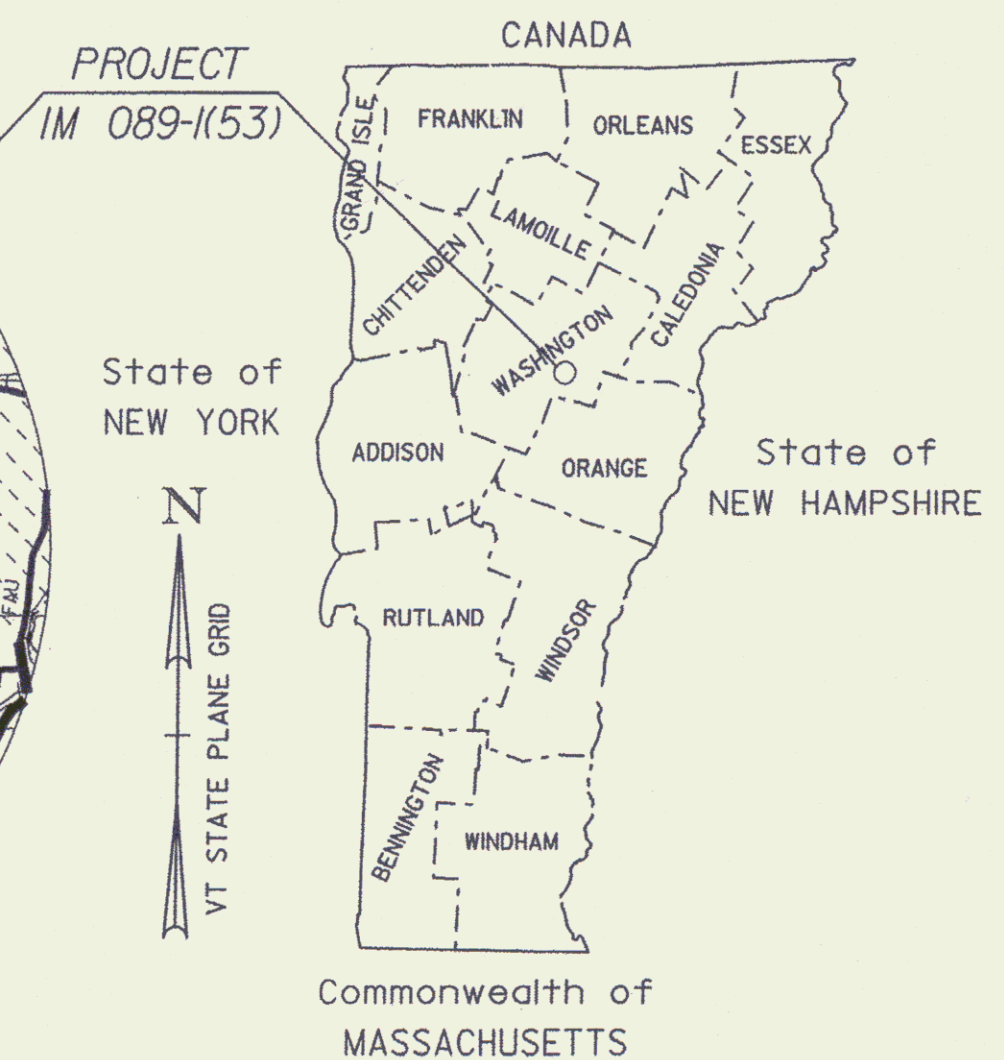
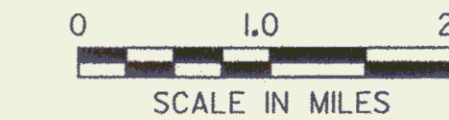
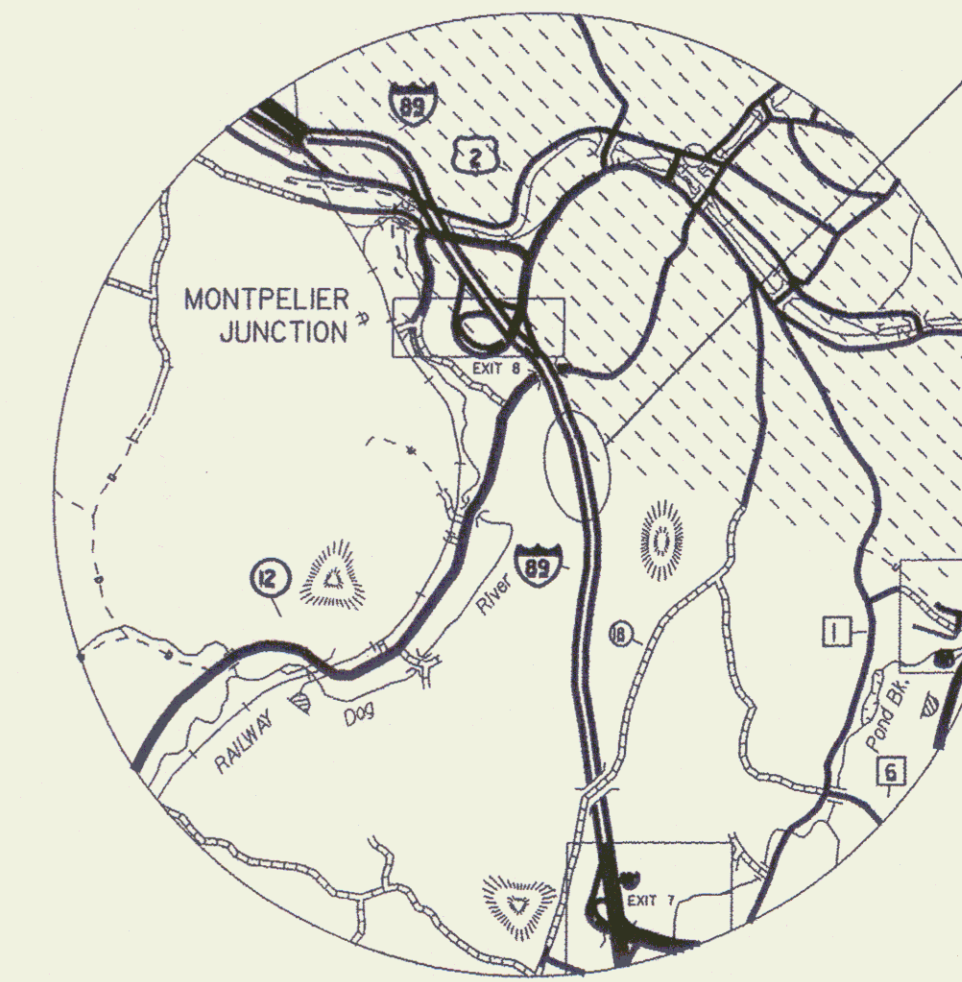


INDEX OF SHEETS
(SEE SHEET 2)

STATE OF VERMONT AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT TOWNS OF BERLIN AND MONTPELIER COUNTY OF WASHINGTON PRINCIPAL ARTERIAL INTERSTATE 89 (NORTHBOUND)

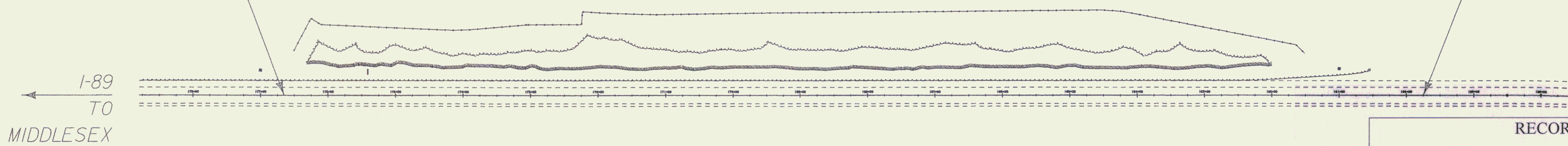
PROJECT LOCATION: BEGINNING AT APPROXIMATELY MM 51.91 AND EXTENDING NORTHERLY 0.32 MILES TO APPROXIMATELY MM 52.23, ADJACENT TO THE NORTHBOUND LANE.

PROJECT DESCRIPTION: WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES HAND SCALING, INSTALLATION OF ROCKFALL CATCHMENT FENCE, TRAFFIC CONTROL AND OTHER RELATED ITEMS.

LENGTH OF PROJECT: 1,690 FT 0.32 MILES

STATION 176+65
END PROJECT
IM 089-1(53)

STATION 159+75
BEGIN PROJECT
IM 089-1(53)

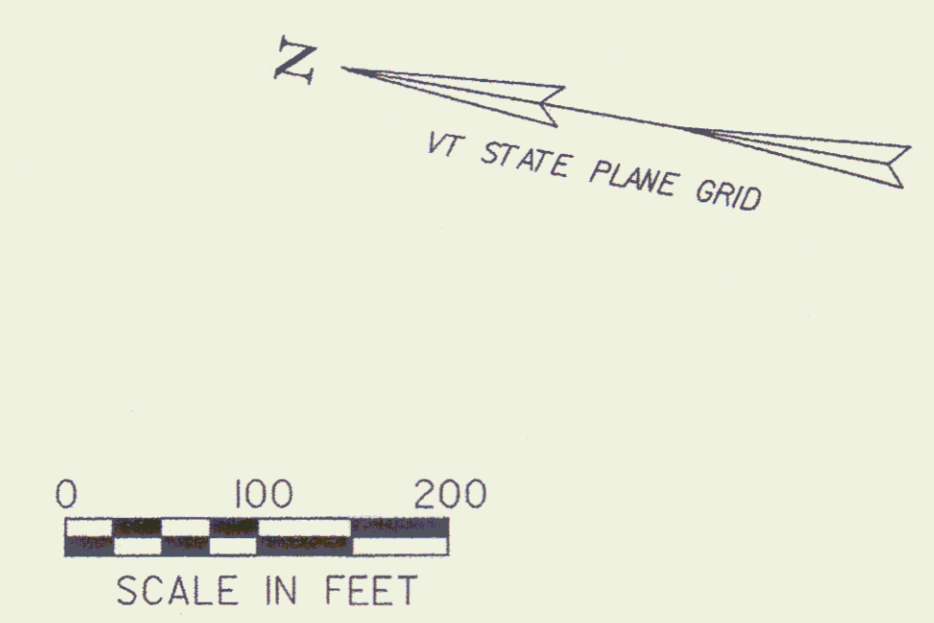


QUALITY ASSURANCE PROGRAM: LEVEL 1

| CONVENTIONAL SYMBOLS | |
|----------------------|--|
| COUNTY LINE | |
| TOWN LINE | |
| LIMITS OF ACCESS | |
| POINT OF ACCESS | |
| FENCE LINE | |
| STONE WALL | |
| TRAVELED WAY | |
| GUARD RAIL | |
| RAILROAD | |
| SURVEY LINE | |
| CULVERT | |
| POWER POLE | |
| TELEPHONE POLE | |
| TREES | |
| CONTROL OF ACCESS | |
| PROPERTY LINE | |
| R.O.W. TAKING LINE | |
| SLOPE RIGHTS | |
| TOP OF CUT | |
| TOE OF SLOPE | |

SURVEYED BY : N/A
SURVEYED DATE : N/A

DATUM
VERTICAL N/A
HORIZONTAL N/A



| RECORD PLANS | |
|--|--------------------------------|
| CONTRACTOR: | WRIGHT CONSTRUCTION, INC. |
| RESIDENT ENGINEER: | CHARLIE HARDING |
| CONSTRUCTION BEGAN: | MAY 16, 2011 |
| CONSTRUCTION COMPLETE: | SEPTEMBER 21, 2012 |
| RECORD PLANS BY: | CHARLIE HARDING & STEPHEN KENT |
| I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN. | |
| BY | RESIDENT ENGINEER |
| DATE | 6/3/13 |
| NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives. | |

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JUNE 15, 2006 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

| | |
|---------------------------------|---------------------|
| DIRECTOR OF PROGRAM DEVELOPMENT | |
| APPROVED | DATE 10-13-11 |
| PROJECT MANAGER : KEN ROBIE | |
| PROJECT NAME : | BERLIN - MONTPELIER |
| PROJECT NUMBER : | IM 089-1(53) |
| SHEET 1 OF 29 SHEETS | |

INDEX OF SHEETS

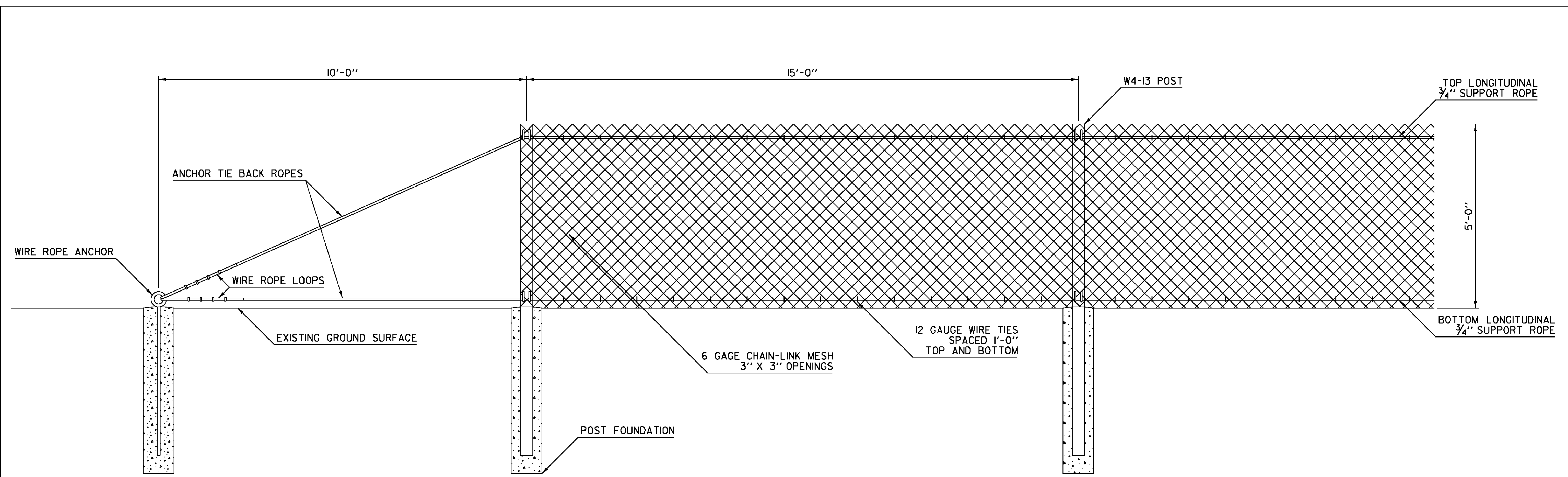
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- 2. INDEX OF SHEETS
- 3.-4. DETAIL SHEETS
- 5. QUANTITY SHEET
- 6. GENERAL NOTES
- 7.-14. LAYOUT SHEETS
- 15. ROW PLAN SHEET
- 16. EPSC NARRATIVE
- 17.-19. EXISTING CONDITIONS LAYOUT SHEETS
- 20.-22. EPSC LAYOUT SHEETS
- 23.-26. EPSC DETAIL SHEETS
- 27.-29. TRAFFIC CONTROL SHEETS

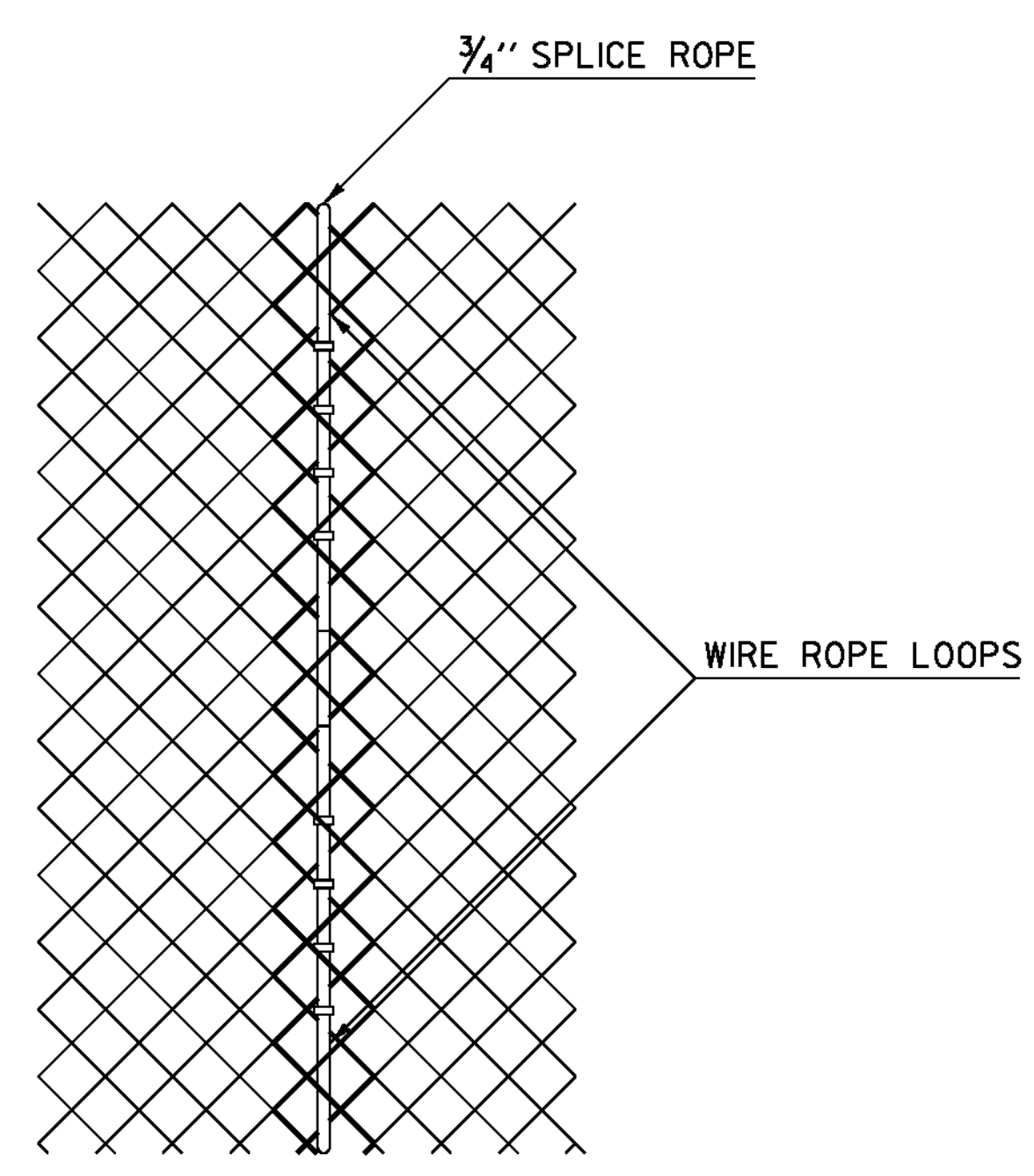
VAOT DESIGN STANDARDS

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| A-60 | STANDARD TYPICAL FOR SLOPES IN SOLID ROCK EXCAVATION DRILLING AND BLASTING OF SOLID ROCK SUBGRADE | 06-01-94 |
| B-5 | EMBANKMENT ON EARTH SLOPE, EMBANKMENT ON ROCK SLOPE MUCK EXCAVATION, TYPICAL SLOPE ROUNDING | 06-01-94 |
| E-100 | CONSTRUCTION APPROACH SIGNS | 01-02-04 |
| E-101 | CONSTRUCTION SIGN DETAILS | 05-30-03 |
| E-102 | CONSTRUCTION SIGN DETAILS | 06-30-03 |
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| E-106 | TRAFFIC CONTROL MISCELLANEOUS DETAILS | 03-01-04 |
| E-107 | DELINEATION, BARRICADES AND DETOURS FOR CONSTRUCTION AREAS | 06-30-03 |
| E-110 | MAJOR MAINTENANCE OPERATION LANE CLOSURE | 08-08-95 |
| G-1 | STEEL BEAM GUARDRAIL WITH STEEL POSTS STEEL BEAM GUARDRAIL WITH WOOD POSTS | 01-03-00 |
| G-1D | STEEL BEAM GUARDRAIL APPROACH END TERMINAL STEEL BEAM GUARDRAIL TRAILING END TERMINAL ANCHOR FOR STEEL BEAM GUARDRAIL STEEL BEAM MEDIAN BARRIER | 01-03-00 |
| G-19 | GENERIC PLANS FOR GUARDRAIL END TERMINALS | 11-15-02 |

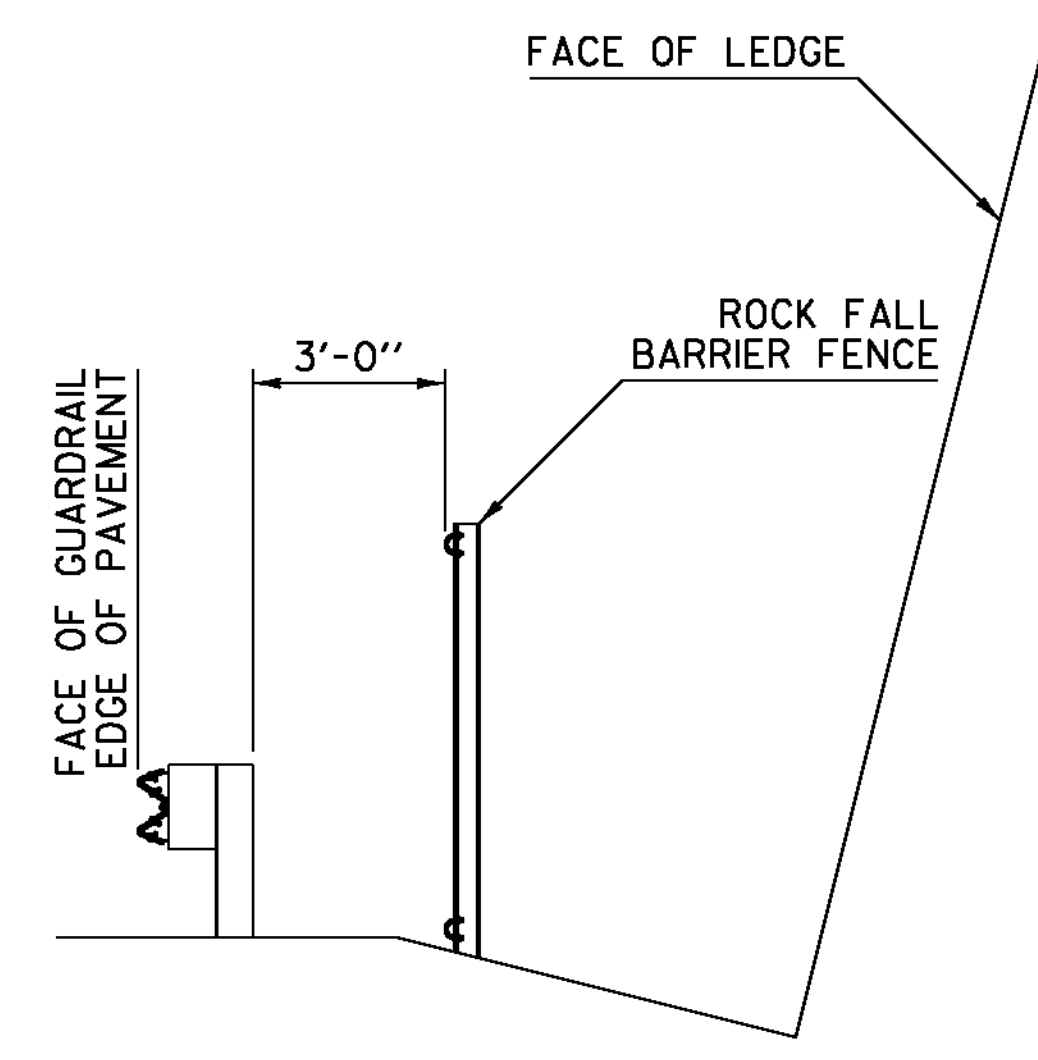
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|---|------------------------|
| PROJECT NAME: BERLIN - MONTPELIER | |
| PROJECT NUMBER: IM 089-1(53) | |
| FILE NAME: 07A150/DESIGN/D07A150FRM.DGN | PLOT DATE: 19-OCT-2011 |
| PROJECT LEADER: K. ROBIE | DRAWN BY: I. SHEA |
| DESIGNED BY: P. PELOQUIN | CHECKED BY: S. MENARD |
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ELEVATION



CHAIN-LINK MESH SPLICE DETAIL



TYPICAL SECTION

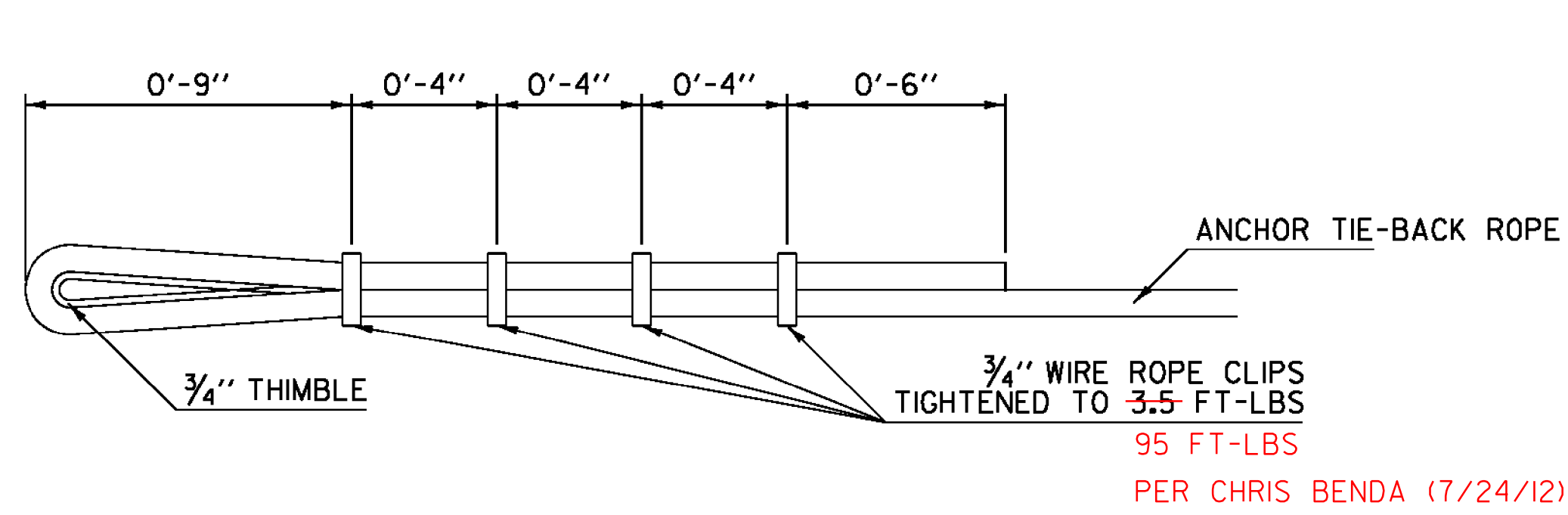
NOTE:

PAYMENT FOR ROCKFALL BARRIER FENCE WILL BE MADE UNDER CONTRACT ITEM 900.640 SPECIAL PROVISION (ROCKFALL BARRIER FENCE).

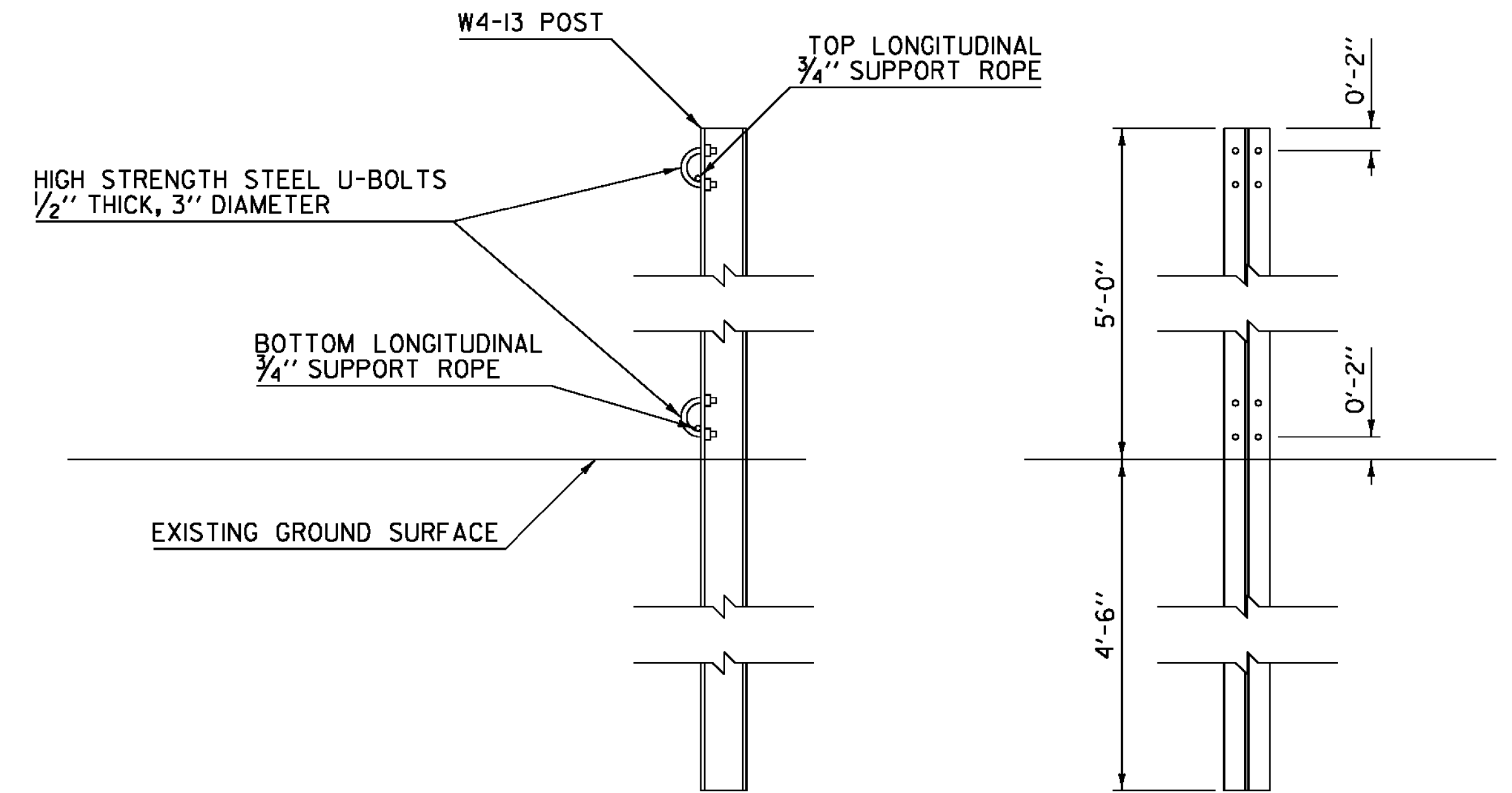
NOT TO SCALE

**SPECIAL PROVISION
(ROCKFALL BARRIER FENCE)**

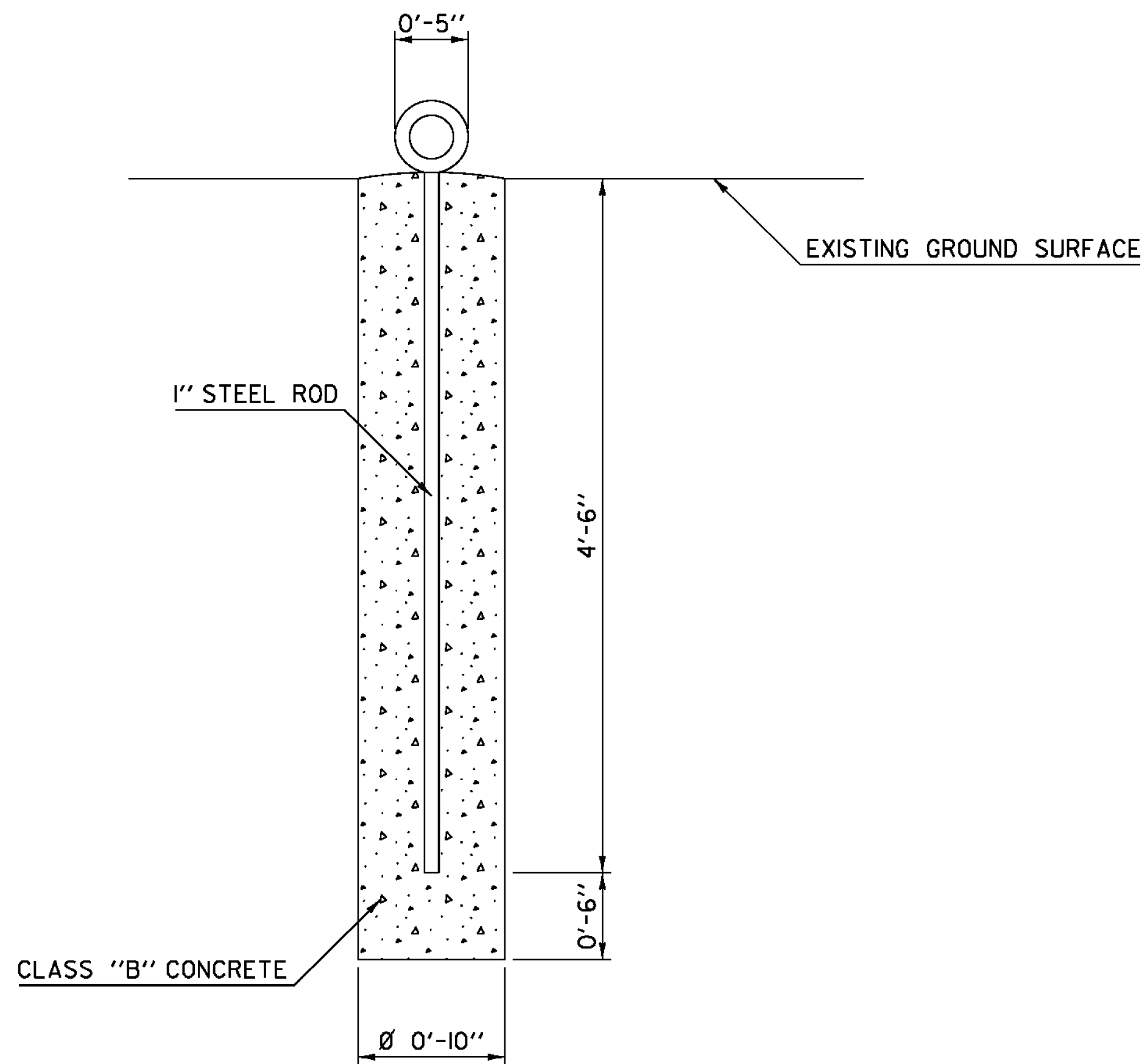
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| PROJECT NUMBER: IM 089-1(53) | |
| FILE NAME: 07A150/DESIGN/D07A150FRM.DGN | PLOT DATE: 19-OCT-2011 |
| PROJECT LEADER: K. ROBBIE | DRAWN BY: P. PELOQUIN |
| DESIGNED BY: P. PELOQUIN | CHECKED BY: S. MENARD |
| DETAIL SHEET 1 | SHEET 3 OF 29 |



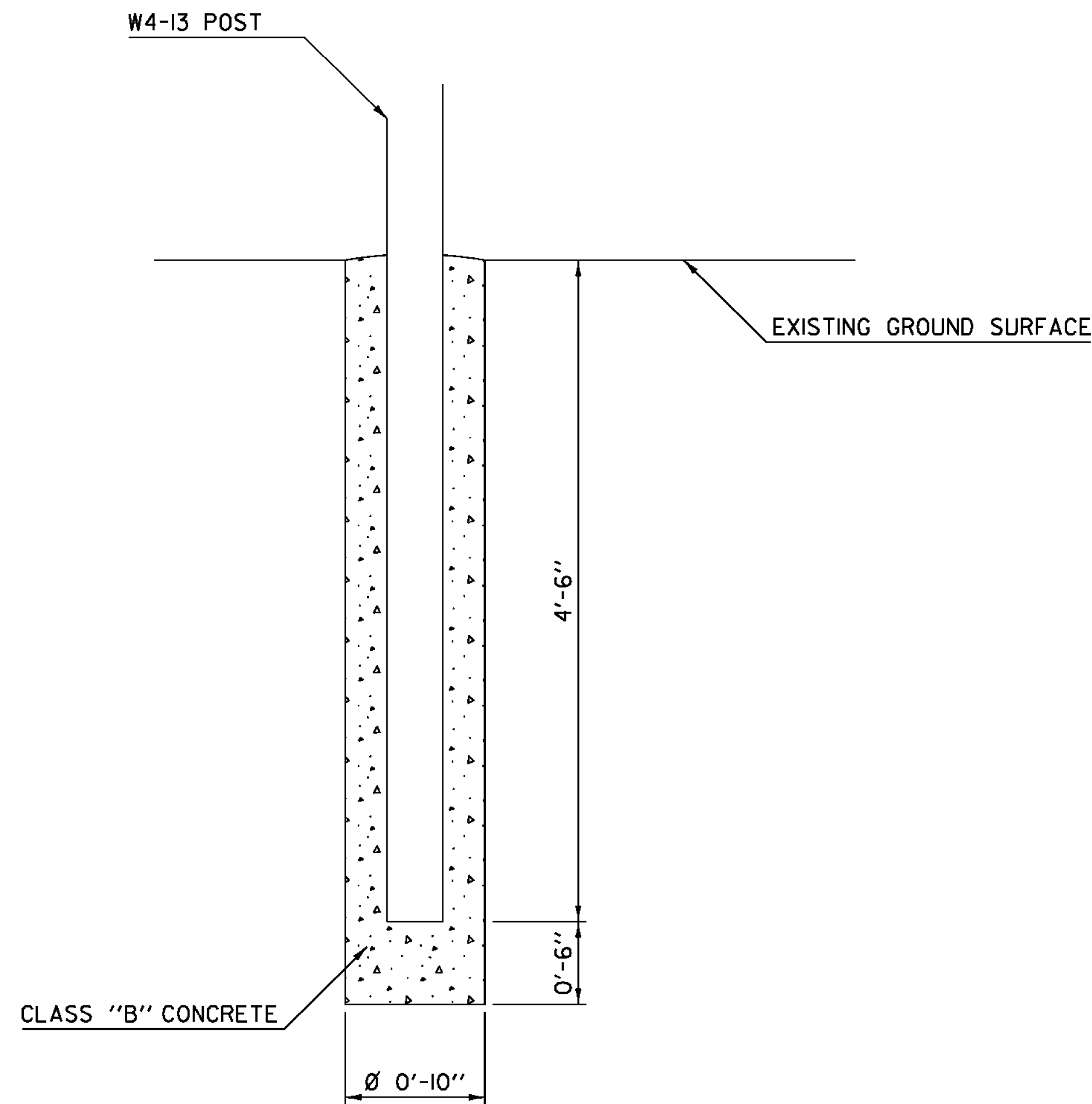
WIRE ROPE LOOP DETAIL



POST DETAIL



WIRE ROPE ANCHOR DETAIL



FOUNDATION DETAIL

NOTE:

PAYMENT FOR ROCKFALL BARRIER FENCE WILL BE MADE UNDER CONTRACT ITEM 900.640 SPECIAL PROVISION (ROCKFALL BARRIER FENCE).

**SPECIAL PROVISION
(ROCKFALL BARRIER FENCE)**

NOT TO SCALE

| | |
|---|------------------------|
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| PROJECT NUMBER: IM 089-1(53) | |
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| PROJECT LEADER: K. ROBIE | DRAWN BY: P. PELOQUIN |
| DESIGNED BY: P. PELOQUIN | CHECKED BY: S. MENARD |
| DETAIL SHEET 2 | SHEET 4 OF 29 |

QUANTITY SHEET 1

| SUMMARY OF ESTIMATED QUANTITIES | | | | | | | | | | TOTALS | | DESCRIPTIONS | | | | DETAILED SUMMARY OF QUANTITIES | | |
|---------------------------------|--|--|--|--|--|--|--|---------|-----------------|-------------|-------|--------------|--|-------------|-------|--------------------------------|------|-------|
| | | | | | | | | ROADWAY | EROSION CONTROL | GRAND TOTAL | FINAL | UNIT | ITEMS | ITEM NUMBER | ROUND | QUANTITIES | UNIT | ITEMS |
| | | | | | | | | 1 | | 1 | | LS | CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS | 201.10 | - | | | |
| | | | | | | | | 0.82 | | 0.82 | | ACRE | CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS | 201.11 | - | | | |
| | | | | | | | | 1 | | 1 | | CY | TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.) | 204.22 | - | | | |
| | | | | | | | | 40 | | 40 | | HR | POWER BROOM RENTAL, TYPE II | 608.31 | EST. | | | |
| | | | | | | | | 2 | | 2 | | EACH | ENERGY ABSORPTION ATTENUATOR | 621.56 | - | | | |
| | | | | | | | | 1520 | | 1520 | | LF | REMOVE AND RESET GUARDRAIL | 621.75 | 50 | | | |
| | | | | | | | | 1650 | | 1650 | | LF | TEMPORARY TRAFFIC BARRIER | 621.90 | 50 | | | |
| | | | | | | | | 560 | | 560 | | HR | UNIFORMED TRAFFIC OFFICERS | 630.10 | EST. | | | |
| | | | | | | | | 1 | | 1 | | LS | TESTING EQUIPMENT, CONCRETE | 631.16 | - | | | |
| | | | | | | | | 1 | | 1 | | LS | MOBILIZATION/DEMobilIZATION | 635.11 | - | | | |
| | | | | | | | | 1 | | 1 | | LS | TRAFFIC CONTROL | 641.10 | - | | | |
| | | | | | | | | 1 | | 1 | | EACH | PORTABLE CHANGEABLE MESSAGE SIGN | 641.15 | - | | | |
| | | | | | | | | 1 | | 1 | | EACH | PORTABLE ARROW BOARD | 641.16 | - | | | |
| | | | | | | | | 1650 | | 1650 | | LF | TEMPORARY 6 INCH WHITE LINE, TYPE II TAPE | 646.621 | 50 | | | |
| | | | | | | | | 45 | | 45 | | EACH | RAISED PAVEMENT MARKERS, TYPE I | 646.80 | - | | | |
| | | | | | | | | 450 | | 450 | | SF | PAVEMENT MARKING MASK | 646.86 | 50 | | | |
| | | | | | | | | 35 | | 35 | | SY | GEOTEXTILE FOR SILT FENCE | 649.51 | 2 | | | |
| | | | | | | | | 200 | | 200 | | LB | SEED | 651.15 | 6 | | | |
| | | | | | | | | 820 | | 820 | | LB | FERTILIZER | 651.18 | 10 | | | |
| | | | | | | | | 4 | | 4 | | TON | AGRICULTURAL LIMESTONE | 651.20 | 0.8 | | | |
| | | | | | | | | 1 | | 1 | | LS | EPSC PLAN | 652.10 | - | | | |
| | | | | | | | | 20 | | 20 | | HR | MONITORING EPSC PLAN | 652.20 | EST. | | | |
| | | | | | | | | 1 | | 1 | | LU | MAINTENANCE OF EPSC PLAN (N.A.B.I.) | 652.30 | - | | | |
| | | | | | | | | 7900 | | 7900 | | SY | TEMPORARY EROSION MATTING | 653.20 | 57 | | | |
| | | | | | | | | 120 | | 120 | | CY | TEMPORARY STONE CHECK DAM, TYPE I | 653.25 | 8 | | | |
| | | | | | | | | 15 | | 15 | | CY | VEHICLE TRACKING PAD | 653.35 | EST. | | | |
| | | | | | | | | 2 | | 2 | | EACH | INLET PROTECTION DEVICE, TYPE I | 653.40 | - | | | |
| | | | | | | | | 1850 | | 1850 | | LF | PROJECT DEMARCATION FENCE | 653.55 | 21 | | | |
| | | | | | | | | 1000 | | 1000 | | CY | SPECIAL PROVISION (REMOVAL OF LEDGE SALVAGE MATERIAL) | 900.608 | - | | | |
| | | | | | | | | 200 | | 200 | | HR | SPECIAL PROVISION (HAND SCALING) | 900.630 | EST. | | | |
| | | | | | | | | 1450 | | 1450 | | LF | SPECIAL PROVISION (ROCKFALL BARRIER FENCE) | 900.640 | - | | | |

GENERAL NOTES

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2006 AND ITS LATEST REVISIONS.
2. EXISTING DIMENSIONS SHOWN IN THE PLANS WERE DEVELOPED FROM LIMITED FIELD SURVEY AND ORIGINAL DESIGN PLANS AND ARE SHOWN FOR INFORMATION ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD CHECKING ALL DIMENSIONS APPLICABLE TO THIS WORK.
3. IN ACCORDANCE WITH SUBSECTION 107.12 THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE THE EXISTING PAVEMENT, PAVEMENT MARKINGS, GUARDRAIL, FENCING, PIPES, DROP INLETS, CONCRETE SIGN FOUNDATIONS AND HEADWALLS. THE CONTRACTOR, AT NO ADDITIONAL COMPENSATION, SHALL REPAIR ALL EXISTING PAVEMENT, PAVEMENT MARKINGS, GUARDRAIL, FENCING, PIPES, DROP INLETS, CONCRETE SIGN FOUNDATIONS AND HEADWALLS DAMAGED DURING CONSTRUCTION ACTIVITIES TO THE SATISFACTION OF THE ENGINEER.
4. THE CONTRACTOR SHALL REMOVE, STOCKPILE, AND REINSTALL SIGNS, MILE MARKER POSTS, AND DELINEATORS LOCATED WHERE REQUIRED WORK MAY CAUSE DAMAGE TO THEM. IF WARNING SIGNS, THAT ARE NOT GATE POSTED, ARE REMOVED THE CONTRACTOR SHALL TEMPORARILY INSTALL THEM IN THE MEDIAN AND REINSTALL AFTER COMPLETION OF WORK. THIS WORK SHALL BE INCIDENTAL TO ITEM 641.10 "TRAFFIC CONTROL".
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS OF BURIED CABLE THROUGH DIG SAFE AND ITEM 204.22 TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B. I.) PRIOR TO THE START OF CONSTRUCTION.
6. ALL WORK SHALL BE COMPLETED WITHIN THE EXISTING STATE OF VERMONT RIGHT OF WAY.
7. GUARDRAIL MAY BE REMOVED AND RESET AS NEEDED AND AS APPROVED BY THE ENGINEER. PAYMENT WILL BE MADE UNDER CONTRAACT ITEM 621.75.
8. ALL EQUIPMENT SHALL BE MOVED OUTSIDE OF THE CLEAR ZONE OR PROTECTED BY APPROVED BARRIERS DURING NON-WORKING HOURS.

LEDGE REMOVAL NOTES

1. PRIOR TO SUBMITTING A BID IT WILL BE REQUIRED THAT ALL BIDDING CONTRACTORS ATTEND A PRE BID MEETING ON SITE, WITH VTRANS STAFF, TO FAMILIARIZE THEMSELVES WITH THE CURRENT SITE CONDITIONS AND ACCESSIBILITY. IT IS ALSO RECOMMENDED THAT ALL SUB CONTRACTORS ATTEND THE PRE BID MEETING ON SITE AS WELL. SEE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
2. THE LIMIT OF LEDGE REMOVAL INCLUDES THE ENTIRE FACE OF LEDGE AS NEEDED OR DETERMINED BY THE ENGINEER OR GEOLOGIST. THE CONTRACTOR SHALL PERFORM ANY ADDITIONAL WORK AT THE UNIT PRICES PROVIDED IN THE CONTRACT. LEDGE REMOVAL SHALL BE COMPLETED THROUGH MEANS OF HAND SCALING.
 - A. ALL LEDGE REMOVAL SHALL BE CONDUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS BY PERSONNEL EXPERIENCED WITH THE REMOVAL METHODS BEING USED.
 - B. LEDGE REMOVAL USING METHODS OF HAND SCALING SHALL BE PAID FOR UNDER CONTRACT ITEM "900.630 SPECIAL PROVISION (HAND SCALING)".
3. ALL REMOVED LEDGE AND EXCAVATION MATERIAL SHALL BE SALVAGED TO THE STATE OF VERMONT. ALL MATERIAL IS TO BE DELIVERED TO THE VERMONT AGENCY OF TRANSPORTATION DISTRICT 6 MIDDLESEX FACILITY. COORDINATION SHALL BE MADE TWO WEEKS IN ADVANCE OF THE INITIAL DELIVERY, AND AS NEEDED, TO IDENTIFY THE LOCATION. COORDINATION SHALL BE MADE THROUGH MIKE WILDER, DISTRICT 6 AREA MAINTENANCE SUPERVISOR [TEL: (802) 828-2697] [CELL: (802) 461-7824].
4. THE CONTRACTOR SHALL TAKE CARE DURING THE LEDGE REMOVAL NOT TO DAMAGE OR DISTURB EXISTING UTILITIES WITHIN THE PROJECT AREA.
5. ALL SOILS SHALL BE REMOVED FROM THE FACE OF THE LEDGE, THIS WORK SHALL BE INCIDENTAL TO ITEM 900.630 SPECIAL PROVISION (HAND SCALING).

CLEARING NOTES:

1. CLEARING SHALL CONSIST OF REMOVAL OF ALL TREES AND SHRUBS BEGINNING AT THE EDGE OF PAVEMENT INCLUDING THE ENTIRE SHOULDER AND DITCHLINE, FACE OF LEDGE CUT AND 20 FEET PAST THE FINAL CREST OF LEDGE (NOT TO EXTEND PAST THE EXISTING CHAIN LINK FENCE). ALL CLEARING AND GRUBBING SHALL BE CLEARED AND DISPOSED OF IN ACCORDANCE WITH SECTION 201. THE FINAL CREST OF LEDGE IS THE CREST LINE AFTER ALL LEDGE REMOVAL IS COMPLETE, WHERE THE LEDGE CHANGES FROM PRIMARILY VERTICAL TO PRIMARILY HORIZONTAL. THE FINAL CREST OF LEDGE AND CLEARING LIMITS SHALL BE DETERMINED BY THE ENGINEER AND THE VTRANS GEOLOGIST.
2. ALL VEGETATION SHALL BE REMOVED FROM THE FACE OF THE LEDGE. ALL VEGETATION TO BE REMOVED FROM THE FACE OF THE LEDGE SHALL BE PAID UNDER THE LUMP SUM ITEM 201.10 "CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS".
3. ALL VEGETATION TO BE REMOVED BETWEEN THE EDGE OF PAVEMENT AND THE BASE OF THE LEDGE CUT AND THE AREA BETWEEN THE FINAL CREST OF LEDGE AND 20 FEET PAST THE FINAL CREST OF LEDGE SHALL BE PAID UNDER THE ACRE ITEM 201.11 "CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS".
4. INDIVIDUAL TREES THAT ARE DEEMED, BY THE ENGINEER, TO BE AT RISK OF FALLING, OUTSIDE OF THE CLEARING AND GRUBBING AREA IDENTIFIED ON THE PLANS, SHALL BE REMOVED. THIS WORK SHALL BE INCIDENTAL TO THE ACRE ITEM 201.11 "CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS".
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN, TO THE SATISFACTION OF THE ENGINEER, A NEAT TREE LINE ALONG THE AREA TO BE CLEARED.

PROJECT NAME: BERLIN - MONTPELIER

PROJECT NUMBER: IM 089-1(53)

FILE NAME: 07A150/DESIGN/D07A150FRM.DGN PLOT DATE: 19-OCT-2011

PROJECT LEADER: K. ROBIE

DRAWN BY: I. SHEA

DESIGNED BY: P. PELOQUIN

CHECKED BY: S. MENARD

GENERAL NOTES

SHEET 6 OF 29



STA. 163+50



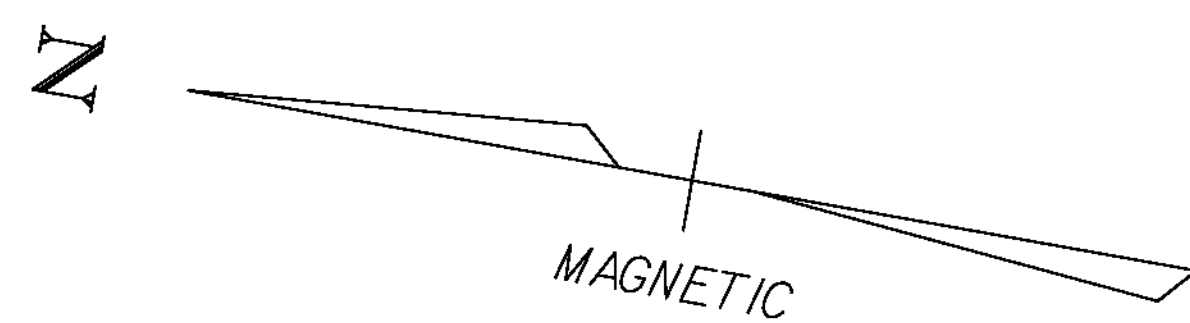
STA. 163+00



STA. 162+50

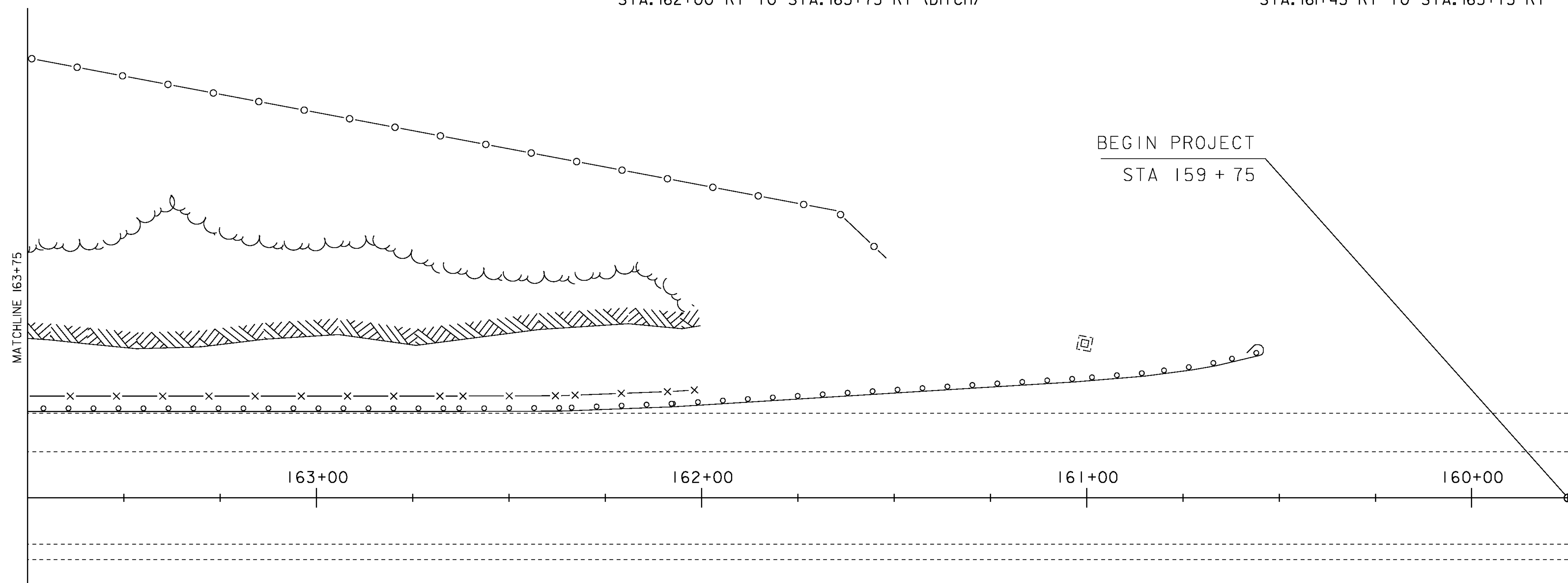


STA. 162+00

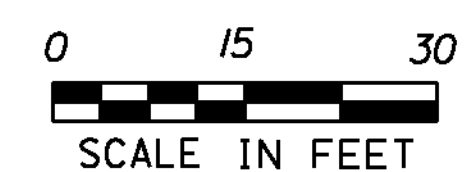


900.640 - SPECIAL PROVISION (ROCKFALL BARRIER FENCE)
STA. 162+00 RT TO STA. 163+75 RT (DITCH)

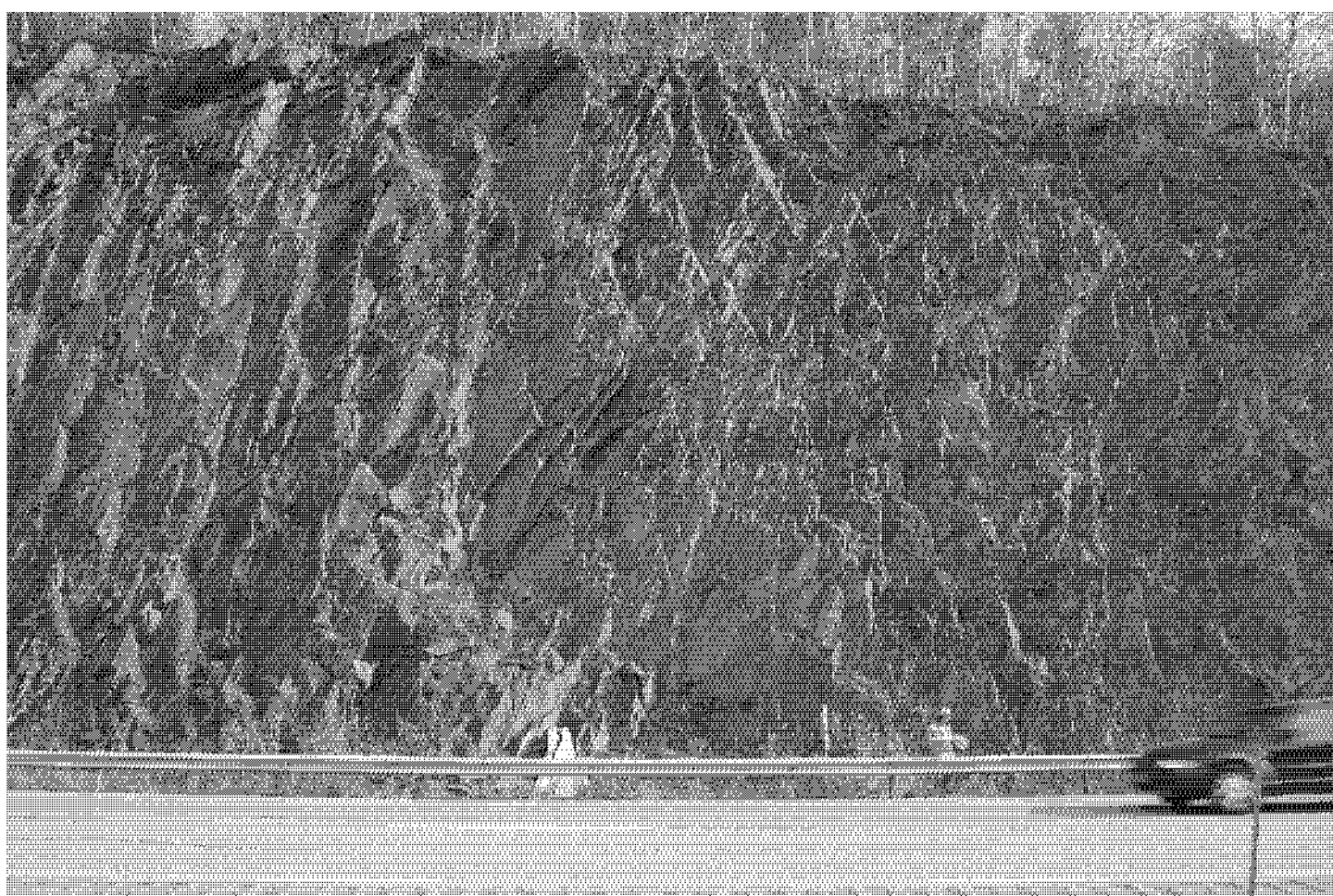
621.75 - REMOVE AND RESET GUARDRAIL
STA. 161+45 RT TO STA. 163+75 RT



| LEGEND | |
|---------|---------------------------|
| -x-x-x- | ROCKFALL BARRIER FENCE |
| -o-o-o- | EXISTING CHAIN LINK FENCE |
| -o-o-o- | EXISTING GUARDRAIL |



| | |
|-----------------|------------------------------|
| PROJECT NAME: | BERLIN - MONTPELIER |
| PROJECT NUMBER: | IM 089-1(53) |
| FILE NAME: | 07A150/DESIGN/D07A150LAY.DGN |
| PROJECT LEADER: | K. ROBBIE |
| DESIGNED BY: | P. PELOQUIN |
| LAYOUT SHEET: | 1 |
| PLOT DATE: | 19-OCT-2011 |
| DRAWN BY: | I. SHEA |
| CHECKED BY: | S. MENARD |
| SHEET: | 7 OF 29 |



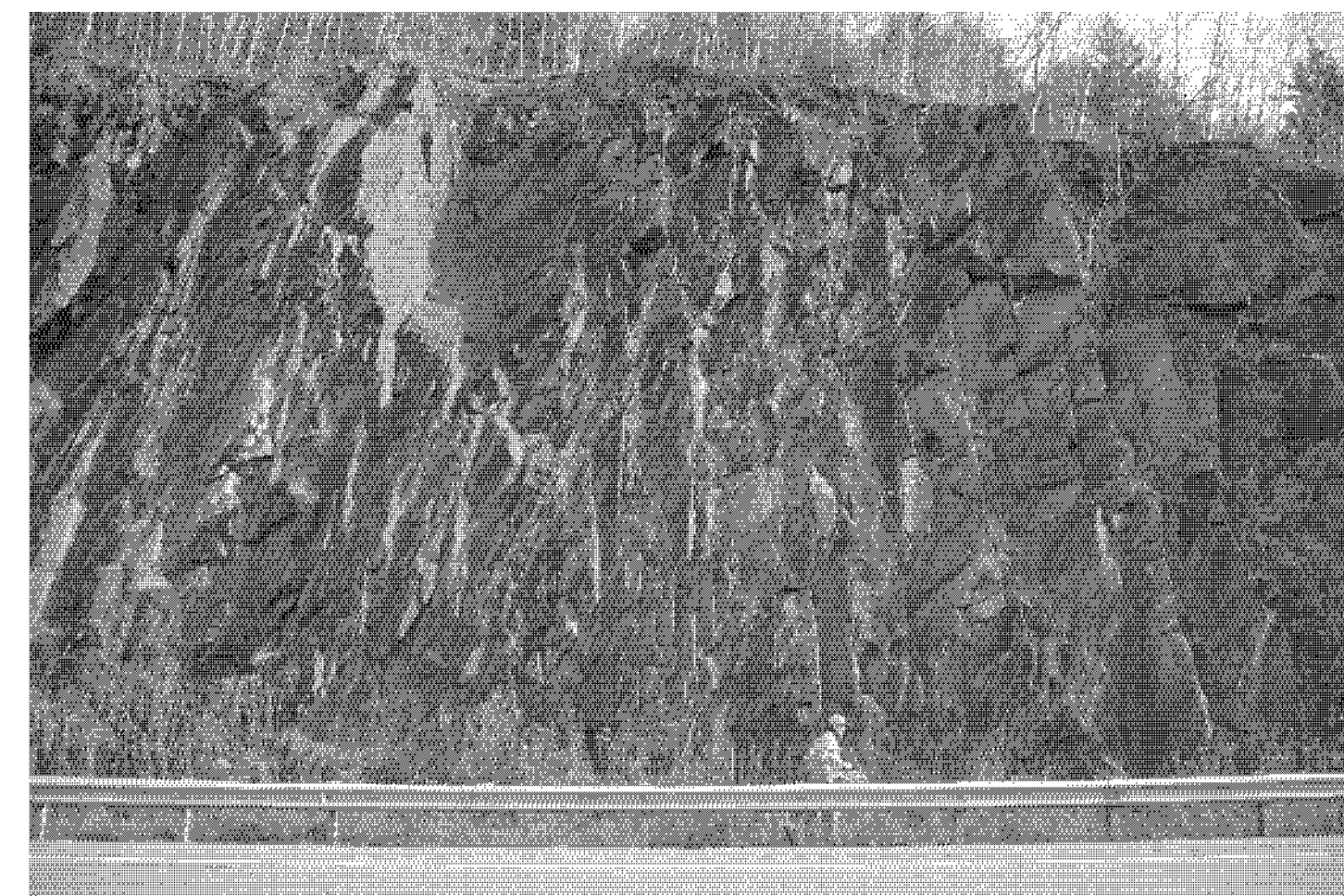
STA. 165+50



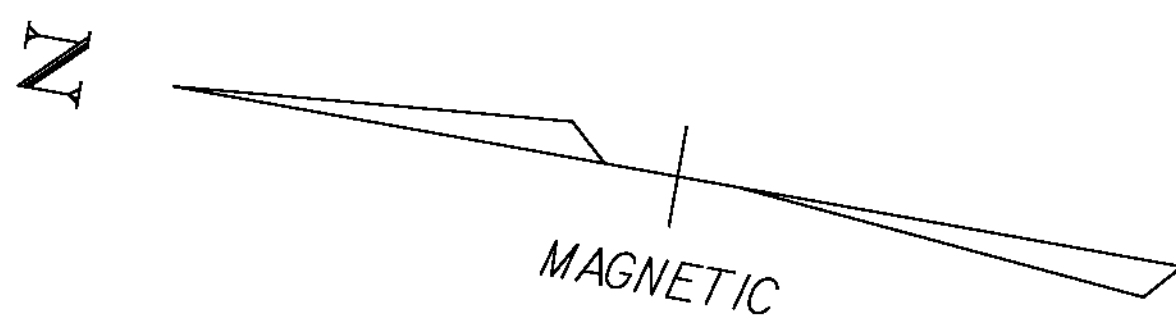
STA. 165+00



STA. 164+50

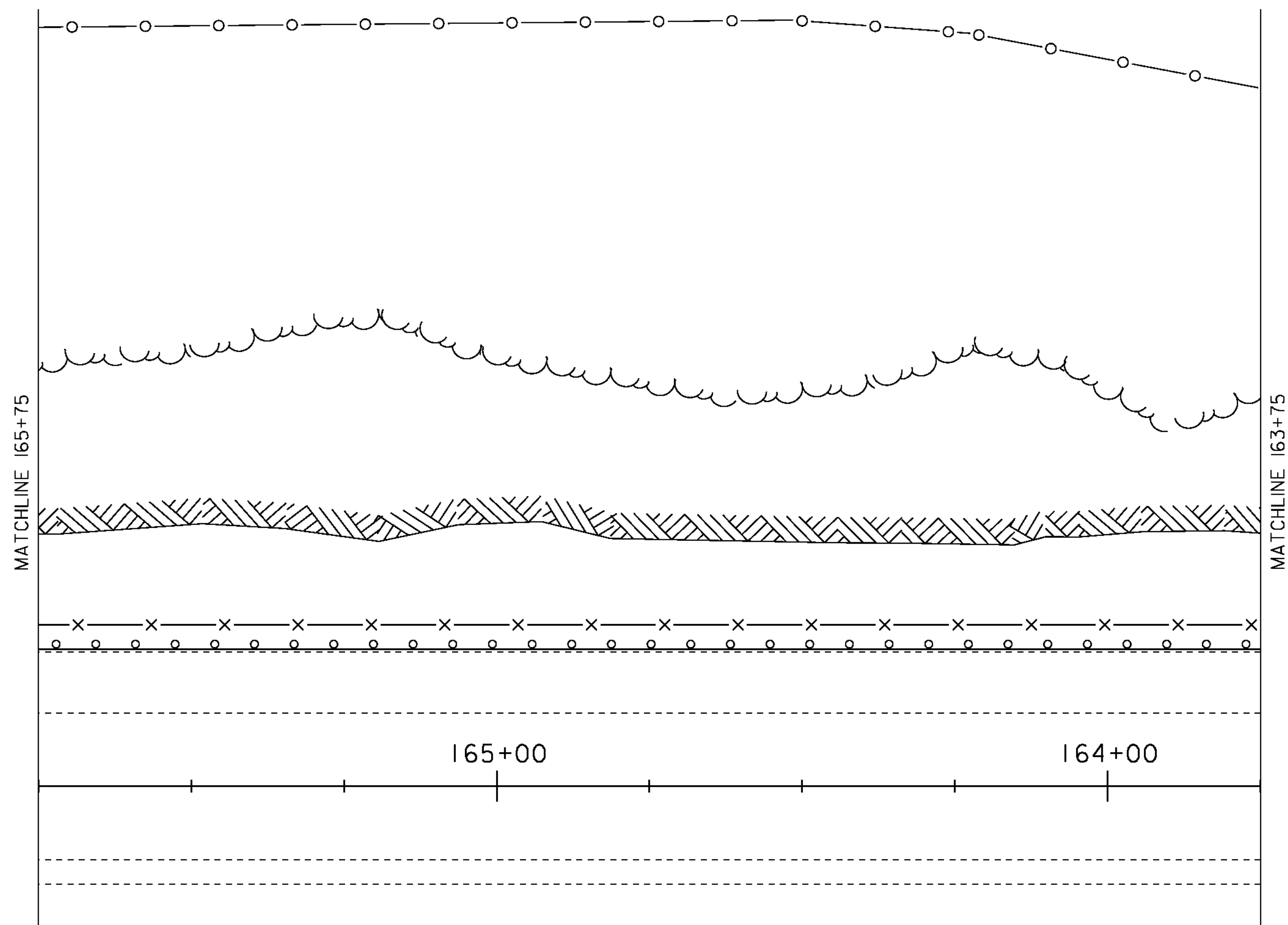


STA. 164+00

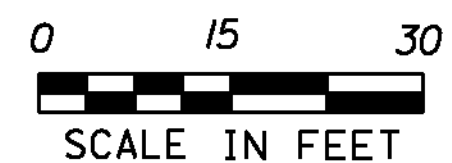


900.640 - SPECIAL PROVISION (ROCKFALL BARRIER FENCE)
STA. 163+75 RT TO STA. 165+75 RT (DITCH)

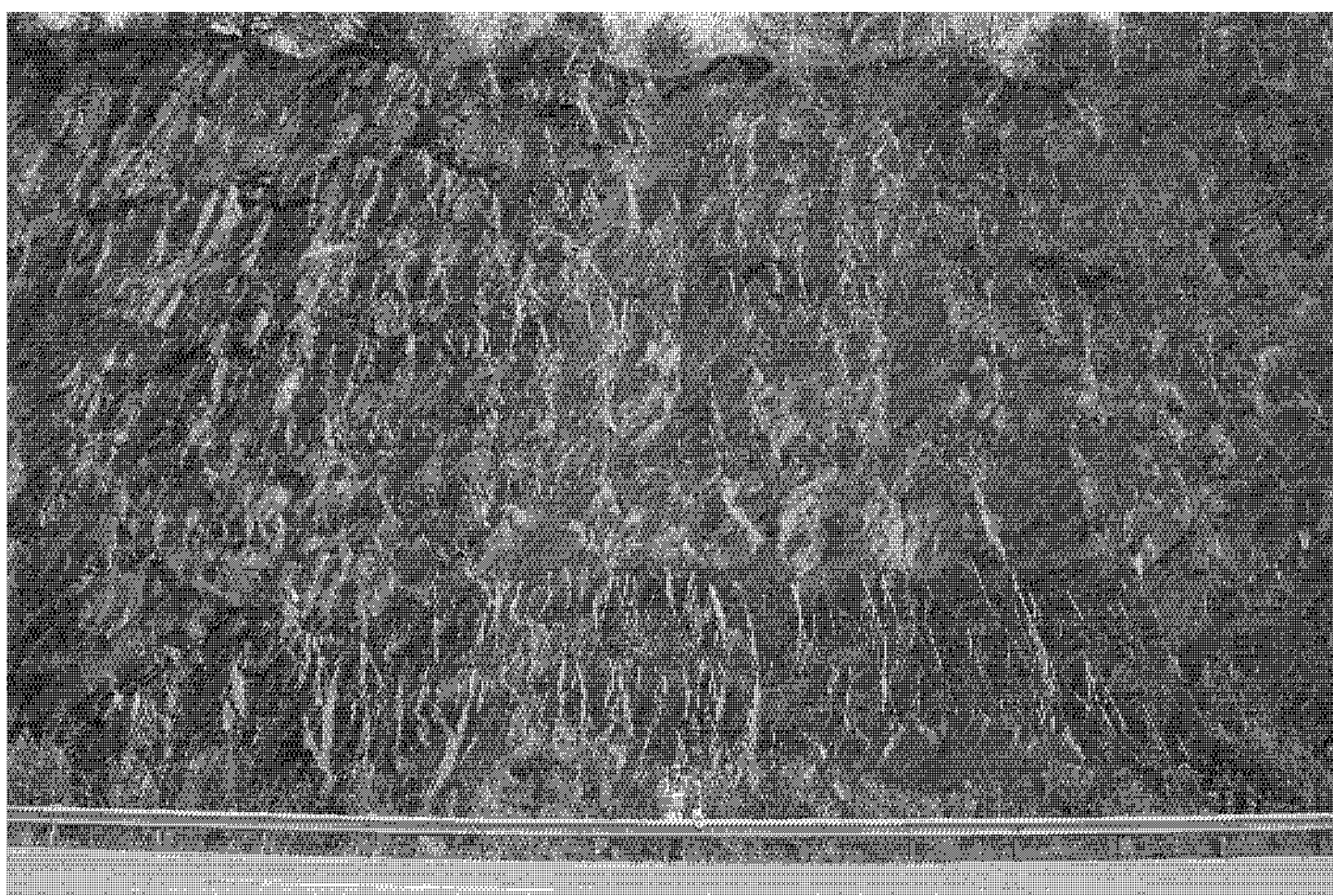
621.75 - REMOVE AND RESET GUARDRAIL
STA. 163+75 RT TO STA. 165+75 RT



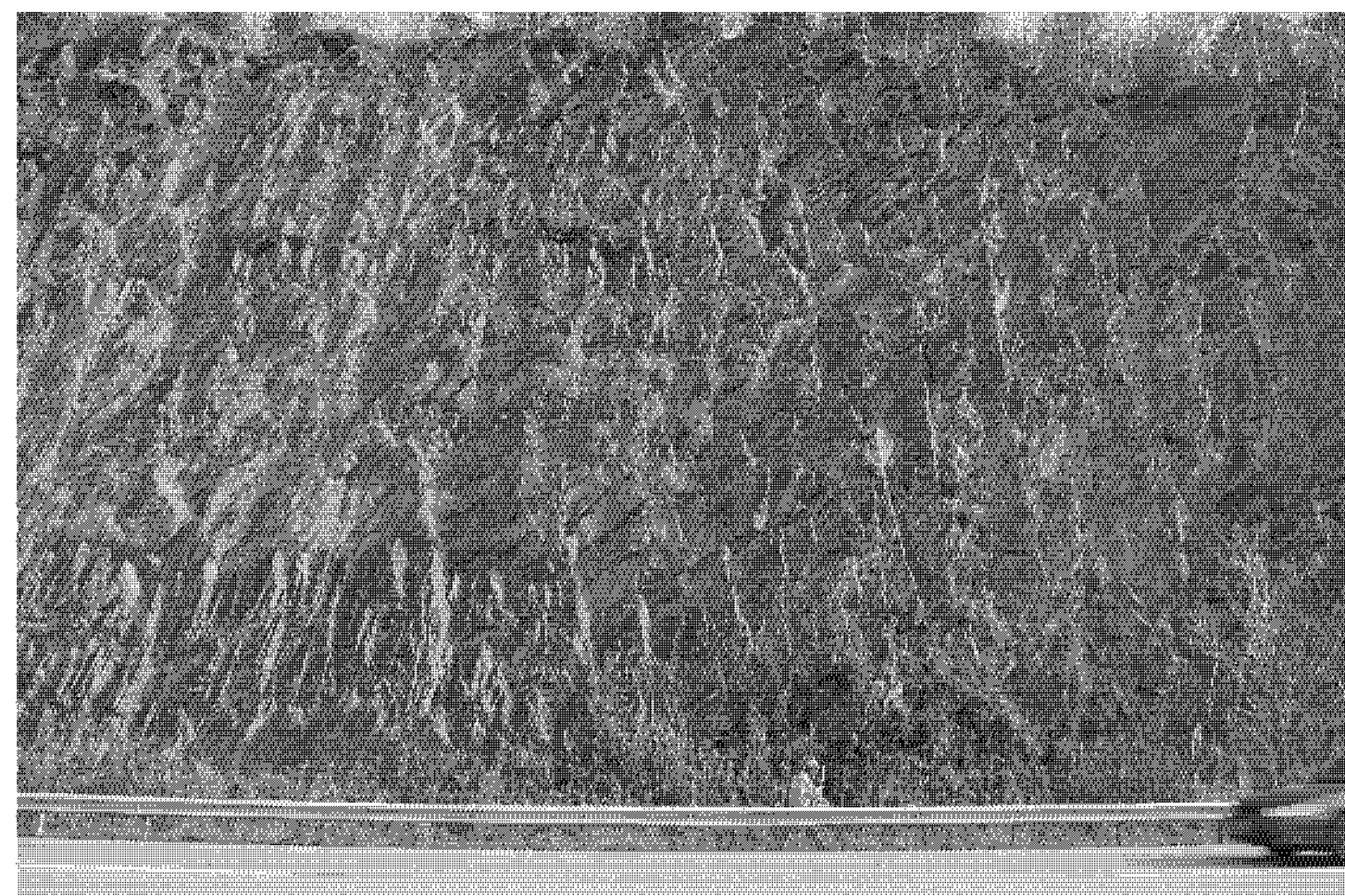
| LEGEND | |
|---------|---------------------------|
| -x-x-x- | ROCKFALL BARRIER FENCE |
| -o-o-o- | EXISTING CHAIN LINK FENCE |
| -o-o-o- | EXISTING GUARDRAIL |



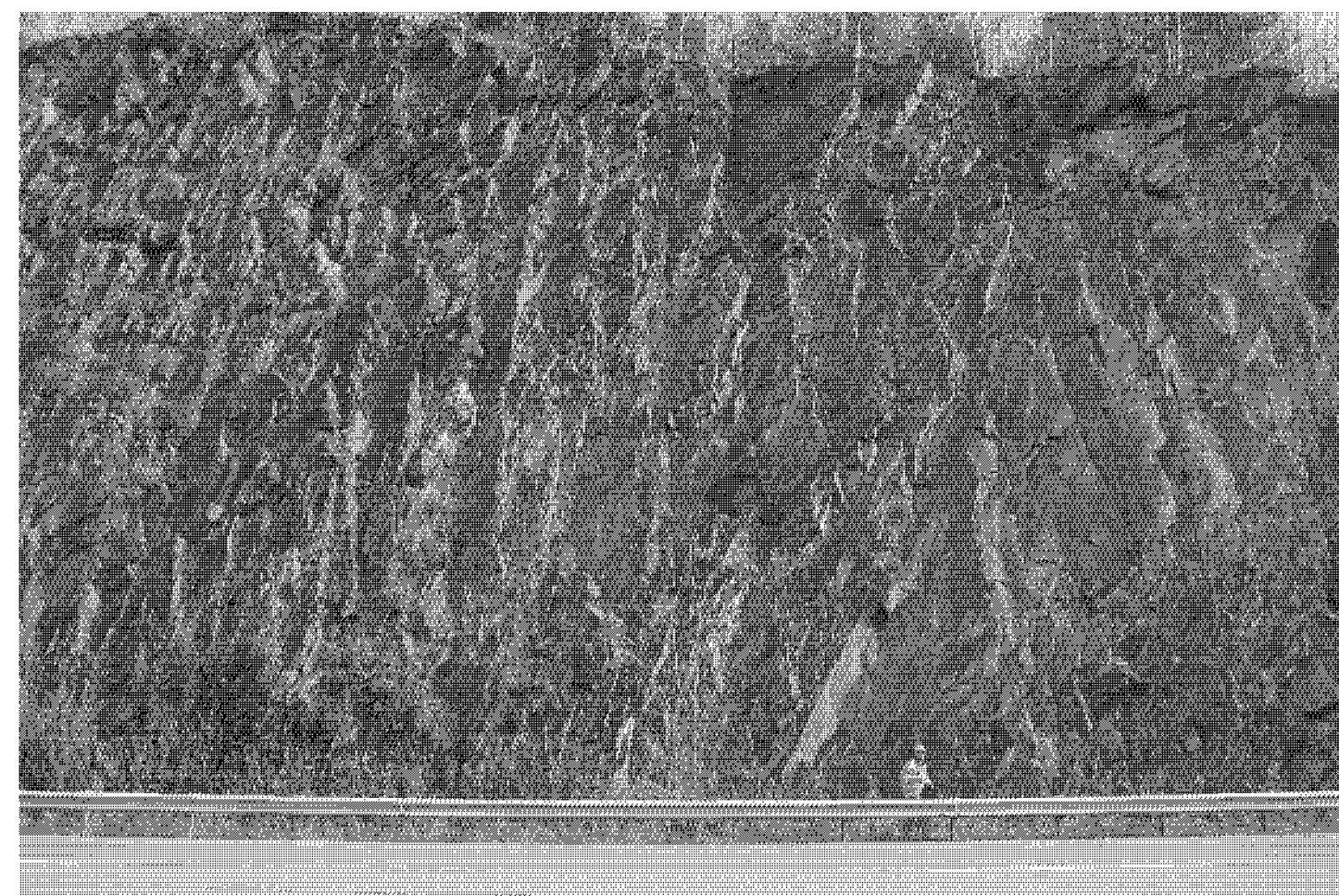
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| PROJECT NAME: | BERLIN - MONTPELIER |
| PROJECT NUMBER: | IM 089-1(53) |
| FILE NAME: | 07A150/DESIGN/D07A150LAY.DGN |
| PROJECT LEADER: | K. ROBIE |
| DESIGNED BY: | P. PELOQUIN |
| LAYOUT SHEET | 2 |
| PLOT DATE: | 19-OCT-2011 |
| DRAWN BY: | I. SHEA |
| CHECKED BY: | S. MENARD |
| SHEET | 8 OF 29 |



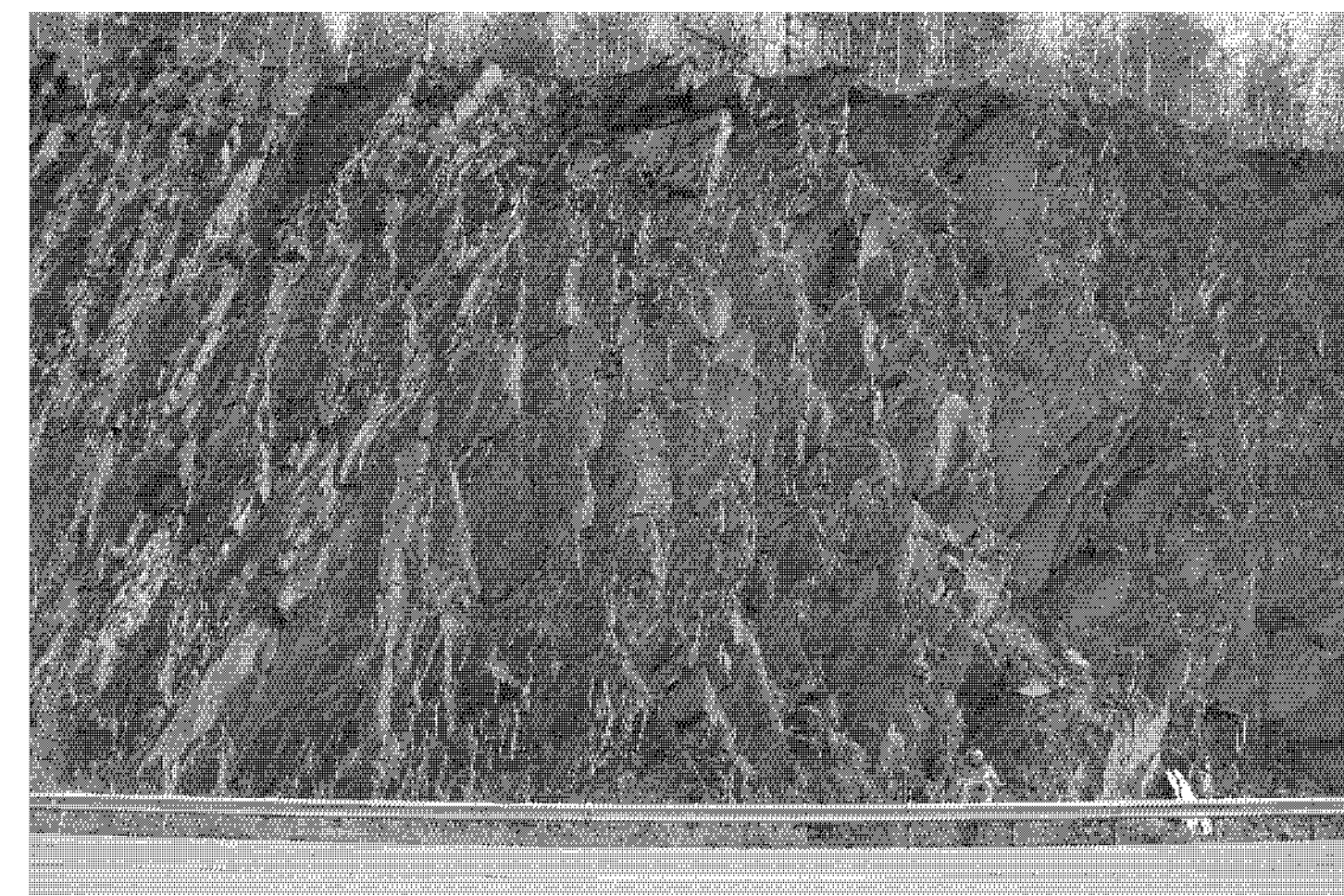
STA. 167+50



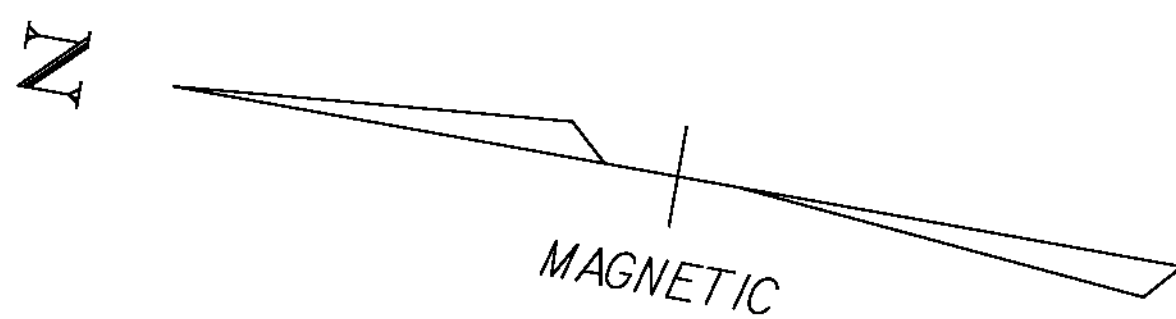
STA. 167+00



STA. 166+50

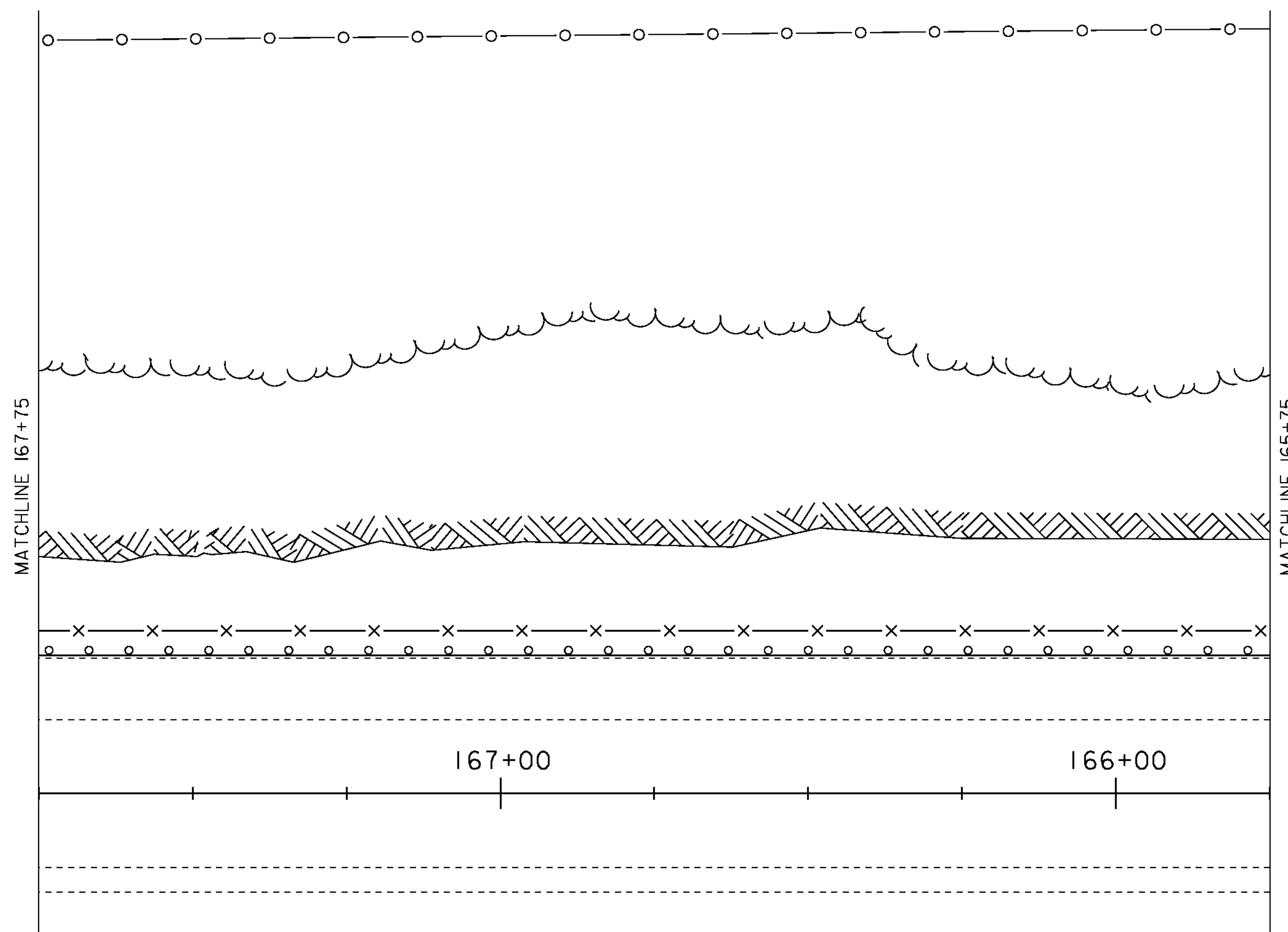


STA. 166+00

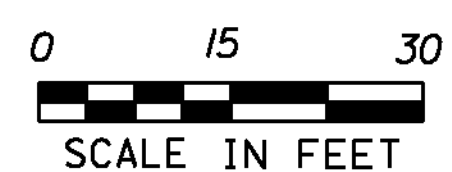


900.640 - SPECIAL PROVISION (ROCKFALL BARRIER FENCE)
STA. 165+75 RT TO STA. 167+75 RT (DITCH)

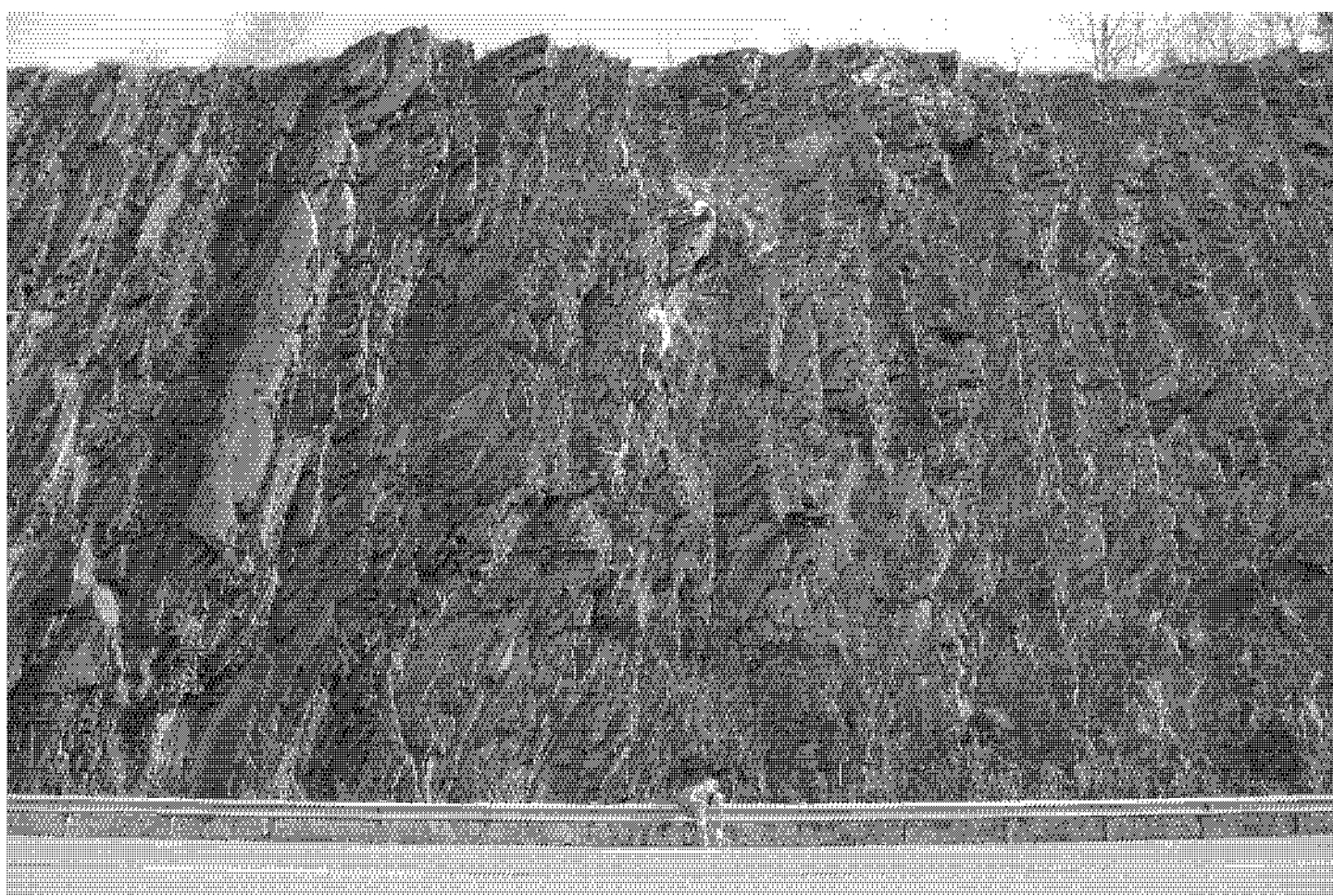
621.75 - REMOVE AND RESET GUARDRAIL
STA. 165+75 RT TO STA. 167+75 RT



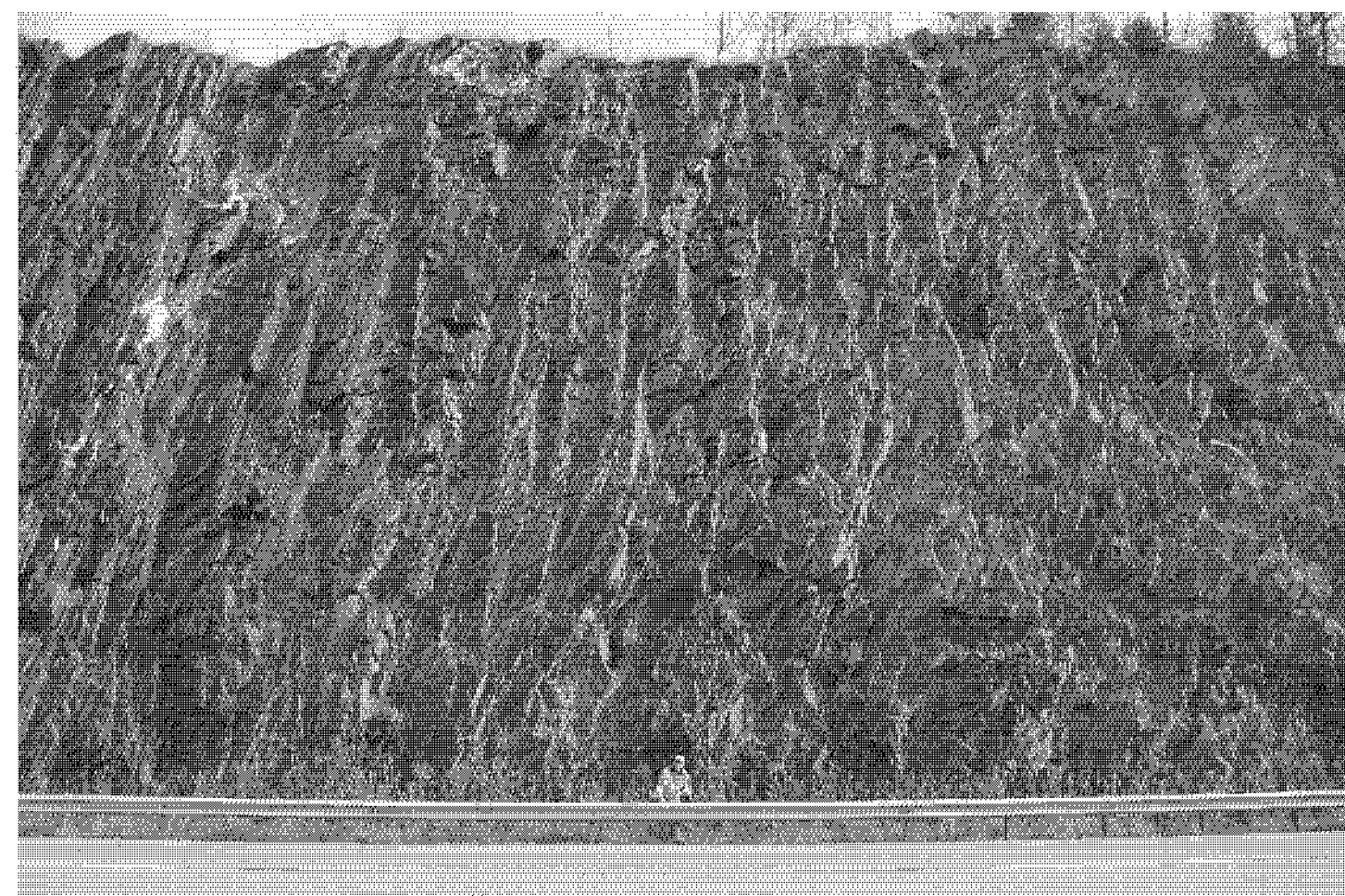
| LEGEND | |
|---------|---------------------------|
| -x-x-x- | ROCKFALL BARRIER FENCE |
| -o-o-o- | EXISTING CHAIN LINK FENCE |
| -o-o-o- | EXISTING GUARDRAIL |



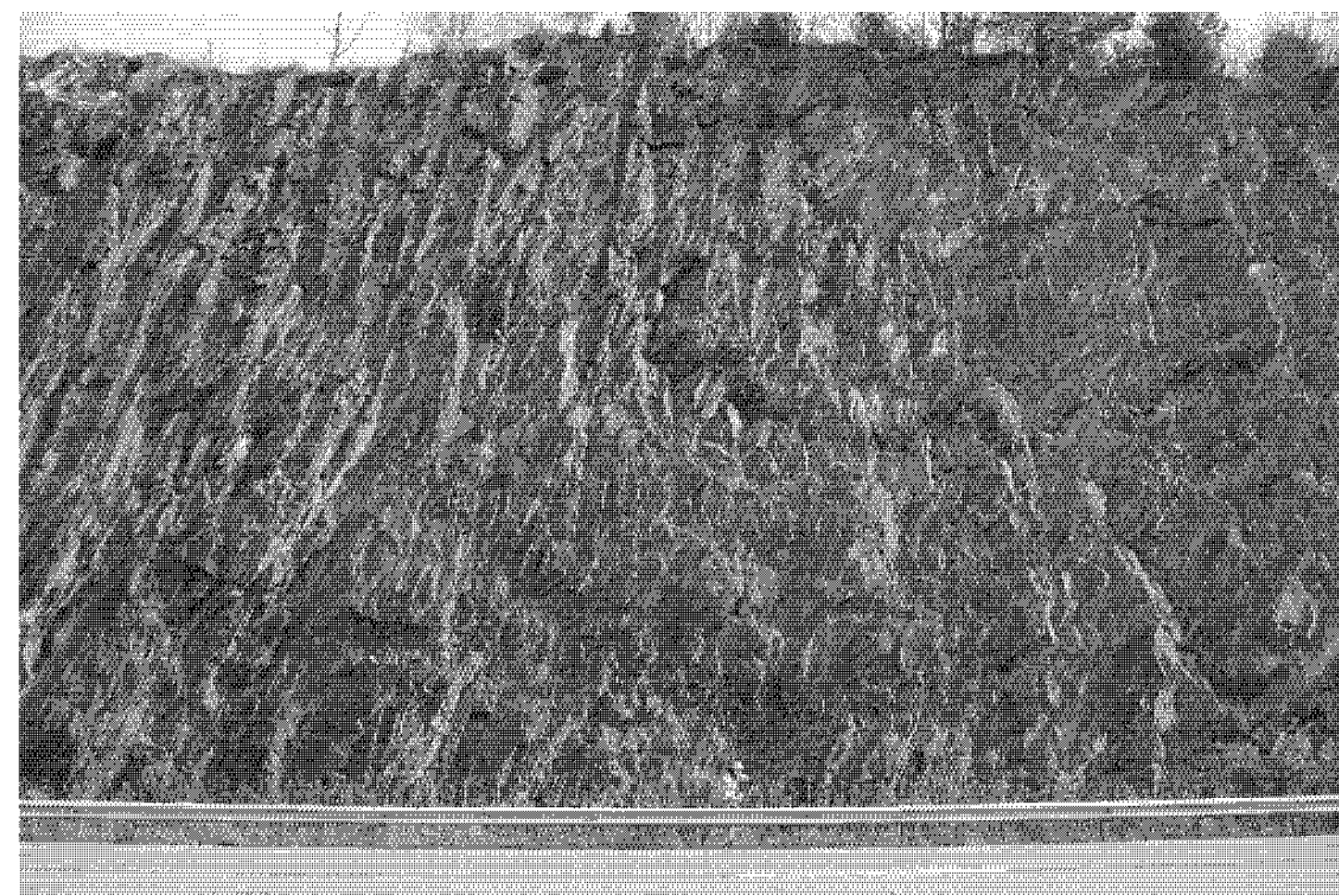
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|-----------------|------------------------------|
| PROJECT NAME: | BERLIN - MONTPELIER |
| PROJECT NUMBER: | IM 089-1(53) |
| FILE NAME: | 07A150/DESIGN/D07A150LAY.DGN |
| PROJECT LEADER: | K. ROBBIE |
| DESIGNED BY: | P. PELOQUIN |
| LAYOUT SHEET | 3 |
| PLOT DATE: | 19-OCT-2011 |
| DRAWN BY: | I. SHEA |
| CHECKED BY: | S. MENARD |
| SHEET | 9 OF 29 |



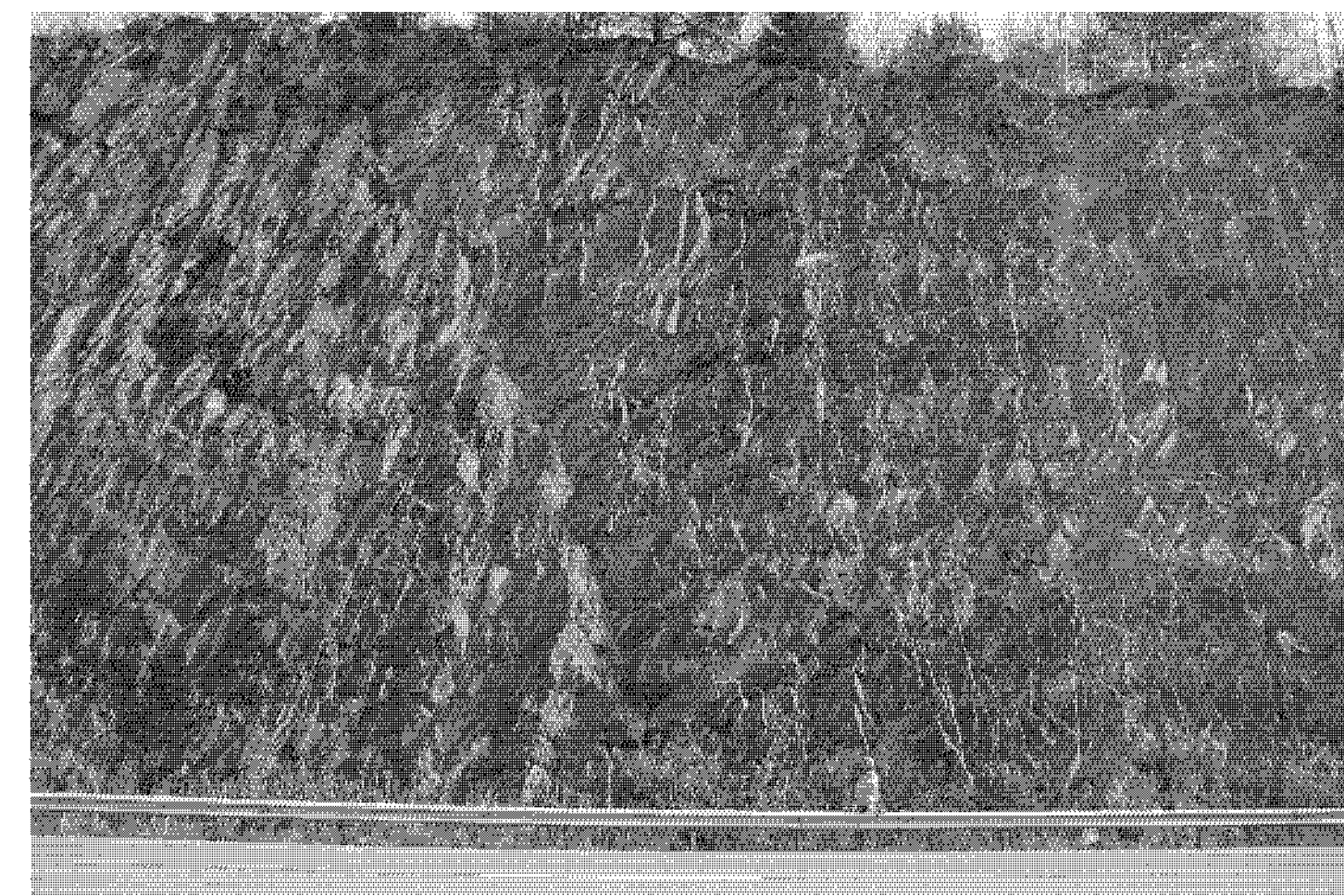
STA. 169+50



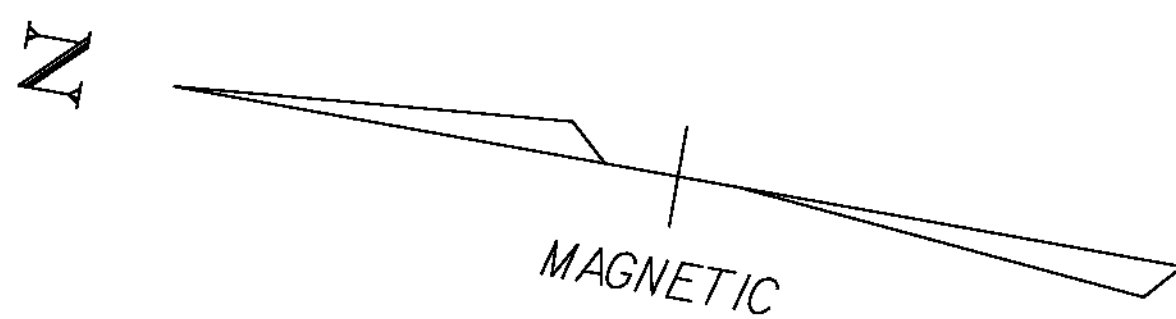
STA. 169+00



STA. 168+50

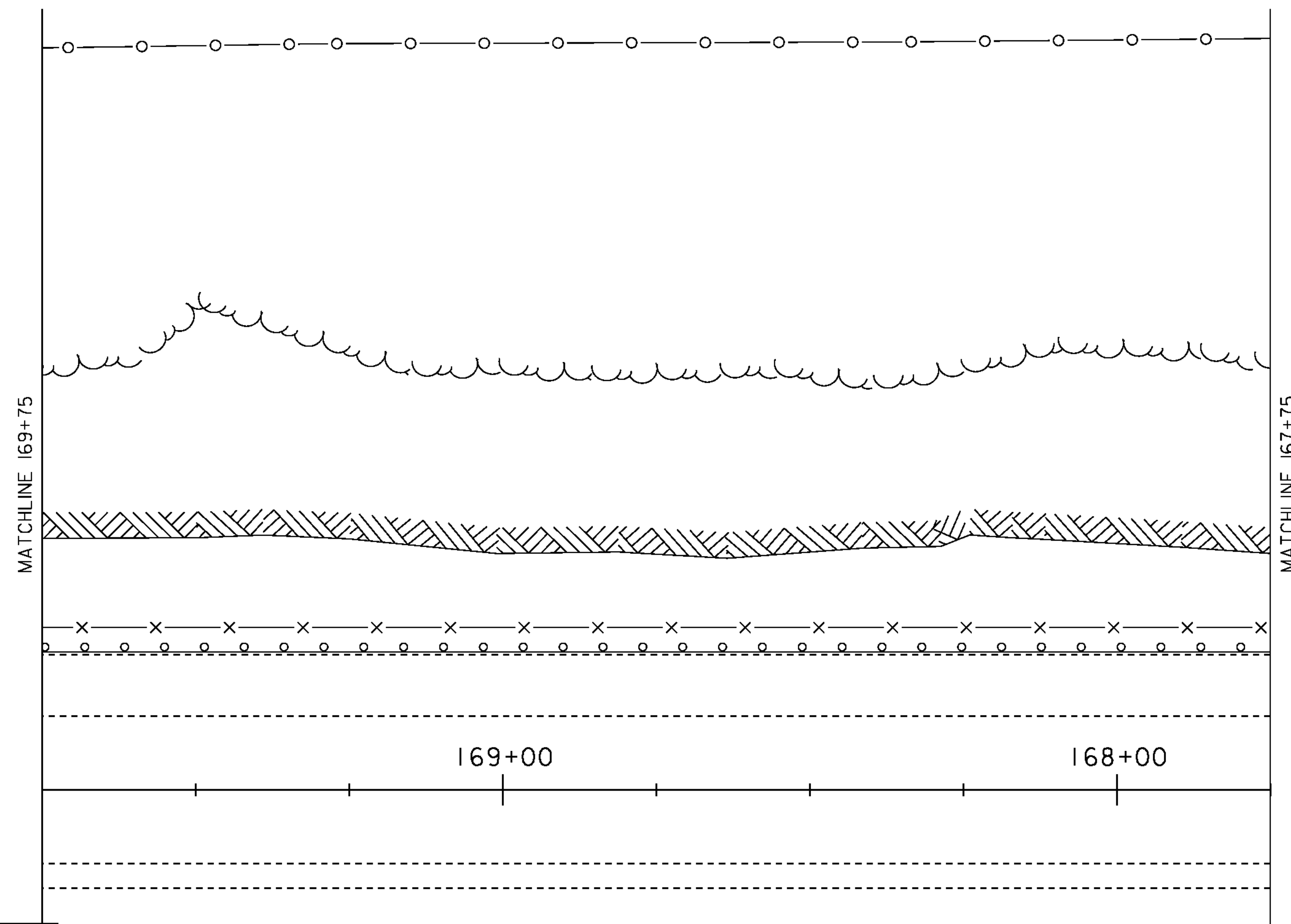


STA. 168+00

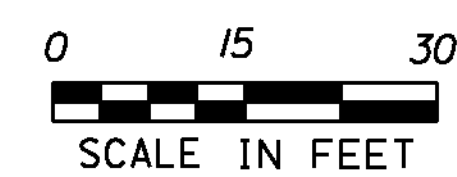


900.640 - SPECIAL PROVISION (ROCKFALL BARRIER FENCE)
STA. 167+75 RT TO STA. 169+75 RT (DITCH)

621.75 - REMOVE AND RESET GUARDRAIL
STA. 167+75 RT TO STA. 169+75 RT



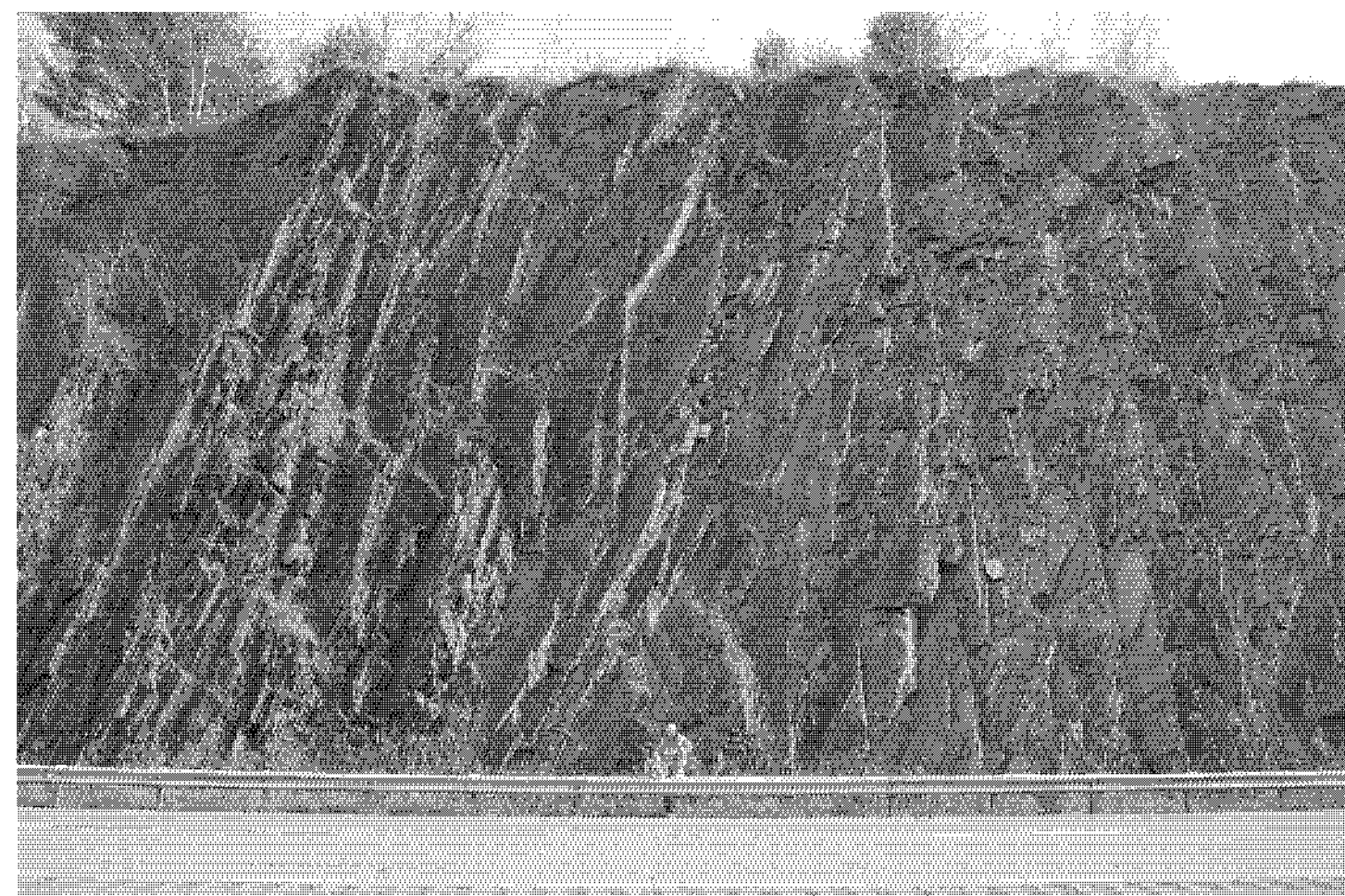
| LEGEND | |
|---------|---------------------------|
| -x-x-x- | ROCKFALL BARRIER FENCE |
| -o-o-o- | EXISTING CHAIN LINK FENCE |
| -o-o-o- | EXISTING GUARDRAIL |



| | |
|-----------------|------------------------------|
| PROJECT NAME: | BERLIN - MONTPELIER |
| PROJECT NUMBER: | IM 089-1(53) |
| FILE NAME: | 07A150/DESIGN/D07A150LAY.DGN |
| PROJECT LEADER: | K. ROBBIE |
| DESIGNED BY: | P. PELOQUIN |
| LAYOUT SHEET | 4 |
| PLOT DATE: | 19-OCT-2011 |
| DRAWN BY: | I. SHEA |
| CHECKED BY: | S. MENARD |
| SHEET | 10 OF 29 |



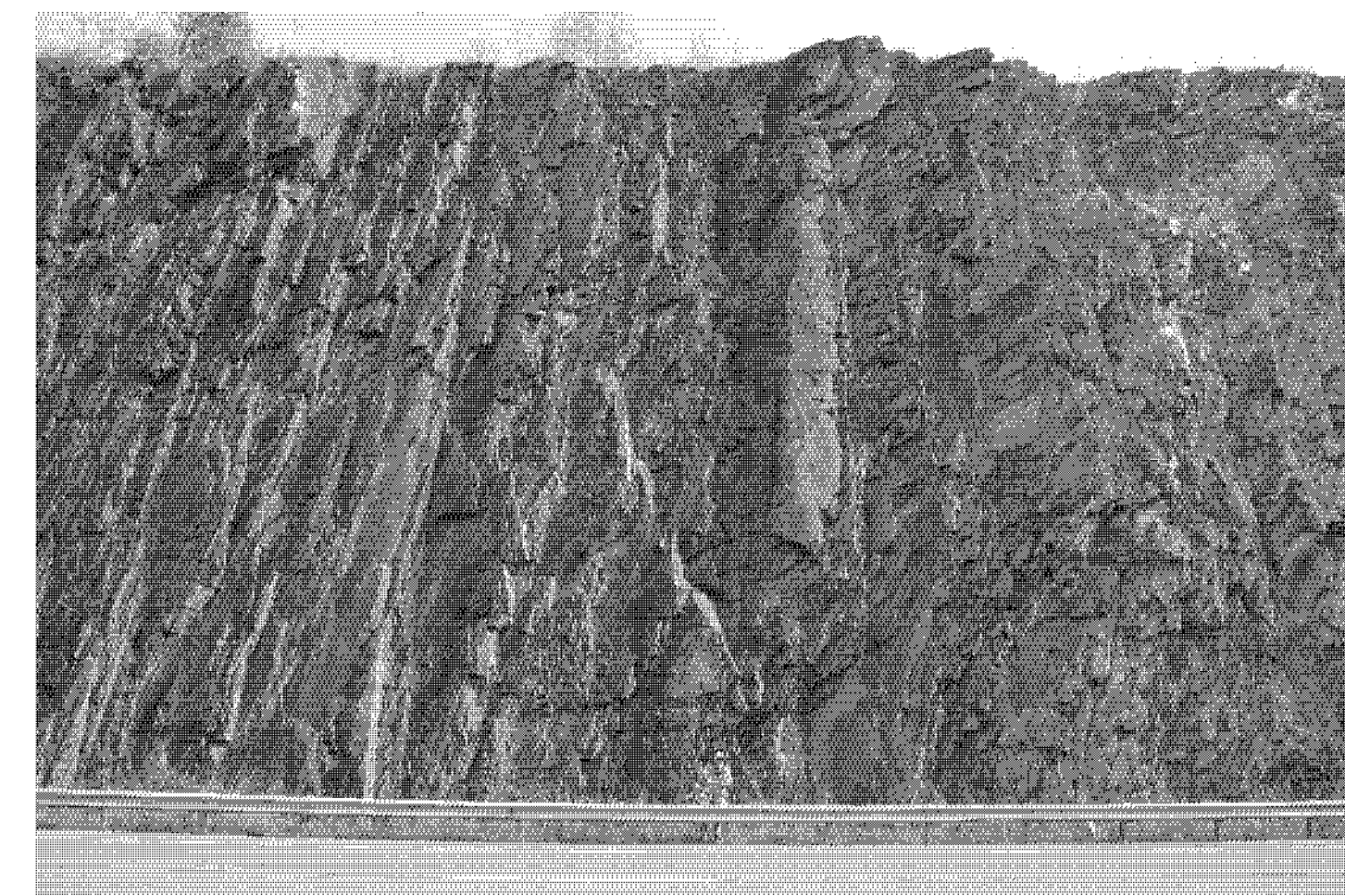
STA. 171+50



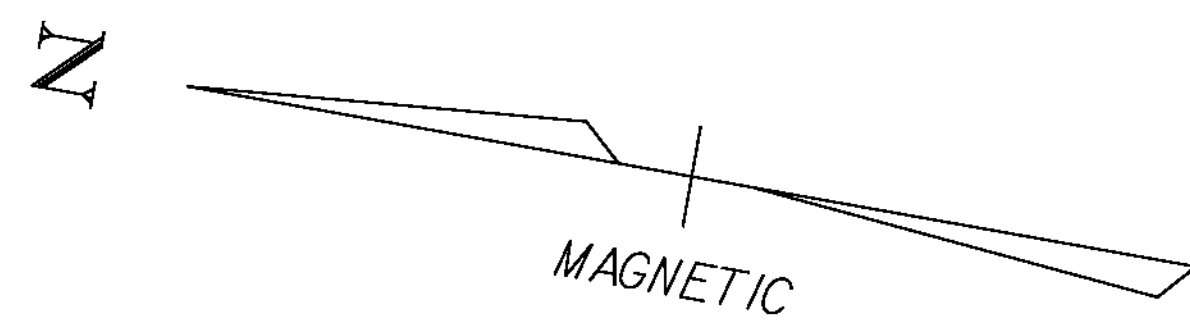
STA. 171+00



STA. 170+50

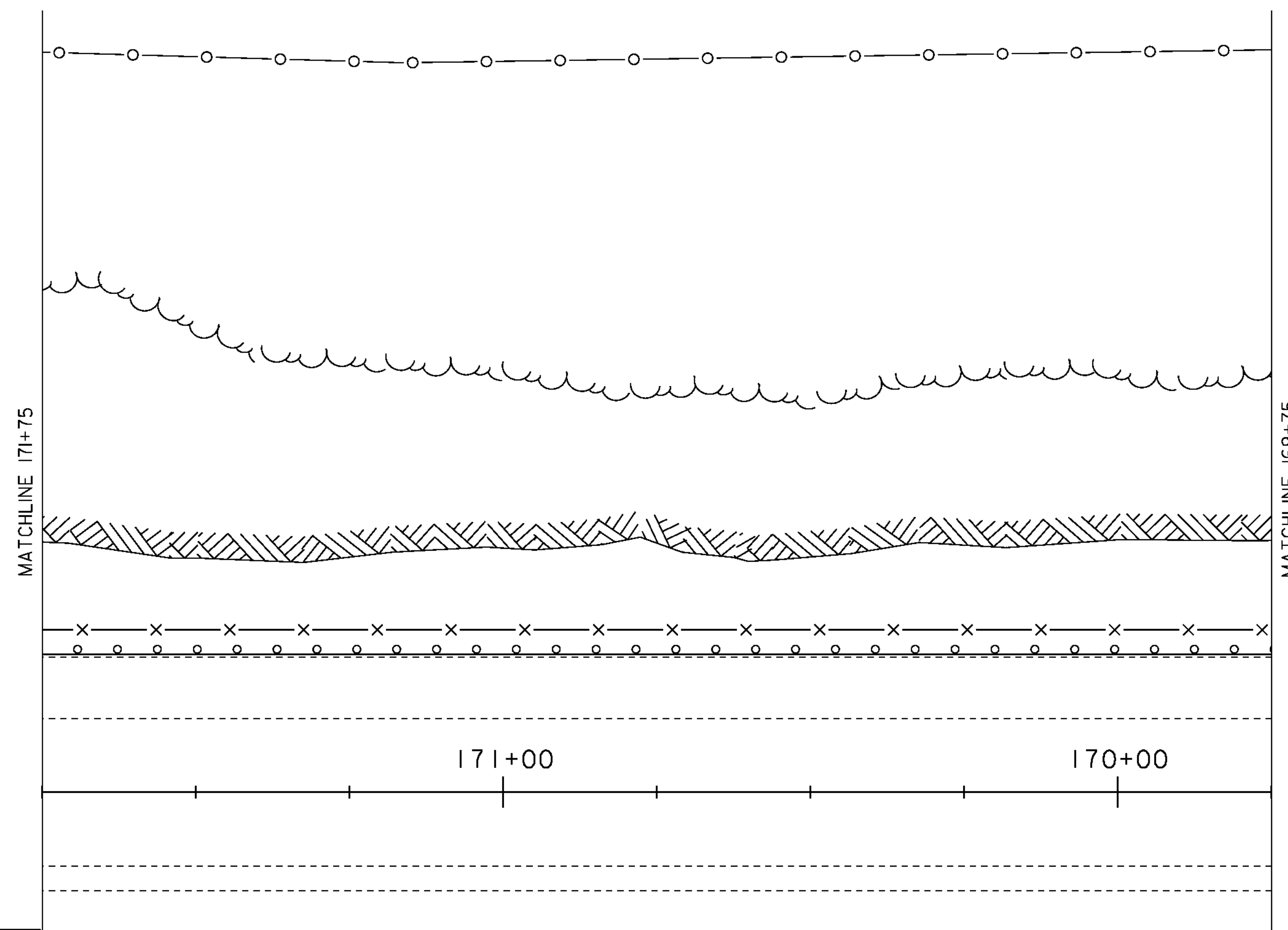


STA. 170+00

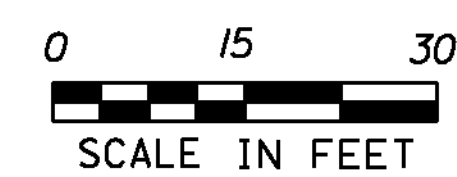


900.640 - SPECIAL PROVISION (ROCKFALL BARRIER FENCE)
STA. 169+75 RT TO STA. 171+75 RT (DITCH)

621.75 - REMOVE AND RESET GUARDRAIL
STA. 169+75 RT TO STA. 171+75 RT



| LEGEND | |
|---------|---------------------------|
| -x-x-x- | ROCKFALL BARRIER FENCE |
| -o-o-o- | EXISTING CHAIN LINK FENCE |
| -o-o-o- | EXISTING GUARDRAIL |



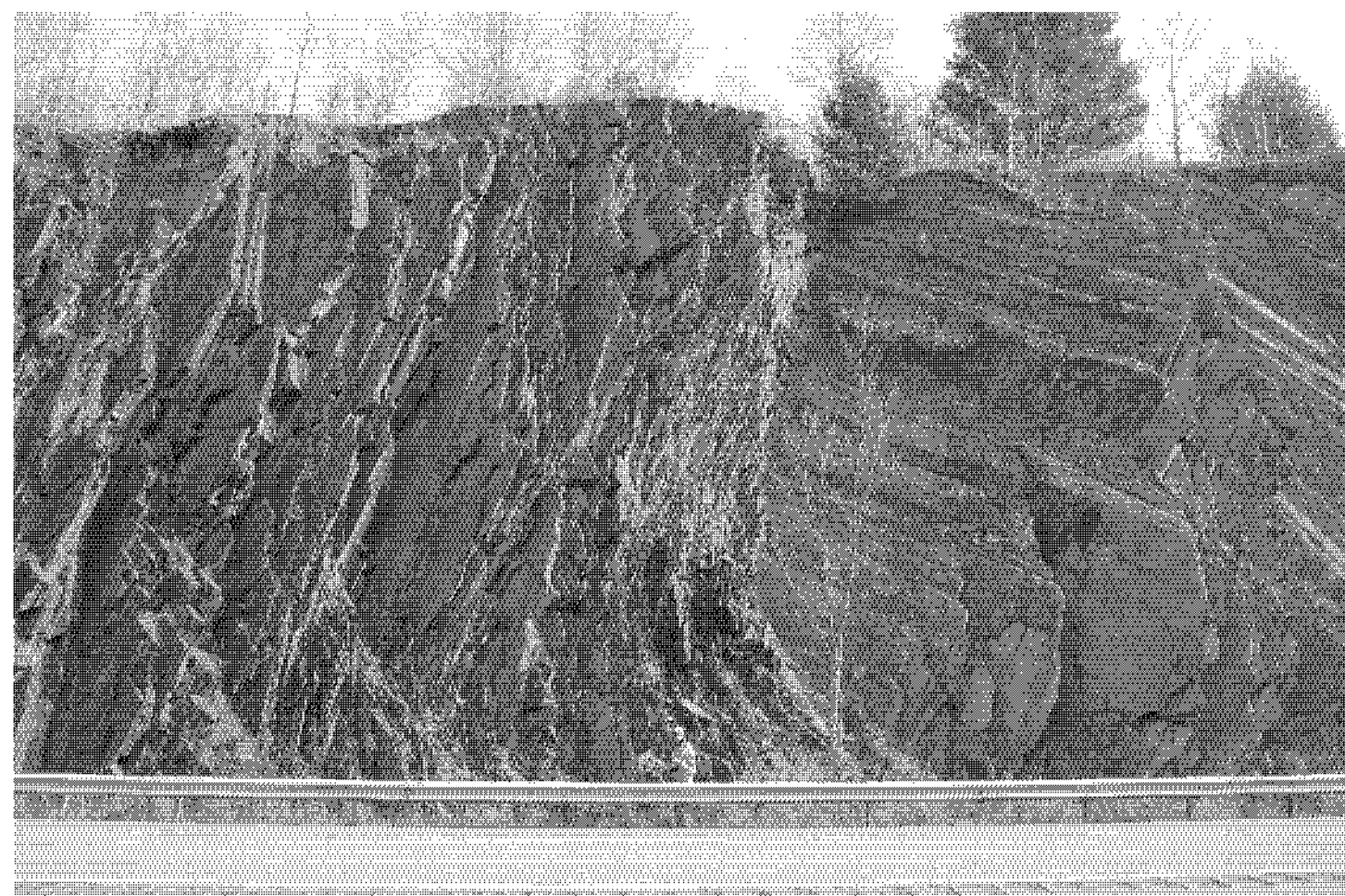
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| PROJECT NAME: | BERLIN - MONTPELIER |
| PROJECT NUMBER: | IM 089-1(53) |
| FILE NAME: | 07A150/DESIGN/D07A150LAY.DGN |
| PROJECT LEADER: | K. ROBBIE |
| DESIGNED BY: | P. PELOQUIN |
| LAYOUT SHEET | 5 |
| PLOT DATE: | 19-OCT-2011 |
| DRAWN BY: | I. SHEA |
| CHECKED BY: | S. MENARD |
| SHEET | II OF 29 |



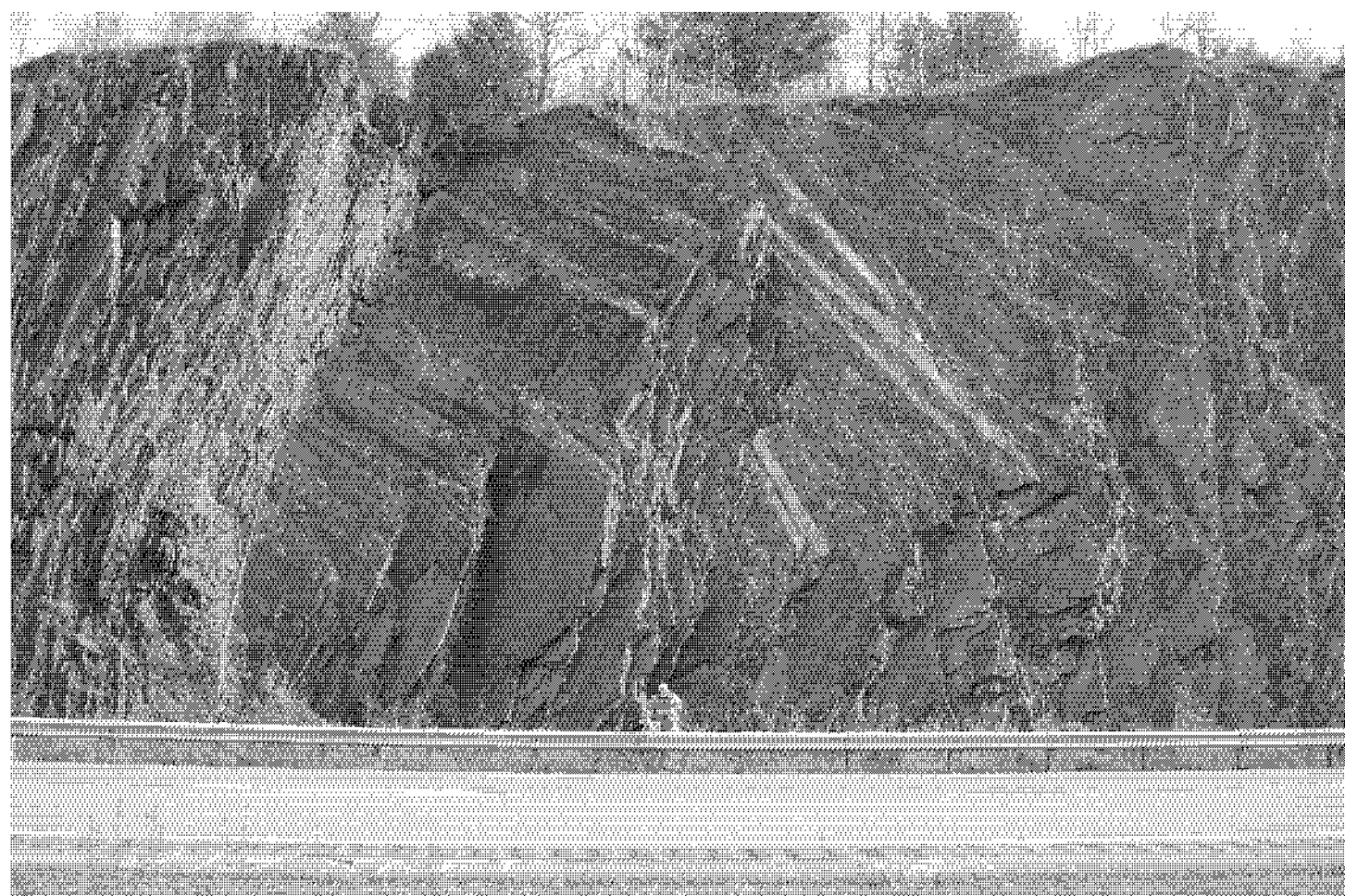
STA. 173+50



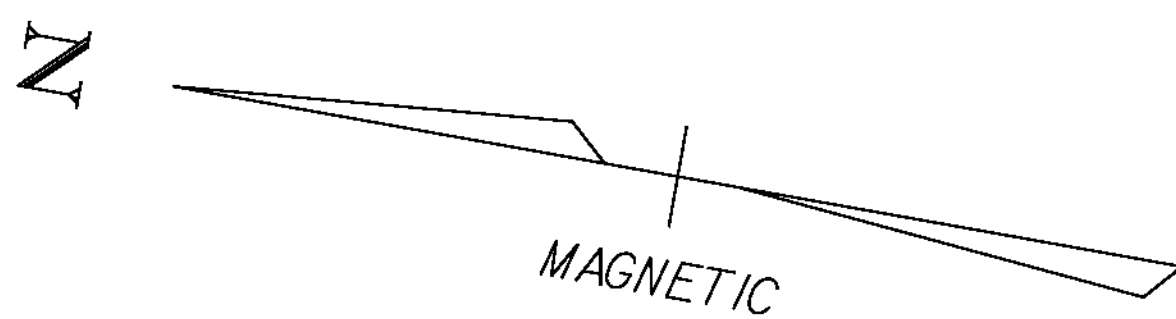
STA. 173+00



STA. 172+50

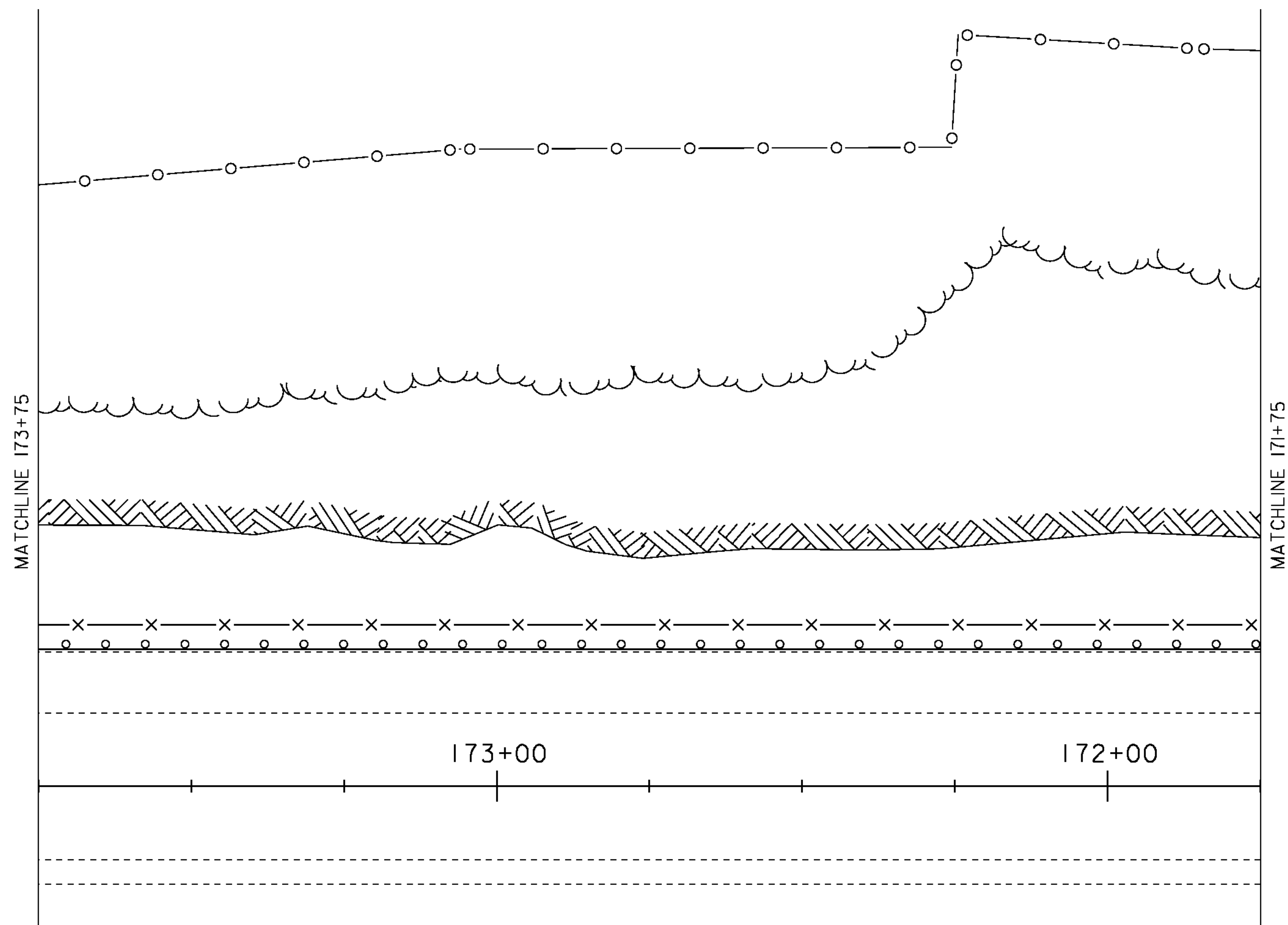


STA. 172+00

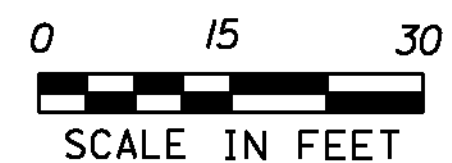


900.640 - SPECIAL PROVISION (ROCKFALL BARRIER FENCE)
STA. 171+75 RT TO STA. 173+75 RT (DITCH)

621.75 - REMOVE AND RESET GUARDRAIL
STA. 171+75 RT TO STA. 173+75 RT



| LEGEND | |
|---------|---------------------------|
| -x-x-x- | ROCKFALL BARRIER FENCE |
| -o-o-o- | EXISTING CHAIN LINK FENCE |
| -o-o-o- | EXISTING GUARDRAIL |



| | |
|-----------------|------------------------------|
| PROJECT NAME: | BERLIN - MONTPELIER |
| PROJECT NUMBER: | IM 089-1(53) |
| FILE NAME: | 07A150/DESIGN/D07A150LAY.DGN |
| PROJECT LEADER: | K. ROBBIE |
| DESIGNED BY: | P. PELOQUIN |
| LAYOUT SHEET | 6 |
| PLOT DATE: | 19-OCT-2011 |
| DRAWN BY: | I. SHEA |
| CHECKED BY: | S. MENARD |
| SHEET | 12 OF 29 |



STA. 175+50



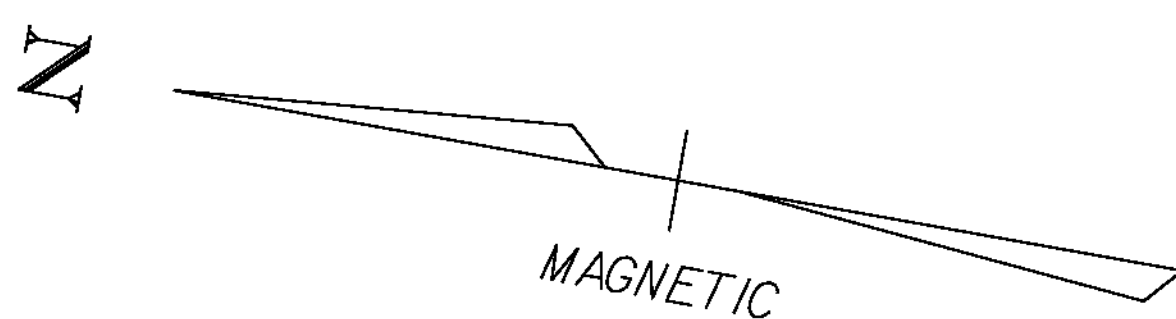
STA. 175+00



STA. 174+50

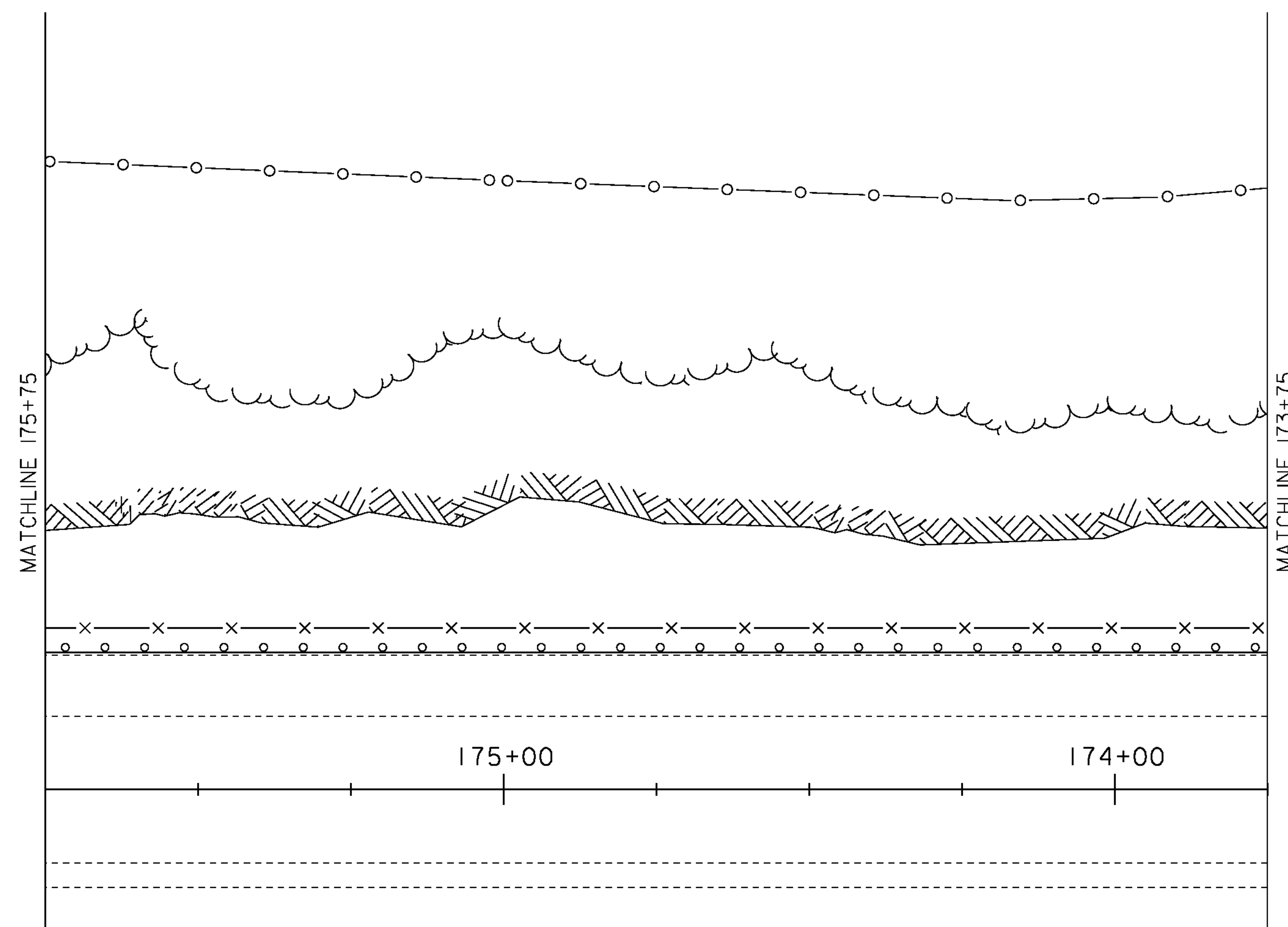


STA. 174+00

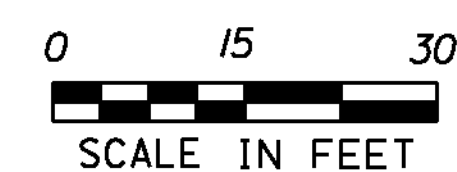


900.640 - SPECIAL PROVISION (ROCKFALL BARRIER FENCE)
STA. 173+75 RT TO STA. 175+75 RT (DITCH)

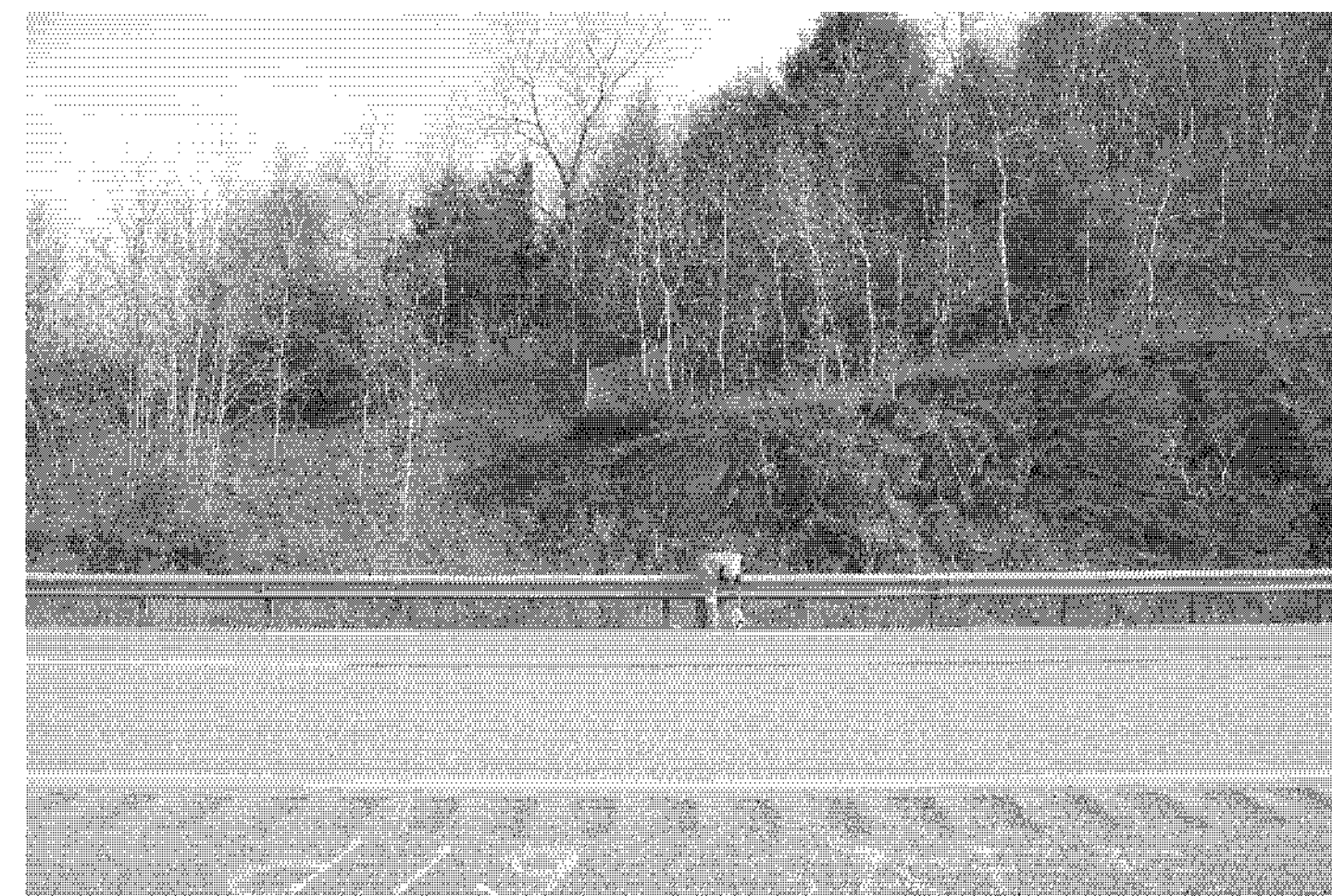
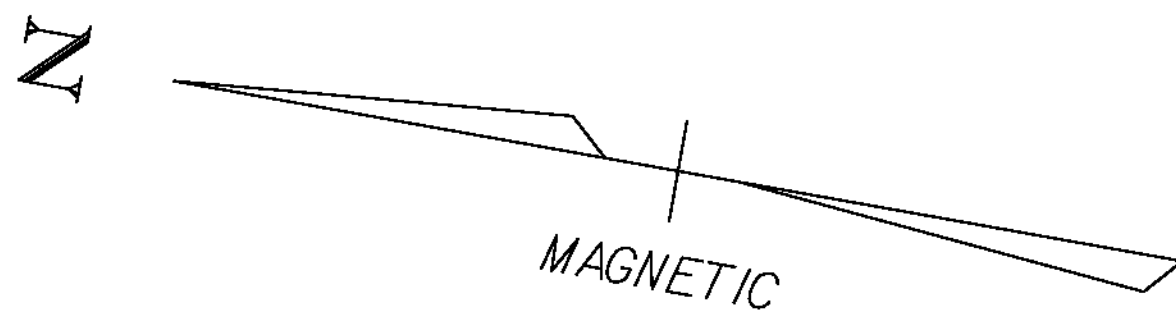
621.75 - REMOVE AND RESET GUARDRAIL
STA. 173+75 RT TO STA. 175+75 RT



| LEGEND | |
|---------|---------------------------|
| -x-x-x- | ROCKFALL BARRIER FENCE |
| -o-o-o- | EXISTING CHAIN LINK FENCE |
| -o-o-o- | EXISTING GUARDRAIL |



| | |
|-----------------|------------------------------|
| PROJECT NAME: | BERLIN - MONTPELIER |
| PROJECT NUMBER: | IM 089-1(53) |
| FILE NAME: | 07A150/DESIGN/D07A150LAY.DGN |
| PROJECT LEADER: | K. ROBBIE |
| DESIGNED BY: | P. PELOQUIN |
| LAYOUT SHEET | 7 |
| PLOT DATE: | 19-OCT-2011 |
| DRAWN BY: | I. SHEA |
| CHECKED BY: | S. MENARD |
| SHEET | 13 OF 29 |



STA. 176+50

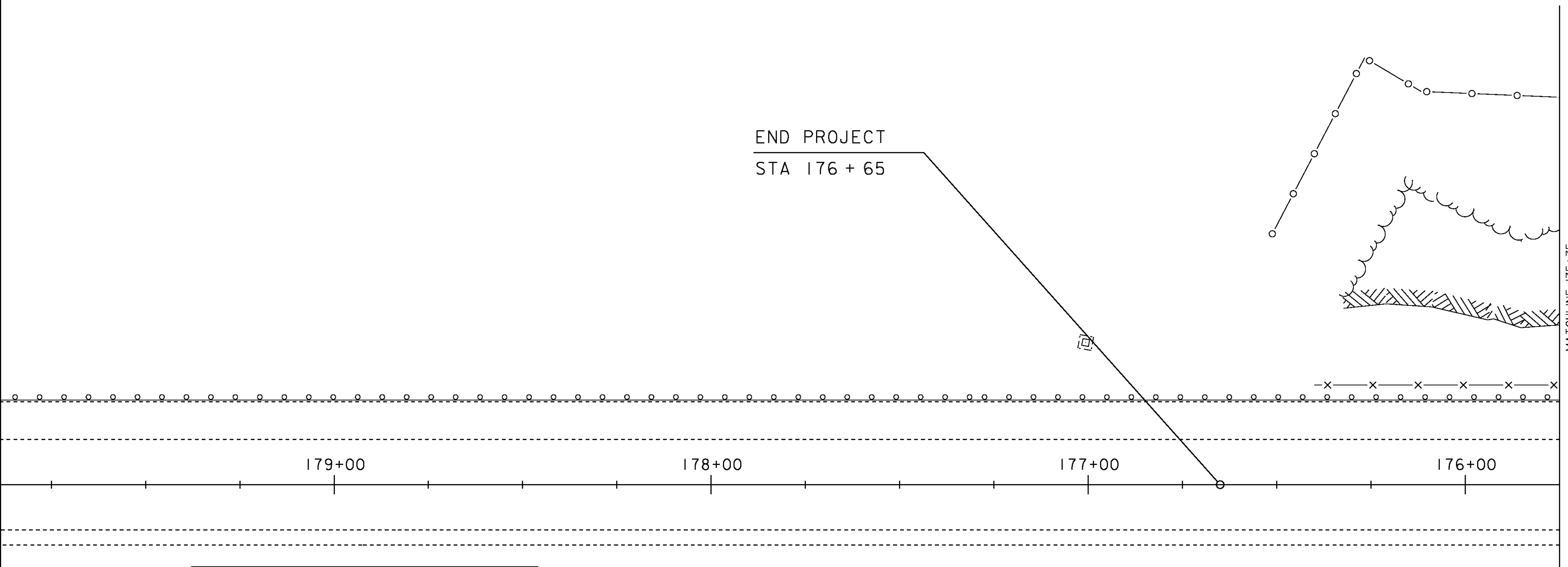


STA. 176+00

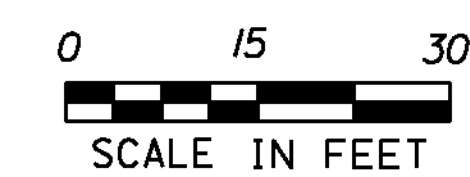
900.640 - SPECIAL PROVISION (ROCKFALL BARRIER FENCE)
STA. 175+75 RT TO STA. 176+40 RT (DITCH)

621.75 - REMOVE AND RESET GUARDRAIL
STA. 175+75 RT TO STA. 176+40 RT

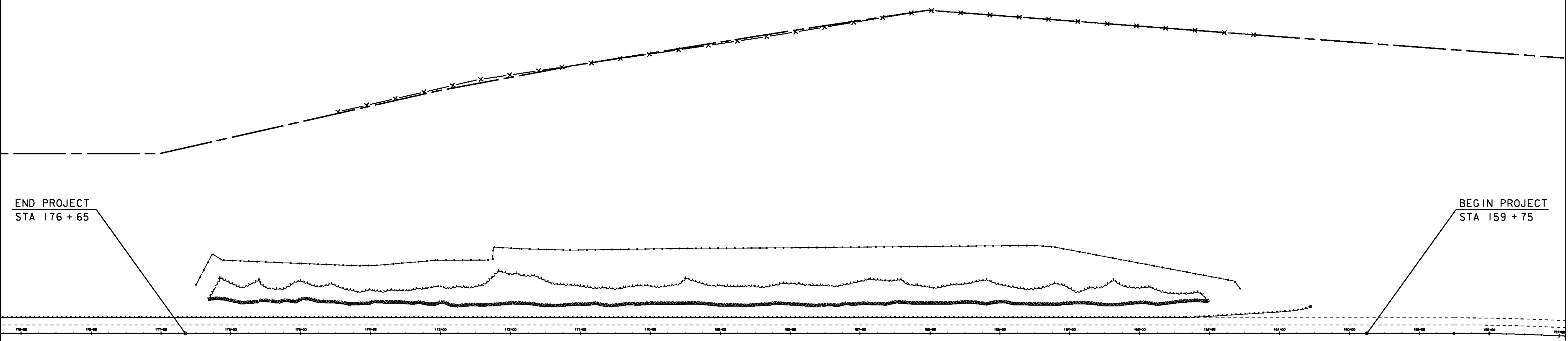
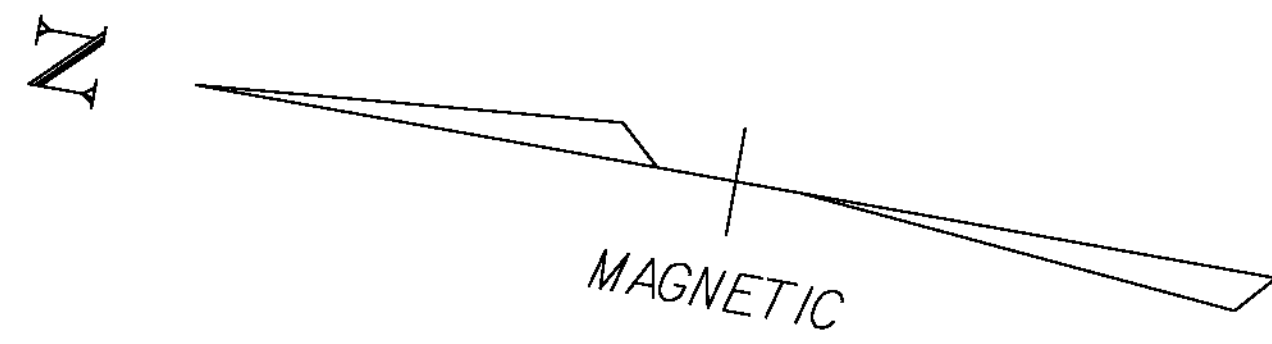
END PROJECT
STA 176 + 65



| LEGEND | |
|---------|---------------------------|
| -x-x-x- | ROCKFALL BARRIER FENCE |
| -o-o-o- | EXISTING CHAIN LINK FENCE |
| -o-o-o- | EXISTING GUARDRAIL |



| | |
|-----------------|------------------------------|
| PROJECT NAME: | BERLIN - MONTPELIER |
| PROJECT NUMBER: | IM 089-1(53) |
| FILE NAME: | 07A150/DESIGN/D07A150LAY.DGN |
| PROJECT LEADER: | K. ROBBE |
| DESIGNED BY: | P. PELOQUIN |
| LAYOUT SHEET | 8 |
| PLOT DATE: | 19-OCT-2011 |
| DRAWN BY: | I. SHEA |
| CHECKED BY: | S. MENARD |
| SHEET | 14 OF 29 |

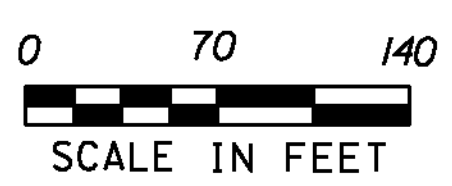


END PROJECT
STA 176 + 65

BEGIN PROJECT
STA 159 + 75

LEGEND

- — — — — APPROXIMATE LOCATION OF RIGHT-OF-WAY LINE
- x — x — x — x — APPROXIMATE LOCATION OF EXISTING RIGHT-OF-WAY FENCE
- o — o — o — o — EXISTING CHAIN LINK FENCE



FOR ROW USE ONLY

| | |
|---|------------------------|
| PROJECT NAME: BERLIN - MONTPELIER | |
| PROJECT NUMBER: IM 089-1(53) | |
| FILE NAME: 07A150/DESIGN/D07A150ROW.DGN | PLOT DATE: 19-OCT-2011 |
| PROJECT LEADER: K. ROBIE | DRAWN BY: I. SHEA |
| DESIGNED BY: I. SHEA | CHECKED BY: S. MENARD |
| ROW PLAN SHEET | SHEET 15 OF 29 |

EPSC PLAN NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES HAND SCALING OF EXPOSED LEDGE AND THE INSTALLATION OF A ROCKFALL CATCHMENT FENCE AT IDENTIFIED LOCATIONS FOR SAFETY ENHANCEMENTS. THE LEDGE IS LOCATED IN THE TOWN OF BERLIN, ALONG THE NORTH BOUND LANES OF I-89, APPROXIMATELY BETWEEN MM 51.91 AND MM 52.23.

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

TOTAL AREA OF DISTURBANCE AS SHOWN ON THE ATTACHED EPSC PLAN IS APPROXIMATELY 1.621 ACRES.

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

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY

THE TOPOGRAPHY OF THE AREA IS MODERATELY MOUNTAINOUS, MOSTLY WOODED WITH OCCASIONAL OPEN AREAS. THERE ARE POWER LINES LOCATED OVERHEAD WITHIN THE PROJECT AREA, WITH NO SURROUNDING COMERCIAL OR RESIDENTIAL BUILDINGS.

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

THERE ARE NO IDENTIFIABLE WATER SOURCES ON THE PROJECT SITE, ONLY STORM WATER CONVEYANCE FEATURES. THE CLOSEST RECEIVING WATER IS AN UNNAMED TRIBUTARY TO THE WINOOSKI RIVER. THE PROPERTY SURROUNDING THE PROJECT SITE CONSISTS OF MINIMAL STEEP SLOPES. DUE TO THE NATURE OF THE SURROUNDING TERRAIN THE PROJECT SITE COULD RECEIVE RUNOFF FROM NEARBY SLOPES.

1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF HARDWOOD AND SOFTWOOD TREES ALONG WITH UNDERGROWTH. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS DIRECTLY AFFECTED BY THE PLANNED REMOVAL OF LEDGE. DISTURBED VEGETATION WILL BE REESTABLISHED WITH STANDARD SEEDING PRACTICES.

1.2.4 SOILS

ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF WASHINGTON, VERMONT. SOILS ON THE PROJECT SITE ARE VESHIRE-DUMMERSTON COMPLEX, ROCKY, 15% TO 25% SLOPES, "K FACTOR" = 0.37/0.32 AND BUCKLAND SILT LOAM, VERY STONEY, 15% TO 35% SLOPES, "K FACTOR" = 0.32. THE SOIL IS CONSIDERED MODERATELY ERODIBLE DUE TO SIGNIFICANT SLOPES.

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

1.2.5 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: NO
HISTORICAL OR ARCHEOLOGICAL AREAS: NO
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: NO
WETLANDS: NO

1.3 RISK EVALUATION

THIS PROJECT FALLS UNDER THE JURISDICTION OF GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES FOR LOW RISK PROJECTS. ANY MODIFICATIONS TO THE PROJECT THAT INCREASE THE RISK TO ENVIRONMENTAL RESOURCES SHALL BE EVALUATED IN ACCORDANCE WITH THE PERMIT REQUIREMENTS. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ADDITIONAL PERMITTING.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

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

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

1.4.1 MARK SITE BOUNDARIES

SITE BOUNDARIES AND AREAS CONSTRUCTION EQUIPMENT CAN ACCESS SHALL BE DELINEATED. PROJECT DEMARCATION FENCING (PDF) SHALL BE USED TO PHYSICALLY MARK SITE BOUNDARIES. BECAUSE THIS PROJECT FALLS UNDER THE CGM 3-9020, WOVEN BARRIER FENCE SHALL BE USED INSTEAD OF (PDF) WITHIN 100 FEET UPSLOPE OF RECEIVING WATERS. THE USE OF BARRIER FENCE IS NOT ANTICIPATED FOR THIS PROJECT.

1.4.2 LIMIT DISTURBANCE AREA

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

1.4.3 SITE ENTRANCE/EXIT STABILIZATION

TRACKING OF SEDIMENT ONTO PUBLIC HIGHWAYS SHALL BE MNIMIZED TO REDUCE THE POTENTIAL FOR RUNOFF ENTERING RECEIVING WATERS. INSTALLATION SHALL COINCIDE WITH THE CONTRACTORS PROGRESS SCHEDULE.

STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED ANYWHERE EQUIPMENT WILL BE GOING FROM AREAS OF EXPOSED SOILS TO PAVED SURFACES.

1.4.4 INSTALL SEDIMENT BARRIERS

SEDIMENT BARRIERS SHALL BE UTILIZED TO INTERCEPT RUNOFF AND ALLOW SUSPENDED SEDIMENT TO SETTLE OUT. THEY SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK. SILT FENCE WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN OR AS NECESSARY. BECAUSE THIS PROJECT FALLS UNDER THE CGM 3-9020, WOVEN WIRE REINFORCED SILT FENCE SHALL BE USED INSTEAD OF SILT FENCE WITHIN 100 FEET UPSLOPE OF RECEIVING WATERS. THE USE OF WOVEN WIRE REINFORCED SILT FENCE IS NOT ANTICIPATED FOR THIS PROJECT.

INLET PROTECTION DEVICES WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN.

1.4.5 DIVERT UPLAND RUNOFF

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

1.4.6 SLOW DOWN CHANNELIZED RUNOFF

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

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

1.4.7 CONSTRUCT PERMANENT CONTROLS

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

1.4.8 STABILIZE EXPOSED SOILS DURING CONSTRUCTION

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

BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3.

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

1.4.9 WINTER STABILIZATION

VARIOUS MEASURES SPECIFIC TO WINTER MAY BE NECESSARY SHOULD THE PROJECT EXTEND INTO WINTER (OCTOBER 15 THROUGH APRIL 15). REFER TO THE LOW RISK SITE HANDBOOK FOR GUIDANCE. WINTER CONSTRUCTION IS NOT ANTICIPATED; HOWEVER, IF WORK CONTINUES INTO WINTER ACTIVITIES WILL FOLLOW THE LOW RISK SITE HANDBOOK.

1.4.10 STABILIZE SOIL AT FINAL GRADE

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

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

1.4.11 DE-WATERING ACTIVITIES

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

NOT APPLICABLE. DE-WATERING ACTIVITIES ARE NOT ANTICIPATED FOR THIS PROJECT.

1.4.12 INSPECT YOUR SITE

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

1.5 SEQUENCE AND STAGING

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

1.5.1 CONSTRUCTION SEQUENCE

1.5.2 OFF-SITE ACTIVITIES

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

1.5.3 UPDATES

PROJECT NAME: BERLIN - MONTPELIER

PROJECT NUMBER: IM 089-1(53)

FILE NAME: 07A150/DESIGN/D07A150FRM.DGN PLOT DATE: 19-OCT-2011

PROJECT LEADER: K. ROBIE

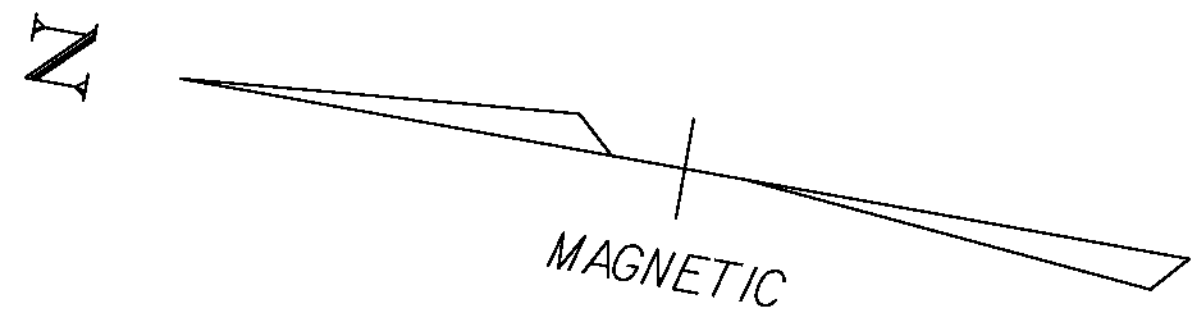
DRAWN BY: I. SHEA

DESIGNED BY: P. PELOQUIN

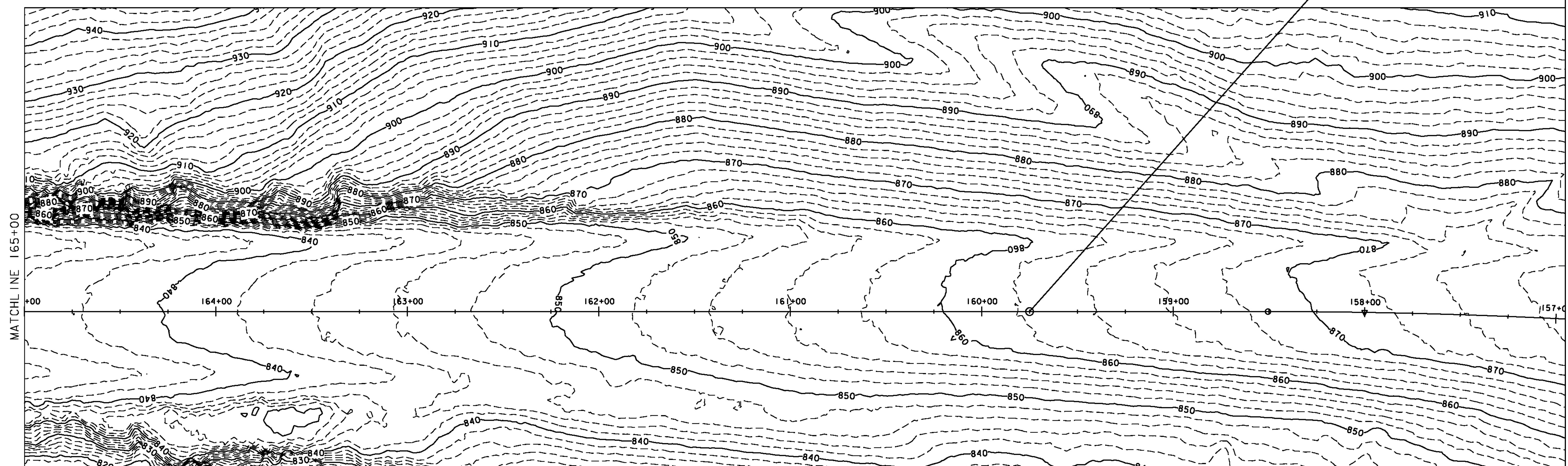
CHECKED BY: S. MENARD

EPSC NARRATIVE

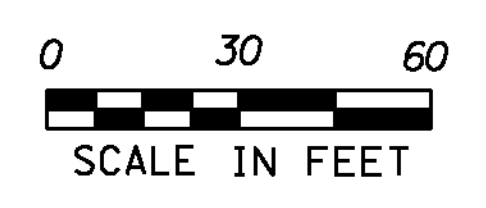
SHEET 16 OF 29



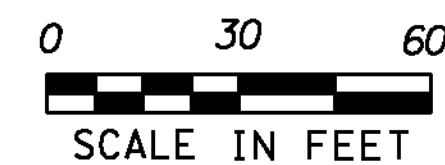
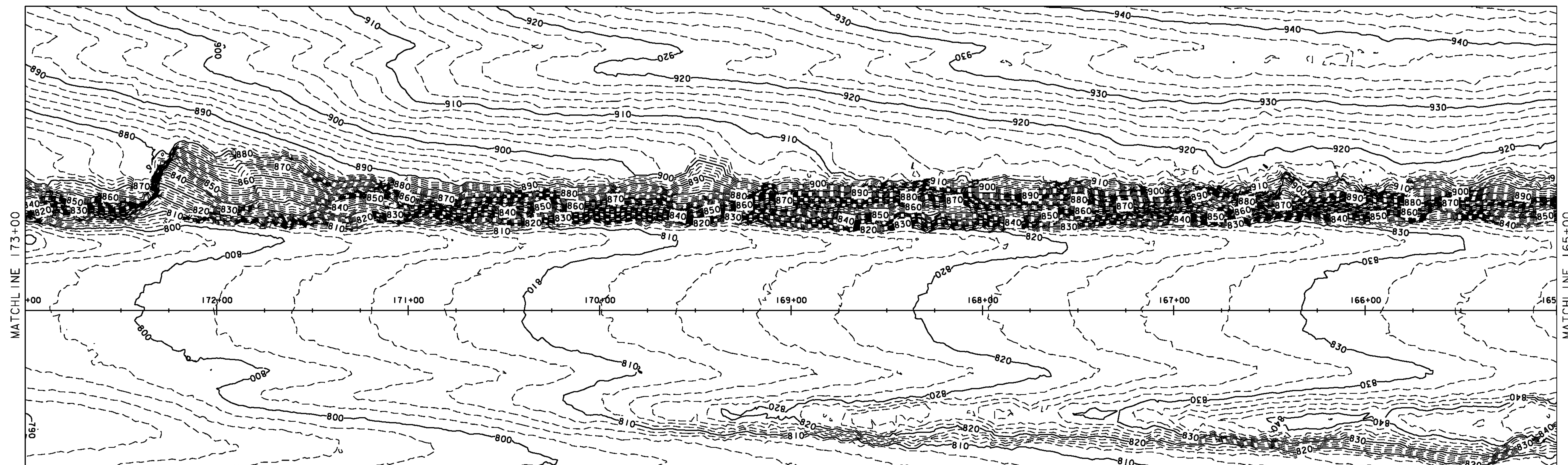
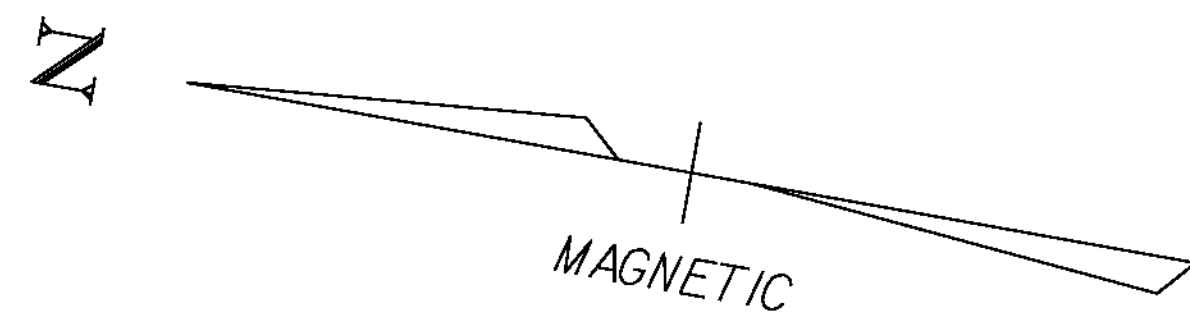
BEGIN PROJECT
STA 159 + 75



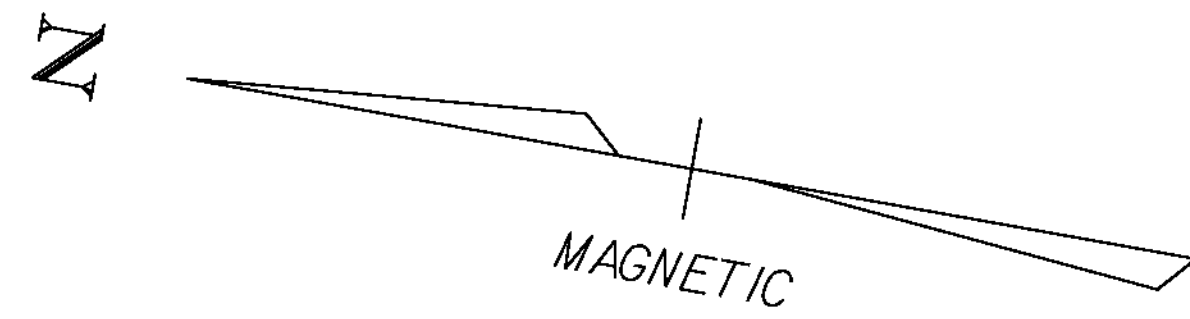
MATCHLINE 165+00



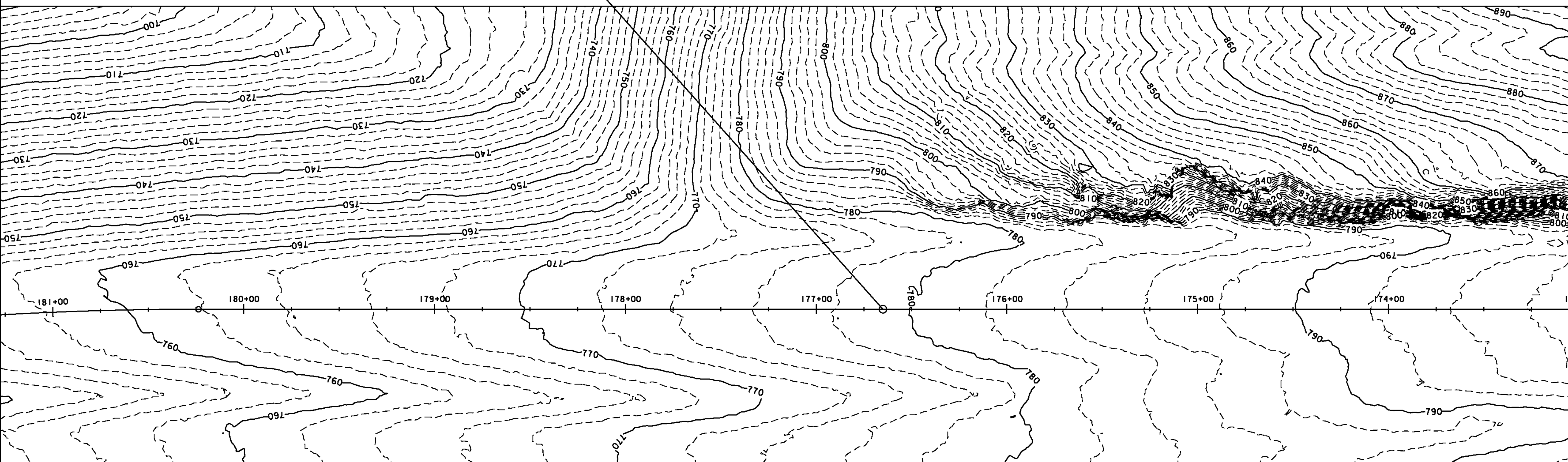
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|------------------------------------|------------------------------|
| PROJECT NAME: | BERLIN - MONTPELIER |
| PROJECT NUMBER: | IM 089-1(53) |
| FILE NAME: | 07A150/DESIGN/D07A150BDR.DGN |
| PROJECT LEADER: | K. ROBIE |
| DESIGNED BY: | P. PELOQUIN |
| EXISTING CONDITIONS LAYOUT SHEET 1 | |
| PLOT DATE: | 19-OCT-2011 |
| DRAWN BY: | I. SHEA |
| CHECKED BY: | S. MENARD |
| SHEET | 17 OF 29 |



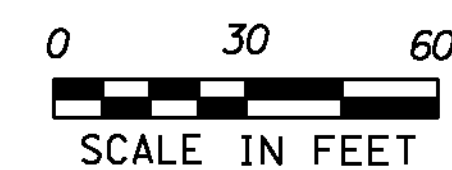
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|------------------------------------|------------------------------|
| PROJECT NAME: | BERLIN - MONTPELIER |
| PROJECT NUMBER: | IM 089-1(53) |
| FILE NAME: | 07A150/DESIGN/D07A150BDR.DGN |
| PROJECT LEADER: | K. ROBIE |
| DESIGNED BY: | P. PELOQUIN |
| EXISTING CONDITIONS LAYOUT SHEET 2 | |
| PLOT DATE: | 19-OCT-2011 |
| DRAWN BY: | I. SHEA |
| CHECKED BY: | S. MENARD |
| SHEET 18 OF 29 | |



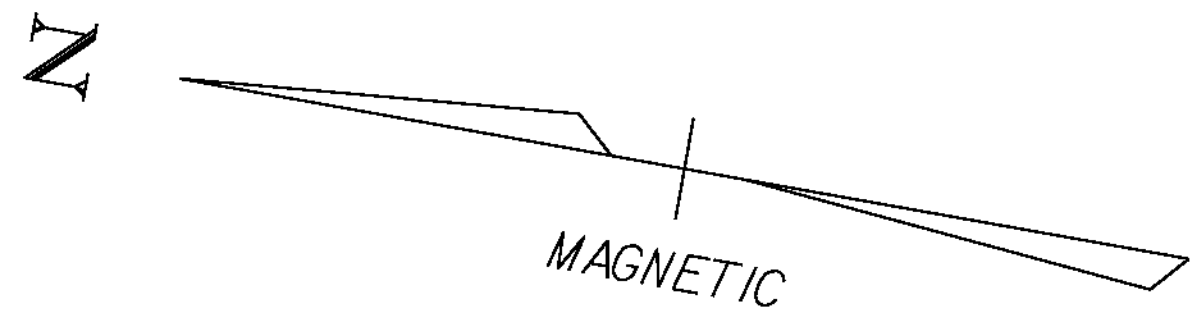
END PROJECT
STA 176 + 65



MATCHLINE 173+00



| | |
|------------------------------------|------------------------------|
| PROJECT NAME: | BERLIN - MONTPELIER |
| PROJECT NUMBER: | IM 089-1(53) |
| FILE NAME: | 07A150/DESIGN/D07A150BDR.DGN |
| PROJECT LEADER: | K. ROBIE |
| DESIGNED BY: | P. PELOQUIN |
| EXISTING CONDITIONS LAYOUT SHEET 3 | |
| PLOT DATE: | 19-OCT-2011 |
| DRAWN BY: | I. SHEA |
| CHECKED BY: | S. MENARD |
| SHEET | 19 OF 29 |

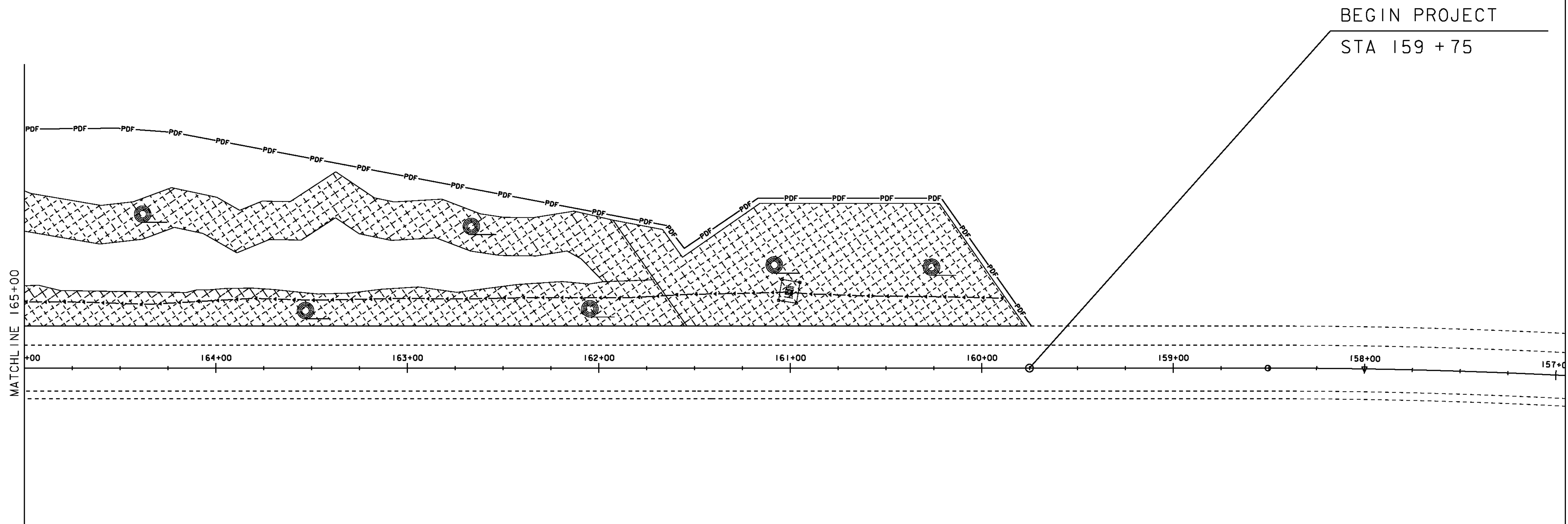


653.20 - TEMPORARY EROSION MATTING
 STA. 161+50 RT TO STA. 165+00 RT (DITCH)
 STA. 161+75 RT TO STA. 165+00 RT (CREST OF LEDGE)
 STA. 159+75 RT TO STA. 161+50 RT (STAGING AREA)

653.40 - INLET PROTECTION DEVICE, TYPE I
 STA. 161+00 RT

653.55 - PROJECT DEMARCATION FENCE
 STA. 159+75 RT TO STA. 165+00 RT (579 FT)

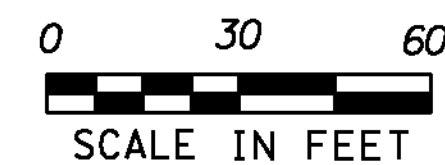
653.25 - TEMPORARY STONE CHECK DAM, TYPE I
 STA. 159+75 RT TO STA. 165+00 RT (14 CHECK DAMS)



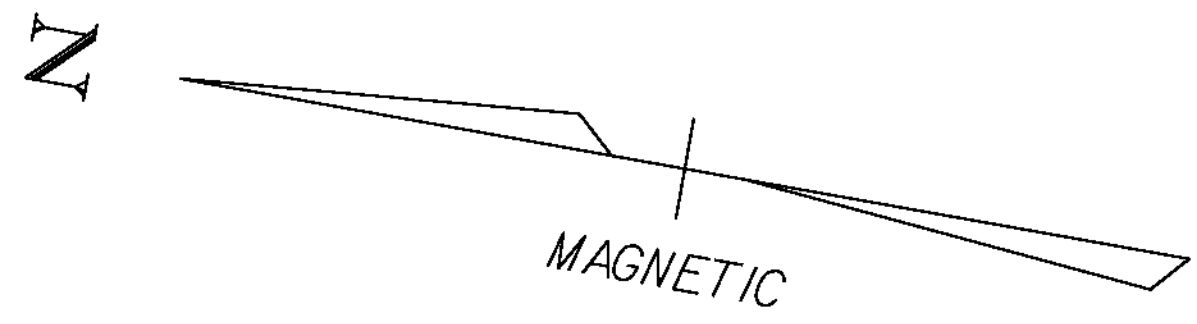
LEGEND

- CHECK DAMS
- SILT FENCE
- EROSION MATTING/LIMITS OF DISTURBANCE
- PROJECT DEMARCATION FENCE
- DROP INLET PROTECTION

AREA OF DISTURBANCE:
 CREST OF LEDGE: 6,988 SF: 0.160 ACRES
 DITCH: 6,694 SF: 0.154 ACRES
 STAGING ACCESS: 10,223 SF: 0.235 ACRES
 SHEET TOTAL: 23,905 SF: 0.549 ACRES
 PROJECT TOTAL: 70,589 SF: 1.621 ACRES



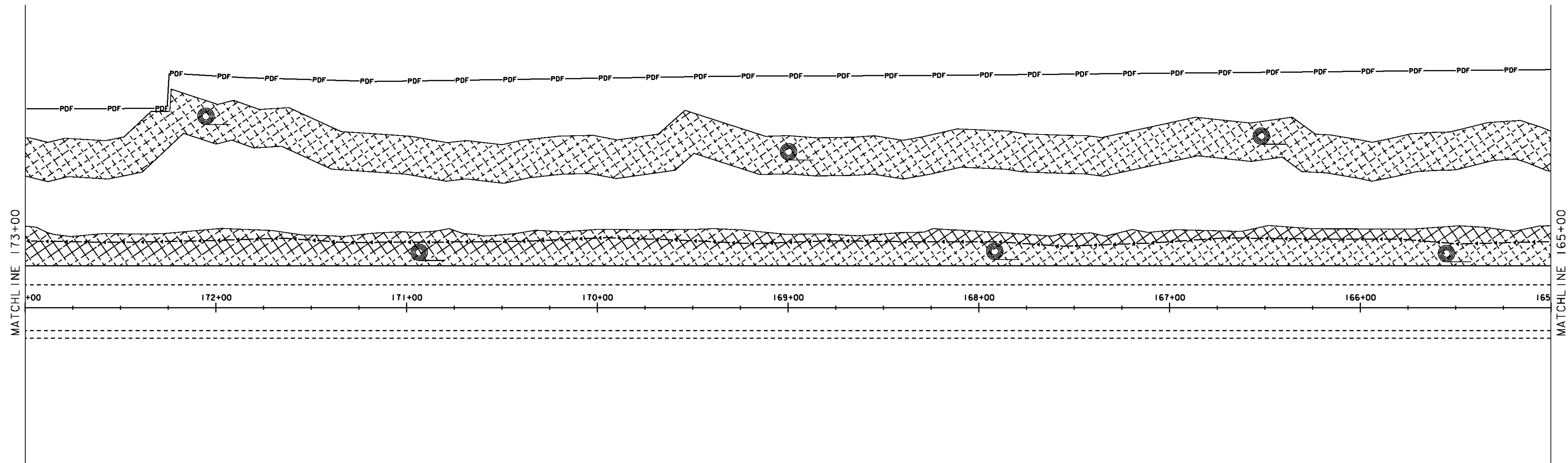
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|---|------------------------|
| PROJECT NAME: BERLIN - MONTPELIER | |
| PROJECT NUMBER: IM 089-1(53) | |
| FILE NAME: 07A150/DESIGN/D07A150BDR.DGN | PLOT DATE: 19-OCT-2011 |
| PROJECT LEADER: K. ROBIE | DRAWN BY: I. SHEA |
| DESIGNED BY: P. PELOQUIN | CHECKED BY: S. MENARD |
| EPSC LAYOUT SHEET 1 | SHEET 20 OF 29 |



653.20 - TEMPORARY EROSION MATTING
 STA. 165+00 RT TO STA. 173+00 RT (DITCH)
 STA. 165+00 RT TO STA. 173+00 RT (CREST OF LEDGE)

653.55 - PROJECT DEMARCATION FENCE
 STA. 165+00 RT TO STA. 173+00 RT (818 FT)

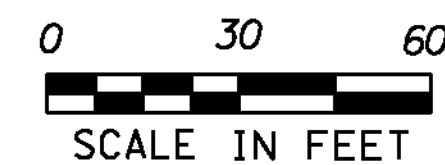
653.25 - TEMPORARY STONE CHECK DAM, TYPE 1
 STA. 165+00 RT TO STA. 173+00 RT (20 CHECK DAMS)



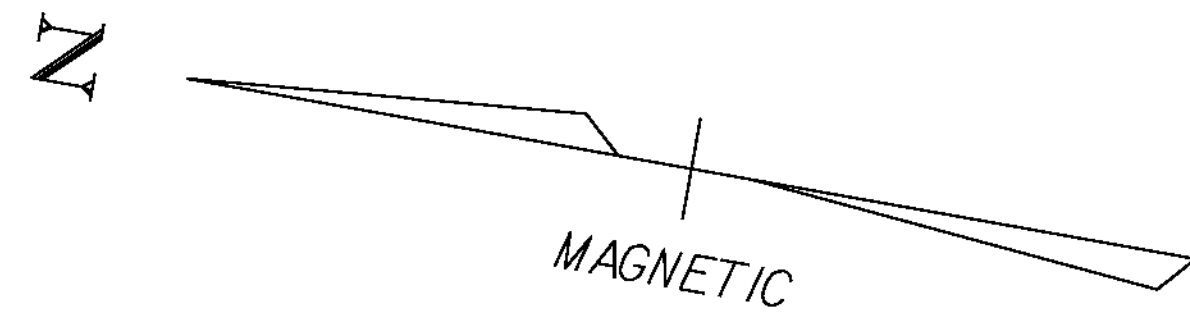
LEGEND

- CHECK DAMS
- SILT FENCE
- EROSION MATTING/LIMITS OF DISTURBANCE
- PROJECT DEMARCATION FENCE
- DROP INLET PROTECTION

AREA OF DISTURBANCE
 CREST OF LEDGE: 16,557 SF: 0.380 ACRES
 DITCH: 14,445 SF: 0.332 ACRES
 SHEET TOTAL: 31,002 SF: 0.712 ACRES
 PROJECT TOTAL: 70,589 SF: 1.621 ACRES



| | |
|---|------------------------|
| PROJECT NAME: BERLIN - MONTPELIER | |
| PROJECT NUMBER: IM 089-1(53) | |
| FILE NAME: 07A150/DESIGN/D07A150BDR.DGN | PLOT DATE: 19-OCT-2011 |
| PROJECT LEADER: K. ROBIE | DRAWN BY: I. SHEA |
| DESIGNED BY: P. PELOQUIN | CHECKED BY: S. MENARD |
| EPSC LAYOUT SHEET 2 | SHEET 21 OF 29 |



653.20 - TEMPORARY EROSION MATTING
 STA. 173+00 RT TO STA. 176+65 RT (DITCH)
 STA. 173+00 RT TO STA. 176+50 RT (CREST OF LEDGE)

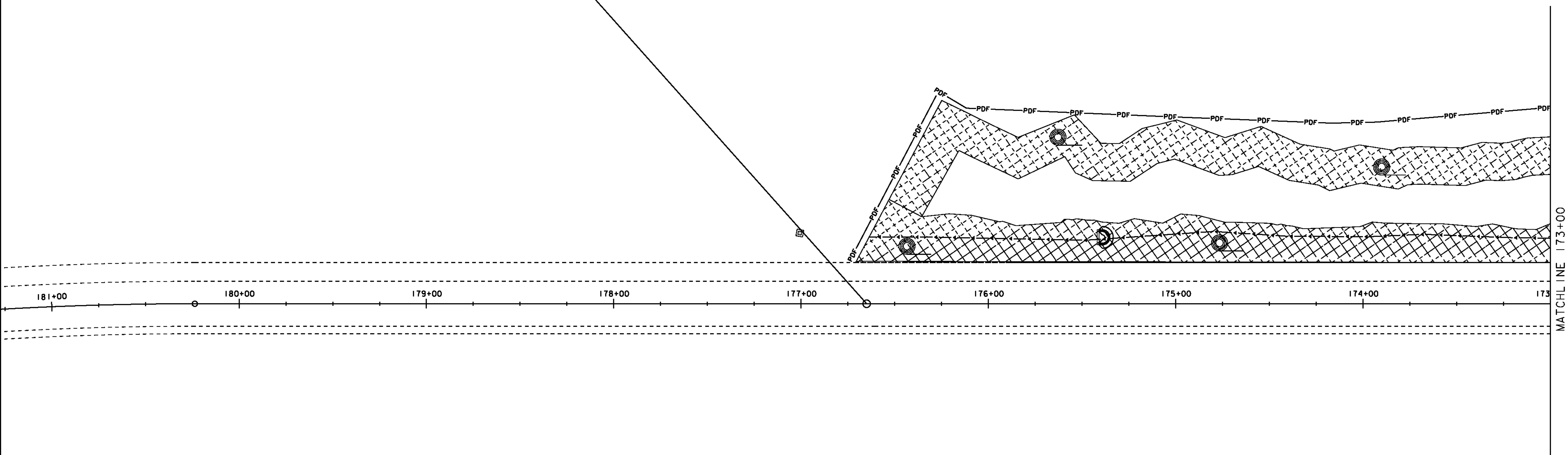
653.25 - TEMPORARY STONE CHECK DAM, TYPE I
 STA. 173+00 RT TO STA. 176+65 RT (8 CHECK DAMS)

653.40 - INLET PROTECTION DEVICE, TYPE I
 STA. 175+41 RT (HW)

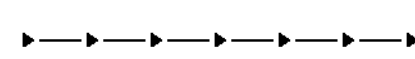
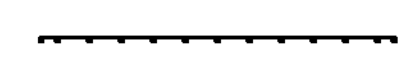




653.55 - PROJECT DEMARCATION FENCE
 STA. 173+00 RT TO STA. 176+65 RT (432 FT)

649.51 - GEOTEXTILE FOR SILT FENCE
 STA. 176+25 RT TO STA. 176+75 RT (DITCH)

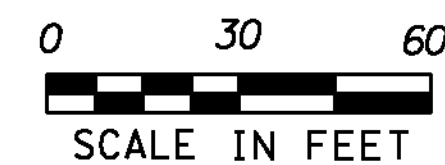
END PROJECT
 STA 176 + 65



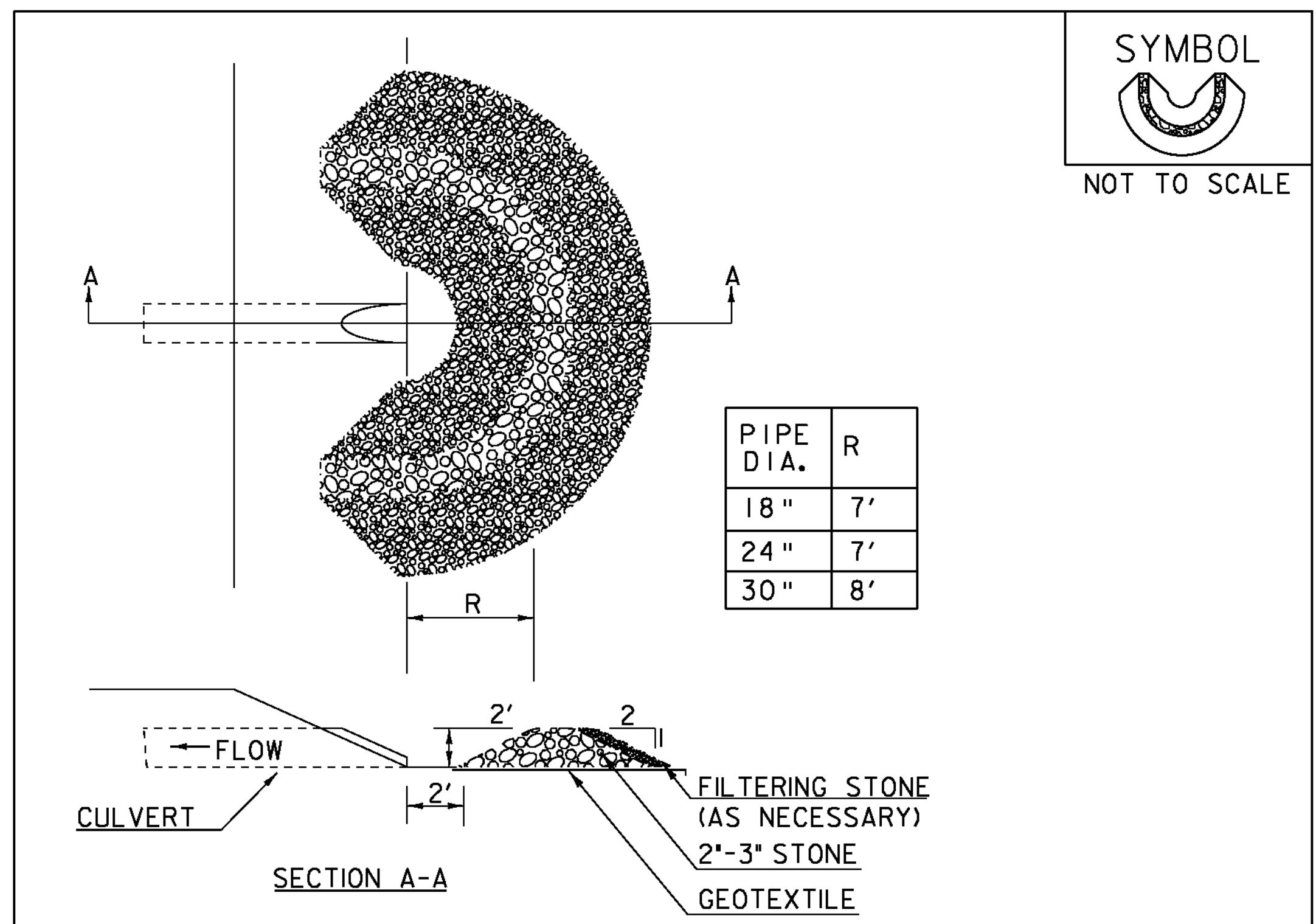
LEGEND

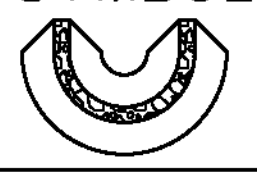
-  CHECK DAMS
-  SILT FENCE
-  EROSION MATTING/LIMITS OF DISTURBANCE
-  PROJECT DEMARCATION FENCE
-  DROP INLET PROTECTION
-  PIPE INLET PROTECTION

AREA OF DISTURBANCE
 CREST OF LEDGE: 7,840 SF: 0.180 ACRES
 DITCH: 7,842 SF: 0.180 ACRES
 SHEET TOTAL: 15,682 SF: 0.360 ACRES
 PROJECT TOTAL: 70,589 SF: 1.621 ACRES



| | |
|--|------------------------|
| PROJECT NAME: BERLIN - MONTPELIER | |
| PROJECT NUMBER: IM 089-1(53) | |
| FILE NAME: 07A150/DESIGN/07A150BDR.DGN | PLOT DATE: 19-OCT-2011 |
| PROJECT LEADER: K. ROBBIE | DRAWN BY: I. SHEA |
| DESIGNED BY: P. PELOQUIN | CHECKED BY: S. MENARD |
| EPSC LAYOUT SHEET 3 | SHEET 22 OF 29 |



SYMBOL

 NOT TO SCALE

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

CONSTRUCTION SPECIFICATIONS

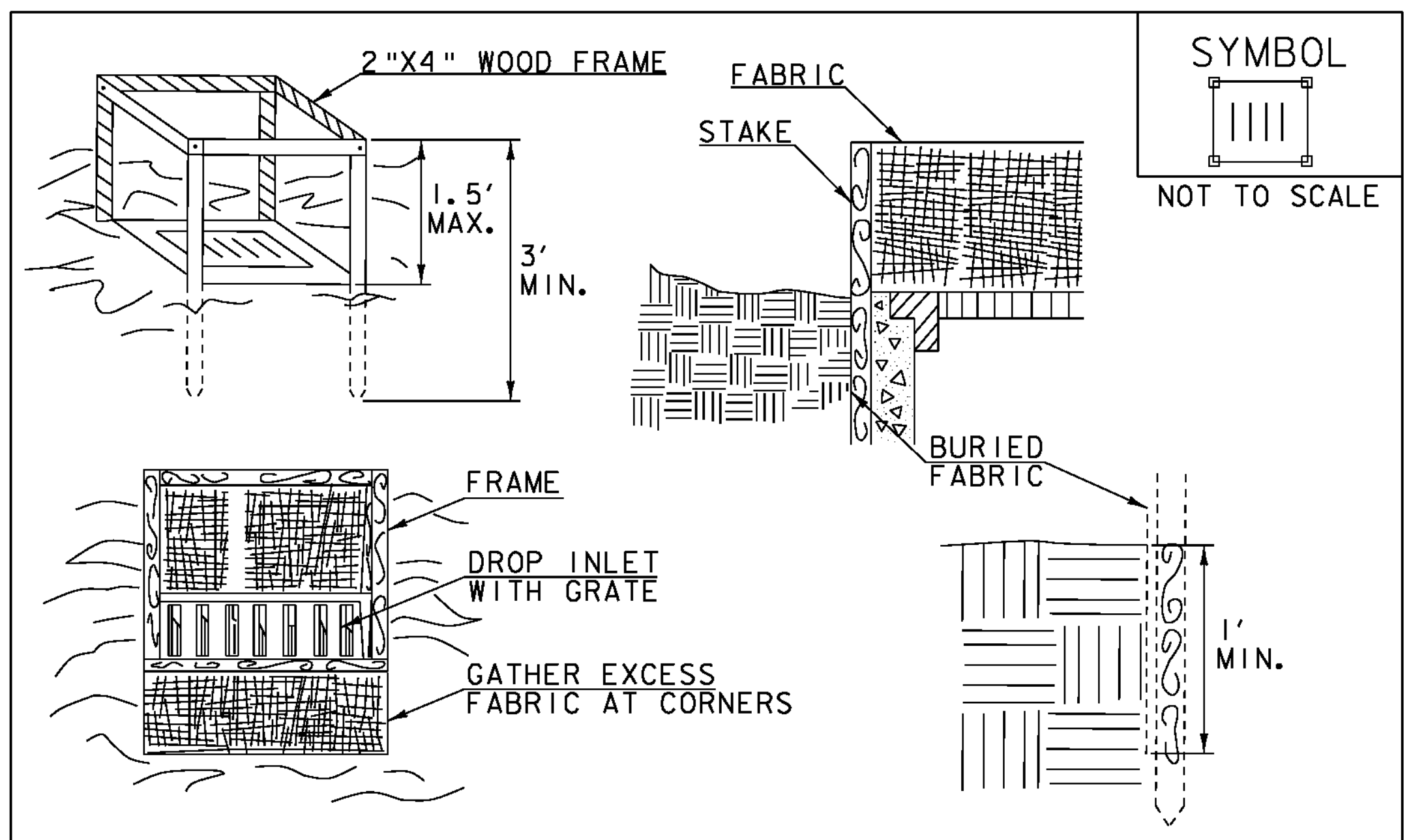
1. USE 2" TO 3" STONE. FILTERING STONE SHALL BE 3/4".
2. PLACE STONE OVER GEOTEXTILE.
3. ONCE THE AREAS UPSTREAM FROM THE CHECK DAM ARE STABILIZED WITH VEGETATION, THE SEDIMENT TRAPPED BEHIND THE DAM SHALL BE DISPOSED OF IN AN APPROVED WASTE AREA.
4. THE CHECK DAM(S) SHALL BE FLATTENED AND GRADED IN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

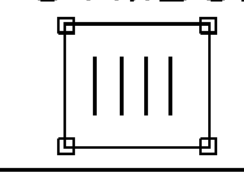
ADAPTED FROM DETAILS PROVIDED BY: ILLINOIS USDA-NRCS
 ORIGINALLY DEVELOPED BY USDA-NRCS

PIPE INLET PROTECTION

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

| REVISIONS | | |
|------------------|-----|--|
| MARCH 6, 2008 | WHF | |
| JANUARY 13, 2009 | WHF | |
| | | |
| | | |



SYMBOL

 NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

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

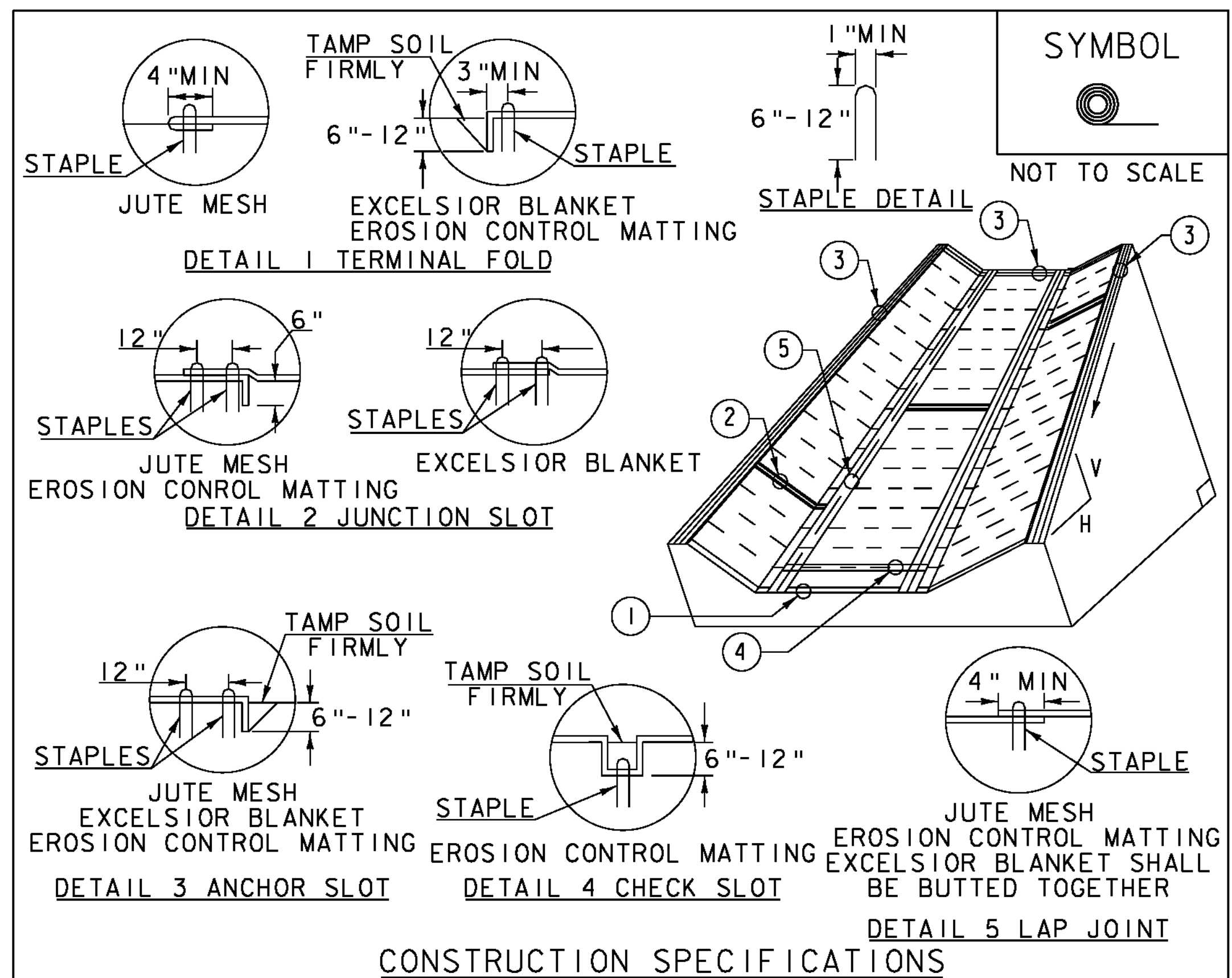
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
 ORIGINALLY DEVELOPED BY USDA-NRCS
 VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

FILTER FABRIC DROP INLET PROTECTION

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

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

| REVISIONS | | |
|------------------|-----|--|
| MARCH 7, 2008 | WHF | |
| JANUARY 13, 2009 | WHF | |
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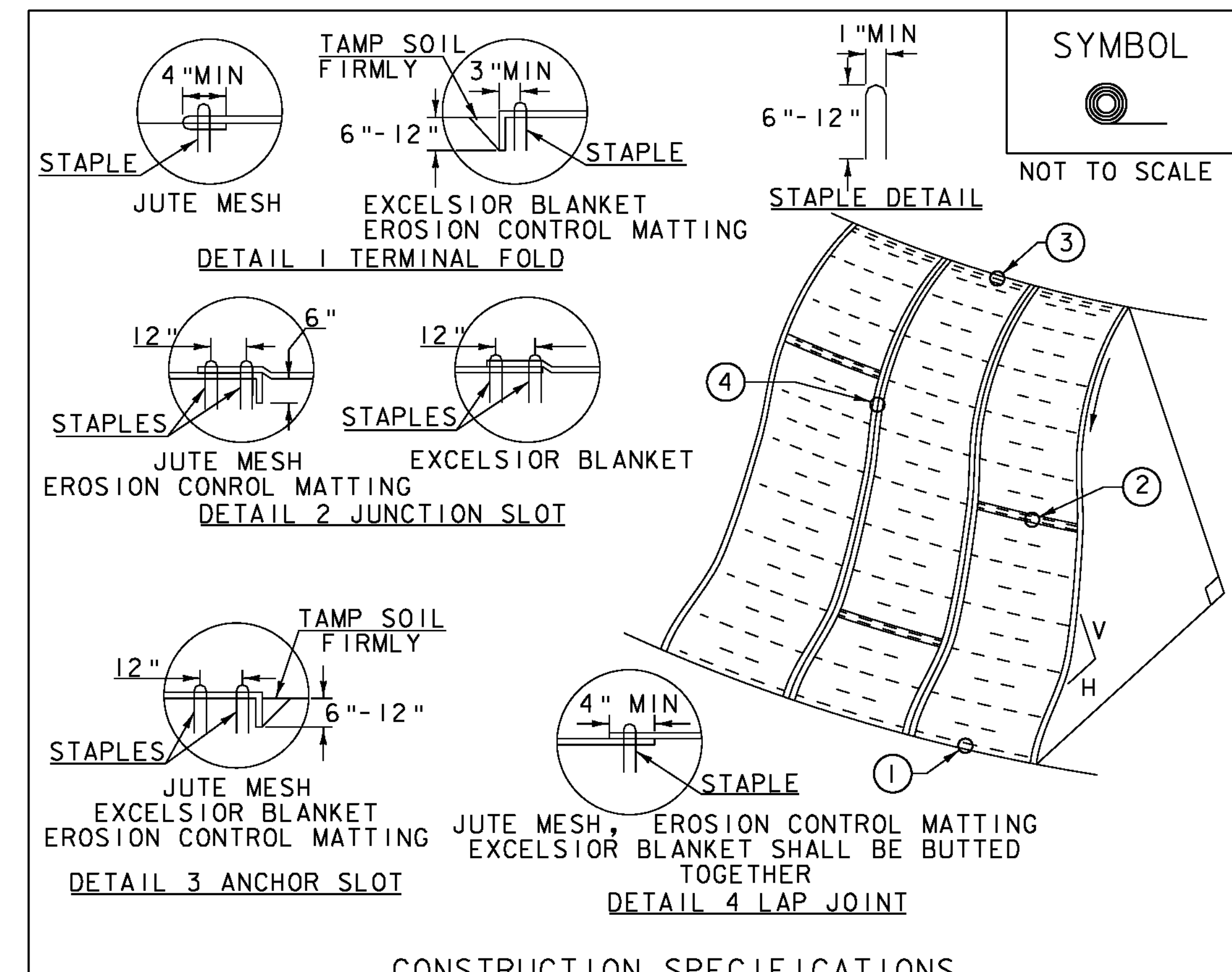
- CONSTRUCTION SPECIFICATIONS**
1. EROSION MATTING, CHECK SLOTS, SHALL BE SPACED IN DITCH CHANNEL SO THAT ONE OCCURS WITHIN EACH 50' ON SLOPES OF MORE THAN 4% AND LESS THAN 6%. ON SLOPES OF 6% OR MORE, THEY SHALL BE SPACED SO THAT ONE OCCURS WITHIN EACH 25'.
 2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
 3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4' X 225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4' X 150' ROLL OF MATERIAL.
 4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
 5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

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

ROLLED EROSION CONTROL PRODUCT (RECP) DITCH

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

| REVISIONS | | |
|------------------|-----|--|
| MARCH 8, 2007 | JMF | |
| APRIL 16, 2007 | WHF | |
| JANUARY 13, 2009 | WHF | |



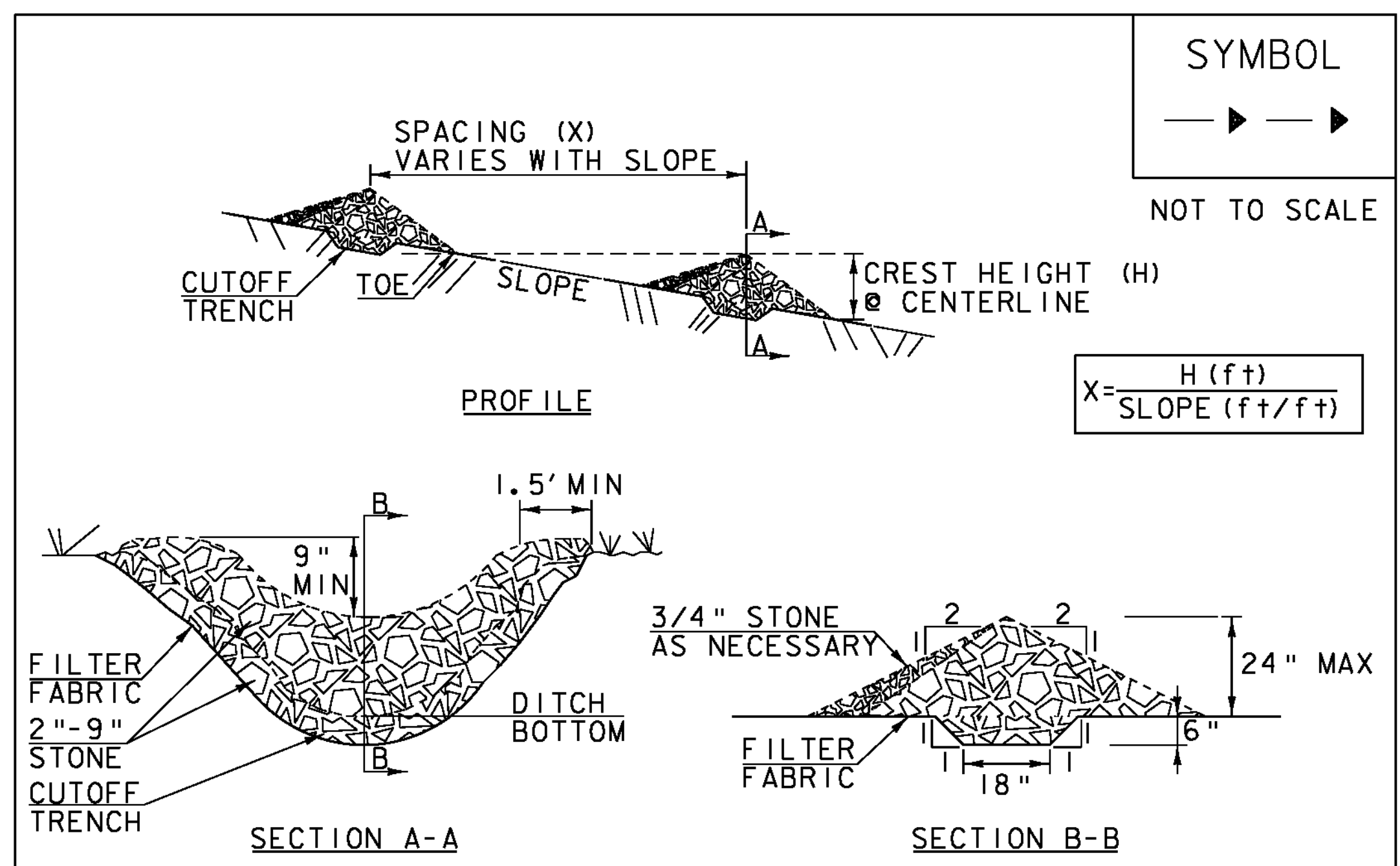
- CONSTRUCTION SPECIFICATIONS**
1. APPLY TO SLOPES GREATER THAN 3H:1V OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.
 2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
 3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4' X 225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4' X 150' ROLL OF MATERIAL.
 4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
 5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

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

ROLLED EROSION CONTROL PRODUCT (RECP) SIDE SLOPE

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

| REVISIONS | | |
|------------------|-----|--|
| APRIL 16, 2007 | JMF | |
| JANUARY 13, 2009 | WHF | |



SYMBOL
 —▶—▶—▶
 NOT TO SCALE

$$X = \frac{H (ft)}{SLOPE (ft/ft)}$$

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

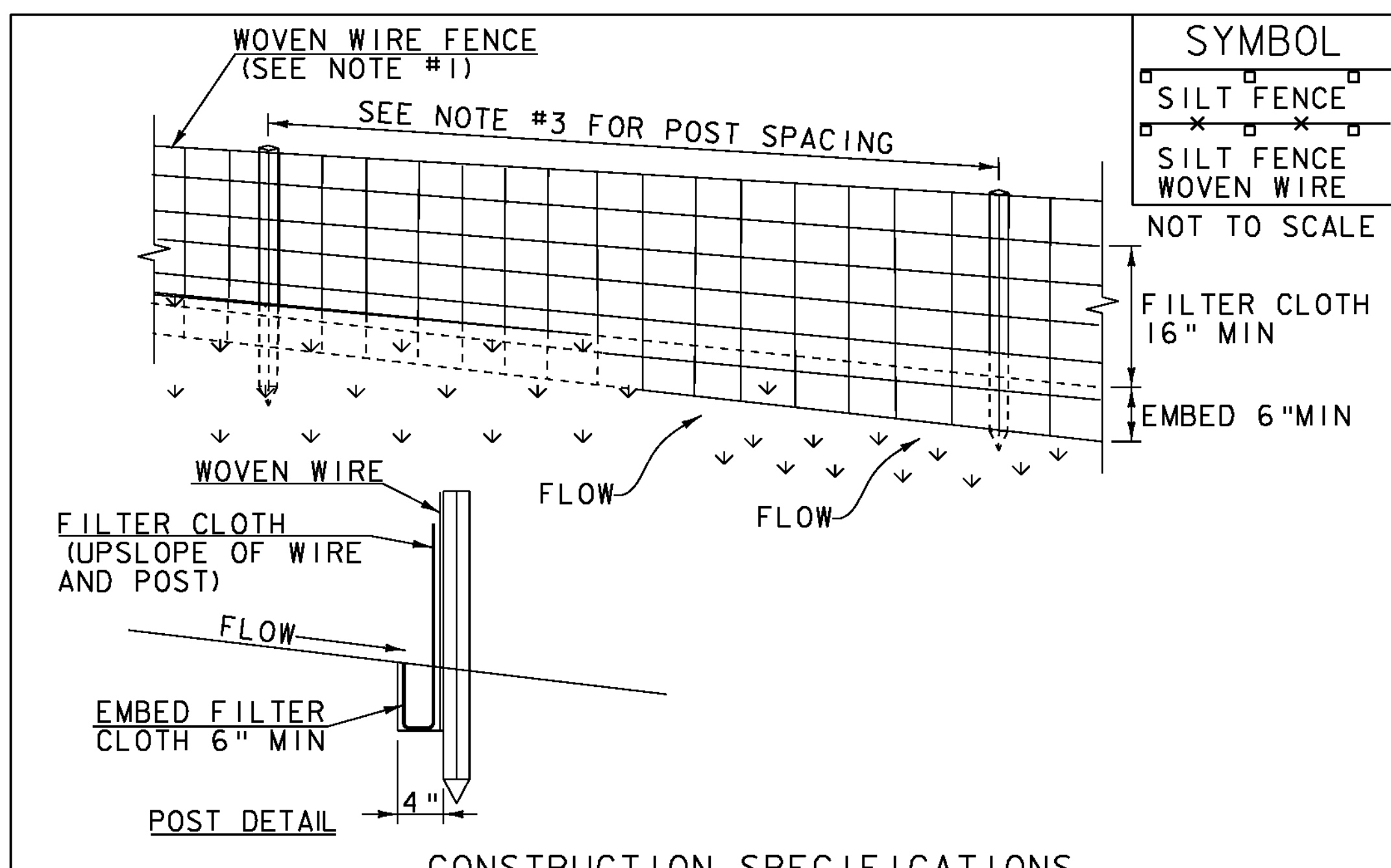
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
 ORIGINALLY DEVELOPED BY USDA-NRCS
 VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

CHECK DAM

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

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR TEMPORARY STONE CHECK DAM, TYPE I (PAY ITEM 653.25)

| REVISIONS | |
|-----------------|-----|
| MARCH 21, 2008 | WHF |
| JANUARY 8, 2009 | WHF |
| | |
| | |



SYMBOL
 □ SILT FENCE
 □ SILT FENCE WOVEN WIRE
 NOT TO SCALE

- CONSTRUCTION SPECIFICATIONS**
1. WOVEN WIRE REINFORCED FENCE IS REQUIRED WITHIN 100' UPSLOPE OF RECEIVING WATERS WHEN THE PROJECT FALLS UNDER A CONSTRUCTION STORMWATER PERMIT. WOVEN WIRE SHALL BE A MIN. 14 GAUGE WITH A 6" MAX. MESH OPENING.
 2. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAF1100X, STABILINKA T140N OR APPROVED EQUIVALENT.
 3. POST SPACING FOR WIRE-BACKED FENCE SHALL BE 10' MAXIMUM. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4' AND WHEN ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6'.
 4. WOVEN WIRE FENCE IS TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. FILTER CLOTH IS TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
 5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY 6" AND FOLDED.
 6. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT.

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

SILT FENCE

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

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 AND AS SHOWN IN THE PLANS FOR GEOTEXTILE FOR SILT FENCE (PAY ITEM 649.5) OR GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED (PAY ITEM 649.515).

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

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

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

| SOIL AMENDMENT GUIDANCE | | | |
|-------------------------|--------------|------------|--------------|
| FERTILIZER | | LIME | |
| BROADCAST | HYDROSEED | BROADCAST | HYDROSEED |
| 10-20-10 | FOLLOW | PELLETIZED | FOLLOW |
| 500 LBS/AC | MANUFACTURER | 2 TONS/AC | MANUFACTURER |

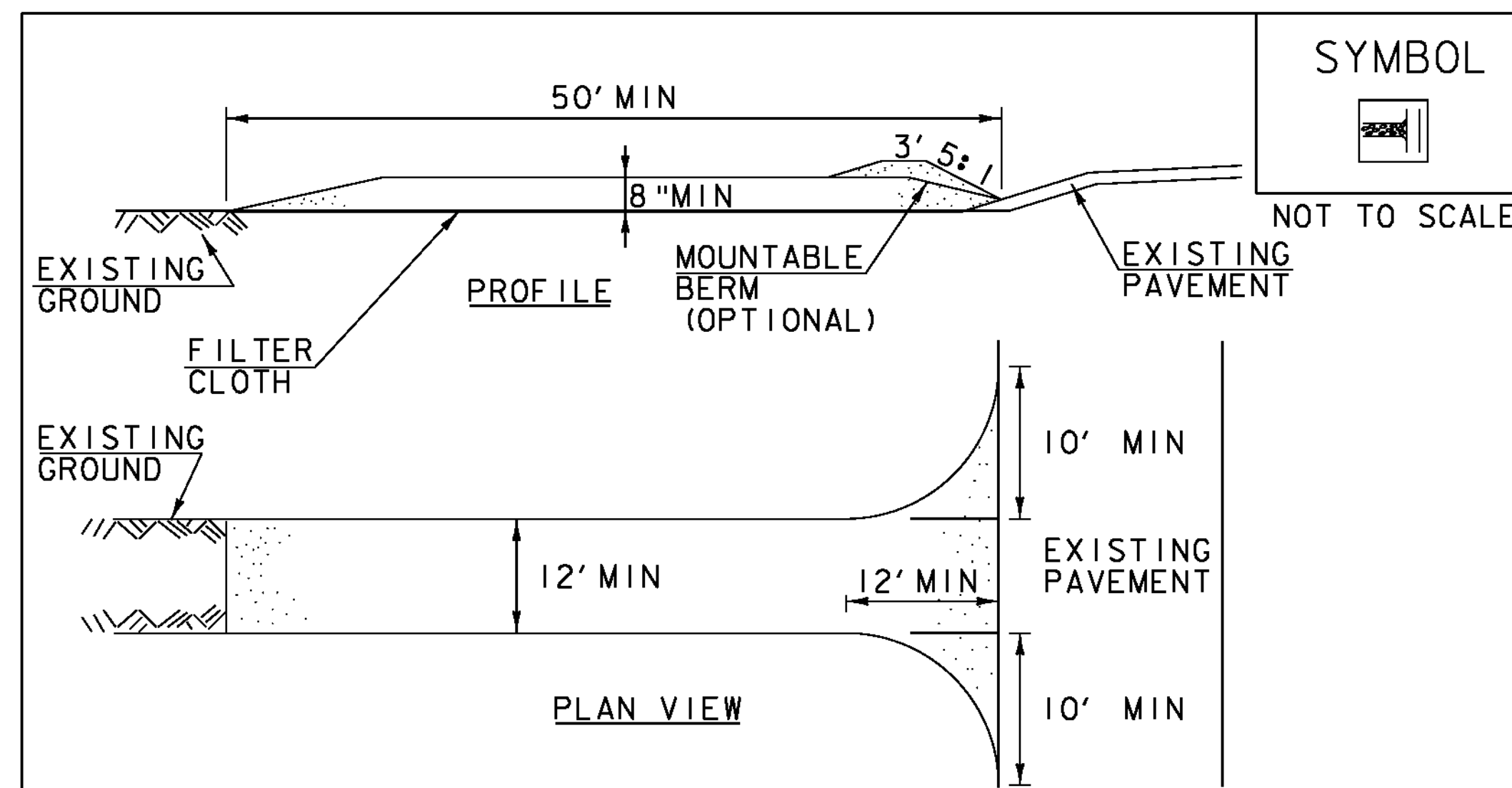
CONSTRUCTION GUIDANCE

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

ADAPTED FROM VTRANS TECHNICAL LANDSCAPE MANUAL FOR ROADWAYS AND TRANSPORTATION FACILITIES

TURF ESTABLISHMENT

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



CONSTRUCTION SPECIFICATIONS

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

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

STABILIZED CONSTRUCTION ENTRANCE

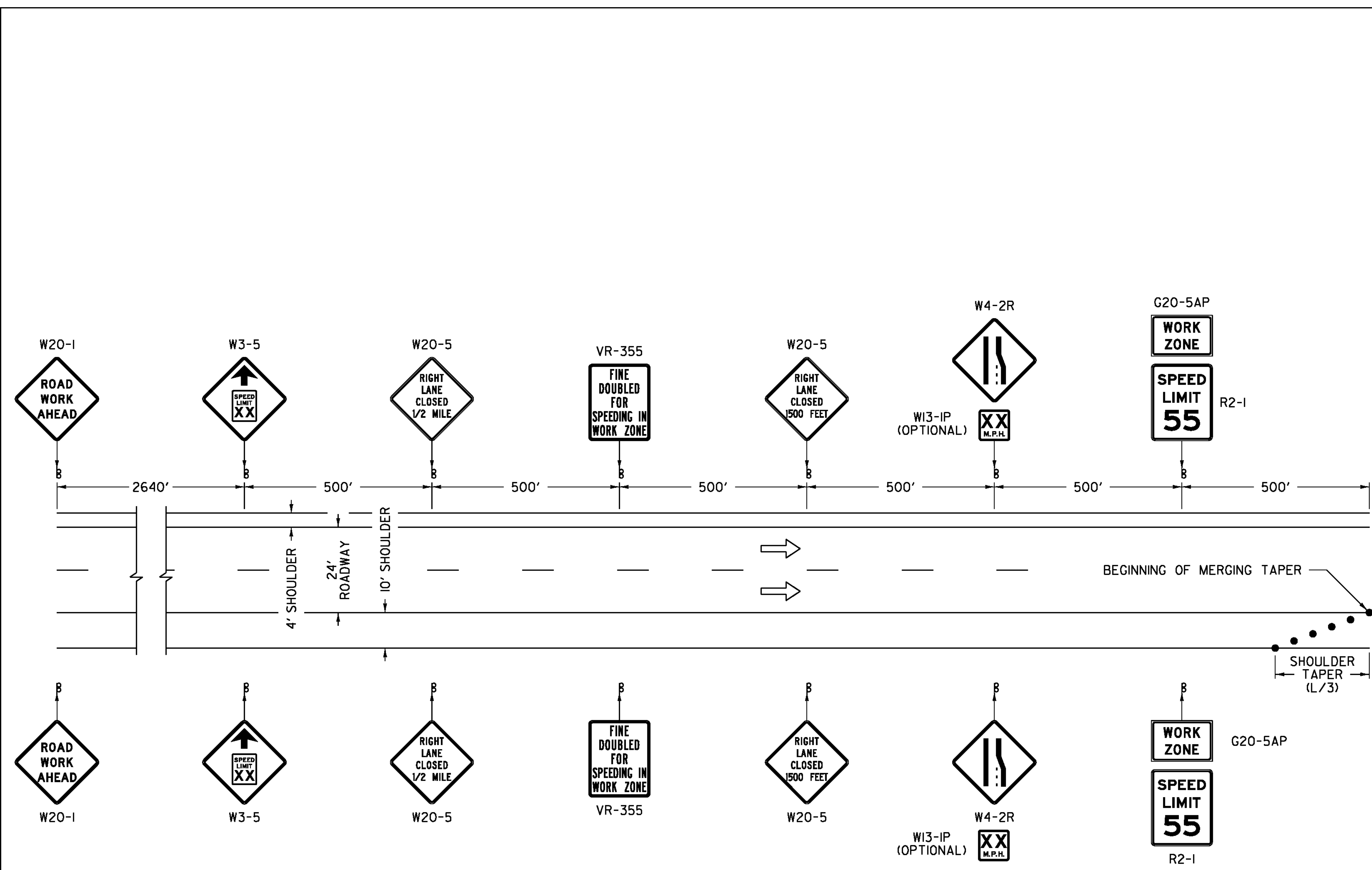
NOTES:
REFER TO *THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- *FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

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

| REVISIONS | |
|------------------|-----|
| MARCH 24, 2008 | WHF |
| JANUARY 13, 2009 | WHF |

PROJECT NAME: BERLIN - MONTPELIER
PROJECT NUMBER: IM 089-1(53)

FILE NAME: 07A150/DESIGN/D07A150ENV.DGN PLOT DATE: 19-OCT-2011
PROJECT LEADER: K. ROBIE DRAWN BY: I. SHEA
DESIGNED BY: P. PELOQUIN CHECKED BY: S. MENARD
EPSC DETAIL SHEET 4 SHEET 26 OF 29



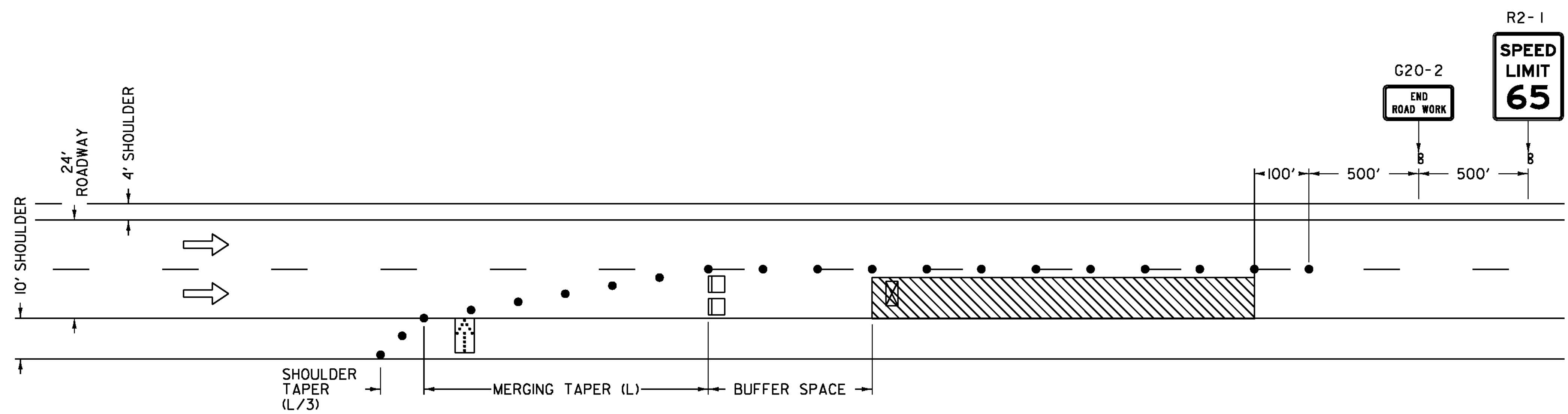
NOTES:

- SIGNS NOT DETAILED IN THE VERMONT AGENCY OF TRANSPORTATION (VAOT) "STANDARD DRAWINGS" SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND THE "STANDARD HIGHWAY SIGNS AND MARKINGS" BOOK (SHSM) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION (FHWA).
- CONSTRUCTION SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING THE "AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS" (AASHTO) M 268 ["AMERICAN SOCIETY FOR TESTING AND MATERIALS" (ASTM) D 4956] TYPE VI AND TYPE VII, VIII OR IX REQUIREMENTS, RESPECTIVELY, UNLESS OTHERWISE NOTED.
- SIGNS SHALL BE ERECTED BEFORE THE START OF ANY WORK AND SHALL BE COVERED UNTIL WORK COMMENCES, DURING PERIODS OF INACTIVITY OR UPON COMPLETION OF THE WORK. EACH SIGN SHALL BE ERECTED IN A NEAT AND WORKMANLIKE MANNER. SIGNS SHALL BE REMOVED UPON COMPLETION OF THE WORK AT THE DISCRETION OF THE ENGINEER.
- ALL SIGNS SHALL BE SET SECURELY IN THE GROUND. THE BOTTOM OF A SIGN SHALL BE AT LEAST FIVE FEET ABOVE THE EDGE OF PAVEMENT. THE NEAREST EDGE OF A SIGN SHALL BE AT LEAST SIX FEET OUTSIDE THE SHOULDER POINT OR FOUR FEET BEHIND GUARDRAIL.
- PORTABLE SIGNS SHALL BE PLACED ON THE EDGE OF ROADWAY AND A MINIMUM OF ONE FOOT ABOVE TRAVELED WAY. ALL VEGETATION THAT INTERFERES WITH VISIBILITY OF THE SIGNS SHALL BE REMOVED. WHEN PLACED BEHIND GUARDRAIL, THE BOTTOM OF THE SIGN FACE SHALL BE ABOVE THE TOP OF THE GUARDRAIL.
- WHERE SIGN INSTALLATIONS ARE NOT PROTECTED BY GUARDRAIL OR OTHER APPROVED TRAFFIC BARRIERS, ALL SIGN STANDS AND POST INSTALLATIONS SHALL MEET "NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM" (NCHRP) REPORT 350 OR THE AASHTO "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH). THE APPROPRIATE RESOURCE SHALL BE DETERMINED AS DESCRIBED IN THE MASH PUBLICATION. NO SIGN POSTS SHALL EXTEND OVER THE TOP OF THE SIGN INSTALLED ON SAID POST(S). WHEN ANCHORS ARE INSTALLED, STUB SHALL NOT BE GREATER THAN FOUR INCHES ABOVE EXISTING GROUND.
- THE "SPEED LIMIT XX" (R2-1) AND "SPEED REDUCTION WARNING" (W3-5) SIGNS SHALL ONLY BE USED IF A TEMPORARY SPEED LIMIT CERTIFICATE HAS BEEN APPROVED. THE "SPEED LIMIT XX" (R2-1) AND OTHER RELATED SIGNS SHALL BE REMOVED OR COVERED WHEN WORK IS NOT IN PROGRESS AND ROADWAY IS NOT RESTRICTED.
- EXISTING SPEED LIMIT SIGNS SHALL BE COVERED WHEN TEMPORARY SPEED LIMIT SIGNS ARE POSTED.
- ALL SIGNS SHALL BE POST MOUNTED.
- ROADWAY AND SHOULDER WIDTHS MAY VARY.
- THE "SPEED LIMIT XX" (R2-1) SIGNS, WITH SOLID SUBSTRATE, SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING AASHTO M 268 [ASTM D 4956] TYPE III.
- THE CONTRACTOR MAY SUBMIT AN ALTERNATE TRAFFIC CONTROL PLAN AS OUTLINED IN SECTION 641- TRAFFIC CONTROL IN THE VERMONT AGENCY OF TRANSPORTATION 2006 STANDARD SPECIFICATIONS FOR CONSTRUCTION.
- PAYMENT FOR TEMPORARY CONSTRUCTION SIGNING AND INDICATED TRAFFIC CONTROL DEVICES WILL BE MADE UNDER CONTRACT ITEM 641.10.

LEGEND

- FLOW OF TRAFFIC
- RETROREFLECTIVE PLASTIC DRUM

| | |
|-------------------------|------------------------------|
| PROJECT NAME: | BERLIN - MONTPELIER |
| PROJECT NUMBER: | IM 089-1(53) |
| FILE NAME: | 07A150/DESIGN/D07A150FRM.DGN |
| PLOT DATE: | 19-OCT-2011 |
| PROJECT LEADER: | K. ROBBE |
| DRAWN BY: | I. SHEA |
| DESIGNED BY: | P. PELOQUIN |
| CHECKED BY: | S. MENARD |
| TRAFFIC CONTROL SHEET 1 | SHEET 27 OF 29 |



NOTES:

1. FOR LONG TERM CLOSURES, DASHED LANE LINE REMOVAL SHALL BEGIN 750 FEET IN ADVANCE OF THE BEGINNING OF THE SHOULDER TAPER AND TEMPORARY PAVEMENT MARKINGS SHALL BE PLACED ALONG THE CHANNELIZING DEVICES.
2. CHANNELIZING DEVICES OTHER THAN RETROREFLECTIVE PLASTIC DRUMS SHALL BE ALLOWED ALONG THE BUFFER SPACE AND WORK AREA AS LONG AS THEY CONFORM TO THE LATEST "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ARE APPROVED BY THE ENGINEER. THE TYPE OF DEVICE SHALL BE CONSISTENT THROUGHOUT THE BUFFER SPACE AND WORK AREA AND SHALL REMAIN STABLE WHILE UNATTENDED.
3. THE NUMBER OF CHANNELIZING DEVICES, TYPE III BARRICADES AND OTHER TRAFFIC CONTROL DEVICES SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY. THE ACTUAL NUMBER REQUIRED ARE TO BE DETERMINED BASED ON INDIVIDUAL DETOUR CONDITIONS (TAPERS, SPEED LIMITS, LENGTH OF DETOUR, CURVE, ETC.). WARNING LIGHTS SHALL NOT BE USED ON CHANNELIZING DEVICES.
4. PLACE LAST CHANNELIZING DEVICE 100 FEET BEYOND THE ANTICIPATED WORK ZONE TERMINAL POINT EACH DAY.
5. THE ARROW PANEL SHALL BE PLACED ON THE SHOULDER OF THE ROADWAY, AS CLOSE AS PRACTICAL TO THE BEGINNING OF THE MERGING TAPER.
6. THE "ROAD WORK NEXT XX MILES" SIGN (G20-1) SHALL BE INSTALLED IN ADVANCE OF TEMPORARY TRAFFIC CONTROL ZONES THAT ARE MORE THAN TWO MILES IN LENGTH, OR AS DIRECTED BY THE ENGINEER. DISTANCES SHALL BE STATED TO THE NEAREST WHOLE MILE.
7. ROADWAY AND SHOULDER WIDTHS MAY VARY.
8. WHEN FLAGGER IS PRESENT THE "FLAGGER" (W20-7) SIGN SHALL BE USED; TO BE REMOVED IF FLAGGING STOPS FOR 15 MINUTES OR MORE.
9. "SPEED LIMIT XX" (R2-1) SIGN TO BE USED IF A TEMPORARY SPEED ZONE IS IN PLACE.
10. TAPER RATES ARE DETERMINED USING THE FOLLOWING EQUATION:
 $L = WS$, FOR POSTED SPEEDS OF 45 MPH OR GREATER.
 $L = WS/60$ FOR POSTED SPEEDS OF 40 MPH OR LESS.
 L = MINIMUM LENGTH OF TAPER
 W = WIDTH OF OFFSET IN FEET (TYPICAL)
 S = POSTED SPEED IN MPH
11. TAPER LENGTHS FOR SHOULDER WIDTHS OTHER THAN 10 FEET NEED TO BE CALCULATED.

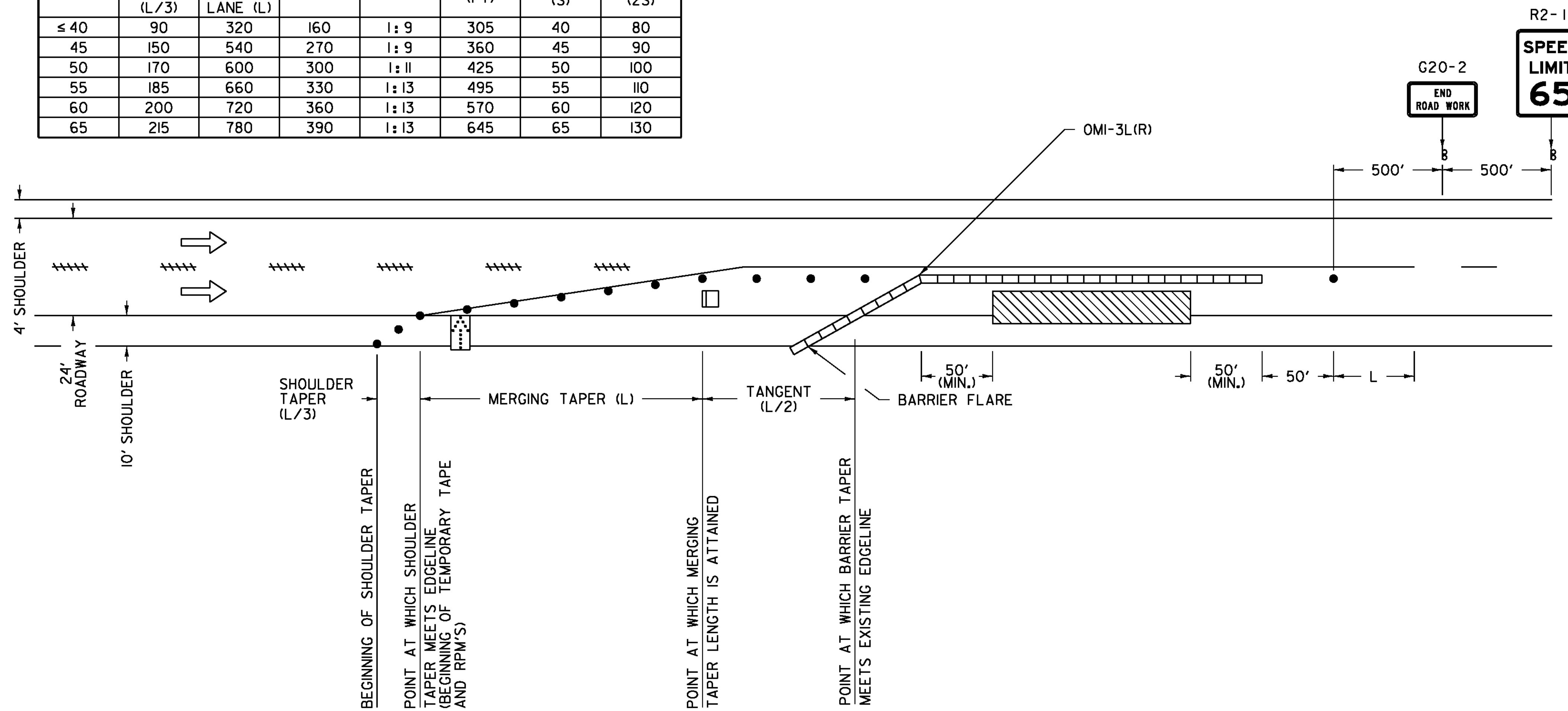
LEGEND

- FLOW OF TRAFFIC
- RETROREFLECTIVE PLASTIC DRUM
- ⬢ FLASHING ARROW PANEL
- TYPE III BARRICADE
- ▨ WORK AREA
- ⊠ TRUCK/TRAILER MOUNTED ATTENUATOR (OPTIONAL)

| POSTED SPEED (MPH) | TAPER LENGTHS (FT) | | TANGENT W=12 FT (L/2) | BARRIER FLARE RATE (MINIMUM) | MINIMUM BUFFER SPACE LENGTH (FT) | MAXIMUM CHANNELIZING DEVICE SPACING (FT) | |
|--------------------|------------------------|------------------------|-----------------------|------------------------------|----------------------------------|--|--------------|
| | SHOULDER W=10 FT (L/3) | MERGING 12 FT LANE (L) | | | | TAPER (S) | TANGENT (2S) |
| ≤ 40 | 90 | 320 | 160 | 1:9 | 305 | 40 | 80 |
| 45 | 150 | 540 | 270 | 1:9 | 360 | 45 | 90 |
| 50 | 170 | 600 | 300 | 1:11 | 425 | 50 | 100 |
| 55 | 185 | 660 | 330 | 1:13 | 495 | 55 | 110 |
| 60 | 200 | 720 | 360 | 1:13 | 570 | 60 | 120 |
| 65 | 215 | 780 | 390 | 1:13 | 645 | 65 | 130 |

PROJECT NAME: BERLIN - MONTPELIER
 PROJECT NUMBER: IM 089-1(53)
 FILE NAME: 07A150/DESIGN/D07A150FRM.DGN PLOT DATE: 19-OCT-2011
 PROJECT LEADER: K. ROBBE DRAWN BY: I. SHEA
 DESIGNED BY: P. PELOQUIN CHECKED BY: S. MENARD
 TRAFFIC CONTROL SHEET 2 SHEET 28 OF 29

| POSTED SPEED (MPH) | TAPER LENGTHS (FT) | | TANGENT W=12 FT (L/2) | BARRIER FLARE RATE (MINIMUM) | MINIMUM BUFFER SPACE LENGTH (FT) | MAXIMUM CHANNELIZING DEVICE SPACING (FT) | |
|--------------------|------------------------|------------------------|-----------------------|------------------------------|----------------------------------|--|--------------|
| | SHOULDER W=10 FT (L/3) | MERGING 12 FT LANE (L) | | | | TAPER (S) | TANGENT (2S) |
| ≤ 40 | 90 | 320 | 160 | 1:9 | 305 | 40 | 80 |
| 45 | 150 | 540 | 270 | 1:9 | 360 | 45 | 90 |
| 50 | 170 | 600 | 300 | 1:11 | 425 | 50 | 100 |
| 55 | 185 | 660 | 330 | 1:13 | 495 | 55 | 110 |
| 60 | 200 | 720 | 360 | 1:13 | 570 | 60 | 120 |
| 65 | 215 | 780 | 390 | 1:13 | 645 | 65 | 130 |



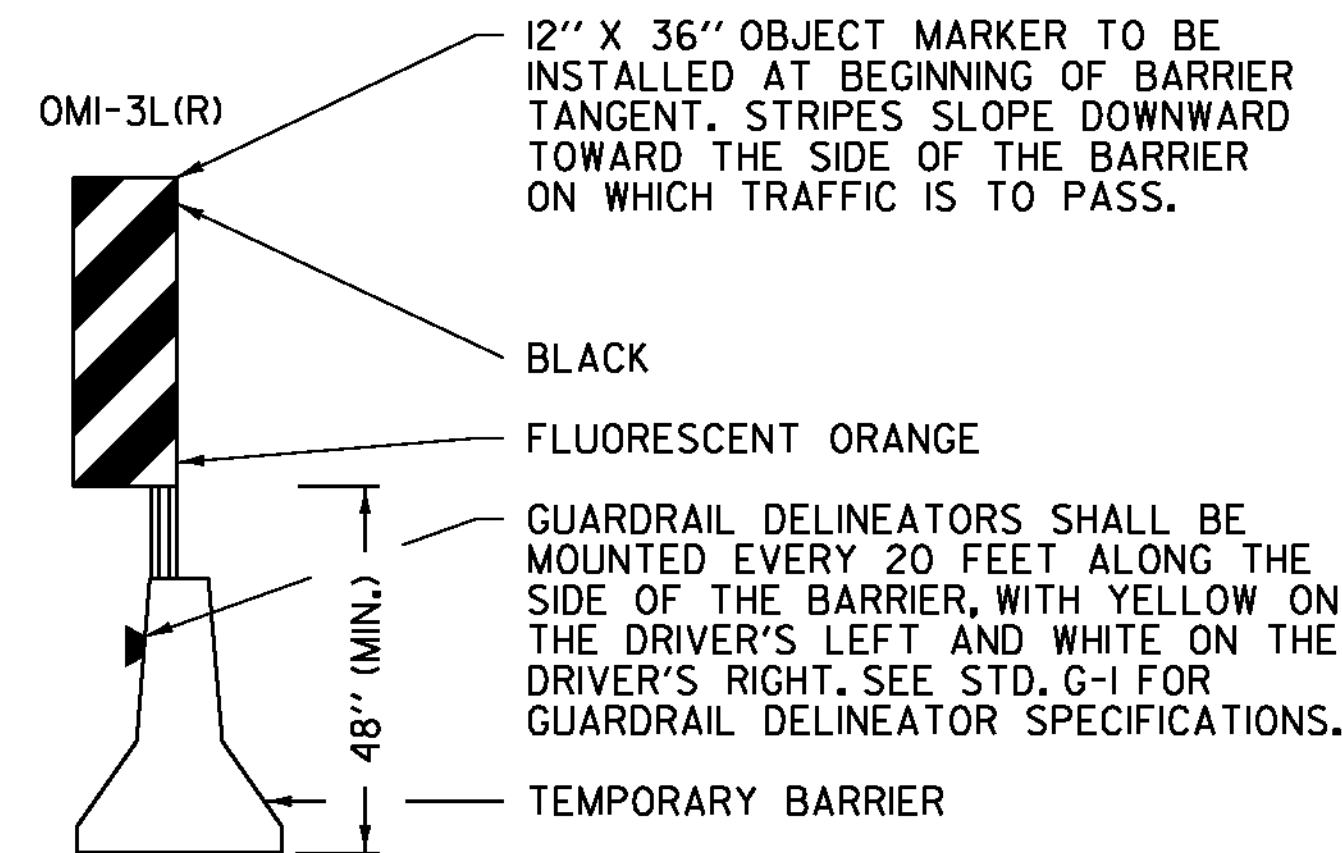
NOTES:

1. THE EXISTING TRAVEL LANE WIDTH SHOULD BE MAINTAINED IF POSSIBLE.
2. TEMPORARY TAPE EDGELINES SHALL BE APPLIED AND SHALL MAINTAIN A ONE FOOT MINIMUM DISTANCE FROM THE BARRIER WITH TWO FEET BEING DESIREABLE. THIS SHALL BE PAID UNDER ITEM 646.62I TEMPORARY SIX INCH WHITE LINE, TYPE II TAPE.
3. RAISED PAVEMENT MARKERS (RPM'S) SHALL BE PLACED TO THE OUTSIDE OF THE TRAVEL LANE AT 20 FOOT SPACING.
4. THE END OF THE BARRIER FACING APPROACHING TRAFFIC SHALL MEET THE FOLLOWING REQUIREMENTS:
 - A. WHEN NO GUARDRAIL IS PRESENT THEN A 30 FOOT OFFSET FROM THE EDGE OF TRAVELED WAY SHOULD BE USED.
 - B. WHEN NO GUARDRAIL IS PRESENT AND A 30 FOOT OFFSET CANNOT BE ATTAINED THEN AN ENERGY ABSORPTION ATTENUATOR SHALL BE USED.
 - C. WHEN GUARDRAIL IS PRESENT, THEN THE GUARDRAIL SHALL BE BROKEN AND THE BARRIER TAPERED TO A POINT OUTSIDE THE DEFLECTION DISTANCE OF THE GUARDRAIL.
5. DASHED LANE LINE REMOVAL SHALL BEGIN 750 FEET IN ADVANCE OF THE BEGINNING OF THE SHOULDER TAPER.
6. CHANNELIZING DEVICES OTHER THAN RETROREFLECTIVE PLASTIC DRUMS SHALL BE ALLOWED ALONG TANGENT SECTIONS AS LONG AS THEY CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ARE APPROVED BY THE ENGINEER. THE TYPE OF DEVICE SHALL BE CONSISTENT THROUGHOUT THE TANGENT SECTION AND SHALL REMAIN STABLE WHILE UNATTENDED.
7. THE NUMBER OF CHANNELIZING DEVICES, TYPE III BARRICADES AND OTHER TRAFFIC CONTROL DEVICES SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY. THE ACTUAL NUMBER REQUIRED ARE TO BE DETERMINED BASED ON INDIVIDUAL DETOUR CONDITIONS (TAPERS, SPEED LIMITS, LENGTH OF DETOUR, CURVE, ETC.). WARNING LIGHTS SHALL NOT BE USED ON CHANNELIZING DEVICES.
8. PLACE LAST CHANNELIZING DEVICE 50 FEET BEYOND THE END OF BARRIER.
9. THE ARROW PANEL SHALL BE PLACED ON THE SHOULDER OF THE ROADWAY, AS CLOSE AS PRACTICAL TO THE BEGINNING OF THE MERGING TAPER.
10. ROADWAY AND SHOULDER WIDTHS MAY VARY.
11. "SPEED LIMIT 65" (R2-1) SIGN TO BE USED WHEN TEMPORARY SPEED ZONE IS IN PLACE.

LEGEND

- ➔ FLOW OF TRAFFIC
- RETROREFLECTIVE PLASTIC DRUM
- ⬢ FLASHING ARROW PANEL
- TYPE III BARRICADE
- ++++ PAVEMENT MARKING REMOVAL
- ▭ TEMPORARY BARRIER
- ▨ WORK AREA

ONE LANE CLOSED WITH TEMPORARY BARRIER PROTECTION



| | |
|-------------------------|------------------------------|
| PROJECT NAME: | BERLIN - MONTPELIER |
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| PROJECT LEADER: | K. ROBBE |
| DESIGNED BY: | P. PELOQUIN |
| TRAFFIC CONTROL SHEET 3 | |
| PLOT DATE: | 19-OCT-2011 |
| DRAWN BY: | I. SHEA |
| CHECKED BY: | S. MENARD |
| SHEET | 29 OF 29 |