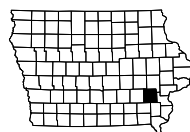


WASHINGTON COUNTY

PCC PAVEMENT - REPLACE
NHSX-001-4(061)--3H-92

LETTING DATE
6/21/2022



INDEX OF SHEETS	
No.	DESCRIPTION
A Sheets	Title Sheets
A.1	Title Sheet
A.2	Location Map Sheet
A.3 - 8	Project Concept
B Sheets	Typical Cross Sections and Details
B.1 - 3	Typical Cross Sections and Details
D Sheets	Mainline Plan and Profile Sheets
* D.1 - 12	As Built Mainline Plan & Profile
J Sheets	Traffic Control and Staging Sheets
J.1	Traffic Control Plan/Staging Notes/Coordinated Ops.
U Sheets	500 Series, Mod.Stds. and Detail Sheets
U.1	Detail of Mailbox Turnouts
	* Color Plan Sheets



PLANS OF PROPOSED IMPROVEMENT ON THE
PRIMARY ROAD SYSTEM
WASHINGTON COUNTY
PCC PAVEMENT - REPLACE

Iowa 1 from Keokuk Co. line to WCL of Brighton

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

Value Engineering Saves. Refer to Article 1105.14 of the Specifications.



REVISIONS

TOTAL	
	25
PROJECT IDENTIFICATION NUMBER	
22-92-001-010	
PROJECT NUMBER	
NHSX-001-4(061)--3H-92	
R.O.W. PROJECT NUMBER	
-	
-	
-	

SEE A.2 FOR MAP

SCHEDULE

D07- 4/05/2022

DESIGN DATA RURAL

2022	AADT	1700	V.P.D.
2042	AADT	1900	V.P.D.
2042	DHV	190	V.P.H.
	TRUCKS	13	%
	Total		
	Design ESALs	..	

INDEX OF SEALS

SHEET NO.	NAME	TYPE
A.1	X	Primary Signature Block
X	X	X

PRELIMINARY PLANS

Subject to change by final design.

D2 PLAN - Date: 3-09-22

FILE NO.

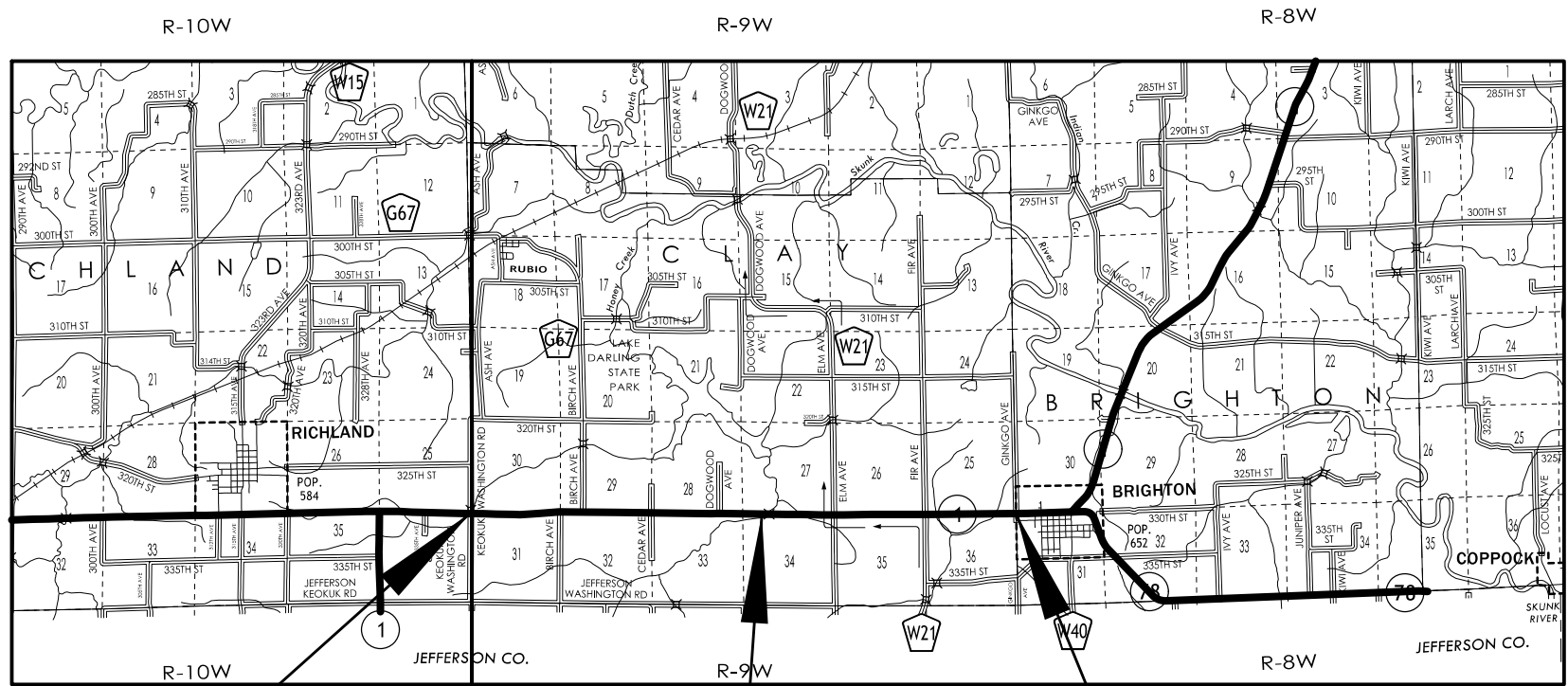
ENGLISH

DESIGN TEAM HOLST/TAMRAKAR/FINCH

WASHINGTON COUNTY

PROJECT NUMBER NHSX-001-4(061)--3H-92

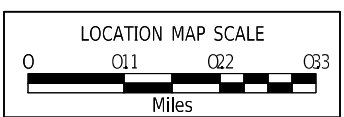
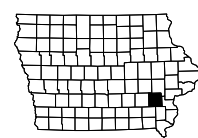
SHEET NUMBER A.1



BEGIN PROJECT/STAGE 1
STA. 163+46.70

END STAGE 1/BEGIN STAGE 2
STA. 323+96.00

END PROJECT/STAGE 2
STA. 480+52.30



TO OFFICE: District 5
ATTENTION: Robert Younie
FROM: Jim Phillips
OFFICE: District 5 Design
SUBJECT: FY 2022 Concept Statement – Draft

DATE: January 13, 2022
 Rev. Jan 21 traffic data
COUNTY: Washington
PROJ. NO.: NHSX-001-4(061)- -3H-92
PIN: 22-92-001-010
FOLDER: [la 1 Washington PCC Concept \(61\) prot link - 1 13 22.docx](#)

PROJECT DATA:
 ROUTE: Iowa 1
 LENGTH: 5.99 miles
 PLANNING CLASSIFICATION: 3
 MAINTENANCE SERVICE LEVEL: C
 NHS ROUTE: Yes

TRAFFIC:
 RURAL TRAFFIC: 2012 --- 1600 ADT with 16% trucks from [Microsurfacing Concept Final Concept IA 1 Keokuk Co. \(4\).docx](#)
 2018 --- 2670 ADT with 8% trucks (210 vpd) from [la 1 Traffic book.docx](#)

PROJECT LOCATION:
 Iowa 1 from Keokuk Co. line to WCL of Brighton
 ProjectWise link to Map: [Iowa 1 Map.docx](#)
 ProjectWise link to Scoping Map: [Cost Screen shots Iowa 1 scoping tool.docx](#)

Iowa 1, Washington Co.
 Keokuk Co. line to WCL of Brighton
 FY '22 PCC Reconstruction, Program Amendment



DESIGN DESIGNATION DATA SHEET								
COUNTY	ROUTE	LOCATION	SECTION LENGTH	ESTIMATED 2022 ADT	2022 PERCENT TRUCKS	ESTIMATED 2042 ADT	ESTIMATED 2042 DHV	2042 PERCENT TRUCKS
WASHINGTON	1	1 KEOKUK CO LINE to E JCT CO RD W21	5.00	1501	14%	1658	171	14%
		2 E JCT CO RD W21 to W LIMITS BRIGHTON	1.00	2726	8%	3013	311	8%
TOTAL LENGTH APPROX. AVERAGE FOR THE TOTAL PROJECT			6.00	1700	13%	1900	190	13%
PROJECT NUMBER	N/A			ESTIMATE NUMBER	3622			
DATE OF ESTIMATE	January 18, 2022							

ProjectWise link to Traffic Data: [3622a.xlsx](#)

PURPOSE AND NEED:
 The existing pavement is full depth asphalt.
 The pavement history is provided in this link to the 2019 Pavement Milepost History: [Iowa 1 Pavement History 2019 milepost book.xlsx](#)
 Since 1942, there is an accumulated 24 ft. wide x 10.5 inch thick HMA pavements on a 6 inch rolled stone base. Pavement widening to 24 ft. has occurred before 1981: [1981 Richland to Brighton FN-1-3\(1\)--21-54 .pdf](#)

The original base HMA is 80 years.
 The existing pavement condition is provided in a Quick look table on Pg. 11. Also see pg. 5
 The existing granular shoulder is 4 foot wide. Per the 2017 Microsurfacing plans: [2017 Microsurfacing NHSN-001-3\(4\)--2R-54.pdf](#)

Paving 4 ft. of the existing shoulders may also significantly reduce the amount of time maintenance staff is out along the roadway maintaining the granular shoulder, which may reduce the risk of potential crashes. The granular shoulders could be PCC or HMA paved 4 ft. wide, to address edge drop-offs, run-off the road crashes, or over corrective steering that could contribute to cross-centerline crashes. With PCC paving of the mainline, it would be cost effective to pave the shoulders with PCC and pave the shoulders – with a tie bar and sawed longitudinal joint- during the same process as mainline paving. More information about the shoulders is available in the Complete Streets 'Needs Test' page 5

PURPOSE AND NEED cont'd:

With 80 year old pavement, a PCI of 54, rutting of 0.29 inches after Microsurfacing in 2017, no existing paved shoulders, 2 fatalities in the last 5 years, and a design / construction timeline that does not allow for purchasing right of way for wider shoulders / grading, this segment was chosen as a candidate for pavement replacement with 4 ft paved shoulders. A schematic existing and proposed roadway **typical section** is in Project Wise: [Exist HMA Proposed PCC Typical B01 schematic.pdf](#)

FEASIBLE ALTERNATIVES:

Per pg. 5 for the specific Pavement Determination and the dTIMS recommended pavement rehabilitation treatment.

A schematic existing and proposed roadway **typical section** is in Project Wise: [Exist HMA Proposed PCC Typical B01 schematic.pdf](#)

See pg 9 for the assumptions and list of common improvements for each Alternate.

Alternate 1:

The PCC and Special Backfill thickness is pending the traffic count and pavement structural need. The following estimate preliminarily assumes 9 inch PCC, 6 inches Special Backfill (Recycling existing HMA pavement) as a drainable base layer for subdrains. PCC Reconstruction **Estimated Cost \$ 9,731,000.**

Alternate 2:

The PCC and Modified Subbase thickness is pending the traffic count and pavement structural need. The following estimate preliminarily assumes 9 inch PCC, 6 inches Modified Subbase (New material) as a drainable base layer for subdrains and the existing HMA pavement would be hauled away for the project. PCC Reconstruction Estimated Cost \$ 10,280,000

RECOMMENDATION:

Construct Alternate 1.

\$ 9,731,000 See below for Cost Estimate

_____0 Washington County side road intersection paving, pg. 6

\$ 9,731,000 Total

Here are ProjectWise links:

Cost Estimate: [1 13 2022 Iowa 1 Wash Cost Est \(61\).xlsx](#)

iPDWeb has D0 Estimate

FUNDS PROGRAMMED:

Currently proposed for programming in Fiscal year 2022.

Funding source: FY '22 Program Amendment [Proposed-2022-Iowa-Transportation-Improvement-Program-Amendment.pdf](#)

PROJECT IMPACTS: Designed by: District/**Design**/Consultant

Design Impact	Assistance Requested (Y/N)	Remarks
ADA:	N	
Agreements/Notification Letters:	Y	Washington Co. paved gravel side roads, pg. 6
Bridges and Structures:	N	See Pg. 7. Update guardrail, erosion control along berm
Consultant:	N	
Contracts:	N	
Design/Methods:	N	
Location and Environment:	N	
Maintenance: (Shop Location)	Y	Washington or Fairfield, potential location to stockpile HMA millings
Project Management:	N	
Railroad:	N	
RCE: (Office Name)	Y	Fairfield
Right of Way:	N	
Soils:	N	
Survey/Photogrammetry:	N	
Systems Planning:	N	
Traffic and Safety:	Y	Detour, Need Agreement
Utilities:	Y	To be reviewed. See culvert repairs, subdrains
Other:	Y	Detour, Coordinate with Lake Darling Park

Cc: C. Purcell
S. J. Megivern
M. Nop
J. W. Laaser-Webb
E. C. Wright
~~N. M. Miller~~
B. E. Azeltine
S. J. Gent
B. Bradley
D. R. Claman
~~F. Today~~
J. Bartholomew
D. L. Maifield
E. D. Gansen
J. Garton
C. Steffensmeier
J. Webb
FHWA [Program.Delivery-IA@dot.gov](#)
H. Torres-cacho
Greg Cagle

M. J. Kennerly
J. S. Nelson
M. A. Swenson
W. A. Sorenson
M. E. Ross
C. C. Poole
~~H. Beach D. Popp~~
S. Anderson
K. K. Patel
C. Brakke
E. Engle
N. Cuva
J. Vortherms
T. Nicholson
J. Woodcock
B. Porter
L. Finarty RCE Chariton
B. Clancy
J. Klein
Matt Buttz

K. D. Nicholson
D. L. Newell
D. E. Sprengeler
A. A. Welch
B. D. Hofer
T. D. Crouch
K. Olson
S. Godbold
B. Beavers
M. Hobbs
K. Brink
S. Nielsen
Milly Ortiz-Pagan
S. McElmeel
M. Claeys
L. Giarro RCE Fairfield
Supervisors Matt Heuvelmann, Doug Swan
H. Bibiano
D. Jones

CONCEPT ANALYSIS & SUPPORTING DATA:

Date of Field Review: Jan. 12, 2022

Participants: Steve McElmeel, Jim Phillips

PAVEMENT:

Existing Conditions:

Per dTIMS, the PCI is 54 (desire 60-80), the wheel path rutting is .29 inches (desire less than .15) to help reduce hydroplaning, and the roughness, IRI is approx. 119 (upper threshold 253, desired 32-100). There is a 4 ft wide existing granular shoulder.

Pavement History:

Here is a ProjectWise link to the 1994 Resurfacing plans: [1994 Ia 78 to Brighton NHS-1-3\(2\)--19-54.pdf](#)

Here is a ProjectWise link to the pavement history: [Iowa 1 Pavement History 2019 milepost book.xlsx](#)

PMIS Data:

See attached Quick Look sheet, pg 11.

dTIMS Report 2020 link: [dtimms data.xlsx](#)

FROM	TO	LANE_MILES	DESCRIPT	NYEAR	BUDGET_SCENARIO	PCI	CRACK_RATIO	IRI	RUT
37.64321	43.73564	12.18	From Keokuk/Washington Co Line East To WCL Brighton	2022	Network - Do Nothing	53.91	45.53	119.16	0.29

Pavement Recommendation: pending Traffic data and Pavement determination

[insert excel table, pending]

Subdrains:

A review of the the 1967 project no.787, 1981 project FN-1-3(1)—21-54, and 1994 NHS-103(2)—19-54 indicates that 0 lf of subdrain exists, which is approximately 0% of the overall 5.99 mile project length. The proposed improvement includes placing subdrains such that there will be 100% subdrains along both sides. The District is to provide the tabulation to Design.

Patching/Curb Repairs:

n/a

ADA/Sidewalk/Trails/Complete Streets analysis:

There is **no** need for **ADA** ramps along this project.

The existing paved shoulder width is 0 feet for the length of the project. There is 4 foot wide existing granular shoulder.

ProjectWise link to **Complete Streets, 'Needs test'**: [IA 1 NHSX-001 Needs Test.docx](#)

Per section 2.4 of the Complete Streets Policy, attached is the Needs Test performed for NHSX-001-4(061)--3H-92, from Keokuk Co Line to WCL Brighton. Mile markers 37.55 to MP 43.64.

- This section of IA 1 was rated as "Poor" by the On-Road Bicycle Compatibility Rating and passed 2 out of the 5 needs test resulting in a Cost Exception Threshold of 15%.
- There are no bikeways, trails, bike lanes along the project included in a bicycle and pedestrian plan.
- Within Brighton there are destinations to parks, schools, or residential areas exist within 1 mile of the project. Lake Darling State Park is along the project.
- Additional bicycle accommodations (paved shoulders) represent an estimated 5% of the total cost of the project. The Estimated Additional Cost provided by District 5, \$900,000 for 4 ft x 6 in. HMA paved shoulders.

The estimated cost of additional paved shoulder width would not be excessively disproportionate to the need or probable use per Section 2.4 of the Complete Streets Policy. See additional comments regarding the shoulders on pg 2

If the application of **rumble "stripes"** can allow for 4 feet of space outside the rumbles, they should serve to accommodate bicyclists.

SAFETY:

3R Design Criteria:

Acceptable Values for 3R Roadway Features						Project Values
DESIGN ELEMENT	FREEWAY	NON-FREEWAY				
Regulatory Speed (mph)	65/55	55	45	35	25	55
Minimum Vertical Curve (mph)	65/55	35	25	15	5	n/a
Maximum Horizontal Curve (degrees)	3	6	8	14	28	n/a
Maximum Gradient	3%	6%	7%	10%	13%	n/a
Lane Width (feet)	12	12	11	11	11	12
Parking Lane Width (feet)	--	--	8	8	8	n/a
Shoulder Width (feet)	10/6	6	4	4	2	4, pg. 2, 5, 9
Foreshopes	3:1	3:1	3:1	--	--	n/a
Transverse Slopes	6:1	6:1	6:1	--	--	n/a
Horizontal Clearance (feet)						
Bridge Width	Approach Lanes + Shoulder Width		Approach Lanes + Offset			Note 1
Vertical Clearance - Over NHS (feet)	16.5	16.5	16.5	16.5	16.5	n/a
Vertical Clearance - Over Local (feet)	14.5	14.5	14.5	14.5	14.5	n/a

Note 1: See the list of Structures on pg. 7

Crash Analysis:

For crash data, see the Project Wise link from the Project Prioritization Scoping tool download: [Ia 1 2016 to 2020 5 year all accidents Report.pdf](#)

Corridor Crash History:

Over the course of 5 years, 2016-2020, 9 crashes are reported including major causes of 2 animal, 2 Ran Stop sign, 2 distraction / inattentive, 1 passing where prohibited, 1 Swerving/evasive action. The severities are 1 fatality, 0 Major injuries, 1 possible injuries 3 Minor injury, 4 Property Damage only. A crash rate of 30 per HMVMT which is less than the Rural Statewide average is 93 per HMVMT. Here is a ProjectWise link to the crash rate: [IA 1 CrashRates.xlsx](#)

Intersection Crash History:

Not applicable.

Intersection Analysis, Side Roads:

No Analysis done for this project.

The proposed paved shoulders are to be continued through existing gravel side roads. If fillets or further paving is needed at a side road, this can be done after the widening is complete.

Washington County would typically like to participate in a Preconstruction Agreement for the paving of gravel public side road intersections per Std detail 7149. That work is usually constructed with Hot Mix Asphalt. This project is PCC paving. As such, the relatively small quantity of HMA could be cost prohibitive.

The proposed paved shoulders are to be gapped at existing paved side roads.

Railroads: n/a

Additional Safety & Operation Considerations: n/a

STRUCTURES and DRAINAGE:

Bridges:

Maint. No.	FHWA No.	Size/Type	County	Over	On NHS	Year Built	Rail Retrofit Year	BDO/ Rehab Year	Bridge Rail Height	Vertical Clearance	Future Project
9240.8S001	051591	100'-0 x 40'-0 Continuous Concrete Slab Bridge	Washington	IA-1 & IA-78 over Honey Creek	Yes	1991	---	---	32"	---	---

Maint. No.	GR Trans.	GR End Terminal	GR Paved Shoulders	Rail Endpost Taper	Rail Endpost Height	Approaches	Notes	Recommendations
9240.8S001	Not current	Not current	Not-fully paved	Yes	32"	Both approaches are paved with PC concrete. Both approaches have moderate level cracks.	Open maintenance recommendation in SILMS created in 04/30/2018 for Deck Repair specifically both-end deck joints are for repairs. The both deck joints need repairs and sealed at deck joints.	Recommend to update guardrails to current standards and save full width up to guardrail shoulder, the 3R concept indicates this will be completed. Recommend repairing erosion damages at far/near berm.

PW link to table: [NHSX-001-4\(061\)--3H-92 BSB Review.xlsx](#)

FHWA No.	Maint. No.	Size/Type	Year Built	BDO/Rehab Year	Bridge Rail Height	End Post Type	Vertical Clearance	Future Projects
051591	9240.8S001	100 x 40	1991		32		n/a	Note 1

Note 1.MP 40.8 Guardrail has old symmetrical thrie beam that should be unsymmetrical thrie beam. The end terminals are the prior RE-52 (56.25 + 56.25+ 56.25+ 56.25 = 225 lf) Remove the existing guardrail. Replace with new guardrail to the latest standards, and construct full width paved the shoulder in each of the 4 corners. Repair erosion damage along the far / near berms.

Culverts/Pipes/Stockpass:

This work is pending field data gathering.

Initially there are 5 locations of repair:

- Per PPM 610.06, check the criteria to see if and existing **stockpass** needs to stay open, or if may be plugged and abandoned 4'x5.5'x42', Milepost 37.77, Sta 175+20, Per 1940 Proj. 787 B(1).). FY 2019, Ia 2 project has a sample of stockpass abandonment documentation and plans: STP-002-5(47)—2C-27 PIN 15-27-002-02.
- Sta 298+29 Rt. needs a **remove and replace of 2 culvert** sections, 24 inch Dia, RCP,
- Sta 265+75 Rt. has 5 ft. wide foreslope erosion up to the existing shoulder edge, that needs **erosion stone**,
- Sta 434+43 Lt. has a transverse concrete, drainage spillway wall that needs **stone revetment** downstream and at the base of the wall, within existing right of way to prevent erosion of the drainage way and undermining of the spillway wall soil.
- Sta 467+60 Coordinate / tie in the bid letting this project with the **separate project** for culvert replacement, 0.25 miles West of Brighton PIN 21-92-001-010 NHSN-001-4(59)- -2R-92 to be Let 3/1/2022.

Since Ia 1 is a NHS route, field review whether **entrance / transverse slopes** need to be flattened per Design Manual 3F-3, Road Standard EW-501, and Tab 102-14 . ProjectWise link to [sample](#) culvert updates on NHS routes: [Entrance Slope Flattening Layout.pdf](#) Sample: [NHS Route Pipe Sample 2016 Sample Marion Co Ia 92 Culverts.docx](#)

Guardrail: See the above structures notes for 225 lf of W beam guardrail to be updated to the latest standards.

PROJECT IMPACTS:

Impacts Map:

See the Project Prioritization / Scoping tool for all Office of Location and Environment Hotspots, Outstanding Iowa Waters, railroad crossings, bridge numbers, major utilities, etc.

Link: [Charter S0092-090821-01.pdf](#), [S0092-090821-01 Impacts.JPG](#), [S0092-090821-01 Prioritization.JPG](#)

Environmental:

See the above Project Prioritization / Scoping tool Ia 1 Charter summary link for wetlands, parks, historic/cultural resources, etc.

Clearing and Grubbing information is pending field data collection.

Bridge berms has the need for erosion repair, see pg. 7

Pipe repairs are pending field data collection. See pg. 7

TSMO/Traffic Control:

Traffic to be maintained at all construction times with Traffic Control devices. Stage the construction such that access to Lake Darling Park (Sta 323+96) is open to traffic open at all times. The existing park entrance has concrete flares such that 2-way traffic may occur of ingress and egress to the Park.

Iowa 1 project **detours** are to be provided to coincide with the staged construction of Iowa 1. No detours are to be operation during the winter season.

Access to private entrances – with temporary surfacing – is to be provided at all times for each construction stage. Mailboxes will need to be maintained.

ROW:

None

Agreements/Notification Letters:

Washington County, pg. 6 may like to participate in a Preconstruction Agreement for the paving of gravel public side road intersections per Std detail 7149.

Detour Agreements are to be discussed and prepared.

Project Coordination:

Coordinate / tie this project with the separate project for Pipe culvert improvements, 0.25 miles West of Brighton PIN 21-92-001-010 NHSN-001-4(59)- -2R-92 to be Let 6/1/2022.

Previous Projects List:

See the Record drawings from 1940 to 2017 within the Project Wise link: [2017 Microsurfacing NHSN-001-3\(4\)--2R-54.pdf](#)

Future Projects List:

None

FEASIBLE ALTERNATIVES & RECOMMENDATION:

Feasible Alternatives:

Per pg. 5 for the specific Pavement Determination and the dTIMS recommended pavement rehabilitation treatment (pending).

Each of the 2 Alternatives also include the following **assumptions:**

Here is a general schematic of the existing and proposed roadway cross section: [Exist HMA Proposed PCC Typical B01 schematic.pdf](#)

The cost estimates assume that the Proposed profile grade would be the same elevation as the current existing top of 10.5 inch HMA pavement.

If the proposed profile grade was lowered, then the quantity of Cl. 10 excavation would increase. Also, sideroad and entrance tie-ins would be needed. The preparation of details would be relatively time consuming for an accelerated project schedule. So, the proposed profile grade is to match current existing profile grade. See Kickoff meeting notes: [Kickoff notes 1 13 2022.docx](#)

Each of the 2 Alternatives also include the following **common improvements:**

- The existing width of roadway top is 34 feet. The 24 ft pavement and 4 ft. paved shoulders = 32 feet. The remaining 1 ft. on each side is to be granular shoulder.
- From the variable slope of the existing typical section, strip, salvage and spread topsoil back onto the finished variable foreslope.
- For construction efficiency, the paved **shoulder** is to be the same thickness as mainline PCC.
- Tie bars and a sawed longitudinal joint along the edge of 24 ft pavement edge lines / shoulder is to be provided. Constructing a paved **shoulder** would be consistent with other segments of Iowa 1 improvements over the recent years.
- Centerline rumble strips,
- Remove and replace W-beam **guard rail** at 1 bridge structure, pg. 7
- Coordination with the separate project for culvert replacement intersection reconstruction in FY '22. pg. 7
- Longitudinal **subdrains** along both sides, pg. 5
- **Culvert repairs**, tree clearings, stockpass, and entrance foreslope flattening, pg. 7.
- **Staged** construction, see pg. 8

Alternate 1:

The PCC and Special Backfill thickness is pending the traffic count and pavement structural need. The following estimate preliminarily assumes 9 inch PCC, 6 inches Special Backfill (Recycling existing HMA pavement) as a drainable base layer for subdrains. PCC Reconstruction **Estimated Cost \$ 9,731,000.**

Alternate 2:

The PCC and Modified Subbase thickness is pending the traffic count and pavement structural need. The following estimate preliminarily assumes 9 inch PCC, 6 inches Modified Subbase (New material) as a drainable base layer for subdrains and the existing HMA pavement would be hauled away for the project. PCC Reconstruction Estimated Cost \$ 10,280,000

FEASIBLE ALTERNATIVES & RECOMMENDATION cont'd:

Recommendation:

Construct Alternate 1.

\$ 9,731,000 See below for Cost Estimate and funding

0 Washington County side road intersection paving, pg. 6

\$ 9,731,000 Total

Cost Estimate: [1 13 2022 Iowa 1 Wash Cost Est \(61\).xlsx](#)

iPDWeb has D0 Estimate

Funds Programmed:

Currently proposed for programming in Fiscal year 2022.

Funding source: FY '22 Program Amendment [Proposed-2022-Iowa-Transportation-Improvement-Program-Amendment.pdf](#)

Development Schedule:

D0: Jan. 14, 2022

Letting: June 21, 2022

Ia 1 Production Schedule:

ID	Task ID	Task Code	Project Phase	Duration	Start	Finish
1	1	A01	NHSX-001-4(061)--3H-92	1 day	01/11/2022	01/11/2022
2	2	D00	NHSX-001-4(061)--3H-92	44 days	11/16/2021	01/14/2022
3	3	D01	NHSX-001-4(061)--3H-92	88 days	09/29/2021	01/28/2022
4	4	TE0	NHSX-001-4(061)--3H-92	44 days	12/21/2021	02/18/2022
5	5	U00	NHSX-001-4(061)--3H-92	22 days	01/20/2022	02/18/2022
6	6	W00	NHSX-001-4(061)--3H-92	69 days	11/16/2021	02/18/2022
7	7	D02	NHSX-001-4(061)--3H-92	34 days	01/11/2022	02/25/2022
8	8	S03	NHSX-001-4(061)--3H-92	8 days	03/02/2022	03/11/2022
9	9	H00	NHSX-001-4(061)--3H-92	34 days	02/08/2022	03/25/2022
10	10	H06	NHSX-001-4(061)--3H-92	1 day	03/25/2022	03/25/2022
11	11	NE10	NHSX-001-4(061)--3H-92	30 days	02/28/2022	04/08/2022
12	12	D07	NHSX-001-4(061)--3H-92	187 days	07/19/2021	04/05/2022
13	13	L02	NHSX-001-4(061)--3H-92	1 day	06/21/2022	06/21/2022
14	14	C02	NHSX-001-4(061)--3H-92	355 days	06/22/2022	10/31/2023

Iowa 1 Washington Co.

Pavement Management Information System (PMIS) – Existing pavement condition, District 5

Quick Look at Data

W:\PerformanceTechnology\AssetMgmt\PMIS\Reports\D5_Quicklook_Data_May 2021

DISTRICT 5
PAVEMENT MANAGEMENT INFORMATION SYSTEM
QUICK LOOK TREND REPORT

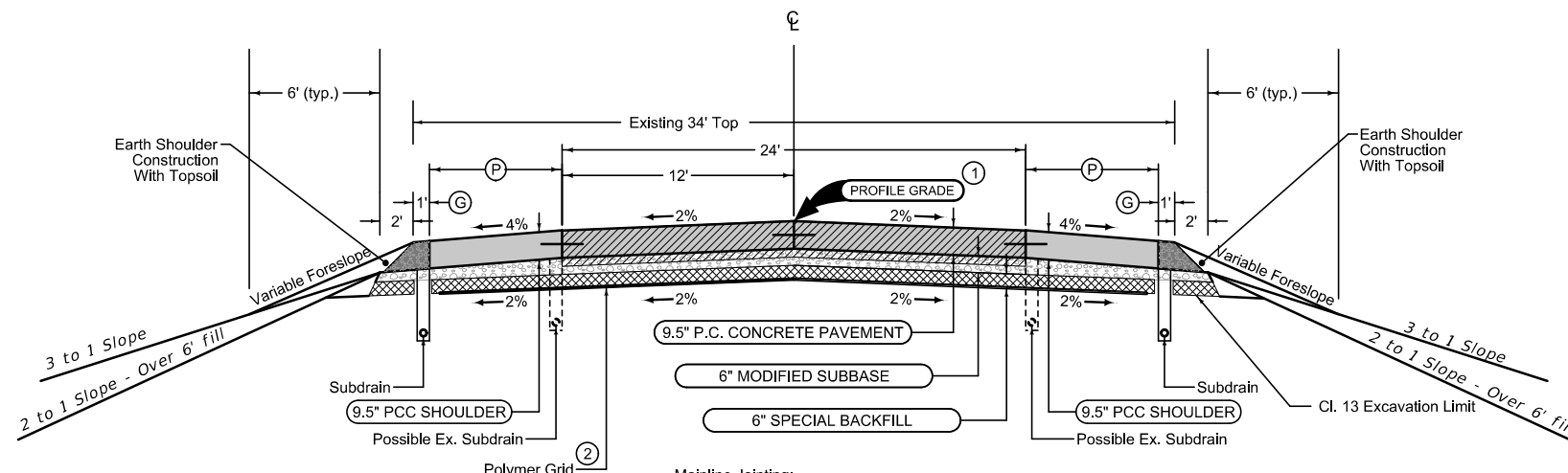
HS RTE	BEGIN MILEPOST	END MILEPOST	S U B S E R V I C E	P M D I E P A V T	R I E P A V T	F R V	I T I P	C C C C	P P P P	I I I I	R R R R	I I I I	R R R R	I I I I	R R R R	I I I I	CON RES	FR YEAR	FLY YEAR	DEP YEAR	ADT	TRUCKS TR		
																							20	19
IA 1	035 59	036 69	65	1	3	C	3	REGRUE (54)	94	93	93	93	47	70	70	70	0	64	1969	2017	24	1,210	119	10
From Jefferson/Keokuk Co Line North To W JCT IA 1/IA 78																								
IA 1	036 69	037 55	69	1	3	C	4	REGRUE (54)	78	65	81	68	104	104	81	104	0	39	1942	1994	27	1,265	189	13
From W JCT IA 1/IA 78 East To Keokuk/Washington Co Line																								
IA 1	037 55	043 64	69	1	3	C	4	WASHINGTON (92)	78	58	80	63	88	98	76	92	0	41	1942	1994	24	1,850	216	12
From Keokuk/Washington Co Line East To WCL Brighton																								
IA 1	043 64	044 18	65	1	3	C	3	WASHINGTON (92)	83	86	86	90	83	73	68	0	57	1928	2014	27	2,260	236	10	
From WCL Brighton East & North To INT Fountain St & Benton																								
IA 1	044 18	044 62	65	1	3	C	3	WASHINGTON (92)	56	52	52	59	142	150	150	113	0	49	1928	1993	24	2,210	249	11
From INT Fountain St & Benton St To WCL Brighton																								
IA 1	044 62	050 80	65	1	3	C	3	WASHINGTON (92)	57	58	57	65	131	126	126	118	0	60	1942	1993	22	2,220	261	11
From WCL Brighton North 6.21 Miles																								
IA 1	050 80	054 82	65	1	3	C	3	WASHINGTON (92)	62	60	60	67	131	126	126	115	0	62	1982	2016	22	3,345	362	11
From 6.21 Miles N Of Brighton North To S JCT IA 1/IA 92																								
IA 1	054 82	057 90	61	1	3	B	3	WASHINGTON (92)	83	84	84	86	72	66	71	0	61	1956	2012	27	3,573	555	16	
From S JCT IA 1/IA 92 North To N JCT IA 1/IA 92																								
IA 1	057 90	067 66	60	1	3	B	4	WASHINGTON (92)	86	91	91	94	51	45	45	46	0	58	1956	2014	24	3,610	586	16
From N JCT IA 1/IA 92 North To SCL Kalona																								
IA 1	067 66	068 04	60	1	3	B	4	WASHINGTON (92)	80	85	85	88	83	76	80	0	1956	2014	27	4,625	576	12		
From SCL Kalona North To INT C Ave & 1st St																								

pw:\\projectwise.dot.int.lan:PWMMain\Documents\Projects\9200101022\Concept\Ia 1 Washington PCC Concept (61) 1 13 22 Rev 1 21 22.docx

Full Depth PCC Shoulder

Shoulder Jointing:
 Longitudinal joint: L-2 or KT-2
 Transverse joints: C at 17' spacing

2_P_FullPCC_MODIFIED			
STATION TO STATION	(P) Feet	(G) Feet	
163+46.70	480+52.30	4	1



Mainline Jointing:
 Transverse joints: CD at 17' spacing
 Longitudinal joint: L-2

2P_MODIFIED	
STATION TO STATION	
163+46.70	480+53.20

Full Depth PCC Shoulder

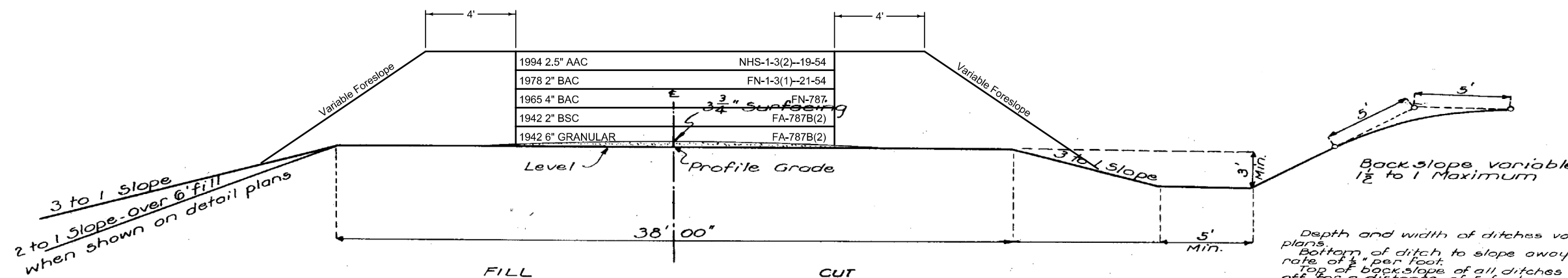
Shoulder Jointing:
 Longitudinal joint: L-2 or KT-2
 Transverse joints: C at 17' spacing

2_P_FullPCC_MODIFIED			
STATION TO STATION	(P) Feet	(G) Feet	
163+46.70	480+52.30	4	1

Remove Existing 10.5\"/>

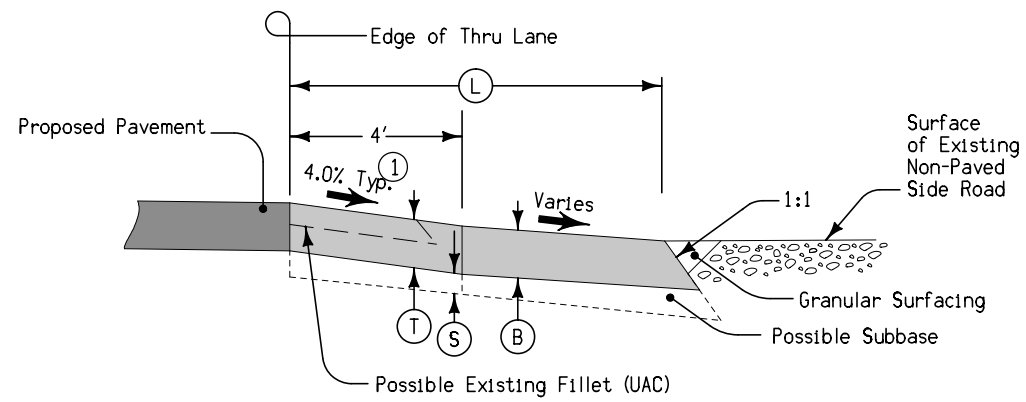
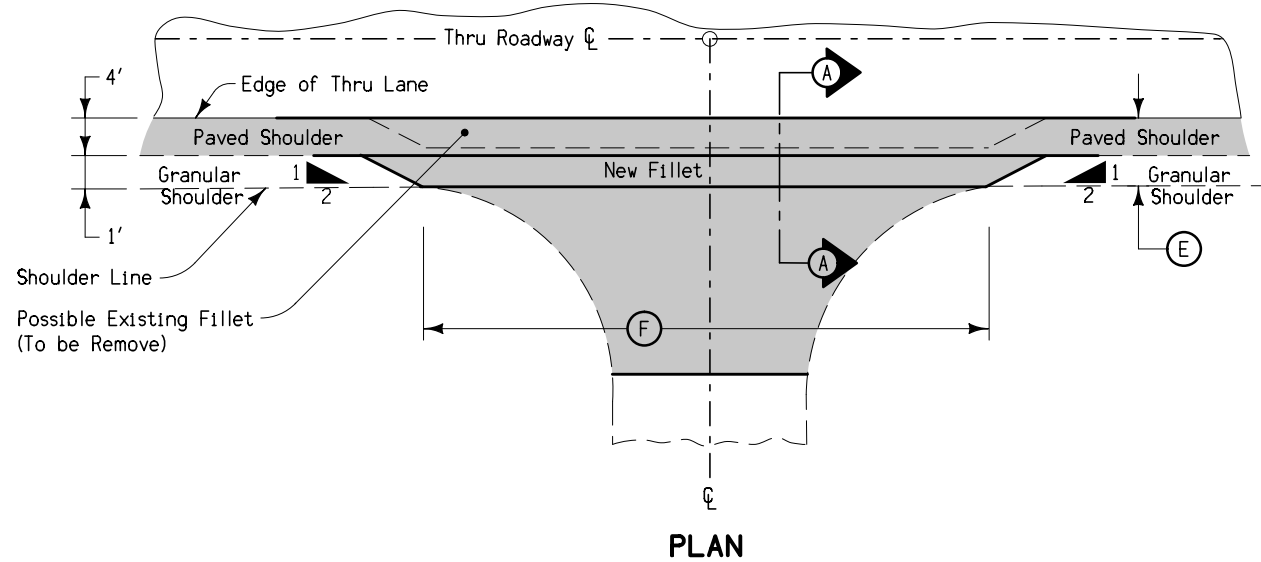
- ① Match Existing Pavement Profile
- ② Leave 6\"/>

PROPOSED TYPICAL CROSS SECTION



Depth and width of ditches variable, see detail plans.
 Bottom of ditch to slope away from road at the rate of 1/2\"/>

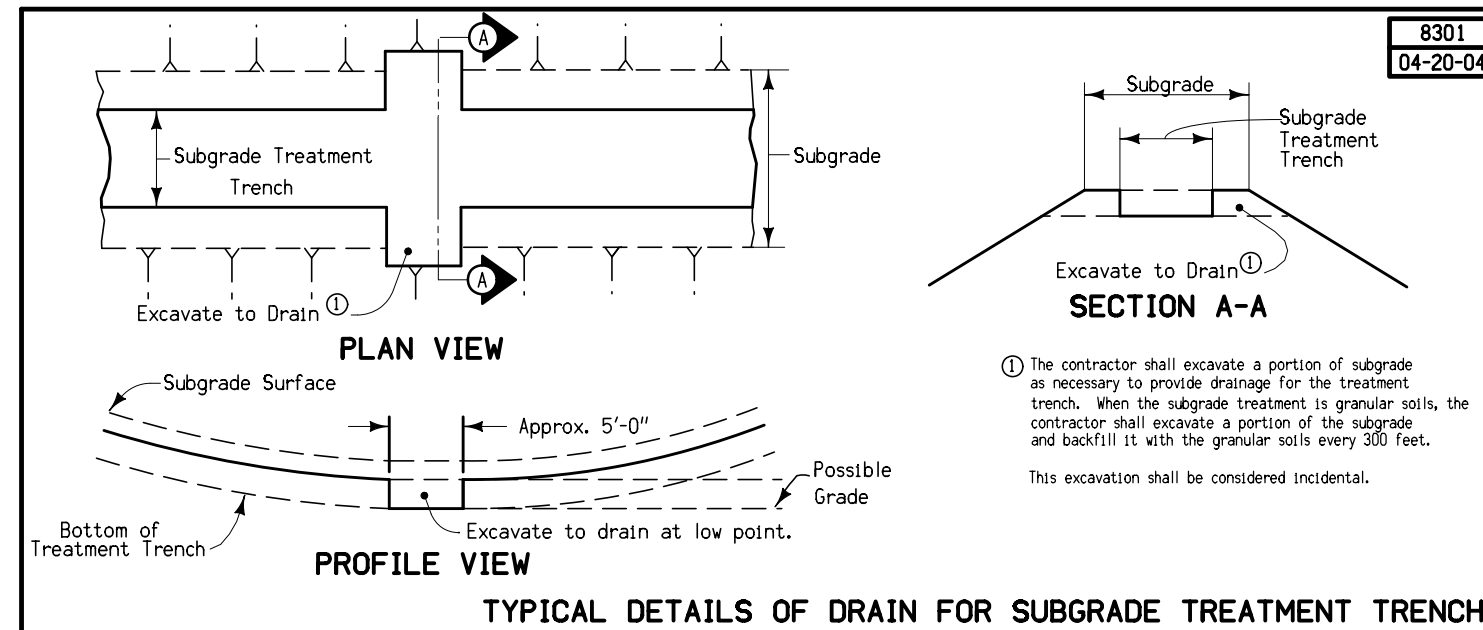
EXISTING TYPICAL CROSS SECTION
 IA 1



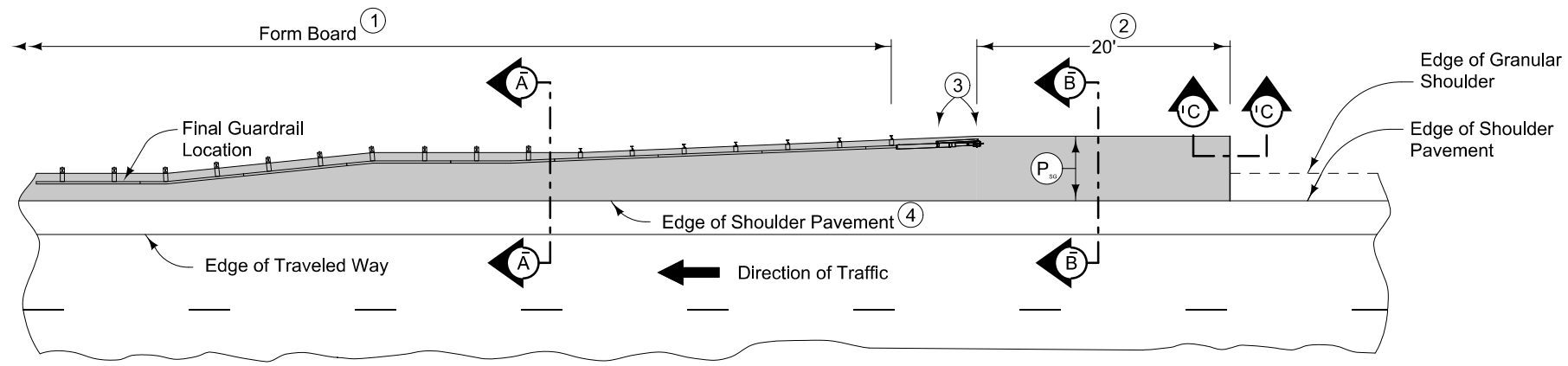
Special shaping of existing surface prior to placement of fillet or fillet extension may be required by the Engineer and is incidental to other work on the project.
Pavement quantities included with mainline quantities.
① Match existing slope.

Location Station	① Feet	② Feet	③ Inches	④ Inches	⑤ Inches	⑥ Feet

FILLET EXTENSION FOR NON-PAVED SIDE ROADS



8301
04-20-04



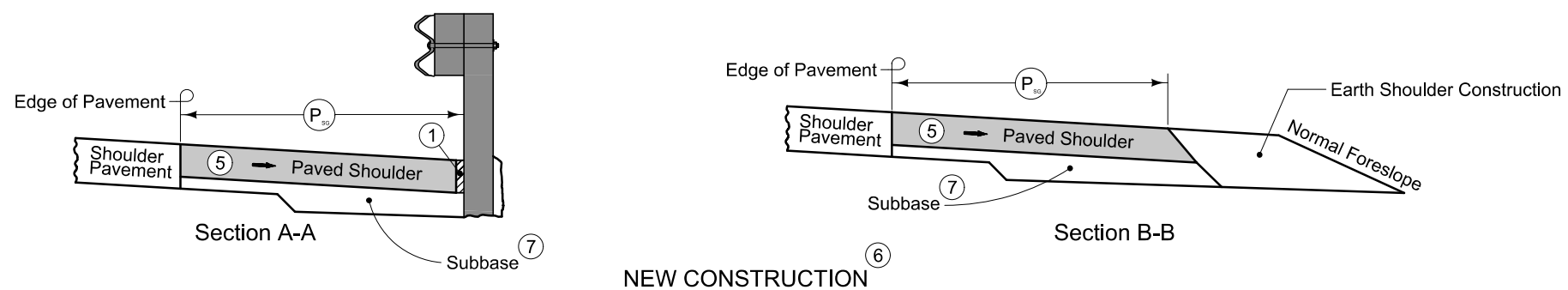
PLAN VIEW

9" HMA Paved Shoulder at guardrail. 8" PCC may be substituted with the following jointing layout:

Match mainline pavement joint spacing. When mainline pavement is 8" or greater in thickness, place additional transverse 'C' joints in shoulder at mid-panel of the mainline pavement. Place longitudinal 'C' joint at P/2 from edge of mainline pavement when P is greater than 10' wide. Terminate longitudinal joint at transverse joint less than 10' in length.

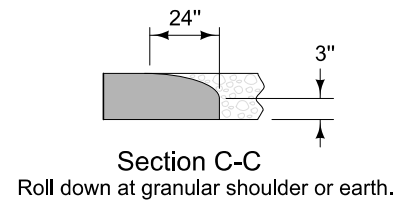
Compaction of HMA is required to face of guardrail post. Hand compaction will be allowed under guardrail. Removal and reinstallation of guardrail will be allowed with no additional payment.

Refer to Tabulation 112-9 for shoulder quantities.



NEW CONSTRUCTION

- ① PCC option only: When guardrail posts are installed prior to construction of PCC paved shoulder, fasten form board to the face of guardrail posts for the length shown.
- ② Continue paved shoulder 20 feet beyond the center of the first post.
- ③ Shoulder may be notched for first 2 posts or post sleeves may be installed through pavement. Do not drive posts through pavement.
- ④ 'KT' (per PV-102) joint for PCC shoulder. 'B' (per PV-102) joint for HMA shoulder.
- ⑤ Match shoulder slope.
- ⑥ The Contractor has the option to pave the paved shoulder at guardrail and the partial width paved shoulder as one operation.
- ⑦ Refer to other details in the plan.

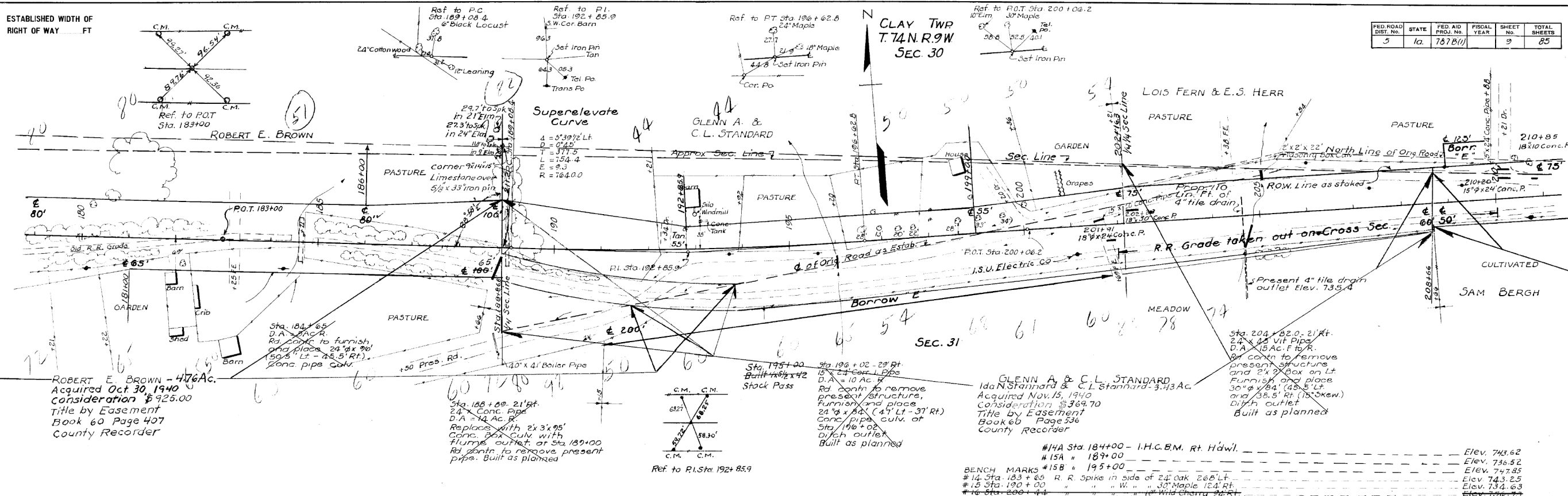


PAVED SHOULDER AT GUARDRAIL
(ADJACENT TO PARTIAL WIDTH PAVED SHOULDER)

ESTABLISHED WIDTH OF RIGHT OF WAY FT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	1a	787B(1)		9	85

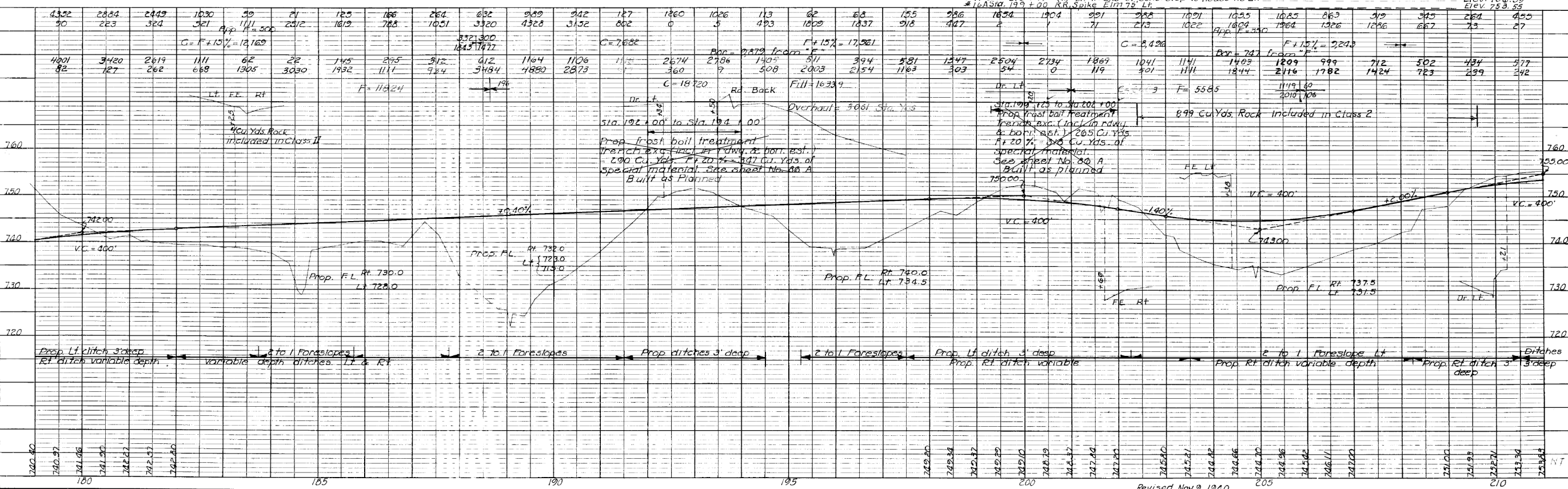
CLAY TWP T. 74 N. R. 9 W SEC. 30



ROBERT E. BROWN - 476Ac.
Acquired Oct 30, 1940
Consideration \$925.00
Title by Easement
Book 60 Page 407
County Recorder

GLENN A. & C.L. STANDARD
Ida N. Stannard & C.L. Stannard - 3.43Ac.
Acquired Nov. 15, 1940
Consideration \$369.70
Title by Easement
Book 60 Page 536
County Recorder

Sta. 204+02.0, 21' Rt.
24\"/>



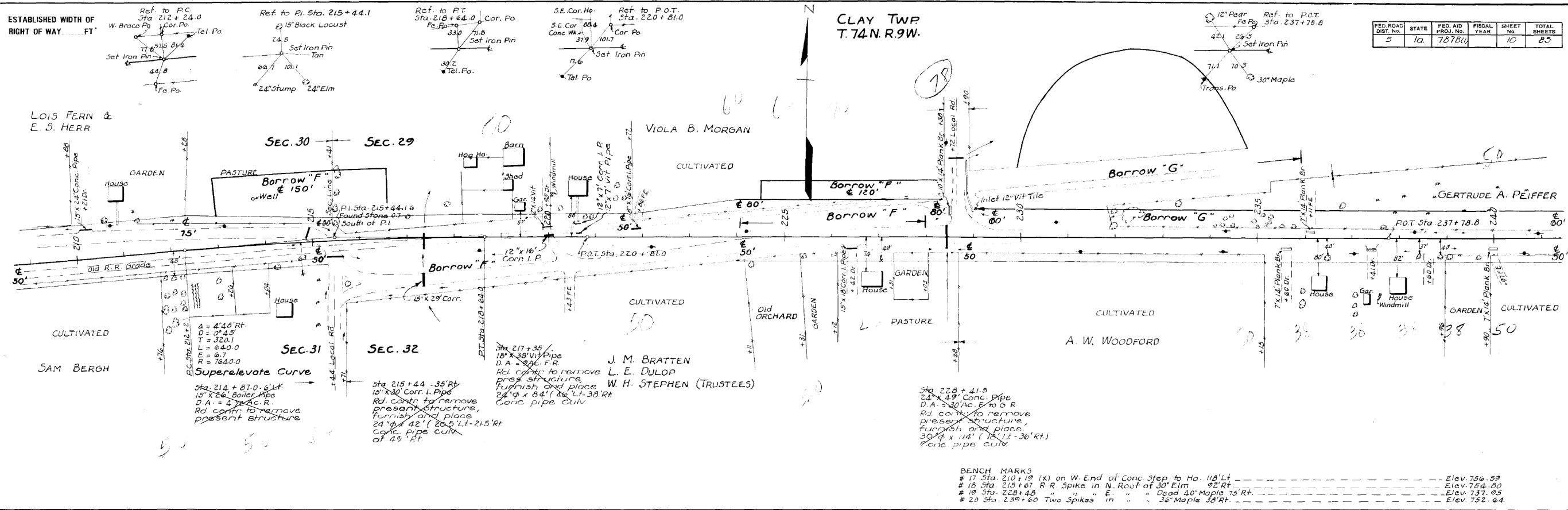
PLAN
DATE
BY
REVISIONS
NO. DATE
NOTE BOOK
ALIGNMENT CHECKED
RT. OF WAY CHECKED

PROFILE
DATE
BY
REVISIONS
NOTE BOOK
GRADES CHECKED
B.M. NOTED
CONSTRUCTION NOTES CHECKED

PLATE 1 - PLAN-PROFILE O.P.R. & E. STANDARD

Washington Co. FA Proj. No. 787B(1) Sheet No. 9

This Sheet For Information Only



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	1a	78784		10	85

DATE	BY	REVISION

DATE	BY	REVISION

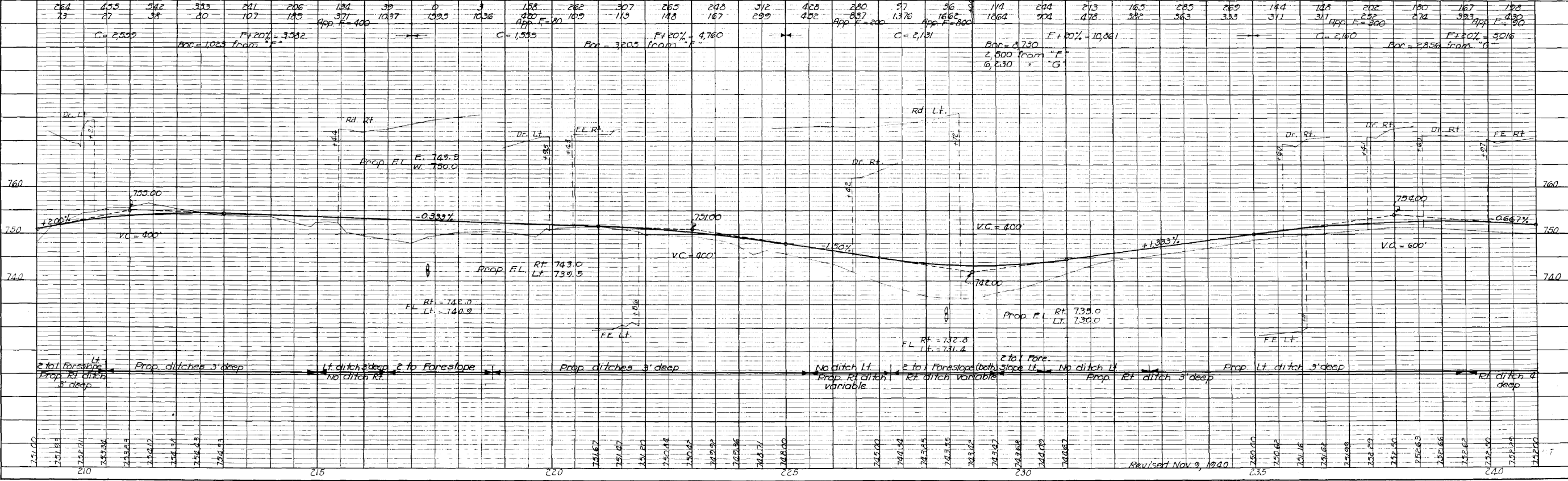
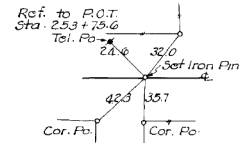
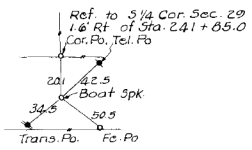


PLATE 1 - PLAN-PROFILE - P.R. & R.E. STANDARD
 METERS & CURVES CO. NEW YORK

Washington Co PA Proj No 78784, Sheet No. 10

This Sheet
For Information Only

ESTABLISHED WIDTH OF RIGHT OF WAY FT



CLAY TWP
T.74N.R.9W

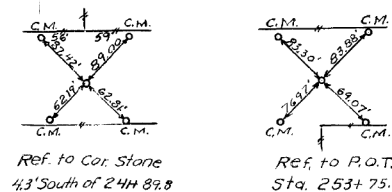
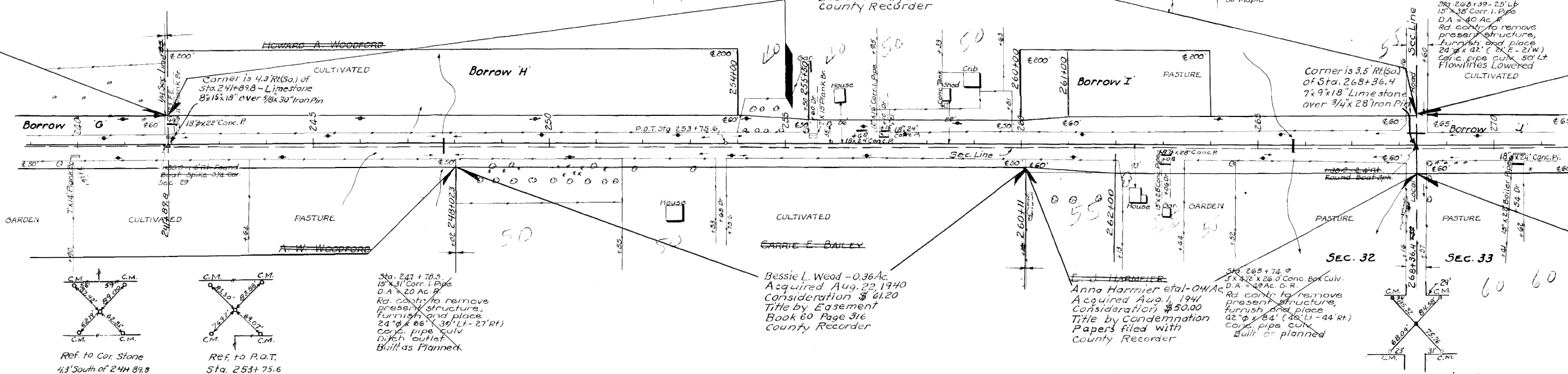
Otto Walton - 1.73 Ac.
Acquired Feb. 10, 1941
Consideration \$234.20
Title by Easement
Book 60 Page 540
County Recorder

Borrow I (old R.R.)
Grade Approx 3000 CU Yds.

FED. ROAD DIST. No.	STATE	FED. AID PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
5	WA	767B(1)		11	65

SEC. 29

SEC. 28



Sta. 247+78.5
19\"/>

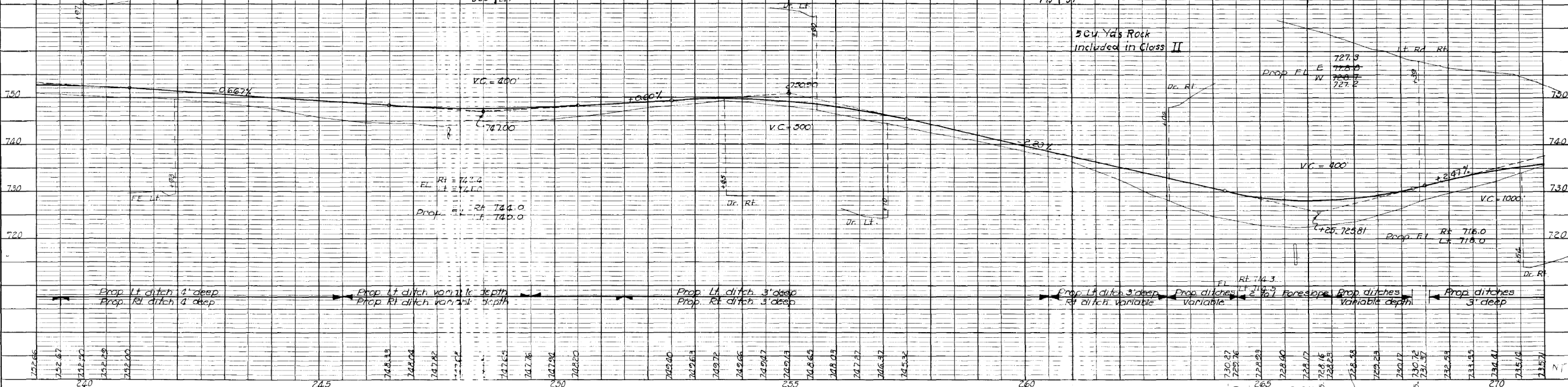
Bessie L. Weed - 0.36 Ac.
Acquired Aug. 22, 1940
Consideration \$61.20
Title by Easement
Book 60 Page 316
County Recorder

Anna Harmier et al. - 0.44 Ac.
Acquired Aug. 1, 1941
Consideration \$50.00
Title by Condemnation
Papers filed with
County Recorder

Sta. 265+74.9
3\"/>

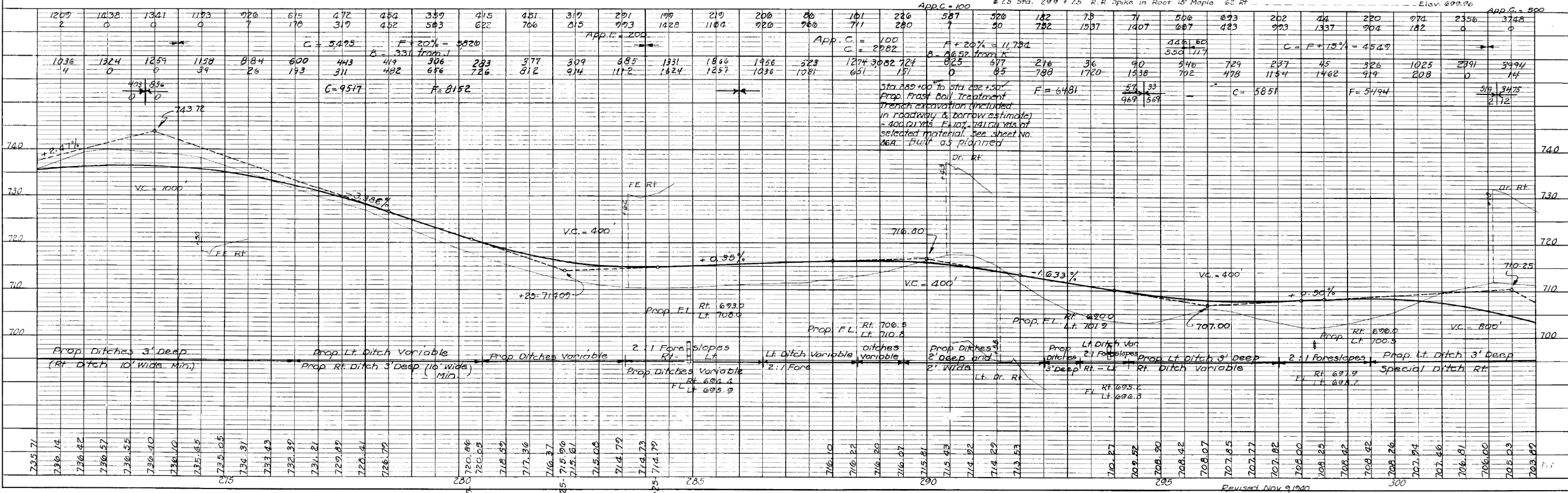
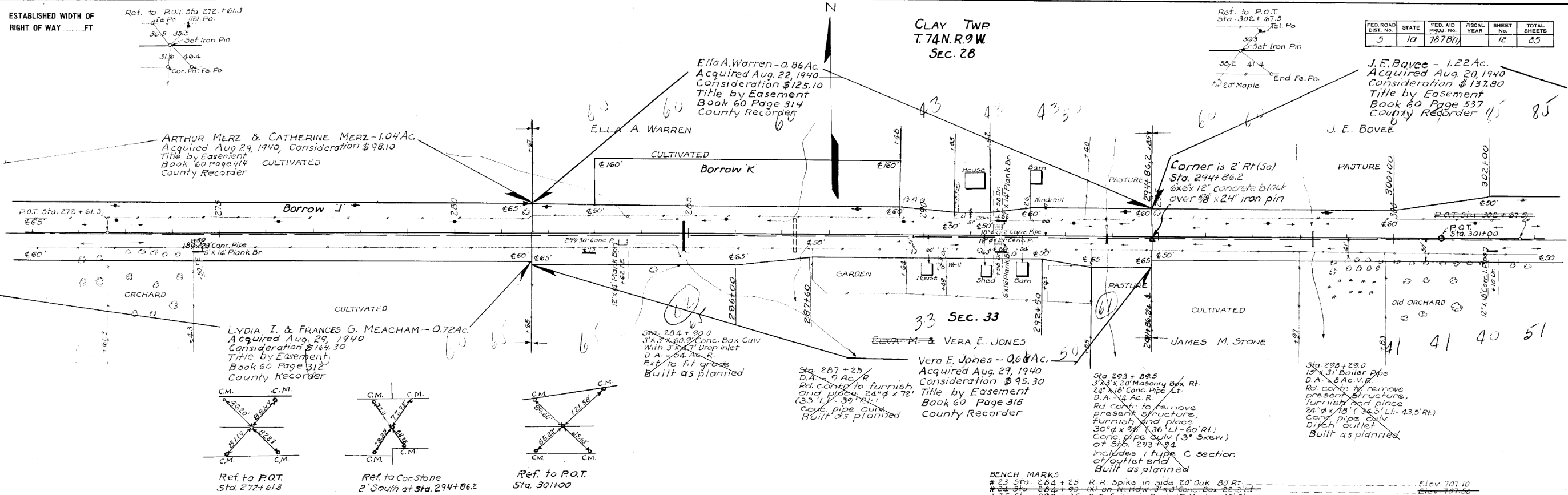
BENCH MARKS
#20 Sta. 239+60 2 spikes in Roof 36\"/>

167	192	241	282	311	287	189	37	44	88	104	211	249	204	267	267	285	324	321	370	430	500	485	252	194	0	183	70	323	783	
393	430	400	385	415	319	756	849	723	787	593	979	335	215	182	182	205	311	311	267	211	236	415	682	122	1363	1482	1274	942	602	783
App F=30		App F=100						C=1705		F=20% = 6.244		App F=40		App F=60		App F=70		App F=70		App F=70		App F=200		App F=200		App F=600		App F=600		
215	182	209	546	1132	1485	1059	296	74	144	352	411	433	483	394	285	234	226	282	346	411	411	1374	1348	1420	1092	743	454	302	489	
417	487	475	428	491	617	813	941	942	893	611	520	415	296	285	270	312	386	404	324	278	250	382	743	1224	1456	1798	1567	945	215	
FE RT		FE LT		C=4877		F=4818		C=2397		F=2614		C=2172		F=1897		C=3465 from I		C=6171		F=5660		C=3940		F=3826		C=1362 from I		F=6736		



PLAT: 1-PLAN-PROFILE D.P.A.R.E. STANDARD
WASHINGTON CO FA Proj No 787B(1) Sheet No 11

This Sheet
For Information Only



1209	1038	1341	1123	726	615	472	454	339	415	451	319	291	199	219	206	66	101	246	387	320	182	75	71	506	693	202	44	220	974	2356	3748			
2	0	0	0	7	170	319	452	583	622	706	815	993	1428	1104	920	760	711	280	7	30	782	1537	1407	607	423	993	1337	904	182	2356	3748			
																	App. C = 100		F = 20% = 11794		C = F + 15% = 4549		C = 5851		F = 5194		519		3475		2112			
1038	1324	1259	1158	884	600	443	419	306	293	377	309	685	1331	1866	1966	523	1274	3082	721	825	877	216	316	90	546	729	297	45	326	1025	2991	5494		
4	0	0	39	26	193	311	422	676	726	812	914	1112	1624	1257	1036	781	651	181	0	85	780	1720	1538	702	478	1144	1462	919	208	0	5494			
																	C = 9517		F = 8152		C = 5851		F = 5194		519		3475		2112					

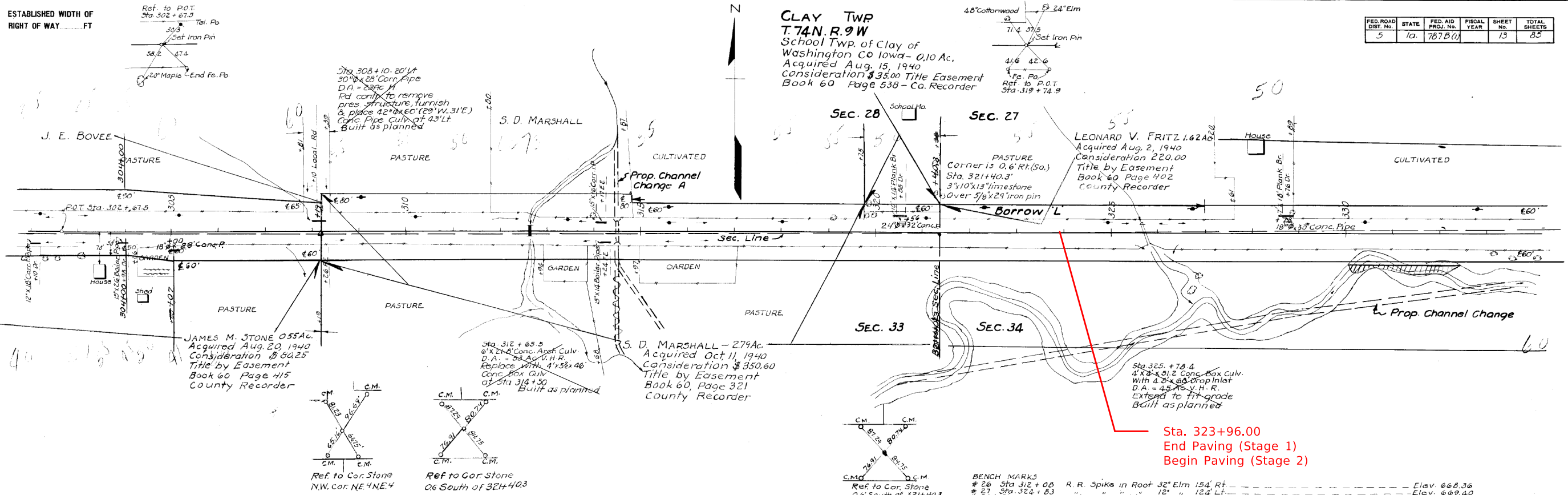
DATE	BY	REVISION

DATE	BY	REVISION

PLATE 1 - PLAN-PROFILE OF P.R. & R.E. STANDARD
KEUFFEL & ESSER CO., NEW YORK

Revised NOV 9, 1940
Washington Co FA Proj. No 7878(1) Sheet No 12

This Sheet
For Information Only



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	1a	787B(1)		13	85

DATE	BY	REVISION

DATE	BY	REVISION

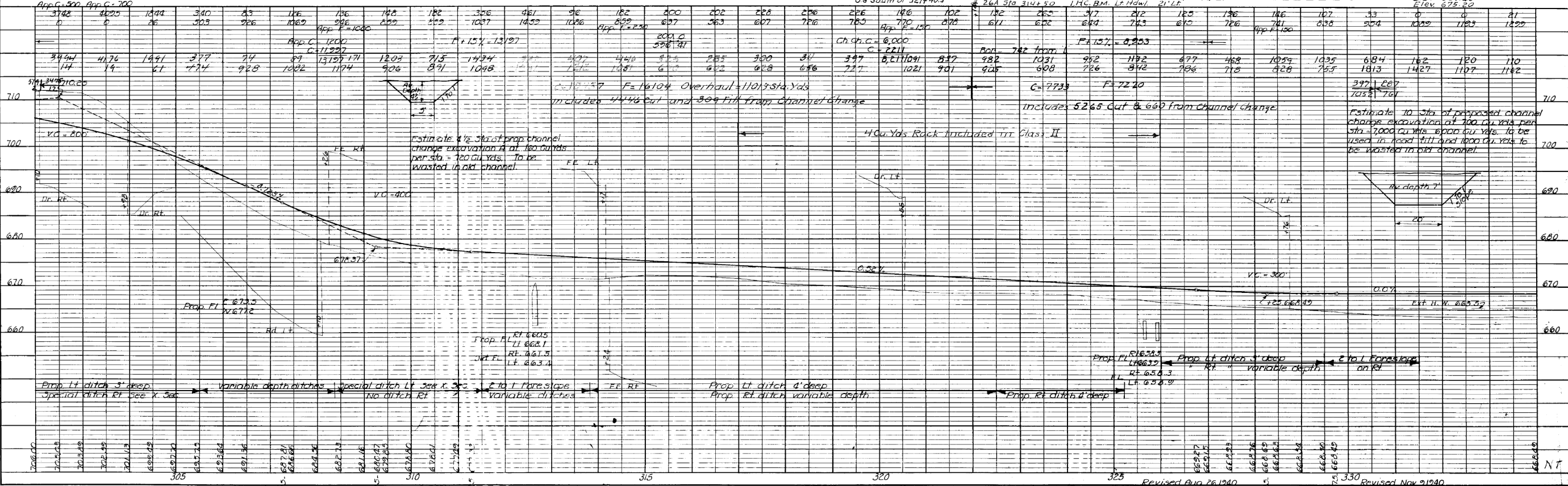


PLATE 1-PLAN-PROFILE D.P.R.A.R.E. STANDARD

Revised Aug 26, 1940
Keokuk - Washington Co. FA Proj. No 787B(1) Sheet No. 13

This Sheet For Information Only

ESTABLISHED WIDTH OF RIGHT OF WAY FT (Stop Paving @ Bridge Approach)

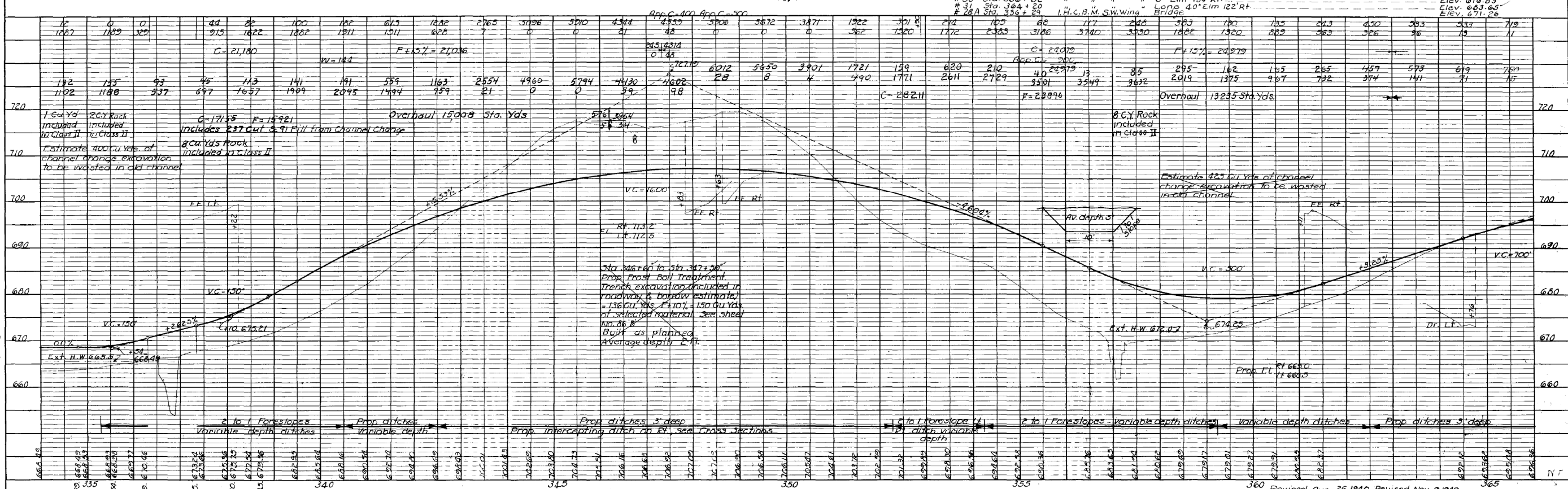
Sta. 335+51.00
Stop Paving (Stage 2)

Sta. 338+03.00
Resume Paving (Stage 2)

(Remove Existing Guardrails,
Install new Guardrails)

DATE	
BY	
PLAN	
SURVEYED	
PLOTTED	
NOTE BOOK ALIGNMENT CHECKED	
NOTE BOOK NOTAS IN CH'D.	

DATE	
BY	
PROFILE	
SURVEYED	
PLOTTED	
NOTE BOOK ALIEN CHECKED	
NOTE BOOK NOTAS IN CH'D.	
STRUCTURE NOTAS IN CH'D.	



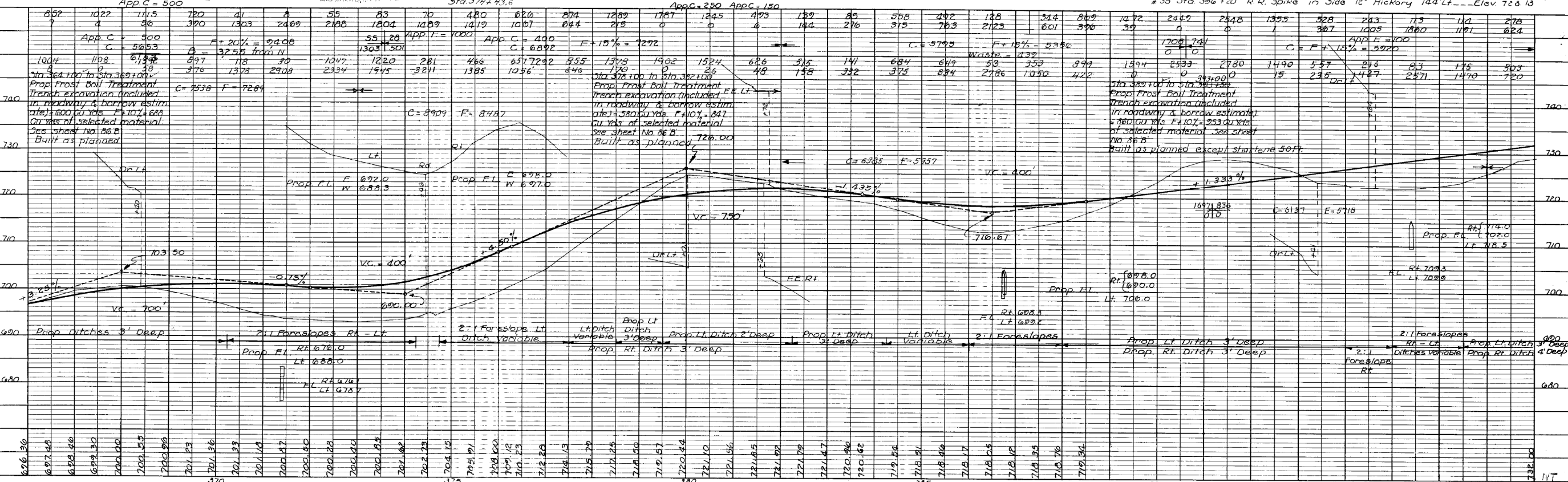
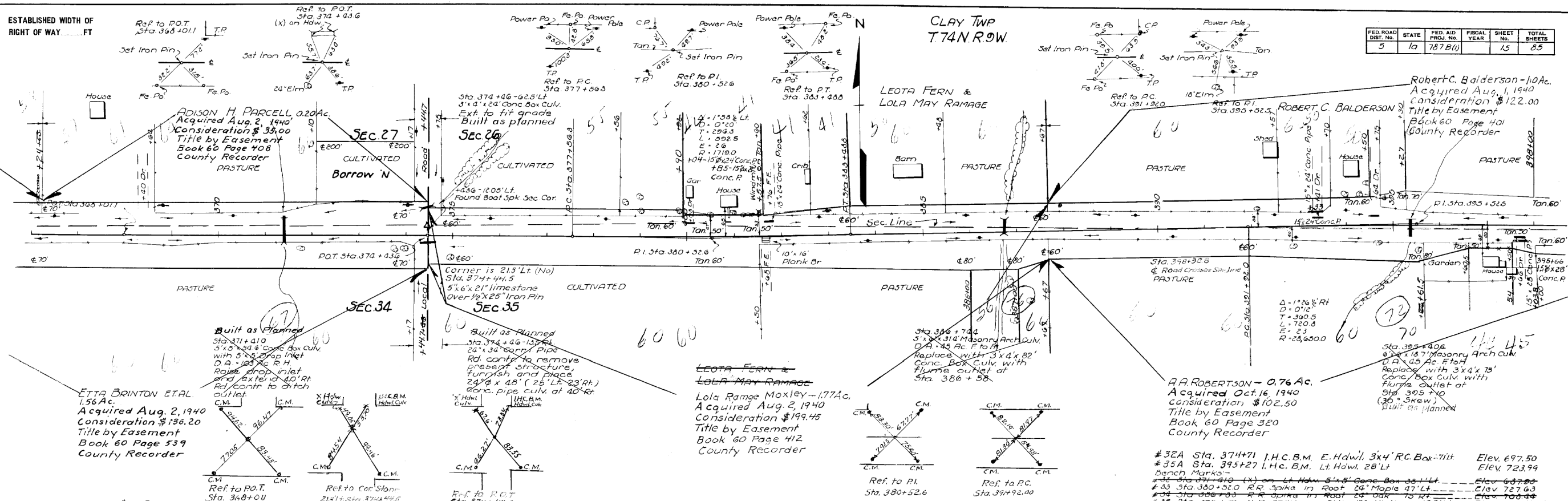
12	0	0	44	82	100	102	102	615	1022	2165	3026	5010	4324	4352	3206	3672	3871	1922	3018	210	105	62	117	202	383	180	735	293	450	353	333	719
1287	1189	329	915	1622	1822	1911	1511	1511	1822	2165	3026	5010	4324	4352	3206	3672	3871	1922	3018	210	105	62	117	202	383	180	735	293	450	353	333	719
C = 21,180										F = 15% = 2,103.6																						
W = 18.4																																
192	135	93	45	113	141	191	559	1163	2554	4960	8794	14130	11602	8212	5650	3901	1721	159	620	210	40	24719	13	85	295	162	165	265	459	573	619	767
1192	1188	537	677	1637	1999	2095	14934	159	21	0	0	39	9.8	28	0	4	490	1771	2611	2729	3501	3549	3632	2019	1375	907	792	374	141	71	15	
C = 24,079										F = 15% = 24,279																						
Roc C = 262																																
F = 23996																																
Overhaul 15,008 Sta. Yds																																
Estimate 237 Cu Yds of channel change excavation to be wasted in old channel																																
Estimate 423 Cu Yds of channel change excavation to be wasted in old channel																																

PLATE 1-PLAN-PROFILE O.P.R.A.E. STANDARD
Reckuk - Washington Co. FA. Proj. No. 787B(1) Sheet No. 14

This Sheet
For Information Only

ESTABLISHED WIDTH OF RIGHT OF WAY FT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	1a	787(B)		15	85



Station	Elevation	Notes
370	697.44	
371	698.46	
372	699.30	
373	700.00	
374	700.55	
375	701.10	
376	701.65	
377	702.20	
378	702.75	
379	703.30	
380	703.85	
381	704.40	
382	704.95	
383	705.50	
384	706.05	
385	706.60	
386	707.15	
387	707.70	
388	708.25	
389	708.80	
390	709.35	
391	709.90	
392	710.45	
393	711.00	
394	711.55	
395	712.10	

PLATE 1--PLAN-PROFILE D.P.R. & R.E. STANDARD
 KEUFFEL & ESSER CO., NEW YORK
 Revised Nov 9, 1940
 Washington Co. PA. Proj. No 787(B) Sheet No. 15

DATE: _____
 BY: _____
 CHECKED: _____
 NO. _____

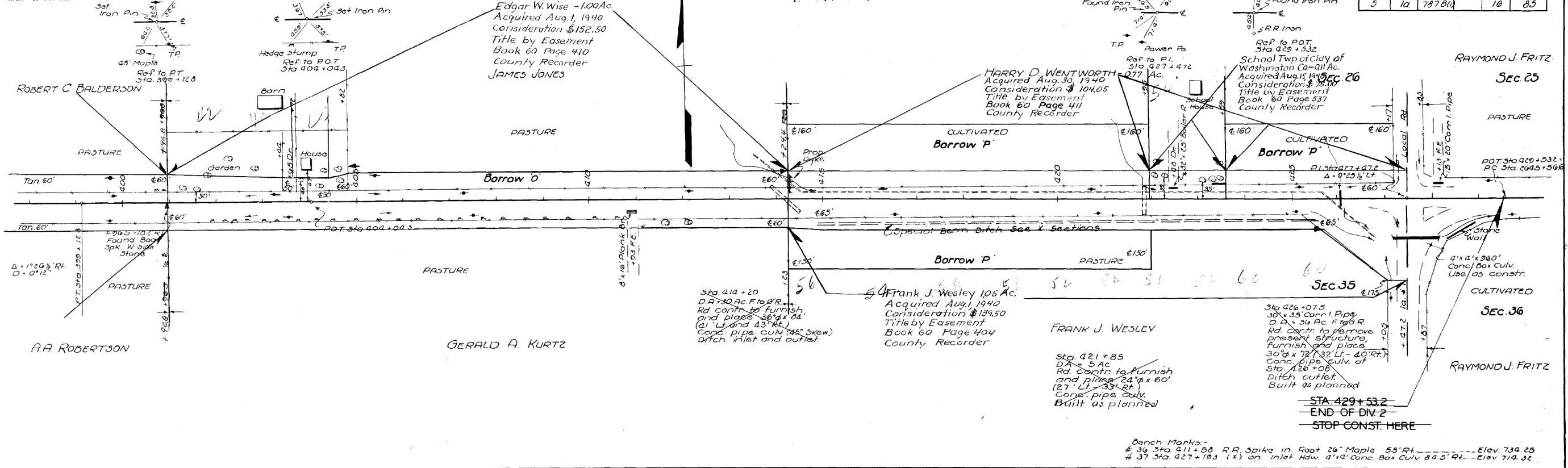
DATE: _____
 BY: _____
 CHECKED: _____
 NO. _____

This Sheet For Information Only

ESTABLISHED WIDTH OF RIGHT OF WAY FT

CLAY TWP
T.74 N. R.9 W.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	1a	787 B(1)		16	85



Bench Marks:
36 Sta 411+58 R.R. Spike in Root 26" Maple 55' RL - Elev 739.25
37 Sta 427+193 (X) on Inlet Hdwy 4'x4' Conc. Box Culv 8.5' RL - Elev 719.32

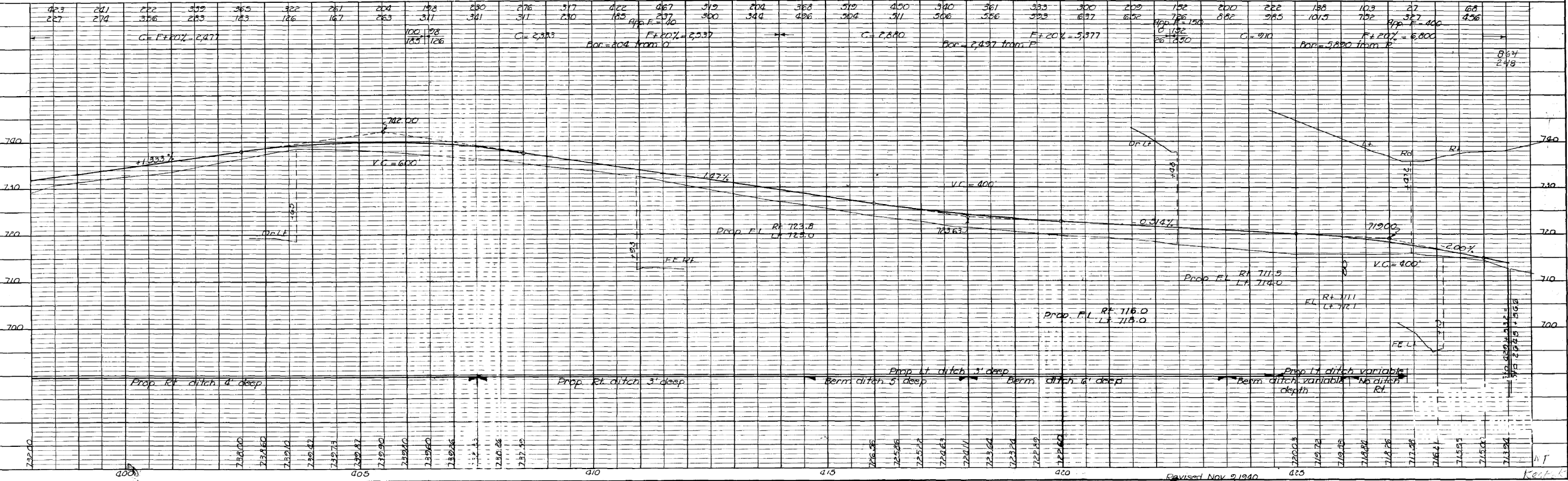


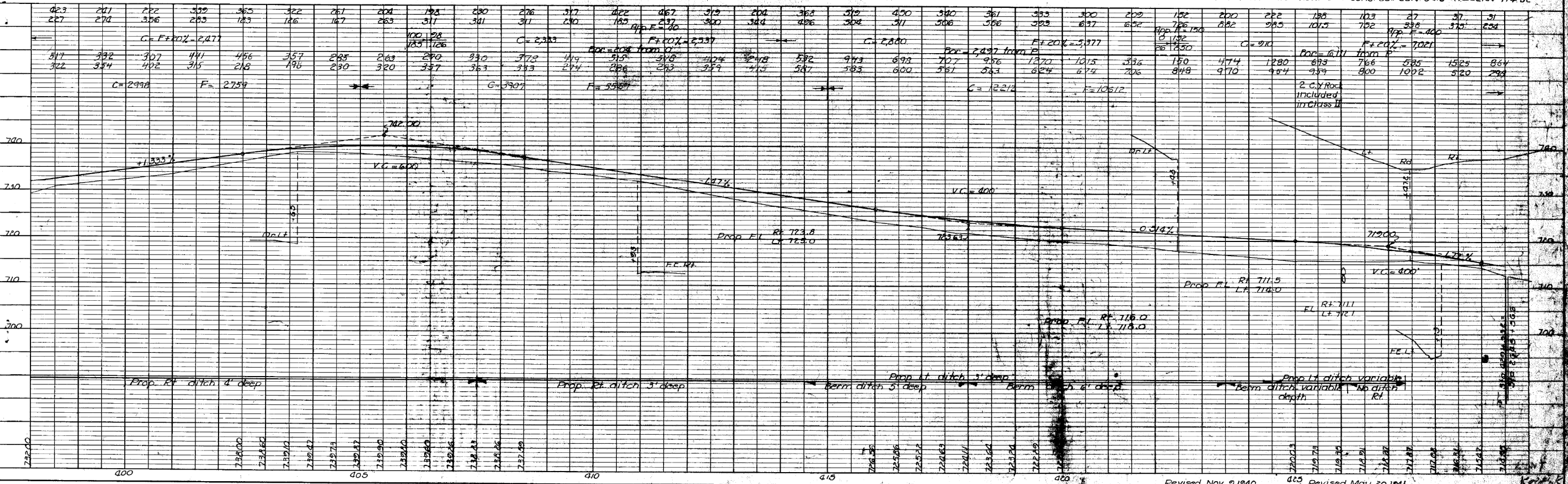
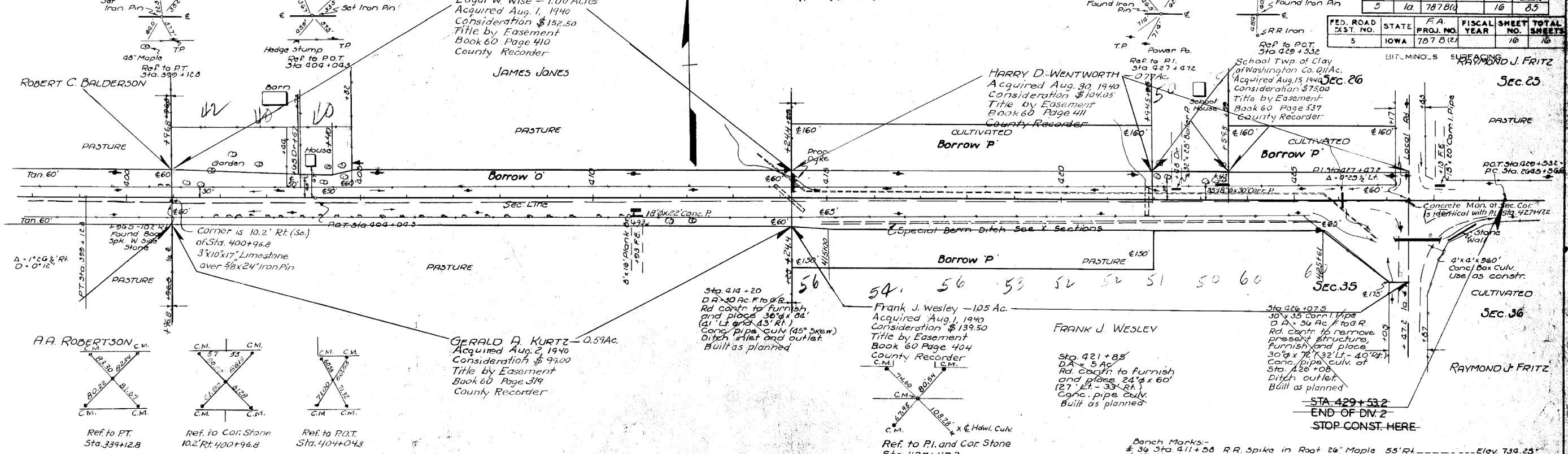
PLATE 1 - PLAN-PROFILE OF R.R.E. STANDARD
REVISED NOV. 9, 1940
Kearney, Washington Co. Pa. Proj. No. 787 B(1) Sheet No. 16

This Sheet
For Information Only

ESTABLISHED WIDTH OF RIGHT OF WAY FT

CLAY TWP T.74 N. R.9 W.

FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	IOWA	787 B(1)		16	85
FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	IOWA	787 B(2)		16	16



423	227	227	322	365	322	261	204	198	280	276	317	422	467	312	204	362	312	450	340	361	333	300	209	152	200	222	188	103	27	37	31
227	274	306	283	183	126	167	263	311	341	311	290	185	237	300	324	426	302	311	306	356	323	652	726	726	200	285	103	286	310	204	
C = 2,472		C = 2,383		C = 2,800		C = 2,800		C = 2,800		C = 2,800		C = 2,800		C = 2,800		C = 2,800		C = 2,800		C = 2,800		C = 2,800		C = 2,800		C = 2,800		C = 2,800			
517	332	307	441	456	357	285	263	290	930	372	419	515	318	424	248	582	943	692	707	956	1370	1015	354	150	474	1280	693	766	585	1525	844
322	334	402	315	218	196	290	320	337	363	343	274	286	283	259	412	547	583	600	561	553	624	674	206	848	970	484	939	800	1092	520	298
C = 2,998		F = 2,759		C = 2,997		F = 2,997		C = 2,997		F = 2,997		C = 2,997		F = 2,997		C = 2,997		F = 2,997		C = 2,997		F = 2,997		C = 2,997		F = 2,997		C = 2,997			

DATE: _____ BY: _____

PLAN: SURVEYED, PLOTTED, ALIGNED, CHECKED, NOTE BOOK, RT. OF WAY CHECKED.

DATE: _____ BY: _____

PROFILE: SURVEYED, PLOTTED, GRADES CHECKED, STRUCTURE NOTATIONS CHD.

Revised Nov 9, 1940
 Keokuk, Washington Co. FA Proj. No 787 B(1) Sheet No. 16
 FA Proj. No. 787 B(2) Sheet No. 16

This Sheet For Information Only

ESTABLISHED WIDTH OF RIGHT OF WAY _____ FT

MARY E. DAY, 0.52 ac.
Acquired June 12, 1941
Consideration 139.30
Title by Easement
Book 62, Page 12
County Recorder

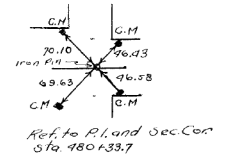
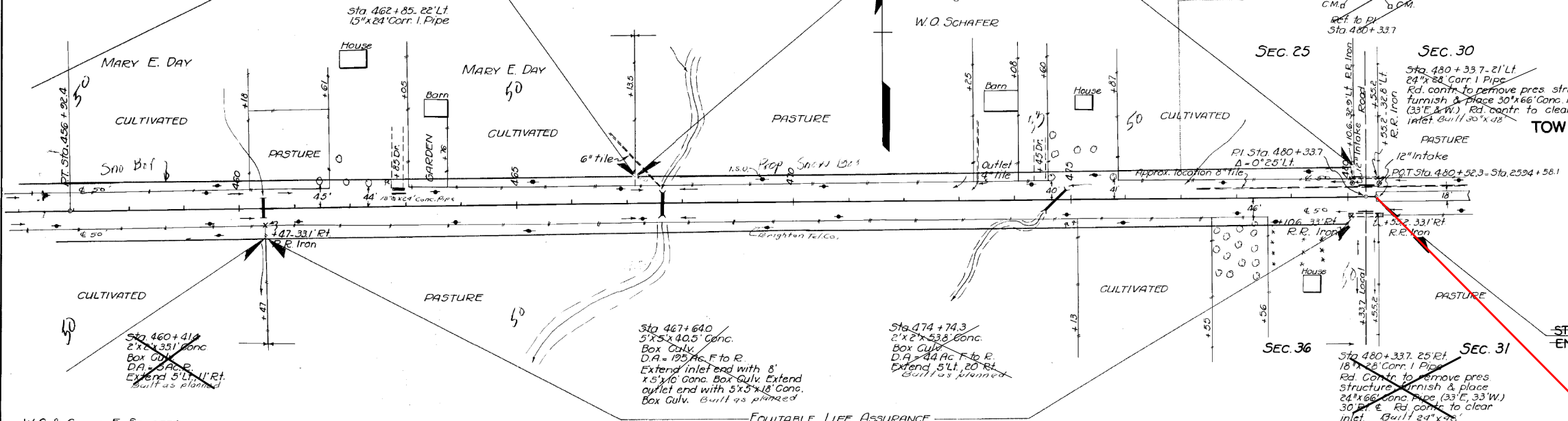
W.O. SCHAFER, 0.50 ac.
Acquired June 12, 1941
Consideration 133.80
Title by Easement
Book 62, Page 25
County Recorder

BRIGHTON TWP.
T.74N. R.8W.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	1a	787C(1)		7	14

DATE	BY	REVISION

DATE	BY	REVISION



BENCH MARKS:

#40 Sta. 460+414	(1) in N. Hdw. 2"x2" Conc. Box 175' Lt.	EL 725.80
#41 Sta. 467+640	(1) in Hdw. 5"x5" Conc. Box 197' Lt.	EL 716.80
#42 Sta. 474+535	(1) in S. Hdw. 2"x2" Conc. Box 267' Rt.	EL 723.04
#43 Sta. 472+774	R.R. Spk. in N.W. root 36" Maple 164' Rt.	EL 732.85
#44 Sta. 467+624	(2) in Hdw. 2"x2"	EL 720.79
#42A Sta. 474+935	(1) in Hdw. 2"x2"	EL 727.67

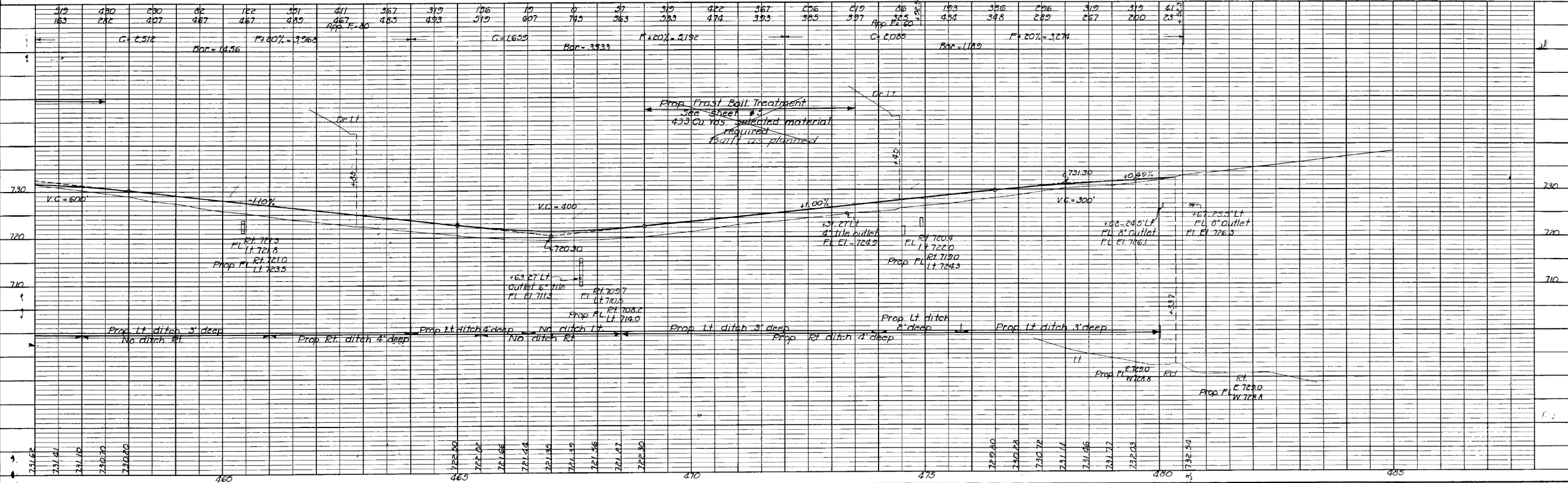


PLATE 1 - PLAN-PROFILE O.P.R. & R.E. STANDARD

Washington Co. FA Proj. No. 787C(1) Sheet No. 7

This Sheet For Information Only

TRAFFIC CONTROL PLAN

Thru traffic on IA 1 shall be maintained at all times except as follows:

- Stage 1 will close IA 1 from BOP to the entrance of Lake Darling State Park (Sta. 323+96). Traffic will be maintained via detour. Refer to J-sheets for detour location.
- Stage 2 will close IA 1 from the entrance Lake Darling State Park (Sta. 323+96) to EOP. Traffic will be maintained via detour. Refer to J-sheets for detour location.

IA 1 detours shall not be in operation during the winter season. Installation, maintenance, and removal of the detour signs are the responsibility of the Contractor. Refer to J-sheets for detour signing layout.

Paved 2-way access for ingress/egress to Lake Darling State Park shall be maintained at all times.

Access to Cedar Ave. and Dogwood Ave. shall be maintained at all times.

Access to all properties shall be maintained at all times.

STAGING NOTES

STAGE 1:

- Grade and Pave from BOP to the entrance of Lake Darling State Park (Sta. 323+96.00).

STAGE 2:

- Grade and Pave from the entrance of Lake Darling State Park (Sta. 323+96.00) to EOP.
- Remove and install new guardrail at bridge Sta. 336+82.

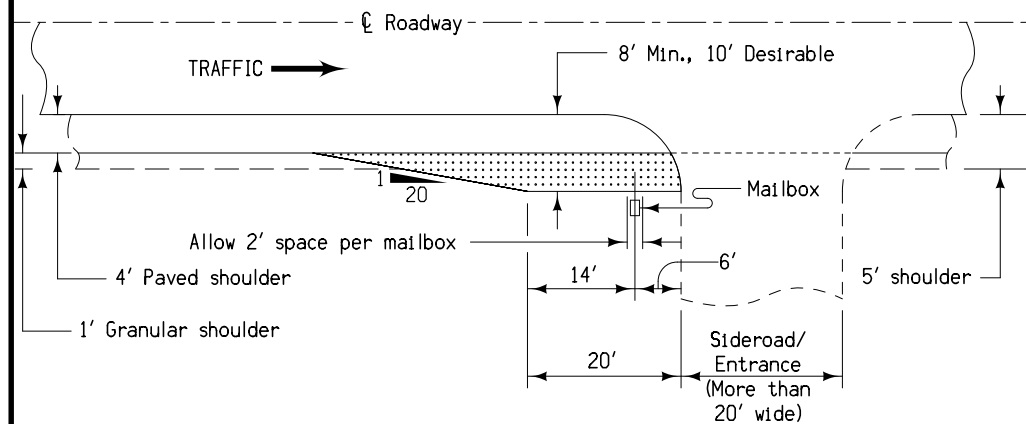
COORDINATED OPERATIONS

Other work in progress during the same period of time will include the construction of the projects listed. Coordinate operations with those of other contractors working within the same area.

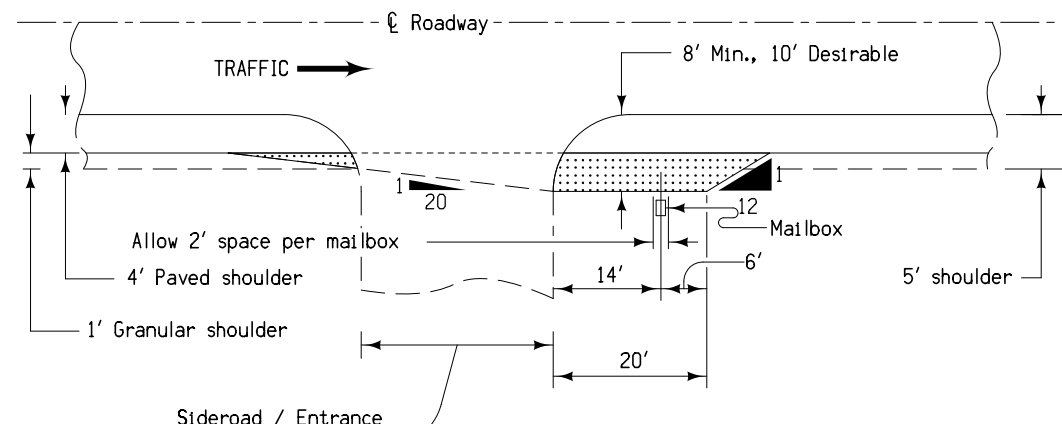
Project	Type of Work
NHSN-001-4(59)- -2R-92	Pipe culvert improvements

511 TRAVEL RESTRICTIONS

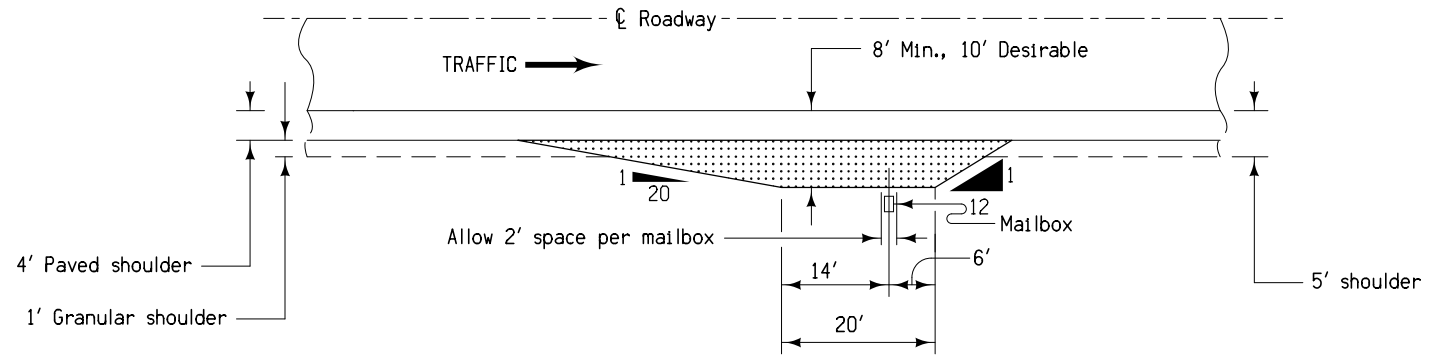
Route	Direction	County	Location Description	Feature Crossed	Object Type	Maint. Bridge No., Structure ID, or FHWA No.	Type of Restriction	Existing Measurement	Construction Measurement	Construction Measurement as Signed	Projected As Built Measurement	Remarks
STAGE 1 IA 1	EB/WB	Washington	Keokuk Washington Co Road to Lake Darling Road	Road Closure								
STAGE 2 IA 1	EB/WB	Washington	Lake Darling Road to Ginkgo Ave.	Road Closure								



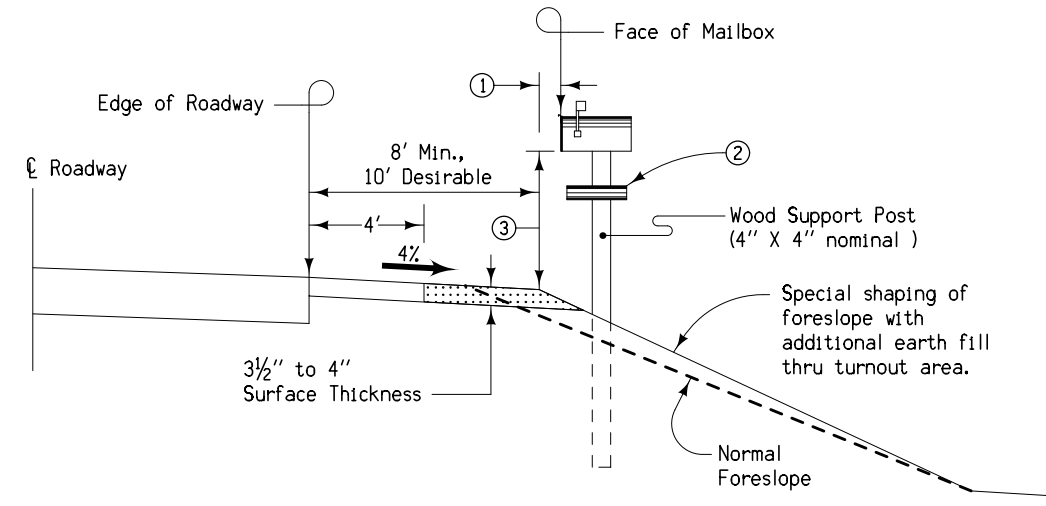
PLAN VIEW
Approach Side of Entrance



PLAN VIEW
Trailing Side of Entrance



PLAN VIEW
Shoulder Width Less than 8'



TYPICAL SECTION
Shoulder Width Less than 8'

GENERAL NOTES:

Refer to "Policies and Procedures Manual", Policy 610.09, Mailboxes and Newspaper Receptacles on Primary Roads.

Mailbox turnouts shall be full shoulder width with a minimum width of 8 feet. On shoulders less than 8 feet, build fillet to obtain a minimum width of 8 feet.

For multiple mailbox installations in one turnout, the taper dimensions will remain the same. The dimensions from centerline of mailbox located at either end will remain the same and 2 feet will be allowed for each mailbox in the installation.

When the mailbox owner's driveway is on the right hand side of the road, as the mail carrier travels, the box would preferably be placed near the driveway as shown on this sheet. With these types of placement, the driveway will serve as part of the mailbox turnout.

Requests, by the property owner, for the location of mailbox turnouts other than at driveways shall be approved by the Engineer in charge of construction and the U.S. Postal Authorities.

Mailbox(s) shall be installed with the face (door) no closer to the roadway than the shoulder line. Support post shall be in the foreslope with the inside edge at least one (1) foot outward from the shoulder line.

SURFACING QUANTITY

Surfacing of mailbox turnouts is based on a 5 inch design depth (loose volume) which will, under normal conditions, compact to 3.5" to 4" actual depth. A width of 8 feet will require approximately 18.3 cubic yards and 10 foot width will require approximately 27.8 cubic yards of surfacing. Quantities are given for a single mailbox installation 276 to 340 feet in length. Where multiple installations or installations at driveways are encountered, quantities will vary as directed by the Engineer.

Payment for construction of mailbox turnouts will be as specified elsewhere in the contract documents.

- ① 8" to 12" preferred, 0" minimum.
- ② Metal tube / box for delivery of local advertisements, newspapers etc.
- ③ Mounting height per U.S. Postal Regulations (42" to 48" above mail stop surface).

 ROAD DESIGN DETAIL	REVISION
	1 MODIFIED
560-2	
SHEET 1 of 1	
DETAILS OF MAILBOX TURNOUTS (GRANULAR SURFACED)	