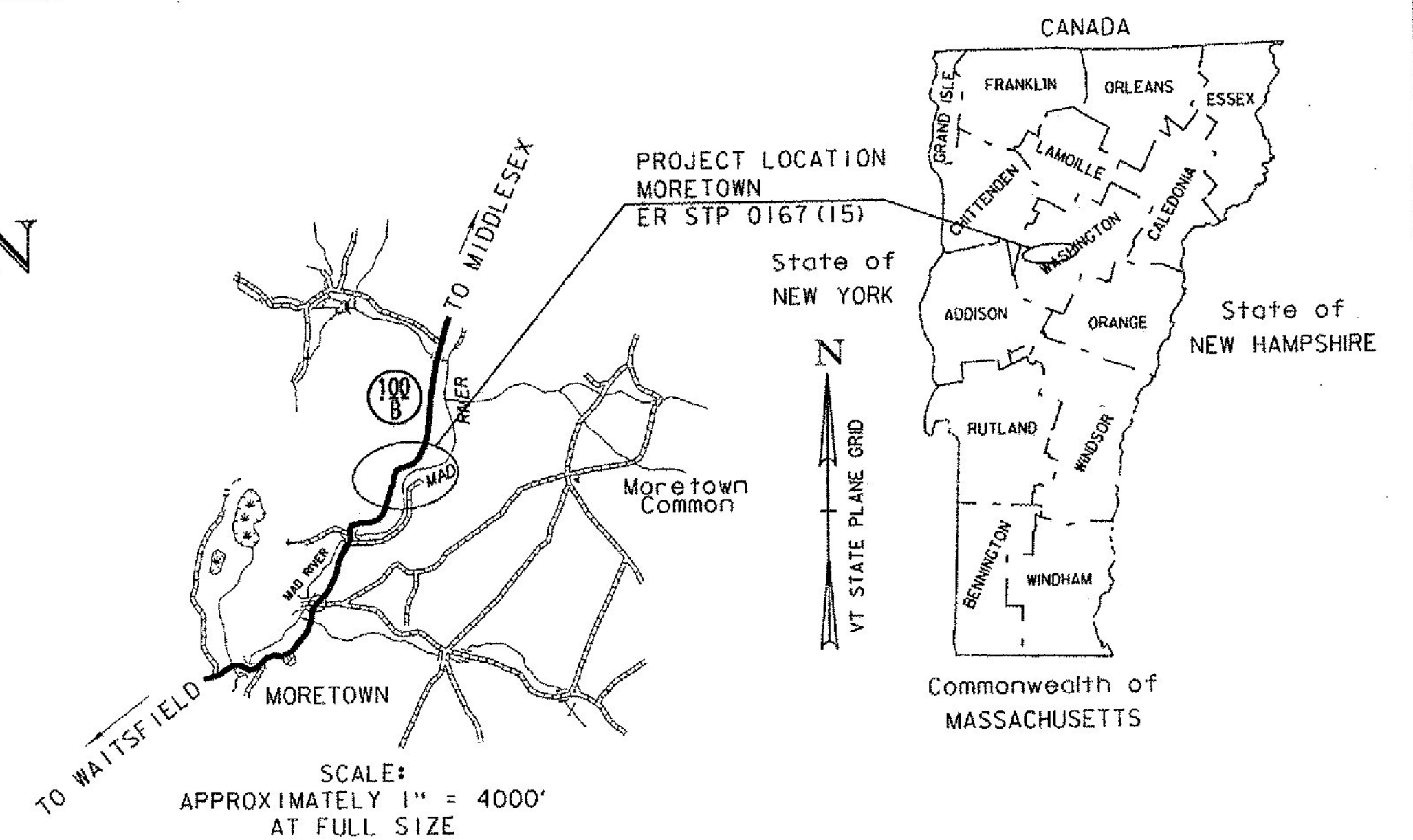


STATE OF VERMONT AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT TOWN OF MORETOWN COUNTY OF WASHINGTON VT ROUTE 100B (MAJOR COLLECTOR)



RECORD PLANS	
CONTRACTOR:	G.W. TATRO CONSTRUCTION, INC. ESSEX JCT., VT
RESIDENT ENGINEER:	BOB SUCKERT
CONSTRUCTION BEGAN:	JUNE 29, 2015
CONSTRUCTION COMPLETE:	OCTOBER 15, 2015
RECORD PLANS BY:	BOB SUCKERT & JESSE IVES
I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.	
BY:	RESIDENT ENGINEER
DATE:	4-21-17
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.	

PROJECT LOCATION: BEGINNING IN THE TOWN OF MORETOWN ON VT ROUTE 100B AT STA. 2+00.00 (MM 1.779) EXTENDING NORTHERLY ALONG VT ROUTE 100B 1350.00 FT (0.256 MILES) TO STA. 15+50.00 (MM 2.055)

PROJECT DESCRIPTION: WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES SLOPE STABILIZATION, CORRECTING SUPERELEVATION DEFICIENCIES, RESURFACING WITH BASE AND WEARING COURSES, NEW PAVEMENT MARKINGS, GUARDRAIL IMPROVEMENTS, DRAINAGE IMPROVEMENTS AND OTHER RELATED HIGHWAY ITEMS.

PROJECT LENGTH: 1350.00 FT (0.256 MI.)

TRAFFIC DATA

HIGHWAY SECTION	AADT		DHV		CUM. ESALS (2013-2023)	CUM. ESALS (2013-2033)
	2013	2023	2013	2023		
VT 100B - MM 1.780 TO MM 2.074	1800	1900	340	350	288,000	668,000
TRUCKS	PERCENT					
	2013	2023				
	8.1	9.9				
POSTED SPEED	40 MPH					
DESIGN SPEED	40 MPH					

BITUMINOUS CONCRETE SUPERPAVE MIXTURE DESIGN CRITERIA	
DESIGN LANE/DESIGN LIFE ESAL	334000
DESIGN NUMBER OF CYRATIONS	65
PERFORMANCE GRADED ASPHALT BINDER	SEE SUBSECTION 490.03B

BEGIN PROJECT
STA. 2+00.00 (MM 1.799)

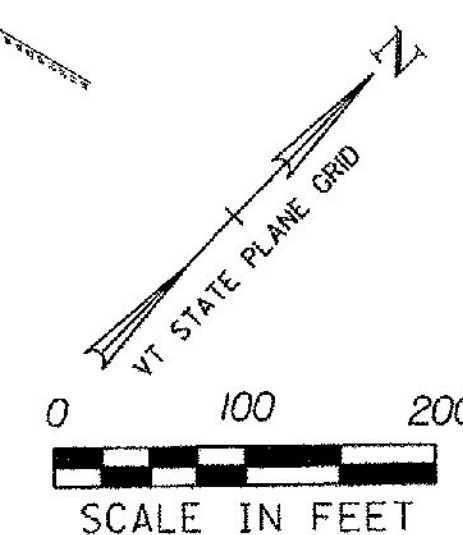
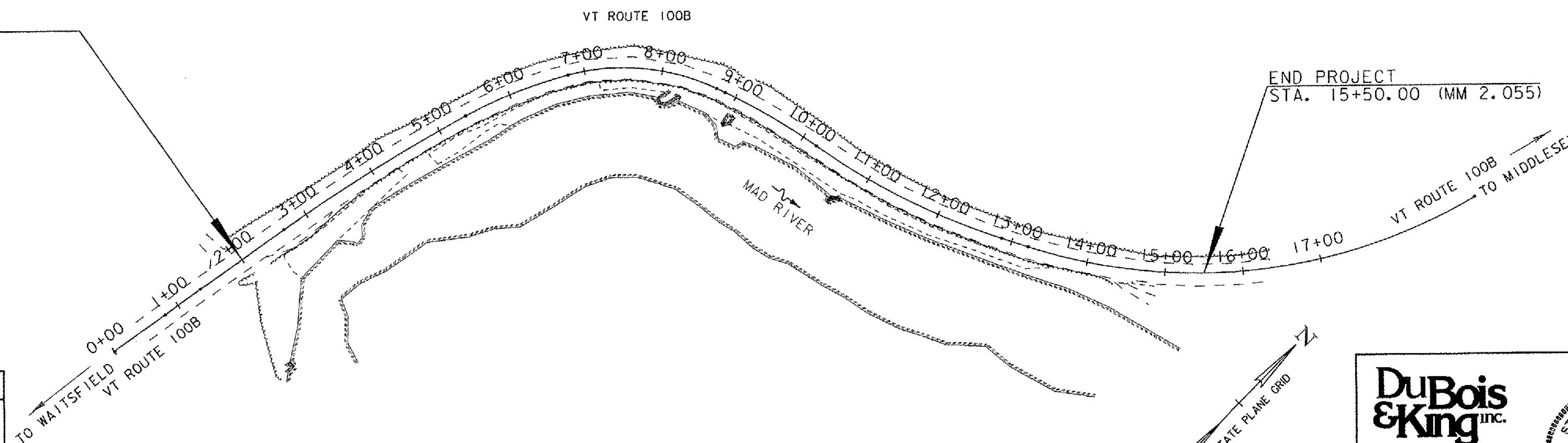
END PROJECT
STA. 15+50.00 (MM 2.055)

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2014, 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 : DUBOIS & KING
SURVEYED DATE : MARCH 2013

DATUM
VERTICAL : NAVD 88
HORIZONTAL : NAD 83 (11)



DuBois & King INC.

DIRECTOR OF PROJECT DELIVERY
APPROVED: DATE: 2/18/2015
PROJECT MANAGER : PAUL LIBBY
PROJECT NAME : MORETOWN
PROJECT NUMBER : ER STP 0167 (15)
SHEET 1 OF 57 SHEETS

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VAOT STANDARDS

B-5	06/01/1994
B-71	07/08/2005
D-6	06/01/1994
E-121	08/08/1995
E-193	08/18/1995
G-1	02/10/2014
G-1D	02/10/2014
J-3	08/07/1995
T-1	08/06/2012
T-10	08/06/2012
T-17	08/06/2012
T-28	08/06/2012
T-30	08/06/2012
T-31	08/06/2012
T-35	08/06/2012
T-36	08/06/2012
T-45	01/02/2013

PROJECT NAME: MORETOWN
PROJECT NUMBER: ER STP 0167 (15)

FILE NAME: z12c524detail.dgn
PROJECT LEADER: J. TUCKER
DESIGNED BY: B. BRESLEND
INDEX OF SHEETS

PLOT DATE: 2/17/2015
DRAWN BY: B. MACK
CHECKED BY: A. SANZ
SHEET 2 OF 57

GENERAL INFORMATION

SYMBOLY LEGEND NOTE

THE SYMBOLY ON THIS SHEET IS INTENDED TO COVER STANDARD CONVENTIONAL SYMBOLY. THE SYMBOLY 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. SYMBOLY 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 VALVE
⊗	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 SYMBOLY

UNDERGROUND UTILITIES

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

ABOVE GROUND UTILITIES (AERIAL)

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

PROJECT CONSTRUCTION SYMBOLY

PROJECT DESIGN & LAYOUT SYMBOLY

— 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	PROJECT DEMARCATION FENCE
BF	BARRIER FENCE
⊗	TREE PROTECTION ZONE (TPZ)
///	STRIPING LINE REMOVAL
~~~~~	SHEET PILES

**CONVENTIONAL BOUNDARY SYMBOLY**

**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	SLOPE RIGHTS
6f	6F PROPERTY BOUNDARY
4f	4F PROPERTY BOUNDARY
HAZ	HAZARDOUS WASTE

**EPSC LAYOUT PLAN SYMBOLY**

**EPSC MEASURES**

ONNOONNOONNO	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	HAZARDOUS WASTE AREA
AG	AGRICULTURAL LAND
HABITAT	FISH & WILDLIFE HABITAT
FLOOD PLAN	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
(H)	HISTORIC STRUCTURE

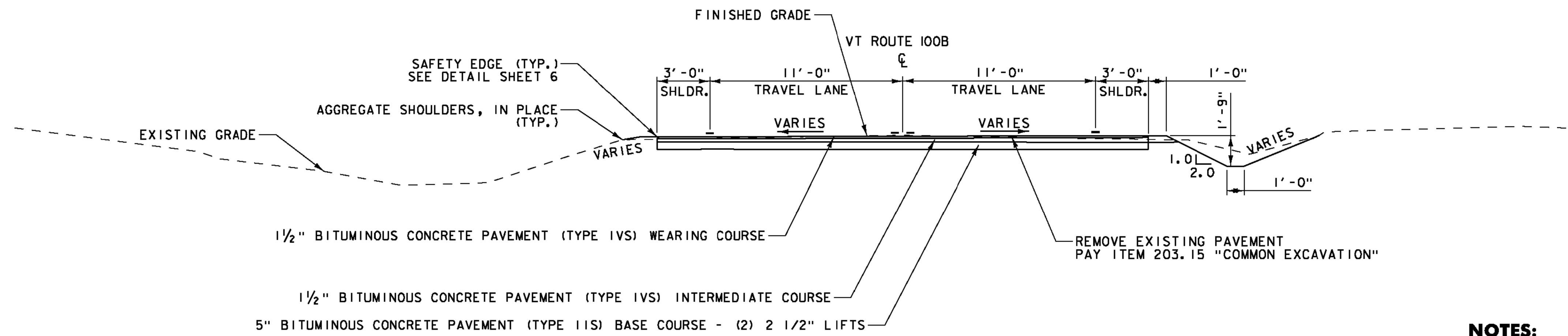
**CONVENTIONAL TOPOGRAPHIC SYMBOLY**

**EXISTING FEATURES**

—	ROAD EDGE PAVEMENT
—	ROAD EDGE GRAVEL
—	DRIVEWAY EDGE
—	DITCH
—	FOUNDATION
x	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: MORETOWN  
PROJECT NUMBER: ER STP 0167 (15)

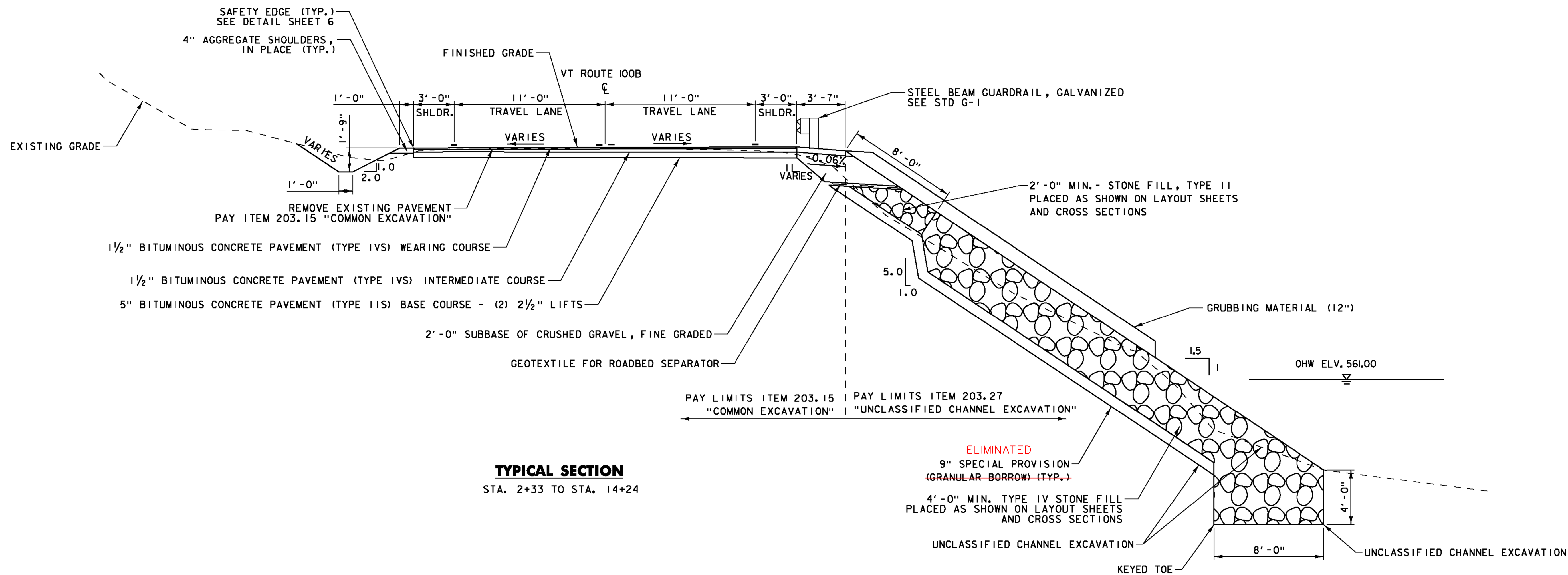
FILE NAME: z12c524detail.dgn PLOT DATE: 2/17/2015  
PROJECT LEADER: J. TUCKER DRAWN BY: B. MACK  
DESIGNED BY: B. BRESLEND CHECKED BY: A. SANZ  
CONVENTIONAL SYMBOLY LEGEND SHEET SHEET 3 OF 57



**TYPICAL SECTION**  
STA. 2+00 TO STA. 2+33

**NOTES:**

1. STONE FILL TO BE PLACED ON SLOPES STEEPER THAN 1:2.00.
2. SEE CROSS SECTIONS FOR SLOPES AND DIMENSIONS AT INDIVIDUAL SECTIONS.
3. ITEM 900.608 "SPECIAL PROVISION (GRANULAR BORROW)" SHALL BE PLACED IN 150 MM (6 INCH) MAXIMUM (LOOSE MEASURE) LAYERS AND COMPACTED AGAINST THE SLOPE WITH AN EXCAVATOR BUCKET.



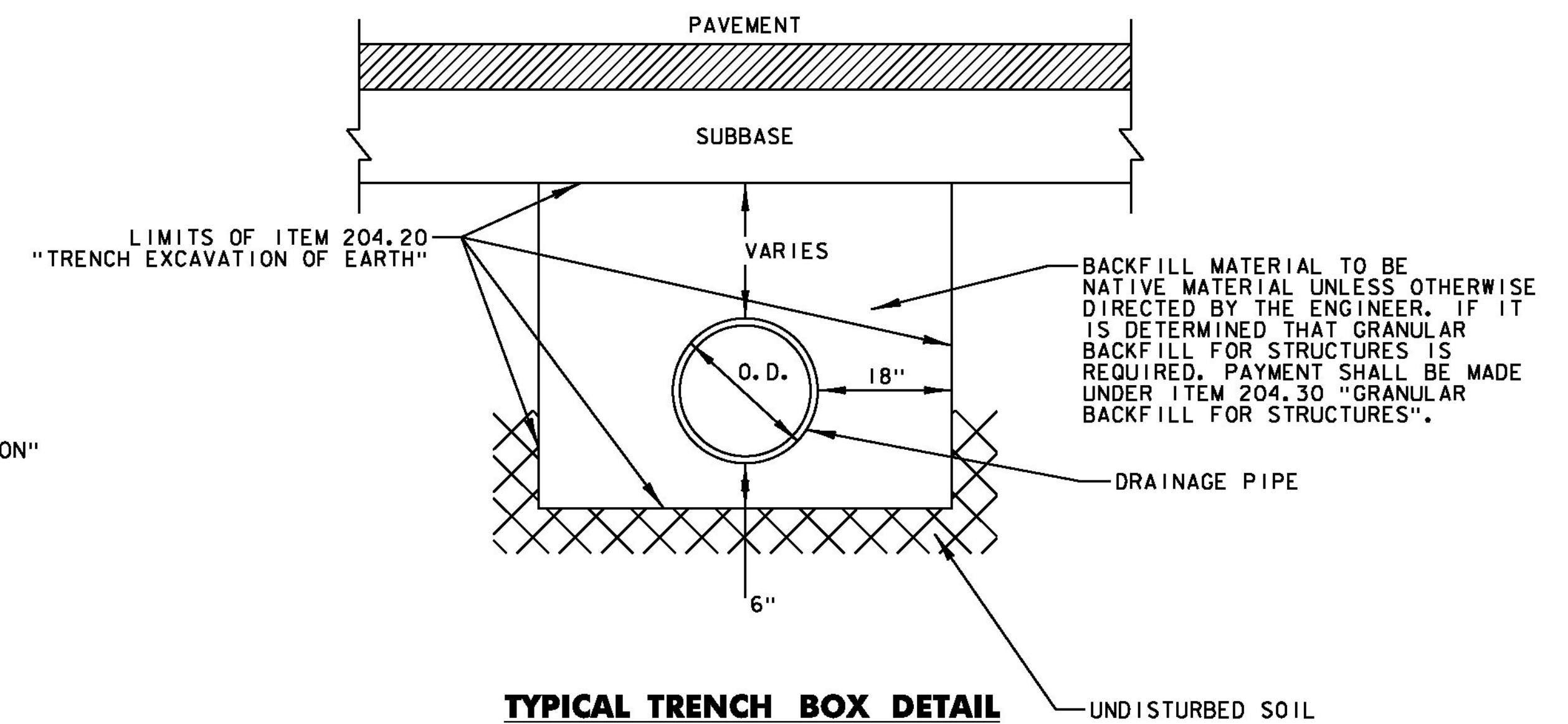
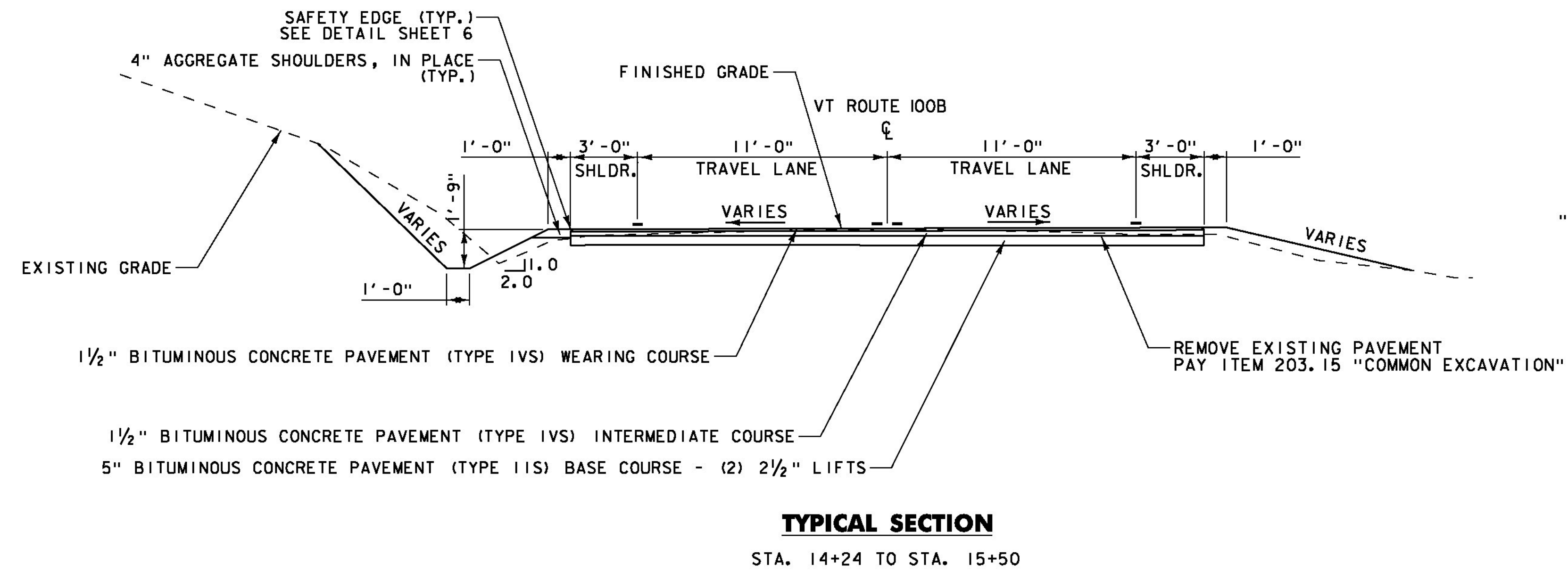
**TYPICAL SECTION**  
STA. 2+33 TO STA. 14+24

**TOLERANCES :**

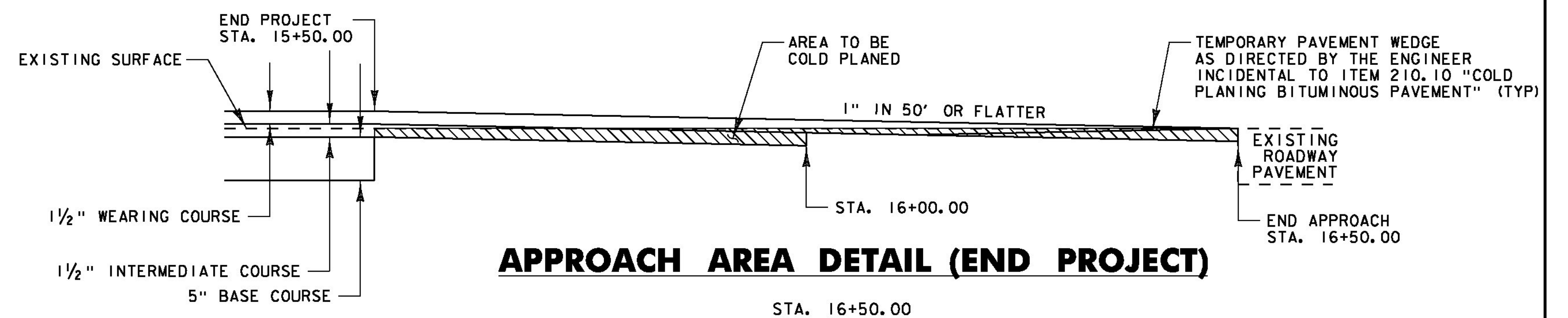
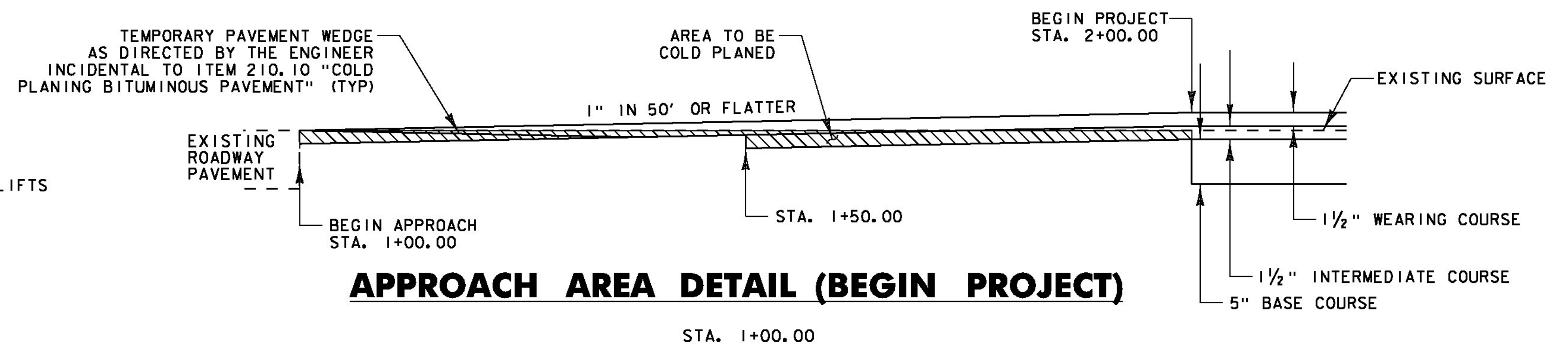
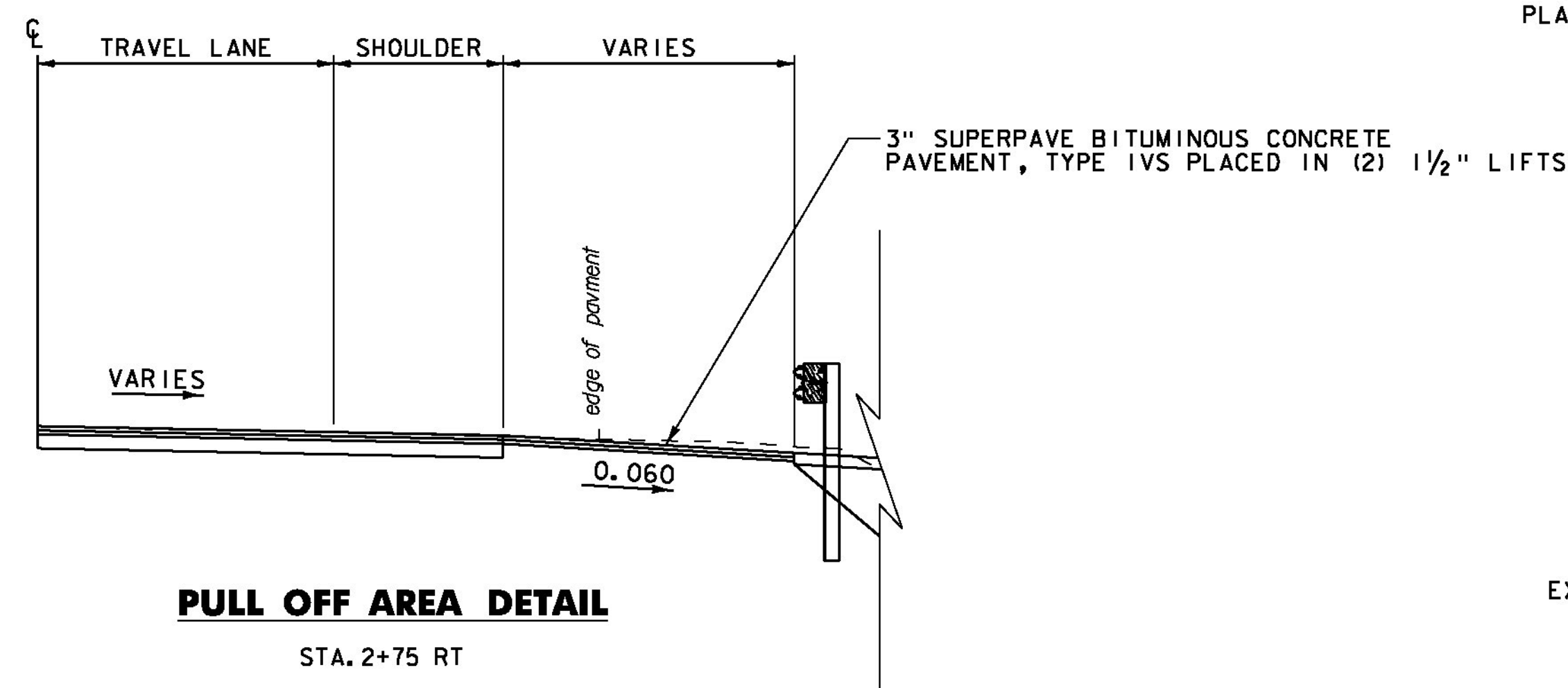
PAVEMENT : +/- 1/4" TOTAL PAVEMENT THICKNESS  
SUBBASE : +/- 1" TOTAL CRUSHED STONE THICKNESS

**DETAILS ARE NOT TO SCALE**

PROJECT NAME: MORETOWN	PLOT DATE: 2/17/2015
PROJECT NUMBER: ER STP 0167 (15)	DRAWN BY: B. MACK
FILE NAME: z12c524 typ. dgn	CHECKED BY: A. SANZ
PROJECT LEADER: J. TUCKER	SHEET 4 OF 57
DESIGNED BY: B. BRESLEND	
TYPICAL SECTION SHEET 1	



NOTE: ANY EXCAVATION REQUIRED IN THE PULLOFF AREAS PRIOR TO PAVING SHALL BE PAID FOR UNDER THE APPROPRIATE RENTAL ITEMS.



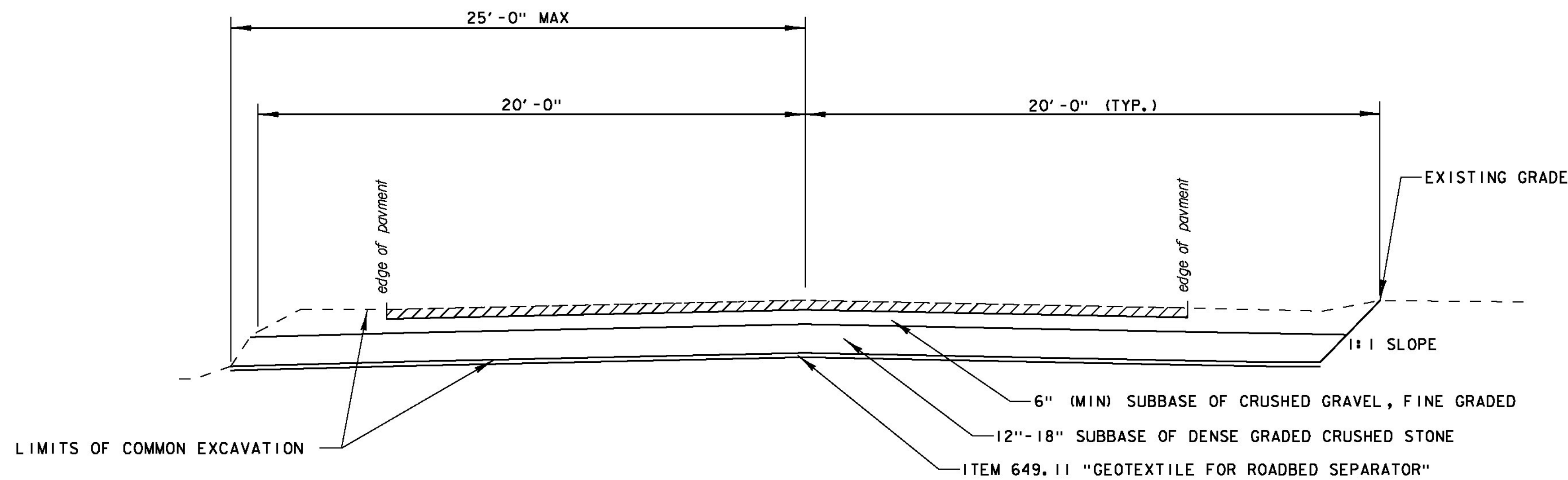
**TOLERANCES :**

PAVEMENT : +/- 1/4" TOTAL PAVEMENT THICKNESS  
SUBBASE : +/- 1" TOTAL CRUSHED STONE THICKNESS

PROJECT NAME: MORETOWN  
PROJECT NUMBER: ER STP 0167 (15)

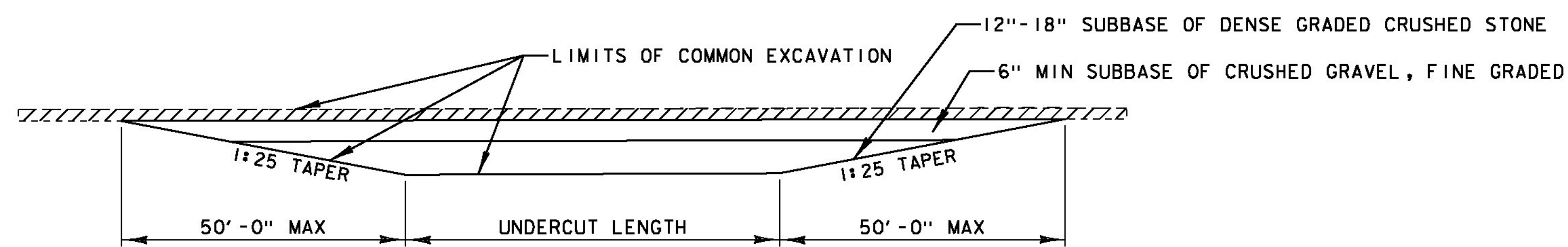
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PROJECT LEADER: J. TUCKER  
DESIGNED BY: B. BRESLEND  
TYPICAL SECTION SHEET 2

PLOT DATE: 2/17/2015  
DRAWN BY: B. MACK  
CHECKED BY: A. SANZ  
SHEET 5 OF 57



**UNSUITABLE SUBBASE MATERIAL UNDERCUT DETAIL**

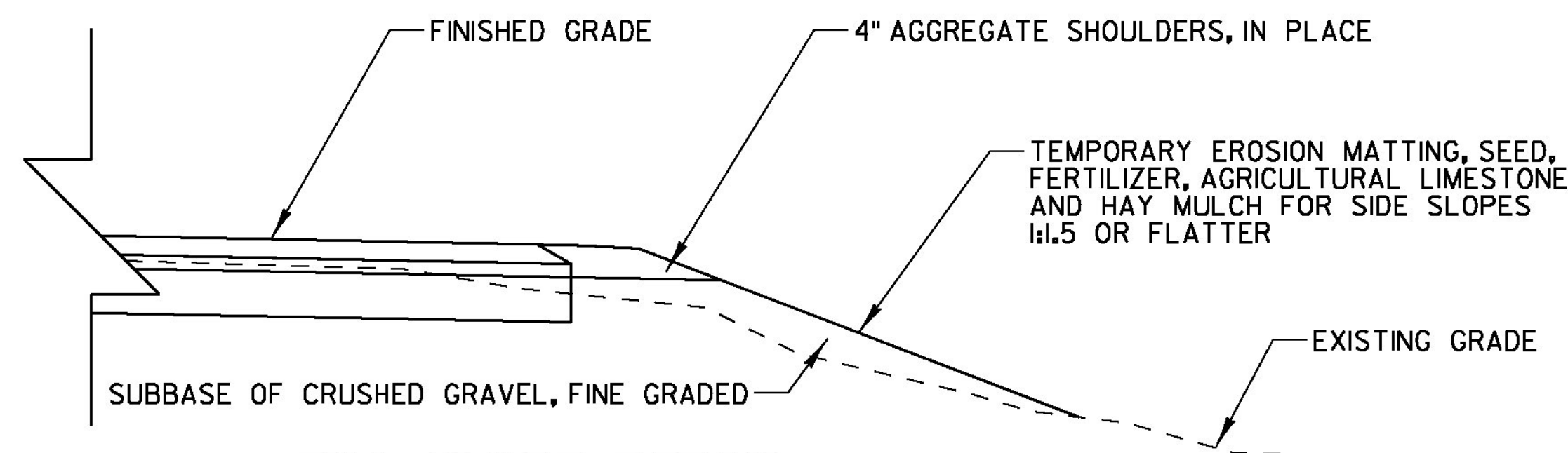
AS DEEMED NECESSARY BY ENGINEER  
 NOTE: ALL WIDTHS AND DEPTHS TO BE APPROVED BY ENGINEER PRIOR TO WORK BEING PERFORMED



**UNSUITABLE SUBBASE MATERIAL TRANSITION DETAIL**

NOT TO SCALE

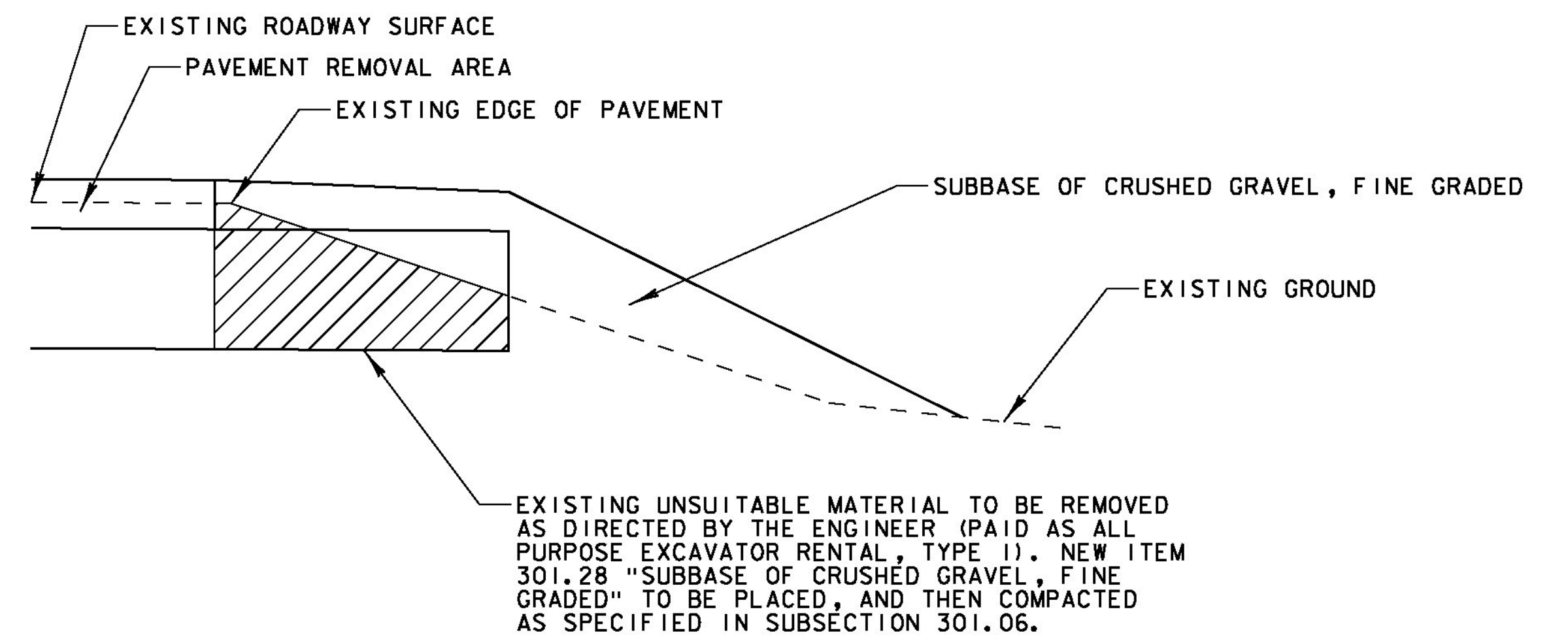
- NOTES:
1. UNDERCUT CANDIDATE AREAS ENCOUNTERED DURING CONSTRUCTION SHALL BE REVIEWED AND APPROVED BY THE VTRANS CONSTRUCTION PAVING ENGINEER PRIOR TO THE TREATMENT.
  2. ALL UNDERCUTS SHALL BE FULL WIDTH.



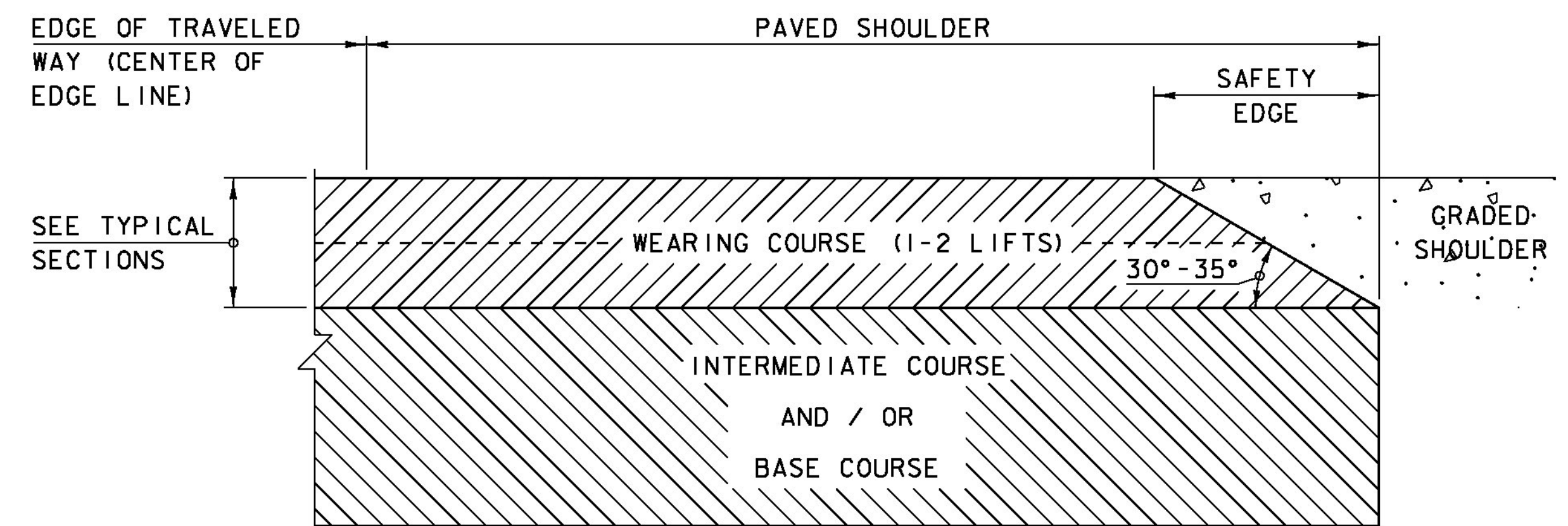
**FILL SLOPE DETAIL**

NOT TO SCALE  
 (FOR SLOPES 1:1.5 OR FLATTER)

NOTE: IF DUE TO GROWING SEASON TIME CONSTRAINTS IT IS DEEMED NECESSARY BY THE CONSTRUCTION ENVIRONMENTAL ENGINEER THAT A MORE RAPID VEGETATION ESTABLISHMENT IS REQUIRED, PLACEMENT OF 2" OF GRUBBING MATERIAL SHALL BE PLACED ON THE SLOPE PRIOR TO PLACEMENT OF SEED, FERTILIZER, TEMPORARY EROSION MATTING, AND AGRICULTURAL LIMESTONE. PLACEMENT OF GRUBBING MATERIAL WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD OF ITEM 651.40 "GRUBBING MATERIAL (2")".



**EXISTING SHOULDER RECONSTRUCTION DETAIL**



**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".

PROJECT NAME: MORETOWN  
 PROJECT NUMBER: ER STP 0167 (15)

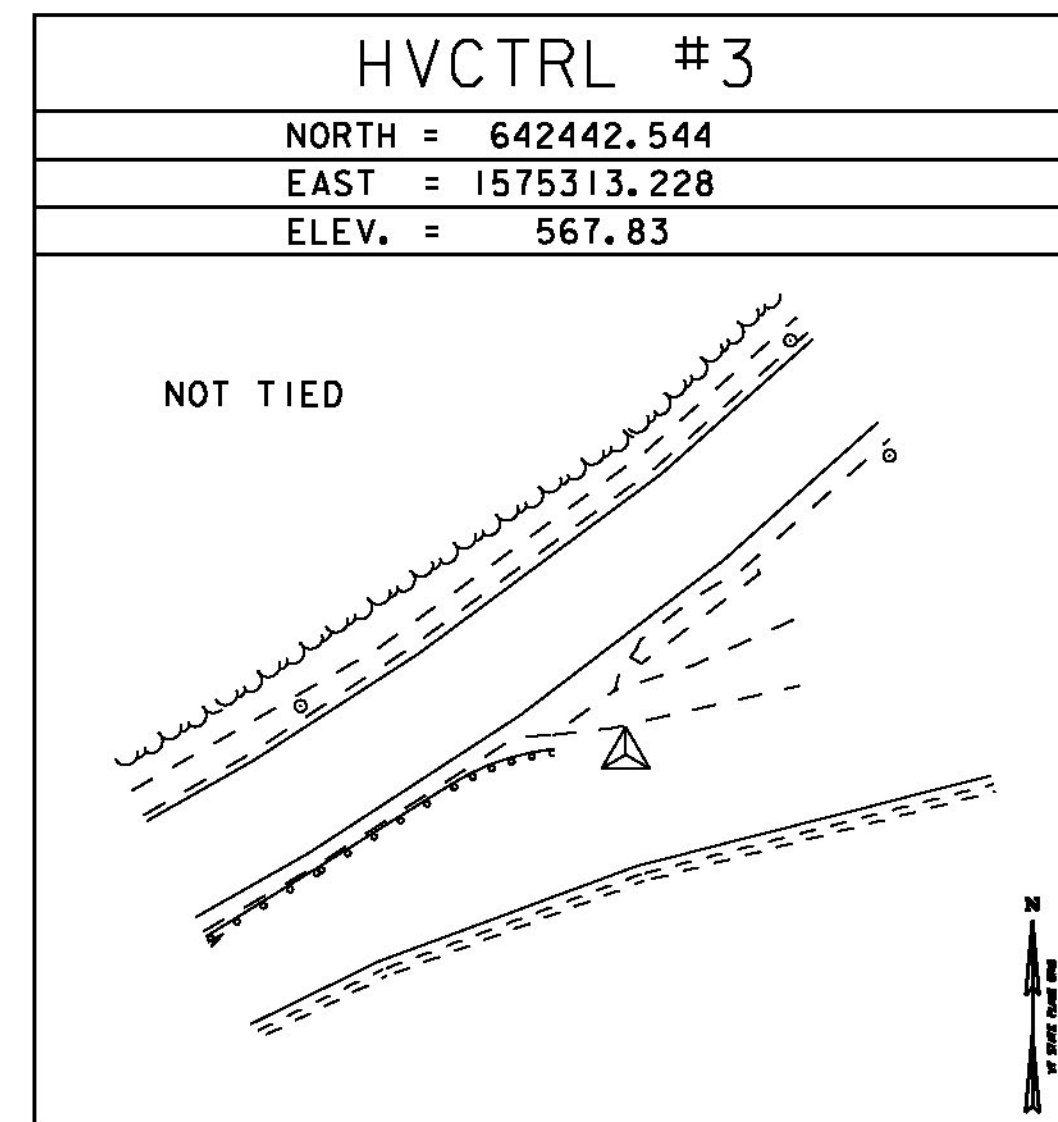
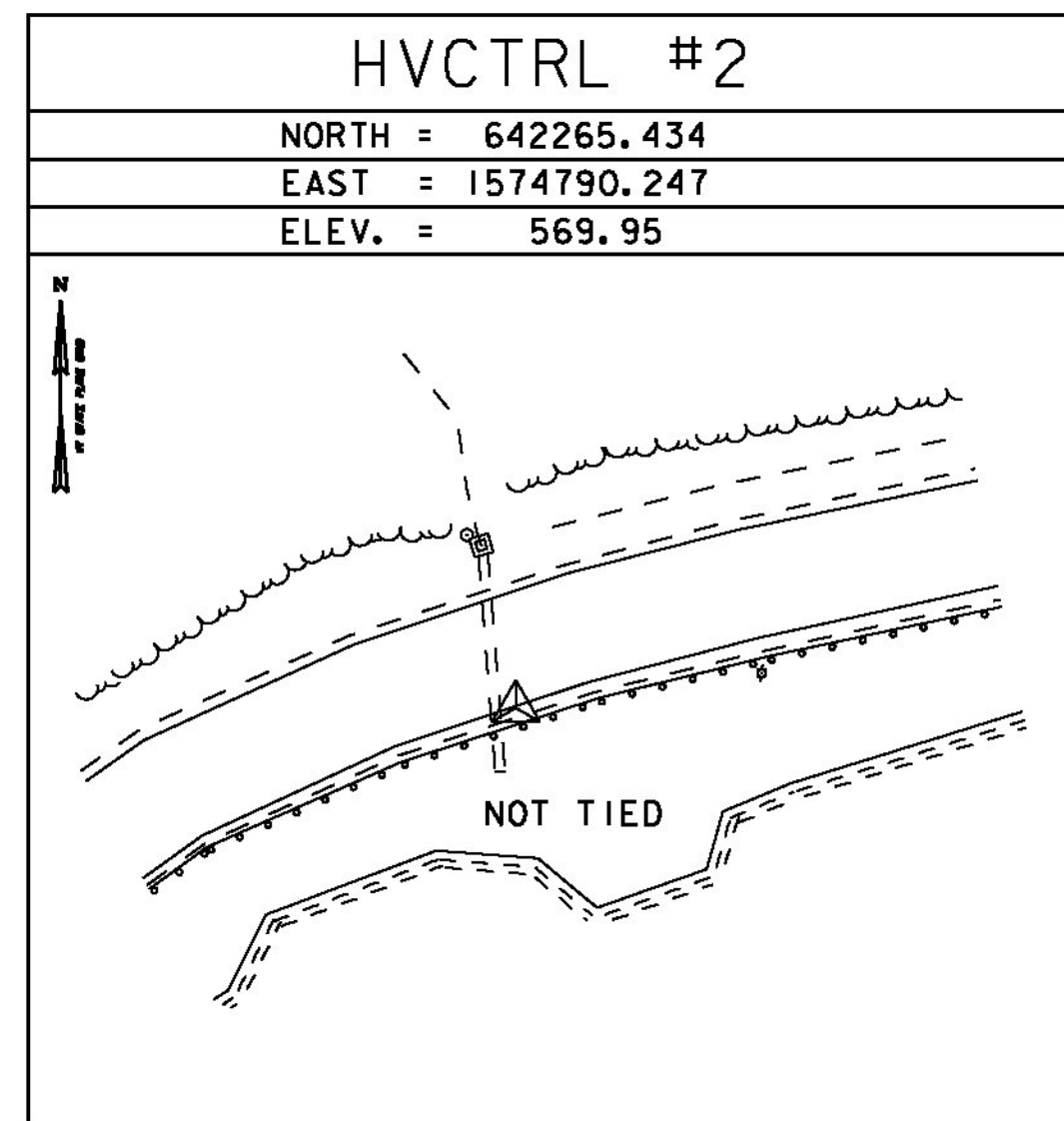
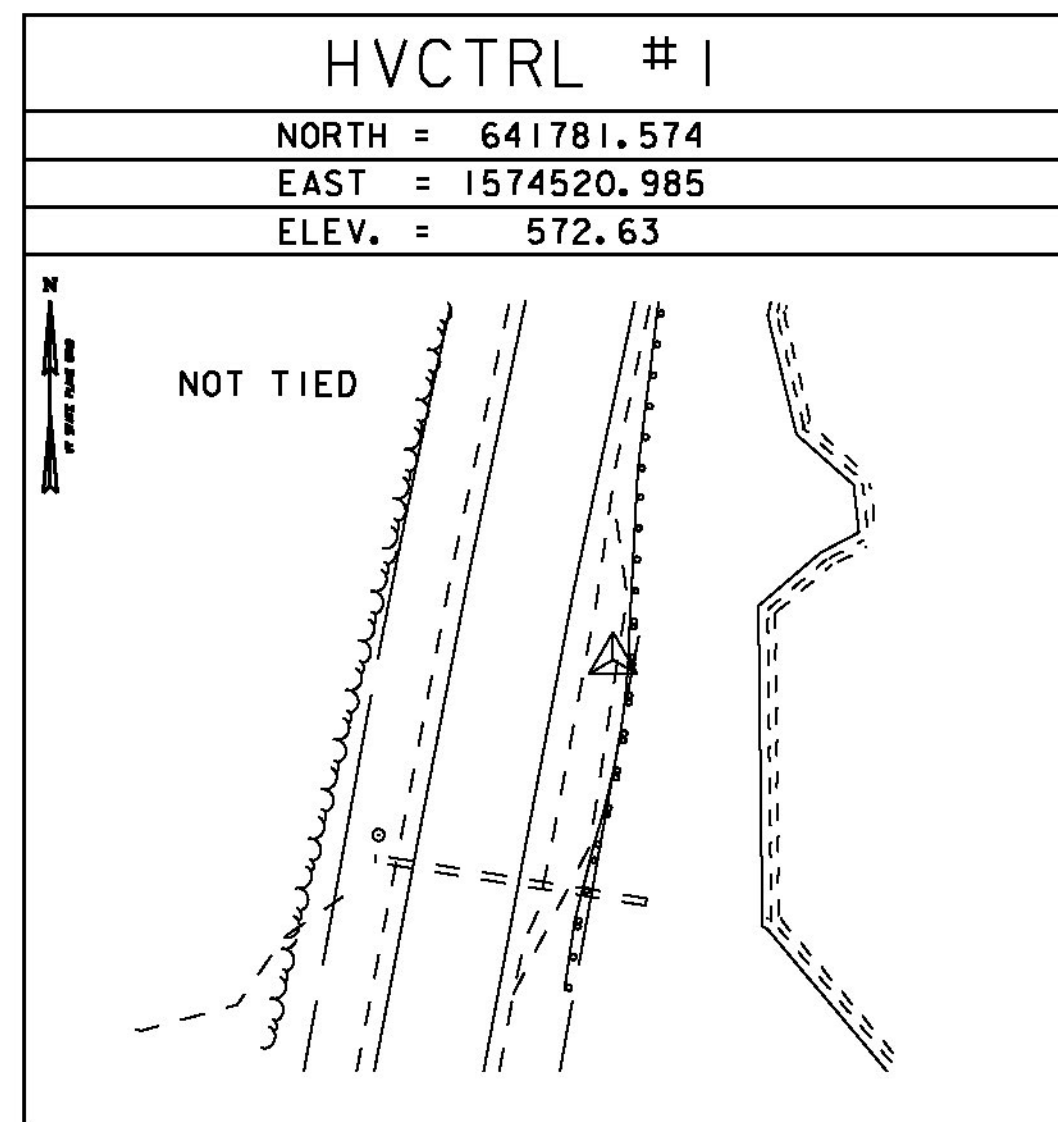
FILE NAME: z12c524detail.dgn  
 PROJECT LEADER: J. TUCKER  
 DESIGNED BY: B. BRESLEND  
 DETAIL SHEET

PLOT DATE: 2/17/2015  
 DRAWN BY: B. MACK  
 CHECKED BY: A. SANZ  
 SHEET 6 OF 57

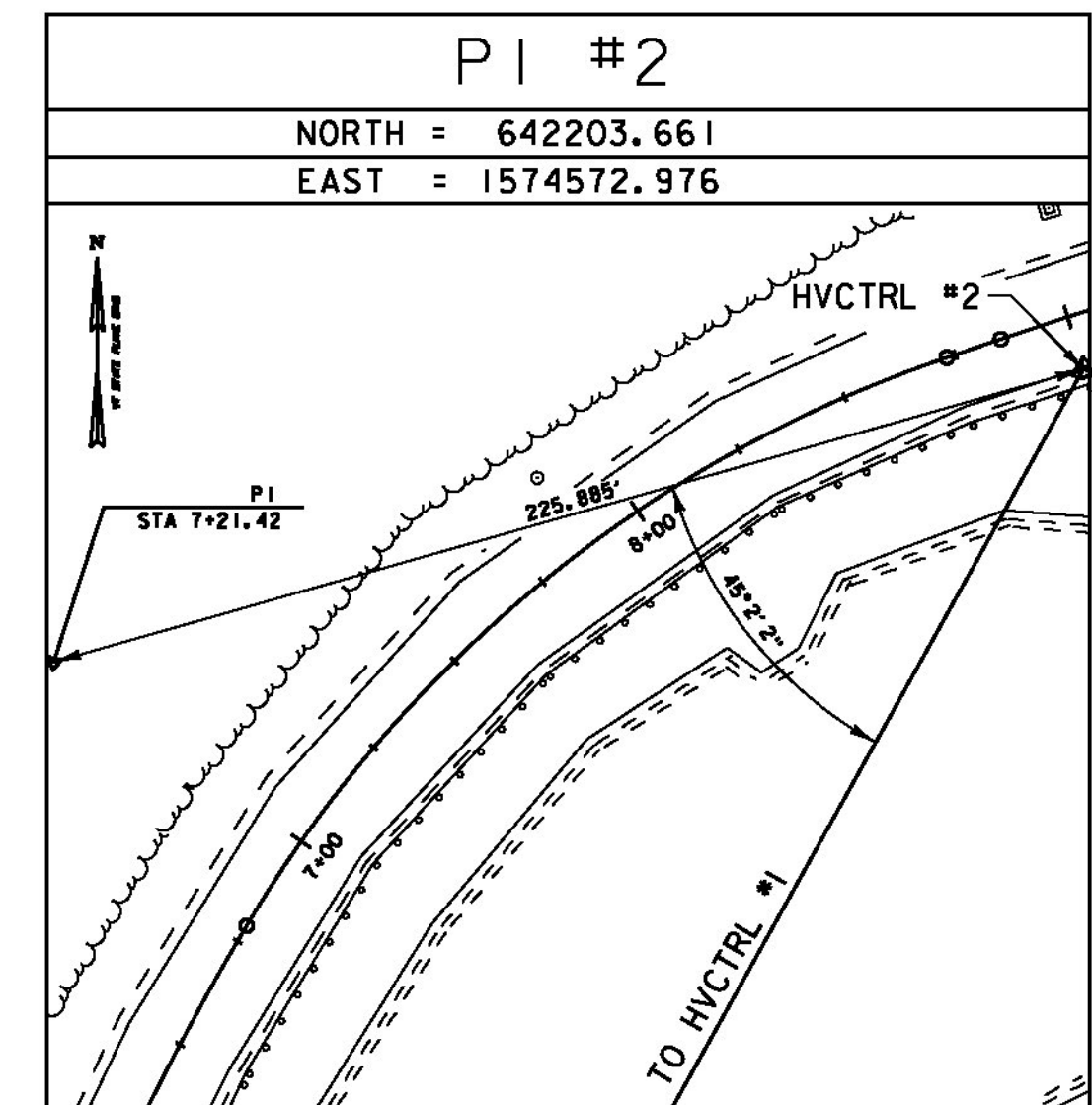
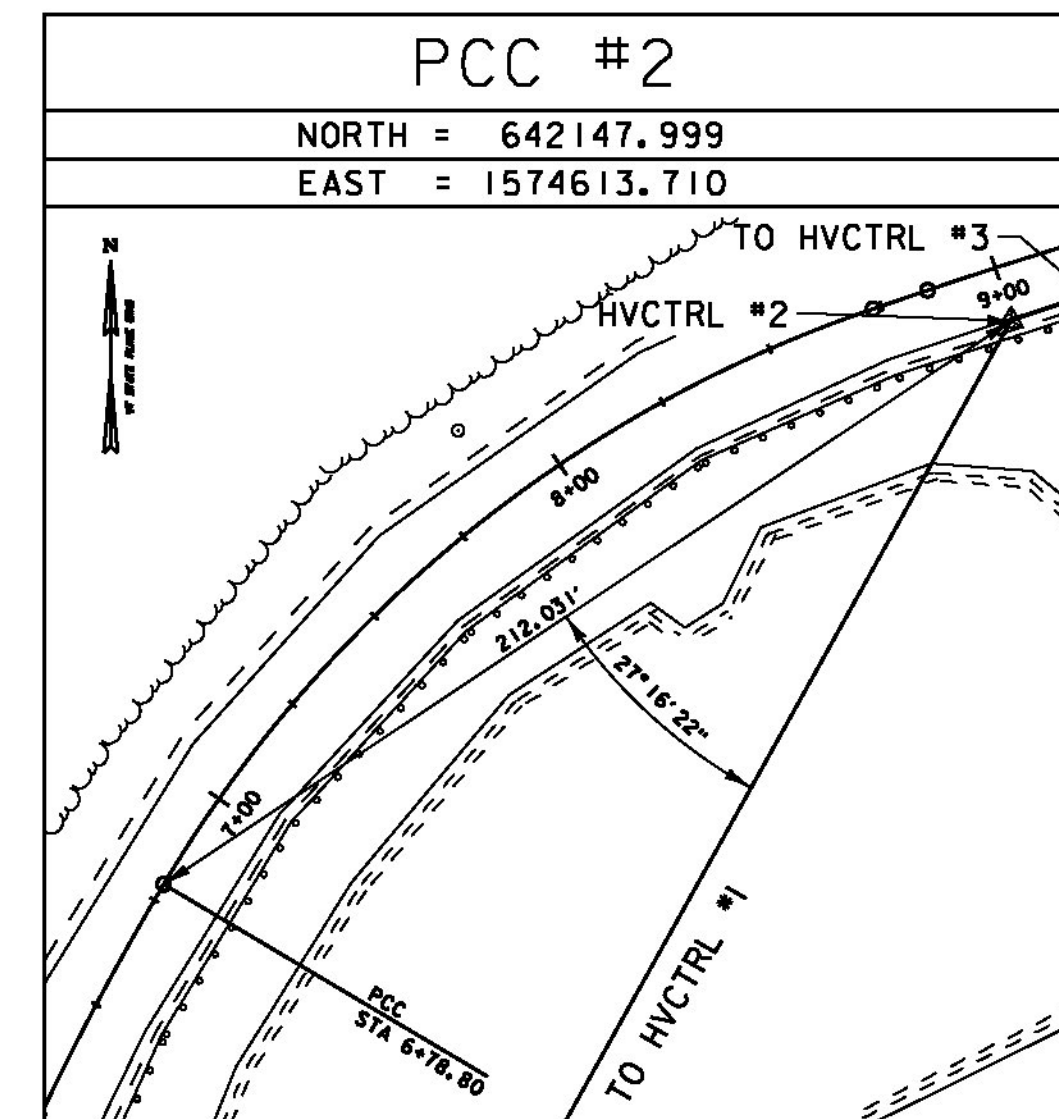
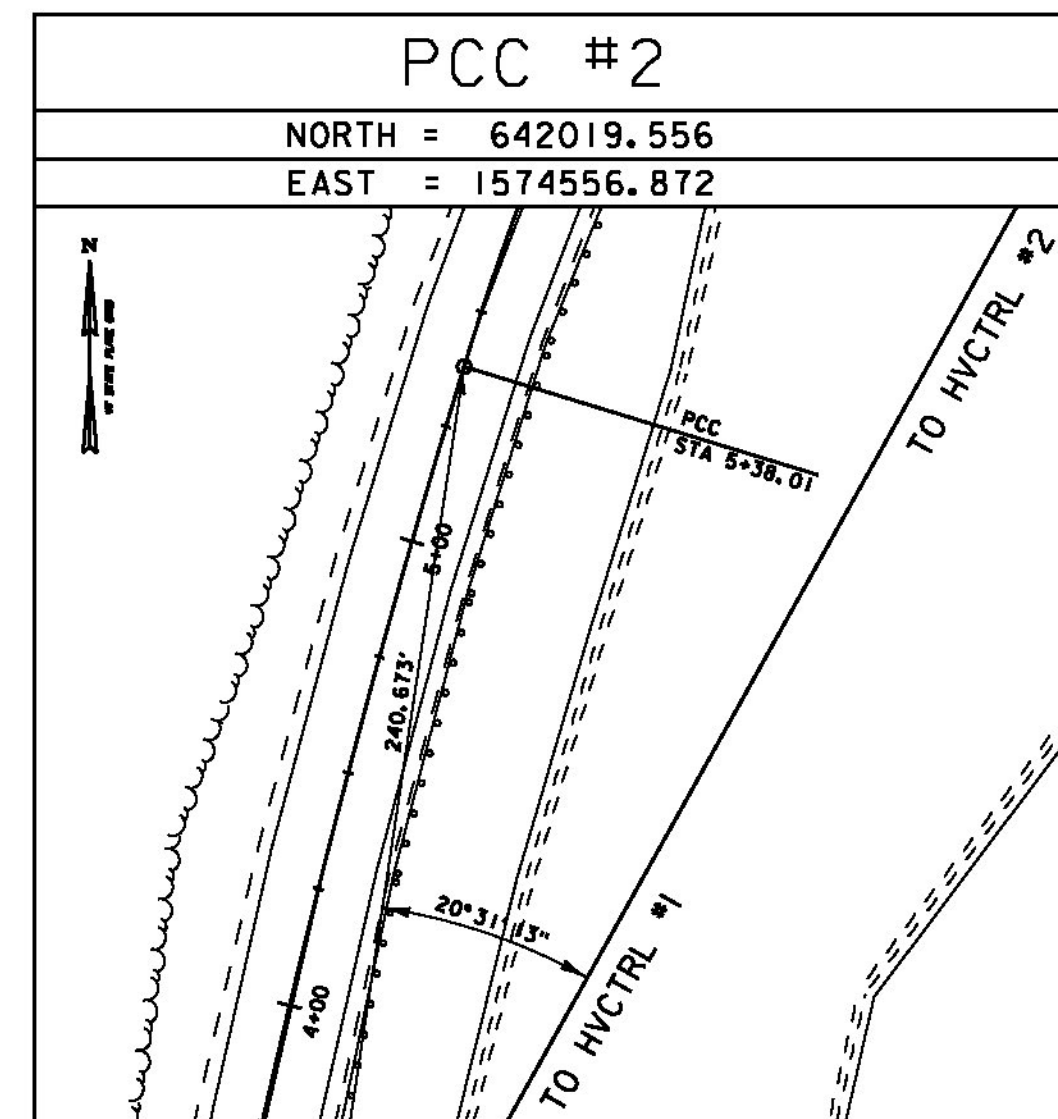
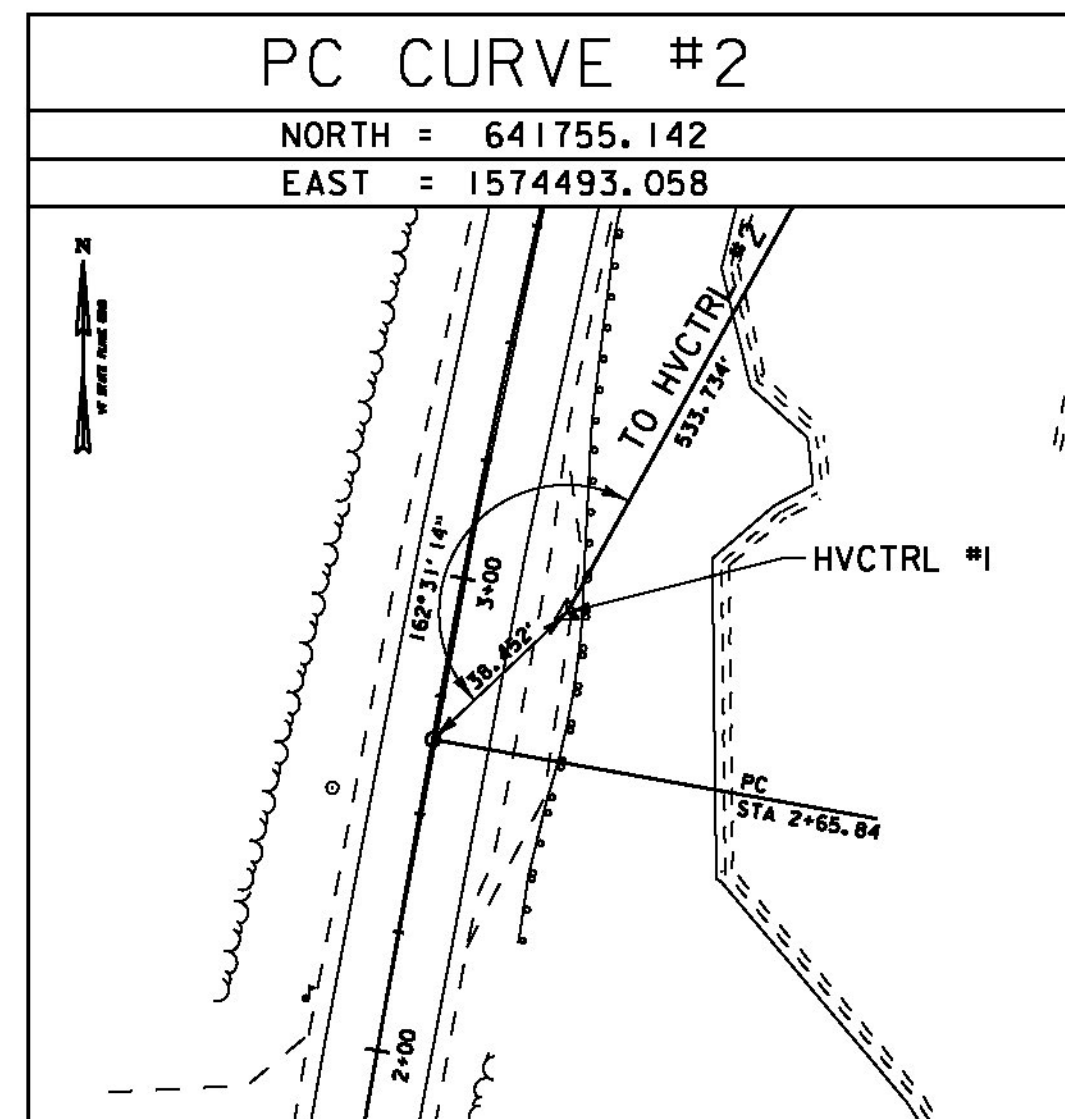
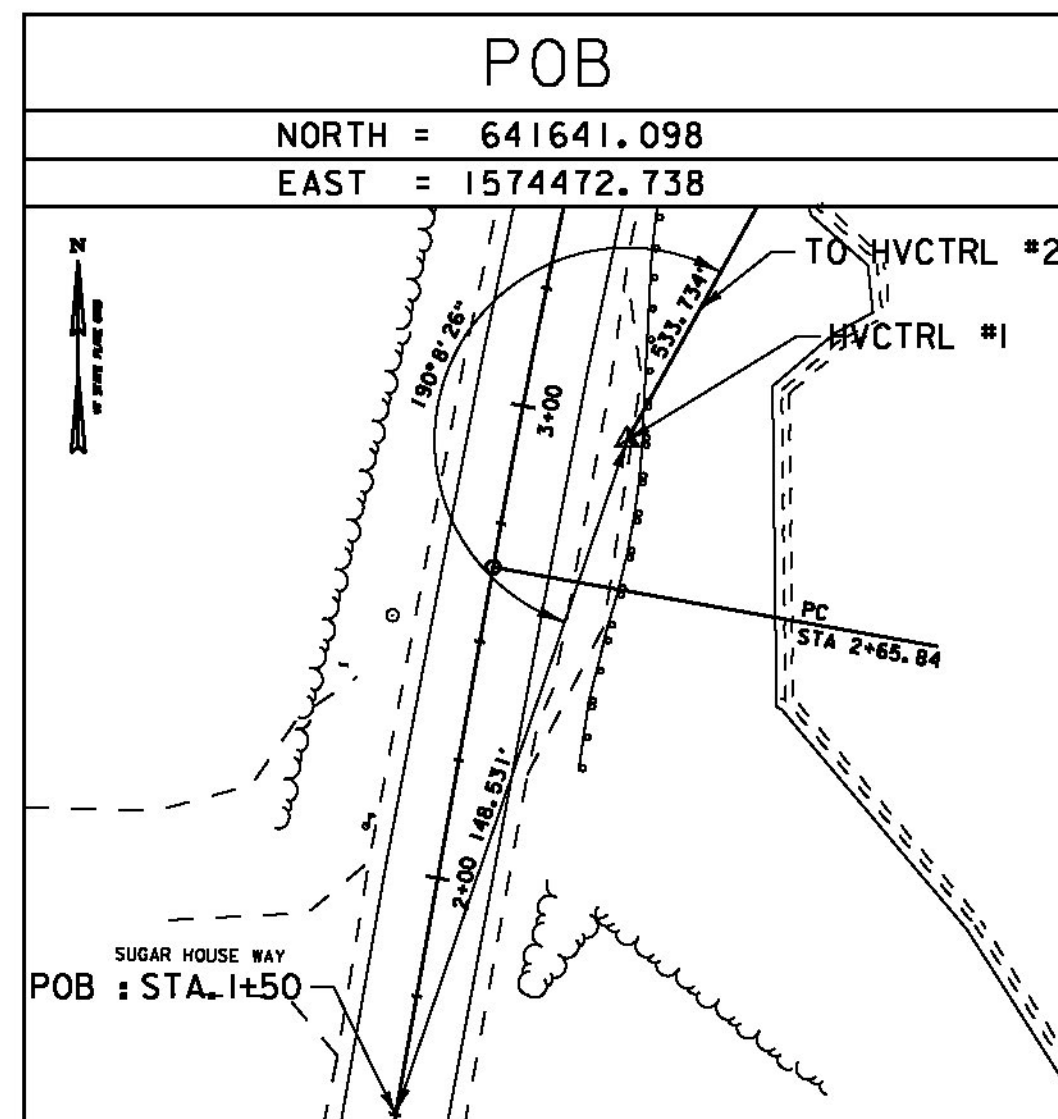
GPS CONTROL POINTS

NONE

TRAVERSE TIES



ALIGNMENT TIES

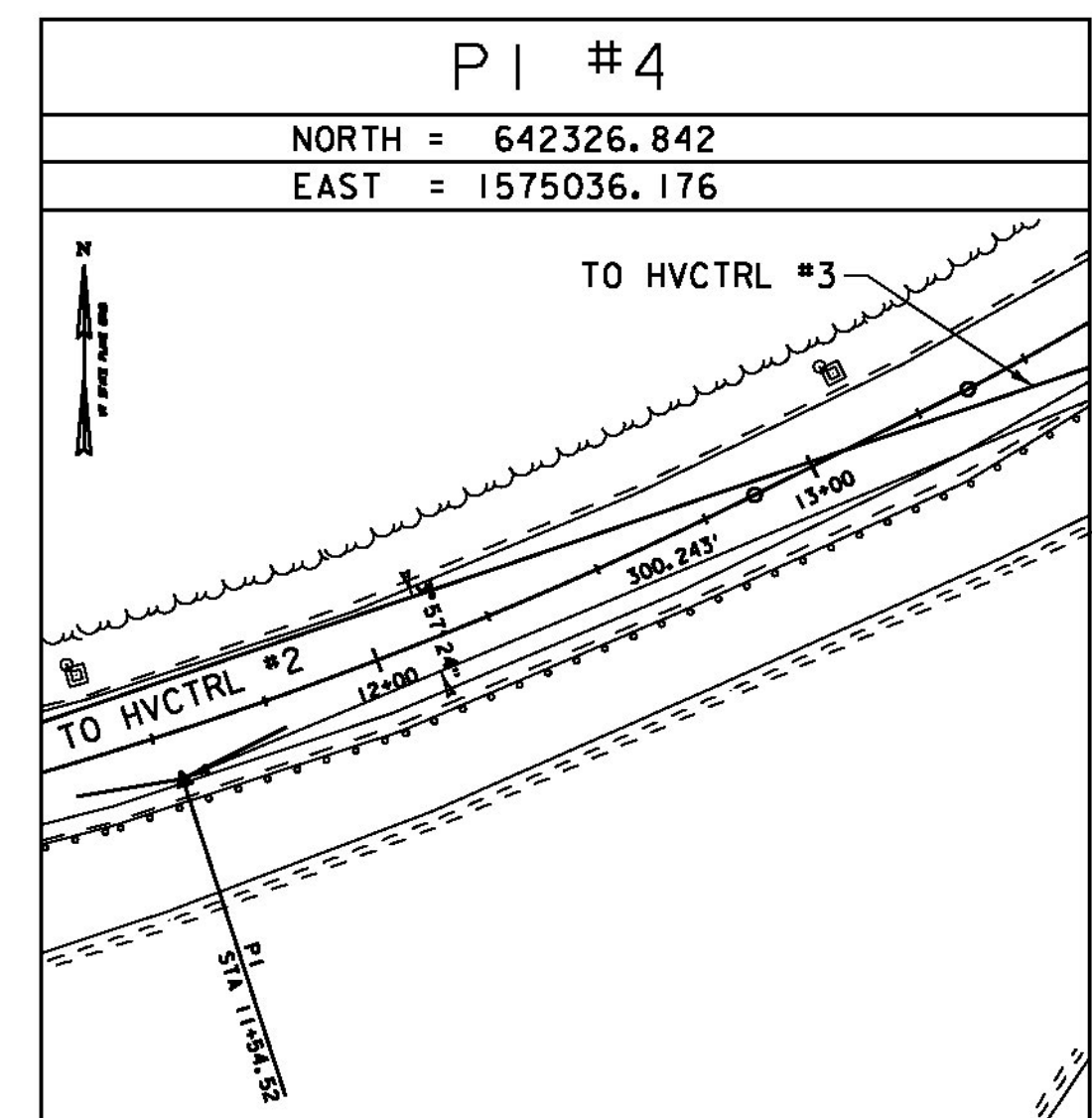
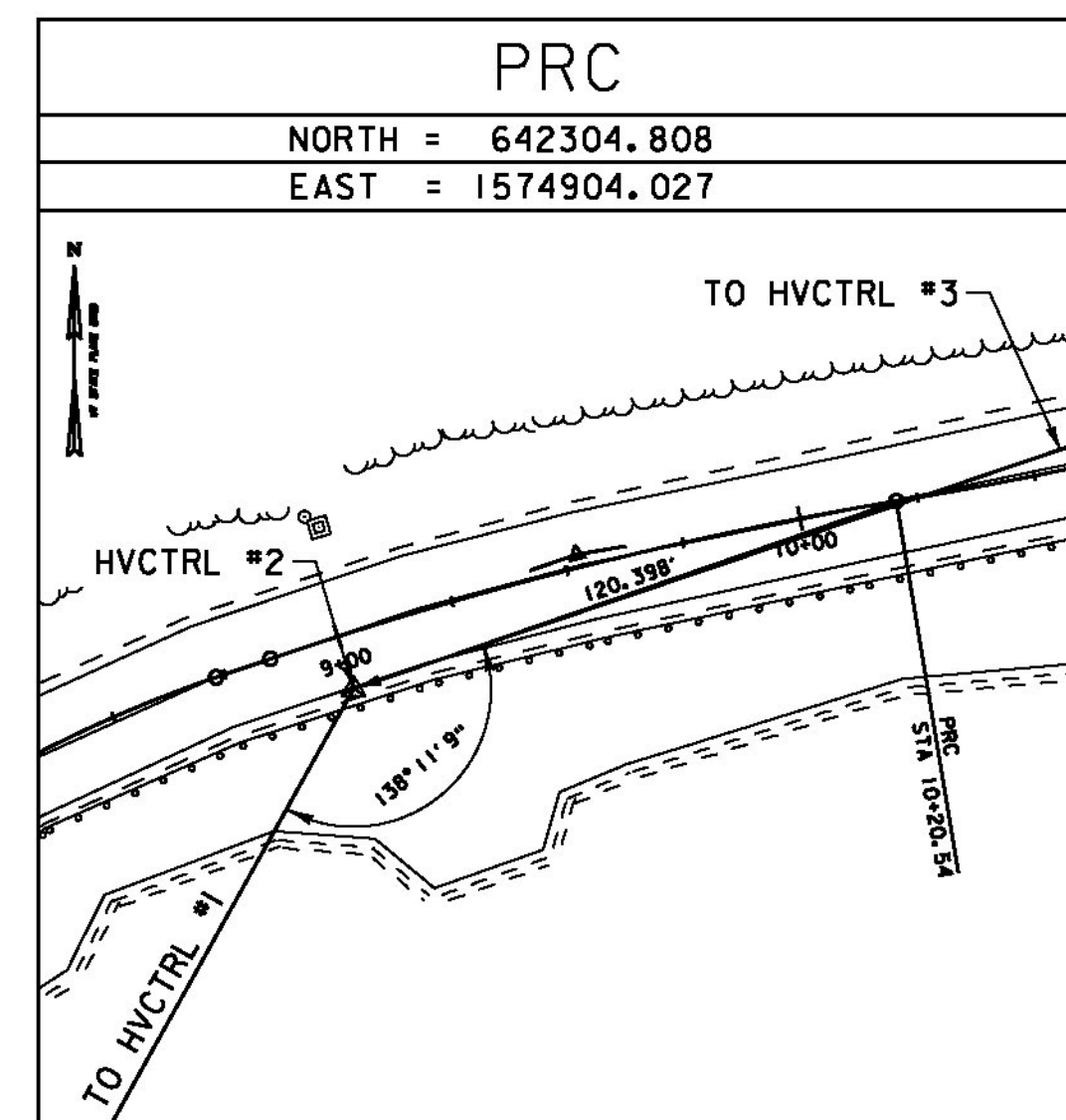
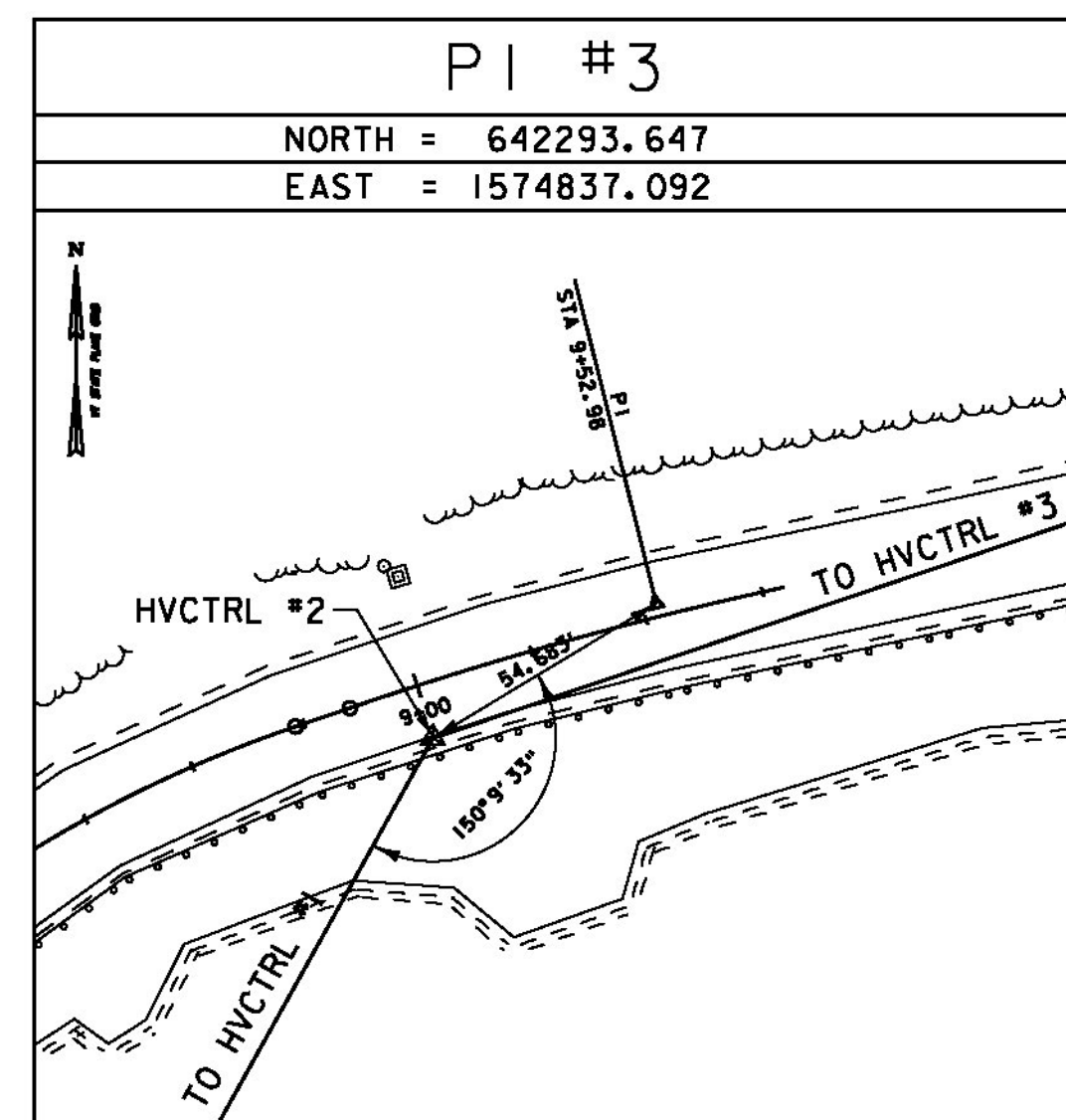
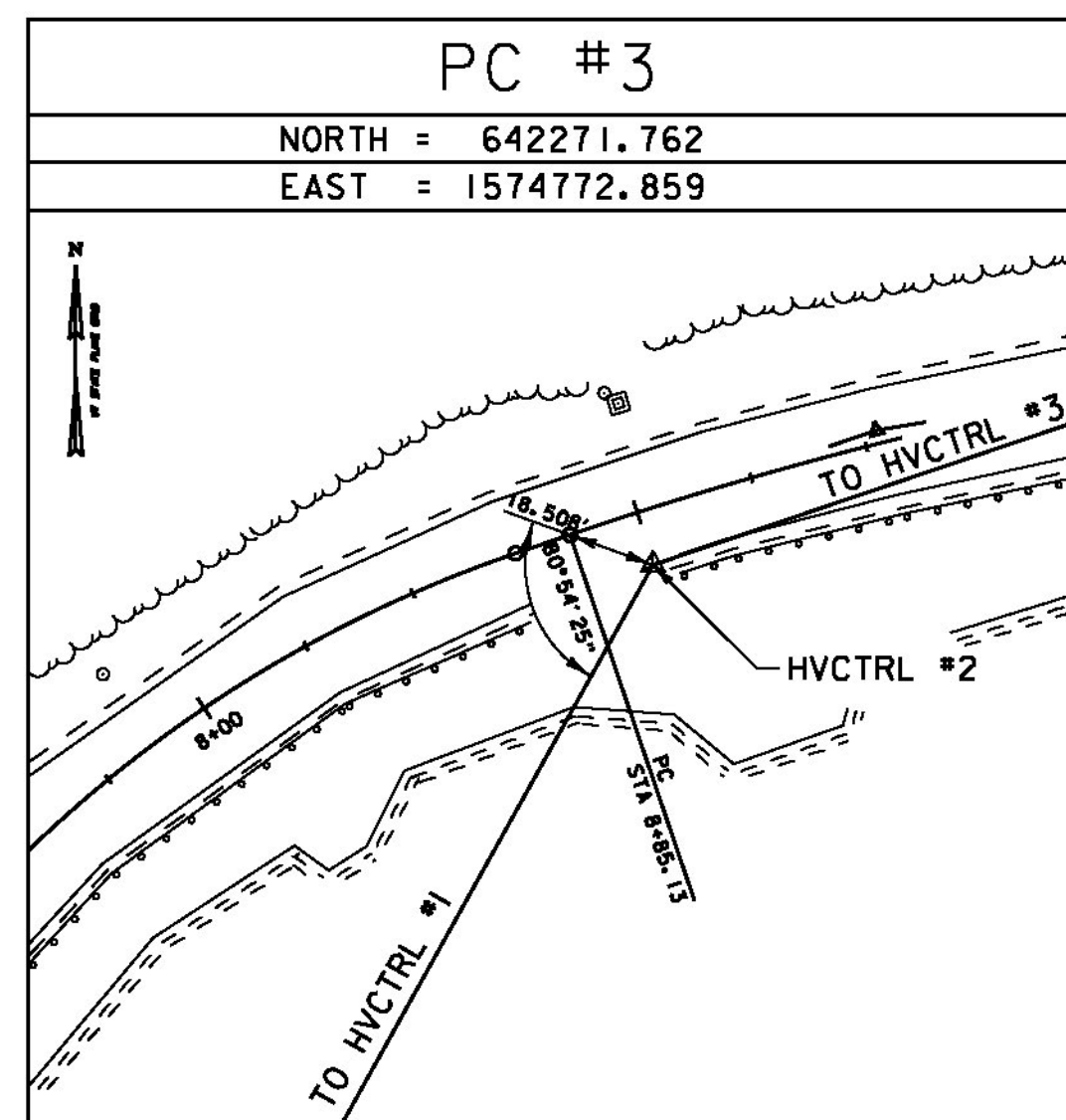
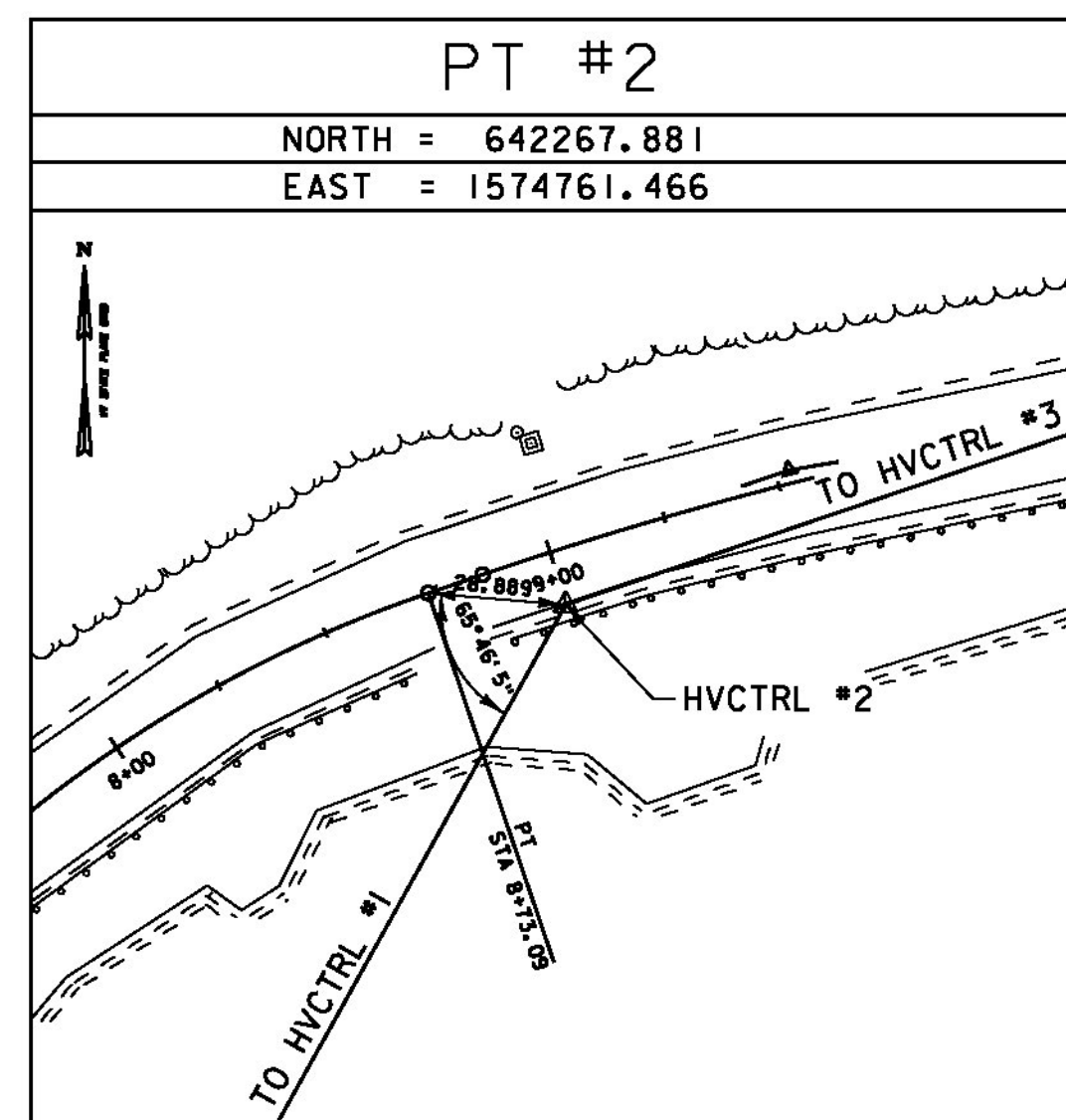


DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83 (11)
ADJUSTMENT	COMPASS

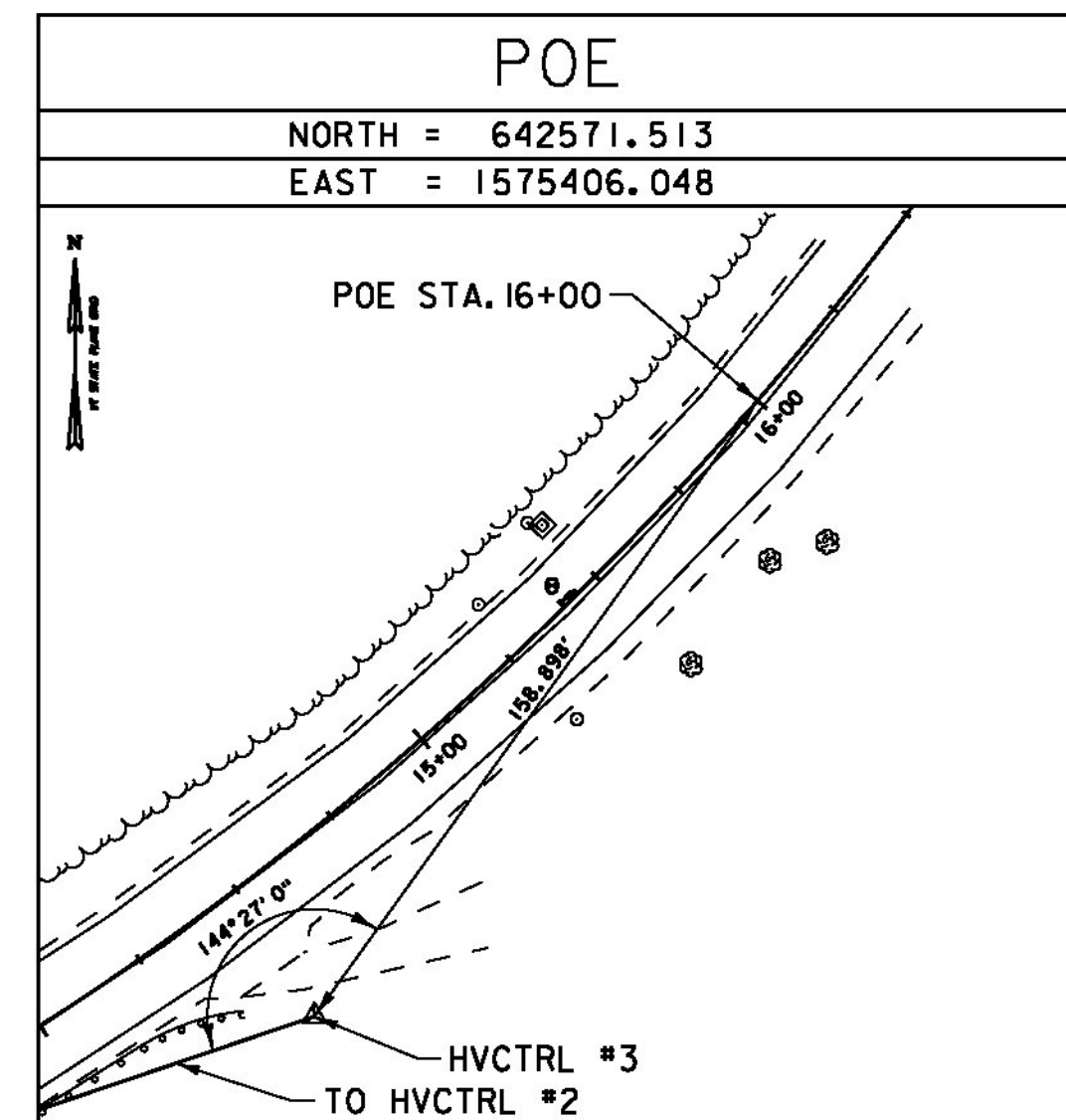
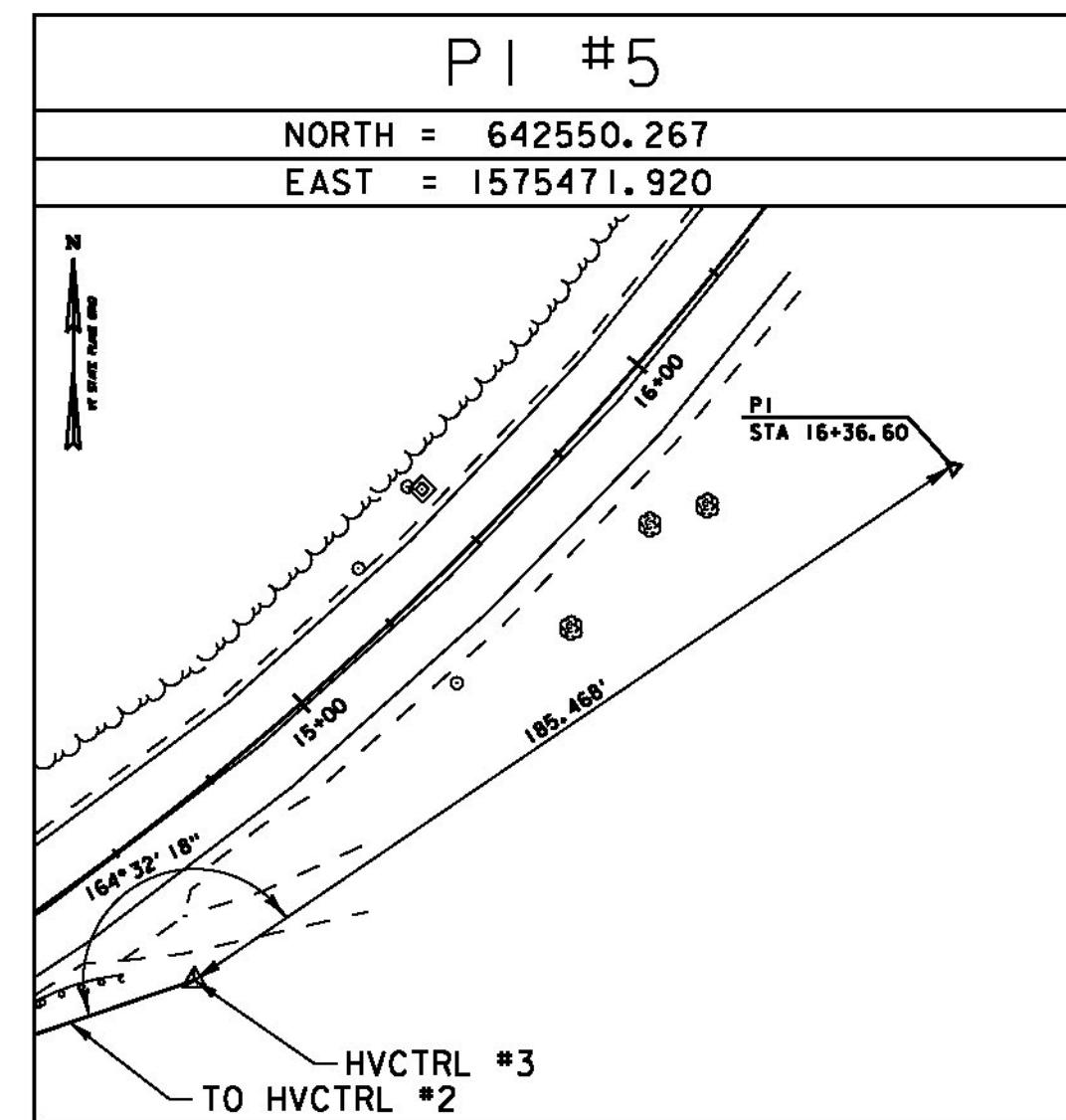
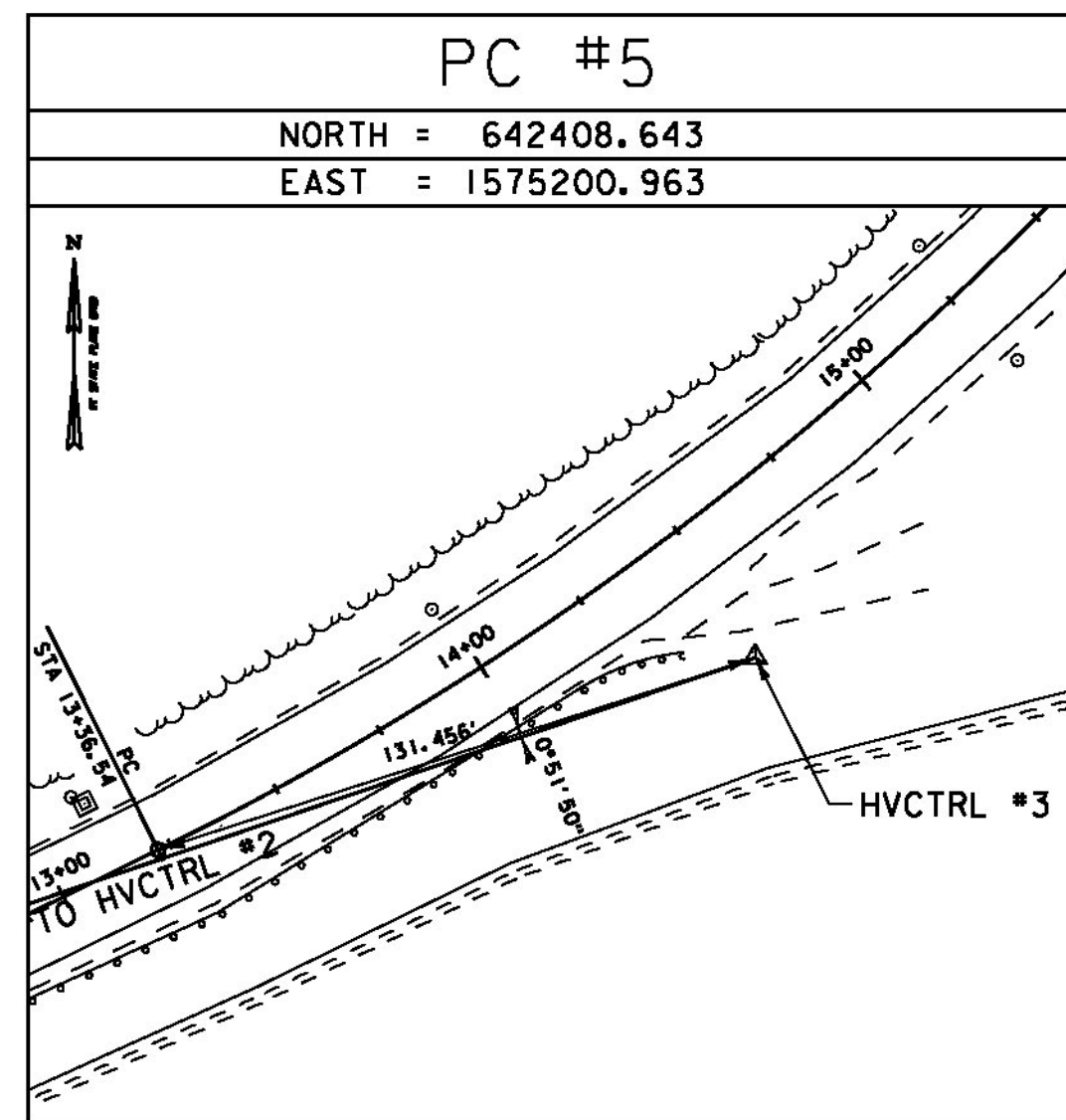
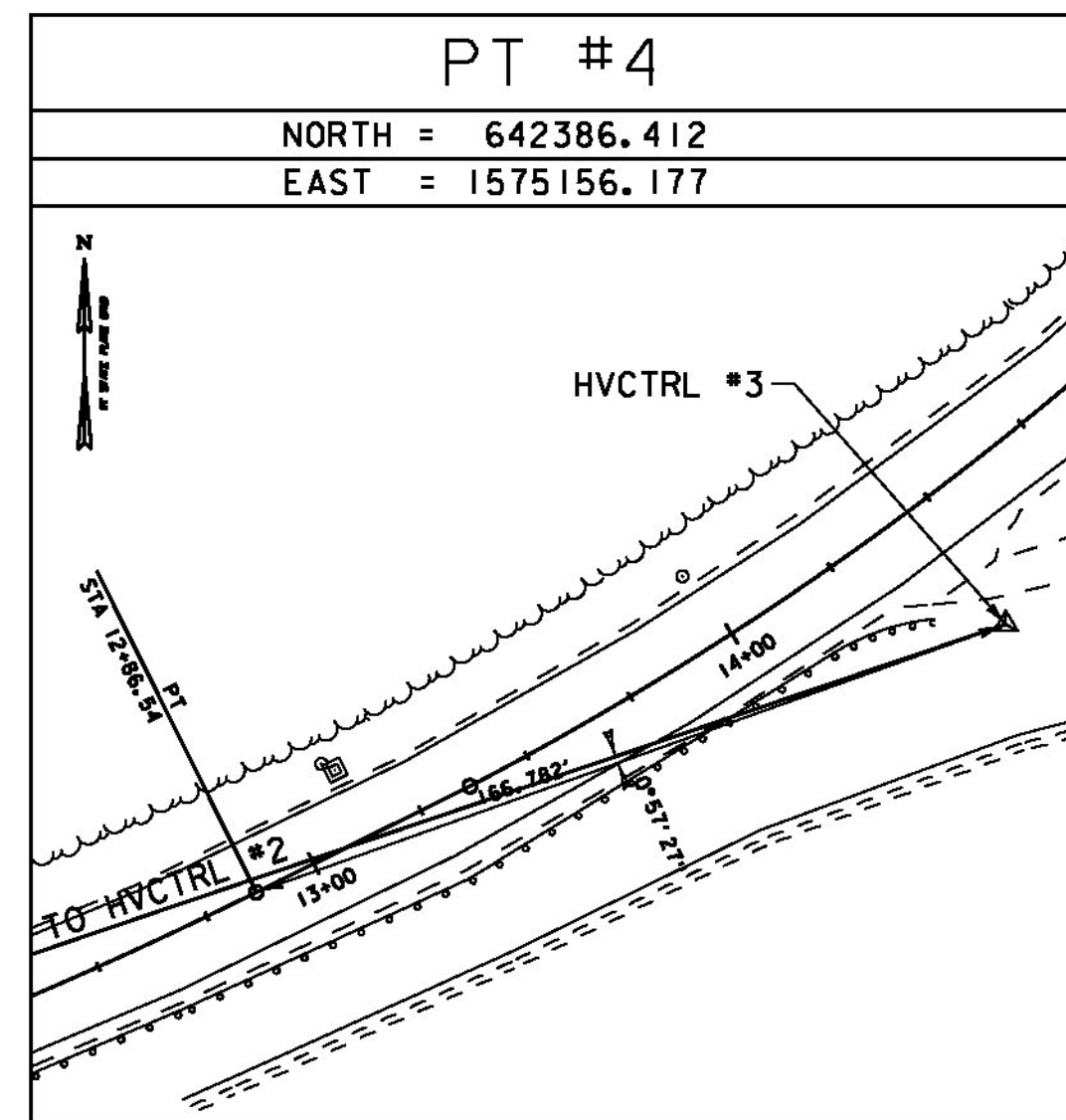
NOT TO SCALE

PROJECT NAME: MORETOWN	
PROJECT NUMBER: ER STP 0167 (15)	
FILE NAME: z12c524+i.dgn	PLOT DATE: 2/17/2015
PROJECT LEADER: J. TUCKER	DRAWN BY: B. MACK
DESIGNED BY: B. BRESLEND	CHECKED BY: A. SANZ
TIE SHEET 1	SHEET 7 OF 57

ALIGNMENT TIES



ALIGNMENT TIES



ALIGNMENT TIES

DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83 (11)
ADJUSTMENT	COMPASS

PROJECT NAME:	MORETOWN
PROJECT NUMBER:	ER STP 0167 (15)
FILE NAME:	z12c5241i.dgn
PROJECT LEADER:	J. TUCKER
DESIGNED BY:	B. BRESLEND
TIE SHEET	2
PLOT DATE:	2/17/2015
DRAWN BY:	B. MACK
CHECKED BY:	A. SANZ
SHEET	8 OF 57

NOT TO SCALE

GENERAL

1. TOPOGRAPHY AND PLANIMETRIC DATA SHOWN ON THESE PLANS ARE BASED ON FIELD SURVEY COMPLETED BY DUBOIS & KING, INC. IN 2013.
2. WRITTEN DIMENSIONS HAVE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN CASE OF CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWINGS OR SPECIFICATION, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR CLARIFICATIONS.
3. ALL UTILITY POLES ARE TO REMAIN UNDISTURBED UNLESS OTHERWISE NOTED IN THESE PLANS.
4. SUBSURFACE FEATURES SUCH AS ELECTRIC AND TELEPHONE LINES, WATER LINES, SEWER LINES, STORM DRAIN AND CULVERTS, ETC., ENCOUNTERED IN THE CONSTRUCTION OF THE PROJECT SHALL BE PROTECTED, SUPPORTED, OR REMOVED AND REPLACED BY THE CONTRACTOR UNLESS OTHERWISE NOTED ON THE PLANS. THE COST OF THIS WORK SHALL BE INCIDENTAL TO THE CONTRACT UNLESS PAYMENT IS SPECIFICALLY NOTED AS A SEPARATE PAY ITEM. THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES AND/OR HIGHWAY DEPARTMENTS WHEN THE WORK INVOLVES THEIR RESPECTIVE FACILITIES. SEE THE UTILITIES SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
5. ANY SURFACE OR SUBSURFACE FEATURES DAMAGED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE RESTORED TO A CONDITION AT LEAST EQUAL TO THAT IN WHICH THEY WERE FOUND IMMEDIATELY PRIOR TO THE BEGINNING OF CONSTRUCTION. ALL COSTS ASSOCIATED WITH THE RESTORATION SHALL BE AT THE SOLE EXPENSE OF THE CONTRACTOR.
6. FORMATION OF EMBANKMENTS (INCLUDING COMPACTION) SHALL BE CONSTRUCTED IN ACCORDANCE WITH DIVISION 200 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION. SUITABLE MATERIAL SHALL MEET THE REQUIREMENTS OF DIVISION 700. PAYMENT FOR CONSTRUCTION OF THE ROADWAY EMBANKMENT USING EXCAVATED MATERIAL SHALL BE CONSIDERED INCIDENTAL TO ITEM 203.15 "COMMON EXCAVATION" OR ITEM 203.27 "UNCLASSIFIED CHANNEL EXCAVATION".
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE DUST CREATED AS A RESULT OF CONSTRUCTION DOES NOT CREATE A NUISANCE OR A SAFETY HAZARD. WHERE AND WHEN DEEMED NECESSARY BY THE ENGINEER, THE CONTRACTOR WILL BE REQUIRED TO WET SECTIONS OF THE CONSTRUCTION AREA WITH WATER. THIS SHALL BE PAID FOR UNDER ITEM 609.10, "DUST CONTROL WITH WATER."
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING FIELD MEASUREMENTS OF ALL EXISTING CONDITIONS AFFECTING THE WORK. ANY DISCREPANCIES IN DIMENSIONS, CHARACTER OR EXTENT OF EXISTING FEATURES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE ADVANCING THE WORK. WORKING DRAWINGS REQUIRED FOR VARIOUS ITEMS OF THE WORK SHALL INDICATE THE ACTUAL FIELD MEASUREMENTS BY THE CONTRACTOR PRIOR TO SUBMITTAL FOR THE ENGINEER'S APPROVAL AND SHALL BE SO NOTED.
9. ITEM 201.10 "CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS" HAS BEEN INCLUDED TO REMOVE ANY VEGETATION, PARTIAL AND FULL TREE REMOVAL (INCLUDING STUMPS), THINNING AND TRIMMING FOR SIGNS, AND ANY ASSOCIATED GRUBBING WITHIN ESTABLISHED ROW. THE ENGINEER MAY EXCLUDE REMOVAL IN SOME AREAS WHERE DEEMED NECESSARY AND APPROPRIATE OR NECESSITATED BY PERMIT REQUIREMENTS PER THE CONSTRUCTION ENVIRONMENTAL ENGINEER'S RECOMMENDATIONS.
10. ALL EXCESS EXCAVATED EARTH SHALL BE DISPOSED OF OFF-SITE, IN A NON-WETLAND OR DRAINAGE WAY AREA. ALL WOODY DEBRIS (TREE LIMBS, BRANCHES, ETC.) SHALL BE CHIPPED AND MULCHED ON-SITE AND USED FOR TEMPORARY EROSION CONTROL. ALL CUT TREE LOGS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE. ALL STUMPS SHALL BE GROUND DOWN ON SITE AND THE CHIPS USED AS EROSION CONTROL. PAYMENT FOR THE DISPOSAL OF EXCESS EXCAVATED MATERIAL SHALL NOT BE PAID FOR DIRECTLY, BUT WILL BE CONSIDERED INCIDENTAL TO ITEM 203.15, "COMMON EXCAVATION". PAYMENT FOR THE CUTTING AND DISPOSAL OF TREE LOGS, CHIPPING AND SPREADING OF WOODY DEBRIS AND GRINDING OF STUMPS SHALL BE PAID FOR UNDER ITEM 201.10, "CLEARING & GRUBBING INCL. INDV. TREES & STUMPS".
11. RESTORATION OF DISTURBED AREAS: RESTORE DISTURBED AREAS, EXCEPT STONE FILL AREAS AND MULCHED AREAS, WITH TWO INCHES TOPSOIL, SEED, FERTILIZER AND MULCH, UNLESS THE ENGINEER DIRECTS THE USE OF SUITABLE EXCAVATED MATERIAL.
12. THE FINISH GRADE SLOPES AND DITCHES SHALL BE CONSTRUCTED AS SHOWN ON THE PLAN, DETAILS AND CROSS SECTIONS. FINISH SLOPES, DITCHES AND DISTURBED AREAS SHALL RECEIVE A MINIMUM OF TWO INCHES OF TOPSOIL AND SHALL BE FERTILIZED, SEED, AND MULCHED. TURF ESTABLISHMENT SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 651. ALL FILL SHALL BE PLACED IN SIX INCH LIFTS AND THOROUGHLY COMPACTED TO 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D698 STANDARD PROCTOR, UNLESS OTHERWISE SPECIFIED.
13. DELETED
14. ALL COMMERCIAL AND RESIDENTIAL PROPERTY OWNERS SHALL BE GIVEN 48 HOURS ADVANCE NOTIFICATION WHEN CONSTRUCTION IS TO TAKE PLACE ADJACENT TO PROPERTIES.
15. YIELDING MARKER POSTS FOR CULVERTS SHALL BE PLACED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
16. ALL SLOPES, PLACEMENT OF EMBANKMENT MATERIAL AND STEPPING OF LAYERS INTO OLD GROUND SHALL BE IN ACCORDANCE WITH STANDARD DRAWING B-5.
17. TACK COAT / EMULSIFIED ASPHALT IS TO BE APPLIED AT THE RATE OF 0.04 GAL/SY BETWEEN SUCCESSIVE COURSES OF NEW PAVEMENT AND 0.08 GAL/SY BETWEEN EXISTING/COLD PLANED SURFACES AND A NEW SURFACE OR AS DIRECTED BY THE ENGINEER.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING AND UNDERSTANDING ALL APPLICABLE ENVIRONMENTAL PERMITS AND ENSURE THAT ALL CONSTRUCTION REQUIREMENTS ARE MET.
19. ALL DRIVES SHALL RECEIVE A PAVED APRON AS DIRECTED BY THE ENGINEER. ANY AND ALL REQUIRED EXCAVATION IN DRIVE AREAS SHALL BE AS DIRECTED BY THE ENGINEER AND WILL BE PAID FOR UNDER THE APPLICABLE ITEM(S). IF REQUIRED, A NEW DRIVEWAY SUBBASE SHALL BE CONSTRUCTED AND WILL BE PAID FOR UNDER ITEM 301.28, "SUBBASE OF CRUSHED GRAVEL, FINE GRADED". A NEW BITUMINOUS SURFACE SHALL BE CONSTRUCTED AS DIRECTED AND WILL BE PAID FOR UNDER ITEM 900.675, "SPECIAL PROVISION (HAND PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES)".
20. AT COMPLETION OF GRADING, THE SLOPES, DITCHES, AND ALL DISTURBED AREAS SHALL BE SMOOTH AND FREE OF POCKETS WITH SUFFICIENT SLOPE TO ENSURE DRAINAGE.
21. NO WORK BEYOND THE LIMITS OF CONSTRUCTION SHOWN ON THE PLANS WILL BE ALLOWED. WORKING OUTSIDE OF THESE LIMITS MAY TRIGGER ADDITIONAL PERMITTING REQUIREMENTS, WHICH WILL BE THE CONTRACTOR'S RESPONSIBILITY.
22. THE CONTRACTOR SHALL SUBMIT SEDIMENT AND EROSION CONTROL METHODS TO THE ENGINEER FOR APPROVAL 14 DAYS PRIOR TO START OF WORK.
23. TYPICAL CROSS SECTIONS ARE MEANT FOR GUIDANCE ONLY. FIELD CONDITIONS MAY VARY AND MUST BE VERIFIED BY THE CONTRACTOR.
24. A QUANTITY OF ITEM 204.21 "TRENCH EXCAVATION OF ROCK" HAS BEEN INCLUDED IN THE EVENT LEDGE IS ENCOUNTERED DURING THE INSTALLATION OF PROPOSED DRAINAGE OR UNDERDRAIN OUTSIDE THE LIMITS OF UNCLASSIFIED CHANNEL EXCAVATION.

STONE FILL

1. STONE FILL MUST BE PLACED IN A MANNER THAT WILL NOT SEPARATE SMALL AND LARGE STONES. PLACEMENT BY DUMP TRUCK OR DOZER WILL NOT BE ALLOWED. REGULAR MIXING OF THE STONE FILL STOCKPILE DURING INSTALLATION MAY BE NECESSARY TO PREVENT SEPARATION OF THE SMALL AND LARGE STONES.
2. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING THE STONE FILL AS A WELL-COMPACTED MASS, WITH STONES INTERLOCKED WITH EACH OTHER AND WITH NO LARGE VOIDS TO REDUCE THE POTENTIAL FOR UPLIFT AND MOVEMENT AND TO PREVENT GRUBBING MATERIAL FROM WASHING INTO THE STONE.
3. TO ACHIEVE A WELL-COMPACTED MASS, THE CONTRACTOR MAY BE REQUIRED TO FOLLOW THE INITIAL PLACEMENT OF STONE FILL WITH ADDITIONAL PASSES OF SMALLER MATERIAL. SELECTIVE HAND PLACEMENT OF STONE FOLLOWED BY COMPACTION MAY ALSO BE REQUIRED. PAYMENT WILL BE CONSIDERED INCIDENTAL TO THE APPROPRIATE STONE FILL CONTRACT ITEM.
4. THE CONTRACTOR SHALL PROVIDE THE ENGINEER AN OPPORTUNITY TO INSPECT, WITH 48-HOUR PRIOR NOTICE, AN IN-PLACE STONE FILL TEST SECTION. THE TEST SECTION SHALL BE BETWEEN 10 AND 20 FEET LONG AND BE INSTALLED TO THE DEPTH AND ELEVATIONS INDICATED IN THE CONTRACT DOCUMENTS. INSTALLATION OF ADDITIONAL STONE FILL IS NOT TO CONTINUE UNTIL THE ENGINEER HAS COMPLETED AND APPROVED, OR WAIVED THE INSPECTION.
5. CONTRACTOR SHALL PLACE A 12 INCH (MINIMUM) LAYER OF GRUBBING MATERIAL OVER THE TOP OF THE STONE FILL SLOPE DOWN TO THE ORDINARY HIGH WATER (OHW) ELEVATION. GRUBBING MATERIAL SHALL BE WORKED IN TO THE STONE FILL MASS AND INTO ANY SMALL REMAINING SURFACE VOIDS AND CREVICES. ON-SITE EXCAVATED GRUBBING MATERIAL MAY BE USED IF, IN THE OPINION OF THE ENGINEER, AS ADEQUATE PERCENTAGE OF FINES AND ORGANICS IS PRESENT IN THE MATERIAL TO SUPPORT A GRASS COVER.
6. GRUBBING MATERIAL SHALL BE SEED,ED WITH A VAOT RURAL AREA MIX. SEE EROSION CONTROL DETAILS SHEET I FOR FORMULA.

UTILITIES

1. UTILITIES INFORMATION SHOWN HEREON WAS OBTAINED FROM THE BEST AVAILABLE SOURCES AND MAY OR MAY NOT BE EITHER ACCURATE OR COMPLETE. CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF EXISTING UTILITIES AND SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY UTILITY, PUBLIC OR PRIVATE, SHOWN OR NOT SHOWN HEREON. CONTRACTOR SHALL CONNECT OR RECONNECT ALL UTILITIES TO THE NEAREST SOURCE THROUGH COORDINATION WITH THE UTILITY OWNER.
2. THE CONTRACTOR SHALL NOT DISRUPT ANY EXISTING UTILITY SERVICE (PRIVATE OR PUBLIC) WITHOUT WRITTEN AUTHORIZATION FROM VTRANS.
3. THE CONTRACTOR SHALL CONTACT "DIG SAFE" [1-888-DIG-SAFE (1-888-344-7233)] AND ALL AFFECTED UTILITY COMPANIES PRIOR TO PERFORMING ANY EXCAVATION, IN ACCORDANCE WITH DIG SAFE'S RULES OF NOTIFICATION.
4. SEE THE UTILITIES SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

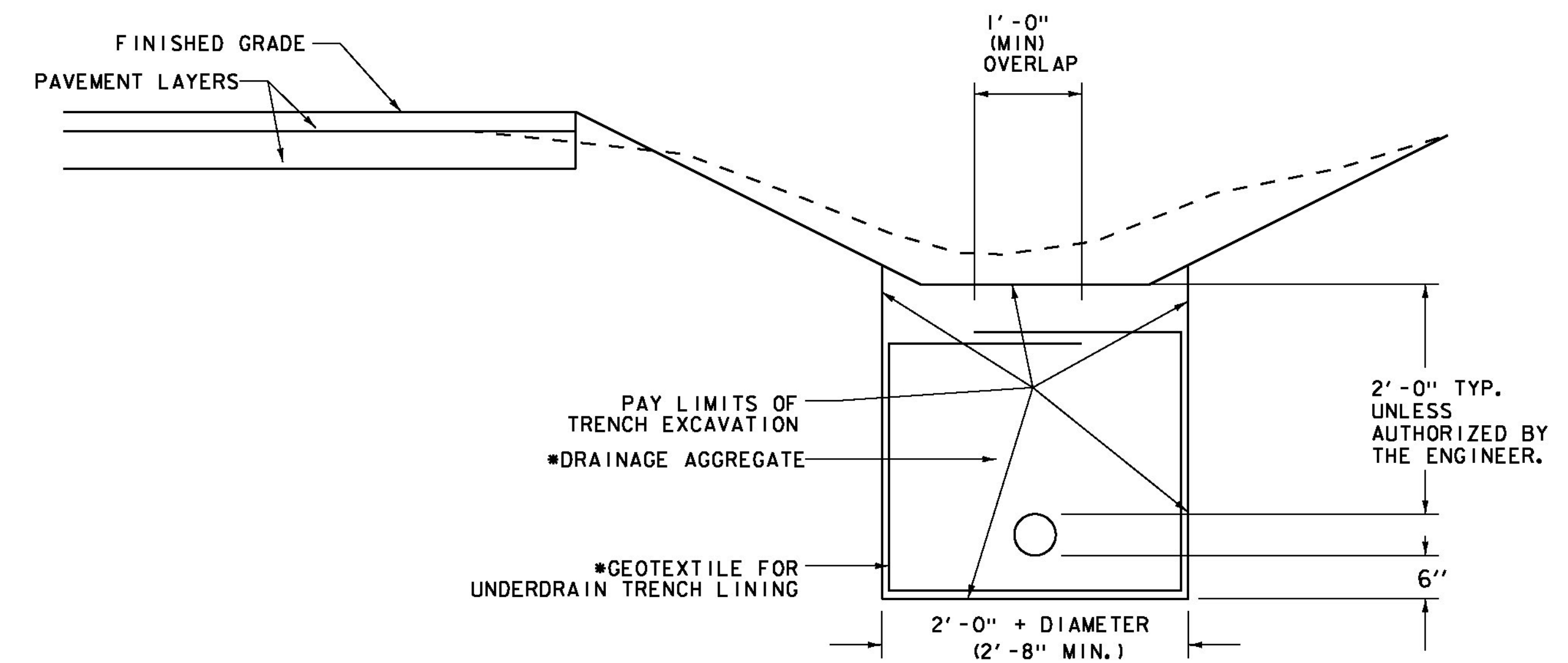


REV	DATE	DESCRIPTION
1	3/24/2015	NOTE 13 DELETED AND NOTE 24 MODIFIED

PROJECT NAME: MORETOWN  
PROJECT NUMBER: ER STP 0167 (15)

FILE NAME: z12c524notes.dgn PLOT DATE: 3/24/2015  
PROJECT LEADER: J. TUCKER DRAWN BY: B. MACK  
DESIGNED BY: B. BRESLEND CHECKED BY: A. SANZ  
PROJECT NOTES SHEET SHEET 9 OF 57

LOCATION					MISC. ITEMS					REMARKS
SITE	STATION	STATION	POS.	605.10 6 INCH UNDERDRAIN PIPE LF	* DRAINAGE AGGREGATE CY	* GEOTEXTILE FOR TRENCH SY	204.20 TRENCH EXCAVATION CY	619.17 YIELDING MARKER POSTS EA	* ITEMS TO BE PAID UNDER ITEM 605.10 "6 INCH UNDERDRAIN PIPE"	
1	2+65	4+85	LT	220.0	65.2	301.5	43.5	2		
2	5+00	6+85	LT	185.0	54.8	253.5	36.5	1		
3	6+95	8+90	LT	195.0	57.8	267.2	38.5	1		
4	9+10	11+38	LT	228.0	67.6	312.4	45.0	1	OUTLET INTO CB	
5	11+50	13+13	LT	163.0	48.3	223.4	32.2	1	OUTLET INTO CB	
6	13+13	15+45	LT	232.0	68.7	317.9	45.8	1	OUTLET INTO CB	
SUBTOTAL				1223.0	362.4	1675.9	241.5	7		
ROUNDING				27.0	-	-	-	-		
TOTAL				1250.0	362.4	1675.9	**	**	** SEE QUANTITY SHEETS FOR TOTAL QUANTITIES.	



DRAINAGE AGGREGATE SHALL MEET THE REQUIREMENTS OF SUBSECTION 704.16.  
 * ITEMS ARE INCLUDED IN THE UNIT PRICE BID FOR PAY ITEM 605.10 "6 INCH UNDERDRAIN PIPE"

UNDERDRAIN DETAIL

NOTES:

1. GEOTEXTILE FOR UNDERDRAIN TRENCH LINING SHALL NOT BE PLACED AROUND UNDERDRAIN WHEN COVER ABOVE UNDERDRAIN IS LESS THAN 1 FOOT.
2. THE END OF THE UNDERDRAIN PIPE AT THE BEGINNING OF ALL UNDERDRAIN RUNS SHALL BE WRAPPED IN GEOTEXTILE FABRIC. PAYMENT FOR THIS WORK IS INCLUDED IN THE UNIT PRICE BID FOR ITEM 605.10 "6 INCH UNDERDRAIN PIPE".

PROJECT NAME: MORETOWN	PLOT DATE: 2/17/2015
PROJECT NUMBER: ER STP 0167 (15)	DRAWN BY: B. MACK
FILE NAME: z12c524detail.dgn	CHECKED BY: A. SANZ
PROJECT LEADER: J. TUCKER	SHEET 10 OF 57
DESIGNED BY: B. BRESLEND	
UNDERDRAIN DETAIL SHEET	





**STATE OF VERMONT**  
**AGENCY OF TRANSPORTATION**  
**MATERIALS & RESEARCH SECTION**  
**SOILS & FOUNDATION UNIT**  
**DRILLING NOTES**

**PROJECT NAME:** Moretown **PROJECT NUMBER:** STP 016-7(15) **SITE:** VT-100B **DATE:** 05/2013  
**BORING CREW:** Mike's Boring & Coring **TESTED BY:** **REVIEWED BY:**

BORING No.	DATE DRILLED	STATION	OFFSET (FT)	DEPTH (FT)	SAMPLE TYPE	FIELD DESCRIPTION	LABORATORY RESULTS							
						SOIL TYPE, COLOR, MOISTURE	% MOISTURE	AASHTO CLASS.	SOIL DES.	% GRAVEL	% SAND	% FINES	LIQUID LIMIT	PLASTIC LIMIT
M-1	5/22/13	1+36	5.5 LT	0-0.77		Asphalt Pavement								
				0.77-2.5		Brown Med. Gr, Damp	2.5	A-1-b	Sandy Gravel	46.3	44.8	8.9		
				2.5-4.5		Brown fine SiSa w/ some stones, Moist	22.1	A-4	Sandy Silt	1.5	42.9	55.6		
				4.5-6.5		Brown fine SiSa, Wet	20.8	A-4	Silty Sand	0.2	63.8	36.1		
M-2	5/22/13	7+32	5.5 RT	0-1.3		Asphalt Pavement								
				1.3-2.5		Brown Gr, Damp	2.4	N/A	Rec. Asph. w/ sand					
				2.5-4.5		Brown, Med Gr into Brown Sa w/ organics, Moist	13.5	A-2-4	Silty Gravelly Sand	25.6	50.3	24.1		
M-3	5/22/13	15+42	5.5 LT	0-0.66		Asphalt Pavement								
				0.66-2.5		Reclaimed Pavement into Brown Med Gr, Damp	1.0	N/A	Rec. Asph. w/ Gravelly Sand					
				2.5-4.5		Brown Med Gr w/ weathered rock, Damp	0.5	A-1-a	Sandy Gravel	53.4	35.1	11.5		

PROJECT NAME: MORETOWN	
PROJECT NUMBER: ER STP 0167 (15)	
FILE NAME: z12c524bor ing. dgn	PLOT DATE: 2/17/2015
PROJECT LEADER: J. TUCKER	DRAWN BY: R. DANIELS
DESIGNED BY: B. BRESLEND	CHECKED BY: J. TUCKER
BORING LOG SHEET	SHEET 12 OF 57

**SOIL CLASSIFICATION**

**AASHTO**

- A1 Gravel and Sand
- A3 Fine Sand
- A2 Silty or Clayey Gravel and Sand
- A4 Silty Soil - Low Compressibility
- A5 Silty Soil - Highly Compressible
- A6 Clayey Soil - Low Compressibility
- A7 Clayey Soil - Highly Compressible

**ROCK QUALITY DESIGNATION**

R.Q.D. (%)	ROCK DESCRIPTION
<25	Very Poor
25 to 50	Poor
51 to 75	Fair
76 to 90	Good
>90	Excellent

**SHEAR STRENGTH**

UNDRAINED SHEAR STRENGTH IN kPa	CONSISTENCY
<12	Very Soft
12-24	Soft
24-48	Med. Stiff
48-96	Stiff
96-192	Very Stiff
>192	Hard

**CORRELATION GUIDE OF "N" TO DENSITY/CONSISTENCY**

DENSITY (GRANULAR SOILS)		CONSISTENCY (COHESIVE SOILS)	
N	DESCRIPTIVE TERM	N	DESCRIPTIVE TERM
<5	Very Loose	<2	Very Soft
5-10	Loose	2-4	Soft
11-24	Med. Dense	5-8	Med. Stiff
25-50	Dense	9-15	Stiff
>50	Very Dense	16-30	Very Stiff
		31-60	Hard
		>60	Very Hard

**COMMONLY USED SYMBOLS**

- ▽ Water Elevation
  - ⊕ Standard Penetration Boring
  - ⊕ Auger Boring
  - ⊙ Rod Sounding
  - S Sample
  - N Standard Penetration Test Blow Count Per 300 mm For: 50.8 mm O.D. Sampler 35.0 mm I.D. Sampler Hammer Weight Of 63.5 kg. Hammer Fall Of 762 mm
  - VS Field Vane Shear Test
  - US Undisturbed Soil Sample
  - B Blast
  - DC Diamond Core
  - MD Mud Drill
  - WA Wash Ahead
  - HSA Hollow Stem Auger
  - AX Core Size 30.1mm
  - BX Core Size 42.0 mm
  - NX Core Size 54.7 mm
  - M Double Tube Core Barrel Used
  - LL Liquid Limit
  - PL Plastic Limit
  - PI Plasticity Index
  - NP Non Plastic
  - w Moisture Content (Dry Wgt. Basis)
  - D Dry
  - M Moist
  - MTW Moist To Wet
  - W Wet
  - Sat Saturated
  - Bo Boulder
  - Gr Gravel
  - Sa Sand
  - St Silt
  - Cl Clay
  - HP Hardpan
  - Le Ledge
  - NLTD No Ledge To Depth
  - CNPF Can Not Penetrate Further
  - TLOB To Ledge Or Boulder
  - NR No Recovery
  - Rec. Recovery
  - %Rec. Percent Recovery
  - ROD Rock Quality Designation
  - CBR California Bearing Ratio
  - < Less Than
  - > Greater Than
  - R Refusal (N > 100)
  - OW Indicates a temporary observation well installed
- | COLOR |        |     |              |
|-------|--------|-----|--------------|
| blk   | Black  | pnk | Pink         |
| bl    | Blue   | pu  | Purple       |
| brn   | Brown  | rd  | Red          |
| dk    | Dark   | tn  | Tan          |
| gry   | Gray   | wh  | White        |
| gn    | Green  | yel | Yellow       |
| lt    | Light  | mtc | Multicolored |
| or    | Orange |     |              |

**GENERAL NOTES**

- The test borings shown herein were drilled by Mike's Boring and Coring een the period from 05-21-13 through 05-23-13.
- Soil and rock classifications, properties and descriptions are based on engineering interpretation from available subsurface information by the Agency and may not necessarily reflect actual variations in subsurface conditions that may be encountered between individual boring or sample locations.
- Observed water levels and/or conditions indicated are as recorded at the time of exploration and may vary according to the prevailing rainfall, methods of exploration and other factors.
- Engineering judgement was exercised in preparing the subsurface information presented herein. Analysis and interpretation of subsurface data was performed and interpreted for Agency design and estimating purposes. Presentation of the information in the Contract is intended to provide the Contractor access to the same data available to the Agency. The subsurface information is presented in good faith and is not intended as a substitute for personal investigation, independent interpretation, independent analysis or judgement by the Contractor.
- Pictorial structure details shown on the boring plan layout or soils profile are for illustrative purposes only and may not accurately portray final contract details.
- Terminology used on boring logs to describe the hardness, degree of weathering, and spacing of fractures, joints and other discontinuities in the bedrock is defined in the AASHTO Manual on Subsurface Investigations, 1988.

SEE LAYOUT SHEETS FOR BORING LOCATIONS

**DEFINITIONS (AASHTO)**

- BEDROCK (LEDGE) - Rock in its native location of indefinite thickness.
- BOULDER - A rock fragment with an average dimension > 304.8 mm.
- COBBLE - Rock fragments with an average dimension between 76.2 and 304.8 mm.
- GRAVEL - Rounded particles of rock < 76.2 mm and > 2 mm (#10 sieve).
- SAND - Particles of rock < 2 mm (#10 sieve) and > 75 μm (#200 sieve).
- SILT - Soil < 75 μm (#200 sieve), non or slightly plastic and exhibits no strength when air-dried.
- CLAY - Fine grained soil, exhibits plasticity when moist and considerable strength when air-dried.
- VARVED - Alternate layers of silt and clay.
- HARDPAN - Extremely dense soil, cemented layer, not softened when wet.
- MUCK - Soft organic soil (containing > 10% organic material).
- MOISTURE CONTENT - Weight of water divided by dry weight of soil.
- FLOWING SAND - Granular soil so saturated (loose) that it flows into drill casing during extraction of wash rod.
- STRIKE - Angle from magnetic north to line of intersection of bed with a horizontal plane.
- DIP - Inclination of bed with a horizontal plane.

PROJECT NAME: MORETOWN	PLOT DATE: 2/17/2015
PROJECT NUMBER: ER STP 0167 (15)	DRAWN BY: B. MACK
FILE NAME: z12c524bor ing. dgn	CHECKED BY: A. SANZ
PROJECT LEADER: J. TUCKER	SHEET 13 OF 57
DESIGNED BY: B. BRESLEND	
BORING LAYOUT SHEET	

# QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES			
								ROADWAY	EROSION CONTROL	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
								1			1		LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10	--			EARTHWORKS SUMMARY
								2200			2200		CY	COMMON EXCAVATION	203.15	5			FILL REQUIRED
								50			50		CY	SOLID ROCK EXCAVATION	203.16	EST	125	CY	EARTHWORKS (109 CY * 1.15)
								4510			4510		CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27	7	58	CY	ITEM DETAIL SHEET (50 CY * 1.15)
								620			620		CY	TRENCH EXCAVATION OF EARTH	204.20	4.5	183	CY	SUBTOTAL
								20			20		CY	TRENCH EXCAVATION OF ROCK	204.21	EST			FILL AVAILABLE
								1			1		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	--	1100	CY	COMMON EXCAVATION (2200 CY * 0.50)
								310			310		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	1	1350	CY	UNCLASSIFIED CHANNEL EXCAVATION (4510 CY * 0.30)
								650			650		SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10	50	25	CY	SOLID ROCK EXCAVATION (50 CY * 0.495)
								1850			1850		TON	SUBBASE OF CRUSHED GRAVEL, FINE GRADED	301.28	50	180	CY	UNDERDRAIN EXCAVATION (241.5 CY * 0.75)
								350			350		CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	6	2655	CY	SUBTOTAL
								80			80		CY	AGGREGATE SHOULDERS, IN PLACE	402.10	4			FILL AVAILABLE
								1			1		LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50	EST	600	SY	COMMON EXCAVATION
								2100			2100		TON	SUPERPAVE BITUMINOUS CONCRETE PAVEMENT	490.30	48.1	1242	CY	EARTHWORKS
								1			1		LU	AIR VOIDS PAY ADJUSTMENT (N.A.B.I.)	490.31	--	400	CY	REMOVAL OF EXISTING PAVEMENT
								1			1		LU	MAT DENSITY PAY ADJUSTMENT (N.A.B.I.)	490.32	--	5	CY	UNSUITABLE SUBBASE MATERIAL UNDERCUT
								12			12		LF	18" RCP CLASS III	601.0815	--	2200	CY	ROUNDING
								210			210		LF	24" CPEP(SL)	601.2620	7			TOTAL
								60			60		LF	36" CPEP(SL)	601.2630	4			COLD PLANING, BITUMINOUS PAVEMENT
								60			60		LF	CLEANING CULV. PIPE, IN-PLACE [0 TO 24 IN., INCL.]	601.995	4			MAINLINE
								4			4		EACH	PRECAST REINFORCED CONCRETE DROP INLET WITH CAST IRON GRATE	604.18	--	0	SY	SIDEROAD APRONS
								1250			1250		LF	6 INCH UNDERDRAIN PIPE	605.10	27	50	SY	ROUNDING
								40			40		HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	608.25	EST	650	SY	TOTAL
								20			20		HR	POWER BROOM RENTAL, TYPE I	608.30	EST			SUPERPAVE BITUMINOUS CONCRETE PAVEMENT
								40			40		HR	TRUCK RENTAL	608.37	EST			WEARING COURSE TYPE IVS
								10			10		MGAL	DUST CONTROL WITH WATER	609.10	EST	420.4	TON	ROUTE 100B
								450			450		CY	STONE FILL, TYPE II	613.11	1.5			INTERMEDIATE COURSE TYPE IVS
								3200			3200		CY	STONE FILL, TYPE IV	613.13	288.6	393.3	TON	ROUTE 100B
								1			1		EACH	RELOCATE MAILBOX, SINGLE SUPPORT	617.10	--			BASE COURSE TYPE IIS
								14			14		EACH	YIELDING MARKER POSTS	619.17	--	1220.6	TON	ROUTE 100B
								1250			1250		LF	STEEL BEAM GUARDRAIL, GALVANIZED	621.20	25			SIDEROADS/PULL OFFS TYPE IVS
								2			2		EACH	ANCHOR FOR STEEL BEAM RAIL	621.60	--	17.6	TON	ROUTE 100B
								1220			1220		LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80	9	48.1	TON	ROUNDING
								220			220		HR	UNIFORMED TRAFFIC OFFICERS	630.10	EST.	2100	TON	TOTAL
								900			900		HR	FLAGGERS	630.15	EST.			STONE FILL, TYPE II
										1	1		LS	FIELD OFFICE, ENGINEERS	631.10	--	424	CY	ITEM DETAIL SHEET
										1	1		LS	TESTING EQUIPMENT, BITUMINOUS	631.17	--	24.5	CY	DRAINAGE DETAIL SHEET
										3000	3000		DL	FIELD OFFICE TELEPHONE (N.A.B.I.)	631.26	--	1.5	CY	ROUNDING
								1			1		LS	MOBILIZATION/DEMobilIZATION	635.11	--	450	CY	TOTAL
								1			1		LS	TRAFFIC CONTROL	641.10	--			TRENCH EXCAVATION OF EARTH

PROJECT NAME: MORETOWN  
PROJECT NUMBER: ER STP 0167 (15)

FILE NAME: z12c524frm.dgn  
PROJECT LEADER: J. TUCKER  
DESIGNED BY: B. BRESLEND  
QUANTITY SHEET 1

PLOT DATE: 2/17/2015  
DRAWN BY: B. MACK  
CHECKED BY: A. SANZ  
SHEET 14 OF 57

# QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES									TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES			
							ROADWAY	EROSION CONTROL	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
							2			2		EACH	PORTABLE CHANGEABLE MESSAGE SIGN	641.15	--			
													BEGIN OPTION AA					
							3300			3300		LF	DURABLE 4 INCH WHITE LINE, THERMOPLASTIC	646.402	200			
							3300			3300		LF	DURABLE 4 INCH WHITE LINE, POLYUREA	646.404	200			
													END OPTION AA					
													BEGIN OPTION BB					
							3300			3300		LF	DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC	646.412	200			
							3300			3300		LF	DURABLE 4 INCH YELLOW LINE, POLYUREA	646.414	200			
													END OPTION BB					
							9400			9400		LF	TEMPORARY 4 INCH WHITE LINE, PAINT	646.602	100			
							9400			9400		LF	TEMPORARY 4 INCH YELLOW LINE, PAINT	646.612	100			
							670			670		EACH	LINE STRIPING TARGETS	646.76	10			
							1600			1600		SY	GEOTEXTILE FOR ROADBED SEPARATOR	649.11	11			
							80			80		SY	GEOTEXTILE UNDER STONE FILL	649.31	7			
								140		140		SY	GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED	649.515	8			
								480		480		SY	GEOTEXTILE FOR FILTER CURTAIN	649.61	6			
								90		90		LB	SEED	651.15	5			
								200		200		LB	FERTILIZER	651.18	29			
								1		1		TON	AGRICULTURAL LIMESTONE	651.20	0.3			
								0.1		0.1		TON	HAY MULCH	651.25	--			
								200		200		CY	TOPSOIL	651.35	18			
							2000			2000		SY	GRUBBING MATERIAL (12")	651.40	80			
							1500			1500		SY	GRUBBING MATERIAL (2")	651.40	20			
							50			50		SY	GRUBBING MATERIAL (6")	651.40	8			
								1		1		LS	EPSC PLAN	652.10	--			
								150		150		HR	MONITORING EPSC PLAN	652.20	--			
								1		1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	652.30	--			
								1900		1900		SY	TEMPORARY EROSION MATTING	653.20	25			
								15		15		CY	TEMPORARY STONE CHECK DAM, TYPE I	653.25	3			
								60		60		CY	VEHICLE TRACKING PAD	653.35	6			
								6		6		EACH	INLET PROTECTION DEVICE, TYPE I	653.40	--			
								1460		1460		LF	BARRIER FENCE	653.50	6			
							30			30		SF	TRAFFIC SIGNS, TYPE A	675.20	0.5			
							90			90		LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341	--			
							5			5		EACH	REMOVING SIGNS	675.50	--			
							2			2		EACH	DELINEATOR WITH STEEL POST	676.10	--			
							2			2		EACH	REMOVAL OF EXISTING DELINEATOR	676.12	--			
							1			1		LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50	--			
							900			900		CY	SPECIAL PROVISION (GRANULAR BORROW)	900.608	29			
							3			3		EACH	SPECIAL PROVISION (CORING CONCRETE)	900.620	--			

PROJECT NAME: MORETOWN  
 PROJECT NUMBER: ER STP 0167 (15)  
 FILE NAME: z12c524 frm. dgn  
 PROJECT LEADER: J. TUCKER  
 DESIGNED BY: B. BRESLEND  
 QUANTITY SHEET 2  
 PLOT DATE: 2/17/2015  
 DRAWN BY: B. MACK  
 CHECKED BY: A. SANZ  
 SHEET 15 OF 57



STATE OF VERMONT  
AGENCY OF TRANSPORTATION

ITEM DETAIL SHEET

BEGIN STATION	END STATION	POS.	203.16		204.21	204.22	210.10	301.28	301.35	402.10	613.11	613.13	621.20	621.60	621.80	649.11	649.31	651.35	651.40	651.40	651.40	676.10	REMARKS
			SOLID ROCK EXCAV.	FILL	TRENCH EXC. OF ROCK	TRENCH EXC. OF EARTH, EXP. (N. A. B. I.)	COLD PLANING BITUM. PVMNT.	SUBBASE OF CR. GRAVEL, FINE GR.	SUBBASE OF DENSE GRD. CR. STONE	AGGREG. SHLDRS. IN PLACE	STONE FILL, TYPE II	STONE FILL, TYPE IV	STEEL BEAM G. R. GALV.	ANCHOR FOR STEEL BEAM G. R.	REMOVAL & DISP. OF G. R.	GEOTECH. FOR ROADBED SEP.	GEOTECH. UNDER STONE FILL	TOPSOIL	GRUBBING MATERIAL (12")	GRUBBING MATERIAL (2")	GRUBBING MATERIAL (2")	DEL IN. W/ STEEL POST	
			CY	CY	CY	CY	SY	TON	CY	CY	CY	CY	LF	EA	LF	SY	SY	CY	SY	SY	SY	EA	
1+00	16+50	LT&RT	50		20	1		1611										172					ESTIMATED QUANTITIES TO BE USED AS DIRECTED
1+00	2+00	LT&RT					300			2													
2+00	2+33	LT&RT								2													
2+07	14+32	RT		50									1225	2	1211	900		10				2	SEE VTRANS STANDARD G-1D FOR END SECTION DETAILS. SEE NOTE BELOW.
2+33	14+24	LT&RT						344	67	396	2911.4								1920		1480		DITCH ON LT., RECON. OF SH. & SLOPE STABIL., RT
2+33	2+58	LT								9										14			PLACE STONE ON SLOPES GREATER THAN 1:1.5 FOR SLOPE STABILIZATION
4+76	4+97	LT								8										12			PLACE STONE ON SLOPES GREATER THAN 1:1.5 FOR SLOPE STABILIZATION
6+75	6+95	LT								11										16			PLACE STONE ON SLOPES GREATER THAN 1:1.5 FOR SLOPE STABILIZATION
14+24	15+50	LT&RT								3													
15+50	16+50	LT&RT					300			2													
SUBTOTAL			50	50	20	1	600	1611	344	76	424	2911.4	1225	2	1211	900	73	182	1920	42	1480	2	
ROUNDING			-	-	-	-	50	-	6	4	-	288.6	25	-	9	-	7	18	80	8	20	-	
TOTAL			50	50	20	1	650	1611	350	80	424	3200	1250	2	1220	900	80	200	2000	50	1500	2	

NOTE:  
SUITABLE FILL FROM EXCAVATED MATERIAL IS  
REQUIRED AT GUARDRAIL END SECTIONS. PAYMENT  
WILL BE CONSIDERED INCIDENTAL TO THE APPROPRIATE  
EXCAVATION CONTRACT ITEM.

PROJECT NAME: MORETOWN  
PROJECT NUMBER: ER STP 0167 (15)

FILE NAME: z12c524detail.dgn  
PROJECT LEADER: J. TUCKER  
DESIGNED BY: B. BRESLEND  
ITEM DETAIL SHEET

PLOT DATE: 2/17/2015  
DRAWN BY: B. MACK  
CHECKED BY: A. SANZ  
SHEET 17 OF 57





# 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	FORTE, ANGELO F., FORTE, LOUIS P., FORTE, GEORGE M., FORTE, JAMES P.	1	2+33.01 RT 1+40 RT 1+73 RT	2+48.82 RT 2+33.03 RT 2+31 RT	520 SF			CONSTRUCTION SLOPE	T T	1,263 SF 98 SF	WD	11/10/14	MORETOWN	104	1-6	INCL. EC
2	ALLEN, THOMAS L., VENEMA, STEPHANIE, SEGUIN, WILLIAM	1, 2, 3	1+57.00 LT 2+27 LT 2+35 LT 3+68 LT 6+70 LT 6+76 LT	2+01.00 LT 2+64 LT 2+59 LT 5+29 LT 6+99 LT 6+96 LT			CONSTRUCTION INSTALL CONSTRUCTION CONSTRUCTION INSTALL	T T T T T	292 SF 448 SF 176 SF	GTR	11/06/14	MORETOWN	103	312-315	DRIVE MM 0202; 44' WIDE GRAVEL WITH PAVED APRON INCL. BF INLET PROTECTION PAD INCL. BF INCL. BF INLET PROTECTION PAD	
3A	VENEMA, STEPHANIE & ALLEN, THOMAS L., trustees of the VENEMA-ALLEN JOINT TRUST	1	2+47.91 RT	3+68.67 RT	1,908 SF						WD	10/23/14	MORETOWN	103	253	
3B		1, 2, 3	4+30.00 RT 14+23.54 RT 14+33.00 RT 14+41 RT 15+25 RT 15+32 RT 15+44 RT	14+23.79 RT 14+93 RT 14+58.00 RT 15+40 RT 15+41 RT 15+40 RT 16+13 RT	0.25 A		SLOPE ACCESS CULVERT & DRAINAGE INSTALL INSTALL	T T P T T	600 SF 1,327 SF						11,090 SF± DRIVE MM 0230; 25' WIDE GRAVEL WITH 2' PAVED APRON INCLUDES INSTALLATION OF PIPE EXTENTION EC EC	
4	GREEN MOUNTAIN POWER CORPORATION															UTILITY
5	WAITSFIELD AND CHAMPLAIN VALLEY TELECOM															UTILITY

TABLE OF REVISIONS

REVISION NO.	ROW SET SHEET #	DESCRIPTION	DATE
1	1, 9	GENERAL - PROJECT REVISION OF TITLE SHEET BEGIN CONSTRUCTION STATION 1+50 TO 1+00 AND END STATION FROM 16+00 TO 16+50. ALSO SUBSTITUED TYPICAL SHEET TO CURRENT DESGIN FILE FROM CONSULTANT. BY: MT C.O. 9909 APPR. BY: RC	07/03/14
2	4-6,15-17	GENERAL - NEW DESIGN OF THE NU1 FILE BY CONSULTANT REMOVING PLANTING POCKETS. ALSO ADDED (3) EPSC CONST. SHEETS TO SET. BY: MT C.O. 9941 APPR. BY: RC	11/03/14

APPROVED: RYAN CLOUTIER DATE: 06-26-14  
CHIEF, PLANS & TITLES

PROJECT NAME: **MORETOWN**  
PROJECT NUMBER: **ER STP 0167(15)**

FILE NAME: r12c524detail.xls PLOT DATE: **21-NOV-2014**  
PROJECT LEADER: **P. LIBBY** DRAWN BY: **M. TROTTIER**  
DESIGNED BY: **A. EGIZI** CHECKED BY: **R. CLOUTIER**  
**R.O.W. DETAIL SHEET #1** SHEET 20 OF 57

**GEOTEXTILE UNDER STONE FILL**  
 STA. 2+33 - STA. 2+58 LT  
 STA. 4+76 - STA. 4+97 LT

**STONE FILL, TYPE II**  
 STA. 2+33 - STA. 5+50 RT  
 STA. 2+33 - STA. 2+58 LT  
 STA. 4+76 - STA. 4+97 LT

**STONE FILL, TYPE IV**  
 STA. 2+33 - STA. 5+50 RT

**GRUBBING MATERIAL**  
 STA. 2+33 - STA. 5+50 RT  
 STA. 2+33 - STA. 2+58 LT  
 STA. 4+76 - STA. 4+97 LT

**STEEL BEAM GUARDRAIL, GALVANIZED**  
 STA. 2+07 - STA. 5+50 RT

**REMOVING SIGNS**  
 AS SHOWN - 3

**REMOVAL AND DISPOSAL OF GUARDRAIL**  
 STA. 2+26 - STA. 5+50 RT

**TEMPORARY 4 INCH WHITE LINE, PAINT**  
 STA. 1+00 - STA. 5+50 (SOLID LT & RT)

**TEMPORARY 4 INCH YELLOW LINE, PAINT**  
 STA. 1+00 - STA. 5+50 (SOLID LT & RT)

**DURABLE 4 INCH WHITE LINE (SEE OPTION ITEMS)**  
 STA. 1+00 - STA. 5+50 (SOLID LT & RT)

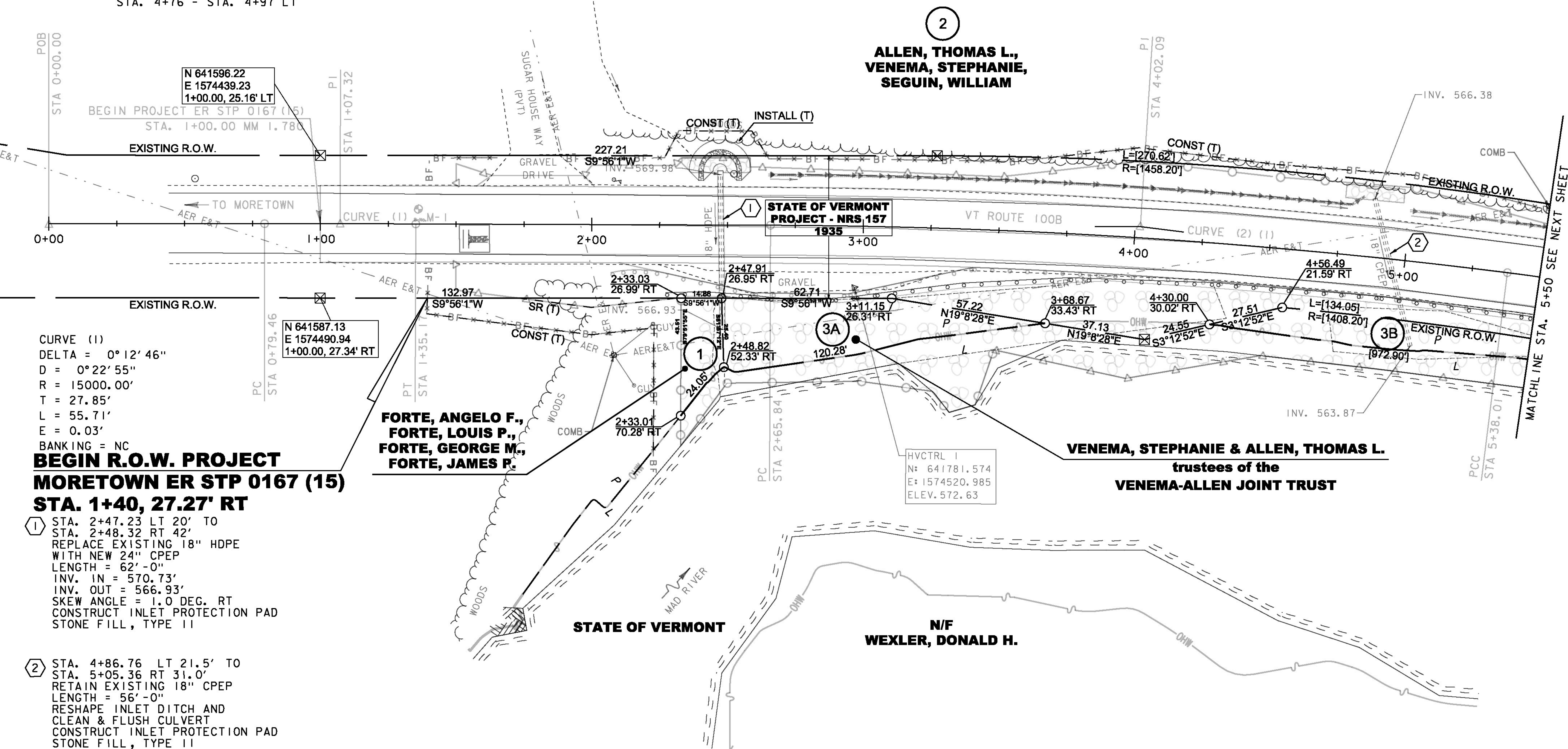
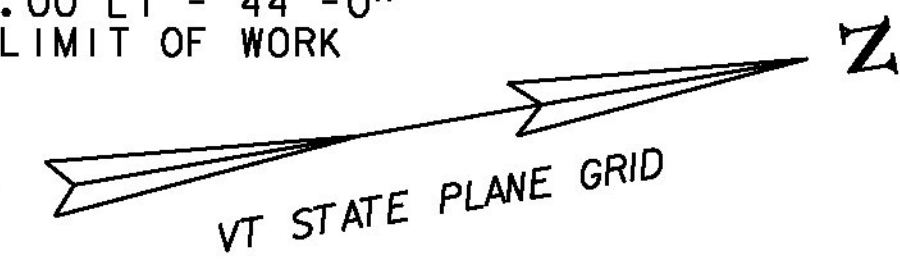
**DURABLE 4 INCH YELLOW LINE (SEE OPTION ITEMS)**  
 STA. 1+00 - STA. 5+50 (SOLID LT & RT)

**CONSTRUCT GRAVEL DRIVES**  
**W/ 4'-0" PAVED APRON**

STA. 1+57.00 - STA. 2+01.00 LT - 44'-0"  
 MATCH EXISTING DRIVE AT LIMIT OF WORK

**6 INCH UNDERDRAIN PIPE**  
 STA. 2+65 - STA. 4+85 LT  
 STA. 5+00 - STA. 5+50 LT

**RELOCATE MAILBOX, SINGLE SUPPORT**  
 STA. 2+08 LT



**CURVE (1)**  
 DELTA = 0°12'46"  
 D = 0°22'55"  
 R = 15000.00'  
 T = 27.85'  
 L = 55.71'  
 E = 0.03'  
 BANKING = NC

**BEGIN R.O.W. PROJECT**  
**MORETOWN ER STP 0167 (15)**  
**STA. 1+40, 27.27' RT**

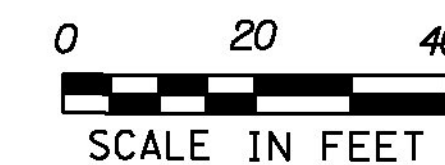
① STA. 2+47.23 LT 20' TO  
 STA. 2+48.32 RT 42'  
 REPLACE EXISTING 18" HDPE  
 WITH NEW 24" CPEP  
 LENGTH = 62'-0"  
 INV. IN = 570.73'  
 INV. OUT = 566.93'  
 SKEW ANGLE = 1.0 DEG. RT  
 CONSTRUCT INLET PROTECTION PAD  
 STONE FILL, TYPE II

② STA. 4+86.76 LT 21.5' TO  
 STA. 5+05.36 RT 31.0'  
 RETAIN EXISTING 18" CPEP  
 LENGTH = 56'-0"  
 RESHAPE INLET DITCH AND  
 CLEAN & FLUSH CULVERT  
 CONSTRUCT INLET PROTECTION PAD  
 STONE FILL, TYPE II

**CURVE (2)**  
 DELTA = 61°04'58"  
 D = 2°32'47" (1) D = 9°42'40" (2) D = 20°50'05" (3)  
 R = 2250.00' (1) R = 590.00' (2) R = 275.00' (3)  
 T = 455.58' (1) T = 199.13' (2)  
 L = 272.17' (1) L = 140.79' (2) L = 194.29' (3)  
 E = 45.66'  
 BANKING = 0.034 FT/FT (1) 0.076 FT/FT (2) 0.077 FT/FT (3)  
 40 MPH 40 MPH 30MPH

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**



PROJECT NAME: MORETOWN  
 PROJECT NUMBER: ER STP 0167(15)

FILE NAME: r12c524lay1.dgn  
 PROJECT LEADER: P. LIBBY  
 DESIGNED BY: DUBOIS & KING  
 R.O.W. LAYOUT SHEET 1 OF 3

PLOT DATE: 03-NOV-2014  
 DRAWN BY: A. EGZI  
 CHECKED BY: R. CLOUTIER  
 SHEET 21 OF 57

2  
**ALLEN, THOMAS L.,  
 VENEMA, STEPHANIE,  
 SEGUIN, WILLIAM**

INSTALL (T)

CONST (T)

GEOTEXTILE UNDER STONE FILL  
 STA. 6+75 - STA. 6+95 LT

STONE FILL, TYPE II  
 STA. 5+50 - STA. 11+25 RT  
 STA. 6+75 - STA. 6+95 LT

STONE FILL, TYPE IV  
 STA. 5+50 - STA. 11+25 RT

STEEL BEAM GUARDRAIL, GALVANIZED  
 STA. 5+50 - STA. 11+25 RT

REMOVAL AND DISPOSAL OF GUARDRAIL  
 STA. 5+50 - STA. 11+25 RT

REMOVING SIGNS  
 AS SHOWN - 2

GRUBBING MATERIAL  
 STA. 5+50 - STA. 11+25 RT  
 STA. 6+75 - STA. 6+95 LT

TEMPORARY 4 INCH WHITE LINE, PAINT  
 STA. 5+50 - STA. 11+25 (SOLID LT & RT)

TEMPORARY 4 INCH YELLOW LINE, PAINT  
 STA. 5+50 - STA. 11+25 (SOLID LT & RT)

DURABLE 4 INCH WHITE LINE (SEE OPTION ITEMS)  
 STA. 5+50 - STA. 11+25 (SOLID LT & RT)

DURABLE 4 INCH YELLOW LINE (SEE OPTION ITEMS)  
 STA. 5+50 - STA. 11+25 (SOLID LT & RT)

6 INCH UNDERDRAIN PIPE  
 STA. 5+50 - STA. 6+85 LT  
 STA. 6+95 - STA. 8+90 LT  
 STA. 9+10 - STA. 11+25 LT

CURVE (3)  
 DELTA = 9°20'53"  
 D = 6°54'11"  
 R = 830.00'  
 T = 67.86'  
 L = 135.42'  
 E = 2.77'  
 BANKING = IN TRANSITION  
 0.065 FT/FT  
 40 MPH

CURVE (4)  
 DELTA = 16°56'01"  
 D = 6°21'58"  
 R = 900.00'  
 T = 133.97'  
 L = 265.99'  
 E = 9.92'  
 BANKING = 0.064 FT/FT  
 40 MPH

3 STA. 6+86.23 LT 26' TO  
 STA. 6+92.46 RT 30'  
 REPLACE EXISTING 30" RCP  
 WITH NEW 36" CPEP  
 LENGTH = 55'-0"  
 INV. IN = 563.54'  
 INV. OUT = 559.61'  
 SKEW ANGLE = 6.7 DEG. RT  
 CONSTRUCT INLET PROTECTION PAD  
 STONE FILL, TYPE II

4 STA. 9+03.13 LT 23.0' REMOVE EXISTING DI  
 STA. 9+02.68 LT 19.8', INSTALL NEW DI WITH  
 RIM = 569.33'  
 REPLACE EXISTING 24" RCP WITH  
 NEW 24" CPEP FROM NEW DI TO  
 STA. 8+91.15 RT 25.3'  
 LENGTH = 44'-0"  
 INV. DI = 566.33'  
 INV. OUT = 565.39'  
 SKEW ANGLE = 13.5 DEG. LT

CURVE (2)  
 DELTA = 61°04'58"  
 D = 2°32'47" (1) D = 9°42'40" (2) D = 20°50'05" (3)  
 R = 2250.00' (1) R = 590.00' (2) R = 275.00' (3)  
 T = 455.58' (1) T = 199.13' (2)  
 L = 272.17' (1) L = 140.79' (2) L = 194.29' (3)  
 E = 45.66'  
 BANKING = 0.034 FT/FT (1) 0.076 FT/FT (2) 0.077 FT/FT (3)  
 40 MPH 40 MPH 30MPH

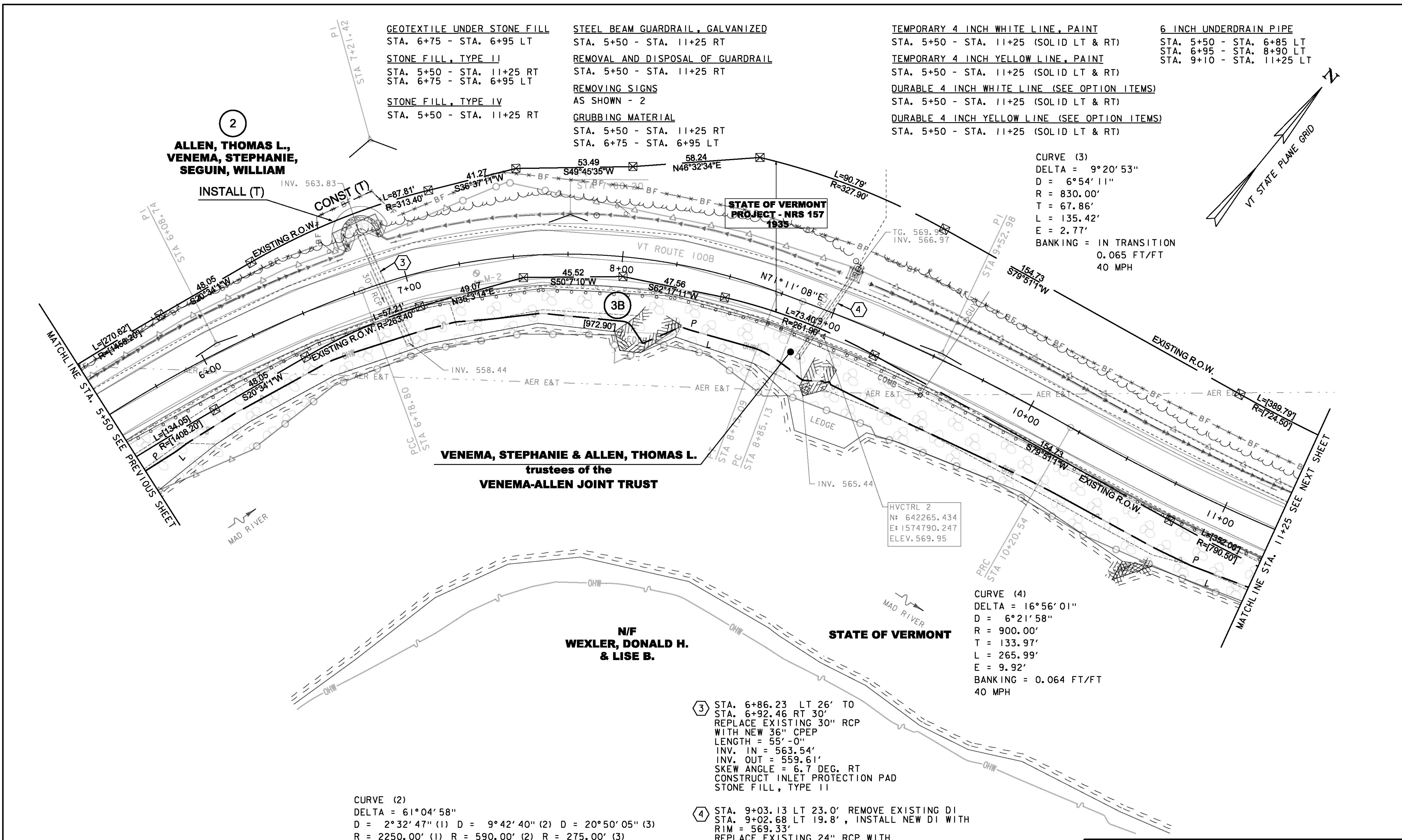
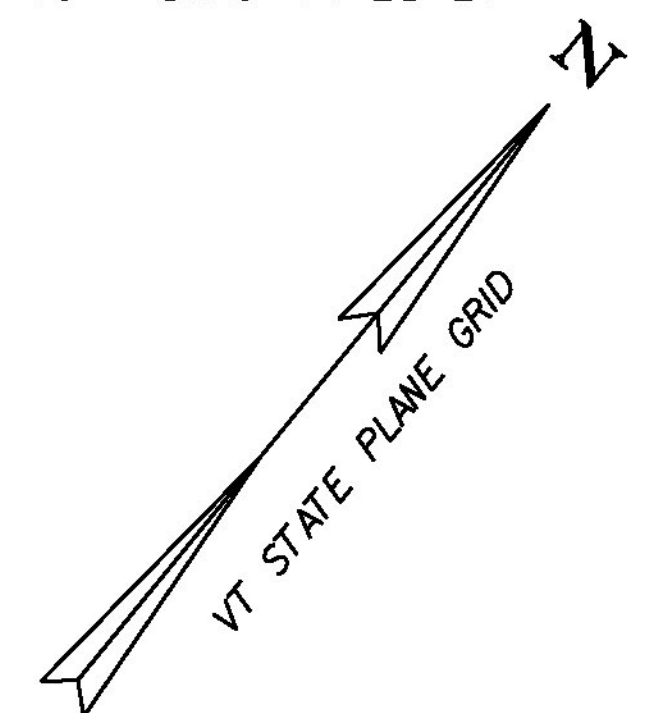
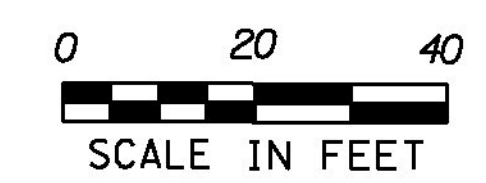
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 UPON FOR PURPOSES UNRELATED TO THE  
 STATE OF VERMONT'S ACQUISITION OF LAND  
 AND RIGHTS FOR THIS PROJECT.

**FOR R.O.W.  
 USE ONLY**

PROJECT NAME: MORETOWN  
 PROJECT NUMBER: ER STP 0167(15)

FILE NAME: r12c524lay2.dgn  
 PROJECT LEADER: P. LIBBY  
 DESIGNED BY: DUBOIS & KING  
 R.O.W. LAYOUT SHEET 2 OF 3

PLOT DATE: 03-NOV-2014  
 DRAWN BY: A. EGZI  
 CHECKED BY: R. CLOUTIER  
 SHEET 22 OF 57



STONE FILL, TYPE II  
 STA. 11+25 - STA. 14+24 RT  
 STONE FILL, TYPE IV  
 STA. 11+25 - STA. 14+24 RT  
 GRUBBING MATERIAL  
 STA. 11+25 - STA. 14+24 RT

STEEL BEAM GUARDRAIL, GALVANIZED  
 STA. 11+25 - STA. 14+32 RT  
 REMOVAL AND DISPOSAL OF GUARDRAIL  
 STA. 11+25 - STA. 14+37 RT  
 CONSTRUCT GRAVEL DRIVES  
 W/ 4'-0" PAVED APRON  
 STA. 14+33.00 - STA. 14+58.00 RT - 25'-0"  
 MATCH EXISTING DRIVE AT LIMIT OF WORK

TEMPORARY 4 INCH WHITE LINE, PAINT  
 STA. 11+25 - STA. 16+00 (SOLID LT & RT)  
 TEMPORARY 4 INCH YELLOW LINE, PAINT  
 STA. 11+25 - STA. 16+00 (SOLID LT & RT)  
 DURABLE 4 INCH WHITE LINE (SEE OPTION ITEMS)  
 STA. 11+25 - STA. 16+00 (SOLID LT & RT)  
 DURABLE 4 INCH YELLOW LINE (SEE OPTION ITEMS)  
 STA. 11+25 - STA. 16+00 (SOLID LT & RT)  
 6 INCH UNDERDRAIN PIPE  
 STA. 11+25 - STA. 11+38 LT  
 STA. 11+50 - STA. 13+13 LT  
 STA. 13+13 - STA. 15+45 LT  
 SPECIAL PROVISION (CORING CONCRETE)  
 STA. 11+38 LT  
 STA. 13+13 LT (2)

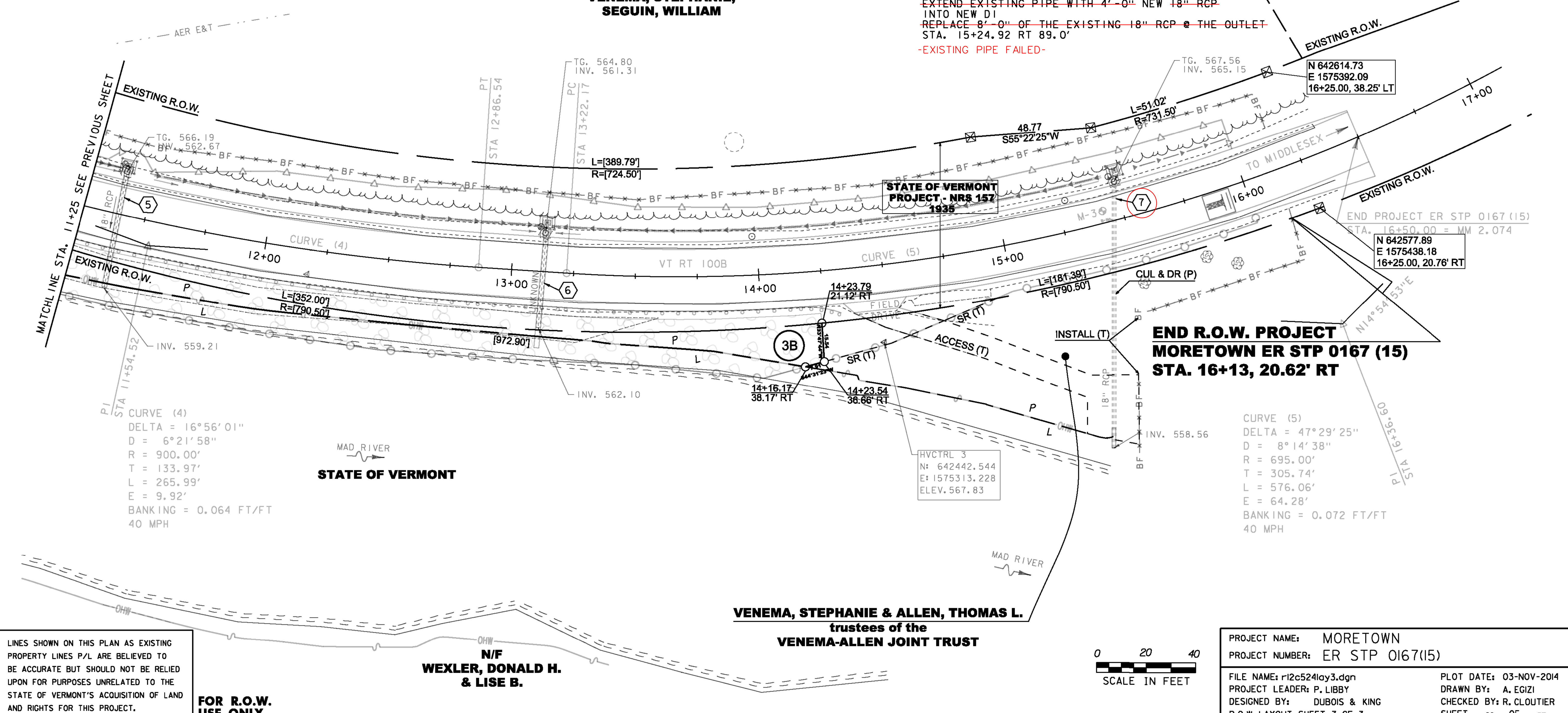
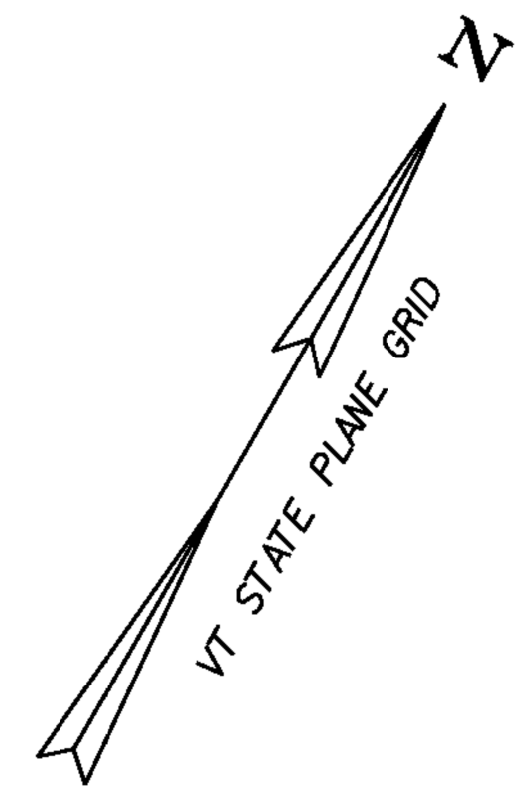
5 STA. 11+38.70 LT 17.5' REMOVE EXISTING DI  
 STA. 11+38.78 LT 19.8', INSTALL NEW DI  
 WITH RIM = 566.16'  
 REPLACE EXISTING 18" RCP WITH  
 NEW 24" CPEP FROM NEW DI TO  
 STA. 11+40.26 RT 30.4'  
 LENGTH = 48'-0"  
 INV. @ DI = 563.16'  
 INV. OUT = 561.53'  
 SKEW ANGLE = 0.4 DEG. RT

6 STA. 13+12.65 LT 15.6' REMOVE EXISTING DI  
 STA. 13+13.14 LT 19.8', INSTALL NEW DI  
 WITH RIM = 565.13'  
 REPLACE EXISTING PIPE WITH  
 NEW 24" CPEP FROM NEW DI TO  
 STA. 13+12.00 RT 30.5'  
 LENGTH = 48'-0"  
 INV. @ DI = 562.13'  
 INV. OUT = 559.73'  
 SKEW ANGLE = 1.3 DEG. LT

7 STA. 15+49.67 LT 15.4' REMOVE EXISTING DI  
 STA. 15+50.87 LT 19.8', INSTALL NEW DI  
 WITH RIM = 567.77'  
 EXTEND EXISTING PIPE WITH 4'-0" NEW 18" RCP  
 INTO NEW DI  
 REPLACE 8'-0" OF THE EXISTING 18" RCP @ THE OUTLET  
 STA. 15+24.92 RT 89.0'  
 -EXISTING PIPE FAILED-

2  
**ALLEN, THOMAS L.,  
 VENEMA, STEPHANIE,  
 SEGUIN, WILLIAM**

N/F  
**JOHNSON, COLMAN C.  
 & JEAN C.**



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**

**STATE OF VERMONT**

**VENEMA, STEPHANIE & ALLEN, THOMAS L.  
 trustees of the  
 VENEMA-ALLEN JOINT TRUST**

N/F  
**WEXLER, DONALD H.  
 & LISE B.**

PROJECT NAME:	MORETOWN	PROJECT NUMBER:	ER STP 0167(15)
FILE NAME:	r12c524lay3.dgn	PLOT DATE:	03-NOV-2014
PROJECT LEADER:	P. LIBBY	DRAWN BY:	A. EGIZI
DESIGNED BY:	DUBOIS & KING	CHECKED BY:	R. CLOUTIER
R.O.W. LAYOUT SHEET 3 OF 3		SHEET	23 OF 57

**GEOTEXTILE UNDER STONE FILL**

STA. 2+33 - STA. 2+58 LT  
STA. 4+76 - STA. 4+97 LT

**STONE FILL, TYPE II**

STA. 2+33 - STA. 5+50 RT  
STA. 2+33 - STA. 2+58 LT  
STA. 4+76 - STA. 4+97 LT

**STONE FILL, TYPE IV**

STA. 2+33 - STA. 5+50 RT

**GRUBBING MATERIAL (12")**

STA. 2+33 - STA. 5+50 RT

**GRUBBING MATERIAL (6")**

STA. 2+33 - STA. 2+58 LT  
STA. 4+76 - STA. 4+97 LT

**STEEL BEAM GUARDRAIL, GALVANIZED**

STA. 2+07 - STA. 5+50 RT

**REMOVING SIGNS**

AS SHOWN - 3

**REMOVAL AND DISPOSAL OF GUARDRAIL**

STA. 2+26 - STA. 5+50 RT

**TEMPORARY 4 INCH WHITE LINE, PAINT**

STA. 1+00 - STA. 5+50 (SOLID LT & RT)

**TEMPORARY 4 INCH YELLOW LINE, PAINT**

STA. 1+00 - STA. 5+50 (SOLID LT & RT)

**DURABLE 4 INCH WHITE LINE (SEE OPTION ITEMS)**

STA. 1+00 - STA. 5+50 (SOLID LT & RT)

**DURABLE 4 INCH YELLOW LINE (SEE OPTION ITEMS)**

STA. 1+00 - STA. 5+50 (SOLID LT & RT)

**CONSTRUCT GRAVEL DRIVES**

W/ 4'-0" PAVED APRON

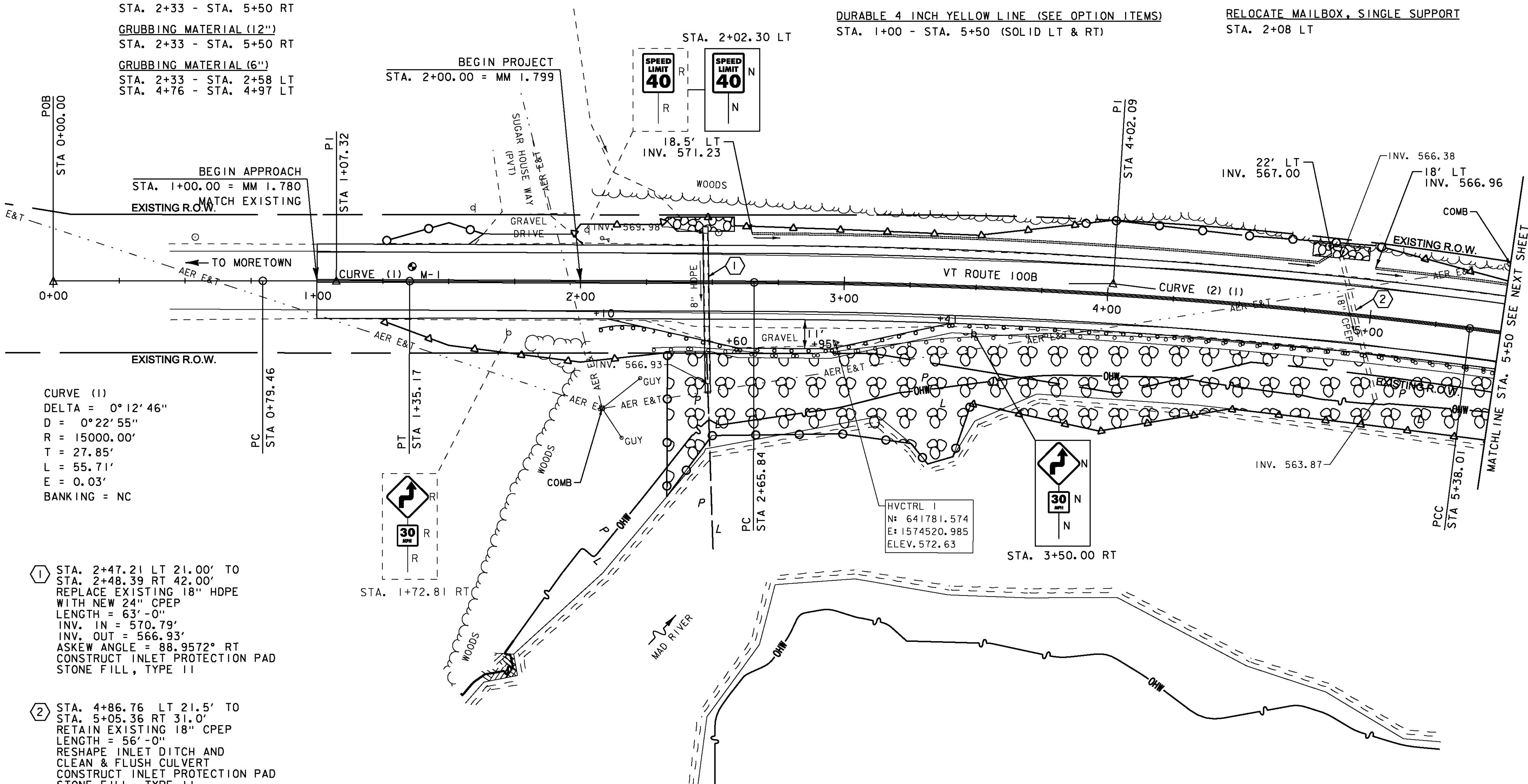
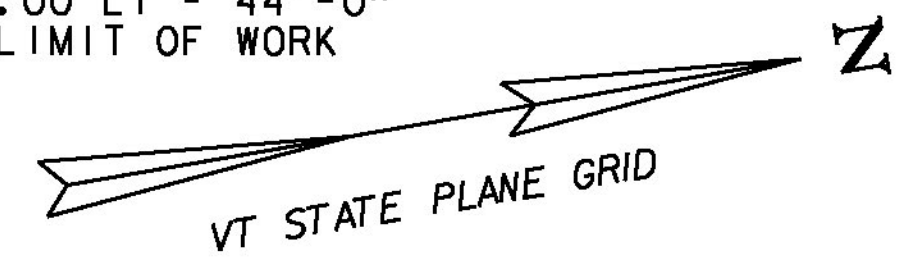
STA. 1+57.00 - STA. 2+01.00 LT - 44'-0"  
MATCH EXISTING DRIVE AT LIMIT OF WORK

**6 INCH UNDERDRAIN PIPE**

STA. 2+65 - STA. 4+85 LT  
STA. 5+00 - STA. 5+50 LT

**RELOCATE MAILBOX, SINGLE SUPPORT**

STA. 2+08 LT

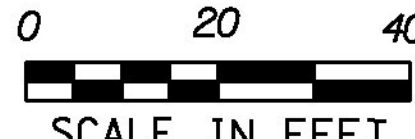


**CURVE (1)**  
DELTA = 0°12'46"  
D = 0°22'55"  
R = 15000.00'  
T = 27.85'  
L = 55.71'  
E = 0.03'  
BANKING = NC

① STA. 2+47.21 LT 21.00' TO  
STA. 2+48.39 RT 42.00'  
REPLACE EXISTING 18" HDPE  
WITH NEW 24" CPEP  
LENGTH = 63'-0"  
INV. IN = 570.79'  
INV. OUT = 566.93'  
ASKEW ANGLE = 88.9572° RT  
CONSTRUCT INLET PROTECTION PAD  
STONE FILL, TYPE II

② STA. 4+86.76 LT 21.5' TO  
STA. 5+05.36 RT 31.0'  
RETAIN EXISTING 18" CPEP  
LENGTH = 56'-0"  
RESHAPE INLET DITCH AND  
CLEAN & FLUSH CULVERT  
CONSTRUCT INLET PROTECTION PAD  
STONE FILL, TYPE II

**CURVE (2)**  
DELTA = 61°04'58"  
D = 2°32'47" (1) D = 9°42'40" (2) D = 20°50'05" (3)  
R = 2250.00' (1) R = 590.00' (2) R = 275.00' (3)  
T = 455.58' (1) T = 199.13' (2)  
L = 272.17' (1) L = 140.79' (2) L = 194.29' (3)  
E = 45.66'  
BANKING = 0.034 FT/FT (1) 0.076 FT/FT (2) 0.077 FT/FT (3)  
40 MPH 40 MPH 30MPH



PROJECT NAME: MORETOWN	PLOT DATE: 2/17/2015
PROJECT NUMBER: ER STP 0167 (15)	DRAWN BY: B. MACK
FILE NAME: z12c524bdr.dgn	CHECKED BY: J. TUCKER
PROJECT LEADER: J. TUCKER	SHEET 24 OF 57
DESIGNED BY: B. BRESLEND	
PLAN SHEET 1	

**GEOTEXTILE UNDER STONE FILL**  
 STA. 6+75 - STA. 6+95 LT

**STONE FILL, TYPE II**  
 STA. 5+50 - STA. 11+25 RT  
 STA. 6+75 - STA. 6+95 LT

**STONE FILL, TYPE IV**  
 STA. 5+50 - STA. 11+25 RT

**STEEL BEAM GUARDRAIL, GALVANIZED**  
 STA. 5+50 - STA. 11+25 RT

**REMOVAL AND DISPOSAL OF GUARDRAIL**  
 STA. 5+50 - STA. 11+25 RT

**REMOVING SIGNS**  
 AS SHOWN - 2

**GRUBBING MATERIAL (12")**  
 STA. 5+50 - STA. 11+25 RT

**GRUBBING MATERIAL (6")**  
 STA. 6+75 - STA. 6+95 LT

**TEMPORARY 4 INCH WHITE LINE, PAINT**  
 STA. 5+50 - STA. 11+25 (SOLID LT & RT)

**TEMPORARY 4 INCH YELLOW LINE, PAINT**  
 STA. 5+50 - STA. 11+25 (SOLID LT & RT)

**DURABLE 4 INCH WHITE LINE (SEE OPTION ITEMS)**  
 STA. 5+50 - STA. 11+25 (SOLID LT & RT)

**DURABLE 4 INCH YELLOW LINE (SEE OPTION ITEMS)**  
 STA. 5+50 - STA. 11+25 (SOLID LT & RT)

**6 INCH UNDERDRAIN PIPE**  
 STA. 5+50 - STA. 6+85 LT  
 STA. 6+95 - STA. 8+90 LT  
 STA. 9+10 - STA. 11+25 LT

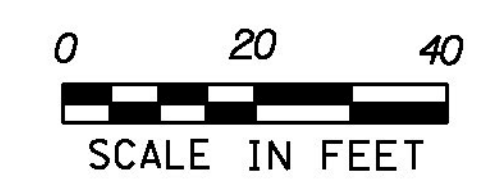
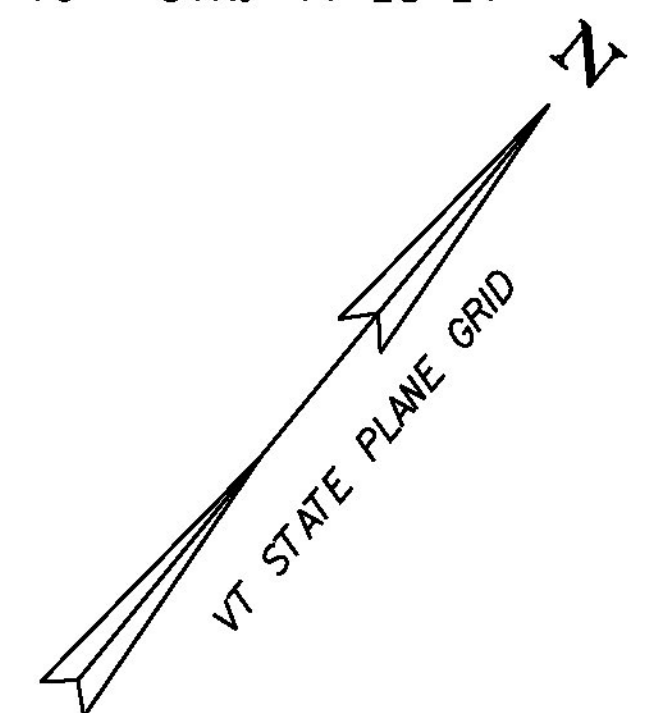
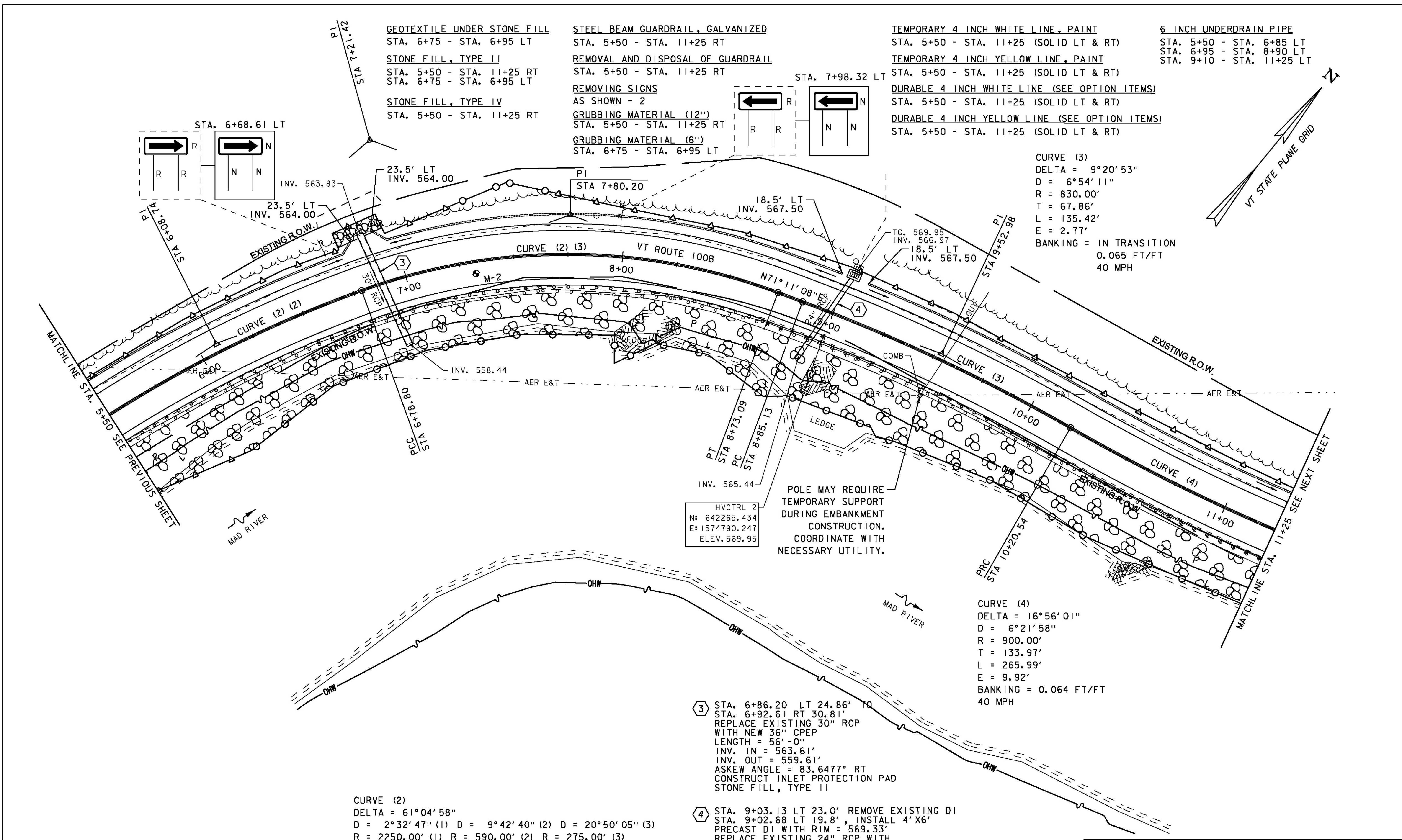
**CURVE (3)**  
 DELTA = 9°20'53"  
 D = 6°54'11"  
 R = 830.00'  
 T = 67.86'  
 L = 135.42'  
 E = 2.77'  
 BANKING = IN TRANSITION  
 0.065 FT/FT  
 40 MPH

**CURVE (4)**  
 DELTA = 16°56'01"  
 D = 6°21'58"  
 R = 900.00'  
 T = 133.97'  
 L = 265.99'  
 E = 9.92'  
 BANKING = 0.064 FT/FT  
 40 MPH

③ STA. 6+86.20 LT 24.86' TO  
 STA. 6+92.61 RT 30.81'  
 REPLACE EXISTING 30" RCP  
 WITH NEW 36" CPEP  
 LENGTH = 56'-0"  
 INV. IN = 563.61'  
 INV. OUT = 559.61'  
 ASKEW ANGLE = 83.6477° RT  
 CONSTRUCT INLET PROTECTION PAD  
 STONE FILL, TYPE II

④ STA. 9+03.13 LT 23.0' REMOVE EXISTING DI  
 STA. 9+02.68 LT 19.8', INSTALL 4'X6'  
 PRECAST DI WITH RIM = 569.33'  
 REPLACE EXISTING 24" RCP WITH  
 NEW 24" CPEP FROM NEW PRECAST DI TO  
 STA. 8+91.80 RT 25.3'  
 LENGTH = 44'-0"  
 INV. DI = 566.33'  
 INV. OUT = 565.39'  
 ASKEW ANGLE = 76.5266° LT

**CURVE (2)**  
 DELTA = 61°04'58"  
 D = 2°32'47" (1) D = 9°42'40" (2) D = 20°50'05" (3)  
 R = 2250.00' (1) R = 590.00' (2) R = 275.00' (3)  
 T = 455.58' (1) T = 199.13' (2)  
 L = 272.17' (1) L = 140.79' (2) L = 194.29' (3)  
 E = 45.66'  
 BANKING = 0.034 FT/FT (1) 0.076 FT/FT (2) 0.077 FT/FT (3)  
 40 MPH 40 MPH 30MPH



PROJECT NAME: MORETOWN	PLOT DATE: 2/17/2015
PROJECT NUMBER: ER STP 0167 (15)	DRAWN BY: B. MACK
FILE NAME: z12c524bdr.dgn	CHECKED BY: J. TUCKER
DESIGNED BY: B. BRESLEND	SHEET 25 OF 57
PLAN SHEET 2	

STONE FILL, TYPE II  
 STA. 11+25 - STA. 14+24 RT  
STONE FILL, TYPE IV  
 STA. 11+25 - STA. 14+24 RT  
GRUBBING MATERIAL (12")  
 STA. 11+25 - STA. 14+24 RT

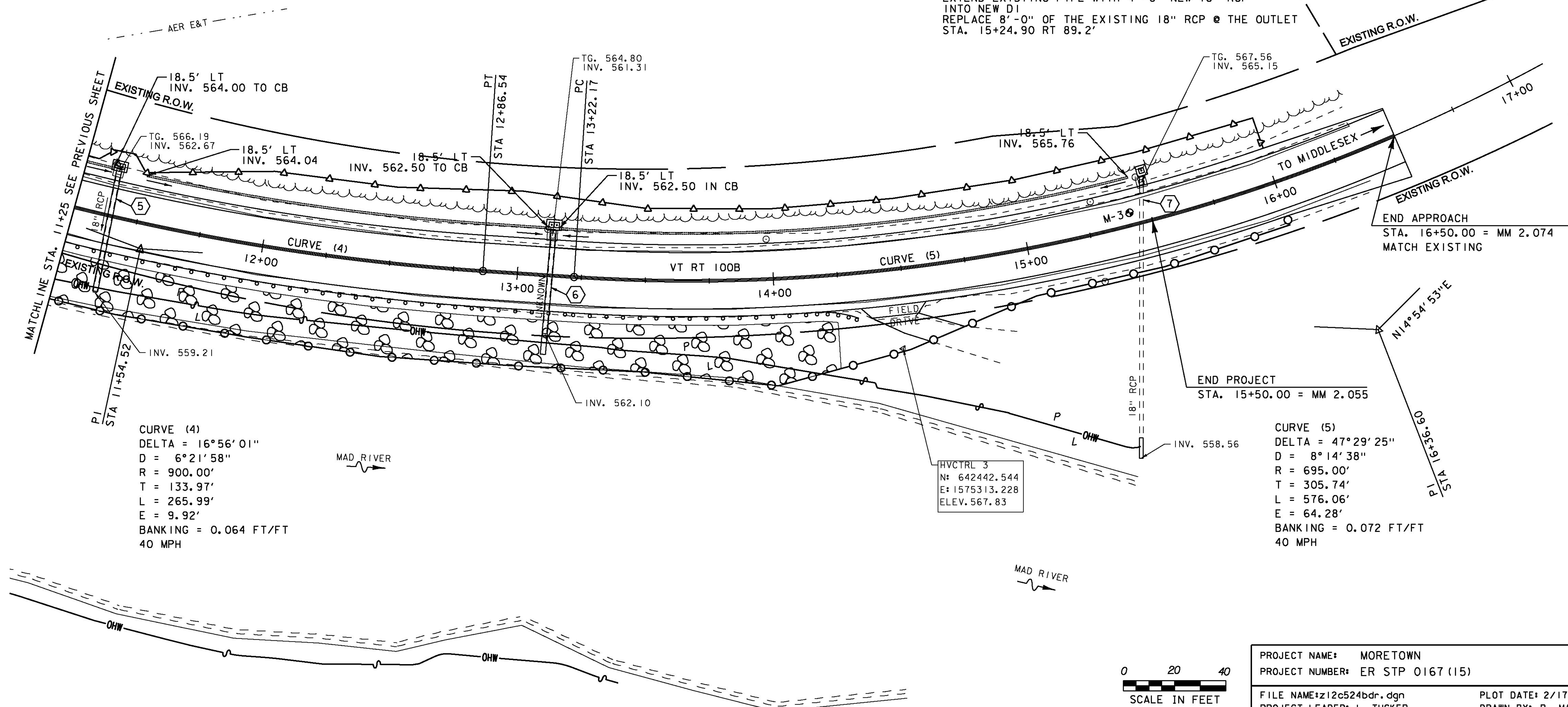
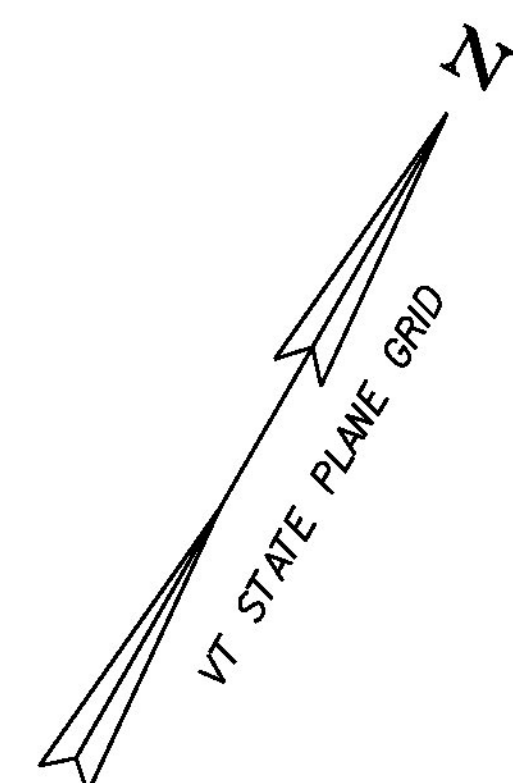
STEEL BEAM GUARDRAIL, GALVANIZED  
 STA. 11+25 - STA. 14+32 RT  
REMOVAL AND DISPOSAL OF GUARDRAIL  
 STA. 11+25 - STA. 14+37 RT  
CONSTRUCT GRAVEL DRIVES  
W/ 4'-0" PAVED APRON  
 STA. 14+33.00 - STA. 14+58.00 RT - 25'-0"  
 MATCH EXISTING DRIVE AT LIMIT OF WORK

TEMPORARY 4 INCH WHITE LINE, PAINT  
 STA. 11+25 - STA. 16+00 (SOLID LT & RT)  
TEMPORARY 4 INCH YELLOW LINE, PAINT  
 STA. 11+25 - STA. 16+00 (SOLID LT & RT)  
DURABLE 4 INCH WHITE LINE (SEE OPTION ITEMS)  
 STA. 11+25 - STA. 16+00 (SOLID LT & RT)  
DURABLE 4 INCH YELLOW LINE (SEE OPTION ITEMS)  
 STA. 11+25 - STA. 16+00 (SOLID LT & RT)  
6 INCH UNDERDRAIN PIPE  
 STA. 11+25 - STA. 11+38 LT  
 STA. 11+50 - STA. 13+13 LT  
 STA. 13+13 - STA. 15+45 LT  
SPECIAL PROVISION (CORING CONCRETE)  
 STA. 11+38 LT  
 STA. 13+13 LT (2)

⑤ STA. 11+38.71 LT 17.5' REMOVE EXISTING DI  
 STA. 11+38.68 LT 19.8', INSTALL 4'X6'  
 PRECAST DI WITH RIM = 566.16'  
 REPLACE EXISTING 18" RCP WITH  
 NEW 24" CPEP FROM NEW DI TO  
 STA. 11+40.25 RT 30.0'  
 LENGTH = 48'-0"  
 INV. @ DI = 563.16'  
 INV. OUT = 561.53'  
 ASKEW ANGLE = 88.175° RT

⑥ STA. 13+12.65 LT 15.6' REMOVE EXISTING DI  
 STA. 13+13.14 LT 19.8', INSTALL 4'X6'  
 PRECAST DI WITH RIM = 565.13'  
 REPLACE EXISTING PIPE WITH  
 NEW 24" CPEP FROM NEW DI TO  
 STA. 13+12.00 RT 30.9'  
 LENGTH = 48'-0"  
 INV. @ DI = 562.13'  
 INV. OUT = 559.73'  
 ASKEW ANGLE = 88.7046° LT

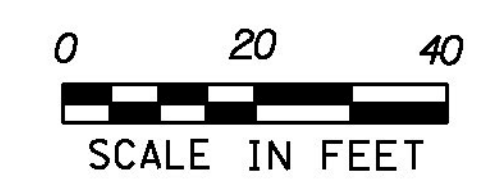
⑦ STA. 15+49.62 LT 15.3' REMOVE EXISTING DI  
 STA. 15+50.82 LT 19.7', INSTALL NEW PRECAST DI  
 WITH RIM = 567.77'  
 EXTEND EXISTING PIPE WITH 4'-0" NEW 18" RCP  
 INTO NEW DI  
 REPLACE 8'-0" OF THE EXISTING 18" RCP @ THE OUTLET  
 STA. 15+24.90 RT 89.2'



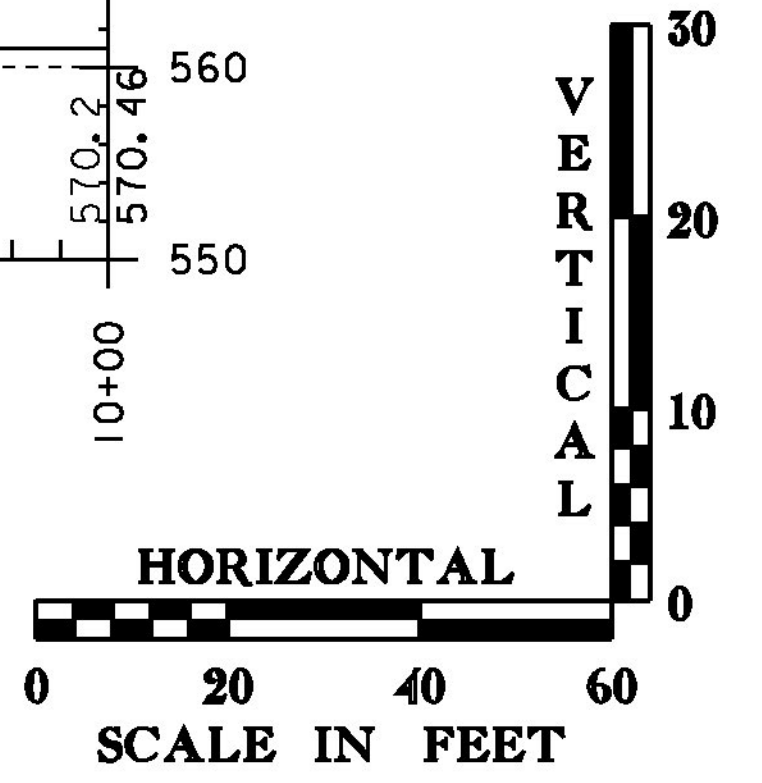
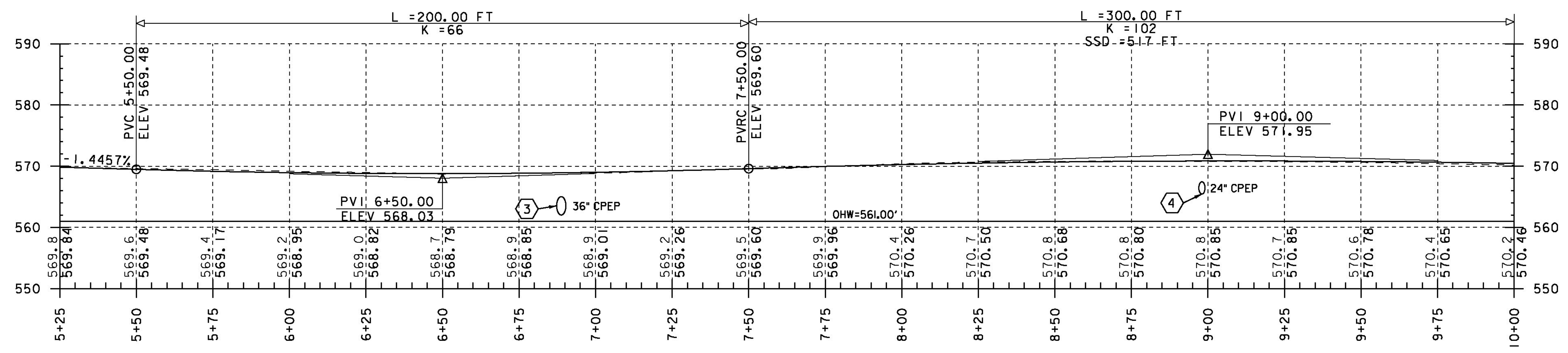
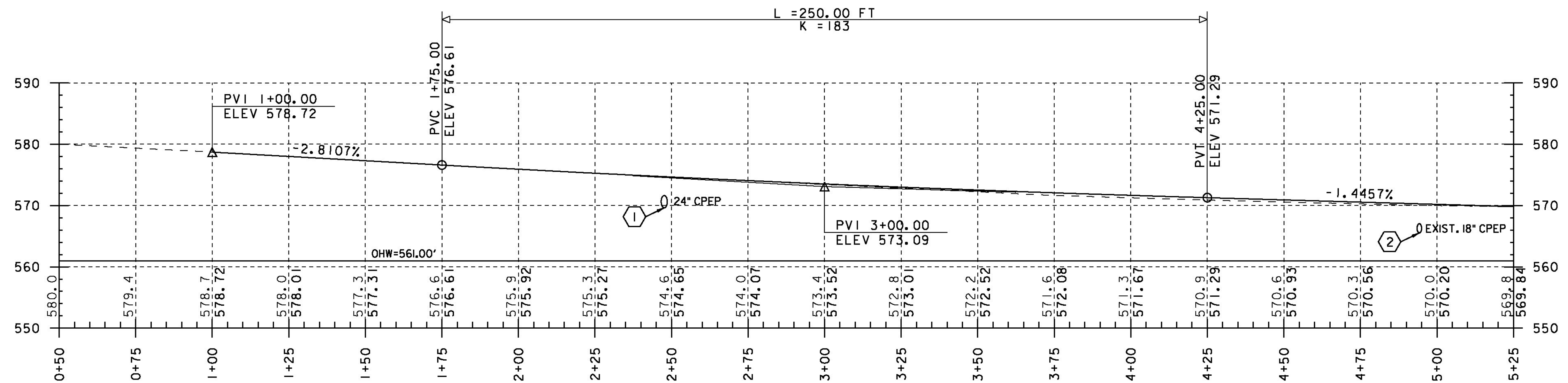
CURVE (4)  
 DELTA = 16°56'01"  
 D = 6°21'58"  
 R = 900.00'  
 T = 133.97'  
 L = 265.99'  
 E = 9.92'  
 BANKING = 0.064 FT/FT  
 40 MPH

CURVE (5)  
 DELTA = 47°29'25"  
 D = 8°14'38"  
 R = 695.00'  
 T = 305.74'  
 L = 576.06'  
 E = 64.28'  
 BANKING = 0.072 FT/FT  
 40 MPH

HVCTRL 3  
 N: 642442.544  
 E: 157513.228  
 ELEV. 567.83

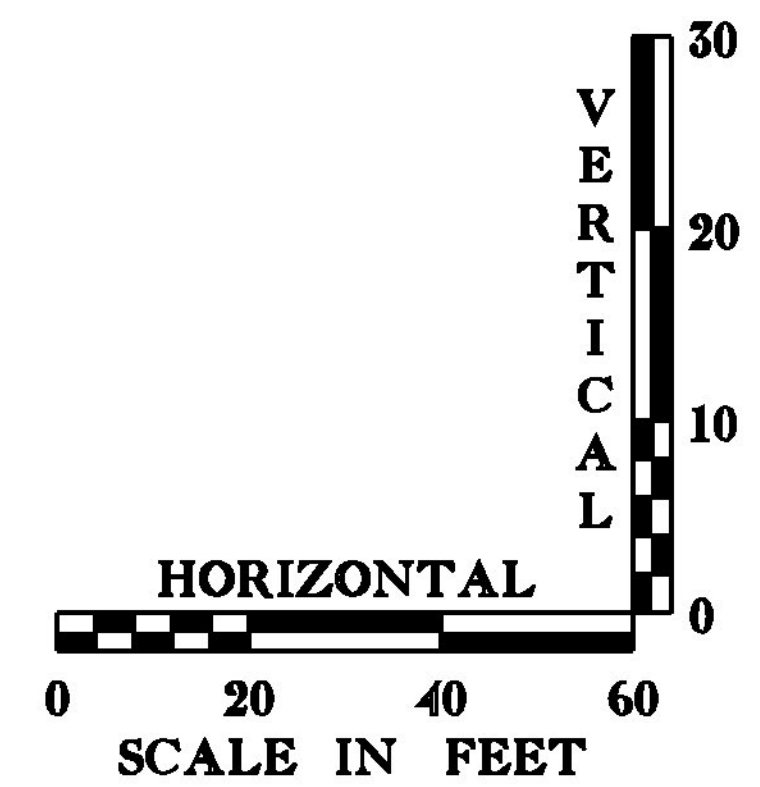
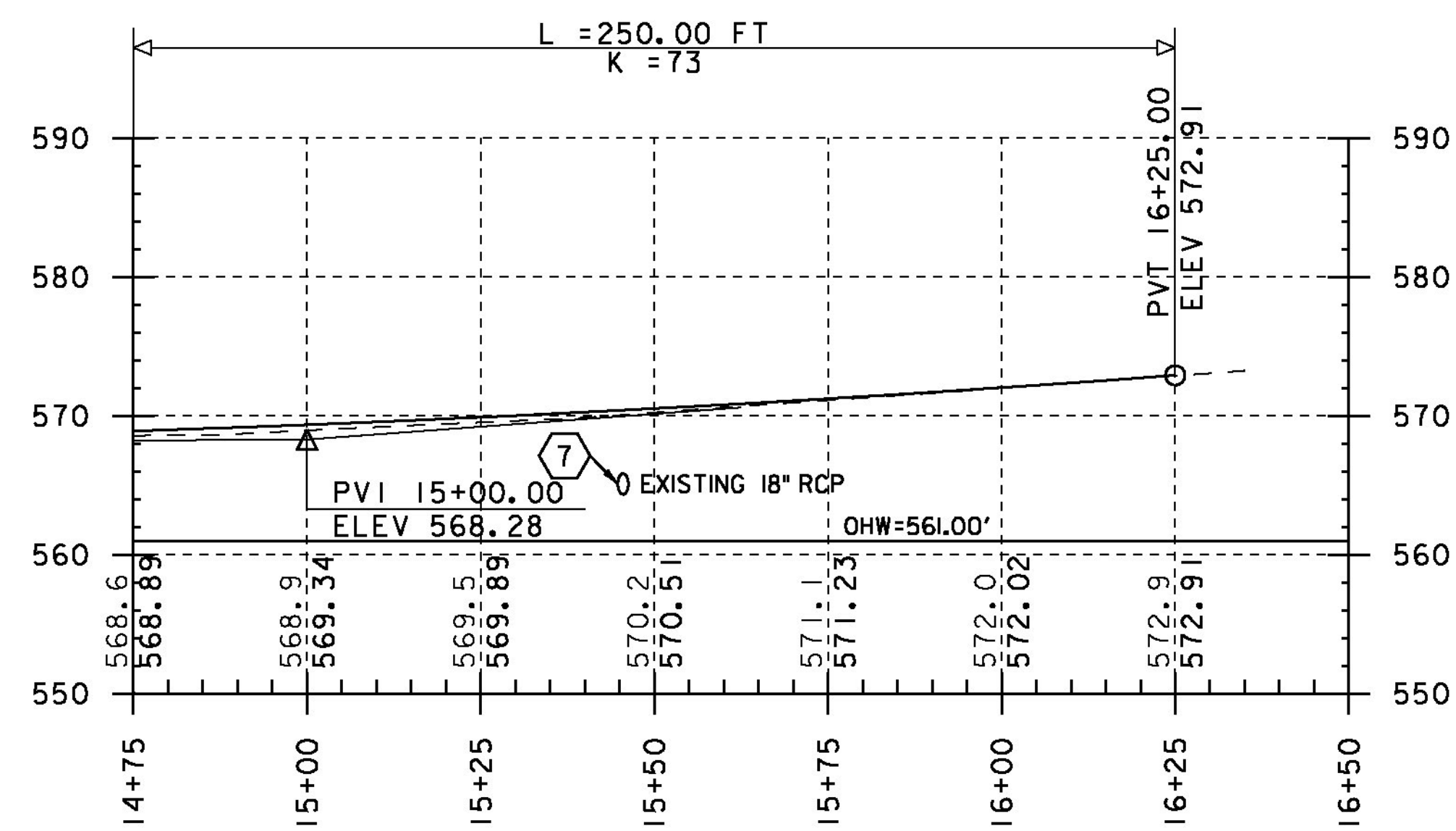
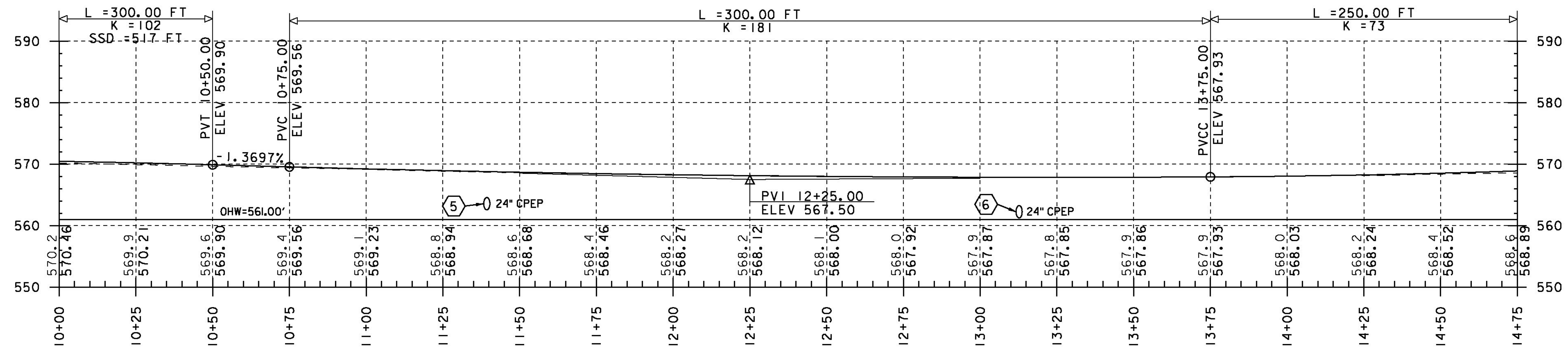


PROJECT NAME: MORETOWN	PLOT DATE: 2/17/2015
PROJECT NUMBER: ER STP 0167 (15)	DRAWN BY: B. MACK
FILE NAME: z12c524bdr.dgn	CHECKED BY: J. TUCKER
PROJECT LEADER: J. TUCKER	SHEET 26 OF 57
DESIGNED BY: B. BRESLEND	
PLAN SHEET 3	



- NOTE**
- GRADES SHOWN TO THE NEAREST TENTH REPRESENT THE EXISTING ELEVATION ALONG THE PROPOSED ALIGNMENT.
  - GRADES SHOWN TO THE NEAREST HUNDREDTH REPRESENT THE PROPOSED ELEVATION ALONG THE PROPOSED ALIGNMENT.

PROJECT NAME: MORETOWN	
PROJECT NUMBER: ER STP 0167 (15)	
FILE NAME: z12c524pro.dgn	PLOT DATE: 2/17/2015
PROJECT LEADER: J. TUCKER	DRAWN BY: B. MACK
DESIGNED BY: B. BRESLEND	CHECKED BY: A. SANZ
PROFILE SHEET 1	SHEET 27 OF 57



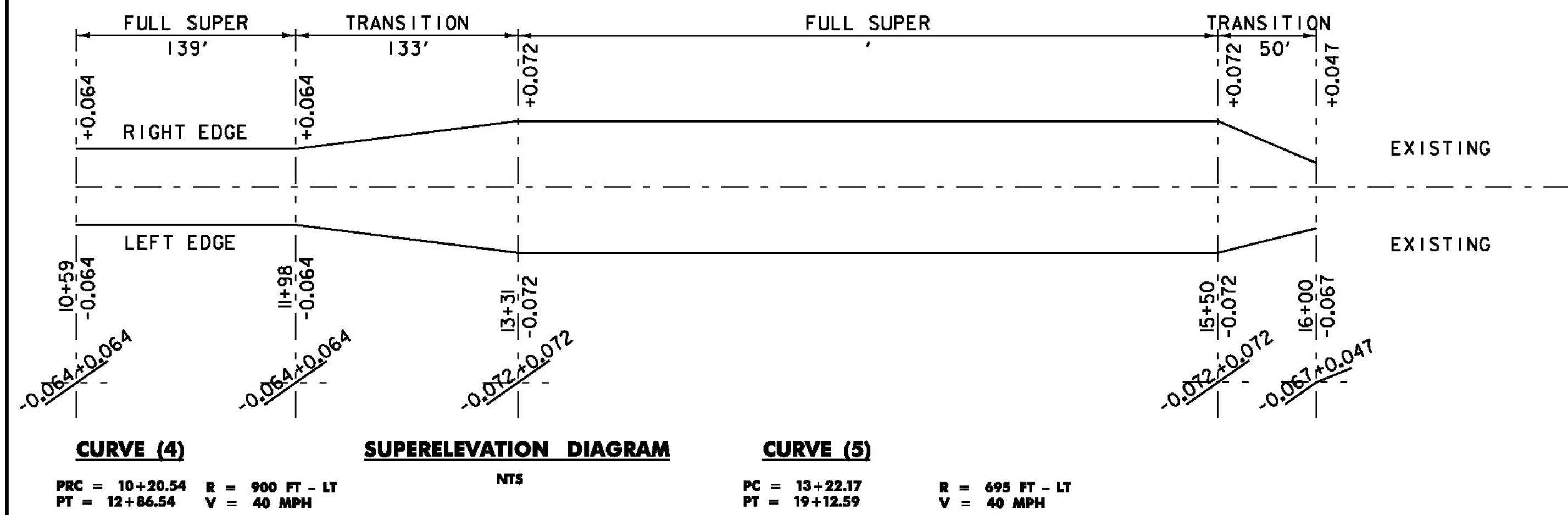
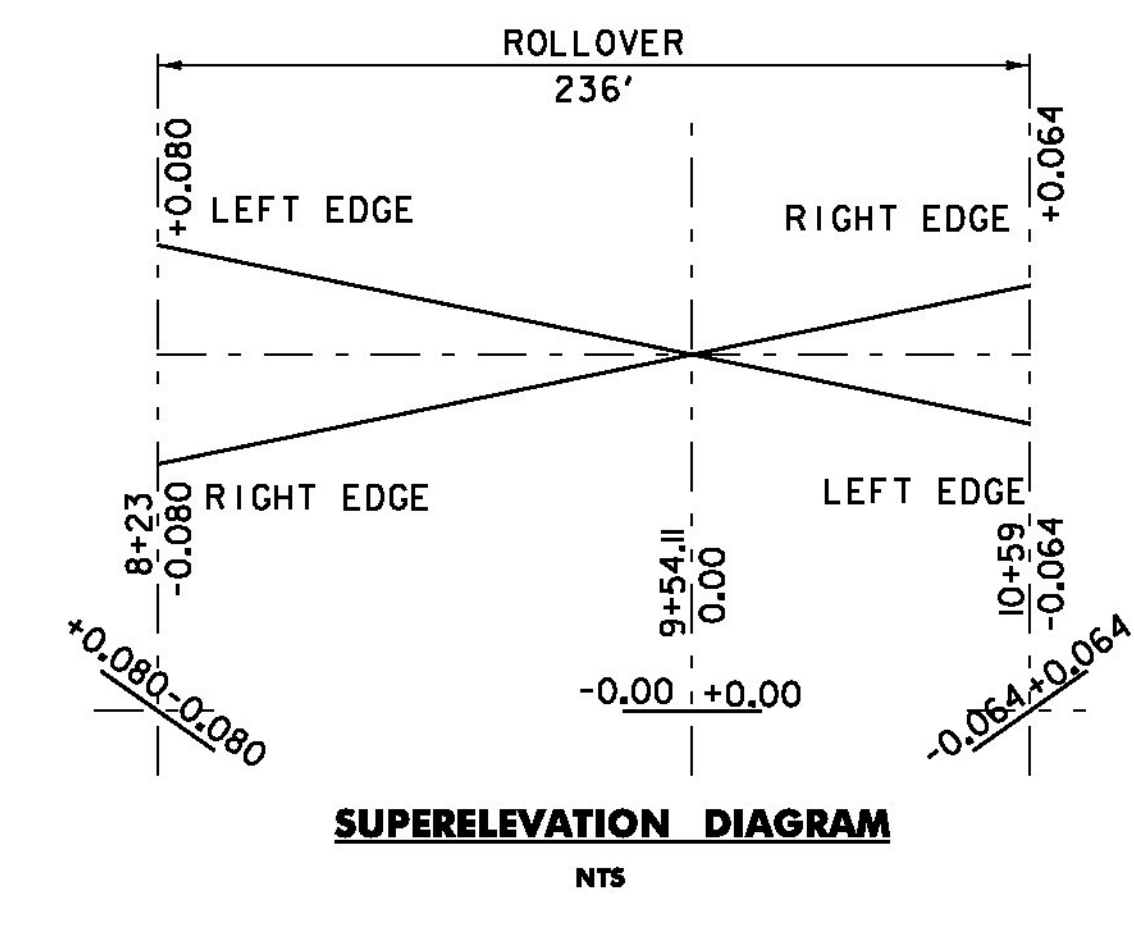
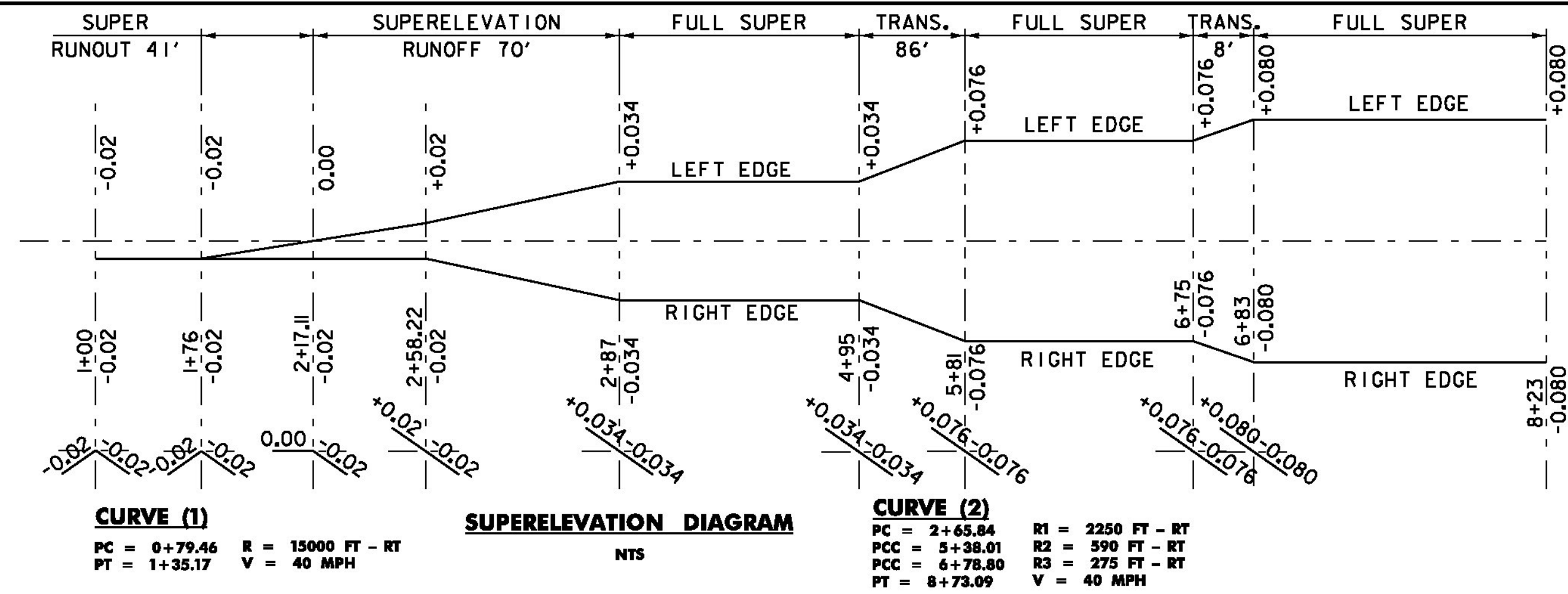
**NOTE**

1. GRADES SHOWN TO THE NEAREST TENTH REPRESENT THE EXISTING ELEVATION ALONG THE PROPOSED ALIGNMENT.
2. GRADES SHOWN TO THE NEAREST HUNDRETH REPRESENT THE PROPOSED ELEVATION ALONG THE PROPOSED ALIGNMENT.

PROJECT NAME: MORETOWN  
 PROJECT NUMBER: ER STP 0167 (15)

FILE NAME: z12c524pro.dgn  
 PROJECT LEADER: J. TUCKER  
 DESIGNED BY: B. BRESLEND  
 PROFILE SHEET 2

PLOT DATE: 2/17/2015  
 DRAWN BY: B. MACK  
 CHECKED BY: A. SANZ  
 SHEET 28 OF 57



PROJECT NAME: MORETOWN  
 PROJECT NUMBER: ER STP 0167 (15)

FILE NAME: z12c524detail.dgn PLOT DATE: 2/17/2015  
 PROJECT LEADER: J. TUCKER DRAWN BY: B. MACK  
 DESIGNED BY: B. BRESLEND CHECKED BY: A. SANZ  
 BANKING SHEET SHEET 29 OF 57

## EPSC PLAN NARRATIVE

### 1.1 PROJECT DESCRIPTION

THIS PROJECT IS ON VT ROUTE 100B IN THE TOWN OF MORETOWN BETWEEN MM 1.780 AND MM 2.074.

THIS PROJECT INVOLVES ROADWAY RECONSTRUCTION, CORRECTING SUPERELEVATION DEFICIENCIES, SLOPE STABILIZATION, RESURFACING WITH BASE AND WEARING COURSES, NEW GUARDRAIL, NEW PAVEMENT MARKING AND DRAINAGE IMPROVEMENTS.

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 1.10 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 ROLLING WITH THE MAD RIVER ON THE EAST SIDE OF VT ROUTE 100B. WELL ESTABLISHED WOODED AREAS ARE LOCATED ON THE WEST SIDE OF VT ROUTE 100B. A PRIVATE ROADWAY/DRIVE WAY, SUGAR HOUSE LANE IS WITHIN THE PROJECT SITE. THERE ARE NO RESIDENCES ALONG THE PROJECT.

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

THE MAD RIVER IS THE PRIMARY WATER SOURCE ON THE PROJECT SITE AND FLOWS ADJACENT TO VT 100B. THERE EXISTS SEVEN CULVERTS UNDER THE ROADWAY, TWO CARRY SEASONAL STREAMS AND THE OTHERS ROADWAY AND DITCH RUNOFF.

#### 1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS MOSTLY OF LIGHT UNDERGROWTH ALONG THE EAST SIDE RIVER EMBANKMENT. THE WEST SIDE OF THE ROADWAY CONSISTS OF LIGHT UNDERGROWTH IN THE DITCH AREAS WITH FORESTED AREAS BEYOND. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS DIRECTLY AFFECTED BY THE PLACEMENT OF THE PROPOSED STONE FILL TYPE IV ALONG THE RIVER EMBANKMENT AND PROPOSED NEW DITCHING AS SPECIFIED ON THE PLANS. DISTURBED VEGETATION WILL BE RE-ESTABLISHED 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 WASHINGTON, VERMONT. SOILS ON THE PROJECT SITE ARE COMPOSED OF FIVE DIFFERENT CLASSIFICATIONS:

TUNBRIDGE-LYMAN COMPLEX, K-FACTOR=0.25, 8-15% SLOPES, VERY ROCKY, HYDROLOGIC SOIL GROUP: C/D

COLTON GRAVELLY LOAMY SAND, K-FACTOR = 0.15, 0-3% SLOPES, HYDROLOGIC SOIL GROUP: A  
COTTON GRAVELLY LOAMY SAND, K-FACTOR = 0.17, 25-60% SLOPES, HYDROLOGIC SOIL GROUP: A  
LAMOINE SILT LOAM, K-FACTOR = 0.43, 3-8% SLOPES, HYDROLOGIC SOIL GROUP: D  
SUNDY FINE SAND, K-FACTOR = 0.15, 0-3% SLOPES, HYDROLOGIC SOIL GROUP: A

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: NO  
PRIME AGRICULTURAL LAND: NO  
THREATENED AND ENDANGERED SPECIES: NO  
WATER RESOURCE: MAD RIVER  
WETLANDS: NO

### 1.3 RISK EVALUATION

THIS PROJECT FALLS UNDER THE JURISDICTION OF GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES FOR LOW RISK PROJECTS. ANY MODIFICATIONS TO THE PROJECT THAT INCREASE THE RISK TO ENVIRONMENTAL RESOURCES SHALL BE EVALUATED IN ACCORDANCE WITH THE PERMIT REQUIREMENTS. 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. BECAUSE THIS PROJECT FALLS UNDER THE CGP 3-9020, BARRIER FENCE SHALL BE USED INSTEAD OF PROJECT DEMARCATION FENCE WITHIN 100 FEET OF A WATER RESOURCE (STREAM, BROOK, LAKE, POND, WETLAND, ETC).

#### 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 CONTRACTORS 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 WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN. BECAUSE THIS PROJECT FALLS UNDER THE CGP 3-9020, WOVEN WIRE REINFORCED SILT FENCE SHALL BE USED INSTEAD OF SILT FENCE WITHIN 100 FEET UPSLOPE OF RECEIVING WATERS. FILTER FABRIC DROP INLET PROTECTION WILL BE USED AT THE PROPOSED DI'S AND PIPE INLET PROTECTION WILL BE USED AT THE PROPOSED CULVERT REPLACEMENTS. CHECK DAMS WILL BE PLACED AND MAINTAINED IN THE PROPOSED DITCHING.

#### 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 CONSTRUCTION SITE.

THE PROJECT AREA IS RELATIVELY FLAT. THEREFORE IT IS NOT ANTICIPATED THAT DIVERSION MEASURES WILL BE NECESSARY.

#### 1.4.6 SLOW DOWN CHANNELIZED RUNOFF

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

STONE CHECK DAMS WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN, AT A MINIMUM.

#### 1.4.7 CONSTRUCT PERMANENT CONTROLS

PERMANENT STORMWATER TREATMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH PERMIT CONDITIONS. CONTROLS NOT ANTICIPATED TO BE NEEDED FOR THIS PROJECT AS DESIGNED.

#### 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.

#### 1.4.11 DE-WATERING ACTIVITIES

DISCHARGE FROM DEWATERING ACTIVITIES THAT FLOWS OFF OF THE CONSTRUCTION SITE MUST NOT CAUSE OR CONTRIBUTE TO A VIOLATION OF THE VERMONT WATER QUALITY STANDARDS.

DEWATERING NOT ANTICIPATED TO BE NEEDED FOR THIS PROJECT AS DESIGNED.

#### 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

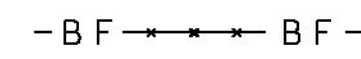
IN ADDITION TO THE CONTRACTOR CHECKLIST ANY ACTIVITIES OUTSIDE THE CONSTRUCTION LIMITS SHALL FOLLOW SUBSECTIONS 105.25- 105.29 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.

PROJECT NAME: MORETOWN  
PROJECT NUMBER: ER STP 0167 (15)

FILE NAME: z12c524EPSC_Narrative.dgn  
PROJECT LEADER: J. TUCKER  
DESIGNED BY: B. BRESLEND  
EPSC NARRATIVE

PL0T DATE: 2/17/2015  
DRAWN BY: B. MACK  
CHECKED BY: A. SANZ  
SHEET 30 OF 57

BARRIER FENCE (LINE STYLE)  
653.50



BRUSH LAYER  
653.75, DETAIL



CHECK DAM (LINE STYLE)  
653.25, DETAIL



COFFERDAM (LINE STYLE)  
208.40



CURB DROP INLET PROTECTION  
653.40, DETAIL



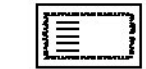
DUST CONTROL  
609.10 & 15



PIPE INLET PROTECTION  
653.40, DETAIL



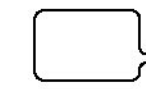
EXCAVATED DROP INLET PROTECTION  
653.40, DETAIL



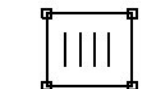
FIBER ROLL (EROSION LOG)  
653.60, DETAIL



FILTER BAG  
653.45, DETAIL



FILTER FABRIC DROP INLET PROTECTION  
653.40, DETAIL



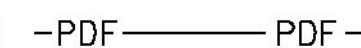
LIVE CUTTINGS/LIVE STAKES PLANTING  
653.70, DETAIL



LIVE FASCINE  
653.65, DETAIL



PROJECT DEMARCATION FENCE (LINE STYLE) -PDF- PDF-



ROLLED EROSION CONTROL PRODUCT (RECP)  
653.20 (TEMP. EROSION MATTING)



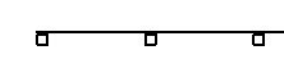
SEDIMENT BASIN  
INCIDENTAL TO COFFERDAM 208.40



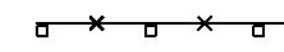
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC  
ORIGINALLY DEVELOPED BY USDA-NRCS  
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

STANDARD SYMBOLS

SILT FENCE (LINE STYLE)  
649.51, DETAIL



SILT FENCE WOVEN WIRE (LINE STYLE)  
649.515, DETAIL



STABILIZED CONSTRUCTION ENTRANCE  
653.35, DETAIL, VEHICLE TRACKING PAD



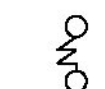
STONE & BLOCK DROP INLET PROTECTION  
653.40, DETAIL



SURFACE ROUGHENING  
INCIDENTAL TO CONTRACT



TURBIDITY CURTAIN  
649.61, DETAIL, FILTER CURTAIN



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

STANDARD SYMBOLS

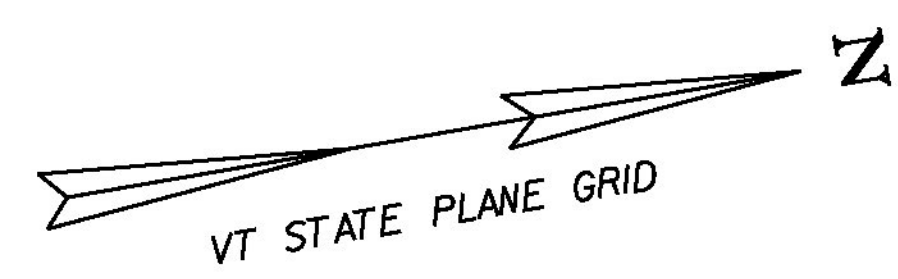
NOTES:

1. THESE PLANS SHOW A CONCEPTUAL EROSION CONTROL PLAN, THE CONTRACTOR MUST SUBMIT A TEMPORARY EROSION CONTROL PLAN FOR APPROVAL.
2. TEMPORARY EROSION CONTROL MEASURES ARE CONCEPTUALLY SHOWN. THE CONTRACTOR MAY RELOCATE TEMPORARY MEASURES TO IMPROVE EROSION CONTROL WITH APPROVAL OF THE ENGINEER AND ON SITE COORDINATOR. SILT FENCE SHALL NOT BE INSTALLED ACROSS CONTOURS.
3. THE CONTRACTOR SHALL USE OTHER TEMPORARY EROSION CONTROL MEASURES AS NECESSITATED BY THE SEQUENCE OF CONSTRUCTION OR AS DIRECTED BY THE ENGINEER AND ON SITE COORDINATOR.
4. REFER TO EROSION CONTROL DETAILS SHEETS FOR ADDITIONAL DETAILS.

PROJECT NAME: MORETOWN  
PROJECT NUMBER: ER STP 0167 (15)

FILE NAME: z12c524EPSC.Narrative.dgn PLOT DATE: 2/17/2015  
PROJECT LEADER: J. TUCKER DRAWN BY: B. MACK  
DESIGNED BY: B. BRESLEND CHECKED BY: E. ANDREWS  
EPSC LEGEND & NOTES SHEET 31 OF 57

SOIL INFORMATION:  
 TUNBRIDGE-LYMAN COMPLEX  
 K-FACTOR = 0.25, 8-15% SLOPES,  
 VERY ROCKY  
 HYDROLOGIC SOIL GROUP: C/D



**SPEED  
 LIMIT  
 40**

**ALLEN, THOMAS L.,  
 VENEMA, STEPHANIE,  
 SEGUIN, WILLIAM**

SOIL INFORMATION:  
 COLTON GRAVELLY LOAMY SAND  
 K-FACTOR = 0.15, 0-3% SLOPES,  
 HYDROLOGIC SOIL GROUP: A

**FORTE, ANGELO F.,  
 FORTE, LOUIS P.,  
 FORTE, GEORGE M.,  
 FORTE, JAMES P.**

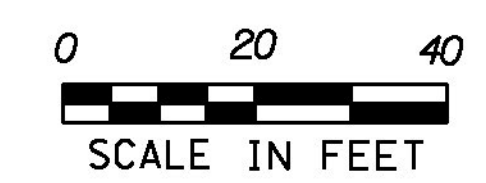
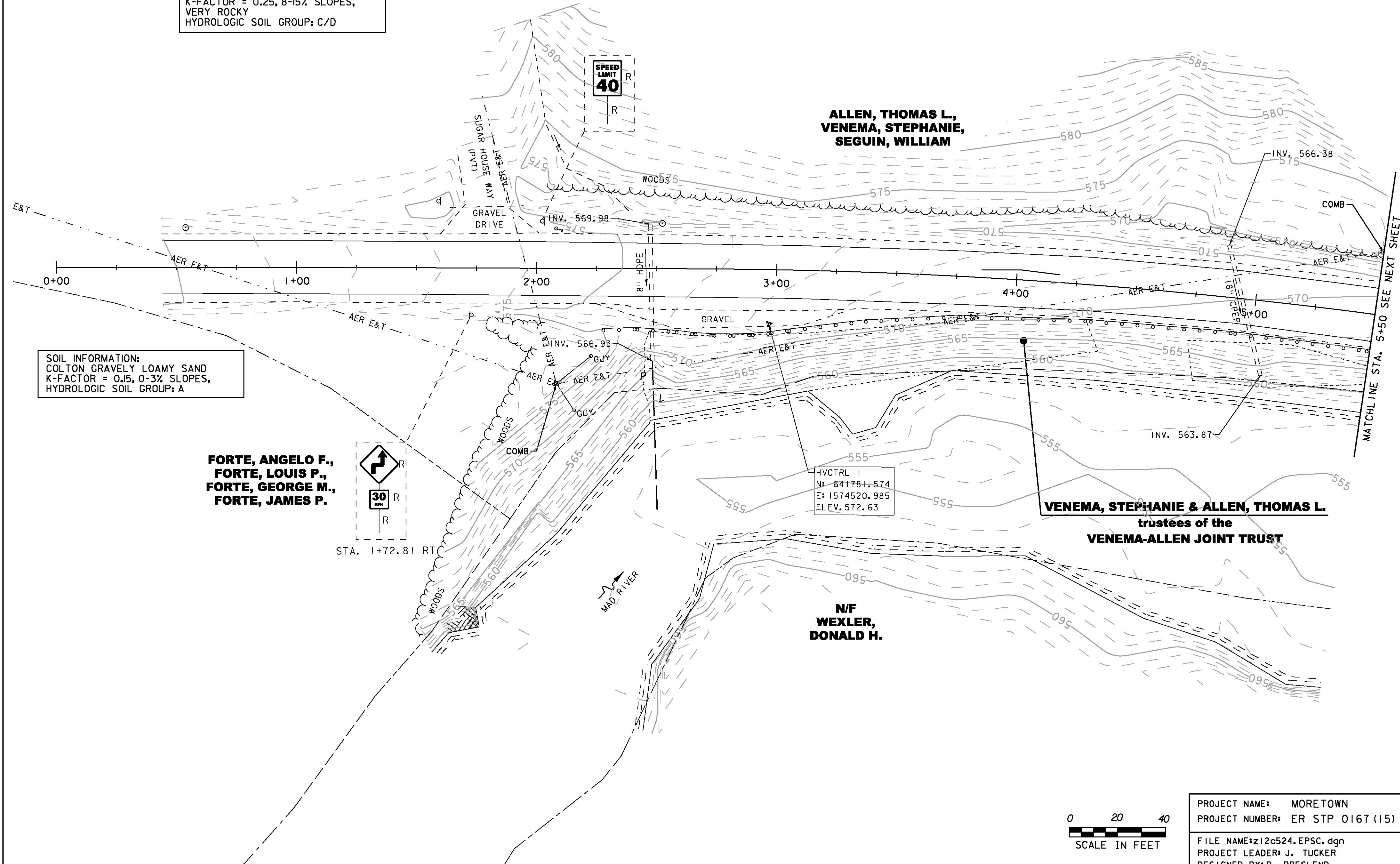
**30**

STA. 1+72.81 RT

HVCTRL 1  
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 ELEV. 572.63

**VENEMA, STEPHANIE & ALLEN, THOMAS L.  
 trustees of the  
 VENEMA-ALLEN JOINT TRUST**

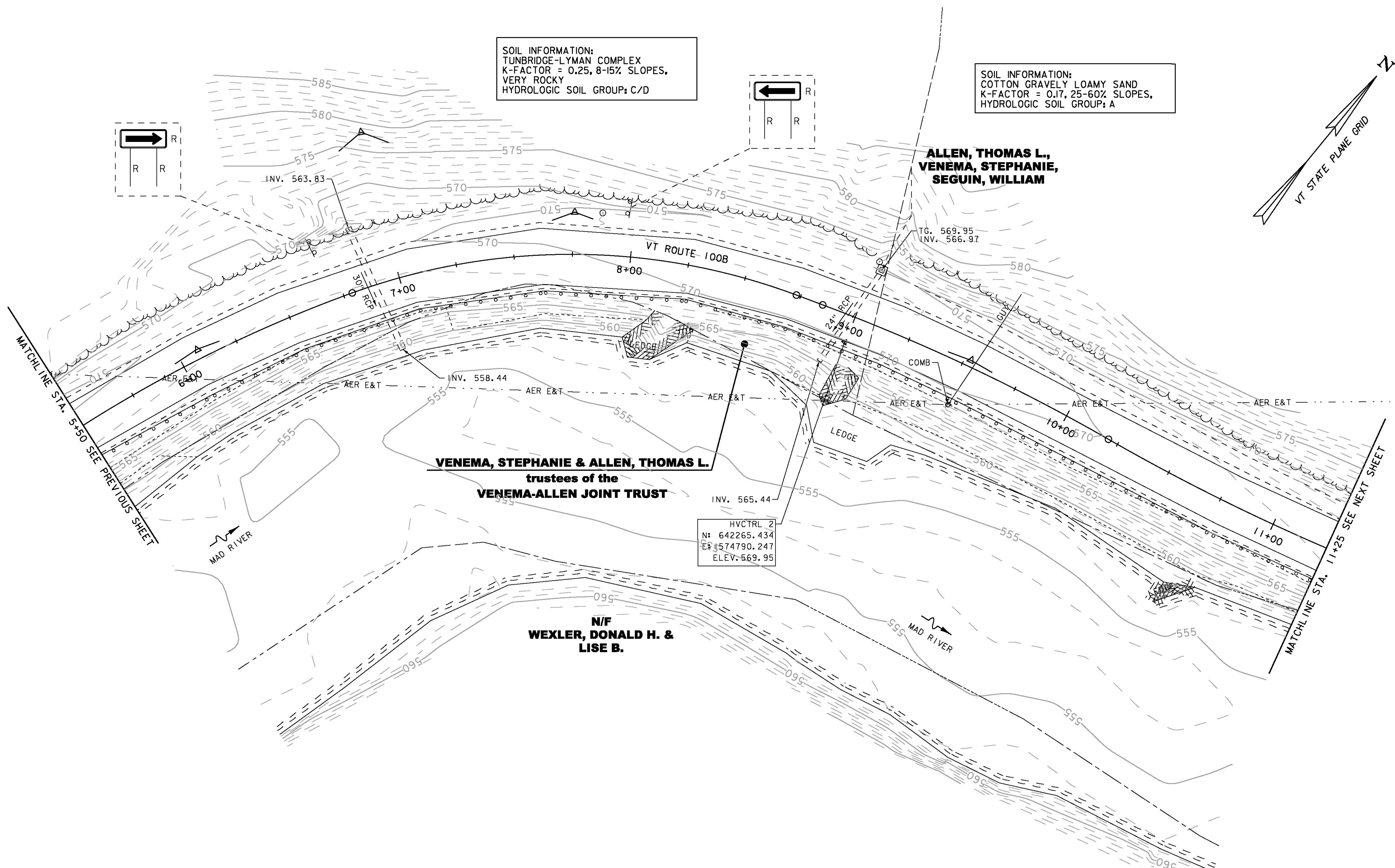
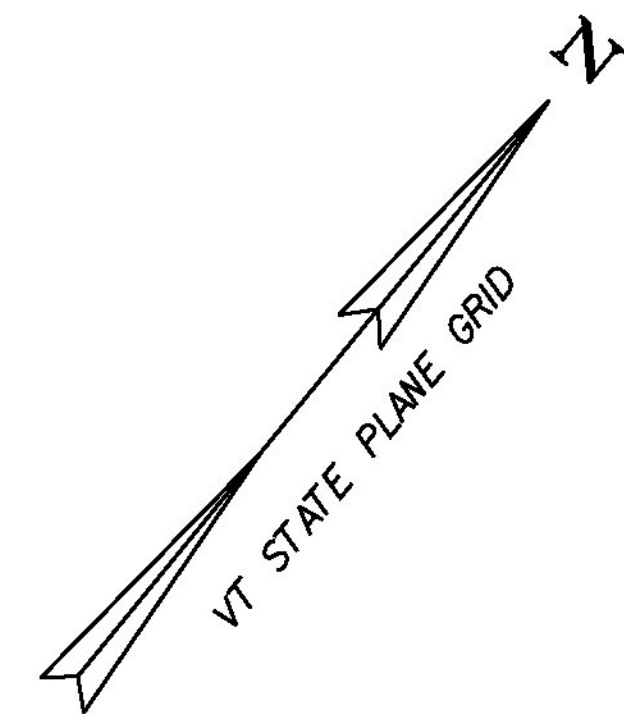
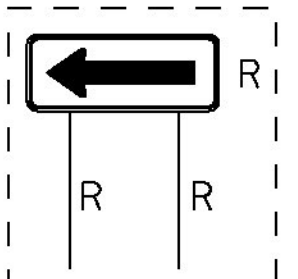
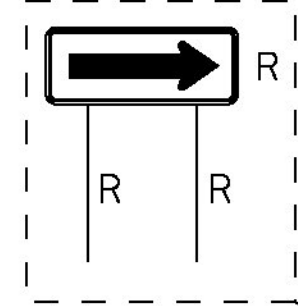
**N/F  
 WEXLER,  
 DONALD H.**



PROJECT NAME: MORETOWN	PLOT DATE: 2/17/2015
PROJECT NUMBER: ER STP 0167 (15)	DRAWN BY: B. MACK
FILE NAME: z12c524.EPSC.dgn	CHECKED BY: J. TUCKER
PROJECT LEADER: J. TUCKER	EPSC EXISTING CONDITIONS - SHEET 1
DESIGNED BY: B. BRESLEND	SHEET 32 OF 57

SOIL INFORMATION:  
 TUNBRIDGE-LYMAN COMPLEX  
 K-FACTOR = 0.25, 8-15% SLOPES,  
 VERY ROCKY  
 HYDROLOGIC SOIL GROUP: C/D

SOIL INFORMATION:  
 COTTON GRAVELLY LOAMY SAND  
 K-FACTOR = 0.17, 25-60% SLOPES,  
 HYDROLOGIC SOIL GROUP: A



MATCHLINE STA. 5+50 SEE PREVIOUS SHEET

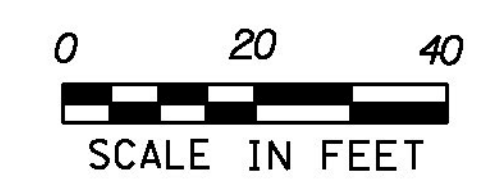
MATCHLINE STA. 11+25 SEE NEXT SHEET

**VENEMA, STEPHANIE & ALLEN, THOMAS L.**  
 trustees of the  
**VENEMA-ALLEN JOINT TRUST**

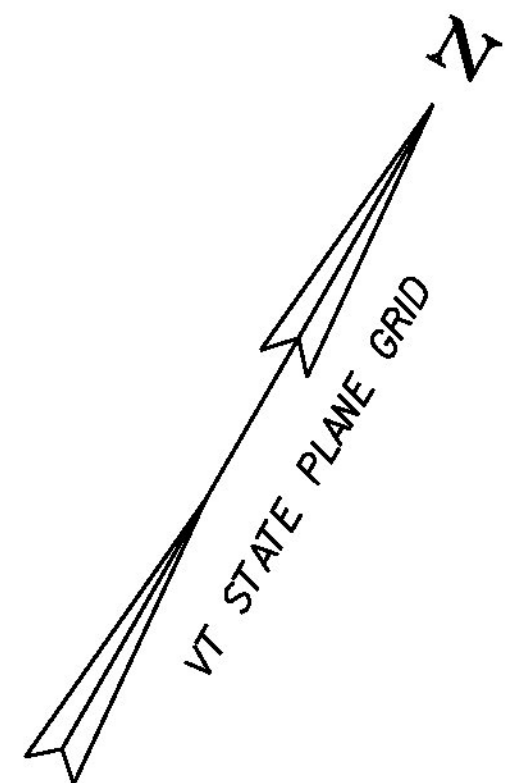
**N/F**  
**WEXLER, DONALD H. &**  
**LISE B.**

**ALLEN, THOMAS L.,**  
**VENEMA, STEPHANIE,**  
**SEGUIN, WILLIAM**

HVCTRL 2  
 N: 642265.434  
 E: 9574790.247  
 ELEV: 569.95



PROJECT NAME: MORETOWN	PROJECT NUMBER: ER STP 0167 (15)
FILE NAME: z12c524.EPSC.dgn	PLOT DATE: 2/17/2015
PROJECT LEADER: J. TUCKER	DRAWN BY: B. MACK
DESIGNED BY: B. BRESLEND	CHECKED BY: J. TUCKER
EPSC EXISTING CONDITIONS - SHEET 2	SHEET 33 OF 57



**JOHNSON, COLMAN C.  
& JEAN C.**

**ALLEN, THOMAS L.,  
VENEMA, STEPHANIE,  
SEGUIN, WILLIAM**

SOIL INFORMATION:  
COTTON GRAVELY LOAMY SAND  
K-FACTOR = 0.17, 25-60% SLOPES,  
HYDROLOGIC SOIL GROUP: A

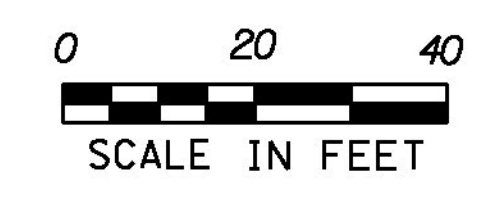
SOIL INFORMATION:  
LAMOINE SILT LOAM  
K-FACTOR = 0.43, 3-8% SLOPES,  
HYDROLOGIC SOIL GROUP: D

SOIL INFORMATION:  
SUNNY FINE SAND  
K-FACTOR = 0.15, 0-3% SLOPES,  
HYDROLOGIC SOIL GROUP: A

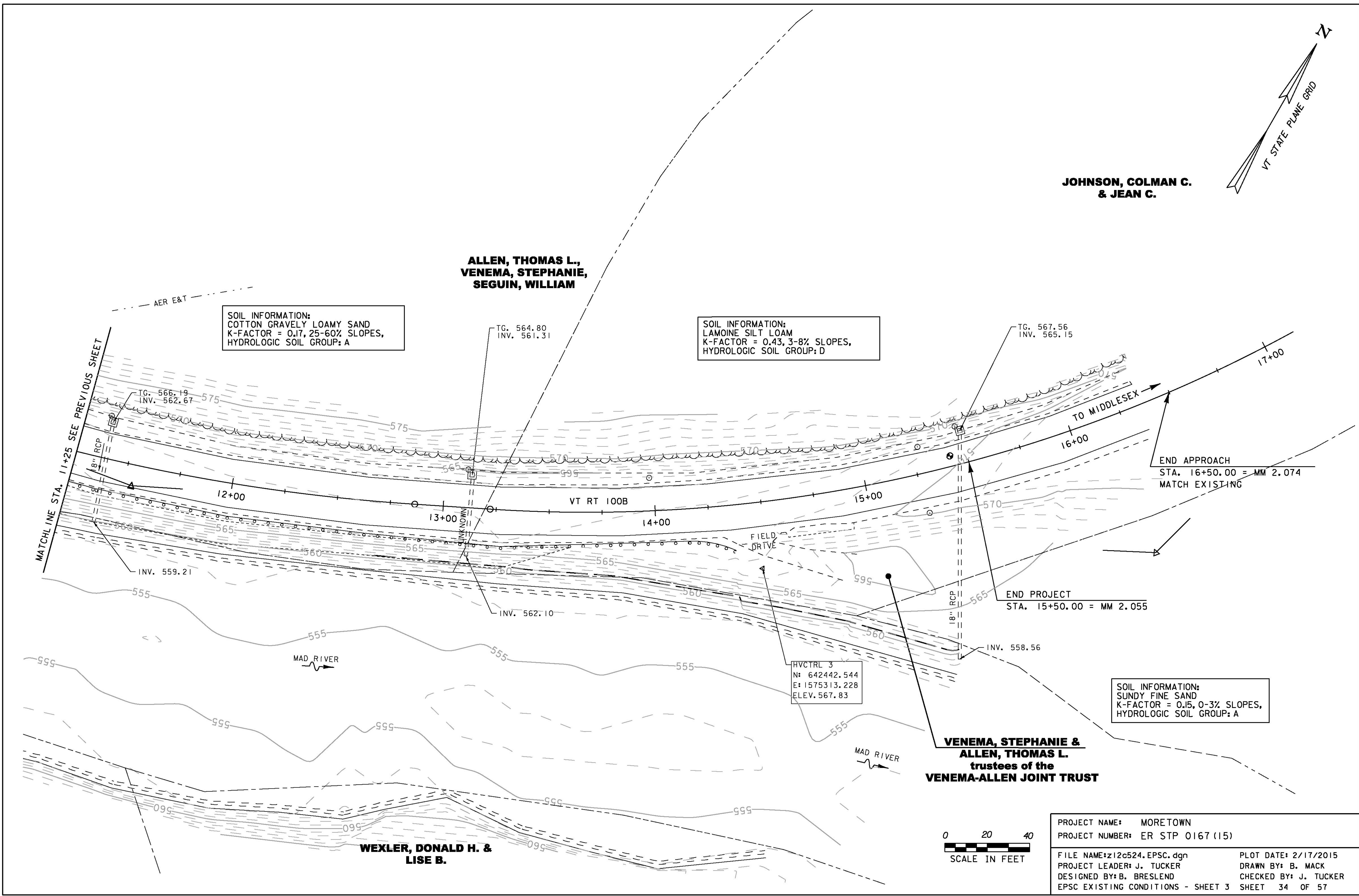
HVCTRL 3  
N: 642442.544  
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ELEV. 567.83

**VENEMA, STEPHANIE &  
ALLEN, THOMAS L.  
trustees of the  
VENEMA-ALLEN JOINT TRUST**

**WEXLER, DONALD H. &  
LISE B.**



PROJECT NAME: MORETOWN	PLLOT DATE: 2/17/2015
PROJECT NUMBER: ER STP 0167 (15)	DRAWN BY: B. MACK
FILE NAME: z12c524.EPSC.dgn	CHECKED BY: J. TUCKER
PROJECT LEADER: J. TUCKER	EPSC EXISTING CONDITIONS - SHEET 3
DESIGNED BY: B. BRESLEND	SHEET 34 OF 57

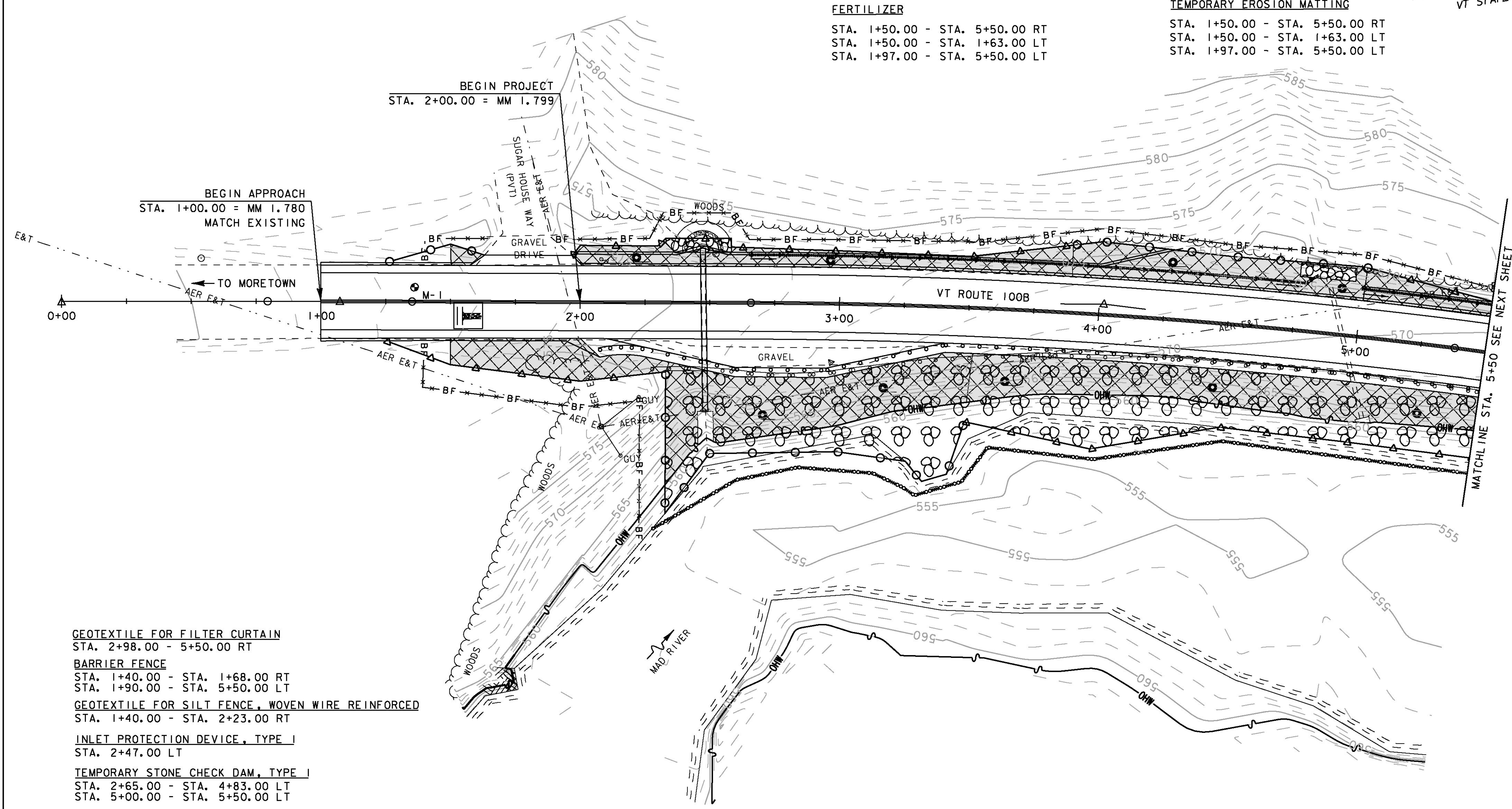
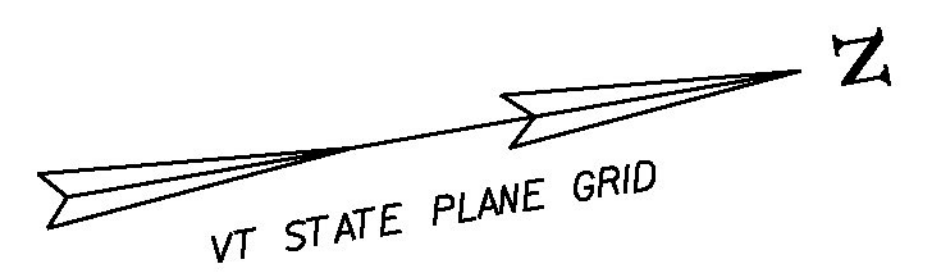


**SEED**  
 STA. 1+50.00 - STA. 5+50.00 RT  
 STA. 1+50.00 - STA. 1+63.00 LT  
 STA. 1+97.00 - STA. 5+50.00 LT

**FERTILIZER**  
 STA. 1+50.00 - STA. 5+50.00 RT  
 STA. 1+50.00 - STA. 1+63.00 LT  
 STA. 1+97.00 - STA. 5+50.00 LT

**AGRICULTURAL LIMESTONE**  
 STA. 1+50.00 - STA. 5+50.00 RT  
 STA. 1+50.00 - STA. 1+63.00 LT  
 STA. 1+97.00 - STA. 5+50.00 LT

**TEMPORARY EROSION MATTING**  
 STA. 1+50.00 - STA. 5+50.00 RT  
 STA. 1+50.00 - STA. 1+63.00 LT  
 STA. 1+97.00 - STA. 5+50.00 LT



**GEOTEXTILE FOR FILTER CURTAIN**  
 STA. 2+98.00 - 5+50.00 RT

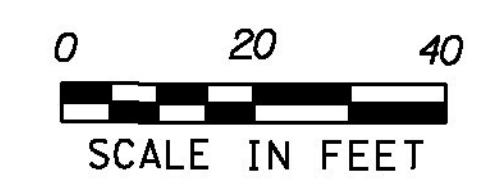
**BARRIER FENCE**  
 STA. 1+40.00 - STA. 1+68.00 RT  
 STA. 1+90.00 - STA. 5+50.00 LT

**GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED**  
 STA. 1+40.00 - STA. 2+23.00 RT

**INLET PROTECTION DEVICE, TYPE I**  
 STA. 2+47.00 LT

**TEMPORARY STONE CHECK DAM, TYPE I**  
 STA. 2+65.00 - STA. 4+83.00 LT  
 STA. 5+00.00 - STA. 5+50.00 LT

**VEHICLE TRACKING PAD**  
 STA. 1+56.00 RT



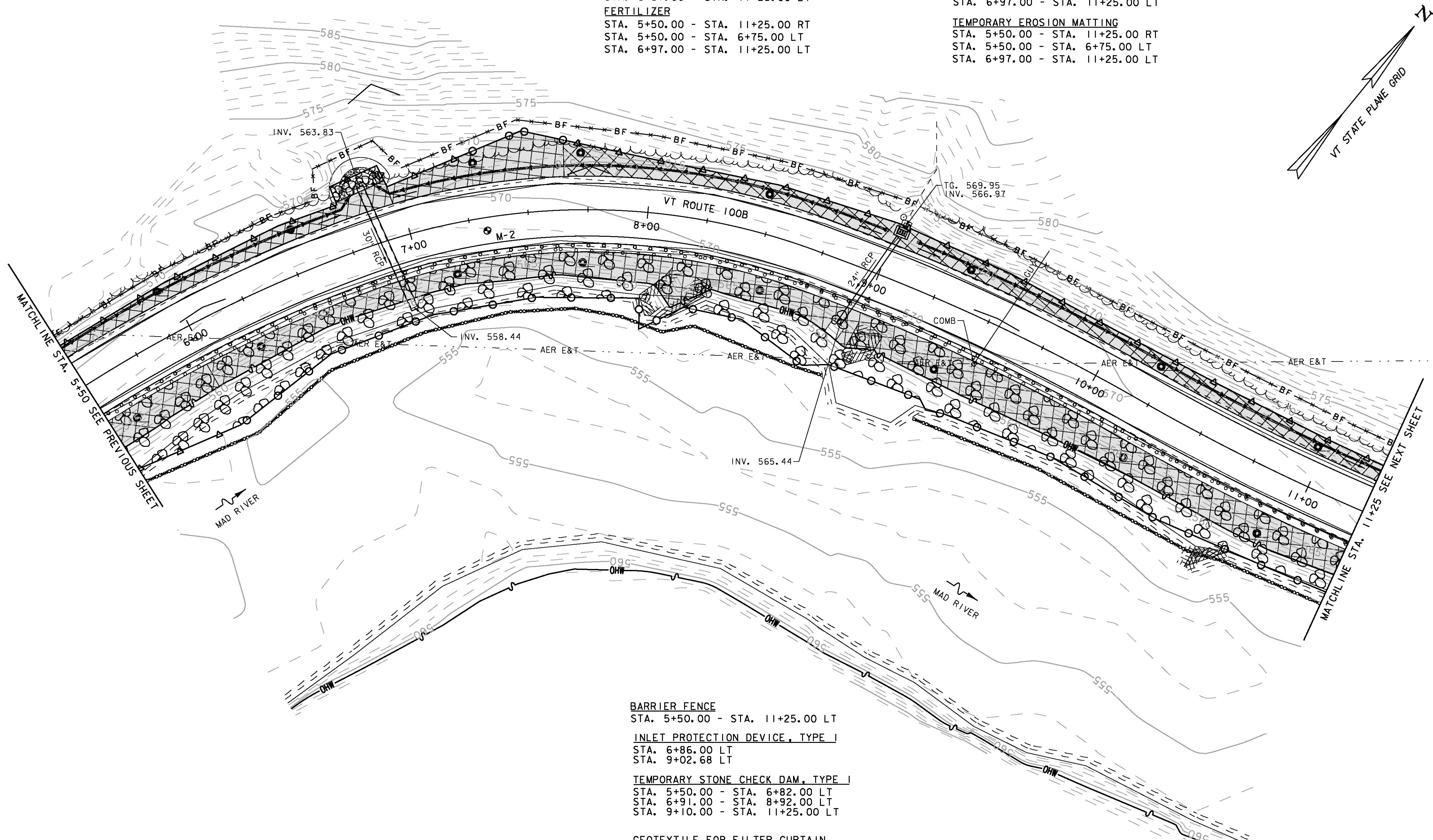
PROJECT NAME: MORETOWN	PLOT DATE: 2/17/2015
PROJECT NUMBER: ER STP 0167 (15)	DRAWN BY: B. MACK
FILE NAME: z12c524.EPSC.dgn	CHECKED BY: J. TUCKER
PROJECT LEADER: J. TUCKER	SHEET 35 OF 57
DESIGNED BY: B. BRESLEND	
EPSC CONSTRUCTION COND. - SHEET 1	

**SEED**  
 STA. 5+50.00 - STA. 11+25.00 RT  
 STA. 5+50.00 - STA. 6+75.00 LT  
 STA. 6+97.00 - STA. 11+25.00 LT

**FERTILIZER**  
 STA. 5+50.00 - STA. 11+25.00 RT  
 STA. 5+50.00 - STA. 6+75.00 LT  
 STA. 6+97.00 - STA. 11+25.00 LT

**AGRICULTURAL LIMESTONE**  
 STA. 5+50.00 - STA. 11+25.00 RT  
 STA. 5+50.00 - STA. 6+75.00 LT  
 STA. 6+97.00 - STA. 11+25.00 LT

**TEMPORARY EROSION MATTING**  
 STA. 5+50.00 - STA. 11+25.00 RT  
 STA. 5+50.00 - STA. 6+75.00 LT  
 STA. 6+97.00 - STA. 11+25.00 LT

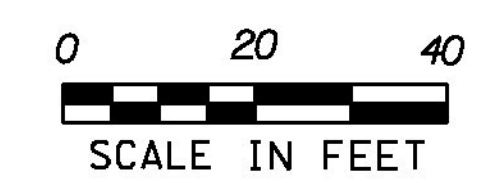


**BARRIER FENCE**  
 STA. 5+50.00 - STA. 11+25.00 LT

**INLET PROTECTION DEVICE, TYPE I**  
 STA. 6+86.00 LT  
 STA. 9+02.68 LT

**TEMPORARY STONE CHECK DAM, TYPE I**  
 STA. 5+50.00 - STA. 6+82.00 LT  
 STA. 6+91.00 - STA. 8+92.00 LT  
 STA. 9+10.00 - STA. 11+25.00 LT

**GEOTEXTILE FOR FILTER CURTAIN**  
 STA. 5+50.00 - STA. 8+93.00 RT  
 STA. 9+38.00 - STA. 11+25.00 RT



PROJECT NAME: MORETOWN	PLOT DATE: 2/17/2015
PROJECT NUMBER: ER STP 0167 (15)	DRAWN BY: B. MACK
FILE NAME: z12c524.EPSC.dgn	CHECKED BY: J. TUCKER
PROJECT LEADER: J. TUCKER	SHEET 36 OF 57
DESIGNED BY: B. BRESLEND	
EPSC CONSTRUCTION COND. - SHEET 2	

**SEED**  
 STA. 11+25.00 - STA. 16+00.00 LT  
 STA. 11+25.00 - STA. 16+00.00 RT

**FERTILIZER**  
 STA. 11+25.00 - STA. 16+00.00 LT  
 STA. 11+25.00 - STA. 16+00.00 RT

**TEMPORARY EROSION MATTING**  
 STA. 11+25.00 - STA. 16+00.00 LT  
 STA. 11+25.00 - STA. 16+00.00 RT

**AGRICULTURAL LIMESTONE**  
 STA. 11+25.00 - STA. 16+00.00 LT  
 STA. 11+25.00 - STA. 16+00.00 RT

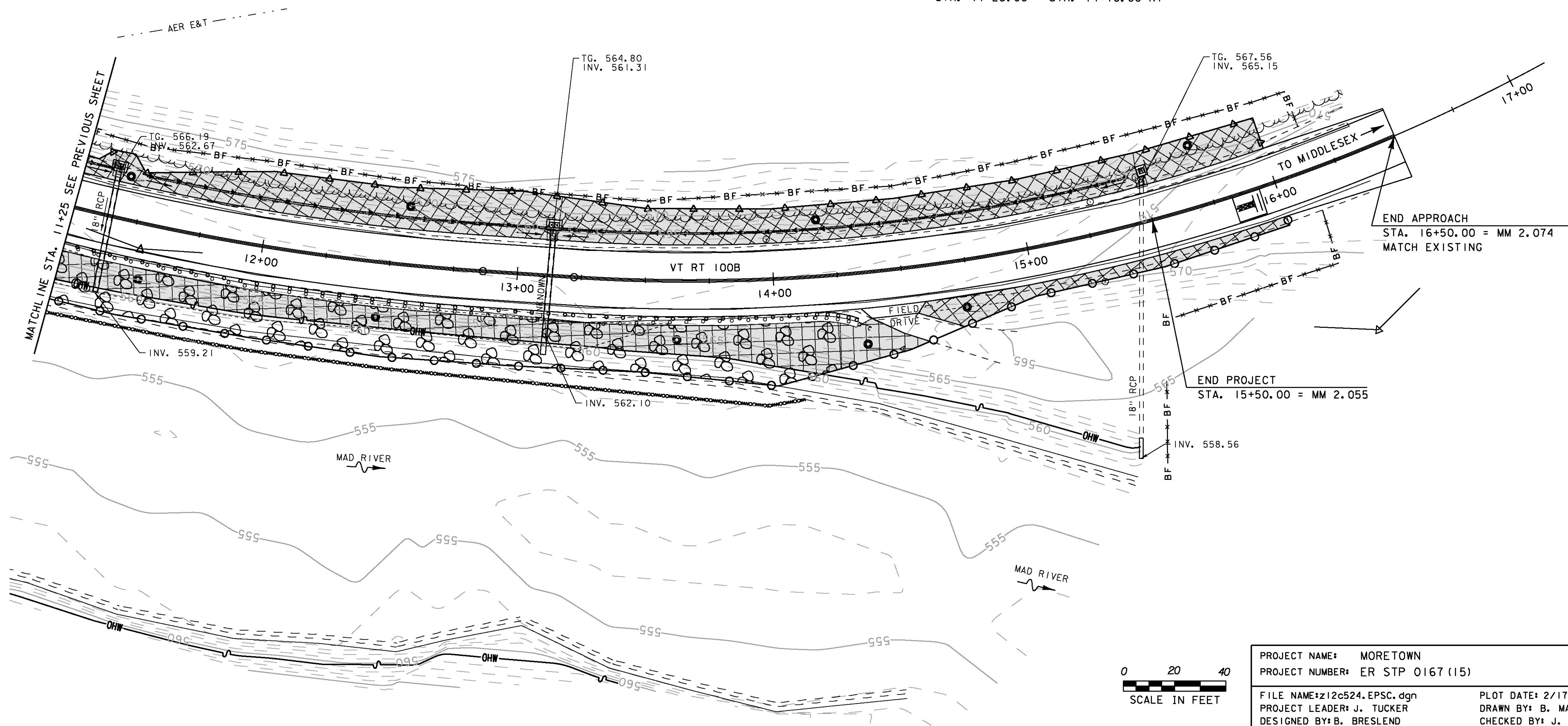
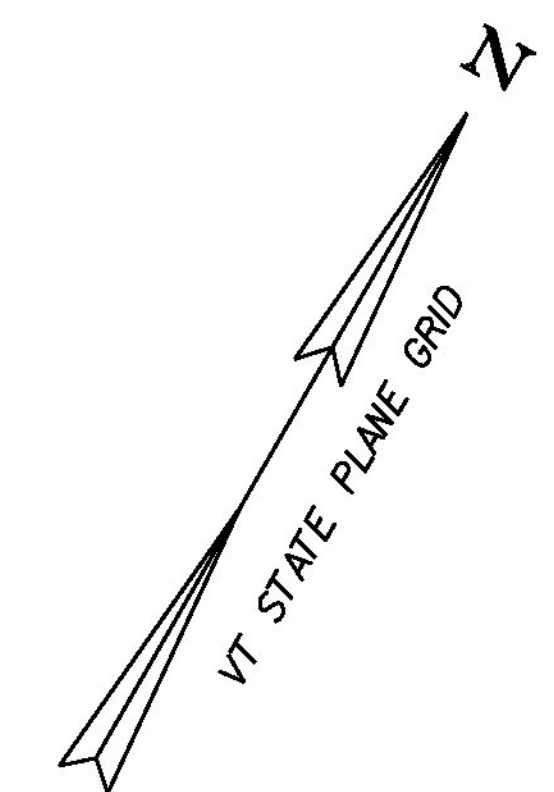
**BARRIER FENCE**  
 STA. 11+25.00 - STA. 16+16.00 LT  
**GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED**  
 STA. 15+32.00 - STA. 16+16.00 RT  
 PROVIDE 20' OPENING IN FENCE FOR ACCESS TO FIELD

**VEHICLE TRACKING PAD**  
 STA. 15+87.00 LT

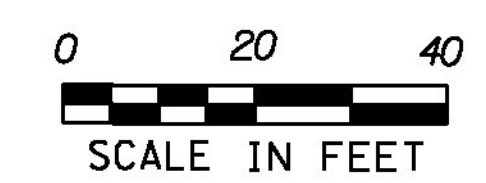
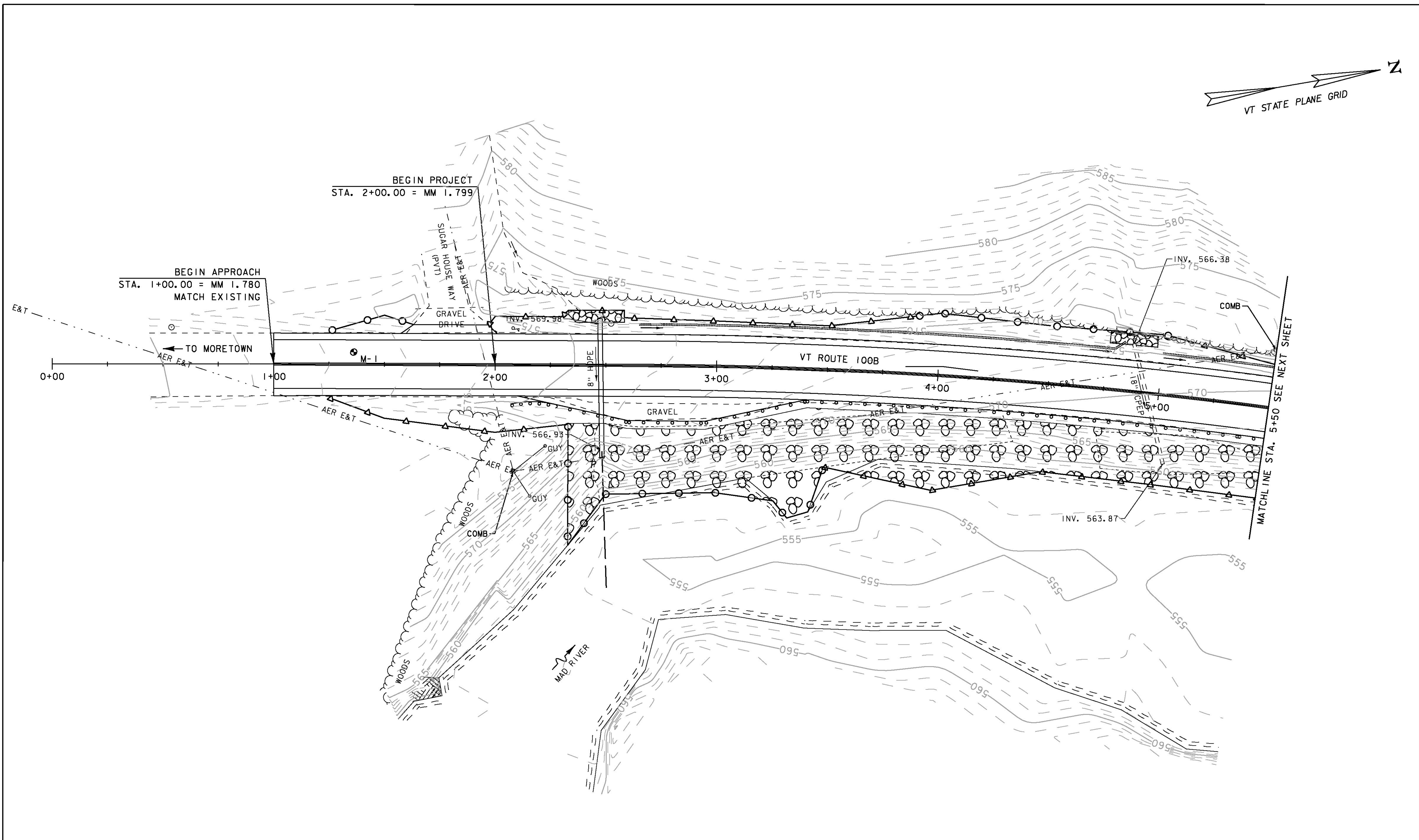
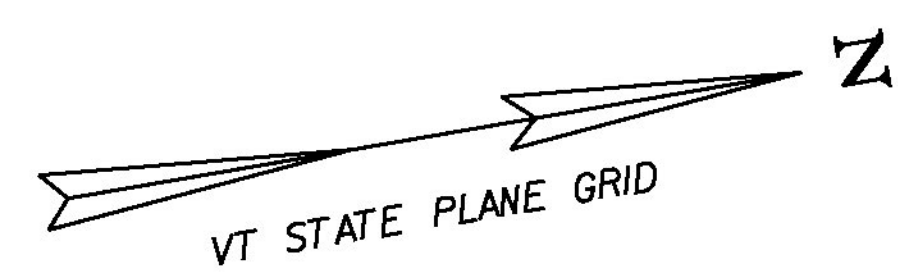
**TEMPORARY STONE CHECK DAM, TYPE I**  
 STA. 11+25.00 - STA. 11+37.00 LT  
 STA. 11+50.00 - STA. 13+11.00 LT  
 STA. 13+15.00 - STA. 15+45.00 LT

**INLET PROTECTION DEVICE, TYPE I**  
 STA. 11+37.78 LT  
 STA. 13+13.14 LT  
 STA. 15+50.87 LT

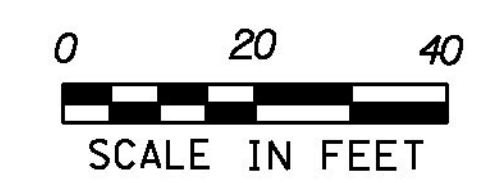
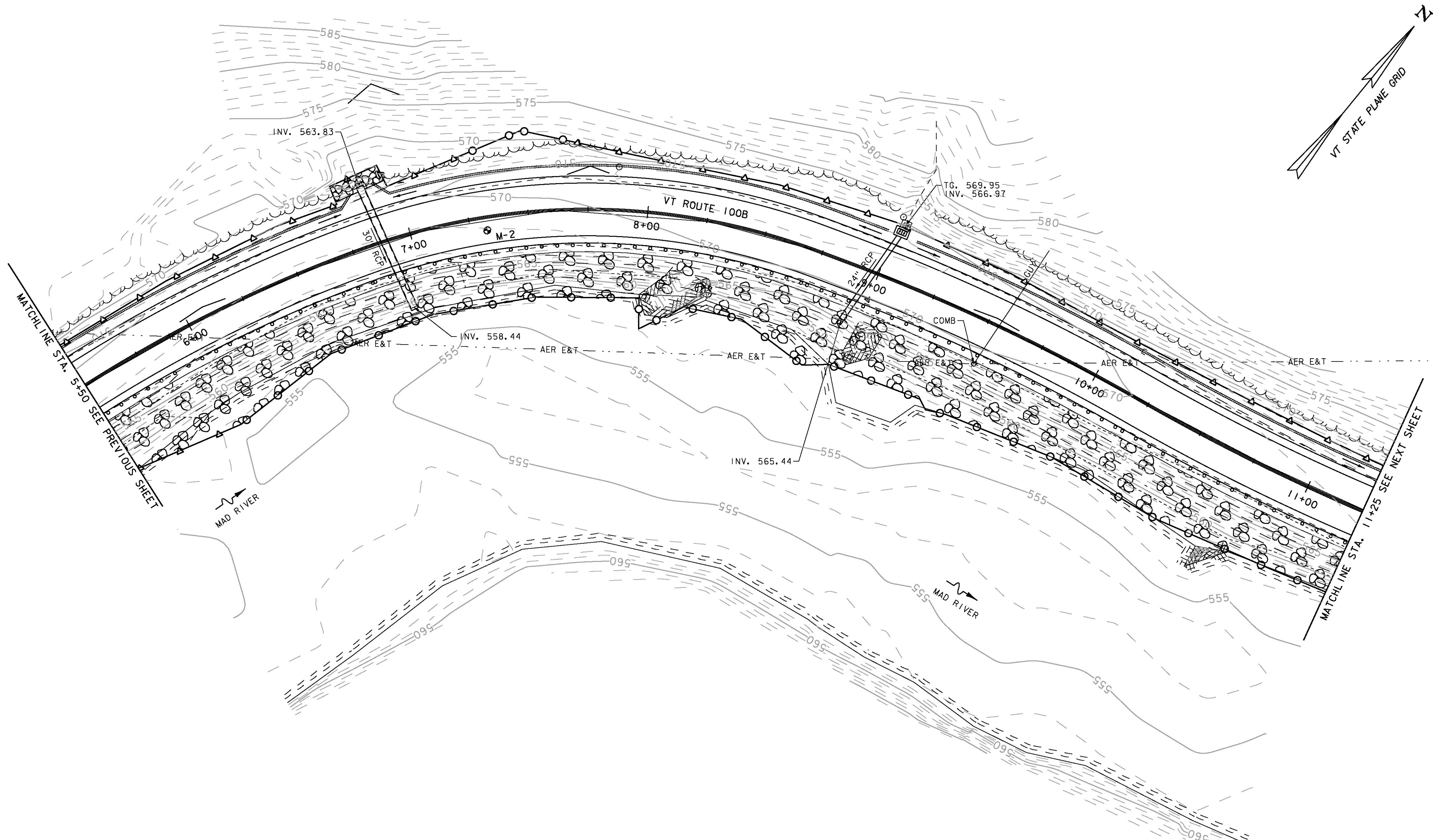
**GEOTEXTILE FOR FILTER CURTAIN**  
 STA. 11+25.00 - STA. 14+10.00 RT



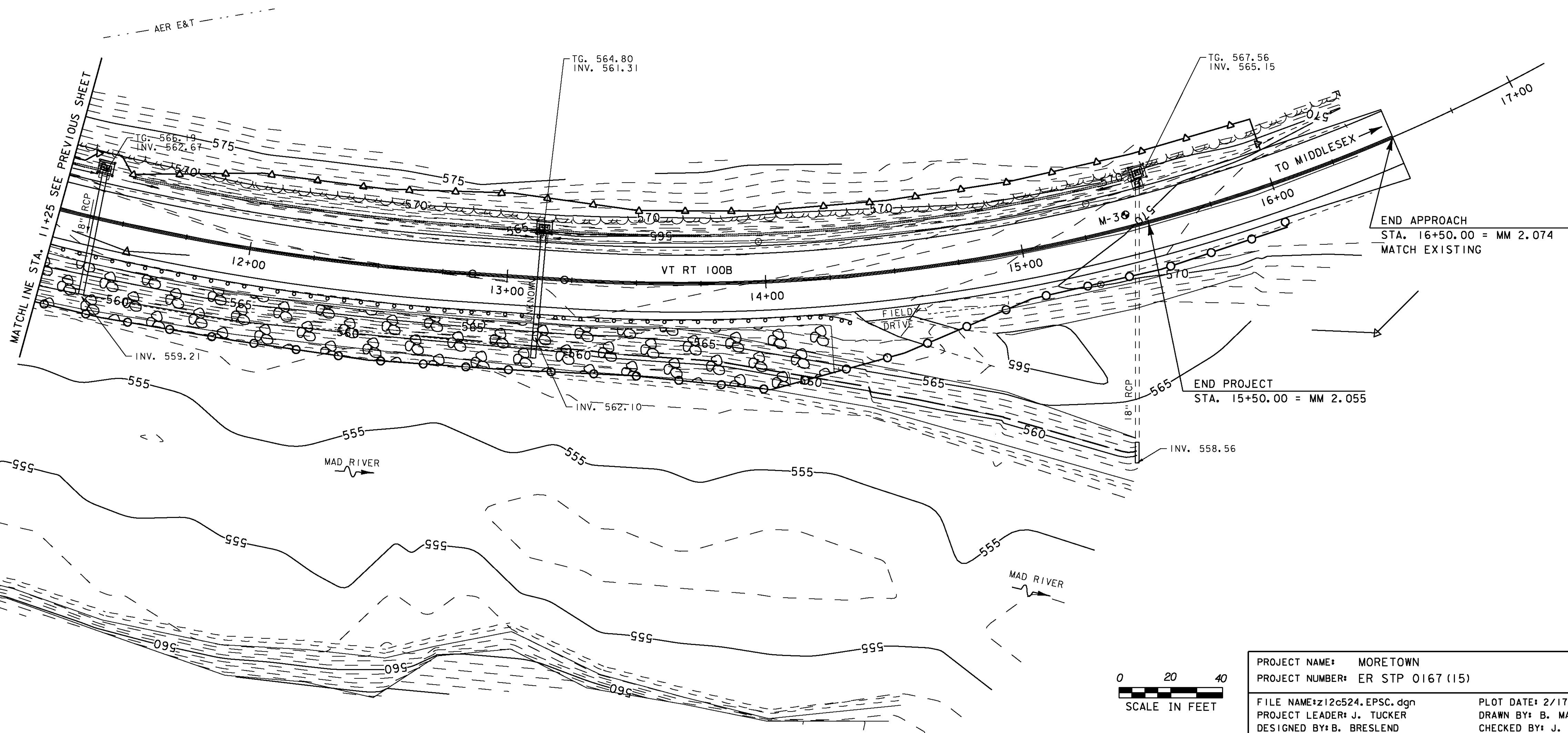
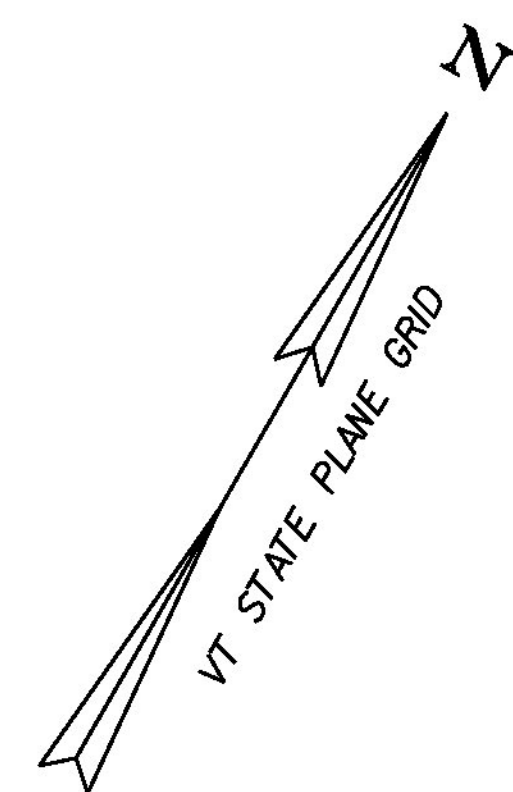
PROJECT NAME: MORETOWN	PLOT DATE: 2/17/2015
PROJECT NUMBER: ER STP 0167 (15)	DRAWN BY: B. MACK
FILE NAME: z12c524.EPSC.dgn	CHECKED BY: J. TUCKER
PROJECT LEADER: J. TUCKER	EPSC CONSTRUCTION COND. - SHEET 3
DESIGNED BY: B. BRESLEND	SHEET 37 OF 57



PROJECT NAME: MORETOWN	PLOT DATE: 2/17/2015
PROJECT NUMBER: ER STP 0167 (15)	DRAWN BY: B. MACK
FILE NAME: z12c524.EPSC.dgn	CHECKED BY: J. TUCKER
PROJECT LEADER: J. TUCKER	SHEET 38 OF 57
DESIGNED BY: B. BRESLEND	
EPSC FINAL CONDITIONS - SHEET 1	



PROJECT NAME: MORETOWN	PLOT DATE: 2/17/2015
PROJECT NUMBER: ER STP 0167 (15)	DRAWN BY: B. MACK
FILE NAME: z12c524.EPSC.dgn	CHECKED BY: J. TUCKER
PROJECT LEADER: J. TUCKER	SHEET 39 OF 57
DESIGNED BY: B. BRESLEND	
EPSC FINAL CONDITIONS - SHEET 2	



PROJECT NAME: MORETOWN	PLOT DATE: 2/17/2015
PROJECT NUMBER: ER STP 0167 (15)	DRAWN BY: B. MACK
FILE NAME: z12c524.EPSC.dgn	CHECKED BY: J. TUCKER
PROJECT LEADER: J. TUCKER	SHEET 40 OF 57
DESIGNED BY: B. BRESLEND	
EPSC FINAL CONDITIONS - SHEET 3	

VAOT LOW GROW/FINE FESCUE MIX						
WEIGHT	LBS/AC		NAME	LATIN NAME	GERM	PURITY
	BROADCAST	HYDROSEED				
38%	57	95	CREeping RED FESCUE	FESTUCA RUBRA VAR. RUBRA	90%	98%
29%	43.5	72.5	HARD FESCUE	FESTUCA LONGIFOLIA	85%	95%
15%	22.5	37.5	CHEWINGS FESCUE	FESTUCA RUBRA VAR. COMMUTATA	87%	95%
15%	22.5	37.5	ANNUAL RYEGRASS	LOLIUM MULTIFLORUM	90%	95%
3%	4.5	7.5	INERTS			
100%	150	250				

VAOT RURAL AREA MIX						
WEIGHT	LBS/AC		NAME	LATIN NAME	GERM	PURITY
	BROADCAST	HYDROSEED				
37.5%	22.5	45	CREeping RED FESCUE	FESTUCA RUBRA VAR. RUBRA	85%	98%
37.5%	22.5	45	TALL FESCUE	FESTUCA ARUNDINACEA	90%	95%
5.0%	3	6	RED TOP	AGROSTIS GIGANTEA	90%	95%
15.0%	9	18	WHITE FIELD CLOVER	TRIFOLIUM REPENS	85%	98%
5.0%	3	6	ANNUAL RYE GRASS	LOLIUM MULTIFLORUM	85%	95%
100%	60	120				

GENERAL AMENDMENT GUIDANCE		
FERTILIZER	LIME	
10/20/10	AG LIME	PELLITIZED
500 LBS/AC	2 TONS/AC	1 TONS/AC

#### CONSTRUCTION GUIDANCE

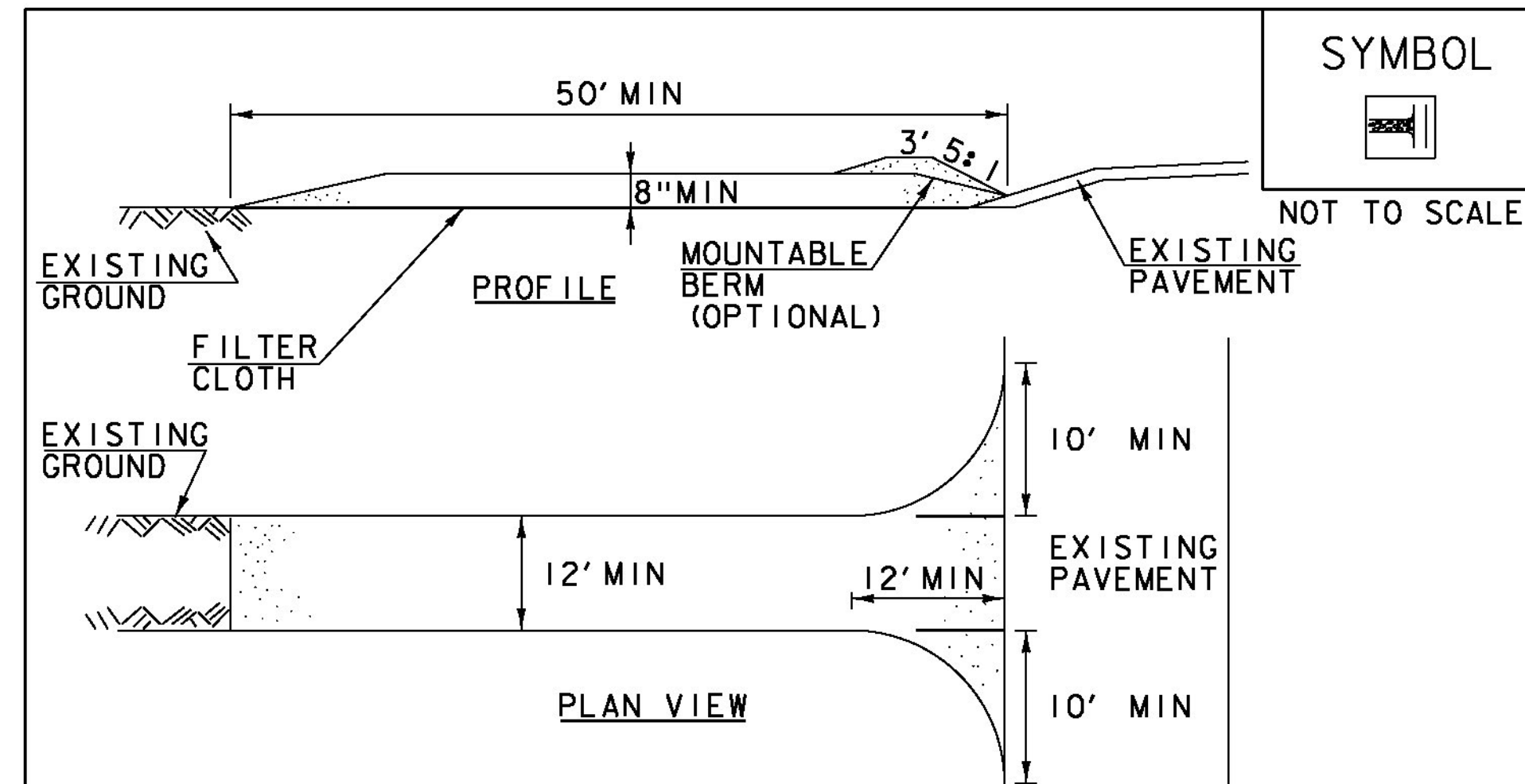
- SEED MIX: THE CONTRACTOR SHALL COORDINATE WITH THE RESIDENT ENGINEER ON WHICH SEED MIX TO USE.
- SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED UPLAND (NON WETLAND) AREAS DISTURBED BY THE CONTRACTOR.
- ALL SEED MIXTURES: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.
- FERTILIZER AND LIMESTONE: SHALL FOLLOW RATES SHOWN ON PLAN OR AS DIRECTED BY THE ENGINEER.
- 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.
- HYDROSEEDING: ALTHOUGH GUIDANCE IS GIVEN ABOVE THE SITE CONDITIONS AND THE TYPE OF HYDROSEED PROPOSED FOR USE WILL ULTIMATELY DICTATE THE AMOUNTS AND TYPES OF SOIL AMENDMENTS TO BE APPLIED.
- 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 651.05)

REVISIONS	
JANUARY 12, 2015	WHF



#### CONSTRUCTION SPECIFICATIONS

- STONE SIZE- USE 1-4" STONE, RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
- LENGTH- NOT LESS THAN 50' (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30' MINIMUM LENGTH APPLIES).
- THICKNESS- NOT LESS THAN 8".
- WIDTH- 12' MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. 24" IF SINGLE ENTRANCE TO SITE.
- GEOTEXTILE MUST BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE.
- 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.
- 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.
- WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
- PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED ACCORDING TO PERMIT REQUIREMENTS.

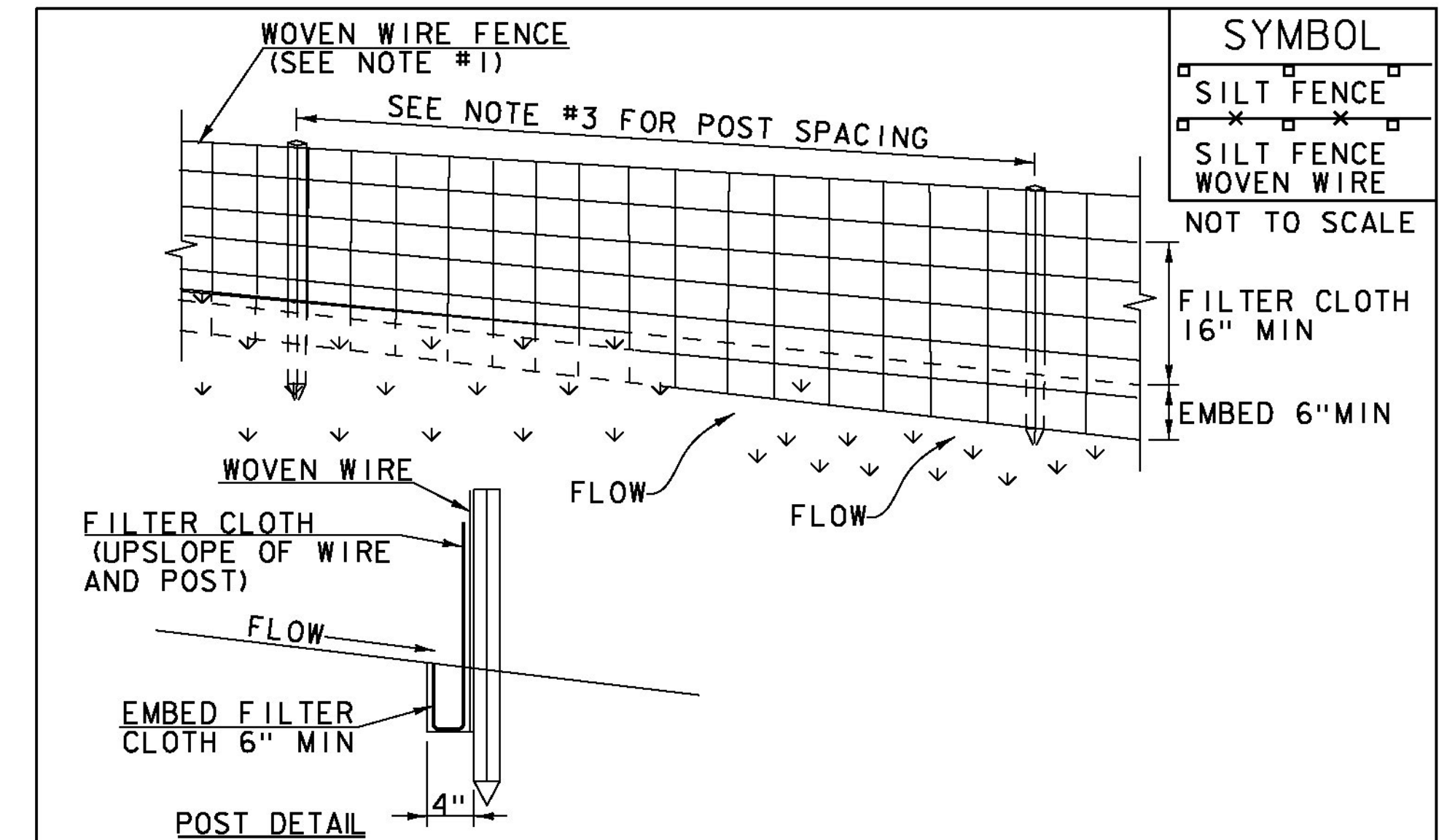
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

#### 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



#### CONSTRUCTION SPECIFICATIONS

- 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.
- FILTER CLOTH SHALL BE EITHER FILTER X, MIRAF1100X, STABILINKA T140N OR APPROVED EQUIVALENT.
- 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'.
- 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.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY 6" AND FOLDED.
- 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

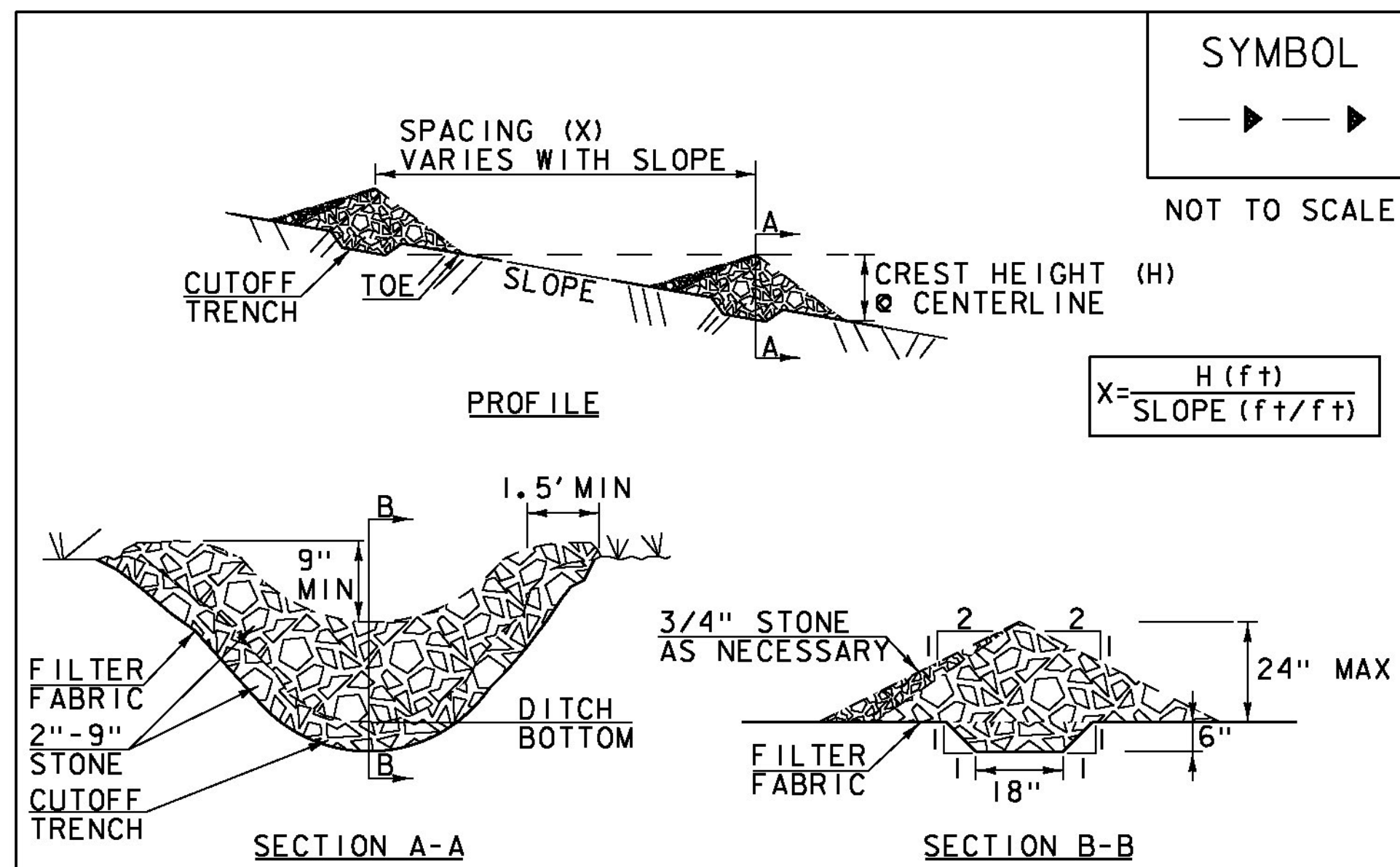
NOTES:  
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006-" FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 AND AS SHOWN IN THE PLANS FOR GEOTEXTILE-FOR SILT FENCE (PAY ITEM 649.50) 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

PROJECT NAME: MORETOWN  
PROJECT NUMBER: ER STP 0167 (15)

FILE NAME: z12c524EPSC_Narrative.dgn PLOT DATE: 2/17/2015  
PROJECT LEADER: J. TUCKER DRAWN BY: B. MACK  
DESIGNED BY: B. BRESLEND CHECKED BY: A. SANZ  
EROSION CONTROL DETAILS SHEET 1 SHEET 41 OF 57



SYMBOL

NOT TO SCALE

$$X = \frac{H(f+f)}{\text{SLOPE}(f+f)}$$

**CONSTRUCTION SPECIFICATIONS**

1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION.
2. CHECK DAMS SHALL BE SPACED SO THAT THE ELEVATION OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION AS THE TOE OF THE UPSTREAM DAM.
3. 3/4" FILTERING STONE MAY BE ADDED TO THE FACE OF THE CHECK DAM AS NECESSARY.
4. EXTEND THE STONE A MINIMUM OF 1.5' BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
5. PROTECT CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
6. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.
7. MAXIMUM DRAINAGE AREA 2 ACRES.

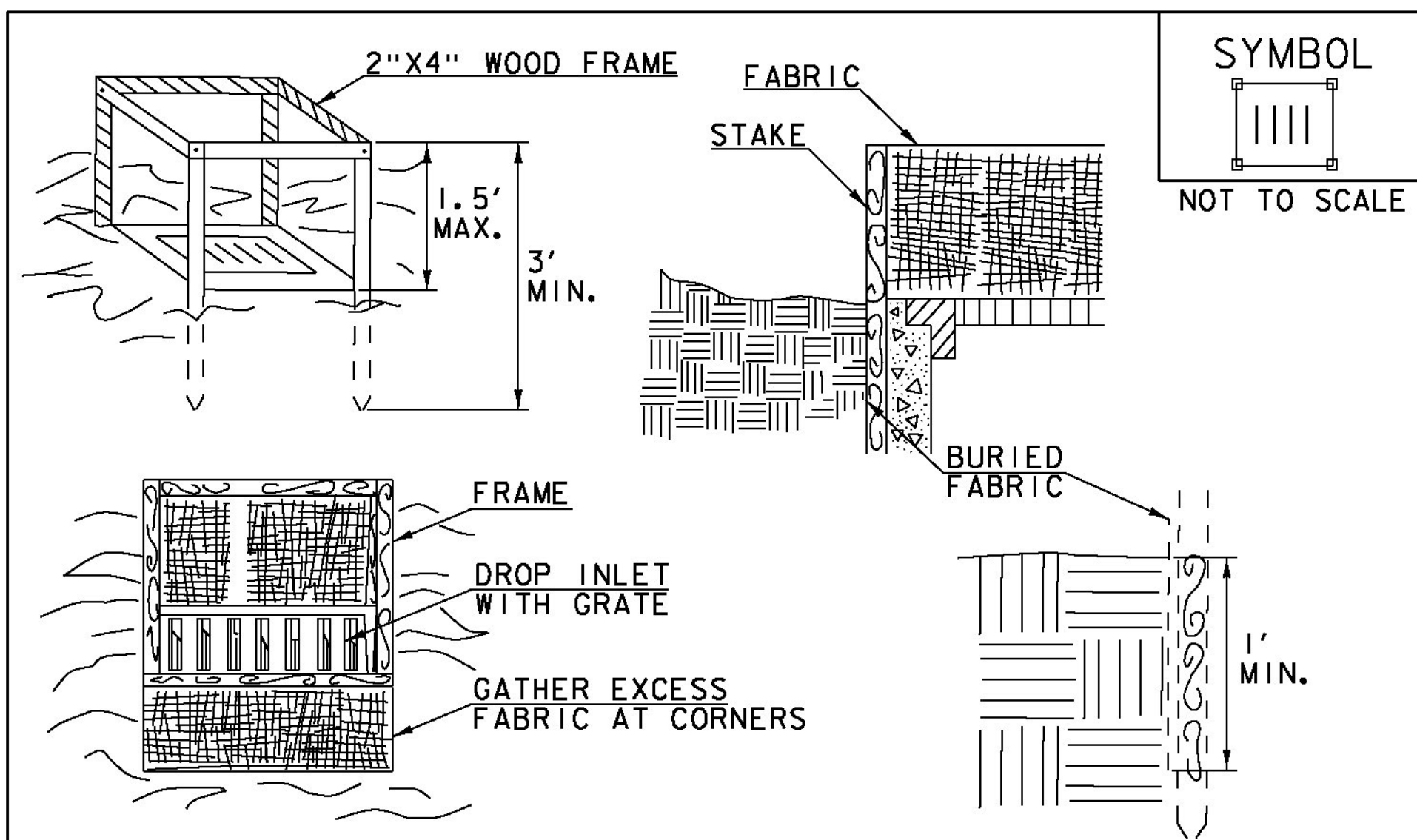
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC  
ORIGINALLY DEVELOPED BY USDA-NRCS  
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

**CHECK DAM**

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 TEMPORARY STONE CHECK DAM, TYPE I (PAY ITEM 653.25)

REVISIONS	
MARCH 21, 2008	WHF
JANUARY 8, 2009	WHF



SYMBOL

NOT TO SCALE

**CONSTRUCTION SPECIFICATIONS**

1. FILTER FABRIC SHALL HAVE AN APPARENT OPENING SIZE OF 40-85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2" x 4" WOOD OR EQUIVALENT METAL WITH A MINIMUM LENGTH OF 3'.
4. SPACE STAKES EVENLY AROUND INLET 3' APART AND DRIVE A MINIMUM 18" DEEP. SPANS GREATER THAN 3' MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.
5. FABRIC SHALL BE EMBEDDED 1' MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
6. A 2" x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.
7. MAXIMUM DRAINAGE AREA 1 ACRE

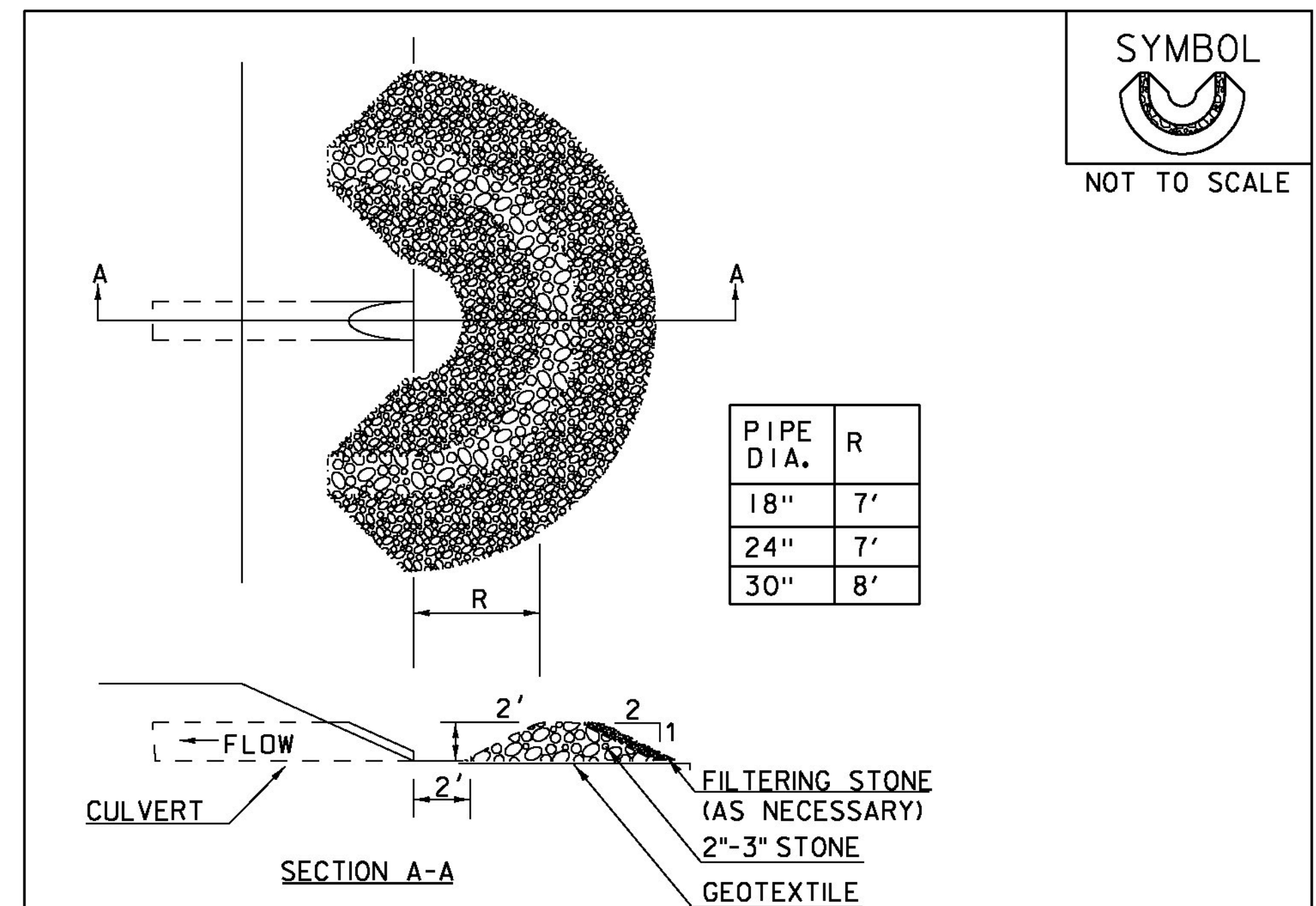
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC  
ORIGINALLY DEVELOPED BY USDA-NRCS  
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

**FILTER FABRIC  
DROP INLET  
PROTECTION**

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 INLET PROTECTION DEVICE, TYPE I (PAY ITEM 653.40).

REVISIONS	
MARCH 7, 2008	WHF
JANUARY 13, 2009	WHF



SYMBOL

NOT TO SCALE

**CONSTRUCTION SPECIFICATIONS**

1. USE 2" TO 3" STONE. FILTERING STONE SHALL BE 3/4".
2. PLACE STONE OVER GEOTEXTILE.
- 3.
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

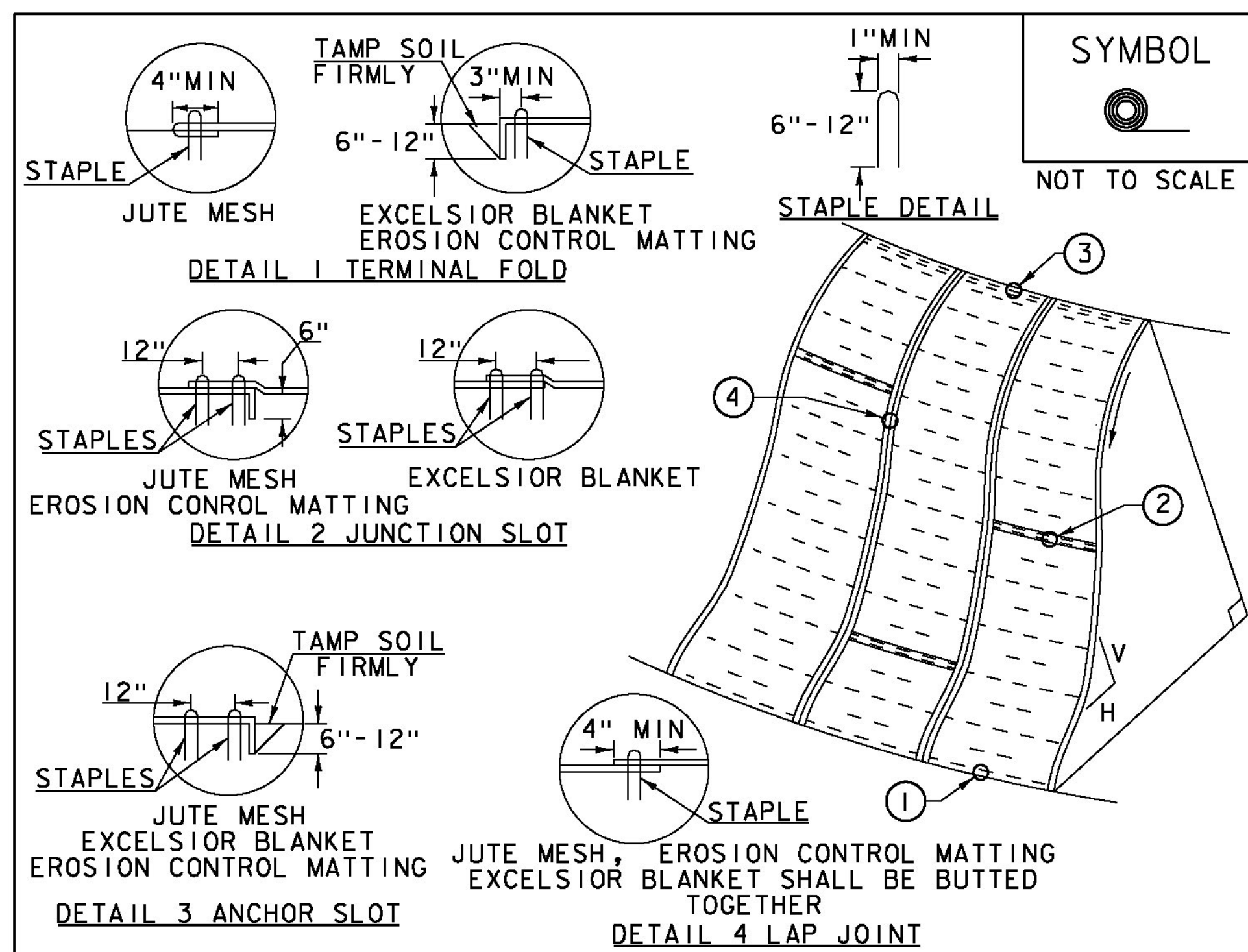
**PIPE INLET  
PROTECTION**

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

PROJECT NAME: MORETOWN  
PROJECT NUMBER: ER STP 0167 (15)

FILE NAME: z12c524EPSC_Narrative.dgn PLOT DATE: 2/17/2015  
PROJECT LEADER: J. TUCKER DRAWN BY: B. MACK  
DESIGNED BY: B. BRESLEND CHECKED BY: A. SANZ  
EROSION CONTROL DETAILS SHEET 2 SHEET 42 OF 57



**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' X 225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4' X 150' 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

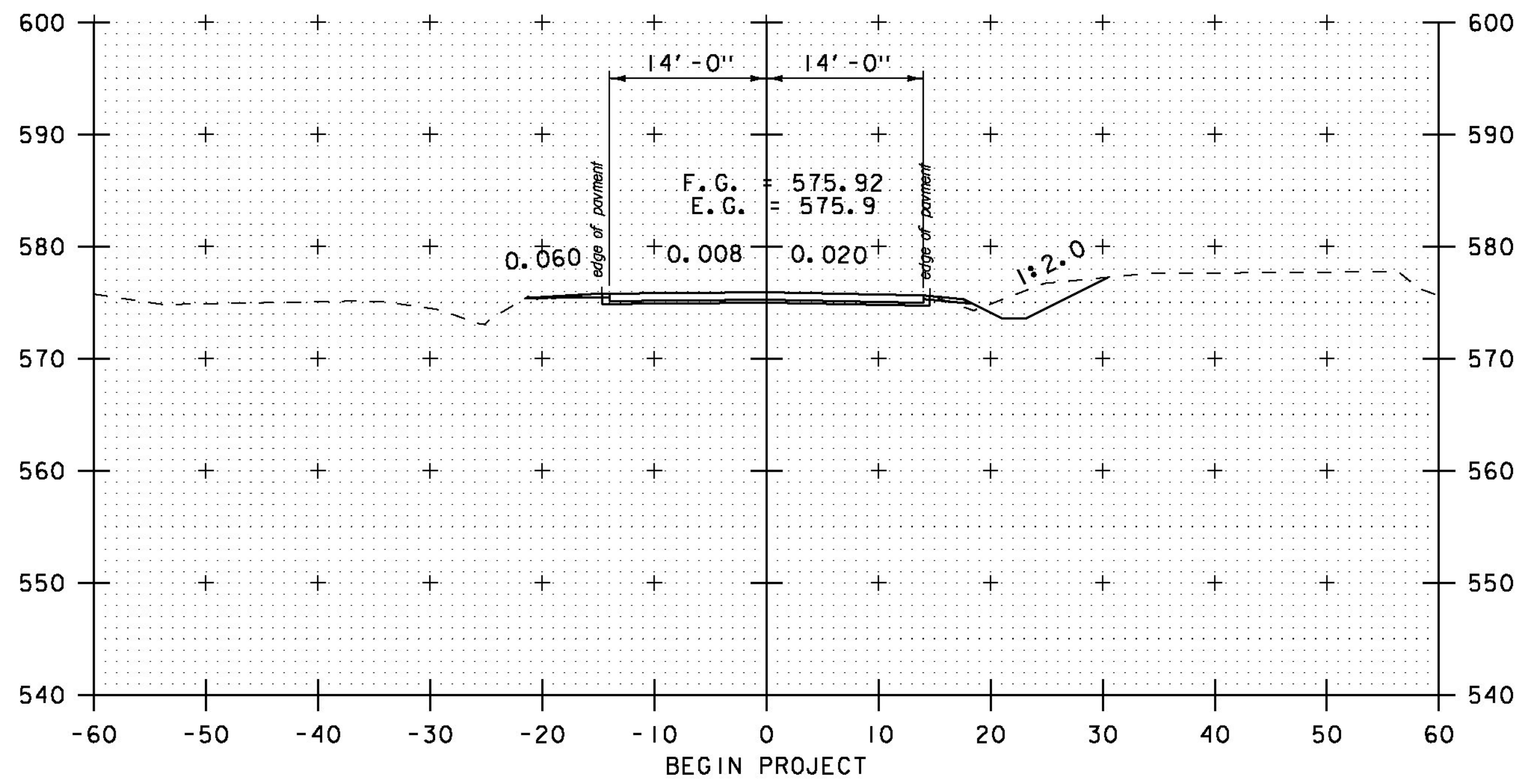
NOTES:  
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006-" FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.  
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 AND AS SHOWN IN THE PLANS FOR TEMPORARY EROSION MATTING (PAY ITEM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

REVISIONS	
APRIL 16, 2007	JMF
JANUARY 13, 2009	WHF

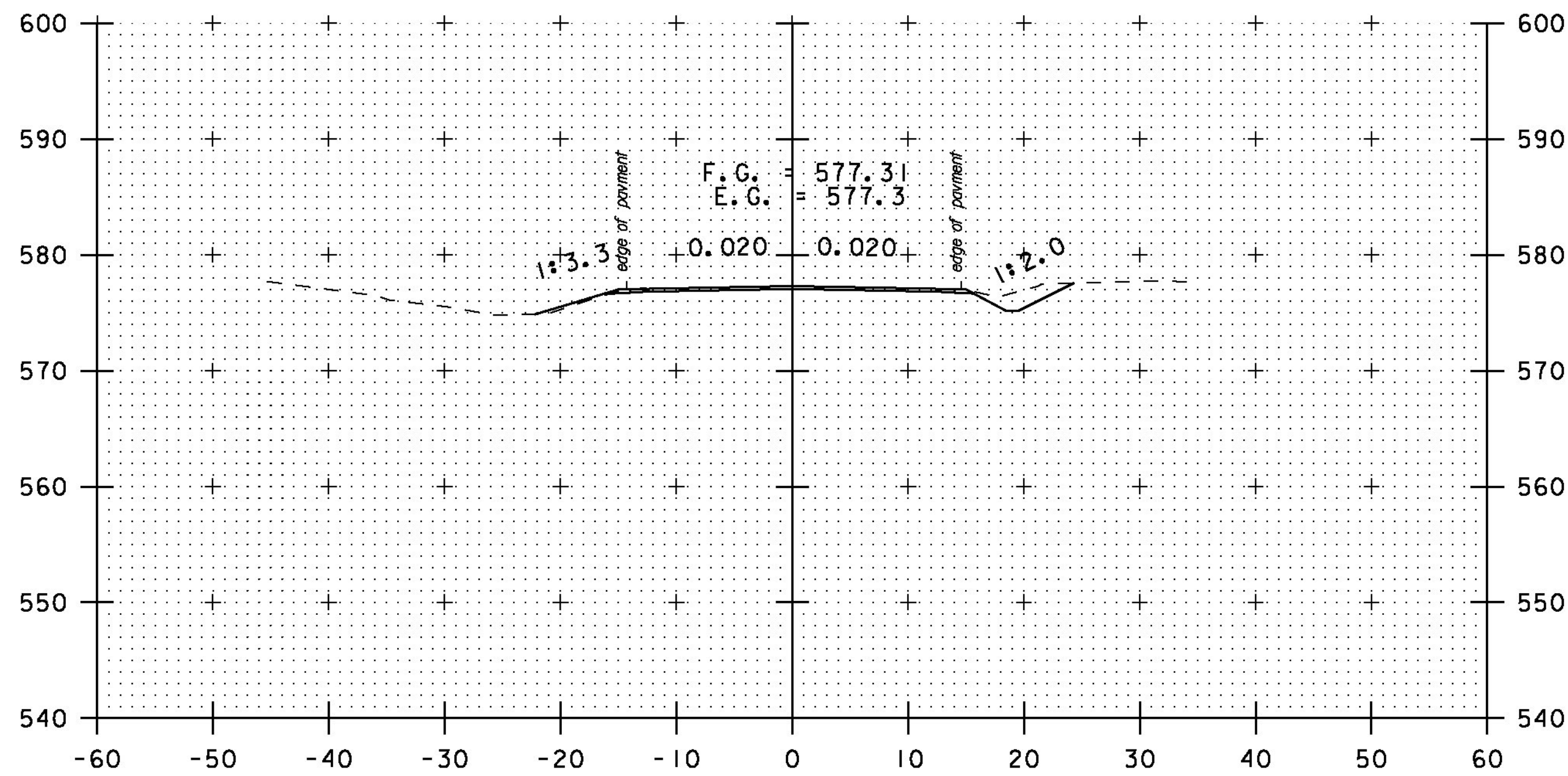
PROJECT NAME: MORETOWN  
PROJECT NUMBER: ER STP 0167 (15)

FILE NAME: z12c524EPSC_Narrative.dgn PLOT DATE: 2/17/2015  
PROJECT LEADER: J. TUCKER DRAWN BY: B. MACK  
DESIGNED BY: B. BRESLEND CHECKED BY: A. SANZ  
EROSION CONTROL DETAILS SHEET 3 SHEET 43 OF 57



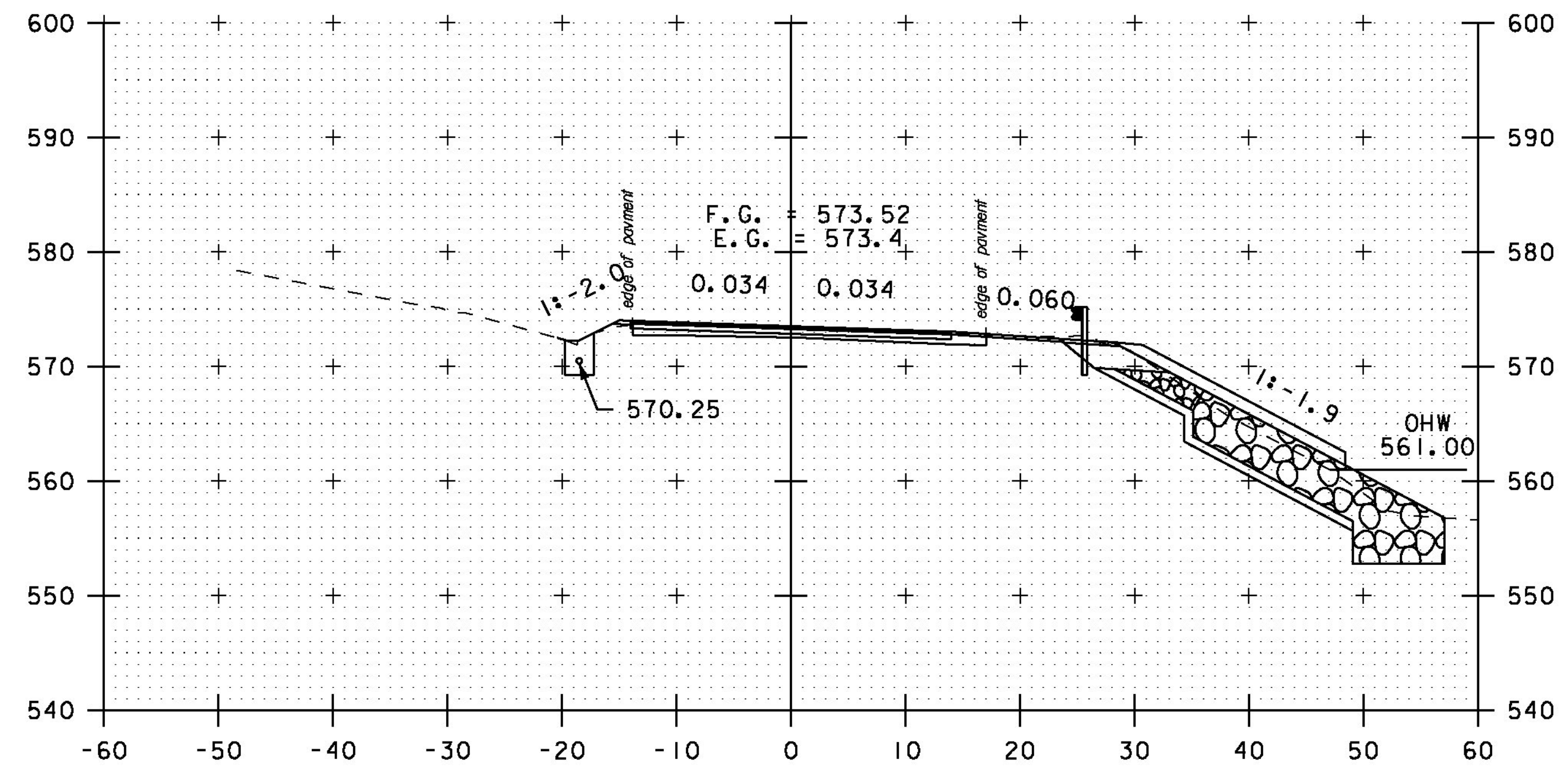


2+00

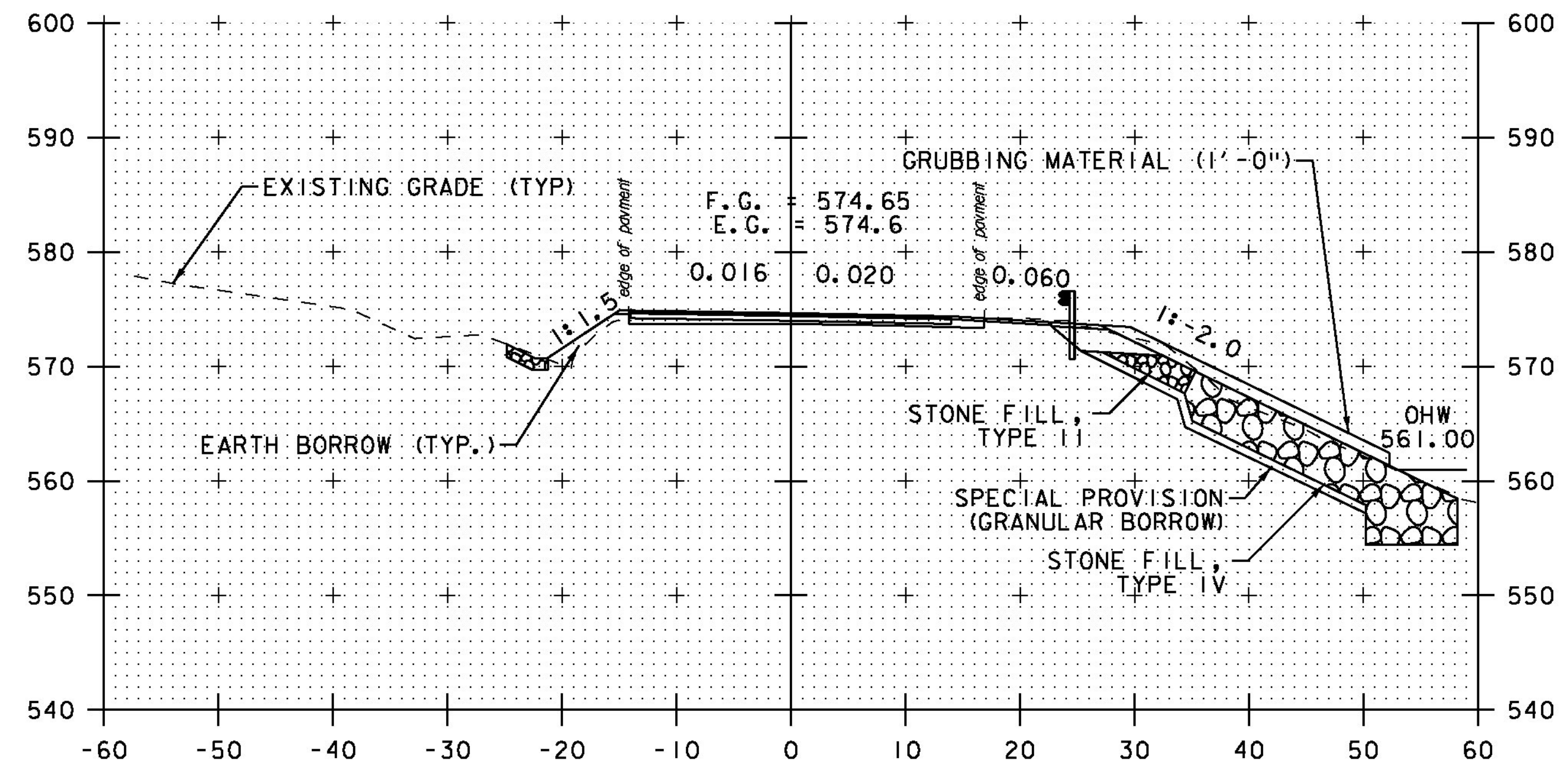


1+50

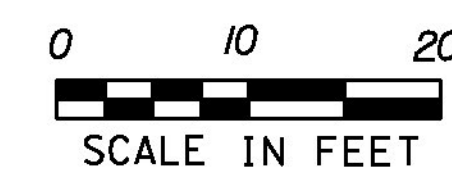
STA. 1+00.00  
BEGIN APPROACH  
MATCH EXISTING



PULL OFF RT  
3+00



PULL OFF RT  
2+50

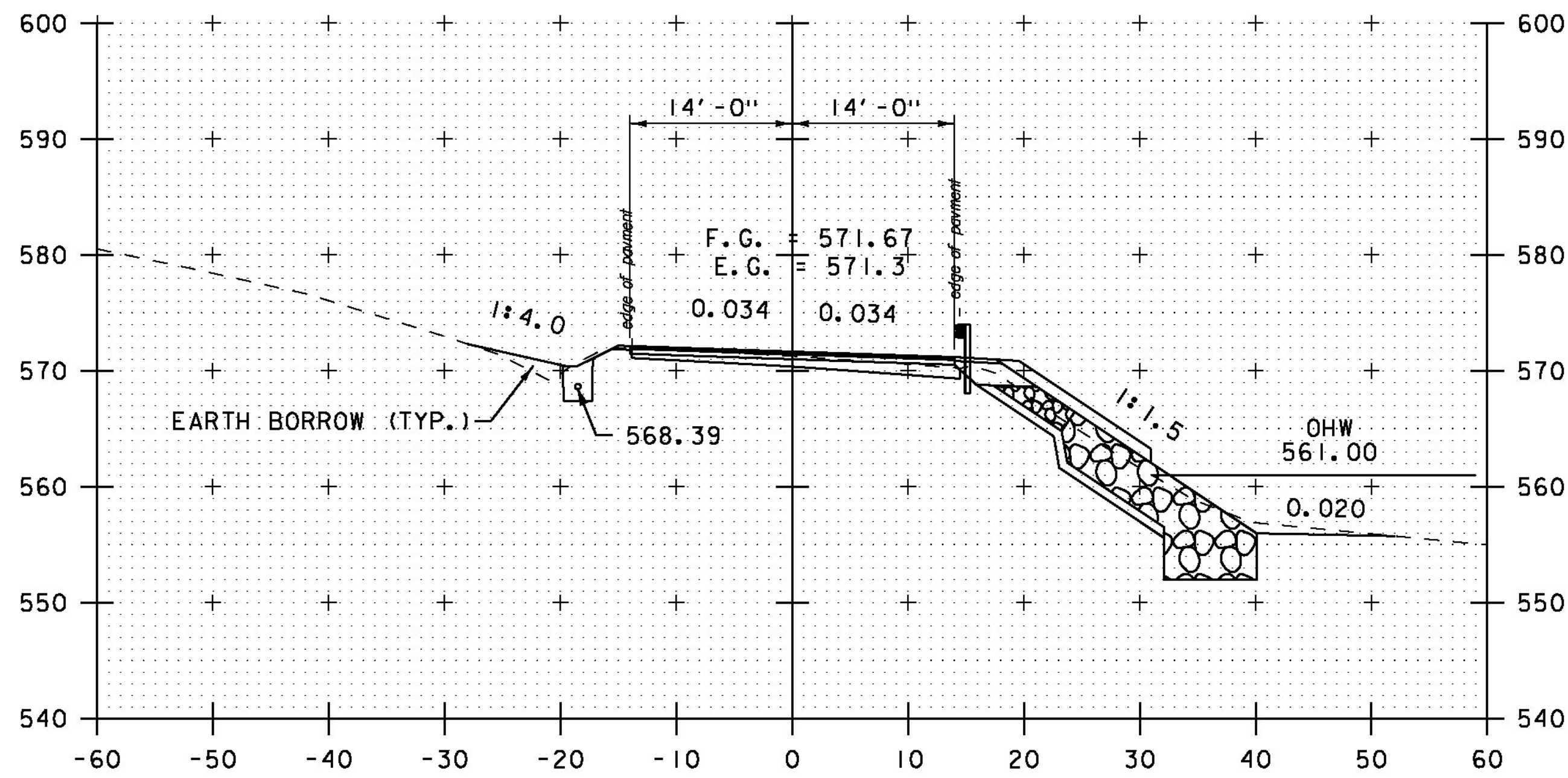


STA. 1+50 TO STA. 3+00

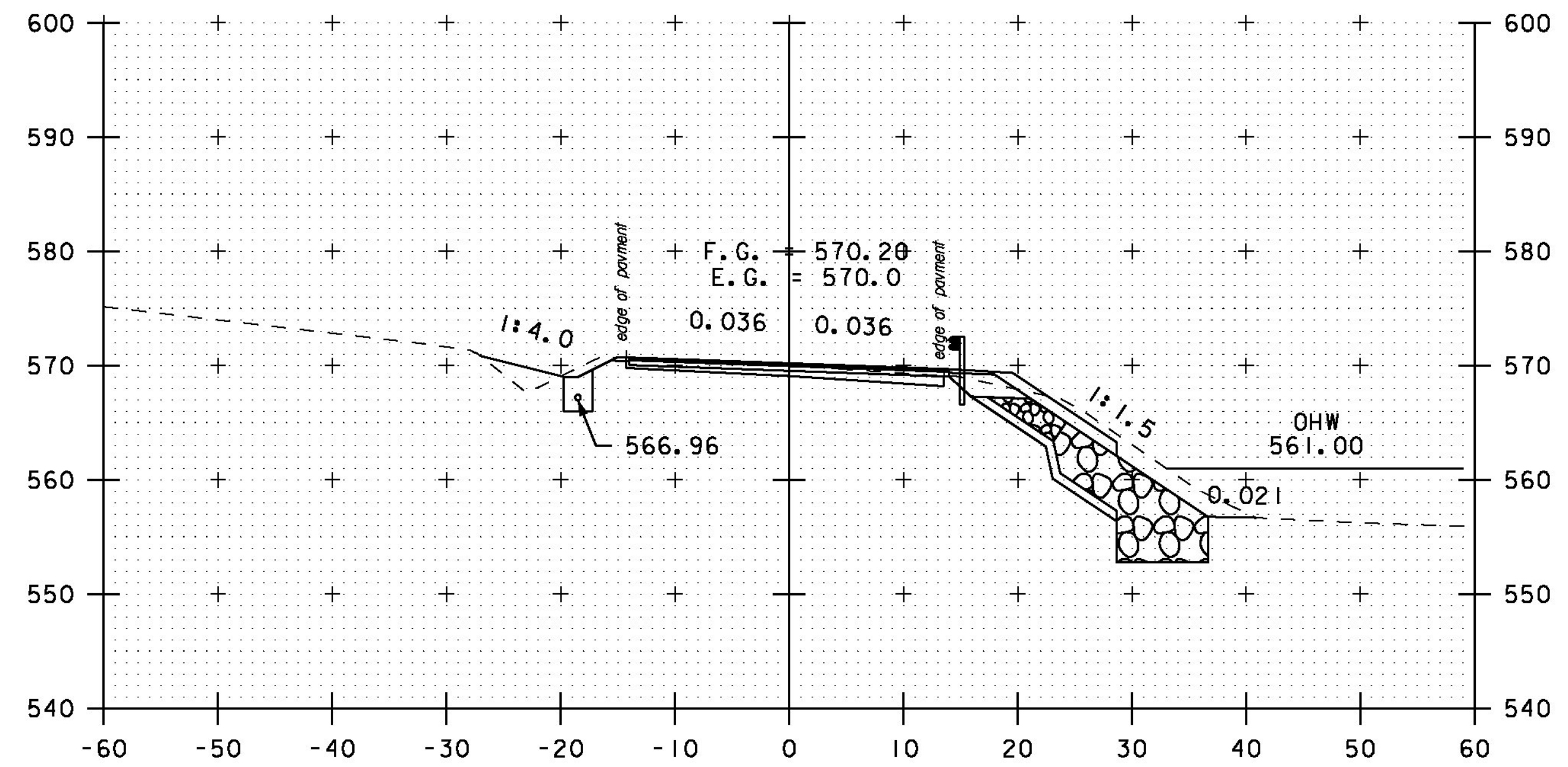
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PROJECT NUMBER: ER STP 0167 (15)

FILE NAME: z12c524xs.dgn  
PROJECT LEADER: J. TUCKER  
DESIGNED BY: B. BRESLEND  
VT 100B CROSS SECTION SHEET 1

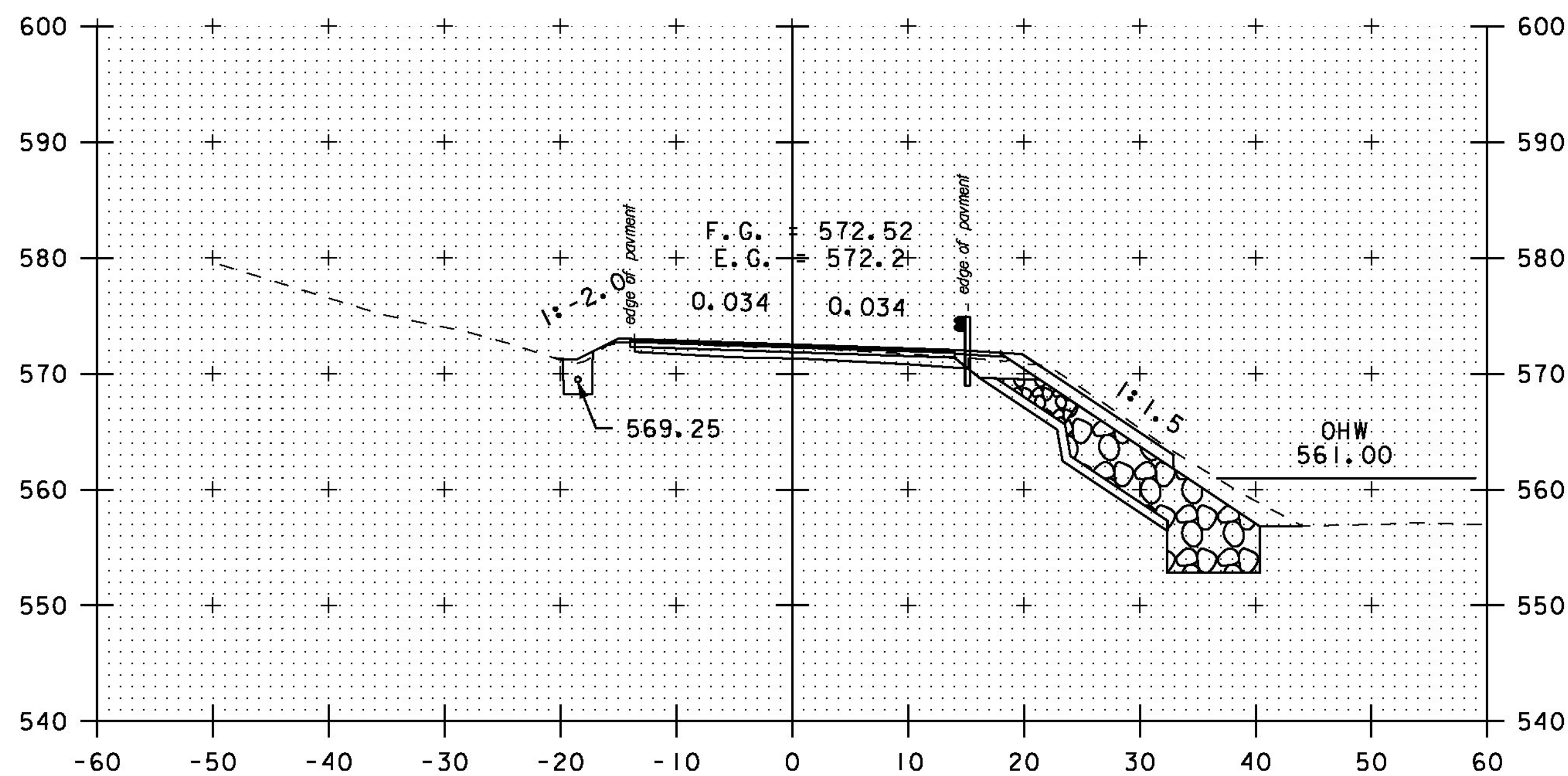
PLOT DATE: 2/17/2015  
DRAWN BY: B. MACK  
CHECKED BY: A. SANZ  
SHEET 45 OF 57



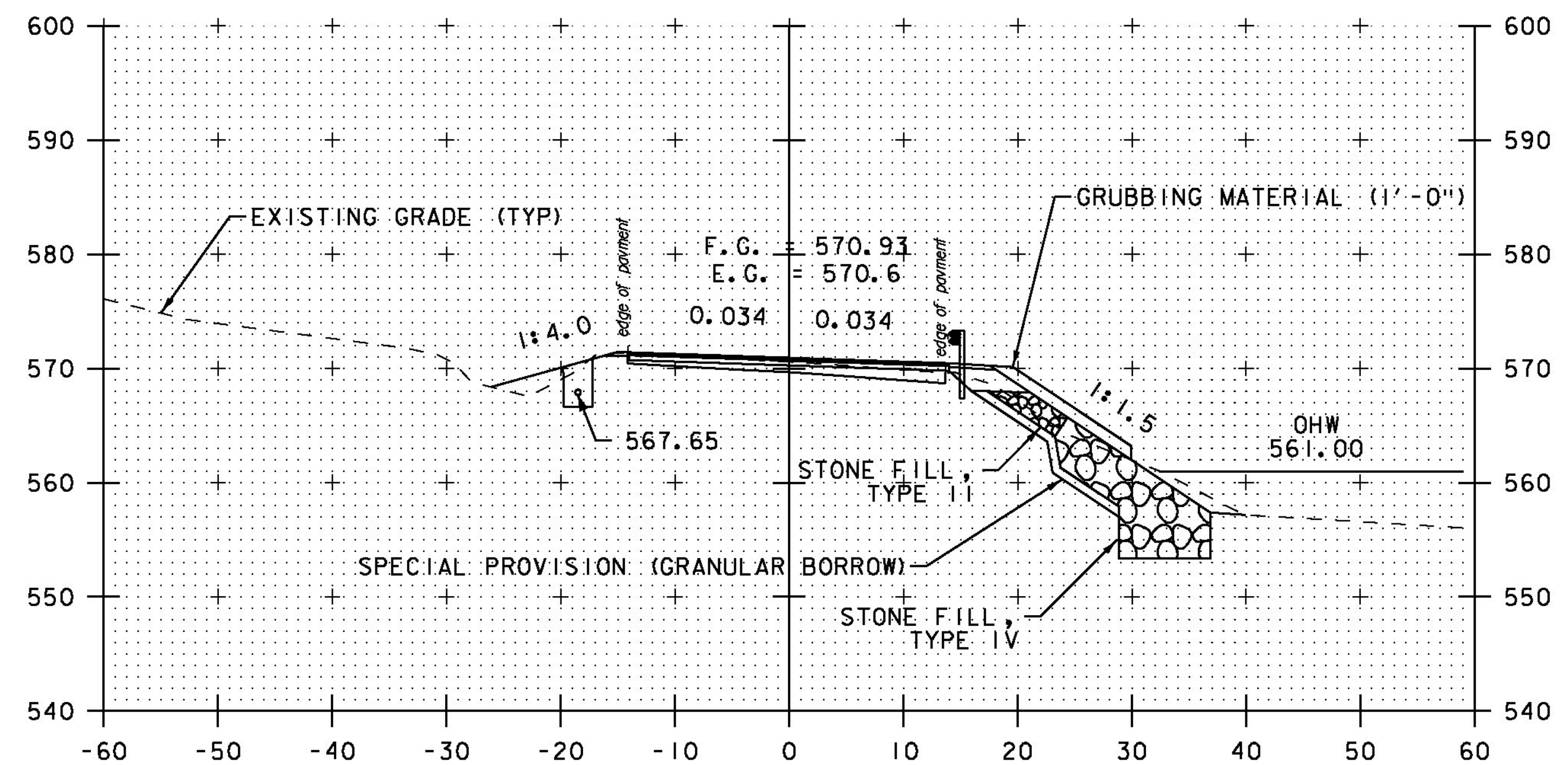
4+00



5+00



3+50



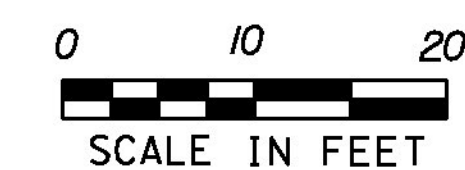
4+50

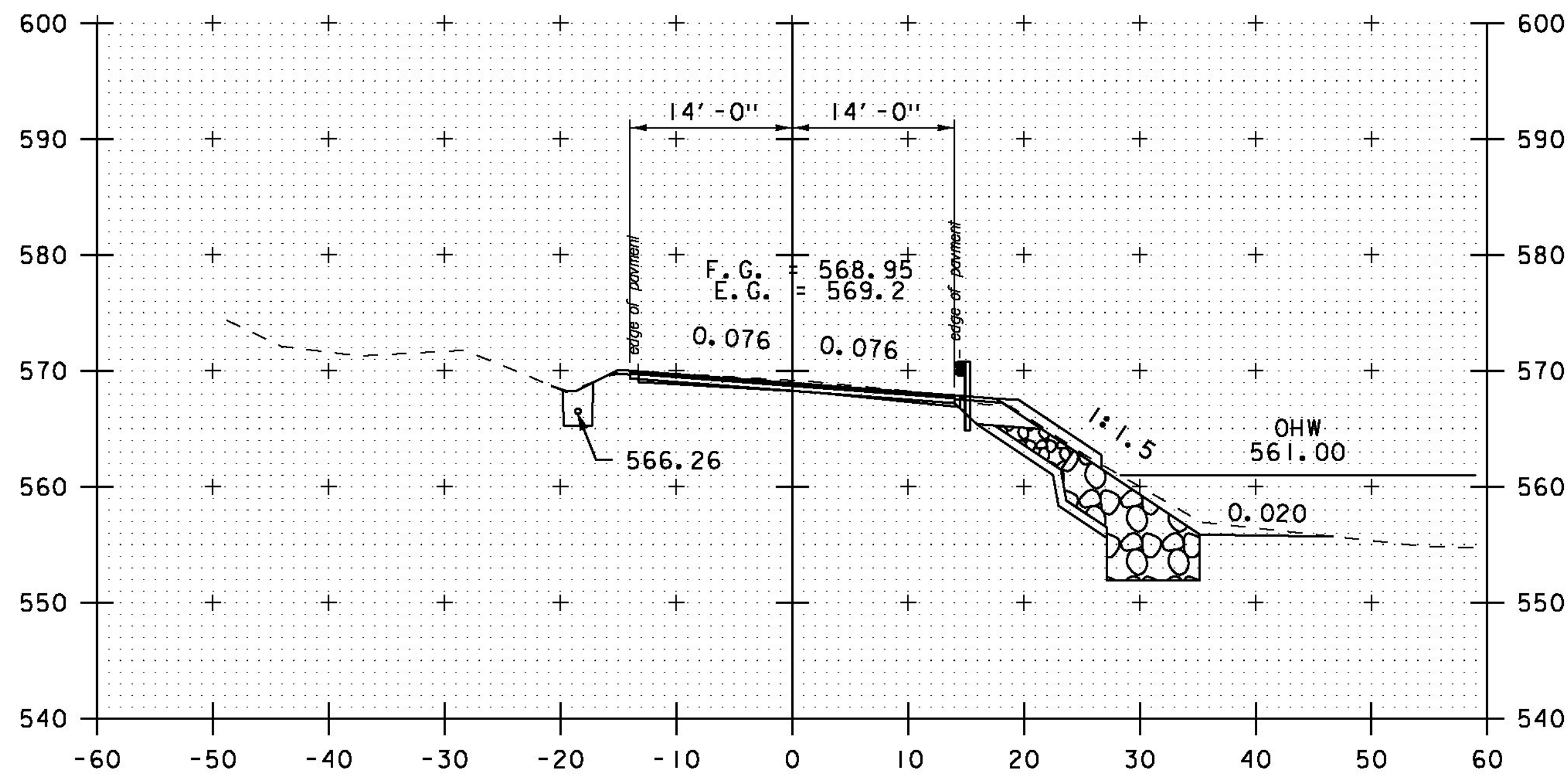
STA. 3+50 TO STA. 5+00

PROJECT NAME: MORETOWN  
PROJECT NUMBER: ER STP 0167 (15)

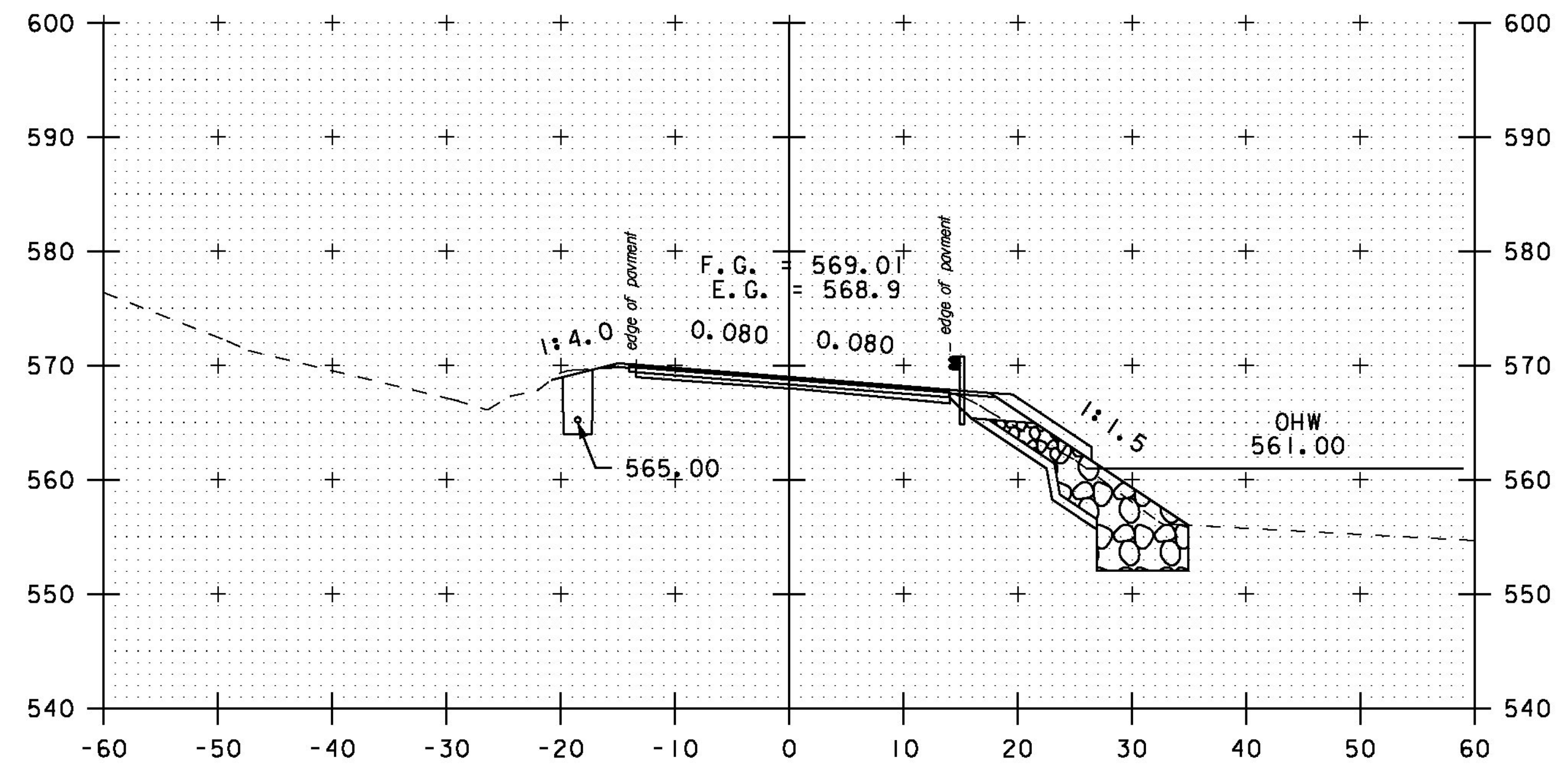
FILE NAME: z12c524xs.dgn  
PROJECT LEADER: J. TUCKER  
DESIGNED BY: B. BRESLEND  
VT 100B CROSS SECTION SHEET 2

PLOT DATE: 2/17/2015  
DRAWN BY: B. MACK  
CHECKED BY: A. SANZ  
SHEET 46 OF 57

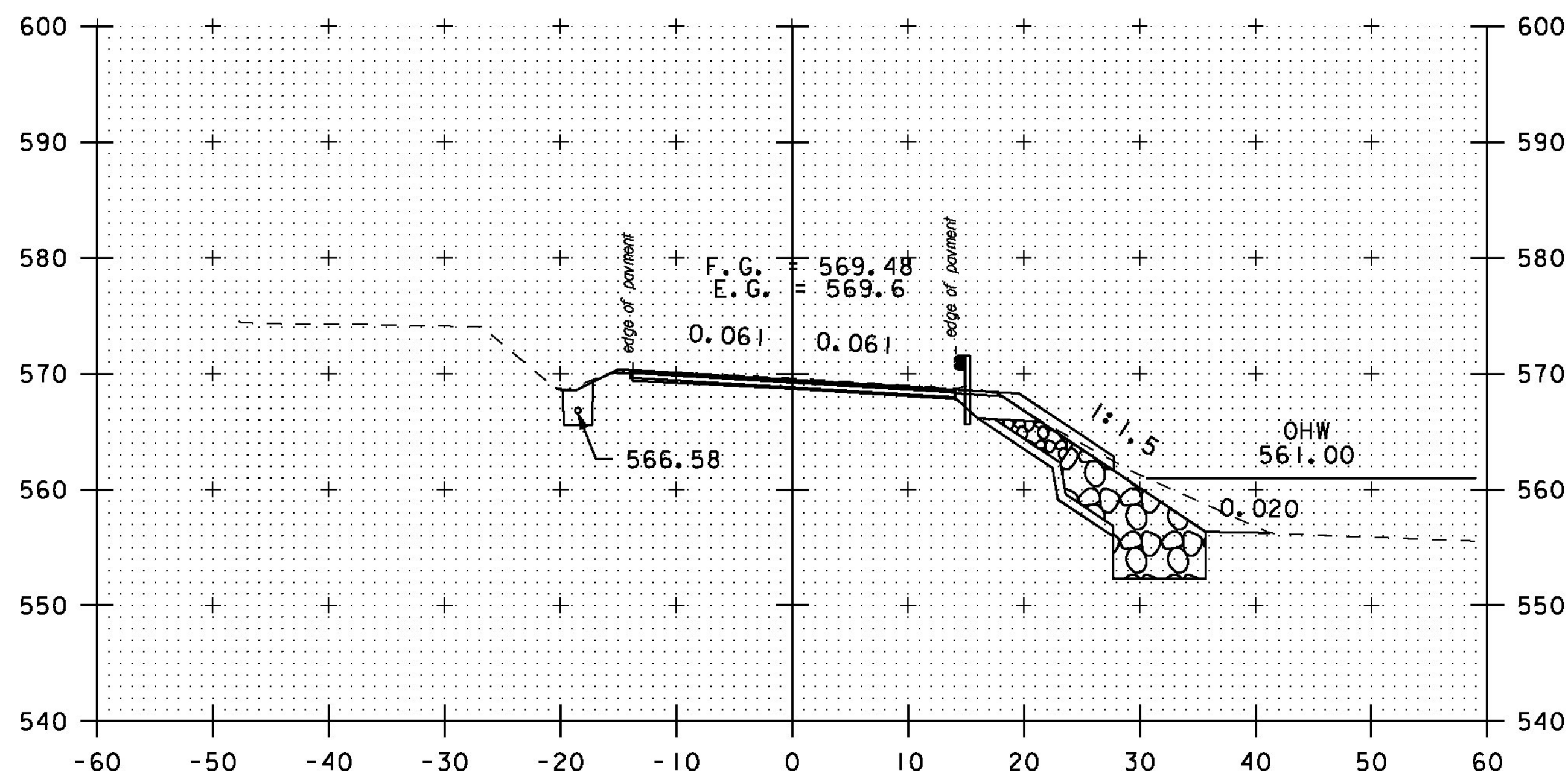




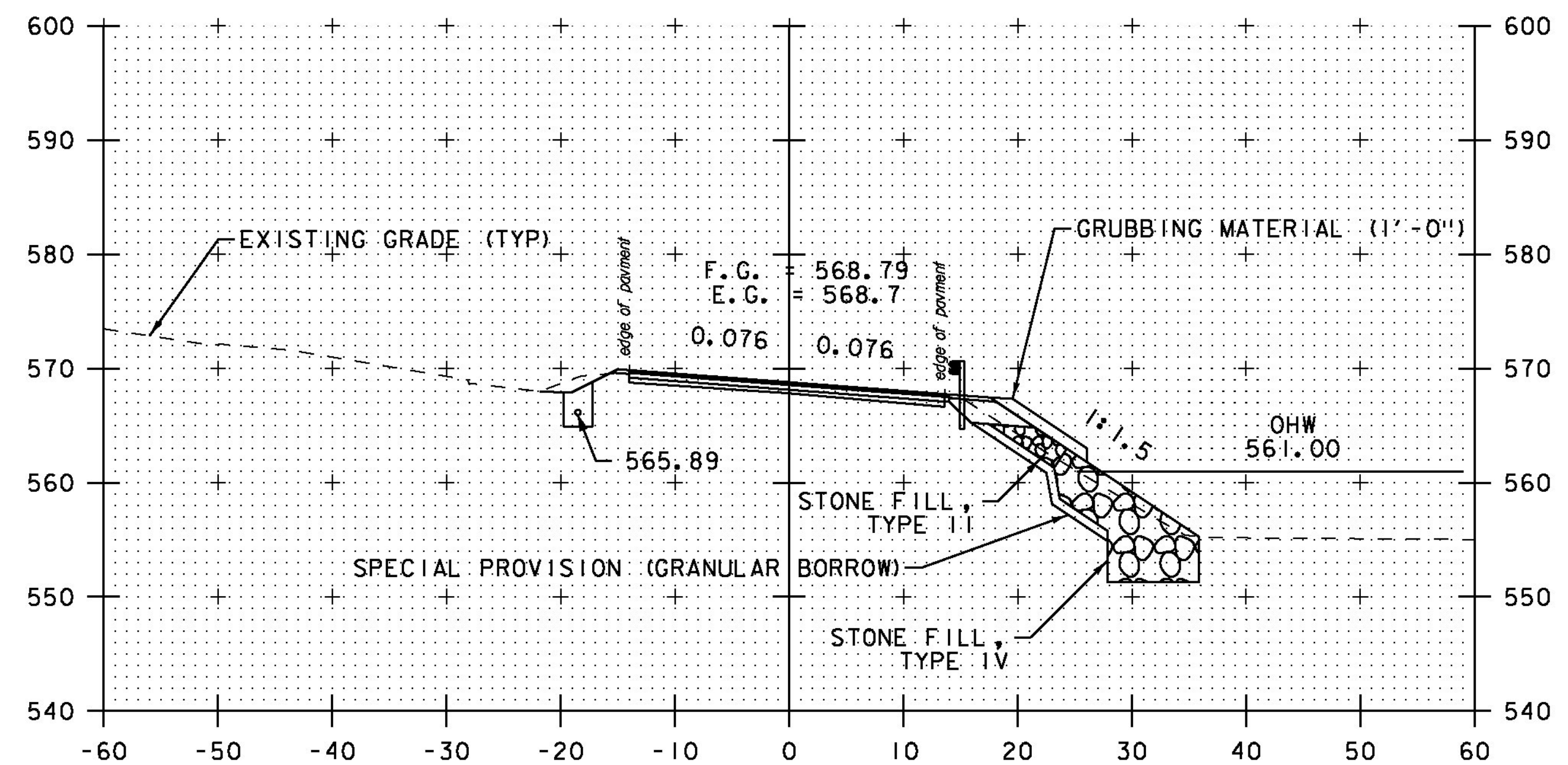
6+00



7+00



5+50



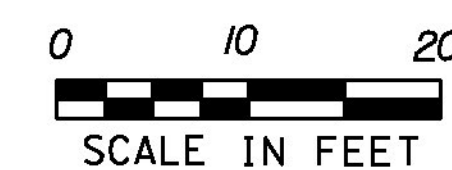
6+50

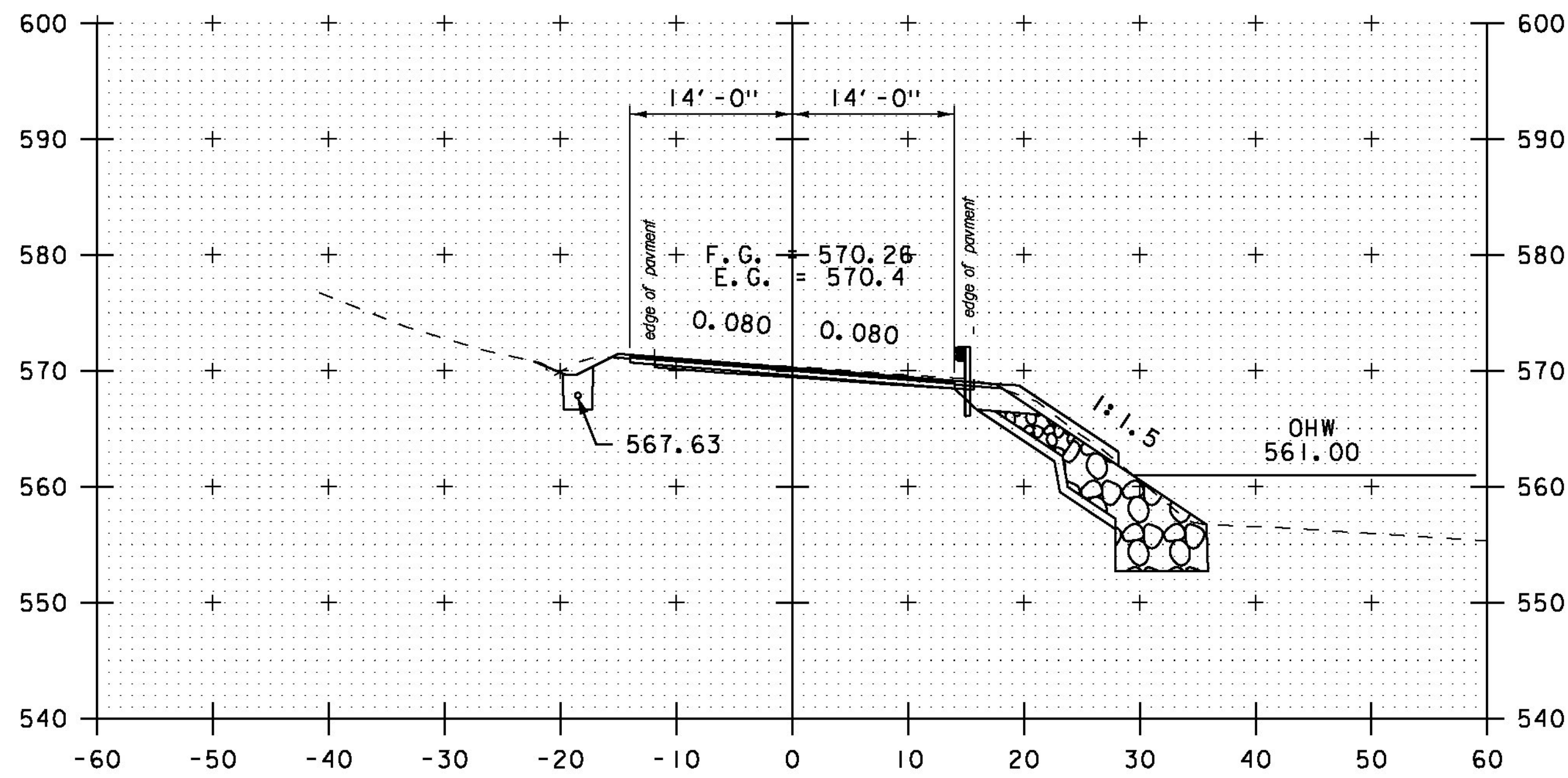
STA. 5+50 TO STA. 7+00

PROJECT NAME: MORETOWN  
PROJECT NUMBER: ER STP 0167 (15)

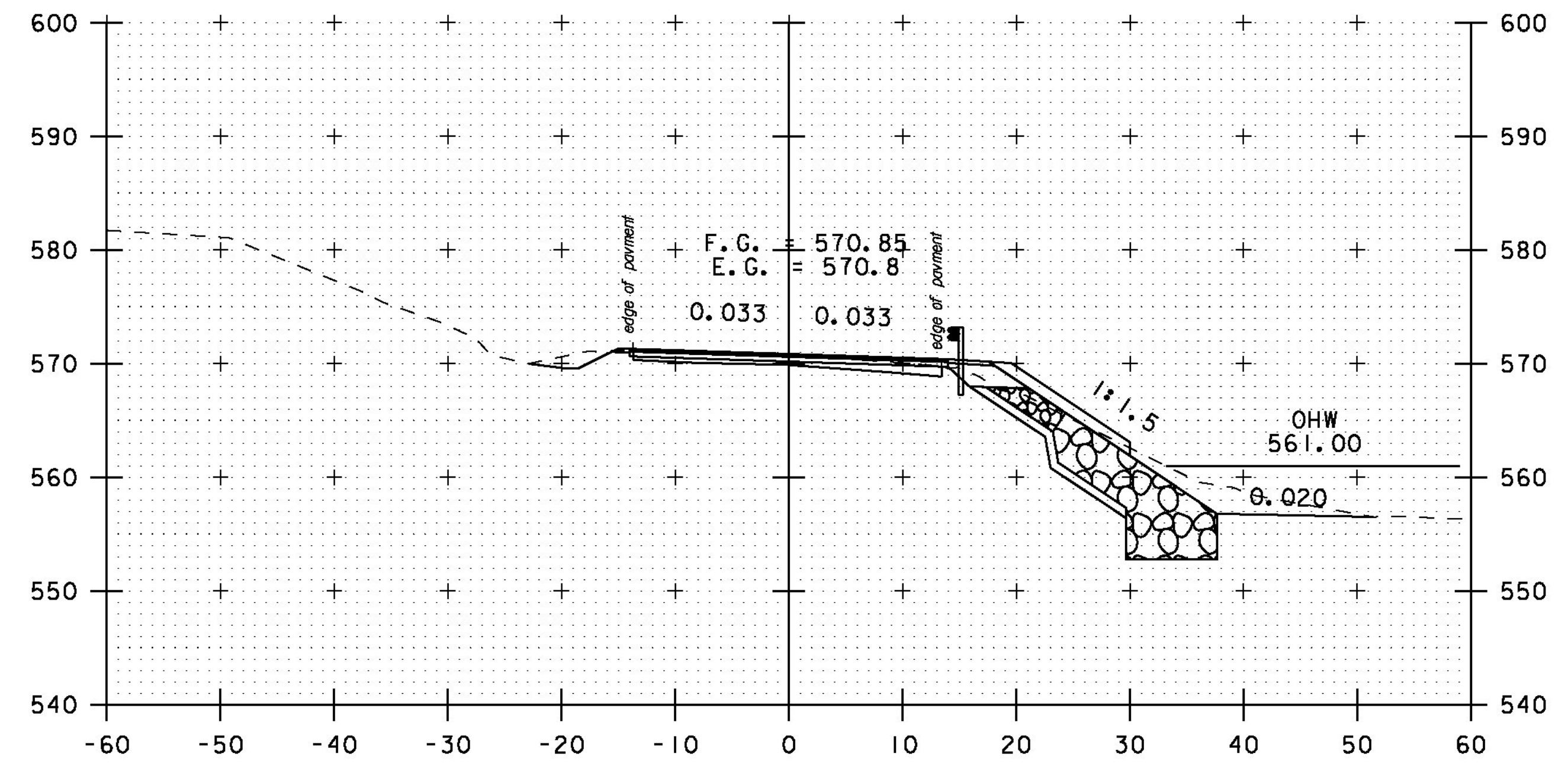
FILE NAME: z12c524xs.dgn  
PROJECT LEADER: J. TUCKER  
DESIGNED BY: B. BRESLEND  
VT 100B CROSS SECTION SHEET 3

PLOT DATE: 2/17/2015  
DRAWN BY: B. MACK  
CHECKED BY: A. SANZ  
SHEET 47 OF 57

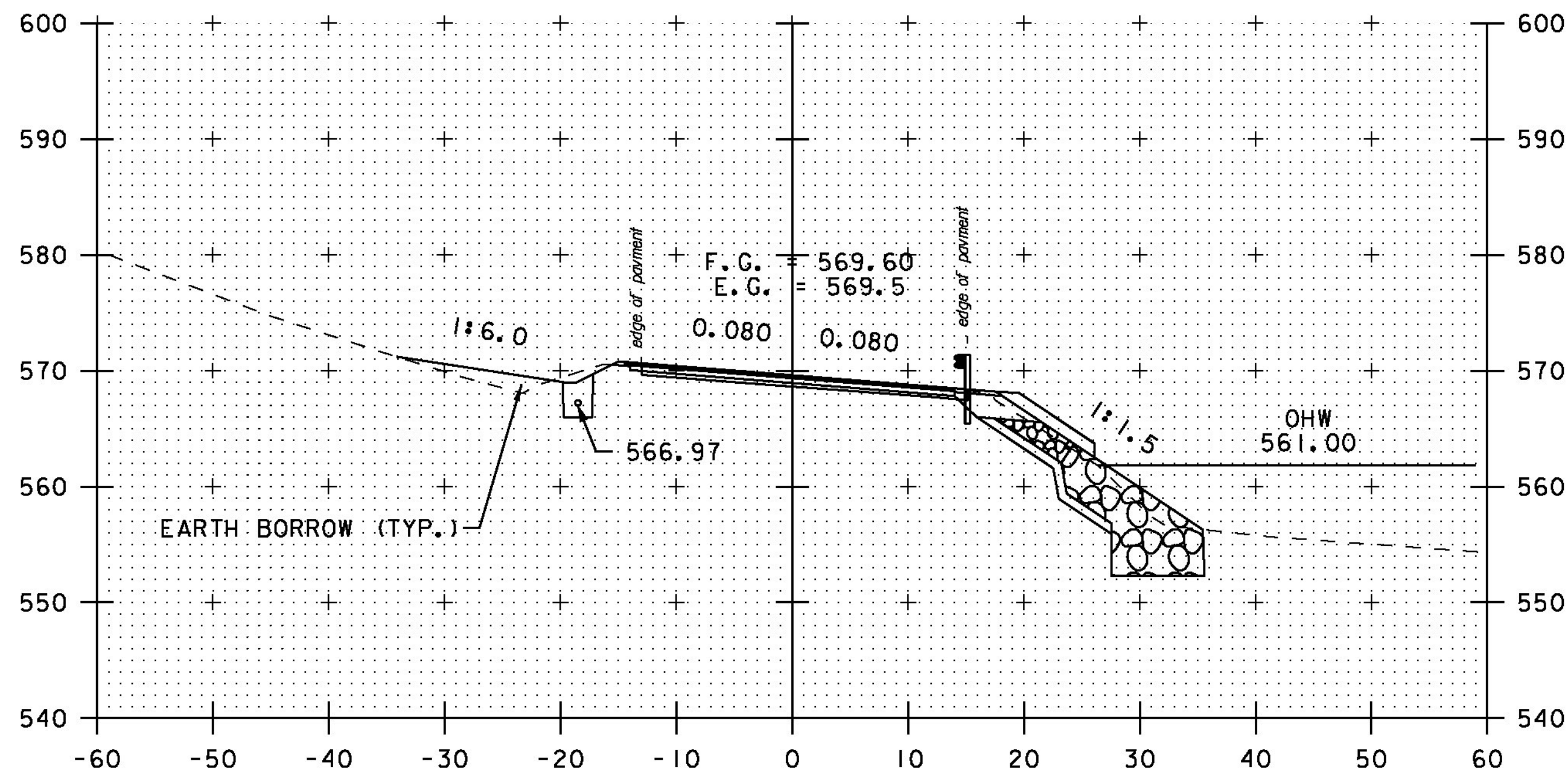




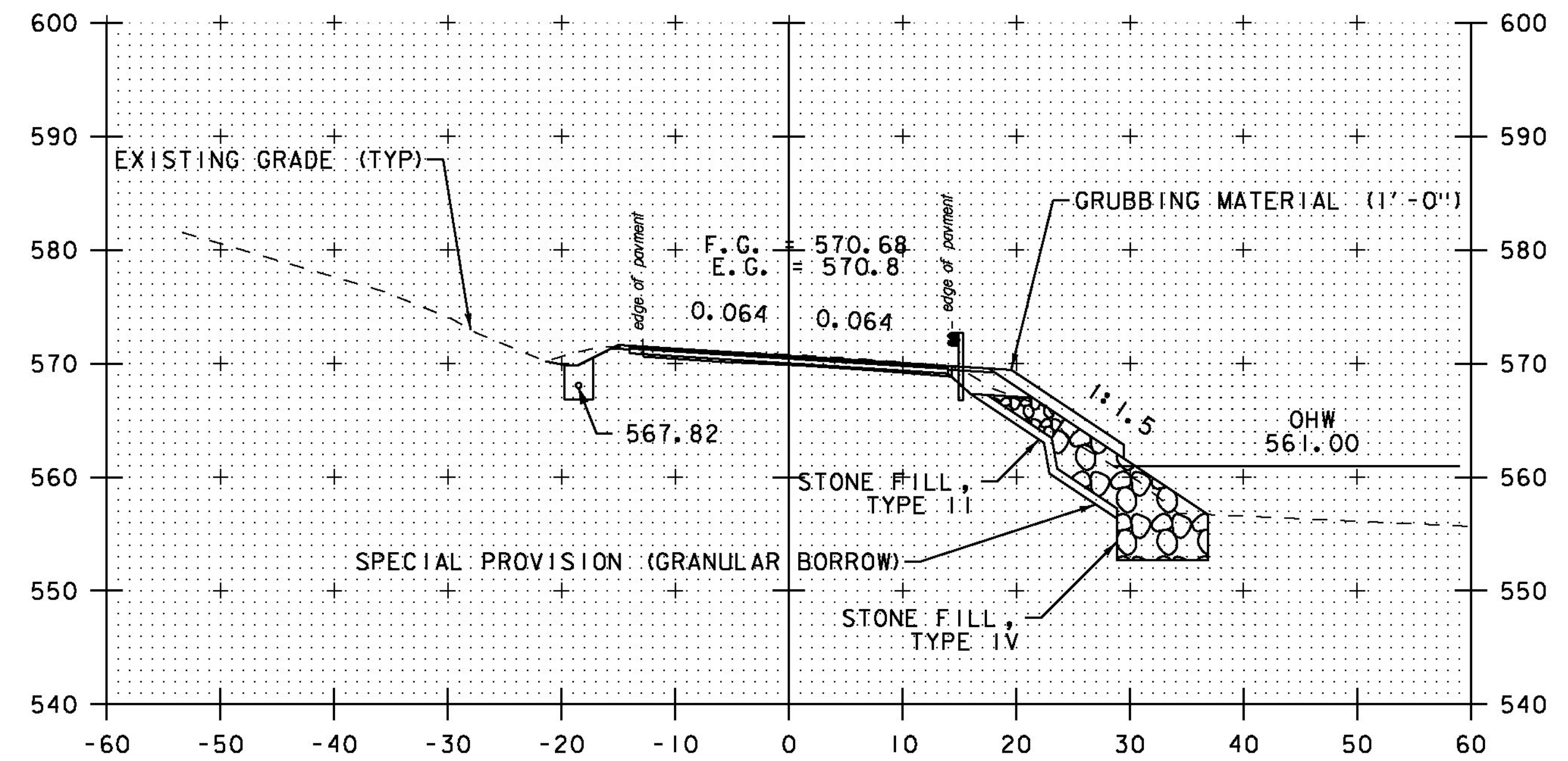
8+00



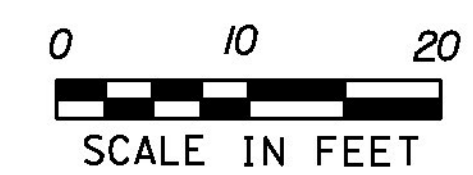
9+00



7+50



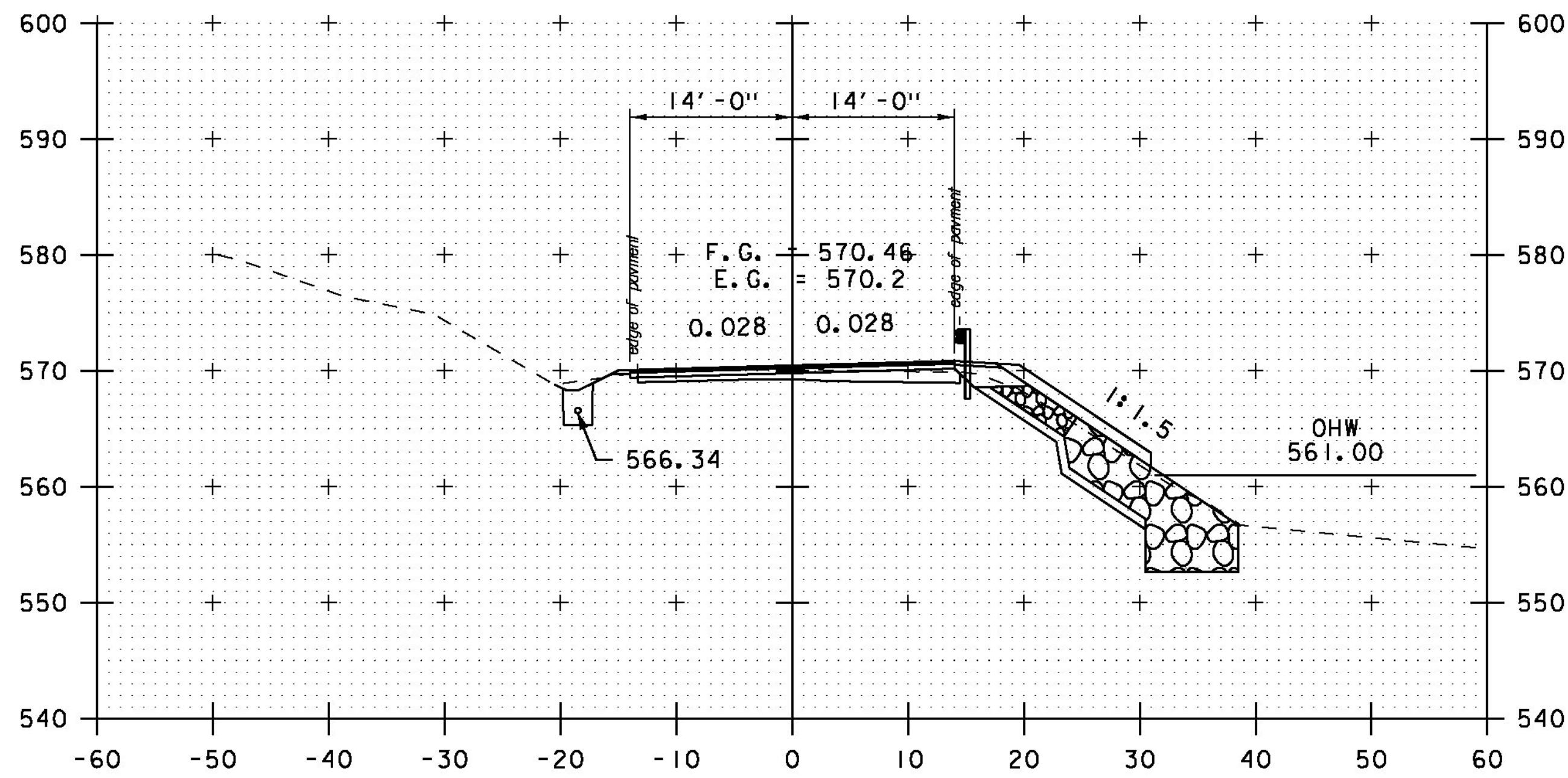
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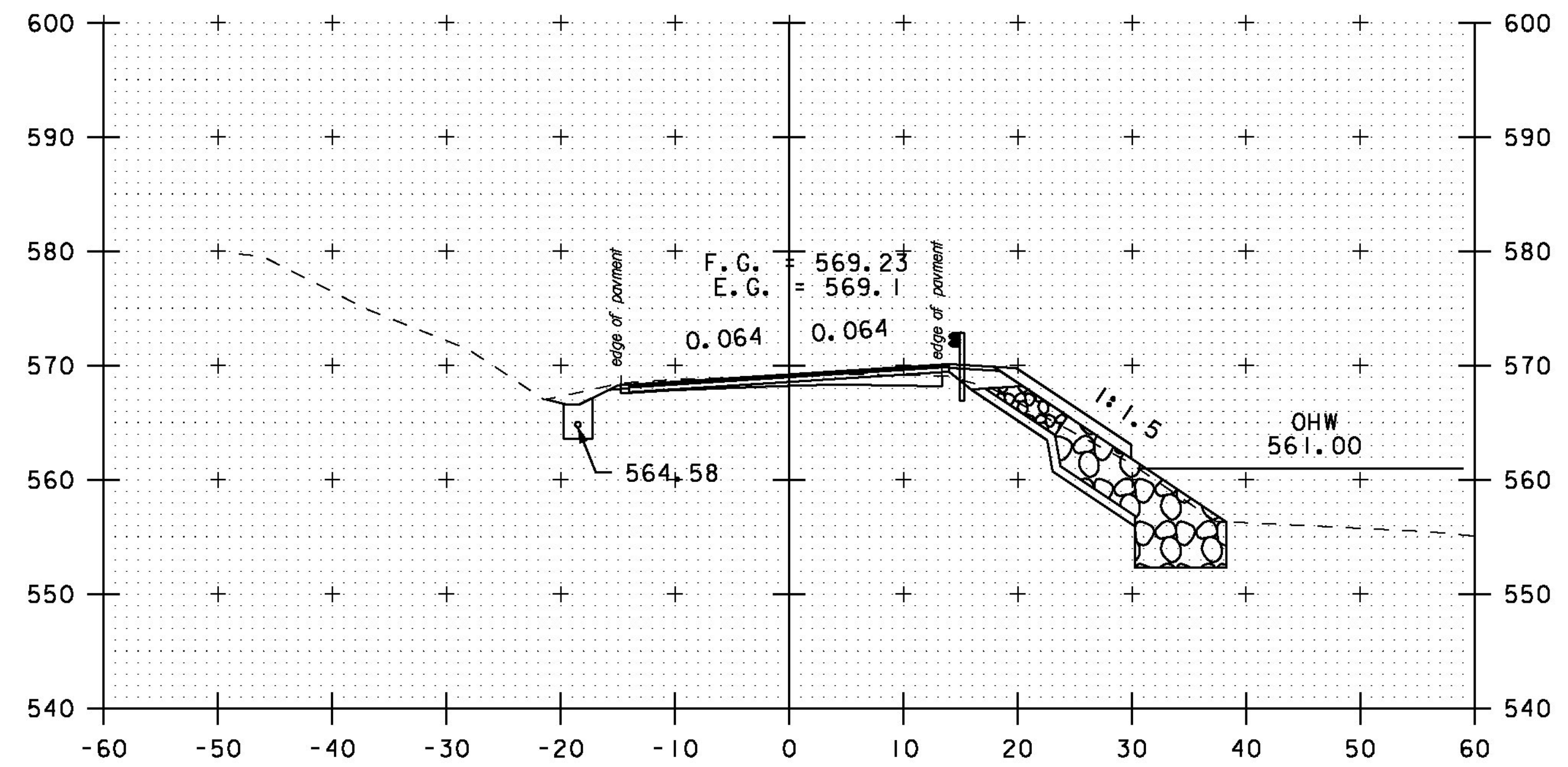
STA. 7+50 TO STA. 9+00

PROJECT NAME: MORETOWN  
PROJECT NUMBER: ER STP 0167 (15)

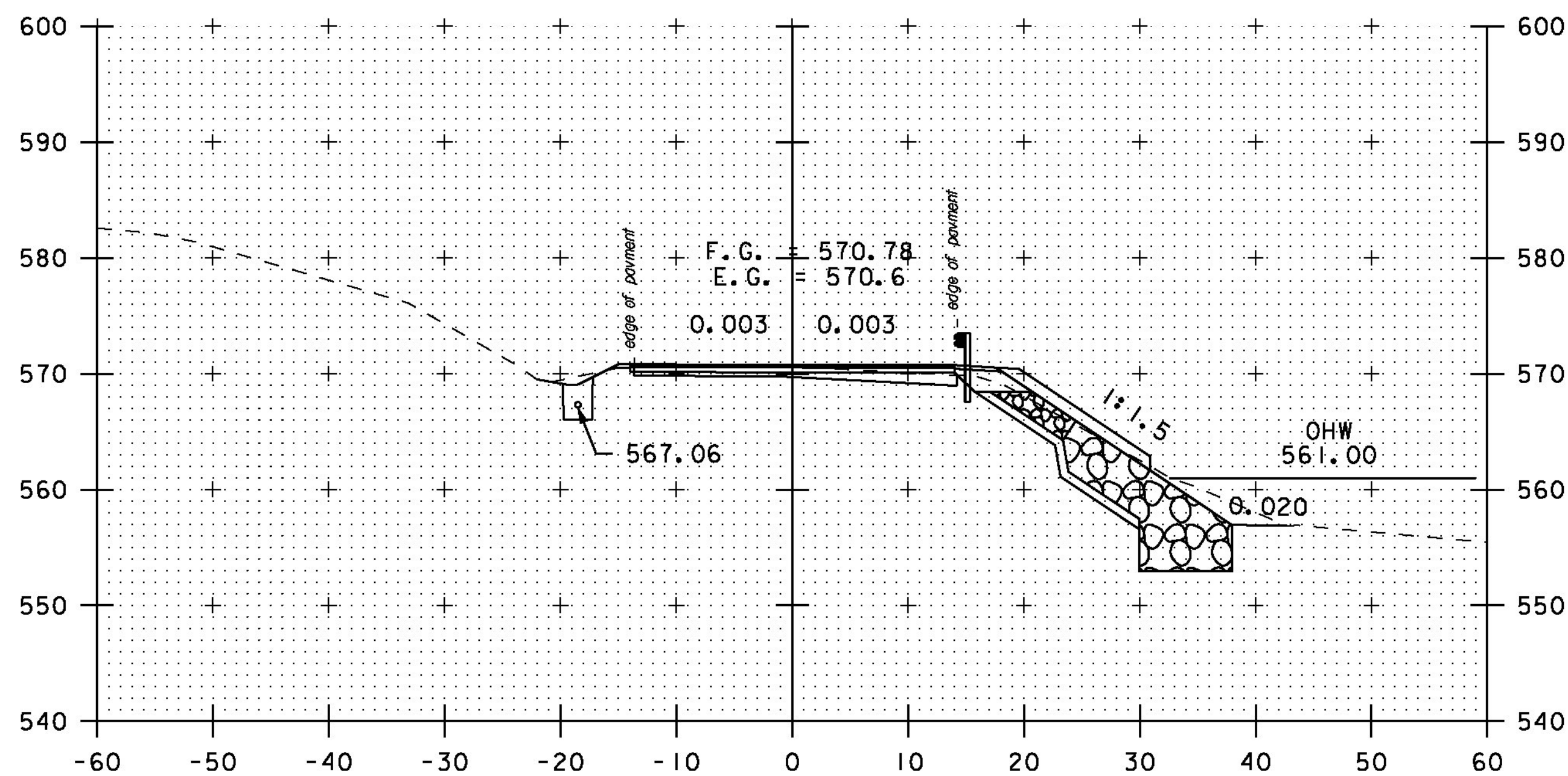
FILE NAME: z12c524xs.dgn	PLOT DATE: 2/17/2015
PROJECT LEADER: J. TUCKER	DRAWN BY: B. MACK
DESIGNED BY: B. BRESLEND	CHECKED BY: A. SANZ
VT 100B CROSS SECTION SHEET 4	SHEET 48 OF 57



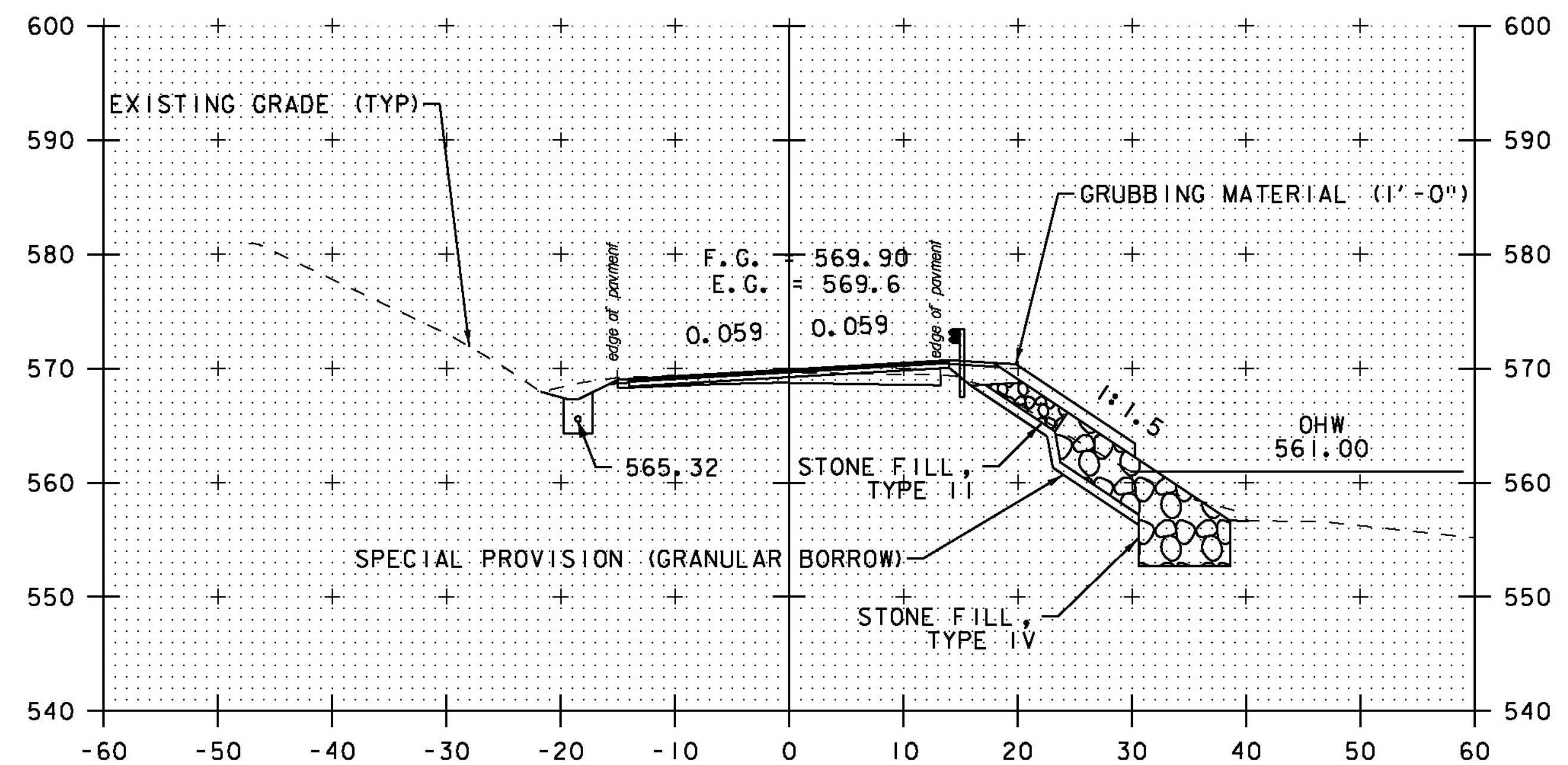
10+00



11+00



9+50



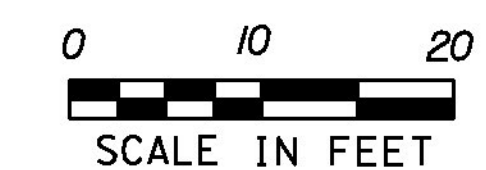
10+50

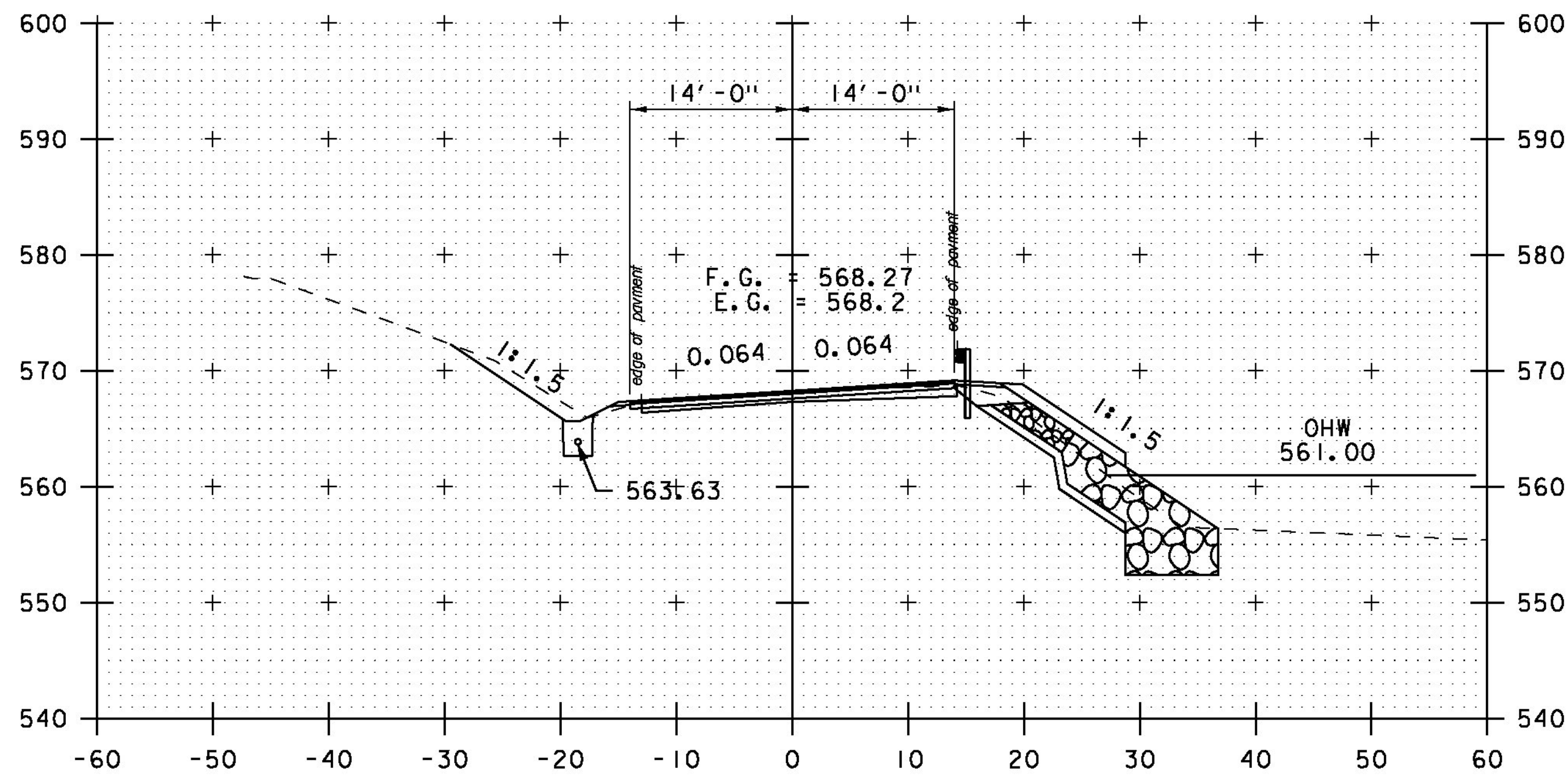
STA. 9+50 TO STA. 11+00

PROJECT NAME: MORETOWN  
PROJECT NUMBER: ER STP 0167 (15)

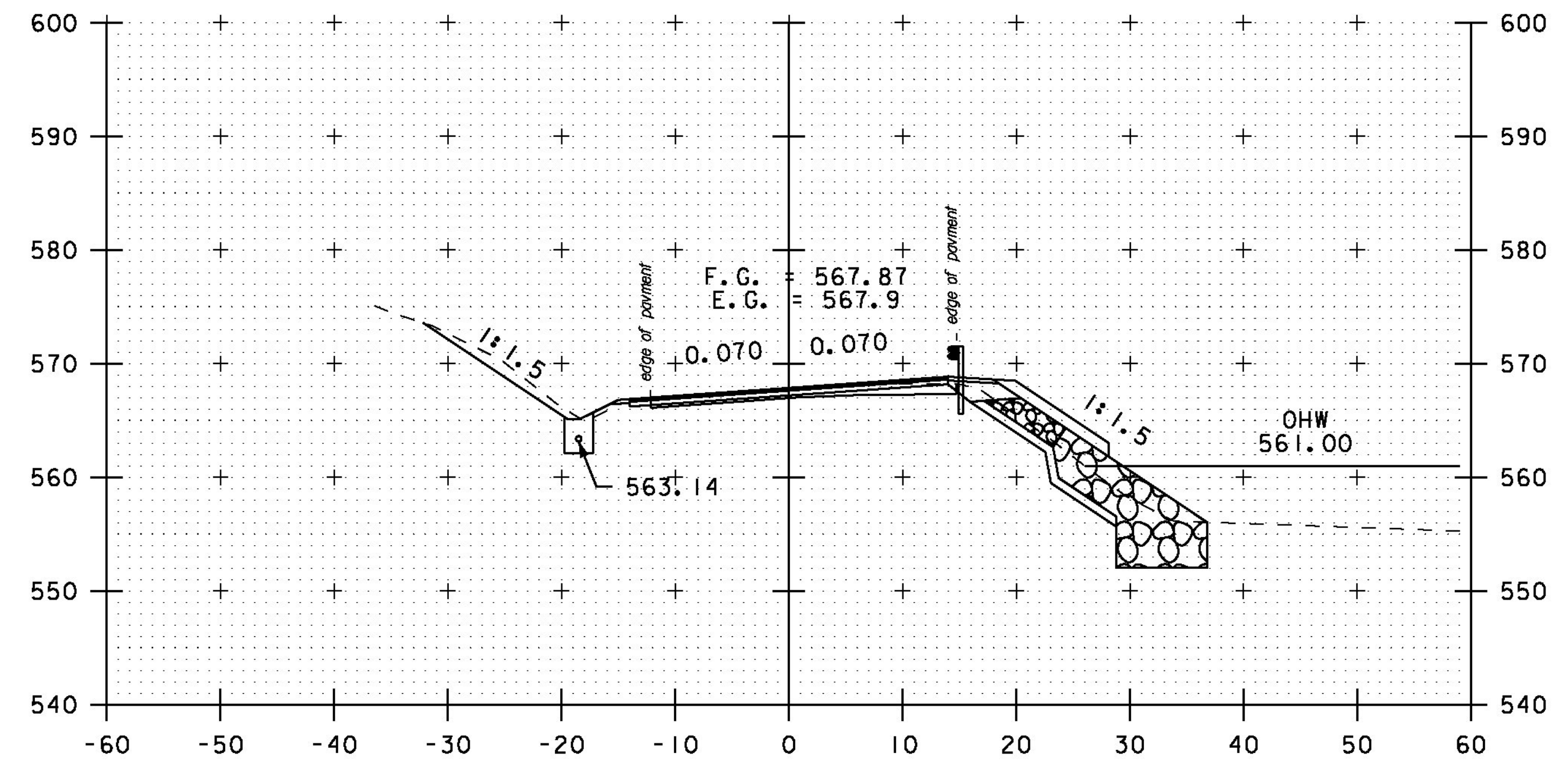
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PROJECT LEADER: J. TUCKER  
DESIGNED BY: B. BRESLEND  
VT 100B CROSS SECTION SHEET 5

PLOT DATE: 2/17/2015  
DRAWN BY: B. MACK  
CHECKED BY: A. SANZ  
SHEET 49 OF 57

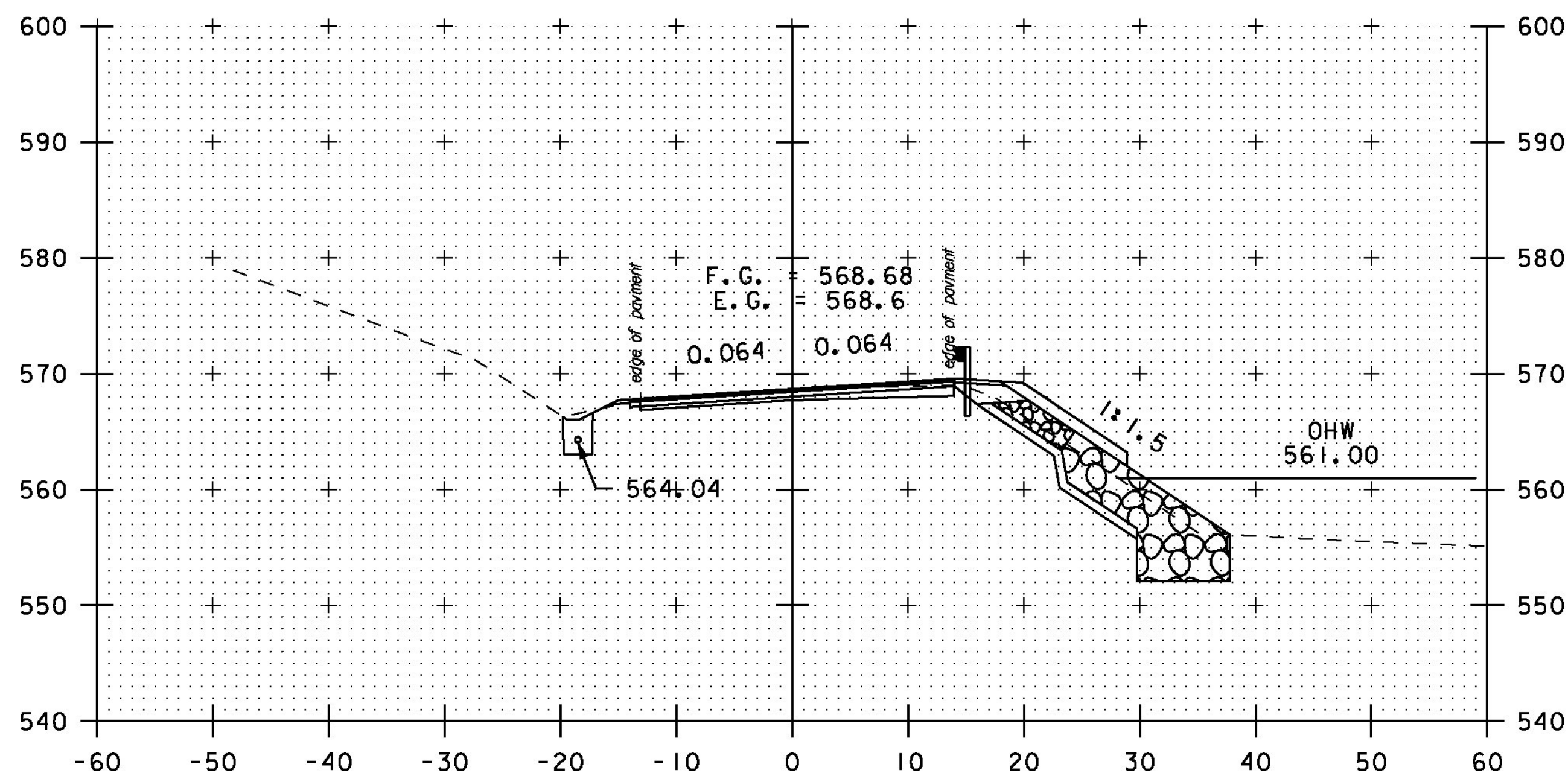




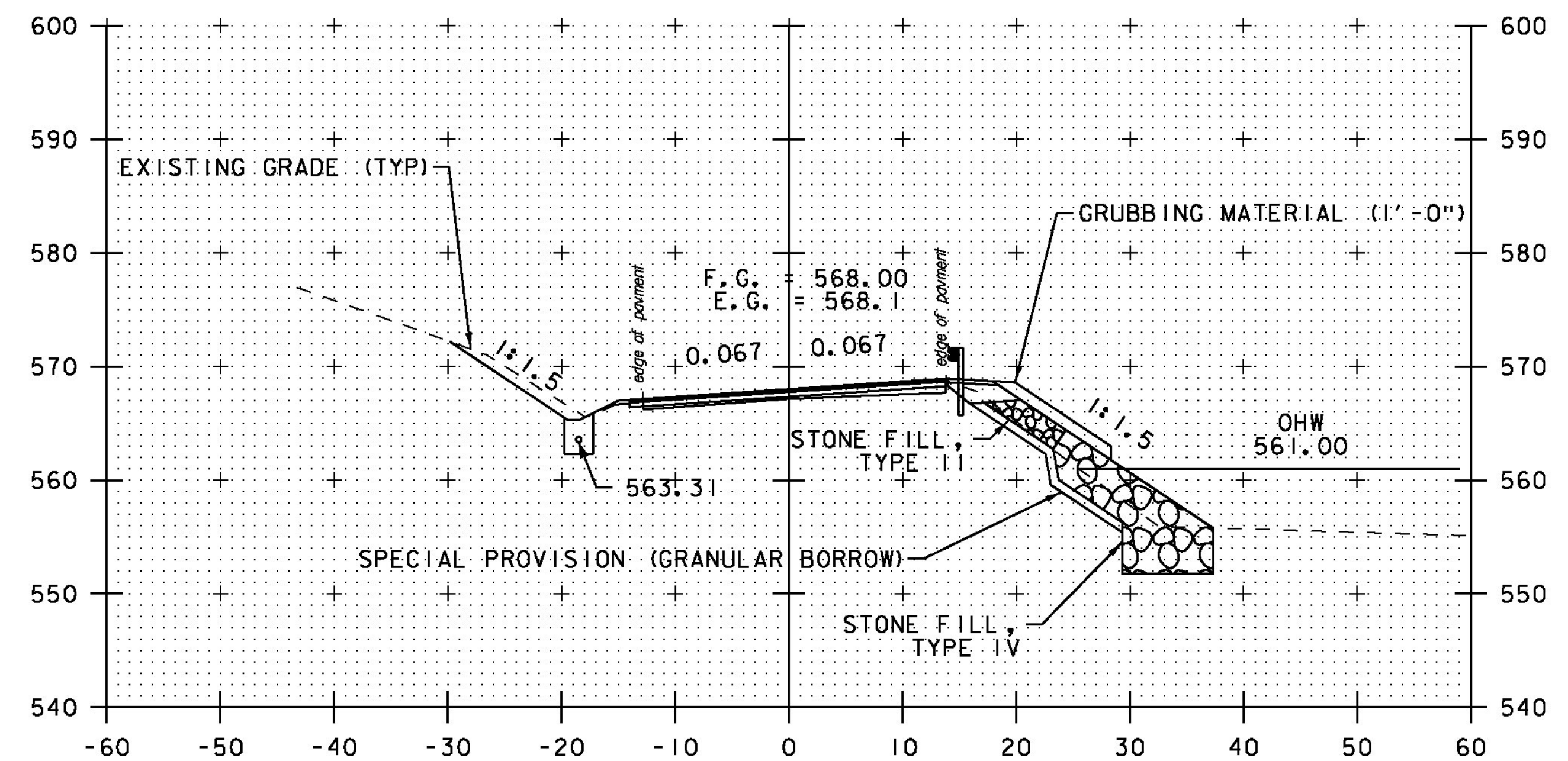
12+00



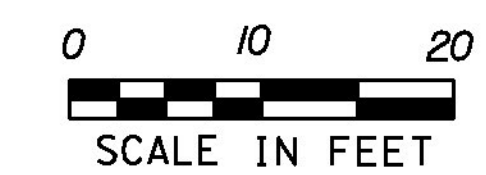
13+00



11+50



12+50

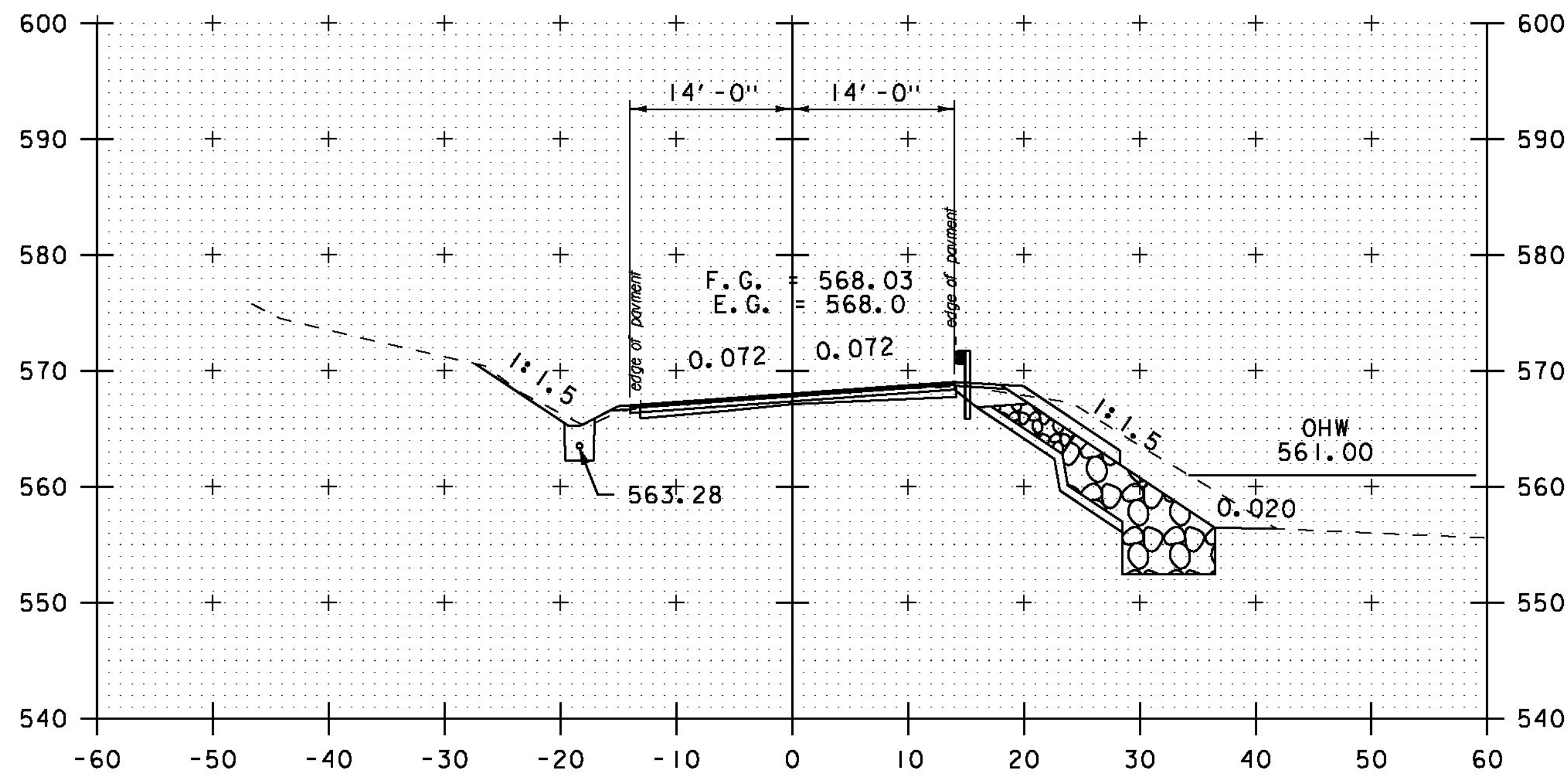


STA. 11+50 TO STA. 13+00

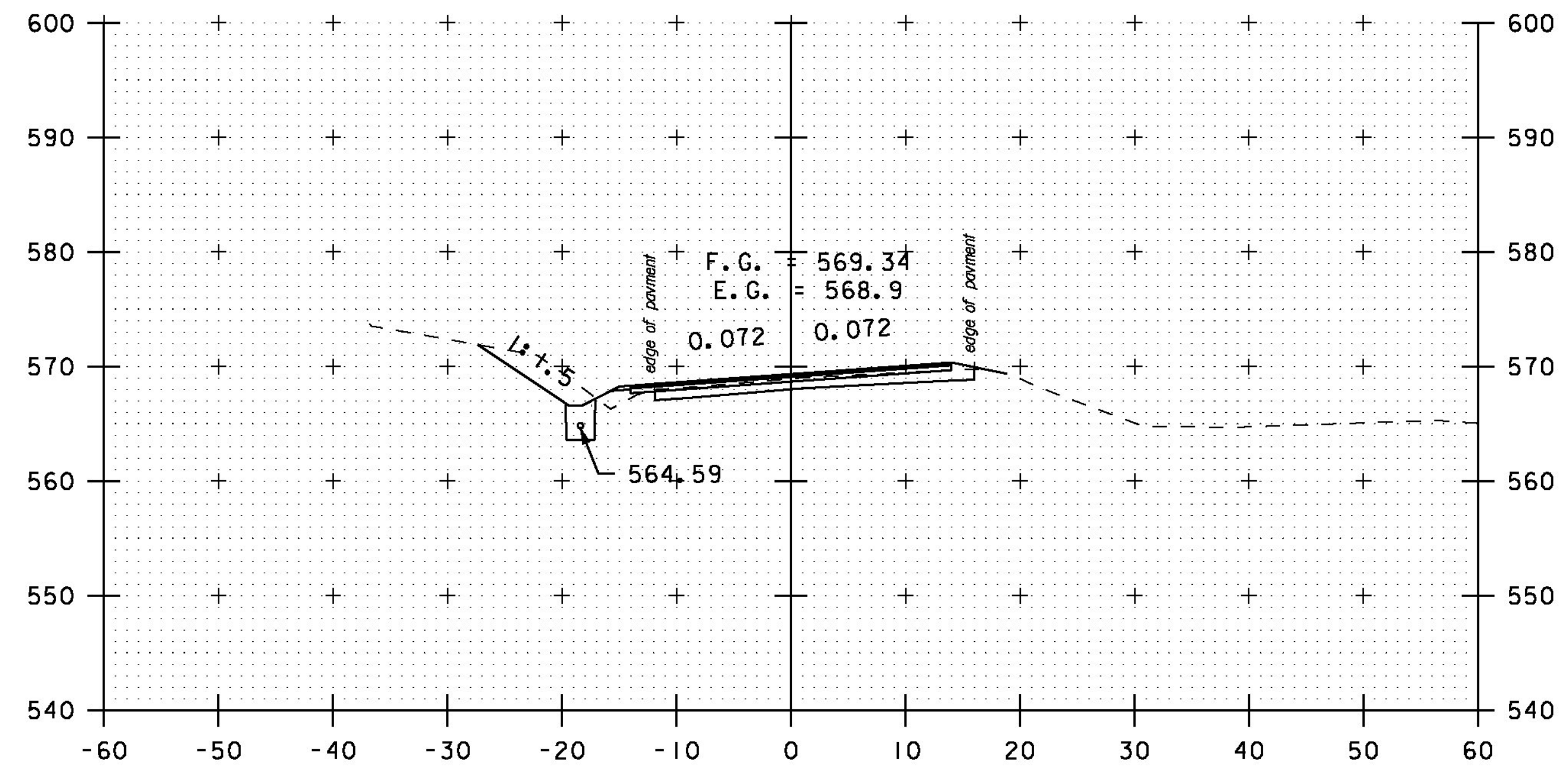
PROJECT NAME: MORETOWN  
PROJECT NUMBER: ER STP 0167 (15)

FILE NAME: z12c524xs.dgn  
PROJECT LEADER: J. TUCKER  
DESIGNED BY: B. BRESLEND  
VT 100B CROSS SECTION SHEET 6

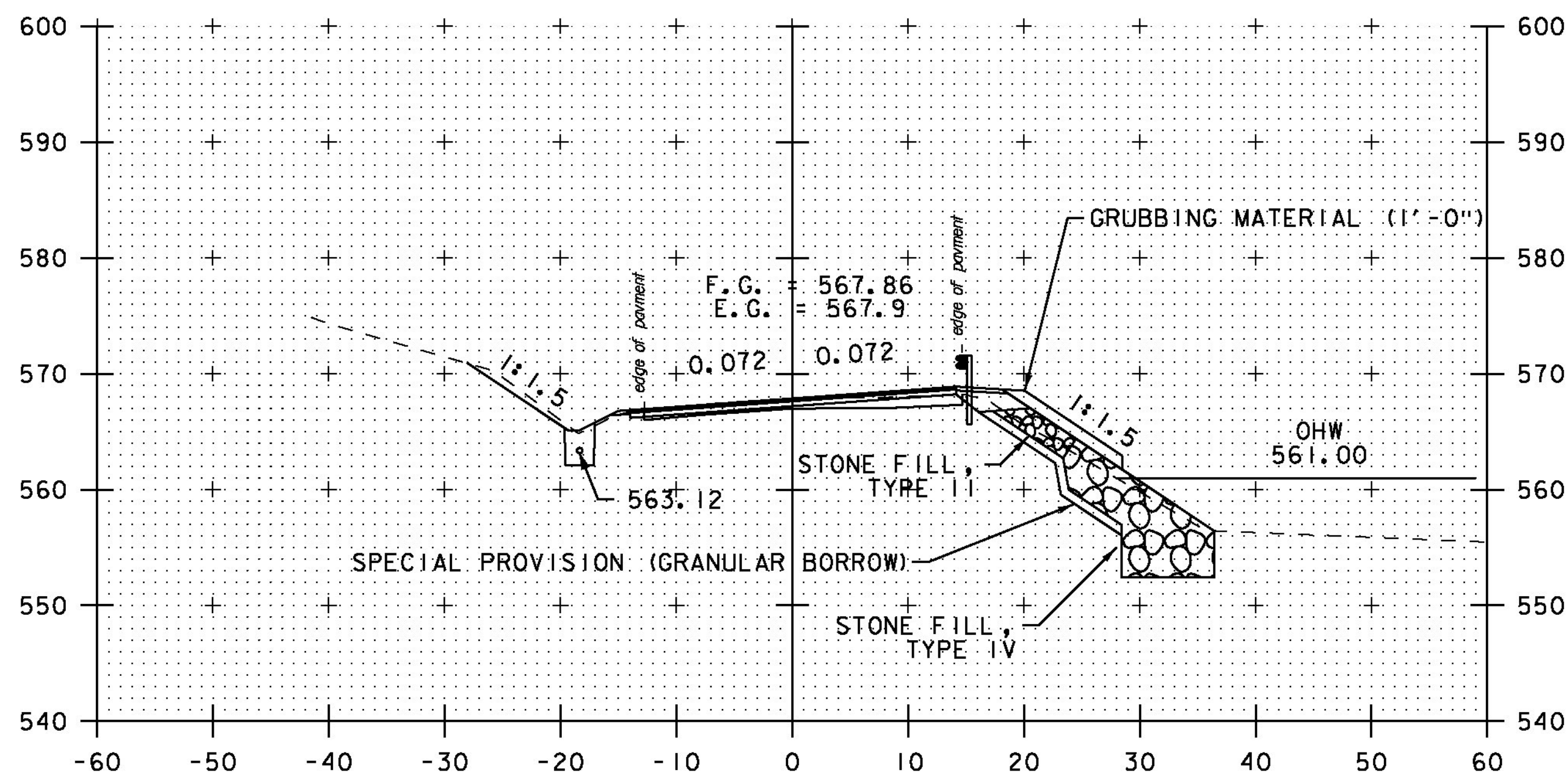
PLOT DATE: 2/17/2015  
DRAWN BY: B. MACK  
CHECKED BY: A. SANZ  
SHEET 50 OF 57



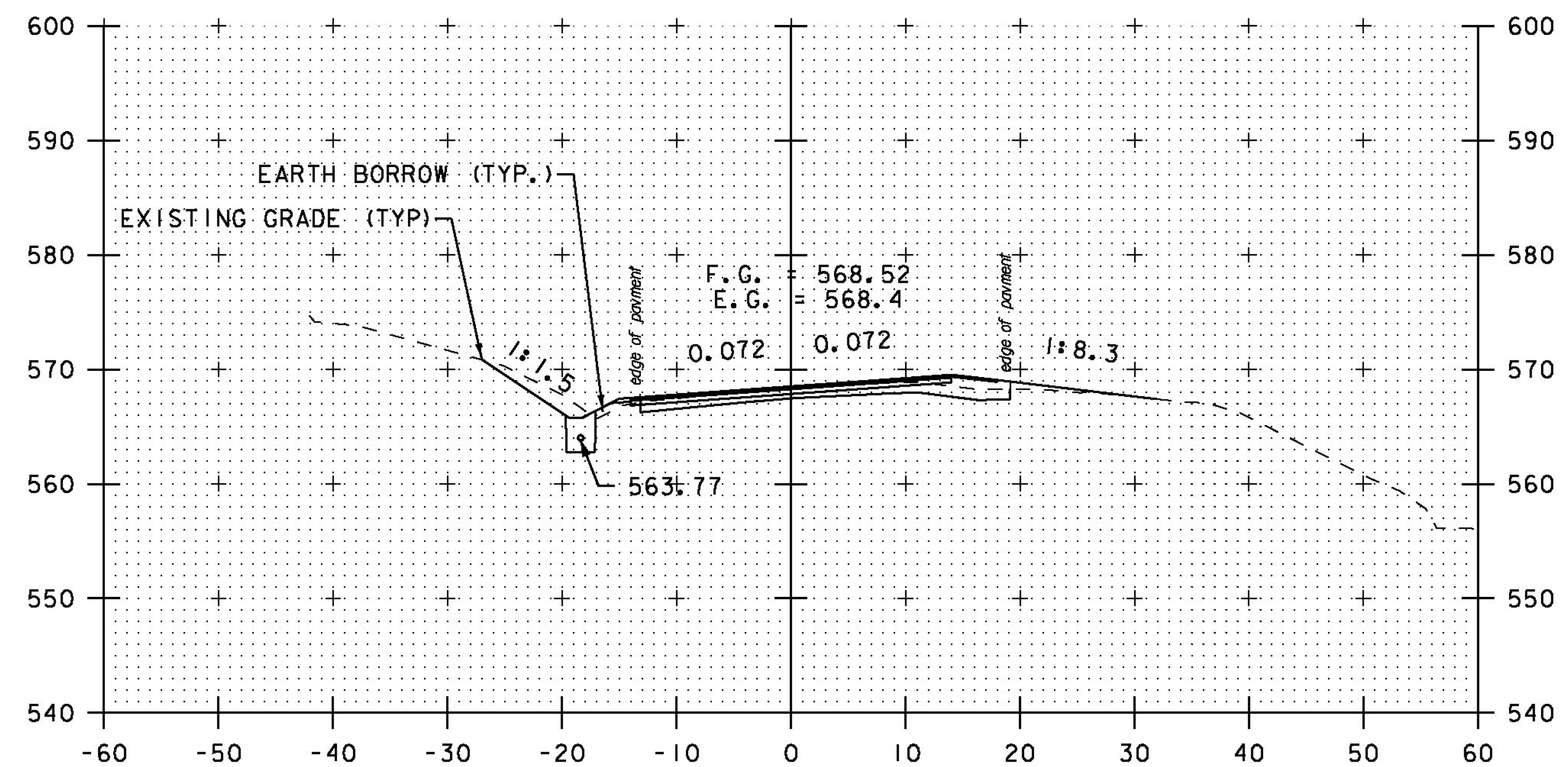
14+00



15+00



13+50



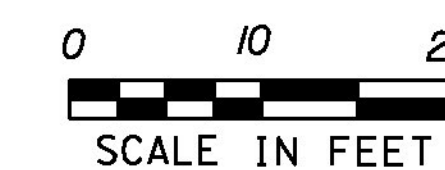
DRIVE RT  
14+50

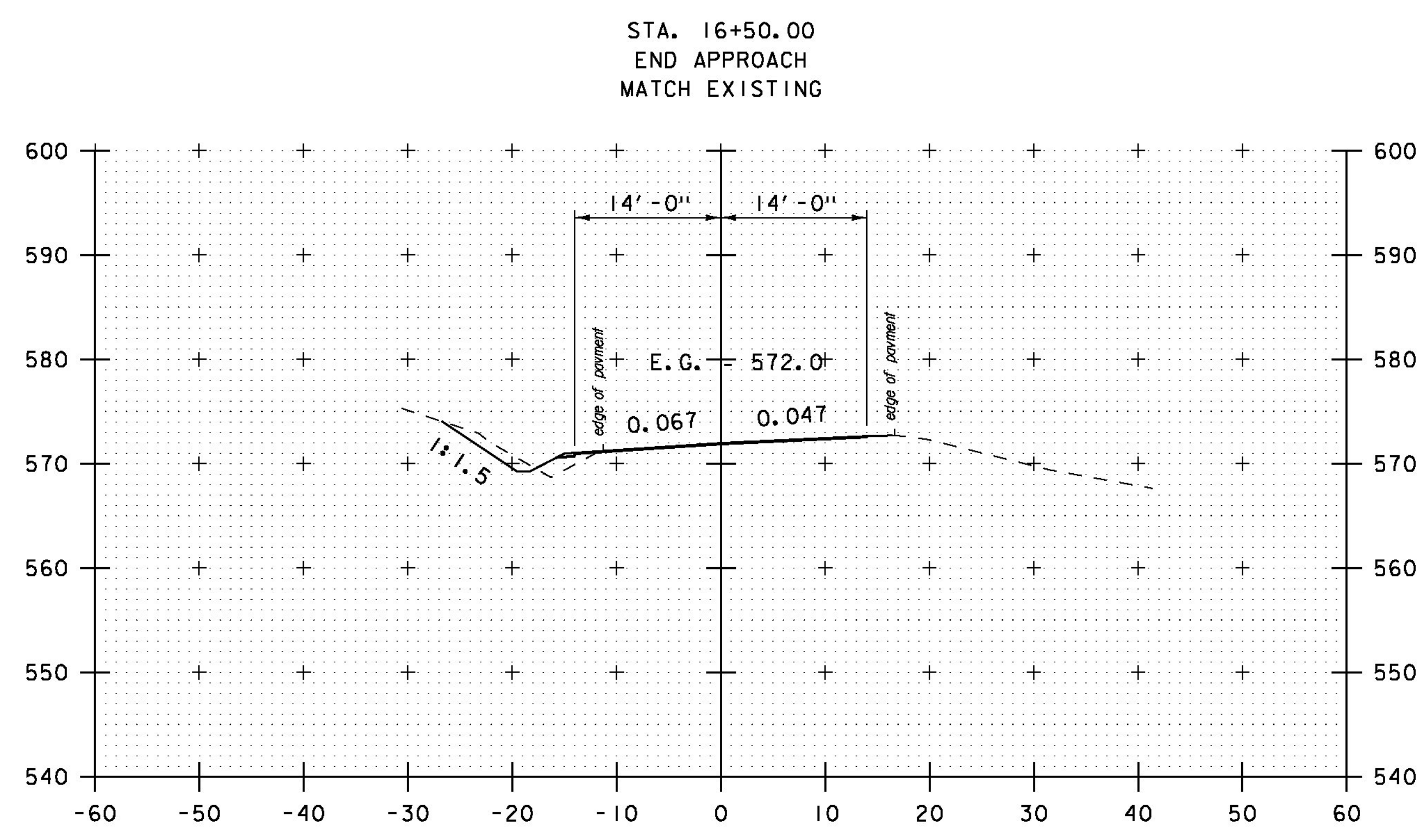
STA. 13+50 TO STA. 15+00

PROJECT NAME: MORETOWN  
PROJECT NUMBER: ER STP 0167 (15)

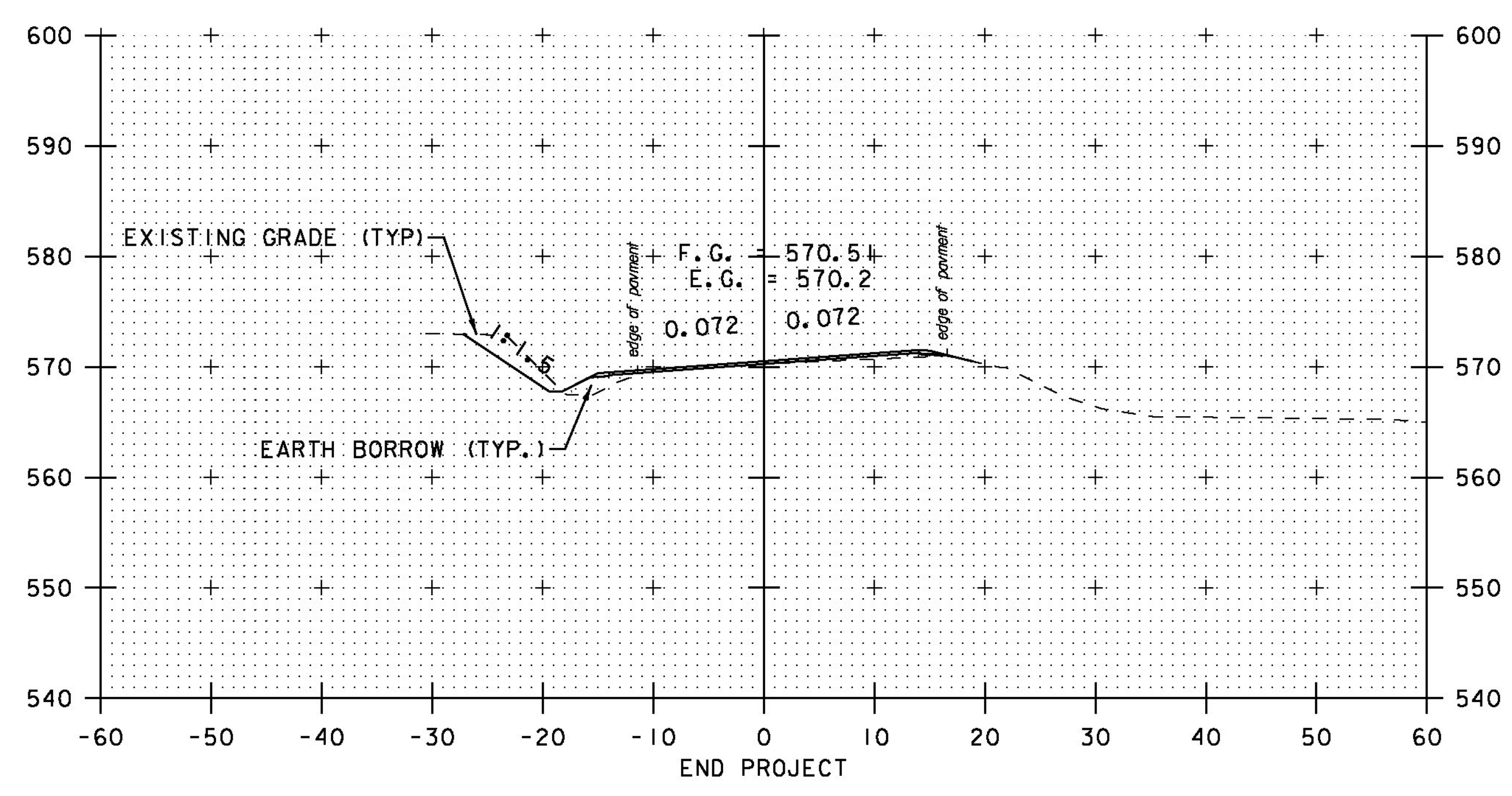
FILE NAME: z12c524xs.dgn  
PROJECT LEADER: J. TUCKER  
DESIGNED BY: B. BRESLEND  
VT 100B CROSS SECTION SHEET 7

PLOT DATE: 2/17/2015  
DRAWN BY: B. MACK  
CHECKED BY: A. SANZ  
SHEET 51 OF 57





16+00



15+50

STA. 15+50 TO STA. 16+00



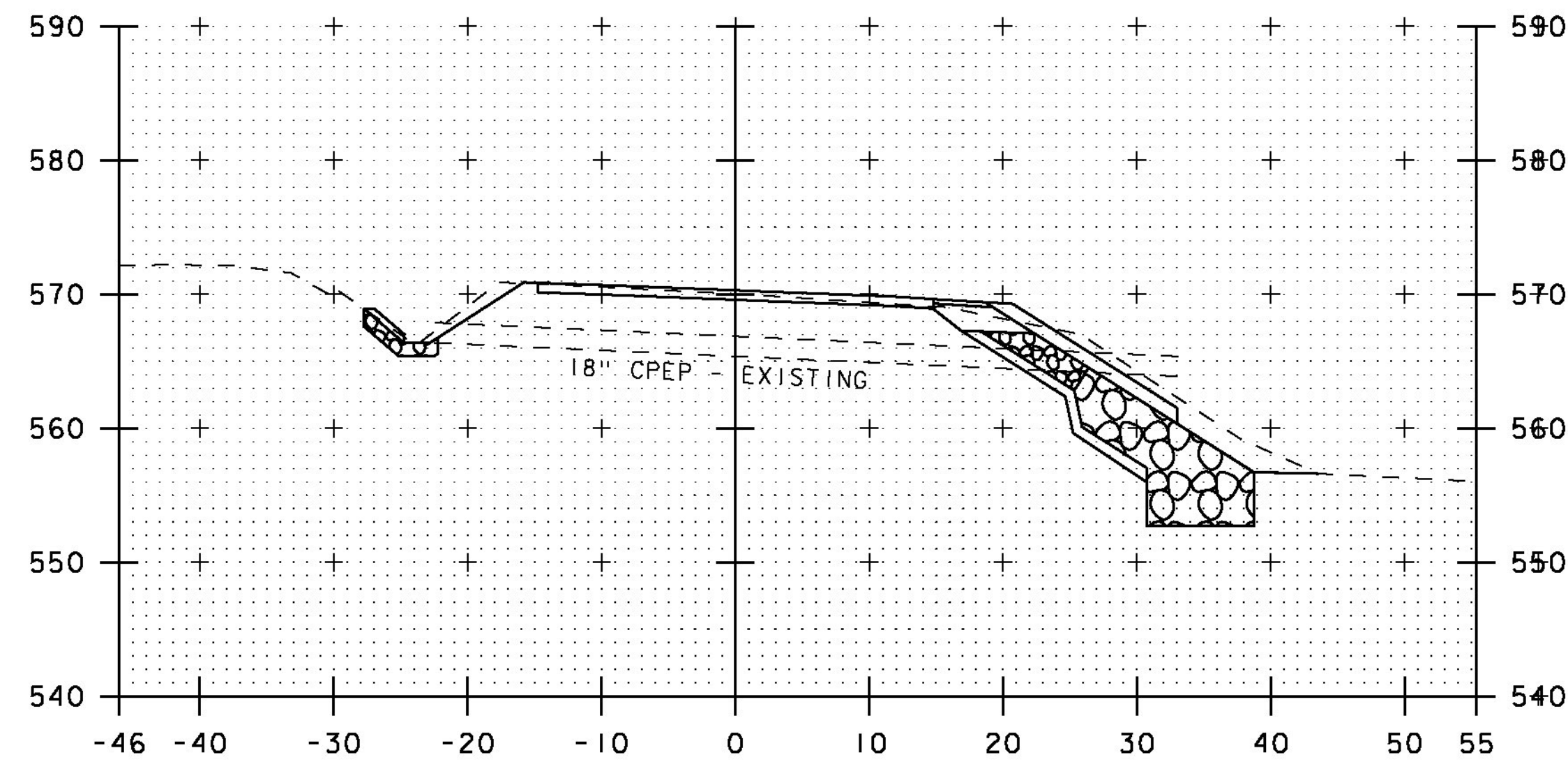
PROJECT NAME: MORETOWN	
PROJECT NUMBER: ER STP 0167 (15)	
FILE NAME: z12c524xs.dgn	PLOT DATE: 2/17/2015
PROJECT LEADER: J. TUCKER	DRAWN BY: B. MACK
DESIGNED BY: B. BRESLEND	CHECKED BY: A. SANZ
VT 100B CROSS SECTION SHEET 8	SHEET 52 OF 57

1 STA. 2+47.21 LT 21.00' TO  
 STA. 2+48.39 RT 42.00'  
 REPLACE EXISTING 18" HDPE  
 WITH NEW 24" CPEP  
 LENGTH = 63'-0"  
 INV. IN = 570.79'  
 INV. OUT = 566.93'  
 ASKEW ANGLE = 88.9572° RT  
 CONSTRUCT INLET PROTECTION PAD  
 STONE FILL, TYPE II

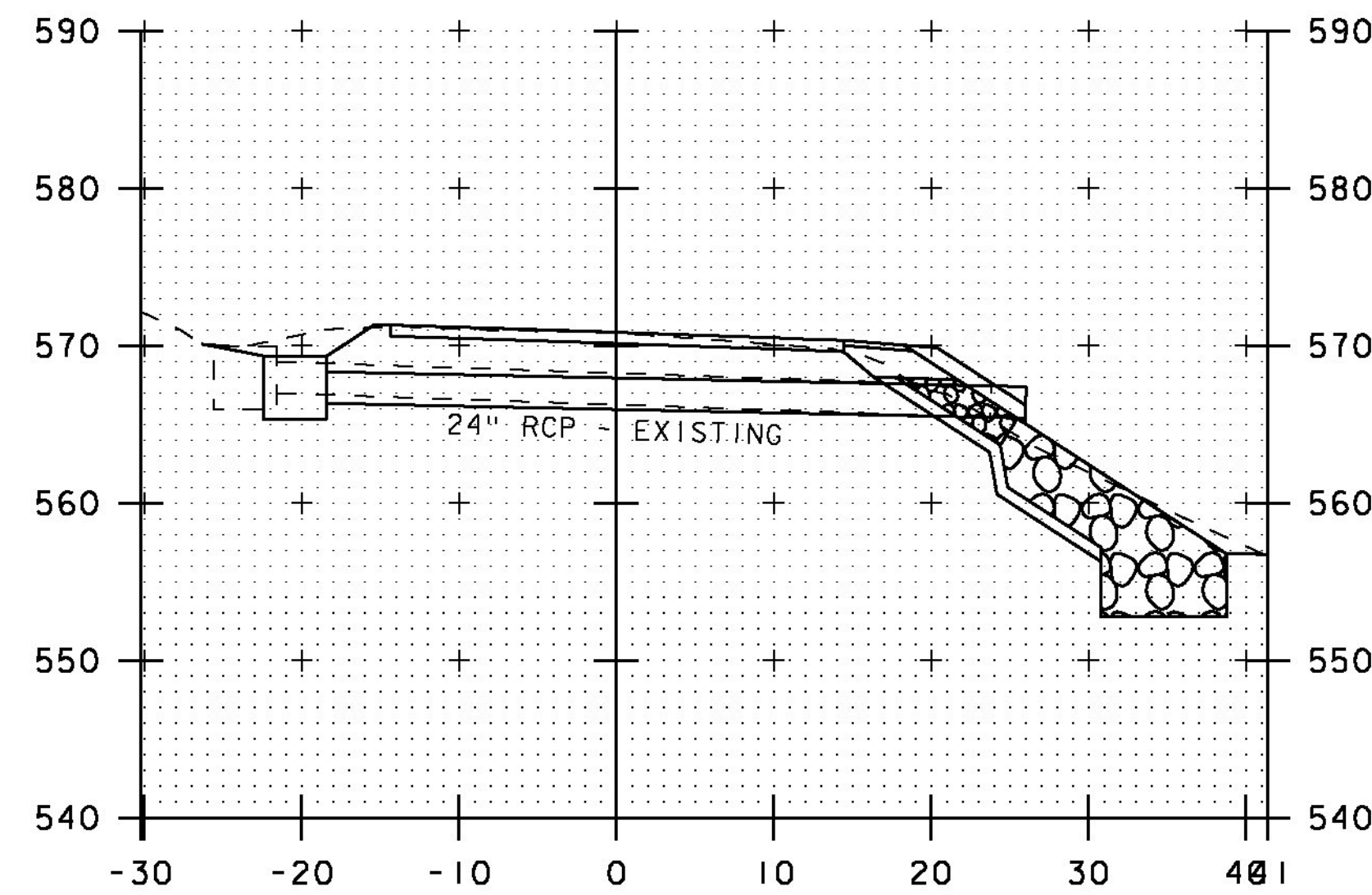
3 STA. 6+86.20 LT 24.86' TO  
 STA. 6+92.61 RT 30.81'  
 REPLACE EXISTING 30" RCP  
 WITH NEW 36" CPEP  
 LENGTH = 56'-0"  
 INV. IN = 563.61'  
 INV. OUT = 559.61'  
 ASKEW ANGLE = 83.6477° RT  
 CONSTRUCT INLET PROTECTION PAD  
 STONE FILL, TYPE II

4 STA. 9+03.13 LT 23.0' REMOVE EXISTING DI  
 STA. 9+02.68 LT 19.8' , INSTALL 4' X6'  
 PRECAST DI WITH RIM = 569.33'  
 REPLACE EXISTING 24" RCP WITH  
 NEW 24" CPEP FROM NEW PRECAST DI TO  
 STA. 8+91.80 RT 25.3'  
 LENGTH = 44'-0"  
 INV. @ DI = 566.33'  
 INV. OUT = 565.39'  
 ASKEW ANGLE = 76.5266° LT

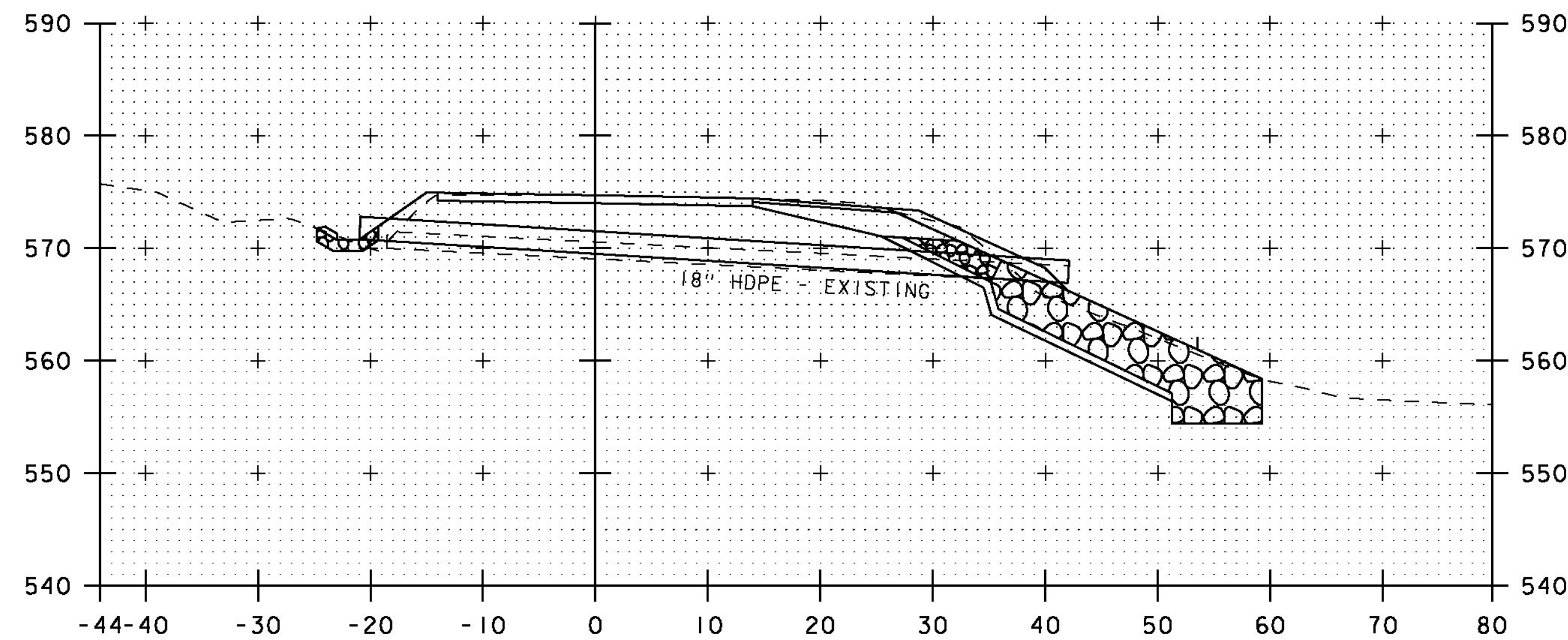
2 STA. 4+86.76 LT 21.5' TO  
 STA. 5+05.36 RT 31.0'  
 RETAIN EXISTING 18" CPEP  
 LENGTH = 56'-0"  
 RESHAPE INLET DITCH AND  
 CLEAN & FLUSH CULVERT  
 CONSTRUCT INLET PROTECTION PAD  
 STONE FILL, TYPE II



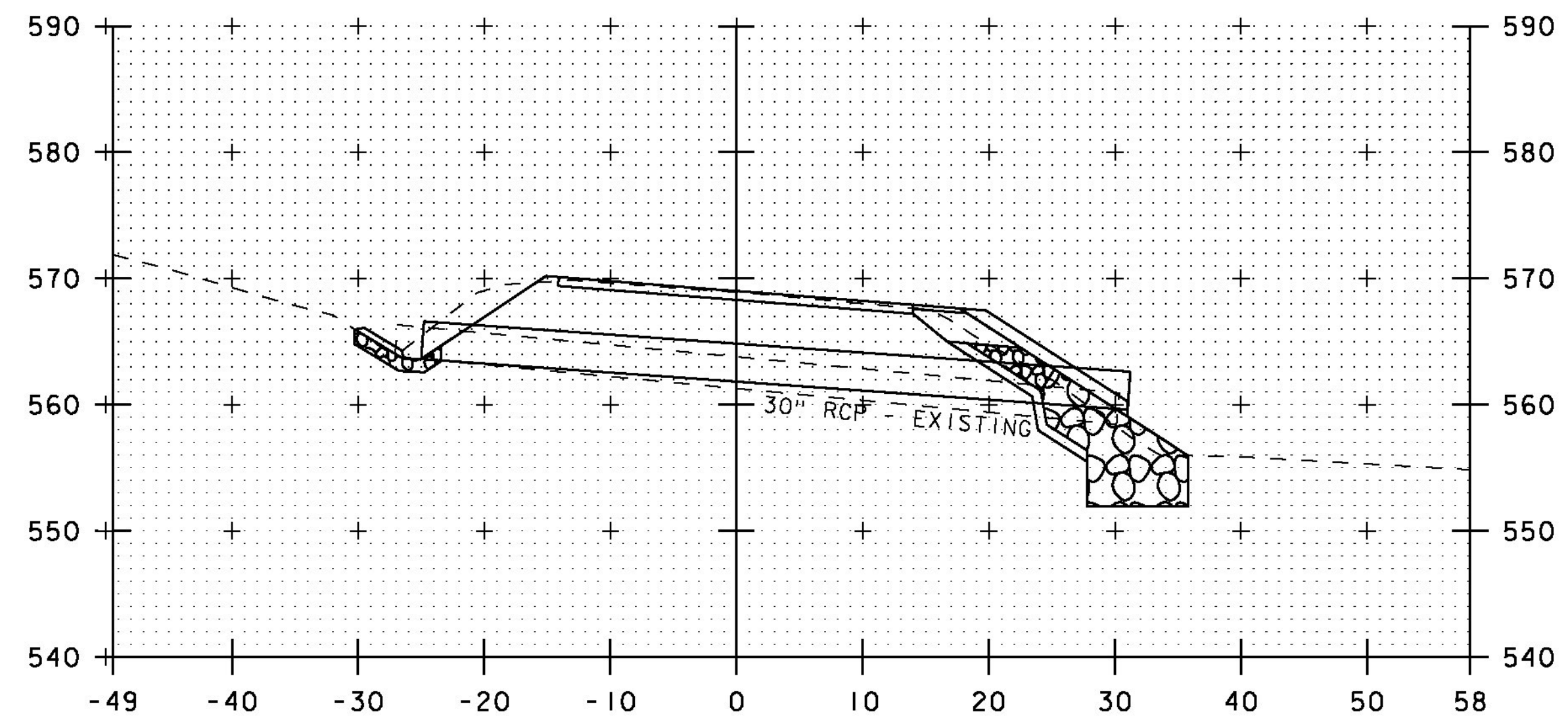
2 4+94 SKEWED



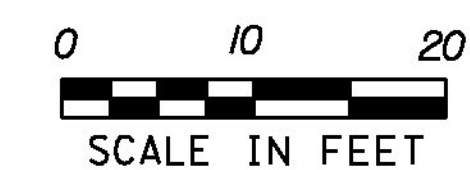
4 8+98 SKEWED



1 2+48 SKEWED



3 6+89 SKEWED



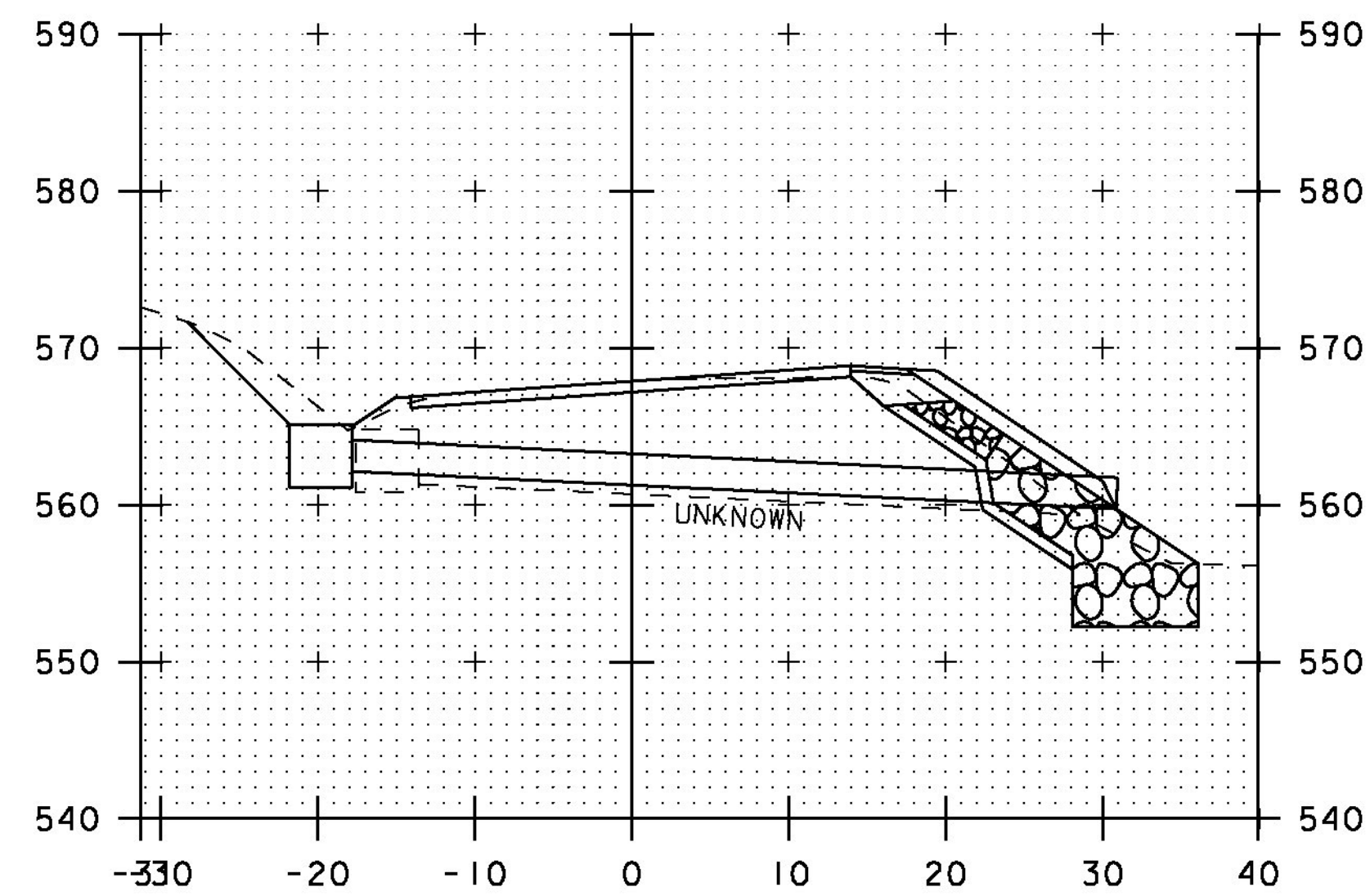
PROJECT NAME: MORETOWN  
 PROJECT NUMBER: ER STP 0167 (15)

FILE NAME: z12c524culver txs.dgn PLOT DATE: 2/17/2015  
 PROJECT LEADER: J. TUCKER DRAWN BY: B. MACK  
 DESIGNED BY: B. BRESLEND CHECKED BY: A. SANZ  
 VT 100B CULV. CROSS SECTION SHEET 1 SHEET 53 OF 57

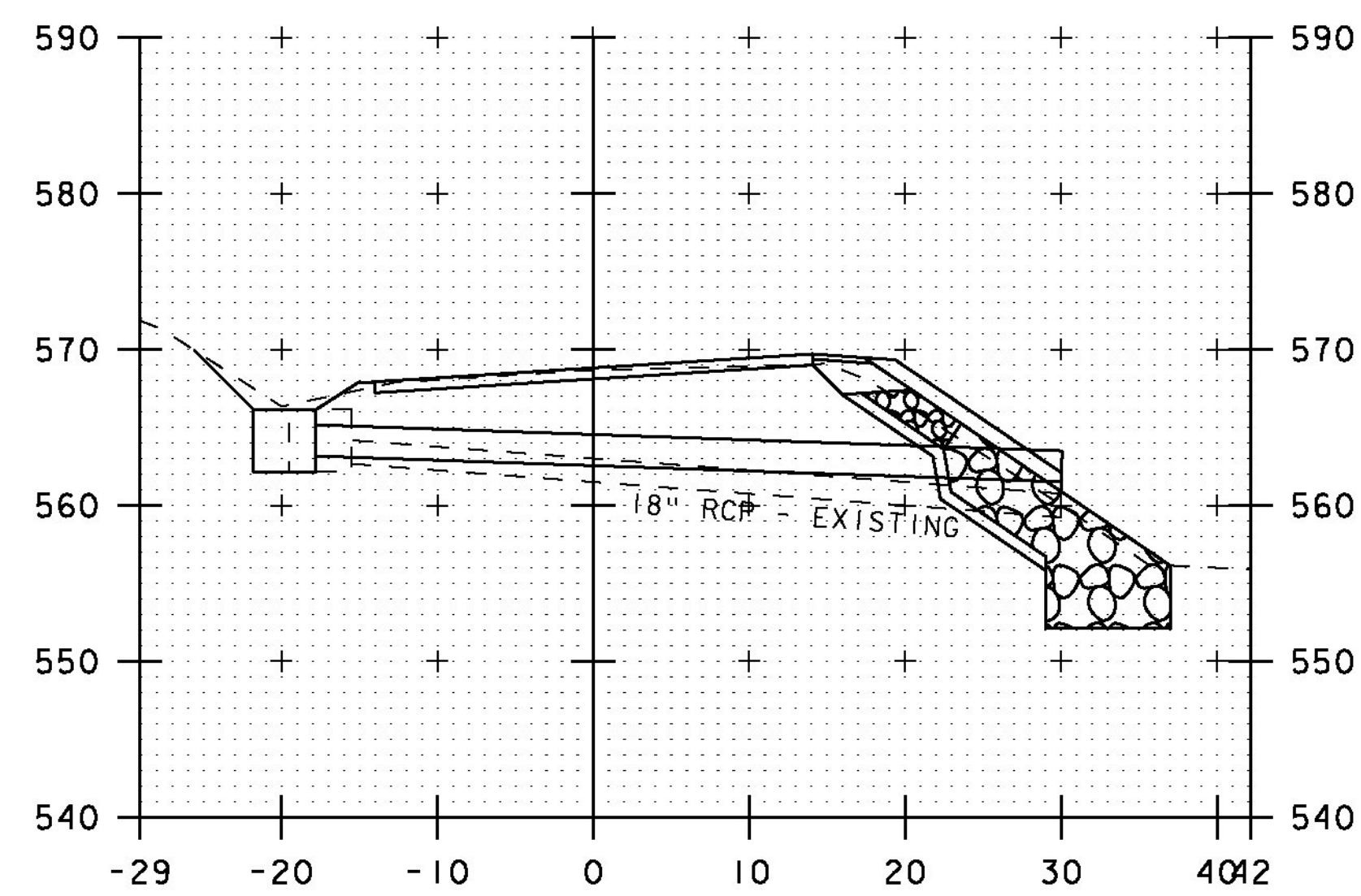
5 STA. 11+38.71 LT 17.5' REMOVE EXISTING DI  
 STA. 11+38.68 LT 19.8' , INSTALL 4' X6'  
 PRECAST DI WITH RIM = 566.16'  
 REPLACE EXISTING 18" RCP WITH  
 NEW 24" CPEP FROM NEW DI TO  
 STA. 11+40.25 RT 30.0'  
 LENGTH = 48'-0"  
 INV. @ DI = 563.16'  
 INV. OUT = 561.53'  
 ASKEW ANGLE = 88.175° RT

6 STA. 13+12.65 LT 15.6' REMOVE EXISTING DI  
 STA. 13+13.14 LT 19.8' , INSTALL 4' X6'  
 PRECAST DI WITH RIM = 565.13'  
 REPLACE EXISTING PIPE WITH  
 NEW 24" CPEP FROM NEW DI TO  
 STA. 13+12.00 RT 30.9'  
 LENGTH = 48'-0"  
 INV. @ DI = 562.13'  
 INV. OUT = 559.73'  
 ASKEW ANGLE = 88.7046° LT

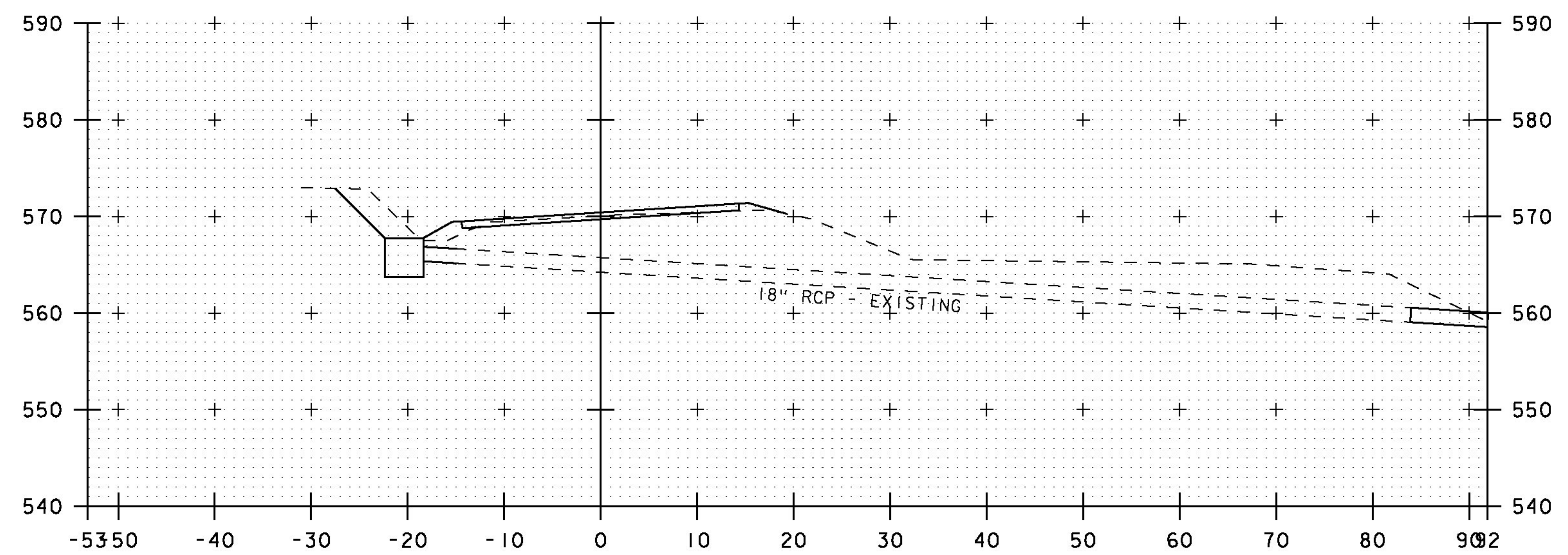
7 STA. 15+49.62 LT 15.3' REMOVE EXISTING DI  
 STA. 15+50.82 LT 19.7' , INSTALL NEW PRECAST DI  
 WITH RIM = 567.77'  
 EXTEND EXISTING PIPE WITH 4'-0" NEW 18" RCP  
 INTO NEW DI  
 REPLACE 8'-0" OF THE EXISTING 18" RCP @ THE OUTLET  
 STA. 15+24.90 RT 89.2'



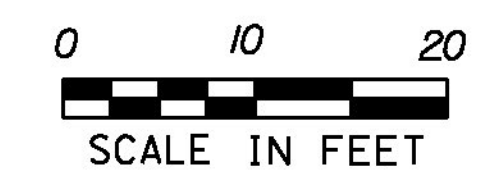
6 13+13 SKEWED



5 11+39 SKEWED



7 15+46 SKEWED



PROJECT NAME: MORETOWN  
 PROJECT NUMBER: ER STP 0167 (15)

FILE NAME: z12c524culver txs.dgn PLOT DATE: 2/17/2015  
 PROJECT LEADER: J. TUCKER DRAWN BY: B. MACK  
 DESIGNED BY: B. BRESLEND CHECKED BY: A. SANZ  
 VT 100B CULV. CROSS SECTION SHEET 2 SHEET 54 OF 57

**TRAFFIC CONTROL NOTES**

1. THE CONTRACTOR MUST PROVIDE ACCESS THROUGH THE WORK ZONE FOR EMERGENCY VEHICLES AT ALL TIMES.
2. A MINIMUM LANE WIDTH OF 10 FT. SHALL BE MAINTAINED.
3. WHEN COLD PLANED BITUMINOUS PAVEMENT IS OPEN TO TRAFFIC, A "MOTORCYCLES USE CAUTION" SIGN, AS PER VAOT STANDARD T-28, SHALL BE PROVIDED.
4. THE CONTRACTOR SHOULD LEAVE NO LONGITUDINAL DROP-OFFS DURING THE OVERNIGHT HOURS. THEREFORE, THE FULL ROADWAY WIDTH SHOULD BE COLD PLANED OR PAVED DURING THE DAILY WORK PERIOD. WHEN NECESSARY, DROP-OFF PROTECTION IN THESE AREAS SHALL CONFORM TO VAOT STANDARD T-35.
5. MAINTAIN ACCESS TO ALL PROPERTIES AT ALL TIMES FOR EMERGENCY VEHICLES. MAINTAIN ACCESS TO ALL COMMERCIAL AND MUNICIPAL PROPERTIES DURING BUSINESS HOURS. ACCESS TO RESIDENTIAL PROPERTIES MAY BE RESTRICTED FOR A SHORT DURATION (A FEW HOURS). ANY RESTRICTIONS SHALL BE COORDINATED WITH THE PROPERTY OWNER. COORDINATE MAJOR WORK ON COMMERCIAL OR MUNICIPAL ACCESSES WITH THE OWNER AT LEAST ONE WEEK PRIOR TO STARTING THE WORK. ALL ACCESSES SHALL ALSO BE KEPT FREE OF WORK. TRAFFIC SHALL BE CONTROLLED BY UNIFORMED TRAFFIC OFFICERS OR FLAGGERS AS REQUIRED BY THE ENGINEER.
6. TRAFFIC SHALL NOT BE CHANGED FROM ONE TRAFFIC PATTERN TO THE NEXT TRAFFIC PATTERN UNTIL ALL TEMPORARY MARKINGS AND SIGNING IS COMPLETED. ANY CONFLICTING MARKINGS SHALL BE REMOVED.
7. ALL PERMANENT SIGNS WHICH CONFLICT WITH TEMPORARY TRAFFIC CONTROL SHALL BE COMPLETELY COVERED.
8. ALL REASONABLE EFFORTS SHALL BE MADE TO ACCOMMODATE PEDESTRIAN AND BICYCLE TRAVEL AT ALL TIMES. THIS MAY INCLUDE, BUT IS NOT LIMITED TO A DEDICATED PEDESTRIAN AND BICYCLE ESCORT, SIGNAGE AND CONED OFF WALKING AND BIKING AREAS WITHIN CLOSED LANES. FLAGGERS SHALL NOT BE USED AS PEDESTRIAN ESCORTS. WHEN EXISTING PEDESTRIAN FACILITIES ARE DISRUPTED, CLOSED, OR RELOCATED IN A TEMPORARY TRAFFIC CONTROL ZONE, THE TEMPORARY FACILITIES SHALL BE DETECTABLE AND SHALL INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH THE FEATURES PRESENT IN THE EXISTING PEDESTRIAN FACILITY. PAYMENT WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 641.10 "TRAFFIC CONTROL".

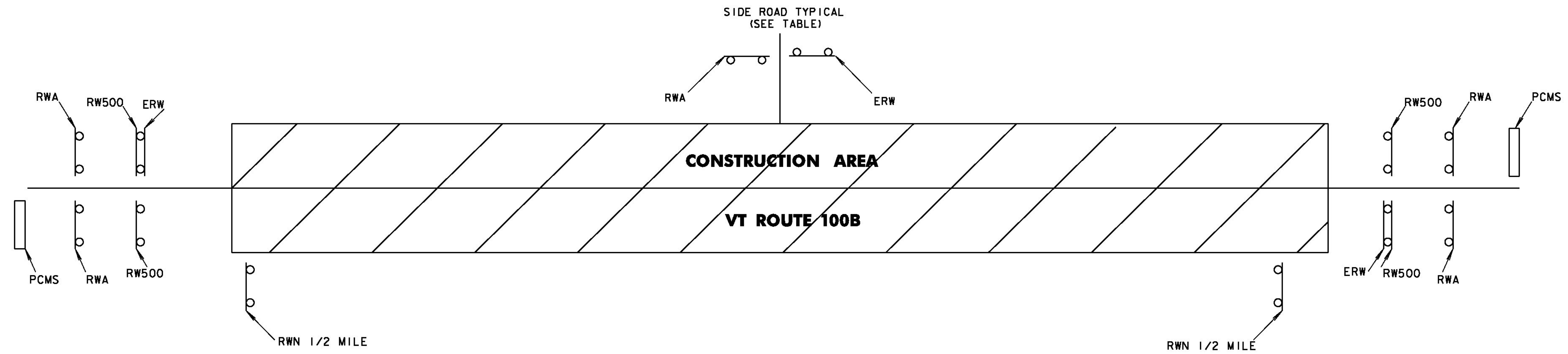
PROJECT NAME: MORETOWN  
PROJECT NUMBER: ER STP 0167 (15)

FILE NAME: z12c524notes.dgn PLOT DATE: 2/17/2015  
PROJECT LEADER: J. TUCKER DRAWN BY: B. MACK  
DESIGNED BY: B. BRESLEND CHECKED BY: A. SANZ  
TRAFFIC CONTROL SHEET SHEET 55 OF 57

**CONSTRUCTION APPROACH SIGNING**

NOT TO SCALE

SEE STD E-121 AND T-10 FOR SIGN PLACEMENT



**NOTES:**

1. THE CONTRACTOR SHALL SUBMIT A SITE SPECIFIC TRAFFIC CONTROL PLAN TO THE ENGINEER FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION. THE COST OF PREPARING THIS PLAN (AND MAKING CHANGES IF NECESSARY) WILL NOT BE PAID SEPARATELY BUT WILL BE PAID UNDER ITEM 641.10, "TRAFFIC CONTROL". THE TRAFFIC CONTROL PLAN SHALL BE IN COMPLIANCE WITH VT STATE STANDARDS AND 2009 MUTCD. WHERE CONFLICTS EXIST, THE 2009 MUTCD SHALL GOVERN.
2. THE CONTRACTOR SHALL INCLUDE A CONSTRUCTION SIGN APPROACH PACKAGE FOR EXPECTED LANE CLOSURES AND WORK ZONE SPEED REDUCTIONS IN COMPLIANCE WITH THE TRAFFIC CONTROL NOTES AND PART 6 OF THE 2009 MUTCD. PAYMENT FOR PROVIDING THIS PACKAGE WILL BE PAID UNDER ITEM 641.10, "TRAFFIC CONTROL".
3. THE BID PRICE FOR "TRAFFIC CONTROL", ITEM 641.10, SHALL INCLUDE ALL OF THE FOLLOWING, AS NEEDED: APPROACH AND ON-PROJECT CONSTRUCTION SIGNING, PORTABLE ARROW BOARDS, BARRELS, CONES, BARRICADES, TEMPORARY REGULATORY AND WARNING SIGNS, AND POSTS AS DETAILED IN VAOT STANDARDS. ALL ADJUSTING, RELOCATING, AND REMOVING OF THESE DEVICES AS DIRECTED BY THE ENGINEER SHALL ALSO BE INCLUDED. THE FOLLOWING ITEMS WILL BE PAID FOR SEPARATELY:  
 646.602, 646.612 - TEMPORARY PAVEMENT MARKINGS  
 630.10 - UNIFORMED TRAFFIC OFFICER  
 630.15 - FLAGGERS  
 900.640 - SPECIAL PROVISION (BARRIER FOR TEMPORARY TRAFFIC PROTECTION)
4. THE MUTCD 2009 AND ITS LATEST REVISIONS SHALL BE THE STANDARD FOR ALL TRAFFIC CONTROL DEVICES. EXISTING SIGNS, SIGNALS AND MARKINGS SHALL BE VALID UNTIL SUCH TIME AS THEY ARE REPLACED OR RECONSTRUCTED. WHEN NEW TRAFFIC CONTROL DEVICES ARE ERECTED OR PLACED OR EXISTING TRAFFIC CONTROL DEVICES ARE REPLACED OR REPAIRED THE EQUIPMENT, DESIGN, METHOD OF INSTALLATION, PLACEMENT OR REPAIR SHALL CONFORM WITH SUCH STANDARDS.
5. CONES SHALL BE USED TO CLEARLY DEFINE THE TRAVEL SPACE AND PROVIDE SEPARATION FROM THE WORK SPACE ALONG ITS ENTIRE LENGTH.
6. AT NO TIME SHOULD THE FLAGGER SYMBOL SIGN BE MORE THAN 1000 FT FROM THE FLAGGER STATION. FLAGGER SIGNS SHALL BE COVERED OR TURNED AWAY IF FLAGGING OPERATIONS CEASE FOR MORE THAN 15 MINUTES.
7. NO CONSTRUCTION SIGNS SHALL BE INSTALLED AS TO INTERFERE OR OBSTRUCT THE VIEW OF EXISTING TRAFFIC CONTROL DEVICES, STOPPING SIGHT DISTANCE, AND CORNER SIGHT DISTANCE FROM DRIVES AND TOWN HIGHWAYS.
8. DIAMOND SHAPED SIGNS SHALL BE 4' X 4' WITH BLACK TEXT AND BORDER ON A RETROREFLECTIVE FLOURESCENT ORANGE BACKGROUND.
9. WHERE TEMPORARY SIGNS ARE PLACED BEHIND GUARDRAIL, THEY SHALL BE ADJUSTED SUCH THAT THE BOTTOM OF THE SIGNS ARE ABOVE THE TOP OF GUARDRAIL.
10. THE PORTABLE CHANEABLE MESSAGE SIGN MESSAGE SHOULD CONVEY UP TO DATE CONSTRUCTION INFORMATION WHICH A STATIC SIGN CAN NOT. THE MESSAGE SHALL BE CHECKED AND UPDATED WEEKLY, OR AS DIRECTED BY THE ENGINEER. ALL MESSAGES SHALL BE APPROVED BY THE ENGINEER PRIOR TO CHANGING THE PREVIOUS MESSAGE.

	ROAD WORK AHEAD	END ROAD WORK	ROAD WORK 500 FT	ROAD WORK NEXT 0.5 MILES	PCMS
<b>MORETOWN</b>					
BEGIN PROJECT (VT 100B)	2	1	2	1	1
SUGAR HOUSE WAY	1	1			
END PROJECT (VT 100B)	2	1	2	1	1
TOTALS	5	3	4	2	2

**LEGEND**

- RWA = ROAD WORK AHEAD
- RW500 = ROAD WORK 500 FT
- ERW = END ROAD WORK
- RWN = ROAD WORK NEXT 1/2 MILE
- PCMS = PORTABLE CHANEABLE MESSAGE SIGN

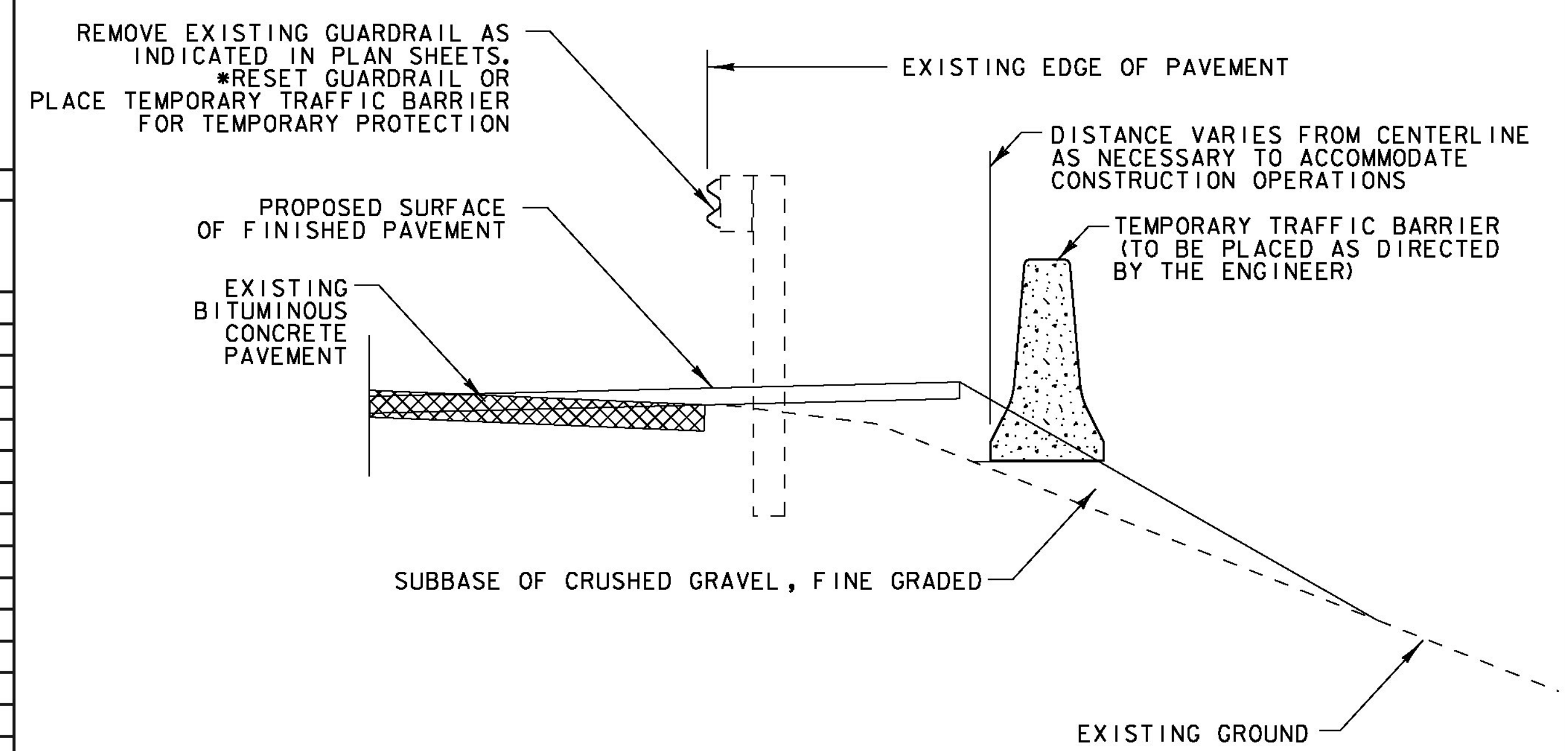
PROJECT NAME: MORETOWN  
 PROJECT NUMBER: ER STP 0167 (15)

FILE NAME: z12c524detail.dgn PLOT DATE: 2/17/2015  
 PROJECT LEADER: J. TUCKER DRAWN BY: B. MACK  
 DESIGNED BY: B. BRESLEND CHECKED BY: A. SANZ  
 CONSTRUCTION APPROACH SIGNING SHEET SHEET 56 OF 57

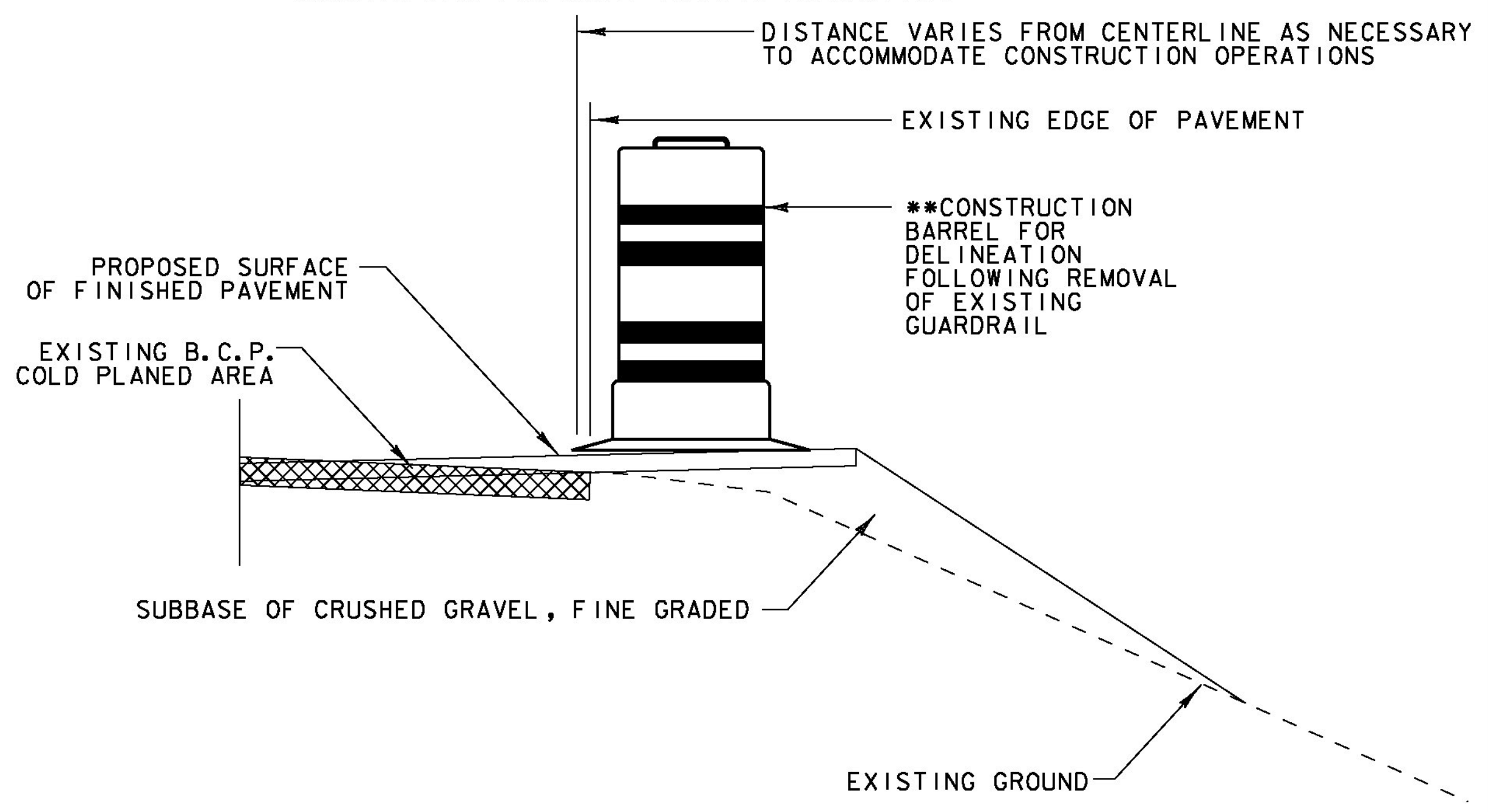
**DETAILS ARE NOT TO SCALE**

# CONSTRUCTION OPERATIONS TRAFFIC PROTECTION PLAN

Existing Guardrail Inventory								Protection Plan	
Begin Sta.	End Sta.	Offset	Length (LF)	Retain/Replace (Y/N)	Approx. Offset Distance from Proposed Centerline to Face of Existing Rail (LF)	Existing Rail Type (Post and Barrier)	Assessed Condition (Good/Fair/Poor)	Construction Condition	900.640 Barrier for Temporary Traffic Protection (LF)
<b>Moretown - Route 100B</b>									
2+26.0	14+37.0	RT	1211.0	N	15-16	Steel W-Beam	POOR	REMOVE AND RESET SO FACE OF RAIL ACCOMODATES CONSTRUCTION OPERATIONS, STA. 3+25 TO STA. 14+25, RT. REMOVE REMAINING LENGTHS AND DELINEATE WITH BARRELS	1100
Total =									1100



* PAYMENT FOR THIS WORK WILL BE MADE UNDER ITEM #900.640 "SPECIAL PROVISION (BARRIER FOR TEMPORARY TRAFFIC PROTECTION)"



** PAYMENT FOR THIS WORK WILL BE INCLUDED IN THE UNIT PRICE BID FOR CONTRACT ITEM 641.10 "TRAFFIC CONTROL"

## TEMPORARY PROTECTION AND DELINEATION DETAILS FOR ROADSIDE HAZARDS DURING CONSTRUCTION

NOT TO SCALE

PROJECT NAME: MORETOWN	
PROJECT NUMBER: ER STP 0167 (15)	
FILE NAME: z12c524detail.dgn	PLOT DATE: 2/17/2015
PROJECT LEADER: J. TUCKER	DRAWN BY: J. GOODALL
DESIGNED BY: B. BRESLEND	CHECKED BY: C. LATHROP
CONST. OP. TRAFFIC PROTECTION PLAN SHEET 57 OF 57	

