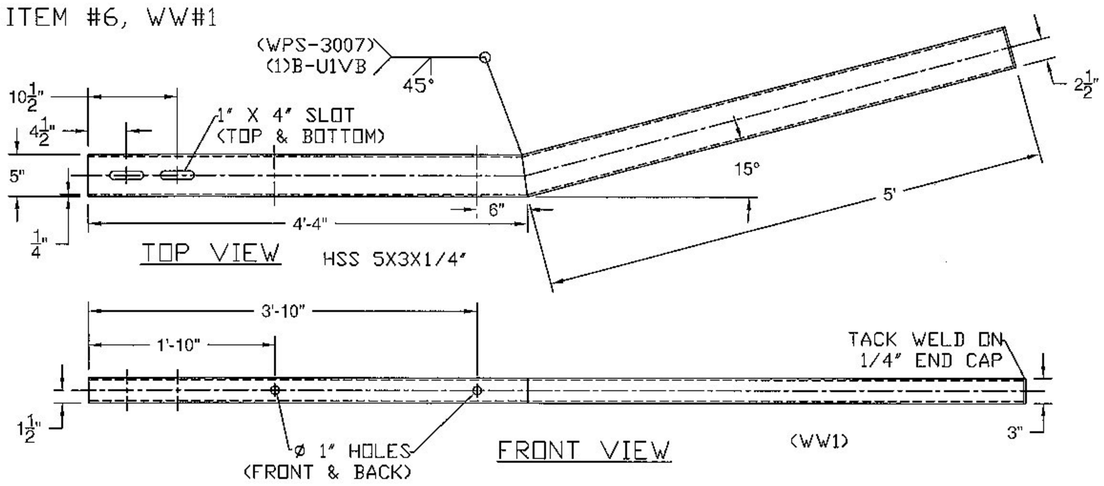
ELDERLEE, INC.
OAKS CORNERS, NEW YORK 14518
E-Mail: dlong@elderlee.com / epeek@elderlee.com
Tel: 315-789-6670 Fax: 315-789-6615

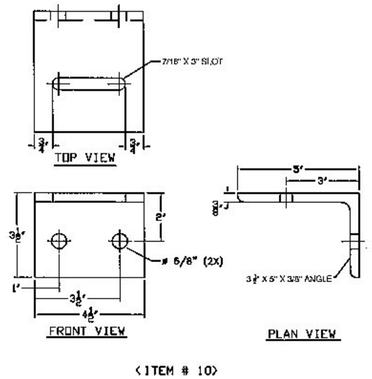
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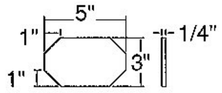
DRAWN	E.P.	2/20/15
CHECKED	D.L.	.
APPROVED		.
SCALE	SCHEMATIC	

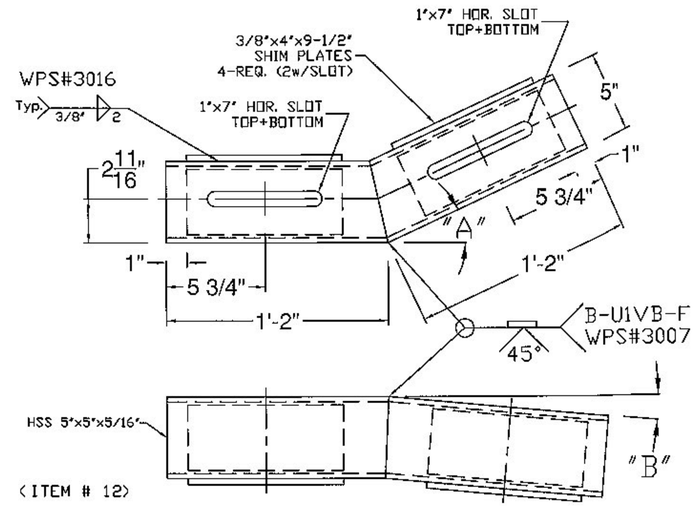
DRAWING NO. P.R. LaFAYETTE-WALDEN

ITEM #6, WW#1







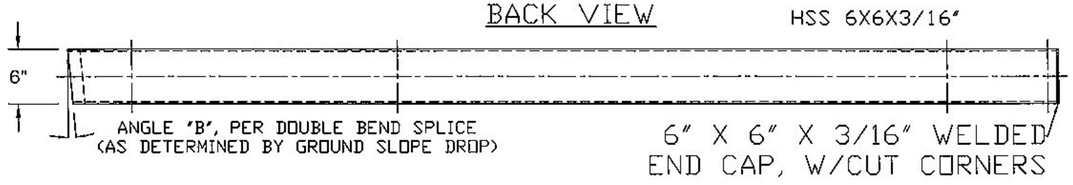


"A" - 26° WW 1 & 4
"A" - 42° WW 2 & 3
"B" - TURN DOWN ANGLE SET BY THE 9" MEASURMENT AT THE END OF THE BOX BEAM.

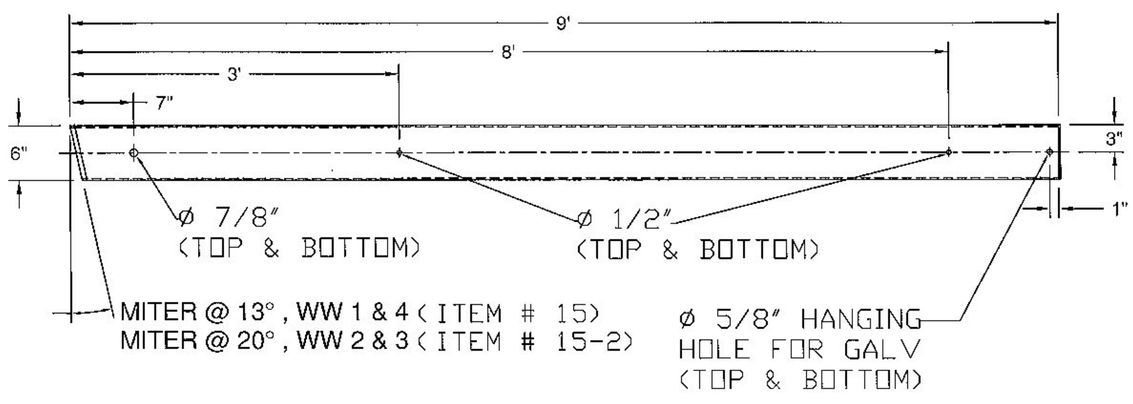
Vermont Agency of Transportation
RECEIVED
CK'D BY FDB OK'D BY CB
July 9, 2015
RESUBMIT No Approved
BY Carolyn Carlson DATE 07/13/15

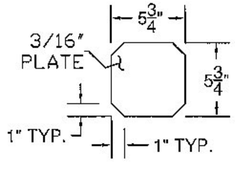
BACK VIEW

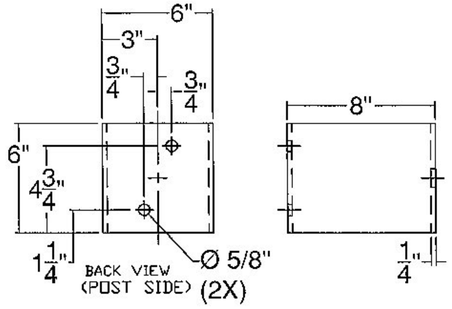
HSS 6X6X3/16"

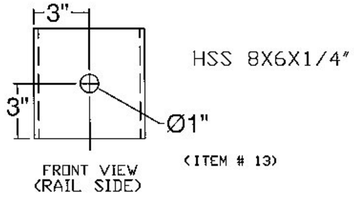


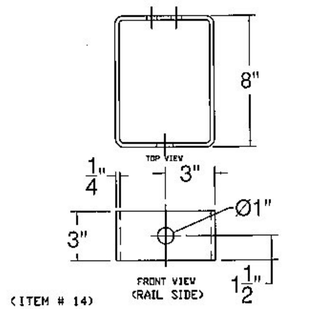
TOP VIEW











ITEM #: 621.725

SHEET 3 OF 7

STRUCTURAL STEEL TO COMPLY W/ ASTM A6

TOLERANCE UNLESS OTHERWISE NOTED:
FRACTIONS = ± 1/16"
ANGLES = ± 1/2°
DIAMETERS = ± 1/32"

GUARD RAIL TO BRIDGE RAIL TRANSITION DETAILS SHEET

ROUTE VT 15 (MINOR ARTERIAL), BRIDGE # 83
TOWN OF WALDEN, COUNTY OF CALEDONIA, VT.

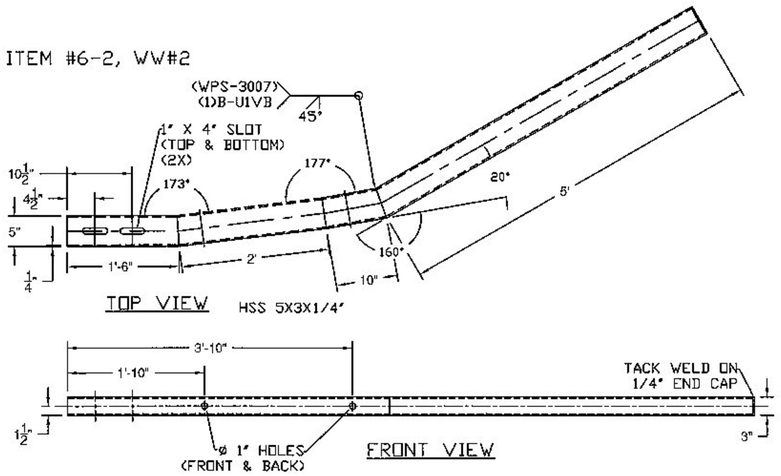
R E V	NO.	DATE	DESCRIPTION	BY

R E V	NO.	DATE	DESCRIPTION	BY

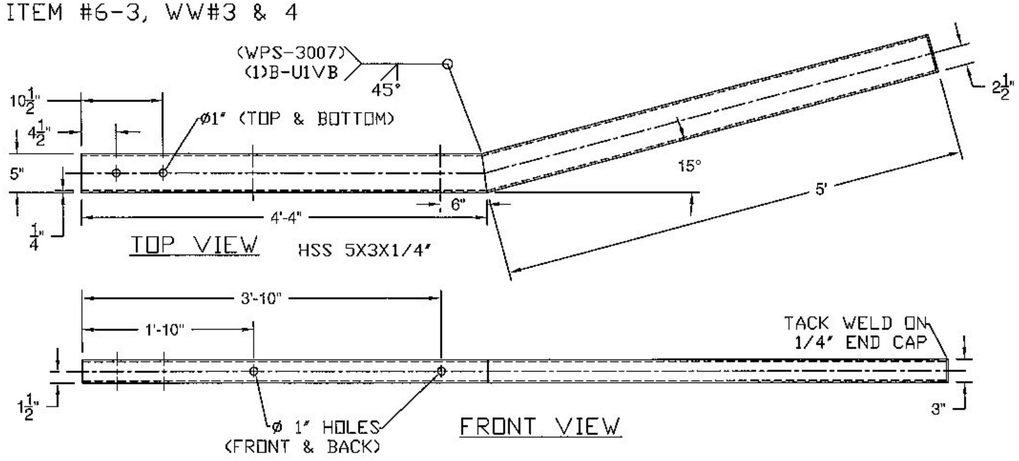
ELDERLEE, INC.
OAKS CORNERS, NEW YORK 14518
E-Mail: dlong@elderlee.com / epeck@elderlee.com
Tel: 315-789-6670 Fax: 315-789-6615

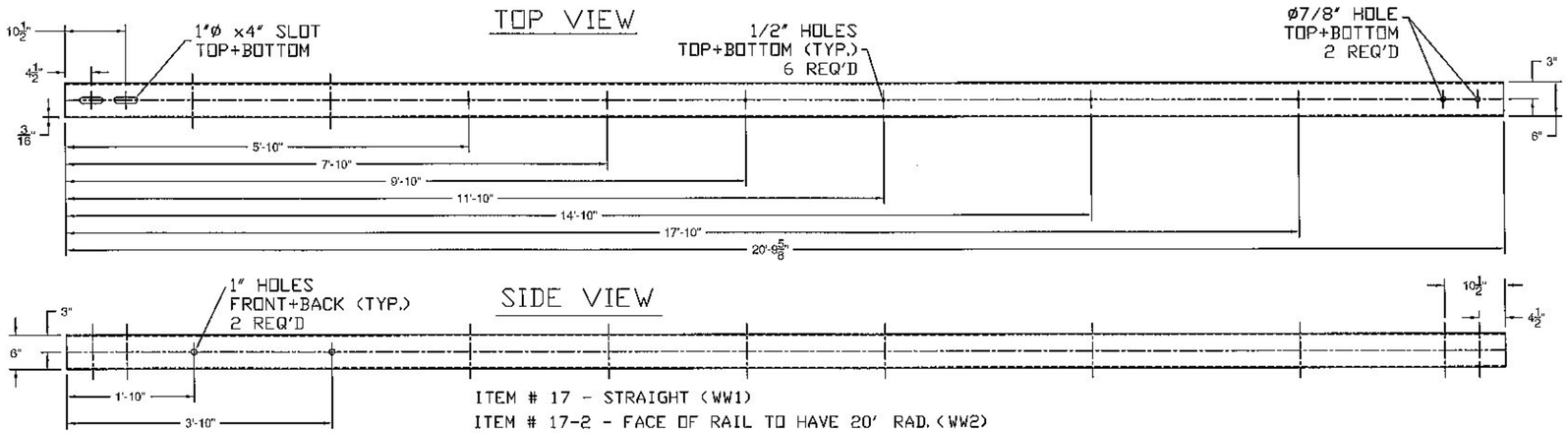
DRAWN	E.P.	2/20/15
CHECKED	D.L.	
APPROVED		
SCALE	SCHEMATIC	
DRAWING NO.	F.R. LaFAYETTE-WALDEN	

ITEM #6-2, WW#2

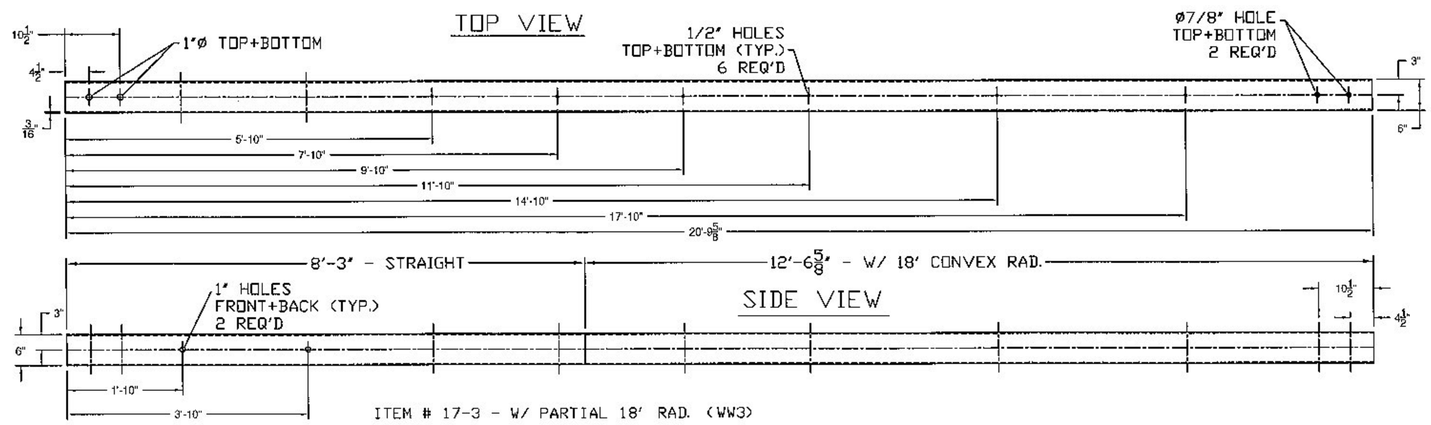


ITEM #6-3, WW#3 & 4





ITEM # 17 - STRAIGHT (WW1)
ITEM # 17-2 - FACE OF RAIL TO HAVE 20' RAD. (WW2)



ITEM # 17-3 - W/ PARTIAL 18' RAD. (WW3)

Vermont Agency of Transportation

RECEIVED

CK'D BY FDB OK'D BY CB

July 9, 2015

RESUBMIT No **Approved**

BY Carolyn Carlson DATE 07/13/15

ITEM #: 621.725

SHEET 4 OF 7

STRUCTURAL STEEL TO COMPLY W/ ASTM A6

TOLERANCE UNLESS OTHERWISE NOTED:
FRACTIONS = ± 1/16"
ANGLES = ± 1/2°
DIAMETERS = ± 1/32"

GUARD RAIL TO BRIDGE RAIL TRANSITION DETAILS SHEET

ROUTE VT 15 (MINOR ARTERIAL), BRIDGE # 83
TOWN OF WALDEN, COUNTY OF CALEDONIA, VT.

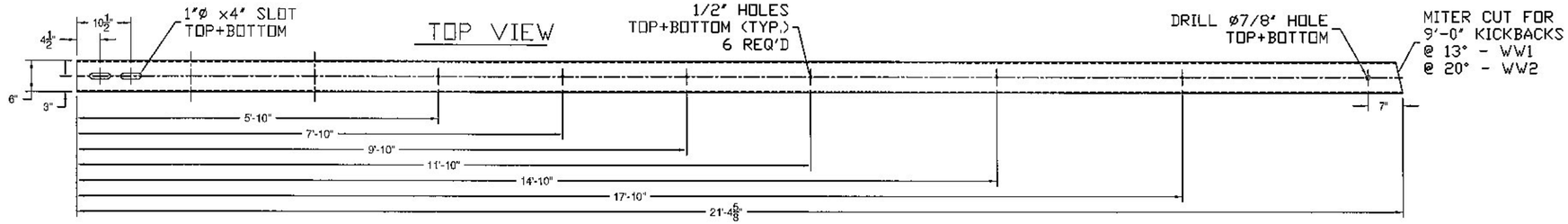
REV	NO.	DATE	DESCRIPTION	BY

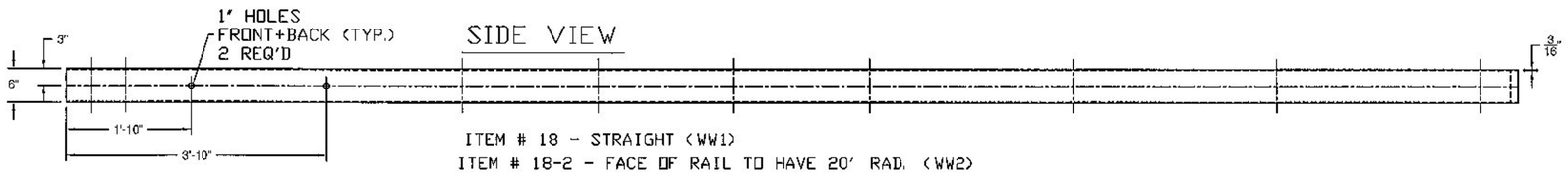
REV	NO.	DATE	DESCRIPTION	BY

ELDERLEE, INC.
OAKS CORNERS, NEW YORK 14518
E-Mail: dlong@elderlee.com / epeek@elderlee.com
Tel: 315-789-6670 Fax: 315-789-6815

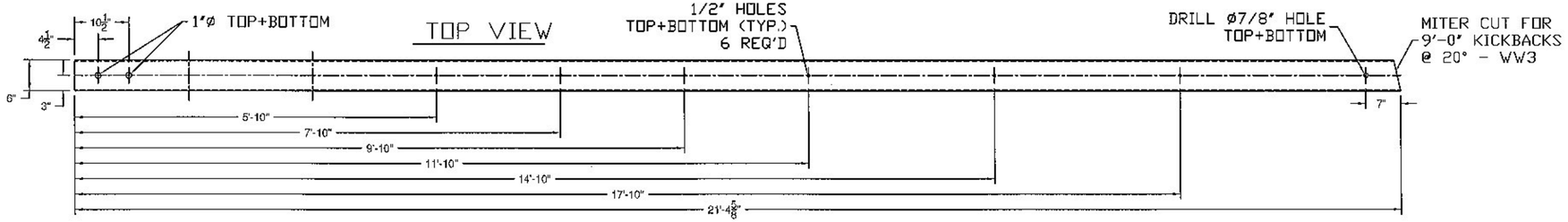
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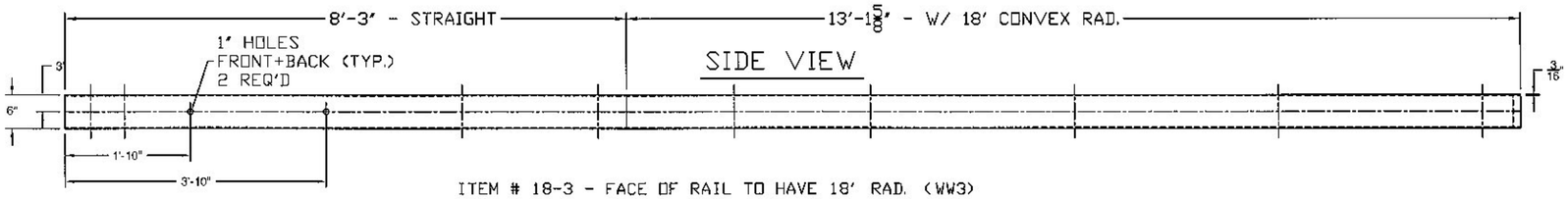
DRAWN	E.P.	2/20/15
CHECKED	D.L.	-
APPROVED	-	-
SCALE	SCHEMATIC	
DRAWING NO.	F.R. LAFAYETTE-WALDEN	



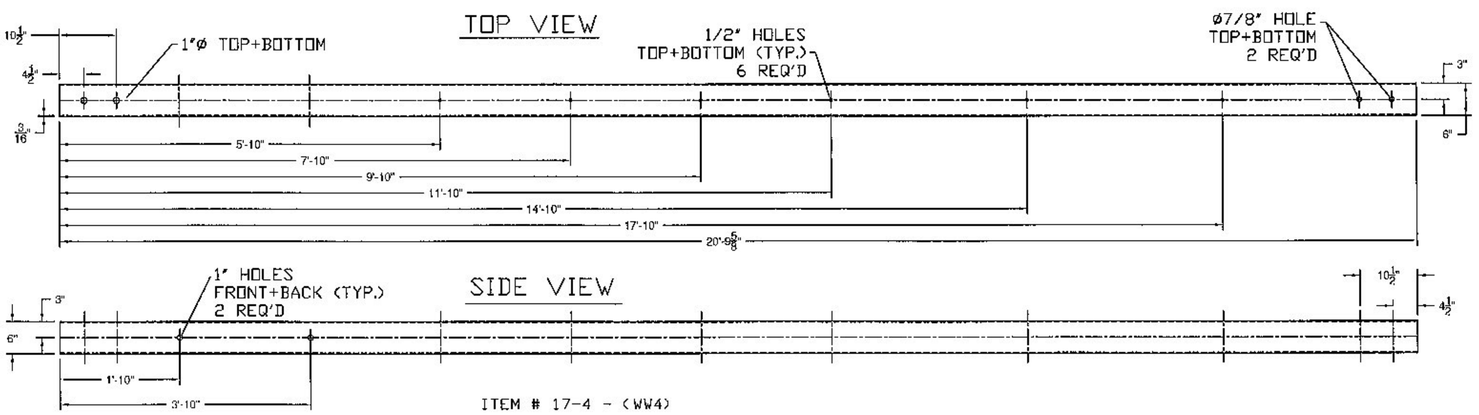


ITEM # 18 - STRAIGHT (WW1)
ITEM # 18-2 - FACE OF RAIL TO HAVE 20' RAD. (WW2)



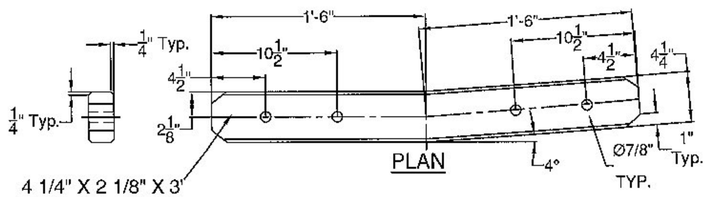


ITEM # 18-3 - FACE OF RAIL TO HAVE 18' RAD. (WW3)



ITEM # 17-4 - (WW4)

ITEM 9-2 - WW2



EXPANSION BAR SPLICE

Vermont Agency of Transportation
RECEIVED
CK'D BY FDB OK'D BY CB
July 9, 2015
RESUBMIT No Approved
BY Carolyn Carlson DATE 07/13/15

ITEM #: 621.725

STRUCTURAL STEEL TO COMPLY W/ ASTM A6

TOLERANCE UNLESS OTHERWISE NOTED:
FRACTIONS = ± 1/16"
ANGLES = ± 1/2"
DIAMETERS = ± 1/32"

SHEET 5 OF 7

GUARD RAIL TO BRIDGE RAIL TRANSITION DETAILS SHEET

ROUTE VT 15 (MINOR ARTERIAL), BRIDGE # 83
TOWN OF WALDEN, COUNTY OF CALEDONIA, VT.

REV	NO.	DATE	DESCRIPTION	BY

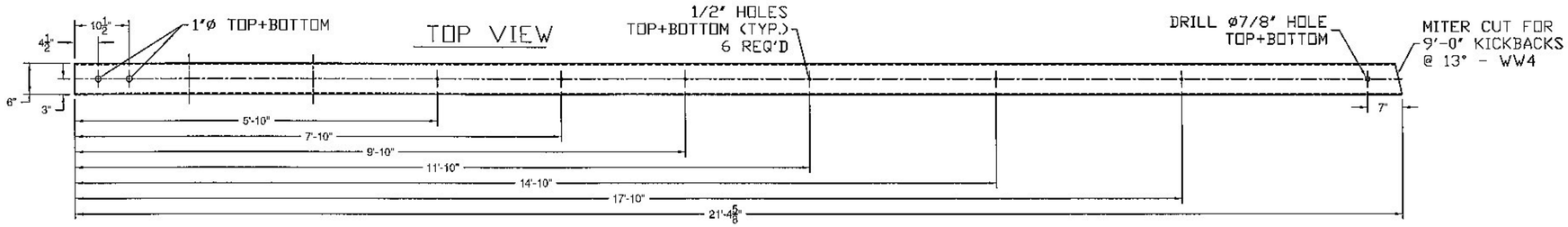
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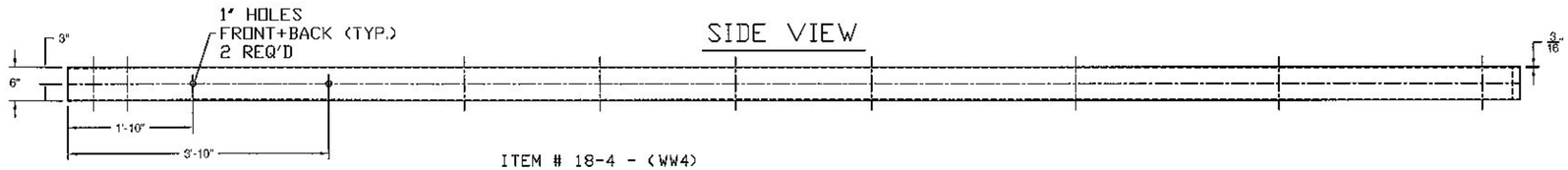
ELDERLEE, INC.
OAKS CORNERS, NEW YORK 14518
E-Mail: dlong@elderlee.com / cpeek@elderlee.com
Tel: 315-789-6670 Fax: 315-789-6615

CERTIFIED FABRICATOR

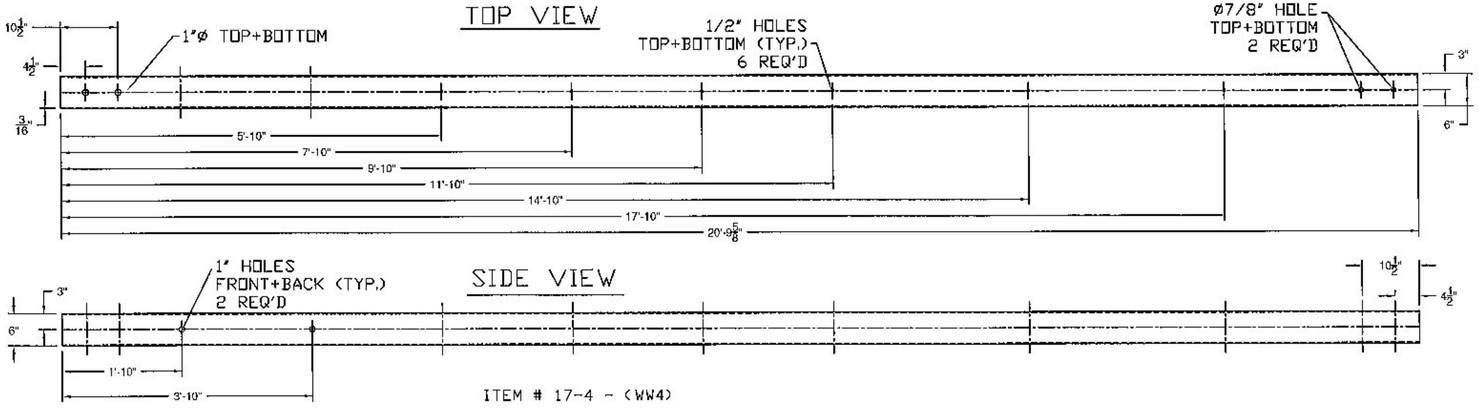
DRAWN	E.P.	2/20/15
CHECKED	D.L.	
APPROVED		
SCALE	SCHEMATIC	

DRAWING NO. F.P. LaFAYETTE-WALDEN





ITEM # 18-4 - (WW4)



ITEM # 17-4 - (WW4)

Vermont Agency of Transportation

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CK'D BY FDB OK'D BY CB

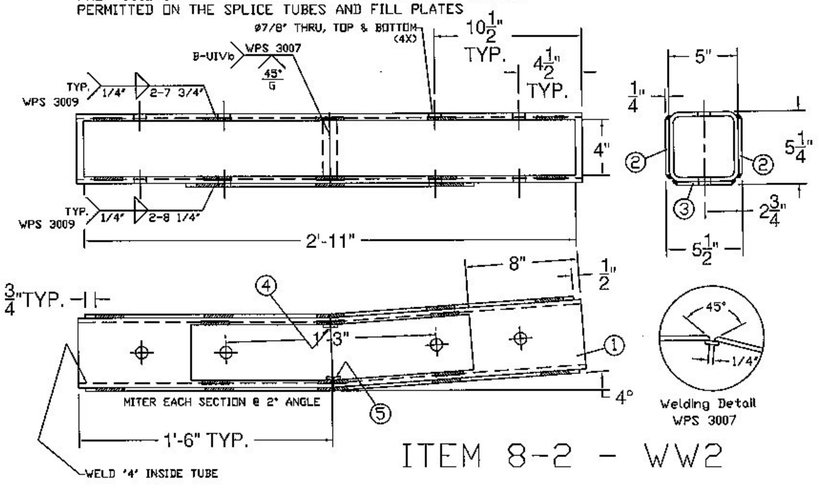
July 9, 2015

RESUBMIT No Approved

BY Carolyn Carlson DATE 07/13/15

BILL OF MATERIALS			
ITEM #	PART #	QTY	DESCRIPTION
1		1	5x5x5/16" TUBE
2		2	RAW FLAT 1/4x4" A709-36 CV
3		1	1/4" PLATE
4		3	IN-PR BACKER, 3/16"x1"x4"
5		1	IN-PR FORMED BACKER PLATE

PROTRUSIONS CAUSED BY WELDING OR GALVANIZING ARE NOT PERMITTED ON THE SPLICE TUBES AND FILL PLATES



ITEM 8-2 - WW2

ITEM #: 621.725

SHEET 6 OF 7

STRUCTURAL STEEL TO COMPLY W/ ASTM A6

TOLERANCE UNLESS OTHERWISE NOTED:
FRACTIONS = ± 1/16"
ANGLES = ± 1/2°
DIAMETERS = ± 1/32"

GUARD RAIL TO BRIDGE RAIL TRANSITION DETAILS SHEET

ROUTE VT 15 (MINOR ARTERIAL), BRIDGE # 83
TOWN OF WALDEN, COUNTY OF CALEDONIA, VT.

REV	NO.	DATE	DESCRIPTION	BY

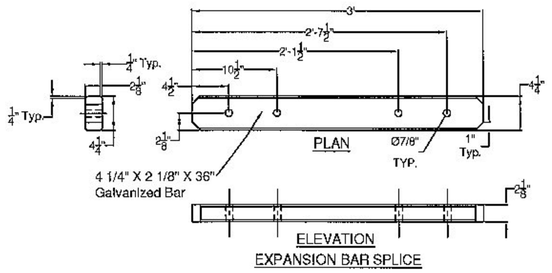
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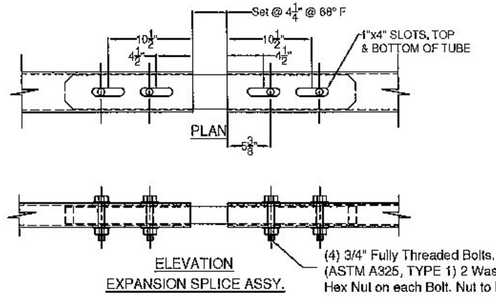
ELDERLEE, INC.
OAKS CORNERS, NEW YORK 14518
E-Mail: dlong@elderlee.com / epeek@elderlee.com
Tel: 315-789-6670 Fax: 315-789-6615

AISC CERTIFIED FABRICATOR

DRAWN	E.P.	2/20/15
CHECKED	D.L.	
APPROVED		
SCALE	SCHEMATIC	
DRAWING NO.	F.R. LaFAYETTE-WALDEN	

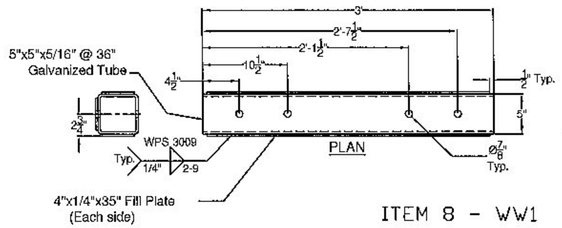
SPLICE BAR - EXPANSION



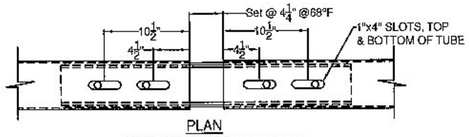


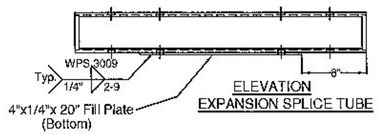
(4) 3/4" Fully Threaded Bolts. 4 1/2" Long (ASTM A325, TYPE 1) 2 Washers and a Heavy Hex Nut on each Bolt. Nut to be Finger Tight and the First Thread below the nut to be damaged A.O.B.E.. 4 Bolts at Each Splice.

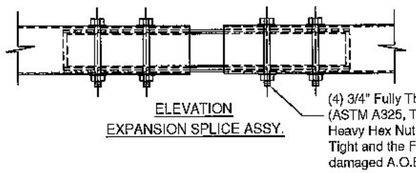
ITEM 9 - WW1



ITEM 8 - WW1







(4) 3/4" Fully Threaded Bolts.7 1/2" Long (ASTM A325, TYPE 1) 2 Washers and a Heavy Hex Nut on each Bolt. Nut to be Finger Tight and the First Thread below the nut to be damaged A.O.B.E.. 4 Bolts at Each Splice.

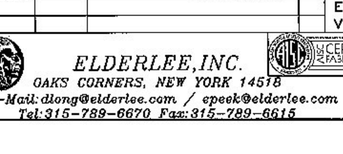
SPLICE TUBE - EXPANSION

SPLICE BAR - FIXED

(4) 3/4" Fully Threaded Bolts. 4 1/2" Long (ASTM A325, TYPE 1) 2 Washers and a Heavy Hex Nut on each Bolt. Nut to be Finger Tight and the First Thread below the nut to be damaged A.O.B.E.. 4 Bolts at Each Splice.

ITEM 9-3 - WW3 & 4

ITEM 8-3 - WW3 & 4



(4) 3/4" Fully Threaded Bolts. 7 1/2" Long (ASTM A325, TYPE 1) 2 Washers and a Heavy Hex Nut on each Bolt. Nut to be Finger Tight and the First Thread below the nut to be damaged A.O.B.E.. 4 Bolts at Each Splice.

SPLICE TUBE - FIXED

Vermont Agency of Transportation

RECEIVED

CK'D BY FDB OK'D BY CB

July 9, 2015

RESUBMIT No Approved

BY Carolyn Carlson DATE 07/13/15

ITEM #: 621.725

SHEET 7 OF 7

STRUCTURAL STEEL TO COMPLY W/ ASTM A6

TOLERANCE UNLESS OTHERWISE NOTED:
FRACTIONS = ± 1/16"
ANGLES = ± 1/2°
DIAMETERS = ± 1/32"

GUARD RAIL TO BRIDGE RAIL TRANSITION DETAILS SHEET

ROUTE VT 15 (MINOR ARTERIAL), BRIDGE # 83
TOWN OF WALDEN, COUNTY OF CALEDONIA, VT.

REV	NO.	DATE	DESCRIPTION	BY	REV	NO.	DATE	DESCRIPTION	BY

ELDERLEE, INC.
OAKS CORNERS, NEW YORK 14518
E-Mail: dlong@elderlee.com / epeek@elderlee.com
Tel: 315-789-6670 Fax: 315-789-6615

AISC CERTIFIED FABRICATOR

DRAWN	E.P.	2/20/15
CHECKED	D.L.	
APPROVED		
SCALE	SCHEMATIC	

DRAWING NO. F.R. LaFAYETTE-WALDEN

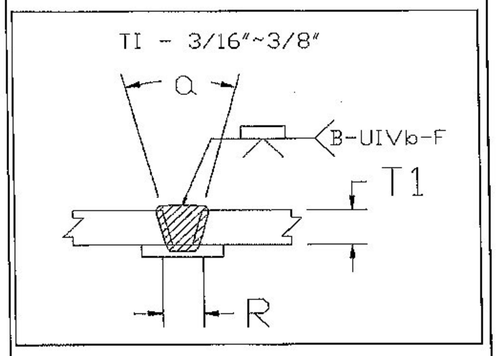
WELDING PROCEDURE SPECIFICATION

PQR ELDERLEE#3

Material Specification	A500 GR B to A572 GR 50
Welding Process	FCAW-G
Manual or Machine	SEMAUTOMATIC
Position of Welding	FLAT/HORIZONTAL
Filler Metal Specification	A5.29
Filler Metal Classification	E81T1-Ni1C-JH4
Flux	N/A
Shielding Gas	CO 2 Dew Point -40DEG F Flow Rate 50CFH
Single or Multiple Pass	SINGLE
Single or Multiple Arc	SINGLE
Welding Current	DC
Polarity	REVERSE ELECTRODE POSITIVE
Welding Progression	STRINGER
Root Treatment	PER D1.5
Preheat and Interpass Temperature	PER D1.5
Postheat Temperature	NONE
Heat Input	Min _____ Max _____

WELDING PROCEDURE

Pass no.	Electrode size	Welding Current Amperes	Welding Current Volts	Travel speed	Joint detail
1	1/16	310	25	11	
Variable	LIMITS	341 TO 269	27 TO 23	12 TO 10	



This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in Section 5.

Procedure No. 3007
Revision No. _____

Contractor Elderlee, Inc.
Authorized By RANDY SCOTT
Date 7/28/2014

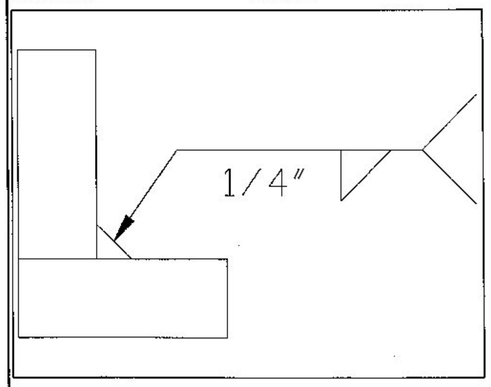
Vermont Agency of Transportation
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CK'D BY FDB OK'D BY CB
July 9, 2015
RESUBMIT No Approved
BY Carolyn Carlson DATE 07/13/15

WELDING PROCEDURE SPECIFICATION

PQR ELDERLEE #3

Material Specification	A709 TO A500 GR B
Welding Process	FCAW-G
Manual or Machine	SEMAUTOMATIC
Position of Welding	FLAT/HORIZONTAL
Filler Metal Specification	A5.29
Filler Metal Classification	E81T1-Ni1C-JH4
Flux	N/A
Shielding Gas	CO 2 Dew Point -40DEG F Flow Rate 50CFH
Single or Multiple Pass	SINGLE
Single or Multiple Arc	SINGLE
Welding Current	DC
Polarity	REVERSE ELECTRODE POSITIVE
Welding Progression	STRINGER
Root Treatment	D1.5
Preheat and Interpass Temperature	D1.5
Postheat Temperature	NONE
Heat Input	Min _____ Max _____

WELDING PROCEDURE

Pass no.	Electrode size	Welding Current Amperes	Welding Current Volts	Travel speed	Joint detail
1	1/16	310	25	11	
Variable	LIMITS	341 TO 269	27 TO 23	12 TO 10	

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in Section 5.

Procedure No. 3009
Revision No. _____

Contractor Elderlee, Inc.
Authorized By RANDY SCOTT
Date 3/20/2014

Vermont Agency of Transportation
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RESUBMIT No Approved
BY Carolyn Carlson DATE 07/13/15

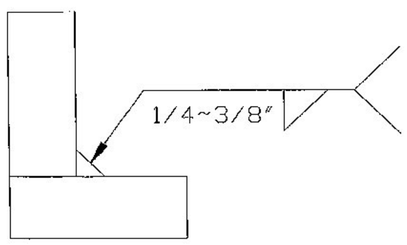
WELDING PROCEDURE SPECIFICATION

PQR ELDERLEE #3

Material Specification	A500 TO A572 GR 50
Welding Process	FCAW-G
Manual or Machine	SEMAUTOMATIC
Position of Welding	FLAT/HORIZONTAL
Filler Metal Specification	A5.29
Filler Metal Classification	E81T1-Ni1C-JH4
Flux	N/A
Shielding Gas	CO 2 Dew Point -40DEG F Flow Rate 50CFH
Single or Multiple Pass	SINGLE
Single or Multiple Arc	SINGLE
Welding Current	DC
Polarity	REVERSE
Welding Progression	STRINGER
Root Treatment	PER D1.5
Preheat and Interpass Temperature	PER D1.5
Postheat Temperature	NONE
Heat Input	Min _____ Max _____

WELDING PROCEDURE

Pass no.	Electrode size	Welding Current Amperes	Welding Current Volts	Travel speed	Joint detail
1	1/16	310	25	11	
Variable	LIMITS	341 TO 269	27 TO 23	12 TO 10	



This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in Section 5.

Procedure No. 3016
Revision No. _____

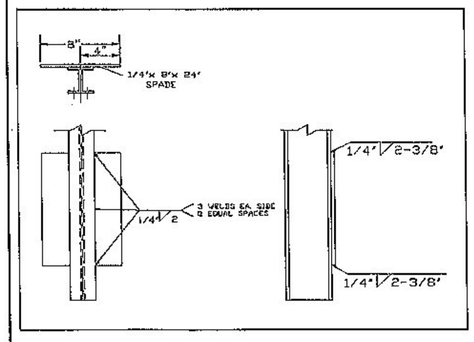
Contractor Elderlee, Inc.
Authorized By RANDY SCOTT
Date 8/4/2014

Vermont Agency of Transportation
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CK'D BY FDB OK'D BY CB
July 9, 2015
RESUBMIT No Approved
BY Carolyn Carlson DATE 07/13/15

WELDING PROCEDURE SPECIFICATION

Material Specification	A572 GR 50		
Welding Process	GMAW		
Manual or Machine	SEMIAUTOMATIC/ROBOTIC		
Position of Welding	FLAT/HORIZONTAL		
Filler Metal Specification	A5.18		
Filler Metal Classification	L-56 LINCOLN		
Flux	N/A		
Shielding Gas	90% ARGON /10% CO2	Dew Point -40DEG F	Flow Rate 45CFH
Single or Multiple Pass	SINGLE		
Single or Multiple Arc	SINGLE		
Welding Current	DC		
Polarity	REVERSE		
Welding Progression	STRINGER		
Root Treatment	PER D1.5		
Preheat and Interpass Temperature	PER D1.5		
Postheat Temperature	NONE		
Heat Input	Min	Max	

WELDING PROCEDURE

Pass no.	Electrode size	Welding Current Amperes	Welding Current Volts	Travel speed	Joint detail
	.045	190	22	19	
Variable	LIMITS	171 TO 209	20 TO 24	17 TO 21	

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in Section 5.

Procedure No. 3022
Revision No.

Contractor Elderlee, Inc.
Authorized By RANDY SCOTT
Date 3/20/2014

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BY Carolyn Carlson DATE 07/13/15

Precast Approach Slabs

Walden BRF 030-3(5)

Concrete:

Mix Designation: P60TER

1. Specified Mix Design - 5000 PSI
2. Proposed Mix Design - 6000 PSI
3. Striping Strength - 4000 PSI
4. Handling Strength - 4000 PSI
5. Shipping Strength - 5000 PSI
6. Install Strength - 5000 PSI
7. Traffic Loading - 5000 PSI

Fabrication Tolerances:

1. Width ±1/4"
2. Height ±1/4"
3. Length ±1/2"
4. Rebar Cover 3" Min. (Unless Noted Otherwise)
5. Rebar Spacing ±1"
6. Rebar Clearance ±1/4"
7. Insert Placement ±1/4"

Approch Slab Finish:

1. Top surface to be smooth flat finish

Reinforcing:

General Notes:

1. Reinforcing Steel - ASTM A615, Grade 60, Level I, Epoxy Coated
2. Materials and Manufacturing shall conform to ASTM C1433
3. Bar tied at every intersection for all perimeter bars and every other intersection for all other bars.
4. Contractor must coordinate closure pour vertical dowel bars with the associated sleeves cast into the approach slabs as submitted. Note that the spacing of these sleeves do not exactly match the spacing indicated on sheet 27 of 56.

Tolerances:

1. Spacing ±1"
2. Clearance ±1/4"

Lap Lengths:

1. Per AASHTO 5.11.2.1.1 & 5.11.5.3.1
   Lap Length for Level I (Epoxy Coated):
   #4 Bar=17"
   #5 Bar=31"
   #6 Bar=39"
   #7 Bar=53"
   #8 Bar=69"

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April 20, 2015

RESUBMIT NO Approved

BY C. CARLSON DATE 04/22/15

CONTRACTORS VTSPEC	Rev.	Date	By	Description
	1	04/16/15	IBA	Changes per State Review

PRECAST CONCRETE APPROACH SLAB SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VT AOT

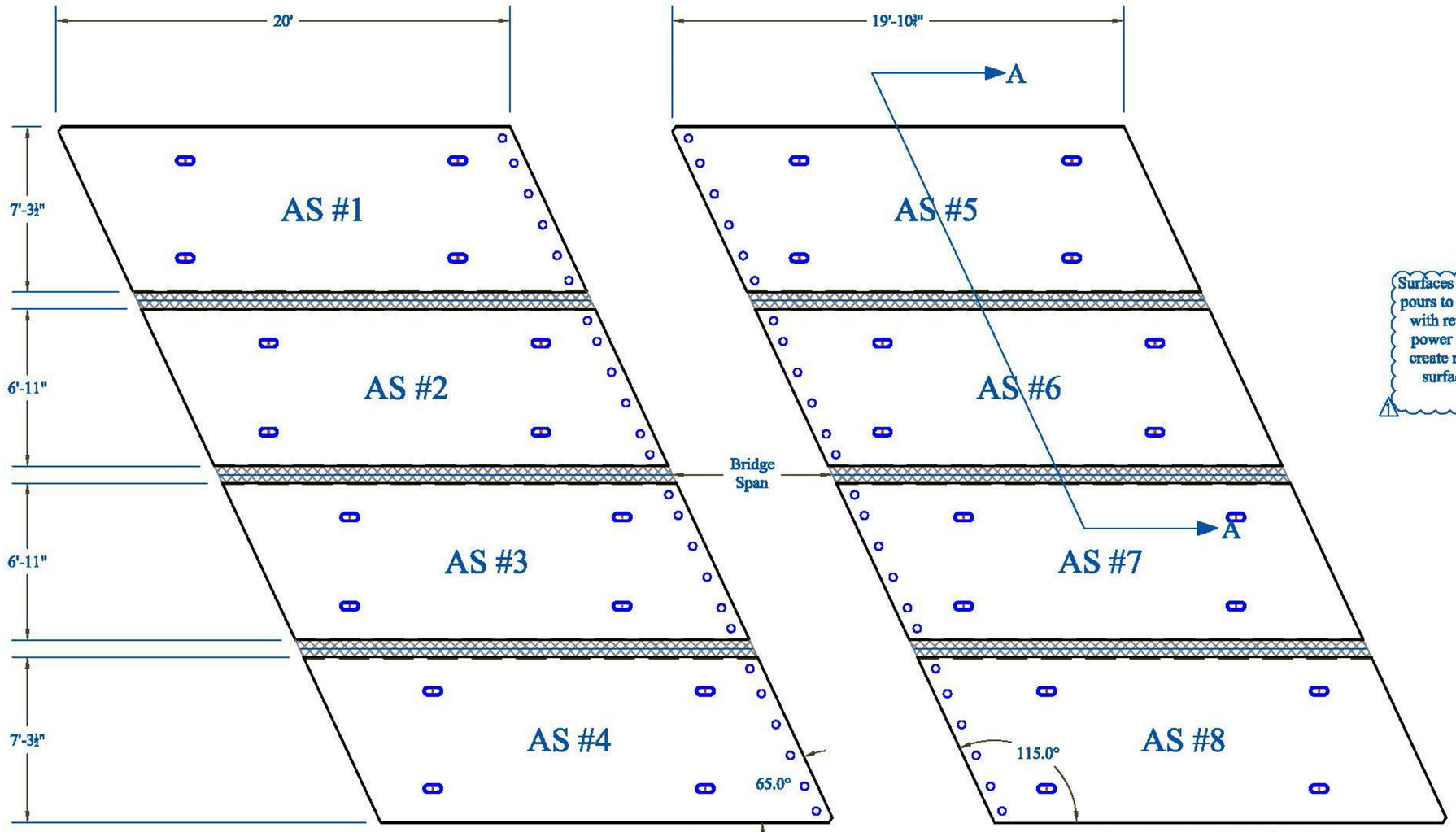
PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

INSTALLER: J.A. McDonald, Inc. PO Box 132 Lyndon Center, VT 05850

FABRICATOR: 193 INDUSTRIAL AVE. WILLISTON, VT 05495 Ph: (802) 658-0201

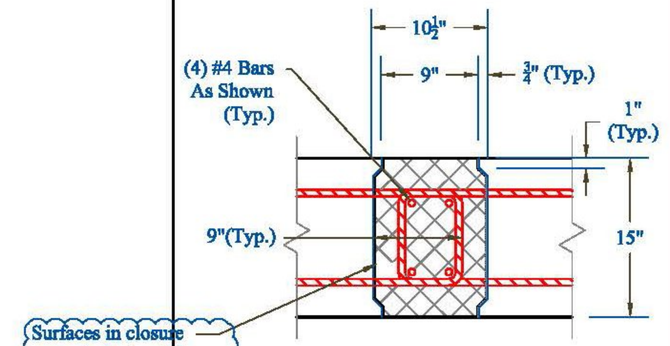
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04/08/2015 | COVER_PAGE | 1_OF_10

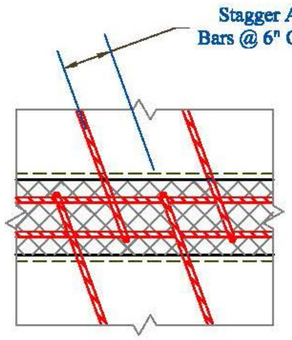


Approach Slab 1: Plan

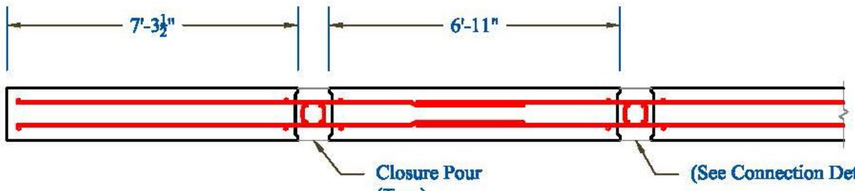
Approach Slab 2: Plan



Connection Detail Section



Connection Detail Plan



Section A-A

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BY C. CARLSON DATE 04/22/15

Table of Pieces

Name	Qty	Thickness	Vol (Cu Yd)	Wt (lbs)
As#1	1	1'-3"	6.75	27,000
As#2	1	1'-3"	6.4	25,600
As#3	1	1'-3"	6.4	25,600
As#4	1	1'-3"	6.75	27,000
As#5	1	1'-3"	6.75	27,000
As#6	1	1'-3"	6.4	25,600
As#7	1	1'-3"	6.4	25,600
As#8	1	1'-3"	6.75	27,000

CONTRACTORS VISPE:	Rev.	Date	By	Description
	1	04/16/15	IBA	Changes per State Review

PRECAST CONCRETE APPROACH SLAB SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VT AOT

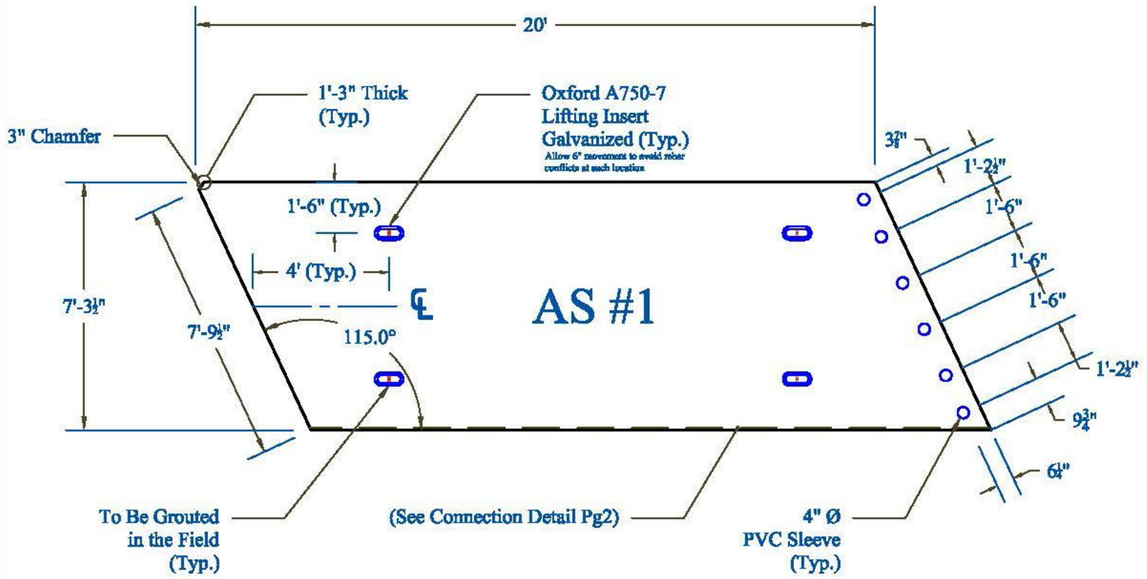
PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

INSTALLER: J.A. McDonald, Inc. PO Box 132 Lyndon Center, VT 05850

FABRICATOR: 193 INDUSTRIAL AVE. WILLISTON, VT 05495 Ph: (802) 658-0201

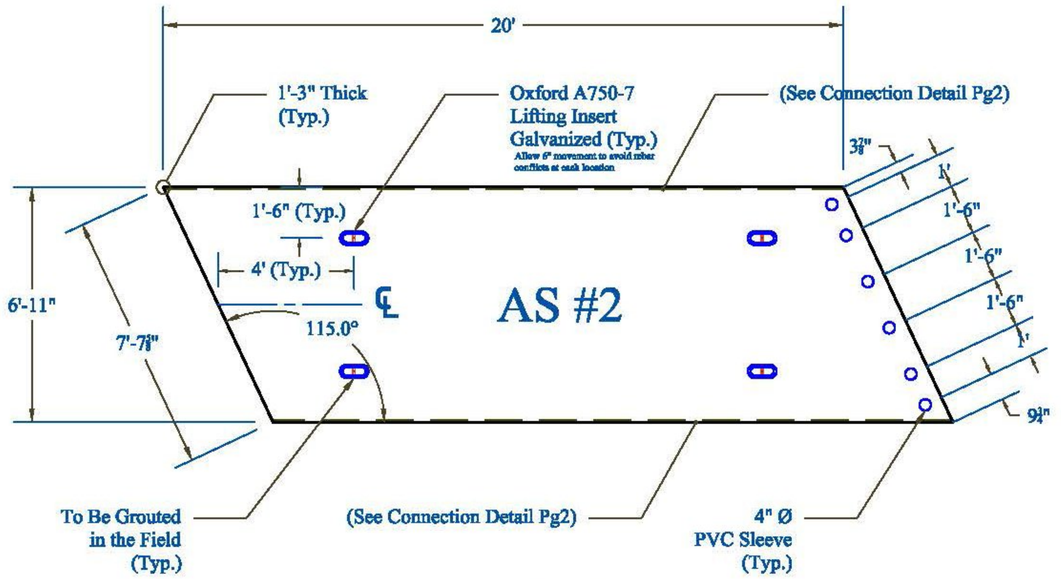
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04/08/2015 | PLAN_VIEW | 2_OF_10



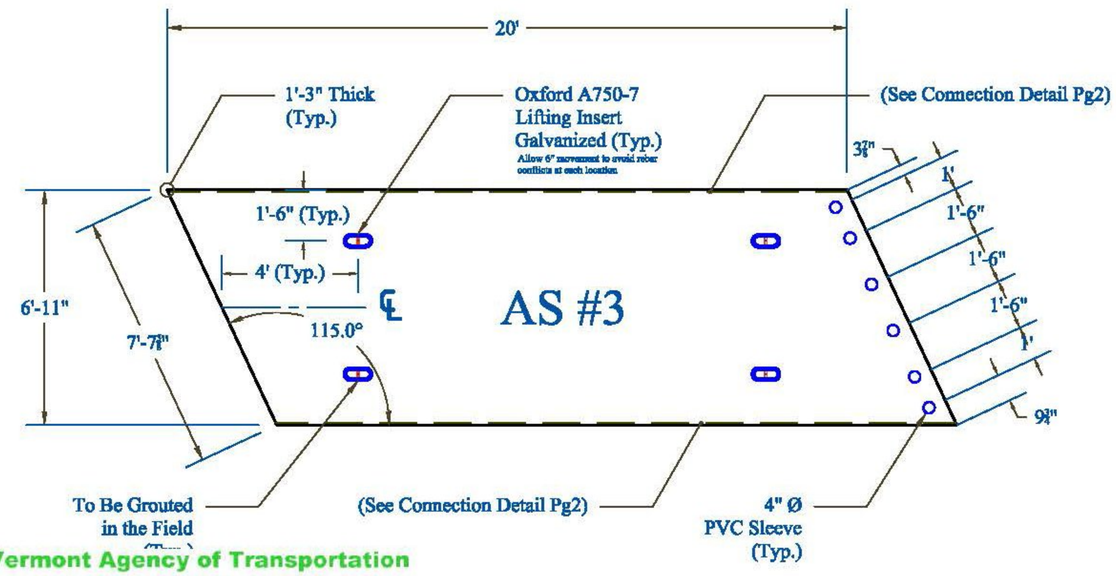
AS #1 Details

Weight: 27,000 lbs



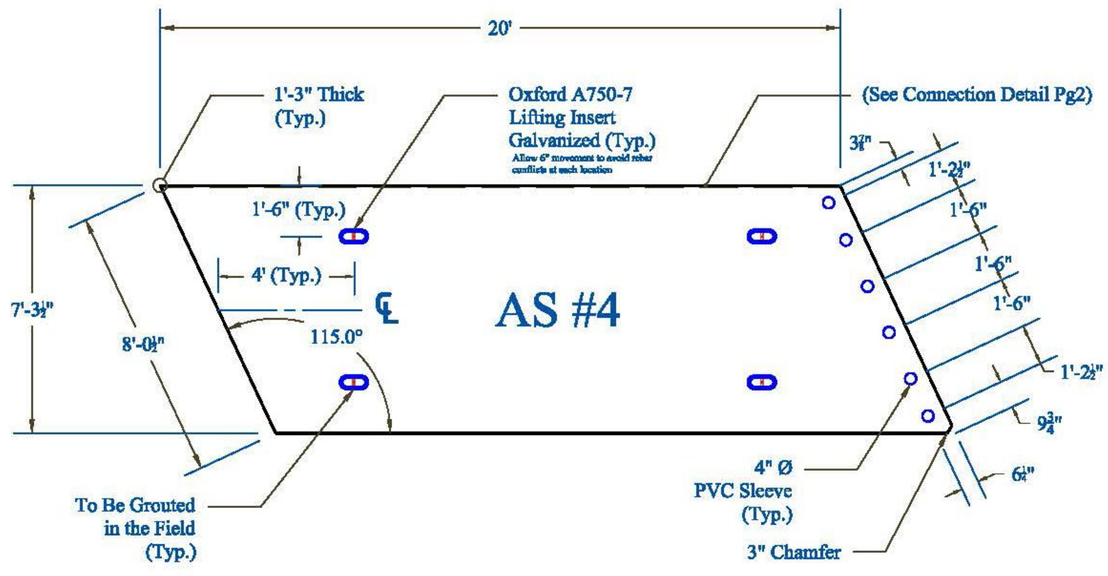
AS #2 Details

Weight: 25,600 lbs



AS #3 Details

Weight: 25,600 lbs



AS #4 Details

Weight: 27,000 lbs

Vermont Agency of Transportation

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April 20, 2015

RESUBMIT NO Approved

BY C. CARLSON DATE 04/22/15

Review

PRECAST CONCRETE APPROACH SLAB SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VT AOT

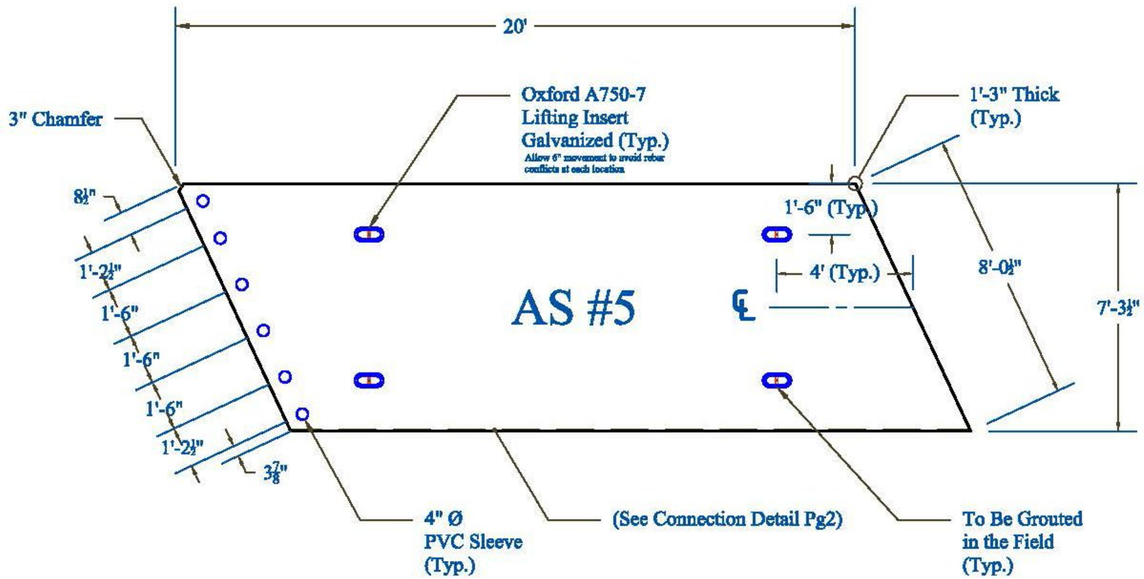
PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

INSTALLER: J.A. McDonald, Inc. PO Box 132 Lyndon Center, VT 05850

FABRICATOR: 193 INDUSTRIAL AVE. WILLISTON, VT 05495 Ph: (802) 658-0201

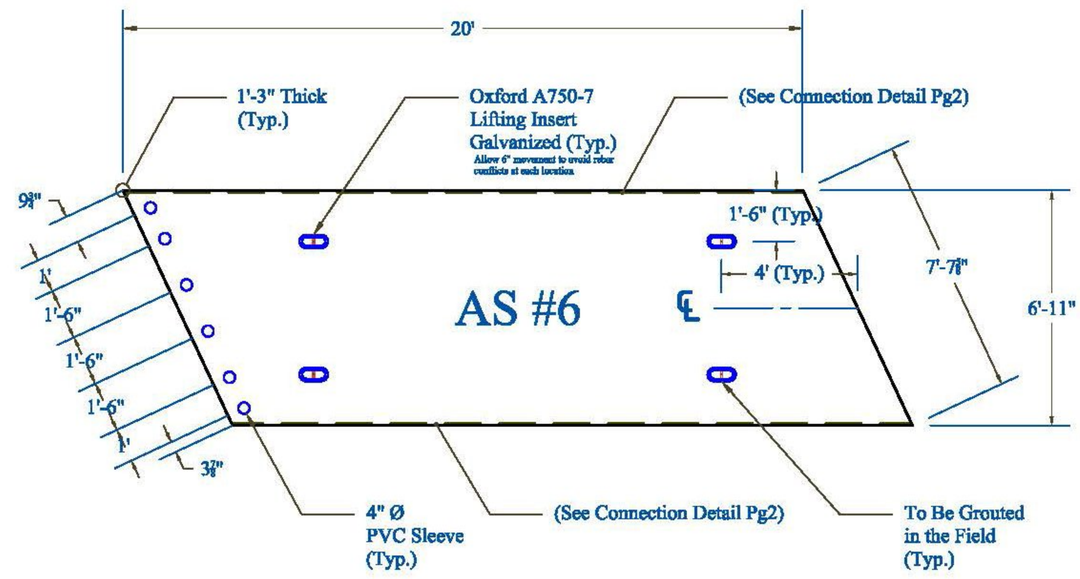
SD Ireland PRECAST

04/08/2015 | SLABS_1 | 3_OF_10



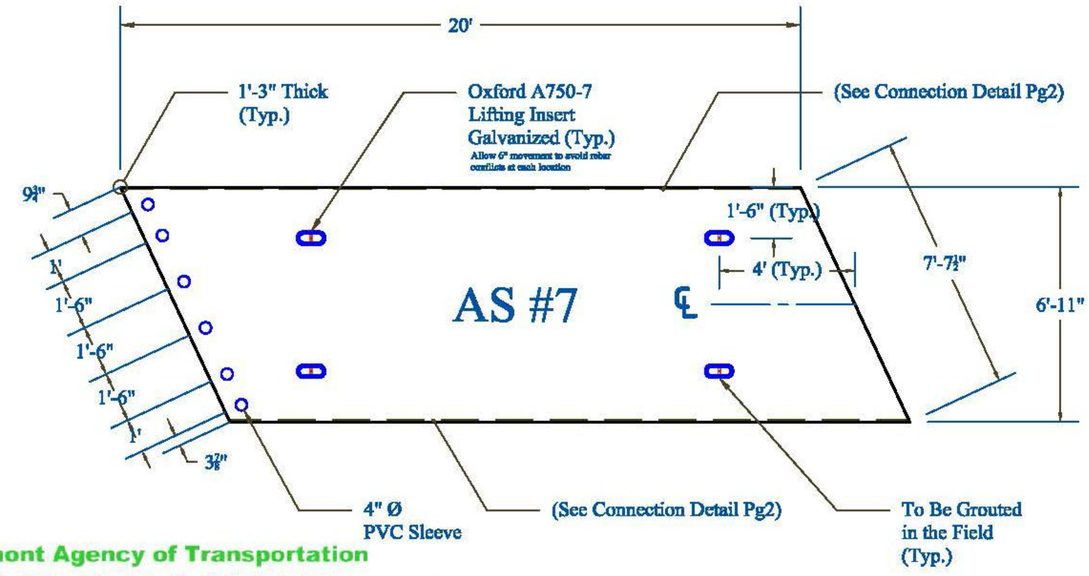
AS #5 Details

Weight: 27,000 lbs



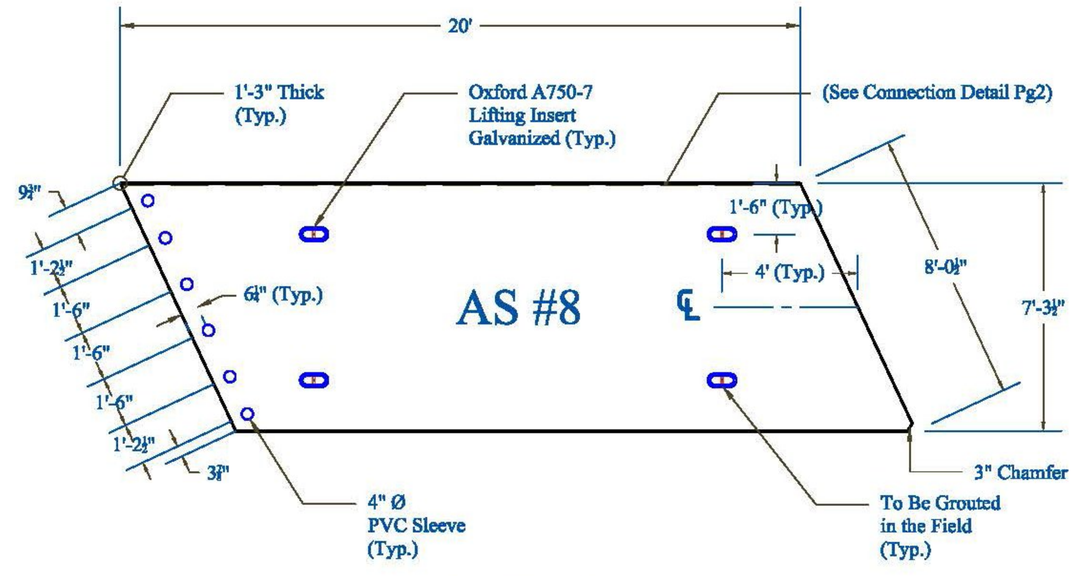
AS #6 Details

Weight: 25,600 lbs



AS #7 Details

Weight: 25,600 lbs



AS #8 Details

Weight: 27,000 lbs

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Review

PRECAST CONCRETE APPROACH SLAB SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VT AOT

PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

INSTALLER:
J.A. McDonald, Inc.
PO Box 132
Lyndon Center, VT 05850

FABRICATOR:
193 INDUSTRIAL AVE.
WILLISTON, VT 05495
Ph: (802) 658-0201

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04/08/2015 | SLABS_2 | 4_OF_10

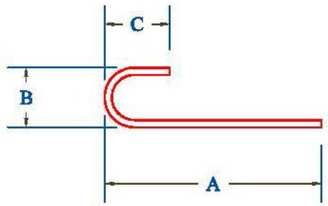
Reinforcing Schedule

Location	Mark	Description	Size	Spacing	Length	Qty.	A	B	C
CP Hor Bars	AS1401	Str	#4	N/A	233-1/4"	13*			
End Slab U Bars	AS1501	2	#5	12"	211-1/4"	42	102"	7-1/4"	102"
Mid Slab U Bars	AS1502	2	#5	12"	148 1/4"	80	70-1/2"	7-1/4"	70-1/2"
Sm End U Bars	AS1503	2	#5	12"	210-1/4"	1	102"	6-1/4"	102"
Sm Mid U Bars	AS1504	2	#5	12"	147-1/4"	3*	70-1/2"	6-1/4"	70-1/2"
Top Hor Slab Bar	AS1601	Str	#6	12"	233"	32			
Bot Hor Slab Hooks	AS1901	1	#9	12"	253-3/4"	34	233"	11-3/4"	9"
CP Hor Bars	AS2401	Str	#4	N/A	233-1/4"	12			
End Slab U Bars	AS2501	2	#5	12"	211-1/4"	40	102"	7-1/4"	102"
Mid Slab U Bars	AS2502	2	#5	12"	148 1/4"	78	70-1/2"	7-1/4"	70-1/2"
Sm End U Bars	AS2503	2	#5	12"	210-1/4"	1	102"	6-1/4"	102"
Sm Mid U Bars	AS2504	2	#5	12"	147-1/4"	2	70-1/2"	6-1/4"	70-1/2"
Top Hor Slab Bar	AS2601	Str	#6	12"	233"	33*			
Bot Hor Slab Hooks	AS2901	1	#9	12"	253-3/4"	35*	233"	11-3/4"	9"

*One Bar Added for Testing

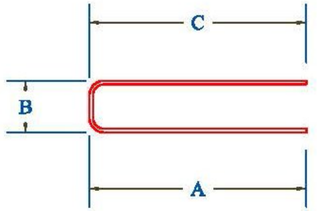
Rebar Bend Types

1



Str

2



Std. Bar Bend Ø	
Bar #	Bend Ø
#4	3"
#5	$3\frac{3}{4}$"
#6	$4\frac{1}{2}$"
#9	$9\frac{1}{2}$"

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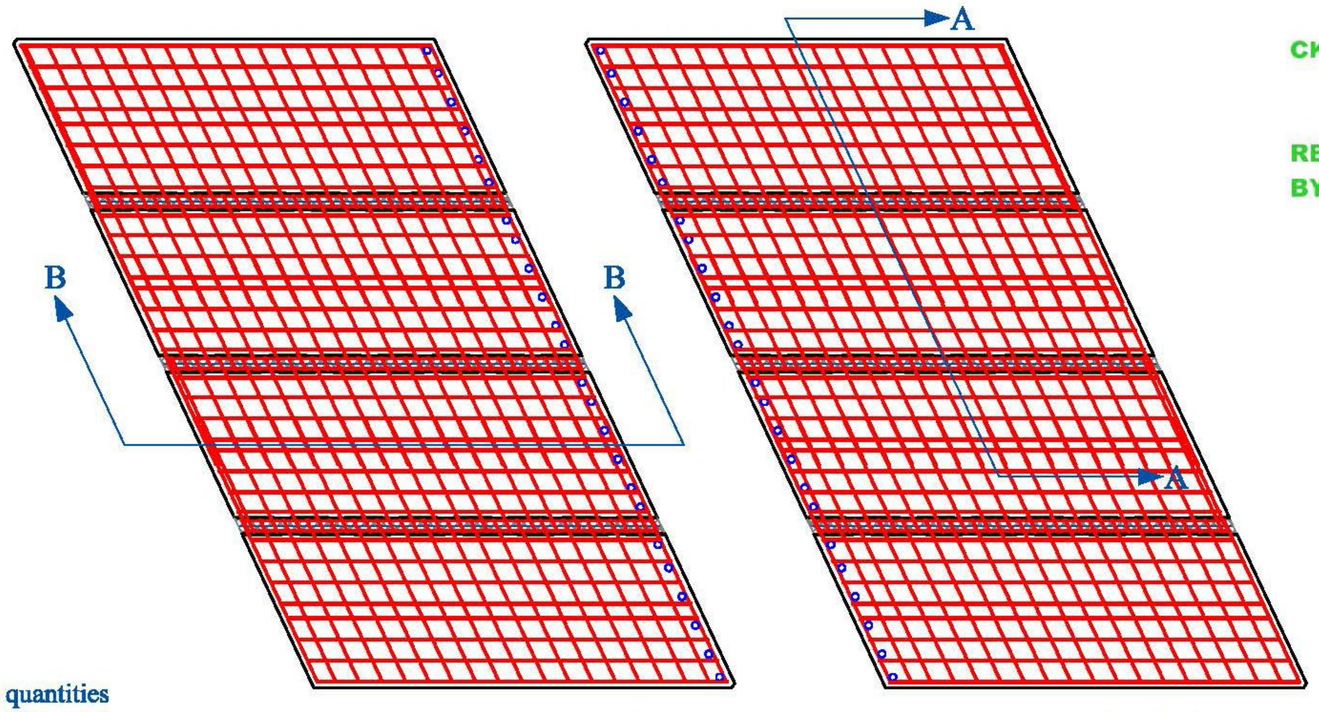
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April 20, 2015

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BY C. CARLSON DATE 04/22/15



Approach Slab 1 Approach Slab 2

Note: Quantities of bar ordered may differ from quantities indicated in bar schedule. Additionally, bar quantities and locations on piece drawings may not reflect the actual number of bars or their exact location.

3" Clear U.O.N.

CONTRACTORS VTSPE:	Rev.	Date	By	Description
	1	04/16/15	IBA	Changes per State Review

PRECAST CONCRETE APPROACH SLAB SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VT AOT

PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

INSTALLER: J.A. McDonald, Inc. PO Box 132 Lyndon Center, VT 05850

FABRICATOR: 193 INDUSTRIAL AVE. WILLISTON, VT 05495 Ph: (802) 658-0201

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04/08/2015 | BAR_OVERVIEW | 5_OF_10

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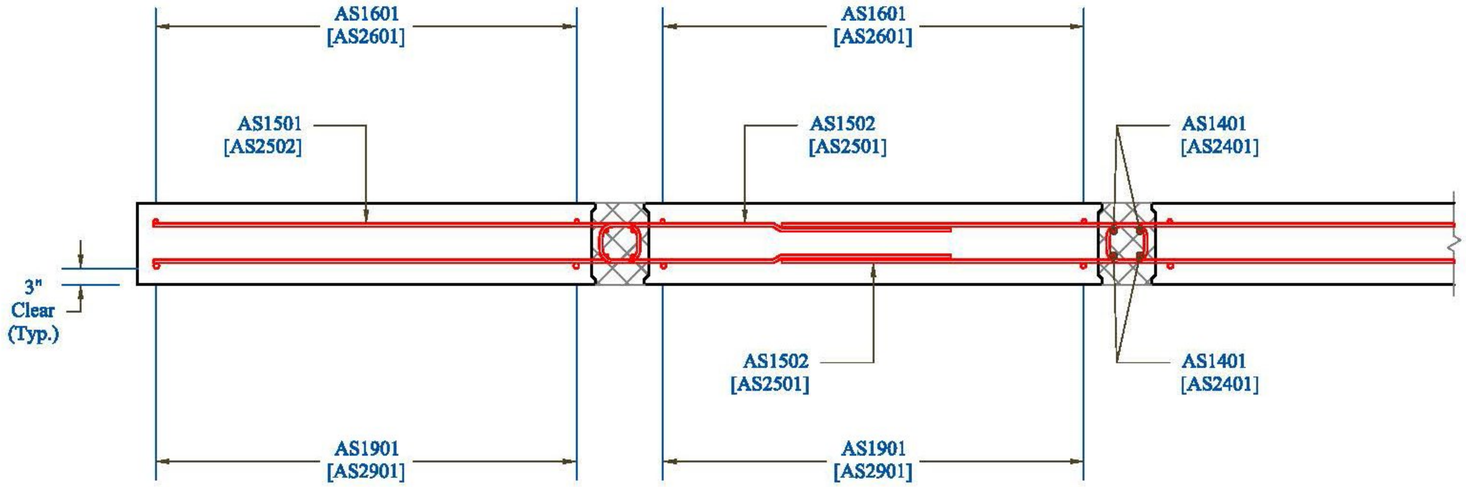
Approach Slab Submittal #2_Approved 4.22.15.pdf

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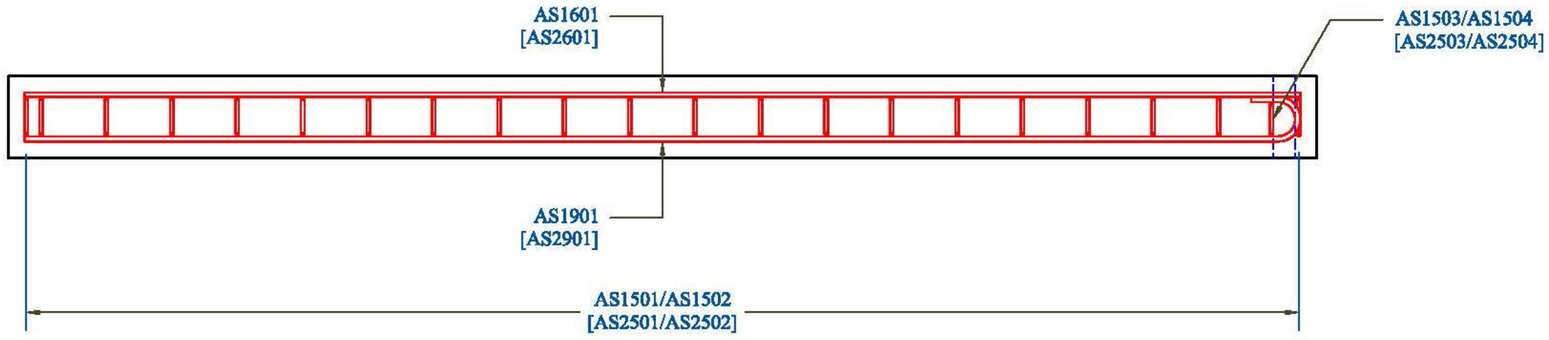
April 20, 2015

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BY C. CARLSON DATE 04/22/15



Section A-A



Section B-B

CONTRACTORS VTSPEC	Rev.	Date	By	Description
	1	04/16/15	IBA	Changes per State Review

PRECAST CONCRETE APPROACH SLAB SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VT AOT

PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
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INSTALLER:
J.A. McDonald, Inc.
PO Box 132
Lyndon Center, VT 05850

FABRICATOR:
193 INDUSTRIAL AVE.
WILLISTON, VT 05495
Ph: (802) 658-0201

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04/08/2015 | BAR_SECTION_VIEWS | 6_OF_10

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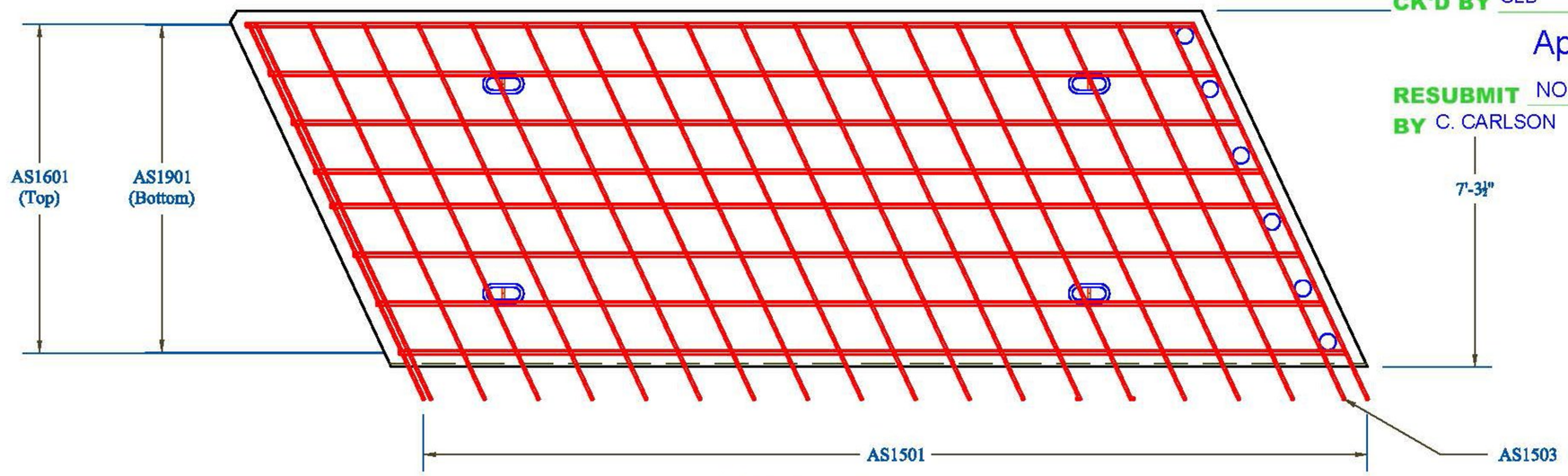
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CK'D BY CLB OK'D BY HIS

April 20, 2015

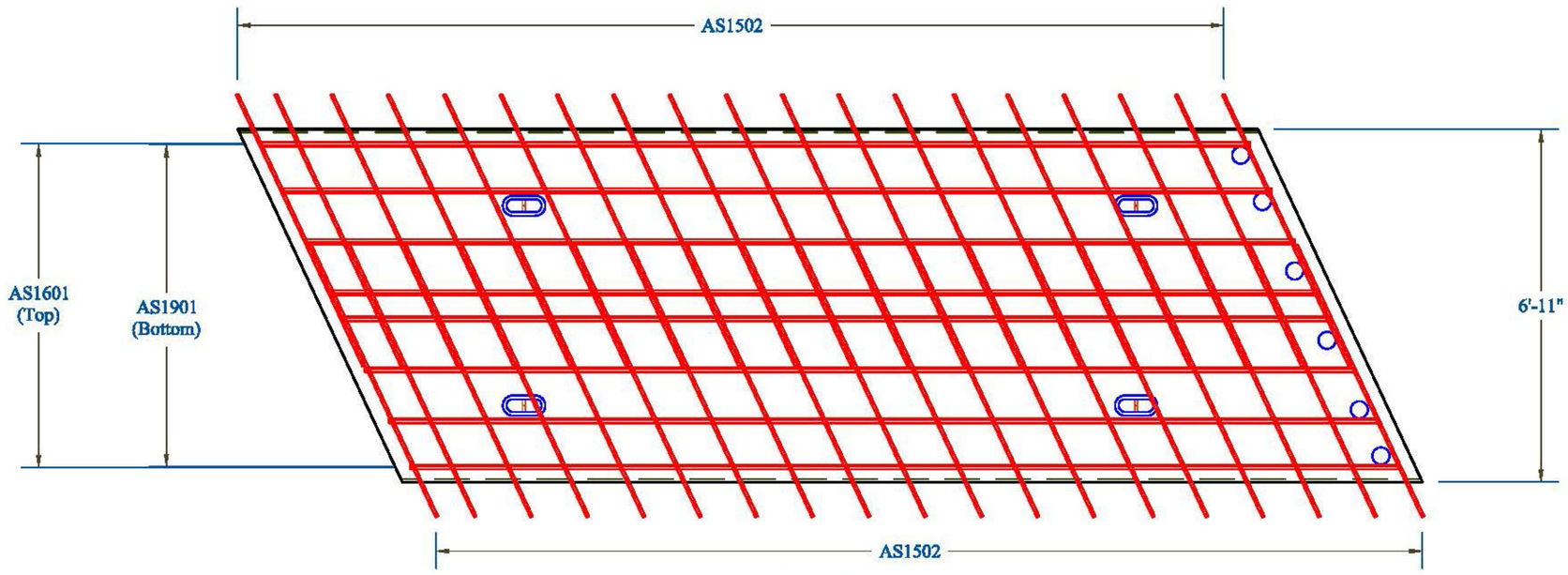
RESUBMIT NO Approved

BY C. CARLSON DATE 04/22/15



AS #1 Details

3" Clear U.O.N.



Check depth of lifting inserts to ensure they will not interfere with the rebar

AS #2 Details

3" Clear U.O.N.

CONTRACTORS VTSPEC	Rev.	Date	By	Description
	1	04/16/15	IBA	Changes per State Review

PRECAST CONCRETE APPROACH SLAB SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VT AOT

PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

INSTALLER: J.A. McDonald, Inc. PO Box 132 Lyndon Center, VT 05850

FABRICATOR: 193 INDUSTRIAL AVE. WILLISTON, VT 05495 Ph: (802) 658-0201

SD Ireland PRECAST

04/08/2015 | SLAB_BAR_1 | 7_OF_10

Vermont Agency of Transportation

RECEIVED

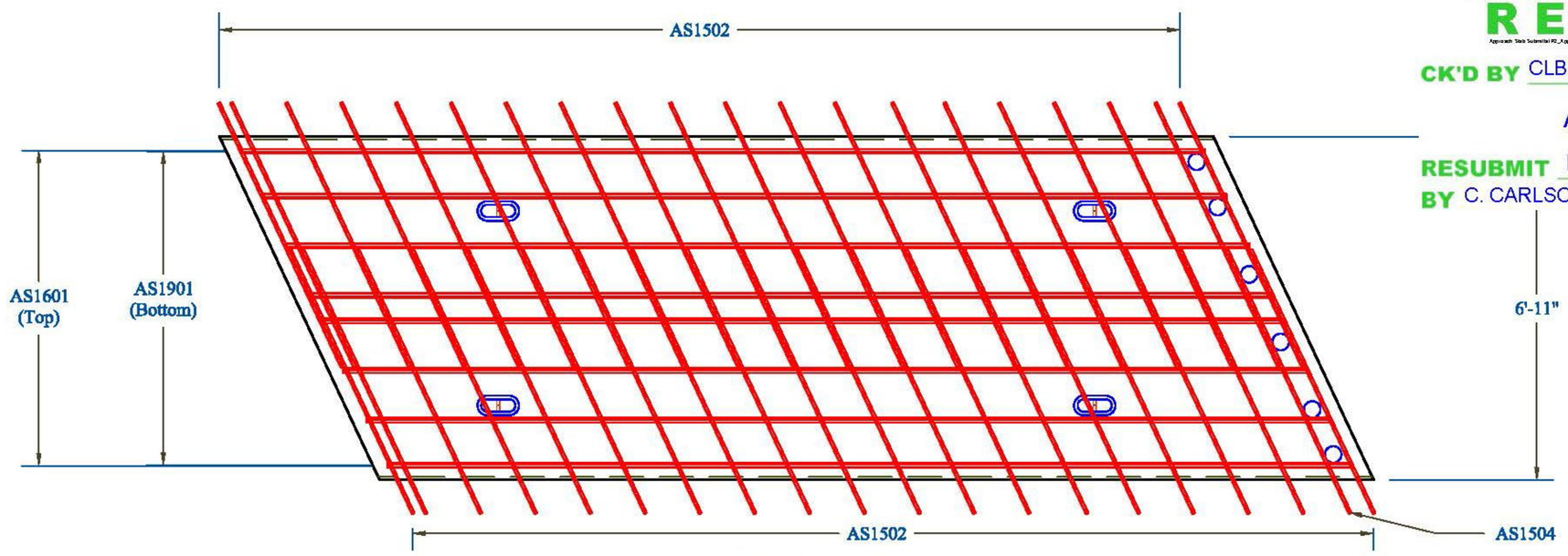
Approach Slab Submittal #2_Approved 4-22-15.pdf

CK'D BY CLB OK'D BY HIS

April 20, 2015

RESUBMIT NO **Approved**

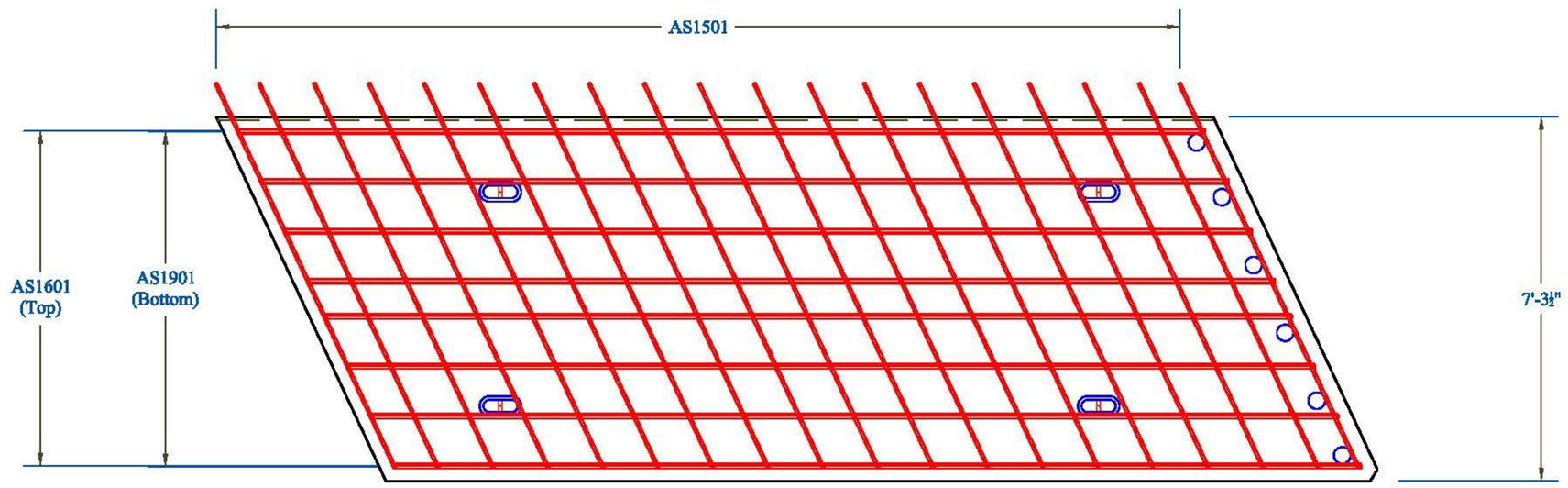
BY C. CARLSON DATE 04/22/15



Check depth of lifting inserts to ensure they will not interfere with the rebar

AS #3 Details

3" Clear U.O.N.



AS #4 Details

3" Clear U.O.N.

CONTRACTORS VTSPEC	Rev.	Date	By	Description
	1	04/16/15	IBA	Changes per State Review

PRECAST CONCRETE APPROACH SLAB SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VT AOT

PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

INSTALLER: J.A. McDonald, Inc. PO Box 132 Lyndon Center, VT 05850

FABRICATOR: 193 INDUSTRIAL AVE. WILLISTON, VT 05495 Ph: (802) 658-0201

SD Ireland PRECAST

04/08/2015 | SLAB_BAR_2 | 8_OF_10

Vermont Agency of Transportation

RECEIVED

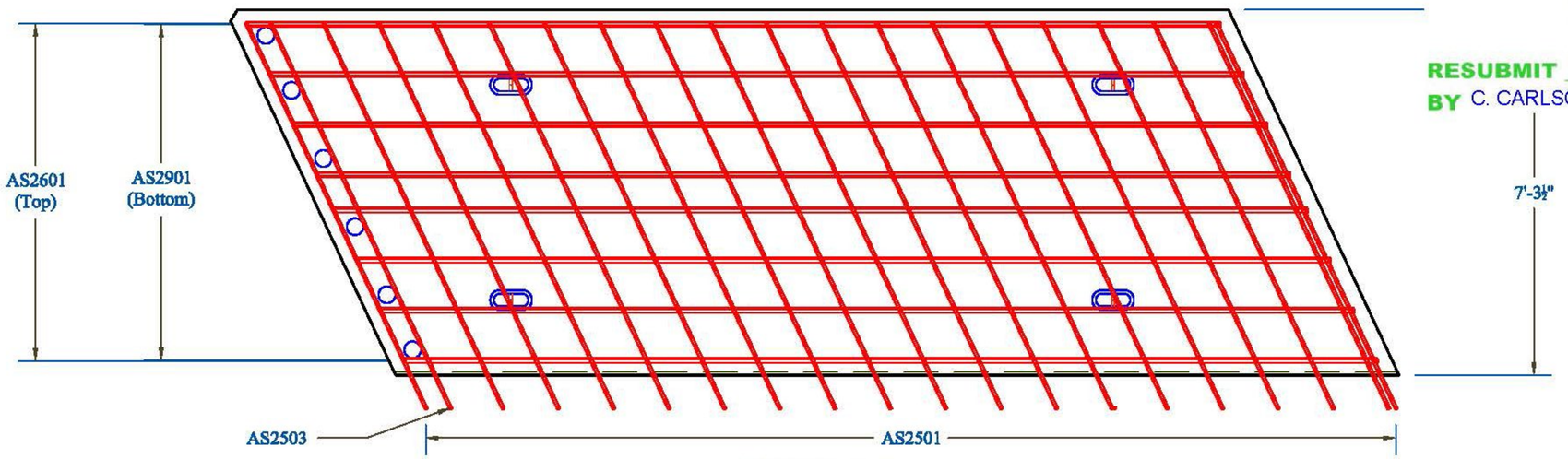
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CK'D BY CLB OK'D BY HIS

April 20, 2015

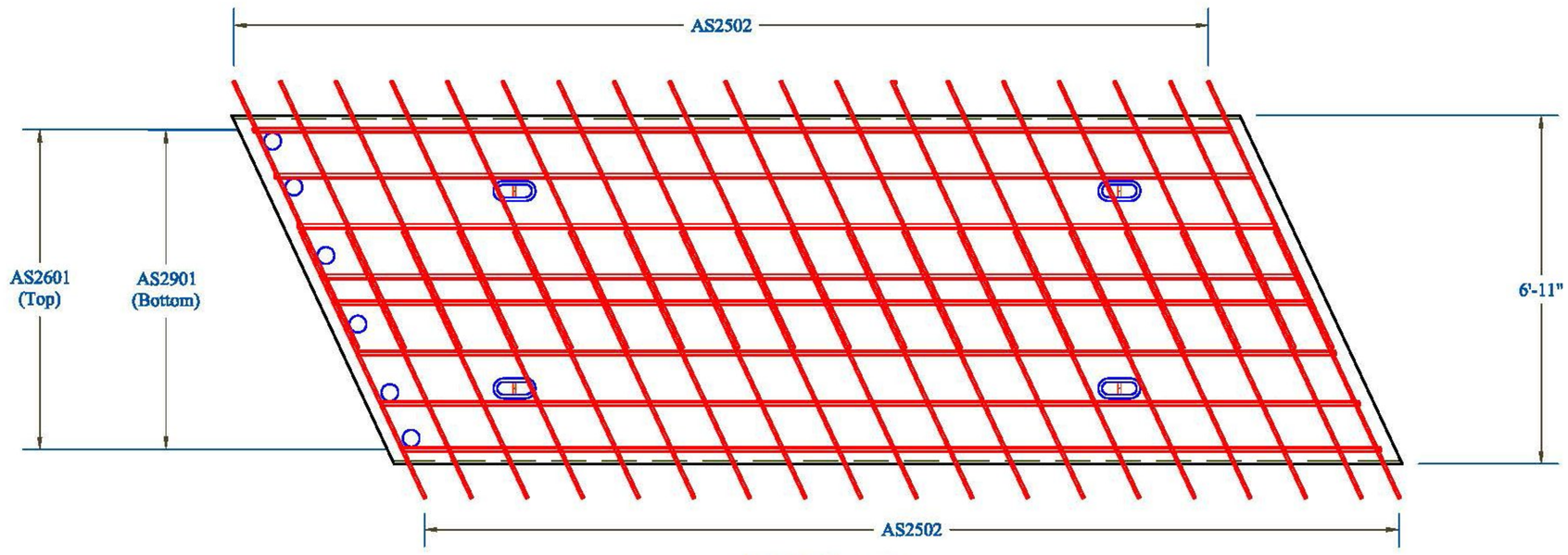
RESUBMIT NO Approved

BY C. CARLSON DATE 04/22/15



AS #5 Details

3" Clear U.O.N.



AS #6 Details

3" Clear U.O.N.

CONTRACTORS VTSPEC	Rev.	Date	By	Description
	1	04/16/15	IBA	Changes per State Review

PRECAST CONCRETE APPROACH SLAB SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VT AOT

PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

INSTALLER:
J.A. McDonald, Inc.
PO Box 132
Lyndon Center, VT 05850

FABRICATOR:
193 INDUSTRIAL AVE.
WILLISTON, VT 05495
Ph: (802) 658-0201

SD Ireland PRECAST

04/08/2015 | SLAB_BAR_3 | 9_OF_10

Vermont Agency of Transportation

RECEIVED

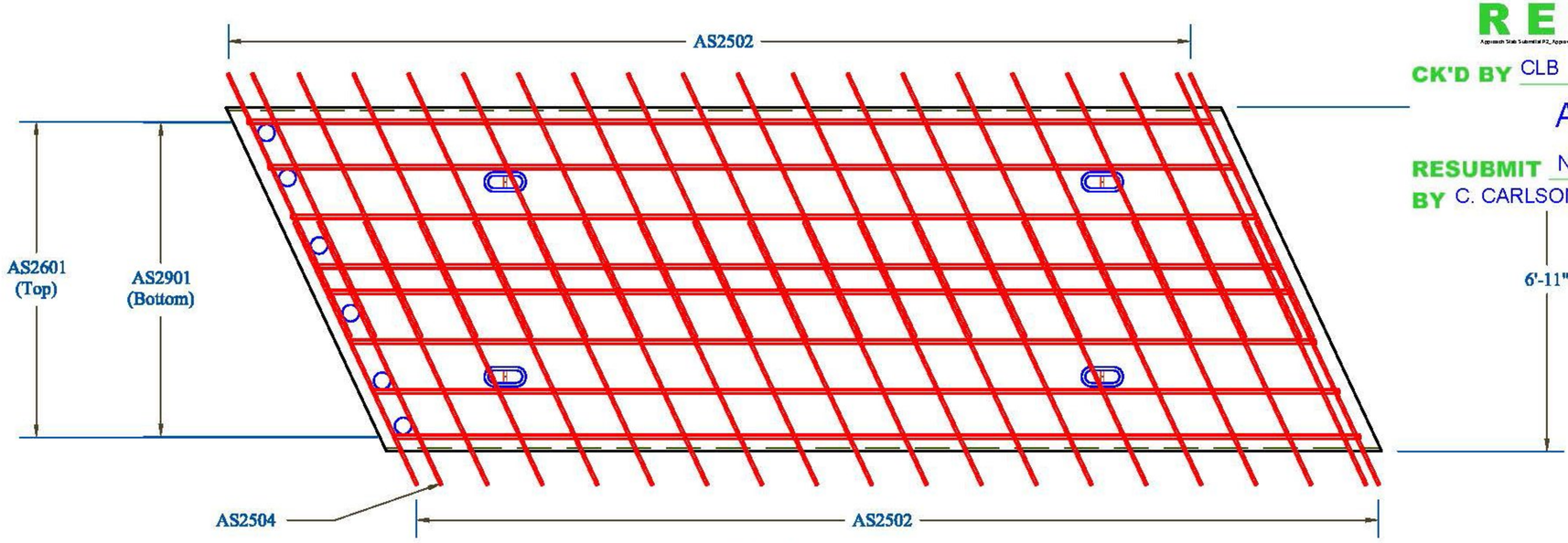
Approach Slab Submittal #2, Approved 4-22-15 ph

CK'D BY CLB OK'D BY HIS

April 20, 2015

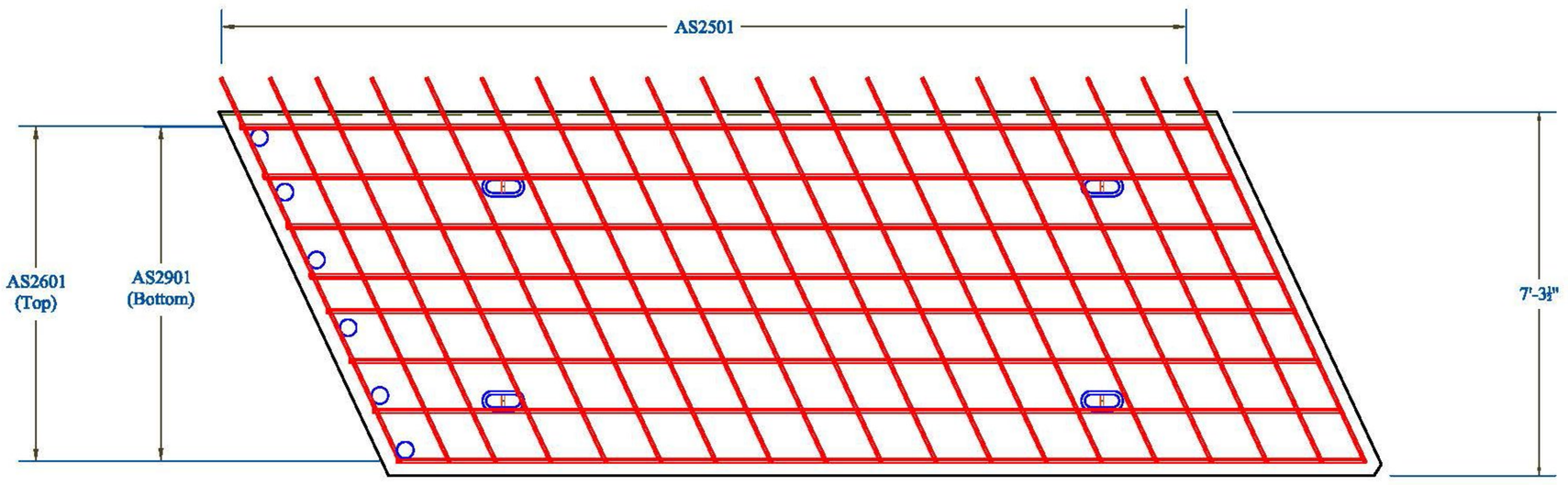
RESUBMIT NO Approved

BY C. CARLSON DATE 04/22/15



AS #7 Details

3" Clear U.O.N.



AS #8 Details

3" Clear U.O.N.

CONTRACTORS VTSPEC	Rev.	Date	By	Description
	1	04/16/15	IBA	Changes per State Review

PRECAST CONCRETE APPROACH SLAB SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VT AOT

PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

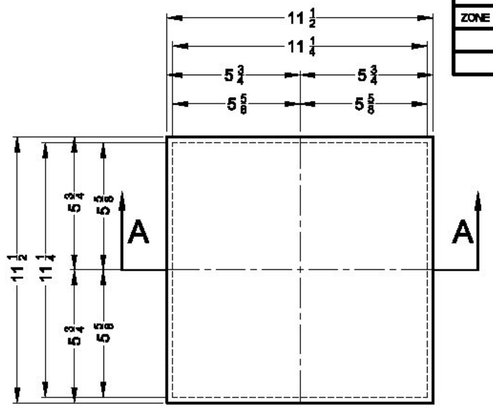
INSTALLER:
J.A. McDonald, Inc.
PO Box 132
Lyndon Center, VT 05850

FABRICATOR:
193 INDUSTRIAL AVE.
WILLISTON, VT 05495
Ph: (802) 658-0201

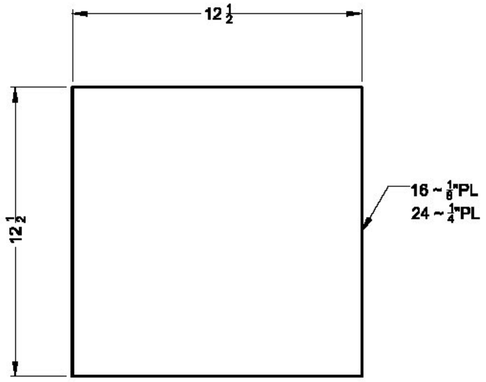
SD Ireland PRECAST

04/08/2015 | SLAB_BAR_4 | 10_OF_10

REVISIONS					
ZONE	REV	DESCRIPTION	REVISED BY	DATE	APPROVED



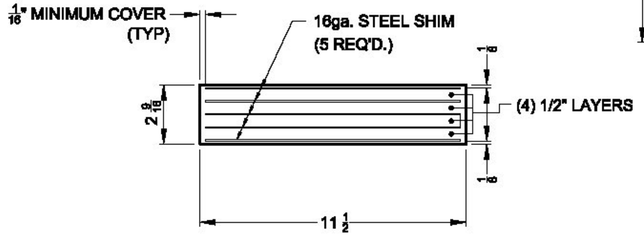
PLAN VIEW



A709 Gr36

GALVANIZED SHIM PLATE PLAN VIEW

QTY. REQ'D. = 16~ 1/8" PLATE
QTY. REQ'D. = 24~ 1/4" PLATE



SECTION A-A

QTY. REQ'D. = 16

NOTES:

1. MANUFACTURING FACILITY LOCATION:
   AMSCOT STRUCTURAL PRODUCTS CORP.
   241 E. BLACKWELL STREET
   DOVER, N.J. 07801
   CONTACT- PETER SOMOGYI
   PH: 973-868-8800
   FAX: 973-969-5851

2. ALL BEARING PADS TO BE MANUFACTURED IN ACCORDANCE WITH AASHTO SECTION 18. THE ELASTOMER SHALL BE GRADE 4 NATURAL RUBBER WITH A DUROMETER HARDNESS OF 60 ± 5. THE STEEL REINFORCING PLATES SHALL CONFORM TO ASTM A36.

3. THE BEARINGS ARE DESIGNED SO THE SUPERSTRUCTURE MAY BE ERECTED WHEN THE AMBIENT AIR TEMPERATURE IS WITHIN THE RANGE OF 40° F. TO 80° F.

4. ALL DIMENSIONS ARE IN INCHES , UNLESS OTHERWISE NOTED.

5. TOLERANCES: THICKNESS -0 +1/8
   PLAN -0 +1/8

Vermont Agency of Transportation

RECEIVED

JAM15A1RO Model (1) WALDEN BEARING DETAILS.pdf

CK'D BY HIS OK'D BY JAG

February 20, 2015

RESUBMIT No Approved

BY Carolyn Carlson DATE 2/25/2015

WALDEN
BRF 030-3(5)

FEDERAL PROJECT NO. :

CONTRACT NO. : PIN NO. :

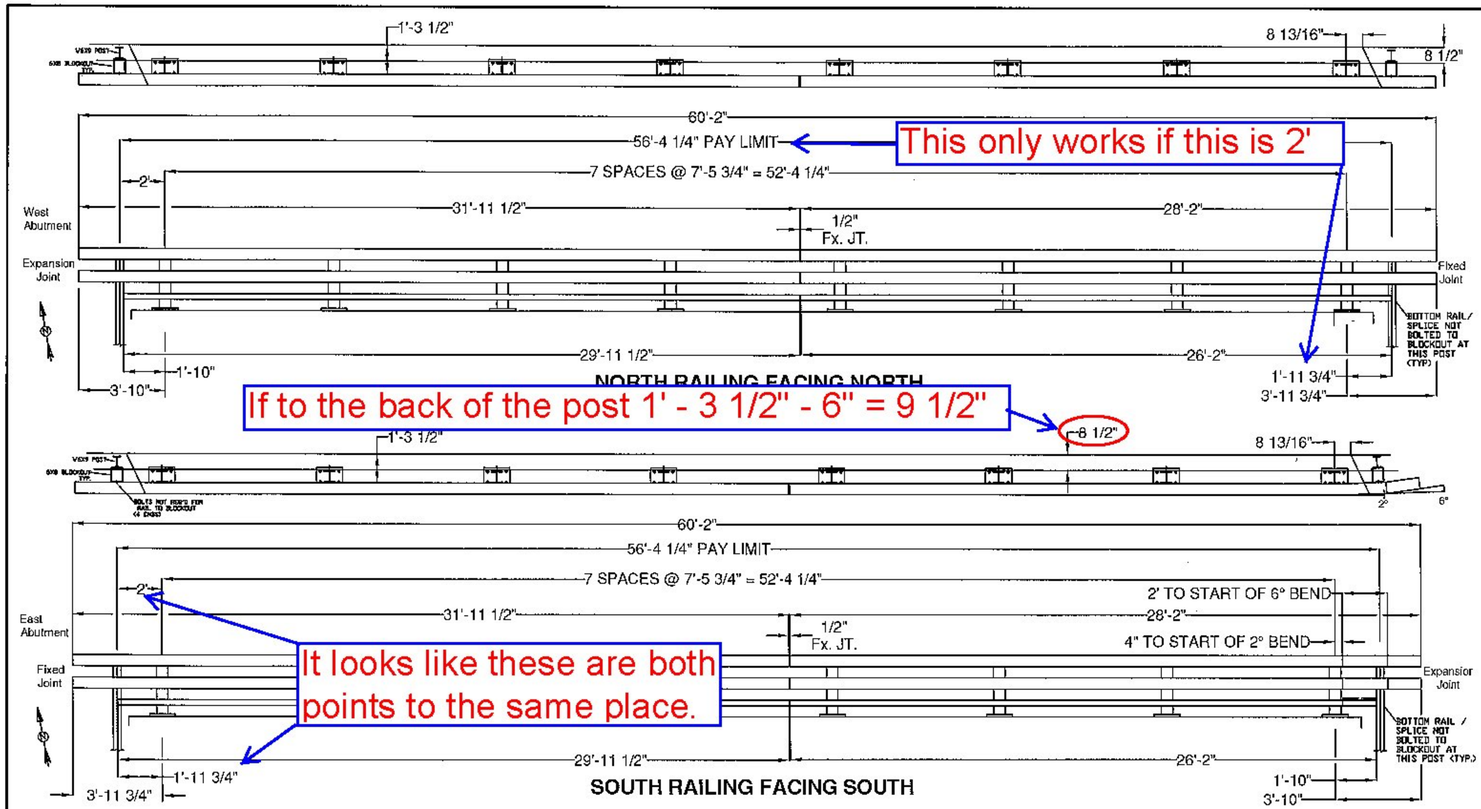
ELASTOMERIC BEARING DETAILS

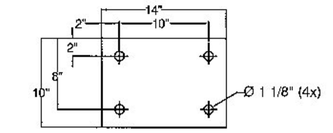
AMSCOT
STRUCTURAL PRODUCTS CORP.

SCALE: N.T.S.	APPRV'D:	DRAWN BY: E.J.G.
DATE: 2/17/15	BF	REVISION: 0

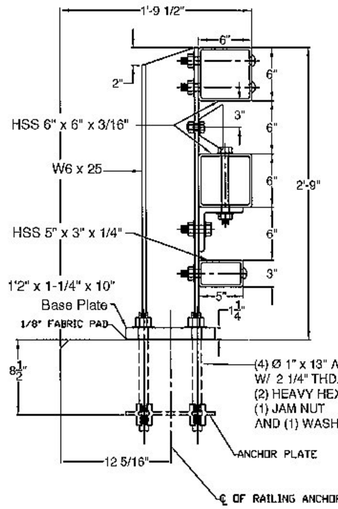
FOR: J.A. McDONALD, INC.

DWG NO: JAM15A1RO		SHEET 1 OF 1

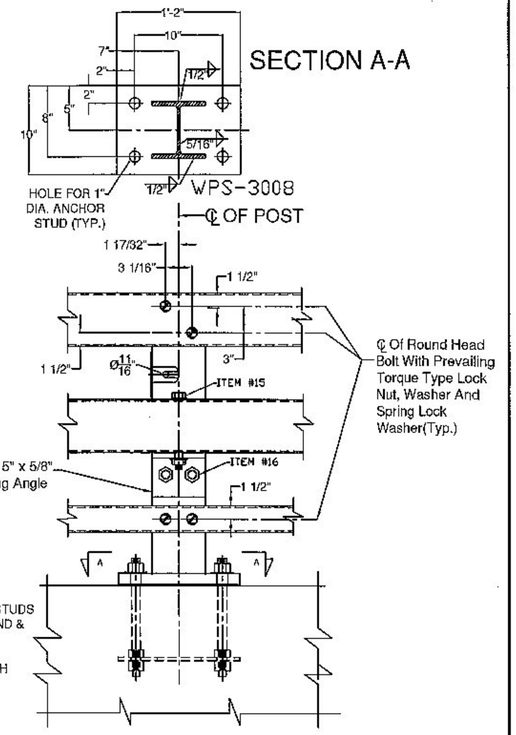




1/8" FABRIC PAD



SECTION



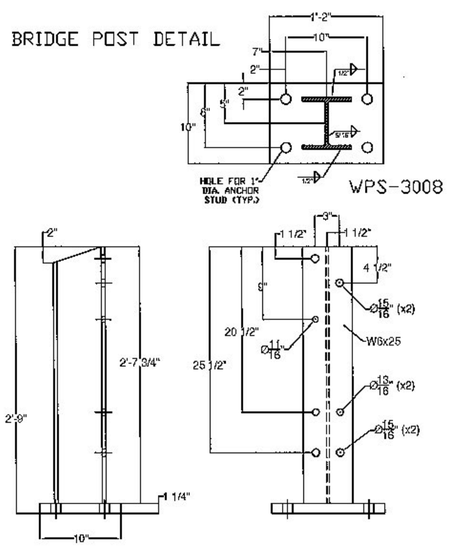
ELEVATION

STEEL BRIDGE RAILING

BILL OF MATERIAL

ITEM #	QTY	PART #	DESCRIPTION	ASTM DESIGNATION
1	16	0033.03610	W6x25, THREE RAIL POST @ 2'-9" OA ON 1 1/4x10x1'-2" B.P.	A572 Gr. 50
2	4	0013.900025	W6x9, POST @ 7'-0"	A572 Gr. 50
3	2	0033.900030	HSS 3" X 5" X 1/4" RAIL @ 29'-11 1/2"	A500 Gr. B
4	1	0033.900031	HSS 3" X 5" X 1/4" RAIL @ 26'-2"	A500 Gr. B
5	1	0034.900010	HSS 3" X 5" X 1/4" RAIL @ 26'-2" W/ PARTIAL RAD.	A500 Gr. B
6	4	0033.900032	HSS 6" X 6" X 3/16" RAIL @ 31'-11 1/2"	A500 Gr. B
7	2	0033.900033	HSS 6" X 6" X 3/16" RAIL @ 26'-2"	A500 Gr. B
8	2	0034.900011	HSS 6" X 6" X 3/16" RAIL @ 26'-2" W/ PARTIAL RAD.	A500 Gr. B
9	8	0054.00563	HSS 6" X 6" X 3/16" @ 6" BLOCK-OUT	A500 Gr. B
10	4	0054.00565	HSS 6" X 6" X 3/16" @ 3" BLOCK-OUT	A500 Gr. B
11	2	0033.00840	2-1/8" X 4-1/4" FIX. SPLICE BAR @ 2'-3"	A572 Gr. 50
12	4	0033.00640	HSS 5" X 5" X 5/16" FIX. SPLICE TUBE @ 2'-3"	A500 Gr. B, A572 Gr. 50
13	16	0033.00220	3/8" X 10" X 14" ANCHOR PLATES	A36
14	16	0033.90050	1/8" X 10" X 14" FABRIC PAD	AASHTO M251
				A449
				A563 DH
				F436
				A563 DH
				A449, A563 DH, F436, ASME D18.2
				A325, A563 DH, F436, & ASME D18.2
				A325, A563 DH, & F436
				A325, A563 DH, & F436
				A572 Gr. 50
				A307
				A307
				(SUPPLIED BY CUSTOMER)

BRIDGE POST DETAIL



GENERAL NOTES:

1) ALL RAILING IS TO BE FABRICATED AND ERECTED ACCORDING TO SECTION 525 OF THE STANDARD SPECIFICATIONS.
2) PRIOR TO GALVANIZING THE ASSEMBLED POST, GRIND ALL EDGES TO A MINIMUM RADIUS OF 1/16".
3) ALL POST SHALL BE SET NORMAL TO GRADE. THE MAXIMUM CENTER TO CENTER SPACING OF BRIDGE RAIL POST IS 8' 3".
4) SECTIONS OF RAIL TUBE SHALL BE ATTACHED TO A MINIMUM OF TWO BRIDGE POSTS AND PREFERABLY TO AT LEAST 4 POSTS.
5) RAIL TUBE EXPANSION JOINTS SHALL BE PROVIDED IN ANY RAIL BAY SPANNING THE END OF AN INTEGRAL ABUTMENT BRIDGE AND AT ALL SUPER STRUCTURE EXPANSION JOINTS. EXPANSION JOINT WIDTH SHALL BE 4"@ 68°F AND WILL BE ADJUSTED IN THE FIELD BY THE ENGINEER FOR OTHER TEMPERATURES.
6) STD. SPLICE HOLES ONLY IN BRIDGE RAIL TUBES. REST TO BE DRILLED BY CUSTOMER. FIELD DRILLED HOLES TO BE COATED WITH AN APPROVED ZINC-RICH PAINT PRIOR TO INSTALLATION.
7) BOLTS SHALL BE TORQUED SNUG TIGHT (APPROXIMATELY 100 FT-LB).
8) SEE STANDARD DRAWING G-I FOR DETAILS OF DELINEATORS. A DELINEATOR SHALL BE INSTALLED AT 30 FOOT SPACING OR THE NEAREST POST. WHITE IS TO BE INSTALLED ON THE DRIVER'S RIGHT. FOR ONE WAY BRIDGES, YELLOW IS TO BE INSTALLED ON THE DRIVER'S LEFT. PAYMENT FOR DELINEATORS SHALL BE INCIDENTAL TO OTHER ITEMS.
9) ANY BENDING OF RAIL SHALL BE DONE AT THE FABRICATION PLANT ACCORDING TO A PROCEDURE PROVIDED BY THE FABRICATOR.
10) THE MINIMUM DISTANCE FROM THE POST TO AN EXPANSION JOINT SHALL BE DETERMINED BY THE MINIMUM EDGE DISTANCE OF 5" FROM ANY ANCHOR STUD TO THE END OF THE SLAB, OR THE EXPANSION JOINT RECESS POUR, IF ONE IS USED.
11) PROTRUSIONS CAUSED BY WELDING OR GALVANIZING ARE NOT PERMITTED ON THE ADJOINING SURFACES OF THE BOX BEAM RAILS, SPLICE TUBES AND FILL PLATES.
12) THIS RAILING MEETS THE REQUIREMENTS FOR A TL-4 SERVICE LEVEL.

Vermont Agency of Transportation

RECEIVED

F RL14(WALDEN 4-23-2015 - comments.pdf

CK'D BY CLB OK'D BY HIS

April 23, 2015

RESUBMIT NO Approved AsNoted

BY Carolyn Carlson DATE 4/29/2015

ITEM #: 525.335

SHEET 1 OF 2

STRUCTURAL STEEL TO COMPLY W/ ASTM A6

TOLERANCE UNLESS OTHERWISE NOTED:
FRACTIONS = ± 1/16"
ANGLES = ± 1/2°
DIAMETERS = ± 1/32"

BRIDGE RAIL DETAILS SHEET

ROUTE VT 15 (MINOR ARTERIAL), BRIDGE # 83
TOWN OF WALDEN, COUNTY OF CALEDONIA, VT.

R E V	NO.	DATE	DESCRIPTION	BY
	1	4/16/15	Revised Per 4/1/15 Markup	E.P.

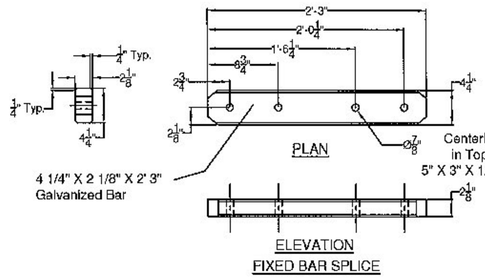
R E V	NO.	DATE	DESCRIPTION	BY

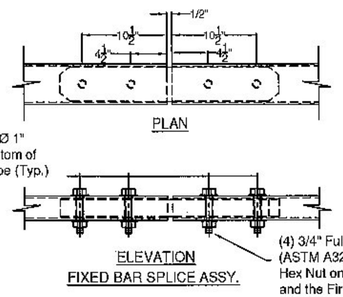
ELDERLEE, INC.
OAKS CORNERS, NEW YORK 14518
E-Mail: dlong@elderlee.com, epeek@elderlee.com
Tel: 315-789-6670 Fax: 315-789-6615

CERTIFIED FABRICATOR

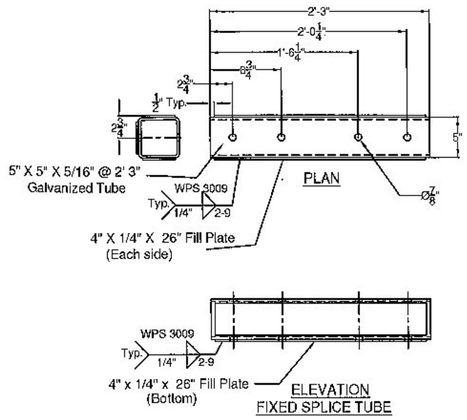
DRAWN	E.P.	2/20/15
CHECKED	D.L.	2/23/15
APPROVED		
SCALE	SCHEMATIC	
DRAWING NO.	F.R. LaFAYETTE-WALDEN	

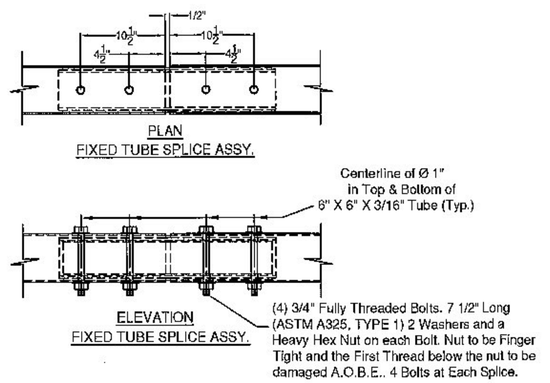
SPLICE BAR - FIXED





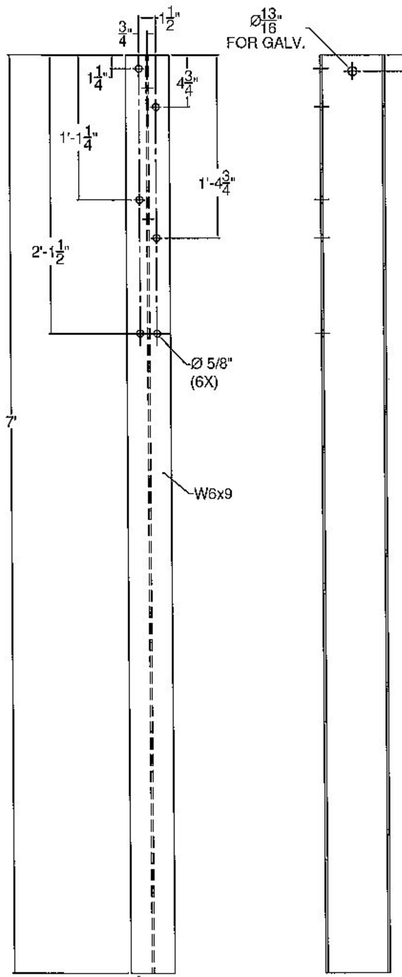
(4) 3/4" Fully Threaded Bolts. 4 1/2" Long (ASTM A325, TYPE 1) 2 Washers and a Heavy Hex Nut on each Bolt. Nut to be Finger Tight and the First Thread below the nut to be damaged A.O.B.E.. 4 Bolts at Each Splice.

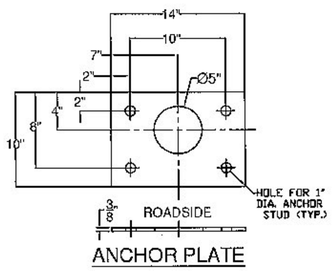


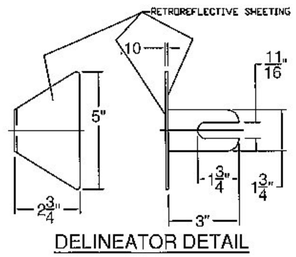


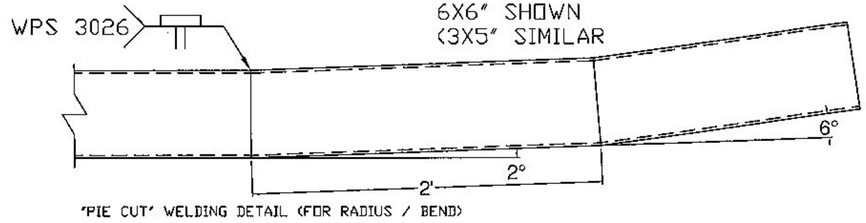
(4) 3/4" Fully Threaded Bolts. 7 1/2" Long (ASTM A325, TYPE 1) 2 Washers and a Heavy Hex Nut on each Bolt. Nut to be Finger Tight and the First Thread below the nut to be damaged A.O.B.E.. 4 Bolts at Each Splice.

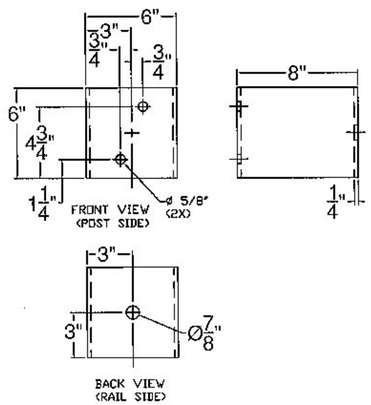
SPLICE TUBE - FIXED

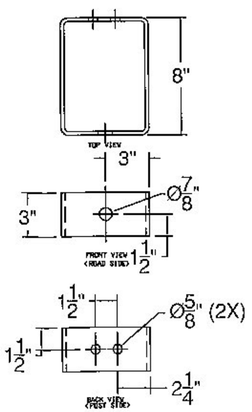


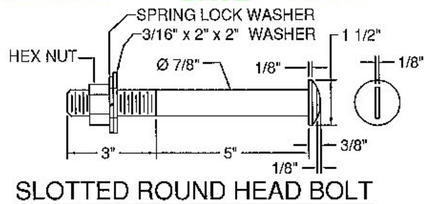




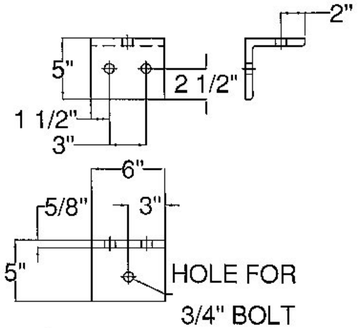








SLOTTED ROUND HEAD BOLT



L5 x 5 x 5/8"
RAILING ANGLE

Vermont Agency of Transportation

RECEIVED

CK'D BY CLB OK'D BY HIS

April 23, 2015

RESUBMIT NO Approved

BY Carolyn Carlson DATE 4/29/2015

ITEM #: 525.335

SHEET 2 OF 2

STRUCTURAL STEEL TO COMPLY W/ ASTM A6

TOLERANCE UNLESS OTHERWISE NOTED:
FRACTIONS = ± 1/16"
ANGLES = ± 1/2°
DIAMETERS = ± 1/32"

BRIDGE RAIL DETAILS SHEET

ROUTE VT 15 (MINOR ARTERIAL), BRIDGE # 83
TOWN OF WALDEN, COUNTY OF CALEDONIA, VT.

R E V	NO.	DATE	DESCRIPTION	BY
	1	4/16/15	Revised Per 4/1/15 Markup	E.P.

R E V	NO.	DATE	DESCRIPTION	BY

ELDERLEE, INC.
OAKS CORNERS, NEW YORK 14518
E-Mail: dlong@elderlee.com, epeek@elderlee.com
Tel: 315-789-6670 Fax: 315-789-6615

DRAWN	E.P.	2/20/15
CHECKED	D.L.	2/23/15
APPROVED		
SCALE	SCHEMATIC	
DRAWING NO.	F.R. LAFAYETTE-WALDEN	

Add Project Name and Number

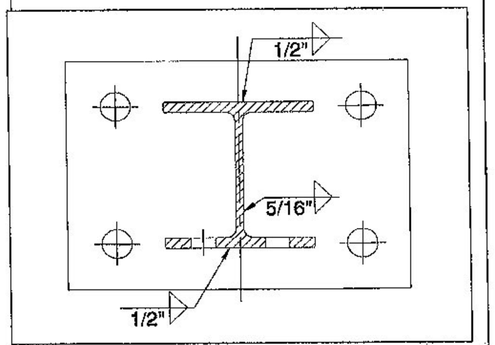
WELDING PROCEDURE SPECIFICATION

PQR ELDERLEE#1

Material Specification	A572 GRD. 50 /A992-06a
Welding Process	FCAW
Manual or Machine	SEMAUTOMATIC
Position of Welding	FLAT/HORIZONTAL
Filler Metal Specification	A5.20
Filler Metal Classification	E70 LINCOLN OUTERSHEILD
Flux	N/A
Shielding Gas	CO 2 Dew Point -40DEG F Flow Rate 50 CFM (45 TO 63 CFM)
Single or Multiple Pass	SINGLE
Single or Multiple Arc	N/A
Welding Current	DC
Polarity	DCEP
Welding Progression	STRINGER
Root Treatment	PER D1.5
Preheat and Interpass Temperature	PER D1.5
Postheat Temperature	NONE
Heat Input	Min _____ Max _____

WELDING PROCEDURE

Pass no.	Electrode size	Welding Current Amperes	Welding Current Volts	Travel speed	Joint detail
1	3/32	390	27	12	
Variable	LIMITS	351 TO 429	25 TO 29	11 TO 13	



This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in Section 5.

Procedure No. 3008
Revision No. _____

Contractor Elderlee, Inc.
Authorized By RANDY SCOTT
Date 5/29/2013

Vermont Agency of Transportation

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FRL-WALDEN 4-23-2015 --comment.pdf

CK'D BY JWC OK'D BY HIS

April 23, 2015

RESUBMIT NO Approved AsNoted

BY Carolyn Carlson DATE 4/29/2015

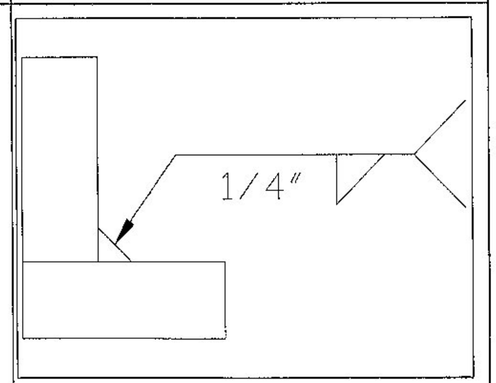
WELDING PROCEDURE SPECIFICATION

PQR ELDERLEE #3

Add Project Name and Number

Material Specification	A709 TO A500 GR B
Welding Process	FCAW-G
Manual or Machine	SEMAUTOMATIC
Position of Welding	FLAT/HORIZONTAL
Filler Metal Specification	A5.29
Filler Metal Classification	E81T1-Ni1C-JH4
Flux	N/A
Shielding Gas	CO 2 Dew Point -40DEG F Flow Rate 50CFH
Single or Multiple Pass	SINGLE
Single or Multiple Arc	SINGLE
Welding Current	DC
Polarity	REVERSE ELECTRODE POSITIVE
Welding Progression	STRINGER
Root Treatment	D1.5
Preheat and Interpass Temperature	D1.5
Postheat Temperature	NONE
Heat Input	Min _____ Max _____

WELDING PROCEDURE

Pass no.	Electrode size	Welding Current Amperes	Welding Current Volts	Travel speed	Joint detail
1	1/16	310	25	11	
Variable	LIMITS	341 TO 269	27 TO 23	12 TO 10	

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in Section 5.

Procedure No. 3009

Revision No. _____

Contractor Elderlee, Inc.

Authorized By RANDY SCOTT

Date 3/20/2014

Vermont Agency of Transportation

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April 23, 2015

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BY Carolyn Carlson DATE 4/29/2015

WELDING PROCEDURE SPECIFICATION

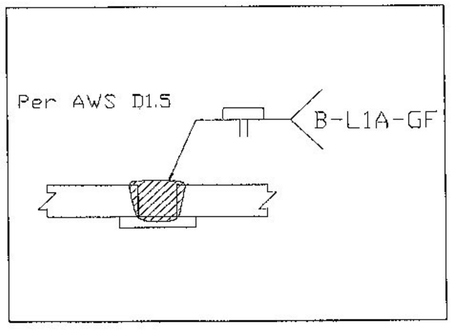
PQR ELDERLEE #3

Add Project Name and Number

Material Specification	A500 TO A36
Welding Process	FCAW-G
Manual or Machine	SEMAUTOMATIC
Position of Welding	FLAT/HORIZONTAL
Filler Metal Specification	A5.29
Filler Metal Classification	E81T1-Ni1C-JH4
Flux	N/A
Shielding Gas	CO 2 Dew Point -40DEG F Flow Rate 50CFH
Single or Multiple Pass	SINGLE
Single or Multiple Arc	SINGLE
Welding Current	DC
Polarity	REVERSE
Welding Progression	STRINGER
Root Treatment	CLEAN PER D1.5
Preheat and Interpass Temperature	PER D1.5
Postheat Temperature	NONE
Heat Input	Min _____ Max _____

WELDING PROCEDURE

Pass no.	Electrode size	Welding Current Amperes	Welding Current Volts	Travel speed	Joint detail
	1/16	310	25	11	
Variable	LIMITS	341 TO 269	27 TO 23	12 TO 10	



This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in Section 5.

Procedure No. 3026

Revision No. _____

Contractor Elderlee, Inc.

Authorized By RANDY SCOTT

Date 3/24/2014

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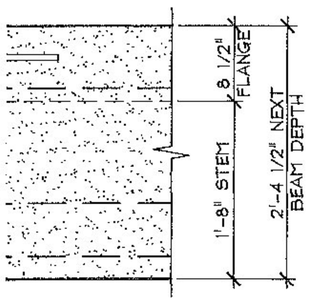
CK'D BY JWC OK'D BY HIS

April 23, 2015

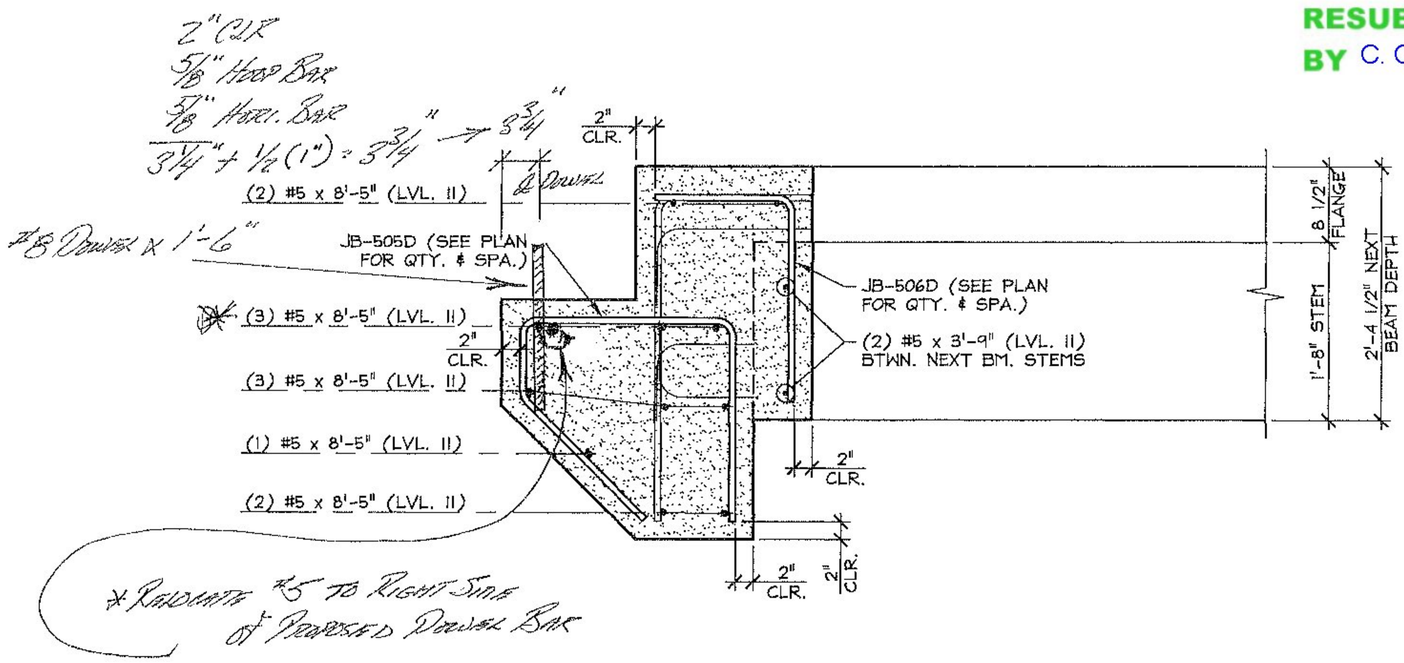
RESUBMIT NO Approved AsNoted

BY Carolyn Carlson DATE 4/29/2015

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WALDEN APPROACHS LAB DOWEL.PDF
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June 15, 2015
RESUBMIT NO Approved
BY C. CARLSON DATE 06/15/15

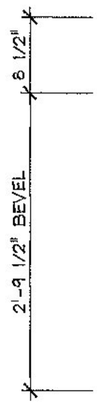


BEND DETAIL
3/4" = 1'-0"



C NB2.1 CURTAIN WALL REINFORCING SECTION
3/4" = 1'-0"

) SETS OF (2) JB-407D
ROJ. 7" FROM WALL FACE
EE PLAN)



4 NB2.1

19.78 cy = NEXT BEAM
2.13 cy = CURTAIN WALL (
2.13 cy = CURTAIN WALL (
24.04 cy = TOTAL BEAM

40.05 T = NEXT BEAM
4.31 T = CURTAIN WALL (
4.31 T = CURTAIN WALL (
48.67 T = TOTAL BEAM

Precast Bridge Abutments

Walden BRF 030-3(5)

Concrete:

Mix Designation: P60TER

1. Specified Mix Design	5000 PSI
2. Proposed Mix Design	6000 PSI
3. Striping Strength	4000 PSI
4. Handling Strength	4000 PSI
5. Shipping Strength	5000 PSI
6. Install Strength	5000 PSI
7. Traffic Loading	5000 PSI

Fabrication Tolerances:

1. Width	±1/4"
2. Height	±1/4"
3. Length	±1/2"
4. Rebar Cover	3" Min. (Unless Noted Otherwise)
5. Rebar Spacing	±1"
6. Rebar Clearance	±1/4"
7. Insert Placement	±1/4"

Reinforcing:

General Notes:

1. Reinforcing Steel - ASTM A615, Grade 60, Level I, Epoxy Coated
2. Perimeter bar tied at every intersection. Internal bars tied at every intersection.
3. Grout Sleeves to be epoxy coated.
4. Three grout sleeves with rebar will be provided to contractor for testing
5. See bar chart for test bars. Two 2'-6" long #4 bars will be ordered in addition to the bars indicated on the bar chart.

Tolerances:

1. Spacing ±1"
2. Clearance ±1/4"
3. Clear Cover 3" U.N.O.

Lap Lengths:

1. Per AASHTO 5.11.2.1.1 & 5.11.5.3.1
   Lap Length:
   #4 Bar=17"
   #5 Bar=26"
   #6 Bar=39"
   #7 Bar=53"
   #8 Bar=69"

General Notes:

1. All lifting anchor points and shear keys to be grouted after use(by site contractor).
2. All rebar spacing chairs to be plastic
3. All exposed edges to be chamfered 1"
4. Silane sealer applied at plant on all exposed surfaces.
5. All inserts and metal components to be galvanized.

Post Tensioning

1. All anchoring assemblies will be galvanized plated and fabricated according to AASHTO M232M
2. Two tensioning strands per duct.
3. Tension ducts will be 3" SCH 40 PVC conduit.
4. Post tension strands will be .5"Ø, 270 ksi, low relaxation, 7-wire strands.
5. Strands will be tensioned to 32 kips prior to the H-pile sleeves being filled with HPC RS.
6. Tensioning block outs to be filled with grout of vertical overhead repair material after tensioning is complete.

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Walden Footing Abutment Wingwall Submittal #2_0 LB 4.21.15.pdf

CK'D BY CLB OK'D BY FDB

April 20, 2015

RESUBMIT NO Approved

BY C. CARLSON DATE 04/22/15

CONTRACTORS VISPE:		Rev.	Date	By	Description
		1	04/16/15	IBA	Changes per State Review

PRECAST CONCRETE ABUTMENT SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VTAOT

PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

INSTALLER: J.A. McDonald, Inc. PO Box 132 Lyndon Center, VT 05850

FABRICATOR: 193 INDUSTRIAL AVE. WILLISTON, VT 05495 Ph: (802) 658-0201

SD Ireland PRECAST

04/08/2015 | COVER_SHEET | 1_OF_25

Piece Schedule	
Piece	Weight (lbs)
AB1F1	52,040
AB1F2	52,990
AB1F3	58,520
AB1F4	58,520
WW-2	20,380
AB1S	53,300
AB1N	56,560
WW-1A	44,160
WW-1B	43,750
AB2F1	56,440
AB2F2	41,280
AB2F3	41,280
AB2F4	47,640
AB2F5	46,640
WW-3	38,600
AB2N	54,810
AB2S	53,290
WW-4A	32,700
WW-4B	31,850

Vermont Agency of Transportation

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Walden Footing Abutment Wingwall Submittal #2_0 LB 4.21.15.pdf

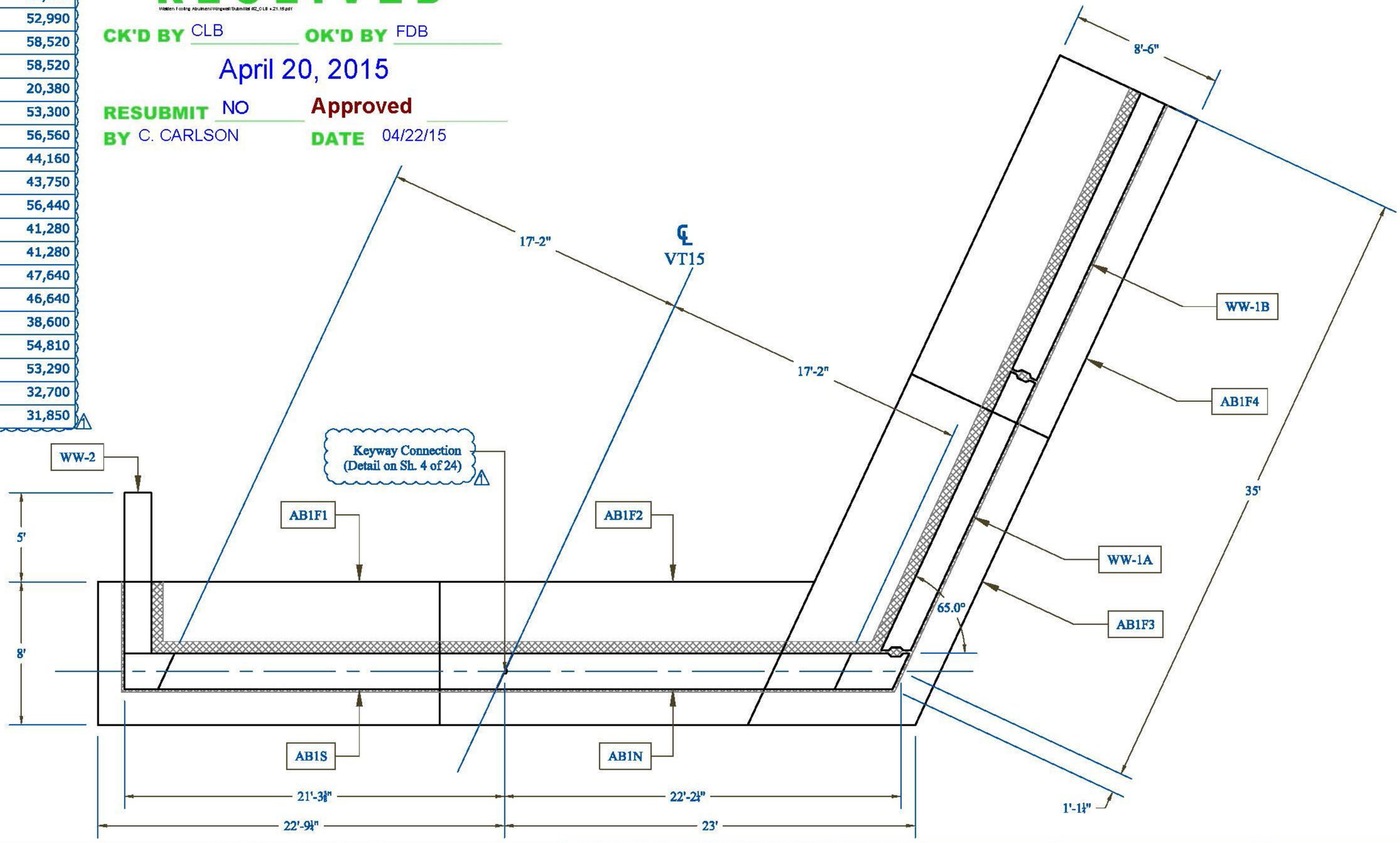
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April 20, 2015

RESUBMIT NO Approved

BY C. CARLSON DATE 04/22/15

Abutment 1: Plan View



CONTRACTORS VISPE:	Rev.	Date	By	Description
	1	04/16/15	IBA	Changes per State Review

PRECAST CONCRETE ABUTMENT SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VTAOT

PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

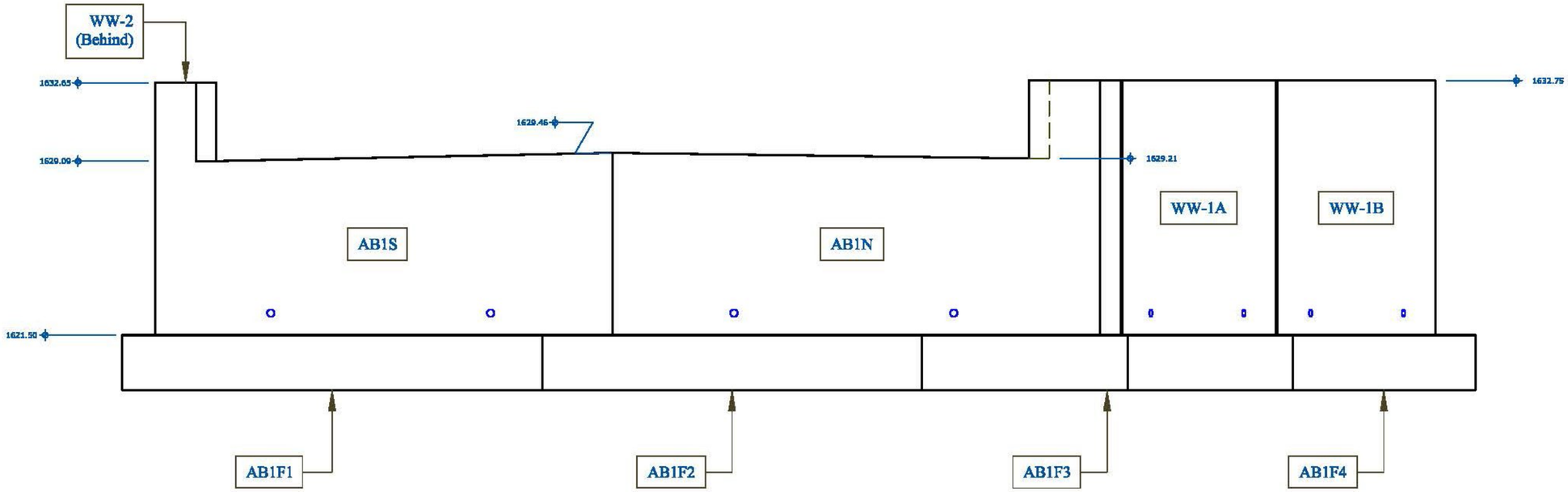
INSTALLER:
J.A. McDonald, Inc.
PO Box 132
Lyndon Center, VT 05850

FABRICATOR:
193 INDUSTRIAL AVE.
WILLISTON, VT 05495
Ph: (802) 658-0201

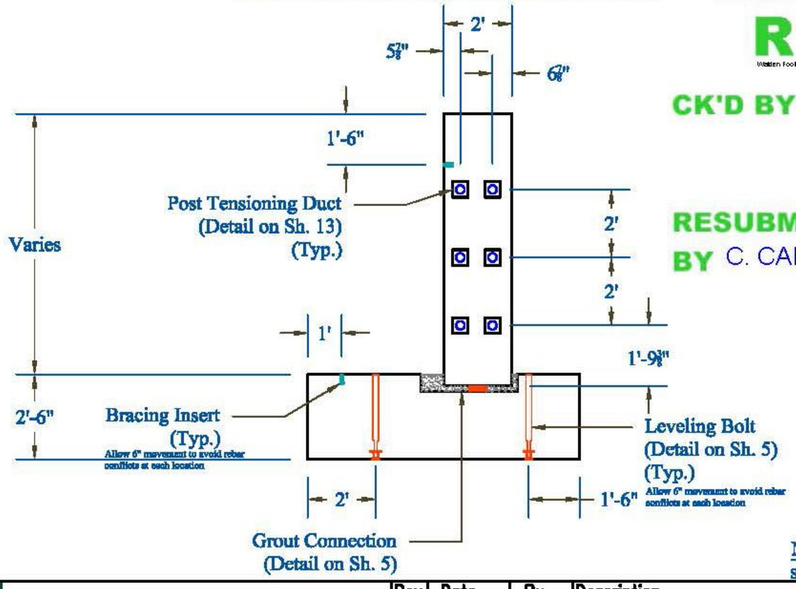
SD Ireland PRECAST

04/08/15 | AB1_PLAN | 2_OF_25

Abutment 1: Elevation View



Abutment Stem: Typical Cross Section



Note: See additional details on sheet 23 & 24

Vermont Agency of Transportation

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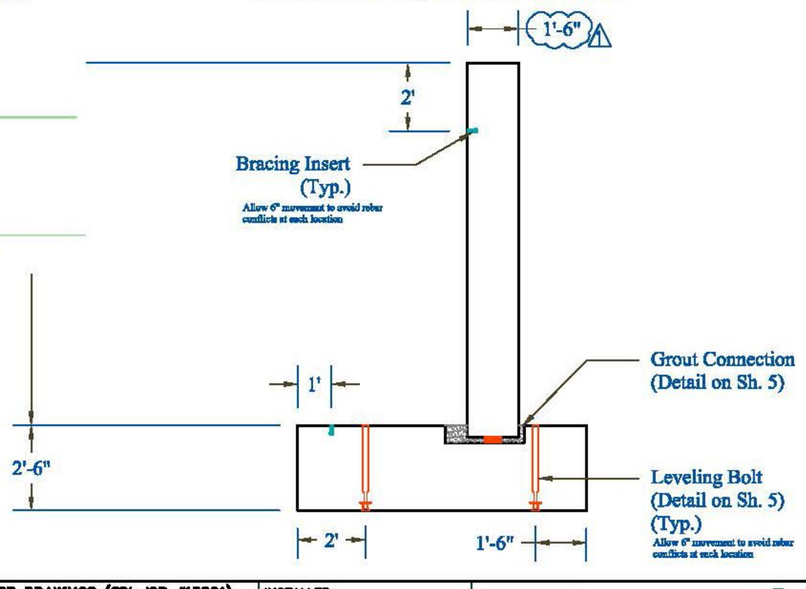
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April 20, 2015

RESUBMIT NO Approved

BY C. CARLSON DATE 04/22/15

Wing Wall: Typical Cross Section



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	1	04/16/15	IBA	Changes per State Review

PRECAST CONCRETE ABUTMENT SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VTAOT

PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

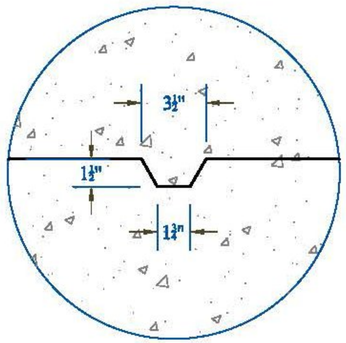
INSTALLER:
J.A. McDonald, Inc.
PO Box 132
Lyndon Center, VT 05850

FABRICATOR:
193 INDUSTRIAL AVE.
WILLISTON, VT 05495
Ph: (802) 658-0201

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04/08/15 | AB1_ELEVATION | 3_OF_25

Abutment Stem Keyway Detail



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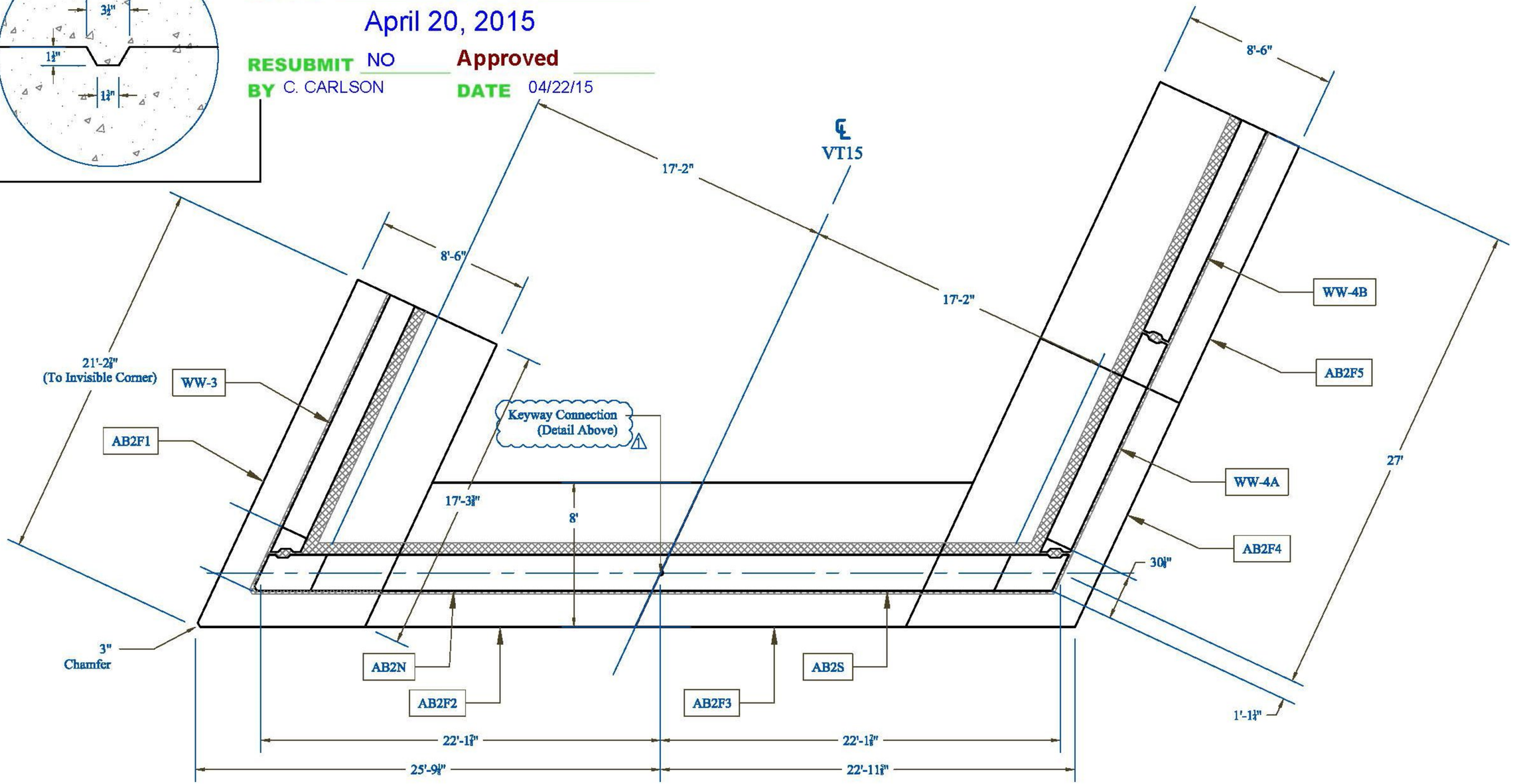
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April 20, 2015

RESUBMIT NO **Approved**

BY C. CARLSON DATE 04/22/15

Abutment 2: Plan View



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	1	04/16/15	IBA	Changes per State Review

PRECAST CONCRETE ABUTMENT SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VTAOT

PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

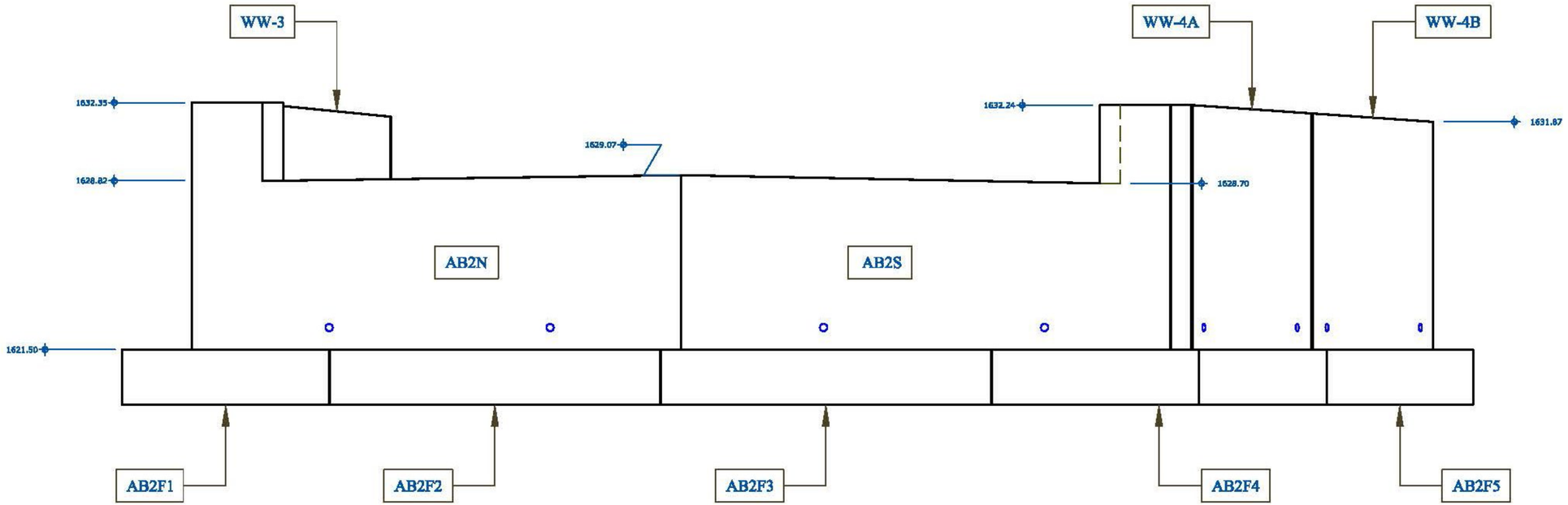
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PO Box 132
Lyndon Center, VT 05850

FABRICATOR:
193 INDUSTRIAL AVE.
WILLISTON, VT 05495
Ph: (802) 658-0201

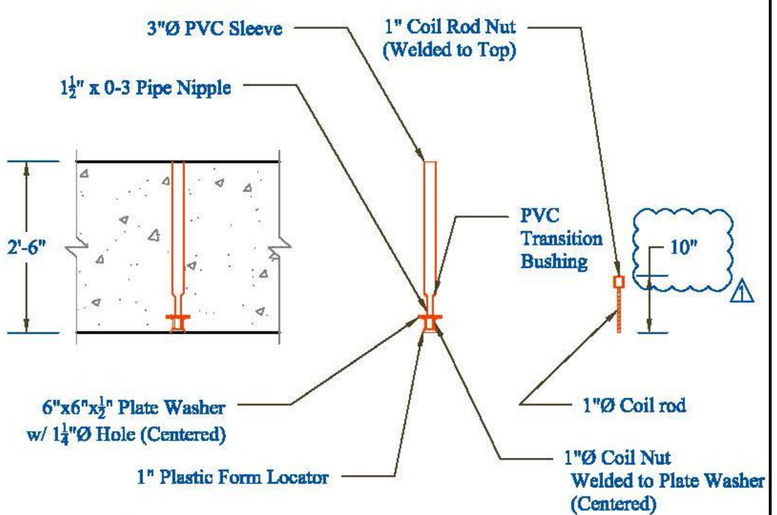
SD Ireland PRECAST

04/08/15 | AB2_PLAN | 4_OF_25

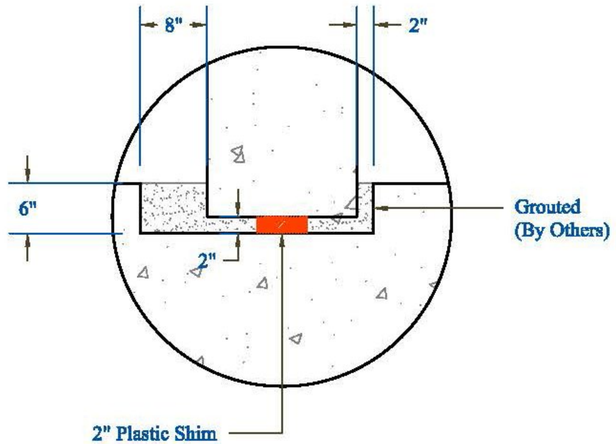
Abutment 2: Elevation View



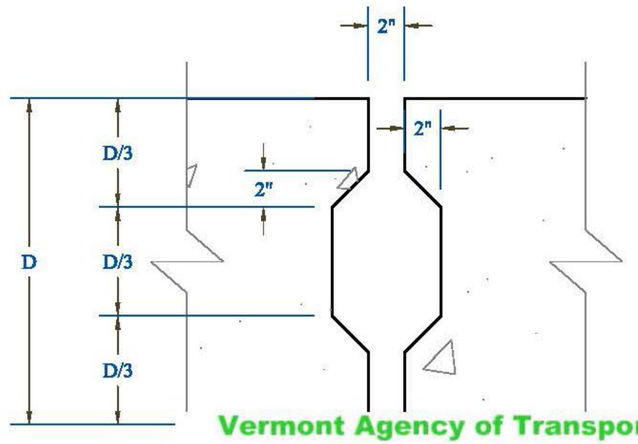
Leveling Bolt Detail



Grout Connection Detail



Typical Shear Key Detail



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April 20, 2015

RESUBMIT NO Approved

BY C. CARLSON DATE 04/22/15

CONTRACTORS VISPE:	Rev.	Date	By	Description
	1	04/16/15	IBA	Changes per State Review

PRECAST CONCRETE ABUTMENT SHOP DRAWINGS (SDI JOB #15801)

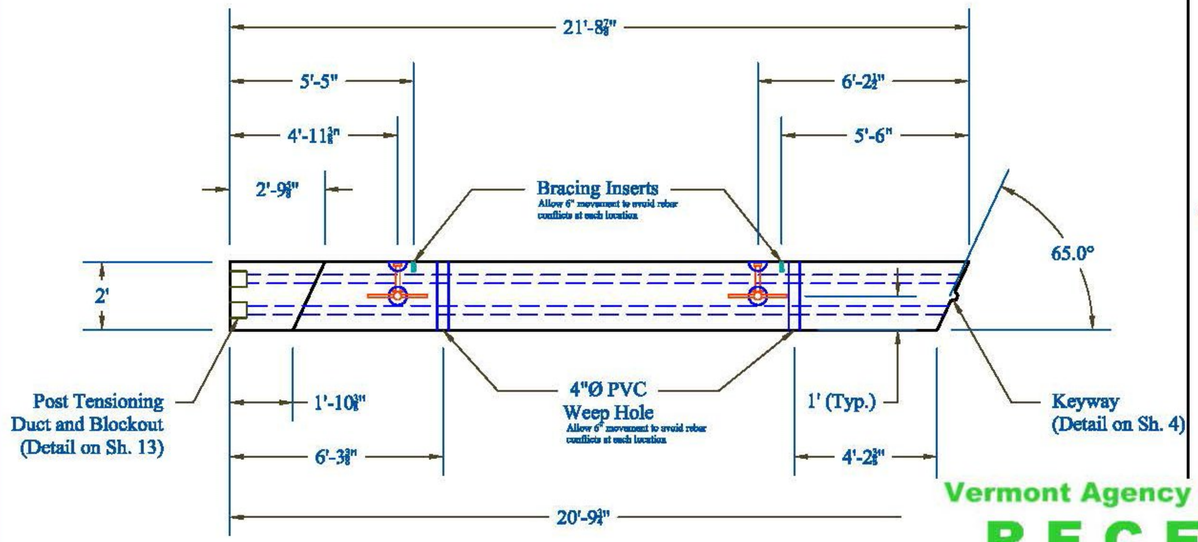
SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VTAOT

PROJECT NAME:
Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

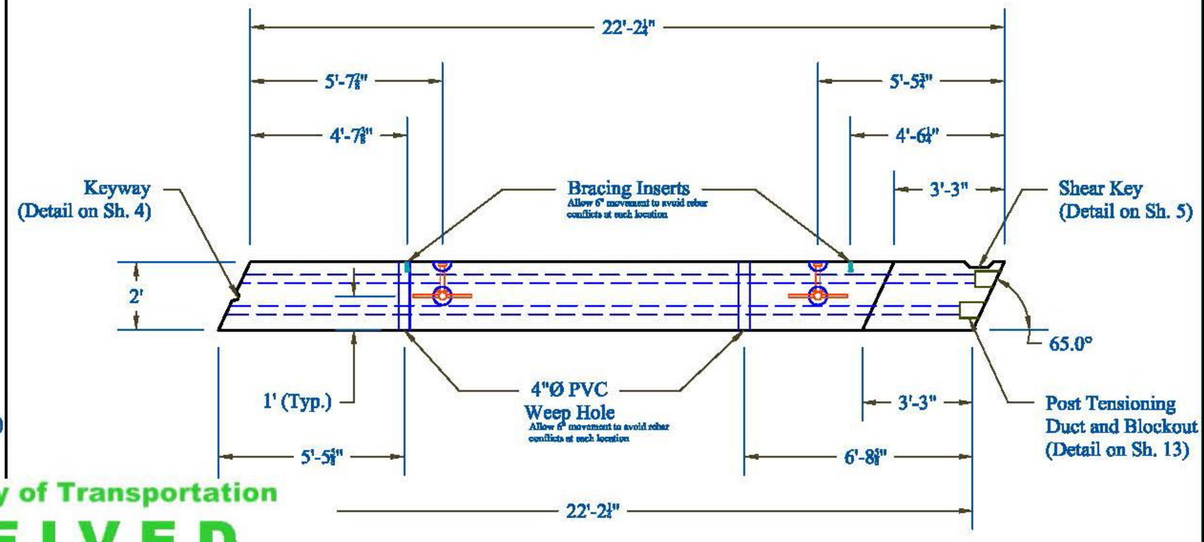
INSTALLER:
J.A. McDonald, Inc.
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04/08/15

Abutment Stem: AB1S - Plan View



Abutment Stem: AB1N - Plan View



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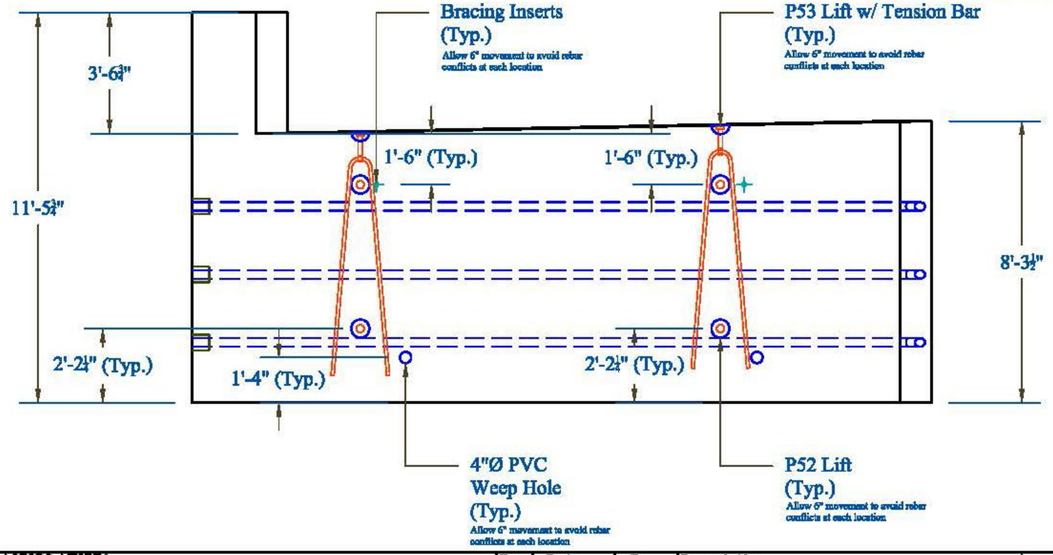
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April 20, 2015

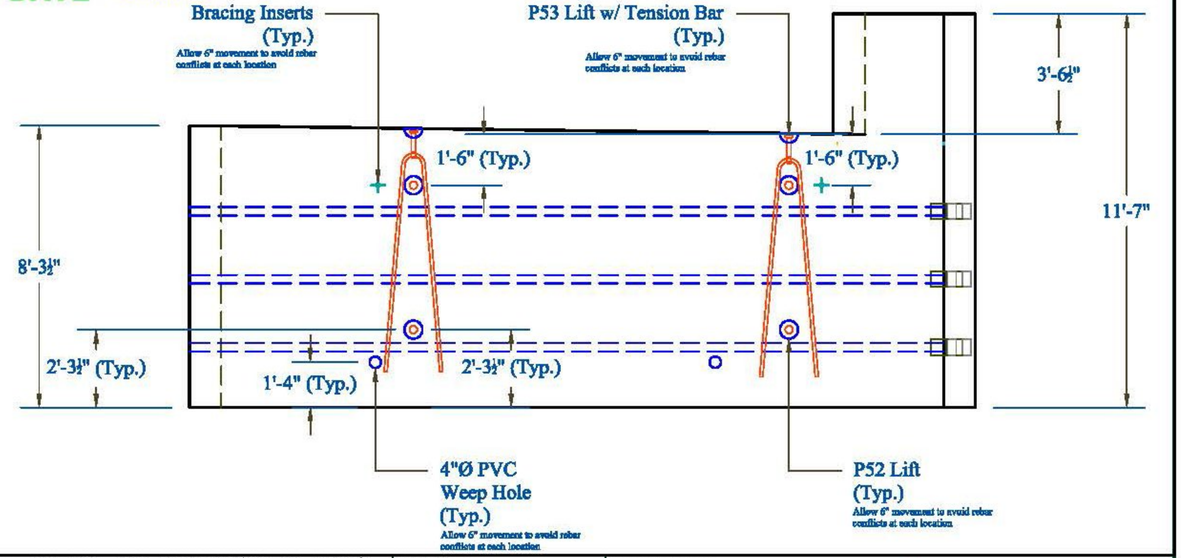
RESUBMIT NO Approved

BY C. CARLSON DATE 04/22/15

Abutment Stem: AB1S - Elevation View



Abutment Stem: AB1N - Elevation View



CONTRACTORS VISPE:

Rev.	Date	By	Description
1	04/16/15	IBA	Changes per State Review

PRECAST CONCRETE ABUTMENT SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VTAOT

PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

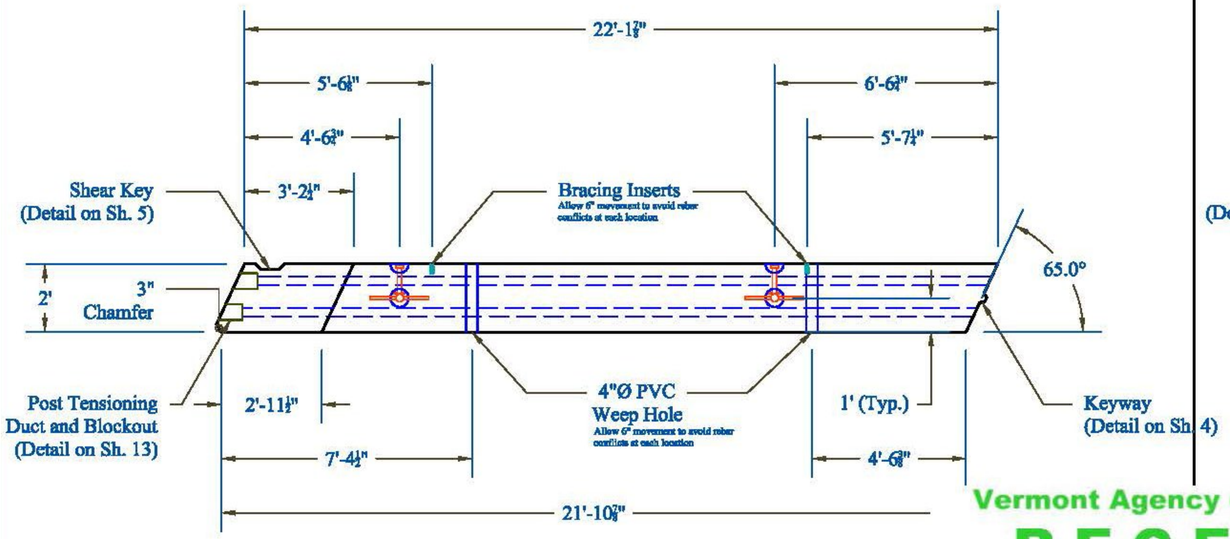
INSTALLER:
J.A. McDonald, Inc.
PO Box 132
Lyndon Center, VT 05850

FABRICATOR:
193 INDUSTRIAL AVE.
WILLISTON, VT 05495
Ph: (802) 658-0201

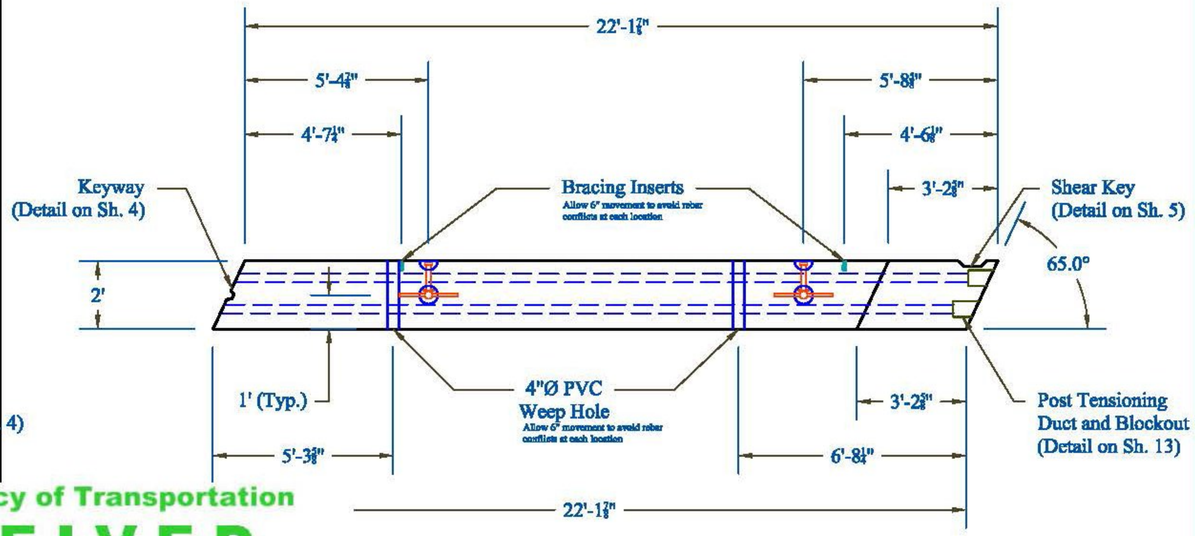
SD Ireland PRECAST

04/08/15 | AB1_STEMS | 6_OF_25

Abutment Stem: AB2N - Plan View



Abutment Stem: AB2S - Plan View



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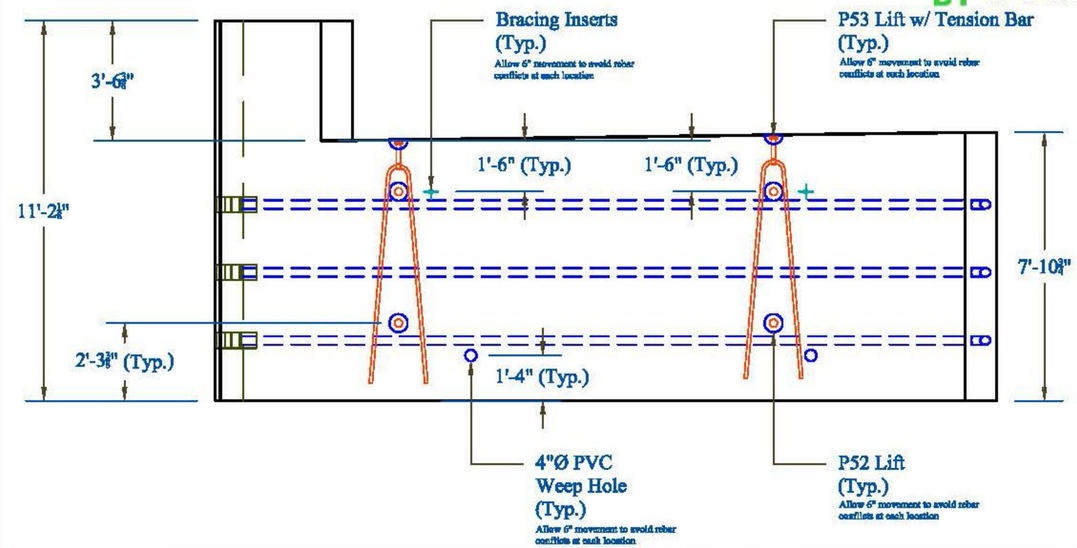
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April 20, 2015

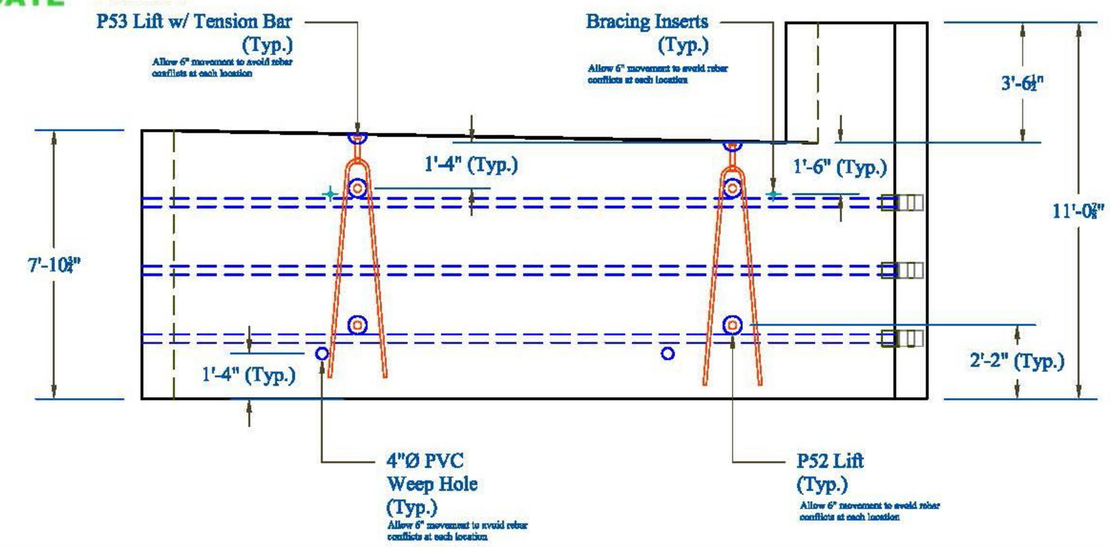
RESUBMIT NO **Approved**

BY C. CARLSON **DATE** 04/22/15

Abutment Stem: AB2N - Elevation View



Abutment Stem: AB2S - Elevation View



CONTRACTORS VTSPEC	Rev.	Date	By	Description
	1	04/16/15	IBA	Changes per State Review

PRECAST CONCRETE ABUTMENT SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VTAOT

PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

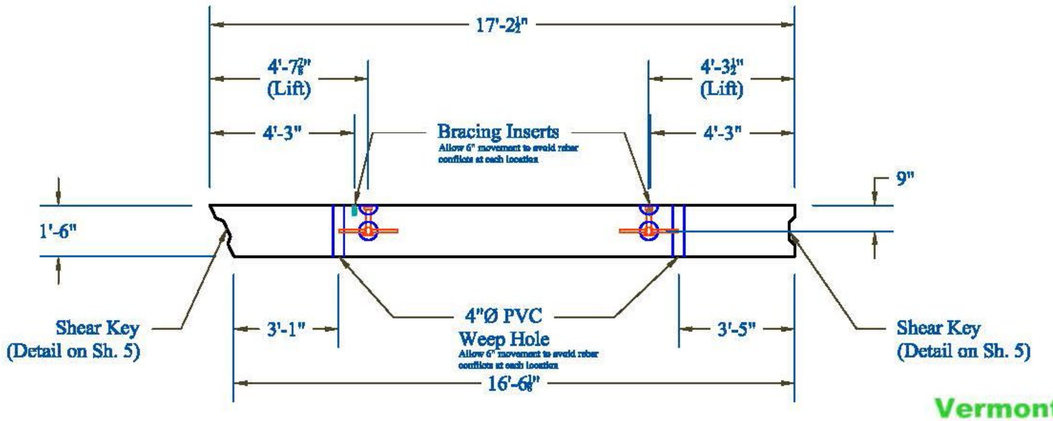
INSTALLER:
J.A. McDonald, Inc.
PO Box 132
Lyndon Center, VT 05850

FABRICATOR:
193 INDUSTRIAL AVE.
WILLISTON, VT 05495
Ph: (802) 658-0201

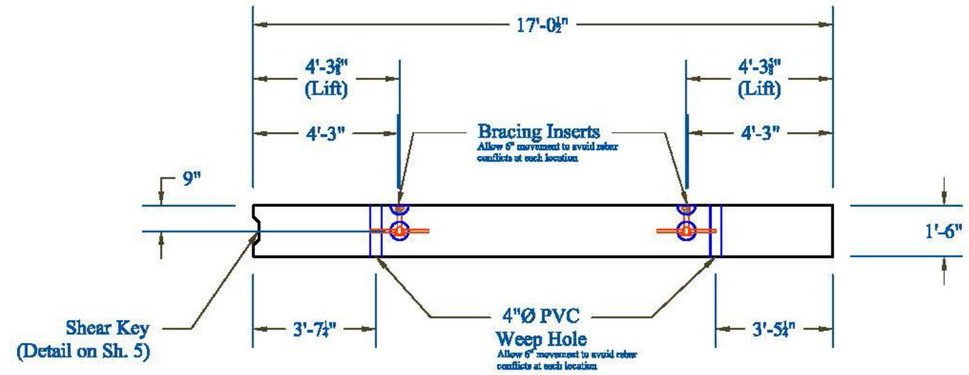
SD Ireland PRECAST

04/08/15 | AB2_STEMS | 7_OF_25

Wing Wall: WW1A - Plan View



Wing Wall: WW1B - Plan View



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Walden Footing Abutment Wingwall Submittal 02_0 LB 4.21.15.pdf

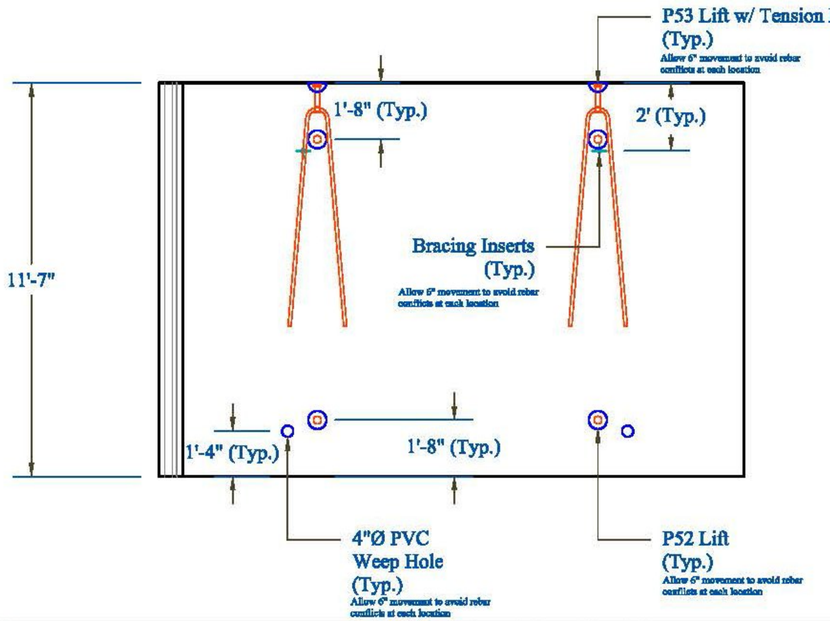
CK'D BY CLB OK'D BY FDB

April 20, 2015

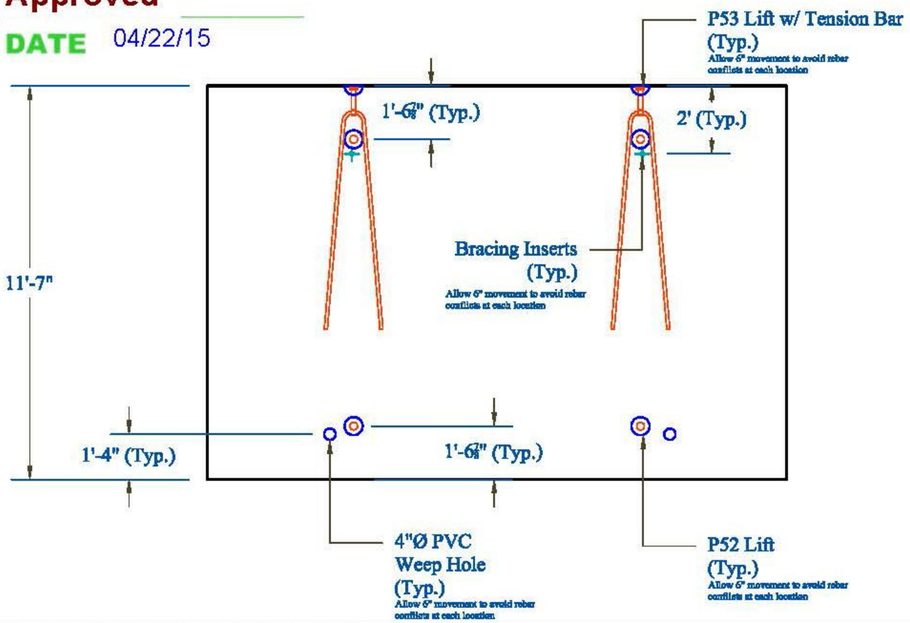
RESUBMIT NO Approved

BY C. CARLSON DATE 04/22/15

Wing Wall: WW1A - Elevation View



Wing Wall: WW1B - Elevation View



CONTRACTORS VISPE:

Rev.	Date	By	Description
1	04/16/15	IBA	Changes per State Review

PRECAST CONCRETE ABUTMENT SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VTAOT

PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

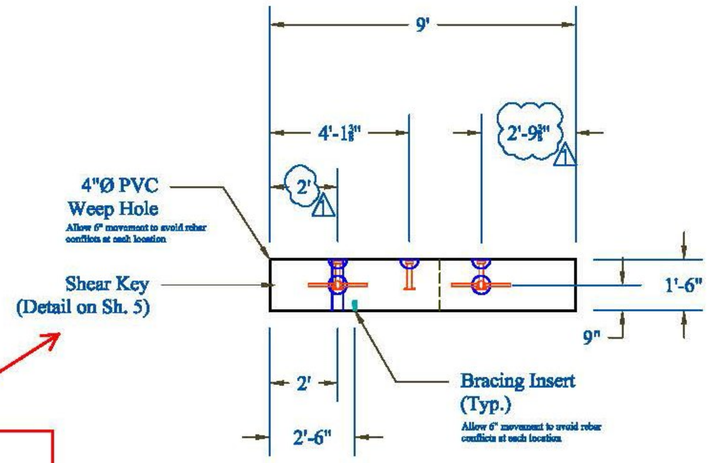
INSTALLER: J.A. McDonald, Inc. PO Box 132 Lyndon Center, VT 05850

FABRICATOR: 193 INDUSTRIAL AVE. WILLISTON, VT 05495 Ph: (802) 658-0201

SD Ireland PRECAST

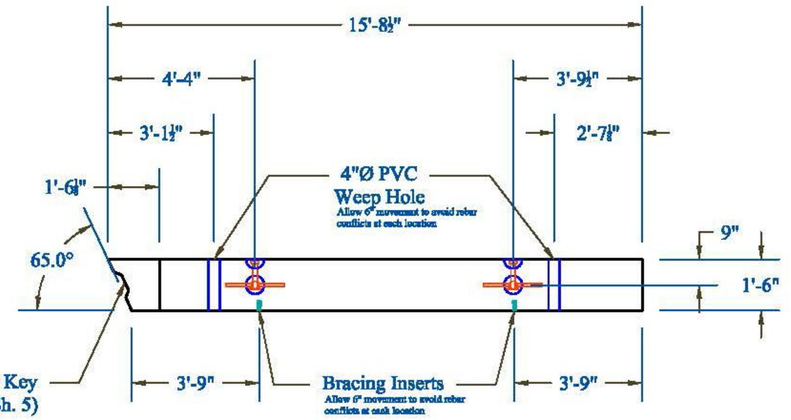
04/08/15 | WINGWALLS_1 | 8_OF_25

Wing Wall: WW2 - Plan View



No shear key, WW2 is mechanically connected to the abutment

Wing Wall: WW3 - Plan View



Vermont Agency of Transportation

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Walden Footing Abutment Wingwall Submittal 62_0 L8 x 21.15.pdf

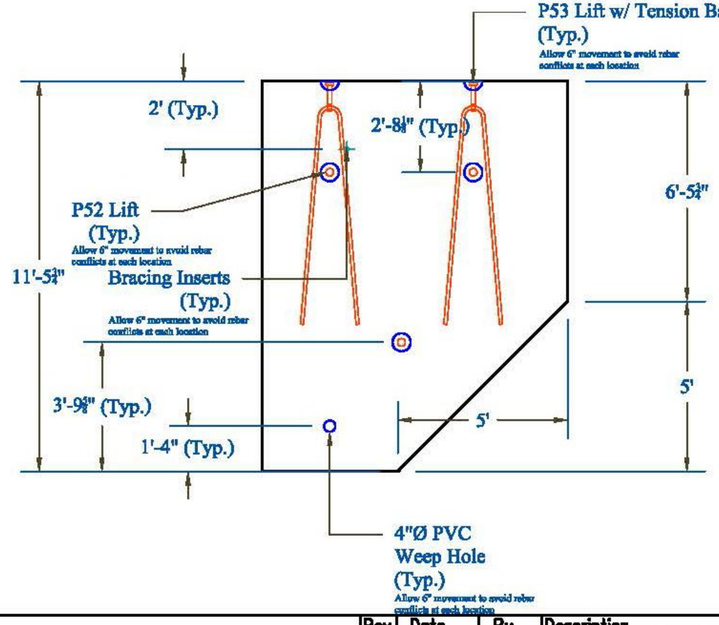
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April 20, 2015

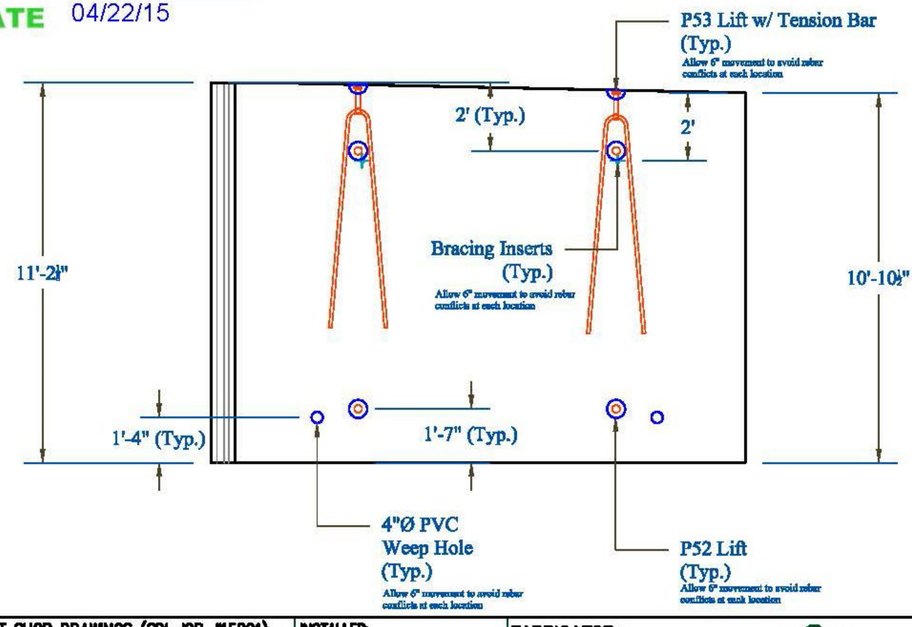
RESUBMIT NO **Approved AsNoted**

BY C. CARLSON DATE 04/22/15

Wing Wall: WW2 - Elevation View



Wing Wall: WW3 - Elevation View



CONTRACTORS VISPE:	Rev.	Date	By	Description
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PRECAST CONCRETE ABUTMENT SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VTAOT

PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

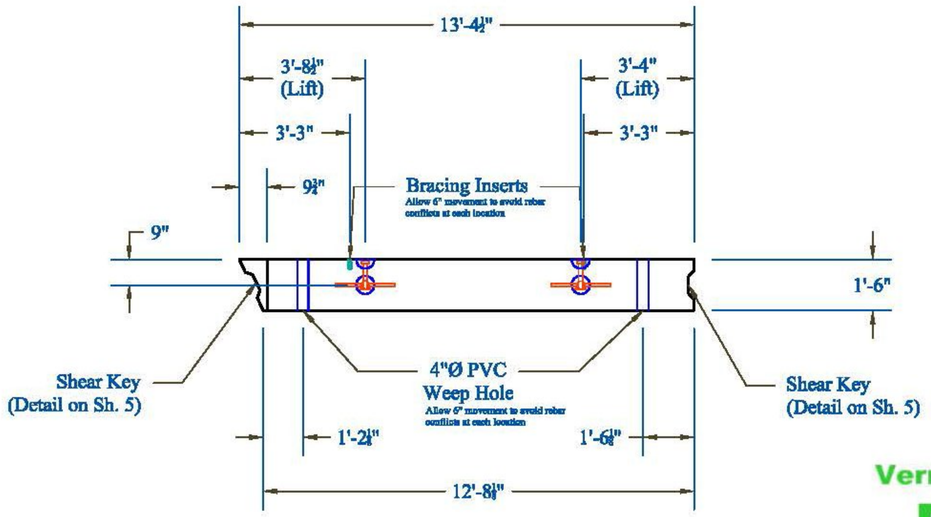
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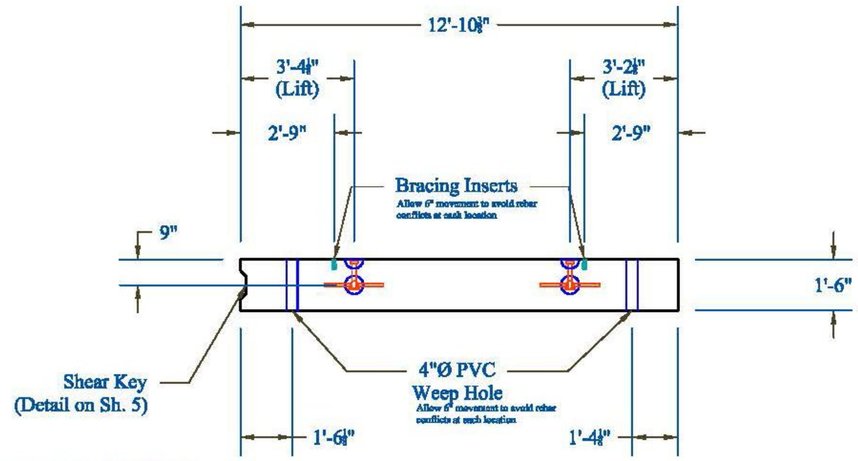
SD Ireland PRECAST

04/08/15 | WINGWALLS_2_&_3 | 9_OF_25

Wing Wall: WW4A - Plan View



Wing Wall: WW4B - Plan View



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Walden Footing Abutment Wingwall Submittal #2_CLB +21.15.pdf

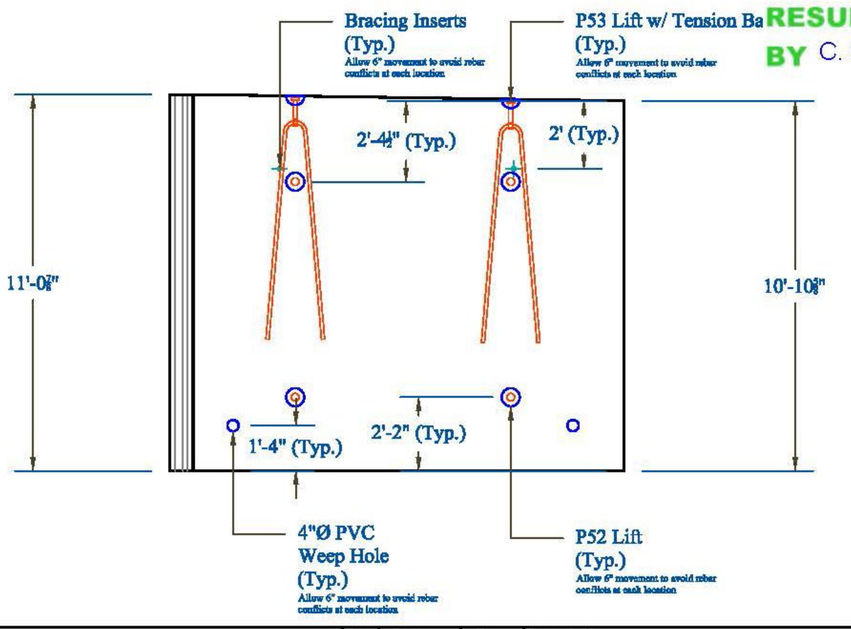
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April 20, 2015

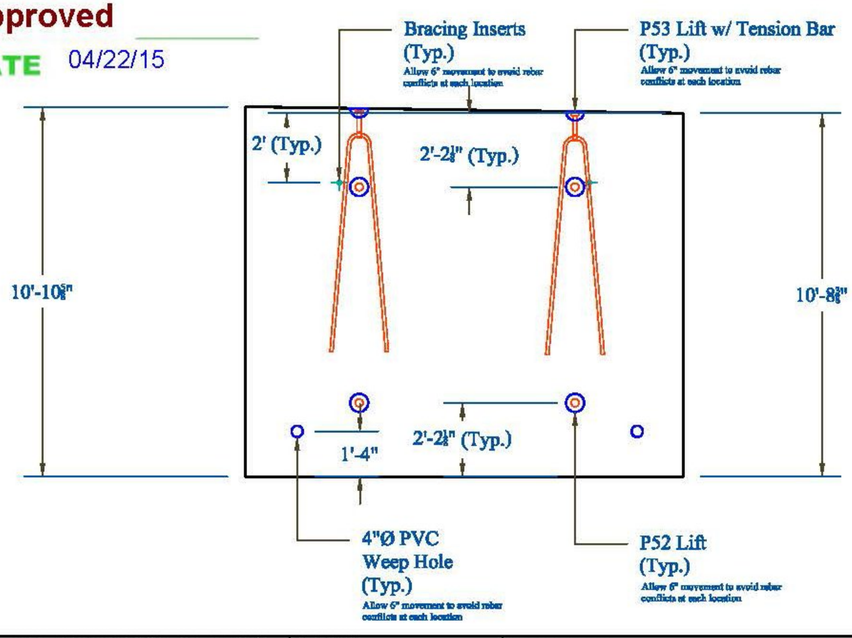
RESUBMIT NO Approved

BY C. CARLSON DATE 04/22/15

Wing Wall: WW4A - Elevation View



Wing Wall: WW4B - Elevation View



CONTRACTORS VTSPE:	Rev.	Date	By	Description
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PRECAST CONCRETE ABUTMENT SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VTAOT

PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

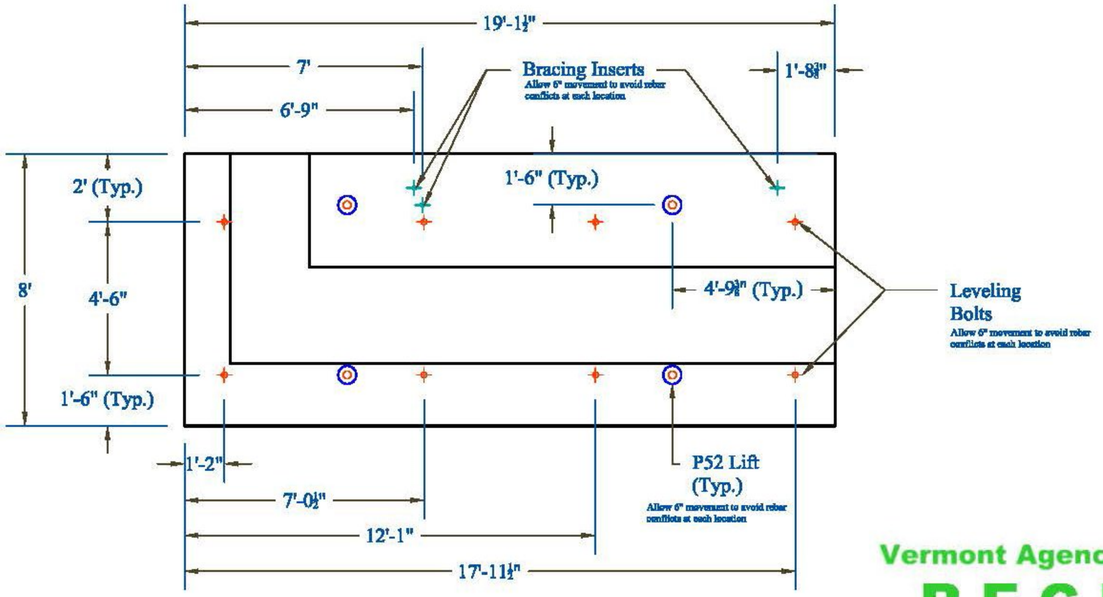
INSTALLER:
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FABRICATOR:
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WILLISTON, VT 05495
Ph: (802) 658-0201

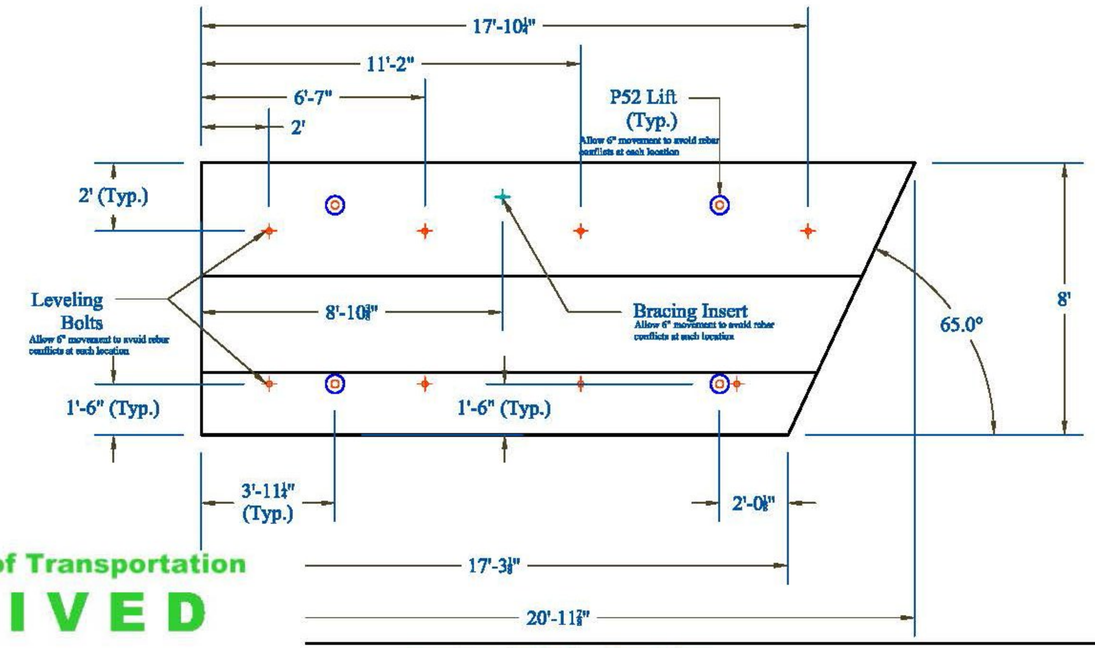
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04/08/15 | WINGWALLS_4 | 10_OF_25

Footing: AB1F1 - Plan View



Footing: AB1F2 - Plan View



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Walden Footing Abutment Wingwall Submittal #2_0 LB +21.15.pdf

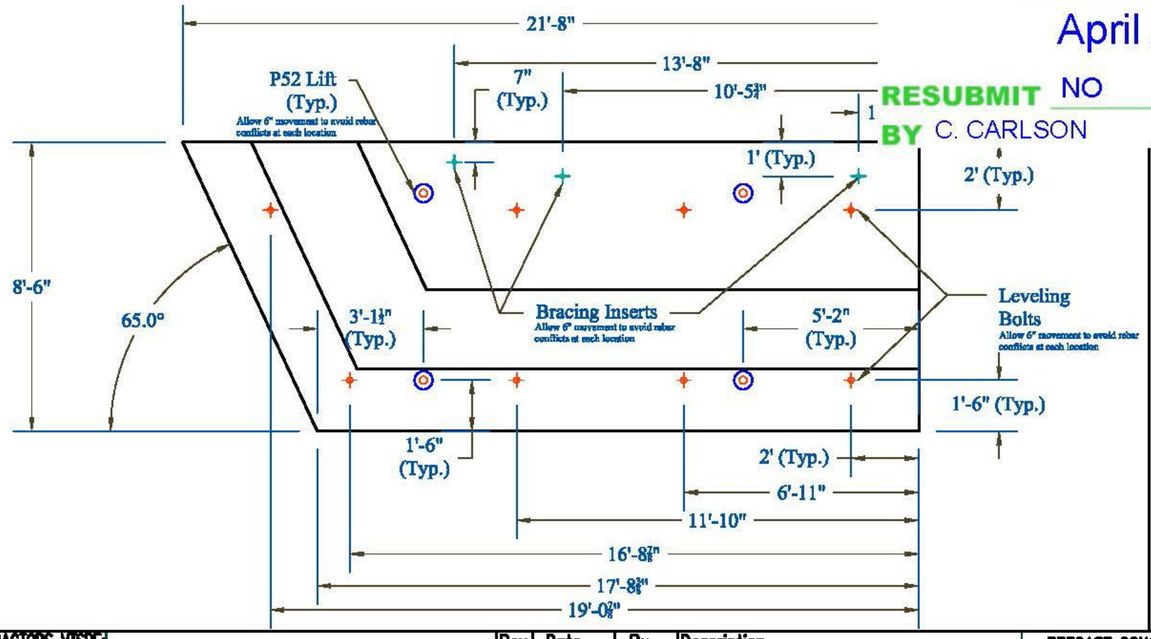
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April 20, 2015

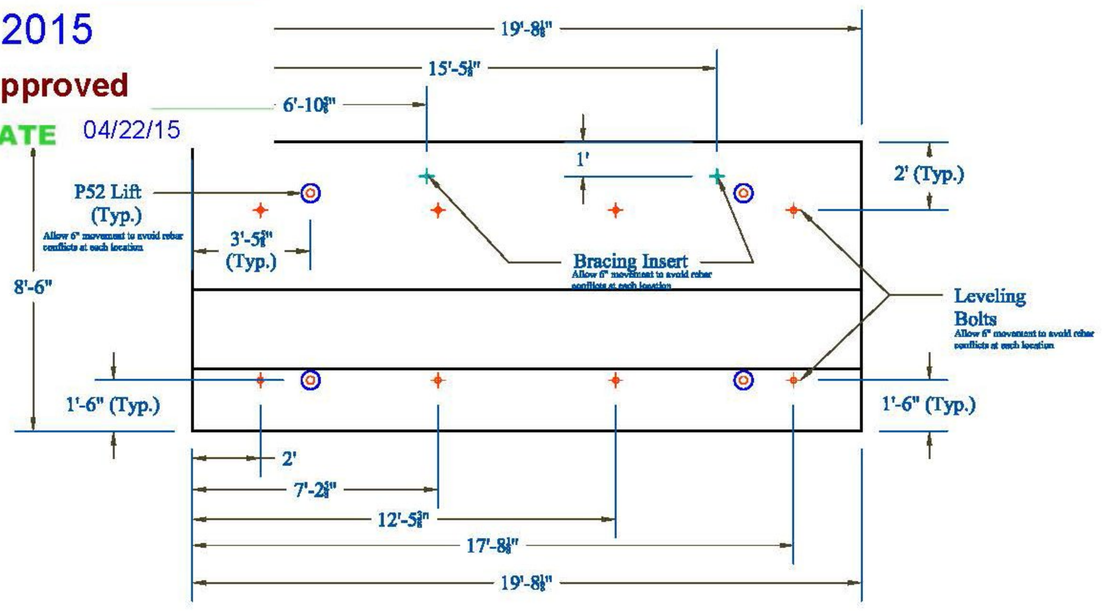
RESUBMIT NO Approved

BY C. CARLSON DATE 04/22/15

Footing: AB1F3 - Plan View



Footing: AB1F4 - Plan View



CONTRACTORS VISPE:	Rev.	Date	By	Description
	1	04/16/15	IBA	Changes per State Review

PRECAST CONCRETE ABUTMENT SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VTAOT

PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

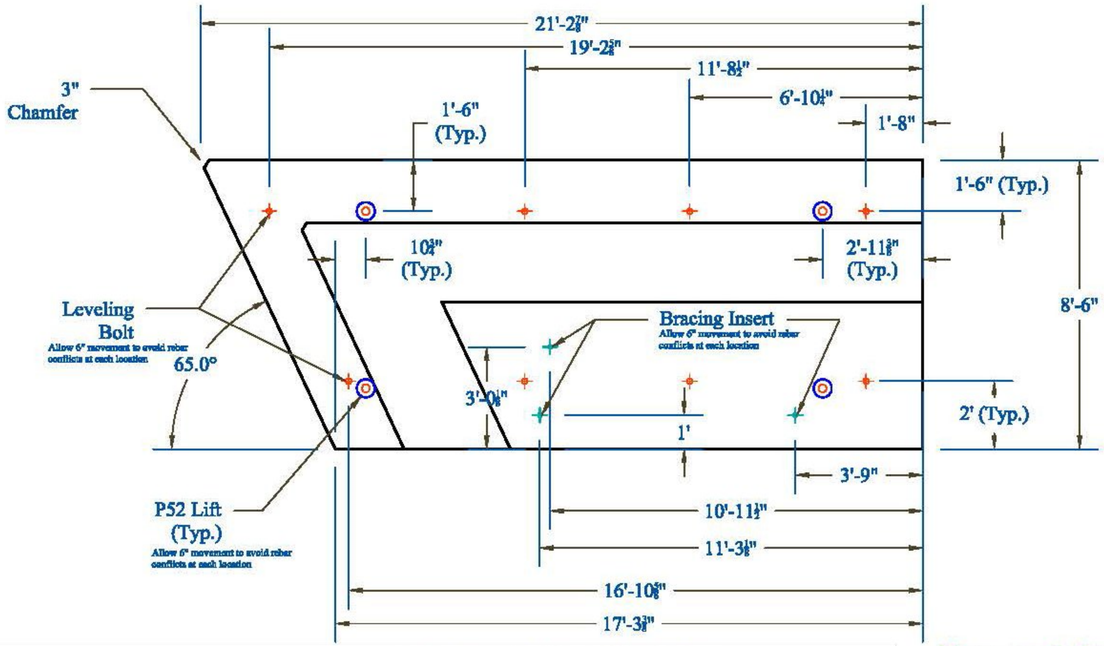
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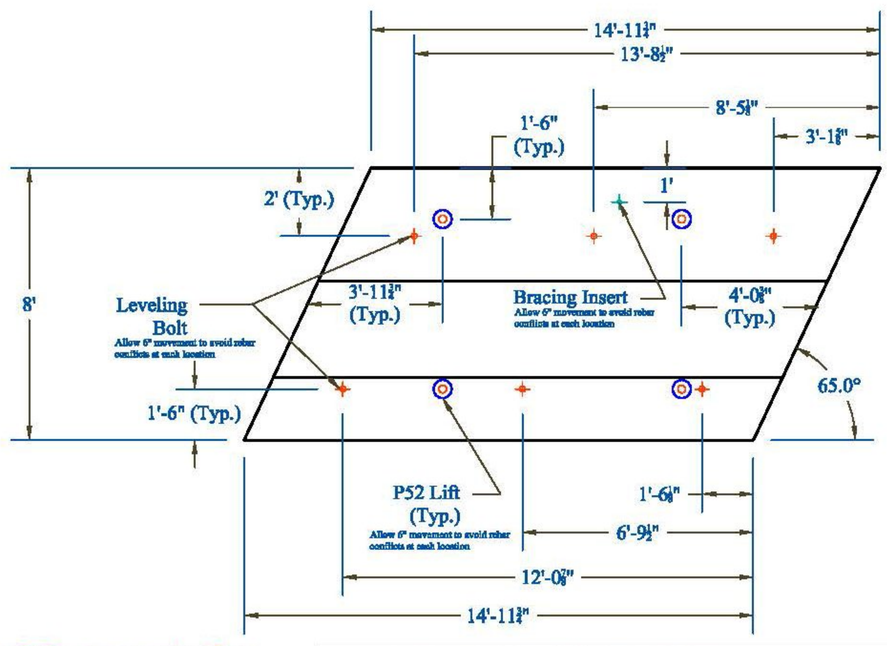
SD Ireland PRECAST

04/08/15 | FOOTINGS_1 | 11_OF_25

Footing: AB2F1 - Plan View



Footing: AB2F2 - Plan View



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Written Footing Abutment Wingwall Submittal #2_0 L8 4.21.15.pdf

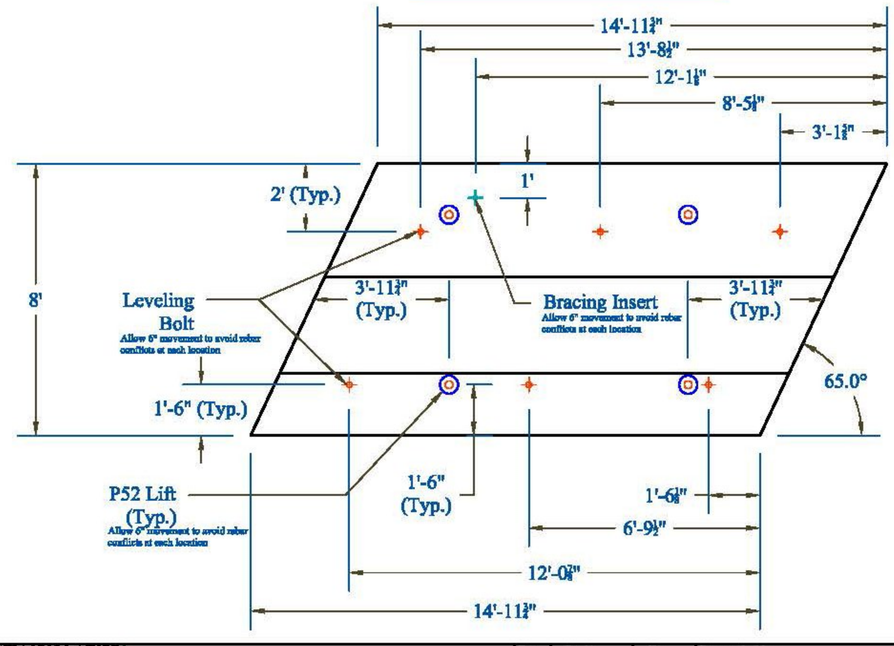
CK'D BY CLB **OK'D BY** FDB

April 20, 2015

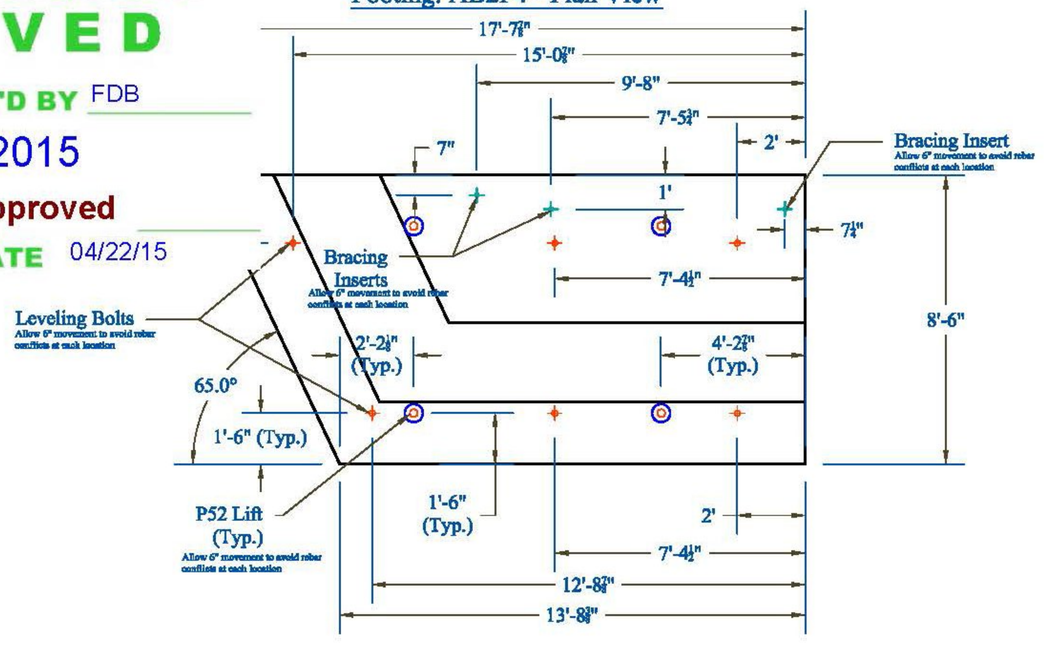
RESUBMIT NO **Approved**

BY C. CARLSON **DATE** 04/22/15

Footing: AB2F3 - Plan View



Footing: AB2F4 - Plan View



CONTRACTORS VTSPE:	Rev.	Date	By	Description
	1	04/16/15	IBA	Changes per State Review

PRECAST CONCRETE ABUTMENT SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VTAOT

PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

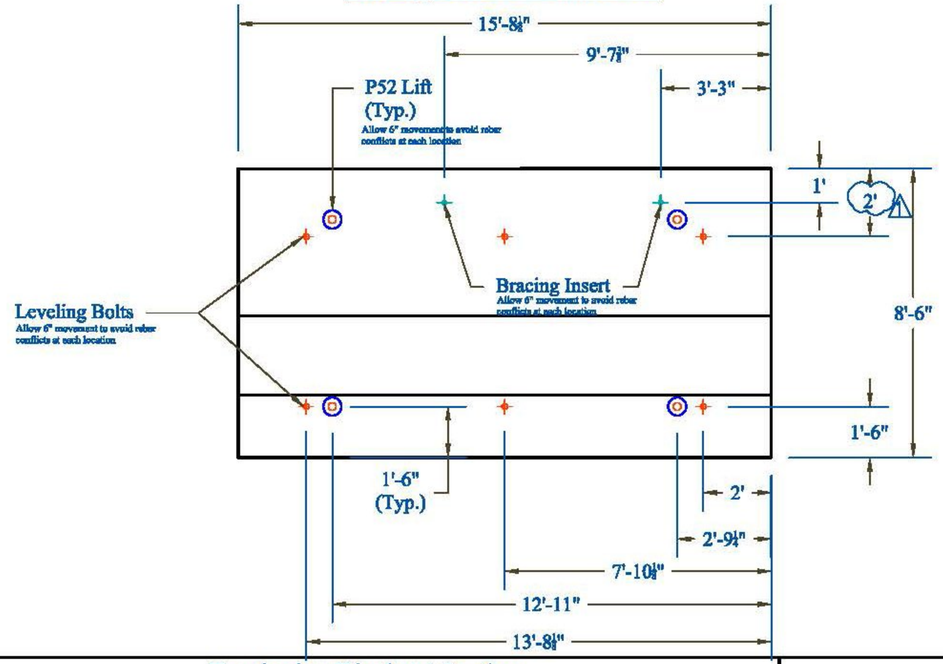
INSTALLER:
J.A. McDonald, Inc.
PO Box 132
Lyndon Center, VT 05850

FABRICATOR:
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WILLISTON, VT 05495
Ph: (802) 658-0201

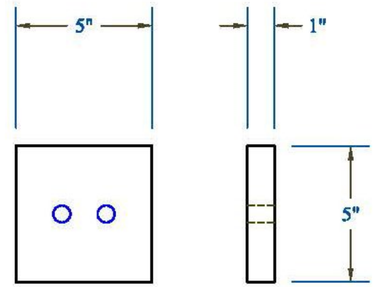
SD Ireland PRECAST

04/08/15 | FOOTINGS_2 | 12_OF_25

Footing: AB2F5 - Plan View

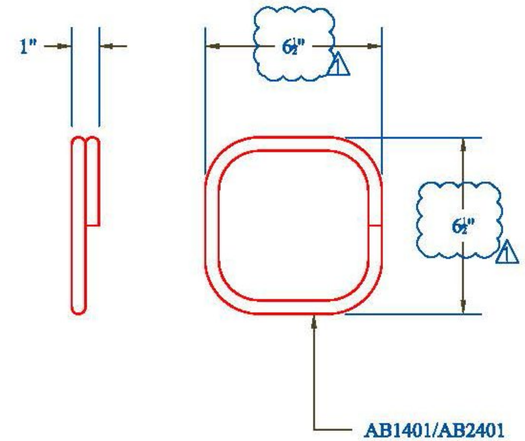


Tension Duct Bearing Plate

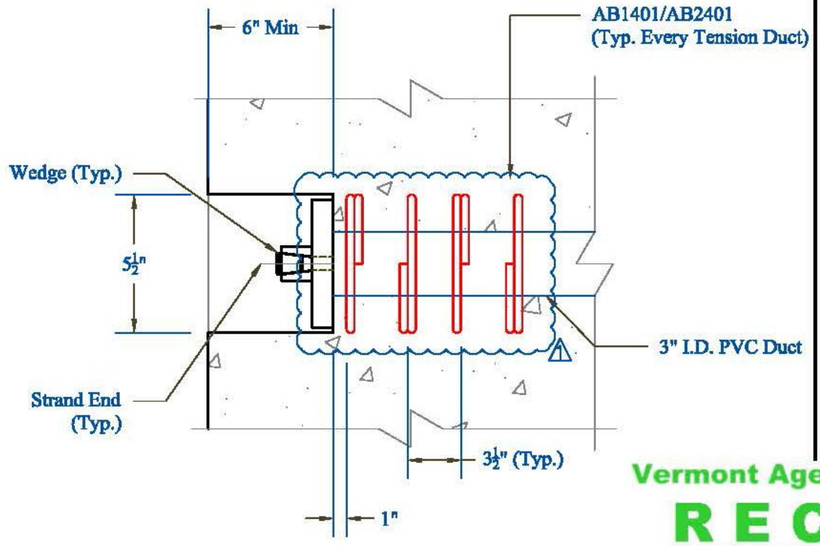


Note: See Tensioning Cut Sheet Details 40 - 42 ⚠

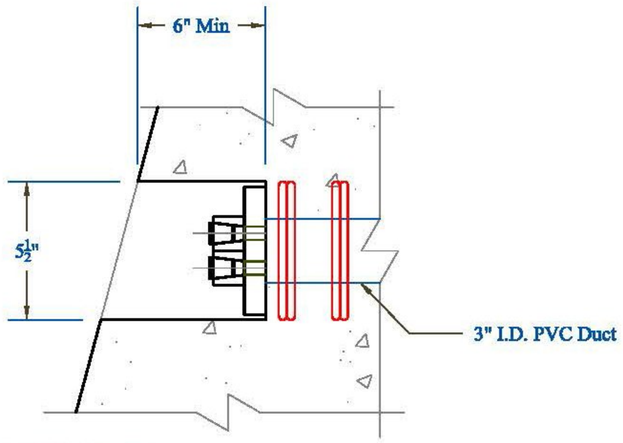
Reinforcement Detail at Tensioning Blockouts



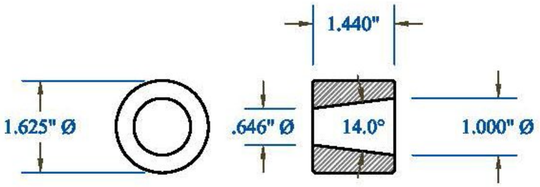
Tensioning Blockout Section



Tensioning Blockout Plan

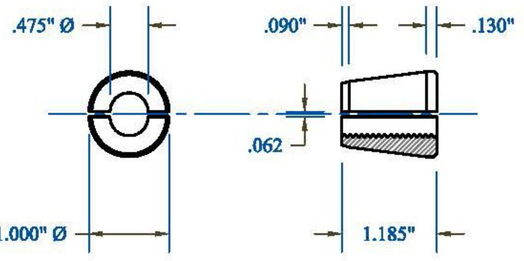


0.5" Barrel Chuck



Note: See Tensioning Cut Sheet Details 40 - 42 ⚠

0.5" 2-Part Wedge



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Walden Footing Abutment Wingwall Submittal #2_CLB 4.21.15.pdf

CK'D BY CLB OK'D BY FDB

April 20, 2015

RESUBMIT NO Approved

BY C. CARLSON DATE 04/22/15

CONTRACTORS VISPE:	Rev.	D
	1	04

TE ABUTMENT SHOP DRAWINGS (SDI JOB #15801)

Barendse
MS
rendse

PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

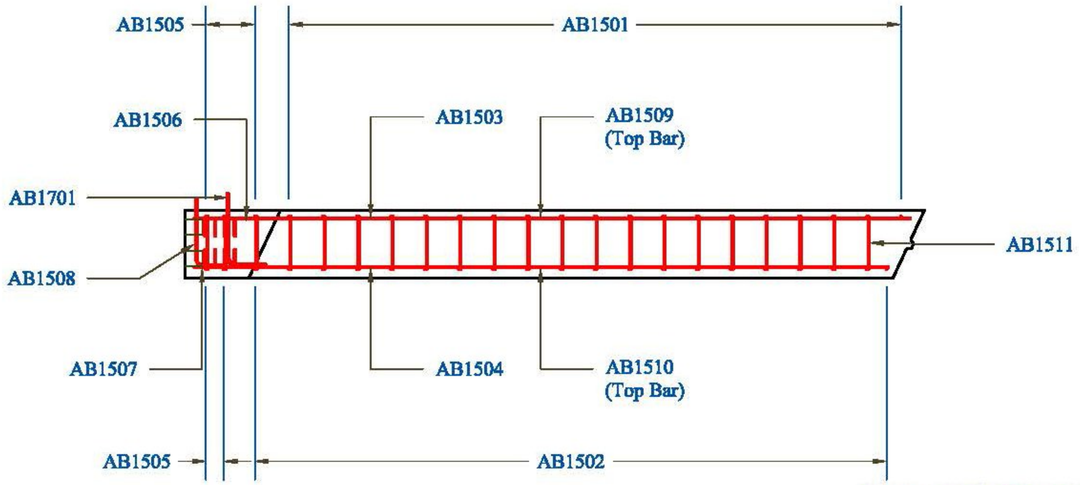
INSTALLER:
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WILLISTON, VT 05495
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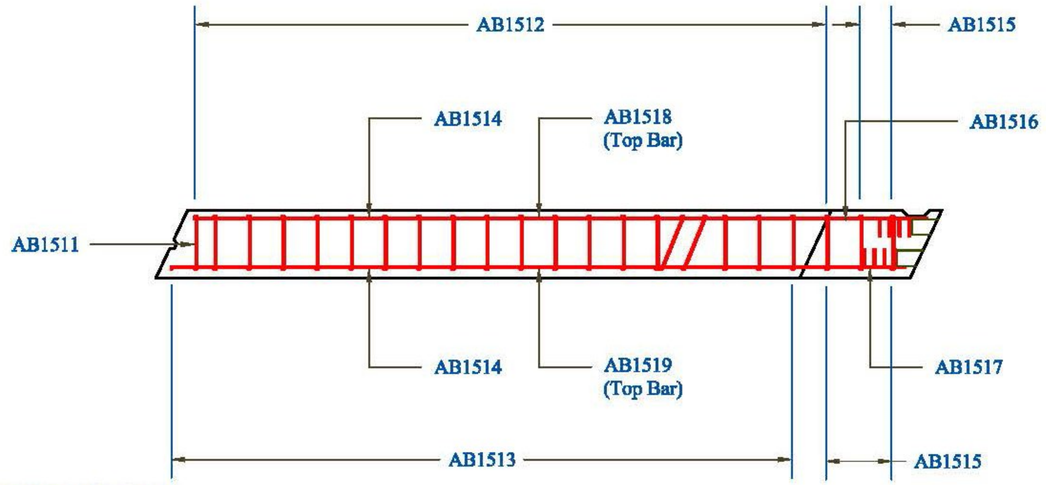
SD Ireland PRECAST

04/08/15 | POST_TENSIONING | 13_OF_25

Abutment Stem: AB1S - Plan View

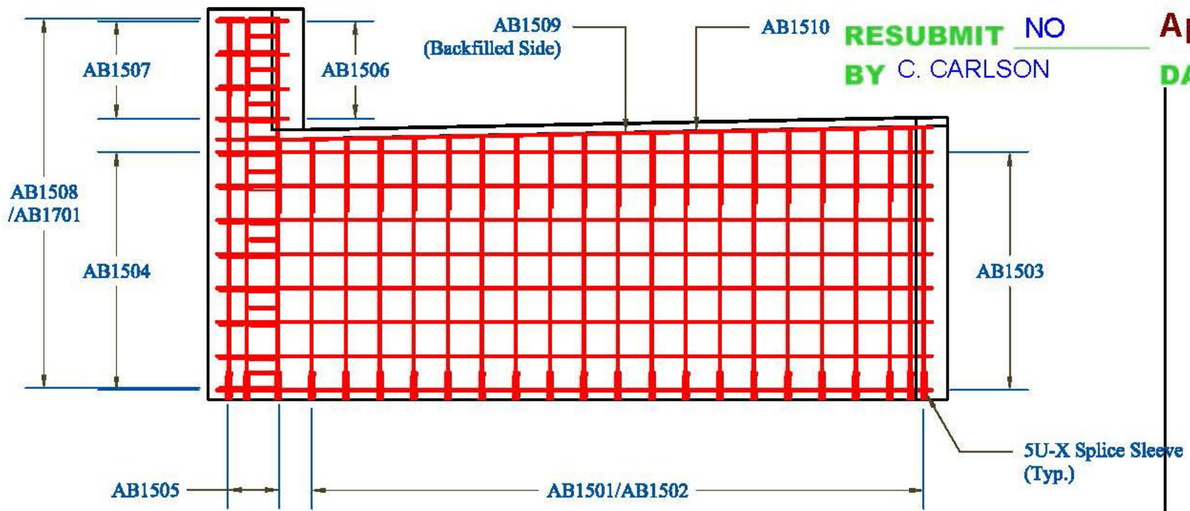


Abutment Stem: AB1N - Plan View

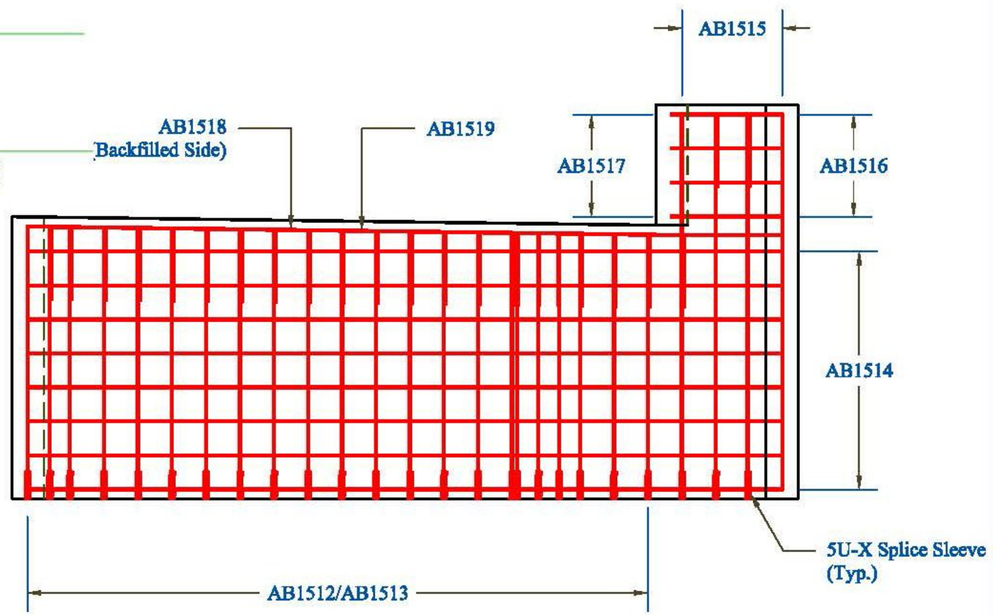


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Walden Footing Abutment Wingwall Submittal #2_CLB 4.21.15.pdf
CK'D BY CLB OK'D BY FDB
April 20, 2015
RESUBMIT NO Approved
BY C. CARLSON DATE 04/22/15

Abutment Stem: AB1S - Elevation View



Abutment Stem: AB1N - Elevation View



CONTRACTORS VISPE:	Rev.	Date	By	Description
	1	04/16/15	IBA	Changes per State Review

PRECAST CONCRETE ABUTMENT SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VTAOT

PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

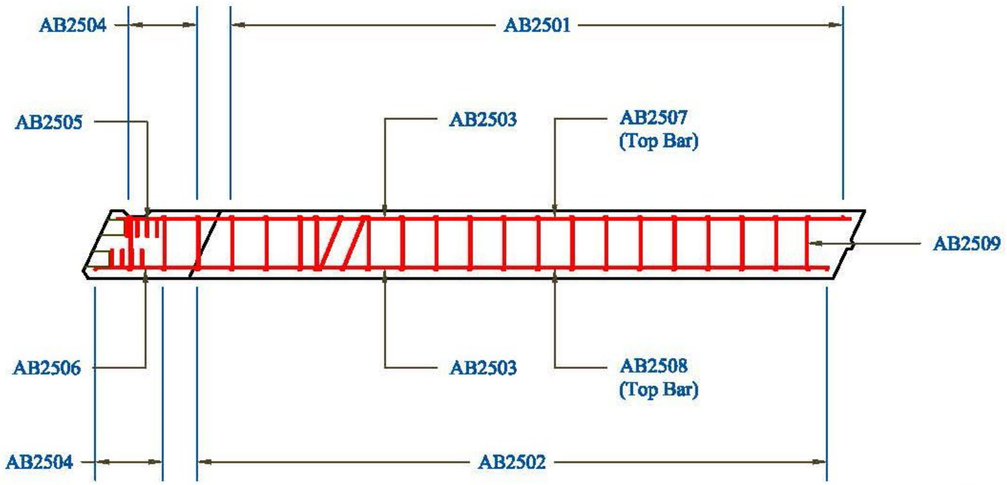
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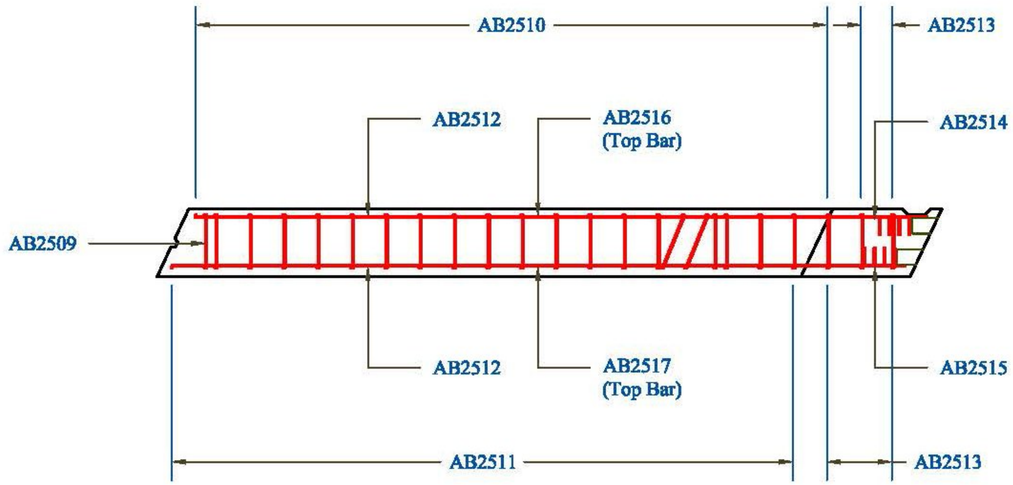
SD Ireland PRECAST

04/08/15 | BAR_AB_1 | 14_OF_25

Abutment Stem: AB2N - Plan View



Abutment Stem: AB2S - Plan View



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Walden Footing Abutment Wingwall Submittal 02_0 LB v.21.15.pdf

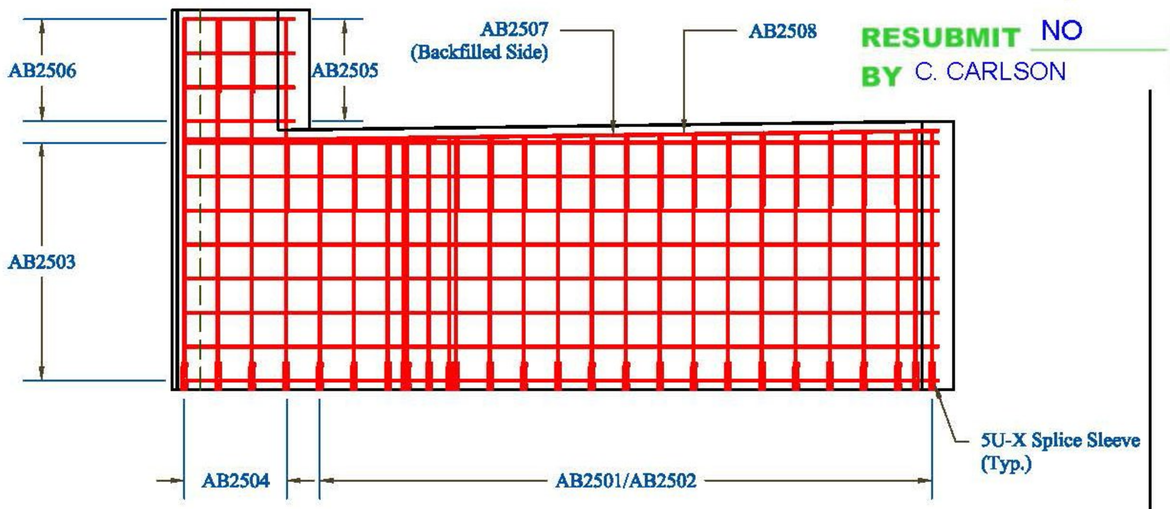
CK'D BY CLB OK'D BY FDB

April 20, 2015

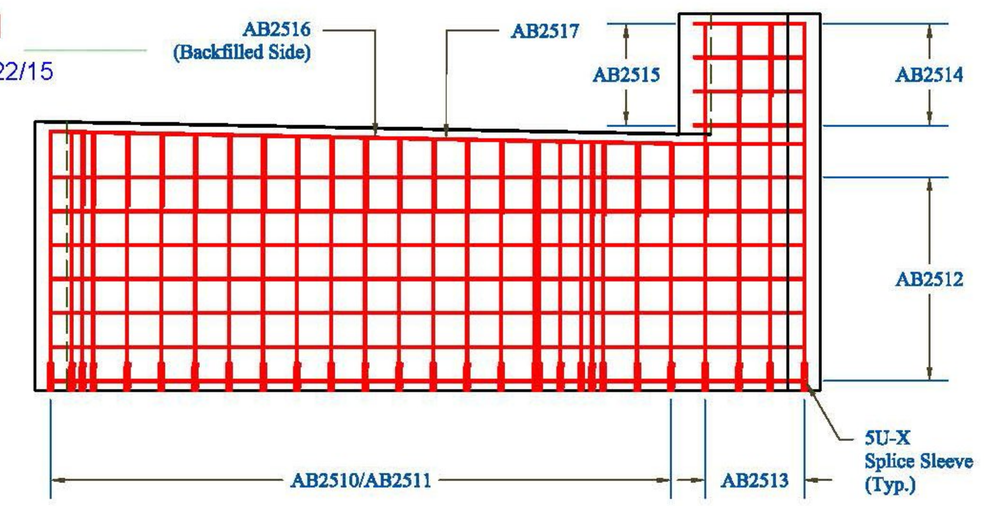
RESUBMIT NO **Approved**

BY C. CARLSON DATE 04/22/15

Abutment Stem: AB2N - Elevation View



Abutment Stem: AB2S - Elevation View



CONTRACTORS VISPE:	Rev.	Date	By	Description
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PRECAST CONCRETE ABUTMENT SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VTAOT

PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

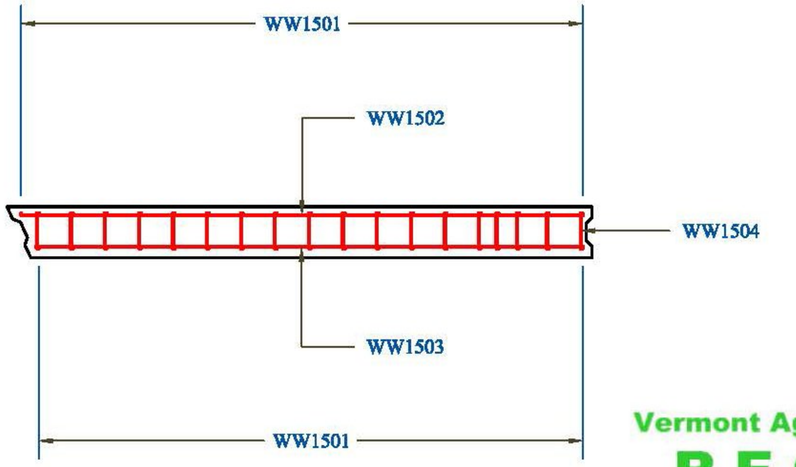
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WILLISTON, VT 05495
Ph: (802) 658-0201

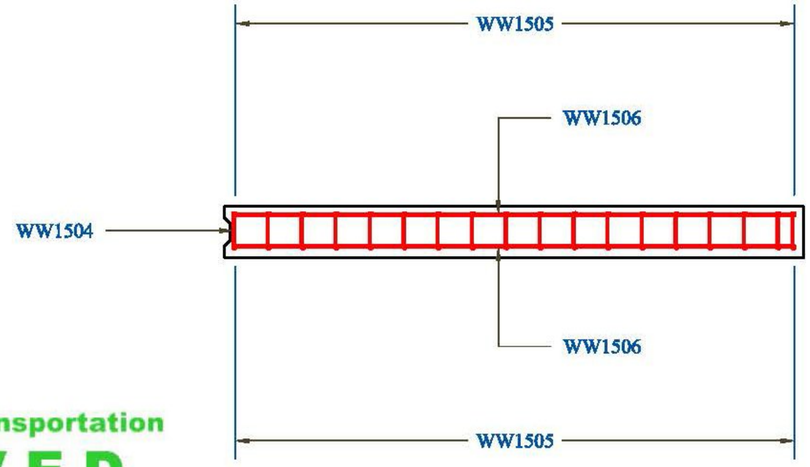
SD Ireland PRECAST

04/08/15 | BAR_AB_2 | 15_OF_25

Wing Wall: WW1A - Plan View



Wing Wall: WW1B - Plan View



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Walden Footing Abutment Wingwall Submittal #2_CLB 4.21.15.pdf

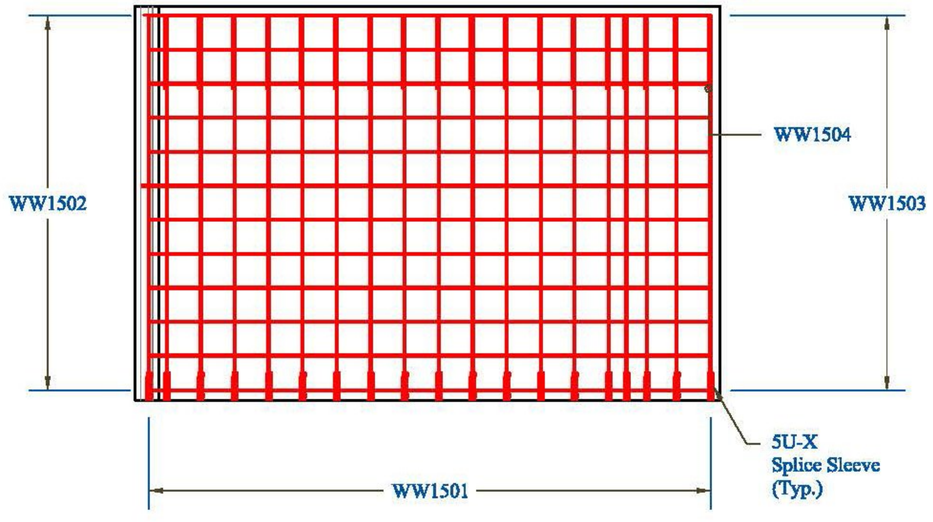
CK'D BY CLB OK'D BY FDB

April 20, 2015

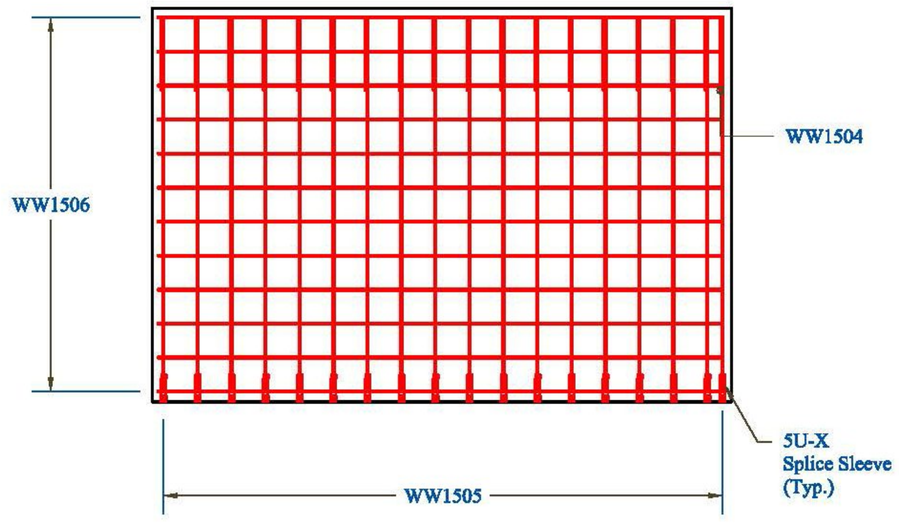
RESUBMIT NO Approved

BY C. CARLSON DATE 04/22/15

Wing Wall: WW1A - Elevation View



Wing Wall: WW1B - Elevation View



CONTRACTORS VISPE:	Rev.	Date	By	Description
	1	04/16/15	IBA	Changes per State Review

PRECAST CONCRETE ABUTMENT SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VTAOT

PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

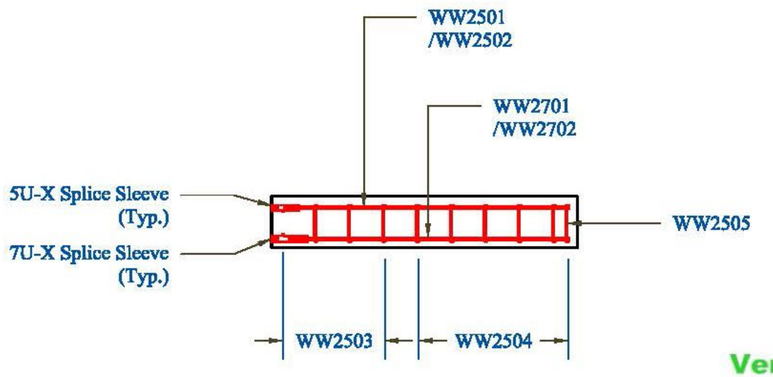
INSTALLER:
J.A. McDonald, Inc.
PO Box 132
Lyndon Center, VT 05850

FABRICATOR:
193 INDUSTRIAL AVE.
WILLISTON, VT 05495
Ph: (802) 658-0201

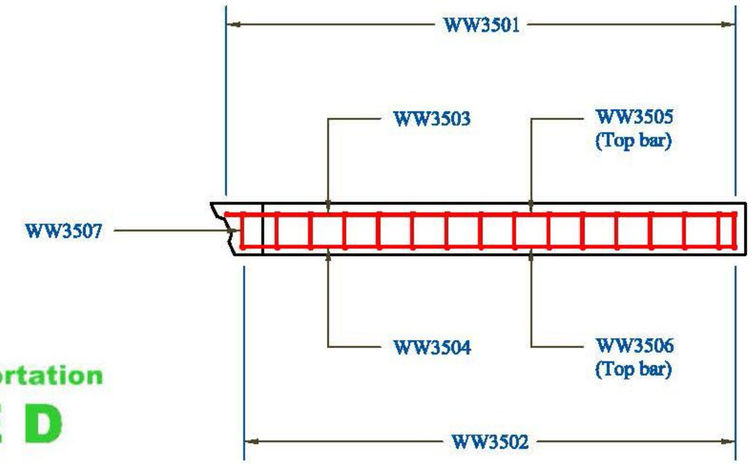
SD Ireland PRECAST

04/08/15 | BAR_WINGWALLS_1 | 16_OF_25

Wing Wall: WW2 - Plan View



Wing Wall: WW3 - Plan View



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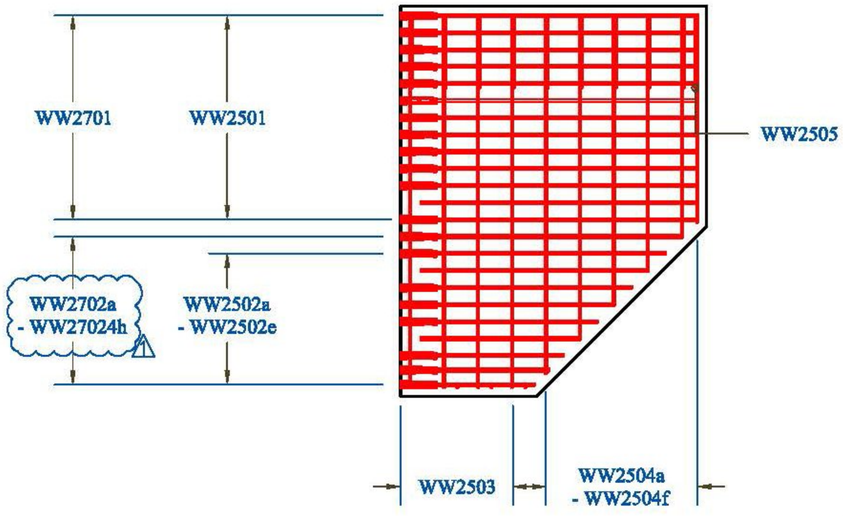
CK'D BY CLB OK'D BY FDB

April 20, 2015

RESUBMIT NO **Approved**

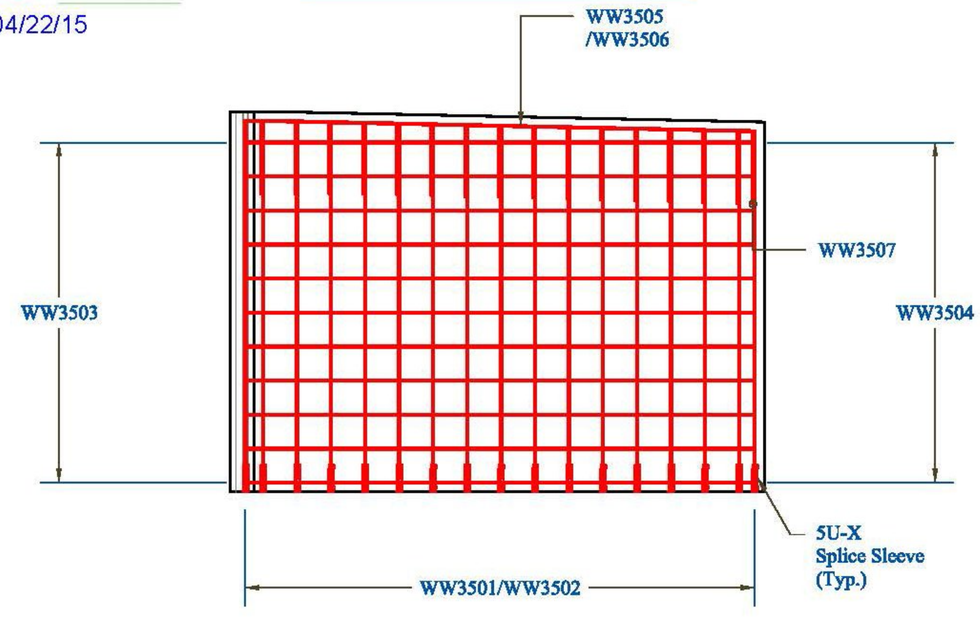
BY C. CARLSON DATE 04/22/15

Wing Wall: WW2 - Elevation View



Note: Omit #7 bar splice sleeves at tension duct location.

Wing Wall: WW3 - Elevation View



CONTRACTORS VISPE:	Rev.	Date	By	Description
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PRECAST CONCRETE ABUTMENT SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VTAOT

PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

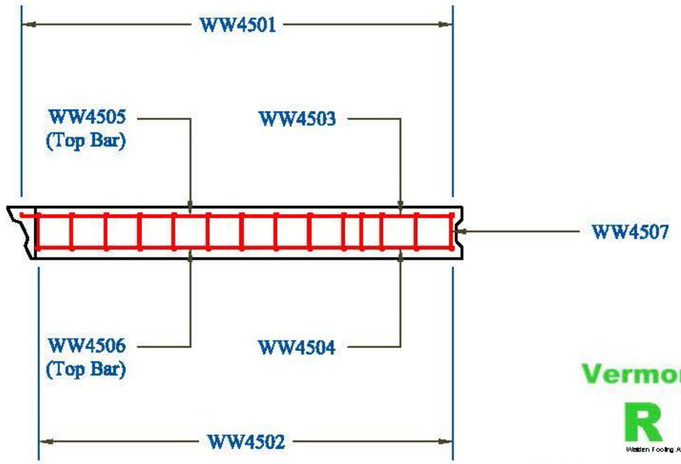
INSTALLER:
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WILLISTON, VT 05495
Ph: (802) 658-0201

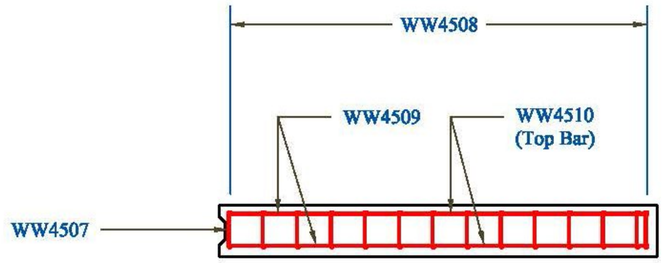
SD Ireland PRECAST

04/08/15 | BAR_WINGWALLS_2_&_3 | 17_OF_25

Wing Wall: WW4A - Plan View



Wing Wall: WW4B - Plan View



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Walden Footing Abutment Wingwall Submittal 62_0 LB 4.21.15.pdf

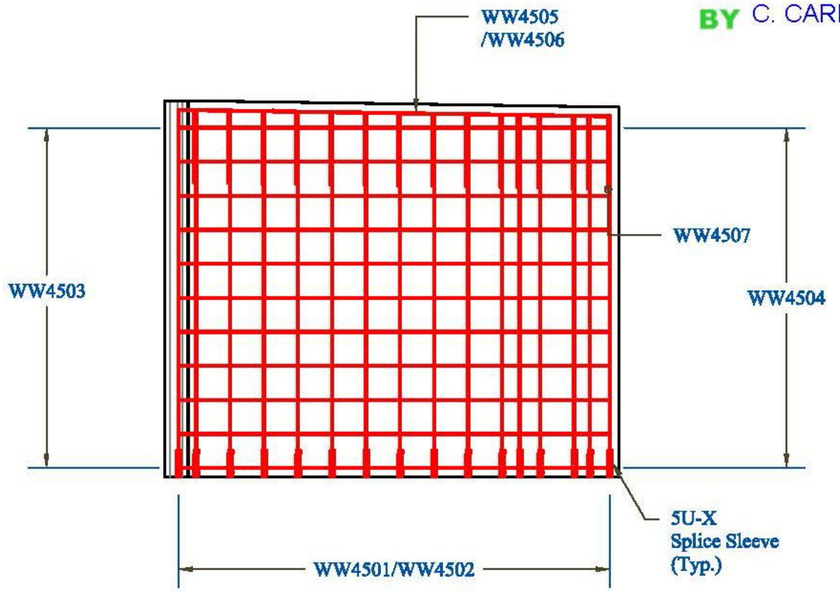
CK'D BY CLB OK'D BY FDB

April 20, 2015

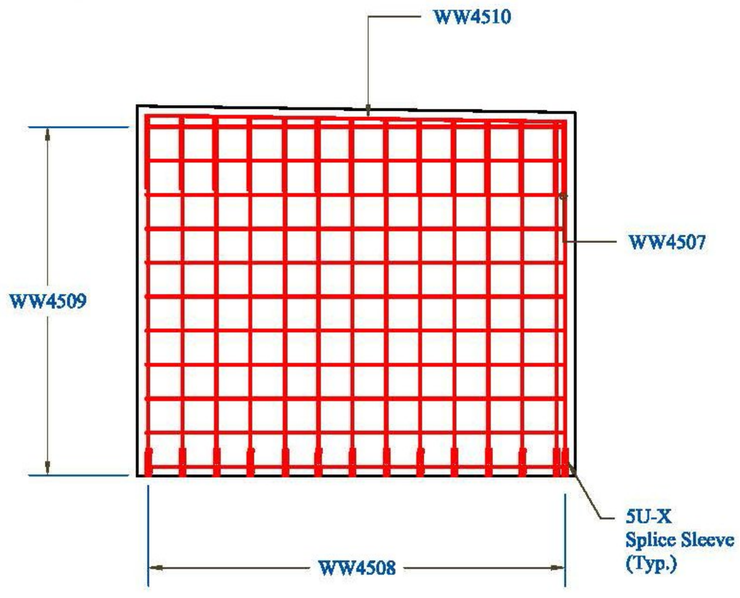
RESUBMIT NO Approved

BY C. CARLSON DATE 04/22/15

Wing Wall: WW4A - Elevation View



Wing Wall: WW4B - Elevation View



CONTRACTORS VISPE:	Rev.	Date	By	Description
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PRECAST CONCRETE ABUTMENT SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VTAOT

PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

INSTALLER:
J.A. McDonald, Inc.
PO Box 132
Lyndon Center, VT 05850

FABRICATOR:
193 INDUSTRIAL AVE.
WILLISTON, VT 05495
Ph: (802) 658-0201

SD Ireland PRECAST

04/08/15 | BAR_WINGWALLS_4 | 18_OF_25

Footing: AB1F1 - Top Mat



Footing: AB1F2 - Top Mat



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Walden Footing Abutment Wingwall Submittal 6Z_0 LB 4.21.15.pdf

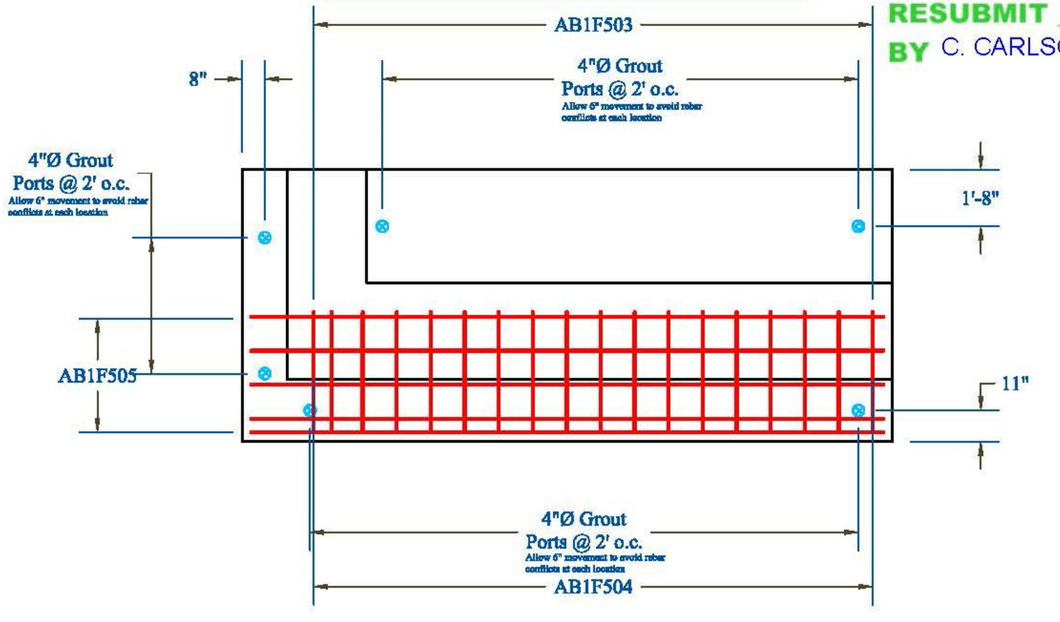
CK'D BY CLB OK'D BY FDB

April 20, 2015

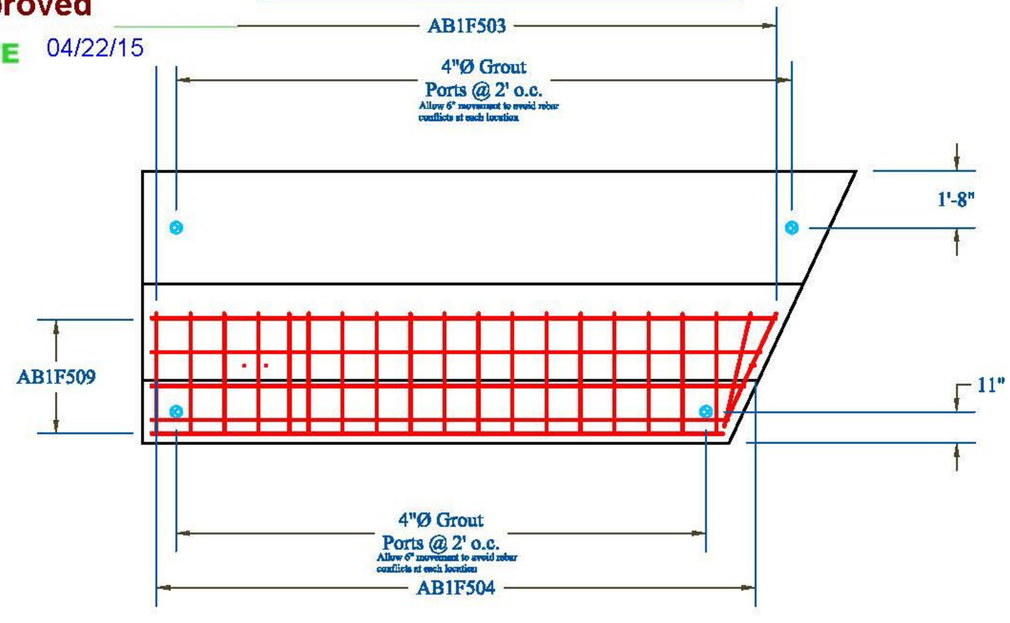
RESUBMIT NO Approved

BY C. CARLSON DATE 04/22/15

Footing: AB1F1 - Splice Bars &Bottom Mat



Footing: AB1F2 - Splice Bars &Bottom Mat



CONTRACTORS VISPE:	Rev.	Date	By	Description
	1	04/16/15	IBA	Changes per State Review

PRECAST CONCRETE ABUTMENT SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VTAOT

PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

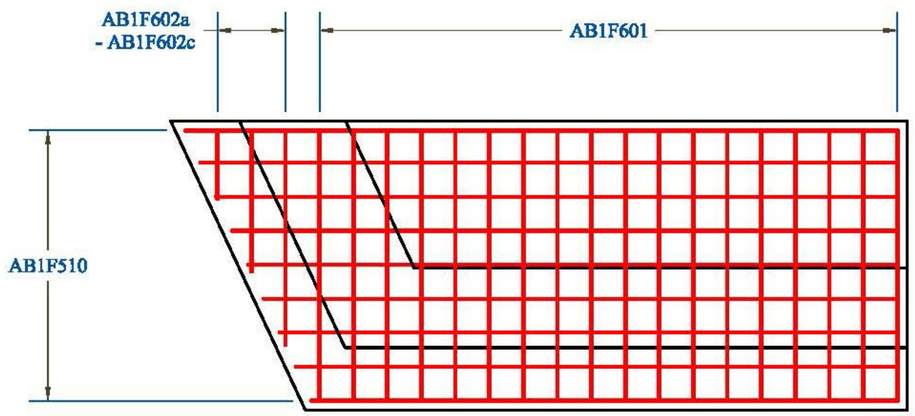
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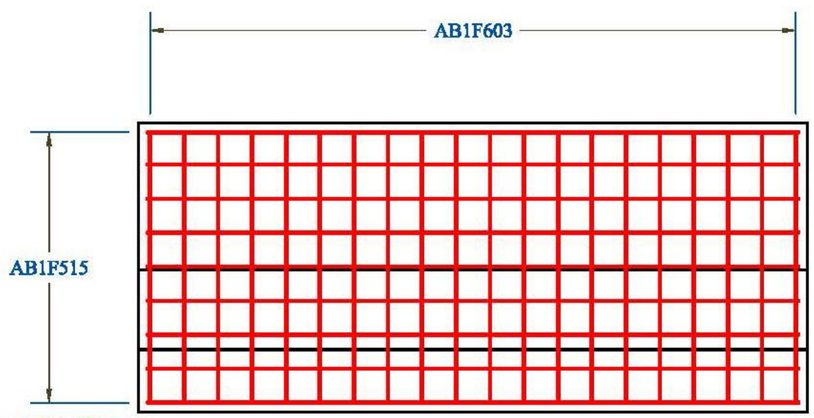
SD Ireland PRECAST

04/08/15 | BAR_FOOTINGS_1 | 19_OF_25

Footing: AB1F3 - Top Mat



Footing: AB1F4 - Top Mat



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Walden Footing Abutment Wingwall Submittal #2_CLB 4.21.15.pdf

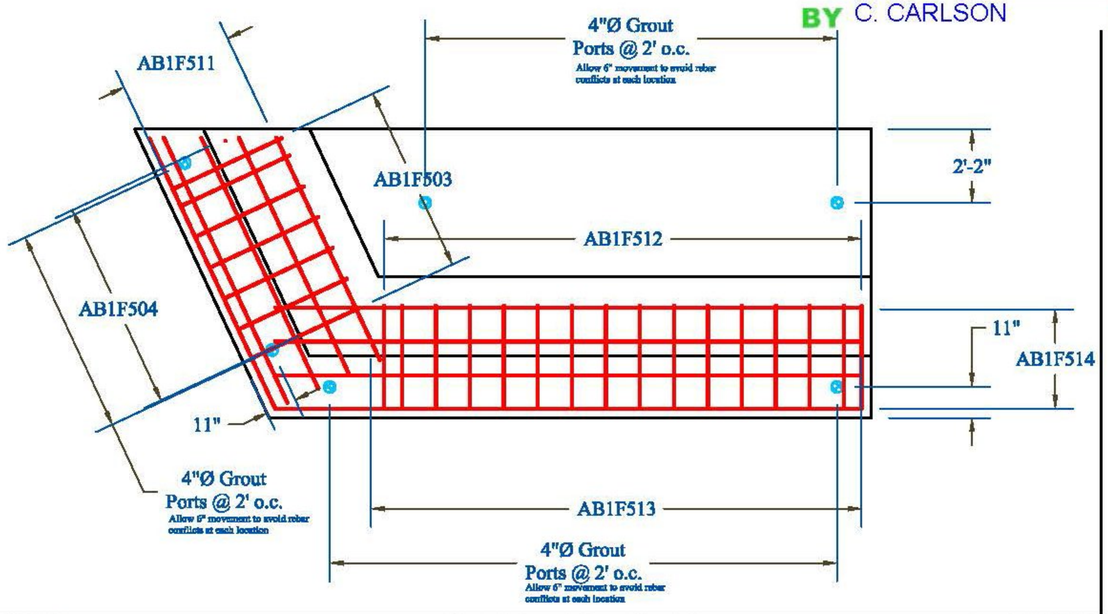
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April 20, 2015

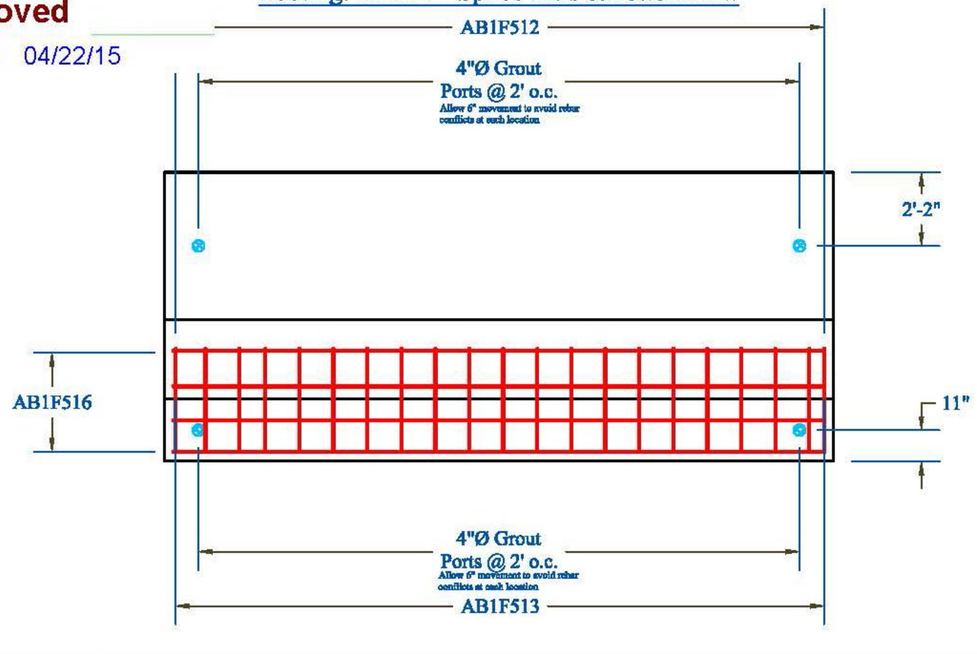
RESUBMIT NO Approved

BY C. CARLSON DATE 04/22/15

Footing: AB1F3 - Splice Bars &Bottom Mat



Footing: AB1F4 - Splice Bars &Bottom Mat



CONTRACTORS VISPE:	Rev.	Date	By	Description
	1	04/16/15	IBA	Changes per State Review

PRECAST CONCRETE ABUTMENT SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VTAOT

PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

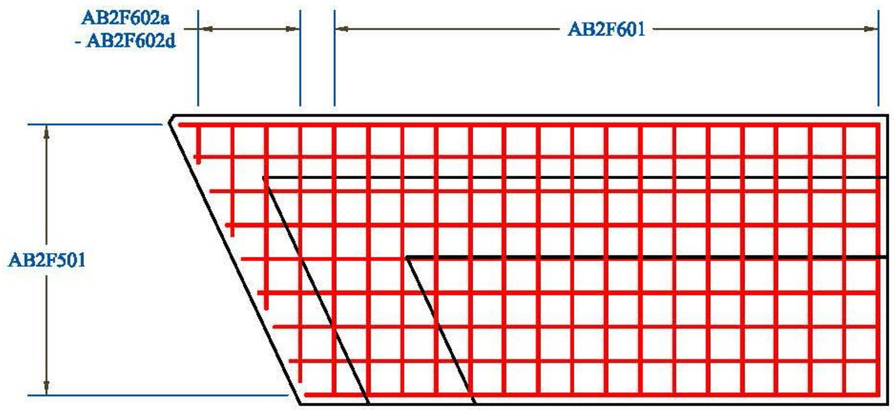
INSTALLER:
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FABRICATOR:
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WILLISTON, VT 05495
Ph: (802) 658-0201

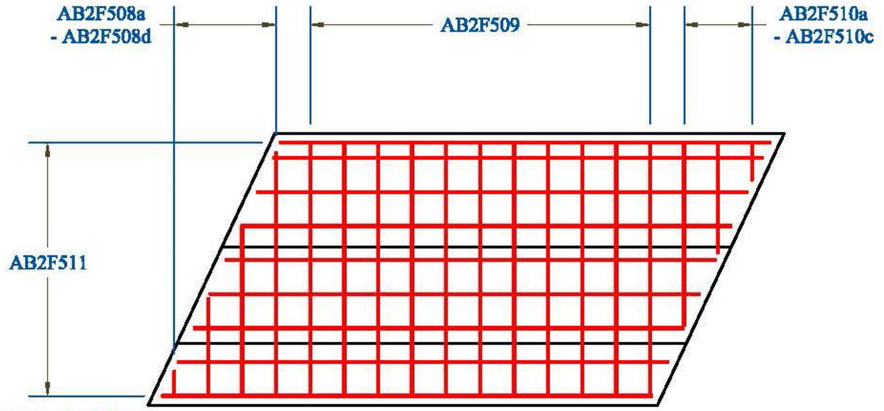
SD Ireland PRECAST

04/08/15 | BAR_FOOTINGS_2 | 20_OF_25

Footing: AB2F1 - Top Mat



Footing: AB2F2 - Top Mat



Vermont Agency of Transportation

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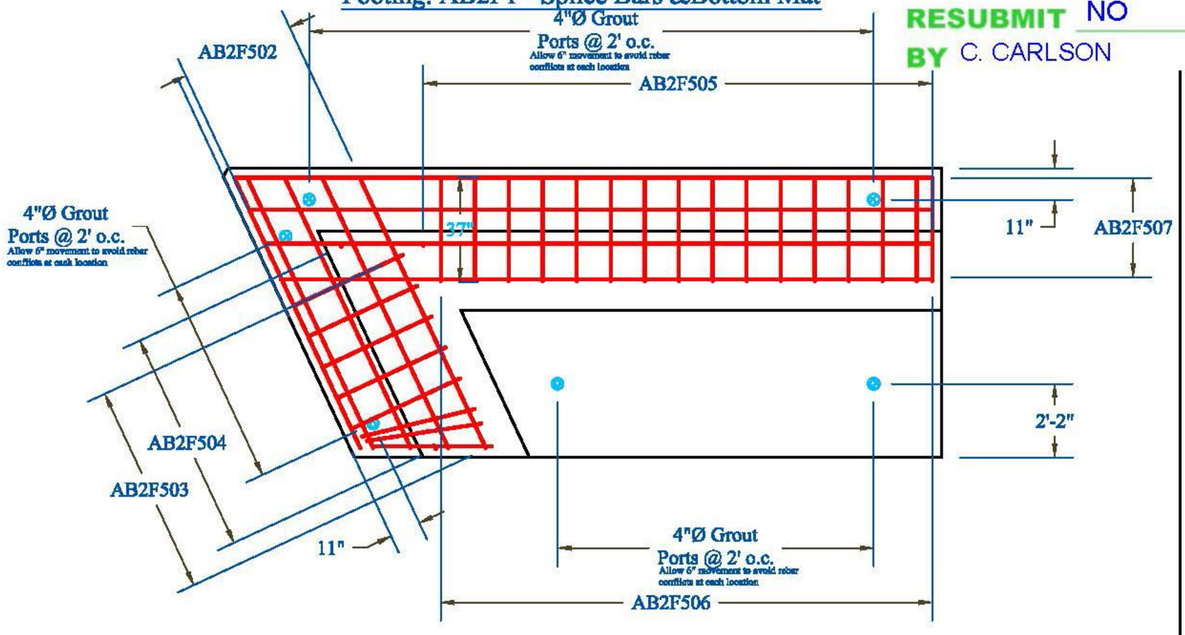
CK'D BY CLB OK'D BY FDB

April 20, 2015

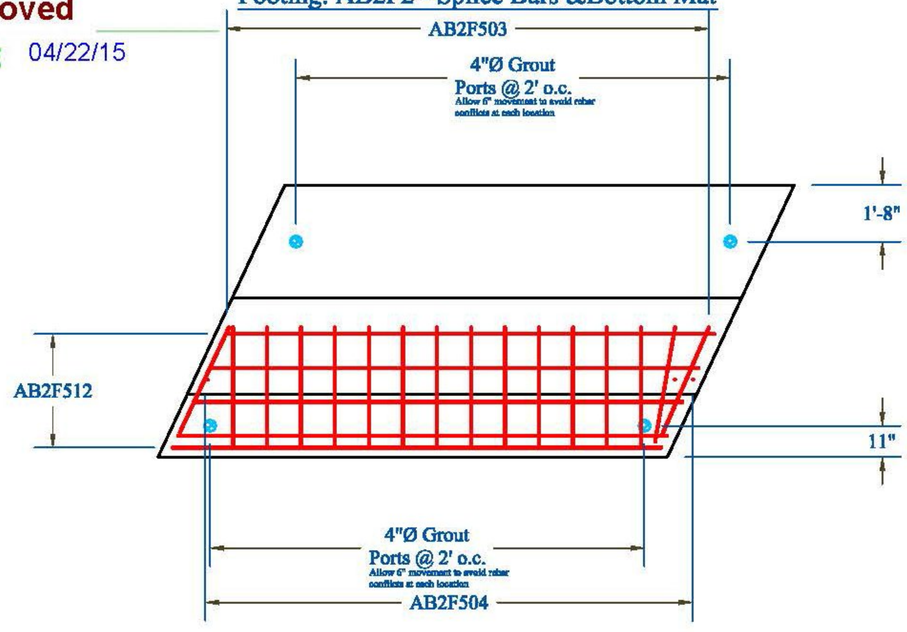
RESUBMIT NO **Approved**

BY C. CARLSON DATE 04/22/15

Footing: AB2F1 - Splice Bars &Bottom Mat



Footing: AB2F2 - Splice Bars &Bottom Mat



CONTRACTORS VISPE:	Rev.	Date	By	Description
	1	04/16/15	IBA	Changes per State Review

PRECAST CONCRETE ABUTMENT SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VTAOT

PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

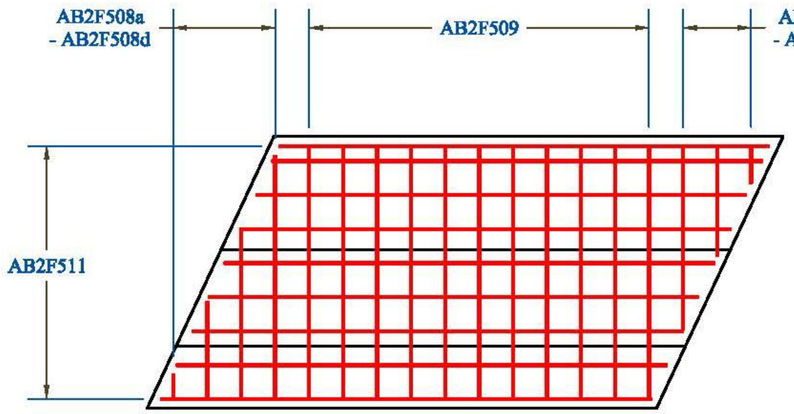
INSTALLER:
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Lyndon Center, VT 05850

FABRICATOR:
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WILLISTON, VT 05495
Ph: (802) 658-0201

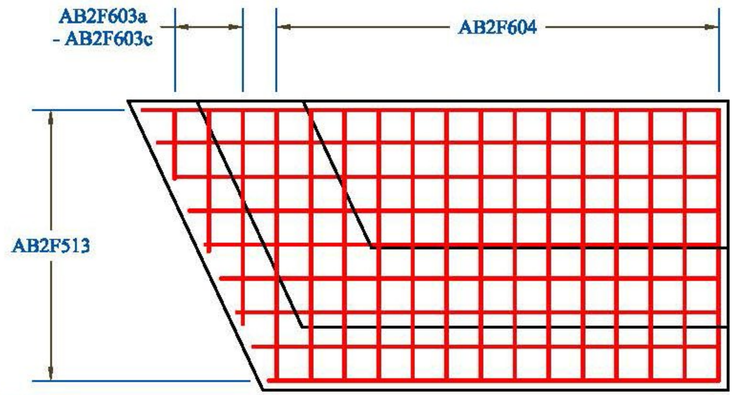
SD Ireland PRECAST

04/08/15 | BAR_FOOTINGS_3 | 21_OF_25

Footing: AB2F3 - Top Mat



Footing: AB2F4 - Top Mat



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Walden Footing Abutment Wingwall Submittal#2_CLB 4.21.15.pdf

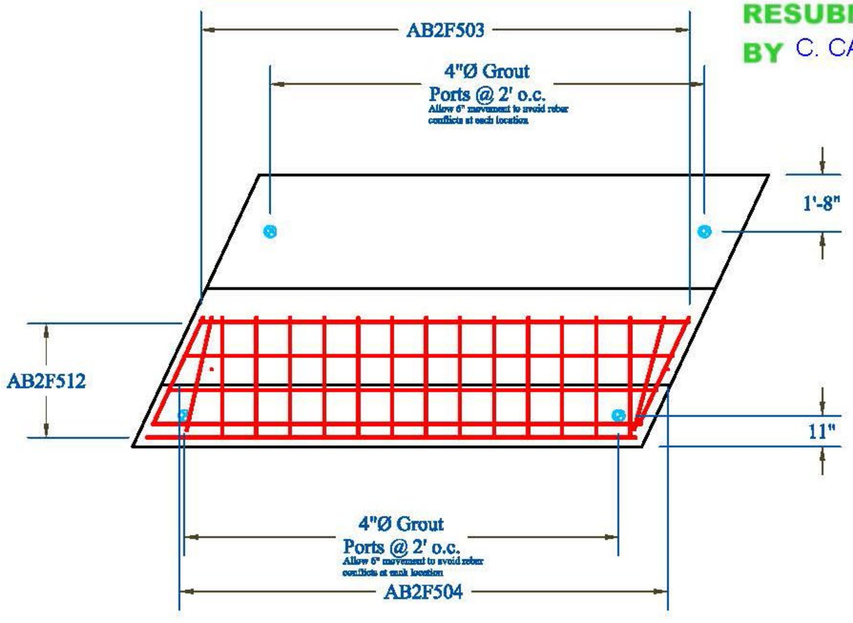
CK'D BY CLB OK'D BY FDB

April 20, 2015

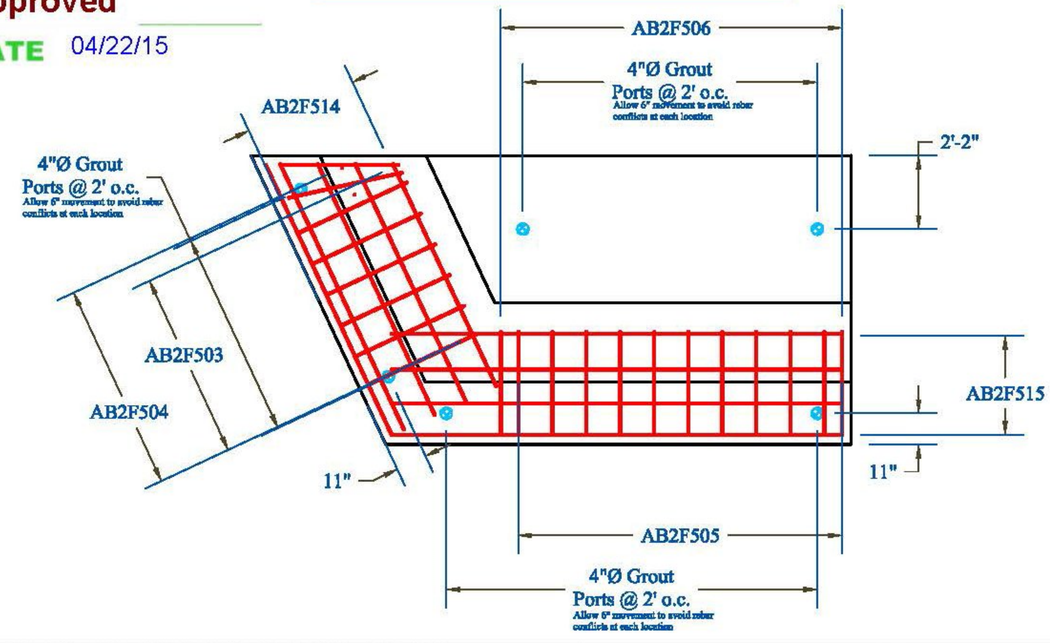
RESUBMIT NO Approved

BY C. CARLSON DATE 04/22/15

Footing: AB2F3 - Splice Bars &Bottom Mat



Footing: AB2F4 - Splice Bars &Bottom Mat



CONTRACTORS VISPE:	Rev.	Date	By	Description
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PRECAST CONCRETE ABUTMENT SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VTAOT

PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

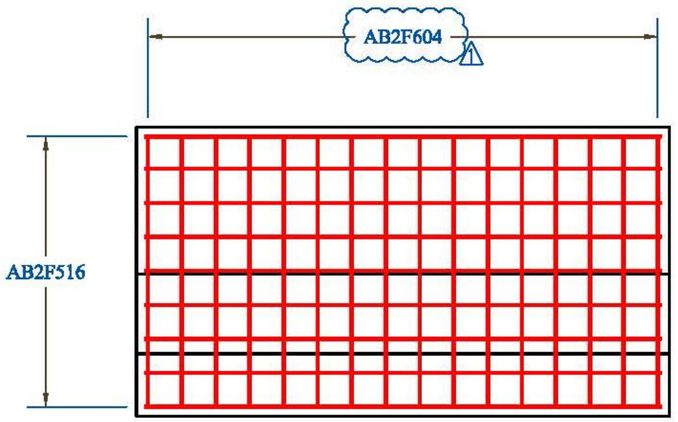
INSTALLER:
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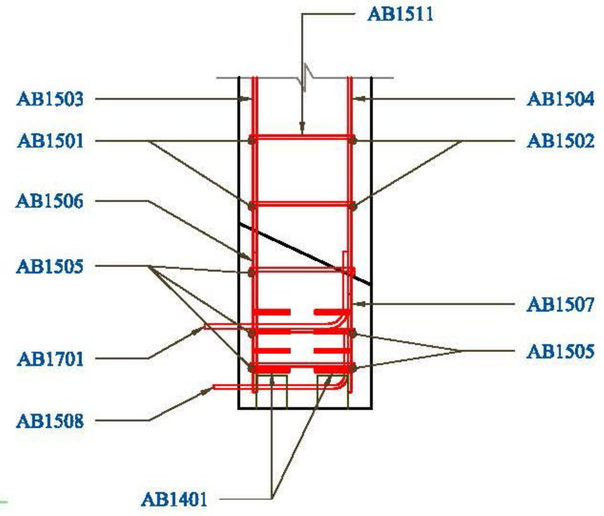
SD Ireland PRECAST

04/08/15 | BAR_FOOTINGS_4 | 22_OF_25

Footing: AB2F5 - Top Mat



End Bar Plan View: AB1S



Vermont Agency of Transportation

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Walden Footing Abutment Wingwall Submittal #2_CLB v.21.15.pdf

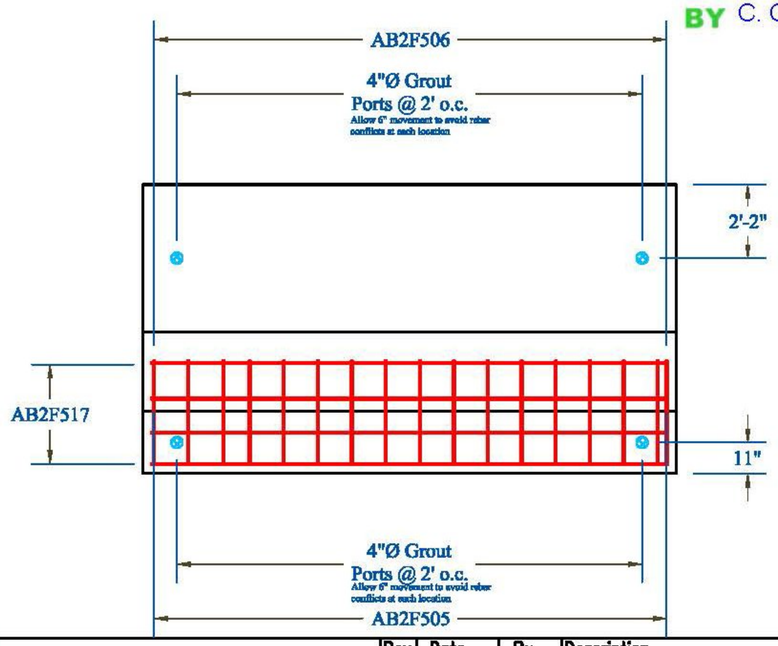
CK'D BY CLB OK'D BY FDB

April 20, 2015

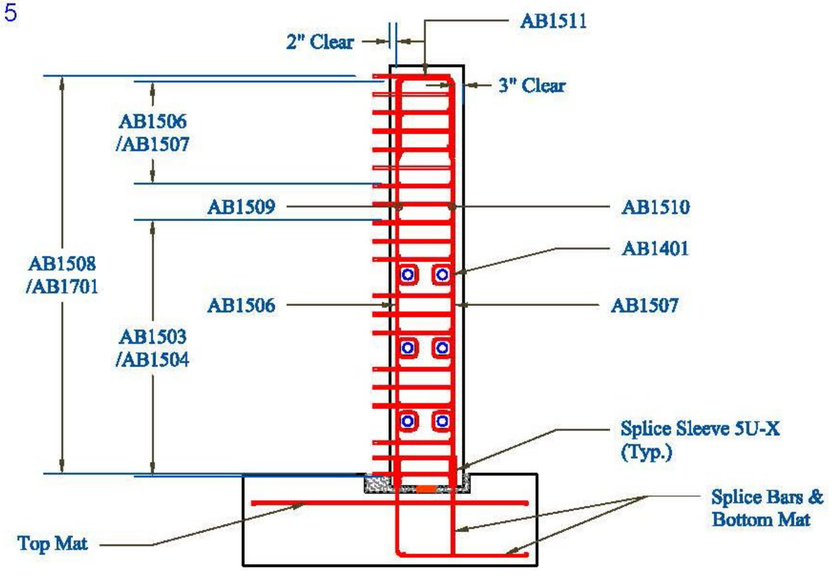
RESUBMIT NO **Approved**

BY C. CARLSON DATE 04/22/15

Footing: AB2F5 - Splice Bars &Bottom Mat



End Bar Section View: AB1S



CONTRACTORS VISPE:	Rev.	Date	By	Description
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PRECAST CONCRETE ABUTMENT SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VTAOT

PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

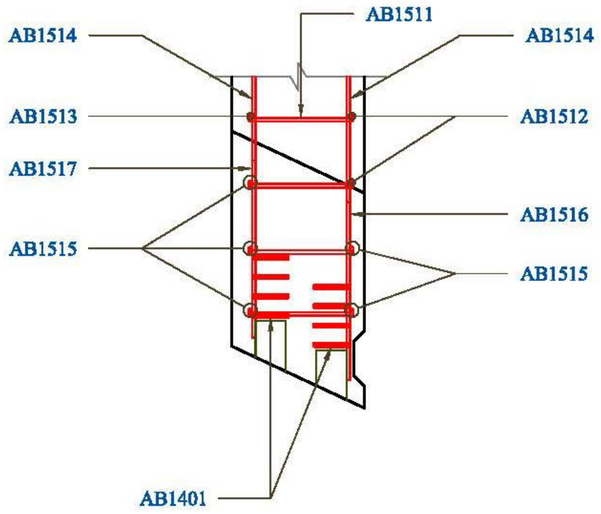
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Ph: (802) 658-0201

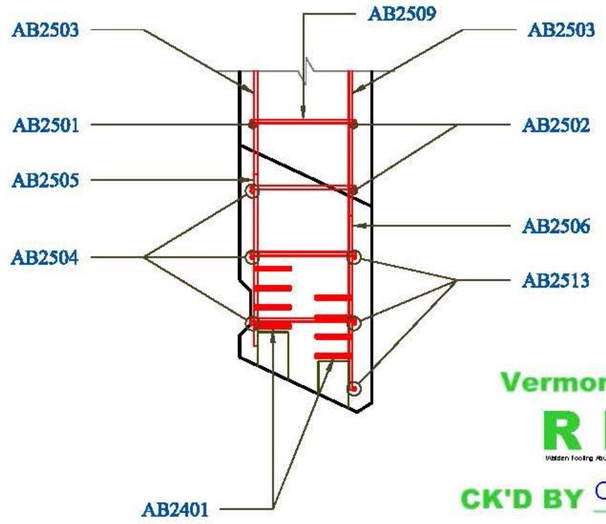
SD Ireland PRECAST

04/08/15 | BAR_FOOTINGS_5 | 23_OF_25

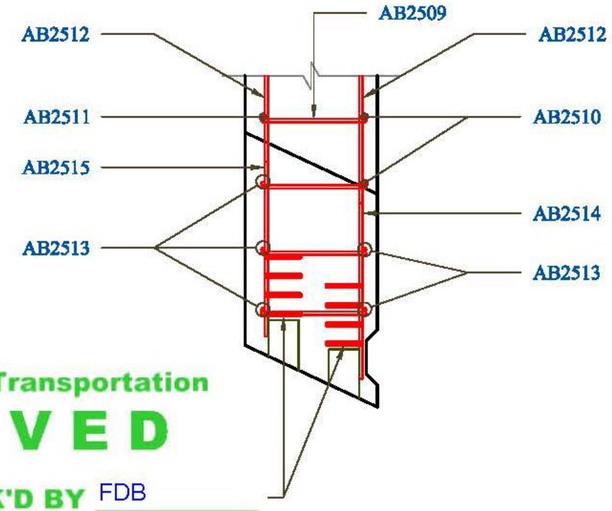
End Bar Plan View: AB1N



End Bar Plan View: AB2N



End Bar Plan View: AB2S



Vermont Agency of Transportation

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Walden Footing Abutment Wingwall Submittal #2_CLB +21.15.pdf

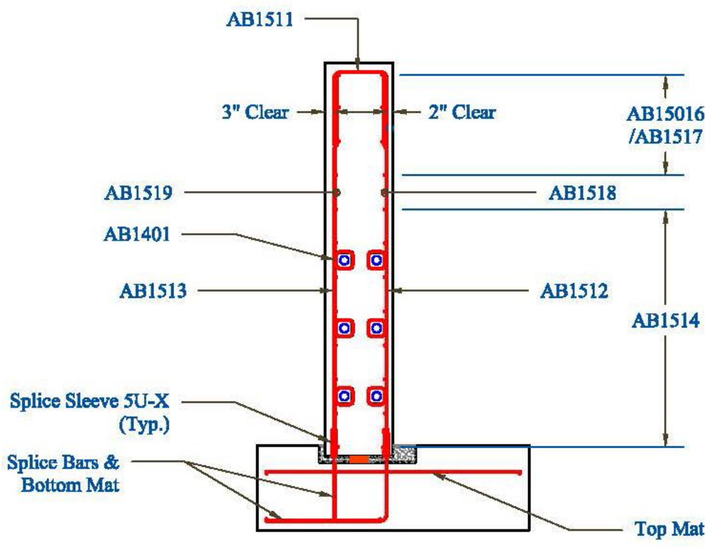
CK'D BY CLB OK'D BY FDB

April 20, 2015

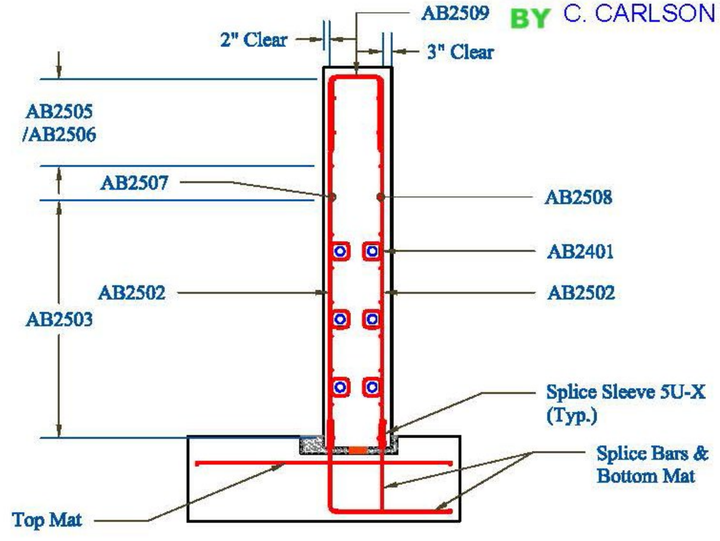
RESUBMIT NO Approved

BY C. CARLSON DATE 04/22/15

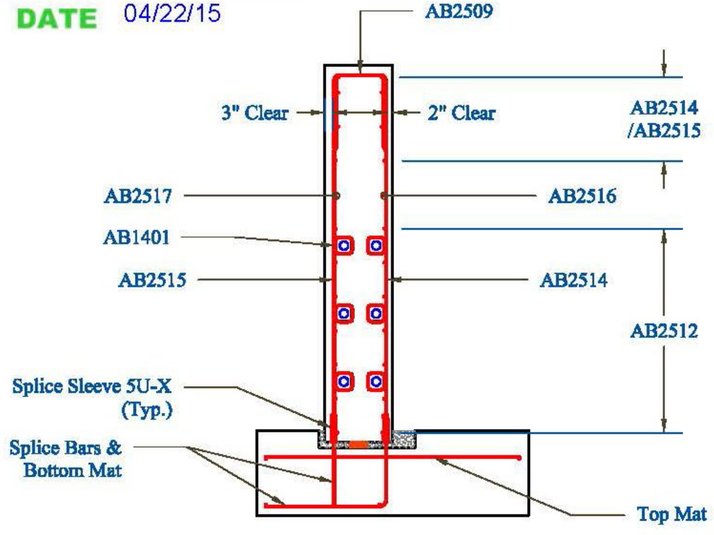
End Bar Section View: AB1N



End Bar Section View: AB2



ection View: AB2S



CONTRACTORS VISPE:	Rev.	Date	By	Description
	1	04/16/15	IBA	Changes per State Review

PRECAST CONCRETE ABUTMENT SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VTAOT

PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

INSTALLER:
J.A. McDonald, Inc.
PO Box 132
Lyndon Center, VT 05850

FABRICATOR:
193 INDUSTRIAL AVE.
WILLISTON, VT 05495
Ph: (802) 658-0201

SD Ireland PRECAST

04/08/15 | ABUTMENT_END_DETAILS | 24_OF_25

Piece Schedule	
Piece	Weight (lbs)
AB1F1	52,040
AB1F2	52,990
AB1F3	58,520
AB1F4	58,520
WW-2	20,380
AB1S	53,300
AB1N	56,560
WW-1A	44,160
WW-1B	43,750
AB2F1	56,440
AB2F2	41,280
AB2F3	41,280
AB2F4	47,640
AB2F5	46,640
WW-3	38,600
AB2N	54,810
AB2S	53,290
WW-4A	32,700
WW-4B	31,850 ⚠1

Vermont Agency of Transportation

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Walden Footing Abutment Wingwall Submittal #2_CLB 4.21.15.pdf

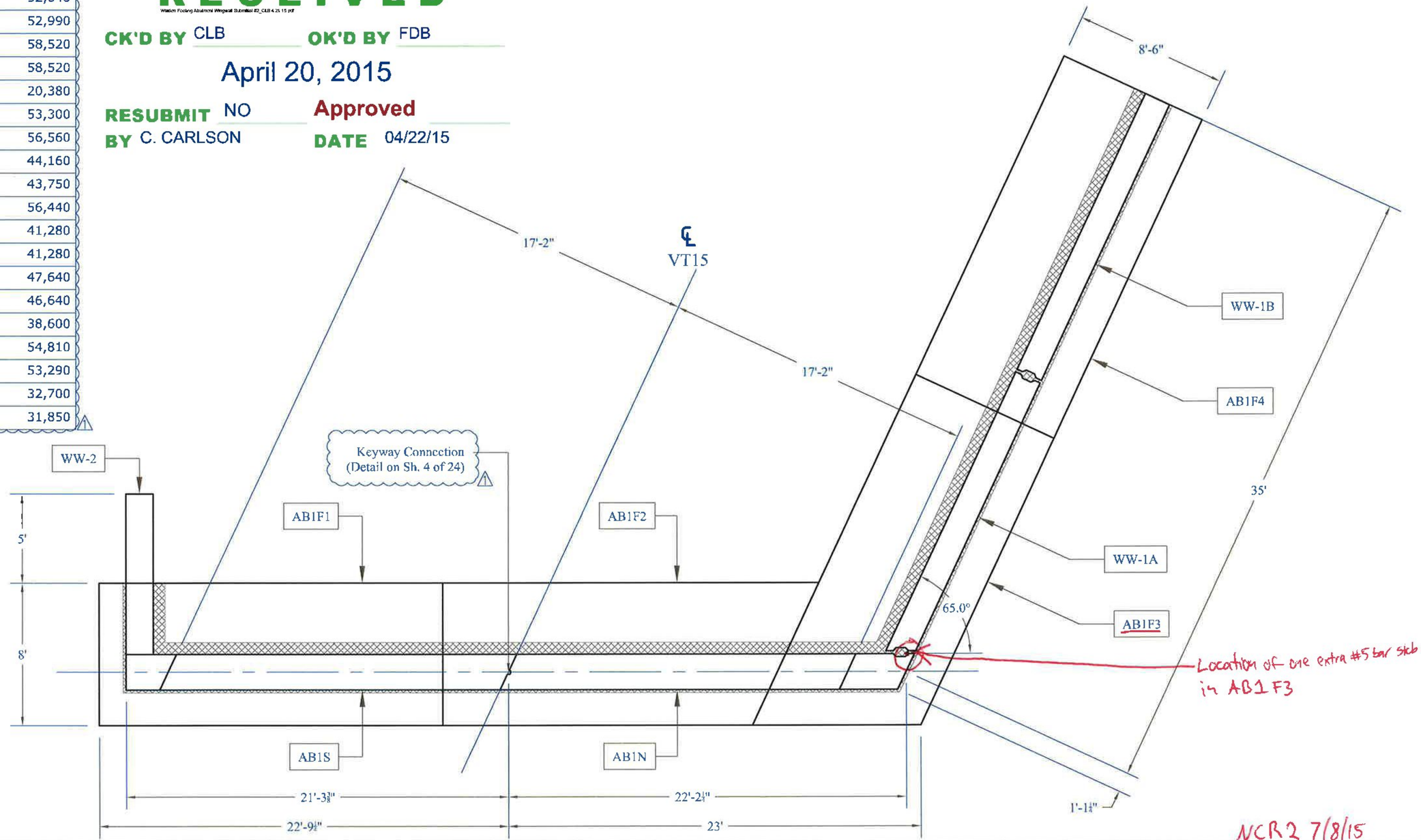
CK'D BY CLB **OK'D BY** FDB

April 20, 2015

RESUBMIT NO **Approved**

BY C. CARLSON **DATE** 04/22/15

Abutment 1: Plan View



NCR2 7/8/15

CONTRACTORS VTSPE:	Rev.	Date	By	Description
	1	04/16/15	IBA	Changes per State Review

PRECAST CONCRETE ABUTMENT SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VTAOT

PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

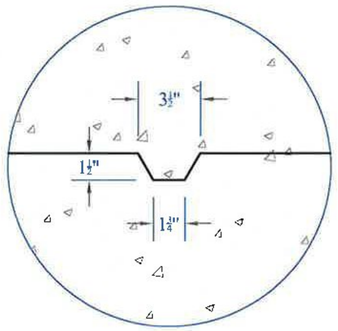
INSTALLER: J.A. McDonald, Inc. PO Box 132 Lyndon Center, VT 05850

FABRICATOR: 193 INDUSTRIAL AVE. WILLISTON, VT 05495 Ph: (802) 658-0201

SD Ireland PRECAST

04/08/15 | AB1_PLAN | 2_OF_25

Abutment Stem Keyway Detail



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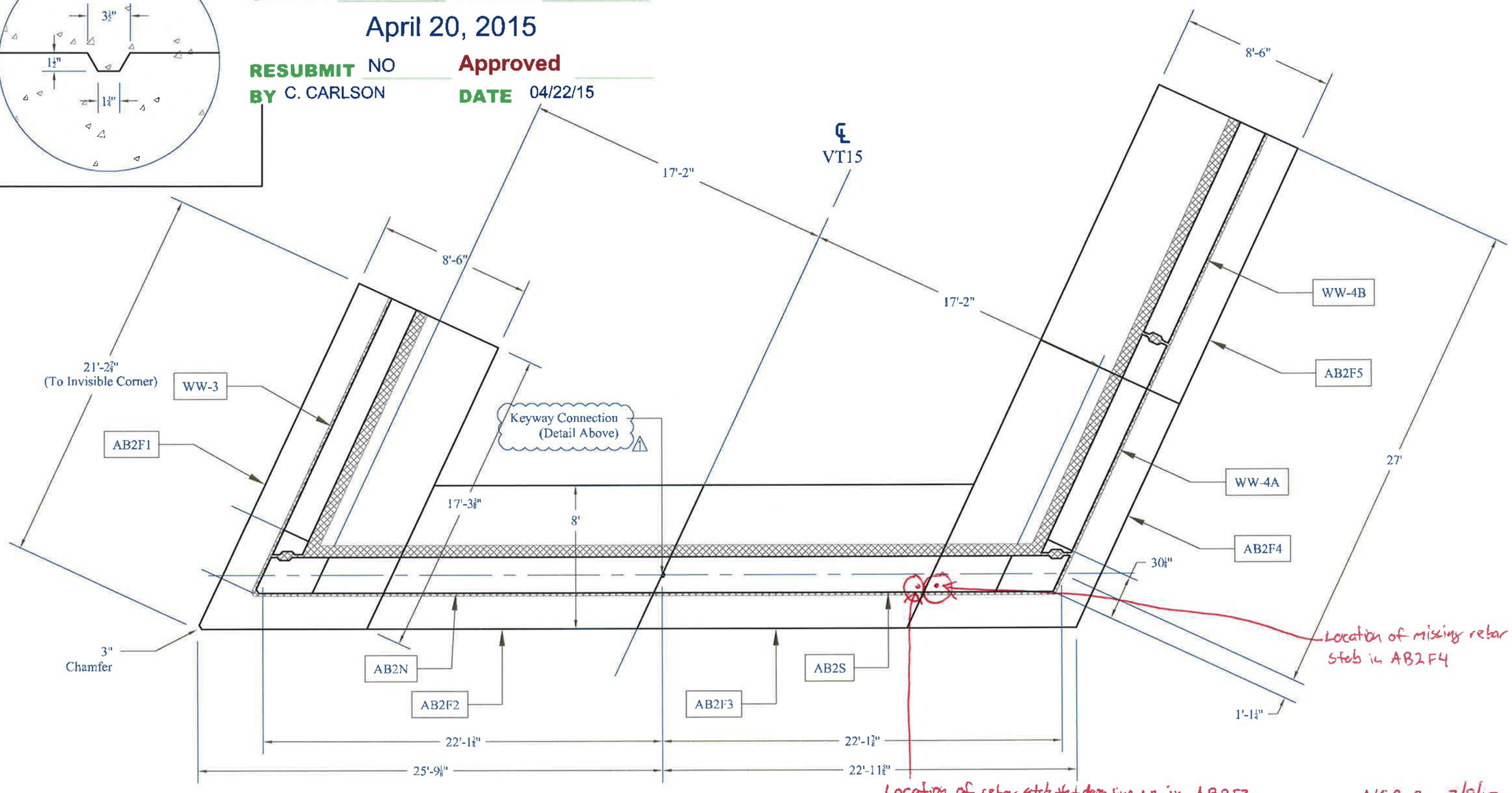
CK'D BY CLB **OK'D BY** FDB

April 20, 2015

RESUBMIT NO **Approved**

BY C. CARLSON **DATE** 04/22/15

Abutment 2: Plan View



NCR 2 7/8/15

CONTRACTORS VTSPE:		Rev.	Date	By	Description
		1	04/16/15	IBA	Changes per State Review

PRECAST CONCRETE ABUTMENT SHOP DRAWINGS (SDI JOB #15801)

SUPERVISOR: E. Barendse
DETAILER: I. ADAMS
CHECKER: E. Barendse
ENGINEER: VTAOT

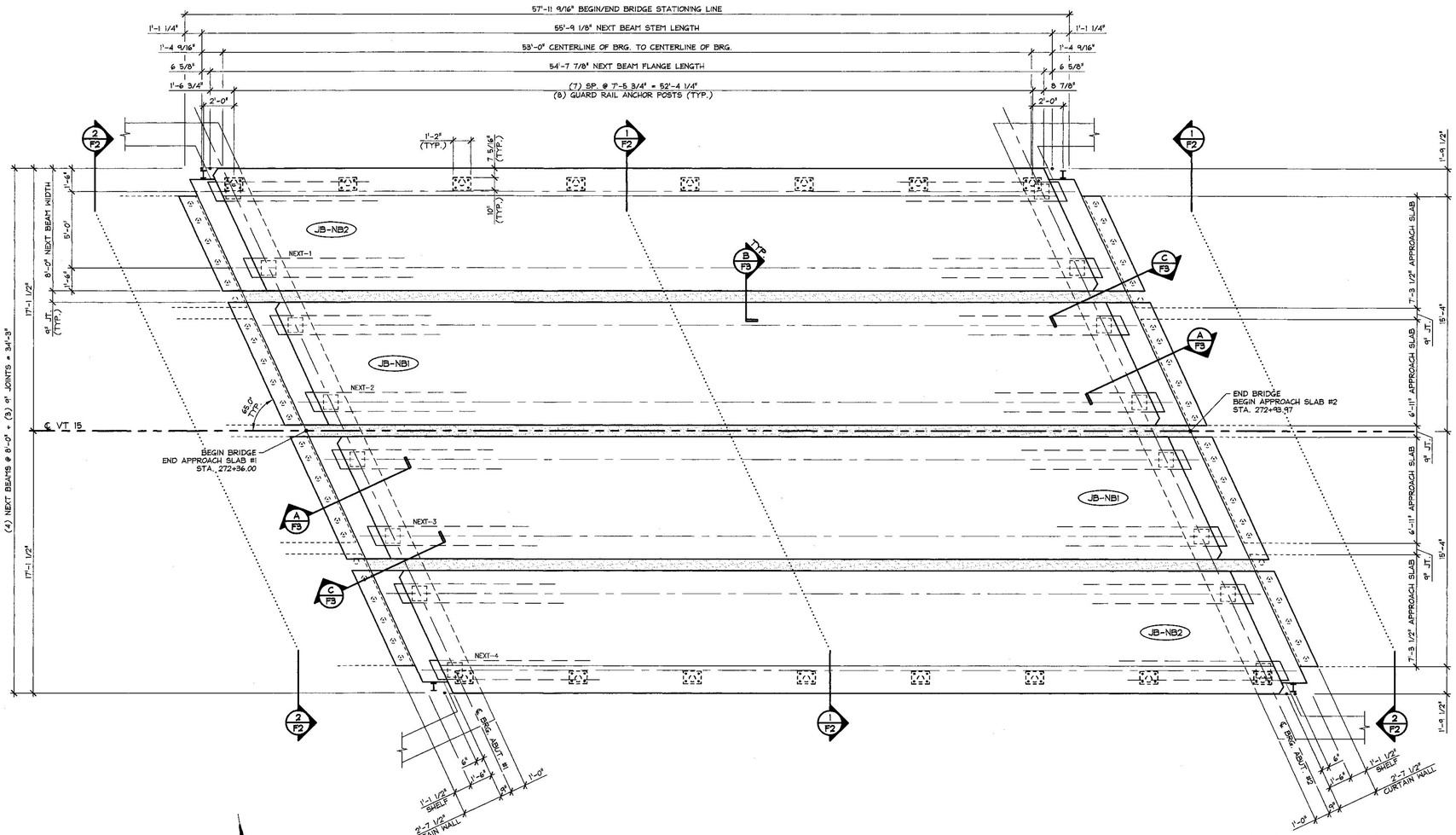
PROJECT NAME: Walden BRF 030-3(5)
PROJECT #: 030-3(5)
LOCATION: Walden, VT

INSTALLER: J.A. McDonald, Inc. PO Box 132 Lyndon Center, VT 05850

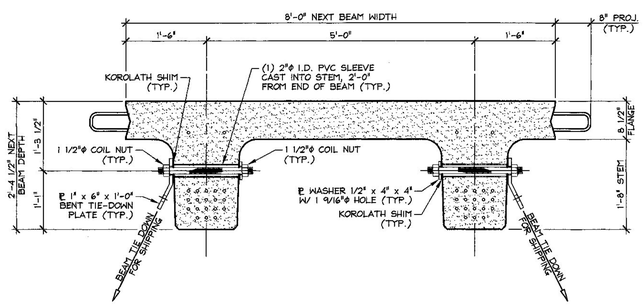
FABRICATOR: 193 INDUSTRIAL AVE. WILLISTON, VT 05495 Ph: (802) 658-0201

SD Ireland PRECAST

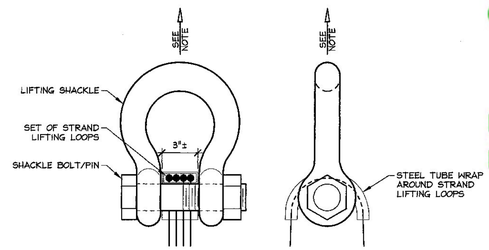
04/08/15 | AB2_PLAN | 4_OF_25



1 F1 PRESTRESSED NEXT BEAM LAYOUT (WITH CURTAIN WALLS)
1/4" = 1'-0"



MODIFIED NEXT BEAM 28D HOLD-DOWN DETAIL FOR SHIPPING
3/4" = 1'-0"



NOTE: BEAMS SHALL BE HANDLED AND ERECTED USING THE LIFTING LOOPS ONLY. RIGGING SHALL BE CONFIGURED SUCH THAT EQUAL AND VERTICAL FORCES ARE APPLIED TO EACH SET OF LIFTING LOOPS AT EACH END OF THE BEAM. SHACKLE BOLT/PIN SHALL BE PLACED UNDER LIFT LOOPS AS SHOWN. DESIGN AND CONFIGURATION OF RIGGING BY PURCHASER.

LIFTING SHACKLE DETAILS
N.T.S.

NEXT BEAM GENERAL NOTES

1. MIN. CONCRETE STRENGTH AT 28 DAYS SHALL BE 10,000 PSI.
2. MIN. CONCRETE STRENGTH AT STRESS TRANSFER SHALL BE 8,000 PSI.
3. REINFORCING STEEL SHALL BE GR-60, ASTM A-615 (AASHTO M31) LEVEL II (DUAL COATED).
4. PRESTRESSING STRANDS SHALL CONFORM TO ASTM A-416 (AASHTO M203) AND SHALL CONSIST OF 0.601"ϕ x 270 KSI 7-WIRE LOW RELAXATION STRANDS.
5. PRESTRESSING STRANDS SHALL EACH BE PULLED TO HAVE A NET TENSION OF 44.0 K AFTER ACCOUNTING FOR CHUCK SLIPPAGE. TENSION SHALL BE VERIFIED BY MEASURING STRAND ELONGATION. (SEE EXAMPLE ELONGATION CALCULATION AND TENSIONING PROCEDURE, THIS SHEET.)
6. ENDS OF PRESTRESSING STRANDS SHALL BE CUT FLUSH WITH END OF NEXT BEAM STEMS (UNLESS NOTED OTHERWISE) AND EPOXY PAINTED.
7. ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4" (UNLESS NOTED OTHERWISE).
8. THE TOP OF BEAMS SHALL RECEIVE A SMOOTH SCREED FINISH (UNLESS NOTED OTHERWISE).
9. SHEAR KEY SURFACES SHALL BE SAND BLASTED CLEAN.
10. BEAMS SHALL BE HANDLED AND ERECTED USING THE LIFTING LOOPS ONLY. RIGGING SHALL BE CONFIGURED SUCH THAT EQUAL AND VERTICAL FORCES ARE APPLIED TO EACH OF THE TWO LIFTING LOOPS AT EACH END OF THE BEAM. **THE PINS OF THE SHACKLES SHALL BE PLACED THROUGH THE LIFTING LOOPS. SEE DETAIL, THIS SHEET.** BEAMS SHALL BE STORED AND TRANSPORTED WITH TIMBER SUPPORTS WITHIN 2'-0" OF THE BEAM ENDS, UNLESS APPROVED BY J.P. CARRARA & SONS, INC.
11. MATERIAL SPECIFICATION AND MIX DESIGN SHALL CONFORM TO VERMONT SPEC. 501.02 AND 501.05 RESPECTIVELY.
    DESIGN MIX: J.P.C. BRIDGE MIX #4801M
12. QUALITY CONTROL PROCEDURES ARE IN ACCORDANCE WITH PCI REQUIREMENTS. J.P. CARRARA & SONS, INC. IS A PCI CERTIFIED PLANT.
13. CURING METHOD: AS SOON AS THE TOP OF BEAM IS FINISHED, A COVER OF INSULATED POLY. THE DESIRED CURING TEMPERATURE RANGE SHALL NOT DROP BELOW 70°F. THE TEMPERATURE SHALL BE RECORDED BY AUTOMATIC SENSOR INSTRUMENTS ON GRAPH CHARTS, SPACED NOT MORE THAN 100' APART AND WILL CONTINUE UNTIL RELEASE STRENGTH IS ACHIEVED. EACH CHART SHALL BE MARKED WITH THE CASTING DATED AND LOCATION OF THE RECORDER. IF NECESSARY TO MAINTAIN CASTING BED TEMPERATURE PRIOR TO CONCRETE PLACEMENT OR TO ACCELERATE EARLY AGE STRENGTH GAIN, EXTERNAL RADIANT HEAT MAY BE EMPLOYED VIA HOT WATER DUCTS BENEATH AND WITHIN THE PERIPHERY OF THE CASTING BED. MAXIMUM CURING TEMPERATURE SHALL NOT EXCEED PCI SPECIFIED LIMITS.
14. OWNER SHALL PROVIDE APPROPRIATE WATERPROOFING TO GROUTED AND/OR EPOXIED SHEAR KEYS. J.P. CARRARA & SONS, INC. SHALL NOT BE HELD LIABLE FOR PROBLEMS ASSOCIATED WITH MOISTURE INFILTRATING GROUTED AND/OR EPOXIED SHEAR KEYS.
15. MANUFACTURING TOLERANCES SHALL COMPLY WITH PCI MNL-116. SINCE PRESTRESSED PRODUCT CAMBER IS A RESULT OF REQUIRED DESIGN LOADS AND SPAN LENGTH, CAMBER TOLERANCES SHALL NOT APPLY.

EXAMPLE PRESTRESSING STRAND ELONGATION CALC. AND TENSIONING

(NOT TO BE USED FOR CONSTRUCTION)

SIZE & GRADE: 0.60"ϕ x 270 KSI
AREA: 0.217 IN^2
TENSION: 44,000 LB. EACH STRAND
GRIP-TO-GRIP: 252'-0" = 252.00'
Es = 28,600,000 PSI (ASSUMED FOR THESE CALCULATIONS; VALUE TO BE OBTAINED FOR STRAND SPOOL ACTUALLY USED)

EXAMPLE:

$$\Delta = \frac{PL}{AE} = \frac{(44{,}000 - 3{,}000) \times 252.00 \times 12}{0.217 \times 28{,}600{,}000} = 19.977"$$

THEREFORE: (TOLERANCES ± 5%)
Δ UPPER LIMIT = 1.05 x 19.977" = 20.98" = 21"
Δ LOWER LIMIT = 0.95 x 19.977" = 18.98" = 19"

EXTRA FORCE REQUIRED TO COMPENSATE FOR 1/2" CHUCK SLIPPAGE:

$$\Delta P = \frac{0.5 \times 41{,}000}{19.977} = 1{,}026 \text{ LBS.}$$

TOTAL TENSIONING FORCE = 44,000 + 1,026 = 45,026 LBS.

ADDITIONALLY, INCREASED ELONGATION AND THE CORRESPONDING FORCE DUE TO FORM SHORTENING SHALL BE ACCOUNTED FOR IN THE CALCULATIONS USED FOR CONSTRUCTION PER PROVISION PCI MNL-116 5.3.11.3.

STRAND TENSIONING PROCEDURE:

1. PULL EACH STRAND INITIALLY TO 3,000# LBS. AND MARK STRAND.
2. THEN PULL EACH STRAND TO A TOTAL TENSION OF 45,026# LBS. AND MEASURE ELONGATION AFTER SEATING. IT MUST BE BETWEEN 19"± AND 21"±.
   # NOTE: FORCES READ ON STRESSING JACK GAUGES MUST BE MADE TO CORRESPOND TO ABOVE VALUES BASED ON CALIBRATION DATA FOR SPECIFIC JACK USED.
3. STRANDS IN BOTTOM TWO ROWS SHALL BE RE-PULLED TO VERIFY SHORTENING EFFECT OF SELF STRESSING BED. RE-PULL FORCE SHALL NOT INCLUDE OVER-PULL FOR SHORTENING.

DESIGN LIVE LOAD: HL-93

Vermont Agency of Transportation
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Walden Next Beams Rev1_Approved 4.15.15.pdf
CK'D BY CLB OK'D BY HIS
April 13, 2015
RESUBMIT NO Approved
BY C. CARLSON DATE 04/15/15
⚠ 4-13-15 REVISED PER V.A.T. COMMENTS

APPROVAL STAMP:

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

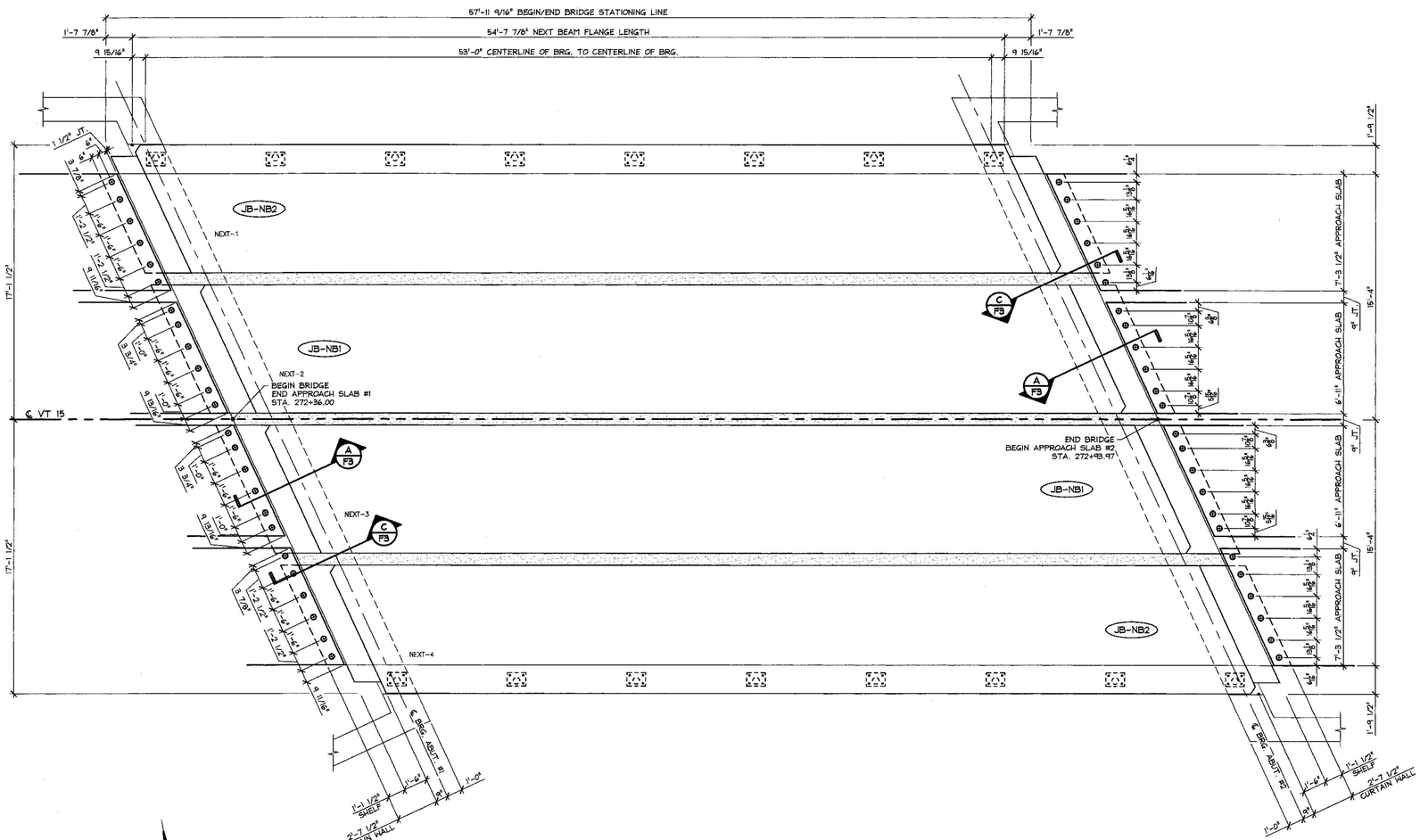
J.A. McDONALD, INC.
CONTRACTOR
LYNDON CENTER, VERMONT

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF CALEDONIA
DATE: FEB. 26, 2015
SCALE: NOTED

TOWN OF WALDEN
VT ROUTE NO. 15 (MINOR ARTERIAL) OVER JOE'S BROOK
BRIDGE NO.: 83 PROJECT NO.: BRF 030-3(5)
CHKD: P.C. DFTM: B.L.
JOB NO: 23460-015

PRESTRESSED NEXT BEAM & CURTAIN WALL LAYOUT
DWG. NO: F1

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1 / F1.1 APPROACH SLAB ANCHOR DOWEL LOCATION PLAN

1/4" = 1'-0"

Vermont Agency of Transportation

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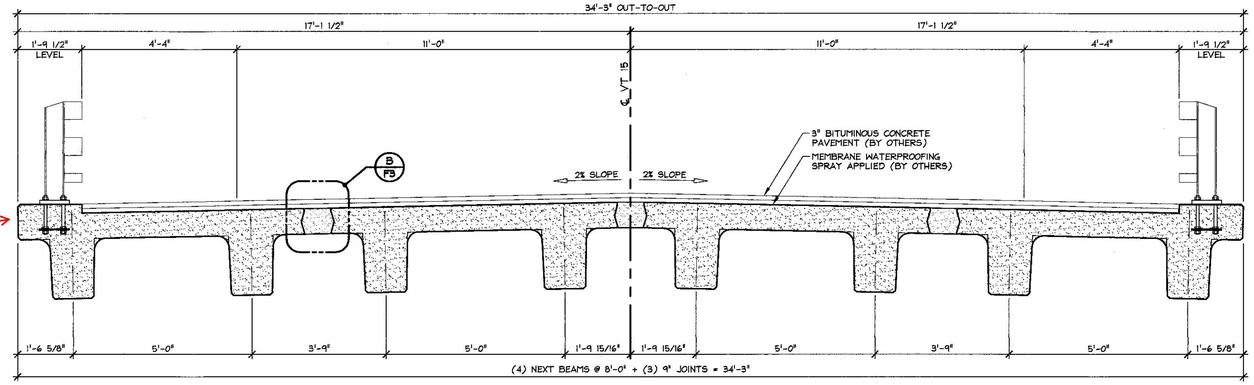
CHKD: P.C. DFTM: B.L.

JOB NO: 23460-015

APPROACH SLAB ANCHOR DOWEL LOCATION PLAN

DWG. NO: F1.1

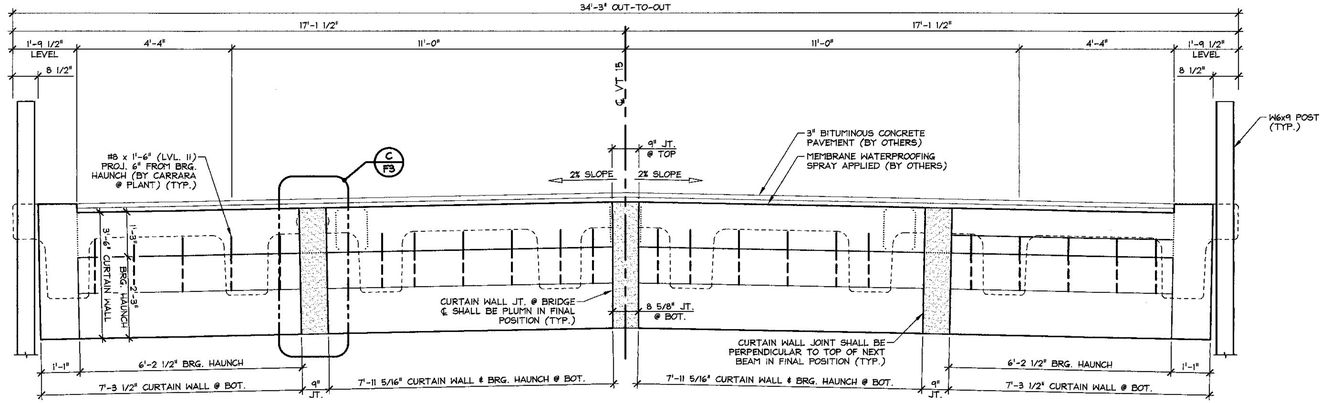
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Water repellent, silane to be applied to exposed surfaces. (By Others)

1/F2 TRANSVERSE SECTION

1/2" = 1'-0"



2/F2 CURTAIN WALL ELEVATION

1/2" = 1'-0"

Vermont Agency of Transportation

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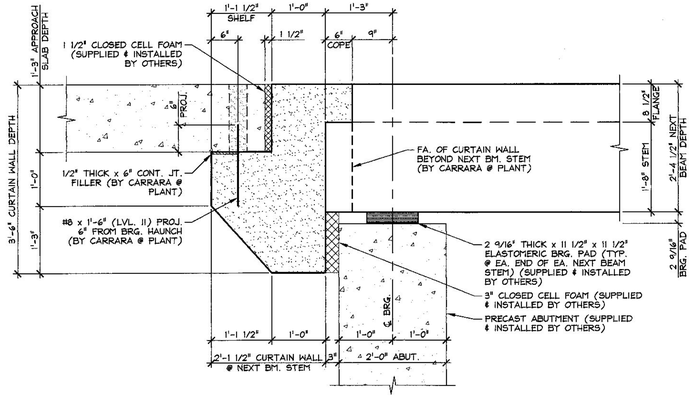
CHKD: P.C. DFTM: B.L.

JOB NO: 23460-015

TRANSVERSE SECTION
℄ CURTAIN WALL ELEVATION

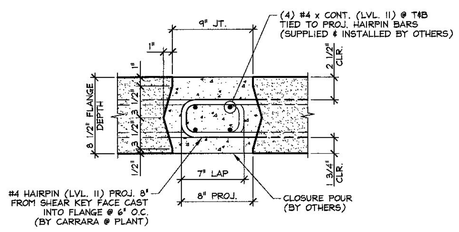
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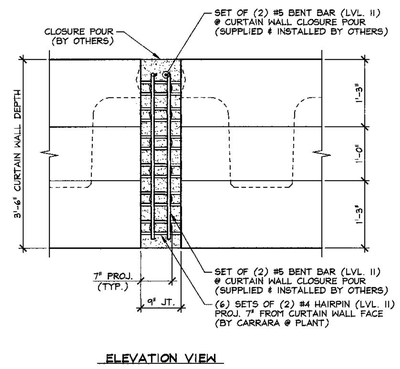
A / F3 NEXT BEAM BEARING SECTION

3/4" = 1'-0"

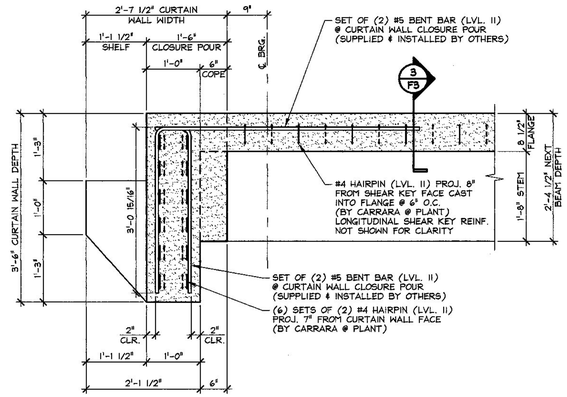


B / F3 NEXT BEAM CLOSURE POUR

1 1/2" = 1'-0"



ELEVATION VIEW



SECTION VIEW

C / F3 CURTAIN WALL CLOSURE POUR DETAILS

3/4" = 1'-0"

Vermont Agency of Transportation

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TOWN OF WALDEN
VT ROUTE NO. 15 (MINOR ARTERIAL) OVER JOE'S BROOK
BRIDGE NO.: 83 PROJECT NO.: BRF 030-3(5)

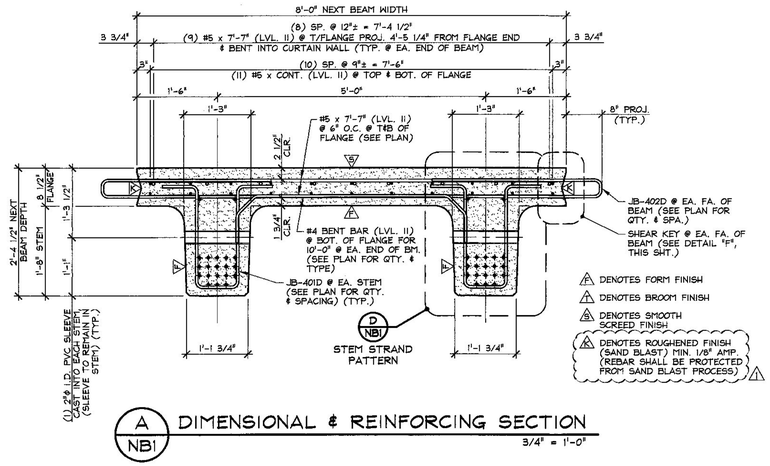
CHKD: P.C. DFTM: B.L.
JOB NO: 23460-015

PRESTRESSED NEXT BEAM DETAILS & CURTAIN WALL DETAILS

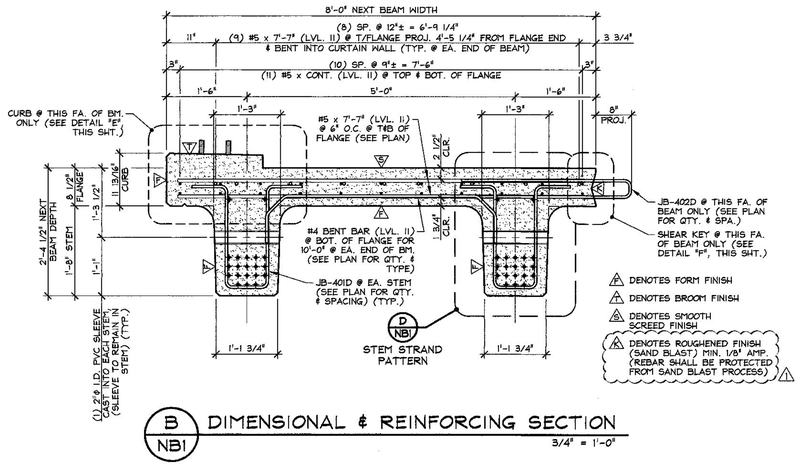
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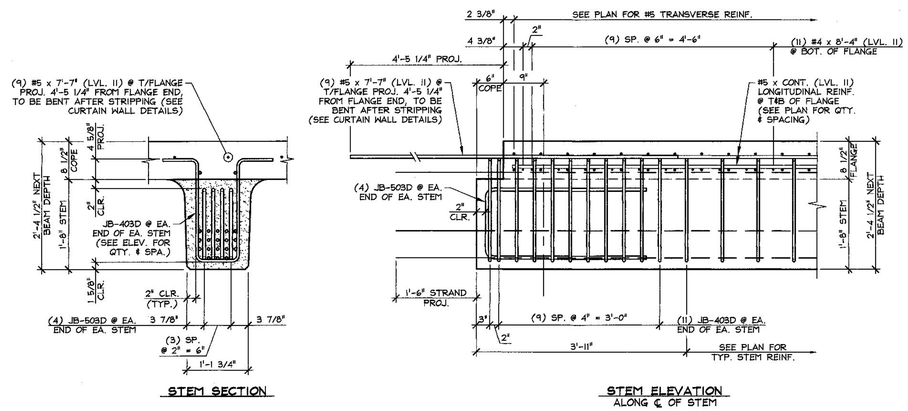
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BY C. CARLSON DATE 04/15/15



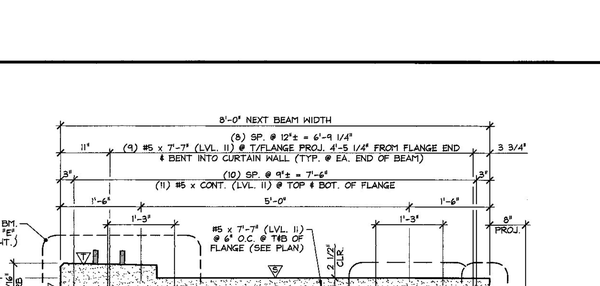
A NB1 DIMENSIONAL & REINFORCING SECTION
3/4" = 1'-0"



B NB1 DIMENSIONAL & REINFORCING SECTION
3/4" = 1'-0"



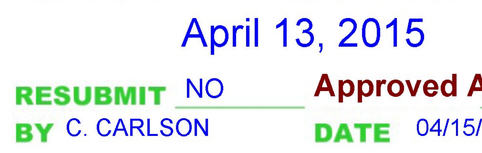
C NB1 END BLOCK STEM REINFORCING DETAILS
3/4" = 1'-0"



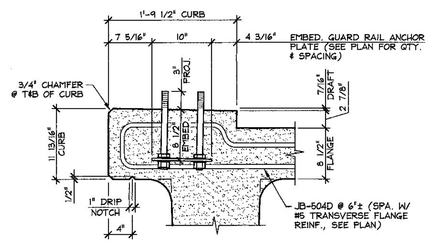
D NB1 STEM STRAND PATTERN
1" = 1'-0"

PRESTRESSING NOTATIONS

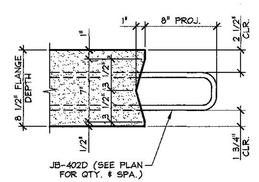
- ✦ DENOTES STRAIGHT STRANDS TO BE CUT FLUSH WITH EA. END OF EA. STEM
- ▲ DENOTES STRAIGHT STRANDS TO BE DEBONDED 6" FROM EA. END OF EA. STEM
- ⊕ DENOTES STRAIGHT STRANDS TO BE DEBONDED 4'-0" FROM EA. END OF EA. STEM
- ◈ DENOTES STRAIGHT STRANDS TO BE DEBONDED 9'-0" FROM EA. END OF EA. STEM
- ✱ DENOTES STRAIGHT STRANDS TO BE DEBONDED 12'-0" FROM EA. END OF EA. STEM
- ⊛ DENOTES STRAIGHT STRANDS TO BE PROJECT 1'-6" FROM EA. END OF EA. STEM



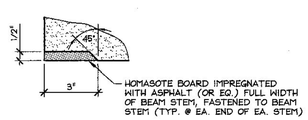
DETENSIONING SCHEDULE
N.T.S.



E NB1 CURB & GUARD RAIL ANCHOR PLATE DETAIL
1" = 1'-0"



F NB1 SHEAR KEY DETAIL
1 1/2" = 1'-0"



G NB1 HOMASOTE DETAIL
3" = 1'-0"

⚠ 4-13-15 REVISED PER V.A.T. COMMENTS

APPROVAL STAMP:

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Precast & Prestress Manufacturer
2464 OSE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

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DATE: FEB. 26, 2015
SCALE: NOTED

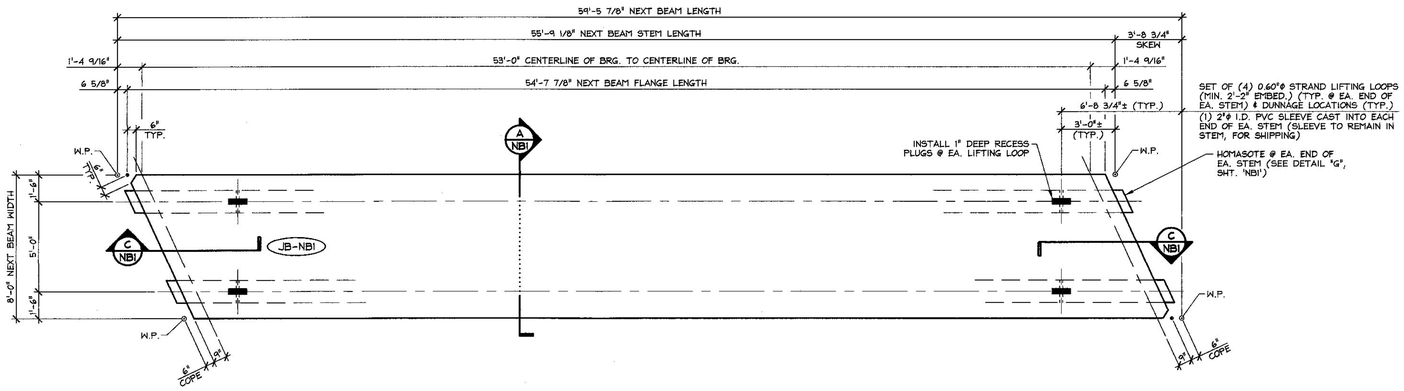
TOWN OF WALDEN
VT ROUTE NO. 15 (MINOR ARTERIAL) OVER JOE'S BROOK
BRIDGE NO.: 83 PROJECT NO.: BRF 030-3(5)

CHKD: P.C. DFTM: B.L.
JOB NO: 23460-015

PRESTRESSED NEXT BEAM DETAILS

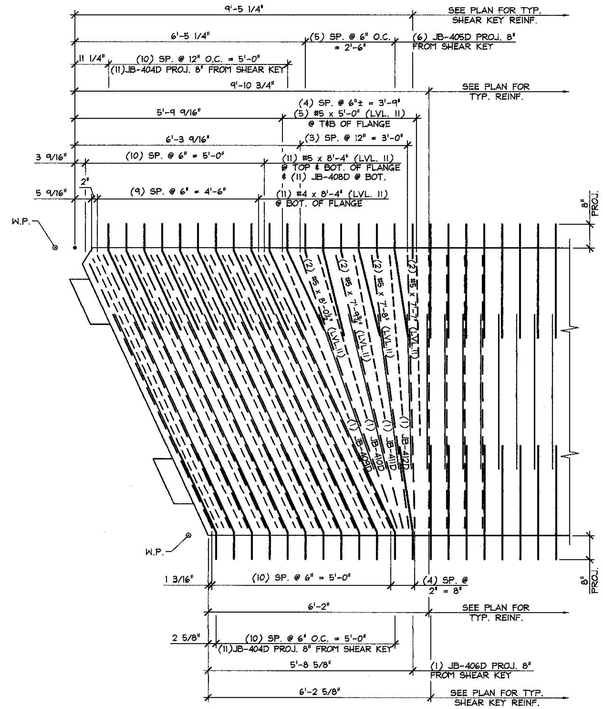
DWG. NO: NB1

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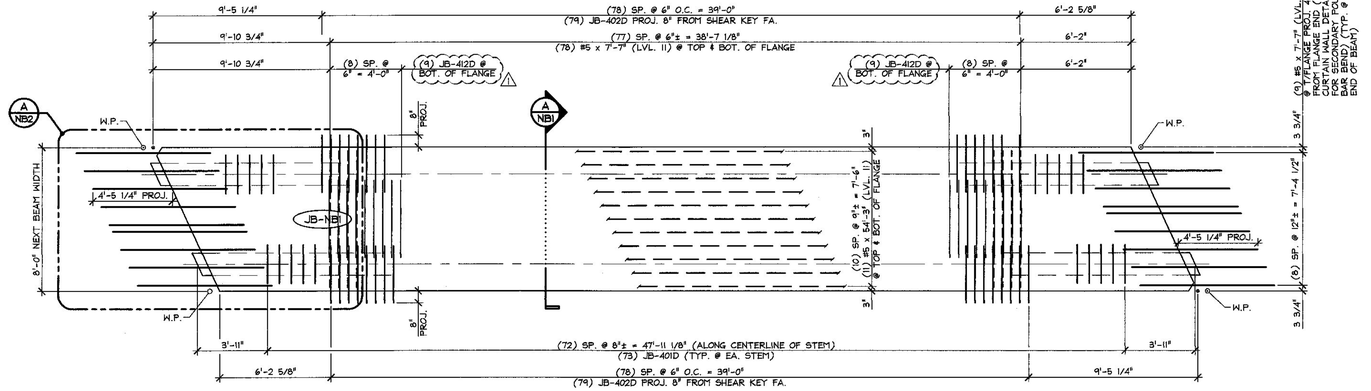
1 NB2 DIMENSIONAL PLAN VIEW IN FORM

1/4" = 1'-0"



A NB2 FLANGE END BLOCK REINF. PLAN

LONGITUDINAL REINF. NOT SHOWN FOR CLARITY 1/2" = 1'-0"



2 NB2 REINFORCING PLAN VIEW IN FORM

1/4" = 1'-0"

MARK: JB-NB1	QTY.: 2	WT.: 40.05 T	VOL.: 19.78 cy

MATERIAL LIST / NEXT BEAM

ITEM	MARK	DESCRIPTION	QTY.	ITEM	MARK	DESCRIPTION	QTY.
1	JB-401D	#4 BENT BAR (LEVEL II, DUAL COATED)	146	16	JB-503D	#5 BENT BAR (LEVEL II, DUAL COATED)	16
2	JB-402D	#4 BENT BAR (LEVEL II, DUAL COATED)	158	17		#5 x 54'-3" (LEVEL II, DUAL COATED)	22
3	JB-403D	#4 BENT BAR (LEVEL II, DUAL COATED)	44	18		#5 x 7'-7" (LEVEL II, DUAL COATED)	178
4	JB-404D	#4 BENT BAR (LEVEL II, DUAL COATED)	44	19		#5 x 8'-4" (LEVEL II, DUAL COATED)	44
5	JB-405D	#4 BENT BAR (LEVEL II, DUAL COATED)	12	20		#5 x 8'-0 1/2" (LEVEL II, DUAL COATED)	4
6	JB-406D	#4 BENT BAR (LEVEL II, DUAL COATED)	2	21		#5 x 7'-9 3/4" (LEVEL II, DUAL COATED)	4
7	JB-408D	#4 BENT BAR (LEVEL II, DUAL COATED)	22	22		#5 x 7'-8" (LEVEL II, DUAL COATED)	4
8	JB-409D	#4 BENT BAR (LEVEL II, DUAL COATED)	2	23		#5 x 5'-0" (LEVEL II, DUAL COATED)	10
9	JB-410D	#4 BENT BAR (LEVEL II, DUAL COATED)	2	24			
10	JB-411D	#4 BENT BAR (LEVEL II, DUAL COATED)	2	25		SET OF (4) 0.60"ϕ STRAND LIFTING LOOPS	4
11	JB-412D	#4 BENT BAR (LEVEL II, DUAL COATED)	20	26			
12		#4 x 8'-4" (LEVEL II, DUAL COATED)	22	27			
13				28			
14				29			
15				30			

Vermont Agency of Transportation

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Walden Next Beams Rev1_Approved 4.15.15.pdf

CK'D BY CLB OK'D BY HIS

April 13, 2015

RESUBMIT NO Approved

BY C. CARLSON DATE 04/15/15

⚠ 4-13-15 REVISED PER V.A.T. COMMENTS

APPROVAL STAMP:

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

J.A. McDONALD, INC.
CONTRACTOR
LYNDON CENTER, VERMONT

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF CALEDONIA

DATE: FEB. 26, 2015
SCALE: NOTED

TOWN OF WALDEN
VT ROUTE NO. 15 (MINOR ARTERIAL) OVER JOE'S BROOK
BRIDGE NO.: 83 PROJECT NO.: BRF 030-3(5)

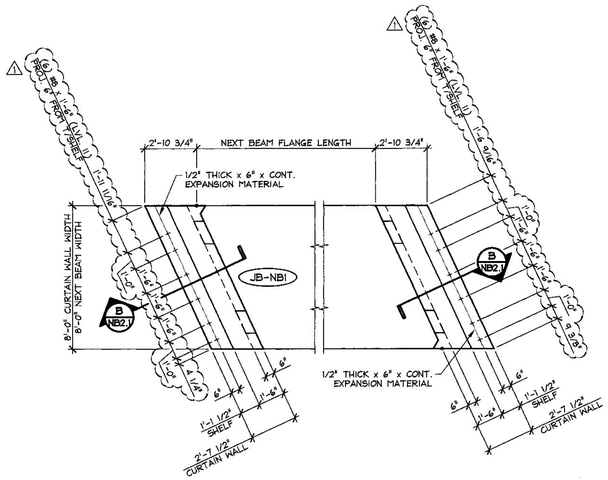
CHKD: P.C. DFTM: B.L.
JOB NO: 23460-015

PRESTRESSED NEXT BEAM DETAILS

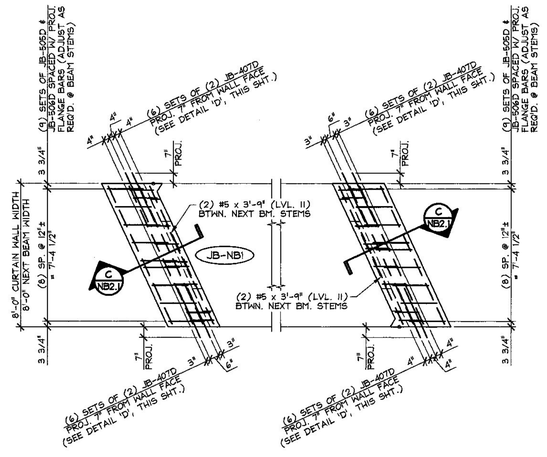
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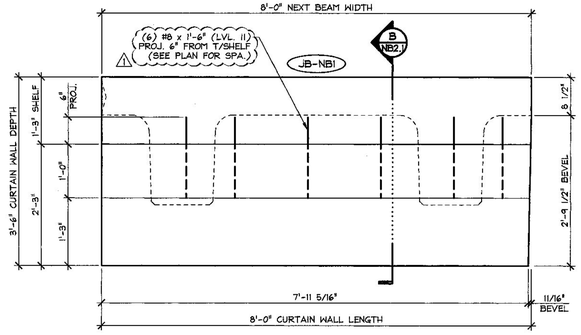
Vermont Agency of Transportation
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Walden Next Beams Rev1_Approved 4.15.15.pdf
CK'D BY CLB OK'D BY HIS
April 13, 2015
RESUBMIT NO Approved
BY C. CARLSON DATE 04/15/15



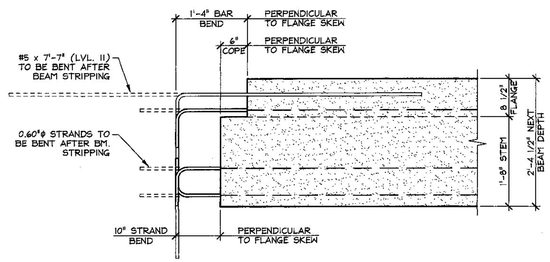
1 NB2.1 CURTAIN WALL DIMENSIONAL PLAN
1/4" = 1'-0"



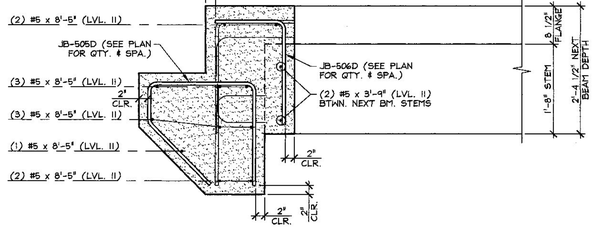
2 NB2.1 CURTAIN WALL REINFORCING PLAN
1/4" = 1'-0"



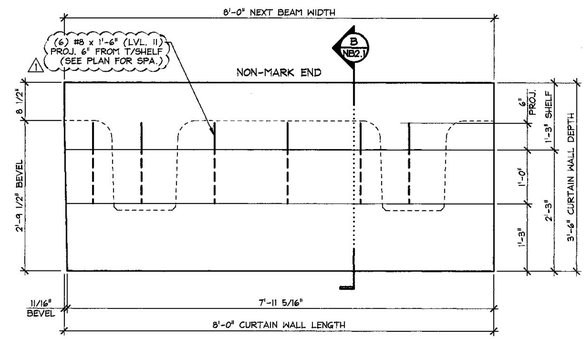
3 NB2.1 CURTAIN WALL ELEVATION (MARK END)
COMPOSITE REINFORCING NOT SHOWN FOR CLARITY
3/4" = 1'-0"



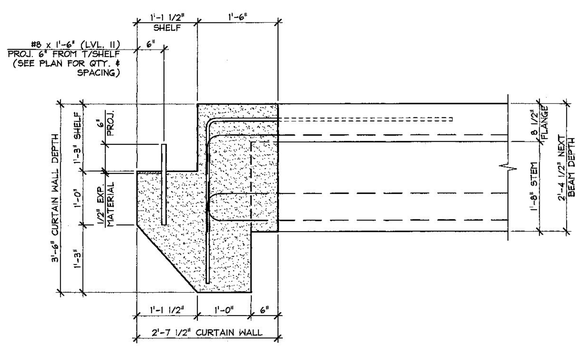
A NB2.1 PROJECTING STRAND & BAR BEND DETAIL
3/4" = 1'-0"



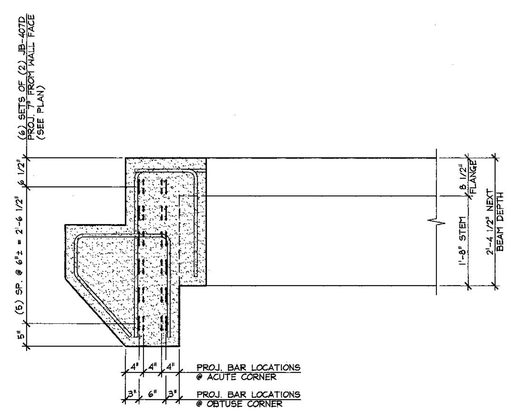
C NB2.1 CURTAIN WALL REINFORCING SECTION
3/4" = 1'-0"



4 NB2.1 CURTAIN WALL ELEVATION (NON-MARK END)
COMPOSITE REINFORCING NOT SHOWN FOR CLARITY
3/4" = 1'-0"



B NB2.1 CURTAIN WALL DIMENSIONAL SECTION
3/4" = 1'-0"



D NB2.1 CURTAIN WALL PROJECTING BAR DETAIL
3/4" = 1'-0"

19.78 cy = NEXT BEAM
2.13 cy = CURTAIN WALL (MARK END)
2.13 cy = CURTAIN WALL (NON-MARK END)
24.04 cy = TOTAL BEAM VOL.

40.05 T = NEXT BEAM
4.31 T = CURTAIN WALL (MARK END)
4.31 T = CURTAIN WALL (NON-MARK END)
48.67 T = TOTAL BEAM WT.

MARK: JB-NB1 QTY.: 2

MATERIAL LIST / CURTAIN WALL

ITEM	MARK	DESCRIPTION	QTY./CURTAIN WALL MARK END	QTY./CURTAIN WALL NON-MARK END
1	JB-407D	#4 HAIRPIN (LEVEL 11, DUAL COATED)	24	24
2				
3	JB-505D	#5 BENT BAR (LEVEL 11, DUAL COATED)	9	9
4	JB-506D	#5 BENT BAR (LEVEL 11, DUAL COATED)	9	9
5		#5 x 8'-5" (LEVEL 11, DUAL COATED)	11	11
6		#5 x 3'-9" (LEVEL 11, DUAL COATED)	2	2
7				
8		#8 x 1'-6" (LEVEL 11, DUAL COATED)	(6)	(6)
9				
10				

⚠ 4-13-15 REVISED PER V.A.T. COMMENTS

APPROVAL STAMP:

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
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J.A. McDONALD, INC.
CONTRACTOR
LYNDON CENTER, VERMONT

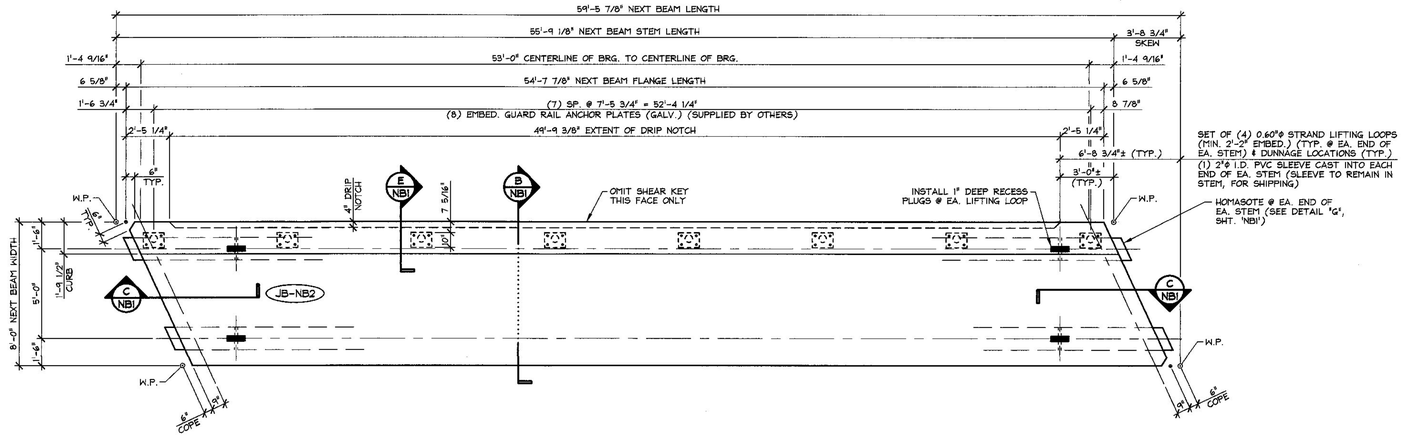
STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF CALEDONIA

TOWN OF WALDEN
VT ROUTE NO. 15 (MINOR ARTERIAL) OVER JOE'S BROOK
BRIDGE NO.: 83 PROJECT NO.: BRF 030-3(5)

PRECAST CURTAIN WALL DETAILS

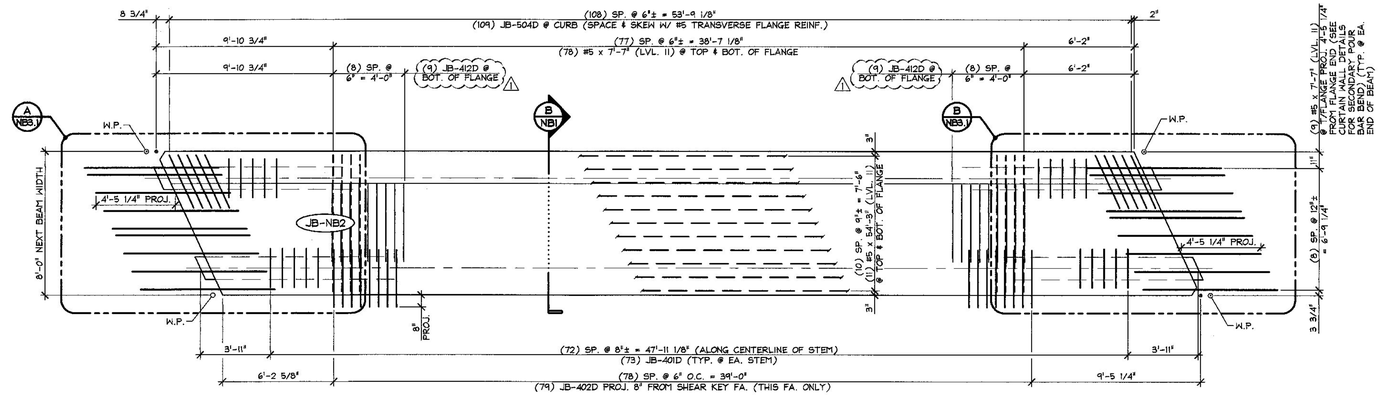
DATE: FEB. 26, 2015
SCALE: NOTED
CHKD: P.C. DFTM: B.L.
JOB NO: 23460-015
DWG. NO: NB2.1

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1 NB3 DIMENSIONAL PLAN VIEW IN FORM

1/4" = 1'-0"



2 NB3 REINFORCING PLAN VIEW IN FORM

1/4" = 1'-0"

MARK: JB-NB2	QTY.: 2	WT.: 41.82 T	VOL.: 20.65 cy

MATERIAL LIST / NEXT BEAM

ITEM	MARK	DESCRIPTION	QTY.
1	JB-401D	#4 BENT BAR (LEVEL II, DUAL COATED)	146
2	JB-402D	#4 BENT BAR (LEVEL II, DUAL COATED)	79
3	JB-403D	#4 BENT BAR (LEVEL II, DUAL COATED)	44
4	JB-404D	#4 BENT BAR (LEVEL II, DUAL COATED)	22
5	JB-405D	#4 BENT BAR (LEVEL II, DUAL COATED)	6
6	JB-406D	#4 BENT BAR (LEVEL II, DUAL COATED)	1
7	JB-408D	#4 BENT BAR (LEVEL II, DUAL COATED)	22
8	JB-409D	#4 BENT BAR (LEVEL II, DUAL COATED)	2
9	JB-410D	#4 BENT BAR (LEVEL II, DUAL COATED)	2
10	JB-411D	#4 BENT BAR (LEVEL II, DUAL COATED)	2
11	JB-412D	#4 BENT BAR (LEVEL II, DUAL COATED)	20
12		#4 x 8'-4" (LEVEL II, DUAL COATED)	22
13			
14			
15			

ITEM	MARK	DESCRIPTION	QTY.
16	JB-503D	#5 BENT BAR (LEVEL II, DUAL COATED)	16
17	JB-504D	#5 BENT BAR (LEVEL II, DUAL COATED)	109
18		#5 x 54'-3" (LEVEL II, DUAL COATED)	22
19		#5 x 7'-7" (LEVEL II, DUAL COATED)	178
20		#5 x 8'-4" (LEVEL II, DUAL COATED)	44
21		#5 x 8'-0 1/2" (LEVEL II, DUAL COATED)	4
22		#5 x 7'-9 3/4" (LEVEL II, DUAL COATED)	4
23		#5 x 7'-8" (LEVEL II, DUAL COATED)	4
24		#5 x 5'-0" (LEVEL II, DUAL COATED)	10
25			
26		GUARD RAIL ANCHOR PLATE (GALV.) (SUPPLIED BY OTHERS)	8
27		SET OF (4) 0.60"ø STRAND LIFTING LOOPS	4
28			
29			

Vermont Agency of Transportation

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CK'D BY CLB OK'D BY HIS

April 13, 2015

RESUBMIT NO Approved

BY C. CARLSON DATE 04/15/15

⚠ 4-13-15 REVISED PER V.A.T. COMMENTS

APPROVAL STAMP:

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

J.A. McDONALD, INC.
CONTRACTOR
LYNDON CENTER, VERMONT

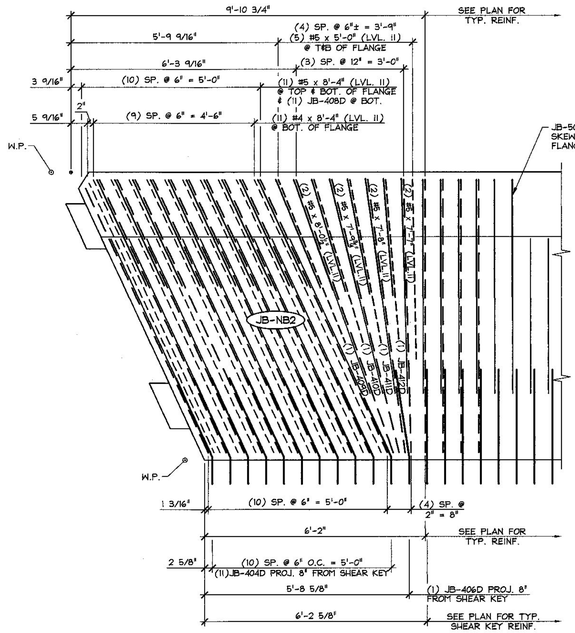
STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF CALEDONIA

TOWN OF WALDEN
VT ROUTE NO. 15 (MINOR ARTERIAL) OVER JOE'S BROOK
BRIDGE NO.: 83 PROJECT NO.: BRF 030-3(5)

PRESTRESSED NEXT BEAM DETAILS

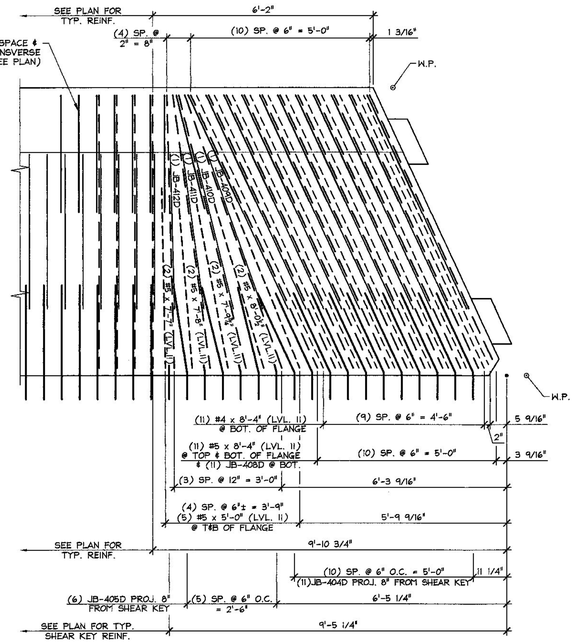
DATE: FEB. 26, 2015
SCALE: NOTED
CHKD: P.C. DFTM: B.L.
JOB NO: 23460-015
DWG. NO: NB3

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A NB3.1 FLANGE END BLOCK REINF. PLAN

LONGITUDINAL REINF. NOT SHOWN FOR CLARITY 1/2" = 1'-0"



B NB3.1 FLANGE END BLOCK REINF. PLAN

LONGITUDINAL REINF. NOT SHOWN FOR CLARITY 1/2" = 1'-0"

Vermont Agency of Transportation

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April 13, 2015

RESUBMIT NO Approved

BY C. CARLSON DATE 04/15/15

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STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF CALEDONIA

DATE: FEB. 26, 2015

SCALE: NOTED

TOWN OF WALDEN
VT ROUTE NO. 15 (MINOR ARTERIAL) OVER JOE'S BROOK
BRIDGE NO.: 83 PROJECT NO.: BRF 030-3(5)

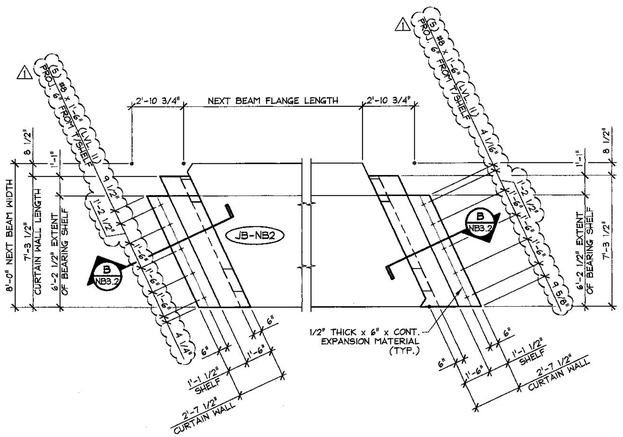
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JOB NO: 23460-015

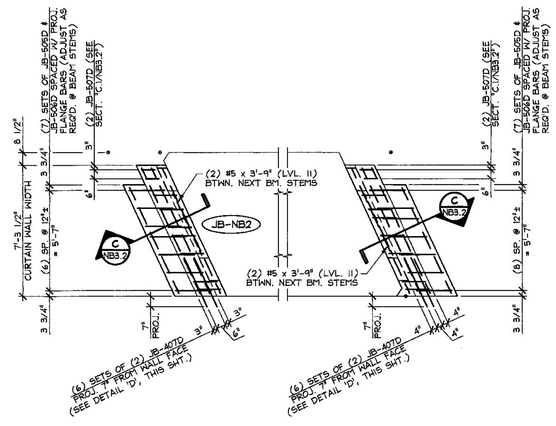
PRESTRESSED NEXT BEAM DETAILS

DWG. NO: NB3.1

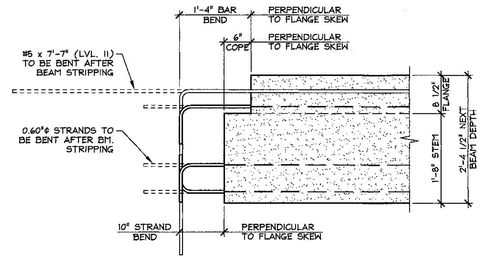
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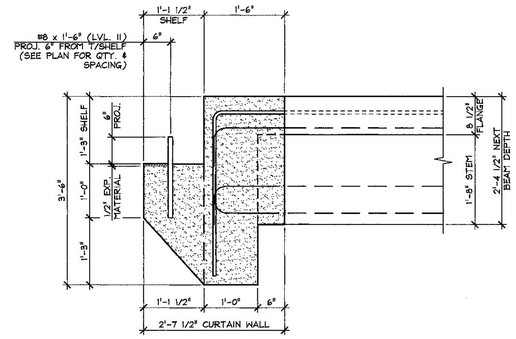
1 NB3.2 CURTAIN WALL DIMENSIONAL PLAN 1/4" = 1'-0"



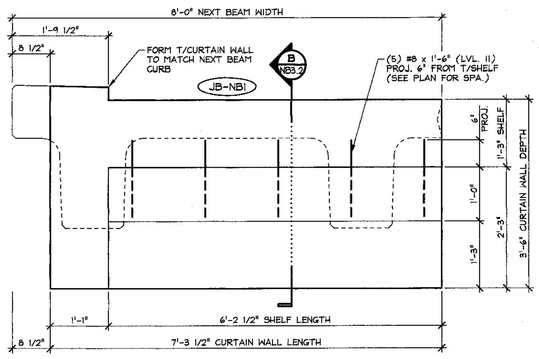
4 NB3.2 CURTAIN WALL REINFORCING PLAN 1/4" = 1'-0"



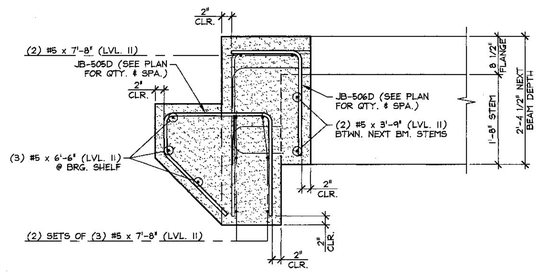
A NB3.2 PROJECTING STRAND & BAR BEND DETAIL 3/4" = 1'-0"



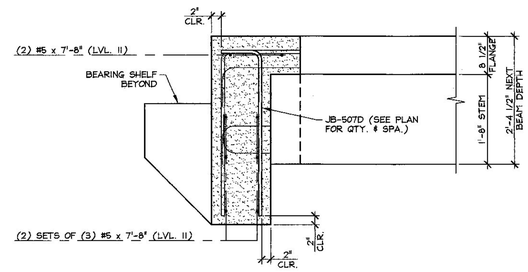
B NB3.2 CURTAIN WALL DIMENSIONAL SECTION 3/4" = 1'-0"



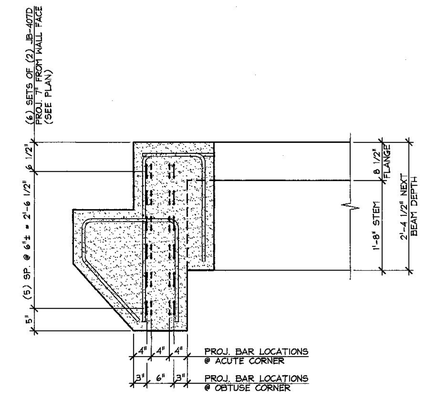
2 NB3.2 CURTAIN WALL ELEVATION (MARK END) COMPOSITE REINFORCING NOT SHOWN FOR CLARITY 3/4" = 1'-0"



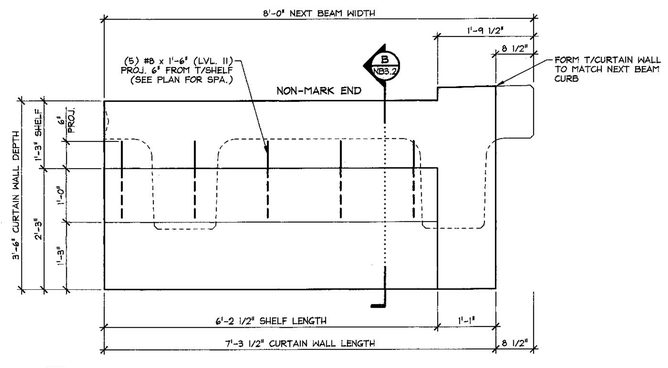
C NB3.2 CURTAIN WALL REINFORCING SECTION 3/4" = 1'-0"



C.1 NB3.2 CURTAIN WALL REINFORCING SECTION 3/4" = 1'-0"



D NB3.2 CURTAIN WALL PROJECTING BAR DETAIL 3/4" = 1'-0"



3 NB3.2 CURTAIN WALL ELEVATION (NON-MARK END) COMPOSITE REINFORCING NOT SHOWN FOR CLARITY 3/4" = 1'-0"

20.65 cy = NEXT BEAM
2.00 cy = CURTAIN WALL (MARK END)
2.00 cy = CURTAIN WALL (NON-MARK END)
24.65 cy = TOTAL BEAM VOL.

41.82 T = NEXT BEAM
4.04 T = CURTAIN WALL (MARK END)
4.04 T = CURTAIN WALL (NON-MARK END)
49.90 T = TOTAL BEAM WT.

MARK: JB-NB2 QTY.: 2

MATERIAL LIST / CURTAIN WALL

ITEM	MARK	DESCRIPTION	QTY./CURTAIN WALL	
			MARK END	NON-MARK END
1	JB-407D	#4 HAIRPIN (LEVEL II, DUAL COATED)	12	12
2				
3	JB-505D	#5 BENT BAR (LEVEL II, DUAL COATED)	7	7
4	JB-506D	#5 BENT BAR (LEVEL II, DUAL COATED)	7	7
5	JB-507D	#5 BENT BAR (LEVEL II, DUAL COATED)	2	2
6		#5 x 7'-8" (LEVEL II, DUAL COATED)	8	8
7		#5 x 3'-9" (LEVEL II, DUAL COATED)	2	2
8		#5 x 6'-6" (LEVEL II, DUAL COATED)	3	3
9				
10		#8 x 1'-6" (LEVEL II, DUAL COATED)	5	5

⚠ 4-13-15 REVISED PER V.A.T. COMMENTS

Vermont Agency of Transportation
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Walden Next Beams Rev1_Approved 4.15.15.pdf
CK'D BY CLB OK'D BY HIS
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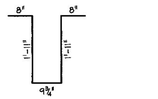
STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF CALEDONIA

TOWN OF WALDEN
VT ROUTE NO. 15 (MINOR ARTERIAL) OVER JOE'S BROOK
BRIDGE NO.: 83 PROJECT NO.: BRF 030-3(5)

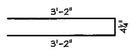
PRECAST CURTAIN WALL DETAILS

DATE: FEB. 26, 2015
SCALE: NOTED
CHK'D: P.C. DFT'M: B.L.
JOB NO: 23460-015
DWG. NO: NB3.2

F:\VT-Bridges\23460-15 Walden\23460-NB3-2.dwg, 4/13/2015 12:08:20 PM



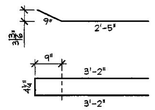
JB-401D
#4 BENT BAR
LEVEL II (DUAL COATED)
(584) REQ'D.



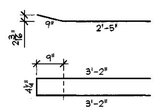
JB-402D
#4 BENT BAR
LEVEL II (DUAL COATED)
(474) REQ'D.



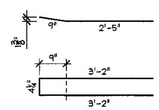
JB-403D
#4 BENT BAR
LEVEL II (DUAL COATED)
(176) REQ'D.



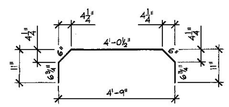
JB-404D
#4 BENT BAR
LEVEL II (DUAL COATED)
(132) REQ'D. ⚠1



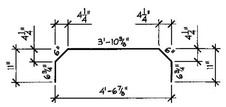
JB-405D
#4 BENT BAR
LEVEL II (DUAL COATED)
(56) REQ'D.



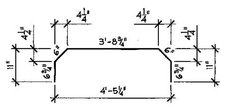
JB-406D
#4 BENT BAR
LEVEL II (DUAL COATED)
(6) REQ'D.



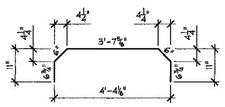
JB-408D
#4 BENT BAR
LEVEL II (DUAL COATED)
(88) REQ'D.



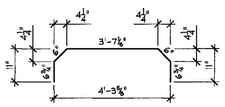
JB-409D
#4 BENT BAR
LEVEL II (DUAL COATED)
(8) REQ'D.



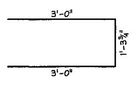
JB-410D
#4 BENT BAR
LEVEL II (DUAL COATED)
(8) REQ'D.



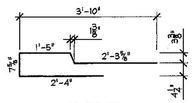
JB-411D
#4 BENT BAR
LEVEL II (DUAL COATED)
(8) REQ'D.



JB-412D
#4 BENT BAR
LEVEL II (DUAL COATED)
(60) REQ'D. ⚠1

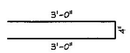


JB-503D
#5 BENT BAR
LEVEL II (DUAL COATED)
(64) REQ'D.

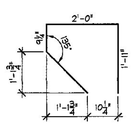


JB-504D
#5 BENT BAR
LEVEL II (DUAL COATED)
(216) REQ'D.

PRESTRESSED NEXT BEAMS



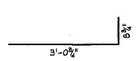
JB-407D
#4 HAIRPIN
LEVEL II (DUAL COATED)
(144) REQ'D.



JB-505D
#5 BENT BAR
LEVEL II (DUAL COATED)
(64) REQ'D.



JB-506D
#5 BENT BAR
LEVEL II (DUAL COATED)
(64) REQ'D.



JB-507D
#5 BENT BAR
LEVEL II (DUAL COATED)
(8) REQ'D.

PRECAST CURTAIN WALLS

MISCELLANEOUS MATERIALS

ITEM	MARK	QTY.	DESCRIPTION	REMARKS	
1					PRESTRESSED NEXT BEAMS
2		(89#)	#4 x 8'-4" (LEVEL II, DUAL COATED)	⚠1 (# DENOTES (1) ADDITIONAL BAR FOR TESTING)	
3					
4		88	#5 x 54'-3" (LEVEL II, DUAL COATED)		
5		712	#5 x 7'-7" (LEVEL II, DUAL COATED)		
6		176	#5 x 8'-4" (LEVEL II, DUAL COATED)		
7		16	#5 x 8'-0 1/2" (LEVEL II, DUAL COATED)		
8		16	#5 x 7'-9 3/4" (LEVEL II, DUAL COATED)		
9		16	#5 x 7'-8" (LEVEL II, DUAL COATED)		
10		(42#)	#5 x 5'-0" (LEVEL II, DUAL COATED)	⚠1 (# DENOTES (2) ADDITIONAL BARS FOR TESTING)	
11					
12		16	GUARD RAIL ANCHOR PLATE (GALV.)	SUPPLIED BY OTHERS	
13		16	SET OF (4) 0.60"ø STRAND LIFTING LOOPS		
14					
15					
16					PRECAST CURTAIN WALLS
17		32	#5 x 7'-8" (LEVEL II, DUAL COATED)		
18		44	#5 x 8'-5" (LEVEL II, DUAL COATED)		
19		16	#5 x 3'-9" (LEVEL II, DUAL COATED)		
20		12	#5 x 6'-6" (LEVEL II, DUAL COATED)		
21					
22		(44)	#8 x 1'-6" (LEVEL II, DUAL COATED)		
23		(1#)	#8 x 6'-0" (LEVEL II, DUAL COATED)	⚠1 (# DENOTES (1) BAR FOR TESTING)	
24					
25					

Vermont Agency of Transportation

RECEIVED

Walden Next Beams Rev1_Approved 4.15.15.pdf

CK'D BY CLB OK'D BY HIS

April 13, 2015

RESUBMIT NO Approved

BY C. CARLSON DATE 04/15/15

⚠ 4-13-15 REVISED PER V.A.T. COMMENTS

APPROVAL STAMP:

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

J.A. McDONALD, INC.
CONTRACTOR
LYNDON CENTER, VERMONT

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF CALEDONIA

DATE: FEB. 26, 2015
SCALE: NOTED

TOWN OF WALDEN
VT ROUTE NO. 15 (MINOR ARTERIAL) OVER JOE'S BROOK
BRIDGE NO.: 83 PROJECT NO.: BRF 030-3(5)

CHKD: P.C. DFTM: B.L.
JOB NO: 23460-015

MATERIALS LIST

DWG. NO: M1

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