



Iowa Department of Transportation

Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM DES MOINES COUNTY PCC PAVEMENT - GRADE AND REPLACE

US 34/01d US 34 Intersection 1 mile E. of New London

SCALES: As Noted

The Iowa Department of Transportation Standard Specifications for Highway and Bridge Construction, series 2001, plus General Supplemental Specifications; and applicable Supplemental Specifications, Developmental Specifications, and Special Provisions, shall apply to construction on this project.

Value Engineering Saves. Refer to Article 1105.15 of the Specifications.

NO MILEAGE SUMMARY



CALL BEFORE YOU DIG!
1-800-292-8989
www.iowaonecall.com



REVISIONS

TOTAL

27

PROJECT IDENTIFICATION NUMBER

07-29-034-010

PROJECT NUMBER

HES-034-9(194)--2H-29

R.O.W. PROJECT NUMBER

INDEX OF SHEETS

105-3

10-18-05

No.	Description
A.01	Title Sheet
A.02	Legend and Symbol Sheet
A.03	Map Sheet
B.01 - B.03	Typical Sheet
C.01 - C.04	Estimate of Quantities and General Information
D.01	Mainline Plan & Profile
G.01	Details of Reference Information
J.01 - J.02	Pavement Marking Details
L.01 - L.02	Geometric & Staking Details Mainline US 034
W.01 - W.11	Mainline Cross Sections

**FOR PROJECT LOCATION MAP
REFER TO SHEET A.03**

04-30-02	101-4
DESIGN DATA RURAL	
20 02 AADT	6,100 V.P.D.
20 27 AADT	-- V.P.D.
20 DHV	-- V.P.H.
TRUCKS	14 %
Total Design ESALs	--

INDEX OF SEALS		
SHEET NO.	NAME	TYPE
A.01	Robert Welper	Primary Signature Block
C.04	Robert L. Stanley	Geotechnical Design

ROADWAY DESIGN



I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Robert A Welper 10/02/07
Signature Date

Printed or Typed Name: Robert Welper

My license renewal date is December 31, 20 07.

Pages or sheets covered by this seal: A.01-A.03, B.01-B.02, C.01-C.03, D.01, G.01, J.01-J.02, L.01-L.02, and W.01-W.11.

DES MOINES CO.
PCC PAVEMENT - GRADE AND REPLACE
HES-034-9(194)--2H-29

LETTING DATE
12/18/07

986-54007
6546



ENGLISH IOWA DOT

DESIGN TEAM Abrams\Welper\Luong

DES MOINES COUNTY

PROJECT NUMBER

HES-034-9(194)--2H-29

SHEET NUMBER A.01

STANDARD SYMBOLS

	Interstate Highway Symbol		Septic Tank
	U.S. Highway Symbol		Cistern
	Iowa Highway Symbol		L.P. Gas Tank (No Footing)
	County Road Highway Symbol		Underground Storage Tank
	Evergreen Tree		Latrine
	Deciduous Tree		Luminaire
	Fruit Tree		Traffic Signal
	Shrub (Bushes)		Traffic Signal with Luminaire
	Timber		Telephone Pedestal
	Hedge		Television Pedestal
	Stump		Telephone Pole
	Swamp		Telephone Pole (Second Company)
	Rock Outcrop		Telephone Pole (Third Company)
	Broken Concrete		Telephone Pole (Fourth Company)
	Revetment (Rip Rap)		Telephone Pole (Fifth Company)
	Cemetery		Power Pole
	Grave		Power Pole (Second Company)
	Cave		Power Pole (Third Company)
	Sink Hole		Power Pole (Fourth Company)
	Board Fence		Power Pole (Fifth Company)
	Chain Link or Security Fence		Electrical Highline Tower (Metal or Concrete)
	Wire Fence		Telephone Riser Pole
	Terrace		Power Riser Pole
	Earth Dam or Dike (Existing)		Telegraph Pole
	Earth Dam or Dike (Proposed)		Satellite TV Dish
	Tile Outlet		Existing Water Line
	Edge of Water		Existing Water Line (Second Company)
	Existing Drainage		Existing Sanitary Sewer Line
	Proposed Drainage		Existing Telephone Line
	Right of Way Rail or Lot Corner		Existing Telephone Line (Second Company)
	Concrete Monument		Existing Fiber Optics Telephone Line
	Well		Existing Storm Sewer Line
	Windmill		Existing Gas Line
	Beehive Intake		Existing High Pressure Gas Line
	Existing Intake		Existing Gas Line (Second Company)
	Proposed Intake		Existing High Pressure Gas Line (Second Company)
	Existing Utility Access (Manhole)		Existing Power Line
	Proposed Utility Access (Manhole)		Existing Power Line (Second Company)
	Fire Hydrant		Cable Television Line
	Water Hydrant (Rural)		

	Guardrail (Beam or Cable)
	Guard Post (one or two)
	Guard Post (over two)
	Filler Pipe
	Gas Valve
	Water Valve
	Speed Limit Sign
	Mile Marker Post
	Sign
	Water Hook Up
	Radio Tower
	Tower Anchor
	Electric Box
	Traffic Signal Control Box
	Rail Road Signal Control Box
	Telephone Switch Box

	Shading - Proposed Paved Surface
	Shading - Proposed Granular Surface
	Shading - Other, with identification
	Shading - Clearing & Grubbing Area

IOWA 1-CALL# 1-800-292-8989



CALL BEFORE YOU DIG!
1-800-292-8989
www.iowadonecall.com



UTILITY LEGEND

	RATHBUN REGIONAL WATER ASS'N INC.
	MEDIACOM
	CITY OF DANVILLE

RIGHT OF WAY LEGEND

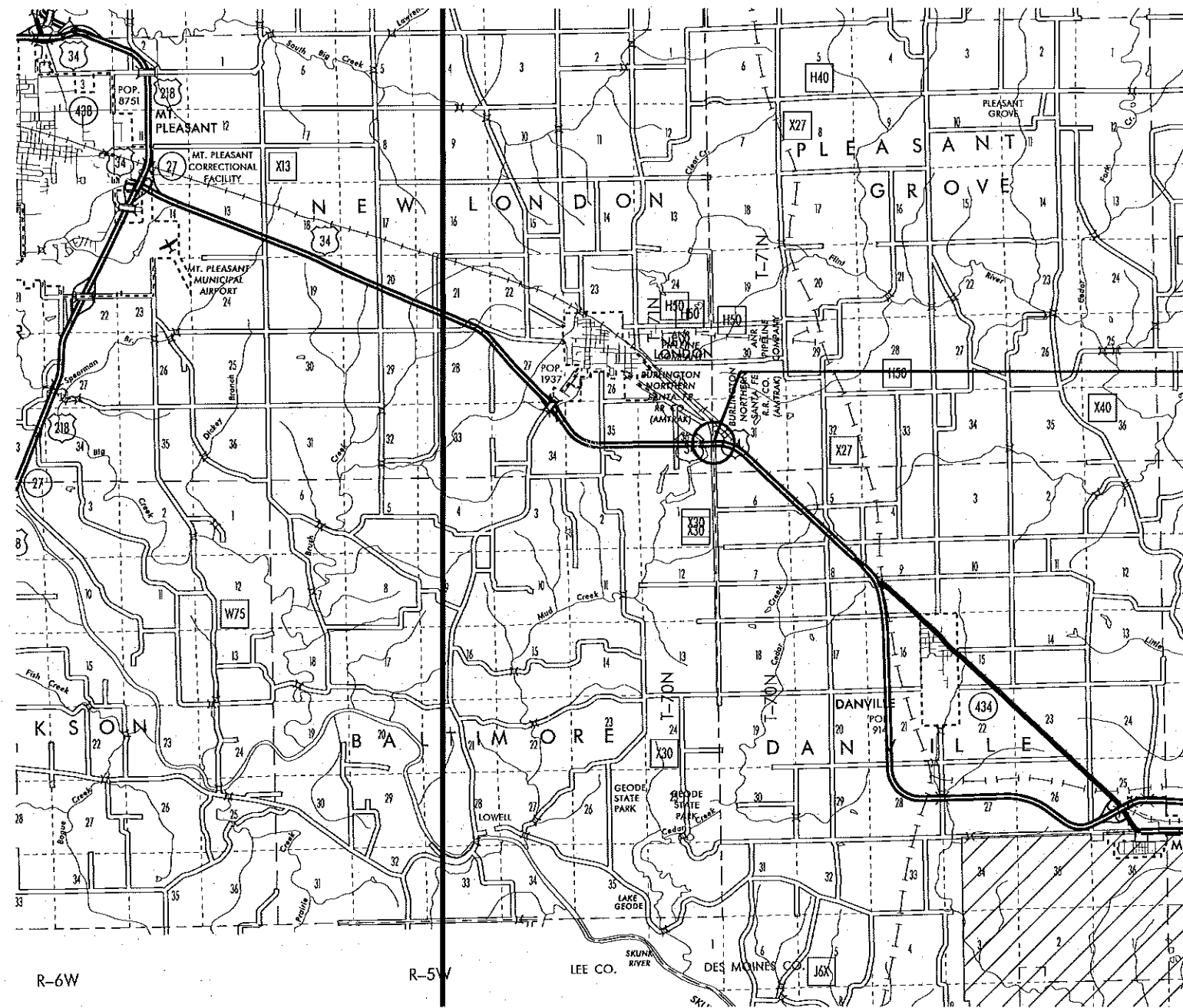
	Proposed Right of Way
	Existing Right of Way
	Existing and Proposed Right of Way
	Easement and Existing Right of Way
	Borrow
	Easement (Temporary)
	Easement
	Excess
	Property Line
	Access Control

CONVENTIONAL SIGNS

	Survey Line
	Section Corner
	Proposed Profile Grade
	Railroad
	Field Tile
	Culverts
	Stream

Legend And Symbol Information Sheet

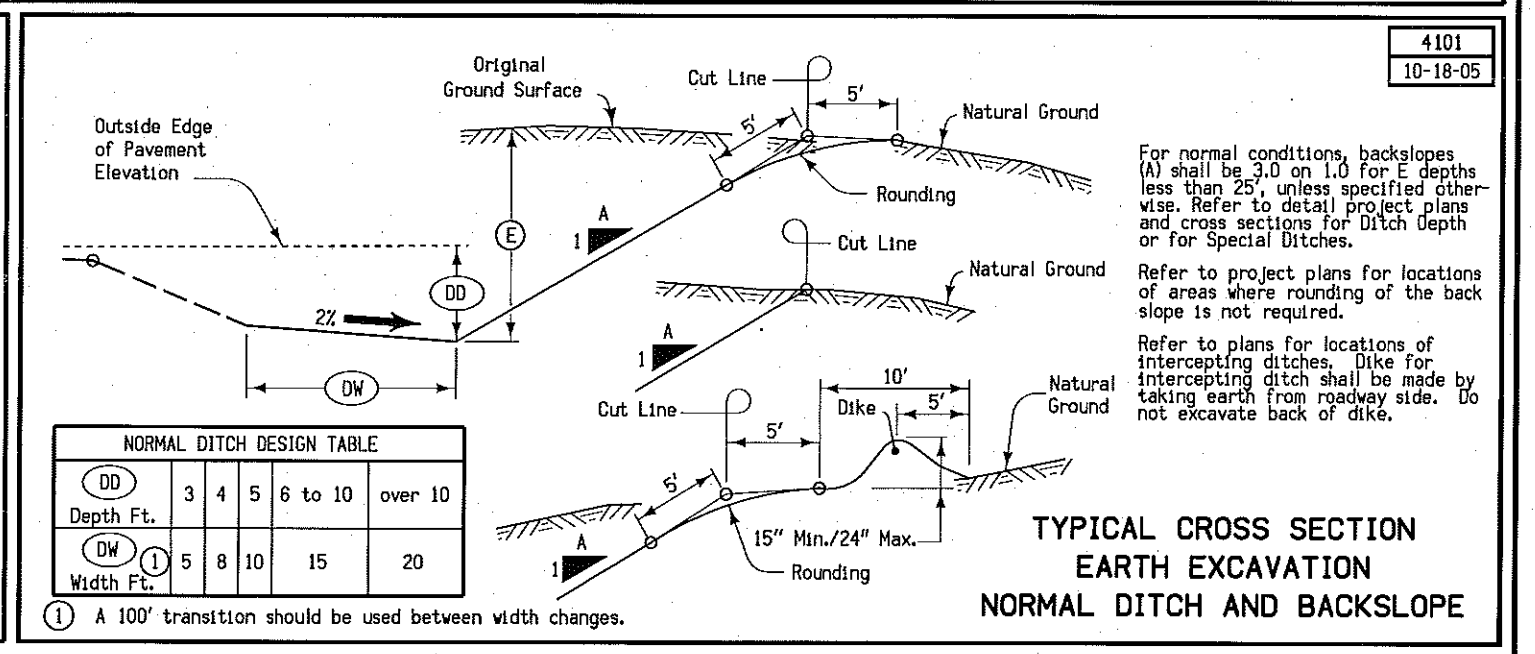
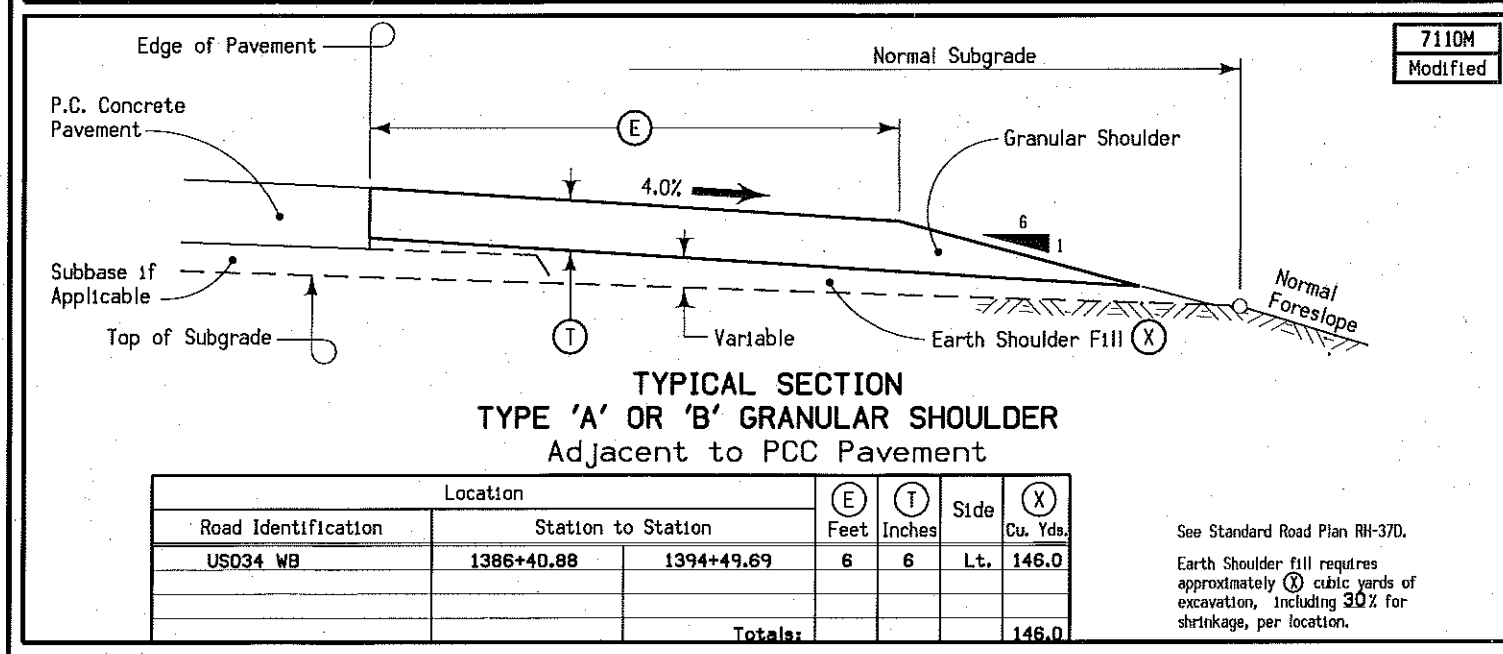
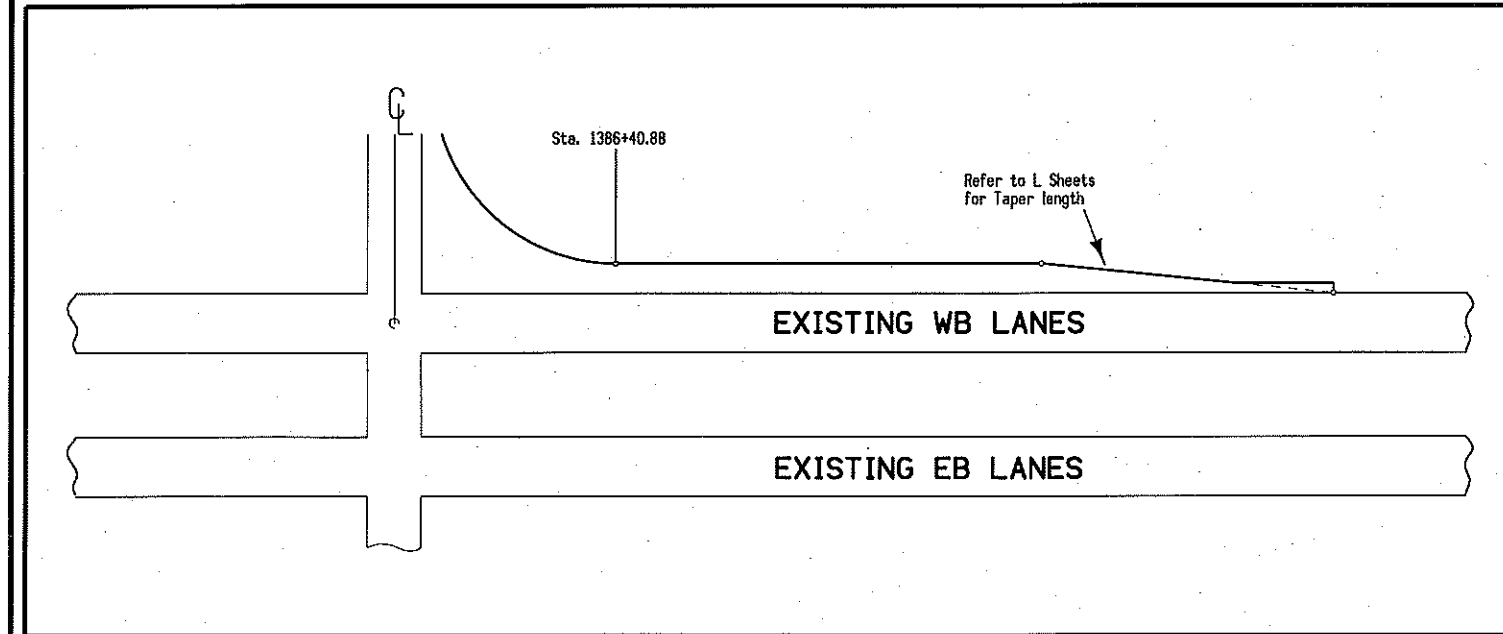
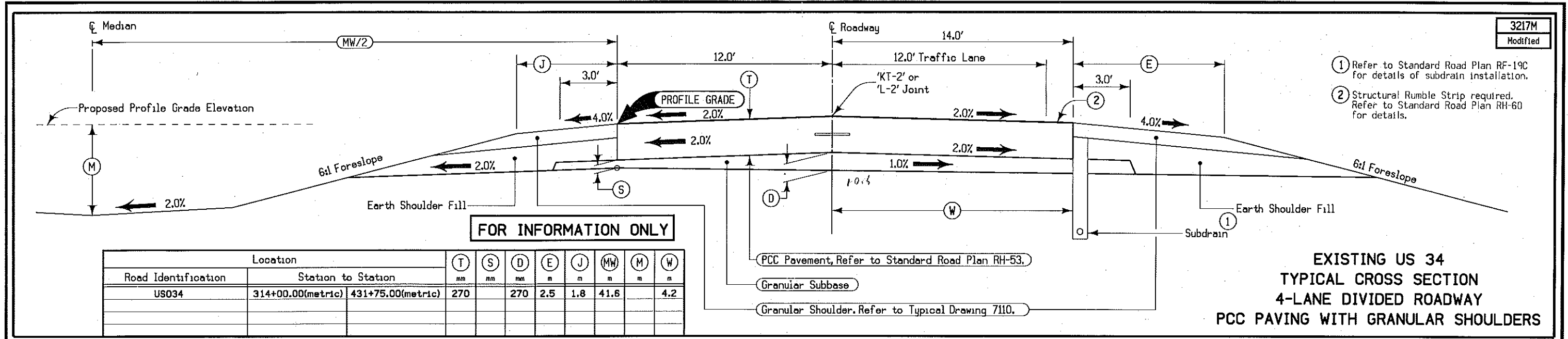
(Symbols are Typical Only,

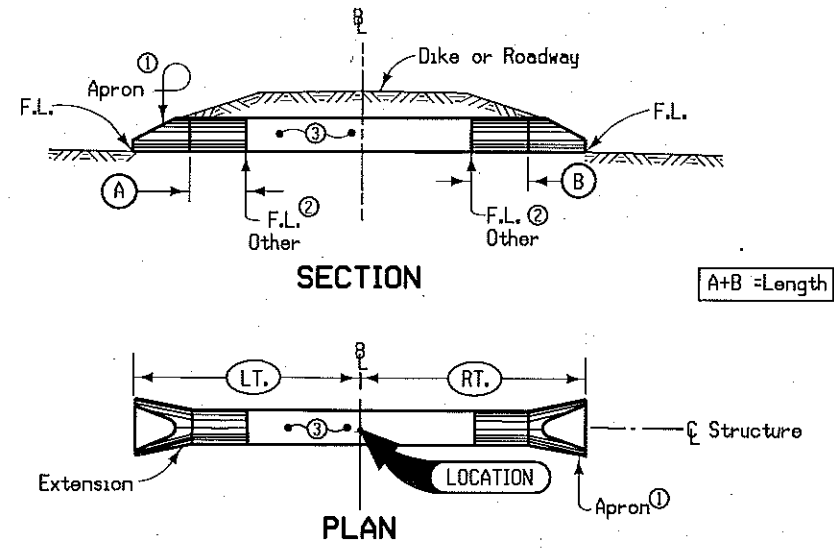


PROJECT LOCATION



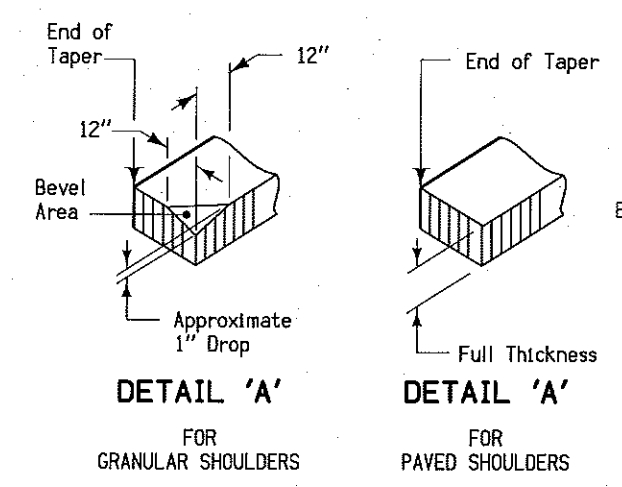
T-71N



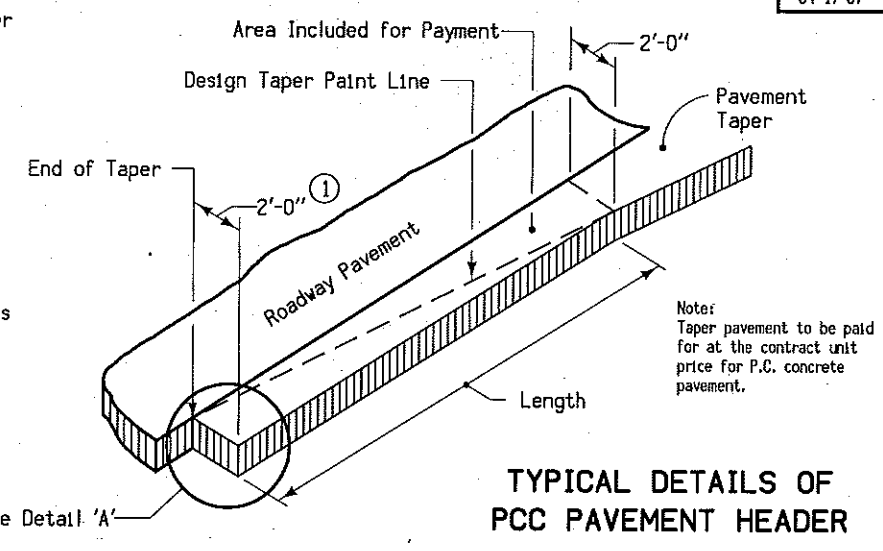


Notes:
 1. ϕ shall be ϕ of roadway, dike, survey, or other; as detailed on plans.
 Extension shall be on line of existing structure to Lt., Rt. or both as specified. Adaptors may be required, see Standard Road Plan RF-2. Refer to tabular listing and other plans for additional information.
 1 See Standard Road Plan RF-3 for concrete, RF-5 for metal.
 2 Optional type "D" section only when specified in tabulation.
 3 Existing structure.

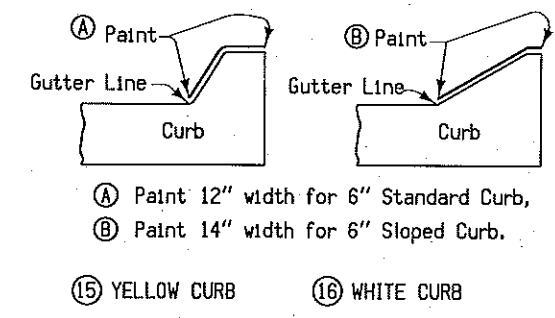
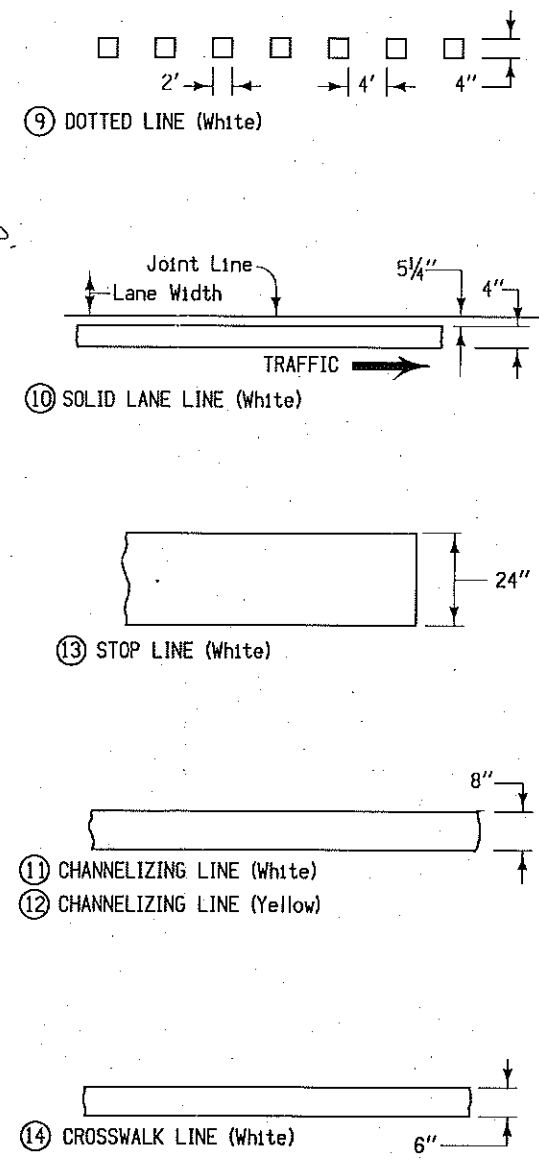
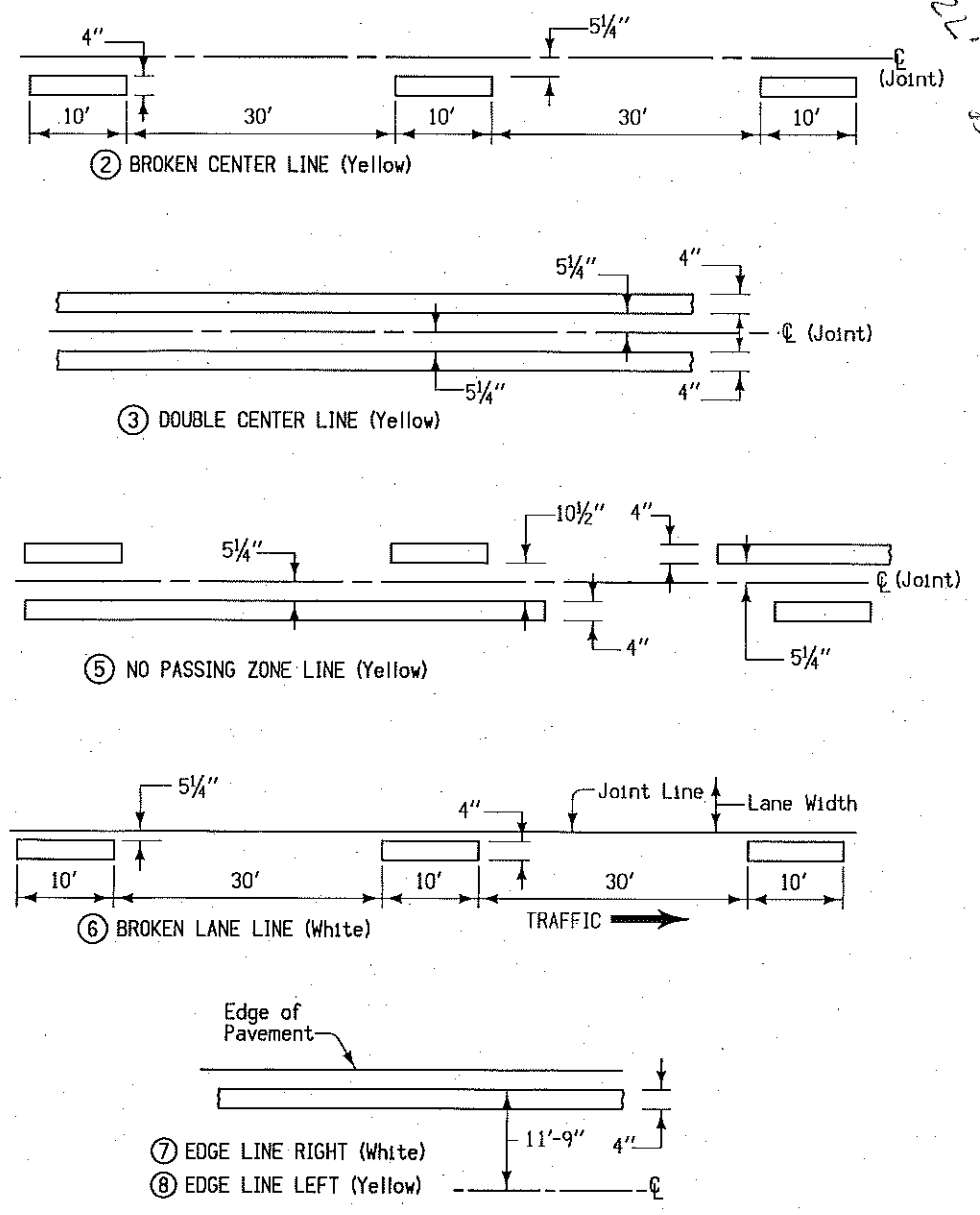
PIPE EXTENSION



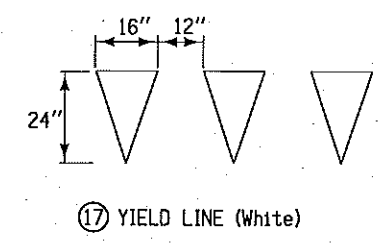
1 Normal width is 2'-0". 4'-0" width should be constructed when butting into 4' wide HMA shoulders (See Typical 7154A).



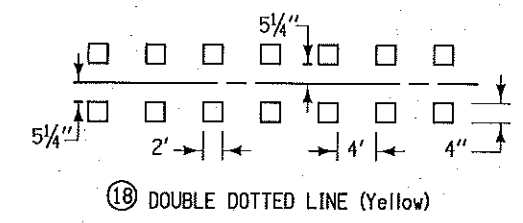
TYPICAL DETAILS OF PCC PAVEMENT HEADER



15 YELLOW CURB 16 WHITE CURB



17 YIELD LINE (White)

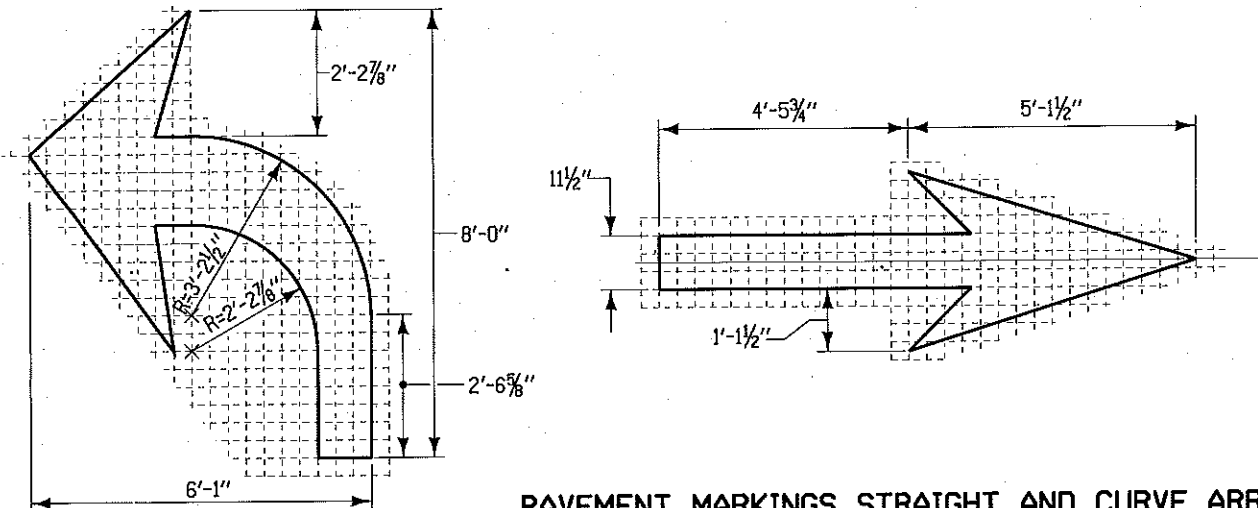


18 DOUBLE DOTTED LINE (Yellow)

STANDARD TYPES OF PAVEMENT MARKINGS

EACH UNIT = 3.84"

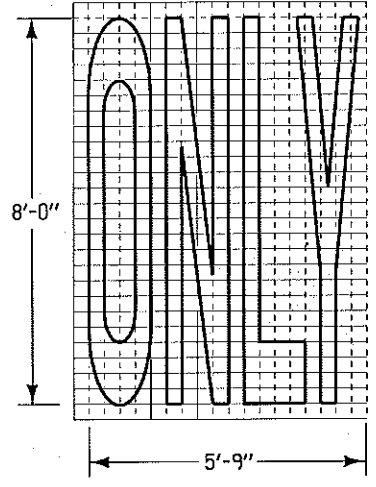
9002
04-28-98



PAVEMENT MARKINGS STRAIGHT AND CURVE ARROWS

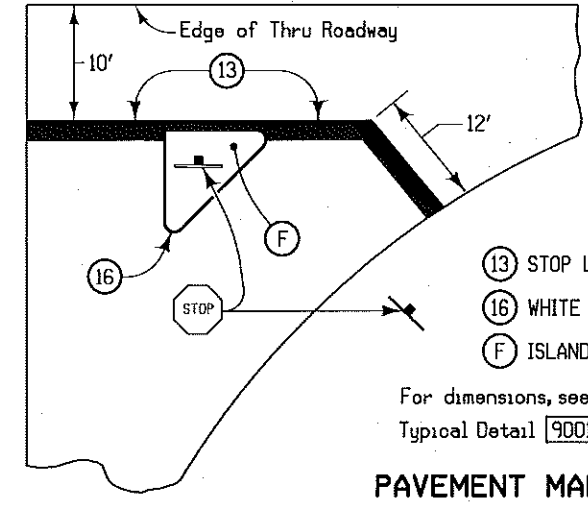
EACH UNIT = 3.84"

9008
01-23-85



"ONLY"
WORD 8'

9501
04-30-96



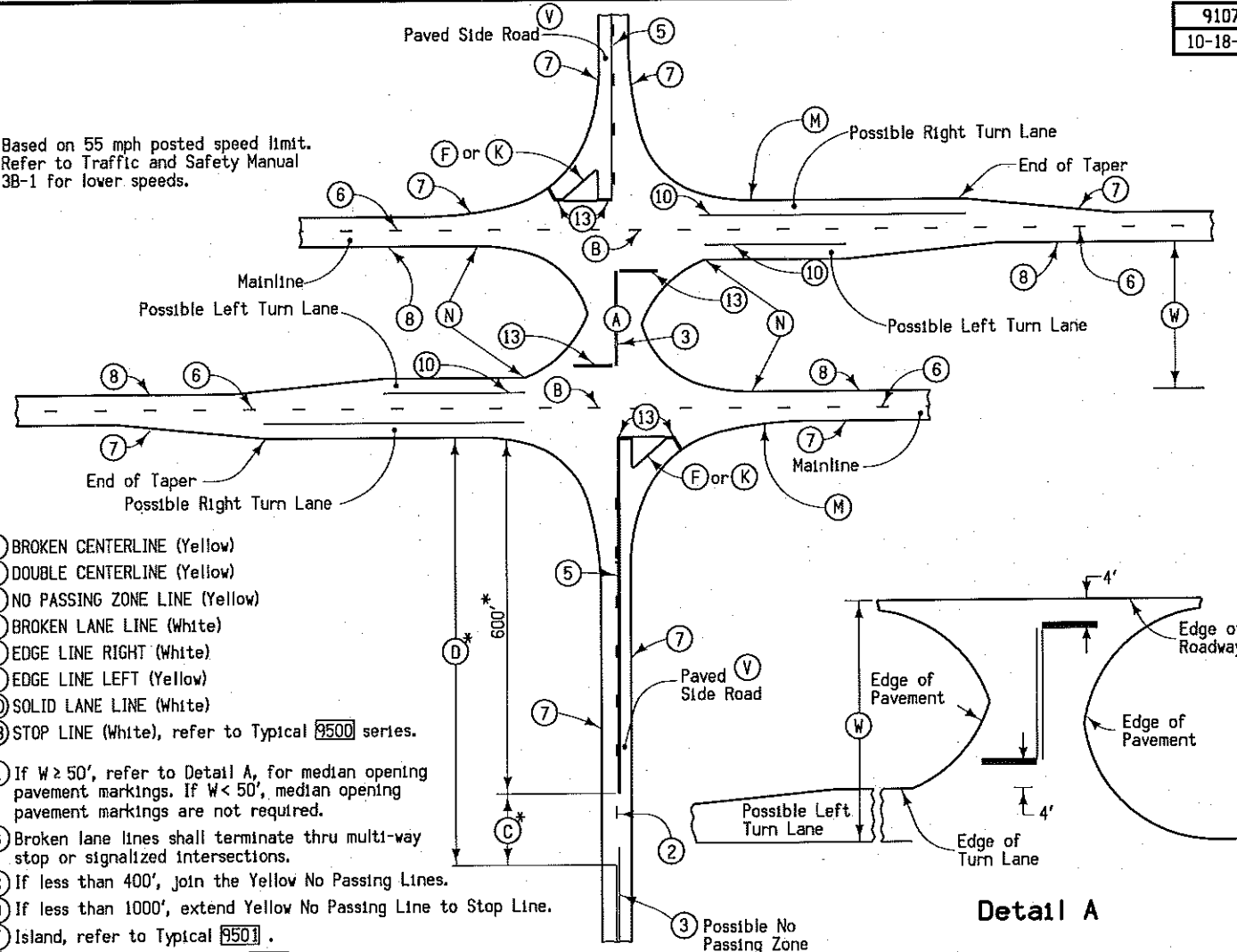
- (13) STOP LINE (White)
- (16) WHITE CURB
- (F) ISLAND

For dimensions, see
Typical Detail 9001

PAVEMENT MARKINGS
Stop Sign Islands
and Stop Lines

9107
10-18-05

* Based on 55 mph posted speed limit.
Refer to Traffic and Safety Manual
3B-1 for lower speeds.



Detail A

TYPICAL INTERSECTION
(DIVIDED ROADWAY)

- (2) BROKEN CENTERLINE (Yellow)
- (3) DOUBLE CENTERLINE (Yellow)
- (5) NO PASSING ZONE LINE (Yellow)
- (6) BROKEN LANE LINE (White)
- (7) EDGE LINE RIGHT (White)
- (8) EDGE LINE LEFT (Yellow)
- (10) SOLID LANE LINE (White)
- (13) STOP LINE (White), refer to Typical 9500 series.

- (A) If $W > 50'$, refer to Detail A, for median opening pavement markings. If $W < 50'$, median opening pavement markings are not required.
- (B) Broken lane lines shall terminate thru multi-way stop or signalized intersections.
- (C) If less than 400', join the Yellow No Passing Lines.
- (D) If less than 1000', extend Yellow No Passing Line to Stop Line.
- (F) Island, refer to Typical 9501.
- (K) No Island, refer to Typical 9502.
- (M) Terminate Edge Line at Beginning of radius or taper if no edge line on sideroad.
- (N) Terminate Edge Line at Beginning of radius or taper.
- (V) Field personnel should verify sideroad markings with appropriate jurisdiction.
- (W) Median Width

For pavement marking details
See Typical 9001.

PROJECT DESCRIPTION

100-10
10-18-05

At the intersection of U.S. 34 with Des Moines-Henry Avenue, construct a full depth PCC Westbound to Northbound Right turn deceleration lane with a 20 foot offset.

ESTIMATED PROJECT QUANTITIES

100-1A
07-15-97

Item No.	Item Code	Item	Unit	Total	As Bult Quan.
1	2102-2710070	EXCAVATION, CL 10, RDWY+BORROW	CY	588	
2	2102-2713090	EXCAVATION, CL 13, WASTE	CY	196	
3	2115-0100000	MODIFIED SUBBASE	CY	312	
4	2121-7425010	GRANULAR SHLD, TYPE A	TON	276	
5	2123-7450000	SHLD CONSTRUCTION, EARTH	STA	9.0	
6	2301-1033105	STD/S-F PCC PAV'T, CL C CL 3, 10.5"	SY	1521	
7	2301-6911722	PCC PAV'T SAMPLE	LS	1	
8	2416-0101036	RMV+REINSTALL CONC PIPE APRON LE 36"	EACH	1	
9	2416-1180024	CULV, CONC RDWY PIPE, 24"	LF	20	
10	2502-8212034	SUBDRAIN, LONGITUDINAL, (SHLD) 4"	LF	884	
11	2502-8220196	SUBDRAIN OUTLET, RF-19E	EACH	5	
12	2510-6745850	RMVL OF PAV'T	SY	8.33	
13	2518-6910000	SAFETY CLOSURE	EACH	2	
14	2523-6765009	RMV+REINSTALL LIGHT POLE+LUMINAIRE <i>Power Comp.</i>	EACH	1	
15	2524-6765010	RMV+REINSTALL SIGN	EACH	5	
16	2524-6765015	RMV+REINSTALL DELINEATOR POST	EACH	3	
17	2524-9275222	WOOD POST-TYPE A/B SIGN, 4"X6"	LF	176	
18	2524-9325001	TYPE A SIGN, SHEET ALUM	SF	12.5	
19	2527-9263109	PAINTED PAV'T MARK, WATERBORNE/SOLVENT	STA	47.75	
20	2527-9263137	PAINTED SYMBOL+LEGEND, WATERBORNE/SOLVNT	EACH	6	
21	2527-9263180	PAV'T MARK RMVD	STA	6.17	
22	2528-8445110	TRAFFIC CONTROL	LS	1	
23	2530-5070210	PATCH, PARTIAL-DEPTH PCC FINISH	SF	48	
24	2533-4980005	MOBILIZATION	LS	1	
25	2602-0000020	SILT FENCE	LF	1375	
26	2602-0000090	CLEAN-OUT OF SILT FENCE	LF	550	

ESTIMATE REFERENCE INFORMATION

100-4A
10-29-02

Item No.	Item Code	Description
1	2102-2710070	EXCAVATION, CL 10, RDWY+BORROW See cross sections. An estimated 398 cubic yards are required to build the subgrade to the elevations needed for construction. The remaining 190 cubic yards shall remain the property of the contractor. Approximately 146 cubic yards of this material may be used for earth shoulder fill. See Typ. 7110M for details. Any remaining material shall remain the property of the contractor and shall be removed from the project. See Standard Note 232-3A for turf restoration information. Seeding shall be incidental to this bid item. An estimated 0.25 acres will be disturbed to complete the work. Contractor staging and materials storage areas shall be restored at no cost.
2	2102-2713090	EXCAVATION, CL 13, WASTE Bid item shall be used for the removal and disposal of existing granular shoulder material. Volume was estimated using 12 ft width and 6 inch thickness for the length of the project. Material shall remain the property of the contractor and shall be removed from the project.
3	2115-0100000	MODIFIED SUBBASE See Typ. 2620M for details.
4	2121-7425010	GRANULAR SHLD, TYPE A
5	2123-7450000	SHLD CONSTRUCTION, EARTH See Typ. 7110M for details. Approximately 146 cubic yards of material is needed for earth shoulder fill. Excess Class 10 Excavation may be used for earth shoulder fill.

ESTIMATE REFERENCE INFORMATION

100-4A
10-29-02

Item No.	Item Code	Description
6	2301-1033105	STD/S-F PCC PAV'T, CL C CL 3, 10.5"
7	2301-6911722	PCC PAV'T SAMPLE See Typ. 2620M for details. Pavement thickness shall match that of adjacent mainline. See L Sheets for typical joint types and spacing. Jointing in new pavement shall align with existing joints in mainline. Quantity includes approximately 90 SY in the side road return, 1070 SY in the 12 ft turn lane and taper, and 360 SY in the painted median.
8	2416-0101036	RMV+REINSTALL CONC PIPE APRON LE 36" Remove and reinstall existing 24" apron at Station 1386+84. Method of measurement shall be by count. Basis of payment shall be contract price for each unit and shall include all labor, materials, and equipment necessary to complete the work.
9	2416-1180024	CULV, CONC RDWY PIPE, 24" See Tab. 104-3M for details and locations.
10	2502-8212034	SUBDRAIN, LONGITUDINAL, (SHLD) 4"
11	2502-8220196	SUBDRAIN OUTLET, RF-19E See Tab. 104-9 for details and locations. Approximately 64 cubic yards of porous backfill and 0.6 cubic yards of Class A Crushed Stone shall be incidental to these bid items.
12	2510-6745850	RMVL OF PAV'T Bid item shall be used to remove PC concrete header at Henry Ave return. See Tab. 110-1 for details and location. Approximately 40 LF of full depth saw cut is incidental to this bid item.
13	2518-6910000	SAFETY CLOSURE Bid item shall be used to close Henry Avenue. Closures shall be placed to prevent access from US 34 to Henry Ave from the south and to permit local access from Henry Ave to field entrances from the north.
14	2523-6765009	RMV+REINSTALL LIGHT POLE+LUMINAIRE <i>Power Comp. work of Oct 6. Done.</i> Bid item shall be used to relocate existing pole and luminaire located in the northeast quadrant of the Henry Ave intersection. New location shall be minimum of 34 feet from edge of pavement at approximate Sta. 1386+20. Utility locates are the responsibility of the contractor. Method of measurement shall be by count. Basis of payment shall be contract price for each unit and shall include all labor, materials, and equipment necessary to complete the work.
15	2524-6765010	RMV+REINSTALL SIGN
16	2524-6765015	RMV+REINSTALL DELINEATOR POST Bid items shall be used to remove existing delineator posts and Type A and B signs to allow construction, and to reinstall these items at the appropriate offset from the new construction. See Standard Road Plans RD-25, RD-28, and RE-7 for installation information. Method of measurement shall be by count. Basis of payment shall be contract price for each unit and shall include all labor, materials, and equipment necessary to complete the work.
17	2524-9275222	WOOD POST-TYPE A/B SIGN, 4"X6"
18	2524-9325001	TYPE A SIGN, SHEET ALUM Bid item shall be used to furnish and install 2 Type A Signs adjacent to right turn lane. Each sign shall consist of an R3-7 30"x30" sign with "RIGHT LANE MUST TURN RIGHT" legend mounted on a nominal 22 ft wood post. Signs shall be installed as per Standard Road Plan RD-28. Sign shall be located at approximate station 1390+50 and 1393+50. Locations may be adjusted to avoid obscuring or conflicting with existing signs.
19	2527-9263109	PAINTED PAV'T MARK, WATERBORNE/SOLVENT
21	2527-9263180	PAV'T MARK RMVD See Tab. 108-22 for details and locations.
20	2527-9263137	PAINTED SYMBOL+LEGEND, WATERBORNE/SOLVNT See Tab. 108-29 for details and locations.
22	2528-8445110	TRAFFIC CONTROL See Tab. 108-23 for details.
23	2530-5070210	PATCH, PARTIAL-DEPTH PCC FINISH Bid item shall be used to mill and partial depth patch existing shoulder rumble strips within the 180 ft right turn lane development area and 240 ft parallel lane area.
24	2533-4980005	MOBILIZATION
25	2602-0000020	SILT FENCE This item includes 25% more silt fence than the tab quantity for field adjustment and replacements. See Tab. 100-17 for locations and details.
26	2602-0000090	CLEAN-OUT OF SILT FENCE This item is included for maintaining the silt fence during the project. See Tab. 100-17 for locations and details.

STANDARD ROAD PLANS

105-4
10-16-07

The following Standard Road Plans shall be considered applicable to construction work on this project.

Number	Date	Sheets	Title
RC-17	10-16-07	2	Silt Fence
RD-25	04-15-03	1	Location Details for Type 'B' Signs
RD-28	10-16-07	1	Location Details for Type 'A' Signs
RE-7	04-15-03	1	Delineators and Object Markers
RF-1	04-03-01	1	Concrete Culvert Pipe
RF-3	10-03-00	1	Concrete Aprons
RF-14	10-16-07	1	Connected Pipe Joints
RF-19E	10-16-07	1	Outlets for Longitudinal, Transverse and Backslope Subdrains
RG-1	09-21-99	1	P.C. Concrete Pavement Widening
RH-22	04-18-06	1	Two-Lane P.C. Concrete Pavement
RH-37D	04-03-01	1	Type 'A' or 'B' Granular Surfaced Shoulder (Adjacent to PCC Pavement)
RH-41B	10-21-03	1	Paved Shoulder Full Depth P.C. Concrete (Adjacent to PCC Pavement)
RH-50	04-17-07	1	Joints (Transverse Contraction)
RH-51	10-17-06	1	Joints (Longitudinal Contraction)
RH-52	04-17-07	1	Joints (Expansion)
RH-55	10-17-06	2	Dowel Assemblies
TC-1	10-17-06	1	Work not Affecting Traffic
TC-252	10-17-06	2	Road Closure
TC-402	10-16-07	1	Shoulder Closure
TC-418	10-16-07	1	Lane Closure on Divided Highway

TRAFFIC CONTROL PLAN

108-23
04-04-89

- 1a. Traffic will be maintained on US 34 at all times. Traffic shall be restricted from the outside lane for excavation and paving operations for the right turn lane. Traffic shall be restricted from the outside shoulder and new turn lane for backfilling and finishing operations.
- 1b. Henry Avenue will be closed to traffic.
2. Traffic control on this project shall be in accordance with Standard Road Plans of the TC series listed in Tabulation 105-4. For additional complementary information, refer to Part 6 of the Manual on Uniform Traffic Control Devices and to the current Standard Specifications.
3. The contractor shall coordinate traffic control with other projects in the area.

TABULATION OF SILT FENCES

100-17
11-10-83

Location		Side	Length (Lin. Ft.)	Remarks
Station to Station	Station to Station			
1385+00	1395+00	LT	1100	Est. 5 segment of fence on foreslope

REMOVAL OF PAVEMENT

110-1
04-19-05

Refer to Tabulation 102-5

* Not a Bid Item

Station to Station	Pavement Type	Area (Sq. Yds.)	Saw Cut* (Lin. Ft.)	Intakes and Utility Accesses (No.)	Remarks
Sta. 1386+41.35 - Sta. 1386+79.35	PCC	8.33	38		

TABULATION OF EXISTING PAVEMENT

102-5
10-29-02

No.	Location	Existing Pavement (Type)	Coarse Aggregate		Source	Durability Class	Pavement Thickness (Inches)	Reinforcement (Type)	Detail Typical
			Gravel	Crushed Stone					
	US034								
	MP.246.73 - MP.247.33	PCC			CONKLIN	I	10.5		

TABULATION OF SPECIAL EVENTS

102-15
10-29-02

Event	Location	Date
None Provided		

06-07-94 232-8
The top six (6) inches of the disturbed areas shall be free of rock and debris and shall be suitable for the establishment of vegetation, subject to the approval of the Engineer.

10-28-97 232-10
The contractor is expected to have materials, equipment, and labor available on a daily basis to install and maintain erosion control features on the project. This may involve seeding, silt fence, rock ditch checks, silt basins, or silt dikes.

01-20-84 241-1
Road contractor is to use due caution in working over and around all tile lines. Breaks in the tile line due to the contractor's carelessness are to be replaced at his expense without cost to the State of Iowa. Any tile lines broken or disturbed by our cut lines will be replaced as directed by the engineer in charge of construction and at the State of Iowa's expense.

01-19-88 251-1
The contractor shall be responsible to maintain access to individual properties during construction.
Relocated access shall be completed to individual properties prior to removal of existing access.
If the permanent access cannot be completed prior to removal of the existing access, the contractor shall provide and maintain an alternate access. Temporary Granular Surfacing will be paid for as a contract item or by extra work.

06-22-84 251-2
The contractor is hereby notified that removal of any existing traffic markers, warning devices or guardrail barriers shall be scheduled subject to the approval of the Engineer. The contractor may be required to place temporary warning devices at certain locations where replacement features are not installed the same day during which any such removals take place.

04-03-01 203-2
During construction of this project, the contractor will be required to coordinate his operations with those of other contractors working within the same area. Other work in progress during the same period of the time will include construction of the following projects:

Project	Type of Work
_____	_____
None	_____

10-29-02 213-1
It shall be the contractor's responsibility to provide waste areas or disposal sites for excess material (excavated material or broken concrete) which is not desirable to be incorporated into the work involved on this project. These areas shall not impact wetlands or "Waters Of The U.S." No payment for overhaul will be allowed for material hauled to these sites. No material shall be placed within the right-of-way, unless specifically stated in the plans.

01-20-84 221-4
In order to avoid any unnecessary surface breaks or premature spalling, the contractor is cautioned to exercise extreme care when performing any of the necessary saw cutting operations for the proposed pavement removal.

01-20-84 232-5
The contractor shall not disturb desirable grass areas and desirable trees outside the construction limits. The contractor will not be permitted to park or service vehicles and equipment or use these areas for storage of materials. Storage, parking and service area(s) will be subject to the approval of the resident engineer.

04-17-07 232-3A
EROSION CONTROL: (Rural Seeding)
Following completion of work on this project, all disturbed areas shall be seeded, fertilized, and mulched.
SEEDING:
3 lbs. of Fescue or Fawn per 1000 sq. ft.
FERTILIZER:
17 lbs. of 13-13-13 (or equivalent) commercial fertilizer per 1000 sq. ft.
MULCH:
70 lbs. of dry cereal straw per 1000 sq. ft. All mulch to be consolidated into the soil with a mulch stabilizer.
The preparation of the seedbed, furnishing and application of seed, fertilizing, and mulching shall be considered incidental to work on this project and no extra compensation will be allowed.

LONGITUDINAL SUBDRAIN SHOULDER AND BACKSLOPE

104-9
10-18-05

① Refer to RL-13 or RL-15.

Refer to Soils Sheets.

* Not a Bid Item

Line No.	Road or Lane Ident.	Location Station to Station		Side	Depth ⓓ (Inches)	Longitudinal Subdrain (RF-19C)						Subdrain Outlet RF-19C, RF-19E, or RF-22			Porous * Backfill (Cu. Yds.)	Class "A" * Crushed Stone (Cu. Yds.)	Remarks
						Shoulder		Backslope		Bridge Berm (1)		Station	Size (Inches)	Type			
						Size (Inches)	Length (Feet)	Size (Inches)	Length (Feet)	Size (Inches)	Type						
1	WBL	1386+05	1386+79	LT	24	4	114					1386+05	6	E	5.3	0.2	Along edge of turning lane
												1386+79	6	E			
2	WBL	1386+90	1394+00	LT	36	4	750					1386+90	6	E	57.9	0.2	Along edge of turning lane
												1394+00	6	E		0.2	
EXTEND	EXISTING SUBDRAIN OUTLET			LT			20					1386+00 +/-				0.2	Along edge of existing Pavement Note: Original Metric Stationing 422+69
TOTALS							884								63.2	1	
NOTE:	ALL LONGITUDINAL SUBDRAINS ARE TYPE 7 WITH PCC OR TYPE 8 WITH HMA (ACC) UNLESS OTHERWISE NOTED IN REMARKS COLUMN.																

GEOTECHNICAL DESIGN



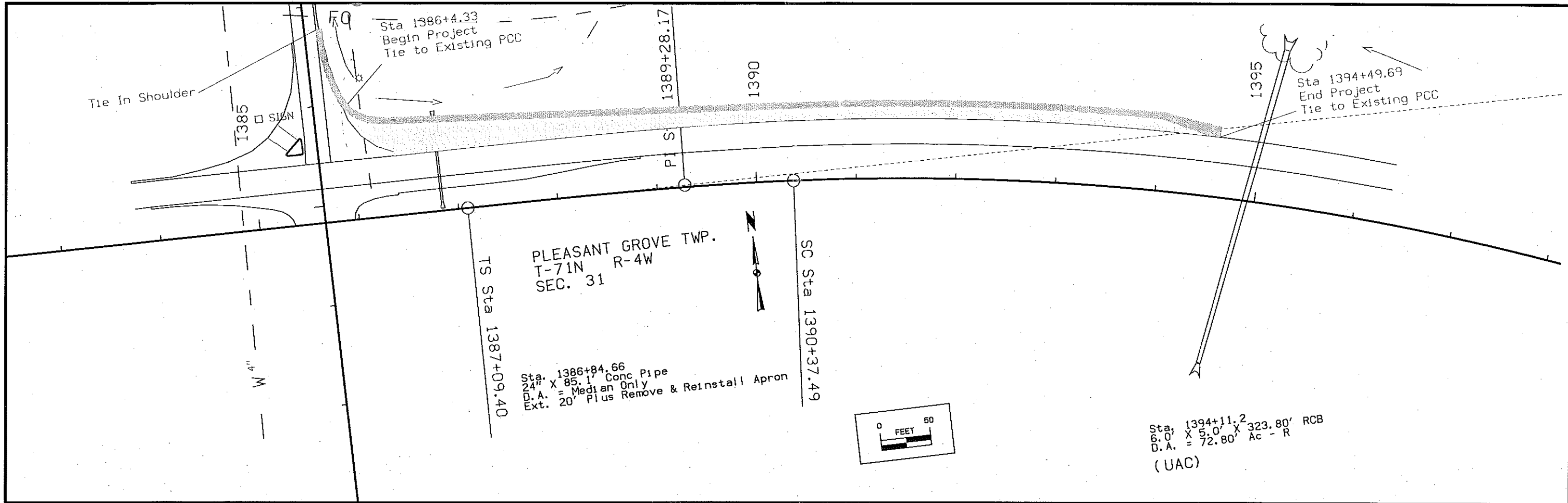
I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Robert L. Stanley 10-2-07
Signature Date

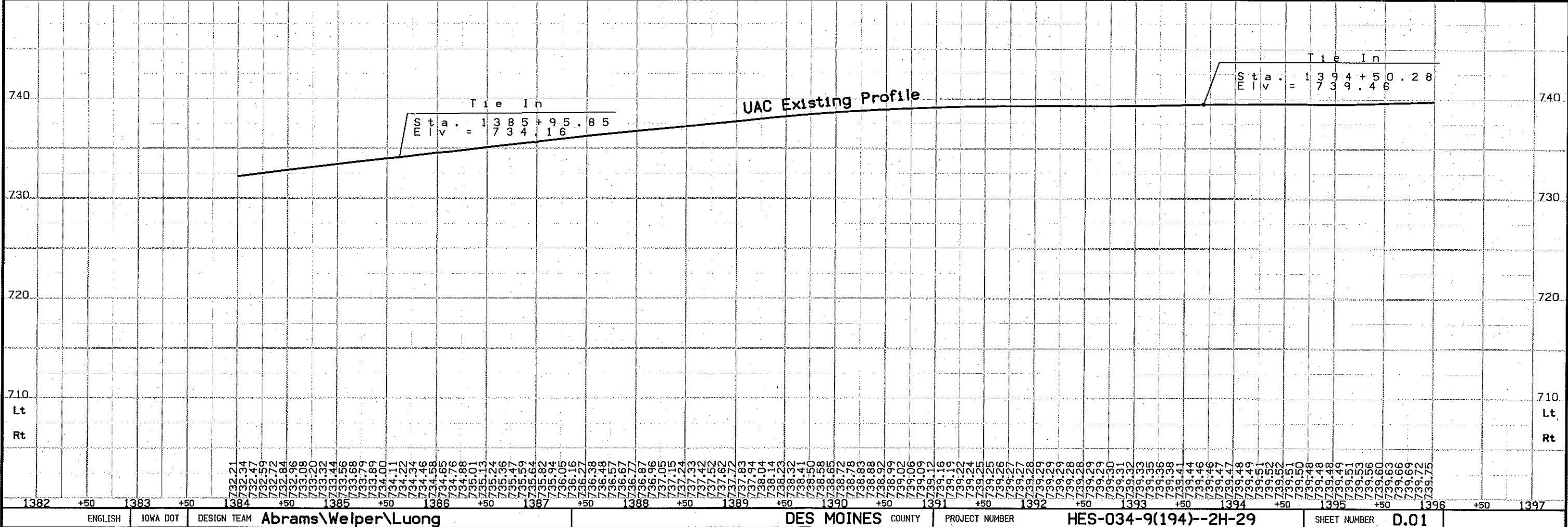
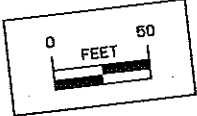
Robert L. Stanley
Printed or Typed Name

My license renewal date is December 31, 20 08.

Pages or sheets covered by this seal: **C.04**

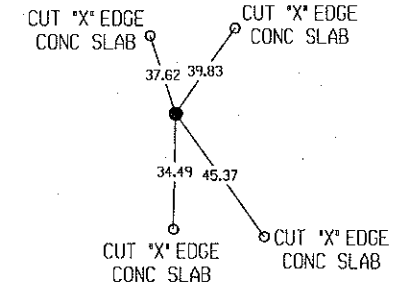
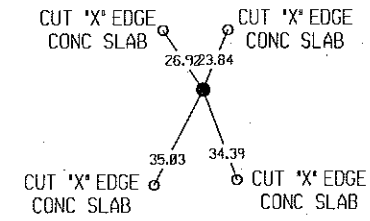


Sta. 1394+11.2
 6.0' X 5.0' X 323.80' RCB
 D.A. = 72.80' Ac - R
 (UAC)



CP STA 1387+09.40
POINT # 127
FO REBAR 1.0' DEEP
XC=590594.98, YC=541792.87

CP STA 1390+37.48
POINT # 128
FO REBAR 1.0' DEEP
XC=590922.81, YC=541781.58



DETAILS OF REFERENCE INFORMATION

All References are Plumb Distances
unless otherwise noted.

Match Existing Side Road Markings

Refresh Existing Edge Line on Radius (White)

Refresh Existing Curb Markings (White)

Match Existing Mainline Markings

Refresh Existing Stop Bar (White)

Remove Existing Edge Line on Radius (White)

Sta. 1386+40.88
Continue Edge Line Outside (White)

Sta. 1385+81.51
Begin Edge Line Painted Median (White)

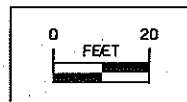
45° 20'

1389

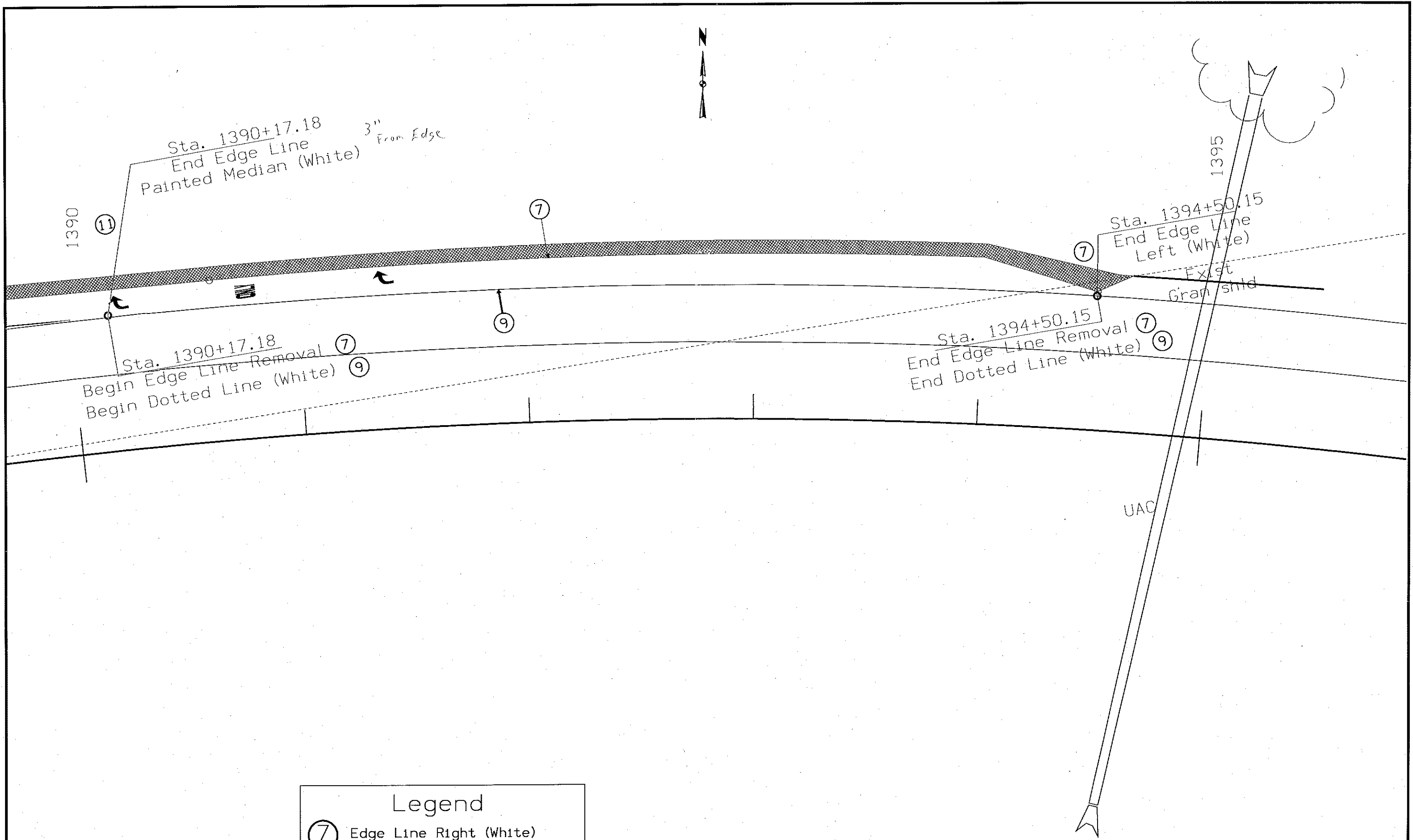


Legend

- ⑦ Edge Line Right (White)
- ⑪ Channelizing Line (White)
- ⑬ Stop Line (White)
- ⑯ White Curb



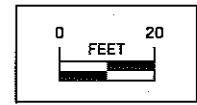
Permanent Pavement Marking



Legend

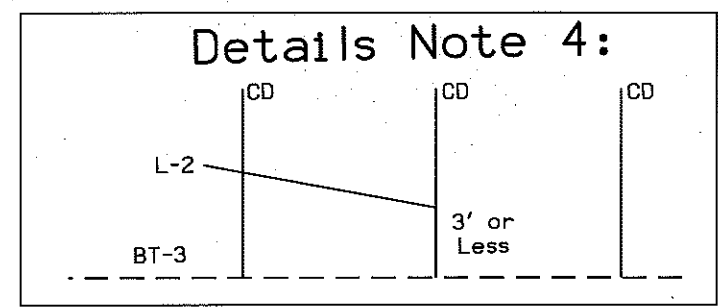
⑦ Edge Line Right (White)

⑨ Dotted Line (White)



Permanent Pavement Marking

Joe
(319) 759-0335



Sta. 1386+40.88
Begin 400 ft Taper
Offset 32.20' from edge of slab

1385

Curve 2

Curve 1

L-2 ③

CD (typical)

Var Slope

Const Slope 3%

Transition Slope
3% to 1.5%

Const Slope 1.5%

BT-3

④

Note:

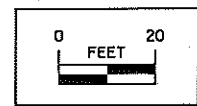
1. All joints in radius pavement shall be CT
2. Match existing joint spacing for CD joints
3. L-2 joint on edge of Rt. Turn Lane
4. L-2 joint ends at CD joint when less than 3 ft from BT-3 joint

Curve 2

$\Delta = 54^\circ 50' 06.08''$ (RT)
 $T = 25.94$
 $L = 47.85$
 $R = 50.00$
 $E = 6.33$

Curve 1

$\Delta = 9^\circ 41' 46.76''$ (RT)
 $T = 10.18$
 $L = 20.31$
 $R = 120.00$
 $E = 0.43$



Geometric & Staking Details
Mainline US 034



Sta. 1390+76.05
Begin Curve 240 ft
Offset 12.0' from edge of slab

Sta. 1392+81.96
End Curve 240 ft
Offset 12.0' from edge of slab

Sta. 1392+81.96
Begin Curve 120 ft
Offset 12.0' from edge of slab

Sta. 1394+00.20
End Curve 120 ft
Offset 12.0' from edge of slab

+07.71
Sta. 1394+00.20
Begin Taper 5:1
Offset 12.0' from edge of slab

+57.71
Sta. 1394+50.15
End Taper 5:1
Offset 2.0' from edge of slab

1390

Const Slope 1.5%

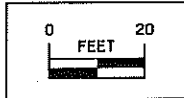
CD (typical)

BT-3

Exist
Gran shld

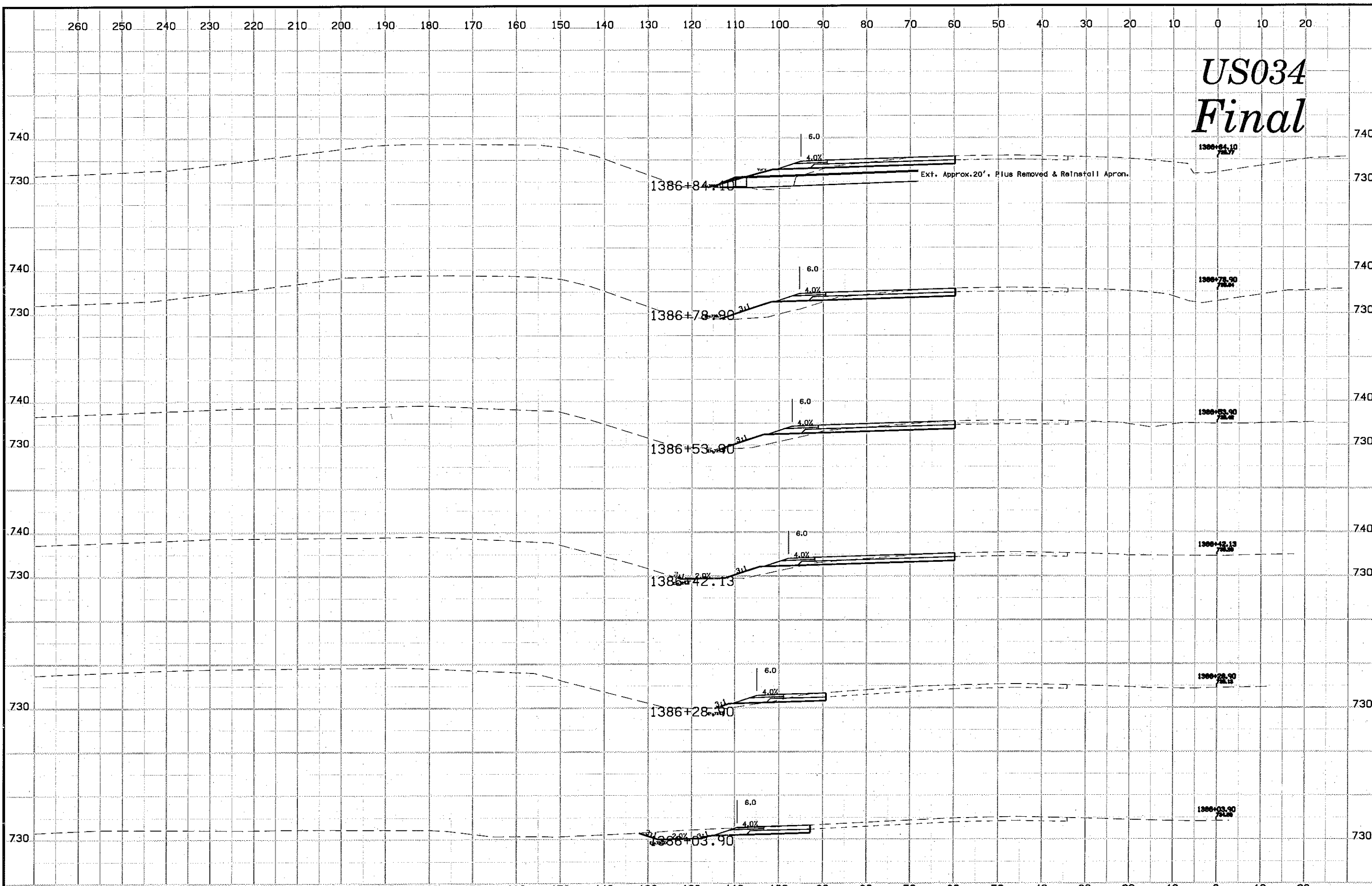
1395

UAC

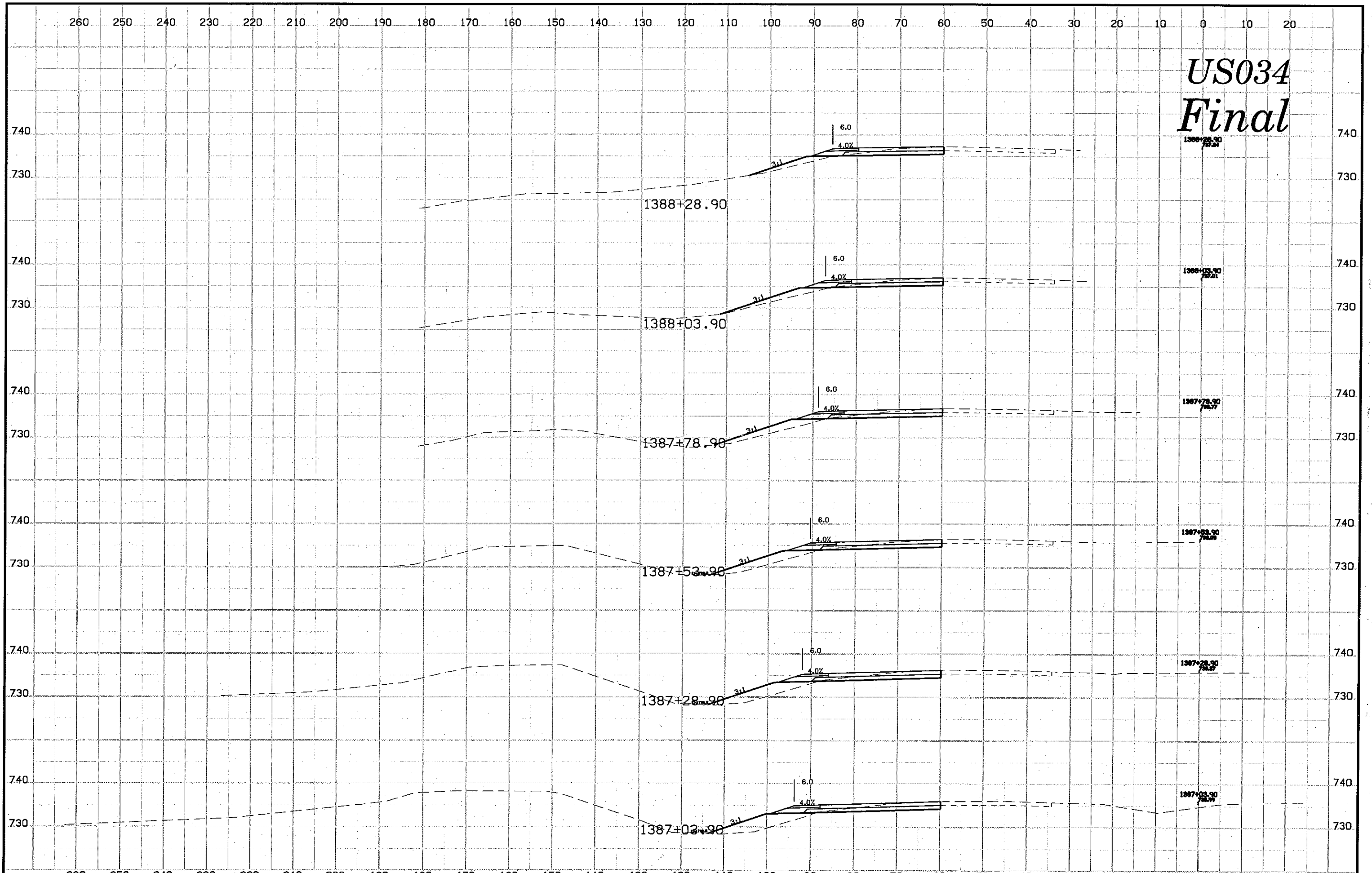


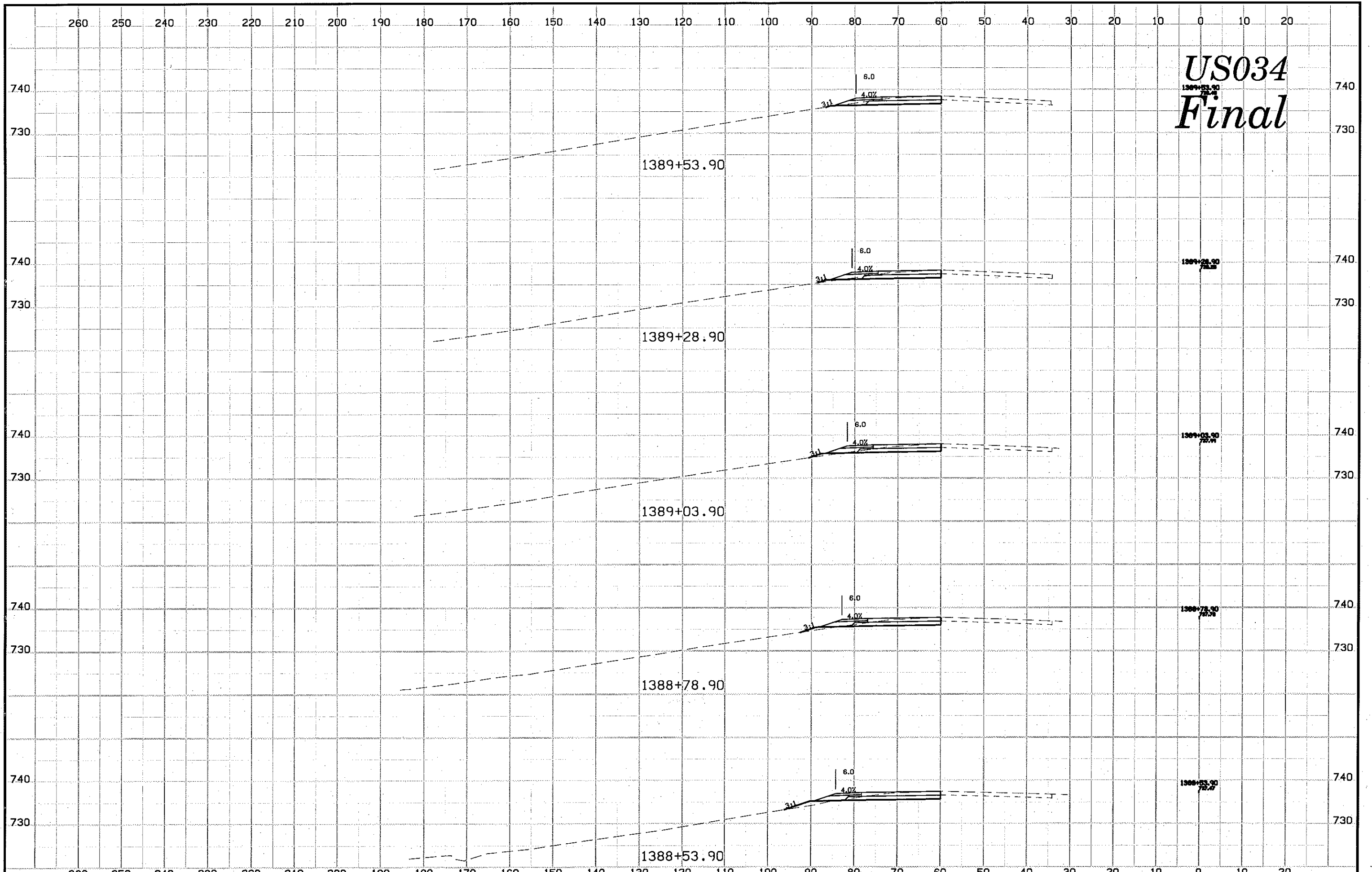
Geometric & Staking Details
Mainline US 034

US034 Final

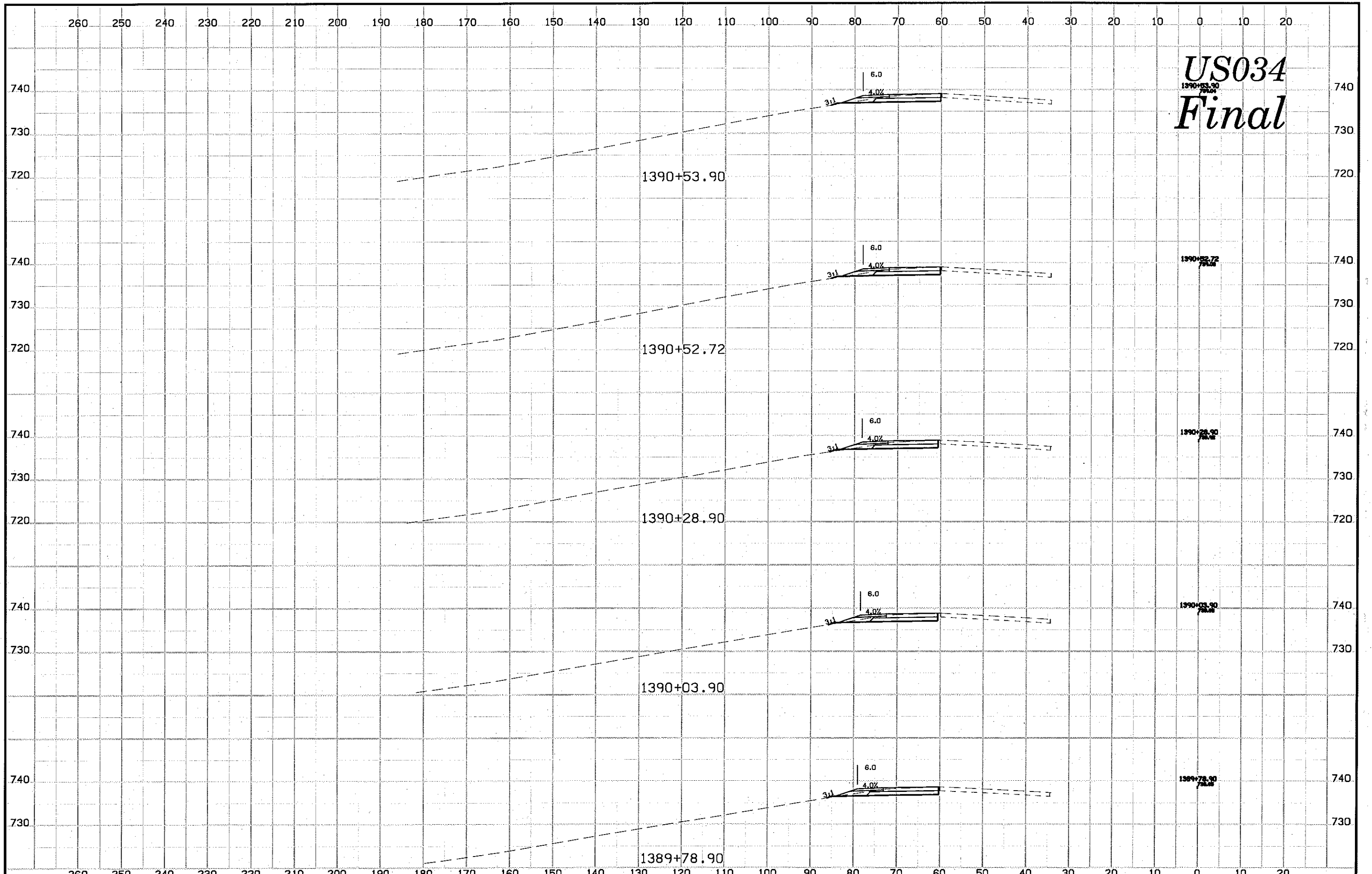


US034 Final



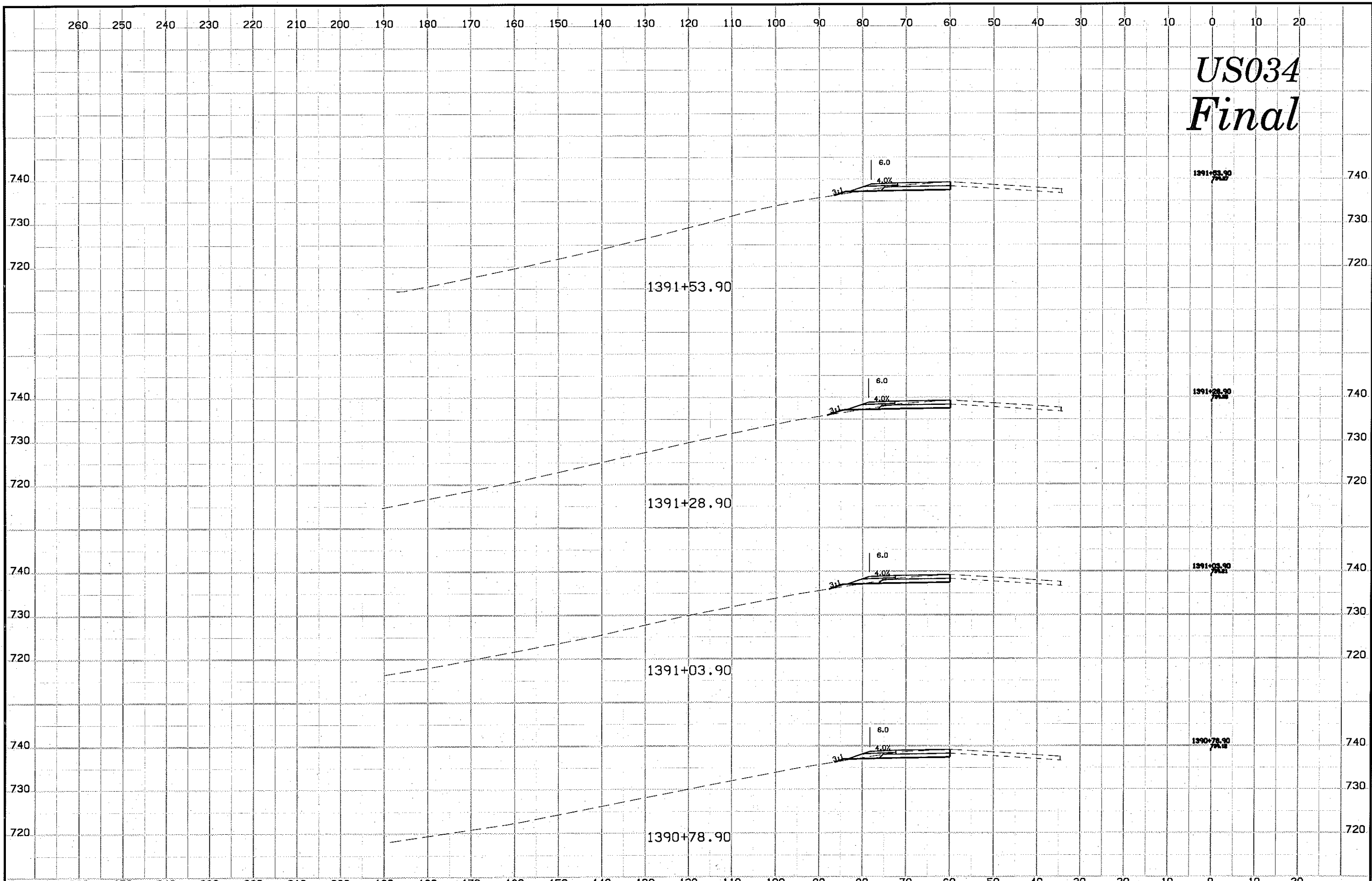


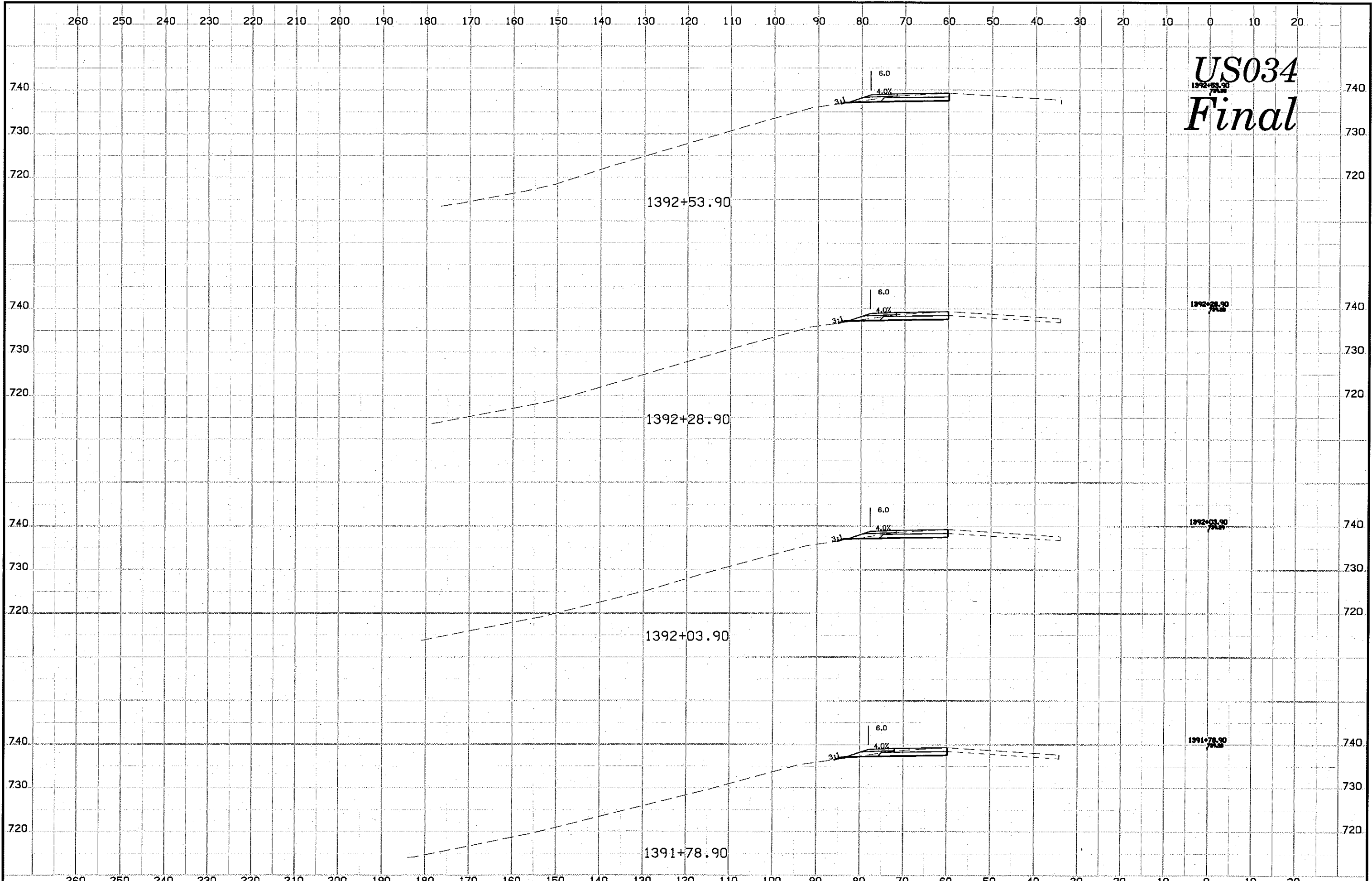
US034
Final



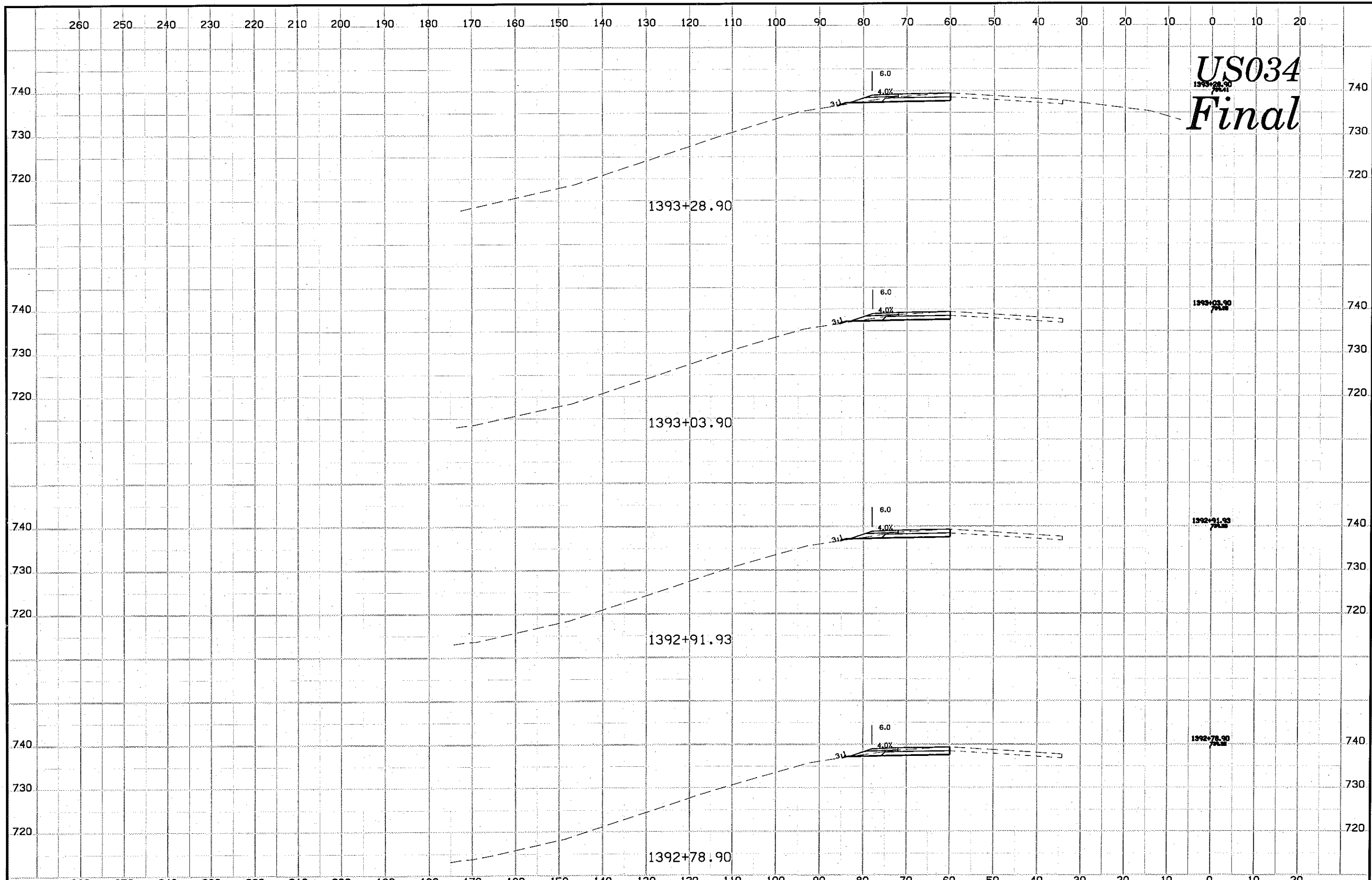
US034
Final

US034 Final

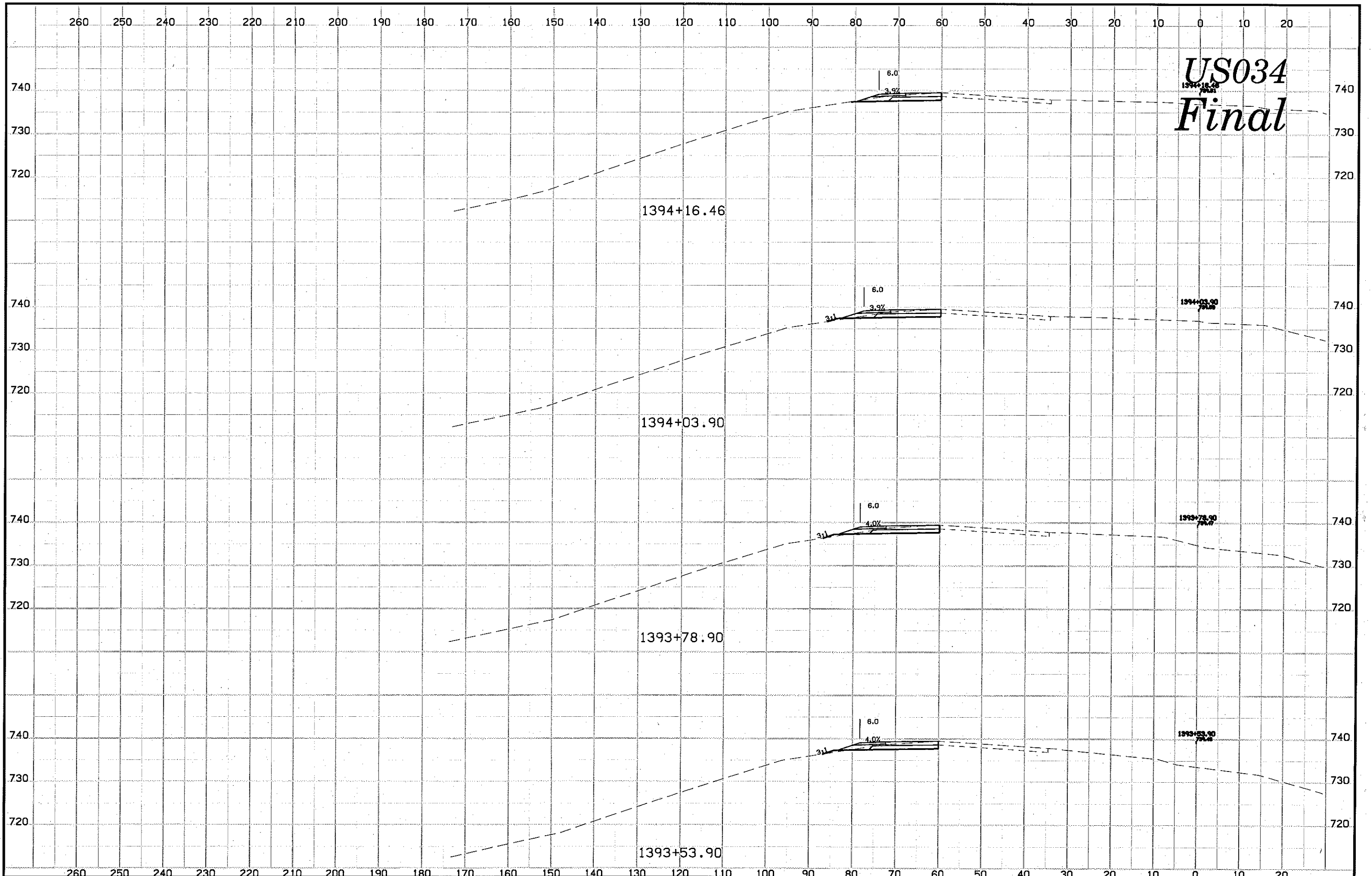




US034
Final

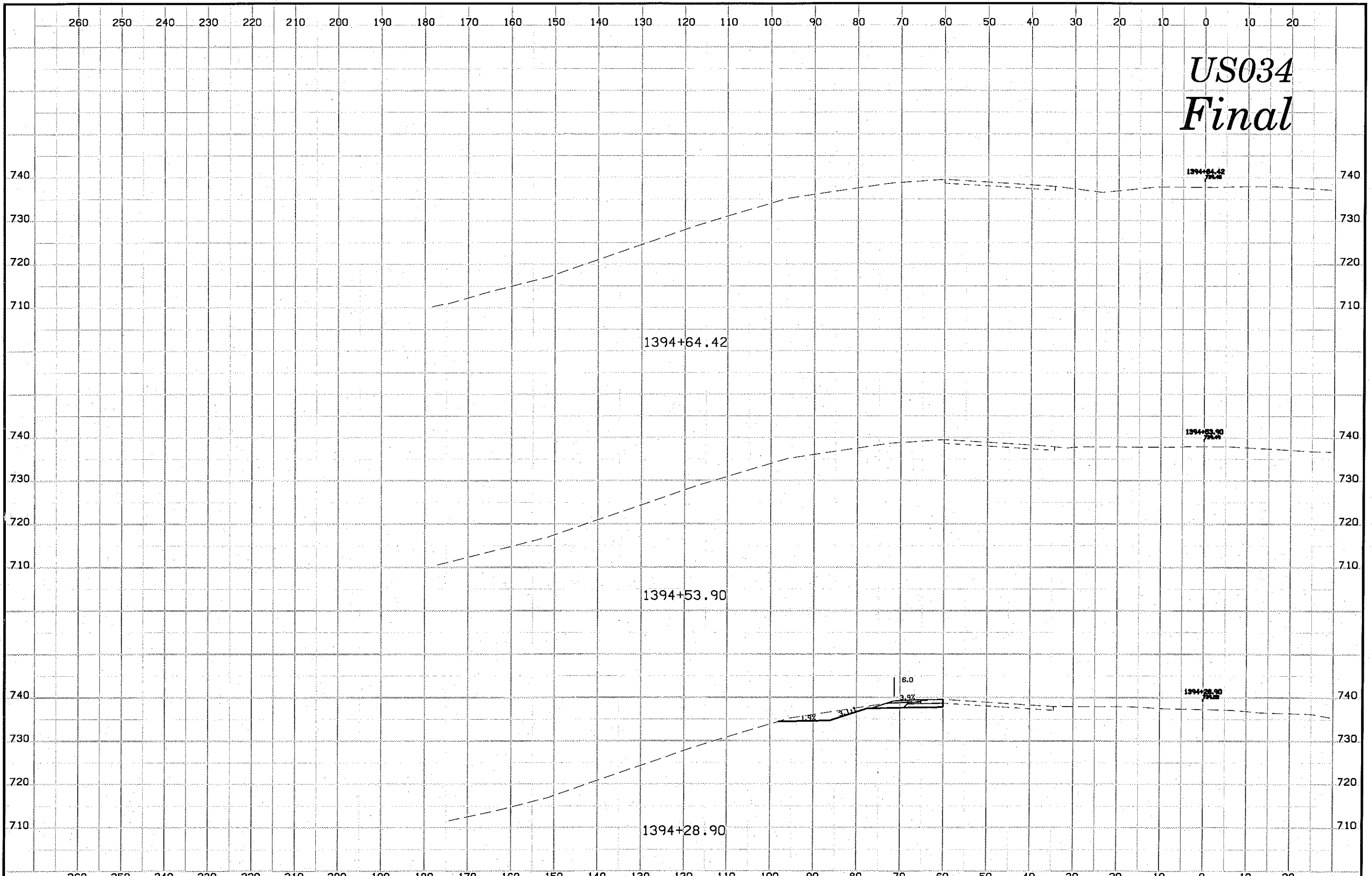


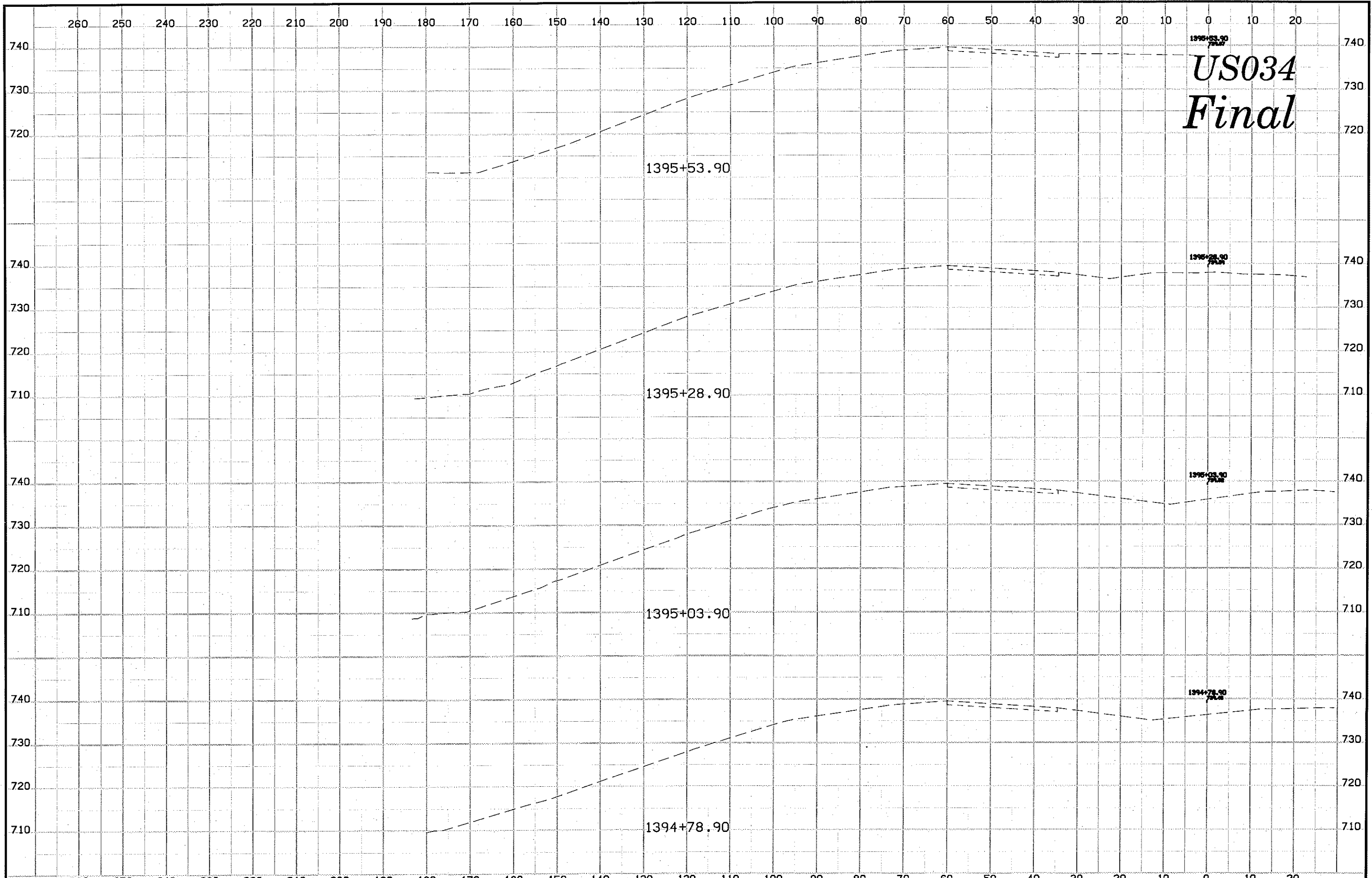
US034
Final



US034
Final

US034 Final





US034
Final

1395+53.90

1395+28.90

1395+03.90

1394+78.90

1395+53.90
734.2

1395+28.90
734.2

1395+03.90
734.2

1394+78.90
734.2

260 250 240 230 220 210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20

US034
Final

