

GENERAL NOTES:

- THE PLANS ARE INTENDED TO BE DRAWN TO SCALE. HOWEVER, IF A CRITICAL DIMENSION IS NOT PROVIDED, MICHE CORPORATION SHOULD BE CONTACTED FOR VERIFICATION.
- IF ANY OF THE WORK TO BE DONE AS SHOWN ON THE DRAWINGS DOES NOT CORRESPOND WITH THE EXISTING FIELD CONDITIONS, CONTACT THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK IN QUESTION.
- FIELD-VERIFY ALL ELEVATIONS PRIOR TO THE START OF CONSTRUCTION. IF THERE ARE ANY DISCREPANCIES, CONSULT THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK IN QUESTION.
- MAINTAIN MINIMUM 60 DEGREE SLING ANGLE WHEN HANDLING PRECAST COMPONENTS.
- PRECAST COMPONENTS SHALL REACH A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI PRIOR TO STRIPPING, AND THE MINIMUM DESIGN COMPRESSIVE STRENGTH PRIOR TO SHIPPING, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- SHOP DRAWINGS WERE DEVELOPED USING THE FOLLOWING RESOURCES FOR THE CONTRACT:
 - PROPOSED IMPROVEMENT, TOWN OF HIGHGATE, VT ROUTE 78 (MAJOR COLLECTOR) BRIDGE #10. PREPARED BY THE VAOT, DATED 9/19/2016.
- IF THERE IS ADDITIONAL INFORMATION PERTINENT TO THE FABRICATION AND INSTALLATION OF THESE UNITS THAT IS NOT CONTAINED WITHIN THE RESOURCES LISTED ABOVE IT SHALL BE BROUGHT TO THE ATTENTION OF MICHE CORPORATION. FAILURE TO MAKE SUCH ADDITIONAL INFORMATION AVAILABLE SHALL RELIEVE MICHE CORPORATION OF ALL LIABILITIES ARISING FROM ERRORS OR OMISSIONS RELATED TO THE OMITTED INFORMATION.
- ALL VOIDS SHALL BE FILLED WITH NON SHRINK GROUT.

HEADWALL NOTES:

- SECTIONS ARE DESIGNED IN ACCORDANCE WITH
 - AASHTO "LRFD BRIDGE DESIGN SPECIFICATIONS", 7TH EDITION
 - STANDARD SPECIFICATION AND GENERAL SPECIAL PROVISIONS SECTION 540.
- THE FOLLOWING SOIL PROPERTIES WERE USED IN THE DESIGN:

SOIL WEIGHT [PCF]	FRICTION ANGLE [DEG]
RETAINED SOIL(INLET) 140	34
FOUNDATION SOIL(INLET) 95	29
RETAINED SOIL(OUTLET) 140	34
FOUNDATION SOIL(OUTLET) 135	38

 - LIVE LOAD SURCHARGE = SEE DESIGN
 - BACKSLOPE ANGLE: SEE DESIGN
 - ALLOWABLE BEARING RESISTANCE = SEE GEOTECH REPORT
- CONCRETE SHALL BE SELF-CONSOLIDATING CONFORMING TO SECTION 540 WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 5,000 PSI. AGGREGATE SHALL CONFORM TO SECTION 540 WITH A MAXIMUM DIAMETER OF 3/4". CEMENT SHALL CONFORM TO ASTM C150. MICHE MIX 5035CAS.
- REINFORCING SHALL BE GRADE 60, DEFORMED BLACK BARS, CONFORMING TO ASTM A-615. ALL BARS SHALL BE BENT COLD.
- ALL EXPOSED EDGES EXCEPT WHERE NOTED SHALL BE CHAMFERED 1".
- BACKFILL SHALL CONFORM TO VTRANS SECTION 708.04 GRANULAR BACKFILL FOR STRUCTURES. BACKFILL SHALL EXTEND BEYOND THE HORIZONTAL LIMITS OF THE STRUCTURE AS DETAILED IN THE CONTRACT DOCUMENTS. PLACEMENT SHALL CONFORM TO VTRANS SECTION 204.08

PRODUCTION CONTROL PROCEDURES

- CYLINDER SAMPLING AND CURING:
 - A MINIMUM OF EIGHT (8) CYLINDERS PER LOT WILL BE MADE IN ACCORDANCE WITH ASTM C31. CYLINDERS WILL BE TESTED IN ACCORDANCE WITH ASTM C39.
 - UNIT WEIGHT (ASTM C138), AIR CONTENT (ASTM C231), SPREAD PER SCC GUIDELINES, AND TEMPERATURE TESTS WILL BE TAKEN INITIALLY FOR EACH BATCH, NOT TO EXCEED NINE (9) CUBIC YARDS. THE FREQUENCY OF SOME TESTS MAY BE REDUCED WHEN THE VIRANS REPRESENTATIVE DETERMINES THAT THE PRECASTER IS CONSISTENT IN HIS BATCHING OPERATION. THESE TESTS WILL BE TAKEN PRIOR TO PLACING CONCRETE IN FORM.

NOTE: 1 AIR TEST PER BATCH (OR DELIVERY TRUCK) IS REQUIRED, AND SHALL NOT BE REDUCED.

 - ALL CAST CYLINDERS WILL BE CURED IN THE SAME MANNER AS THE PIECES THEY REPRESENT.
- CYLINDER BREAKS:
 - FOR EARLY STRENGTH VERIFICATION, CYLINDERS MAY BE BROKEN AT ANY TIME UP TO 28 DAYS AFTER CASTING. IF THE AVERAGE STRENGTH OF TWO (2) CYLINDERS MEETS OR EXCEEDS THE REQUIRED 28 DAY STRENGTH (WITH EACH CYLINDER HAVING A MINIMUM OF 95% OF THE REQUIRED 28 DAY STRENGTH), THE LOT SHALL BE ACCEPTED FOR STRENGTH.
- QUALITY CONTROL TEST AND EQUIPMENT:
 - CYLINDER TESTER: FORNEY 500 SERIES WITH DR-2 DIGITAL READOUT CALIBRATED BIANNUALLY
 - AIR METER: PRESSURE METER BY FORNEY (CALIBRATED MONTHLY)
 - SLUMP CONE: STANDARD 8" BASE, 4" AT RIM, 12" IN HEIGHT MEASURED IN ACCORDANCE WITH SCC GUIDELINES
 - SCALES FOR UNIT WEIGHT: MEASURED IN ACCORDANCE WITH ASTM C143 100 LBS. CAPACITY CALIBRATED ANNUALLY TO THE NEAREST 1/10TH POUND 4" DIAMETER X 8" PLASTIC
- CONCRETE TESTING AND AIR METER CALIBRATION WILL BE DONE BY PLANT PERSONNEL (ACI GRADE 1 CERTIFIED) ALL TESTING PRODUCERS WILL BE OBSERVED BY VERMONT INSPECTORS OR AUTHORIZED REPRESENTATIVES.

CURING

- THIS SECTION APPLIES TO ALL PRECAST PIECES CAST IN EACH RESPECTIVE LOT. ALL CURING PROCEDURES SHALL ADHERE TO THE REQUIREMENTS OF SECTION 540.08 OF THE VT STANDARD SPECIFICATIONS FOR CONSTRUCTION 2011 EDITION.
- AS SOON AS PRACTICAL AFTER PLACEMENT OF FRESH CONCRETE THE CASTING FORMS SHALL BE COVERED WITH POLYETHYLENE SHEETING UNTIL STRIPPING STRENGTH HAS BEEN ACHIEVED.
- ONCE STRIPPING STRENGTH HAS BEEN ACHIEVED THE PRECAST PRODUCT SHALL BE REMOVED FROM THE FORM AND PLACED IN A DESIGNATED CURING AREA (INTERIOR OR EXTERIOR DEPENDING ON WEATHER CONDITIONS)
- AT THE DESIGNATED CURING AREA THE PRECAST SHALL BE CURED USING ONE OF THE APPROVED METHODS IN SECTION 501.17 UNTIL DESIGN STRENGTH HAS BEEN ACHIEVED.
 - FOR VAOT PROJECT# STP SCRP (12) - HIGHGATE, VT ROUTE 78 - BRIDGE #10, THE FOLLOWING METHOD WILL BE UTILIZED: 501.17 (4) - WHITE POLYETHYLENE SHEETING METHOD.
- THE TEMPERATURE MONITORING METHOD WILL BE DETERMINED DURING THE PRE-CONSTRUCTION MEETING WITH THE CONTRACTOR AND VAOT PERSONNEL.
- AS SOON AS THE DESIGN STRENGTH HAS BEEN ACHIEVED THE PRODUCT WILL BE REMOVED FROM THE CURING AREA AND TRANSPORTED TO THE STAGING AREA WHERE IT WILL BE STORED UNTIL SHIPPING.

FINISH

- ALL PRECAST COMPONENTS WILL HAVE A STEEL FORM FINISH ON THE VISIBLE FACES. THE BURIED SIDE OF THE WINGWALLS AND CURB WALLS WILL BE THE POUR FACE AND WILL HAVE A STEEL TROWEL FINISH. THE BRIDGE SECTIONS WILL HAVE A STEEL FORM FINISH ON ALL FACES EXCEPT THE TOP OF THE DECK. THIS WILL HAVE A STEEL TROWEL FINISH.
- ANY AND ALL REPAIR PROCEDURES WILL ADHERE TO NPCA BEST PRACTICES, AND WILL BE GENERATED SPECIFICALLY FOR THE APPLICATION AT THE TIME OF NEED.

HANDLING/STORAGE

- ONCE STRIPPING STRENGTH HAS BEEN ACHIEVED, ALL PRECAST COMPONENTS WILL BE REMOVED FROM THE FORMS USING OVERHEAD CRANES. THE PIECES WILL THEN BE PLACED ON FLATBED TRAILERS AND TRANSPORTED TO THE CURING AREA, OR STORAGE YARD WHERE THEY WILL EITHER BE PLACED ON DUNNAGE (WINGWALLS) OR DIRECTLY ON THE GROUND (CULVERT). ONCE THE CURING PROCESS HAS REACHED DESIGN STRENGTH, THE PRECAST WILL BE HANDLED USING THE INDICATED LIFTERS/ANCHORS AND APPROPRIATE RIGGING, IN PREPARATION FOR SHIPPING ON FLAT BED TRAILERS. PLACEMENT OF THE DUNNAGE WILL GENERALLY FOLLOW THE 1/2 RULE OR BE PLACED UNDER THE LIFTERS, HOWEVER FINAL DECISIONS REGARDING PLACEMENT WILL BE THAT OF THE MANUFACTURER/DESIGNER.

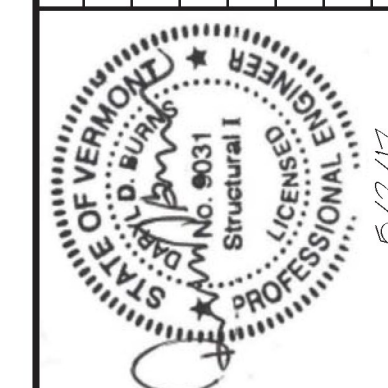
BILL OF MATERIALS

QTY	DESCRIPTION	IN STOCK		DATE	
		ORDERED	FROM	ORDERED	DELIVERED
ITEMS CAST-IN					
7LF	4" DIA PVC PIPE FOR WEEP HOLES				
60	5 TON UTILITY ANCHORS				
20	1-8NC 6X6 DWA				
ITEMS FOR PRESHIPPING/PREP.					
ITEMS TO SHIP TO THE JOB					
8	(10'X14'X1/2" GALV. STEEL WW PLATE (135 DEG)				
2	(10'X14'X1/2" GALV. STEEL WW PLATE (180 DEG)				
40	1" DIA X 5" NC THREAD ROD W/ NUT				
40	4"X4"X1/4" PLATE WASHER				

SHEET LIST

- S1.0 LAYOUT AND ELEVATION VIEWS
- S2.0 INLET HEADWALL DETAILS
- S3.0 OUTLET HEADWALL DETAILS

No.	Date	Revision	By
XXX			
XX			
XX			



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VT Route 78 - VAOT # STP SCRP (12)
Highgate, VT
Special Headwalls - 72"Ø SI Steel Pipe

Project No. 7910
 Date: 3/7/2017
 Drawn by: CJP
 Checked by: Della
 Scale: AS SHOWN

Prepared for:
Casella Construction, Inc.
 25 Industrial Ave.
 Mendon, VT 05701

DWG NO.
S1.0