EXHIBIT "I"

SCOPE OF SERVICES

This scope of services is intended to be an accurate description of the items and tasks required for completion of the design of this project. However, each project is unique and may require effort in an individual task to complete the design. The following information will explain and define in general terms the major design items of importance relating to this project. All the elements of work that are necessary to satisfactorily complete the design of this project may or may not be listed. The lack of a specific listing of an element or item in the scope of services does not in itself constitute the basis for additional services, supplemental agreements, and/or adjustment in compensation.

A more detailed description of the process and requirements used by MoDOT for completion of the design may be found in the EPG. The consultant is encouraged to review the appropriate sections of the manual to supplement the information contained in the scope of services and provide additional guidance in the requirements and expectations of MoDOT for completion of the design services.

Services rendered by the CONSULTANT, which are considered additional services, will be addressed under a supplemental agreement. The provisions of the Design Consultant Agreement outlining the responsibilities of the CONSULTANT regarding the quality and accuracy of the deliverables and products shall apply to any decisions regarding determinations of additional services.

Preparation of a supplemental agreement is necessary prior to performance of any work, which is considered as additional services, not included in the original scope of services. The consultant will not be compensated for additional services performed prior to execution of a supplemental agreement. Only additional services, which are required due to changed or unforeseen conditions or are due to a change in the specified deliverable, will be considered for inclusion in a supplemental agreement.

The CONSULTANT will provide the professional, technical, and other personnel resources, equipment, materials and all other things necessary to prepare the preliminary plans, right of way plans, and construction plans and data required for development of this specific project. The survey data shall be based on the Missouri State plane coordinate system and modified by a factor approved by the COMMISSION. All elevations and vertical control shall be based on NAVD 88.

The CONSULTANT shall prepare all plans through use of a Computer Aided Drafting (CAD) program. The CONSULTANT shall conform to the Missouri Department of Transportation

Specifications for Computer Deliverable Contract Plans as referenced in the EPG. Unless otherwise specified all plan sheets and CAD plots shall be electronically delivered to the COMMISSION as 22-inch by 34-inch sheets and shall conform to the Specifications for Computer Deliverable Contract Plans.

The CONSULTANT will be required to produce and update the construction cost estimate for this project at the completion of each major milestone or at a minimum of every six months. The major milestones for this project are defined as the preliminary design, right of way design (if necessary), and final design. The CONSULTANT shall review "as built" plans, aerial photographs, manuscripts, etc. and other information to be provided by the Commission and make the necessary field investigations to assure that there have been no significant changes since the information was recorded or obtained.

The CONSULTANT shall provide the professional, technical and other personnel resources, equipment, materials and all other things necessary to prepare the preliminary plans, Right of Way plans, and construction plans for the bridge improvements.

The consultant shall perform the following services, all in accordance with the standard practice of the Commission and the following:

AASHTO “A Policy on Geometric Design of Highways and Streets” (latest version)

AASHTO “Roadside Design Guide” (latest version)

AASHTO “LRFD Design methods” (latest version)

AASHTO “Highway Drainage Guidelines” (latest version)

“Manual on Uniform Traffic Control Devices” (latest version)

“Highway Capacity Manual” (latest version)

I Administration

CONSULTANT shall participate in the following as part of the Administration tasks:

1. Attend and document milestone project meetings with MoDOT (CORE Team meetings). Meetings can be held virtually.
2. Correspondence (emails, letters, meeting minutes, phone calls)
3. Set up the project and conduct Kick-Off Meeting.

4. Coordination with subconsultants.

5. Participate in one Public Meeting. Develop handouts and exhibits for meeting.

6. Provide monthly progress reports and invoices and review subconsultants invoices and reports.

7. Provide exhibits, sketches, and back-up data to MoDOT on an as-needed basis.

8. Provide information to support the SE District MoDOT staff in maintaining a public website for the project staff to inform the public and update impacts related to the project including timelines, changes to the project, meetings, comments. The website to be maintained through the construction phase.

II Surveys

CONSULTANT shall obtain topographic survey information required for the preparation of preliminary, right of way, and final roadway plans including:

1. Perform a thorough review of any existing surveys.

2. Coordinate available survey control and benchmarks with surveyors.

    a. Translate control and benchmarks into sheet drawings to be used in construction plans, per EPG.

3. Complete remaining topographic surveys to develop preliminary plans, bridge survey, right-of-way plans and final roadway plans, including all improvements and existing topography within the limits of the project. Topographic surveys shall consist of all pertinent topographic features including, but not limited to:

    a. existing drainage and sanitary structures (pipes, types, flowlines, sizes)

    b. trees over 4 inches in diameter

    c. additional existing retaining wall shots and type of wall

    d. building front elevations and pertinent building features

    e. pertinent parking lot features

    f. driveway joints, pavement types and profiles

    g. existing signal equipment surveys

    h. drainage swales

    i. sign posts, size, identification and photo log

    j. pavement marking type

k. miscellaneous roadside identification and photo log

l. lighting

m. other

4. Field locate visible above ground evidence of utilities located within the project area. “Missouri One Call” and MoDOT will be contacted and a formal request will be submitted for marking the locations of member utilities. In the event that “Missouri One Call” fails to respond, in whole or in part, to the formal request, underground facilities, structures, and utilities will be plotted from surveys and/or available records. The locations of all utilities are to be considered approximate. There may be other utilities, whose existence may not be known at the time of the survey.

5. Coordinate with District Utility Engineer on underground utility one-call locates and have utilities located in identified areas of proposed project.

6. Complete utilities survey and verify completeness and accuracy of utility topographical survey.

7. As-needed punch list surveys due to design updates and/or new development.

CONSULTANT shall perform right-of-way surveys necessary for the preparation of preliminary, right of way and final roadway plans including:

1. Identify at the earliest opportunity, the title reports to be ordered by the COMMISSION. This will be coordinated during the preliminary design phase of the project.

2. Locate existing right of way, property lines and pertinent section lines for the entire project limits.

3. Clearly identify linework in drawing with text (i.e. property lines (PL), section lines, quarter-quarter section lines, existing right-of-way, existing easements, etc.

4. Research impacted parcels. Each of these properties within the project limits shall include property owner name, assessor’s map number, last deed book and page, and existing size of parcel in square feet.

5. All property lines shall have a bearing (to the nearest second) and a length (to the nearest hundredth of a foot) shown and the parcel closed within acceptable tolerances governed by the State of Missouri.

6. Incorporate all easements and identified information from the title work into the existing right-of-way drawing.

7. Provide a reference tie drawing with three-point ties.

8. Establish land corner ties.

9. If necessary, the CONSULTANT shall provide a land survey plat that is compliant with the current standards for property boundary surveys to be recorded. The CONSULTANT shall also provide survey plats and legal descriptions as defined in Section 236.4.6 of MoDOT's Engineering Policy Guide.

III Utility Coordination

The CONSULTANT shall perform the following utility coordination tasks:

1. Obtain maps from utilities of their known locations and adjust survey limits as needed.
2. Coordinate submittal of preliminary plans to utility companies.
3. Coordinate with utility companies on the development of the plan of adjustment and obtain cost estimates for reimbursable utilities for the District Utility Engineer's approval.
4. Show the existing utility facilities and plan of adjustments for proposed utilities facilities in the contract plans. (plans sheets, cross sections, culvert sections)
5. Coordinate with utility owner the relocation of each impacted utility on the project during design and construction.
6. Prepare special utility sheets as necessary (including utility profile and exhibits).
7. Assist District Utility Engineer in the preparation of agreements (includes municipal agreements).
8. Identify locations for power service needs, prepare service request for submittal and coordinate with the power company to obtain estimated costs.
9. Coordinate with MoDOT (PM and District Utility Engineer) and to provide SUE test hole information at critical utility locations.
10. Prepare utility job special provision and information for the preparation of the Utility Status Letter for District Utility Engineer.
11. Provide assistance and answer utility related questions during the construction phase for MoDOT staff and the roadway contractor.

IV Concept Report

1. The CONSULTANT will collect traffic data for the intersection.

2. Alternatives Development

    a. The CONSULTANT will develop a minimum of two geometric alternatives for the intersection.
        i. Establish horizontal and vertical geometry of alternatives
        ii. Establish typical section of alternatives
        iii. Estimate area of any R/W needed for alternatives
        iv. Identify potential design exceptions that may be required
        v. Review drainage per Alternative
        vi. Review potential utility impacts per Alternative
        vii. Evaluate constructability of the alternatives

3. Traffic Safety and Operational Analyses

    a. The CONSULTANT shall perform the following tasks:
        i. Conduct a safety analysis utilizing methods described within the latest edition of the Highway Safety Manual (HSM).
        ii. Safety Analysis (Existing Condition)
        iii. Safety Analysis (proposed alternatives)
        iv. Conduct an operational analysis of existing condition and proposed two alternatives.
        v. Prepare conceptual signing plan for the recommended alternative configuration.

4. Concept Report

    a. The CONSULTANT will prepare a written draft summarizing the findings of Geometric Concepts, Safety and Operational Analyses, and Cost Analysis.
    b. The CONSULTANT will develop a conceptual opinion of probable construction cost for each alternative using current year bid tabulations to formulate an order of magnitude cost for each alternative.
    c. The CONSULTANT will submit an electronic copy of the draft report to MoDOT for review of the proposed recommendations and will finalize the report based on MoDOT comments and/or concurrence.

V Public Involvement Support

The COMMISSION will be the main point of contact for receiving calls from the public. The CONSULTANT will interact with external agencies and the county commission as required to accomplish the scope of services of this contract.

1. The CONSULTANT shall be required to attend meetings with regulatory agencies, organizations, county officials, local municipalities, property owners and other entities as

required. A total of three (3) stakeholder meetings, with various entities, is anticipated for the public involvement on this project.

2. The CONSULTANT shall participate in a planning meeting with MoDOT prior to the public meeting. A total of one (1) public meeting is anticipated to be held during the preliminary design phase. If additional public meetings are required, the COMMISSION will request via a Supplemental Agreement.
3. The CONSULTANT shall provide the COMMISSION a database containing all property owners contiguous to the project area, or within a reasonable distance of the project. The database shall provide contact information available for public involvement and environmental purposes (e.g. mailing addresses, phone numbers, email addresses, etc.) The database shall also designate whether the individual is someone the Commission will need to obtain right of way and/or easements from.
4. The COMMISSION shall advertise for meetings, obtain the meeting location and room and perform mass mailings of notices of meetings or hearings, and newsletters.
5. The CONSULTANT shall prepare the exhibits as requested by COMMISSION for the public meeting or hearing. Assume 2 plan view mounted board exhibits.
6. The CONSULTANT shall produce copies of the handouts.
7. The COMMISSION shall provide the sign-in sheet/equipment and personnel for the sign-in table at each public meeting.
8. The CONSULTANT shall record and prepare the meeting minutes of the public meeting and shall prepare the transcript, if applicable.

VI Preliminary Roadway Design

The CONSULTANT'S attention is directed to Chapter 235 of the MoDOT Engineering Policy Guide (EPG) for general guidelines and requirements for preliminary design. Other chapters may be applicable for preliminary design preparation.

1. Upon approval of the design criteria memorandum by COMMISSION, the CONSULTANT shall undertake the following to develop the preliminary design phase:

    a. Prepare preliminary plans, as outlined in the MoDOT EPG.
        i. The COMMISSION shall furnish the CONSULTANT traffic information for the construction and design years to be used in the preliminary plans.
        ii. The COMMISSION shall furnish the CONSULTANT the latest accident data and traffic information used to calculate the project accident rate. The COMMISSION shall furnish the CONSULTANT the "statewide accident rate for a similar class of roadway" and any high hazard locations within the project limits.
        iii. The CONSULTANT shall submit the preliminary plans to the COMMISSION for review and approval as shown in Exhibit IV.
    b. The preliminary plans shall be prepared in accordance with the applicable sections of the MoDOT EPG, as to what shall be shown thereon, including proposed design features.

i. The plan view English scale shall be 1”=50’ horizontal (or different scale as determined by MoDOT Project Manager for clarity) and extend 100 feet beyond project limits.
ii. The profile view English scale shall be 1”=50’ horizontal, and 1”=10’ vertical.

c. The CONSULTANT may have to review preliminary cross sections sufficiently to make a cost comparison between using retaining walls versus acquiring additional right of way for all proposed wall locations.
d. The CONSULTANT shall prepare the construction estimate. The COMMISSION shall prepare the right of way estimate based on the right of way requirements furnished by the CONSULTANT.
e. The preliminary plans shall be submitted to the COMMISSION for review and approval. A letter of transmittal shall be provided with the preliminary plan submittal. The COMMISSION shall furnish the template for the letter of transmittal. The construction cost estimate shall also be submitted with the preliminary plans.
f. The preliminary plans shall include the tentative additional easement and right of way limits, property lines and ownerships, section lines, township and ranges, any U.S. Surveys, city limits, and a general outline of the construction staging, critical design items and other items as outlined in the EPG.
g. Traffic assignments shall be shown on the respective roadways or on a line sketch of the roadways.
h. Typical sections shall indicate heavy, medium or light duty pavement for new roadways, along with descriptions of the existing roadway types remaining in place.

1. A Preliminary Field Check will be arranged by the CONSULTANT with the COMMISSION to discuss design features in the project area.

2. The CONSULTANT shall provide the COMMISSION with information for proper environmental and cultural clearance including submittal of the preliminary stage RES, right of way stage RES (if needed) and final stage RES. Items that may need to be addressed include historical buildings, archaeological sites, historic bridges, conversion of farmland, endangered species, wetlands, parklands and historical sites.

3. The CONSULTANT shall set horizontal and vertical control for the project and provide the COMMISSION the combined adjustment factor. All control furnished by the CONSULTANT shall use current datums and adjustments.

4. The CONSULTANT shall provide all land boundary work and legal descriptions to the COMMISSION for review and approval prior to right of way plans submittal.

5. The COMMISSION shall provide the pavement design and general Job Special Provisions related to the project including any special design elements.

6. The COMMISSION may hold a public meeting for this project either in person or virtually and the CONSULTANT will be required to attend and coordinate meeting. The CONSULTANT shall provide exhibits for MoDOT public meeting as requested and will refer to the sections of the EPG concerning public involvement.

VII Right of Way Design

1. The CONSULTANT shall prepare right of way plans, which may be separate drawings from those used for design and construction details. The right of way plans shall show alignment, geometric design, removal of improvements, drainage facilities, property lines and ownership, sub-division lot lines, other land survey information, street lines and existing right of way and easements. The CONSULTANT should also include any plan details, which will require additional right of way or permanent, temporary or utility easements during the construction phase of the project such as bypasses, temporary erosion control, etc. Right of way plans include title sheet, typical sections, profile sheets, and cross sections of the roadway, entrances and side roads. Areas of new right of way, permanent easements and/or temporary easements required from each individual property owner may be shown in tabular form on the respective sheets.

    a. The CONSULTANT shall finalize any previous review of the roadway cross sections sufficiently to determine the feasibility of constructing retaining walls versus obtaining additional right of way. This final review shall consist of construction estimates versus right of way estimates.
    b. Upon completion of the estimates by COMMISSION and CONSULTANT, the CONSULTANT shall recommend to the COMMISSION a choice at the various locations which warrant consideration of the alternate retaining wall versus right of way solutions. The COMMISSION shall make the final determination of purchasing right of way, or constructing retaining walls.

2. Right of way plans shall be submitted to the COMMISSION for review and approval. The right of way plans shall be at the same scale as the construction plans. The right of way plans shall include any design details that will control the width of right of way and necessary easements.

    a. New right of way lines and all easements shall be dimensioned by station and offset distance from the centerline, or crossroad centerlines, if necessary. Bearings and distances on the right of way lines may be required.
    b. The following minimum design features shall be included on the right of way plans:
        i. Title sheet with appropriate project limits, access note and traffic data completed.
        ii. Typical Sections
        iii. Cross sections at 100’ intervals, including additional sections at each entrance with new and existing entrance grades.

iv. Construction limits (slope lines); drainage facilities; entrances and their reference location, width and type along with their existing and future grade percentage; property owners, with areas of new right of way, easements and remaining property; centerline bearing, ties to legal land corners from centerline stations with notation for corner witness by a registered land surveyor; existing utility locations and easements, including replacement utility easements; horizontal curvature information; and proper right of way symbolization for new right of way (access control) and easements, including areas which may be required to accommodate temporary erosion control.
v. Township, Range, Section and/or U.S. Survey information broken down t ¼ ¼ section line level on each plan sheet near the title block or appropriate survey/section line.

3. The CONSULTANT shall provide an updated construction estimate for the Right of Way design stage.

4. The COMMISSION shall review, approve and certify the right of way plans as completed by the CONSULTANT. The CONSULTANT shall provide one (1) electronic set of fully signed and sealed right of way plans, for the COMMISSION'S use.

5. The CONSULTANT shall provide title insurance information for all parcels with new right of way acquisition and the last deed of record for any parcel with easements.

6. The COMMISSION will prepare right of way appraisals and secure the necessary right of way by negotiation or condemnation, if necessary, for construction of this project.

7. The CONSULTANT shall be responsible for staking and re-staking tentative right of way on individual properties, as required by MoDOT staff, during right of way negotiation and acquisition phase of the project. The CONSULTANT shall also set permanent monuments as shown on the recordable land survey.

8. The CONSULTANT shall be responsible for making all revisions to the right of way and construction plans due to negotiations with the property owners in an effort to acquire right of way.

9. The CONSULTANT shall write, sign and seal deed descriptions for all right of way acquisitions on MoDOT's approved Exhibit A form and submit to COMMISSION.

10. The CONSULTANT will provide the COMMISSION with information for proper environmental and cultural clearance including submittal of the Right of Way stage RES. Items that may need to be addressed include historical buildings, archaeological sites, historic bridges, conversion of farmland, endangered species, wetlands, parklands and historical sites.

VIII Final Roadway Design

1. The COMMISSION will secure execution of municipal agreements with the cities and/or county agreements. A copy of the executed agreements will be furnished to the CONSULTANT for his information. The CONSULTANT shall conform to all design provisions of these agreements.

2. A final design field check shall be held with CONSULTANT and COMMISSION representatives prior to completing final design plan quantities. The CONSULTANT shall make any necessary revisions to the final plans as determined by this design field check.

3. The CONSULTANT shall prepare detailed temporary erosion control plans for review and approval before inclusion in the final design plans. The CONSULTANT will submit a Final Plans stage RES and help ensure previous RES items have been addressed.

4. The CONSULTANT shall prepare computations for all design plan quantities. All plan quantities shall be shown on the Quantity Sheets, by construction stage, if applicable. The format for these sheets shall be furnished by the COMMISSION. Specialty items may have separate sheets for quantity tabulations.

5. The CONSULTANT shall prepare for review and approval by the COMMISSION all General Job Special Provisions, which are to supersede the Missouri Standard Specification for Highway Construction. A brief reason for the deviation from the standard plans and specifications should also be provided. The CONSULTANT shall prepare only Job Special Provisions related to design elements shown in the plans.

6. The following list shall be considered the minimum requirements for a complete set of Final Design Plans.

    a. Title Sheet
    b. Typical Sections
    c. Quantity Sheets
    d. Plan Sheets at 1”=50’ horizontal (or different scale as determined by MoDOT Project Manager for clarity). Plan sheets shall include all necessary adjustments to signing and proposed pavement marking.
    e. Profile Sheets at 1”=50’ horizontal and 1”=10’ vertical
    f. Culvert Sections at 1”=10’, if needed
    g. Special Sheets for geometrics, referenced points, grading plan, traffic control plan, temporary erosion control plan and any other sheets for special design features.
    h. Earthwork Quantities, Cross Sections at 25’ intervals, 1”=10’ (1:100), horizontal and vertical, including entrance sections with existing and proposed grades
    i. Tabulation of Quantity Sheets

j. Job Special Provisions in electronic format readable in COMMISSION'S current word processor
k. File with the bid items and quantities as generated by COMMISSION'S Estimate Program
l. Construction Workday Study
m. Transportation Management Plan
n. Final Plans Checklist Form D-12

7. Additional plans and information may be required to complete the Final Design Plans. With the submittal of the Final Design the CONSULTANT shall also provide the COMMISSION a statement that an internal quality control check has been conducted and to the best of the CONSULTANT'S knowledge the final design plans are free of gross errors, misleading or confusing typos, and includes adequate information to construct the project.

8. The CONSULTANT shall prepare all plans through the use of a Computer Aided Drafting (CAD) program. The CONSULTANT shall conform to MoDOT's Specifications for Computer Deliverable Contract Plans as referenced in the MoDOT EPG.

9. The CONSULTANT shall furnish the COMMISSION the following completed sheets and documents, as applicable, for each separate construction project included in this contract, as follows:

    a. Final Design Plans showing profile grades, geometric data, alignment data, etc.
    b. One (1) electronic copy of the location sketch for Commission Approval submitted in electronic format.
    c. Draft copy of the job special provisions related to design elements for review. After corrections, the job special provisions shall be furnished in electronic format utilizing the COMMISSION'S latest word processing program.
    d. One (1) legible electronic copy of engineering calculations and analysis.
    e. One (1) electronic copy of a complete summary of quantities and estimate of construction costs. The estimate shall be prepared using the latest version of MoDOT's ESTIMATE program.
    f. One (1) electronic copy of Electronic Design Data.
    g. One (1) electronic copy of a workday study showing the estimated number of workdays required to construct each project.
    h. The CONSULTANT shall provide a 3D model of the project exported from Geopak Open Roads Designer software for the COMMISSION'S use.

IX Construction Support

1. The CONSULTANT shall be available to the COMMISSION to discuss and interpret plans and specifications during the bidding and construction phase of the project as determined necessary by the Engineer.

2. The CONSULTANT shall be available to provide Shop Drawing review of CONTRACTOR submittals pertaining to essential structural components and review any contractor's Value Engineering Proposals.

3. The CONSULTANT may be required to attend a pre-construction meeting, and a post construction meeting via TEAMS.

4. If issues arise during construction, there will be a direct line of communication established between the MoDOT Construction Office and the CONSULTANT. The CONSULTANT will immediately inform the MoDOT Design Division or MoDOT Bridge Division of any recommendations or clarifications made to the Construction Office.

EXHIBIT II

SERVICES PROVIDED BY THE COMMISSION

The Commission will furnish to the Consultant without charge the following information:

A. General design criteria.
B. Available standard detail sheets in Microstation format.
C. Traffic and accident data.
D. Pavement Design Selection
E. All necessary environment services identified through the Request for Environmental Services
F. Right of way and easement acquisition.

The Consultant shall proceed with the final design and detail plans in accordance with the data approved or furnished by the Commission which will meet with the general standards adopted by AASHTO and approved by the Department of Transportation as provided by Title 23, United States Code, Section 109(b).

EXHIBIT IV

PERIOD OF SERVICE

The Consultant shall make submittals in accordance with the schedule described below:

Period of Service	
Letting	April 2027
PSE	1/11/2027
100% Review Plans	10/2/2026
Final RES	10/2/2026
ROW Plans/ROW RES	3/20/2026
Public Meeting Exhibits	1/9/2026
Preliminary Roadway Plans	12/5/2025
Preliminary RES	12/5/2025
Conceptual Report	10/17/2025

Construction support as needed post award – Anticipated for 24 months

PERIOD OF SERVICE – The total period of service including construction services is expected to be completed by April 1, 2029.

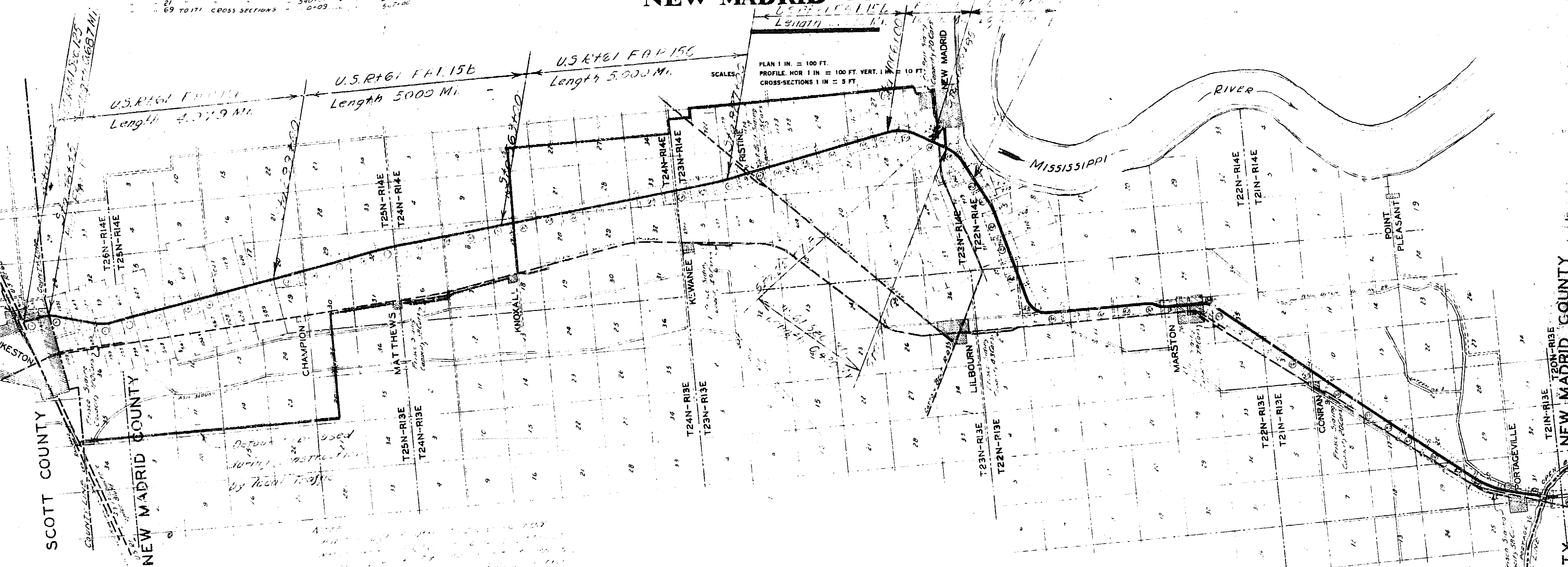
MISSOURI
STATE HIGHWAY COMMISSION
PLAN AND PROFILE
OF PROPOSED
STATE ROAD
FEDERAL AID PROJECT
NEW MADRID COUNTY

INDEX OF SHEETS

SHEET NO.		FROM STA.	TO STA.
1	TITLE PAGE		
2	TYPICAL CROSS-SECTION OF IMPROVEMENT		
3	PLAN AND PROFILE STA.	0+09	23+00
4	"	23+00	53+00
5	"	53+00	83+00
6	"	83+00	113+00
7	"	113+00	143+00
8	"	143+00	173+00
9	"	173+00	204+00
10	"	204+00	235+00
11	"	235+00	266+00
12	"	266+00	297+00
13	"	297+00	328+00
14	"	328+00	359+00
15	"	359+00	385+00
16	"	389+00	419+00
17	"	419+00	450+00
18	"	450+00	480+00
19	"	480+00	510+00
20	"	510+00	540+00
21	"	540+00	570+00
69 TO 171	CROSS SECTIONS	0+09	567+00

LIST OF CULVERTS

C 232 C 233



CONVENTIONAL SIGNS

STATE AND NATIONAL LINE	LEVEE
COUNTY LINE	CULVERTS
CITY, VILLAGE OR BOROUGH	DROP INLET
TOWNSHIP LINE	TROLLEY POLE
SECTION LINE	POWER POLE
GRANT LINE	TELEPHONE OR TELEGRAPH POLE
FENCE LINE	MARSH
GUARD RAIL	HEDGE
UNFENCED PROPERTY	
RIGHT OF WAY LINE	GROUND ELEVATION
TRAVELED WAY	
RAILROADS	GRADE ELEVATION
RETAINING WALL	SURFACE LINE
BASE OR SURVEY LINE	GRADE LINE

EXCEPTIONS

None

EQUATIONS

Sta 1856+11 = Sta 1863+90.2 = -779.2
Sta 4+21.8 = Sta 4+20.9 = +0.9
Sta 94+24.4 = Sta 94+00.3 = +24.1

LENGTH OF PROJECT.

APPARENT LENGTH 194,156 FT = 36.772 MILES
GROSS LENGTH 191,156 " " 36.772
NET LENGTH 193,401.8 " " 36.629

SUBMITTED [redacted]

CHIEF ENGINEER MO. STATE HIGHWAY COMMISSION

RECOMMENDED FOR APPROVAL [redacted]

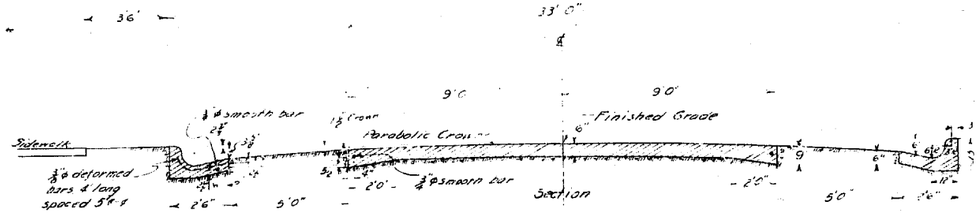
DISTRICT ENGINEER - DISTRICT NO. 5

RECOMMENDED FOR APPROVAL [redacted]

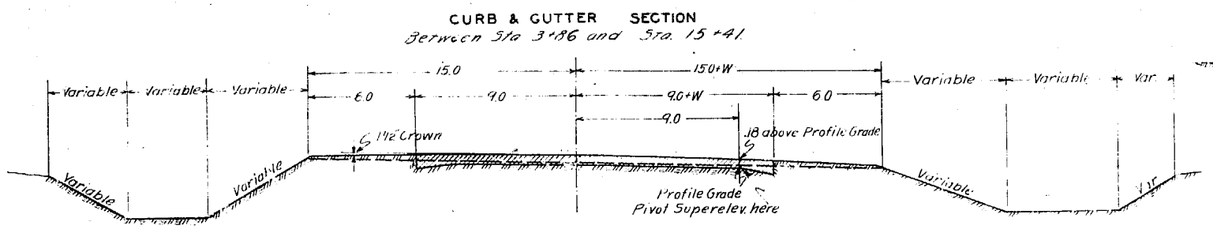
CHIEF ENGINEER BUREAU PUBLIC ROADS

APPROVED [redacted]

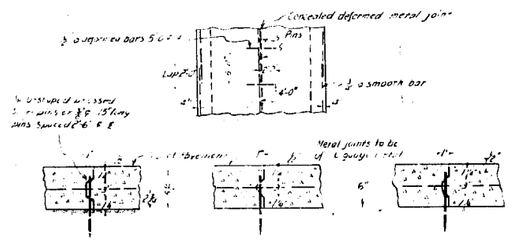
DIRECTOR BUREAU OF PUBLIC ROADS



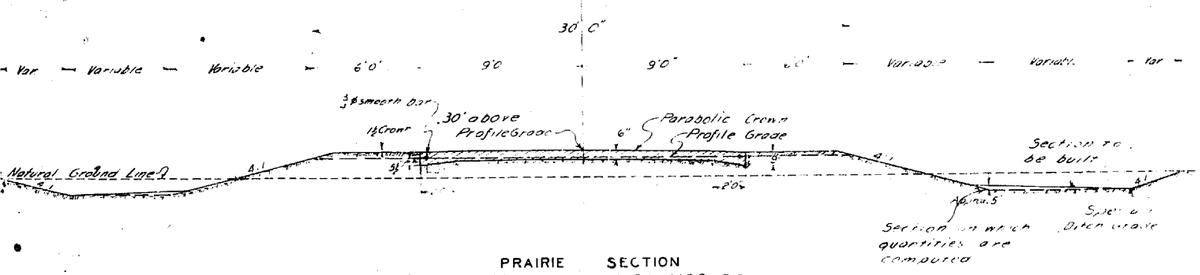
CURB & GUTTER SECTION
Between Sta 3+86 and Sta 15+41



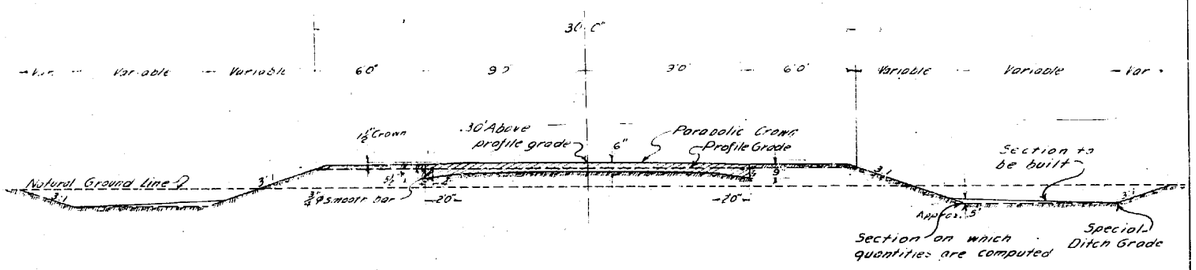
SECTION ON CURVE



DETAILS OF CONCEALED DEFORMED METAL JOINT.



PRAIRIE SECTION
Between Sta 15+41 and Sta 1122+00



PRAIRIE SECTION
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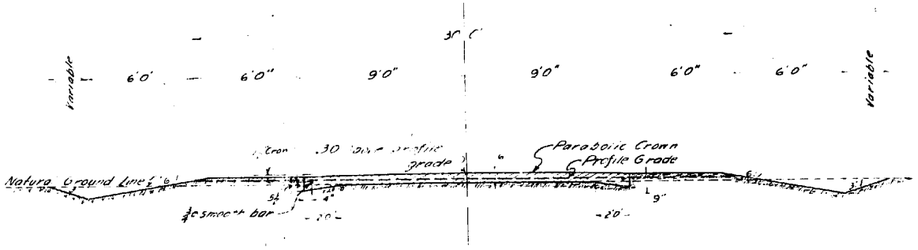
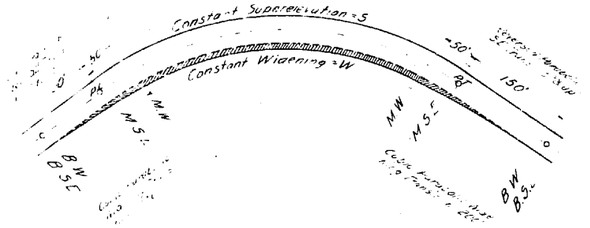


MODIFIED DITCH SECTION
Between Sta 1450+00 and Sta 1480+15



SCHEME OF SUPERELEVATION AND WIDENING TRANSITION

$S = \frac{0.07}{R}$, R in Radius

DEGREE	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	11°38' up
S(ft.)	.0073	.0146	.0219	.0292	.0365	.0438	.0511	.0585	.0658	.0731	.0804	.0837

SUPERELEVATION PER FOOT OF WIDTH

DEGREE	0°-9'	10°	11°	12°	13°	14°	15°	16°	17°	18°	9°up
W (ft)		2	2.5	3	3.5	4	4.5	5	5.5	6	6.5

CONSTANT CURVE WIDENING

TYPICAL SECTIONS FOR U.S.RT. 61.
SCOTT NEW MADRID AND PEMISCOT COUNTIES.

MISSOURI STATE HIGHWAY COMMISSION
ESTIMATE SHEET

5 MO. 15-B 26 77
10 61 | 7

Description of Paving 18' CONCRETE

County of NEW MADRID

Length 5.001 Miles

Prepared by H.T.K.

Date 6-10-29.

Name of road SIKESTON-PORTAGEVILLE.

EXCAVATION

Sta to Sta		Cl. "A"	O-Haul	Borrow
299+00	304+00	1624		
	310+00	1564		
	316+00	1316		
	321+00	1074		
	324+00	685		
	336+67	3506	950	
	343+00	5394		
	350+00	1403		
	355+00	716		
	360+00	747		
	363+75	758		
	369+60	1197		
	375+00	1010		
	378+50	812		
	386+00	1810		
	395+50	2407	320	
	409+00	3313	1540	
	415+00	1051		
	420+00	1773		
	425+60	1256		
	430+00	1449		
	433+00	1105		
	439+10	1761		
	443+25	5645		
	449+00	1369		
	454+00	1308		
	458+00	1826		
	462+00	1469		
	466+00	1107		
	471+00	1485		
	476+50	1543		
	484+00	2151		
	495+00	2557	320	
	513+00	3935	2220	
	519+75	1203		
	523+00	624		
	529+00	1681		
	536+50	2010		
	543+30	1538		
	563+00	3571	3192	
	TOTAL	72753	8542	0
	Culvert Excav	88		
	TOTAL	72841	8542	0

LENGTH OF PROJECT

Beginning of Project	Sta	299+00
End of Project	Sta	563+00
Apparent Length	26400	ft.
Result of equation	+7.5	ft.
Net Length	26407.5	ft.
=	5.001	Mi.

N.B. According to final measurements as constructed.

EQUATION

Station 467+07.5 = Station 467+00 = +7.5'

CONCRETE PAVEMENT

Beginning of Pavement	Sta.	299+00
End of Pavement	Sta	563+00
Apparent Length	26400	FT.
Result of equation	+7.5	FT
Net Length	26407.5	FT.
$\frac{26407.5 \times 18}{9}$	= 52815	Sq. yds

R/W MARKERS

Right-of-Way Markers 72

HEDGE PULLING

Sta to	Sta	No. Stas
363+27	375+00	11.7
401+00	408+00	7.0
411+00	413+30	2.3
TOTAL		21.0

TIMBER F.E. BRIDGES

Sta	No.	Side	
301+05		Lt	(Double)
323+06		Rt	
323+15	1	Lt	
325+30		Rt	
336+72	2	Located on Sp. Ditch	
350+40	1	Lt	
363+35		Rt	
376+80		Rt	
376+85		Lt	
387+20		Rt & Lt	
390+25		Lt	
398+60		Rt	
417+02	1	Lt	
423+10	2	Rt & Lt	
441+30	1	Lt	
442+15	2	Rt	(Double)
443+85	4	Located on Sp. Ditch	
447+50	1	Lt	
451+50	1	Rt	
462+90		Rt	
467+20		Lt	
475+20		Lt	
484+00		Rt	
503+40		Rt & Lt	
529+00		Lt	
523+75	2	Rt & Lt	
536+70		Rt	
536+90		Lt	
542+00	1	Lt	
544+95		Rt	
550+30		Rt	
551+50		Lt	
552+50		Lt	
556+25		Lt	
TOTAL	45		

TIMBER S.R. BRIDGES

Station	No.	Side
350+00	1	Rt
390+25	1	Rt
443+85	2	Rt & Lt
497+10	1	Lt
TOTAL	5	

STD. CONC. BOX CULVERTS

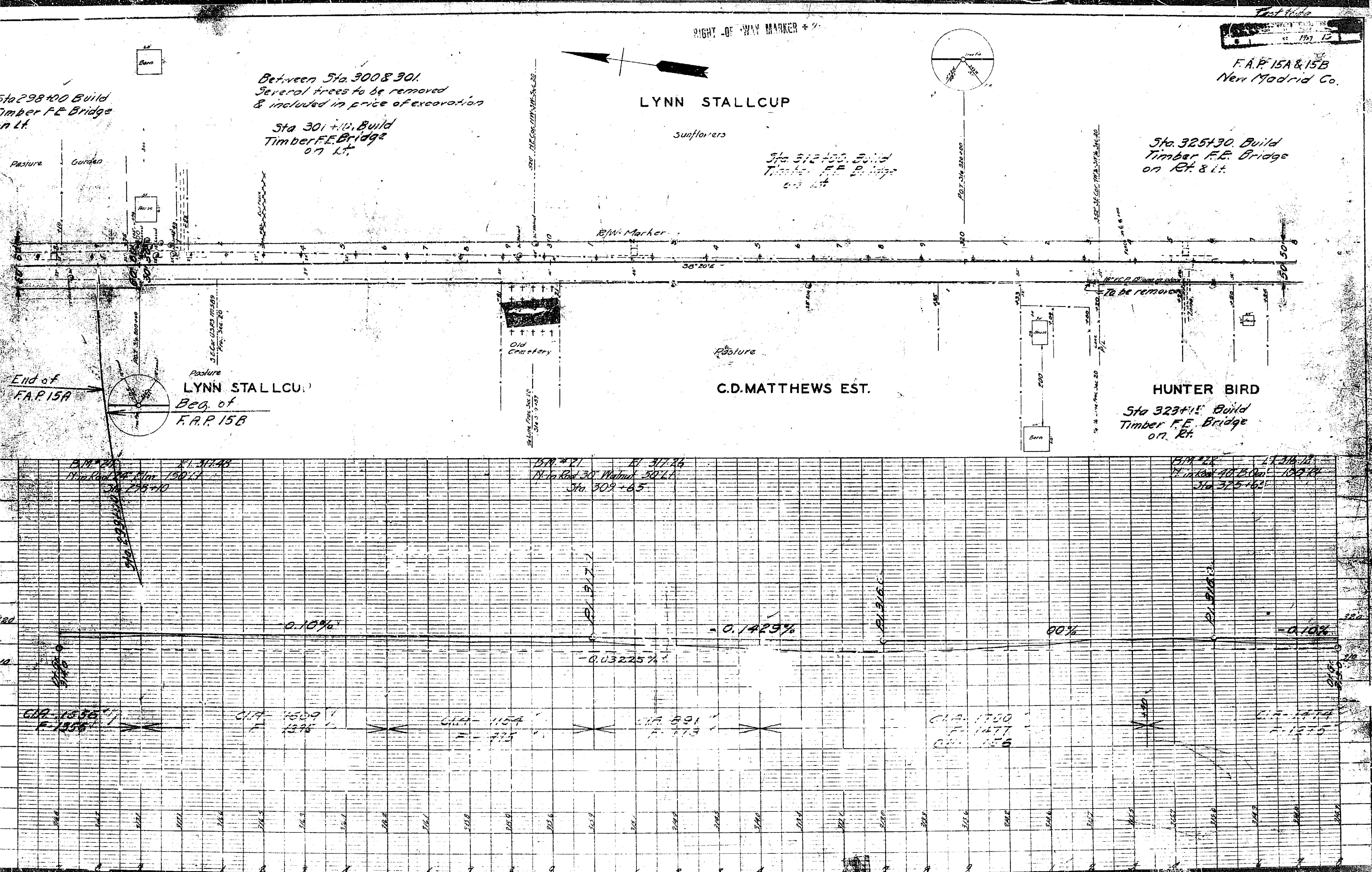
Station	Std	Size	Length	Conc.	Steel	O. Excav.
336+72	C-233	3x2	32'	8.98	1136	16
380+00	C-233	3x2	39'	10.62	1324	25
443+65	C-233	3x2	43'	11.56	1432	23
542+60	C-233	3x2	32'	8.98	1136	24
TOTAL				40.14	5028	88

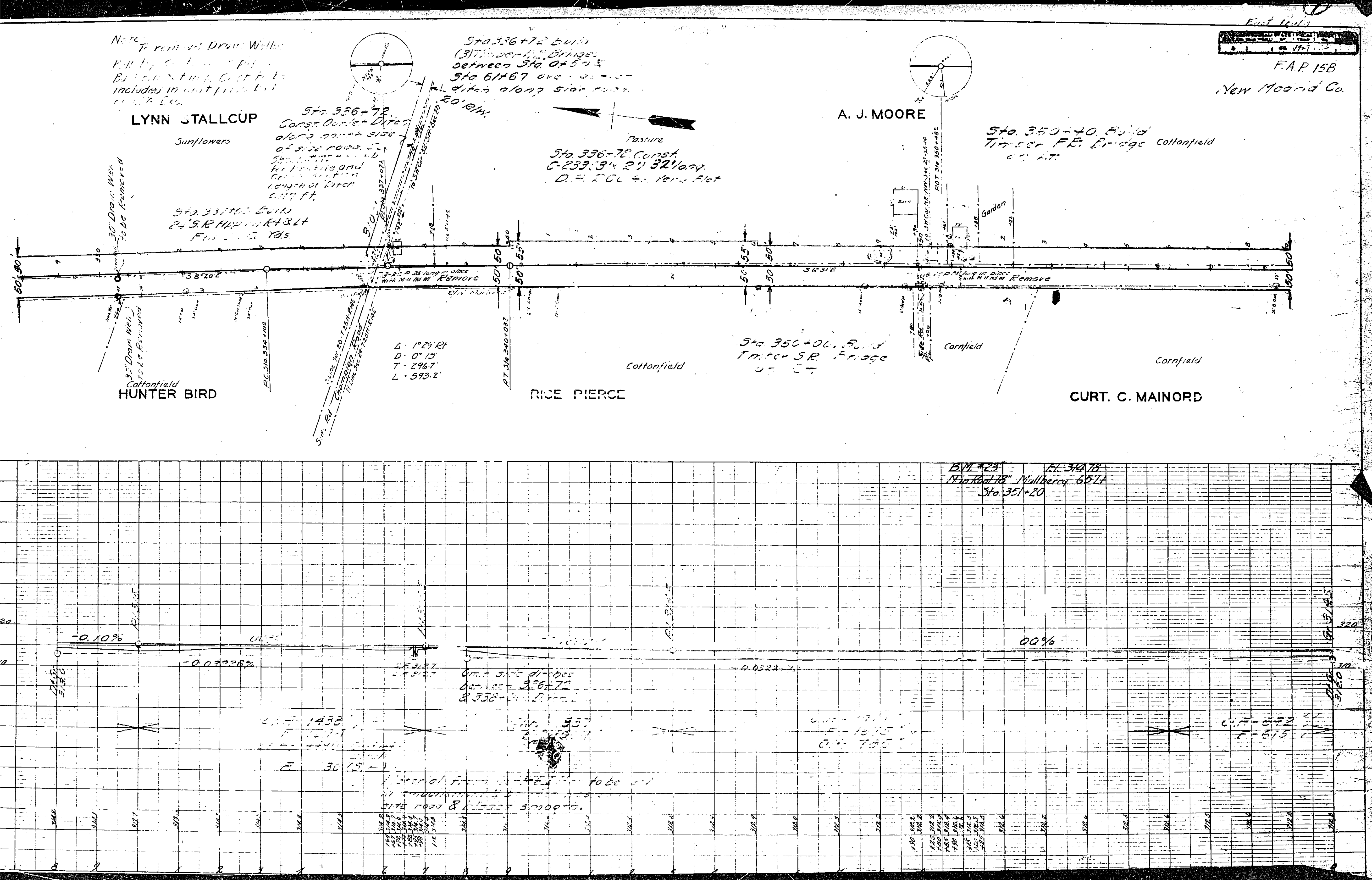
R.C. F.E. PIPE

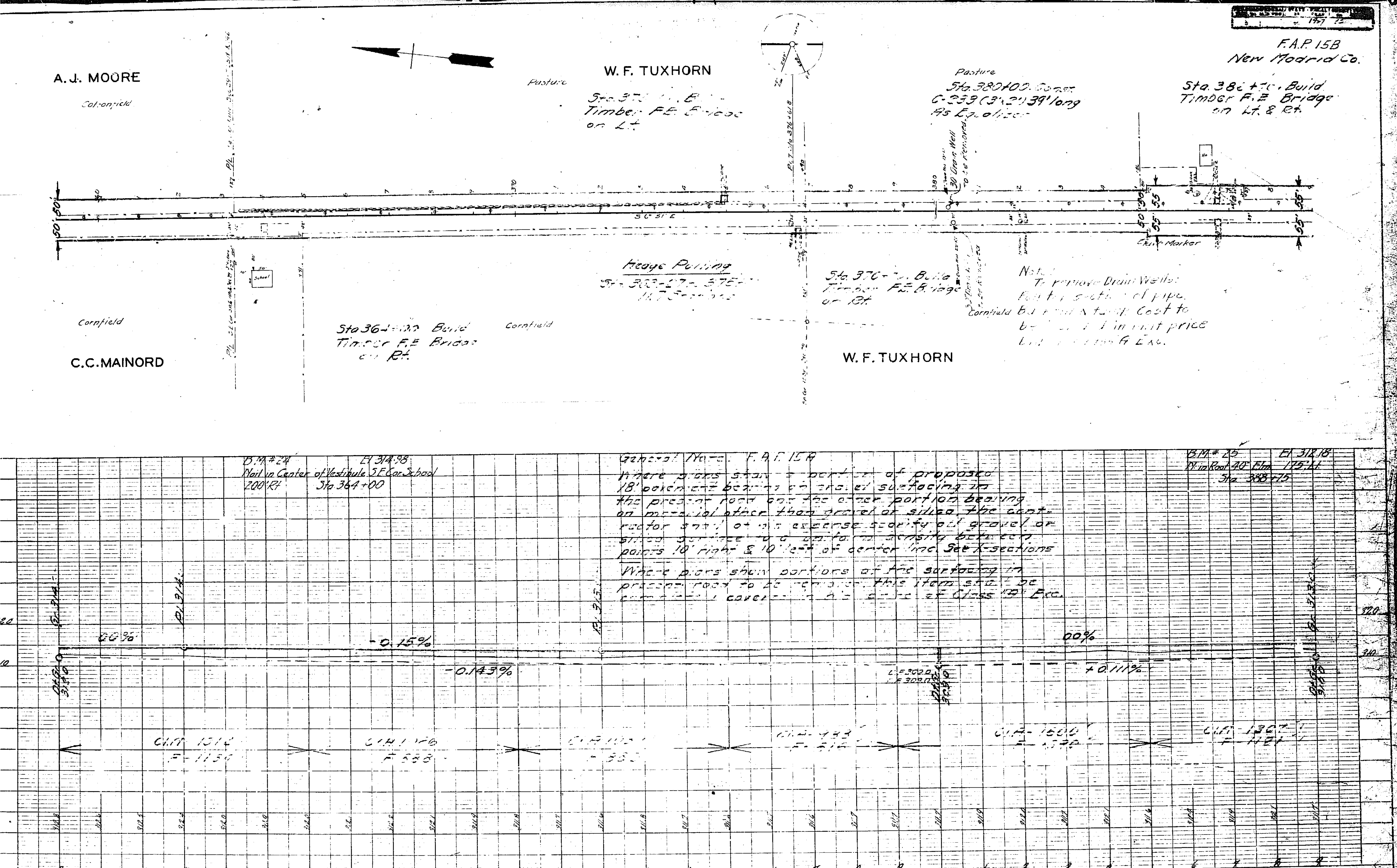
Sta	Size	Length	Side
399+79	18"	20'	Rt
498+80	18"	20'	Rt
TOTAL		40'	

SUMMARY

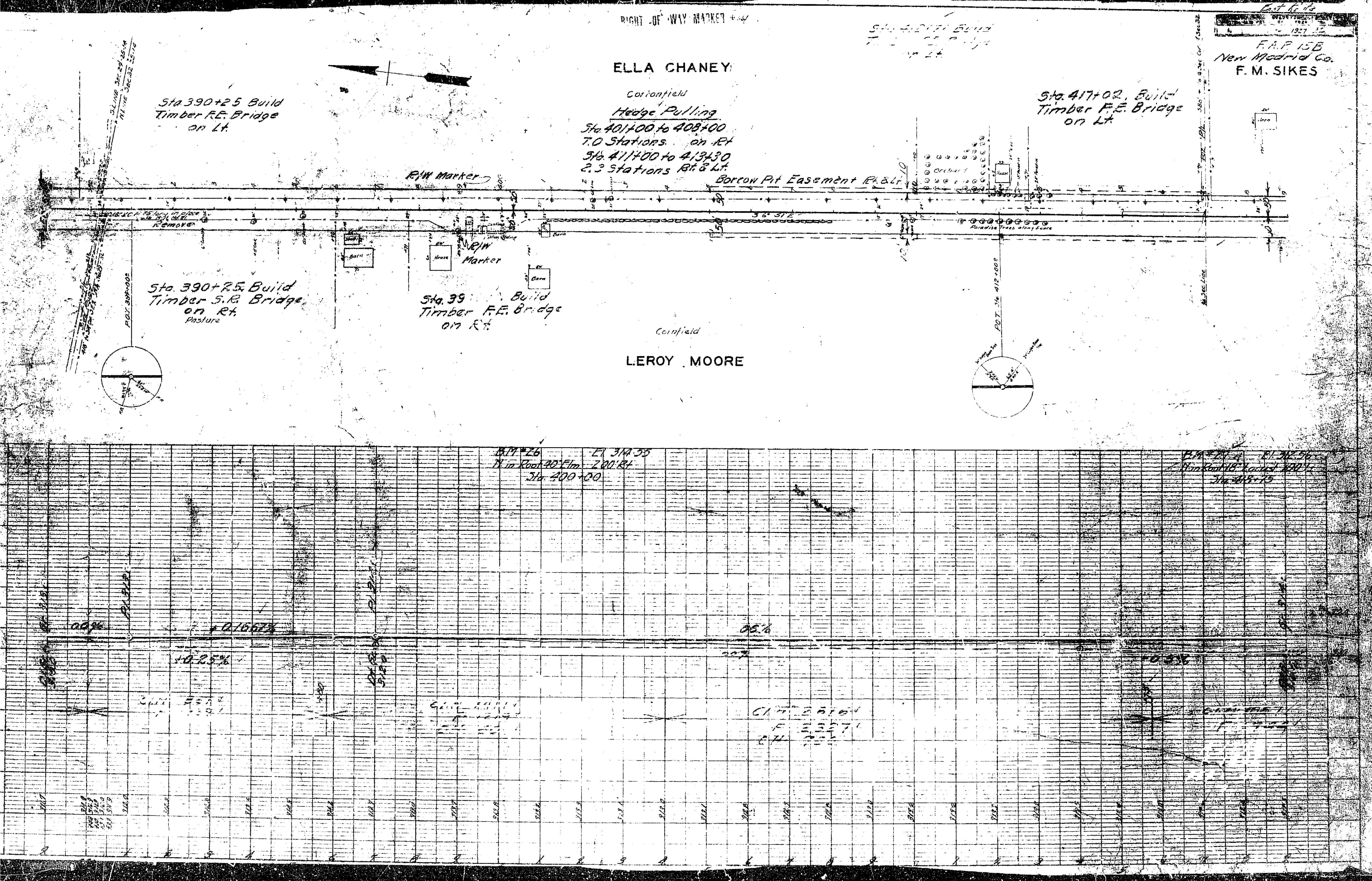
No.	Description	Unit	No. Units
2b	Hedge Pulling	STA	21.0
2c	Class "A" Excavation	Cu. Yds	72841
2h	Overhaul	Sta Yds	8542
6a	Portland Cement Conc. Pave.	Sq. Yds	52815
18a	Barricades	Each	5
18c	Relocating Barricades	Each	3
23a	Right of Way Markers	Each	72
59b	Class "B" Conc. Masonry	Cu. Yds	40.14
60a	Reinf. for Conc. Structures	Lbs	5028
82a	Timber F.E. Bridges	Each	45
82b	Timber S.R. Bridges	Each	5
	CONTINGENCIES		
	18" R.C. Pipe	Lin. ft.	40
	36" C.I. Pipe	Lin. ft.	303
	Special Excavation	Cu. yds	3607
	Force account	F.A.	$87.74
	[illegible]	[illegible]	26.71
	[illegible]	[illegible]	36.31


RIGHT-OF-WAY MARKER
F.A.P. 15A & 15B
New Madrid Co.
LYNN STALLCUP
Between Sta. 300 & 301.
Several trees to be removed
& included in price of excavation
Sta 301+10. Build
Timber F.E. Bridge
on Lt.
Sunflowers
Sta 325+30. Build
Timber F.E. Bridge
on Rt. & Lt.
Pasture
Garden
Barn
House
R/W Marker
Old
Cemetery
Pasture
To be removed
End of
F.A.P. 15A
Beg. of
F.A.P. 15B
LYNN STALLCUP
C.D. MATTHEWS EST.
HUNTER BIRD
Sta 323+15 Build
Timber F.E. Bridge
on Rt.
Sta. 309+65
-0.10%
-0.1429%
-0.03225%
.00%
-0.10%

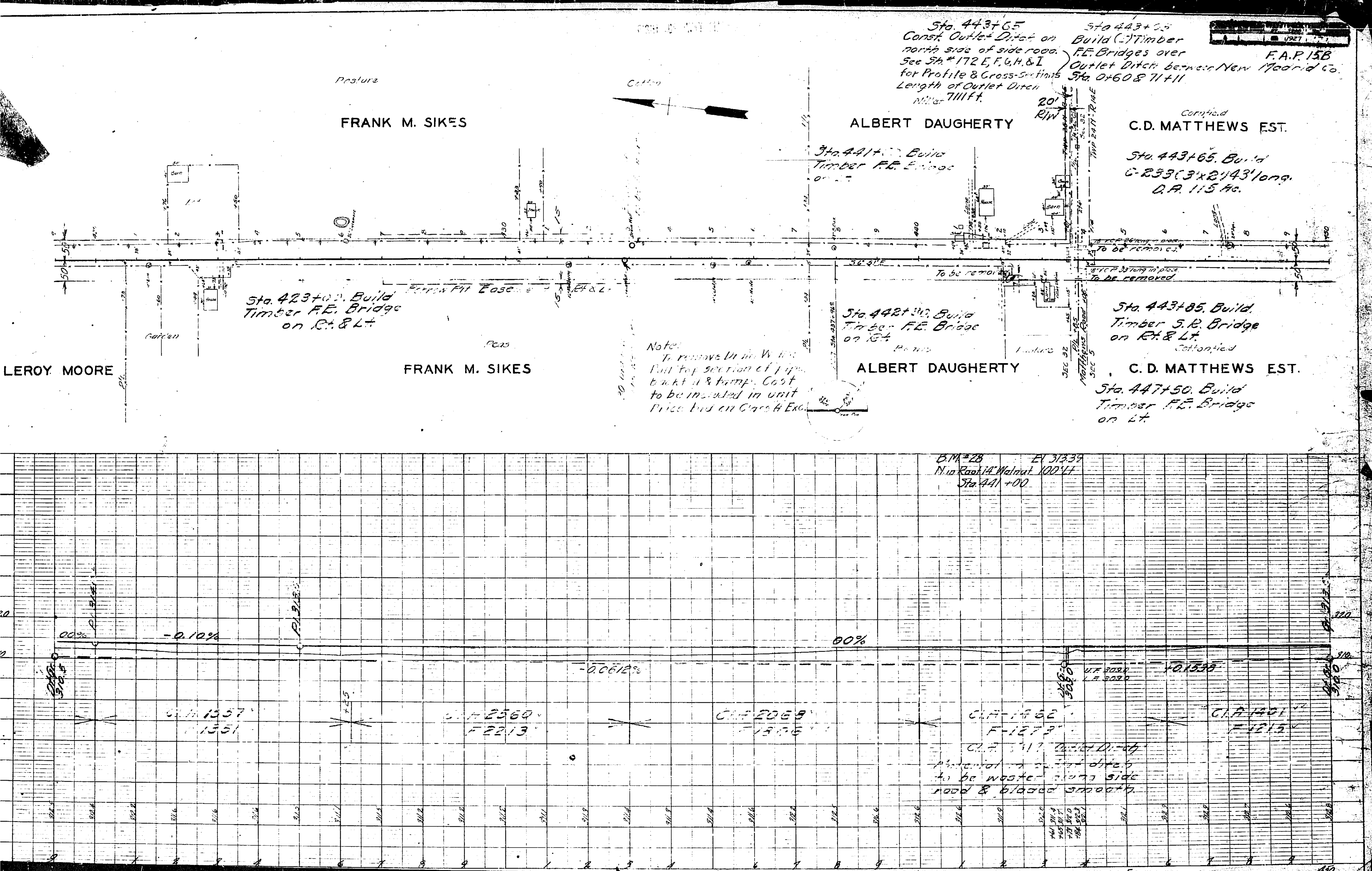

F.A.P. 15B
New Madrid Co.
LYNN STALLCUP
Sunflowers
Sta. 336+72 Build (3) Timber F.E. Bridges
Sta. 336+72
Pasture
Sta. 336+72 Const. C-233: 3'x 2' 32' long
A. J. MOORE
Sta. 350+40. Build Timber F.E. Bridge
Cottonfield
Garden
Barn
Remove
30" Drain Well to be Removed
Cottonfield
HUNTER BIRD
Champion Road
Δ = 1°29' Rt
D = 0° 15'
T = 296.7'
L = 593.2'
Cottonfield
RICE PIERCE
Cornfield
Cornfield
CURT. C. MAINORD
B.M. #23 El. 314.78
N in Road 18" Mulberry 65' Lt
Sta. 351+20
-0.10%
-0.0336%
00%
320
310

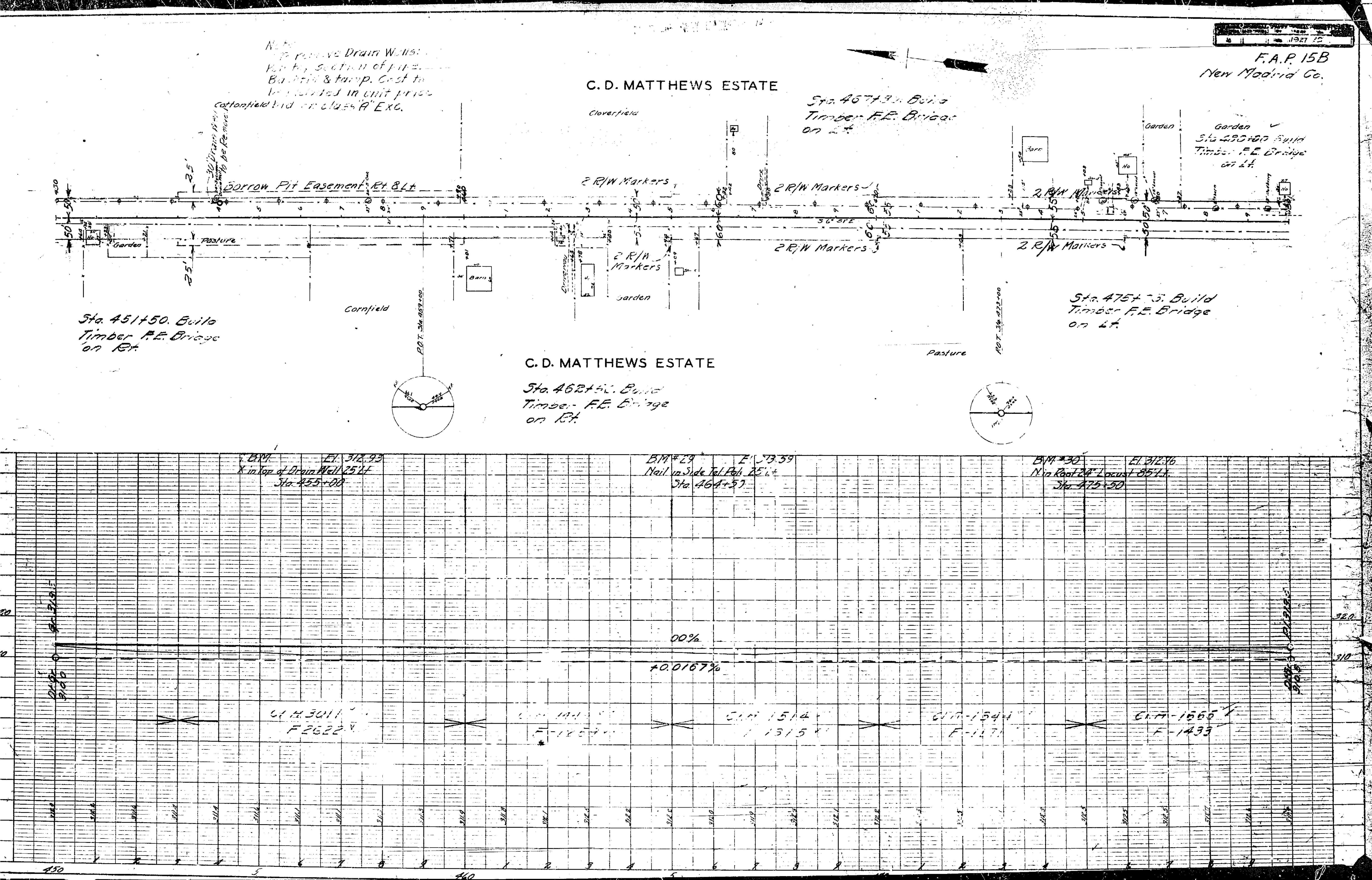


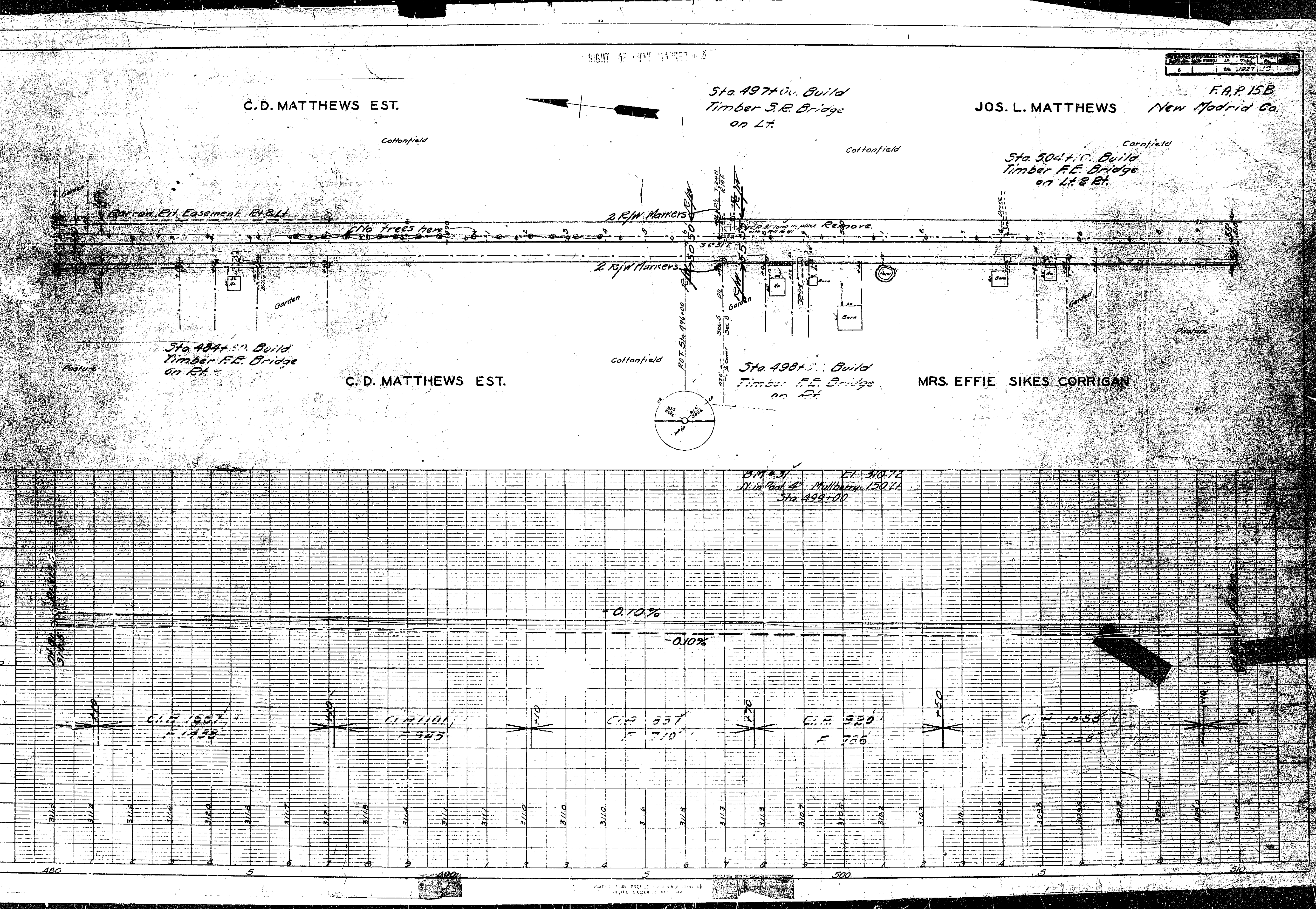
F.A.P. 15B
New Madrid Co.
A.J. MOORE
Cornfield
C.C.MAINORD
W. F. TUXHORN
Pasture
Sta. 386+70, Build
Timber F.E. Bridge
on Lt. & Rt.
Hedge Pulling
Sta 364+00 Build
Timber F.E. Bridge
on Rt.
Sta. 376+ Build
Timber F.E. Bridge
on Rt.
Cornfield
W. F. TUXHORN
Note:
To remove Drain Wells:
B.M. #24 El. 314.98
Nail in Center of Vestibule S.E. Cor. School
200' Rt. Sta 364+00
General Note: F.A.P. 15A
Where plans show a portion of proposed
18' pavement bearing on gravel surfacing in
the present road and the other portion bearing
on material other than gravel or silica, the contractor
shall at his expense scarify all gravel or
points 10' right & 10' left of center line. See X-sections
Where plans show portions of the surfacing in
present road to be removed this item shall be
B.M. #25 El. 312.18
Sta. 388+75
-0.15%
-0.143%
+0.111%



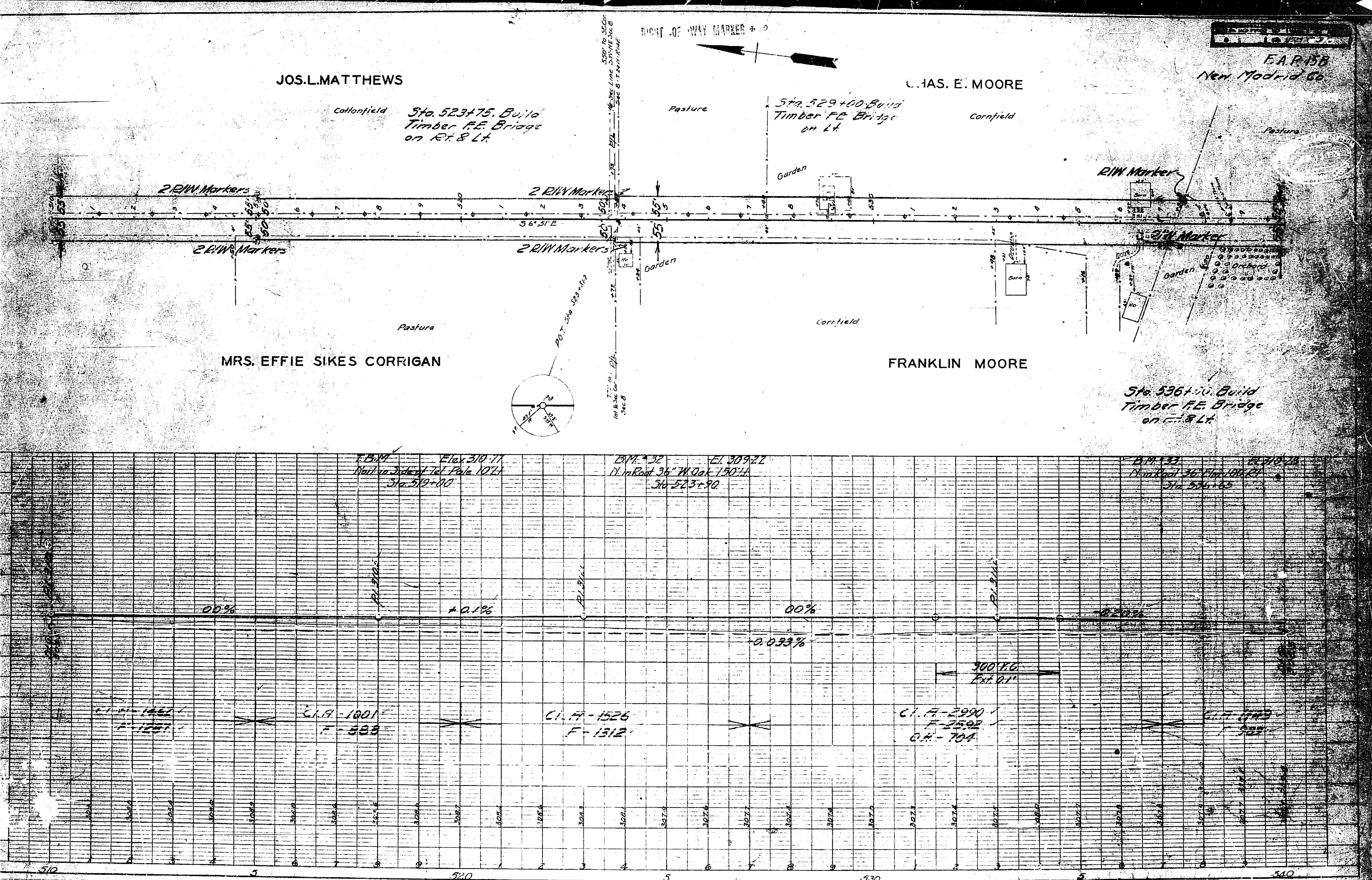
RIGHT OF WAY MARKER
F.A.P. 15B
New Madrid Co.
F. M. SIKES
ELLA CHANEY
Cottonfield
Hedge Pulling
Sta. 401+00 to 408+00
7.0 Stations on Rt
Sta. 411+00 to 413+30
2.3 Stations Rt. & Lt.
Sta. 390+25 Build
Timber F.E. Bridge
on Lt.
Sta. 417+02 Build
Timber F.E. Bridge
on Lt.
R/W Marker
Borrow Pit Easement Rt. & Lt.
Remove
Orchard
House
Barn
R/W
Marker
Sta. 390+25 Build
Timber S.R. Bridge
on Rt.
Pasture
Build
Timber F.E. Bridge
on Rt.
Cornfield
LEROY MOORE
B.M. #26 El. 314.35
Sta. 400+00
+0.1667%
+0.25%

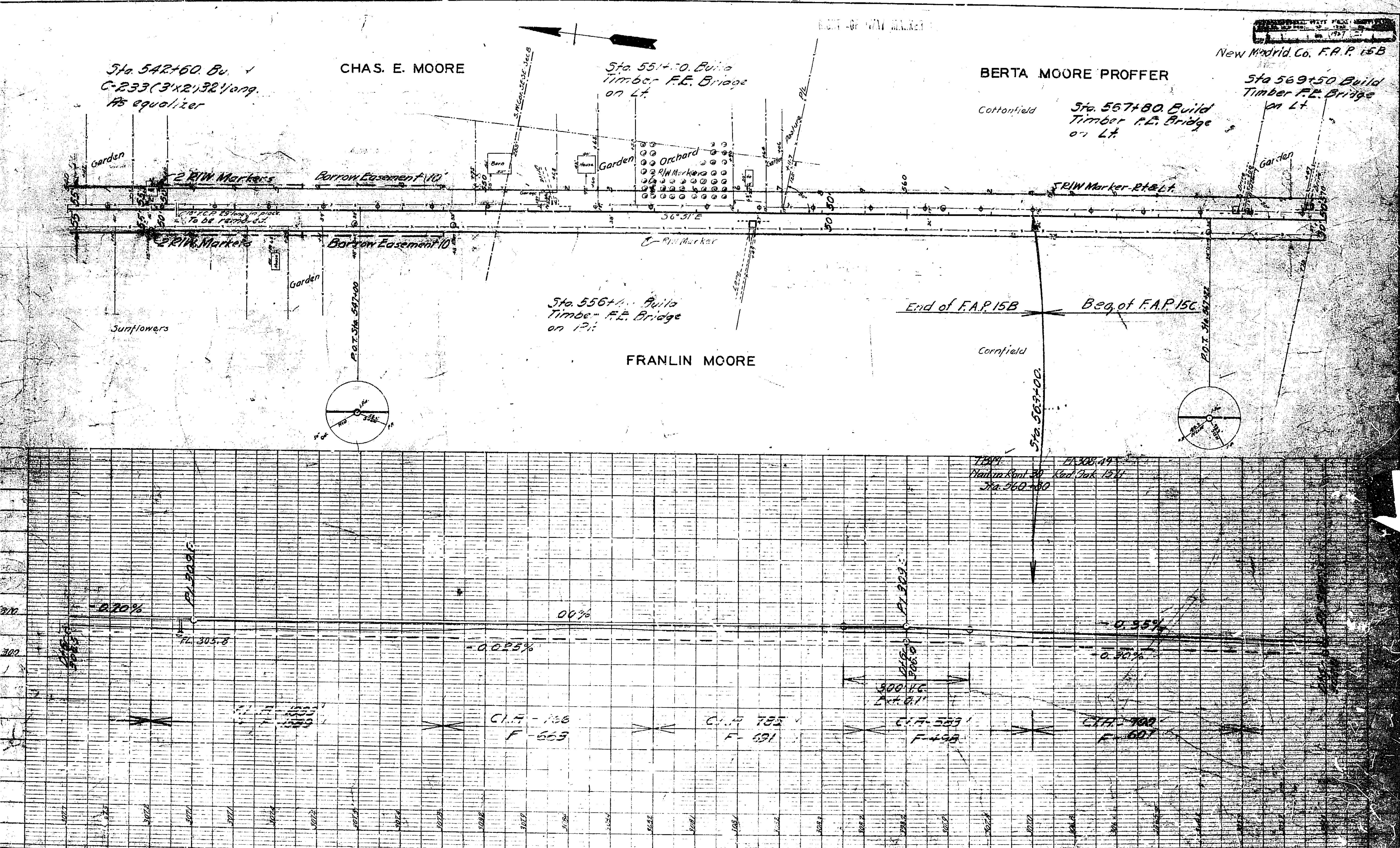

F.A.P. 15B
New Madrid Co.
Sta. 443+65
Const. Outlet Ditch on north side of side road.
See Sh. #172 E, F, G, H, & I for Profile & Cross-Sections
Length of Outlet Ditch 7111 ft.
Sta 443+65
Build (2) Timber F.E. Bridges over Outlet Ditch between Sta. 0+60 & 71+11
Pasture
Cotton
FRANK M. SIKES
ALBERT DAUGHERTY
C.D. MATTHEWS EST.
20' R/W
Sta. 443+65. Build C-233 (3'x2') 43' long. D.A. 115 Ac.
Sta. 423+00. Build Timber F.E. Bridge on Rt. & Lt.
Sta. 442+30. Build Timber F.E. Bridge on Rt.
Sta. 443+85. Build Timber S.R. Bridge on Rt. & Lt.
Sta. 447+50. Build Timber F.E. Bridge on Lt.
To be removed
Garden
Peas
Cottonfield
LEROY MOORE
FRANK M. SIKES
ALBERT DAUGHERTY
C.D. MATTHEWS EST.
Sec 32
Sec 5
B.M. #28 El. 313.39
N. in Root 14" Walnut 100' Lt.
Sta. 441+00
-0.10%
00%
-0.0612%
+0.153%
C.A. 1557
F 1351
C.A. 2560
F 2213
C.A. 2069
F 1806
C.A. 1462
F 1273
C.A. 1401
F 1215
Material in outlet ditch to be wasted along side road & bladed smooth


F.A.P. 15B
New Madrid Co.
C. D. MATTHEWS ESTATE
Cottonfield
Cloverfield
Borrow Pit Easement Rt & Lt
2 R/W Markers
Pasture
Garden
Barn
Ho
Cornfield
Driveway
Sta. 451+50. Build
Timber F.E. Bridge
on Rt.
Sta. 475+ Build
Timber F.E. Bridge
on Lt.
C. D. MATTHEWS ESTATE
Pasture
Sta. 462+ Build
Timber F.E. Bridge
on Rt.
B.M. El. 312.93
X in Top of Drain Well 25' Lt
Sta. 455+00
BM #29
Nail in Side Tel. Pole 25' Lt
Sta. 464+50
BM #30 El. 312.96
N in Root 24" Locust 85' Lt.
Sta. 475+50
00%
+0.0167%
F 2622
F-1433
320
310
450
460



F.A.P. 15B
New Madrid Co.
C. D. MATTHEWS EST.
JOS. L. MATTHEWS
Sta. 497+00 Build
Timber S.R. Bridge
on Lt.
Cottonfield
Cornfield
Sta. 504+00 Build
Timber F.E. Bridge
on Lt. & Rt.
Borrow Pit Easement Rt. & Lt.
No trees here
2 R/W Markers
Remove.
Garden
Sta. 484+50 Build
Timber F.E. Bridge
on Rt.
Pasture
C. D. MATTHEWS EST.
Cottonfield
P.O.T. Sta. 496+00
Sec. 5
Sec. 8
Barn
Sta. 498+00 Build
Timber F.E. Bridge
on Rt.
MRS. EFFIE SIKES CORRIGAN
BM #31 El. 310.72
N. in Root 4" Mulberry 150' Lt.
Sta. 499+00
-0.10%
-0.10%
C.Y. 1557
F 1238
C.Y. 1101
F 345
C.Y. 557
F 710
C.Y. 926
F 226
480
5
490
5
500
5
510


F.A.R. 138
New Madrid Co.
JOS. L. MATTHEWS
CHAS. E. MOORE
MRS. EFFIE SIKES CORRIGAN
FRANKLIN MOORE
Cottonfield
Pasture
Cornfield
Garden
Orchard
Barn
Sta. 523+75. Build Timber F.E. Bridge on Rt. & Lt.
Sta. 529+00 Build Timber F.E. Bridge on Lt.
Sta. 536+50. Build Timber F.E. Bridge on Rt. & Lt.
2 R/W Markers
R/W Marker
S 6° 51' E
T.B.M. Elev. 310.77 Nail in Side of Tel. Pole 107 Lt. Sta. 519+00
B.M. #32 El. 309.22 N. in Root 36" W. Oak 150' Lt. Sta. 523+90
0.0%
+0.1%
-0.033%
300 V.C.
C.H. - 1001
F - 888
C.H. - 1526
F - 1312
C.H. - 2990
F - 2592
O.H. - 704
510
520
530
540



New Madrid Co. F.A.P. 15B
CHAS. E. MOORE
BERTA MOORE PROFFER
FRANLIN MOORE
Sta. 542+60. Build C-233(3'x2') 32' long. As equalizer
Sta 569+50 Build Timber F.E. Bridge on Lt.
Sta. 567+80. Build Timber F.E. Bridge on Lt.
Sta. 556+... Build Timber F.E. Bridge on Rt.
Cottonfield
Cornfield
Garden
Orchard
Sunflowers
2 R/W Markers
R/W Marker-Rt.&Lt.
Borrow Easement 10'
Borrow Easement 10
End of F.A.P. 15B
Beg. of F.A.P. 15C
Sta. 563+00.
P.O.T. Sta. 547+00
56°31'E
-0.70%
.00%
-0.025%
-0.35%
-0.30%
300 V.C.
C.I.A. -168
F -663
C.I.A. 785
F- 691
F -498
F -601
FL 305.8

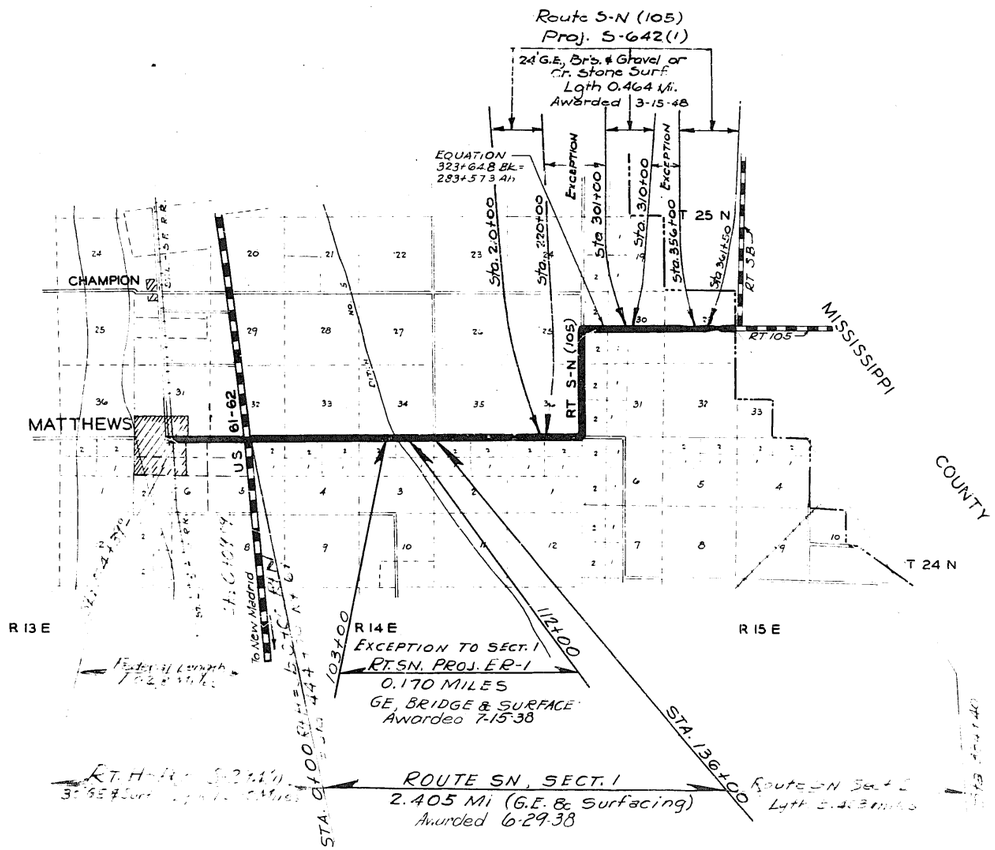
10 NEW MADRID 1

MISSOURI
STATE HIGHWAY COMMISSION
PLAN AND PROFILE
OF PROPOSED
STATE ROAD

FEDERAL AID PROJECT

NEW MADRID COUNTY

SCALES. PLAN 1 IN. = 100 FT.
PROFILE, HOR. 1 IN. = 100 FT. VERT. 1 IN. = 10 FT
CROSS-SECTION: 1 IN. = 5 FT.



CONVENTIONAL SIGNS

STATE AND NATIONAL LINE	LEVEE
COUNTY LINE	CULVERTS
CITY, VILLAGE OR BOROUGH	DROP INLET
TOWNSHIP LINE	TROLLEY POLE
SECTION LINE	POWER POLE
GRANT LINE	TELEPHONE OR TELEGRAPH POLE
FENCE LINE	MARSH
GUARD RAIL	HEDGE
UNFENCED PROPERTY	
RIGHT OF WAY LINE	GROUND ELEVATION
TRAVELED WAY	
RAILROAD	GRADE ELEVATION
RETAINING WALL	SURFACE LINE
BASE OR SURVEY LINE	GRADE LINE

SUBMITTED DATE [redacted]

[redacted]
CHIEF ENGINEER
MISSOURI STATE
HIGHWAY COMMISSION

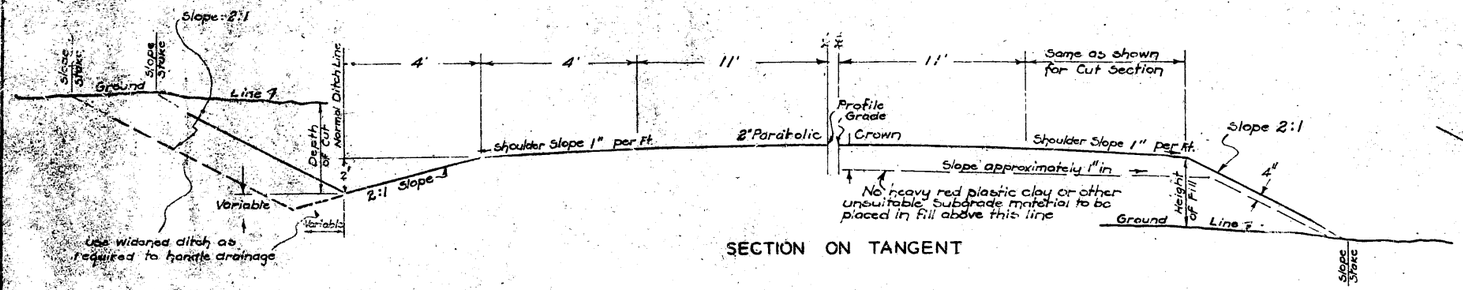
RECOMMENDED FOR APPROVAL DATE [redacted]

[redacted]
DISTRICT ENGINEER
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

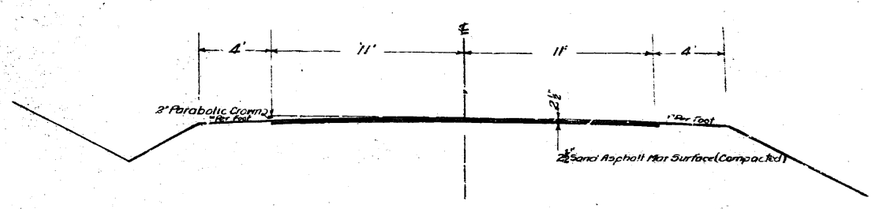
APPROVED DATE [redacted]

[redacted]
DIVISION ENGINEER
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

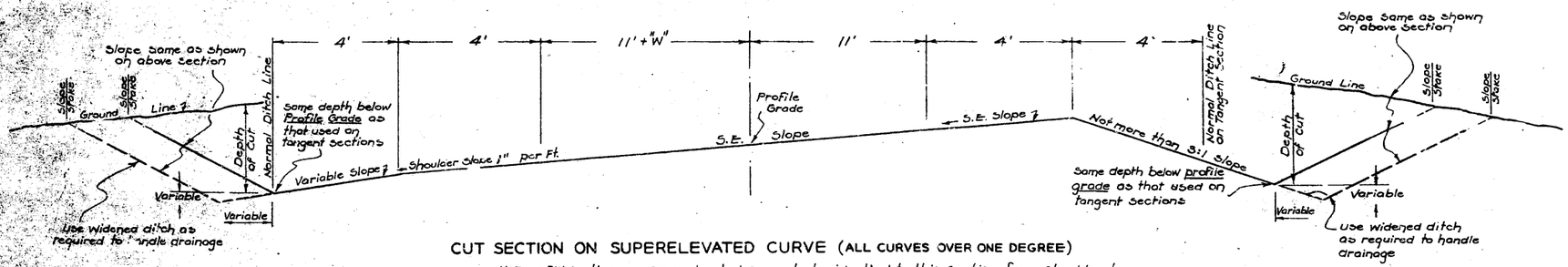
STATE	FEDERAL PROJECT No.	SHEET No.	SHEETS
MO	S-294(1)	2	
COUNTY No.	COUNTY	DIST.	SEC.
10	NEW MADRID	5H	



SECTION ON TANGENT

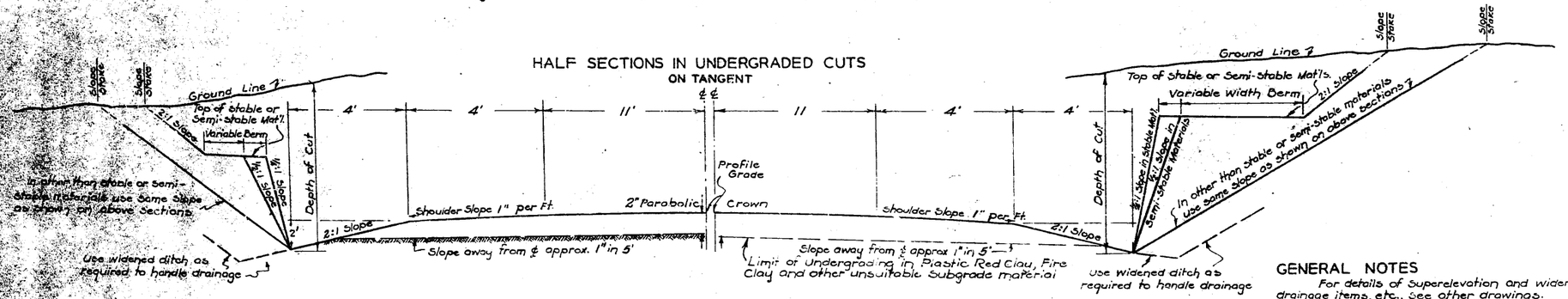


SECTION SAND ASPHALT MAT SURFACE



CUT SECTION ON SUPERELEVATED CURVE (ALL CURVES OVER ONE DEGREE)

NOTE:- Fill sections on superelevated curve to be identical to this section from shoulder to shoulder. Beyond shoulders use same as shown for "Section on Tangent."



HALF SECTIONS IN UNDERGRADED CUTS
ON TANGENT

IN CLASS C OR LEDGE SANDSTONE

IN HEAVY RED PLASTIC CLAY FIRE CLAY OR OTHER UNSUITABLE SUBGRADE MATERIAL

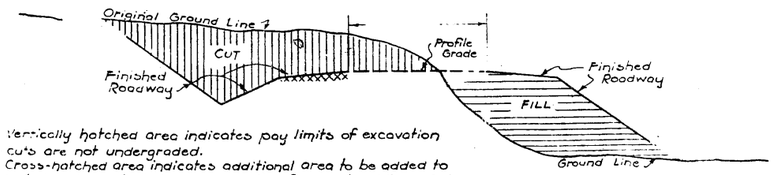
NOTE:- On superelevated curves, undergrading to parallel the superelevation and other details from ditch line to ditch line shall be identical to those shown for "Cut Sections on Superelevated Curve" For pay limits of overbreak and backfill, See Specifications.

GENERAL NOTES

For details of superelevation and widening of horizontal curves, all pavement appurtenances, drainage items, etc., see other drawings.

In transitioning from one cut or fill slope to another, use a 25' transition beginning at a point 25' back along that which would normally be the flatter slope and ending the transition at the actual point where the steeper slope is required. If the actual limits requiring a steeper slope is less than 25' in length, do not change to steeper slope.

All information shown on these Typical Sections is for the purpose of indicating general design and construction details. Actual roadway widths, slopes, depth and type of ditches, undergraded cuts, and other features, shall conform to the details shown on Cross-Sections and Plan-Profile sheets or as directed by the Engineer.



Vertically hatched area indicates pay limits of excavation where cuts are not undergraded.

Cross-hatched area indicates additional area to be added to vertically hatched area, included in pay limits of excavation where cuts are undergraded. For pay limits of overbreak and backfill, See Specifications.

Horizontally hatched area indicates limits to which embankment can be constructed.

SKETCH SECTION SHOWING EXCAVATION PAY LIMITS

MISSOURI STATE HIGHWAY COMMISSION

TYPICAL SECTIONS FOR 30 FT. GRADED EARTH AND 22 FT. SAND ASPHALT MAT

(DESIGN SPEED 40 M.P.H.)

ROUTE: SH COUNTY: NEW MADRID

PROJ. ~~OR SEC.~~: S-294(1)

(MAJOR: UNDER 1000
SUPPLE.: 400-1000)

LOCATION Rte. 61 to Matthews

TYPE 30' Graded Earth & 22' Sand Asphalt Mat

MISSOURI STATE HIGHWAY COMMISSION

SUMMARY OF QUANTITIES

FED. ROAD DIST. No.	STATE	PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
5	MO.	S-294(i)		2A	
DIV. No.	COUNTY			ROUTE	SEC. No.
10	NEW MADRID			5H	

EXCAVATION

Station	Class A	Fill	Overhaul (Sta. Yd.)	Compacting Embankment
0+00				
1+71	82	64		
54+39	6436	4243	4320	6403
Sub Totals	6518	4307	4320	6403
Approach	0	699		
Totals	6518	5006	4320	6403

WATER (COMPACTING ROLLING)

Station	Station	1000 gals
21+00	54+39	765
Total		765

SELECT MATERIAL

Station	Station	C.I.A. Exc. (S.M.)	Fill (S.M.)
22+00	54+39	3636	2703
Total		3636	2703

SALVAGED GRAVEL

Station of Stockpile	Cu. Yd.
53+42	151
51+89	100
Total	251

REINF. CONC. PIPE & APPROACHES

Station	Location	Type	15"	18"	Fill	Remarks
42+36	P.E. Lt.			22'	29	
49+36	P.E. Rt.			24	29	
50+48	S.R. Lt.				63	No Pipe
51+72	P.E. Rt.		22		44	15" Relaid Culvert RCP Supplied by Landowner
53+39	S.R. Rt.				103	No Pipe
Totals			22'	46	268	

REINF. CONC. PIPE ON ℄

Station	18" Cl. 3 Exc.	Remarks
35+00	40'	0
Total	40'	0

RELAID CULVERT PIPE & APPROACHES

Station	Type & Loc.	Lin. Ft.	Fill	Remarks
24+22	F.E. - Rt.	22	25	
26+95	F.E. - Lt.	22	18	
44+38	F.E. - S.	32	49	from Lt. Sta. 52+78
48+95	P.E. - Lt.	24	40	
50+00	℄	44		from Sta. 35+06
50+23	P.E. - Rt.	12	L	
50+48	S.R. - Lt.	34	70	
51+52	℄	40		
52+59	P.E. - Lt.	44	24	from Lt. Sta. 52+94 - 53+38
52+69	P.E. - Rt.	22	13	from Rt. Sta. 52+30
53+16	P.E. - Lt.	48	31	from Lt. Sta. 53+38 - 53+86
53+75	S.R. - Lt.	42	150	from To Sta. 60
Totals		386	431	

REMOVAL OF MISCELLANEOUS STRUCTURES

Station	Location	Description	Cl. 3 Exc.
49+38	P.E. Rt.	18"x16' VCP	5.6
52+48	Lt. ℄	18"x28' CMP	10.0
52+94	Lt. ℄	3'x3' Prop. Inlet	4.5
53+46	Lt. ℄	3'x3' Prop. Inlet	4.5
Total			24.0

LENGTH OF PROJECT

End of Project	Station	54+39.0	
Beginning of Project	Station	0+00	
Apparent Length		5439.0	Feet
Equations and Exceptions:			
Sta. 54+11.3 Bk. = Sta. 54+11.6 Ah.		0.3	
Total Corrections		0.3	Feet
Net Length of Project		5438.7	Feet
	State Length	1.030	Miles
	Federal Length	1.028	Miles

FEDERAL LENGTH

End of Federal Aid Improvement Sta. 54+39.00
Begin " " " 01+09.07

Apparent Length 5429.93 Ft.
Exceptions: None
Result of Equations (See State Length) = -0.30 Ft.
Net Length = 5429.63
= 1.028 Miles

SURFACING AREA

Net Length of Project	5438.7 Ft.
Exception, Int. Rte. 61 (0+00 - 01+09.3) =	- 95.3 Ft.
Net Length of 22' Surface =	5343.4 Ft.
5343.4 x 22 ÷ 9	1306.64 Sq. Yds.
Intersection Rte. 51 Add	488.70 " "
Total	1795.34 Sq. Yd.

BINDER (RC-2)

Car Init.	Car No.	Gallons
GATX	9174	9681
GATX	19923	9511
CYCX	10895	3392 *
Total		22874

* Remainder used on Div. 10 Group 3 (1948)

PROCESSING

Station	Station	Miles
0+02	54+39	1.03
Total		1.03

GENERAL SUMMARY

ITEM NO.	DESCRIPTION	UNIT	TOTAL UNITS	NO. UNITS
1-D	Class A Exc.	Cu. Yd.	6518	
1-D	Class A Exc. (Select Material)	Cu. Yd.	3636	
1-I	Class 3 Exc.	Cu. Yd.	24.0	
1-K	Compacting Embankment (Rolling)	Cu. Yd.	6403	
1-N	Overhaul	M. Yd.	43.0	
1-P	Water (Compacting-Rolling)	1000 gal.	765	
13-K	Salvaged Gravel	Cu. Yd.	251	
18-C	15" RCP	Lin. Ft.	22	
18-C	18" RCP	Lin. Ft.	86	
18-L	Relaid Pipe Culv.	Lin. Ft.	386	
	SAND ASPHALT MAT SURF.			
9C-B	Binder (RC-)	gallons	22874	
9C-C	Processing	Miles	1.03	

CONTINGENT ITEMS
(See C.O. No. 1 Blanket)

Divert two cars	Lump	$ 7.30
Haul Asphalt	Lump	45.30
Demurrage	Lump	106.70
Total		$ 159.30

Prepared By H.B.G. Date 12/31 1948 Checked in Div. Office By A.E.N. Date 12-31 1948 Checked in Central Office By _____ Date _____ 19 Revised By _____ Date _____ 19

STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO S-294(1)		3	4
NO.	COUNTY		ROUTE	SEC
10	NEW MADRID		H	

FINAL PLANS

Sta 27+10 is Cor of Sec 546 on TWP Line

C.D. MATTHEWS ESTATE

E^2 Lot 2 NW^4
5-24-14

W^2 Lot 2 NW^4
5-24-14

POT 0+00

PI 9+14.2
Δ 0°52'LT

PI 27+00.5
Δ 0°01'LT

10E-24"CMP U.I.P.

Lot Line

R/W

Rte N

Sta 0+00

US Rte 61

SE^4SW^4
32-25-14

Begin Rte H
Proj. S-294(1)

Sta 0+00 on Rte H = 444+00 on Rte 61 - FAP 198

Scale 1"=50'

Detail of Intersection

℄ Rte H.

US Rte 61 80' R/W

75'R

Add. Surf. 488.70 Sq. Yd.

¼ ¼ Sec Line

JUDGE PROFFER

SW^4SW^4
32-25-14

PI 27+00.5
Δ 0°01'LT

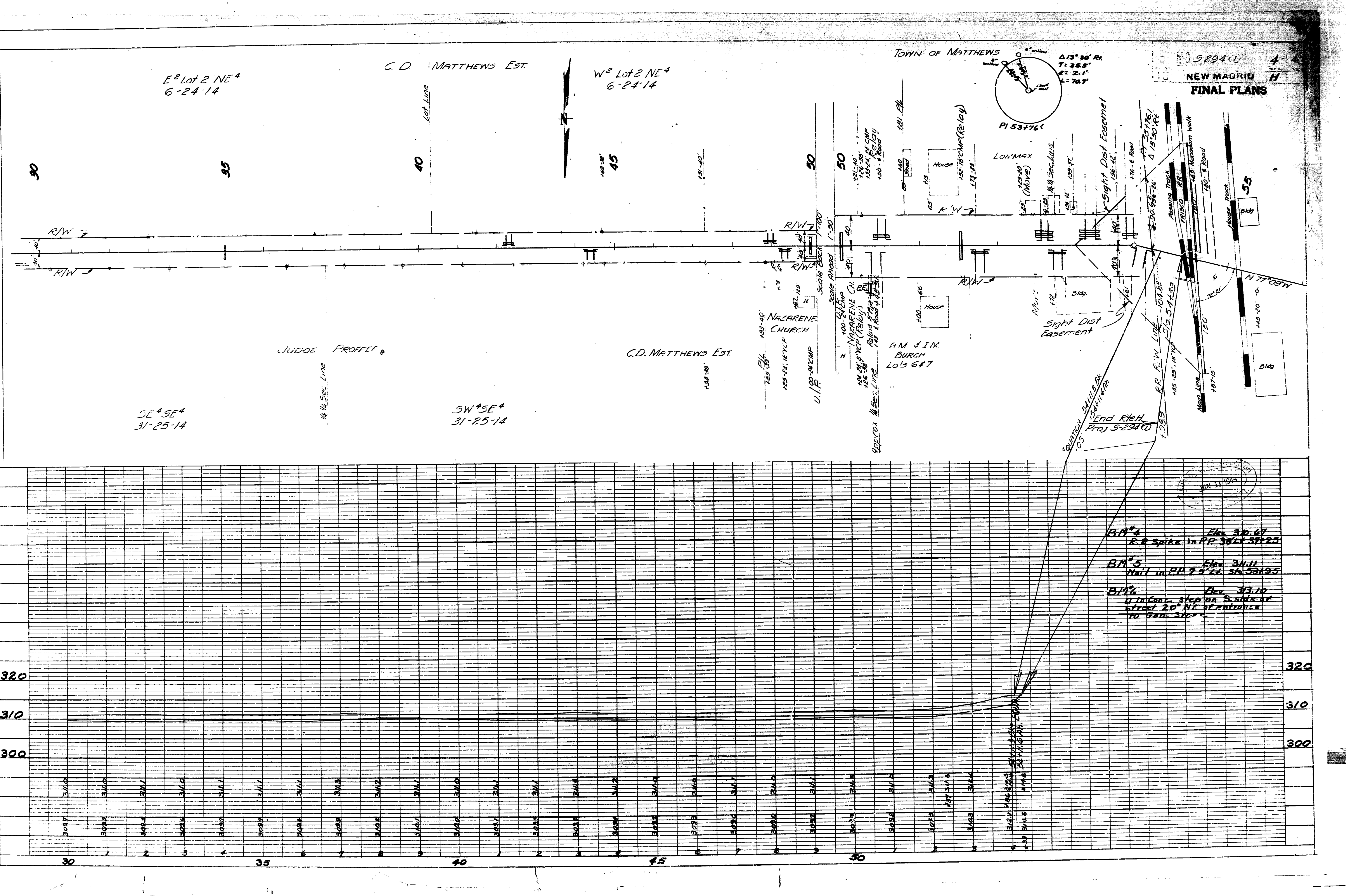
BM #1 Elev. 312.56
Intersection of RH SH and Rte "G"

BM #2 Elev. 311.24
P.K. Spike in P.P. 38' Lt Sta 1+36

BM #3 Elev. 311.65
Nail in P.P. 38' Lt. Sta 2+32

320
310
300

0 5 10 15 20 25 30


S 5294(1)
4
NEW MADRID
H
FINAL PLANS
TOWN OF MATTHEWS
Δ 13° 30' Rt.
T: 35.5'
E: 2.1'
L: 70.7'
PI 53+76.1
C.D. MATTHEWS EST.
E² Lot 2 NE⁴
6-24-14
W² Lot 2 NE⁴
6-24-14
Lot Line
R/W
NAZARENE CHURCH
NAZARENE CH.
House
Bldg
LOWMAX
Sight Dist Easement
Passing Track
Main Line
House Track
Macadam Walk
N 77°09' W
A.M. & I.M. BURCH
Lots 6 & 7
JUDGE PROFFER
C.D. MATTHEWS EST.
SE⁴ SE⁴
31-25-14
SW⁴ SE⁴
31-25-14
1/4 1/4 Sec. Line
Approx. 1/4 Sec. Line
U.I.P.
End R/eH
Proj S-294(1)
Equation 54+11.8 Bk
54+16 Ah
RR R/W Line
BM#4 Elev. 310.67
R.R. Spike in P.P. 38' Lt. 39+25
BM#5 Elev. 311.11
Nail in P.P. 25' Lt. Sta. 53+95
BM#6 Elev. 313.10
□ in Conc. step on S. side of street 20' NE of entrance to Gen. Store
JUN 17 1949
320
310
300
30
35
40
45
50

Standards

Route H
~~Sect~~ Proj S 294 (2)
County NEW MADRID

Sheet # 5

TYP Sect + Earthwork
1K-4

Surf. Curb + Gutter + APP
1BA-1

Drainage

Bridges

Conc-Reinf Apports
Finish etc.

Misc.

NO. AREAS CHECKED

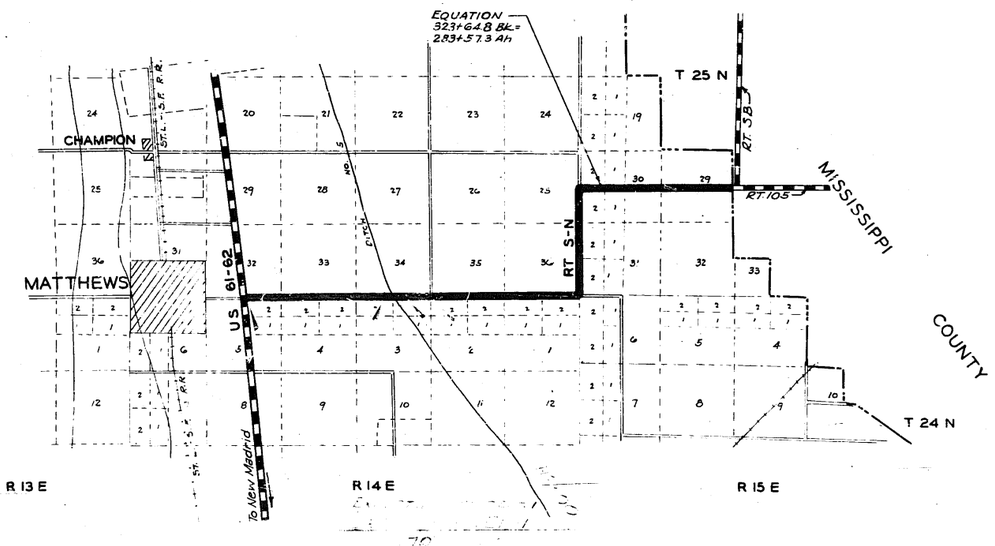
10 NEW MADRID S-N 1

MISSOURI
STATE HIGHWAY COMMISSION
PLAN AND PROFILE
OF PROPOSED
STATE ROAD

FEDERAL AID PROJECT

NEW MADRID COUNTY

SCALES. PLAN 1 IN. = 100 FT.
PROFILE. HOR. 1 IN. = 100 FT. VERT. 1 IN. = 10 FT.
CROSS-SECTIONS 1 IN. = 5 FT.



CONVENTIONAL SIGNS

STATE AND NATIONAL LINE	LEVEE
COUNTY LINE	CULVERTS
CITY, VILLAGE OR BOROUGH	DROP INLET
TOWNSHIP LINE	TROLLEY POLE
SECTION LINE	POWER POLE
GRANT LINE	TELEPHONE OR TELEGRAPH POLE
FENCE LINE	MARSH
GUARD RAIL	HEDGE
UNFENCED PROPERTY	
RIGHT OF WAY LINE	GROUND ELEVATION
TRAVELED WAY	
RAILROADS	GRADE ELEVATION
RETAINING WALL	SURFACE LINES
BASE OR SURVEY LINE	GRADE LINE

SUBMITTED [redacted]

[redacted]

CHIEF ENGINEER MO. STATE HIGHWAY COMMISSION

RECOMMENDED FOR APPROVAL

[redacted]

DISTRICT ENGINEER - DISTRICT NO. 5

RECOMMENDED FOR APPROVAL

[redacted]

CHIEF ENGINEER BUREAU PUBLIC ROADS

APPROVED

[redacted]

DIRECTOR BUREAU OF PUBLIC ROADS

LOCATION MATTHEWS EAST

TYPE 24' G.E. CULV.S GRAV. SURFACE

MISSOURI STATE HIGHWAY COMMISSION

FINAL SUMMARY OF QUANTITIES

FED. ROAD DIST. No.	STATE	PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
5	MO.			2A	33
DIV. No.	COUNTY			ROUTE	SEC. No.
10	NEW MADRID			SN	1

EXCAVATION

Sta.	Excav.	Bor.	Fill	Machine Grading
0+00				
3+00	397	280	484	
30+00		38		27.00
60+00		62		30.00
90+00				30.00
95+00				5.00
103+00	437	681	688	
112+00	Excpt.	Rt. SN	, EE-1	
120+00				8.00
126+48				6.48
133+60	390	770	847	
136+00	165	218	283	
Sub-Total	1389	2049	2302	106.48
Ditch Cleanouts	23			
Approaches	51	141	235	
Total	1463	2190	2537	106.5
	3653			

CLEARING & GRUBBING

Sheet #	Clearing Units	Grubbing Units
3	26	15
4	45	30
5	17	12
6	39	5
7	38	2
Total	165	64
Acres	1.9	0.7

HEDGE REMOVAL

Sta.	Sta.	Side	100 Ft.
58+38	60+00	Rt.	1.62
60+00	66+80	Rt.	6.80
Total			8.42

REM. EXISTING STRUCT.

Sta.	Side	Description	No.
0+31	Lt.	9'x16' Wd. Br.	1
99+63	℄	15'x18' Wd. Br.	1
128+53	℄	12'x15' Wd. Br.	1
129+69	℄	12'x14' Wd. Br.	1
131+66	℄	15'x23' Wd. Br.	1
Total			5
Lump Sum			1

DITCH CLEANOUTS

Sta.	Side	Cu. Yds.
7+00	Lt.	5
27+45	Lt.	5
52+00	Lt.	7
53+21	Lt.	6
Total		23

CONCRETE BOX CULVERTS

Sta.	Std.	Size	Length	Class B Conc.	Steel	Cl. 3 Excav.	Remarks
0+00	C-253A	3x2	11	3.5	535	12.6	Extension on E. to Culv. under Rt. 61 35' N. of 0+00
Total				3.5	535	12.6	

CONCRETE DROP INLET & GRATE

Sta.	Side	Size	Class B Conc.	Reinf. Steel	Cl. 3 Excav.	Grates & Br. Plates	Remarks
75+26.5	Lt.	2½x2½x4½	1.0	45	6.1	190 lbs.	See Sheet 2B
Total			1.0	45	6.1	190	

C.M. PIPE CULVERTS (NO ALTERNATE)

Sta.	Side	15"	18"	30"	36"	Cl. 3 Excav.	Remarks
18+00	℄		36			8.6	Equalizer
38+00	℄		38			11.5	Relief
55+00	℄		40			14.2	Equalizer
67+50	℄		38			10.2	Equalizer
69+00	℄		36			8.9	Equalizer
69+35	Lt.					1.6	Removal
75+26.5	Lt.	10				1.7	To Drop Inlet
80+37	Rt.					2.9	Removal
99+73	℄				46	11.7	
128+59	℄				40	4.8	Equalizer
135+25	℄			40		1.3	Equalizer
Total		10	188	40	86	87.4	

C.M. PIPE APPROACH CULVERTS

Sta.	Side	15"	18"	24"	Cl. 3 Excav.	Excav.	Bor.	Fill	Gravel	Remarks
1+35	Rt.							.4		FE Ramp
7+00	Lt.								2.5	Appr. + Tim. Br. used in place
27+23	Rt.		26		1.1		22	16		FE
27+59	Lt.								2.5	Appr. + Tim. Br. used in place
42+07	Rt.						17	12		FE Ramp
52+36	Lt.								1.5	Appr. + Tim. Br. used in place
53+33	Lt.								1.5	Appr. + Tim. Br. used in place
61+23	Rt.						13	9	2.4	FE Ramp
68+49	Rt.						4	3		FE Ramp
70+86	Lt.								2.4	Appr. + CMP used in place
74+71	Lt.						8	6	2.4	FE Ramp
80+45	Rt.		34		0.0	2	20	16	3.9	S.R.
87+35	Rt.						4	3	2.4	FE Ramp
87+90	Lt.						6	4	2.0	FE Ramp
88+58	Rt.	22			1.9	4	6	7	2.8	FE
93+85	Rt.		34		1.4	2	19	15	3.9	S.R.
112+00	℄					12		2		Rd. Conn.
117+55	Rt.						22	16		FE Ramp
130+27	Lt.			26	1.1			63		FE
135+48	Lt.			36	11.1			27	4.0	S.R.
136+00	℄					31		22		Rd. Conn.
Total		22	94	62	16.6	51	141	235	34.2	

RELAID PIPE CULVERTS

From Sta.	Sta.	To Sta.	Sta.	Side	Size	Lin. Ft.	Remarks
91+00	92+54	91+00	92+54	Lt.	18"	154	V.C. Farm Tile
Total						154	

LENGTH OF PROJECT

End of Project	Station	136+00	
Beginning of Project	Station	0+00	
Apparent Length		13600	Feet
Equations and Exceptions:			
Excpt. for Rt. SN, Proj. EE-1 103+00 to 112+00 =	900.0		
Total Corrections		-900	Feet
Net Length of Project		12700	Feet
State Length =		2.405	Miles
Federal Length =			Miles

GRAVEL SURFACE

Sta.	Pounds Gross	Pounds Tare	Pounds Excess Moist.	Pounds Net Dry	Book #
0+00					
2+92	272865	89230	7760	175875	15
12+54	604075	197185	17200	389690	14
22+34	607120	197810	17025	392285	13
31+72	592835	196810	16010	380015	12
41+27	596185	197560	16355	382270	11
49+85	555965	197565	15155	343245	10
58+49	560023	197305	10975	351743	9
67+17	561085	196940	12085	352060	5
75+94	571170	195990	15045	360135	4
85+39	598040	197845	14880	385315	3.
94+33	594635	199205	14800	380630	2
103+00	559015	198105	14680	346230	1
	Exception: Rt. SN, Proj. EE-1				
112+00					
119+06	454285	161545	10515	282225	8
127+54	545780	193155	13315	339310	7
136+00	555225	193765	15145	346315	6
Sub-Total	8228303	2810015	210945	5207343	
Deduction for Oversize				1670	
Total				5205673	= 2603 Tons

Above Quant. include Surf. on Appr's, Intersection, etc.

GRAVEL IN STOCK PILES

Sta.	St. P. #	Side	Pounds Gross	Pounds Tare	Pounds Excess Moist.	Pounds Net Dry	Book #	Tons
77+00	1	Rt.	222625	76945	5510	140170	2	
77+00	1	Rt.	218900	72190	5525	141185	3	
Sub-Total			441525	149135	11035	281355	=	140.68
91+00	2	Lt.	572590	196350	11335	364905	1	
91+00	2	Lt.	355365	119475	8390	227500	2	
Sub-Total			927955	315825	19725	592405	=	29[illegible]
Total			1369480	464960	30760	873760	=	437

METAL ARCH CULVERTS

Sta.	Side	Size	Length	Cl. 3 Excav.	Remarks
11+00	℄	48"	42	26.4	
Total			42	26.4	

FORCE ACCOUNT: Costs of Grouted Stone Revetment placed 92+31.5 to 92+93 Lt. to prevent scour in vicinity of 18" V.C. Farm Tile outlet, 18' Lt. of 92+54 = $165.27

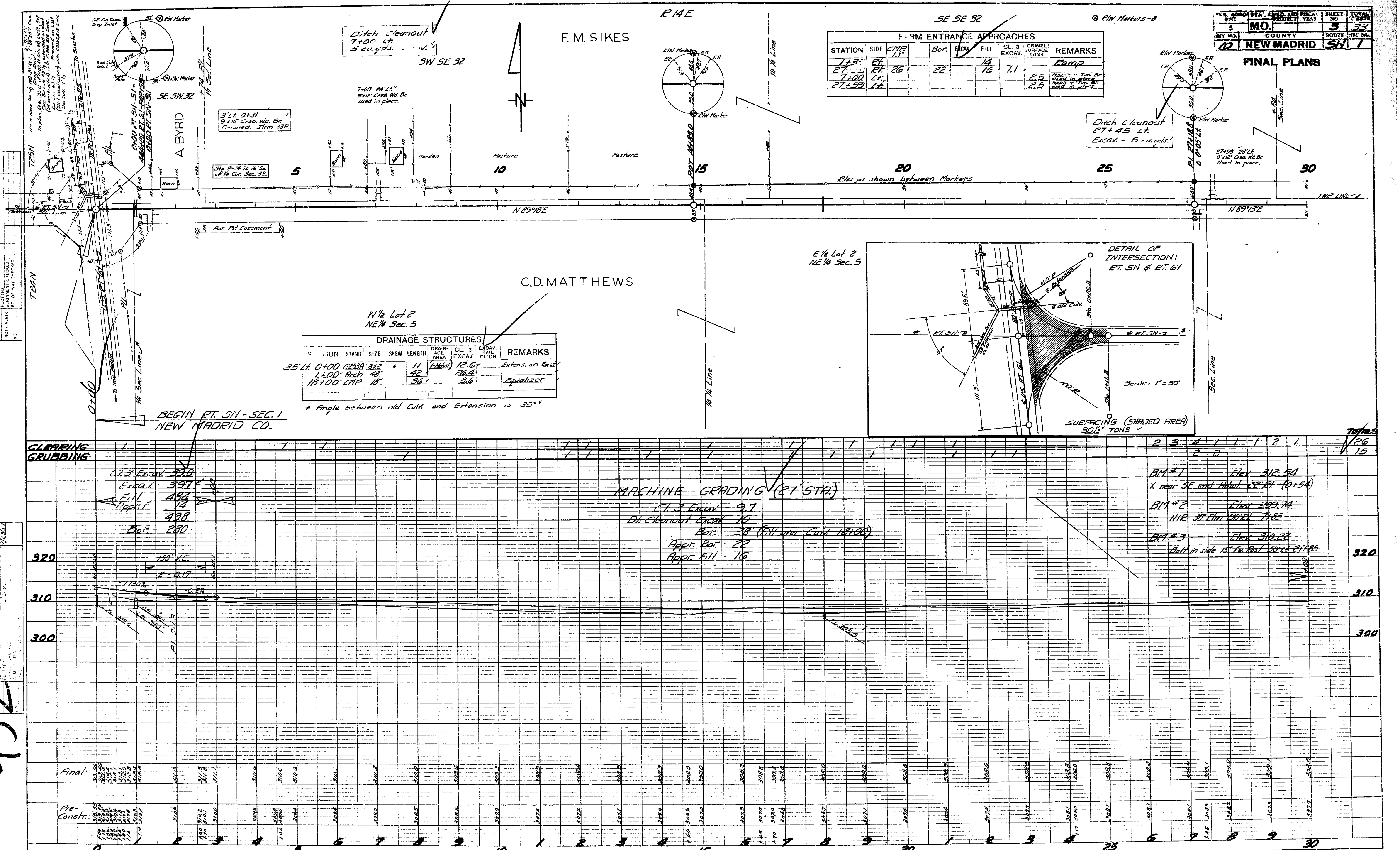
GENERAL SUMMARY FINAL PLANS

ITEM NO.	DESCRIPTION	UNIT	TOTAL UNITS	NO. UNITS FED. AID ONLY
1-A	Clearing	Acre	1.9	
1-B	Grubbing	Acre	0.7	
1-C	Hedge Removal	100 Ft.	8.42	
1-F	Unclassified Excavation	Cu. Yd.	3653	
1-I	Cl. 3 Excav. for Structures	Cu. Yd.	149.0	
1-O	Machine Grading	Station	106.5	
13-C	Gravel Surface (B)	Tons	2603	
13-CC	Gravel in Stock Piles (B)	Tons	437	
16-B	Class B Concrete Masonry	Cu. Yd.	4.5	
18-B	15" C.M. Pipe Culverts (No Alt.)	Lin. Ft.	10	
18-B	18" C.M. Pipe Culverts (No Alt.)	Lin. Ft.	188	
18-B	30" C.M. Pipe Culverts (No Alt.)	Lin. Ft.	40	
18-B	36" C.M. Pipe Culverts (No Alt.)	Lin. Ft.	86	
18-B	15" C.M. Pipe Culverts	Lin. Ft.	22	
18-B	18" C.M. Pipe Culverts	Lin. Ft.	94	
18-B	24" C.M. Pipe Culverts	Lin. Ft.	62	
18-I	Relaid Pipe Culverts	Lin. Ft.	154	
19-A	Reinforcing Steel	Pound	580	
33-A	Removal (5) Existing Structures	Lump Sum	1	
35-A	48" Metal Arch Culverts	Lin. Ft.	42	
36-A	Steel Grate & Bearing Plates	Pound	190	
	CONTINGENT ITEMS			
	Force Account	FA	$165.27	

Prepared By Ben Terrell Date 9-21 1938 Checked in Div. Office By ____ Date ____ 19__ Checked in Central Office By ____ Date ____ 19__ Revised By ____ Date ____ 19__

F.A.S. ROAD DIST.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.			3	33
HWY NO.	COUNTY			ROUTE	SEC. NO.
10	NEW MADRID			SN	1

FINAL PLANS



R 14 E
F. M. SIKES
A. BYRD
C.D. MATTHEWS
SE SW 32
SW SE 32
SE SE 32
T25N
T24N
Ditch Cleanout 7+00 Lt. 5 cu. yds.
Ditch Cleanout 27+45 Lt. Excav. - 5 cu. yds.
3' Lt. 0+31 9'x16' Creo. Wd. Br. Removed. Item 33A.
7+00 24' Lt. 9'x12' Creo. Wd. Br. Used in place.
27+59 23' Lt. 9'x12' Creo. Wd. Br. Used in place.
Sta. 2+74 is 16' So. of 1/4 Cor. Sec. 32.
R/W as shown between Markers
R/W Markers - 8
N 89°13'E
Bor. Pit Easement
W 1/2 Lot 2 NE 1/4 Sec. 5
E 1/2 Lot 2 NE 1/4 Sec. 5
DETAIL OF INTERSECTION: RT. SN & RT. 61
Scale: 1" = 50'
SURFACING (SHADED AREA) 30 1/2 TONS
BEGIN RT. SN - SEC. 1 NEW MADRID CO.
CLEARING
GRUBBING
Cl. 3 Excav. - 39.0
Excav. 397
Fill 484
Appr. F 14
498
Bor. 280
150' V.C.
E - 0.17
MACHINE GRADING (27 STA.)
Cl. 3 Excav. - 9.7
Dt. Cleanout Excav. - 10
Bor. - 38 (Fill over Culv. 18+00)
Appr. Bor. - 22
Appr. Fill - 16
BM # 1 — Elev. 312.54
X near SE end Hdwl. 22' Rt. (0+54)
BM # 2 — Elev. 309.74
N.E. 30" Elm 50' Lt. 7+85
BM # 3 — Elev. 310.22
Bolt in side 15" Fe. Post 50' Lt. 21+85
Final:
Pre-Constr.:
320
310
300

FARM ENTRANCE APPROACHES									
STATION	SIDE	CMP 1.3"		Bor.	EXCAV.	FILL	CL. 3 EXCAV.	GRAVEL SURFACE TONS	REMARKS
1+3[illegible]	Rt.					14			Ramp
27[illegible]	Rt.	26		22		16	1.1		
7+00	Lt.							2.5	Appr. & Tim. Br. used in place
27+59	Lt.							2.5	Appr. & Tim. Br. used in place

DRAINAGE STRUCTURES									
STATION	STAND	SIZE	SKEW	LENGTH	DRAINAGE AREA	CL. 3 EXCAV.	EXCAV. TAIL DITCH	REMARKS
35' Lt. 0+00	C-253A	3x2	*	11	(1-Hdwl.)	12.6		Extens. on East
1+00	Arch	48"		42		26.4		
18+00	CMP	18"		36		8.6		Equalizer

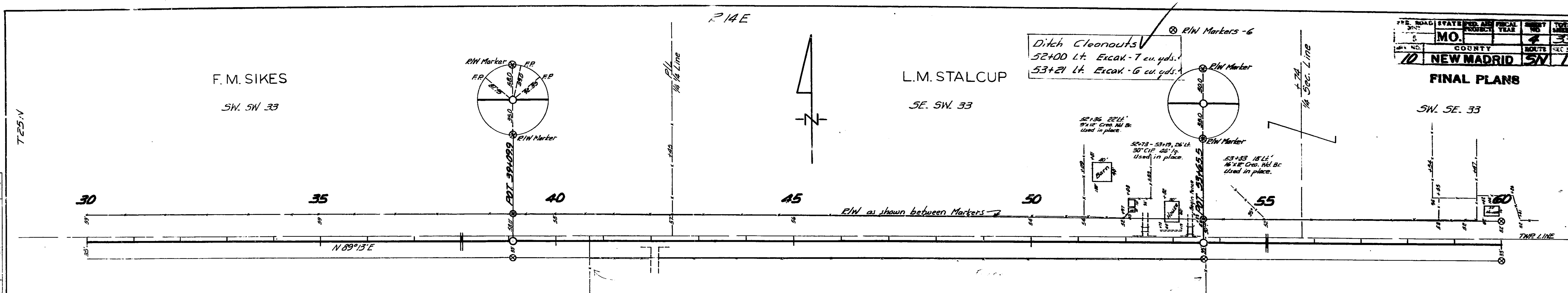
* Angle between old Culv. and Extension is 35°

PLATE 1 — PLAN — PROFILE
KEUFFEL & ESSER CO. NEW YORK

FED. ROAD DIST.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.			4	33

DIST. NO.	COUNTY	ROUTE	SEC. NO.
10	NEW MADRID	SN	1

FINAL PLANS



C. D. MATTHEWS

W. ½ Lot 2, NW. ¼ Sec. 4

JAMES M. HILL

E. ½ Lot 2 NW ¼ Sec. 4

W. ½ Lot 2 NE ¼ Sec. 4

1/4 1/4 Line

1/4 Sec. Line

DRAINAGE STRUCTURES

STATION	STAND	SIZE	SKEW	LENGTH	DRAINAGE AREA	CL. 3 EXCAV.	EXCAV. TAIL DITCH	REMARKS
38+00	CMP	18"		38		11.5		Relief
55+00	CMP	18"		40		14.2		Equalizer

FARM ENTRANCE APPROACHES

STATION	SIDE			Bor.	EXCAV.	FILL	CL. 3 EXCAV.	GRAVEL SURFACE TONS	REMARKS
42+07	Rt.			17		12			Ramp
52+36	Lt.							1.5	Appr. + Tim. Br. used in place
53+33	Lt.							1.5	Appr. + Tim. Br. used in place

HEDGE REMOVAL

Sta.	Sta.	Side	100 Ft.	Remarks
58+38	60+00	Rt.	1.62	

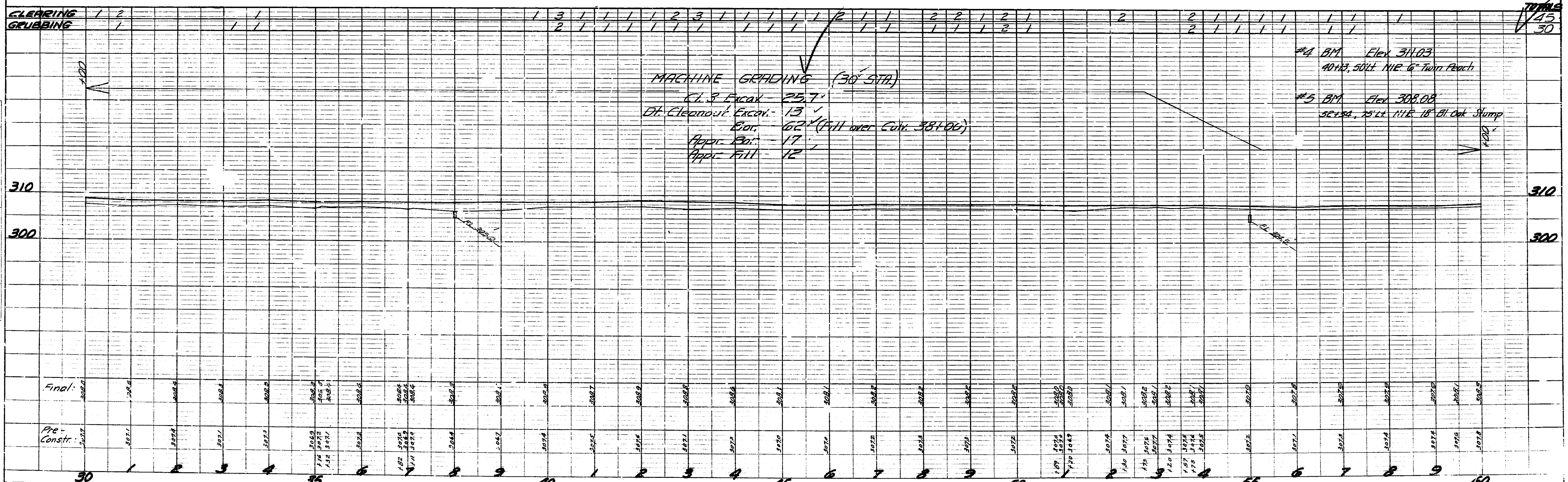
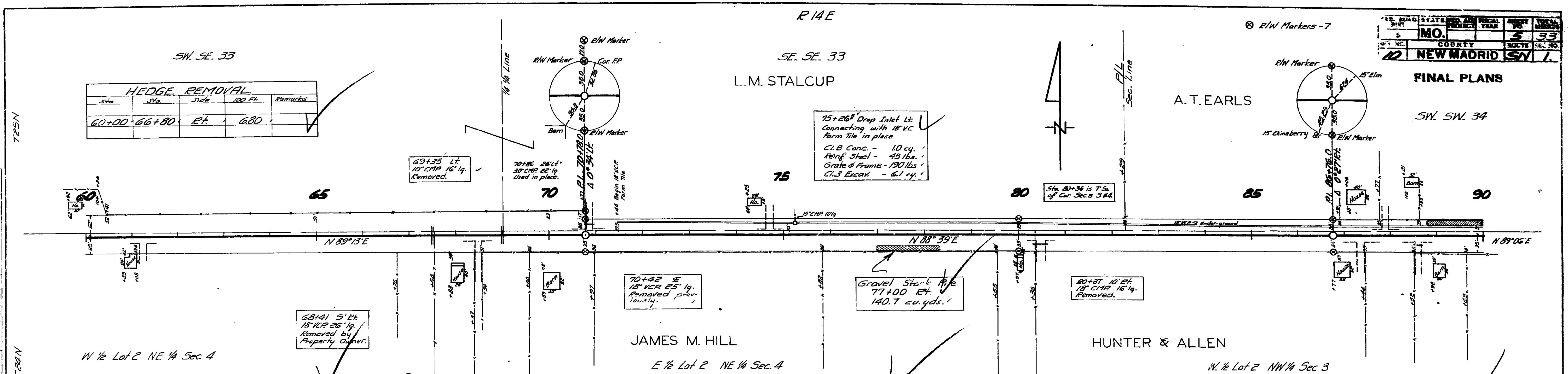


PLATE 1 — PLAN-PROFILE

FED. ROAD DIST.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.			5	33

DIST. NO.	COUNTY	ROUTE	SEC. NO.
10	NEW MADRID	SN	1.

FINAL PLANS



HEDGE REMOVAL				
Sta.	Sta.	Side	100 Ft.	Remarks
60+00	66+80	Rt.	6.80	

DRAINAGE STRUCTURES

STATION	STAND	SIZE	SKEW	LENGTH	DRAINAGE AREA	CL. 3 EXCAV.	EXCAV. TAIL DITCH	REMARKS
67+50	CMP	18"		38		10.2		Equalizer
69+00	CMP	18"		36		8.9		Equalizer
69+35						1.6		Removal Lt.
75+26.5	CMP	15"		10		1.7		To Drop Inlet
80+37						2.9		Removal Rt.

SIDE ROAD APPROACHES

STATION	SIDE	CMP 18"		Bor.	EXCAV.	FILL	CL. 3 EXCAV.	GRAVEL SURFACE TONS	REMARKS
80+45	Rt.	34		20	2	16	0	3.9	

FARM ENTRANCE APPROACHES

STATION	SIDE	CMP 15"		Bor.	EXCAV.	FILL	CL. 3 EXCAV.	GRAVEL SURFACE TONS	REMARKS
61+23	Rt.			13		9		2.4	Ramp
68+49	Rt.			4		3			Ramp
74+71	Lt.			8		6		2.4	Ramp
87+35	Rt.			4		3		2.4	Ramp
87+90	Lt.			6		4		2.0	Ramp
88+58	Rt.	22		6	4		1.9	2.8	
70+86	Lt.							2.4	Appr. + CMP. used in place

	TOTALS
CLEARING	17
GRUBBING	12

MACHINE GRADING (30' STA.)

Cl. 3 Excav. - 33.3
Appr. Excav. - 6
Appr. Bor. - 61
Appr. Fill - 48

#6 BM. Elev. 306.23
68+36, 50' Rt. NIR 15" Sycamore

#7 BM. Elev. 309.42
74+25 37' Lt. Harrow Tooth in side 12" Sycamore

#8 BM. Elev. 310.05
83+42 14' Rt. NIR 40" White Oak

#9 BM. Elev. 312.95
87+20 50' Lt. NIR 12" Elm

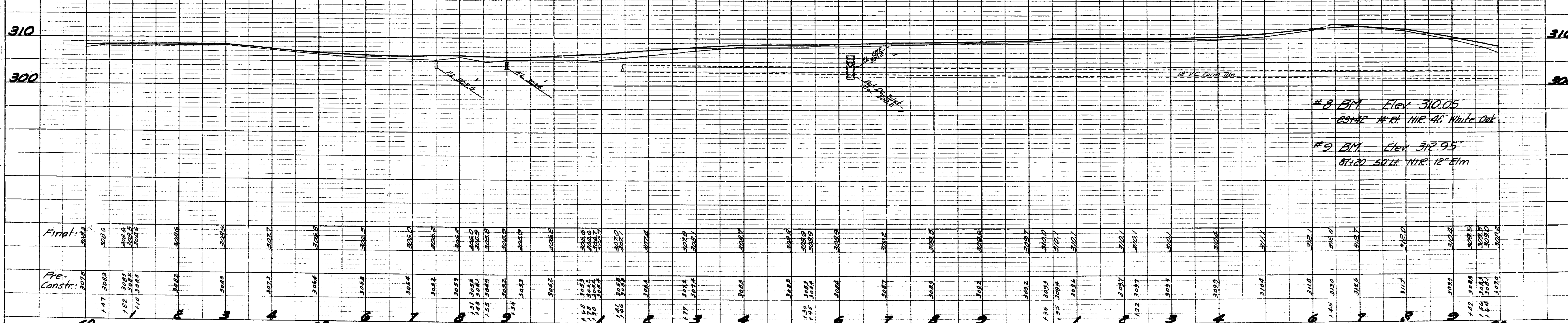


PLATE 1 — PLAN — PROFILE
KEUFFEL & ESSER CO.

S.H. ROAD DIST.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	MO.			6	33

REV. NO.	COUNTY	ROUTE	SEC. NO.
10	NEW MADRID	SN	1

FINAL PLANS

RELAID PIPE				18" VCP	
From		To		Side	Lin. Ft.	Remarks
91+00	92+54	91+00	92+54	Lt.	154	Farm Tile

(Relaid to permit Lowering)

FORCE ACCOUNT
Grouted Stone Revetment placed 92+31.5 to 92+93 Lt. to prevent scour in vicinity of 18" V.C. Farm Tile outlet 18' Lt. 92+54. $165.27.

Gravel Stock Pile
91+00 Lt.
296.2 cu. yds.

18" V.C.P. (Under-ground)

92+54 End 18" V.C. Farm Tile

99+63 ℄
15' x 18' Wd. Br.
Removed. Item 33A

107+23.46 Bridge in place
41' 49' & 41' I-Bm. Spans
on Creo. Pile Bents
Skew 30° R.A.
Fill & Pav. Excpt. = 133.42'
Drwg. No. K-787
(SN-ER-1 construction)

111+ 35' Lt.
12' x 21' Wd. Br.
Removed by
Property Owner.

111+75 ℄ 18" CMP.
50' lg. in place.
(SN-ER-1 construction)

DRAINAGE STRUCTURES								
STATION	STAND	SIZE	SKEW	LENGTH	DRAINAGE AREA	CL. 3 EXCAV.	EXCAV. FOR DITCH	REMARKS
99+73	CMP	36"		46		11.7		

SIDE ROAD APPROACHES									
STATION	SIDE	CMP 18"		Bor.	EXCAV.	FILL	CL. 3 EXCAV.	GRAVEL SURFACE TONS	REMARKS
93+85	Rt.	34		19	2	15	1.4	39	
112+00	℄				12	2			Rd. Conn.

FARM ENTRANCE APPROACHES									
STATION	SIDE			Bor.	EXCAV.	FILL	CL. 3 EXCAV.	GRAVEL SURFACE TONS	REMARKS
117+55	Rt.			22		16			Ramp

	TOTALS
CLEARING	39
GRUBBING	5

MACHINE GRADING (5 STA.)
Cl. 3 Excav. - 1.4
Appr. Excav. - 2
Appr. Bor. - 19
Appr. Fill - 15

Cl. 3 Excav. - 11.7
Excav. - 437
Fill - 688
Bor. - 681

ROUTE SN PROJECT ER-1
(Exception to Rt. SN Sec. 1)

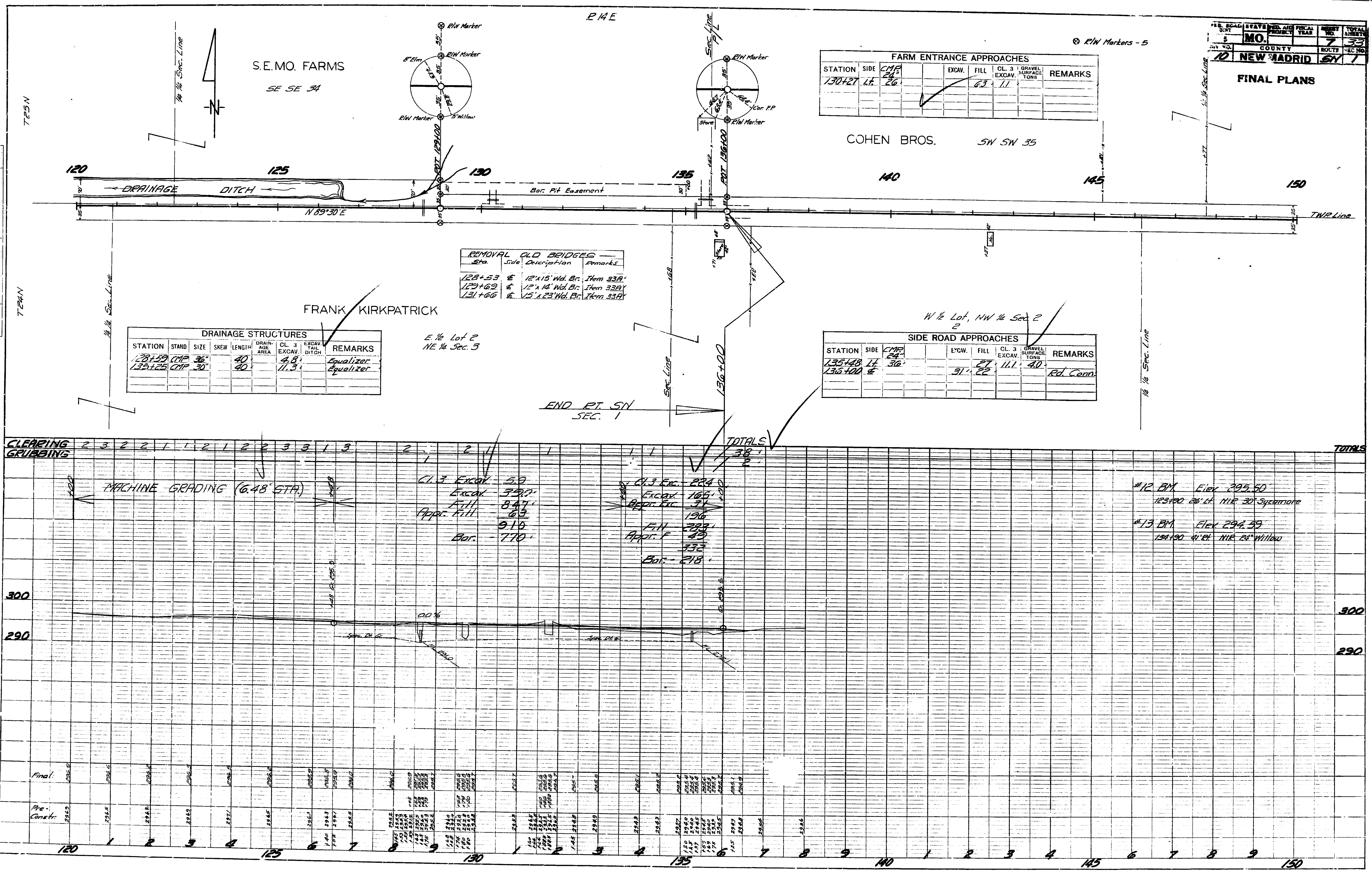
#10 BM. Elev. 294.22
103+85 23' Rt. N.I.R. 10" Elm

#11 BM. Elev. 292.99
108+95 50' Rt. N.I.R. 30" Willow

MACHINE GRADING (8.0 STA.)
Appr. Excav. - 12
Appr. Bor. - 22
Appr. Fill - 18

FED. ROAD DIST.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.			7	33
DIV. NO.	COUNTY			ROUTE	SEC. NO.
10	NEW MADRID			SN	1

FINAL PLANS



REMOVAL OLD BRIDGES			
Sta.	Side	Description	Remarks
128+53	℄	12'x15' Wd. Br.	Item 33A
129+69	℄	12'x14' Wd. Br.	Item 33A
131+66	℄	15'x23' Wd. Br.	Item 33A

FARM ENTRANCE APPROACHES

STATION	SIDE	CMP. 24"			EXCAV.	FILL	CL. 3 EXCAV.	GRAVEL SURFACE TONS	REMARKS
130+27	Lt.	26				63	1.1		

DRAINAGE STRUCTURES

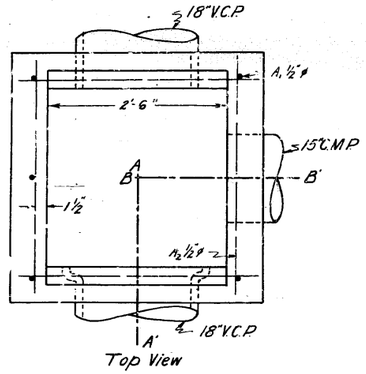
STATION	STAND	SIZE	SKEW	LENGTH	DRAIN-AGE AREA	CL. 3 EXCAV.	EXCAV. TAIL DITCH	REMARKS
128+59	CMP	36"		40		4.8		Equalizer
135+25	CMP	30"		40		11.3		Equalizer

SIDE ROAD APPROACHES

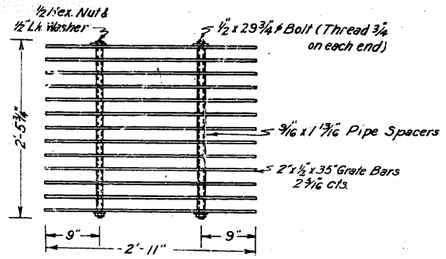
STATION	SIDE	CMP. 24"			EXCAV.	FILL	CL. 3 EXCAV.	GRAVEL SURFACE TONS	REMARKS
135+48	Lt.	36				27	11.1	4.0	
136+00	℄				31	22			Rd. Conn.

10 NEW MADRID SN 1

SPS



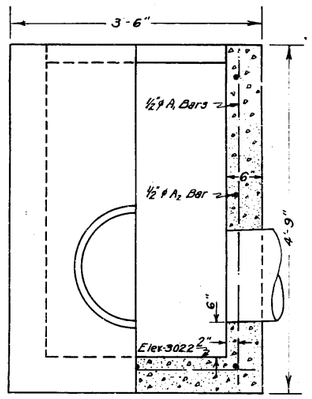
Top View



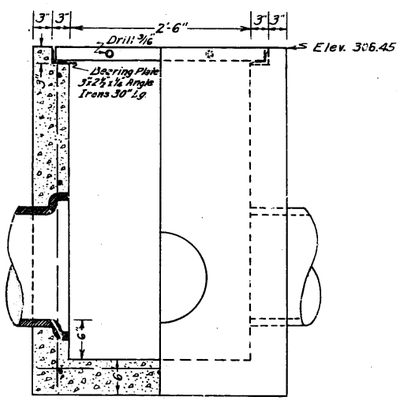
Plan Detail of Grate Assembly

Bill of Material Grate Assembly & Bearing Plates		
Item	No.	Size
Grate Bars	13	2" x ⅛" x 35"
Br. Pl. Angles	2	3" x 2½" x ¼" x 30"
Bolts	2	½" ø x 2 9¾"
Pipe Spacers	24	⅜" x 1 ⅞"
Hex. Nuts	4	½"
Lock Washers	4	½"

Approximate weight of Grate & Bearing Plates 190 Lbs.



East View Sec. B-B'



North View Sec. A-A'

Bill of Reinforcing Steel				
Item	No.	Size	Length	Wt (lbs)
A.	5	½ ø	4'-6"	15
A_2	14	½ ø	3'-3"	30
			Total -	45

Estimated Quantities	
Item	Amount
Concrete	1.0 Cu Yd.
Reinf. Steel	45 lbs.
Cl. 3 Excav.	12 Cu. Yds.
Excav. (T.D.)	3 Cu. Yds.
Grt. & Br. Plts.	190 Lbs.
15" C.M.P.	1.0 Lin. Ft.

Proposed Drop Inlet
Rt. S.N. Sec. 1 New Madrid Co.
24.8' Lt. Sta. 75+25
Scale: 1" = 1'

Standards

TYP SEC & Earthwork

RTE
Sec. or proj.
County NEW MADRID
Sheet # 1

Surface - Curb & Gutter
Approaches

DRAINAGE

25A-2
CRS-24.

Bridges

CON-REINF
FINISH Etc

APPURTS.

Misc.