DESIGN DESIGNATION SR422		HEATON—NORTH RD.
Current Year ADT (1993)	= 31,560	= 12,590
Design Year ADT (2013)	= 35,610	= 14,200
D H V	= 3560	= 1420
D	= 52%	= 55%
T	= 4%	= 4%
V	= 45/50 m.p.h*	= 35 m.p.h
Legal Speed	= 45/50 m.p.h*	= 35 m.p.h
Functional Classification	= Major Arterial, Urban	= Minor Arterial, Urban

* Legal Speed West of SR46 = 45 m.p.h.; East of SR46 = 50 m.p.h.

DESIGN EXCEPTIONS:

Design Exception For Shoulder Width: Approved 9-29-93

Design Exception For Superelevated Rate: Approved 9-29-93

CONVENTIONAL SIGNS

County Line — Limited Access (only) LA
Township Line — Right of Way (only) RW
Section Line — Limited Access & Right of Way LA&RW
Corporation Line — Existing Right of Way EX RW
Fence Line(existing) 352 or (proposed) 353 — Property Line (in existing fence)
Center Line — Railroad or
Trees, Stumps, (to be removed) — Guardrail (existing) (proposed)
Utility Poles: Telephone, Power, Light

INDEX OF SHEETS

LINE DATA

US 422

Begin Project Sta. 782+32.19
End Project Sta. 919+32.38
TOTAL = 13,700.19 L.F. = 2.595 Mi.

US 422

Begin Work Sta. 782+32.19
End Work Sta. 919+32.38
= 13,700.19 L.F. = 2.595 Mi.

HEATON—NORTH RD.

Begin Work Sta. 8+65.00
End Work Sta. 14+27.00
= 562.00 L.F. = 0.106 Mi.

TOTAL = 14,262.00 L.F. = 2.701 Mi.

Plan Prepared By:

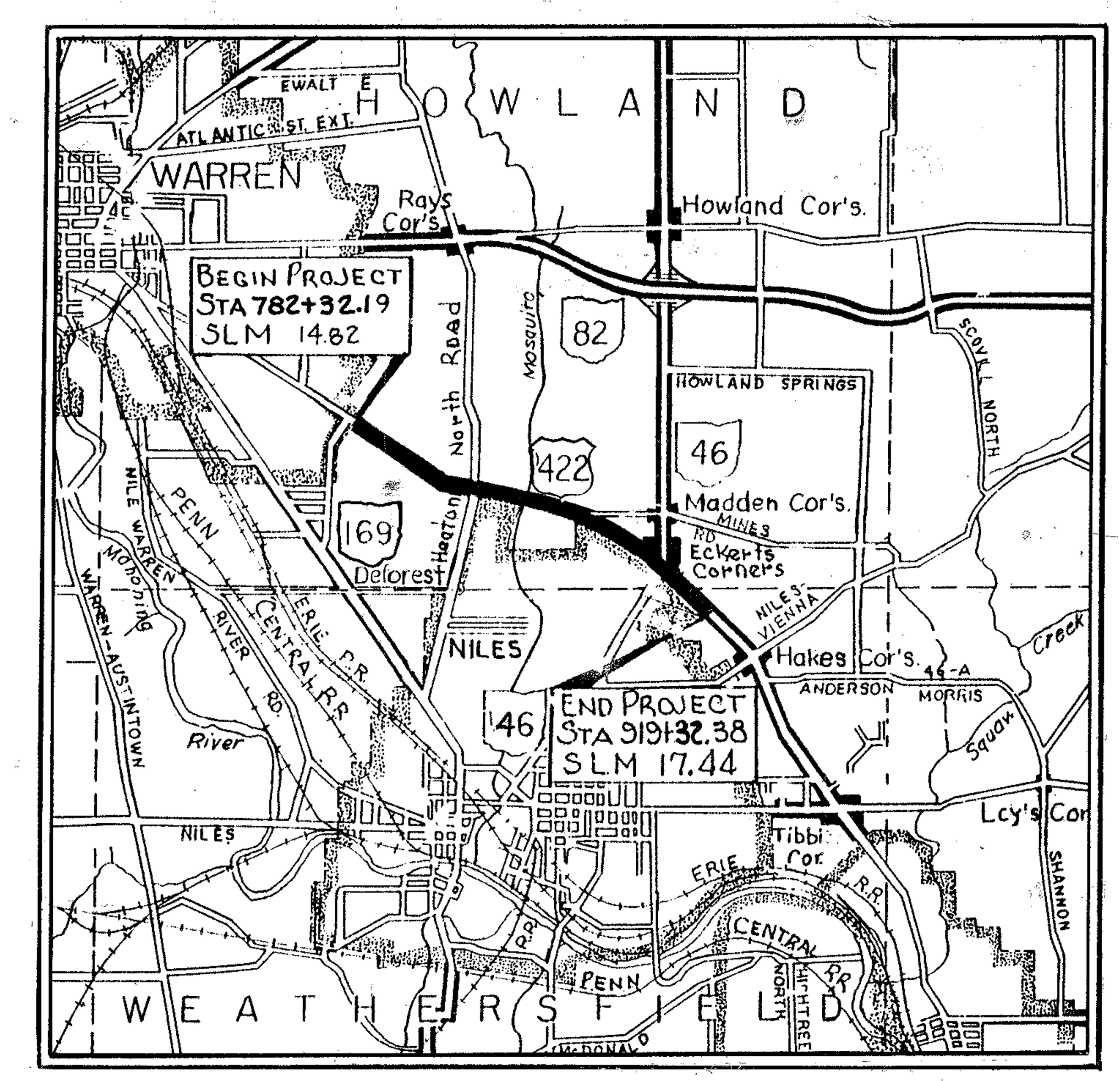
THOMAS FOK & ASSOCIATES, LTD.
3896 MAHONING AVE.
YOUNGSTOWN, OHIO 44515
216-799-1501

Project TRU—422—14.82
Date of Letting ______19__Contract No.____

MICROFILMED FEB 27 1996

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
TRU-422-14.82

CITY OF WARREN
CITY OF NILES
TRUMBULL COUNTY



LOCATION MAP

SCALE IN MILES

0 1 2 3 4

Portion to be Improved
State & Federal Routes
Other Roads

SCALES

Plan 0 20 40
Profile Horizontal 0 20 40 Vertical 0 5 10
Cross Section Horzt 0 5 10 Vertical 0 5 10

UNDERGROUND UTILITIES
TWO WORKING DAYS BEFORE YOU DIG Call 800-362-2764 (Toll Free) OHIO UTILITIES PROTECTION SERVICE NON-MEMBERS MUST BE CALLED DIRECTLY

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS									
BP-1.1	2-21-92								
BP-3.1	2-21-92	CB-3	5-1-79	TC-35.10	8-29-84				
BP-5.1	2-21-92			TC-41.20	3-26-79				
BP-2.1	2-21-92			TC-52.10	4-3-79				
BP-2.2	2-21-92	MC-4	7-26-76	TC-52.20	4-3-79				
GR-1.3	2-21-92	MC-11	8-1-78	TC-71.10	9-10-91				
GR-1.1	5-6-91			TC-41.10	8-29-84				
GR-1.2	10-30-92	MT-95.31	10-10-88						
GR-2.1	5-6-91	MT-95.32	8-25-89	DBR-2-73	4-10-73				
GR-2.2	10-30-92	MT-99.10	11-14-86						
GR-3.4	5-6-91	MT-99.20	4-29-88						
GR-4.2	5-6-91	MT-105.10	7-1-92						
		MT-105.11	7-1-92						

SUPPLEMENTAL SPECIFICATIONS			
		910	5-20-91
805	1-13-77	944	3-18-92
825	10-2-89		
820	3-18-92	902	8-31-79
		923	1-10-69
903	1-1-69		
921	12-04-72		
924	12-14-88		
942	3-18-92		

TRU-422-14.82	OHIO	1 / 41
	FHWA REGION 5	
	FEDERAL PROJECT	

STP — 65(68)

1993 SPECIFICATIONS

The standard specifications of the State of Ohio, Department of Transportation, including changes and supplemental specifications listed in the proposal shall govern this improvement.

I hereby approve these plans and declare that the making of this improvement will not require the closing to traffic of the highway, except as noted on sheet 8, and that provisions for the maintenance and safety of traffic will be as set forth on the plans and estimates.

Approved [signature]
Date 6/10/93 Engineering Director, City Of Warren

Approved Ralph A Infante
Date 6/10/93 Mayor, City Of Niles

Approved David R Dreger
Date 9-28-93 District Deputy Director of Transportation

Approved [signature]
Date 12/29/93 Engineer, Bureau of Bridges and Structural Design

Approved Christopher L. Runyan
Date 1-12-94 Deputy Director, Design

Approved Jerry Wray
Date 1-12-94 Director, Department of Transportation

REVISED 3-28-94

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED

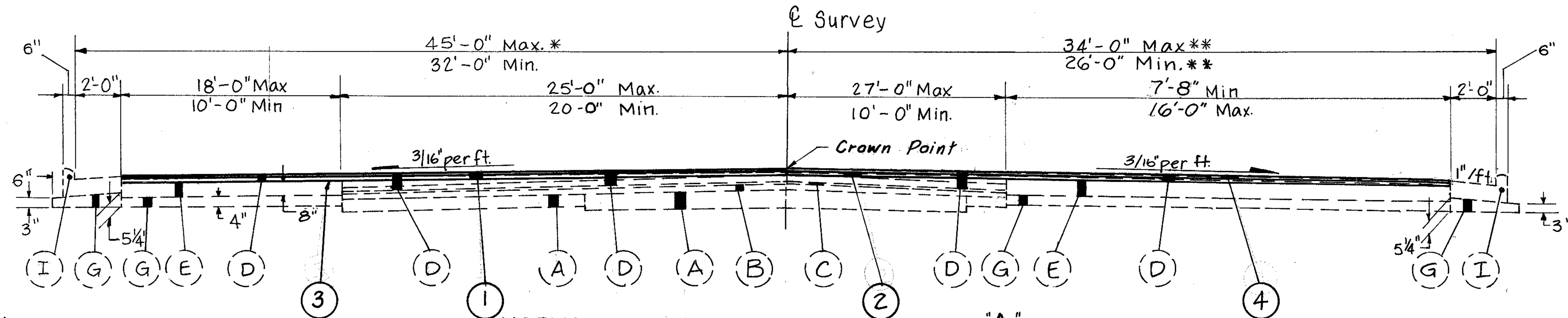
DIVISION ADMINISTRATOR DATE

REGION	STATE	PROJECT	
5	OHIO		

TRUMBULL COUNTY
TRU-422-14.82

SCHEMATIC PLAN

TYPICAL SECTIONS
TYPE 805



NORMAL TYPICAL SECTION "A"

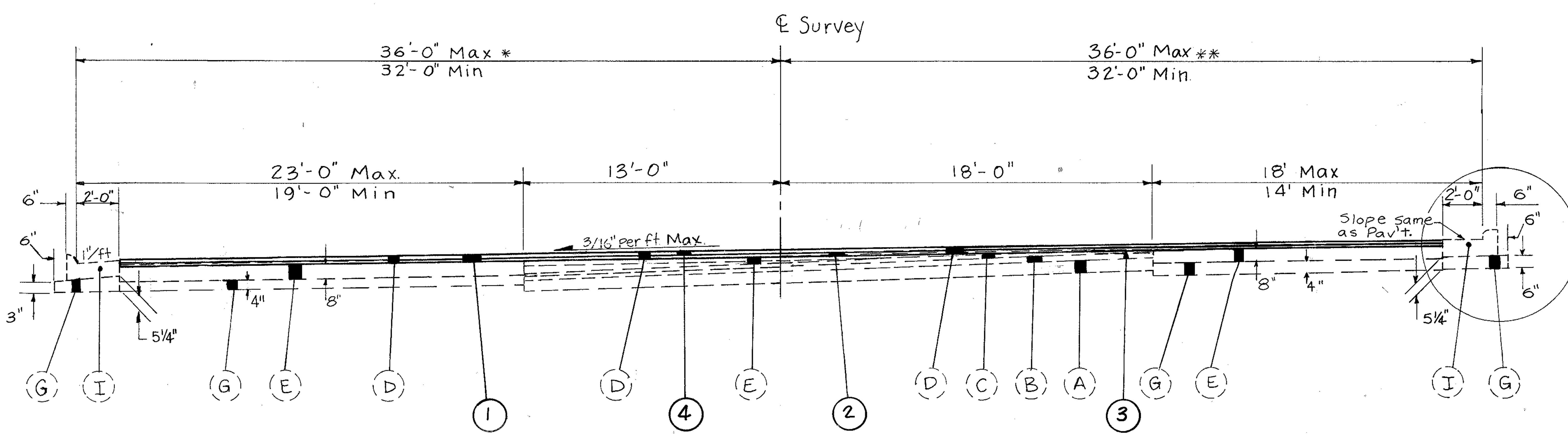
Proposed Pavement Legend

1 — Item 254 - Pavement Planing, Bituminous (2½")
2 — Item 404 - Asphalt Concrete; AC-20, as per Plan, Using 402 Composition (1¾")
3 — Item 407 - Tack Coat, SS 924
4 — Item 805 - Rubberized Sand Asphalt (90lb/s.y.) (¾")
5 — Item 609 - Curb, Type 6
6 — Item 606 - Guardrail, Type 5
7 — Item 660 - Sodding, As Per Plan
8 — Item 203 - Linear Grading, Method 1

STATION FROM	STATION TO	LIN. FT.	WIDTH LEFT *	WIDTH RIGHT**	DESCRIPTION
782+32.19	810+51.40	2,819.21	32'-0"	32'-0"	
858+21	862+86	465.00	34'-0"	32'-0"	
862+86	864+31	145.00	34'-0"-42'-0"	32'-0"	
864+31	874+69.41	1,038.41	42'-0"	32'-0"	
874+69.41	874+84	14.59	42'-0"-41.97'	32'-0"	
889+63	893+55.13	392.13	34'-0"	———	
889+63	894+27.02	464.02	———	34'-0"	
893+55.13	895+16.18	161.05	34'-0"-45'-0"	———	INTERSECTION
894+27.02	895+67.91	140.89	———	34'-0"-26'-0"	INTERSECTION
895+16.18	900+30	513.82	45'-0"-40'-0"	———	
895+67.91	900+30	462.09	———	26'-0"-32'-0"	
900+30	901+80	150.00	40'-0"-32'-0"	32'-0"	TAPER
901+80	919+32.38	1,752.38	32'-0"	32'-0"	
TOTAL = 8,618.59 Lin. Ft.					

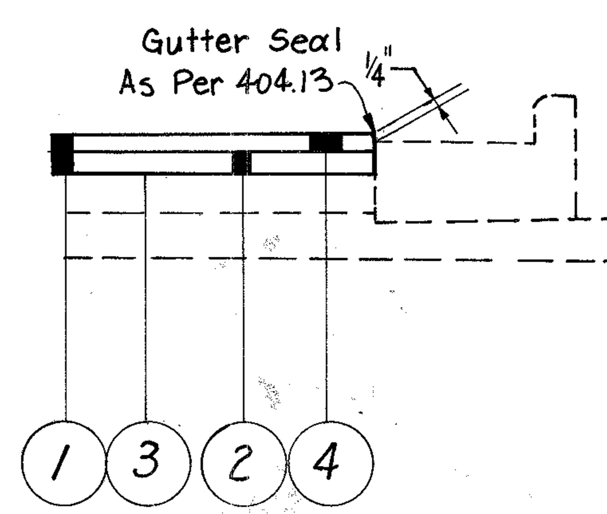
EXISTING PAVEMENT LEGEND

- A — 6" CONCRETE BASE; 1" CUSHION; 4" BRICK
- B — 3½" BRICK SURFACE COURSE
- C — ¾" NATURAL ASPHALTIC LIMESTONE
- D — 2½" MIN.- 5½" MAX. ASPHALT CONCRETE
- E — BITUMINOUS AGGREGATE BASE; DEPTH AS SHOWN
- F — 8" AGGREGATE BASE
- G — SUBBASE; DEPTH AS SHOWN
- H — 8" REINFORCED CONCRETE BASE
- I — TYPE 2 COMBINATION CURB & GUTTER
- J — TYPE 6 CURB
- K — APPROACH SLAB (T=13")



SUPERELEVATED TYPICAL SECTION "B"

STATION FROM	STATION TO	LIN. FT.	WIDTH LEFT *	WIDTH RIGHT **	DESCRIPTION
810+51.40	813+51.40	300.00	32'-0"	32'-0"	Transition Crown to Superelevation
813+51.40	817+19.24	367.84	32'-0"	32'-0"	Superelevation
817+19.24	820+87.09	367.85	32'-0"-36'-0"	32'-0"-36'-0"	Superelevation
820+87.09	823+87.09	300.00	36'-0"	36'-0"	Transition Superelevation to Crown
	TOTAL = 1335.69 LIN. FT.				

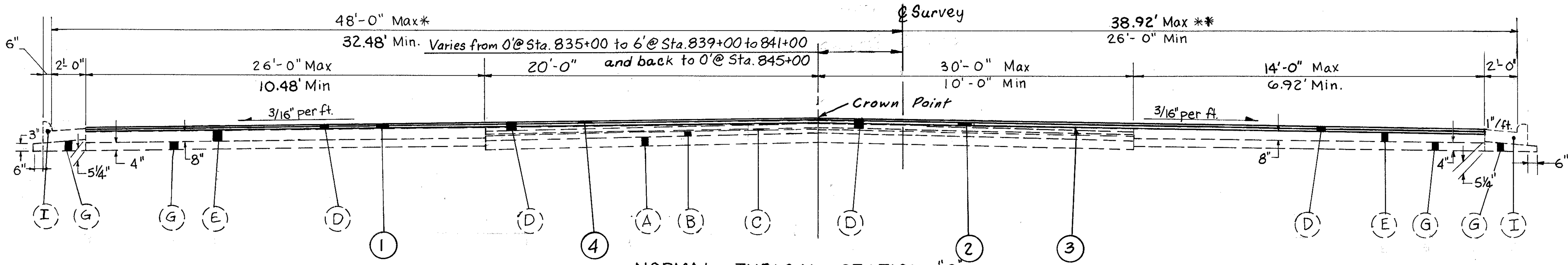


DETAIL "A" (Typ. For All Sections)

Note: Pavement is to be Finished ¼" Above Exist. Gutter Plate.

TYPICAL SECTIONS

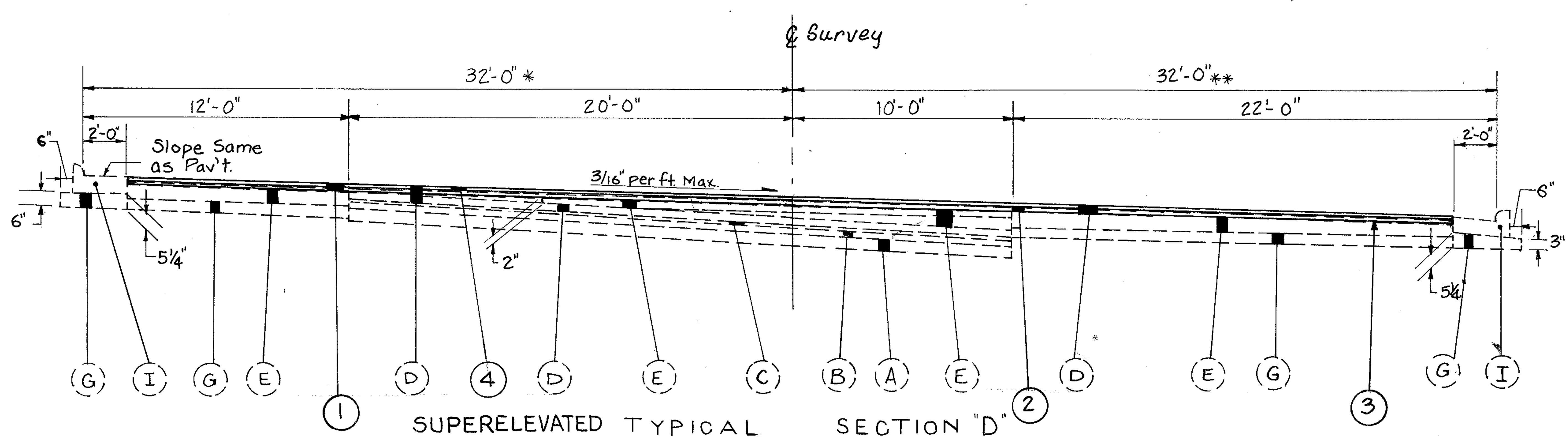
TYPE 805



NORMAL TYPICAL SECTION "C"

STATION FROM	STATION TO	LIN. FT.	WIDTH LEFT*	WIDTH RIGHT**	DESCRIPTION
823+87.09	825+10.28	123.19	36'-0"	36'-0"	
825+10.28	826+37.98	127.70	———	36'-0"	INTERSECTION
826+37.98	829+00	262.02	48'-0"	26'-0"	
829+00	830+00	100.00	48'-0"	26'-0"-36'-0"	TAPER
830+00	830+33	33.00	48'-0"	36'-0"	
830+33	831+83	150.00	48'-0"-38'-0"	36'-0"	TAPER
831+83	832+33.22	50.22	38'-0"	36'-0"	
832+33.22	832+54.20	20.98	38'-0"	36'-0"-26'-0"	TAPER RT.
832+54.20	835+63	308.80	38'-0"	26'-0"	TRANSITION (RT.)
835+63	835+83.50	20.50	38'-0"-48'-0"	26'-0"	TAPER Lt.
TOTAL = 1,196.40 Lin. Ft.					

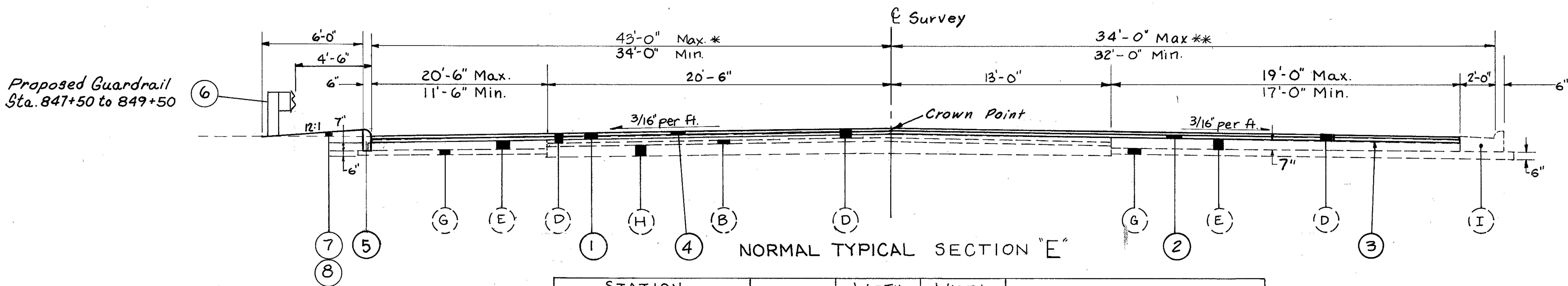
STATION FROM	STATION TO	LIN. FT.	WIDTH LEFT*	WIDTH RIGHT**	DESCRIPTION
835+83.50	839+16	332.50	48'-0"	26'-0"	TAPER LT.
839+16	839+42.95	26.95	48'-0"-38'-0"	26'-0"	
					SEE SHT. 5 FOR BRIDGE & APP. SLABS
840+97.05	845+09.81	412.76	38'-0"	26'-0"	
845+09.81	846+24	114.19	38'-0"	———	
845+09.81	846+88	178.19	———	26'-0"-31'-0"	TAPER RT.
846+24	846+88	64.00	38'-0"-34'-0"	———	
886+08.15	887+48.80	140.65	32.48'-33.08'	32.45'-38.92'	
887+48.80	888+42.39	93.59	33.08'-33.48'	38.92'-38.51'	
888+42.39	889+63	120.61	33.48'-34.00'	38.51'-34.00'	
TOTAL = 1,483.44 Lin. Ft.					



SUPERELEVATED TYPICAL SECTION "D"

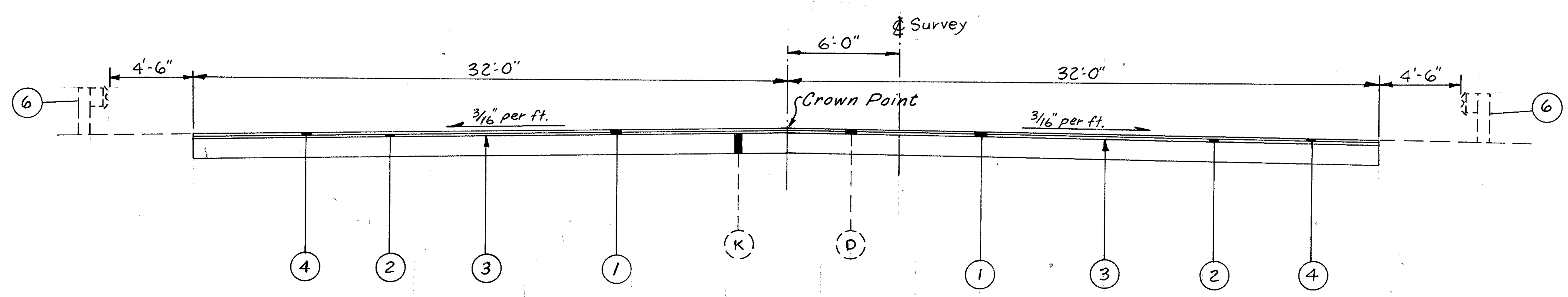
STATION FROM	STATION TO	LIN. FT.	WIDTH LEFT *	WIDTH RIGHT**	DESCRIPTION
874+84	876+19.41	135.41	41.97'-32'-0"	32'-0"	TRANS. CROWN TO SUPER
876+19.41	876+87	67.59	32'-0"	32'-0"	
876+87	884+05.15	718.15	32'-0"	32'-0"	SUPERELEVATED
884+05.15	884+96	90.85	32'-0"	32'-0"	TRANSITION SUPERELEVATION TO CROWN
884+96	885+82.30	86.30	32'-0"-32.96'	———	
884+96	885+98.80	102.80	———	32'-0"	
885+82.30	886+08.15	25.85	32.36'-32.48'	———	
885+98.80	886+08.15	9.35	———	32'-0"-32.45'	
TOTAL = 1,236.30 Lin. Ft.					

TYPICAL SECTIONS
TYPE 805



NORMAL TYPICAL SECTION "E"

STATION FROM	STATION TO	LIN. FT.	WIDTH LEFT *	WIDTH RIGHT **	DESCRIPTION
846+88	849+45	257.00	34'-0"	31'-0"-34'-0"	
849+45	850+28	83.00	34'-0"-36'-0"	34'-0"	
850+28	853+61	333.00	36'-0"-39'-0"	34'-0"	
853+61	855+20	159.00	39'-0"-41'-0"	34'-0"	
855+20	857+53	233.00	41'-0"-43'-0"	34'-0"-32'-0"	
857+53	858+21	68.00	43'-0"-34'-0"	32'-0"	
	TOTAL = 1,133.00 LIN. FT.				



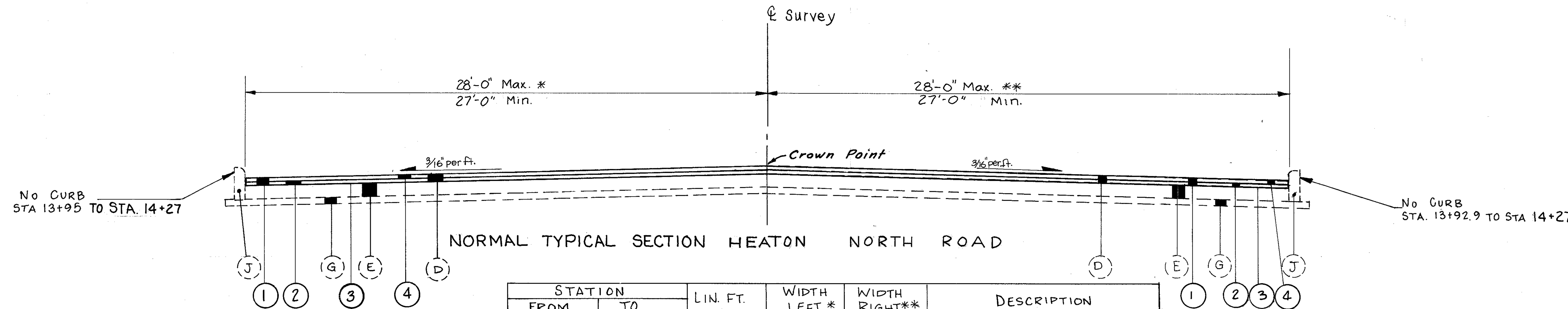
APPROACH SLAB TYPICAL NORMAL SECTION "F"

STATION FROM	STATION TO	LIN. FT.	WIDTH LEFT	WIDTH RIGHT	DESCRIPTION
839+42.95	839+57.95	15.00	32'-0"	32'-0"	APPROACH SLAB
839+57.95	840+82.05	124.10	—	—	BRIDGE LIMITS
840+82.05	840+97.05	15.00	32'-0"	32'-0"	APPROACH SLAB
	TOTAL = 154.10 LIN. FT.				

TYPICAL SECTIONS
TYPE 805

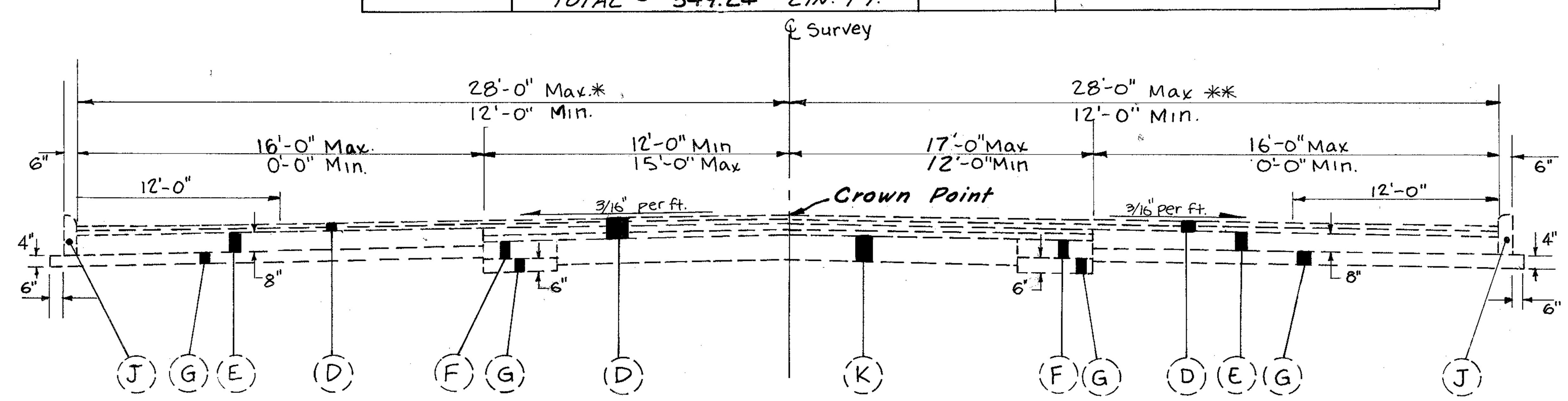
REGION	STATE	PROJECT	
5	OHIO		

TRUMBULL COUNTY
TRU-422-14.82

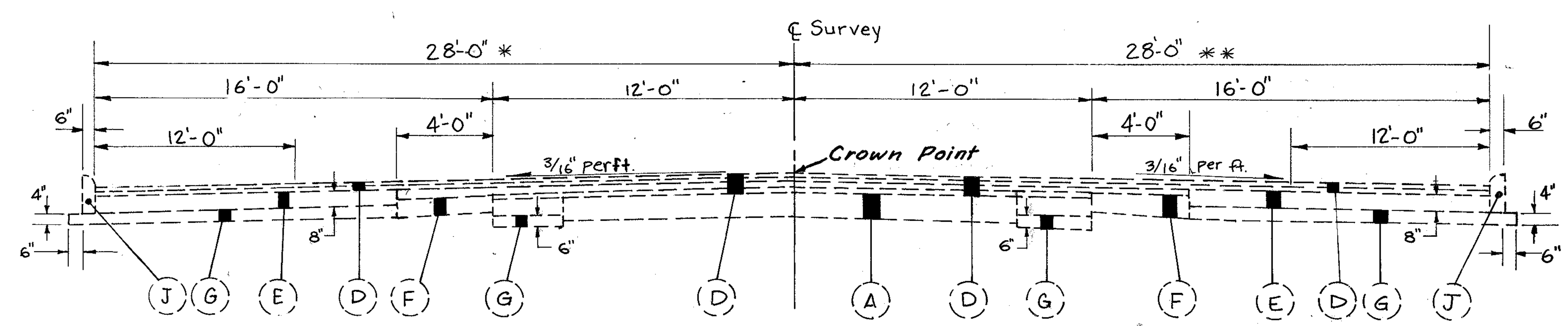


NORMAL TYPICAL SECTION HEATON NORTH ROAD

STATION FROM	STATION TO	LIN. FT.	WIDTH LEFT *	WIDTH RIGHT**	DESCRIPTION
10+77.66	13+95	317.24	28'-0"	28'-0"	
13+95	14+27	32.00	27'-0"	28'-0"-27'-0"	TAPER
	TOTAL =	349.24	LIN. FT.		



EXISTING NORMAL TYPICAL SECTION SR 46 SOUTH



EXISTING NORMAL TYPICAL SECTION SR 46 NORTH

GENERAL NOTES

DESCRIPTION OF PROJECT :

ROADWAY

THIS PROJECT WILL INCLUDE THE FOLLOWING ITEMS OF WORK:

1. GRIND PAVEMENT AT THE FACE OF CURB TO CONFIRM TYPE AND CONDITION OF EXISTING CURB AND/OR CURB AND GUTTER.
2. REMOVE AND REPLACE DAMAGED CURB OR CURB AND GUTTER AS DIRECTED BY ENGINEER.
3. CONSTRUCT NEW CATCH BASINS AND CONNECT TO EXISTING SYSTEM IN NEW CURB AREA.
4. SEAL ALL CRACKS AND PERFORM FULL DEPTH FLEXIBLE PAVEMENT REPAIR AND PARTIAL DEPTH PAVEMENT REPAIR AS DIRECTED BY THE ENGINEER.
5. RESURFACE PAVEMENT WITH ASPHALT LEVELING AND RUBBERIZED SAND ASPHALT SURFACE COURSE.

UNDERGROUND UTILITIES: THE LOCATION OF UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITY, AS REQUIRED BY SECTION 153.64 O.R.C.

UTILITY OWNERSHIP: THE FOLLOWING UTILITIES AND OWNERS ARE LOCATED WITHIN THE WORK LIMITS FOR THIS PROJECT:

T C I CABLEVISION
OF OHIO INC.
2650 WEIR ROAD, N.E.
WARREN, OHIO 44483
(216) 372-1112
ATTN: MARION

OHIO EDISON COMPANY
2231 W. MARKET ST.
WARREN, OHIO 44485
ATTN: MR. E.J. DICKSON,
DIVISION ENGINEER
(216) 393-1531

EAST OHIO GAS COMPANY
320 HIGH ST. N.E.
WARREN, OHIO 44481
(216) 394-1541

CITY OF WARREN WATER DEPT.
580 LAIRD AVE., S.E.
P.O. BOX 670
WARREN, OHIO 44484
(216) 545-1934

CITY OF WARREN ENG. DEPT.
540 LAIRD AVE., S.E.
WARREN, OHIO 44484
(216) 841-2562

CITY OF NILES, WATER, ELECTRIC
STORM AND SANITARY SEWER
CONTACT:
CITY OF NILES
CITY BUILDING
34 WEST STATE ST.
(216) 652-3618

UNITED TELEPHONE CO.
220 S. PARK AVENUE
WARREN, OHIO 44483
ATTN:
MS. MONACA MEGYESI
(216) 841-1214

OHIO BELL TELEPHONE CO.
CITY CENTRE ONE
2nd FLOOR
YOUNGSTOWN, OHIO 44503
(216) 744-6053

CONTINGENCY QUANTITIES: THE CONTRACTOR SHALL NOT ORDER MATERIALS, OR PERFORM WORK LISTED IN THE GENERAL SUMMARY, FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED, "AS DIRECTED BY THE ENGINEER", UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED, AT THE ENGINEER'S DISCRETION, SHALL BE MADE A MATTER OF RECORD, BY INCORPORATION INTO THE FINAL CHANGE ORDER, GOVERNING COMPLETION OF THIS PROJECT.

ITEM 250 PAVEMENT REPAIRS: AFTER ITEM 252 PAVEMENT PLANING BITUMINOUS. THE CONTRACTOR SHALL REPAIR THE EXISTING PAVEMENT AS DIRECTED BY THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

ITEM 251 PARTIAL DEPTH REPAIR . . . . . . 3,000 S.Y.
ITEM 253 PAVEMENT REPAIR, A.P.P. . . . . 1,000 S.Y.

ITEM 304 6" AGGREGATE BASE, ITEM 301 6" BITUMINOUS AGGREGATE BASE SHALL BE INCLUDED IN THE UNIT BID PRICE OF ITEM 253 PAVEMENT REPAIR, A.P.P.

NONE OF THE ABOVE MATERIALS SHALL BE ORDERED BY THE CONTRACTOR UNTIL AUTHORIZED BY THE ENGINEER.

ITEM 203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION: THIS ITEM OF WORK SHALL CONSIST OF REMOVING AND DISPOSING OF ALL UNSUITABLE MATERIAL BY EXCAVATING THE EXISTING SUBGRADE AND SUBBASE TO AN AVERAGE DEPTH OF 12 INCHES OR AS DIRECTED BY THE ENGINEER. EXACT LIMITS OF REMOVAL SHALL BE DETERMINED BY THE ENGINEER. THE CUBIC YARDAGE TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF CUBIC YARDS REMOVED AND DISPOSED OF AS DIRECTED BY THE ENGINEER. ALL EQUIPMENT, LABOR, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 203
EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION . . 250 C.Y.

ITEM 203 LINEAR GRADING, METHOD 1: THIS WORK SHALL CONSIST OF GRADING THE EXISTING BERMS TO PROVIDE POSITIVE DRAINAGE. REGRADING SHALL BE ACCOMPLISHED BY THE REMOVAL OF, OR ADDITION TO, MATERIAL BEHIND THE BACK OF THE CONCRETE CURB.

THE REGRADED AREAS SHALL BE COMPACTED TO A SUFFICIENT DENSITY TO PREVENT EROSION, UNTIL THE LIME, FERTILIZER, AND SODDING IS PLACED. ALL EXCESS MATERIALS GENERATED FROM THE BERMS SHALL BE REMOVED FROM THE PROJECT AND DISPOSED OF BY THE CONTRACTOR.

PAYMENT FOR ALL LABOR AND MATERIALS USED IN THE PERFORMANCE OF THE EXCAVATION, EMBANKMENT AND GRADING OF THE BERMS, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203 LINEAR GRADING, METHOD. MEASUREMENT SHALL BE PER STATION FOR ONE SIDE OF THE STREET.

ITEM 203 LINEAR GRADING, METHOD 1
STA. 847+58 TO 849+45 LT. = 187 L.F.
STA. 850+28 TO 853+61 LT. = 333 L.F.
STA. 855+20 TO 857+71 LT. = 251 L.F.
TOTAL = 771 L.F. = USE 8 STATIONS

ITEM 660 SODDING, AS PER PLAN

PAYMENT FOR ALL LABOR AND MATERIALS, INCLUDING FERTILIZER AND LIME, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 660 SODDING, AS PER PLAN. LOCATIONS AND QUANTITIES ARE FOUND ON PLAN SHEET 21 / 41 & 22 / 41 .

ITEM 407 TACK COAT, SS 924: THE RATE OF APPLICATION OF 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENT, AS DIRECTED BY THE ENGINEER. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.075 GALLONS PER SQUARE YARD OF TACK COAT, FOR ESTIMATING PURPOSES ONLY.

REVIEW OF DRAINAGE FACILITIES: BEFORE ANY WORK IS STARTED ON THE PROJECT, AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF THE EXISTING SEWERS WITHIN THE WORK LIMITS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTIONS SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT 603 CONDUIT ITEMS OF THE CONTRACT.

CATCH BASIN AND PIPE CLEANOUT: VARIOUS DRAINAGE CATCH BASINS AND PIPES WITHIN THE LIMITS OF THIS PROJECT ARE FILLED OR BLOCKED WITH DIRT AND DEBRIS. THE CITY OF WARREN OR THE CITY OF NILES WILL CLEAN OUT THESE STORM SEWER PIPES AND APPURTENANCES PRIOR TO ANY CONNECTION TO THE SYSTEM.

THE CONTRACTOR SHALL NOTIFY THE CITY OF WARREN ENGINEERING DEPARTMENT (841-2562) OR THE CITY OF NILES (652-3618) TWO WORKING DAYS BEFORE COMMENCING ANY DRAINAGE WORK .

PROFILE AND ALIGNMENT: THE PROPOSED PAVEMENT RESURFACING COURSE SHALL FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. PREVIOUS CONSTRUCTION PLANS SHOWING THE ORIGINAL ALIGNMENT AND PROFILE GRADE, ARE ON FILE FOR INSPECTION IF NECESSARY AT THE ODOT DISTRICT 4 OFFICE AS PROJECT NO. TRU-422-(14.77)(16.36). THE PROPOSED ASPHALT CONCRETE OVERLAY SHALL HAVE A UNIFORM THICKNESS OF APPROXIMATELY 2 1/2" INCHES, AS INDICATED ON THE TYPICAL SECTIONS.

ITEM 404, AS PER PLAN: ITEM 404 ASPHALT CONCRET, AC-20 SHALL BE AS SPECIFIED IN THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, CONSTRUCTION AND SPECIFICATION MANUAL. EXCEPT THAT THE COMPOSTION SHALL BE AS ITEM 402 ASPHALT CONCRETE.

ITEM 609 CURB, AND CURB AND GUTTER: ALL CURBS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ITEM 609, STANDARD DRAWING BP-5.1. AT LOCATIONS DESIGNATED ON THESE PLANS, OR AT LOCATIONS DESIGNATED BY THE ENGINEER. ALL WORK REQUIRED FOR THE CONSTRUCTION OF THE CURB SHALL BE INCLUDED IN THE LINEAR FOOT PRICE BID FOR ITEM 609 - CURB AND GUTTER TYPE 2.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

ITEM 202 CURB AND GUTTER REMOVED . . . . 500 L.F
ITEM 609 COMBINATION CURB AND GUTTER, TYPE 2 . . . 500 L.F.

PART-WIDTH CONSTRUCTION: BECAUSE OF THE NECESSITY OF BUILDING THIS PROJECT UNDER TRAFFIC, AND CONSTRUCTING THE FULL PAVEMENT WIDTH IN STAGES, EXTREME CARE SHALL BE TAKEN TO PREVENT THE CONSTRUCTION OF A BUTT JOINT ON CENTERLINE IN THE BASE COURSES. LONGITUDINAL JOINTS SHALL BE LAPPED, AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-2.1

ITEM 825 - CRACK SEALING, TYPE 1: AFTER ITEM 252 PAVEMENT PLANING, BITUMINOUS, THE CONTRACTOR SHALL CLEAN ALL CRACKS AND JOINTS IN THE EXISTING PAVEMENT. ALL COST FOR MATERIALS AND LABOR IN CLEANING AND SEALING ALL CRACKS AND JOINTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 825 - CRACK SEALING, TYPE 1.

AN ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY, AND IS TO BE USED, AS DIRECTED BY THE ENGINEER.

ITEM 825
CRACK SEALING, TYPE 1 . . . . 10,000 LBS.

ITEM 632 LOOP DETECTOR REPLACEMENT: LOOP DETECTORS DISTURBED BY PAVEMENT PLANING SHALL BE ABANDONED IN PLACE, THE LOOP DETECTOR WIRE SHALL THEN BE COVERED WITH THE SURFACE COURSE OF PROPOSED ITEM 404, ASPHALT CONCRETE, AC-20. EACH DETECTOR SHALL BE REPLACED IN KIND, AT THE SAME LOCATION AS EXISTING. THE QUANTITIES LISTED BELOW FOR PAVEMENT CUTTING AND LOOP DETECTOR WIRE HAVE BEEN CARRIED TO THE GENERAL SUMMARY. THE NEW LOOP DETECTOR WIRES SHALL BE RUN INTO THE EXISTING CONTROL BOX.

ALL NECESSARY MATERIAL, LABOR, SPLICE KITS AND EQUIPMENT SHALL BE INCIDENTAL TO PAYMENT OF THESE ITEMS.

ITEM 632 LOOP DETECTOR WIRE, TYPE E . . . . . 1500 L.F.
ITEM 632 LOOP DETECTOR PAVEMENT CUTTING . . 805 L.F.

GENERAL NOTES

DUST CONTROL: THE WORK SHALL CONSIST OF APPLYING, WHEN ORDERED, WATER OR DUST PALLIATIVE FOR THE ALLEVIATION OR PREVENTION OF DUST NUISANCE ORIGINATING WITHIN THE PROJECT RIGHT-OF-WAY.

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY TO COVER THIS WORK:

ITEM	DESCRIPTION	TOTAL
616	WATER	50 M. GAL
616	CALCIUM CHLORIDE	5 TONS

ITEM 614 MAINTAINING TRAFFIC: THE CONTRACTOR SHALL MAINTAIN TRAFFIC AT ALL TIMES ON THE PROJECT IN ACCORDANCE WITH ITEM 614 MAINTAINING TRAFFIC AS DESCRIBED BELOW.

ALL SIGNS, BARRICADES, SIGN SUPPORTS, CONES, DRUMS, FLAGGERS, AND INCIDENTALS SHALL BE FURNISHED, ERECTED, MAINTAINED, AND REMOVED BY THE CONTRACTOR IN CONFORMANCE WITH THE MOST RECENT REVISION, CURRENT EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (OMUTCD). DEVICES USED TO MAINTAIN TRAFFIC SHALL BE REMOVED IMMEDIATELY AFTER THE TERMINATION OF SAID WORK.

A MINIMUM OF ONE 12'-LANE OPERATION IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING ROADWAY. THE MAXIMUN DROP OFF BETWEEN TRAFFIC LANES DURING PAVEMENT PLANING OPERATION WITHOUT MAINTAINING A LANE CLOSURE SHALL BE 1 1/2". THE LANE CLOSURE SHALL REMAIN IN PLACE UNTIL ADJACENT LANE AND BERM HAVE BEEN PLANED TO WITHIN THE 1 1/2" ALLOWABLE. ALL PLANED SURFACES ON WHICH TRAFFIC IS MAINTAINED SHALL BE COVERED BY AT LEAST THE 404 COURSE WITHIN 5 CALANDER DAYS.

ACCESS FOR ABUTTING PROPERTY OWNERS SHALL BE MAINTAINED AT ALL TIMES, EXCEPT AS NOTED BELOW. FOR A MAXIMUM PERIOD OF FOUR (4) HOURS, ONE-WAY SIDESTREET TRAFFIC, SIDESTREET CLOSURES, AND PRIVATE DRIVE CLOSURES WILL BE PERMITTED CONSISTENT WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR PLAN- ING OPERATIONS AND FOR PROTECTION OF COMPLETED ASPHALT CONCRETE COURSES. NO TWO CONSECUTIVE INTER- SECTIONS SHALL BE CLOSED AT ANY ONE TIME. FOR PARCELS WITH TWO OR MORE DRIVES ALONG U.S. 422, AT LEAST ONE DRIVE SHALL BE OPEN AT ALL TIMES. NO SIDESTREET OR PRIVATE DRIVE CLOSURES ARE PERMITTED OVERNIGHT. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN THE APPROPRIATE MAINTAINING TRAFFIC PLAN SHOWN ON STANDARD CONSTRUCTION DRAWINGS MT-95.31 AND MT-95.32 DURING THE REMOVAL AND CONSTRUCTION OF THE WATER-PROOFING ON THIS PROJECT.

AT THE CONCLUSION OF EACH WORK DAY ALL OPEN TRENCH SHALL BE BACKFILLED OR PLATED. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH SHALL BE BACKFILLED OR PLATED AT THE THE DIRECTION OF THE ENGINEER.

THE CONTRACTOR SHALL NOT BE PERMITTED TO STORE CONDUIT WITHIN 20 FEET OF THE EDGE OF PAVEMENT. ALL PIPE DELIVERED MUST BE INSTALLED WITHIN TEN WORKING DAYS.

THE SAFETY OF PEDESTRIAN TRAFFIC SHALL BE CONSIDERED AT ALL TIMES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE LIGHTS, SIGNS, BARRICADES, TEMPORARY FENCE AND OTHER DEVICES TO WARN AND TO PHYSICALLY SEPARATE THE PEDESTRIAN FROM HAZARDS INCIDENTAL TO THE CONSTRUCTION AND/OR INSTALLATION OF THE REQUIRED TRAFFIC CONTROL AND ROADWAY ITEMS SUCH AS ANCHOR BOLTS, OPEN EXCAVATIONS, ETC. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, SUCH PEDESTRIAN PROTECTION SHALL UTILIZE, BUT NOT BE LIMITED TO, TYPE A WARNING LIGHTS MOUNTED ON DRUMS, TYPE I, TYPE II OR TYPE III BARRICADES, OR TEMPORARY FENCE.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER FOR THE MAINTENANCE OF TRAFFIC:

ITEM 404	BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC	50 C.Y.
ITEM 410	TRAFFIC COMPACTED SURFACE COURSE, TYPE A OR B	50 C.Y.

SEPARATE PAYMENT SHALL BE MADE FOR ITEMS 404 AND 410 NOTED ABOVE. ALL OTHER WORK REQUIRED FOR TRAFFIC MAINTENANCE, EXCEPT TEMPORARY PAVEMENT MARKINGS, SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 614 MAINTAINING TRAFFIC.

WORK ZONE PAVEMENT MARKINGS AND SIGNS: WORK ZONE PAVEMENT MARKING AND SIGNS SHALL BE FURNISHED, INSTALLED, MAINTAINED, AND REMOVED ACCORDING TO O.D.O.T. STANDARD CONSTRUCTION DRAWING MT-99.10 DATED 11/14/86.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY TO COVER THIS ITEM OF WORK:

ITEM	DESCRIPTION	TOTAL
614	TEMPORARY CENTER LINE, CLASS 1	31.20 MI.
614	WORK ZONE MARKING SIGNS	19 EACH
614	TEMPORARY LANE LINE, CLASS 1	15.57 MI.
614	TEMPORARY STOP LINE, CLASS 1	1120 L.F.

EROSION CONTROL: ITEM 660 IS PROVIDED IN THE PLANS FOR EROSION CONTROL. ROCK OF A STABLE NATURE WILL NOT BE REMOVED IN ORDER TO PLACE THIS ITEM. THE ENGINEER SHALL CHECK AND NON-PERFORM QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES FOR THIS ITEM WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION.

LANE WIDTH RESTRICTION NOTIFICATION: THE CONTRACTOR SHALL NOTIFY THE DISTRICT TRAFFIC ENGINEER 10 DAYS PRIOR TO ANY LANE RESTRICTION.

LOCATION OF GUARDRAIL: THE LOCATIONS OF GUARDRAIL RUNS, AS SHOWN IN THESE PLANS, ARE SUBJECT TO ADJUSTMENT PRIOR TO FINAL ACCEPTANCE. THE ENGINEER SHALL BE SATISFIED THAT ALL INSTALLATIONS WILL AFFORD MAXIMUM PROTECTION FOR TRAFFIC.

GUARD RAIL REPLACEMENT: NO HAZARD SHALL BE LEFT UNPROTECTED EXCEPT FOR THE ACTUAL TIME NECESSARY TO REMOVE, GRADE AND REINSTALL GUARD RAIL IN A CONTINUOUS OPERATION. THE REMOVAL OF ALL GUARD RAIL SHALL AT ALL TIMES BE AS DIRECTED BY THE ENGINEER. NO GUARD RAIL SHALL BE REMOVED UNTIL REPLACEMENT MATERIAL IS ON THE SITE, READY FOR INSTALLATION. FAILURE TO COMPLY WITH THIS REQUIREMENT SHALL BE DEEMED SUFFICIENT CAUSE TO ORDER WORK SUSPENDED ON THIS PROJECT UNTIL SUCH TIME THAT THE ENGINEER IS ASSURED OF SAID COMPLIANCE.

CONNECTION TO EXISTING PIPE: WHERE THE PLANS PROVIDE FOR PROPOSED CONDUIT TO BE CONNECTED TO, OR TO CROSS EITHER OVER OR UNDER AN EXISTING SEWER, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE THE EXISTING PIPE BOTH AS TO LINE AND GRADE BEFORE HE STARTS TO LAY THE PROPOSED CONDUIT.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT 603 CONDUIT ITEMS.

ITEM 606 ANCHOR ASSEMBLY, TYPE E
THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING AN ET-2000, OPTION "C" GUARDRAIL END TERMINAL AS MANUFACTURED BY SYRO STEEL COMPANY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 216-545-4373).

THE ANCHOR ASSEMBLY SHALL BE PLACED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND AT THE LOCATIONS SHOWN IN THE PLANS.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT BID PRICE FOR ITEM 606, EACH, ANCHOR ASSEMBLY, TYPE E. PAYMENT SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT THE 25' LONG ANCHOR ASSEMBLY, INCLUDING ALL RELATED HARDWARE, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY. THIS ITEM SHALL ALSO INCLUDE PAYMENT OVER AND ABOVE THE COST OF STANDARD TYPE 5 GUARDRAIL FOR INSTALLING TYPE 1 BREAKAWAY POSTS (AS PER STANDARD CONSTRUCTION DRAWING GR-1.3) AT THE FOLLOWING LOCATIONS: 1) AT THE POINT WHERE THE ANCHOR ASSEMBLY AND THE GUARDRAIL RUN MEET; AND 2) AT THE NEXT THREE (3) POST LOCATIONS INTO THE GUARDRAIL RUN.

LAW ENFORCEMENT OFFICER:
THE CONTRACTOR SHALL PROVIDE THE SERVICE OF LAW ENFORCEMENT OFFICERS (L.E.O.) WITH A PATROL CAR, AT THE ENGINEER'S REQUEST, FOR THE PURPOSE OF CONTROLLING THROUGH TRAFFIC. THE L.E.O. WITH A PATROL CAR SHALL BE UTILIZED DURING INSTALLATION AND REMOVAL OF TRAFFIC CONTROL DEVICES FOR LANE CLOSURES AND AS AUTHORIZED BY THE ENGINEER.

INFORMATION REGARDING ARRANGEMENTS AND PAYMENTS BY THE CONTRACTOR FOR THE L.E.O. MAY BE OBTAINED BY CONTACTING CITY OF WARREN POLICE DEPARTMENT 141 SOUTH STREET S.E. WARREN, OHIO, TELEPHONE: 216-394-2521.

IF AFTER CONTACTING WARREN POLICE DEPARTMENT, IT IS DETERMINED THAT THEY CANNOT SUPPLY THE L.E.O. THEN CONTACT THE CITY OF NILES POLICE DEPARTMENT 15 E. STATE STREET, NILES, OHIO, 216-652-9944. L.E.O. SHALL BE EQUIPPED WITH A MARKED AND FLASHER-LIGHT EQUIPPED OFFICIAL POLICE OR PATROL CAR SHALL BE PROVIDED.

THIS REQUIREMENT DOES NOT PRECLUDE THE CONTRACTORS USE OF AN L.E.O FOR OTHER PURPOSES OF CONTROLLING TRAFFIC AS APPROVED BY THE ENGINEER. THE LEO SHALL BE CONSIDERED AN EMPLOYEE OF THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS/HER ACTIONS. ALTHOUGH EMPLOYED BY THE CONTRACTOR, THE PROJECT ENGINEER SHALL HAVE CONTROL OVER THE LEO PLACEMENT AND HIS/HER ACTIVITIES. PAYMENT SHALL BE AT THE UNIT PRICE BID FOR THE ACTUAL NUMBER OF HOURS FOR ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR.

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR
150 HOURS

ITEM 517 - RAILING (DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP AND TYPE 2 STEEL POST AND ANCHOR BOLTS), AS PER PLAN
WORK UNDER THIS ITEM SHALL INCLUDE FURNISHING AND ERECTING DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP IN ACCORDANCE WITH ITEM 517 AND STANDARD CONSTRUCTION DRAWING DBR-2-73, EXCEPT THAT NEW POSTS WILL NOT BE PROVIDED AS THE EXISTING POSTS ARE TO REMAIN AND BE RE-USED. PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR ITEM 517 - RAILING (DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP AND TYPE 2 STEEL POST AND ANCHOR BOLTS), AS PER PLAN.

ITEM 606 - ANCHOR ASSEMBLY, TYPE T, AS PER PLAN
WORK UNDER THIS ITEM SHALL INCLUDE FURNISHING AND ERECTING ANCHOR ASSEMBLY, TYPE T IN ACCORDANCE WITH ITEM 606 STANDARD CONSTRUCTION DRAWING GR-4.2 EXCEPT THAT ONLY 2 POSTS SHALL BE PROVIDED AND ENCASE IN CONCRETE, ALSO THE STANDARD GUARDRAIL PANEL SHALL BE REPLACED WITH DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP EXTENDED FROM THE STRUCTURE, AND PROVIDED FOR UNDER ITS RESPECTIVE BID ITEM. PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR EACH ITEM 606 - ANCHOR ASSEMBLY, TYPE T, AS PER PLAN.

CALCULATIONS

CALC. BY	W.H.S.	TRUMBULL COUNTY TRU–422–14.82	OHIO	9/41
DATE	4/93		FHWA REGION 5	
CHKD. BY	W.J.J.		FEDERAL PROJECT	
DATE	4/93			

STATION TO STATION		LENGTH	WIDTH	AREA	REMARKS
U.S.R. 422 – WARREN					
782+32.19	817+19.24	3,487.05'	60'	209,223.00 S.F.	
817+19.24	820+87.09	367.85'	(60+68) / 2	23,542.40 S.F.	Taper L/R
820+87.09	825+77.12	490.03'	68'	33,322.04 S.F.	
Hilda St. Int.		163+182.22+142.09+828.39 =		1,315.70 S.F.	
Pineview Entr. #1		57.75+17.78+244.65 =		320.18 S.F.	
Pineview Entr. #2		17.78+64.00+310.38 =		392.16 S.F.	
Heaton North Rd. Int.		333.63 + 311.18 + 3489.10 =		4,133.91 S.F.	
10+75.90	13+95.00	319.10 x 28		8,934.80 S.F.	
13+95.00	14+27.00	32(27+28) / 2		880.00 S.F.	
WARREN PAVEMENT AREA = 282,064.19 S.F.					
U.S.R. 422 – NILES					
825+77.12	829+00.00	322.88'	70'	22,601.60 S.F.	
829+00.00	830+00.00	100.00'	(70+80) / 2	7,500.00 S.F.	Taper Rt.
830+00.00	830+33.00	33.00'	80'	2,640.00 S.F.	
830+33.00	831+83.00	150.00'	(80+70) / 2	11,250.00 S.F.	Taper Lt.
831+83.00	832+33.22	50.22'	70'	3,515.40 S.F.	
832+33.22	835+63.00	329.78'	60'	19,786.80 S.F.	
835+63.00	835+83.50	20.50'	(60+70) / 2	1,332.50 S.F.	Taper Lt.
835+83.50	839+16.00	332.50'	70'	23,275.00 S.F.	
839+16.00	839+42.95	26.95'	(70+62) / 2	1,778.70 S.F.	Taper Lt.
839+42.95	839+61.00	18.05'	62'	1,119.10 S.F.	
839+61.00	840+87.00	126.00'	64'	8,064.00 S.F.	Area on Bridge
840+87.00	841+16.00	29.00'	62'	1,798.00 S.F.	
841+16.00	845+09.81	393.81'	60'	23,628.60 S.F.	
845+09.81	846+00.00	90.19'	(60+63) / 2	5,546.68 S.F.	Taper Rt.
846+00.00	847+58.00	158.00'	63'	9,954.00 S.F.	
847+58.00	849+45.00	187.00'	(63+66) / 2	12,061.50 S.F.	Taper Rt.
849+45.00	850+28.00	83.00'	(66+68) / 2	5,561.00 S.F.	Taper Lt.
850+28.00	853+61.00	333.00'	(68+71) / 2	23,143.50 S.F.	Taper Lt.
853+61.00	855+20.00	159.00'	(71+73) / 2	11,448.00 S.F.	Taper Lt.
855+20.00	857+71.00	251.00'	73'	18,323.00 S.F.	
857+71.00	858+26.00	55.00'	(73+64) / 2	3,767.50 S.F.	Taper Lt.
858+26.00	862+86.00	460.00'	62'	28,520.00 S.F.	
862+86.00	864+31.00	145.00'	(62+70) / 2	9,570.00 S.F.	Taper Lt.
864+31.00	866+37.00	206.00'	70'	14,420.00 S.F.	
866+37.00	866+67.00	30.00'	(70+82) / 2	2,280.00 S.F.	Taper Rt.
866+67.00	869+07.67	240.67'	82'	19,734.94 S.F.	
869+07.67	874+69.41	561.74'	70'	39,321.80 S.F.	
874+69.41	876+19.41	150.00'	(70+60) / 2	9,750.00 S.F.	Taper Lt.
876+19.41	886+00.00	980.59'	60'	58,835.40 S.F.	
886+00.00	886+08.15	8.15'	(60+60.93) / 2	492.79 S.F.	
886+08.15	887+48.80	140.65'	(60.93+68) / 2	9,067.00 S.F.	Taper L/R
887+48.80	888+42.39	93.59'	68'	6,364.12 S.F.	
888+42.39	889+63.00	120.61'	(68+64) / 2	7,960.26 S.F.	Taper Rt.
889+63.00	894+87.92	524.92'	64'	33,594.88 S.F.	
894+87.92	900+30.00	542.08'	(67+68) / 2	36,590.40 S.F.	Taper L/R
900+30.00	901+80.00	150.00'	(68+60) / 2	9,600.00 S.F.	Taper Lt.
901+80.00	919+32.38	1,752.38'	60'	105,142.80 S.F.	
Heaton North Rd. Int.		227.14 +200.08 +1550.58 =		1,977.80 S.F.	
10+75.90	13+95.00	319.10'	28'	8,934.80 S.F.	
13+95.00	14+27.00	32.00'	(28+27) / 2	880.00 S.F.	
Burlington Drwy.		63.78		63.78 S.F.	
Park Dr. Int.		395.35 +158.43 +1090.56 =		1,644.34 S.F.	
Eastwood Mall Entr.#1		178.73 +159.21 +1444.19 =		1,782.13 S.F.	
Eastwood Mall Entr.#2		123.24 +210.88 +381.52 =		715.64 S.F.	
Valley Blvd. Int.		223.36 +421.40 +1126.80 =		1,771.56 S.F.	
Eastwood Mall Entr.#3		166.26 +137.16 +1,255.24 =		1,558.66 S.F.	
Mines Rd. Int.		102.77 +176.36 +42.00 =		321.13 S.F.	
Eastwood Mall Entr.#4		518.64 +532.88 +2,988.89 =		4,040.41 S.F.	
Gypsy Lane Int.		194.89 +194.89 +770.88 =		1,160.66 S.F.	
McKinley Center Ent. (West)		146.64 – 48.55 =		98.09 S.F.	
Hill's Plaza Entr.#1		61.42 + 75.04 + 881.84 =		1,018.30 S.F.	
Hill's Plaza Entr.#2		61.42 + 61.42 + 624.08 =		746.92 S.F.	
Johnny Cake Rd. Int.		111.03 +195.10 +1141.94 =		1,448.07 S.F.	
Frederick St. Int.		177.36 + 249.79 + 945.12 =		1,732.27 S.F.	
Village Plaza Entr.		25.05 + 66.23 + 781.29 =		872.57 S.F.	
S.R. 46 Int. (North)		875.55 + 134.88 + 5672.81 =		6,683.24 S.F.	
S.R. 46 Int. (South)		311.48 + 454.30 + 2775.36 =		3,541.14 S.F.	
NILES PAVEMENT AREA = 650,330.78 S.F.					
TOTAL PROJECT PAVEMENT AREA = 932,394.97 S.F.					

ITEM 254 PAVEMENT PLANING, BITUMINOUS

Warren Pav't Area = 282,064.19 S.F. x (1/9) = 31,340.47 S.Y.
Niles Pav't Area = 650,330.78 S.F. x (1/9) = 72,258.98 S.Y.
Total Project Pav't Planing = 103,599.45 S.Y. USE 103,600 S.Y.

ITEM 404 ASPHALT CONCRETE, AC–20, As Per Plan

Warren Pav't Area = 282,064.19 S.F. x (1.75/12) x (1/27) = 1,523.49 C.Y.
Niles Pav't Area = 650.330.78 S.F. x (1.75/12) x (1/27) = 3,512.59 C.Y.
Total Project 404 Pav't = 5,036.08 C.Y. USE 5,036 C.Y.

ITEM 407 TACK COAT, USING SS 924

Warren = 282,064.19 S.F. x (1/9) x 0.075 = 2,350.53 GAL.
Niles = 650,330.78 S.F. x (1/9) x 0.075 = 5,419.42 GAL.
Total Project Tack Coat = 7,769.96 GAL. USE 7,770 GAL.

ITEM 805 RUBBERIZED SAND ASPHALT

Warren = 282,064.19 S.F. x (1/9) x 90 x (1/2000) = 1,410.32 TONS
Niles = 650,330.78 S.F. x (1/9) x 90 x (1/2000) = 3,251.65 TONS
Total Project 805 Pav't = 4,661.97 TONS USE 4,662 TONS

GENERAL SUMMARY

CALC. BY	DATE			
B.E.J.	4/93	TRUMBULL COUNTY TRU–422–14.82	OHIO FHWA REGION 5 FEDERAL PROJECT	10/41
CHKD. BY W.H.S.	DATE 5/93			

TOTAL FROM SHEET NO.																
7	8	9		20	21	22		26	27		32	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
																ROADWAY
											23	202	23000	23	S.Y.	Pavement Removed
											39	202	32000	39	L.F.	Curb Removed
500											38	202	32500	538	L.F.	Curb and Gutter Removed
					106.25							202	38000	106.25	L.F.	Guardrail Removed
				3				1	1			202	42000	5	Each	Anchor Assembly Removed, Type A
											8	202	98100	8	Each	Removed Miscellanous: Railroad Ties
250											5	203	12000	255	C.Y.	Excavation Not Including Embankment Construction
											14	203	20000	14	C.Y.	Embankment
8												203	60200	8	STA.	Linear Grading, Method 1
				62.5	37.5			12.5	12.5			606	13000	125	L.F.	Guardrail, Type 5
				3	2			1	1			606	26100	7	Each	Anchor Assembly, Type E
					1							606	26500	1	Each	Anchor Assembly, Type T
					1							606	26501	1	Each	Anchor Assembly, Type T, As Per Plan See Sheet No. 8
					3							606	35140	3	Each	Bridge Terminal Assembly, Type 4
						1						638	10800	1	Each	Valve Box Adjusted to Grade
																EROSION CONTROL
					113	389					45	660	30001	547	S.Y.	Sodding, As Per Plan
																DRAINAGE
					17	135						603	04600	152	L.F.	12" Conduit, Type C
					4	1						604	00400	5	Each	Catch Basin, No. 3
											1	604	09500	1	Each	Catch Basin Reconstructed To Grade
																PAVEMENT
3000												251	01000	3000	S.Y.	Partial Depth Pavement Repair
1000												253	01001	1000	S.Y.	Pavement Repair, As Per Plan See Sheet No.7
		103,600										254	01000	103,600	S.Y.	Pavement Planing, Bituminous
		5036										404	20001	5036	C.Y.	Asphalt Concrete, AC–20, As Per Plan See Sheet No. 7
		7770										407	13900	7770	Gal.	Tack Coat Using SS 924
500											38	609	12000	538	L.F.	Combination Curb & Gutter, Type 2
					169	584					39	609	26000	792	L.F.	Curb, Type 6
		4662										805	10000	4662	Ton	Rubberized Sand Asphalt
10,000												825	00100	10,000	Pound	Crack Sealing, Type I

GENERAL SUMMARY

TOTAL FROM SHEET NO. 7	8		21		34	35	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
											MAINTENANCE OF TRAFFIC
	150						Special	61411100	150	Hour	Law Enforcement Officer With Patrol Car
	19						614	12460	19	Each	Work Zone Marking Signs
	15.57						614	20000	15.57	Mi.	Temporary Lane Line, Class I
	31.20						614	21000	31.20	Mi.	Temporary Centerline, Class I
	1120						614	26000	1120	L.F.	Temporary Stop Line, Class I
	50						404	35000	50	C.Y.	BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC
	50						410	12000	50	C.Y.	TRAFFIC COMPACTED SURFACE, TYPE A OR B
	50						616	10000	50	M.GAL	WATER
	5						616	20000	5	TON	CALCIUM CHLORIDE
											TRAFFIC CONTROL
805							632	27500	805	L.F.	Loop Detector Pavement Cutting
1500							632	64900	1500	L.F.	Loop Detector Wire, Type E
						4.78	644	00200	4.78	Mi.	Lane Line
						3.89	644	00300	3.89	Mi.	Center Line
						7975	644	00400	7975	L.F.	Channelizing Line
						1328	644	00500	1328	L.F.	Stop Line
						1089	644	00700	1089	L.F.	Transverse Line
						100	644	01300	100	Each	Lane Arrow
						49	644	01400	49	Each	Word on Pavement, 72"
											STRUCTURE
					1064		Special	51267030	1064	S.Y.	Membrane Waterproofing, Sheet Type 3 (See Proposal Note)
					132		Special	51267502	132	S.Y.	Sealing of Concrete Surfaces (Epoxy) (See Proposal Note)
					Lump		Special	51400100	Lump		Surface Preparation of Existing Steel, System OZEU (See Proposal Note)
					Lump		Special	51400200	Lump		Field Painting of Existing Steel, Prime Coat, System OZEU (See Proposal Note)
					Lump		Special	51400300	Lump		Field Painting of Existing Steel, Intermediate Coat, System OZEU (See Proposal Note)
					Lump		Special	51400400	Lump		Field Painting of Existing Steel, Finish Coat, System OZEU (See Proposal Note)
			81.25				517	72301	81.25	L.F.	Railing (Deep Beam Rail With Steel Tubular Backup And Type 2 Steel Post and Anchor Bolts), As Per Plan See Sheet No. 8 (See Proposal Note)
					10.5		Special	51822200	10.5	S.F.	Steel Drip Strip
					789		Special	51911502	789	S.F.	Patching Concrete Structures with Trowelable Mortar (See Proposal Note)
							614	11000	Lump		Maintaining Traffic
							619	15010	Lump		Field Office, Type B
							623	10000	Lump		Construction Layout Stakes
							624	10000	Lump		Mobilization

TRUMBULL COUNTY
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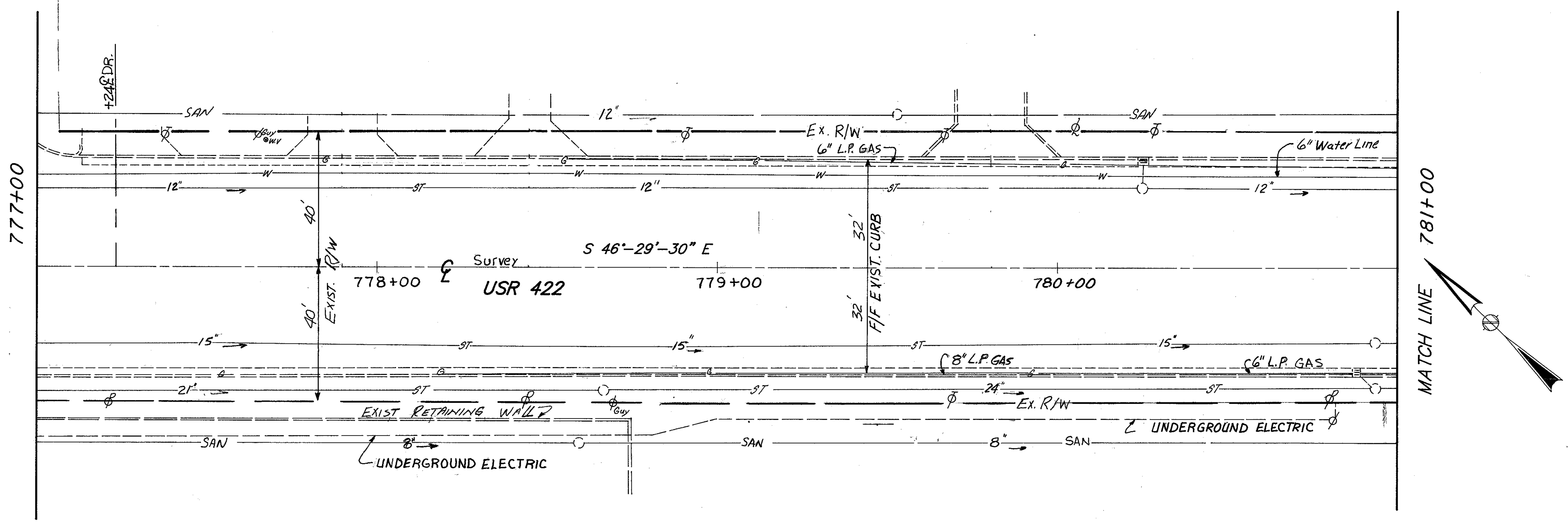
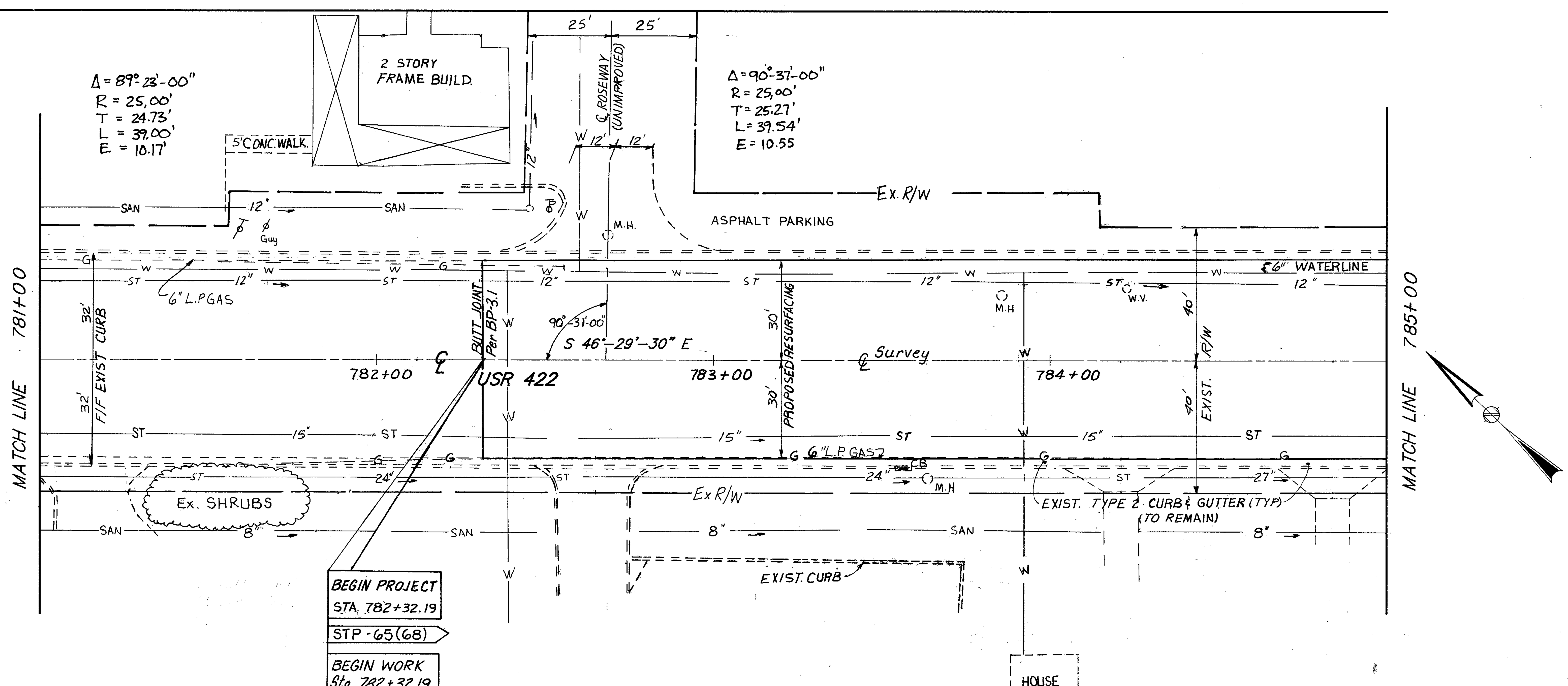




Reference No.	Station To Station	Side									
TOTALS											

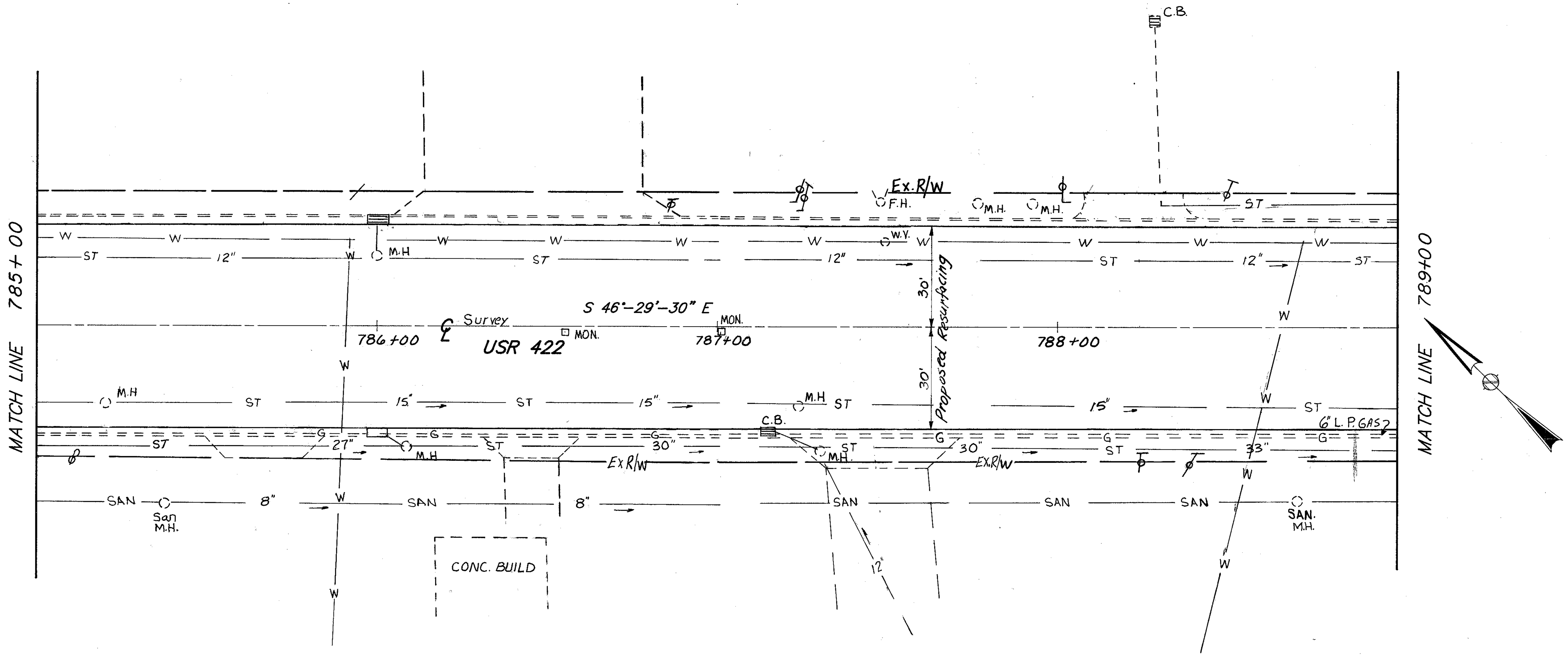
ROADWAY QUANTITIES

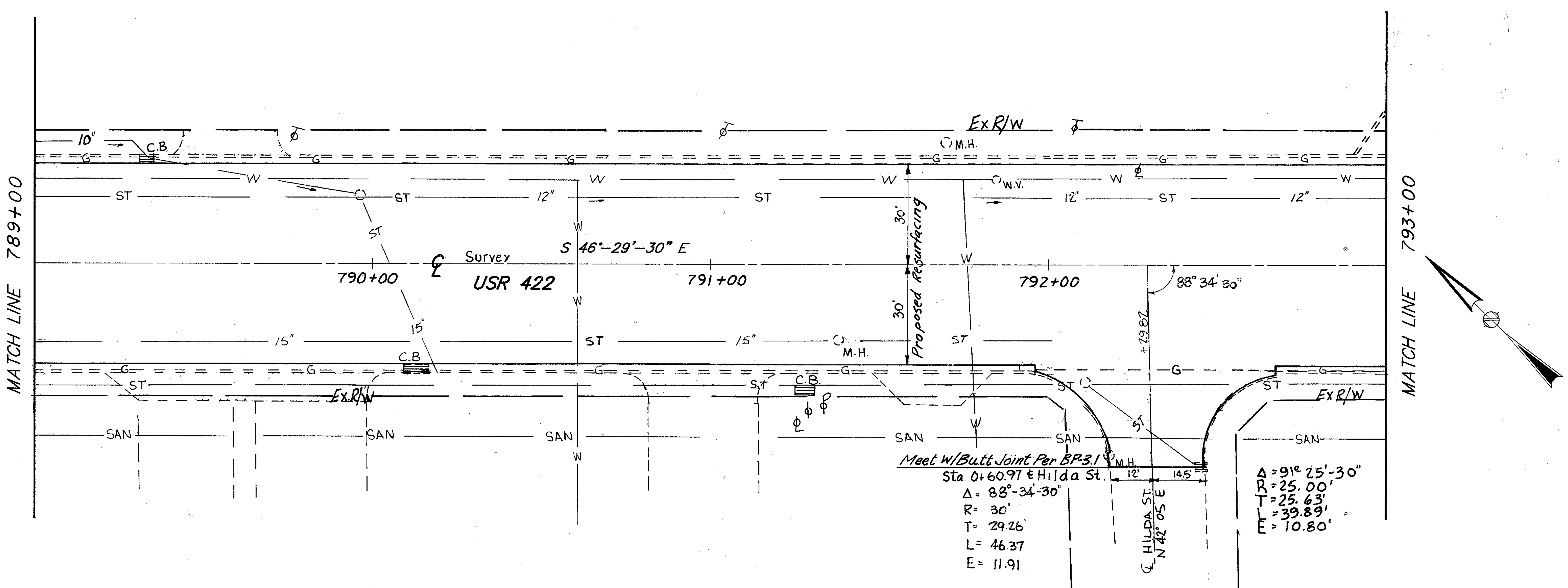
FOR QUANTITIES SEE SHEET NO. 9

PLAN - STA. 777+00 to STA. 785+00

	BY	DATE	REGION	STATE	PROJECT	
Calculated			5	OHIO		
Checked						

TRUMBULL COUNTY
TRU-422-14.82



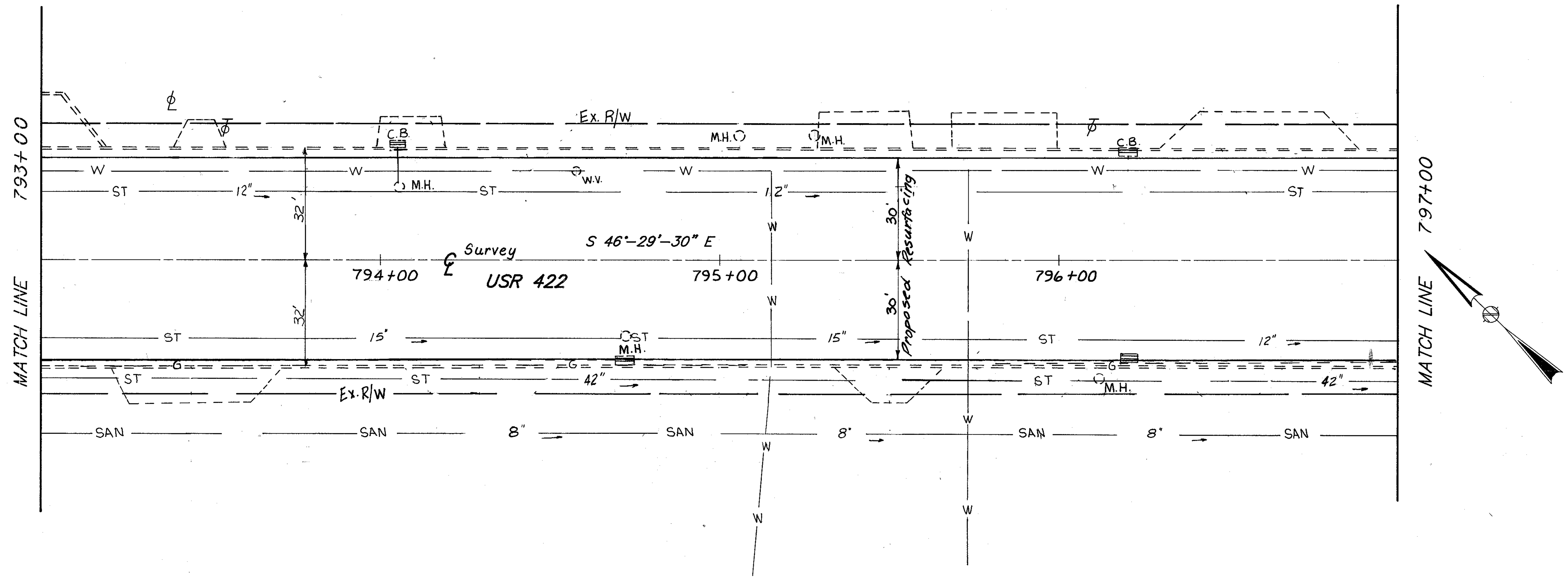


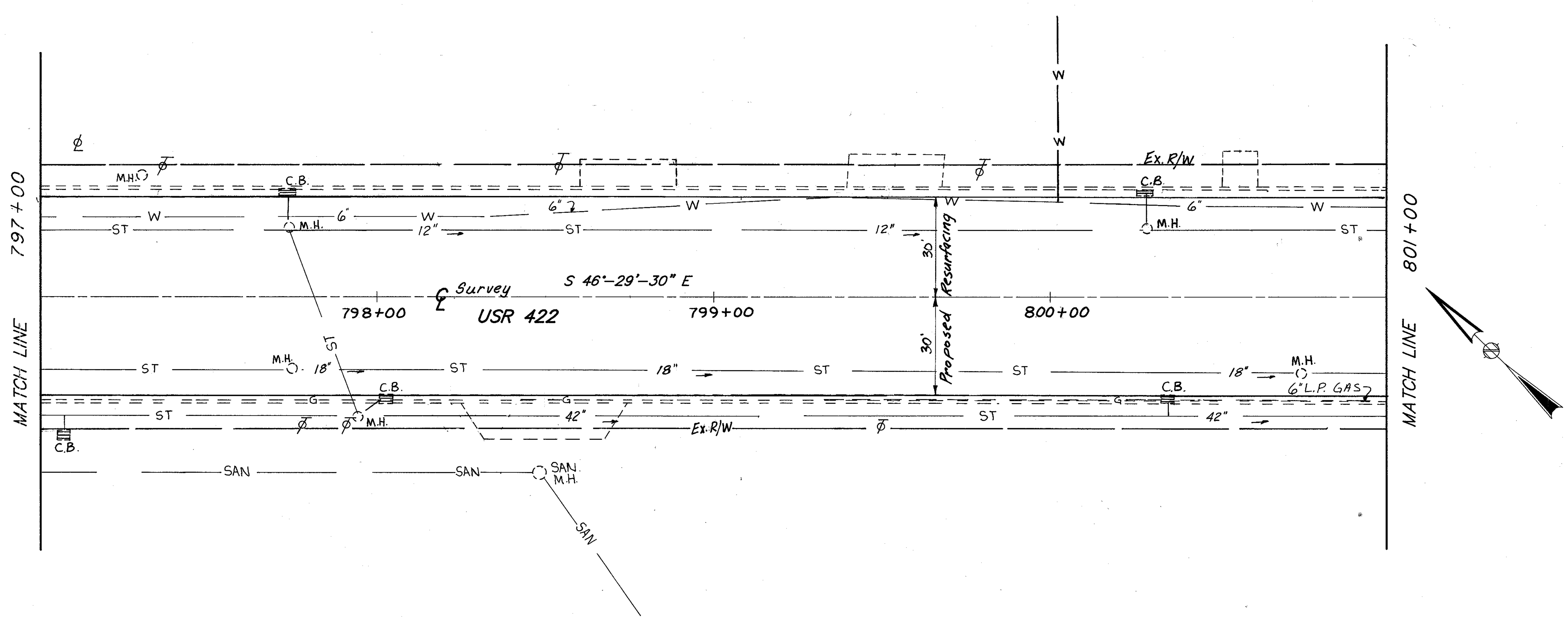
ROADWAY QUANTITIES

Reference No.	Station To Station	Side									
TOTALS											

FOR QUANTITIES SEE SHEET NO. 9

PLAN – STA. 785+00 to STA. 793+00



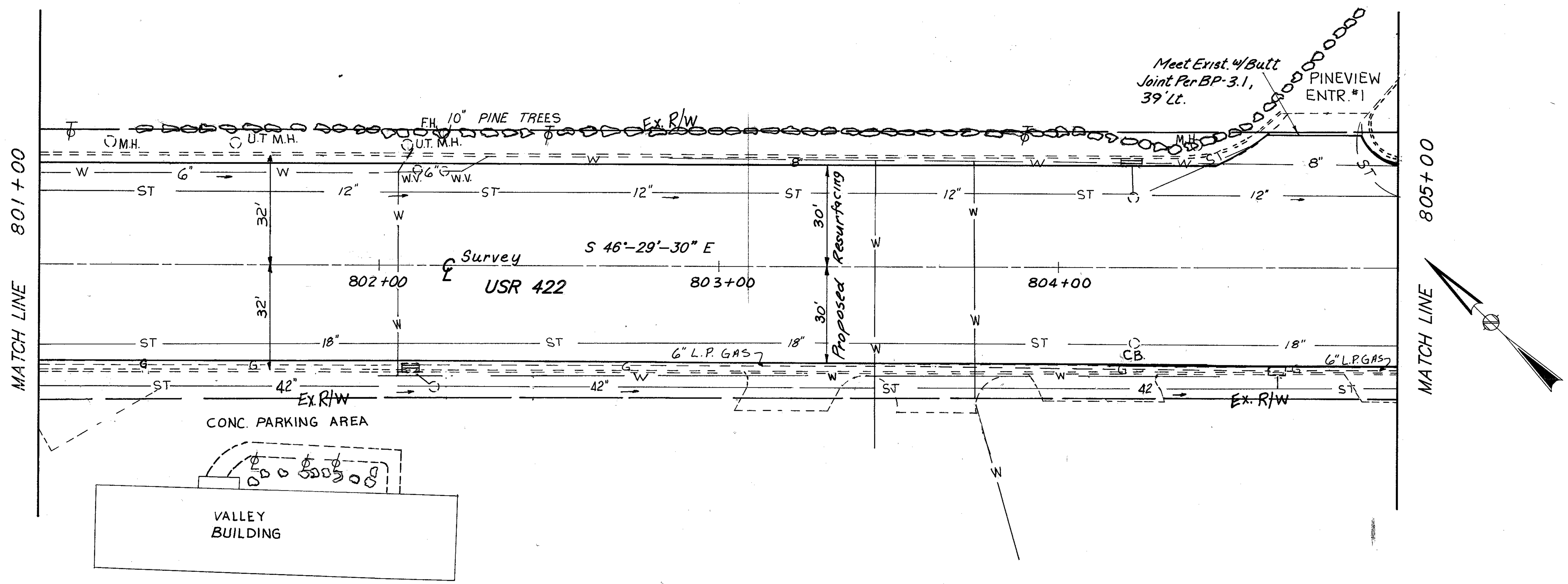


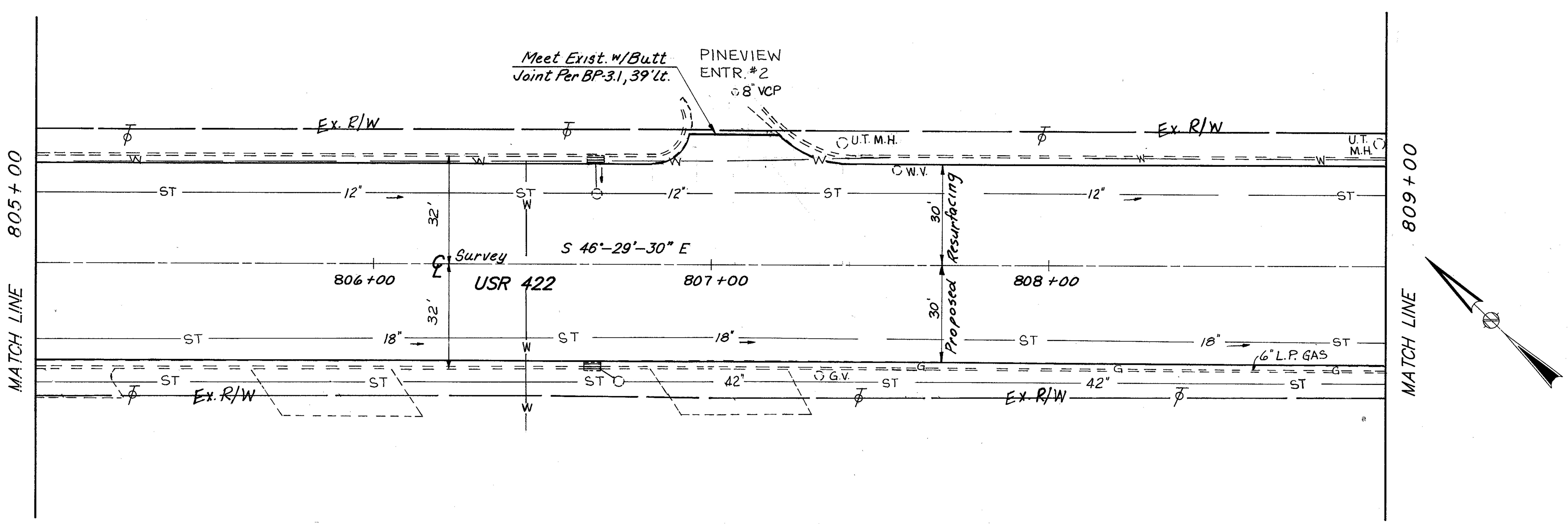
ROADWAY QUANTITIES

Reference No.	Station To Station	Side									
TOTALS											

For Quantities See Sheet No. 9

PLAN – STA. 793+00 to STA. 801+00





ROADWAY QUANTITIES

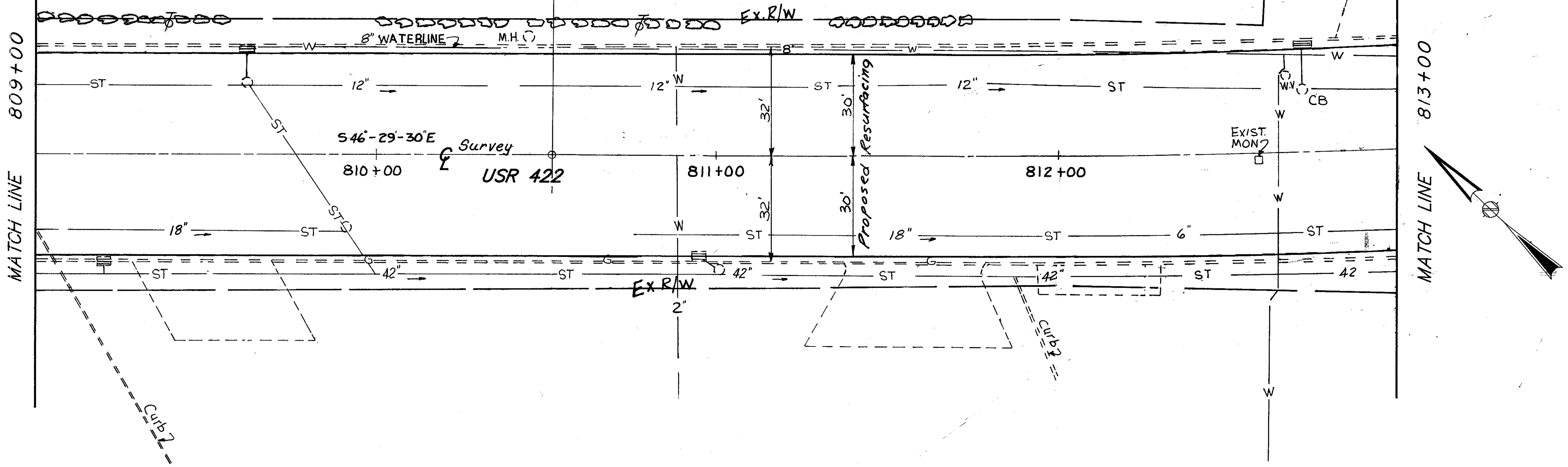
Reference No.	Station To Station	Side									
TOTALS											

FOR QUANTITIES SEE SHEET NO. 9

PLAN – STA. 801+00 to STA. 809+00

CURVE DATA ℄ CONSTR.
P.I. STA. 817+29.87

Δ = 27°-37' Lt.	θ_s = 4°-00'
Δ_c = 19°-37'	ϕ_c = 1°-19'-59"
D_c = 2°-40'	L.T. = 200.04'
R_c = 2148.59	S.T. = 100.04'
L_c = 735.69'	L.C. = 299.93'
L_s = 300.00'	E_s = 65.73'
T_s = 678.47'	K = 149.97'
X_c = 299.84'	P = 1.74'
Y_c = 6.98'	



ROADWAY QUANTITIES

Reference No.	Station To Station	Side									
TOTALS											

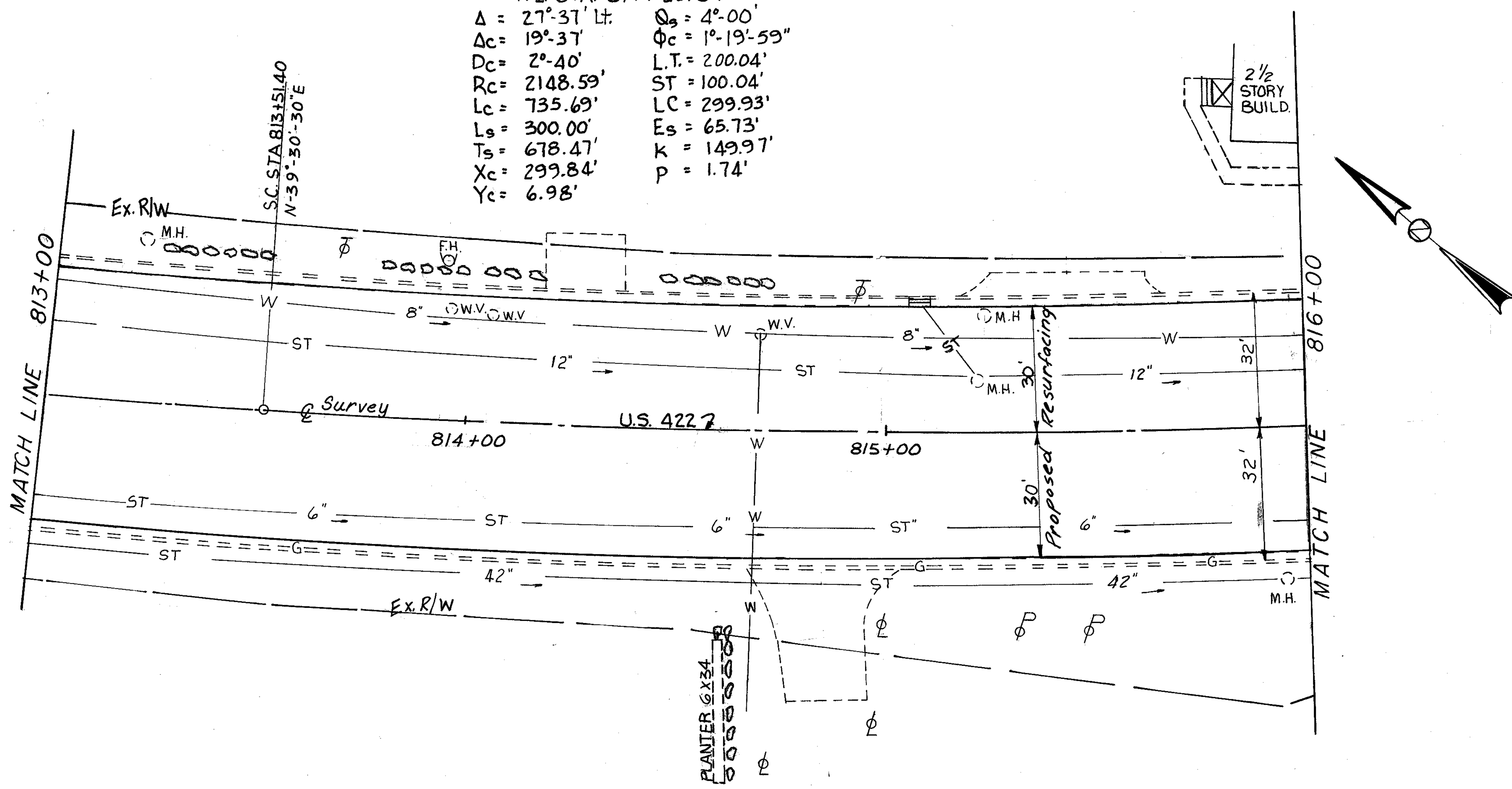
For Quantities See Sheet No. 9

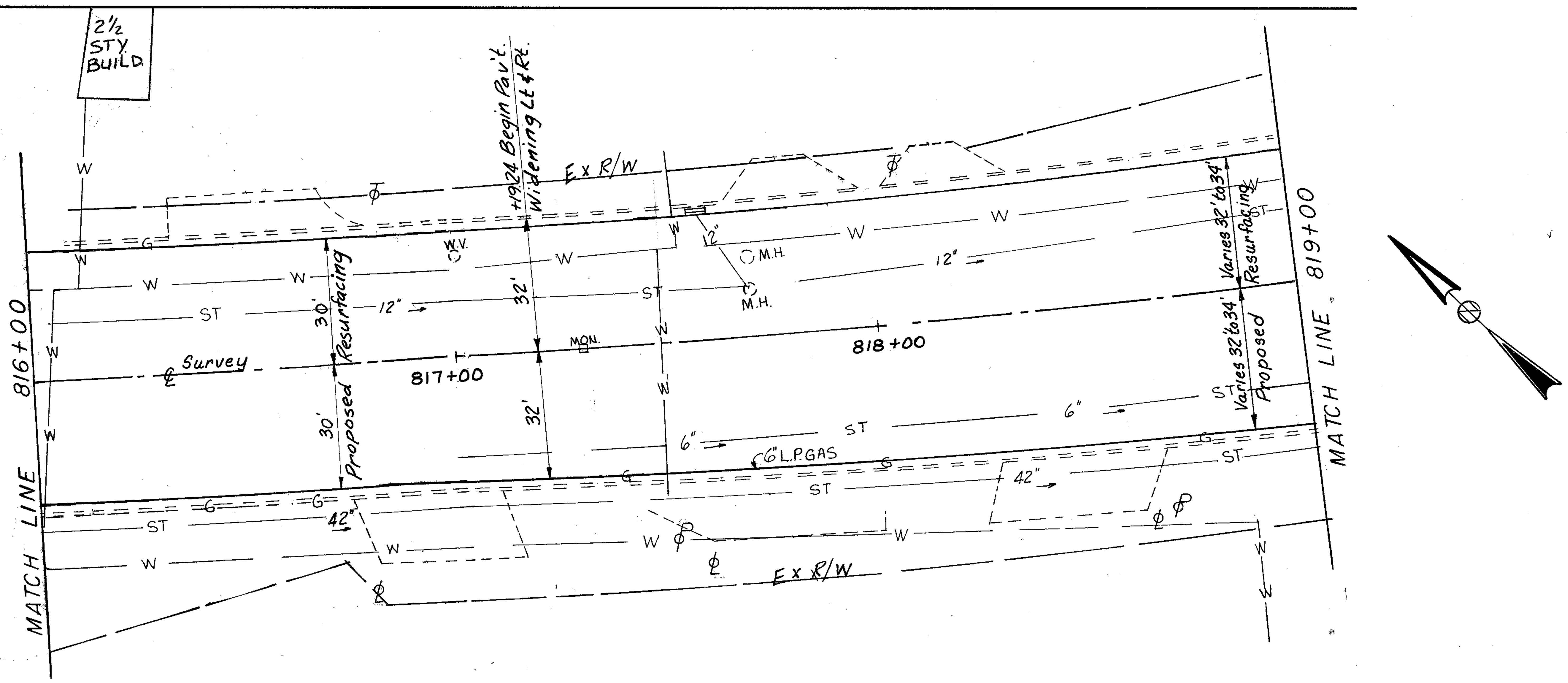
	BY	DATE	REGION	STATE	PROJECT	
Calculated			5	OHIO		
Checked						

TRUMBULL COUNTY
TRU–422–14.82

CURVE DATA & CONSTR.
P.I. STA. 817+29.87

Δ = 27°-37' Lt.	θ_s = 4°-00'
Δc = 19°-37'	Φc = 1°-19'-59"
Dc = 2°-40'	L.T. = 200.04'
Rc = 2148.59'	ST = 100.04'
Lc = 735.69'	LC = 299.93'
Ls = 300.00'	Es = 65.73'
Ts = 678.47'	K = 149.97'
Xc = 299.84'	P = 1.74'
Yc = 6.98'	





ROADWAY QUANTITIES

Reference No.	Station To Station	Side									
TOTALS											

For Quantities See Sheet No. 9

	BY	DATE	REGION	STATE	PROJECT	
Calculated			5	OHIO		
Checked						

TRUMBULL COUNTY
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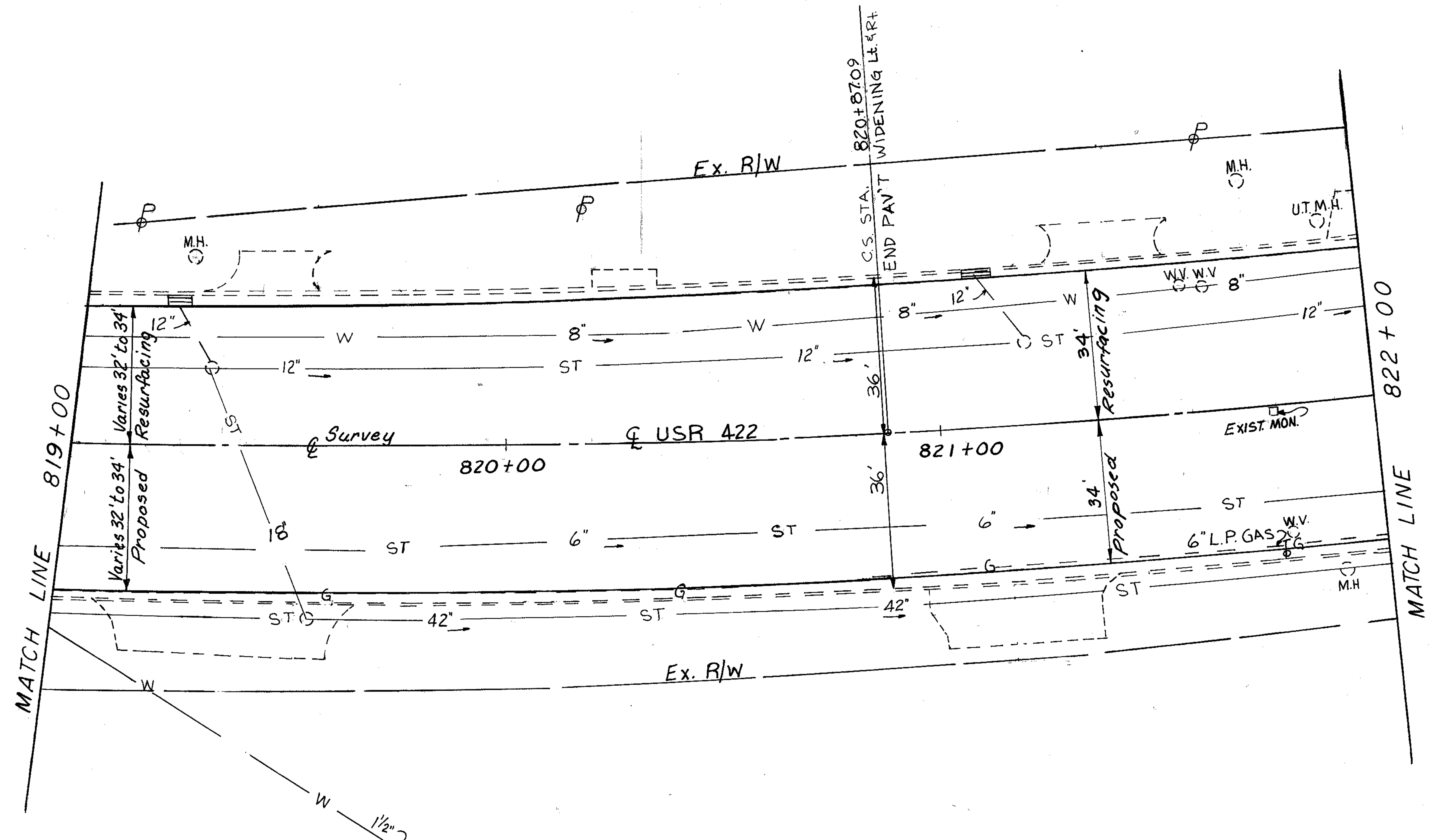
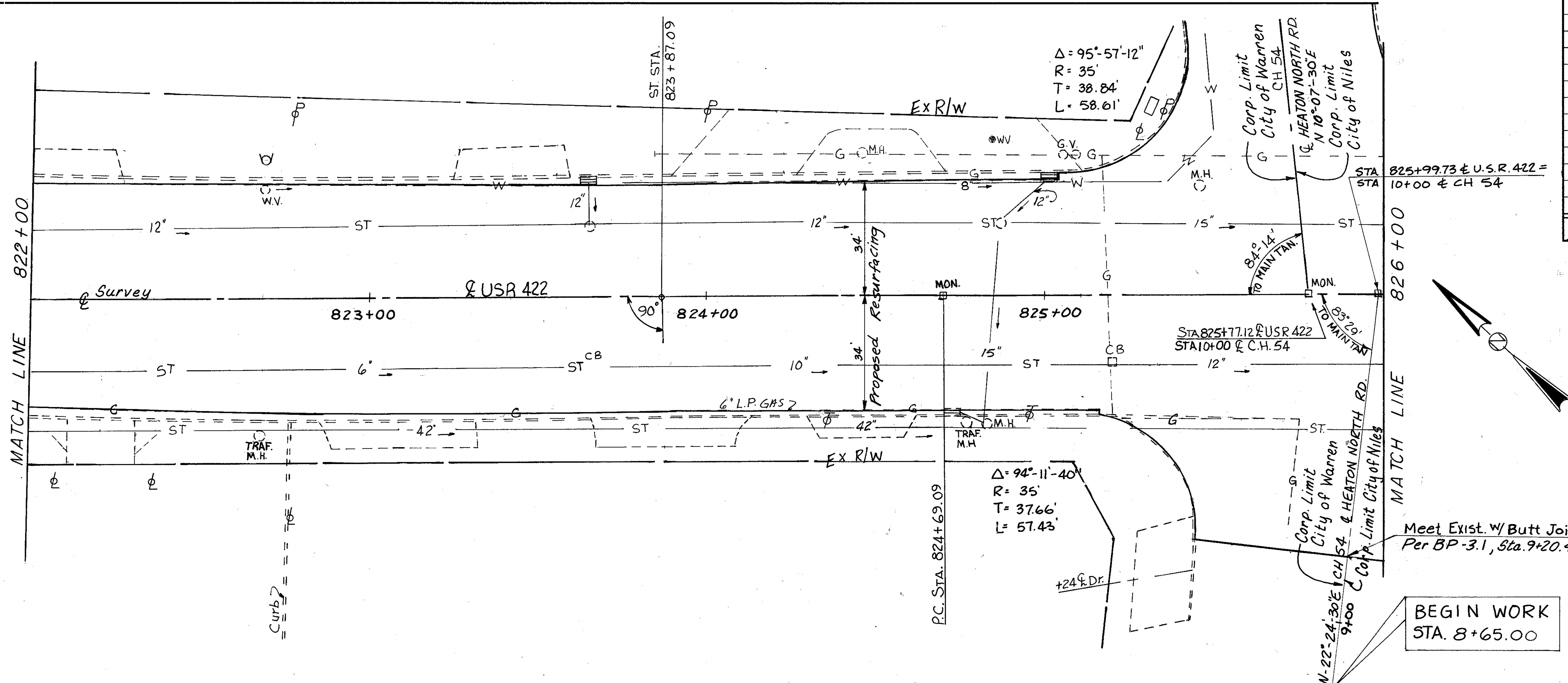
CURVE DATA ℄ SURVEY
P.I. STA. 844+93.94
Δ = 20°-02'-30" Rt.
D = 0°-30'
R = 11459.16'
L = 4008.34'
T = 2024.85'
E = 177.46'

CURVE DATA ℄ CONSTR.
P.I. STA. 817+29.87
Δ = 27°-37' Lt.
Δ_c = 19°-37'
D_c = 2°-40'
R_c = 2148.59'
L_c = 735.69'
L_s = 300.00'
T_s = 678.47'
X_c = 299.84'
Y_c = 6.98'
θ_s = 4°-00'
ϕ_c = 1°-19'-59"
L.T. = 200.04'
S.T. = 100.04'
L.C. = 299.93'
E_s = 65.73'
k = 149.97'
p = 1.74'



Note: For Heaton North Rd (North)
See Plan Sht.# 32



ROADWAY QUANTITIES

Reference No.	Station To Station	Side									
TOTALS											

For Quantities See Sheet No. 9

PLAN – STA. 819+00 to STA. 826+00

	BY	DATE	REGION	STATE	PROJECT	
Calculated			5	OHIO		
Checked						

TRUMBULL COUNTY
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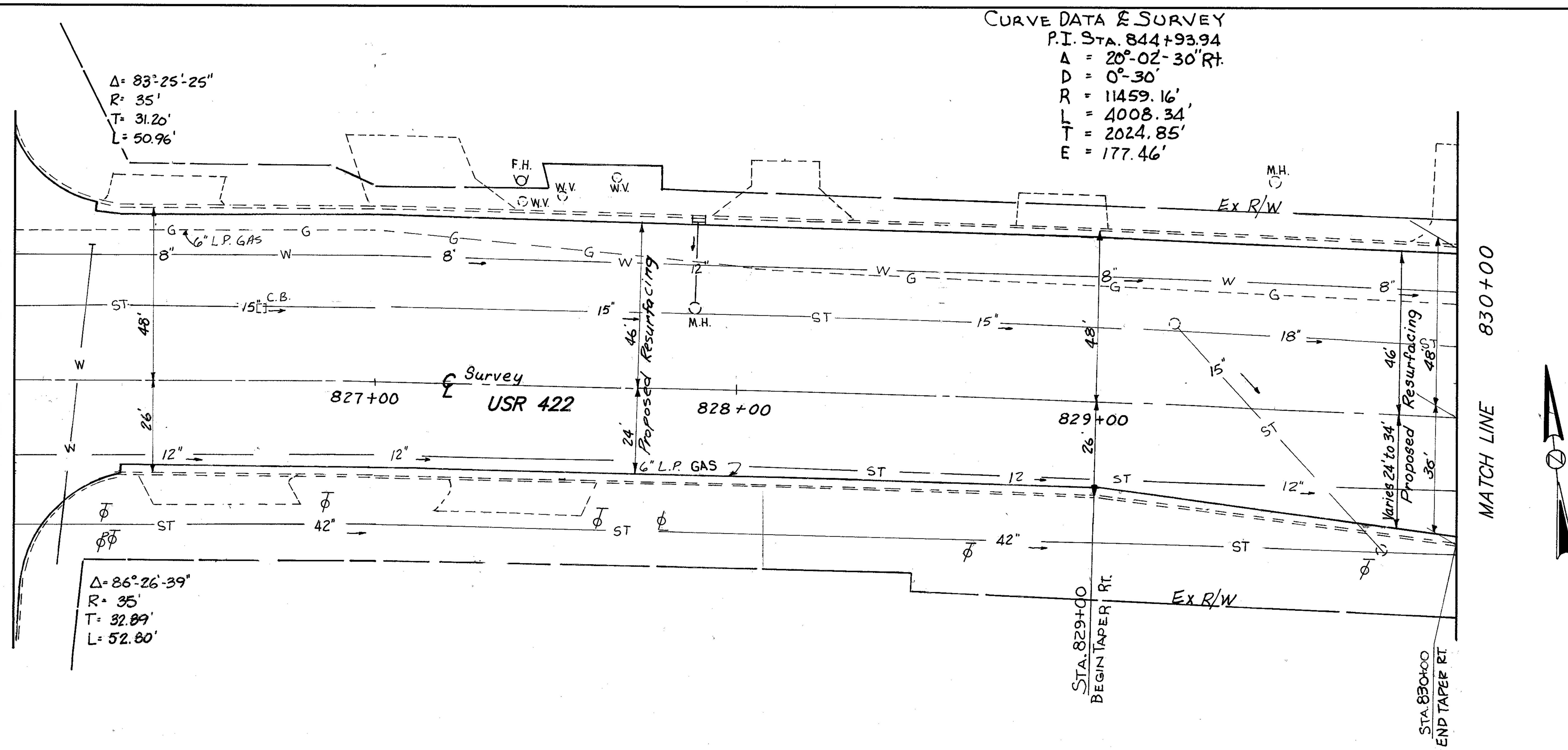
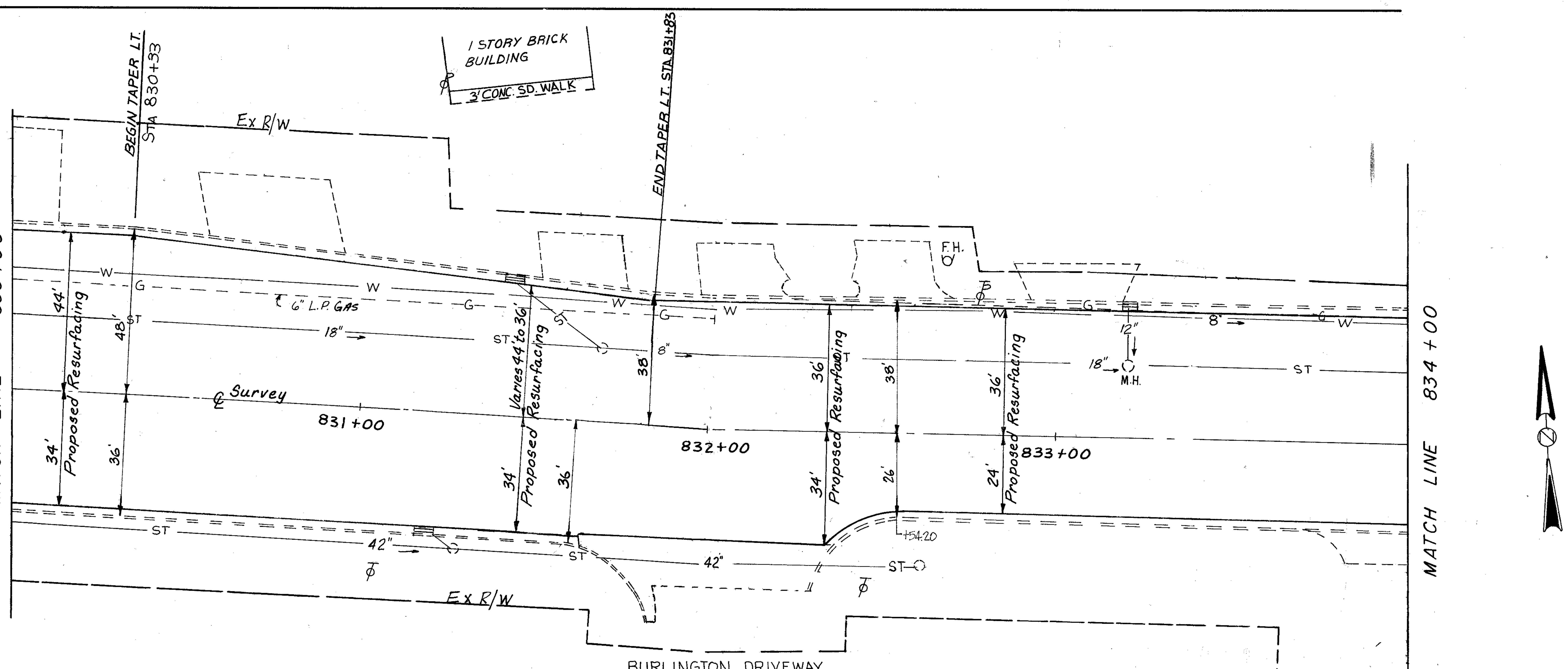


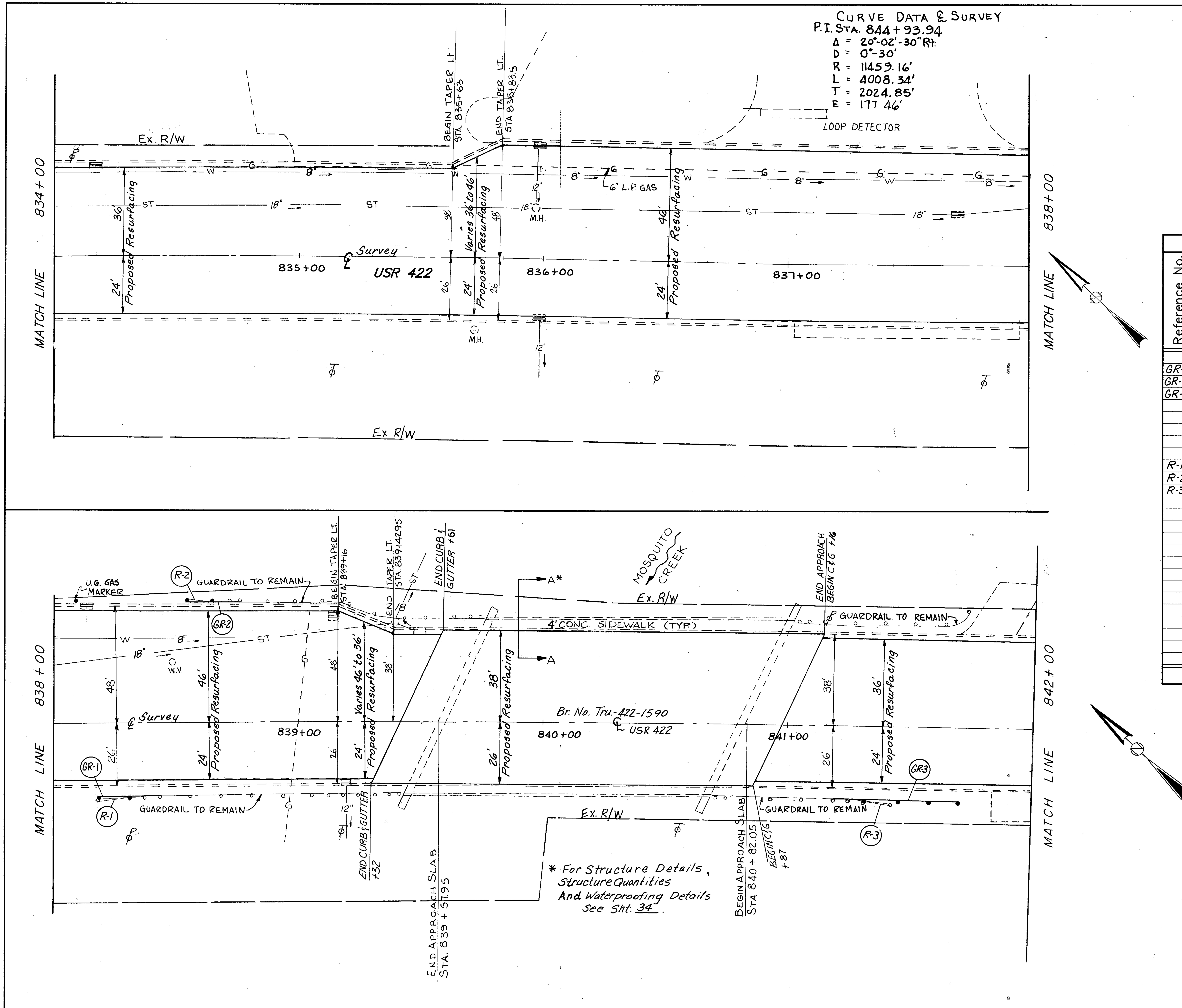


ROADWAY QUANTITIES

Reference No.	Station To Station	Side									
TOTALS											

For Quantities See Sheet No. 9

PLAN – STA. 826+00 to STA. 834+00



ROADWAY QUANTITIES

Reference No.	Station To Station	Side	202 Anchor Assembly Removed, Type A		606 Guardrail, Type 5	606 Anchor Assembly, Type E					
			Ea.		L.F.	Ea.					
GR-1	838+18.96 - 838+43.96	Rt.			12.5	1					
GR-2	838+52.53 - 838+77.53	Lt.			12.5	1					
GR-3	841+18.06 - 841+68.06	Rt.			37.5	1					
R-1	838+18.06 - 838+43.96	Rt.	1								
R-2	838+52.53 - 838+77.53	Lt.	1								
R-3	841+18.06 - 841+43.06	Rt.	1								
TOTALS			3		62.5	3					

PLAN - STA. 834+00 to STA. 842+00

	BY	DATE	REGION	STATE	PROJECT
Calculated	W.F.	4/93	5	OHIO	
Checked	W.S.	4/93			

TRUMBULL COUNTY
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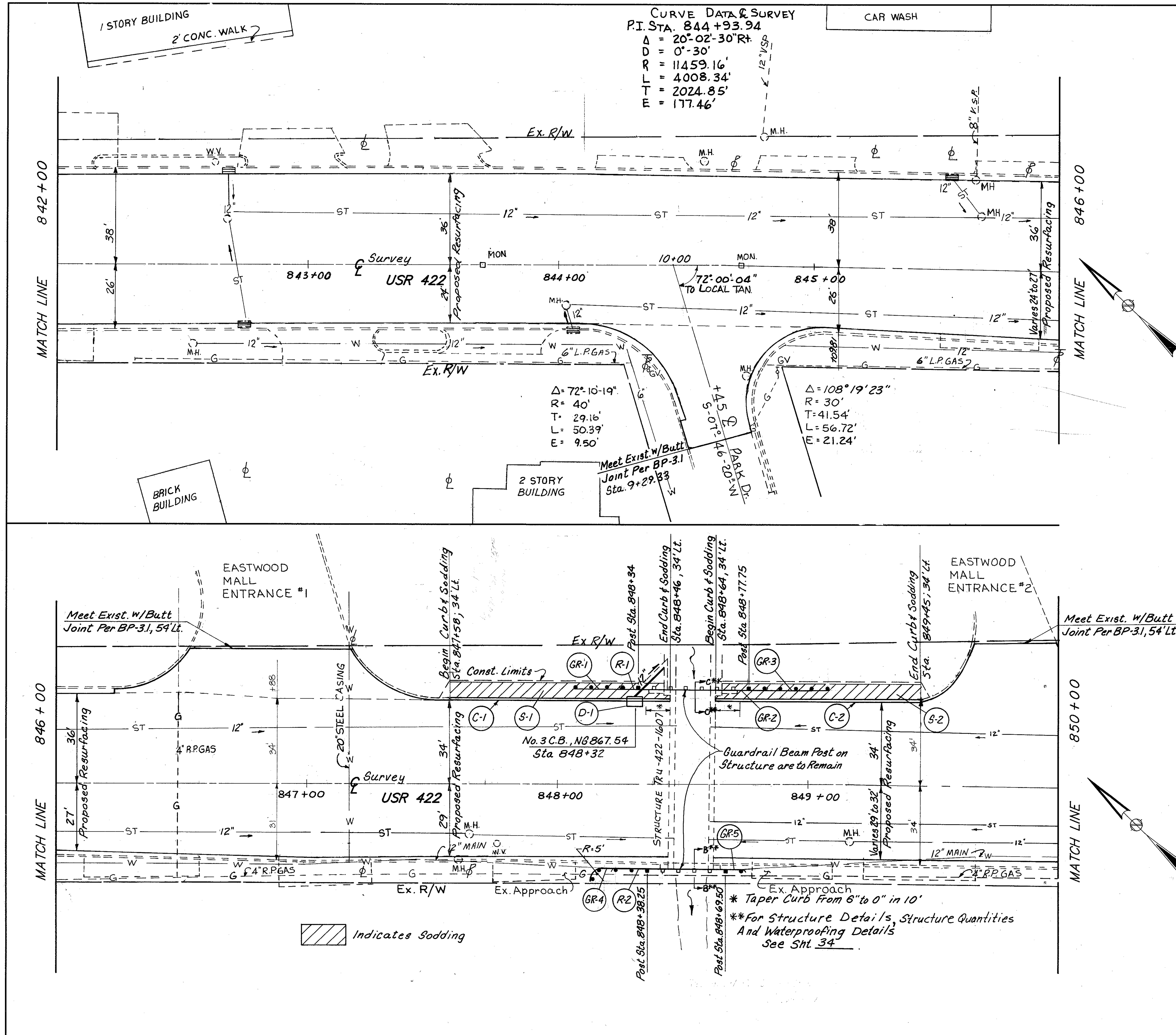


ROADWAY QUANTITIES

Reference No.	Station To Station	Side		603 12" Conduit Type C L.F.	604 No. 3 Catch Basin Ea.		609 Curb Type 6 L.F.		660 Sodding As Per Plan S.Y.		
C-1	847+58 - 848+46	Lt.					88				
C-2	848+64 - 849+45	Lt.					81				
D-1	848+32	Lt.		17	1						
S-1	847+58 - 848+46	Lt.							59		
S-2	848+64 - 849+45	Lt.							54		
TOTALS				17	1		169		113		

ROADWAY QUANTITIES

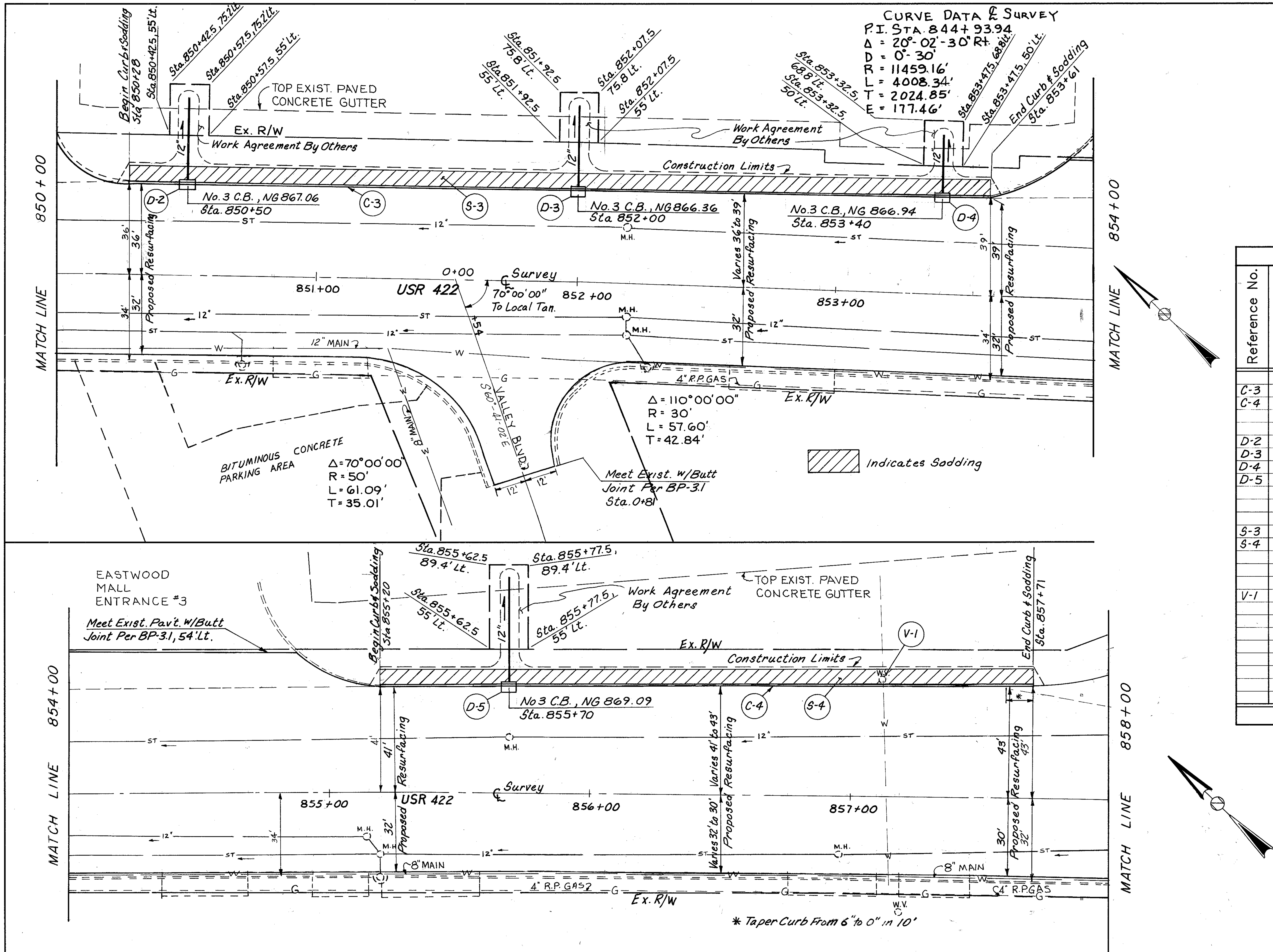
Reference No.	Station To Station	Side	202 Guardrail Removed L.F.	517 Railing (Deep Beam Rail) A.P.P. L.F.	606 Guardrail Type 5 L.F.	606 Bridge Term. Assembly Type 4 Ea.	606 Anchor Assembly Type E Ea.	606 Anchor Assembly Type T Ea.	606 Anchor Assembly Type T, A.P.P. Ea.		
GR-1	848+09 - 848+34	Lt.			12.5	1	1				
GR-2	848+34 - 848+77.75	Lt.		43.75							
GR-3	848+77.75 - 849+09	Lt			12.5	1	1				
1 GR-4	848+16.10 - 848+38.25	Rt.			12.5	1		1			
GR-5	848+38.25 - 848+75.75	Rt.		37.5					1		
R-1	848+27.75 - 848+84	Lt.	56.25								
R-2	848+25.75 - 848+75.75	Rt.	50								
TOTALS			106.25	81.25	37.5	3	2	1	1		

1 - Guardrail (GR-4) Has 7.85' on 5' Radius

For D-1 Profile See Sheet No. 33

PLAN - STA. 842+00 to STA. 850+00

TRUMBULL COUNTY
TRU-422-14.82

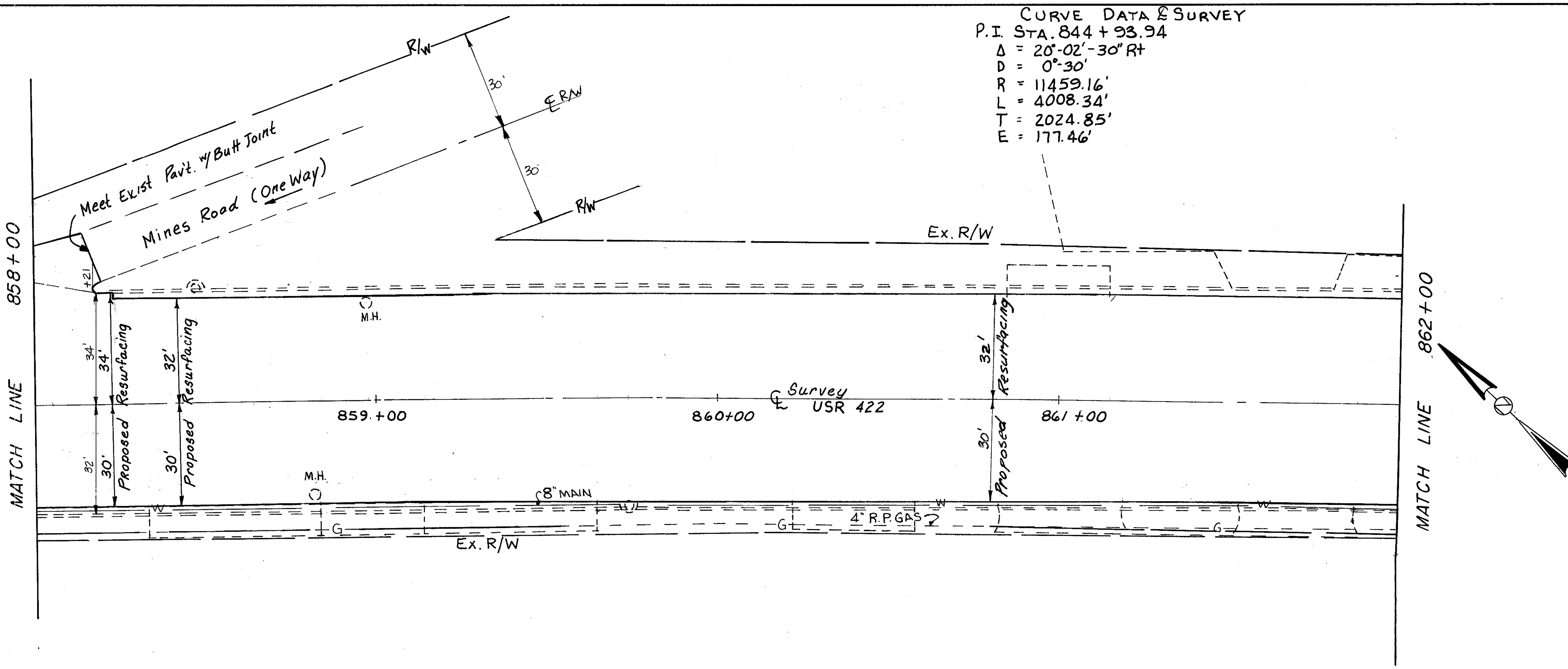


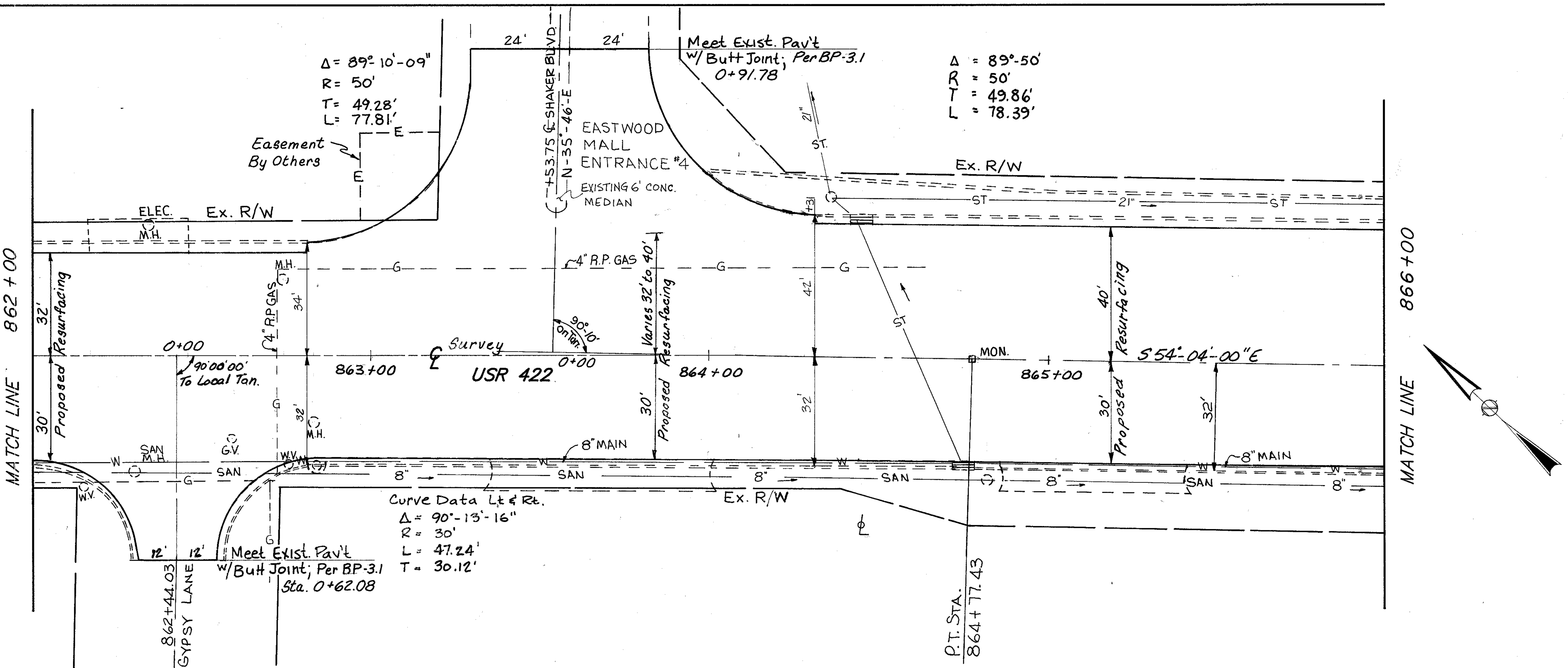
Reference No.	Station To Station	Side	603 12" Conduit, Type C (L.F.)	604 No 3 Catch Basin (Ea.)	609 Curb, Type 6 (L.F.)	660 Sodding As Per Plan (S.Y.)	638 Valve Box Adj to Grade (Ea.)
C-3	850+28 - 853+61	Lt			333		
C-4	855+20 - 857+71	Lt			251		
D-2	850+50	Lt.	34	1			
D-3	852+00	Lt.	33	1			
D-4	853+40	Lt.	25	1			
D-5	855+70	Lt.	43	1			
S-3	850+28 - 853+61	Lt.				222	
S-4	855+20 - 857+71	Lt.				167	
V-1	857+12	Lt.					1
TOTALS			135	4	584	389	1

For D-2, D-3, D-4 & D-5 Pipe Profiles See Sheet No. 33

PLAN – STA. 850+00 to STA. 858+00

TRUMBULL COUNTY
TRU-422-14.82





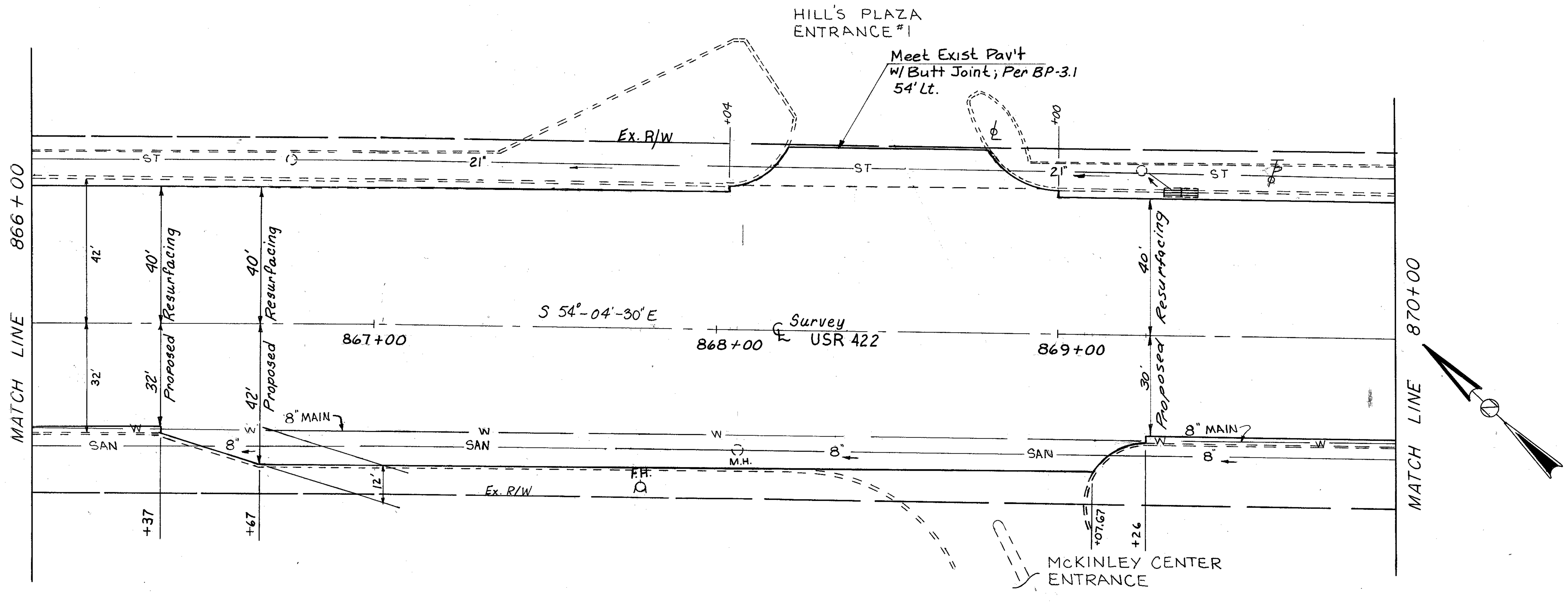
ROADWAY QUANTITIES

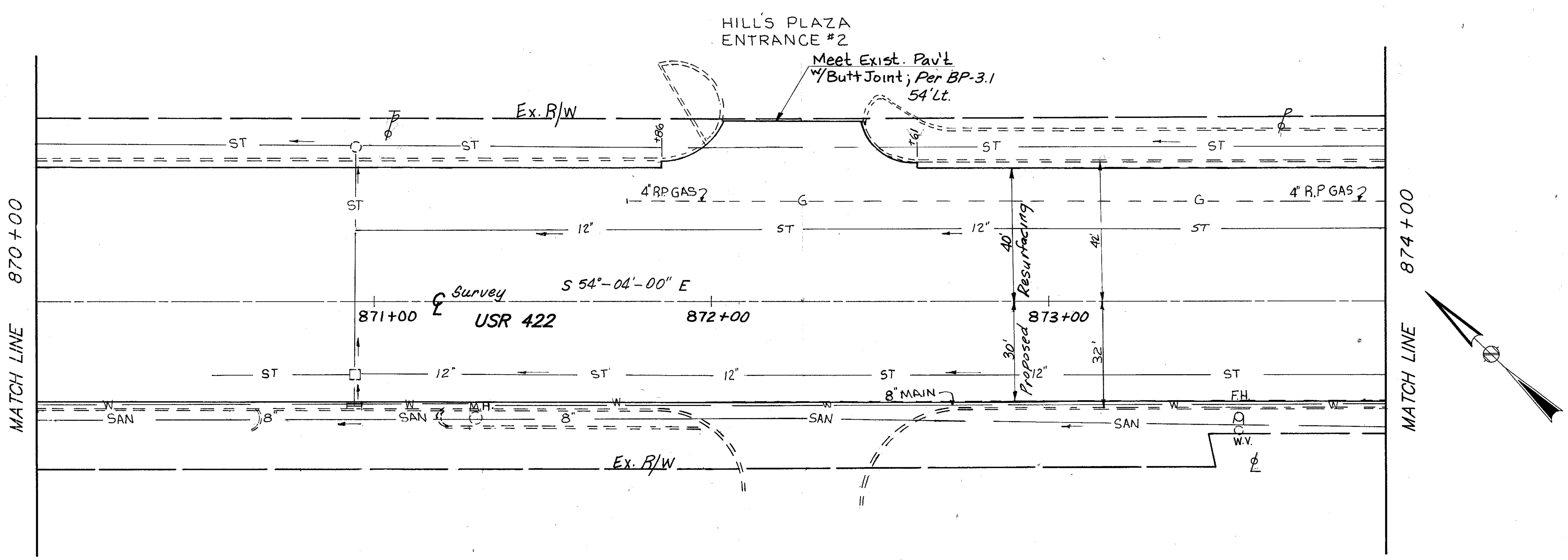
Reference No.	Station To Station	Side								
TOTALS										

For Quantities See Sheet No. 9

	BY	DATE	REGION	STATE	PROJECT	
Calculated			5	OHIO		
Checked						

TRUMBULL COUNTY
TRU-422-14.82





ROADWAY QUANTITIES											
Reference No.	Station To Station	Side									
TOTALS											

For Quantities See Sheet No. 9

PLAN – STA. 866+00 to STA. 874+00

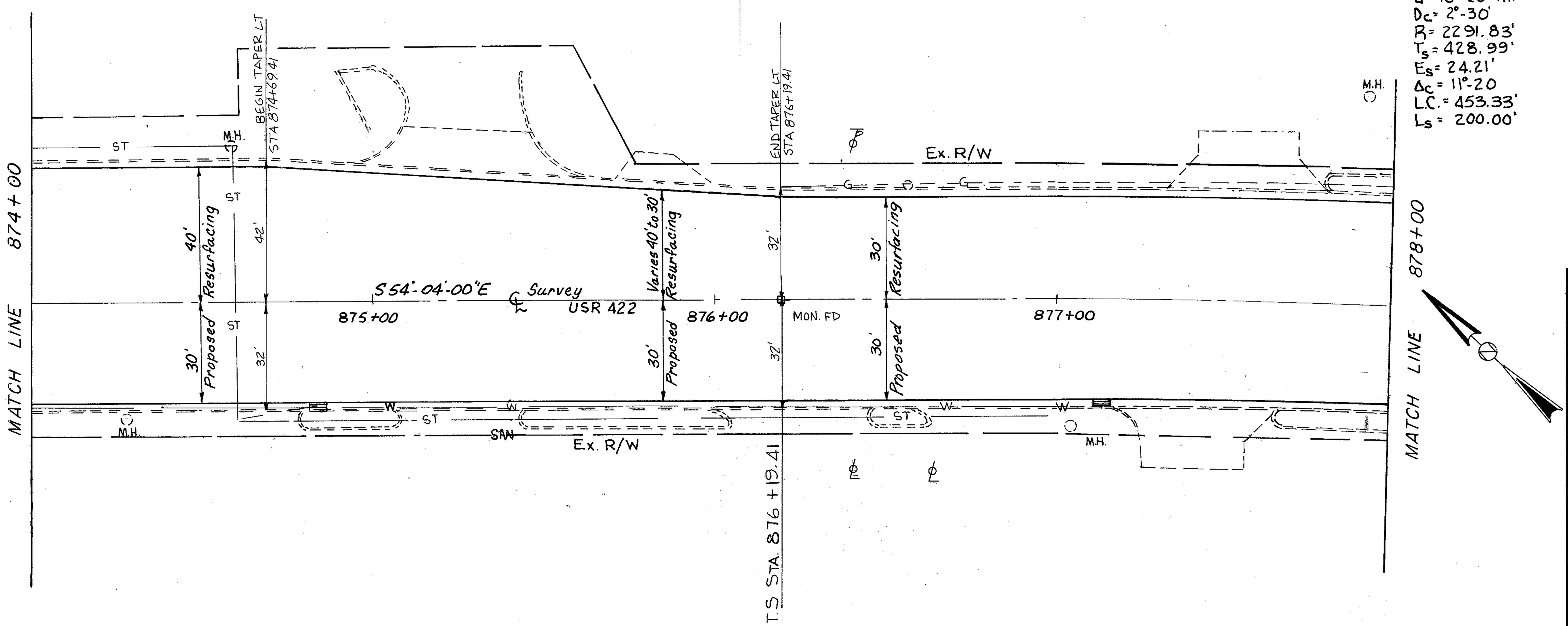
	BY	DATE	REGION	STATE	PROJECT	
Calculated			5	OHIO		
Checked						

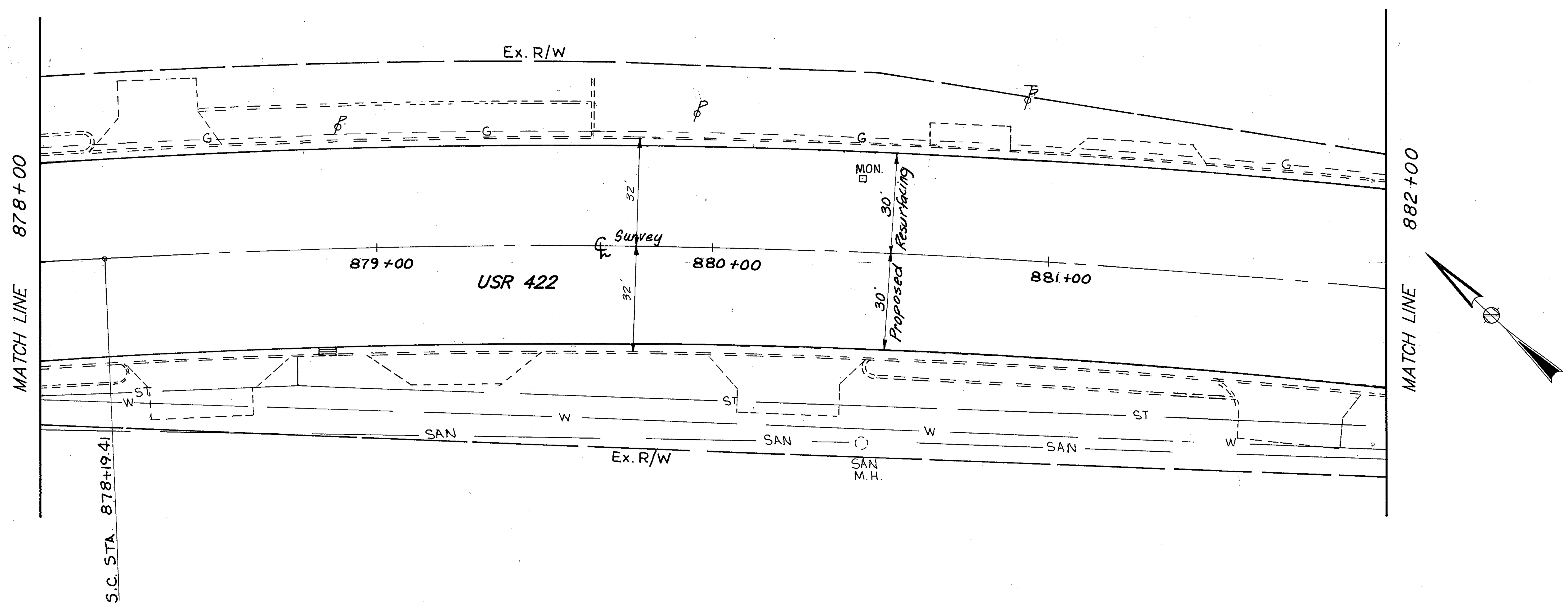
TRUMBULL COUNTY
TRU-422-14.82

CURVE DATA & SURVEY
P.I. STA. 880+48.40

Δ = 16°-20' Rt.
Dc = 2°-30'
R = 2291.83'
Ts = 428.99'
Es = 24.21'
Δc = 11°-20
L.C. = 453.33'
Ls = 200.00'

θs = 2°-30'
P = 0.73'
K = 99.99'
Xc = 199.96'
Yc = 2.91'
L.T. 133.35'
S.T. 66.68'
L.C. 199.98'



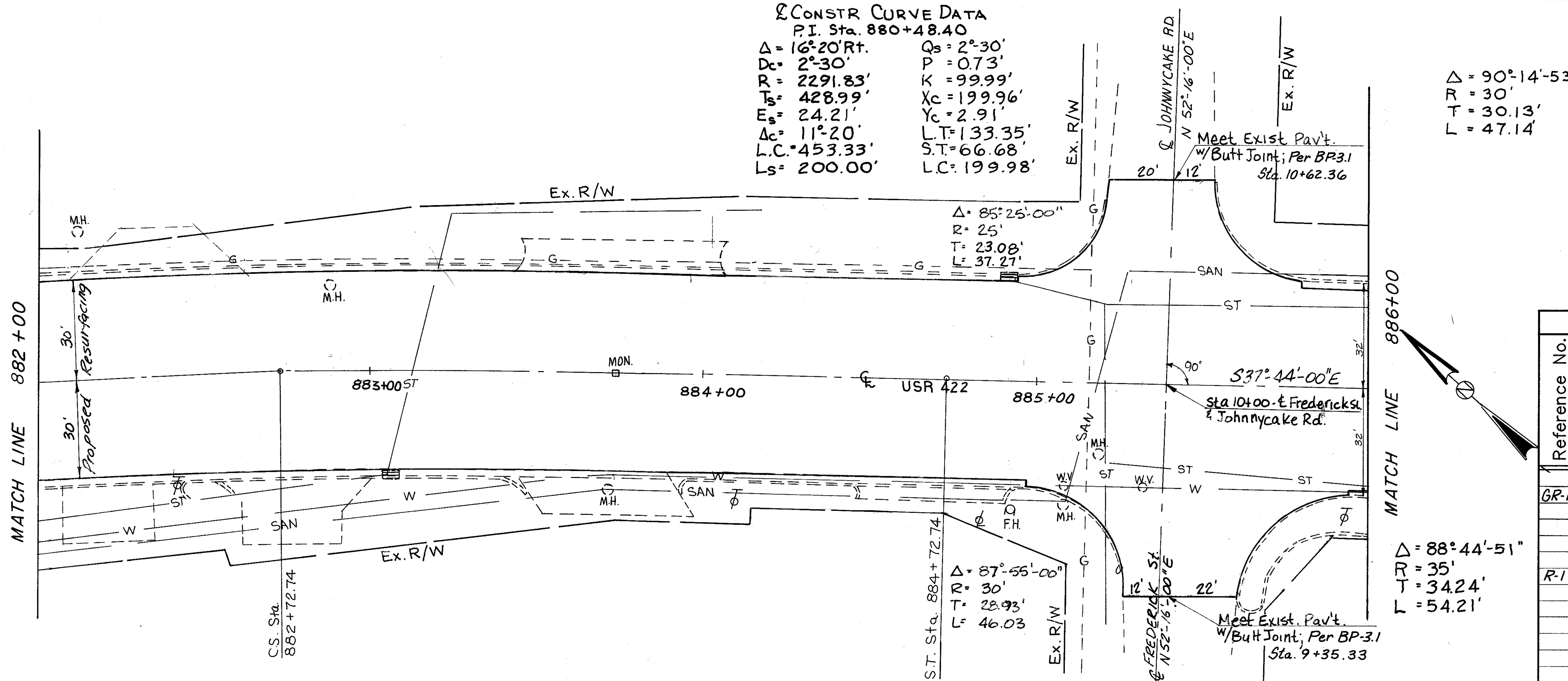


ROADWAY QUANTITIES

Reference No.	Station To Station	Side									
TOTALS											

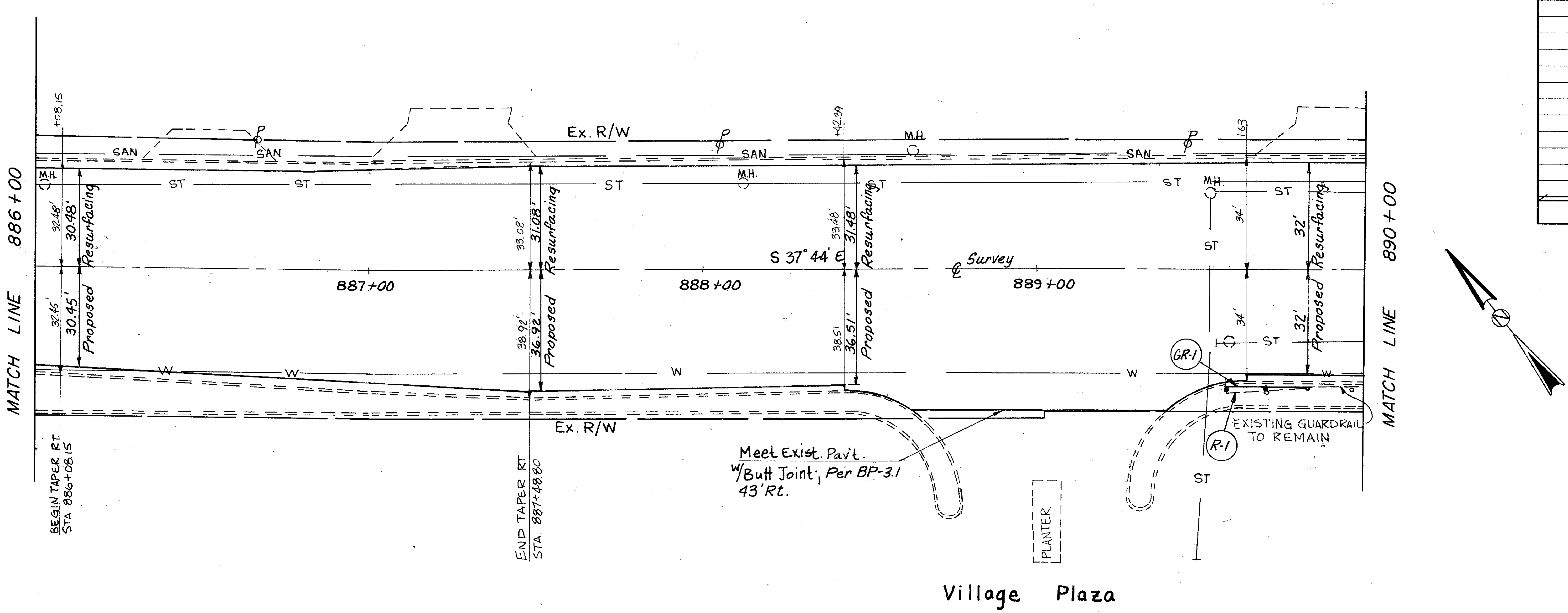
For Quantities See Sheet No. 9

PLAN - STA. 874+00 to STA. 882+00



ROADWAY QUANTITIES

Reference No.	Station To Station	Side	202 Anchor Assembly Removed, Type A		606 Guardrail Type 5	606 Anchor Assembly Type E					
			Ea.		L.F.	Ea.					
GR-1	889+54.20 - 889+79.20	Rt.			12.5	1					
R-1	889+54.20 - 889+79.20	Rt.	1								
TOTALS			1		12.5	1					



TRUMBULL COUNTY
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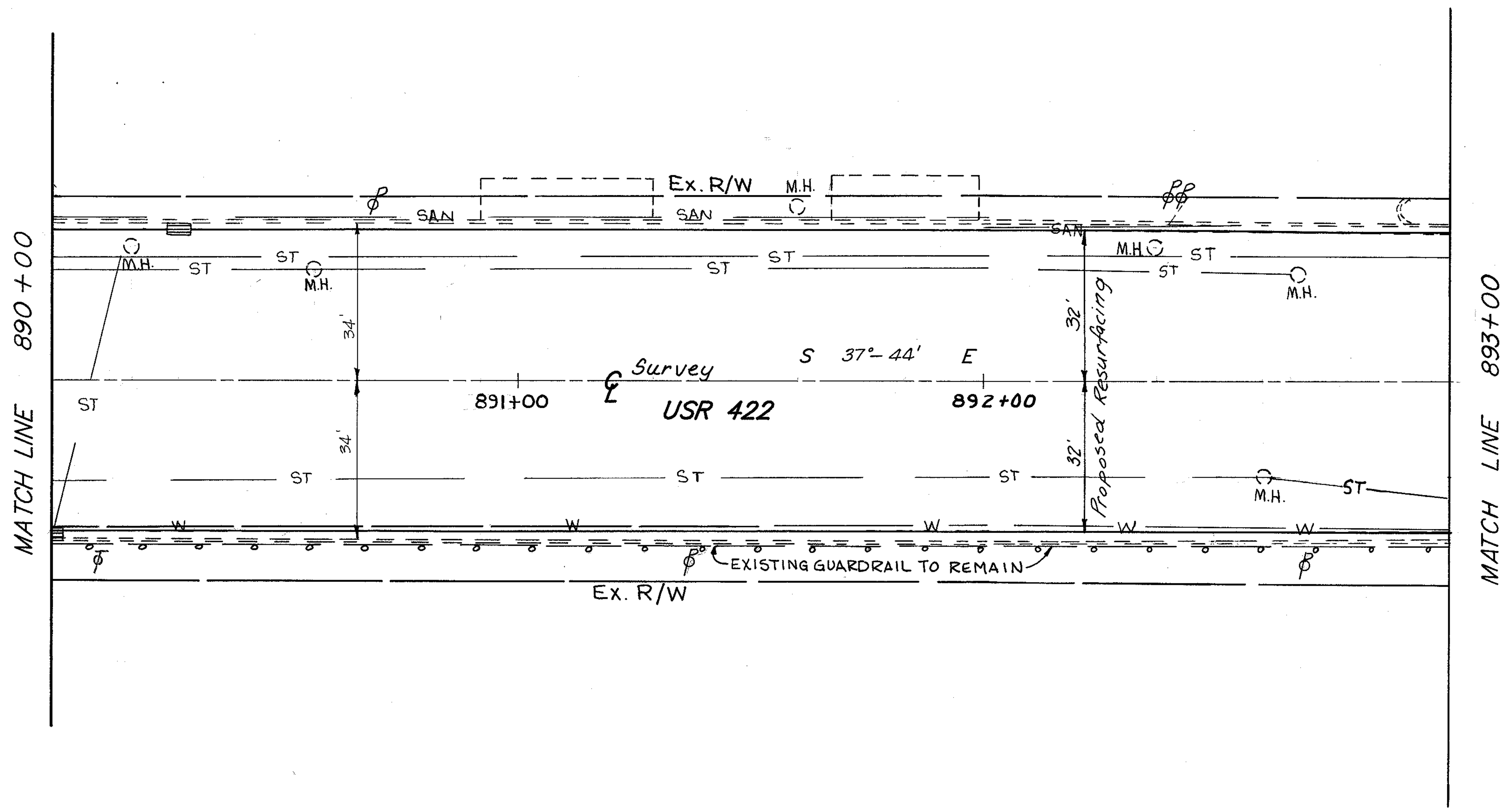

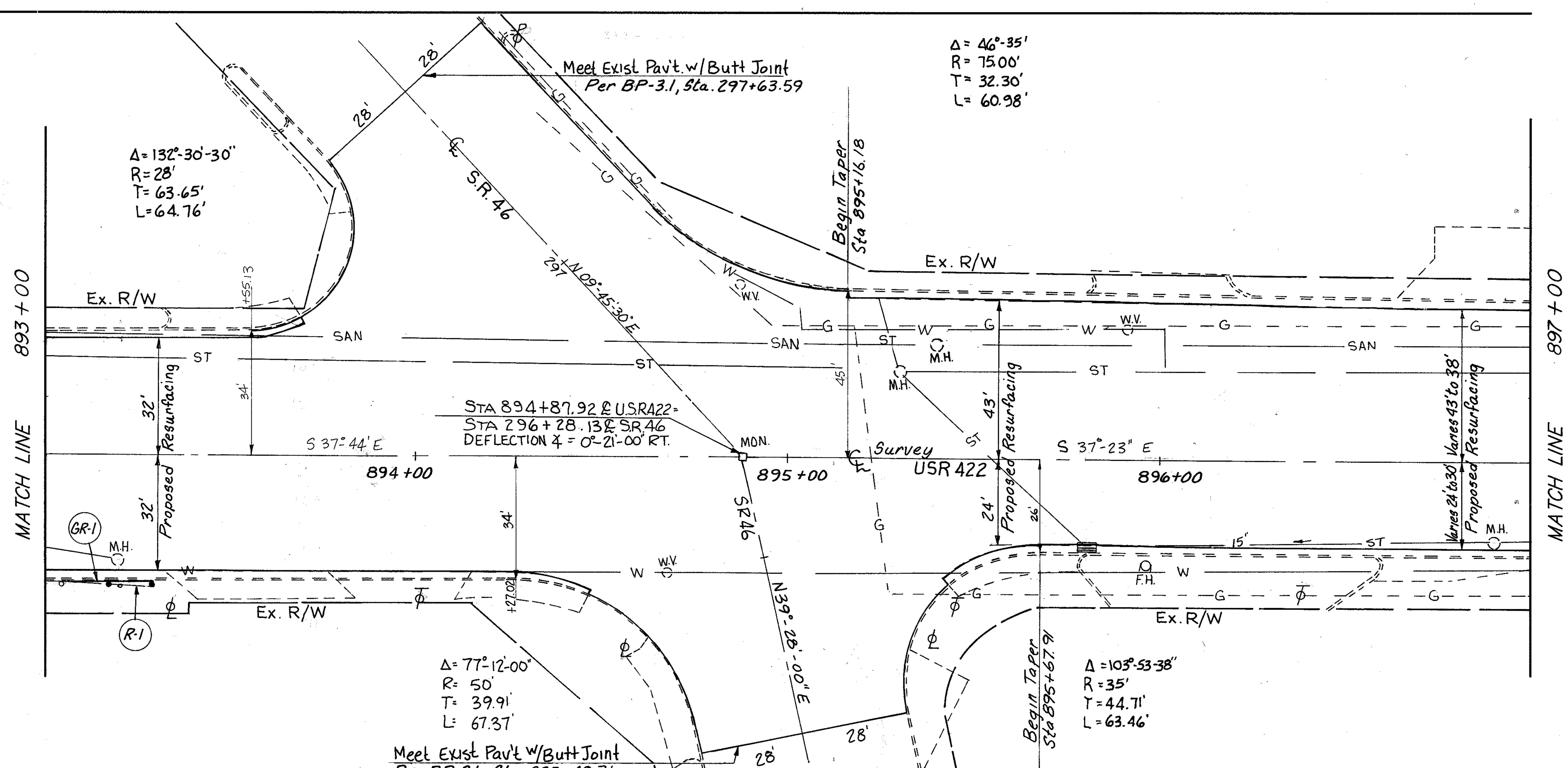

ROADWAY QUANTITIES

Reference No.	Station To Station	Side	202 Anchor Assembly Removed, Type A		606 Guardrail, Type 5	606 Anchor Assembly, Type E
			Ea.		L.F.	Ea.
GR-1	893+04.20-893+29.20	Rt.			12.5	1
R-1	893+04.20-893+29.20	Rt.	1			
TOTALS			1		12.5	1

PLAN – STA. 890+00 to STA. 897+00

	BY	DATE	REGION	STATE	PROJECT	
Calculated			5	OHIO		
Checked						

TRUMBULL COUNTY
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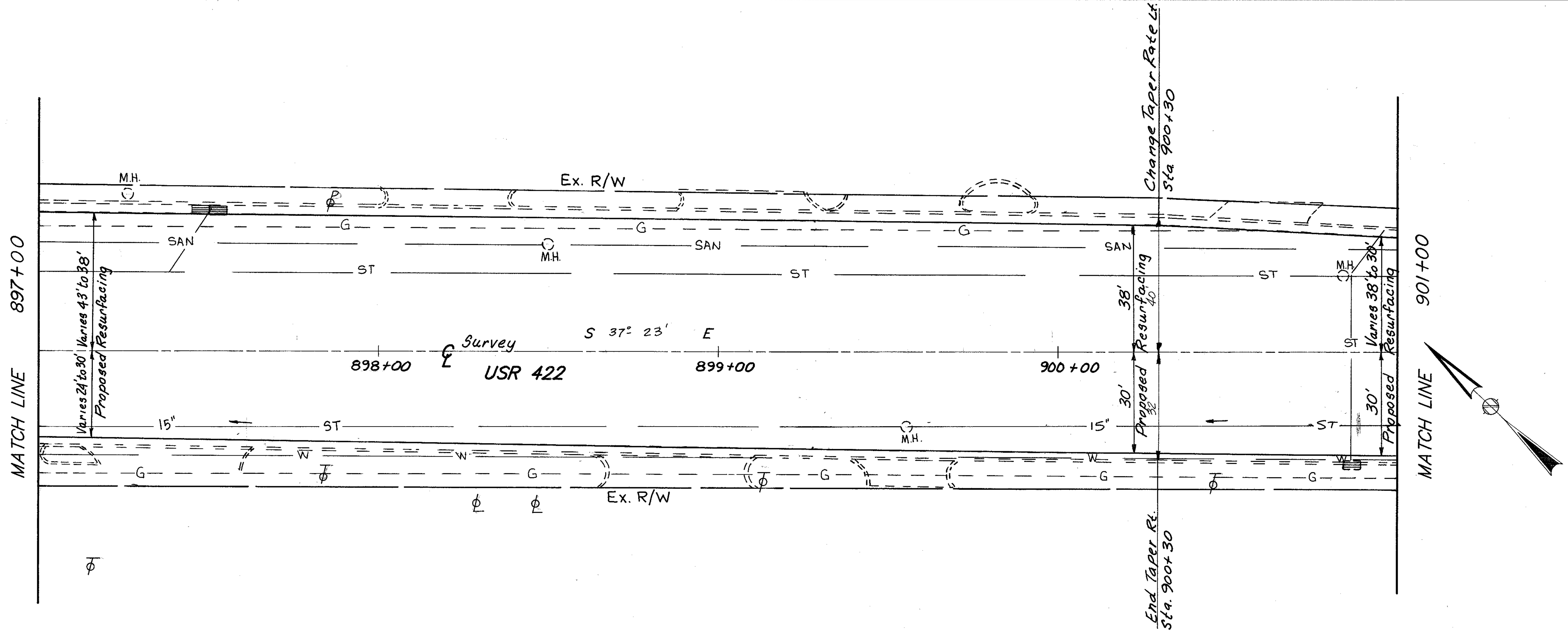
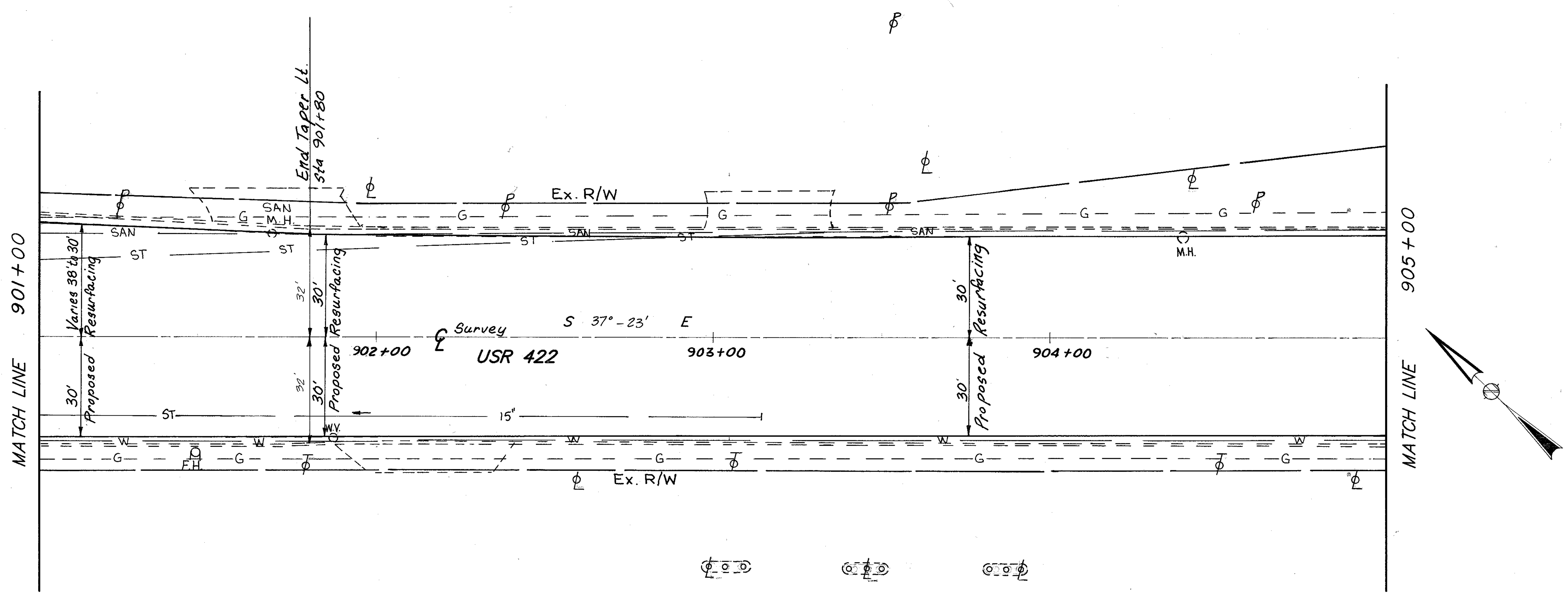


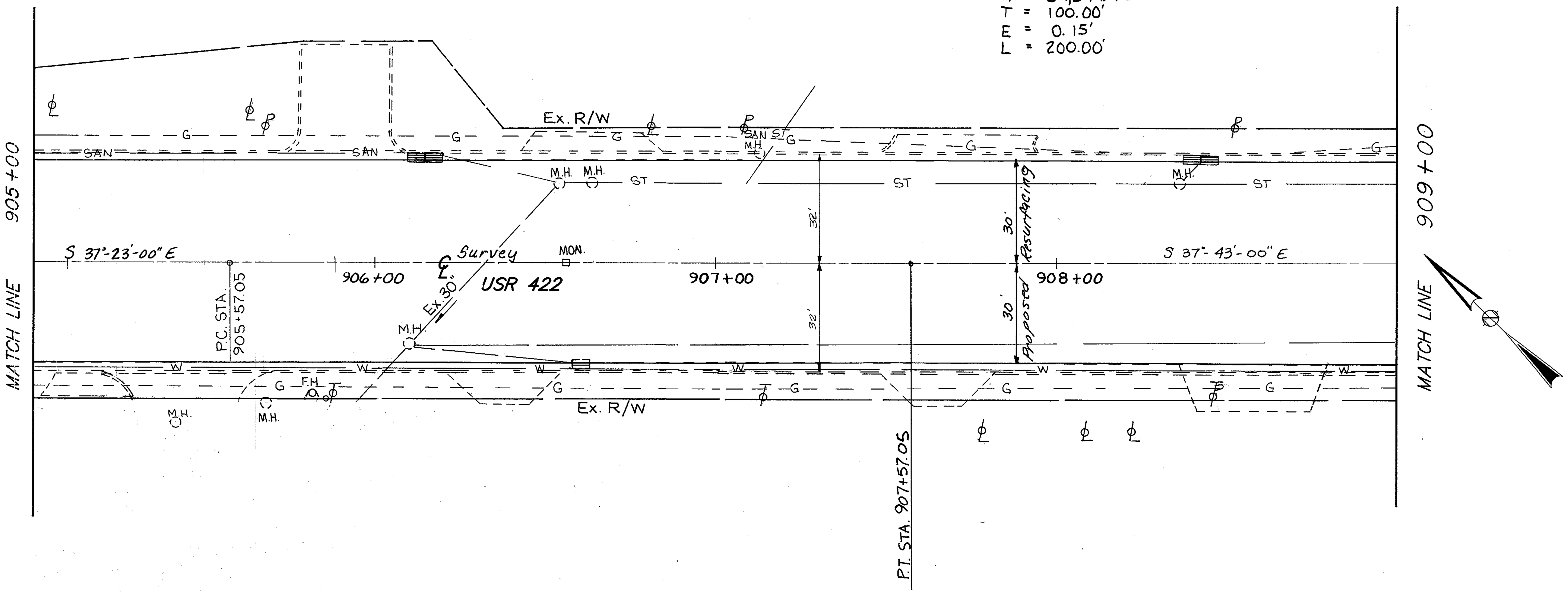


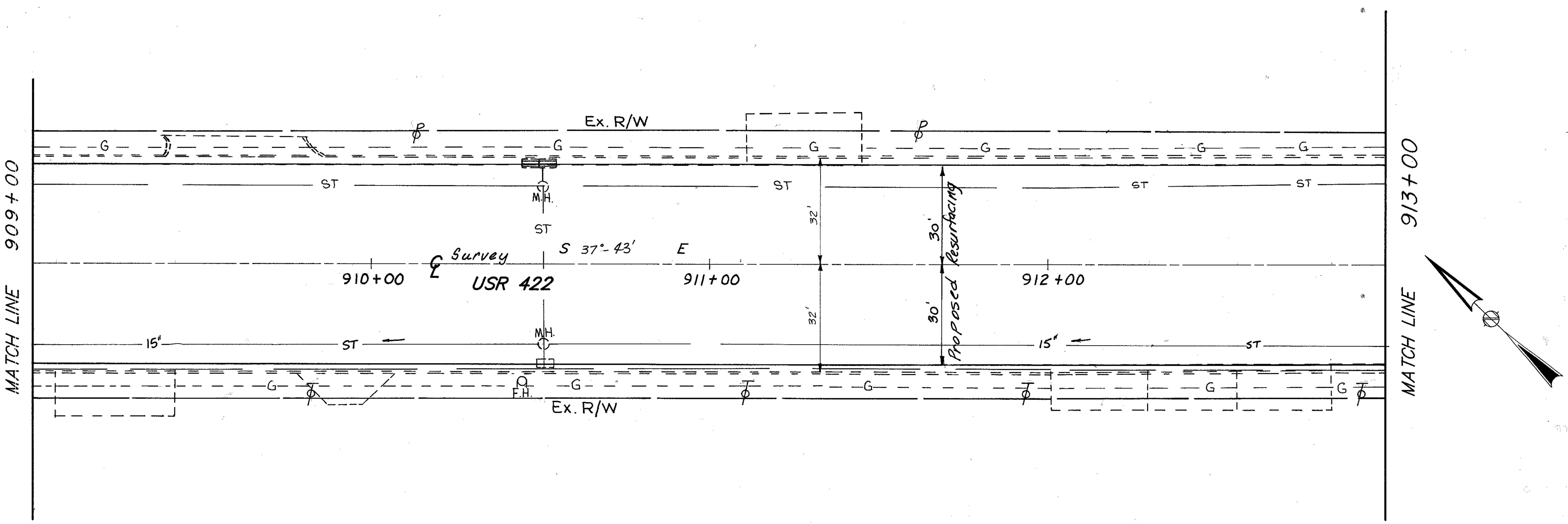
Reference No.	Station To Station	Side									
TOTALS											

ROADWAY QUANTITIES

For Quantities See Sheet No. 9

CURVE DATA
P.I. STA. 906+57.05
Δ = 0°-20'-00" Lt.
D = 0°-10'
R = 34,377.48'
T = 100.00'
E = 0.15'
L = 200.00'





ROADWAY QUANTITIES

Reference No.	Station To Station	Side									
TOTALS											

For Quantities See Sheet No. 9

	BY	DATE	REGION	STATE	PROJECT	
Calculated			5	OHIO		
Checked						

TRUMBULL COUNTY
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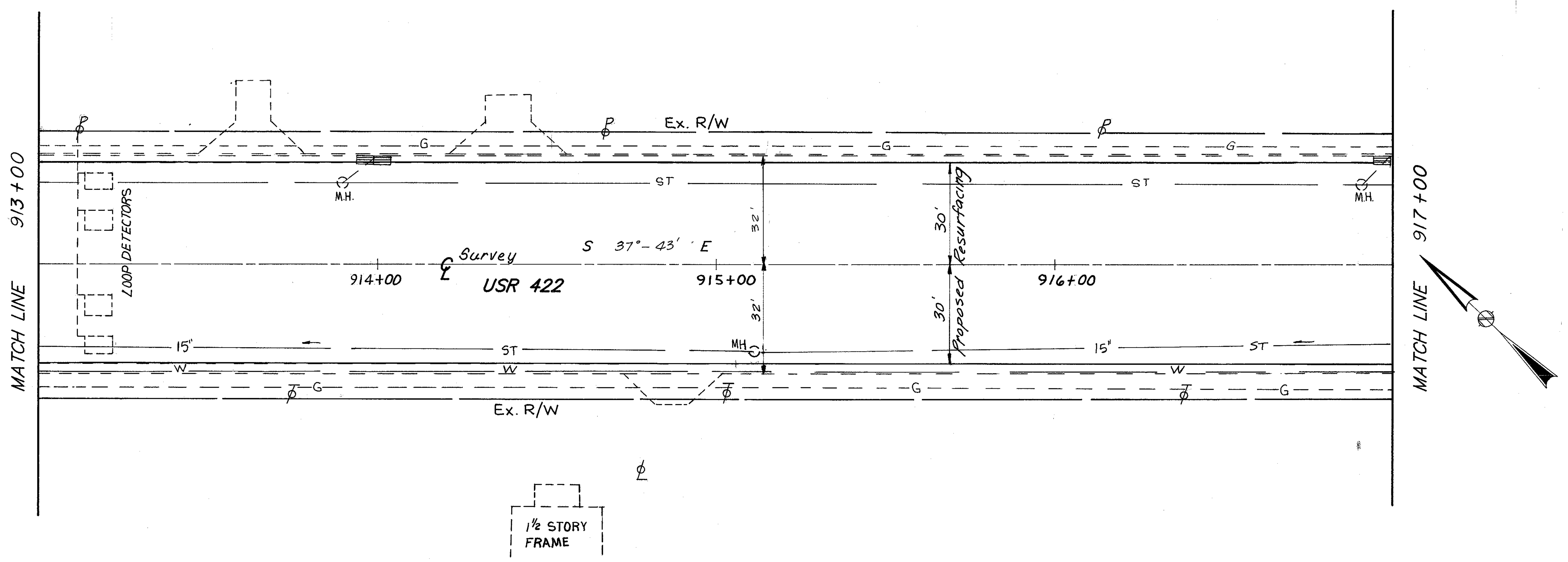

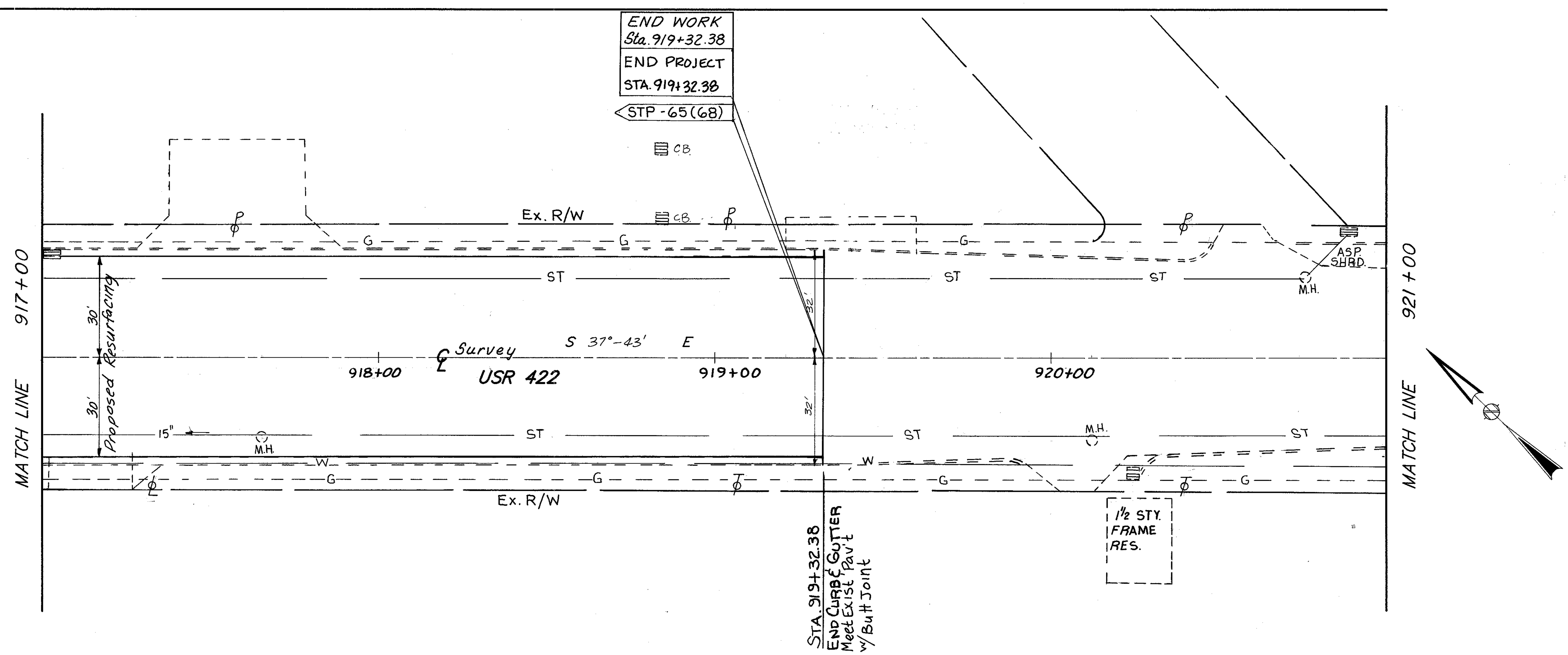

ROADWAY QUANTITIES

Reference No.	Station To Station	Side									
TOTALS											

For Quantities See Sheet No. 9

TRUMBULL COUNTY
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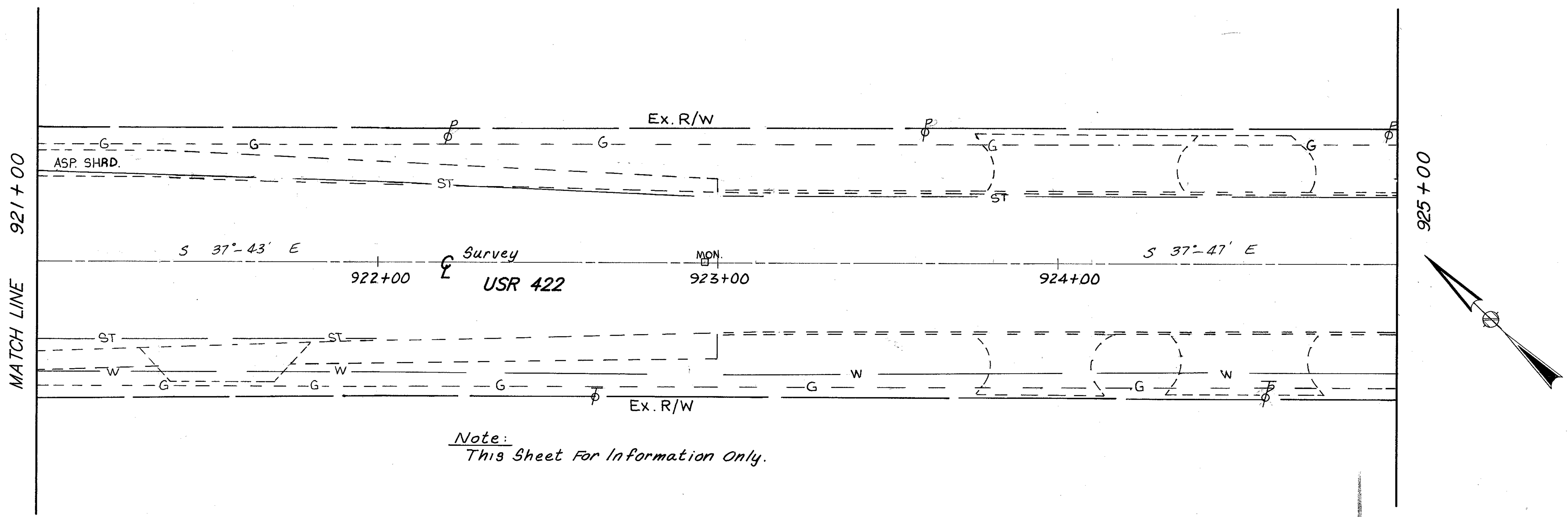
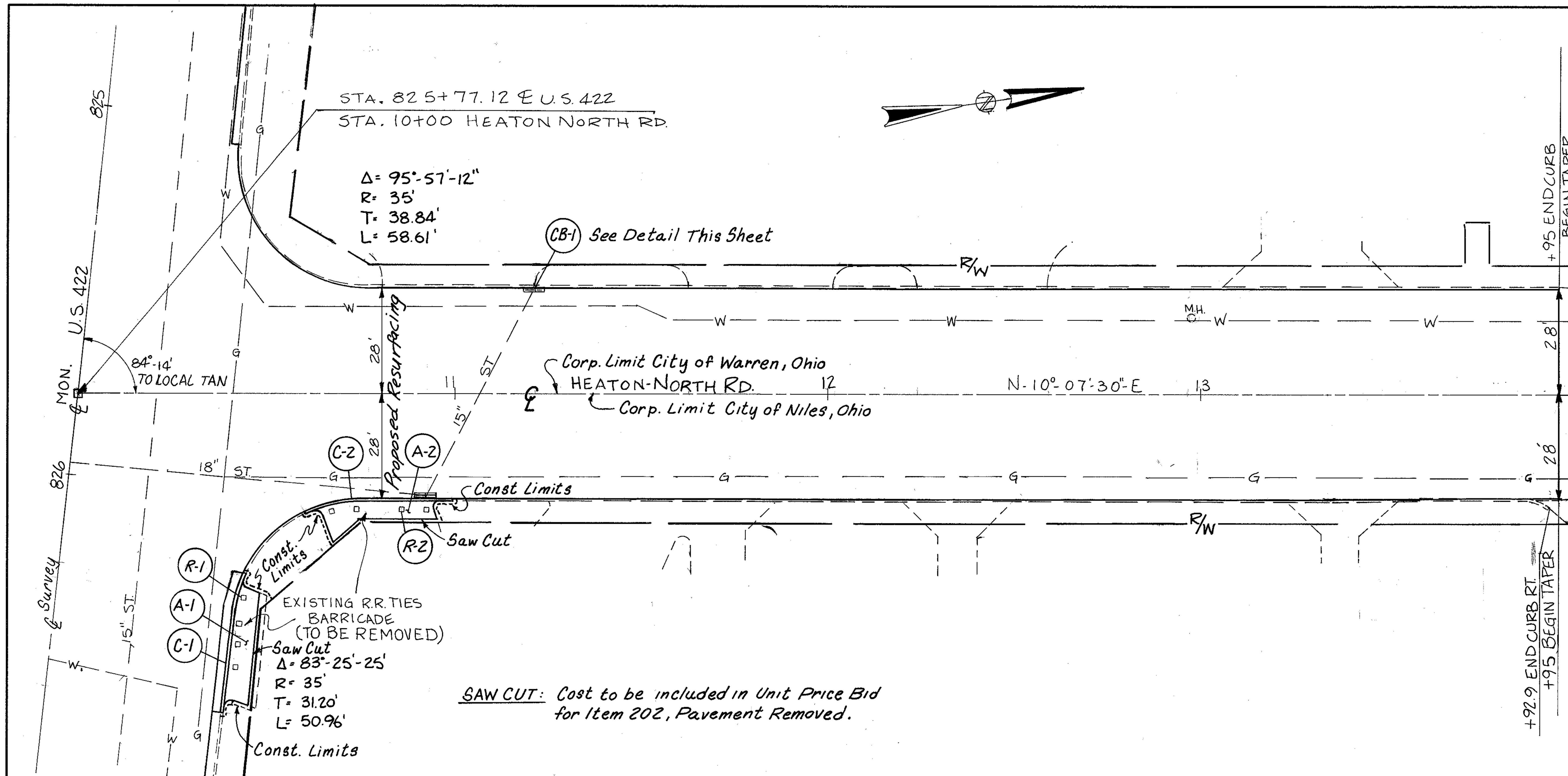


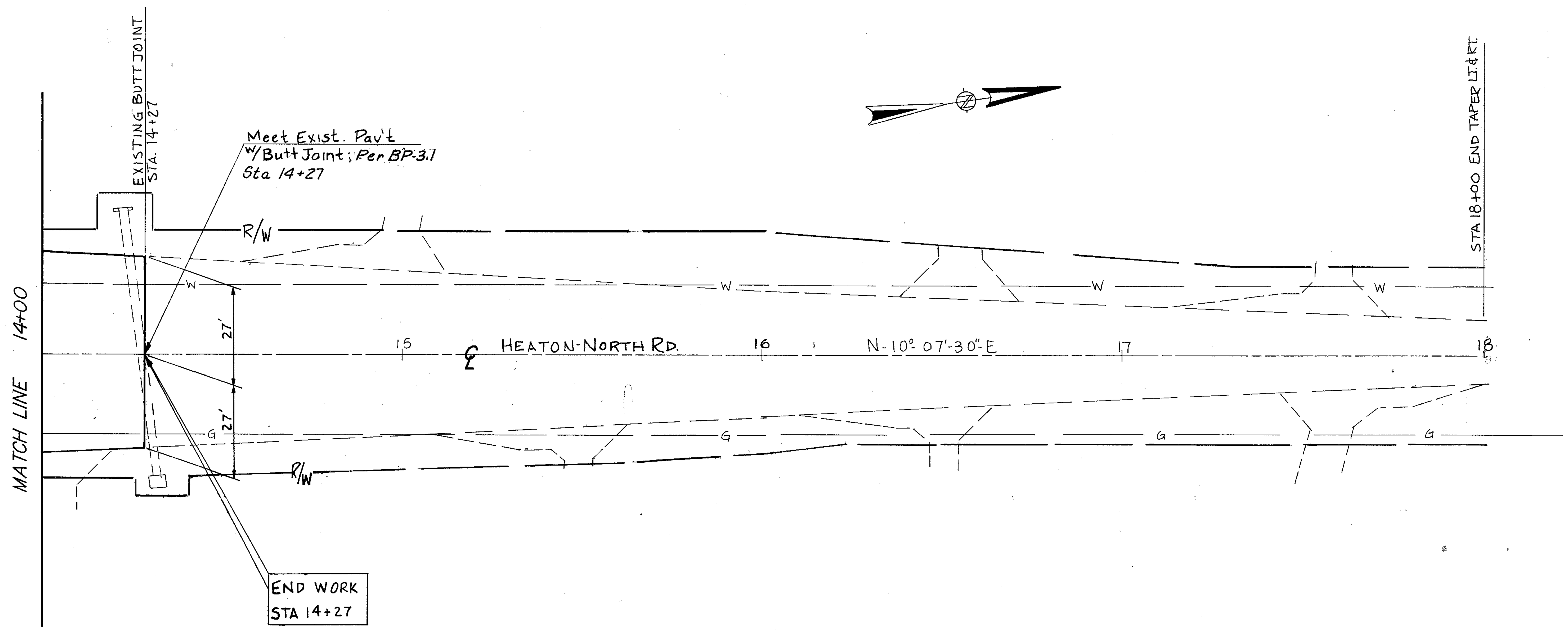
ROADWAY QUANTITIES

Reference No.	Station To Station	Side									
TOTALS											

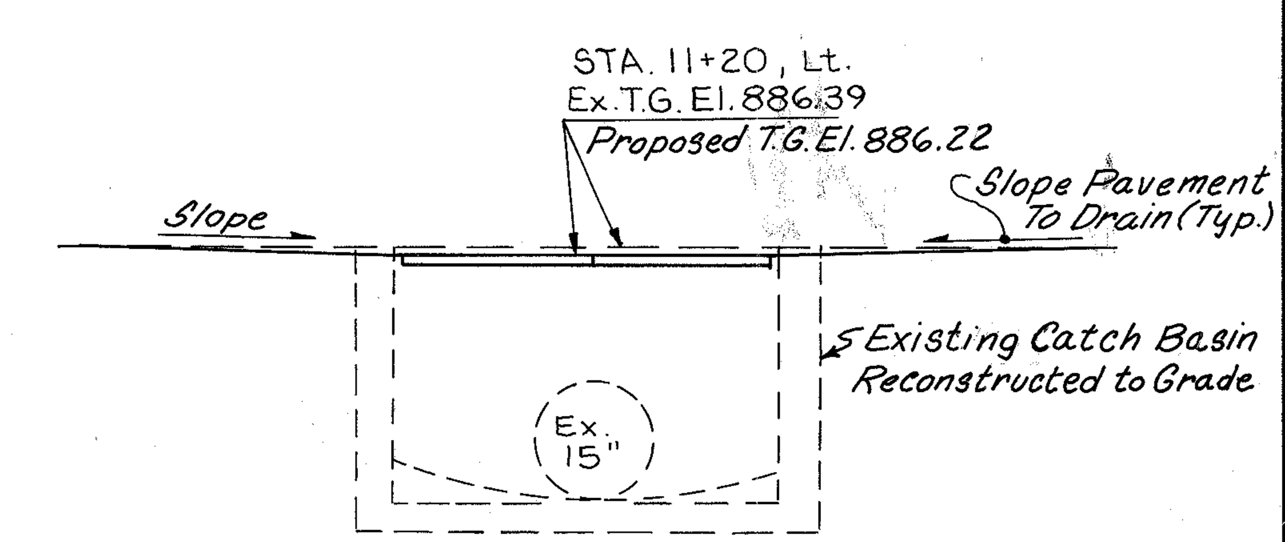
	BY	DATE	REGION	STATE	PROJECT	
Calculated	W.F.	4/93	5	OHIO		
Checked	W.S.	4/93				

TRUMBULL COUNTY
TRU-422-14.82





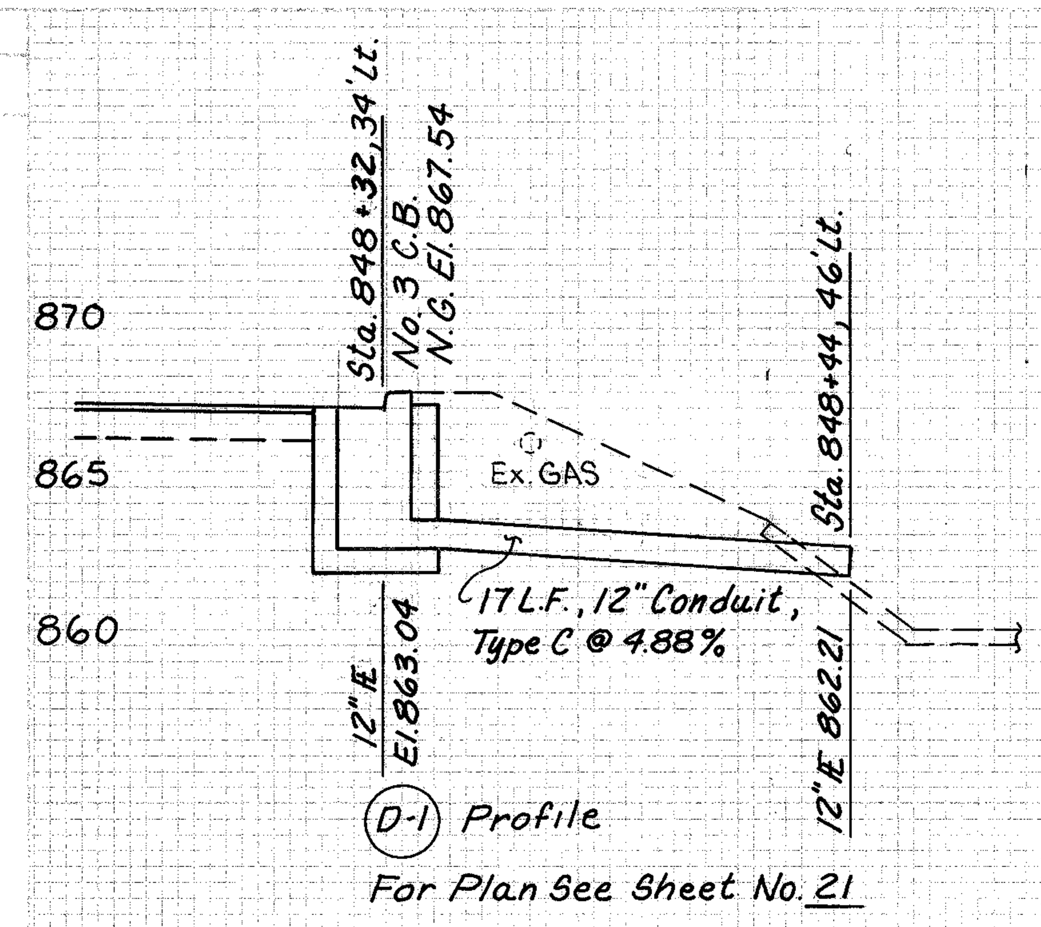
Reference No.	Station To Station	Side	604 Catch Basin Recons. to Grade	202 Pavement Removed	202 Curb Removed	202 Curb & Gutter Removed	202 Removal Miscellaneous (R/R Ties)	203 Excavation	203 Embankment	609 Curb, Type 6	609 Curb & Gutter Type 2	660 Sodding As Per Plan
			Ea.	S.Y.	L.F.	L.F.	Ea.	C.Y.	C.Y.	L.F.	L.F.	S.Y.
A-1	826+24 - 826+58	Lt		23					7			23
A-2	10+66 - 10+95	Rt.						5	7			22
C-1	826+22 - 826+60	Lt				38					38	
C-2	10+60.6 - 10+98.6	Rt			39					39		
R-1	826+28 - 826+54	Lt.					4					
R-2	10+68 - 10+93	Rt					4					
CB-1	11+20	Lt.	1									
TOTALS			1	23	39	38	8	5	14	39	38	45

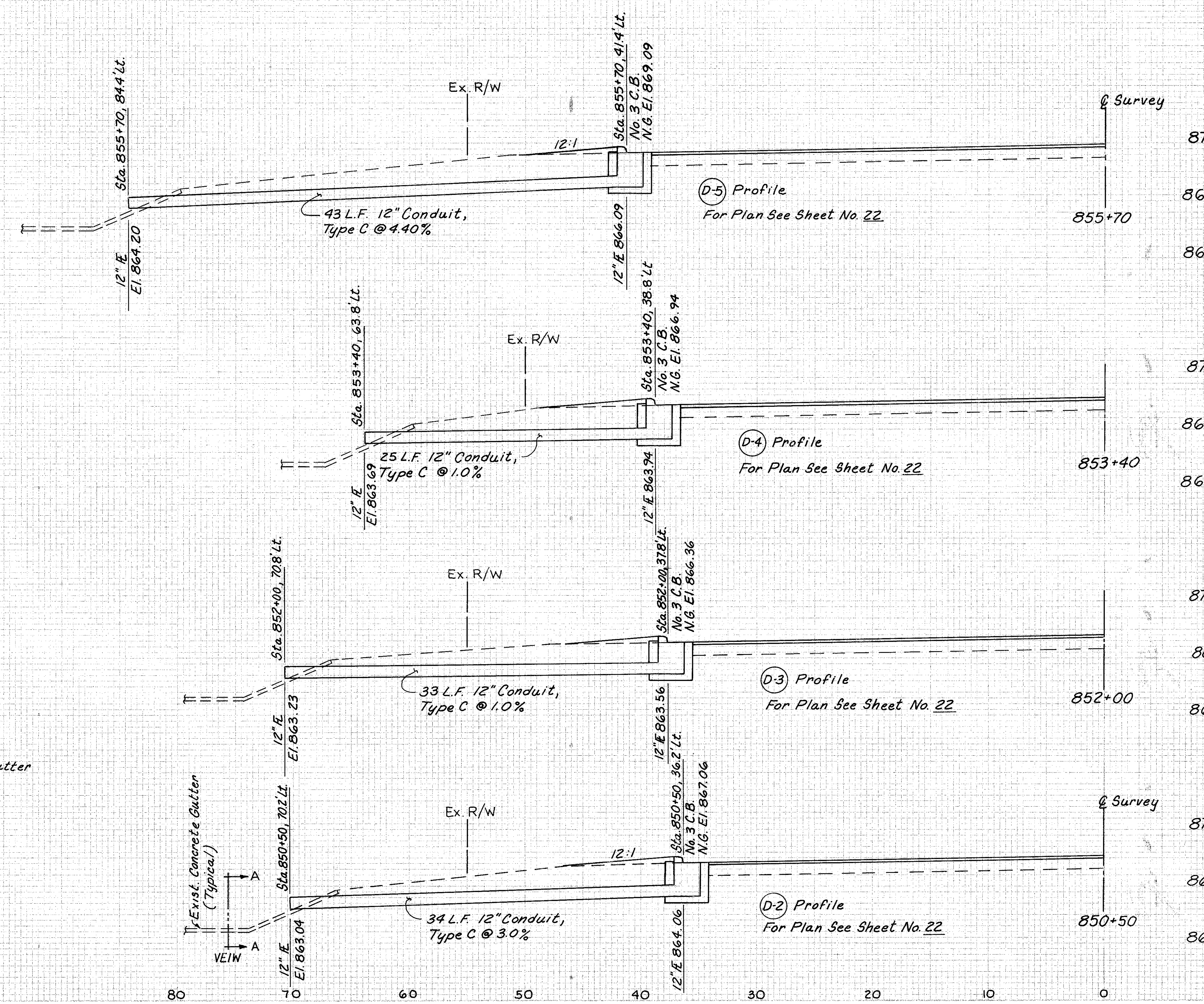


CB-1 DETAIL
N.T.S.

HEATON-NORTH RD. PLAN – STA. 10+00 to STA. 18+00

TRUMBULL COUNTY
TRU-442-14.82

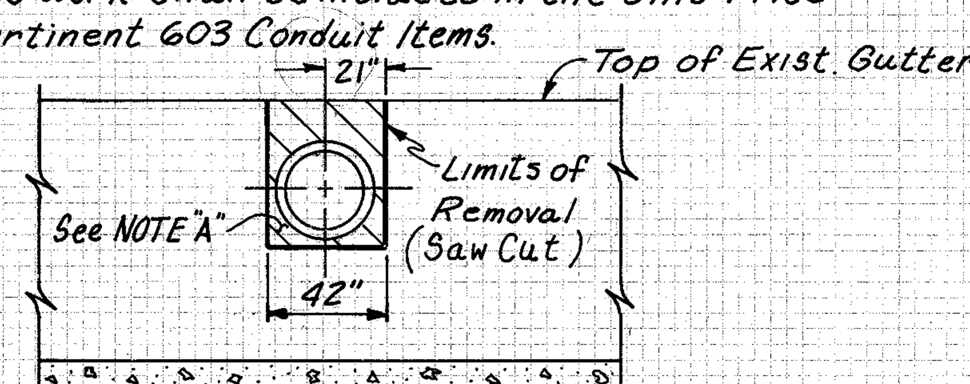




NOTE "A"

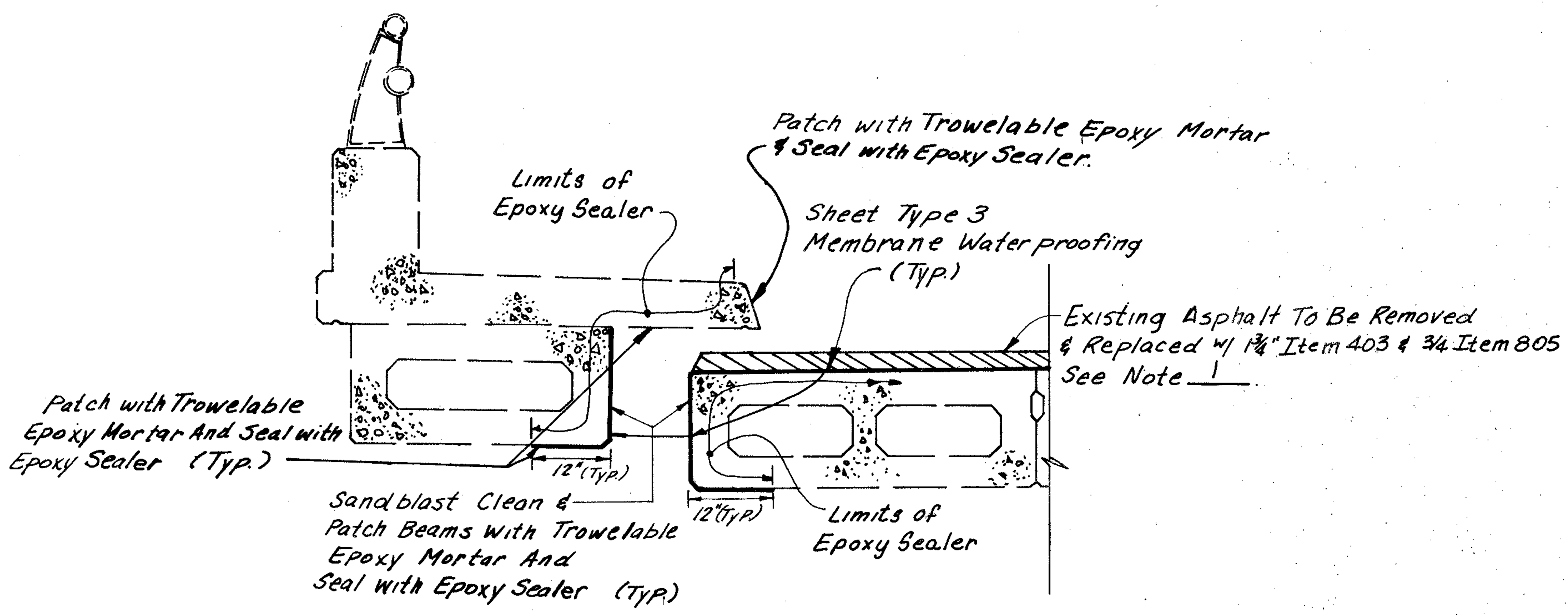
The Contractor shall remove the existing Concrete Paved Gutter encountered to place new sewers. A neat joint shall be saw cut at the limits of removal. After the new sewer conduits are installed, void areas of concrete gutter around the new pipe shall be filled with concrete to match surrounding areas.

Payment for all materials, labor and equipment to accomplish this work shall be included in the Unit Price Bid for the Pertinent 603 Conduit Items.



VEIW A-A
Typical

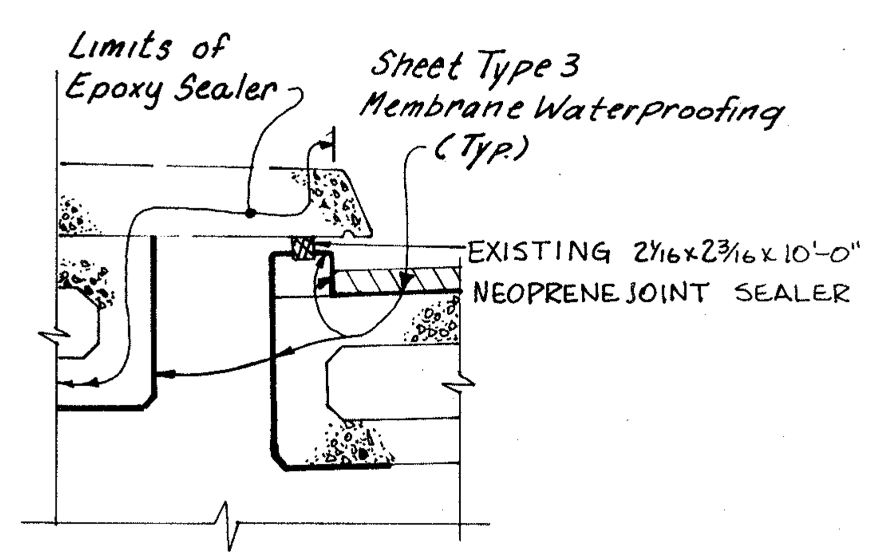
DRAINAGE PROFILES



Section A-A

Waterproofing Detail

(Typical)
See Sheet No. 20



Detail "A"
This Sheet

NOTES

1) ITEM 254 PAVEMENT PLANING BITUMINOUS WHEN PLANING PRESTRESSED BOX BEAM STRUCTURES CONTRACTOR SHALL ONLY GRIND WITHIN 1/2" OF THE SURFACE OF THE STRUCTURE. THE REMAINING ASPHALT AND WATERPROOFING SHALL BE REMOVED USING HAND TOOLS. THE CONTRACTOR SHALL BE CAUTIOUS WHEN REMOVING ASPHALT AND WATERPROOFING SO THAT SURFACE IS NOT DAMAGED, ANY DAMAGE INCURRED SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

2) ITEM SPECIAL MEMBRANE WATERPROOFING, SHEET TYPE 3 ON PRESTRESSED BOX BEAMS WITH APPROACH SLABS SHALL EXTEND 2 FEET BEYOND DECK ONTO EACH APPROACH SLAB. SEE PROPOSAL FOR SURFACE PREPARATION, APPLICATION RATES, MATERIAL REQUIREMENT AND APPLICATION PROCEDURES.

3) WATERPROOFING BRIDGE DECK WITH MEMBRANE WATERPROOFING SHEET TYPE 3 SHALL EXTEND FROM OUTSIDE FACE TO OUTSIDE FACE OF THE DECK BEAMS, AND UP TO THE 2-1/16" X 2-3/16" NEOPRENE SEAL AT PIERS AND ABUTMENTS FOR THE FULL LENGTH OF THE BRIDGE DECK. SEE DETAIL "A". ON STRUCTURE 16.07 THE LATERAL LIMITS SHALL BE FROM STEEL DRIP STRIP TO FACE OF CURB.

4) ITEM SPECIAL PATCHING CONCRETE STRUCTURES WITH TROWELABLE EPOXY MORTAR PROPOSED PATCH AREAS ARE ON THE STRUCTURE ELEMENT:
FOR BRIDGE #15.90
- FACE OF CURBS
- THE AREA EXPOSED UNDER SIDEWALKS
- EXPOSED VERTICAL FACE AND BOTTOM OF SIDEWALK BEAMS
- EXPOSED VERTICAL FACE AND BOTTOM OF DECKBEAMS

FOR STRUCTURE #16.07
- FACE OF CURBS

AND AS SHOWN ON PLANS
SAND BLASTING OF EXISTING ASPHALT CEMENT ON VERTICAL SIDES SHALL BE CONSIDERED PART OF SURFACE PREPARATION UNDER THIS ITEM.

SEE PROPOSAL FOR SURFACE PREPARATION, REQUIREMENTS, APPLICATION RATES AND PROCEDURES, AND MATERIAL REQUIREMENTS.

5) ITEM SPECIAL SEALING OF CONCRETE SURFACES (EPOXY) AN EPOXY CONCRETE SEALER SHALL BE APPLIED TO THE FOLLOWING AND AS SHOWN ON THE PLANS:

FOR BRIDGE #15.90
- FACE OF CURBS
- THE AREA EXPOSED UNDER SIDEWALKS
- EXPOSED VERTICAL FACE AND 12" ON BOTTOM SIDE OF SIDEWALK BEAMS
- EXPOSED VERTICAL FACE AND 12" ON BOTTOM SIDE OF DECK BEAMS

FOR STRUCTURE #16.07
- FACE OF CURB

AND AS SHOWN ON PLANS
SEE PROPOSAL FOR SURFACE PREPARATION, REQUIREMENT, APPLICATION RATES AND PROCEDURES, AND MATERIAL REQUIREMENTS.

6) ITEM SPECIAL FIELD PAINTING OF EXISTING STEEL, SYSTEM OZEU ALL EXISTING PILE CASINGS SHALL BE PREPARED AND PAINTED USING SYSTEM OZEU. LIMITS OF PAINTING SHALL EXTEND FROM BOTTOM OF PIER CAPS TO EXISTING WATERLINE OR EXISTING GROUND. SEE PROPOSAL NOTE.

7) ITEM SPECIAL STEEL DRIP STRIP AFTER THE DECK IS SCARIFIED AND BEFORE ASPHALT OVERLAY IS PLACED, A STEEL DRIP STRIP, AS DETAILED, SHALL BE INSTALLED ALONG THE FULL LENGTH OF THE LEFT SIDE OF STRUCTURE #16.07. THE STRIP SHALL BE FASTENED AT 3' C/C MAXIMUM WITH NO. 10 STAINLESS STEEL SCREWS AND EXPANSION ANCHORS. WHERE SPLICES ARE REQUIRED, THE INDIVIDUAL PIECES SHALL BE BUTTED TIGHTLY TOGETHER, NOT LAPPED. STAINLESS STEEL SHALL BE 20 GAUGE ASTM A 167, TYPE 304, MILL FINISH.

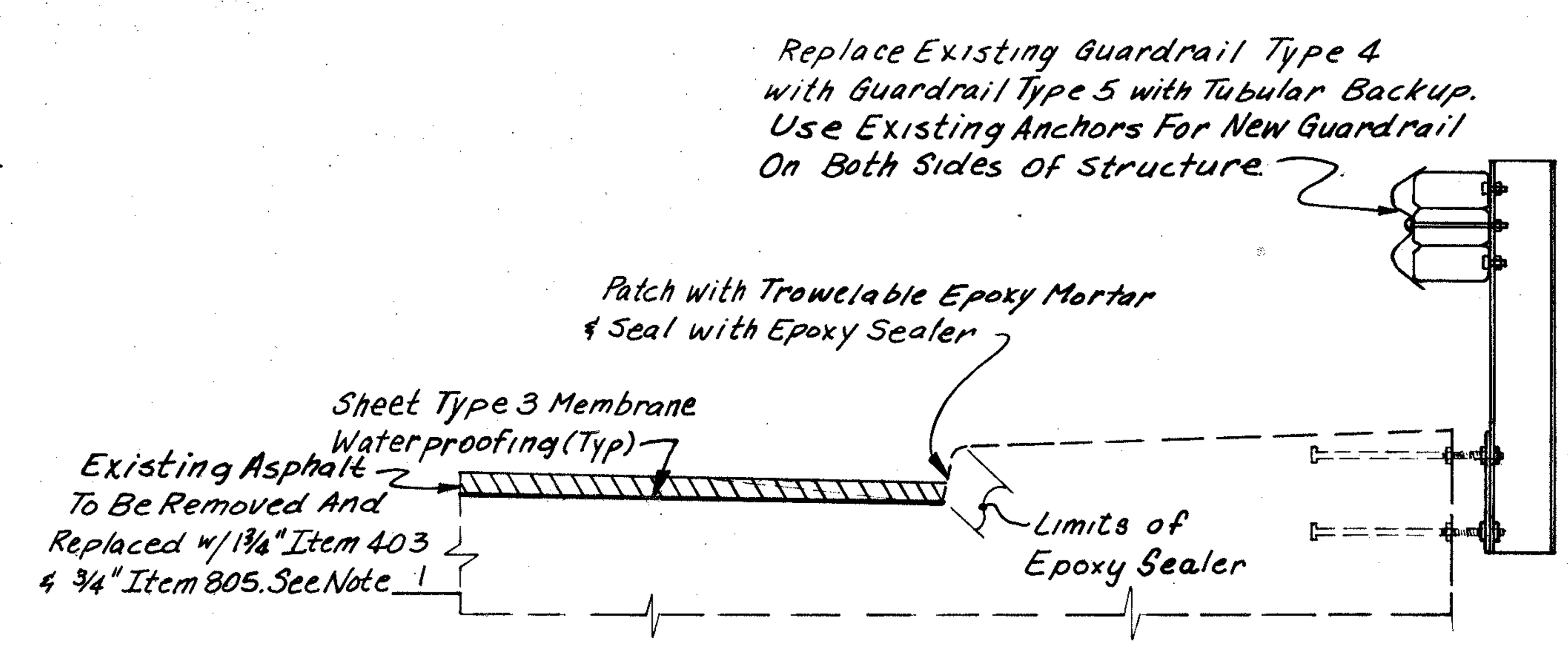
PAYMENT SHALL BE AT THE CONTRACT BID PRICE FOR ITEM SPECIAL, LIN. FT., STEEL DRIP STRIP, AND SHALL INCLUDE ALL MATERIALS, LABOR; TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE ITEM.

STRUCTURE QUANTITIES

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION
SPEC.	51267502	132	SQ.YD.	SEALING OF CONCRETE SURFACES, EPOXY *
SPEC.	51400100	LUMP	LUMP	SURFACE PREPARATION OF EXISTING STEEL, SYSTEM OZEU *
SPEC.	51400200	LUMP	LUMP	FIELD PAINTING OF EXISTING STEEL, PRIME COAT, SYSTEM OZEU *
SPEC.	51400300	LUMP	LUMP	FIELD PAINTING OF EXISTING STEEL, INTERMEDIATE COAT, SYSTEM OZEU *
SPEC.	51400400	LUMP	LUMP	FIELD PAINTING OF EXISTING STEEL, FINISH COAT, SYSTEM OZEU *
SPEC.	51911504	789	SQ FT.	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR *
SPEC.	51267030	1064	SQ.YD.	MEMBRANE WATERPROOFING, SHEET TYPE 3 (SEE PROPOSAL NOTE)
SPEC	51822200	10.5	SQ FT.	STEEL DRIP STRIP

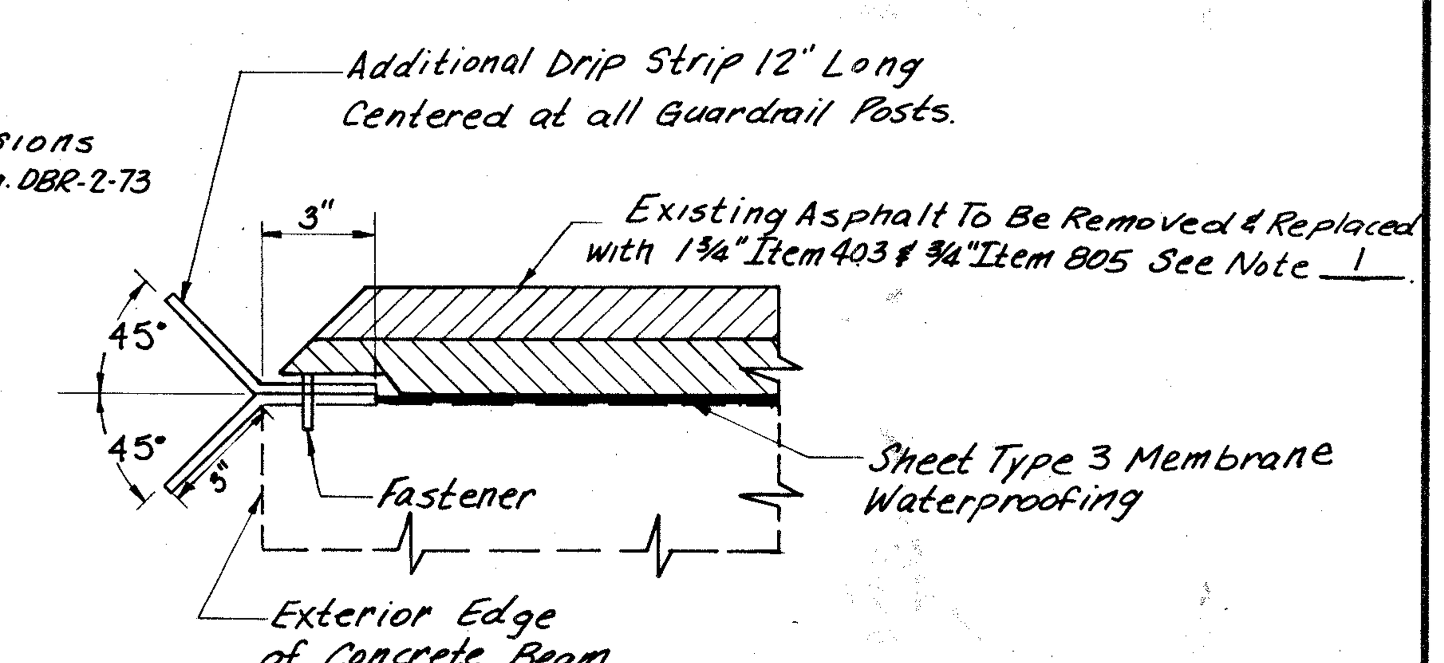
Quantities Carried to Sheet No. 10

* See proposal note



Waterproofing and Guardrail Detail

Section B-B
See Sheet No. 21



Typical Drip Strip Detail

Section C-C
(N.T.S.)
See Sheet No. 21

	BY	DATE	REGION	STATE	PROJECT
Calculated	W.F.	5/93	5	OHIO	
Checked	W.S.	5/93			

TRUMBULL COUNTY
TRU-422-14.82

PAVEMENT MARKING SUMMARY

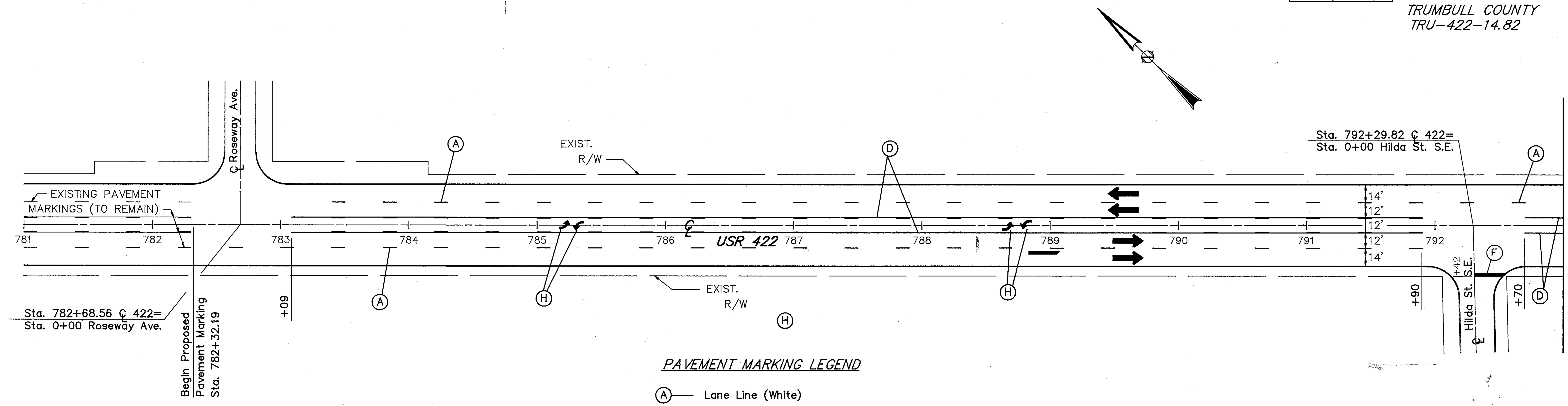
LOCATION BY STATION	SIDE OF CENTERLINE	ITEM 644 PAVEMENT MARKING (A) LANE LINE	(C) CENTERLINE DOUBLE SOLID	(D) CENTERLINE DOUBLE SOLID & DASHED	(E) CHANNELIZING LINE	(F) STOP LINE	(G) TRANSVERSE LINE	(H) LANE ARROWS	(J) WORD ON PAVEMENT, 72"
		Mi.	Mi.	Mi.	L.F.	L.F.	L.F.	EA.	EA.
781+00-805+00	Lt.&Rt.	0.86	—	0.80	—	24	—	8	—
805+00-825+77.12	Lt.&Rt.	0.76	0.11	0.60	804	50	102	11	5
8+65-10+00 (North Rd.)	Lt.	0.02	0.02	—	91	—	—	1	1
10+00-14+27 (North Rd.)	Lt.	0.05	—	—	178	40	—	1	1
SUBTOTAL (WARREN)		1.69	0.13	1.40	1073	114	102	21	7
825+77.12-829+00	Lt.&Rt.	0.10	0.05	—	606	50	—	6	6
8+65-10+00 (North Rd.)	Rt.	—	—	—	52	40	—	—	—
10+00-14+27 (North Rd.)	Rt.	—	0.10	—	—	—	213	—	—
829+00-853+00	Lt.&Rt.	0.78	0.16	0.38	1089	258	—	13	7
853+00-877+00	Lt.&Rt.	0.75	0.42	0.01	2967	498	459	30	19
877+00-901+00	Lt.&Rt.	0.77	0.36	0.19	2188	368	315	20	10
901+00-920+00	Lt.&Rt.	0.69	—	0.69	—	—	—	10	—
SUBTOTAL (NILES)		3.09	1.09	1.27	6902	1214	987	77	40
SUBTOTALS		4.78	1.22	2.67	7975	1328	1089	100	49
TOTALS		4.78	3.89		7975	1328	1089	100	49

LINE SPECIFICATIONS

(A)	LANE LINE 4" — 10' / 30' / 10' / 30' / 10' / 30' / 10'; 4"
(C)	CENTERLINE, SOLID DOUBLE — 4" / 4" / 4"
(D)	CENTERLINE, DOUBLE SOLID & DASHED — 4" / 4" / 4"
(E)	CHANNELIZING LINE, WHITE, — 4"
(F)	STOP LINE, 24" — 24"
(G)	TRANSVERSE LINE, 24", YELLOW — 24"
(H)	LANE ARROW AS PER TC-71.10
(J)	72" ONLY AS PER TC-71.10

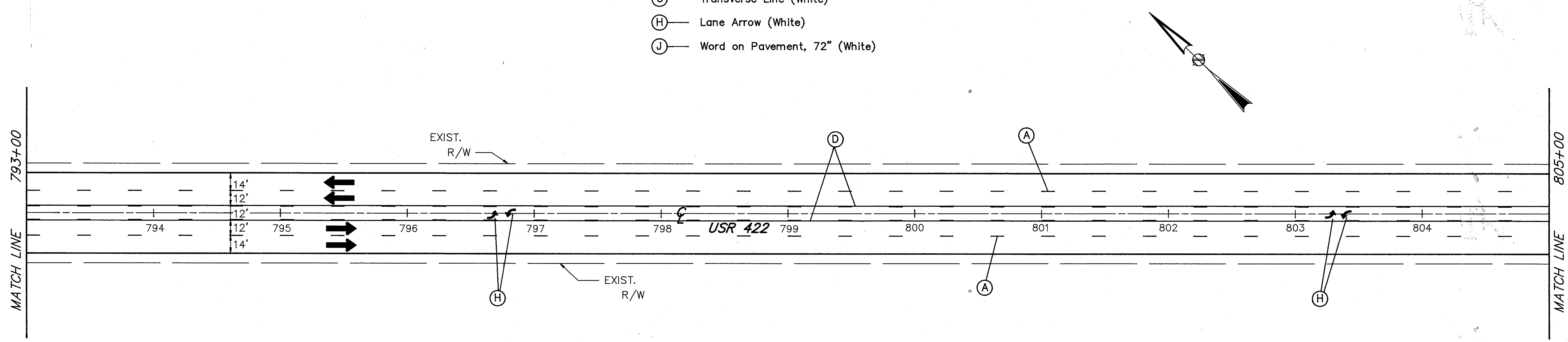
	BY	DATE	REGION	STATE	PROJECT	
Calculated	C.S.K.	11/92	5	OHIO		
Checked	R.J.Z.	12/92				

TRUMBULL COUNTY
TRU–422–14.82



PAVEMENT MARKING LEGEND

- Ⓐ— Lane Line (White)
- Ⓑ— Edge Line (White)
- Ⓒ— Center Line, Double, Solid (Yellow)
- Ⓓ— Center Line, Double, Solid and Dashed (Yellow)
- Ⓔ— Channelizing Line (White)
- Ⓕ— Stop Line (White)
- Ⓖ— Transverse Line (White)
- Ⓗ— Lane Arrow (White)
- Ⓙ— Word on Pavement, 72" (White)



40 20 0 40
SCALE IN FEET

PAVEMENT MARKING PLAN – STA. 781+00 to STA. 805+00

	BY DATE	REGION	STATE	PROJECT	
Calculated	C.S.K. 11/92	5	OHIO		
Checked	R.J.Z. 11/92				

TRUMBULL COUNTY
TRU-422-14.82

PAVEMENT MARKING PLAN – STA.805+00 to STA.829+00

	BY	DATE	REGION	STATE	PROJECT	
Calculated	C.S.K.	11/92	5	OHIO		
Checked	R.J.Z.	12/92				

TRUMBULL COUNTY
TRU-422-14.82

PAVEMENT MARKING PLAN – STA.829+00 to STA.853+00

	BY	DATE	REGION	STATE	PROJECT
Calculated	J.C.	12/92	5	OHIO	
Checked	R.J.Z.	12/92			

TRUMBULL COUNTY
TRU-422-14.82

40 20 0 40
SCALE IN FEET

SPLAN4 1=40 4-28-93

PAVEMENT MARKING PLAN – STA.853+00 to STA.877+00

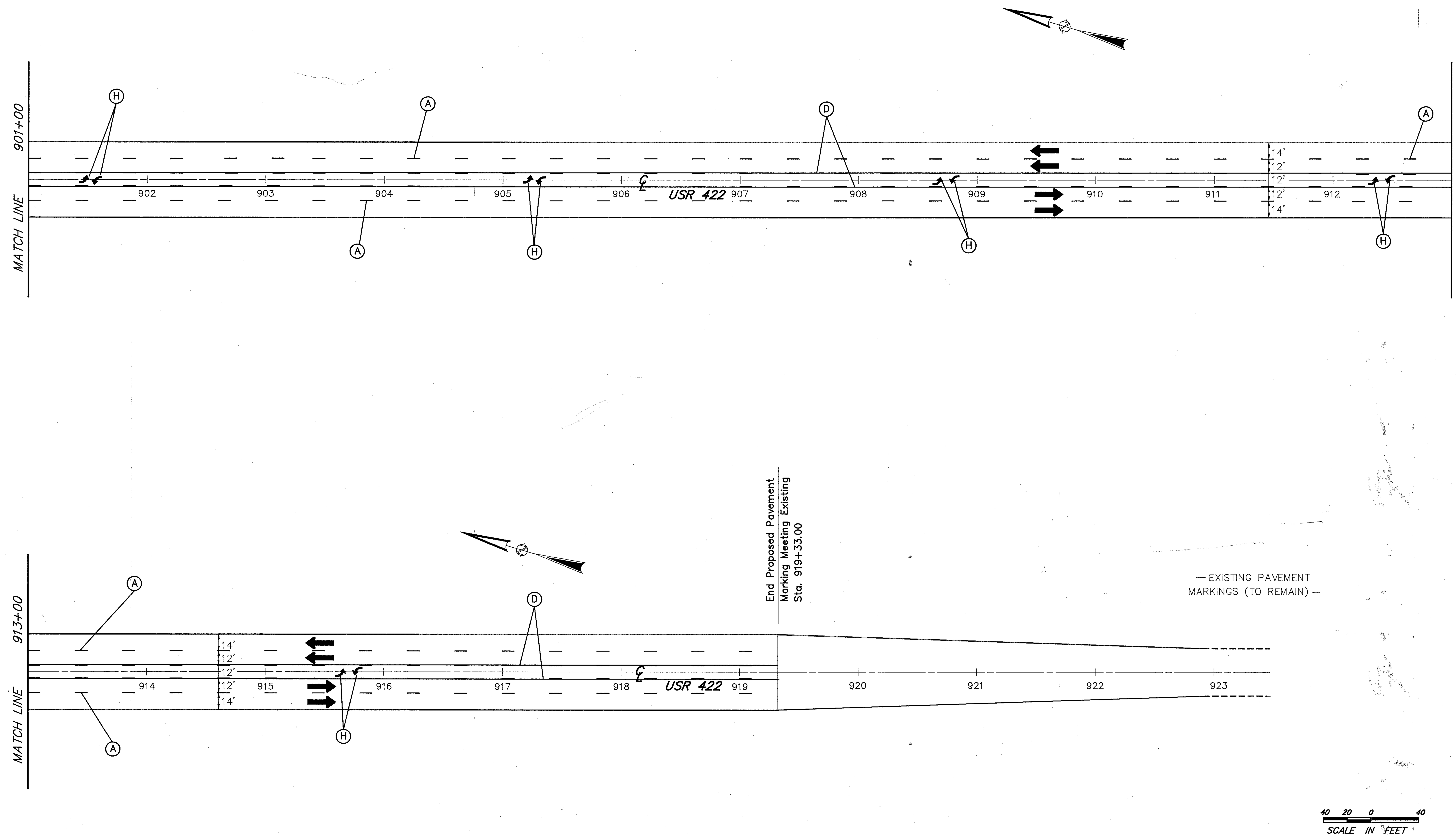
	BY	DATE	REGION	STATE	PROJECT
Calculated	J.C.	12/92	5	OHIO	
Checked	R.J.Z.	12/92			

TRUMBULL COUNTY
TRU-422-14.82

PAVEMENT MARKING PLAN – STA.877+00 to STA.901+00

	BY	DATE	REGION	STATE	PROJECT	
Calculated	C.S.K.	11/92	5	OHIO		
Checked	R.J.Z.	12/92				

TRUMBULL COUNTY
TRU-422-14.82



PAVEMENT MARKING PLAN – STA.901+00 to STA.923+00