08-03-2018 LETTING ITEM 026

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
698	123-CR	MARSHALL	36	1
FED. ROAD DIST. NO. -	ILLINOIS	CONTRACT NO. 68C49		

INDEX OF SHEETS

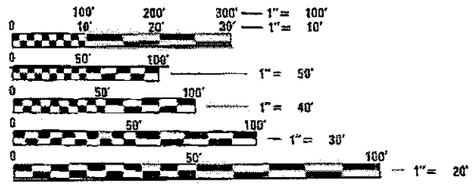
LIST OF ILLINOIS DOT HIGHWAY STANDARDS

000001-06	701006-05
001001-02	701011-04
280001-07	701201-04
515001-03	701301-04
630001-12	701326-04
630301-08	701901-07
666001-01	704001-08
701001-02	725001-01

LIST OF DISTRICT 4 CADD STANDARDS

205001-D4
291001-D4
630101-D4

ADT = 1600 (2014)
% HCV = 10.38 (2011)
% SU = 6.25 (2014)
% MU = 9.38 (2014)
TOWNSHIP: ROBERTS
FUNCTIONAL CLASSIFICATION: MINOR ARTERIAL (RURAL)



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

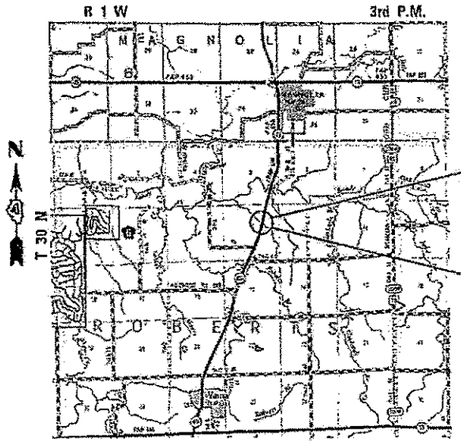
PROJECT ENGINEER: NICHOLAS JACK 309-671-3451
PROJECT MANAGER: CLARK JONES 309-671-3452

CATALOG NO. 035251-00D
CONTRACT NO. 68C49

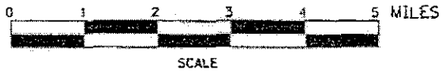
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED HIGHWAY PLANS

FAP 698 (IL ROUTE 89)
SECTION 123-CR
PROJECT STP-2G05(480)
MARSHALL COUNTY
C-94-061-15



LOCATION PLAN
NET LENGTH OF PROJECT = 636.00 FEET = 0.120 MILES



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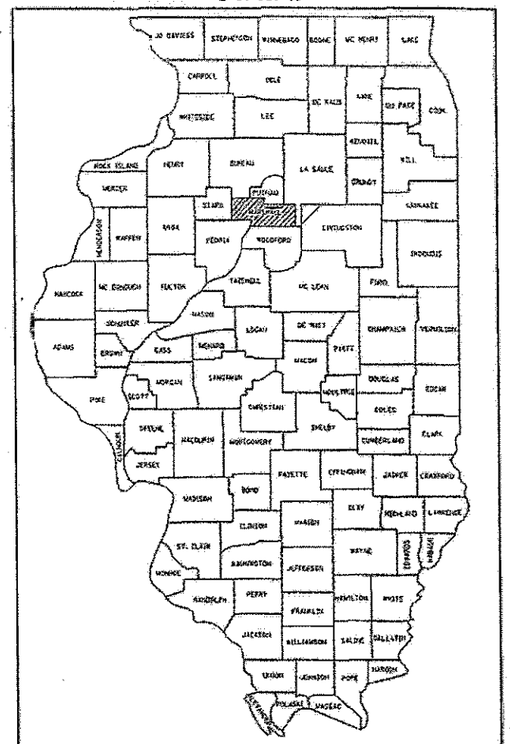
IL. Design Firm No. 184-001939

D-94-030-15



LOCATION OF SECTION INDICATED THUS:- ■

PROJECT DESCRIPTION
PROJECT INCLUDES PUSHING A 9' X 6' PRECAST CONCRETE BOX CULVERT THRU AN EXISTING 12' X 8' CONCRETE BOX CULVERT OVER
SANDY CREEK TRIBUTARY
EX SN 062-1002 PROP SN 062-2500
℄ STA 702+88

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED May 09 20 18
Kensil A Barnett (KSD)
REGION THREE ENGINEER
June 29 20 18
ENGINEER OF DESIGN AND ENVIRONMENT
June 29 20 18
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

CHRISTOPHER P. KOLLROS
062-060338
LICENSED PROFESSIONAL ENGINEER
STATE OF ILLINOIS

Christopher P. Kollros 10/19/17
EXPIRATION: 11/30/2017

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

REV. 6/14/18

COMMITMENTS

COMMITMENTS SHALL NOT BE ALTERED WITHOUT THE WRITTEN CONSENT OF ALL PARTIES TO WHICH THE COMMITMENT WAS MADE.

GENERAL NOTES

AVAILABILITY OF ELECTRONIC FILES

MICROSTATION AND GEOPAK FILES OF THIS PROJECT WILL BE MADE AVAILABLE TO THE CONTRACTOR AFTER CONTRACT AWARD. IF THERE IS A CONFLICT BETWEEN THE ELECTRONIC FILES AND THE PRINTED CONTRACT PLANS AND DOCUMENTS, THE PRINTED CONTRACT PLANS AND DOCUMENTS SHALL TAKE PRECEDENCE OVER THE ELECTRONIC FILES. THE CONTRACTOR SHALL ACCEPT ALL RISK ASSOCIATED WITH USING THE ELECTRONIC FILES AND SHALL HOLD THE DEPARTMENT HARMLESS FOR ANY ERRORS OR OMISSIONS IN THE ELECTRONIC FILES AND THE DATA CONTAINED THEREIN. ERRORS OR DELAYS RESULTING FROM THE USE OF THE ELECTRONIC FILES BY THE CONTRACTOR SHALL NOT RESULT IN AN EXTENSION OF TIME FOR ANY INTERIM OR FINAL COMPLETION DATE OR SHALL NOT BE CONSIDERED CAUSE FOR ADDITIONAL COMPENSATION. THE CONTRACTOR SHALL NOT USE, SHARE, OR DISTRIBUTE THESE ELECTRONIC FILES EXCEPT FOR THE PURPOSE OF CONSTRUCTING THIS CONTRACT. ANY CLAIMS BY THIRD PARTIES DUE TO USE OR ERRORS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL INCLUDE THIS DISCLAIMER WITH THE TRANSFER OF THESE ELECTRONIC FILES TO ANY OTHER PARTIES AND SHALL INCLUDE APPROPRIATE LANGUAGE BINDING THEM TO SIMILAR RESPONSIBILITIES.

TREE REMOVAL – UTILITY RELOCATION

TREE REMOVAL MAY BE NECESSARY PRIOR TO UTILITY COMPANIES BEING ABLE TO RELOCATE THEIR FACILITIES OUTSIDE THE CONSTRUCTION LIMITS. THE CONTRACTOR SHOULD COORDINATE ANY CONTRACT TREE REMOVAL ACTIVITIES WITH THE UTILITY COMPANIES TO ELIMINATE CONFLICTS AND POTENTIAL DELAYS CAUSED BY UTILITY TREE REMOVAL ACTIVITIES OR INCOMPLETE UTILITY RELOCATIONS.

PLAN ELEVATIONS – U. S. G. S. MEAN SEA LEVEL DATUM

1. ALL ELEVATIONS SHOWN REFER TO U. S. G. S. DATUM AT MEAN SEA LEVEL UNLESS OTHERWISE NOTED.

PROPERTY OWNER ACCESS REQUIREMENTS

ACCESS MUST BE MAINTAINED TO ALL EXISTING PROPERTIES DURING CONSTRUCTION PER ARTICLE 107.09 UNLESS ARRANGEMENTS ARE MADE IN WRITING BY THE CONTRACTOR WITH THE PROPERTY OWNERS WITH A COPY TO THE ENGINEER FOR SHORT–TERM CLOSURES.

CRITICAL PATH WORK SCHEDULE REQUIREMENT

THE CONTRACTOR WILL SUBMIT TO THE ENGINEER A SATISFACTORY PROGRESS SCHEDULE AND CRITICAL PATH SCHEDULE WHICH SHALL SHOW THE PROPOSED SEQUENCE OF WORK AT THE TIME OF THE PRE–CONSTRUCTION CONFERENCE.

CLEARING

AT LOCATIONS WHERE CLEARING IS INDICATED ON THE PLANS BEYOND THE LIMITS OF THE PROPOSED EXCAVATION OR EMBANKMENT, THE CONTRACTOR SHALL RESTORE THE DISTURBED EARTH BY BLADING AND SHAPING TO BLEND WITH THE ADJACENT GROUND. THE CLEARING WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF EXCAVATION PAY ITEMS IN THE PLANS. PAYMENT FOR RESEEDING OR RESODDING WILL BE AS PROVIDED IN THE PLANS.

RIGHT–OF–WAY MARKERS

WHEN INSTALLING RIGHT–OF–WAY MARKERS, CARE SHALL BE TAKEN TO NOT DISTURB ANY EXISTING PROPERTY/RIGHT–OF–WAY PINS. IF A PROPERTY/RIGHT–OF–WAY PIN IS FOUND AT THE LOCATION OF A PROPOSED RIGHT–OF–WAY MARKER, THE MARKER SHALL BE PLACED ONE (1) FOOT IN FRONT OF THE PIN.

ENVIRONMENTAL REVIEWS

PRIOR TO THE USE OF ANY PROPOSED BORROW AREAS, USE AREAS (TEMPORARY ACCESS ROADS, DETOURS, RUN–AROUNDS, ETC.) AND/OR WASTE AREAS, THE CONTRACTOR SHALL FILE THE REQUIRED ENVIRONMENTAL RESOURCE REQUEST SURVEYS ACCORDING TO SECTION 107.22 OF THE STANDARD SPECIFICATIONS. THESE SURVEYS ARE REQUIRED IN ORDER FOR THE DEPARTMENT TO CONDUCT CULTURAL AND BIOLOGICAL RESOURCE SURVEYS FOR THE PROPOSED SITE.

PRIOR TO ANY WASTE MATERIALS BEING REMOVED FROM THE CONSTRUCTION SITE THE REQUIRED ENVIRONMENTAL RESOURCE SURVEYS WILL NEED TO BE OBTAINED AND FILED BY THE CONTRACTOR. EXCESS WASTE PRODUCTS REMOVED FROM THE CONSTRUCTION SITE SHALL BE DISPOSED OF AS REQUIRED IN SECTION 202.03 OF THE STANDARD SPECIFICATIONS.

ANY PROTRUDING METAL BARS SHALL BE REMOVED PRIOR TO THE DISPOSAL OF BROKEN CONCRETE AT APPROVED DISPOSAL SITES.

THE REQUIRED ENVIRONMENTAL RESOURCE DOCUMENTATION SHALL INCLUDE THE FOLLOWING:

* BDE FORM 2289 (ENVIRONMENTAL SURVEY REQUEST)
* BDE FORM 2290 (WASTE/USE AREA REVIEW)
* A LOCATION MAP SHOWING THE SIZE LIMITS AND LOCATION OF THE USE AREA
* COLOR PHOTOGRAPHS DEPICTING THE USE AREA
* BORROW AREA ENTRY AGREEMENT FORM–D4 PI0101

PLEASE NOTE THAT A MINIMUM OF FOUR WEEKS SHALL BE ALLOWED FOR THE DISTRICT TO OBTAIN THE REQUIRED ENVIRONMENTAL CLEARANCES AND SIX WEEKS FOR THE REQUIRED BORROW SITE ENVIRONMENTAL CLEARANCES.

SEEDING – SIDE SLOPE RIPPING

ALL SLOPES STEEPER THAN 3 TO 1 AND OVER 15 FT (4.5 M) IN HEIGHT SHALL BE RIPPED. THIS SHALL CONSIST OF RIPPING BETWEEN 18 INCHES TO 24 INCHES (450 MM TO 600 MM) DEEP NORMAL TO THE SLOPE. THE INTERVAL OF RIPPING ALONG THE SLOPE SHALL BE 12 FT. (3.6 M). THIS WORK SHALL BE DONE AFTER THE SEED BED HAS BEEN PREPARED BUT BEFORE ANY FERTILIZER OR SEED HAS BEEN APPLIED. THE FERTILIZER AND SEED SHALL BE APPLIED WITHIN A 24–HOUR PERIOD AFTER THE RIPPING HAS BEEN DONE. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST OF THE VARIOUS ITEMS OF SEEDING INVOLVED.

PROJECT SPECIFIC NOTES

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO ORDERING MATERIALS AND COMMENCING CONSTRUCTION.
2. THE CONTRACTOR SHALL CONSULT WITH THE ENGINEER IN REGARD TO THE EXACT LENGTH OF THE BOX/PIPE CULVERTS, STORM SEWERS, AND/OR PIPE DRAINS REQUIRED PRIOR TO ORDERING THESE ITEMS.
3. NO TREE REMOVAL FROM APRIL 1 TO SEPTEMBER 30.

   THE DISTRICT FOUR TREE COMMITTEE SHOULD BE CONTACTED AND PRIOR APPROVAL OBTAINED FOR ANY TREE REMOVAL BEYOND THE LIMITS/LOCATIONS INCLUDED IN THE PLANS.
4. THE RESIDENT ENGINEER SHALL SUBMIT A FINAL COUNT OF TREES REMOVED SO THAT THEY WILL BE PROPERLY REPLACED IN THE TREE BACKING PROGRAM. PLEASE CONTACT JIM ALWILL AT 309–671–4484 FOR FINAL COUNT.

CALCULATION FACTORS

AGGREGATE SHOULDERS AND BASES: 0.05833 TON /SQ. YD /INCH
TEMPORARY EROSION CONTROL SEEDING: 100 LBS /ACRE
STONE RIPRAP: 1.5 TON /CU YD
GUARDRAIL AGGREGATE EROSION CONTROL: 1.5 TON /CU. YD.

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Springfield, IL. Phone: (217)544–8033

USER NAME = ___	DESIGNED - ___	REVISED - ___
	CHECKED - ___	REVISED - ___
PLOT SCALE = ___	DRAWN - ___	REVISED - ___
PLOT DATE = ___	CHECKED - ___	REVISED - ___

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES, COMMITMENTS & PROJECT SPECIFIC NOTES

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
698	123-CR	MARSHALL	36	2
		CONTRACT NO. 68C49		
	ILLINOIS FED. AID PROJECT			

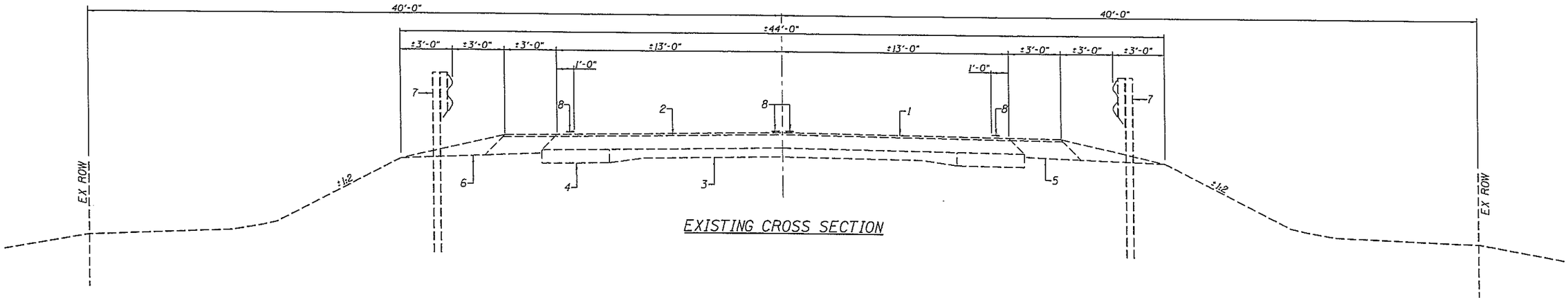
	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONST. CODE 80% FED 20% STATE BOX CULVERT 0004 062-1002
	20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	24	24
	20100500	TREE REMOVAL, ACRES	ACRE	0.4	0.4
	20200100	EARTH EXCAVATION	CU YD	459	459
*	20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	33	33
	20400800	FURNISHED EXCAVATION	CU YD	1858	1858
	21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	4259	4259
	25000210	SEEDING, CLASS 2A	ACRE	1.6	1.6
	25000400	NITROGEN FERTILIZER NUTRIENT	POUND	144	144
	25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	144	144
	25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	144	144
	25100115	MULCH, METHOD 2	ACRE	1.6	1.6
	25100630	EROSION CONTROL BLANKET	SQ YD	4407	4407
	28000400	PERIMETER EROSION BARRIER	FOOT	925	925
	28100107	STONE RIPRAP, CLASS A4	SQ YD	418	418

*= SPECIALTY ITEM

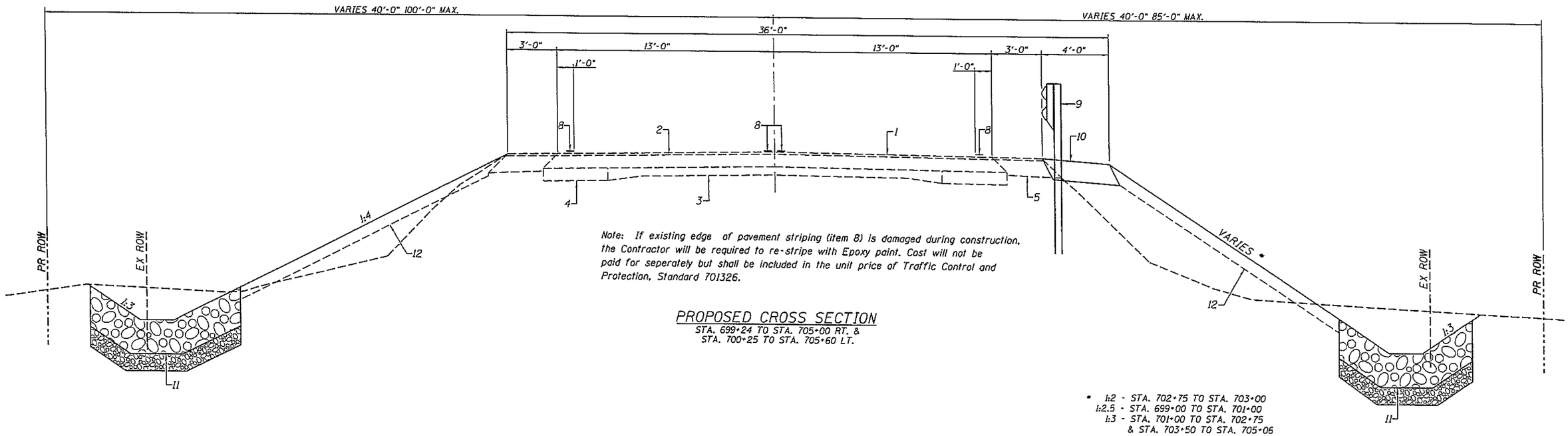
	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONST. CODE 80% FED 20% STATE BOX CULVERT 0004 062-1002
	28100109	STONE RIPRAP, CLASS A5	SQ YD	155	155
	28200200	FILTER FABRIC	SQ YD	573	573
	50102400	CONCRETE REMOVAL	CU YD	22.8	22.8
	52200020	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	376	376
	54001001	BOX CULVERT END SECTIONS, CULVERT NO. 1	EACH	2	2
	54260315	TRAVERSABLE PIPE GRATE FOR CONCRETE END SECTIONS	FOOT	83	83
*	63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	400	400
*	63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	2	2
	63200310	GUARDRAIL REMOVAL	FOOT	992	992
*	66600105	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	EACH	12	12
	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	3	3
	67100100	MOBILIZATION	LSUM	1	1
	70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	LSUM	1	1
	70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	LSUM	1	1

*= SPECIALTY ITEM

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONST. CODE 80% FED 20% STATE BOX CULVERT 0004 062-1002
	70400100	TEMPORARY CONCRETE BARRIER	FOOT	80	80
*	72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	2	2
*	78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	7	7
	X1200140	PRECAST CONCRETE BOX CULVERT (SPECIAL)	FOOT	66	66
	X2020410	EARTH EXCAVATION (SPECIAL)	CU YD	108	108
	X2030300	CHANNEL EXCAVATION (SPECIAL)	CU YD	16	16
	X2070302	POROUS GRANULAR EMBANKMENT, SPECIAL	TON	52	52
	Z0001002	GUARDRAIL AGGREGATE EROSION CONTROL	TON	81	81
	Z0013798	CONSTRUCTION LAYOUT	LSUM	1	1
	Z0023602	GRANULAR CULVERT BACKFILL	CU YD	46	46



EXISTING CROSS SECTION



Note: If existing edge of pavement striping (item 8) is damaged during construction, the Contractor will be required to re-stripe with Epoxy paint. Cost will not be paid for seperately but shall be included in the unit price of Traffic Control and Protection, Standard 701326.

PROPOSED CROSS SECTION

STA. 699+24 TO STA. 705+00 RT. &
STA. 700+25 TO STA. 705+60 LT.

* 1:2 - STA. 702+75 TO STA. 703+00
1:2.5 - STA. 699+00 TO STA. 701+00
1:3 - STA. 701+00 TO STA. 702+75
& STA. 703+50 TO STA. 705+06

PAVEMENT LEGEND

1 - EX HMA SURFACE COURSE
2 - EX HMA OVERLAYS
3 - EX PCC PAVEMENT
4 - EX HMA WIDENING
5 - EX HMA SHOULDER
6 - EX AGG SHOULDER
7 - EX GUARDRAIL
8 - EX PAVEMENT MARKING
9 - PR GUARDRAIL
10 - PR AGG EROSION CONTROL
11 - PR STONE RIPRAP CLASS A4
12 - PR TOPSOIL 4"

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USER NAME = ___	DESIGNED - ___	REVISED - ___
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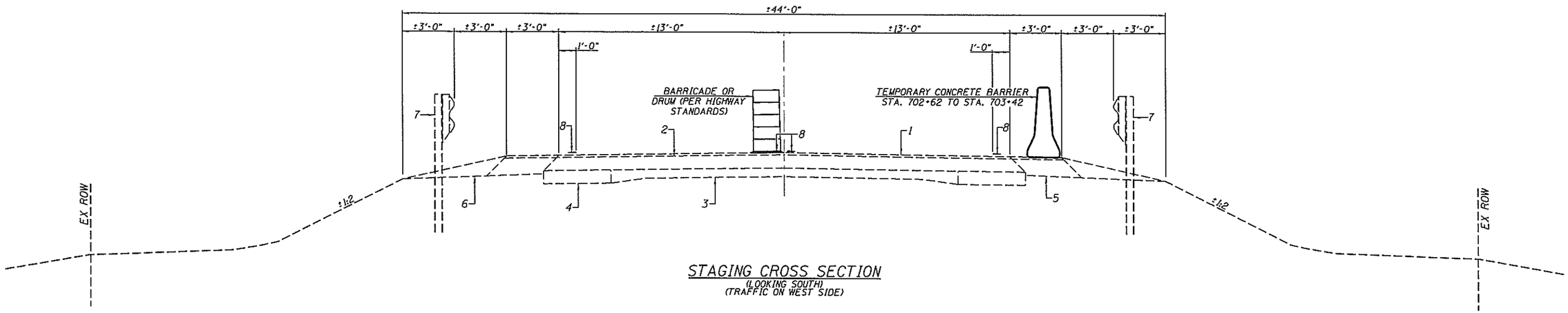
PLOT DATE = ___	CHECKED - ___	REVISED - ___

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

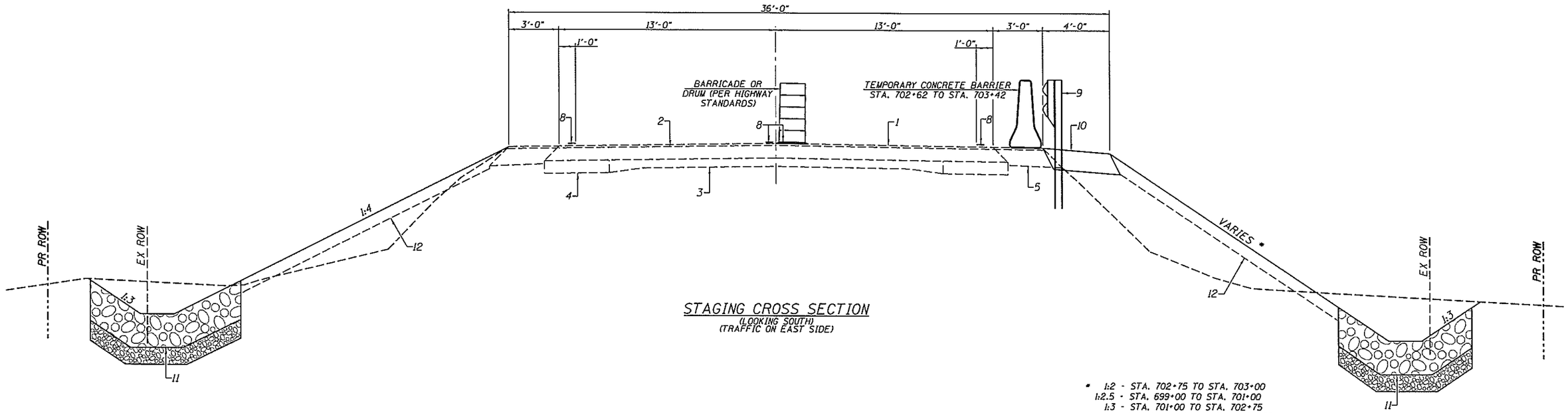
TYPICAL SECTIONS

SHEET NO. 1 OF 1 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
698	123-CR	MARSHALL	36	6
		CONTRACT NO. 68C49		
	ILLINOIS FED. AID PROJECT			



STAGING CROSS SECTION
(LOOKING SOUTH)
(TRAFFIC ON WEST SIDE)



STAGING CROSS SECTION
(LOOKING SOUTH)
(TRAFFIC ON EAST SIDE)

* 1:2 - STA. 702+75 TO STA. 703+00
1:2.5 - STA. 699+00 TO STA. 701+00
1:3 - STA. 701+00 TO STA. 702+75
& STA. 703+50 TO STA. 705+06

PAVEMENT LEGEND

1 - EX HMA SURFACE COURSE
2 - EX HMA OVERLAYS
3 - EX PCC PAVEMENT
4 - EX HMA WIDENING
5 - EX HMA SHOULDER
6 - EX AGG SHOULDER
7 - EX GUARDRAIL
8 - EX PAVEMENT MARKING
9 - PR GUARDRAIL
10 - PR AGG EROSION CONTROL
11 - PR STONE RIPRAP CLASS A4
12 - PR TOPSOIL 4"

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USER NAME = ____	DESIGNED - ____	REVISED - ____
	CHECKED - ____	REVISED - ____
PLOT SCALE = ____	DRAWN - ____	REVISED - ____
PLOT DATE = ____	CHECKED - ____	REVISED - ____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION TRAFFIC DETAILS

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
698	123-CR	MARSHALL	36	7
		CONTRACT NO. 68C49		
	ILLINOIS FED. AID PROJECT			

GUARDRAIL SCHEDULE

LOCATION	63000001 SPBGR, TYPE A, 6' POSTS	63100167 TRAF. BAR. TERM., TYPE 1 (SPECIAL) TANGENT	63200310 GUARDRAIL REMOVAL	72501000 TERMINAL MARKER DIRECT APPLIED	78200005 GUARDRAIL REFLECTORS, TYPE A
	FOOT	EACH	FOOT	EACH	EACH
STA. 699+58 TO STA. 700+08, 16' LT.		1			
STA. 700+08 TO STA. 704+08, 16' LT.	400				
STA. 704+08 TO STA. 704+58, 16' LT.		1			
STA. 699+64 TO STA. 704+56, 19' RT			492		
STA. 700+65 TO STA. 705+65, 20' LT			500		
STA. 699+58 TO STA. 704+58, 16' LT.					7
STA. 699+58, 16' LT.				1	
STA. 704+58, 16' LT.				1	
TOTAL	400	2	992	2	7

EARTHWORK

LOCATION	20200100 EARTH EXCAVATION	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT	20400800 EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)	X2020410 EARTH EXCAVATION (SPECIAL)
	CU. YD.	CU. YD.	CU. YD.	CU. YD.	CU. YD.
STA. 699+24 TO STA. 705+60 (MAINLINE IL 89)	290	217	1813	1596	
STA. 10+00 TO STA. 10+99 (CHANNEL EARTHWORK)	169	127	389	262	
STA. 702+66.25 TO STA. 703+09.75 RT.					108
TOTAL	459	344	2202	1858	108

PERMANENT SEEDING

LOCATION	25000210 SEEDING, CLASS 2A	25000400 NITROGEN FERT. NUTRIENT	25000500 PHOSPHORUS FERT. NUTRIENT	25000600 POTASSIUM FERT. NUTRIENT	25100115 MULCH, METHOD 2
	ACRE	POUND	POUND	POUND	ACRE
STA. 700+25 TO STA. 705+60 LT. TO R.O.W. & EASEMENT	1.14	103	103	103	1.14
STA. 699+24 TO STA. 705+00 RT. TO R.O.W.	0.46	41	41	41	0.46
TOTAL	1.6	144	144	144	1.6

20100210 - TREE REMOVAL (OVER 15 UNITS DIA.)

LOCATION	TREE REMOVAL
	UNITS
STA. 702+33, 55' RT.	24
TOTAL	24

20100500 - TREE REMOVAL, ACRES

LOCATION	TREE REMOVAL
	ACRE
STA. 700+25 TO STA. 704+95, 20' LT. TO EX. ROW	0.18
STA. 700+00 TO STA. 703+97, LT. EX. ROW TO CONST. LIMIT	0.14
TOTAL	0.32

SAY 0.4 ACRE

20201200 REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL

LOCATION	QUANTITY
	CU. YD.
STA. 702+82.5 TO STA. 702+93.5 LT.	15
STA. 702+82.5 TO STA. 702+93.5 RT.	18
TOTAL	33

25100630 - EROSION CONTROL BLANKET

LOCATION	EROSION CONTROL BLANKET
	SQ. YD.
STA. 700+25 TO STA. 705+00 LT.	2194
STA. 699+24 TO STA. 705+00 RT.	2213
TOTAL	4407

28000400 - PERIMETER EROSION BARRIER

LOCATION	PERIMETER EROSION BARRIER
	FOOT
STA. 699+51, 40' RT. TO STA. 702+55 84' RT.	311
STA. 700+01 40' LT. TO STA. 702+50, 89' LT.	286
STA. 703+32, 99' LT. TO STA. 704+99, 40' LT.	179
STA. 703+49, 74' RT. TO STA. 704+99, 40' RT.	149
TOTAL	925

28100107 - STONE RIPRAP, CLASS A4

LOCATION	STONE RIPRAP CLASS A4
	SQ. YD.
STA. 702+00 TO STA. 703+50 LT.	199
STA. 702+00 TO STA. 704+00 RT.	219
TOTAL	418

28100109 - STONE RIPRAP, CLASS A5

LOCATION	STONE RIPRAP CLASS A5
	SQ. YD.
STA. 702+71, 75' RT. TO STA. 702+98 49' RT.	69
STA. 702+76, 73' LT. TO STA. 703+20, 88' LT.	86
TOTAL	155

28200200 - FILTER FABRIC

LOCATION	FILTER FABRIC
	SQ. YD.
STA. 702+71, 75' RT. TO STA. 702+98, 49' RT.	69
STA. 702+76, 63' LT. TO STA. 703+20, 88'LT.	86
STA. 702+00 TO STA. 704+00 RT.	219
STA. 702+00 TO STA. 703+50 LT.	199
TOTAL	573

21101615 - TOPSOIL FURNISH AND PLACE, 4"

LOCATION	TOPSOIL FURNISH AND PLACE, 4"
	SQ. YD.
STA. 700+25 TO STA. 705+60, LT.	2168
STA. 699+24 TO STA. 705+00 RT.	2091
TOTAL	4259

50102400 CONCRETE REMOVAL

LOCATION	CONCRETE REMOVAL
	CU. YD.
STA. 702+68.25 TO STA. 703+06.75 RT.	22.8
TOTAL	22.8

52200020 - TEMPORARY SOIL RETENTION SYSTEM

LOCATION	TEMPORARY SOIL RETENTION SYSTEM
	SQ. FT.
STA. 702+64 TO STA. 703+12, 16' RT.	624
TOTAL	624

54001001 - BOX CULVERT END SECTIONS, CULVERT NO. 1

LOCATION	BOX CULVERT END SECTIONS, NO. 1
	EACH
STA. 702+88, 30' LT. TO 48.5' LT.	1
STA. 702+88, 36' RT. TO 63' RT.	1
TOTAL	2

X1200140 - PRECAST CONCRETE BOX CULVERT (SPECIAL)

LOCATION	PRECAST CONCRETE BOX CULVERT (SPECIAL)
	FOOT
STA. 702+88, 30' LT. TO 36' RT.	66
TOTAL	66

54260311 - TRAVERSABLE PIPE GRATE

LOCATION	TRAVERSABLE PIPE GRATE
	FOOT
STA. 702+88, 39' RT. TO 63' RT.	83
TOTAL	83

66600105 FURNISHING AND ERECTING RIGHT OF WAY MARKERS

LOCATION	RIGTH OF WAY MARKERS
	EACH
STA. 699+50, 40' RT.	1
STA. 700+00, 40' LT.	1
STA. 700+00, 45' RT.	1
STA. 700+50, 50' LT.	1
STA. 701+17.2, 45' RT.	1
STA. 701+50, 50' LT.	1
STA. 702+55, 85' RT.	1
STA. 702+75, 100' LT.	1
STA. 703+05, 85' RT.	1
STA. 703+65, 100' LT.	1
STA. 705+00, 40' LT. & RT.	2
TOTAL	12

67000400 ENGINEER'S FIELD OFFICE, TYPE A

LOCATION	QUANTITY
	CAL. MO.
STA. 699+00 TO STA. 706+06	3
TOTAL	3

67100100 - MOBILIZATION

LOCATION	QUANTITY
	LUMP SUM
STA. 699+00 TO STA. 706+06	1
TOTAL	1

66600105 FURNISHING AND ERECTING RIGHT OF WAY MARKERS

LOCATION	RIGTH OF WAY MARKERS
	EACH
STA. 699+50, 40' RT.	1
STA. 700+00, 40' LT.	1
STA. 700+00, 45' RT.	1
STA. 700+50, 50' LT.	1
STA. 701+17.2, 45' RT.	1
STA. 701+50, 50' LT.	1
STA. 702+55, 85' RT.	1
STA. 702+75, 100' LT.	1
STA. 703+05, 85' RT.	1
STA. 703+65, 100' LT.	1
STA. 705+00, 40' LT. & RT.	2
TOTAL	12

70400100 - TEMPORARY CONCRETE BARRIER

LOCATION	QUANTITY
	FOOT
STA. 702+62 TO STA. 703+42	80
TOTAL	80

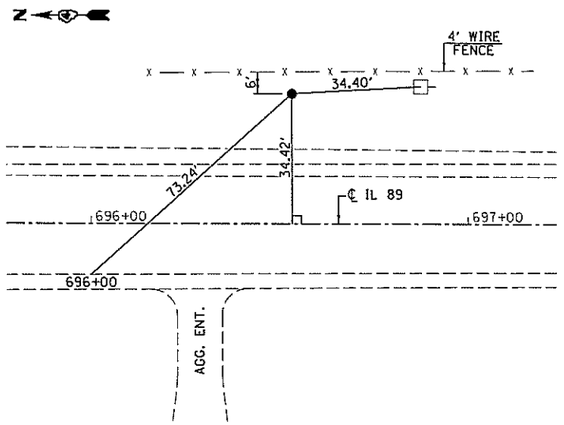
X2030300 - CHANNEL EXCAVATION (SPECIAL)	
LOCATION	QUANTITY
	CU. YD.
STA. 702+82 TO STA. 702+94 27' LT. TO 27' RT.	16
TOTAL	16

X2010302 - POROUS GRANULAR EMBANKMENT (SPECIAL)	
LOCATION	POROUS GRANULAR EMBANKMENT (SPECIAL)
	TON
STA. 702+88, 26.75' LT. TO 61' LT.	20
STA. 702+88, 26.75'' RT. TO 46.5' RT.	34
TOTAL	54

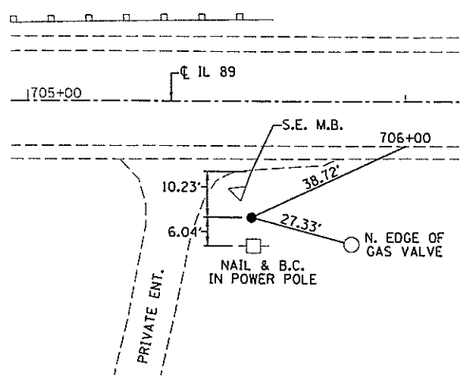
Z0001002 - GUARDRAIL AGGREGATE EROSION CONTROL	
LOCATION	GUARDRAIL AGGREGATE EROSION CONTROL
	TON
STA. 699+58 TO STA. 704+58 LT.	81
TOTAL	81

Z0013798 - CONSTRUCTION LAYOUT	
LOCATION	CONSTRUCTION LAYOUT
	LUMP UM
STA. 702+88	1
TOTAL	1

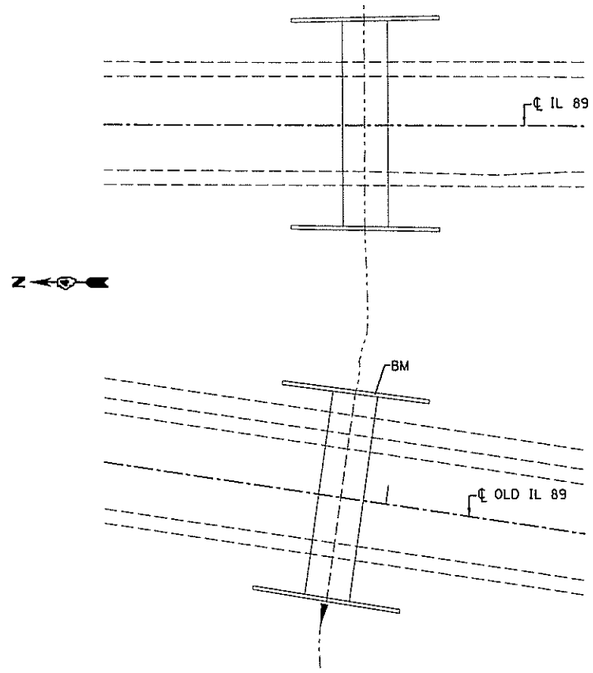
Z0023602 - GRANULAR CULVERT BACKFILL	
LOCATION	GRANULAR CULVERT BACKFILL
	CU. YD.
STA. 702+88, 30' LT. TO 48.5' LT.	26
STA. 702+88, 36' RT. TO 63' RT.	20
TOTAL	46



TIE #1
#5 REBAR WITH IDOT CAP
34.42' LT STA. 696+53.25
N 1610259.968
E 2561296.074



TIE #2
#5 REBAR WITH IDOT CAP
30.64' RT STA. 705+59.25
N 1609386.212
E 2561047.868



BENCHMARK: CHISELED "□" ON S. END OF PCC HEADWALL FOR BOX CULVERT UNDER OLD IL 89, 155' WEST OF ℄ EX IL 89
±ELEV. 625.57

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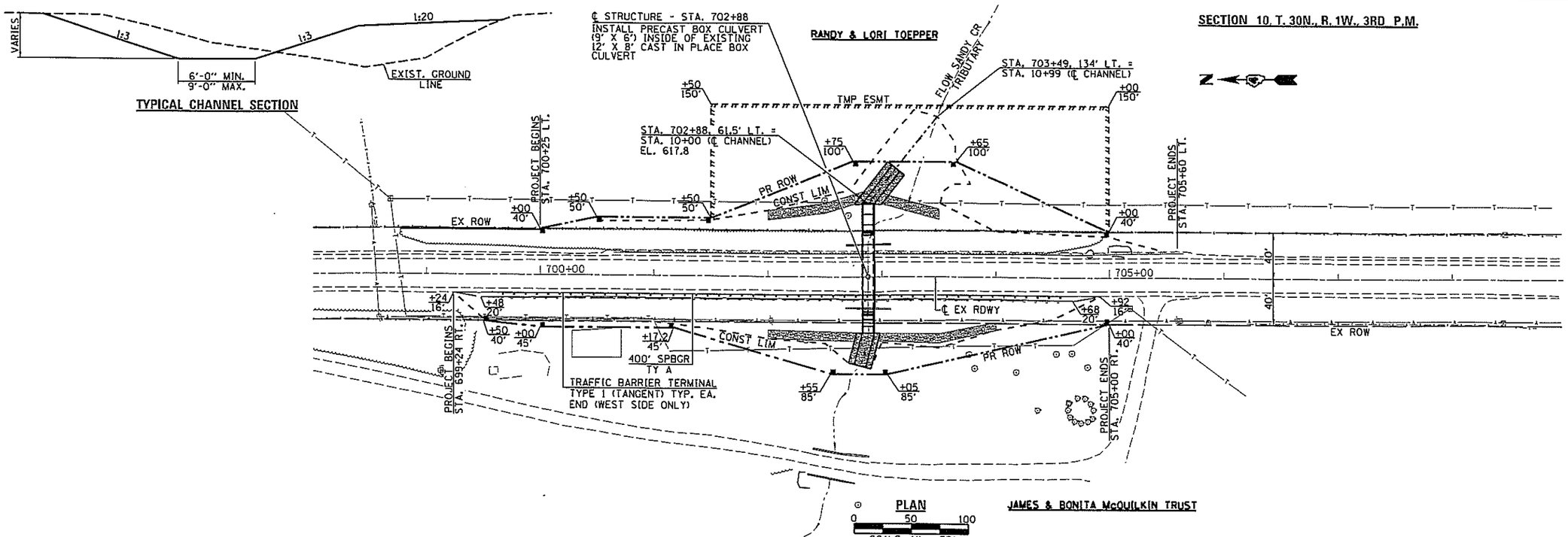
	CHECKED - ____	REVISED - ____
PLOT SCALE = ____	DRAWN - ____	REVISED - ____
PLOT DATE = ____	CHECKED - ____	REVISED - ____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TIES & BENCHMARKS

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
698	123-CR	MARSHALL	36	11
		CONTRACT NO. 68C49		
	ILLINOIS FED. AID PROJECT			



PLAN — SURVEYED, PLOTTED, ALIGNMENT CHECKED, RE. NAME CHECKED, CARD FILE NAME, NOTE BOOK, NO., BY, DATE

PROFILE — SURVEYED, PLOTTED, GRADES CHECKED, RE. NAME CHECKED, STRUCTURE NO(S)/STNS CHKD, NOTE BOOK, NO., BY, DATE

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USER NAME = $USER$	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = $SCALE$	CHECKED -	REVISED -
PLOT DATE = $DATE$	DATE -	REVISED -

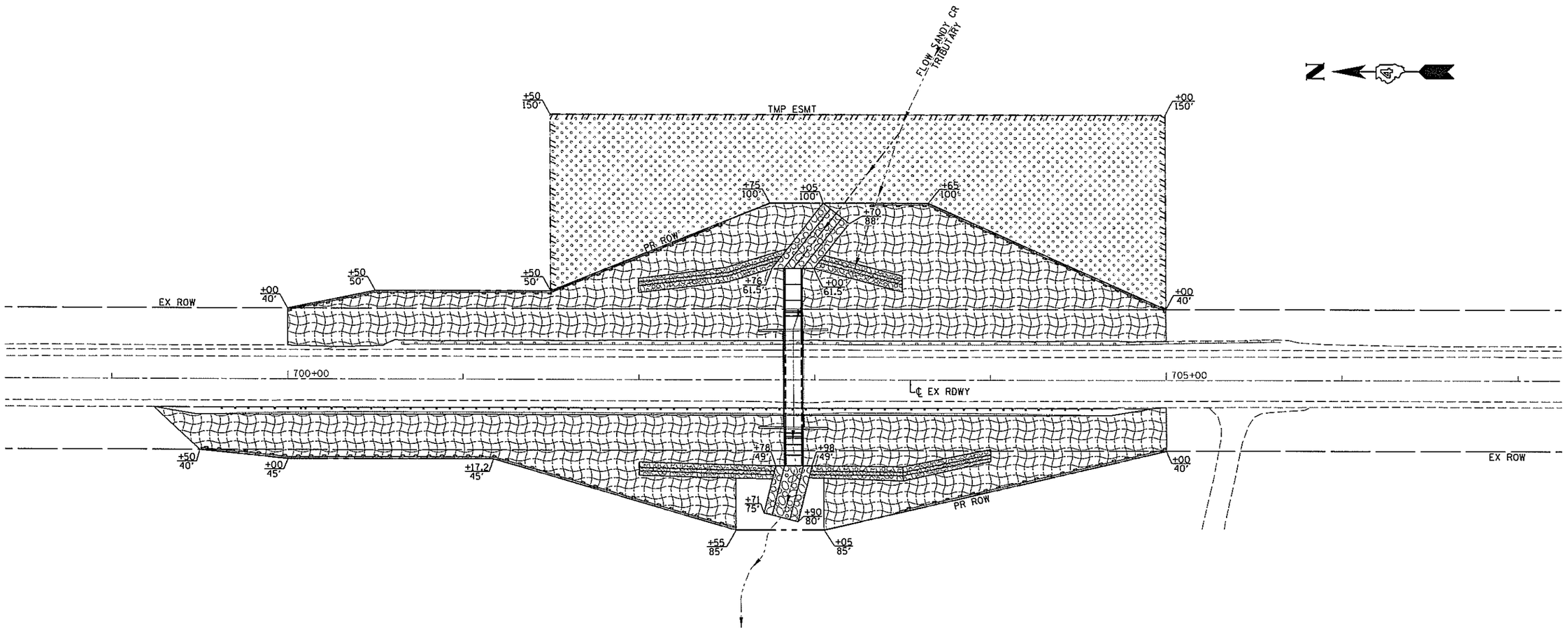
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE

SCALE: 1" = 50' | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
698	123-CR	MARSHALL	36	12
		CONTRACT NO. 68C49		
ILLINOIS FED. AID PROJECT				

SECTION 10, T. 30N., R. 1W., 3RD P.M.



PLAN
0 50 100
SCALE: 1" = 50'

LEGEND
- EROSION CONTROL BLANKET
- STONE RIPRAP CLASS A4
- STONE RIPRAP CLASS A5
- PERIMETER EROSION BARRIER
- SEEDING CLASS 2A

V&K
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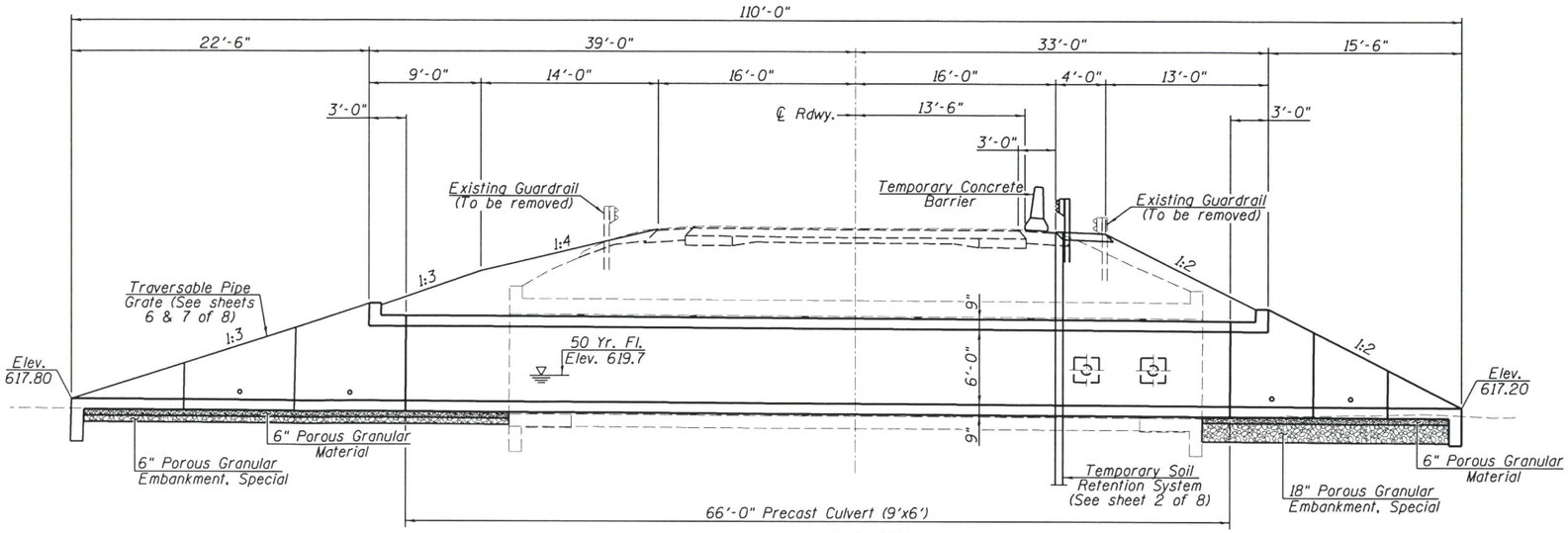
	CHECKED -	REVISED -
PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE =	CHECKED -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN

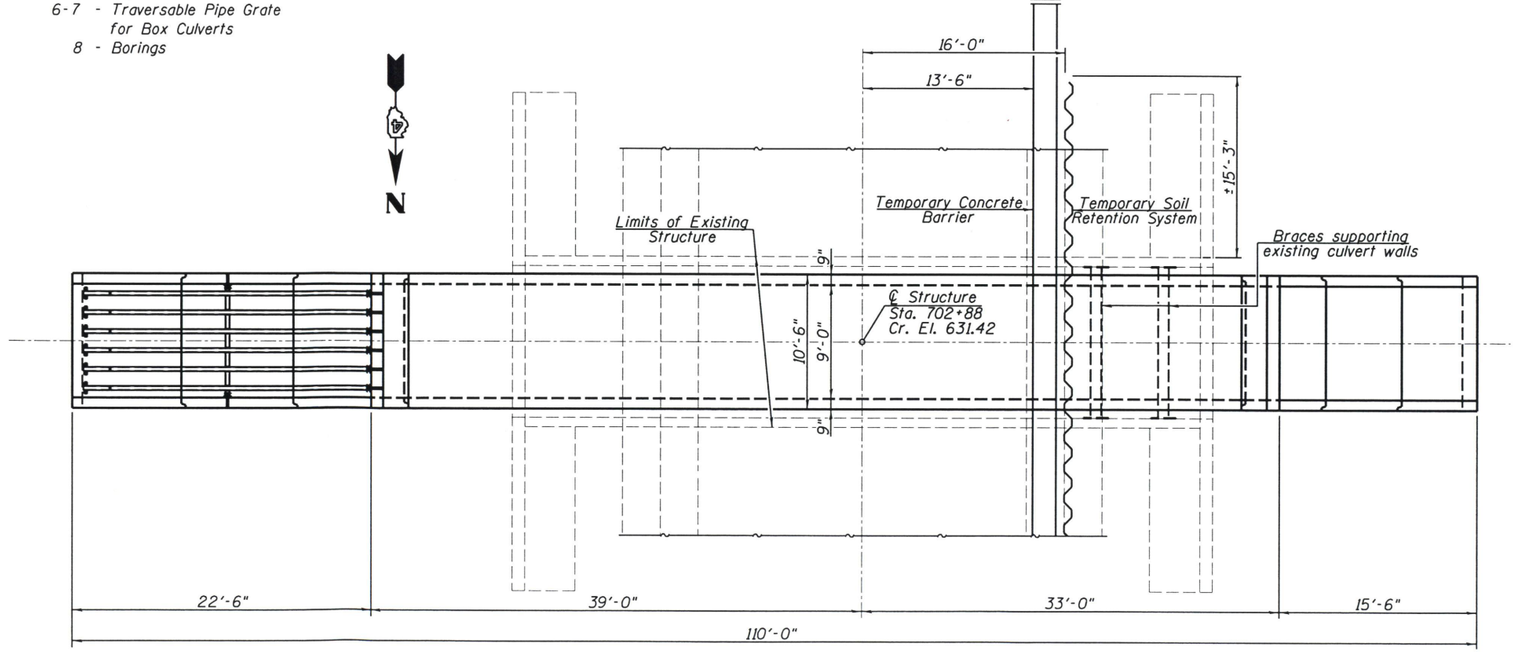
SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
698	123-CR	MARSHALL	36	13
		CONTRACT NO. 68C49		
	ILLINOIS FED. AID PROJECT			



ELEVATION
(Looking South)

INDEX OF SHEETS



PLAN

GENERAL NOTES

The design fill height for this box is 7.2 ft. This precast box culvert sections shall conform to the requirements of ASTM C 1577.

Drain holes shall be provided on exterior culvert walls for each precast box segment not placed within the existing box culvert and having a clear rise greater than 3 ft. The drain hole shall be located within ⅓ of the clear rise of the box culvert, shall not intercept the haunch, and shall conform to the requirements of Article 503.11 of the Standard Specifications.

The 6 in. thick layer of porous granular material required for the precast concrete box culvert per Art. 540.06 of the Standard Specifications shall also apply to the end sections and culvert sections outside of the existing culvert. Cost of the porous granular material will not be paid for separately but shall be included in the unit price of the work for which it is required.

Nonwoven geotextile fabric shall conform to the requirements of Art. 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard.

Precast concrete box culverts and box culvert end sections shall be backfilled with Granular Culvert Backfill below the top of the box culvert extending to a vertical plane 2 ft. from the back face of the end sections, and not closer than 2 ft. from the face of embankment.

TOTAL BILL OF MATERIAL

Item	Unit	Quantity
Stone Riprap Class A5	Sq. Yd.	155
Filter Fabric	Sq. Yd.	155
Concrete Removal	Cu. Yd.	22.8
Box Culvert End Sections, Culvert No. 1	Each	2
Precast Concrete Box Culvert (Special)	Foot	66
Traversable Pipe Grate	Foot	83
Granular Culvert Backfill	Cu. Yd.	46
Temporary Soil Retention System	Sq. Ft.	376
Porous Granular Embankment, Special	Ton	52
Channel Excavation (Special)	Cu. Yd.	16

WATERWAY INFORMATION

Drainage Area = 0.27 mi²
Exist. Low Grade Elev. 621.3 @ Sta. 702+00
Prop. Low Grade Elev. 621.3 @ Sta. 702+00

Flood	Freq. Yr.	Discharge C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	172	36.0	27.0	619.1	0.4	1.6	619.5	620.7
Design	50	297	43.2	32.4	619.7	1.2	2.6	620.9	622.3
Base	100	355	45.6	34.2	619.9	1.6	3.2	621.5	623.1
OVT(E)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
OVT(P)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max. Calc.	500	502	51.6	38.7	620.4	2.5	4.9	622.9	625.3

10 Year Outlet Velocity from Existing Structure = 5.5 fps
10 Year Outlet Velocity from Proposed Structure = 10.4 fps

Note: Work this sheet with sheets 2 & 3 of 8.

STATION 702+88.00
BUILT 20__ BY
STATE OF ILLINOIS
F.A.P. RT. 698 - SEC. 123-CR
LOADING HL-93
STR. NO. 062-2500

NAME PLATE
(See Std. 515001)

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition with 2015 & 2016 Interim Revisions.

DESIGN STRESSES

FIELD UNITS

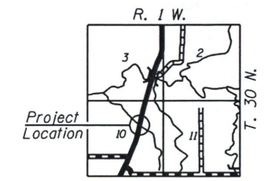
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 65,000 psi (Welded Wire Fabric)

PRECAST UNITS

f'c = 5,000 psi
fy = 60,000 psi (Reinforcement)
fy = 65,000 psi (Welded Wire Fabric)

MARK A. HENDERSON
5513
LICENSED STRUCTURAL ENGINEER
STATE OF ILLINOIS

Mark A Henderson 10/19/2018
Exp. Date: 11/30/2018



LOCATION SKETCH

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	CHECKED - MAH	REVISED - ___	
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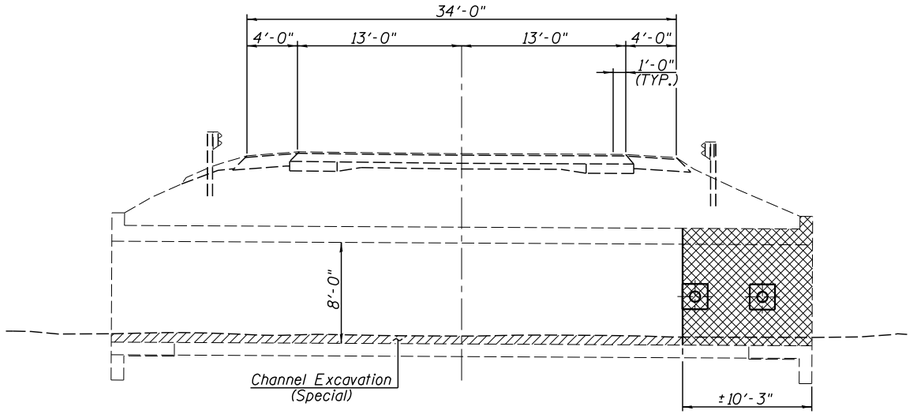
PLOT DATE = ___	CHECKED - KES	REVISED - ___	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

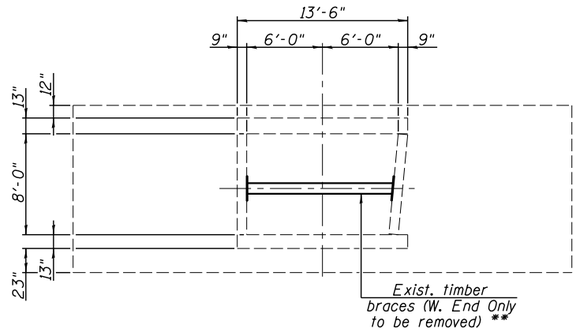
GENERAL PLAN & ELEVATION
STRUCTURE NO. 062-2500

SCALE: NONE | SHEET NO. 1 OF 8 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
698	123-CR	MARSHALL	36	14
		CONTRACT NO. 68C49		
		ILLINOIS FED. AID PROJECT		



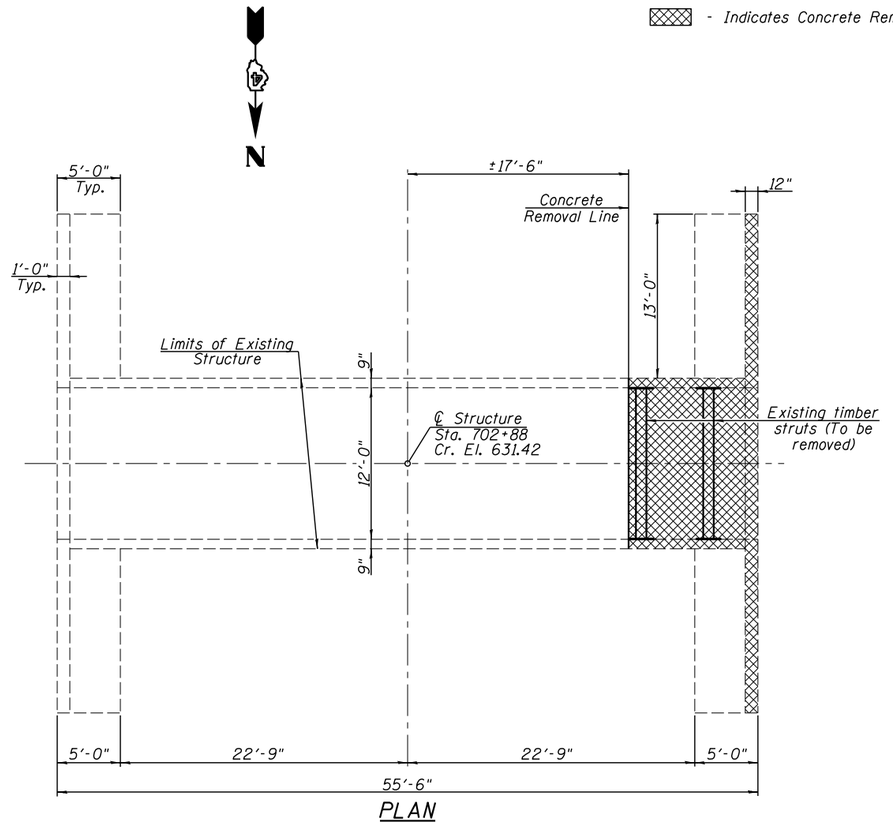
ELEVATION
(Looking South)



SECTION THRU BARREL

** Cost of removing and disposing of existing timber braces included with Concrete Removal

- Indicates Concrete Removal



PLAN

SUGGESTED SEQUENCE OF CONSTRUCTION

STAGE I

1. Install traffic control in accordance with Standard 701201 to direct traffic to the east lane.
2. Install soil retention system at location shown on plans and remove existing guardrail as necessary to access west end of existing culvert.
3. Install Temporary Concrete Barrier. Excavate earth behind soil retention system and culvert.
4. Remove unsuitable material at west end of existing culvert and replace with Porous Granular Embankment, Special as directed by the Engineer.

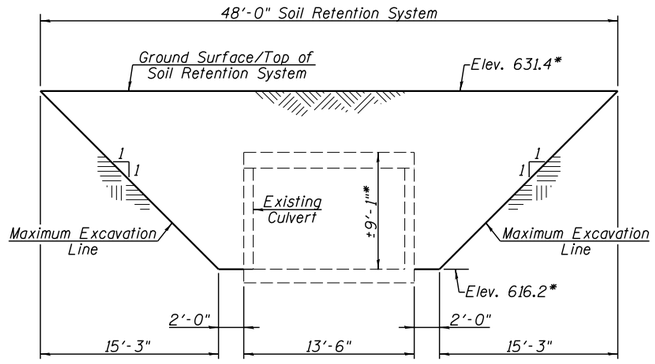
STAGE II

1. Install traffic control in accordance with Standard 701201 to direct traffic to the west lane. Remove existing guardrail and trees as necessary to access east end of culvert.
2. Remove all Channel Excavation (Special) from inside existing culvert.
3. Remove unsuitable material at east end of existing culvert and replace with Porous Granular Embankment, Special as directed by the Engineer.
4. Insert proposed 9'x6' Precast Culvert from east end and progress west.
5. As proposed box culvert nears existing timber supports, remove concrete top slab, walls and wingwalls along with timber supports and continue installing proposed box culvert.
6. Install proposed end sections on east end of culvert.
7. Remove remaining existing guardrail and construct new foreslopes. At night time or when no construction is taking place, barrels shall be placed on HMA shoulders until construction is complete on the east side.
8. Install grout in the annular space.

STAGE III

1. Install traffic control in accordance with Standard 701201 to direct traffic to the east lane.
2. Install proposed end sections at west end of culvert.
3. Remove remaining existing guardrail and construct new shoulders and foreslopes. At night time or when no construction is taking place, barrels shall be placed on HMA shoulders until all new guardrail is in place.
4. Install new guardrail.
5. Seed, mulch and fertilize.

Note: Work this sheet with sheets 1 & 3 of 8.



TEMPORARY SOIL RETENTION SYSTEM

* To be verified in field by the Engineer

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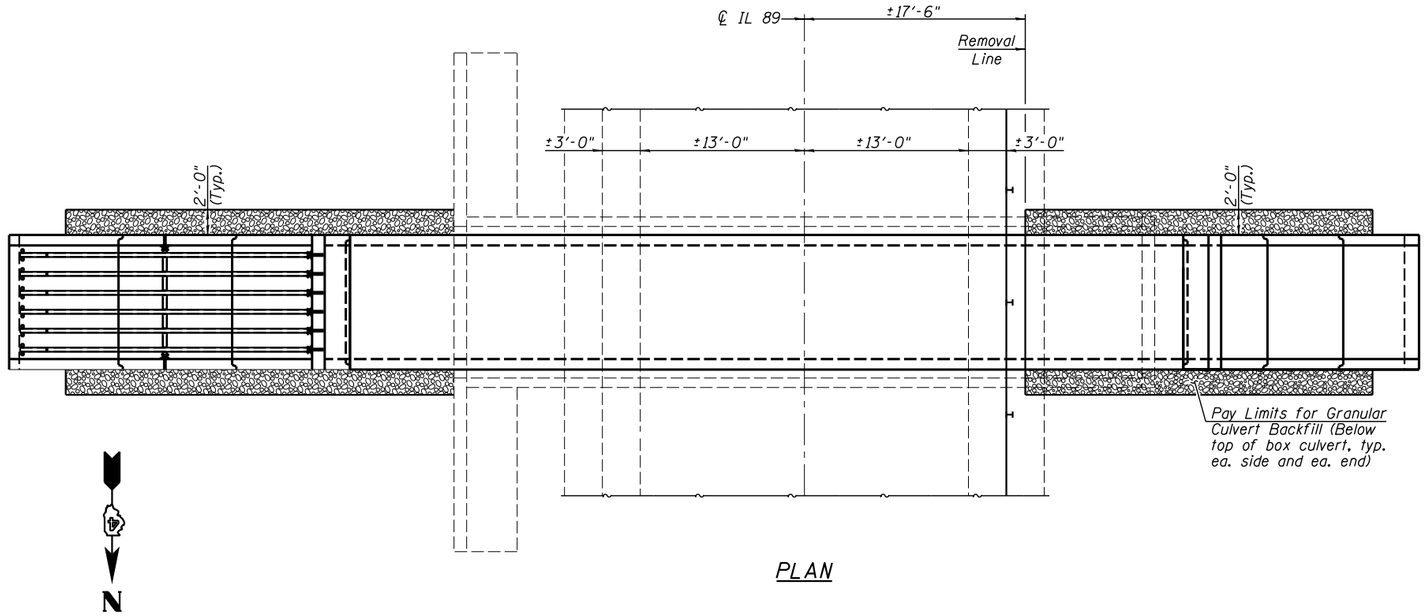
PLOT DATE = ___	CHECKED - KES	REVISED - ___

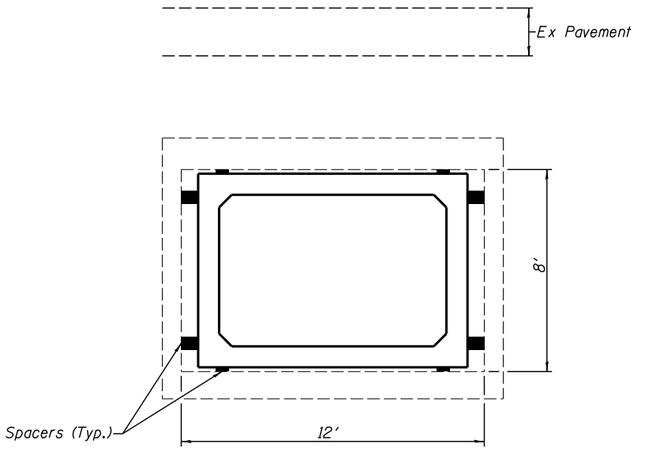
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURE REMOVAL DETAILS
STRUCTURE NO. 062-2500
SHEET NO. 2 OF 8 SHEETS

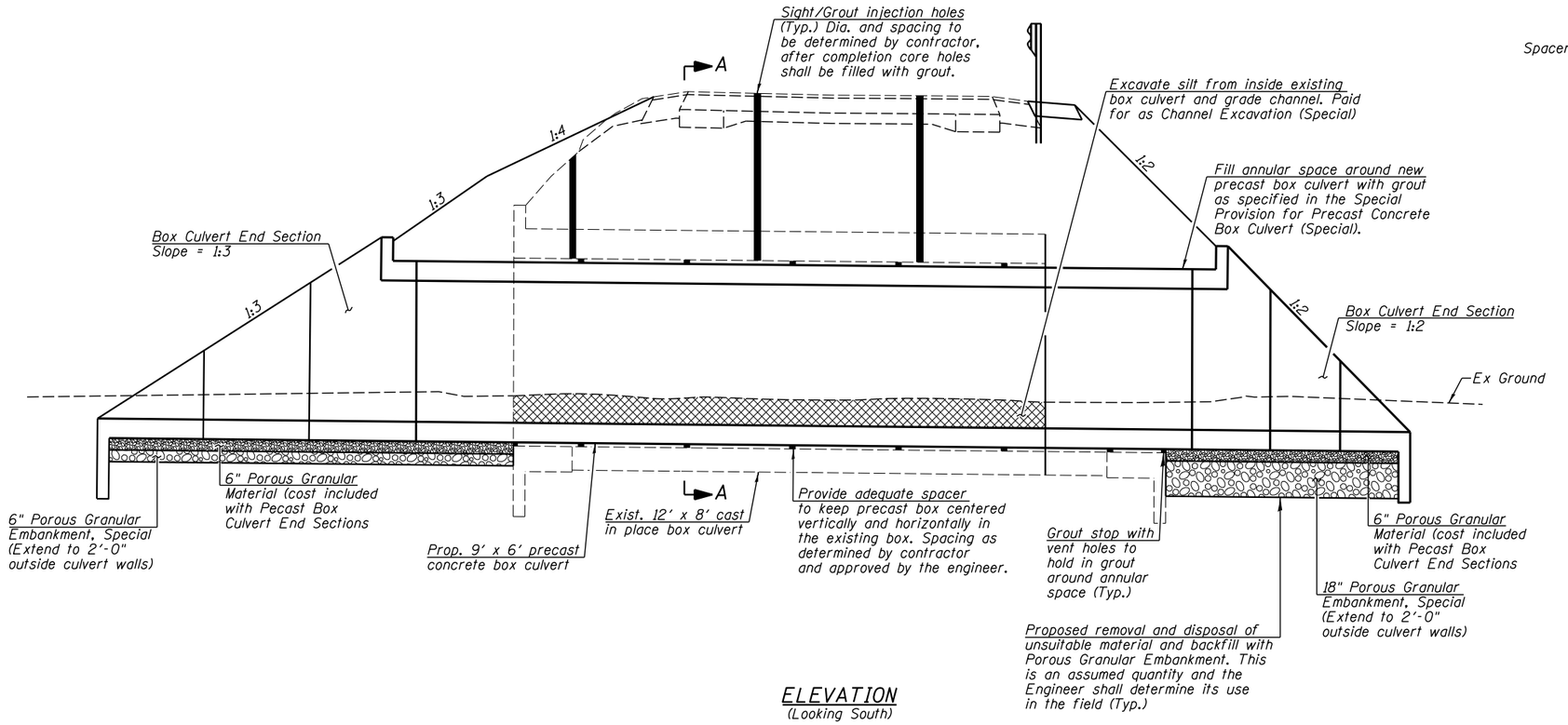
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
698	123-CR	MARSHALL	36	15
		CONTRACT NO. 68C49		
	ILLINOIS FED. AID PROJECT			



PLAN



SECTION A-A



ELEVATION
(Looking South)

Notes:
1. See Culvert Cross Sections for grading in the channel.
2. The excavation for the upstream roadside ditches will be paid for as Earth Ecavation.
3. Traversable Pipe Grate shall be installed so that the intermediate supports shall be located a minimum of 6" from the edge of a precast section joint. If required, an additional intermediate support shall be installed and paid for at the unit price for Traversable Pipe Grate.

Note: Work this sheet with sheets 1 & 2 of 8.

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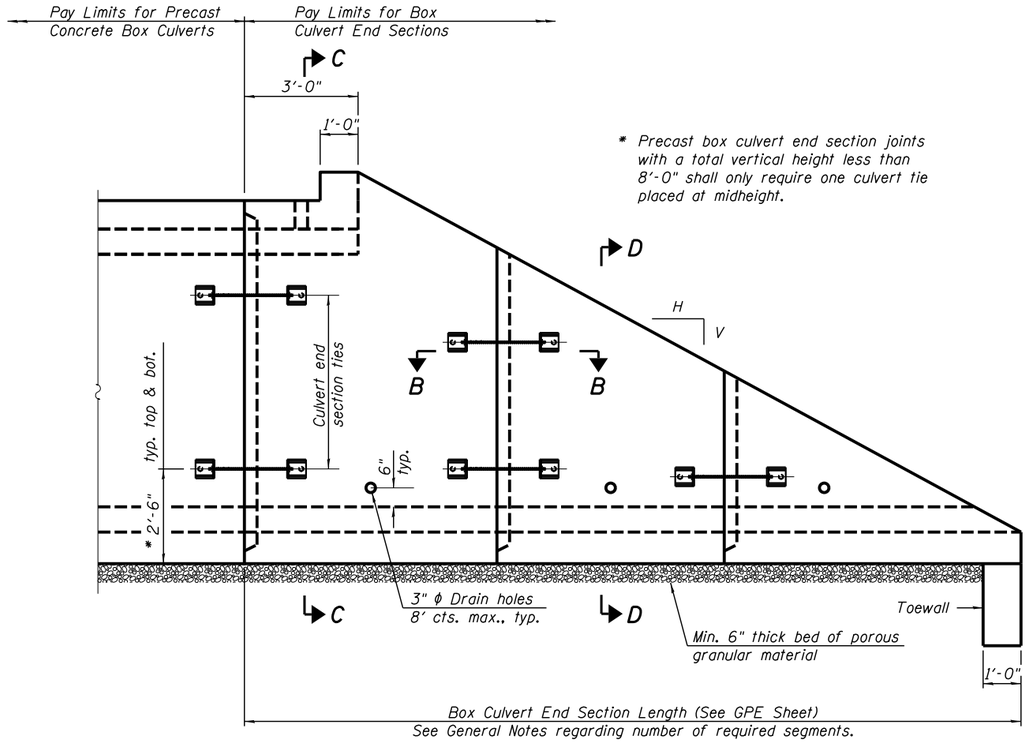
PLOT SCALE = ___	DRAWN - JRP	REVISED - ___
PLOT DATE = ___	CHECKED - KES	REVISED - ___

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

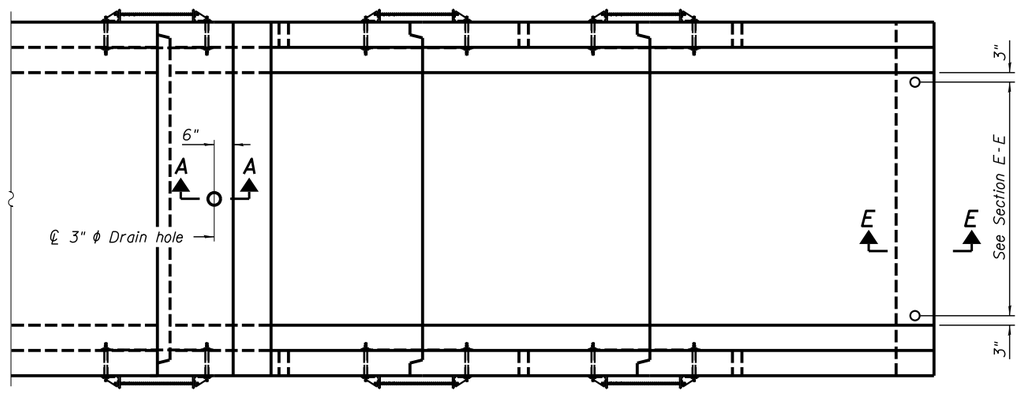
PRECAST BOX CULVERT (SPECIAL) DETAILS
STRUCTURE NO. 062-2500

SCALE: NONE | SHEET NO. 3 OF 8 SHEETS | STA. | TO STA.

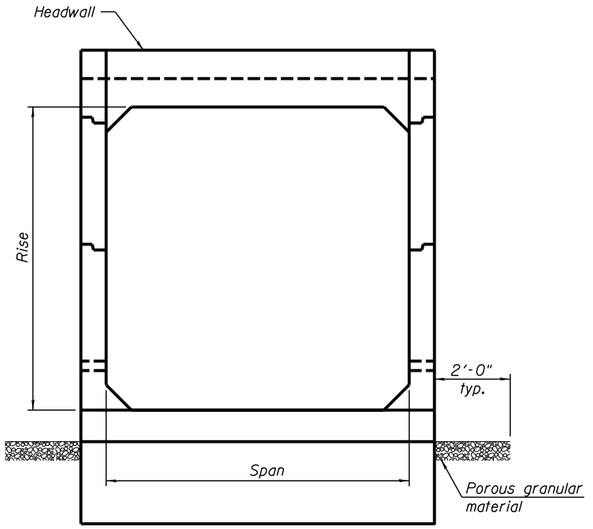
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
698	123-CR	MARSHALL	36	16
		CONTRACT NO. 68C49		
	ILLINOIS FED. AID PROJECT			



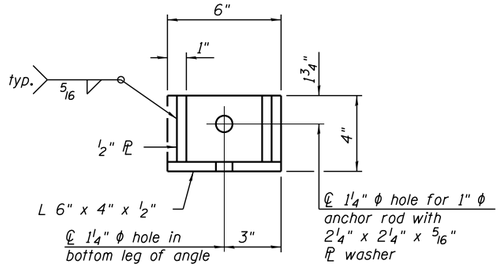
ELEVATION



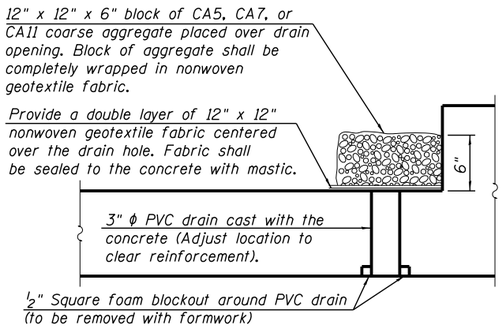
PLAN



END VIEW

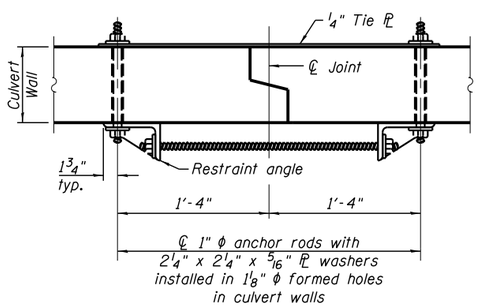


RESTRAINT ANGLE DETAIL



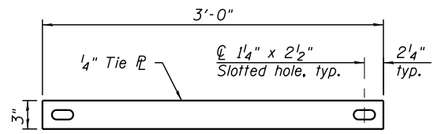
SECTION A-A

(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for the associated work.)



SECTION B-B

(Showing end section tie details)



TIE PLATE DETAIL

GENERAL NOTES

Box Culvert End Sections shall be constructed according to the requirements of Section 540 of the Standard Specifications except as modified herein. This work will be measured for payment as each, with each end of each culvert being one each. End sections will be paid for at the contract unit price per each for Box Culvert End Sections of the culvert number specified.

Typical box section dimensions, materials, and reinforcement details for Box Culvert End Sections shall be according to the requirements of ASTM C 1577 as required for the design of the portion of the culvert within the limits of Precast Concrete Box Culverts except as modified herein.

Number of segments shown in Elevation is for example only. Length and number of precast box sections required to construct Box Culvert End Sections shall be determined by the Contractor.

See General Plan & Elevation sheet for embankment slope (V:H).

1" ϕ anchor rods for the culvert ties shall conform to the requirements of ASTM F1554, Grade 105. Structural steel for tie plate and restraint angle shall conform to the requirements of Article 1006.04 of the Standard Specifications. All components of the culvert tie detail shall be galvanized according to the requirements of AASHTO M 111 or M 232 as applicable. 2 1/4" x 2 1/4" x 5/16" plate washers shall be provided under each nut required for the anchor rods. Anchor rods connecting precast sections shall be brought to a snug tight condition followed by an additional 1/2 turn on one of the nuts for anchor rods installed in the walls. Match marks shall be provided on the bolt and nut to verify relative rotation between the bolt and the nut. Holes in the walls for the culvert tie assembly may be drilled using core bits in lieu of using formed holes.

All costs associated with furnishing and installing or constructing the toewall and culvert ties will not be measured for payment but shall be included in the contract unit price for Box Culvert End Sections of the culvert number specified.

Drain holes shall conform to the requirements of Article 503.11 of the Standard Specifications unless noted otherwise.

Nonwoven geotextile fabric shall conform to the requirements of Article 1080.01. The minimum weight of the fabric shall be 6 oz. / sq. yd..

For end sections with traversable pipe grate systems, see grate detail sheet for required modifications.

SCB-TES 2-17-2017

(Sheet 1 of 2)

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Springfield, IL. Phone: (217)544-8033

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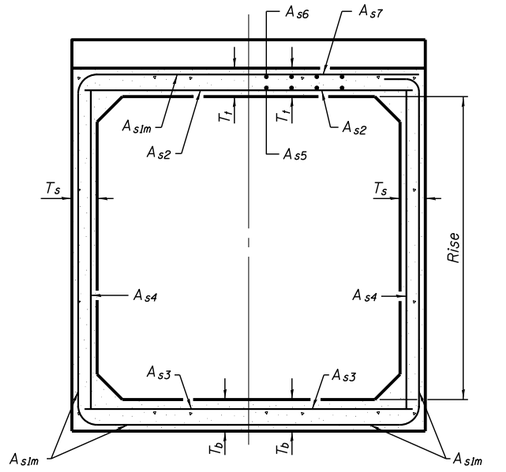
	CHECKED - MAH	REVISED - ___
PLOT SCALE = ___	DRAWN - JRP	REVISED - ___
PLOT DATE = ___	CHECKED - KES	REVISED - ___

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SINGLE CELL PRECAST BOX CULVERT END SECTIONS
STRUCTURE NO. 062-2500

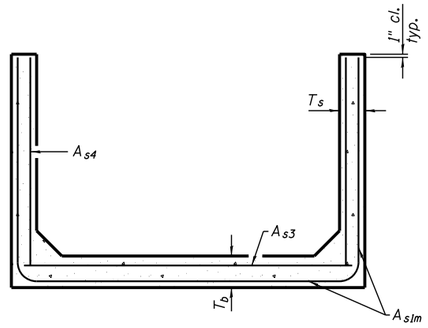
SCALE: NONE | SHEET NO. 4 OF 8 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
698	123-CR	MARSHALL	36	17
		CONTRACT NO. 68C49		
	ILLINOIS FED. AID PROJECT			

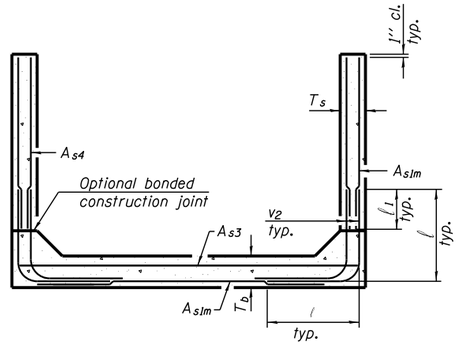


(Design Earth Cover ≥ 2 ft) (Design Earth Cover < 2 ft)

SECTION C-C



SECTION D-D



ALTERNATE SECTION D-D

A_{s1m} REINFORCEMENT

($in.^2$ / ft)

T_s (in.) \ Rise (ft)	2	3	4	5	6	7	8	9	10	11	12
4	0.19	0.17									
5	0.26	0.21	0.18								
6	0.22	0.26	0.23	0.22							
7	0.25	0.33	0.59	0.27	0.28						
8	0.40	0.35	0.43	0.39	0.36	0.34	0.40				
9	0.44	0.39	0.35	0.43	0.40	0.37	0.36	0.48			
10	0.48	0.42	0.38	0.47	0.44	0.41	0.38	0.42	0.56		
11	0.52	0.45	0.54	0.50	0.46	0.44	0.41	0.46	0.50	0.65	
12	0.55	0.49	0.58	0.54	0.50	0.48	0.45	0.46	0.46	0.61	0.75

(A_{s1m} reinforcement based upon welded wire reinforcement conforming to AASHTO M 55 or M 221).

ℓ_1 DIMENSION

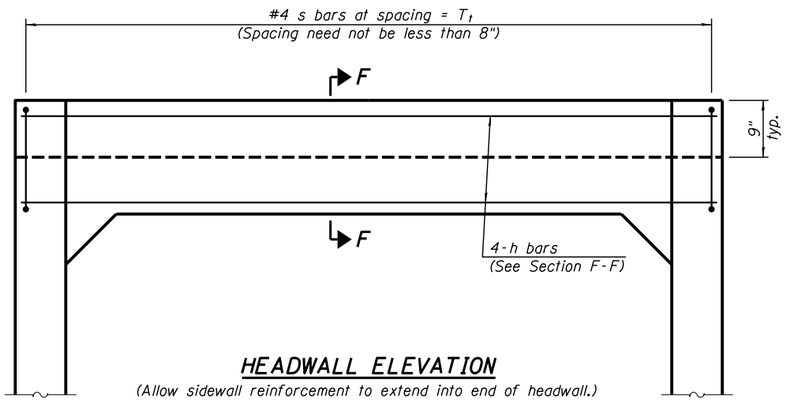
#3 bar = 2'-0"
#4 bar = 2'-8"
#5 bar = 3'-4"
#6 bar = 3'-11"

Notes:

Alternate Section D-D is provided to allow the Contractor the option of casting the bottom slab of the end section first followed by construction of the sidewalls using conventional forming methods. Shop drawings that detail slab thickness and reinforcement layout shall be submitted to the Engineer for review and approval when using Alternate Section D-D.

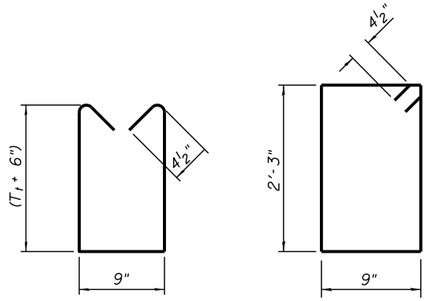
The size and spacing of the v_2 bars shall provide a minimum reinforcement area along each face of the walls ($in.^2$/ft.) equal to 1.10*(A_{s1m}). v_2 bars may consist of #3 thru #6 size reinforcement bars and the longitudinal spacing shall not exceed the lesser of the wall thickness or 8 inches.

Bonded construction joints shall be prepared according to Article 503.09 of the Standard Specifications.



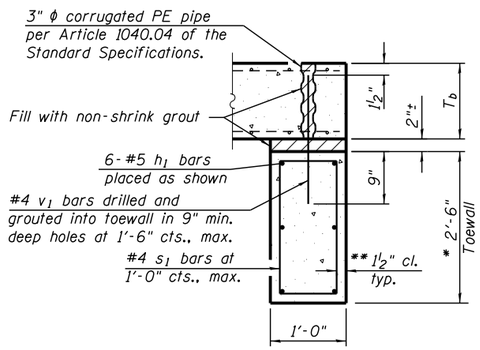
HEADWALL ELEVATION

(Allow sidewall reinforcement to extend into end of headwall.)



BAR s

BAR s_1



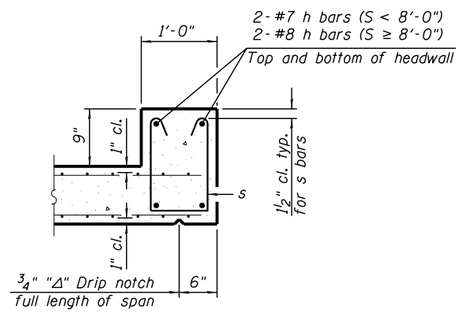
SECTION E-E

TOEWALL CONSTRUCTION SEQUENCE

1. Perform excavation and construct toewall.
2. Backfill according to the applicable paragraphs of Article 502.10 of the Standard Specifications and place bedding for precast box culvert end sections.
3. Set precast box culvert end section.
4. Drill and epoxy grout reinforcement in toewall in accordance with Section 584 of the Standard Specifications.
5. Pressure grout voids using non-shrink grout conforming to Section 1024 of the Standard Specifications.

* The Contractor may furnish a precast or cast-in-place toewall. The Contractor shall be responsible for the strength and stability of the precast toewall during handling. Additional lifting points may be required depending upon the length of the toewall or the Contractor may need to modify the design of the toewall for the proposed handling the method.

** If soil conditions permit, the sides of the toewall may be poured directly against the soil. The clear cover on the sides of the toewall shall be increased to 3" by increasing the thickness of the toewall.



SECTION F-F

SCB-TES 2-17-2017

Veenstra & Kimm, Inc.
Springfield, IL. Phone: (217)544-8033

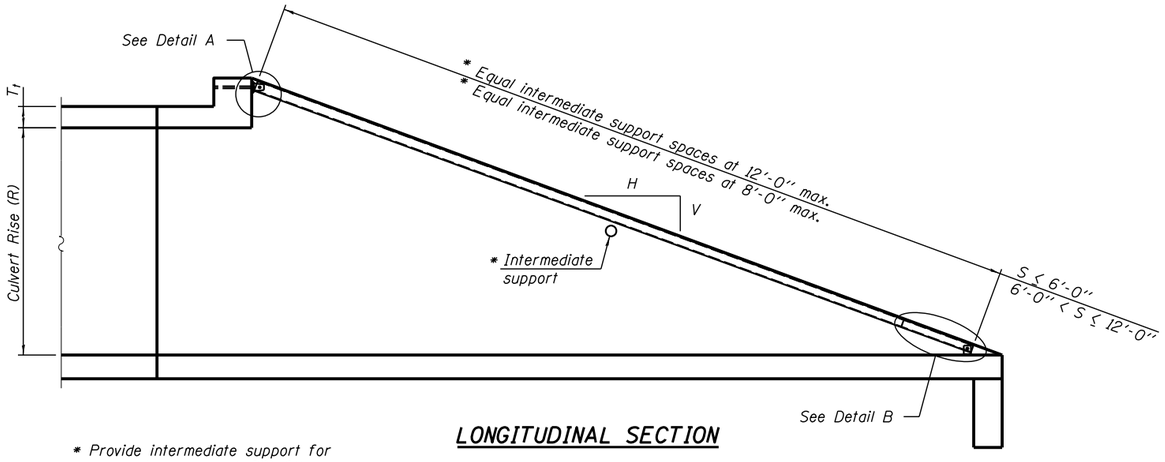
USER NAME = ___	DESIGNED - KES	REVISED - ___	
	CHECKED - MAH	REVISED - ___	
PLOT SCALE = ___	DRAWN - JRP	REVISED - ___	
PLOT DATE = ___	CHECKED - KES	REVISED - ___	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SINGLE CELL PRECAST BOX CULVERT END SECTIONS
STRUCTURE NO. 062-2500

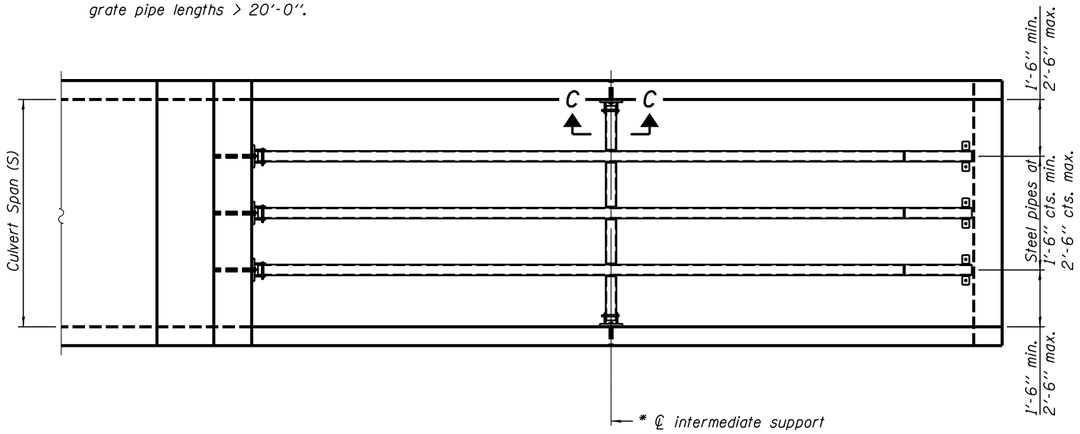
SCALE: NONE | SHEET NO. 5 OF 8 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
698	123-CR	MARSHALL	36	18
		CONTRACT NO. 68C49		
	ILLINOIS FED. AID PROJECT			

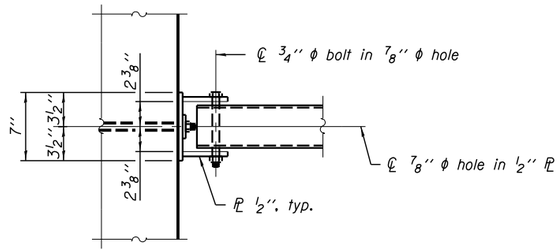


LONGITUDINAL SECTION

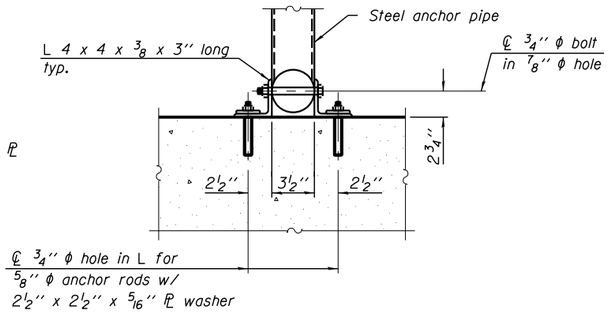
* Provide intermediate support for grate pipe lengths > 20'-0".



PLAN VIEW



VIEW A-A



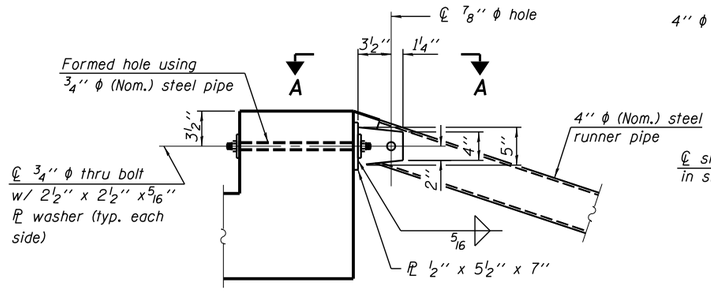
SECTION B-B

GENERAL NOTES

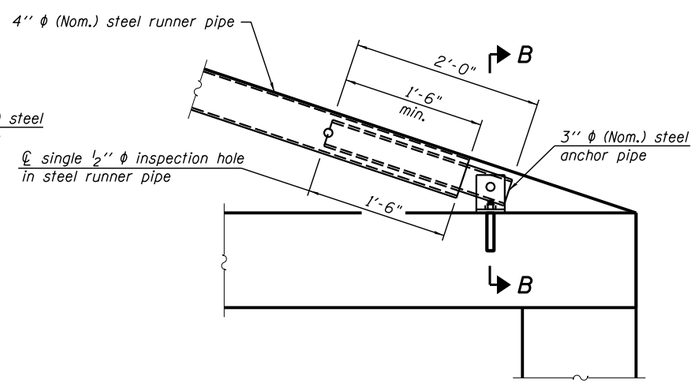
The minimum edge distance from the center of a hole to the free edge of a structural shape or plate shall be 1 1/2" unless noted otherwise.

This standard shall only be used on concrete end sections not skewed more than ±15 degrees with roadway.

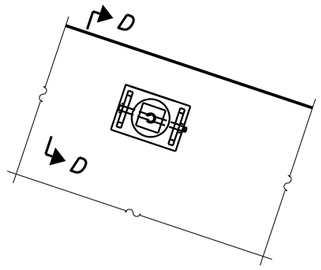
The Contractor may install the thru bolts using drilling and grouting in lieu of providing a formed hole using steel pipe. Installation shall be in accordance with Article 509.06 using a method that results in the annulus surrounding the bolt being completed filled with adhesive. The method of drilling shall not result in spalled concrete at the exit face. Epoxy grouted thru bolts shall be snug tightened followed by an additional 1/3 turn on the interior nut at final installation. Cost included with Traversable Pipe Grate.



DETAIL A

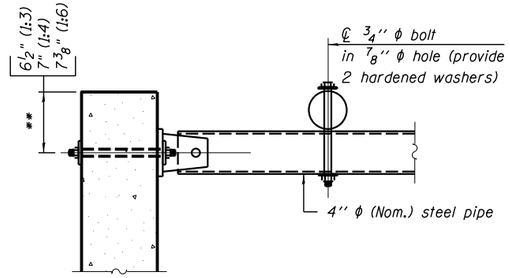


DETAIL B



VIEW C-C

(See Detail A for dimensions and details not shown.)



SECTION D-D

** Measured perpendicular to top of culvert wall. In addition, formed hole shall be located a minimum of 6" measured horizontally from any vertical joints necessary for construction of the culvert end section.

TPGBC-ZS

10-15-2016

(Sheet 1 of 2)

Veenstra & Kimm, Inc. Springfield, IL. Phone: (217)544-8033	USER NAME = ___	DESIGNED - KES	REVISED - ___
		CHECKED - MAH	REVISED - ___
	PLOT SCALE = ___	DRAWN - JRP	REVISED - ___
	PLOT DATE = ___	CHECKED - KES	REVISED - ___

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAVERSABLE PIPE GRATE FOR BOX CULVERTS
STRUCTURE NO. 062-2500

SCALE: NONE | SHEET NO. 6 OF 8 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
698	123-CR	MARSHALL	36	19
		CONTRACT NO. 68C49		
	ILLINOIS FED. AID PROJECT			

PIPE-GRATE SCHEDULE FOR BOX CULVERT END SECTIONS

Precast Box Culvert Dimensions			Slope of End Section								
			1:3			1:4			1:6		
S (ft)	R (ft)	T_1 (in)	Main Pipe No. / Length	Int. Support No. / Length	Total Length of Pipe	Main Pipe No. / Length	Int. Support No. / Length	Total Length of Pipe	Main Pipe No. / Length	Int. Support No. / Length	Total Length of Pipe
4	2	7.5	1 @ 8'-10"	N/A	8'-10"	1 @ 11'-7"	N/A	11'-7"	1 @ 17'-2"	N/A	17'-2"
4	2	5	1 @ 8'-2"	N/A	8'-2"	1 @ 10'-8"	N/A	10'-8"	1 @ 15'-11"	N/A	15'-11"
4	3	7.5	1 @ 12'-0"	N/A	12'-0"	1 @ 15'-8"	N/A	15'-8"	1 @ 23'-3"	1 @ 3'-7"	26'-10"
4	3	5	1 @ 11'-4"	N/A	11'-4"	1 @ 14'-10"	N/A	14'-10"	1 @ 22'-0"	1 @ 3'-7"	25'-7"
4	4	7.5	1 @ 15'-2"	N/A	15'-2"	1 @ 19'-10"	1 @ 3'-7"	23'-5"	1 @ 29'-4"	2 @ 3'-7"	36'-6"
4	4	5	1 @ 14'-6"	N/A	14'-6"	1 @ 18'-11"	N/A	18'-11"	1 @ 28'-1"	2 @ 3'-7"	35'-3"
5	2	8	1 @ 8'-11"	N/A	8'-11"	1 @ 11'-9"	N/A	11'-9"	1 @ 17'-5"	N/A	17'-5"
5	2	6	1 @ 8'-5"	N/A	8'-5"	1 @ 11'-1"	N/A	11'-1"	1 @ 16'-5"	N/A	16'-5"
5	3	8	1 @ 12'-1"	N/A	12'-1"	1 @ 15'-10"	N/A	15'-10"	1 @ 23'-6"	1 @ 4'-7"	28'-1"
5	3	6	1 @ 11'-7"	N/A	11'-7"	1 @ 15'-2"	N/A	15'-2"	1 @ 22'-6"	1 @ 4'-7"	27'-1"
5	4	8	1 @ 15'-3"	N/A	15'-3"	1 @ 20'-0"	1 @ 4'-7"	24'-7"	1 @ 29'-7"	2 @ 4'-7"	38'-9"
5	4	6	1 @ 14'-9"	N/A	14'-9"	1 @ 19'-3"	N/A	19'-3"	1 @ 28'-7"	2 @ 4'-7"	37'-9"
5	5	8	1 @ 18'-5"	N/A	18'-5"	1 @ 24'-1"	2 @ 4'-7"	33'-3"	1 @ 35'-8"	3 @ 4'-7"	49'-5"
5	5	6	1 @ 17'-11"	N/A	17'-11"	1 @ 23'-5"	1 @ 4'-7"	28'-0"	1 @ 34'-8"	2 @ 4'-7"	43'-10"
6	2	8	2 @ 8'-11"	N/A	17'-10"	2 @ 11'-9"	N/A	23'-6"	2 @ 17'-5"	N/A	34'-10"
6	2	7	2 @ 8'-8"	N/A	17'-4"	2 @ 11'-5"	N/A	22'-10"	2 @ 16'-11"	N/A	33'-10"
6	3	8	2 @ 12'-1"	N/A	24'-2"	2 @ 15'-10"	N/A	31'-8"	2 @ 23'-6"	1 @ 5'-7"	52'-7"
6	3	7	2 @ 11'-10"	N/A	23'-8"	2 @ 15'-6"	N/A	31'-0"	2 @ 23'-0"	1 @ 5'-7"	51'-7"
6	4	8	2 @ 15'-3"	N/A	30'-6"	2 @ 20'-0"	1 @ 5'-7"	45'-7"	2 @ 29'-7"	2 @ 5'-7"	70'-4"
6	4	7	2 @ 15'-0"	N/A	30'-0"	2 @ 19'-8"	1 @ 5'-7"	44'-11"	2 @ 29'-1"	2 @ 5'-7"	69'-4"
6	5	8	2 @ 18'-5"	N/A	36'-10"	2 @ 24'-1"	2 @ 5'-7"	59'-4"	2 @ 35'-8"	3 @ 5'-7"	88'-1"
6	5	7	2 @ 18'-2"	N/A	36'-4"	2 @ 23'-9"	2 @ 5'-7"	58'-8"	2 @ 35'-2"	2 @ 5'-7"	81'-6"
6	6	8	2 @ 21'-7"	1 @ 5'-7"	48'-9"	2 @ 28'-3"	2 @ 5'-7"	67'-8"	2 @ 41'-9"	3 @ 5'-7"	100'-3"
6	6	7	2 @ 21'-4"	1 @ 5'-7"	48'-3"	2 @ 27'-11"	2 @ 5'-7"	67'-0"	2 @ 41'-3"	3 @ 5'-7"	99'-3"
7	2	8	2 @ 8'-11"	N/A	17'-10"	2 @ 11'-9"	N/A	23'-6"	2 @ 17'-5"	N/A	34'-10"
7	3	8	2 @ 12'-1"	N/A	24'-2"	2 @ 15'-10"	N/A	31'-8"	2 @ 23'-6"	2 @ 6'-7"	60'-2"
7	4	8	2 @ 15'-3"	N/A	30'-6"	2 @ 20'-0"	2 @ 6'-7"	53'-2"	2 @ 29'-7"	3 @ 6'-7"	78'-11"
7	5	8	2 @ 18'-5"	N/A	36'-10"	2 @ 24'-1"	3 @ 6'-7"	67'-11"	2 @ 35'-8"	4 @ 6'-7"	97'-8"
7	6	8	2 @ 21'-7"	2 @ 6'-7"	56'-4"	2 @ 28'-3"	3 @ 6'-7"	76'-3"	2 @ 41'-9"	5 @ 6'-7"	116'-5"
7	7	8	2 @ 24'-9"	3 @ 6'-7"	69'-3"	2 @ 32'-4"	4 @ 6'-7"	91'-0"	2 @ 47'-10"	6 @ 6'-7"	135'-2"
8	2	8	3 @ 8'-11"	N/A	26'-9"	3 @ 11'-9"	N/A	35'-3"	3 @ 17'-5"	N/A	52'-3"
8	3	8	3 @ 12'-1"	N/A	36'-3"	3 @ 15'-10"	N/A	47'-6"	3 @ 23'-6"	2 @ 7'-7"	85'-8"
8	4	8	3 @ 15'-3"	N/A	45'-9"	3 @ 20'-0"	2 @ 7'-7"	75'-2"	3 @ 29'-7"	3 @ 7'-7"	111'-6"
8	5	8	3 @ 18'-5"	N/A	55'-3"	3 @ 24'-1"	3 @ 7'-7"	95'-0"	3 @ 35'-8"	4 @ 7'-7"	137'-4"
8	6	8	3 @ 21'-7"	2 @ 7'-7"	79'-11"	3 @ 28'-3"	3 @ 7'-7"	107'-6"	3 @ 41'-9"	5 @ 7'-7"	163'-2"
8	7	8	3 @ 24'-9"	3 @ 7'-7"	97'-0"	3 @ 32'-4"	4 @ 7'-7"	127'-4"	3 @ 47'-10"	6 @ 7'-7"	189'-0"
8	8	8	3 @ 27'-11"	3 @ 7'-7"	106'-6"	3 @ 36'-6"	4 @ 7'-7"	139'-10"	3 @ 53'-11"	6 @ 7'-7"	207'-3"
9	2	9	3 @ 9'-3"	N/A	27'-9"	3 @ 12'-1"	N/A	36'-3"	3 @ 17'-11"	N/A	53'-9"
9	3	9	3 @ 12'-4"	N/A	37'-0"	3 @ 16'-2"	N/A	48'-6"	3 @ 24'-0"	3 @ 8'-7"	97'-9"
9	4	9	3 @ 15'-6"	N/A	46'-6"	3 @ 20'-4"	2 @ 8'-7"	78'-2"	3 @ 30'-1"	3 @ 8'-7"	116'-0"
9	5	9	3 @ 18'-8"	N/A	56'-0"	3 @ 24'-5"	3 @ 8'-7"	99'-0"	3 @ 36'-2"	4 @ 8'-7"	142'-10"
9	6	9	3 @ 21'-10"	2 @ 8'-7"	82'-8"	3 @ 28'-7"	3 @ 8'-7"	111'-6"	3 @ 42'-3"	5 @ 8'-7"	169'-8"
9	7	9	3 @ 25'-0"	3 @ 8'-7"	100'-9"	3 @ 32'-8"	4 @ 8'-7"	132'-4"	3 @ 48'-4"	6 @ 8'-7"	196'-6"
9	8	9	3 @ 28'-2"	3 @ 8'-7"	110'-3"	3 @ 36'-10"	4 @ 8'-7"	144'-10"	3 @ 54'-5"	6 @ 8'-7"	214'-9"
9	9	9	3 @ 31'-4"	3 @ 8'-7"	119'-9"	3 @ 40'-11"	5 @ 8'-7"	165'-8"	3 @ 60'-6"	7 @ 8'-7"	241'-7"
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10	3	10	3 @ 12'-8"	N/A	38'-0"	3 @ 16'-6"	N/A	49'-6"	3 @ 24'-6"	3 @ 9'-7"	102'-3"
10	4	10	3 @ 15'-10"	N/A	47'-6"	3 @ 20'-8"	2 @ 9'-7"	81'-2"	3 @ 30'-7"	3 @ 9'-7"	120'-6"
10	5	10	3 @ 19'-0"	N/A	57'-0"	3 @ 24'-9"	3 @ 9'-7"	103'-0"	3 @ 36'-8"	4 @ 9'-7"	148'-4"
10	6	10	3 @ 22'-1"	2 @ 9'-7"	85'-5"	3 @ 28'-11"	3 @ 9'-7"	115'-6"	3 @ 42'-9"	5 @ 9'-7"	176'-2"
10	7	10	3 @ 25'-3"	3 @ 9'-7"	104'-6"	3 @ 33'-0"	4 @ 9'-7"	137'-4"	3 @ 48'-10"	6 @ 9'-7"	204'-0"
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10	9	10	3 @ 31'-7"	4 @ 9'-7"	133'-1"	3 @ 41'-3"	5 @ 9'-7"	171'-8"	3 @ 61'-0"	7 @ 9'-7"	250'-1"
10	10	10	3 @ 34'-9"	4 @ 9'-7"	142'-7"	3 @ 45'-5"	5 @ 9'-7"	184'-2"	3 @ 67'-1"	8 @ 9'-7"	277'-11"
11	2	11	4 @ 9'-9"	N/A	39'-0"	4 @ 12'-9"	N/A	51'-0"	4 @ 18'-11"	N/A	75'-8"
11	3	11	4 @ 12'-11"	N/A	51'-8"	4 @ 16'-11"	N/A	67'-8"	4 @ 25'-0"	3 @ 10'-7"	131'-9"
11	4	11	4 @ 16'-1"	N/A	64'-4"	4 @ 21'-0"	2 @ 10'-7"	105'-2"	4 @ 31'-1"	3 @ 10'-7"	156'-1"
11	6	11	4 @ 22'-5"	2 @ 10'-7"	110'-10"	4 @ 29'-3"	3 @ 10'-7"	148'-9"	4 @ 43'-3"	5 @ 10'-7"	225'-11"
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11	10	11	4 @ 35'-0"	4 @ 10'-7"	182'-4"	4 @ 45'-9"	5 @ 10'-7"	235'-11"	4 @ 67'-7"	8 @ 10'-7"	355'-0"
11	11	11	4 @ 38'-2"	4 @ 10'-7"	195'-0"	4 @ 49'-10"	6 @ 10'-7"	262'-10"	4 @ 73'-8"	9 @ 10'-7"	389'-11"
12	2	12	4 @ 10'-0"	N/A	40'-0"	4 @ 13'-1"	N/A	52'-4"	4 @ 19'-5"	N/A	77'-8"
12	3	12	4 @ 13'-2"	N/A	52'-8"	4 @ 17'-3"	N/A	69'-0"	4 @ 25'-6"	3 @ 11'-7"	136'-9"
12	4	12	4 @ 16'-4"	N/A	65'-4"	4 @ 21'-4"	2 @ 11'-7"	108'-6"	4 @ 31'-7"	4 @ 11'-7"	172'-8"
12	6	12	4 @ 22'-8"	2 @ 11'-7"	113'-10"	4 @ 29'-7"	3 @ 11'-7"	153'-1"	4 @ 43'-9"	5 @ 11'-7"	232'-11"
12	8	12	4 @ 29'-0"	3 @ 11'-7"	150'-9"	4 @ 37'-10"	4 @ 11'-7"	197'-8"	4 @ 55'-11"	7 @ 11'-7"	304'-9"
12	10	12	4 @ 35'-4"	4 @ 11'-7"	187'-8"	4 @ 46'-1"	5 @ 11'-7"	242'-3"	4 @ 68'-1"	8 @ 11'-7"	365'-0"
12	12	12	4 @ 41'-8"	5 @ 11'-7"	224'-7"	4 @ 54'-4"	6 @ 11'-7"	286'-10"	4 @ 80'-3"	10 @ 11'-7"	436'-10"

TPGBC-ZS

10-15-2016

(Sheet 2 of 2)

Veenstra & Kimm, Inc.
Springfield, IL. Phone: (217)544-8033

USER NAME = ___	DESIGNED - KES	REVISED - ___
	CHECKED - MAH	REVISED - ___
PLOT SCALE = ___	DRAWN - JRP	REVISED - ___
PLOT DATE = ___	CHECKED - KES	REVISED - ___

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAVERSABLE PIPE GRATE FOR BOX CULVERTS
STRUCTURE NO. 062-2500

SCALE: NONE | SHEET NO. 7 OF 8 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
698	123-CR	MARSHALL	36	20
		CONTRACT NO. 68C49		
	ILLINOIS	FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
Terracon

SOIL BORING LOG

Date 1/14/16

ROUTE FAP 698 (IL 89) **DESCRIPTION** Structure Boring at Culvert under IL 89 **LOGGED BY** ED

SECTION 123-CR **LOCATION** IL 89 2.6 miles S of IL 18, **SEC.** , **TWP.** , **RNG.** ,
Latitude 41-04'-56" N, **Longitude** 89-12'-25" W

COUNTY Marshall **DRILLING METHOD** Hollow Stem Auger **HAMMER TYPE** AUTO SPT Hammer

STRUCT. NO. 062-1002
Station 702+88

BORING NO. B-1
Station 702+88
Offset 15.0 ft RT
Ground Surface Elev. 630 (est) ft

Surface Water Elev. ____ ft
Stream Bed Elev. ____ ft

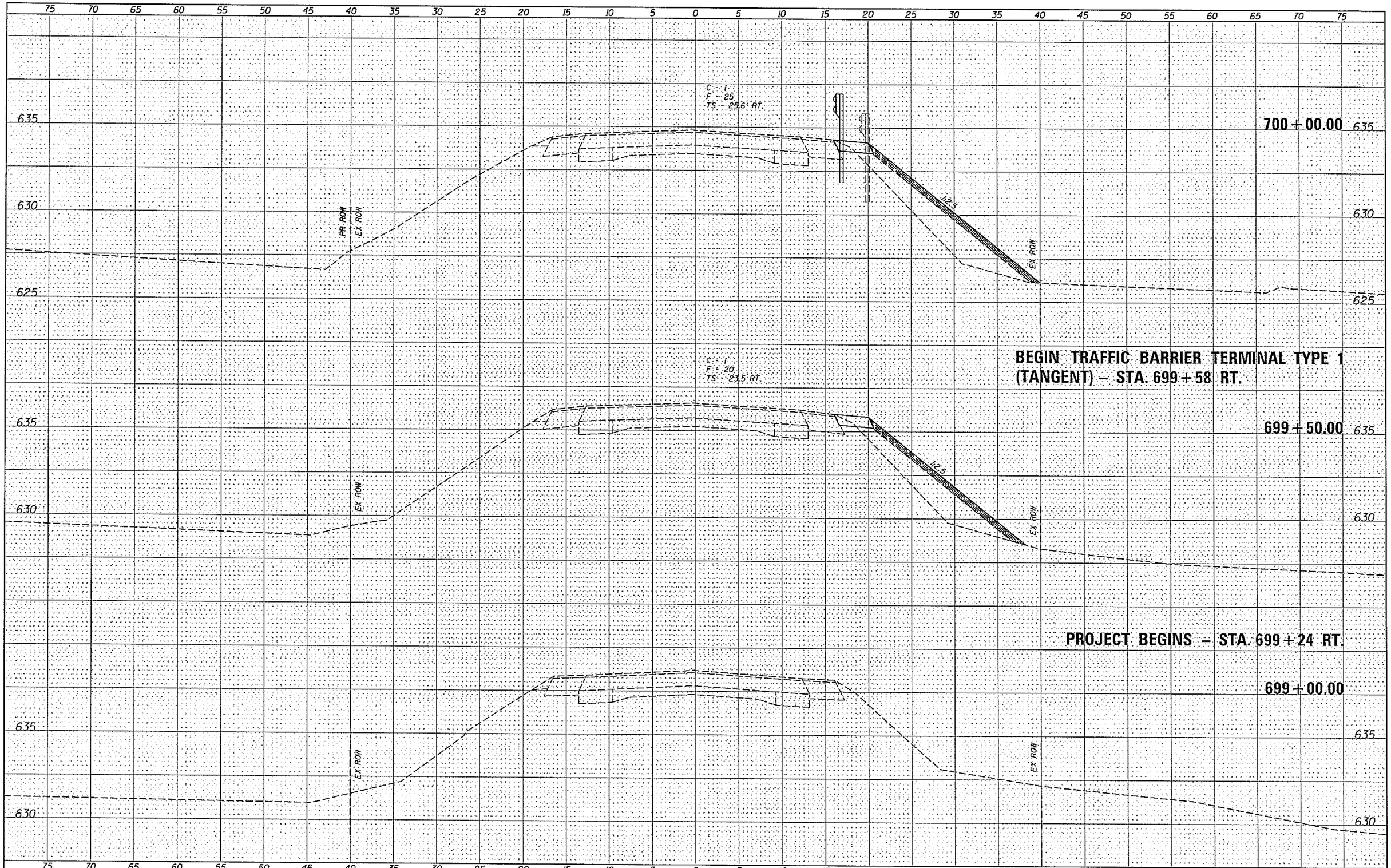
Groundwater Elev.:
First Encounter ____ ft
Upon Completion ____ ft
After ____ **Hrs.** ____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Material
	4			ASPHALT, approximately 12"
	4	1.1		
	5	B	21	SAND AND GRAVEL (fill-base), Approximately 8"
				Soft to Medium Stiff Brown, Moist CLAY LOAM (fill)
	3			
	3	0.5	19	
-5	3	P		
	2			
	1	0.5	14	
	3	P		
	2			Stiff Black to Dark Gray, Moist CLAY (buried topsoil)
	3	2.3	24	
-10	6	B		Dark Gray to Brown and Gray Medium Stiff to Very Stiff, Moist CLAY
	2			
	2	1.0	24	
	4	B		
	2			
	3	3.3	14	
-15	5	B		
	5			Hard Gray, Most, CLAY
	7	4.7	9	
	7	S		
	5			
	7	4.5	9	
-20	13	P		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Material
				Hard Gray, Moist, CLAY *(continued)*
	7			Sample @ 21' occasional sand seam
	13	4.5	9	
	18	S		
	14			
	26	5.2	7	
-25	50/5"	S		
	6			
	12	5.0	11	
	25	S		
	12			
	31	4.5	12	
-30	45	P		
				End of Boring
-35				
-40				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)



FINAL SURVEY — NOTE BOOK — NO. — BY — DATE
SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED

ORIGINAL SURVEY — NOTE BOOK — NO. — BY — DATE
SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED

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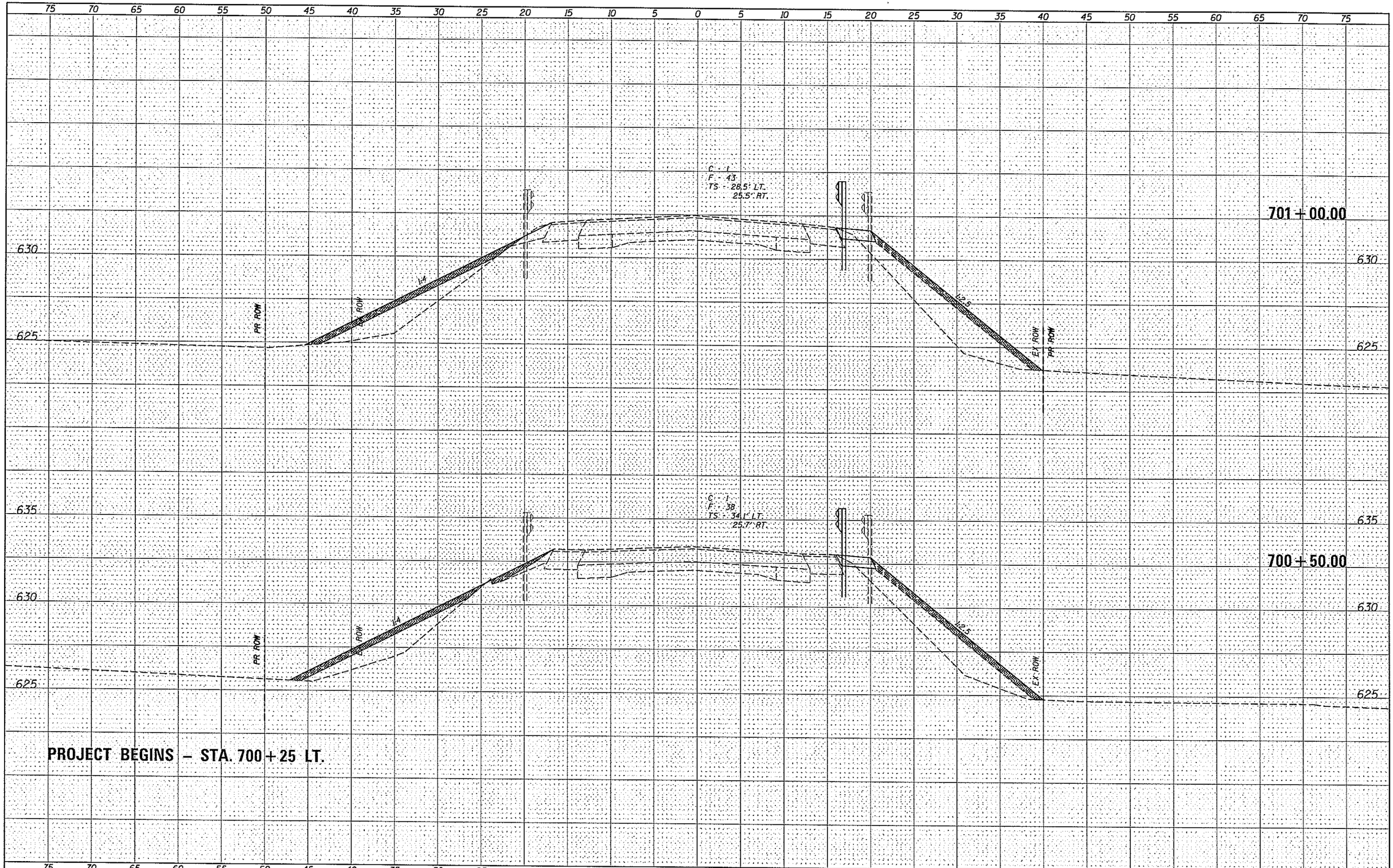
USER NAME = $USER$	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = $SCALE$	CHECKED -	REVISED -	
PLOT DATE = $DATE$	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: | SHEET NO. 1 OF 7 SHEETS | STA. 699+00.00 TO STA. 700+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
698	123-CR	MARSHALL	36	22
		CONTRACT NO. 68C49		
	ILLINOIS FED. AID PROJECT			



FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS CHECKED — BY — DATE

Veenstra & Kimm, Inc.
Springfield, IL Phone: (217)544-8033

USER NAME = $USER$	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = $SCALE$	CHECKED -	REVISED -
PLOT DATE = $DATE$	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: | SHEET NO. 2 OF 7 SHEETS | STA. 700+50.00 | TO STA. 701+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
698	123-CR	MARSHALL	36	23
		CONTRACT NO. 68C49		
ILLINOIS FED. AID PROJECT				

FINAL SURVEY	NOTE BOOK	NO.	SURVEYED	PLOTTED	TEMPLATE	AREAS	AREAS CHECKED	BY	DATE

ORIGINAL SURVEY	NOTE BOOK	NO.	SURVEYED	PLOTTED	TEMPLATE	AREAS	AREAS CHECKED	BY	DATE

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

630
625
620

ESMT. 150'
PR ROW
EX ROW
1:4
1:3

EL. 622.00
RIPRAP DITCH - 8.7 SF

C - 6
F - 100
TS - 36.1' LT.
31.9' RT.

EL. 620.75
RIPRAP DITCH - 8.3 SF

702+00.00

BEGIN STONE RIPRAP DITCH, CLASS A4 – STA. 702+00 LT. & RT.

C - 1
F - 72
TS - 32.1' LT.
31.1' RT.

701+50.00

USER NAME = $USER$	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = $SCALE$	CHECKED -	REVISED -	
PLOT DATE = $DATE$	DATE -	REVISED -	

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Springfield, IL Phone: (217)544-8033

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: | SHEET NO. 3 OF 7 SHEETS | STA. 701+50.00 TO STA. 702+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
698	123-CR	MARSHALL	36	24
		CONTRACT NO. 68C49		
		ILLINOIS FED. AID PROJECT		

FINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
NO.	PLOTTED	
	TEMPLATE	
	AREAS	
	AREAS CHECKED	

ORIGINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
NO.	PLOTTED	
	TEMPLATE	
	AREAS	
	AREAS CHECKED	

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

630
625
620
615

C = 0
F = 88
TS = 24.2' LT.
16.8' RT.

702+88.00
℄ CULVERT

1:4
1:3
1:2

ESMT. 150'
PR ROW 100'
℄ INLET
EL. 617.80

PR. 9'-0" x 6'-0" x 66'-0"
PRECAST CONC. BOX CULVERT

EX ROW

℄ OUTLET
EL. 617.20
PR ROW 85'

C = 42
F = 120
TS = 43.9' LT.
35.9' RT.

702+50.00

630
625
620

ESMT. 150'
PR ROW 90'
1:3
EL. 619.50
RIPRAP DITCH - 8.5 SF
1:4
1:3.5
EX ROW
1:2.5
EX ROW
1:3
EL. 618.50
RIPRAP DITCH - 8.5 SF
PR ROW 83.5'

TRANSITION FROM 1:4 FORESLOPE AT STA. 702+25 TO BREAK AT 30' TO 1:3 FORESLOPE AT 702+75

TRANSITION FROM 1:3 FORESLOPE AT STA. 702+25 TO 1:2 FORESLOPE AT 702+75

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

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USER NAME = $USER$	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = $SCALE$	CHECKED -	REVISED -	
PLOT DATE = $DATE$	DATE -	REVISED -	

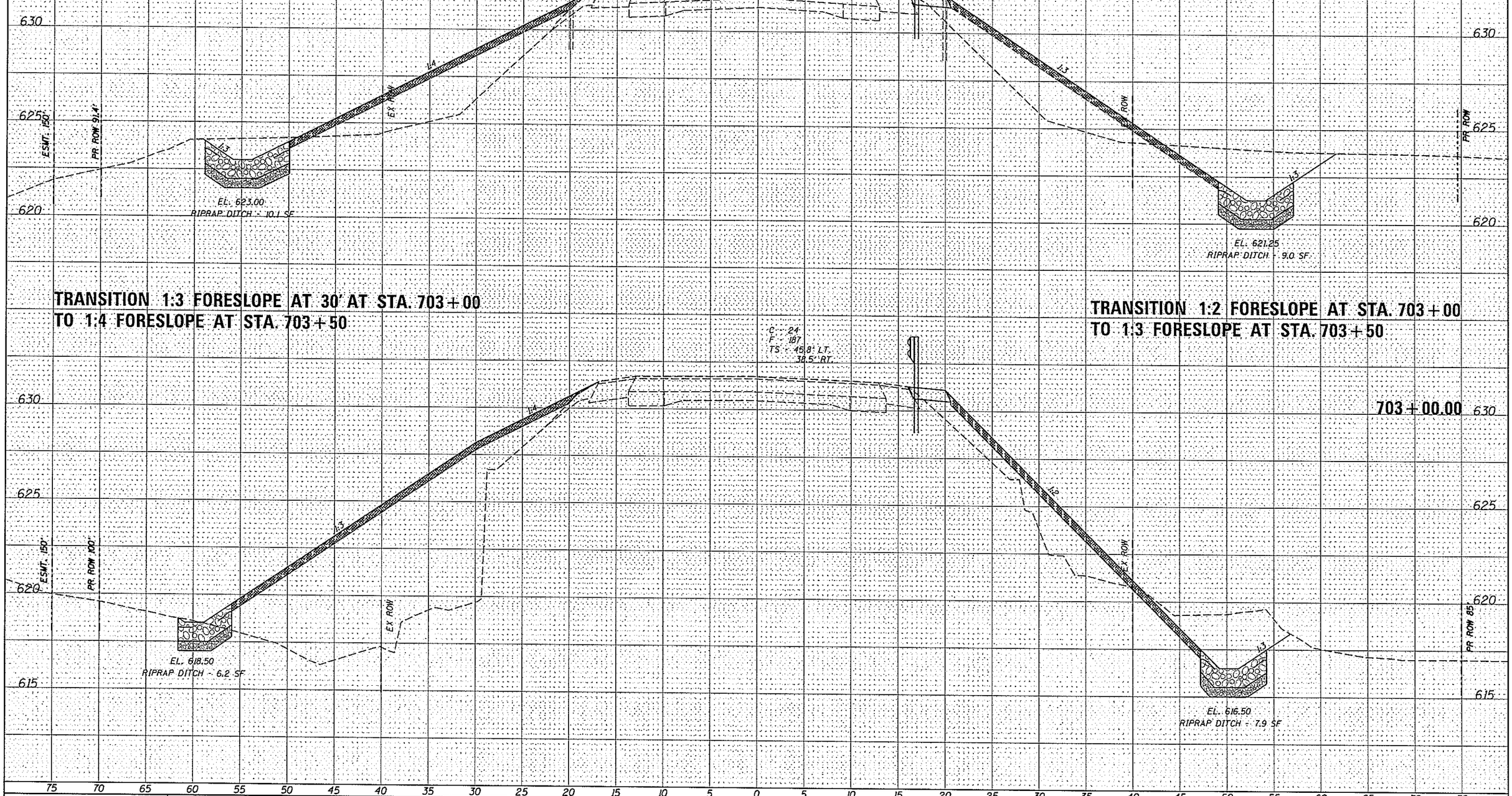
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: | SHEET NO. 4 OF 7 SHEETS | STA. 702+50.00 | TO STA. 702+88.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
698	123-CR	MARSHALL	36	25
		CONTRACT NO. 68C49		
		ILLINOIS FED. AID PROJECT		

END STONE RIPRAP, CLASS A4 DITCH – STA. 703+50 LT.



TRANSITION 1:3 FORESLOPE AT 30' AT STA. 703+00 TO 1:4 FORESLOPE AT STA. 703+50

TRANSITION 1:2 FORESLOPE AT STA. 703+00 TO 1:3 FORESLOPE AT STA. 703+50

FINAL SURVEY NOTE BOOK NO.	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

ORIGINAL SURVEY NOTE BOOK NO.	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

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Springfield, IL Phone: (217)544-8033

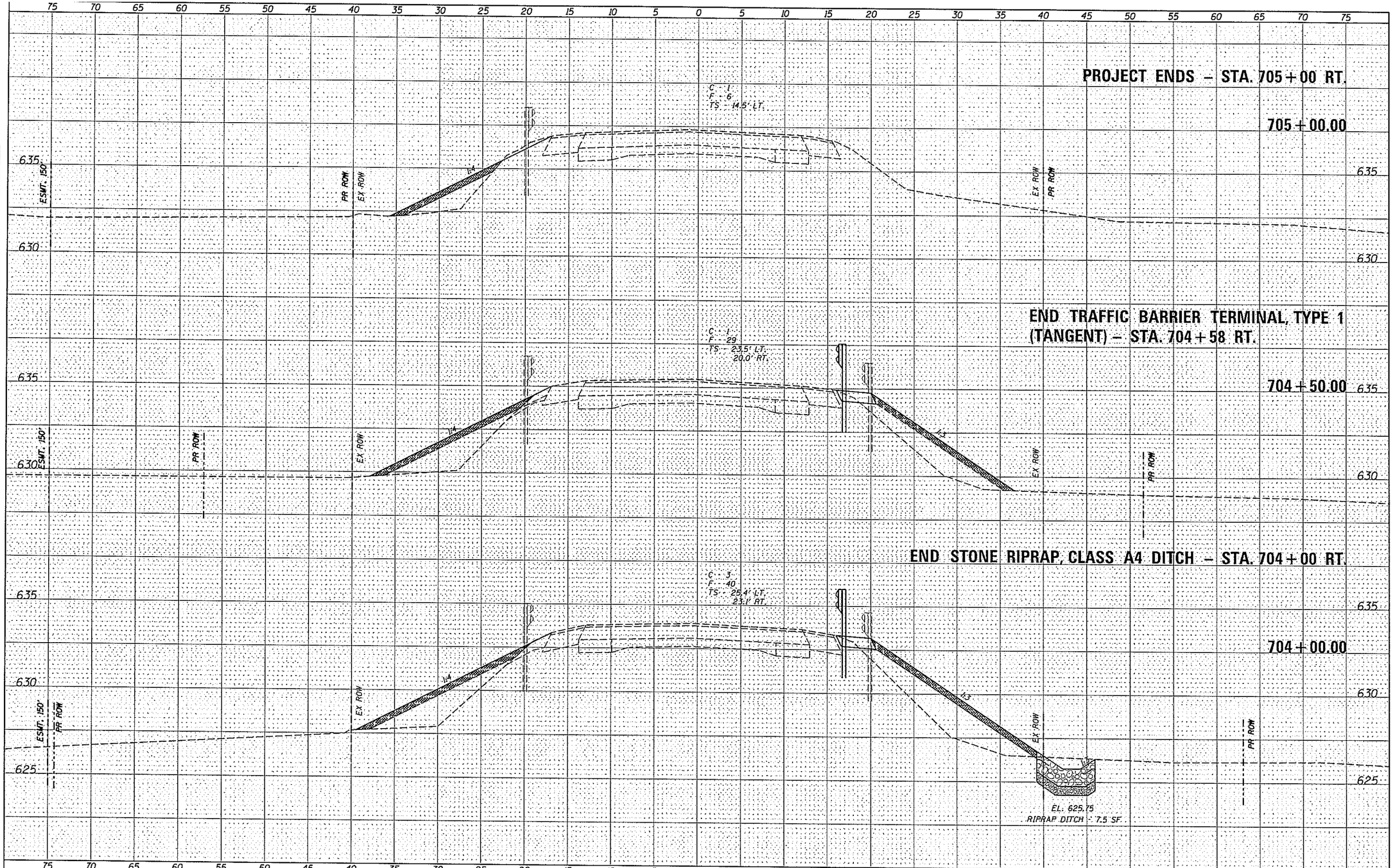
USER NAME = $USER$	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = $SCALE$	CHECKED -	REVISED -
PLOT DATE = $DATE$	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: | SHEET NO. 5 OF 7 SHEETS | STA. 703+00.00 TO STA. 703+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
698	123-CR	MARSHALL	36	26
		CONTRACT NO. 68C49		
		ILLINOIS FED. AID PROJECT		



FINAL SURVEY	NOTE BOOK	NO.	BY	DATE
SURVEYED				
PLOTTED				
TEMPLATE				
AREAS				
AREAS CHECKED				

ORIGINAL SURVEY	NOTE BOOK	NO.	BY	DATE
SURVEYED				
PLOTTED				
TEMPLATE				
AREAS				
AREAS CHECKED				

Veenstra & Kimm, Inc.
Springfield, IL Phone: (217)544-8033

USER NAME = $USER$	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = $SCALE$	CHECKED -	REVISED -
PLOT DATE = $DATE$	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: | SHEET NO. 6 OF 7 SHEETS | STA. 704+00.00 TO STA. 705+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
698	123-CR	MARSHALL	36	27
		CONTRACT NO. 68C49		
		ILLINOIS FED. AID PROJECT		

FINAL SURVEY	DATE
NOTE BOOK	BY
NO.	SURVEYED
	PLOTTED
	TEMPLATE
	AREAS
	AREAS CHECKED

ORIGINAL SURVEY	DATE
NOTE BOOK	BY
NO.	SURVEYED
	PLOTTED
	TEMPLATE
	AREAS
	AREAS CHECKED

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

645

640

635

630

EX ROW

EX ROW

EX ROW

EX ROW

EX ROW

706 + 50.00

706 + 00.00

705 + 50.00

C 2
F 0

PROJECT ENDS – STA. 705 + 60 LT.

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

Veenstra & Kimm, Inc.
Springfield, IL Phone: (217)544-8033

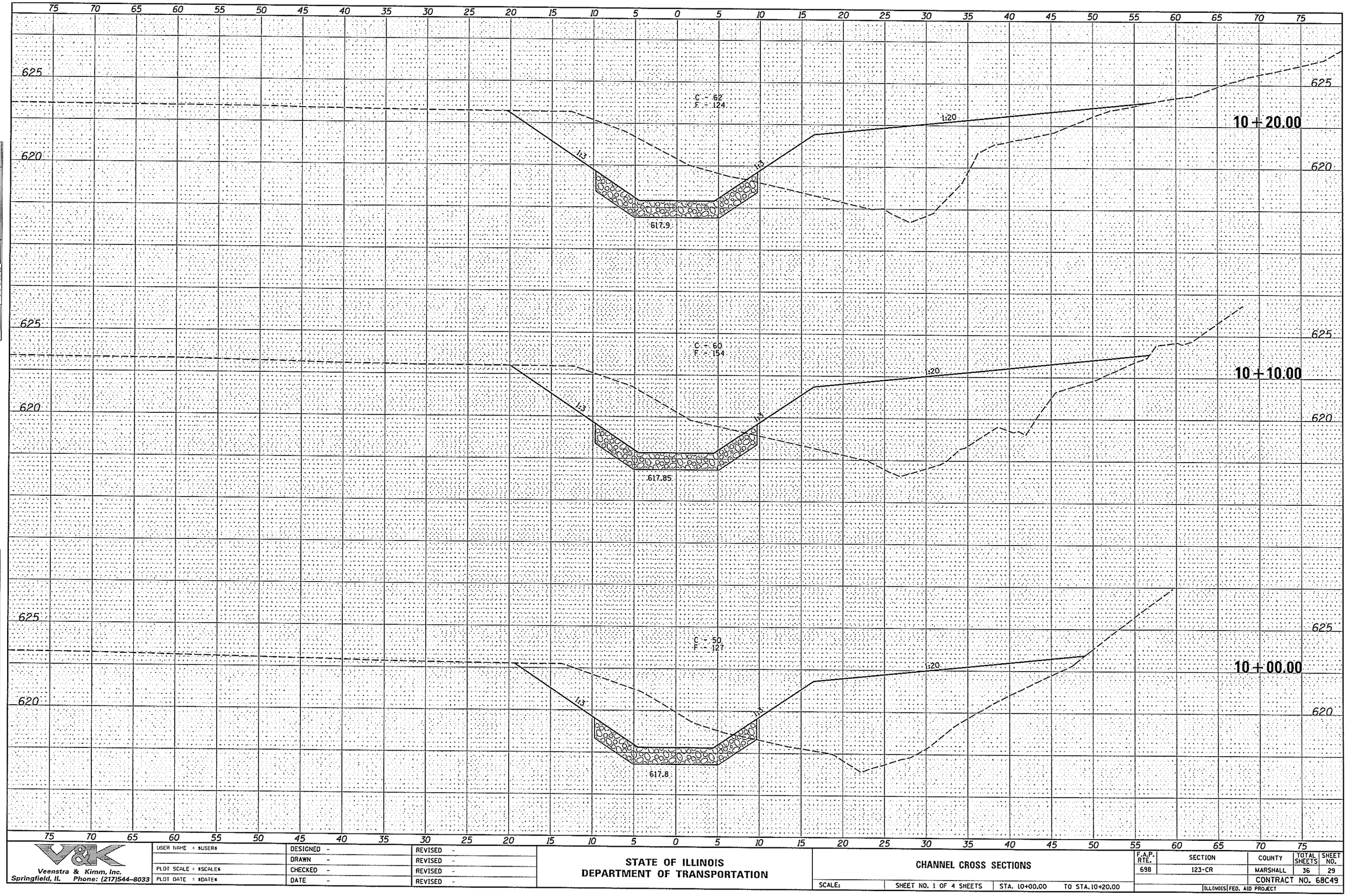
USER NAME = $USER$	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = $SCALE$	CHECKED -	REVISED -
PLOT DATE = $DATE$	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: | SHEET NO. 7 OF 7 SHEETS | STA. 705+50.00 | TO STA. 706+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
698	123-CR	MARSHALL	36	28
		CONTRACT NO. 68C49		
	ILLINOIS FED. AID PROJECT			



FINAL SURVEY — NOTE BOOK NO. — SURVEYED — PLOTTED — TEMPLATE AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK NO. — SURVEYED — PLOTTED — TEMPLATE AREAS — AREAS CHECKED — BY — DATE

V&K
Veenstra & Kimm, Inc.
Springfield, IL. Phone: (217)544-8033

USER NAME = $USER$	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = $SCALE$	CHECKED -	REVISED -
PLOT DATE = $DATE$	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

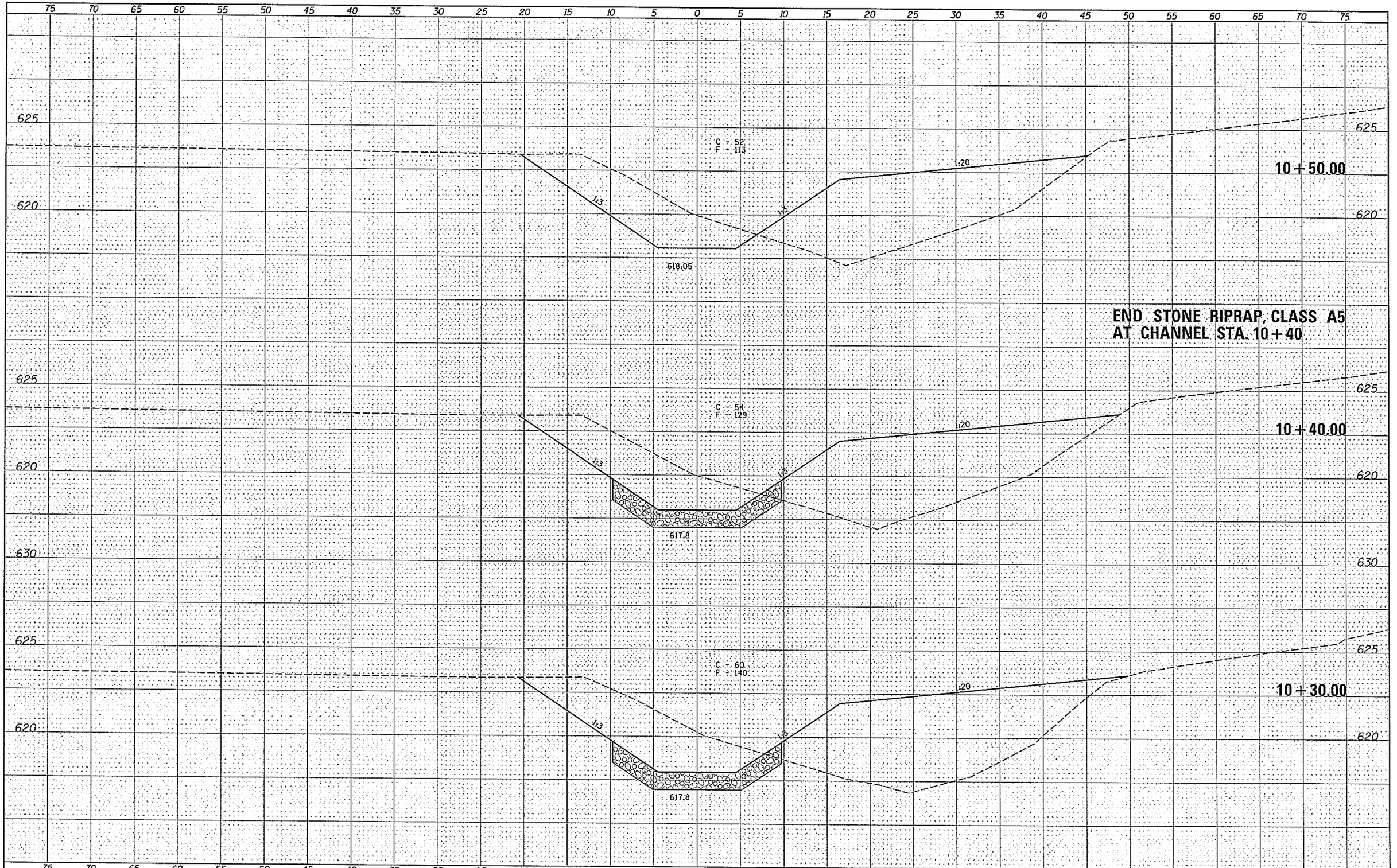
CHANNEL CROSS SECTIONS

SCALE: | SHEET NO. 1 OF 4 SHEETS | STA. 10+00.00 | TO STA. 10+20.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
698	123-CR	MARSHALL	36	29
		CONTRACT NO. 68C49		
	ILLINOIS FED. AID PROJECT			

FINAL SURVEY	NOTE BOOK	NO.	SURVEYED	PLOTTED	TEMPLATE	AREAS	AREAS CHECKED	BY	DATE

ORIGINAL SURVEY	NOTE BOOK	NO.	SURVEYED	PLOTTED	TEMPLATE	AREAS	AREAS CHECKED	BY	DATE



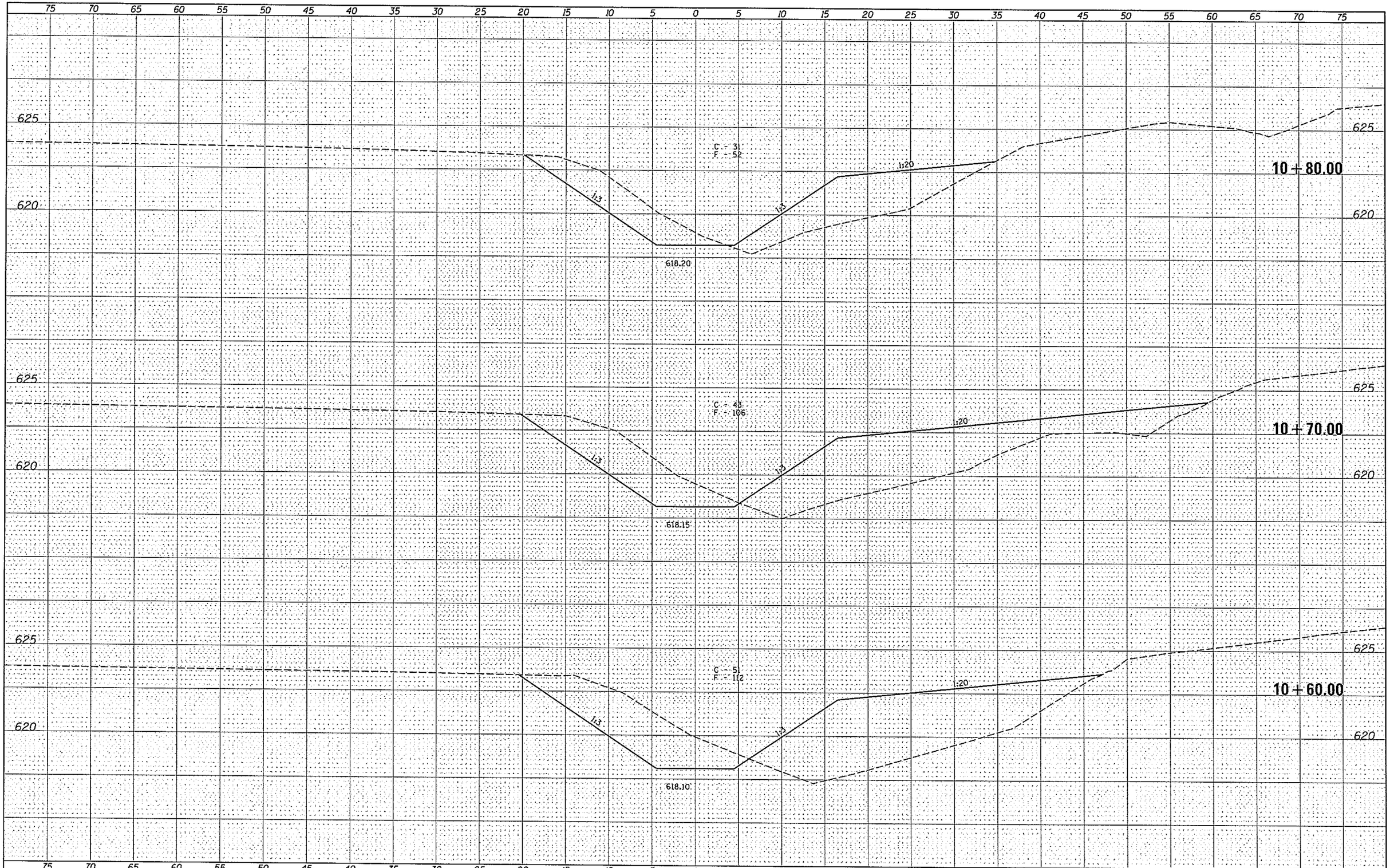
USER NAME = $USER$	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	
PLOT SCALE = $SCALE$	CHECKED -	REVISED -	
PLOT DATE = $DATE$	DATE -	REVISED -	

Veenstra & Kimm, Inc.
Springfield, IL Phone: (217)544-8033

CHANNEL CROSS SECTIONS

SCALE: | SHEET NO. 2 OF 4 SHEETS | STA. 10+30.00 | TO STA. 10+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
698	123-CR	MARSHALL	36	30
		CONTRACT NO. 68C49		
		ILLINOIS FED. AID PROJECT		



FINAL SURVEY	NOTE BOOK	NO.	BY	DATE
SURVEYED				
PLOTTED				
TEMPLATE				
AREAS				
AREAS CHECKED				

ORIGINAL SURVEY	NOTE BOOK	NO.	BY	DATE
SURVEYED				
PLOTTED				
TEMPLATE				
AREAS				
AREAS CHECKED				

Veenstra & Kimm, Inc.
Springfield, IL Phone: (217)544-8033

USER NAME = $USER$	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = $SCALE$	CHECKED -	REVISED -
PLOT DATE = $DATE$	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CHANNEL CROSS SECTIONS

SCALE: | SHEET NO. 3 OF 4 SHEETS | STA. 10+60.00 | TO STA. 10+80.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
698	123-CR	MARSHALL	36	31

CONTRACT NO. 68C49

ILLINOIS FED. AID PROJECT

FINAL SURVEY	SURVEYED	BY
NOTE BOOK	PLOTTED	DATE
NO.	TEMPLATE AREAS	
	AREAS CHECKED	

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

625

620

11+00.00

CHANNEL CLEANING ENDS STA. 10+99
TRANSITION FROM 9'-0" CHANNEL BOTTOM AT STA. 10+90
TO EXISTING CHANNEL BOTTOM AT STA. 10+99

ORIGINAL SCALE	SURVEYED	BY
NOTE BOOK	PLOTTED	DATE
NO.	TEMPLATE AREAS	
	AREAS CHECKED	

625

620

C - 18
F - 28

1:3

1:3

1:20

618.25

10+90.00

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

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Springfield, IL Phone: (217)544-8033

USER NAME = $USER$	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = $SCALE$	CHECKED -	REVISED -
PLOT DATE = $DATE$	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

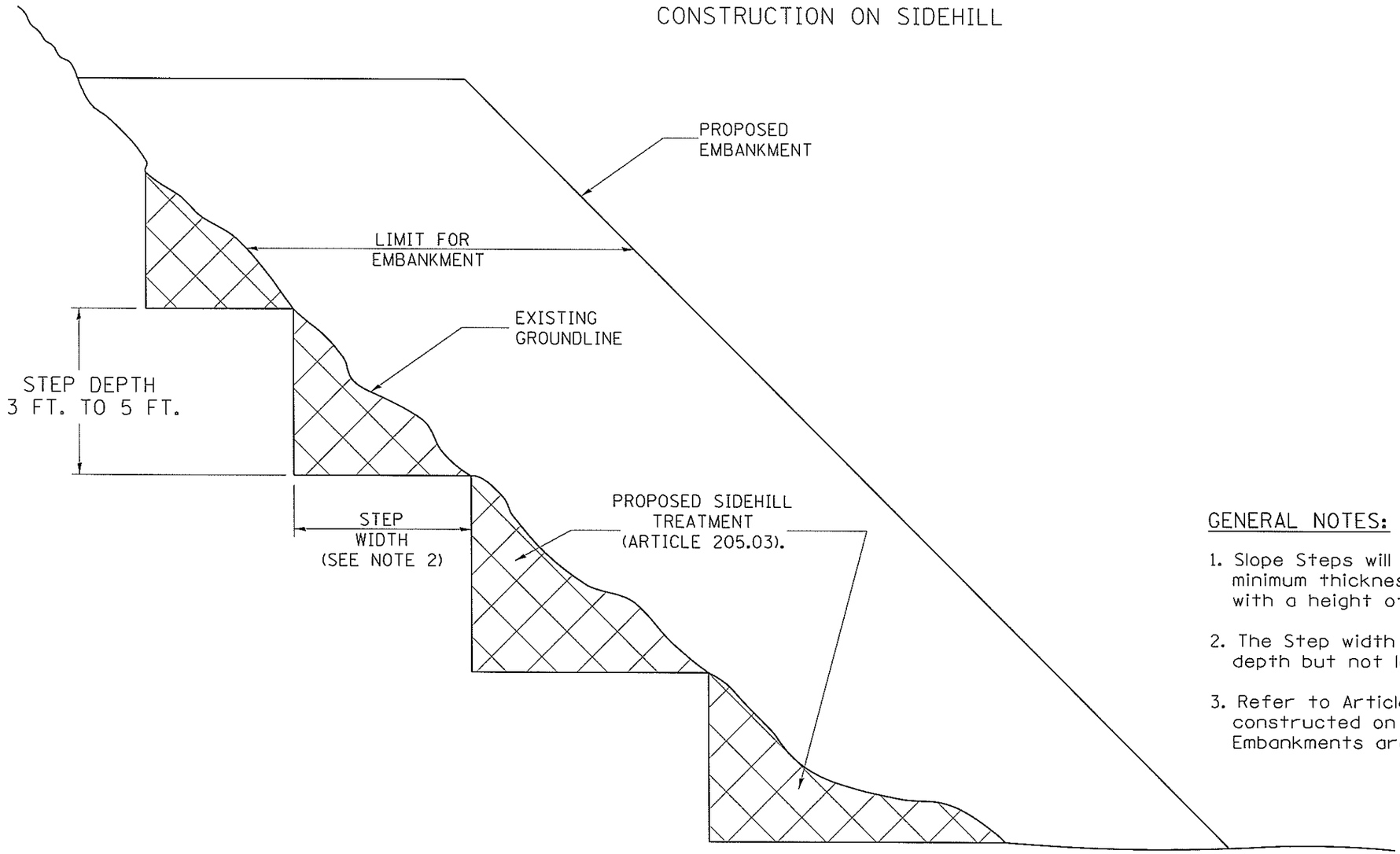
CHANNEL CROSS SECTIONS

SCALE: | SHEET NO. 4 OF 4 SHEETS | STA. 10+90.00 | TO STA. 11+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
698	123-CR	MARSHALL	36	32
		CONTRACT NO. 68C49		
ILLINOIS	FED. AID PROJECT			

SLOPE STEPS DETAIL

TYPICAL CROSS-SECTION EMBANKMENT
CONSTRUCTION ON SIDEHILL



GENERAL NOTES:

1. Slope Steps will be required for all 12(300) minimum thickness "sliver fills" and on a fills with a height of 10 feet or greater.

2. The Step width shall be twice the Step depth but not less than 6 feet.

3. Refer to Article 205.03 for Embankment to be constructed on Hillside or Slopes, or if existing Embankments are to be widened.

REPLACEMENT MATERIAL:

STANDARD EMBANKMENT
(IN ACCORDANCE WITH
205 OF THE STANDARD SPECIFACATION).

All dimensions are in inches (millimeters) unless otherwise noted.

01-01-97	RENUM. C-22.01. NEW REVISION BOX	T.P.
03-01-97	CORRECT STD. NUMBERS IN NOTES PG. 2	J.A.
11-03-00	CORRECTION TO NOTES	M.A.
10-16-06	REVISED TO 2007 SPEC.	M.A.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

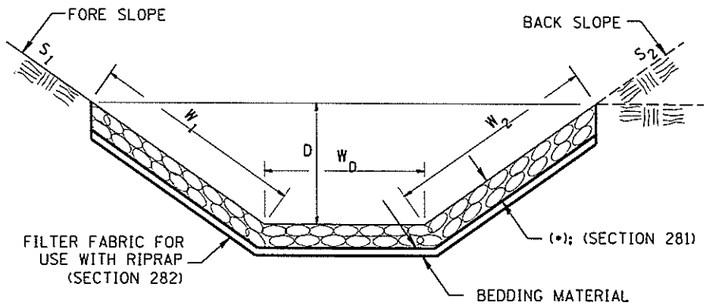
SLOPE STEPS DETAIL

NOT TO SCALE

CADD STD. 205001-04

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
698	123-CR	MARSHALL	36	33
		CONTRACT NO. 68C49		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

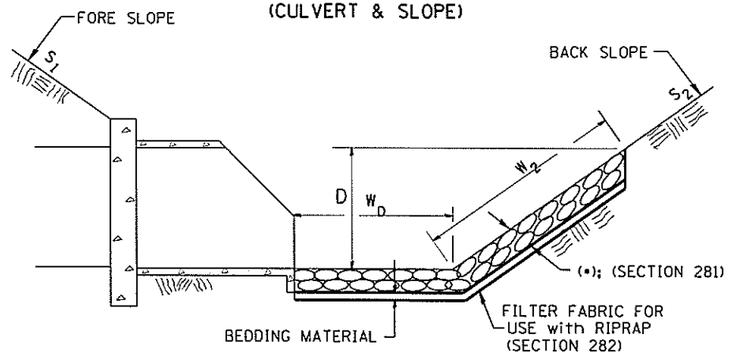
CASE 1
(DITCH)



(*)				
LOCATION	WIDTH (1)	LENGTH	RIPRAP	FABRIC
STA TO STA	lin ft (m)	lin ft (m)	tons (m tons)	sq yds (m^2)
TOTAL				

(1) WIDTH = $W_1 + W_2 + W_D$

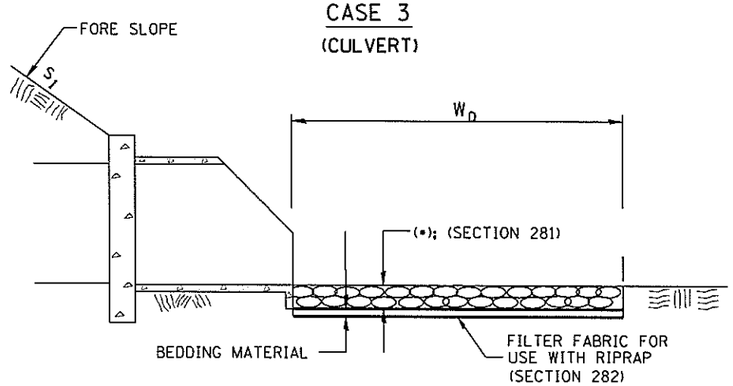
CASE 2
(CULVERT & SLOPE)



(*)				
LOCATION	WIDTH (1)	LENGTH	RIPRAP	FABRIC
STA TO STA	lin ft (m)	lin ft (m)	tons (m tons)	sq yds (m^2)
TOTAL				

(1) WIDTH = $W_2 + W_D$

CASE 3
(CULVERT)



(*)				
LOCATION	WIDTH (1)	LENGTH	RIPRAP	FABRIC
STA TO STA	lin ft (m)	lin ft (m)	tons (m tons)	sq yds (m^2)
TOTAL				

(1) WIDTH = W_D

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

All dimensions are in inches (millimeters) unless otherwise noted.

01-01-97	RENUM. C-22.01, NEW REVISION BOX	T.P.
03-01-97	CORRECT STD. NUMBERS IN NOTES PG. 2	J.A.
11-03-00	CORRECTION TO NOTES	M.A.
10-16-06	REVISED TO 2007 SPEC.	M.A.

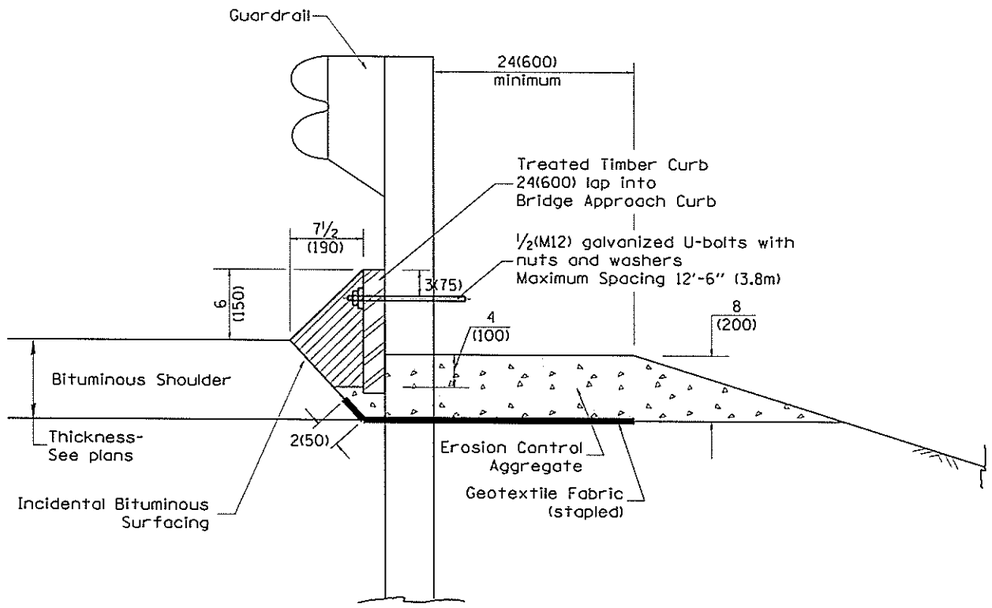
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RIPRAP DITCH FOR EROSION PROTECTION

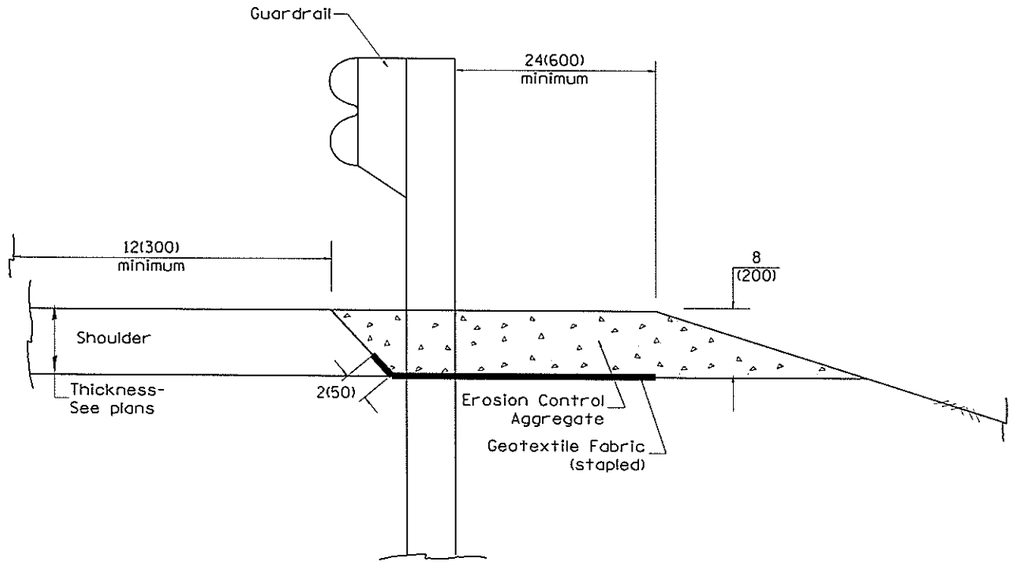
NOT TO SCALE

CADD STD. 281001-04

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
698	123-CR	MARSHALL	36	34
		CONTRACT NO. 68C49		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



TYPICAL SECTION WITH EROSION CONTROL CURB



TYPICAL SECTION WITHOUT EROSION CONTROL CURB

GENERAL NOTES: EROSION CONTROL CURB

1. This work shall consist of grading as needed, installing hardware and treated timber boards, furnishing and placing mastic material and incidental bituminous surfacing in front of Steel Plate Beam Guardrail in accordance with Plan Details.

2. Timber shall be treated in accordance with Article 1007.12. All preservatives specified in the article will be allowed. Waterborne preservatives "asa" and "cca" shall have a minimum retention of 0.40 lbs./cu. ft. (6.4 kg/m³)

GENERAL NOTES: GUARDRAIL AGGREGATE EROSION CONTROL

1. This work shall consist of grading as needed, furnishing and installing geotextile fabric and staples, and furnishing, placing and shaping crushed aggregate around and behind Steel Plate Beam Guardrail posts in accordance with Plan Details.

2. Before placing the aggregate and the Geotextile Fabric, weeds and grass shall be removed from the area to be covered.

3. After the area has been prepared, and in a dry condition, the Geotextile fabric shall be placed with a 12(300) minimum overlap. A knife cut for guardrail post installation is necessary.

4. The aggregate shall be deposited, compacted and shaped by either mechanical or hand methods, in a manner reasonably true to line and grade.

5. The Contractor shall have the option of placing the guardrail before or after the Geotextile Fabric and Aggregate are in place. If the guardrail is placed after the Geotextile Fabric and Aggregate, then any voids must be filled and the aggregate returned to line and grade.

6. Materials shall meet the following requirements:

   A. The crushed aggregate shall be CA1 gradation in accordance with Article 1004.01(c) of the Standard Specifications.

   B. The Geotextile Fabric shall be nonwoven fabric in accordance with Article 1080.02 of the Standard Specifications.

All dimensions are in inches (millimeters) unless otherwise noted.

01-01-97	RENUM. C-22.01, NEW REVISION BOX	T.P.									
03-01-97	CORRECT STD. NUMBERS IN NOTES PG. 2	J.A.									
11-03-00	CORRECTION TO NOTES	M.A.									
10-16-06	REVISED TO 2007 SPEC.	M.A.									

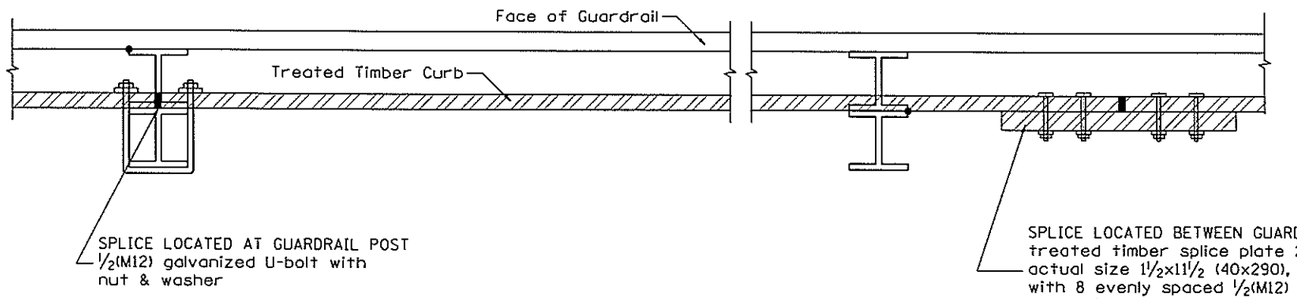
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GUARDRAIL EROSION CONTROL TREATMENTS

NOT TO SCALE

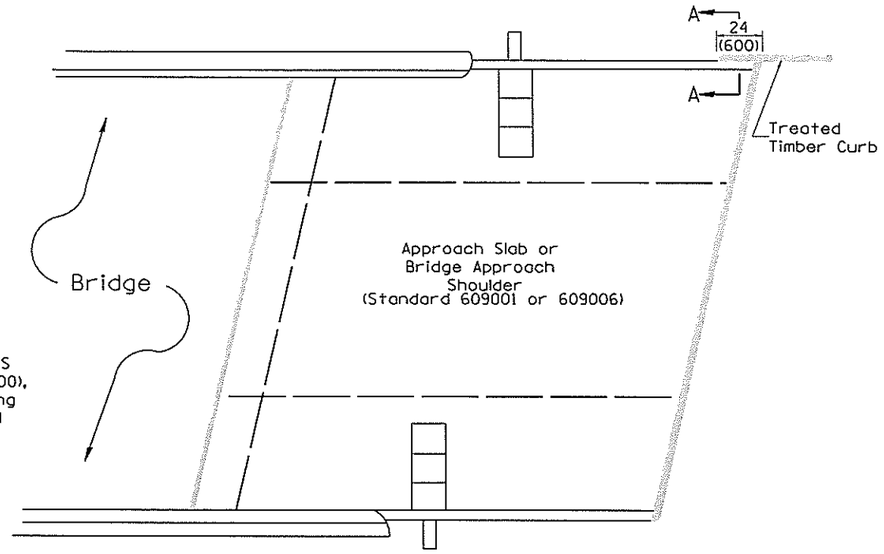
SHT. 1 OF 2
CADD STD. 630101-D4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
698	123-CR	MARSHALL	36	35
		CONTRACT NO. 68C49		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



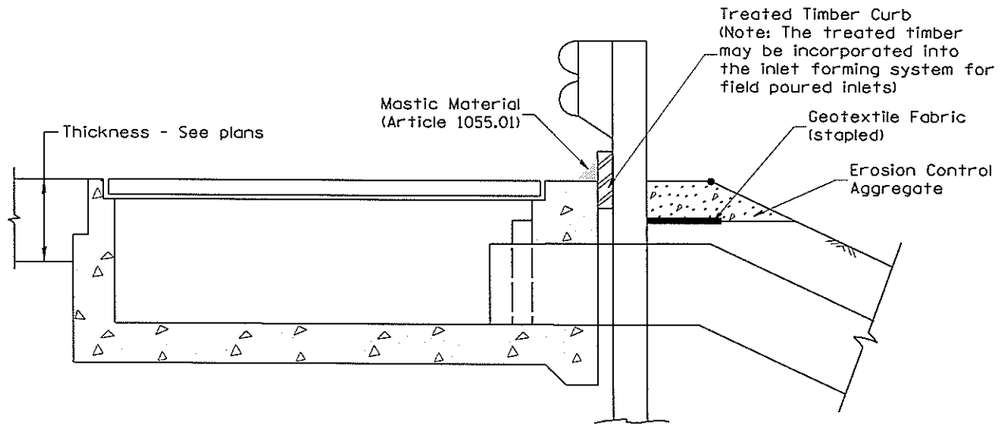
DETAIL A

(Typical Treated Timber Splices)

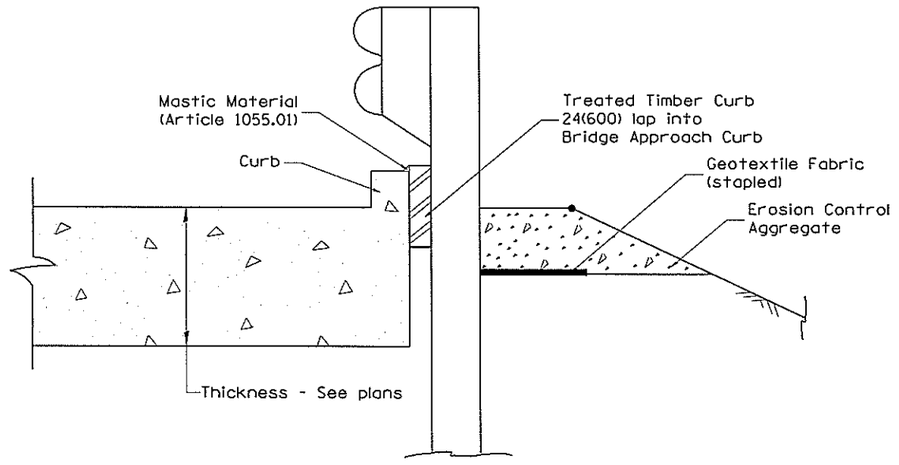


PLAN VIEW

APPROACH SLAB OR BRIDGE APPROACH SHOULDER
(STANDARD 609001 or 609006)



TYPICAL SECTION WITH EROSION CONTROL CURB
AT INLETS TYPE E & F (STANDARD 610001)



SECTION A-A

TYPICAL SECTION WITH EROSION CONTROL CURB
AT BRIDGE APPROACH CURB
(STANDARD 609001 OR 609006)

All dimensions are in inches (millimeters) unless otherwise noted.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GUARDRAIL EROSION CONTROL TREATMENTS		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			698	123-CR	MARSHALL	36	36
	SHT. 2 OF 2				CONTRACT NO. 68C49		
	NOT TO SCALE	CADD STD. 630101-D4	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		