CONTRACT: ID: W-5313

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	46136.1.1 (W-5313)	1	132

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
46136.1.1	STP-1221(15)	P.E.
		R/W & UTIL.

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT

ROADWAY SUBSURFACE INVESTIGATION

PROJ. REFERENCE NO. 46136.1.1 (W-5313) F.A. PROJ. STP-1221(15)

COUNTY ROWAN

PROJECT DESCRIPTION SR 1221 (OLD BEATTY FORD ROAD) FROM SR 1337 (LENTZ ROAD) TO SR 2335 (LOWER STONE CHURCH ROAD)

INVENTORY

CONTENTS

CAUTION NOTICE

THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WERE MADE FOR THE PURPOSE OF STUDY, PLANNING, AND DESIGN, AND NOT FOR CONSTRUCTION OR PAY PURPOSES. THE VARIOUS FIELD BORING LOGS, ROCK CORES, AND SOIL TEST DATA AVAILABLE MAY BE REVIEWED OR INSPECTED IN RALEIGH BY CONTACTING THE N. C. DEPARTMENT OF TRANSPORTATION, GEOTECHNICAL ENGINEERING UNIT AT (919) 707-6850. NEITHER THE SUBSURFACE PLANS AND REPORTS, NOR THE FIELD BORING LOGS, ROCK CORES, OR SOIL TEST DATA ARE PART OF THE CONTRACT.

GENERAL SOIL AND ROCK STRATA DESCRIPTIONS AND INDICATED BOUNDARIES ARE BASED ON A GEOTECHNICAL INTERPRETATION OF ALL AVAILABLE SUBSURFACE DATA AND MAY NOT NECESSARILY REFLECT THE ACTUAL SUBSURFACE CONDITIONS BETWEEN BORINGS OR BETWEEN SAMPLED STRATA WITHIN THE BOREHOLE. THE LABORATORY SAMPLE DATA AND THE IN SITU (IN-PLACE) TEST DATA CAN BE RELIED ON ONLY TO THE DEGREE OF RELIABILITY INHERENT IN THE STANDARD TEST METHOD. THE OBSERVED WATER LEVELS OR SOIL MOISTURE CONDITIONS INDICATED IN THE SUBSURFACE INVESTIGATIONS ARE AS RECORDED AT THE TIME OF THE INVESTIGATION. THESE WATER LEVELS OR SOIL MOISTURE CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS INCLUDING TEMPERATURES, PRECIPITATION, AND WIND, AS WELL AS OTHER NON-CLIMATIC FACTORS.

THE BIDDER OR CONTRACTOR IS CAUTIONED THAT DETAILS SHOWN ON THE SUBSURFACE PLANS ARE PRELIMINARY ONLY AND IN MANY CASES THE FINAL DESIGN DETAILS ARE DIFFERENT. FOR BIDDING AND CONSTRUCTION PURPOSES, REFER TO THE CONSTRUCTION PLANS AND DOCUMENTS FOR FINAL DESIGN INFORMATION ON THIS PROJECT. THE DEPARTMENT DOES NOT WARRANT OR GUARANTEE THE SUFFICIENCY OR ACCURACY OF THE INVESTIGATION MADE, NOR THE INTERPRETATIONS MADE, OR OPINION OF THE DEPARTMENT AS TO THE TYPE OF MATERIALS AND CONDITIONS TO BE ENCOUNTERED. THE BIDDER OR CONTRACTOR IS CAUTIONED TO MAKE SUCH INDEPENDENT SUBSURFACE INVESTIGATIONS AS HE DEEMS NECESSARY TO SATISFY HIMSELF AS TO CONDITIONS TO BE ENCOUNTERED ON THIS PROJECT. THE CONTRACTOR SHALL HAVE NO CLAIM FOR ADDITIONAL COMPENSATION OR FOR AN EXTENSION OF TIME FOR ANY REASON RESULTING FROM THE ACTUAL CONDITIONS ENCOUNTERED AT THE SITE DIFFERING FROM THOSE INDICATED IN THE SUBSURFACE INFORMATION.

PERSONNEL

R. TOOTHMAN

G. LOWDERMILK

INVESTIGATED BY D. GOODNIGHT

CHECKED BY T. WELLS

SUBMITTED BY KLEINFELDER

DATE JUNE 2014

NORTH CAROLINA PROFESSIONAL SEAL 37998 ENGINEER THOMAS R. WELLS 6/18/14

DRAWN BY: W. FELDER

NOTE - THE INFORMATION CONTAINED HEREIN IS NOT IMPLIED OR GUARANTEED BY THE N. C. DEPARTMENT OF TRANSPORTATION AS BEING ACCURATE NOR IT IS CONSIDERED TO BE PART OF THE PLANS, SPECIFICATIONS, OR CONTRACT FOR THE PROJECT.

NOTE - BY HAVING REQUESTED THIS INFORMATION THE CONTRACTOR SPECIFICALLY WAIVES ANY CLAIMS FOR INCREASED COMPENSATION OR EXTENSION OF TIME BASED ON DIFFERENCES BETWEEN THE CONDITIONS INDICATED HEREIN AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

PROJECT REFERENCE NO.	SHEET NO.
46136.1.1 (W-5313)	2 OF 132

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT

SUBSURFACE INVESTIGATION

SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

SOIL DESCRIPTION

SOIL IS CONSIDERED TO BE THE UNCONSOLIDATED, SEMI-CONSOLIDATED, OR WEATHERED EARTH MATERIALS THAT CAN BE PENETRATED WITH A CONTINUOUS FLIGHT POWER AUGER, AND YIELD LESS THAN 100 BLOWS PER FOOT ACCORDING TO STANDARD PENETRATION TEST (AASHTO T206, ASTM D-1586). SOIL CLASSIFICATION IS BASED ON THE AASHTO SYSTEM. BASIC DESCRIPTIONS GENERALLY SHALL INCLUDE: CONSISTENCY, COLOR, TEXTURE, MOISTURE, AASHTO CLASSIFICATION, AND OTHER PERTINENT FACTORS SUCH AS MINERALOGICAL COMPOSITION, ANGULARITY, STRUCTURE, PLASTICITY, ETC. EXAMPLE:

VERY STIFF, GRAY, SILTY CLAY, MOIST WITH INTERBEDDED FINE SAND LAYERS, HIGHLY PLASTIC, A-7-6

SOIL LEGEND AND AASHTO CLASSIFICATION

GENERAL CLASS.	GRANULAR MATERIALS (≤ 35% PASSING #200)							SILT-CLAY MATERIALS (> 35% PASSING #200)				ORGANIC MATERIALS		
GROUP	A-1		A-3	A-2				A-4	A-5	A-6	A-7	A-1, A-2	A-4, A-5	
CLASS.	A-1-a	A-1-b		A-2-4	A-2-5	A-2-6	A-2-7				A-7-5, A-7-6	A-3	A-6, A-7	
SYMBOL														
% PASSING #10	50 MX											GRANULAR SOILS	SILT-CLAY SOILS	MUCK, PEAT
#40	30 MX	50 MX	51 MN											
#200	15 MX	25 MX	10 MX	35 MX	35 MX	35 MX	35 MX	36 MN	36 MN	36 MN	36 MN			
LIQUID LIMIT	6 MX		NP	40 MX	41 MN	40 MX	41 MN	40 MX	41 MN	40 MX	41 MN	SOILS WITH LITTLE OR MODERATE AMOUNTS OF ORGANIC MATTER		HIGHLY ORGANIC SOILS
PLASTIC INDEX				10 MX	10 MX	11 MN	11 MN	10 MX	10 MX	11 MN	11 MN			
GROUP INDEX	0		0	0		4 MX		8 MX	12 MX	16 MX	No MX			
USUAL TYPES OF MAJOR MATERIALS	STONE FRAGS. GRAVEL, AND SAND		FINE SAND	SILTY OR CLAYEY GRAVEL AND SAND				SILTY SOILS		CLAYEY SOILS				
GEN. RATING AS A SUBGRADE	EXCELLENT TO GOOD							FAIR TO POOR				FAIR TO POOR	POOR	UNSUITABLE

PI OF A-7-5 SUBGROUP IS ≤ LL - 30 ; PI OF A-7-6 SUBGROUP IS > LL - 30

CONSISTENCY OR DENSENESS

PRIMARY SOIL TYPE	COMPACTNESS OR CONSISTENCY	RANGE OF STANDARD PENETRATION RESISTENCE (N-VALUE)	RANGE OF UNCONFINED COMPRESSIVE STRENGTH ($TONS/FT^2$)
GENERALLY GRANULAR MATERIAL (NON-COHESIVE)	VERY LOOSE	<4	N/A
	LOOSE	4 TO 10	
	MEDIUM DENSE	10 TO 30	
	DENSE	30 TO 50	
	VERY DENSE	>50	
GENERALLY SILT-CLAY MATERIAL (COHESIVE)	VERY SOFT	<2	<0.25
	SOFT	2 TO 4	0.25 TO 0.50
	MEDIUM STIFF	4 TO 8	0.5 TO 1.0
	STIFF	8 TO 15	1 TO 2
	VERY STIFF	15 TO 30	2 TO 4
	HARD	>30	>4

TEXTURE OR GRAIN SIZE

U.S. STD. SIEVE SIZE	4	10	40	60	200	270
OPENING (MM)	4.76	2.00	0.42	0.25	0.075	0.053

BOULDER (BLDR.)	COBBLE (COB.)	GRAVEL (GR.)	COARSE SAND (CSE. SD.)	FINE SAND (F SD.)	SILT (SL.)	CLAY (CL.)

GRAIN SIZE	MM	305	75	2.0	0.25	0.05	0.005
	IN.	12	3				

SOIL MOISTURE - CORRELATION OF TERMS

SOIL MOISTURE SCALE (ATTERBERG LIMITS)	FIELD MOISTURE DESCRIPTION	GUIDE FOR FIELD MOISTURE DESCRIPTION
	- SATURATED - (SAT.)	USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TABLE
LL — LIQUID LIMIT (PLASTIC RANGE (PI))		
	- WET - (W)	SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE
PL — PLASTIC LIMIT		
	- MOIST - (M)	SOLID; AT OR NEAR OPTIMUM MOISTURE
OM — OPTIMUM MOISTURE		
SL — SHRINKAGE LIMIT		
	- DRY - (D)	REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE

PLASTICITY

	PLASTICITY INDEX (PI)	DRY STRENGTH
NONPLASTIC	0-5	VERY LOW
LOW PLASTICITY	6-15	SLIGHT
MED. PLASTICITY	16-25	MEDIUM
HIGH PLASTICITY	26 OR MORE	HIGH

COLOR

DESCRIPTIONS MAY INCLUDE COLOR OR COLOR COMBINATIONS (TAN, RED, YELLOW-BROWN, BLUE-GRAY). MODIFIERS SUCH AS LIGHT, DARK, STREAKED, ETC. ARE USED TO DESCRIBE APPEARANCE.

GRADATION

WELL GRADED - INDICATES A GOOD REPRESENTATION OF PARTICLE SIZES FROM FINE TO COARSE.
UNIFORM - INDICATES THAT SOIL PARTICLES ARE ALL APPROXIMATELY THE SAME SIZE. (ALSO POORLY GRADED)
GAP-GRADED - INDICATES A MIXTURE OF UNIFORM PARTICLES OF TWO OR MORE SIZES.

ANGULARITY OF GRAINS

THE ANGULARITY OR ROUNDNESS OF SOIL GRAINS IS DESIGNATED BY THE TERMS: ANGULAR, SUBANGULAR, SUBROUNDED, OR ROUNDED.

MINERALOGICAL COMPOSITION

MINERAL NAMES SUCH AS QUARTZ, FELDSPAR, MICA, TALC, KAOLIN, ETC. ARE USED IN DESCRIPTIONS WHENEVER THEY ARE CONSIDERED OF SIGNIFICANCE.

COMPRESSIBILITY

SLIGHTLY COMPRESSIBLE	LIQUID LIMIT LESS THAN 31
MODERATELY COMPRESSIBLE	LIQUID LIMIT EQUAL TO 31-50
HIGHLY COMPRESSIBLE	LIQUID LIMIT GREATER THAN 50

PERCENTAGE OF MATERIAL

ORGANIC MATERIAL	GRANULAR SOILS	SILT - CLAY SOILS
TRACE OF ORGANIC MATTER	2 - 3%	3 - 5%
LITTLE ORGANIC MATTER	3 - 5%	5 - 12%
MODERATELY ORGANIC	5 - 10%	12 - 20%
HIGHLY ORGANIC	>10%	>20%

OTHER MATERIAL	
TRACE	1 - 10%
LITTLE	10 - 20%
SOME	20 - 35%
HIGHLY	35% AND ABOVE

GROUND WATER

- WATER LEVEL IN BORE HOLE IMMEDIATELY AFTER DRILLING
- STATIC WATER LEVEL AFTER 24 HOURS
- PW — PERCHED WATER, SATURATED ZONE, OR WATER BEARING STRATA
- SPRING OR SEEP

MISCELLANEOUS SYMBOLS

- ROADWAY EMBANKMENT (RE) WITH SOIL DESCRIPTION
- SOIL SYMBOL
- ARTIFICIAL FILL (AF) OTHER THAN ROADWAY EMBANKMENT
- INFERRED SOIL BOUNDARY
- INFERRED ROCK LINE
- ALLUVIAL SOIL BOUNDARY
- 25/025 — DIP & DIP DIRECTION OF ROCK STRUCTURES
- SPT / DPT / DMT / VST / PMT — TEST BORING
- AUGER BORING
- CORE BORING
- MW — MONITORING WELL
- PIEZOMETER INSTALLATION
- SLOPE INDICATOR INSTALLATION
- CONE PENETROMETER TEST
- SOUNDING ROD
- TEST BORING W/ CORE
- SPT N-VALUE
- REF — SPT REFUSAL

ABBREVIATIONS

AR - AUGER REFUSAL
BT - BORING TERMINATED
CL. - CLAY
CPT - CONE PENETRATION TEST
CSE. - COARSE
DMT - DILATOMETER TEST
DPT - DYNAMIC PENETRATION TEST
e - VOID RATIO
F - FINE
FOSS. - FOSSILIFEROUS
FRAC. - FRACTURED, FRACTURES
FRAGS. - FRAGMENTS
HI. - HIGHLY
MED. - MEDIUM
MICA. - MICACEOUS
MOD. - MODERATELY
NP - NON PLASTIC
ORG. - ORGANIC
PMT - PRESSUREMETER TEST
SAP. - SAPROLITIC
SD. - SAND, SANDY
SL. - SILT, SILTY
SLI. - SLIGHTLY
TCR - TRICONE REFUSAL
w - MOISTURE CONTENT
V - VERY
VST - VANE SHEAR TEST
WEA. - WEATHERED
γ - UNIT WEIGHT
γ_d - DRY UNIT WEIGHT

SAMPLE ABBREVIATIONS

S - BULK
SS - SPLIT SPOON
ST - SHELBY TUBE
RS - ROCK
RT - RECOMPACTED TRIAXIAL
CBR - CALIFORNIA BEARING RATIO

EQUIPMENT USED ON SUBJECT PROJECT

DRILL UNITS:
- [ ] MOBILE B-___
- [ ] BK-51
- [ ] CME-45C
- [ ] CME-550
- [ ] PORTABLE HOIST
- [X] CME-55
- [ ] _____

ADVANCING TOOLS:
- [ ] CLAY BITS
- [ ] 6" CONTINUOUS FLIGHT AUGER
- [X] 8" HOLLOW AUGERS
- [ ] HARD FACED FINGER BITS
- [ ] TUNG.-CARBIDE INSERTS
- [ ] CASING [ ] W/ ADVANCER
- [ ] TRICONE _____" STEEL TEETH
- [ ] TRICONE _____" TUNG.-CARB.
- [ ] CORE BIT
- [ ] _____

HAMMER TYPE:
- [X] AUTOMATIC [ ] MANUAL

CORE SIZE:
- [ ] -B_____
- [ ] -N_____
- [ ] -H_____

HAND TOOLS:
- [ ] POST HOLE DIGGER
- [ ] HAND AUGER
- [ ] SOUNDING ROD
- [ ] VANE SHEAR TEST
- [ ] _____

ROCK DESCRIPTION

HARD ROCK IS NON-COASTAL PLAIN MATERIAL THAT IF TESTED, WOULD YIELD SPT REFUSAL. AN INFERRED ROCK LINE INDICATES THE LEVEL AT WHICH NON-COASTAL PLAIN MATERIAL WOULD YIELD SPT REFUSAL. SPT REFUSAL IS PENETRATION BY A SPLIT SPOON SAMPLER EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS. IN NON-COASTAL PLAIN MATERIAL, THE TRANSITION BETWEEN SOIL AND ROCK IS OFTEN REPRESENTED BY A ZONE OF WEATHERED ROCK.
ROCK MATERIALS ARE TYPICALLY DIVIDED AS FOLLOWS:

WEATHERED ROCK (WR)	NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT N VALUES > 100 BLOWS PER FOOT IF TESTED.
CRYSTALLINE ROCK (CR)	FINE TO COARSE GRAIN IGNEOUS AND METAMORPHIC ROCK THAT WOULD YIELD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES GRANITE, GNEISS, GABBRO, SCHIST, ETC.
NON-CRYSTALLINE ROCK (NCR)	FINE TO COARSE GRAIN METAMORPHIC AND NON-COASTAL PLAIN SEDIMENTARY ROCK THAT WOULD YEILD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES PHYLLITE, SLATE, SANDSTONE, ETC.
COASTAL PLAIN SEDIMENTARY ROCK (CP)	COASTAL PLAIN SEDIMENTS CEMENTED INTO ROCK, BUT MAY NOT YIELD SPT REFUSAL. ROCK TYPE INCLUDES LIMESTONE, SANDSTONE, CEMENTED SHELL BEDS, ETC.

WEATHERING

FRESH	ROCK FRESH, CRYSTALS BRIGHT, FEW JOINTS MAY SHOW SLIGHT STAINING. ROCK RINGS UNDER HAMMER IF CRYSTALLINE.
VERY SLIGHT (V SLI.)	ROCK GENERALLY FRESH, JOINTS STAINED, SOME JOINTS MAY SHOW THIN CLAY COATINGS IF OPEN, CRYSTALS ON A BROKEN SPECIMEN FACE SHINE BRIGHTLY. ROCK RINGS UNDER HAMMER BLOWS IF OF A CRYSTALLINE NATURE.
SLIGHT (SLI.)	ROCK GENERALLY FRESH, JOINTS STAINED AND DISCOLORATION EXTENDS INTO ROCK UP TO 1 INCH. OPEN JOINTS MAY CONTAIN CLAY. IN GRANITOID ROCKS SOME OCCASIONAL FELDSPAR CRYSTALS ARE DULL AND DISCOLORED. CRYSTALLINE ROCKS RING UNDER HAMMER BLOWS.
MODERATE (MOD.)	SIGNIFICANT PORTIONS OF ROCK SHOW DISCOLORATION AND WEATHERING EFFECTS. IN GRANITOID ROCKS, MOST FELDSPARS ARE DULL AND DISCOLORED, SOME SHOW CLAY. ROCK HAS DULL SOUND UNDER HAMMER BLOWS AND SHOWS SIGNIFICANT LOSS OF STRENGTH AS COMPARED WITH FRESH ROCK.
MODERATELY SEVERE (MOD. SEV.)	ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. IN GRANITOID ROCKS, ALL FELDSPARS DULL AND DISCOLORED AND A MAJORITY SHOW KAOLINIZATION. ROCK SHOWS SEVERE LOSS OF STRENGTH AND CAN BE EXCAVATED WITH A GEOLOGIST'S PICK. ROCK GIVES "CLUNK" SOUND WHEN STRUCK. *IF TESTED, WOULD YIELD SPT REFUSAL*
SEVERE (SEV.)	ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC CLEAR AND EVIDENT BUT REDUCED IN STRENGTH TO STRONG SOIL. IN GRANITOID ROCKS ALL FELDSPARS ARE KAOLINIZED TO SOME EXTENT. SOME FRAGMENTS OF STRONG ROCK USUALLY REMAIN. *IF TESTED, YIELDS SPT N VALUES > 100 BPF*
VERY SEVERE (V SEV.)	ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC ELEMENTS ARE DISCERNIBLE BUT THE MASS IS EFFECTIVELY REDUCED TO SOIL STATUS, WITH ONLY FRAGMENTS OF STRONG ROCK REMAINING. SAPROLITE IS AN EXAMPLE OF ROCK WEATHERED TO A DEGREE SUCH THAT ONLY MINOR VESTIGES OF THE ORIGINAL ROCK FABRIC REMAIN. *IF TESTED, YIELDS SPT N VALUES < 100 BPF*
COMPLETE	ROCK REDUCED TO SOIL. ROCK FABRIC NOT DISCERNIBLE, OR DISCERNIBLE ONLY IN SMALL AND SCATTERED CONCENTRATIONS. QUARTZ MAY BE PRESENT AS DIKES OR STRINGERS. SAPROLITE IS ALSO AN EXAMPLE.

ROCK HARDNESS

VERY HARD	CANNOT BE SCRATCHED BY KNIFE OR SHARP PICK. BREAKING OF HAND SPECIMENS REQUIRES SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK.
HARD	CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN.
MODERATELY HARD	CAN BE SCRATCHED BY KNIFE OR PICK. GOUGES OR GROOVES TO 0.25 INCHES DEEP CAN BE EXCAVATED BY HARD BLOW OF A GEOLOGIST'S PICK. HAND SPECIMENS CAN BE DETACHED BY MODERATE BLOWS.
MEDIUM HARD	CAN BE GROOVED OR GOUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. CAN BE EXCAVATED IN SMALL CHIPS TO PEICES 1 INCH MAXIMUM SIZE BY HARD BLOWS OF THE POINT OF A GEOLOGIST'S PICK.
SOFT	CAN BE GROVED OR GOUGED READILY BY KNIFE OR PICK. CAN BE EXCAVATED IN FRAGMENTS FROM CHIPS TO SEVERAL INCHES IN SIZE BY MODERATE BLOWS OF A PICK POINT. SMALL, THIN PIECES CAN BE BROKEN BY FINGER PRESSURE.
VERY SOFT	CAN BE CARVED WITH KNIFE. CAN BE EXCAVATED READILY WITH POINT OF PICK. PIECES 1 INCH OR MORE IN THICKNESS CAN BE BROKEN BY FINGER PRESSURE. CAN BE SCRATCHED READILY BY FINGERNAIL.

FRACTURE SPACING

TERM	SPACING
VERY WIDE	MORE THAN 10 FEET
WIDE	3 TO 10 FEET
MODERATELY CLOSE	1 TO 3 FEET
CLOSE	0.16 TO 1 FEET
VERY CLOSE	LESS THAN 0.16 FEET

BEDDING

TERM	THICKNESS
VERY THICKLY BEDDED	> 4 FEET
THICKLY BEDDED	1.5 - 4 FEET
THINLY BEDDED	0.16 - 1.5 FEET
VERY THINLY BEDDED	0.03 - 0.16 FEET
THICKLY LAMINATED	0.008 - 0.03 FEET
THINLY LAMINATED	< 0.008 FEET

INDURATION

FOR SEDIMENTARY ROCKS, INDURATION IS THE HARDENING OF THE MATERIAL BY CEMENTING, HEAT, PRESSURE, ETC.

FRIABLE	RUBBING WITH FINGER FREES NUMEROUS GRAINS; GENTLE BLOW BY HAMMER DISINTEGRATES SAMPLE.
MODERATELY INDURATED	GRAINS CAN BE SEPARATED FROM SAMPLE WITH STEEL PROBE; BREAKS EASILY WHEN HIT WITH HAMMER.
INDURATED	GRAINS ARE DIFFICULT TO SEPARATE WITH STEEL PROBE; DIFFICULT TO BREAK WITH HAMMER.
EXTREMELY INDURATED	SHARP HAMMER BLOWS REQUIRED TO BREAK SAMPLE; SAMPLE BREAKS ACROSS GRAINS.

TERMS AND DEFINITIONS

ALLUVIUM (ALLUV.) - SOILS THAT HAVE BEEN TRANSPORTED BY WATER.

AQUIFER - A WATER BEARING FORMATION OR STRATA.

ARENACEOUS - APPLIED TO ROCKS THAT HAVE BEEN DERIVED FROM SAND OR THAT CONTAIN SAND.

ARGILLACEOUS - APPLIED TO ALL ROCKS OR SUBSTANCES COMPOSED OF CLAY MINERALS, OR HAVING A NOTABLE PROPORTION OF CLAY IN THEIR COMPOSITION, AS SHALE, SLATE, ETC.

ARTESIAN - GROUND WATER THAT IS UNDER SUFFICIENT PRESSURE TO RISE ABOVE THE LEVEL AT WHICH IT IS ENCOUNTERED, BUT WHICH DOES NOT NECESSARILY RISE TO OR ABOVE THE GROUND SURFACE.

CALCAREOUS (CALC.) - SOILS THAT CONTAIN APPRECIABLE AMOUNTS OF CALCIUM CARBONATE.

COLLUVIUM - ROCK FRAGMENTS MIXED WITH SOIL DEPOSITED BY GRAVITY ON SLOPE OR AT BOTTOM OF SLOPE.

CORE RECOVERY (REC.) - TOTAL LENGTH OF ALL MATERIAL RECOVERED IN THE CORE BARREL DIVIDED BY TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE.

DIKE - A TABULAR BODY OF IGNEOUS ROCK THAT CUTS ACROSS THE STRUCTURE OF ADJACENT ROCKS OR CUTS MASSIVE ROCK.

DIP - THE ANGLE AT WHICH A STRATUM OR ANY PLANAR FEATURE IS INCLINED FROM THE HORIZONTAL.

DIP DIRECTION (D)IP AZIMUTH) - THE DIRECTION OR BEARING OF THE HORIZONTAL TRACE OF THE LINE OF DIP, MEASURED CLOCKWISE FROM NORTH.

FAULT - A FRACTURE OR FRACTURE ZONE ALONG WHICH THERE HAS BEEN DISPLACEMENT OF THE SIDES RELATIVE TO ONE ANOTHER PARALLEL TO THE FRACTURE.

FISSILE - A PROPERTY OF SPLITTING ALONG CLOSELY SPACED PARALLEL PLANES.

FLOAT - ROCK FRAGMENTS ON SURFACE NEAR THEIR ORIGINAL POSITION AND DISLODGED FROM PARENT MATERIAL.

FLOOD PLAIN (FP) - LAND BORDERING A STREAM, BUILT OF SEDIMENTS DEPOSITED BY THE STREAM.

FORMATION (FM.) - A MAPPABLE GEOLOGIC UNIT THAT CAN BE RECOGNIZED AND TRACED IN THE FIELD.

JOINT - FRACTURE IN ROCK ALONG WHICH NO APPRECIABLE MOVEMENT HAS OCCURRED.

LEDGE - A SHELF-LIKE RIDGE OR PROJECTION OF ROCK WHOSE THICKNESS IS SMALL COMPARED TO ITS LATERAL EXTENT.

LENS - A BODY OF SOIL OR ROCK THAT THINS OUT IN ONE OR MORE DIRECTIONS.

MOTTLED (MOT.) - IRREGULARLY MARKED WITH SPOTS OF DIFFERENT COLORS. MOTTLING IN SOILS USUALLY INDICATES POOR AERATION AND LACK OF GOOD DRAINAGE.

PERCHED WATER - WATER MAINTAINED ABOVE THE NORMAL GROUND WATER LEVEL BY THE PRESENCE OF AN INTERVENING IMPERVIOUS STRATUM.

RESIDUAL (RES.) SOIL - SOIL FORMED IN PLACE BY THE WEATHERING OF ROCK.

ROCK QUALITY DESIGNATION (RQD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE.

SAPROLITE (SAP.) - RESIDUAL SOIL THAT RETAINS THE RELIC STRUCTURE OR FABRIC OF THE PARENT ROCK.

SILL - AN INTRUSIVE BODY OF IGNEOUS ROCK OF APPROXIMATELY UNIFORM THICKNESS AND RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS.

SLICKENSIDE - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT OR SLIP PLANE.

STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPT) - NUMBER OF BLOWS (N OR BPF) OF A 140 LB. HAMMER FALLING 30 INCHES REQUIRED TO PRODUCE A PENETRATION OF 1 FOOT INTO SOIL WITH A 2 INCH OUTSIDE DIAMETER SPLIT SPOON SAMPLER. SPT REFUSAL IS PENETRATION EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS.

STRATA CORE RECOVERY (SREC.) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE.

STRATA ROCK QUALITY DESIGNATION (SRQD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS WITHIN A STRATUM EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE.

TOPSOIL (TS.) - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.

BENCH MARK: BORING ELEVATIONS OBTAINED USING W5313_LS_TIN.TIN
DATED 12/19/13
ELEVATION: N/A FT.

NOTES: FIAD - FILLED IN AFTER DRILLING

REVISED 09/23/09

09/08/99

TIP PROJECT: W-5313

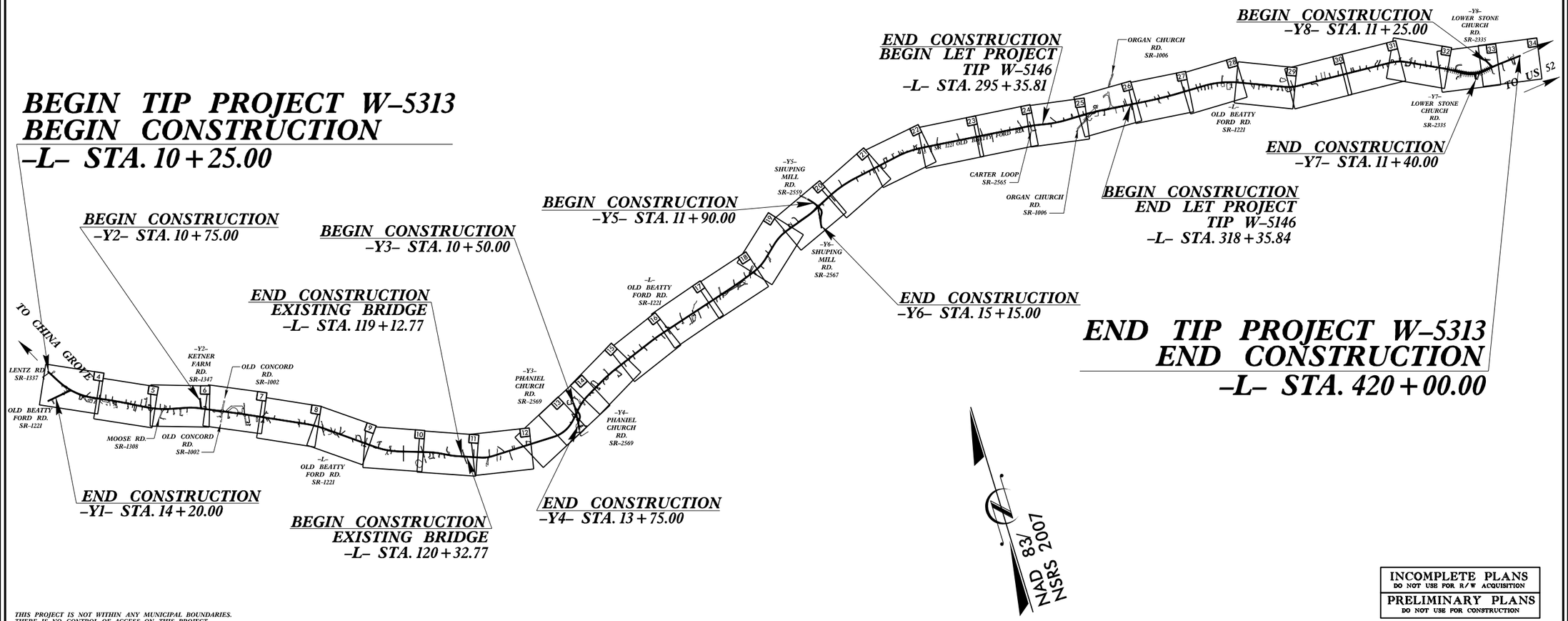
CONTRACT: 46136.1.1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ROWAN COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W-5313	2A	132
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
46136.1.1	STP-1221(15)	P.E.	

LOCATION: SR 1221 (OLD BEATTY FORD ROAD)
FROM SR 1337 (LENTZ ROAD) TO
SR 2335 (LOWER STONE CHURCH ROAD)
TYPE OF WORK: WIDENING, RESURFACING, DRAINAGE, SIGNING



THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.
THERE IS NO CONTROL OF ACCESS ON THIS PROJECT.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2015 = 4334
ADT 2035 = 5667
DHV = 10 %
D = 65 %
T = 8 % *
V = 50 MPH
* TTST = 3 DUAL = 5
FUNC CLASS =
RUAL COLLECTOR
SUB REGIONAL TIER

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT W-5313	=	7.30 MILES
LENGTH OF EXISTING STRUCTURE TIP PROJECT W-5313	=	0.02 MILES
LENGTH OF LET TIP PROJECT W-5146	=	0.44 MILES
TOTAL LENGTH OF TIP PROJECT W-5313	=	7.76 MILES

Prepared In the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
MARCH 21, 2014

LETTING DATE:
SEPTEMBER 15, 2015

TONY HOUSER, PE.
PROJECT ENGINEER

LEE ANN MOORE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ *P.E.*

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ *P.E.*

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION

June 13, 2104
File No. 138804 | GSO14R0146

STATE PROJECT: 46136.1.1 (W-5313)
FEDERAL PROJECT: STP-1221(15)
COUNTY: Rowan
DESCRIPTION: SR 1221 (Old Beatty Ford Road) from SR 1337 (Lentz Road) to SR 2335 (Lower Stone Church Road)

SUBJECT: Geotechnical Report - Inventory

Project Description

This project consists of the proposed 7.4 mile widening of Old Beatty Ford Road (-L-) from Lentz Road to Lower Stone Church Road. This project includes of the reconstruction of portions of the intersections with Lentz Road (-Y1-), Ketner Farm Road (-Y2-), Phaniel Church Road (-Y3- and -Y4-), Shuping Mill Road (-Y5- and -Y6-), and Lower Stone Church Road (-Y7- and -Y8-).

The geotechnical investigation was conducted during January of 2014. One drill machine, a CME-55, with automatic hammers, was used during the investigation. Standard Penetration Tests were performed at each boring location. Representative soil samples were collected for visual classification in the field and selected samples were submitted for laboratory analysis by Kleinfelder, Inc.

The following alignments, totaling 7.8 miles, were investigated.

Line	Stations
-L-	10+25 to 295+35.81
-L-	318+35.84 to 420+00
-Y1-	10+00 to 14+20
-Y2-	10+75 to 12+60.70
-Y3-	10+50 to 12+24.08
-Y4-	10+00 to 13+75
-Y5-	11+90 to 13+33.49
-Y6-	10+00 to 15+15
-Y7-	10+00 to 11+40
-Y8-	11+25 to 12+84.99

Areas of Special Geotechnical Interest

1) Highly Plastic Clays: Highly plastic clays (PI > 25) were encountered on the project at the following locations:

Line	Stations	Offsets
-L-	27+30 to 32+70	LT to RT
-L-	37+30 to 47+70	LT to RT
-L-	92+60 to 97+60	LT to RT
-L-	162+30 to 167+70	LT to RT
-L-	179+20 to 180+20	LT to RT
-L-	208+50 to 209+30	LT to RT
-L-	257+30 to 277+60	LT to RT
-L-	282+30 to 287+60	LT to RT
-L-	318+36 to 337+70	LT to RT
-L-	350+60 to 351+60	LT to RT
-L-	367+60 to 377+60	LT to RT
-L-	392+00 to 402+60	LT to RT
-Y4-	11+80 to 13+75	LT to RT
-Y6-	10+00 to 15+15	LT to RT

A discussion of these highly plastic clay soils is located below in the section titled “Soil Properties”.

2) Artificial Fill: Several areas of artificial fill occur at the following locations.

Line	Station	Offset (ft)
-L-	84+50	26 RT to 38 RT
-L-	154+79	19 RT to 31 RT
-L-	189+86	16 RT to 28 RT

3) Alluvial: The following locations were found to have very soft to soft alluvial soils.

Line	Station	Offset (ft)
-L-	179+20 to 180+20	LT to RT
-L-	208+60 to 209+70	LT to RT
-L-	397+20 to 398+60	LT to RT

4) Ponds: One pond is located within close proximity of the right of way on this project. This was noted at the following location:

Line	Station	Offset (ft)
-L-	190+27 to 191+55	30 RT to 185 RT

5) Rock Outcrops: Several rock outcrops were observed along the existing roadway at the following loactions:

Line	Stations	Offsets
-L-	227+50 to 233+00	LT
-L-	228+30 to 229+00	RT
-Y5-	10+00 to 13+00	RT

Physiography and Geology

The project is located in the Piedmont Physiographic Province. The project corridor is comprised primarily of residential and agricultural properties. The general topography of the site consists of rolling hills with flat to moderate slopes along the existing roadways.

Geologically, the project is located within the Charlotte Belt. Soils are derived from the underlying metamorphic bedrock primarily consisting of metavolcanic rock with areas of intrusive granite in the eastern portion of the project.

Soil Properties

Soils encountered during this investigation are separated into four categories based on origin. They consist of roadway embankment, artificial fill, alluvial, and residual soils.

Roadway Embankment soils are present along the existing roadways (-L-) on the project. These soils consist of moist, medium stiff to very stiff, medium plasticity, brown, tan-red, and brown-green, coarse to fine sandy clay (A-6) and moist, medium stiff, high plasticity, brown to brown-green, coarse to fine sandy, silty clay (A-7-5). The plasticity index of the roadway embankment soils tested ranged from 29 to 32.

Artificial Fill soils are present in several small isolated areas throughout the project adjacent to the existing roadway (-L-). The artificial soils encountered consist of moist, stiff, non-plastic, tan, fine sandy silt (A-4), moist, non-plastic, tan, fine to coarse sand with gravel (A-1-b), and moist, stiff, medium plasticity, gray and brown, silty, coarse to fine sandy clay (A-6). The plasticity index of the artificial fill soils tested was 16.

Alluvial soils are present along several streams that cross the existing roadway (-L-). The alluvial soils encountered consist of wet, very soft to stiff, non-plastic, coarse to fine sandy silt (A-4), wet, soft to stiff, high plasticity, coarse to fine sandy, silty clay (A-7-5), wet, soft, low plasticity, fine sandy, clayey silt (A-5), and wet, very loose to loose, non-plastic, tan, silty, coarse to fine sand (A-2-4). Alluvial soils are also present in a pond near the project right of way and are further discussed in the “Ponds” section of this report. The plasticity index of the alluvial soils tested was 54.

Residual soils are derived from the weathering of underlying metavolcanic rock. These majority of the residual soils encountered consist of moist to wet, medium stiff to hard, non-plastic, fine sandy silt (A-4), moist, stiff to very stiff, low plasticity, coarse to fine sandy, clayey silt (A-5), moist, stiff to hard, medium plasticity, silty, fine sandy clay (A-6), and moist to wet, medium stiff to very stiff, medium to high plasticity, coarse to fine sandy, silty clay (A-7-5 and A-7-6). Minor amounts of moist to wet, loose to very dense, non-plastic to low plasticity, clayey, silty, coarse to fine sand (A-2-4 and A-2-5) are also present. The plasticity index of the residual soils tested ranged from 17 to 68.

Rock Properties

Weathered rock was encountered along the existing roadways (-L-) at elevations ranging from 688.5 to 796.0 feet (MSL). The majority of the weathered rock consists of tan and gray-green metavolcanic with some isolated areas of granite.

Crystalline rock was encountered along the existing roadways (-L-) at elevations ranging from 687.1 to 749.9 feet (MSL). The crystalline rock consists of metavolcanic.

Several rock outcrops were observed near the intersection of Old Beatty Ford Road (-L-) and Shuping Mill Road (-Y5-).

Groundwater

Groundwater generally occurs well below the ground surface with the exception of several isolated locations along the existing roadways (-L-) of the project. Groundwater was encountered at depths ranging from 0.1 to 12 feet below the existing ground surface. Areas with shallow groundwater were influenced by the weather during the investigation.

Ponds

One pond is located near the project right of way. This pond is listed by alignment, station, and offsets in the “Areas of Special Geotechnical Interest.” This pond was investigated. Alluvial soils consist of brown and gray, sandy silts (A-4) and silty clays (A-7-5).

Prepared by,

Thomas R. Wells, P.E.
Senior Professional

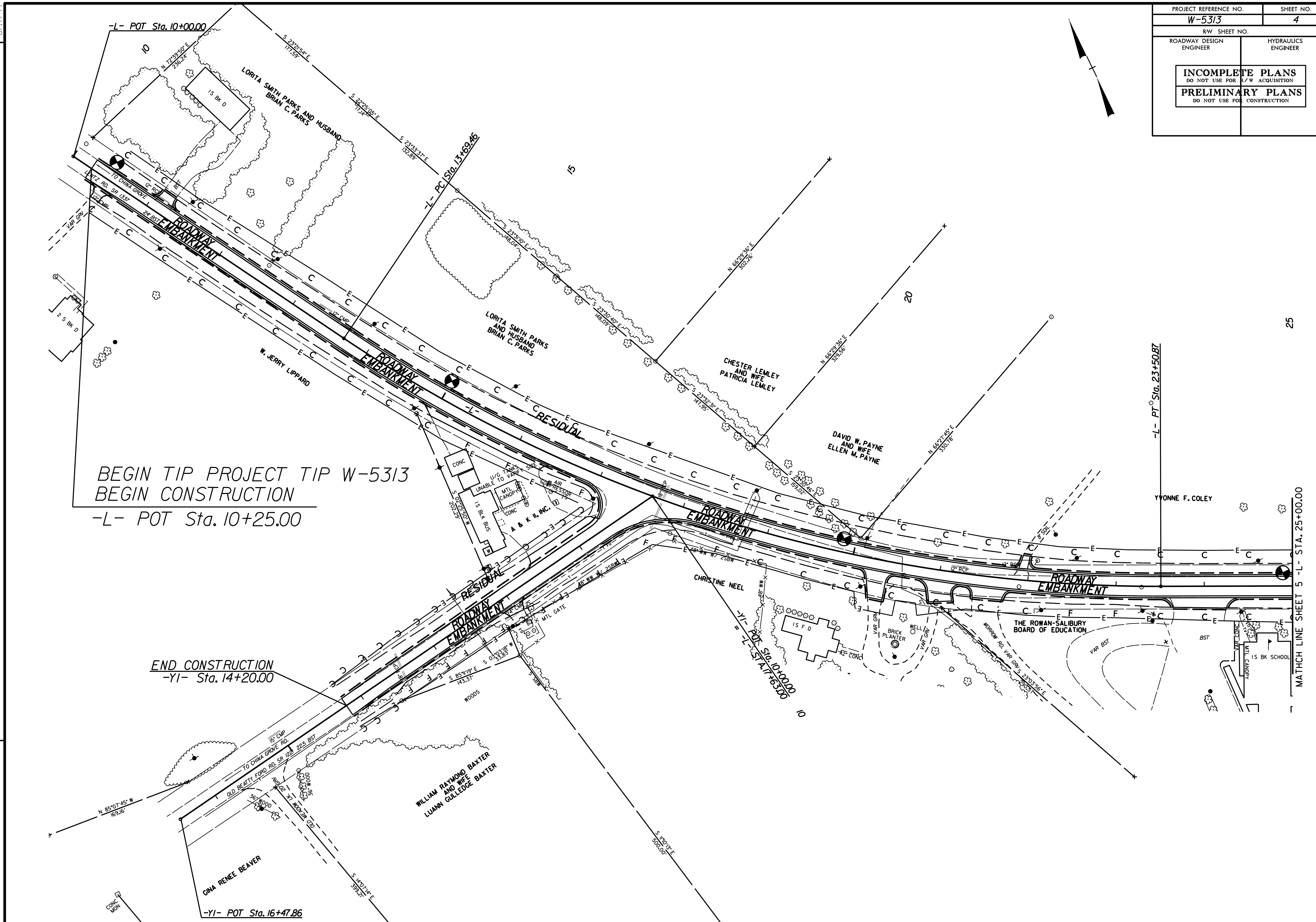
Xavier C. Barrett, P.E.
Principal Professional

TRW/XCB:cas

PROJECT REFERENCE NO.	SHEET NO.
W-5313	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



-L- POT Sta. 10+00.00
-L- PC Sta. 13+69.46
-L- PT Sta. 23+50.87
BEGIN TIP PROJECT TIP W-5313
BEGIN CONSTRUCTION
-L- POT Sta. 10+25.00
END CONSTRUCTION
-Y1- Sta. 14+20.00
-Y1- POT Sta. 10+00.00 = -L- STA. 17+63.00
-Y1- POT Sta. 16+47.86
MATCH LINE SHEET 5 -L- STA. 25+00.00
LORITA SMITH PARKS AND HUSBAND BRIAN C. PARKS
W. JERRY LIPPARD
CHESTER LEMLEY AND WIFE PATRICIA LEMLEY
DAVID W. PAYNE AND WIFE ELLEN M. PAYNE
YVONNE F. COLEY
CHRISTINE NEEL
THE ROWAN-SALISBURY BOARD OF EDUCATION
WILLIAM RAYMOND BAXTER AND WIFE LUANN GULLEDGE BAXTER
GINA RENEE BEAVER
A & K II, INC.
ROADWAY EMBANKMENT
RESIDUAL
LENTZ RD. SR 1337
TO CHINA GROVE
OLD BEATTY FORD RD. SR 1221
MORROW RD.
1 S BK SCHOOL
MTL CANOPY
BRICK PLANTER
WELL
WOODS
CONC MON

8/17/99

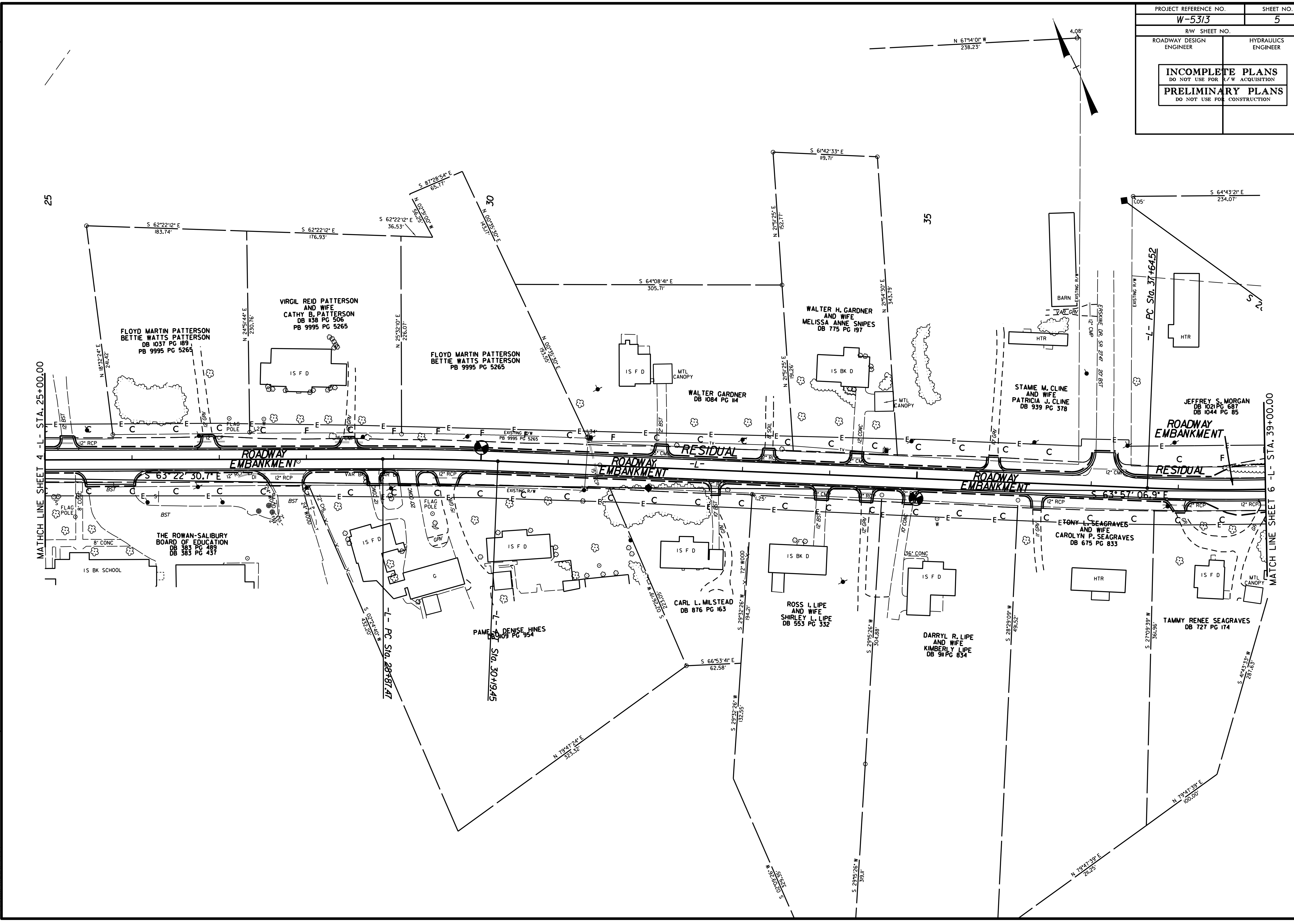
8/17/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
W-5313	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



MATCHLINE SHEET 4 -L- STA. 25+00.00
MATCH LINE SHEET 6 -L- STA. 39+00.00
25
30
35
FLOYD MARTIN PATTERSON
BETTIE WATTS PATTERSON
DB 1037 PG 189
PB 9995 PG 5265
VIRGIL REID PATTERSON
AND WIFE
CATHY B. PATTERSON
DB 1138 PG 506
PB 9995 PG 5265
FLOYD MARTIN PATTERSON
BETTIE WATTS PATTERSON
PB 9995 PG 5265
WALTER H. GARDNER
AND WIFE
MELISSA ANNE SNIPES
DB 775 PG 197
WALTER GARDNER
DB 1084 PG 114
STAMIE M. CLINE
AND WIFE
PATRICIA J. CLINE
DB 939 PG 378
JEFFREY S. MORGAN
DB 1021 PG 687
DB 1044 PG 85
THE ROWAN-SALISBURY
BOARD OF EDUCATION
DB 383 PG 489
DB 383 PG 437
1 S BK SCHOOL
PAMELA DENISE HINES
DB 1109 PG 954
CARL L. MILSTEAD
DB 876 PG 163
ROSS I. LIPE
AND WIFE
SHIRLEY L. LIPE
DB 553 PG 332
DARRYL R. LIPE
AND WIFE
KIMBERLY LIPE
DB 911 PG 834
TONY L. SEAGRAVES
AND WIFE
CAROLYN P. SEAGRAVES
DB 675 PG 833
TAMMY RENEE SEAGRAVES
DB 727 PG 174
ROADWAY EMBANKMENT
RESIDUAL
S 63° 22' 30.7" E
S 63° 57' 06.9" E
-L- PC Sta. 28+87.47
-L- Sta. 30+19.45
-L- PC Sta. 37+64.52
ERSKINE DR. SR 2747
S 62°22'12" E 183.74'
S 62°22'12" E 176.93'
S 62°22'12" E 36.53'
S 87°28'54" E 65.77'
S 64°08'41" E 305.71'
S 61°42'33" E 119.71'
N 67°14'01" W 238.23'
S 64°43'21" E 234.07'
S 66°53'41" E 62.58'
N 79°47'24" E 323.32'
N 79°47'39" E 100.00'
N 79°47'39" E 211.25'

$$$$SYSTIME$$$$
$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

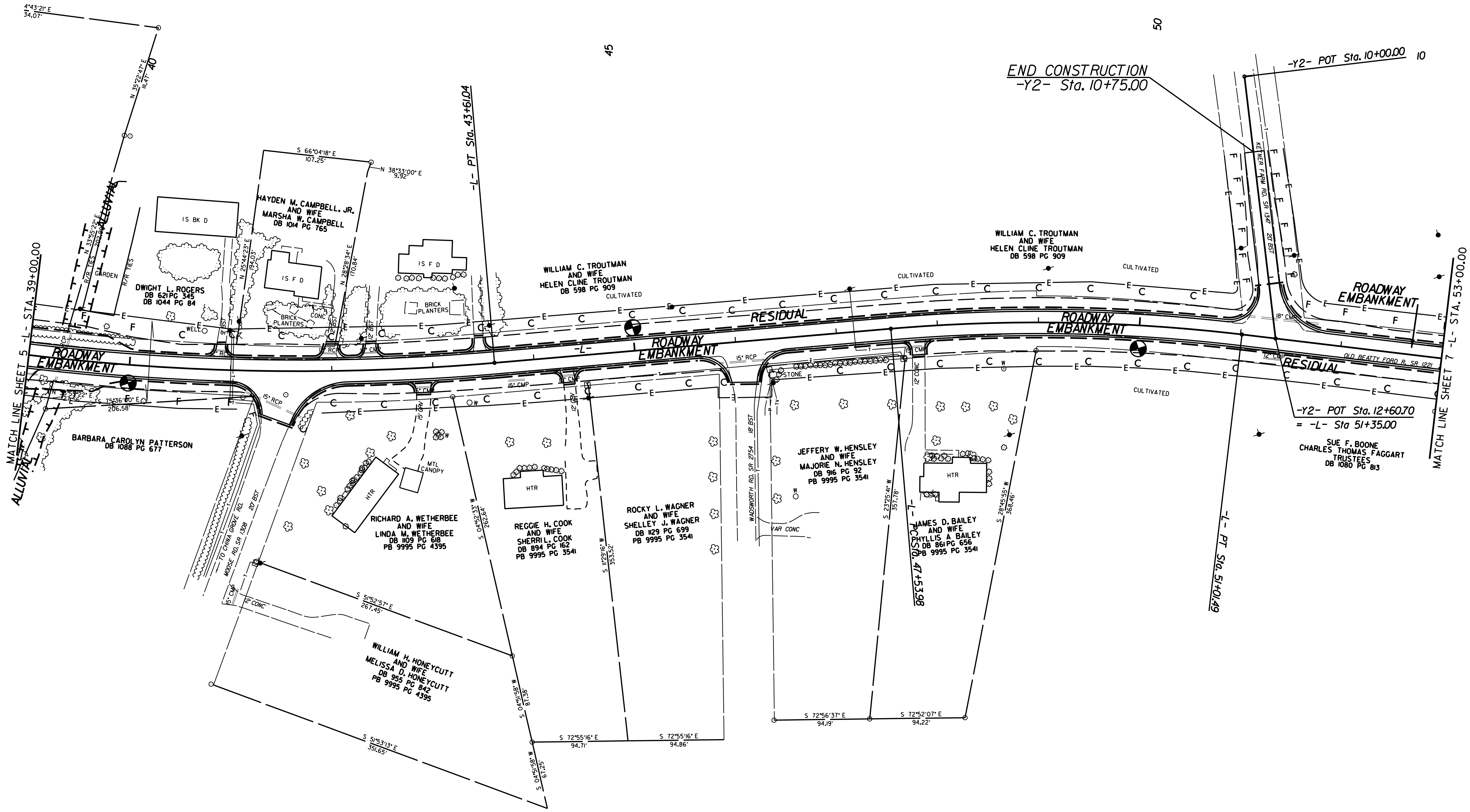
8/17/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
W-5313	6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



MATCH LINE SHEET 5 -L- STA. 39+00.00
MATCH LINE SHEET 7 -L- STA. 53+00.00
END CONSTRUCTION
-Y2- Sta. 10+75.00
-Y2- POT Sta. 10+00.00
-Y2- POT Sta. 12+60.70
= -L- Sta 51+35.00
-L- PT Sta. 43+61.04
-L- PC Sta. 47+53.98
-L- PT Sta. 51+01.49
40
45
50
ROADWAY EMBANKMENT
RESIDUAL
ALLUVIAL
CULTIVATED
DWIGHT L. ROGERS
DB 621 PG 345
DB 1044 PG 84
HAYDEN M. CAMPBELL, JR.
AND WIFE
MARSHA W. CAMPBELL
DB 1014 PG 765
WILLIAM C. TROUTMAN
AND WIFE
HELEN CLINE TROUTMAN
DB 598 PG 909
BARBARA CAROLYN PATTERSON
DB 1088 PG 677
RICHARD A. WETHERBEE
AND WIFE
LINDA M. WETHERBEE
DB 1109 PG 618
PB 9995 PG 4395
REGGIE H. COOK
AND WIFE
SHERRI L. COOK
DB 894 PG 162
PB 9995 PG 3541
ROCKY L. WAGNER
AND WIFE
SHELLEY J. WAGNER
DB 1129 PG 699
PB 9995 PG 3541
JEFFERY W. HENSLEY
AND WIFE
MAJORIE N. HENSLEY
DB 916 PG 92
PB 9995 PG 3541
JAMES D. BAILEY
AND WIFE
PHYLLIS A. BAILEY
DB 861 PG 656
PB 9995 PG 3541
SUE F. BOONE
CHARLES THOMAS FAGGART
TRUSTEES
DB 1080 PG 813
WILLIAM H. HONEYCUTT
AND WIFE
MELISSA D. HONEYCUTT
DB 955 PG 842
PB 9995 PG 4395
OLD BEATTY FORD R. SR 1221
KEENER FARM RD. SR 1541
WADSWORTH RD. SR 2754
MOOSE RD. SR 1308
TO CHINA GROVE RD.
S 66°04'18" E
107.25'
N 38°33'00" E
9.92'
4°43'21" E
34.07'
S 51°52'57" E
267.45'
S 51°53'13" E
351.65'
S 72°55'16" E
94.71'
S 72°55'16" E
94.86'
S 72°56'37" E
94.19'
S 72°52'07" E
94.22'

PROJECT REFERENCE NO.	SHEET NO.
W-5313	7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

8/17/99

REVISIONS

MATCH LINE SHEET 6 -L- STA. 53+00.00

MATCH LINE SHEET 8 -L- STA. 67+00.00

S 73°41'38" E
330.74'

N 14°54'58" E
135.19'

S 76°24'27" E
99.92'

WOODS

55

60

65

CEMETERY

CEMETERY

CEMETERY

1S BK CHURCH

1S BK PAVILION

CONC

BK CANOPY

EBENEZER LUTHERAN CHURCH
DB 1023 PG 225
DB 295 PG 227
DB 311 PG 12
DB 449 PG 649
DB 487 PG 245
DB 498 PG 163
DB 843 PG 171
PB 9995 PG 5185

WILLIAM C. TROUTMAN
AND WIFE
HELEN CLINE TROUTMAN
DB 598 PG 909

CULTIVATED

RESIDUAL

ROADWAY EMBANKMENT

-L-

EXISTING R/W

WOOD POSTS

12" RCP

15" RCP

GREGORY HAROLD SAFRIT
DB 722 PG 445

THERESA L SAFRIT
AND HUSBAND
DONALD R. SAFRIT
DB 1040 PG 545

JIMMY H. DAVIS
AND WIFE
DEBRA J. DAVIS
DB 914 PG 180
PB 9995 PG 583

BOYDEN L. BROWN
AND WIFE
DALE K. BRLOWN
DB 634 PG 522
PB 9995 PG 583

BOBBY LYN
ELLEN RENA
DB 612
PB 9995

JOHN MICHAEL FOX
AND WIFE
CATHERINE N. FOX
DB 587 PG 715

U/G TANK @ 10000 GAL
U/G TANK @ 8000 GAL
A/G KEROSENE

CANOPY W/ 2 PUMPS

1S BK BUS

1S BK D

2 S BK D

1S F D

HTR

4" CONC

BST

VAR GRV

-L- PC Sta 62+50

-L- PT Sta 64+30

S 23°48'30" W
284.23'

N 63°34'55" W
200.20'

N 63°34'55" W
273.22'

S 67°39'06" E
124.01'

S 24°47'14" W
234.26'

S 13°37'24" W
245.58'

S 82°26'40" E
122.66'

S 12°47'29" W
23.53'

S 07°41'10" W
26.58'

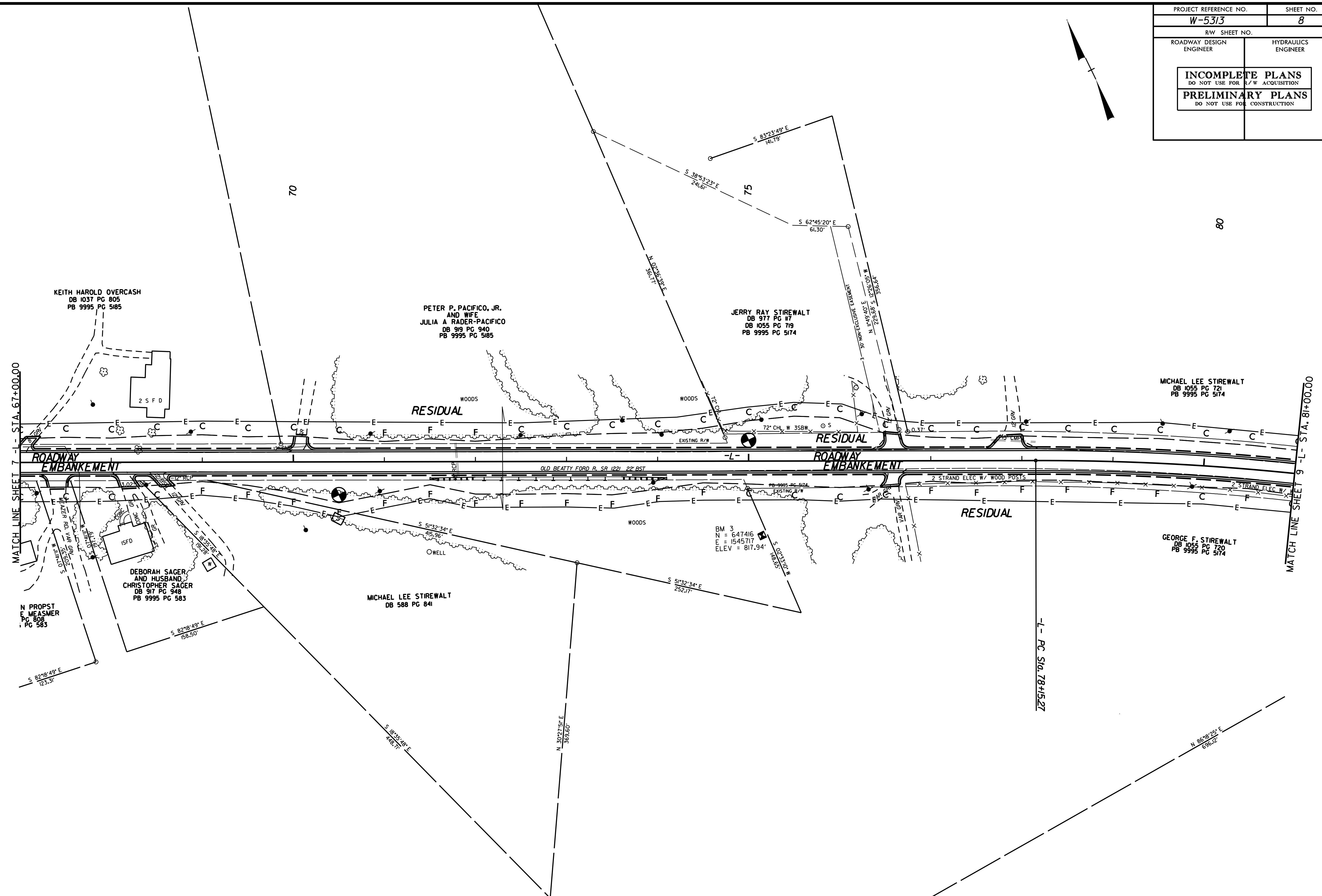
8/17/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
W-5313	8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



KEITH HAROLD OVERCASH
DB 1037 PG 805
PB 9995 PG 5185
PETER P. PACIFICO, JR.
AND WIFE
JULIA A RADER-PACIFICO
DB 919 PG 940
PB 9995 PG 5185
JERRY RAY STIREWALT
DB 977 PG 117
DB 1055 PG 719
PB 9995 PG 5174
MICHAEL LEE STIREWALT
DB 1055 PG 721
PB 9995 PG 5174
GEORGE F. STIREWALT
DB 1055 PG 720
PB 9995 PG 5174
DEBORAH SAGER
AND HUSBAND
CHRISTOPHER SAGER
DB 917 PG 948
PB 9995 PG 583
MICHAEL LEE STIREWALT
DB 588 PG 841
RESIDUAL
ROADWAY EMBANKEMENT
OLD BEATTY FORD R. SR 1221 22' BST
MATCH LINE SHEET 7 -L- STA. 67+00.00
MATCH LINE SHEET 9 -L- STA. 81+00.00
-L- PC Sta. 78+15.27
BM 3
N = 647416
E = 1545717
ELEV = 817.94'
WOODS
WELL
2 STRAND ELEC W/ WOOD POSTS
72" CHL W 3SBW
EXISTING R/W
S 83°23'49" E 141.79'
S 38°53'23" E 241.61'
S 62°45'20" E 61.30'
N 02°16'39" E 361.17'
S 51°32'34" E 415.96'
S 51°32'34" E 252.17'
S 18°35'48" E 448.71'
N 30°27'51" E 369.60'
S 82°18'49" E 158.50'
S 82°18'49" E 123.31'
N 86°18'25" E 696.12'
70
75
80

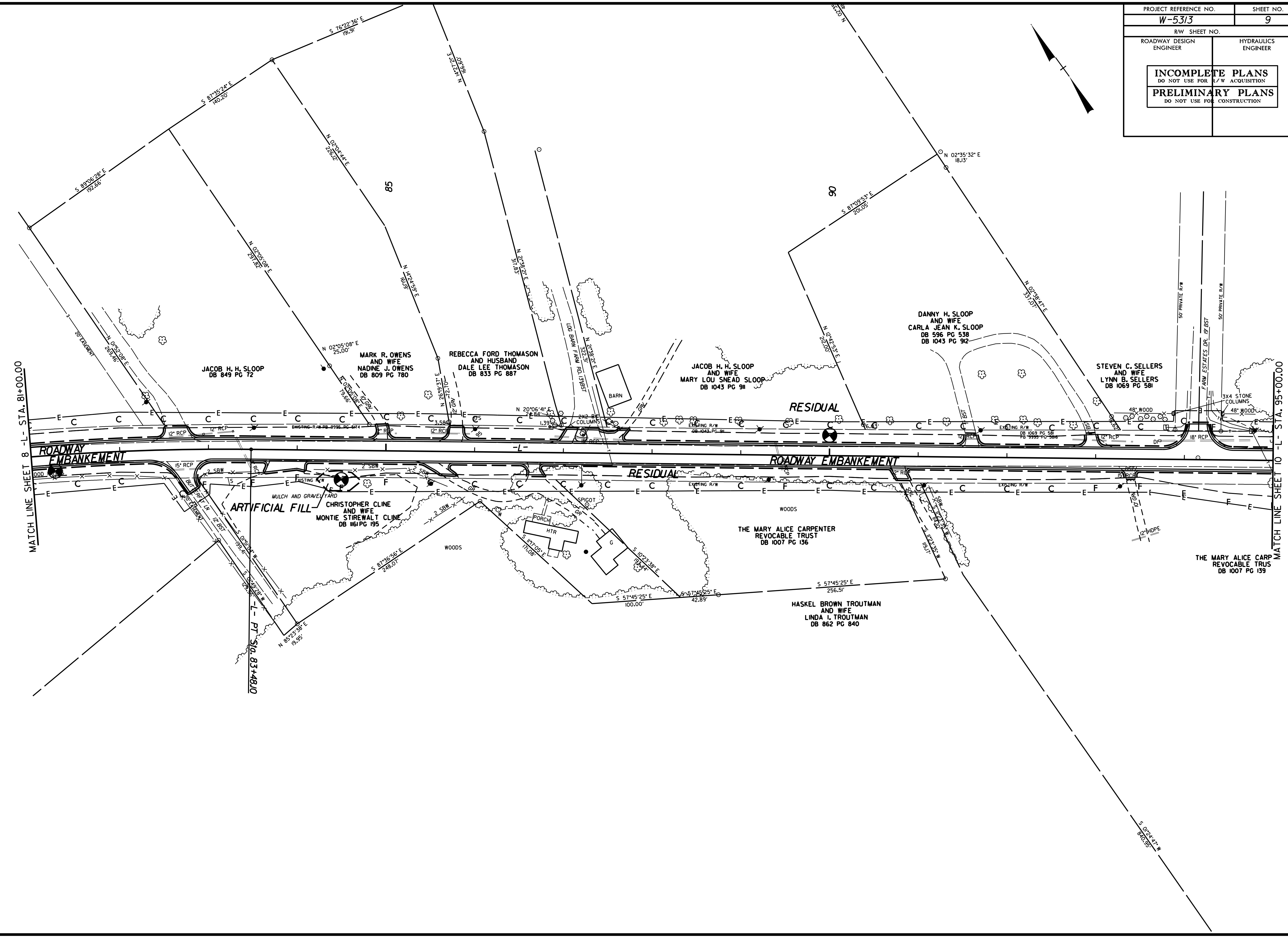
8/17/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
W-5313	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



MATCH LINE SHEET 8 -L- STA. 81+00.00
MATCH LINE SHEET 10 -L- STA. 95+00.00
ROADWAY EMBANKEMENT
ROADWAY EMBANKEMENT
RESIDUAL
RESIDUAL
ARTIFICIAL FILL
-L-
-L- PT Sta. 83+48.10
85
90
JACOB H. H. SLOOP
DB 849 PG 72
MARK R. OWENS
AND WIFE
NADINE J. OWENS
DB 809 PG 780
REBECCA FORD THOMASON
AND HUSBAND
DALE LEE THOMASON
DB 833 PG 887
JACOB H. H. SLOOP
AND WIFE
MARY LOU SNEAD SLOOP
DB 1043 PG 911
DANNY H. SLOOP
AND WIFE
CARLA JEAN K. SLOOP
DB 596 PG 538
DB 1043 PG 912
STEVEN C. SELLERS
AND WIFE
LYNN B. SELLERS
DB 1069 PG 581
CHRISTOPHER CLINE
AND WIFE
MONTIE STIREWALT CLINE
DB 1161 PG 195
THE MARY ALICE CARPENTER
REVOCABLE TRUST
DB 1007 PG 136
THE MARY ALICE CARP
REVOCABLE TRUS
DB 1007 PG 139
HASKEL BROWN TROUTMAN
AND WIFE
LINDA I. TROUTMAN
DB 862 PG 840
WOODS
WOODS
BARN
PORCH
HTR
G
SPIGOT
MULCH AND GRAVEL YARD
LOG BARN FARM RD. 13' BST
FARM ESTATES DR. 19' BST
50' PRIVATE R/W
50' PRIVATE R/W
3X4 STONE COLUMNS
2X2 BC COLUMNS
48" WOOD
48" WOOD
20' EASEMENT
12" RCP
15" RCP
18" RCP
12" HDPE
2 SBW
S 76°22'36" E
191.91'
S 87°35'24" E
140.20'
S 89°06'28" E
192.66'
N 02°04'44" E
226.12'
N 02°05'08" E
297.82'
N 02°05'08" E
25.00'
N 14°24'59" E
161.19'
N 21°38'21" E
317.83'
N 20°06'41" E
N 12°42'53" E
212.00'
N 02°35'32" E
18.13'
S 87°09'53" E
201.05'
N 02°38'47" E
337.01'
S 87°36'56" E
248.07'
N 85°23'38" E
19.95'
S 57°45'25" E
100.00'
S 57°45'25" E
42.89'
S 57°45'25" E
256.51'
S 10°23'38" E
S 01°24'47" W
840.35'
EXISTING R/W

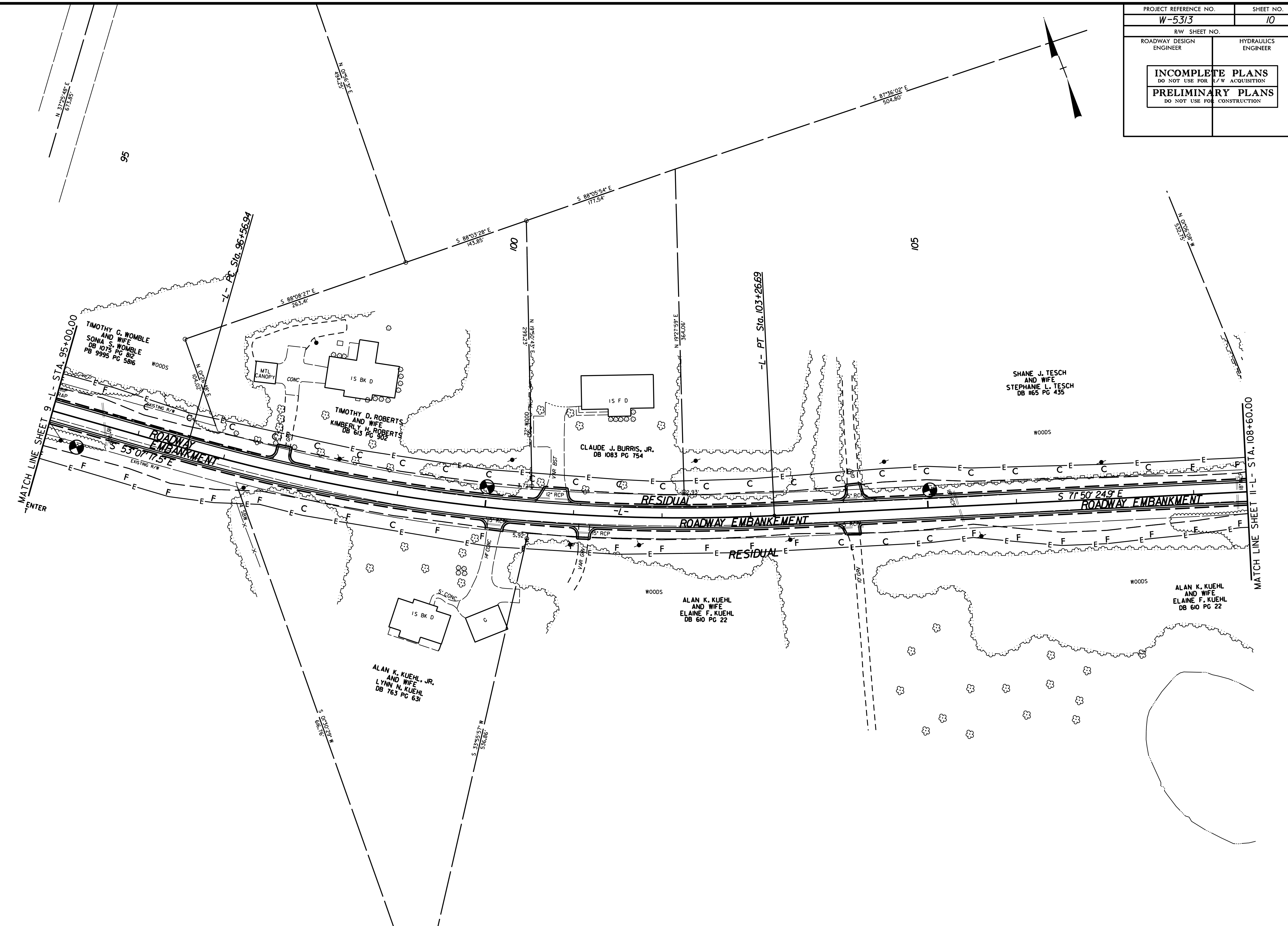
PROJECT REFERENCE NO.	SHEET NO.
W-5313	10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISIONS

8/17/99



MATCH LINE SHEET 9 -L- STA. 95+00.00
MATCH LINE SHEET 11 -L- STA. 108+60.00
-L- PC Sta. 96+56.94
-L- PT Sta. 103+26.69
95
100
105
S 53°07'17.5" E
S 71°50'24.9" E
ROADWAY EMBANKMENT
ROADWAY EMBANKEMENT
RESIDUAL
EXISTING R/W
WOODS
TIMOTHY G. WOMBLE
AND WIFE
SONIA S. WOMBLE
DB 1075 PG 812
PB 9995 PG 5816
TIMOTHY D. ROBERTS
AND WIFE
KIMBERLY H. ROBERTS
DB 613 PG 902
CLAUDE J. BURRIS, JR.
DB 1083 PG 754
SHANE J. TESCH
AND WIFE
STEPHANIE L. TESCH
DB 1165 PG 435
ALAN K. KUEHL
AND WIFE
ELAINE F. KUEHL
DB 610 PG 22
ALAN K. KUEHL, JR.
AND WIFE
LYNN N. KUEHL
DB 763 PG 631
1S BK D
1S F D
MTL CANOPY
CONC
G
5' CONC
12" RCP
15" RCP
VAR BST
S 88°08'27" E
263.41'
S 88°03'28" E
143.85'
S 88°05'54" E
177.54'
S 87°36'02" E
504.80'
N 37°25'48" E
673.85'
N 01°56'31" E
494.25'
N 19°27'59" E
364.06'
ENTER

8/17/99

REVISIONS

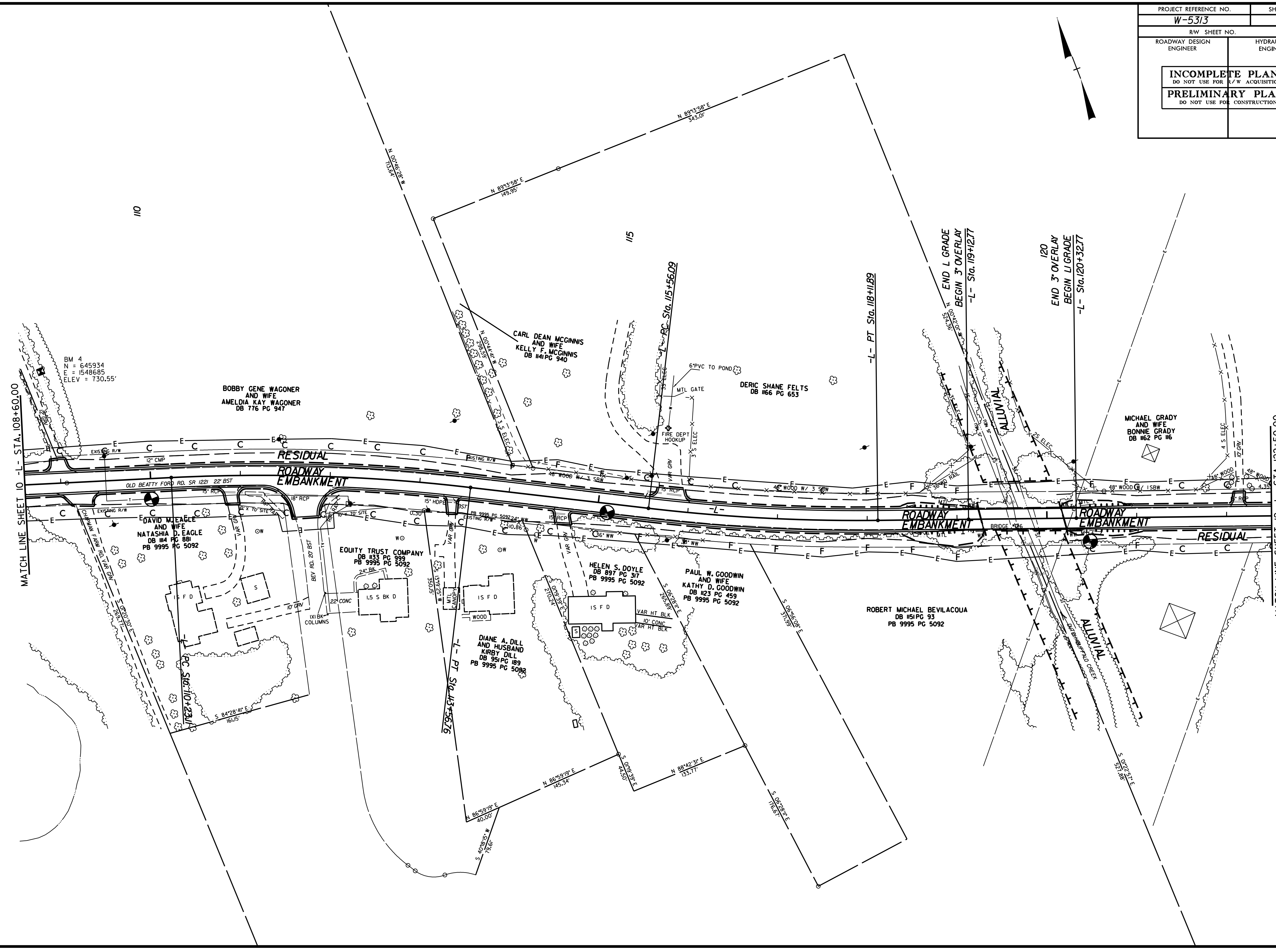
PROJECT REFERENCE NO.	SHEET NO.
W-5313	11

R/W SHEET NO.

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



MATCH LINE SHEET 10 -L- STA. 108+60.00
MATCH LINE SHEET 12 -L- STA. 122+50.00
BM 4
N = 645934
E = 1548685
ELEV = 730.55'
BOBBY GENE WAGONER
AND WIFE
AMELDIA KAY WAGONER
DB 776 PG 947
CARL DEAN MCGINNIS
AND WIFE
KELLY F. MCGINNIS
DB 1141 PG 940
DERIC SHANE FELTS
DB 1166 PG 653
MICHAEL GRADY
AND WIFE
BONNIE GRADY
DB 1162 PG 116
DAVID M. EAGLE
AND WIFE
NATASHIA D. EAGLE
DB 1114 PG 881
PB 9995 PG 5092
EQUITY TRUST COMPANY
DB 1133 PG 999
PB 9995 PG 5092
HELEN S. DOYLE
DB 897 PG 317
PB 9995 PG 5092
PAUL W. GOODWIN
AND WIFE
KATHY D. GOODWIN
DB 1123 PG 459
PB 9995 PG 5092
ROBERT MICHAEL BEVILACOUA
DB 1151 PG 93
PB 9995 PG 5092
DIANE A. DILL
AND HUSBAND
KIRBY DILL
DB 951 PG 189
PB 9995 PG 5092
OLD BEATTY FORD RD. SR 1221 22' BST
RESIDUAL
ROADWAY
EMBANKMENT
-L-
-L- PC Sta. 115+56.09
-L- PT Sta. 118+11.89
END L GRADE
BEGIN 3" OVERLAY
-L- Sta. 119+12.77
END 3" OVERLAY
BEGIN L GRADE
-L- Sta. 120+32.77
PC Sta. 110+23.11
-L- PT Sta. 113+56.76
ALLUVIAL
BRIDGE
110
115
120
N 89°13'58" E
343.01'
N 89°13'58" E
149.95'
N 00°46'28" W
713.64'
S 84°28'41" E
161.15'
N 86°59'19" E
145.34'
N 86°59'19" E
40.00'
N 88°42'31" E
133.77'
S 40°18'15" W
79.61'
6"PVC TO POND
MTL GATE
FIRE DEPT HOOKUP
3'S ELEC
EXISTING R/W
12" CMP
15" RCP
18" RCP
15" HDPE
48" WOOD W/ 3 SBW
36" WW
1 S F D
1.5 S BK D
1X1 BK COLUMNS
22' CONC
10' GRV
BEV RD. 20' BST
VAR HT BLK
10' CONC
MTL CANOPY
WOOD

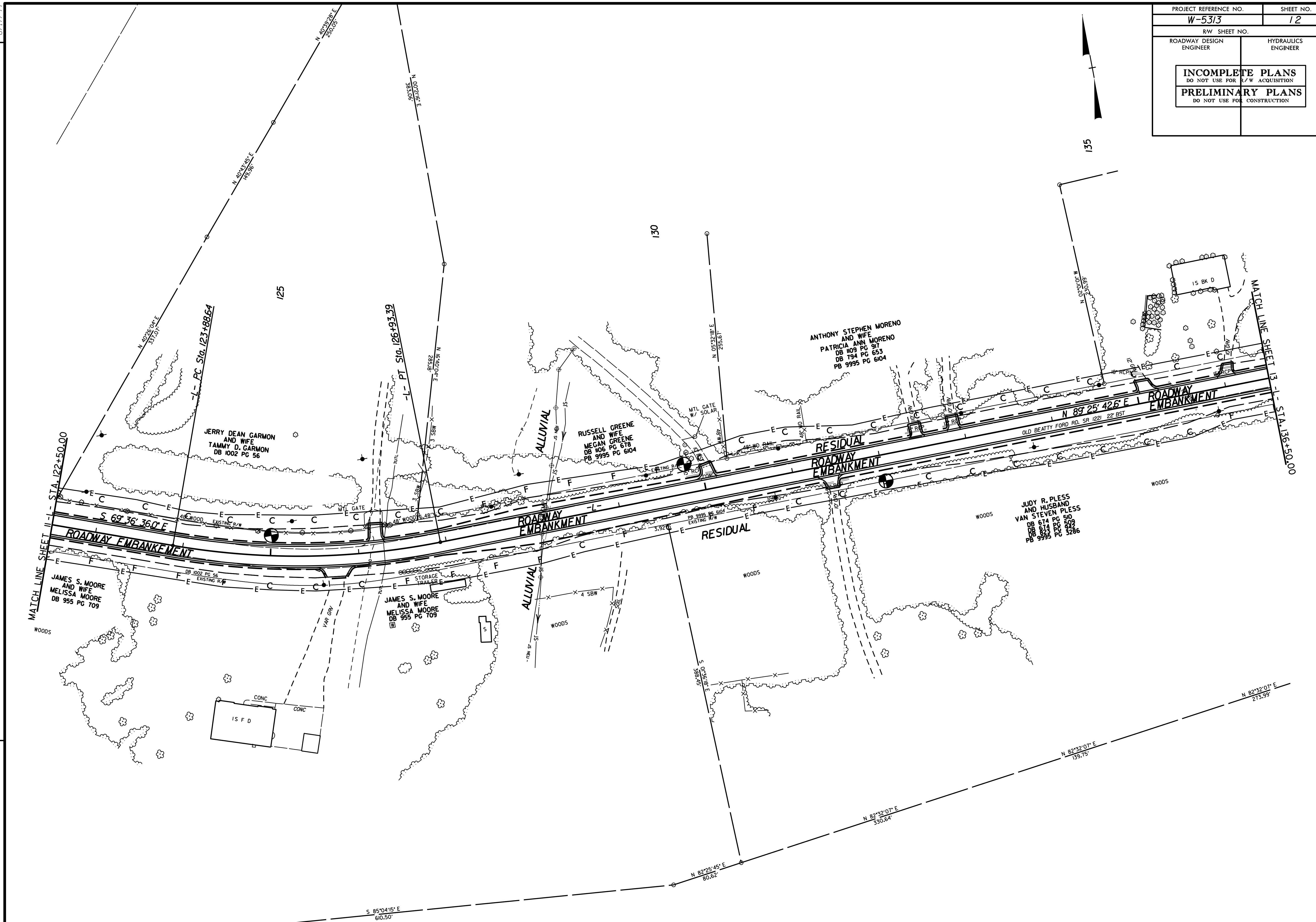
PROJECT REFERENCE NO.	SHEET NO.
W-5313	12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISIONS

8/17/99



MATCH LINE SHEET 11 -L- STA. 122+50.00
MATCH LINE SHEET 13 -L- STA. 136+50.00
-L- PC Sta. 123+88.64
-L- PT Sta. 126+93.39
125
130
135
S 69° 36' 36.0" E
N 89° 25' 42.6" E
ROADWAY EMBANKEMENT
ROADWAY EMBANKMENT
RESIDUAL
ALLUVIAL
OLD BEATTY FORD RD. SR 1221 22' BST
JERRY DEAN GARMON AND WIFE TAMMY D. GARMON DB 1002 PG 56
RUSSELL GREENE AND WIFE MEGAN GREENE DB 1106 PG 678 PB 9995 PG 6104
ANTHONY STEPHEN MORENO AND WIFE PATRICIA ANN MORENO DB 1109 PG 917 DB 794 PG 653 PB 9995 PG 6104
JUDY R. PLESS AND HUSBAND VAN STEVEN PLESS DB 674 PG 510 DB 674 PG 509 DB 823 PG 942 DB 884 PG 272 PB 9995 PG 3286
JAMES S. MOORE AND WIFE MELISSA MOORE DB 955 PG 709
JAMES S. MOORE AND WIFE MELISSA MOORE DB 955 PG 709
WOODS
MTL GATE
MTL GATE W/ SOLAR
STORAGE TRAILER
1S F D
1S BK D
CONC
EXISTING R/W
N 82°32'07" E 273.99'
N 82°32'07" E 139.75'
N 82°32'07" E 330.64'
N 82°25'45" E 80.62'
S 85°04'15" E 610.50'
N 40°39'28" E 250.05'
N 40°43'45" E 149.96'
N 40°26'04" E 337.07'
N 00°21'16" E 383.06'
N 16°40'04" E 285.18'
N 05°32'18" E 255.67'
S 07°36'18" E 388.45'

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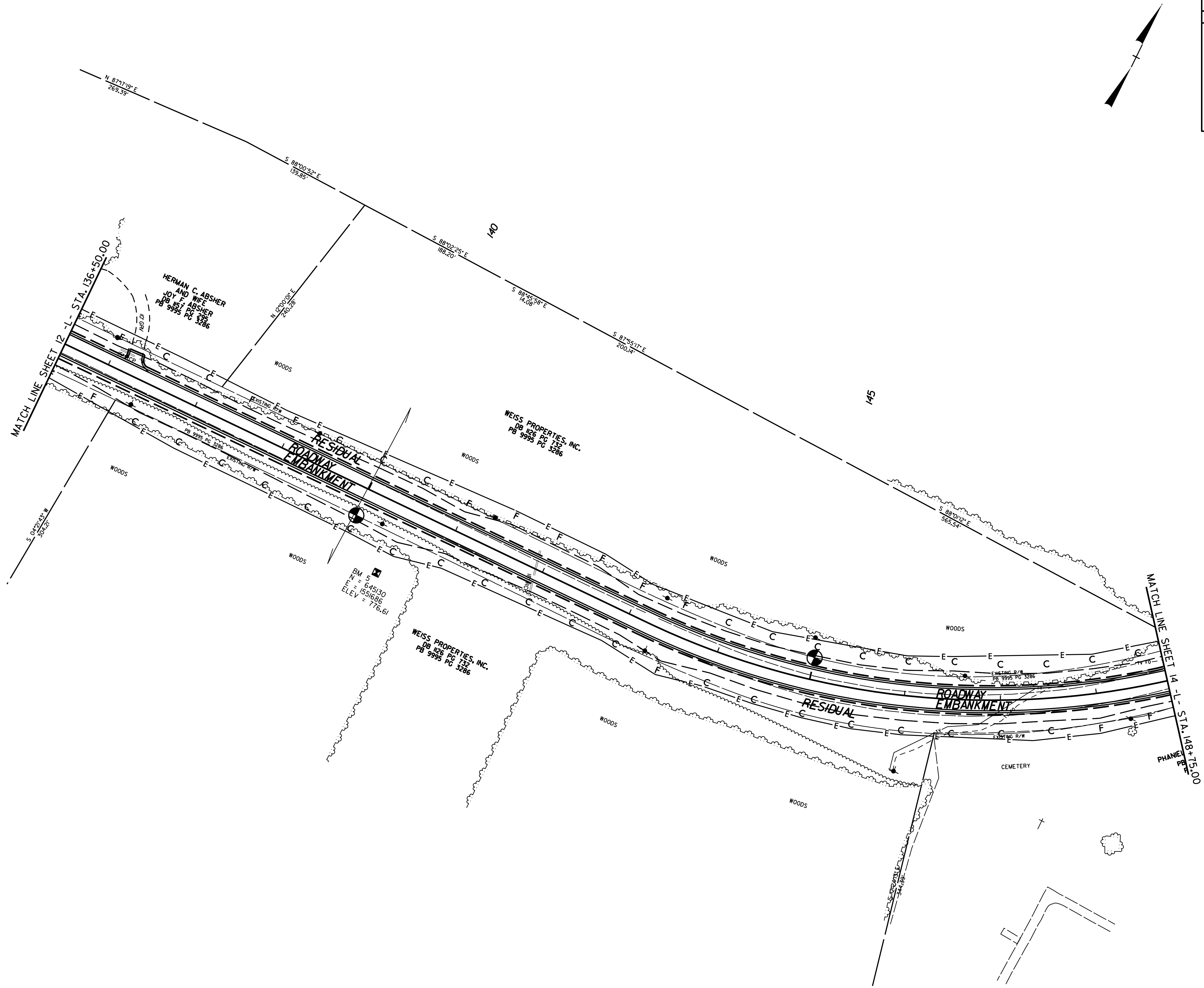
REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
W-5313	13
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



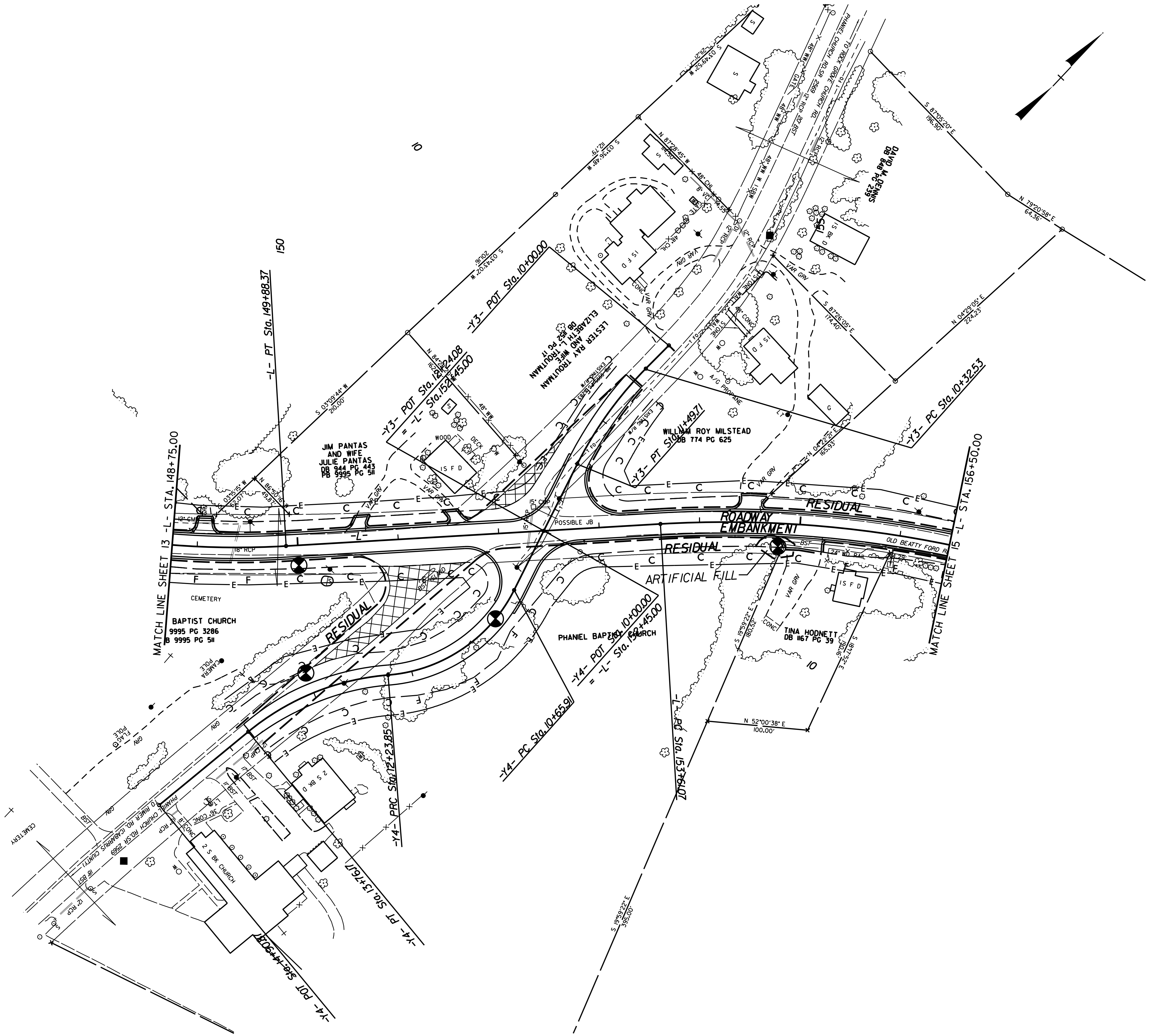
MATCH LINE SHEET 12 -L- STA. 136+50.00
MATCH LINE SHEET 14 -L- STA. 148+75.00
N 87°17'19" E 269.39'
S 88°00'52" E 139.85'
S 88°02'25" E 188.20'
S 88°45'58" E 14.08'
S 87°55'17" E 200.14'
S 88°01'12" E 565.54'
N 12°00'01" E 240.28'
S 04°21'43" W 304.21'
140
145
HERMAN C. ABSHER AND WIFE JOY F. ABSHER
PB 9995 PG 3286
WEISS PROPERTIES, INC.
DB 1126 PG 732
PB 9995 PG 3286
WOODS
RESIDUAL
ROADWAY EMBANKMENT
EXISTING R/W
BM 5
N = 645130
E = 1551686
ELEV = 776.61
CEMETERY

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
W-5313	14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

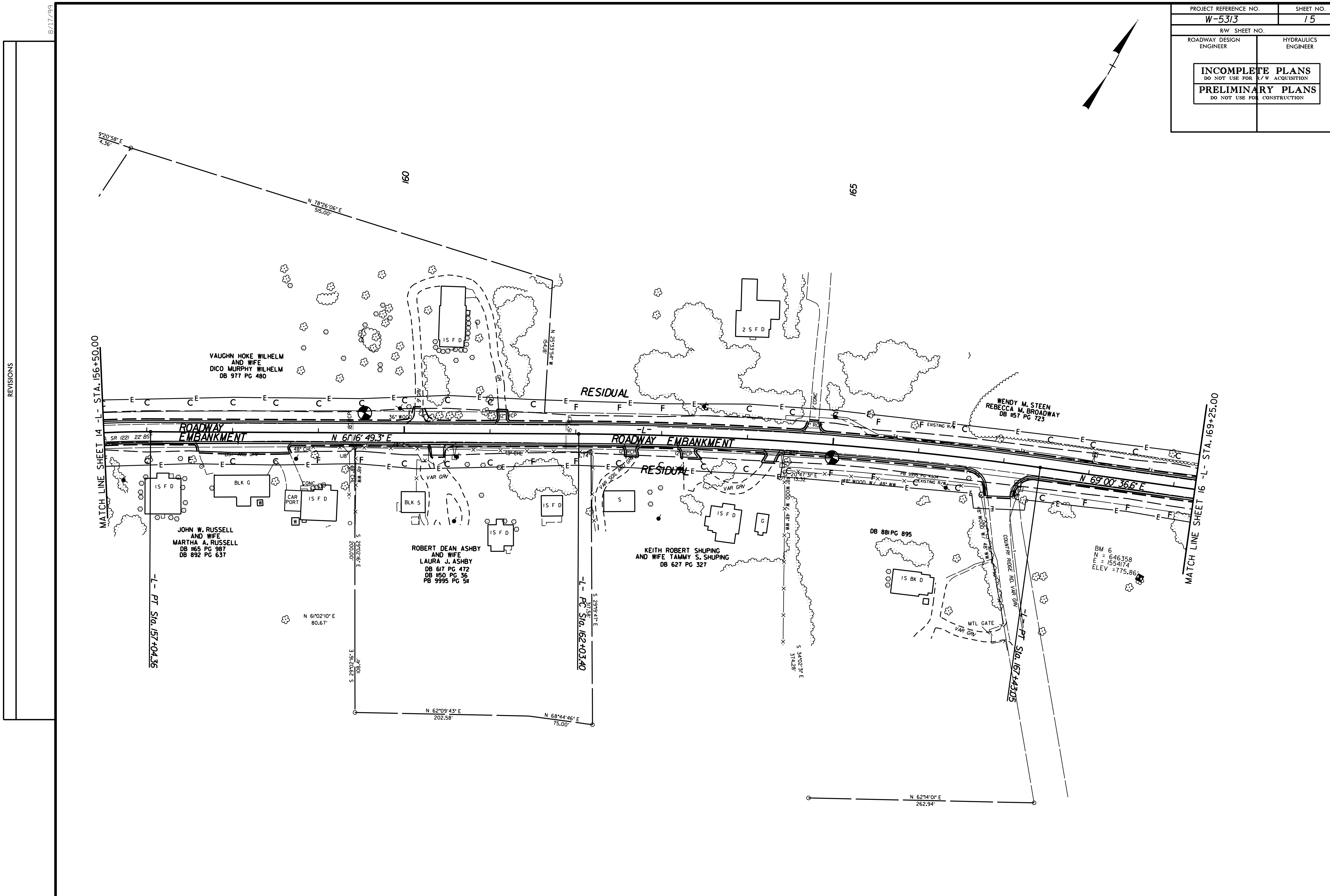


MATCH LINE SHEET 13 -L- STA. 148+75.00
MATCH LINE SHEET 15 -L- STA. 156+50.00
-L- PT Sta. 149+88.37
150
10
-Y3- POT Sta. 10+00.00
-Y3- PC Sta. 10+32.53
-Y4- POT Sta. 10+00.00
-Y4- PC Sta. 10+65.91
-Y4- PRC Sta. 12+23.85
-Y4- PT Sta. 13+76.17
-L- PC Sta. 153+76.07
JIM PANTAS
AND WIFE
JULIE PANTAS
DB 944 PG 443
PB 9995 PG 511
LESTER RAY TROUTMAN
AND WIFE
ELIZABETH L. TROUTMAN
WILLIAM ROY MILSTEAD
DB 774 PG 625
DAVID M. DENNIS
DB 848 PG 239
TINA HODNETT
DB 1167 PG 39
BAPTIST CHURCH
9995 PG 3286
B 9995 PG 511
PHANIEL BAPTIST CHURCH
CEMETERY
RESIDUAL
ROADWAY
EMBANKMENT
ARTIFICIAL FILL
POSSIBLE JB
OLD BEATTY FORD RD
2 S BK CHURCH
2 S BK D
I S F D
S 03°09'44" W
210.00'
S 87°05'20" E
196.90'
N 79°20'68" E
64.36'
S 87°26'05" E
174.40'
N 04°29'05" E
224.23'
N 52°00'38" E
100.00'
S 19°59'22" E
395.00'

PROJECT REFERENCE NO.	SHEET NO.
W-5313	15
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



8/17/99
REVISIONS
MATCH LINE SHEET 14 -L- STA. 156+50.00
MATCH LINE SHEET 16 -L- STA. 169+25.00
VAUGHN HOKE WILHELM
AND WIFE
DICO MURPHY WILHELM
DB 977 PG 480
RESIDUAL
ROADWAY EMBANKMENT
N 61°16' 49.3" E
N 69°00' 36.6" E
JOHN W. RUSSELL
AND WIFE
MARTHA A. RUSSELL
DB 1165 PG 987
DB 892 PG 637
ROBERT DEAN ASHBY
AND WIFE
LAURA J. ASHBY
DB 617 PG 472
DB 1150 PG 36
PB 9995 PG 511
KEITH ROBERT SHUPING
AND WIFE TAMMY S. SHUPING
DB 627 PG 327
WENDY M. STEEN
REBECCA M. BROADWAY
DB 1157 PG 723
DB 881 PG 895
BM 6
N = 646358
E = 1554174
ELEV =775.86
-L- PT Sta. 157+04.36
-L- PC Sta. 162+03.40
-L- PT Sta. 167+43.05
N 78°26'06" E
515.00'
N 62°09'43" E
202.58'
N 68°44'46" E
75.00'
N 62°14'01" E
262.94'
N 61°02'10" E
80.67'
COUNTRY RIDGE RD. VAR GRV
MTL GATE
160
165

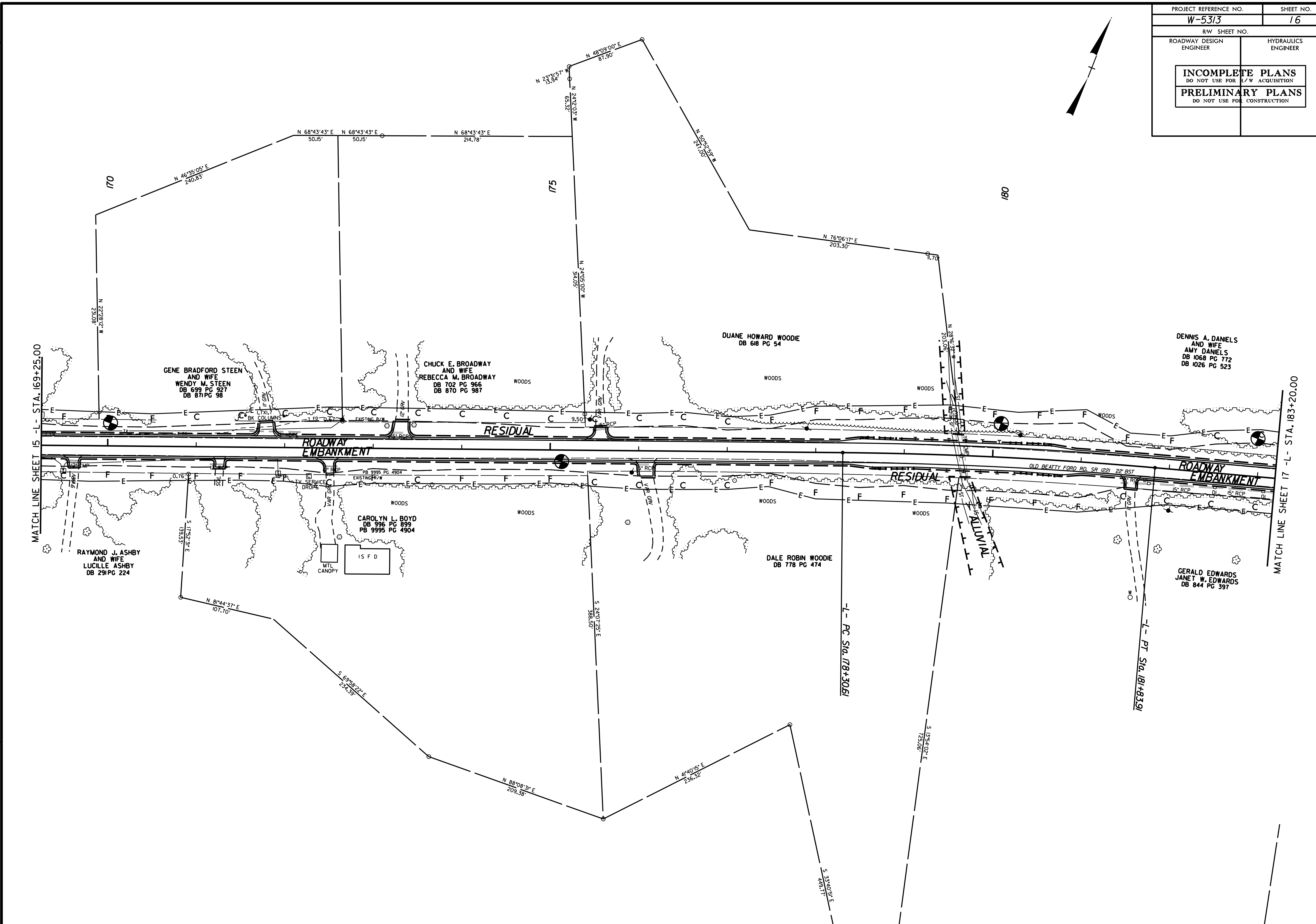
8/17/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
W-5313	16
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



MATCH LINE SHEET 15 -L- STA. 169+25.00
MATCH LINE SHEET 17 -L- STA. 183+20.00
170
175
180
N 46°35'05" E
240.83'
N 68°43'43" E
50.15'
N 68°43'43" E
50.15'
N 68°43'43" E
214.78'
N 48°09'00" E
87.90'
N 23°31'57" W
13.94'
N 24°12'03" W
65.32'
N 50°52'59" W
271.00'
N 76°06'17" E
203.30'
N 24°05'00" W
314.05'
N 22°28'12" W
251.08'
GENE BRADFORD STEEN
AND WIFE
WENDY M. STEEN
DB 699 PG 927
DB 871 PG 98
CHUCK E. BROADWAY
AND WIFE
REBECCA M. BROADWAY
DB 702 PG 966
DB 870 PG 987
DUANE HOWARD WOODIE
DB 618 PG 54
DENNIS A. DANIELS
AND WIFE
AMY DANIELS
DB 1068 PG 772
DB 1026 PG 523
WOODS
RESIDUAL
ROADWAY
EMBANKMENT
OLD BEATTY FORD RD. SR 1221 22' BST
ALLUVIAL
RAYMOND J. ASHBY
AND WIFE
LUCILLE ASHBY
DB 291 PG 224
CAROLYN L. BOYD
DB 996 PG 899
PB 9995 PG 4904
MTL
CANOPY
1 S F D
DALE ROBIN WOODIE
DB 778 PG 474
GERALD EDWARDS
JANET W. EDWARDS
DB 844 PG 397
-L- PC Sta. 178+30.61
-L- PT Sta. 181+83.91
S 17°52'31" E
139.53'
N 81°44'37" E
107.70'
S 69°58'22" E
234.39'
N 88°08'31" E
209.38'
N 41°40'15" E
236.32'
S 24°07'25" E
388.50'
S 13°54'02" E
725.06'
S 33°40'15" E
449.17'

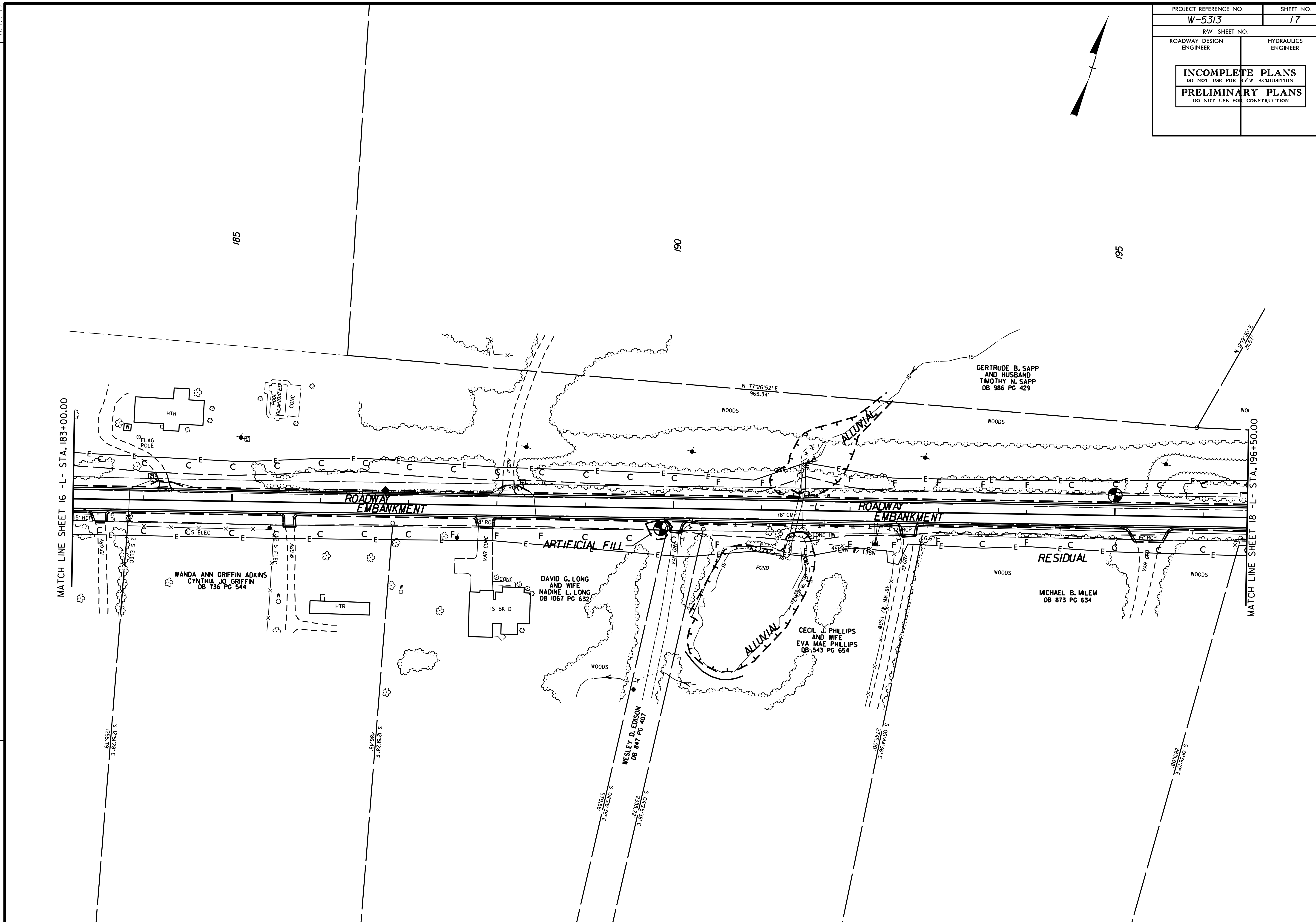
8/17/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
W-5313	17
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



MATCH LINE SHEET 16 -L- STA. 183+00.00
MATCH LINE SHEET 18 -L- STA. 196+50.00
185
190
195
N 77°26'52" E
965.34'
GERTRUDE B. SAPP
AND HUSBAND
TIMOTHY N. SAPP
DB 986 PG 429
WOODS
ALLUVIAL
ROADWAY
EMBANKMENT
ARTIFICIAL FILL
RESIDUAL
HTR
FLAG
POLE
POOL
DILAPIDATED
CONC
15" RCP
18" RCP
78" CMP
WANDA ANN GRIFFIN ADKINS
CYNTHIA JO GRIFFIN
DB 736 PG 544
DAVID G. LONG
AND WIFE
NADINE L. LONG
DB 1067 PG 632
1S BK D
VAR CONC
POND
CECIL J. PHILLIPS
AND WIFE
EVA MAE PHILLIPS
DB 543 PG 654
MICHAEL B. MILEM
DB 873 PG 634
WESLEY D. EDISON
DB 847 PG 407
S 12°51'28" E
486.49'
S 04°26'38" E
2746.00'

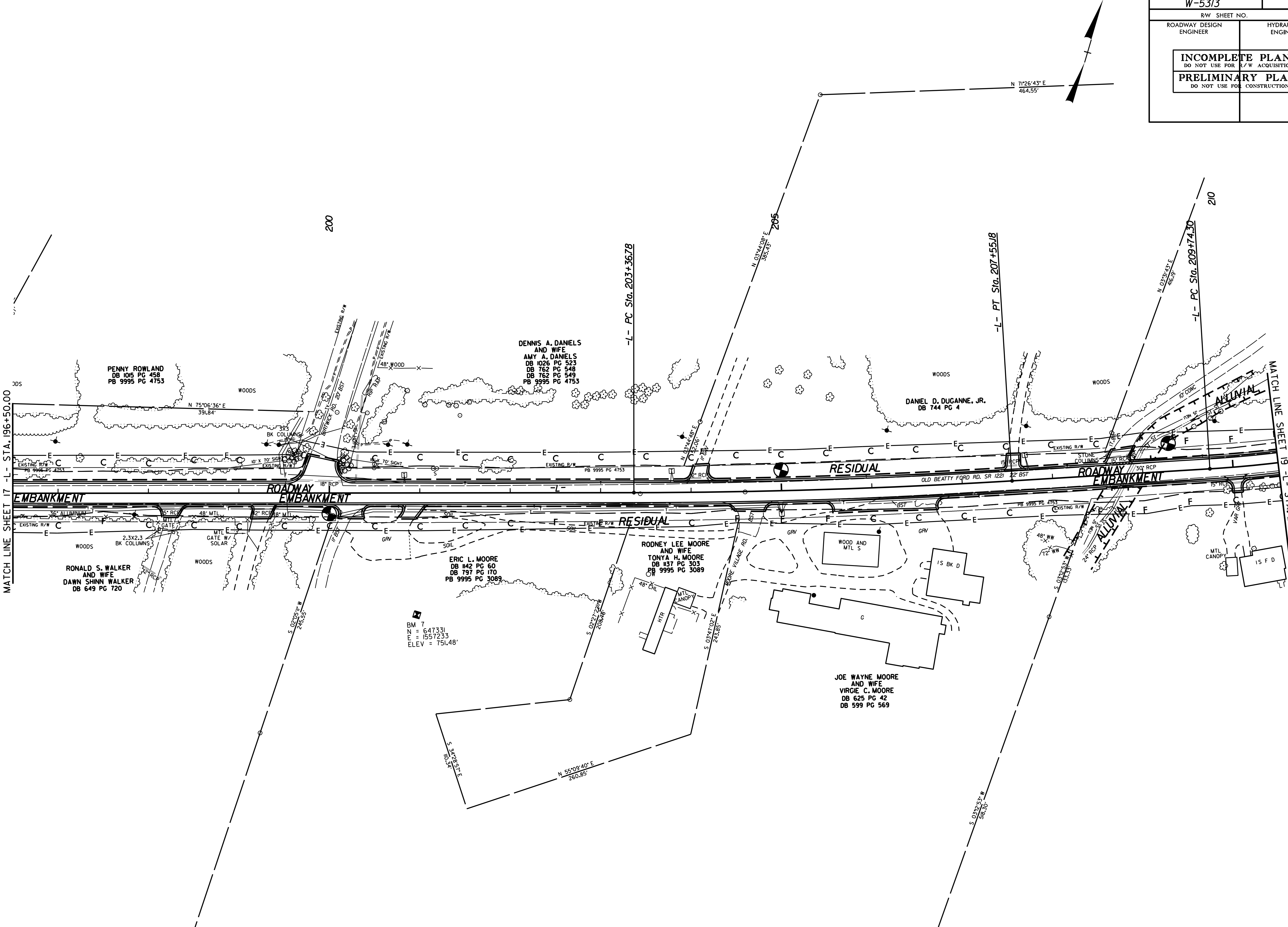
8/17/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
W-5313	18
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



MATCH LINE SHEET 17 -L- STA. 196+50.00
MATCH LINE SHEET 19 -L- STA. 210+50.00
N 71°26'43" E
464.55'
200
205
210
-L- PC Sta. 203+36.78
-L- PT Sta. 207+55.18
-L- PC Sta. 209+74.30
PENNY ROWLAND
DB 1015 PG 458
PB 9995 PG 4753
N 75°06'36" E
391.84'
DENNIS A. DANIELS
AND WIFE
AMY A. DANIELS
DB 1026 PG 523
DB 762 PG 548
DB 762 PG 549
PB 9995 PG 4753
DANIEL D. DUGANNE, JR.
DB 744 PG 4
WOODS
ROADWAY
EMBANKMENT
RESIDUAL
ALLUVIAL
OLD BEATTY FORD RD. SR 1221 22' BST
EXISTING R/W
PB 9995 PG 4753
STONE COLUMNS
RONALD S. WALKER
AND WIFE
DAWN SHINN WALKER
DB 649 PG 720
ERIC L. MOORE
DB 1142 PG 60
DB 797 PG 170
PB 9995 PG 3089
RODNEY LEE MOORE
AND WIFE
TONYA H. MOORE
DB 1137 PG 303
PB 9995 PG 3089
BM 7
N = 647331
E = 1557233
ELEV = 751.48'
WOOD AND MTL S
1S BK D
1S F D
MTL CANOPY
JOE WAYNE MOORE
AND WIFE
VIRGIE C. MOORE
DB 625 PG 42
DB 599 PG 569
S 02°05'11" W
245.55'
S 34°28'57" E
110.34'
N 55°09'40" E
260.85'
S 03°47'02" E
243.85'
S 03°12'53" W
518.30'

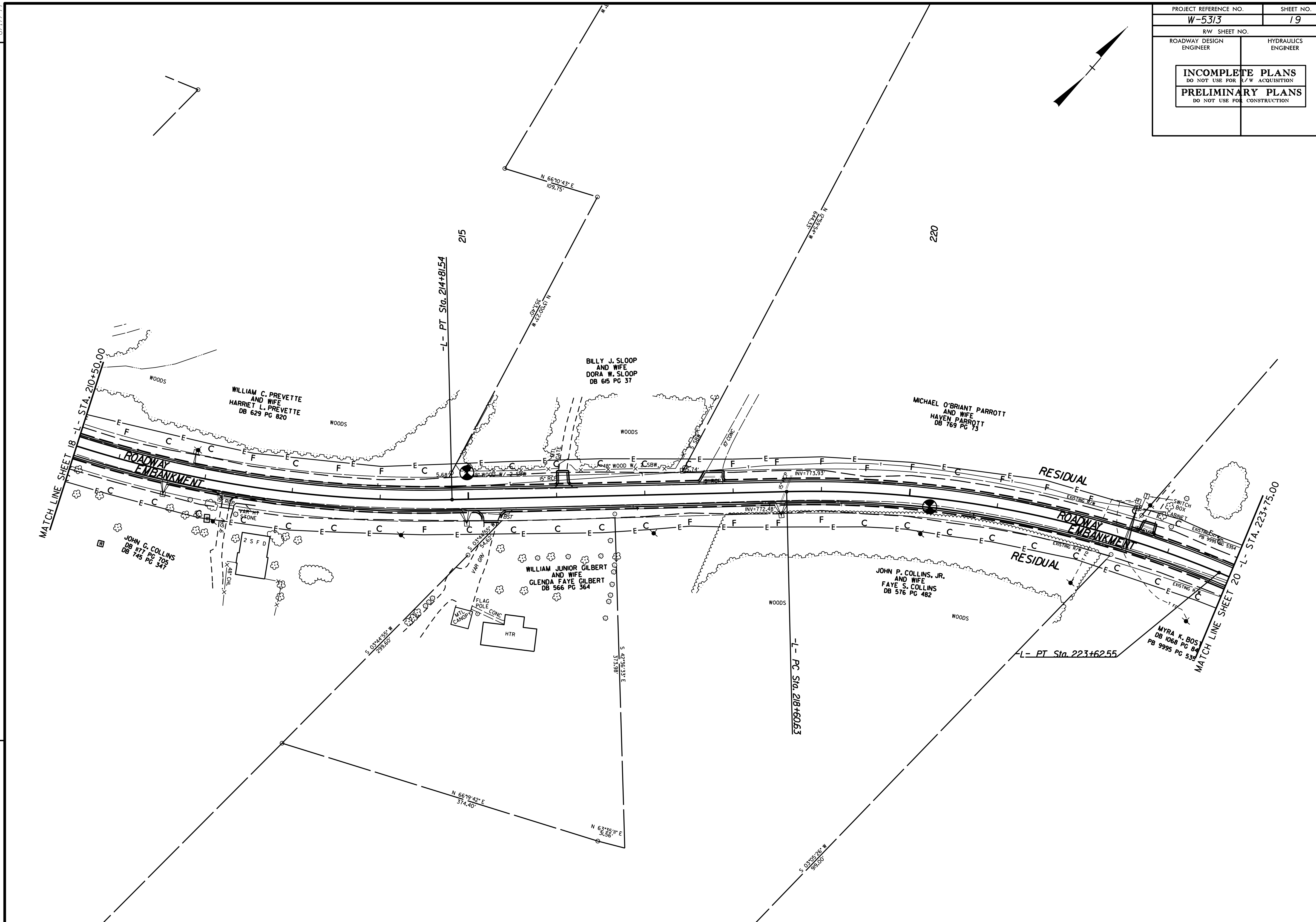
8/17/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
W-5313	19
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

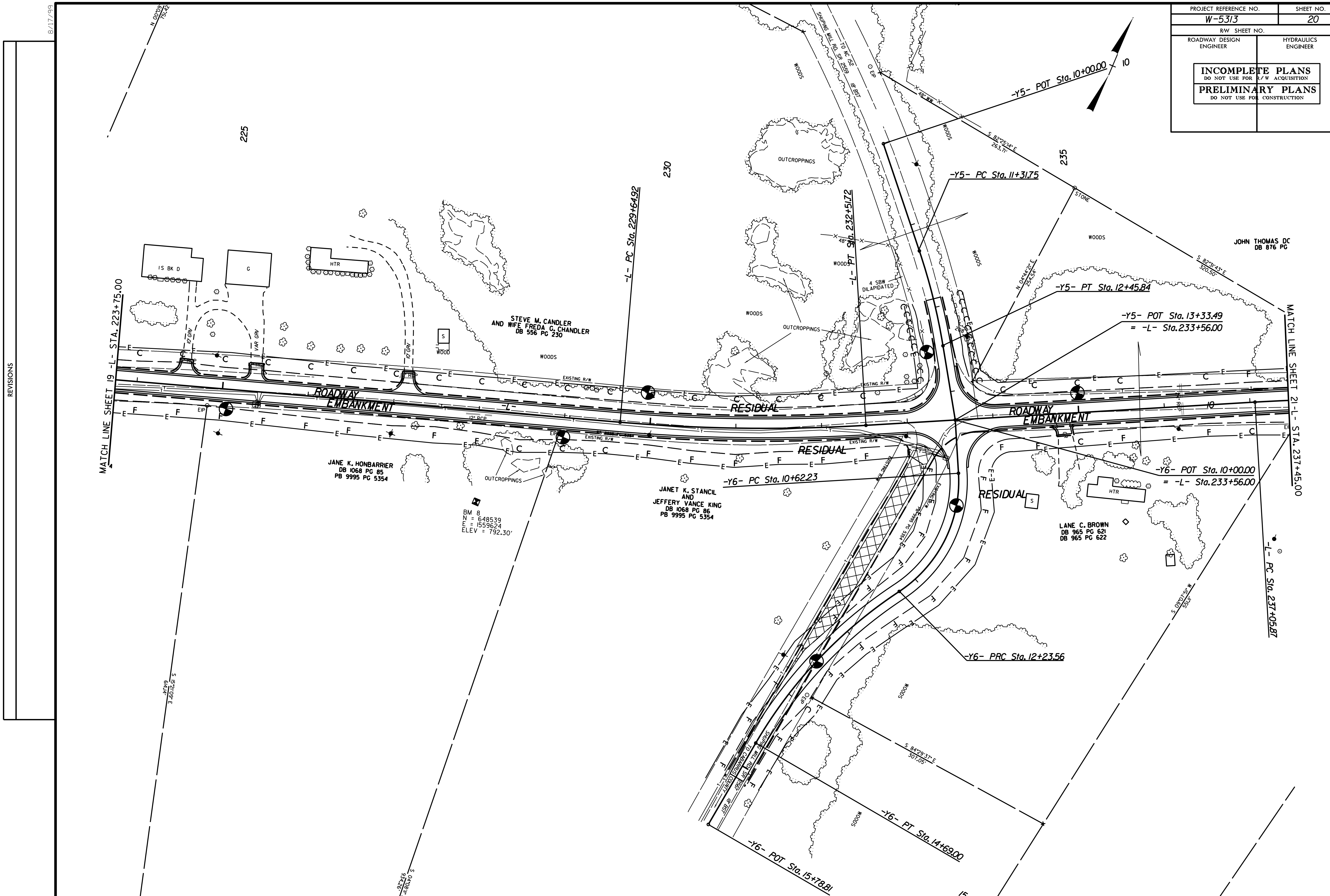


MATCH LINE SHEET 18 -L- STA. 210+50.00
MATCH LINE SHEET 20 -L- STA. 223+75.00
-L- PT Sta. 214+81.54
-L- PC Sta. 218+60.63
-L- PT Sta. 223+62.55
215
220
ROADWAY EMBANKMENT
RESIDUAL
WOODS
WILLIAM C. PREVETTE
AND WIFE
HARRIET L. PREVETTE
DB 629 PG 820
BILLY J. SLOOP
AND WIFE
DORA W. SLOOP
DB 615 PG 37
MICHAEL O'BRIANT PARROTT
AND WIFE
HAVEN PARROTT
DB 769 PG 73
JOHN G. COLLINS
DB 1177 PG 705
DB 745 PG 347
WILLIAM JUNIOR GILBERT
AND WIFE
GLENDA FAYE GILBERT
DB 566 PG 364
JOHN P. COLLINS, JR.
AND WIFE
FAYE S. COLLINS
DB 576 PG 482
MYRA K. BOS
DB 1068 PG 84
PB 9995 PG 53
N 66°10'43" E
109.75'
N 66°9'42" E
374.40'
S 03°44'55" W
299.60'
S 42°36'33" E
373.98'
N 63°35'11" E
31.56'
S 03°05'26" W
919.00'
INV=773.93'
INV=772.48'
15" RCP
SWITCH BOX
CABINET
EXISTING R/W
2 S F D
MTL CANOPY
FLAG POLE
CONC
HTR
VAR HT STONE
10' CONC

PROJECT REFERENCE NO.	SHEET NO.
W-5313	20
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



8/17/99
REVISIONS
MATCH LINE SHEET 19 -L- STA. 223+75.00
MATCH LINE SHEET 21 -L- STA. 237+45.00
225
230
235
10
15
-L- PC Sta. 229+64.92
-L- PT Sta. 232+51.72
-L- PC Sta. 237+05.87
-Y5- POT Sta. 10+00.00
-Y5- PC Sta. 11+31.75
-Y5- PT Sta. 12+45.84
-Y5- POT Sta. 13+33.49
= -L- Sta.233+56.00
-Y6- POT Sta. 10+00.00
= -L- Sta.233+56.00
-Y6- PC Sta. 10+62.23
-Y6- PRC Sta. 12+23.56
-Y6- PT Sta. 14+69.00
-Y6- POT Sta. 15+78.81
ROADWAY EMBANKMENT
RESIDUAL
EXISTING R/W
STEVE M. CANDLER
AND WIFE FREDA G. CHANDLER
DB 556 PG 230
JANE K. HONBARRIER
DB 1068 PG 85
PB 9995 PG 5354
JANET K. STANCIL
AND
JEFFERY VANCE KING
DB 1068 PG 86
PB 9995 PG 5354
LANE C. BROWN
DB 965 PG 621
DB 965 PG 622
JOHN THOMAS DC
DB 876 PG
BM 8
N = 648539
E = 1559624
ELEV = 792.30'
WOODS
OUTCROPPINGS
4 SBW DILAPIDATED
1S BK D
G
HTR
S
STONE
EIP
S 82°25'14" E
263.71'
S 82°31'43" E
320.50'
N 04°44'21" E
254.54'
S 84°29'37" E
307.05'
S 09°07'51" W
S 15°27'09" E
S 04°08'19" E
934.26'
12" RCP

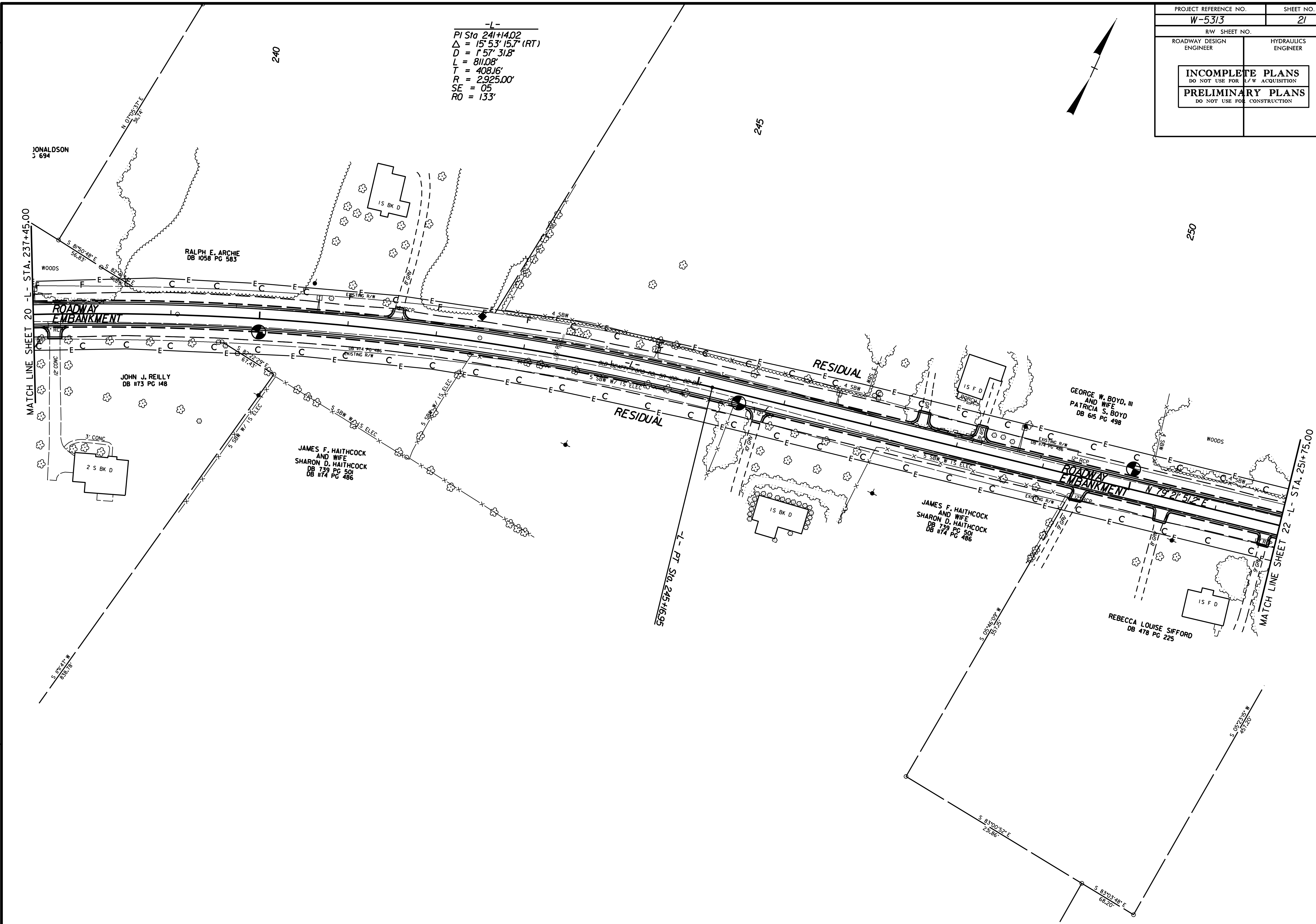
8/17/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
W-5313	21
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



-L-
PI Sta 241+14.02
Δ = 15° 53' 15.7" (RT)
D = 1° 57' 31.8"
L = 811.08'
T = 408.16'
R = 2,925.00'
SE = .05
RO = 133'
240
245
250
MATCH LINE SHEET 20 -L- STA. 237+45.00
MATCH LINE SHEET 22 -L- STA. 251+75.00
DONALDSON
G 694
RALPH E. ARCHIE
DB 1058 PG 583
JOHN J. REILLY
DB 1173 PG 148
JAMES F. HAITHCOCK
AND WIFE
SHARON D. HAITHCOCK
DB 739 PG 501
DB 1174 PG 486
GEORGE W. BOYD, III
AND WIFE
PATRICIA S. BOYD
DB 615 PG 498
REBECCA LOUISE SIFFORD
DB 478 PG 225
ROADWAY EMBANKMENT
RESIDUAL
WOODS
EXISTING R/W
1S BK D
2 S BK D
1S F D
-L- PT Sta. 245+16.95
N 79° 21' 51.2" E
S 81°50'48" E
56.83'
S 82°25'29" E
67.43'
S 11°11'47" W
838.78'
S 05°46'09" W
357.15'
S 05°23'15" W
457.20'
S 83°00'52" E
231.86'
S 83°03'48" E
68.20'
N 07°59'37" E
5 SBW W/ 1S ELEC
4 SBW
12' CONC
3' CONC
12" RCP

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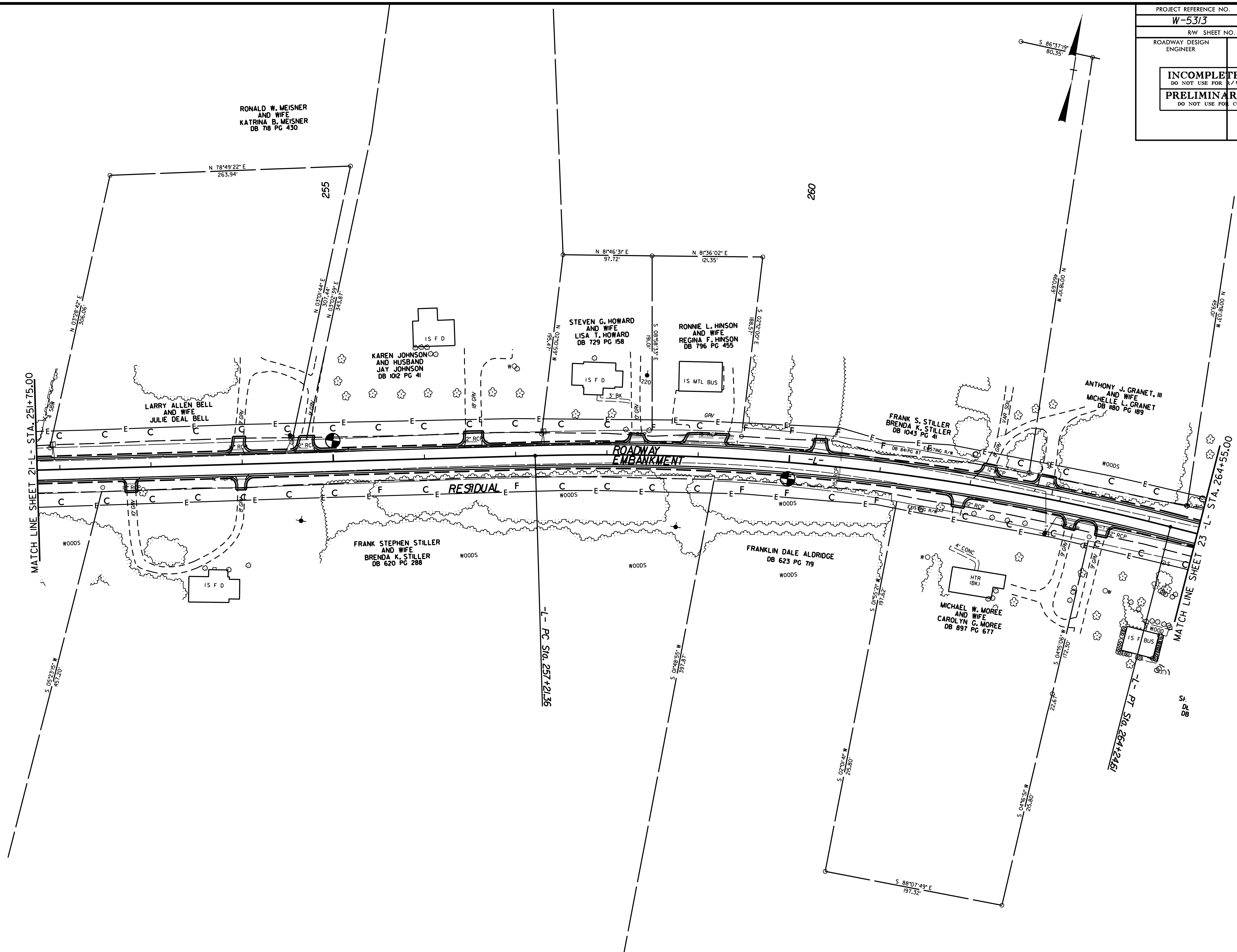
REVISIONS

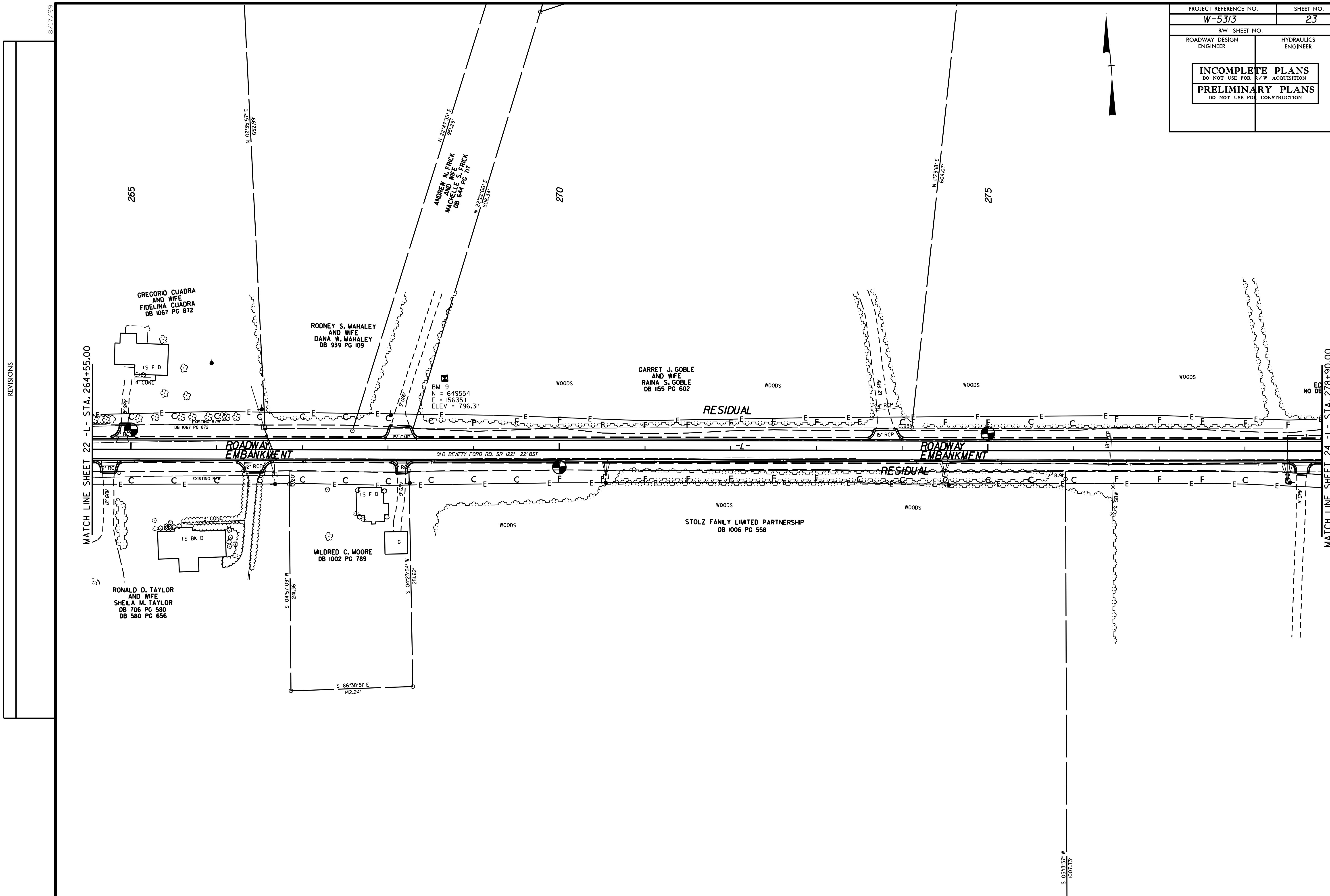
PROJECT REFERENCE NO.	SHEET NO.
W-5313	22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



S 86°37'19"
80.35'
RONALD W. MEISNER
AND WIFE
KATRINA B. MEISNER
DB 718 PG 430
N 78°49'22" E
263.94'
255
260
N 81°46'31" E
97.72'
N 81°36'02" E
121.35'
N 03°28'42" E
306.06'
N 03°01'44" E
307.44'
N 03°02'39" E
343.87'
KAREN JOHNSON
AND HUSBAND
JAY JOHNSON
DB 1012 PG 41
1 S F D
STEVEN G. HOWARD
AND WIFE
LISA T. HOWARD
DB 729 PG 158
RONNIE L. HINSON
AND WIFE
REGINA F. HINSON
DB 796 PG 455
1 S MTL BUS
3' BK
LARRY ALLEN BELL
AND WIFE
JULIE DEAL BELL
FRANK S. STILLER
BRENDA K. STILLER
DB 1043 PG 41
ANTHONY J. GRANET, III
AND WIFE
MICHELLE L. GRANET
DB 1180 PG 189
MATCH LINE SHEET 21 -L- STA. 251+75.00
ROADWAY
EMBANKMENT
RESIDUAL
-L-
WOODS
12" RCP
FRANK STEPHEN STILLER
AND WIFE
BRENDA K. STILLER
DB 620 PG 288
FRANKLIN DALE ALDRIDGE
DB 623 PG 719
-L- PC Sta. 257+21.36
HTR
(BK)
4' CONC
MICHAEL W. MOREE
AND WIFE
CAROLYN G. MOREE
DB 897 PG 677
1 S F BUS
MATCH LINE SHEET 23 -L- STA. 264+55.00
-L- PT Sta. 264+24.61
S 05°23'15" W
457.20'
S 01°48'55" W
397.87'
S 01°55'21" W
191.62'
S 02°01'41" W
215.80'
S 04°16'51" W
215.80'
S 88°07'49" E
197.32'



8/17/99
REVISIONS
PROJECT REFERENCE NO.
SHEET NO.
W-5313
23
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
MATCH LINE SHEET 22 -L- STA. 264+55.00
MATCH LINE SHEET 24 -L- STA. 278+90.00
265
270
275
N 02°15'57" E
652.99'
N 22°47'35" E
951.29'
N 22°22'06" E
508.34'
N 11°29'18" E
604.07'
ANDREW N. FRICK
AND WIFE
MACHELLE S. FRICK
DB 644 PG 717
GREGORIO CUADRA
AND WIFE
FIDELINA CUADRA
DB 1067 PG 872
RODNEY S. MAHALEY
AND WIFE
DANA W. MAHALEY
DB 939 PG 109
BM 9
N = 649554
E = 1563511
ELEV = 796.31'
GARRET J. GOBLE
AND WIFE
RAINA S. GOBLE
DB 1155 PG 602
WOODS
RESIDUAL
ROADWAY
EMBANKMENT
-L-
OLD BEATTY FORD RD. SR 1221 22' BST
EXISTING R/W
DB 1067 PG 872
15" CMP
15" RCP
24" RCP
1S F D
4" CONC
1S BK D
3" CONC
RONALD D. TAYLOR
AND WIFE
SHEILA M. TAYLOR
DB 706 PG 580
DB 580 PG 656
MILDRED C. MOORE
DB 1002 PG 789
S 04°57'09" W
241.36'
S 04°23'54" W
251.62'
S 86°38'51" E
142.24'
STOLZ FAMILY LIMITED PARTNERSHIP
DB 1006 PG 558
S 05°13'37" W
1007.73'

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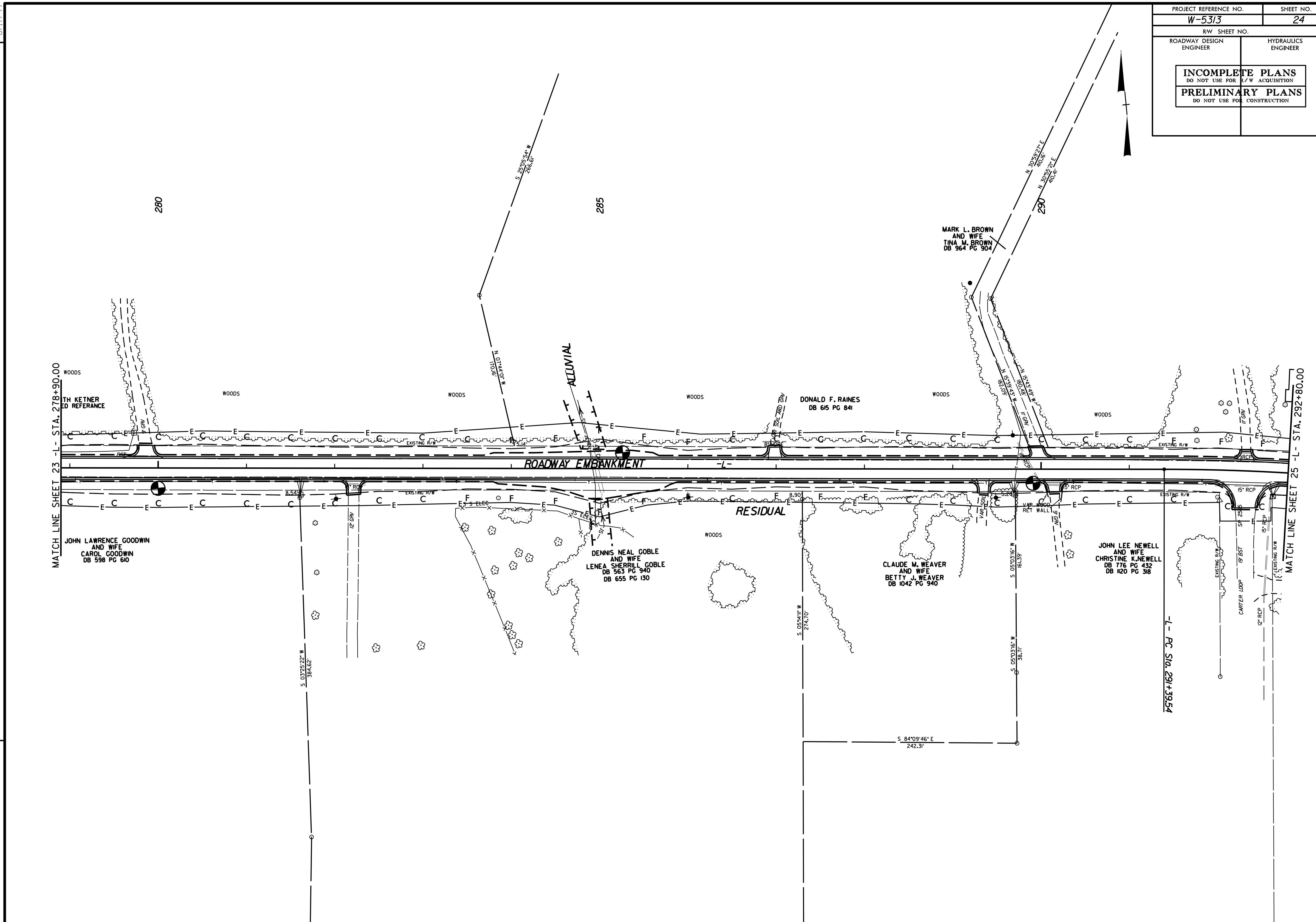
REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
W-5313	24
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



MATCH LINE SHEET 23 -L- STA. 278+90.00
MATCH LINE SHEET 25 -L- STA. 292+80.00
280
285
290
ROADWAY EMBANKMENT
-L-
ALLUVIAL
RESIDUAL
WOODS
TH KETNER
ED REFERANCE
JOHN LAWRENCE GOODWIN
AND WIFE
CAROL GOODWIN
DB 598 PG 610
DENNIS NEAL GOBLE
AND WIFE
LENEA SHERRILL GOBLE
DB 563 PG 940
DB 655 PG 130
DONALD F. RAINES
DB 615 PG 841
MARK L. BROWN
AND WIFE
TINA M. BROWN
DB 964 PG 904
CLAUDE M. WEAVER
AND WIFE
BETTY J. WEAVER
DB 1042 PG 940
JOHN LEE NEWELL
AND WIFE
CHRISTINE K. NEWELL
DB 776 PG 432
DB 1120 PG 318
S 25°05'54" W
266.61'
N 07°44'07" W
170.16'
N 30°59'27" E
410.46'
N 30°55'21" E
410.41'
S 03°25'22" W
384.62
S 05°14'11" W
274.70'
S 05°03'16" W
161.39'
S 05°03'16" W
38.71'
S 84°09'46" E
242.31'
EXISTING R/W
15" RCP
12" RCP
CARTER LOOP
RET WALL
-L- PC Sta. 291+39.54

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REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
W-5313	25

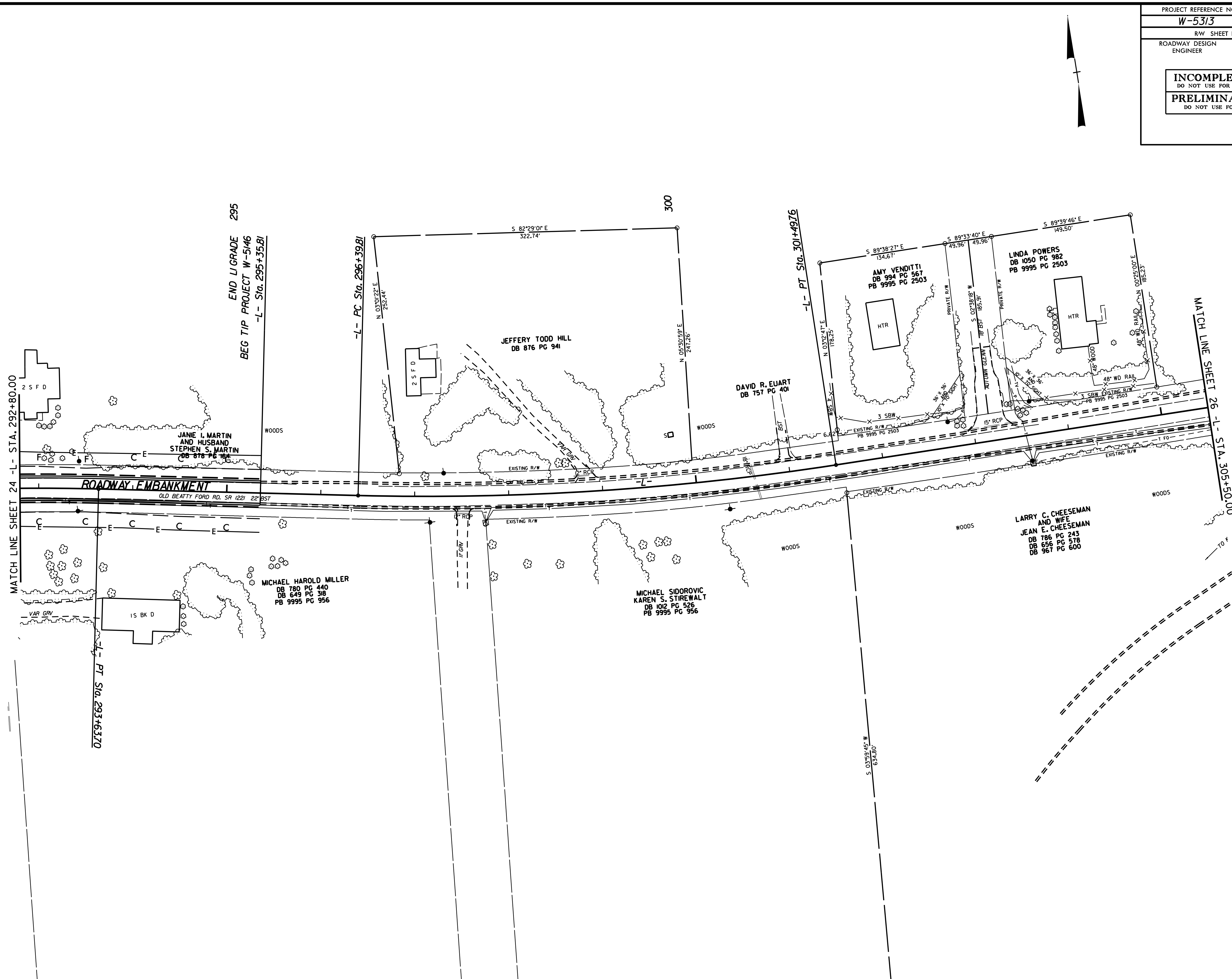
R/W SHEET NO.

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



MATCH LINE SHEET 24 -L- STA. 292+80.00
MATCH LINE SHEET 26 -L- STA. 305+50.00
END L/GRADE
BEG TIP PROJECT W-5146
-L- Sta. 295+35.81
295
300
-L- PC Sta. 296+39.81
-L- PT Sta. 301+49.76
-L- PT Sta. 293+63.70
ROADWAY EMBANKMENT
OLD BEATTY FORD RD. SR 1221 22' BST
JANIE I. MARTIN
AND HUSBAND
STEPHEN S. MARTIN
DB 878 PG 164
JEFFERY TODD HILL
DB 876 PG 941
S 82°29'01" E
322.74'
N 05°30'59" E
247.26'
N 03°01'22" E
252.44'
DAVID R. EUART
DB 757 PG 401
AMY VENDITTI
DB 994 PG 567
PB 9995 PG 2503
S 89°38'27" E
134.67'
S 89°33'40" E
49.96'
LINDA POWERS
DB 1050 PG 982
PB 9995 PG 2503
S 89°39'46" E
149.50'
N 03°12'47" E
178.25'
S 02°38'18" W
185.91'
N 00°25'00" E
185.23'
HTR
2 S F D
1S BK D
WOODS
EXISTING R/W
3 SBW
48" WD RAIL
15" RCP
PRIVATE R/W
LARRY C. CHEESEMAN
AND WIFE
JEAN E. CHEESEMAN
DB 786 PG 243
DB 656 PG 578
DB 967 PG 600
MICHAEL HAROLD MILLER
DB 780 PG 440
DB 649 PG 318
PB 9995 PG 956
MICHAEL SIDOROVIC
KAREN S. STIREWALT
DB 1012 PG 526
PB 9995 PG 956
S 03°59'45" W
634.80'
VAR GRV
-L-

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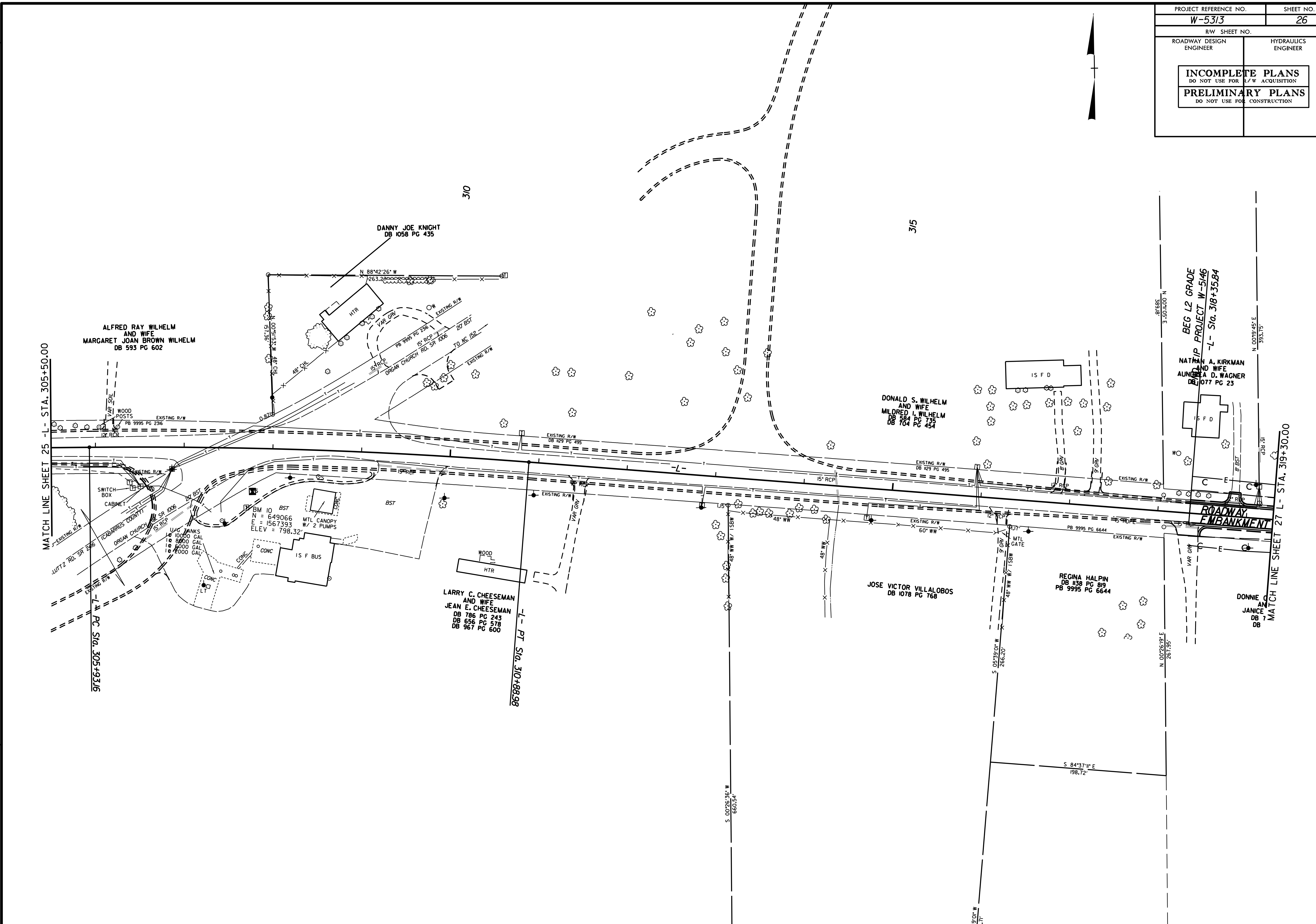
REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
W-5313	26
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



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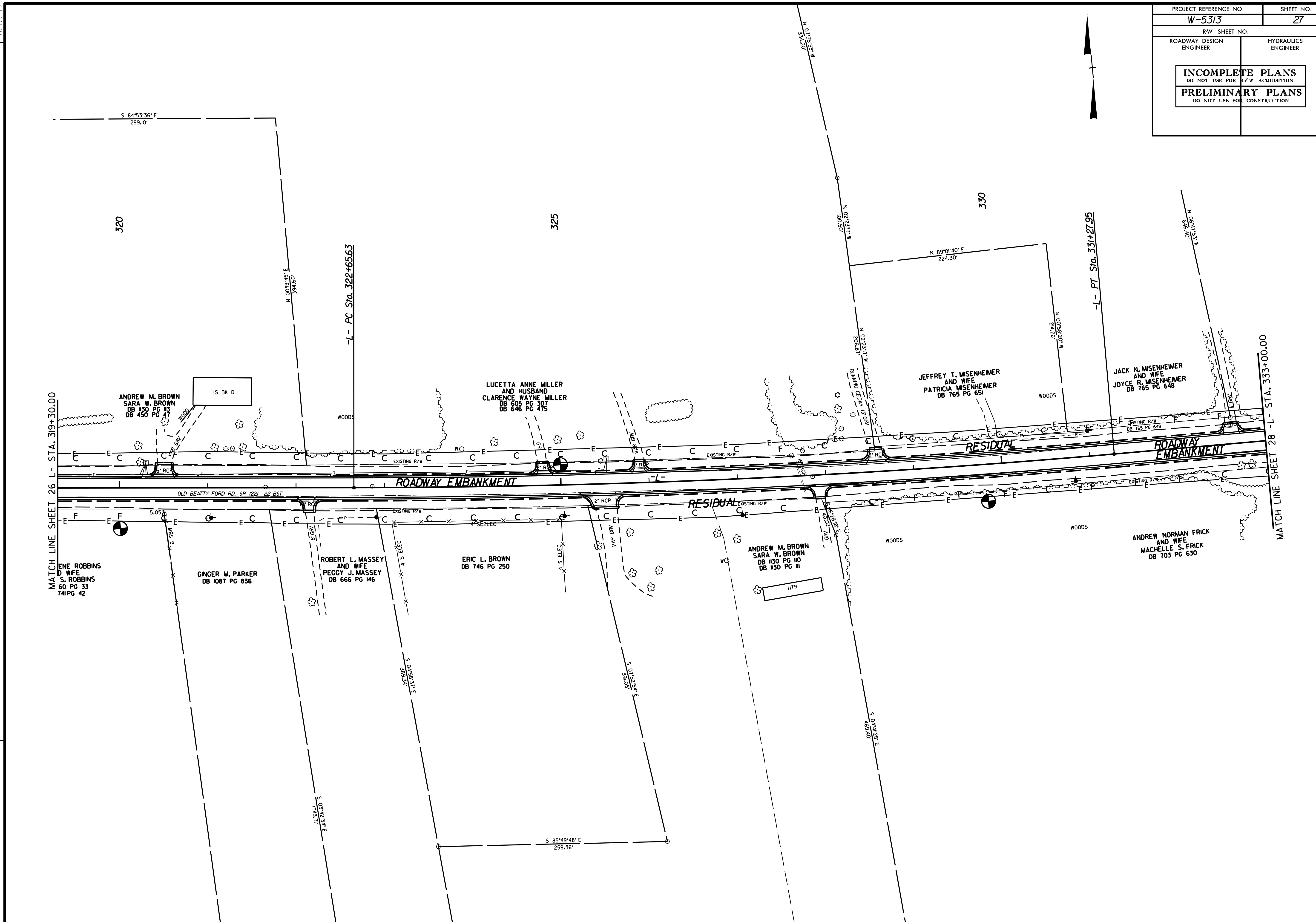
REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
W-5313	27
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



MATCH LINE SHEET 26 -L- STA. 319+30.00
MATCH LINE SHEET 28 -L- STA. 333+00.00
-L- PC Sta. 322+65.63
-L- PT Sta. 331+27.95
320
325
330
S 84°53'36" E
299.10'
N 00°19'45" E
394.60'
N 07°35'33" W
334.20'
N 02°23'17" W
101.50'
N 89°01'40" E
224.30'
N 00°58'20" W
214.26'
N 02°23'17" W
206.81'
N 04°47'53" W
646.40'
ANDREW M. BROWN
SARA W. BROWN
DB 1130 PG 113
DB 450 PG 47
1S BK D
WOODS
LUCETTA ANNE MILLER
AND HUSBAND
CLARENCE WAYNE MILLER
DB 605 PG 307
DB 646 PG 475
JEFFREY T. MISENHEIMER
AND WIFE
PATRICIA MISENHEIMER
DB 765 PG 651
JACK N. MISENHEIMER
AND WIFE
JOYCE R. MISENHEIMER
DB 765 PG 648
RUNNING CEDAR 13' GRV
ROADWAY EMBANKMENT
RESIDUAL
EXISTING R/W
OLD BEATTY FORD RD. SR 1221 22' BST
12" RCP
-L-
ENE ROBBINS
D WIFE
S. ROBBINS
60 PG 33
741 PG 42
GINGER M. PARKER
DB 1087 PG 836
ROBERT L. MASSEY
AND WIFE
PEGGY J. MASSEY
DB 666 PG 146
ERIC L. BROWN
DB 746 PG 250
ANDREW M. BROWN
SARA W. BROWN
DB 1130 PG 110
DB 1130 PG 111
HTR
ANDREW NORMAN FRICK
AND WIFE
MACHELLE S. FRICK
DB 703 PG 630
S 03°42'34" E
1743.71'
S 04°58'37" E
389.34'
S 07°52'54" E
391.05'
S 04°41'28" E
469.40'
S 85°49'48" E
259.36'

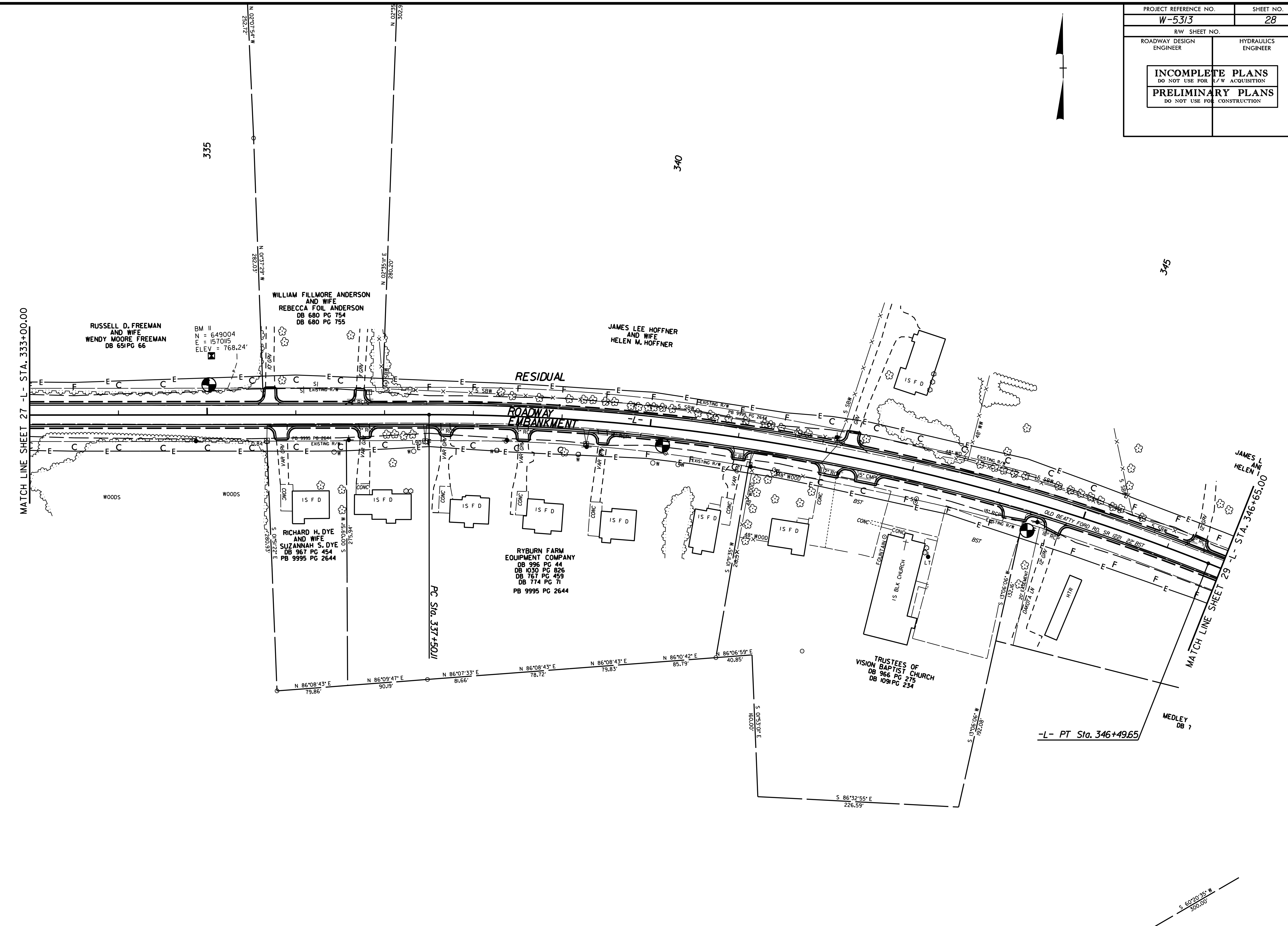
PROJECT REFERENCE NO.	SHEET NO.
W-5313	28
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISIONS

8/17/99



MATCH LINE SHEET 27 -L- STA. 333+00.00
MATCH LINE SHEET 29 -L- STA. 346+65.00
335
340
345
RUSSELL D. FREEMAN AND WIFE WENDY MOORE FREEMAN DB 651 PG 66
BM 11 N = 649004 E = 1570115 ELEV = 768.24'
WILLIAM FILLMORE ANDERSON AND WIFE REBECCA FOIL ANDERSON DB 680 PG 754 DB 680 PG 755
JAMES LEE HOFFNER AND WIFE HELEN M. HOFFNER
RESIDUAL
ROADWAY EMBANKMENT
RICHARD H. DYE AND WIFE SUZANNAH S. DYE DB 967 PG 454 PB 9995 PG 2644
RYBURN FARM EQUIPMENT COMPANY DB 996 PG 44 DB 1030 PG 826 DB 767 PG 459 DB 774 PG 71 PB 9995 PG 2644
PC Sta. 337+50.11
TRUSTEES OF VISION BAPTIST CHURCH DB 966 PG 275 DB 1091 PG 234
OLD BEATTY FORD RD. SR 1221 22' BST
1S BLK CHURCH
-L- PT Sta. 346+49.65
MEDLEY DB 7
WOODS
N 86°08'43" E 79.86'
N 86°09'47" E 90.19'
N 86°07'33" E 81.66'
N 86°08'43" E 78.72'
N 86°08'43" E 79.83'
N 86°10'42" E 85.79'
N 86°06'59" E 40.85'
S 86°32'55" E 226.59'
S 60°20'35" W 300.00'

PROJECT REFERENCE NO.	SHEET NO.
W-5313	29
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

8/17/99

REVISIONS

MATCH LINE SHEET 28 -L- STA. 346+65.00

MATCH LINE SHEET 30 -L- STA. 360+20.00

-L- PC Sta. 358+41.23

350

355

360

ALLUVIAL

RESIDUAL

ROADWAY EMBANKMENT

WOODS

EE HOFFNER
) WIFE
W. HOFFNER

ALINE B. VEACH
DB 1153 PG 965

MEDLEY RENTALS, INC.
DB 744 PG 566

RANDY GOODMAN
DB 587 PG 169
DB 625 PG 930

RODNEY MACK GOODMAN
DB 787 PG 726
DB 851 PG 977

TONY D. MISENHEIMER
AND WIFE
PAMELA H. MISENHEIMER
DB 863 PG 222

CHRISTINE GOODMAN CULP
DB 905 PG 512

FREDERICK L. DIEHL
AND WIFE
LORI ANN DIEHL
DB 721 PG 64

JEFFREY S. WRIGHT
SHANNON D. SMITH
DB 661 PG 185

N 75°08'40" W
561.95'

S 68°29'34" W
225.10'

S 66°20'35" W
300.00'

S 14°17'47" W
595.05'

N 85°49'45" E
147.60'

N 85°34'17" E
302.99'

S 24°26'58" W
228.89'

S 04°48'40" E
258.51'

N 54°13'58" E
206.00'

S 80°40'22" E
569.16'

S 62°28'07" E
227.22'

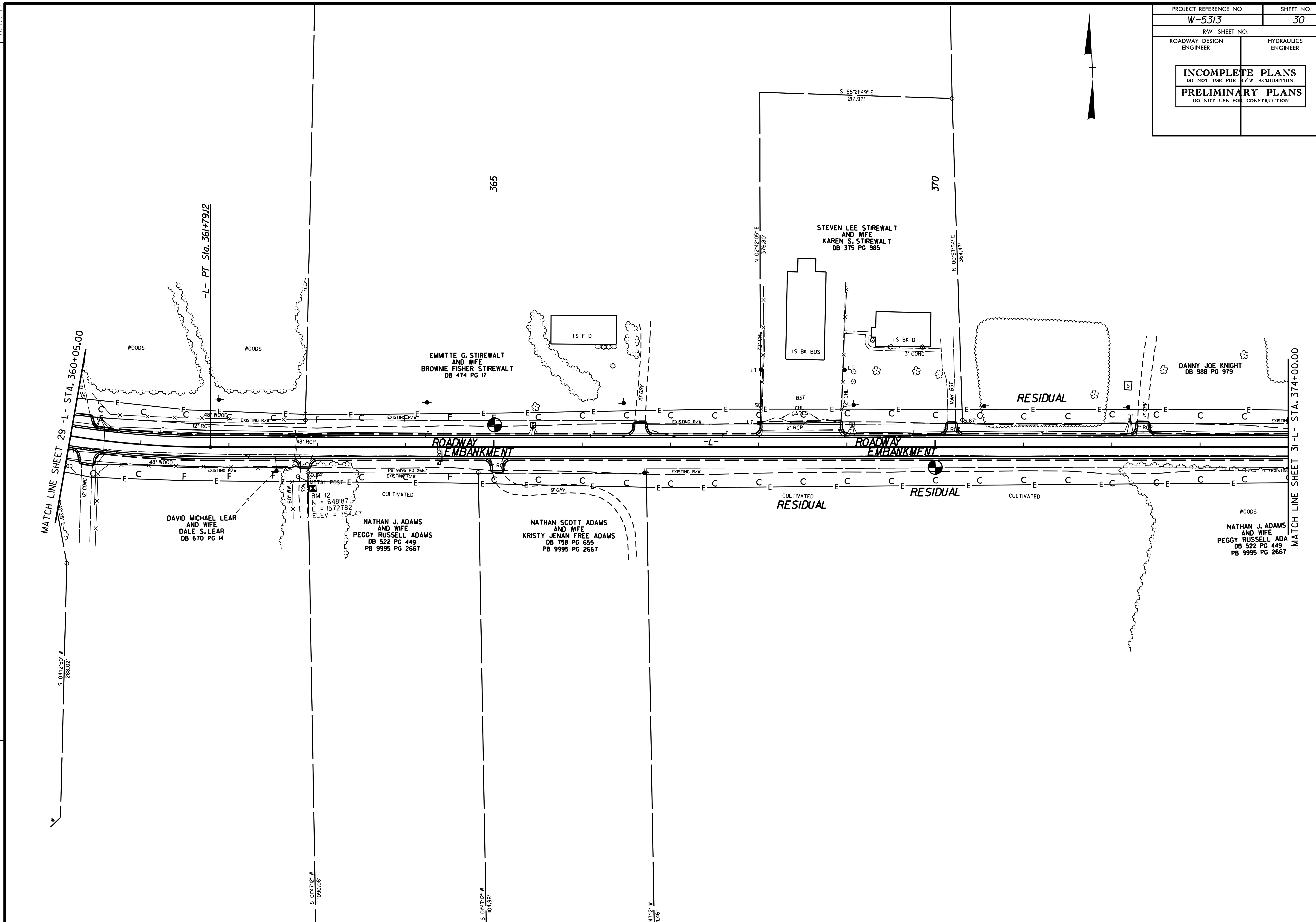
N 09°52'28" E
403.54'

N 23°08'36" E
344.94'

S 07°47'47" W
27.57'
ROCK WALL

S 60°44'05" E
70.83'

S 60°47'38" E
168.14'


PROJECT REFERENCE NO. W-5313
SHEET NO. 30
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
REVISIONS
8/17/99
MATCH LINE SHEET 29 -L- STA. 360+05.00
MATCH LINE SHEET 31 -L- STA. 374+00.00
-L- PT Sta. 361+79.12
365
370
WOODS
EMMITTE G. STIREWALT
AND WIFE
BROWNIE FISHER STIREWALT
DB 474 PG 17
STEVEN LEE STIREWALT
AND WIFE
KAREN S. STIREWALT
DB 375 PG 985
S 85°21'49" E
217.97'
N 02°42'05" E
376.80'
N 00°57'54" E
364.47'
1S F D
1S BK BUS
1S BK D
3' CONC
RESIDUAL
DANNY JOE KNIGHT
DB 988 PG 979
ROADWAY
EMBANKMENT
-L-
EXISTING R/W
48" WOOD
12" RCP
18" RCP
BST
CHL
GATES
VAR BST
12" CONC
DAVID MICHAEL LEAR
AND WIFE
DALE S. LEAR
DB 670 PG 14
BM 12
N = 648187
E = 1572782
ELEV = 754.47
METAL POST
60' WW
CULTIVATED
NATHAN J. ADAMS
AND WIFE
PEGGY RUSSELL ADAMS
DB 522 PG 449
PB 9995 PG 2667
NATHAN SCOTT ADAMS
AND WIFE
KRISTY JENAN FREE ADAMS
DB 758 PG 655
PB 9995 PG 2667
9' GRV
WOODS
S 04°12'50" W
288.02'
S 01°47'12" W
1090.08'
S 01°47'12" W
1104.96'
01°47'12" W
1121.46'

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REVISIONS

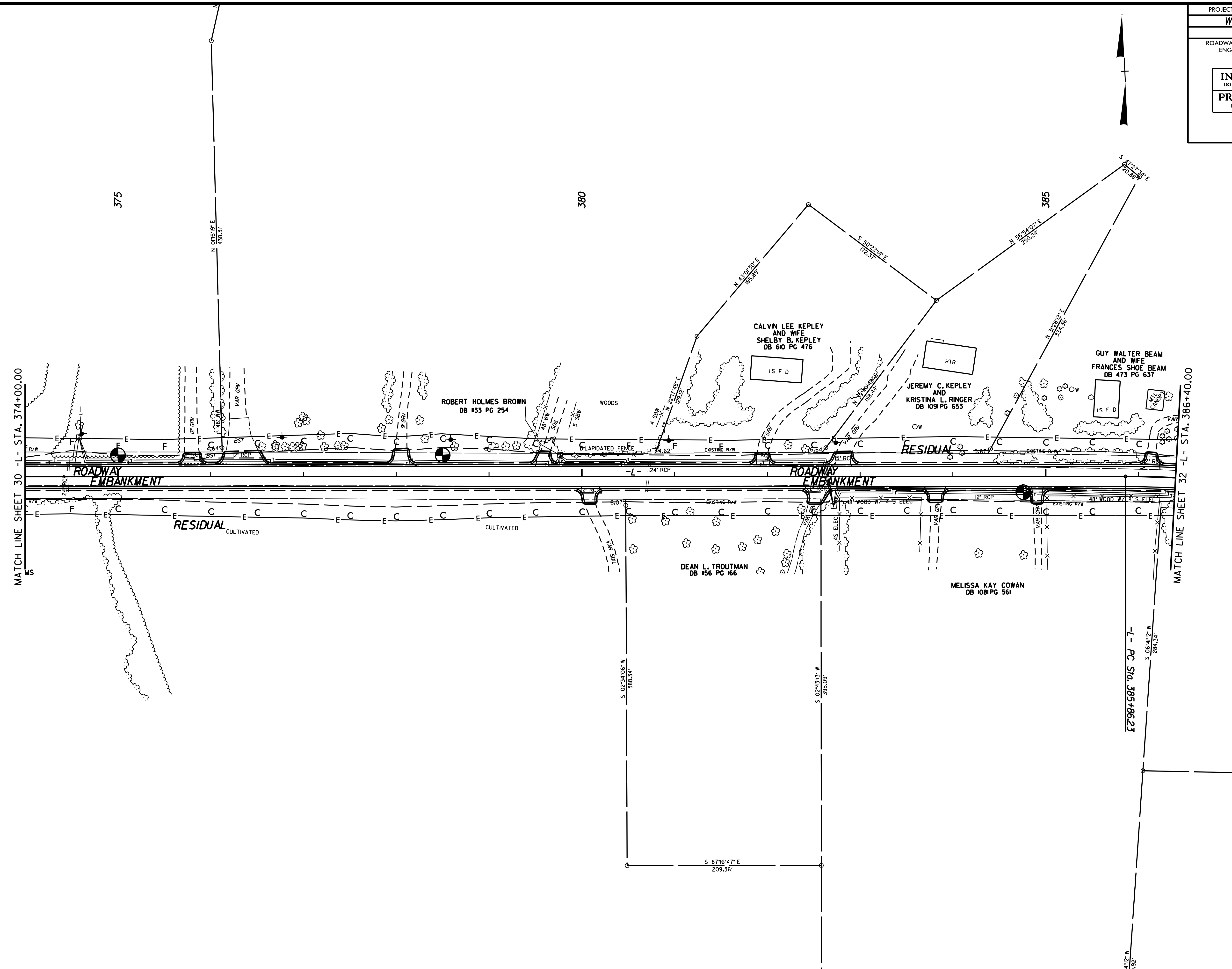
PROJECT REFERENCE NO.	SHEET NO.
W-5313	31

R/W SHEET NO.

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



375
380
385
MATCH LINE SHEET 30 -L- STA. 374+00.00
MATCH LINE SHEET 32 -L- STA. 386+40.00
N 01°16'19" E
438.31'
N 43°01'30" E
185.89'
S 50°22'14" E
172.37'
N 56°54'07" E
250.24'
S 47°27'34" E
20.88'
N 31°28'12" E
334.36'
N 22°27'45" E
123.12'
CALVIN LEE KEPLEY
AND WIFE
SHELBY B. KEPLEY
DB 610 PG 476
1 S F D
HTR
JEREMY C. KEPLEY
AND
KRISTINA L. RINGER
DB 1091 PG 653
GUY WALTER BEAM
AND WIFE
FRANCES SHOE BEAM
DB 473 PG 637
MTL CANOPY
ROBERT HOLMES BROWN
DB 1133 PG 254
WOODS
DILAPIDATED FENCE
EXISTING R/W
ROADWAY
EMBANKMENT
RESIDUAL
CULTIVATED
-L-
24" RCP
12" RCP
48" WOOD W/ 4 S ELEC
DEAN L. TROUTMAN
DB 1156 PG 166
MELISSA KAY COWAN
DB 1081 PG 561
S 02°34'06" W
388.34'
S 02°43'13" W
395.09'
S 87°16'47" E
209.36'
S 06°41'12" W
284.34'
-L- PC Sta. 385+86.23

PROJECT REFERENCE NO.	SHEET NO.
W-5313	32

R/W SHEET NO.

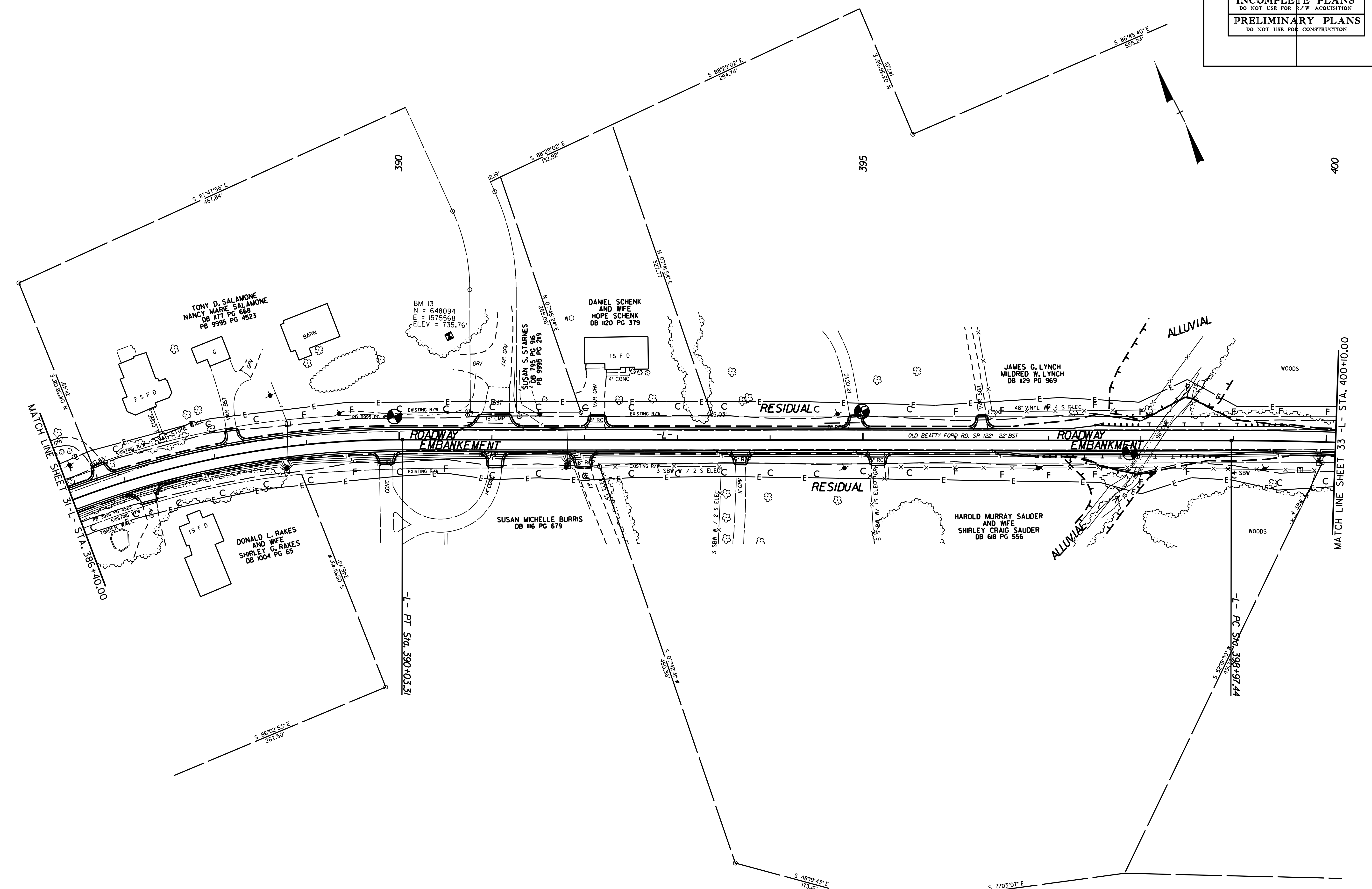
ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISIONS

8/17/99



MATCH LINE SHEET 31 -L- STA. 386+40.00
MATCH LINE SHEET 33 -L- STA. 400+10.00
390
395
400
TONY D. SALAMONE
NANCY MARIE SALAMONE
DB 1177 PG 668
PB 9995 PG 4523
BARN
BM 13
N = 648094
E = 1575568
ELEV = 735.76'
SUSAN S. STARNES
DB 795 PG 916
PB 9995 PG 219
DANIEL SCHENK
AND WIFE
HOPE SCHENK
DB 1120 PG 379
1 S F D
4' CONC
JAMES G. LYNCH
MILDRED W. LYNCH
DB 1129 PG 969
ALLUVIAL
WOODS
ROADWAY
EMBANKEMENT
-L-
OLD BEATTY FORD RD. SR 1221 22' BST
ROADWAY
EMBANKMENT
RESIDUAL
RESIDUAL
EXISTING R/W
18" CMP
18" RCP
48" VINYL W/ 4 S ELEC
3 SBW W / 2 S ELEC
DONALD L. RAKES
AND WIFE
SHIRLEY G. RAKES
DB 1004 PG 65
SUSAN MICHELLE BURRIS
DB 1116 PG 679
HAROLD MURRAY SAUDER
AND WIFE
SHIRLEY CRAIG SAUDER
DB 618 PG 556
TIMBER WALL
STONE WALL
-L- PT Sta. 390+03.31
-L- PC Sta. 398+97.44
S 87°47'56" E 457.84'
S 88°29'02" E 132.92'
S 88°29'02" E 294.74'
N 07°36'56" E 147.01'
S 86°45'40" E 555.24'
N 07°41'54" E 327.77'
N 07°45'24" E
S 86°02'53" E 262.50'
S 48°19'43" E 173.16'
S 71°03'07" E 255.05'
S 07°42'41" W 450.36'

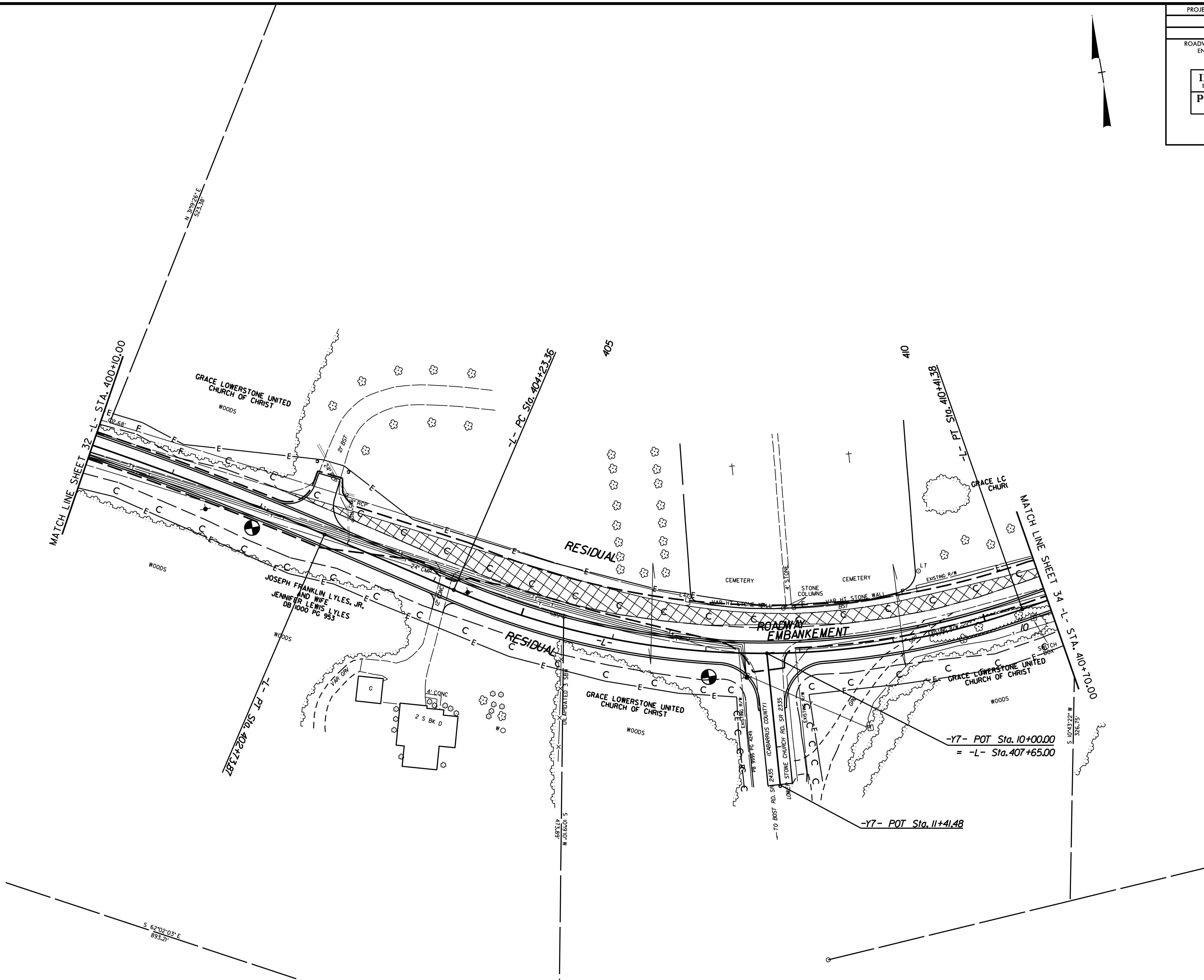
PROJECT REFERENCE NO.	SHEET NO.
W-5313	33
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

8/17/99

REVISIONS



MATCH LINE SHEET 32 -L- STA. 400+10.00
MATCH LINE SHEET 34 -L- STA. 410+70.00
-L- PC Sta. 404+23.36
-L- PT Sta. 402+73.87
-L- PT Sta. 410+41.38
405
410
GRACE LOWERSTONE UNITED CHURCH OF CHRIST
WOODS
JOSEPH FRANKLIN LYLES, JR. AND WIFE JENNIFER LEWIS LYLES DB 1000 PG 953
RESIDUAL
ROADWAY EMBANKEMENT
CEMETERY
STONE COLUMNS
VAR HT STONE WALL
EXISTING R/W
24" CMP
-Y7- POT Sta. 10+00.00 = -L- Sta. 407+65.00
-Y7- POT Sta. 11+41.48
LOWER STONE CHURCH RD. SR 2335 (CABARRUS COUNTY)
TO BOST RD. SR 2435
N 3°19'26" E 523.38'
S 62°02'03" E 893.21'
S 10°43'22" W 326.75'
S 10°10'01" W 473.89'
4' CONC
2 S BK D

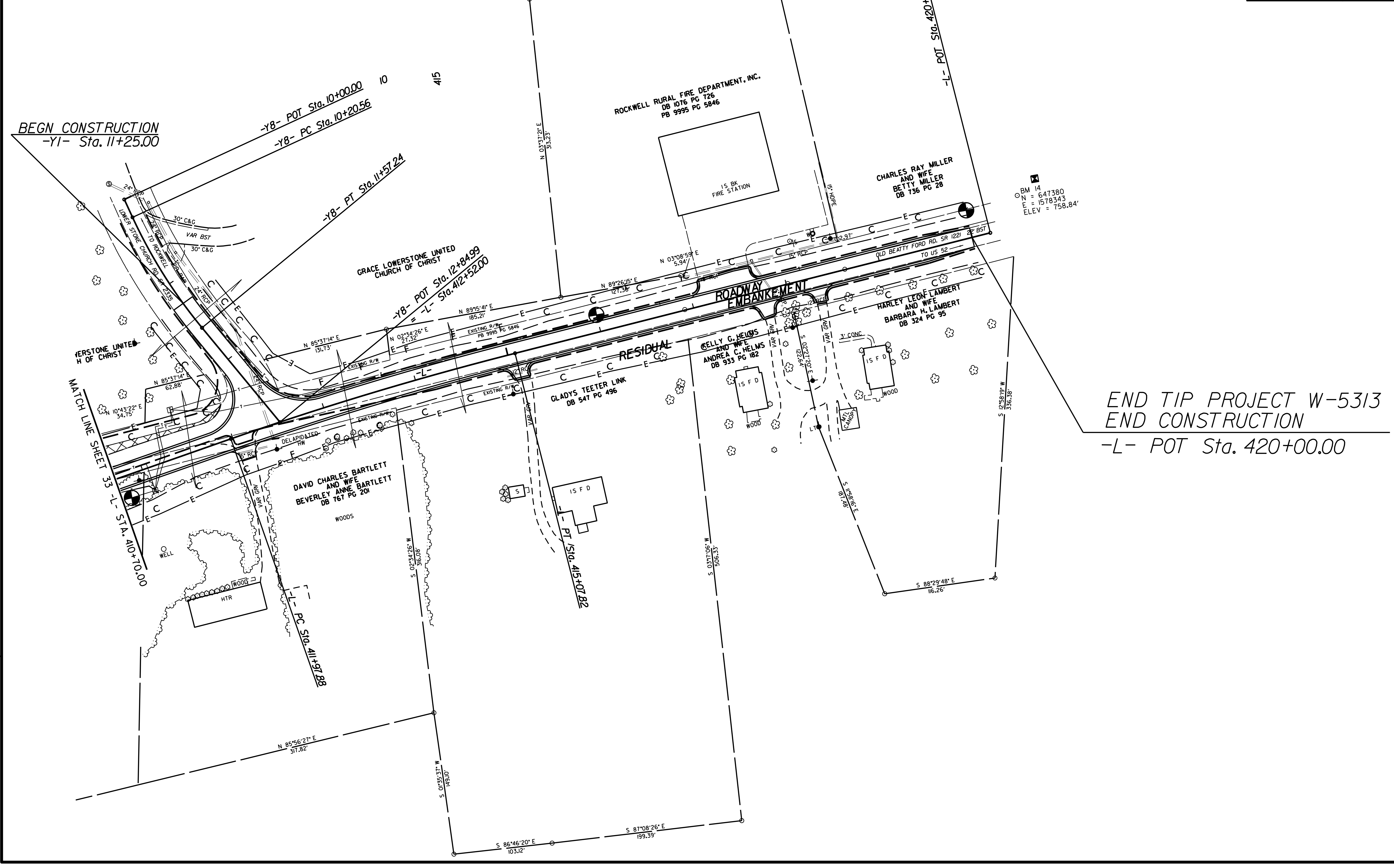
8/17/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
W-5313	34
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



BEGN CONSTRUCTION
-Y1- Sta. 11+25.00
-Y8- POT Sta. 10+00.00
-Y8- PC Sta. 10+20.56
-Y8- PT Sta. 11+57.24
-Y8- POT Sta. 12+84.99
= -L- Sta. 412+52.00
-L- POT Sta. 420+19.59
ROCKWELL RURAL FIRE DEPARTMENT, INC.
DB 1076 PG 726
PB 9995 PG 5846
1 S BK FIRE STATION
CHARLES RAY MILLER AND WIFE BETTY MILLER DB 736 PG 28
BM 14
N = 647380
E = 1578343
ELEV = 758.84'
GRACE LOWERSTONE UNITED CHURCH OF CHRIST
LOWER STONE CHURCH RD. SR 2335
OLD BEATTY FORD RD. SR 1221
TO US 52
ROADWAY EMBANKEMENT
RESIDUAL
HARLEY LEON LAMBERT AND WIFE BARBARA H. LAMBERT DB 324 PG 95
KELLY G. HELMS AND WIFE ANDREA C. HELMS DB 933 PG 182
GLADYS TEETER LINK DB 547 PG 496
DAVID CHARLES BARTLETT AND WIFE BEVERLEY ANNE BARTLETT DB 767 PG 201
WOODS
WELL
HTR
MATCH LINE SHEET 33 -L- STA. 410+70.00
-L- PC Sta. 411+97.88
-L- PT Sta. 415+07.82
END TIP PROJECT W-5313
END CONSTRUCTION
-L- POT Sta. 420+00.00
N 86°27'08" E 256.08'
N 03°37'21" E 313.23'
N 89°26'15" E 127.38'
N 89°15'41" E 185.21'
N 85°37'14" E 131.73'
N 02°34'26" E 27.32'
N 03°08'59" E 5.94'
N 85°37'14" E 62.88'
N 10°43'22" E 34.75'
S 12°58'19" W 336.38'
S 11°58'16" E 187.48'
S 88°29'48" E 116.26'
S 03°17'06" W 506.33'
S 02°34'26" W 316.08'
S 01°35'37" W 149.01'
S 86°46'20" E 103.12'
S 87°08'26" E 199.39'
N 85°56'27" E 517.82'
410
415
420

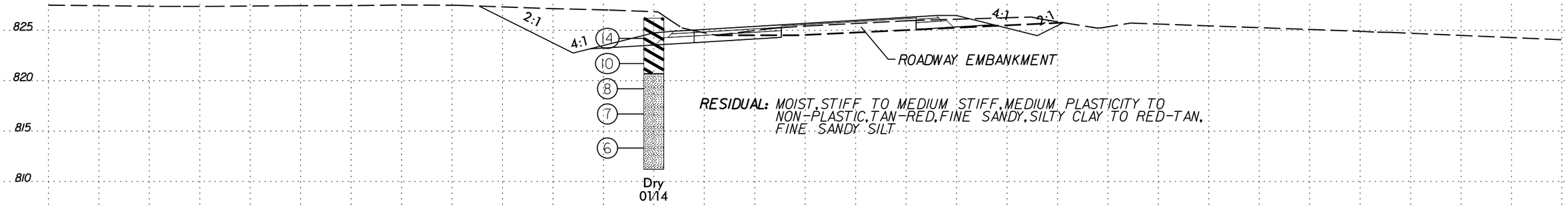
8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	35

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

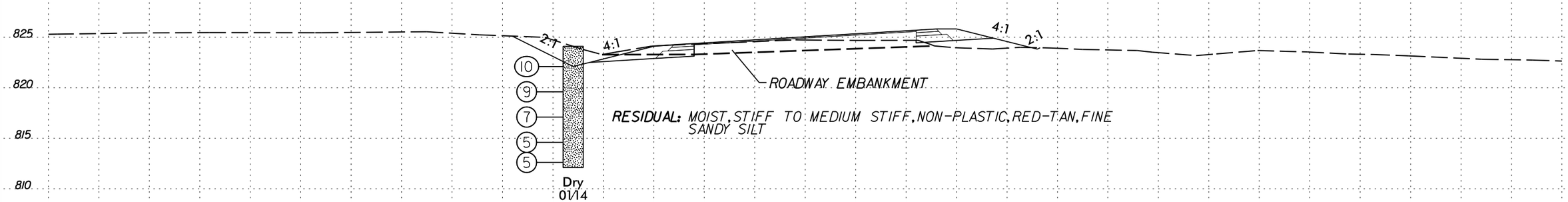
SS-20

STA 19+86



RESIDUAL: MOIST, STIFF TO MEDIUM STIFF, MEDIUM PLASTICITY TO NON-PLASTIC, TAN-RED, FINE SANDY, SILTY CLAY TO RED-TAN, FINE SANDY SILT

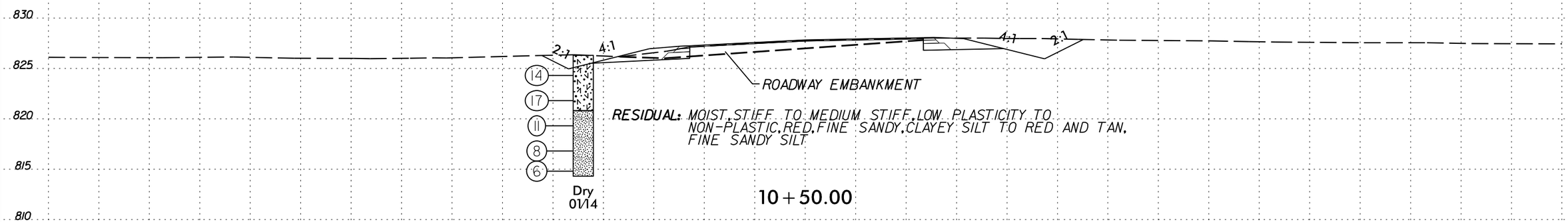
20+00.00



RESIDUAL: MOIST, STIFF TO MEDIUM STIFF, NON-PLASTIC, RED-TAN, FINE SANDY SILT

15+00.00

STA 10+45



RESIDUAL: MOIST, STIFF TO MEDIUM STIFF, LOW PLASTICITY TO NON-PLASTIC, RED, FINE SANDY, CLAYEY SILT TO RED AND TAN, FINE SANDY SILT

10+50.00

$-\mathit{L}-$

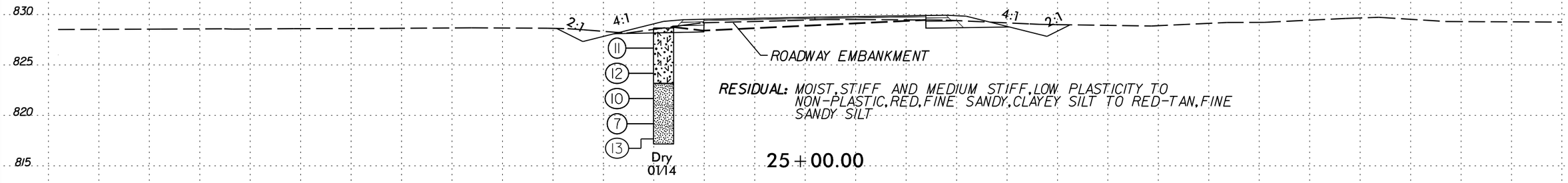
70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	36

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

STA 24+89



RESIDUAL: MOIST, STIFF AND MEDIUM STIFF, LOW PLASTICITY TO NON-PLASTIC, RED, FINE SANDY, CLAYEY SILT TO RED-TAN, FINE SANDY SILT

25+00.00

830
825
820
815

—℄—

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	37

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

830
825
820

ROADWAY EMBANKMENT

1.98:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF TO STIFF, LOW PLASTICITY, RED-TAN, FINE SANDY CLAYEY SILT

28+00.00

830
825
820

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF TO STIFF, LOW PLASTICITY, RED-TAN, FINE SANDY CLAYEY SILT

27+50.00

830
825
820

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF AND MEDIUM STIFF, MEDIUM PLASTICITY TO NON-PLASTIC, RED, FINE SANDY, SILTY CLAY TO RED-TAN, FINE SANDY SILT

27+00.00

$-\mathit{L}-$

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

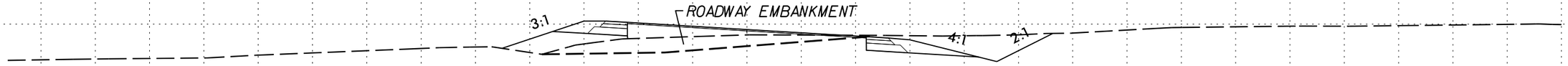
8/23/99

0 2.5 5

PROJ. REFERENCE NO.	SHEET NO.
W-5313	38

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

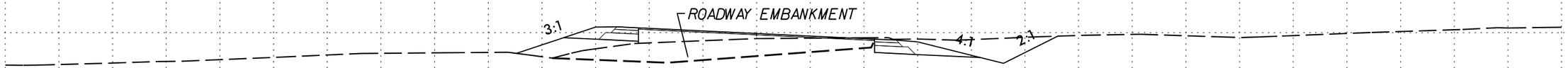
830 825 820 815



RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF TO STIFF, LOW PLASTICITY, RED-TAN, FINE SANDY CLAYEY SILT

29 + 50.00



RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF TO STIFF, LOW PLASTICITY, RED-TAN, FINE SANDY CLAYEY SILT

29 + 00.00

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF TO STIFF, LOW PLASTICITY, RED-TAN, FINE SANDY CLAYEY SILT

28 + 50.00

$-\mathit{L}-$

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	39

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

830 825 820 815

2:1 4:1 ROADWAY EMBANKMENT 4:1 2:1

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF TO STIFF, LOW PLASTICITY, RED-TAN, FINE SANDY CLAYEY SILT

31+00.00

830 825 820 815

3:1 ROADWAY EMBANKMENT 4:1 2:1

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF TO STIFF, LOW PLASTICITY, RED-TAN, FINE SANDY CLAYEY SILT

30+50.00

830 825 820 815

SS-21

3:1 ROADWAY EMBANKMENT 4:1 2:1

9
22
20
11

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF TO STIFF, LOW PLASTICITY, RED-TAN, FINE SANDY CLAYEY SILT

Dry
01/14

30+00.00

—℄—

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	40

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

830
825
820
815

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF TO STIFF, LOW PLASTICITY, RED-TAN, FINE SANDY CLAYEY SILT

32 + 50.00

830
825
820
815

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF TO STIFF, LOW PLASTICITY, RED-TAN, FINE SANDY CLAYEY SILT

32 + 00.00

830
825
820
815

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF TO STIFF, LOW PLASTICITY, RED-TAN, FINE SANDY CLAYEY SILT

31 + 50.00

$-\mathit{L}-$

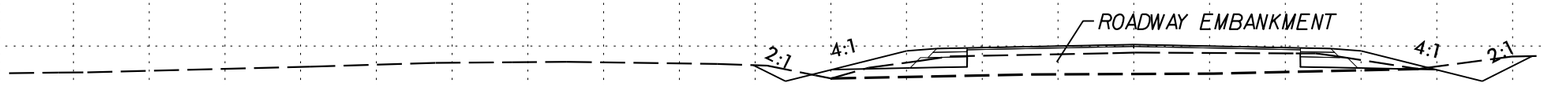
75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	41

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

830
825
820



RESIDUAL: MOIST, VERY STIFF TO MEDIUM STIFF, LOW PLASTICITY TO NON-PLASTIC, RED-TAN, FINE SANDY, CLAYEY SILT TO RED-TAN, FINE SANDY SILT

33+00.00

—L—

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	42

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

830
825
820
815
810

2:1 4:1

ROADWAY EMBANKMENT

4:1 2:1

11
18
11
7
7

RESIDUAL: MOIST, VERY STIFF TO MEDIUM STIFF, LOW PLASTICITY TO NON-PLASTIC, RED-TAN, FINE SANDY, CLAYEY SILT TO RED-TAN, FINE SANDY SILT

Dry
01/14

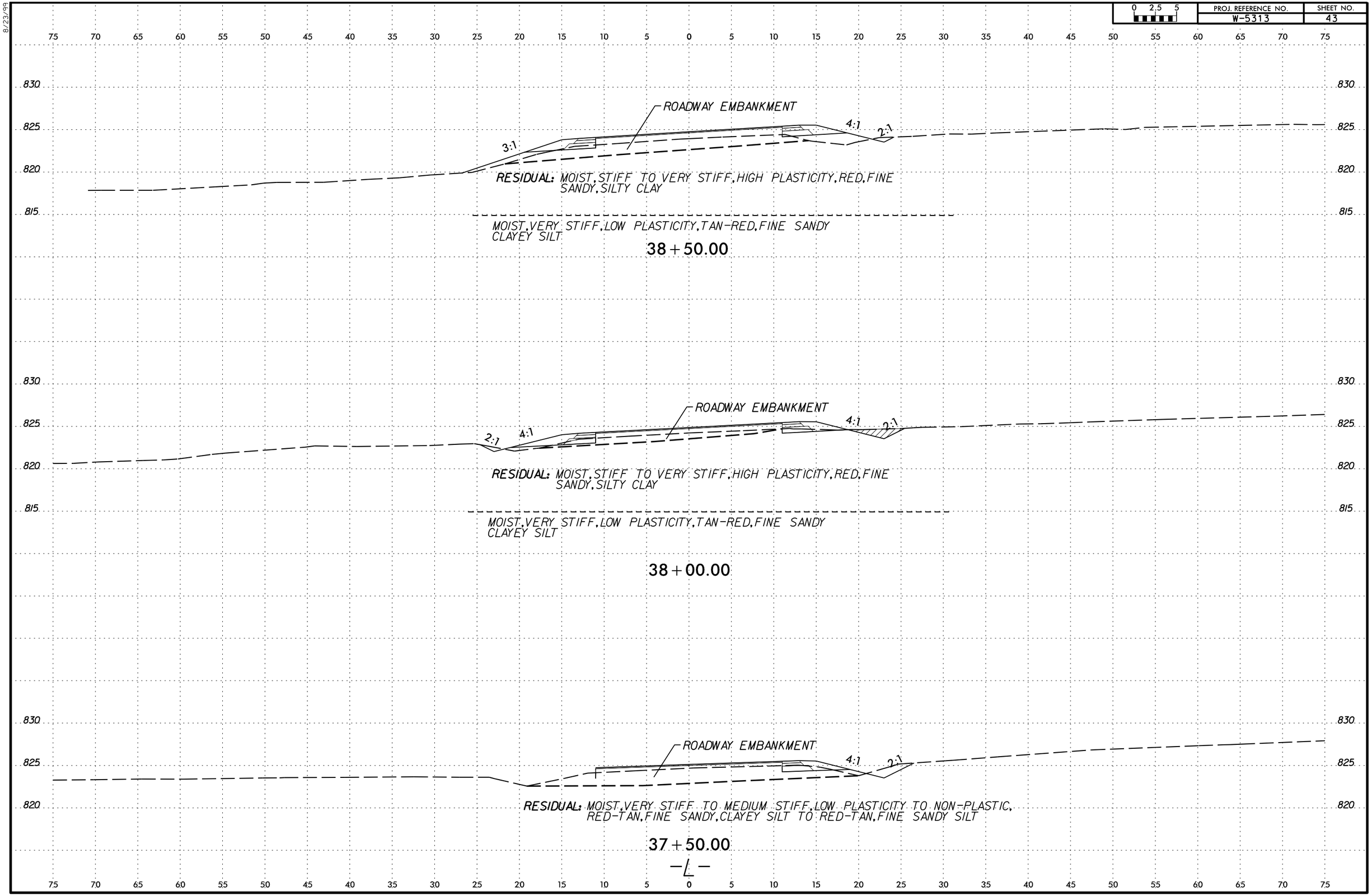
35 + 00.00

—L—

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	43



8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	44

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

830
825
820
815

ROADWAY EMBANKMENT

3:1

3:1

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF, LOW PLASTICITY, TAN-RED, FINE SANDY CLAYEY SILT

39 + 50.00

830
825
820
815

ROADWAY EMBANKMENT

3:1

4:1

2:1

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF, LOW PLASTICITY, TAN-RED, FINE SANDY CLAYEY SILT

39 + 00.00

$-\mathit{L}-$

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	45

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

835
830
825
820

ROADWAY EMBANKMENT

2:1 4:1 3:1

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF, LOW PLASTICITY, TAN-RED, FINE SANDY CLAYEY SILT

41+00.00

830
825
820

ROADWAY EMBANKMENT

2.01:1 4:1 3:1

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF, LOW PLASTICITY, TAN-RED, FINE SANDY CLAYEY SILT

40+50.00

830
825
820
815

SS-1

3:1 3:1

ROADWAY EMBANKMENT

10
27
28
19

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF, LOW PLASTICITY, TAN-RED, FINE SANDY CLAYEY SILT

Dry
01/14

40+00.00

$-\mathit{L}-$

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	46

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

835
830
825
820

ROADWAY EMBANKMENT

2:1 4:1

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF, LOW PLASTICITY, TAN-RED, FINE SANDY CLAYEY SILT

41 + 50.00

$-\mathit{L}-$

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	47

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

835
830
825
820

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF TO STIFF, LOW PLASTICITY TO NON-PLASTIC, RED, FINE SANDY, CLAYEY SILT TO TAN-RED, FINE SANDY SILT

43+00.00

835
830
825
820

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF TO STIFF, LOW PLASTICITY TO NON-PLASTIC, RED, FINE SANDY, CLAYEY SILT TO TAN-RED, FINE SANDY SILT

42+50.00

835
830
825
820

ROADWAY EMBANKMENT

2:1 4:1

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF, LOW PLASTICITY, TAN-RED, FINE SANDY CLAYEY SILT

42+00.00

—℄—

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	48

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

835
830
825
820

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF TO STIFF, LOW PLASTICITY TO NON-PLASTIC, RED, FINE SANDY, CLAYEY SILT TO TAN-RED, FINE SANDY SILT

44+50.00

835
830
825
820

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF TO STIFF, LOW PLASTICITY TO NON-PLASTIC, RED, FINE SANDY, CLAYEY SILT TO TAN-RED, FINE SANDY SILT

44+00.00

835
830
825
820

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF TO STIFF, LOW PLASTICITY TO NON-PLASTIC, RED, FINE SANDY, CLAYEY SILT TO TAN-RED, FINE SANDY SILT

43+50.00

$-\mathit{L}-$

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	49

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

830
825
820

ROADWAY EMBANKMENT

2:1 4:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF TO STIFF, LOW PLASTICITY TO NON-PLASTIC, RED, FINE SANDY, CLAYEY SILT TO TAN-RED, FINE SANDY SILT

46 + 00.00

830
825
820

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF TO STIFF, LOW PLASTICITY TO NON-PLASTIC, RED, FINE SANDY, CLAYEY SILT TO TAN-RED, FINE SANDY SILT

45 + 50.00

835
830
825
820

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

(8) (13) (17) (15) (10)

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF TO STIFF, LOW PLASTICITY TO NON-PLASTIC, RED, FINE SANDY, CLAYEY SILT TO TAN-RED, FINE SANDY SILT

Dry
01\14

45 + 00.00

$-\mathit{L}-$

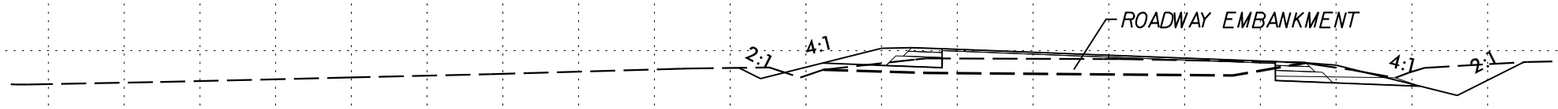
75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	50

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

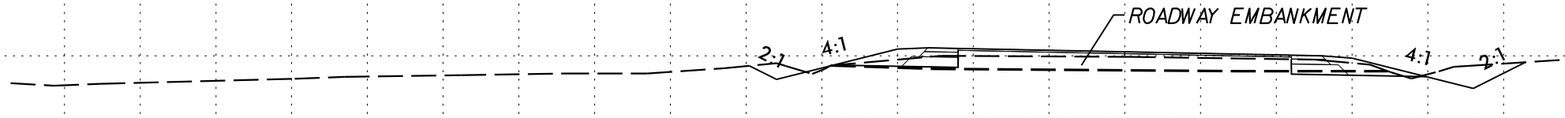
830
825
820
815



RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF TO STIFF, LOW PLASTICITY TO NON-PLASTIC, RED, FINE SANDY, CLAYEY SILT TO TAN-RED, FINE SANDY SILT

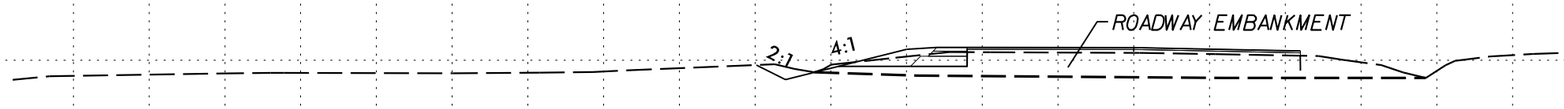
47 + 50.00



RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF TO STIFF, LOW PLASTICITY TO NON-PLASTIC, RED, FINE SANDY, CLAYEY SILT TO TAN-RED, FINE SANDY SILT

47 + 00.00



RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF TO STIFF, LOW PLASTICITY TO NON-PLASTIC, RED, FINE SANDY, CLAYEY SILT TO TAN-RED, FINE SANDY SILT

46 + 50.00

$-\underline{\ell}-$

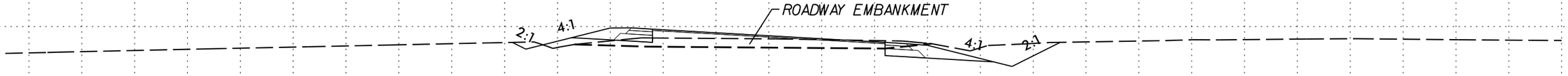
75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	51

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

830
825
820
815



RESIDUAL: MOIST, VERY STIFF TO MEDIUM STIFF, MEDIUM PLASTICITY TO NON-PLASTIC, RED, SILTY FINE SANDY CLAY TO TAN-RED, AND TAN-RED FINE SANDY, CLAYEY SILT

48 + 00.00

—L—

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	52

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

830
825
820
815
810
805

2:1 4:1

ROADWAY EMBANKMENT

4:1 2:1

12
20
15
7
8

Dry
01/14

RESIDUAL: MOIST, VERY STIFF TO MEDIUM STIFF, MEDIUM PLASTICITY T NON-PLASTIC, RED, SILTY FINE SANDY CLAY TO TAN-RED, AND TAN-RED FINE SANDY, CLAYEY SILT

50+00.00

—℄—

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	53

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

820
815
810
805
800

ROADWAY EMBANKMENT

1.98:1 4:1 4:1 2:1

11
19
12
10

Dry
01/14

RESIDUAL: MOIST, STIFF AND VERY STIFF, MEDIUM PLASTICITY TO NON-PLASTIC, COARSE TO FINE SANDY, SILTY CLAY TO RED AND RED-TAN, FINE SANDY, CLAYEY SILT

65+00.00

825
820
815
810
805

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

11
17
15
10
10

Dry
01/14

RESIDUAL: MOIST, STIFF TO VERY STIFF, LOW PLASTICITY TO NON-PLASTIC, RED, FINE SANDY, CLAYEY SILT TO RED-TAN, FINE SANDY SILT

60+00.00

820
815
810
805

2:1 4:1 4:1 2:1

ROADWAY EMBANKMENT

9
12
9
7
5

Dry
01/14

RESIDUAL: MOIST, STIFF TO MEDIUM STIFF, LOW PLASTICITY TO NON-PLASTIC, RED, FINE SANDY, CLAYEY SILT TO RED-TAN, FINE SANDY SILT

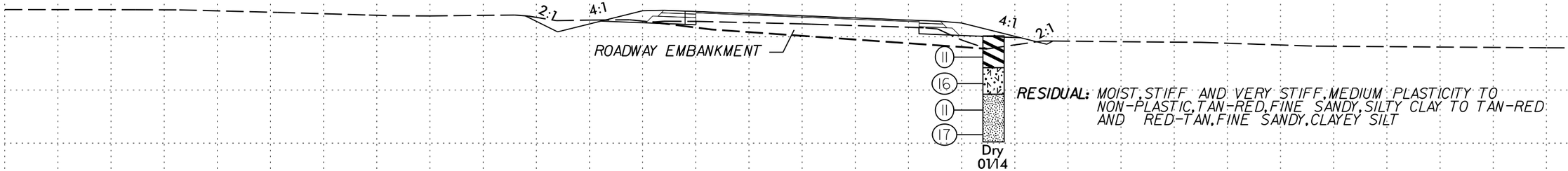
55+00.00
—℄—

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

8/23/99

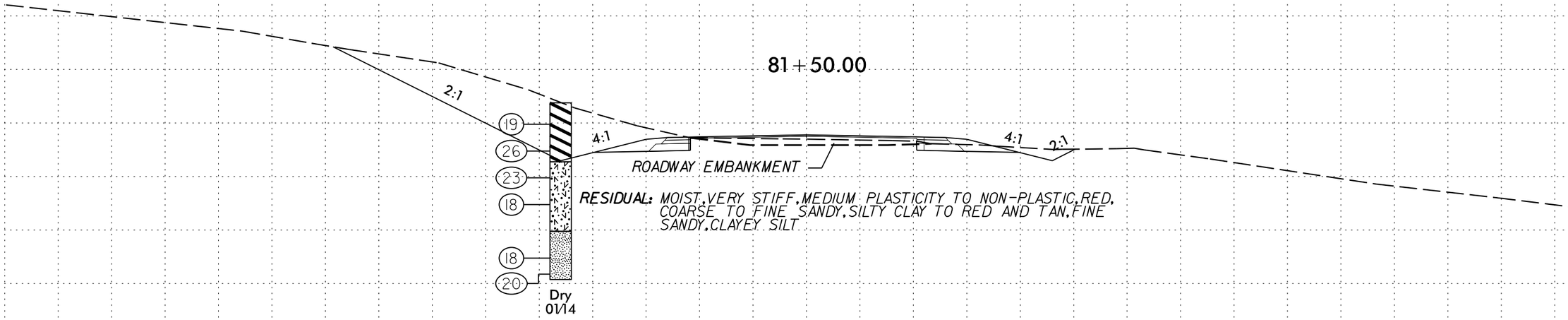
0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	54

STA 81+26



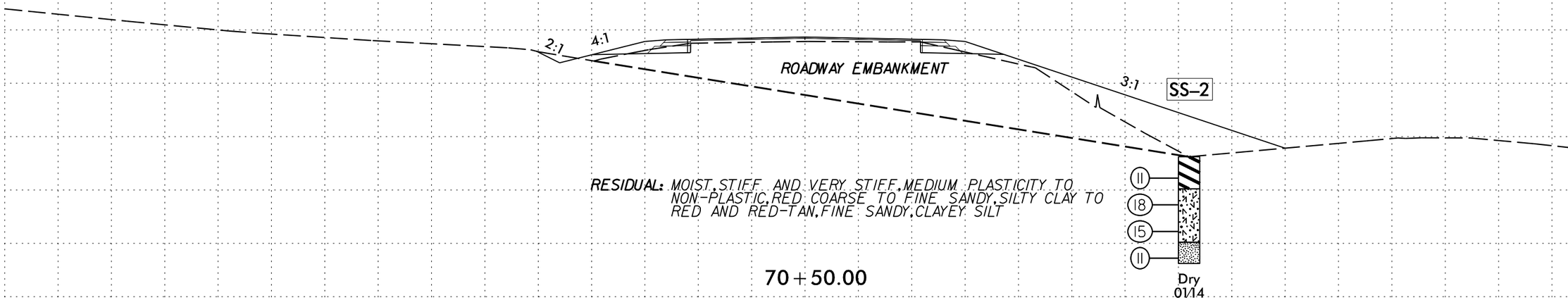
RESIDUAL: MOIST, STIFF AND VERY STIFF, MEDIUM PLASTICITY TO NON-PLASTIC, TAN-RED, FINE SANDY, SILTY CLAY TO TAN-RED AND RED-TAN, FINE SANDY, CLAYEY SILT

81+50.00



RESIDUAL: MOIST, VERY STIFF, MEDIUM PLASTICITY TO NON-PLASTIC, RED, COARSE TO FINE SANDY, SILTY CLAY TO RED AND TAN, FINE SANDY, CLAYEY SILT

75+00.00



RESIDUAL: MOIST, STIFF AND VERY STIFF, MEDIUM PLASTICITY TO NON-PLASTIC, RED COARSE TO FINE SANDY, SILTY CLAY TO RED AND RED-TAN, FINE SANDY, CLAYEY SILT

70+50.00

—L—

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	55

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

760 755 750 745

2:1 4:1 ROADWAY EMBANKMENT 3:1

(10) (16) (11) (9) (14)

RESIDUAL: MOIST, STIFF AND VERY STIFF, NON-PLASTIC, RED-TAN, FINE SANDY SILT

Dry
01/14

100+00.00

765 760 755 750 745

6:1 ROADWAY EMBANKMENT 3:1

STA 95+37

(8) (11) (8) (10)

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, TAN, COARSE TO FINE SANDY, SILTY CLAY

MOIST, STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN, COARSE TO FINE SANDY, SILTY CLAY TO TAN, FINE SANDY SILT

Dry
01/14

95+50.00

780 775 770 800

2:1 4:1 ROADWAY EMBANKMENT 4:1 2:1

(14) (32) (29) (38) (43)

RESIDUAL: MOIST, MEDIUM DENSE, NON-PLASTIC, TAN, SILTY, COARSE TO FINE SAND

MOIST, HARD AND VERY STIFF, NON-PLASTIC, TAN, FINE SANDY SILT

Dry
01/14

90+00.00

795 790 785 780 775

2:1 4:1 ROADWAY EMBANKMENT 3:1

(A) (8) (10) (16) (15)

(A) **ARTIFICIAL FILL:** MOIST, STIFF, NON-PLASTIC, TAN, FINE SANDY SILT WITH LITTLE GRAVEL AND A TRACE OF ORGANIC MATTER

RESIDUAL: MOIST, STIFF TO VERY STIFF, NON-PLASTIC TO MEDIUM PLASTICITY, TAN, FINE SANDY SILT TO TAN AND GRAY, FINE SANDY, SILTY CLAY TO TAN, FINE SANDY, CLAYEY SILT

Dry
01/14

84+50.00

—L—

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

8/23/99

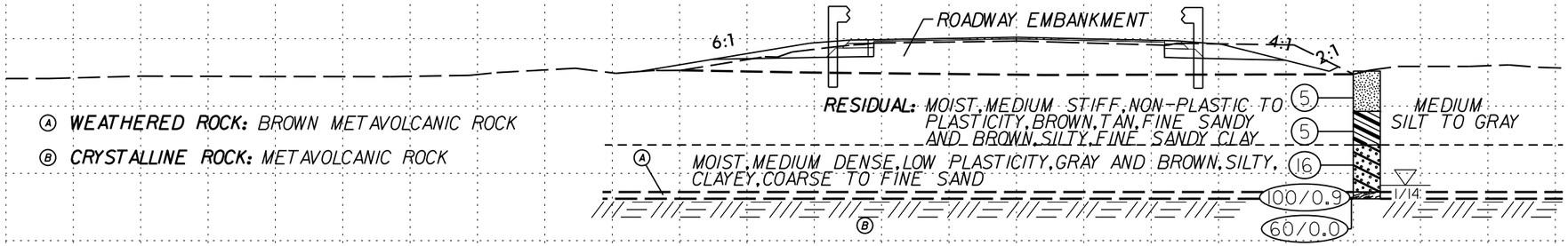
0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	56

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

700 695 690 685 680 710 705 700 695 730 725 720 715 750 745 740 735 730

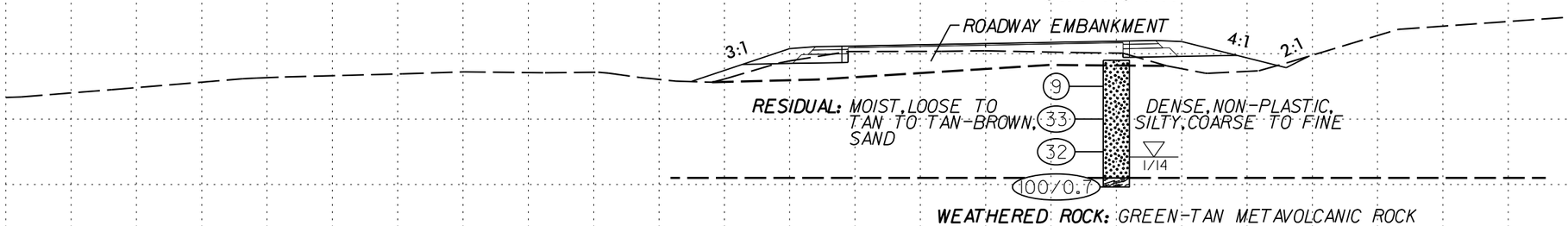
SS–4

STA 120+48



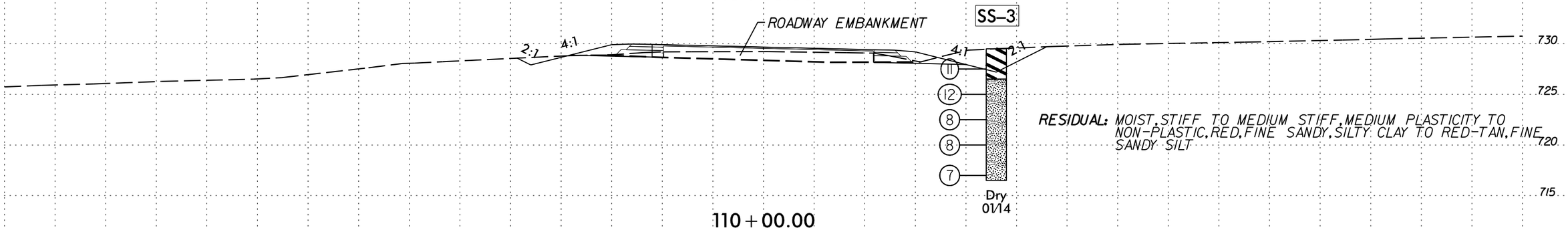
120+50.00

STA 115+11



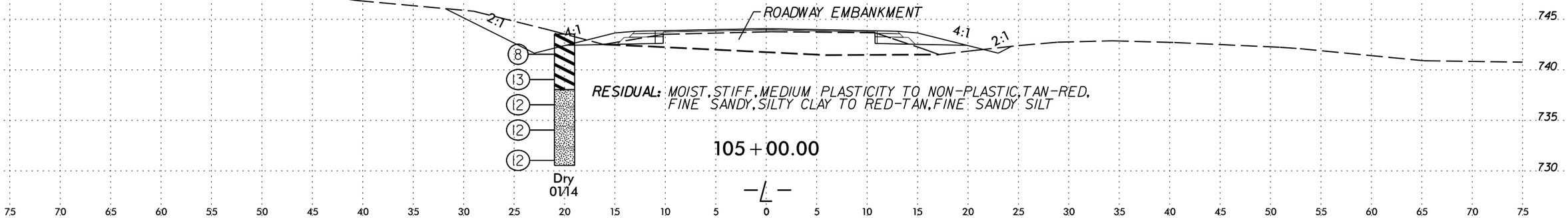
115+00.00

SS–3



110+00.00

STA 105+03



105+00.00

—℄—

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	57

STA 132+02

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, MEDIUM DENSE TO DENSE, NON-PLASTIC, TAN, SILTY COARSE FINE SAND WITH LITTLE ROCK FRAGMENTS

15
31
45
30
21

MOIST, HARD TO VERY STIFF, NON-PLASTIC, TAN FINE SANDY SILT

Dry
01/14

132+00.00

STA 129+81

ROADWAY EMBANKMENT

2:1 4:1 3:1

Ⓑ **RESIDUAL:** MOIST, STIFF, MEDIUM PLASTICITY, TAN, COARSE TO FINE SANDY CLAY

10
18
18
71

MOIST, MEDIUM DENSE TO VERY DENSE, NON-PLASTIC, TAN, SILTY COARSE TO FINE SAND

Dry
01/14

130+00.00

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

Ⓐ MOIST, DENSE, NON-PLASTIC, TAN, SILTY, COARSE TO FINE SAND

27
Ⓐ 37
51
74
100/0.8

RESIDUAL: MOIST, VERY STIFF TO HARD, TAN, COARSE TO FINE SANDY SILT

WEATHERED ROCK: TAN METAVOLCANIC

Dry
01/14

125+00.00

—℄—

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	58

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

780 775 770 765

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF AND NON-PLASTIC, TAN, FINE SANDY

12 20 14 9

VERY STIFF, LOW PLASTICITY TO FINE SANDY, CLAYEY SILT TO TAN, COARSE TO SILT WITH A TRACE OF QUARTZ FRAGMENTS

Dry
01/14

150 + 00.00

785 780 775 770 765

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

12 9 8 7 8

RESIDUAL: MOIST, STIFF TO MEDIUM STIFF, NON-PLASTIC, TAN-RED, FINE SANDY SILT

Dry
01/14

145 + 00.00

775 770 765 760 755 750

ROADWAY EMBANKMENT

2:1 4:1 4:1

13 29 26 15 11 16

RESIDUAL: MOIST, STIFF AND VERY STIFF, MEDIUM PLASTICITY TO NON-PLASTIC, TAN-RED, SILTY, COARSE TO FINE SANDY CLAY TO TAN-RED AND RED-TAN, FINE SANDY, CLAYEY SILT

Dry
01/14

140 + 00.00

$-\mathit{L}-$

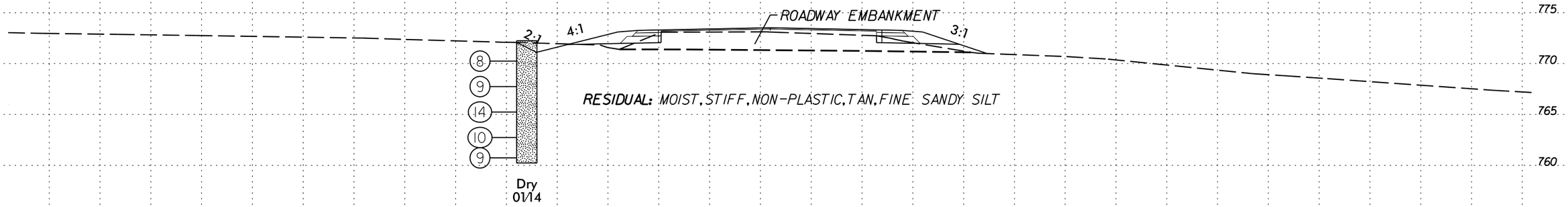
75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	59

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

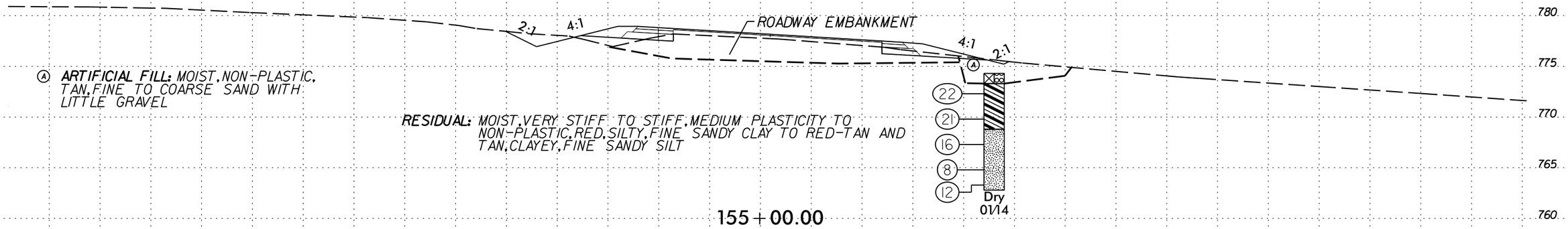
STA 159+54



RESIDUAL: MOIST, STIFF, NON-PLASTIC, TAN, FINE SANDY SILT

159+50.00

STA 154+79



(A) **ARTIFICIAL FILL:** MOIST, NON-PLASTIC, TAN, FINE TO COARSE SAND WITH LITTLE GRAVEL

RESIDUAL: MOIST, VERY STIFF TO STIFF, MEDIUM PLASTICITY TO NON-PLASTIC, RED, SILTY, FINE SANDY CLAY TO RED-TAN AND TAN, CLAYEY, FINE SANDY SILT

155+00.00

—℄—

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	60

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

780
775
770

ROADWAY EMBANKMENT

3:1 4:1 2:1

RESIDUAL: MOIST, STIFF HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN-RED, FINE SANDY, CLAYEY SILT TO FINE SANDY SILT

163+00.00

780
775
770

ROADWAY EMBANKMENT

3:1 4:1 2:1

RESIDUAL: MOIST, STIFF HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN-RED, FINE SANDY, CLAYEY SILT TO FINE SANDY SILT

765

162+50.00

780
775
770

ROADWAY EMBANKMENT

3:1 3:1

RESIDUAL: MOIST, STIFF, NON-PLASTIC, TAN, FINE SANDY SILT

765

162+00.00

$-\mathit{L}-$

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	61

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

785
780
775
770

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN-RED, FINE SANDY, CLAYEY SILT TO FINE SANDY SILT

164+50.00

785
780
775
770

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN-RED, FINE SANDY, CLAYEY SILT TO FINE SANDY SILT

164+00.00

780
775
770

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN-RED, FINE SANDY, CLAYEY SILT TO FINE SANDY SILT

163+50.00

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	62

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

785
780
775

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN-RED, FINE SANDY, CLAYEY SILT TO FINE SANDY SILT

166+00.00

785
780
775

ROADWAY EMBANKMENT

3:1 4:1 2:1

RESIDUAL: MOIST, STIFF HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN-RED, FINE SANDY, CLAYEY SILT TO FINE SANDY SILT

165+50.00

785
780
775
770

ROADWAY EMBANKMENT

SS-5

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN-RED, FINE SANDY, CLAYEY SILT TO FINE SANDY SILT

12
10
11
9

Dry
01/14

165+00.00

$-\mathit{L}-$

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	63

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

785
780
775

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN-RED, FINE SANDY, CLAYEY SILT TO FINE SANDY SILT

167+50.00

790
785
780
775

ROADWAY EMBANKMENT

2:1 4:1

RESIDUAL: MOIST, STIFF HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN-RED, FINE SANDY, CLAYEY SILT TO FINE SANDY SILT

167+00.00

785
780
775

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN-RED, FINE SANDY, CLAYEY SILT TO FINE SANDY SILT

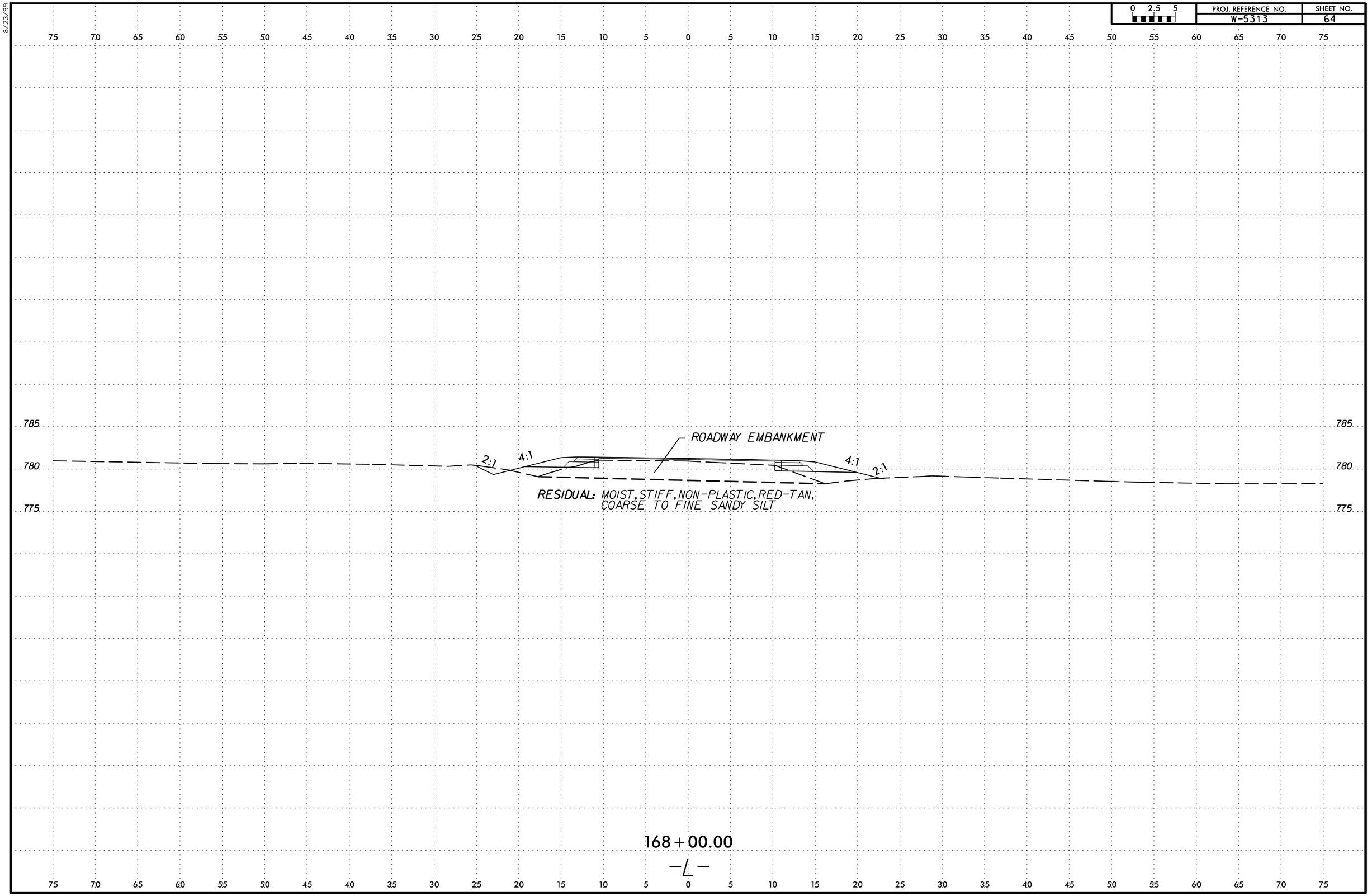
166+50.00

$-\underline{L}-$

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	64



8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	65

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

STA 175+13

750 745 740 735 730

ROADWAY EMBANKMENT

2:1 4:1 3:1

19 20 15 10

Dry
01/14

RESIDUAL: MOIST, VERY STIFF TO STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN-RED, FINE SANDY, CLAYEY SILT TO TAN AND WHITE-TAN, COARSE TO FINE SANDY SILT

175+00.00

780 775 770 765 760

STA 170+03

ROADWAY EMBANKMENT

3:1 3:1

10 14 13 14

Dry
01/14

RESIDUAL: MOIST, STIFF, NON-PLASTIC, RED-TAN, COARSE TO FINE SANDY SILT

170+00.00

$-\mathit{L}-$

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	66

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

725 720 715 710 705 700

2:1

ROADWAY EMBANKMENT

2:1

ALLUVIAL: WET, VERY SOFT TO SOFT, NON-PLASTIC, BROWN AND GRAY, FINE SANDY SILT WITH LITTLE ORGANIC MATTER

WET, STIFF, HIGH PLASTICITY, GRAY, FINE SANDY, SILTY CLAY

RESIDUAL: MOIST, STIFF, NON-PLASTIC, TAN, COARSE TO FINE SANDY SILT

179 + 50.00

725 720 715 710 705

2:1

ROADWAY EMBANKMENT

2:1

RESIDUAL: MOIST, STIFF, NON-PLASTIC, TAN, COARSE TO FINE SANDY SILT

179 + 00.00

—L—

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	67

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

725
720
715
710
705

2:1

ROADWAY EMBANKMENT

2:1

RESIDUAL: MOIST, STIFF, NON-PLASTIC, TAN, COARSE TO FINE SANDY SILT

180+50.00

SS-6

STA 180+08

2:1

ROADWAY EMBANKMENT

2:1

1
3
9
11

1/14

ALLUVIAL: WET, VERY SOFT TO SOFT, NON-PLASTIC, BROWN AND GRAY, FINE SANDY SILT WITH LITTLE ORGANIC MATTER

WET, STIFF, HIGH PLASTICITY, GRAY, FINE SANDY, SILTY CLAY

RESIDUAL: MOIST, STIFF, NON-PLASTIC, TAN, COARSE TO FINE SANDY SILT

180+00.00

$-\mathit{L}-$

725
720
715
710
705
75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	68

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

745 740 735 730 725

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

17 19 13 37 37

Dry
01/14

Ⓑ MOIST, STIFF, NON-PLASTIC, TAN, FINE SANDY SILT

RESIDUAL: MOIST, MEDIUM DENSE TO DENSE, TAN, CLAYEY, SILTY SAND

195+00.00

735 730 725 720 715

SS-7

STA 189+86

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

10 4 18 13 15

Dry
01/14

Ⓐ **ARTIFICIAL FILL:** MOIST, STIFF, MEDIUM PLASTICITY, GRAY AND BROWN, SILTY, COARSE TO FINE SANDY CLAY WITH TRACE GRAVEL

RESIDUAL: MOIST, MEDIUM STIFF TO VERY STIFF, MEDIUM PLASTICITY TO NON-PLASTIC, TAN COARSE TO FINE SANDY CLAY TO TAN, COARSE TO FINE SANDY SILT

190+00.00

735 730 725 720 715 710

STA 182+97

RESIDUAL: MOIST, STIFF TO VERY MEDIUM TO LOW RED-TAN, SILTY, FINE TO CLAYEY, FINE SANDY

10 19 13 13 48 73 29

STIFF, PLASTICITY, SANDY CLAY SILT

2:1 4:1

ROADWAY EMBANKMENT

4:1 2:1

MOIST, MEDIUM DENSE TO VERY DENSE, NON-PLASTIC, TAN SILTY, COARSE TO FINE SAND

Dry
01/14

183+00.00

℄

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	69

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

765 760 755 750 745 740

Ⓑ

2:1 4:1 3:1

ROADWAY EMBANKMENT

MOIST, MEDIUM DENSE, NON-PLASTIC, TAN, SILTY, COARSE TO FINE SAND

20

100/0.9

100/0.5

100/0.7

WEATHERED ROCK: TAN GRANITE

55

RESIDUAL: MOIST, HARD, NON-PLASTIC, Dry TAN, COARSE TO FINE SANDY SILT

0\14

Ⓑ **RESIDUAL:** MOIST, MEDIUM PLASTICITY, TAN, COARSE TO FINE SANDY CLAY

205+00.00

760 755 750 745 740

ROADWAY EMBANKMENT

4:1 2:1

39 63 27 21 22

RESIDUAL: MOIST, HARD TO VERY STIFF, NON-PLASTIC, TAN, COARSE TO FINE SANDY SILT

Ⓐ

Ⓐ MOIST, MEDIUM DENSE, NON-PLASTIC, TAN, SILTY, COARSE TO FINE SAND

200+00.00

Dry

0\14

—℄—

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	70

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

760
755
750
745

SS-8

STA 209+30

3:1 3:1

ROADWAY EMBANKMENT

ALLUVIAL: WET, SOFT, LOW PLASTICITY, TAN, FINE SANDY, CLAYEY SILT

© WET, VERY LOOSE, NON-PLASTIC, TAN, SILTY, COARSE TO FINE SAND

MOIST, SOFT TO MEDIUM STIFF, HIGH PLASTICITY, GRAY TO GRAY AND TAN, COARSE TO FINE SANDY, SILTY CLAY WITH LITTLE GRAVEL

2 1 © 2 6 27

1/14

Dry
0/14

RESIDUAL: MOIST, VERY DENSE, NON-PLASTIC, TAN, COARSE TO FINE SANDY SILT

209+50.00

760
755
750
745

3:1 3:1

ROADWAY EMBANKMENT

ALLUVIAL: WET, SOFT, LOW PLASTICITY, TAN, FINE SANDY, CLAYEY SILT

MOIST, SOFT TO MEDIUM STIFF, HIGH PLASTICITY, GRAY TO GRAY AND TAN, COARSE TO FINE SANDY, SILTY CLAY WITH LITTLE GRAVEL

RESIDUAL: MOIST, VERY DENSE, NON-PLASTIC, TAN, COARSE TO FINE SANDY SILT

209+00.00

760
755
750
745

2:1 4:1 3:1

ROADWAY EMBANKMENT

RESIDUAL: MOIST, VERY DENSE, NON-PLASTIC, TAN, COARSE TO FINE SANDY SILT

208+50.00

$-\underline{L}-$

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	71

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

760
755
750
745

ROADWAY EMBANKMENT

3:1 4:1 2:1

RESIDUAL: MOIST, MEDIUM DENSE, NON-PLASTIC, TAN, SILTY, COARSE TO FINE SAND

MOIST, HARD TO STIFF, NON-PLASTIC, TAN, COARSE TO FINE SANDY SILT

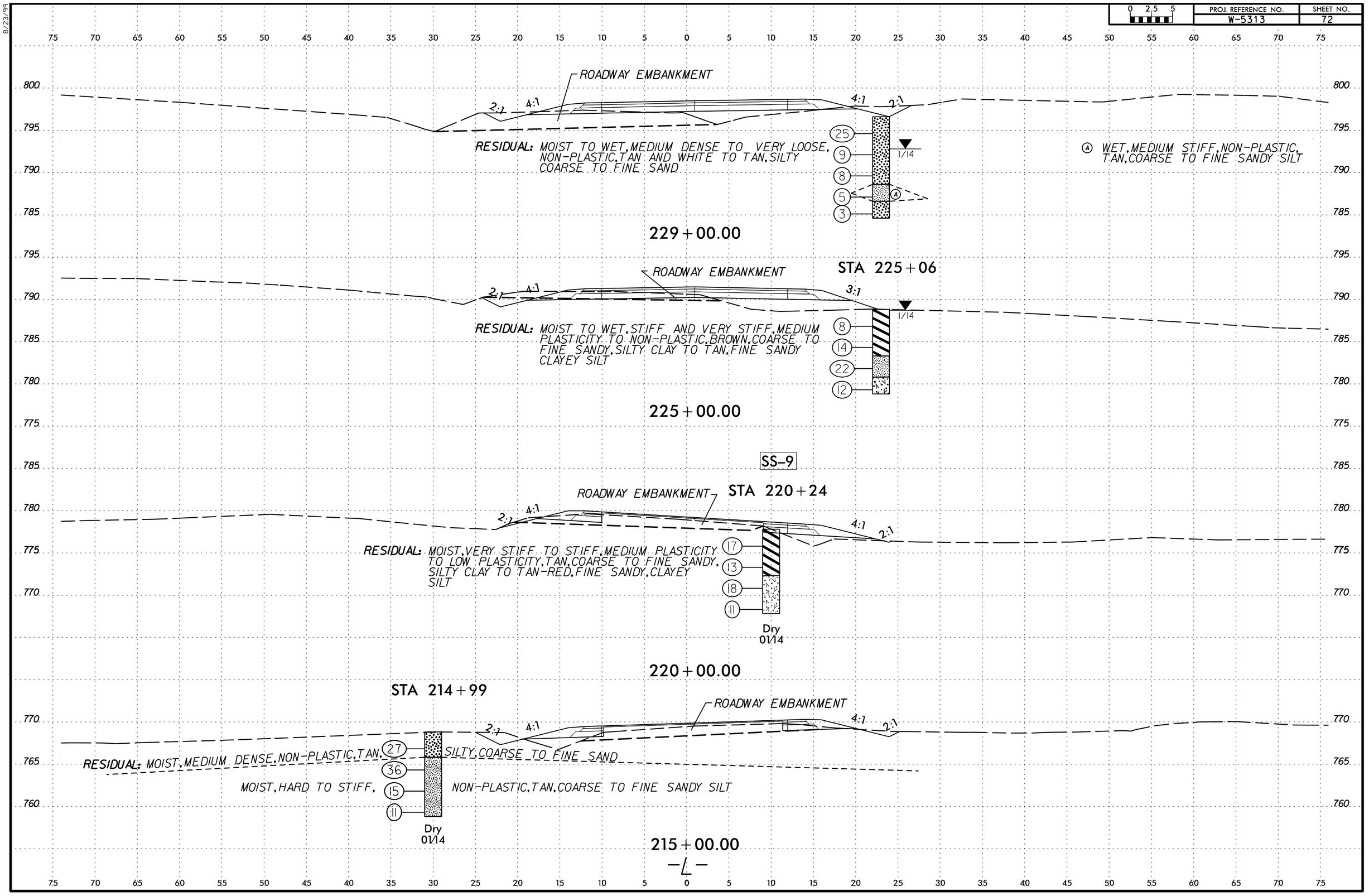
210+00.00

-L-

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	72



8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	73

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

810 805 800 795 790

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

13 28 12 8

Dry
01/14

RESIDUAL: MOIST, VERY STIFF TO STIFF, MEDIUM PLASTICITY TO NON-PLASTIC, TAN-BROWN, FINE SANDY, CLAYEY SILT AND TAN, SILTY, COARSE TO FINE SANDY CLAY

240+00.00

810 805 800 795 790

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

Ⓐ **RESIDUAL:** MOIST, NON-PLASTIC, TAN-BROWN, SILTY FINE SAND

17 14 9 6 7

01/14

RESIDUAL: MOIST TO WET, VERY STIFF TO MEDIUM STIFF, LOW PLASTICITY, RED-TAN, COARSE TO FINE SANDY, CLAYEY SILT

235+00.00

805 800 795 790 785

STA 229+95

ROADWAY EMBANKMENT

2:1 4:1 3:1

26 38 30 18 52

01/14

RESIDUAL: MOIST AND WET, MEDIUM DENSE AND DENSE, NON-PLASTIC, TAN TO WHITE AND TAN, SILTY, COARSE TO FINE SAND

230+00.00

$-\mathit{L}-$

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	74

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

810 805 800 795 790

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

10 15 9 7 6

Dry
01/14

RESIDUAL: MOIST, STIFF TO MEDIUM STIFF, MEDIUM TO LOW PLASTICITY, RED, COARSE TO FINE SANDY, SILTY CLAY TO TAN-RED, FINE SANDY CLAYEY SILT

255+00.00

SS-10

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

11 13 11 8 7

Dry
01/14

RESIDUAL: MOIST, STIFF TO MEDIUM STIFF, MEDIUM PLASTICITY TO NON-PLASTIC, TAN-RED, FINE SANDY, SILTY CLAY TO RED-TAN, FINE SAND SILT

250+00.00

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

10 10 8 5 6

Dry
01/14

RESIDUAL: MOIST, STIFF TO MEDIUM STIFF, MEDIUM PLASTICITY TO NON-PLASTIC, TAN, COARSE TO FINE SANDY, SILTY CLAY TO RED-TAN AND TAN, FINE SAND, CLAYEY SILT

245+50.00
—L—

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	75

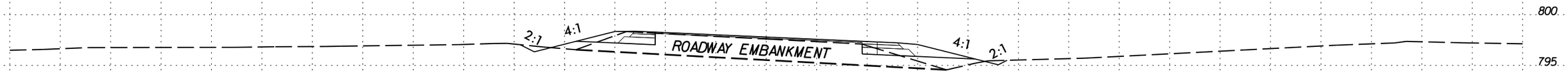
75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

800
795
790

RESIDUAL: MOIST, MEDIUM STIFF, HIGH PLASTICITY, TAN, COARSE TO FINE SANDY, SILTY CLAY WITH TRACE ROCK FRAGMENTS
MOIST, STIFF, NON-PLASTIC, TAN, FINE SANDY SILT

258+00.00

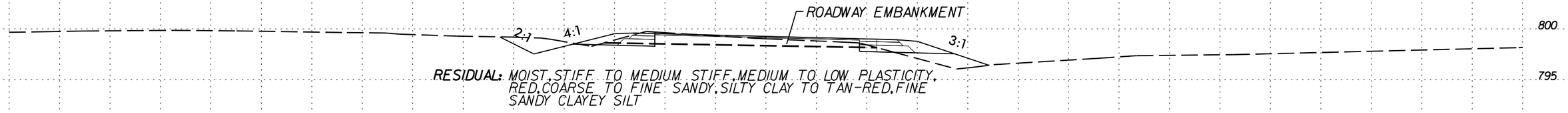
805
800
795



RESIDUAL: MOIST, MEDIUM STIFF, HIGH PLASTICITY, TAN, COARSE TO FINE SANDY, SILTY CLAY WITH TRACE ROCK FRAGMENTS
MOIST, STIFF, NON-PLASTIC, TAN, FINE SANDY SILT

257+50.00

805
800
795



RESIDUAL: MOIST, STIFF TO MEDIUM STIFF, MEDIUM TO LOW PLASTICITY, RED, COARSE TO FINE SANDY, SILTY CLAY TO TAN-RED, FINE SANDY CLAYEY SILT

257+00.00

—℄—

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	76

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

800
795
790
785

5:1 ROADWAY EMBANKMENT 4:1 2:1

RESIDUAL: MOIST, MEDIUM STIFF, HIGH PLASTICITY, TAN, COARSE TO FINE SANDY, SILTY CLAY WITH TRACE ROCK FRAGMENTS
MOIST, STIFF, NON-PLASTIC, TAN, FINE SANDY SILT

259+50.00

800
795
790
785

2:1 4:1 ROADWAY EMBANKMENT 4:1 2:1

RESIDUAL: MOIST, MEDIUM STIFF, HIGH PLASTICITY, TAN, COARSE TO FINE SANDY, SILTY CLAY WITH TRACE ROCK FRAGMENTS
MOIST, STIFF, NON-PLASTIC, TAN, FINE SANDY SILT

259+00.00

800
795
790
785

3:1 ROADWAY EMBANKMENT 4:1 2:1

RESIDUAL: MOIST, MEDIUM STIFF, HIGH PLASTICITY, TAN, COARSE TO FINE SANDY, SILTY CLAY WITH TRACE ROCK FRAGMENTS
MOIST, STIFF, NON-PLASTIC, TAN, FINE SANDY SILT

258+50.00

—℄—

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	77

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

800 795 790 785

3:1 3:1

ROADWAY EMBANKMENT

RESIDUAL: MOIST, MEDIUM STIFF, HIGH PLASTICITY, TAN, COARSE TO FINE SANDY, SILTY CLAY WITH TRACE ROCK FRAGMENTS
MOIST, STIFF, NON-PLASTIC, TAN, FINE SANDY SILT

261+00.00

800 795 790 785

5:1 4:1 2:1

ROADWAY EMBANKMENT

RESIDUAL: MOIST, MEDIUM STIFF, HIGH PLASTICITY, TAN, COARSE TO FINE SANDY, SILTY CLAY WITH TRACE ROCK FRAGMENTS
MOIST, STIFF, NON-PLASTIC, TAN, FINE SANDY SILT

260+50.00

800 795 790 785

5:1 4:1 2:1

ROADWAY EMBANKMENT

RESIDUAL: MOIST, MEDIUM STIFF, HIGH PLASTICITY, TAN, COARSE TO FINE SANDY, SILTY CLAY WITH TRACE ROCK FRAGMENTS
MOIST, STIFF, NON-PLASTIC, TAN, FINE SANDY SILT

(6) (13) (12) (11)

Dry
01/14

260+00.00

$-\mathit{L}-$

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	78

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

800
795
790
785

2:1 4:1 ROADWAY EMBANKMENT 4:1 2:1

RESIDUAL: MOIST, MEDIUM STIFF, HIGH PLASTICITY, TAN, COARSE TO FINE SANDY, SILTY CLAY WITH TRACE ROCK FRAGMENTS
MOIST, STIFF, NON-PLASTIC, TAN, FINE SANDY SILT

262+50.00

800
795
790
785

2:1 4:1 ROADWAY EMBANKMENT 4:1 2:1

RESIDUAL: MOIST, MEDIUM STIFF, HIGH PLASTICITY, TAN, COARSE TO FINE SANDY, SILTY CLAY WITH TRACE ROCK FRAGMENTS
MOIST, STIFF, NON-PLASTIC, TAN, FINE SANDY SILT

262+00.00

800
795
790
785

3:1 ROADWAY EMBANKMENT 4:1 2:1

RESIDUAL: MOIST, MEDIUM STIFF, HIGH PLASTICITY, TAN, COARSE TO FINE SANDY, SILTY CLAY WITH TRACE ROCK FRAGMENTS
MOIST, STIFF, NON-PLASTIC, TAN, FINE SANDY SILT

261+50.00

—℄—

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	79

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

800
795
790

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, MEDIUM STIFF, HIGH PLASTICITY, TAN, COARSE TO FINE SANDY, SILTY CLAY WITH TRACE ROCK FRAGMENTS

MOIST, STIFF, NON-PLASTIC, TAN, FINE SANDY SILT

264+00.00

800
795
790
785

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, MEDIUM STIFF, HIGH PLASTICITY, TAN, COARSE TO FINE SANDY, SILTY CLAY WITH TRACE ROCK FRAGMENTS

MOIST, STIFF, NON-PLASTIC, TAN, FINE SANDY SILT

263+50.00

800
795
790
785

2:1 4:1 ROADWAY EMBANKMENT 4:1 2:1

RESIDUAL: MOIST, MEDIUM STIFF, HIGH PLASTICITY, TAN, COARSE TO FINE SANDY, SILTY CLAY WITH TRACE ROCK FRAGMENTS

MOIST, STIFF, NON-PLASTIC, TAN, FINE SANDY SILT

263+00.00

$-\mathit{L}-$

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	80

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

800
795
790

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN-RED, FINE SANDY, CLAYEY SILT TO RED-TAN AND TAN, FINE SANDY SILT

265+50.00

800
795
790

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN-RED, FINE SANDY, CLAYEY SILT TO RED-TAN AND TAN, FINE SANDY SILT

(13) (19) (11) (8) (9)

Dry
01/14

265+00.00

800
795
790

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN-RED, FINE SANDY, CLAYEY SILT TO RED-TAN AND TAN, FINE SANDY SILT

264+50.00

$-\mathit{L}-$

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	81

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

800
795
790

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN-RED, FINE SANDY, CLAYEY SILT TO RED-TAN AND TAN, FINE SANDY SILT

267+00.00

800
795
790

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN-RED, FINE SANDY, CLAYEY SILT TO RED-TAN AND TAN, FINE SANDY SILT

266+50.00

800
795
790

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN-RED, FINE SANDY, CLAYEY SILT TO RED-TAN AND TAN, FINE SANDY SILT

266+00.00

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	82

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

800
795
790
785

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, MEDIUM STIFF, HIGH PLASTICITY, TAN, FINE SANDY, SILTY CLAY

MOIST, STIFF TO MEDIUM STIFF, LOW PLASTICITY TO NON-PLASTIC, RED-TAN, FINE SANDY, CLAYEY SILT TO RED-TAN, FINE SANDY SILT

268+50.00

800
795
790

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN-RED, FINE SANDY, CLAYEY SILT TO RED-TAN AND TAN, FINE SANDY SILT

268+00.00

800
795
790

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN-RED, FINE SANDY, CLAYEY SILT TO RED-TAN AND TAN, FINE SANDY SILT

267+50.00

$-\mathit{L}-$

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	83

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

795
790
785

ROADWAY EMBANKMENT **SS-11**

3:1 3:1

RESIDUAL: MOIST, MEDIUM STIFF, HIGH PLASTICITY, TAN, FINE SANDY, SILTY CLAY

MOIST, STIFF TO MEDIUM STIFF, LOW PLASTICITY TO NON-PLASTIC, RED-TAN, FINE SANDY, CLAYEY SILT TO RED-TAN, FINE SANDY SILT

6
9
9
6

Dry
01/14

270+00.00

795
790
785

ROADWAY EMBANKMENT

3:1 4:1 2:1

RESIDUAL: MOIST, MEDIUM STIFF, HIGH PLASTICITY, TAN, FINE SANDY, SILTY CLAY

MOIST, STIFF TO MEDIUM STIFF, LOW PLASTICITY TO NON-PLASTIC, RED-TAN, FINE SANDY, CLAYEY SILT TO RED-TAN, FINE SANDY SILT

269+50.00

800
795
790
785

ROADWAY EMBANKMENT

3:1 4:1 2:1

RESIDUAL: MOIST, MEDIUM STIFF, HIGH PLASTICITY, TAN, FINE SANDY, SILTY CLAY

MOIST, STIFF TO MEDIUM STIFF, LOW PLASTICITY TO NON-PLASTIC, RED-TAN, FINE SANDY, CLAYEY SILT TO RED-TAN, FINE SANDY SILT

269+00.00

$-\mathit{L}-$

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	84

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

790
785
780

ROADWAY EMBANKMENT

3:1 3:1

RESIDUAL: MOIST, MEDIUM STIFF, HIGH PLASTICITY, TAN, FINE SANDY, SILTY CLAY

MOIST, STIFF TO MEDIUM STIFF, LOW PLASTICITY TO NON-PLASTIC, RED-TAN, FINE SANDY, CLAYEY SILT TO RED-TAN, FINE SANDY SILT

271+50.00

795
790
785
780

ROADWAY EMBANKMENT

3:1 3:1

RESIDUAL: MOIST, MEDIUM STIFF, HIGH PLASTICITY, TAN, FINE SANDY, SILTY CLAY

MOIST, STIFF TO MEDIUM STIFF, LOW PLASTICITY TO NON-PLASTIC, RED-TAN, FINE SANDY, CLAYEY SILT TO RED-TAN, FINE SANDY SILT

271+00.00

795
790
785

ROADWAY EMBANKMENT

3:1 3:1

RESIDUAL: MOIST, MEDIUM STIFF, HIGH PLASTICITY, TAN, FINE SANDY, SILTY CLAY

MOIST, STIFF TO MEDIUM STIFF, LOW PLASTICITY TO NON-PLASTIC, RED-TAN, FINE SANDY, CLAYEY SILT TO RED-TAN, FINE SANDY SILT

270+50.00

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	85

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

790
785
780

ROADWAY EMBANKMENT

3:1 3:1

RESIDUAL: MOIST, MEDIUM STIFF, NON-PLASTIC TO MEDIUM PLASTICITY, BROWN, FINE SANDY SILT TO TAN, COARSE TO FINE SANDY, SILTY CLAY

273+00.00

790
785
780

ROADWAY EMBANKMENT

3:1 3:1

RESIDUAL: MOIST, MEDIUM STIFF, HIGH PLASTICITY, TAN, FINE SANDY SILTY CLAY

MOIST, STIFF TO MEDIUM STIFF, LOW PLASTICITY TO NON-PLASTIC, RED-TAN, FINE SANDY, CLAYEY SILT TO RED-TAN, FINE SANDY SILT

272+50.00

790
785
780

ROADWAY EMBANKMENT

3:1 3:1

RESIDUAL: MOIST, MEDIUM STIFF, HIGH PLASTICITY, TAN, FINE SANDY, SILTY CLAY

MOIST, STIFF TO MEDIUM STIFF, LOW PLASTICITY TO NON-PLASTIC, RED-TAN, FINE SANDY, CLAYEY SILT TO RED-TAN, FINE SANDY SILT

272+00.00

$-\mathit{L}-$

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	86

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

780
775
770
765
760

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

8
11
14
22
40

RESIDUAL: MOIST, STIFF, NON-PLASTIC, TAN, FINE SANDY SILT

MOIST, MEDIUM DENSE TO DENSE, NON-PLASTIC, GRAY AND BROWN, COARSE TO FINE SAND

Dry
01/14

280+00.00

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

7
8
10
10

RESIDUAL: MOIST, MEDIUM STIFF, NON-PLASTIC TO MEDIUM PLASTICITY, BROWN, FINE SANDY SILT TO TAN, COARSE TO FINE SANDY, SILTY CLAY

MOIST, STIFF, HIGH PLASTICITY, TAN, FINE SANDY, SILTY CLAY

MOIST, STIFF, LOW PLASTICITY, TAN, FINE SANDY, CLAYEY SILT

Dry
01/14

275+00.00

$-\mathit{L}-$

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	87

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

770
765
760

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, BROWN-TAN, COARSE TO FINE SANDY, SILTY CLAY

283+00.00

770
765
760

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, BROWN-TAN, COARSE TO FINE SANDY, SILTY CLAY

282+50.00

775
770
765
760

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, NON-PLASTIC, TAN, FINE SANDY SILT

282+00.00

$-\mathit{L}-$

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	88

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

765
760
755
750

3:1 3:1

ROADWAY EMBANKMENT

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, BROWN-TAN, COARSE TO FINE SANDY, SILTY CLAY

284+50.00

770
765
760
755

3:1 3:1

ROADWAY EMBANKMENT

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, BROWN-TAN, COARSE TO FINE SANDY, SILTY CLAY

284+00.00

770
765
760
755

2:1 4:1 ROADWAY EMBANKMENT 4:1 2:1

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, BROWN-TAN, COARSE TO FINE SANDY, SILTY CLAY

283+50.00

$-\mathit{L}-$

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	89

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

770 765 760 755

ROADWAY EMBANKMENT

3:1 3:1

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, BROWN-TAN, COARSE TO FINE SANDY, SILTY CLAY

286+00.00

SS-12

STA 285+26

770 765 760 755

3:1 3:1

(9) (19) (100/0.9) (100/0.8) (60/0.0)

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, BROWN-TAN, COARSE TO FINE SANDY, SILTY CLAY

Ⓐ **WEATHERED ROCK:** TAN AND BROWN METAVOLCANIC ROCK

Ⓑ MOIST, MEDIUM PLASTICITY, TAN AND BROWN, COARSE TO FINE SANDY CLAY WITH SOME ROCK FRAGMENTS

AR
Dry
01/14

CRYSTALLINE ROCK: METAVOLCANIC ROCK

285+50.00

765 760 755 750

3:1 3:1

ROADWAY EMBANKMENT

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, BROWN-TAN, COARSE TO FINE SANDY, SILTY CLAY

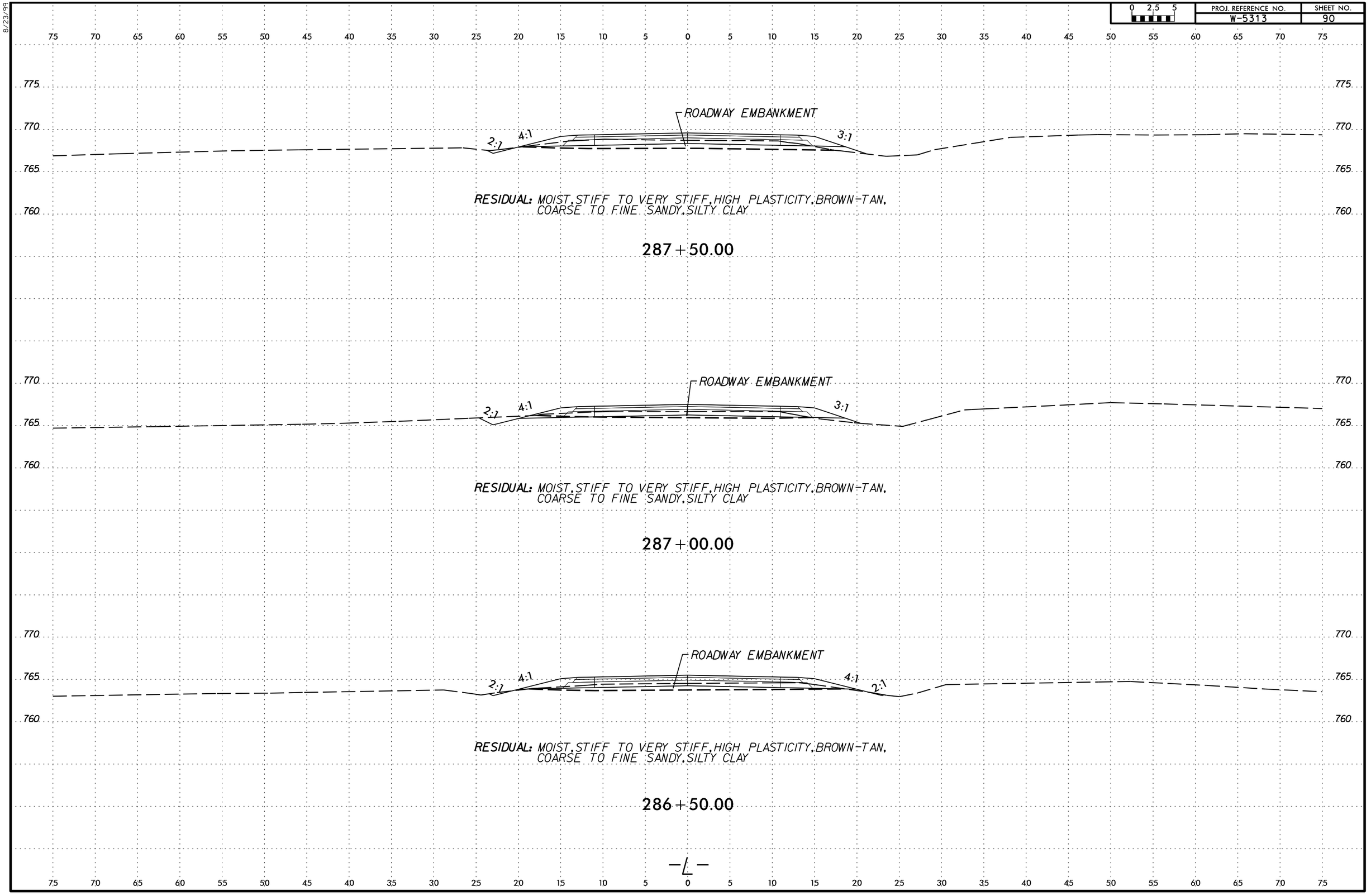
285+00.00

$-\mathit{L}-$

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

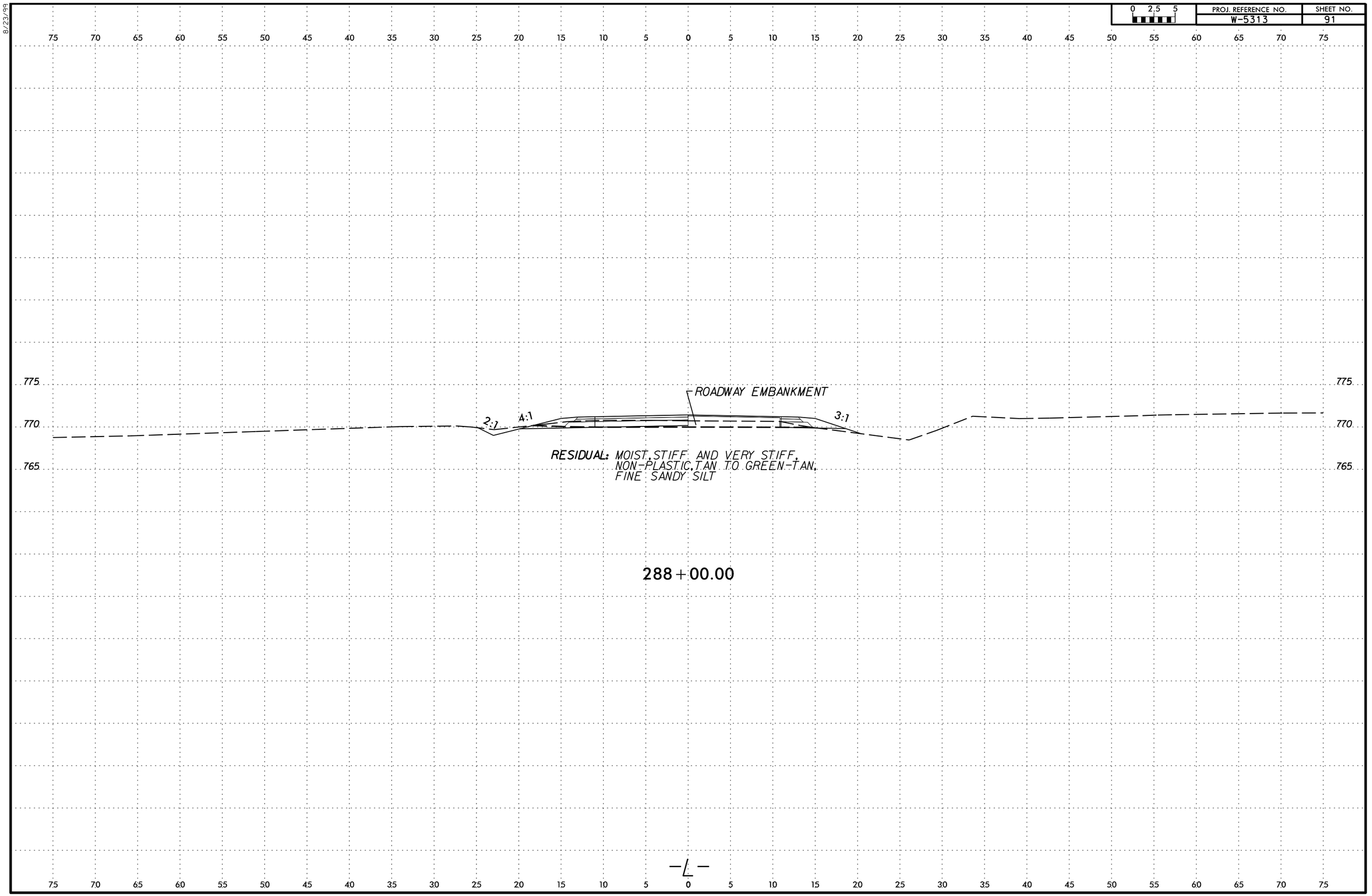
8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	90



8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	91



8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	92

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

780
775
770
765
760

ROADWAY EMBANKMENT

STA 289+91

2:1 4:1 4:1 2:1

10
23
28
25
14

Dry
01/14

RESIDUAL: *MOIST, STIFF AND VERY STIFF, NON-PLASTIC, TAN TO GREEN-TAN, FINE SANDY SILT*

290+00.00

$-\not{L}-$

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	93

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

795
790
785
780

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN-RED, FINE SANDY, CLAYEY SILT TO RED-TAN, FINE SANDY SILT

318+50.00

795
790
785

MOIST, STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN-RED, FINE SANDY, CLAYEY SILT TO RED-TAN, FINE SANDY SILT

318+00.00

$-\mathit{L}-$

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	94

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

785
780
775

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN-RED, FINE SANDY, CLAYEY SILT TO RED-TAN, FINE SANDY SILT

320+50.00

790
785
780
775

SS-13

STA 320+01

ROADWAY EMBANKMENT

2:1 4:1 3:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, STIFF, LOW PLASTICITY TO TAN-RED, FINE SANDY, CLAYEY FINE SANDY SILT

11 RED, FINE SANDY, SILTY CLAY
12 NON-PLASTIC,
9 SILT TO RED-TAN,
11

Dry
01/14

320+00.00

790
785
780

ROADWAY EMBANKMENT

2:1 4:1 3:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN-RED, FINE SANDY, CLAYEY SILT TO RED-TAN, FINE SANDY SILT

319+50.00

790
785
780

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN-RED, FINE SANDY, CLAYEY SILT TO RED-TAN, FINE SANDY SILT

319+00.00

—℄—

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

8/23/99

0 2.5 5

PROJ. REFERENCE NO.	SHEET NO.
W-5313	95

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

780
775
770

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN-RED, FINE SANDY, CLAYEY SILT TO RED-TAN, FINE SANDY SILT

322+00.00

785
780
775
770

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN-RED, FINE SANDY, CLAYEY SILT TO RED-TAN, FINE SANDY SILT

321+50.00

785
780
775
770

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN-RED, FINE SANDY, CLAYEY SILT TO RED-TAN, FINE SANDY SILT

321+00.00

—L—

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

8/23/99

0 2.5 5

PROJ. REFERENCE NO.	SHEET NO.
W-5313	96

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

775
770
765

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, STIFF TO VERY STIFF, LOW PLASTICITY TO NON-PLASTIC, RED-TAN, COARSE TO FINE SANDY, CLAYEY SILT TO RED-TAN, FINE SANDY SILT

323+50.00

780
775
770
765

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN-RED, FINE SANDY, CLAYEY SILT TO RED-TAN, FINE SANDY SILT

323+00.00

780
775
770

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN-RED, FINE SANDY, CLAYEY SILT TO RED-TAN, FINE SANDY SILT

322+50.00

—L—

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	97

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

770
765
760

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, TAN, COARSE TO FINE SANDY, SILTY CLAY

(8) (13) (13) (10) (15)

MOIST, STIFF TO VERY STIFF, LOW PLASTICITY TO NON-PLASTIC, RED-TAN, COARSE TO FINE SANDY, CLAYEY SILT TO RED-TAN, FINE SANDY SILT

Dry
01/14

325+00.00

775
770
765
760

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, STIFF TO VERY STIFF, LOW PLASTICITY TO NON-PLASTIC, RED-TAN, COARSE TO FINE SANDY, CLAYEY SILT TO RED-TAN, FINE SANDY SILT

324+50.00

775
770
765

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, STIFF TO VERY STIFF, LOW PLASTICITY TO NON-PLASTIC, RED-TAN, COARSE TO FINE SANDY, CLAYEY SILT TO RED-TAN, FINE SANDY SILT

324+00.00

$\mathcal{L}$

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	98

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

770
765
760
755

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, STIFF TO VERY STIFF, LOW PLASTICITY TO NON-PLASTIC, RED-TAN, COARSE TO FINE SANDY, CLAYEY SILT TO RED-TAN, FINE SANDY SILT

326+50.00

770
765
760
755

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, STIFF TO VERY STIFF, LOW PLASTICITY TO NON-PLASTIC, RED-TAN, COARSE TO FINE SANDY, CLAYEY SILT TO RED-TAN, FINE SANDY SILT

326+00.00

770
765
760

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, RED, FINE SANDY, SILTY CLAY

MOIST, STIFF TO VERY STIFF, LOW PLASTICITY TO NON-PLASTIC, RED-TAN, COARSE TO FINE SANDY, CLAYEY SILT TO RED-TAN, FINE SANDY SILT

325+50.00

—L—

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	99

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

765
760
755

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, TAN, COARSE TO FINE SANDY, SILTY CLAY

MOIST, STIFF TO VERY STIFF, LOW PLASTICITY TO NON-PLASTIC, RED-TAN, COARSE TO FINE SANDY, CLAYEY SILT TO RED-TAN, FINE SANDY SILT

328+00.00

765
760
755

ROADWAY EMBANKMENT

3:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, TAN, COARSE TO FINE SANDY, SILTY CLAY

MOIST, STIFF TO VERY STIFF, LOW PLASTICITY TO NON-PLASTIC, RED-TAN, COARSE TO FINE SANDY, CLAYEY SILT TO RED-TAN, FINE SANDY SILT

327+50.00

770
765
760
755

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, TAN, COARSE TO FINE SANDY, SILTY CLAY

MOIST, STIFF TO VERY STIFF, LOW PLASTICITY TO NON-PLASTIC, RED-TAN, COARSE TO FINE SANDY, CLAYEY SILT TO RED-TAN, FINE SANDY SILT

327+00.00

$-\mathit{L}-$

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	100

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

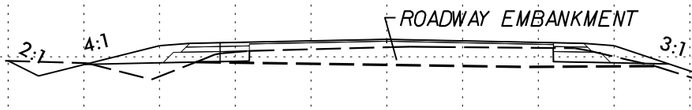
765
760
755

RESIDUAL: *MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED-TAN, COARSE TO FINE SANDY, SILTY CLAY*

MOIST, STIFF, NON-PLASTIC TO LOW PLASTICITY, RED-TAN, FINE SANDY, SILT TO RED-TAN, FINE SANDY, CLAYEY SILT

329+50.00

765
760
755

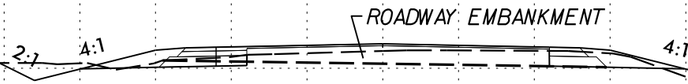


RESIDUAL: *MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED-TAN, COARSE TO FINE SANDY, SILTY CLAY*

MOIST, STIFF, NON-PLASTIC TO LOW PLASTICITY, RED-TAN, FINE SANDY, SILT TO RED-TAN, FINE SANDY, CLAYEY SILT

329+00.00

765
760
755



RESIDUAL: *MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED-TAN, COARSE TO FINE SANDY, SILTY CLAY*

MOIST, STIFF, NON-PLASTIC TO LOW PLASTICITY, RED-TAN, FINE SANDY, SILT TO RED-TAN, FINE SANDY, CLAYEY SILT

328+50.00

$-\mathit{L}-$

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	101

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

765
760
755
750

ROADWAY EMBANKMENT

3:1 3:1

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED-TAN, COARSE TO FINE SANDY, SILTY CLAY

MOIST, STIFF, NON-PLASTIC TO LOW PLASTICITY, RED-TAN, FINE SANDY, SILT TO RED-TAN, FINE SANDY, CLAYEY SILT

331+00.00

765
760
755
750

ROADWAY EMBANKMENT

2:1 4:1 4:1 2.01:1

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED-TAN, COARSE TO FINE SANDY, SILTY CLAY

MOIST, STIFF, NON-PLASTIC TO LOW PLASTICITY, RED-TAN, FINE SANDY, SILT TO RED-TAN, FINE SANDY, CLAYEY SILT

330+50.00

765
760
755

ROADWAY EMBANKMENT

2:1 4:1 3:1

SS-14

STA 329+82

14 20 PLASTICITY, RED-TAN, COARSE TO

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH FINE SANDY, SILTY CLAY

9 11 PLASTICITY, RED-TAN, FINE SANDY, CLAYEY SILT

MOIST, STIFF, NON-PLASTIC TO LOW SILT TO RED-TAN, FINE SANDY,

Dry
01/14

330+00.00

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	102

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

770
765
760
755

ROADWAY EMBANKMENT

3:1 4:1 2:1

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED-TAN, COARSE TO FINE SANDY, SILTY CLAY

MOIST, STIFF, NON-PLASTIC TO LOW PLASTICITY, RED-TAN, FINE SANDY, SILT TO RED-TAN, FINE SANDY, CLAYEY SILT

332+50.00

765
760
755

ROADWAY EMBANKMENT

3:1 3:1

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED-TAN, COARSE TO FINE SANDY, SILTY CLAY

MOIST, STIFF, NON-PLASTIC TO LOW PLASTICITY, RED-TAN, FINE SANDY, SILT TO RED-TAN, FINE SANDY, CLAYEY SILT

332+00.00

765
760
755

ROADWAY EMBANKMENT

3:1 3:1

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED-TAN, COARSE TO FINE SANDY, SILTY CLAY

MOIST, STIFF, NON-PLASTIC TO LOW PLASTICITY, RED-TAN, FINE SANDY, SILT TO RED-TAN, FINE SANDY, CLAYEY SILT

331+50.00

$-\mathit{L}-$

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	103

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

770
765
760

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, RED, COARSE TO FINE SANDY, SILTY CLAY

MOIST, STIFF, NON-PLASTIC, RED-TAN, COARSE TO FINE SANDY SILT

334+00.00

770
765
760

ROADWAY EMBANKMENT

3:1 4:1 2:1

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED-TAN, COARSE TO FINE SANDY, SILTY CLAY

MOIST, STIFF, NON-PLASTIC TO LOW PLASTICITY, RED-TAN, FINE SANDY, SILT TO RED-TAN, FINE SANDY, CLAYEY SILT

333+50.00

770
765
760
755

BEGIN AGGREGATE SUBGRADE AT STA 333+25

ROADWAY EMBANKMENT

3:1 4:1 2:1

RESIDUAL: MOIST, STIFF TO VERY STIFF, HIGH PLASTICITY, RED-TAN, COARSE TO FINE SANDY, SILTY CLAY

MOIST, STIFF, NON-PLASTIC TO LOW PLASTICITY, RED-TAN, FINE SANDY, SILT TO RED-TAN, FINE SANDY, CLAYEY SILT

333+00.00

$-\mathit{L}-$

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	104

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

770
765
760

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, RED, COARSE TO FINE SANDY, SILTY CLAY

MOIST, STIFF, NON-PLASTIC, RED-TAN, COARSE TO FINE SANDY SILT

335+50.00

STA 335+02

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

(12)
(14)
(14)
(12)
(9)

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, RED, COARSE TO FINE SANDY, SILTY CLAY

MOIST, STIFF, NON-PLASTIC, RED-TAN, COARSE TO FINE SANDY SILT

Dry
01/14

335+00.00

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, RED, COARSE TO FINE SANDY, SILTY CLAY

MOIST, STIFF, NON-PLASTIC, RED-TAN, COARSE TO FINE SANDY SILT

334+50.00

$-\mathit{L}-$

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	105

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

770 765 760

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, RED, COARSE TO FINE SANDY, SILTY CLAY

MOIST, STIFF, NON-PLASTIC, RED-TAN, COARSE TO FINE SANDY SILT

337+00.00

770 765 760

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, RED, COARSE TO FINE SANDY, SILTY CLAY

MOIST, STIFF, NON-PLASTIC, RED-TAN, COARSE TO FINE SANDY SILT

336+50.00

770 765 760

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, RED, COARSE TO FINE SANDY, SILTY CLAY

MOIST, STIFF, NON-PLASTIC, RED-TAN, COARSE TO FINE SANDY SILT

336+00.00

$-\mathit{L}-$

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	106

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

770
765
760
755

ROADWAY EMBANKMENT

3:1 4:1 2:1

RESIDUAL: MOIST, VERY STIFF TO MEDIUM STIFF, LOW PLASTICITY TO NON-PLASTIC, RED, FINE SANDY, CLAYEY SILT TO RED-TAN, FINE SAND SILT

338+00.00

770
765
760

ROADWAY EMBANKMENT

3:1 3:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, RED, COARSE TO FINE SANDY, SILTY CLAY

MOIST, STIFF, NON-PLASTIC, RED-TAN, COARSE TO FINE SANDY SILT

337+50.00

$-\mathit{L}-$

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	107

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

750
745
740
735
730

2:1 4:1 ROADWAY EMBANKMENT 3:1

STA 344+43

35
8
11
8

RESIDUAL: MOIST, HARD TO STIFF, MEDIUM PLASTICITY TO NON-PLASTIC, RED, COARSE TO FINE SANDY CLAY TO RED-TAN AND TAN-RED, FINE SANDY, CLAYEY SILT

Dry
01/14

344+50.00

765
760
755
750
745

3:1 ROADWAY EMBANKMENT 3:1

STA 340+16

14
14
9
6

RESIDUAL: MOIST, VERY STIFF TO MEDIUM NON-PLASTIC, RED, FINE SANDY, SAND SILT

STIFF, LOW PLASTICITY TO CLAYEY SILT TO RED-TAN, FINE

Dry
01/14

340+00.00

$-\mathit{L}-$

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	108

STA 365+01

ROADWAY EMBANKMENT

3:1 4:1 2:1

(7) (7) (5) (5)

RESIDUAL: MOIST, MEDIUM STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN, FINE SANDY, CLAYEY SILT TO TAN, FINE SANDY SILT

Dry
01/14

365+00.00

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

(29) (29) (46) (24) (27)

RESIDUAL: MOIST, VERY STIFF AND STIFF, NON-PLASTIC, TAN, FINE SANDY SILT

Dry
01/14

360+00.00

STA 355+11

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

(17) (75) (53) (100/0.8) (29)

RESIDUAL: MOIST, VERY STIFF, NON-PLASTIC, TAN-GREEN, COARSE TO FINE SANDY SILT

MOIST, VERY DENSE TO MEDIUM, TAN-GREEN TO TAN, SILTY, COARSE TO FINE SAND

Ⓒ **WEATHERED ROCK:** TAN-GREEN METAVOLCANIC ROCK

Dry
01/14

355+00.00

SS-15

STA 350+79

3:1 3:1

ROADWAY EMBANKMENT: MOIST, MEDIUM STIFF, MEDIUM PLASTICITY, BROWN-GREEN, COARSE TO FINE SANDY CLAY WITH TRACE GRAVEL

(8) (7) (8) (19) (27)

Ⓐ 1/14

ALLUVIAL: MOIST, LOOSE, NON-PLASTIC, GRAY-GREEN, SILTY, COARSE TO FINE SAND

WET, VERY STIFF, NON-PLASTIC, DARK GRAY, COARSE TO FINE SANDY SILT WITH SOME GRAVEL

Ⓑ

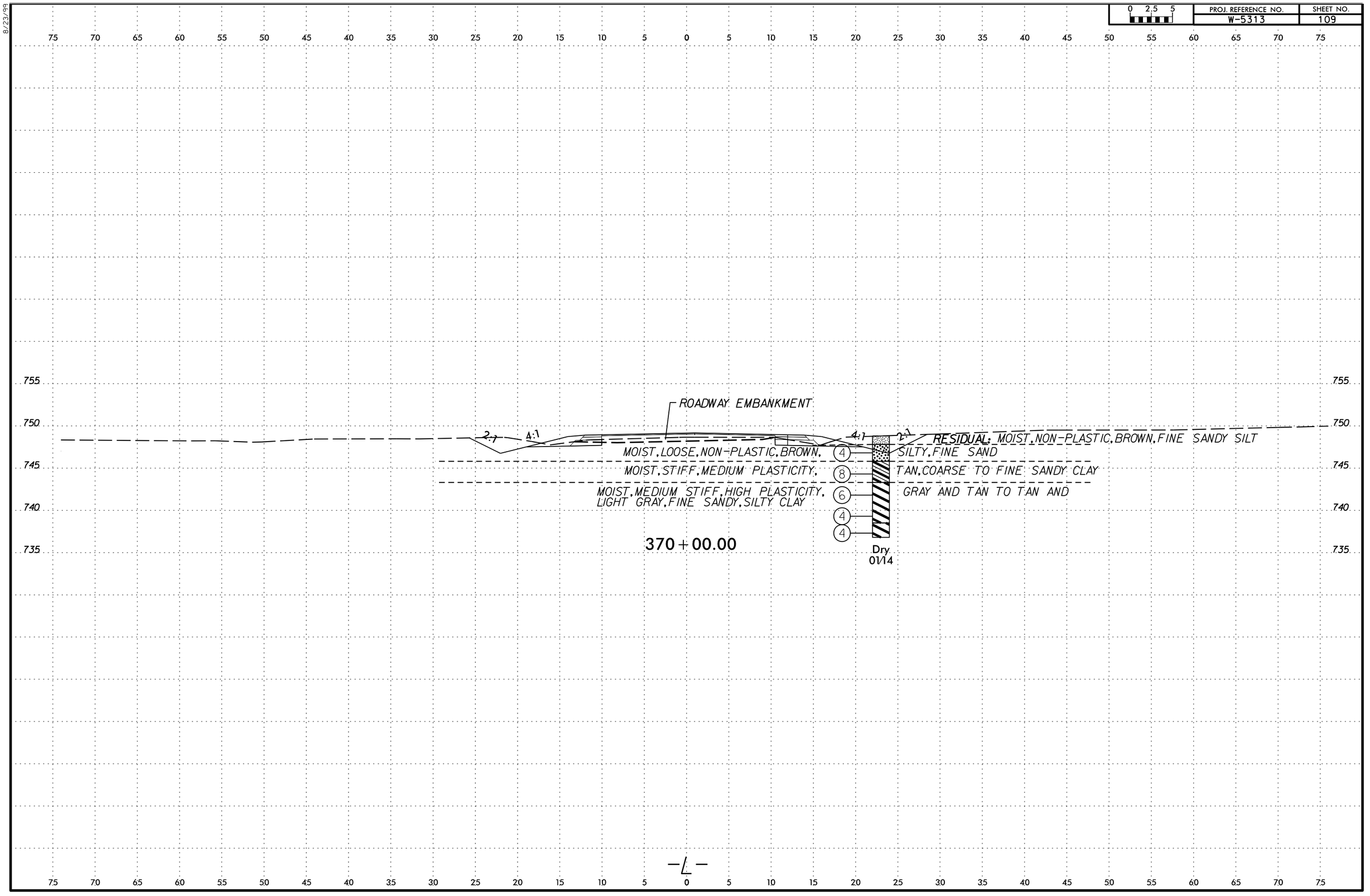
351+00.00

Ⓐ MOIST, MEDIUM STIFF, HIGH PLASTICITY, BROWN-GREEN, COARSE TO FINE SANDY, SILTY CLAY

Ⓑ **RESIDUAL:** MOIST, VERY STIFF, NON-PLASTIC, BROWN-GREEN, COARSE TO FINE SANDY SILT WITH SOME ROCK FRAGMENTS

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	109



8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	110

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

750
745
740
735

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, MEDIUM STIFF, HIGH PLASTICITY, RED-TAN TO TAN, FINE SANDY, SILTY CLAY WITH TRACE QUARTZ FRAGMENTS

MOIST, MEDIUM STIFF, LOW PLASTICITY, TAN, FINE SANDY, CLAYEY SILT

373+00.00

750
745
740
735

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, MEDIUM STIFF, HIGH PLASTICITY, RED-TAN TO TAN, FINE SANDY, SILTY CLAY WITH TRACE QUARTZ FRAGMENTS

MOIST, MEDIUM STIFF, LOW PLASTICITY, TAN, FINE SANDY, CLAYEY SILT

372+50.00

750
745
740

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, NON-PLASTIC, BROWN, FINE SANDY SILT

MOIST, LOOSE, NON-PLASTIC, BROWN, SILTY, FINE SAND

MOIST, STIFF, MEDIUM PLASTICITY, TAN, COARSE TO FINE SANDY CLAY

MOIST, MEDIUM STIFF, HIGH PLASTICITY, GRAY AND TAN TO TAN AND LIGHT GRAY, FINE SANDY, SILTY CLAY

372+00.00

—℄—

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	111

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

745
740
735

3:1 3:1

ROADWAY EMBANKMENT

RESIDUAL: MOIST, MEDIUM STIFF, HIGH PLASTICITY, RED-TAN TO TAN, FINE SANDY, SILTY CLAY WITH TRACE QUARTZ FRAGMENTS

MOIST, MEDIUM STIFF, LOW PLASTICITY, TAN, FINE SANDY, CLAYEY SILT

374+50.00

745
740
735

3:1 4:1 2:1

ROADWAY EMBANKMENT

RESIDUAL: MOIST, MEDIUM STIFF, HIGH PLASTICITY, RED-TAN TO TAN, FINE SANDY, SILTY CLAY WITH TRACE QUARTZ FRAGMENTS

MOIST, MEDIUM STIFF, LOW PLASTICITY, TAN, FINE SANDY, CLAYEY SILT

374+00.00

750
745
740
735

2:1 4:1 4:1 2:1

ROADWAY EMBANKMENT

RESIDUAL: MOIST, MEDIUM STIFF, HIGH PLASTICITY, RED-TAN TO TAN, FINE SANDY, SILTY CLAY WITH TRACE QUARTZ FRAGMENTS

MOIST, MEDIUM STIFF, LOW PLASTICITY, TAN, FINE SANDY, CLAYEY SILT

373+50.00

—L—

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	112

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

750
745
740
735

2:1 4:1 ROADWAY EMBANKMENT 4:1 2:1

RESIDUAL: MOIST, MEDIUM STIFF, HIGH PLASTICITY, RED-TAN TO TAN, FINE SANDY, SILTY CLAY WITH TRACE QUARTZ FRAGMENTS

MOIST, MEDIUM STIFF, LOW PLASTICITY, TAN, FINE SANDY, CLAYEY SILT

376+00.00

3:1 ROADWAY EMBANKMENT 4:1 2:1

RESIDUAL: MOIST, MEDIUM STIFF, HIGH PLASTICITY, RED-TAN TO TAN, FINE SANDY, SILTY CLAY WITH TRACE QUARTZ FRAGMENTS

MOIST, MEDIUM STIFF, LOW PLASTICITY, TAN, FINE SANDY, CLAYEY SILT

375+50.00

SS-16 3:1 ROADWAY EMBANKMENT 4:1 2:1

6
5
4
4

RESIDUAL: MOIST, MEDIUM STIFF, HIGH PLASTICITY, RED-TAN TO TAN, FINE SANDY, SILTY CLAY WITH TRACE QUARTZ FRAGMENTS

MOIST, MEDIUM STIFF, LOW PLASTICITY, TAN, FINE SANDY, CLAYEY SILT

Dry
01/14

375+00.00

$-\mathit{L}-$

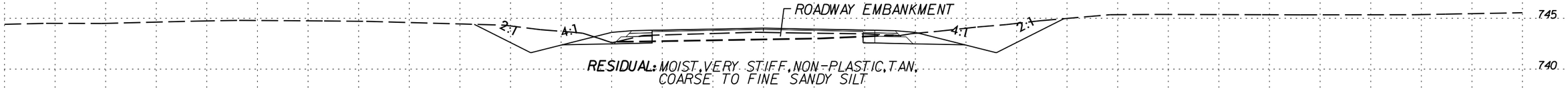
75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	113

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

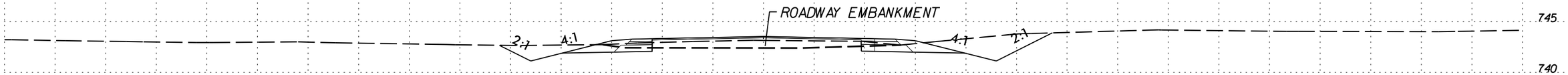
750
745
740
735



RESIDUAL: MOIST, VERY STIFF, NON-PLASTIC, TAN, COARSE TO FINE SANDY SILT

377+00.00

750
745
740
735



RESIDUAL: MOIST, MEDIUM STIFF, HIGH PLASTICITY, RED-TAN TO TAN, FINE SANDY, SILTY CLAY WITH TRACE QUARTZ FRAGMENTS
MOIST, MEDIUM STIFF, LOW PLASTICITY, TAN, FINE SANDY, CLAYEY SILT

376+50.00

—L—

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	114

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

750
745
740
735

ROADWAY EMBANKMENT

STA 384+76

2:1 4:1 4:1 2:1

17
18
10
7
7

RESIDUAL: MOIST, VERY STIFF TO TO NON-PLASTIC, RED, TO RED-TAN, COARSE

MEDIUM STIFF, MEDIUM PLASTICITY SILTY, COARSE TO FINE SANDY CLAY TO FINE SANDY SILT

385+00.00

Dry
01/14

ROADWAY EMBANKMENT

16
27
22
17
29

2:1 4:1 4:1 2:1

Ⓐ MOIST, MEDIUM DENSE, NON-PLASTIC, TAN, SILTY, COARSE TO FINE SAND

RESIDUAL: MOIST, VERY STIFF, NON-PLASTIC, TAN, COARSE TO FINE SANDY SILT

Dry
01/14

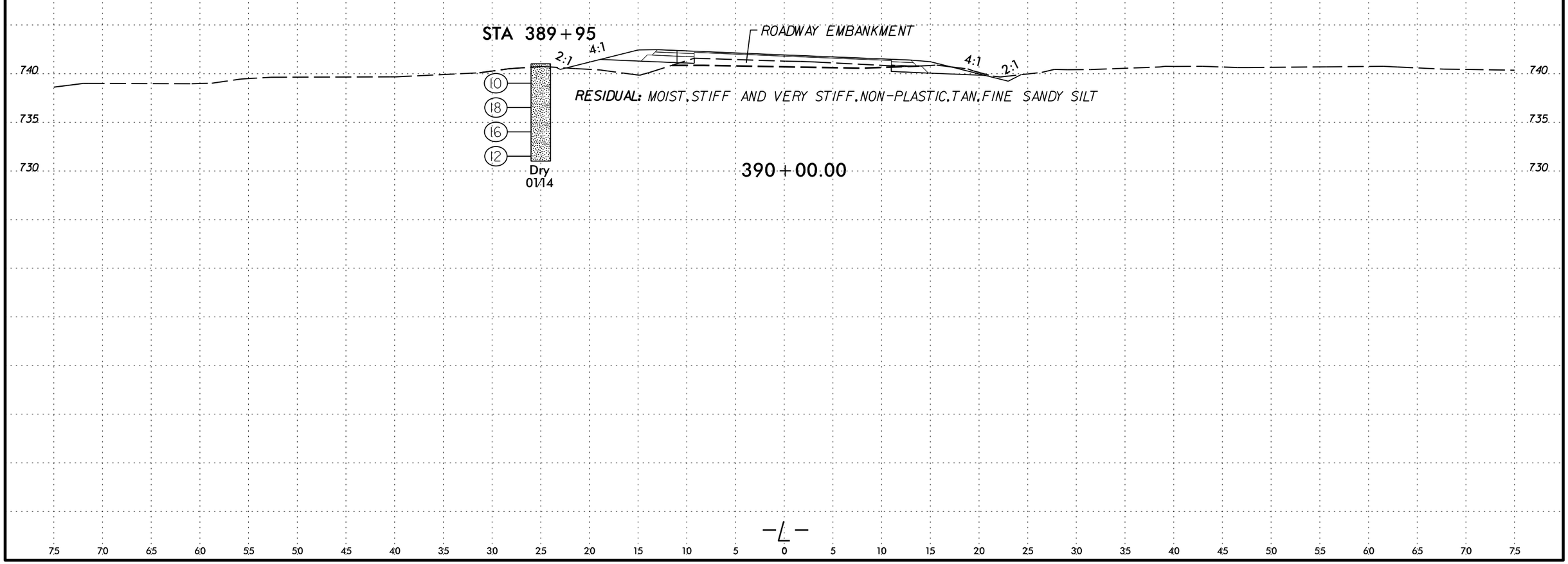
378+50.00

—℄—

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	115

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



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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	116

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

730
725
720
715

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, TAN-RED, FINE SANDY, SILTY CLAY

MOIST, STIFF AND MEDIUM STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN, COARSE TO FINE SANDY, CLAYEY SILT TO TAN, FINE SANDY SILT

393 + 00.00

735
730
725

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, TAN-RED, FINE SANDY, SILTY CLAY

MOIST, STIFF AND MEDIUM STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN, COARSE TO FINE SANDY, CLAYEY SILT TO TAN, FINE SANDY SILT

392 + 50.00

735
730
725

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF AND VERY STIFF, NON-PLASTIC, TAN, FINE SANDY SILT

392 + 00.00

$-\mathit{L}-$

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	117

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

720
715
710

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, TAN-RED, FINE SANDY, SILTY CLAY

MOIST, STIFF AND MEDIUM STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN, COARSE TO FINE SANDY, CLAYEY SILT TO TAN, FINE SANDY SILT

394 + 50.00

725
720
715
710

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, TAN-RED, FINE SANDY, SILTY CLAY

MOIST, STIFF AND MEDIUM STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN, COARSE TO FINE SANDY, CLAYEY SILT TO TAN, FINE SANDY SILT

394 + 00.00

725
720
715

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, TAN-RED, FINE SANDY, SILTY CLAY

MOIST, STIFF AND MEDIUM STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN, COARSE TO FINE SANDY, CLAYEY SILT TO TAN, FINE SANDY SILT

393 + 50.00

$-\underline{L}-$

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	118

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

715
710
705

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, HIGH PLASTICITY, TAN-RED, FINE SANDY, SILTY CLAY

395+50.00

STA 394+99

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, STIFF, (9) HIGH PLASTICITY, TAN-RED, FINE SANDY, SILTY CLAY

(9) MOIST, STIFF AND MEDIUM STIFF, LOW PLASTICITY TO NON-PLASTIC, TAN, COARSE TO FINE SANDY, CLAYEY SILT TO TAN, FINE SANDY SILT

(7)

(4)

(11)

Dry
01/14

395+00.00

$-\mathit{L}-$

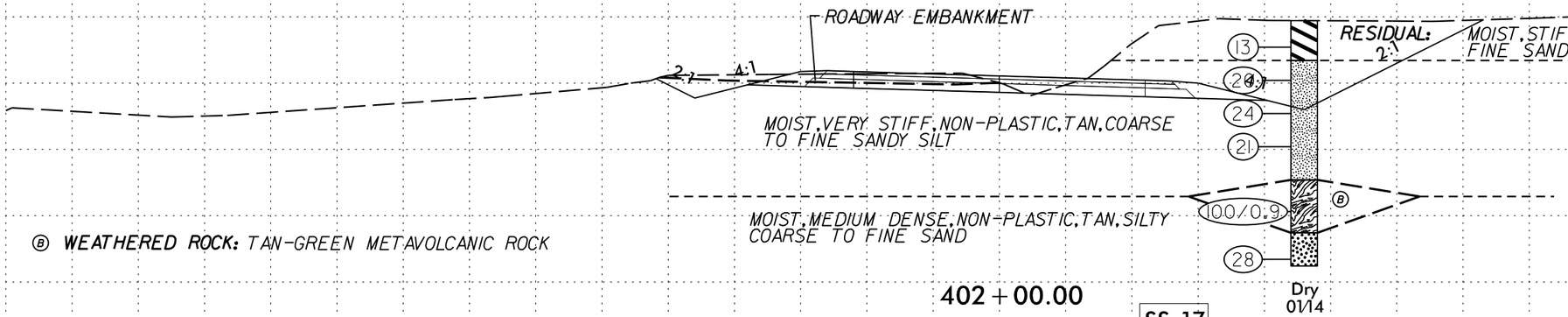
75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	119

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

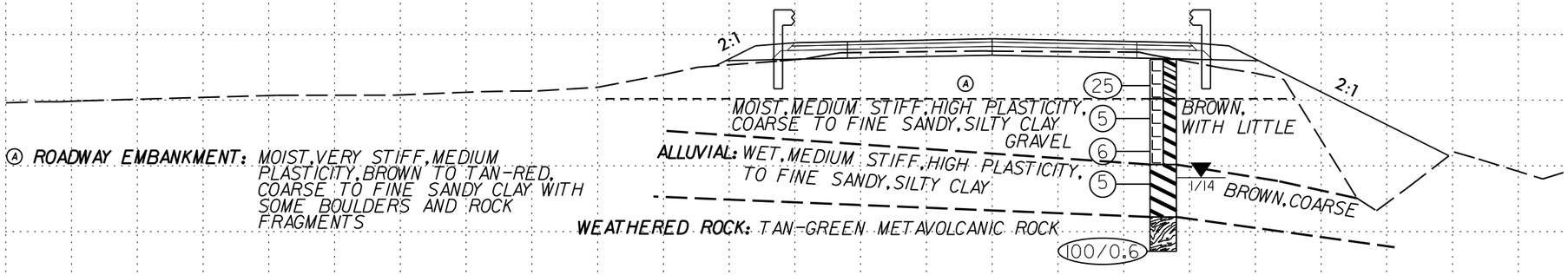
720 715 710 705 700 695



402 + 00.00

SS–17

STA 397 + 88



398 + 00.00

705 700 695 690 685

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	120

STA 420+01

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

(12) (22) (9) (7)

RESIDUAL: MOIST, VERY STIFF TO MEDIUM STIFF, MEDIUM PLASTICITY TO NON-PLASTIC, RED, COARSE TO FINE SANDY, SILTY CLAY TO TAN-RED, FINE SANDY CLAYEY SILT

Dry
01/14

420+00.00

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

(5) (6) (6) (4)

RESIDUAL: MOIST, MEDIUM STIFF, LOW PLASTICITY, TAN-RED, COARSE TO FINE SANDY, CLAYEY SILT

Dry
01/14

416+00.00

STA 410+80

ROADWAY EMBANKMENT

2:1 4:1 2:1

(8) (14) (17) (13) (14)

RESIDUAL: MOIST, STIFF AND VERY STIFF, MEDIUM PLASTICITY TO NON-PLASTIC, RED-BROWN, SILTY, COARSE TO FINE SANDY CLAY TO RED-TAN AND TAN, FINE SANDY, CLAYEY SILT

Dry
01/14

411+00.00

STA 407+05

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

(18) (42) (26) (25) (26)

RESIDUAL: MOIST, VERY STIFF TO HARD, NON-PLASTIC, TAN, COARSE TO FINE SANDY SILT

MOIST, MEDIUM DENSE, NON-PLASTIC, TAN, SILTY, COARSE TO FINE SAND

Dry
01/14

407+00.00

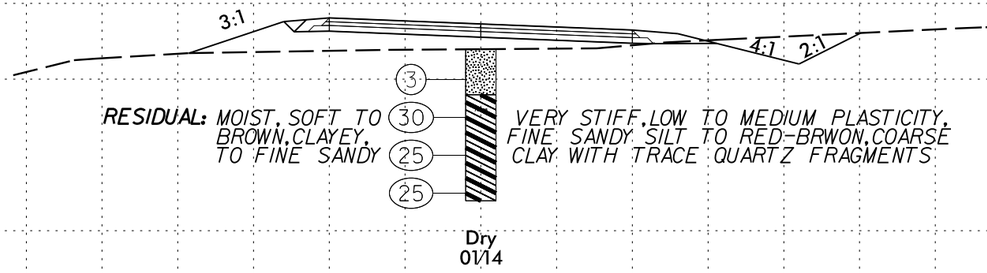
—℄—

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	121

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

780
775
770
765
760



RESIDUAL: MOIST, SOFT TO BROWN, CLAYEY, TO FINE SANDY

VERY STIFF, LOW TO MEDIUM PLASTICITY, FINE SANDY SILT TO RED-BRWON, COARSE CLAY WITH TRACE QUARTZ FRAGMENTS

Dry
01/14

11+00.00

8/23/99

0 2.5 5

PROJ. REFERENCE NO.	SHEET NO.
W-5313	122

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

785
780
775
770

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, MEDIUM STIFF TO VERY STIFF, HIGH PLASTICITY, TAN-BROWN, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF TO STIFF, LOW PLASTICITY, RED-TAN, FINE SANDY, CLAYEY SILT TO RED-TAN, CLAYEY, FINE SANDY SILT

12+25.00

785
780
775
770

ROADWAY EMBANKMENT

3:1 4:1 2:1

RESIDUAL: MOIST, MEDIUM STIFF TO VERY STIFF, HIGH PLASTICITY, TAN-BROWN, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF TO STIFF, LOW PLASTICITY, RED-TAN, FINE SANDY, CLAYEY SILT TO RED-TAN, CLAYEY, FINE SANDY SILT

12+00.00

785
780
775
770

ROADWAY EMBANKMENT

3:1 4:1 2:1

RESIDUAL: MOIST, SOFT TO VERY STIFF, LOW TO MEDIUM PLASTICITY, BROWN, CLAYEY, FINE SANDY SILT TO RED-BRWON, COARSE TO FINE SANDY CLAY WITH TRACE QUARTZ FRAGMENTS

11+75.00

-Y4-

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	123

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

785
780
775

SS-18

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

7
16
20
13
10

RESIDUAL: MOIST, MEDIUM STIFF TO VERY STIFF, HIGH PLASTICITY, TAN-BROWN, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF TO STIFF, LOW PLASTICITY, RED-TAN, FINE SANDY, CLAYEY SILT TO RED-TAN, CLAYEY, FINE SANDY SILT

Dry
01/14

13 + 00.00

785
780
775
770

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, MEDIUM STIFF TO VERY STIFF, HIGH PLASTICITY, TAN-BROWN, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF TO STIFF, LOW PLASTICITY, RED-TAN, FINE SANDY, CLAYEY SILT TO RED-TAN, CLAYEY, FINE SANDY SILT

12 + 75.00

785
780
775
770

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, MEDIUM STIFF TO VERY STIFF, HIGH PLASTICITY, TAN-BROWN, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF TO STIFF, LOW PLASTICITY, RED-TAN, FINE SANDY, CLAYEY SILT TO RED-TAN, CLAYEY, FINE SANDY SILT

12 + 50.00

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

8/23/99

0 2.5 5

PROJ. REFERENCE NO.	SHEET NO.
W-5313	124

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

785
780
775

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, MEDIUM STIFF TO VERY STIFF, HIGH PLASTICITY, TAN-BROWN, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF TO STIFF, LOW PLASTICITY, RED-TAN, FINE SANDY, CLAYEY SILT TO RED-TAN, CLAYEY, FINE SANDY SILT

13+75.00

785
780
775

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, MEDIUM STIFF TO VERY STIFF, HIGH PLASTICITY, TAN-BROWN, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF TO STIFF, LOW PLASTICITY, RED-TAN, FINE SANDY, CLAYEY SILT TO RED-TAN, CLAYEY, FINE SANDY SILT

13+50.00

785
780
775

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

RESIDUAL: MOIST, MEDIUM STIFF TO VERY STIFF, HIGH PLASTICITY, TAN-BROWN, FINE SANDY, SILTY CLAY

MOIST, VERY STIFF TO STIFF, LOW PLASTICITY, RED-TAN, FINE SANDY, CLAYEY SILT TO RED-TAN, CLAYEY, FINE SANDY SILT

13+25.00

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	125

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

810
805
800
795
790

ROADWAY EMBANKMENT

2:1 4:1 4:1 2:1

1/14

9
13
44
100/0.9
100/0.4

RESIDUAL: MOIST, LOOSE TO DENSE, LOW PLASTICITY TO NON-PLASTIC, TAN TO WHITE AND TAN, CLAYEY, SILTY, COARSE TO FINE SAND

WEATHERED ROCK: WHITE AND GRAY GRANITE

12 + 50.00

-Y5-

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	126

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

810
805
800
795
790

3:1 3:1

1/14

RESIDUAL: MOIST TO WET, STIFF, HIGH COARSE TO MEDIUM STIFF TO VERY PLASTICITY, TAN-RED, FINE SANDY, SILTY CLAY

WET, STIFF, LOW PLASTICITY, RED-TAN, FINE SANDY, CLAYEY SILT

7	
24	
25	
12	

Dry
01/14

11+00.00

-Y6-

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	127

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

805
800
795
790

3:1
3:1
ROADWAY EMBANKMENT

RESIDUAL: MOIST, MEDIUM STIFF TO VERY STIFF, HIGH PLASTICITY, TAN-RED, COARSE TO FINE SANDY, SILTY CLAY

13 + 00.00

805
800
795
790

3:1
3:1
ROADWAY EMBANKMENT

RESIDUAL: MOIST, MEDIUM STIFF TO VERY STIFF, HIGH PLASTICITY, TAN-RED, COARSE TO FINE SANDY, SILTY CLAY

12 + 50.00

805
800
795
790

3:1
3:1
ROADWAY EMBANKMENT

RESIDUAL: MOIST, MEDIUM STIFF TO VERY STIFF, HIGH PLASTICITY, TAN-RED, COARSE TO FINE SANDY, SILTY CLAY

12 + 00.00

-Y6-

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	128

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

800
795
790
785

ROADWAY EMBANKMENT

3:1 3:1

RESIDUAL: MOIST, MEDIUM STIFF TO VERY STIFF, HIGH PLASTICITY, TAN-RED, COARSE TO FINE SANDY, SILTY CLAY

14 + 50.00

800
795
790

ROADWAY EMBANKMENT

2:1 4:1 3:1

RESIDUAL: MOIST, MEDIUM STIFF TO VERY STIFF, HIGH PLASTICITY, TAN-RED, COARSE TO FINE SANDY, SILTY CLAY

14 + 00.00

805
800
795
790

SS-19

ROADWAY EMBANKMENT

3:1 4:1 2:1

7
15
23
12

RESIDUAL: MOIST, STIFF, COARSE MEDIUM STIFF TO VERY HIGH PLASTICITY, TAN-RED, TO FINE SANDY, SILTY CLAY

Dry
01/14

13 + 50.00

-Y6-

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

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	W-5313	129

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

795
790
785

ROADWAY EMBANKMENT

RESIDUAL: MOIST, MEDIUM STIFF TO VERY STIFF, HIGH PLASTICITY, TAN-RED, COARSE TO FINE SANDY, SILTY CLAY

15+50.00

800
795
790
785

ROADWAY EMBANKMENT

3:1 3:1

RESIDUAL: MOIST, MEDIUM STIFF TO VERY STIFF, HIGH PLASTICITY, TAN-RED, COARSE TO FINE SANDY, SILTY CLAY

15+00.00

-Y6-

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

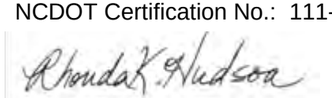
SUMMARY OF LABORATORY TEST DATA

PROJECT NO. 46136.1.1 (W-5313)
FA NO. STP-1221(15)
COUNTY: ROWAN
SR 1221 (OLD BEATTY FORD ROAD) FROM SR 1337 (LENTZ ROAD) TO SR 2335 (LOWER STONE CHURCH ROAD)

									Atterberg Limits			Gradation Results							
Sample No.	Boring Number	Station	Offset	Alignment	Sample Depth (ft.)	Natural Moisture Content (%)	AASHTO Class (Group Index)	N-Value (blows/ ft.)	L.L.	P.L.	P.I.	Pass #10 Sieve	Pass #40 Sieve	Pass #200 Sieve	Retained #270 Sieve	Coarse Sand (%)	Fine Sand (%)	Silt (%)	Clay (%)
SS-1	L_4000	40+00	18' RT	-L-	3.5-5.0	30.6	A-7-5(45)	27	75	37	38	100	99	95	7	1.2	5.9	14.7	78.2
SS-2	L_7050	70+50	36' RT	-L-	1.0-2.5	27.9	A-7-5(24)	11	56	34	22	100	98	90	12	2.7	9.6	23.4	64.2
SS-3	L_11000	110+00	23' RT	-L-	1.0-2.5	30.4	A-7-5(25)	11	59	35	24	100	99	85	18	4.0	14.1	26.1	55.9
SS-4	L_12048	120+48	26' RT	-L-	3.5-5.0	27.4	A-6(12)	5	34	17	17	99	97	82	23	3.8	19.4	25.3	51.5
SS-5	L_16500	165+00	15' RT	-L-	1.0-2.5	45.2	-	12	-	-	-	-	-	-	-	-	-	-	-
SS-6	L_18008	180+08	38' LT	-L-	6.0-7.5	41.7	A-7-5(60)	9	99	45	54	100	98	90	12	3.3	8.6	26.8	61.3
SS-7	L_18986	189+86	22' RT	-L-	1.0-2.5	23.0	A-6(6)	10	34	18	16	92	81	57	44	18.8	24.7	22.9	33.5
SS-8	L_20930	209+30	31' LT	-L-	1.0-2.5	27.7	-	2	-	-	-	-	-	-	-	-	-	-	-
SS-9	L_22024	220+24	10' RT	-L-	1.0-2.5	28.6	A-7-6(8)	17	50	24	26	84	65	46	48	28.6	18.9	14.2	38.3
SS-10	L_25000	250+00	23' LT	-L-	1.0-2.5	32.8	A-7-5(27)	11	61	38	23	100	100	91	11	1.9	9.2	36.9	52.0
SS-11	L_27000	270+00	20' RT	-L-	1.0-2.5	44.2	A-7-5(42)	6	76	41	35	100	99	93	8	2.3	5.6	27.6	64.5
SS-12	L_28526	285+26	18' LT	-L-	1.0-2.5	31.5	A-7-6(24)	9	55	27	28	95	91	79	21	7.5	13.5	24.7	54.3
SS-13	L_32001	320+01	46' LT	-L-	1.0-2.5	40.1	A-7-5(43)	11	74	36	38	100	99	91	11	1.6	9.6	26.9	61.9
SS-14	L_32982	329+82	42' RT	-L-	1.0-2.5	24.1	A-7-6(19)	14	51	22	29	97	87	70	30	15.0	15.0	2.8	67.2
SS-15	L_35079	350+79	37' LT	-L-	3.5-5.0	26.8	A-7-6(21)	7	51	22	29	96	94	73	30	5.7	24.1	35.0	35.2
SS-16	L_37500	375+00	23" LT	-L-	1.0-2.5	30.0	A-7-6(59)	6	93	25	68	98	96	80	21	7.1	13.6	16.7	62.6
SS-17	L_39788	397+88	13' RT	-L-	3.5-5.0	24.8	A-7-6(24)	5	59	27	32	95	89	73	27	11.9	14.8	33.7	39.6
SS-18	Y4_1300	13+00	21' RT	-Y4-	1.0-2.5	31.4	A-7-6(20)	7	56	28	28	99	91	72	30	12.6	17.7	14.7	55.0
SS-19	Y6_1350	13+50	CL	-Y6-	1.0-2.5	22.1	A-7-6(14)	7	44	18	26	96	85	62	39	18.4	20.3	18.6	42.8
SS-20	L_1986	19+86	15' LT	-L-	1.0-2.5	29.1	A-7-5(29)	14	59	34	25	100	99	94	9	1.2	7.4	31.5	59.9
SS-21	L_3000	30+00	15' LT	-L-	3.5-5.0	28.2	A-7-5(42)	22	73	37	36	100	99	94	9	1.4	7.3	21.6	69.7

SS = Split-Barrel Sample (ASTM-D-1586) ST = Shelby Tube (Undisturbed) Sample
S = Grab Sample
NP -- Non Plastic NA-- Non Applicable

Lab Technician: NCDOT Certification No.: 111-06-1203



Rhonda Hudson