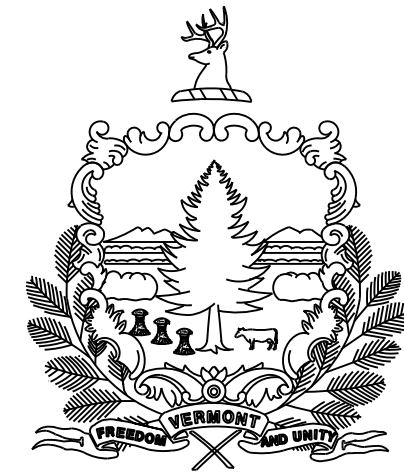
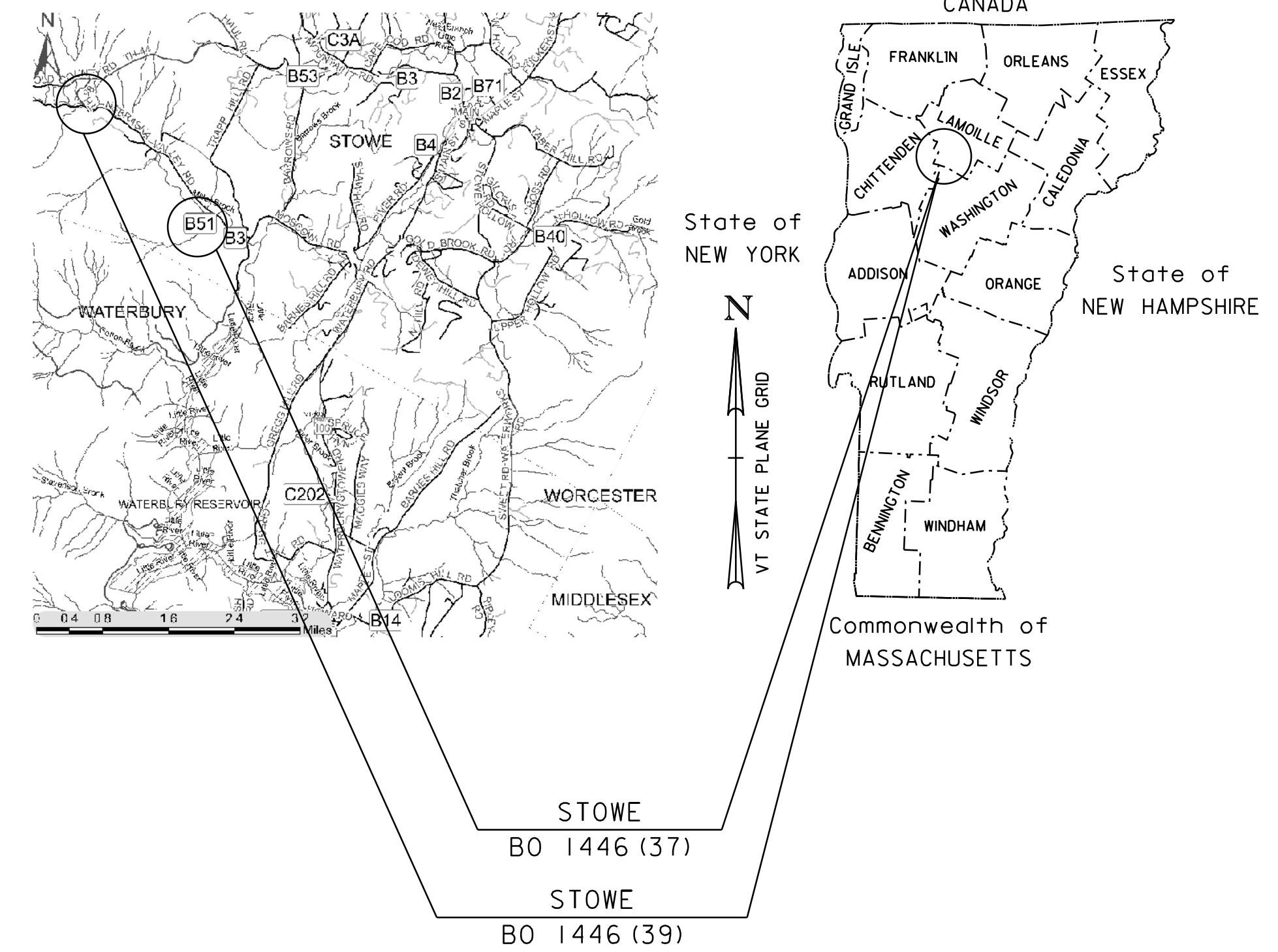


STATE OF VERMONT AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT BRIDGE PROJECT

TOWN OF STOWE
COUNTY OF LAMOILLE



STOWE BO 1446(37)

ROUTE NO : TOWN HIGHWAY 43 (CLASS 3 TOWN HIGHWAY) BRIDGE NO: 51

PROJECT LOCATION : BRIDGE 51 IS LOCATED IN THE TOWN OF STOWE ON TH 43 (NEBRASKA VALLEY ROAD) APPROXIMATELY 0.5 MILES NORTHWEST FROM ITS INTERSECTION WITH TH 1 (MOSCOW ROAD) AND EXTENDING EASTERLY 0.047 MILES.

PROJECT DESCRIPTION : REPLACEMENT OF THE EXISTING BRIDGE WITH A NEW BRIDGE ON ALIGNMENT INCLUDING RELATED APPROACH AND CHANNEL WORK.

LENGTH OF STRUCTURE : 55.83 FEET.
LENGTH OF ROADWAY : 194.17 FEET.
LENGTH OF PROJECT : 250.00 FEET.

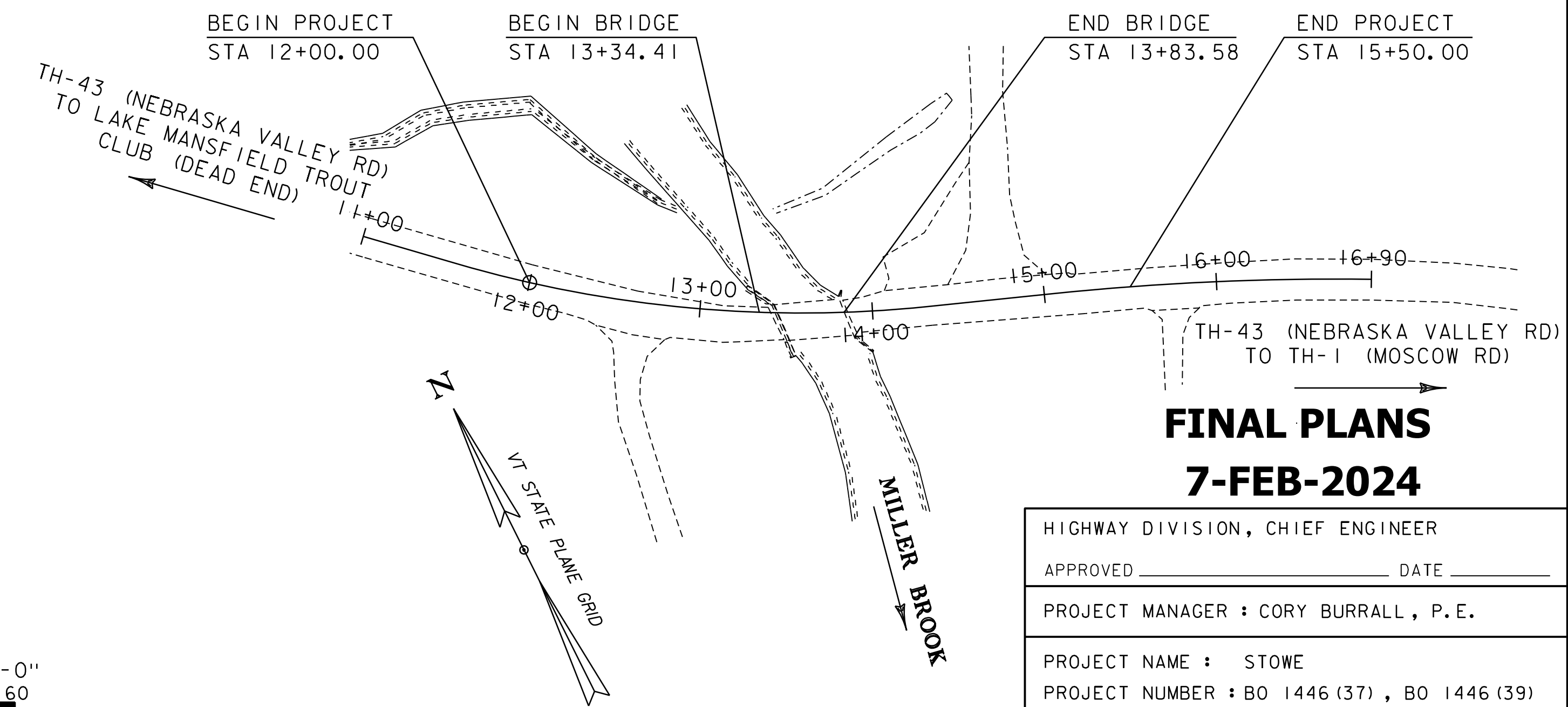
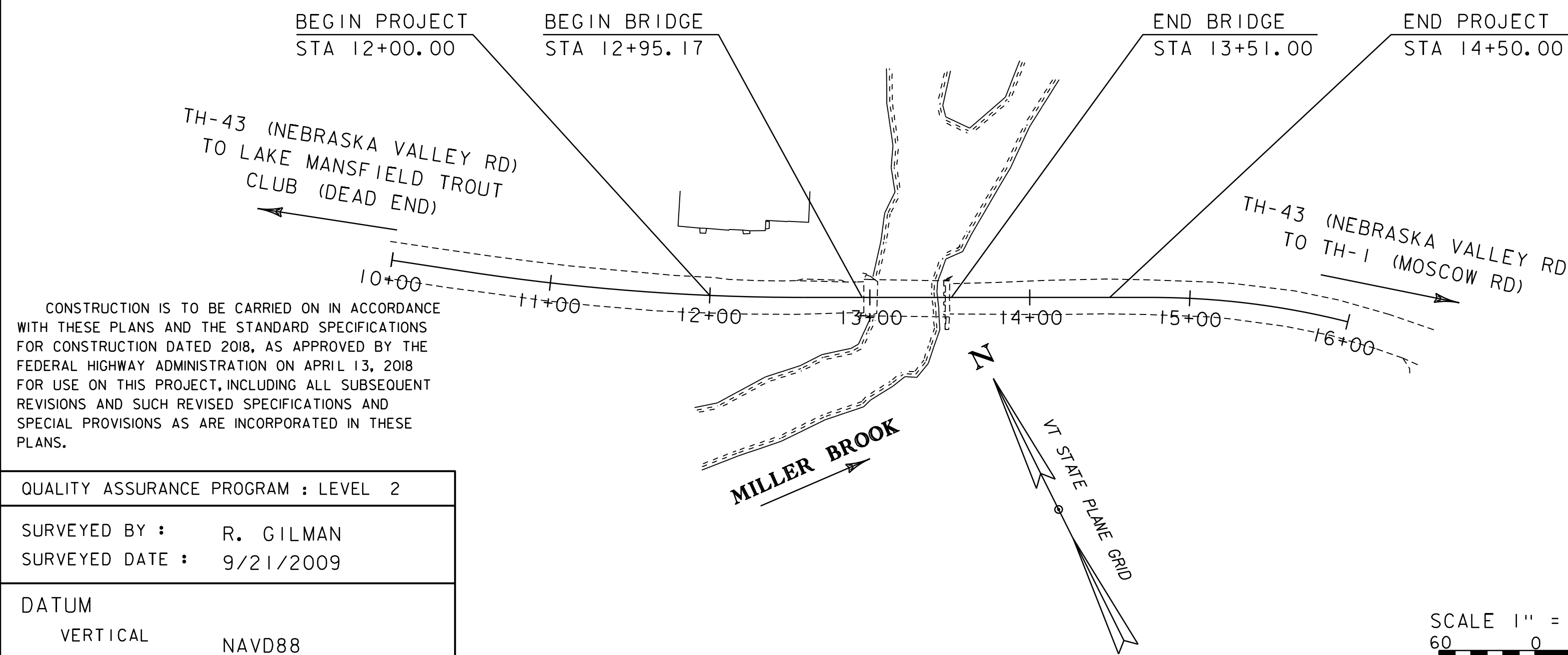
STOWE BO 1446(39)

ROUTE NO : TOWN HIGHWAY 43 (CLASS 3 TOWN HIGHWAY) BRIDGE NO: 48

PROJECT LOCATION : BRIDGE 48 IS LOCATED IN THE TOWN OF STOWE ON TH 43 (NEBRASKA VALLEY ROAD) APPROXIMATELY 1.5 MILES NORTHWEST FROM ITS INTERSECTION WITH TH 1 (MOSCOW ROAD) AND EXTENDING EASTERLY 0.066 MILES.

PROJECT DESCRIPTION : REPLACEMENT OF THE EXISTING BRIDGE WITH A NEW BRIDGE OFF ALIGNMENT INCLUDING RELATED APPROACH AND CHANNEL WORK.

LENGTH OF STRUCTURE : 49.17 FEET.
LENGTH OF ROADWAY : 300.83 FEET.
LENGTH OF PROJECT : 350.00 FEET.



CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2018, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON APRIL 13, 2018 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

QUALITY ASSURANCE PROGRAM : LEVEL 2	
SURVEYED BY :	R. GILMAN
SURVEYED DATE :	9/21/2009
DATUM	
VERTICAL	NAVD88
HORIZONTAL	NAD83 (96)

SCALE 1" = 60'-0"
60 0 60

FINAL PLANS
7-FEB-2024

HIGHWAY DIVISION, CHIEF ENGINEER	
APPROVED _____	DATE _____
PROJECT MANAGER : CORY BURRALL, P.E.	
PROJECT NAME : STOWE	
PROJECT NUMBER : BO 1446 (37) , BO 1446 (39)	
SHEET 1 OF 84 SHEETS	

COMPOSITE DETAILS

1	COMBINED TITLE SHEET
2	INDEX OF SHEETS
3	CONVENTIONAL SYMBOLOGY LEGEND
4	EPSC DETAILS

DETAIL SHEETS

HSD-400.01	SAFETY EDGE DETAILS	1/5/2018
------------	---------------------	----------

BO 1446(37) - BRIDGE 51

5	TITLE SHEET
6	PRELIMINARY INFORMATION SHEET
7 - 8	TYPICAL SECTIONS 1-2
9	PROJECT NOTES(37)
10 - 11	QUANTITY SHEET 1-2
12	TIE SHEET
13	EXISTING CONDITIONS
14	LAYOUT
15	TH 43 PROFILE AND MATERIAL TRANSITION
16	TEMPORARY BRIDGE LAYOUT
17	LANDSCAPE PLAN
18	BORING INFORMATION SHEET
19 - 20	BORING LOGS 1-2
21	DECK PLAN & TYPICAL SECTION
22	FRAMING PLAN & BEAM DETAILS
23	BEARING DETAILS
24	APPROACH SLABS
25	ABUTMENT #1
26	ABUTMENT #2
27	WINGWALLS
28	ABUTMENT #2 FOOTING
29	REINFORCING STEEL SCHEDULE
30 - 34	TH 43 CROSS SECTIONS 1-5
35 - 37	CHANNEL CROSS SECTIONS 1-3
38	R.O.W. LAYOUT SHEET
39	R.O.W. DETAIL SHEET

STANDARDS LIST

A-76	STANDARDS FOR TOWN & DEVELOPMENT ROADS	03-03-2003
B-71a	STANDARD FOR RESIDENTIAL DRIVES	04-07-2020
E-1	TREE PLANTING	07-11-2017
E-2	SHRUB PLANTING	07-11-2017
E-10	ROLLED EROSION CONTROL PRODUCT, TYPE I	04-07-2020
E-12	STABILIZED CONSTRUCTION ENTRANCE	04-07-2020
E-15	SILT FENCE	04-07-2020
E-193	PAVEMENT MARKING DETAILS	08-18-1995
G-1	STEEL BEAM GUARDRAIL DETAILS (POST, DELINEATOR, TYPICALS)	03-10-2017
J-3	MAIL BOX SUPPORT DETAILS	08-07-1995
S-364A	BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM - CURBLESS	02-15-2023
S-364B	GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM -	02-15-2023
S-364C	GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM -	02-15-2023
S-364D	GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM -	02-15-2023
S-400	BRIDGE JOINT ASPHALTIC PLUG	04-07-2020
S-500	CONCRETE DETAILS AND NOTES	02-15-2023
S-501	CONCRETE DETAILS AND NOTES	02-15-2023
S-600	STRUCTURAL DETAILS AND NOTES	02-15-2023
S-601	STRUCTURAL STEEL PLATE GIRDER DETAILS AND NOTES	02-15-2023
T-1	TRAFFIC CONTROL GENERAL NOTES	04-25-2016
T-2	TRAFFIC SIGN GENERAL NOTES	04-07-2020
T-10	CONVENTIONAL ROADS CONSTRUCTION APPROACH SIGNING	08-06-2012
T-17	TRAFFIC CONTROL MISCELLANEOUS DETAILS	08-06-2012
T-28	CONSTRUCTION SIGN DETAILS	08-06-2012
T-29	CONSTRUCTION SIGN DETAILS	08-06-2012
T-30	CONSTRUCTION SIGN DETAILS	02-17-2022
T-40	DELINEATORS AND MILEPOSTS	01-02-2013
T-42	BRIDGE NUMBER PLAQUE	04-09-2014
T-45	SQUARE TUBE SIGN POST AND ANCHOR	01-02-2013

BO 1446(39) - BRIDGE 48

40	TITLE SHEET
41	PRELIMINARY INFORMATION SHEET
42 -43	TYPICAL SECTIONS 1-2
44	PROJECT NOTES (39)
45 - 46	QUANTITY SHEET 1-2
47	TIE SHEET
48	ALIGNMENT DATA
49	EXISTING CONDITIONS
50	LAYOUT
51	TH 43 PROFILE
52	TH 43 BANKING & MATERIAL TRANSITION
53	TH 45 PROFILE & MATERIAL TRANSITION
54	TH 47 PROFILE & MATERIAL TRANSITION
55	TEMPORARY BRIDGE LAYOUT
56	UTILITY LAYOUT
57	LANDSCAPE PLAN
58	BORING INFORMATION
59 - 61	BORING LOGS 1-3
62	DECK PLAN AND TYPICAL SECTION
63	FRAMING PLAN & BEAM DETAILS
64	BEARING DETAILS
65	APPROACH SLABS
66	ABUTMENT #1
67	ABUTMENT #2
68	WINGWALLS 1 & 2
69	WINGWALLS 3 & 4
70	REINFORCING STEEL SCHEDULE
71 - 76	TH 43 CROSS SECTIONS 1-6
77	TH 45 (FALLS BROOK LN) CROSS SECTIONS
78 - 79	TH 47 (SUGAR BUSH LN) CROSS SECTIONS 1-2
80 - 81	CHANNEL CROSS SECTIONS 1-2
82 - 83	R.O.W. LAYOUT SHEETS
84	R.O.W. DETAIL SHEET

PROJECT NAME:	STOWE		
PROJECT NUMBER:	BO 1446(37) - BO 1446(39)		
FILE NAME:	sl2j660i2j658_complindex.dgn	PLOT DATE:	7-FEB-2024
PROJECT LEADER:	C. BURRALL	DRAWN BY:	R. PELLETT
DESIGNED BY:	C. BURRALL	CHECKED BY:	C. BURRALL
INDEX OF SHEETS		SHEET	2 OF 84

GENERAL INFORMATION

SYMBOLGY LEGEND NOTE

THE SYMBOLGY ON THIS SHEET IS INTENDED TO COVER STANDARD CONVENTIONAL SYMBOLGY. THE SYMBOLGY 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. SYMBOLGY ON PLANS MAY VARY, PLAN ANNOTATIONS AND NOTES SHOULD BE USED TO CLARIFY AS NEEDED.

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

POINT CODE	DESCRIPTION
BF	BARRIER FENCE
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
PDF	PROJECT DEMARCATION FENCE
R&RES	REMOVE & RESET
R&REP	REMOVE & REPLACE
R.T.& I.	RIGHT, TITLE, AND INTEREST
SR	SLOPE RIGHT
UE	UTILITY EASEMENT
(P)	PERMANENT EASEMENT
(T)	TEMPORARY EASEMENT
■	BNDNS BOUND SET
▣	BNDNS BOUND TO BE SET
⊙	IPNF IRON PIN FOUND
●	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 RADIUS OF
T	CURVE TANGENT LENGTH
L	CURVE LENGTH OF
E	CURVE EXTERNAL DISTANCE
CB	CHORD BEARING

UTILITY SYMBOLGY

UNDERGROUND UTILITIES

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

ABOVE GROUND UTILITIES (AERIAL)

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

PROJECT CONSTRUCTION SYMBOLGY

PROJECT DESIGN & LAYOUT SYMBOLGY

— 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 SYMBOLGY

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 —	PROPERTY LINE (P/L)
— SR —	SLOPE RIGHTS
— 6f —	6F PROPERTY BOUNDARY
— 4f —	4F PROPERTY BOUNDARY
— HAZ —	HAZARDOUS WASTE

EPSC LAYOUT PLAN SYMBOLGY

EPSC MEASURES

—	SEDIMENT ISOLATION
—	SILT FENCE
—	SILT FENCE WOVEN WIRE
—	CHECK DAM
—	DISTURBED AREAS REQUIRING RE-VEGETATION
—	EROSION MATTING

SEE EPSC DETAIL SHEETS FOR ADDITIONAL SYMBOLGY

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 PLAIN —	FLOOD PLAIN
— OHW —	ORDINARY HIGH WATER (OHW)
—	STORM WATER
—	USDA FOREST SERVICE LANDS
—	WILDLIFE HABITAT SUIT/CONN

ARCHEOLOGICAL & HISTORIC

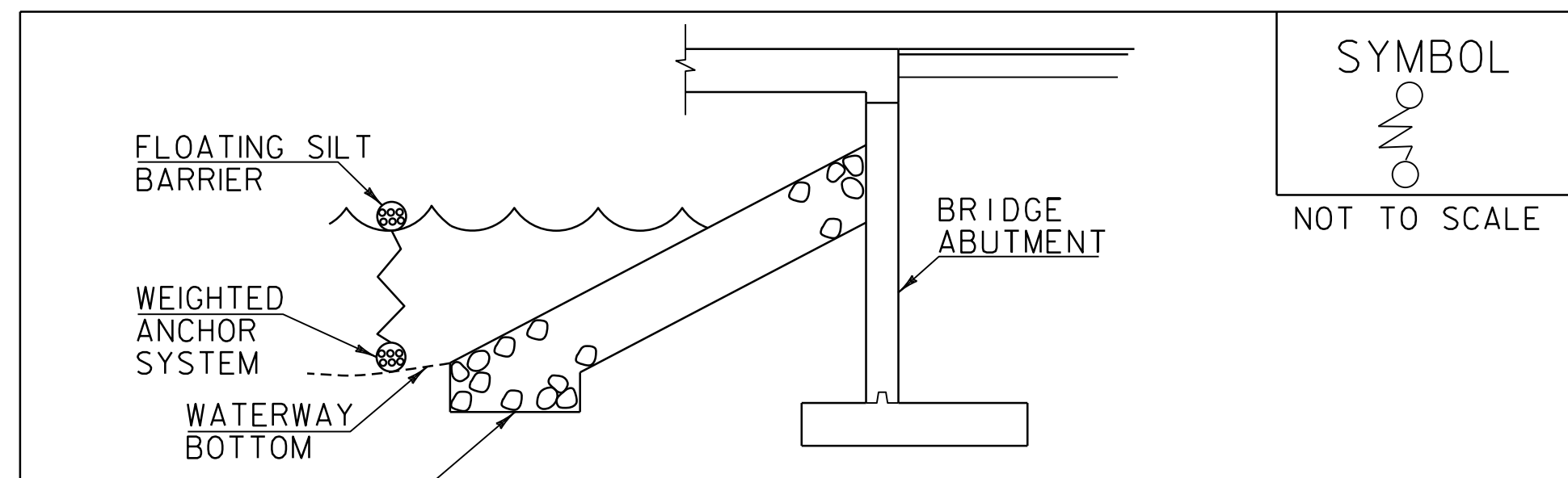
— ARCH —	ARCHEOLOGICAL BOUNDARY
— HISTORIC DIST —	HISTORIC DISTRICT BOUNDARY
— HISTORIC —	HISTORIC AREA
— (H) —	HISTORIC STRUCTURE

CONVENTIONAL TOPOGRAPHIC SYMBOLGY

EXISTING FEATURES

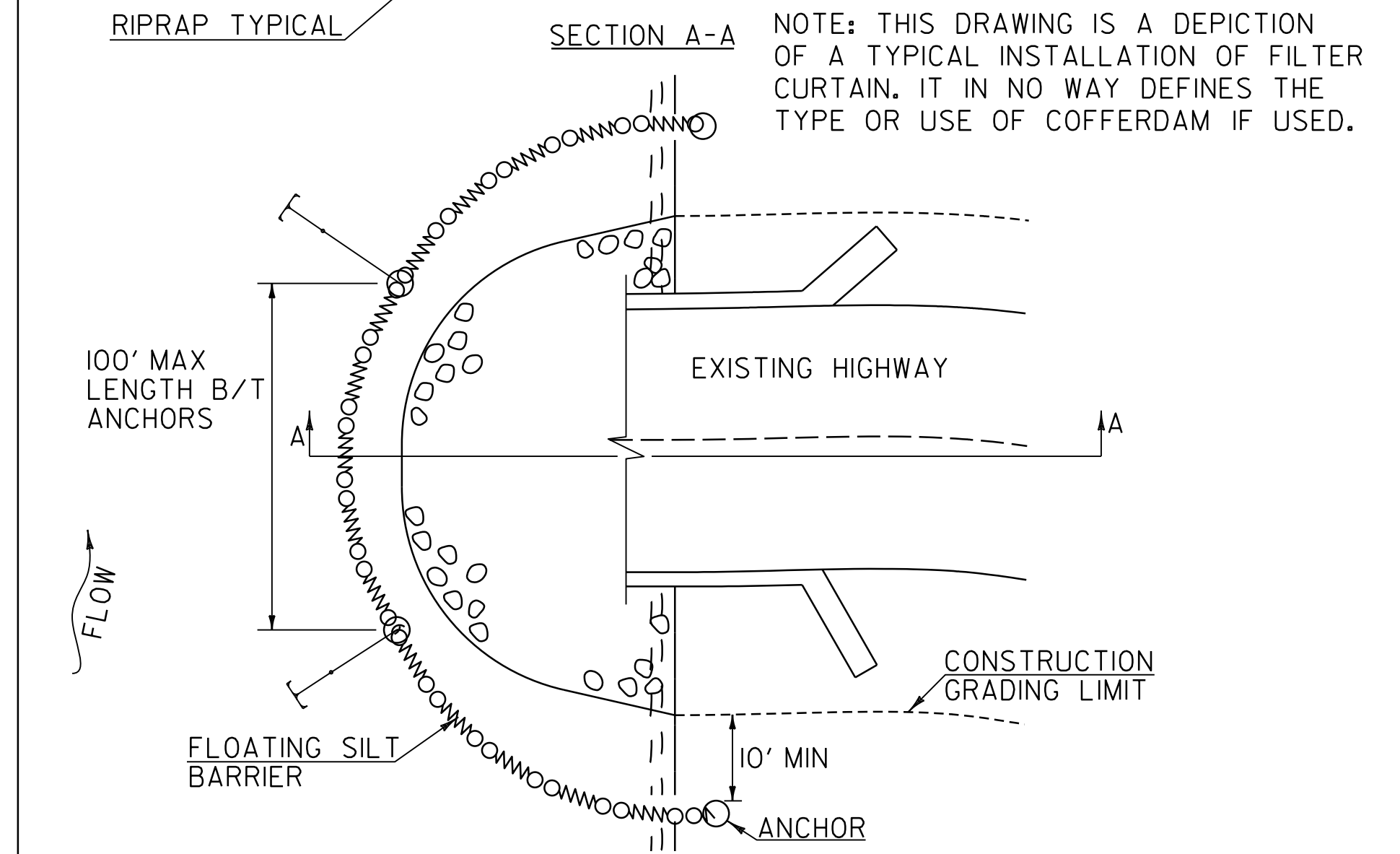
—	ROAD EDGE PAVEMENT
—	ROAD EDGE GRAVEL
—	DRIVEWAY EDGE
—	DITCH
—	FOUNDATION
—	FENCE (EXISTING)
—	FENCE WOOD POST
—	FENCE STEEL POST
—	GARDEN
—	ROAD GUARDRAIL
—	RAILROAD TRACKS
—	CULVERT (EXISTING)
—	STONE WALL
—	WALL
—	WOOD LINE
—	BRUSH LINE
—	HEDGE
—	BODY OF WATER EDGE
—	LEDGE EXPOSED

PROJECT NAME:	STOWE
PROJECT NUMBER:	BO 1446(37) - BO 1446(39)
FILE NAME:	sl2j66012j658_complegend.dgn
PROJECT LEADER:	C. BURRALL
DESIGNED BY:	R. PELLETT
CONVENTIONAL SYMBOLGY LEGEND	
PLOT DATE:	7-FEB-2024
DRAWN BY:	R. PELLETT
CHECKED BY:	C. BURRALL
SHEET	\$\$\$ OF \$\$\$



SYMBOL

 NOT TO SCALE



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

CONSTRUCTION SPECIFICATIONS

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

FILTER CURTAIN

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

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

VAOT LOW GROW/FINE FESCUE MIX						
	LBS/AC					
WEIGHT	BROADCAST	HYDROSEED	NAME	LATIN NAME	GERM	PURITY
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						
	LBS/AC					
WEIGHT	BROADCAST	HYDROSEED	NAME	LATIN NAME	GERM	PURITY
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

1. SEED MIX: THE CONTRACTOR SHALL COORDINATE WITH THE RESIDENT ENGINEER ON WHICH SEED MIX TO USE.
2. SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED UPLAND (NON WETLAND) AREAS DISTURBED BY THE CONTRACTOR.
3. ALL SEED MIXTURES: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.
4. FERTILIZER AND LIMESTONE: SHALL FOLLOW RATES SHOWN ON PLAN OR AS DIRECTED BY THE ENGINEER.
5. HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, ACHIEVE 90% GROUND COVER OR AS DIRECTED BY THE ENGINEER.
6. 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.
7. TURF ESTABLISHMENT: PLACING SEED, FERTILIZER, LIME AND MULCH PRIOR TO SEPTEMBER 15 AND AFTER APRIL 15 CAN BETTER ENSURE A VIGOROUS GROWTH OF GRASS.

ADAPTED FROM VTRANS TECHNICAL LANDSCAPE MANUAL FOR ROADWAYS AND TRANSPORTATION FACILITIES

TURF ESTABLISHMENT

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

REVISIONS	
JANUARY 12, 2015	WHF



SYMBOL

 NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. THE PRIMARY PURPOSE OF FILTER BAG IS TO RETAIN SILT, SAND, AND FINES DURING DEWATERING OPERATIONS.
2. FILTER BAGS SHALL BE INSTALLED ON A VEGETATED SLOPE GRADED TO ALLOW INCOMING WATER TO FLOW THROUGH THE BAG.
3. FILTER BAGS MAY ALSO BE PLACED ON COARSE AGGREGATE, STONE, OR HAYBALES TO INCREASE FILTRATION EFFICIENCY.
4. FILTER BAGS SHALL BE LOCATED A MINIMUM OF 50' FROM WATERS OF THE STATE UNLESS OTHERWISE APPROVED BY THE ENGINEER.
5. THE NECK OF THE FILTER BAG SHALL BE STRAPPED TIGHTLY TO THE DISCHARGE HOSE.
6. A FILTER BAG IS FULL WHEN IT NO LONGER CAN EFFICIENTLY FILTER SEDIMENT OR ALLOW WATER TO PASS AT A REASONABLE RATE.
7. FILTER BAG SHALL BE DISPOSED OF AS APPROVED IN THE EPSC PLAN OR AS DIRECTED BY THE ENGINEER.

FILTER BAG

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

REVISIONS	
MARCH 24, 2008	WHF
JANUARY 13, 2009	WHF

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR FILTER BAG (PAY ITEM 653.45) AND AS SPECIFIED IN THE CONTRACT.

PROJECT NAME: STOWE
 PROJECT NUMBER: BO 1446(37) - BO 1446(39)

FILE NAME: sl2j660erodetails.dgn
 PROJECT LEADER: C. BURRALL
 DESIGNED BY: C. BURRALL
 EPSC DETAILS

PLOT DATE: 7-FEB-2024
 DRAWN BY: C. BURRALL
 CHECKED BY: M. LONGSTREET
 SHEET 4 OF 84

STATE OF VERMONT AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT BRIDGE PROJECT

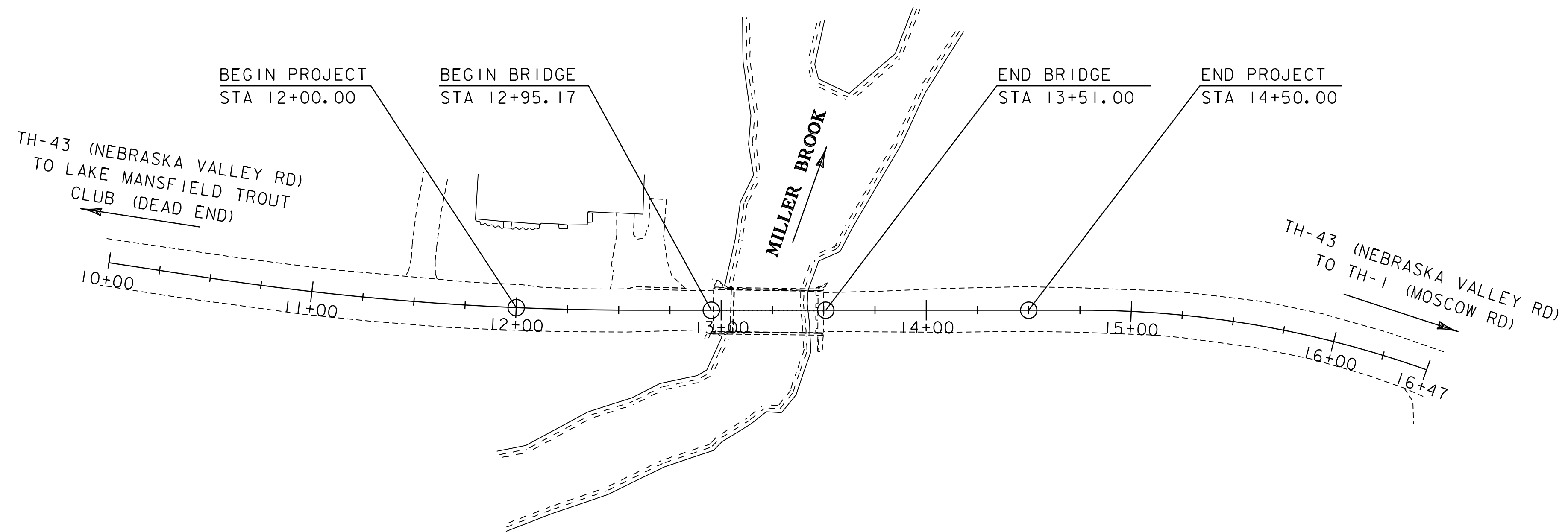
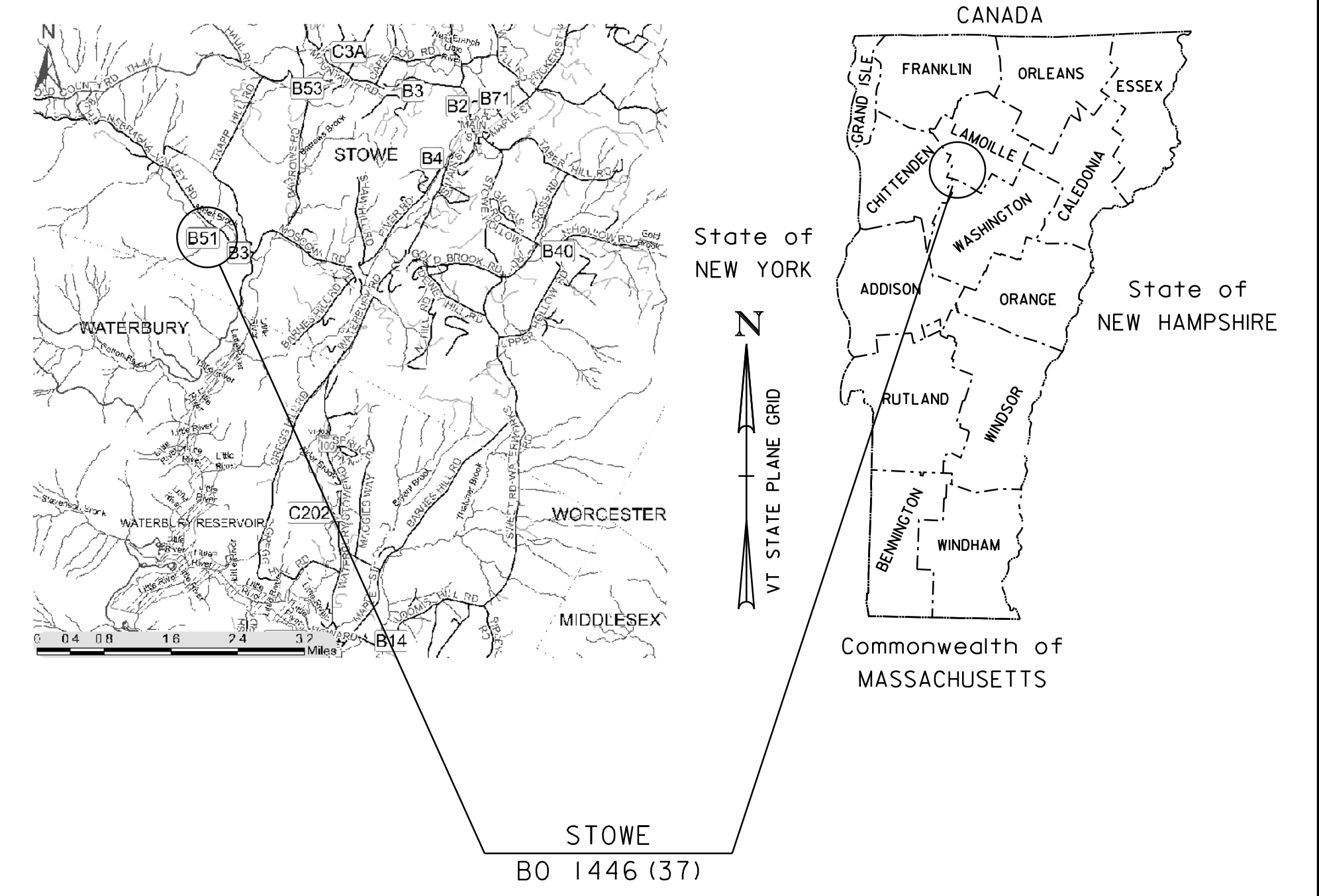
TOWN OF STOWE
COUNTY OF LAMOILLE

ROUTE NO : TOWN HIGHWAY 43 (CLASS 3 TOWN HIGHWAY) BRIDGE NO : 5 I

PROJECT LOCATION : ON TH 43 (NEBRASKA VALLEY ROAD) IN STOWE APPROXIMATELY .5 MILES NORTHWEST FROM ITS INTERSECTION WITH TH 1 (MOSCOW ROAD) AND EXTENDING EASTERLY .047 MILES.

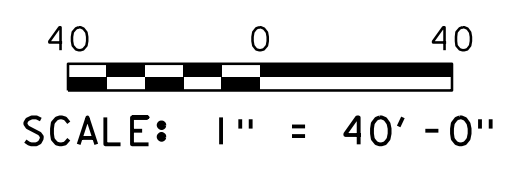
PROJECT DESCRIPTION : REPLACEMENT OF THE EXISTING BRIDGE ON ALIGNMENT INCLUDING APPROACH ROADWAY AND CHANNEL WORK RELATIVE TO PROJECT CONSTRUCTION.

LENGTH OF STRUCTURE : 55.83 FEET.
LENGTH OF ROADWAY : 194.17 FEET.
LENGTH OF PROJECT : 250.00 FEET.



CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2018, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON APRIL 13, 2018 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

QUALITY ASSURANCE PROGRAM : LEVEL 2	
SURVEYED BY :	R. GILMAN
SURVEYED DATE :	9/21/2009
DATUM	
VERTICAL	NAVD88
HORIZONTAL	NAD83 (96)



HIGHWAY DIVISION, CHIEF ENGINEER	
APPROVED _____	DATE _____
PROJECT MANAGER : CORY BURRALL, P.E.	
PROJECT NAME : STOWE	
PROJECT NUMBER : BO 1446 (37)	
SHEET 5 OF 84 SHEETS	

SEE INDEX OF SHEETS FOR STOWE 37 INDEX

FINAL HYDRAULIC REPORT

HYDROLOGIC DATA Date: 3/24/20

DRAINAGE AREA : 12.9 sq. mi.
 CHARACTER OF TERRAIN : Mountainous to Hilly
 STREAM CHARACTERISTICS : Low sinuosity with narrow floodplains
 NATURE OF STREAMBED : Cobbles with sandy-gravel substrate

PEAK FLOW DATA - ANNUAL EXCEEDANCE PROBABILITY (AEP)

43% =	720 cfs	2% =	2,100 cfs
10% =	1,300 cfs	1% =	2,600 cfs
4% =	1,800 cfs	0.2% =	3,700 cfs

DATE OF FLOOD OF RECORD : Unknown
 ESTIMATED DISCHARGE : Unknown
 WATER SURFACE ELEV. : Unknown
 NATURAL STREAM VELOCITY : @ 4% AEP = 11 fps
 ICE CONDITIONS : Unknown
 DEBRIS : Moderate
 DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? : Unknown
 IS ORDINARY RISE RAPID? : Unknown
 IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? : N/A
 IF YES, DESCRIBE :

WATERSHED STORAGE: 1% HEADWATERS: X
 UNIFORM: _____
 IMMEDIATELY ABOVE SITE: _____

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE: Rolled Beam Bridge
 YEAR BUILT: 1948
 CLEAR SPAN(NORMAL TO STREAM): 42.2 ft
 VERTICAL CLEARANCE ABOVE STREAMBED: 11.0 ft
 WATERWAY OF FULL OPENING: 355.8 sq. ft +/-
 DISPOSITION OF STRUCTURE: Replacement
 TYPE OF MATERIAL UNDER SUBSTRUCTURE: Gravel with ledge outcrops

WATER SURFACE ELEVATIONS AT:

43% AEP =	649.0 ft	VELOCITY =	10.2 fps
10% AEP =	650.2 ft	"	13.7 fps
4% AEP =	651.1 ft	"	15.5 fps
2% AEP =	651.8 ft	"	16.7 fps
1% AEP =	652.6 ft	"	18.0 fps

LONG TERM STREAMBED CHANGES: Unknown

IS THE ROADWAY OVERTOPPED BELOW 1% AEP: No
 FREQUENCY: N/A
 RELIEF ELEVATION: N/A
 DISCHARGE OVER ROAD @ 1% AEP: N/A

UPSTREAM STRUCTURE

TOWN: Stowe DISTANCE: 1.2 mi.
 HIGHWAY #: TH-43 STRUCTURE #: 48
 CLEAR SPAN: 43.0 ft CLEAR HEIGHT: Unknown
 YEAR BUILT: 1925 FULL WATERWAY: Unknown
 STRUCTURE TYPE: Rolled I Beam

DOWNSTREAM STRUCTURE

TOWN: Stowe DISTANCE: 3,400 ft.
 HIGHWAY #: TH-43 STRUCTURE #: 3
 CLEAR SPAN: 75.0 ft CLEAR HEIGHT: Unknown
 YEAR BUILT: 2010 FULL WATERWAY: Unknown
 STRUCTURE TYPE: Prestress Concrete Box Beam

LRFR LOAD RATING FACTORS

LOADING LEVELS	TRUCK						
	H-20	HL-93	3S2	6 AXLE	3A STR.	4A STR.	5A SEM
TONNAGE	20	36	36	66	30	34.5	38
INVENTORY	2.63	1.46					
POSTING							
OPERATING	3.42	1.9	3.2	1.89	2.47	2.23	2.6
COMMENTS:							

PROPOSED STRUCTURE

STRUCTURE TYPE: Semi Integral Abutment

CLEAR SPAN(NORMAL TO STREAM): 48.5 ft
 VERTICAL CLEARANCE ABOVE STREAMBED: 10.8 ft
 WATERWAY OF FULL OPENING: 423.0 sq. ft.

WATER SURFACE ELEVATIONS AT:

43% AEP =	649.0 ft	VELOCITY=	10.3 fps
10% AEP =	650.2 ft	"	13.7 fps
4% AEP =	651.1 ft	"	15.3 fps
2% AEP =	651.7 ft	"	16.6 fps
1% AEP =	652.5 ft	"	17.9 fps

IS THE ROADWAY OVERTOPPED BELOW 1% AEP: No
 FREQUENCY: N/A
 RELIEF ELEVATION: N/A
 DISCHARGE OVER ROAD @ 1% AEP: N/A

BRIDGE LOW CHORD ELEVATION: 654.96 ft
 FREEBOARD: @ 4% AEP = 3.84 ft

SCOUR: Minimum 6.0 ft per Hydraulics Manual

REQUIRED CHANNEL PROTECTION: Stone Fill Type IV for channel banks*

PERMIT INFORMATION

AVERAGE DAILY FLOW: - DEPTH OR ELEVATION:
 ORDINARY LOW WATER: -
 ORDINARY HIGH WATER: -

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: Bridge type to be determined by contractor
 CLEAR SPAN (NORMAL TO STREAM): 85.0 ft +/- **
 VERTICAL CLEARANCE ABOVE STREAMBED: 9.1 ft +/-***
 WATERWAY AREA OF FULL OPENING: 408 sq. ft. **

ADDITIONAL INFORMATION

*E-Stone, Type IV should be used for all in channel work
 **Dimension is based on available plan information. Constructed conditions may vary.
 ***Contractor to provide a minimum low chord elevation of 653.5 ft.

- TRAFFIC MAINTENANCE NOTES**
1. MAINTAIN ONE-WAY TRAFFIC ON A TEMPORARY BRIDGE.
 2. INSTALL AND MAINTAIN TRAFFIC SIGNALS.
 3. SIDEWALKS ARE NOT NECESSARY
 4. THE APPROACHES FOR THE TEMPORARY BRIDGE SHALL BE PAVED.

DESIGN VALUES

1. DESIGN LIVE LOAD	HL-93
2. FUTURE PAVEMENT	d _p : 2.5 INCH
3. DESIGN SPAN	L: 54.00 FT
4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS)	Δ: ---
5. PRESTRESSING STRAND	f _y : ---
6. PRESTRESSED CONCRETE STRENGTH	f' _c : ---
7. PRESTRESSED CONCRETE RELEASE STRENGTH	f' _{cr} : ---
8. HIGH PERFORMANCE CONCRETE, CLASS PCD	f' _c : 4.0 KSI
9. HIGH PERFORMANCE CONCRETE, CLASS PCS	f' _c : 3.5 KSI
10. CONCRETE HIGH PERFORMANCE, CLASS SCC	f' _c : 4.0 KSI
11. CONCRETE, CLASS C	f' _c : 3.0 KSI
12. REINFORCING STEEL	f _y : 60 KSI
13. STRUCTURAL STEEL AASHTO M270 (GALVANIZED)	f _y : 50 KSI
14. NOMINAL BEARING RESISTANCE OF SOIL	q _n : ---
15. SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	φ: ---
16. NOMINAL BEARING RESISTANCE OF ROCK	q _n : 67.0 KSF
17. ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	φ: 0.45

18. PILE RESISTANCE FACTOR φ: ---
19. LATERAL PILE DEFLECTION Δ: ---
20. BASIC WIND SPEED V_{3s}: ---
21. MINIMUM GROUND SNOW LOAD p_g: ---
22. SEISMIC DATA PGA: --- S_s: --- S₁: ---
23. ---
24. ---
25. ---
26. ---

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2024	400	60	54	1.5	35
2044	440	70	54	2	50

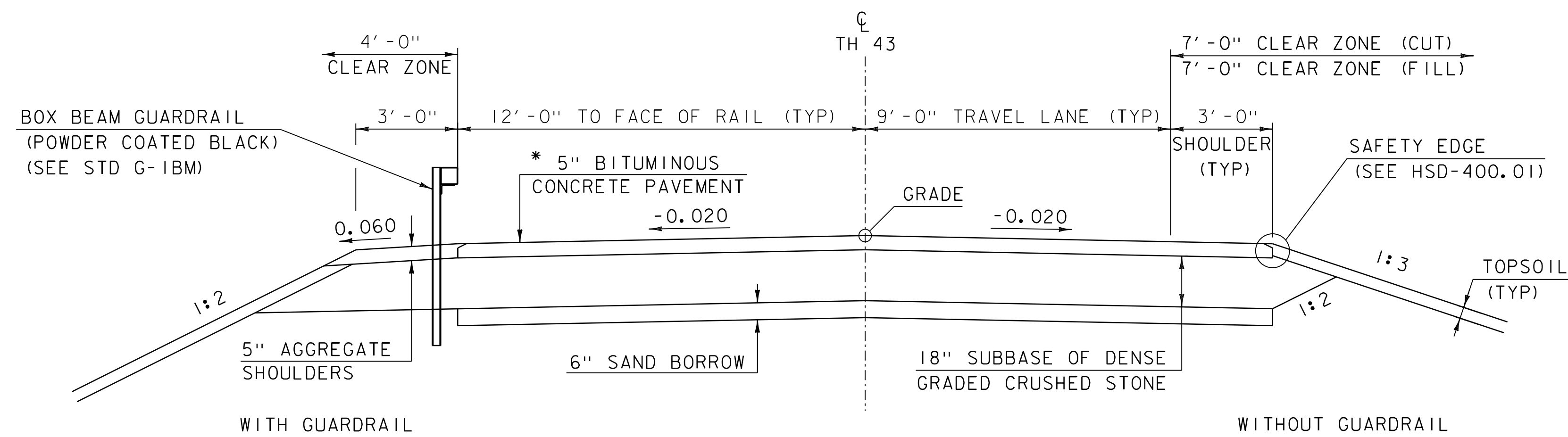
20 year ESAL for flexible pavement from 2024 to 2044 : 76000
 40 year ESAL for flexible pavement from 2024 to 2064 : 160000
 Design Speed: 35 mph

AS BUILT "REBAR" DETAIL

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

PROJECT NAME: STOWE
 PROJECT NUMBER: BO 1446(37)

FILE NAME: sl2j660p1.dgn PLOT DATE: 7-FEB-2024
 PROJECT LEADER: C. BURRALL DRAWN BY: R. PELLET
 DESIGNED BY: C. BURRALL CHECKED BY: M. LONGSTREET
 PRELIMINARY INFORMATION SHEET SHEET 6 OF 84



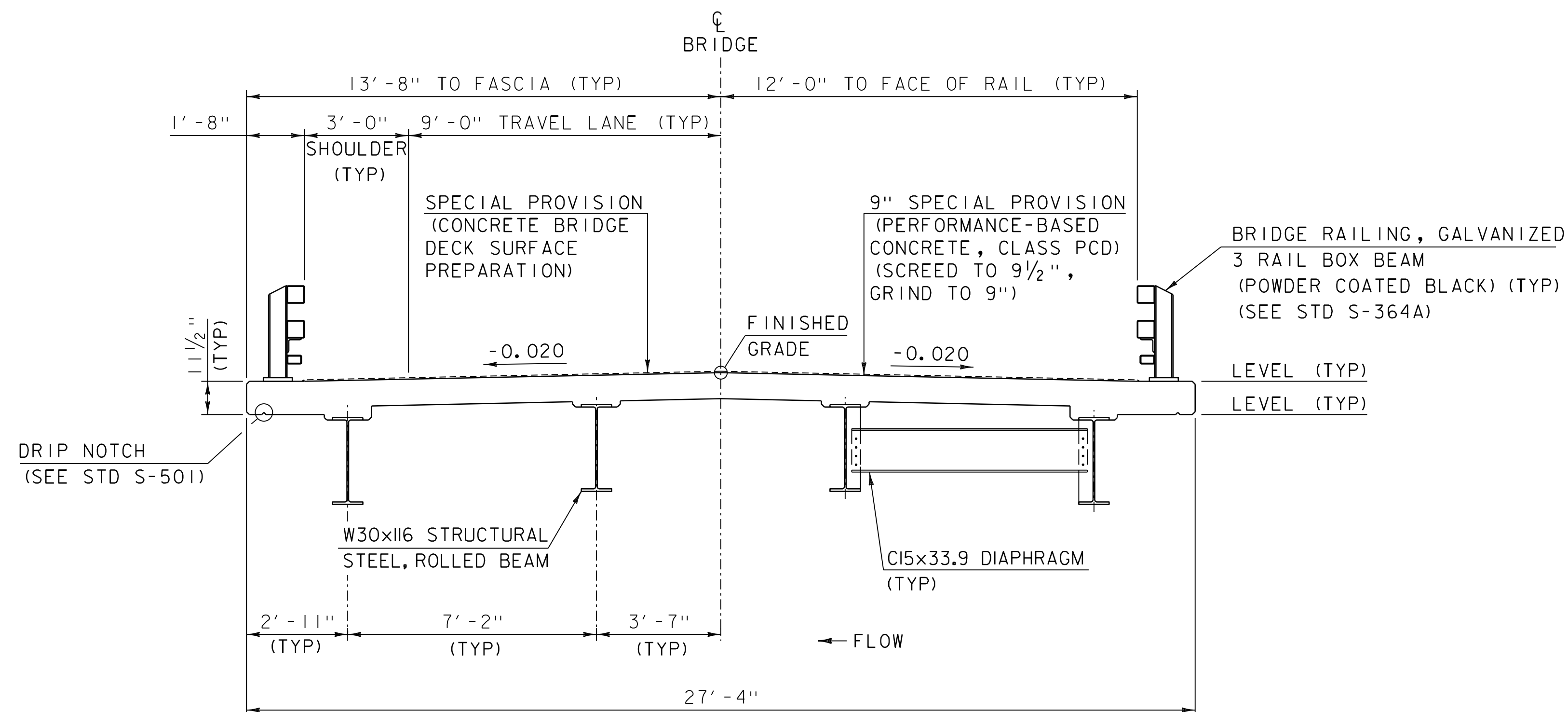
TH 43 (NEBRASKA VALLEY RD) ROADWAY TYPICAL SECTION

SCALE 3/8" = 1'-0"

* 1 1/2" BCP, TYPE IVS OVER
 1 1/2" BCP, TYPE IVS OVER
 2" BCP, TYPE 111S

BITUMINOUS CONCRETE PAVEMENT MATERIAL REQUIREMENTS

DESIGN LANE/DESIGN LIFE ESALS	41,040
PERFORMANCE GRADE ASPHALT BINDER	70-28
DESIGN NUMBER OF GYRATIONS	50



BRIDGE TYPICAL SECTION

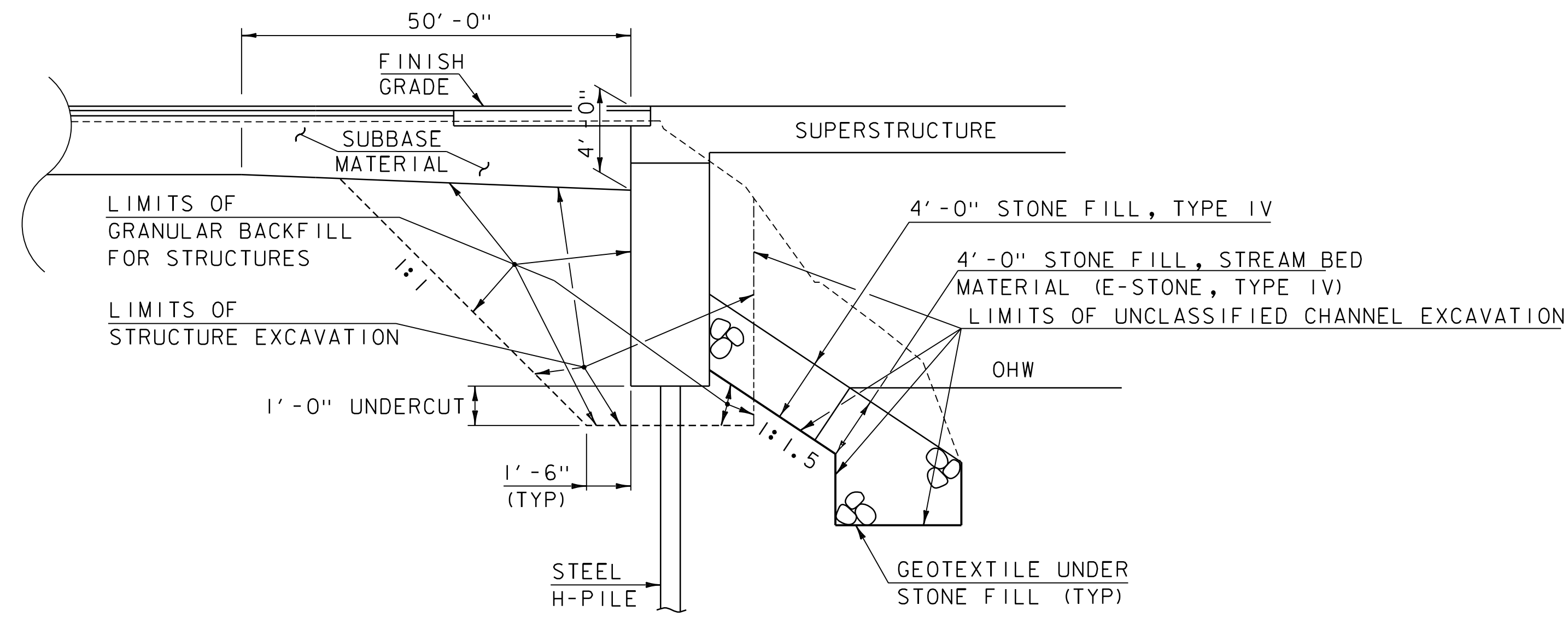
SCALE 3/8" = 1'-0"

MATERIAL TOLERANCES
 (IF USED ON PROJECT)

SURFACE	
- PAVEMENT (TOTAL THICKNESS)	+/- 1/4"
- AGGREGATE SURFACE COURSE	+/- 1/2"
SUBBASE	+/- 1"
SAND BORROW	+/- 1"

EMULSION SHALL BE APPLIED PER THE APPLICATION RATES IN TABLE 406.12A OF THE STANDARD SPECIFICATIONS.

PROJECT NAME:	STOWE	PLOT DATE:	7-FEB-2024
PROJECT NUMBER:	BO 1446(37)	DRAWN BY:	M. LONGSTREET
FILE NAME:	sl2j660typ.dgn	DESIGNED BY:	C. BURRALL
PROJECT LEADER:	C. BURRALL	CHECKED BY:	C. BURRALL
TYPICAL SECTIONS 1		SHEET	7 OF 84

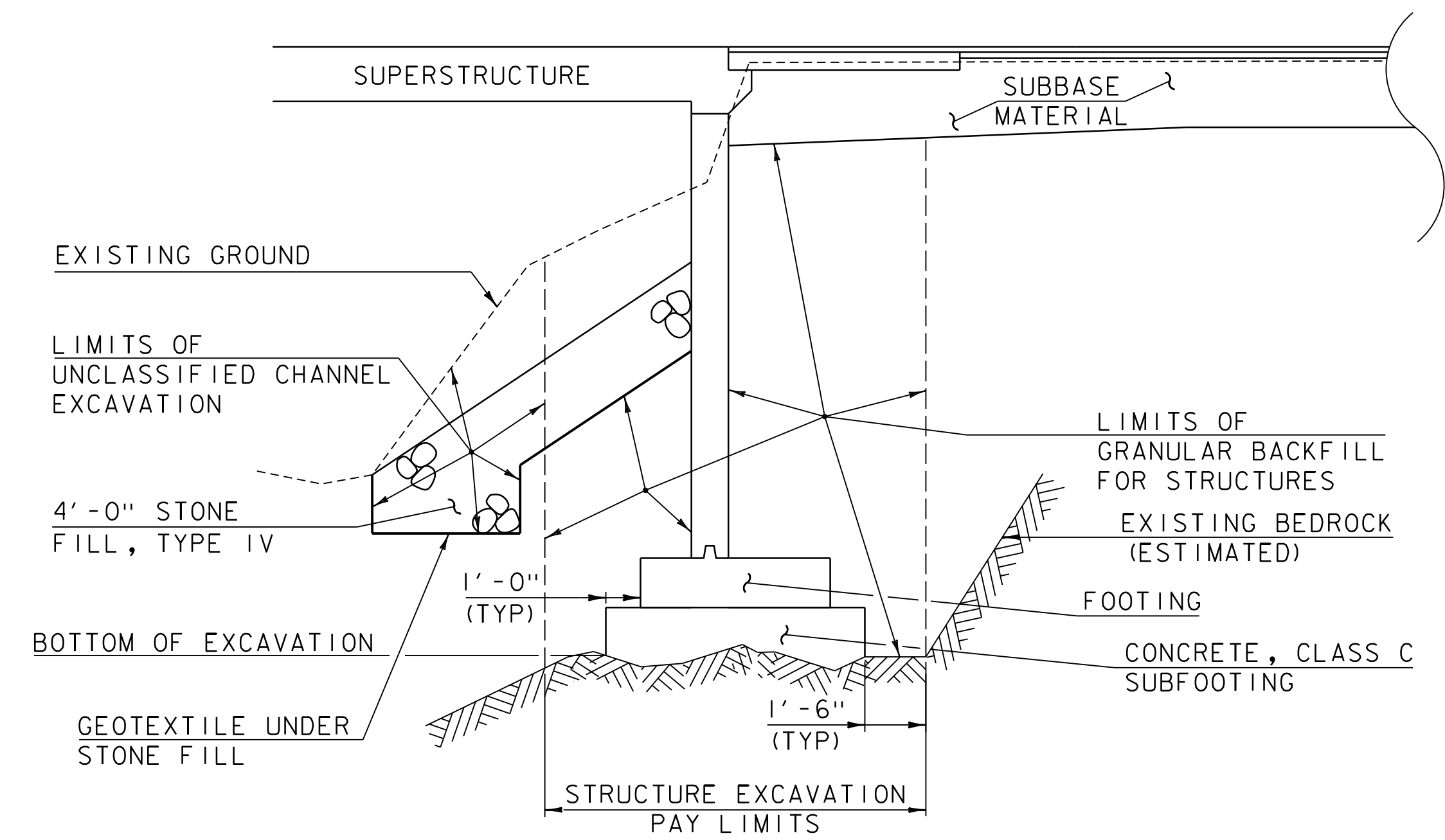


ABUTMENT #1 EARTHWORK TYPICAL SECTION

(NOT TO SCALE)

NOTES

1. STONE FILL SHOULD BE PLACED OVER THE GEOTEXTILE BY METHODS THAT DO NOT STRETCH, TEAR, PUNCTURE, OR REPOSITION THE FABRIC.

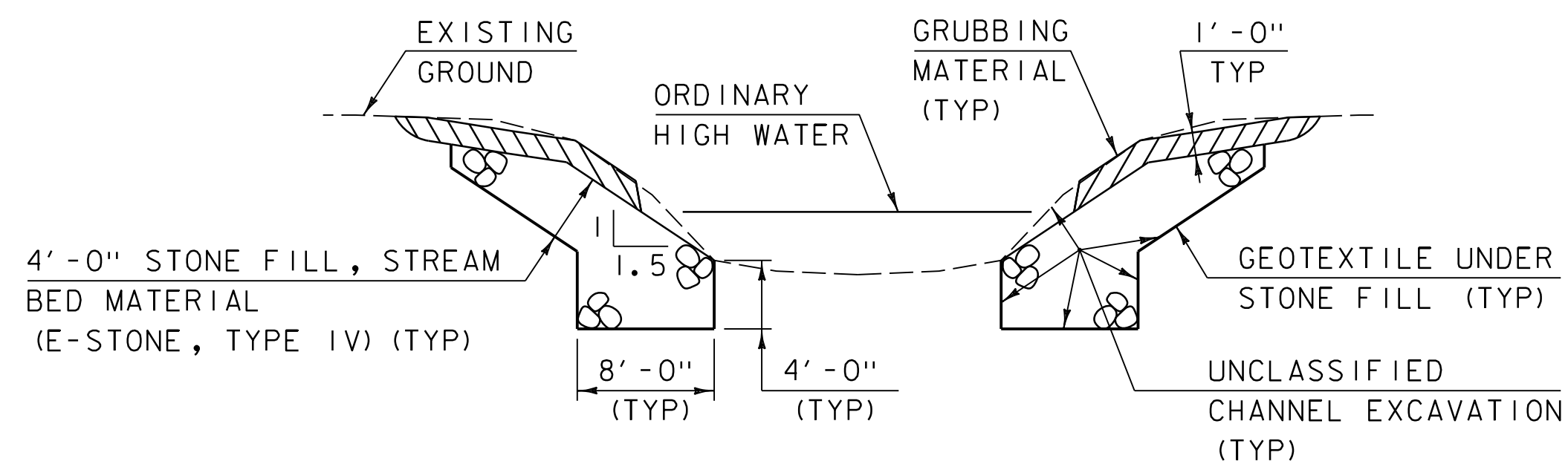


ABUTMENT #2 EARTHWORK TYPICAL SECTION

(NOT TO SCALE)

NOTES

1. STONE FILL SHOULD BE PLACED OVER THE GEOTEXTILE BY METHODS THAT DO NOT STRETCH, TEAR, PUNCTURE, OR REPOSITION THE FABRIC.
2. STONE FILL SHALL BE OMITTED IN AREAS WHERE EXPOSED BEDROCK IS ENCOUNTERED IN THE FINAL CONSTRUCTION CONDITION
3. BEDROCK SHOWN IS NOT REPRESENTATIVE OF ACTUAL CONDITIONS AND MAY VARY FROM WHAT IS SHOWN. THE LOCATION OF BEDROCK SHOWN IS SUBJECT TO THE LIMITATIONS OF THE METHODS USED TO INVESTIGATE SUBSURFACE DONTIONS. CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING ACTUAL ELEVATIONS.



CHANNEL TYPICAL SECTION

(NOT TO SCALE)

NOTES

1. E-STONE MAY BE USED IN PLACE OF STONE FILL BUT SHALL AT A MINIMUM BE USED BELOW OHW.
2. STONE FILL SHOULD BE PLACED OVER THE GEOTEXTILE BY METHODS THAT DO NOT STRETCH, TEAR, PUNCTURE, OR REPOSITION THE FABRIC.
3. WHENEVER CHANNEL SLOPE INTERSECTS ROADWAY SUBBASE, GRUBBING MATERIAL SHALL BEGIN AT THE BOTTOM OF SUBBASE.
4. GRUBBING MATERIAL SHALL BE PLACED UNDERNEATH STRUCTURES WHERE THERE IS MORE THAN 6 FEET VERTICALLY FROM ORDINARY HIGH WATER (OHW) TO THE BOTTOM OF SUPERSTRUCTURE AND MORE THAN 6 FEET HORIZONTALLY FROM OHW LINE TO FRONT FACE OF ABUTMENT. THIS MATERIAL SHALL START JUST ABOVE THE OHW ELEVATION AND TERMINATE 3 FEET HORIZONTALLY FROM THE FRONT FACE OF THE ABUTMENT. THIS MATERIAL SHALL NOT BE PLACED IN AREAS THAT WILL SEE CONCENTRATED FLOWS RESULTING FROM SURFACE WATER RUNOFF. GRUBBING MATERIAL MAY BE OMITTED IF LESS THAN 3 FEET IN WIDTH BENEATH A STRUCTURE. SEE CHANNEL SECTIONS FOR ADDITIONAL DETAILING.
5. STONE FILL SHALL BE OMITTED IN AREAS WHERE EXPOSED BEDROCK IS ENCOUNTERED IN THE FINAL CONSTRUCTION CONDITION

PROJECT NAME: STOWE	
PROJECT NUMBER: BO 1446(37)	
FILE NAME: sl2j660typ.dgn	PLOT DATE: 7-FEB-2024
PROJECT LEADER: C. BURRALL	DRAWN BY: M. LONGSTREET
DESIGNED BY: C. BURRALL	CHECKED BY: C. BURRALL
TYPICAL SECTIONS 2	SHEET 8 OF 84

GENERAL

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION 2018, AND ITS LATEST REVISIONS, AND THE AASHTO LRFD BRIDGE DESIGN SPECIFICATION, DATED 2020, AND ITS LATEST REVISIONS.
2. THE CONTRACTOR SHALL PROVIDE A SITE-SPECIFIC EROSION PREVENTION AND SEDIMENT CONTROL PLAN IN ACCORDANCE WITH SECTION 653 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION. ESTIMATED QUANTITIES FOR EPSC WORK HAVE BEEN INCLUDED IN THE CONTRACT FOR BIDDING PURPOSES. IF THE CONTRACTOR'S EPSC PLAN REQUIRES ITEMS OF WORK THAT ARE NOT INCLUDED IN THE PLANS IT SHALL BE PAID FOR AS PART OF ITEM 653.03, "MAINTENANCE OF EPSC PLAN."
3. THE AREA(S) OF DISTURBANCE ARE SHOWN ON THE ENVIRONMENTAL IMPACT PLANS, WHICH ARE REFERENCED IN THE SPECIAL PROVISIONS, NOTICE TO BIDDER - OTHER SPECIFICATIONS AND CONTRACT REQUIREMENTS.

EARTHWORK AND RELATED ITEMS

4. THE REMOVAL OF THE EXISTING STRUCTURE WILL BE PAID UNDER ITEM 529.15, "REMOVAL OF STRUCTURE". THIS WORK INCLUDES REMOVAL OF THE ENTIRE SUPERSTRUCTURE, SUBSTRUCTURE, AND ALL PARTS OF THE EXISTING STRUCTURE THAT MAY FALL OUTSIDE THE LIMITS OF STRUCTURE EXCAVATION AND UNCLASSIFIED CHANNEL EXCAVATION.
5. REMOVAL OF MATERIAL AND BEDROCK NECESSARY FOR THE INSTALLATION OF THE ABUTMENT, ABUTMENT FOOTINGS, WINGWALLS, AND WINGWALL FOOTINGS OUTSIDE THE LIMITS OF ITEM 529.15, "REMOVAL OF STRUCTURE" WILL BE PAID FOR UNDER ITEM 204.25, "STRUCTURE EXCAVATION".
6. BACKFILL BEHIND THE ABUTMENTS SHALL BE LIMITED TO 2 FEET BELOW THE BRIDGE SEATS UNTIL THE STRUCTURAL STEEL IS SET. BACKFILL BEHIND THE ABUTMENTS SHALL NOT BE PLACED HIGHER THAN THE BRIDGE SEATS UNTIL THE ABUTMENTS AND DECK CONSTRUCTION ARE COMPLETED.
7. THE STONE FILL UNDER THE BRIDGE AS SHOWN IN THE PLANS SHALL BE PLACED BEFORE THE NEW SUPERSTRUCTURE IS SET.

CONCRETE

8. ALL CONCRETE FOR THE BRIDGE DECK, BACKWALLS, AND WINGWALL 1 AND 2 ABOVE THE BRIDGE SEAT SHALL BE PAID FOR UNDER ITEM 900.608, "SPECIAL PROVISION (PERFORMANCE-BASED CONCRETE, CLASS PCD)".
9. CONCRETE BELOW THE BRIDGE THE BRIDGE SEAT, WINGWALLS 3 AND 4, FOOTINGS, AND APPROACH SLABS SHALL BE PAID FOR UNDER ITEM 900.608, "SPECIAL PROVISION (PERFORMANCE-BASED CONCRETE, CLASS PCS)".
10. THE DECK IS TO BE PLACED IN ONE CONTINUOUS POUR WITH A MAXIMUM DURATION OF EIGHT HOURS. IF THE DECK PLACEMENT CANNOT BE COMPLETED, DUE TO UNEXPECTED CIRCUMSTANCES, A CONSTRUCTION JOINT SHALL BE USED. A MINIMUM 96 HOUR DELAY BETWEEN THE COMPLETION OF ONE DAY'S PLACEMENT AND THE BEGINNING OF ANY OTHER ADJACENT SEGMENT SHALL BE OBSERVED.
11. AFTER THE DECK HAS CURED, THE BRIDGE DECK SURFACE BETWEEN THE FACE OF RAIL SHALL BE DIAMOND GROUND A NOMINAL 0.5 INCHES. PAYMENT WILL BE MADE UNDER ITEM 900.670, "SPECIAL PROVISION (CONCRETE BRIDGE DECK SURFACE PREPARATION)".
12. WATER REPELLENT, SILANE, SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES, EXCEPT THE UNDERSIDE OF THE DECK BETWEEN DRIP NOTCHES.
13. A BRIDGE PLAQUE FURNISHED BY THE AGENCY SHALL BE CAST INTO WINGWALL #2. SEE STANDARD S-501 FOR FURTHER DETAILS.
14. CHAMFER ALL EXPOSED EDGES OF CONCRETE 1" BY 1" UNLESS OTHERWISE NOTED.

REINFORCING STEEL

15. ALL REINFORCING STEEL FOR THE BRIDGE DECK, BACKWALLS, WINGWALLS 1 AND 2 ABOVE THE BRIDGE SEAT, AND APPROACH SLABS SHALL BE PAID FOR UNDER ITEM 506.11, "REINFORCING STEEL, LEVEL 1 (EPOXY)" AND MARKED WITH AN "E" IN THEIR PREFIX
16. ALL REINFORCING STEEL FOR THE SUBSTRUCTURE BELOW THE BRIDGE SEAT, WINGWALLS 3 AND 4, FOOTINGS, AND SUBFOOTINGS SHALL BE PAID FOR UNDER ITEM 506.11, "REINFORCING STEEL, LEVEL 1 (BLACK)".
17. UNLESS OTHERWISE NOTED, MINIMUM CLEAR COVER SHALL BE AS FOLLOWS:
 - ALONG TOP SURFACE OF SUPERSTRUCTURE: 3 INCHES
 - ALONG BOTTOM SURFACE OF SUPERSTRUCTURE: 1 ½ INCHES
 - ALONG BACK FACES OF WALLS AGAINST EARTH: 2 INCHES
 - ELSEWHERE UNLESS OTHERWISE INDICATED: 3 INCHES
18. TEST BARS SHALL BE PROVIDED IN ACCORDANCE WITH THE "VERMONT AGENCY OF TRANSPORTATION MATERIAL SAMPLING MANUAL" AVAILABLE ON THE AGENCY WEBSITE.

STRUCTURAL STEEL

19. ALL NEW STRUCTURAL STEEL SHALL CONFORM TO AASHTO M 270 GRADE 50 AND SHALL BE GALVANIZED AFTER FABRICATION UNLESS NOTED OTHERWISE. ALL STRUCTURAL STEEL SHALL BE PAID FOR UNDER ITEM 506.50, "STRUCTURAL STEEL, ROLLED BEAM (GALVANIZED)".
20. STRUCTURAL STEEL MEMBERS DESIGNATED "CVN" IN THE PLANS SHALL BE CHARPY V-NOTCH TESTED IN ACCORDANCE WITH SUBSECTION 714.01.
21. FLEMING BRACKETS OR SIMILAR FALSEWORK SHALL BE SPACED AS REQUIRED BY DESIGN, BUT SHALL BE LIMITED TO A MAXIMUM SPACING OF 4 FEET. BRACKETS SHALL EXTEND AS NEAR AS POSSIBLE TO THE BOTTOM FLANGE AND SHALL BE A MINIMUM OF AT LEAST 75% OF WEB DEPTH. THE DESIGN OF FALSEWORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
22. BEARING STIFFENERS SHALL BE PLUMB UNDER FULL DEAD LOAD OF THE STRUCTURE. INTERMEDIATE CONNECTION PLATES MAY BE EITHER ALL PLUMB OR NORMAL TO THE TOP FLANGE.
23. UNLESS OTHERWISE NOTED, ALL BOLTS SHALL BE 7/8" DIA ASTM A325 TYPE 1 AND MEET THE REQUIREMENTS OF SUBSECTION 714.05. HOLE DIAMETERS SHALL BE 15/16". ANY CONNECTIONS THAT ARE NOT DETAILED ON THE PLANS SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE VTRANS PROJECT MANAGER FOR APPROVAL.
24. AFTER SUPERSTRUCTURE STEEL HAS BEEN ERECTED, LOWER PORTIONS OF THE ABUTMENTS AND WINGWALLS CAST AND CURED, AND BEFORE ANY FORMWORK OR OTHER LOADS ARE ADDED TO THE BEAMS, ELEVATIONS ALONG THE TOP OF THE BEAM FLANGES SHALL BE TAKEN AS DIRECTED BY THE ENGINEER FOR USE IN DETERMINING DECK FORMWORK ELEVATIONS.

PILE FOUNDATIONS

25. ALL PILES SHALL BE DRIVEN TO A NOMINAL PILE DRIVING RESISTANCE OF XXX KIPS AND HAVE A MINIMUM EMBEDMENT DEPTH OF 13 FEET BELOW THE BOTTOM OF THE PILE CAP. ANY WORK REQUIRED FOR DRIVING SHALL BE PAID FOR UNDER ITEM 504.10, "FURNISHING EQUIPMENT FOR DRIVING PILING".
26. FOR ESTIMATING PURPOSES, THE PILE TIP ELEVATIONS ARE ASSUMED TO BE AS SHOWN ON THE BORING LOGS. THE ACTUAL IN-PLACE LENGTH MAY VARY.
27. REINFORCED DRIVING TIPS SHALL BE REQUIRED AND SHALL CONFORM TO SUBSECTION 505.04(f) OF THE STANDARD SPECIFICATIONS.
28. A MINIMUM OF TWO DYNAMIC PILE TESTS IS REQUIRED DURING PILE INSTALLATION. PAYMENT WILL BE MADE UNDER ITEM 505.45, "DYNAMIC PILE LOADING TEST".

SUBSTRUCTURES ON BEDROCK

29. THE LOCATION OF BEDROCK SHOWN IN THE PLANS IS SUBJECT TO THE LIMITATIONS OF THE METHODS USED TO INVESTIGATE SUBSURFACE CONDITIONS. CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING ACTUAL ELEVATIONS.
30. UPON COMPLETION OF EXCAVATION FOR SUBSTRUCTURES FOUNDED ON BEDROCK AND PRIOR TO PLACING FORMWORK, THE CONTRACTOR SHALL NOTIFY THE ENGINEER THAT THEY INTEND TO BEGIN FORMING FOR FOUNDATIONS. THE ENGINEER WILL NOTIFY THE PROJECT MANAGER AND THE VTRANS STATE GEOLOGIST. THE GEOLOGIST WILL DETERMINE IF THE BEDROCK IS COMPETENT TO OBTAIN THE REQUIRED NOMINAL BEARING RESISTANCE. THE CONTRACTOR SHALL NOTIFY THE ENGINEER 72 HOURS PRIOR TO WHEN THE ANALYSIS WILL BE NEEDED. THE CONTRACTOR IS INFORMED THAT EXCAVATION LIMITS WILL NOT BE CONSIDERED FINAL UNTIL THE ENGINEER AND STATE GEOLOGIST DETERMINE THAT BEDROCK IS SOUND.
31. AFTER BEDROCK HAS BEEN EXPOSED AND DETERMINED COMPETENT BY GEOLOGIST, IF ELEVATIONS VARY FROM THE ELEVATIONS SHOWN IN THE PLANS, ADJUSTMENTS TO THE FOOTING ELEVATIONS MAY BE DESIRABLE TO MINIMIZE BEDROCK REMOVAL AND/OR REDUCE SUBFOOTING CONCRETE QUANTITIES. IF THE ACTUAL SITE CONDITIONS ENCOUNTERED REQUIRE LOWERING THE TOP OF FOOTING ELEVATION BY 2-FT OR MORE, CONTACT THE PROJECT MANAGER IMMEDIATELY TO INQUIRE ABOUT REDESIGN OF THE FOUNDATION. THE CONTRACTOR SHOULD EXPECT THAT A DESIGN CHANGE MAY TAKE UP TO 5 BUSINESS DAYS TO PROCESS AND PLAN CONSTRUCTION ACTIVITIES ACCORDINGLY.
32. ABUTMENT 2, WINGWALL 3, AND WINGWALL 4 HAVE BEEN DESIGNED FOR THE TOP OF FOOTING ELEVATIONS SHOWN ON THE PLANS. BEDROCK SHALL BE EXCAVATED DOWN TO THE INDICATED BOTTOM OF FOOTING FOR THE FULL WIDTH OF THE FOOTING CONFIGURATION. IF THE BEDROCK ELEVATION IS GREATER THAN 1'-0" BELOW THE DESIGN BOTTOM OF FOOTING, A SUBFOOTING SHALL BE POURED SO THAT THE DESIGN TOP OF FOOTING IS AT THE REQUIRED ELEVATION. SUBFOOTING CONCRETE SHALL BE PAID UNDER ITEM 541.30, "CONCRETE, CLASS C."
33. THE LIMITS OF THE SUBFOOTING (IF REQUIRED) FOR ABUTMENT 2, WINGWALL 3, OR WINGWALL 4 SHALL BE 1'-0" OUTSIDE THE LIMITS OF THE FOOTING, OR AS DIRECTED BY THE RESIDENT ENGINEER, AND BE A MINIMUM OF 6" THICK.
34. ANY EXPOSED SUBFOOTING FACES EXCEEDING 5 FEET IN HEIGHT SHALL BE REINFORCED WITH #5 REINFORCING STEEL BARS SPACED AT 12 INCHES EACH WAY. AN ESTIMATED QUANTITY FOR THESE BARS HAS BEEN INCLUDED IN ITEM 507.11, "REINFORCING STEEL, LEVEL 1 (BLACK)".
35. ALL OVERBREAKAGE BEYOND ALLOWANCE SPECIFIED IN 204.06(B)(1) SHALL BE REPLACED WITH COMPETENT CONCRETE AT THE CONTRACTOR'S EXPENSE. ALL OVERBREAK SHALL BE REPLACED WITH ITEM 541.30, "CONCRETE, CLASS C".

36. DOWELS SHALL BE DRILED AND GROUTED INTO BEDROCK AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THE DOWELS SHALL HAVE A 2'-0" MINIMUM EMBEDMENT INTO THE BEDROCK AND EXTEND INTO THE FOOTING A MINIMUM OF 1'-6". PAYMENT FOR THE DOWELS WILL BE PAID FOR UNDER ITEM 507.11 "REINFORCING STEEL, LEVEL 1 (BLACK)" AND PAYMENT FOR DRILLING AND GROUTING WILL BE PAID FOR UNDER ITEM 507.16, "DRILLING AND GROUTING DOWELS".

TRAFFIC CONTROL

37. DURING CONSTRUCTION TRAFFIC WILL BE MAINTAINED ON A ONE-WAY TEMPORARY BRIDGE LOCATED UPSTREAM OF THE NEW STRUCTURE. THE TEMPORARY BRIDGE AND DETOUR SHALL BE PAVED. CONSTRUCTION AND MAINTENANCE OF THE TEMPORARY BRIDGE AND ITS APPROACHES SHALL BE PAID FOR UNDER ITEM 528.10, "ONE-WAY TEMPORARY BRIDGE". TEMPORARY BRIDGE SHALL HAVE A MINIMUM CLEAR WIDTH BETWEEN FACES OF RAILING OF 14'-6".
38. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN, SUBMITTAL, AND IMPLEMENTATION OF A SITE-SPECIFIC TRAFFIC CONTROL PLAN. THE SITE-SPECIFIC TRAFFIC CONTROL PLAN SHALL BE DESIGNED IN ACCORDANCE WITH SECTION 641. ALL COSTS OF DESIGNING, SUBMITTING, AND IMPLEMENTING THE SITE-SPECIFIC TRAFFIC CONTROL PLAN WILL BE INCLUDED IN THE PAYMENT OF ITEM 641.11, "TRAFFIC CONTROL, ALL-INCLUSIVE".
39. THE CHMURA PROPERTY'S NORTHERLY ACCESS SHALL BE MAINTAINED AT ALL TIMES.
40. TEMPORARY TRAFFIC BARRIER SHALL MEET THE REQUIREMENTS OF 621.07. PAYMENT FOR FURNISHING, MAINTAINING, INSTALLATION, REMOVAL, AND RESETTING WILL BE INCLUDED UNDER ITEM 641.11, "TRAFFIC CONTROL, ALL-INCLUSIVE."
41. ANY REMOVAL, COVERING AND/ OR RESETTING OF EXISTING TRAFFIC SIGNS, AS WELL AS REMOVAL OF EXISTING PAVEMENT MARKINGS AND INSTALLATION OF ANY TEMPORARY PAVEMENT MARKINGS DEEMED NECESSARY BY THE RESIDENT ENGINEER, WILL BE CONSIDERED INCIDENTAL TO ITEM 641.11, "TRAFFIC CONTROL, ALL-INCLUSIVE".

TEMPORARY TRAFFIC SIGNAL AND DRIVEWAY ASSISTANCE DEVICE

42. THE TEMPORARY TRAFFIC SIGNAL SYSTEM SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH ITEM 678.40, "TEMPORARY TRAFFIC SIGNAL SYSTEM" AND IN COMPLIANCE WITH THE LATEST EDITION OF THE MUTCD.
43. SIGNAL FACES SHALL BE LED AND CONSIST OF 12" LENSES (RED, YELLOW AND GREEN).
44. LUMINAIRES SHALL BE INSTALLED AT EACH OF THE APPROACHES TO ADEQUATELY LIGHT THE STOP BAR AREAS. PAYMENT WILL BE CONSIDERED INCIDENTAL TO ITEM 678.40, "TEMPORARY TRAFFIC SIGNAL SYSTEM".
45. STOP BARS SHALL BE LOCATED A MINIMUM OF 40 FT AND A MAXIMUM OF 180 FT FROM THE NEAREST SIGNAL HEAD.
46. ALL TEMPORARY SIGNAL EQUIPMENT, SIGNS, ETC. SHALL BELONG TO THE CONTRACTOR AT THE END OF THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR REMOVAL INCLUDING UTILITY POLES, WIRES, ETC. PAYMENT WILL BE CONSIDERED INCIDENTAL TO ITEM 678.40, "TEMPORARY TRAFFIC SIGNAL SYSTEM".
47. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING SIGNAL PHASING AND TIMING. THE CONTRACTOR SHALL SUBMIT A PHASING DIAGRAM AND TIMING SCHEDULE TO THE ENGINEER FOR APPROVAL. THE CONTRACTOR SHALL MAKE THE SIGNALS OPERATIONAL ONLY AFTER RECEIVING APPROVAL OF BOTH THE PHASING DIAGRAM AND TIMING SCHEDULE BY THE ENGINEER. DEVELOPMENT OF THE PHASING DIAGRAM AND TIMING SCHEDULE WILL BE CONSIDERED INCIDENTAL TO ITEM 678.40, "TEMPORARY TRAFFIC SIGNAL SYSTEM". ADDITIONAL ADJUSTMENTS TO SIGNAL TIMING OR PHASING REQUESTED BY THE ENGINEER SHALL BE COMPLETED WITHIN 48 HOURS OF THE REQUEST. PAYMENT FOR ADDITIONAL ADJUSTMENTS TO SIGNAL TIMING OR PHASING WILL BE CONSIDERED INCIDENTAL TO ITEM 678.40, "TEMPORARY TRAFFIC SIGNAL SYSTEM".
48. THE SUBMITTAL FOR ITEM 678.40, "TEMPORARY TRAFFIC SIGNAL SYSTEM" SHALL BE IN CONJUNCTION WITH THE SUBMITTAL FOR ITEM 641.11, "TRAFFIC CONTROL, ALL-INCLUSIVE" AND SHALL INCLUDE AS A MINIMUM, THE SIGNAL LOCATION, TIMING AND PHASING PLAN, VEHICLE DETECTION SYSTEM, AND EMERGENCY VEHICLE PREEMPTION SYSTEM.
49. ITEM 900.650, "SPECIAL PROVISION (DRIVEWAY ASSISTANCE DEVICE)" HAS BEEN INCLUDED FOR USE BY THE RESIDENT ADJACENT TO THE PROJECT FOR SAFELY ACCESSING THE TEMPORARY BRIDGE DURING CONSTRUCTION.

MISCELLANEOUS

50. ALL EXISTING TREES AND LANDSCAPING IDENTIFIED IN THE PLANS WITH TREE PROTECTION SHALL REMAIN UNDISTURBED DURING CONSTRUCTION AND BE PAID FOR UNDER ITEM 656.85, "TREE PROTECTION".
51. ALL STEEL COMPONENTS OF BRIDGE AND APPROACH RAIL SHALL BE GALVANIZED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. COMPONENTS SHALL BE POWDER COATED BLACK. SEE NOTICE TO BIDDERS FOR POWDER COATING REQUIREMENTS.

PROJECT NAME:	STOWE		
PROJECT NUMBER:	BO 1446(37)		
FILE NAME:	sl2j660notes.dgn	PLOT DATE:	7-FEB-2024
PROJECT LEADER:	C. BURRALL	DRAWN BY:	R. PELLETT
DESIGNED BY:	C. BURRALL	CHECKED BY:	C. BURRALL
PROJECT NOTES		SHEET	9 OF 84

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES											TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
					1011 - ROADWAY	1031 - TRAINING	1041 - LANDSCAPING	1051 - EROSION CONTROL	1211 - BRIDGE NO. 1	1999 - 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 (STOWE(37))	201.10				
					730						730		CY	COMMON EXCAVATION	203.15				
									100		100		CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27				
					70						70		CY	SAND BORROW	203.31				
									120		120		CY	STRUCTURE EXCAVATION	204.25				
									110		110		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30				
					380						380		SY	COARSE-MILLING, BITUMINOUS PAVEMENT	210.10				
					510						510		CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35				
					40						40		TON	AGGREGATE SHOULDERS	402.12				
					17						17		CWT	EMULSIFIED ASPHALT	404.65				
					140						140		SY	HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES	406.38				
					1						1		LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50				
									1		1		LS	FURNISHING EQUIPMENT FOR DRIVING PILING (STOWE(37))	504.10				
									60		60		LF	STEEL PILING, HP 12 X 63	505.155				
									2		2		EACH	DYNAMIC PILE LOADING TEST (STOWE(37))	505.45				
									29340		29340		LB	STRUCTURAL STEEL, ROLLED BEAM (GALVANIZED)	506.50				
									10780		10780		LB	REINFORCING STEEL, LEVEL I (BLACK)	507.11				
									10680		10680		LB	REINFORCING STEEL, LEVEL I (EPOXY COATED)	507.11				
									60		60		LF	DRILLING AND GROUTING DOWELS	507.16				
									1		1		LS	SHEAR CONNECTORS (432 - 7/8IN X 7IN)	508.15				
									20		20		GAL	WATER REPELLENT, SILANE	514.10				
									48		48		LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10				
									48		48		LF	JOINT SEALER, HOT POURED	524.11				
									156		156		LF	BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM (POWDER COATED BLACK)	525.335				
									1		1		LS	TWO-WAY TEMPORARY BRIDGE (1,600 SF - EST)(STOWE(37))	528.11				
									1		1		EACH	REMOVAL OF STRUCTURE (1,300 SF - EST.)(STOWE(37))	529.15				
									4		4		EACH	BEARING DEVICE ASSEMBLY, STEEL REINFORCED ELASTOMERIC PAD	531.17				
									4		4		EACH	BEARING DEVICE ASSEMBLY, ELASTOMERIC PAD W/ EXT. LOAD PLATES	531.18				
									28		28		CY	CONCRETE, CLASS C	541.30				
									110		110		CY	STONE FILL, TYPE IV	613.13				
					1						1		EACH	REMOVE AND RESET MAILBOX, MULTIPLE SUPPORT	617.12				
					80						80		LF	REMOVING AND RESETTING FENCE	620.50				
					159						159		LF	BOX BEAM GUARDRAIL (POWDER COATED BLACK)	621.30				
					3						3		EACH	GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM (POWDER COATED)	621.725				
					110						110		LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80				
					200						200		HR	FLAGGERS	630.15				
										1	1		LS	FIELD OFFICE, ENGINEERS	631.10				
										1	1		LS	TESTING EQUIPMENT, CONCRETE	631.16				
										1	1		LS	TESTING EQUIPMENT, BITUMINOUS	631.17				
										2000	2000		DL	FIELD OFFICE COMMUNICATIONS (N.A.B.I.)	631.26				

PROJECT NAME: STOWE
PROJECT NUMBER: BO 1446(37)

FILE NAME: sl2j660qs.dgn
PROJECT LEADER: C. BURRALL
DESIGNED BY: C. BURRALL
QUANTITY SHEET 1

PLOT DATE: 7-FEB-2024
DRAWN BY: R. PELLETT
CHECKED BY: C. BURRALL
SHEET 10 OF 84

QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES			
					1011 - ROADWAY	1031 - TRAINING	1041 - LANDSCAPING	1051 - EROSION CONTROL	1211 - BRIDGE NO. 1	1999 - FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
					7						7		EACH	CPM SCHEDULE (STOWE(37))	633.10				
						260					260		HR	EMPLOYEE TRAINEESHIP (STOWE(37))	634.10				
					1						1		LS	MOBILIZATION/DEMOBILIZATION (STOWE(37))	635.11				
					1						1		LS	TRAFFIC CONTROL, ALL-INCLUSIVE (STOWE(37))	641.11				
					800						800		LF	DURABLE 4 INCH YELLOW LINE, POLYUREA	646.414				
									180		180		SY	GEOTEXTILE UNDER STONE FILL	649.31				
								100			100		SY	GEOTEXTILE FOR FILTER CURTAIN	649.61				
							43				43		LB	SEED	651.15				
								120			120		LB	FERTILIZER	651.18				
								0.25			0.25		TON	AGRICULTURAL LIMESTONE	651.20				
								50			50		CY	TOPSOIL	651.35				
									70		70		SY	GRUBBING MATERIAL (12 INCH)	651.40				
								1			1		LS	EPSC PLAN (STOWE(37))	653.01				
								40			40		HR	MONITORING EPSC PLAN (STOWE(37))	653.02				
								1			1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.) (STOWE(37))	653.03				
								0.25			0.25		TON	HAY MULCH	653.10				
								900			900		SY	ROLLED EROSION CONTROL PRODUCT, TYPE I	653.20				
								30			30		CY	STABILIZED CONSTRUCTION ENTRANCE	653.35				
								2			2		EACH	FILTER BAG	653.45				
								260			260		LF	BARRIER FENCE	653.50				
							9				9		EACH	EVERGREEN TREES (PICEA GLAUCA)(3-4FT HT. NATURAL)(B AND B)	656.20				
							4				4		EACH	EVERGREEN TREES (TSUGA CANADENSIS)(3-4FT HT. NATURAL)(B AND B)	656.20				
							3				3		EACH	DECIDUOUS TREES (ACER RUBRUM)(1.5-2IN CAL.)(B AND B)	656.30				
							7				7		EACH	DECIDUOUS SHRUBS (CORNUS SERICEA)(3 GAL)(CONT.)	656.35				
							6				6		EACH	DECIDUOUS SHRUBS (CORNUS AMOMUM)(3 GAL)(CONT.)	656.35				
							5				5		EACH	DECIDUOUS SHRUBS (SAMBUCUS CANADENSIS)(3 GAL)(CONT.)	656.35				
							7				7		EACH	DECIDUOUS SHRUBS (SALIX DISCOLOR)(3 GAL)(CONT.)	656.35				
							7				7		EACH	DECIDUOUS SHRUBS (SALIX SERICEA)(3 GAL)(CONT.)	656.35				
							17				17		MGAL	LANDSCAPE WATERING	656.65				
							15				15		CY	LANDSCAPE BACKFILL, TRUCK MEASUREMENT	656.80				
							1				1		LS	TREE PROTECTION	656.85				
					4						4		EACH	DELINEATOR WITH STEEL POST	678.10				
					1						1		EACH	TEMPORARY TRAFFIC SIGNAL SYSTEM (STOWE(37))	678.40				
									82		82		CY	SPECIAL PROVISION (PERFORMANCE-BASED CONCRETE, CLASS PCD)	900.608				
									110		110		CY	SPECIAL PROVISION (PERFORMANCE-BASED CONCRETE, CLASS PCS)	900.608				
					1						1		EACH	SPECIAL PROVISION (DRIVEWAY ASSISTANCE DEVICE)	900.620				
					1						1		LU	SPECIAL PROVISION (MAT DENSITY PAY ADJUSTMENT, SMALL QUANTITY)(N.A.B.I.)	900.650				
					1						1		LU	SPECIAL PROVISION (MIXTURE PAY ADJUSTMENT, SMALL QUANTITY)(N.A.B.I.)	900.650				
									1344		1344		SF	SPECIAL PROVISION (CONCRETE BRIDGE DECK SURFACE PREPARATION)	900.670				
					220						220		TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	900.680				

PROJECT NAME: STOWE
PROJECT NUMBER: BO 1446(37)
FILE NAME: sl2j660qs.dgn PLOT DATE: 7-FEB-2024
PROJECT LEADER: C. BURRALL DRAWN BY: R. PELLETT
DESIGNED BY: C. BURRALL CHECKED BY: C. BURRALL
QUANTITY SHEET 2 SHEET II OF 84

NETWORK CONTROL

HVCTRL #1
 STOWE AZ MK
 NORTH = 706904.3965
 EAST = 1585797.3958
 ELEV. = 672.550

GENERAL LOCATION, STOWE, VT

TO REACH FROM THE INTERSECTION OF VT. ROUTES 100 AND 108 IN STOWE GO SOUTH ALONG ROUTE 100 FOR 2.2 MI (3.5 KM) TO THE MARK ON THE LEFT IN THE NORTH END OF A LEDGE CUT. THE MARK IS 7.7 M (25.3 FT) SOUTHWEST OF AND ABOUT 2 M (6.6 FT) HIGHER THAN THE CENTERLINE OF ROUTE 100, 27.9 M (91.5 FT) NORTHEAST OF POLE NO. 58, 0.5 M (1.6 FT) SOUTHWEST OF THE FACE OF THE LEDGE CUT, 1.7 M (5.6 FT) SOUTH OF THE NORTH END OF THE LEDGE, 2.1 M (6.9 FT) NORTHEAST OF A METAL WITNESS POST.

HVCTRL #2
 STOWE RIVER
 NORTH = 708261.7724
 EAST = 1585037.8666
 ELEV. = 692.866

GENERAL LOCATION, STOWE, VT

TO REACH FROM THE INTERSECTION OF VT ROUTE 100 AND VT ROUTE 108, GO SOUTH ALONG VT ROUTE 100 FOR 2.5 MI (4.0 KM) TO THE INTERSECTION OF MOSCOW ROAD RIGHT. TURN RIGHT AND GO NORTHWEST ALONG MOSCOW ROAD FOR 0.5 MI (0.8 KM) TO THE INTERSECTION OF RIVER ROAD RIGHT. TURN RIGHT AND GO NORTHEAST ALONG RIVER ROAD FOR 0.2 MI (0.3 KM) TO THE SITE OF THE MARK ON THE RIGHT IN A SMALL FIELD. IT IS ABOUT 0.05 MI (0.1 KM) WEST-SOUTHWEST OF A POWER SUB STATION.

THE MARK IS SET 12 CM (5 INCHES) BELOW GROUND SURFACE IN THE TOP OF A 30 CM (12 INCH) DIAMETER CONCRETE MONUMENT.

IT IS 6.1 M (20.0 FT) SOUTH-SOUTHWEST OF AND ABOUT 1.5 M (4.9 FT) LOWER THAN THE CENTERLINE OF RIVER ROAD, 20.6 M (67.6 FT) EAST-NORTHEAST OF POLE NO 151/315/43 (WITH METER BOX), 27.2 M (89.2 FT) WEST-SOUTHWEST OF POLE NO 42, 29.5 M (96.8 FT) EAST OF THE EAST-NORTHEAST END OF A WOOD RAIL FENCE AND 0.6 M (2.0 FT) NORTH-NORTHWEST OF A FIBERGLASS WITNESS POST.

HVCTRL #17/90
 NEBRASKA
 NORTH = 709893.2357
 EAST = 1575984.0593
 ELEV. = 648.683

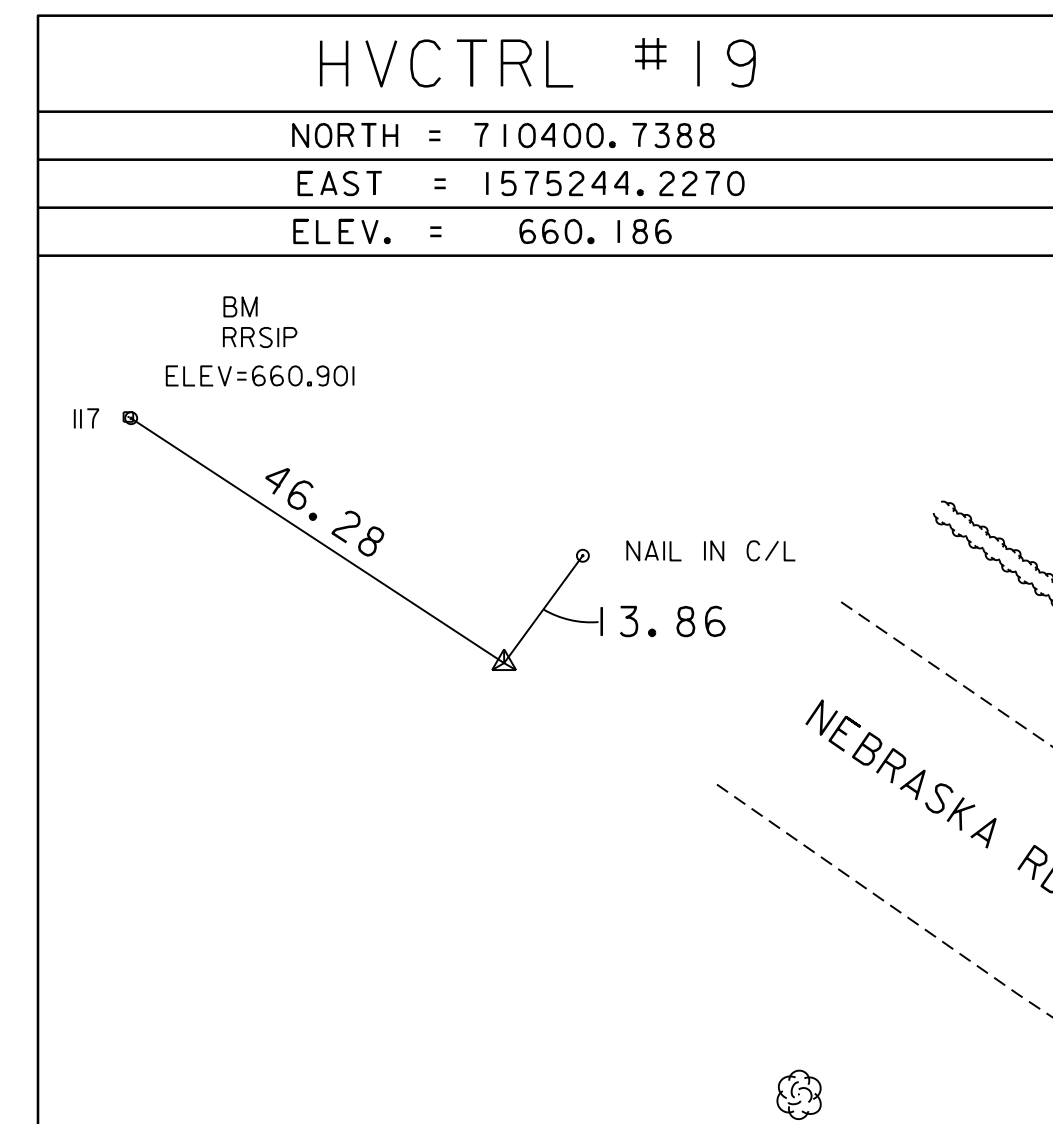
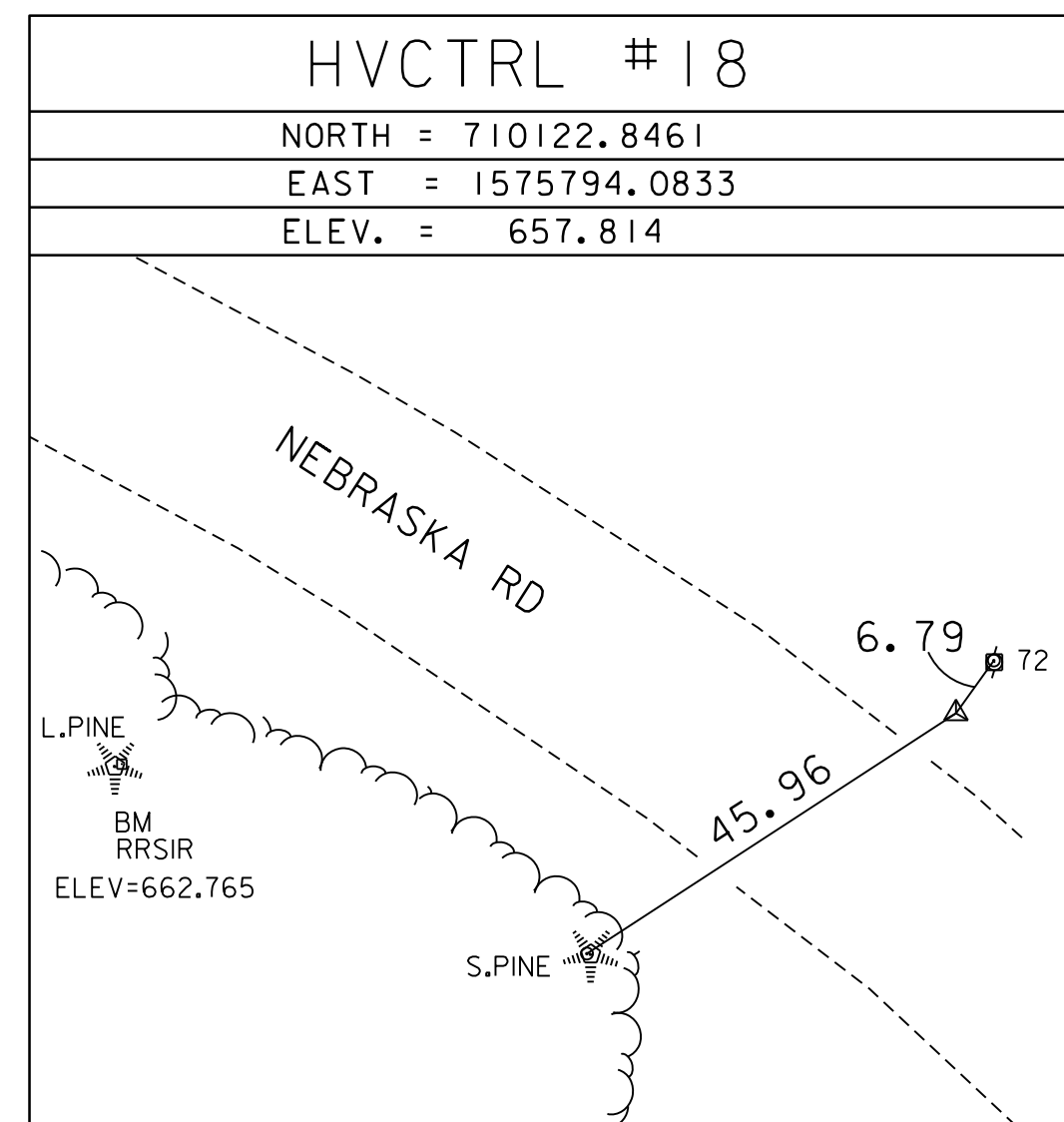
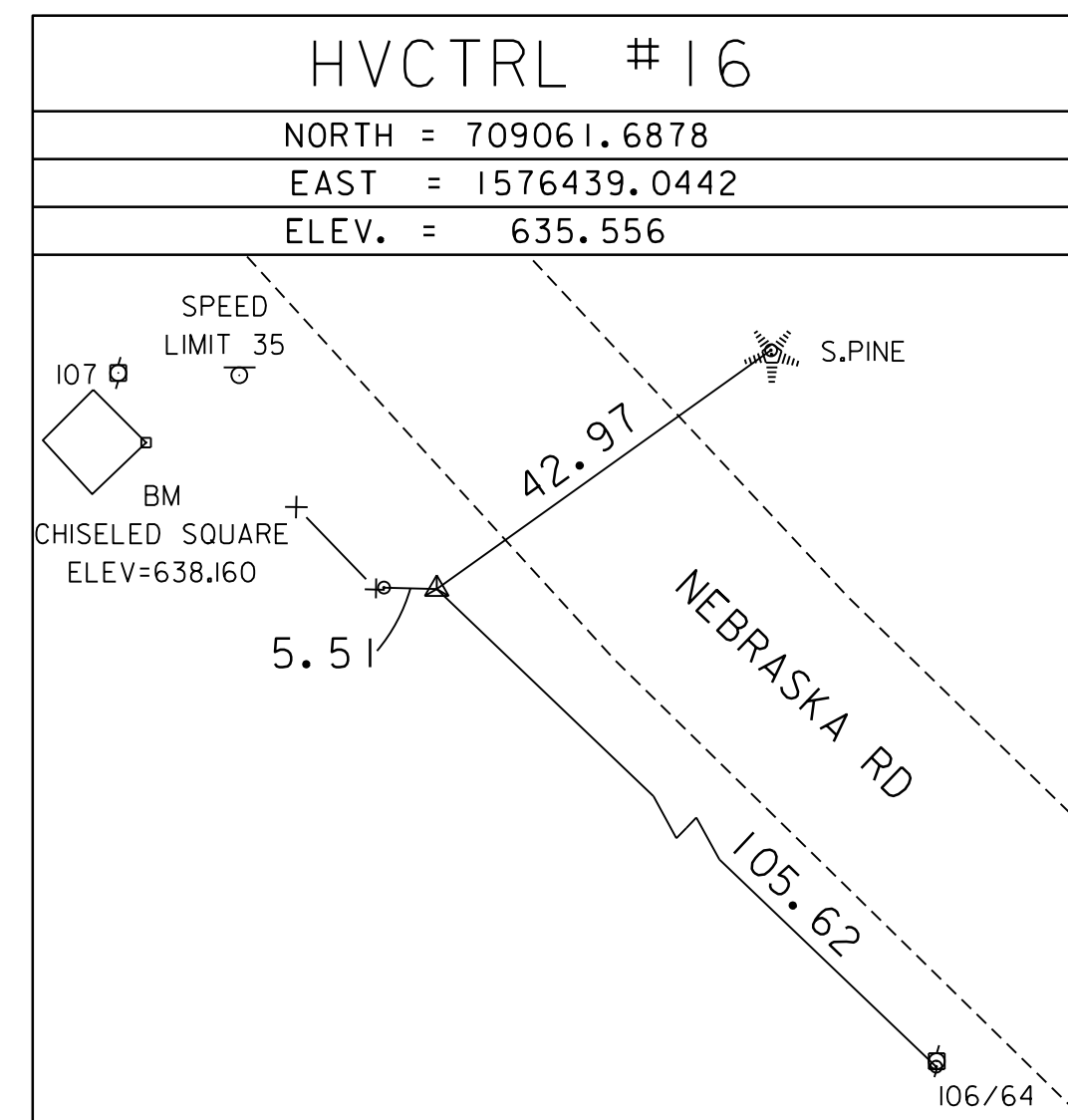
GENERAL LOCATION, STOWE, VT

TO REACH FROM THE INTERSECTION OF VT ROUTE 100 AND VT ROUTE 108 IN STOWE VILLAGE, GO SOUTH ALONG VT ROUTE 100 FOR 2.5 MI (4.0 KM) TO THE INTERSECTION OF MOSCOW ROAD RIGHT. TURN RIGHT AND GO NORTHWEST ALONG MOSCOW ROAD FOR 1.5 M (4.9 FT) TO THE INTERSECTION OF BARROWS ROAD RIGHT. CONTINUE NORTHWEST ALONG MOSCOW ROAD FOR 0.6 M (2.0 FT) TO THE INTERSECTION OF COTTON BROOK ROAD LEFT AND NEBRASKA VALLEY ROAD RIGHT. TURN RIGHT AND GO WEST ALONG NEBRASKA VALLEY ROAD FOR 0.5 M (1.6 FT) TO THE SITE OF THE MARK ON THE RIGHT SET IN THE WEST EDGE OF A FIELD.

THE MARK IS SET 10 CM (4 INCHES) BELOW GROUND SURFACE IN THE TOP OF A FENO STYLE MONUMENT.

IT IS 6.6 M (21.7 FT) EAST OF AND ABOUT 0.1 M (0.3 FT) LOWER THAN THE CENTERLINE OF NEBRASKA VALLEY ROAD, 29.8 M (97.8 FT) NORTH-NORTHEAST OF AND ACROSS THE ROAD FROM POLE NO 14/70, 37.6 M (123.4 FT) SOUTHWEST OF AND ACROSS THE ROAD FROM POLE NO 71 WITH TRANSFORMER AND METER AND 0.25 M (0.8 FT) WEST OF A FIBERGLASS WITNESS POST.

LOCAL CONTROL



* MAIN TRAVERSE COMPLETED ON 2/15/2017 BY C. CYR P.C. ...T. CATTANEO & K. KELLEY

ALIGNMENT TIES

Point Type	Station	Northing	Easting	Radius	Length	Tangent
Alignment Name:		TH43prop				
Description:		Town Highway 43 Prop				
POB	10+00.00	710396.01	1575275.15			
PC	10+49.10	710368.10	1575315.54			
PC	10+49.10	710368.10	1575315.54			
PI	11+54.20	710308.35	1575402.00	1390.00	209.81	105.10
PT	12+58.90	710262.27	1575496.47			
PT	12+58.90	710262.27	1575496.47			
PC	14+75.97	710167.12	1575691.56			
PC	14+75.97	710167.12	1575691.56			
PI	15+62.55	710129.16	1575769.38	500.00	171.46	86.58
PT	16+47.43	710067.25	1575829.91			
Alignment Name:		CHANNEL				
Description:		CHANNEL GEOMETRY				
POB	50+00.00	710143.42	1575512.04			
POE	52+00.00	710323.18	1575599.71			

DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD83 (2011)
ADJUSTMENT	COMPASS

PROJECT NAME:	STOWE	PLOT DATE:	7-FEB-2024
PROJECT NUMBER:	BO 1446(37)	DRAWN BY:	C. CYR
FILE NAME:	sl2j660tie.dgn	CHECKED BY:	G. HITCHCOCK
PROJECT LEADER:	C. BURRALL	TIE SHEET	SHEET 12 OF 84
DESIGNED BY:	C. BURRALL		

BOOTHBAY SILT LOAM
0%-3% SLOPES
MODERATELY ERODIBLE
K= 0.24

PODUNK FINE SANDY LOAM
0%-3% SLOPES
MODERATELY ERODIBLE
K= 0.24

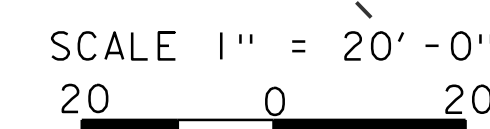
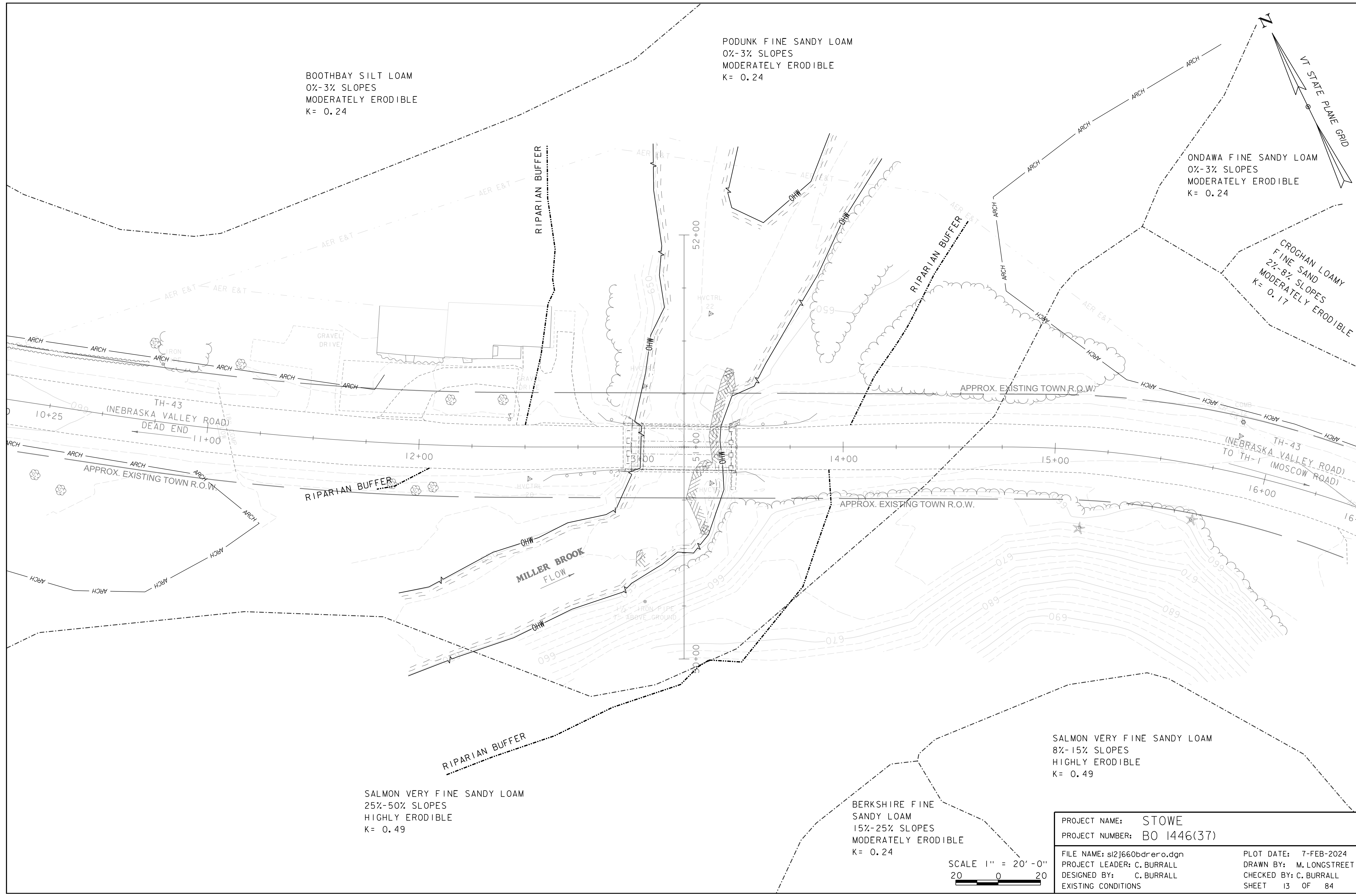
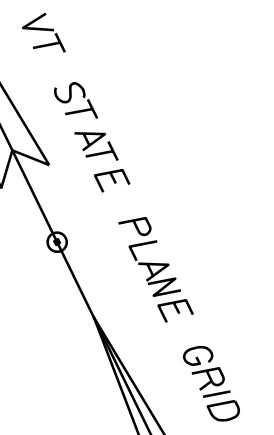
ONDAWA FINE SANDY LOAM
0%-3% SLOPES
MODERATELY ERODIBLE
K= 0.24

CROGHAN LOAMY
FINE SAND
2%-8% SLOPES
MODERATELY ERODIBLE
K= 0.17

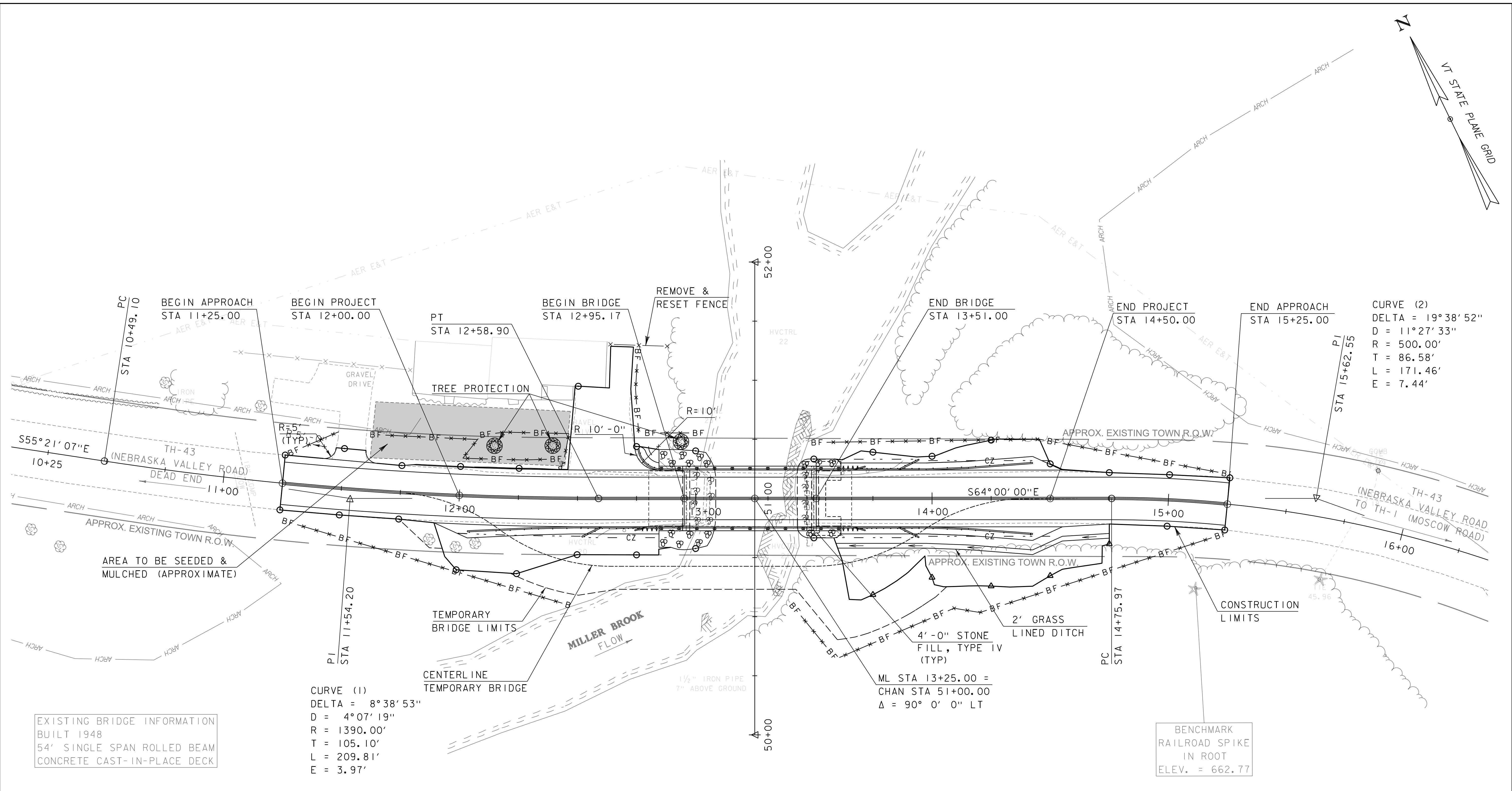
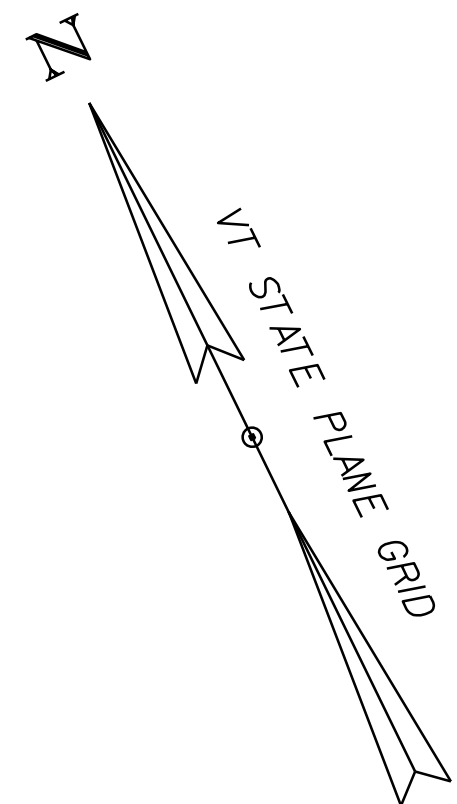
SALMON VERY FINE SANDY LOAM
8%-15% SLOPES
HIGHLY ERODIBLE
K= 0.49

SALMON VERY FINE SANDY LOAM
25%-50% SLOPES
HIGHLY ERODIBLE
K= 0.49

BERKSHIRE FINE
SANDY LOAM
15%-25% SLOPES
MODERATELY ERODIBLE
K= 0.24



PROJECT NAME:	STOWE	PLOT DATE:	7-FEB-2024
PROJECT NUMBER:	BO 1446(37)	DRAWN BY:	M. LONGSTREET
FILE NAME:	sl2j660bdrero.dgn	CHECKED BY:	C. BURRALL
PROJECT LEADER:	C. BURRALL	EXISTING CONDITIONS	SHEET 13 OF 84



CURVE (2)
 DELTA = 19° 38' 52"
 D = 11° 27' 33"
 R = 500.00'
 T = 86.58'
 L = 171.46'
 E = 7.44'

CURVE (1)
 DELTA = 8° 38' 53"
 D = 4° 07' 19"
 R = 1390.00'
 T = 105.10'
 L = 209.81'
 E = 3.97'

EXISTING BRIDGE INFORMATION
 BUILT 1948
 54' SINGLE SPAN ROLLED BEAM
 CONCRETE CAST-IN-PLACE DECK

BENCHMARK
 RAILROAD SPIKE
 IN ROOT
 ELEV. = 662.77

BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM (POWDER COATED BLACK)
 STA 12+83.50 RT - STA 13+62.50 RT
 STA 12+85.50 LT - STA 13+62.50 LT

BOX BEAM GUARDRAIL (POWDER COATED BLACK)
 STA 12+03.93 RT - STA 12+51.56 RT
 STA 12+75.56 LT - STA 12+85.50 LT
 STA 13+94.50 LT - STA 14+42.58 LT
 STA 13+94.50 RT - STA 14+42.58 RT

GUARDRAIL APPROACH SECTION, GALV 3 RAIL BOX BEAM (POWDER COATED BLACK)
 STA 12+51.56 RT - STA 12+83.50 RT
 STA 13+62.50 LT - STA 13+94.50 LT
 STA 13+62.50 RT - STA 13+94.50 RT

CONSTRUCT 5' -0" PAVED APRON
 STA 11+41.37 LT - STA 11+64.16 LT

CONSTRUCT PAVED DRIVE
 STA 12+45.84 LT - STA 12+84.26 LT

REMOVAL AND DISPOSAL OF GUARDRAIL
 STA 12+58.59 RT - STA 12+96.11 RT
 STA 12+84.47 LT - STA 12+97.02 LT
 STA 13+49.22 LT - STA 13+87.71 LT
 STA 13+49.23 RT - STA 13+63.04 RT

REMOVE & RESET MAILBOX, SINGLE SUPPORT
 STA 12+42.56 LT

REMOVE & RESET FENCE
 STA 12+63.96 OFFSET 65' LT TO
 STA 12+87.94 OFFSET 65' LT

4 INCH YELLOW LINE
 STA 11+25.00 CL - STA 15+25.00 CL (DOUBLE)

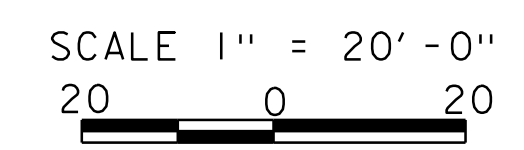
DELINEATOR WITH STEEL POST
 STA 12+58.50 RT (BLUE)
 STA 12+85.50 LT (GREEN)
 STA 13+87.50 LT (BLUE)
 STA 13+87.50 RT (GREEN)

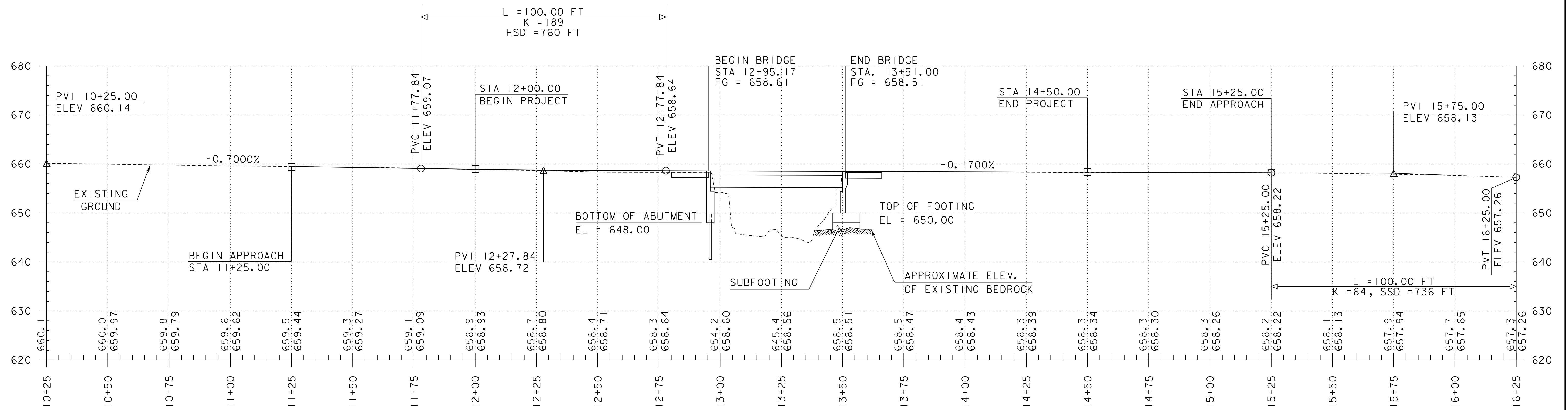
- NOTES**
- 1) RESIDENTIAL DRIVES AND FENCES SHOWN ARE APPROXIMATE. EXISTING CONDITIONS AND EXACT LOCATIONS MAY DIFFER.
 - 2) LAWN AT ADJACENT PROPERTY TO BE SEEDDED AND MULCHED UPON CONSTRUCTION COMPLETION. AREA SHOWN IS APPROXIMATE.

PROJECT NAME: **STOWE**
 PROJECT NUMBER: **BO 1446(37)**

FILE NAME: sl2j660bdr.dgn
 PROJECT LEADER: C. BURRALL
 DESIGNED BY: C. BURRALL
 LAYOUT

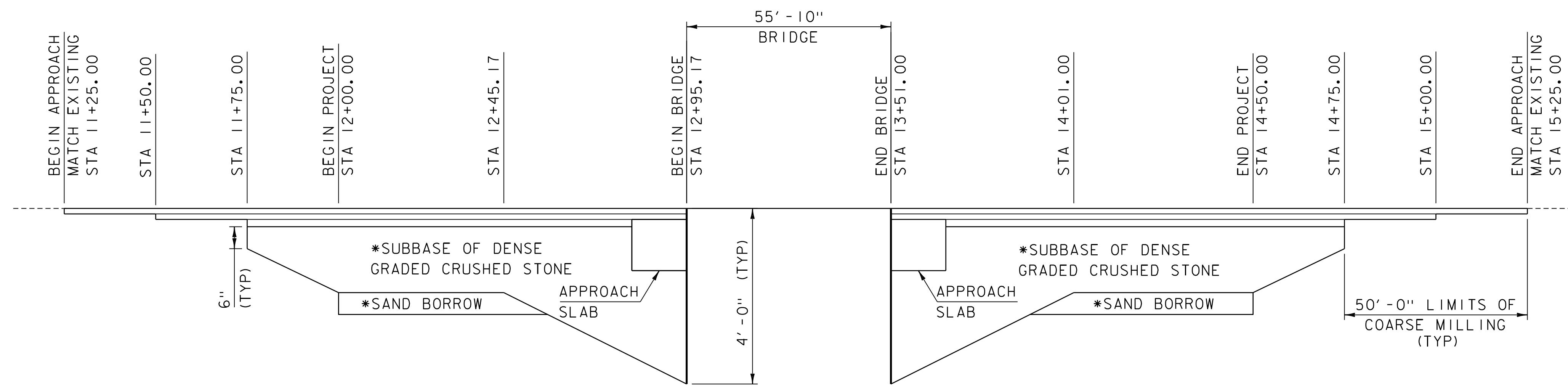
PLOT DATE: 7-FEB-2024
 DRAWN BY: M. LONGSTREET
 CHECKED BY: C. BURRALL
 SHEET \$S*\$ OF \$T*\$





TH 43 (NEBRASKA VALLEY RD) PROFILE

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



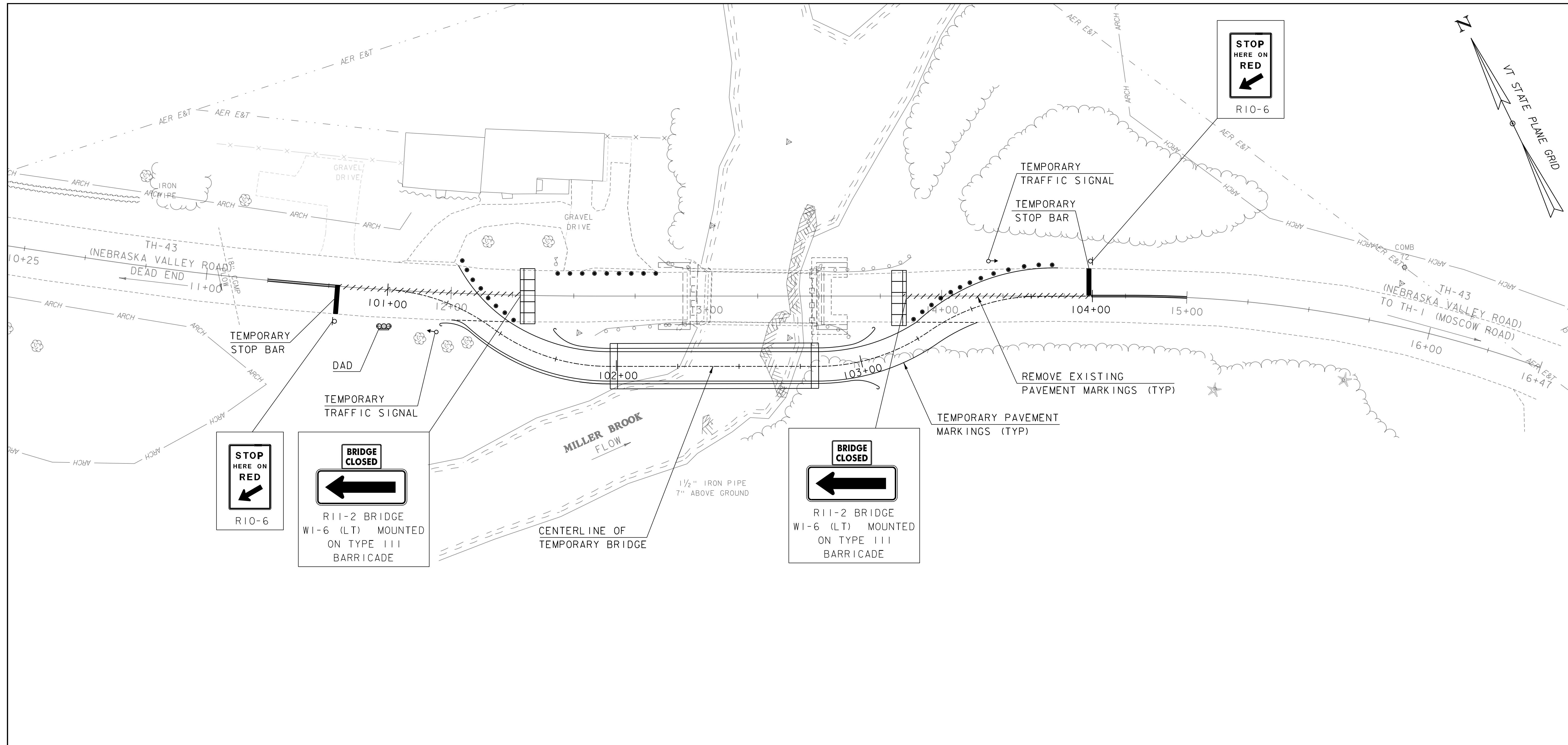
*SEE TH 43 ROADWAY TYPICAL SECTION FOR PAVEMENT AND SUBBASE MATERIAL DESIGN INFORMATION.

TH 43 (NEBRASKA VALLEY RD) MATERIAL TRANSITION DETAIL

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

NOTE:
 GRADES SHOWN TO THE NEAREST TENTH ARE EXISTING GROUND ALONG CL
 GRADES SHOWN TO THE NEAREST HUNDRETH ARE FINISH GRADE ALONG CL

PROJECT NAME:	STOWE	FILE NAME:	sl2j660pro.dgn	PLOT DATE:	2/9/2024
PROJECT NUMBER:	BO 1446(37)	PROJECT LEADER:	C. BURRALL	DRAWN BY:	M. LONGSTREET
		DESIGNED BY:	C. BURRALL	CHECKED BY:	C. BURRALL
		TH 43 PROFILE & MATERIAL TRANSITION		SHEET	15 OF 84

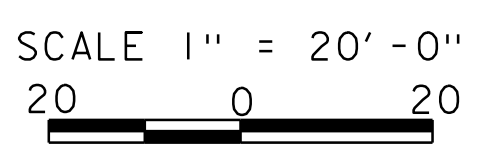


NOTES



1. TRAFFIC CONTROL PLAN IS CONCEPTUAL IN NATURE ONLY. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE DESIGN, SUBMITTAL, AND IMPLEMENTATION OF A SITE SPECIFIC TRAFFIC CONTROL PLAN.
2. ACCESS TO THE NORTHERLY DRIVE FOR THE ADJACENT PROPERTY OWNER MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. A DRIVEWAY ASSISTANCE DEVICE (DAD) HAS BEEN INCLUDED TO INDICATE DIRECTION OF TRAFFIC FOR SAFE ACCESS ONTO THE TEMPORARY BRIDGE FROM THE DRIVE.
3. CONCRETE BARRIER ENDS EXPOSED TO TRAFFIC SHALL BE PROTECTED (ATTENUATED) OR EXTENDED OUTSIDE THE CLEAR ZONE.
4. CONCRETE BARRIER SIDE EXPOSED TO TRAFFIC SHALL BE DELINEATED TO MATCH THE CORRESPONDING TEMPORARY PAVEMENT MARKINGS. REFLECTORS SHALL BE MOUNTED EVERY 20 FEET ALONG THE SIDE OF THE BARRIER EXPOSED TO TRAFFIC, WITH YELLOW ON THE DRIVER'S LEFT AND WHITE ON THE DRIVER'S RIGHT.
5. W1-6 ARROW SIGNS SHALL BE BLACK ON FLOURESCENT ORANGE SHEETING.

TRAFFIC CONTROL PLAN LEGEND			
	TEMPORARY TRAFFIC BARRIER		CRASH CUSHION
	TEMPORARY CHANNELIZING DEVICE		WARNING LIGHT
	DIRECTION OF TRAVEL		TRAFFIC SIGN LOCATION
	PAVEMENT MARKING REMOVAL		TYPE III BARRICADE
	TRAFFIC SIGNAL		DRIVEWAY ASSISTANCE DEVICE

PROJECT NAME: STOWE	
PROJECT NUMBER: BO 1446(37)	
FILE NAME: sl2j660temp.dgn	PLOT DATE: 2/9/2024
PROJECT LEADER: C. BURRALL	DRAWN BY: C. BURRALL
DESIGNED BY: C. BURRALL	CHECKED BY: M. LONGSTREET
TEMPORARY BRIDGE LAYOUT	SHEET 16 OF 84



LEGEND:

-  VAOT LOW GROW/FINE FESCUE MIX
-  VAOT URBAN AREA MIX

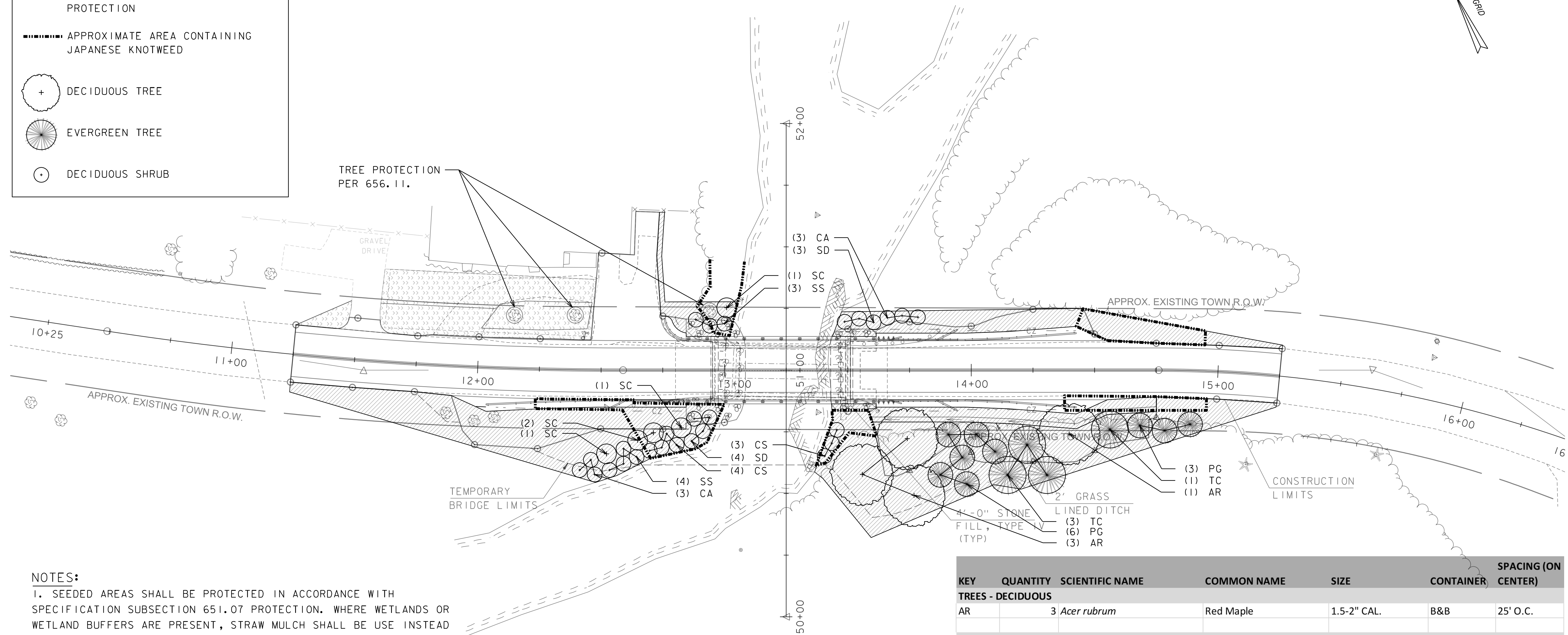
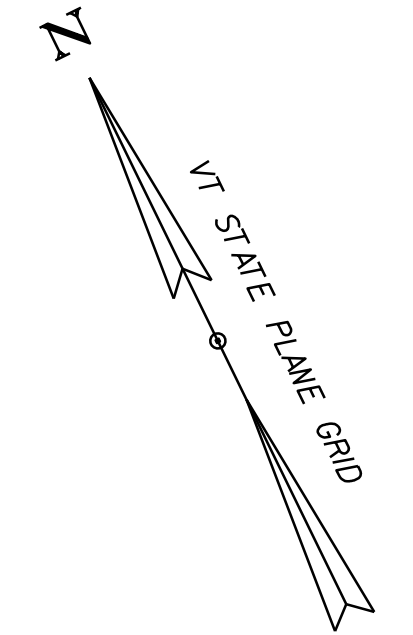
— TREE PROTECTION ZONE (TPZ)
SEE SPECIFICATION: 656.11 TREE PROTECTION

----- APPROXIMATE AREA CONTAINING
JAPANESE KNOTWEED

 DECIDUOUS TREE

 EVERGREEN TREE

 DECIDUOUS SHRUB



TREE PROTECTION
PER 656.11.

GRAVEL
DRIVE

APPROX. EXISTING TOWN R.O.W.

APPROX. EXISTING TOWN R.O.W.

TEMPORARY
BRIDGE LIMITS

2" GRASS
4"-0" STONE
LINED DITCH
FILL, TYPE IV
(TYP)

CONSTRUCTION
LIMITS

NOTES:

1. SEEDED AREAS SHALL BE PROTECTED IN ACCORDANCE WITH SPECIFICATION SUBSECTION 651.07 PROTECTION. WHERE WETLANDS OR WETLAND BUFFERS ARE PRESENT, STRAW MULCH SHALL BE USE INSTEAD OF HAY MULCH.
2. VAOT URBAN AREA MIX SHALL BE INSTALLED ONLY IN AREAS THAT WILL BE FREQUENTLY MAINTAINED AND USED AS TRADITIONAL LAWN. VAOT LOW GROW/FINE FESCUE MIX AND VAOT RURAL AREA MIX SHALL BE USED IN AREAS THAT WILL BE MAINTAINED INFREQUENTLY OR LEFT TO NATURALIZE.
3. IF AREAS WITHIN PDF OR BARRIER FENCE ARE NOT DISTURBED, THEY SHOULD REMAIN VEGETATED, AND ADDITIONAL REVEGETATION IS NOT REQUIRED.
4. PROVIDING SUFFICIENT MOISTURE IS CRITICAL DURING THE ENTIRE PLANT ESTABLISHMENT PERIOD. WATERING TO BE PAID FOR UNDER 656.65 LANDSCAPE WATERING.

5. THE CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF 1 WEEK PRIOR TO PLANTING OPERATIONS. THE ENGINEER WILL NOTIFY THE VTRANS LANDSCAPE ARCHITECT AND LANDSCAPE INSPECTOR WHO WILL CONFIRM PLANTING LOCATIONS BASED ON THE PREPARED SITE.
6. INVASIVE JAPANESE KNOTWEED HAS BEEN IDENTIFIED ON THIS PROJECT SITE. SEE APPROXIMATE DELINEATION IN PLAN. SOIL CONTAMINATED WITH JAPANESE KNOTWEED SHALL NOT BE SPREAD TO AREAS WITHOUT EVIDENCE OF EXISTING JAPANESE KNOTWEED. SEE NOTICE TO BIDDERS FOR MORE INFORMATION.

KEY	QUANTITY	SCIENTIFIC NAME	COMMON NAME	SIZE	CONTAINER	SPACING (ON CENTER)
TREES - DECIDUOUS						
AR	3	<i>Acer rubrum</i>	Red Maple	1.5-2" CAL.	B&B	25' O.C.
TREES - EVERGREEN						
PG	9	<i>Picea glauca</i>	White spruce	3-4' height, natural	B&B	10' O.C.
TC	4	<i>Tsuga canadensis</i>	Eastern Hemlock	3-4' height, natural	B&B	15' O.C.
SHRUBS - DECIDUOUS						
CA	6	<i>Cornus amomum</i>	Silky dogwood	3 GAL	CONT.	6' O.C.
CS	7	<i>Cornus sericea</i>	Red twig dogwood	3 GAL	CONT.	6' O.C.
SC	5	<i>Sambucus canadensis</i>	Elderberry	3 GAL	CONT.	8' O.C.
SD	7	<i>Salix discolor</i>	Common pussy willow	3 GAL	CONT.	6' O.C.
SS	7	<i>Salix sericea</i>	Silky willow	3 GAL	CONT.	6' O.C.

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

PROJECT NAME: STOWE
PROJECT NUMBER: BO 1446(37)
FILE NAME: sl2j660land.dgn
PROJECT LEADER: C. BURRALL
DESIGNED BY: B. DONAHUE
LANDSCAPE PLAN
PLOT DATE: 2/9/2024
DRAWN BY: B. DONAHUE
CHECKED BY: C. BURRALL
SHEET 17 OF 84

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 P.S.F.	CONSISTENCY
<250	Very Soft
250-500	Soft
500-1000	Med. Stiff
1000-2000	Stiff
2000-4000	Very Stiff
>4000	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

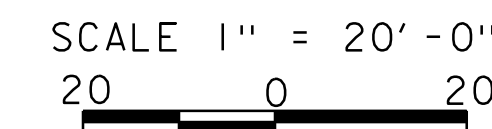
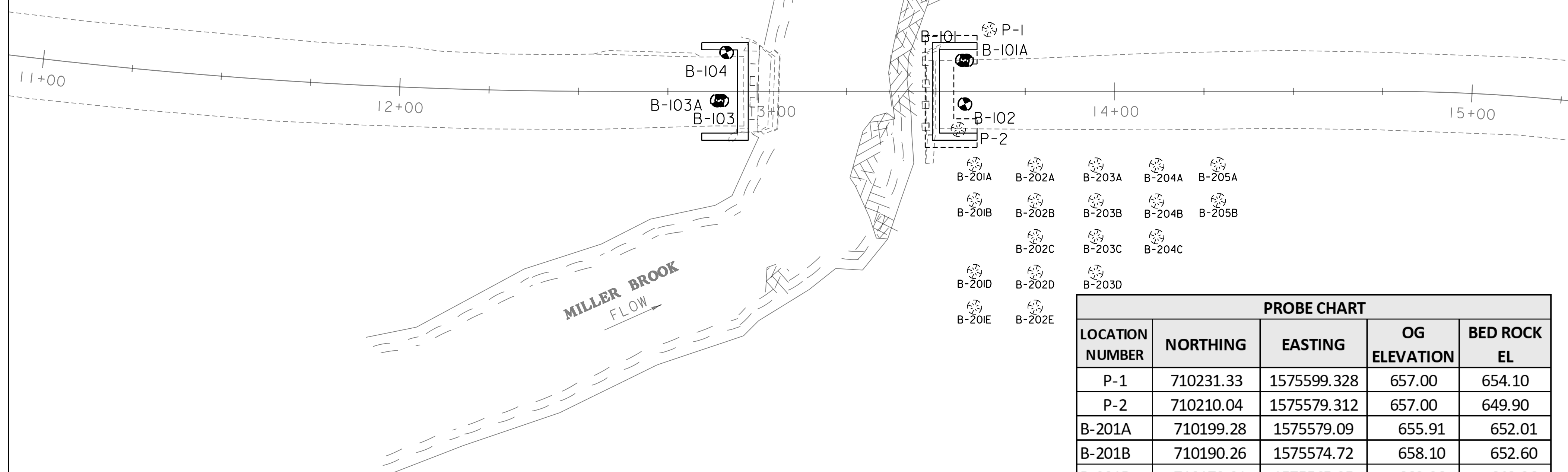
▼	Water Elevation
⊕	Standard Penetration Boring
⊗	Auger Boring
⊙	Rod Sounding
S	Sample
N	Standard Penetration Test
	Blow Count Per Foot For:
	2" O.D. Sampler
	1 3/8" I.D. Sampler
	Hammer Weight Of 140 Lbs.
	Hammer Fall Of 30"
VS	Field Vane Shear Test
US	Undisturbed Soil Sample
B	Blast
DC	Diamond Core
MD	Mud Drill
WA	Wash Ahead
HSA	Hollow Stem Auger
AX	Core Size 1 1/8"
BX	Core Size 1 3/8"
NX	Core Size 2 1/8"
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
Si	Silt
Cl	Clay
HP	Hardpan
Le	Ledge
NLTD	No Ledge To Depth
CNPF	Can Not Penetrate Further
TLOB	Top of 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)
VTSPG	NAD83 - See Note 7

COLOR

blk	Black	pnk	Pink
bl	Blue	pu	Purple
brn	Brown	rd	Red
dk	Dark	tn	Tan
gr-y	Gray	wh	White
gn	Green	yel	Yellow
lt	Light	mltc	Multicolored
or	Orange		

BORING CHART

HOLE NUMBER	NORTHING	EASTING	OG ELEVATION	BEDROCK EL
B-101	710226.91	1575588.76	658.00	N/A
B-101A	710226.37	1575589.88	658.00	646.70
B-102	710215.65	1575584.08	658.00	648.00
B-103	710246.26	1575523.36	657.00	N/A
B-103A	710246.80	1575522.23	657.00	638.10
B-104	710257.80	1575530.49	657.00	637.20



GENERAL NOTES

- The subsurface explorations shown herein were made between 8/27/2018 and 11/26/2018 and between 4/22/2019 and 4/24/2019 by the Agency.
- 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 judgment 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 judgment 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.
- Northing and Easting coordinates are shown in Vermont State Plane Grid North American Datum 1983 in meters and survey feet.

PROBE CHART

LOCATION NUMBER	NORTHING	EASTING	OG ELEVATION	BED ROCK EL
P-1	710231.33	1575599.328	657.00	654.10
P-2	710210.04	1575579.312	657.00	649.90
B-201A	710199.28	1575579.09	655.91	652.01
B-201B	710190.26	1575574.72	658.10	652.60
B-201D	710172.31	1575565.95	663.96	648.96
B-201E	710163.32	1575561.57	666.60	650.50
B-202A	710191.64	1575594.28	656.70	651.10
B-202B	710182.63	1575589.89	661.77	653.27
B-202C	710173.65	1575585.51	665.25	656.35
B-202D	710164.68	1575581.12	665.80	652.20
B-202E	710155.88	1575576.83	666.08	651.78
B-203A	710184.17	1575609.56	657.18	649.28
B-203B	710175.18	1575605.17	663.91	651.71
B-203C	710166.21	1575600.78	665.05	654.55
B-203D	710157.23	1575596.39	665.20	656.50
B-204A	710176.59	1575624.78	658.79	648.89
B-204B	710167.68	1575620.41	664.39	649.79
B-204C	710158.69	1575616.02	664.51	652.91
B-205A	710169.29	1575640.30	659.18	653.98
B-205B	710160.25	1575636.00	664.09	656.49

DEFINITIONS (AASHTO)

- BEDROCK (LEDGE)** - Rock in its native location of indefinite thickness.
- BOULDER** - A rock fragment with an average dimension > 12 inches.
- COBBLE** - Rock fragments with an average dimension between 3 and 12 inches.
- GRAVEL** - Rounded particles of rock < 3" and > 0.075" (#10 sieve).
- SAND** - Particles of rock < 0.075" (#10 sieve) and > 0.0029" (#200 sieve).
- SILT** - Soil < 0.0029" (#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: STOWE
PROJECT NUMBER: BO 1446(37)

FILE NAME: sl2j660bor.dgn PLOT DATE: 2/9/2024
PROJECT LEADER: C. BURRALL DRAWN BY: C. BURRALL
DESIGNED BY: C. BURRALL CHECKED BY: M. LONGSTREET
BORING INFORMATION SHEET SHEET 18 OF 84

Boring Crew: Brochu, Gonyaw, Emerson, Judkins
 Date Started: 8/27/18 Date Finished: 8/27/18
 VTSFG NAD83: N 710226.90 ft E 1575588.80 ft
 Station: 13+60 Offset: 12 LT
 Ground Elevation: 658.0 ft

Casing Sampler Type: WASH BORE SS
 I.D.: 4 in 1.5 in
 Hammer Wt: 140 lb. 140 lb.
 Hammer Fall: 30 in. 30 in.
 Hammer/Rod Type: Auto/AWJ
 Rig: CME 45C SKID CE = 1.42

Groundwater Observations
 Date Depth (ft) Notes
 Not recorded.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0.0 - 0.75		Asphalt, 0.0 ft - 0.75 ft					
0.75 - 2.5		Field Class: SiSaGr, brn, Moist, Rec. = 0.9 ft	5-13- >50 (>63)				
2.5 - 3.5		Hole stopped @ 3.5 ft					
3.5 - 22.5		Remarks: Refusal in concrete encountered 3.5 ft bgs. Offset hole to B-101A.					

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

ABUTMENT 2
TOP OF FOOTING EL. 650.00

BORING LOG: STOWE BO 1446(37).DPT VERMONT AOT.GIT 12/18/18

Boring Crew: Brochu, Judkins, Gonyaw
 Date Started: 8/27/18 Date Finished: 8/27/18
 VTSFG NAD83: N 710226.40 ft E 1575589.90 ft
 Station: 13+61 Offset: 12 LT
 Ground Elevation: 658.0 ft

Casing Sampler Type: WASH BORE SS
 I.D.: 4 in 1.5 in
 Hammer Wt: 140 lb. 140 lb.
 Hammer Fall: 30 in. 30 in.
 Hammer/Rod Type: Auto/AWJ
 Rig: CME 45C SKID CE = 1.42

Groundwater Observations
 Date Depth (ft) Notes
 08/27/18 4.0 WT During drilling.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0.0 - 0.6		Asphalt, 0.0 ft - 0.6 ft					
0.6 - 2.5		Field Class: GrSa, brn, Moist, Rec. = 0.6 ft	8-4-5-17 (9)				
2.5 - 5.0		Rec. = 0.0 ft, 5.0 ft - 7.0 ft	3-3-3-3 (6)				
5.0 - 10.0		Field Class: SiSa with broken rock, gray-brn, Moist, Rec. = 0.7 ft	1-2- >100 (>100)				
10.0 - 12.5		Rollerbit 2 ft to confirm bedrock, 11.3 ft - 13.2 ft					
12.5 - 13.2		Hole stopped @ 13.2 ft					

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

ABUTMENT 2
TOP OF FOOTING EL. 650.00

BORING LOG: STOWE BO 1446(37).DPT VERMONT AOT.GIT 12/18/18

Boring Crew: Gonyaw, Judkins, Brochu
 Date Started: 8/29/18 Date Finished: 8/30/18
 VTSFG NAD83: N 710215.60 ft E 1575584.10 ft
 Station: 13+60 Offset: 2 RT
 Ground Elevation: 658.0 ft

Casing Sampler Type: WASH BORE SS
 I.D.: 4 in 1.5 in
 Hammer Wt: 140 lb. 140 lb.
 Hammer Fall: 30 in. 30 in.
 Hammer/Rod Type: Auto/AWJ
 Rig: CME 45C SKID CE = 1.42

Groundwater Observations
 Date Depth (ft) Notes
 08/30/18 3.5 WT During drilling.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %	Run (Dip deg)	Core Rec. (ft)	Drill Rate (min/ft)
0.0 - 0.8		Asphalt, 0.0 ft - 0.8 ft								
0.8 - 2.5		Field Class: SaGr w/ broken rock fragments, brn, Moist, Rec. = 1.4 ft	11-11- 40->50 (51)							
2.5 - 5.0		Field Class: SiGrSa, brn, Moist, Rec. = 1.1 ft	5-3-3-4 (6)							
5.0 - 10.0		Field Note: Refusal, Rec. = 0.0 ft 10.01 ft - 15.0 ft, Gray and white, Sulfidic and carbonaceous biotite-muscovite-plagioclase-quartz SCHIST, rust staining along open foliation and joint planes. Moderately hard, Slightly weathered, Fair rock, NX, RMR=46	>50 (>100)					R-1 (30)	92 (57)	4
10.0 - 15.0		15.0 ft - 20.0 ft, Gray and white, Sulfidic and carbonaceous biotite-muscovite-plagioclase-quartz SCHIST, foliation planes and joints are tight and unweathered. Moderately hard, Unweathered, Good rock, NX, RMR=66						R-2 (30-40)	98 (98)	5
15.0 - 20.0		Hole stopped @ 20.0 ft								

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

ABUTMENT 2
TOP OF FOOTING EL. 650.00

BORING LOG: STOWE BO 1446(37).DPT VERMONT AOT.GIT 12/18/18

Boring Crew: Brochu, Emerson, Judkins
 Date Started: 8/28/18 Date Finished: 8/28/18
 VTSPG NAD83: N 710246.30 ft E 1575523.40 ft
 Station: 12+92 Offset: 2 RT
 Ground Elevation: 657.0 ft

Casing Sampler
 Type: WASH BORE SS
 I.D.: 4 in 1.5 in
 Hammer Wt: 140 lb. 140 lb.
 Hammer Fall: 30 in. 30 in.
 Hammer/Rod Type: Auto/AWJ
 Rig: CME 45C SKID CE = 1.42

Groundwater Observations
 Date Depth (ft) Notes
 Not Recorded.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0.0 - 0.75	Asphalt	Asphalt, 0.0 ft - 0.75 ft					
0.75 - 2.5	Field Class.	Field Class., SaGr, brn, Moist, Rec. = 1.4 ft	11-14-16-16 (30)				
2.5 - 5.0	Field Class.	Field Class., SaGr w/ broken rock, brn, Moist, Rec. = 0.5 ft	3-2-2-1 (4)				
5.0 - 10.0	Field Class.	Field Class., SaGr w/ broken rock, brn, Moist, Rec. = 0.9 ft	6-8-15-20 (23)				
10.0 - 15.0	Field Class.	Field Class., SaGr, brn, Moist, Rec. = 1.0 ft	9-12-12-10 (24)				
15.0 - 20.0	Hole stopped @ 20.0 ft						

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

ABUTMENT 1
 BOTTOM OF PILE CAP EL. 648.00

ABUTMENT 1
 ESTIMATED PILE TIP EL. 635.00

BORING LOG: STOWE BO 1446(37) VERMONT AOT.GDT 12/18/18

Boring Crew: Brochu, Gonyaw, Emerson
 Date Started: 11/26/18 Date Finished: 11/26/18
 VTSPG NAD83: N 710246.80 ft E 1575522.20 ft
 Station: 12+91 Offset: 2 RT
 Ground Elevation: 657.0 ft

Casing Sampler
 Type: WASH BORE SS
 I.D.: 4 in 1.5 in
 Hammer Wt: 140 lb. 140 lb.
 Hammer Fall: 30 in. 30 in.
 Hammer/Rod Type: Auto/AWJ
 Rig: CME 45C SKID CE = 1.42

Groundwater Observations
 Date Depth (ft) Notes
 11/26/18 10.4 WT During drilling.

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. (ft)	Drill Rate (min/ft)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0.0 - 0.7	Asphalt	Asphalt, 0.0 ft - 0.7 ft								
0.7 - 20.0	Field Note: Blind bore to bedrock.									
18.9 - 23.9	18.9 ft - 23.9 ft, Silvery-gray to white, Sulfidic, muscovite-plagioclase-quartz SCHIST, Open foliation planes and joints are slightly rusty. Core is pitted/vuggy from 21.9 ft bgs to 22.4 ft bgs. Moderately hard, Very slightly weathered, Fair rock, NX		R-1 (30-40)	88 (68)	3					
20.0 - 22.5	Hole stopped @ 23.9 ft									

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

ABUTMENT 1
 BOTTOM OF PILE CAP EL. 648.00

ABUTMENT 1
 ESTIMATED PILE TIP EL. 635.00

BORING LOG: STOWE BO 1446(37) VERMONT AOT.GDT 12/18/18

Boring Crew: Judkins, Emerson, Whitlock
 Date Started: 9/24/18 Date Finished: 9/25/18
 VTSPG NAD83: N 710257.80 ft E 1575530.50 ft
 Station: 12+94 Offset: 13 LT
 Ground Elevation: 657.0 ft

Casing Sampler
 Type: WASH BORE SS
 I.D.: 4 in 1.5 in
 Hammer Wt: 140 lb. 140 lb.
 Hammer Fall: 30 in. 30 in.
 Hammer/Rod Type: Auto/AWJ
 Rig: CME 45C SKID CE = 1.42

Groundwater Observations
 Date Depth (ft) Notes
 09/25/18 11.8 WT During Drilling.

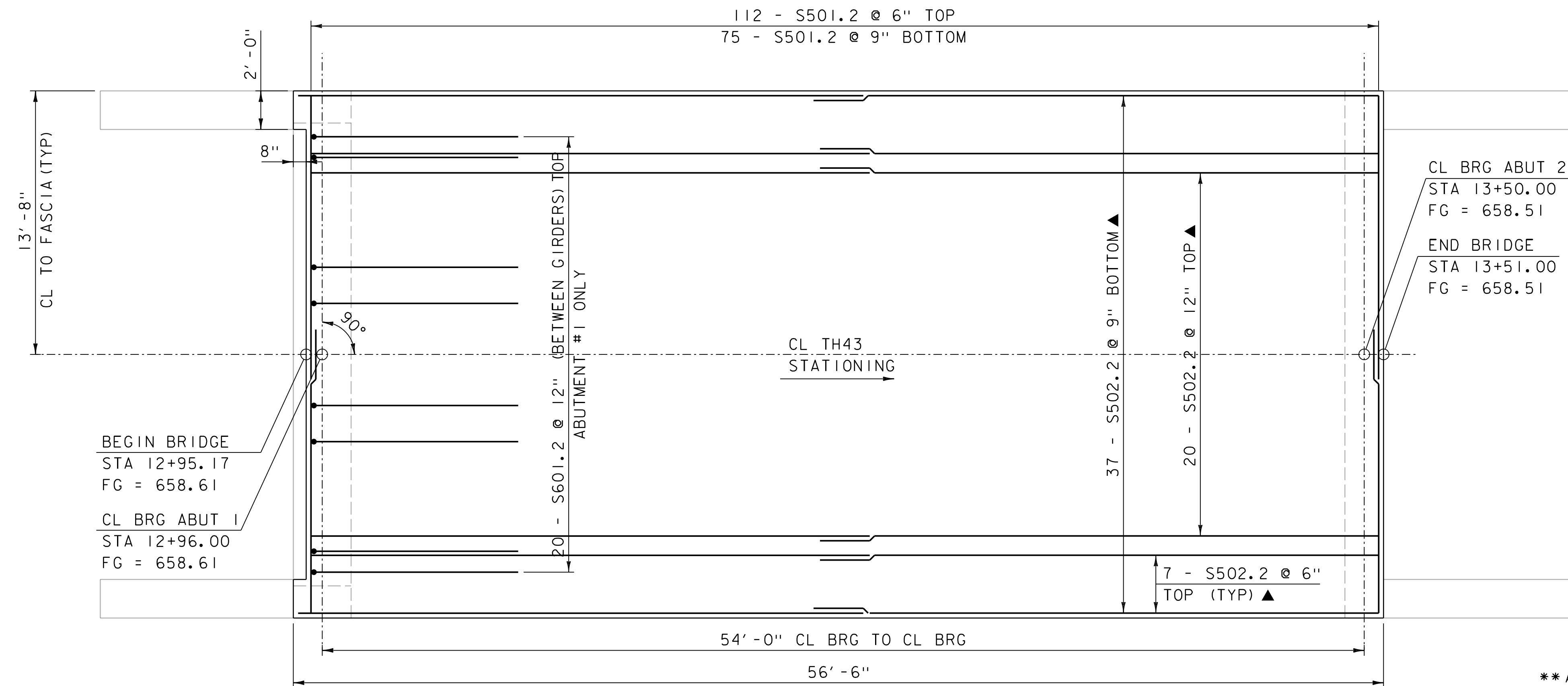
Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. (ft)	Drill Rate (min/ft)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0.0 - 0.38	Asphalt	Asphalt, 0.0 ft - 0.38 ft								
0.38 - 2.5	Field Class.	Field Class., GrSa, brn, Moist, Rec. = 0.9 ft				10-9-9-10 (18)				
2.5 - 5.0	Field Class.	Field Class., SiSa w/ wood, brn, Moist, Rec. = 0.9 ft				4-2-5-5 (7)				
5.0 - 10.0	Field Class.	Field Class., GrSa, gry, Moist, Rec. = 1.2 ft				18-16-26-21 (42)				
10.0 - 15.0	Field Class.	Field Class., SiSa w/ broken rock, brn, Moist, Rec. = 0.7 ft				4-6-11-19 (17)				
15.0 - 20.0	19.8 ft - 24.8 ft, Silver-gray to white, Sulfidic and carbonaceous biotite-muscovite-plagioclase-quartz SCHIST, rust along open foliation planes. From 23.6 ft to 24.2 ft rust staining is more pronounced. Moderately hard, Slightly to moderately weathered, Fair rock, NX, RMR=58		R-1 (40-50)	100 (76)	2					
20.0 - 22.5	Hole stopped @ 23.9 ft									

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

ABUTMENT 1
 BOTTOM OF PILE CAP EL. 648.00

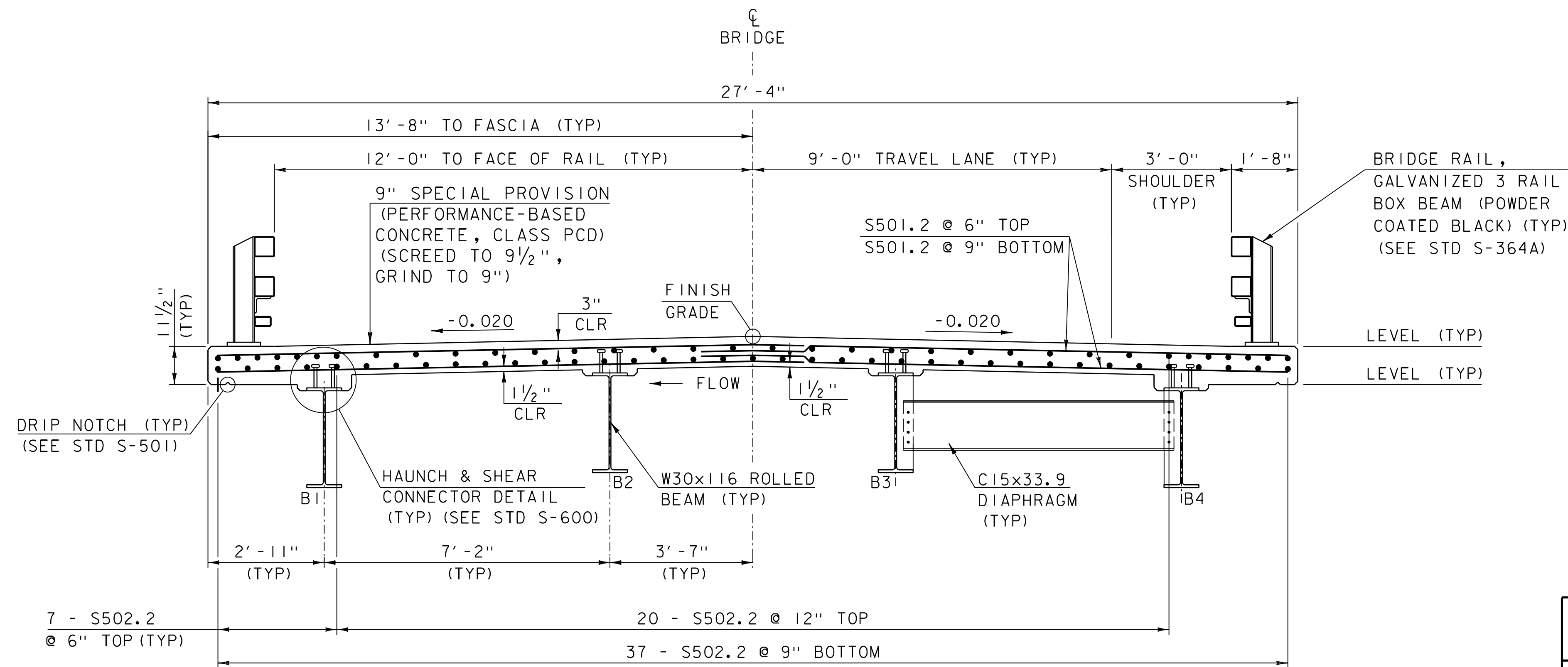
ABUTMENT 1
 ESTIMATED PILE TIP EL. 635.00

BORING LOG: STOWE BO 1446(37) VERMONT AOT.GDT 12/18/18



DECK REINFORCING PLAN
SCALE 1/4" = 1'-0"

** ADJUST LONGITUDIAL BARS TO GO BETWEEN ANCHOR BOLTS AS NEEDED TO MAINTAIN CLEAR COVER

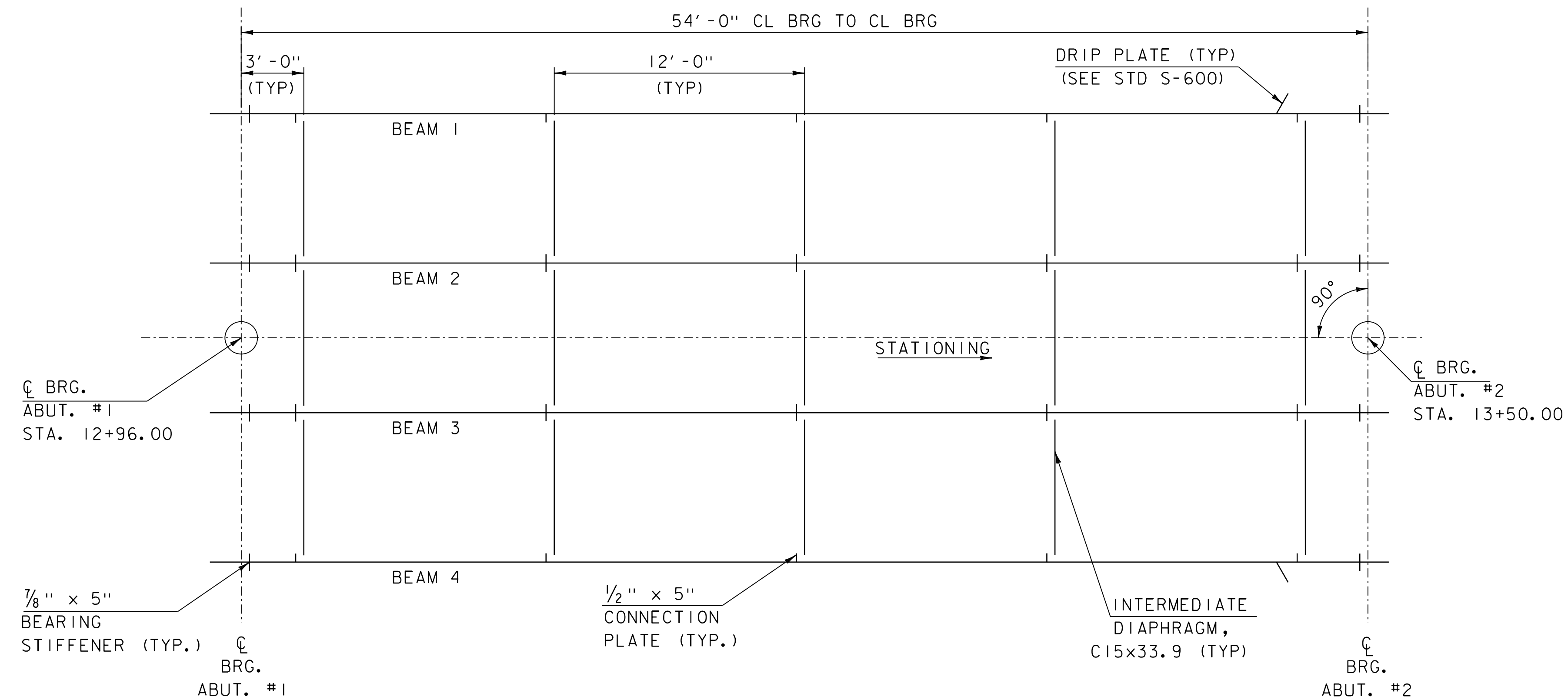


DECK REINFORCING SECTION
SCALE 1/2" = 1'-0"

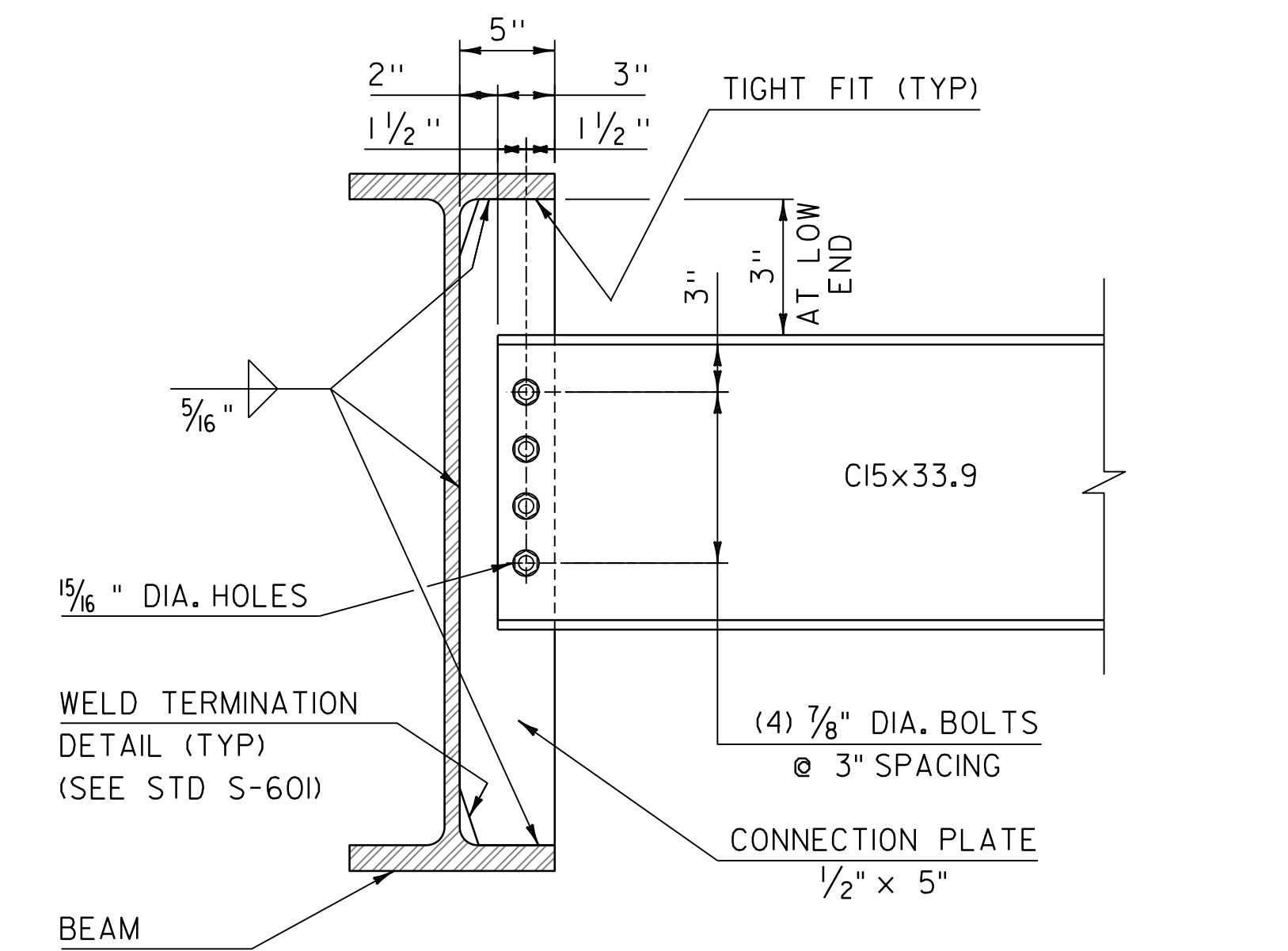
NOTE:
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-7" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROJECT NAME: STOWE
PROJECT NUMBER: BO 1446(37)

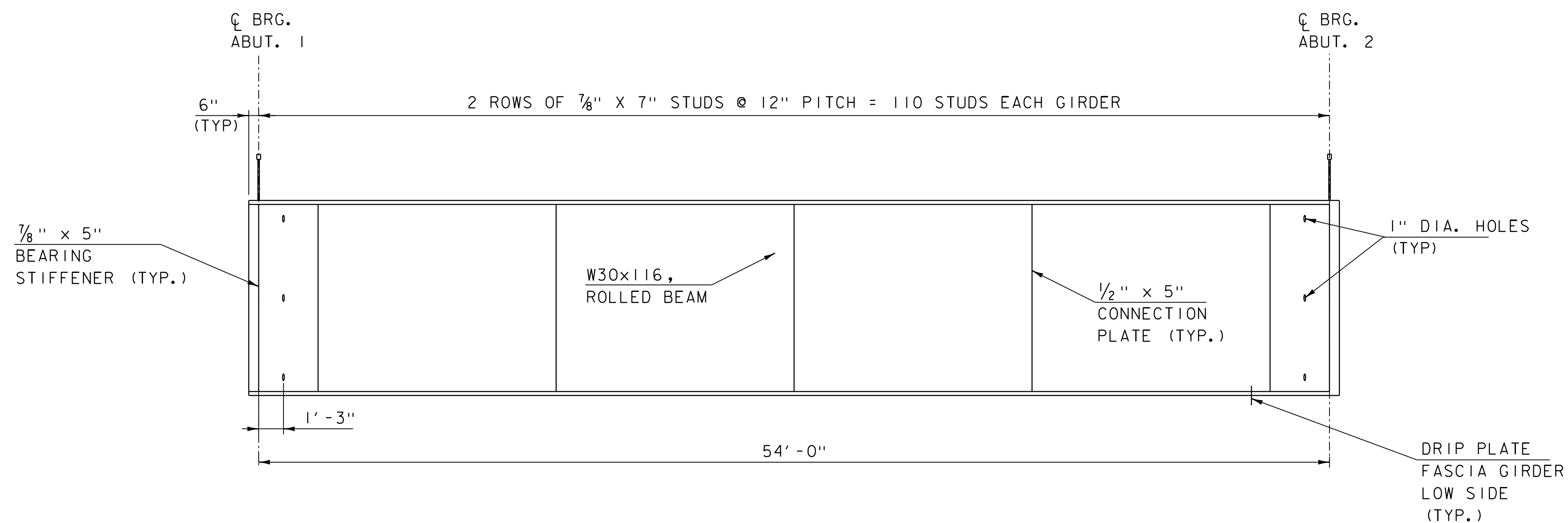
FILE NAME: sl2j660sup.dgn PLOT DATE: 2/9/2024
PROJECT LEADER: C. BURRALL DRAWN BY: R. PELLETT
DESIGNED BY: C. BURRALL CHECKED BY: C. BURRALL
DECK PLAN & TYPICAL SECTION SHEET 21 OF 84



FRAMING PLAN
SCALE 1/4" = 1'-0"



INTERMEDIATE DIAPHRAGMS
NOT TO SCALE
(SEE STD S-601) FOR ABUTMENT BEARING STIFFENER DETAILS



BEAM ELEVATION
HORIZONTAL SCALE 1/4" = 1'-0"
VERTICAL SCALE NTS

NOTES:

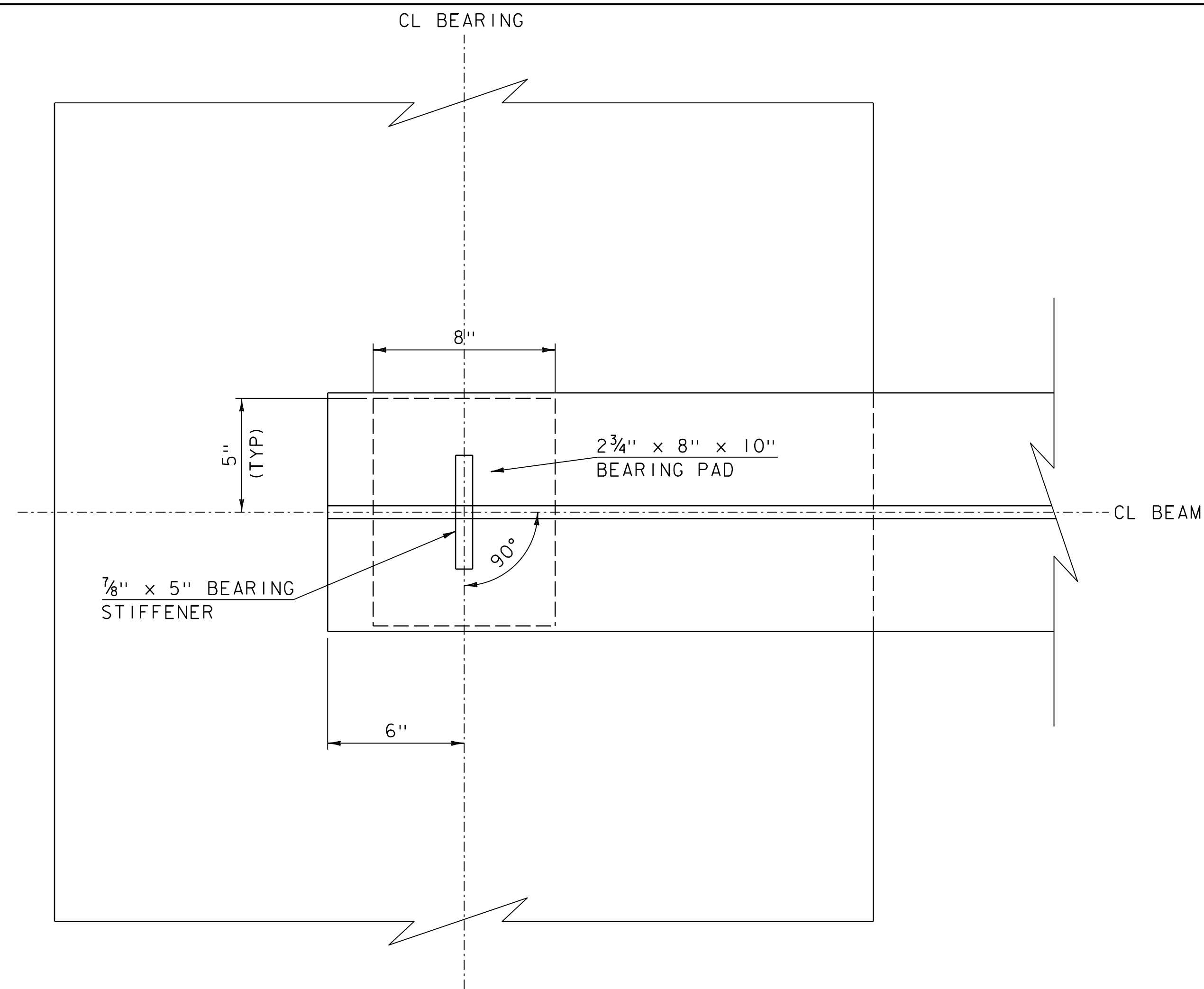
- DEAD LOAD DEFLECTION INCLUDES: BEAM, DIAPHRAGMS, DECK & BRIDGE RAIL.
- CVN - SHALL MEET CHARPY V-NOTCH REQUIREMENTS FOR MAIN MEMBERS AS SPECIFIED IN SECTION 714.

CAMBER & DEFLECTION											
	0L	0.1L	0.2L	0.3L	0.4L	0.5L	0.6L	0.7L	0.8L	0.9L	1.0L
Steel Deflection	0	1/16	1/8	1/8	3/16	3/16	3/16	1/8	1/8	1/16	0
Slab and Super	0	3/8	11/16	15/16	1 1/16	1 1/8	1 1/16	15/16	11/16	3/8	0
Total	0	7/16	13/16	1 1/16	1 1/4	1 5/16	1 1/4	1 11/16	13/16	7/16	0
Residual Camber	0	3/8	5/8	13/16	15/16	1	15/16	13/16	5/8	3/8	0
Total Camber	0	3/4	1 7/16	1 15/16	2 1/4	2 5/16	2 1/4	1 15/16	1 7/16	3/4	0

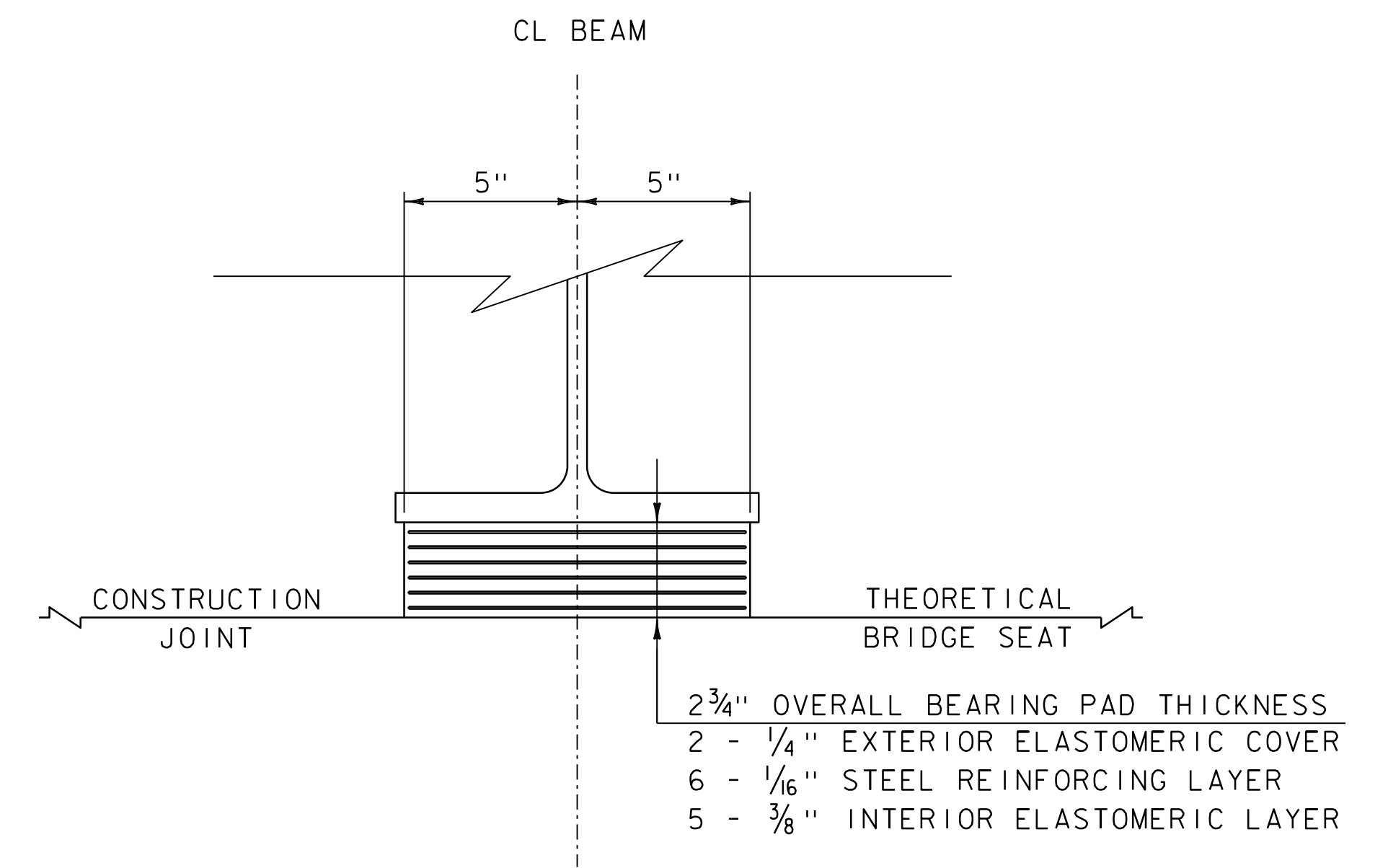
PROJECT NAME: STOWE
PROJECT NUMBER: BO 1446(37)

FILE NAME: sl2j660sup.dgn
PROJECT LEADER: C. BURRALL
DESIGNED BY: C. BURRALL
FRAMING PLAN & BEAM DETAILS

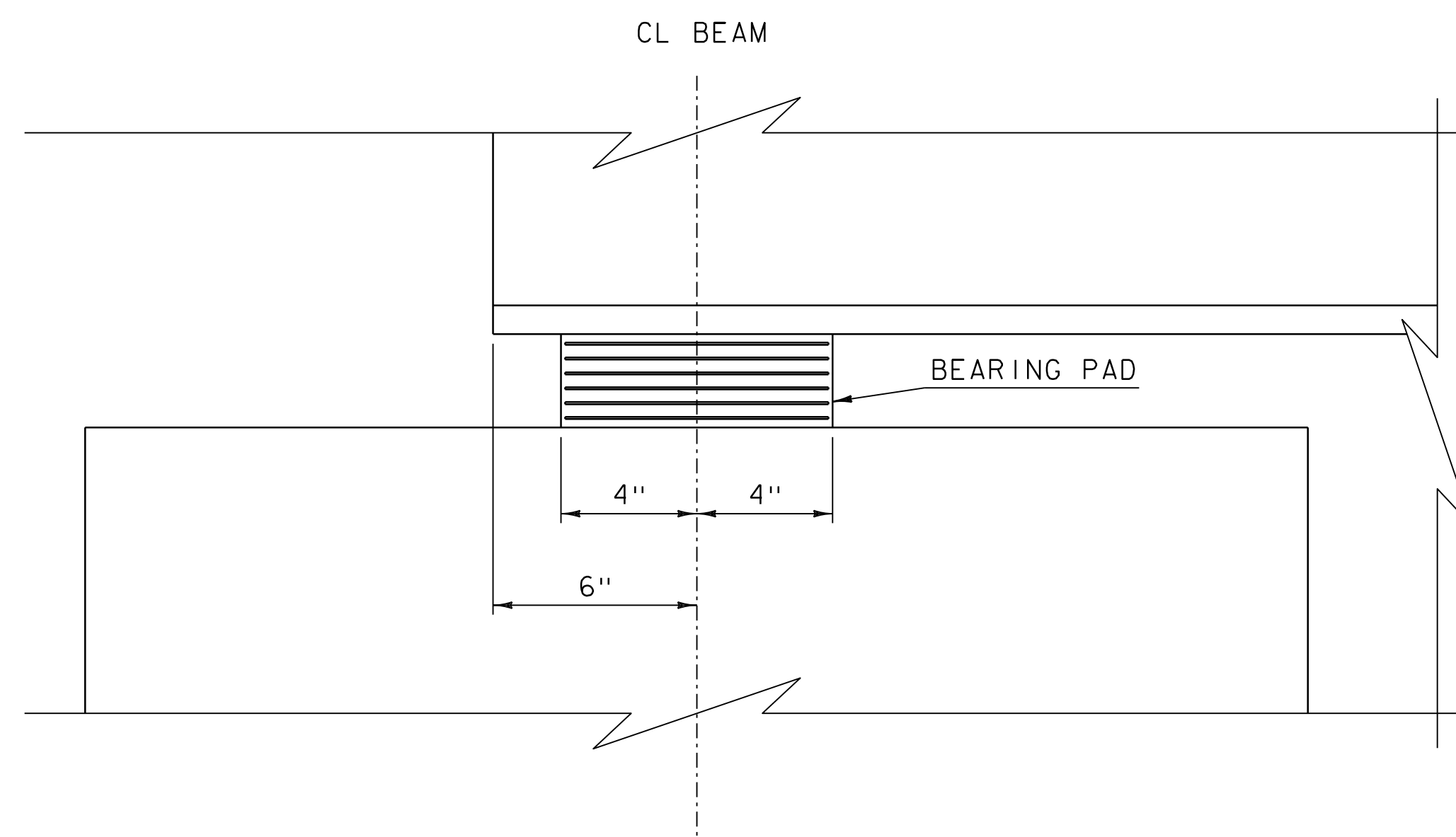
PLOT DATE: 2/9/2024
DRAWN BY: A. MANN
CHECKED BY: C. BURRALL
SHEET 22 OF 84



BEARING PLAN
SCALE 3" = 1'-0"



BEARING SECTION
SCALE 3" = 1'-0"

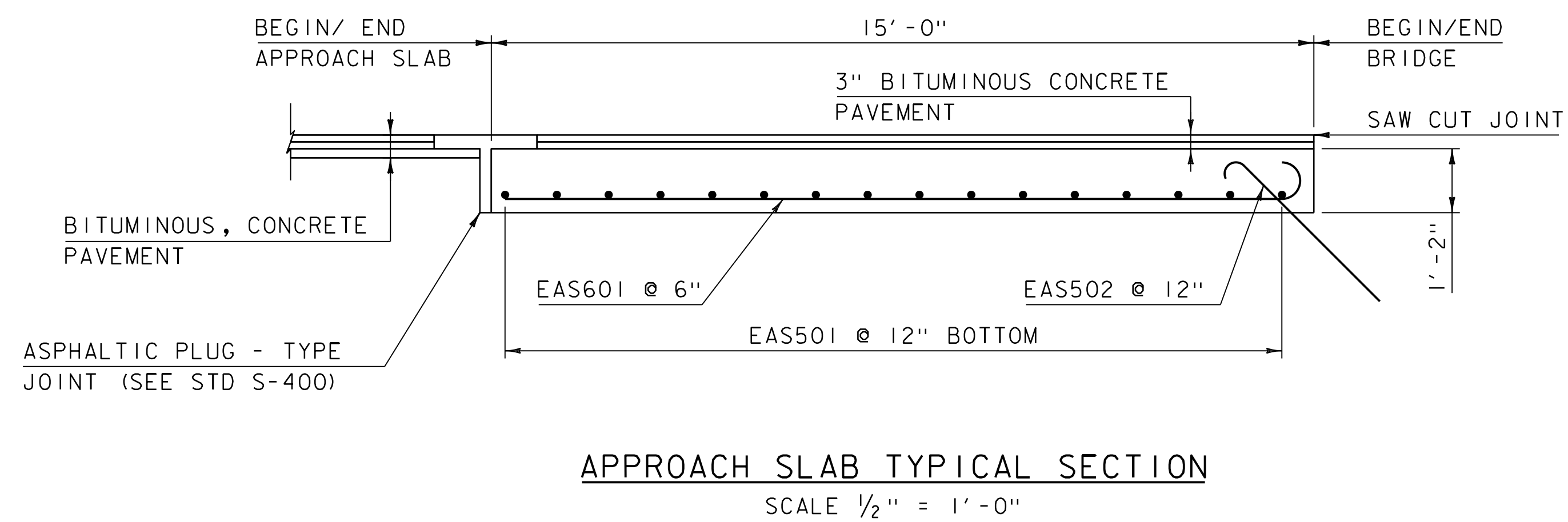
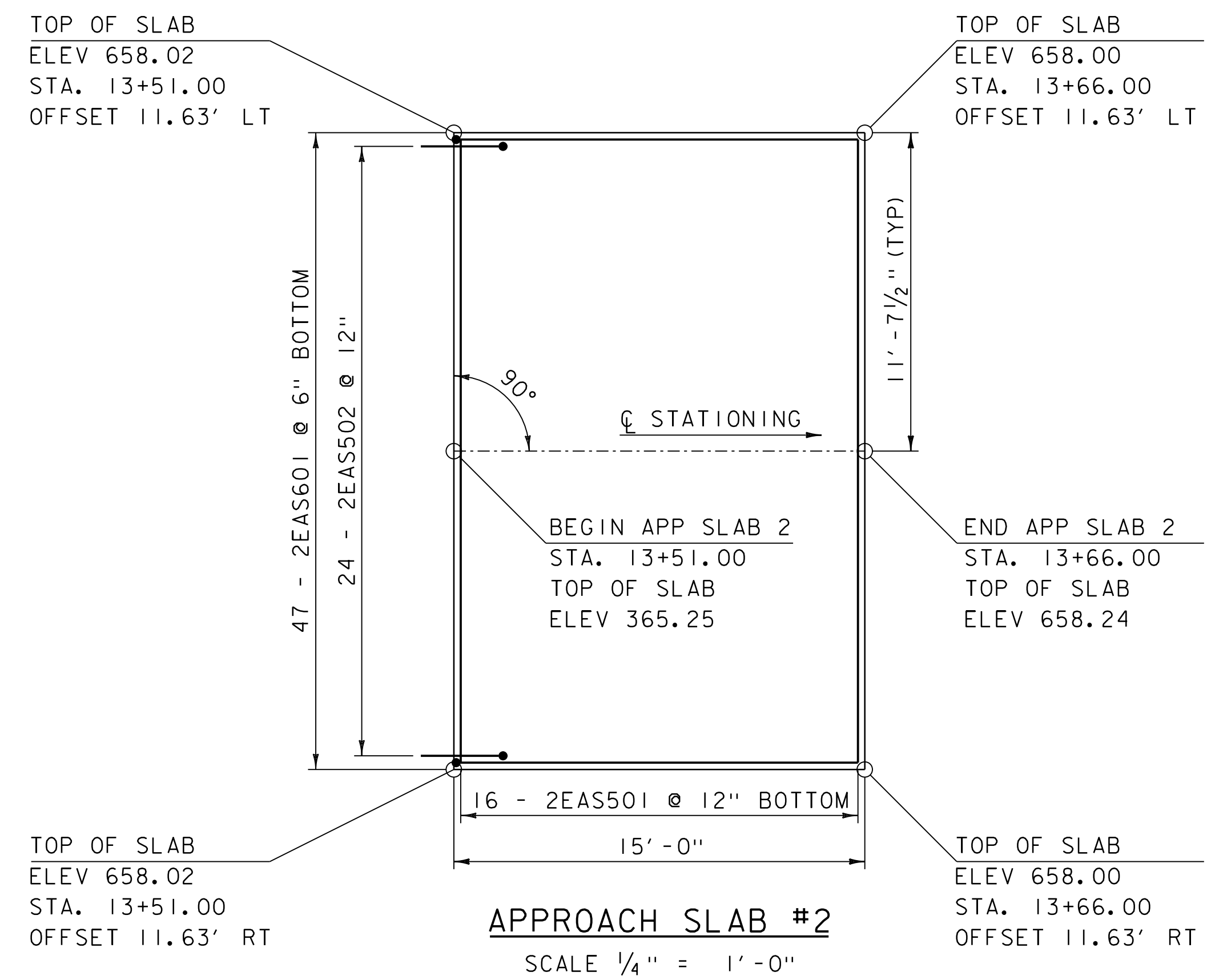
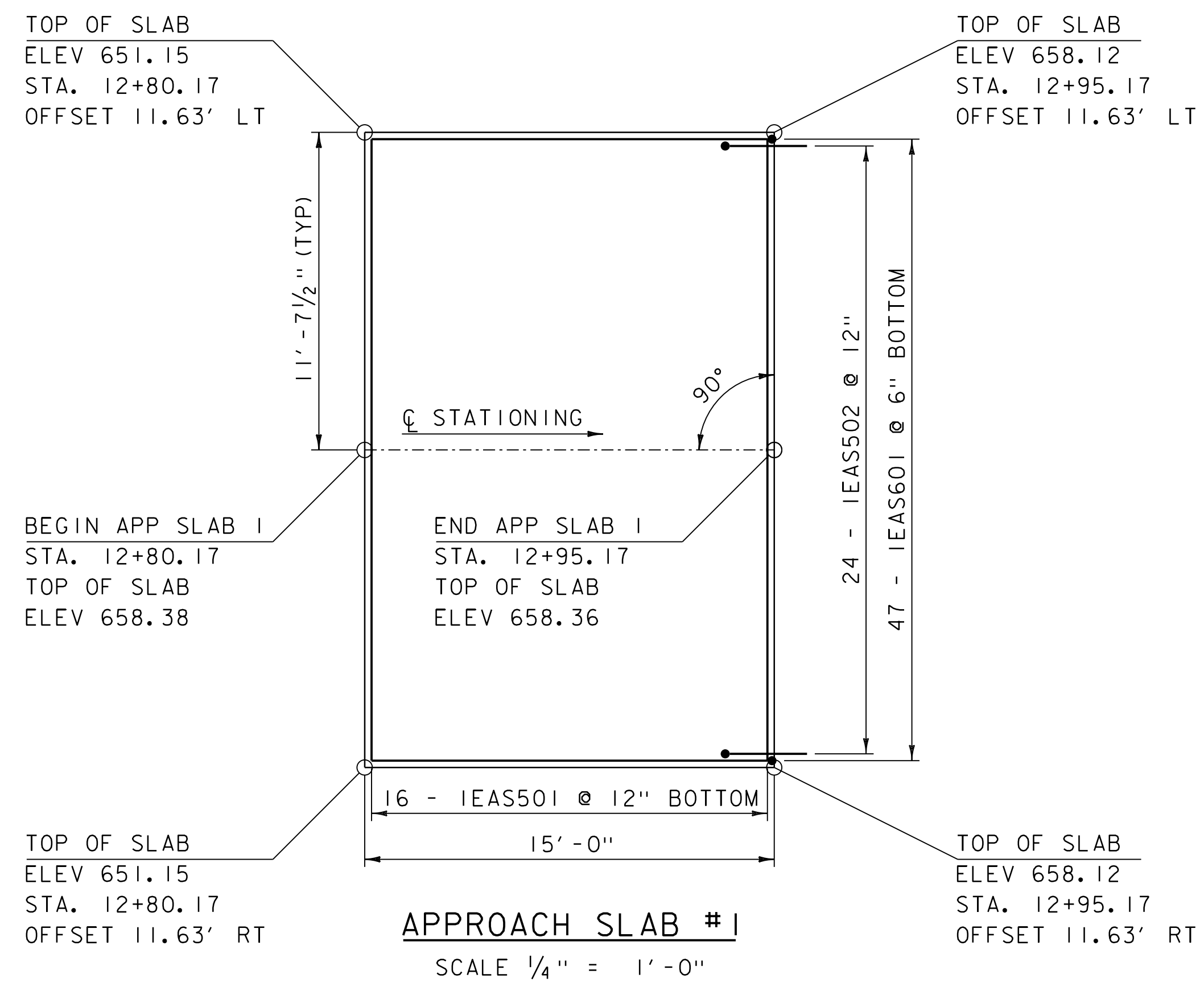


BEARING ELEVATION
SCALE 3" = 1'-0"

BEARING DEVICE NOTES

1. BEARINGS SHALL BE PAID FOR UNDER ITEM 531.17 "BEARING DEVICE ASSEMBLY, STEEL REINFORCED ELASTOMERIC PAD" AND SHALL CONFORM TO APPLICABLE SUBSECTIONS OF SECTIONS 531 AND 731.
2. ALL REINFORCEMENT BETWEEN LAYERS OF ELASTOMERIC SHALL BE STEEL MEETING ASTM A36. ALL INTERNAL STEEL PLATES SHALL BE SAND BLASTED AND FREE OF COATINGS, RUST, AND MILL SCALE. THE PLATES SHALL BE FREE OF SHARP EDGES AND BURRS.
3. STEEL REINFORCED ELASTOMERIC PAD BEARINGS SHALL HAVE A MINIMUM OF 1/8" EDGE SEAL OF ELASTOMER INTEGRAL WITH THE BEARING OVER ALL INTERNAL PLATES.

PROJECT NAME: STOWE	
PROJECT NUMBER: BO 1446(37)	
FILE NAME: sl2j660sup.dgn	PLOT DATE: 2/9/2024
PROJECT LEADER: C. BURRALL	DRAWN BY: R. PELLETT
DESIGNED BY: A. MANN	CHECKED BY: C. BURRALL
BEARING DETAILS	SHEET 23 OF 84

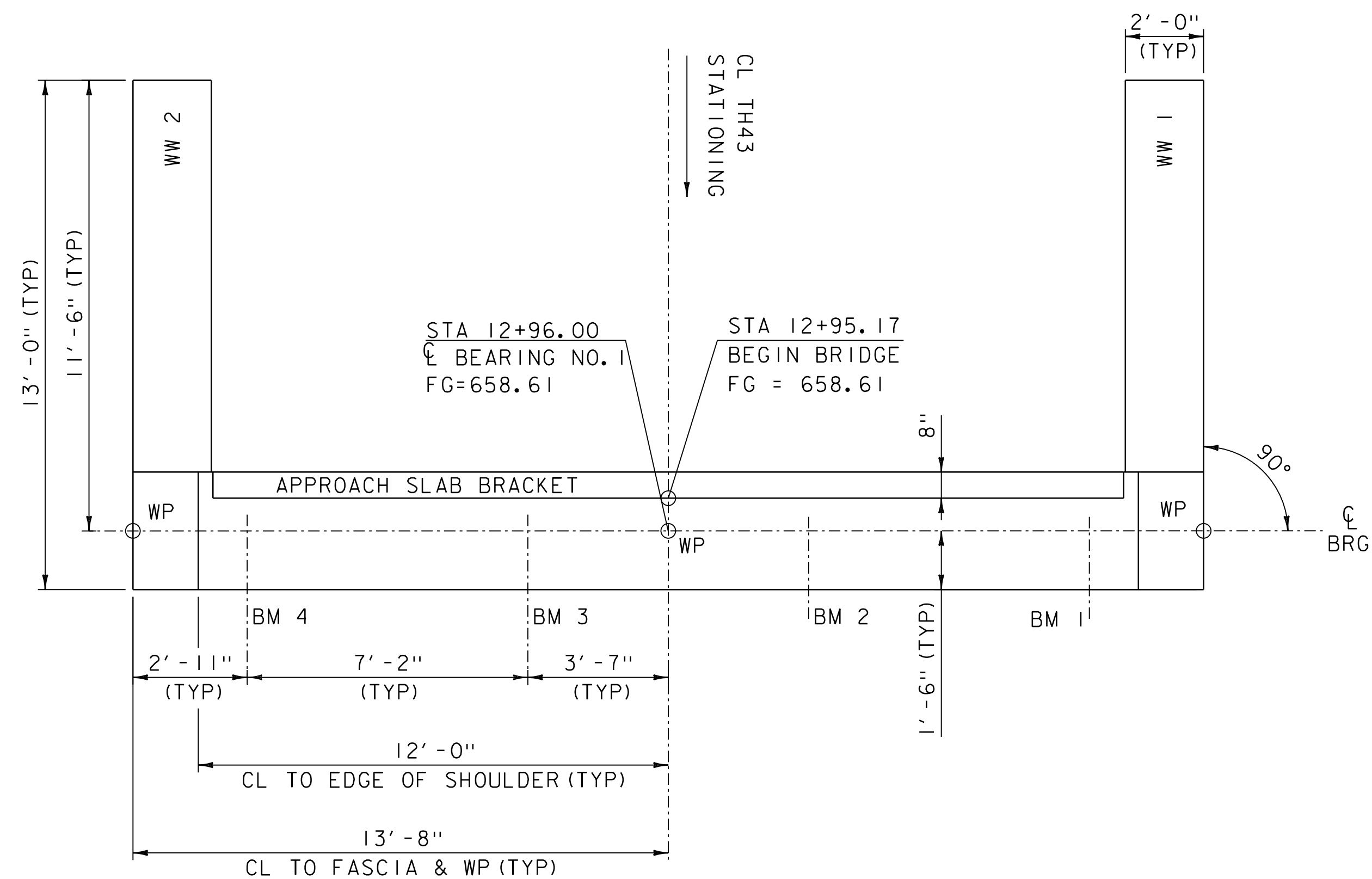


NOTE:
 NF = NEAR FACE
 FF = FAR FACE
 EF = EACH FACE
 ▲ = CUT TO FIT IN FIELD
 3" CLEAR, UNLESS OTHERWISE
 SPECIFIED ON THE PLANS.
 2'-2" BAR LAP UNLESS OTHERWISE
 SPECIFIED ON THE PLANS.

PROJECT NAME: STOWE
 PROJECT NUMBER: BO 1446(37)

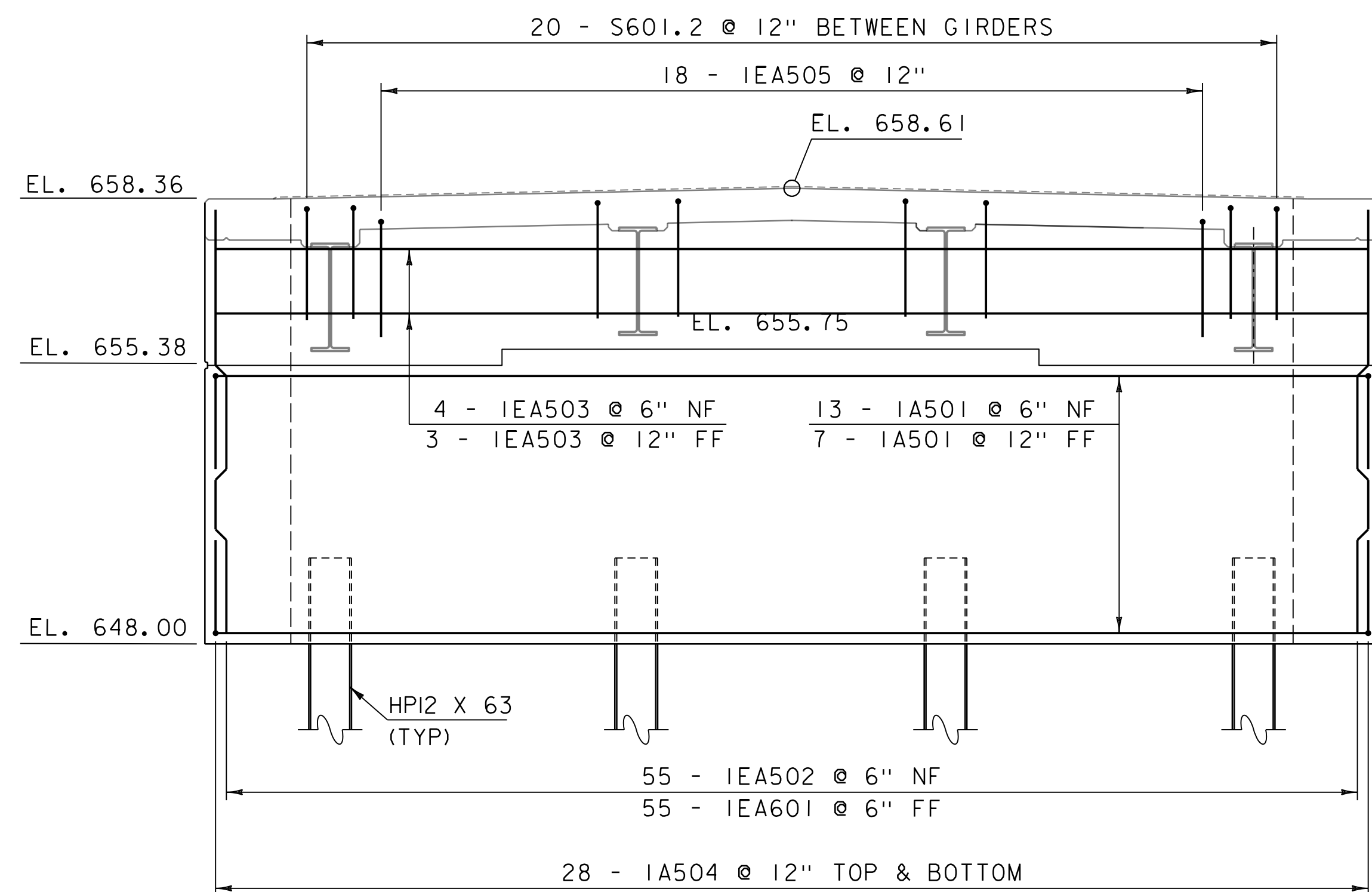
FILE NAME: sl2j660sup.dgn
 PROJECT LEADER: C. BURRALL
 DESIGNED BY: R. PELLETT
 APPROACH SLABS

PLOT DATE: 2/9/2024
 DRAWN BY: R. PELLETT
 CHECKED BY: C. BURRALL
 SHEET 24 OF 84



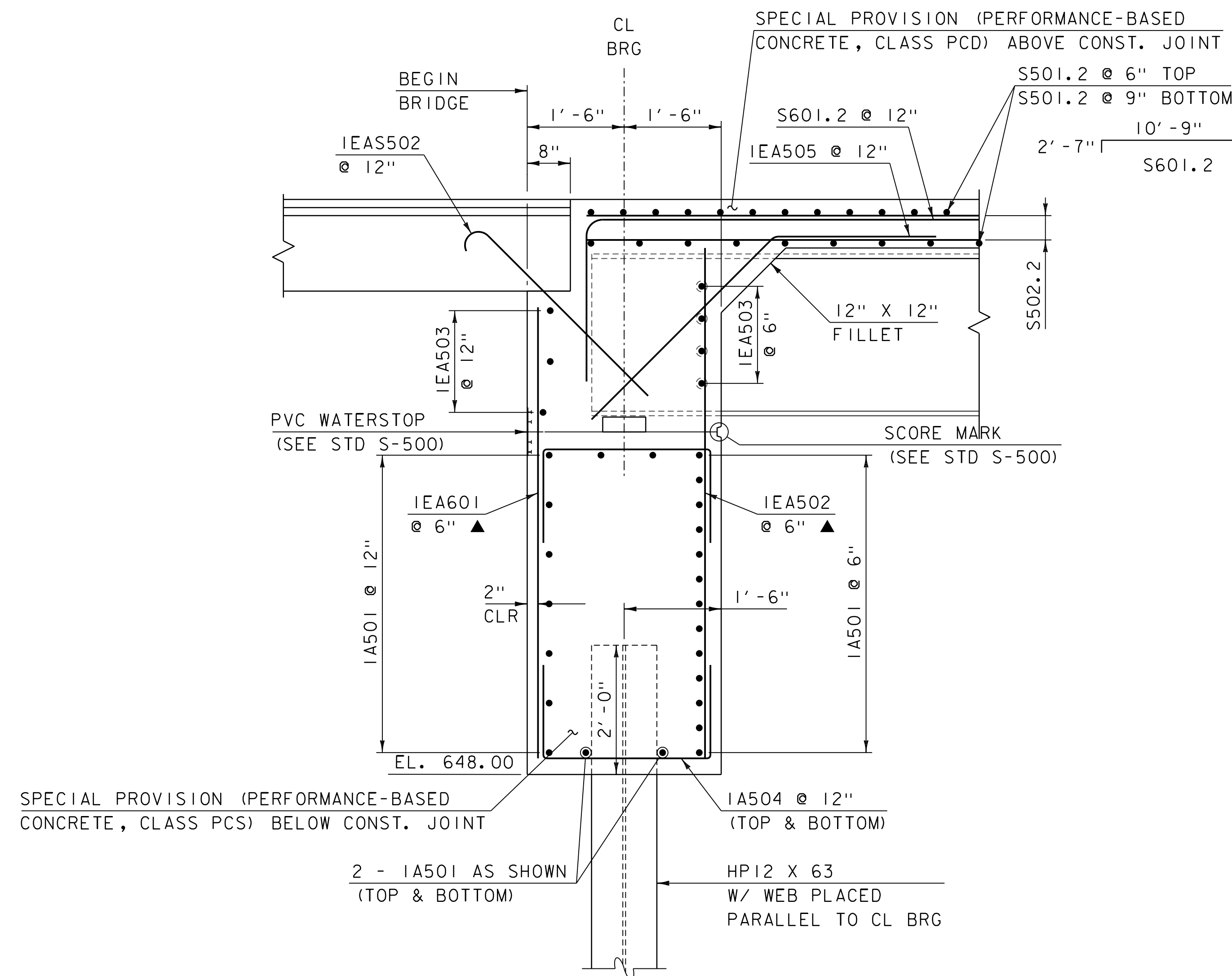
ABUTMENT NO. 1 PLAN

SCALE: 3/8" = 1'-0"



ABUTMENT NO. 1 ELEVATION

SCALE: 3/8" = 1'-0"



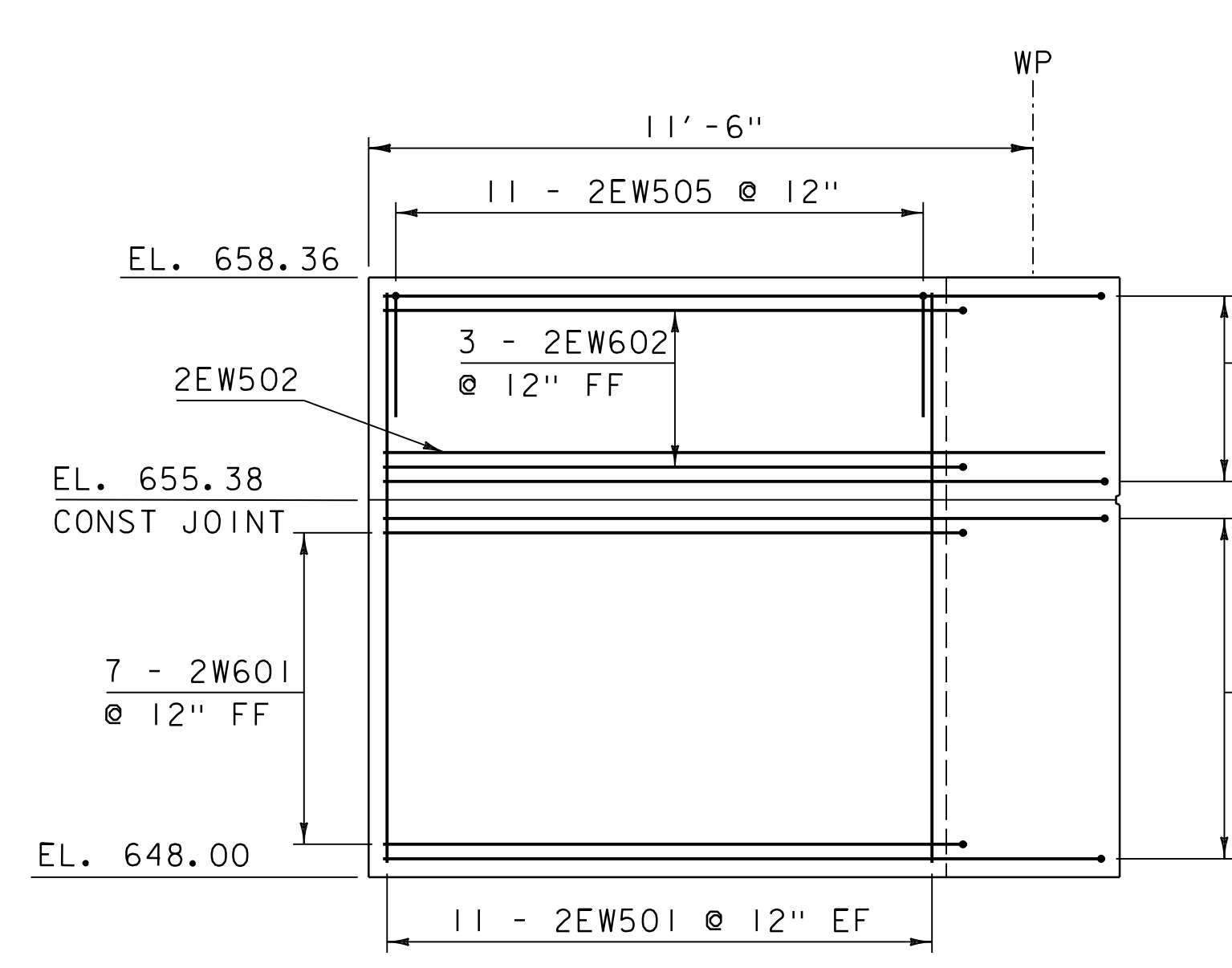
ABUTMENT NO. 1 TYPICAL SECTION

SCALE: 3/4" = 1'-0"

NOTE:

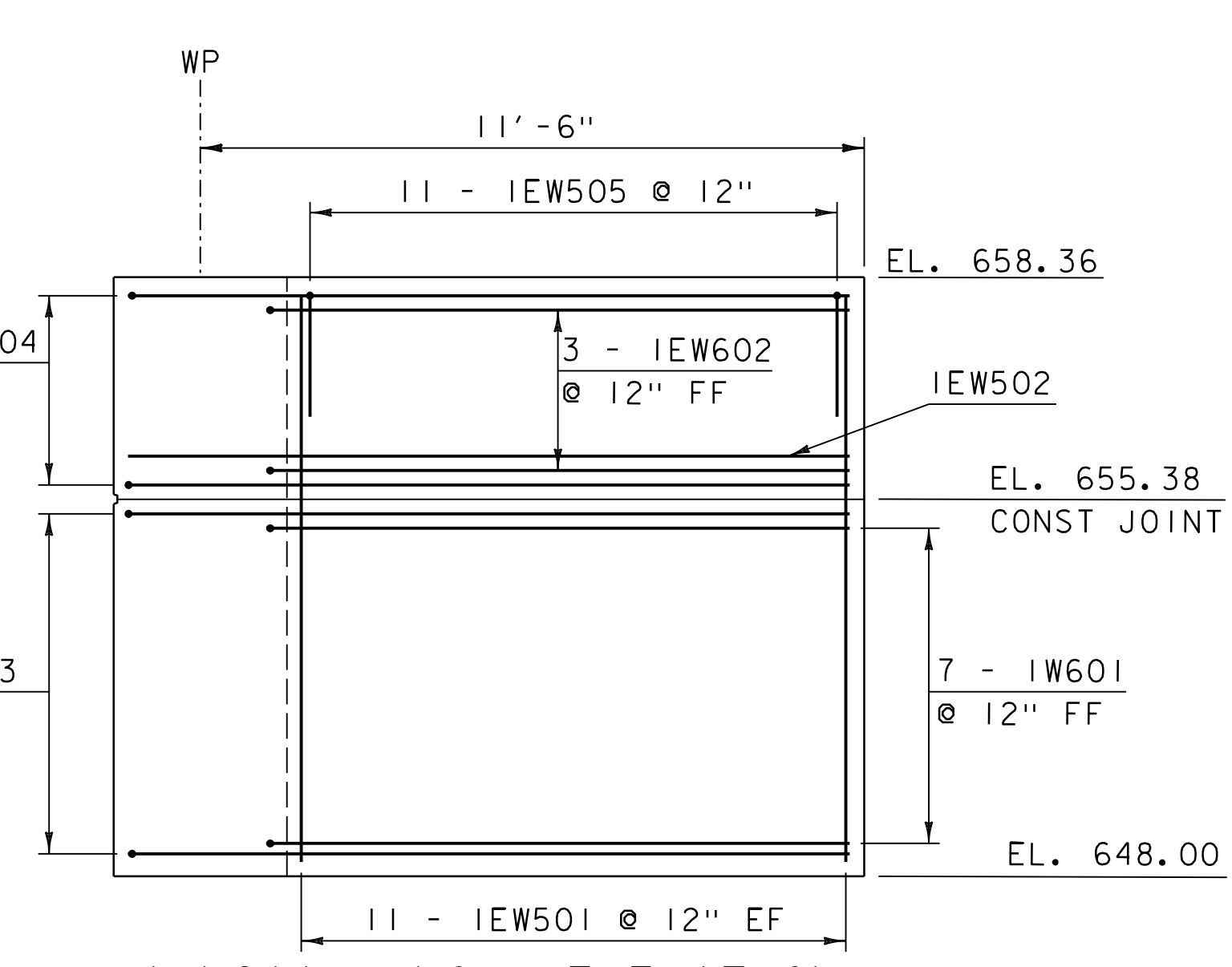
- NF = NEAR FACE
- FF = FAR FACE
- EF = EACH FACE
- ▲ = CUT TO FIT IN FIELD
- 3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
- 2'-4" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROJECT NAME: STOWE	
PROJECT NUMBER: BO 1446(37)	
FILE NAME: sl2j660sub.dgn	PLOT DATE: 2/9/2024
PROJECT LEADER: C. BURRALL	DRAWN BY: R. PELLETT
DESIGNED BY: A. MANN	CHECKED BY: C. BURRALL
ABUTMENT #1	SHEET 25 OF 84



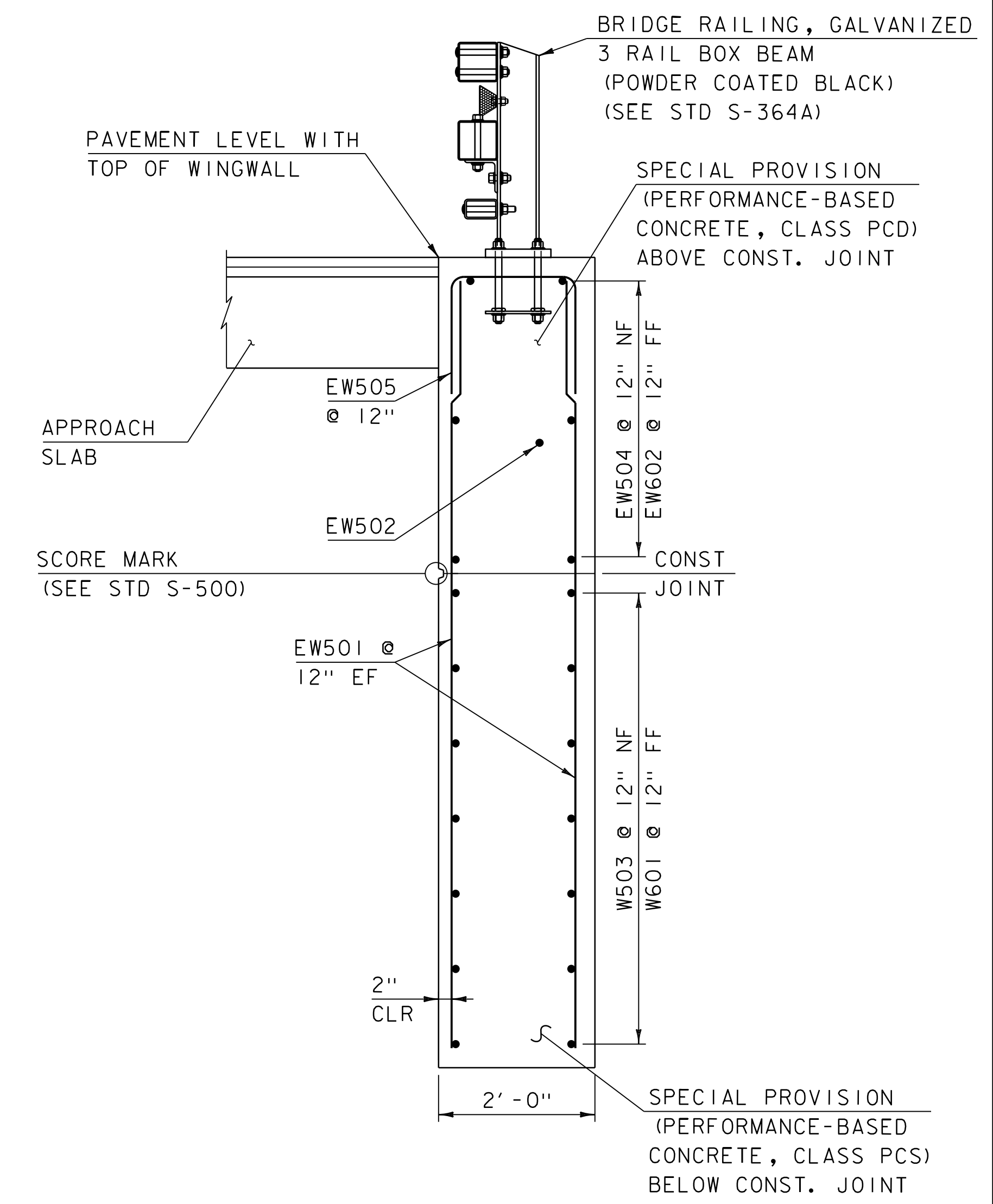
WINGWALL NO. 2 ELEVATION

SCALE: 3/8" = 1'-0"



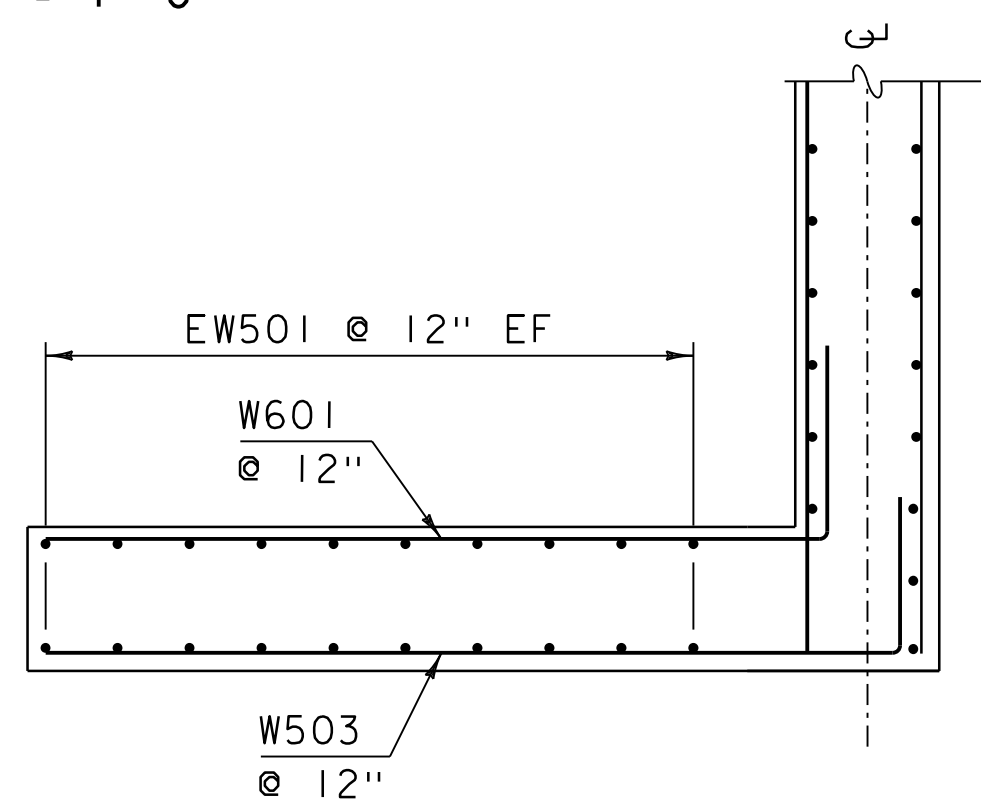
WINGWALL NO. 1 ELEVATION

SCALE: 3/8" = 1'-0"

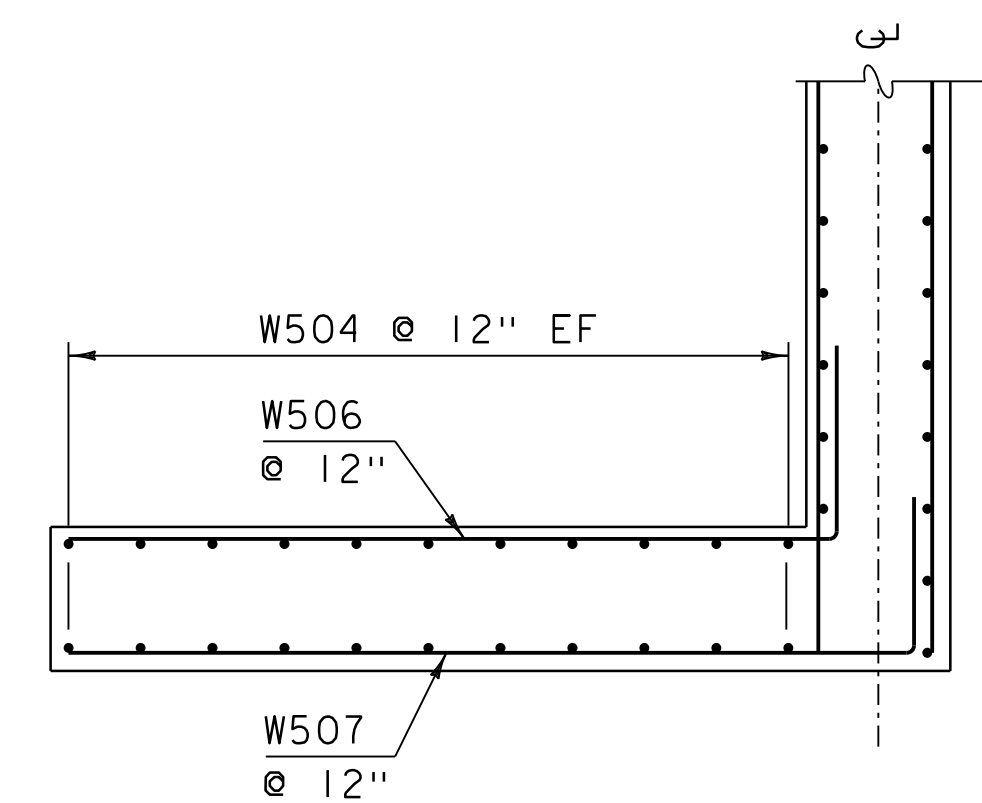


WINGWALL I & 2 TYPICAL SECTION

SCALE: 3/4" = 1'-0"

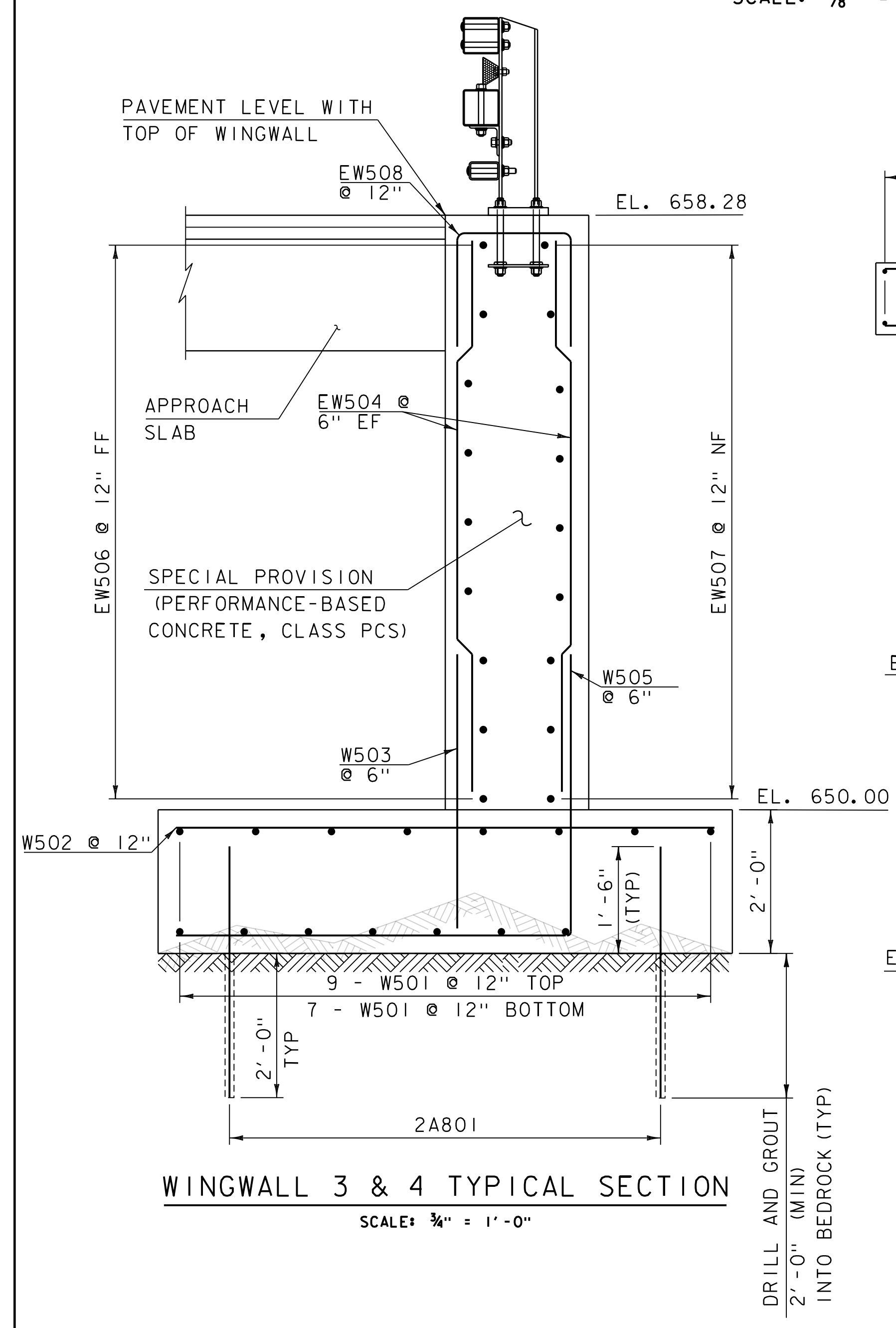


WINGWALL #1 & #2 CORNER REINFORCING



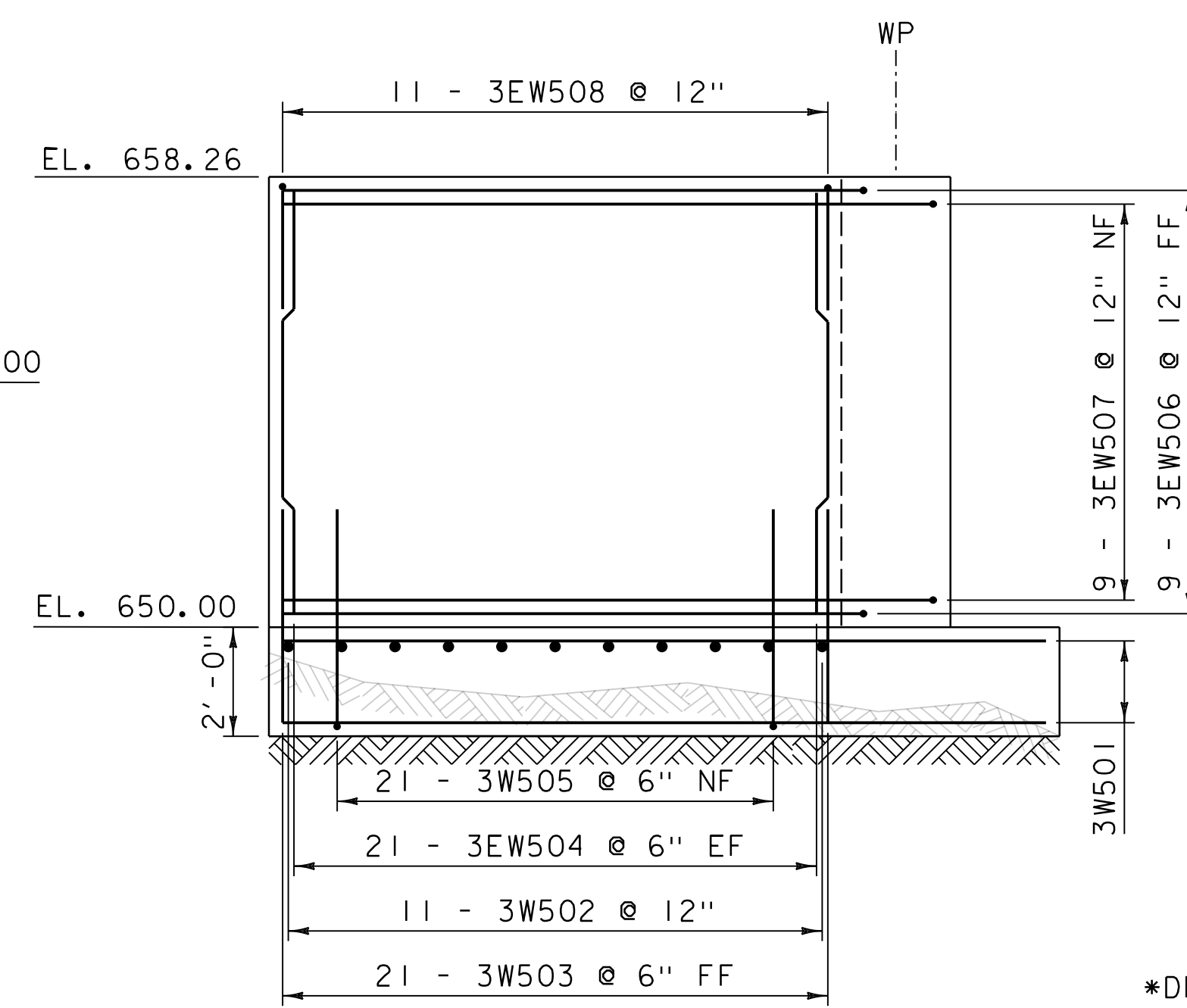
WINGWALL #3 & #4 CORNER REINFORCING

SCALE: 3/8" = 1'-0"



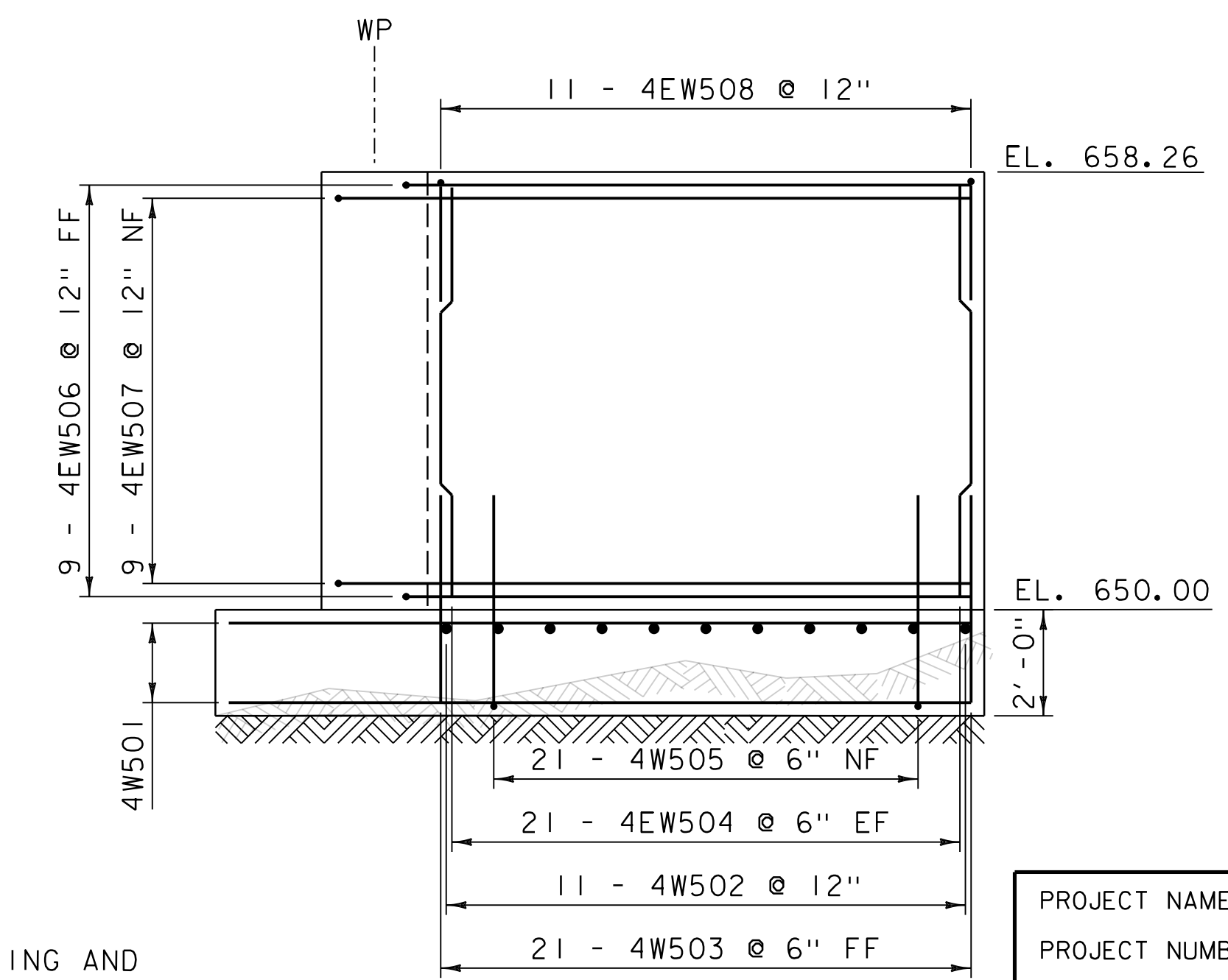
WINGWALL 3 & 4 TYPICAL SECTION

SCALE: 3/4" = 1'-0"



WINGWALL NO. 3 ELEVATION

SCALE: 3/8" = 1'-0"



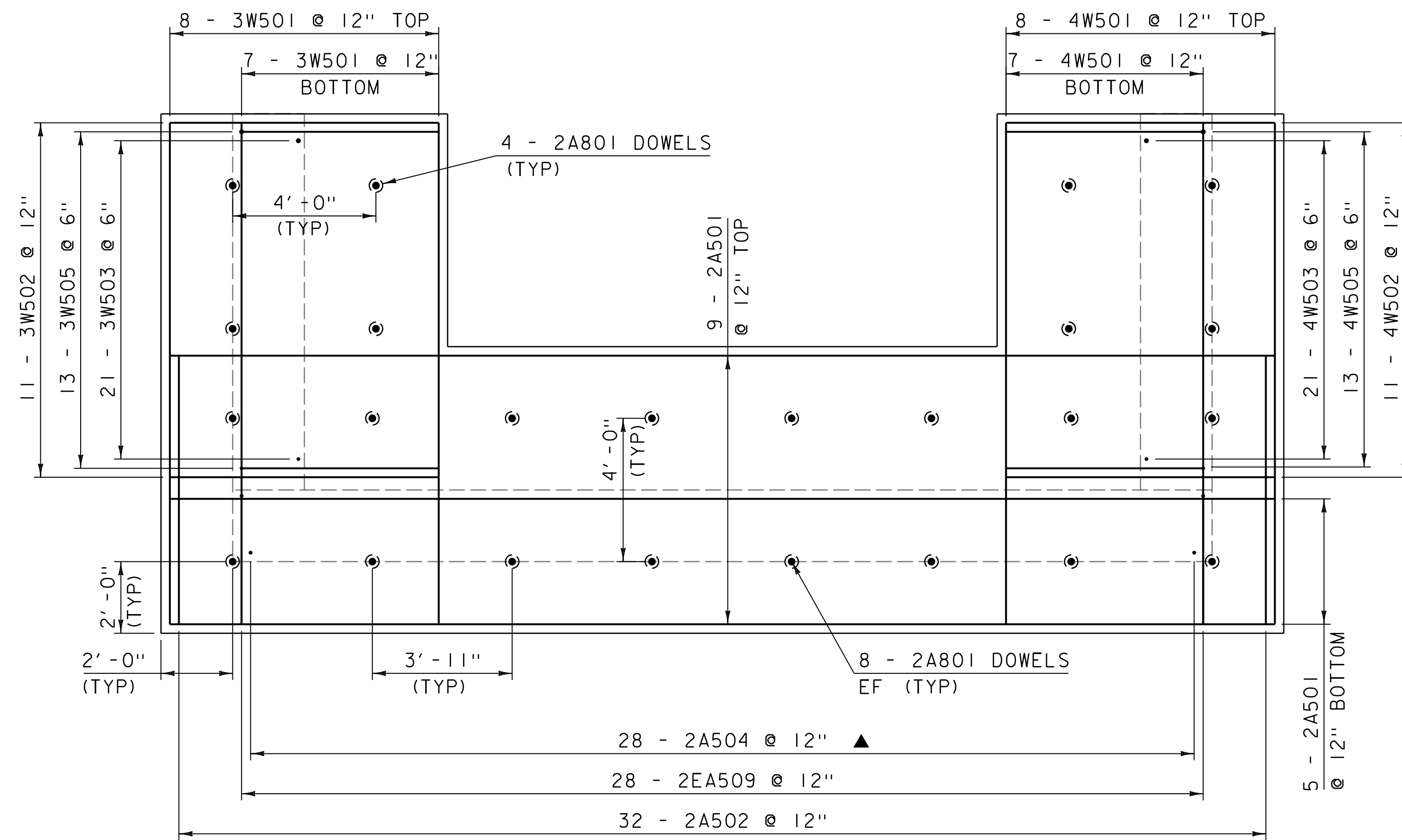
WINGWALL NO. 4 ELEVATION

SCALE: 3/8" = 1'-0"

*DRILLING AND GROUTING DOWELS OMITTED FOR CLARITY

NOTE:
 NF = NEAR FACE
 FF = FAR FACE
 EF = EACH FACE
 ▲ = CUT TO FIT IN FIELD
 3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
 2'-4" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROJECT NAME:	STOWE	FILE NAME:	sl2j660sub.dgn	PLOT DATE:	2/9/2024
PROJECT NUMBER:	BO 1446(37)	PROJECT LEADER:	C. BURRALL	DRAWN BY:	R. PELLETT
		DESIGNED BY:	A. MANN	CHECKED BY:	C. BURRALL
		WINGWALLS			SHEET 27 OF 84



ABUTMENT NO. 2 DOWEL PLACEMENT

SCALE: 3/8" = 1'-0"

NOTE:

NF = NEAR FACE
 FF = FAR FACE
 EF = EACH FACE
 ▲ = CUT TO FIT IN FIELD
 3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
 2'-4" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROJECT NAME: STOWE
 PROJECT NUMBER: BO 1446(37)

FILE NAME: sl2j660sub.dgn
 PROJECT LEADER: C. BURRALL
 DESIGNED BY: A. MANN
 ABUTMENT #2 FOOTING

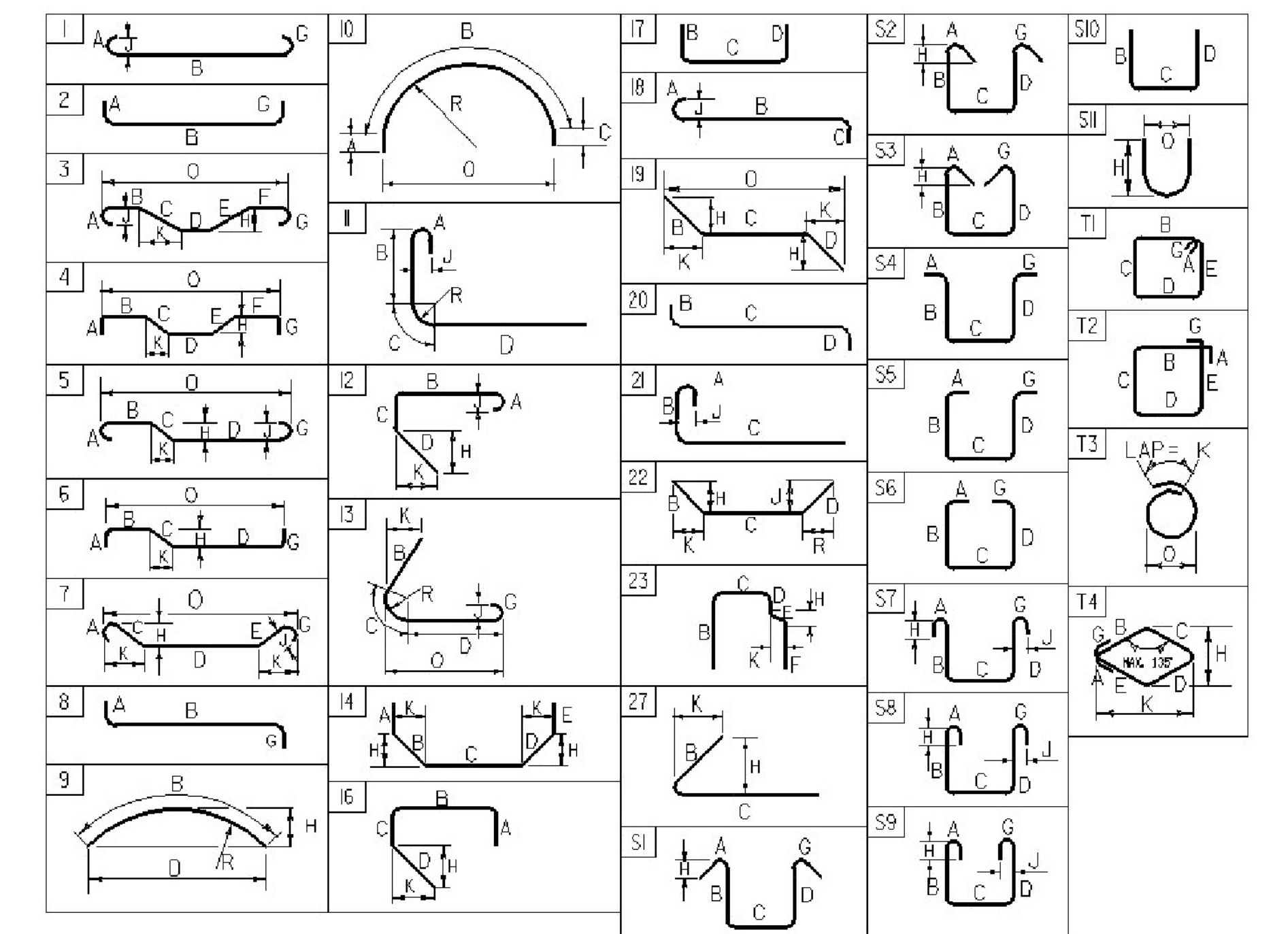
PLOT DATE: 2/9/2024
 DRAWN BY: R. PELLETT
 CHECKED BY: C. BURRALL
 SHEET 28 OF 84

REINFORCING STEEL SCHEDULE

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O	ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O			
DECK																		WINGWALL #3																				
374	5	14'- 8"	S501.2	STR	14'- 8"													16	5	14'- 0"	3W501	STR	14'- 0"															
▲ 142	5	29'- 4"	S502.2	STR	29'- 4"													11	5	7'- 6"	3W502	STR	7'- 6"															
																		21	5	3'- 11"	3W503	STR	3'- 11"															
20	6	13'- 4"	S601.2	17		2'- 7"	10'- 9"	---										42	5	7'- 9"	3EW504	STR	7'- 9"															
APPROACH SLAB #1																		WINGWALL #4																				
16	5	22'- 9"	1EAS501	STR	22'- 9"													21	5	9'- 5"	3W505	17		3'- 11"	5'- 6"	---												
24	5	4'- 2"	1EAS502	1	0'- 7"	3'- 7"							---			0'- 5"		9	5	12'- 11"	3EW506	17		2'- 2"	10'- 9"	---												
47	6	15'- 2"	1EAS601	1	0'- 8"	14'- 6"							---			0'- 8"		9	5	14'- 2"	3EW507	17		2'- 2"	12'- 0"	---												
APPROACH SLAB #2																		WINGWALL #4																				
16	5	22'- 9"	2EAS501	STR	22'- 9"													11	5	5'- 11"	3EW508	S10		2'- 2"	1'- 7"	2'- 2"												
24	5	4'- 2"	2EAS502	1	0'- 7"	3'- 7"							---			0'- 5"		16	5	14'- 0"	4W501	STR	14'- 0"															
47	6	15'- 2"	2EAS601	1	0'- 8"	14'- 6"							---			0'- 8"		11	5	7'- 6"	4W502	STR	7'- 6"															
ABUTMENT #1																		WINGWALL #1																				
24	5	26'- 10"	1A501	STR	26'- 10"													22	5	9'- 10"	1EW501	STR	9'- 10"															
▲ 55	5	9'- 10"	1EA502	STR	9'- 10"													1	5	12'- 6"	1EW502	STR	12'- 6"															
7	5	26'- 10"	1EA503	STR	26'- 10"													7	5	14'- 8"	1W503	17		2'- 2"	12'- 6"	---												
▲ 55	6	9'- 10"	1EA601	STR	9'- 10"													3	5	14'- 8"	1EW504	17		2'- 2"	12'- 6"	---												
56	5	6'- 11"	1A504	17		2'- 2"	2'- 7"	2'- 2"										11	5	5'- 11"	1EW505	S10		2'- 2"	1'- 7"	2'- 2"												
21	5	6'- 2"	1EA505	22		2'- 2"	4'- 0"	---					1'- 6"	---		1'- 6"	---	7	5	14'- 8"	1W601	17		2'- 7"	10'- 7"	---												
WINGWALL #2																		WINGWALL #2																				
22	5	9'- 10"	2EW501	STR	9'- 10"													22	5	9'- 10"	2EW501	STR	9'- 10"															
1	5	12'- 6"	2EW502	STR	12'- 6"													1	5	12'- 6"	2EW502	STR	12'- 6"															
7	5	14'- 8"	2W503	17		2'- 2"	12'- 6"	---										7	5	14'- 8"	2W503	17		2'- 2"	12'- 6"	---												
3	5	14'- 8"	2EW504	17		2'- 2"	12'- 6"	---										3	5	14'- 8"	2EW504	17		2'- 2"	12'- 6"	---												
11	5	5'- 11"	2EW505	S10		2'- 2"	1'- 7"	2'- 2"										11	5	5'- 11"	2EW505	S10		2'- 2"	1'- 7"	2'- 2"												
7	6	13'- 2"	2W601	17		2'- 7"	10'- 7"	---										7	6	13'- 2"	2W601	17		2'- 7"	10'- 7"	---												
3	6	13'- 2"	2EW602	17		2'- 7"	10'- 7"	---										3	6	13'- 2"	2EW602	17		2'- 7"	10'- 7"	---												
ABUTMENT #2																		ABUTMENT #2																				
14	5	30'- 10"	2A501	STR	30'- 10"													14	5	30'- 10"	2A501	STR	30'- 10"															
32	5	7'- 6"	2A502	STR	7'- 6"													32	5	7'- 6"	2A502	STR	7'- 6"															
12	5	26'- 10"	2A503	STR	26'- 10"													12	5	26'- 10"	2A503	STR	26'- 10"															
▲ 28	5	6'- 3"	2A504	STR	6'- 3"													▲ 28	5	6'- 3"	2A504	STR	6'- 3"															
▲ 28	5	8'- 0"	2EA505	STR	8'- 0"													▲ 28	5	8'- 0"	2EA505	STR	8'- 0"															
28	5	5'- 9"	2EA506	STR	5'- 9"													28	5	5'- 9"	2EA506	STR	5'- 9"															
10	5	26'- 10"	2EA507	STR	26'- 10"													10	5	26'- 10"	2EA507	STR	26'- 10"															
24	5	5'- 2"	2EA508	16	1'- 7"	1'- 7"	0'- 8"	1'- 4"									0'- 11"	24	5	5'- 2"	2EA508	16	1'- 7"	1'- 7"	0'- 8"	1'- 4"												
28	5	7'- 5"	2EA509	17		3'- 6"	3'- 11"	---										28	5	7'- 5"	2EA509	17		3'- 6"	3'- 11"	---												
28	5	5'- 11"	2EA510	S10		2'- 2"	1'- 7"	2'- 2"										28	5	5'- 11"	2EA510	S10		2'- 2"	1'- 7"	2'- 2"												
28	5	4'- 11"	2EA511	S10		2'- 2"	0'- 7"	2'- 2"										28	5	4'- 11"	2EA511	S10		2'- 2"	0'- 7"	2'- 2"												
16	8	3'- 9"	2A801	STR	3'- 9"													16	8	3'- 9"	2A801	STR	3'- 9"															

~ NOTES ~

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



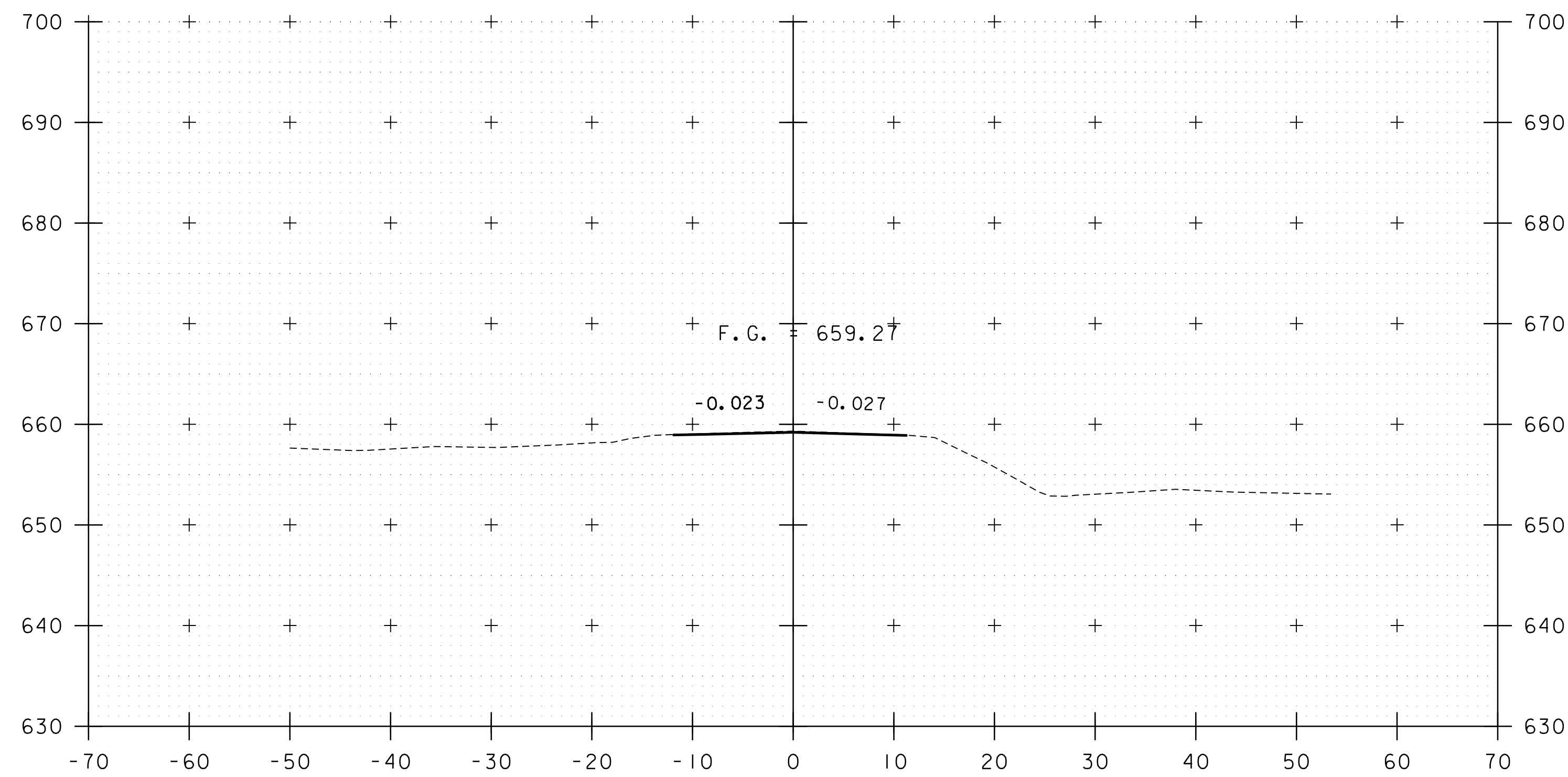
ASTM STANDARD REINFORCING BARS

BAR SIZE DESIGNATION	WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS ROUND SECTION		
		DIAMETER INCHES	AREA INCHES ²	PERIMETER INCHES
#3	0.376	0.375	0.11	1.178
#4	0.668	0.500	0.20	1.571
#5	1.043	0.625	0.31	1.963
#6	1.502	0.750	0.44	2.356
#7	2.04	0.875	0.60	2.749
#8	2.670	1.000	0.79	3.14
#9	3.400	1.13	1.00	3.54
#10	4.3	1.270	1.27	3.990
#11	5.31	1.410	1.56	4.430
#14	7.65	1.69	2.25	5.32
#18	13.60	2.26	4.00	7.09

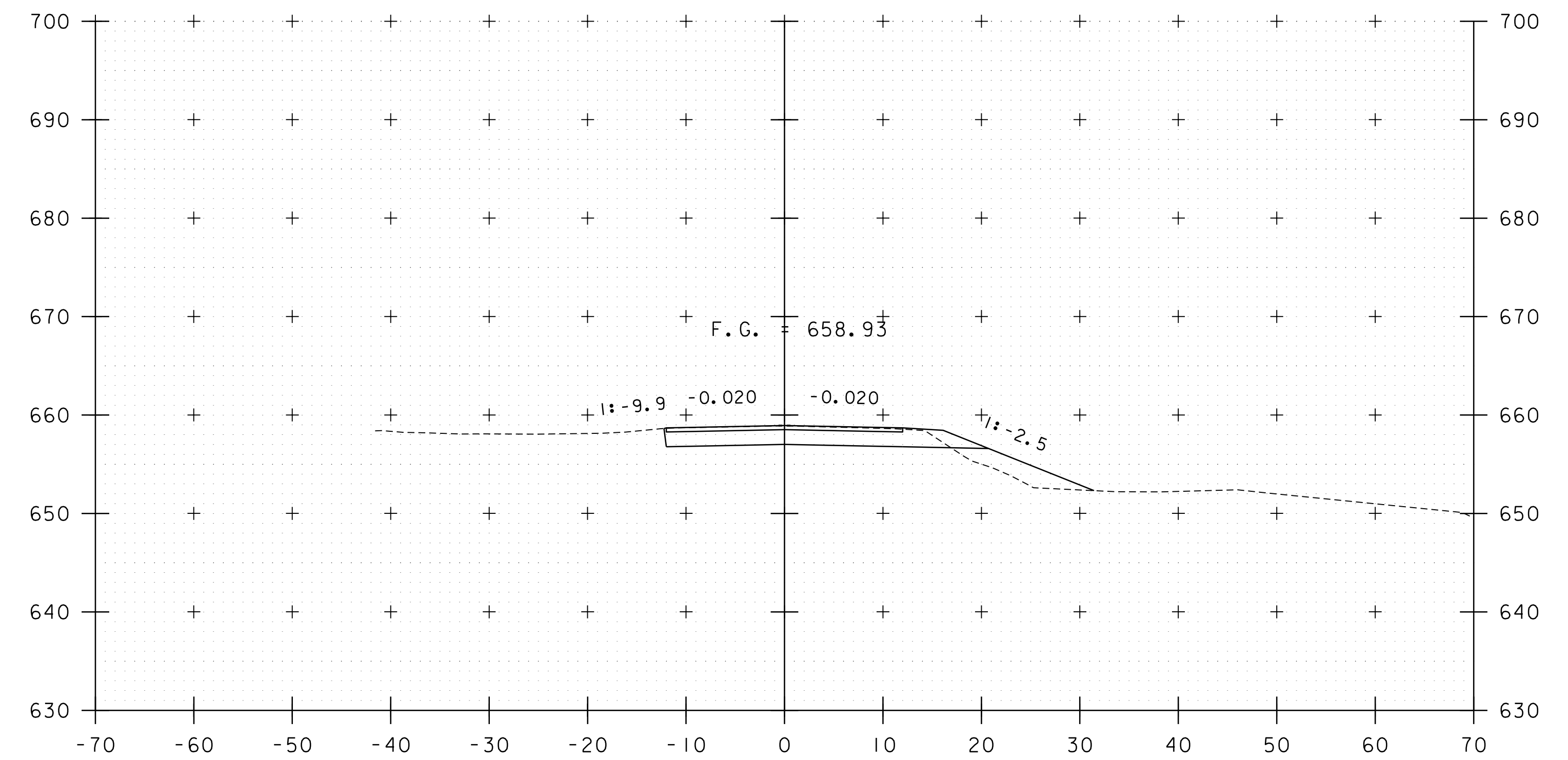
~ REINFORCING STEEL CORROSION RESISTANCE LEVEL ~

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

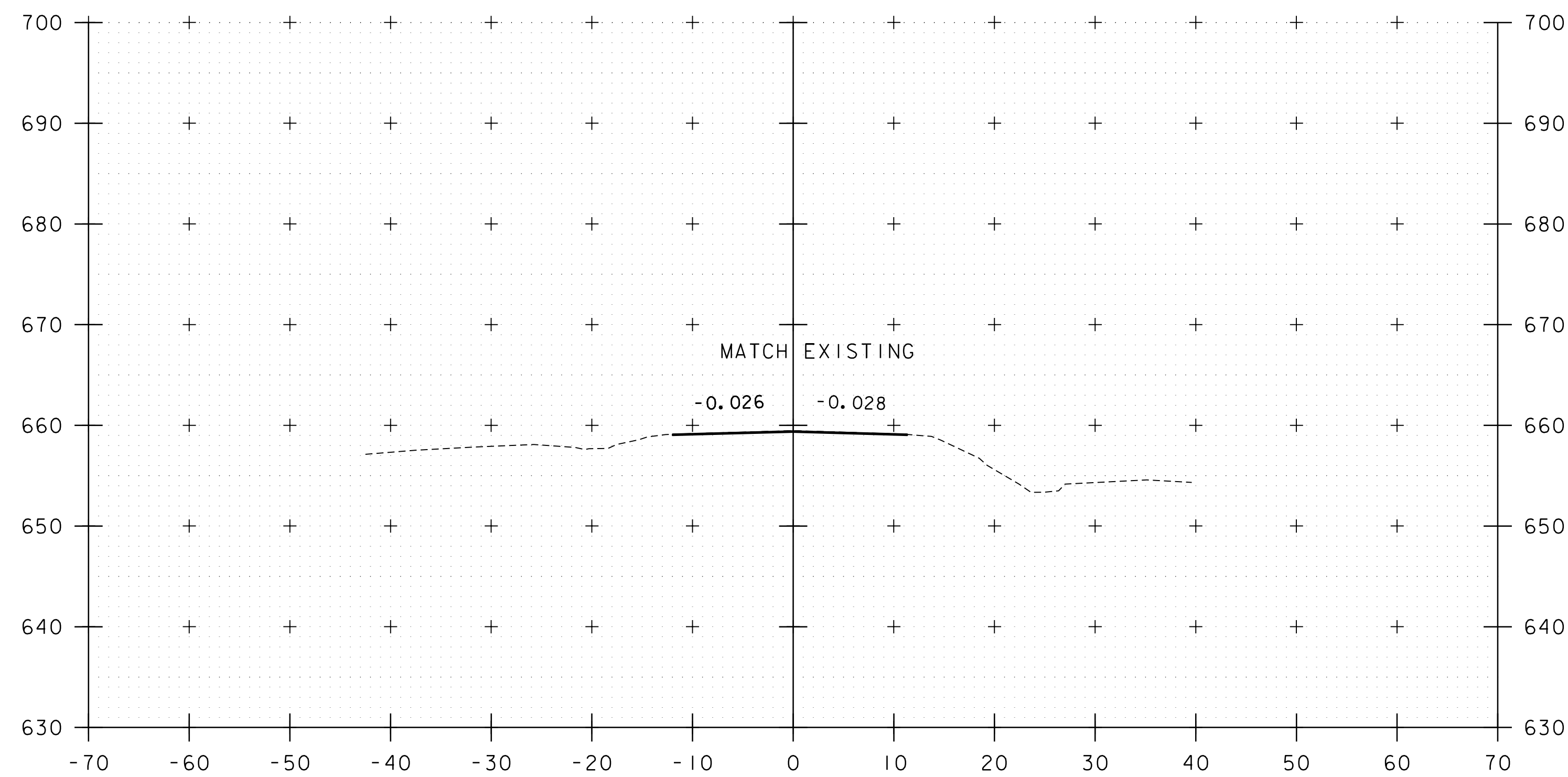
PROJECT NAME: STOWE
PROJECT NUMBER: BO 1446(37)
FILE NAME: sl2j660r.ss.dgn
PROJECT LEADER: C. BURRALL
DESIGNED BY: R. PELLETT
REINFORCING STEEL SCHEDULE
PLOT DATE: 2/9/2024
DRAWN BY: R. PELLETT
CHECKED BY: C. BURRALL
SHEET 29 OF 84



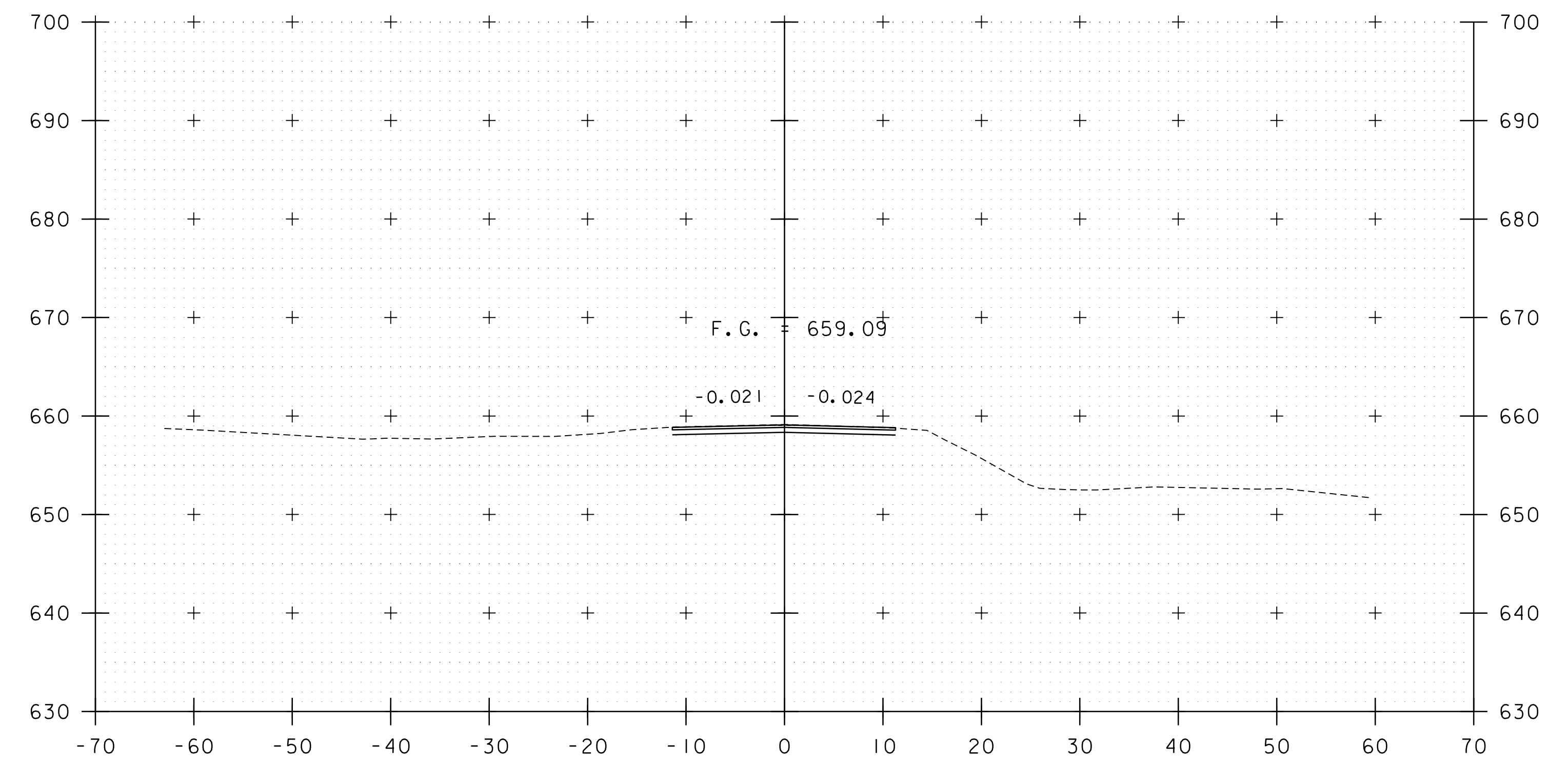
11+50



12+00
BEGIN PROJECT



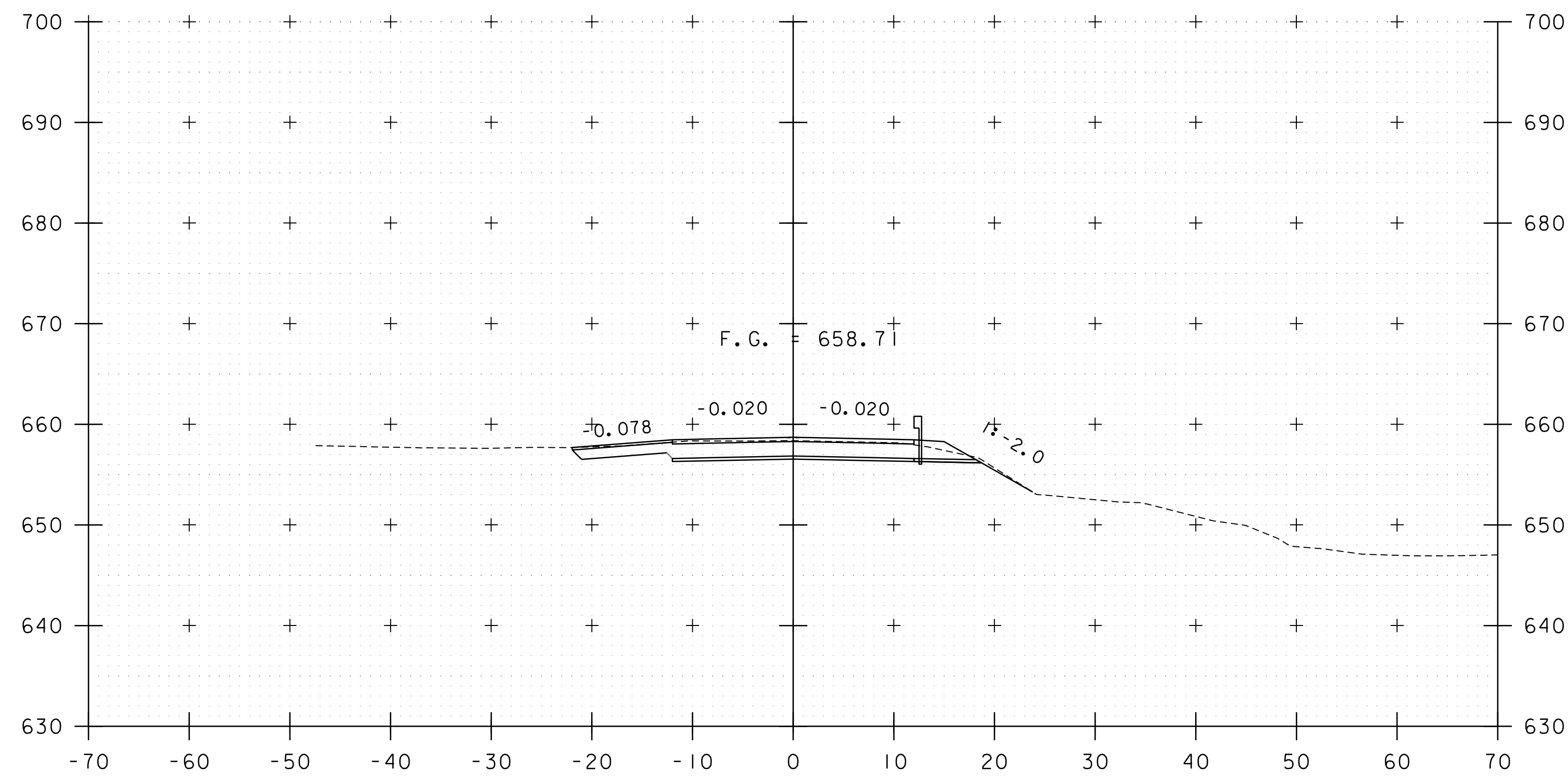
11+25
BEGIN APPROACH



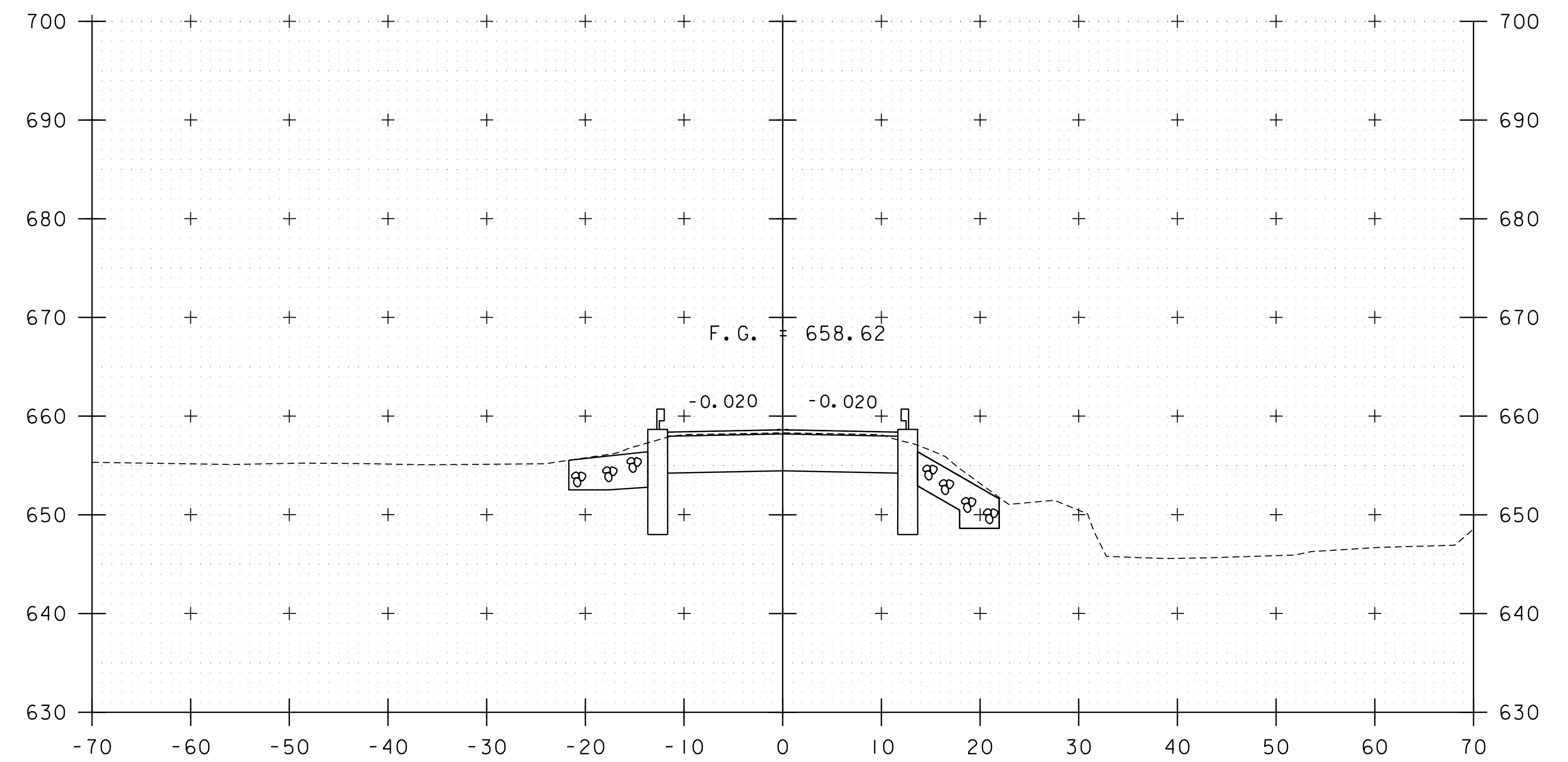
11+75

STA. 11+25 TO STA. 12+00

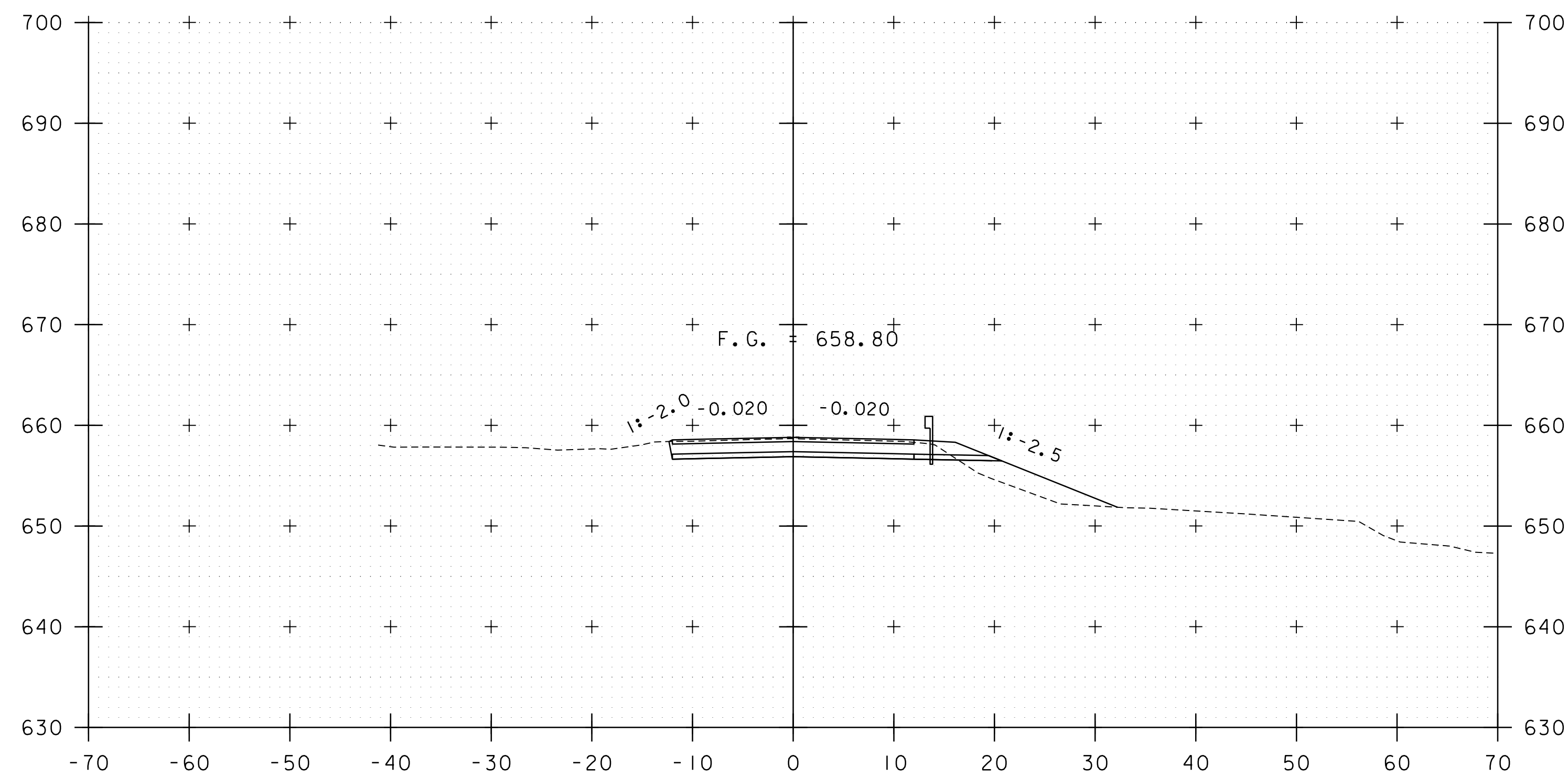
PROJECT NAME: STOWE	PLOT DATE: 2/9/2024
PROJECT NUMBER: BO 1446(37)	DRAWN BY: M. LONGSTREET
FILE NAME: sl2j660xs.dgn	DESIGNED BY: C. BURRALL
PROJECT LEADER: C. BURRALL	CHECKED BY: C. BURRALL
TH 43 CROSS SECTIONS I	SHEET 30 OF 84



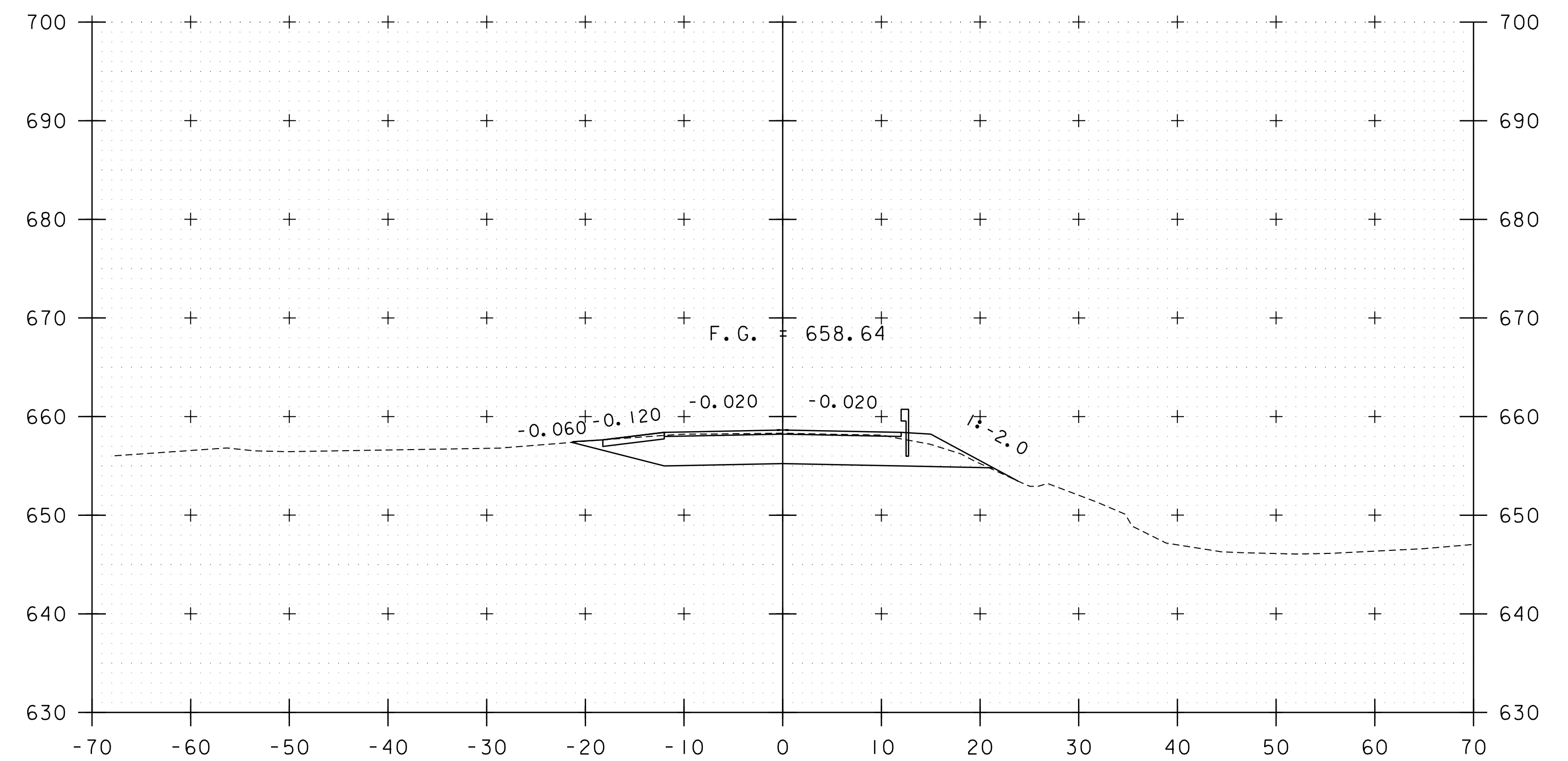
12+50



12+90
STA 12+95.17 BEGIN BRIDGE



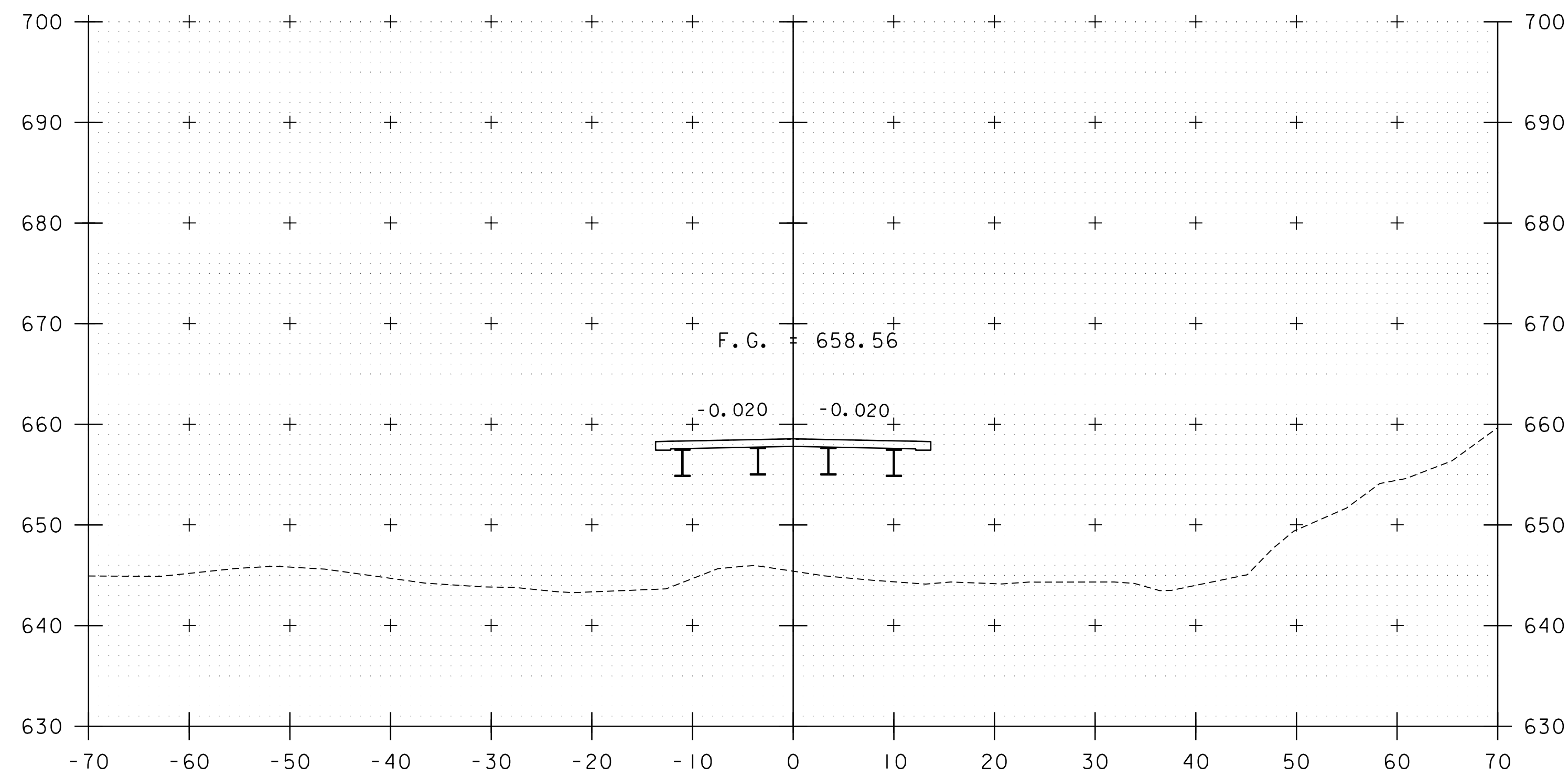
12+25



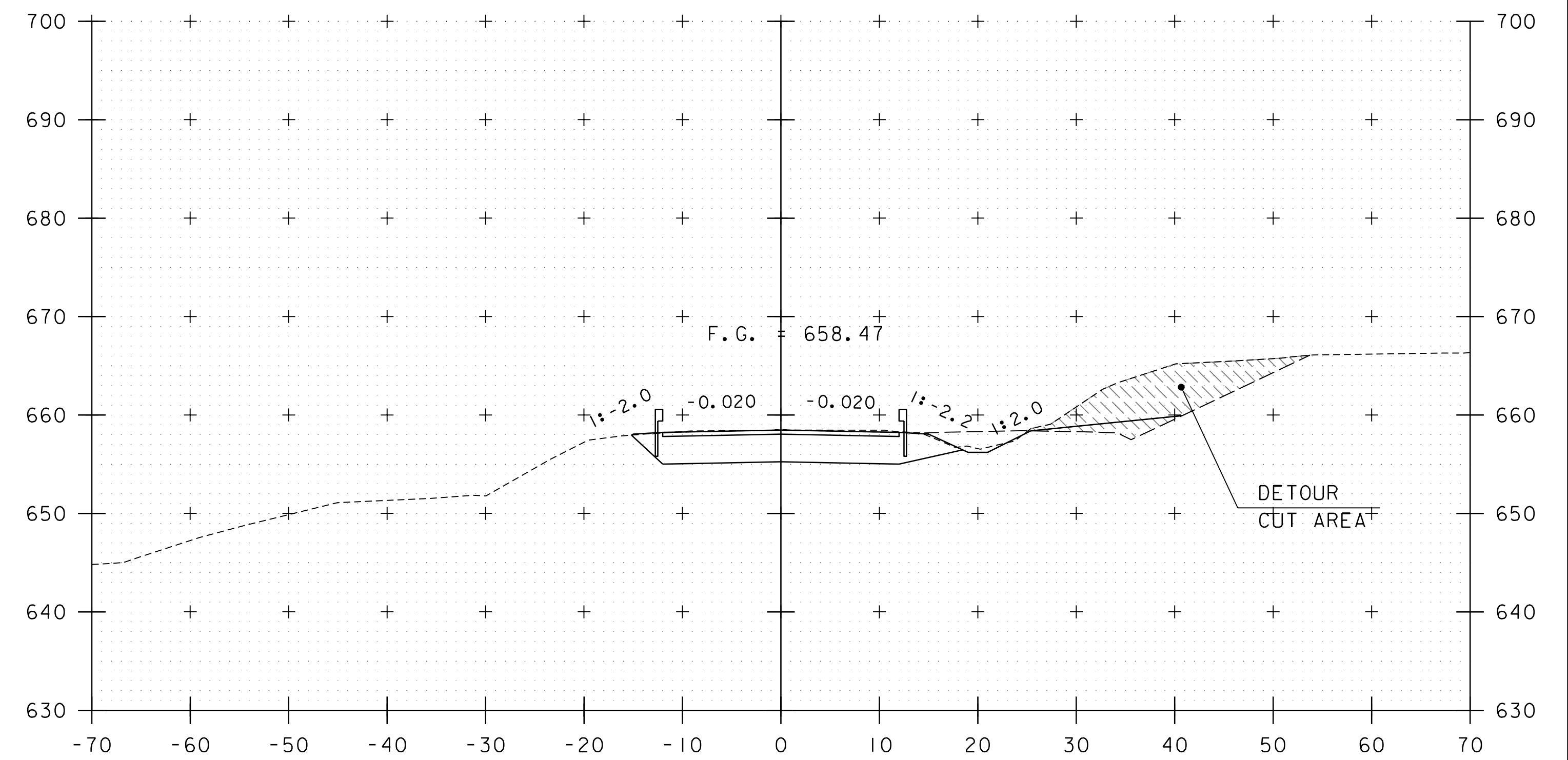
12+75

STA. 12+25 TO STA. 12+90

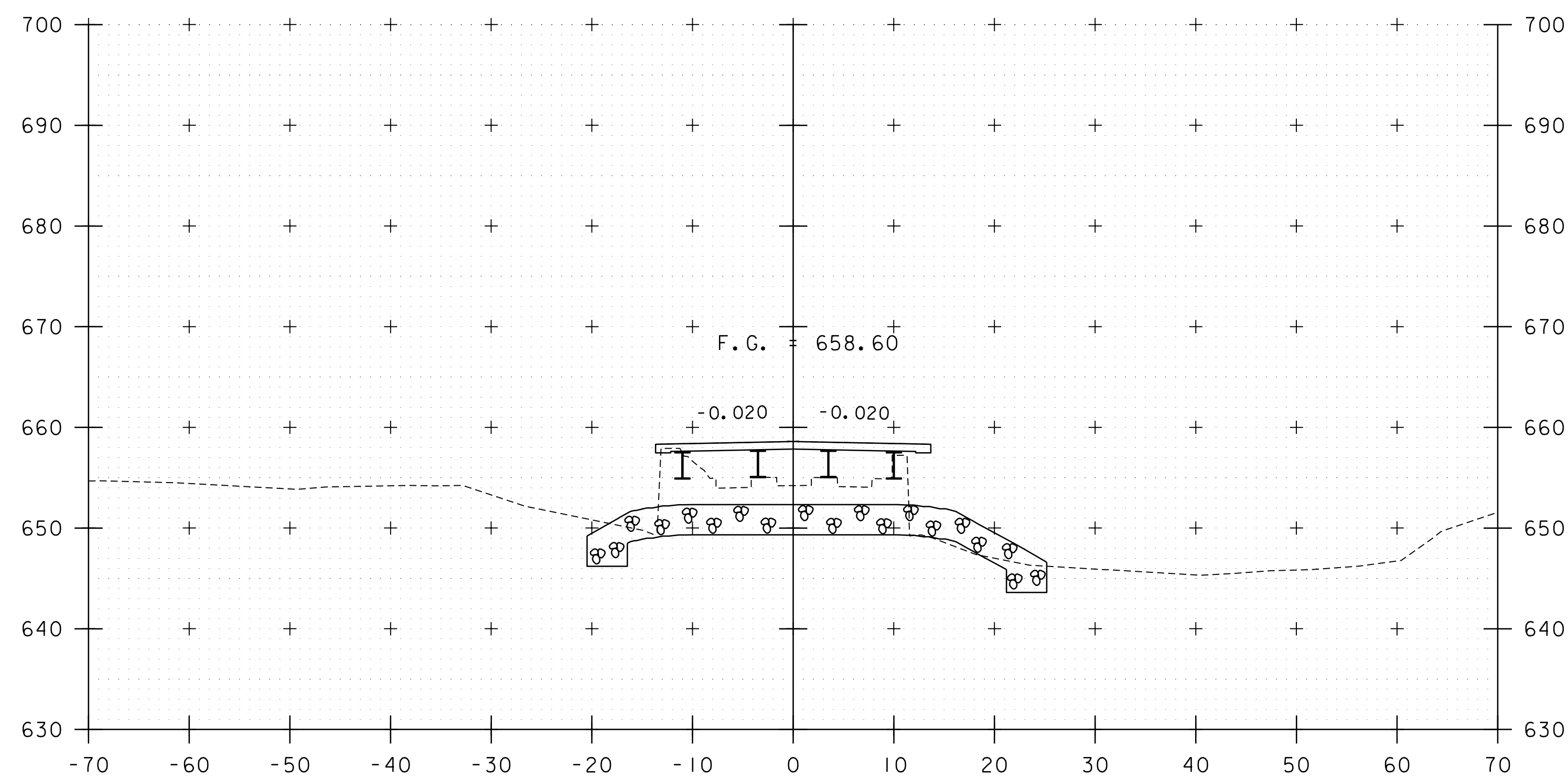
PROJECT NAME:	STOWE	PLOT DATE:	2/9/2024	
PROJECT NUMBER:	BO 1446(37)	DRAWN BY:	M. LONGSTREET	
FILE NAME:	sl2j660xs.dgn	DESIGNED BY:	C. BURRALL	
PROJECT LEADER:	C. BURRALL	TH 43 CROSS SECTIONS 2	CHECKED BY:	C. BURRALL
			SHEET	31 OF 84



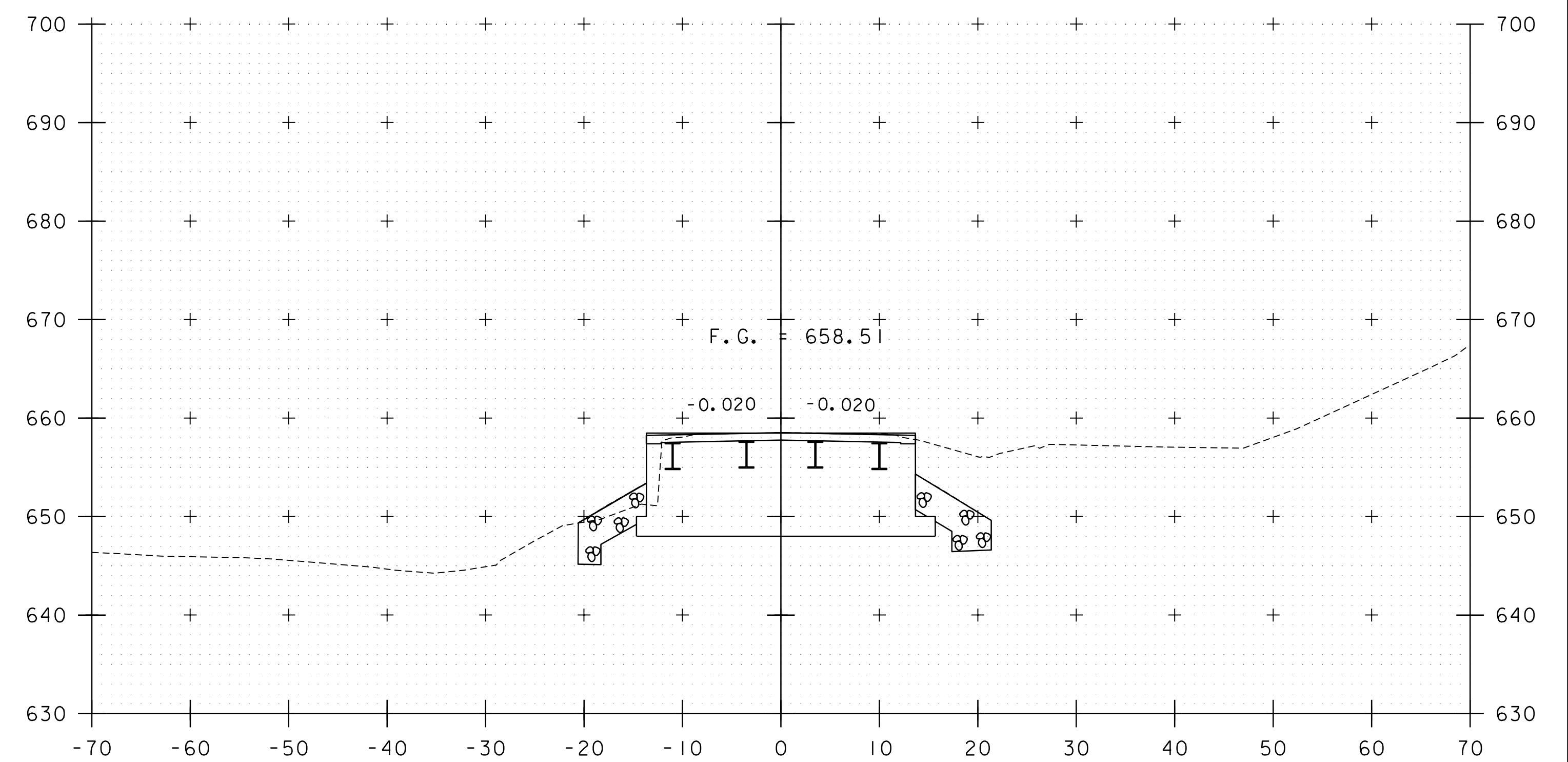
13+25



13+75



13+00

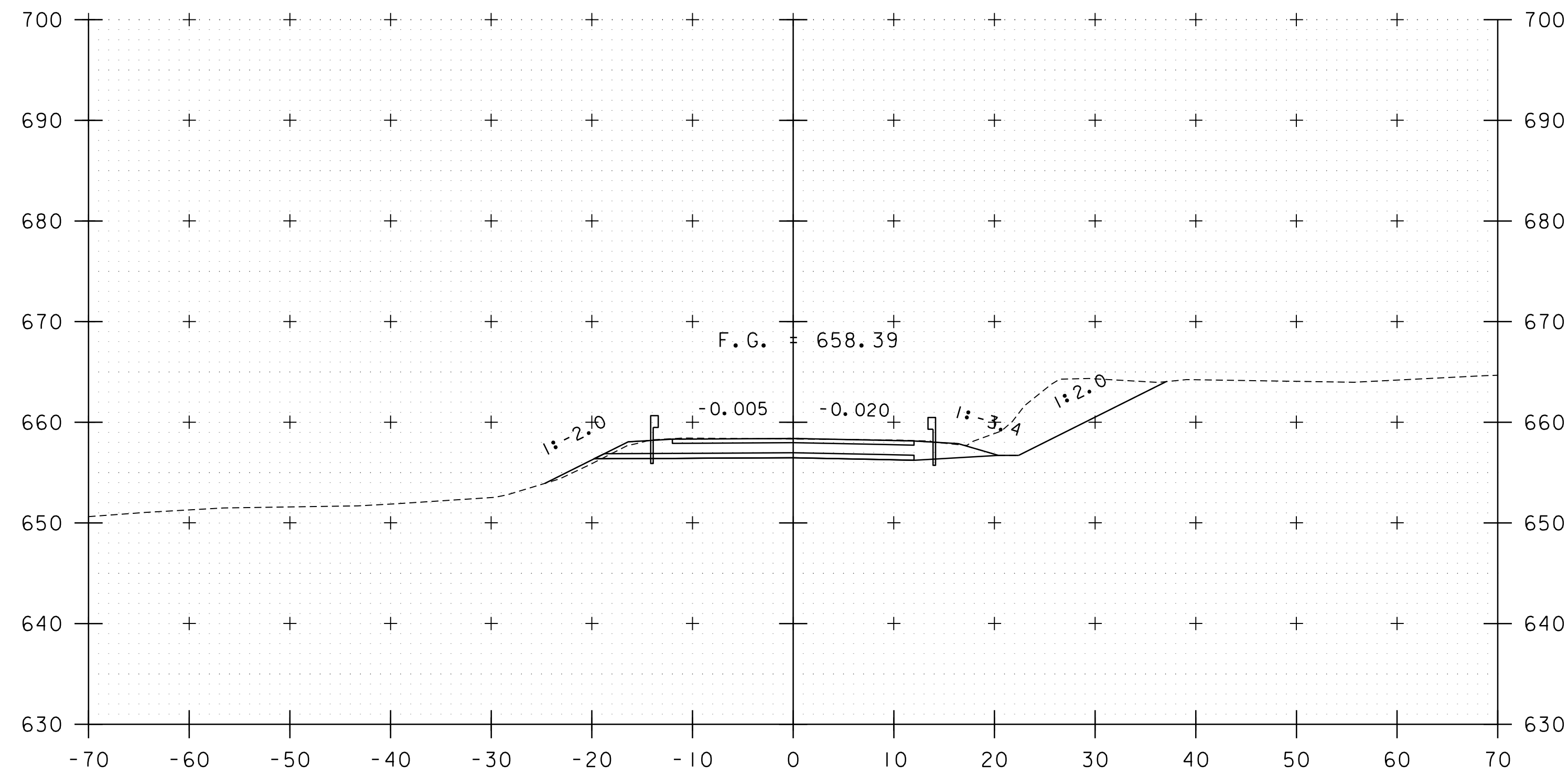


13+50

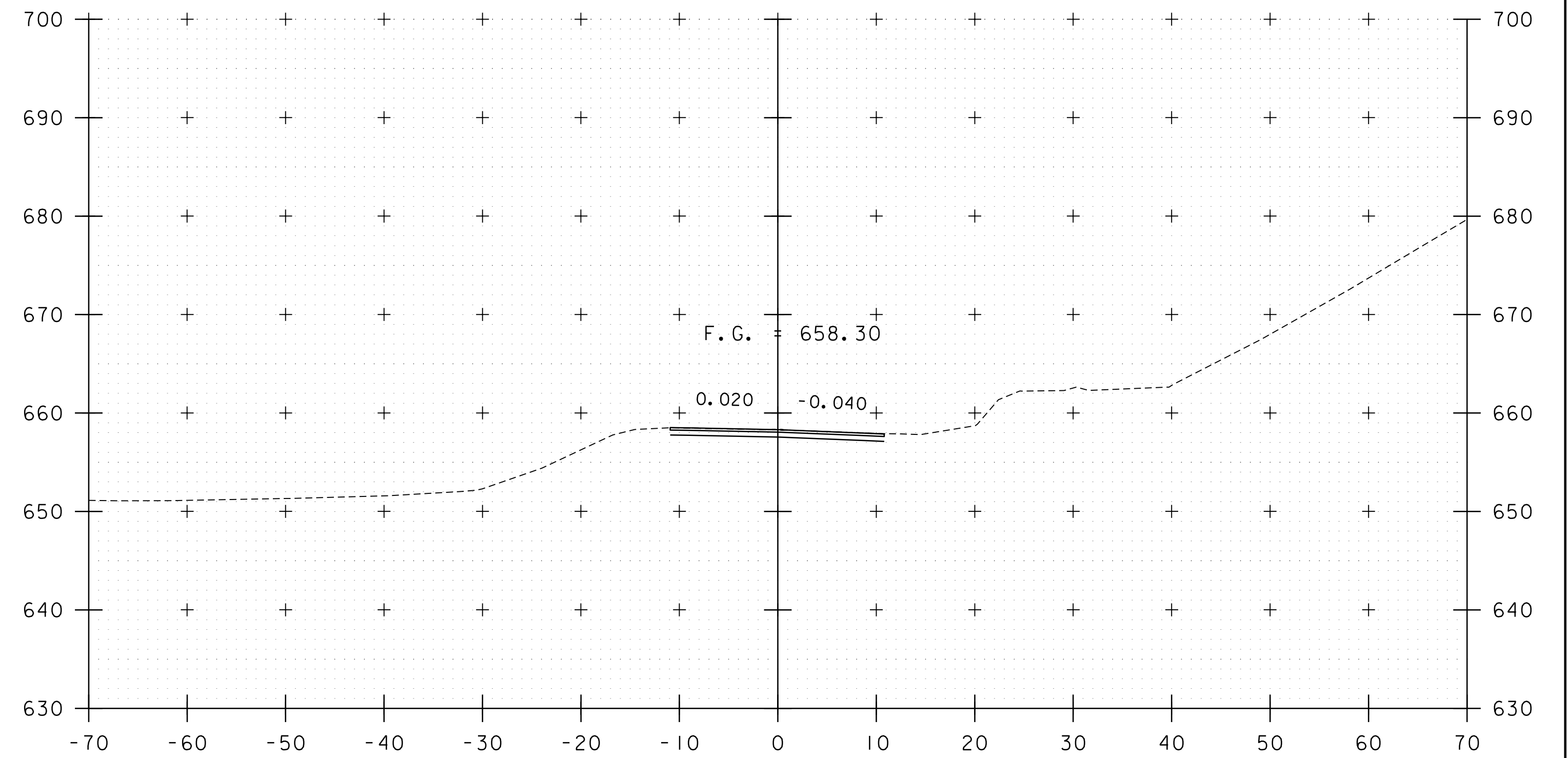
STA 13+51.00 END BRIDGE

STA. 13+00 TO STA. 13+75

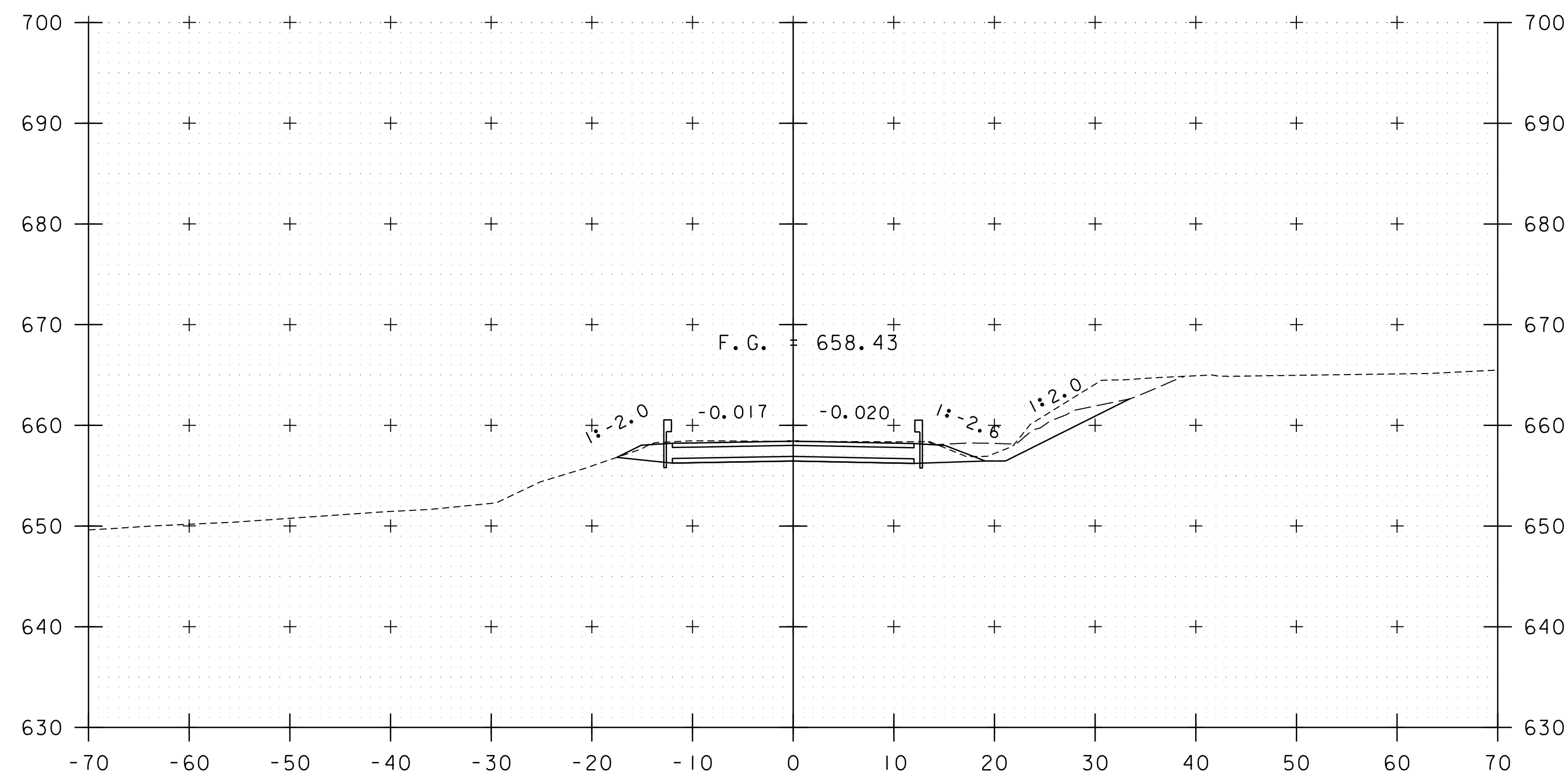
PROJECT NAME:	STOWE	PLOT DATE:	2/9/2024
PROJECT NUMBER:	BO 1446(37)	DRAWN BY:	M. LONGSTREET
FILE NAME:	sl2j660xs.dgn	DESIGNED BY:	C. BURRALL
PROJECT LEADER:	C. BURRALL	TH 43 CROSS SECTIONS	3
		CHECKED BY:	C. BURRALL
		SHEET	32 OF 84



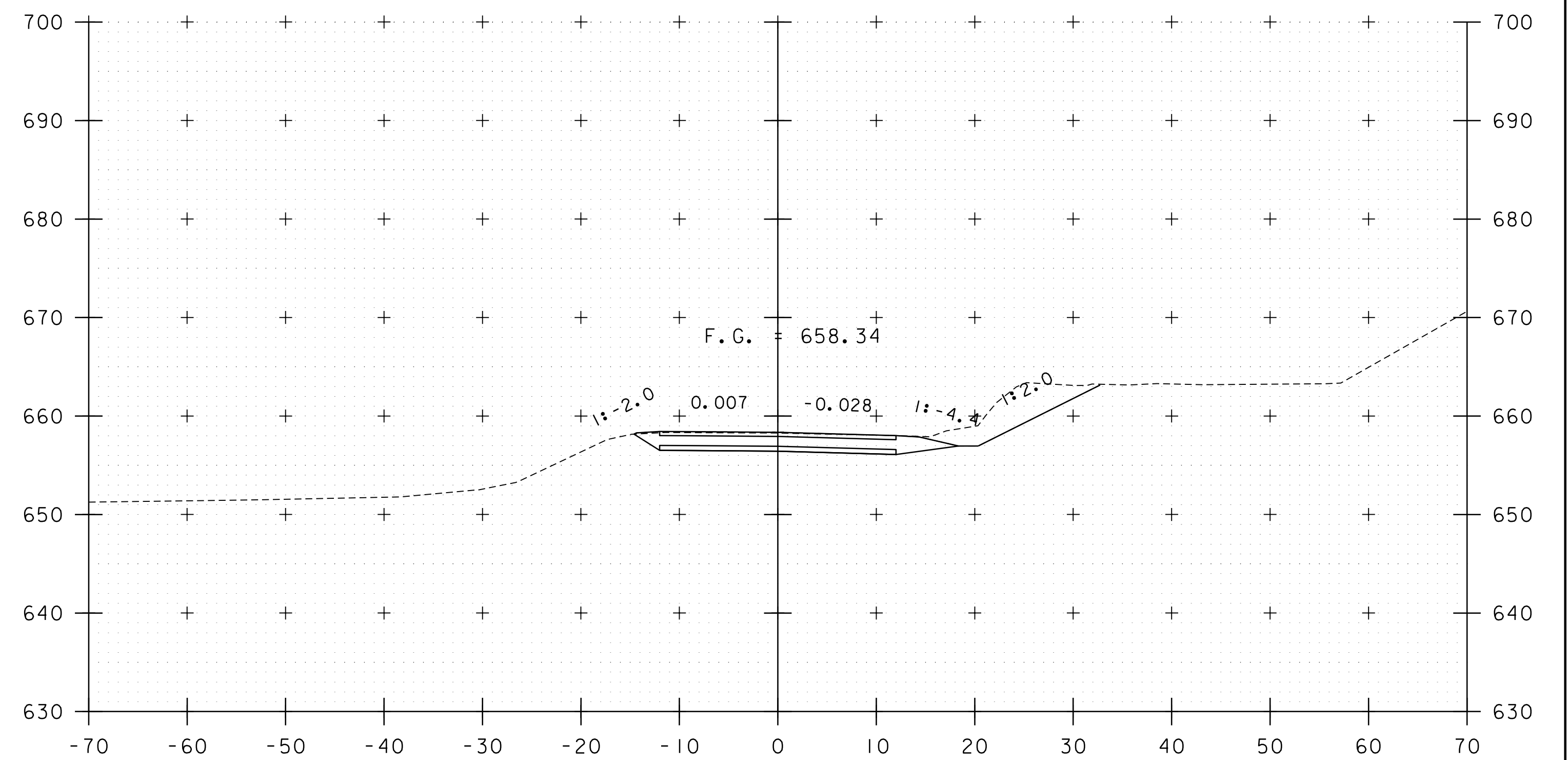
14+25



14+75



14+00



14+50

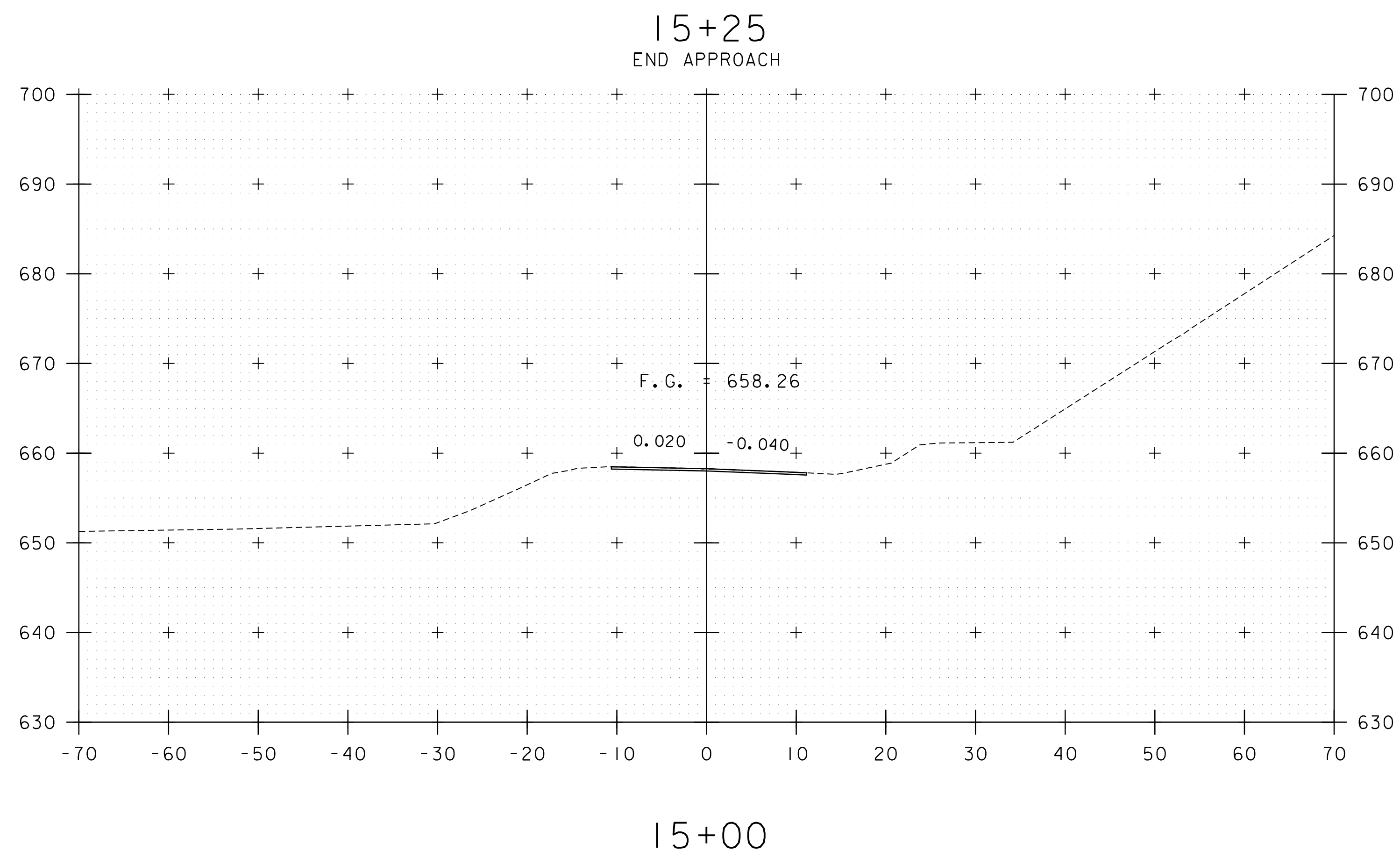
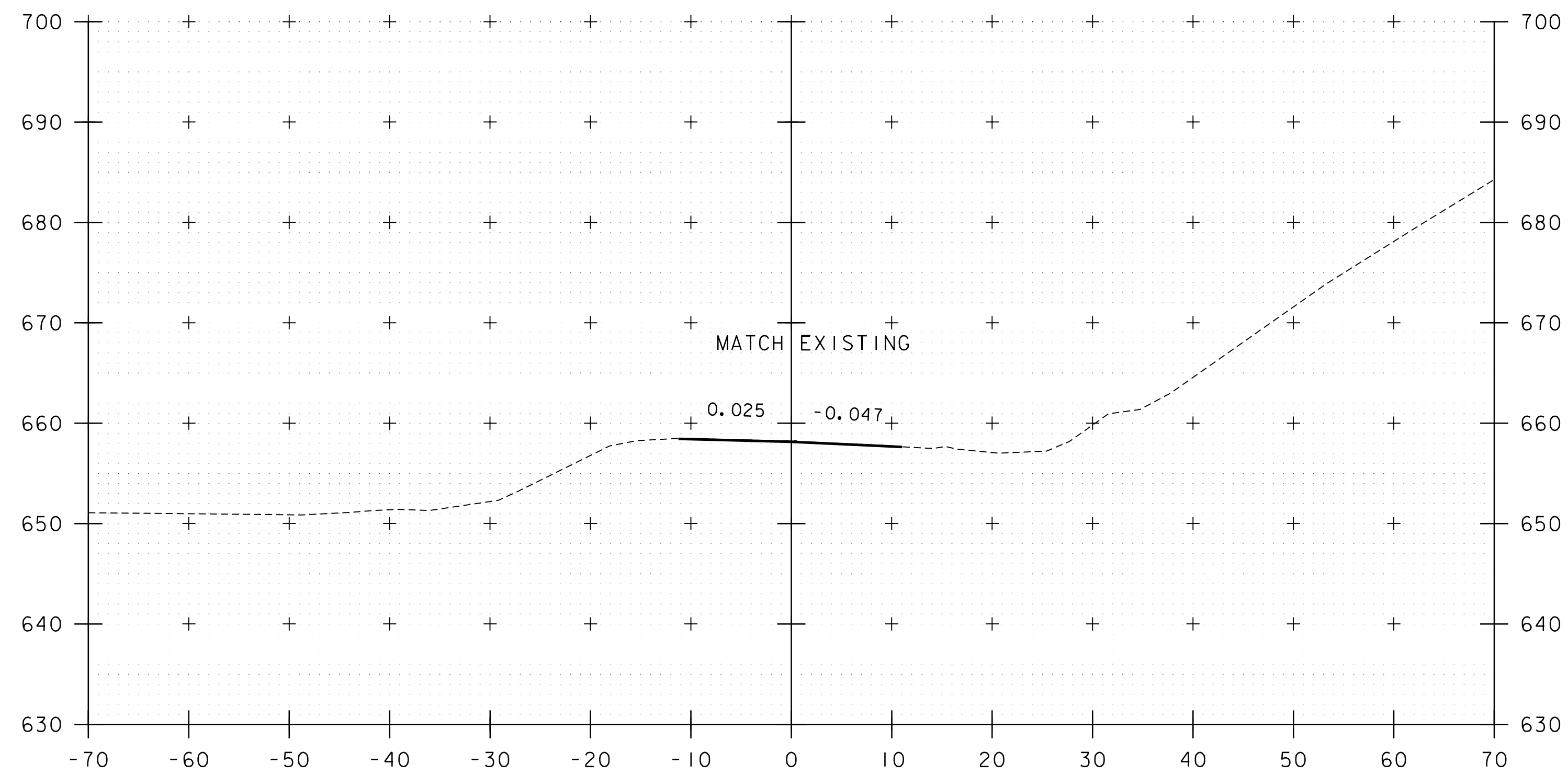
END PROJECT

STA. 14+00 TO STA. 14+75

PROJECT NAME: STOWE
PROJECT NUMBER: BO 1446(37)

FILE NAME: sl2j660xs.dgn
PROJECT LEADER: C. BURRALL
DESIGNED BY: C. BURRALL
TH 43 CROSS SECTIONS 4

PLOT DATE: 2/9/2024
DRAWN BY: M. LONGSTREET
CHECKED BY: C. BURRALL
SHEET 33 OF 84

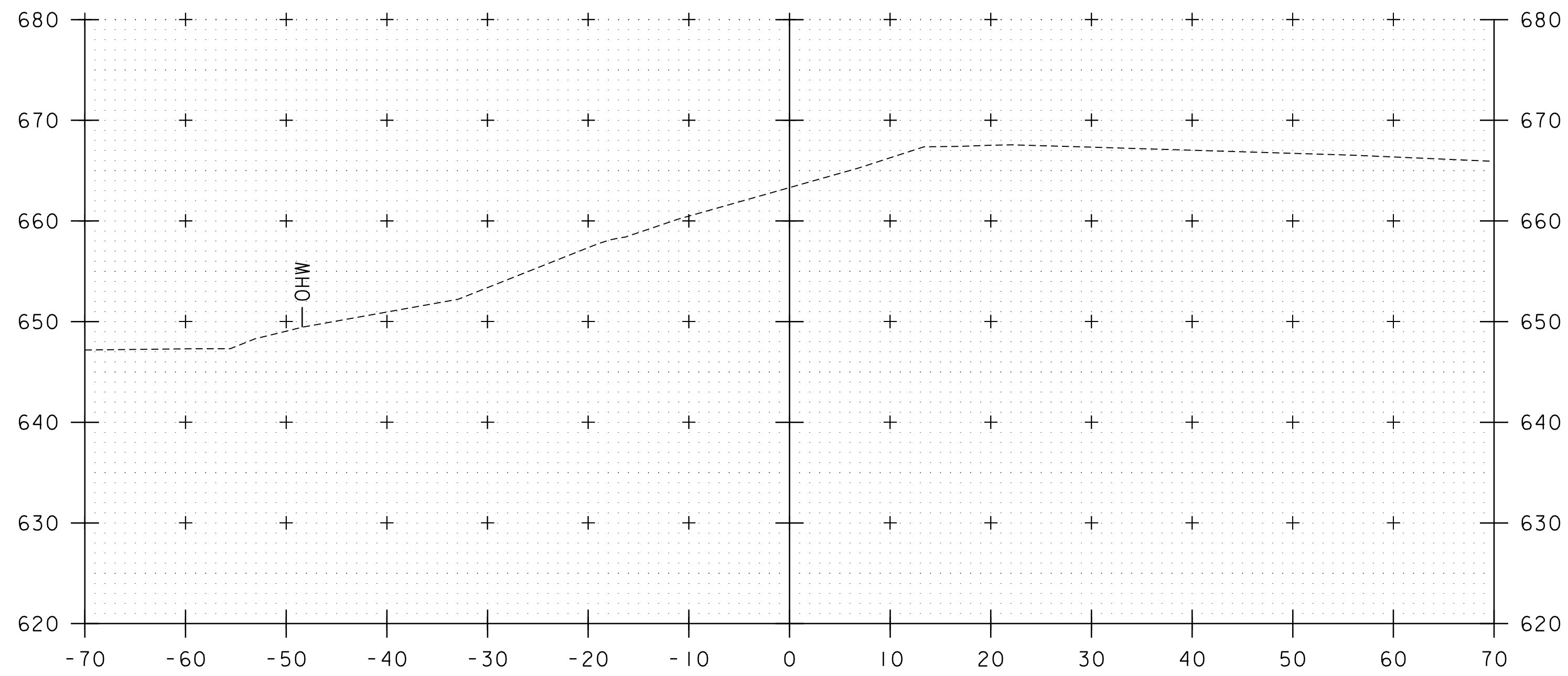


STA. 15+00 TO STA. 15+25

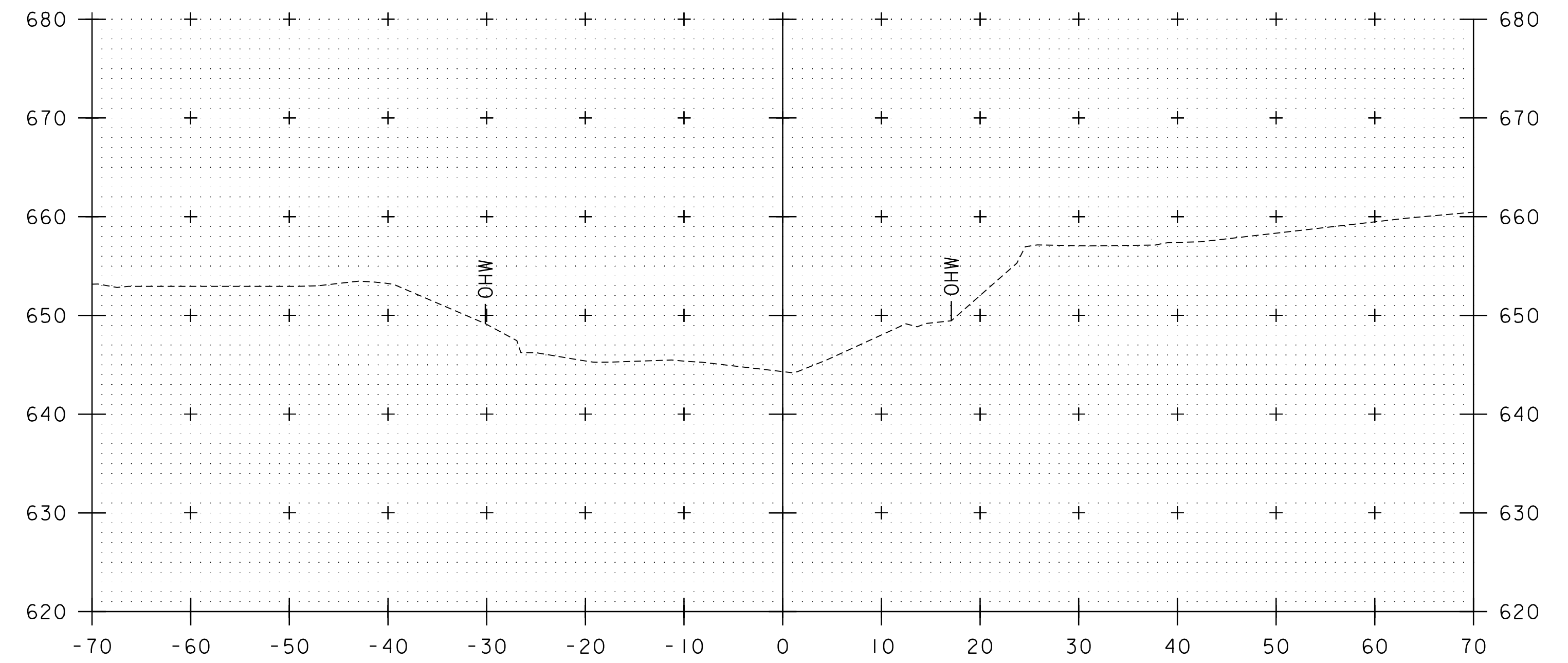
PROJECT NAME: STOWE
PROJECT NUMBER: BO 1446(37)

FILE NAME: sl2j660xs.dgn
PROJECT LEADER: C. BURRALL
DESIGNED BY: C. BURRALL
TH 43 CROSS SECTIONS 5

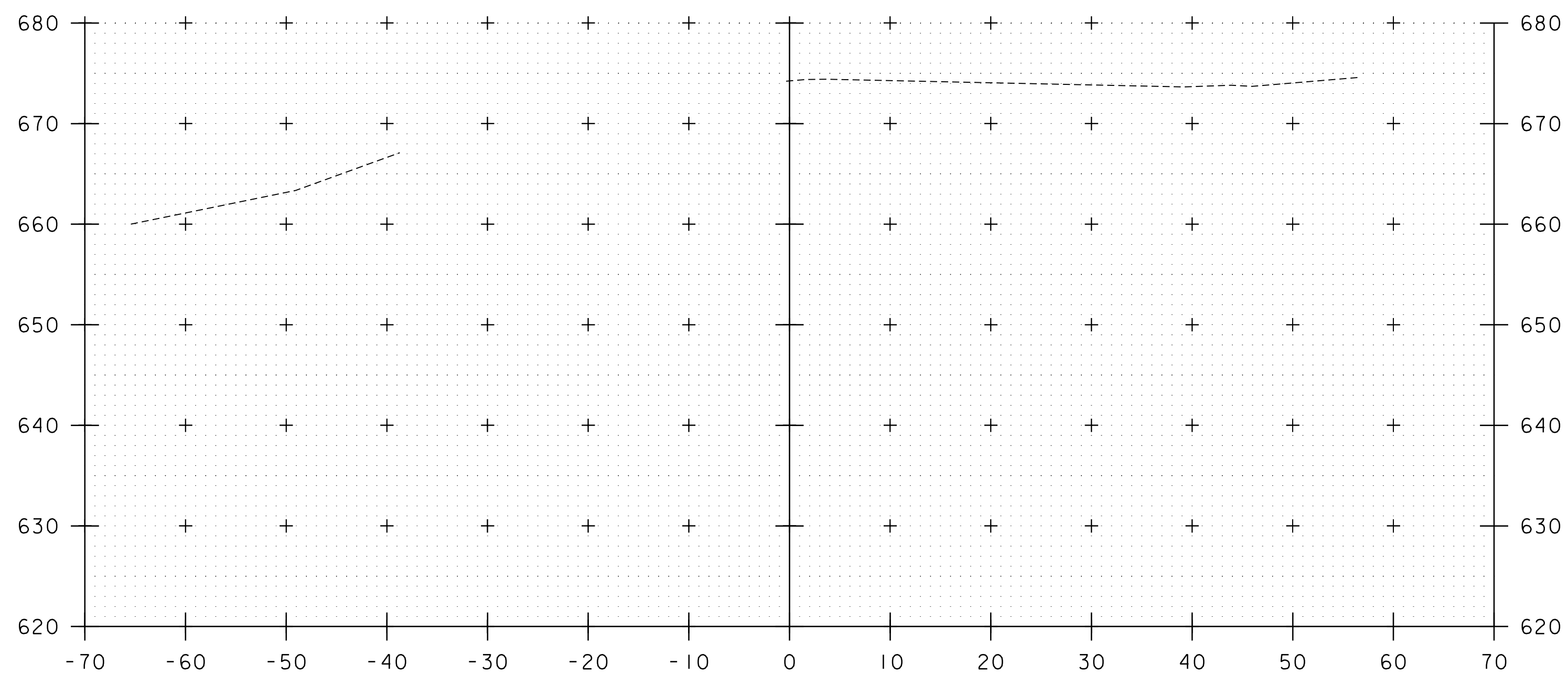
PLOT DATE: 2/9/2024
DRAWN BY: M. LONGSTREET
CHECKED BY: C. BURRALL
SHEET 34 OF 84



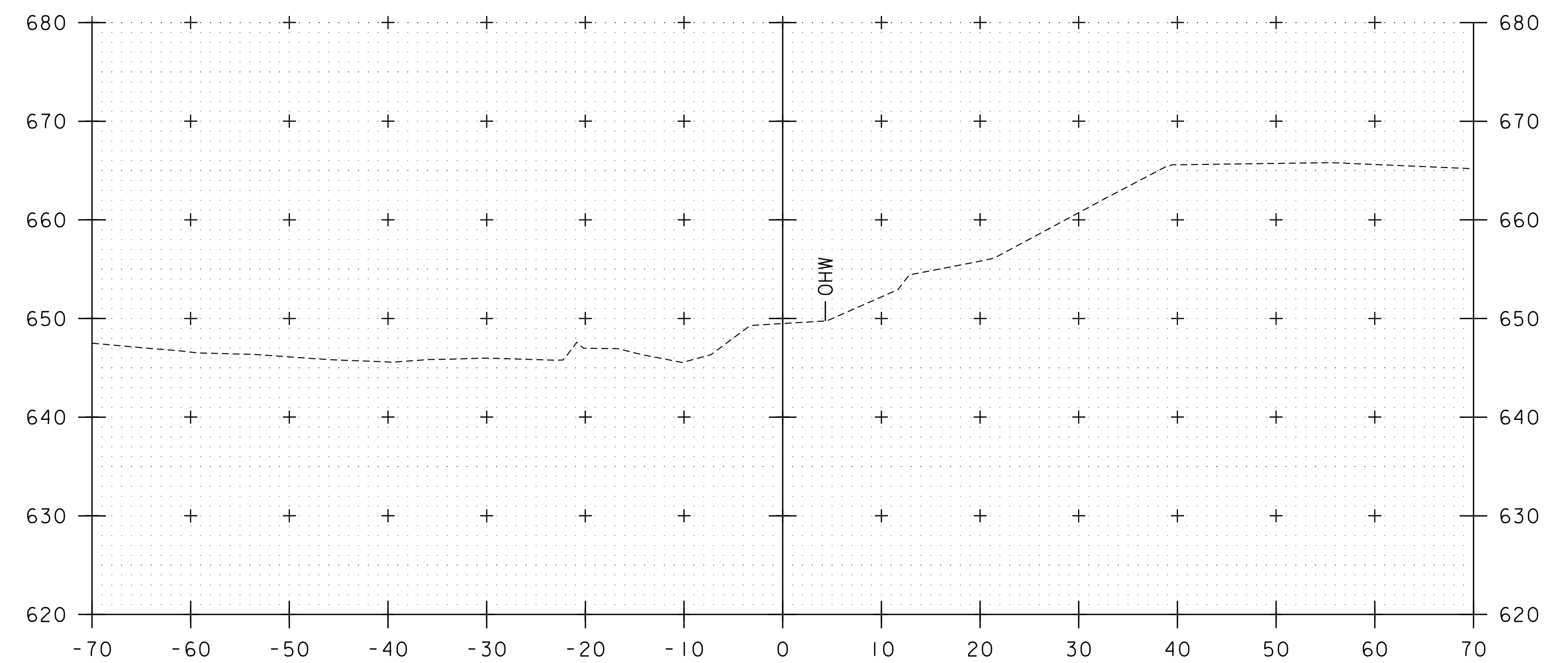
50+25



50+75



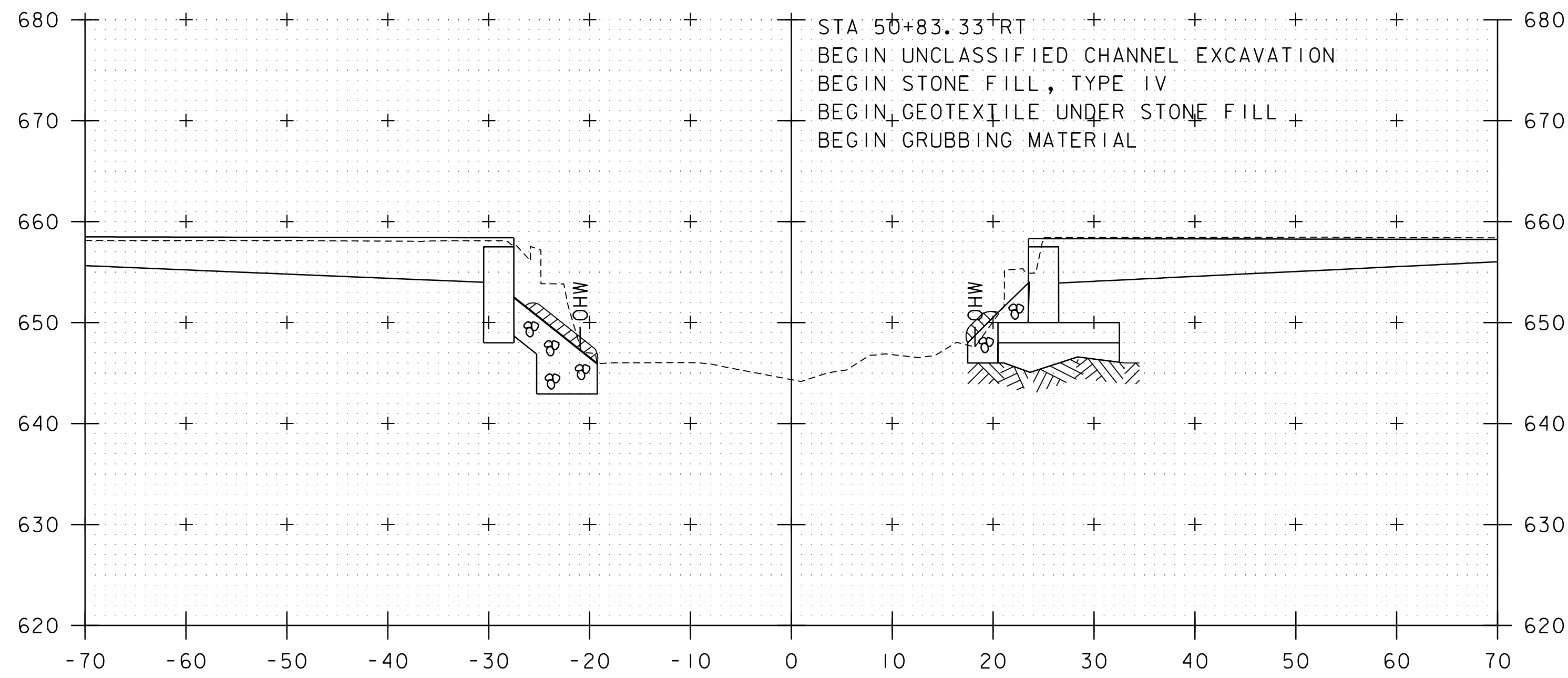
50+00



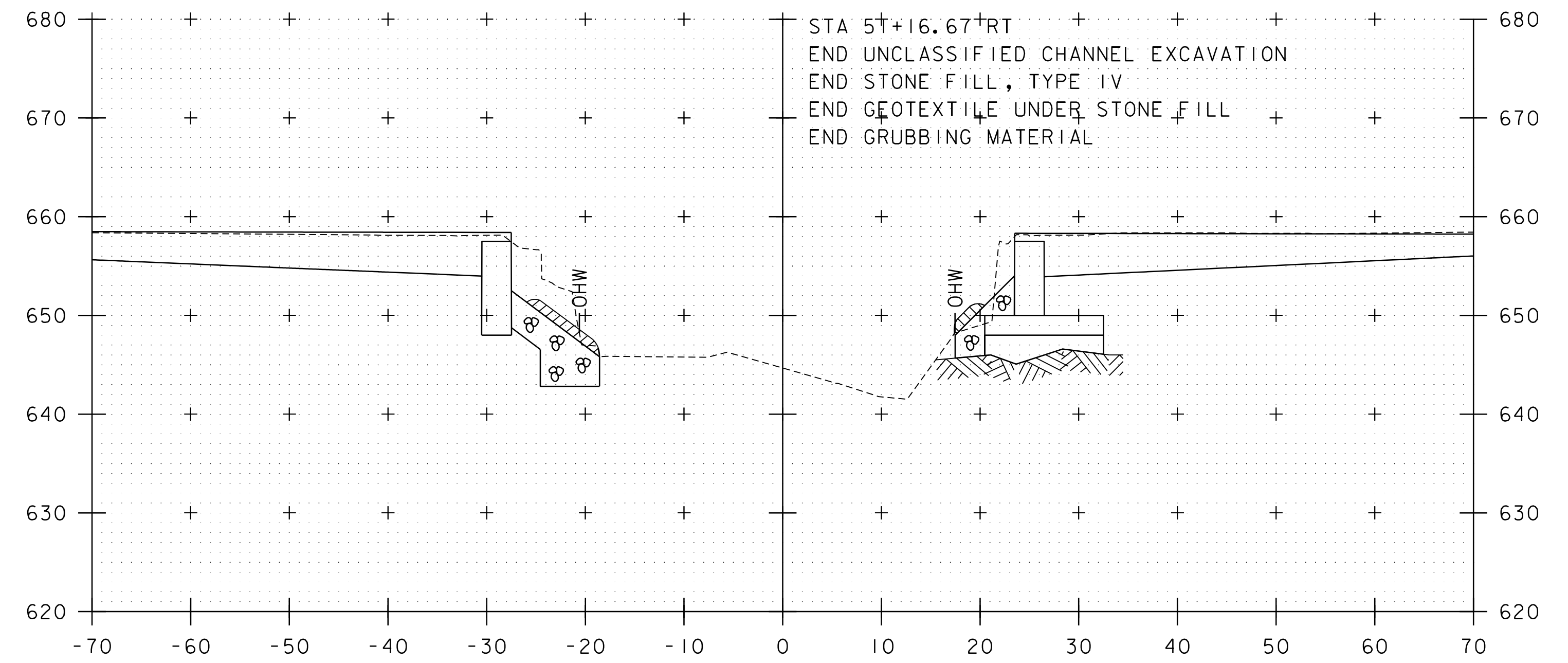
50+50

STA. 50+00 TO STA. 50+75

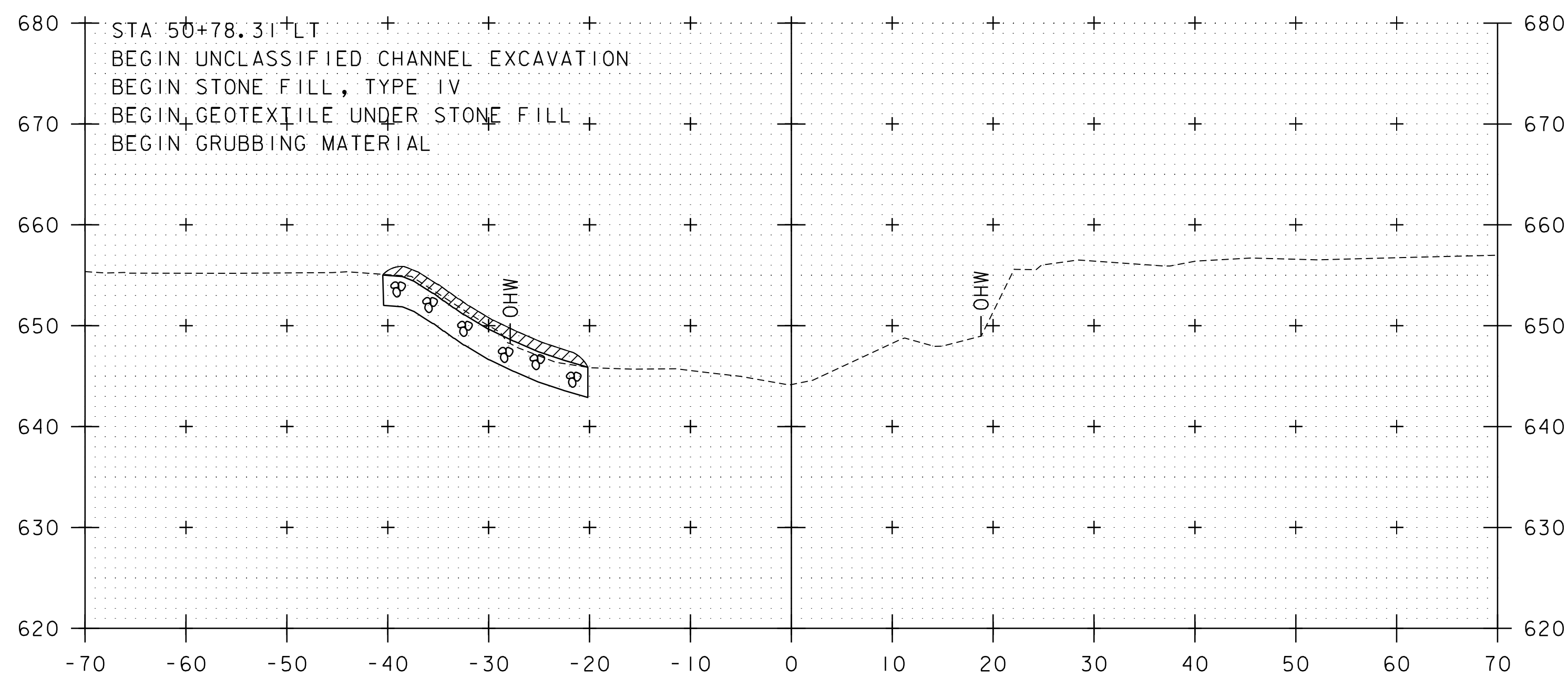
PROJECT NAME: STOWE	
PROJECT NUMBER: BO 1446(37)	
FILE NAME: sl2j660xs.dgn	PLOT DATE: 2/9/2024
PROJECT LEADER: C. BURRALL	DRAWN BY: M. LONGSTREET
DESIGNED BY: C. BURRALL	CHECKED BY: C. BURRALL
CHANNEL CROSS SECTIONS 1	SHEET 35 OF 84



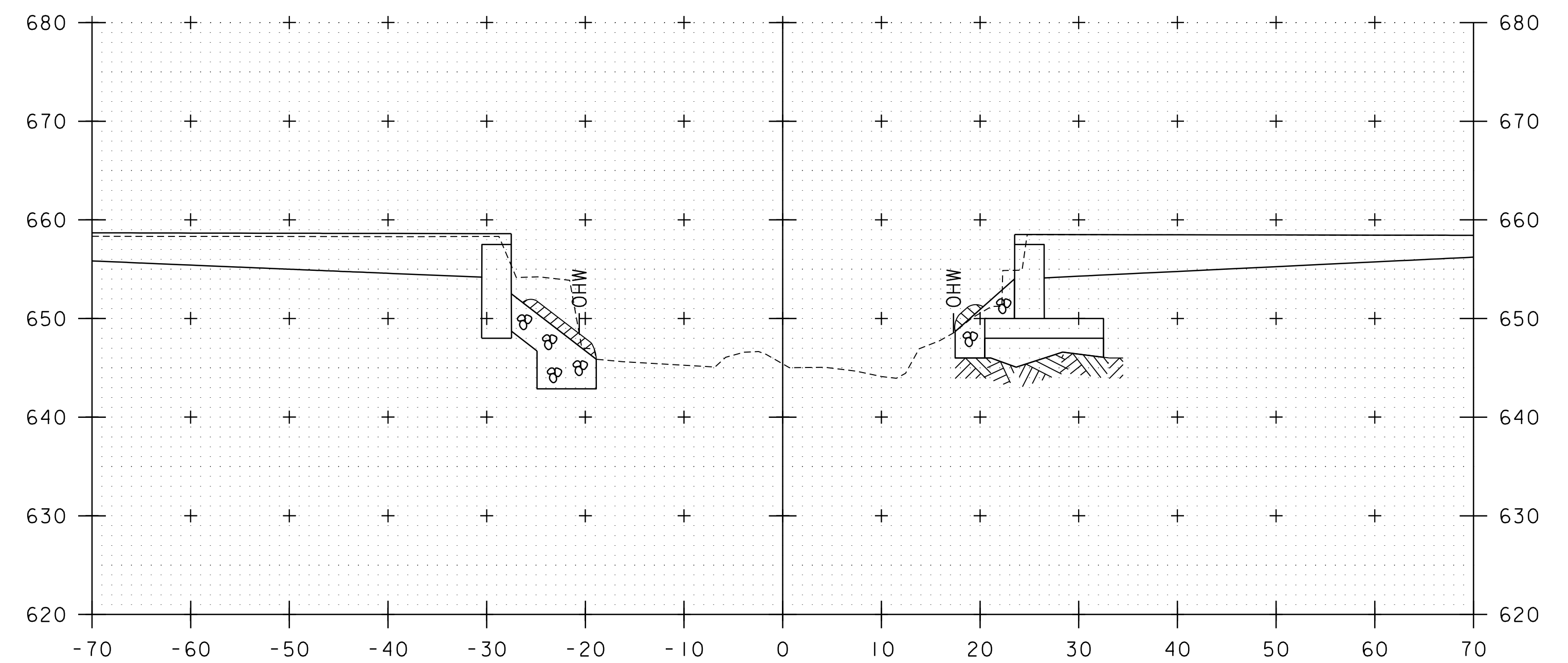
50+90



51+10



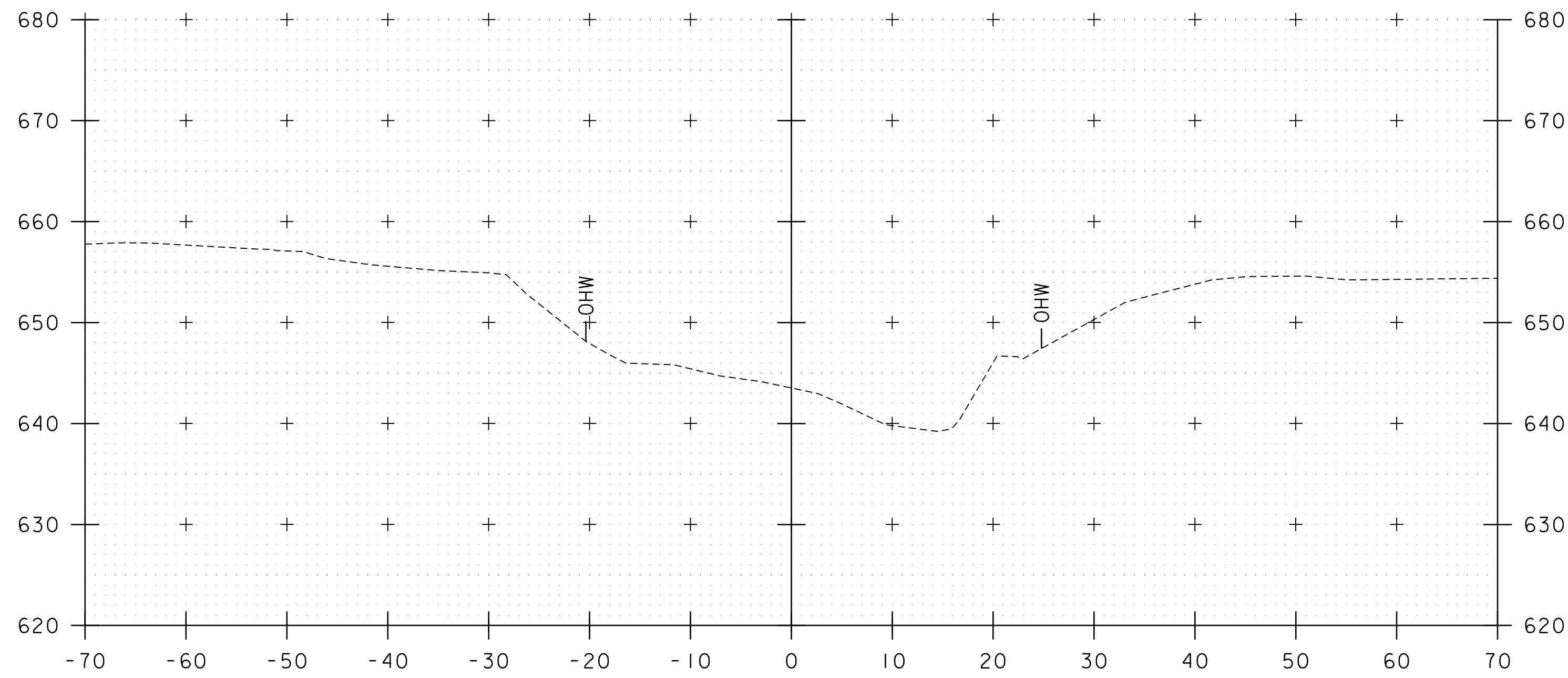
50+80



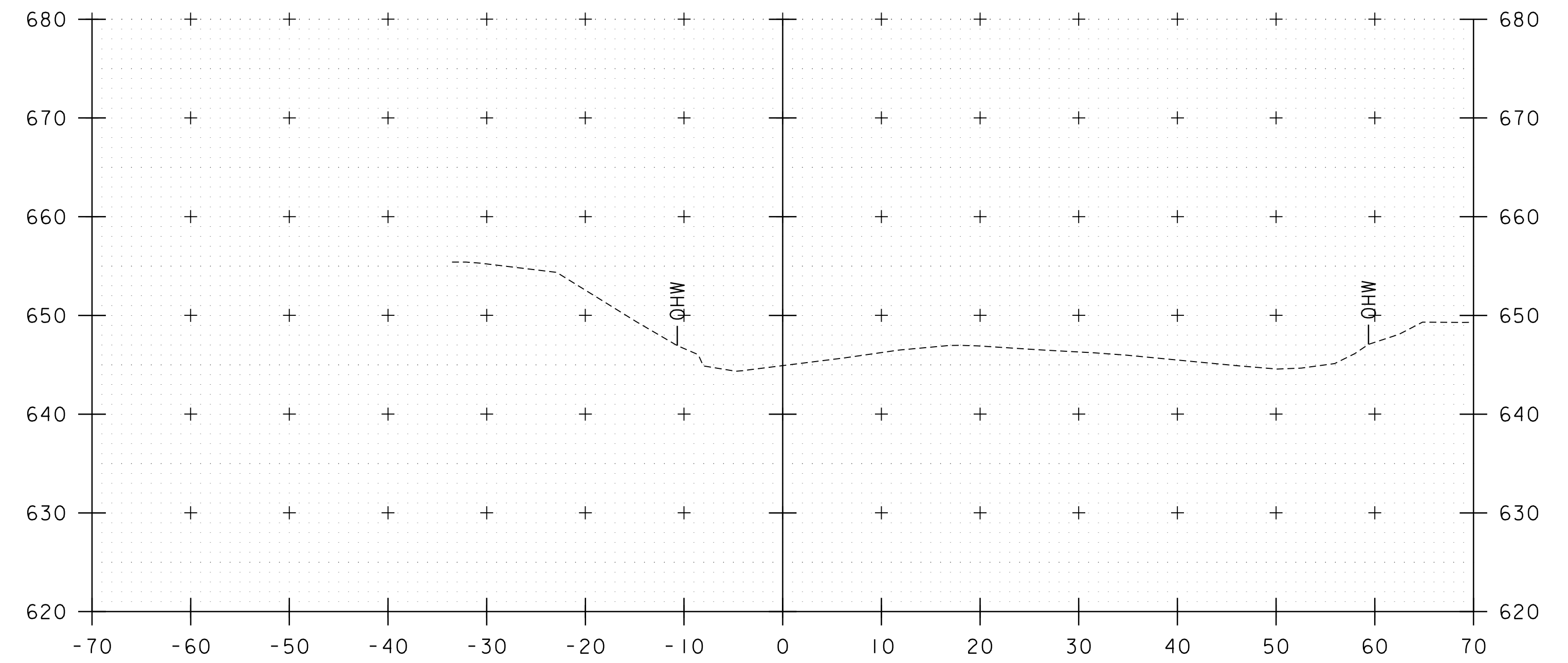
51+00

STA. 50+80 TO STA. 51+10

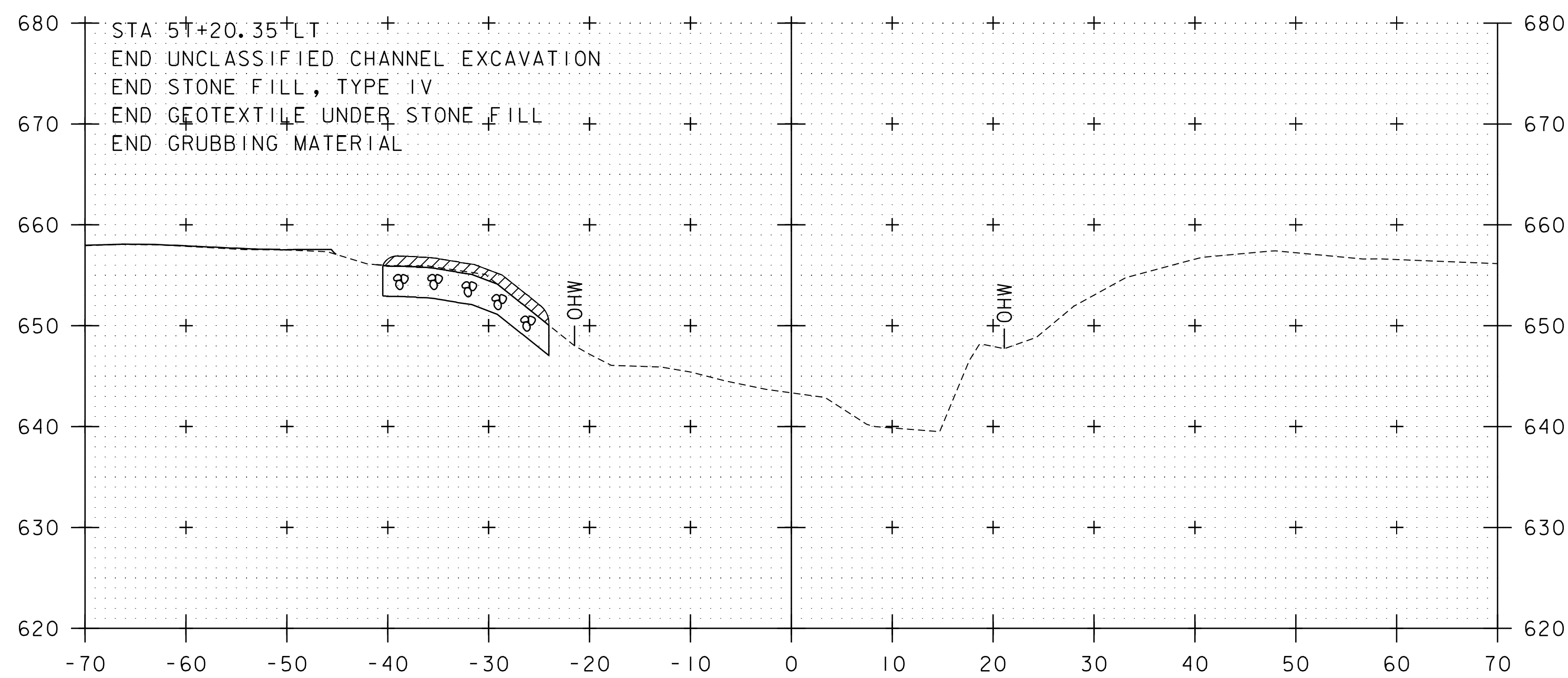
PROJECT NAME: STOWE	
PROJECT NUMBER: BO 1446(37)	
FILE NAME: si2j660xs.dgn	PLOT DATE: 09-FEB-2024
PROJECT LEADER: C. BURRALL	DRAWN BY: M. LONGSTREET
DESIGNED BY: C. BURRALL	CHECKED BY: C. BURRALL
CHANNEL CROSS SECTIONS 2	SHEET 36 OF 84



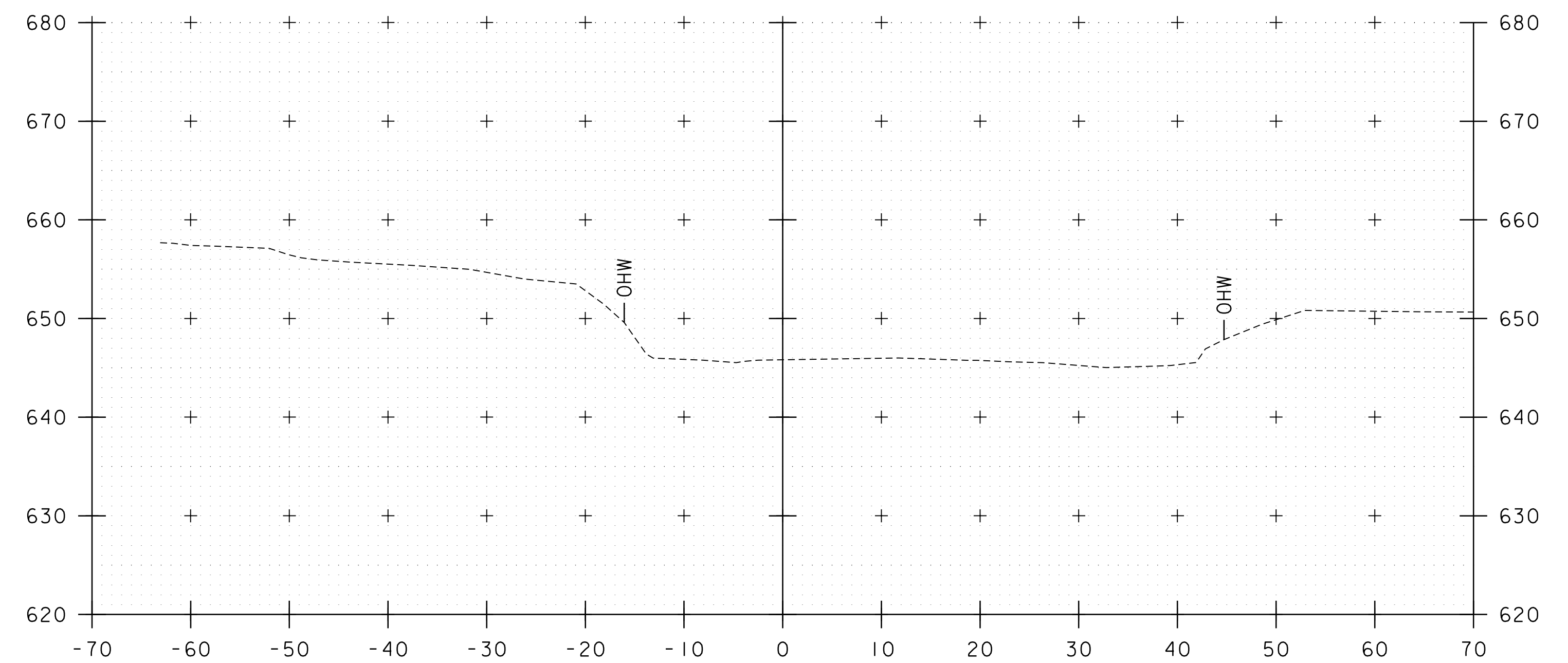
51+25



51+75



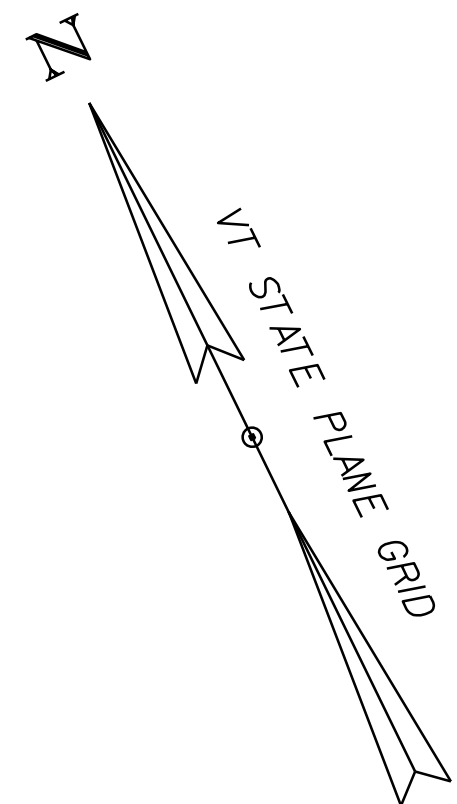
51+20



51+50

STA. 51+20 TO STA. 51+75

PROJECT NAME: STOWE	PLOT DATE: 2/9/2024
PROJECT NUMBER: BO 1446(37)	DRAWN BY: M. LONGSTREET
FILE NAME: sl2j660xs.dgn	DESIGNED BY: C. BURRALL
PROJECT LEADER: C. BURRALL	CHECKED BY: C. BURRALL
CHANNEL CROSS SECTIONS 3	SHEET 37 OF 84

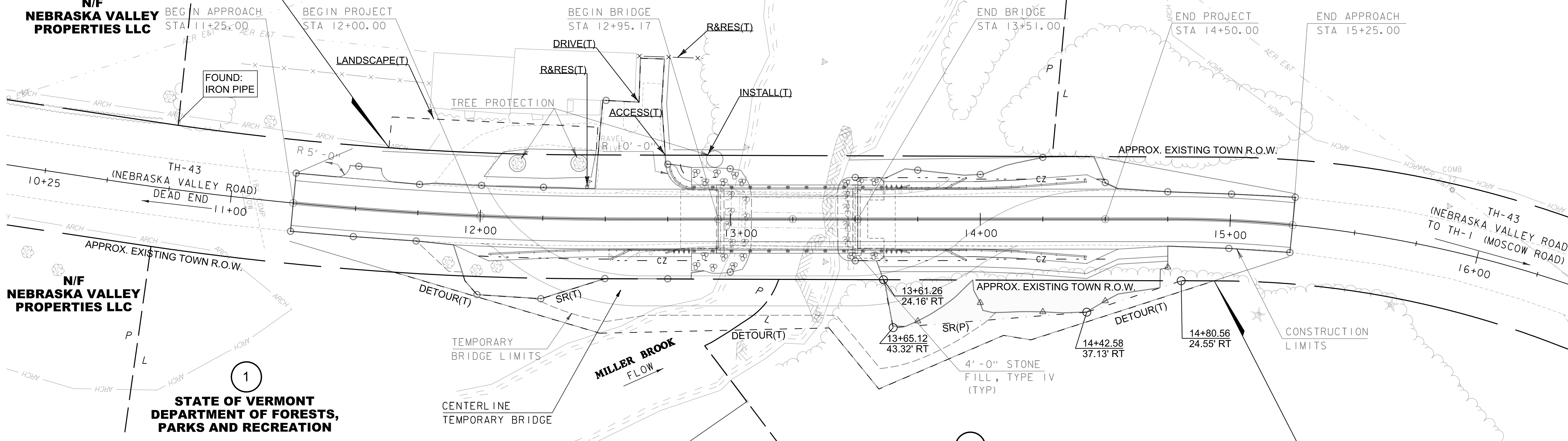


**BEGIN R.O.W. PROJECT
STOWE BO 1446(37)
STA. 11+62, 25.27' LT**

**N/F
NEBRASKA VALLEY
PROPERTIES LLC**

CHMURA, ANDREW

**N/F
ROBERTS, PETER A. & ELLEN C.
LIVING TRUST**



**N/F
NEBRASKA VALLEY
PROPERTIES LLC**

**STATE OF VERMONT
DEPARTMENT OF FORESTS,
PARKS AND RECREATION**

BOYER, MARK

**END R.O.W. PROJECT
STOWE BO 1446(37)
STA. 14+94, 24.29' RT**

EXISTING BRIDGE INFORMATION
BUILT 1948
54' SINGLE SPAN ROLLED BEAM
CONCRETE CAST-IN-PLACE DECK

FOUND:
1.5" IRON PIPE
7" ABOVE GROUND

BRIDGE RAILING, GALVANIZED 3 RAIL
BOX BEAM (POWDER COATED BLACK)

STA 12+83.50 RT - STA 13+62.50 RT
STA 12+85.50 LT - STA 13+62.50 LT

BOX BEAM GUARDRAIL (POWDER COATED BLACK)

STA 12+03.93 RT - STA 12+51.56 RT
STA 12+75.56 LT - STA 12+85.50 LT
STA 13+94.50 LT - STA 14+42.58 LT
STA 13+94.50 RT - STA 14+42.58 RT

GUARDRAIL APPROACH SECTION, GALV 3
RAIL BOX BEAM (POWDER COATED BLACK)

STA 12+51.56 RT - STA 12+83.50 RT
STA 13+62.50 LT - STA 13+94.50 LT
STA 13+62.50 RT - STA 13+94.50 RT

CONSTRUCT 5' -0" PAVED APRON

STA 11+41.37 LT - STA 11+64.16 LT

CONSTRUCT PAVED DRIVE

STA 12+45.84 LT - STA 12+84.26 LT

REMOVAL AND DISPOSAL OF GUARDRAIL

STA 12+58.59 RT - STA 12+96.11 RT
STA 12+84.47 LT - STA 12+97.02 LT
STA 13+49.22 LT - STA 13+87.71 LT
STA 13+49.23 RT - STA 13+63.04 RT

REMOVE & RESET MAILBOX, SINGLE SUPPORT

STA 12+42.56 LT

REMOVE & RESET FENCE

STA 12+63.96 OFFSET 65' LT TO
STA 12+87.94 OFFSET 65' LT

4 INCH YELLOW LINE

STA 11+25.00 CL - STA 15+25.00 CL (DOUBLE)

DELINEATOR WITH STEEL POST

STA 12+58.50 RT (BLUE)
STA 12+85.50 LT (GREEN)
STA 13+87.50 LT (BLUE)
STA 13+87.50 RT (GREEN)

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

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

NOTES

- 1) RESIDENTIAL DRIVES AND FENCES SHOWN ARE APPROXIMATE. EXISTING CONDITIONS AND EXACT LOCATIONS MAY DIFFER.
- 2) LAWN AT ADJACENT PROPERTY TO BE SEEDED AND MULCHED UPON CONSTRUCTION COMPLETION. AREA SHOWN IS APPROXIMATE.

PROJECT NAME: STOWE
PROJECT NUMBER: BO 1446(37)

FILE NAME: r12j660lay.dgn
PROJECT LEADER: C. COTA
DESIGNED BY: C. BURRALL
R.O.W. LAYOUT SHEET

PLOT DATE: 2/9/2024
DRAWN BY: F. BORCH
CHECKED BY: A. PROULX
SHEET 38 OF 84

RIGHT - OF - WAY DETAIL SHEET

TABLE OF PROPERTY ACQUISITION

PARCEL NO.	PROPERTY OWNER	ROW LAYOUT NO.	BEGINNING STATION	ENDING STATION	FEE ACQUISITION	REMAINDER	RIGHT			RECORDING DATA					REMARKS
					AREA±	AREA±	TYPE	T/P	AREA ±	TITLE	DATE	TOWN / CITY	BOOK	PAGE	
1	STATE OF VERMONT DEPARTMENT OF FORESTS, PARKS AND RECREATION	1	11+67 RT 11+94 RT	13+19± RT 12+50 RT			DETOUR SLOPE	T T	1,680 SF 327 SF	MOA	07/11/22	STOWE	1172	335-339	INCL. EC
2	BOYER, MARK	1	13+00± RT 13+61.26 RT	14+94 RT 14+80.56 RT			DETOUR SLOPE	T P	2,423 SF 1,509 SF	WDOE	06/13/22	STOWE	1170	60-61	INCL. EC
3	CHMURA, ANDREW	1	11+62 LT 12+47 LT 12+43 LT 12+47 LT 12+62 LT 12+91 LT	12+47 LT 12+74 LT 12+74 LT 12+89 LT 12+97 LT			LANDSCAPE DRIVE REMOVE & RESET ACCESS REMOVE & RESET INSTALL	T T T T T T	1,009 SF 701 SF	GTR	08/18/22	STOWE	1175	304-305	INCL. BF, SEED & MULCH POST-CONSTRUCTION MAILBOX TEMP. LOSS OF ACCESS FENCE INCL. TPZ
	STOWE ELECTRIC														UTILITY
	CONSOLIDATED COMMUNICATIONS														UTILITY

TABLE OF REVISIONS

REVISION NO.	ROW SET SHEET #	DESCRIPTION	DATE
1	3, 4	PARCEL 3, CHMURA - ADD NEW PROPERTY TO PROJECT. REV BY: MT CO 10601 APP BY: AP	03/04/22
2	3, 4	PARCEL 3, CHMURA - CHANGE BEGIN ROW PROJECT STA 11+66.82, 24.23' RT TO STA 11+62, 25.27' LT, LENGTH OF ROW PROJECT CHANGED FROM 327.67 FT TO 332.90 FT; ADD LANDSCAPE(T) STA 11+62 LT TO STA 12+47 LT, AREA 1,009 SF, REMARKS INCL. BF, SEED & MULCH POST CONST; CHANGE DRIVE(T) BEGIN STA 11+94 LT TO 12+47 LT, END STATION 12+49 LT TO 12+74 LT, CHANGE AREA 577 SF TO 701 SF; CHANGE ACCESS(T) STA 12+73 LT TO STA 12+74 LT; ADD REMOVE & RESET(T) STA 12+62 LT TO 12+89 LT, ADD REMARKS FENCE. REV BY: MT CO 10632 APP BY: AP	06/23/22

PROJECT NAME: STOWE
PROJECT NUMBER: BO 1446(37)

FILE NAME: r12j660detail.dgn
PROJECT LEADER: C. COTA
DESIGNED BY: F. BORCH
R.O.W. DETAIL SHEET

PLOT DATE: 2/9/2024
DRAWN BY: M. TROTTIER
CHECKED BY: A. PROULX
SHEET 39 OF 84

STATE OF VERMONT AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT BRIDGE PROJECT

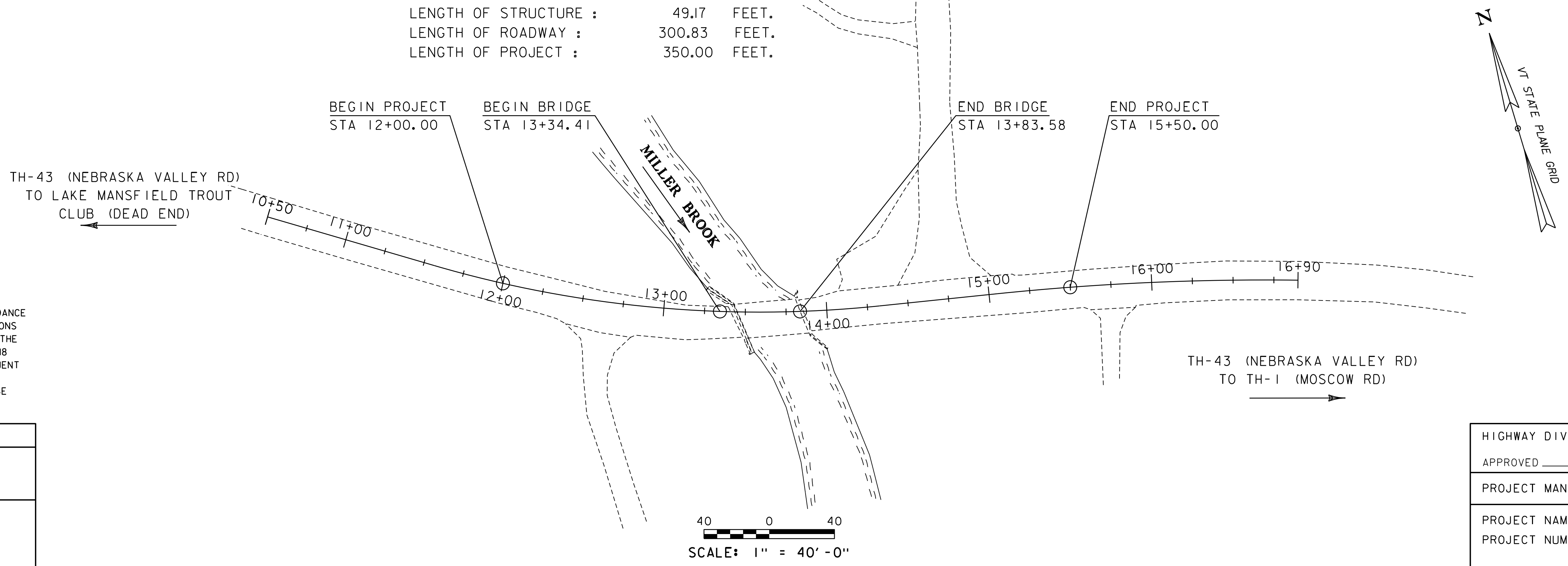
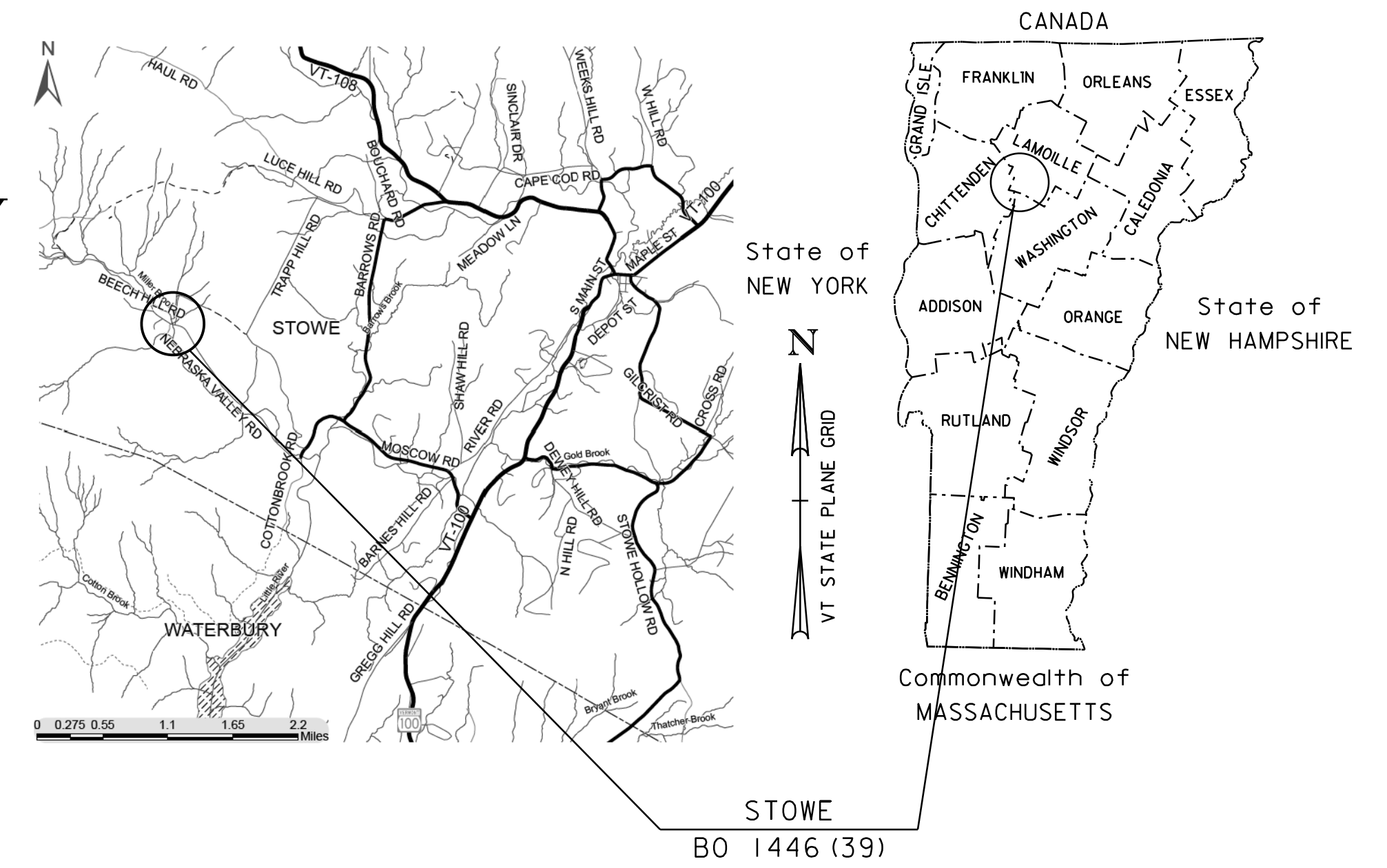
TOWN OF STOWE
COUNTY OF LAMOILLE

ROUTE NO : TOWN HIGHWAY 43 (CLASS 3 TOWN HIGHWAY) BRIDGE NO : 48

PROJECT LOCATION : BRIDGE 48 IS LOCATED IN THE TOWN OF STOWE ON TH 43 (NEBRASKA VALLEY ROAD) APPROXIMATELY 1.5 MILES NORTHWEST FROM ITS INTERSECTION WITH TH 1 (MOSCOW ROAD) AND EXTENDING EASTERLY .066 MILES.

PROJECT DESCRIPTION : REPLACEMENT OF THE EXISTING BRIDGE WITH A NEW BRIDGE OFF ALIGNMENT INCLUDING RELATED APPROACH AND CHANNEL WORK.

LENGTH OF STRUCTURE : 49.17 FEET.
LENGTH OF ROADWAY : 300.83 FEET.
LENGTH OF PROJECT : 350.00 FEET.



CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2018, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON APRIL 13, 2018 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

QUALITY ASSURANCE PROGRAM : LEVEL 2	
SURVEYED BY :	R. GILMAN
SURVEYED DATE :	9/21/2009
DATUM	
VERTICAL	NAVD88
HORIZONTAL	NAD83 (96)

HIGHWAY DIVISION, CHIEF ENGINEER	
APPROVED _____	DATE _____
PROJECT MANAGER : CORY BURRALL, P.E.	
PROJECT NAME : STOWE	
PROJECT NUMBER : BO 1446 (39)	
SHEET 40 OF 84 SHEETS	

SEE INDEX OF SHEETS FOR STOWE 39 INDEX

FINAL HYDRAULIC REPORT

HYDROLOGIC DATA Date: _____

DRAINAGE AREA : 10
 CHARACTER OF TERRAIN : Mountainous Rural Watershed
 STREAM CHARACTERISTICS : Sinuous with narrow floodplain, braided downstream channel
 NATURE OF STREAMBED : Cobble with Gravel substrate

PEAK FLOW DATA - ANNUAL EXCEEDANCE PROBABILITY (AEP)

43% =	590	2% =	1800
10% =	1100	1% =	2200
4% =	1500	0.2% =	3200

DATE OF FLOOD OF RECORD: Unknown
 ESTIMATED DISCHARGE: Unknown
 WATER SURFACE ELEV.: Unknown
 NATURAL STREAM VELOCITY: @ 4% AEP 14
 ICE CONDITIONS: Moderate
 DEBRIS: Moderate
 DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? Unknown
 IS ORDINARY RISE RAPID? Unknown
 IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? No
 IF YES, DESCRIBE: _____

WATERSHED STORAGE: 1% HEADWATERS: X
 UNIFORM: _____
 IMMEDIATELY ABOVE SITE: _____

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE: Rolled I Beam
 YEAR BUILT: 1925
 CLEAR SPAN(NORMAL TO STREAM): 36
 VERTICAL CLEARANCE ABOVE STREAMBED: 7
 WATERWAY OF FULL OPENING: 264
 DISPOSITION OF STRUCTURE: Full Replacement
 TYPE OF MATERIAL UNDER SUBSTRUCTURE: See Borings

WATER SURFACE ELEVATIONS AT:

43% AEP =	746	VELOCITY =	8
10% AEP =	747	"	10
4% AEP =	748	"	11
2% AEP =	749	"	12
1% AEP =	750	"	13

LONG TERM STREAMBED CHANGES: Unknown

IS THE ROADWAY OVERTOPPED BELOW 1% AEP: No
 FREQUENCY: N/A
 RELIEF ELEVATION: N/A
 DISCHARGE OVER ROAD @ 1% AEP: N/A

UPSTREAM STRUCTURE

TOWN: Stowe DISTANCE: 3,700 ft.
 HIGHWAY #: TH-44 STRUCTURE #: Unknown
 CLEAR SPAN: Unknown CLEAR HEIGHT: Unknown
 YEAR BUILT: Unknown FULL WATERWAY: Unknown
 STRUCTURE TYPE: Unknown

DOWNSTREAM STRUCTURE

TOWN: Stowe DISTANCE: 1.2 mi.
 HIGHWAY #: TH-43 STRUCTURE #: 51
 CLEAR SPAN: 51 CLEAR HEIGHT: Unknown
 YEAR BUILT: 1948 FULL WATERWAY: Unknown
 STRUCTURE TYPE: Single Span Rolled Beam

LRFR LOAD RATING FACTORS

LOADING LEVELS	TRUCK						
	H-20	HL-93	3S2	6 AXLE	3A STR.	4A STR.	5A SEM
TONNAGE	20	36	36	66	30	34.5	38
INVENTORY	2.83	1.65					
POSTING							
OPERATING	3.68	2.15	3.8	2.04	2.69	2.44	2.99
COMMENTS:							

PROPOSED STRUCTURE

STRUCTURE TYPE: Single Span

CLEAR SPAN(NORMAL TO STREAM): 40
 VERTICAL CLEARANCE ABOVE STREAMBED: 7
 WATERWAY OF FULL OPENING: 265

WATER SURFACE ELEVATIONS AT:

43% AEP =	746	VELOCITY=	7
10% AEP =	747	"	9
4% AEP =	748	"	10
2% AEP =	749	"	11
1% AEP =	750	"	12

IS THE ROADWAY OVERTOPPED BELOW 1% AEP: No
 FREQUENCY: N/A
 RELIEF ELEVATION: N/A
 DISCHARGE OVER ROAD @ 1% AEP: N/A

BRIDGE LOW CHORD ELEVATION: 750
 FREEBOARD: @ 4% AEP 2

SCOUR: 1.5-ft of scour was calculated, 6.0 ft. (minimum) should be used for substructure analysis and design
 REQUIRED CHANNEL PROTECTION: Stone Fill Type IV*

PERMIT INFORMATION

AVERAGE DAILY FLOW: - DEPTH OR ELEVATION:
 ORDINARY LOW WATER: -
 ORDINARY HIGH WATER: -

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: N/A
 CLEAR SPAN (NORMAL TO STREAM): N/A
 VERTICAL CLEARANCE ABOVE STREAMBED: N/A
 WATERWAY AREA OF FULL OPENING: N/A

ADDITIONAL INFORMATION

*E-Stone Type IV should be used for all in channel work.

- TRAFFIC MAINTENANCE NOTES**
1. MAINTAIN ONE-WAY TRAFFIC ON A TEMPORARY BRIDGE.
 2. INSTALL AND MAINTAIN TRAFFIC SIGNALS.
 3. SIDEWALKS ARE NOT NECESSARY
 4. THE APPROACHES FOR THE TEMPORARY BRIDGE SHALL BE PAVED.

DESIGN VALUES

1. DESIGN LIVE LOAD	HL-93
2. FUTURE PAVEMENT	d _p : 2.5 INCH
3. DESIGN SPAN	L: 48.00 FT
4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS)	Δ: ---
5. PRESTRESSING STRAND	f _y : ---
6. PRESTRESSED CONCRETE STRENGTH	f'c: ---
7. PRESTRESSED CONCRETE RELEASE STRENGTH	f'ci: ---
8. SPECIAL PROVISION (PERFORMANCE-BASED CONCRETE, CLASS PCD)	f'c: 4.0 KSI
9. SPECIAL PROVISION (PERFORMANCE-BASED CONCRETE, CLASS PCS)	f'c: 3.5 KSI
10. SPECIAL PROVISION (PERFORMANCE-BASED CONCRETE, CLASS SCC)	f'c: 4.0 KSI
11. CONCRETE, CLASS C	f'c: 3.0 KSI
12. REINFORCING STEEL	f _y : 60 KSI
13. STRUCTURAL STEEL AASHTO M270 (GALVANIZED)	f _y : 50 KSI
14. NOMINAL BEARING RESISTANCE OF SOIL	q _n : ---
15. SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	φ: ---
16. NOMINAL BEARING RESISTANCE OF ROCK	q _n : ---
17. ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	φ: ---
18. PILE RESISTANCE FACTOR	φ: ---
19. LATERAL PILE DEFLECTION	Δ: ---
20. BASIC WIND SPEED	V _{3s} : ---
21. MINIMUM GROUND SNOW LOAD	p _g : ---
22. SEISMIC DATA	PGA: --- S: --- S ₁ : ---
23.	---
24.	---
25.	---
26.	---

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2024	400	60	54	1.5	35
2044	440	70	54	2	50

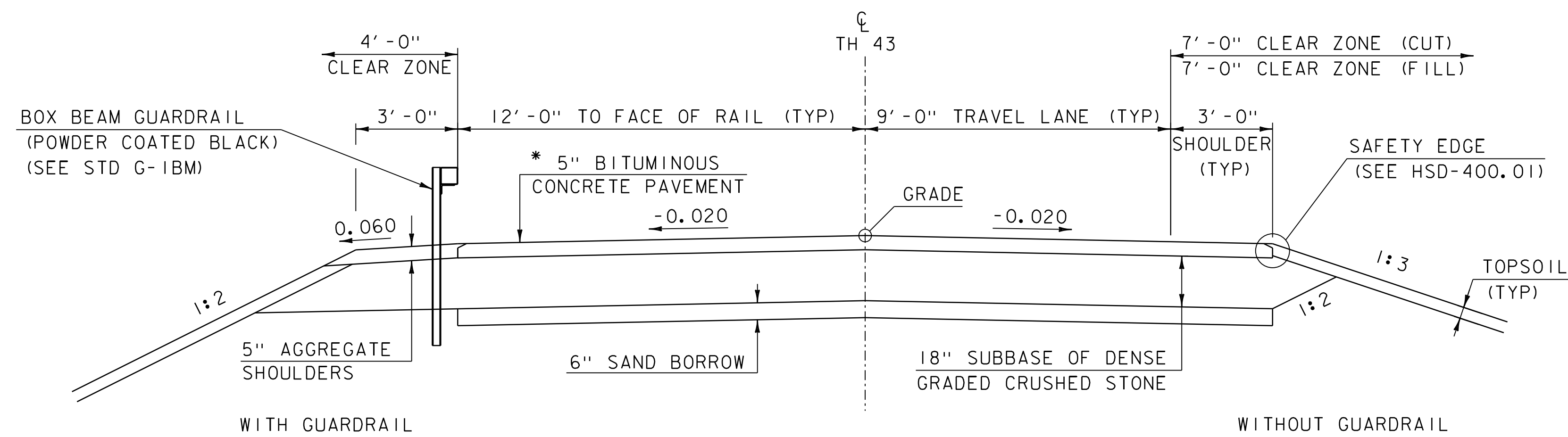
20 year ESAL for flexible pavement from 2024 to 2044 : 76000
 40 year ESAL for flexible pavement from 2024 to 2064 : 160000
 Design Speed: 35 mph

AS BUILT "REBAR" DETAIL

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

PROJECT NAME: STOWE
 PROJECT NUMBER: BO 1446(39)

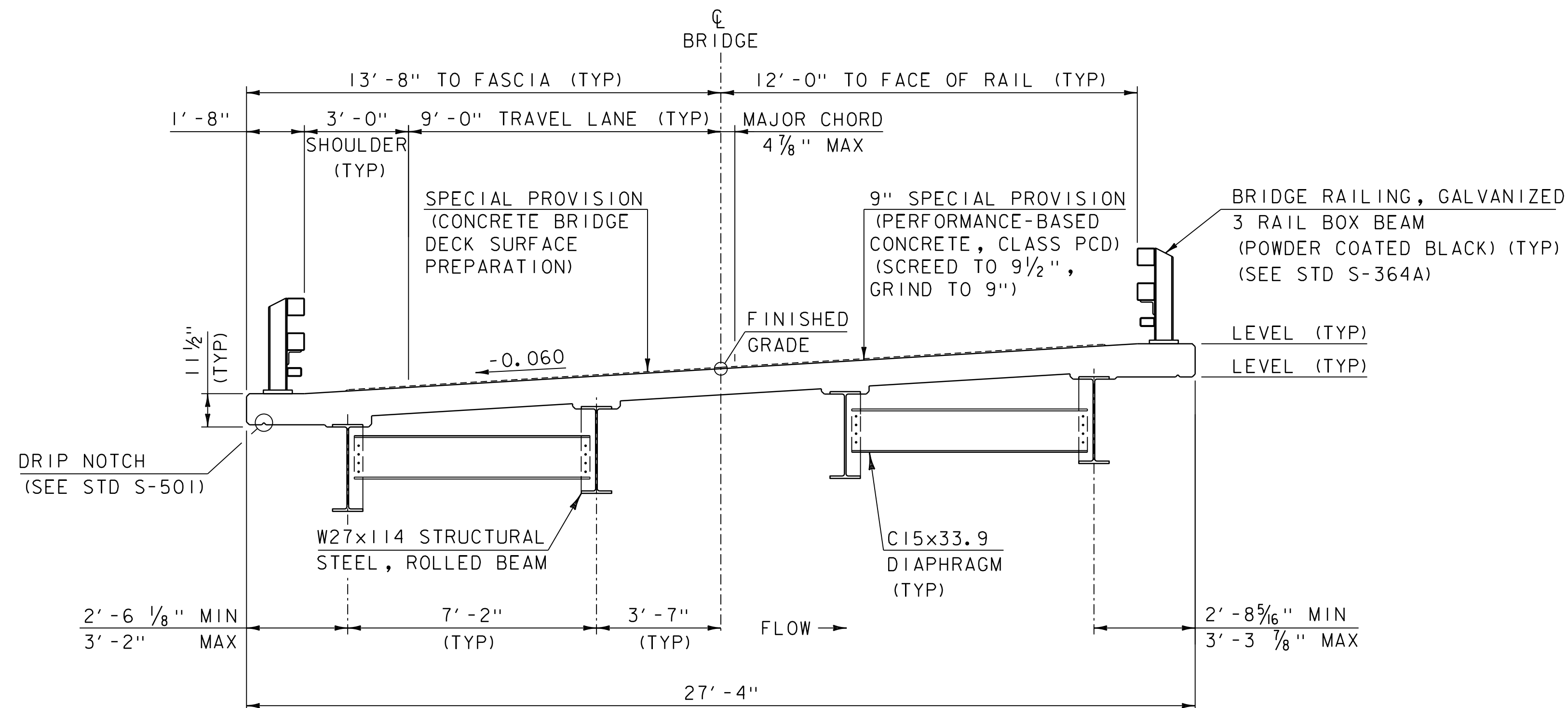
FILE NAME: sl2j658p1.dgn PLOT DATE: 2/9/2024
 PROJECT LEADER: C. BURRALL DRAWN BY: R. PELLETT
 DESIGNED BY: R. PELLETT CHECKED BY: C. BURRALL
 PRELIMINARY INFORMATION SHEET SHEET 41 OF 84



TH 43 (NEBRASKA VALLEY RD) ROADWAY TYPICAL SECTION
SCALE 3/8" = 1'-0"

BITUMINOUS CONCRETE PAVEMENT MATERIAL REQUIREMENTS

DESIGN LANE/DESIGN LIFE ESALS	41,040
PERFORMANCE GRADE ASPHALT BINDER	70-28
DESIGN NUMBER OF GYRATIONS	50



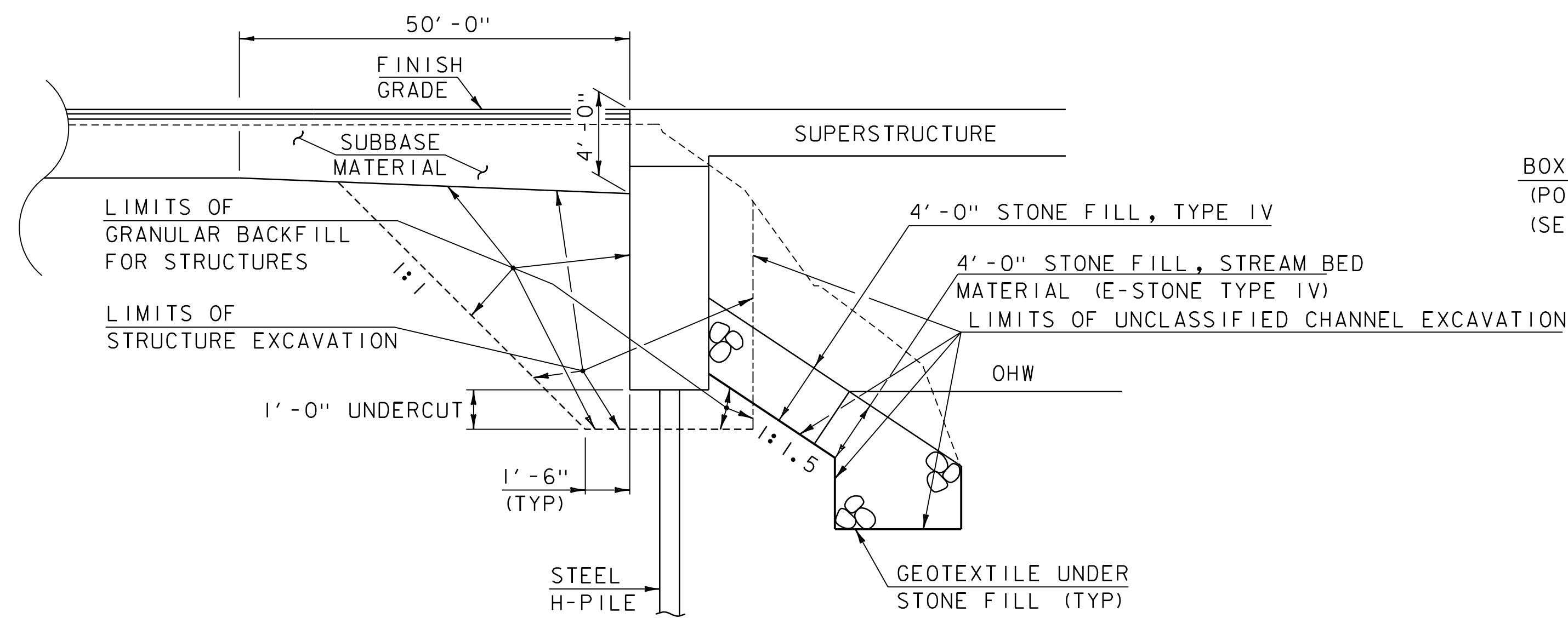
BRIDGE TYPICAL SECTION
SCALE 3/8" = 1'-0"

MATERIAL TOLERANCES
(IF USED ON PROJECT)

SURFACE	
- PAVEMENT (TOTAL THICKNESS)	+/- 1/4"
- AGGREGATE SURFACE COURSE	+/- 1/2"
SUBBASE	+/- 1"
SAND BORROW	+/- 1"

EMULSION SHALL BE APPLIED PER THE APPLICATION RATES IN TABLE 406.12A OF THE STANDARD SPECIFICATIONS.

PROJECT NAME:	STOWE
PROJECT NUMBER:	BO 1446(39)
FILE NAME:	sl2j658+yp.dgn
PROJECT LEADER:	C. BURRALL
DESIGNED BY:	C. BURRALL
TYPICAL SECTIONS I	
PLOT DATE:	2/9/2024
DRAWN BY:	R. PELLETT
CHECKED BY:	M. LONGSTREET
SHEET	42 OF 84

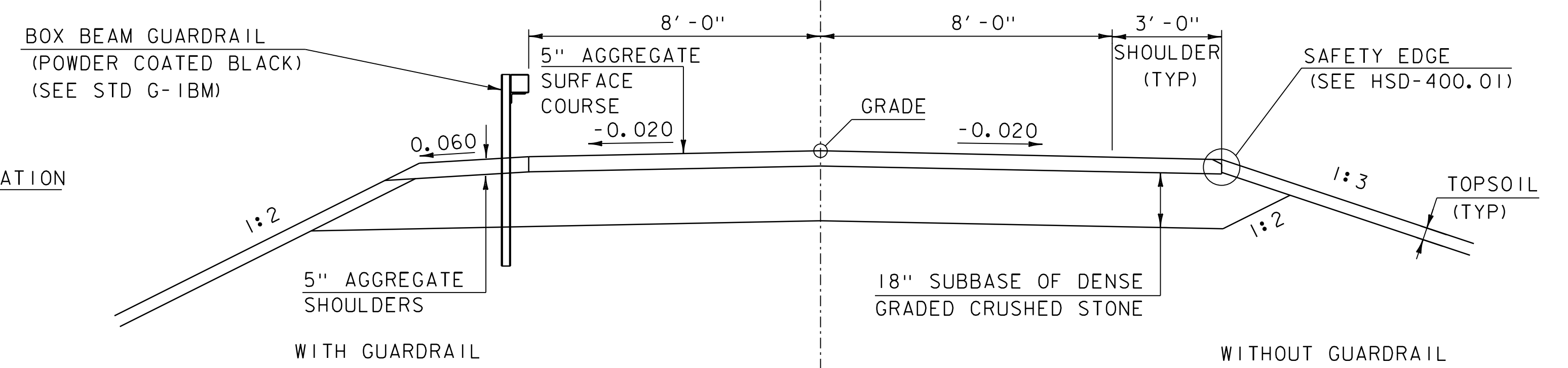


ABUTMENT EARTHWORK TYPICAL SECTION

(NOT TO SCALE)

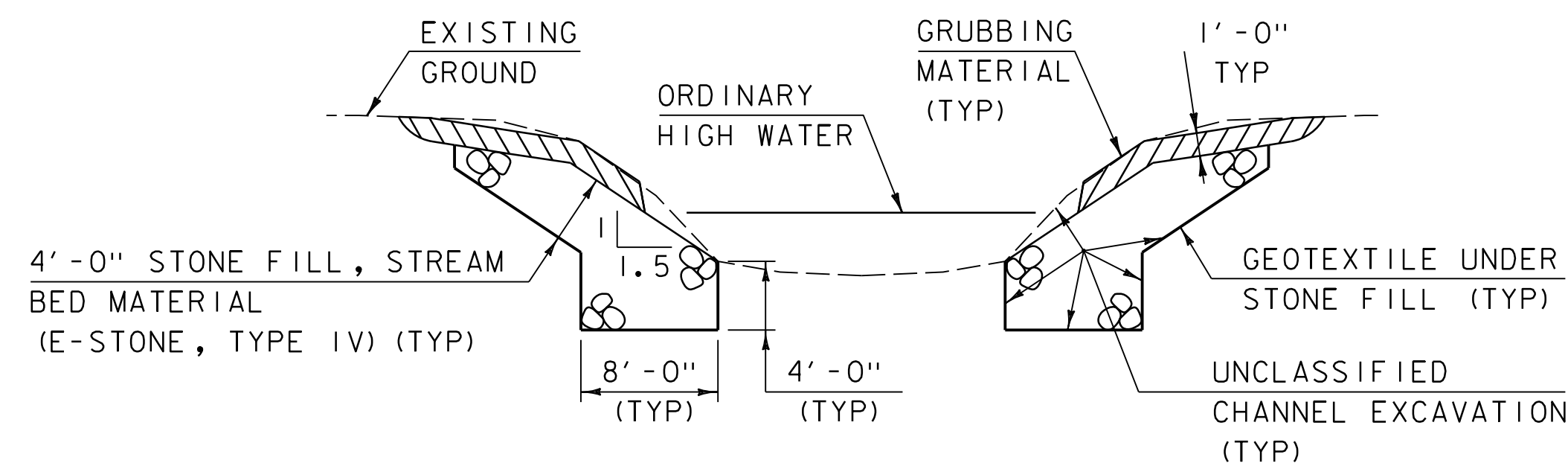
NOTES

1. STONE FILL SHOULD BE PLACED OVER THE GEOTEXTILE BY METHODS THAT DO NOT STRETCH, TEAR, PUNCTURE, OR REPOSITION THE FABRIC.



SIDE ROAD TYPICAL SECTION

(NOT TO SCALE)



CHANNEL TYPICAL SECTION

(NOT TO SCALE)

NOTES

1. E-STONE MAY BE USED IN PLACE OF STONE FILL BUT SHALL AT A MINIMUM BE USED BELOW OHW.
2. STONE FILL SHOULD BE PLACED OVER THE GEOTEXTILE BY METHODS THAT DO NOT STRETCH, TEAR, PUNCTURE, OR REPOSITION THE FABRIC.
3. WHENEVER CHANNEL SLOPE INTERSECTS ROADWAY SUBBASE, GRUBBING MATERIAL SHALL BEGIN AT THE BOTTOM OF SUBBASE.
4. GRUBBING MATERIAL SHALL BE PLACED UNDERNEATH STRUCTURES WHERE THERE IS MORE THAN 6 FEET VERTICALLY FROM ORDINARY HIGH WATER (OHW) TO THE BOTTOM OF SUPERSTRUCTURE AND MORE THAN 6 FEET HORIZONTALLY FROM OHW LINE TO FRONT FACE OF ABUTMENT. THIS MATERIAL SHALL START JUST ABOVE THE OHW ELEVATION AND TERMINATE 3 FEET HORIZONTALLY FROM THE FRONT FACE OF THE ABUTMENT. THIS MATERIAL SHALL NOT BE PLACED IN AREAS THAT WILL SEE CONCENTRATED FLOWS RESULTING FROM SURFACE WATER RUNOFF. GRUBBING MATERIAL MAY BE OMITTED IF LESS THAN 3 FEET IN WIDTH BENEATH A STRUCTURE. SEE CHANNEL SECTIONS FOR ADDITIONAL DETAILING.
5. STONE FILL SHALL BE OMITTED IN AREAS WHERE EXPOSED BEDROCK IS ENCOUNTERED IN THE FINAL CONSTRUCTION CONDITION

PROJECT NAME: STOWE
PROJECT NUMBER: BO 1446(39)

FILE NAME: sl2j658+yp.dgn
PROJECT LEADER: C. BURRALL
DESIGNED BY: C. BURRALL
TYPICAL SECTIONS 2

PLOT DATE: 2/9/2024
DRAWN BY: R. PELLET
CHECKED BY: M. LONGSTREET
SHEET 43 OF 84

GENERAL

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION 2018, AND ITS LATEST REVISIONS, AND THE AASHTO LRFD BRIDGE DESIGN SPECIFICATION, DATED 2020, AND ITS LATEST REVISIONS.
2. THE CONTRACTOR SHALL PROVIDE A SITE-SPECIFIC EROSION PREVENTION AND SEDIMENT CONTROL PLAN IN ACCORDANCE WITH SECTION 653 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION. ESTIMATED QUANTITIES FOR EPSC WORK HAVE BEEN INCLUDED IN THE CONTRACT FOR BIDDING PURPOSES. IF THE CONTRACTOR'S EPSC PLAN REQUIRES ITEMS OF WORK THAT ARE NOT INCLUDED IN THE PLANS IT SHALL BE PAID FOR AS PART OF ITEM 653.03, "MAINTENANCE OF EPSC PLAN."
3. THE AREA(S) OF DISTURBANCE ARE SHOWN ON THE ENVIRONMENTAL IMPACT PLANS, WHICH ARE REFERENCED IN THE SPECIAL PROVISIONS, NOTICE TO BIDDER - OTHER SPECIFICATIONS AND CONTRACT REQUIREMENTS.

EARTHWORK AND RELATED ITEMS

4. THE REMOVAL OF THE EXISTING STRUCTURE WILL BE PAID UNDER ITEM 529.15, "REMOVAL OF STRUCTURE". THIS WORK INCLUDES REMOVAL OF THE ENTIRE SUPERSTRUCTURE, SUBSTRUCTURE, AND ALL PARTS OF THE EXISTING STRUCTURE THAT MAY FALL OUTSIDE THE LIMITS OF STRUCTURE EXCAVATION AND UNCLASSIFIED CHANNEL EXCAVATION.
5. BACKFILL BEHIND THE ABUTMENTS SHALL BE LIMITED TO 2 FEET BELOW THE BRIDGE SEATS UNTIL THE STRUCTURAL STEEL IS SET. BACKFILL BEHIND THE ABUTMENTS SHALL NOT BE PLACED HIGHER THAN THE BRIDGE SEATS UNTIL THE ABUTMENTS AND DECK CONSTRUCTION ARE COMPLETED.
6. THE STONE FILL UNDER THE BRIDGE AS SHOWN IN THE PLANS SHALL BE PLACED BEFORE THE NEW SUPERSTRUCTURE IS SET.

CONCRETE

7. ALL CONCRETE FOR THE BRIDGE DECK, BACKWALLS, AND WINGWALLS ABOVE THE BRIDGE SEAT SHALL BE PAID FOR UNDER ITEM 900.608, "SPECIAL PROVISION (PERFORMANCE-BASED CONCRETE, CLASS PCF)".
8. ALL CONCRETE FOR THE SUBSTRUCTURE BELOW THE BRIDGE SEAT AND APPROACH SLABS SHALL BE PAID FOR UNDER ITEM 900.608, "SPECIAL PROVISION (PERFORMANCE-BASED CONCRETE, CLASS PCS)".
9. THE DECK IS TO BE PLACED IN ONE CONTINUOUS POUR WITH A MAXIMUM DURATION OF EIGHT HOURS. IF THE DECK PLACEMENT CANNOT BE COMPLETED, DUE TO UNEXPECTED CIRCUMSTANCES, A CONSTRUCTION JOINT SHALL BE USED. A MINIMUM 96 HOUR DELAY BETWEEN THE COMPLETION OF ONE DAY'S PLACEMENT AND THE BEGINNING OF ANY OTHER ADJACENT SEGMENT SHALL BE OBSERVED.
10. AFTER THE DECK HAS CURED, THE BRIDGE DECK SURFACE BETWEEN THE FACE OF RAIL SHALL BE DIAMOND GROUND A NOMINAL 0.5 INCHES. PAYMENT WILL BE MADE UNDER ITEM 900.670, "SPECIAL PROVISION (CONCRETE BRIDGE DECK SURFACE PREPARATION)".
11. WATER REPELLENT, SILANE, SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES, EXCEPT THE UNDERSIDE OF THE DECK BETWEEN DRIP NOTCHES.
12. A BRIDGE PLAQUE FURNISHED BY THE AGENCY SHALL BE CAST INTO WINGWALL #2. SEE STANDARD S-501 FOR FURTHER DETAILS.
13. CHAMFER ALL EXPOSED EDGES OF CONCRETE 1" BY 1" UNLESS OTHERWISE NOTED.

REINFORCING STEEL

14. ALL REINFORCING STEEL FOR THE BRIDGE DECK, BACKWALLS, WINGWALLS ABOVE THE BRIDGE SEAT, AND APPROACH SLABS SHALL BE PAID FOR UNDER ITEM 506.11, "REINFORCING STEEL, LEVEL 1 (EPOXY)" AND MARKED WITH AN "E" IN THEIR PREFIX
15. ALL REINFORCING STEEL FOR THE SUBSTRUCTURE BELOW THE BRIDGE SEAT SHALL BE PAID FOR UNDER ITEM 506.11, "REINFORCING STEEL, LEVEL 1 (BLACK)".
16. UNLESS OTHERWISE NOTED, MINIMUM CLEAR COVER SHALL BE AS FOLLOWS:
 - ALONG TOP SURFACE OF SUPERSTRUCTURE: 3 INCHES
 - ALONG BOTTOM SURFACE OF SUPERSTRUCTURE: 1 ½ INCHES
 - ALONG BACK FACES OF WALLS AGAINST EARTH: 2 INCHES
 - ELSEWHERE UNLESS OTHERWISE INDICATED: 3 INCHES

17. TEST BARS SHALL BE PROVIDED IN ACCORDANCE WITH THE "VERMONT AGENCY OF TRANSPORTATION MATERIAL SAMPLING MANUAL" AVAILABLE ON THE AGENCY WEBSITE.

STRUCTURAL STEEL

18. ALL NEW STRUCTURAL STEEL SHALL CONFORM TO AASHTO M 270 GRADE 50 AND SHALL BE GALVANIZED AFTER FABRICATION UNLESS NOTED OTHERWISE. ALL STRUCTURAL STEEL SHALL BE PAID FOR UNDER ITEM 506.50, "STRUCTURAL STEEL, ROLLED BEAM (GALVANIZED)".
19. STRUCTURAL STEEL MEMBERS DESIGNATED "CVN" IN THE PLANS SHALL BE CHARPY V-NOTCH TESTED IN ACCORDANCE WITH SUBSECTION 714.01.

20. FLEMING BRACKETS OR SIMILAR FALSEWORK SHALL BE SPACED AS REQUIRED BY DESIGN, BUT SHALL BE LIMITED TO A MAXIMUM SPACING OF 4 FEET. BRACKETS SHALL EXTEND AS NEAR AS POSSIBLE TO THE BOTTOM FLANGE AND SHALL BE A MINIMUM OF AT LEAST 75% OF WEB DEPTH. THE DESIGN OF FALSEWORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
21. BEARING STIFFENERS SHALL BE PLUMB UNDER FULL DEAD LOAD OF THE STRUCTURE. INTERMEDIATE CONNECTION PLATES MAY BE EITHER ALL PLUMB OR NORMAL TO THE TOP FLANGE.
22. UNLESS OTHERWISE NOTED, ALL BOLTS SHALL BE 7/8" DIA ASTM A325 TYPE 1 AND MEET THE REQUIREMENTS OF SUBSECTION 714.05. HOLE DIAMETERS SHALL BE 15/16". ANY CONNECTIONS THAT ARE NOT DETAILED ON THE PLANS SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE VTRANS PROJECT MANAGER FOR APPROVAL.
23. AFTER SUPERSTRUCTURE STEEL HAS BEEN ERECTED, LOWER PORTIONS OF THE ABUTMENTS AND WINGWALLS CAST AND CURED, AND BEFORE ANY FORMWORK OR OTHER LOADS ARE ADDED TO THE BEAMS, ELEVATIONS ALONG THE TOP OF THE BEAM FLANGES SHALL BE TAKEN AS DIRECTED BY THE ENGINEER FOR USE IN DETERMINING DECK FORMWORK ELEVATIONS.

PILE FOUNDATIONS

24. ALL PILES SHALL BE DRIVEN TO A NOMINAL PILE DRIVING RESISTANCE OF XXX KIPS AND HAVE A MINIMUM EMBEDMENT DEPTH OF 43 FEET BELOW THE BOTTOM OF THE PILE CAP AT ABUTMENT 1 AND 33 FEET BELOW THE BOTTOM OF THE PILE CAP AT ABUTMENT 2. ANY WORK REQUIRED FOR DRIVING SHALL BE PAID FOR UNDER ITEM 504.10, "FURNISHING EQUIPMENT FOR DRIVING PILING".
25. FOR ESTIMATING PURPOSES, THE PILE TIP ELEVATIONS ARE ASSUMED TO BE AS SHOWN ON THE BORING LOGS. THE ACTUAL IN-PLACE LENGTH MAY VARY.
26. REINFORCED DRIVING TIPS SHALL BE REQUIRED AND SHALL CONFORM TO SUBSECTION 505.04(f) OF THE STANDARD SPECIFICATIONS.
27. A MINIMUM OF ONE DYNAMIC PILE TEST PER ABUTMENT IS REQUIRED DURING PILE INSTALLATION. PAYMENT WILL BE MADE UNDER ITEM 505.45, "DYNAMIC PILE LOADING TEST".

TRAFFIC CONTROL

28. DURING CONSTRUCTION TRAFFIC WILL BE MAINTAINED ON A ONE-WAY TEMPORARY BRIDGE LOCATED UPSTREAM OF THE NEW STRUCTURE. THE TEMPORARY BRIDGE AND DETOUR SHALL BE PAVED. CONSTRUCTION AND MAINTENANCE OF THE TEMPORARY BRIDGE AND ITS APPROACHES SHALL BE PAID FOR UNDER ITEM 528.10, "ONE-WAY TEMPORARY BRIDGE". TEMPORARY BRIDGE SHALL HAVE A MINIMUM CLEAR WIDTH BETWEEN FACES OF RAILING OF 14'-6".
29. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN, SUBMITTAL, AND IMPLEMENTATION OF A SITE-SPECIFIC TRAFFIC CONTROL PLAN. THE SITE-SPECIFIC TRAFFIC CONTROL PLAN SHALL BE DESIGNED IN ACCORDANCE WITH SECTION 641. ALL COSTS OF DESIGNING, SUBMITTING, AND IMPLEMENTING THE SITE-SPECIFIC TRAFFIC CONTROL PLAN WILL BE INCLUDED IN THE PAYMENT OF ITEM 641.11, "TRAFFIC CONTROL, ALL-INCLUSIVE".
30. ACCESS TO ALL DRIVES AND SIDE ROADS SHALL BE MAINTAINED AT ALL TIMES.
31. TEMPORARY TRAFFIC BARRIER SHALL MEET THE REQUIREMENTS OF 621.07. PAYMENT FOR FURNISHING, MAINTAINING, INSTALLATION, REMOVAL, AND RESETTING WILL BE INCLUDED UNDER ITEM 641.11, "TRAFFIC CONTROL, ALL-INCLUSIVE."
32. ANY REMOVAL, COVERING AND/ OR RESETTING OF EXISTING TRAFFIC SIGNS, AS WELL AS REMOVAL OF EXISTING PAVEMENT MARKINGS AND INSTALLATION OF ANY TEMPORARY PAVEMENT MARKINGS DEEMED NECESSARY BY THE RESIDENT ENGINEER, WILL BE CONSIDERED INCIDENTAL TO ITEM 641.11, "TRAFFIC CONTROL, ALL-INCLUSIVE".

TEMPORARY TRAFFIC SIGNAL AND DRIVEWAY ASSISTANT DEVICE

33. THE TEMPORARY TRAFFIC SIGNAL SYSTEM SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH ITEM 678.40, "TEMPORARY TRAFFIC SIGNAL SYSTEM" AND IN COMPLIANCE WITH THE LATEST EDITION OF THE MUTCD.
34. SIGNAL FACES SHALL BE LED AND CONSIST OF 12" LENSES (RED, YELLOW AND GREEN).
35. LUMINAIRES SHALL BE INSTALLED AT EACH OF THE APPROACHES TO ADEQUATELY LIGHT THE STOP BAR AREAS. PAYMENT WILL BE CONSIDERED INCIDENTAL TO ITEM 678.40, "TEMPORARY TRAFFIC SIGNAL SYSTEM".
36. STOP BARS SHALL BE LOCATED A MINIMUM OF 40 FT AND A MAXIMUM OF 180 FT FROM THE NEAREST SIGNAL HEAD.
37. ALL TEMPORARY SIGNAL EQUIPMENT, SIGNS, ETC. SHALL BELONG TO THE CONTRACTOR AT THE END OF THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR REMOVAL INCLUDING UTILITY POLES, WIRES, ETC. PAYMENT WILL BE CONSIDERED INCIDENTAL TO ITEM 678.40, "TEMPORARY TRAFFIC SIGNAL SYSTEM".

38. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING SIGNAL PHASING AND TIMING. THE CONTRACTOR SHALL SUBMIT A PHASING DIAGRAM AND TIMING SCHEDULE TO THE ENGINEER FOR APPROVAL. THE CONTRACTOR SHALL MAKE THE SIGNALS OPERATIONAL ONLY AFTER RECEIVING APPROVAL OF BOTH THE PHASING DIAGRAM AND TIMING SCHEDULE BY THE ENGINEER. DEVELOPMENT OF THE PHASING DIAGRAM AND TIMING SCHEDULE WILL BE CONSIDERED INCIDENTAL TO ITEM 678.40, "TEMPORARY TRAFFIC SIGNAL SYSTEM". ADDITIONAL ADJUSTMENTS TO SIGNAL TIMING OR PHASING REQUESTED BY THE ENGINEER SHALL BE COMPLETED WITHIN 48 HOURS OF THE REQUEST. PAYMENT FOR ADDITIONAL ADJUSTMENTS TO SIGNAL TIMING OR PHASING WILL BE CONSIDERED INCIDENTAL TO ITEM 678.40, "TEMPORARY TRAFFIC SIGNAL SYSTEM".

39. THE SUBMITTAL FOR ITEM 678.40, "TEMPORARY TRAFFIC SIGNAL SYSTEM" SHALL BE IN CONJUNCTION WITH THE SUBMITTAL FOR ITEM 641.11 "TRAFFIC CONTROL, ALL-INCLUSIVE" AND SHALL INCLUDE AS A MINIMUM, THE SIGNAL LOCATION, TIMING AND PHASING PLAN, VEHICLE DETECTION SYSTEM, AND EMERGENCY VEHICLE PREEMPTION SYSTEM.

MISCELLANEOUS

40. ALL EXISTING TREES AND LANDSCAPING IDENTIFIED IN THE PLANS WITH TREE PROTECTION SHALL REMAIN UNDISTURBED DURING CONSTRUCTION AND BE PAID FOR UNDER ITEM 656.85, "TREE PROTECTION".
41. ALL STEEL COMPONENTS OF BRIDGE RAIL SHALL BE GALVANIZED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. COMPONENTS SHALL BE POWDER COATED BLACK. SEE NOTICE TO BIDDERS FOR POWDER COATING REQUIREMENTS.

PROJECT NAME: STOWE
 PROJECT NUMBER: BO 1446(39)

FILE NAME: sl2j658notes.dgn PLOT DATE: 2/9/2024
 PROJECT LEADER: C. BURRALL DRAWN BY: R. PELLETT
 DESIGNED BY: C. BURRALL CHECKED BY: C. BURRALL
 PROJECT NOTES SHEET 44 OF 84

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES											TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
					1011 - ROADWAY	1031 - TRAINING	1041 - LANDSCAPING	1051 - EROSION CONTROL	1211 - BRIDGE NO. 1	1999 - 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 (STOWE(39))	201.10				
					900						900		CY	COMMON EXCAVATION	203.15				
									150		150		CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27				
					120						120		CY	SAND BORROW	203.31				
									290		290		CY	STRUCTURE EXCAVATION	204.25				
									220		220		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30				
					390						390		SY	COARSE-MILLING, BITUMINOUS PAVEMENT	210.10				
					870						870		CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35				
					80						80		CY	AGGREGATE SURFACE COURSE	401.10				
					40						40		TON	AGGREGATE SHOULDERS	402.12				
					25						25		CWT	EMULSIFIED ASPHALT	404.65				
					50						50		SY	HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES	406.38				
					1						1		LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50				
									1		1		LS	FURNISHING EQUIPMENT FOR DRIVING PILING (STOWE(39))	504.10				
									334		334		LF	STEEL PILING, HP 12 X 63	505.155				
									2		2		EACH	DYNAMIC PILE LOADING TEST	505.45				
									25661		25661		LB	STRUCTURAL STEEL, ROLLED BEAM (GALVANIZED)	506.50				
									17210		17210		LB	REINFORCING STEEL, LEVEL I (BLACK)	507.11				
									2210		2210		LB	REINFORCING STEEL, LEVEL I (EPOXY COATED)	507.11				
									1		1		LS	SHEAR CONNECTORS (384 - 7/8IN X 7IN)	508.15				
									20		20		GAL	WATER REPELLENT, SILANE	514.10				
									56		56		LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10				
									56		56		LF	JOINT SEALER, HOT POURED	524.11				
									105		105		LF	BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM (POWDER COATED BLACK)	525.335				
									1		1		LS	ONE-WAY TEMPORARY BRIDGE (1575 SF - EST)(STOWE(39))	528.10				
									1		1		EACH	REMOVAL OF STRUCTURE (1000 SF - EST)(STOWE(39))	529.15				
									8		8		EACH	BEARING DEVICE ASSEMBLY, STEEL REINFORCED ELASTOMERIC PAD	531.17				
					20						20		LF	12" CPEP(SL)	601.2605				
									150		150		CY	STONE FILL, TYPE IV	613.13				
					3						3		EACH	REMOVE AND RESET MAILBOX, MULTIPLE SUPPORT	617.12				
					194						194		LF	BOX BEAM GUARDRAIL (POWDER COATED BLACK)	621.30				
					4						4		EACH	GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM (POWDER COATED)	621.725				
					110						110		LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80				
					200						200		HR	FLAGGERS	630.15				
										1	1		LS	FIELD OFFICE, ENGINEERS	631.10				
										1	1		LS	TESTING EQUIPMENT, CONCRETE	631.16				
										1	1		LS	TESTING EQUIPMENT, BITUMINOUS	631.17				
										2000	2000		DL	FIELD OFFICE COMMUNICATIONS (N.A.B.I.)	631.26				
					7						7		EACH	CPM SCHEDULE (STOWE(39))	633.10				
						260					260		HR	EMPLOYEE TRAINEESHIP (STOWE(39))	634.10				

PROJECT NAME: STOWE
PROJECT NUMBER: BO 1446(39)

FILE NAME: sl2j658qs.dgn
PROJECT LEADER: C. BURRALL
DESIGNED BY: C. BURRALL
QUANTITY SHEET 1

PLOT DATE: 2/9/2024
DRAWN BY: R. PELLETT
CHECKED BY: C. BURRALL
SHEET 45 OF 84

QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES											TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
					1011 - ROADWAY	1031 - TRAINING	1041 - LANDSCAPING	1051 - EROSION CONTROL	1211 - BRIDGE NO. 1	1999 - FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
					1						1		LS	MOBILIZATION/DEMOBILIZATION (STOWE(39))	635.11				
					1						1		LS	TRAFFIC CONTROL, ALL-INCLUSIVE (STOWE(39))	641.11				
					950						950		LF	DURABLE 4 INCH YELLOW LINE, POLYUREA	646.414				
									200		200		SY	GEOTEXTILE UNDER STONE FILL	649.31				
								100			100		SY	GEOTEXTILE FOR FILTER CURTAIN	649.61				
							71				71		LB	SEED	651.15				
								120			120		LB	FERTILIZER	651.18				
								0.25			0.25		TON	AGRICULTURAL LIMESTONE	651.20				
								60			60		CY	TOPSOIL	651.35				
									50		50		SY	GRUBBING MATERIAL (12 INCH)	651.40				
								1			1		LS	EPSC PLAN (STOWE(39))	653.01				
								40			40		HR	MONITORING EPSC PLAN (STOWE(39))	653.02				
								1			1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.) (STOWE(39))	653.03				
								0.25			0.25		TON	HAY MULCH	653.10				
								70			70		SY	ROLLED EROSION CONTROL PRODUCT, TYPE I	653.20				
					30			30			60		CY	STABILIZED CONSTRUCTION ENTRANCE	653.35				
								2			2		EACH	FILTER BAG	653.45				
								1100			1100		LF	BARRIER FENCE	653.50				
								300			300		LF	PROJECT DEMARCATION FENCE	653.55				
							1				1		EACH	EVERGREEN TREES (PICEA GLAUCA)(5-6FT HT. NATURAL)(BANDB)	656.20				
							5				5		EACH	DECIDUOUS SHRUBS (ALNUS RUGOSA)(3-4FT HT.)(CONT.)	656.35				
							13				13		EACH	DECIDUOUS SHRUBS (ARONIA ARBUTIFOLIA)(3 GAL)(CONT.)	656.35				
							6				6		EACH	DECIDUOUS SHRUBS (ARONIA MELANOCARPA)(3 GAL)(CONT.)	656.35				
							6				6		EACH	DECIDUOUS SHRUBS (CORNUS AMOMUM)(3 GAL)(CONT.)	656.35				
							6				6		EACH	DECIDUOUS SHRUBS (VIBURNUM LENTAGO)(3 GAL)(CONT.)	656.35				
							10				10		MGAL	LANDSCAPE WATERING	656.65				
							10				10		CY	LANDSCAPE BACKFILL, TRUCK MEASUREMENT	656.80				
					4						4		EACH	DELINEATOR WITH STEEL POST	676.10				
					1						1		EACH	TEMPORARY TRAFFIC SIGNAL SYSTEM (STOWE(39))	678.40				
									84		84		CY	SPECIAL PROVISION (PERFORMANCE-BASED CONCRETE, CLASS PCD)	900.608				
									150		150		CY	SPECIAL PROVISION (PERFORMANCE-BASED CONCRETE, CLASS PCS)	900.608				
					1						1		LU	SPECIAL PROVISION (MIXTURE PAY ADJUSTMENT, SMALL QUANTITY)(N.A.B.I.)	900.650				
					1						1		LU	SPECIAL PROVISION (MAT DENSITY PAY ADJUSTMENT, SMALL QUANTITY)(N.A.B.I.)	900.650				
									1200		1200		SF	SPECIAL PROVISION (CONCRETE BRIDGE DECK SURFACE PREPARATION)	900.670				
					320						320		TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	900.680				

PROJECT NAME: STOWE	PLOT DATE: 2/9/2024
PROJECT NUMBER: BO 1446(39)	DRAWN BY: R. PELLETT
FILE NAME: sl2j658qs.dgn	CHECKED BY: C. BURRALL
PROJECT LEADER: C. BURRALL	QUANTITY SHEET 2
DESIGNED BY: C. BURRALL	SHEET 46 OF 84

PRIMARY CONTROL

HVCTRL #1
 STOWE AZ MK
 NORTH = 706904.3965
 EAST = 1585797.3958
 ELEV. = 672.550

GENERAL LOCATION, STOWE, VT

TO REACH FROM THE INTERSECTION OF VT. ROUTES 100 AND 108 IN STOWE GO SOUTH ALONG ROUTE 100 FOR 2.2 MI (3.5 KM) TO THE MARK ON THE LEFT IN THE NORTH END OF A LEDGE CUT. THE MARK IS 7.7 M (25.3 FT) SOUTHWEST OF AND ABOUT 2 M (6.6 FT) HIGHER THAN THE CENTERLINE OF ROUTE 100, 27.9 M (91.5 FT) NORTHEAST OF POLE NO. 58, 0.5 M (1.6 FT) SOUTHWEST OF THE FACE OF THE LEDGE CUT, 1.7 M (5.6 FT) SOUTH OF THE NORTH END OF THE LEDGE, 2.1 M (6.9 FT) NORTHEAST OF A METAL WITNESS POST.

HVCTRL #2
 STOWE RIVER
 NORTH = 708261.7724
 EAST = 1585037.8666
 ELEV. = 692.866

GENERAL LOCATION, STOWE, VT

TO REACH FROM THE INTERSECTION OF VT ROUTE 100 AND VT ROUTE 108, GO SOUTH ALONG VT ROUTE 100 FOR 2.5 MI (4.0 KM) TO THE INTERSECTION OF MOSCOW ROAD RIGHT. TURN RIGHT AND GO NORTHWEST ALONG MOSCOW ROAD FOR 0.5 MI (0.8 KM) TO THE INTERSECTION OF RIVER ROAD RIGHT. TURN RIGHT AND GO NORTHEAST ALONG RIVER ROAD FOR 0.2 MI (0.3 KM) TO THE SITE OF THE MARK ON THE RIGHT IN A SMALL FIELD. IT IS ABOUT 0.05 MI (0.1 KM) WEST-SOUTHWEST OF A POWER SUB STATION.

THE MARK IS SET 12 CM (5 INCHES) BELOW GROUND SURFACE IN THE TOP OF A 30 CM (12 INCH) DIAMETER CONCRETE MONUMENT.

IT IS 6.1 M (20.0 FT) SOUTH-SOUTHWEST OF AND ABOUT 1.5 M (4.9 FT) LOWER THAN THE CENTERLINE OF RIVER ROAD, 20.6 M (67.6 FT) EAST-NORTHEAST OF POLE NO 151/315/43 (WITH METER BOX), 27.2 M (89.2 FT) WEST-SOUTHWEST OF POLE NO 42, 29.5 M (96.8 FT) EAST OF THE EAST-NORTHEAST END OF A WOOD RAIL FENCE AND 0.6 M (2.0 FT) NORTH-NORTHWEST OF A FIBERGLASS WITNESS POST.

HVCTRL #17/90
 NEBRASKA
 NORTH = 709893.2357
 EAST = 1575984.0593
 ELEV. = 648.683

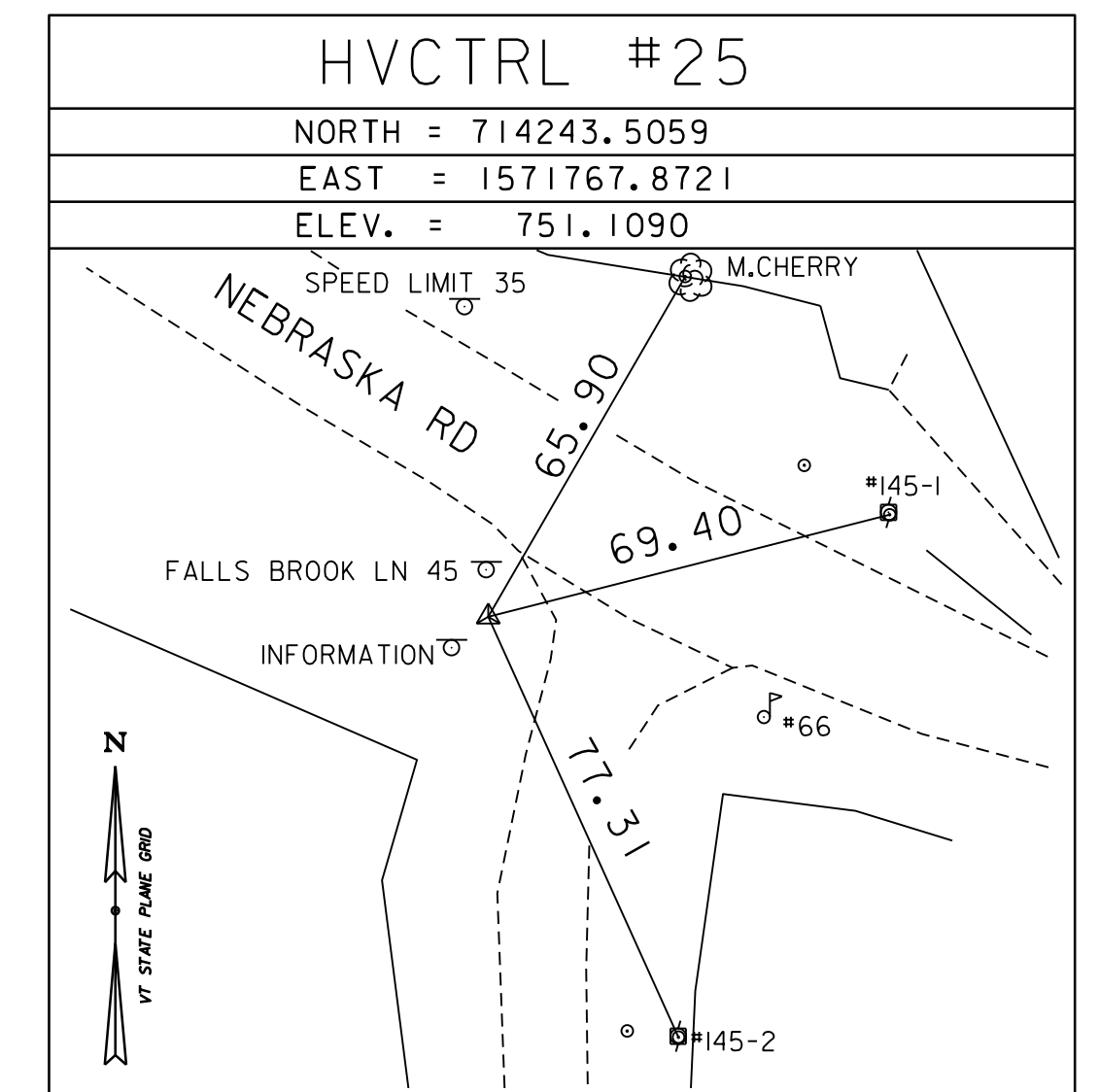
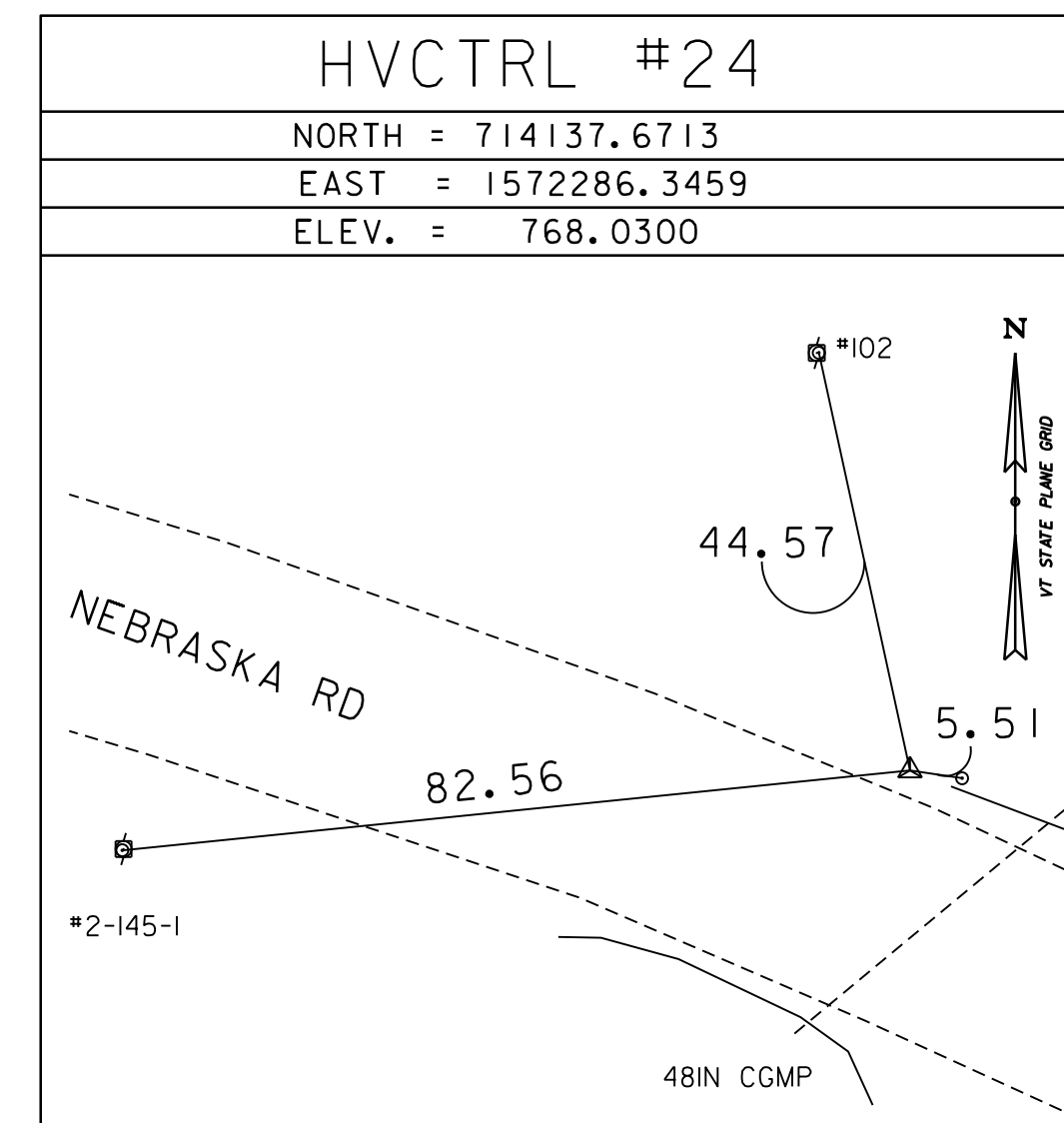
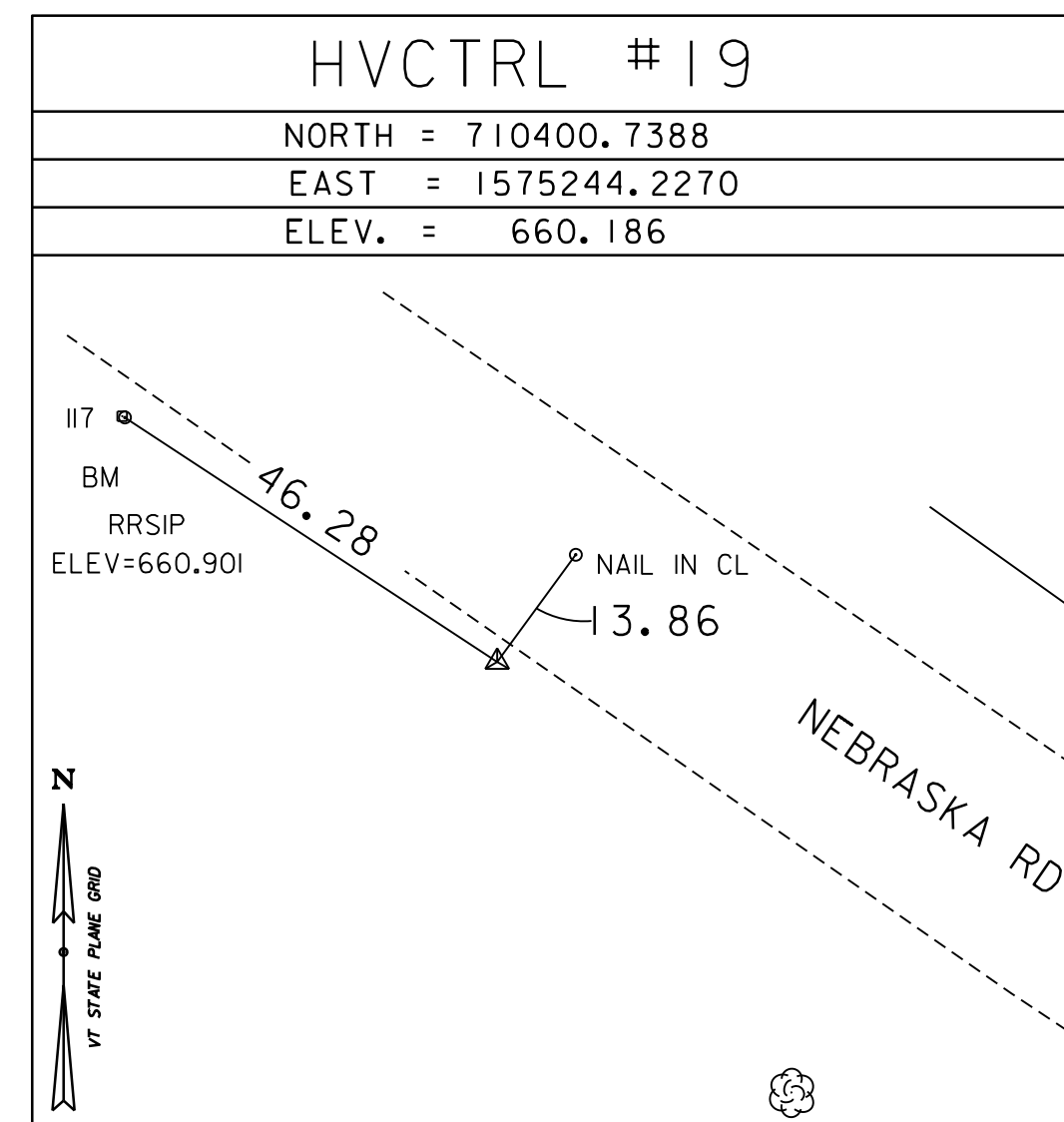
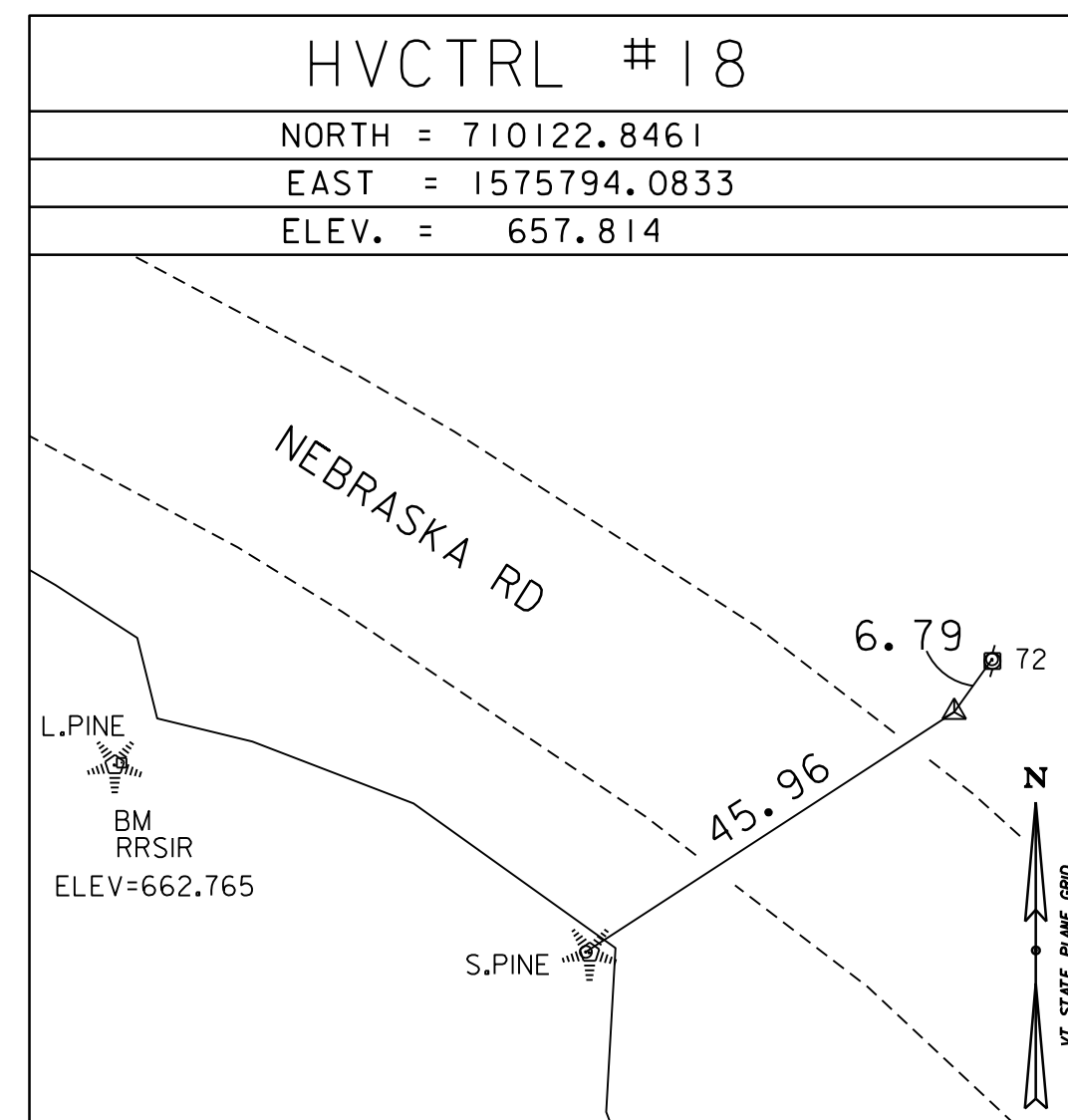
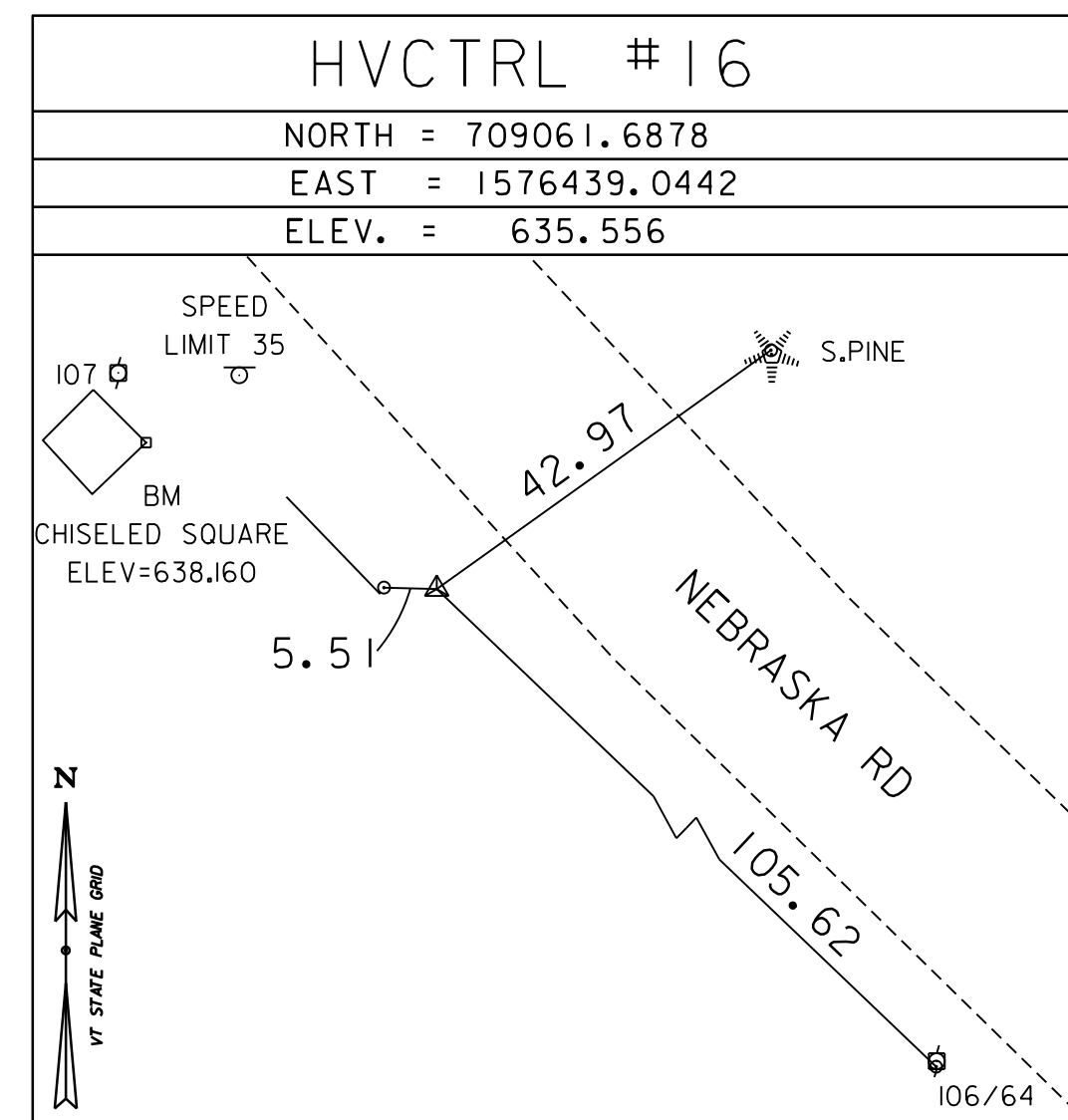
GENERAL LOCATION, STOWE, VT

TO REACH FROM THE INTERSECTION OF VT ROUTE 100 AND VT ROUTE 108 IN STOWE VILLAGE, GO SOUTH ALONG VT ROUTE 100 FOR 2.5 MI (4.0 KM) TO THE INTERSECTION OF MOSCOW ROAD RIGHT. TURN RIGHT AND GO NORTHWEST ALONG MOSCOW ROAD FOR 1.5 M (4.9 FT) TO THE INTERSECTION OF BARROWS ROAD RIGHT. CONTINUE NORTHWEST ALONG MOSCOW ROAD FOR 0.6 M (2.0 FT) TO THE INTERSECTION OF COTTON BROOK ROAD LEFT AND NEBRASKA VALLEY ROAD RIGHT. TURN RIGHT AND GO WEST ALONG NEBRASKA VALLEY ROAD FOR 0.5 M (1.6 FT) TO THE SITE OF THE MARK ON THE RIGHT SET IN THE WEST EDGE OF A FIELD.

THE MARK IS SET 10 CM (4 INCHES) BELOW GROUND SURFACE IN THE TOP OF A FENO STYLE MONUMENT.

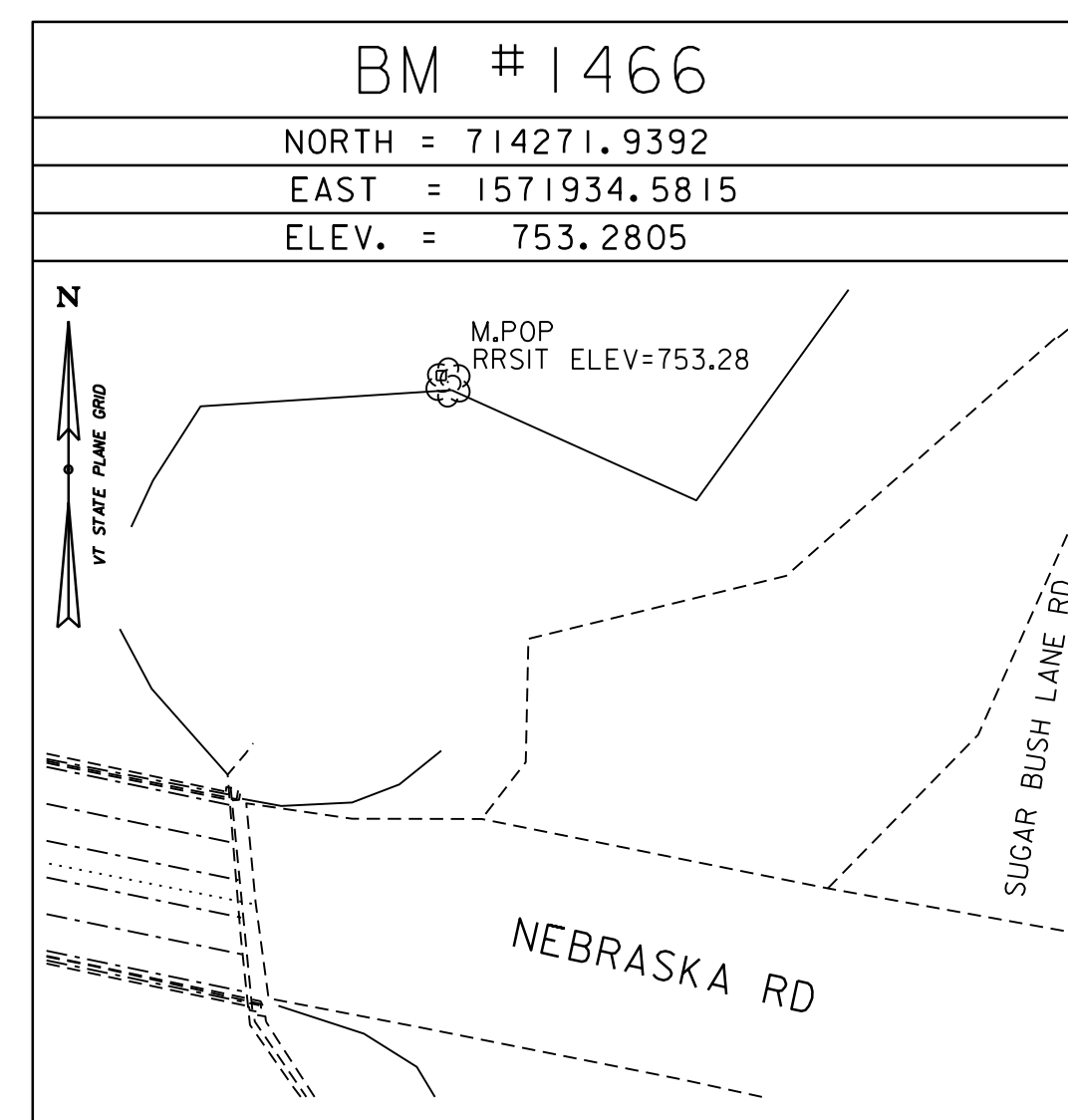
IT IS 6.6 M (21.7 FT) EAST OF AND ABOUT 0.1 M (0.3 FT) LOWER THAN THE CENTERLINE OF NEBRASKA VALLEY ROAD, 29.8 M (97.8 FT) NORTH-NORTHEAST OF AND ACROSS THE ROAD FROM POLE NO 14/70, 37.6 M (123.4 FT) SOUTHWEST OF AND ACROSS THE ROAD FROM POLE NO 71 WITH TRANSFORMER AND METER AND 0.25 M (0.8 FT) WEST OF A FIBERGLASS WITNESS POST.

SECONDARY CONTROL



* MAIN TRAVERSE COMPLETED ON 2/15/2017 BY C. CYR P.C. ...T. CATTANEO & K. KELLEY ADDITIONAL TRAVERSING DONE BY R.GILMAN AND B.HERRING COMPLETED ON 10/29/2019

SECONDARY CONTROL

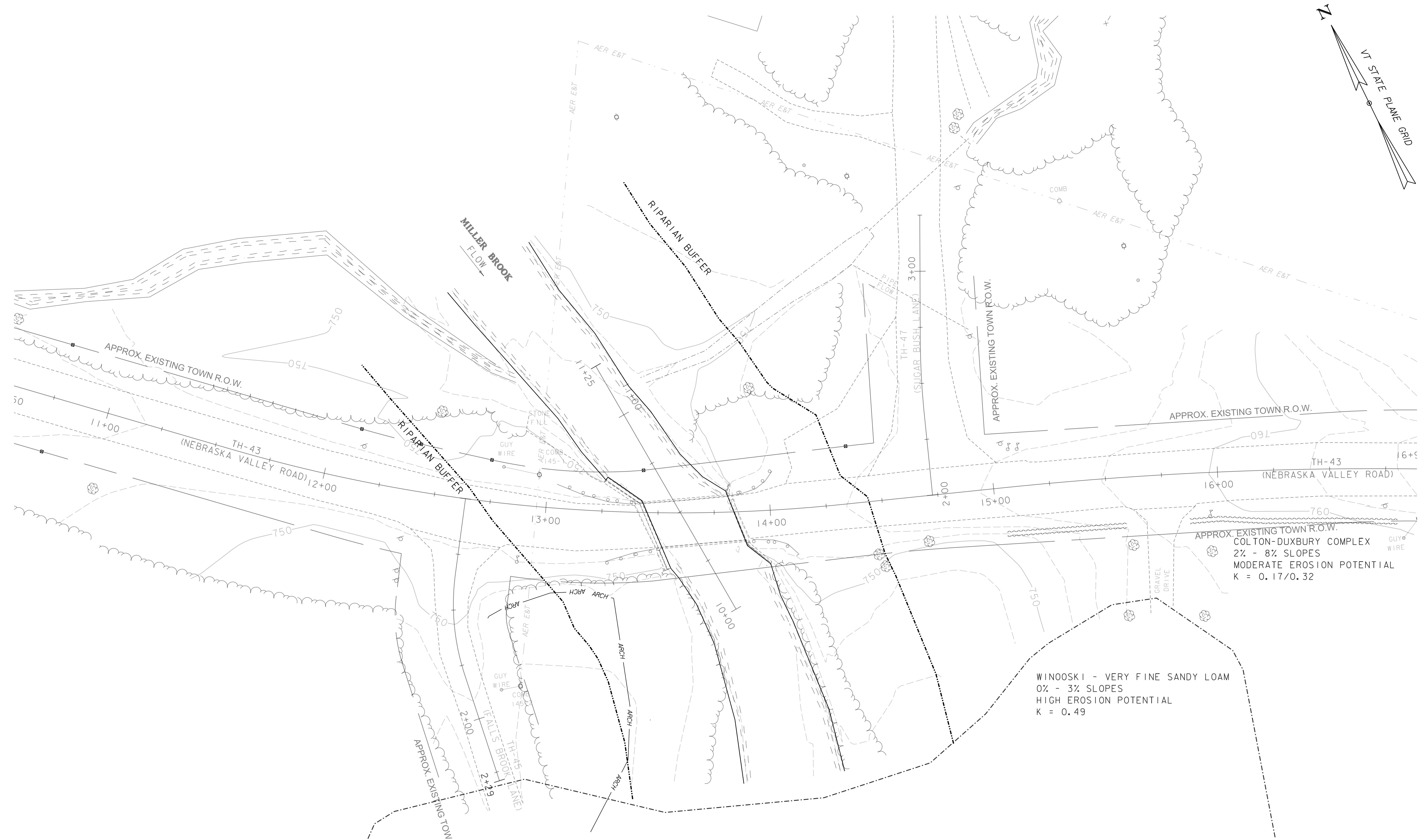
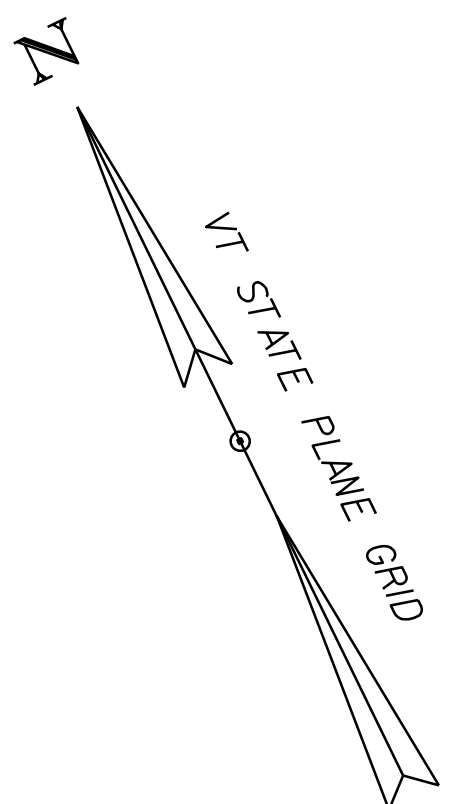


DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD83 (2011)
ADJUSTMENT	COMPASS

PROJECT NAME:	STOWE
PROJECT NUMBER:	BO 1446(39)
FILE NAME:	sl2j658+1e.dgn
PROJECT LEADER:	C. BURRALL
DESIGNED BY:	C. BURRALL
TIE SHEET	
PLOT DATE:	2/9/2024
DRAWN BY:	H. MCGOWAN
CHECKED BY:	G. HITCHCOCK
SHEET	47 OF 84

Point Type	Station	Northing	Easting	Radius	Length	Tangent
Aligment Name:		TH43 Proposed Mainline				
Description:		Nebraska Valley Road				
POB	10+50.00	714369.79	1571616.84			
PC	11+56.58	714311.75	1571706.22			
PC	11+56.58	714311.75	1571706.22			
PI	12+96.25	714235.68	1571823.36	713.00	275.85	139.67
PT	14+32.42	714209.42	1571960.54			
PT	14+32.42	714209.42	1571960.54			
PC	15+04.81	714195.82	1572031.63			
PC	15+04.81	714195.82	1572031.63			
PI	15+97.41	714178.41	1572122.59	1600.00	185.00	92.60
PT	16+89.81	714150.63	1572210.92			
Aligment Name:		Fallsbrook Lane				
Description:		TH 45				
POB	1+00.00	714260.25	1571800.33			
PC	1+34.06	714229.22	1571786.28			
PC	1+34.06	714229.22	1571786.28			
PI	1+56.95	714208.38	1571776.83	100.00	45.00	22.89
PT	1+79.06	714185.50	1571777.39			
PT	1+79.06	714185.50	1571777.39			
POE	2+29.06	714135.51	1571778.63			
Aligment Name:		Sugarbush Lane				
Description:		TH 47				
POB	2+00.00	714201.87	1572000.02			
PC	2+36.92	714238.12	1572007.03			
PC	2+36.92	714238.12	1572007.03			
PI	2+53.43	714254.33	1572010.16	340.00	33.01	16.52
PT	2+69.93	714270.17	1572014.85			
PT	2+69.93	714270.17	1572014.85			
PI	3+25.00	714322.98	1572030.49			
PI	3+25.00	714468.06	1572066.17			
POE	3+25.51	714468.56	1572066.26			
Aligment Name:		CH_2_BR48				
Description:		CHANNEL GEOMETRY				
POB	10+00.00	714178.41	1571901.59			
POE	11+25.00	714300.07	1571872.90			

PROJECT NAME:	STOWE
PROJECT NUMBER:	BO 1446(39)
FILE NAME:	sl2j658+ie.dgn
PROJECT LEADER:	C. BURRALL
DESIGNED BY:	C. BURRALL
ALIGNMENT DATA	
PLOT DATE:	2/9/2024
DRAWN BY:	H. MCGOWAN
CHECKED BY:	G. HITCHCOCK
SHEET	48 OF 84



APPROX. EXISTING TOWN R.O.W.
 COLTON-DUXBURY COMPLEX
 2% - 8% SLOPES
 MODERATE EROSION POTENTIAL
 K = 0.17/0.32

WINOOSKI - VERY FINE SANDY LOAM
 0% - 3% SLOPES
 HIGH EROSION POTENTIAL
 K = 0.49

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

PROJECT NAME: STOWE	
PROJECT NUMBER: BO 1446(39)	
FILE NAME: sl2j658bdrero.dgn	PLOT DATE: 2/9/2024
PROJECT LEADER: C. BURRALL	DRAWN BY: R. PELLETT
DESIGNED BY: R. PELLETT	CHECKED BY: M. LONGSTREET
EXISTING CONDITIONS	SHEET 49 OF 84

BRIDGE RAILING, GALVANIZED 3 RAIL

BOX BEAM (POWDER COATED BLACK)

STA 13+25.1 LT - STA 13+78.7 LT
STA 13+40.2 RT - STA 13+91.4 RT

GUARDRAIL APPROACH SECTION, GALV 3

RAIL BOX BEAM (POWDER COATED BLACK)

STA 12+92.6 LT - STA 13+25.1 LT
STA 13+08.7 RT - STA 13+40.2 RT
STA 13+78.7 LT - STA 14+11.2 LT
STA 13+91.4 RT - STA 14+11.9 RT*
(* MODIFIED APPROACH RAIL)

CONSTRUCT GRAVEL APRON

STA 15+62.0 RT - STA 15+89.0 RT

BOX BEAM GUARDRAIL (POWDER COATED BLACK)

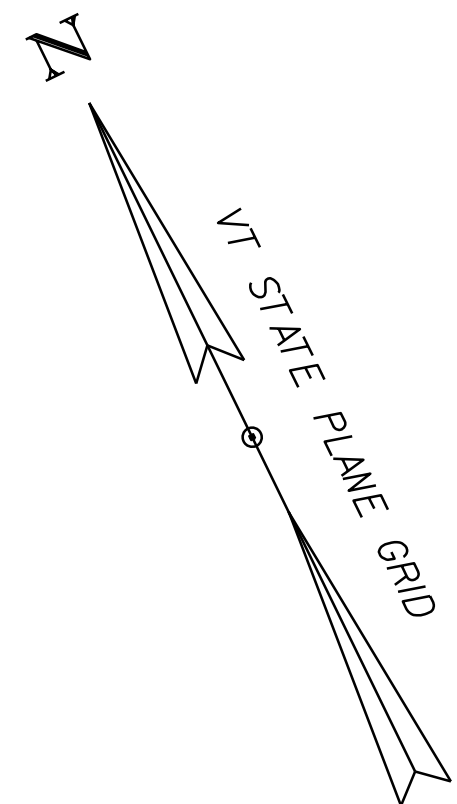
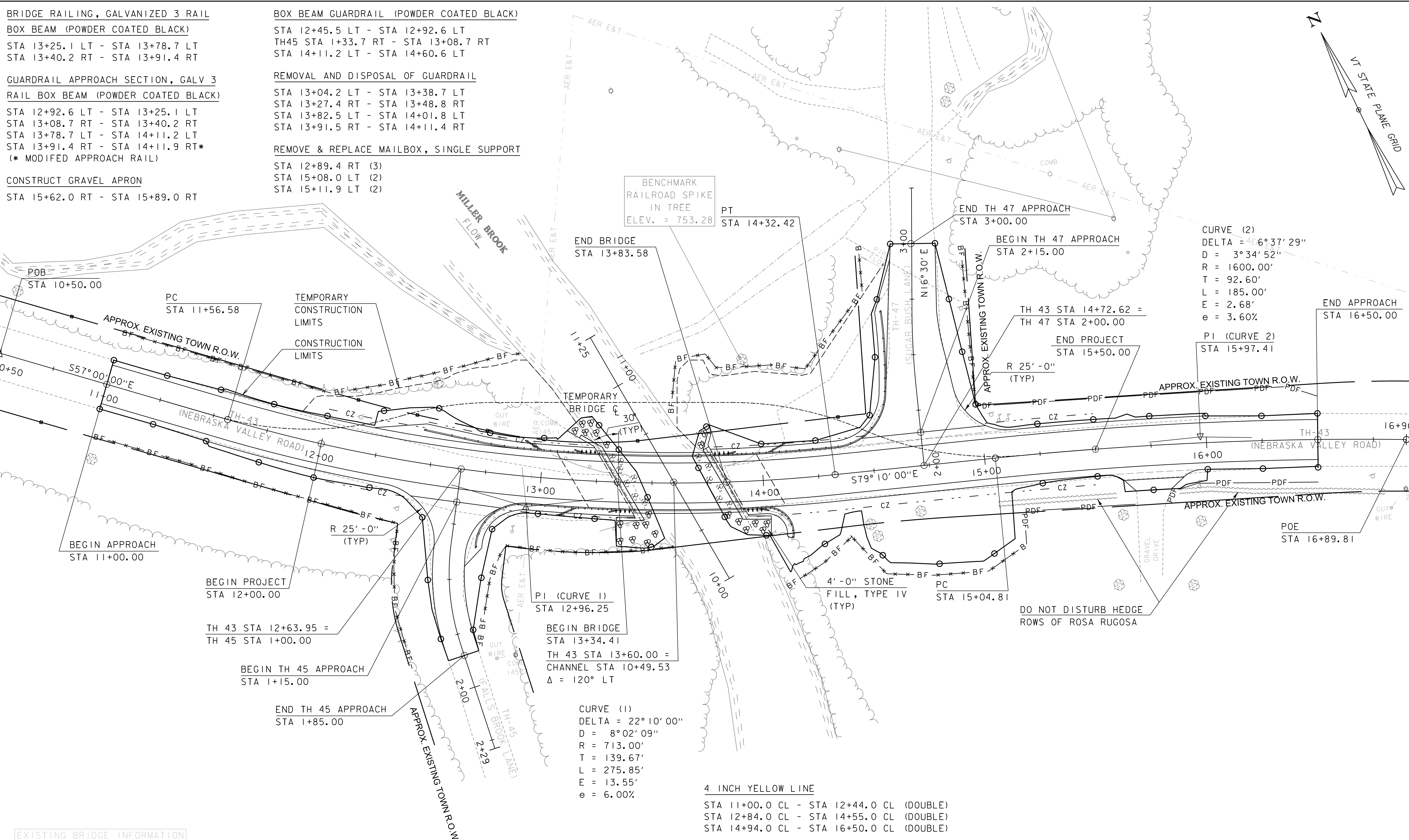
STA 12+45.5 LT - STA 12+92.6 LT
TH45 STA 1+33.7 RT - STA 13+08.7 RT
STA 14+11.2 LT - STA 14+60.6 LT

REMOVAL AND DISPOSAL OF GUARDRAIL

STA 13+04.2 LT - STA 13+38.7 LT
STA 13+27.4 RT - STA 13+48.8 RT
STA 13+82.5 LT - STA 14+01.8 LT
STA 13+91.5 RT - STA 14+11.4 RT

REMOVE & REPLACE MAILBOX, SINGLE SUPPORT

STA 12+89.4 RT (3)
STA 15+08.0 LT (2)
STA 15+11.9 LT (2)



CURVE (2)
 DELTA = 48° 37' 29"
 D = 3° 34' 52"
 R = 1600.00'
 T = 92.60'
 L = 185.00'
 E = 2.68'
 e = 3.60%

PI (CURVE 2)
 STA 15+97.41

END APPROACH
 STA 16+50.00

END BRIDGE
 STA 13+83.58

PT
 STA 14+32.42

END TH 47 APPROACH
 STA 3+00.00

BEGIN TH 47 APPROACH
 STA 2+15.00

TH 43 STA 14+72.62 =
 TH 47 STA 2+00.00

END PROJECT
 STA 15+50.00

PI (CURVE 1)
 STA 12+96.25

BEGIN BRIDGE
 STA 13+34.41
 TH 43 STA 13+60.00 =
 CHANNEL STA 10+49.53
 Δ = 120° LT

CURVE (1)
 DELTA = 22° 10' 00"
 D = 8° 02' 09"
 R = 713.00'
 T = 139.67'
 L = 275.85'
 E = 13.55'
 e = 6.00%

4 INCH YELLOW LINE

STA 11+00.0 CL - STA 12+44.0 CL (DOUBLE)
 STA 12+84.0 CL - STA 14+55.0 CL (DOUBLE)
 STA 14+94.0 CL - STA 16+50.0 CL (DOUBLE)

DELINEATOR WITH STEEL POST

STA 12+46.9 LT (GREEN)
 STA 13+08.7 LT (BLUE)
 STA TH45 1+33.7 RT (BLUE)
 STA 15+30.8 RT (GREEN)

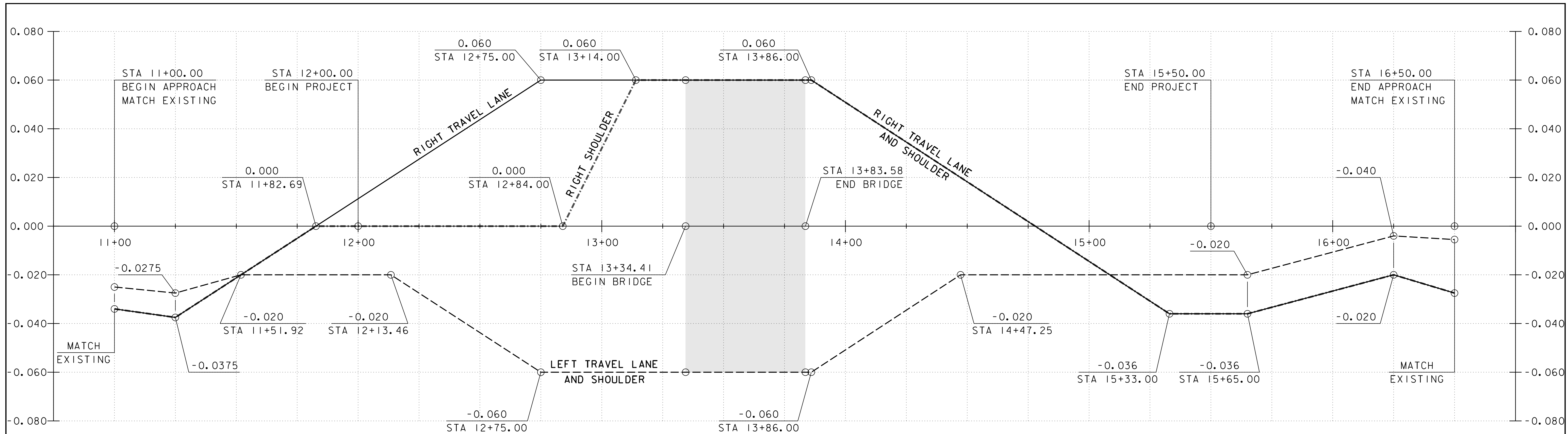
SCALE 1" = 20' - 0"
 20 0 20

EXISTING BRIDGE INFORMATION
 BUILT 1925 ROLLED I BEAM,
 CONCRETE CIP DECK
 SPAN LENGTH: 45'

PROJECT NAME: STOWE
 PROJECT NUMBER: BO 1446(39)

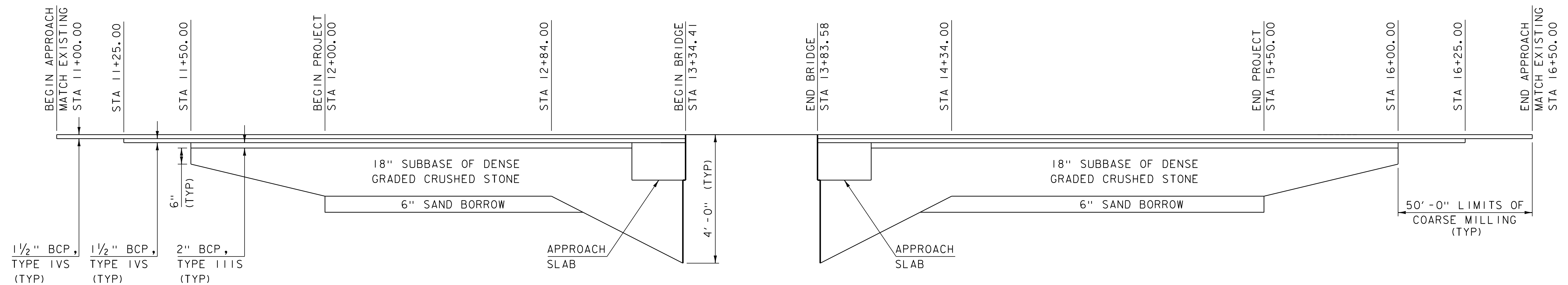
FILE NAME: sl2j658bdr.dgn
 PROJECT LEADER: C. BURRALL
 DESIGNED BY: R. PELLETT
 LAYOUT

PLOT DATE: 09-FEB-2024
 DRAWN BY: R. PELLETT
 CHECKED BY: C. BURRALL
 SHEET 50 OF 84



TH 43 (NEBRASKA VALLEY RD) BANKING DIAGRAM

HORIZONTAL SCALE: 1" = 20' - 0"
 VERTICAL SCALE: 1" = 0.020' /'



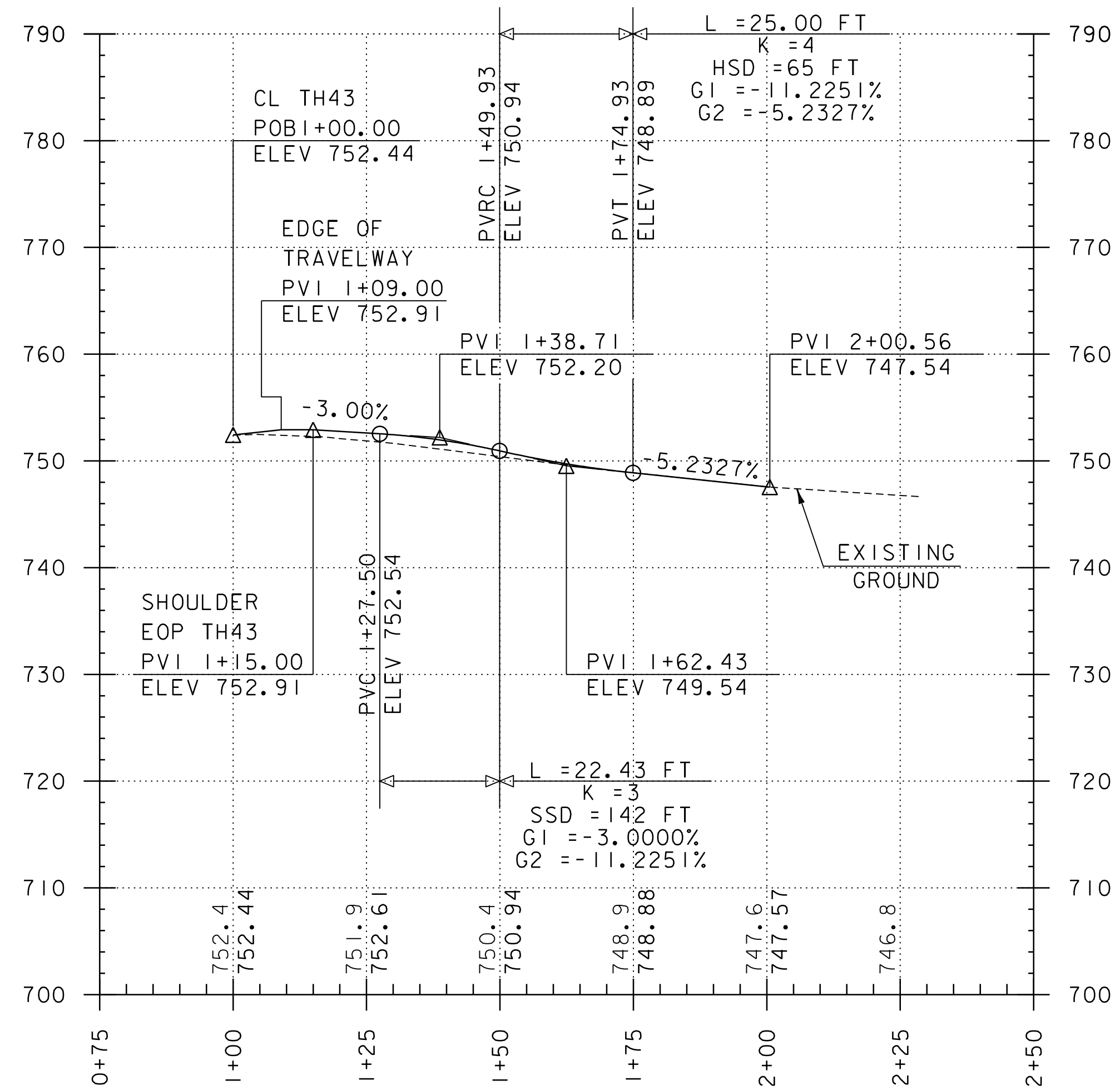
TH 43 (NEBRASKA VALLEY RD) MATERIAL TRANSITION DETAIL

BCP = BITUMINOUS CONCRETE PAVEMENT

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

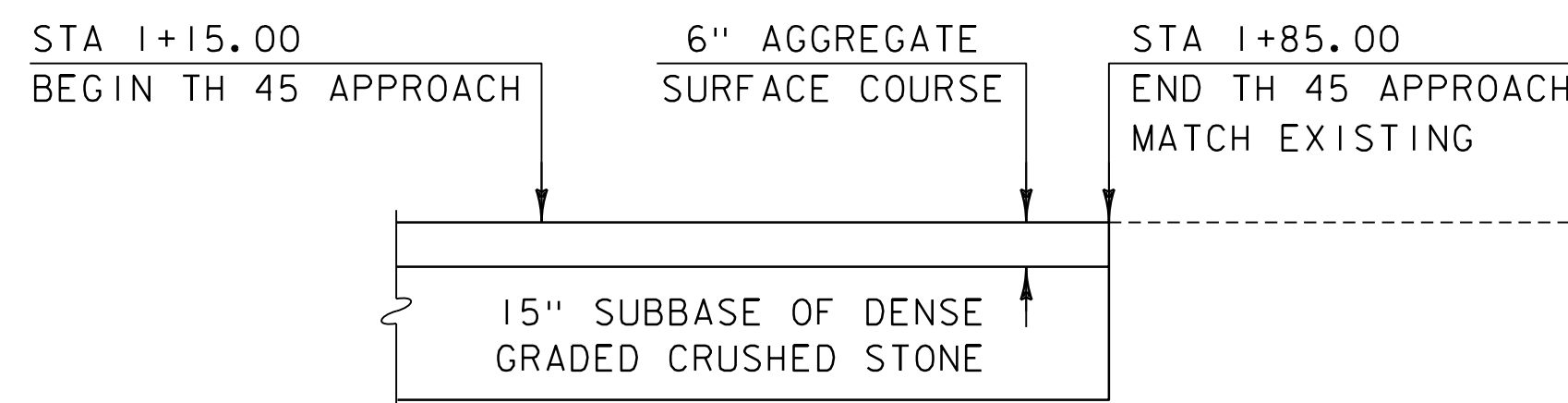
NOTE:
 GRADES SHOWN TO THE NEAREST TENTH ARE EXISTING GROUND ALONG ϕ
 GRADES SHOWN TO THE NEAREST HUNDREDTH ARE FINISH GRADE ALONG ϕ

PROJECT NAME: STOWE	
PROJECT NUMBER: BO 1446(39)	
FILE NAME: sl2j658pro.dgn	PLOT DATE: 2/9/2024
PROJECT LEADER: C. BURRALL	DRAWN BY: R. PELLETT
DESIGNED BY: C. BURRALL	CHECKED BY: C. BURRALL
TH 43 BANKING & MATERIAL TRANSITION	SHEET 52 OF 84



TH 45 (FALLS BROOK LANE) PROFILE

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



TH 45 (FALLS BROOK LANE) MATERIAL TRANSITION

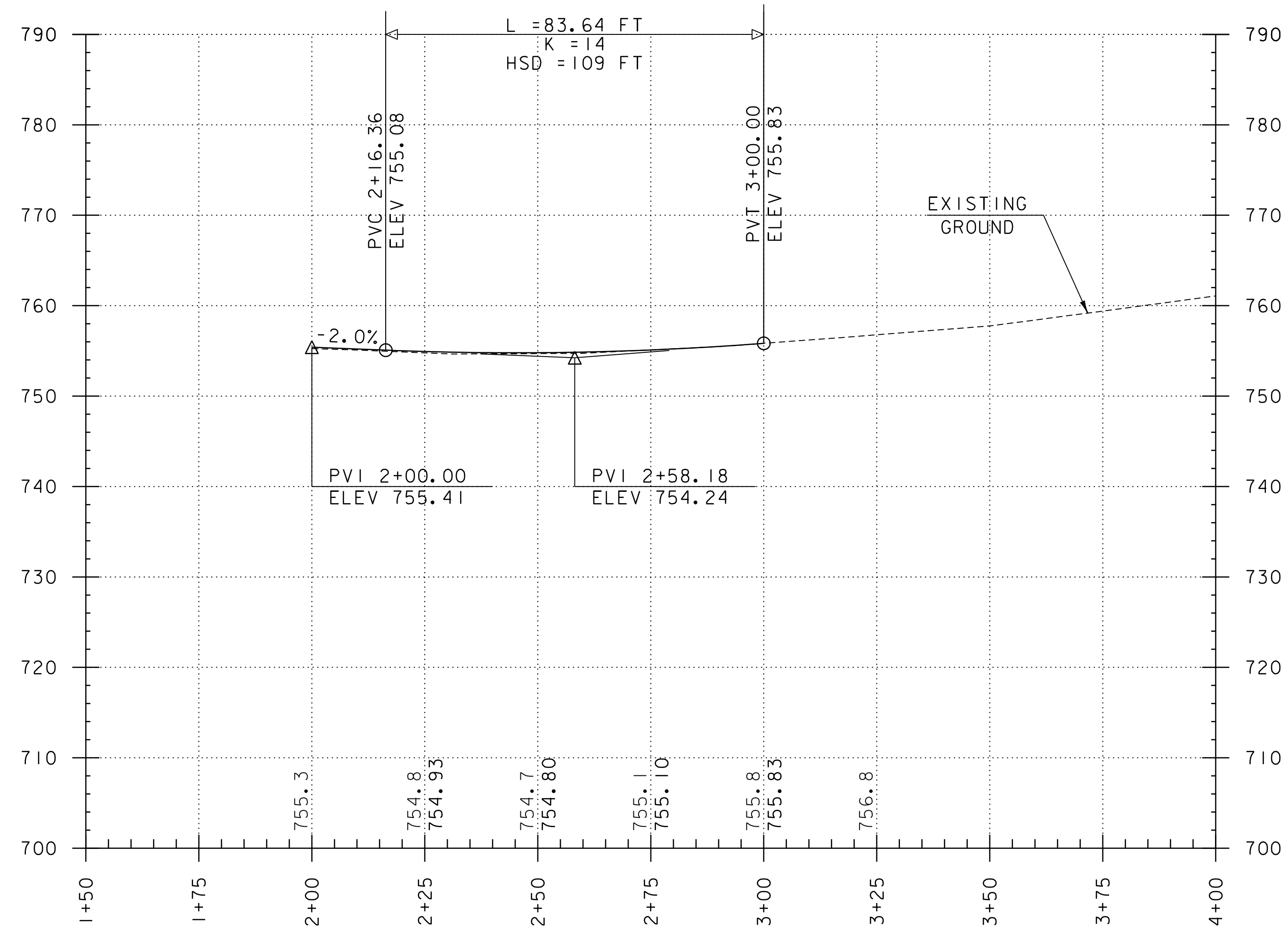
HORIZONTAL SCALE: 1" = 20'-0"
 VERTICAL SCALE: 1" = 2'-0"

NOTE:

ELEVATIONS SHOWN TO THE NEAREST TENTH ARE EXISTING GROUND ALONG PROPOSED CENTERLINE.

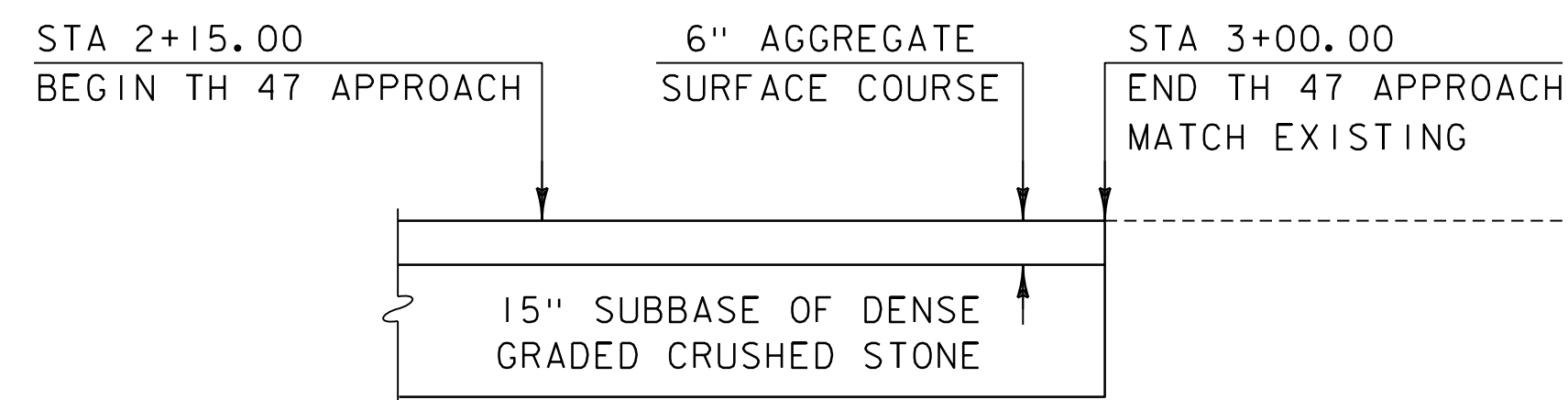
ELEVATIONS SHOWN TO THE NEAREST HUNDREDTH ARE FINISH GRADES ALONG PROPOSED CENTERLINE.

PROJECT NAME:	STOWE
PROJECT NUMBER:	BO 1446(39)
FILE NAME:	sl2j658pro.dgn
PROJECT LEADER:	C. BURRALL
DESIGNED BY:	C. BURRALL
TH 45 PROFILE & MATERIAL TRANSITION	
PLOT DATE:	2/9/2024
DRAWN BY:	R. PELLETT
CHECKED BY:	C. BURRALL
SHEET	53 OF 84



TH 47 (SUGAR BUSH LANE) PROFILE

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



TH 47 (SUGAR BUSH LANE) MATERIAL TRANSITION

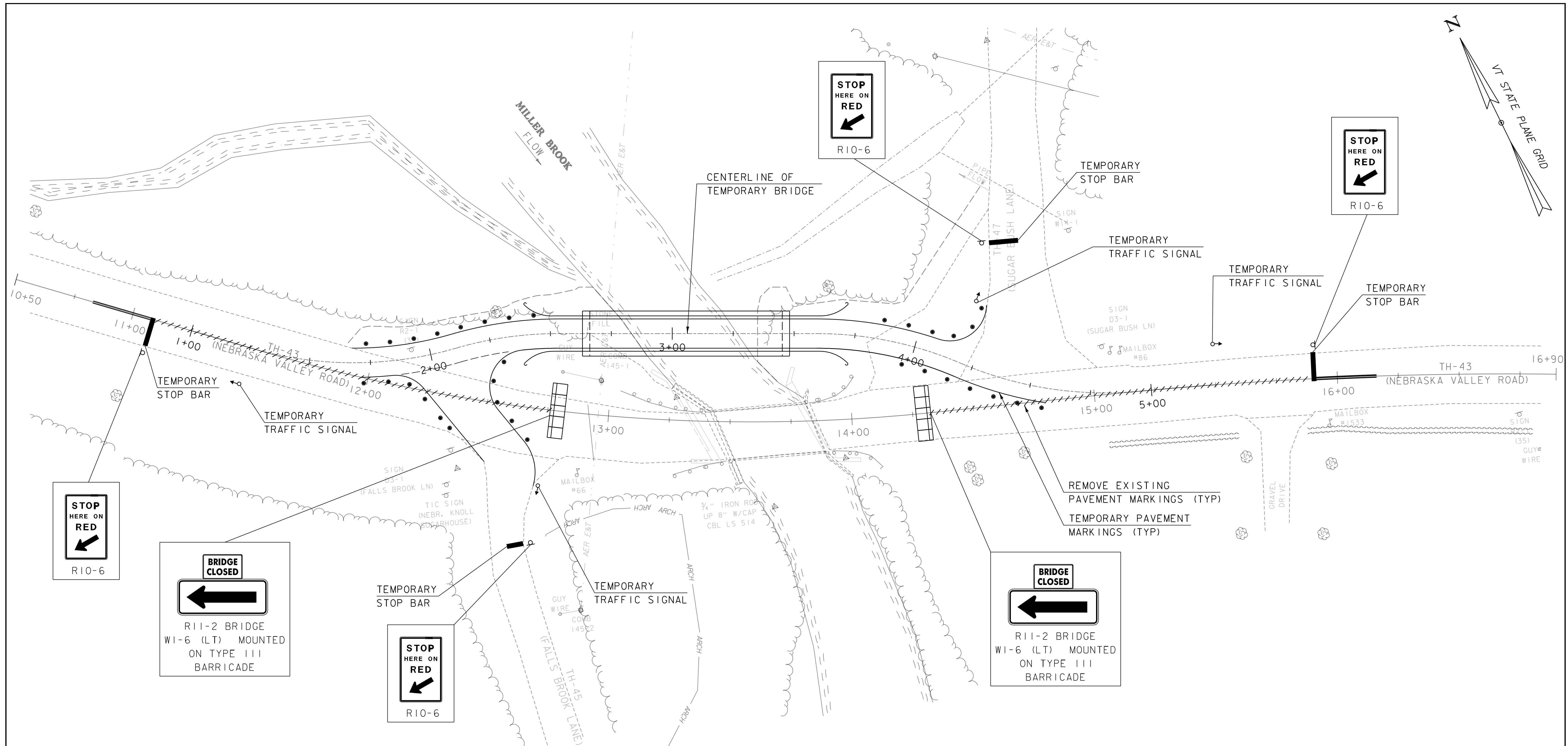
HORIZONTAL SCALE: 1" = 20'-0"
 VERTICAL SCALE: 1" = 2'-0"

NOTE:

ELEVATIONS SHOWN TO THE NEAREST TENTH ARE EXISTING GROUND ALONG PROPOSED CENTERLINE.

ELEVATIONS SHOWN TO THE NEAREST HUNDREDTH ARE FINISH GRADES ALONG PROPOSED CENTERLINE.

PROJECT NAME: STOWE	
PROJECT NUMBER: BO 1446(39)	
FILE NAME: sl2j658pro.dgn	PLOT DATE: 2/9/2024
PROJECT LEADER: C. BURRALL	DRAWN BY: R. PELLETT
DESIGNED BY: C. BURRALL	CHECKED BY: C. BURRALL
TH 47 PROFILE & MATERIAL TRANSITION	SHEET 54 OF 84



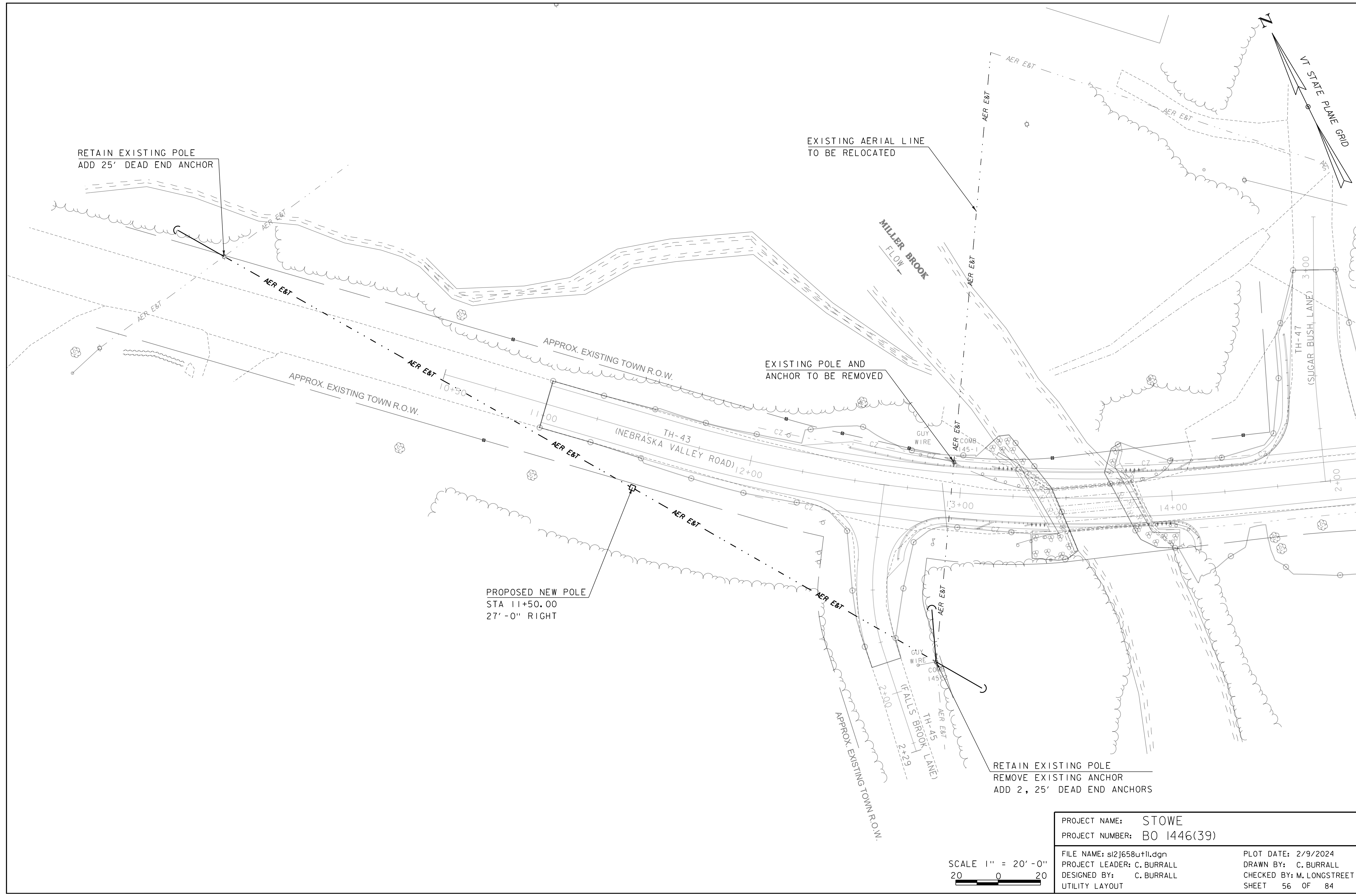
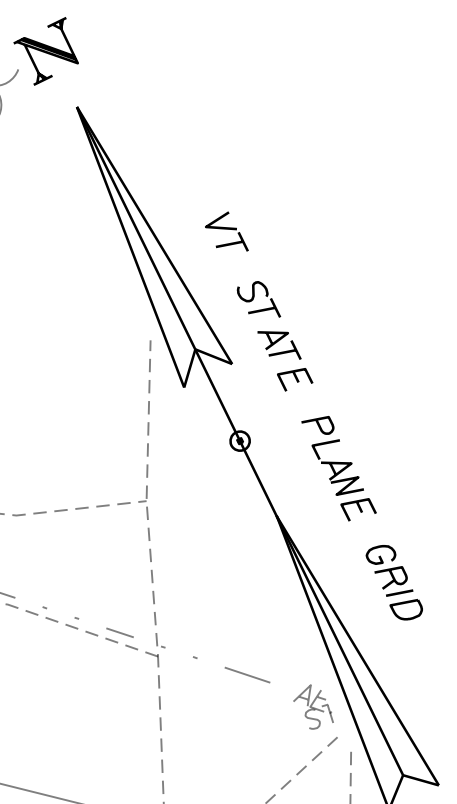
NOTES

1. TRAFFIC CONTROL PLAN IS CONCEPTUAL IN NATURE ONLY. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE DESIGN, SUBMITTAL, AND IMPLEMENTATION OF A SITE SPECIFIC TRAFFIC CONTROL PLAN.
2. CONCRETE BARRIER ENDS EXPOSED TO TRAFFIC SHALL BE PROTECTED (ATTENUATED) OR EXTENDED OUTSIDE THE CLEAR ZONE.
3. CONCRETE BARRIER SIDE EXPOSED TO TRAFFIC SHALL BE DELINEATED TO MATCH THE CORRESPONDING TEMPORARY PAVEMENT MARKINGS. REFLECTORS SHALL BE MOUNTED EVERY 20 FEET ALONG THE SIDE OF THE BARRIER EXPOSED TO TRAFFIC, WITH YELLOW ON THE DRIVER'S LEFT AND WHITE ON THE DRIVER'S RIGHT.
4. W1-6 ARROW SIGNS SHALL BE BLACK ON FLOURESCENT ORANGE SHEETING.

TRAFFIC CONTROL PLAN LEGEND			
	TEMPORARY TRAFFIC BARRIER		CRASH CUSHION
	TEMPORARY CHANNELIZING DEVICE		WARNING LIGHT
	DIRECTION OF TRAVEL		TRAFFIC SIGN LOCATION
	PAVEMENT MARKING REMOVAL		TYPE III BARRICADE
	TRAFFIC SIGNAL		DRIVEWAY ASSISTANCE DEVICE

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

PROJECT NAME: STOWE
 PROJECT NUMBER: BO 1446(39)
 FILE NAME: I12j658bdrTemTC.dgn
 PROJECT LEADER: C. BURRALL
 DESIGNED BY: R. PELLETT
 TEMPORARY BRIDGE LAYOUT
 PLOT DATE: 2/9/2024
 DRAWN BY: R. PELLETT
 CHECKED BY: C. BURRALL
 SHEET 55 OF 84



RETAIN EXISTING POLE
ADD 25' DEAD END ANCHOR

EXISTING AERIAL LINE
TO BE RELOCATED

EXISTING POLE AND
ANCHOR TO BE REMOVED

PROPOSED NEW POLE
STA 11+50.00
27' -0" RIGHT

RETAIN EXISTING POLE
REMOVE EXISTING ANCHOR
ADD 2, 25' DEAD END ANCHORS





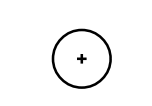
PROJECT NAME: STOWE
PROJECT NUMBER: BO 1446(39)

FILE NAME: sl2j658uttl.dgn
PROJECT LEADER: C. BURRALL
DESIGNED BY: C. BURRALL
UTILITY LAYOUT

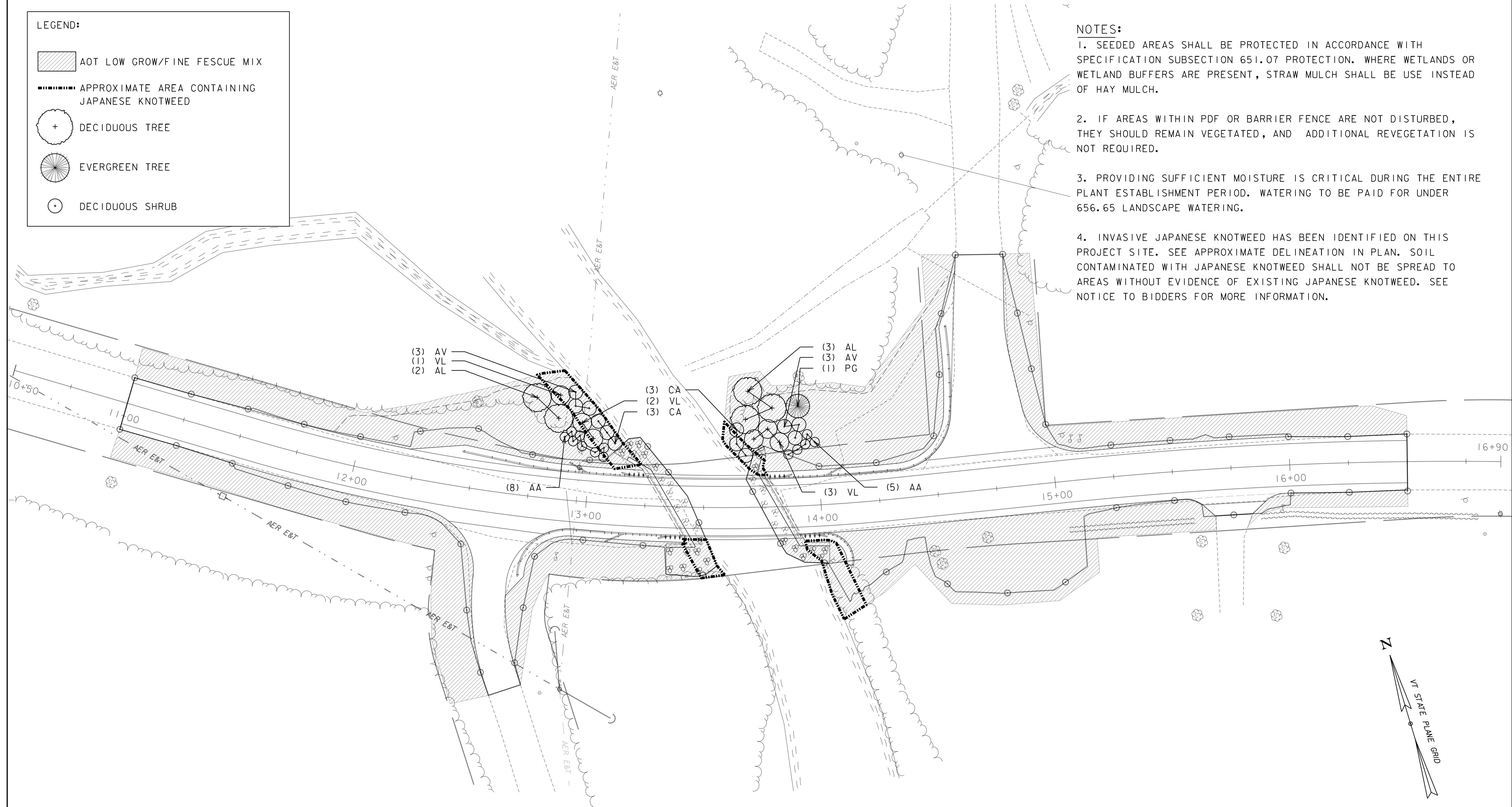
PLOT DATE: 2/9/2024
DRAWN BY: C. BURRALL
CHECKED BY: M. LONGSTREET
SHEET 56 OF 84

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

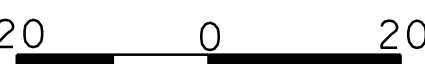
LEGEND:

-  AOT LOW GROW/FINE FESCUE MIX
-  APPROXIMATE AREA CONTAINING JAPANESE KNOTWEED
-  DECIDUOUS TREE
-  EVERGREEN TREE
-  DECIDUOUS SHRUB

- NOTES:**
1. SEEDED AREAS SHALL BE PROTECTED IN ACCORDANCE WITH SPECIFICATION SUBSECTION 651.07 PROTECTION. WHERE WETLANDS OR WETLAND BUFFERS ARE PRESENT, STRAW MULCH SHALL BE USE INSTEAD OF HAY MULCH.
 2. IF AREAS WITHIN PDF OR BARRIER FENCE ARE NOT DISTURBED, THEY SHOULD REMAIN VEGETATED, AND ADDITIONAL REVEGETATION IS NOT REQUIRED.
 3. PROVIDING SUFFICIENT MOISTURE IS CRITICAL DURING THE ENTIRE PLANT ESTABLISHMENT PERIOD. WATERING TO BE PAID FOR UNDER 656.65 LANDSCAPE WATERING.
 4. INVASIVE JAPANESE KNOTWEED HAS BEEN IDENTIFIED ON THIS PROJECT SITE. SEE APPROXIMATE DELINEATION IN PLAN. SOIL CONTAMINATED WITH JAPANESE KNOTWEED SHALL NOT BE SPREAD TO AREAS WITHOUT EVIDENCE OF EXISTING JAPANESE KNOTWEED. SEE NOTICE TO BIDDERS FOR MORE INFORMATION.



KEY	QUANTITY	SCIENTIFIC NAME	COMMON NAME	SIZE	CONTAINER	SPACING (ON CENTER)
TREES - EVERGREEN						
PG	1	<i>Picea glauca</i>	White spruce	5-6' height, natural	B&B	10' O.C.
SHRUBS - DECIDUOUS						
AL	5	<i>Alnus rugosa</i>	Speckled Alder	3-4' height	CONT.	12' O.C.
AA	13	<i>Aronia arbutifolia</i> 'Brilliantissima'	Red chokeberry	3 GAL	CONT.	4' O.C.
AV	6	<i>Aronia melanocarpa</i> 'Viking'	'Viking' Black chokeberry	3 GAL	CONT.	6' O.C.
CA	6	<i>Cornus amomum</i>	Silky dogwood	3 GAL	CONT.	6' O.C.
VL	6	<i>Viburnum lentago</i>	Nannyberry	3 GAL	CONT.	8' O.C.

SCALE 1" = 20' - 0"


PROJECT NAME: STOWE
 PROJECT NUMBER: BO 1446(39)

FILE NAME: sl2j658land.dgn
 PROJECT LEADER: C. BURRALL
 DESIGNED BY: B. DONAHUE
 LANDSCAPE PLAN

PLOT DATE: 2/9/2024
 DRAWN BY: B. DONAHUE
 CHECKED BY: C. BURRALL
 SHEET 57 OF 84

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 P.S.F.	CONSISTENCY
<250	Very Soft
250-500	Soft
500-1000	Med. Stiff
1000-2000	Stiff
2000-4000	Very Stiff
>4000	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

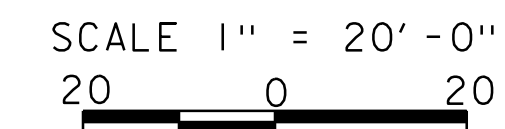
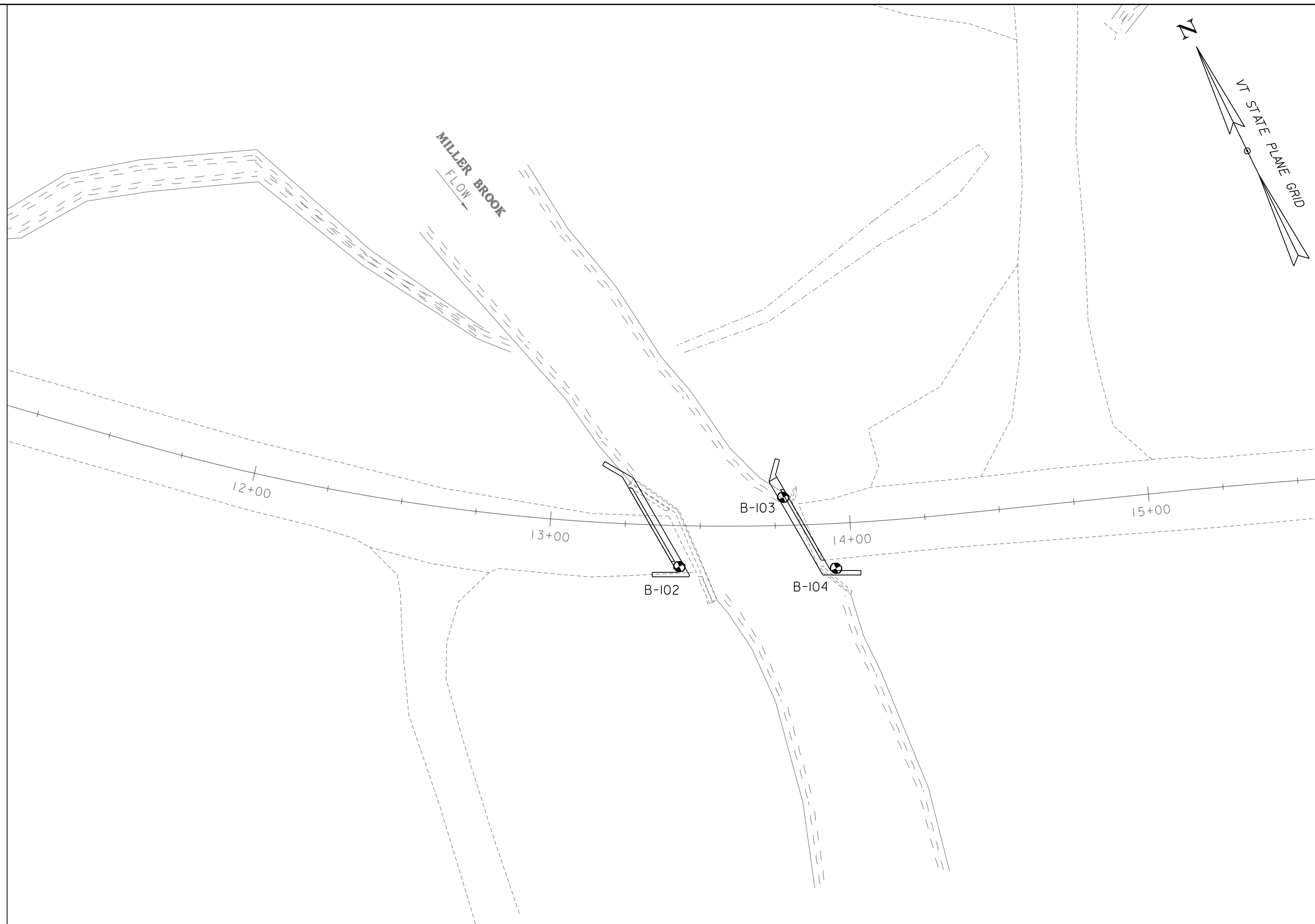
▼	Water Elevation
⊕	Standard Penetration Boring
⊗	Auger Boring
⊙	Rod Sounding
S	Sample
N	Standard Penetration Test
	Blow Count Per Foot For:
	2" O.D. Sampler
	1 3/8" I.D. Sampler
	Hammer Weight Of 140 Lbs.
	Hammer Fall Of 30"
VS	Field Vane Shear Test
US	Undisturbed Soil Sample
B	Blast
DC	Diamond Core
MD	Mud Drill
WA	Wash Ahead
HSA	Hollow Stem Auger
AX	Core Size 1 1/8"
BX	Core Size 1 3/8"
NX	Core Size 2 1/8"
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
Si	Silt
Cl	Clay
HP	Hardpan
Le	Ledge
NLTD	No Ledge To Depth
CNPF	Can Not Penetrate Further
TLOB	Top of Ledge Or Boulder
NR	No Recovery
Rec.	Recovery
1/2 Rec.	Percent Recovery
ROD	Rock Quality Designation
CBR	California Bearing Ratio
<	Less Than
>	Greater Than
R	Refusal (N > 100)
VTSPG	NAD83 - See Note 7

COLOR

blk	Black	pnk	Pink
bl	Blue	pu	Purple
brn	Brown	rd	Red
dk	Dark	tn	Tan
gr'y	Gray	wh	White
gn	Green	yel	Yellow
lt	Light	mltc	Multicolored
or	Orange		

DEFINITIONS (AASHTO)

BEDROCK (LEDGE) - Rock in its native location of indefinite thickness.	VARVED - Alternate layers of silt and clay.
BOULDER - A rock fragment with an average dimension > 12 inches.	HARDPAN - Extremely dense soil, cemented layer, not softened when wet.
COBBLE - Rock fragments with an average dimension between 3 and 12 inches.	MUCK - Soft organic soil (containing > 10% organic material).
GRAVEL - Rounded particles of rock < 3" and > 0.0787" (#10 sieve).	MOISTURE CONTENT - Weight of water divided by dry weight of soil.
SAND - Particles of rock < 0.0787" (#10 sieve) and > 0.0029" (#200 sieve).	FLOWING SAND - Granular soil so saturated (loose) that it flows into drill casing during extraction of wash rod.
SILT - Soil < 0.0029" (#200 sieve), non or slightly plastic and exhibits no strength when air-dried.	STRIKE - Angle from magnetic north to line of intersection of bed with a horizontal plane.
CLAY - Fine grained soil, exhibits plasticity when moist and considerable strength when air-dried.	DIP - Inclination of bed with a horizontal plane.



GENERAL NOTES

- The subsurface explorations shown herein were made between 5/17/2021 and 5/19/2021 by the Agency.
- 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 judgment 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 judgment 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.
- Northing and Easting coordinates are shown in Vermont State Plane Grid North American Datum 1983 in meters and survey feet.

BORING CHART

HOLE NUMBER	STATION	OFFSET	GROUND ELEVATION	ELEVATION TLOB
B-102	13+43.33	13.67 RT	752.40	698.40
B-103	13+77.93	9.39 LT	753.70	710.20
B-104	13+94.57	14.94 RT	753.70	709.70

PROJECT NAME: STOWE
PROJECT NUMBER: BO 1446(39)

FILE NAME: si2j658bor.dgn
PROJECT LEADER: C. BURRALL
DESIGNED BY: R. PELLETT
BORING INFORMATION

PLOT DATE: 2/9/2024
DRAWN BY: R. PELLETT
CHECKED BY: C. BURRALL
SHEET 58 OF 84

Boring Crew: P. LaBossiere, New England Boring Contractors
 Date Started: 5/17/21 Date Finished: 5/18/21
 VTSPG NAD83: N 714218.59 ft E 1571870.08 ft
 Station: 13+43.33 Offset: 13.67 RT
 Ground Elevation: 752.44 ft

Casing Sampler
 Type: WASH BORE SS
 I.D.: 4 in 2 in
 Hammer Wt: 300 140 lb.
 Hammer Fall: N.A. 30 in.
 Hammer/Rod Type: Auto/NW
 Rig: Stratas Star 15 CE = 1.44

Groundwater Observations
 Date Depth (ft) Notes
 05/17/21 8.0 after drilling

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (ROD %)	Drill Rate (min/ft)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0.0 - 0.8	Visual Description: ASPHALT (6 inches)	Visual Description: ASPHALT (6 inches)								
0.8 - 2.5	Visual Description: medium dense, fine to coarse SAND, little Gravel, trace Silt, brn, Moist, FILL. Rec.=0.8 ft	Visual Description: medium dense, fine to coarse SAND, little Gravel, trace Silt, brn, Moist, FILL. Rec.=0.8 ft				15-12-10/6" (22)				
2.5 - 5.0	Visual Description: very stiff, Clayey SILT, some Sand, trace Gravel, brn, Moist, FILL. Rec.=1.1 ft	Visual Description: very stiff, Clayey SILT, some Sand, trace Gravel, brn, Moist, FILL. Rec.=1.1 ft				6-11-14-19 (25)				
5.0 - 6.0	Visual Description: medium dense, fine to coarse SAND, some Silt, trace Gravel, tan, Moist, FILL. Rec.=1.1 ft	Visual Description: medium dense, fine to coarse SAND, some Silt, trace Gravel, tan, Moist, FILL. Rec.=1.1 ft				18-16-26-19 (42)				
6.0 - 8.0	Visual Description: dense, fine to coarse SAND, some Gravel, trace Silt, brn, Moist, Rec.=0.9 ft	Visual Description: dense, fine to coarse SAND, some Gravel, trace Silt, brn, Moist, Rec.=0.9 ft				21-20-28-73 (48)	2.6	53.6	37.6	8.8
8.0 - 10.0	Dense, fine to coarse GRAVEL, and Sand, trace Silt, brn, Moist, 6.0 ft - 8.0 ft, Rec.=1.6 ft, (A-1-a)	Dense, fine to coarse GRAVEL, and Sand, trace Silt, brn, Moist, 6.0 ft - 8.0 ft, Rec.=1.6 ft, (A-1-a)				30-40-41-81 (61)	9.4	53.1	18.9	28.0
10.0 - 11.0	Very dense, fine to coarse GRAVEL, some Silt, little Sand, brn, Moist, 8.0 ft - 10.0 ft, Rec.=1.1 ft, (A-2-4)	Very dense, fine to coarse GRAVEL, some Silt, little Sand, brn, Moist, 8.0 ft - 10.0 ft, Rec.=1.1 ft, (A-2-4)				30-29-10-9 (39)				
11.0 - 15.0	Visual Description: dense, fine to coarse GRAVEL, some Silt, little Sand, brn, Wet, Rec.=1.1 ft	Visual Description: dense, fine to coarse GRAVEL, some Silt, little Sand, brn, Wet, Rec.=1.1 ft				70-27-18-14 (45)				
15.0 - 17.5	Visual Description: dense, fine to coarse GRAVEL, some Silt, little Sand, brn, Wet, Rec.=0.3 ft	Visual Description: dense, fine to coarse GRAVEL, some Silt, little Sand, brn, Wet, Rec.=0.3 ft								
17.5 - 20.0	Visual Description: dense, fine to coarse GRAVEL, some Silt, little Sand, brn, Wet, Rec.=0.3 ft	Visual Description: dense, fine to coarse GRAVEL, some Silt, little Sand, brn, Wet, Rec.=0.3 ft								
20.0 - 21.0	Medium dense, fine to coarse SAND, some Gravel, little Silt, brn, Moist, 19.0 ft - 21.0 ft, Rec.=0.8 ft, (A-2-4)	Medium dense, fine to coarse SAND, some Gravel, little Silt, brn, Moist, 19.0 ft - 21.0 ft, Rec.=0.8 ft, (A-2-4)				10-16-14-8 (30)	13.9	23.7	60.0	16.3

Notes:
 1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
 2. N Values have not been corrected for hammer energy. CE the hammer energy correction factor.
 3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.
 4. Soil descriptions are based on modified burmister system when no soil laboratory testing was performed, AASHTO classifications are included where soil laboratory testing was performed.

Boring Crew: P. LaBossiere, New England Boring Contractors
 Date Started: 5/17/21 Date Finished: 5/18/21
 VTSPG NAD83: N 714218.59 ft E 1571870.08 ft
 Station: 13+43.33 Offset: 13.67 RT
 Ground Elevation: 752.44 ft

Casing Sampler
 Type: WASH BORE SS
 I.D.: 4 in 2 in
 Hammer Wt: 300 140 lb.
 Hammer Fall: N.A. 30 in.
 Hammer/Rod Type: Auto/NW
 Rig: Stratas Star 15 CE = 1.44

Groundwater Observations
 Date Depth (ft) Notes
 05/17/21 8.0 after drilling

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (ROD %)	Drill Rate (min/ft)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
25.0 - 27.5	Visual Description: medium dense, fine to coarse SAND, some Gravel, little Silt, brn, Moist. Field Note: Some iron staining at approximately 25 feet. Rec.=0.8 ft	Visual Description: medium dense, fine to coarse SAND, some Gravel, little Silt, brn, Moist. Field Note: Some iron staining at approximately 25 feet. Rec.=0.8 ft				24-14-14-18 (28)				
27.5 - 30.0	Visual Description: Field Note: No Recovery. Rec.= 0.0 ft	Visual Description: Field Note: No Recovery. Rec.= 0.0 ft				100/3" (>100)				
30.0 - 32.5	Visual Description: Field Note: No Recovery. Rec.= 0.0 ft	Visual Description: Field Note: No Recovery. Rec.= 0.0 ft				100/3" (>100)				
32.5 - 35.0	Visual Description: Field Note: No Recovery. Rec.= 0.0 ft	Visual Description: Field Note: No Recovery. Rec.= 0.0 ft				100/3" (>100)				
35.0 - 37.5	Visual Description: Field Note: No Recovery. Rec.= 0.0 ft	Visual Description: Field Note: No Recovery. Rec.= 0.0 ft				100/3" (>100)				
37.5 - 40.0	Visual Description: Field Note: No Recovery. Rec.= 0.0 ft	Visual Description: Field Note: No Recovery. Rec.= 0.0 ft				100/3" (>100)				
40.0 - 41.0	Visual Description: very dense, fine to coarse SAND, trace Gravel, trace Silt, gray/brown, Moist, GLACIAL TILL. Rec.=0.4 ft	Visual Description: very dense, fine to coarse SAND, trace Gravel, trace Silt, gray/brown, Moist, GLACIAL TILL. Rec.=0.4 ft				100/5" (>100)				
41.0 - 44.0	Visual Description: Field Note: Hard drilling started at 41 feet, refusal at approximately 44 feet. 44.0 ft - 49.0 ft, WEATHERED ROCK. Possible top of bedrock surface (may have been a boulder)	Visual Description: Field Note: Hard drilling started at 41 feet, refusal at approximately 44 feet. 44.0 ft - 49.0 ft, WEATHERED ROCK. Possible top of bedrock surface (may have been a boulder)	C-1	20 (0)	1.6					
44.0 - 45.0	Visual Description: Field Note: Hard drilling started at 41 feet, refusal at approximately 44 feet. 44.0 ft - 49.0 ft, WEATHERED ROCK. Possible top of bedrock surface (may have been a boulder)	Visual Description: Field Note: Hard drilling started at 41 feet, refusal at approximately 44 feet. 44.0 ft - 49.0 ft, WEATHERED ROCK. Possible top of bedrock surface (may have been a boulder)			1.7					
45.0 - 46.0	Visual Description: Field Note: Hard drilling started at 41 feet, refusal at approximately 44 feet. 44.0 ft - 49.0 ft, WEATHERED ROCK. Possible top of bedrock surface (may have been a boulder)	Visual Description: Field Note: Hard drilling started at 41 feet, refusal at approximately 44 feet. 44.0 ft - 49.0 ft, WEATHERED ROCK. Possible top of bedrock surface (may have been a boulder)			1.5					
46.0 - 47.5	Visual Description: Field Note: Hard drilling started at 41 feet, refusal at approximately 44 feet. 44.0 ft - 49.0 ft, WEATHERED ROCK. Possible top of bedrock surface (may have been a boulder)	Visual Description: Field Note: Hard drilling started at 41 feet, refusal at approximately 44 feet. 44.0 ft - 49.0 ft, WEATHERED ROCK. Possible top of bedrock surface (may have been a boulder)			1.5					

Notes:
 1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
 2. N Values have not been corrected for hammer energy. CE the hammer energy correction factor.
 3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.
 4. Soil descriptions are based on modified burmister system when no soil laboratory testing was performed, AASHTO classifications are included where soil laboratory testing was performed.

Boring Crew: P. LaBossiere, New England Boring Contractors
 Date Started: 5/17/21 Date Finished: 5/18/21
 VTSPG NAD83: N 714218.59 ft E 1571870.08 ft
 Station: 13+43.33 Offset: 13.67 RT
 Ground Elevation: 752.44 ft

Casing Sampler
 Type: WASH BORE SS
 I.D.: 4 in 2 in
 Hammer Wt: 300 140 lb.
 Hammer Fall: N.A. 30 in.
 Hammer/Rod Type: Auto/NW
 Rig: Stratas Star 15 CE = 1.44

Groundwater Observations
 Date Depth (ft) Notes
 05/17/21 8.0 after drilling

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (ROD %)	Drill Rate (min/ft)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0.0 - 1.7	Visual Description: very dense, fine to coarse SAND, trace Gravel, trace Silt, gray/brown, Moist, GLACIAL TILL. Rec.=0.2 ft	Visual Description: very dense, fine to coarse SAND, trace Gravel, trace Silt, gray/brown, Moist, GLACIAL TILL. Rec.=0.2 ft				100/2" (>100)				
1.7 - 54.0	Visual Description: very dense, fine to coarse SAND, trace Gravel, trace Silt, gray/brown, Moist, GLACIAL TILL. Rec.=0.2 ft	Visual Description: very dense, fine to coarse SAND, trace Gravel, trace Silt, gray/brown, Moist, GLACIAL TILL. Rec.=0.2 ft				100/2" (>100)				
54.0 - 59.0	54.0 ft - 59.0 ft. Light gray, Fine-grained SCHIST, little quartzite bedding, with joints spaced 4 to 6 inches apart, moderately dipping. Moderately hard to hard. Very slightly weathered, slightly fractured	54.0 ft - 59.0 ft. Light gray, Fine-grained SCHIST, little quartzite bedding, with joints spaced 4 to 6 inches apart, moderately dipping. Moderately hard to hard. Very slightly weathered, slightly fractured	C-2	96.7 (90.8)	2.6					
59.0 - 64.0	59.0 ft - 64.0 ft. Light gray, Fine-grained SCHIST, little quartzite bedding, with joints spaced 2 to 6 inches apart, moderately dipping. Moderately hard to hard. Very slightly weathered	59.0 ft - 64.0 ft. Light gray, Fine-grained SCHIST, little quartzite bedding, with joints spaced 2 to 6 inches apart, moderately dipping. Moderately hard to hard. Very slightly weathered	C-3	100 (71.7)	2.8					
64.0 - 65.0	Hole stopped @ 64.0 ft	Hole stopped @ 64.0 ft								

Notes:
 1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
 2. N Values have not been corrected for hammer energy. CE the hammer energy correction factor.
 3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.
 4. Soil descriptions are based on modified burmister system when no soil laboratory testing was performed, AASHTO classifications are included where soil laboratory testing was performed.

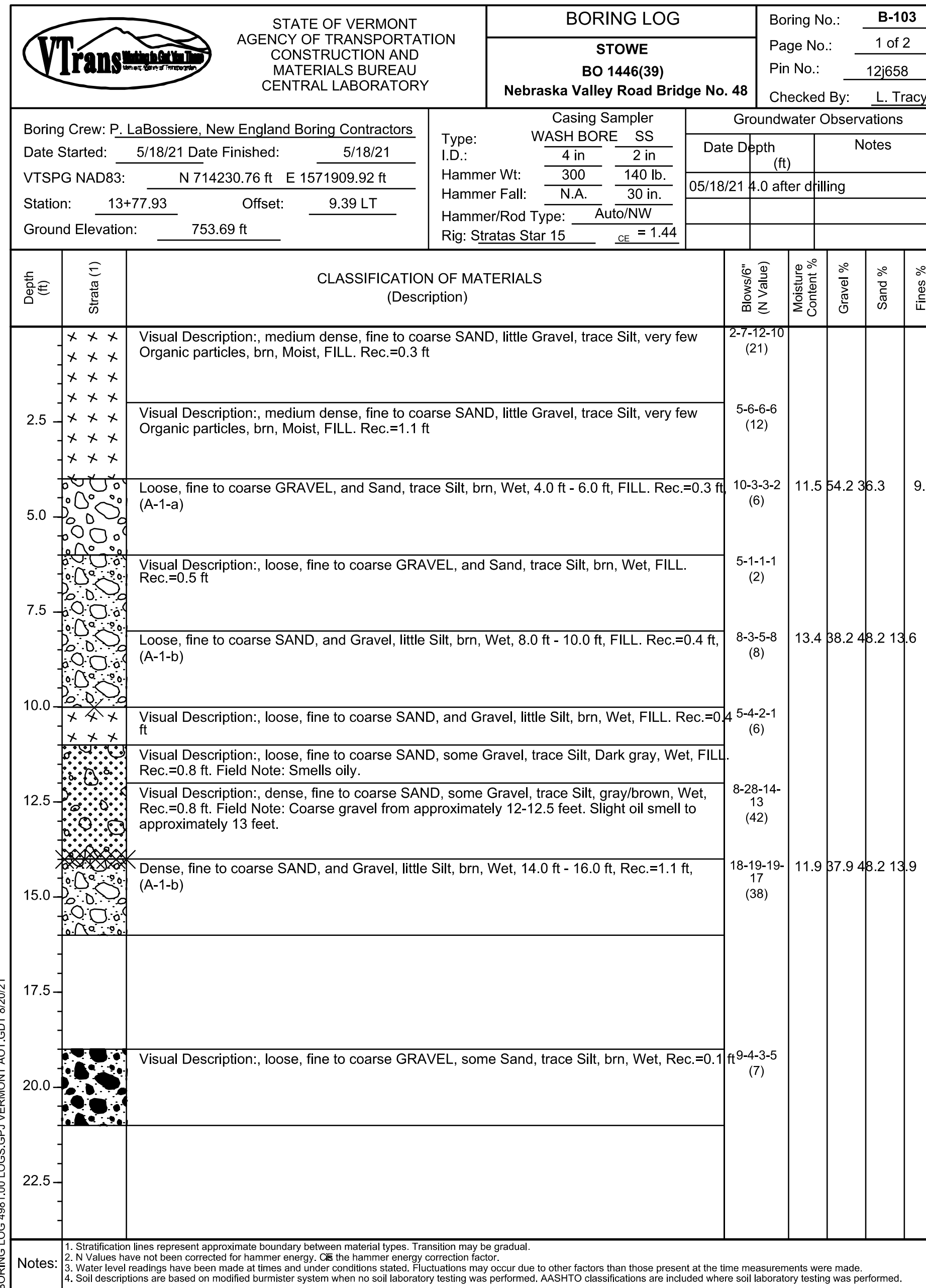
ABUT 1 BOT ELEV 741.00

BORING LOG 4981.00 LOGS.GPJ VERMONT AOT.GDT 8/20/21

BORING LOG 4981.00 LOGS.GPJ VERMONT AOT.GDT 8/20/21

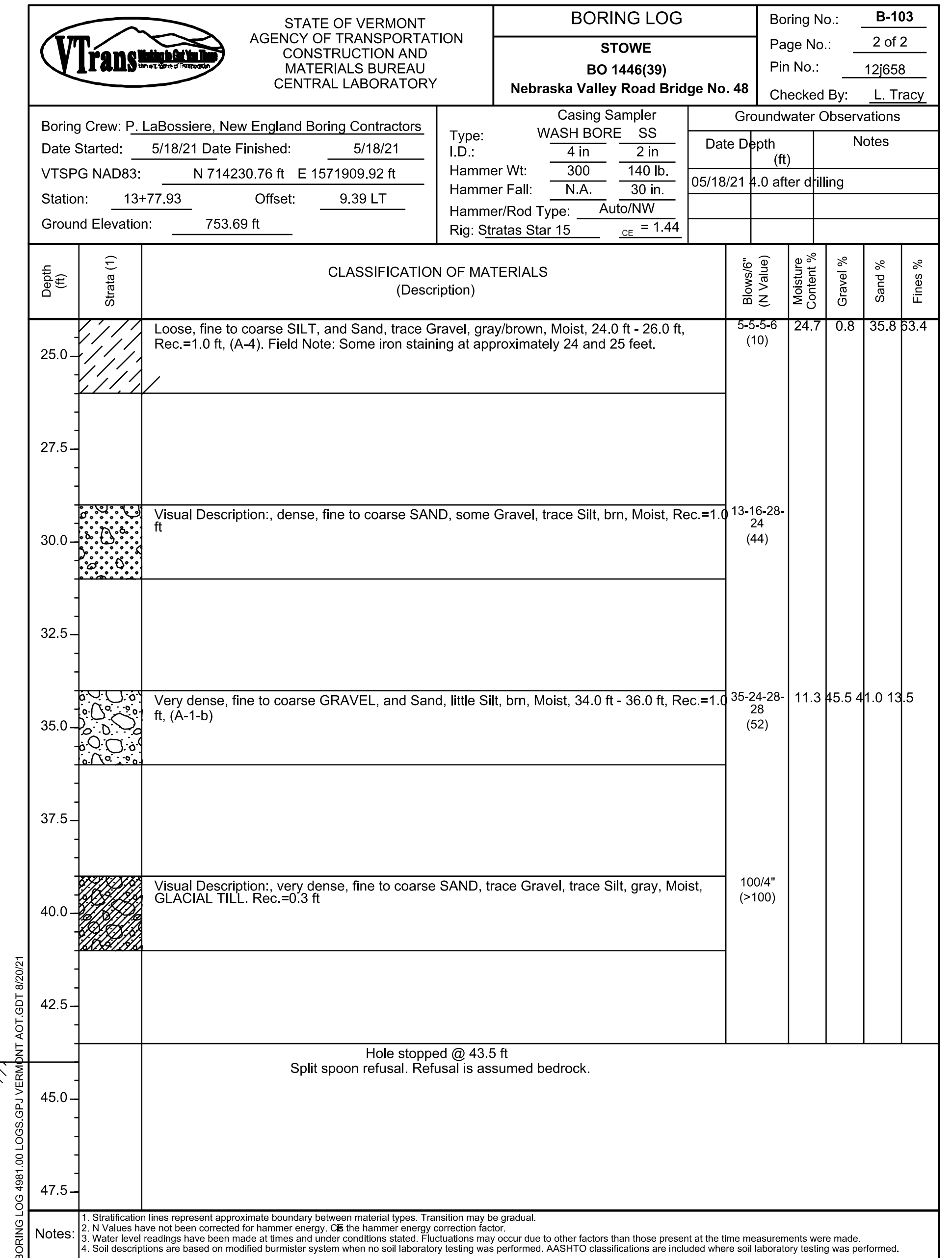
EST PILE TIP ELEV 698.00

BORING LOG 4981.00 LOGS.GPJ VERMONT AOT.GDT 8/20/21



ABUT 2 BOT ELEV 742.00

BORING LOG 4981.00 LOGS.GPJ VERMONT AOT.GDT 8/20/21



EST PILE TIP ELEV 709.00

BORING LOG 4981.00 LOGS.GPJ VERMONT AOT.GDT 8/20/21

PROJECT NAME: STOWE	
PROJECT NUMBER: BO 1446(39)	
FILE NAME: sl2j658bor.dgn	PLOT DATE: 2/9/2024
PROJECT LEADER: C. BURRALL	DRAWN BY: R. PELLETT
DESIGNED BY: R. PELLETT	CHECKED BY: C. BURRALL
BORING LOGS 2	SHEET 60 OF 84

STATE OF VERMONT AGENCY OF TRANSPORTATION CONSTRUCTION AND MATERIALS BUREAU CENTRAL LABORATORY		BORING LOG		Boring No.: B-104					
STOWE BO 1446(39) Nebraska Valley Road Bridge No. 48		Page No.: 1 of 3		Pin No.: 12 658					
Checked By: L. Tracy		Boring Crew: P. LaBossiere, New England Boring Contractors		Casing Sampler					
Date Started: 5/19/21 Date Finished: 5/19/21		Type: WASH BORE SS		Groundwater Observations					
VTSPG NAD83: N 714203.02 ft E 1571919.99 ft		I.D.: 4 in 2 in		Date Depth (ft) Notes					
Station: 13+94.57 Offset: 14.94 RT		Hammer Wt: 300 140 lb.		05/19/21 8.0 after drilling					
Ground Elevation: 753.69 ft		Hammer Fall: N.A. 30 in.							
		Hammer/Rod Type: Auto/NW							
		Rig: Stratas Star 15 CE = 1.44							
Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Drill Rate (minutes/ft)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0.0		Visual Description: ASPHALT (6 inches)							
0.0		Visual Description: fine to coarse SAND, little Silt, trace Gravel, brn, Moist, FILL. Rec.=0.9 ft			10-10-10/6" (20)				
2.5		Medium dense, fine to coarse SAND, little Silt, little Gravel, brn, Moist, 2.0 ft - 4.0 ft, FILL. Rec.=1.1 ft, (A-2-4)			10-7-10-9 (17)	9.6	18.3	53.3	18.4
5.0		Visual Description: loose, fine to coarse SAND, little Silt, little Gravel, brn, Moist, FILL. Rec.=0.9 ft			5-5-5-3 (10)				
7.5		Loose, fine to coarse SILT, some Sand, some Gravel, brn, Moist, 6.0 ft - 8.0 ft, FILL. Rec.=1.2 ft, (A-4)			3-4-3-4 (7)	14.4	25.0	25.4	48.6
10.0		Visual Description: loose, fine to coarse SILT, some Sand, some Gravel, brn, Wet, FILL. Rec.=0.6 ft			5-7-8-12 (15)				
12.5		Medium dense, fine to coarse GRAVEL, some Silt, some Sand, brn, Wet, 10.0 ft - 12.0 ft, Rec.=1.3 ft, (A-2-4)			20-11-11-16 (22)	19.4	52.3	20.2	27.5
15.0		Visual Description: medium dense, fine to coarse GRAVEL, some Silt, some Sand, brn, Wet, Rec.=0.6 ft			15-12-8-9 (30)				
20.0		Medium dense, fine to coarse SAND, some Silt, trace Gravel, brn, Moist, 19.0 ft - 21.0 ft, Rec.=0.8 ft, (A-2-4)			6-5-6-5 (11)	25.0	0.1	68.3	31.6

Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. CE the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.
4. Soil descriptions are based on modified burmister system when no soil laboratory testing was performed, AASHTO classifications are included where soil laboratory testing was performed.

STATE OF VERMONT AGENCY OF TRANSPORTATION CONSTRUCTION AND MATERIALS BUREAU CENTRAL LABORATORY		BORING LOG		Boring No.: B-104					
STOWE BO 1446(39) Nebraska Valley Road Bridge No. 48		Page No.: 2 of 3		Pin No.: 12 658					
Checked By: L. Tracy		Boring Crew: P. LaBossiere, New England Boring Contractors		Casing Sampler					
Date Started: 5/19/21 Date Finished: 5/19/21		Type: WASH BORE SS		Groundwater Observations					
VTSPG NAD83: N 714203.02 ft E 1571919.99 ft		I.D.: 4 in 2 in		Date Depth (ft) Notes					
Station: 13+94.57 Offset: 14.94 RT		Hammer Wt: 300 140 lb.		05/19/21 8.0 after drilling					
Ground Elevation: 753.69 ft		Hammer Fall: N.A. 30 in.							
		Hammer/Rod Type: Auto/NW							
		Rig: Stratas Star 15 CE = 1.44							
Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Drill Rate (minutes/ft)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
25.0									
27.5									
30.0		Hard, SILT, little Gravel, trace Sand, gray/brown, Wet, 29.0 ft - 30.5 ft, Rec.=1.1 ft, (A-4)			12-15-16-12 (31)	32.3	0.1		99.9
30.0		Visual Description: medium dense, fine to coarse GRAVEL, some Sand, trace Silt, gray/brown, Wet, Rec.=1.1 ft							
40.0		Visual Description: very dense, fine to coarse SAND, some Gravel, little Silt, brn, Moist, Rec.=1.2 ft			33-28-50-100/3" (78)				
40.0		Visual Description: very dense, fine to coarse SAND, little Gravel, trace Silt, gray, Moist, GLACIAL TILL. Rec.=1.2 ft							
45.0		44.0 ft - 45.0 ft, Medium-grained QUARTZITE, horizontal joints. Hard to very hard, Fresh, slightly fractured	C-1	8					
45.0		Visual Description: Field note: Core barrel was pulled at approximately 45 ft and found to be completely worn down. The driller roller bitted from 45 ft to 50 ft and confirmed material was consistently dense.							

Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. CE the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.
4. Soil descriptions are based on modified burmister system when no soil laboratory testing was performed, AASHTO classifications are included where soil laboratory testing was performed.

STATE OF VERMONT AGENCY OF TRANSPORTATION CONSTRUCTION AND MATERIALS BUREAU CENTRAL LABORATORY		BORING LOG		Boring No.: B-104					
STOWE BO 1446(39) Nebraska Valley Road Bridge No. 48		Page No.: 3 of 3		Pin No.: 12 658					
Checked By: L. Tracy		Boring Crew: P. LaBossiere, New England Boring Contractors		Casing Sampler					
Date Started: 5/19/21 Date Finished: 5/19/21		Type: WASH BORE SS		Groundwater Observations					
VTSPG NAD83: N 714203.02 ft E 1571919.99 ft		I.D.: 4 in 2 in		Date Depth (ft) Notes					
Station: 13+94.57 Offset: 14.94 RT		Hammer Wt: 300 140 lb.		05/19/21 8.0 after drilling					
Ground Elevation: 753.69 ft		Hammer Fall: N.A. 30 in.							
		Hammer/Rod Type: Auto/NW							
		Rig: Stratas Star 15 CE = 1.44							
Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Drill Rate (minutes/ft)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
50.0		Hole stopped @ 50.0 ft							
52.5									
55.0									
57.5									
60.0									
62.5									
65.0									
67.5									
70.0									

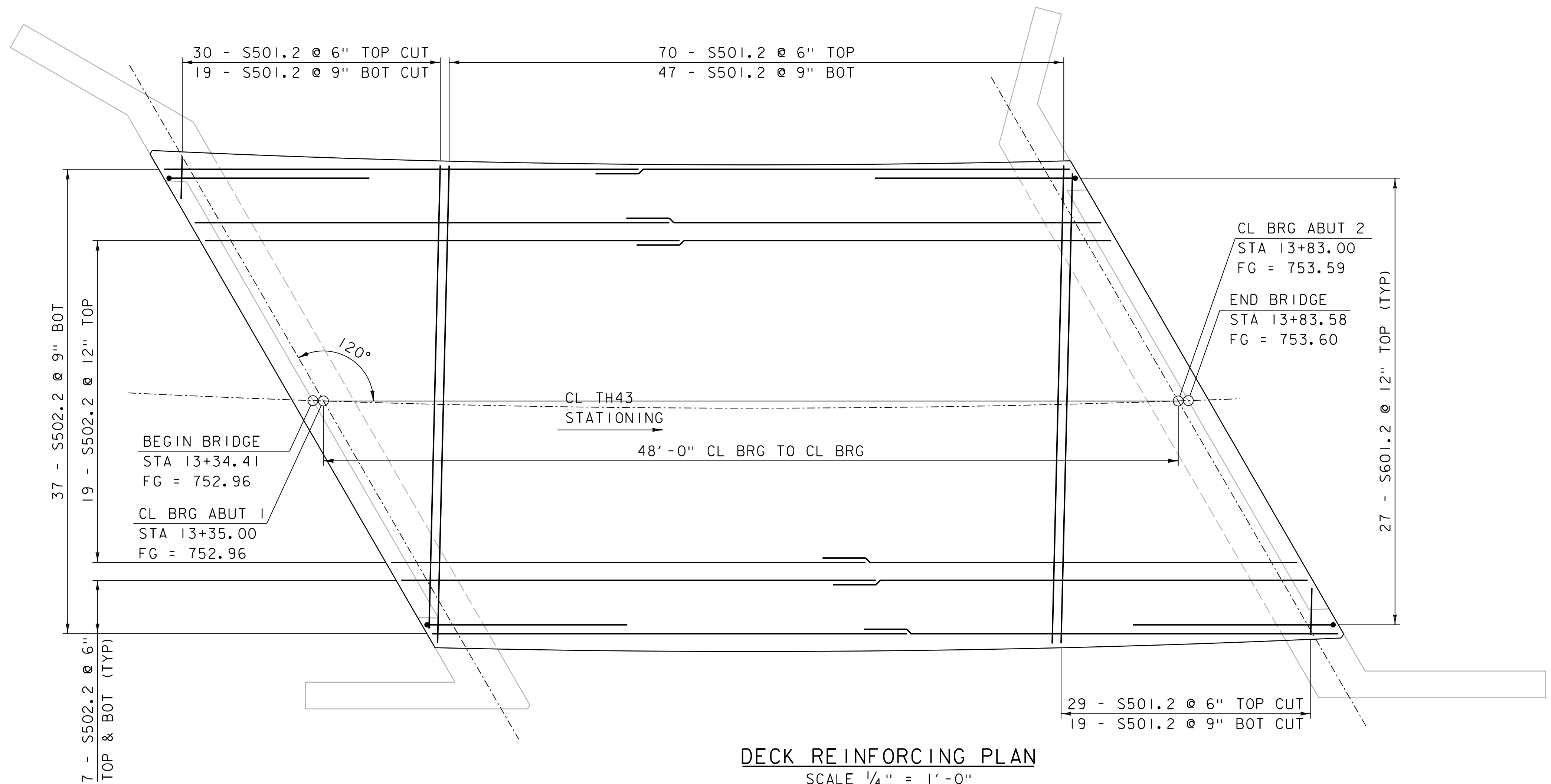
Notes:
1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. CE the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations may occur due to other factors than those present at the time measurements were made.
4. Soil descriptions are based on modified burmister system when no soil laboratory testing was performed, AASHTO classifications are included where soil laboratory testing was performed.

ABUT 2 BOT ELEV 742.00

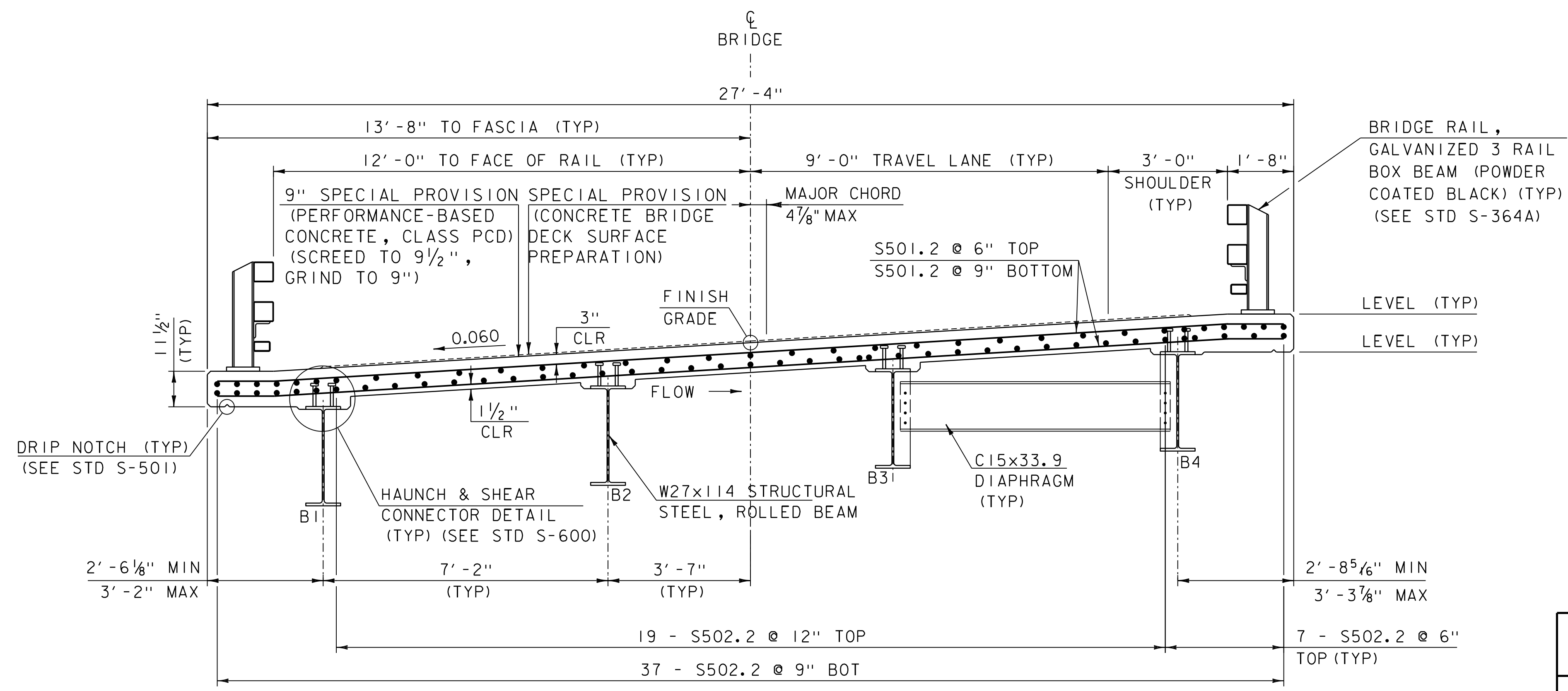
EST PILE TIP ELEV 709.00

BORING LOG 4981.00 LOGS.GPJ VERMONT AOT.GDT 8/20/21

PROJECT NAME: STOWE
PROJECT NUMBER: BO 1446(39)
FILE NAME: sl2j658bor.dgn PLOT DATE: 2/9/2024
PROJECT LEADER: C. BURRALL DRAWN BY: R. PELLETT
DESIGNED BY: R. PELLETT CHECKED BY: C. BURRALL
BORING LOGS 3 SHEET 61 OF 84



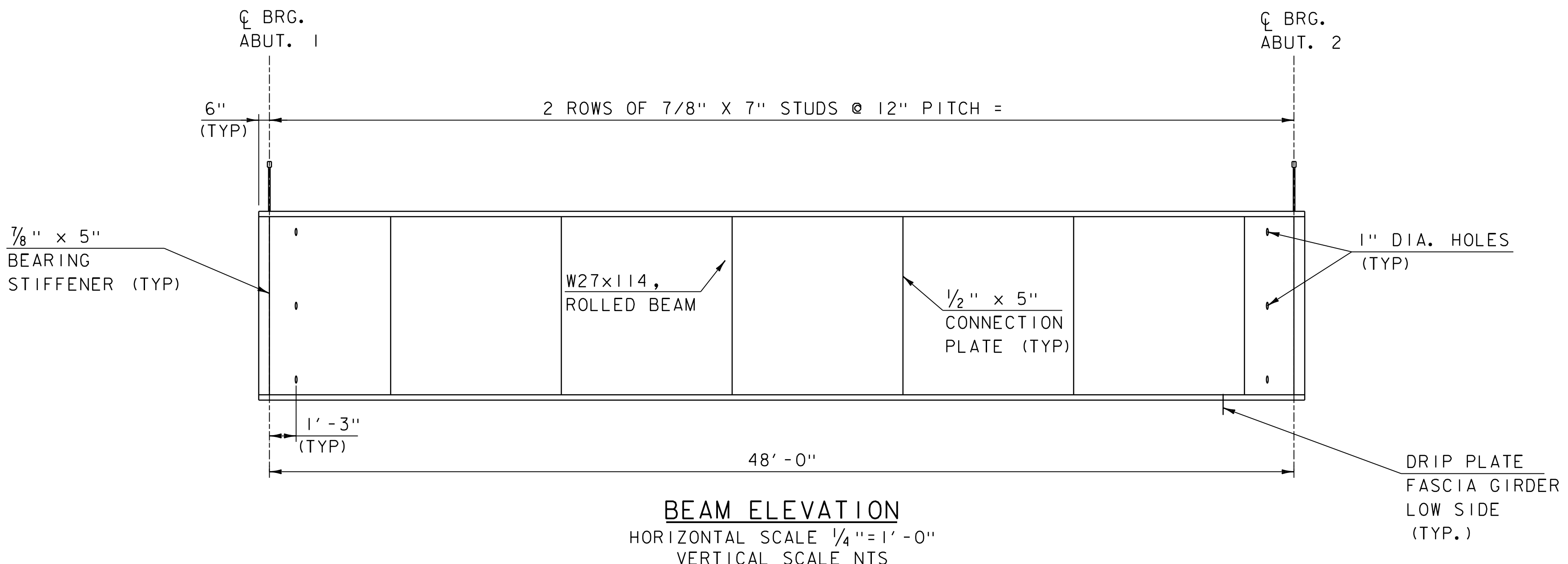
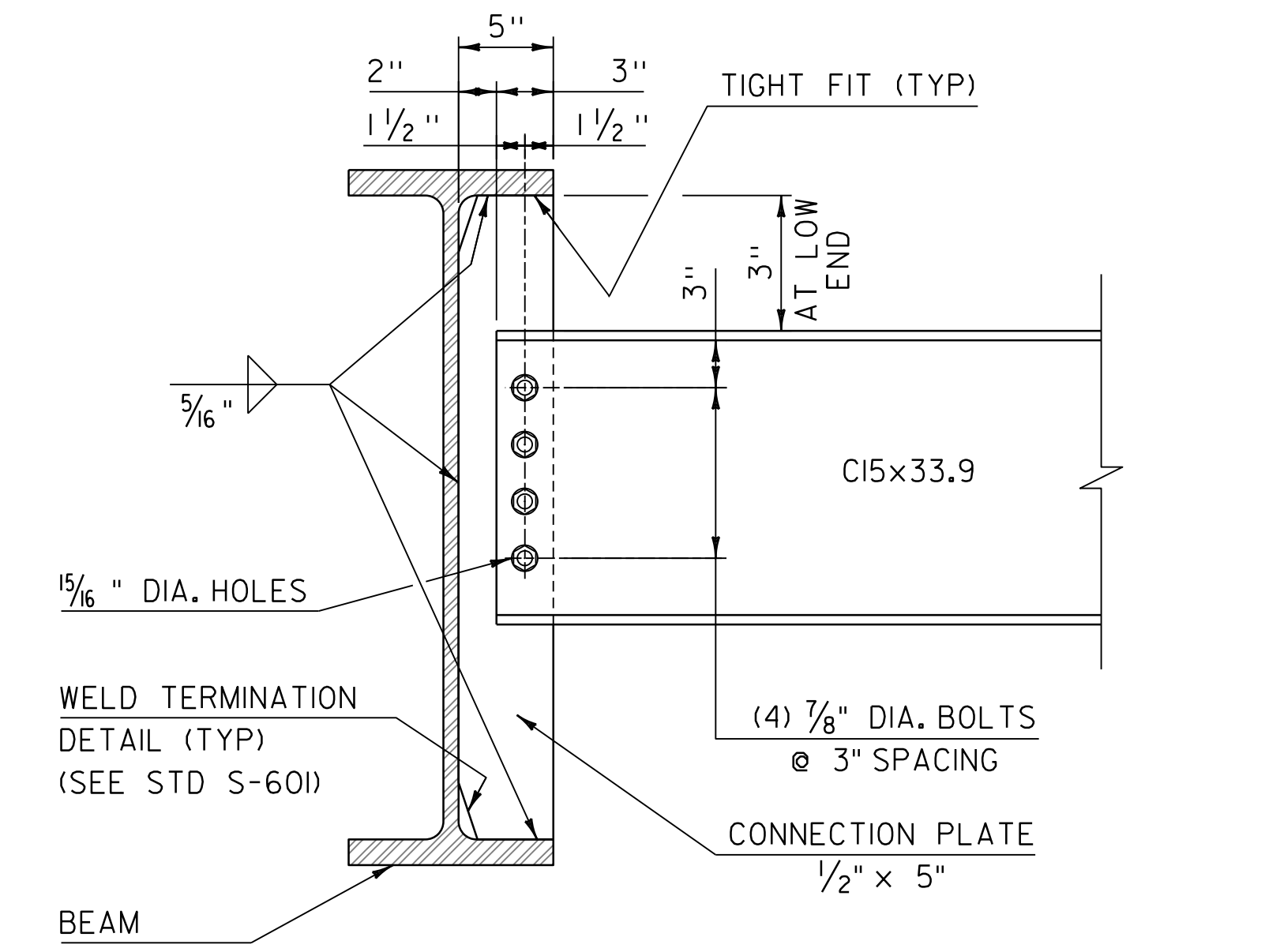
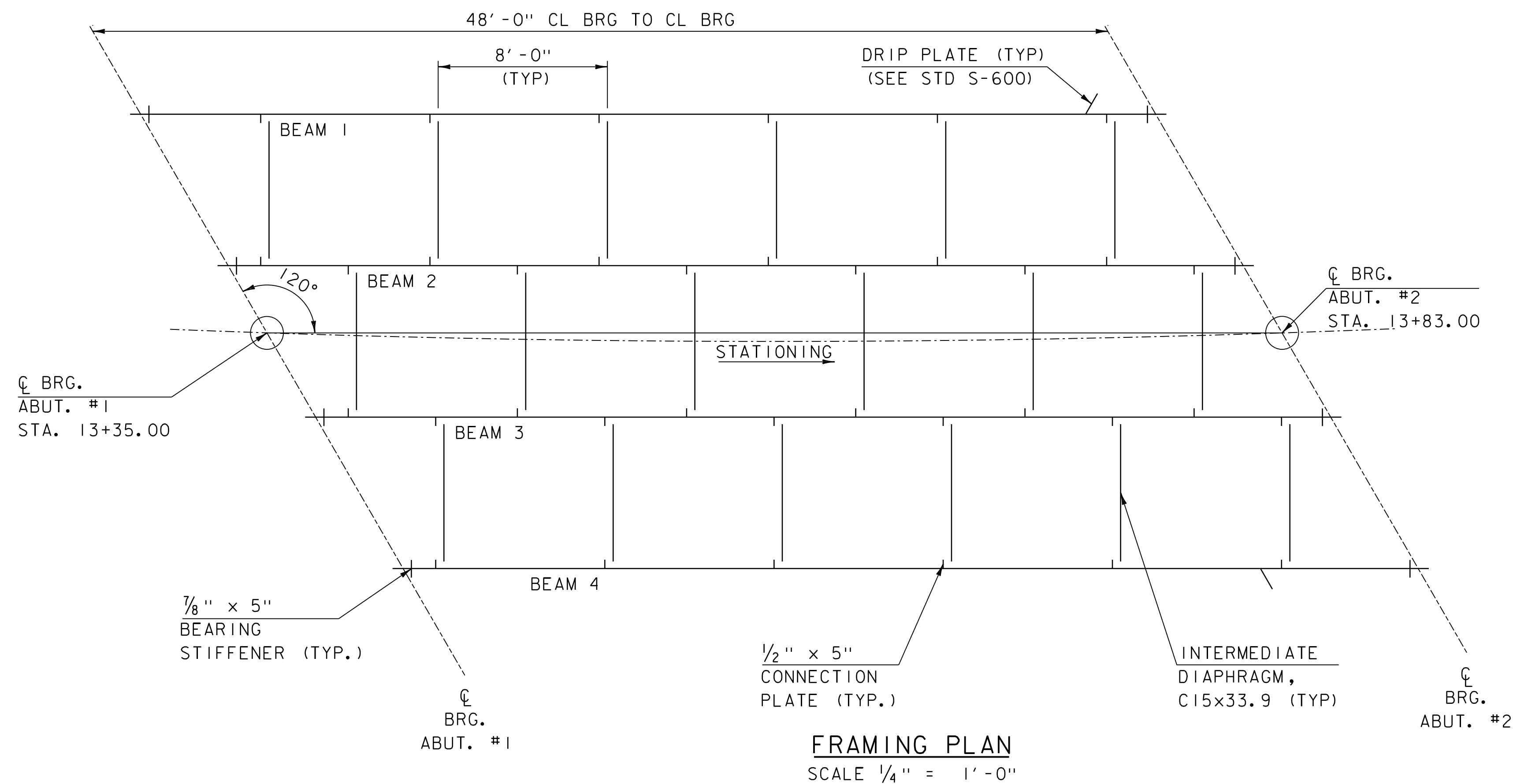
DECK REINFORCING PLAN
SCALE 1/4" = 1'-0"



DECK REINFORCING SECTION
SCALE 1/2" = 1'-0"

NOTE:
 NF = NEAR FACE
 FF = FAR FACE
 EF = EACH FACE
 ▲ = CUT TO FIT IN FIELD
 3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
 2'-7" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROJECT NAME:	STOWE	FILE NAME:	sl2j658sup2.dgn	PLOT DATE:	2/9/2024
PROJECT NUMBER:	BO 1446(39)	PROJECT LEADER:	C. BURRALL	DRAWN BY:	A. MANN
		DESIGNED BY:	C. BURRALL	CHECKED BY:	C. BURRALL
		DECK PLAN & TYPICAL SECTION		SHEET	62 OF 84

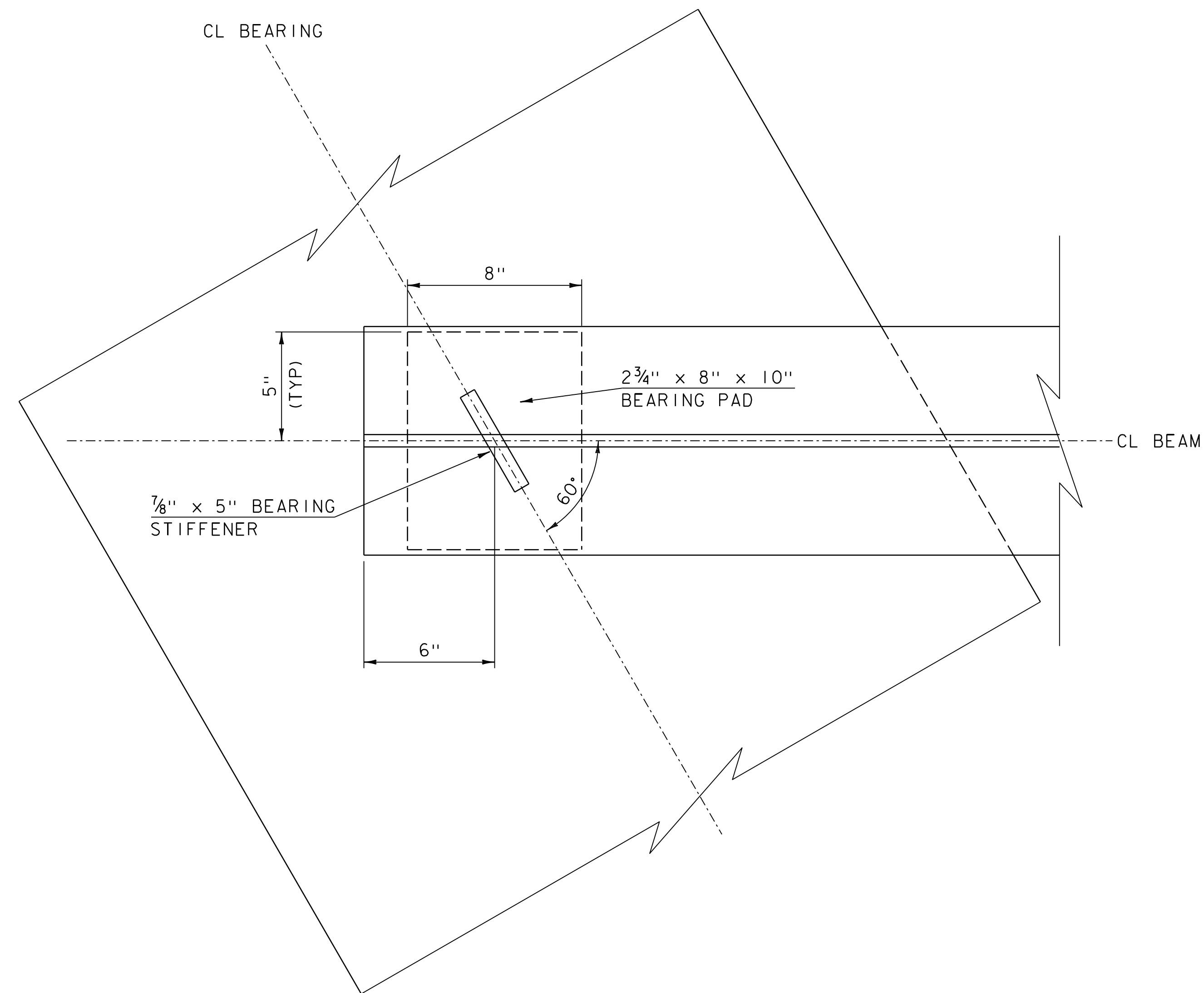


- NOTES:**
- SEE STRUCTURES DETAIL SHEET SD-601 FOR DRIP PLATE DETAILS.
 - SEE STRUCTURES DETAIL SHEET SD-602 FOR DIAPHRAGM, CONNECTION PLATE, AND STIFFENER DETAILS.
 - DEAD LOAD DEFLECTION INCLUDES: BEAM, DIAPHRAGMS, DECK & BRIDGE RAIL.
 - CVN - SHALL MEET CHARPY V-NOTCH REQUIREMENTS FOR MAIN MEMBERS AS SPECIFIED IN SECTION 714.

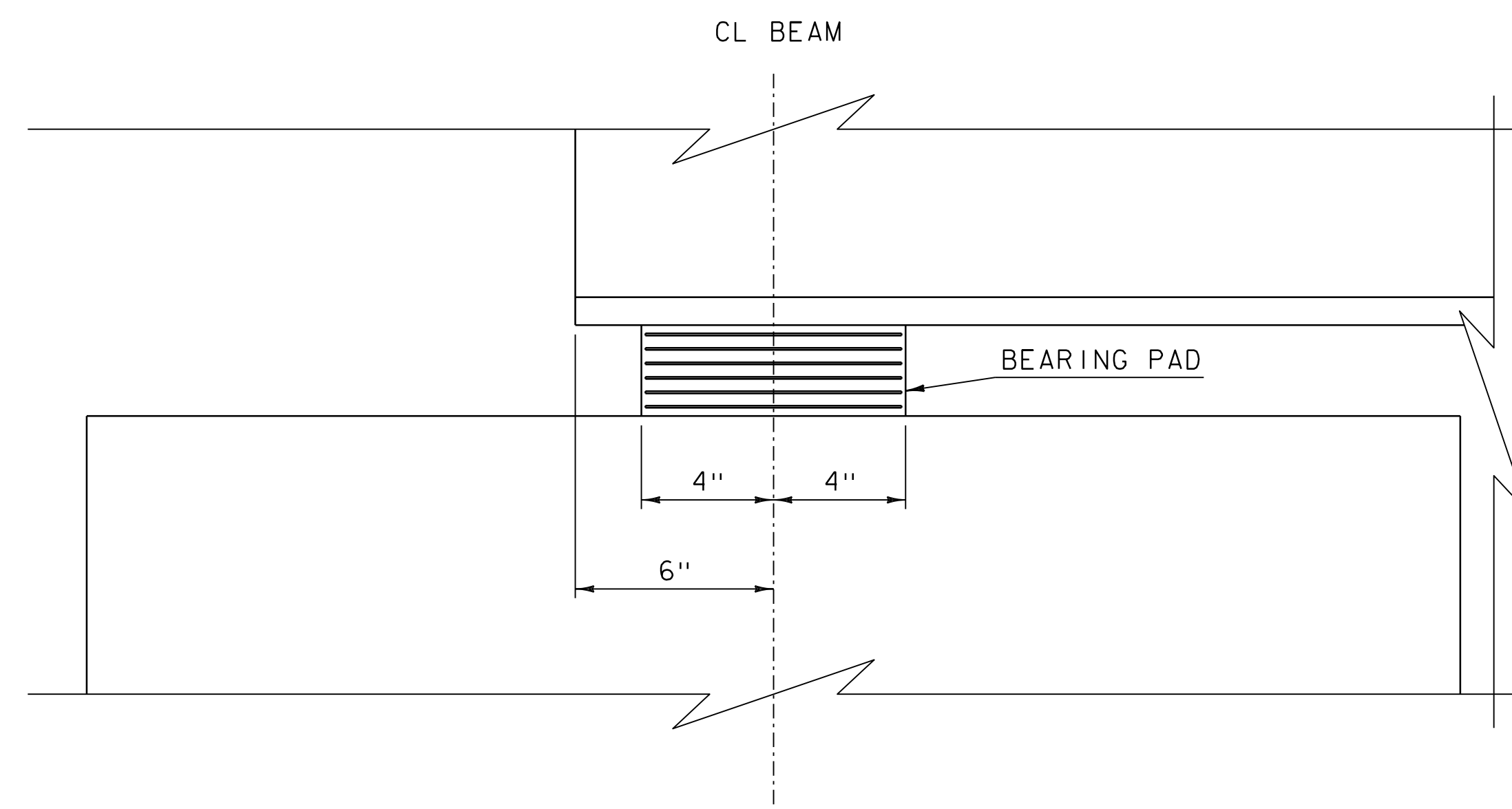
CAMBER & DEFLECTION											
	0L	0.1L	0.2L	0.3L	0.4L	0.5L	0.6L	0.7L	0.8L	0.9L	1.0L
Steel Deflection	0	1/16	1/16	1/8	1/8	1/8	1/8	1/8	1/16	1/16	0
Slab and Super	0	1/3	9/16	3/4	7/8	15/16	7/8	3/4	9/16	5/16	0
Total	0	5/16	5/8	7/8	1	11/16	1	7/8	5/8	5/16	0
Residual Camber	0	3/8	5/8	13/16	15/16	1	15/16	13/16	5/8	3/8	0
Total Camber	0	11/16	11/4	1 11/16	2	2 1/16	2	1 11/16	1 1/4	1 1/16	0

PROJECT NAME: STOWE
PROJECT NUMBER: BO 1446(39)

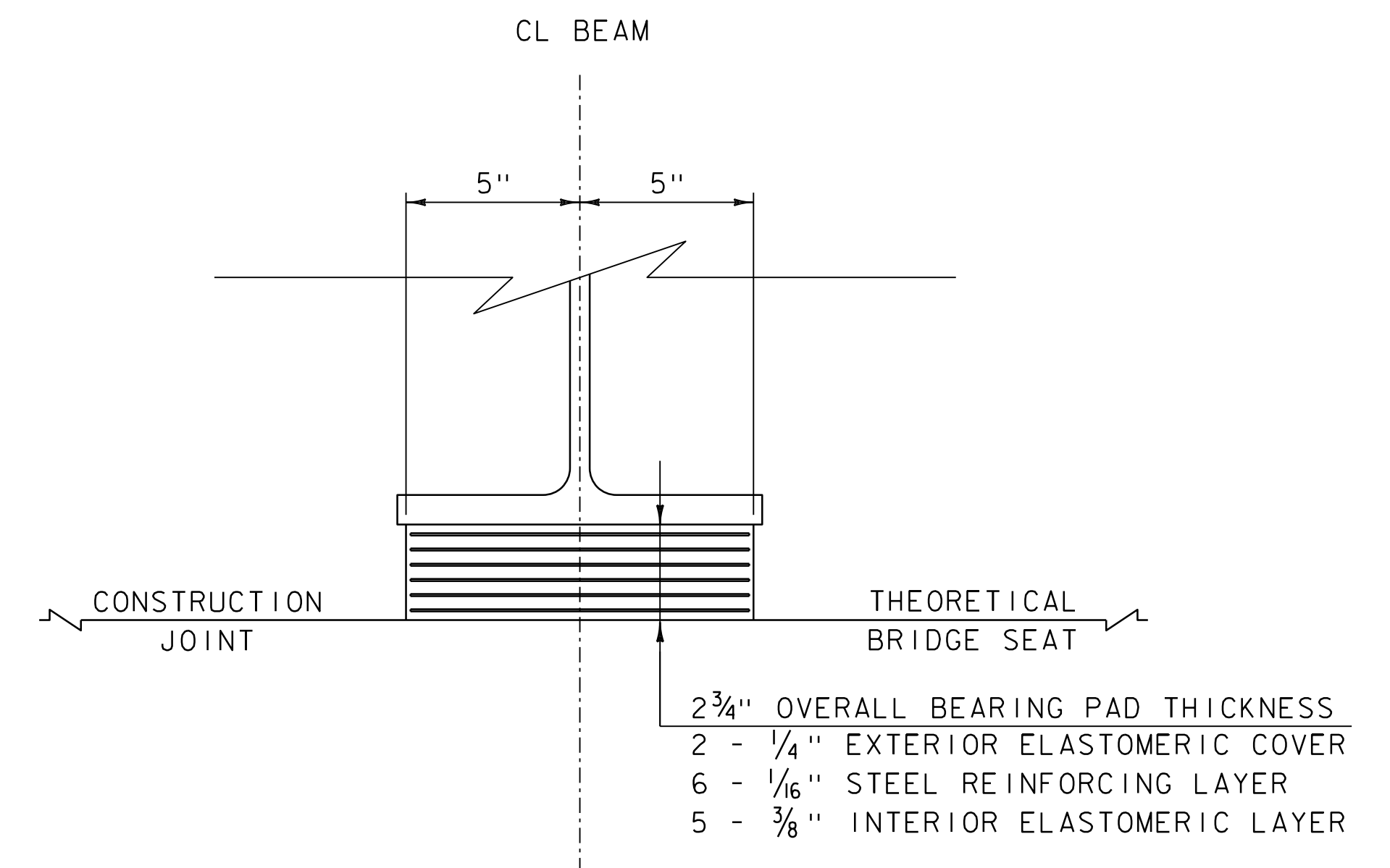
FILE NAME: sl2j658sup2.dgn PLOT DATE: 2/9/2024
PROJECT LEADER: C. BURRALL DRAWN BY: A. MANN
DESIGNED BY: C. BURRALL CHECKED BY: C. BURRALL
FRAMING PLAN & BEAM DETAILS SHEET 63 OF 84



BEARING PLAN
SCALE 3" = 1'-0"



BEARING ELEVATION
SCALE 3" = 1'-0"



BEARING SECTION
SCALE 3" = 1'-0"

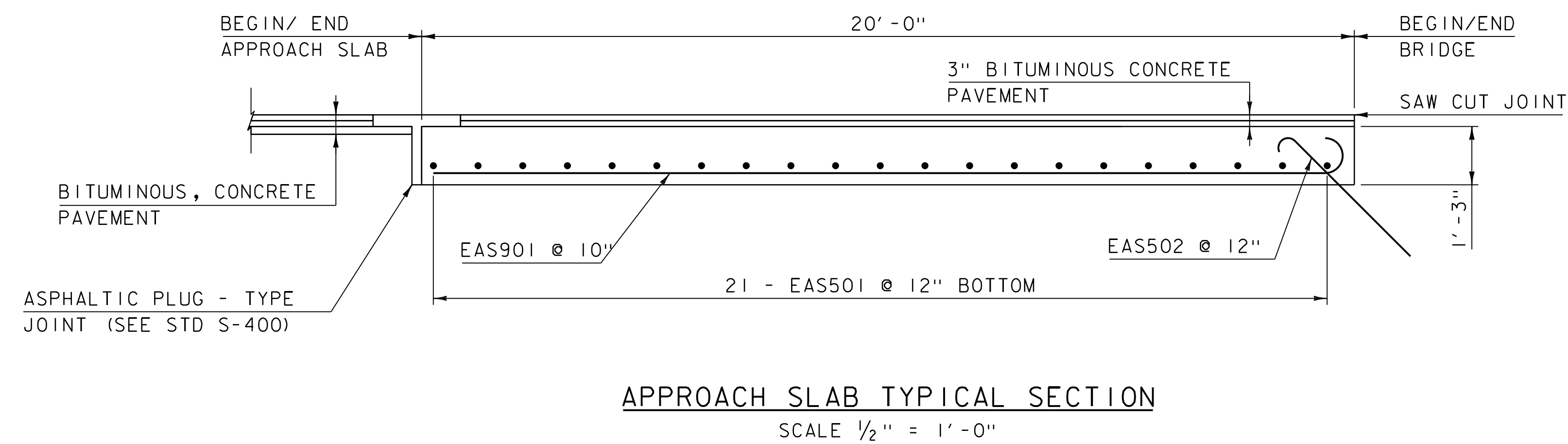
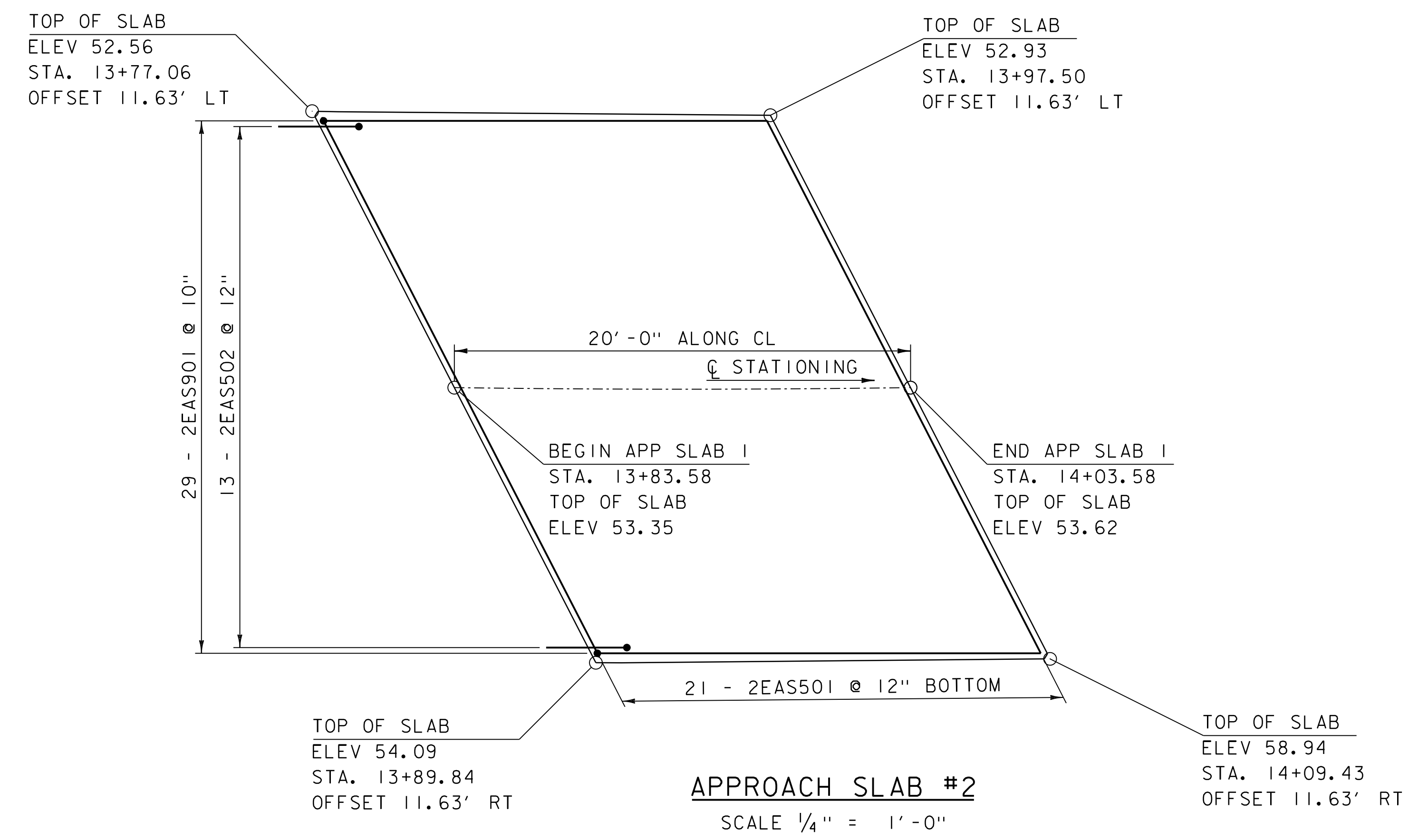
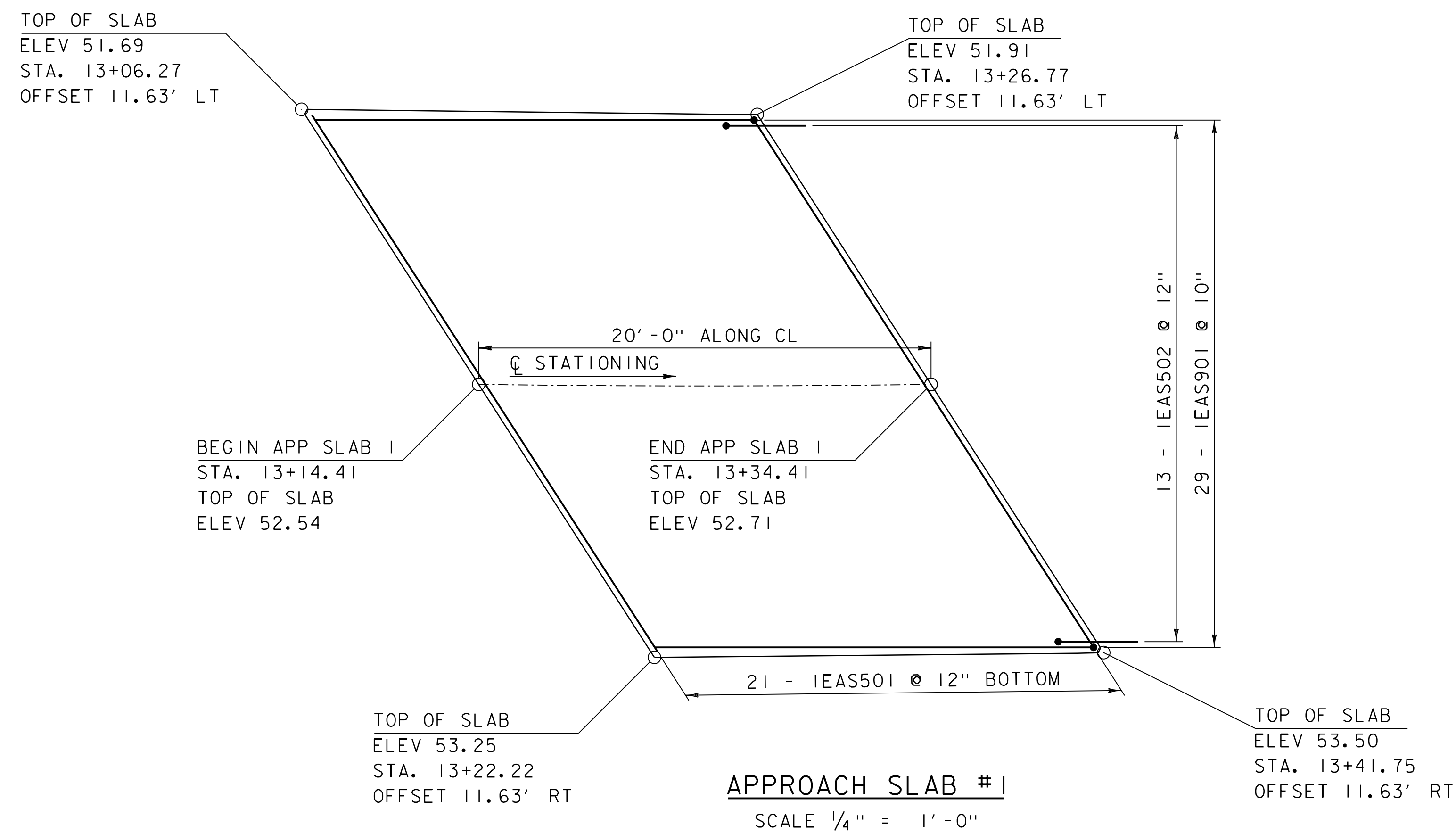
BEARING DEVICE NOTES

1. BEARINGS SHALL BE PAID FOR UNDER ITEM 531.17 "BEARING DEVICE ASSEMBLY, STEEL REINFORCED ELASTOMERIC PAD" AND SHALL CONFORM TO APPLICABLE SUBSECTIONS OF SECTIONS 531 AND 731.
2. ALL REINFORCEMENT BETWEEN LAYERS OF ELASTOMERIC SHALL BE STEEL MEETING ASTM A36. ALL INTERNAL STEEL PLATES SHALL BE SAND BLASTED AND FREE OF COATINGS, RUST, AND MILL SCALE. THE PLATES SHALL BE FREE OF SHARP EDGES AND BURRS.
3. STEEL REINFORCED ELASTOMERIC PAD BEARINGS SHALL HAVE A MINIMUM OF 1/8" EDGE SEAL OF ELASTOMER INTEGRAL WITH THE BEARING OVER ALL INTERNAL PLATES.

PROJECT NAME: STOWE
PROJECT NUMBER: BO 1446(39)

FILE NAME: sl2j658sup2.dgn
PROJECT LEADER: C. BURRALL
DESIGNED BY: A. MANN
BEARING DETAILS

PLOT DATE: 2/9/2024
DRAWN BY: R. PELLETT
CHECKED BY: C. BURRALL
SHEET 64 OF 84

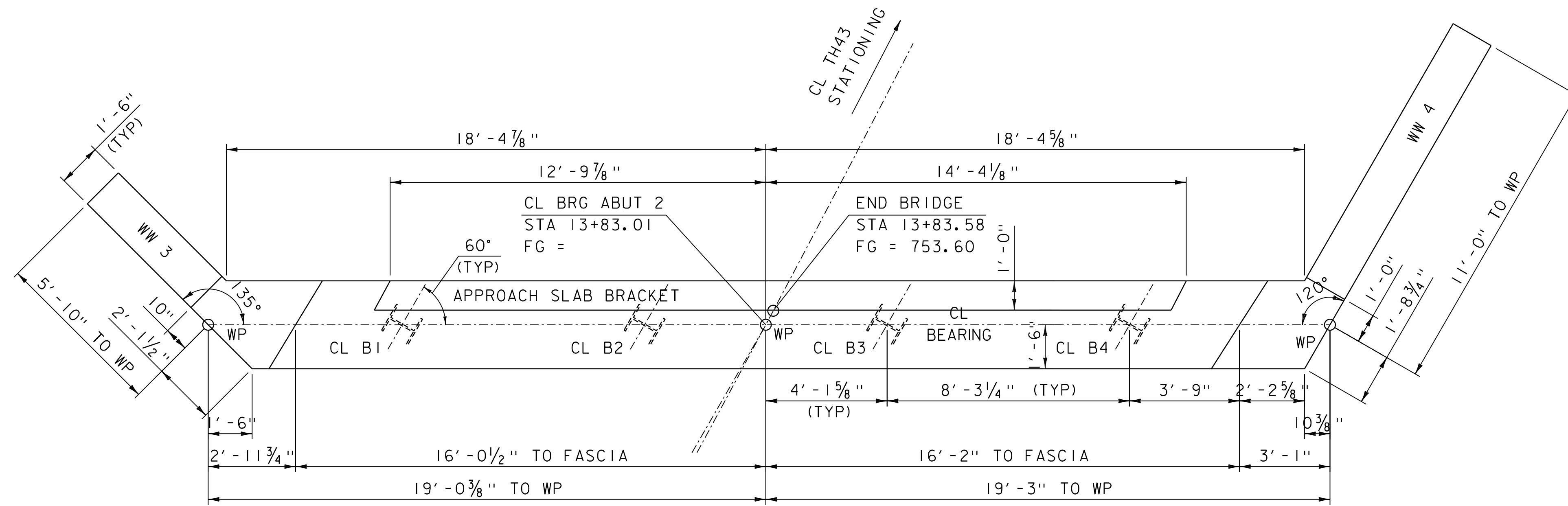


NOTE:
 NF = NEAR FACE
 FF = FAR FACE
 EF = EACH FACE
 ▲ = CUT TO FIT IN FIELD
 3" CLEAR, UNLESS OTHERWISE
 SPECIFIED ON THE PLANS.
 2'-2" BAR LAP UNLESS OTHERWISE
 SPECIFIED ON THE PLANS.

PROJECT NAME: STOWE
 PROJECT NUMBER: BO 1446(39)

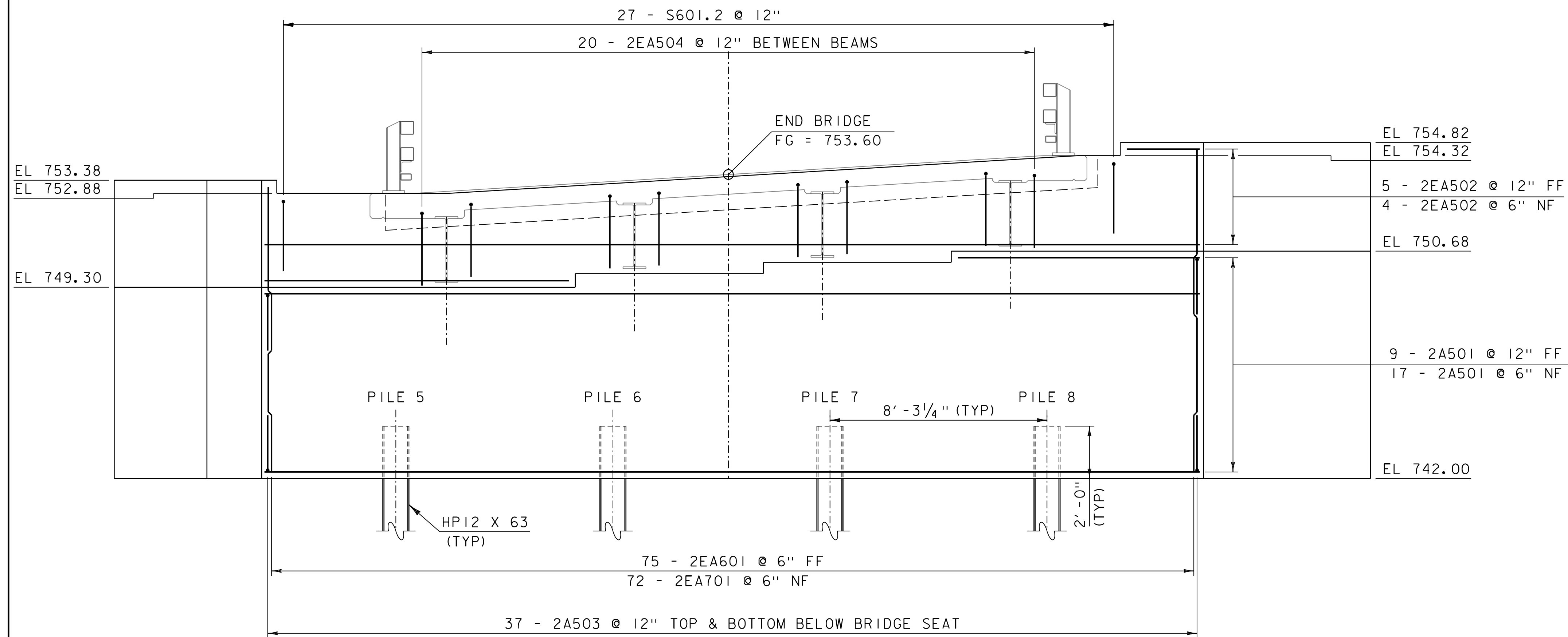
FILE NAME: sl2j658sup2.dgn
 PROJECT LEADER: C. BURRALL
 DESIGNED BY: A. MANN
 APPROACH SLABS

PLOT DATE: 2/9/2024
 DRAWN BY: R. PELLETT
 CHECKED BY: C. BURRALL
 SHEET 65 OF 84



ABUTMENT NO. 2 PLAN

SCALE: 3/8" = 1'-0"



ABUTMENT NO. 2 ELEVATION

SCALE: 3/8" = 1'-0"

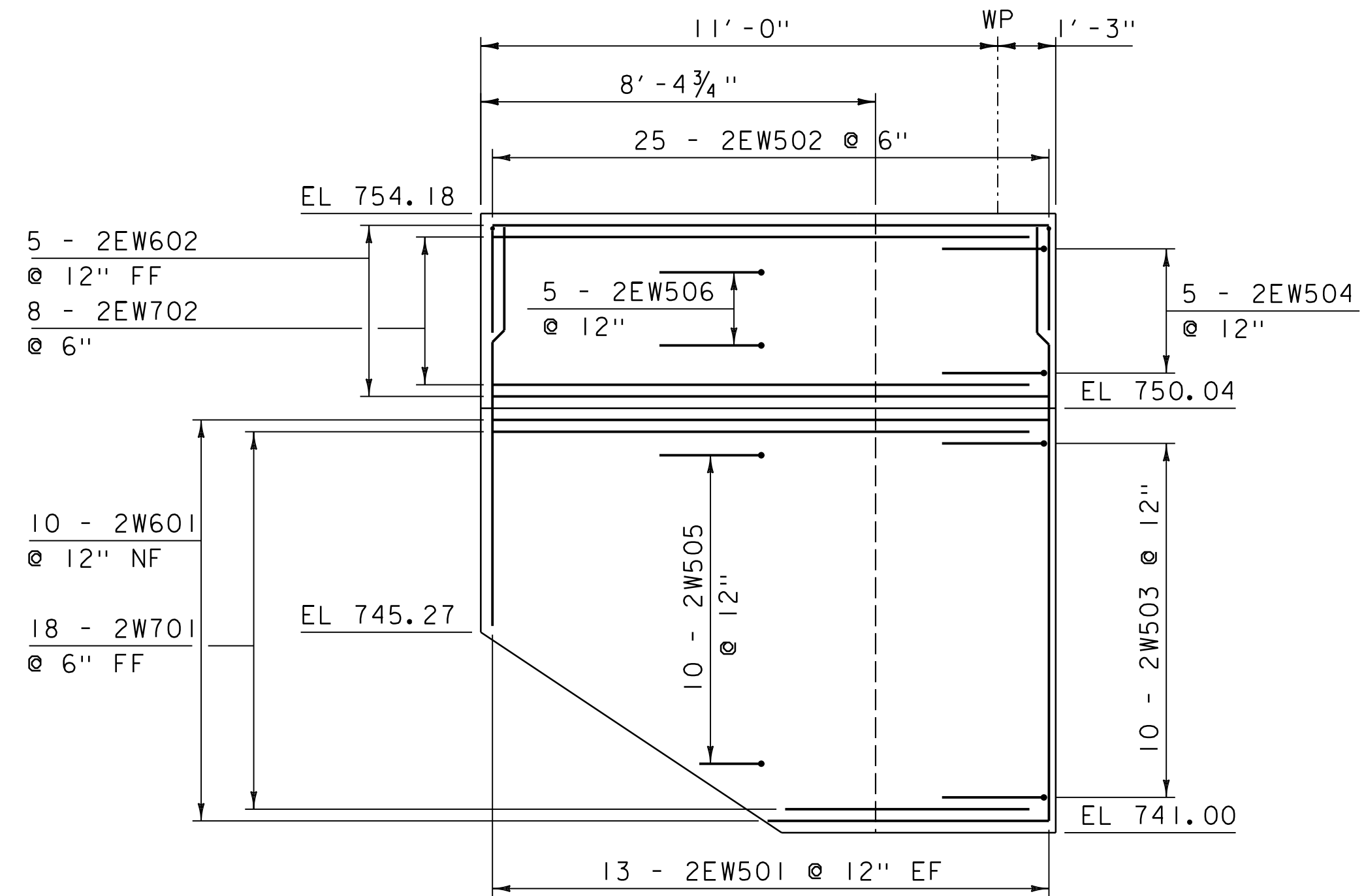
NOTE:

- NF = NEAR FACE
- FF = FAR FACE
- EF = EACH FACE
- ▲ = CUT TO FIT IN FIELD
- 3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
- 2'-4" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

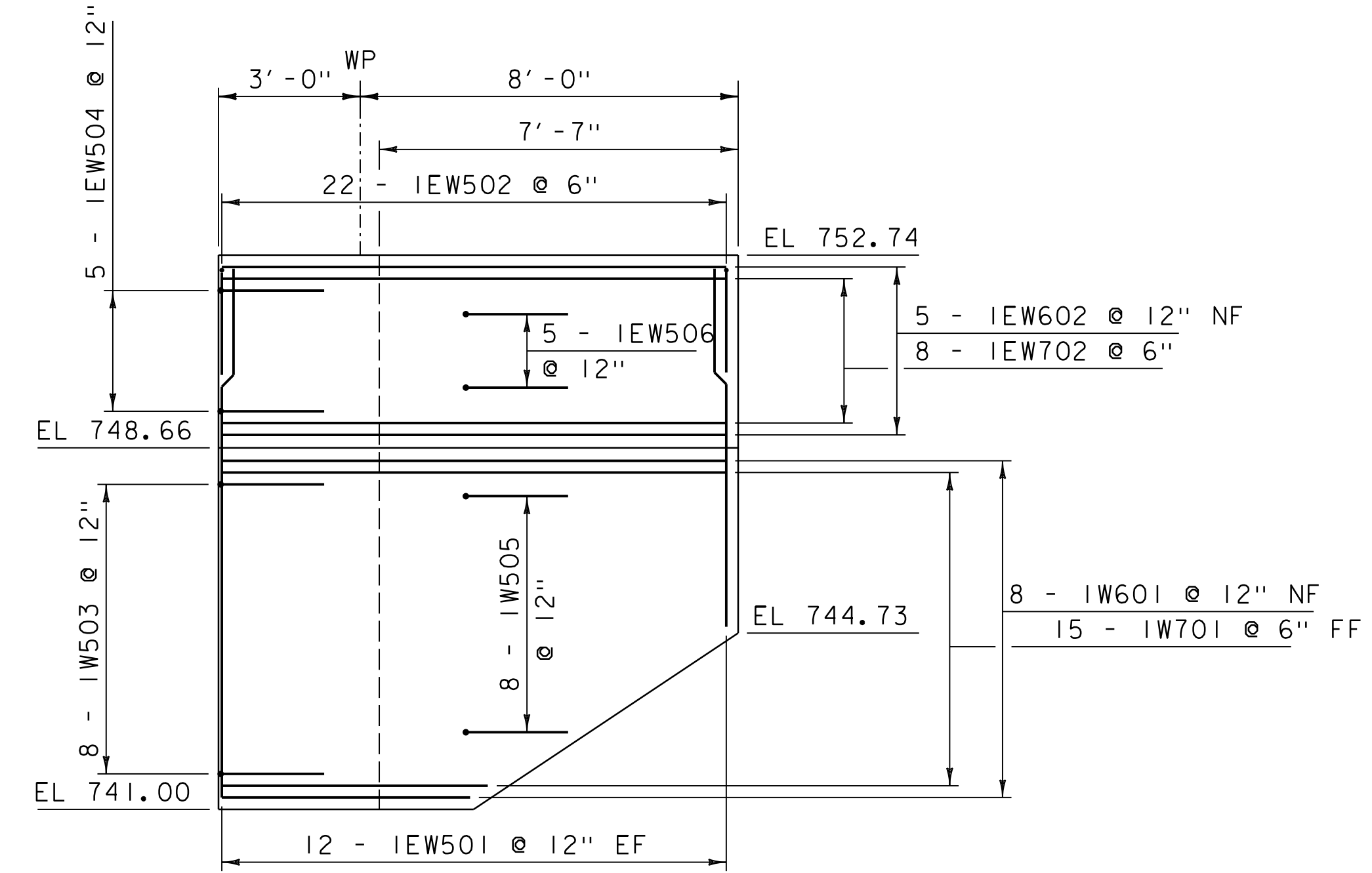
PROJECT NAME: STOWE
PROJECT NUMBER: BO 1446(39)

FILE NAME: sl2j658sub.dgn
PROJECT LEADER: C. BURRALL
DESIGNED BY: A. MANN
ABUTMENT #2

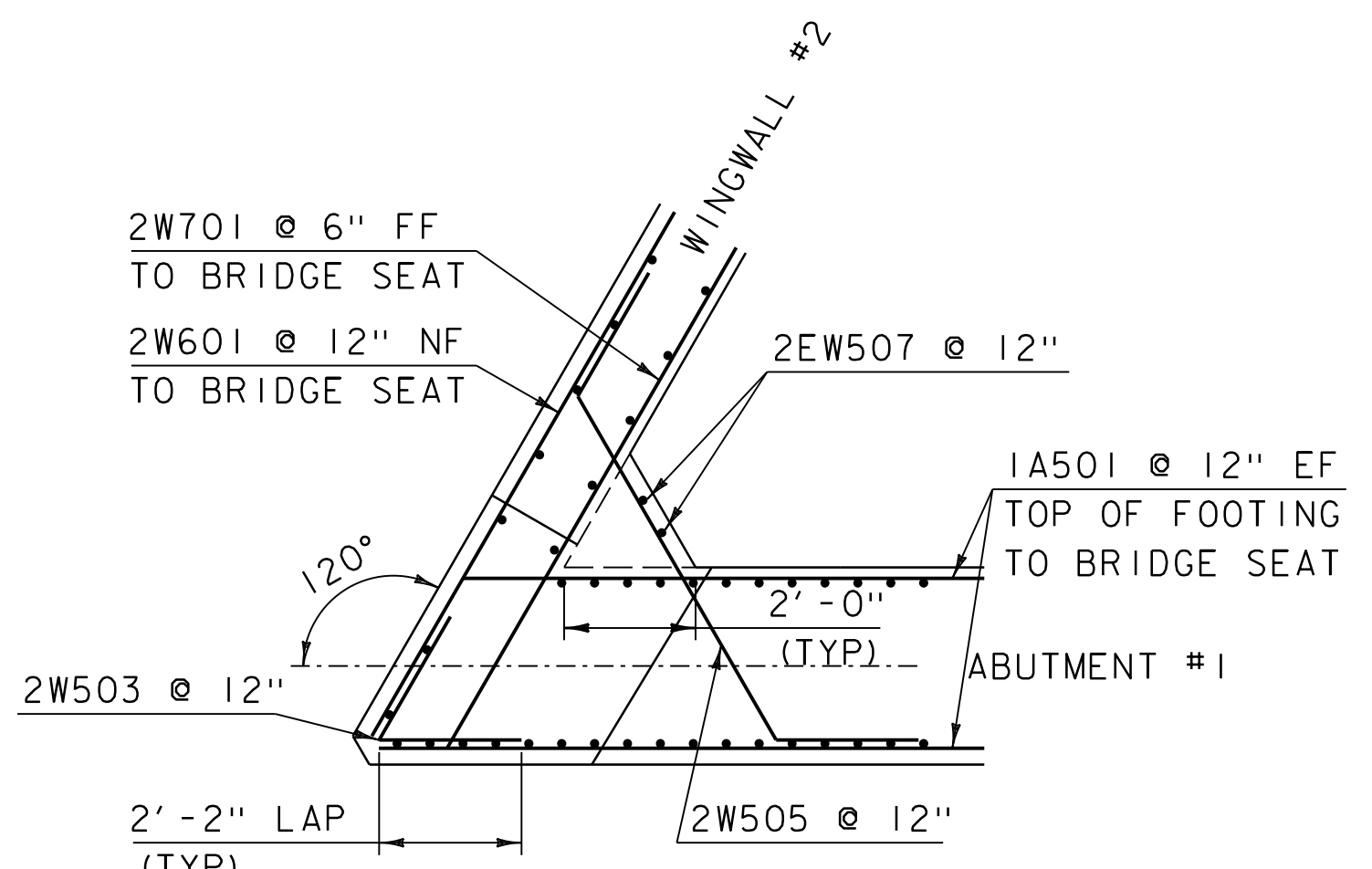
PLOT DATE: 2/9/2024
DRAWN BY: R. PELLETT
CHECKED BY: C. BURRALL
SHEET 67 OF 84



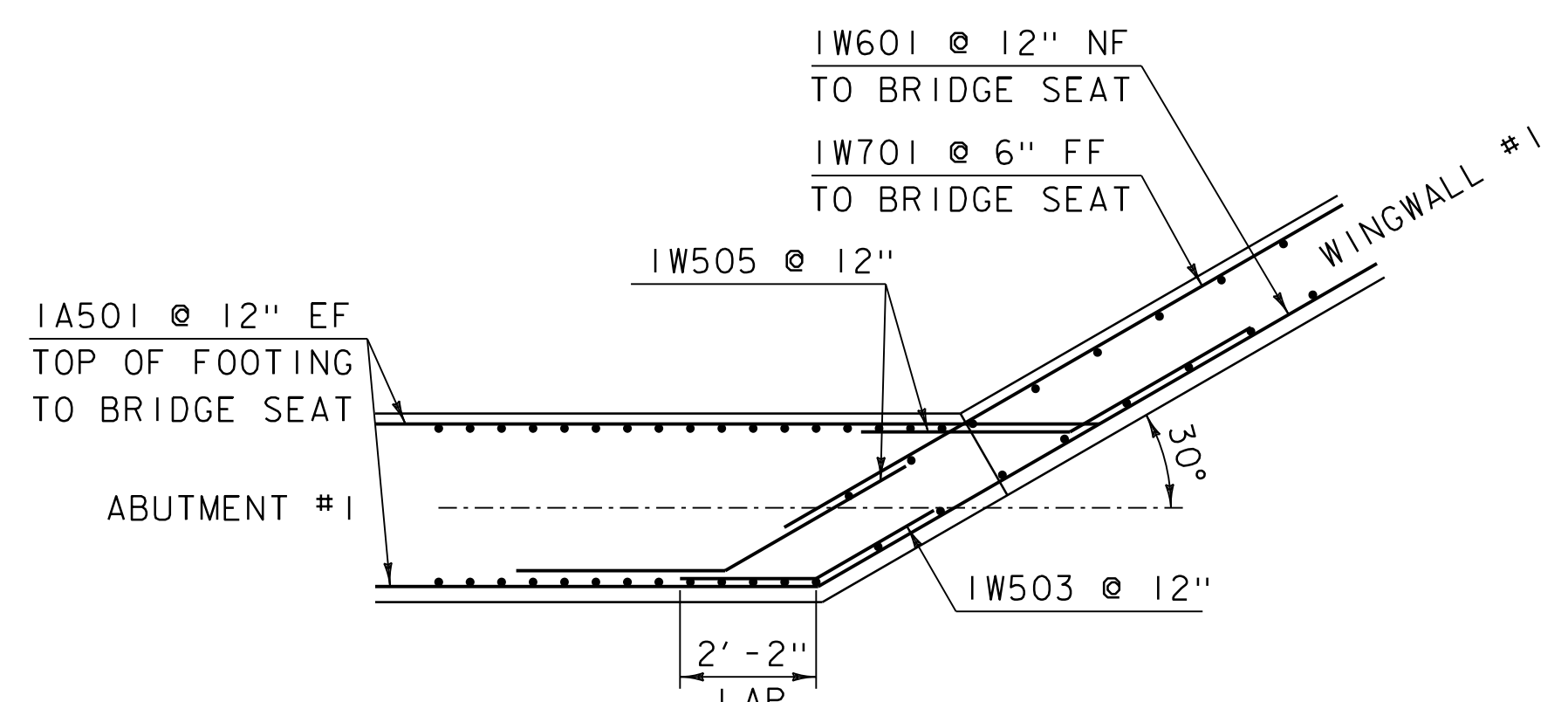
WINGWALL NO. 2 ELEVATION
SCALE: 3/8" = 1'-0"



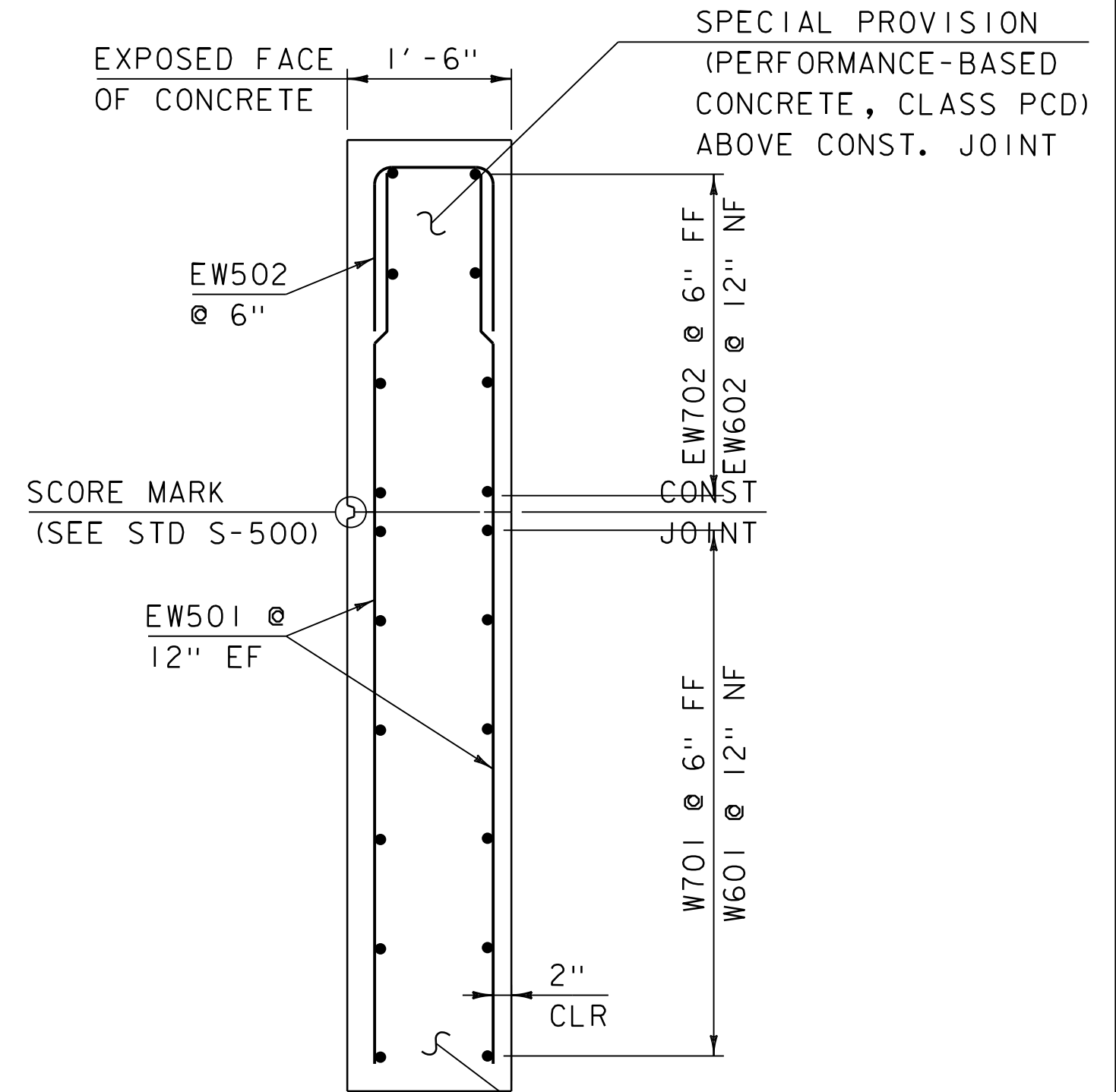
WINGWALL NO. 1 ELEVATION
SCALE: 3/8" = 1'-0"



WINGWALL NO. 2 CORNER DETAIL
BELOW BRIDGE SEAT
SCALE: 3/8" = 1'-0"



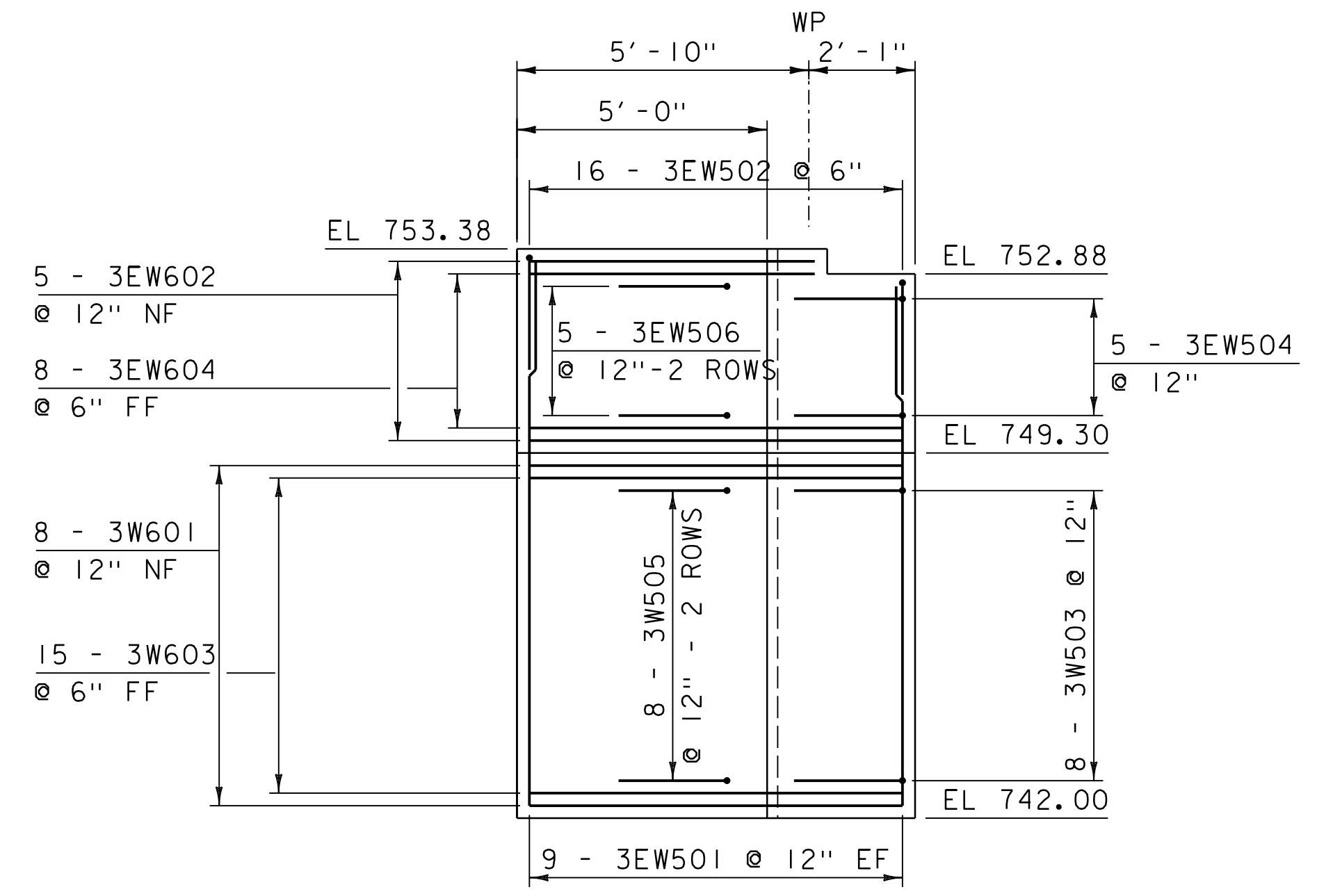
WINGWALL NO. 1 CORNER DETAIL
BELOW BRIDGE SEAT
SCALE: 3/8" = 1'-0"



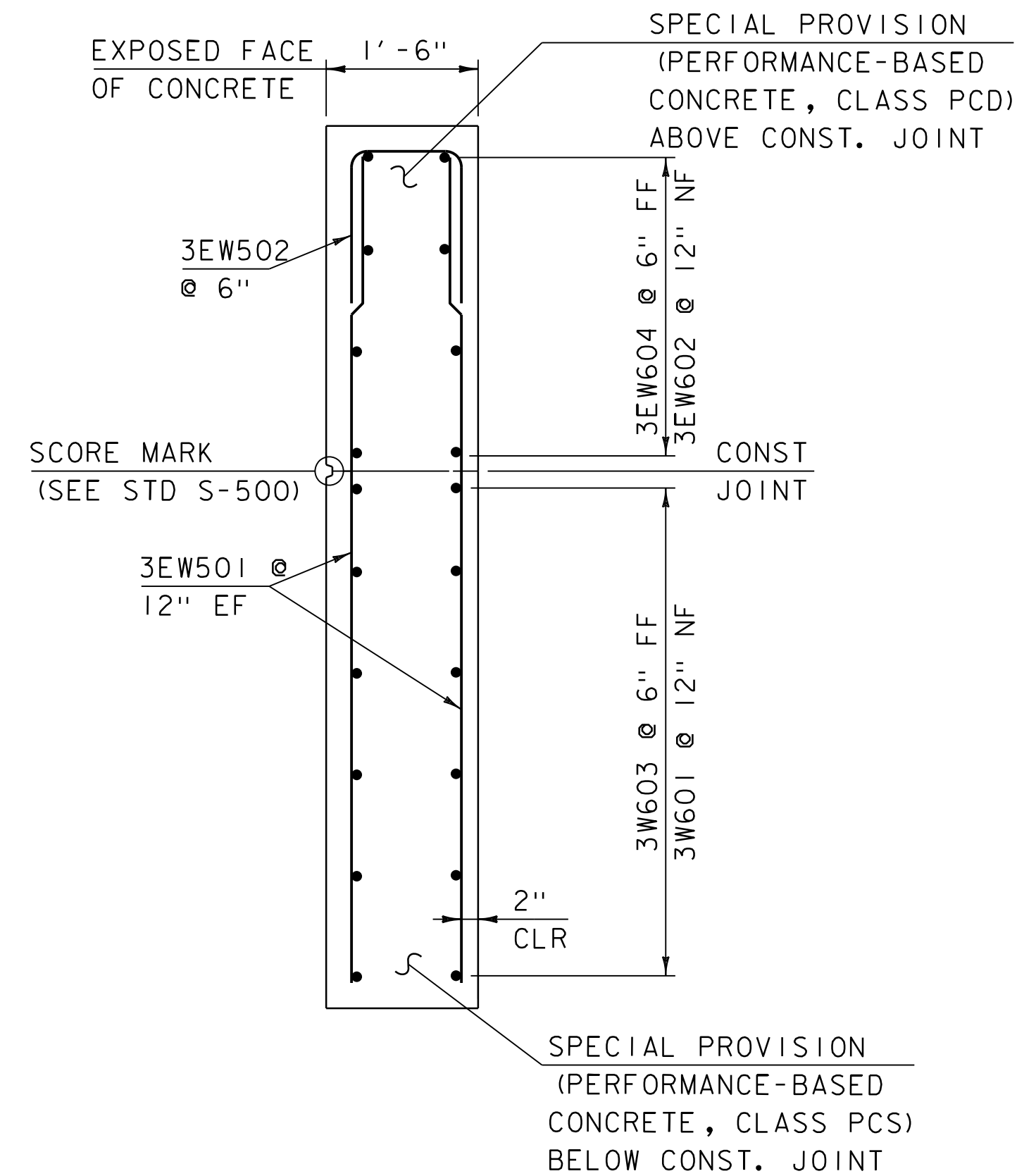
WINGWALL TYPICAL SECTION
SCALE: 3/4" = 1'-0"

NOTE:
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-4" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

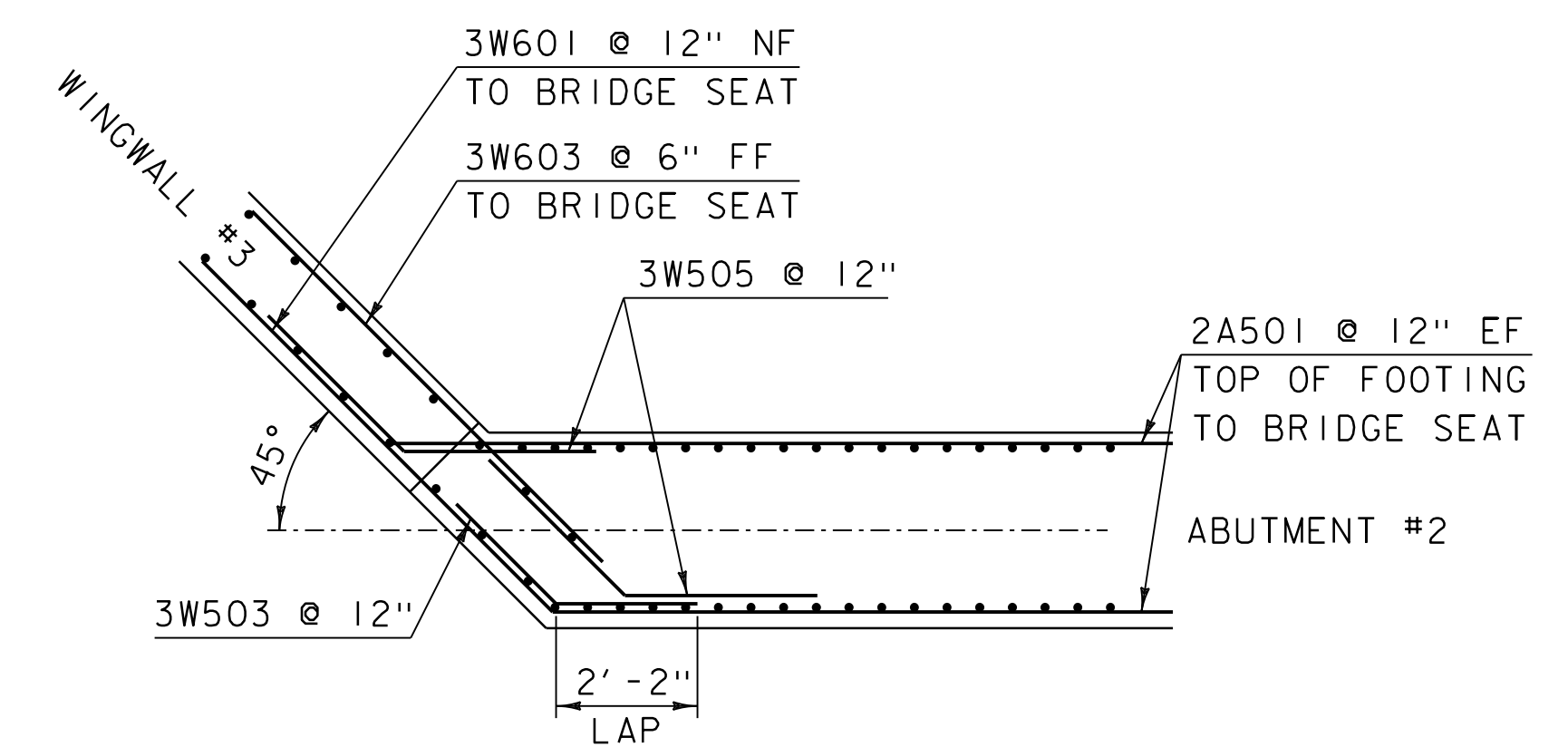
PROJECT NAME: STOWE	PLOT DATE: 2/9/2024
PROJECT NUMBER: BO 1446(39)	DRAWN BY: R. PELLETT
FILE NAME: sl2j658sub.dgn	CHECKED BY: C. BURRALL
PROJECT LEADER: C. BURRALL	SHEET 68 OF 84
DESIGNED BY: A. MANN	
WINGWALLS 1 & 2	



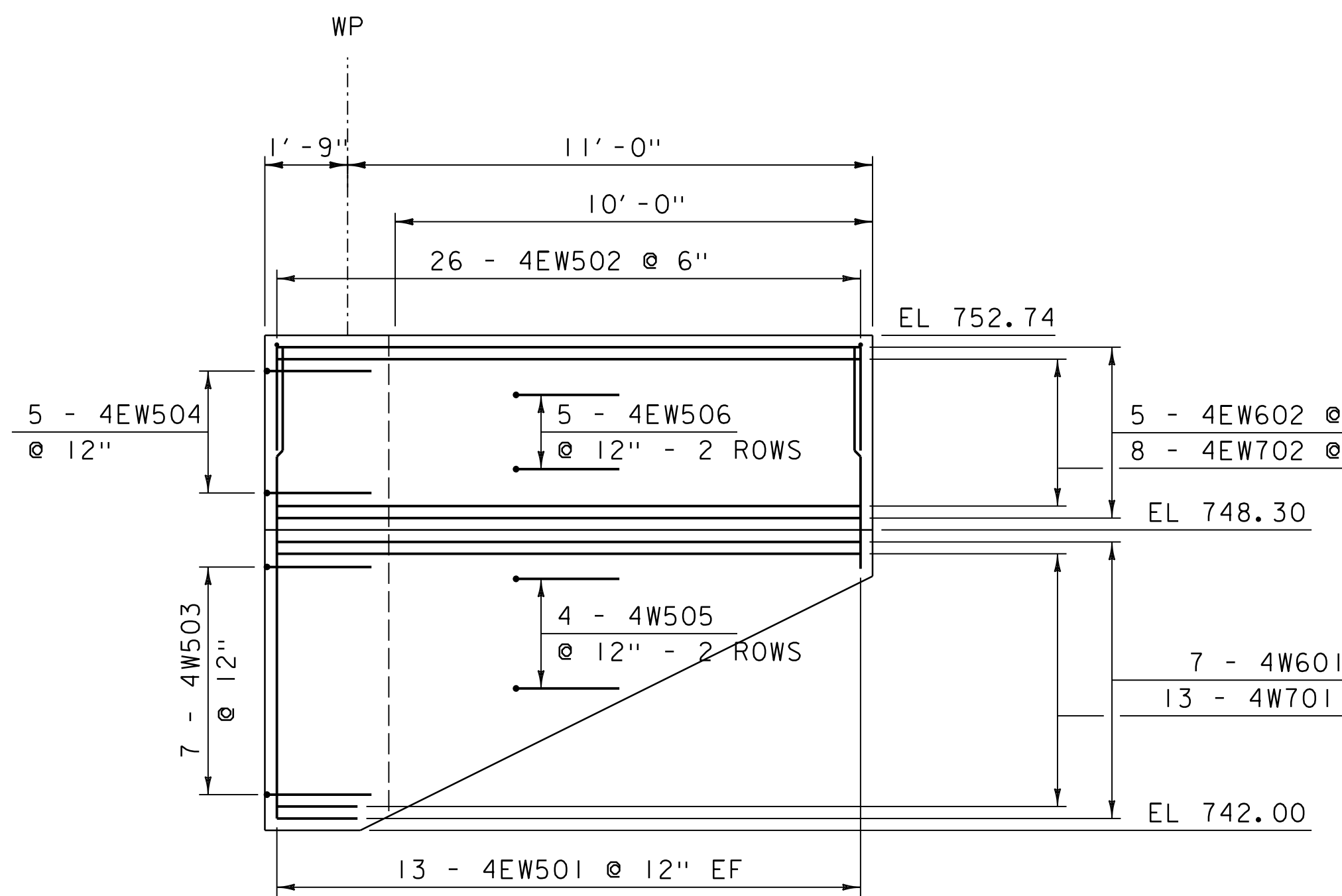
WINGWALL NO. 3 ELEVATION
 SCALE: 3/8" = 1'-0"



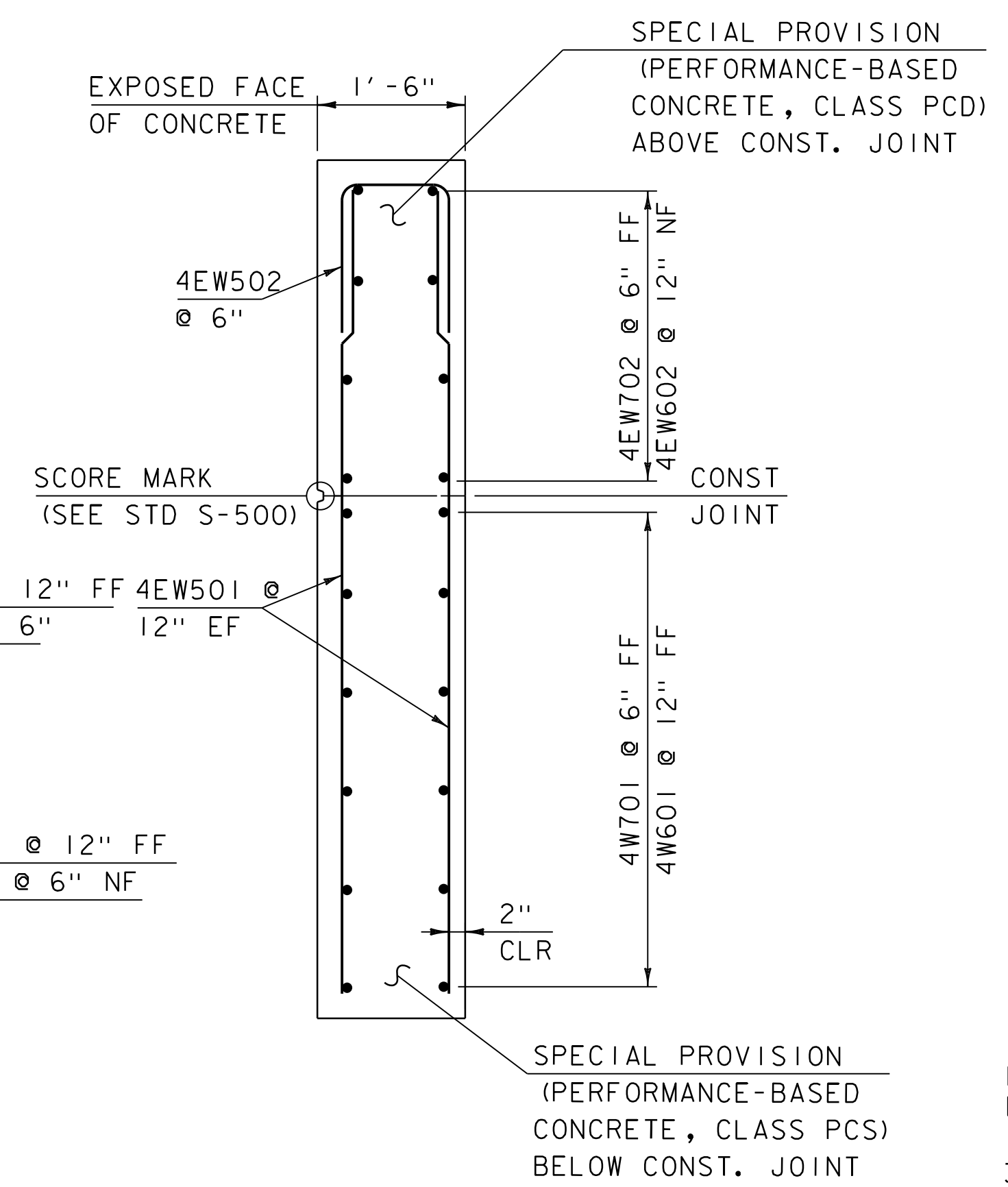
WINGWALL #3 TYPICAL SECTION
 SCALE: 3/4" = 1'-0"



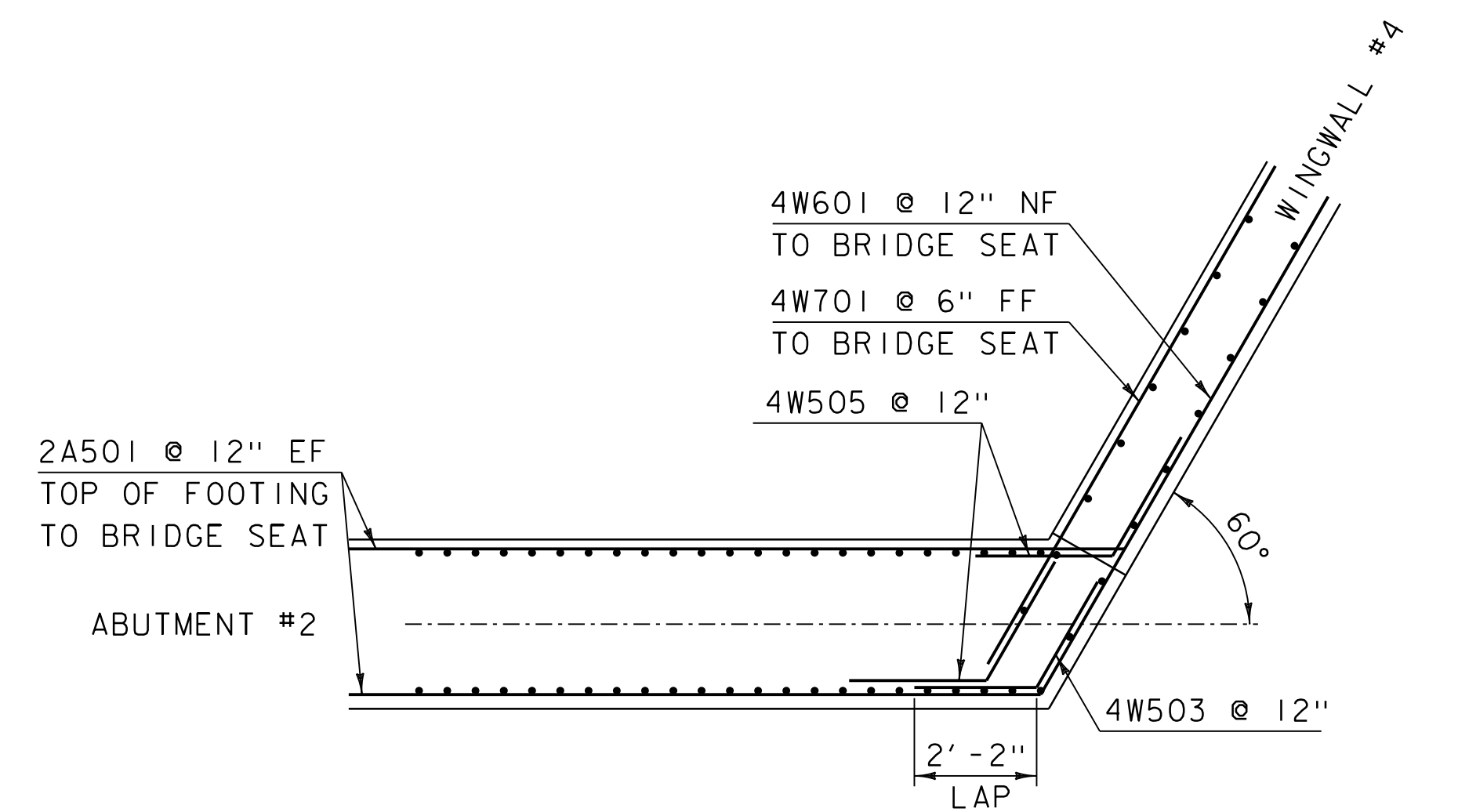
WINGWALL NO. 3 CORNER DETAIL
 BELOW BRIDGE SEAT
 SCALE: 3/8" = 1'-0"



WINGWALL NO. 4 ELEVATION
 SCALE: 3/8" = 1'-0"



WINGWALL #4 TYPICAL SECTION
 SCALE: 3/4" = 1'-0"



WINGWALL NO. 4 CORNER DETAIL
 BELOW BRIDGE SEAT
 SCALE: 3/8" = 1'-0"

NOTE:
 NF = NEAR FACE
 FF = FAR FACE
 EF = EACH FACE
 ▲ = CUT TO FIT IN FIELD
 3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
 2'-4" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

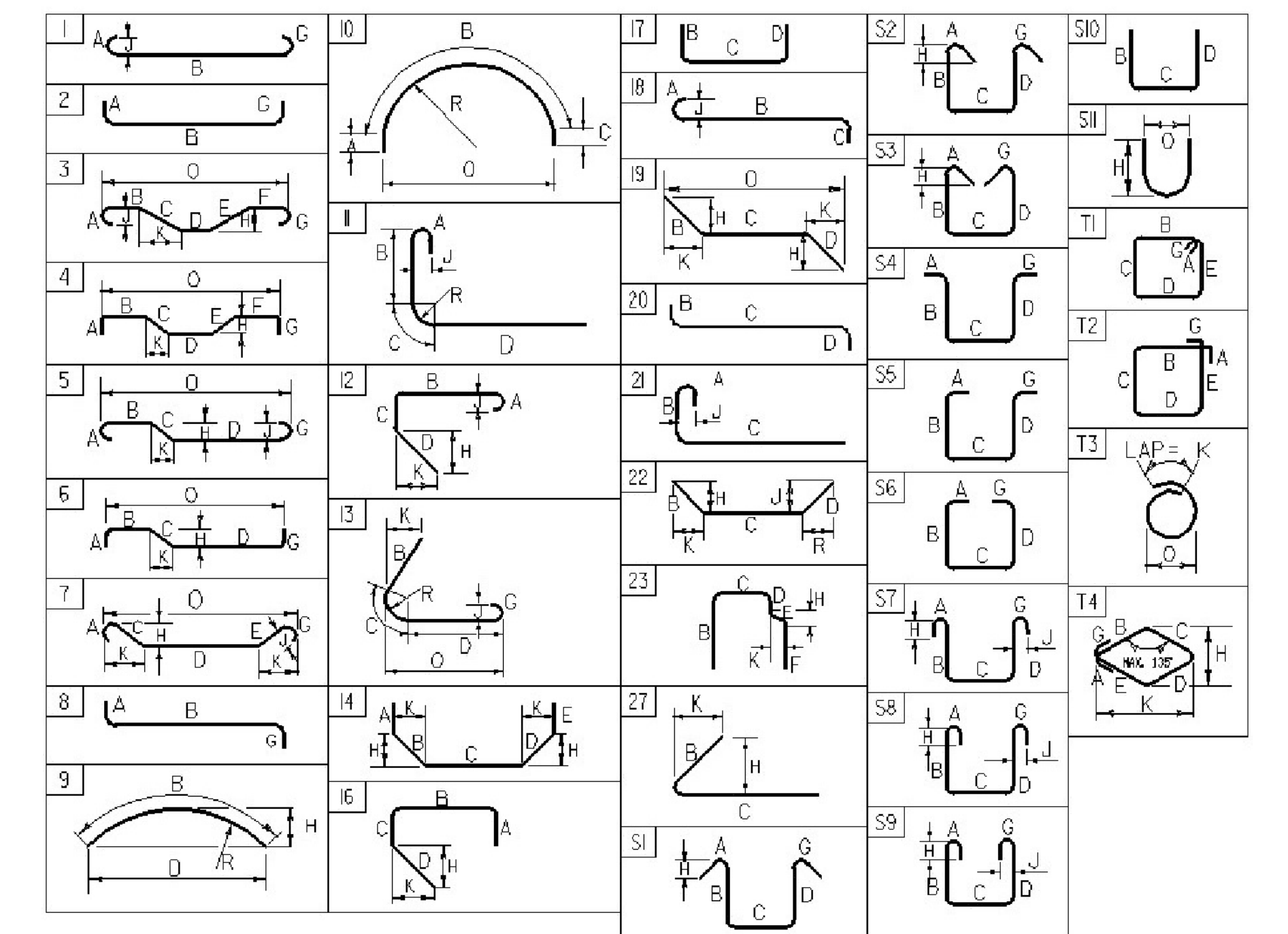
PROJECT NAME: STOWE	PLOT DATE: 2/9/2024
PROJECT NUMBER: BO 1446(39)	DRAWN BY: R. PELLET
FILE NAME: sl2j658sub.dgn	CHECKED BY: C. BURRALL
PROJECT LEADER: C. BURRALL	SHEET 69 OF 84
DESIGNED BY: A. MANN	
WINGWALLS 3 & 4	

REINFORCING STEEL SCHEDULE

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O	ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O			
DECK																		WINGWALL #3																				
▲ 214	5	26'-10"	S501.2	STR	26'-10"													▲ 18	5	10'-11"	3EW501	STR	10'-11"															
140	5	26'-8"	S502.2	STR	26'-8"													8	6	7'-5"	3W601	STR	7'-5"															
54	6	13'-10"	S601.2	17		2'-7"	11'-3"	---										▲ 5	6	7'-5"	3W602	STR	7'-5"															
APPROACH SLAB #1																		WINGWALL #4																				
▲ 21	5	28'-3"	1EAS501	STR	28'-3"													▲ 26	5	9'-11"	4EW501	STR	9'-11"															
13	5	4'-3"	1EAS502	1	0'-7"	3'-8"												▲ 7	6	12'-3"	4W601	STR	12'-3"															
29	6	22'-0"	1EAS601	17		2'-7"	19'-5"	---										5	6	12'-3"	4W602	STR	12'-3"															
APPROACH SLAB #2																		WINGWALL #3																				
▲ 21	5	26'-7"	2EAS501	STR	26'-7"													▲ 13	7	12'-3"	4W701	STR	12'-3"															
13	5	4'-3"	2EAS502	1	0'-7"	3'-8"												8	7	12'-3"	4W702	STR	12'-3"															
29	6	22'-0"	2EAS601	17		2'-7"	19'-5"	---										7	5	4'-4"	4W503	22		2'-2"	2'-2"	---					1'-1"	---	1'-11"	---				
ABUTMENT #1																		WINGWALL #2																				
▲ 32	5	40'-6"	1A501	STR	40'-6"													▲ 26	5	12'-8"	2EW501	STR	12'-8"															
▲ 9	5	40'-6"	1EA502	STR	40'-6"													2	5	12'-8"	2EW507	STR	12'-8"															
▲ 82	6	12'-8"	1EA601	STR	12'-8"													▲ 10	6	11'-10"	2W601	STR	11'-10"															
▲ 76	7	12'-8"	1EA701	STR	12'-8"													5	6	11'-10"	2EW602	STR	11'-10"															
20	5	4'-4"	1EA504	22		2'-2"	2'-2"	---										▲ 18	7	11'-5"	2W701	STR	11'-5"															
74	5	6'-11"	1A503	S10		2'-2"	2'-7"	2'-2"										8	7	11'-5"	2EW702	STR	11'-5"															
WINGWALL #1																		WINGWALL #1																				
▲ 24	5	11'-3"	1EW501	STR	11'-3"													▲ 8	6	10'-8"	1W601	STR	10'-8"															
▲ 8	6	10'-8"	1W602	STR	10'-8"													5	6	10'-8"	1EW602	STR	10'-8"															
▲ 15	7	10'-8"	1W701	STR	10'-8"													▲ 15	7	10'-8"	1W701	STR	10'-8"															
8	7	10'-8"	1EW702	STR	10'-8"													8	7	10'-8"	1EW702	STR	10'-8"															
8	5	4'-4"	1W503	22		2'-2"	2'-2"	---										8	5	4'-4"	1W503	22		2'-2"	2'-2"	---												
5	5	4'-4"	1EW504	22		2'-2"	2'-2"	---										5	5	4'-4"	1EW504	22		2'-2"	2'-2"	---												
16	5	9'-2"	1W505	22		4'-7"	4'-7"	---										16	5	9'-2"	1W505	22		4'-7"	4'-7"	---												
10	5	6'-9"	1EW506	22		2'-2"	4'-7"	---										10	5	6'-9"	1EW506	22		2'-2"	4'-7"	---												
22	5	5'-5"	1EW502	S10		2'-2"	1'-1"	2'-2"										22	5	5'-5"	1EW502	S10		2'-2"	1'-1"	2'-2"												
WINGWALL #2																		WINGWALL #2																				
▲ 26	5	12'-8"	2EW501	STR	12'-8"													▲ 26	5	12'-8"	2EW501	STR	12'-8"															
2	5	12'-8"	2EW507	STR	12'-8"													2	5	12'-8"	2EW507	STR	12'-8"															
▲ 10	6	11'-10"	2W601	STR	11'-10"													▲ 10	6	11'-10"	2W601	STR	11'-10"															
5	6	11'-10"	2EW602	STR	11'-10"													5	6	11'-10"	2EW602	STR	11'-10"															
▲ 18	7	11'-5"	2W701	STR	11'-5"													▲ 18	7	11'-5"	2W701	STR	11'-5"															
8	7	11'-5"	2EW702	STR	11'-5"													8	7	11'-5"	2EW702	STR	11'-5"															
10	5	10'-8"	2W505	22		2'-2"	6'-4"	2'-2"										10	5	10'-8"	2W505	22		2'-2"	6'-4"	2'-2"												
5	5	10'-8"	2EW506	22		2'-2"	6'-4"	2'-2"										5	5	10'-8"	2EW506	22		2'-2"	6'-4"	2'-2"												
10	5	4'-4"	2W503	27		2'-2"	2'-2"											10	5	4'-4"	2W503	27		2'-2"	2'-2"													
5	5	4'-4"	2EW504	27		2'-2"	2'-2"											5	5	4'-4"	2EW504	27		2'-2"	2'-2"													
25	5	5'-5"	2EW502	S10		2'-2"	1'-1"	2'-2"										25	5	5'-5"	2EW502	S10		2'-2"	1'-1"	2'-2"												
ABUTMENT #2																		ABUTMENT #2																				
▲ 30	5	39'-9"	2A501	STR	39'-9"													▲ 30	5	39'-9"	2A501	STR	39'-9"															
9	5	35'-8"	2EA502	STR	35'-8"													9	5	35'-8"	2EA502	STR	35'-8"															
▲ 80	6	12'-4"	2EA601	STR	12'-4"													▲ 80	6	12'-4"	2EA601	STR	12'-4"															
▲ 72	7	12'-4"	2EA701	STR	12'-4"													▲ 72	7	12'-4"	2EA701	STR	12'-4"															
20	5	4'-4"	2EA504	22		2'-2"	2'-2"	---										20	5	4'-4"	2EA504	22		2'-2"	2'-2"	---												
74	5	6'-11"	2A503	S10		2'-2"	2'-7"	2'-2"										74	5	6'-11"	2A503	S10		2'-2"	2'-7"	2'-2"												

~ NOTES ~

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



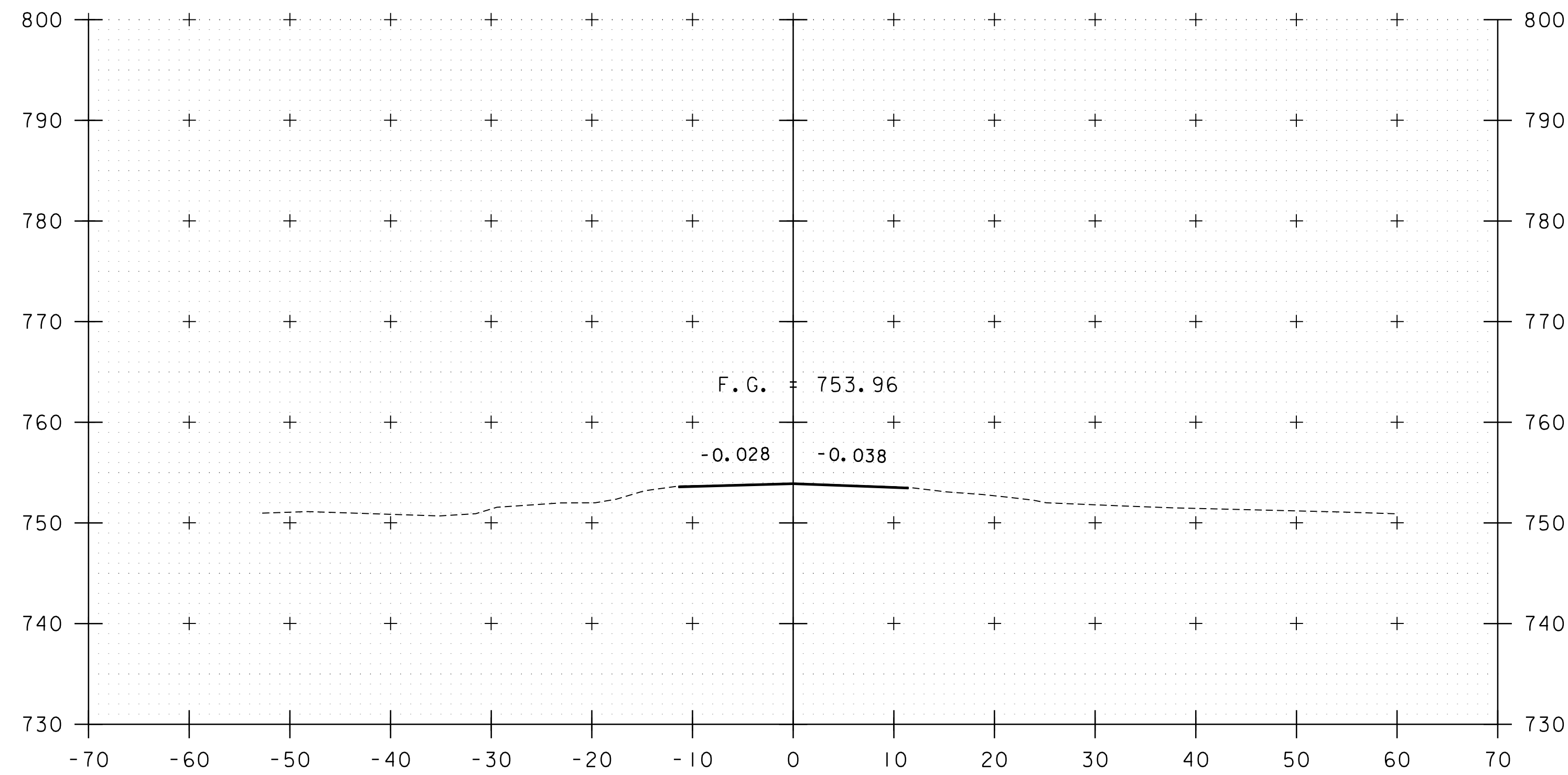
ASTM STANDARD REINFORCING BARS

BAR SIZE DESIGNATION	WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS ROUND SECTION		
		DIAMETER INCHES	AREA INCHES ²	PERIMETER INCHES
#3	0.376	0.375	0.11	1.178
#4	0.668	0.500	0.20	1.571
#5	1.043	0.625	0.31	1.963
#6	1.502	0.750	0.44	2.356
#7	2.04	0.875	0.60	2.749
#8	2.670	1.000	0.79	3.14
#9	3.400	1.13	1.00	3.54
#10	4.3	1.270	1.27	3.990
#11	5.31	1.410	1.56	4.430
#14	7.65	1.69	2.25	5.32
#18	13.60	2.26	4.00	7.09

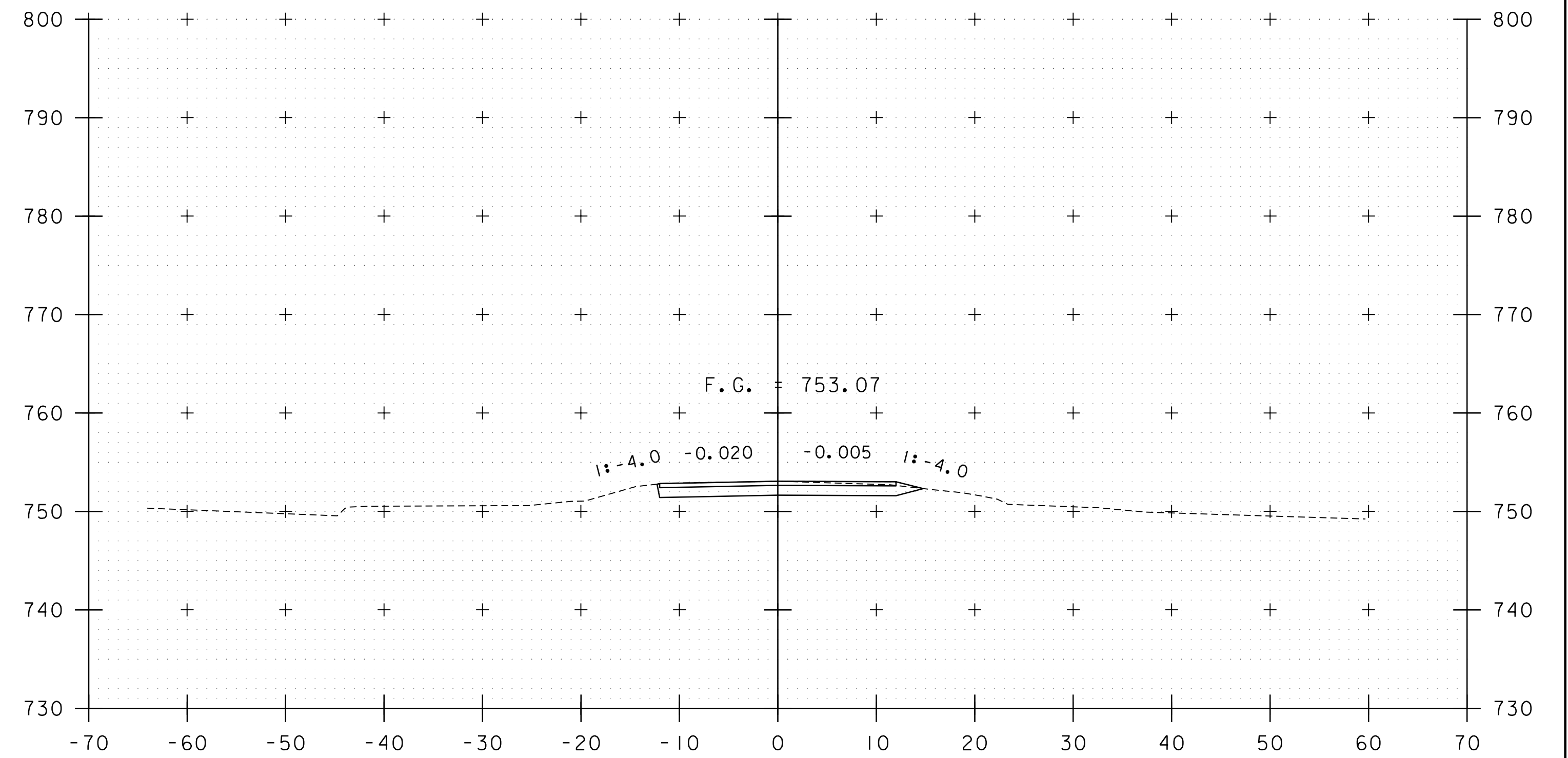
~ REINFORCING STEEL CORROSION RESISTANCE LEVEL ~

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

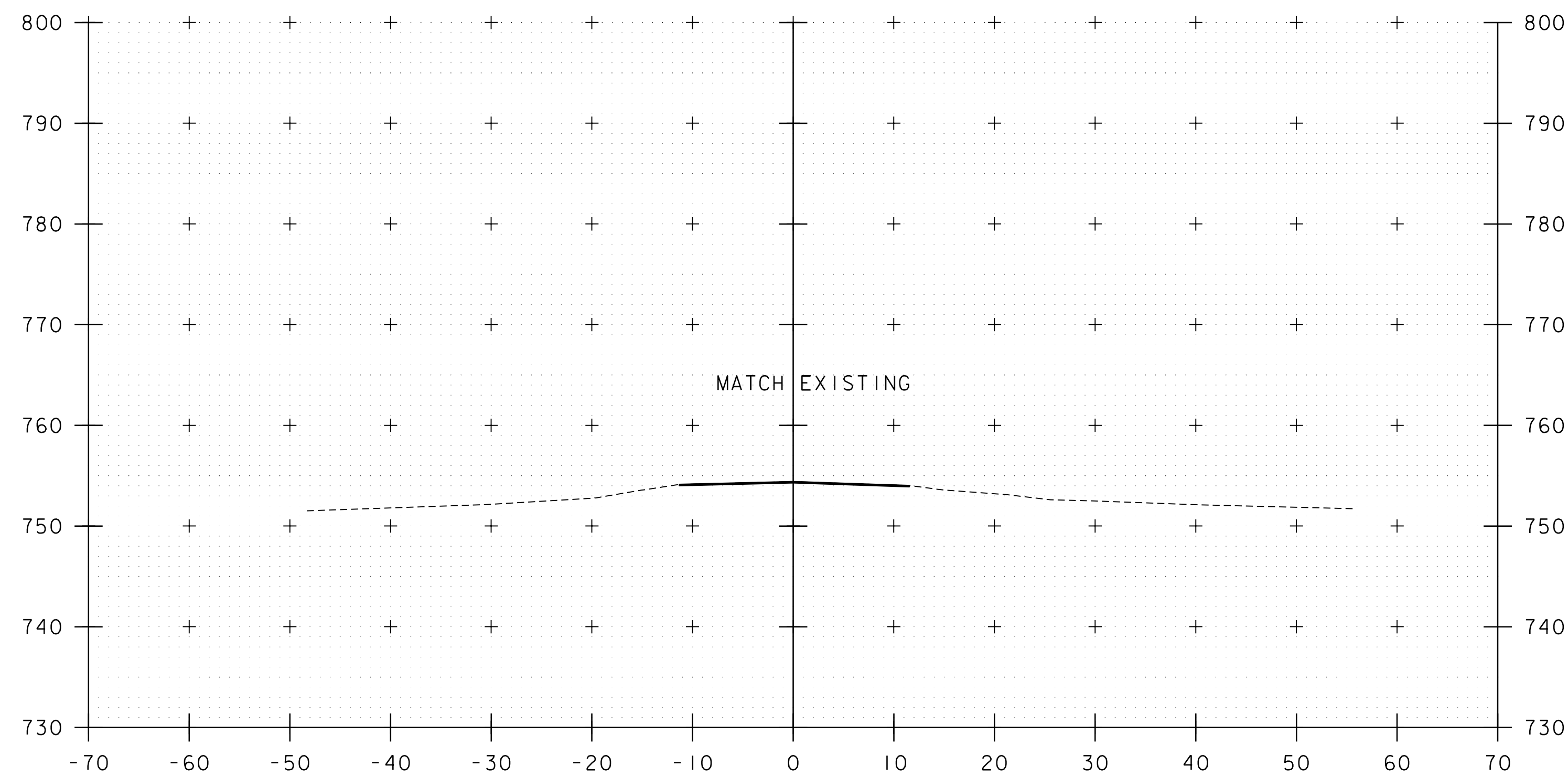
PROJECT NAME: STOWE
PROJECT NUMBER: BO 1446(39)
FILE NAME: sl2j658r.ss.dgn
PROJECT LEADER: C. BURRALL
DESIGNED BY: R. PELLETT
REINFORCING STEEL SCHEDULE
PLOT DATE: 2/9/2024
DRAWN BY: R. PELLETT
CHECKED BY: C. BURRALL
SHEET 70 OF 84



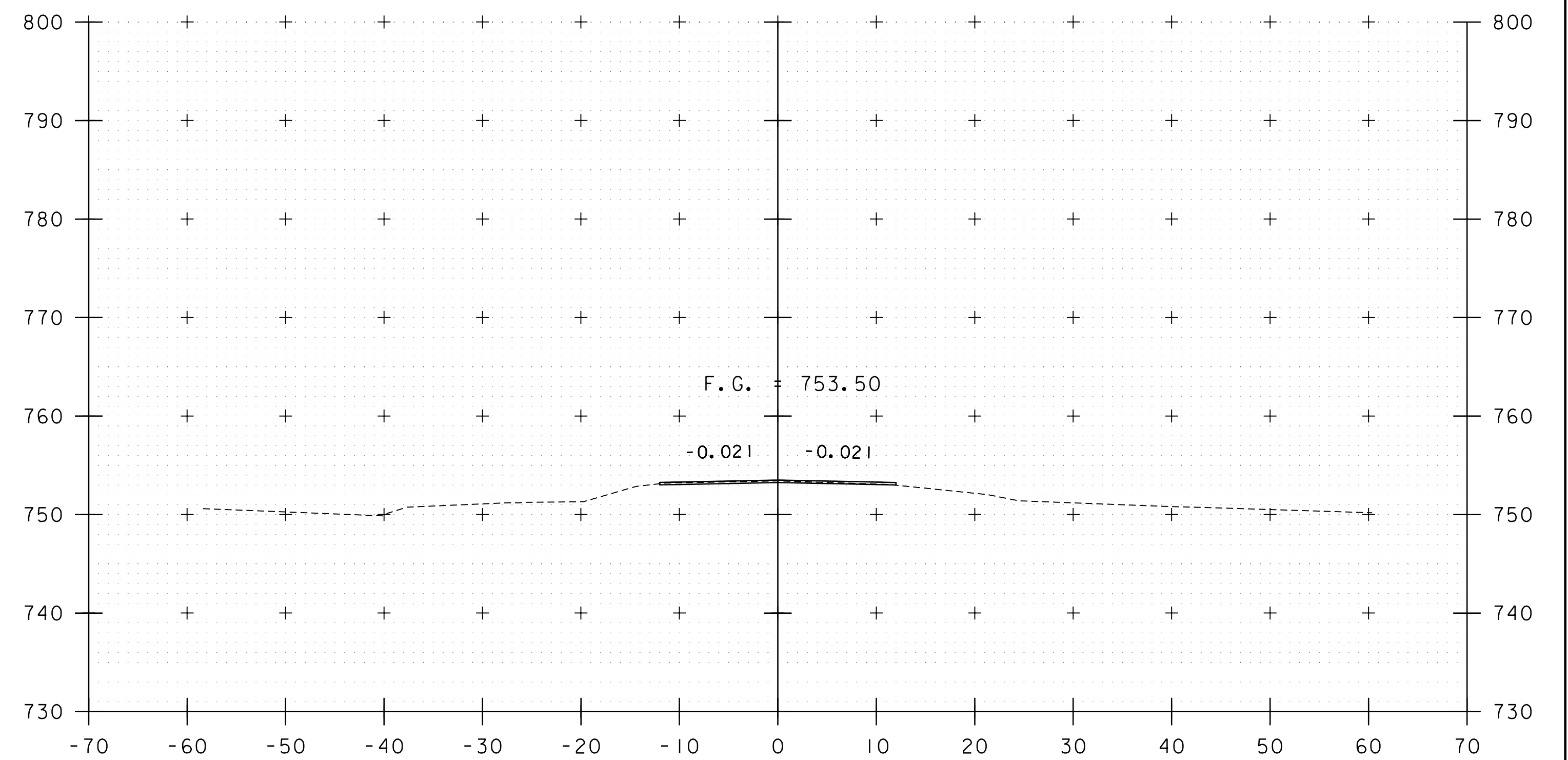
11+25



11+75



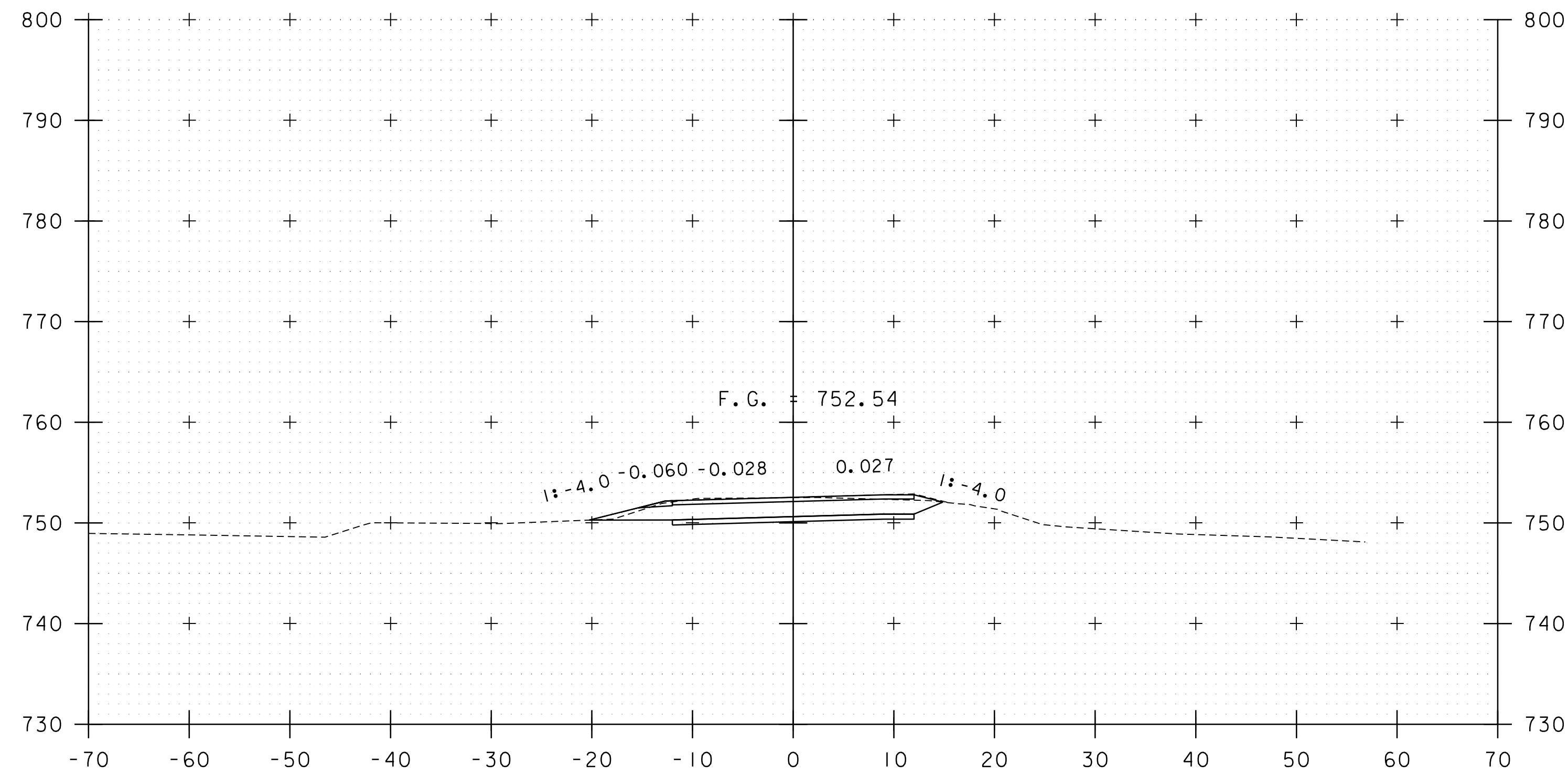
11+00
BEGIN APPROACH



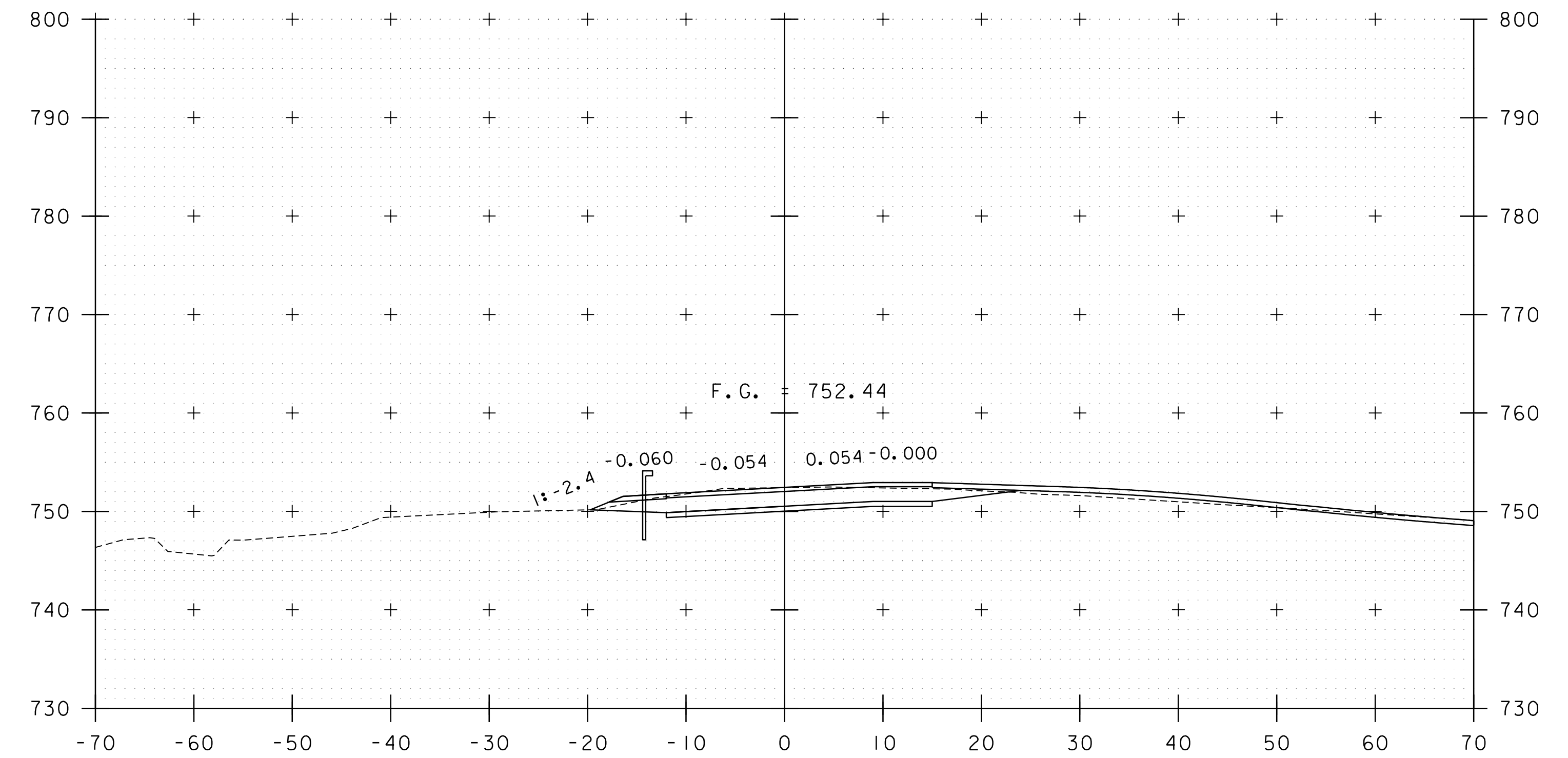
11+50

STA. 11+00 TO STA. 11+75

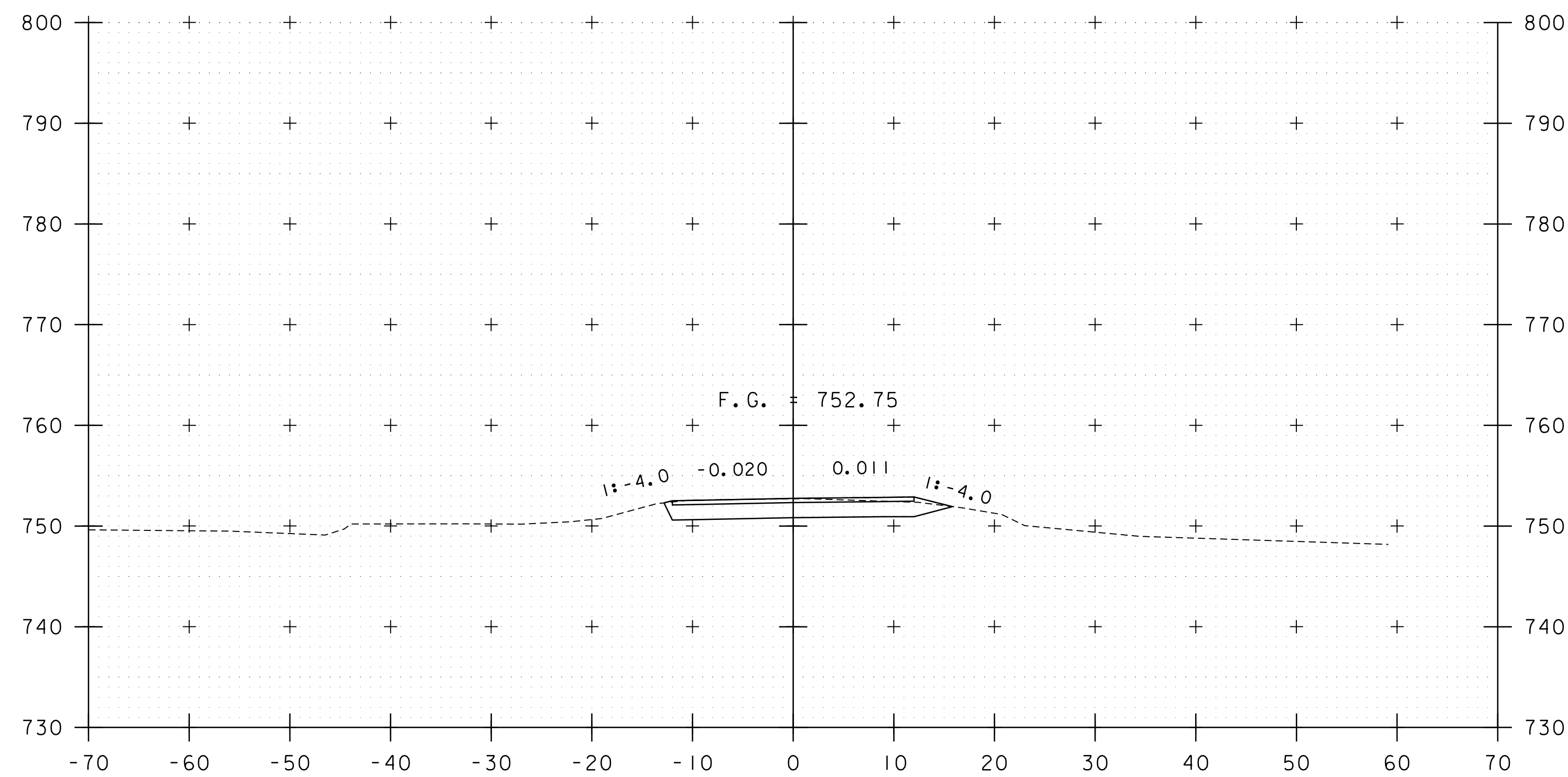
PROJECT NAME: STOWE	
PROJECT NUMBER: BO 1446(39)	
FILE NAME: si2j658xs.dgn	PLOT DATE: 2/9/2024
PROJECT LEADER: C. BURRALL	DRAWN BY: M. LONGSTREET
DESIGNED BY: C. BURRALL	CHECKED BY: C. BURRALL
TH 43 CROSS SECTIONS I	SHEET 71 OF 84



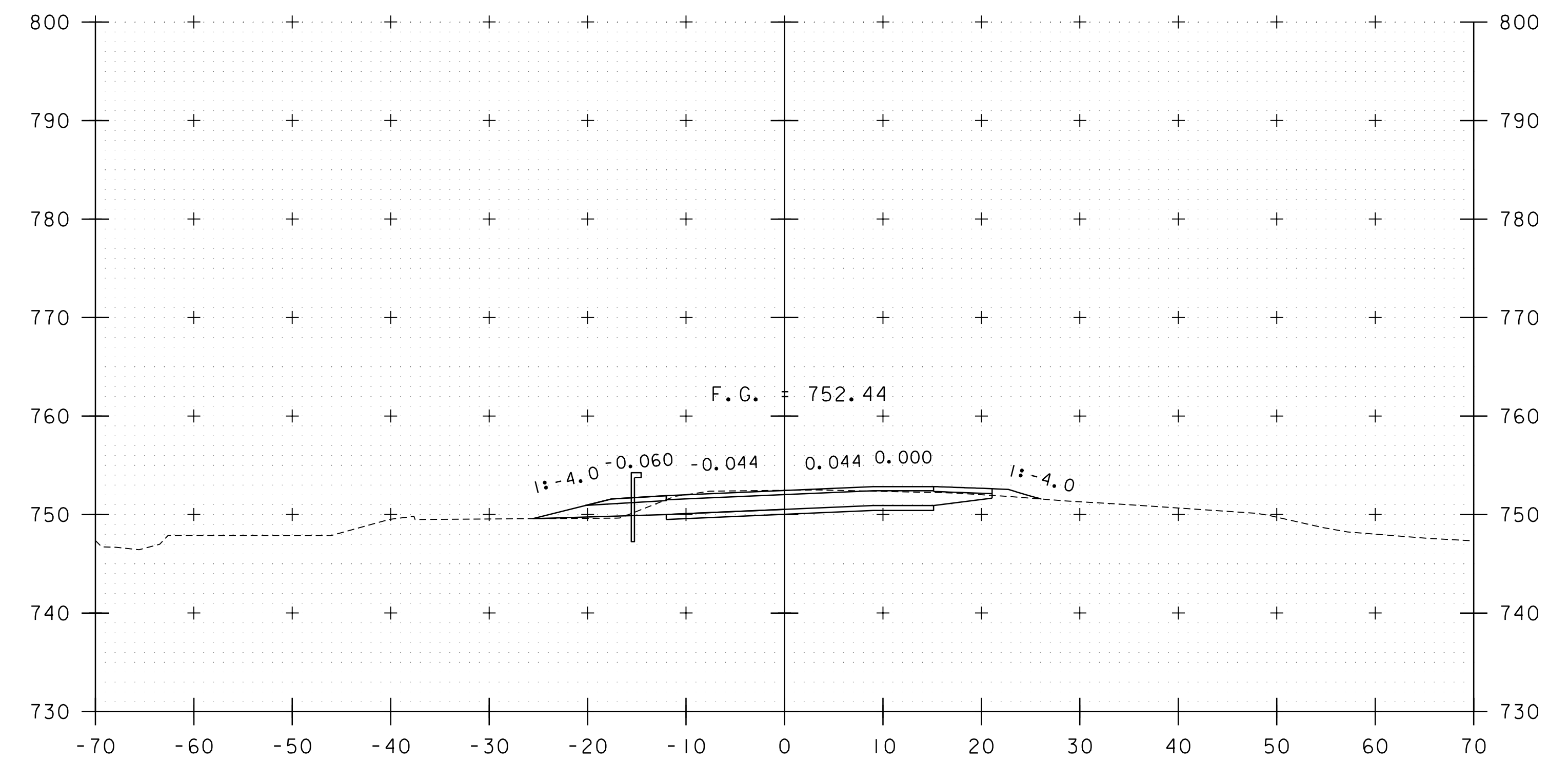
12+25



12+66



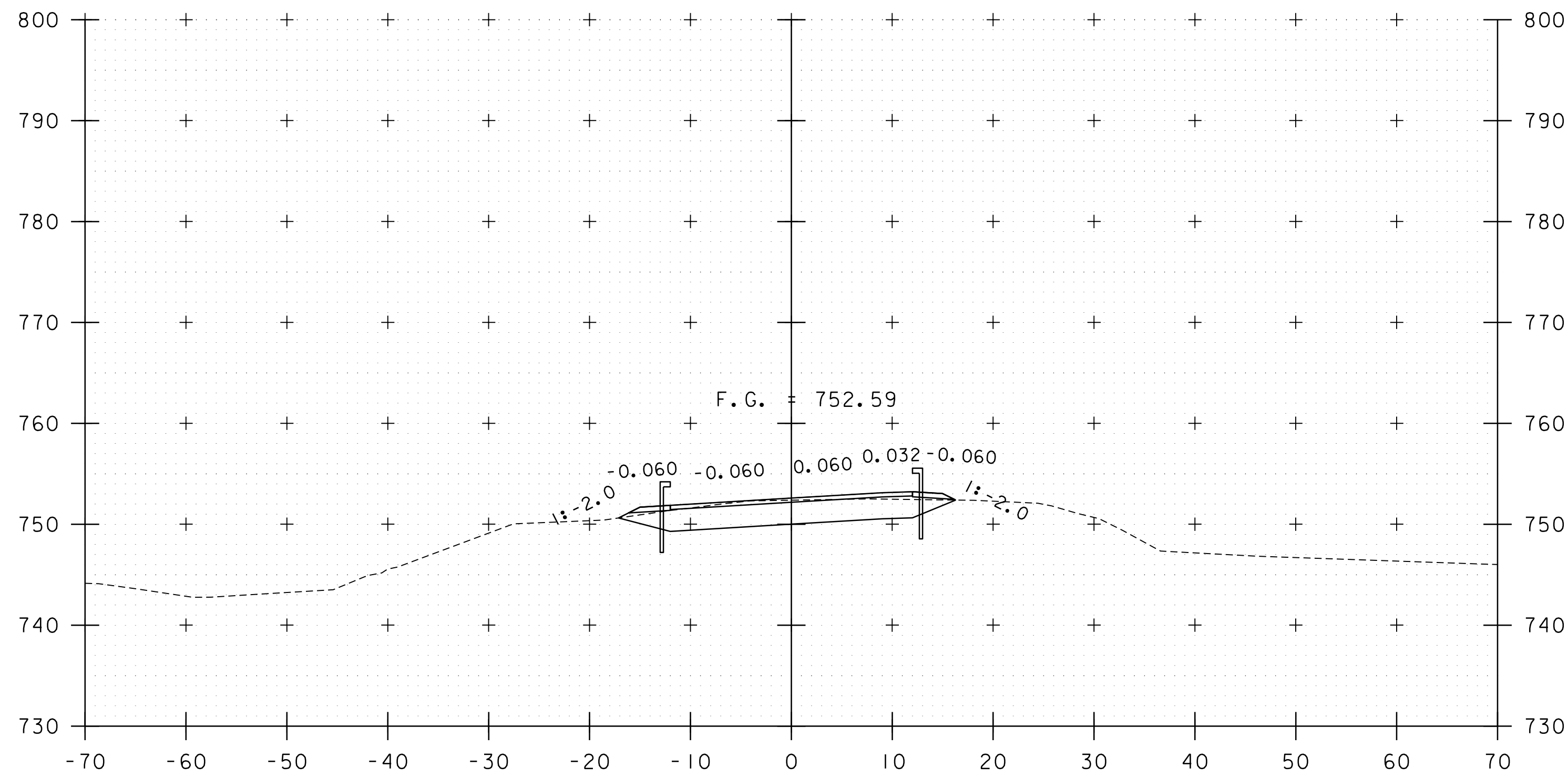
12+00
BEGIN PROJECT



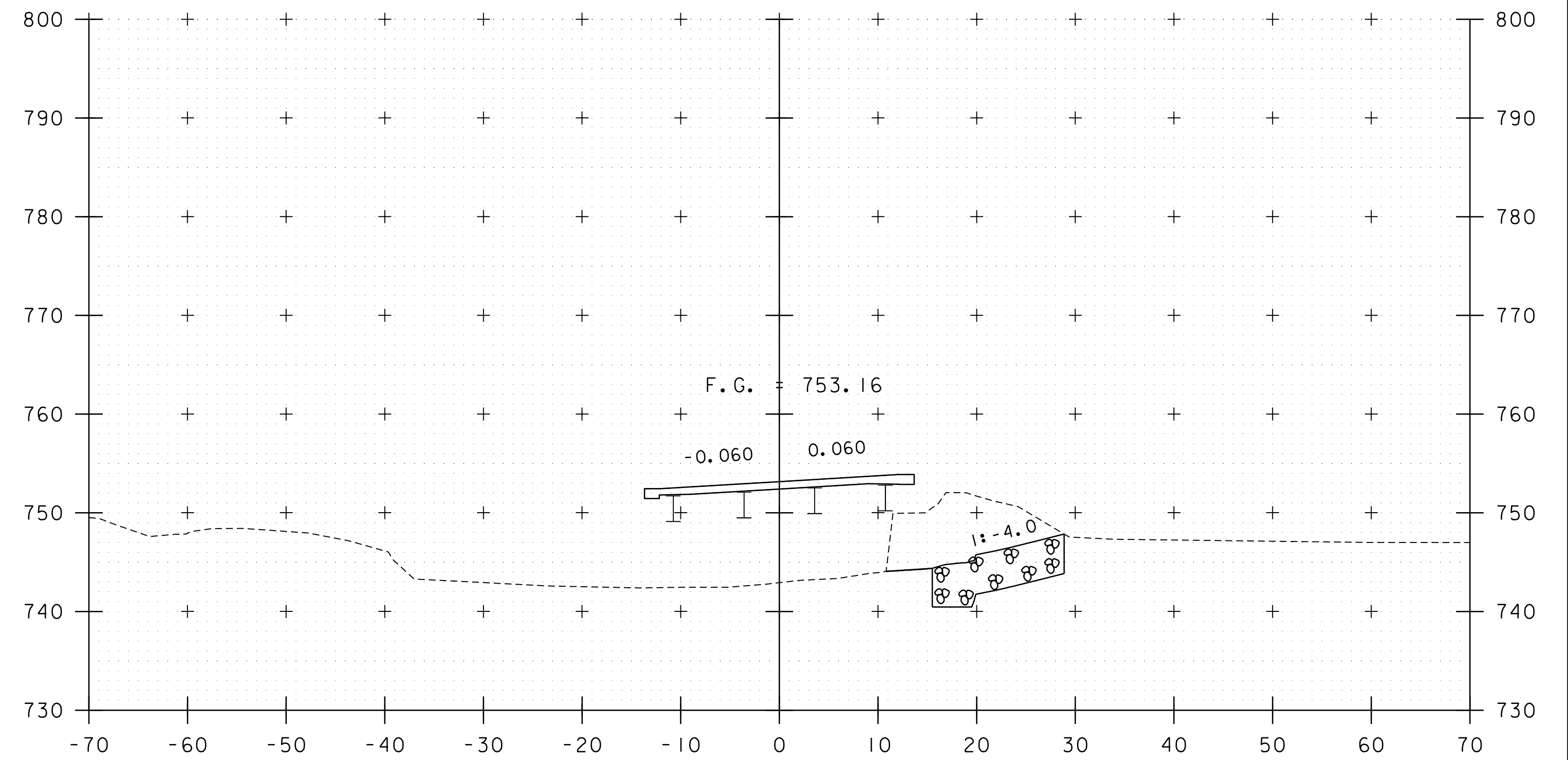
12+50

STA. 12+00 TO STA. 12+66

PROJECT NAME: STOWE	
PROJECT NUMBER: BO 1446(39)	
FILE NAME: sl2j658xs.dgn	PLOT DATE: 2/9/2024
PROJECT LEADER: C. BURRALL	DRAWN BY: M. LONGSTREET
DESIGNED BY: C. BURRALL	CHECKED BY: C. BURRALL
TH 43 CROSS SECTIONS 2	SHEET 72 OF 84

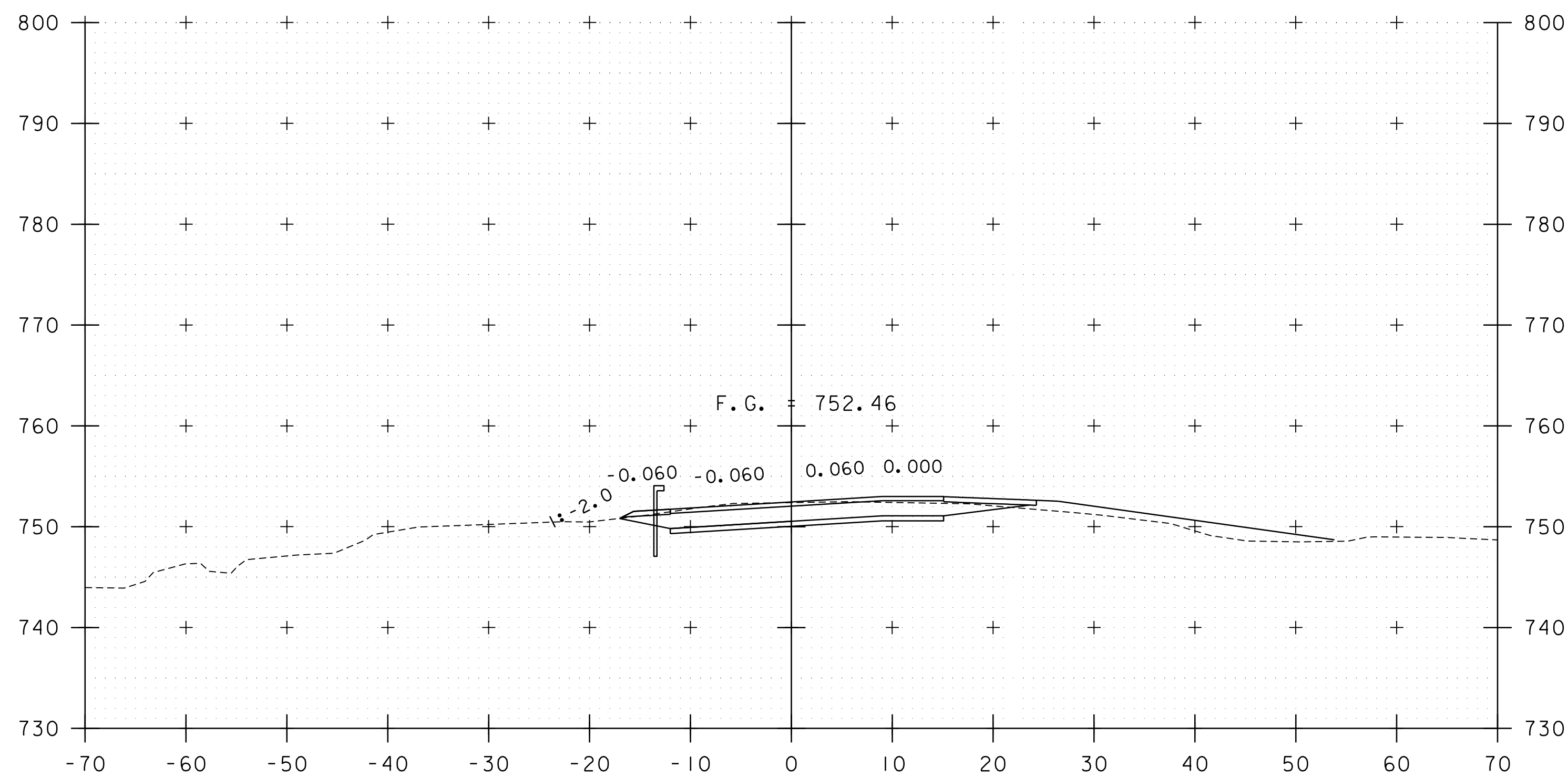


13+00

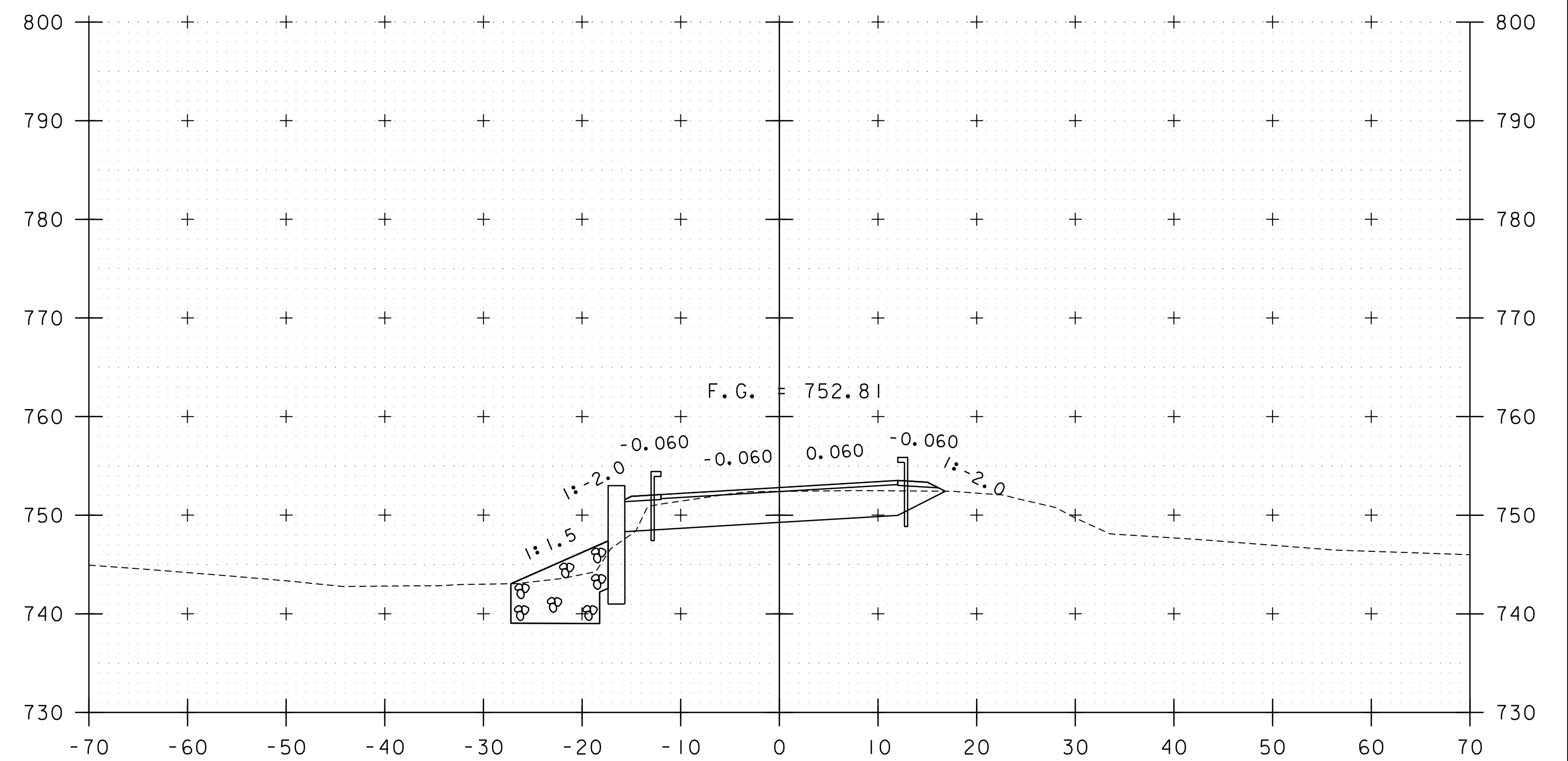


13+50

BEGIN BRIDGE 13+34.41



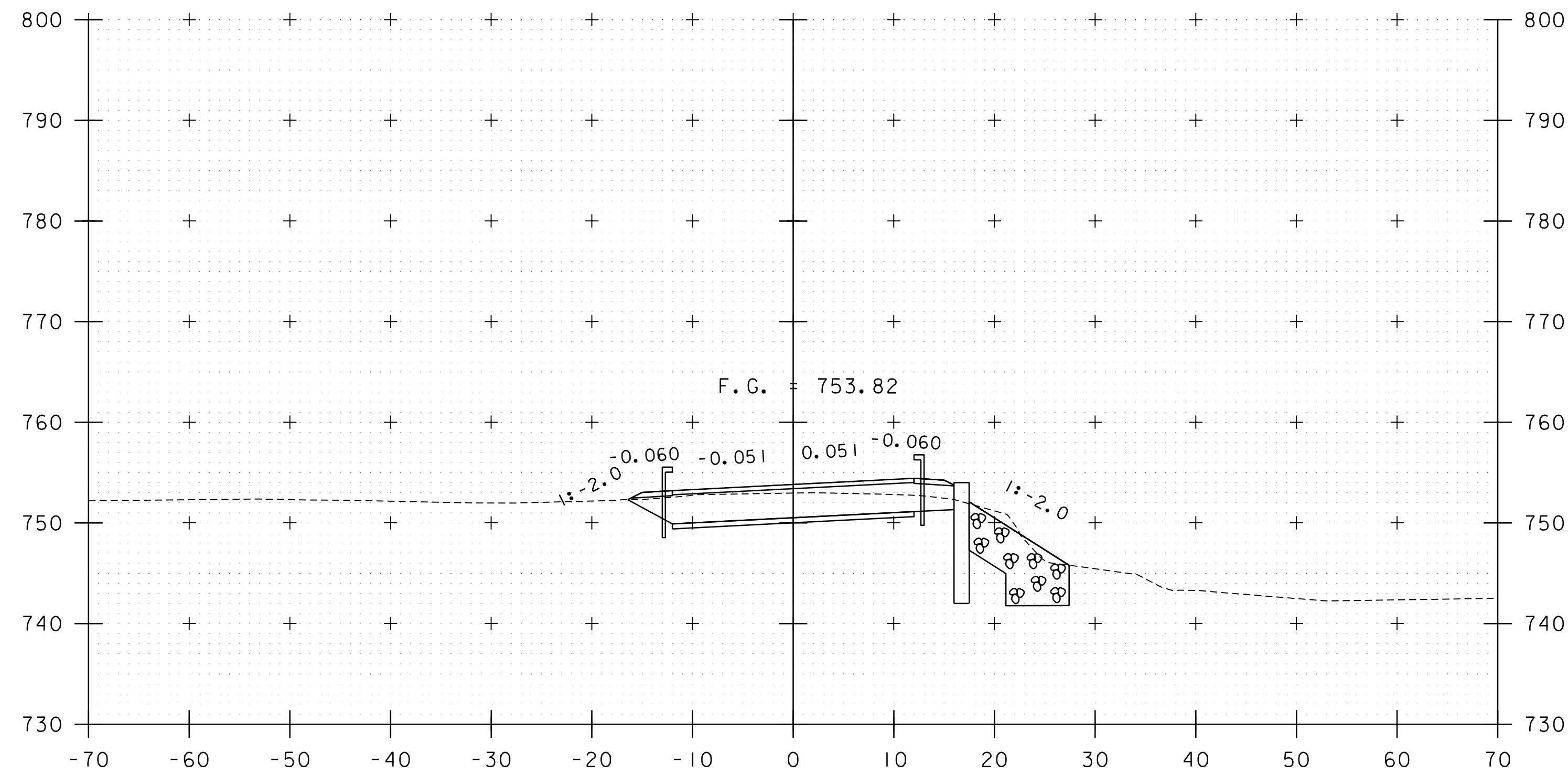
12+75



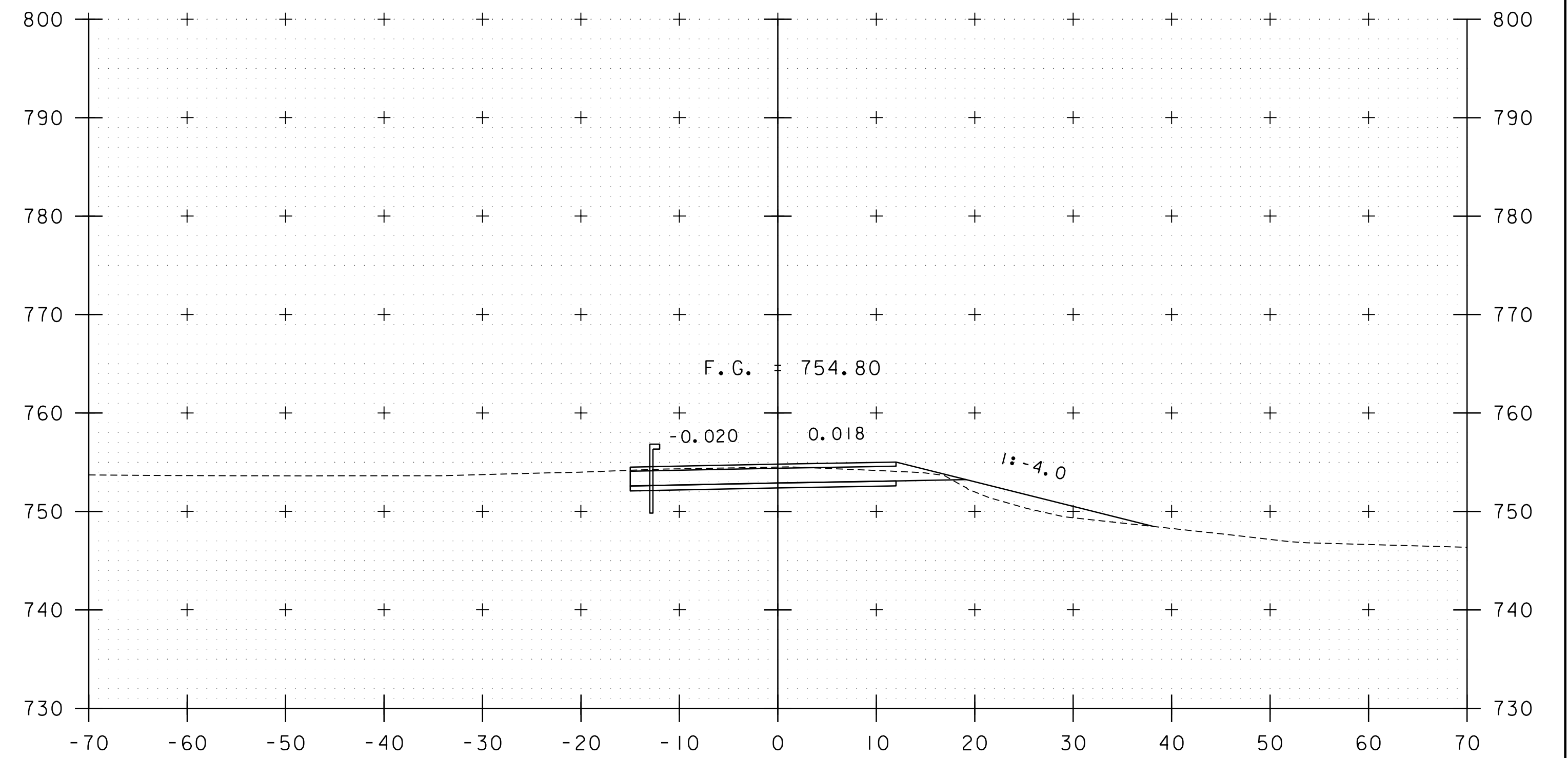
13+23

STA. 12+75 TO STA. 13+50

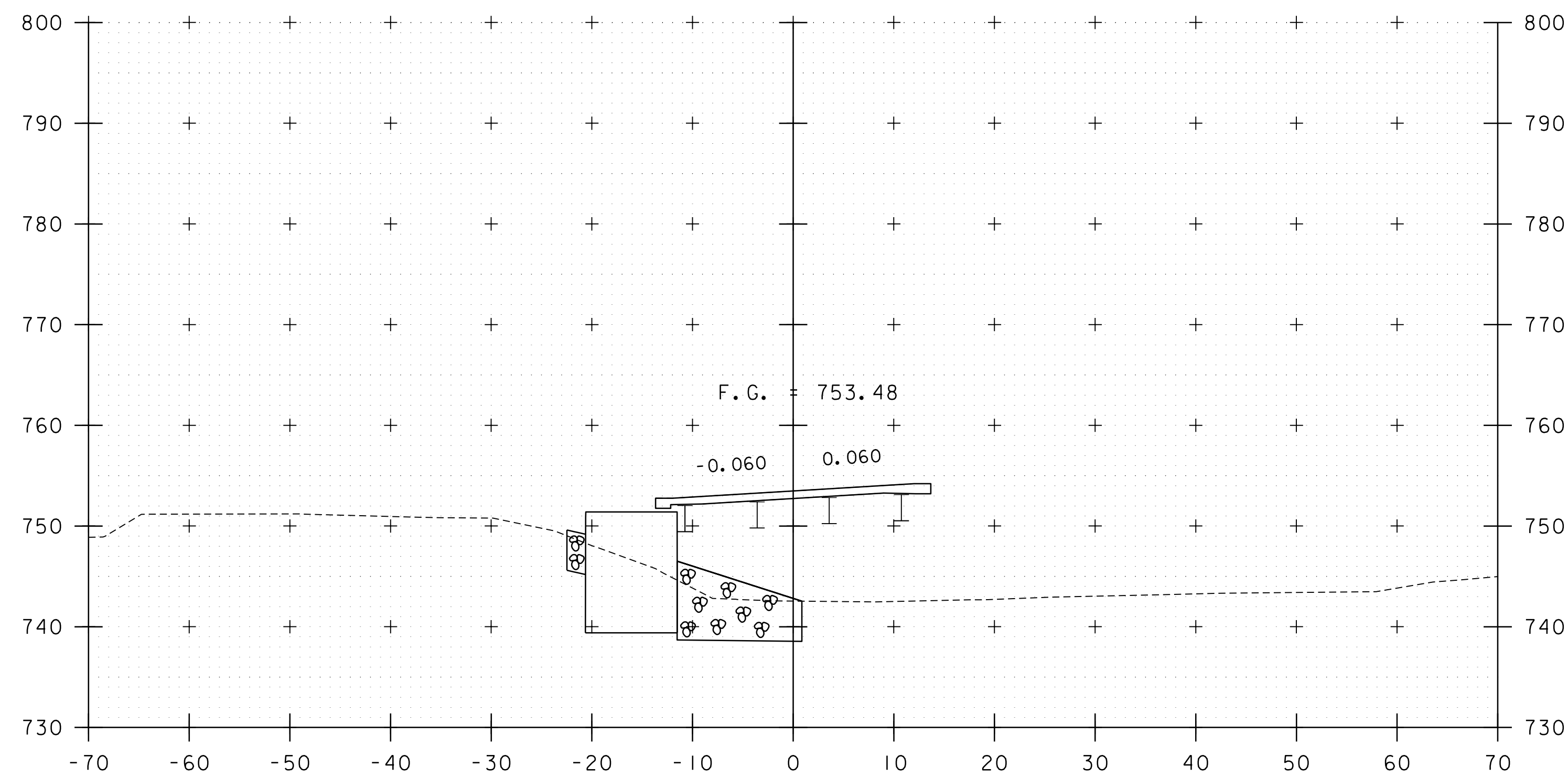
PROJECT NAME: STOWE	PLOT DATE: 2/9/2024
PROJECT NUMBER: BO 1446(39)	DRAWN BY: M. LONGSTREET
FILE NAME: sl2j658xs.dgn	DESIGNED BY: C. BURRALL
PROJECT LEADER: C. BURRALL	CHECKED BY: C. BURRALL
TH 43 CROSS SECTIONS 3	SHEET 73 OF 84



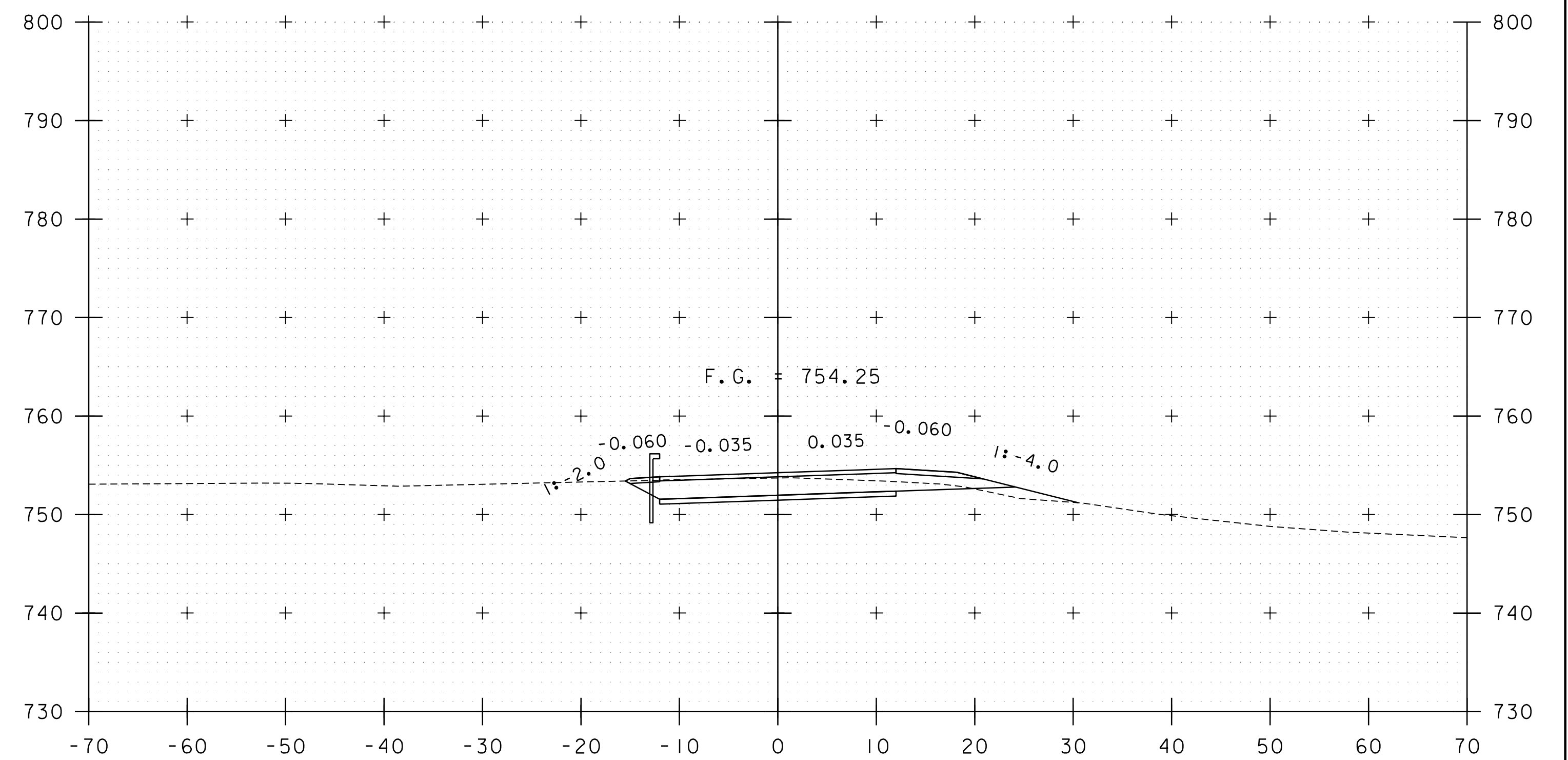
14+00



14+50



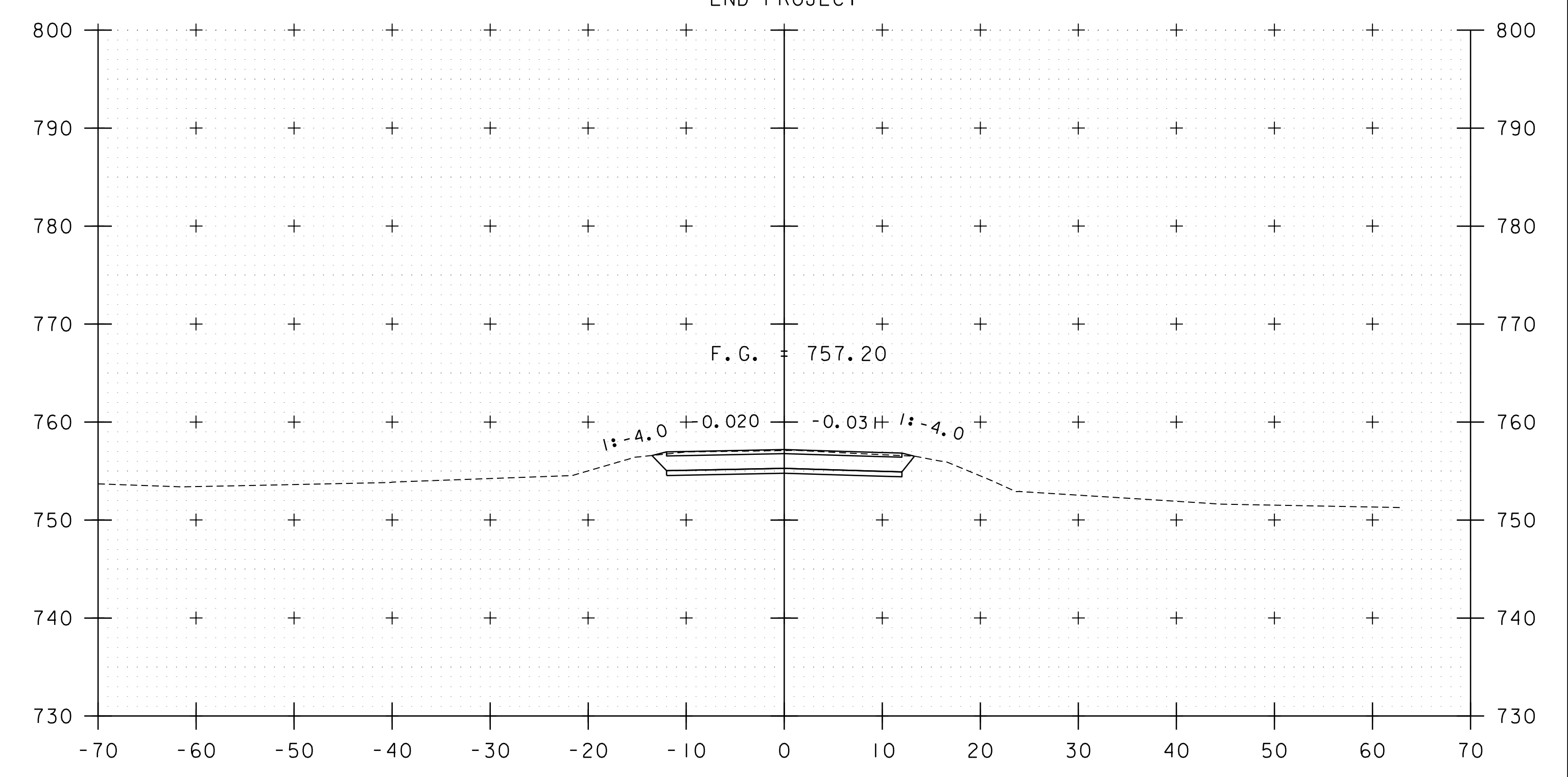
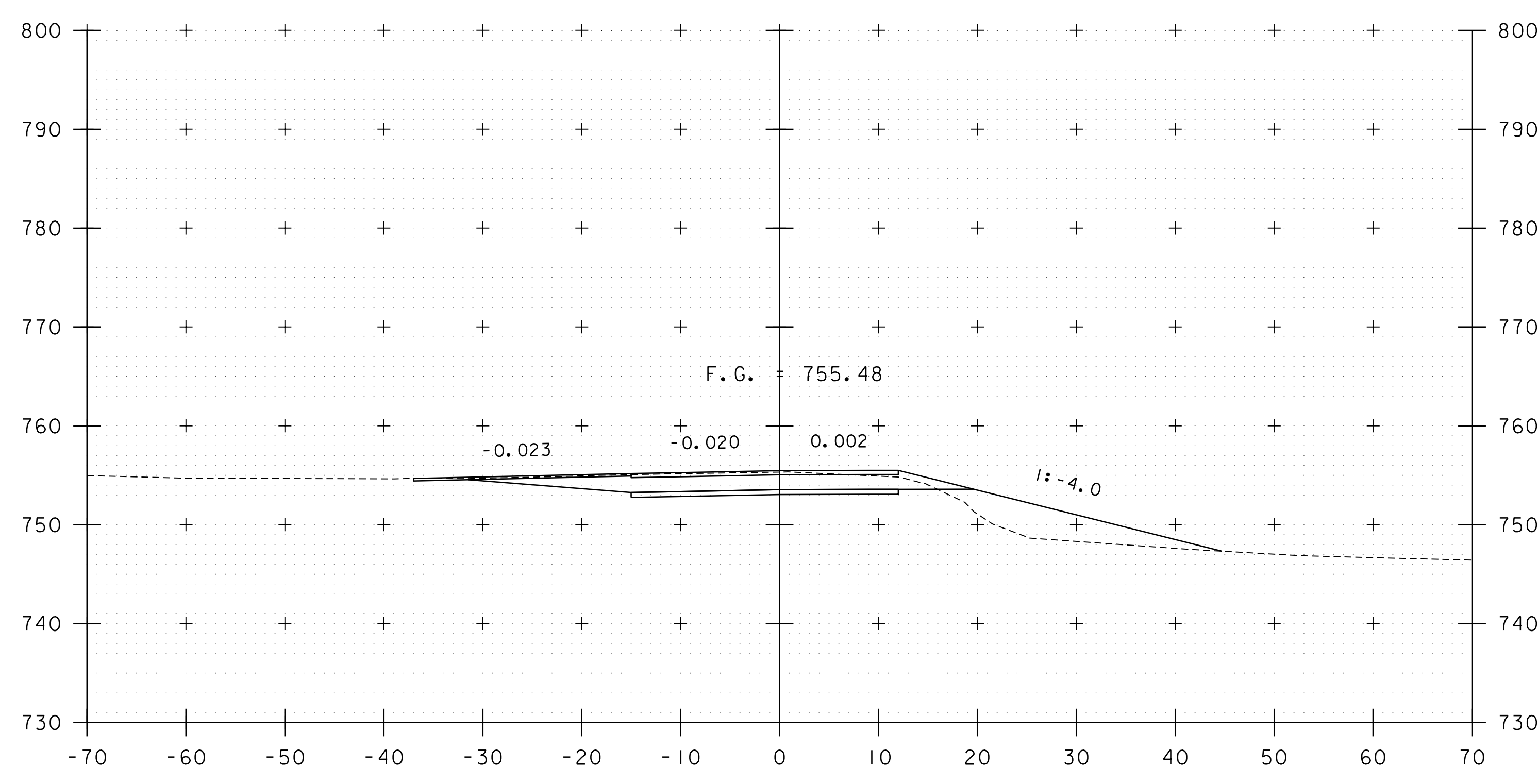
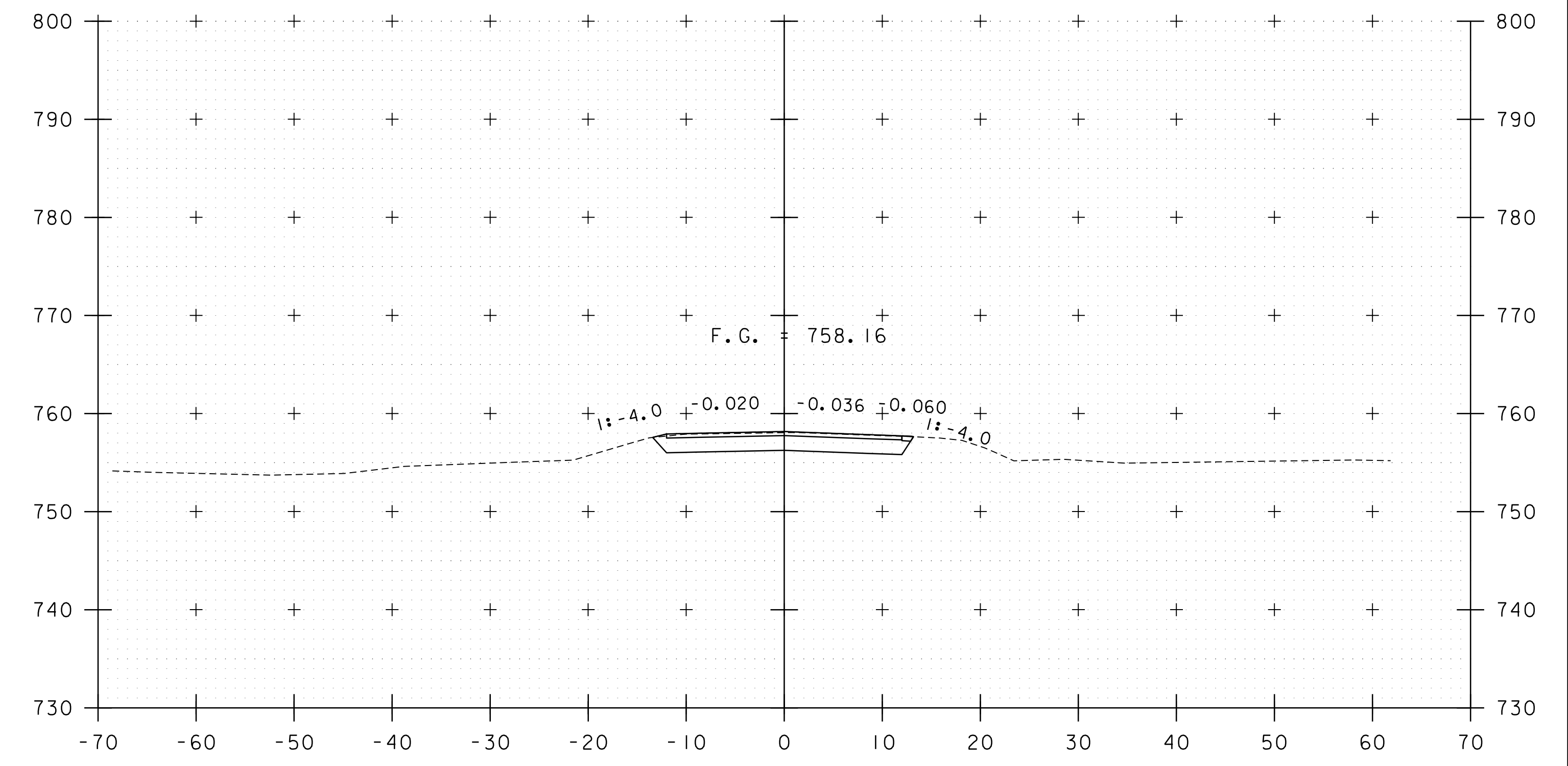
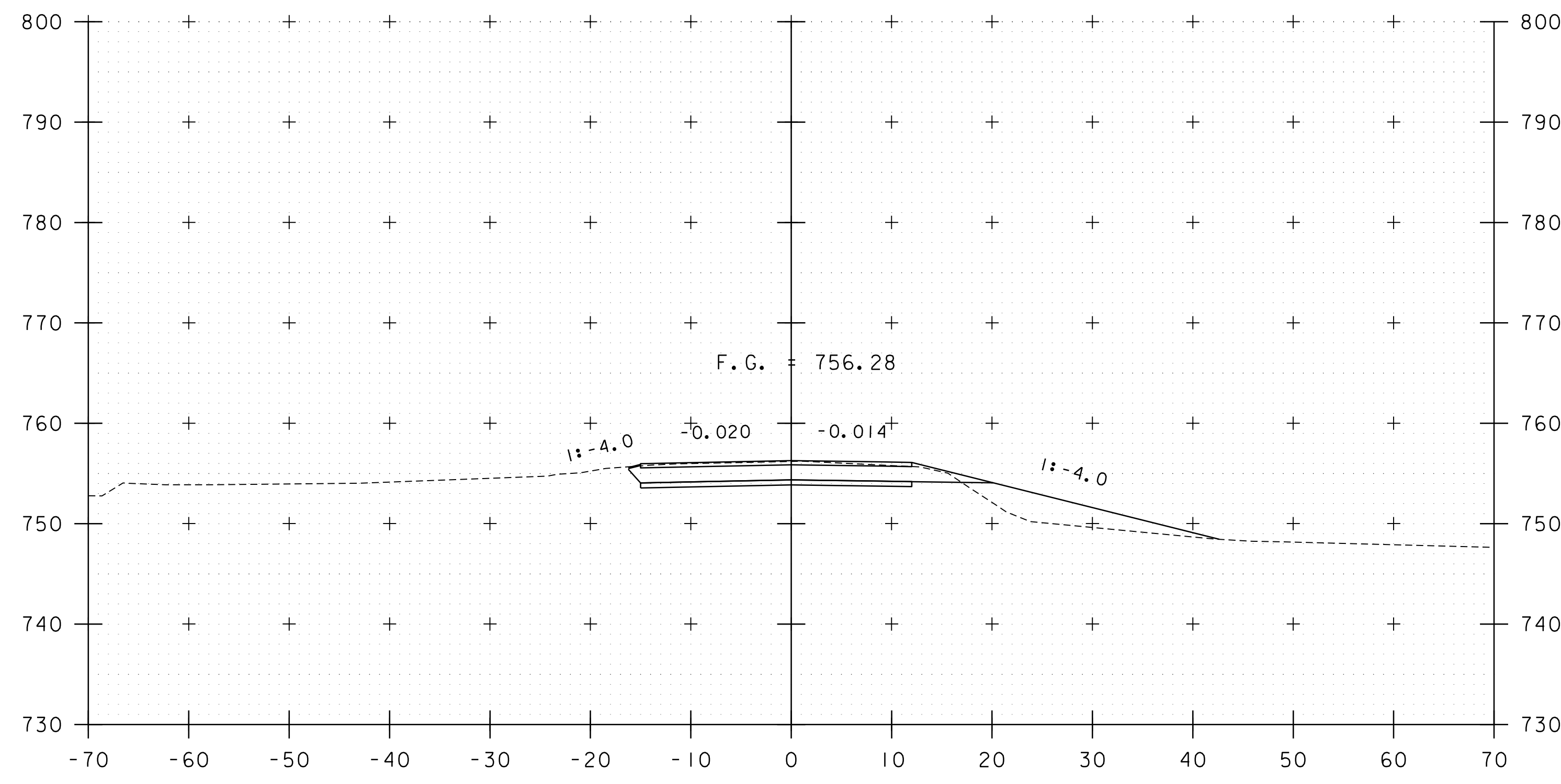
13+75
END BRIDGE 13+83.58



14+25

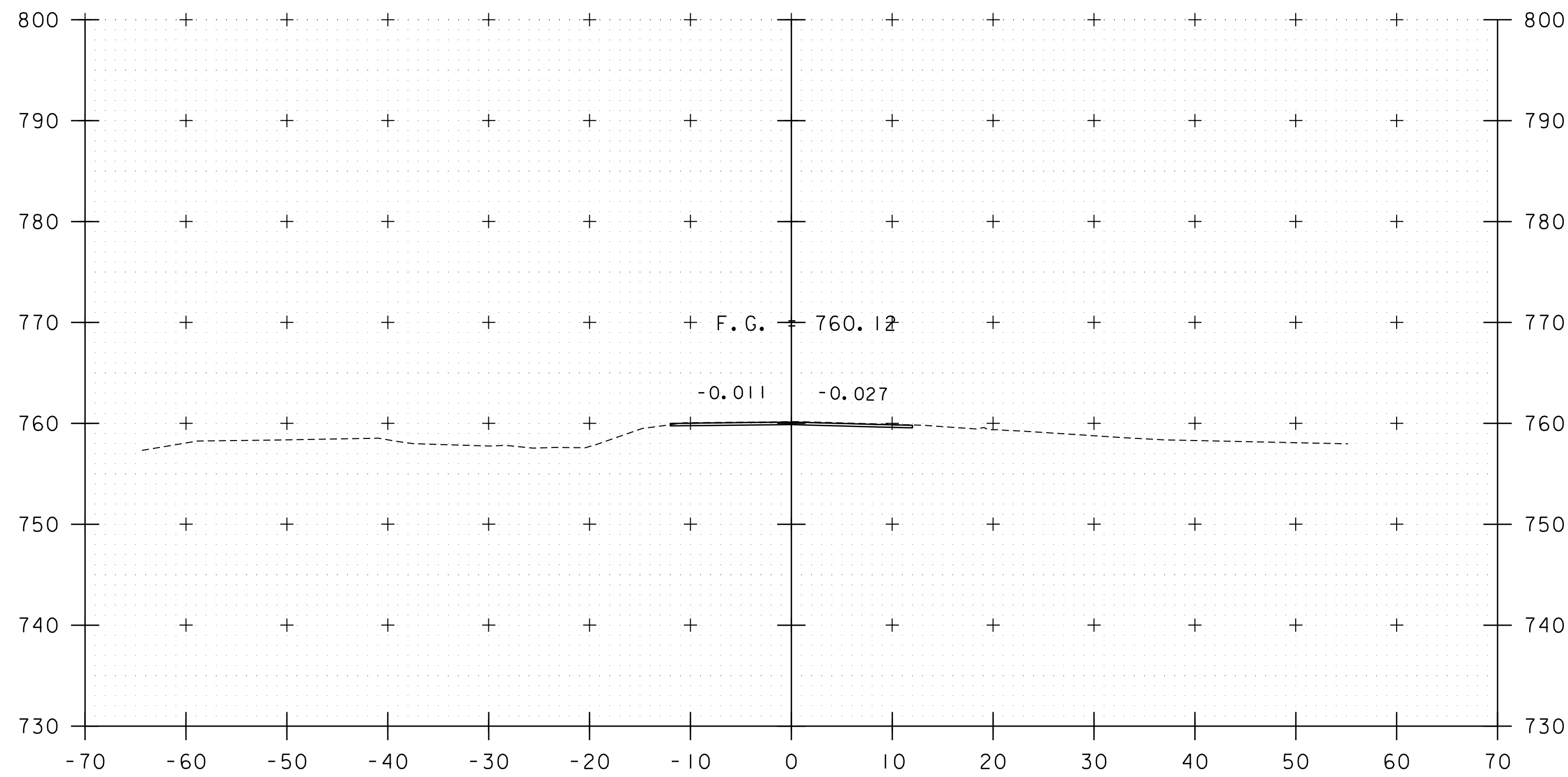
STA. 13+75 TO STA. 14+50

PROJECT NAME: STOWE	
PROJECT NUMBER: BO 1446(39)	
FILE NAME: sl2j658xs.dgn	PLOT DATE: 2/9/2024
PROJECT LEADER: C. BURRALL	DRAWN BY: M. LONGSTREET
DESIGNED BY: C. BURRALL	CHECKED BY: C. BURRALL
TH 43 CROSS SECTIONS 4	SHEET 74 OF 84

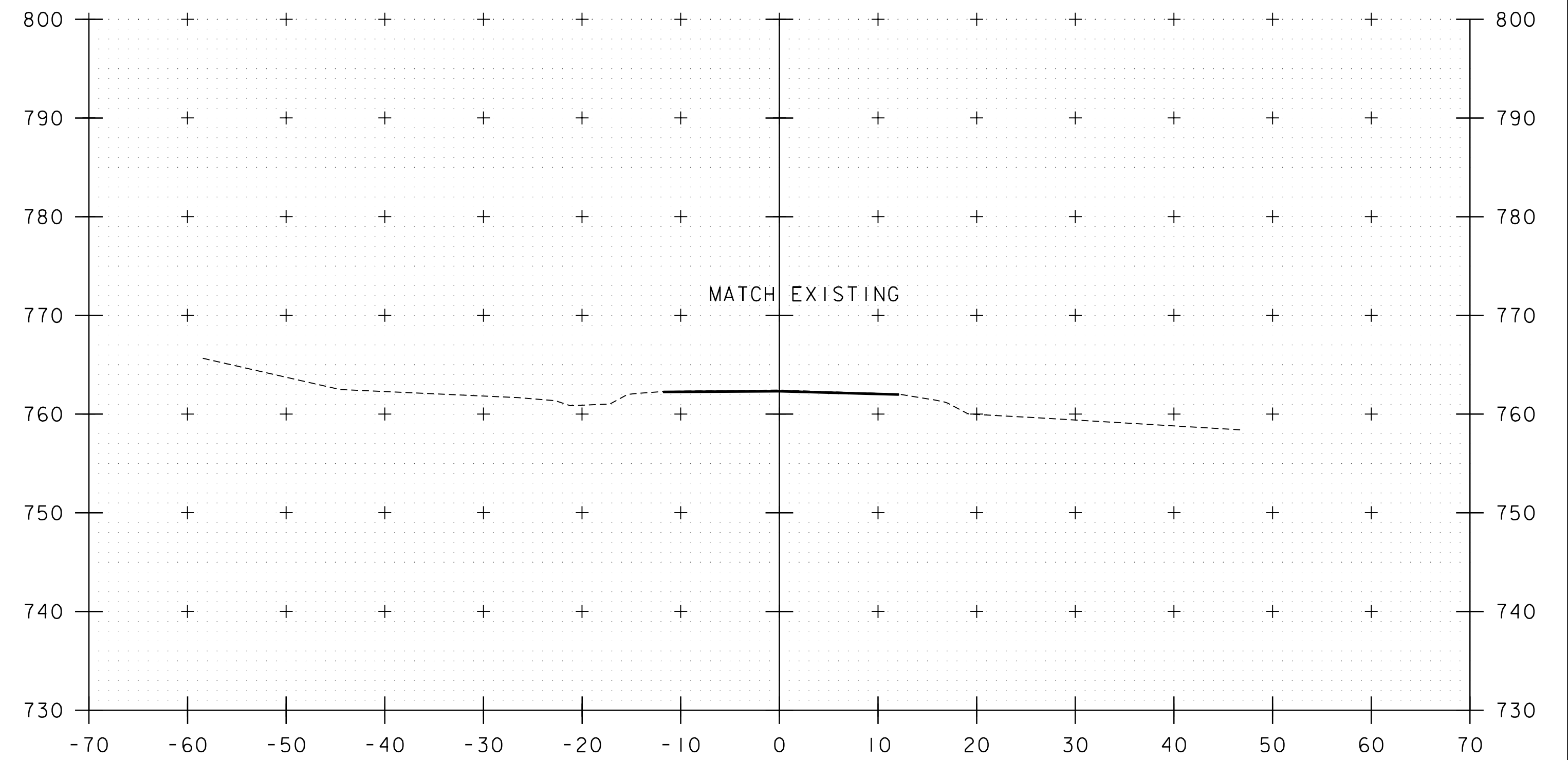


STA. 14+75 TO STA. 15+50

PROJECT NAME: STOWE	
PROJECT NUMBER: BO 1446(39)	
FILE NAME: sl2j658xs.dgn	PLOT DATE: 2/9/2024
PROJECT LEADER: C. BURRALL	DRAWN BY: M. LONGSTREET
DESIGNED BY: C. BURRALL	CHECKED BY: C. BURRALL
TH 43 CROSS SECTIONS 5	SHEET 75 OF 84

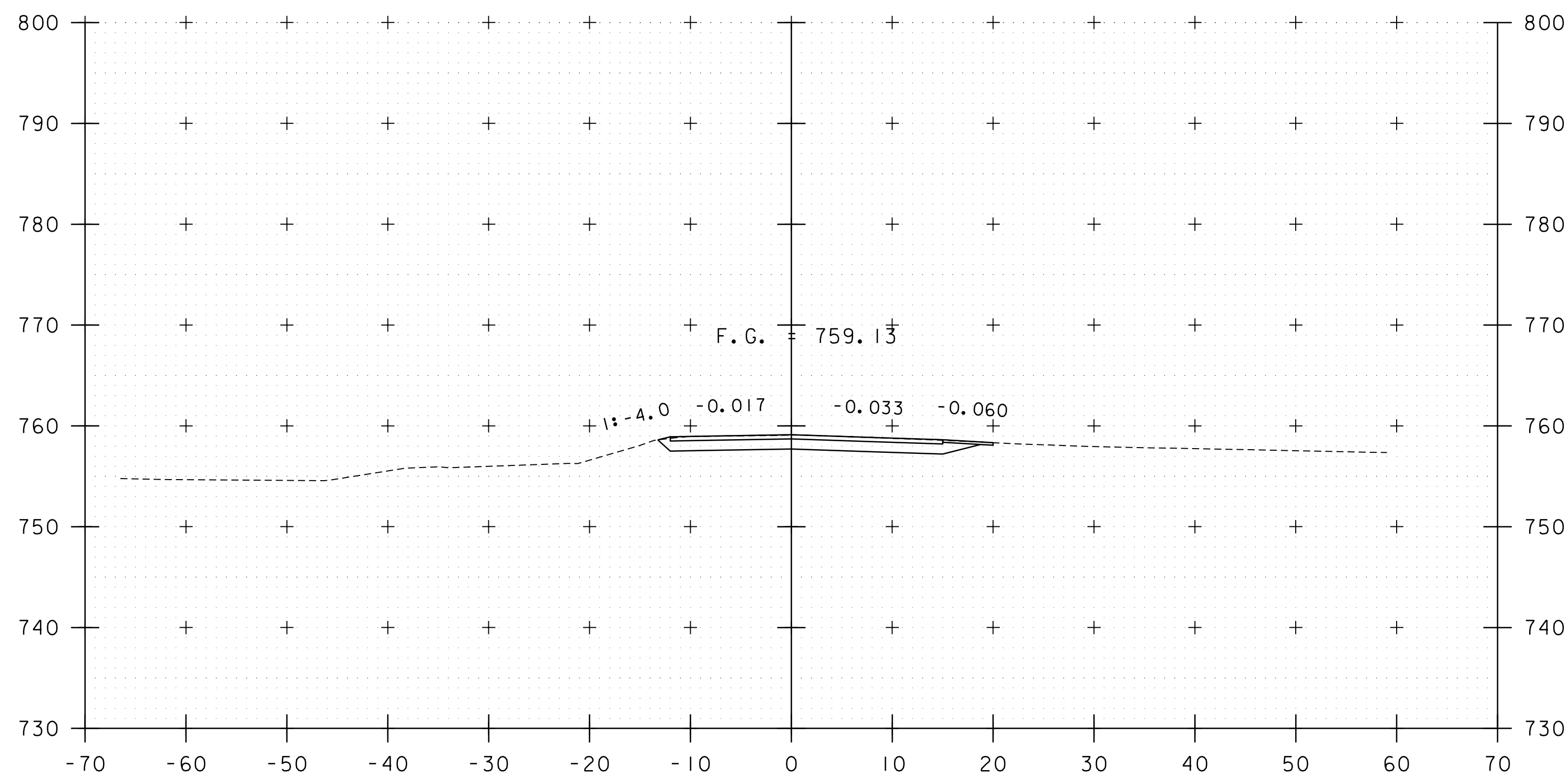


16+00

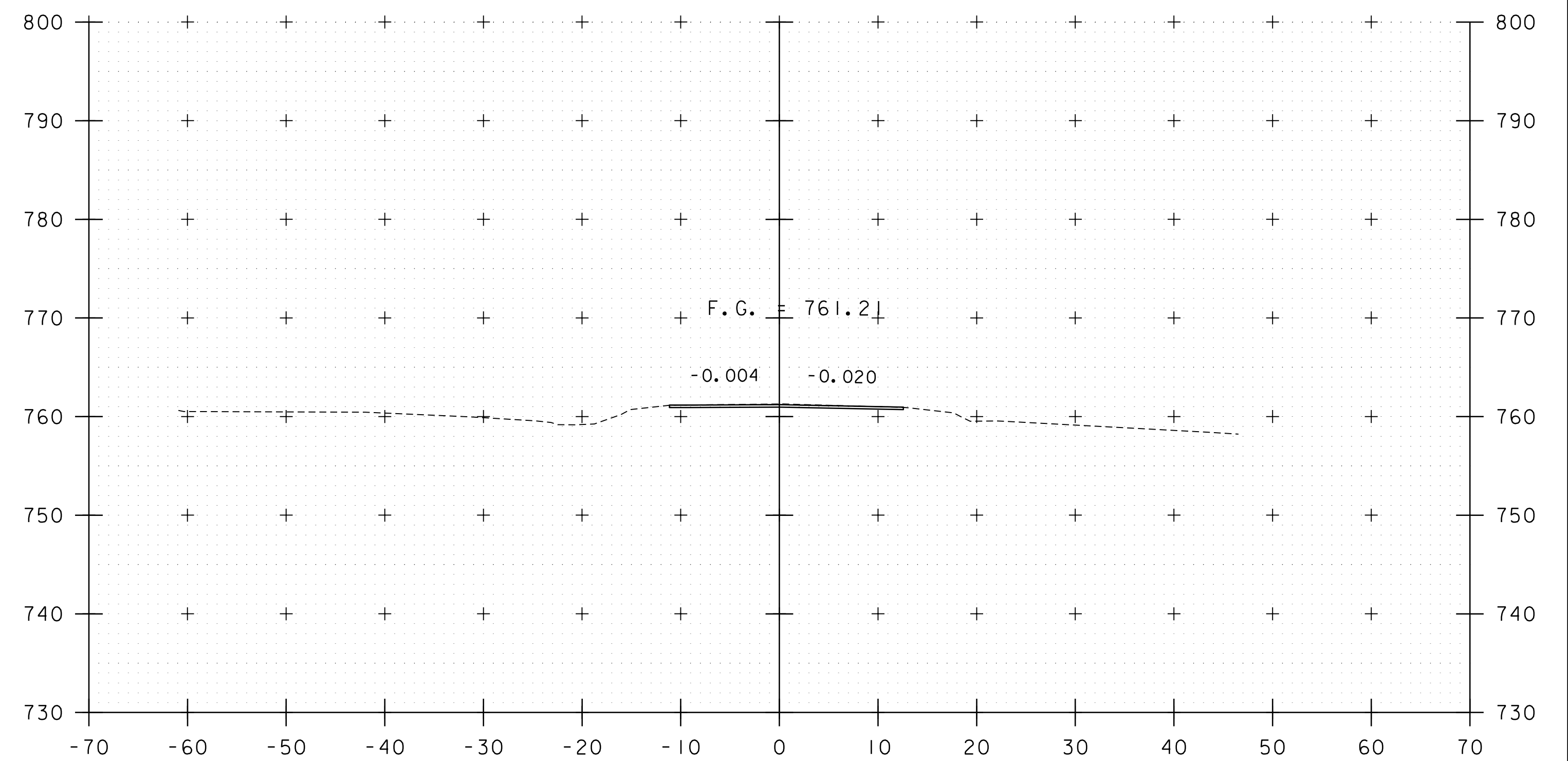


16+50

END APPROACH



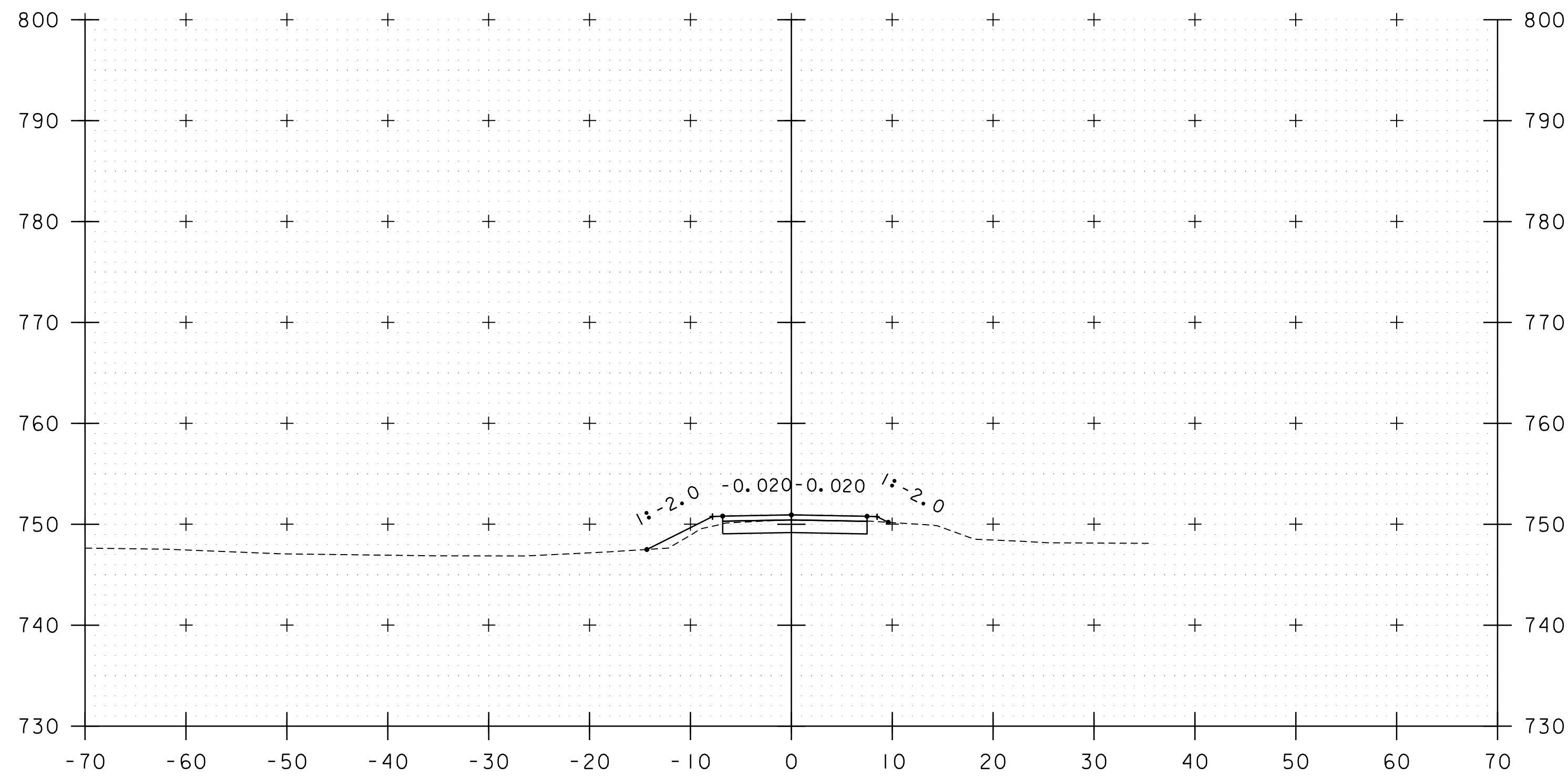
15+75



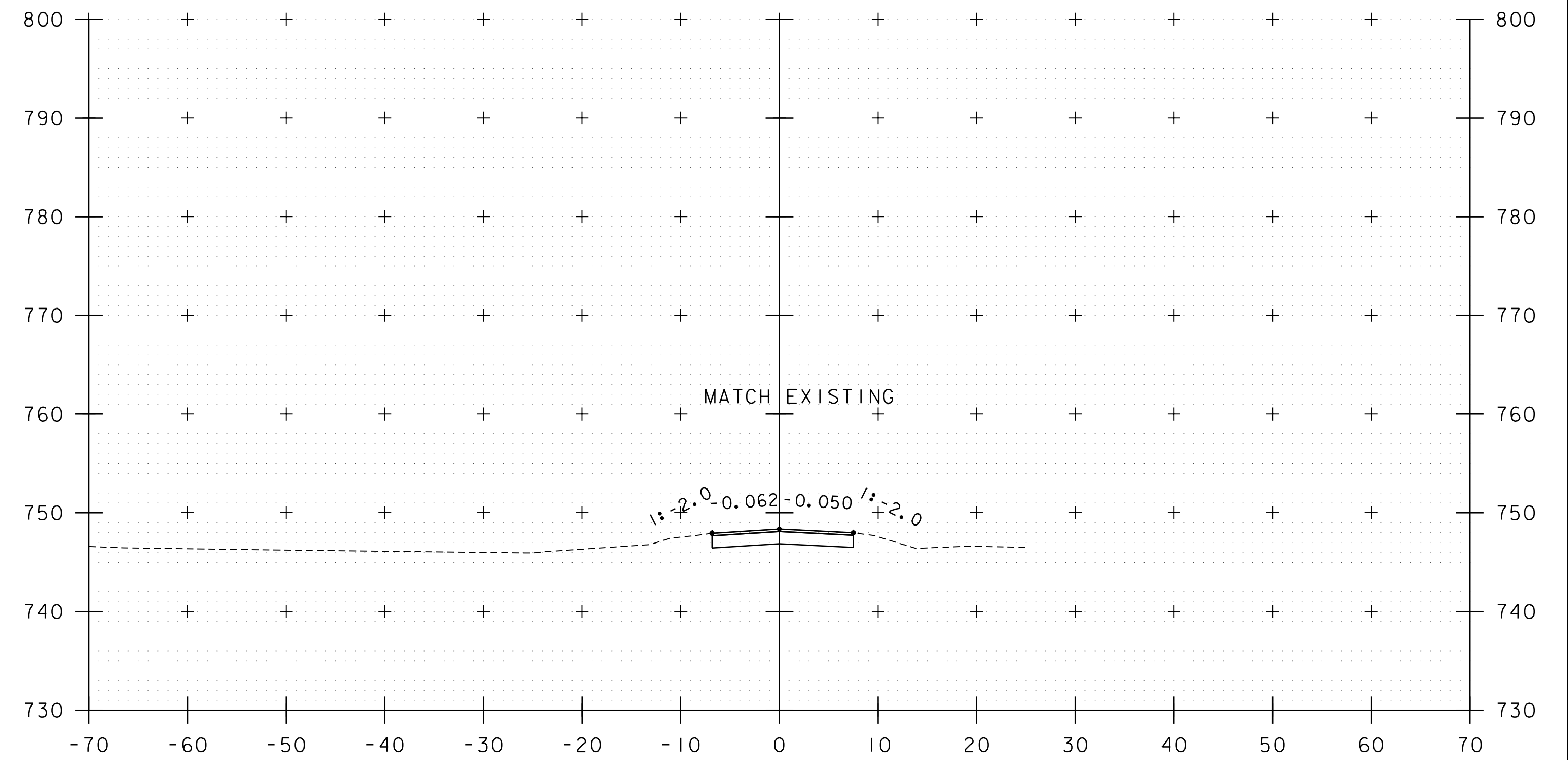
16+25

STA. 15+75 TO STA. 16+50

PROJECT NAME: STOWE	PLOT DATE: 2/9/2024
PROJECT NUMBER: BO 1446(39)	DRAWN BY: M. LONGSTREET
FILE NAME: sl2j658xs.dgn	DESIGNED BY: C. BURRALL
PROJECT LEADER: C. BURRALL	TH 43 CROSS SECTIONS 6
CHECKED BY: C. BURRALL	SHEET 76 OF 84

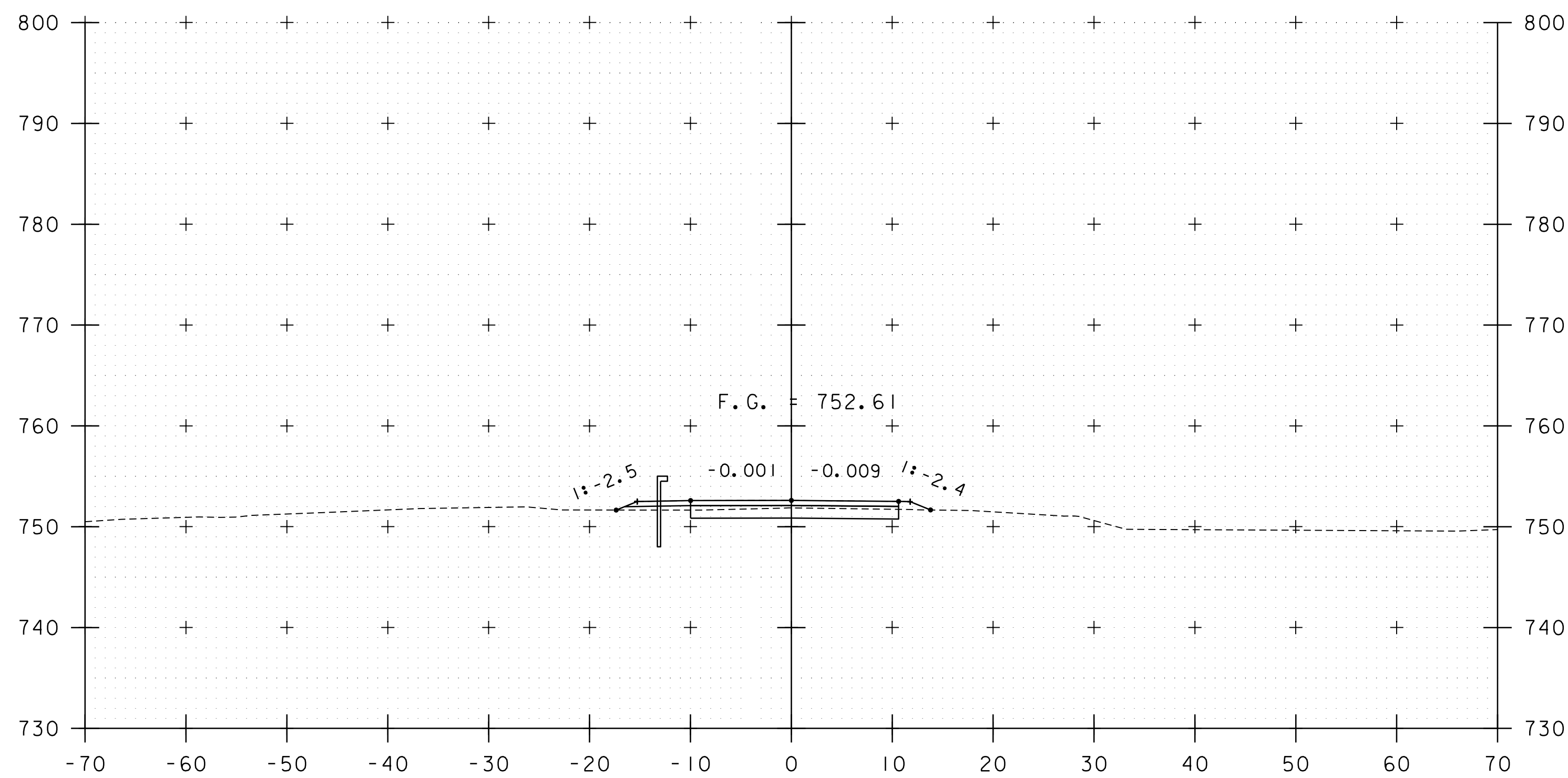


1+50



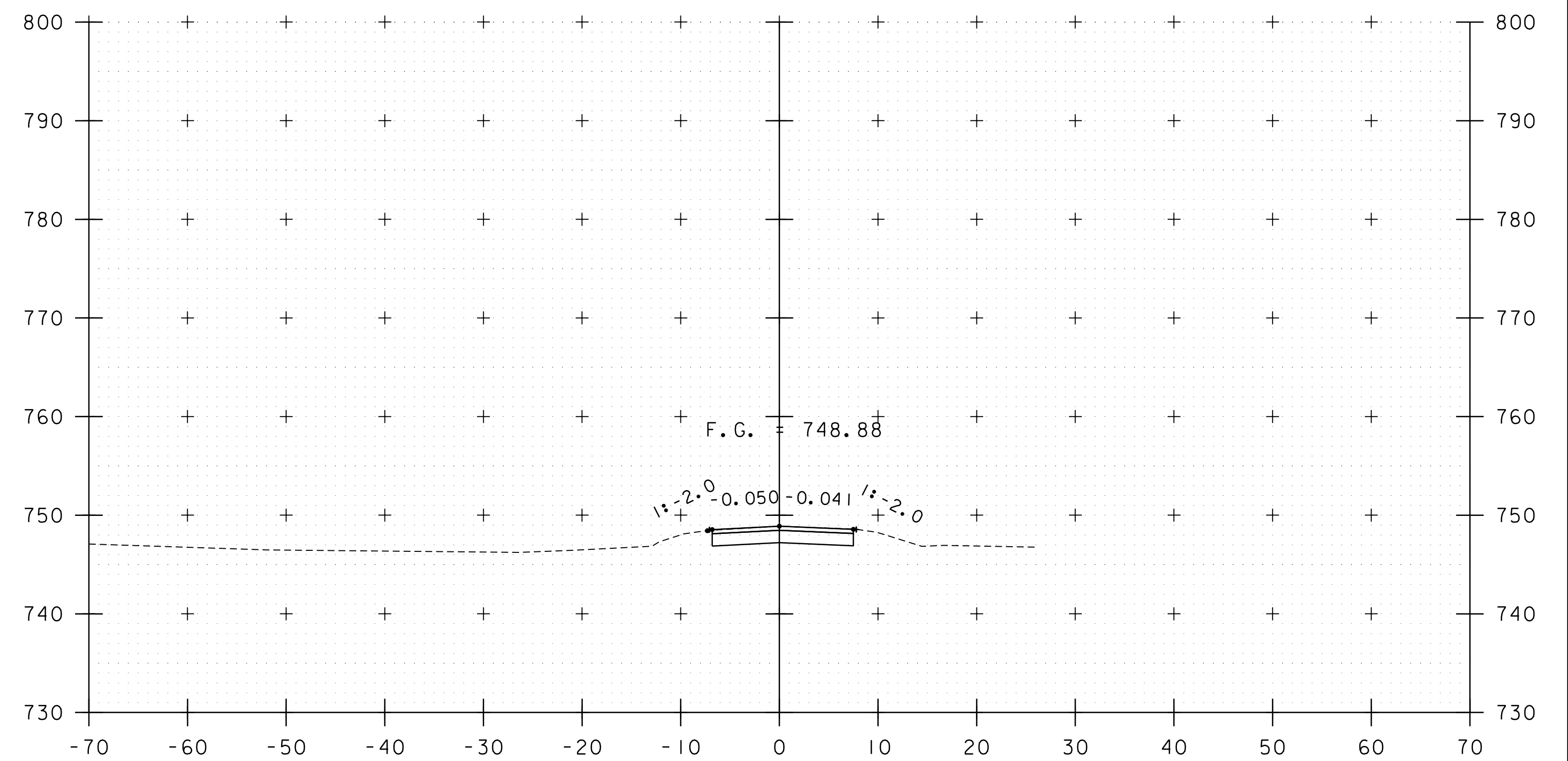
1+85

END TH 45 APPROACH



1+25

BEGIN TH 45 APPROACH
STA 1+15.00

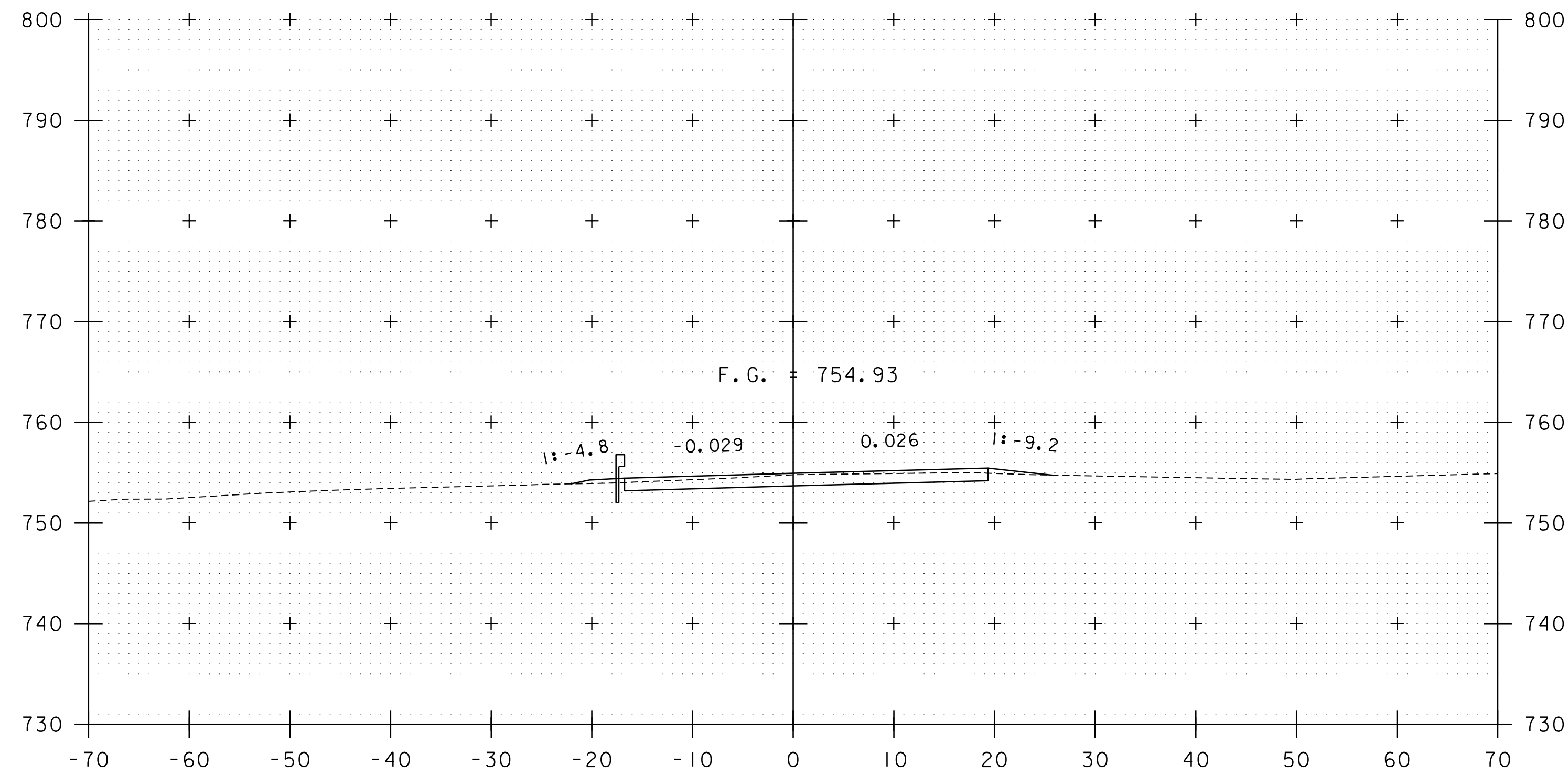


1+75

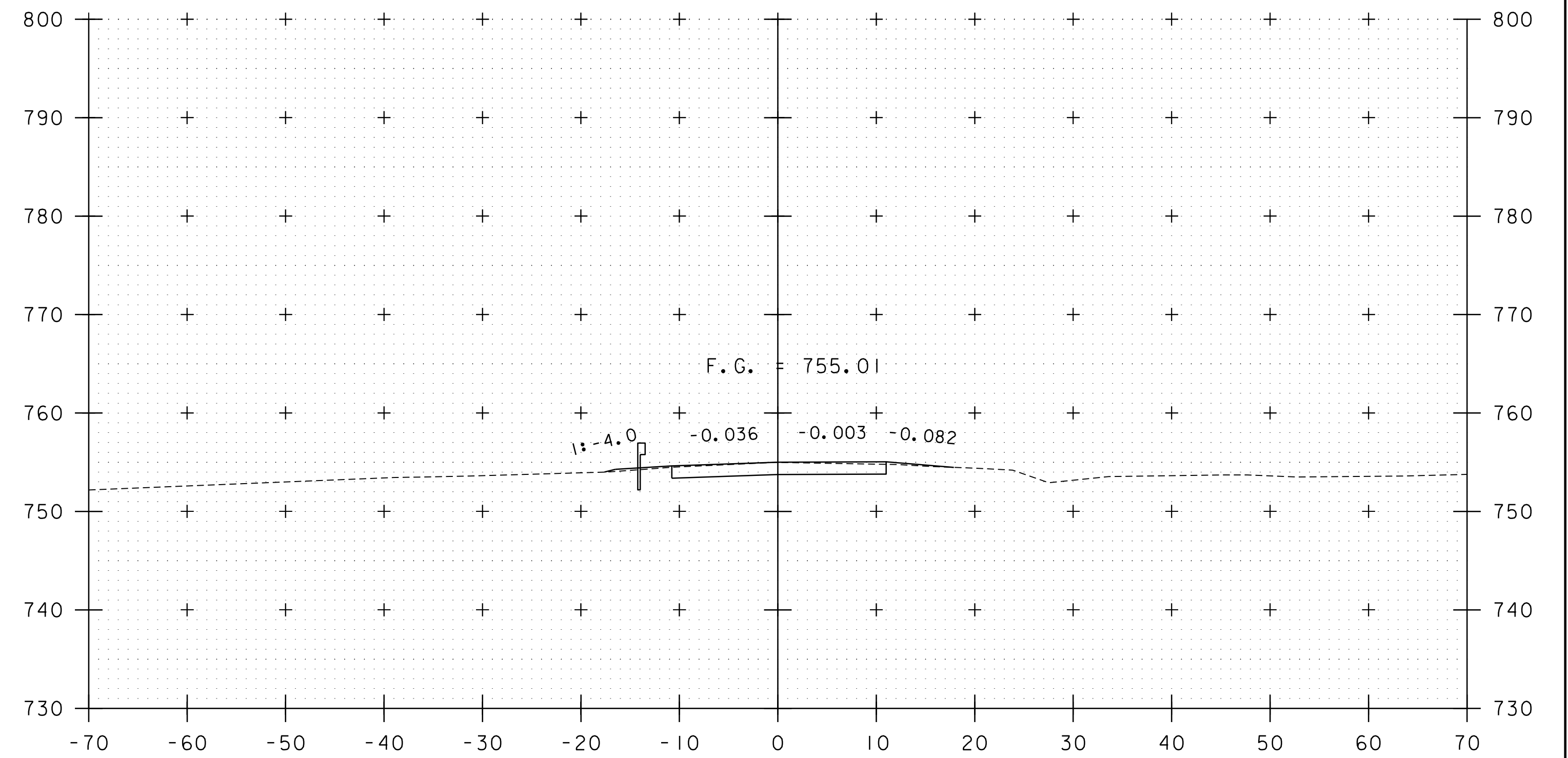
PROJECT NAME: STOWE
PROJECT NUMBER: BO 1446(39)

FILE NAME: sl2j658xs.dgn PLOT DATE: 2/9/2024
PROJECT LEADER: C. BURRALL DRAWN BY: M. LONGSTREET
DESIGNED BY: C. BURRALL CHECKED BY: C. BURRALL
TH 45 (FALLS BROOK LN) CROSS SECTIONS SHEET 77 OF 84

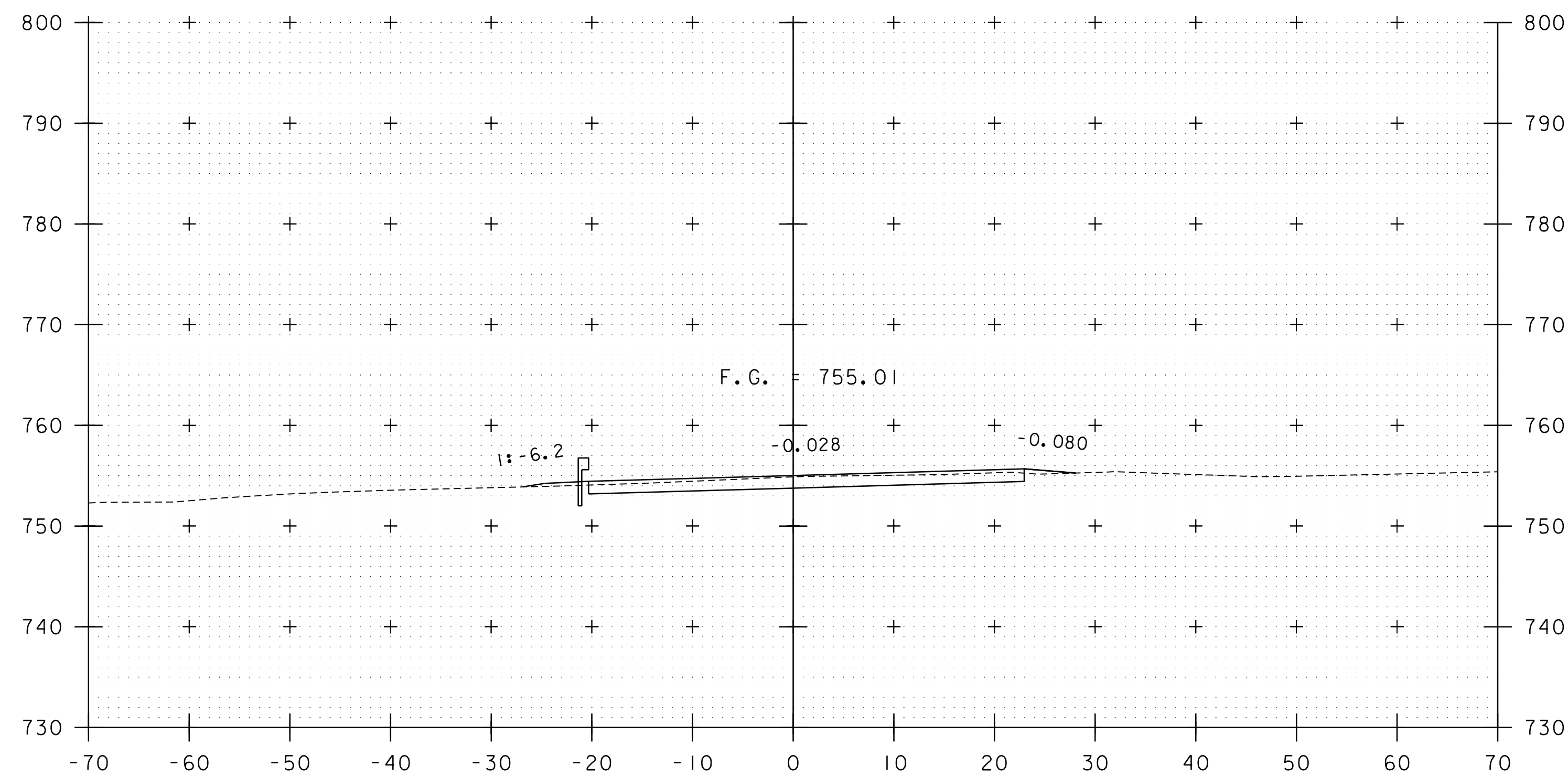
STA. 1+25 TO STA. 1+85



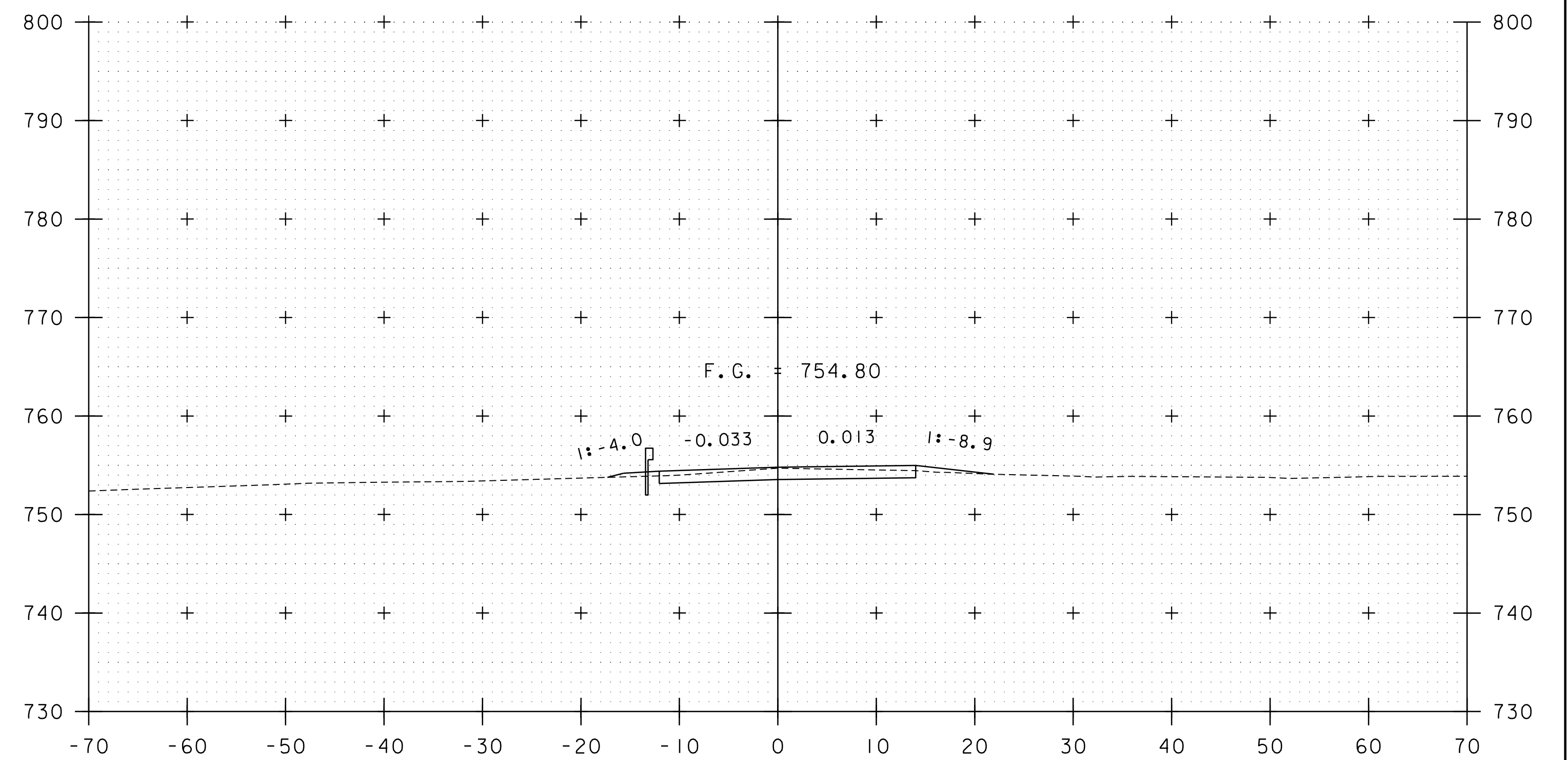
2+25



2+70



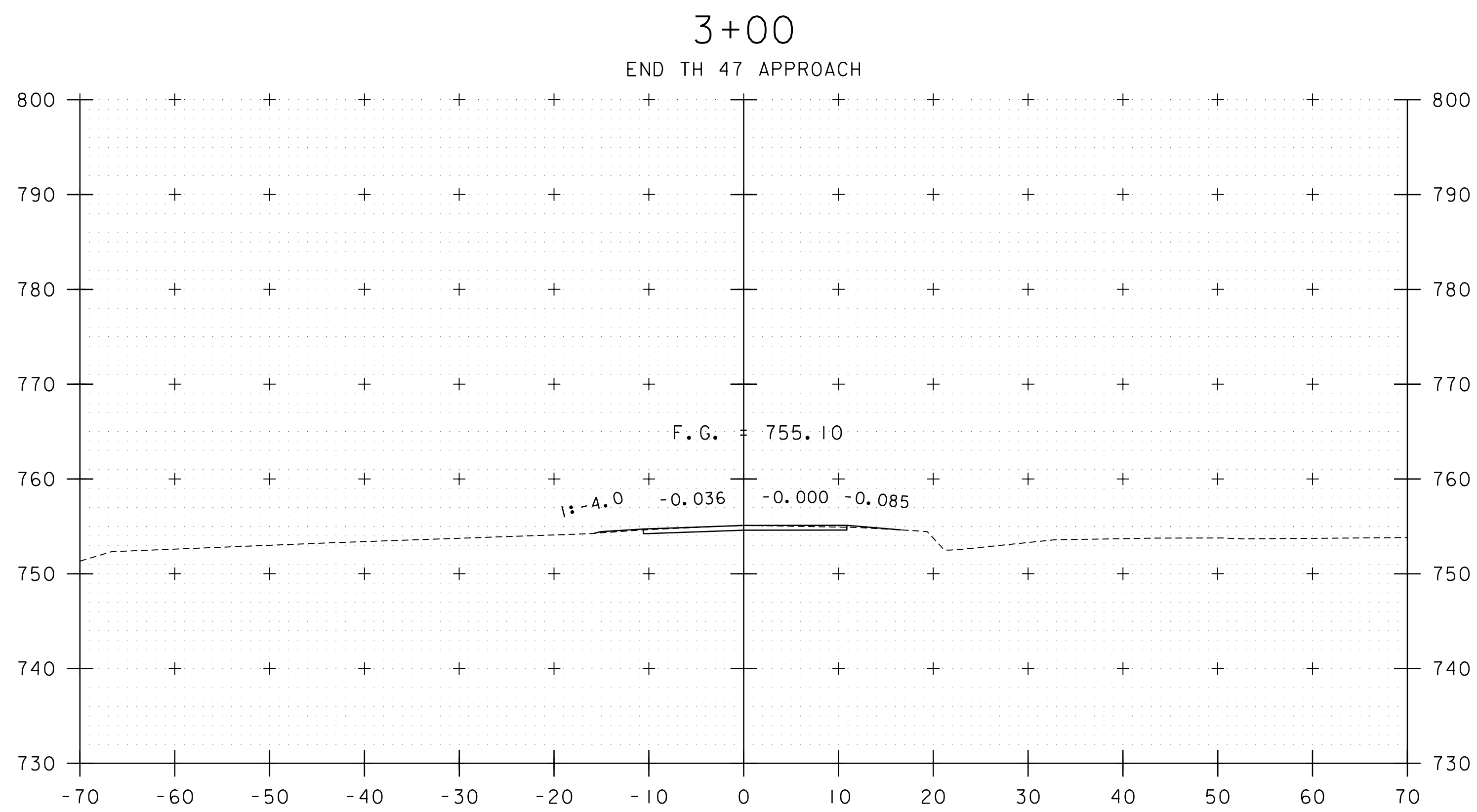
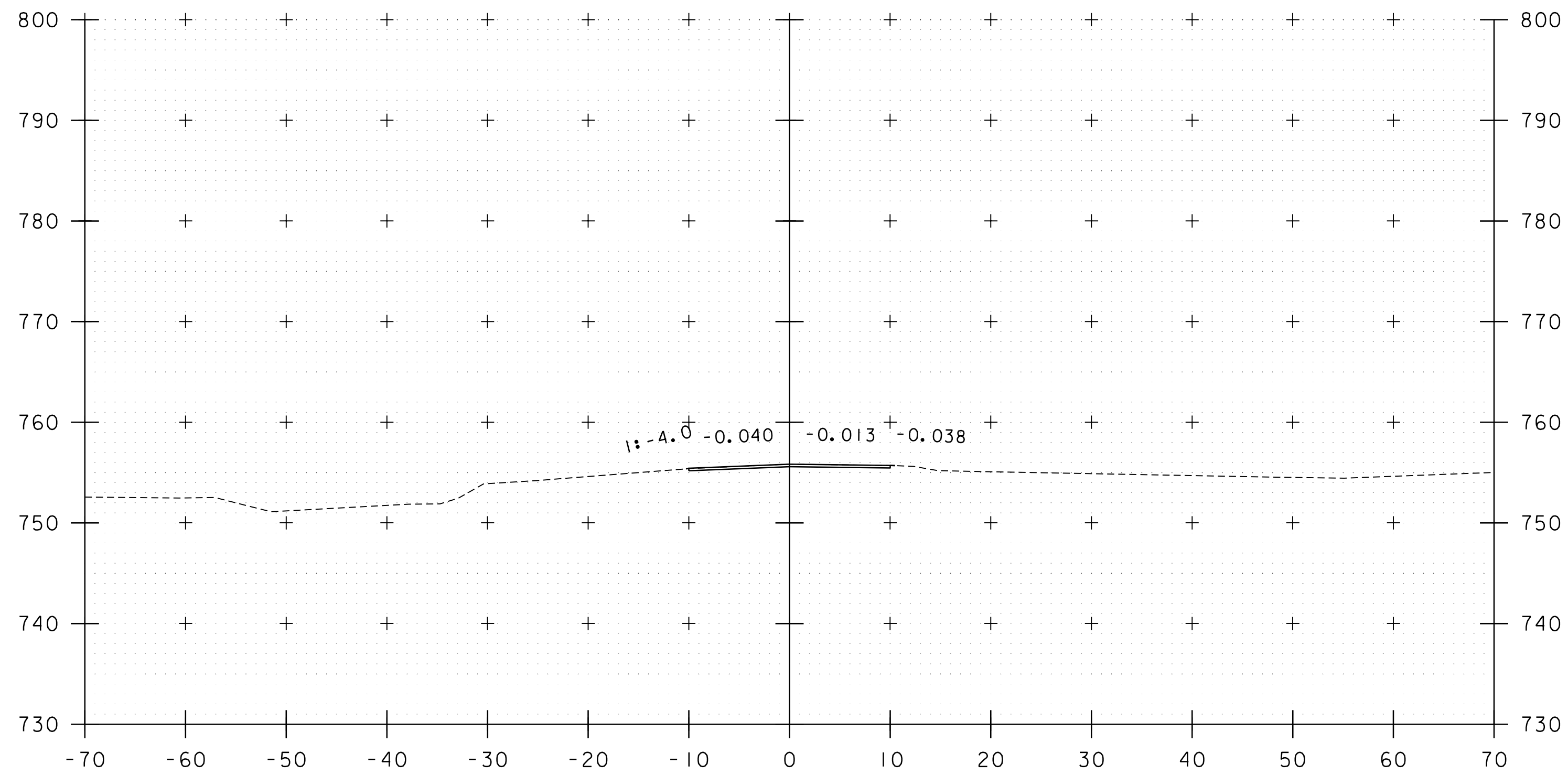
2+20
 BEGIN TH 47 APPROACH
 STA 2+15.00



2+50

STA. 2+20 TO STA. 2+70

PROJECT NAME: STOWE	PLOT DATE: 2/9/2024
PROJECT NUMBER: BO 1446(39)	DRAWN BY: M. LONGSTREET
FILE NAME: sl2j658xs.dgn	DESIGNED BY: C. BURRALL
PROJECT LEADER: C. BURRALL	CHECKED BY: C. BURRALL
TH 47 (SUGAR BUSH LN) CROSS SECTIONS I	SHEET 78 OF 84

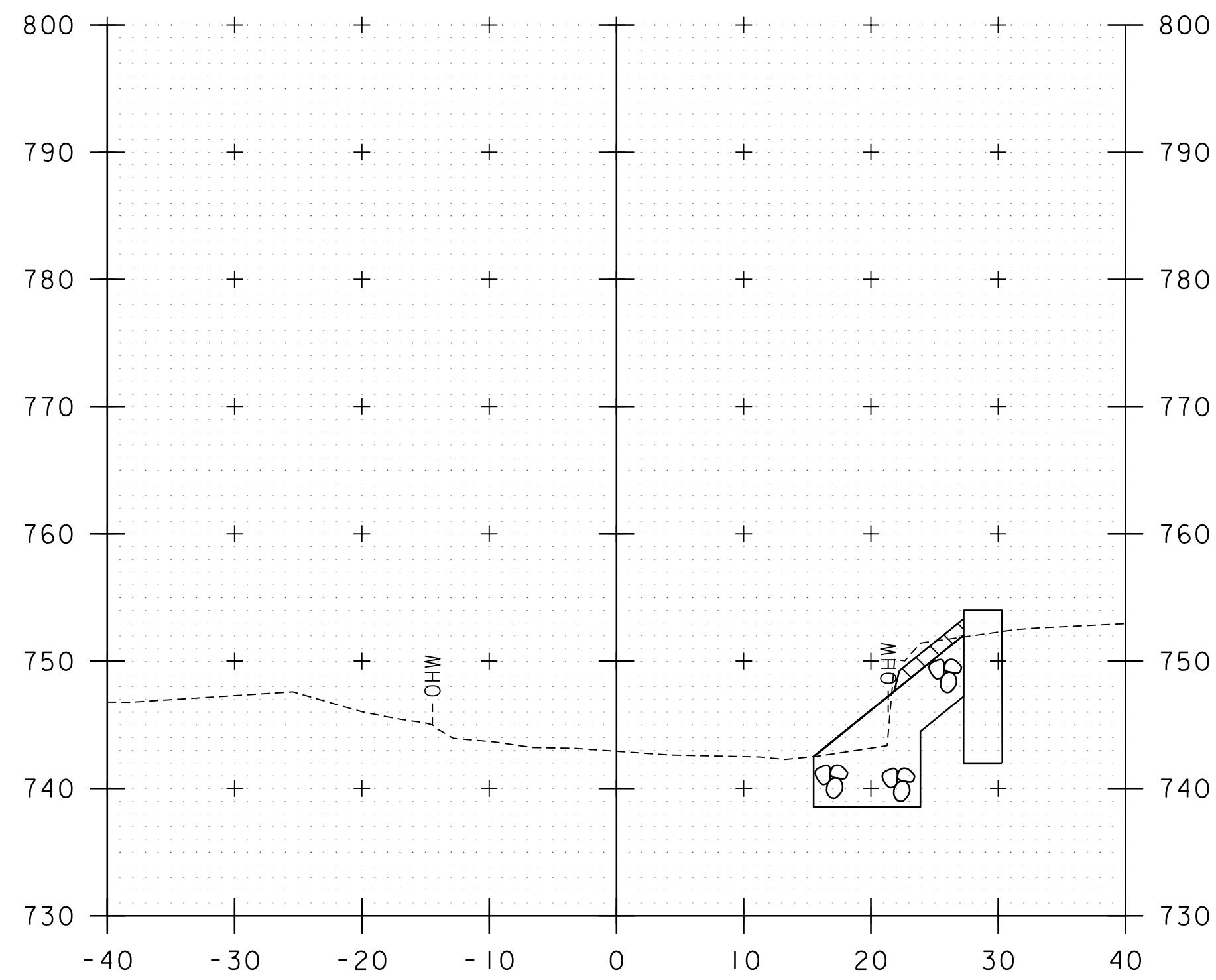


STA. 2+75 TO STA. 3+00

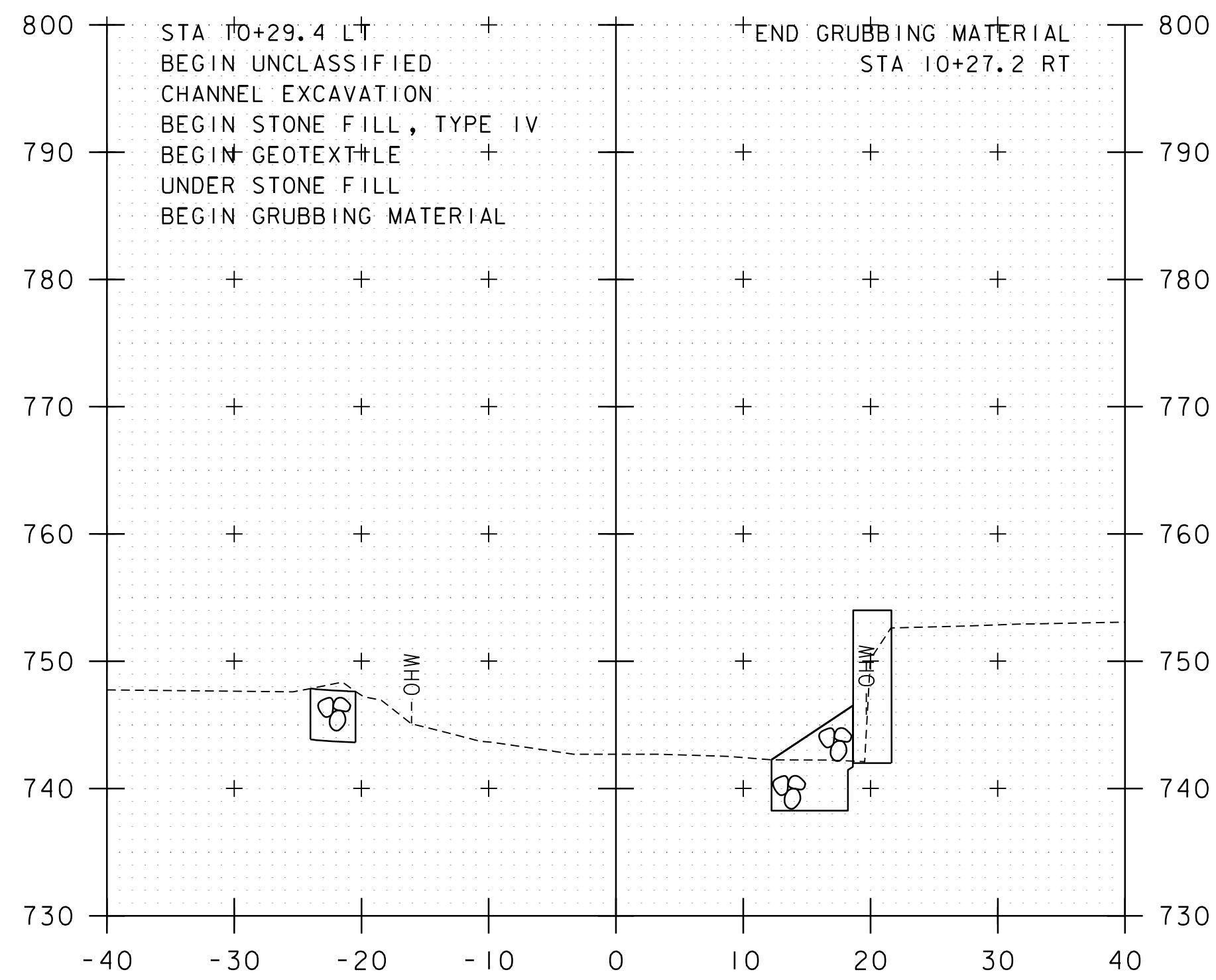
PROJECT NAME: STOWE
PROJECT NUMBER: BO 1446(39)

FILE NAME: sl2j658xs.dgn
PROJECT LEADER: C. BURRALL
DESIGNED BY: C. BURRALL
TH 47 (SUGAR BUSH LN) CROSS SECTIONS 2

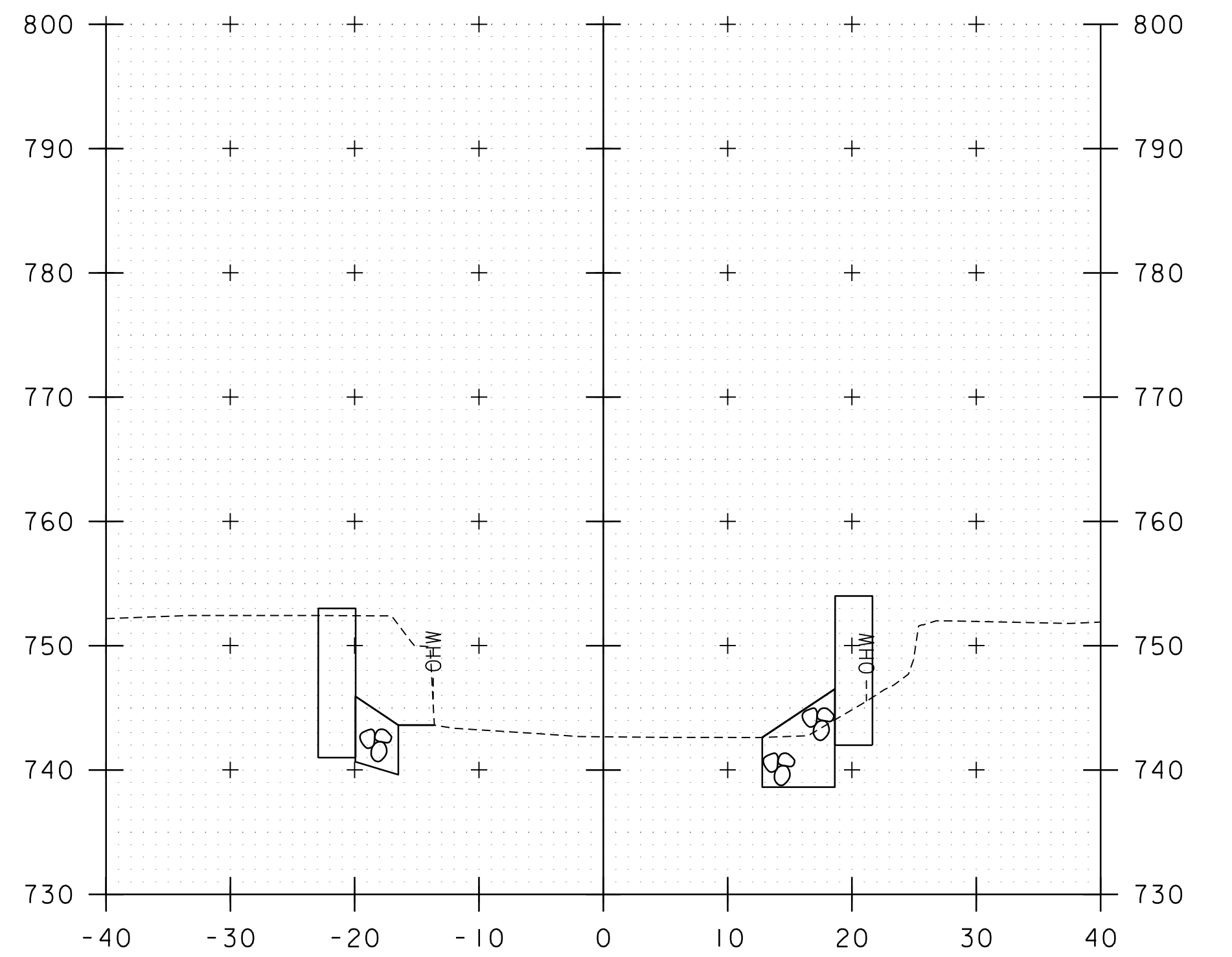
PLOT DATE: 2/9/2024
DRAWN BY: M. LONGSTREET
CHECKED BY: C. BURRALL
SHEET 79 OF 84



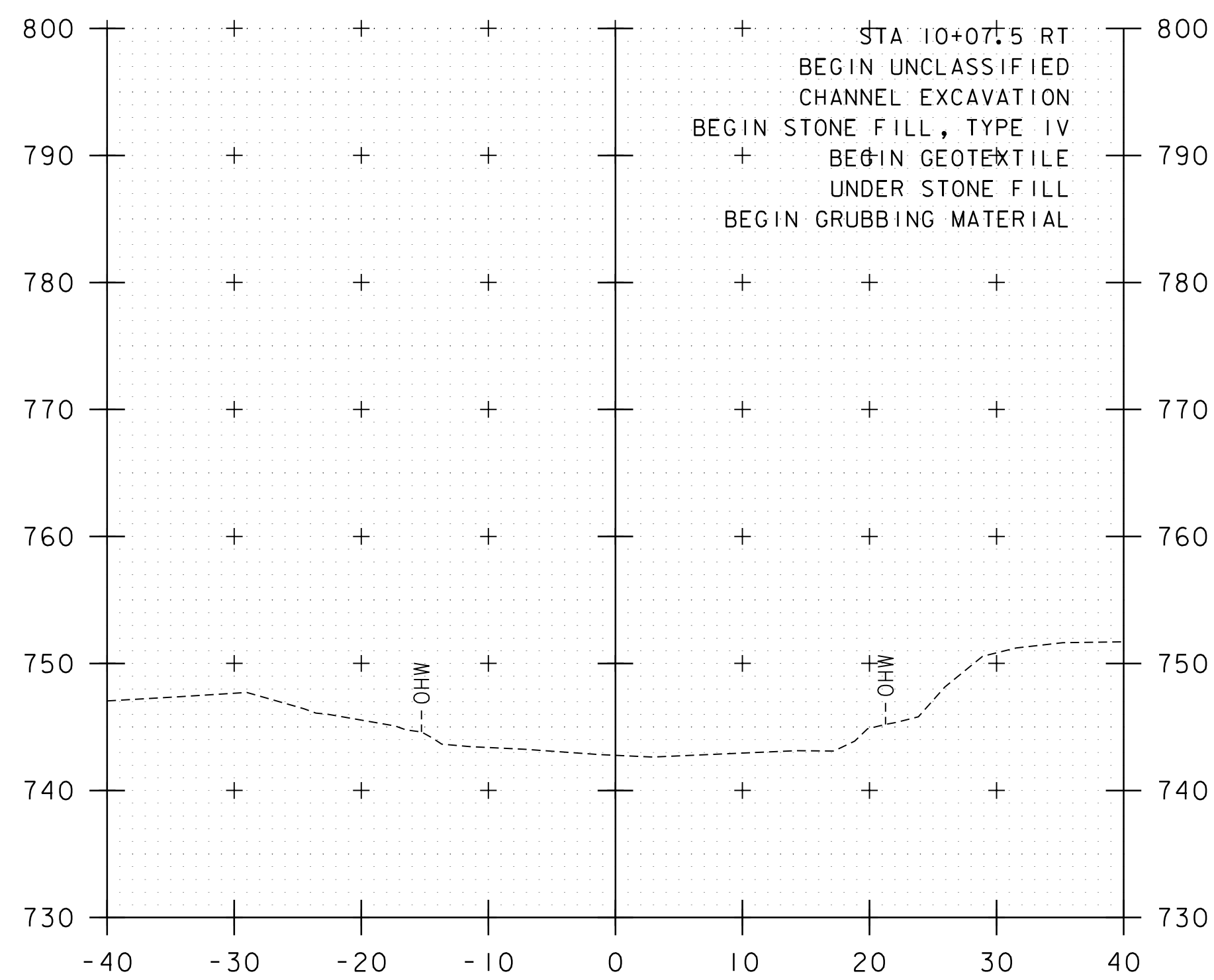
10+15



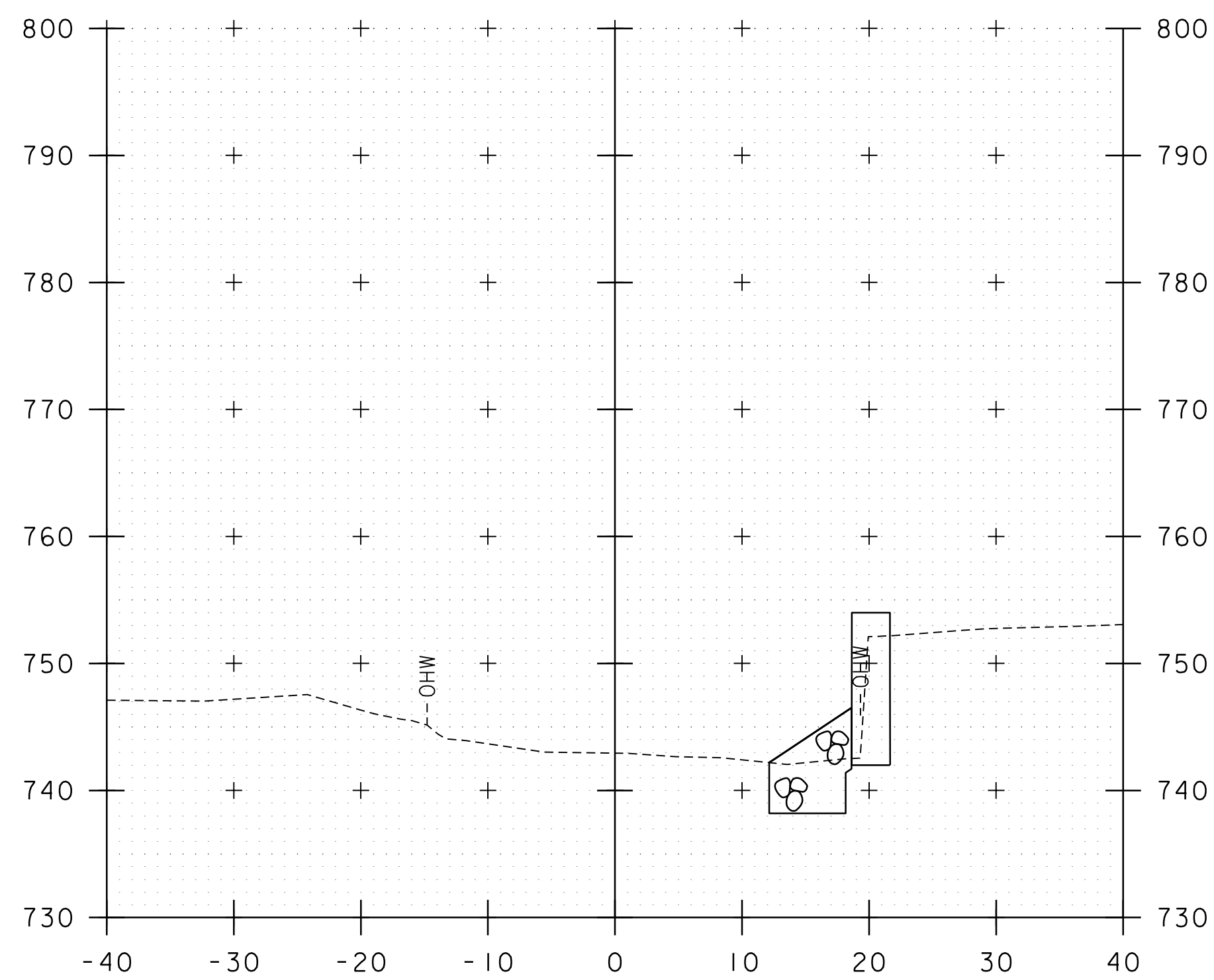
10+30



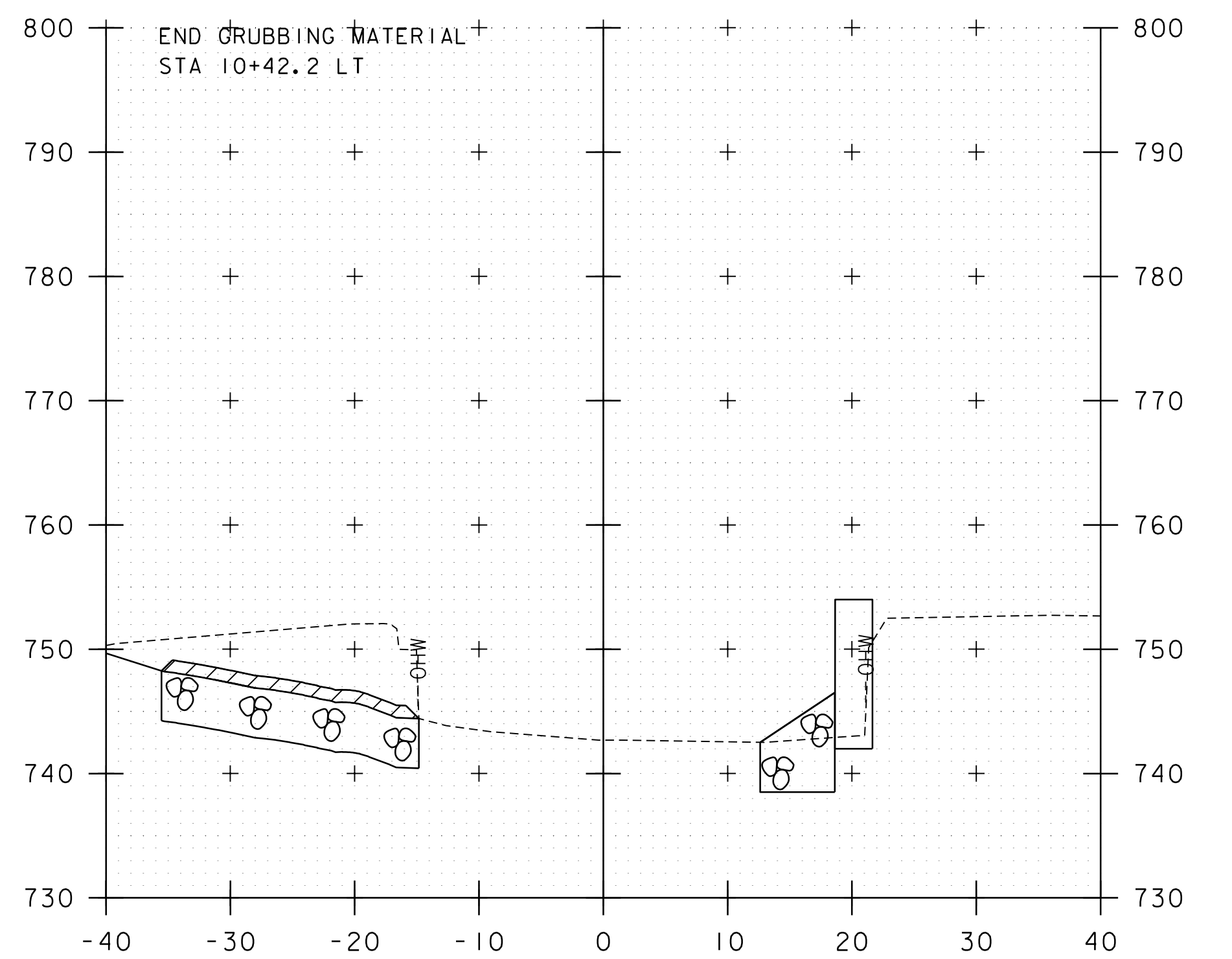
10+50



10+00



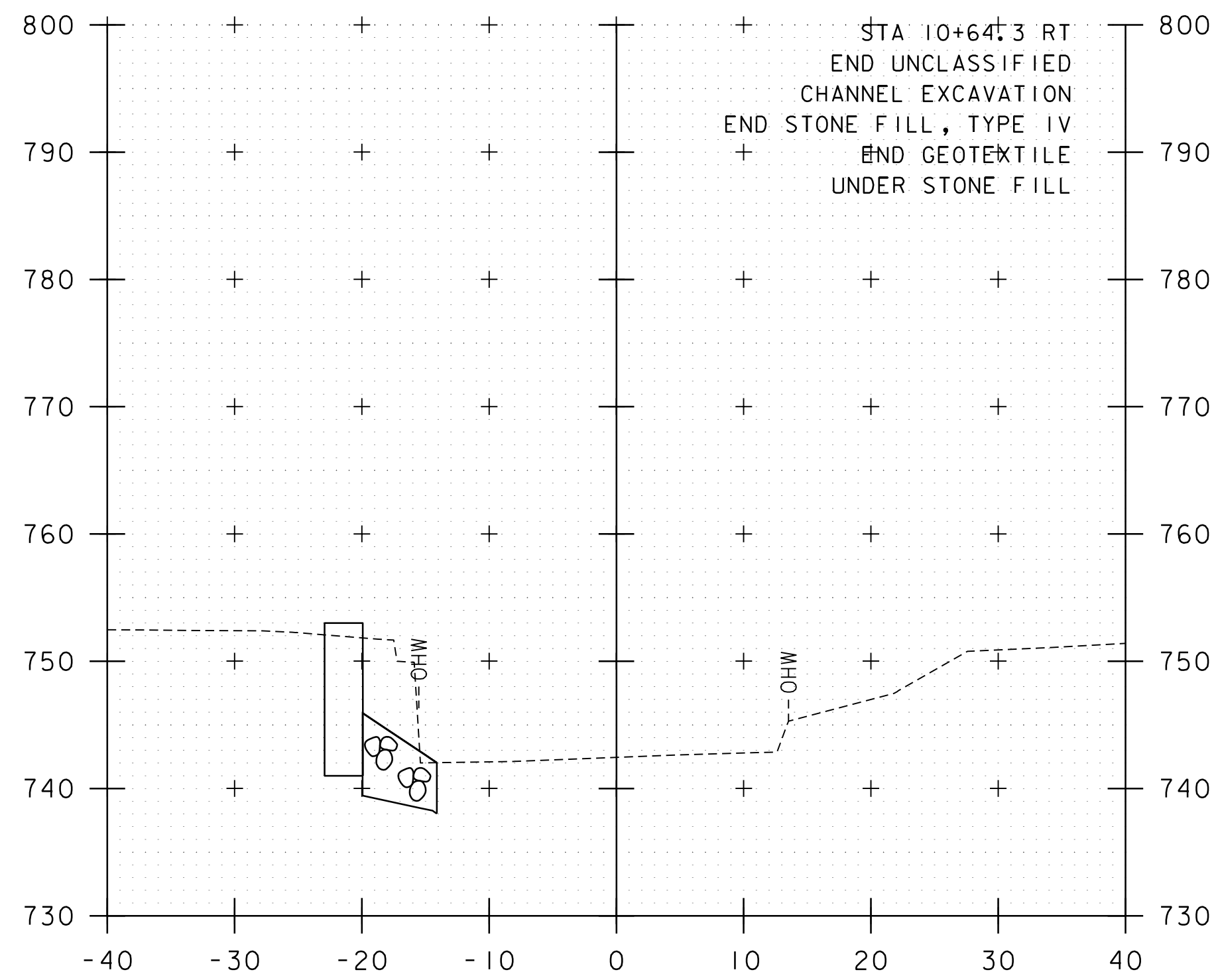
10+20



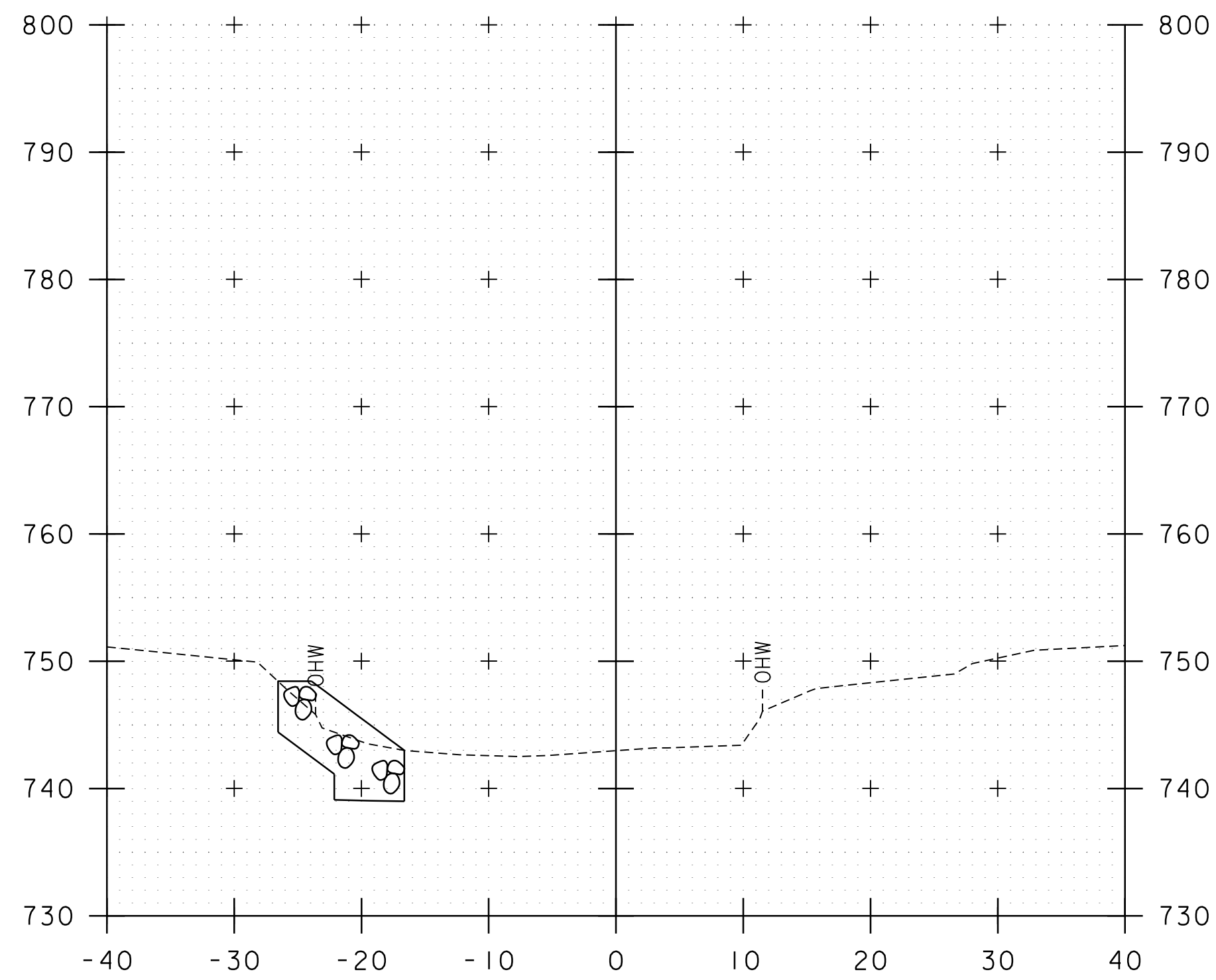
10+40

STA. 10+00 TO STA. 10+50

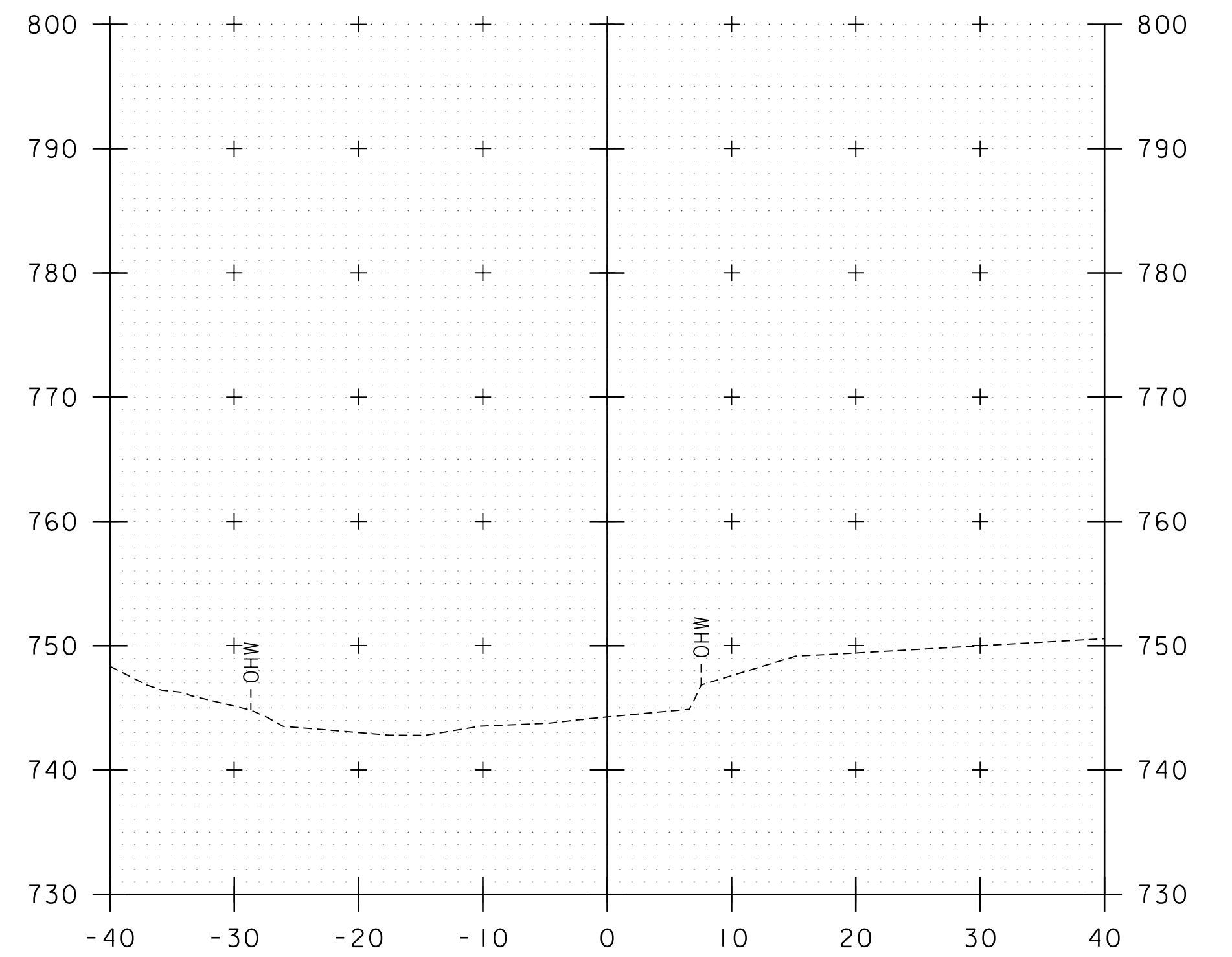
PROJECT NAME: STOWE	
PROJECT NUMBER: BO 1446(39)	
FILE NAME: sl2j658xs.dgn	PLOT DATE: 2/9/2024
PROJECT LEADER: C. BURRALL	DRAWN BY: M. LONGSTREET
DESIGNED BY: C. BURRALL	CHECKED BY: C. BURRALL
CHANNEL CROSS SECTIONS 1	SHEET 80 OF 84



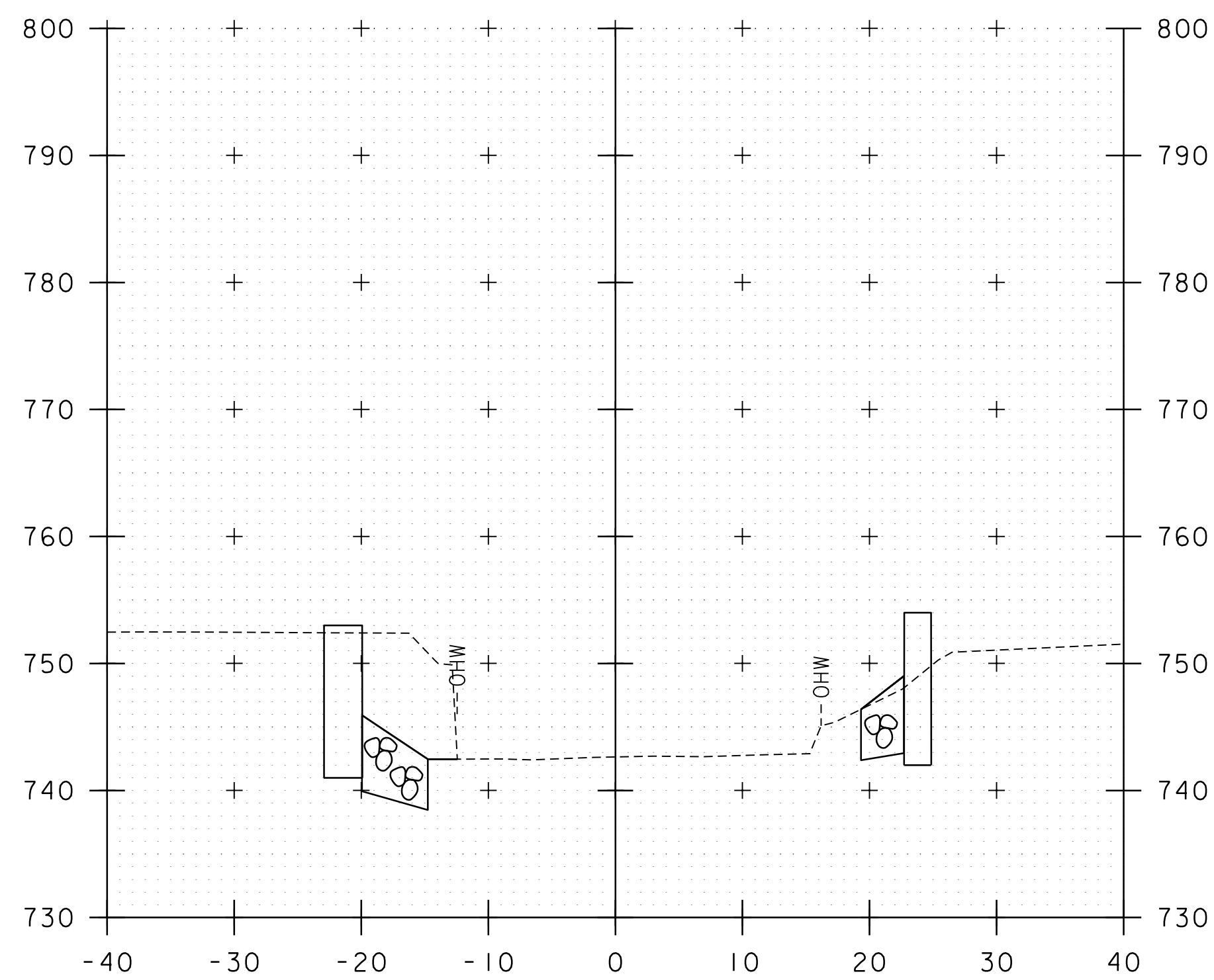
10+70



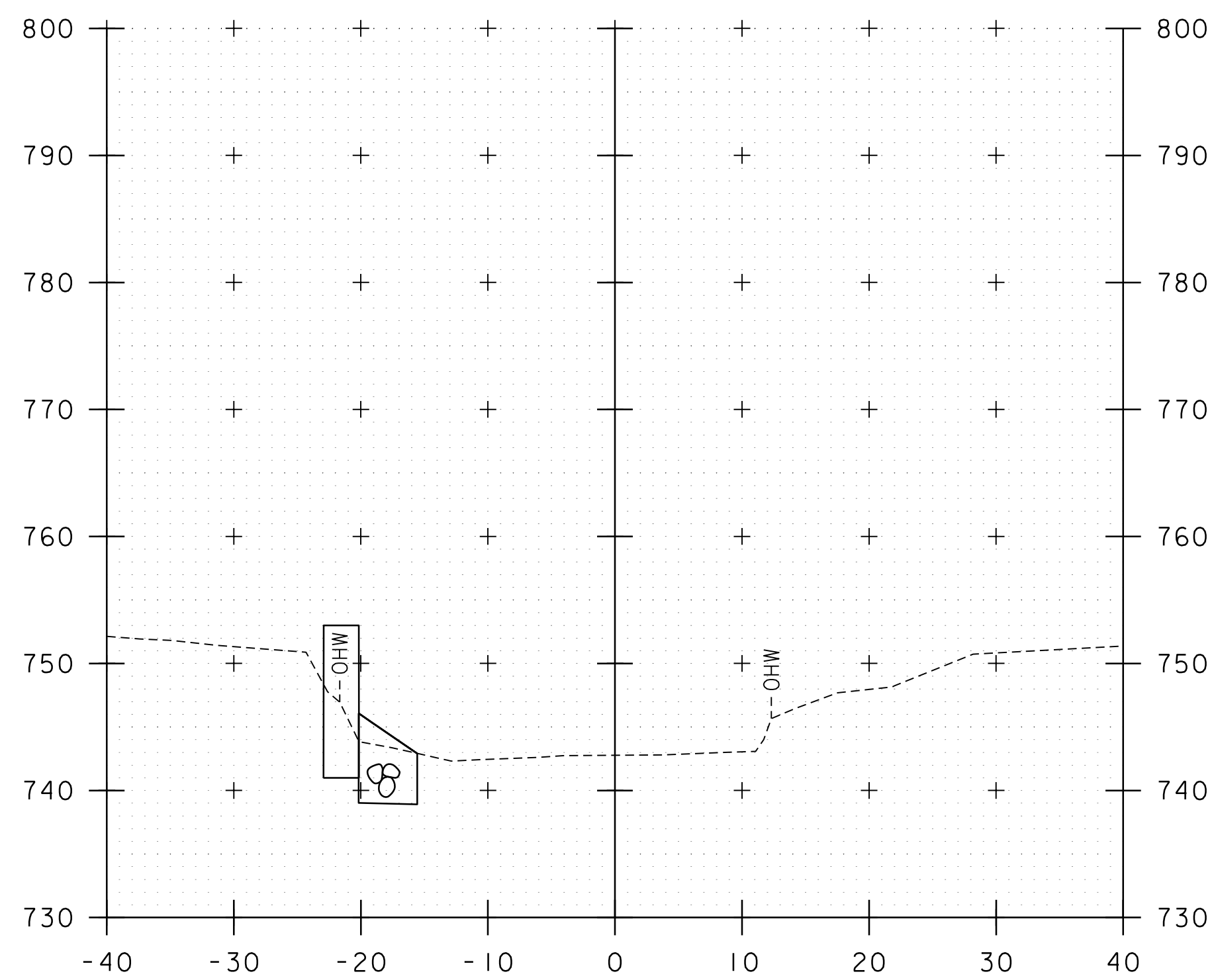
10+90



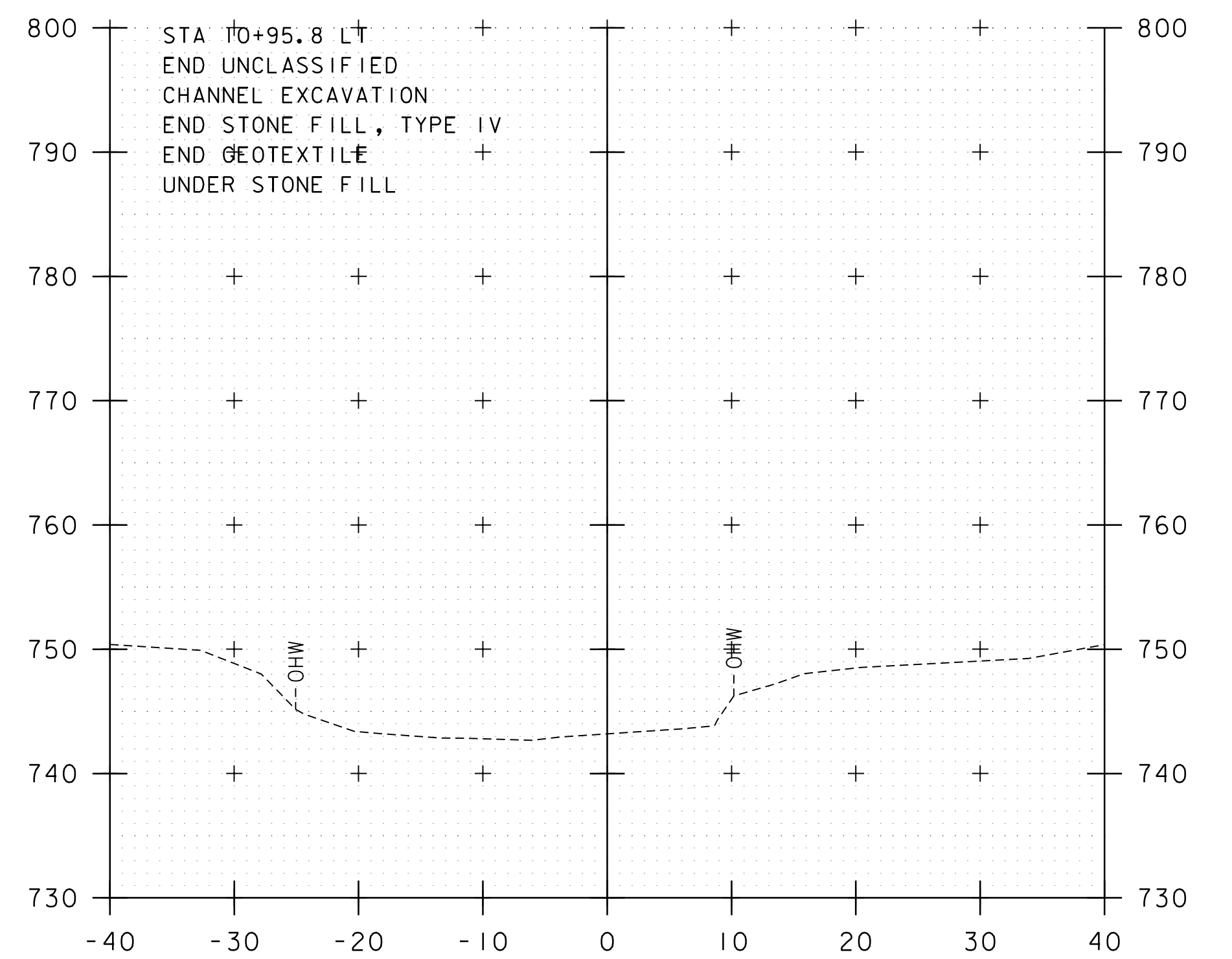
11+25



10+60



10+80



11+00

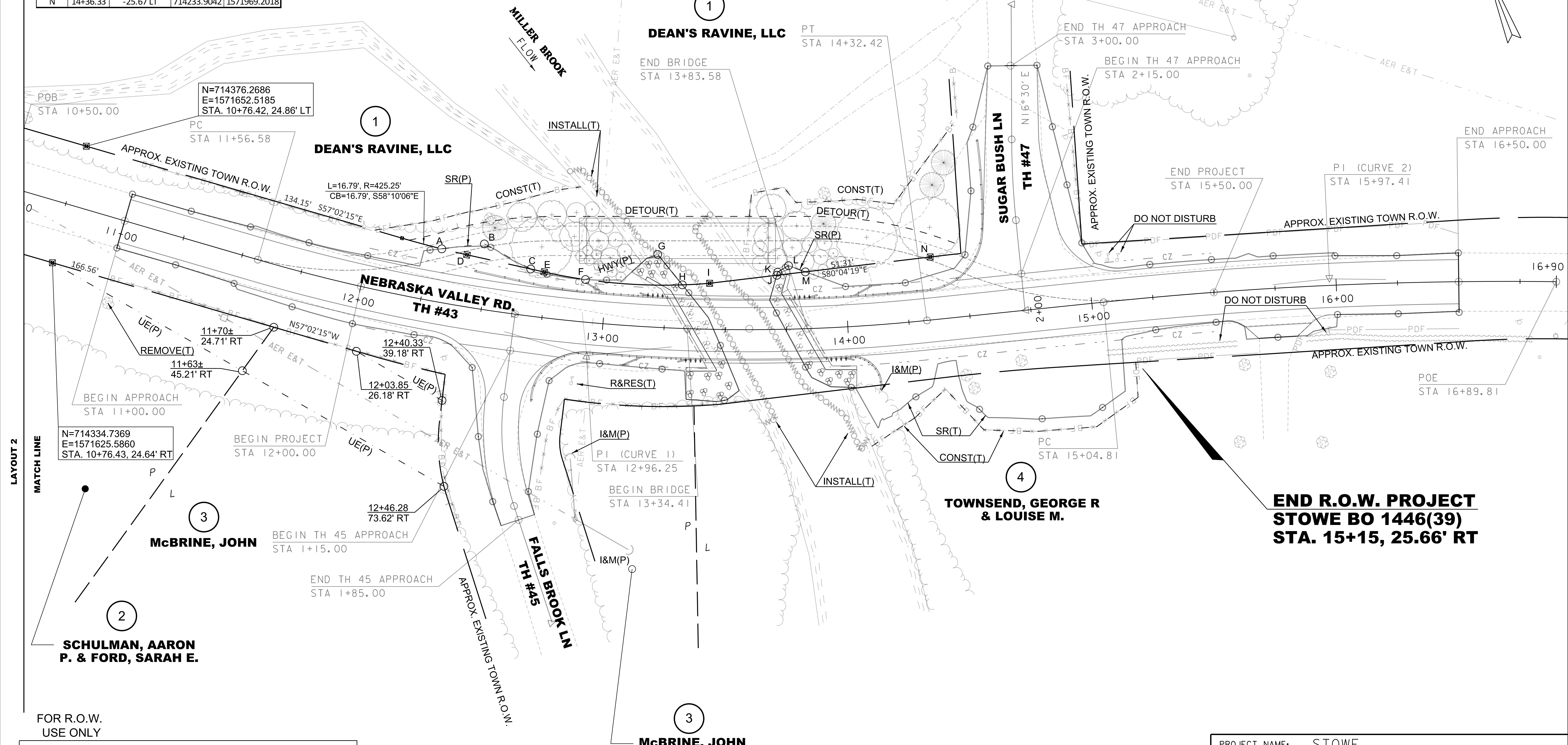
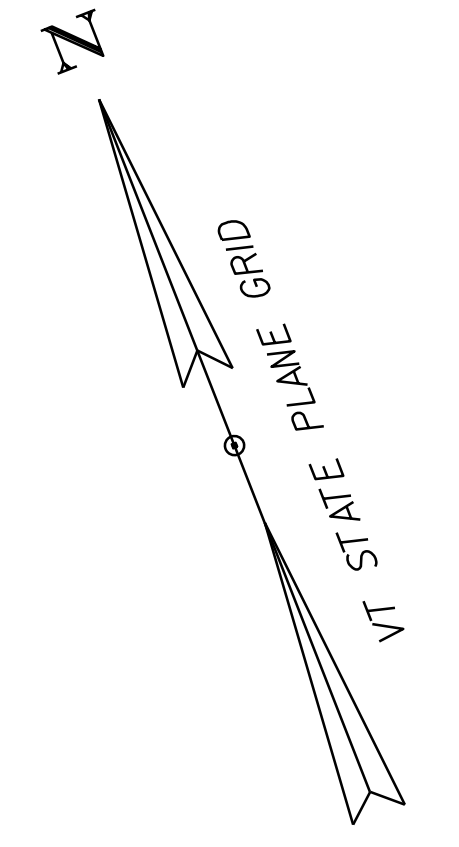
STA. 10+60 TO STA. 11+25

PROJECT NAME: STOWE	
PROJECT NUMBER: BO 1446(39)	
FILE NAME: sl2j658xs.dgn	PLOT DATE: 2/9/2024
PROJECT LEADER: C. BURRALL	DRAWN BY: M. LONGSTREET
DESIGNED BY: C. BURRALL	CHECKED BY: C. BURRALL
CHANNEL CROSS SECTIONS 2	SHEET 81 OF 84

POINT	STATION	OFFSET	NORTHING	EASTING
A	12+29.67	-21.66 LT	714294.4249	1571779.3362
B	12+47.05	-26.59 LT	714291.3652	1571796.5591
C	12+67.86	-19.15 LT	714276.1350	1571811.6970
D	12+40.53	-21.06 LT	714289.1531	1571788.4710
E	12+73.60	-18.61 LT	714273.3866	1571816.5901
F	12.91.07	-17.35 LT	714265.5978	1571831.7932
G	13+20.76	-29.76 LT	714266.8987	1571863.0400
H	13+31.74	-17.82 LT	714252.1139	1571869.0957
I	13+43.14	-18.80 LT	714249.5287	1571879.9362
J	13+71.38	-22.15 LT	714244.7649	1571907.1523
K	13+71.76	-23.38 LT	714245.8556	1571907.8481
L	13+76.37	-25.95 LT	714247.1393	1571912.8243
M	13+83.40	-23.23 LT	714242.7500	1571918.6641
N	14+36.33	-25.67 LT	714233.9042	1571969.2018

LINE TABLE		
NAME	LENGTH	DIRECTION
A-B	17.49'	S 79°55'34" E
B-C	21.48'	S 44°49'19" E
C-D	26.64'	N 60°43'14" W
C-E	5.61'	S 60°43'14" E
F-G	31.20'	N 87°33'26" E
G-H	15.95'	S 22°30'25" E
I-J	27.63'	S 80°04'19" E
J-M	11.69'	S 80°04'19" E
J-K	1.29'	N 32°32'10" E
K-L	5.14'	N 75°32'06" E
L-M	7.31'	S 53°04'15" E

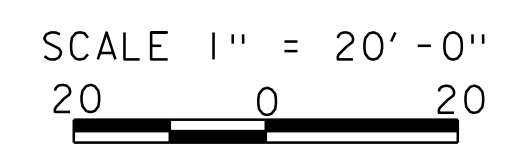
CURVE TABLE			
NAME	RADIUS	ARC LENGTH	CHORD DIRECTION
A-D	425.25	10.55'	S 60°00'36" E
E-F	225.25	17.17'	S 62°54'14" E
F-H	225.25	39.63'	S 70°07'41" E
H-I	225.25	11.15'	S 76°35'11" E



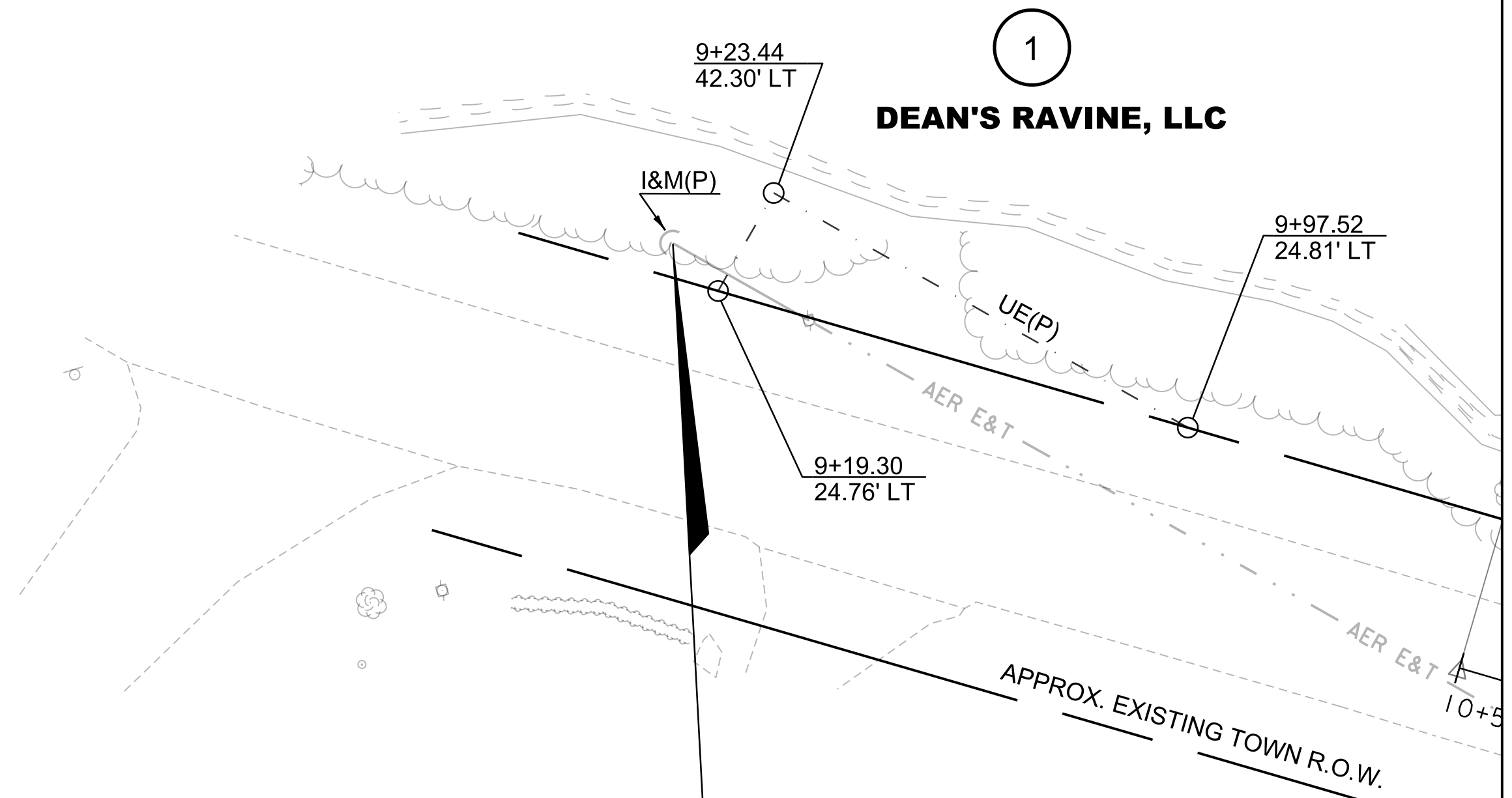
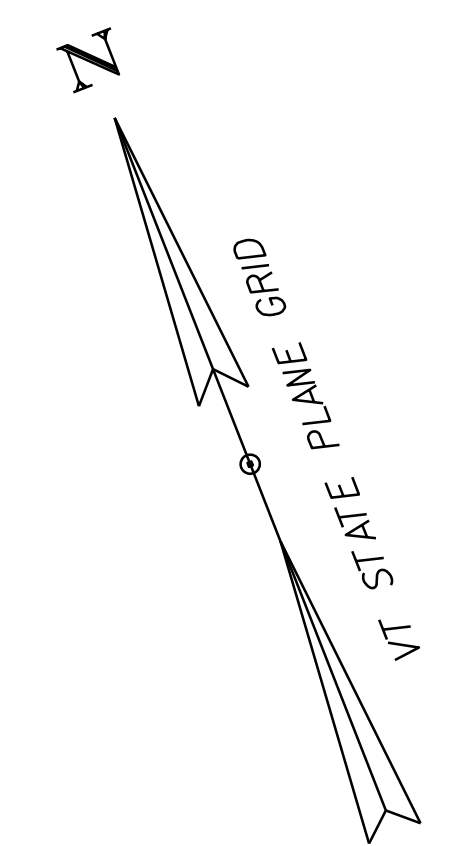
LAYOUT 2
MATCH LINE

FOR R.O.W.
USE ONLY

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 TOWN OF STOWE'S ACQUISITION OF LAND AND RIGHTS FOR THIS PROJECT.



PROJECT NAME:	STOWE	PLOT DATE:	09-FEB-2024
PROJECT NUMBER:	BO 1446(39)	DRAWN BY:	A. PROULX
FILE NAME:	r12j658lay1.dgn	CHECKED BY:	A. PROULX
PROJECT LEADER:	C. COTA	SHEET	82 OF 84
DESIGNED BY:	VHB		
R.O.W. LAYOUT SHEET 1			



**BEGIN R.O.W. PROJECT
STOWE BO 1446(39)
STA. 10+76.43, 29.99' LT**

FOR R.O.W.
USE ONLY

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 TOWN OF STOWE'S
ACQUISITION OF LAND AND RIGHTS FOR THIS PROJECT.

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



PROJECT NAME: STOWE	
PROJECT NUMBER: BO 1446(39)	
FILE NAME: r12j658lay2.dgn	PLOT DATE: 09-FEB-2024
PROJECT LEADER: C. COTA	DRAWN BY: A. PROULX
DESIGNED BY: VHB	CHECKED BY: A. PROULX
R.O.W. LAYOUT SHEET 2	SHEET 83 OF 84

