

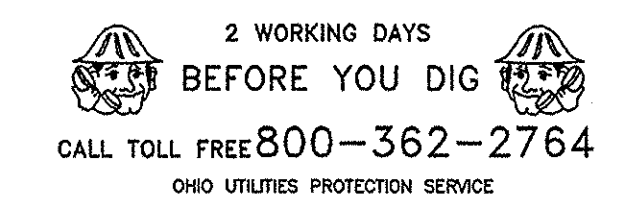
LEGEND

ROAD	
RAILROAD	
WATERSHED BOUNDARY	
PROPERTY LINE	
FENCE	
STATION	
EXISTING WATERWAY	
ACRES DRAINED	

Note To Excavator

Excavator must notify all utilities at least 48 hours and not more than 10 days prior to the planned commencement of excavation.

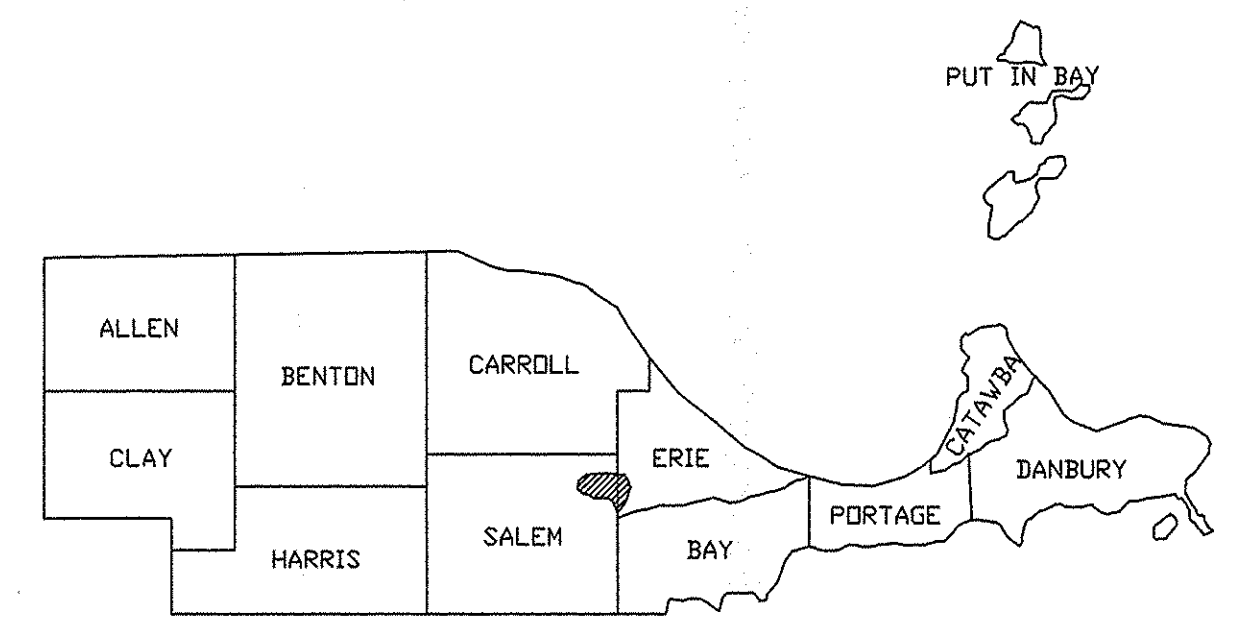
- Member utilities will be contacted by calling oups (1-800-362-2764)
- Each Limited Basis Participant will be contacted by the excavator using the telephone number provided.



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SHEET 1.....	LOCATION MAP, PLAN VIEW
SHEET 2.....	PROFILE
SHEET 3.....	CROSS-SECTIONS
SHEET 4.....	CROSS-SECTIONS
SHEET 5.....	TYPICAL DRAWINGS - OUTLET PIPE, CULVERT RIP RAP, BRUSH, SPOIL, SEEDING
SHEET 6.....	BM DESCRIPTIONS, SOILS MAP & DESCRIPTIONS, EROSION CONTROL STRUCTURE

JOB CLASS 1
 Watershed Map#2.dwg
 11/30/2006 12:24 PM
 Michael Gargac, Ottawa SWCD



DESIGNER NOTIFICATION TO OUPS
 BY: MIKE GARGAC DATE: 3/9/2006 ID#: 0309081002 & Q03

UNDERGROUND UTILITIES AT EXCAVATION SITE

UTILITY	NAME	RESPONSE	PHONE NO.	MEMBER OUPS	LIMITED BASIS PARTICIPANTS
	ADELPHIA	NONE		X	
	ATT	NONE		X	
	COLUMBIA GAS	PIPELINE S SIDE SR 163		X	
	TOLEDO EDISON	NONE		X	
	VERIZON	NONE		X	
	MCI	NONE		X	
	VILLAGE OF O.H.	WATERLINE N SIDE SR 163		X	
	QUEST	NONE		X	
	COLUMBIA GAS TRANS	NONE		X	
	OHIO EDISON	NONE		X	
	CITY OF PORT CLINTON	NONE		X	
	OHIO EDISON	NONE		X	
	SANITARY ENGINEER		419.734.6725		X

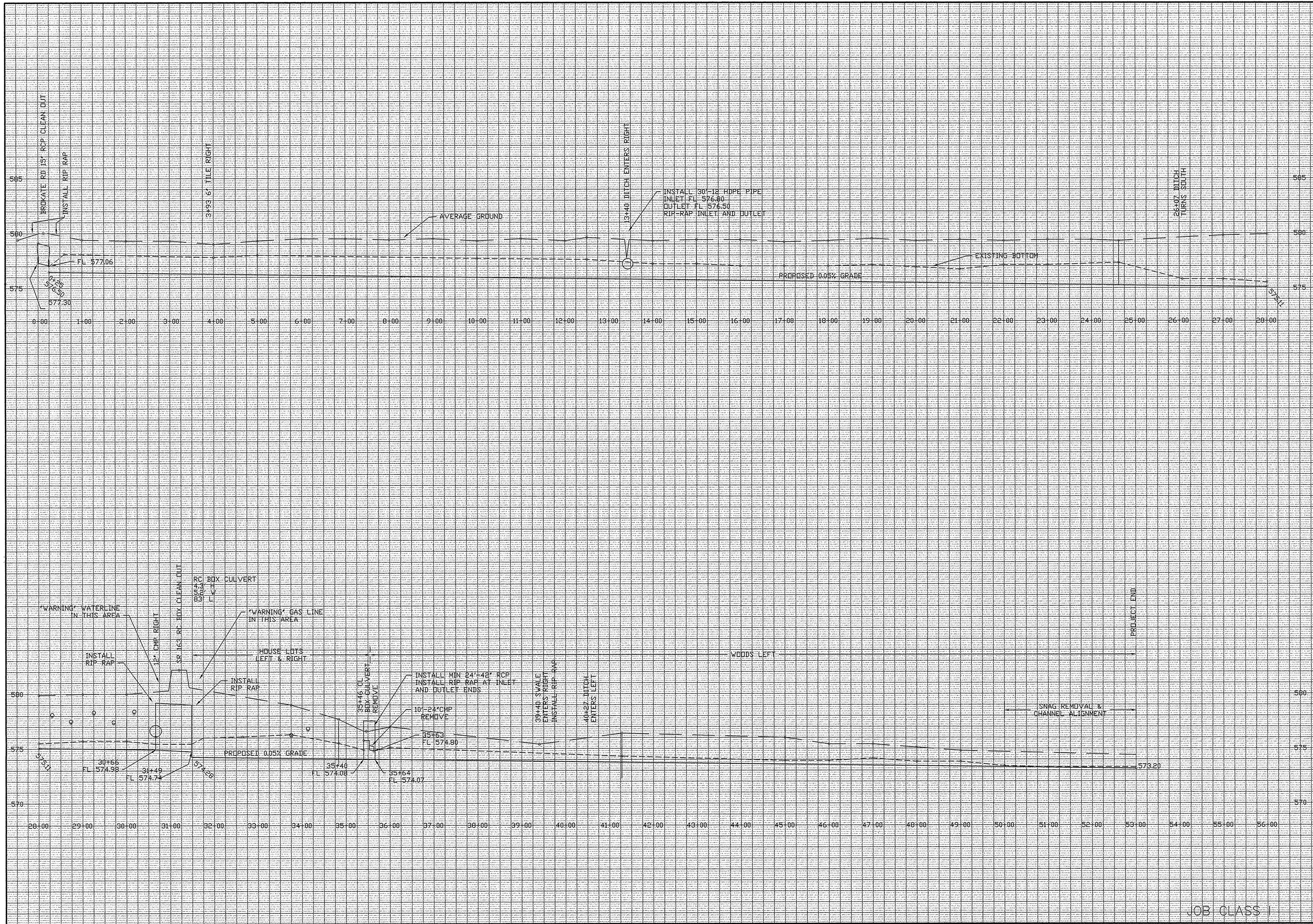
Michael Gargac 7/18/01
 OTTAWA COUNTY ENGINEER DATE
 CONSTRUCTION APPROVED BY DATE

DATE	08/2005	Approved	<i>C. H. Murray</i>
DATE	08/2005	Drawn	<i>C. H. Murray</i>
DATE	08/2005	Redlined	<i>C. H. Murray</i>
DATE	08/2005	Checked	<i>C. H. Murray</i>
DATE	08/2005	Construction Approved	<i>C. H. Murray</i>
DATE	08/2005	Title	<i>C.E.T.</i>
DATE	08/2005	Title	<i>M. Lee</i>

MINIER DITCH

USDA - NATURAL RESOURCES CONSERVATION SERVICE

CAD FILE I.D.
 DRAWING NUMBER
 Sheet 1 of 6



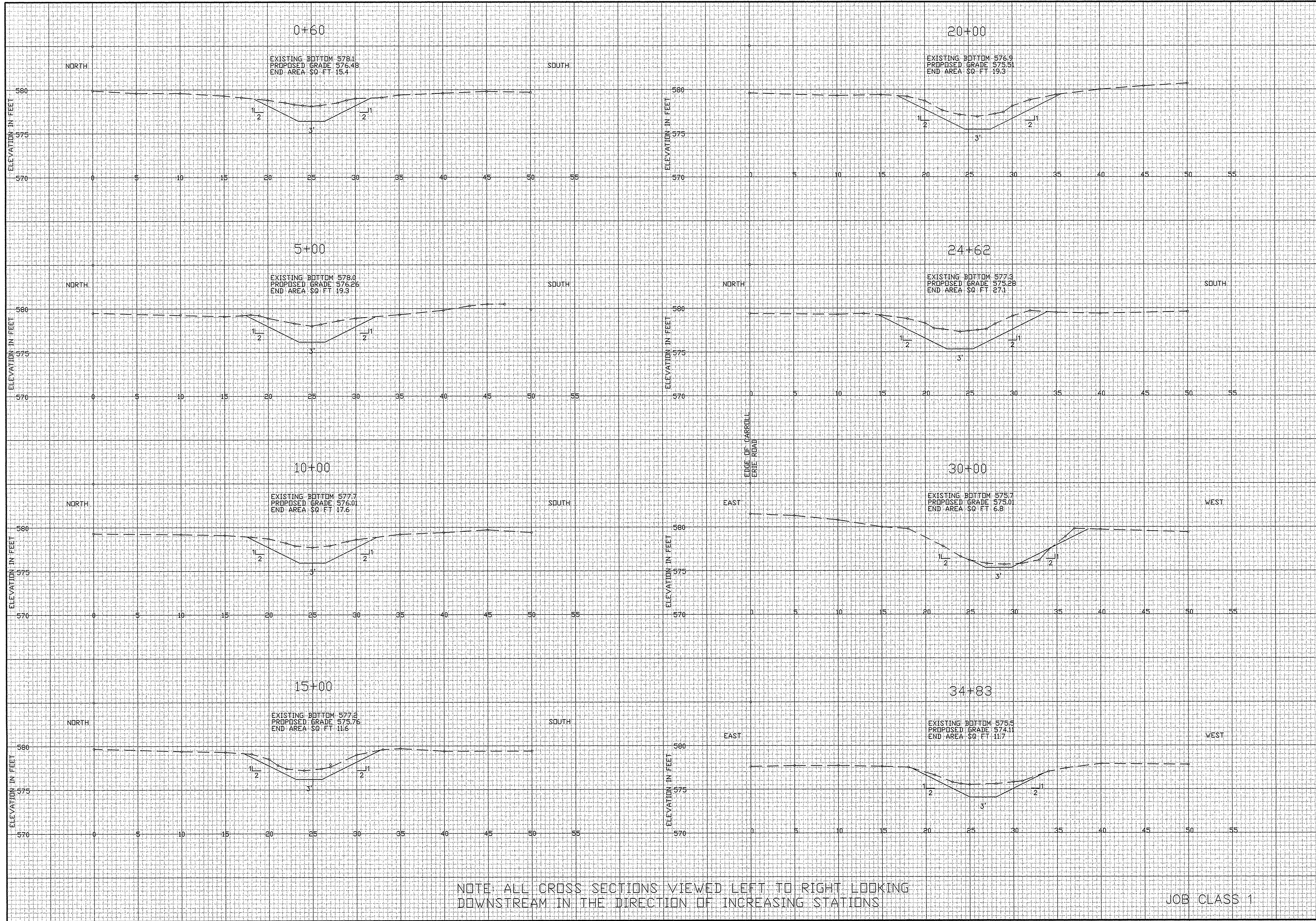
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Title	MWE LIBBEY
Const. Approved	7/20/05
Title	MWE LIBBEY
Checked	
Traced	
Drawn	
Designed	

MINIER DITCH

USDA - NATURAL RESOURCES CONSERVATION SERVICE

CAD FILE I.D.
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 DRAWING NUMBER
 Sheet 2 of 6

JOB CLASS I



0+60
 EXISTING BOTTOM 578.1
 PROPOSED GRADE 576.48
 END AREA SQ. FT 15.4

20+00
 EXISTING BOTTOM 576.9
 PROPOSED GRADE 575.51
 END AREA SQ. FT 19.3

5+00
 EXISTING BOTTOM 578.0
 PROPOSED GRADE 576.26
 END AREA SQ. FT 19.3

24+62
 EXISTING BOTTOM 577.3
 PROPOSED GRADE 575.28
 END AREA SQ. FT 27.1

10+00
 EXISTING BOTTOM 577.7
 PROPOSED GRADE 576.01
 END AREA SQ. FT 17.6

30+00
 EXISTING BOTTOM 575.7
 PROPOSED GRADE 575.01
 END AREA SQ. FT 6.8

15+00
 EXISTING BOTTOM 577.2
 PROPOSED GRADE 575.76
 END AREA SQ. FT 11.6

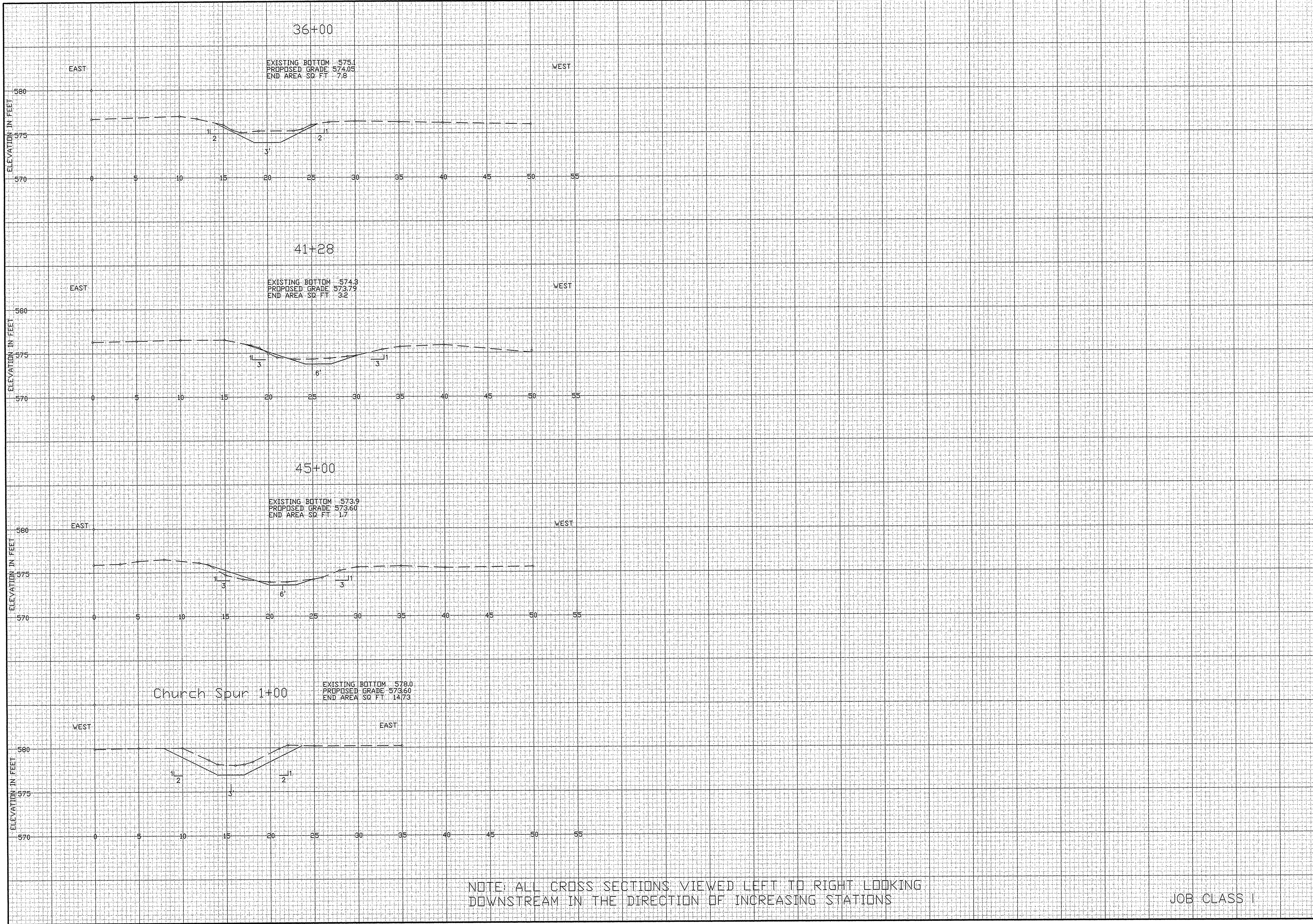
34+83
 EXISTING BOTTOM 575.5
 PROPOSED GRADE 574.11
 END AREA SQ. FT 11.7

EDGE OF GARROLL
 ERIE ROAD

NOTE: ALL CROSS SECTIONS VIEWED LEFT TO RIGHT LOOKING
 DOWNSTREAM IN THE DIRECTION OF INCREASING STATIONS

JOB CLASS 1

DATE	DATE	DESIGNED	DRAWN	TRACED	CHECKED
	7/2005	MIKE LIBBEN	MIKE LIBBEN		
APPROVED	TITLE	MINIER DITCH			
		USDA - NATURAL RESOURCES CONSERVATION SERVICE			
CONST. APPROVED	TITLE	CAD FILE I.D.			
		DRAWING NUMBER			
		Sheet 3 of 6			



NOTE: ALL CROSS SECTIONS VIEWED LEFT TO RIGHT LOOKING DOWNSTREAM IN THE DIRECTION OF INCREASING STATIONS

JOB CLASS I

DATE		DESIGNED	APPROVED
DATE		DRAWN	TITLE
DATE		TRACED	CONST. APPROVED
DATE		CHECKED	TITLE
DATE		DESIGNED	APPROVED
DATE		DRAWN	TITLE
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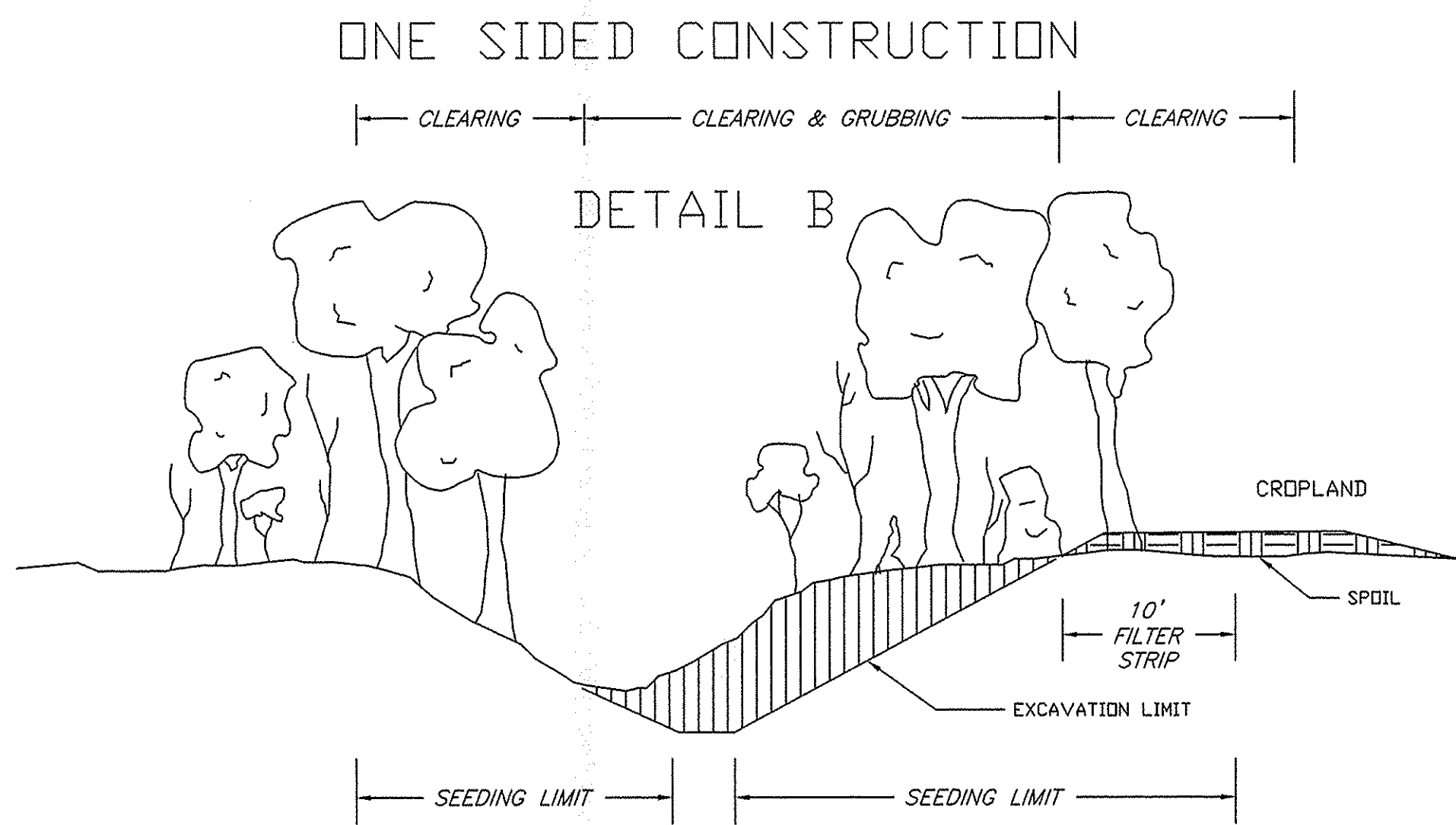
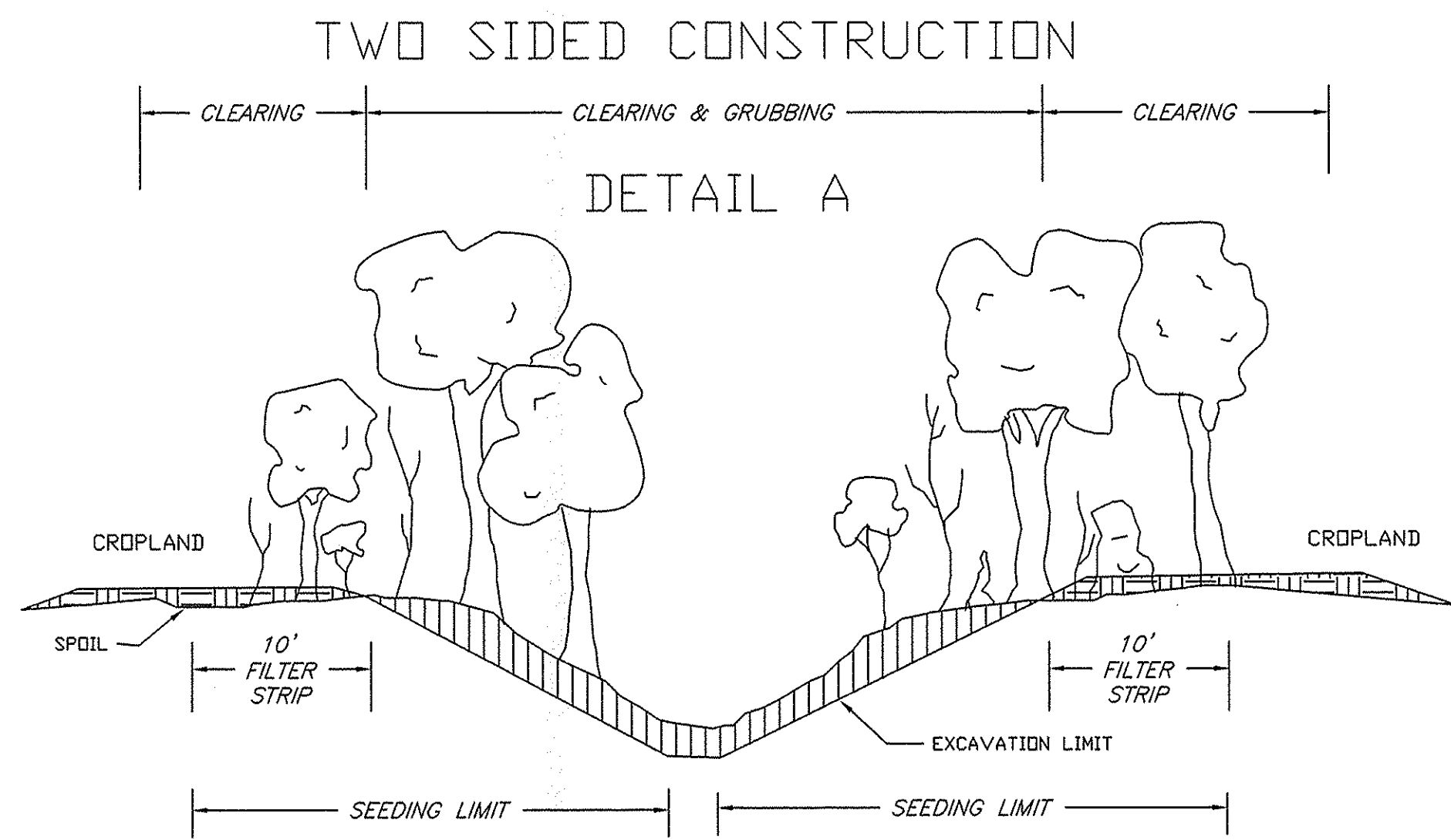
MINIER DITCH

USDA - NATURAL RESOURCES CONSERVATION SERVICE

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DRAWING NUMBER

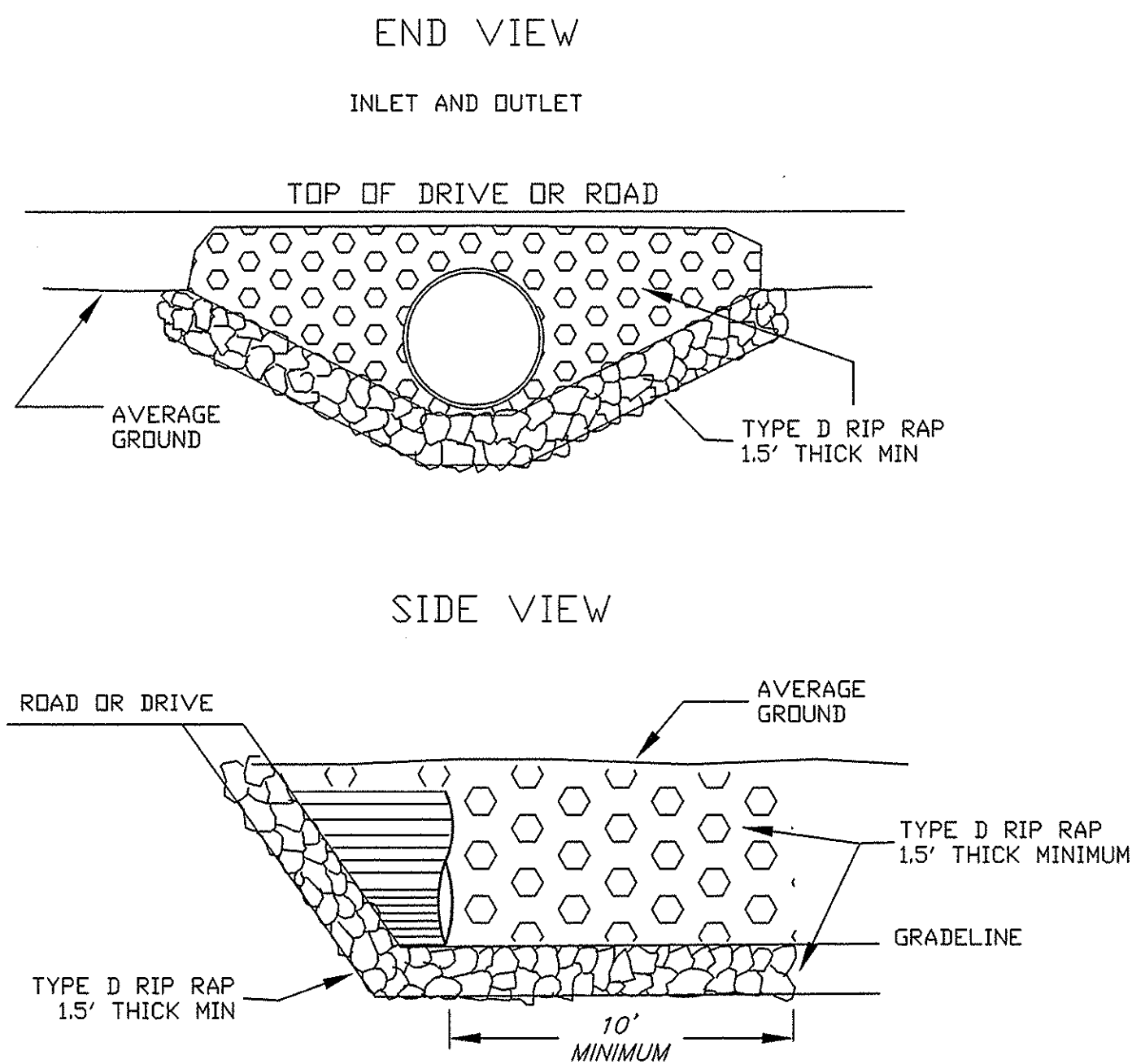
Sheet 4 of 6



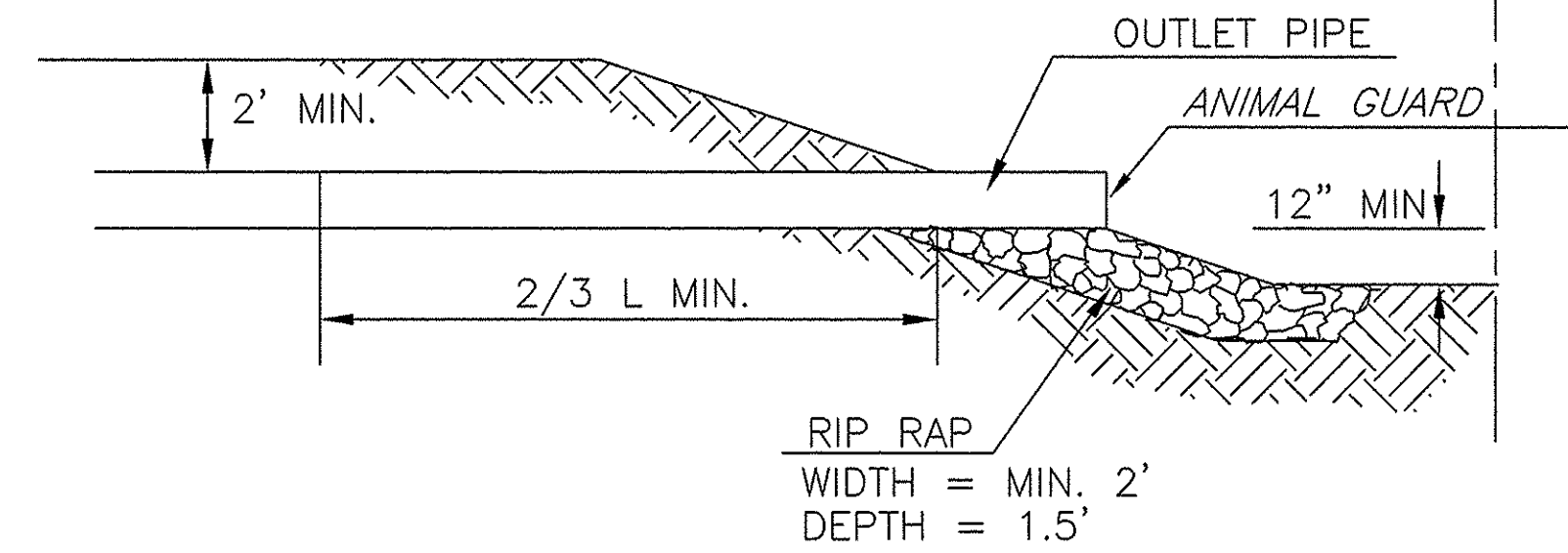
BRUSH, SPOIL, & SEEDING DETAIL TABLE

MAIN CHANNEL	STA 0+00 - 35+46	DETAIL A
	STA 35+46 - 53+00	DETAIL B

CULVERT RIP RAP DETAIL

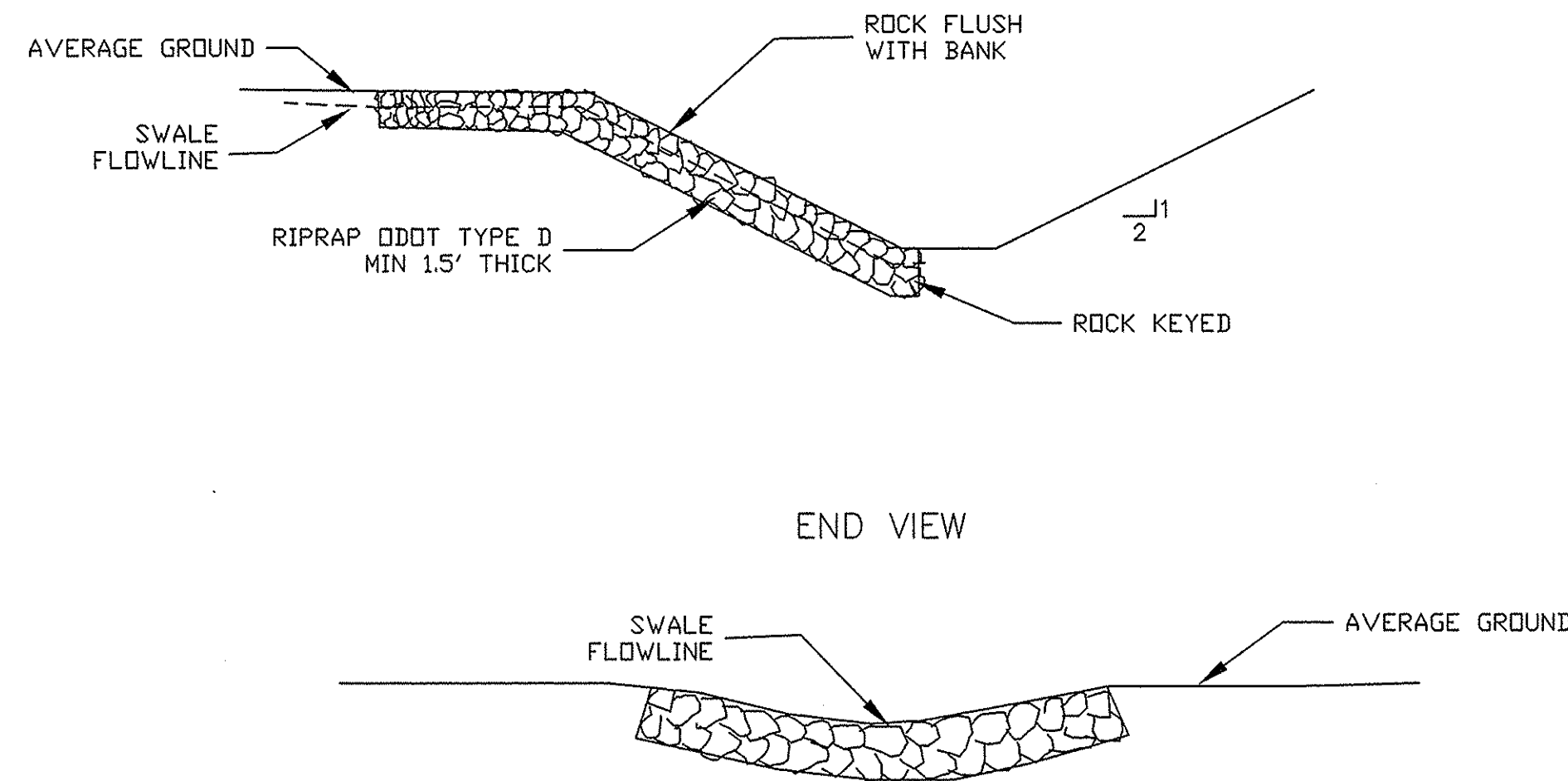


OUTLET PIPE INSTALLATION



SWALE OR SIDE DITCH ENTRY

SIDE VIEW



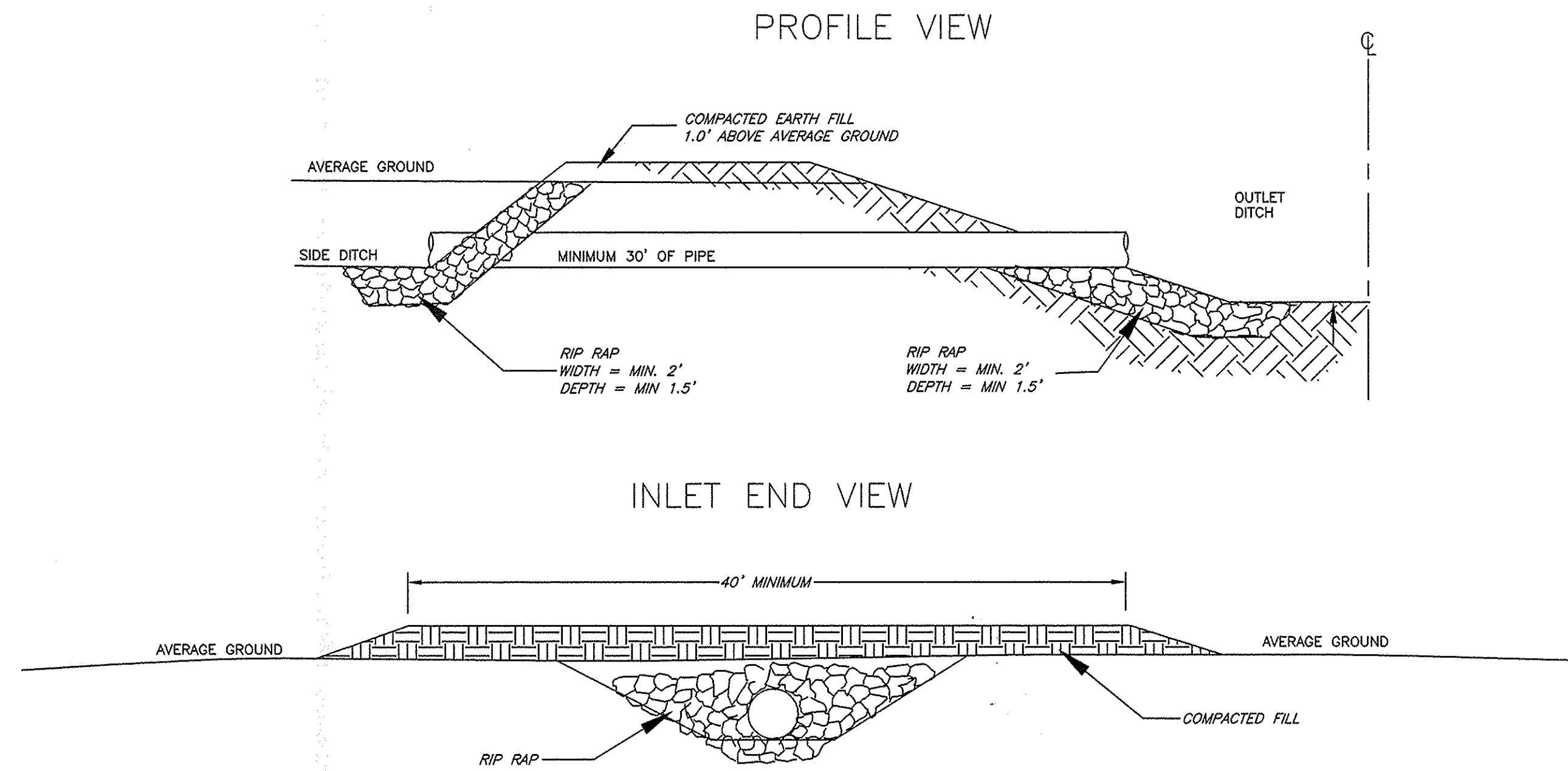
DATE _____
 Approved *Levy Johnson*
 Title *C.E.T.*

DATE *6/2/05*
 Designed *M.W. GARCIA*
 Drawn *M.W. GARCIA*
 Traced _____
 Checked *C. Johnson*

MINIER DITCH
 USDA - NATURAL RESOURCES CONSERVATION SERVICE
 CAD FILE I.D.
 DRAWING NUMBER
 Sheet *5* of *6*

JOB CLASS I

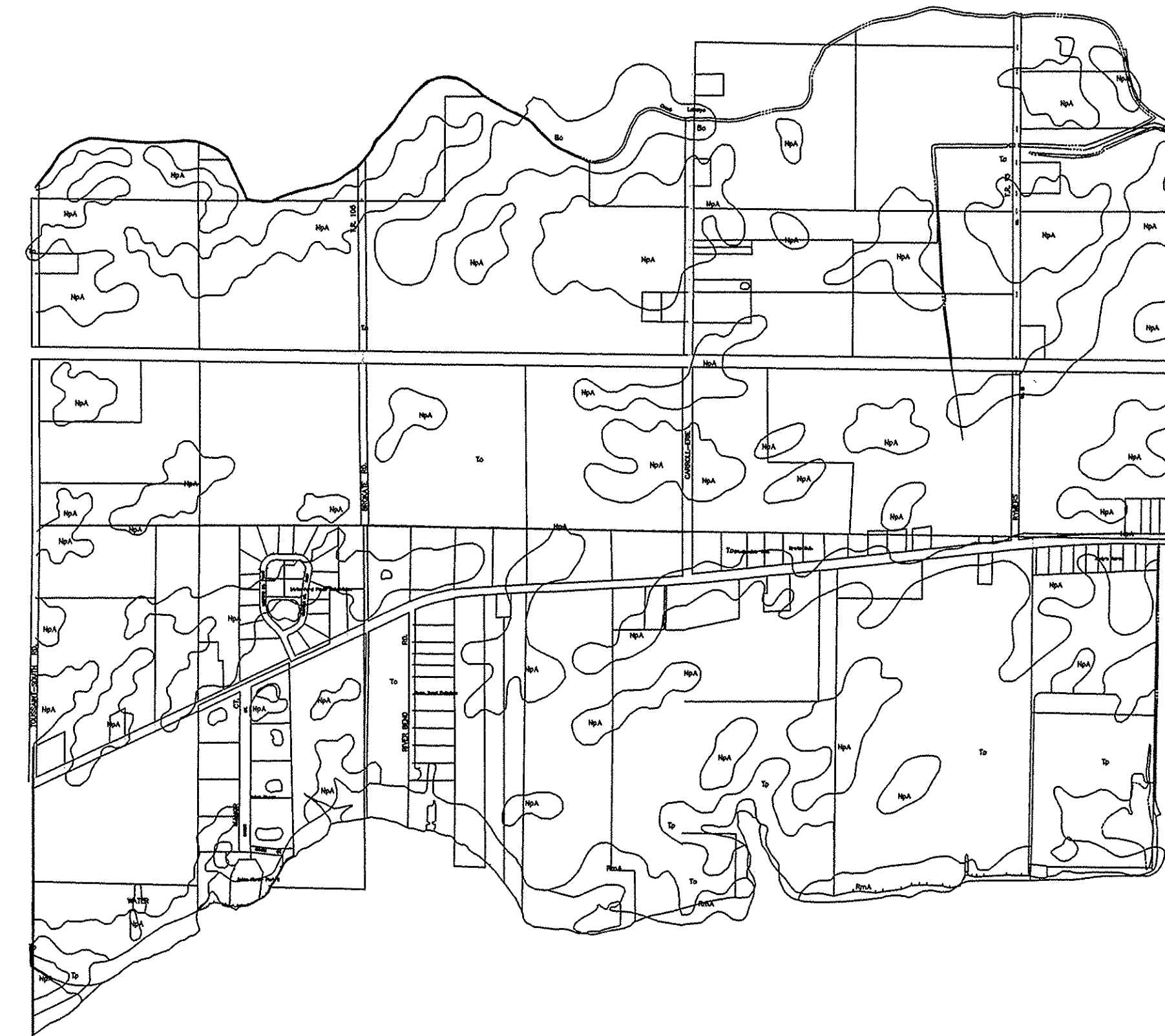
TYPICAL EROSION CONTROL STRUCTURE — DETAIL



BENCHMARKS

- BM #1 BRASS PLATE IN NORTHWEST CORNER OF THE INTERSECTION OF CARROLL ERIE ROAD AND STATE ROUTE 163. PLATE IS ON THE NORTH END OF CONCRETE WALL ON THE EAST SIDE OF THE COX CULVERT UNDER STATE ROUTE 163. MSL 581.14
- BM #2 CHISELED + ON TOP STEP ON SOUTH END OF WEST WALL OF CONCRETE BOX CULVERT, ON SOUTH SIDE OF STATE ROUTE 163 AT CARROLL ERIE ROAD. MSL 579.68
- BM #3 CHISELED + ON THE WEST END OF 15" RCP ON THE WEST SIDE OF BROKATE ROAD AT STA 0+00 OF MINIER DITCH. MSL 579.10
- BM #4 SPIKE IN SOUTH SIDE OF 36" DIAMETER OAK TREE IN PROPERTY LINE FENCE ROW, ON NORTH SIDE OF DITCH AT STA 13+25. MSL 581.48
- BM #5 CHISELED + ON SOUTH SIDE OF SOUTHWEST CONCRETE PAD OF POWER TOWER 300' NORTH OF STA 15+00 OF MINIER DITCH. MSL 581.06

SOILS MAP



SOILS DESCRIPTIONS

- NpA—Nappanee silty clay loam. This deep, nearly level, somewhat poorly drained soil is on slight convexa rises and side slopes along drainageways on lake plains. Most areas range from 4 to 75 acres.*
- To—Toledo silty clay. This deep nearly level, very poorly drained soil is on broad flats and in long narrow concave areas on lake plains. It is subject to ponding of short duration. Most areas range from 5 to more than 100 acres. Slope is 0 to 2 percent.*
- Tp—Toledo silty clay, ponded. This deep nearly level, very poorly drained soil is on broad flats and in long narrow concave areas on lake plains. It is subject to ponding of long duration. Most areas range from 5 to more than 100 acres. Slope is 0 to 2 percent.*
- RmA—Rimer loamy fine sand. This deep, nearly level, somewhat poorly drained soil is in long narrow areas on slight rises. It is on low beach ridges on lake plains. Most areas range from 4 to 25 acres.*

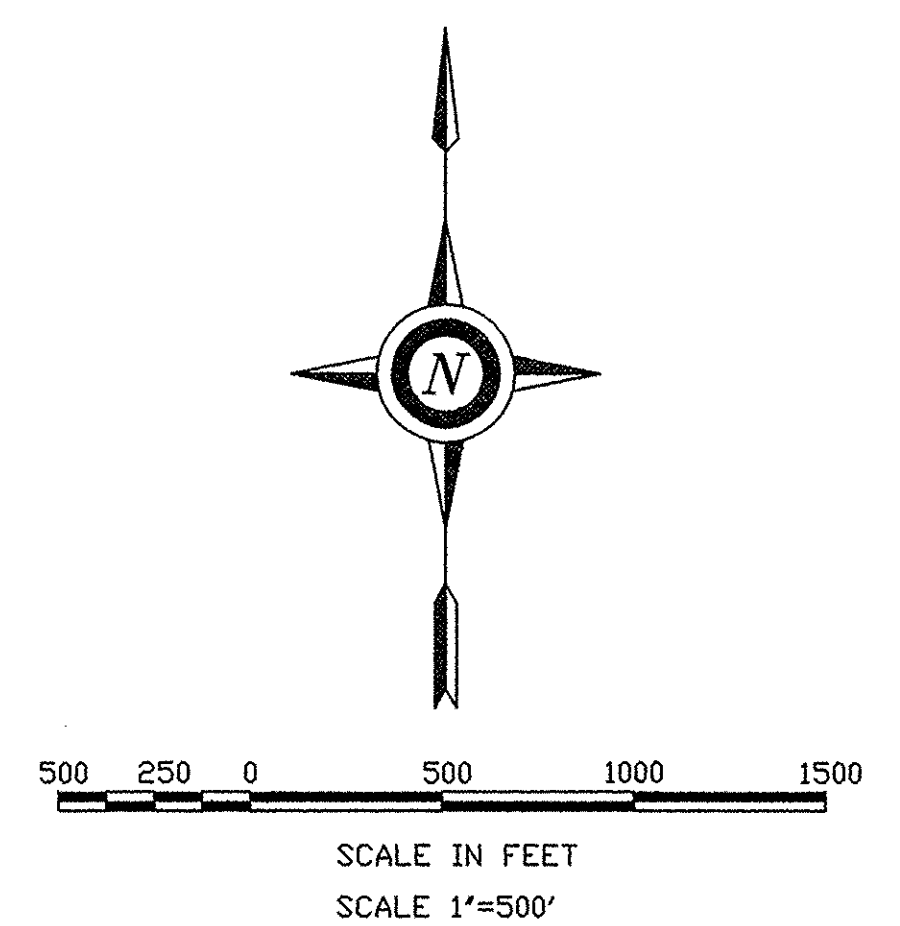
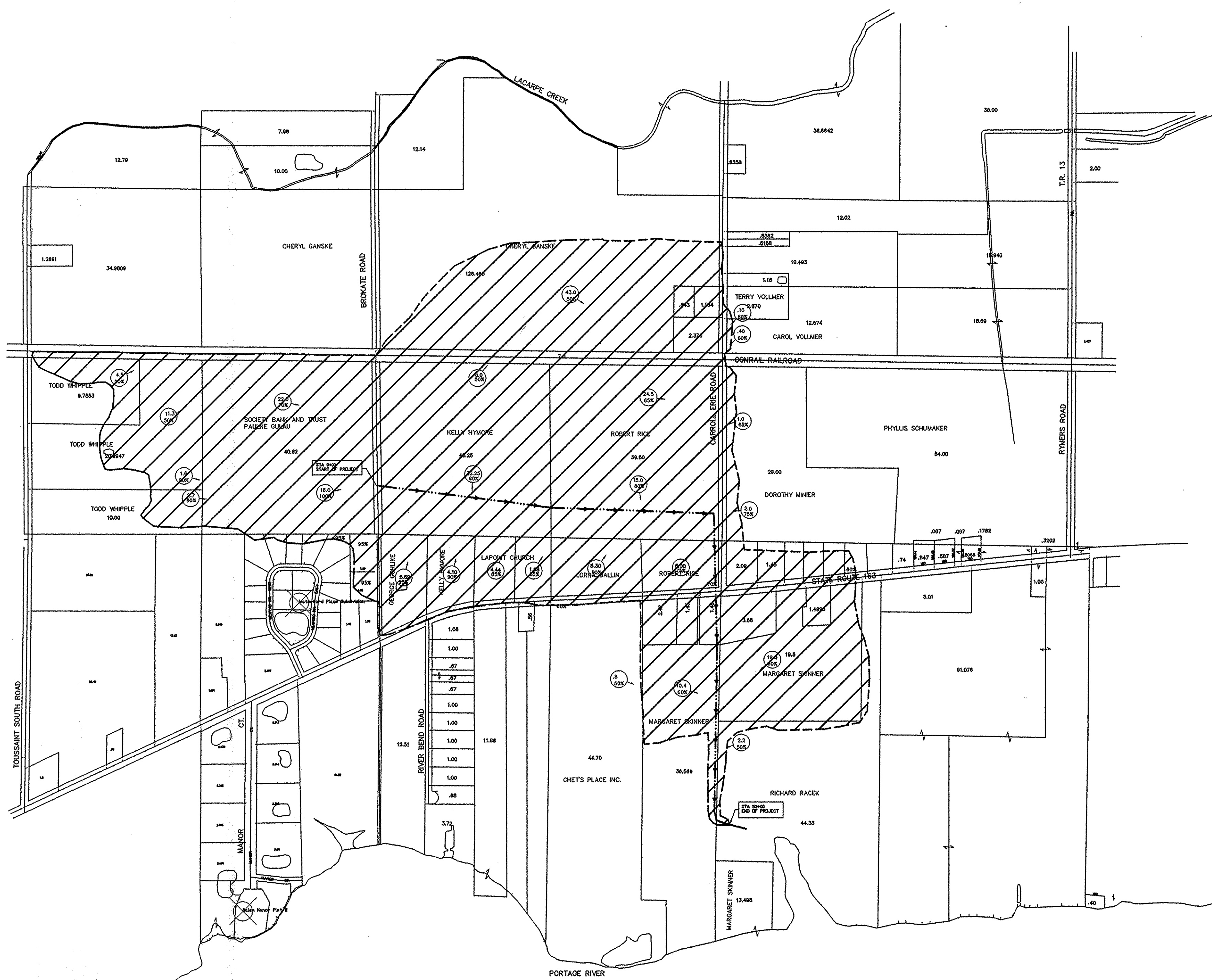
DATE	12/16/05
Approved	Greg H. Hansen
Title	C.E.I.
Const. Approved	
Title	
DATE	6/2/2005
Designed	MIKE CARCAC
Drawn	MIKE CARCAC
Traced	
Checked	C. Hansen

MINIER DITCH

USDA — NATURAL RESOURCES CONSERVATION SERVICE

CAD FILE I.D.
 DRAWING NUMBER
 Sheet 6 of 6

JOB CLASS I



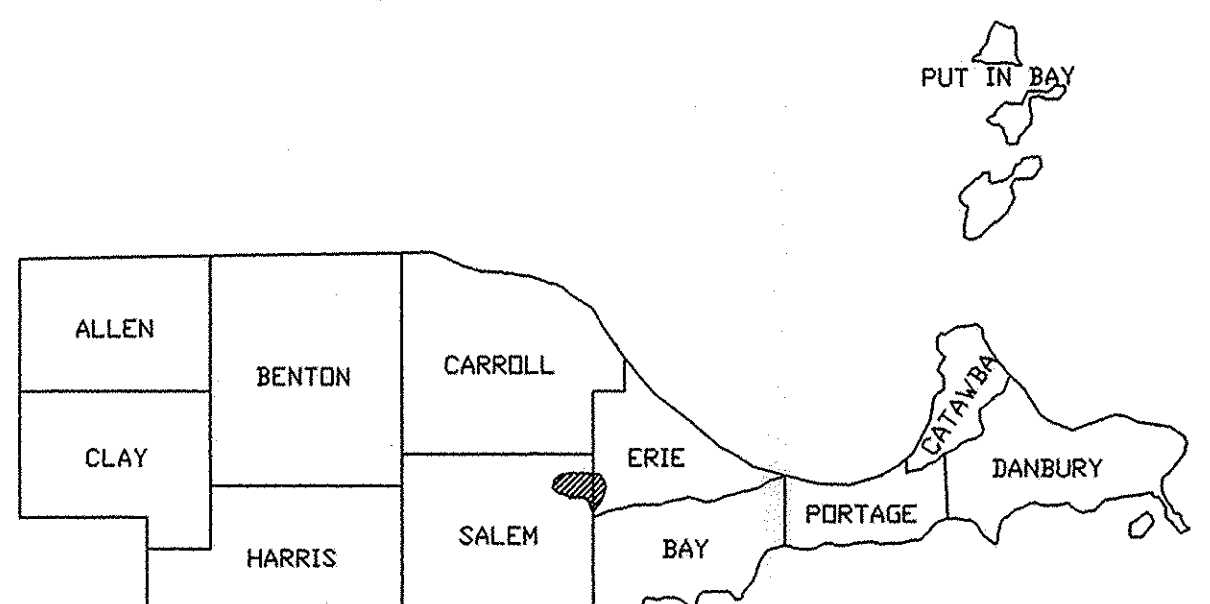
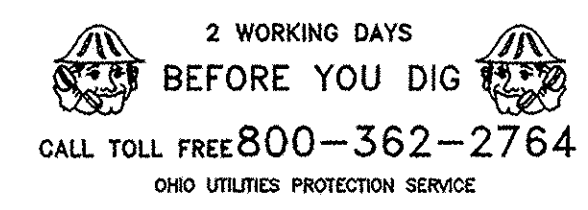
LEGEND

ROAD	
RAILROAD	
WATERSHED BOUNDARY	
PROPERTY LINE	
FENCE	
STATION	
EXISTING WATERWAY	
ACRES DRAINED	

Note To Excavator

Excavator must notify all utilities at least 48 hours and not more than 10 days prior to the planned commencement of excavation.

1. Member utilities will be contacted by calling oups (1-800-362-2764)
2. Each Limited Basis Participant will be contacted by the excavator using the telephone number provided.



DESIGNER NOTIFICATION TO OUPS

BY: MIKE GARGAC DATE: 3/9/2006 ID#: 0309081002 & 003

UNDERGROUND UTILITIES AT EXCAVATION SITE				MEMBER OUPS	LIMITED BASIS PARTICIPANTS
UTILITY	RESPONSE	PHONE NO.			
ADELPHIA	NONE			X	
ATT	NONE			X	
COLUMBIA GAS	PIPELINE S SIDE SR 163			X	
TOLEDO EDISON	NONE			X	
VERIZON	NONE			X	
MCI	NONE			X	
VILLAGE OF O.H.	WATERLINE N SIDE SR 163			X	
QUEST	NONE			X	
COLUMBIA GAS TRANS	NONE			X	
OHIO EDISON	NONE			X	
CITY OF PORT CLINTON	NONE			X	
OHIO EDISON	NONE			X	
SANITARY ENGINEER		419.734.6725			X

David B. Hines 7/18/07
 OTTAWA COUNTY ENGINEER DATE

CONSTRUCTION APPROVED BY DATE

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SHEET 6.....	BM DESCRIPTIONS, SOILS MAP & DESCRIPTIONS, EROSION CONTROL STRUCTURE

JOB CLASS 1

Watershed Map#2.dwg
 11/30/2006 12:24 PM
 Michael Gargac, Ottawa SWCD

DATE	06/2005	DATE	12/16/06
DESIGNED	MICHAEL LIBBEN	APPROVED	COY. HANSEN
DRAWN	MICHAEL LIBBEN	TITLE	C.E.T.
REDLINED	MICHAEL GARGAC	CONSTRUCTION APPROVED	
CHECKED	C. HANSEN	TITLE	

MINIER DITCH

USDA - NATURAL RESOURCES CONSERVATION SERVICE

CAD FILE I.D.
 DRAWING NUMBER
 Sheet 1 of 6

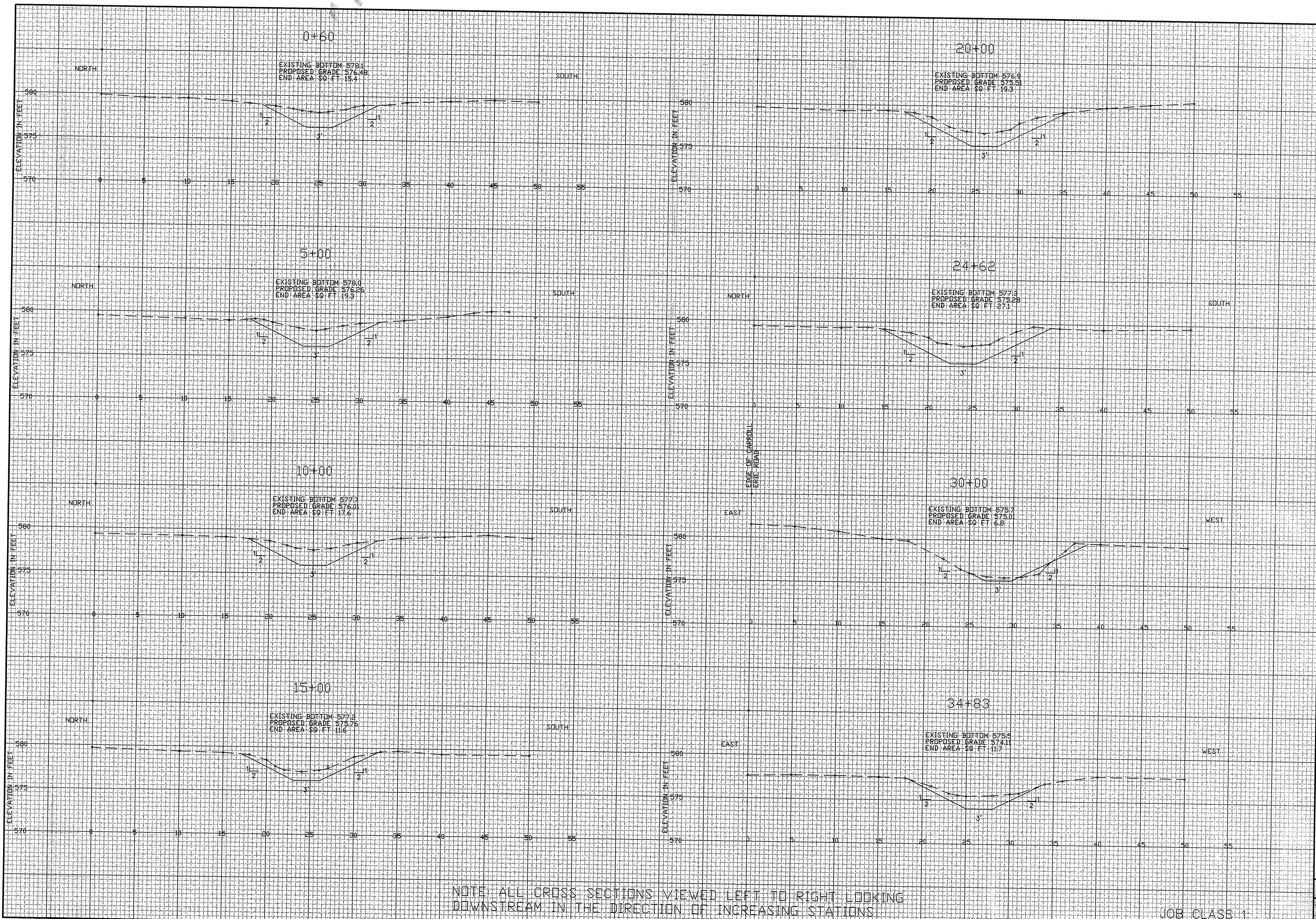


DATE	DATE
DESIGNED MINE LIBBEN 7/2005	APPROVED _____
DRAWN MINE LIBBEN 7/2005	TITLE _____
TRACED _____	CONST. APPROVED _____
CHECKED _____	TITLE _____

MINIER DITCH
 USDA - NATURAL RESOURCES CONSERVATION SERVICE

CAD FILE I.D.
 1/23/06 8:00 PM
 MINE LIBBEN
 DRAWING NUMBER _____

JOB CLASS I



0+60

EXISTING BOTTOM 578.1
PROPOSED GRADE 576.48
END AREA SQ. FT. 19.4

20+00

EXISTING BOTTOM 576.9
PROPOSED GRADE 575.51
END AREA SQ. FT. 19.3

5+00

EXISTING BOTTOM 578.0
PROPOSED GRADE 576.26
END AREA SQ. FT. 19.3

24+62

EXISTING BOTTOM 577.6
PROPOSED GRADE 575.28
END AREA SQ. FT. 27.1

10+00

EXISTING BOTTOM 577.7
PROPOSED GRADE 576.0
END AREA SQ. FT. 17.6

30+00

EXISTING BOTTOM 575.7
PROPOSED GRADE 575.0
END AREA SQ. FT. 6.8

15+00

EXISTING BOTTOM 577.2
PROPOSED GRADE 575.76
END AREA SQ. FT. 11.6

34+83

EXISTING BOTTOM 575.6
PROPOSED GRADE 573.1
END AREA SQ. FT. 11.7

EDGE OF GARROLL
COUNTY ROAD

NOTE: ALL CROSS SECTIONS VIEWED LEFT TO RIGHT LOOKING
DOWNSTREAM IN THE DIRECTION OF INCREASING STATIONS

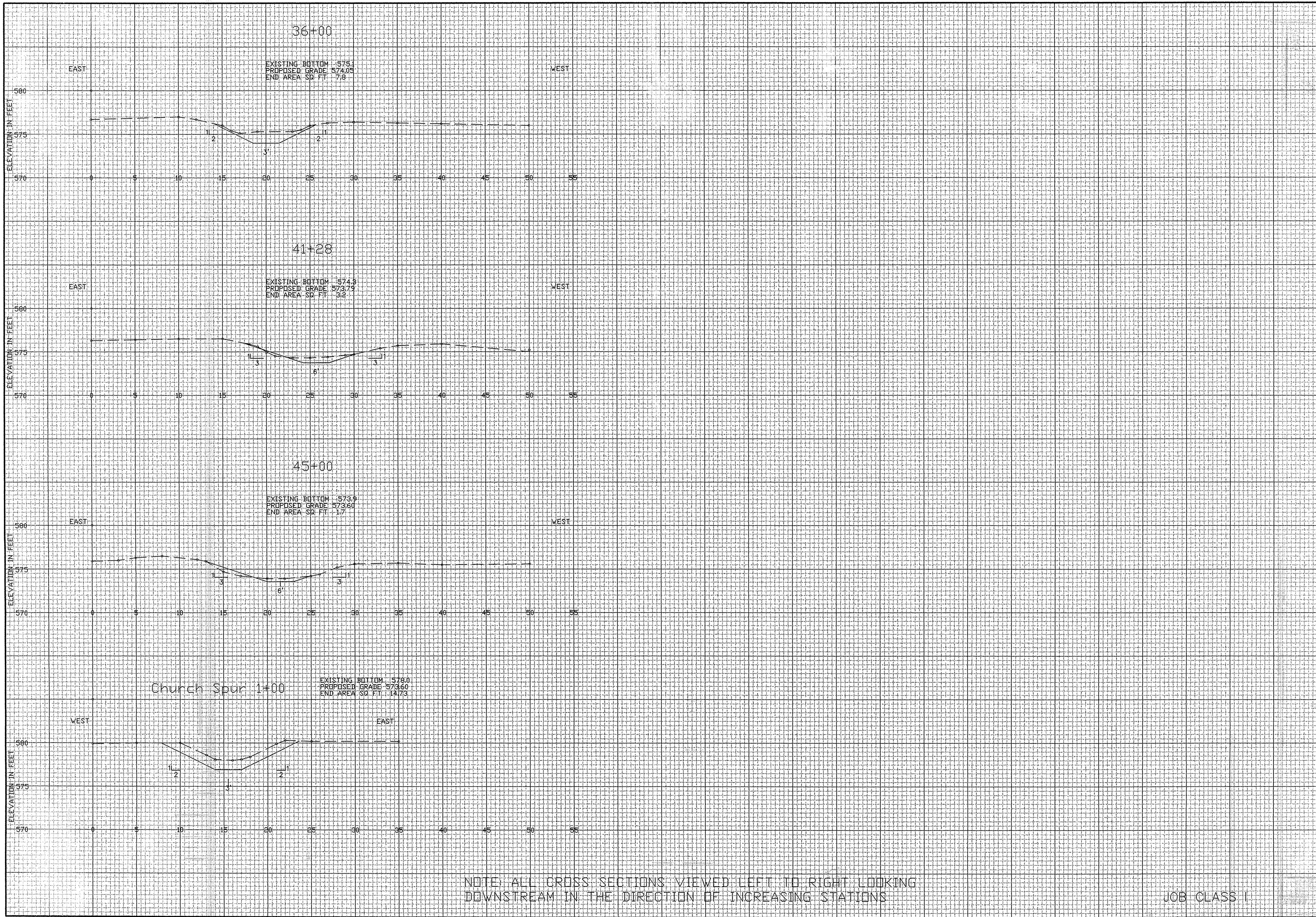
JOB CLASS 1

DATE	7/2005
DESIGNED	MINE LIBBY
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TRACED	
CHECKED	
APPROVED	
TITLE	
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TITLE	

MINIER DITCH

USDA - NATURAL RESOURCES CONSERVATION SERVICE

CAD FILE I.D.
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Sheet 3 of 6

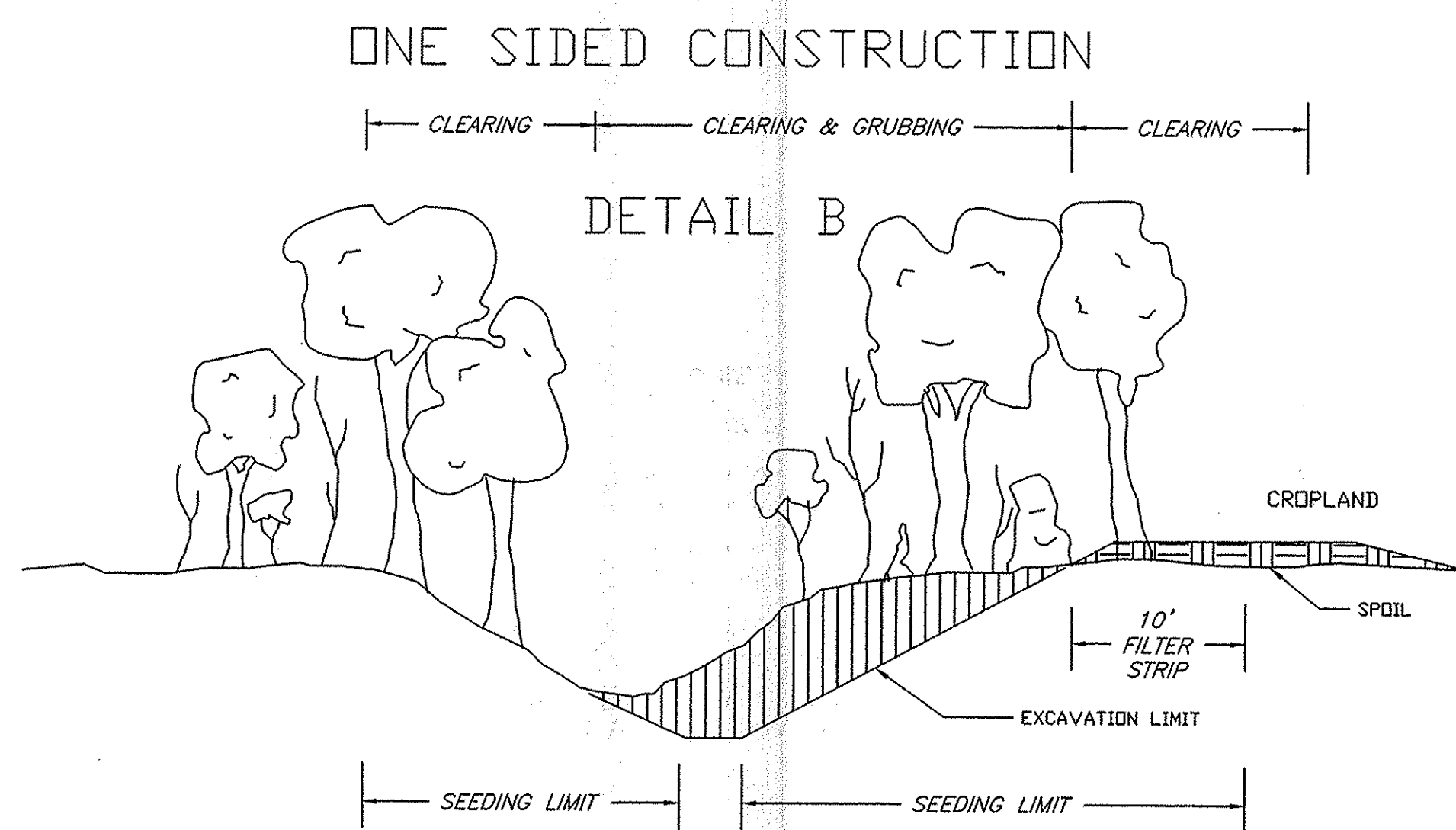
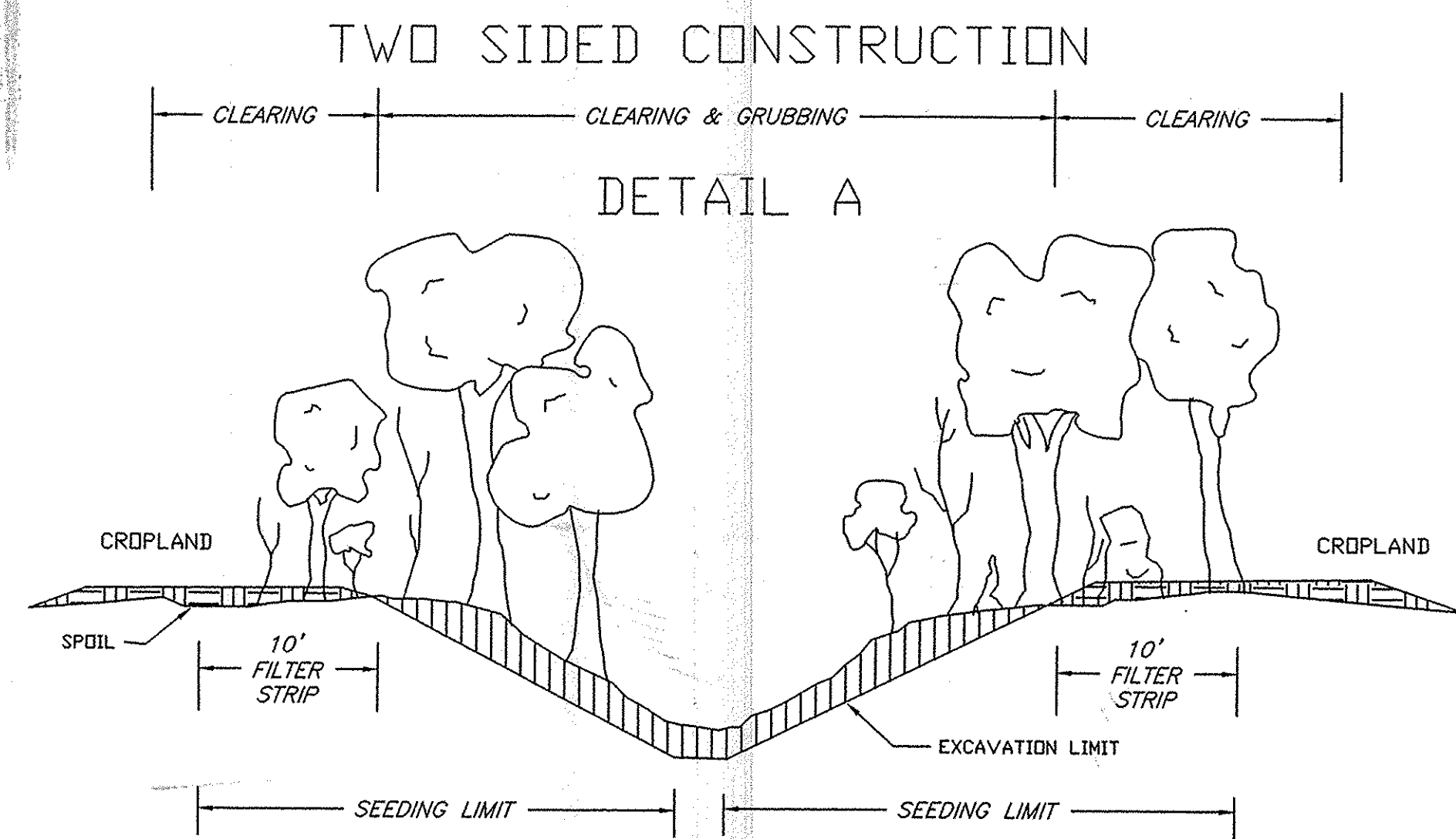


NOTE: ALL CROSS SECTIONS VIEWED LEFT TO RIGHT LOOKING
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JOB CLASS I

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Title	Drawn
Const. Approved	Traced
Title	Checked

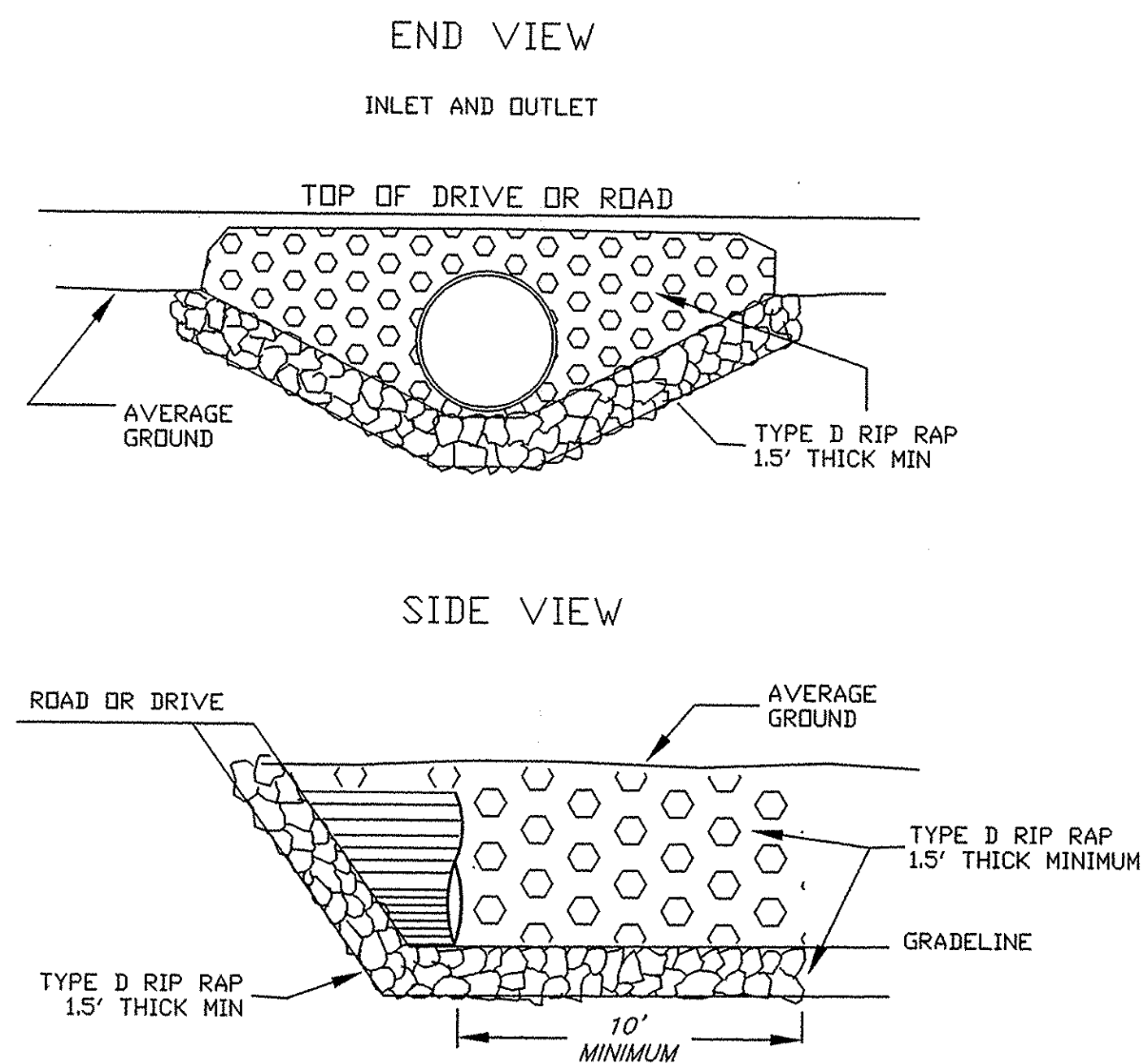
MINIER DITCH
 USDA - NATURAL RESOURCES CONSERVATION SERVICE



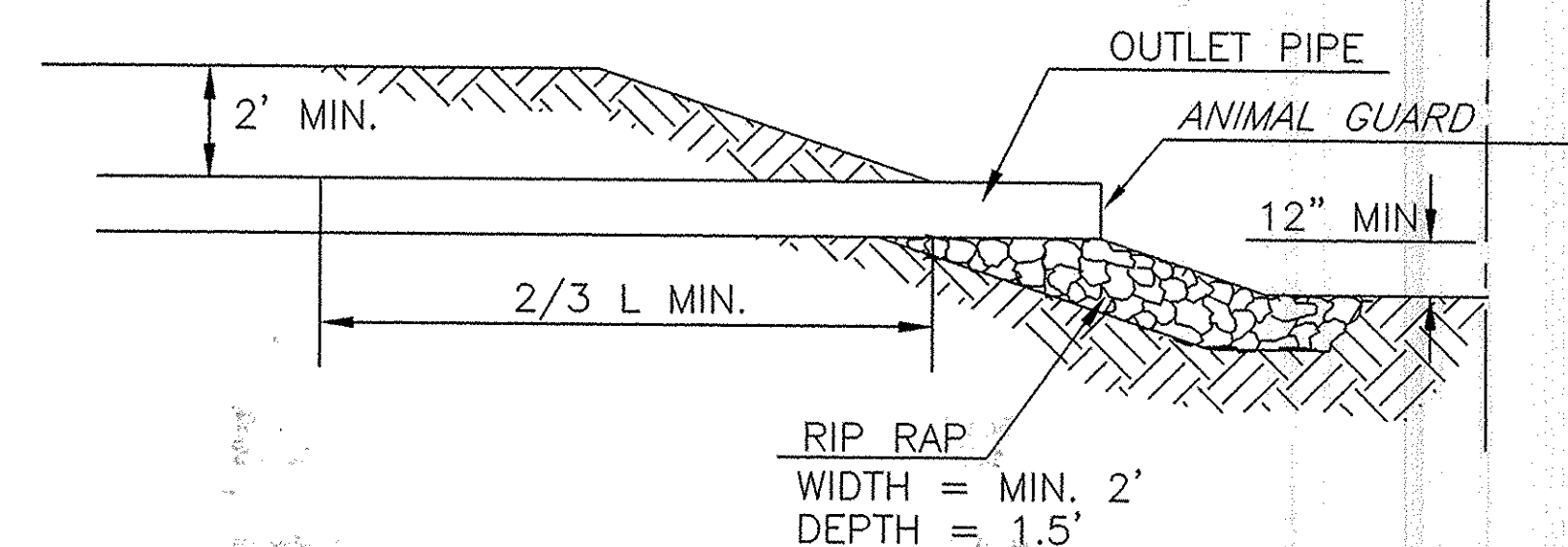
BRUSH, SPOIL, & SEEDING DETAIL TABLE

MAIN CHANNEL	STA	DETAIL
	0+00 - 35+46	DETAIL A
	35+46 - 53+00	DETAIL B

CULVERT RIP RAP DETAIL

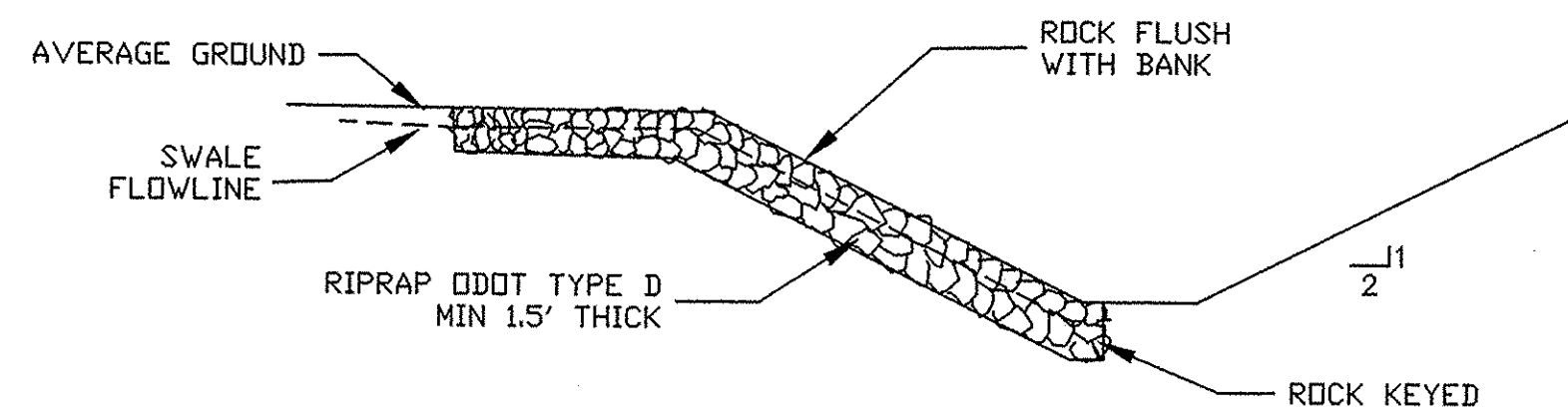


OUTLET PIPE INSTALLATION

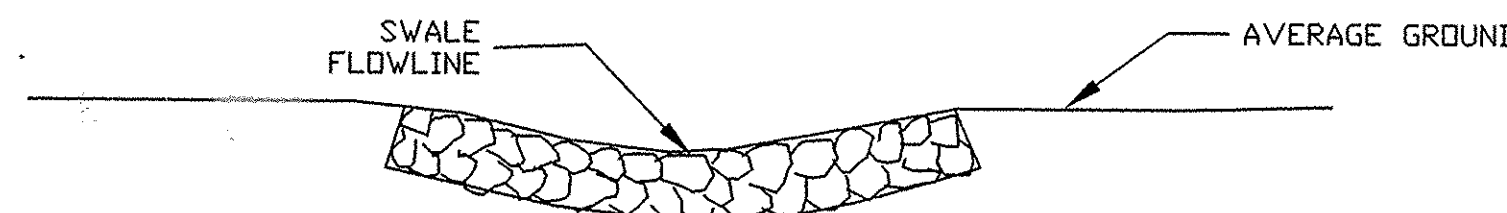


SWALE OR SIDE DITCH ENTRY

SIDE VIEW



END VIEW



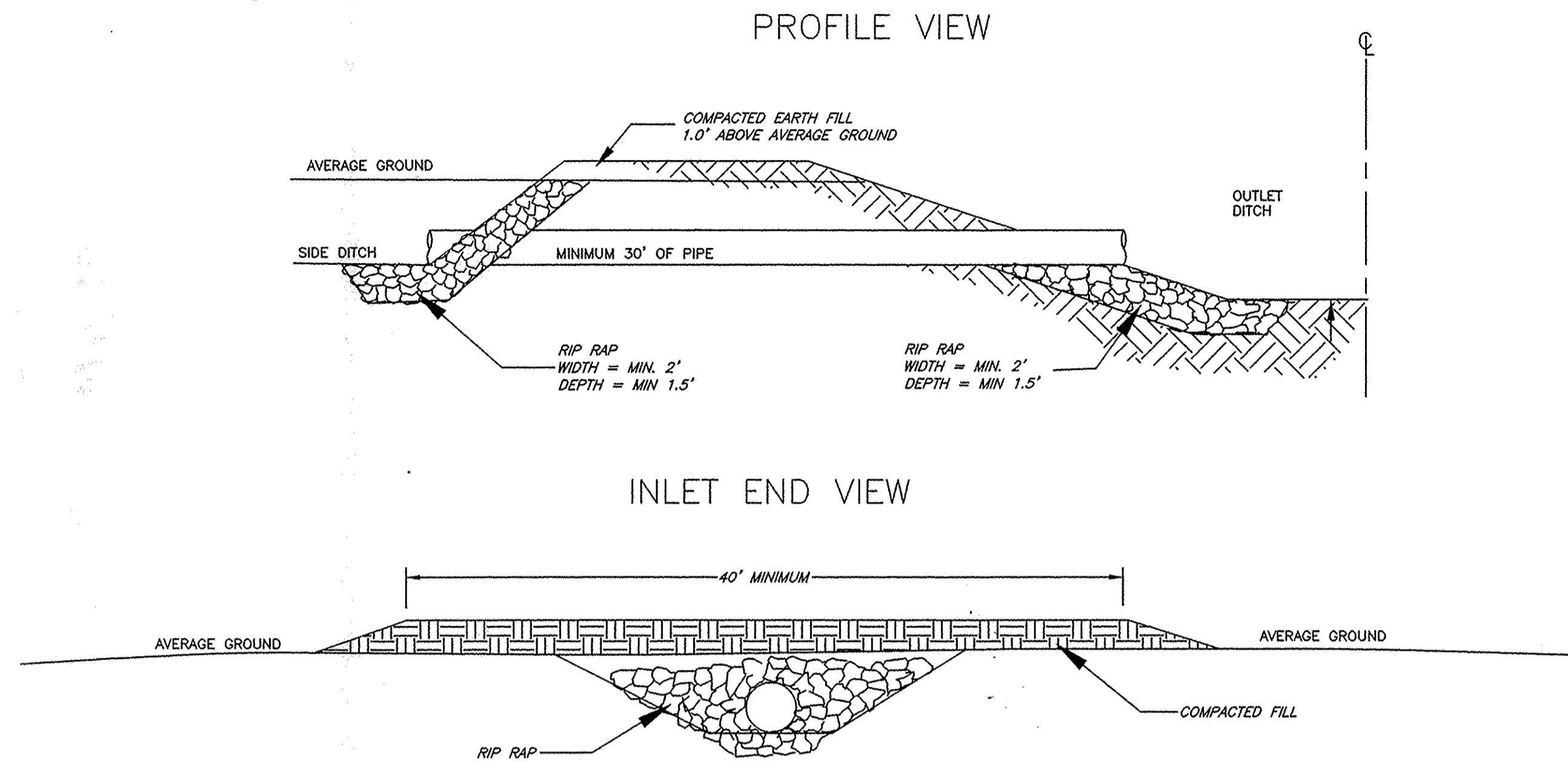
DATE _____
 Approved *Greg Johnson*
 Title *C.E.T.*
 Const. Approved _____
 Title _____

DATE *6/2005*
 Designed *MIKE GARGAC*
 Drawn *MIKE GARGAC*
 Traced _____
 Checked *C. Johnson*
 Title _____

MINIER DITCH
 USDA - NATURAL RESOURCES CONSERVATION SERVICE

CAD FILE I.D.
 DRAWING NUMBER _____
 JOB CLASS _____
 Sheet 5 of 6

TYPICAL EROSION CONTROL STRUCTURE – DETAIL



BENCHMARKS

BM #1 BRASS PLATE IN NORTHWEST CORNER OF THE INTERSECTION OF CARROLL ERIE ROAD AND STATE ROUTE 163. PLATE IS ON THE NORTH END OF CONCRETE WALL ON THE EAST SIDE OF THE COX CULVERT UNDER STATE ROUTE 163. MSL 581.14

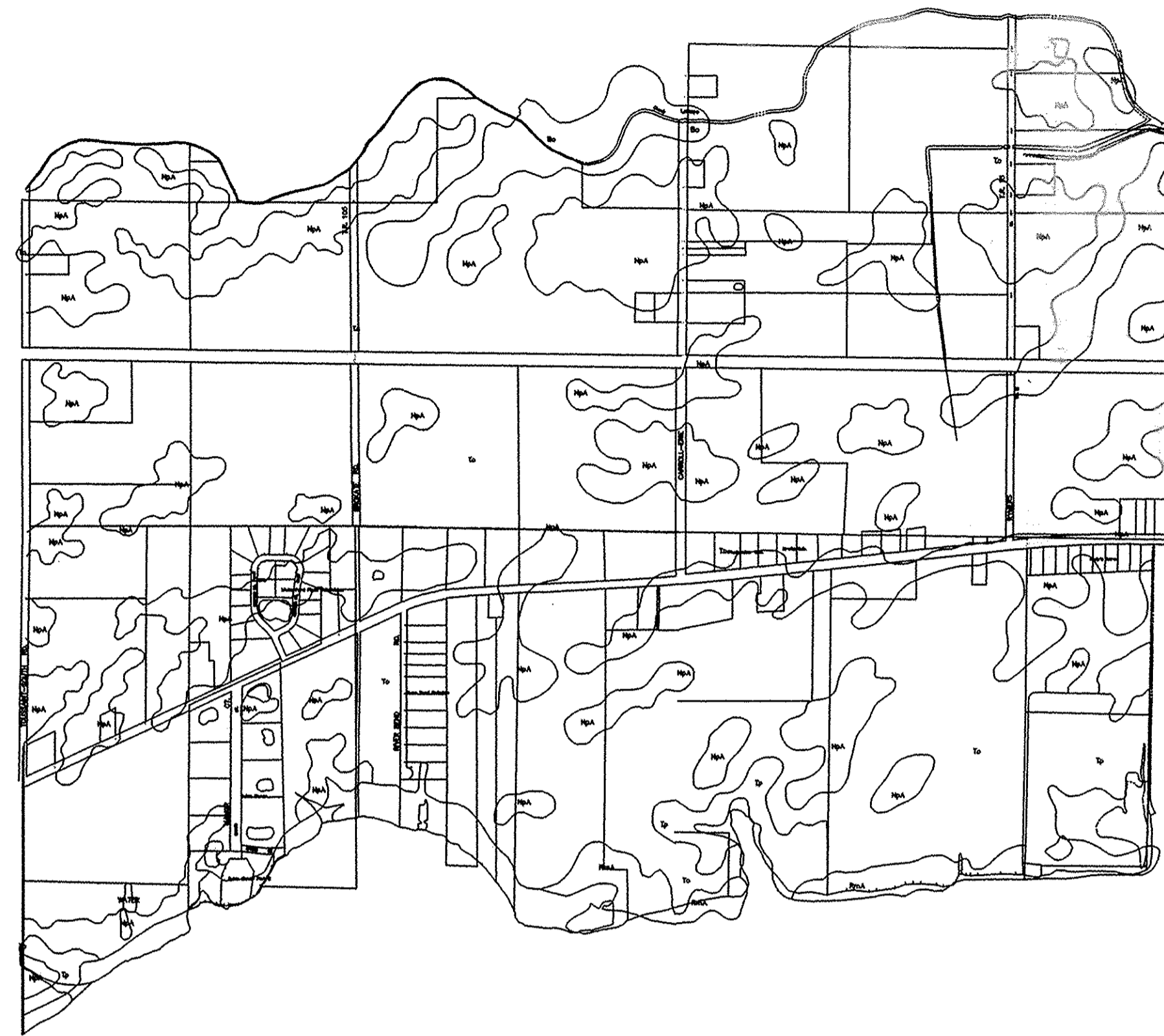
BM #2 CHISELED + ON TOP STEP ON SOUTH END OF WEST WALL OF CONCRETE BOX CULVERT, ON SOUTH SIDE OF STATE ROUTE 163 AT CARROLL ERIE ROAD. MSL 579.68

BM #3 CHISELED + ON THE WEST END OF 15" RCP ON THE WEST SIDE OF BROKATE ROAD AT STA 0+00 OF MINIER DITCH. MSL 579.10

BM #4 SPIKE IN SOUTH SIDE OF 36" DIAMETER OAK TREE IN PROPERTY LINE FENCE ROW, ON NORTH SIDE OF DITCH AT STA 13+25. MSL 581.48

BM #5 CHISELED + ON SOUTH SIDE OF SOUTHWEST CONCRETE PAD OF POWER TOWER 300' NORTH OF STA 15+00 OF MINIER DITCH. MSL 581.06

SOILS MAP



SOILS DESCRIPTIONS

NpA-Nappanee silty clay loam. This deep, nearly level, somewhat poorly drained soil is on slight convexa rises and side slopes along drainageways on lake plains. Most areas range from 4 to 75 acres.

To-Toledo silty clay. This deep nearly level, very poorly drained soil is on broad flats and in long narrow concave areas on lake plains. It is subject to ponding of short duration. Most areas range from 5 to more than 100 acres. Slope is 0 to 2 percent.

Tp-Toledo silty clay, ponded. This deep nearly level, very poorly drained soil is on broad flats and in long narrow concave areas on lake plains. It is subject to ponding of long duration. Most areas range from 5 to more than 100 acres. Slope is 0 to 2 percent.

RmA-Rimer loamy fine sand. This deep, nearly level, somewhat poorly drained soil is in long narrow areas on slight rises. It is on low beach ridges on lake plains. Most areas range from 4 to 25 acres.

DATE	6/2005	DATE	6/2005
DESIGNED	MIKE CARGAC	APPROVED	LEO HILMAN
DRAWN	MIKE CARGAC	TITLE	L.S.J.
TRACED		CONST. APPROVED	
CHECKED	L. Hilman	TITLE	

MINIER DITCH
 USDA - NATURAL RESOURCES CONSERVATION SERVICE

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 Sheet 6 of 6

JOB CLASS I