

HWY. 110 – CLINTON (WIDENING) (S)

AHTD Job CA0801

Environmental Assessment



U.S. Department of Transportation
Federal Highway
Administration

October 2016

Arkansas State Highway &
Transportation Department



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HWY. 110 – CLINTON (WIDENING) (S)

F.A.P. Number M001-0071-031

Environmental Assessment

Submitted pursuant to:

The National Environmental Policy Act (NEPA)

42 U.S.C. §4322(2)(c) and 23 C.F.R. §771

Submitted by:

FEDERAL HIGHWAY ADMINISTRATION

and

**ARKANSAS STATE HIGHWAY AND TRANSPORTATION
DEPARTMENT**

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In compliance with the *National Environmental Policy Act*, this Environmental Assessment (EA) describes the plan to widen Highway 65 from just north of Highway 16 within the City of Clinton to its intersection with Highway 110 near Botkinburg, Arkansas. The analysis did not identify any significant adverse environmental impacts and identifies Alternative 1 as the Preferred Alternative.

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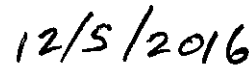
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This EA is also available online at:

<http://www.arkansashighways.com/>



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Date of Approval



U.S. Department of Transportation
Federal Highway
Administration



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Chapter 1 – Purpose & Need

What’s in Chapter 1?

Chapter 1 explains the purpose of the project, why improvements to Highway 65 are needed, and who is leading the project.

1.1 What is the Highway 65 widening project?

The Arkansas State Highway and Transportation Department (AHTD) is proposing improvements to Highway 65 from within the City of Clinton north to its intersection with Highway 110. The project will include highway widening and minor intersection realignments.

1.2 What are the existing conditions on Highway 65?

Highway 65 is a principal arterial on the National Highway System that begins at Clayton, Louisiana, and ends 988 miles later at I-35 in Albert Lea, Minnesota. In Arkansas, Highway 65 enters the State eight miles south of Eudora. The highway runs north and intersects with I-530 at Pine Bluff, southeast of Little Rock. Highway 65 is signed concurrently with I-530 and I-40 through central Arkansas until it diverges from I-40 at Conway, heading north/northwest to the state line, north of Omaha. The total length of Highway 65 in Arkansas is 309 miles.

The project area is located in north-central Van Buren County. The project begins within the city limits of Clinton, just north of the intersection of Highway 65 with Highway 16, and extends north approximately eight miles to the intersection with Highway 110 at Botkinburg (Figure 1). According to the 2010 Census, Clinton has a population of 2,602. Botkinburg is not an incorporated city. The project area is rural and primarily wooded. There is an elevation change of approximately 800 feet in the project area. In the Clinton area, Highway 65 provides access to Greers Ferry Lake as one of the major highways that skirts the western boundary of the lake. Some tourists access Greers Ferry Lake, the Little Red River, and the Buffalo National River while using their recreational vehicles and large motorhomes. Logging operations in the Ozark National Forest routinely utilize Highway 65.

What does it mean when a highway is on the National Highway System?

The National Highway System (NHS) consists of roadways important to the nation’s economy, defense, and mobility. The NHS was developed by the Department of Transportation in cooperation with the states, local officials, and metropolitan planning organizations. Placement upon the NHS gives the highway priority in federal funding, maintenance and safety improvements.

Project Area

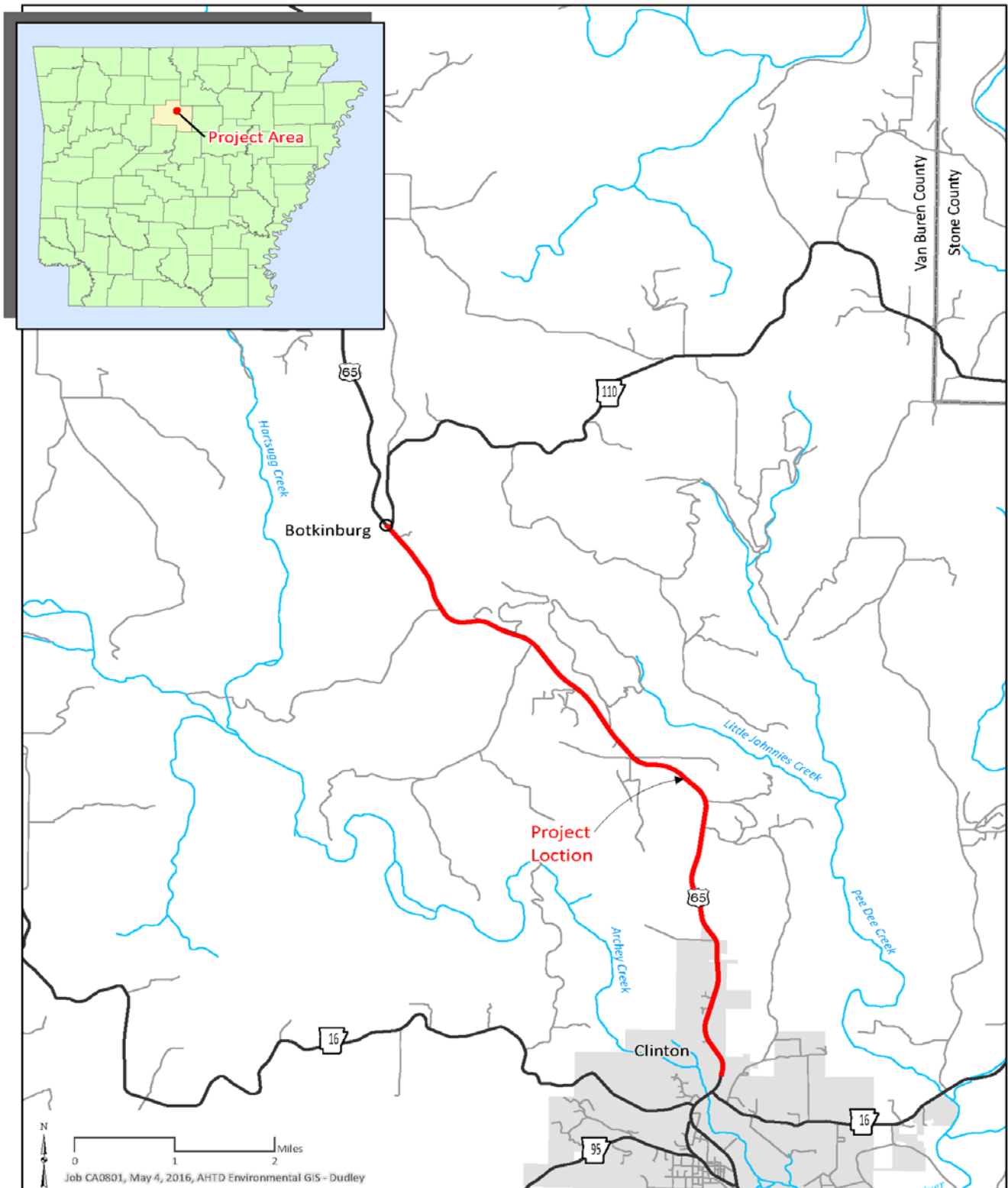


Figure 1

Existing Conditions

From I-40 to the Missouri State line, Highway 65 includes several segments with four travel lanes, including a 4.26-mile segment extending from the southern terminus of the project area, south through Clinton. Within Arkansas, 73% of Highway 65 is currently four lanes, while 27% of the route is still either two or three lanes.

From Highway 16 to the north, for a distance of five miles, Highway 65 in the project area has three 12-foot lanes (one southbound and two northbound) with eight-foot shoulders. The remaining three miles of Highway 65 consists of two 12-foot lanes and eight-foot shoulders. In 2016, there were 5,500 vehicles per day (vpd) traveling this route during traditional weekdays (Monday-Thursday). Sixteen percent of the traffic was trucks. It is estimated that 6,000 vpd will travel this route on weekdays by 2036. Because Highway 65 is a direct route between central Arkansas and several tourist destinations (Buffalo National River, Ozark National Forest, Eureka Springs and Branson, Missouri), seasonal and weekend traffic volumes range from seven percent higher than weekday vpd in February, to 35 percent higher than weekday vpd in August. During specific holiday/event, periods (spring break, Memorial Day weekend, Labor Day weekend), average traffic volumes are as high as 40 percent above weekday vpd over the entire holiday event period. See Figure 2 for existing and projected traffic volumes.

1.3 What is the purpose of this project?

This route is part of Arkansas's four-lane grid system that is being completed as funding becomes available. The purpose of the proposed project is to provide safer and efficient intrastate and interstate movement of people and goods for greater mobility and connectivity.

Average Daily Traffic

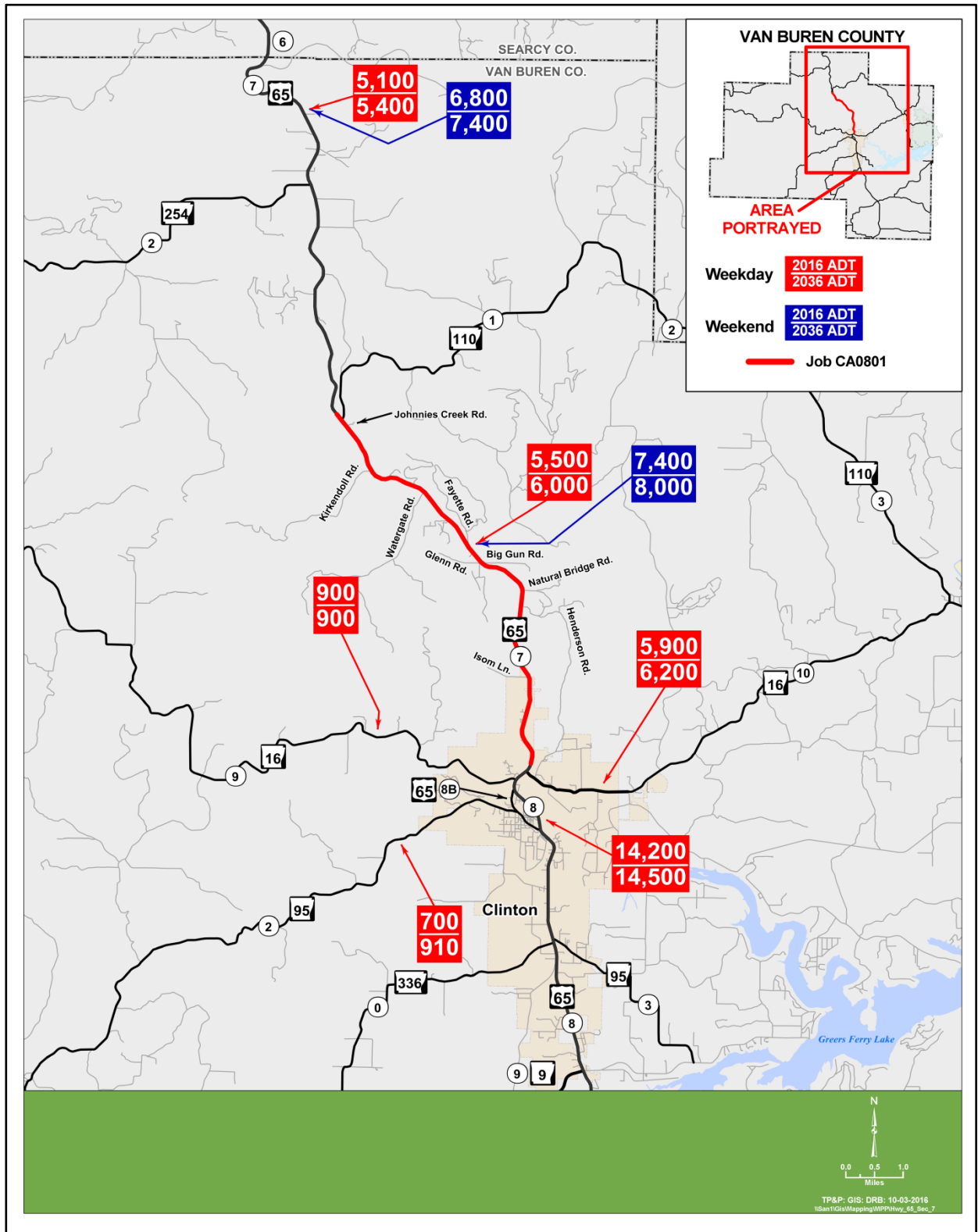


Figure 2

1.4 Why does Highway 65 need to be widened?

Level of Service

In the United States, state highway agencies have categorized traffic flow with a qualitative measure called Level of Service (LOS). The LOS is determined by using the Highway Capacity Software 2010. The LOS calculation results in one of six levels of service (A through F) as described in Appendix A. Weekday traffic distribution is approximately 50 percent each direction. Weekend traffic distribution is as high as 60 percent northbound and 40 percent southbound on Fridays with those percentages reversed on Sundays. The higher traffic volumes and difference in directional distribution can be attributed to recreational activities in the region. Northbound weekday traffic operates at an acceptable LOS C and is expected to continue to operate at an acceptable LOS C through the forecast year of 2036, even if no improvements are made. Weekday southbound, and weekend traffic in both directions, currently operates at unacceptable LOS D and will continue to operate at an unacceptable LOS D if no improvements are made. For southbound traffic, trucks using lower gears for engine braking on the long downhill grade impede traffic flow. See Table 1 for the existing LOS.

What does LOS take into account?

The LOS calculator uses road and traffic conditions that affect traffic flow, such as:

- peak-hour traffic volume
- free-flow speed (how quickly free-flowing traffic would travel)
- shoulder and lane width
- percent of the daily traffic that consists of trucks, buses, or recreational vehicles
- passing opportunities
- number of traffic signals
- density of access points (intersections & driveways)
- terrain
- type of highway (commuter & long-distance routes with higher speeds or scenic & recreational routes with slower speeds)

	Weekday				Weekend			
Year	Northbound		Southbound		Northbound		Southbound	
	LM 7.62 to LM 10.47 (two lanes)	LM 10.47 to LM 15.63 (three lanes)	LM 7.62 to LM 10.47 (two lanes)	LM 10.47 to LM 15.63 (three lanes)	LM 7.62 to LM 10.47 (two lanes)	LM 10.47 to LM 15.63 (three lanes)	LM 7.62 to LM 10.47 (two lanes)	LM 10.47 to LM 15.63 (three lanes)
2016	C	C	D	D	D	D	D	D
2036	C	C	D	D	D	D	D	D

Highlighted LOS D is considered an unacceptable level of service.

Safety Analysis

The relative safety of a route can be determined by comparing the crash rate on the route to a statewide crash rate for similar routes. Crash data for 2010-2014 (the five most recent years for which data are available) were analyzed to determine crash rates for each year and for a five-year average along the study segment. Crash rates were analyzed by cross section (i.e., two-lane and three-lane sections) and compared to a statewide average for similar facilities. See Table 2 for a summary of the crash analysis and Figure 3 for crash locations. The five-year average crash rate was lower than the statewide average on both sections; the five-year KA (combined fatal and severe injury) crash rate was higher than the statewide average on both sections of the study segment. In 2010-2014, rear end crashes caused by turning vehicles stopping in the travel lane accounted for 24 percent of the total crashes as well as 30 percent of the KA crashes not caused by equipment failure (i.e., tire blowout). The addition of a painted median that can be utilized as a continuous, two-way, left-turn lane will remove left turning vehicles from the travel lanes and reduce the potential for rear end crashes.

What are crash rates?

Crash rates are based on the number of crashes per million vehicle miles traveled. Over a 5-year period, the two-lane section of Highway 65 north of Clinton had an average of 2.4 crashes per year, an average traffic volume of 5,620 vehicles per day, and is 2.85 mile long. This translated to a crash rate, per million vehicle miles, of 19.42. These rates are compared to a statewide average crash rate, also per million vehicle miles, for similar highways. In this case, the statewide average crash rate for two-lane undivided urban highways, per million vehicle miles, was 15.26.

Table 2 Crash Analysis							
Year	Crashes	KA Crashes	Weighted ADT	Crash Rate¹	Statewide Avg. Crash Rate	KA Crash Rate²	Statewide Avg. KA Crash Rate
Highway 65, Section 7, Highway 110 to Clinton – two-lane section (2.85 miles)³							
2014	3	1	5700	0.51	0.96	16.87	15.08
2013	3	2	5700	0.51	0.96	33.73	13.98
2012	2	0	5300	0.36	1.02	0	15.65
2011	0	0	5200	0.00	0.99	0	15.19
2010	4	3	6200	0.62	1.01	46.51	14.83
5-Year Avg.	2.4	1.2	5620	0.40	0.99	19.42	15.26
Highway 65, Section 7, Highway 110 to Clinton – three-lane section (5.15 miles)⁴							
2014	12	2	5700	1.12	0.68	18.67	12.73
2013	6	2	5700	0.56	0.64	18.63	9.77
2012	15	1	5300	1.50	0.65	10.02	10.04
2011	3	2	5200	0.31	0.70	20.42	12.23
2010	6	1	6200	0.51	0.58	8.56	10.09
5-Year Avg.	8.4	1.6	5620	0.47	0.69	15.28	10.50
¹ Crash rates are based on the number of crashes per million vehicle miles (mvm) traveled. ² KA crash rates are based on the number of crashes per 100 mvm traveled. ³ Two-lane, two-way rural highways with no control of access. ⁴ Three-lane, two-way rural highways with no control of access. <i>Highlighted crash rates are above the statewide average.</i>							

Crash Locations

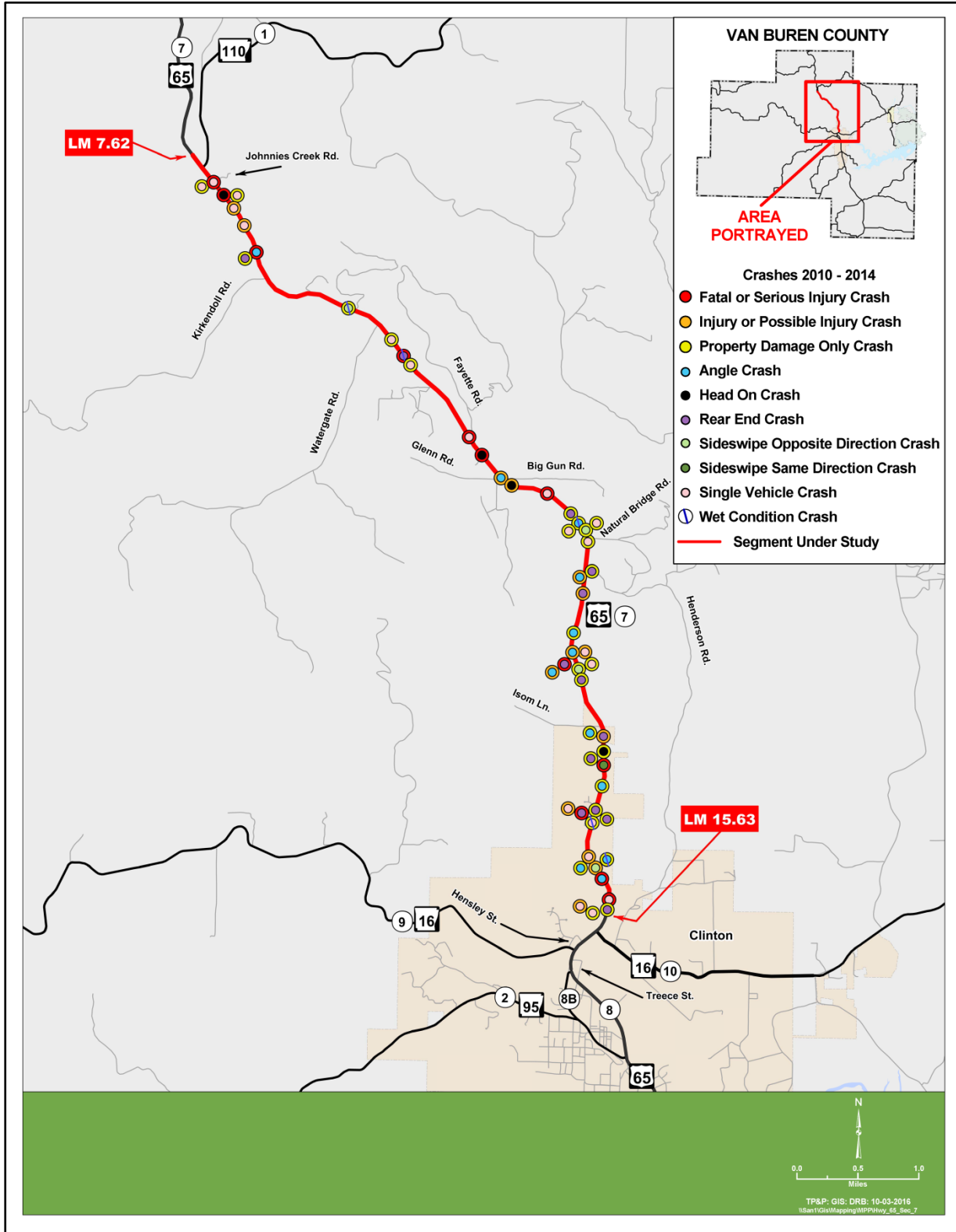


Figure 3

Pavement Analysis

A pavement analysis was conducted using data collected by the Automated Road Analyzer in April 2015, the latest data that is available. The analysis classified the pavement as “fair” and qualifies for preventive maintenance based on the AHTD Preventive Maintenance Plan guidelines. Table 3 below summarizes the analysis.

Table 3
Pavement Analysis

Location	Average IRI (in/mi) ¹	Crack Rating	Average Rutting (in)	Qualified for Preventive Maintenance ²
LM 7.62-15.63 (three-lane)	89.9 (fair)	Fair to poor	0.23	Yes

¹International Roughness Index

²Qualifying treatments are recommended based on the AHTD Preventive Maintenance Plan dated March 2016

1.5 What is the purpose of this Environmental Assessment?

This Environmental Assessment (EA) is being prepared under the *National Environmental Policy Act* (NEPA) to:

- Evaluate the environmental effects of widening Highway 65.
- Inform and receive feedback from the public and decision makers about the environmental effects of the project.
- Determine whether there are significant impacts requiring an Environmental Impact Statement (EIS) or if the project effects can be sufficiently documented through an EA and issue a Finding of No Significant Impact (FONSI).

1.6 Who is leading this project?

This project is being led by a partnership between the Federal Highway Administration (FHWA) and the AHTD. The FHWA is involved because it is funding a portion of the project and has the

What is NEPA?

The National Environmental Policy Act of 1969 (NEPA) requires Federal agencies to consider the potential environmental consequences for their actions, document the analysis, and provide a public involvement process prior to project implementation. Federal agencies are subject to NEPA as part of their decision-making process, as part of their own projects, by providing funding to other organizations or agencies, through regulatory or permitting processes, or through the involvement of their resources or property.

primary responsibility for the content and accuracy of this NEPA document.

The project is primarily funded through Connecting Arkansas Program (CAP) funds allocated to the AHTD. The AHTD is responsible for administering and maintaining the state highway system, which includes Highway 65. For these reasons, the AHTD is a co-lead agency with the FHWA.

What are significant impacts?

NEPA regulations do not provide specific thresholds to determine if project impacts are considered significant, but they do discuss the process that should be used to evaluate impacts. Consideration is given both to context, where the significance of impacts varies with the setting of the proposed action, and intensity, the severity of the impacts.



What are Connecting Arkansas Program Funds?

In the 2012 general election, Arkansas voters approved a 10 year half-cent sales tax to fund continued construction of four-lane highways to connect all four corners of the state, including the widening of existing four-lane highways to help ease congestion. As revenue is collected, 70 percent of the money will go toward improvements to the state highway system, and 30 percent to local governments – 15 percent for counties and 15 percent for local communities. In 10 years or less (by 2023), all of the work must be completed and the temporary half-cent sales tax will be abolished by the State Constitution.

Chapter 2 – Alternative Development

What’s in Chapter 2?

Chapter 2 identifies the project limits and briefly describes how the alternatives were developed.

2.1 What are the project limits and how were they chosen?

The proposed project begins within the city limits of Clinton just north of Highway 16 and extends north to Highway 110 near the community of Botkinburg. Highway 65 through Clinton is composed of a curb and gutter, four-lane highway with a continuous left turn lane. Highway 65 north of Botkinburg consists of a northbound passing lane for 1.25 miles. Highway 110 is a minor arterial providing a connection to Highway 16 around Greers Ferry Lake.

2.2 How has the public been involved?

A public involvement meeting was held on March 15, 2016, at the Botkinburg Foursquare Church located within the project area along Highway 65. The meeting was attended by 115 people, with 33 comment forms received. A majority (26) of the commenters indicated that they believed that Highway 65 needed to be widened in the project area, but many believed that their personal property would be adversely affected by the proposed project. The public involvement meeting synopsis can be found in Appendix B.

2.3 How have tribal governments been involved?

Section 106 of the *National Historic Preservation Act* requires federal agencies to consult with tribes where projects could affect tribal areas with historical or cultural significance. The FHWA initiated coordination with The Osage Nation and the Quapaw Tribe since these tribes have an active cultural interest in the area. The Tribal Historic Preservation Officer for each tribe was given the opportunity to comment on the proposed project. The Osage Tribe determined a “No Adverse Effect” for the proposed project. To date, the Quapaw Tribe has not responded.

2.4 What alternatives were evaluated for this project?

Two alternatives were considered for this project: the No Action Alternative and one build alternative, Alternative 1. Due to the steep grades, and mountainous terrain, a new location alignment was not considered feasible and prudent.

No Action Alternative

The No Action Alternative would not provide changes to the existing roadway network and would still require routine maintenance. Traffic congestion would remain unacceptable for southbound traffic. The No Action Alternative does not meet the project's purpose and need of improving current and forecasted traffic flow and correcting vehicle safety concerns; however, the No Action Alternative will be considered in this Environmental Assessment as a baseline comparison of impacts against Alternative 1.

Alternative 1

Alternative 1 would provide four 12-foot travel lanes with an 11-foot painted median and 8-foot shoulders along the entire length of the project. The painted median could be utilized as a continuous, two-way, left-turn lane. Left-turning vehicles would be in the painted median and outside the traveled way, reducing delay and chances for crashes. It would include minor realignment at several locations to improve both horizontal and vertical geometrics, and minor realignment of the Highway 110 intersection to reduce construction impacts to the business located at the southeast corner of the intersection. Alternative 1 would increase highway capacity, improve safety, reduce delays, and provide greater regional connectivity to and for the state's existing four-lane grid system.

Alternative 1 is considered feasible, prudent, and able to be constructed. Alternative 1 would improve safety with the addition of a painted median and wider travel lanes, thus improving the forecasted LOS C to LOS A for all of Highway 65 in the project area. A summary of the alternatives are shown in Table 4.

The alignment and design developed for Alternative 1 meets the project's purpose and need while lowering impacts to the community; therefore, the No Action and Alternative 1 will be the only alternatives considered in the remainder of this EA. Figure 4 shows the typical cross section of Alternative 1.

What does it mean for an alternative to be feasible and prudent?

NEPA defines feasible alternatives as those that can be built using current construction practices, while a prudent alternative is one that is reasonable, or makes sense. For example, alternatives that are not prudent may not meet the project's purpose and need, have severe operational or safety problems, unacceptable impacts, or cause severe community disruption.

Why would you consider a No Action Alternative?

The National Environmental Policy Act (NEPA) requires decision makers to consider a "no action" alternative in all NEPA studies. This alternative usually does not meet the project's purpose and need, but is used to compare the beneficial and adverse impacts of "action" alternatives and determine their significance.

Table 4
Summary of Alternatives

Alternative	Construction (\$ millions) ¹	Total (\$ millions) ²	Volume (2016 vpd)	LOS ⁴ (2016)	Volume (2036 vpd)	LOS ⁴ (2036)
No Action ³	\$2.7	\$3.1	6,900	D ⁶	7,500	D ⁶
Alternative 1	\$34.0	\$46.6	6,900	A ⁵	7,500	A ⁵

¹Costs are in 2015 dollars.

²Total cost includes PE, ROW, Construction, and CENG.

³Preventative Maintenance estimate is based on cost of mill and inlay 2" of asphalt.

⁴Two-lane methodology with passing/climbing lane for northbound traffic (LOS C northbound/LOS D southbound).

⁵Multi-lane methodology for two lanes each direction.

⁶Two-lane methodology with passing/climbing lane for northbound traffic.

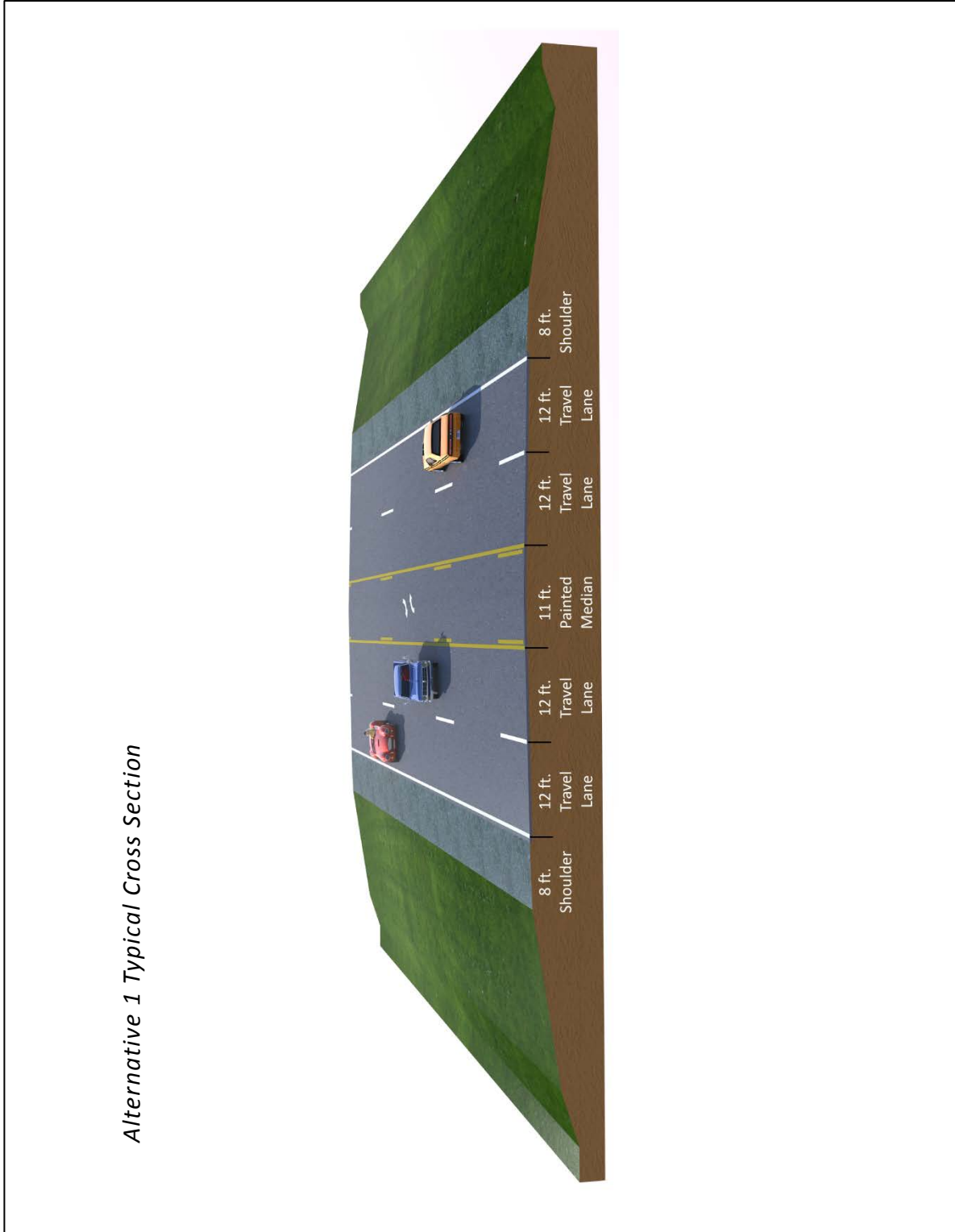


Figure 4

Chapter 3 – Project Impacts

What's in Chapter 3?

Chapter 3 identifies impacts that are expected as a result of the proposed project. Only elements that would be affected by the project are discussed. The impact areas discussed in Chapter 3 are summarized in Table 6 at the end of the Chapter 4.

3.1 How would the project affect traffic and safety?

How would traffic patterns and volumes on Highway 65 and intersecting roads change with the project?

Normal traffic patterns would not change with the No Action Alternative or the construction of Alternative 1. Widening Highway 65 with Alternative 1 may result in land use changes as development extends north, but forecasted traffic growth considers future growth in the project area. Crash rates would be reduced with the additional travel lanes and continuous two-way left-turn lane, lessening the likelihood of traffic disruptions due to collisions. The LOS for Alternative 1 would increase to a level A with the proposed construction. The No Action Alternative would result in increasingly congested traffic flows and higher crash rates as traffic volumes increase over the 20-year study period, and the LOS would remain at unacceptable levels.

How would the project affect safety?

Alternative 1 would result in improved safety with the introduction of additional travel lanes and a painted median. Bicyclist and pedestrian safety will be improved with the addition of wider shoulders on both sides of Highway 65.

The No Action Alternative would not address any of the safety hazards or reduce the crash rates. Bicyclists and pedestrians would have no improvements in safety, and safety would decrease as traffic volumes increase on Highway 65 over the 20-year study period.

How much traffic congestion would be caused by construction?

While Highway 65 traffic would likely experience minor delays during the construction of Alternative 1, traffic would be maintained in both directions during construction. Because Alternative 1 involves constructing additional lanes on Highway 65, traffic can be shifted to either side of the highway throughout construction. The No Action Alternative would only involve periodic highway maintenance and not result in any major traffic delays.

3.2 How much would the proposed project cost?

Using 2015 dollars, estimated construction cost for Alternative 1 is \$34 million, \$1.3 million in acquisition and relocation costs, and \$11.3 million in utility relocation for a total project cost estimated at \$46.6 million. The No Action Alternative would not result in any construction and would involve routine maintenance costs estimated at \$3.1 million over the 20-year study period.

3.3 How would economic and social conditions in the surrounding areas be affected?

The geographic area considered for analysis of existing social and economic conditions consists of a one-county region (Van Buren County) along with the City of Clinton. The project study area consists of commercial, agricultural, and residential development but is generally rural in nature. Alternative 1 would require the relocation of four businesses, four landlord businesses, six residential owners, and three residential tenants. The relocation of these businesses would negatively affect the local economy due to permanent and/or temporary loss of jobs and income, but wouldn't negatively affect the overall economic conditions of the City of Clinton or Van Buren County.

According to the 2010 U.S. Census Data, there has been a 14% population increase in Clinton from 2000 to 2010. This is more than the state average of 9.1%. With this type of population increase comes the need for better highway connections to facilitate accessibility of businesses, communities, and services. Alternative 1 would have direct positive impacts to the social environment by providing the community with enhanced circulation and accessibility for local citizens and travelers alike by widening Highway 65. Demographics and Economic Analysis can be found in Appendix C.

What is a relocation?

Relocations occur when a residence, business, or non-profit is impacted severely enough by a proposed project that they cannot continue to live or do business at their current location. This is usually due to the proposed right of way limits requiring acquisition of a structure (house or business), taking most of a business's parking, or severing access to the property.

Cost estimates, a conceptual stage relocation study, and a housing inventory are provided in Appendix D. The study determined that suitable locations could be found to relocate all eight businesses. The No Action Alternative would not have any direct negative impacts on local businesses or economic conditions.

3.4 How would the project affect how land is used in the area?

Land cover in the immediate project area was historically oak-hickory and oak-hickory-pine upland hardwood forest. Current land use consists of scattered homes, businesses, and pastureland. Residential and commercial development along the Highway 65 corridor has been slow. The land uses affected by Alternative 1 can be found in Table 5.

Development is anticipated to occur throughout the proposed project corridor and surrounding areas, regardless of the implementation of this project. Several utilities including cable television, natural gas, electricity, sewer, telephone, and water, would need to be relocated to accommodate a widened Highway 65. Direct impacts as a result of the proposed project include the additional utility right of way required for existing utilities that have to be relocated. The No Action Alternative would not affect any utilities.

The No Action Alternative would not result in any land use impacts and would not encourage any additional development in and around the project area. Right of way acreages and relocation counts are based on the latest design plans, both are subject to change if design alterations occur as a result of comments received at the Location and Design Public Hearing.

3.5 How would the project affect cultural resources?

Section 106 of the *National Historic Preservation Act* requires agencies to consider the effects of Federal actions to historic properties. In compliance with Section 106 requirements, AHTD cultural resource specialists consulted with the State Historic Preservation Officer (SHPO) and Native American tribes.

Preliminary inquiries with the Arkansas Archeological Survey and Arkansas Historic Preservation Program (AHPP), as well as early maps of the project area, were investigated for records of known archeological sites or historic structures. A cultural resources specialist performed a survey of the project area to identify historic

Land Use Type	Acres
Utility Corridors	15
Wooded	63
Pasture/Field	9
Residential/ Business	6
Total	93

What is a historic property?

Cultural resources include elements of the built environment (buildings, structures, or objects) or evidence of past human activity (archeological sites). Those that are listed on or eligible for inclusion in the National Register of Historic Places are defined as historic properties.

structures and completed archeological surveys of the immediate area impacted by Alternative 1.

From these record investigations, field observations, and surveys, SHPO determined that Alternative 1 and the No Action Alternative would have “No Adverse Effect” on known historic properties or National Register eligible archaeological sites. SHPO clearance can be found in Appendix E.

3.6 Would noise levels change?

Noise modeling indicates that an increase in noise levels will occur along the existing route from the predicted traffic volume increase during the next 20 years. Twenty-five sensitive receptors are currently being impacted by noise along Highway 65, and would continue to be impacted if the No Action Alternative was selected. Forty-seven receptors would be impacted by noise from the project due to the increase in traffic volumes and the design for Alternative 1 bringing the highway closer to some receptors. A noise barrier would be ineffective due to the gaps needed along the route for driveways and streets.

Construction noise from the project would be temporary and relatively minor. A noise analysis detailing the methods used for the noise study and the results can be found in Appendix F.

3.7 How would the project affect views?

The project corridor is situated in low, rolling, forested mountains with cleared valleys used for pastureland and hayfields. Highway-adjacent trees include hardwoods and pines. Tall fescue dominates cleared areas, such as pastureland and utility line easements. Many of the residences and other structures feature grassy lawns, landscaping, and trees. Most of these neighboring structures afford partial or complete views of Highway 65, and are in turn visible to travelers along the route. These are the typical views that would be associated with the No Action Alternative.

In conjunction with the expansion of highway right of way caused by Alternative 1, the increase in roadway width and profile would modify the appearance of the roadway. The removal of residences and businesses would alter the view shed of the project corridor. Likewise, some of the remaining residences and commercial structures would be in closer proximity to the highway. The proposed roadway cross

What is noise?

Sound is anything we hear, while noise can be unwanted or undesirable sound. Traffic noise is a combination of the noises produced by vehicle engines, exhaust, and tires.

What are sensitive noise receptors?

Residences are considered sensitive noise receptors along with businesses that have a special sensitivity to noise, such as schools, churches, libraries, and parks.

What is a view shed?

A view shed is simply the area that is visible from a specific location. The view shed could be from the point of view from a vehicle, pedestrians, bicyclists, or even river users.

section and materials are typical of improvements made to highways throughout the state. Local community design standards do not exist. The proximity of the remaining residences and commercial structures would not exceed zoning codes. Visual elements of the roadway would not discernably differ from the project area's existing overall character. With the exception of the fill areas near the project's southern termini, landforms will not be noticeably altered. For these reasons, permanent impacts to the view shed from Alternative 1 would be minor and localized. These impacts may be adverse for residents for whom views of the roadway will become more prominent.

Project activities caused by Alternative 1 would result in the short-term presence of construction vehicles and equipment, grading and excavation, and vegetation clearing throughout the project area. Equipment and materials would be stored at staging areas yet to be determined. The areas where construction and grading would remove existing natural vegetation would be viewable by travelers and site-specific neighbors. Grading and excavation activities and the presence of construction vehicles and equipment would result in a temporary change in the visual character of the project site. These activities would be short-term. Impacts in roadside fore slope cleared areas would be short/medium-term until new vegetation becomes established. These temporary visual impacts would be minor and not expected to result in an adverse response by typical viewers.

As a result of the project, adverse impacts to the overall visual character of the project corridor from Alternative 1 are not expected. A Visual Impact Assessment Scoping Questionnaire and definitions for the concepts and terms are provided in Appendix G.

3.8 Would any hazardous materials be created or affected?

A visual assessment and database search were performed to determine if any hazardous materials were located in the project area. No underground storage tanks were identified within the project area. An old tire dump was identified outside the existing right of way and will be avoided.

The No Action Alternative would not impact any hazardous materials sites. Neither of the alternatives would involve the creation of hazardous materials.

What are hazardous materials?

A hazardous material is any item or chemical that can cause harm to people, plants, or animals when released into the environment.

If hazardous materials are identified, observed or accidentally uncovered by any AHTD personnel, contracting company(s), or state regulating agency, it would be the AHTD's responsibility to determine the type, size and extent of contamination. The AHTD would identify the type of contaminant, develop a remediation plan, and coordinate disposal methods to be employed for the particular type of contamination. All remediation work would be conducted in conformance with the Arkansas Department of Environmental Quality (ADEQ), Environmental Protection Agency (EPA), and Occupational Safety and Health Administration (OSHA) regulations.

An asbestos survey by a certified asbestos inspector will be conducted on each building identified for demolition. If the survey detects the presence of any asbestos-containing materials, plans will be developed for the safe removal of these materials prior to demolition. All asbestos abatement work will be conducted in accordance with ADEQ, EPA, and OSHA asbestos abatement regulations.

3.9 Would any prime farmland be impacted by the project?

Alternative 1 would acquire approximately 0.6 acre of Prime Farmland. The NRCS-CPA-106 Form is located in Appendix H. The No Action Alternative would not impact any prime farmland.

3.10 How would water resources, such as streams, be affected?

The project will directly impact 24 intermittent streams that are tributaries to Hartsugg, Pee Dee, and Little Johnnies Creek within the Little Red River drainage. All jurisdictional Waters of the United States impacted by this project are located in the adjacent roadside ditches and associated cross drainage structures of Highway 65 (Figures 5 and 6). During construction, culverts will be extended and/or replaced and ditched streams relocated to the new roadside edge, resulting in a total impact of 6,330 linear feet of stream. Compensatory stream mitigation will be provided at a United States Army Corps of Engineers (USACE) mitigation bank. Construction of the proposed project will require AHTD to obtain a Section 404 permit for the discharge of dredged and fill material in waters of the US from the USACE and a Section 402-National Pollutant Discharge Elimination System (NPDES) permit. The No Action Alternative would not affect any water resources.

What is prime farmland?

Prime Farmland is defined by the US Department of Agriculture as land that has the best combination of physical and chemical characteristics for the production of crops. Impacts to Prime Farmland occur when it is converted to highway right of way.

What is an intermittent stream?

Intermittent streams are those that flow for at least three months out of the year, but experience annual drying, usually during the hot dry summer months.

3.11 Would any wetlands be impacted by the project?

Two herbaceous wetlands (0.05-acre total) would be impacted by Alternative 1 (Figure 6). Dominant plant species at each wetland include *Juncus* rushes and *Carex* sedges. Primary hydrologic indicators from a field review in April 2016 include surface water of 3-6 inches, high water table, and saturation.

Wetland impacts will be included in the Section 404 permit application. Wetlands that will be impacted by this project formed many years by the construction of the present highway. Drainage patterns changed by the introduction of the highway created small wetland pockets along roadside ditches.

The No Action Alternative would not affect any wetlands.

3.12 Would any protected species be impacted by the project?

The Information for Planning and Conservation database from the United States Fish and Wildlife Service (USFWS) identified five threatened or endangered species and one area of critical habitat within a 300-foot buffer around the current road alignment. A 300-foot buffer was chosen to account for the widening and for the potential effects of noise during construction. The endangered gray bat (*Myotis grisescens*), endangered Indiana bat (*Myotis sodalis*), threatened northern long-eared bat (*Myotis septentrionalis*), endangered speckled pocketbook mussel (*Lampsilis streckeri*), and endangered yellowcheek darter (*Etheostoma moorei*) all have the potential to be present in and around the project location.

Clearing trees on the proposed right of way directly impacts bat species by removing potential roost trees, creating larger open habitat, and altering foraging areas. Mist nets and acoustic surveys for listed bat species were conducted in July 2016 by the Jackson Group, a private biological consulting group that specializes in bat identification. Acoustic analysis confirmed the presence of northern long-eared bats. No gray or Indiana bats were detected. One juvenile female northern long-eared bat was captured in a mist net and tracked for five days. Three roost trees were identified approximately 4.6 miles from the northern end of the project.

What is a wetland?

Wetlands are areas typically inundated or saturated by surface water or groundwater to the extent that they can support vegetation adapted for life in wet soil conditions.

What is the difference between threatened and endangered species?

An endangered species is one that is in danger of extinction throughout all or a significant portion of its range. Endangered species receive the highest level of protection. A threatened species is one that is likely to become endangered in the near future.

Streams and Wetlands

1 of 2

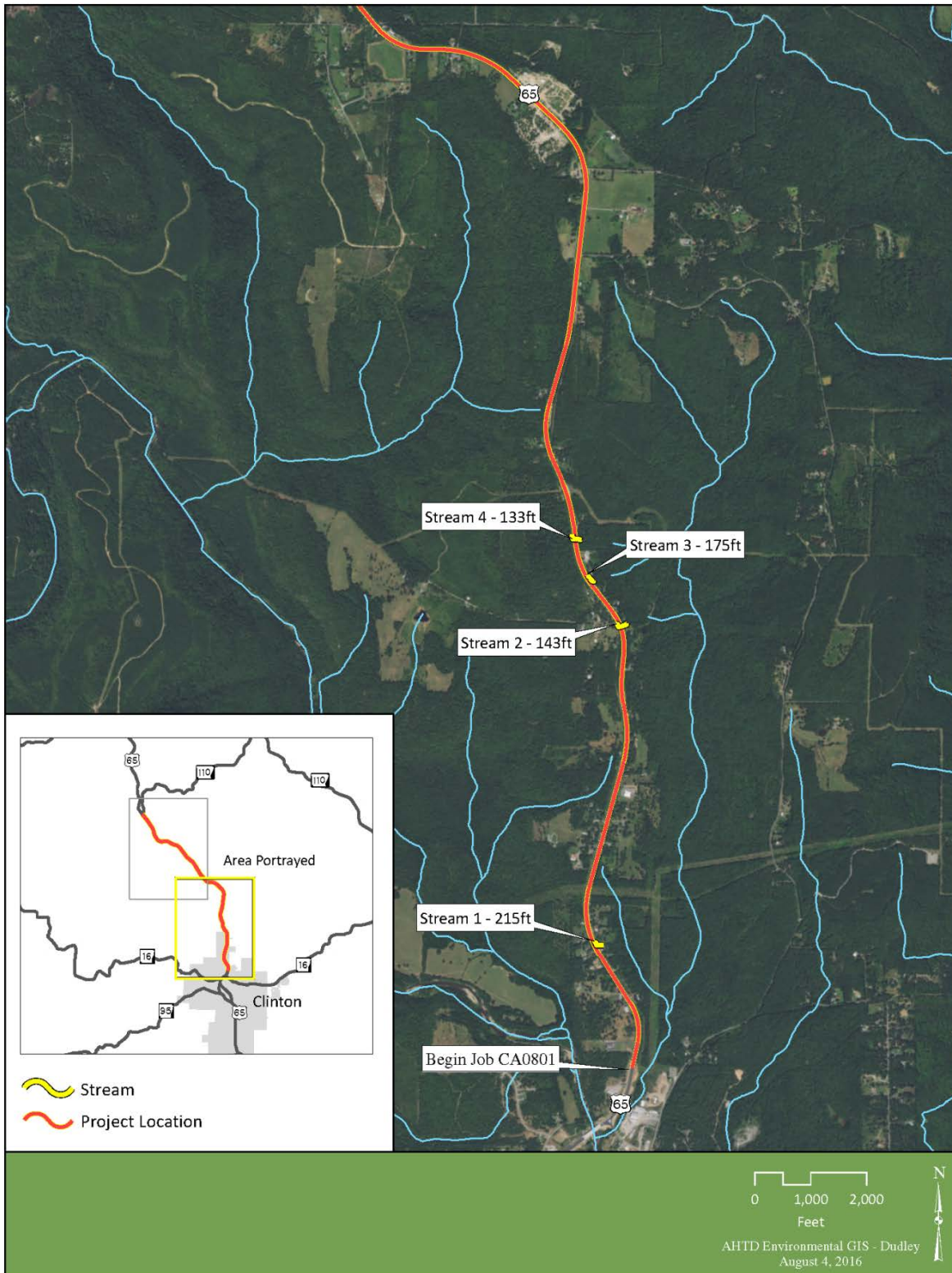


Figure 5

Streams and Wetlands
2 of 2

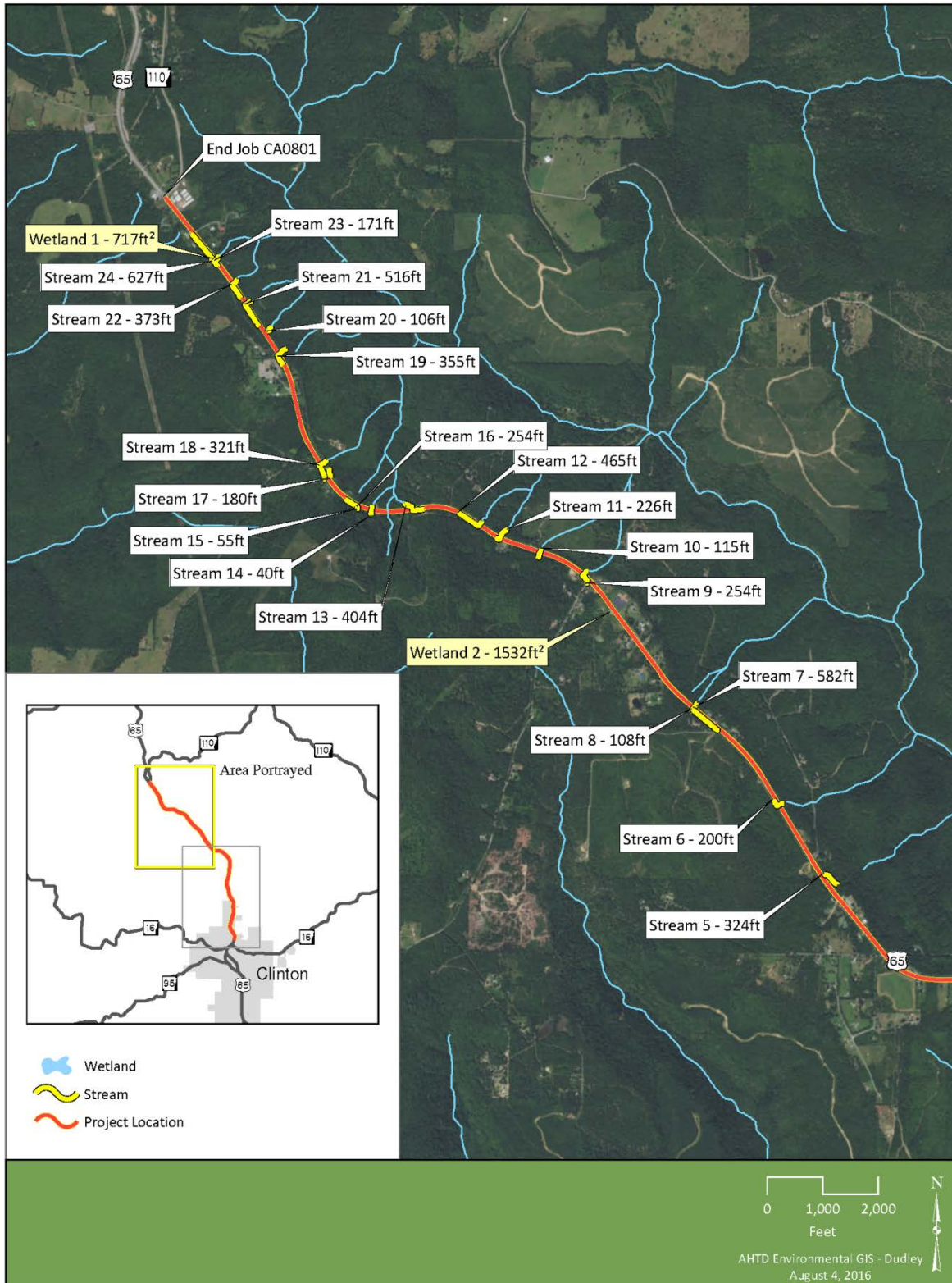


Figure 6

A bat inventory report can be obtained from the Department upon request. The proposed activities associated with this project fall within the guidance of the final 4(d) rule for northern long-eared bats. A streamlined consultation checklist is attached in Appendix I.

Karst topography is a common feature throughout the project. A cave system was identified on the eastern side of Highway 65 and it extends partially under the existing highway. Gray, Indiana and northern long-eared bats utilize caves for winter roosts. Cave surveys for bats took place in July and November of 2015. USFWS correspondence can be found in Appendix I. Guano was observed at the cave entrance during both surveys and one single common tricolored bat (*Perimyotis subflavus*) was observed roosting in the cave during the summer survey. Special provisions outlining procedures for cave discoveries and water pollution control measures will be included in the contract to limit impacts to caves and other karst features. With the use of erosion and sediment controls, no impacts to cave or karst features are anticipated as a result of the project. The No Action Alternative would not affect any protected species.

3.13 Will public/private wellheads be impacted?

The project area is not within a public drinking water system's wellhead protection area. If any permanent impacts to private drinking water sources occur due to this project, the AHTD will take appropriate action to mitigate these impacts. Impacts to private water sources due to the contractor neglect or misconduct are the responsibility of the contractor. The No Action Alternative would not affect any public or private wellheads.

3.14 How would the project affect the natural environment?

The project is located within the Lower Boston Mountains (EPA 38b Level IV Ecoregion) of the Boston Mountains Ecoregion (EPA 38 Level III Ecoregion) (Woods et al. 2004). The Lower Boston Mountains are described as low, rolling mountains, high hills and undulating plateaus that range from 200-1,900 feet, typically, but can reach up to 2,300 feet (Woods et al. 2004). The landform is comprised largely of forested mountains with a few cleared valleys, the latter of which is used for pastureland and hayfields.

Surface geology in the project area is largely mapped as Bloyd Shale (undifferentiated) and Prairie Grove Member of the Hale Formation,

What is karst topography?

Karst topography is formed from the dissolution of soluble rocks such as limestone, dolomite, and gypsum. It is characterized by underground drainage systems with sinkholes and caves.

which is middle Pennsylvanian-aged, Morrowan Series. Numerous rock outcrops occur and form steep slopes on both sides of Highway 65 within the project location. A cave was discovered on the eastern side of Highway 65 south of the roadside park along an exposed rock bluff line. Soils are mapped mostly as Enders, Linker, Mountainburg, Nella, and Steprock in the immediate project area.

Natural vegetation in the area is primarily oak-hickory and oak-hickory-pine upland forests. White oak (*Quercus alba*), northern red oak (*Quercus rubra*), post oak (*Quercus stellata*), blackjack oak (*Quercus marilandica*), black oak (*Quercus velutina*), shagbark hickory (*Carya ovata*) and mockernut hickory (*Carya tomentosa*) are common native trees found in the project area. Shortleaf pine (*Pinus echinata*) is a dominant to co-dominant species found along drier south- and west-facing slopes. Along streams, sweetgum (*Liquidambar styraciflua*), willows (*Salix* spp.), birch (*Betula nigra*), sycamore (*Platanus occidentalis*), and southern red oak (*Quercus falcata*) are common (Woods et al. 2004). Natural vegetation has been displaced where pastureland, residences and loblolly pine (*Pinus taeda*) dominated stands exist in the project area. Alternative 1 would clear approximately 93 and 63 acres of oak-hickory and oak-hickory-pine upland forests respectively.

The No Action Alternative would not affect the existing vegetation adjacent to Highway 65.

3.15 What other resources were examined but not found to be present or impacted?

Air Quality

This project is located in an area that is designated as in attainment for all transportation pollutants. Therefore, the conformity procedures of the *Clean Air Act*, as amended, do not apply.

Floodplains

There are no encroachments into the special flood hazard areas (SFHAs) also known as the 100-year floodplain, which are typically shown on Flood Insurance Rate Maps issued by the Federal Emergency Management Agency. No areas of SFHAs were identified within the project area.

What is air quality attainment?

Areas are considered in attainment for air pollutants when measured levels are below the National Ambient Air Quality Standards set by the U.S. Environmental Protection Agency.

What is a floodplain?

Floodplains are land areas that become covered by water in a flood event. 100-year floodplains are areas that would be covered by a flood event that has a 1% chance of occurring (or being exceeded) each year, also known as a 100-year flood. This is the floodplain commonly used for insurance and regulatory purposes.

Wild and Scenic Rivers

There is no Federal or state regulated waterbodies impacted by this project.

Environmental Justice

Through a review of U.S. Census Data, Health and Human Services Poverty Guidelines, and field observations, a determination was made that the proposed project will not have any adverse or disproportionate impacts on Environmental Justice/Title VI populations. Therefore, in accordance with the provisions of Executive Order 12898, Title VI of the *Civil Rights Act of 1964* and FHWA Order 6640.23, no further analysis is necessary.

3.16 What are indirect and cumulative effects, and does the project have any?

Indirect Effects

An indirect effect is any reasonably foreseeable effect that may be caused by the project but would occur in the future or outside of the project area. Widening Highway 65 could induce additional development north of the City of Clinton, but this area is currently experiencing negative growth which is likely to continue under either Alternative 1 or the No Action Alternative. The No Action Alternative involves no work other than regular maintenance and would not result in any indirect effects other than worsening traffic flow and safety concerns as traffic volumes increase over the 20-year planning period.

Potential indirect impacts to streams outside the construction limits include increased turbidity from sediments leaving the construction site.

Cumulative Effects

Cumulative effects result from the total effects of a proposed project, when added to other past, present, and reasonably foreseeable future projects or actions. Cumulative effects are studied so that the public, decision-makers, and project proponents take time to consider the “big picture” effects a project could have on the community and environment.

The AHTD does have another scheduled job in the area, CA0803. Both AHTD Jobs CA0801 and CA0803 are scheduled to improve Highway 65 north of Clinton. No other reasonably foreseeable public or private projects are known to be in development in the project area. Neither

What is Environmental Justice and Title VI?

An Environmental Justice evaluation determines whether low-income or minority populations would suffer disproportionately high and adverse effects from an action. Title VI of the Civil Rights Act of 1964 (Title VI) prohibits discrimination on the basis of race, color, sex, national origin, religion or disability under any program or activity receiving Federal financial assistance

Alternative 1 nor the No Action Alternative is expected to contribute to any adverse impacts on any natural, cultural, social, or economic resources.

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Chapter 4 – Recommendations

What's in Chapter 4?

Chapter 4 contains the results and conclusions of this Environmental Assessment.

4.1 What are the results of this EA?

The environmental analysis of the proposed project did not identify any significant impacts to the natural and social environment as a result of the No Action Alternative or Alternative 1. A summary of the impacts of these alternatives can be found in Table 6. Alternative 1 has been identified as the Preferred Alternative, because it meets the project's purpose and need and minimizes impacts.

The AHTD's standard commitments associated with relocation procedures, hazardous waste abatement, cultural resources discovery, and control of water quality impacts have been made in association with this project. They are as follows:

- See Relocation procedures located in Appendix D.
- If hazardous materials, unknown illegal dumps, or underground storage tanks are identified or accidentally uncovered by AHTD personnel or its contractors, the AHTD will determine the type, size, and extent of the contamination according to the AHTD's response protocol. The AHTD in cooperation with the ADEQ will determine the remediation and disposal methods suited for that particular type of contamination. The proposed project will comply with local, state, and federal laws and regulations.
- An asbestos survey will be conducted by a certified asbestos inspector on each building slated for acquisition and demolition. If the survey detects the presence of any asbestos-containing materials, plans will be developed to accomplish the safe removal of these materials prior to demolition. All asbestos abatement work will be conducted in conformance with ADEQ, EPA, and OSHA asbestos abatement regulations.
- An intensive cultural resources survey will be conducted for the Preferred Alternative. If sites are affected, a full report documenting the results of the survey and stating the AHTD's

recommendations will be prepared and submitted to the SHPO for review. If prehistoric sites are impacted, consultation led by FHWA with the appropriate Native American Tribe will be conducted and the site(s) evaluated to determine if Phase II testing is necessary. Should any of the sites be found to be eligible or potentially eligible for nomination to the NHRP and avoidance is not possible, then site-specific treatment plans will be prepared, and data recovery conducted at the earliest practicable time. All borrow pits, waste areas and work roads will be surveyed for cultural resources when locations become available.

- Stream and wetland mitigation will be offered at an USACE approved mitigation bank site at a ratio approved by the USACE during the Section 404 permitting process.
- Special provisions outlining procedures for cave discoveries will be included in the contract to limit impacts to caves and other karst features.
- A Restraining Condition and an Archeological Monitoring Special Provision is required by the AHPP: therefore, an AHTD staff archeologist must be present during any ground disturbing activity within the existing roadside park.
- The AHTD will comply with all requirements of the *Clean Water Act*, as amended, for the construction of this project. This includes Section 401-Water Quality Certification, Section 402-NPDES, and Section 404-Permit for Dredged or Fill Material.
- A Water Pollution Control Special Provision will be incorporated into the contract to minimize potential water quality impacts.
- If any permanent impacts to private drinking water sources occur due to this project, the AHTD will take appropriate action to mitigate these impacts.
- A wildflower seed mix will be included in the permanent seeding for the project.

Table 6
Alternative Impact Comparison

Alternative	Total Project Cost (2015 dollars)	Construction Cost (2015 dollars)	Other Cost* (2015 dollars)	Right of Way (acres)	Relocations	Noise Receptors Impacted	Stream Impacts (linear feet)
No Action	3.1 million	2.7 million	400,000	0	0	25	0
Alternative 1	46.6 million	34 million	12.6 million	93	17	47	6,330

Other cost includes preliminary engineering, right of way acquisition costs, business, non-profit, landlord relocation costs, and utility relocation costs.

4.2 Is the NEPA process finished?

After this EA is signed by the FHWA and approved for public dissemination, a Location and Design Public Hearing will be offered.

After a review of comments received from citizens, public officials, and public agencies, a FONSI document will be prepared by the AHTD and submitted to the FHWA. Approval of the FONSI by the FHWA will identify the Selected Alternative and conclude the NEPA process.

Reference Pages

Acronyms

ADEQ	Arkansas Department of Environmental Quality
ADT	Average Daily Traffic
AHPP	Arkansas Historic Preservation Program
AHTD	Arkansas State Highway and Transportation Department
BMP	Best Management Practices
CAP	Connecting Arkansas Program
CENG	Construction Engineering
EA	Environmental Assessment
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
KA	Killed in Accident
LOS	Level of Service
NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System
OSHA	Occupational Safety and Health Administration
PE	Preliminary Engineering
ROW	Right of Way
SHPO	State Historic Preservation Officer
USFWS	United States Fish and Wildlife Service
vpd	Vehicles per Day

References

Arkansas Geological Survey. Stratigraphic Descriptions and Geologic Web Map of Arkansas. Accessed 27 May 2016.
http://www.geology.ar.gov/geology/strat_geomap.htm?formation=pa.

DOT, Department of Transportation, Federal Highway Administration, Office of Planning, Environment, & Realty (HEP)
http://www.fhwa.dot.gov/planning/national_highway_system/

Hutto, R.S., Rains, D.S., and D.P. Holland. 2010a. Geologic Map of the Botkinburg Quadrangle, Van Buren County, Arkansas. Accessed 27 May 2016.
http://www.geology.arkansas.gov/maps_pdf/geologic/24k_maps/Botkinburg.pdf.

Hutto, R.S., Rains, D.S., and D.P. Holland. 2010b. Geologic Map of the Old Lexington Quadrangle, Van Buren County, Arkansas. Accessed 27 May 2016.
http://www.geology.arkansas.gov/maps_pdf/geologic/24k_maps/Old%20Lexington.pdf.

NRCS. Official Soil Series Descriptions. NRCS Soils, USDA. Accessed 27 May 2016.
https://soilseries.sc.egov.usda.gov/OSD_Docs/E/ENDERS.html

NRCS. Official Soil Series Descriptions. NRCS Soils, USDA. Accessed 27 May 2016.
https://soilseries.sc.egov.usda.gov/OSD_Docs/L/LINKER.html.

NRCS. Official Soil Series Descriptions. NRCS Soils, USDA. Accessed 27 May 2016.
https://soilseries.sc.egov.usda.gov/OSD_Docs/M/MOUNTAINBURG.html.

NRCS. Official Soil Series Descriptions. NRCS Soils, USDA. Accessed 27 May 2016.
https://soilseries.sc.egov.usda.gov/OSD_Docs/N/NELLA.html.

NRCS. Official Soil Series Descriptions. NRCS Soils, USDA.

Accessed 27 May 2016.

https://soilseries.sc.egov.usda.gov/OSD_Docs/S/STEPROCK.html

Townsend, W.R., Crader K.J., Harris, C., Chism, J.D., Hudson, E. and Harriman, J. 1986. Soil Survey of Cleburne and Van Buren Counties, Arkansas. United States Department of Agriculture, Soil Conservation Service, and Forest Service, in cooperation with the Arkansas Agricultural Experiment Station. Available online at

http://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/arkansas/AR640/0/cleburneandvanburen.pdf. Accessed 27 May 2016.

U.S. Census Bureau. Arkansas Quick Facts. U.S. Department of Commerce. Van Buren County.

<http://www.census.gov/quickfact/table/PST045215/05141,05>.

Accessed 19 October 2016.

U.S. Department of Health & Human Services. Poverty Guidelines.

25 January 2016. <https://aspe.hhs.gov/poverty-guidelines>.

Accessed 19 October 2016.

Appendix A – Level of Service Descriptions

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Two-Lane Highway

LOS A - At LOS A, motorists experience high operating speeds and little difficulty in passing. A small amount of platooning would be expected. Drivers should be able to maintain operating speeds close or equal to the free-flow speed (FFS) of the facility.

LOS B - At LOS B, passing demand and passing capacity are balanced. Platooning becomes noticeable. It becomes difficult to maintain FFS operation, but the speed reduction is still relatively small.

LOS C - At LOS C, most vehicles are traveling in platoons. Speeds are noticeably reduced on all three classes of highway.

LOS D - At LOS D, platooning increases significantly. Passing demand is high but passing capacity approaches zero. A high percentage of vehicles are now traveling in platoons, and percent time-spent-following (PTSF) is quite noticeable. The fall-off from FFS is now significant.

LOS E - At LOS E, demand is approaching capacity. Passing is virtually impossible, and PTSF is more than 80%. Speeds are seriously reduced. Speed is less than two-thirds the FFS. The lower limit of this LOS represents capacity.

LOS F - LOS F exists whenever demand flow in one or both directions exceeds the capacity of the segment. Operating conditions are unstable, and heavy congestion exists on all two-lane highways.

Multi-Lane Highway

LOS A - LOS A describes free-flow operations where FFS prevails and vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream. The effects of incidents or point breakdowns are easily absorbed.

LOS B - LOS B represents reasonably free-flow operations where FFS is maintained. The ability to maneuver within the traffic stream is only slightly restricted, and the general level of physical psychological comfort provided to drivers is still high. The effects of minor incidents and point breakdowns are still easily absorbed.

LOS C - LOS C provides for flow with speeds near the FFS. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver. Minor incidents may still be absorbed, but the local deterioration in service quality will be significant. Queues may be expected to form behind any significant blockages.

LOS D - LOS D is the level at which speeds begin to decline with increasing flows, with density increasing more quickly. Freedom to maneuver within the traffic stream is seriously limited and drivers experience reduced physical and psychological comfort levels. Even minor incidents can be expected to create queuing, because the traffic stream has little space to absorb disruptions.

LOS E - LOS E describes operation at capacity. Operations at this level are highly volatile because there are virtually no usable gaps within the traffic stream, leaving little room to maneuver within the traffic stream. Any disruption to the traffic stream can establish a disruption wave that propagates throughout the upstream traffic flow. At capacity, the traffic stream has no ability to dissipate even the most minor disruption, and any incident can be expected to produce a serious breakdown and substantial queuing. The physical and psychological comfort afforded to drivers is poor.

LOS F - LOS F is determined when the demand flow rate exceeds capacity. At this level, traffic flow has broken down. Whenever queues due to a breakdown exist, they have the potential to extend upstream for considerable distances.

Appendix B – Public Involvement Meeting Synopsis

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PUBLIC INVOLVEMENT SYNOPSIS

Job CA0801
Highway 110 – Clinton (Widening) (Hwy. 65)
Van Buren County
Tuesday, March 15, 2016

An open-forum public involvement meeting for the proposed Hwy. 110 - Clinton (Widening) project in Van Buren County was held at Botkinburg Foursquare Church (Fellowship Hall), 7054 Highway 65 North, Clinton, Arkansas from 4:00 – 7:00 p.m. on Tuesday, March 15, 2016. A public officials meeting was held at 2:00 p.m. on the same day. Efforts to involve minorities and local property owners in the meeting included:

- Display ads were placed in the *Van Buren County Democrat* on Wednesday, March 2, 2016 and Wednesday, March 9, 2016.
- Distribution of fliers in the project area.

The following information was available for inspection and comment.

- Two aerial photograph roll plots at a scale of 1" = 100', illustrating the entire length of the proposed project.
- Two 34" x 44" aerial photographs on mounted boards at a scale of 1" = 1000', illustrating the entire length of the proposed project.
- One Connecting Arkansas Program board.

Handouts for the public included a comment sheet and a small-scale map (1 inch = 3,142 feet) illustrating the project location. Copies of these are attached to this synopsis.

Table 1 describes the results of public officials participation at the 2 p.m. meeting.

TABLE 1	
Public Official Participation	Totals
Attendance at meeting (including AHTD staff)	18
Comment forms received	2

The two comment forms received were from the Van Buren County Judge and a member of the Van Buren County Road Department. No written comments were received on their forms.

Table 2 describes the results of public participation at the 4-7 p.m. meeting.

TABLE 2	
Public Participation	Totals
Attendance at meeting (including AHTD staff)	97
Comment forms received	31

AHTD Staff reviewed all comments received and evaluated their contents. The summary of comments listed below reflects the personal perception or opinion of the person or Division making the statement. The sequencing of the comments is random and is not intended to reflect importance or numerical values. Some of the comments were combined and/or paraphrased to simplify the synopsis process.

An analysis of the responses received from the public survey is shown in Table 3.

TABLE 3	
Survey Results	Totals
Supports improvements to Hwy. 65	26
Does not support proposed improvements to Hwy. 65	7
Believes the project would have beneficial impacts	8
Believes the project would have adverse impacts	9
Knowledge of historical, archeological or cemetery sites	4
Knowledge of area environmental constraints	4
Home or property offers limitations to the project that need to be considered during the design	9
Suggestion to better serve the needs of the community	3
Additional Comments	7

CA0801 Public Involvement Synopsis

March 15, 2016

Page 3 of 3

The following is a listing of comments concerning issues associated with this project.

- Two commenters noted the roadside park and how the project is affecting it.
- Two commenters noted the cave located under the highway near the roadside park.
- Five commenters thought their septic systems would be impacted.
- Two commenters were concerned about steep grades and how that would affect the entering and leaving of their properties.
- Two commenters were concerned about impacts to the parking lot at Botkinburg Four Square Baptist Church.
- Five comments were about how close the road will be to their residence and how it will affect their residences.

Attachments:

Public handouts, including blank comment form

Small-scale display copies

RJ 
DN 

TT:cb

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT (AHTD)

CITIZEN COMMENT FORM

**AHTD JOB NUMBER CA0801
Hwy. 110 - Clinton (Widening) (Hwy. 65)
VAN BUREN COUNTY**

**LOCATION:
BOTKINBURG FOURSQUARE CHURCH (FELLOWSHIP HALL)
7054 HIGHWAY 65 NORTH
CLINTON, AR
4:00 – 7:00 P.M.
TUESDAY, MARCH 15, 2016**

Make your comments on this form and leave it with AHTD personnel at the meeting or mail it within 15 days to: Arkansas State Highway and Transportation Department, Environmental Division, Post Office Box 2261, Little Rock, Arkansas 72203-2261.
Email: environmentalpimeetings@ahtd.ar.gov.

Yes No

Do you feel there is a need for the proposed widening on Hwy. 65 between Hwy. 110 and the City of Clinton? (optional) _____

Do you know of any historical sites, family cemeteries, or archaeological sites in the project area? Please note and discuss with staff. _____

Do you know of any environmental constraints, such as endangered species, hazardous waste sites, existing or former landfills, or parks and public lands in the vicinity of the project? Please note and discuss with AHTD staff. _____

Does your home or property offer any limitations to the project, such as septic systems, that the Department needs to consider in its design? _____

(Continue on Back)



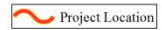


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Feet
AHTD Environmental GIS - Dudley
Map Date: March 7, 2016
Meeting Date: March 15, 2016
Public Involvement Handout
Photography: USGS 2015 NAIP



Job CA0801
Hwy. 110 - Clinton (Widening)
Van Buren County

Preliminary
Subject
to
Revision



Notes:

Appendix C – Demographics and Economic Analysis

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DEMOGRAPHICS
JOB CA0801 – June 2016
HIGHWAY 65 HIGHWAY 110 - CLINTON
Van Buren County

As requested, an economic analysis was conducted for Job CA0801 in Van Buren County. The analysis includes a review of the following demographic data that was compiled for the City of Clinton, Van Buren County and the State.

	City of Clinton	Van Buren County	State
Population, 2010	2,602	17,295	2,915,918
Population, 2000	2,283	16,192	2,673,400
Population 1990	2,213	14,008	2,350,725
Percent Change 1990/2000	3.2%	15.6%	13.7%
Percent Change 2000/2010	14.0%	6.8%	9.1%
Median Resident Age	43.7	46.6	36.9
Median Household Income	\$32,694	\$31,960	\$39,267
Median House Value	\$87,700	\$79,200	\$97,200
White-Non Hispanic	89.6%	96.0%	74.5%
Black	0.3%	0.4%	15.4%
Hispanic	6.9%	2.7%	6.4%
<i><u>Education Attained by Age 25+</u></i>			
High School Graduates	81.4 %	81.0%	81.9%
Bachelor's Degree or higher	12.5%	13.2%	19.1%
<i><u>Employment by Industry Type</u></i>			
Educational and Social Services	13.1%	20.4%	22.4%
Manufacturing	12.3%	11.5%	15.0%
Retail Trade	11.6%	13.1%	13.2%
Unemployment Rate	4.4%	4.2%	4.8 %

Sources include:

UALR Institute for Economic Advancement, 2010 Census Data

U.S. Census Bureau, 2006-2010 American Community Survey 5-Year Estimates

Clinton and Van Buren County Economic Analysis

The City of Clinton is the county seat and largest city in Van Buren County. Clinton experienced growth slightly higher than the statewide average between 2000 and 2010. Compared to the state average, the population of the study area is older, less educated than the statewide average, and has a very small minority representation.

The existing highway network provides access for the labor market, access to Fairfield Bay (a planned community/city of 2,400 located approximately 14 miles east of Clinton), and direct access to the greater Little Rock metropolitan area to the south. To the north, Highway 65 provides access to the Buffalo National River, Ozark National Forest, the City of Harrison, and other tourist destinations in both Arkansas and Missouri. In addition, logging in the Ozark National Forest contributes to truck traffic in the study area. Much of the traffic on the study segment is through traffic accessing recreational and leisure activities at other locations. Traffic volumes average approximately 24-35 percent higher on weekends during the summer, and 14-32 percent higher on weekends during the school year.

The study area includes the Ozark Health facility with a fully operational, professionally staffed hospital, specialty care center, and nursing home. Employers include the healthcare industry, retail and service providers, State and local government, and tourist-oriented cottage industries.

This widening project is part of the “Connecting Arkansas” program and is designed to accomplish the following:

- improve transportation connections between cities throughout the state;
- increase capacity by widening highways to move people and goods more efficiently;
- improve traveler safety;
- ease congestion
- support job growth and improve Arkansas’ economy.

Appendix D – Conceptual Stage Relocation Study

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**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
RIGHT OF WAY DIVISION RELOCATION SECTION**

INTEROFFICE MEMORANDUM

TO: John Fleming, Environmental Division Head

FROM: *John*
FER Perry M. Johnston, Right of Way Division Head

DATE: April 7, 2016

SUBJECT: Job CA0801
Hwy. 110 - Clinton
(Widening) (S)
Van Buren County
CONCEPTUAL STAGE RELOCATION STATEMENT

**RECEIVED
AHTD**

APR 19 2016

**ENVIRONMENTAL
DIVISION**

GENERAL STATEMENT OF RELOCATION PROCEDURE

Persons displaced as a direct result of acquisition for the proposed project will be eligible for relocation assistance in accordance with Public Law 91-646, Uniform Relocation Assistance Act of 1970. The Relocation Program provides advisory assistance and payments to minimize the adverse impact and hardship of displacement upon such persons. No lawful occupant shall be required to move without receiving a minimum of 90 days advance written notice. All displaced persons; residential, business, farm, nonprofit organization, and personal property relocatees are eligible for reimbursement for actual reasonable moving costs.

Construction of the project will not begin until decent, safe and sanitary replacement housing is in place and offered to all affected persons. It is the Department's Policy that adequate replacement housing will be made available, built if necessary, before any person is required to move from their dwelling. All replacement housing must be fair housing and offered to all affected persons regardless of race, color, religion, sex or national origin.

There are two basic types of residential relocation payments: (1) Replacement Housing payments and (2) Moving Expense payments. Replacement Housing payments are made to qualified owners and tenants. An owner may receive a payment of up to \$31,000.00 for the increased cost of a comparable replacement dwelling. The amount of this payment is determined by a study of the housing market. Owners may also be eligible for payments to compensate them for the increased interest cost for a new mortgage and the incidental expenses incurred in connection with the purchase of a replacement dwelling. A tenant may receive a rental subsidy payment of up to \$7,200.00. Tenants may elect to receive a down payment rather than a rental subsidy to enable them to purchase a replacement dwelling. Replacement housing payments are made in addition to moving expense payments.

Businesses, farms and nonprofit organizations are eligible for reestablishment payments, not to exceed \$25,000.00. Reestablishment expense payments are made in addition to moving expense payments. A business, farm or nonprofit organization may be eligible for a fixed

payment in lieu of the moving costs and reestablishment costs if relocation cannot be accomplished without a substantial loss of existing patronage. The fixed payment will be computed in accordance with the Uniform Relocation Act and cannot exceed \$40,000.00.

If the displacee is not satisfied with the amounts offered as relocation payments, they will be provided a form to assist in filing a formal appeal. A hearing will be arranged at a time and place convenient for the displacee, and the facts of the case will be promptly and carefully reviewed.

Relocation services will be provided until all persons are relocated or their relocation eligibility expires. The Relocation Office will have listings of available replacement housing and commercial properties. Information is also maintained concerning other Federal and State Programs offering assistance to displaced persons.

Based on preliminary construction plans, aerial photographs, and an on-site project review, it is estimated that the subject project could cause the following displacements and costs:

Proposed Project:

6 Residential Owners	\$ 210,000.00
3 Residential Tenants	\$ 36,000.00
4 Businesses	\$ 160,000.00
4 Landlord Businesses	\$ 100,000.00
30 Personal Properties	\$ 175,000.00
Services	<u>\$ 125,000.00</u>
Total	\$ 806,000.00

The general characteristics of the displacees to be relocated are listed on the Conceptual Stage Inventory Record forms in the back of this report. The general characteristics have been determined by a visual inspection of the potential displacement locations by Relocation Coordinators. The Relocation Coordinators utilize area demographic data, visual inspections, past experiences and knowledge in making this determination.

An available housing inventory has been compiled and it indicates there are at least fifty-nine comparable replacement dwellings available for sale and seven comparable replacement dwellings available for rent within a reasonable proximity of the project area. At least twenty-two commercial properties are currently for sale in the project area. A breakdown of the available properties is as follows:

Residential (For Sale)	<u>Number Of Units</u>
50,001 - 99,999	18
100,000 - 149,999	19
150,000 - 199,999	16
200,000 - 250,000	6
Total	<u>59</u>

Residential	
(Monthly Rent)	
Other	1
\$ 0.00 - 300.00	0
301.00 - 400.00	0
401.00 - 500.00	2
501.00 - 600.00	1
601.00 and up	3
Total	7
Commercial Properties	
(For Sale)	
\$ 0 - 50,000	1
50,001 - 100,000	6
100,001 - 150,000	1
150,001 - 200,000	3
200,001 - 300,000	3
300,001 - 500,000	1
Total	15
Commercial Land	
(For Sale)	
\$ 0 - 50,000	2
50,001 - 100,000	0
100,001 - 150,000	0
150,001 - 200,000	0
200,001 - 300,000	2
300,001 - 550,000	3
Total	7

This is a highway improvement and widening project for Highway 65 in Clinton, AR and Van Buren County, AR. The units contained in the housing inventory are in Clinton and Van Buren County. The dwellings and number of dwellings are comparable and adequate to provide replacement housing for the families displaced on the project. The housing market should not be detrimentally affected and there should be no problems with insufficient housing at this time. In the event housing cannot be found or can be found but not within the displacees' economic means at the time of displacement, Section 206 of Public Law 91-646 (Housing of Last Resort) will be utilized to its fullest and practical extent.

The replacement property inventory was compiled from data obtained from real estate companies, web sites, and local newspapers for the subject area. The dwellings contained in the inventory have been determined to be comparable and decent, safe and sanitary. The locations of the comparable dwellings are not less desirable in regard to public utilities and public and commercial facilities, are reasonably accessible to the displacees' places of employment, adequate to accommodate the displacees, and in neighborhoods which are not subject to unreasonable adverse environmental factors. It has also been determined that the available housing is within the financial means of the displacees and is fair housing open to all persons regardless of race, color, sex, religion or national origin consistent with the

requirements of 49 CFR, Subpart A, Section 24.2 and Title VIII of the Civil Rights Act of 1968.

A commercial property inventory indicates there are at least twenty-two properties available in the subject area at this time. The businesses and nonprofit organizations displaced on the project may not be able to relocate in the immediate area of their displacement resulting in termination of the operation. However, in order to assist the displaced businesses and nonprofit organizations in relocating, the State will explore all possible sources of funding or other resources that may be available to businesses and nonprofit organizations. Sources that will be considered include: State and Local entities, the Department of Housing and Urban Development, the Economic Development Administration, the Small Business Administration and other Federal Agencies. Emphasis will be given in providing relocation advisory services to the businesses and nonprofit organizations. Appropriate measures will be taken to ensure that each entity displaced is fully aware of their benefits, entitlements, courses of action that are open to it, and any special provisions designed to encourage businesses and nonprofit organizations to relocate within the same community.

All displacees will be offered relocation assistance under provisions in the applicable FHWA regulations. At the time of displacement another inventory of available housing in the subject area will be obtained and an analysis of the market made to ensure that there are dwellings adequate to meet the needs of all displacees. Also, special relocation advisory services and assistance will be administered commensurate with displacees' needs, when necessary. Examples of these include, but are not limited to, Housing of Last Resort as previously mentioned and consultation with local officials, social and federal agencies and community groups.

The Right of Way Division has identified topographical and geographical conditions in the project area which may preclude the modification or replacement of some septic systems which may be located in the acquisition area. Affects upon septic systems in the acquisition area will be monitored. All persons displaced by the acquisition of a septic system that cannot be modified or replaced in a manner that will provide Decent, Safe, and Sanitary conditions will be entitled to the same relocation benefits as any other displaced person. This Conceptual Stage Relocation Statement does not include displacements or costs resulting from the loss of septic systems.

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 CONCEPTUAL STAGE RELOCATION INVENTORY

Job No.: CA0801 Job Name: Hwy. 110 - Clinton (Widening) (S) Date of Inventory: March 23, 2016

Type Relocation	Number	Residential Property Values or Rental Rates	Number in Household (Range)	Employees Affected (Range)	Length of Occupancy (Range)	Minority Households	Elderly Households	Low Income Households
Residential Owners	6	\$25,000 to \$150,000	1 to 4	N/A	8 to 30	1	2	N/A
Residential Tenants	3	\$200 to \$500 per Month	1 to 4	N/A	1 to 8	0	1	2
Businesses	4			6 to 13	1 to 25			
Land Lord Businesses	4							
Nonprofit Organizations	0							
Personal Properties	30							
Totals	47	N/A	N/A	6 to 13	N/A	1	3	2

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 CONCEPTUAL STAGE RELOCATION INVENTORY

Job No.: CA0801 Job Name: Hwy. 110 - Clinton (Widening) (S) Date of Inventory: April 1, 2016

RELO #	RELO TYPE	Street #	Street Name	Unit #	IMP. VAL	IMP. RENT	Family Size or # Employees	Occ Length	Eld? Y/N/U	Min? Y/N/U	Low Inc? Y/N/U	DSS? Y/N/U
17	Res. Owner	2981	Hwy. 65 N.		\$40,000		1	15	U	N		N
18	Personal Property	180	Isom									
19	Personal Property	3081	Hwy. 65 N.									
20	Personal Property	3234	Hwy. 65 N.									
21	Personal Property	3638	Hwy. 65 N.									
22	Personal Property	3660	Hwy. 65 N.									
23	Personal Property	3686	Hwy. 65 N.									
24	Personal Property		Hwy. 65 N.									
25	Res. Tenant	4230	Hwy. 65 N.			\$400.00	2	1	N	N	Y	N
26	LL Business	4230	Hwy. 65 N.		\$40,000							
27	Personal Property		Hwy. 65 N.									
28	Personal Property	5261	Hwy. 65 N.									
29	Personal Property	5363	Hwy. 65 N.									
30	Personal Property	5433	Hwy. 65 N.									
31	Res. Owner	5563	Hwy. 65 N.		\$40,000		2	15	U	N		N
32	Res. Owner	152	Henning St.		\$80,000		2	22	N	Y		Y

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
CONCEPTUAL STAGE RELOCATION INVENTORY

Job No.: CA0801 Job Name: Hwy. 110 - Clinton (Widening) (S) Date of Inventory: April 1, 2016

RELO #	RELO TYPE	Street #	Street Name	Unit #	IMP. VAL	IMP. RENT	Family Size or # Employees	Occ Length	Eld? Y/N/U	Min? Y/N/U	Low Inc? Y/N/U	DSS? Y/N/U
33	Personal Property		Fayette Rd.									
34	Personal Property		Hwy. 65 N.									
35	Personal Property	6044	Hwy. 65 N.									
36	Business	6534	Hwy. 65 N.		140,000		1	1				
37	Personal Property											
38	Res. Owner	6918	Hwy. 65 N.		\$30,000		4	8	N	N		N
39	Personal Property	6953	Hwy. 65 N.									
40	Personal Property		Hwy. 65 N.									
41	Personal Property	112	Watergate		\$25,000							
42	Personal Property	7519	Hwy. 65 N.		\$20,000							
43	Res. Owner		Hwy. 65 N.		\$20,000		4	10	N	N		N
44	Personal Property		Hwy. 65 N.									
45	Personal Property		Hwy. 65 N.									
46	Res. Tenant	2666	Hwy. 65 N.			\$750	4	5	N	N	N	Y
47	LL Business	2666	Hwy. 65 N.		\$75,000							

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

INTEROFFICE MEMORANDUM

Right of Way Division - Appraisal Section

TO: Perry M. Johnston, Division Head
Right of Way Division

THROUGH: Steven A. Means, Appraisal Section Head
Right of Way Division *Steven A. Means*

FROM: Kenneth Redus, Realty Appraiser II *KLR*
Right of Way Division

DATE: April 1, 2016

SUBJECT: Relocation Tract Cost Estimate
Job CA0801
Hwy. 110-Clinton (Widening)(S)
Van Buren County

Right of Way Appraisal has been tasked to provide a cost study involving relocation tracts.

This study included approximately 22 properties that are current relocation tracts, possible relocation tracts due to septic issues and tracts that are encroaching into the existing right of way.

Based on information provided by preliminary design plan and preliminary market research, a total estimate of the right of way cost to acquire the relocation tracts is provided. This estimate is made subject to the following premises and conditions: Considering the above factors, the estimated right of way cost is:

1. No owner contact has been made.
2. No right of way staking was in place.
3. Only a limited market study has been completed.
4. No Right of Way Plans were provided.
5. Total area of acquisition is estimated.
6. This Is Not An Appraisal.

Considering the above factors, the estimated right of way cost is:

TOTAL:

\$1,310,000.00


One Million Three Hundred Ten Thousand Dollars

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

INTEROFFICE MEMORANDUM

March 16, 2016

TO: Perry Johnston, Division Head, Right of Way Division

FROM: John Fleming, Division Head, Environmental Division 

SUBJECT: AHTD Job Number CA0801
Hwy. 110 - Clinton
Van Buren County
ROW Information Request

Please provide a Conceptual Stage Relocation Analysis and a Conceptual Stage Inventory Record for the referenced project. This information is requested by April 15, 2016. If you have any questions concerning this project, contact Terry Tucker at Extension 2082.

JF:TT:fc

Appendix E – Cultural Resources Clearance

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THE DEPARTMENT OF ARKANSAS
HERITAGE

Asa Hutchinson
Governor

Stacy Hurst
Director

July 20, 2016

Mr. John Fleming
Division Head
Environmental Division
Arkansas State Highway and Transportation Department
P.O. Box 2261
Little Rock, AR 72203-2261

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AHTD

JUL 25 2016

ENVIRONMENTAL
DIVISION

RE: Van Buren County – General
Section 106 Review – FHWA
Report Entitled: *Second Addendum to a Cultural Resources Survey of
AHTD Job Number CA801. Hwy. 110-Clinton (Widening) (S), Van
Buren County*
AHTD Job Number CA801
AHPP Tracking Number 93659.04

Dear Mr. Fleming:

The staff of the Arkansas Historic Preservation Program (AHPP) has reviewed the above-referenced Phase I cultural resources report addendum.

Based on the information presented in the addendum, we concur with the June 20, 2016 AHPP letter stating that Property 16 is not eligible for the National Register of Historic Places (NRHP) and reaffirm that the proposed undertaking will have No Adverse Effect on historic properties.

Thank you for the opportunity to review this undertaking. Please refer to the AHPP Tracking Number listed above in all correspondence. If you have any questions, please call Bob Scoggin of my staff at 501-324-9270

Sincerely,

Frances McSwain
Deputy State Historic Preservation Officer

cc: Mr. Randall Looney, Federal Highway Administration
Dr. Andrea Hunter, Osage Nation
Mr. Everett Bandy, Quapaw Tribe of Oklahoma
Ms. Kim Jumper, Shawnee Tribe of Oklahoma
Mr. Eric Oosahwee-Voss, United Keetoowah Band of Cherokee Indians
Dr. Ann Early, Arkansas Archeological Survey

Arkansas Arts Council

Arkansas Natural
Heritage Commission

Arkansas State Archives

Delta Cultural Center

Historic Arkansas Museum

Mosaic Templars
Cultural Center

Old State House Museum



ARKANSAS HISTORIC
PRESERVATION PROGRAM



National Historic
Preservation Act 1966-2016



323 Center Street, Suite 1500
Little Rock, AR 72201

(501) 324-9880
fax: (501) 324-9184
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e-mail:

info@arkansaspreservation.org

website:

www.arkansaspreservation.com

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Appendix F – Noise Analysis

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Noise Analysis

Fundamentals of Sound and Noise

“Noise” is defined as an unwanted sound. Sounds are described as noise if they interfere with an activity or disturb the person hearing them. Sound is measured in a logarithmic unit called a decibel (dB). The human ear is more sensitive to middle and high frequency sounds than it is to low frequency sounds, so sound levels are weighted to more closely reflect human perceptions. These “A-weighted” sounds are measured using the decibel unit dB(A). Because the dB(A) is based on a logarithmic scale, a 10 dB(A) increase in sound level is generally perceived as twice as loud while a 3 dB(A) increase is just barely perceptible to the human ear.

Sound levels fluctuate with time depending on the sources of the sound audible at a specific location. In addition, the degree of annoyance associated with certain sounds varies by time of day, depending on other ambient sounds affecting the listener and the activities of the listener. The time-varying fluctuations in sound levels at a fixed location can be quite complex, so they are typically reported using statistical or mathematical descriptors that are a function of sound intensity and time. A commonly used descriptor of the equivalent sound level is Leq , which represents the equivalent of a steady, unvarying level over a defined period of time containing the same level of sound energy as the time varying noise environment. $Leq(h)$ is a sound level averaged over one hour. For highway projects, the $Leq(h)$ is commonly used to describe traffic-generated sound levels at locations of outdoor human use and activity (such as residences).

Noise Impact Criteria

Traffic noise impacts take place when the predicted traffic noise levels approach or exceed the noise abatement standard, or when the predicted traffic noise levels exceed the existing noise level by ten dB(A) (decibels on the A-scale). The noise abatement standard of 67 dB(A) is used for sensitive noise receptors such as residences, schools, churches, cemeteries and parks. The term “approach” is considered to be one dB(A) less than the noise abatement standard.

The number of noise receptors was estimated for this project utilizing the Federal Highway Administration’s Traffic Noise Model 2.5, existing and proposed roadway information, existing traffic information, and projected traffic levels for 2036.

Traffic Noise Analyses

Traffic noise analyses were performed for the project utilizing a roadway cross-section for Highway 82 consisting of four 11-foot paved travel lanes with curb and gutter and one 12-foot turn lane.

Effects of Project

The traffic noise estimates for the project resulted in a noise abatement distance of 171 feet from the centerline of Highway 82 in project area. Approximately 47 sensitive receptors will be affected by future noise levels greater than 66 dB(A). Of those 47 receptors, 25 are currently being impacted by highway noise.

Traffic Noise Abatement

Since noise impacts are predicted within 500 feet of the proposed project, the feasibility and reasonableness of potential noise abatement measures must be evaluated. Based upon AHTD's "Policy on Highway Traffic Noise Abatement", any noise abatement effort using barrier walls or berms is not warranted for this project. In order to provide direct access to the highway from adjacent properties, breaks in the barrier walls or berms would be required. These necessary breaks for highway access would render any noise barrier ineffective.

To avoid noise levels in excess of design levels, any future receptors should be located a minimum of 10 feet beyond the distance that the noise abatement standard is projected to occur. This distance should be used as a general guide and not a specific rule since the noise will vary depending upon the roadway grades and other noise contributions.

Any excessive project noise, due to construction operations, should be of short duration and have a minimum adverse effect on land uses or activities associated with this project area.

In compliance with Federal guidelines, a copy of this analysis will be transmitted to the White River Planning and Development District for possible use in present and future land use planning.

Appendix G – Visual Impact Assessment

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June 30, 2016

TO: Terry Tucker, Environmental Scientist I, Environmental Division

FROM: Mary Pearson, Environmental Analyst III, Environmental Division

SUBJECT: AHTD Job Number CA0801
FAP Number M001-0071-031
Hwy. 110-Clinton (Widening) (S)
Van Buren County
Visual Impact Assessment for Environmental Assessment

Purpose of this Memorandum

The purpose of this memorandum (memo) is to evaluate potential impacts to the visual environment associated with the Hwy. 110-Clinton Widening project.

Project Description

The Highway 65 segment between Clinton and Highway 110 is comprised of 12-foot travel lanes and 8-foot shoulders. The roadway includes three travel lanes for 5 miles north from the project start point, then narrows to two travel lanes for 2.9 miles to the project end point. The average right of way width is 142 feet. Nine residences and eight commercial structures will be removed. A total of 11 residences and five commercial structures currently located within approximately 105.5 feet of the centerline will remain. The roadway grade is steepest near the project start point.

The proposed project will replace the existing roadway with four 12-foot travel lanes, an 11-foot painted median, and 8-foot paved shoulders. The average right of way width will be 211 feet. The proposed improvements will occur along the existing alignment. In addition to widening, the roadway profile will be raised by an average of 4 feet or less throughout the majority of the corridor. However, the roadway profile will be raised by more than 4 feet from the project start point northward for approximately 0.40 mile to reduce the existing steep grade. This section of the project corridor will also require the

largest areas of fill. Roadside fore slopes will range from 2:1 to 6:1, with 3:1 being the most common.

Visual Impact Assessment

The Visual Impact Assessment Scoping Questionnaire was completed. As shown in Attachment 1, the response to each question has a corresponding value of either 1 or 2, resulting in an overall score of 11. Consistent with Federal Highway Administration (FHWA) visual assessment guidelines, a score of 10 to 14 recommends the preparation of a brief visual assessment in memo format. This memo serves as the recommended visual assessment memo.

Visual resource and visual impact assessment definitions for the concepts and terms used in the remainder of this memo are provided in Attachment 2.

Existing Environments

The project corridor is situated in low, rolling, forested mountains with cleared valleys used for pastureland and hayfields. Highway-adjacent trees include hardwoods and pines. Tall fescue dominates cleared areas, such as pastureland and utility line easements. Many of the residences and other structures feature grassy lawns, landscaping, and trees. Most of these neighboring structures afford partial or complete views of Highway 65, and are in turn visible to travelers along the route.

Permanent Impacts

In conjunction with the expansion of highway right of way, the increase in roadway width and profile would modify the appearance of the roadway. The removal of residences and businesses would alter the current appearance of the project corridor. Likewise, some of the remaining residences and commercial structures would be in closer proximity to the highway. The proposed roadway cross section and materials are typical of improvements made to highways throughout the state. Local community design standards do not exist, and the proximity of the remaining residences and commercial structures would not exceed zoning codes or discernably differ from the existing overall visual character. Visual elements uncommon in the area would not be introduced, and landforms will not be noticeably altered outside of the fill areas near the project start point. For these reasons, permanent impacts would be minor and localized. These impacts may be adverse for residents for whom views of the roadway will become more prominent.

Temporary Impacts

Project activities would result in the short-term presence of construction vehicles and equipment, grading and excavation, and vegetation clearing throughout the project area. Equipment and materials would be stored at staging areas that have yet to be determined. The areas where construction and grading would remove existing natural vegetation would be viewable by travelers and site-specific neighbors. Grading and excavation activities and the presence of construction vehicles and equipment would result in a temporary change in the visual character of the project site. These activities would be short-term. Impacts in roadside fore slope cleared areas would be short/medium-term until new vegetation becomes established. These temporary visual impacts would be minor and not expected to result in an adverse response to typical viewers.

Avoidance, Minimization and/or Mitigation Measures

Construction of this project would introduce minor changes to views but would not alter the overall character of the project corridor. Impacts to the existing vegetation within the project area would be minimized through revegetation efforts as part of the process to ensure that biological resources are not adversely affected. As a result, adverse impacts to the overall visual character of the project corridor are not expected as a result of the proposed project.

Attachments:

1. Visual Impact Assessment Scoping Questionnaire
2. Impact Definitions

Visual Resource and Visual Assessment Impact Definitions

Visible elements of natural (e.g., vegetation, water bodies), cultural (e.g., residences, commercial structures), or design (e.g., roadway geometrics, bridges) environments comprise visual resources. For highway project assessment purposes, visual resources are considered from two perspectives:

1. The view of the project to the surrounding community (neighbors).
2. The view from the project to motorists (travelers).

Neighbors who can see a highway project and travelers who use it are defined as viewers.

Visual resource changes are assessed by considering the compatibility and/or contrast of the proposed projects with the visual character of existing environments. Viewer responses to these changes are predicted by considering both exposure and sensitivity. Viewer exposure considers the physical limits of the views and the number and type of viewers. Viewer sensitivity considers the expectations of viewers based on existing environments and the extent to which various visual resources may be important to them.

The predicted viewer response to changes in the existing landscape are used to determine visual resource impacts. Potential impacts may be identified as neutral, adverse, or beneficial and described in the following terms:

- Extent – Are the effects site-specific, local, or even regional?
- Duration – Are the effects temporary or permanent, or short-term or long-term?
- Scale – Are the effects negligible, minor, moderate, or major?

Potential impact durations are defined below.

- Short-term – during construction.
- Short/medium-term – 1 to 5 years while new vegetation becomes established after construction.
- Medium/long-term – 5 to 15 years after construction when new vegetation would be effective mitigation.
- Long-term – Over 15 years.

Potential impact scales are defined below.

Negligible: Changes would be non-detectable or, if detected, effects would be slight and local. Impacts would not require mitigation.

Minor: Changes would be noticeable, although the changes would be small and localized. Conventional mitigation measures may be necessary to reduce potential effects.

Moderate: Changes would be noticeable and have localized and potentially regional scale impacts; historical conditions would be altered. Conventional mitigation measures may be necessary to reduce potential effects.

Major: Changes would be noticeable and would have substantial consequences on a local and/or regional level. Mitigation measures to offset the effects would be required to reduce impacts, although long-term changes to the resource would be possible.

Visual Impact Assessment Scoping Questionnaire

Project Name: Hwy. 110-Clinton (Widening) (S)

Location: Hwy. 65, Van Buren County

Special Conditions/Notes:

Conducted By: M. Pearson

Environmental Compatibility

1. *Will the project result in a noticeable change in the physical characteristics of the existing environment? (Consider all project components and construction impacts - both permanent and temporary, including landform changes, structures, noise barriers, vegetation removal, railing, signage, and contractor activities.)*

- High level of permanent change (3) Moderate level of permanent change (2)
 Low level of permanent or temporary change (1) No Noticeable Change (0)

2. *Will the project complement or contrast with the visual character desired by the community? (Evaluate the scale and extent of the project features compared to the surrounding scale of the community. Is the project likely to give an urban appearance to an existing rural or suburban community? Do you anticipate that the change will be viewed by the public as positive or negative? Research planning documents, or talk with local planners and community representatives to understand the type of visual environment local residents envision for their community.)*

- Low Compatibility (3) Moderate Compatibility (2)
 High compatibility (1)

3. *What level of local concern is there for the types of project features (e.g., bridge structures, large excavations, sound barriers, or median planting removal) and construction impacts that are proposed? (Certain project improvements can be of special interest to local citizens, causing a heightened level of public concern, and requiring a more focused visual analysis.)*

- High concern (3) Moderate concern (2)
 Low concern (1) Negligible Project Features (0)

4. *Is it anticipated that to mitigate visual impacts, it may be necessary to develop extensive or novel mitigation strategies to avoid, minimize, or compensate for adverse impacts or will using conventional mitigation strategies, such as landscape or architectural treatment adequately mitigate adverse visual impacts?*

- Extensive Non-Conventional Mitigation Likely (3) Some non-conventional Mitigation Likely (2)
- Only Conventional Mitigation Likely (1) No Mitigation Likely (0)

5. Will this project, when seen collectively with other projects, result in an aggregate adverse change (cumulative impacts) in overall visual quality or character? (Identify any projects [both state and local] in the area that have been constructed in recent years and those currently planned for future construction. The window of time and the extent of area applicable to possible cumulative impacts should be based on a reasonable anticipation of the viewing public's perception.)

- Cumulative Impacts likely: 0-5 years (3) Cumulative Impacts likely: 6-10 years (2)
- Cumulative Impacts unlikely (1)

Viewer Sensitivity

1. *What is the potential that the project proposal may be controversial within the community, or opposed by any organized group? (This can be researched initially by talking with the state DOT and local agency management and staff familiar with the affected community's sentiments as evidenced by past projects and/or current information.)*

- High Potential (3) Moderate Potential (2)
- Low Potential (1) No Potential (0)

2. *How sensitive are potential viewer-groups likely to be regarding visible changes proposed by the project? (Consider among other factors the number of viewers within the group, probable viewer expectations, activities, viewing duration, and orientation. The expected viewer sensitivity level may be scoped by applying professional judgment, and by soliciting information from other DOT staff, local agencies and community representatives familiar with the affected community's sentiments and demonstrated concerns.)*

- High Sensitivity (3) Moderate Sensitivity (2)
- Low Sensitivity (1)

3. *To what degree does the project's aesthetic approach appear to be consistent with applicable laws, ordinances, regulations, policies or standards?*

- Low Compatibility (3) Moderate Compatibility (2)
 High compatibility (1)

4. *Are permits going to be required by outside regulatory agencies (i.e., Federal, State, or local)?*
(Permit requirements can have an unintended consequence on the visual environment. Anticipated permits, as well as specific permit requirements - which are defined by the permitter, may be determined by talking with the project environmental planner and project engineer. Note: coordinate with the state DOT representative responsible for obtaining the permit prior to communicating directly with any permitting agency. Permits that may benefit from additional analysis include permits that may result in visible built features, such as infiltration basins or devices under a storm water permit or a retaining wall for wetland avoidance or permits for work in sensitive areas such as coastal development permits or on Federal lands, such as impacts to Wild and Scenic Rivers.)

- Yes (3) Maybe (2)
 No (1)

5. *Will the project sponsor or public benefit from a more detailed visual analysis in order to help reach consensus on a course of action to address potential visual impacts?* (Consider the proposed project features, possible visual impacts, and probable mitigation recommendations.)

- Yes (3) Maybe (2)
 No (1)

Total Project Score: 11

Determining the Level of Visual Impact Assessment

Total the scores of the answers to all ten questions on the Visual Impact Assessment Scoping Questionnaire. Use the total score from the questionnaire as an indicator of the appropriate level of VIA to perform for the project. Confirm that the level suggested by the checklist is consistent with the project teams' professional judgments. If there remains doubt about whether a VIA needs to be completed, it may be prudent to conduct an Abbreviated VIA. If there remains doubt about the level of the VIA, begin with the simpler VIA process. If visual impacts emerge as a more substantial concern than anticipated, the level of VIA documentation can always be increased.

The level of the VIA can initially be based on the following ranges of total scores:

Score 25-30

An *Expanded VIA* is probably necessary. It is recommended that it should be preceded by a formal visual scoping study prior to beginning the VIA to alert the project team to potential highly adverse impacts and to develop new project alternatives to avoid those impacts. These technical studies will likely receive state-wide, even national, public review. Extensive use of visual simulations and a comprehensive public involvement program would be typical.

Score 20-24

A *Standard VIA* is recommended. This technical study will likely receive extensive local, perhaps state-wide, public review. It would typically include several visual simulations. It would also include a thorough examination of public planning and policy documents supplemented with a direct public engagement processes to determine visual preferences.

Score 15-19

An *Abbreviated VIA* would briefly describe project features, impacts and mitigation requirements. Visual simulations would be optional. An Abbreviated VIA would receive little direct public interest beyond a summary of its findings in the project's environmental documents. Visual preferences would be based on observation and review of planning and policy documents by local jurisdictions.

Score 10-14

A *VIA Memorandum* addressing minor visual issues that indicates the nature of the limited impacts and any necessary mitigation strategies that should be implemented would likely be sufficient along with an explanation of why no formal analysis is required.

Score 6-9

No noticeable physical changes to the environment are proposed and no further analysis is required. Print out a copy of this completed questionnaire for your project file to document that there is no effect. A *VIA Memorandum* may be used to document that there is no effect and to explain the approach used for the determination.

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Appendix H – NRCS-CPA-106 Form

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**FARMLAND CONVERSION IMPACT RATING
FOR CORRIDOR TYPE PROJECTS**

PART I (To be completed by Federal Agency) Job CA0801		3. Date of Land Evaluation Request 7/13/2016	4. Sheet 1 of _____
1. Name of Project Hwy. 110 – Clinton (Widening)		5. Federal Agency Involved FHWA	
2. Type of Project Widening		6. County and State Van Buren AR.	
PART II (To be completed by NRCS)		1. Date Request Received by NRCS	2. Person Completing Form
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form).		YES NO	4. Acres Irrigated Average Farm Size
5. Major Crop(s)	6. Farmable Land in Government Jurisdiction Acres: %	7. Amount of Farmland As Defined in FPPA Acres: %	
8. Name Of Land Evaluation System Used	9. Name of Local Site Assessment System	10. Date Land Evaluation Returned by NRCS	

PART III (To be completed by Federal Agency)	Alternative Corridor For Segment			
	Corridor A	Corridor B	Corridor C	Corridor D
	A. Total Acres To Be Converted Directly			
	B. Total Acres To Be Converted Indirectly, Or To Receive Services			
C. Total Acres In Corridor				

PART IV (To be completed by NRCS) Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	.6			
B. Total Acres Statewide And Local Important Farmland				
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted				
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value				

PART V (To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)				
--	--	--	--	--

PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))		Maximum Points			
1. Area in Nonurban Use	15	10			
2. Perimeter in Nonurban Use	10	5			
3. Percent Of Corridor Being Farmed	20	5			
4. Protection Provided By State And Local Government	20	0			
5. Size of Present Farm Unit Compared To Average	10	0			
6. Creation Of Nonfarmable Farmland	25	0			
7. Availability Of Farm Support Services	5	5			
8. On-Farm Investments	20	0			
9. Effects Of Conversion On Farm Support Services	25	0			
10. Compatibility With Existing Agricultural Use	10	0			
TOTAL CORRIDOR ASSESSMENT POINTS	160	25			

PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)	100	100			
Total Corridor Assessment (From Part VI above or a local site assessment)	160	25			
TOTAL POINTS (Total of above 2 lines)	260	125			

1. Corridor Selected: New Location Adjacent to existing	2. Total Acres of Farmlands to be Converted by Project: .6 acres of Prime Farmland	3. Date Of Selection:	4. Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input type="checkbox"/>
---	--	-----------------------	--

5. Reason For Selection:

Signature of Person Completing this Part:  DATE 7/18/14

NOTE: Complete a form for each segment with more than one Alternate Corridor

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Appendix I – Endangered Species

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Northern Long-Eared Bat 4(d) Rule Streamlined Consultation Form

Federal agencies should use this form for the optional streamlined consultation framework for the northern long-eared bat (NLEB). This framework allows federal agencies to rely upon the U.S. Fish and Wildlife Service's (USFWS) January 5, 2016, intra-Service Programmatic Biological Opinion (BO) on the final 4(d) rule for the NLEB for section 7(a)(2) compliance by: (1) notifying the USFWS that an action agency will use the streamlined framework; (2) describing the project with sufficient detail to support the required determination; and (3) enabling the USFWS to track effects and determine if reinitiation of consultation is required per 50 CFR 402.16.

This form is not necessary if an agency determines that a proposed action will have no effect to the NLEB or if the USFWS has concurred in writing with an agency's determination that a proposed action may affect, but is not likely to adversely affect the NLEB (i.e., the standard informal consultation process). Actions that may cause prohibited incidental take require separate formal consultation. Providing this information does not address section 7(a)(2) compliance for any other listed species.

Information to Determine 4(d) Rule Compliance:

YES NO

Information to Determine 4(d) Rule Compliance:	YES	NO
1. Does the project occur wholly outside of the WNS Zone ¹ ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Have you contacted the appropriate agency ² to determine if your project is near known hibernacula or maternity roost trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Could the project disturb hibernating NLEBs in a known hibernaculum?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Could the project alter the entrance or interior environment of a known hibernaculum?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Does the project remove any trees within 0.25 miles of a known hibernaculum at any time of year?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. Would the project cut or destroy known occupied maternity roost trees, or any other trees within a 150-foot radius from the maternity roost tree from June 1 through July 31.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

You are eligible to use this form if you have answered yes to question # 1 **or** yes to question #2 **and** no to questions 3, 4, 5 and 6. The remainder of the form will be used by the USFWS to track our assumptions in the BO.

Agency and Applicant³ (Name, Email, Phone No.):

Arkansas Highway and Transportation Department - John.Fleming@ahtd.ar.gov - 501-569-2281

Project Name: AHTD Job #CA0801 - Hwy. 110-Clinton (Widening) (S)

Project Location (include coordinates if known): Highway 65 Clinton, AR to Botkinburg, AR

Basic Project Description (provide narrative below or attach additional information):

Widening Highway 65 from 2-3 lanes to 5 lanes

¹ <http://www.fws.gov/midwest/endangered/mammals/nleb/pdf/WNSZone.pdf>

² See <http://www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html>

³ If applicable - only needed for federal actions with applicants (e.g., for a permit, etc.) who are party to the consultation.

General Project Information	YES	NO
Does the project occur within 0.25 miles of a known hibernaculum?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the project occur within 150 feet of a known maternity roost tree?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the project include forest conversion ⁴ ? (if yes, report acreage below)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Estimated total acres of forest conversion	~40 acres	
If known, estimated acres ⁵ of forest conversion from April 1 to October 31		
If known, estimated acres of forest conversion from June 1 to July 31 ⁶		
Does the project include timber harvest? (if yes, report acreage below)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated total acres of timber harvest		
If known, estimated acres of timber harvest from April 1 to October 31		
If known, estimated acres of timber harvest from June 1 to July 31		
Does the project include prescribed fire? (if yes, report acreage below)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated total acres of prescribed fire		
If known, estimated acres of prescribed fire from April 1 to October 31		
If known, estimated acres of prescribed fire from June 1 to July 31		
Does the project install new wind turbines? (if yes, report capacity in MW below)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated wind capacity (MW)		

Agency Determination:

By signing this form, the action agency determines that this project may affect the NLEB, but that any resulting incidental take of the NLEB is not prohibited by the final 4(d) rule.

If the USFWS does not respond within 30 days from submittal of this form, the action agency may presume that its determination is informed by the best available information and that its project responsibilities under 7(a)(2) with respect to the NLEB are fulfilled through the USFWS January 5, 2016, Programmatic BO. The action agency will update this determination annually for multi-year activities.

The action agency understands that the USFWS presumes that all activities are implemented as described herein. The action agency will promptly report any departures from the described activities to the appropriate USFWS Field Office. The action agency will provide the appropriate USFWS Field Office with the results of any surveys conducted for the NLEB. Involved parties will promptly notify the appropriate USFWS Field Office upon finding a dead, injured, or sick NLEB.

Signature: _____



Date Submitted: _____

21 Apr 2016

⁴ Any activity that temporarily or permanently removes suitable forested habitat, including, but not limited to, tree removal from development, energy production and transmission, mining, agriculture, etc. (see page 48 of the BO).

⁵ If the project removes less than 10 trees and the acreage is unknown, report the acreage as less than 0.1 acre.

⁶ If the activity includes tree clearing in June and July, also include those acreage in April to October.



IN REPLY REFER TO:

United States Department of the Interior

FISH AND WILDLIFE SERVICE
 110 S. Amity Road, Suite 300
 Conway, Arkansas 72032
 Tel.: 501/513-4470 Fax: 501/513-4480



Hwy. 65 (Botkinburg) Cave Report

Mitch Wine and Michelle Fleming (with support from Ben Thesing and Terry Tucker of AHTD)

One cave near Botkinburg, Arkansas was investigated on July 23, 2015 by the above listed Service personnel. The objective was to perform a biotic survey due to planned highway construction near the cave. The cave is located near a roadside park on private property at approximately: 35.66888, -92.47962.

Park at the roadside park and follow the foot path (can be obscured during spring/summer) down to the cave. The cave entrance is small and has a tight squeeze with an entrance located under an overhanging bluff. The cave appears popular with locals as there are lawn chairs and other items near the entrance. The cave is only about 30 ft. long (passable distance) but continues toward the highway in a narrow crack too small for human exploration. There was some airflow in the cave and standing shallow water in parts. No special equipment is required to explore the cave.

Western Slimy Salamanders were abundant throughout the cave and it was very tough not to disturb them. There was a lot of guano in the cave and it should be investigated again in the winter to look for hibernating Tricolored and possibly Northern Long-eared Bats.

Recommendations for the highway construction would include avoiding widening to the east side of the existing highway to the extent practicable and limiting excavation in the area to the east of the highway. If listed species are discovered in the cave during winter surveys, further consultation with the Service will be required for the construction project.

Animals observed:

56 Western Slimy Salamanders
 1 Tricolored Bat (no signs of disease, distress or injury)
 1 terrestrial millipede
 14 terrestrial snails (*Patera perigrapta*)
 Camel Crickets (hundreds)



IN REPLY REFER TO:

United States Department of the Interior

FISH AND WILDLIFE SERVICE

110 S. Amity Road, Suite 300

Conway, Arkansas 72032

Tel.: 501/513-4470 Fax: 501/513-4480



Hwy. 65 (Botkinburg) Cave Report

Mitch Wine (with support from Ben Thesing and Nate Goddard of AHTD)

One cave near Botkinburg, Arkansas was investigated on November 19, 2015 by the above listed Service personnel and Nate Goddard of the Arkansas Highway and Transportation Department (AHTD). The objective was to follow up on a July visit to determine winter bat use in the cave. The cave is located near a roadside park on private property at approximately: 35.66888, -92.47962.

Park at the roadside park and follow the foot path (can be obscured during spring/summer) down to the cave. The cave entrance is small and has a tight squeeze with an entrance located under an overhanging bluff. The cave appears popular with locals as there are lawn chairs and other items near the entrance. The cave is only about 30 ft. long (passable distance) but continues toward the highway in a narrow crack too small for human exploration. There was some airflow in the cave and some flowing water in parts following recent heavy rains. We spent approximately 20 minutes investigating the cave. No special equipment is required to explore the cave.

Western Slimy Salamanders were once again abundant throughout the cave and we saw many juveniles along with one female adult. There was very little guano in the cave this trip and there were no bats present despite the significant guano trails during the July visit and presence of a Tri-colored Bat. It seems unlikely this cave is being used by Northern Long-eared Bats or any other listed species.

Recommendations for the highway construction would include avoiding widening to the east side of the existing highway to the extent practicable and limiting excavation in the area to the east of the highway. Storm water from the roadway should be diverted away from the cave to extent practicable.

Animals observed:

21 Western Slimy Salamanders (1 female adult, the rest juveniles)

1 terrestrial millipede

>10 Cave Orb Weaver spiders

Camel Crickets (hundreds)

No bats

From: [Thesing, Ben](#)
To: [Tucker, Terry](#)
Cc: [Seagraves, Josh](#)
Subject: FW: CA0801 Concurrence Hwy 65
Date: Monday, November 07, 2016 9:12:58 AM

Terry,

Attached is endangered species clearance for the CA0801. Please let me know if you need anything else for this job.

-Ben

From: Lewis, Lindsey [mailto:lindsey_lewis@fws.gov]
Sent: Monday, November 07, 2016 9:10 AM
To: Thesing, Ben
Subject: Re: CA0801 Concurrence Hwy 65

Ben,

Due to the limited size of the area being cleared, minimal adjacent habitat being disturbed, distance to known species locations, and the standard special provisions and BMPs for sediment and erosion control, the Service concurs with the determination of "may affect, not likely to adversely affect" for the yellowcheek darter and speckled pocketbook.

The Service has reviewed your determination that the proposed action will not result in any prohibited incidental take for Northern Long-eared Bat. This project may affect the Northern Long-eared Bat; however, there are no effects beyond those previously disclosed in the Service's programmatic biological opinion for the final 4(d) rule dated January 5, 2016. Any taking that may occur incidental to this project is not prohibited under the final 4(d) rule (50 CFR §17.40(o)). This project is consistent with the description of the proposed action in the programmatic biological opinion, and the 4(d) rule does not prohibit incidental take of the Northern Long-eared Bat that may occur as a result of this project. Therefore, the programmatic biological opinion satisfies the "action agency" responsibilities under ESA section 7(a)(2) relative to the Northern Long-eared Bat for this project.

Please keep in mind that you must report any departures from the plans submitted; results of any surveys conducted; or any dead, injured, or sick Northern Long-eared Bats that are found to this office. If this project is not completed within one year of this letter, you must update your determination and resubmit the required information.

No further action is required at this time.

Lindsey Lewis
Biologist

US Fish & Wildlife Service
Arkansas Field Office
110 South Amity Rd., Suite 300

Conway, Arkansas 72032

(501) 513-4489 - voice

(501) 513-4480 - fax

Lindsey.Lewis@fws.gov

<http://www.fws.gov/arkansas-es/>

NOTE: This email correspondence and any attachments to and from this sender is subject to the Freedom of Information Act (FOIA) and may be disclosed to third parties.

On Fri, Oct 28, 2016 at 7:20 AM, Thesing, Ben <Ben.Thesing@ahtd.ar.gov> wrote:
Lindsey,

I wanted to check to see if you received the previous email. With the attachment size it might not have gone through. Thanks.

-Ben

From: Thesing, Ben
Sent: Wednesday, October 12, 2016 7:01:36 AM
To: Lewis, Lindsey
Subject: RE: CA0801 Concurrence Hwy 65

Lindsey,

Jackson Group completed the bat survey and provided us a final report (attached). One northern long-eared bat was captured and tracked to roost trees. Acoustic surveys showed potential for gray, Indiana, and Ozark big-eared but were vetted and discounted due to visual vetting, habitat type, and range. Conclusions were that only NLEB were present in the project area. We had previously sent in a 4(d) checklist for NLEB (attached again). I would further like to seek concurrence that the yellowcheek darter and speckled pocketbook will "not likely be adversely affected" due to the potential of sediment and water quality effects minimized by BMPs.

Let me know if you have any questions.

-Ben

From: Lewis, Lindsey [mailto:lindsey_lewis@fws.gov]
Sent: Thursday, April 21, 2016 3:37 PM

To: Thesing, Benjamin D.
Subject: Re: CA0801 Concurrence Hwy 65

Probably best to do a NLAA considering the potential for sediment/water quality effects is there, but they are likely minimal due to being mitigated by the BMPs.

Lindsey Lewis
Biologist

US Fish & Wildlife Service

Arkansas Field Office
110 South Amity Rd., Suite 300
Conway, Arkansas 72032

(501) 513-4489 - voice
(501) 513-4480 - fax
Lindsey_Lewis@fws.gov
<http://www.fws.gov/arkansas-es/>

On Thu, Apr 21, 2016 at 3:30 PM, Thesing, Benjamin D. <Benjamin.Thesing@ahtd.ar.gov> wrote:

No "actions" are scheduled to take place until after surveys. However, since I already have it, please find the attached checklist for files.

What are your initial thoughts on yellowcheek and speckled pocketbook. Do you feel the no effect is appropriate or would it be better for another call?

From: Lewis, Lindsey [mailto:lindsey_lewis@fws.gov]
Sent: Thursday, April 21, 2016 3:24 PM

To: Thesing, Benjamin D.
Subject: Re: CA0801 Concurrence Hwy 65

That depends on whether or not any clearing or other "actions" will take place prior to completion of the surveys and subsequent determinations and concurrence. If no "actions" other than permitted surveys take place then you should just wait, but if some "actions" are going to take place then you should go ahead and submit it and then you can initiate consultation, if necessary, at a later time. Probably the safest thing to do is just go ahead and submit it and then we'll adjust later to whatever the surveys find if necessary.

Lindsey Lewis
Biologist

US Fish & Wildlife Service
Arkansas Field Office
110 South Amity Rd., Suite 300
Conway, Arkansas 72032

(501) 513-4489 - voice
(501) 513-4480 - fax
Lindsey_Lewis@fws.gov
<http://www.fws.gov/arkansas-es/>

On Thu, Apr 21, 2016 at 2:50 PM, Thesing, Benjamin D. <Benjamin.Thesing@ahtd.ar.gov> wrote:

I have been informed that there is a task order to survey the entire length of the project this year for Indiana Bats and with tracking of both Indiana and NLEB bats if caught. I apologize for leaving this out of the original email as I just learned of this yesterday. Would you like the checklist still or would it be better to wait till after the surveys.

From: Lewis, Lindsey [mailto:lindsey_lewis@fws.gov]
Sent: Thursday, April 21, 2016 11:29 AM
To: Thesing, Benjamin D.
Subject: Re: CA0801 Concurrence Hwy 65

Yes, please submit the checklist for NLEB. Thanks.

Lindsey Lewis
Biologist

US Fish & Wildlife Service
Arkansas Field Office
110 South Amity Rd., Suite 300
Conway, Arkansas 72032

(501) 513-4489 - voice
(501) 513-4480 - fax
Lindsey_Lewis@fws.gov
<http://www.fws.gov/arkansas-es/>

On Tue, Apr 19, 2016 at 3:32 PM, Thesing, Benjamin D. <Benjamin.Thesing@ahtd.ar.gov> wrote:
Lindsey,

AHTD plans to widen approximately 8 miles of Highway 65 from Clinton to Botkinburg. Currently the road is 2-3 travel lanes with plans to widen the road to 4 travel lanes with a center turner lane. Widening will occur on both sides of the road along the currently existing road. Some trees will be cleared during the project. A cave, near the center of the job, was discovered that is very close to the construction limits. Two surveys (attached) by USFWS personnel were conducted to check for the possibility of bats. A single tricolored bat was observed during the summer survey. There are no anticipated impacts to this cave and a standard cave discovery SP will be included in the contract. Gray Bats are known from Big Creek Cave approximately 18 miles north of the northern job limit. No known hibernacula or maternity roost trees of northern long-eared bats are known from the area.

During construction 21 first order streams in the Archy and South Fork Little Red River drainage will be impacted. The majority, 15 of 21, are currently confined to road side ditches and will be filled and relocated to the toe of slope. The remaining six will be realigned to allow for culvert extensions. Yellow Cheek Darters and Speckled Pocketbook mussels are known to occur throughout both the Archy and South Fork Little Red River. The closest stream impact is 2.5 miles by stream from the nearest ANHC location of either protected species. Standard erosion control methods will be utilized to minimize runoff.

With consideration of the above information AHTD has determined that there will be "no effect" on threatened and endangered species as a result of the construction of this job. We seek concurrence and ask for guidance or requests at this time. Please let me know if you would like any further information. Would you like a streamlined checklist for NLEB submitted?

Thanks,

Ben

Ben Thesing
Environmental Analyst I
Arkansas State Highway & Transportation Dept.
PO BOX 2261, Little Rock, AR 72203
P: 501-569-2520 F: 501-569-2009

ARKANSAS STATE HIGHWAY
AND
TRANSPORTATION DEPARTMENT

Scott E. Bennett
Director
Telephone (501) 569-2000
Voice/TTY 711



P.O. Box 2261
Little Rock, Arkansas 72203-2261
Telefax (501) 569-2400
www.arkansashighways.com

January 24, 2017

Mr. Angel Correa
Division Administrator
Federal Highway Administration
700 West Capitol, Room 3130
Little Rock, Arkansas 72201-3298

RE: AHTD Job Number CA0801
FAP Number M001-0071-031
Hwy. 110 – Clinton (Widening) (S)
Van Buren County
FONSI Request

Dear Mr. Correa:

An Environmental Assessment (EA) for the referenced project was prepared by the Environmental Division of the Arkansas State Highway and Transportation Department and submitted for your approval. The document was signed and approved for public dissemination on December 5, 2016. A Public Involvement was held March 15, 2016, and a Design Public Hearing was offered from December 21, 2016 to January 25, 2017. No Public Hearing requests were received.

A review of the project and its impacts indicates that its construction will have no significant impact on the environment. We have included a Finding Of No Significant Impact (FONSI) document for your review and approval, if acceptable. A copy of the EA is enclosed.

Should you have questions or require additional information, please contact Terry Tucker at (501) 569-2281.

Sincerely,

A handwritten signature in blue ink that reads 'John Fleming'.

John Fleming
Division Head
Environmental Division

Enclosures
JF:TT:fc

AHTD JOB CA0801
HIGHWAY 65 Widening Project
HWY. 110 - CLINTON (WIDENING) (S)
FINDING OF NO SIGNIFICANT IMPACT





Title VI

The Arkansas State Highway and Transportation Department (AHTD) ensures full compliance with Title VI of the Civil Rights Act of 1964 by prohibiting discrimination against any person on the basis of race, color, national origin, or sex in the provision of benefits and services resulting from its federally assisted programs and activities. The AHTD public involvement process did not exclude any individuals due to income, race, color, religion, national origin, sex, age, or disability. For questions regarding the AHTD's Title VI Program, you may contact the Department's EEO/DBE Section Head (ADA/504/Title VI Coordinator) at (501) 569-2298 (Voice/TTY 711), or at the following email address: EEO_DBE_Section_Head@ahtd.ar.gov.

Americans with Disabilities Act (ADA) Information

Materials are available in alternative formats: large print, Braille, or audiotape for people with disabilities by contacting AHTD's EEO/DBE Section Head (ADA/504/Title VI Coordinator) at (501) 569-2298 (Voice/TTY 711), or at the following email address: EEO_DBE_Section_Head@ahtd.ar.gov.

Persons who are deaf or hard of hearing may contact the AHTD through the Arkansas Relay Service at 7-1-1.

A federal agency may publish a notice in the Federal Register, pursuant to 23 USC §139(l), indicating that one or more federal agencies have taken final action on permits, licenses, or approvals for a transportation project. If such notice is published, claims seeking judicial review of those federal agency actions will be barred unless such claims are filed within 180 days after the date of publication of the notice, or within such shorter time period as is specified in the federal laws pursuant to which judicial review of the federal agency action is allowed. If no notice is published, then the periods of time that otherwise are provided by the federal laws governing such claims will apply.

AHTD JOB NUMBER CA0801

F.A.P. NUMBER M001-0071-031

FINDING OF NO SIGNIFICANT IMPACT

Submitted by the U.S. Department of Transportation, Federal Highway Administration, Arkansas Division

The Arkansas State Highway and Transportation Department (AHTD) has completed the assessment of the proposed project and the Federal Highway Administration (FHWA) issues a Finding of No Significant Impact (FONSI) for the widening of U.S. Highway 65 from within the City of Clinton north to its intersection with Highway 110.

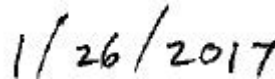
Upon consideration of the FHWA-approved Environmental Assessment (EA) for the proposed project, public comments, and other considerations, the FHWA has determined that Alternative 1 will have no significant impact on the human environment and hereby issues a FONSI pursuant to 23 CFR §771(a).

This FONSI is based on FHWA's independent evaluation. The information contained in the EA has been determined to adequately and accurately discuss the need, environmental issues, and impacts of the proposed project and its appropriate mitigation measures. The EA provides sufficient evidence and analysis for determining that an Environmental Impact Statement is not required. No impacts identified would cause any significant adverse effects to the human or natural environment.

Based upon the EA, additional information included in this document, and public, agency, and organization comments, FHWA concludes that no additional environmental documentation is required for AHTD Job CA0801, Highway 65 Widening.



Randal Looney
Environmental Specialist



Date of Approval



U.S. Department of Transportation
Federal Highway Administration

TABLE OF CONTENTS

FINDING OF NO SIGNIFICANT IMPACT

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2	Has the project changed since the publication of the EA?	1
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APPENDICES

- Appendix A: State Historic Preservation Officer Clearance
- Appendix B: Northern Long-Eared Bat 4(d) Rule Streamlined Consultation

FIGURE

1	Project Location Map	2
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Finding of No Significant Impact

This Finding of No Significant Impact (FONSI) document updates the Environmental Assessment (EA), identifies the Preferred Alternative, and incorporates all applicable comments and responses received during the review period.

1 What is the Highway 65 widening project?

The Arkansas State Highway and Transportation Department (AHTD), in conjunction with the Federal Highway Administration (FHWA), is proposing improvements to Highway 65 from within the City of Clinton north to its intersection with Highway 110. The project will include highway widening and minor intersection realignments. See Figure 1 for the project location.

An EA was approved by the FHWA on December 5, 2016. The EA did not identify any significant adverse environmental impacts.

2 Has the project changed since the publication of the EA?

No changes were made to the proposed design for Alternative 1, as evaluated in the EA, and no additional impacts have been identified. Conditions in the project area have not changed.

3 How have the public, local officials, state, and federal agencies been involved during the EA comment period?

The public, local officials, and government agencies have been coordinated with and kept informed of developments throughout the EA process. A Location and Design Public Hearing and public comment period were offered from December 21, 2016, to January 25, 2017. Copies of the EA were made available to the public and copies were submitted to The Arkansas State Clearinghouse for state agency review. No Public Hearing requests were received.

When does FHWA issue a FONSI?

A FONSI is issued when the environmental analysis and review finds a project to have no significant impacts on the quality of the environment.

Where can I find the EA and other project documents?

The project documents are available for review at the following locations:

By mail or in person:
AHTD District 8 Office
372 Aspen Lane
I-40 Exit 81
Russellville, AR 72811-0070

By email:
info@ahtd.ar.gov

On the AHTD website:
http://web/public_meetings/2017/CA0801/CA0801.aspx

For any other questions, call:
(501) 569-2281

2 Hwy. 110- Clinton (Widening) (S)

Project Location Map

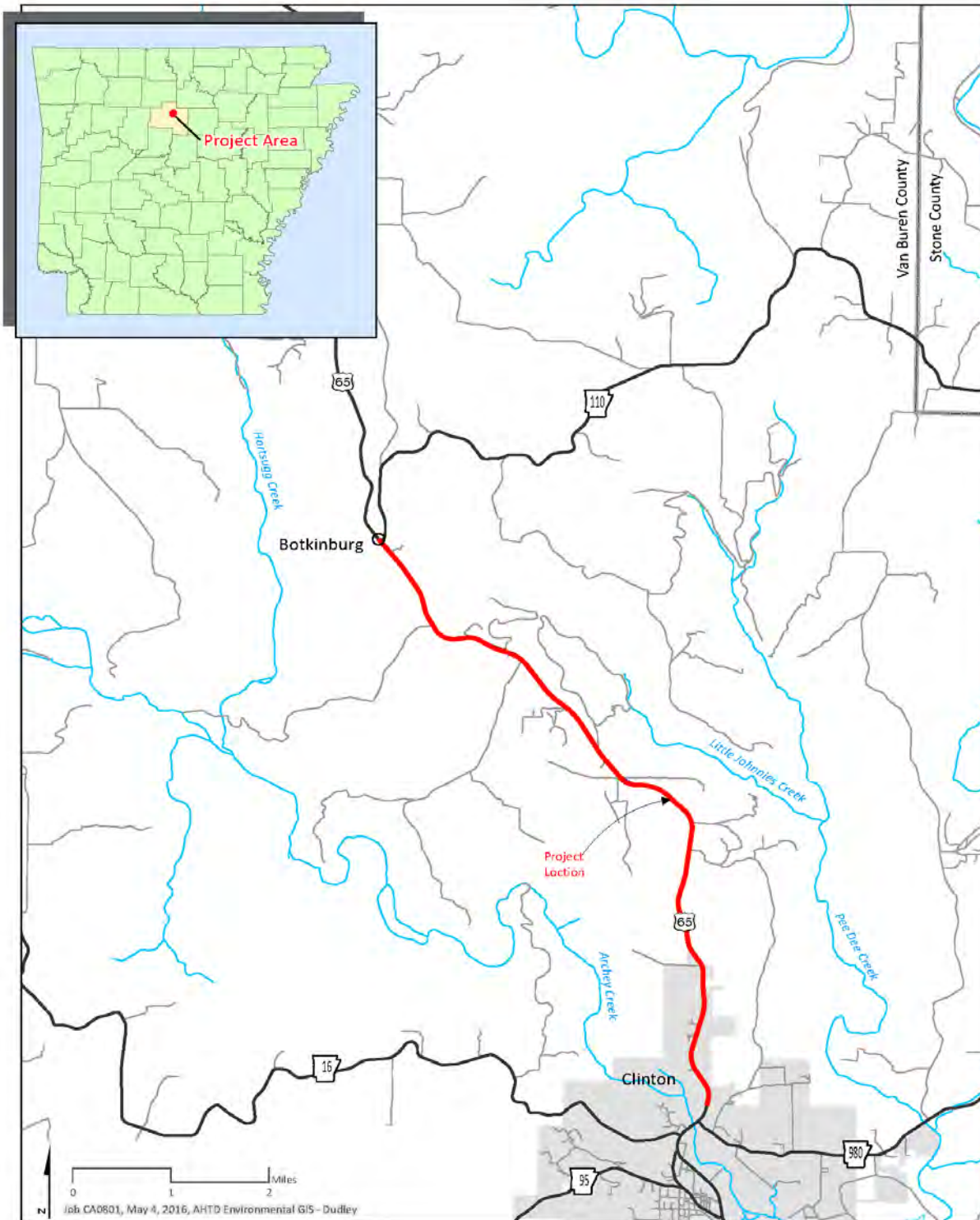


Figure 1

4 Which alternative was recommended?

Alternative 1 was identified as the Preferred Alternative in the EA. The Preferred Alternative meets the project's purpose and need of providing safer and efficient intrastate and interstate movement of people and goods for greater mobility and connectivity while minimizing environmental impacts.

5 What impacts are expected with the Preferred Alternative?

The Preferred Alternative has an estimated construction cost of \$34 million, \$1.3 million in acquisition and relocation costs, and \$11.3 million in utility relocation for a total project cost of \$46.6 million. The project will require approximately 93 acres of new right of way. There are no air quality, wild and scenic rivers, Environmental Justice, or floodplain impacts associated with the Preferred Alternative. State Historic Preservation Officer clearance can be found in Appendix A.

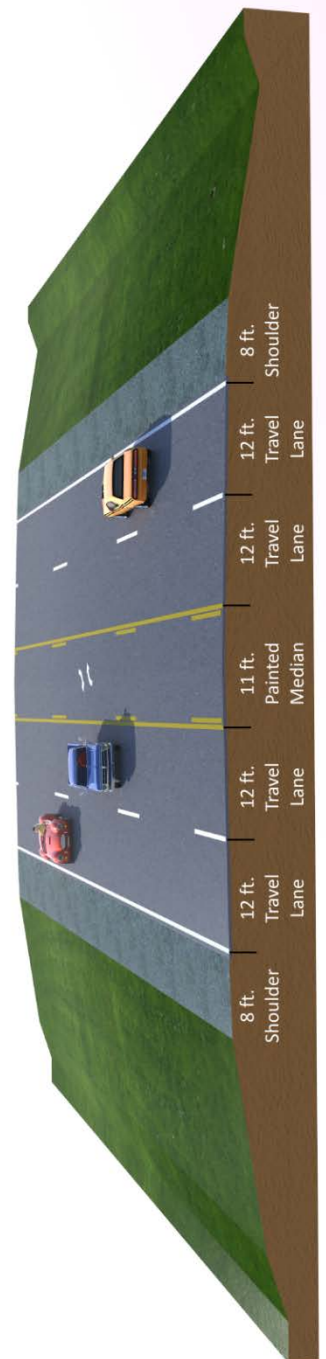
The Preferred Alternative would require the relocation of four businesses, four landlord businesses, six residential owners, and three residential tenants. The relocation of these businesses would have an adverse effect resulting in a temporary and/or permanent loss of jobs and income, but wouldn't adversely effect the overall economic conditions of the City of Clinton or Van Buren County. Several utilities including cable television, natural gas, electricity, sewer, telephone, and water, will be relocated to accommodate the proposed project.

Coordination with the United States Fish and Wildlife Service resulted in findings of "may affect, not likely to adversely affect" for the Indiana bat and gray bat. Impacts to the northern long-eared bat fall under the recent Final 4(d) Rule and Programmatic Biological Opinion. The streamlined consultation form for the northern long-eared bat can be found in Appendix B. Impacts to bat species will be mitigated with a Special Provision restricting when tree clearing and construction activities may occur.

6 What commitments have been made?

- The AHTD will comply with all requirements of *The Clean Water Act, as Amended*, for the construction of this project. This includes Section 401: Water Quality Certification; Section 402: National Pollutant Discharge Elimination Permit (NPDES); and

Preferred Alternative
Typical Section



Section 404: Permits for Dredged or Fill Material.

- An asbestos survey will be conducted on each building prior to the development of demolition plans. If the survey detects the presence of any asbestos-containing materials, plans will be developed to accomplish the safe removal of these materials prior to demolition. All asbestos abatement work will be conducted in conformance with the Arkansas Department of Environmental Quality (ADEQ), United States Environmental Protection Agency and Occupational Safety and Health Administration asbestos abatement regulations.
- If hazardous materials, unknown illegal dumps, or underground storage tanks are identified or accidentally uncovered by any AHTD personnel, contractors, contracting companies, or state regulatory agency, the AHTD will determine the type, size, and extent of the contamination according to the AHTD's response protocol. The AHTD, in consultation with the ADEQ, will decide the type of containment, remediation, and disposal methods to be employed for that particular type of contamination.
- The construction of the proposed project should be allowed under the terms of a Nationwide Permit 14 for Linear Transportation Projects as defined in Federal Register 77(34) 10183-10290. The AHTD will obtain all waterway and stormwater permits before construction begins.
- Impacts to endangered bat species will be limited with the addition of a Special Provision restricting the clearing of trees to the winter hibernating months and placing restrictions on the time of day construction can occur during the summer.
- The Arkansas Historic Preservation Program requires a Restraining Condition and an Archeological Monitoring Special Provision: therefore, an AHTD staff archeologist must be present during any ground disturbing activity within the existing roadside park.
- A Water Pollution Control Special Provision will be incorporated into the contract to minimize potential water quality impacts.
- If any permanent impacts to private drinking water sources occur due to this project, the AHTD will take appropriate action to mitigate these impacts.

- A wildflower seed mix will be included in the permanent seeding for the project.
- Based on current construction plans, seventeen relocatees will be relocated as a result of this project. Relocation services will be provided until all persons are relocated or their relocation eligibility expires.

7 What happens next?

The issuing of the FONSI concludes the National Environmental Policy Act (NEPA) process and results in a Selected Alternative. The signing of the FONSI allows further actions such as property acquisition, relocations, and utility adjustments to begin.

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Appendix A – State Historic Preservation Officer Clearance



THE DEPARTMENT OF ARKANSAS
HERITAGE

Asa Hutchinson
Governor

Stacy Hurst
Director

Arkansas Arts Council

Arkansas Natural
Heritage Commission

Delta Cultural Center

Historic Arkansas Museum

Mosaic Templars
Cultural Center

Old State House Museum



ARKANSAS HISTORIC
PRESERVATION PROGRAM



National Historic
Preservation Act 1966-2016



323 Center Street, Suite 1500
Little Rock, AR 72201

(501) 324-9880
fax: (501) 324-9184
tdd: 711

e-mail:

info@arkansaspreservation.org

website:

www.arkansaspreservation.com

An Equal Opportunity Employer

May 10, 2016

Mr. John Fleming
Division Head
Environmental Division
Arkansas State Highway and Transportation Department
P.O. Box 2261
Little Rock, AR 72203-2261

RECEIVED
AHTD

MAY 12 2016

ENVIRONMENTAL
DIVISION

RE: Van Buren County – General
Section 106 Review – FHWA
Report Entitled *A Cultural Resources Survey of AHTD Job Number
CA0801 Hwy. 110-Clinton (Widening) (S) Van Buren County,
Arkansas*
AHTD Job No. CA0801
AHPP Tracking Number 93659.01

Dear Mr. Fleming:

The staff of the Arkansas Historic Preservation Program has reviewed the above-referenced Phase I cultural resources report.

Based on the information presented in this report, we concur that sites 3VB227, 3VB399, 3VB400 and 3VB401 are Not Eligible for the National Register of Historic Places (NRHP) and require no further work.

In addition we find that the National Register of Historic Places (NRHP) listed Walter Patterson House (VB241) will not be impacted by the project and that the limited impacts to the NRHP eligible Roadside Park (Property 42) will have No Adverse Effect on the historic property.

Thank you for the opportunity to review this undertaking. Please refer to the AHPP Tracking Number listed above in all correspondence. If you have any questions, please call Bob Scoggin of my staff at 501-324-9270

Sincerely,

Frances McSwain
Deputy State Historic Preservation Officer

cc: Mr. Randal Looney, FHWA
Dr. Andrea Hunter, Osage Nation
Mr. Everett Bandy, Quapaw Tribe of Oklahoma
Ms. Kim Jumper, Shawnee Tribe of Oklahoma
Mr. Eric Oosahwee-Voss, United Keetoowah Band of Cherokee Indians
Dr. Ann Early, Arkansas Archeological Survey



THE DEPARTMENT OF ARKANSAS
HERITAGE

Asa Hutchinson
Governor

Stacy Hurst
Director

July 20, 2016

Mr. John Fleming
Division Head
Environmental Division
Arkansas State Highway and Transportation Department
P.O. Box 2261
Little Rock, AR 72203-2261

RECEIVED
AHTD

JUL 25 2016

ENVIRONMENTAL
DIVISION

RE: Van Buren County – General
Section 106 Review – FHWA
Report Entitled: *Second Addendum to a Cultural Resources Survey of
AHTD Job Number CA801. Hwy. 110-Clinton (Widening) (S), Van
Buren County*
AHTD Job Number CA801
AHPP Tracking Number 93659.04

Dear Mr. Fleming:

The staff of the Arkansas Historic Preservation Program (AHPP) has reviewed the above-referenced Phase I cultural resources report addendum.

Based on the information presented in the addendum, we concur with the June 20, 2016 AHPP letter stating that Property 16 is not eligible for the National Register of Historic Places (NRHP) and reaffirm that the proposed undertaking will have No Adverse Effect on historic properties.

Thank you for the opportunity to review this undertaking. Please refer to the AHPP Tracking Number listed above in all correspondence. If you have any questions, please call Bob Scoggin of my staff at 501-324-9270

Sincerely,

Frances McSwain
Deputy State Historic Preservation Officer

cc: Mr. Randall Looney, Federal Highway Administration
Dr. Andrea Hunter, Osage Nation
Mr. Everett Bandy, Quapaw Tribe of Oklahoma
Ms. Kim Jumper, Shawnee Tribe of Oklahoma
Mr. Eric Oosahwee-Voss, United Keetoowah Band of Cherokee Indians
Dr. Ann Early, Arkansas Archeological Survey

Arkansas Arts Council

Arkansas Natural
Heritage Commission

Arkansas State Archives

Delta Cultural Center

Historic Arkansas Museum

Mosaic Templars
Cultural Center

Old State House Museum



ARKANSAS HISTORIC
PRESERVATION PROGRAM



National Historic
Preservation Act 1966-2016



323 Center Street, Suite 1500
Little Rock, AR 72201

(501) 324-9880
fax: (501) 324-9184
tdd: 711

e-mail:

info@arkansaspreservation.org

website:

www.arkansaspreservation.com

Appendix B – NORTHERN LONG-EARED BAT 4(D) RULE STREAMLINED CONSULTATION

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Northern Long-Eared Bat 4(d) Rule Streamlined Consultation Form

Federal agencies should use this form for the optional streamlined consultation framework for the northern long-eared bat (NLEB). This framework allows federal agencies to rely upon the U.S. Fish and Wildlife Service's (USFWS) January 5, 2016, intra-Service Programmatic Biological Opinion (BO) on the final 4(d) rule for the NLEB for section 7(a)(2) compliance by: (1) notifying the USFWS that an action agency will use the streamlined framework; (2) describing the project with sufficient detail to support the required determination; and (3) enabling the USFWS to track effects and determine if reinitiation of consultation is required per 50 CFR 402.16.

This form is not necessary if an agency determines that a proposed action will have no effect to the NLEB or if the USFWS has concurred in writing with an agency's determination that a proposed action may affect, but is not likely to adversely affect the NLEB (i.e., the standard informal consultation process). Actions that may cause prohibited incidental take require separate formal consultation. Providing this information does not address section 7(a)(2) compliance for any other listed species.

Information to Determine 4(d) Rule Compliance:

YES NO

Information to Determine 4(d) Rule Compliance:	YES	NO
1. Does the project occur wholly outside of the WNS Zone ¹ ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Have you contacted the appropriate agency ² to determine if your project is near known hibernacula or maternity roost trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Could the project disturb hibernating NLEBs in a known hibernaculum?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Could the project alter the entrance or interior environment of a known hibernaculum?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Does the project remove any trees within 0.25 miles of a known hibernaculum at any time of year?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. Would the project cut or destroy known occupied maternity roost trees, or any other trees within a 150-foot radius from the maternity roost tree from June 1 through July 31.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

You are eligible to use this form if you have answered yes to question # 1 **or** yes to question #2 **and** no to questions 3, 4, 5 and 6. The remainder of the form will be used by the USFWS to track our assumptions in the BO.

Agency and Applicant³ (Name, Email, Phone No.):

Arkansas Highway and Transportation Department - John.Fleming@ahtd.ar.gov - 501-569-2281

Project Name: AHTD Job #CA0801 - Hwy. 110-Clinton (Widening) (S)

Project Location (include coordinates if known): Highway 65 Clinton, AR to Botkinburg, AR

Basic Project Description (provide narrative below or attach additional information):

Widening Highway 65 from 2-3 lanes to 5 lanes

¹ <http://www.fws.gov/midwest/endangered/mammals/nleb/pdf/WNSZone.pdf>

² See <http://www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html>

³ If applicable - only needed for federal actions with applicants (e.g., for a permit, etc.) who are party to the consultation.

General Project Information	YES	NO
Does the project occur within 0.25 miles of a known hibernaculum?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the project occur within 150 feet of a known maternity roost tree?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the project include forest conversion ⁴ ? (if yes, report acreage below)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Estimated total acres of forest conversion	~40 acres	
If known, estimated acres ⁵ of forest conversion from April 1 to October 31		
If known, estimated acres of forest conversion from June 1 to July 31 ⁶		
Does the project include timber harvest? (if yes, report acreage below)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated total acres of timber harvest		
If known, estimated acres of timber harvest from April 1 to October 31		
If known, estimated acres of timber harvest from June 1 to July 31		
Does the project include prescribed fire? (if yes, report acreage below)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated total acres of prescribed fire		
If known, estimated acres of prescribed fire from April 1 to October 31		
If known, estimated acres of prescribed fire from June 1 to July 31		
Does the project install new wind turbines? (if yes, report capacity in MW below)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated wind capacity (MW)		

Agency Determination:

By signing this form, the action agency determines that this project may affect the NLEB, but that any resulting incidental take of the NLEB is not prohibited by the final 4(d) rule.

If the USFWS does not respond within 30 days from submittal of this form, the action agency may presume that its determination is informed by the best available information and that its project responsibilities under 7(a)(2) with respect to the NLEB are fulfilled through the USFWS January 5, 2016, Programmatic BO. The action agency will update this determination annually for multi-year activities.

The action agency understands that the USFWS presumes that all activities are implemented as described herein. The action agency will promptly report any departures from the described activities to the appropriate USFWS Field Office. The action agency will provide the appropriate USFWS Field Office with the results of any surveys conducted for the NLEB. Involved parties will promptly notify the appropriate USFWS Field Office upon finding a dead, injured, or sick NLEB.

Signature:  _____

Date Submitted: 21 Apr 2016

⁴ Any activity that temporarily or permanently removes suitable forested habitat, including, but not limited to, tree removal from development, energy production and transmission, mining, agriculture, etc. (see page 48 of the BO).
⁵ If the project removes less than 10 trees and the acreage is unknown, report the acreage as less than 0.1 acre.
⁶ If the activity includes tree clearing in June and July, also include those acreage in April to October.



IN REPLY REFER TO:

United States Department of the Interior

FISH AND WILDLIFE SERVICE

110 S. Amity Road, Suite 300
Conway, Arkansas 72032

Tel: 501/513-4470 Fax: 501/513-4480



Hwy. 65 (Botkinburg) Cave Report

Mitch Wine and Michelle Fleming (with support from Ben Thesing and Terry Tucker of AHTD)

One cave near Botkinburg, Arkansas was investigated on July 23, 2015 by the above listed Service personnel. The objective was to perform a biotic survey due to planned highway construction near the cave. The cave is located near a roadside park on private property at approximately: 35.66888, -92.47962.

Park at the roadside park and follow the foot path (can be obscured during spring/summer) down to the cave. The cave entrance is small and has a tight squeeze with an entrance located under an overhanging bluff. The cave appears popular with locals as there are lawn chairs and other items near the entrance. The cave is only about 30 ft. long (passable distance) but continues toward the highway in a narrow crack too small for human exploration. There was some airflow in the cave and standing shallow water in parts. No special equipment is required to explore the cave.

Western Slimy Salamanders were abundant throughout the cave and it was very tough not to disturb them. There was a lot of guano in the cave and it should be investigated again in the winter to look for hibernating Tricolored and possibly Northern Long-eared Bats.

Recommendations for the highway construction would include avoiding widening to the east side of the existing highway to the extent practicable and limiting excavation in the area to the east of the highway. If listed species are discovered in the cave during winter surveys, further consultation with the Service will be required for the construction project.

Animals observed:

56 Western Slimy Salamanders
1 Tricolored Bat (no signs of disease, distress or injury)
1 terrestrial millipede
14 terrestrial snails (*Patena perigrapta*)
Camel Crickets (hundreds)



IN REPLY REFER TO:

United States Department of the Interior

FISH AND WILDLIFE SERVICE

110 S. Amity Road, Suite 300
Conway, Arkansas 72032

Tel: 501/513-4470 Fax: 501/513-4480



Hwy. 65 (Botkinburg) Cave Report

Mitch Wine (with support from Ben Thesing and Nate Goddard of AHTD)

One cave near Botkinburg, Arkansas was investigated on November 19, 2015 by the above listed Service personnel and Nate Goddard of the Arkansas Highway and Transportation Department (AHTD). The objective was to follow up on a July visit to determine winter bat use in the cave. The cave is located near a roadside park on private property at approximately: 35.66888, -92.47962.

Park at the roadside park and follow the foot path (can be obscured during spring/summer) down to the cave. The cave entrance is small and has a tight squeeze with an entrance located under an overhanging bluff. The cave appears popular with locals as there are lawn chairs and other items near the entrance. The cave is only about 30 ft. long (passable distance) but continues toward the highway in a narrow crack too small for human exploration. There was some airflow in the cave and some flowing water in parts following recent heavy rains. We spent approximately 20 minutes investigating the cave. No special equipment is required to explore the cave.

Western Slimy Salamanders were once again abundant throughout the cave and we saw many juveniles along with one female adult. There was very little guano in the cave this trip and there were no bats present despite the significant guano trails during the July visit and presence of a Tri-colored Bat. It seems unlikely this cave is being used by Northern Long-eared Bats or any other listed species.

Recommendations for the highway construction would include avoiding widening to the east side of the existing highway to the extent practicable and limiting excavation in the area to the east of the highway. Storm water from the roadway should be diverted away from the cave to extent practicable.

Animals observed:

21 Western Slimy Salamanders (1 female adult, the rest juveniles)

1 terrestrial millipede

>10 Cave Orb Weaver spiders

Camel Crickets (hundreds)

No bats

ARKANSAS STATE HIGHWAY
AND
TRANSPORTATION DEPARTMENT

Scott E. Bennett P.E.
Director
Telephone (501) 569-2000
Voice/TTY 711



P.O. Box 2261
Little Rock, Arkansas 72203-2261
Telefax (501) 569-2400
www.arkansashighways.com

February 27, 2017

Ms. M. Elaine Edwards
Chief, Regulatory Division
Little Rock District, Corps of Engineers
P.O. Box 867
Little Rock, AR 72203

RE: AHTD Job Number CA0801
Hwy. 110 - Clinton (Widening) (S)
Van Buren County

Dear Ms. Edwards:

Enclosed are the Application for Department of Army Permit, FONSI, proposed construction plans, and supporting illustrations for the referenced AHTD project. This job involves improvements to Highway 65 from within the City of Clinton north to its intersection with Highway 110. The proposed project will widen the existing roadway to accommodate four 12-foot travel lanes, an 11-foot painted median, and 8-foot paved shoulders. The average right of way width will be 211 feet.

A total of 24 stream segments and two herbaceous wetlands will be impacted during construction. During construction, culverts will be extended and/or replaced to accommodate the wider roadway embankment. Streams located within the current rights-of-way will be relocated to the new toe of slope. Due to the proximity to the current roadway, avoidance was not possible. Impacts were minimized as much as possible during the design phase. The relocated channels will provide similar stream functions and are being proposed as compensatory mitigation for unavoidable impacts to waters of the United States. Wetland impacts are estimated at 0.05 acre; therefore, no compensatory mitigation is being offered. A summary table of impacts to waters of the United States is enclosed.

If additional information is required, please contact Josh Seagraves or Ben Thesing of my staff at (501) 569-2281.

Sincerely,

A handwritten signature in blue ink that reads 'John Fleming'.

John Fleming
Division Head
Environmental Division

Enclosures
Application for Department of Army Permit
FONSI
Supporting Illustrations

JF:JS:BT:ym

**U.S. ARMY CORPS OF ENGINEERS
APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT**

33 CFR 325. The proponent agency is CECW-CO-R.

*Form Approved -
OMB No. 0710-0003
Expires: 31-AUGUST-2013*

Public reporting for this collection of information is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of the collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters, Executive Services and Communications Directorate, Information Management Division and to the Office of Management and Budget, Paperwork Reduction Project (0710-0003). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE
--------------------	----------------------	------------------	------------------------------

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME First - John Middle - Last - Fleming Company - Arkansas State Highway and Transportation Department E-mail Address - John.Fleming@ahtd.ar.gov	8. AUTHORIZED AGENT'S NAME AND TITLE (agent is not required) First - Middle - Last - Company - E-mail Address -
6. APPLICANT'S ADDRESS: Address- P.O. Box 2261 City - Little Rock State - AR Zip - 72203 Country - USA	9. AGENT'S ADDRESS: Address- City - State - Zip - Country -
7. APPLICANT'S PHONE NOs. w/AREA CODE a. Residence b. Business c. Fax (501) 569-2526 (501) 569-2009	10. AGENTS PHONE NOs. w/AREA CODE a. Residence b. Business c. Fax

STATEMENT OF AUTHORIZATION

11. I hereby authorize, _____ to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

SIGNATURE OF APPLICANT

DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions) Hwy. 110 – Clinton (Widening)(S) Job #CA0801		
13. NAME OF WATERBODY, IF KNOWN (if applicable) Tributaries of the South Fork Little Red River	14. PROJECT STREET ADDRESS (if applicable) Address City - State- Zip-	
15. LOCATION OF PROJECT Latitude: °N 35.660129° Longitude: °W -92.473282°		
16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions) State Tax Parcel ID Municipality Section - See Attached supp. Township - Range -		

17. DIRECTIONS TO THE SITE

The project starts within the city limits of Clinton, AR approximately 0.75 miles north of the Highway 65 and Highway 16 intersection. It continues on Highway 65 north for approximately 8 miles and ends at Highway 110 in the town Botkinburg, AR.

18. Nature of Activity (Description of project, include all features)

Highway Department job #CA0801 Hwy. 110 – Clinton (Widening) (S) will widen Highway 65 from Clinton, AR to Botkinburg, AR. The widening will consist of four 12-foot travel lanes, an 11-foot painted median, 8-foot paved shoulders, and 3-1 side slopes. Some areas will have 6-1 safety slopes and some areas where constraints are warranted, the slope will be 2-1. The average right-of-way width is estimated at 211 feet for the project. A detailed discussion is provided in the Environmental Assessment which is attached.

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

The purpose of the proposed project is to widen an approximately 8 mile segment of Highway 65 from Clinton north to Highway 110 in Van Buren County to provide for four 12-foot travel lanes with an 11-foot painted median and 8-foot shoulders. Highway 65 is on AHTD's four-lane grid system. Segments are being widened as funding becomes available. Currently 73% of Highway 65 in Arkansas is four lane.

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

Construction of the wider roadway will permanently fill and relocate 21 stream segments including portions of Hartsugg Creek and Little Johnnies Creek. The stream segments to be impacted are located within the existing rights-of-way and will be moved to the edge of the new right-of-way. Three culverts will also be extended. Two small herbaceous wetlands, totaling 0.05 acre, will be filled as the roadway is widened.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type	Type	Type
Amount in Cubic Yards	Amount in Cubic Yards	Amount in Cubic Yards

See attached supplement

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres 0.05 acre wetland

or

Linear Feet 6,330 linear feet streams

23. Description of Avoidance, Minimization, and Compensation (see instructions)

Wetland and stream impacts were minimized as much as possible during the design of the selected alternative through the NEPA process. Temporary and permanent erosion control measures will minimize adverse impacts to streams and adjacent wetlands. Stream channels will be relocated to the new roadside upon completion of the project resulting in no net loss of stream function.

24. Is Any Portion of the Work Already Complete? Yes No IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).

a. Address- See attached supplemental list.

City - State - Zip -

b. Address-

City - State - Zip -

c. Address-

City - State - Zip -

d. Address-

City - State - Zip -

e. Address-

City - State - Zip -

26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED

* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.




 SIGNATURE OF APPLICANT DATE SIGNATURE OF AGENT DATE

The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN

Section	Township	Range
3	T 11 N	R 14 W
10	T 11 N	R 14 W
7	T 12 N	R 14 W
16	T 12 N	R 14 W
17	T 12 N	R 14 W
18	T 12 N	R 14 W
21	T 12 N	R 14 W
22	T 12 N	R 14 W
27	T 12 N	R 14 W
34	T 12 N	R 14 W

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

a. Streams

Steam #	Easting	Northing	Watershed	Name of Tributary	Stream Type	Activity	Length (feet)	Fill Quantity (cubic yards)
1	548997	3941230	Archey Creek	Hartsugg Creek	Intermittent	Relocate	627	12
2	549121	3942970	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Relocate	171	3
3	548955	3943234	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Relocate	373	3
4	548874	3943447	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Relocate	516	5
5	547481	3946675	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Culvert Extension	106	2
6	547189	3947069	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Relocate	355	7
7	546734	3947604	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Relocate	321	6
8	546778	3947549	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Relocate	180	5
9	546123	3948313	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Relocate	254	2
10	545885	3948437	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Relocate	55	1
11	545671	3948521	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Culvert Extension	40	2
12	545512	3948609	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Relocate	404	7
13	545189	3948676	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Relocate	465	4
14	544965	3948666	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Relocate	226	2
15	544889	3948681	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Culvert Extension	115	2
16	544859	3948706	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Relocate	254	5
17	544737	3948867	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Relocate	108	2
18	544687	3948918	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Relocate	582	11
19	544458	3949515	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Relocate	200	4
20	544407	3949652	Archey Creek	Little Johnnies Creek	Intermittent	Relocate	324	6
21	544296	3949749	Archey Creek	Unnamed Tributary	Intermittent	Relocate	133	2
22	544211	3949878	Archey Creek	Unnamed Tributary	Intermittent	Relocate	175	2
23	544110	3950025	Archey Creek	Unnamed Tributary	Intermittent	Relocate	143	1
24	544043	3950097	Archey Creek	Unnamed Tributary	Intermittent	Relocate	203	2
Total							6330	98

b. Wetlands

Wetland #	Easting	Northing	Watershed	Name of Tributary	Wetland Type	Activity	Area (sq. feet)	Acres
1	544089	3950035	Archey Creek	Unnamed Tributary	Herbaceous	Fill	717	0.016
2	546277	3948116	Greers Ferry Lake	Little Johnnies Creek	Herbaceous	Fill	1532	0.035
Total							2249	0.052

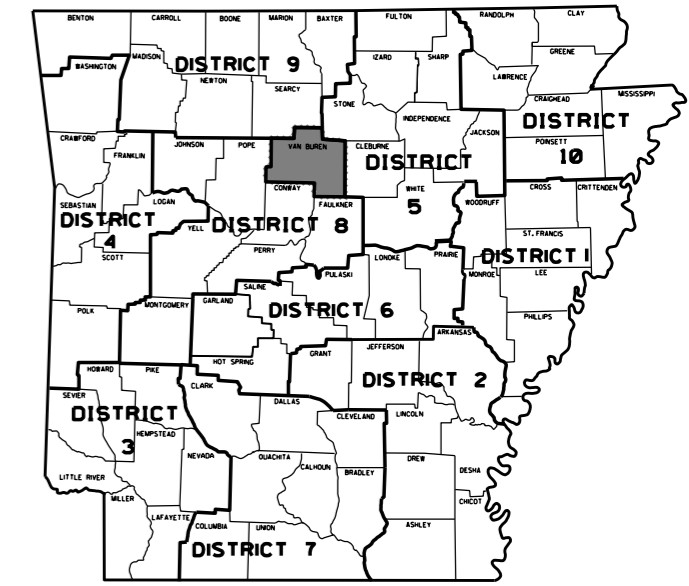
25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody

Name	Address	City	State	Zip code
A.C. Diles and Carolyn Cloud	883 Little Red River Road	Leslie	Arkansas	72645
Angela Dawn Bradford	9129 Highway 65 North	Clinton	Arkansas	72031
Arthur McGee and Nan McGee	8603 Highway 65 North	Clinton	Arkansas	72031
Betty Hickam and Terry Lynn Huyck	3649 Hickory Street	Abilene	Texas	79601
Botkinburg Community Volunteer Fire Department, Inc.	5704 Highway 65 North	Clinton	Arkansas	72031
Charles Palmer and Lois Palmer	2316 Llama Drive	Searcy	Arkansas	72143
Clarence R. Ledbetter and Elma Ledbetter	n/a			
David H. Sanders and Rosetta P. Sander	7519 Highway 65 North	Clinton	Arkansas	72031
David John Pioro	3702 6 Mile Road	Racine	Wisconsin	53402
Dwight R. Watson and Kathy N. Watson	2275 Victory Lane	Conway	Arkansas	72032
Emma Gene Shipp, nee Beavers % Wina Williams	603 Pinewood Road	Clinton	Arkansas	72031
Eugene C. Churches	1170 Plant Church Road	Clinton	Arkansas	72031
First Christian Church (Disciples of Christ)	P.O. Box 369	Paris	Arkansas	72855
Freda Sue Davis	1413 Fore Winds Hill	Ooltewah	Tennessee	37363
Gerald M. Coogan and Kathleen Coogan	P.O. Box 369	Choctaw	Arkansas	72028
Harry H. Prout and Hannah F. Prout	2781 Highway 110	Clinton	Arkansas	72031
Jerel Brown and Kathleen Brown	P.O. Box 21	Shirley	Arkansas	72153
Joanne Hefner, Lavonne Roddy and Dewayne Huggins	5368 Buttercreek Road	Scotland	Arkansas	72031
John N. Durham	1888 Highway 65 North	Clinton	Arkansas	72031
Johnny Huggins and Rebecca Huggins	762 Highway 16 East	Clinton	Arkansas	72031
Kenneth McGee % Arthur McGee	6089 Stone Creek Drive	Reno	Nevada	89511
Milton and Joyce C. Minchew Revocable Trust	2001 South 65th Street	Fork Smith	Arkansas	72903
Riley Scott Keeling and Wanda B. Keeling	P.O. Box 720	Clinton	Arkansas	72031
Ronald Doyle Hodges	216 Hickory	Dardanelle	Arkansas	72834
Ronald Lee Ross and Betty F. Ross	725 Walnut Drive	Rio Dell	California	95562
Ronald S. Beatrez	12126 Rough & Ready Road	Rough & Ready	California	95975
Samuel R. Mezo and Marcie A. Mezo	P.O. Box 434	Clinton	Arkansas	72031
Shawn Anthony Taylor	3394 Highway 65 North	Clinton	Arkansas	72031
Steven Savoie	261 Lake Road	Brick	New Jersey	8724
Ty Blackard	140 Fayette Road	Clinton	Arkansas	72031
Vilene Borgman	8575 Highway 65 North	Clinton	Arkansas	72031
Wayne Vickery and Mary Ann Vickery	111 Deer Trail	Searcy	Arkansas	72143

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	CA0801	
						(2) HWY. 110-CLINTON (WIDENING) (S)		

**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
CONSTRUCTION PLANS FOR STATE HIGHWAY**

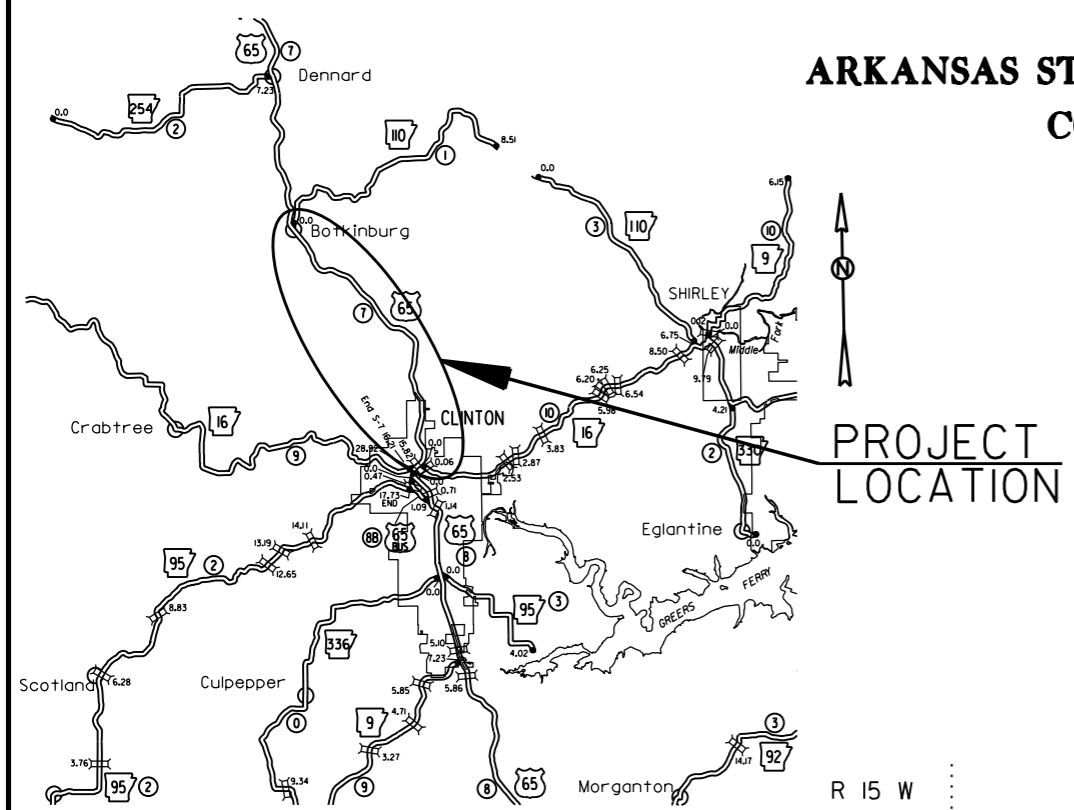
**HWY. 110-CLINTON
(WIDENING) (S)
VAN BUREN COUNTY
ROUTE 65 SECTION 7
F.A.P.
JOB CA0801**



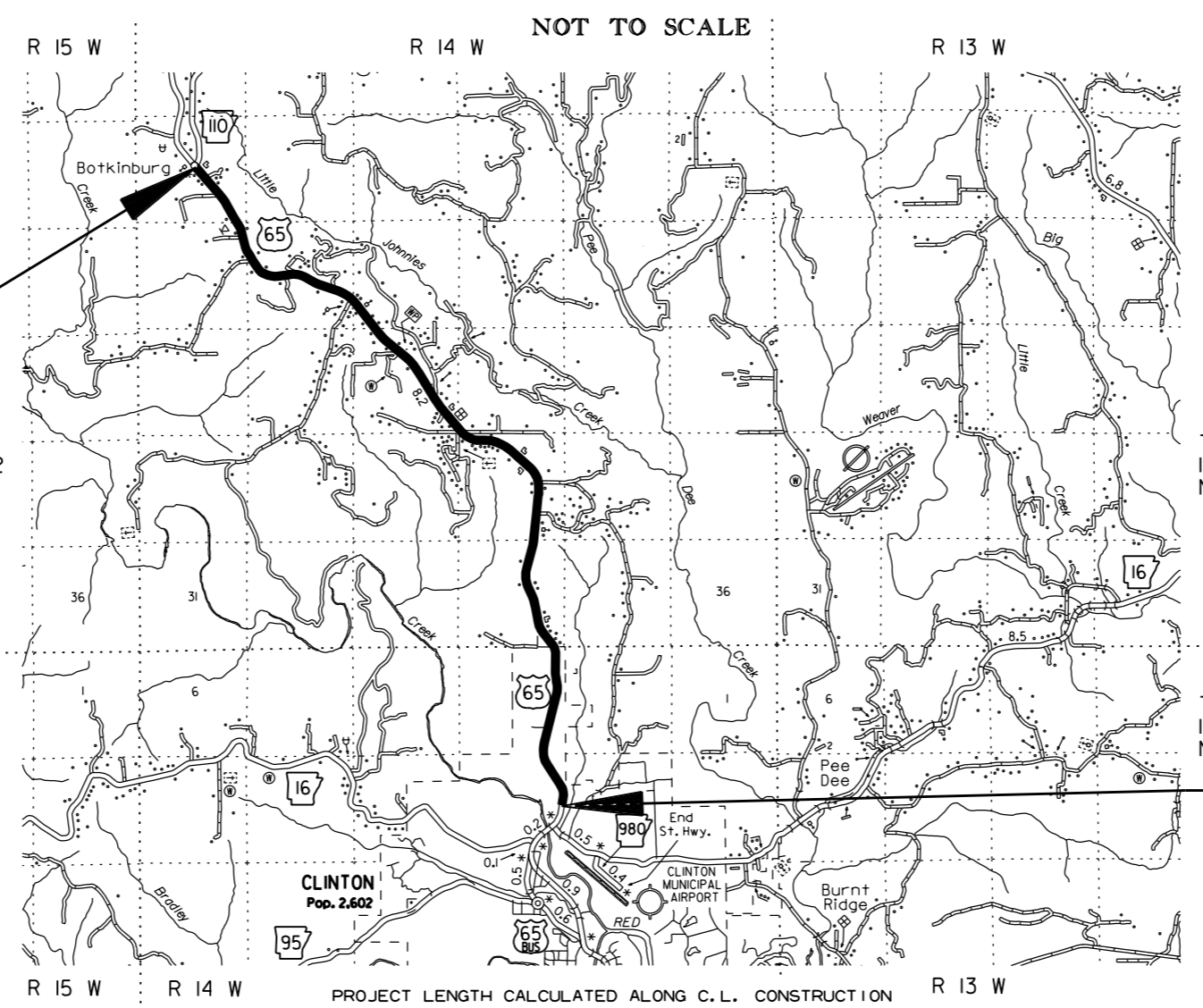
ARKANSAS HWY. DIST. 8

• DESIGN TRAFFIC DATA •

DESIGN YEAR-----	2037
2017 ADT-----	5900
2037 ADT-----	8200
DHV-----	902
DIRECTIONAL DISTRIBUTION-----	0.60
TRUCKS-----	18%
DESIGN SPEED-----	60 MPH



VICINITY MAP



**STA. 912+34.04
END JOB CA0801**

**STA. 497+04.36
BEGIN JOB CA0801
END JOB 080390
LOG MILE 15.63**

**PRELIMINARY
SUBJECT TO REVISION**



PROJECT COORDINATES:

	BEGIN	MID-POINT	END
LAT.	NXX° XX' XX"	N35° 40' 45"	NXX° XX' XX"
LON.	WXX° XX' XX"	W92° 29' 41"	WXX° XX' XX"

PROJECT LENGTH CALCULATED ALONG C.L. CONSTRUCTION
 GROSS LENGTH OF PROJECT 41409.37 FEET OR 7.843 MILES
 NET LENGTH OF ROADWAY 41409.37 FEET OR 7.843 MILES
 NET LENGTH OF BRIDGES XXX.XX FEET OR X.XXX MILES
 NET LENGTH OF PROJECT 41409.37 FEET OR 7.843 MILES

P.E. JOB CA0801

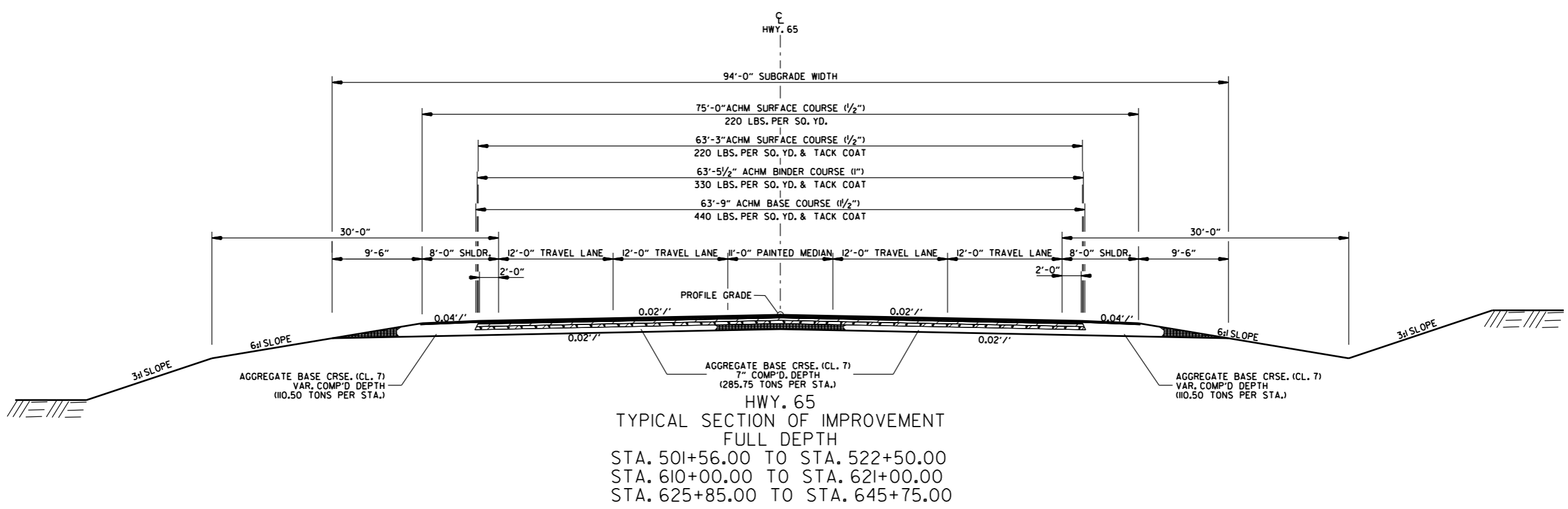
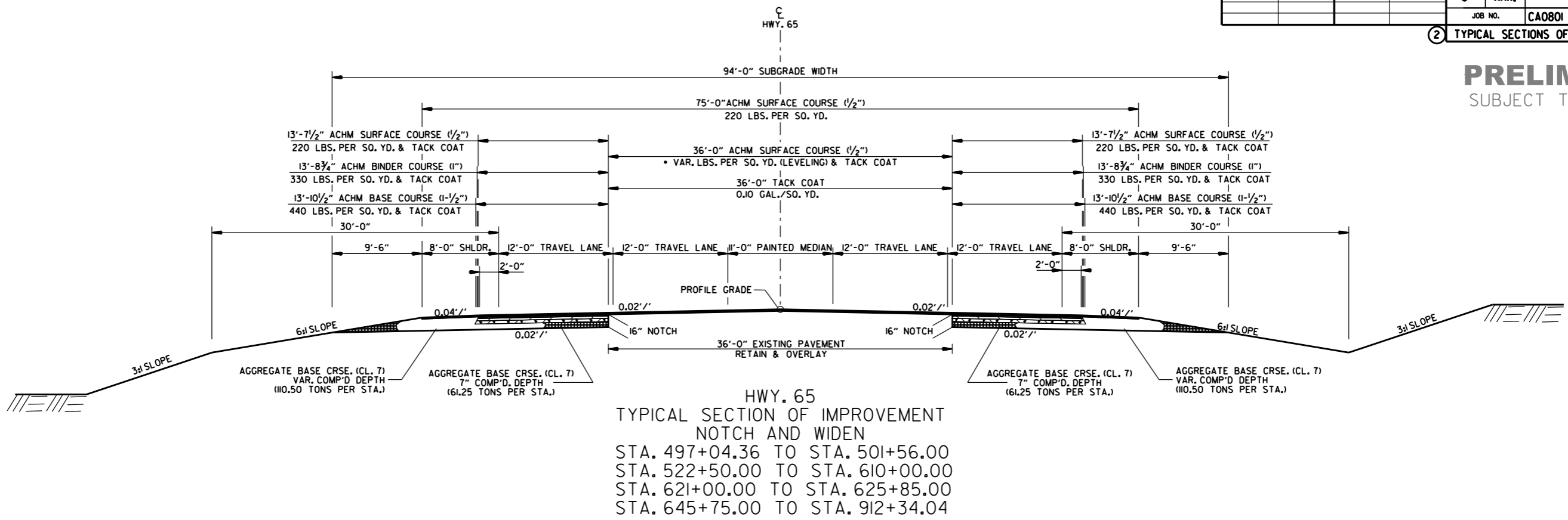
3/16/2016

RCA0801.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	CA0801	

2 TYPICAL SECTIONS OF IMPROVEMENT

PRELIMINARY
SUBJECT TO REVISION



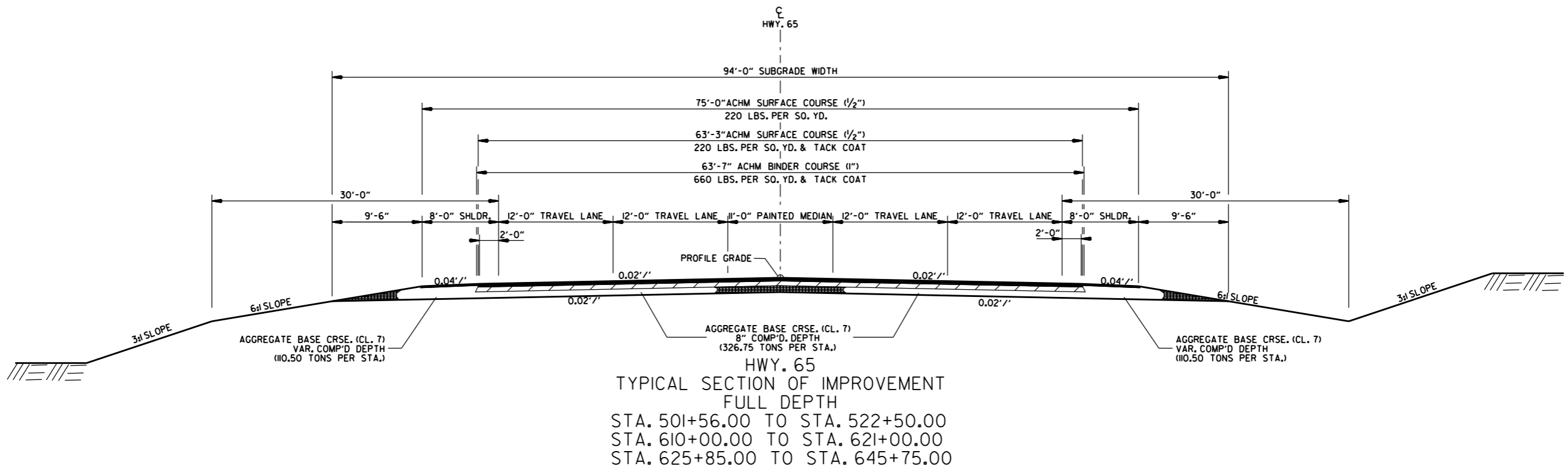
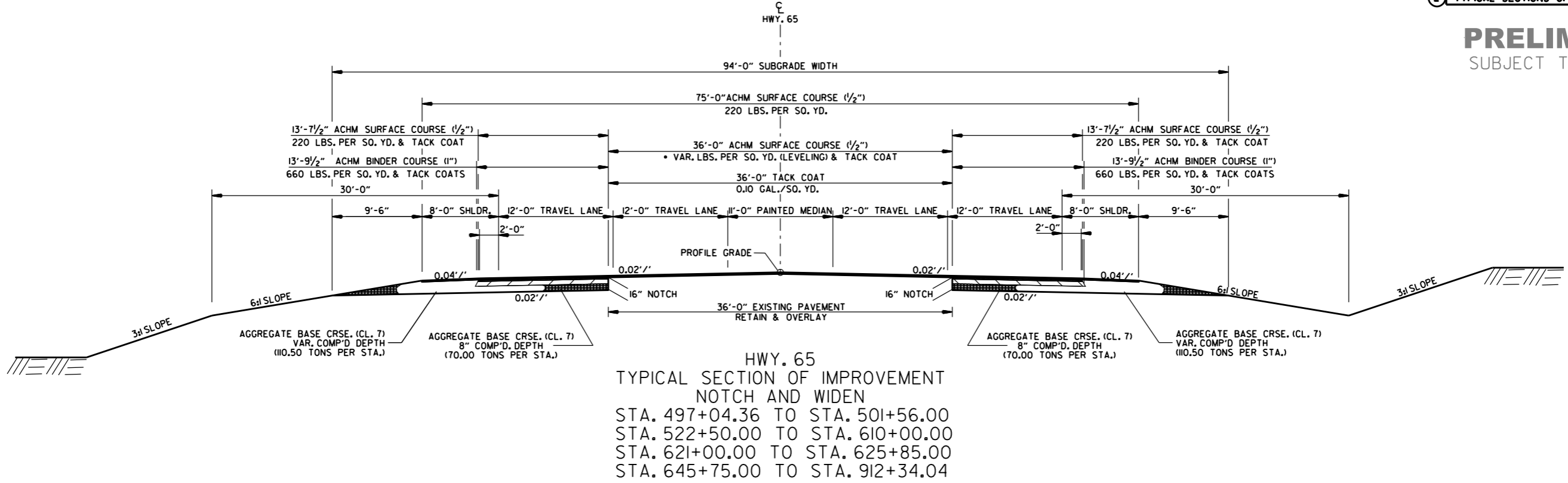
ALTERNATE I
TYPICAL SECTIONS OF IMPROVEMENT

3/17/2016
RCA0801.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	CA0801	

2 TYPICAL SECTIONS OF IMPROVEMENT

PRELIMINARY
SUBJECT TO REVISION



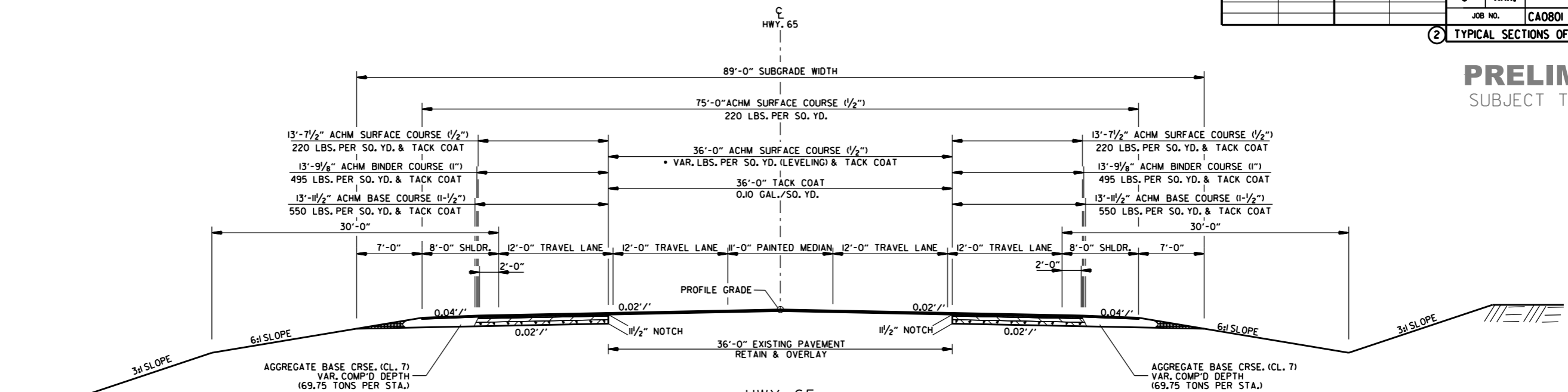
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TYPICAL SECTIONS OF IMPROVEMENT

3/17/2016
RCA0801.DGN

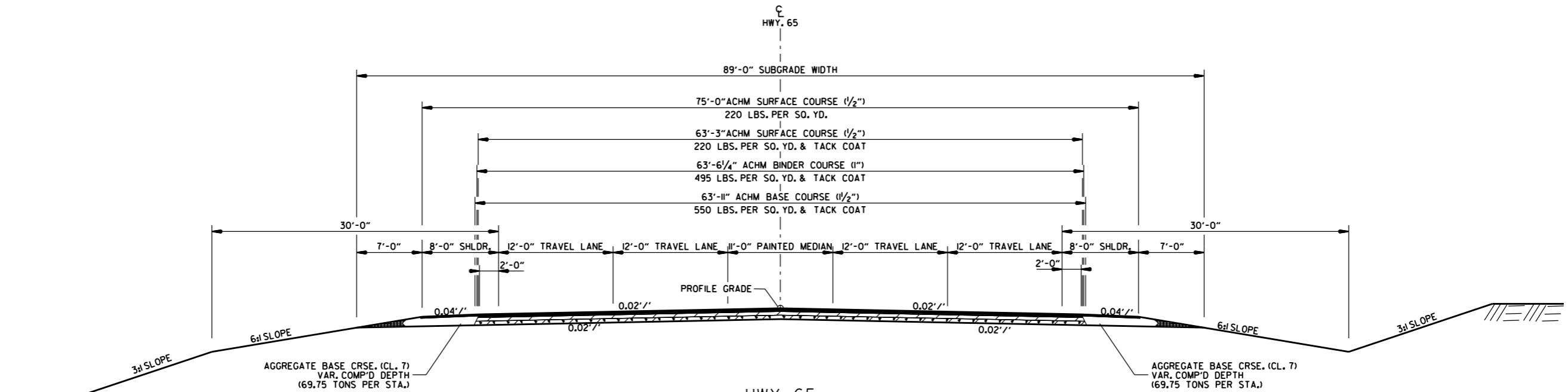
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				6	ARK.			
						JOB NO.	CA0801	

2 TYPICAL SECTIONS OF IMPROVEMENT

PRELIMINARY
SUBJECT TO REVISION



HWY. 65
TYPICAL SECTION OF IMPROVEMENT
NOTCH AND WIDEN
STA. 497+04.36 TO STA. 501+56.00
STA. 522+50.00 TO STA. 610+00.00
STA. 621+00.00 TO STA. 625+85.00
STA. 645+75.00 TO STA. 912+34.04



HWY. 65
TYPICAL SECTION OF IMPROVEMENT
FULL DEPTH
STA. 501+56.00 TO STA. 522+50.00
STA. 610+00.00 TO STA. 621+00.00
STA. 625+85.00 TO STA. 645+75.00

ALTERNATE 3
TYPICAL SECTIONS OF IMPROVEMENT

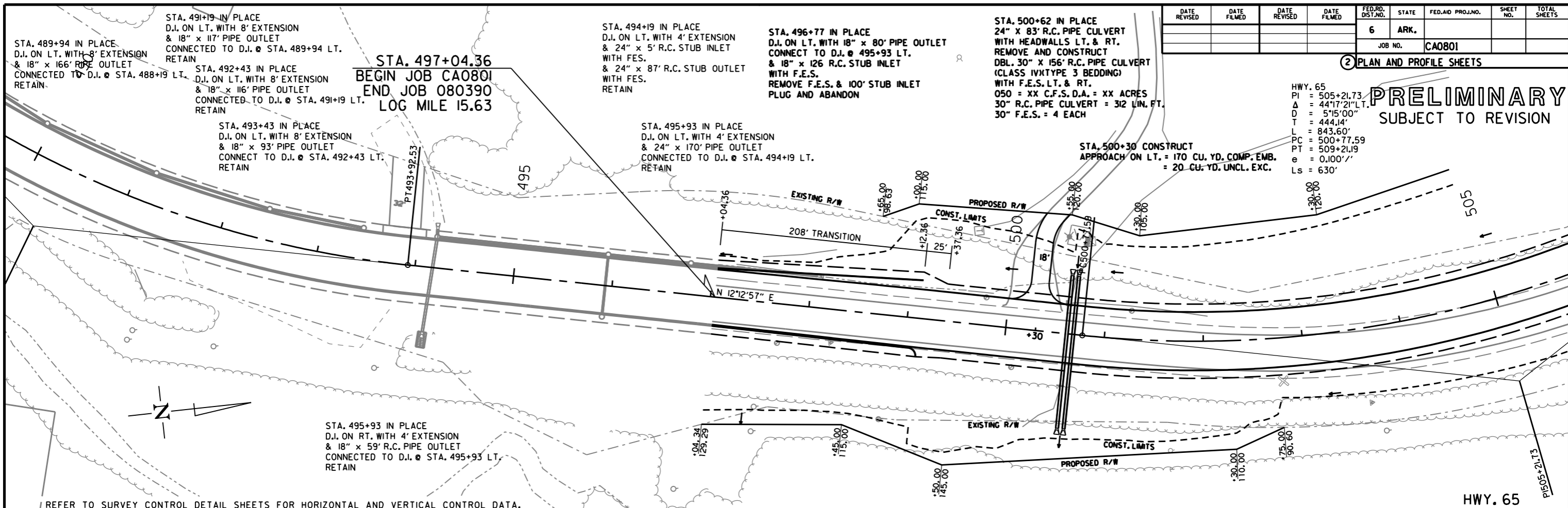
3/17/2016
RCA0801.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	CA0801	

2 PLAN AND PROFILE SHEETS

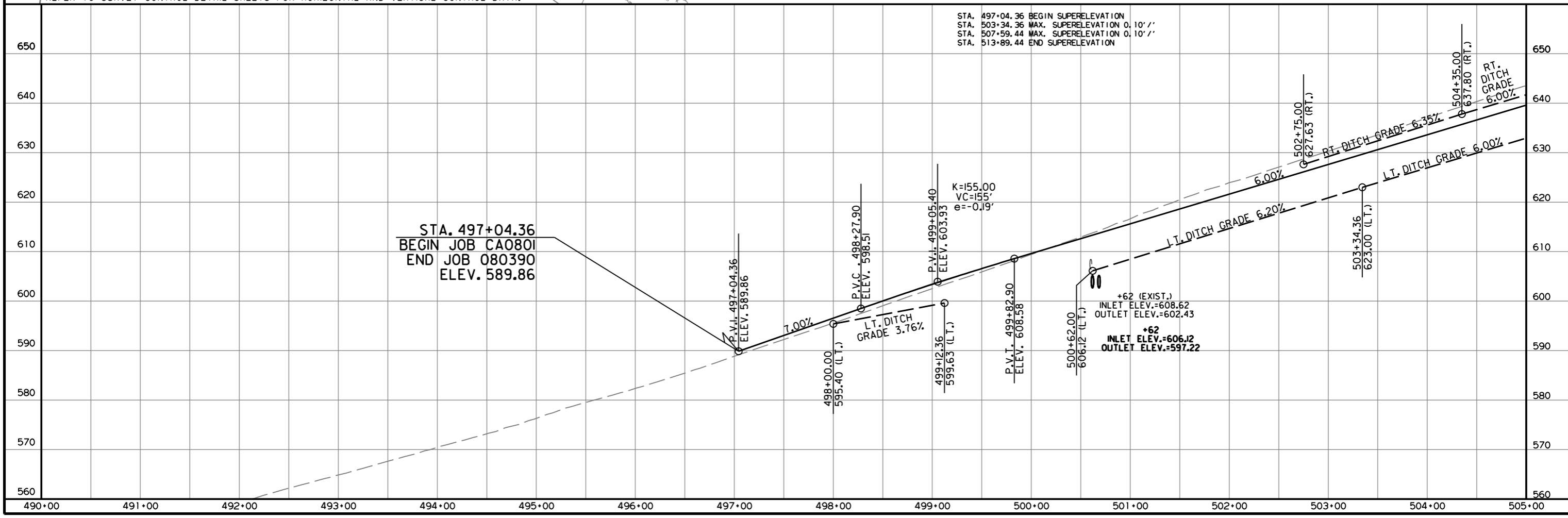
PRELIMINARY
SUBJECT TO REVISION

HWY. 65
 Δ = 505+21.73
 Δ = 44°17'21" LT.
 D = 5°15'00"
 T = 444.14'
 L = 843.60'
 PC = 500+77.59
 PT = 509+21.19
 e = 0.100'/'
 Ls = 630'



REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

HWY. 65



RCA0801.DGN 3/17/2016

HWY. 65
 PI = 505+21.73
 Δ = 44°17'21" L.T.
 D = 5°15'00"
 T = 444.14'
 L = 843.60'
 PC = 500+77.59
 PT = 509+21.19
 e = 0.100'/'
 Ls = 630'

STA. 508+07 IN PLACE
 24" X 9" R.C. PIPE CULVERT
 WITH HEADWALLS LT. & RT.
 REMOVE

STA. 511+04 IN PLACE
 24" X 40" C.M. PIPE CULVERT
 REMOVE AND INSTALL
 24" X 228" PIPE CULVERT
 LT. SIDE DRAIN
 CONSTRUCT APPROACH = 300 CU. YD. UNCL. EXC.

STA. 512+46 INSTALL
 24" X 54" PIPE CULVERT
 LT. SIDE DRAIN
 CONSTRUCT APPROACH = 100 CU. YD. COMP. EMB.
 = 25 CU. YD. UNCL. EXC.

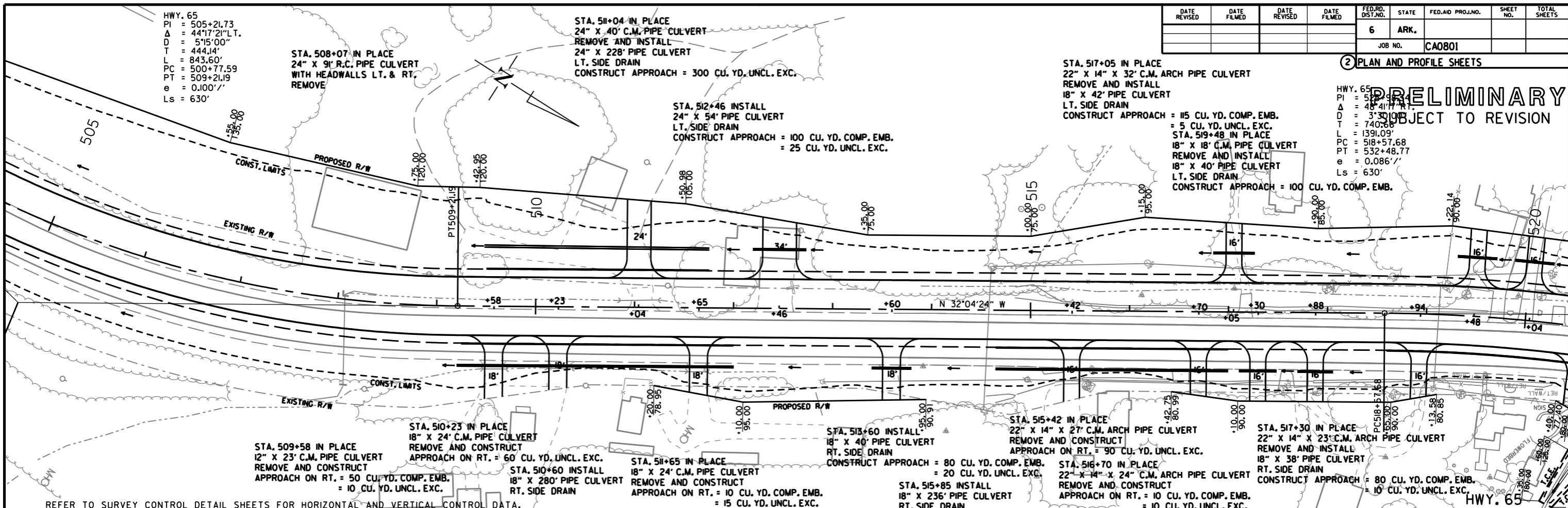
STA. 517+05 IN PLACE
 22" X 14" X 32" C.M. ARCH PIPE CULVERT
 REMOVE AND INSTALL
 18" X 42" PIPE CULVERT
 LT. SIDE DRAIN
 CONSTRUCT APPROACH = 115 CU. YD. COMP. EMB.
 = 5 CU. YD. UNCL. EXC.
 STA. 519+48 IN PLACE
 18" X 18" C.M. PIPE CULVERT
 REMOVE AND INSTALL
 18" X 40" PIPE CULVERT
 LT. SIDE DRAIN
 CONSTRUCT APPROACH = 100 CU. YD. COMP. EMB.

PRELIMINARY
 SUBJECT TO REVISION

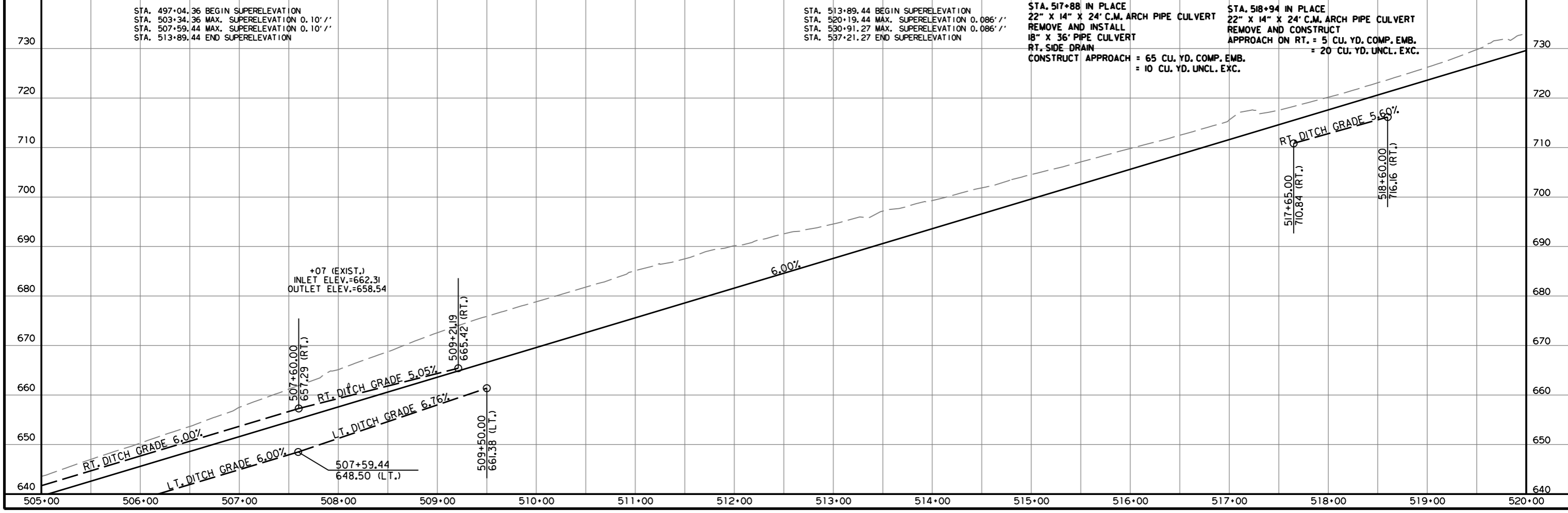
HWY. 65
 PI = 518+57.68
 Δ = 48°41'17" R.T.
 D = 3°33'
 T = 740.66'
 L = 1391.09'
 PC = 518+57.68
 PT = 532+48.77
 e = 0.086'/'
 Ls = 630'

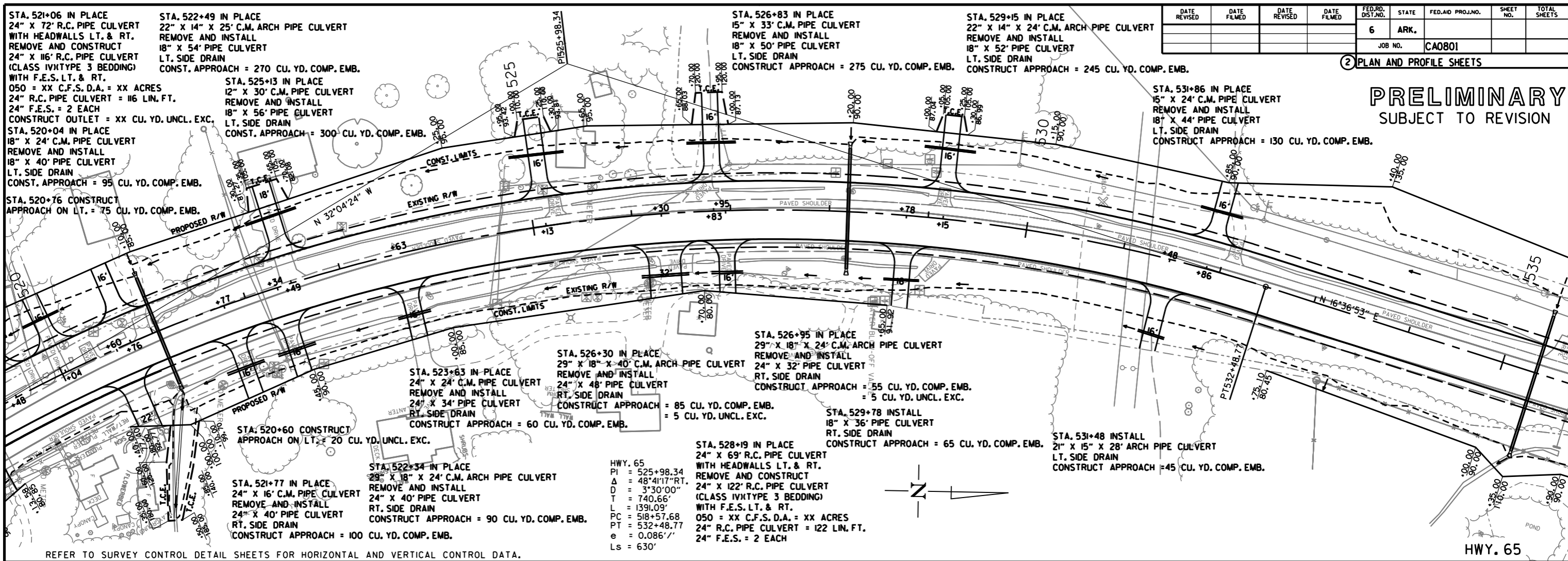
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	CA0801	

2 PLAN AND PROFILE SHEETS



REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

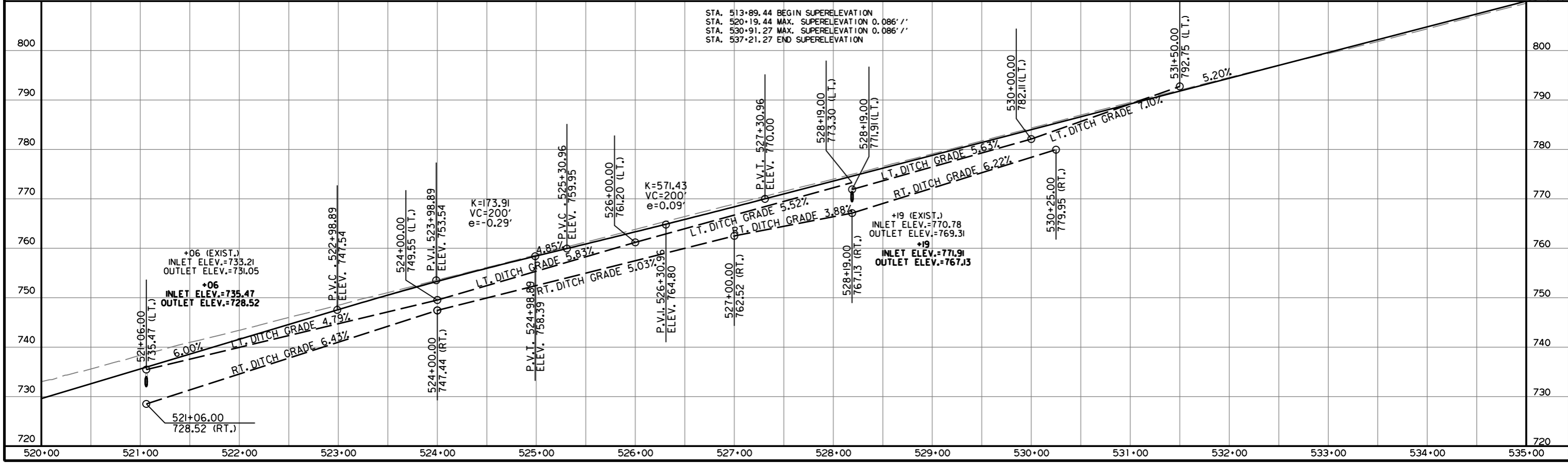
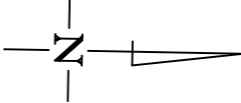




DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. CA0801		

2 PLAN AND PROFILE SHEETS

PRELIMINARY
SUBJECT TO REVISION

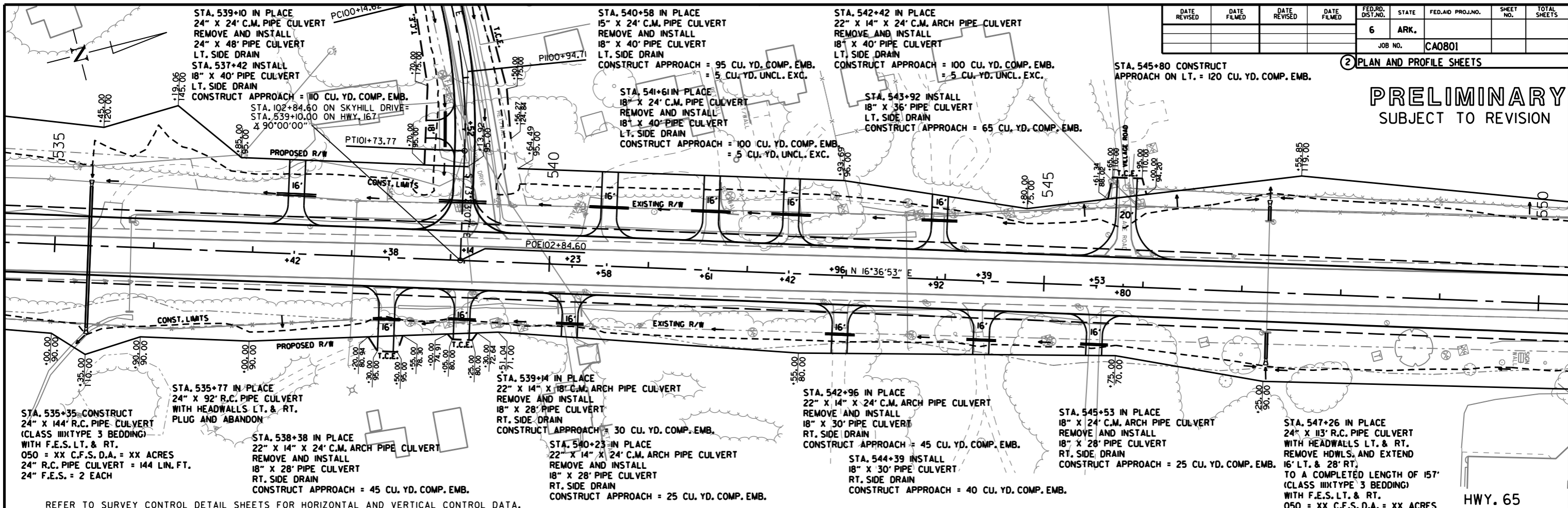


RCA0801.DGN 3/17/2016

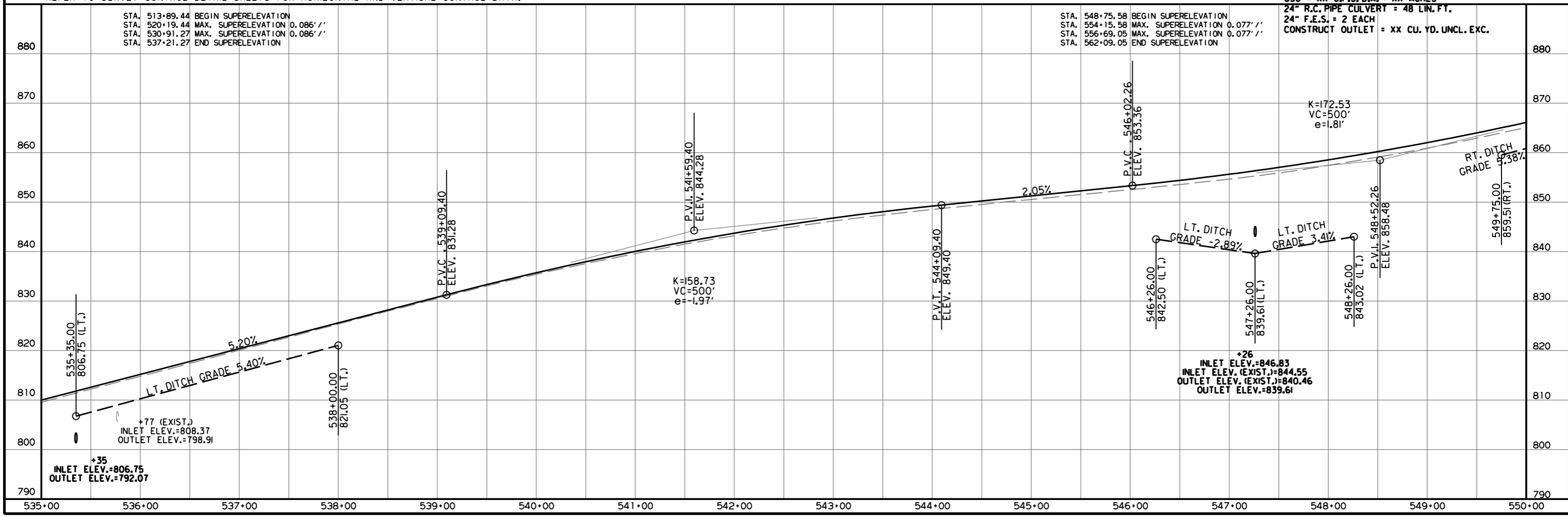
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				6	ARK.			
						JOB NO.	CA0801	

2 PLAN AND PROFILE SHEETS

PRELIMINARY
SUBJECT TO REVISION



REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.



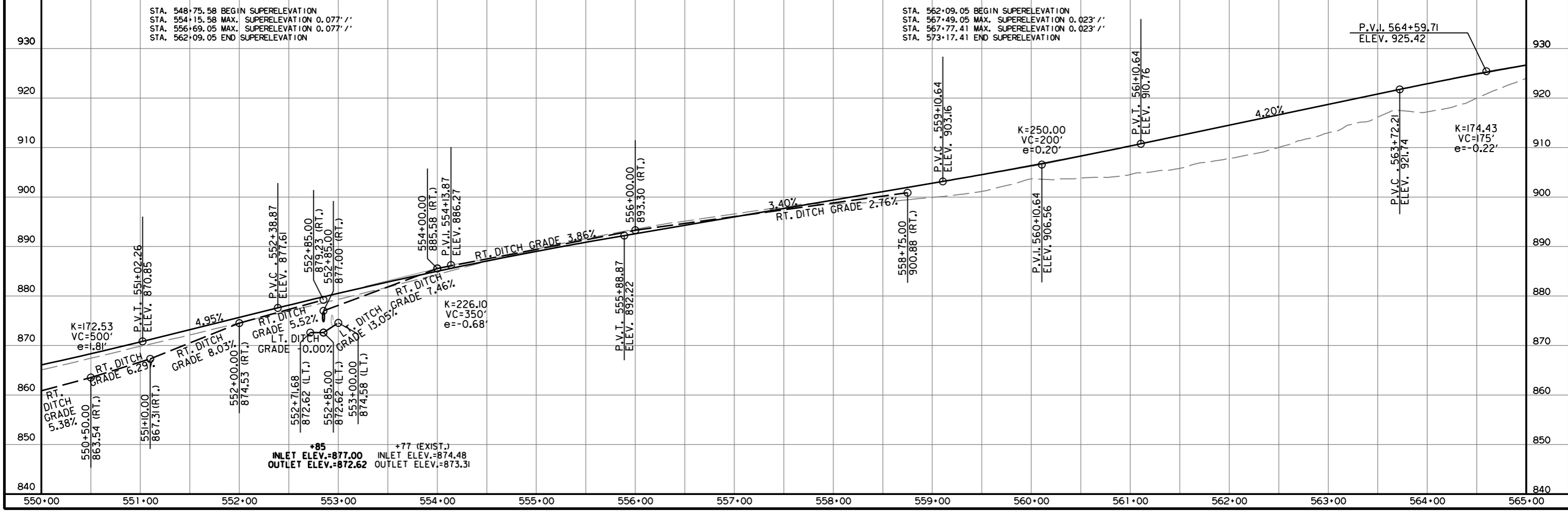
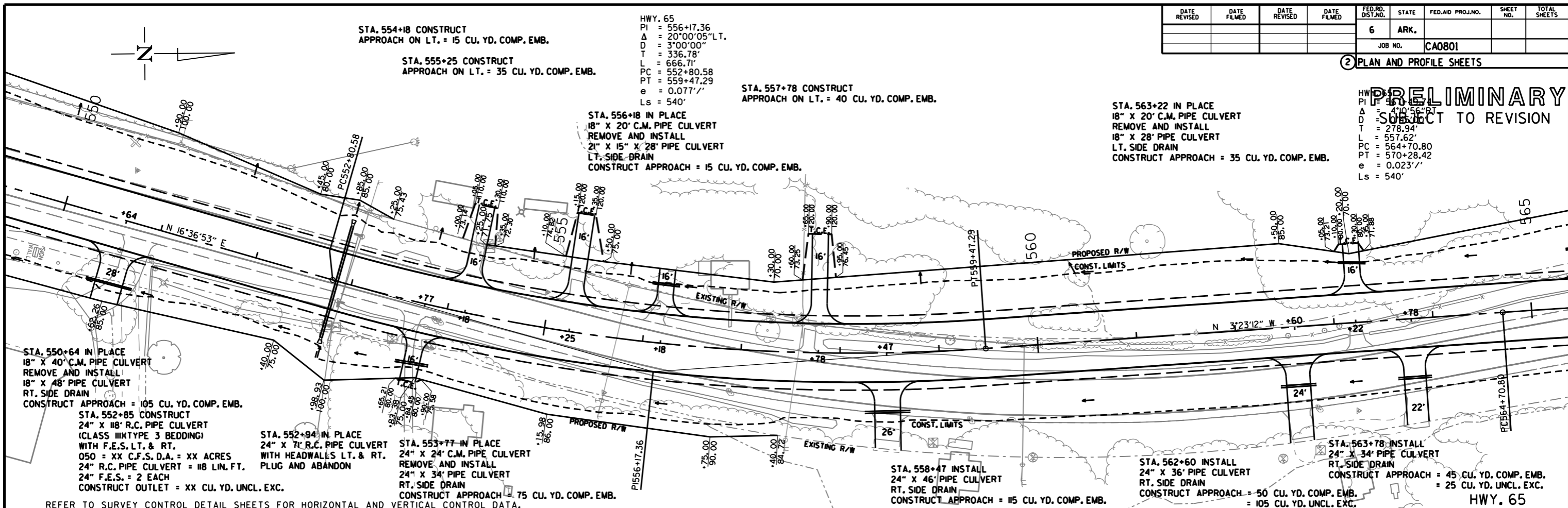
RCA0801.DGN 3/17/2016

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	CA0801	

2 PLAN AND PROFILE SHEETS

**PRELIMINARY
SUBJECT TO REVISION**

HWY. 65
 PI = 561.56
 Δ = 4°10'56" RT
 D = 278.94'
 L = 557.62'
 PC = 564+70.80
 PT = 570+28.42
 e = 0.023' /'
 Ls = 540'



3/17/2016
 RCA0801.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	CA0801	

② PLAN AND PROFILE SHEETS

STA. 565+58 IN PLACE
18" X 24" C.M. PIPE CULVERT
REMOVE AND INSTALL
18" X 40" PIPE CULVERT
LT. SIDE DRAIN
CONSTRUCT APPROACH = 105 CU. YD. COMP. EMB.
= 10 CU. YD. UNCL. EXC.

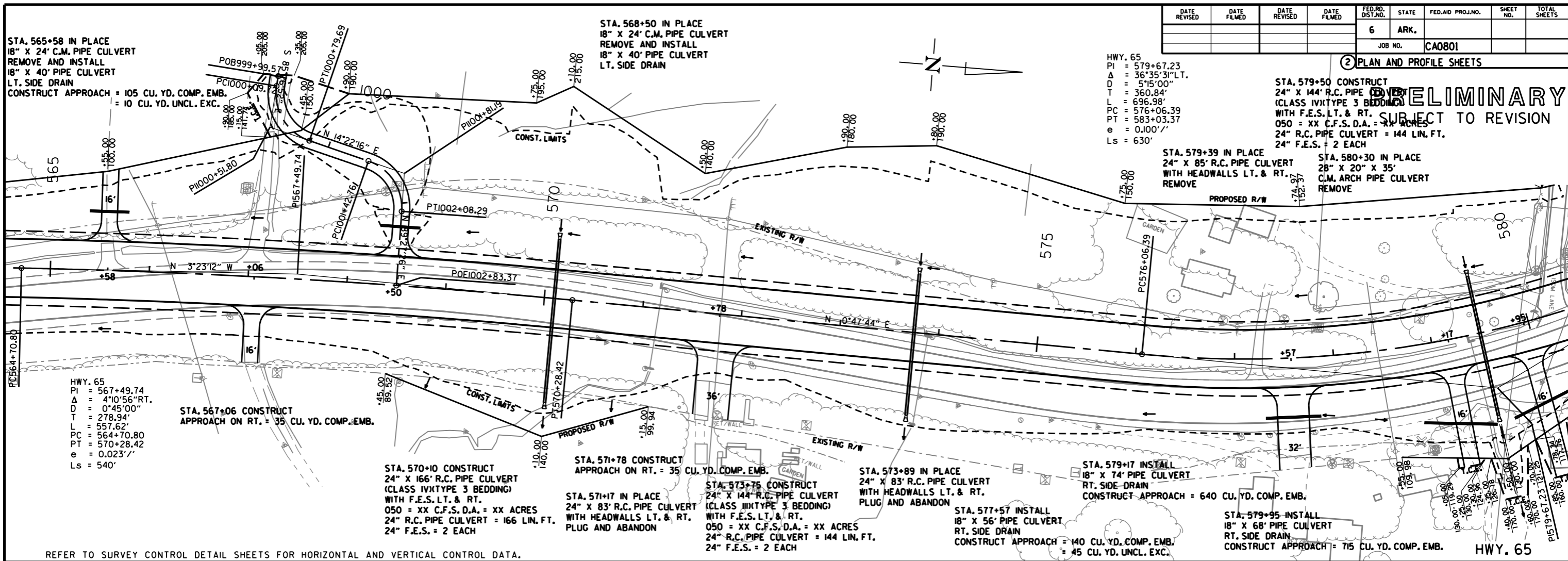
STA. 568+50 IN PLACE
18" X 24" C.M. PIPE CULVERT
REMOVE AND INSTALL
18" X 40" PIPE CULVERT
LT. SIDE DRAIN

HWY. 65
PI = 579+67.23
Δ = 36°35'31" LT.
D = 5'15"00"
L = 360.84'
PC = 576+06.39
PT = 583+03.37
e = 0.100'/'
Ls = 630'

STA. 579+50 CONSTRUCT
24" X 144" R.C. PIPE CULVERT
(CLASS IV) TYPE 3 BEDDING
WITH F.E.S. LT. & RT.
050 = XX C.F.S. D.A. = XX ACRES
24" R.C. PIPE CULVERT = 144 LIN. FT.
24" F.E.S. = 2 EACH

STA. 579+39 IN PLACE
24" X 85" R.C. PIPE CULVERT
WITH HEADWALLS LT. & RT.
REMOVE

STA. 580+30 IN PLACE
28" X 20" X 35'
C.M. ARCH PIPE CULVERT
REMOVE



STA. 567+06 CONSTRUCT
APPROACH ON RT. = 35 CU. YD. COMP. EMB.

STA. 570+10 CONSTRUCT
24" X 166" R.C. PIPE CULVERT
(CLASS IV) TYPE 3 BEDDING
WITH F.E.S. LT. & RT.
050 = XX C.F.S. D.A. = XX ACRES
24" R.C. PIPE CULVERT = 166 LIN. FT.
24" F.E.S. = 2 EACH

STA. 571+78 CONSTRUCT
APPROACH ON RT. = 35 CU. YD. COMP. EMB.

STA. 571+17 IN PLACE
24" X 83" R.C. PIPE CULVERT
WITH HEADWALLS LT. & RT.
PLUG AND ABANDON

STA. 573+75 CONSTRUCT
24" X 144" R.C. PIPE CULVERT
(CLASS III) TYPE 3 BEDDING
WITH F.E.S. LT. & RT.
050 = XX C.F.S. D.A. = XX ACRES
24" R.C. PIPE CULVERT = 144 LIN. FT.
24" F.E.S. = 2 EACH

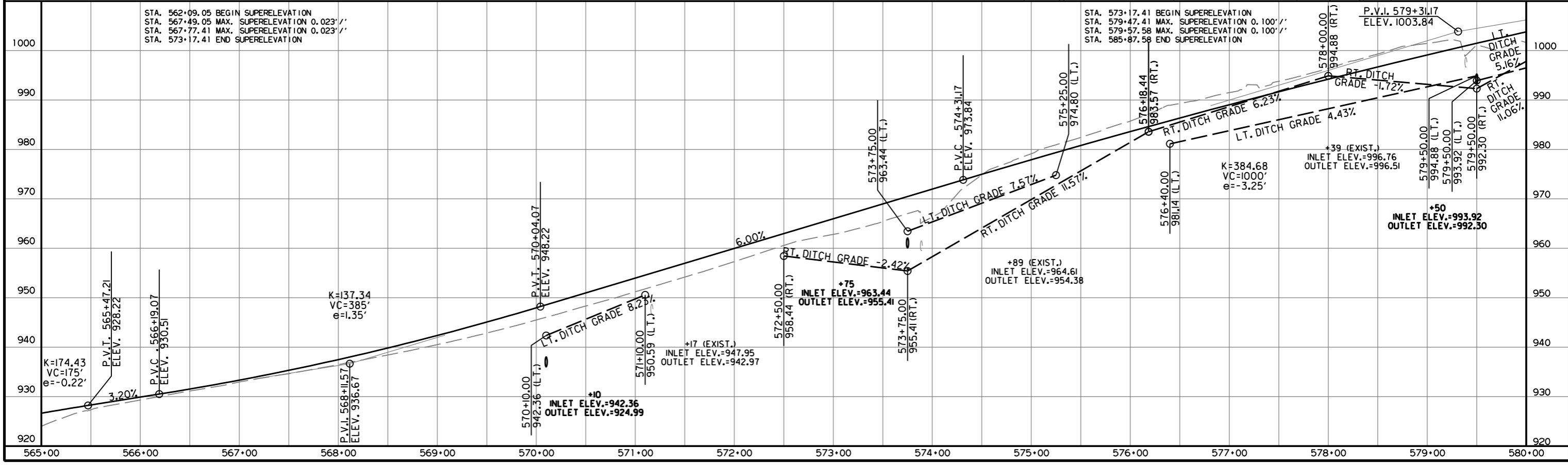
STA. 573+89 IN PLACE
24" X 83" R.C. PIPE CULVERT
WITH HEADWALLS LT. & RT.
PLUG AND ABANDON

STA. 579+17 INSTALL
18" X 74" PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 640 CU. YD. COMP. EMB.

STA. 577+57 INSTALL
18" X 56" PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 140 CU. YD. COMP. EMB.
= 45 CU. YD. UNCL. EXC.

STA. 579+95 INSTALL
18" X 68" PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 715 CU. YD. COMP. EMB.

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.



STA. 562+09.05 BEGIN SUPERELEVATION
STA. 567+49.05 MAX. SUPERELEVATION 0.023'/'
STA. 567+77.41 MAX. SUPERELEVATION 0.023'/'
STA. 573+17.41 END SUPERELEVATION

STA. 573+17.41 BEGIN SUPERELEVATION
STA. 579+47.41 MAX. SUPERELEVATION 0.100'/'
STA. 579+57.58 MAX. SUPERELEVATION 0.100'/'
STA. 585+87.58 END SUPERELEVATION

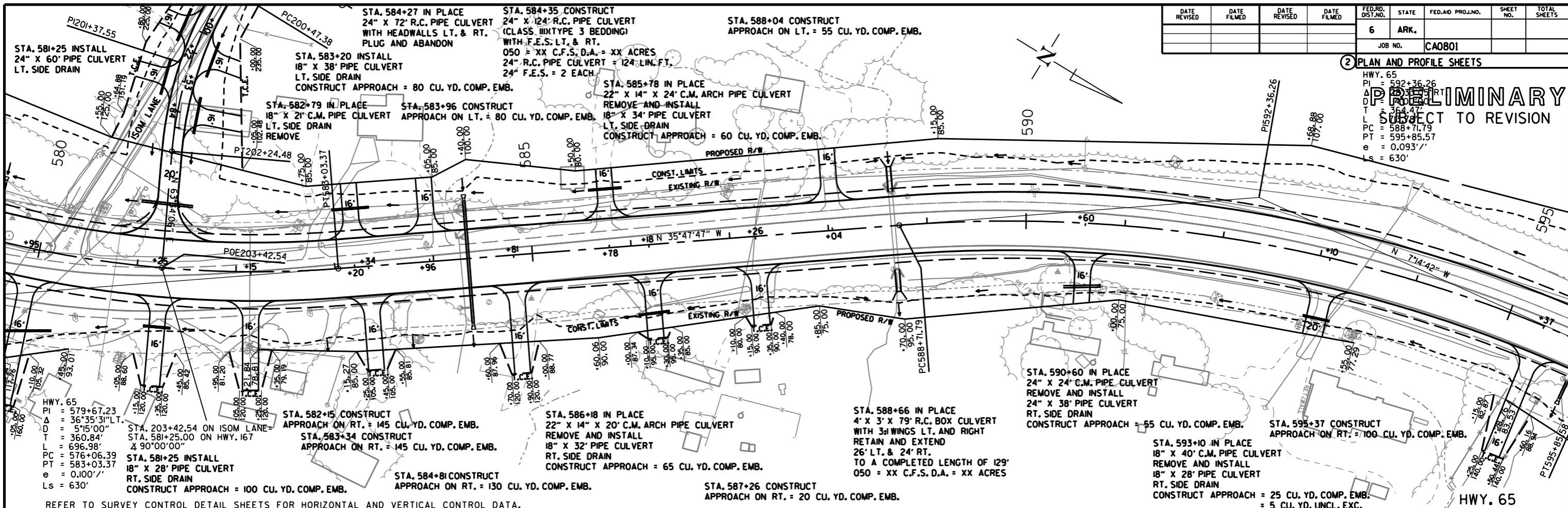
RCA0801.DGN 3/17/2016

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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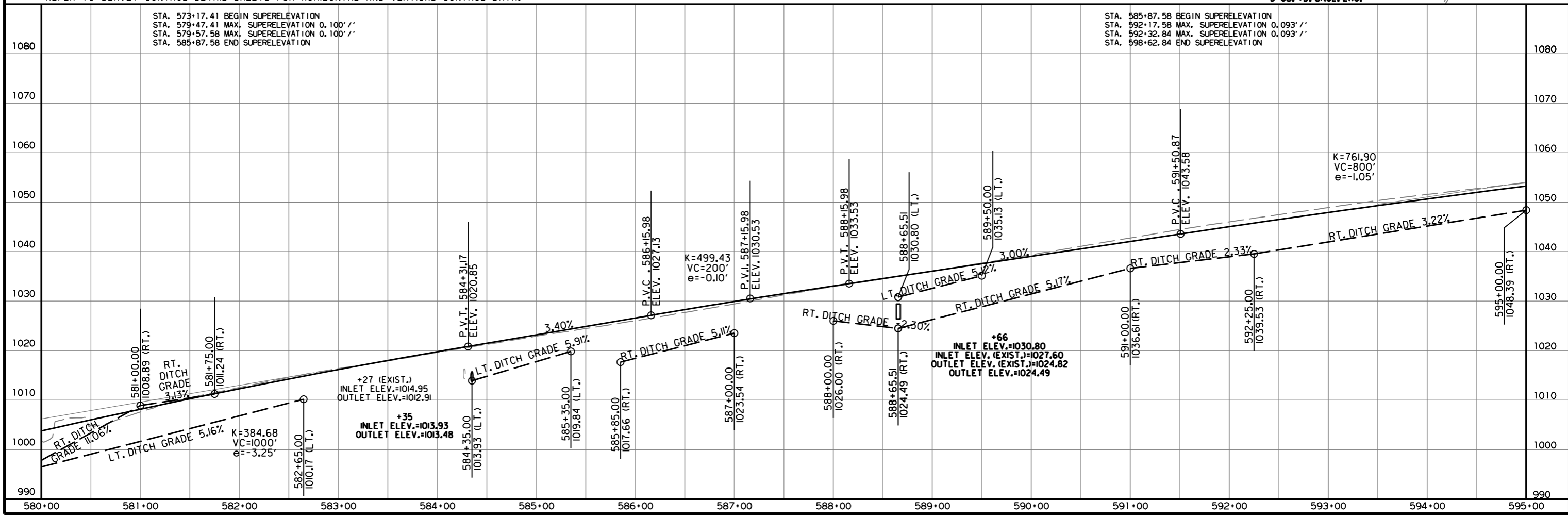
2 PLAN AND PROFILE SHEETS

PRELIMINARY
SUBJECT TO REVISION

HWY. 65
 PI = 592+36.26
 Δ = 3.14°
 D = 364.47'
 L = 364.47'
 PC = 588+71.79
 PT = 595+85.57
 e = 0.093'/'
 Ls = 630'



REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.



RCA0801.DGN 3/17/2016

HWY. 65
 PI = 592+36.26
 Δ = 28°33'05" RT.
 D = 4'00"00"
 T = 364.47'
 L = 713.78'
 PC = 588+71.79
 PT = 595+85.57
 e = 0.093'/'
 Ls = 630'

STA. 595+82 IN PLACE
 24" X 72" R.C. PIPE CULVERT
 WITH HEADWALLS LT. & RT.
 REMOVE HDWLS. AND EXTEND
 26' LT. & 20' RT.
 TO A COMPLETED LENGTH OF 118'
 (CLASS III TYPE 3 BEDDING)
 WITH F.E.S. LT. & RT.
 050 = XX C.F.S. D.A. = XX ACRES
 24" R.C. PIPE CULVERT = 50 LIN. FT.
 24" F.E.S. = 2 EACH

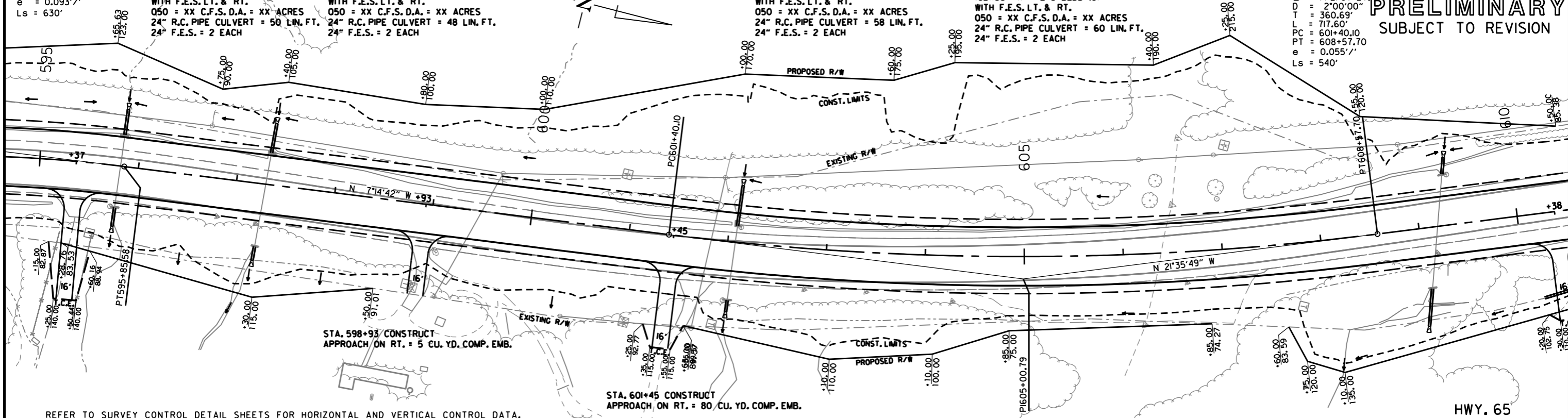
STA. 597+30 IN PLACE
 24" X 96" R.C. PIPE CULVERT
 WITH HEADWALLS LT. & RT.
 REMOVE HDWLS. AND EXTEND
 30' LT. & 14' RT.
 TO A COMPLETED LENGTH OF 140'
 (CLASS III TYPE 3 BEDDING)
 WITH F.E.S. LT. & RT.
 050 = XX C.F.S. D.A. = XX ACRES
 24" R.C. PIPE CULVERT = 48 LIN. FT.
 24" F.E.S. = 2 EACH

STA. 602+08 IN PLACE
 24" X 76" R.C. PIPE CULVERT
 WITH HEADWALLS LT. & RT.
 REMOVE HDWLS. AND EXTEND
 42' LT. & 12' RT.
 TO A COMPLETED LENGTH OF 130'
 (CLASS III TYPE 3 BEDDING)
 WITH F.E.S. LT. & RT.
 050 = XX C.F.S. D.A. = XX ACRES
 24" R.C. PIPE CULVERT = 58 LIN. FT.
 24" F.E.S. = 2 EACH

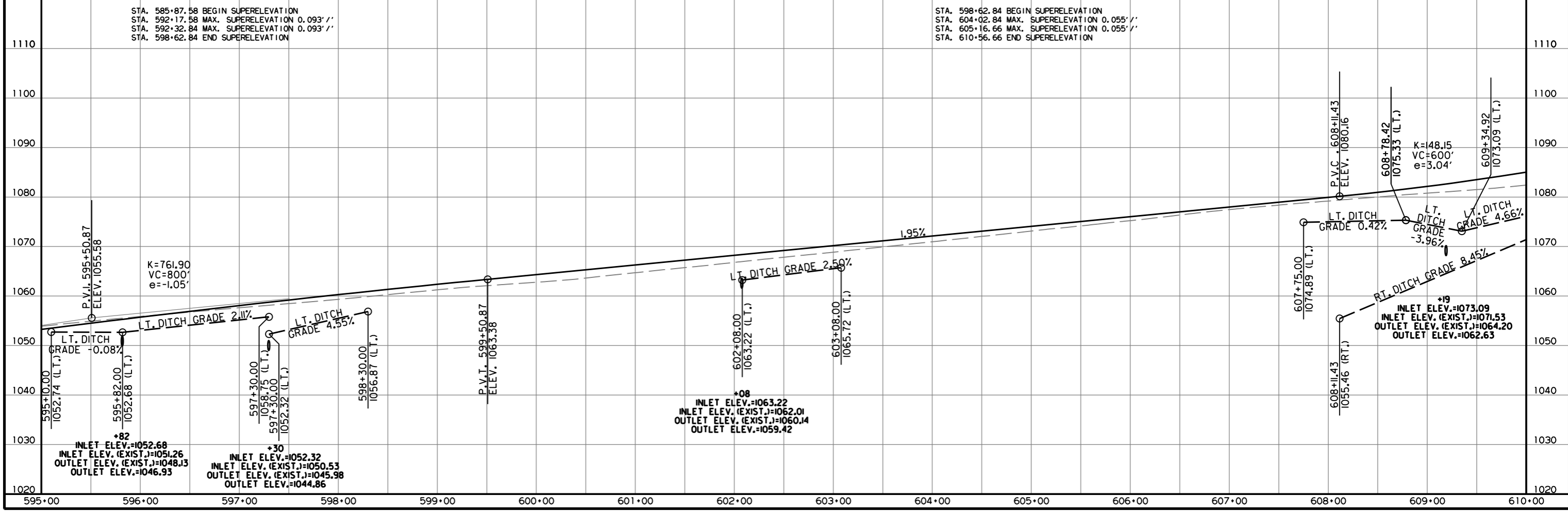
STA. 609+19 IN PLACE
 24" X 116" R.C. PIPE CULVERT
 ON 10° LT. FWD. SKEW
 WITH HEADWALLS LT. & RT.
 REMOVE HDWLS. AND EXTEND
 18' LT. & 38' RT.
 TO A COMPLETED LENGTH OF 172'
 (CLASS III TYPE 3 BEDDING)
 WITH F.E.S. LT. & RT.
 050 = XX C.F.S. D.A. = XX ACRES
 24" R.C. PIPE CULVERT = 60 LIN. FT.
 24" F.E.S. = 2 EACH

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2 PLAN AND PROFILE SHEETS
 PRELIMINARY
 SUBJECT TO REVISION
 HWY. 65
 PI = 605+00.79
 Δ = 14°21'07" LT.
 D = 2'00"00"
 T = 360.69'
 L = 717.60'
 PC = 601+40.10
 PT = 608+57.70
 e = 0.055'/'
 Ls = 540'



REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.



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2 PLAN AND PROFILE SHEETS

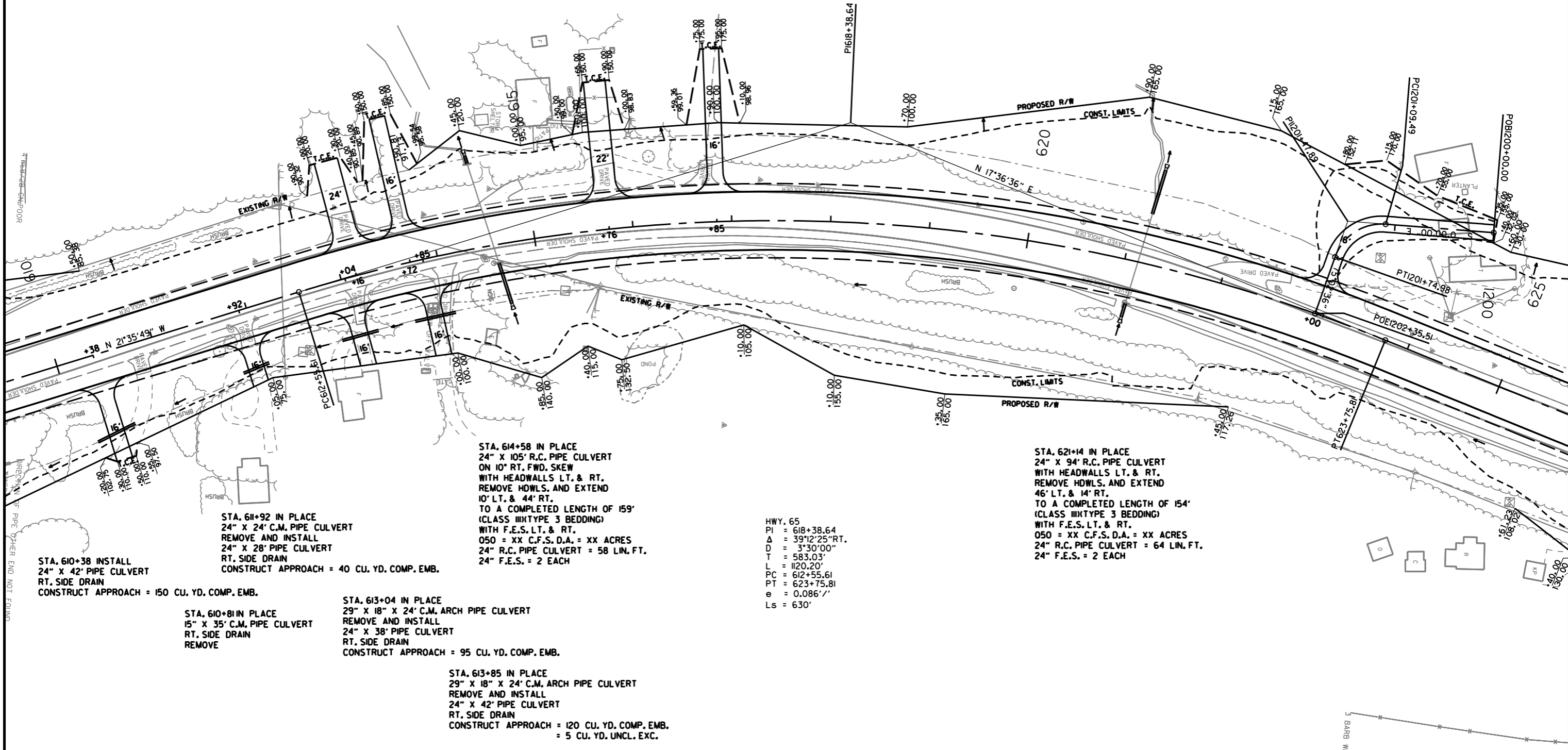
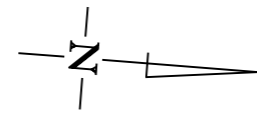
PRELIMINARY
SUBJECT TO REVISION

STA. 613+16 CONSTRUCT
APPROACH ON LT. = 200 CU. YD. COMP. EMB.

STA. 613+72 CONSTRUCT
APPROACH ON LT. = 395 CU. YD. COMP. EMB.

STA. 615+76 CONSTRUCT
APPROACH ON LT. = 380 CU. YD. COMP. EMB.

STA. 616+85 CONSTRUCT
APPROACH ON LT. = 560 CU. YD. COMP. EMB.



STA. 611+92 IN PLACE
24" X 24" C.M. PIPE CULVERT
REMOVE AND INSTALL
24" X 28" PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 40 CU. YD. COMP. EMB.

STA. 610+38 INSTALL
24" X 42" PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 150 CU. YD. COMP. EMB.

STA. 610+81 IN PLACE
15" X 35" C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 613+04 IN PLACE
29" X 18" X 24" C.M. ARCH PIPE CULVERT
REMOVE AND INSTALL
24" X 38" PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 95 CU. YD. COMP. EMB.

STA. 613+85 IN PLACE
29" X 18" X 24" C.M. ARCH PIPE CULVERT
REMOVE AND INSTALL
24" X 42" PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 120 CU. YD. COMP. EMB.
= 5 CU. YD. UNCL. EXC.

STA. 614+58 IN PLACE
24" X 105' R.C. PIPE CULVERT
ON 10° RT. FWD. SKEW
WITH HEADWALLS LT. & RT.
REMOVE HDWLS. AND EXTEND
10' LT. & 44' RT.
TO A COMPLETED LENGTH OF 159'
(CLASS III TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
050 = XX C.F.S. D.A. = XX ACRES
24" R.C. PIPE CULVERT = 58 LIN. FT.
24" F.E.S. = 2 EACH

HWY. 65
PI = 618+38.64
Δ = 39°12'25" RT.
D = 3°30'00"
T = 583.03'
L = 1120.20'
PC = 612+55.61
PT = 623+75.81
e = 0.086'/'
Ls = 630'

STA. 621+14 IN PLACE
24" X 94' R.C. PIPE CULVERT
WITH HEADWALLS LT. & RT.
REMOVE HDWLS. AND EXTEND
46' LT. & 14' RT.
TO A COMPLETED LENGTH OF 154'
(CLASS III TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
050 = XX C.F.S. D.A. = XX ACRES
24" R.C. PIPE CULVERT = 64 LIN. FT.
24" F.E.S. = 2 EACH

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

PLAN AND PROFILE SHEETS

3/17/2016

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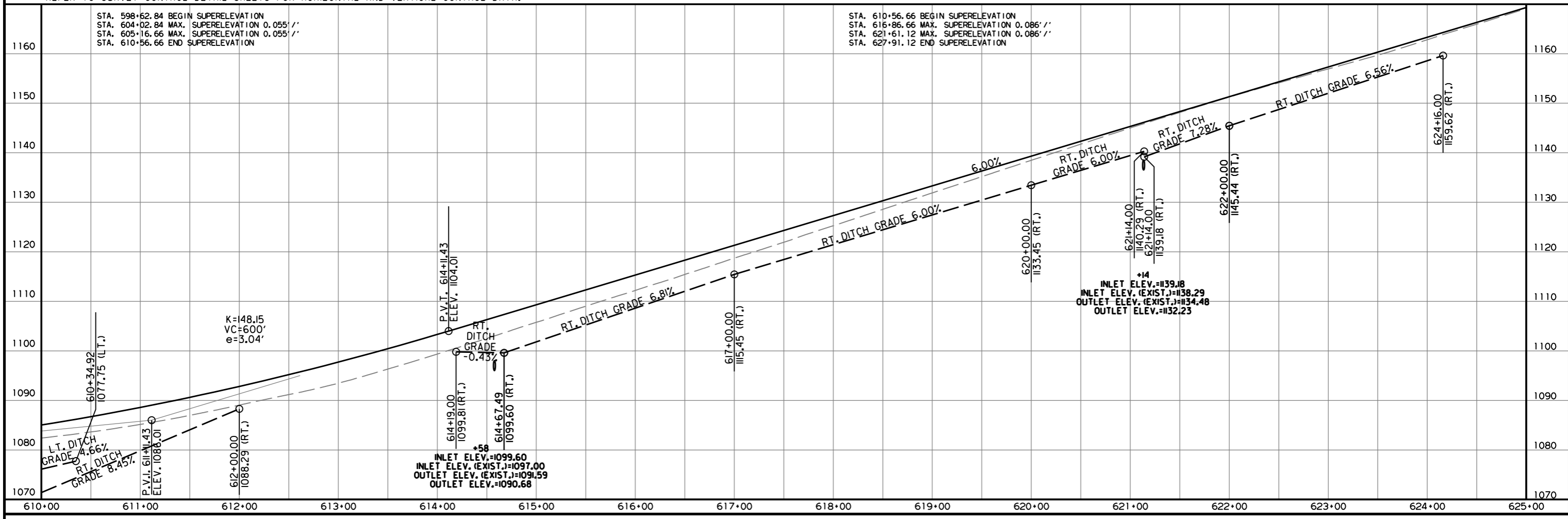
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REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

HWY. 65



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3/17/20160801.DGN

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PLAN AND PROFILE SHEETS

STA. 628+84 CONSTRUCT
24" X 136" R.C. PIPE CULVERT
(CLASS III TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
050 = XX C.F.S. D.A. = XX ACRES
24" R.C. PIPE CULVERT = 136 LIN. FT.
24" F.E.S. = 2 EACH

STA. 629+12 IN PLACE
24" X 69" R.C. PIPE CULVERT
WITH HEADWALLS LT. & RT.
PLUG AND ABANDON

STA. 631+35 INSTALL
18" X 32" PIPE CULVERT
LT. SIDE DRAIN

HWY. 65
PI = 634+07.79
Δ = 9°02'34" LT.
D = 2'15" 00"
T = 201.37'
L = 401.89'
PC = 632+06.42
PT = 636+08.31
e = 0.061' / '
Ls = 540'

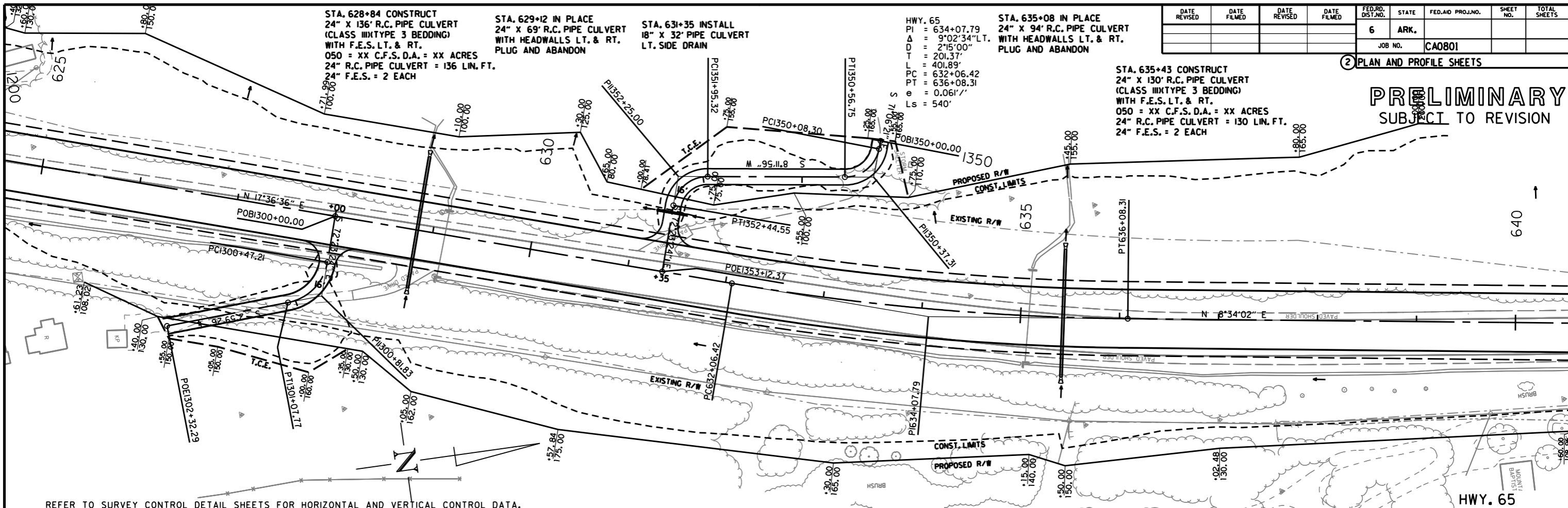
STA. 635+08 IN PLACE
24" X 94" R.C. PIPE CULVERT
WITH HEADWALLS LT. & RT.
PLUG AND ABANDON

STA. 635+43 CONSTRUCT
24" X 130" R.C. PIPE CULVERT
(CLASS III TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
050 = XX C.F.S. D.A. = XX ACRES
24" R.C. PIPE CULVERT = 130 LIN. FT.
24" F.E.S. = 2 EACH

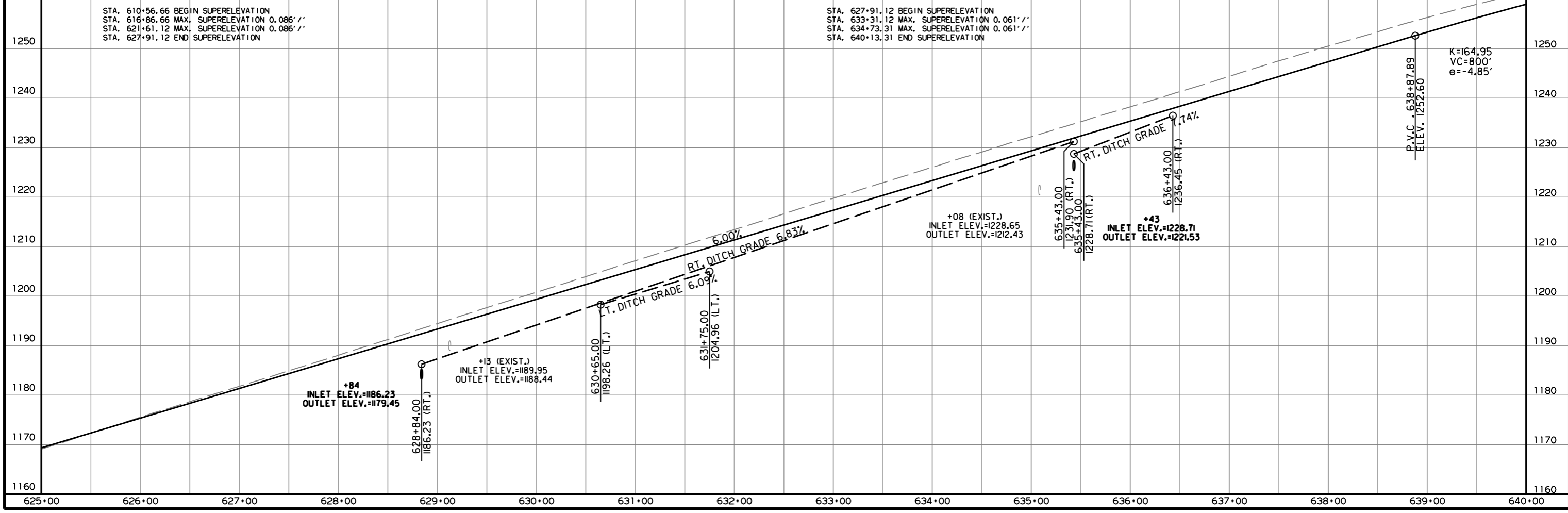
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2 PLAN AND PROFILE SHEETS

PRELIMINARY
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REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

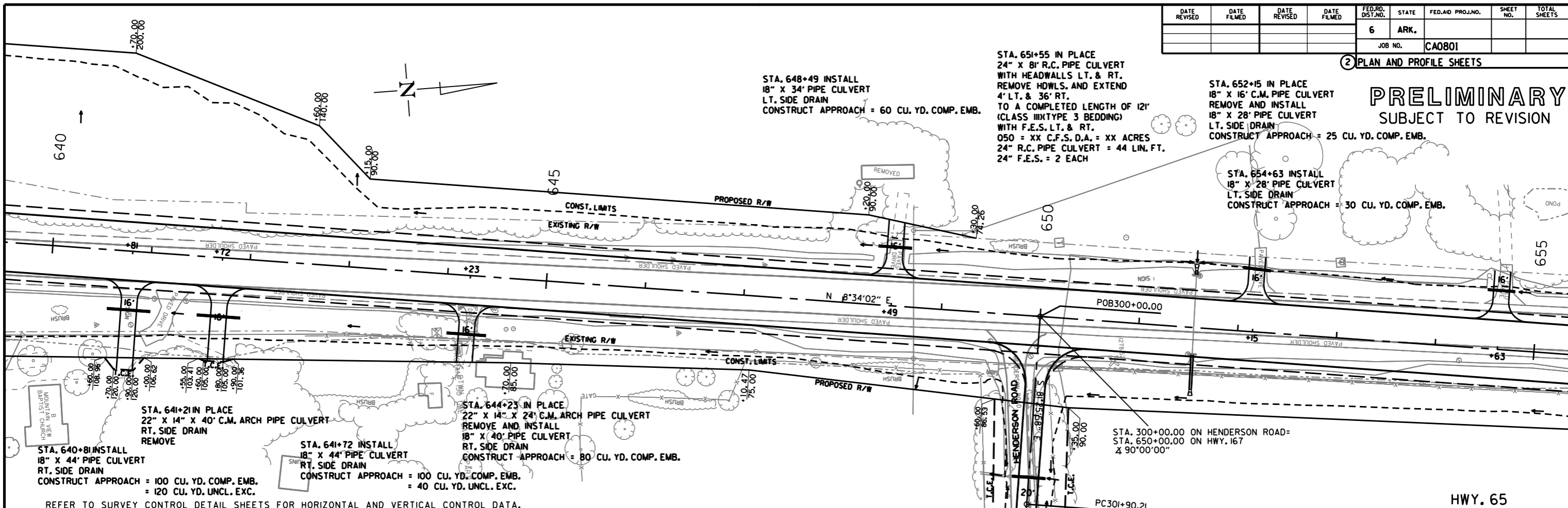


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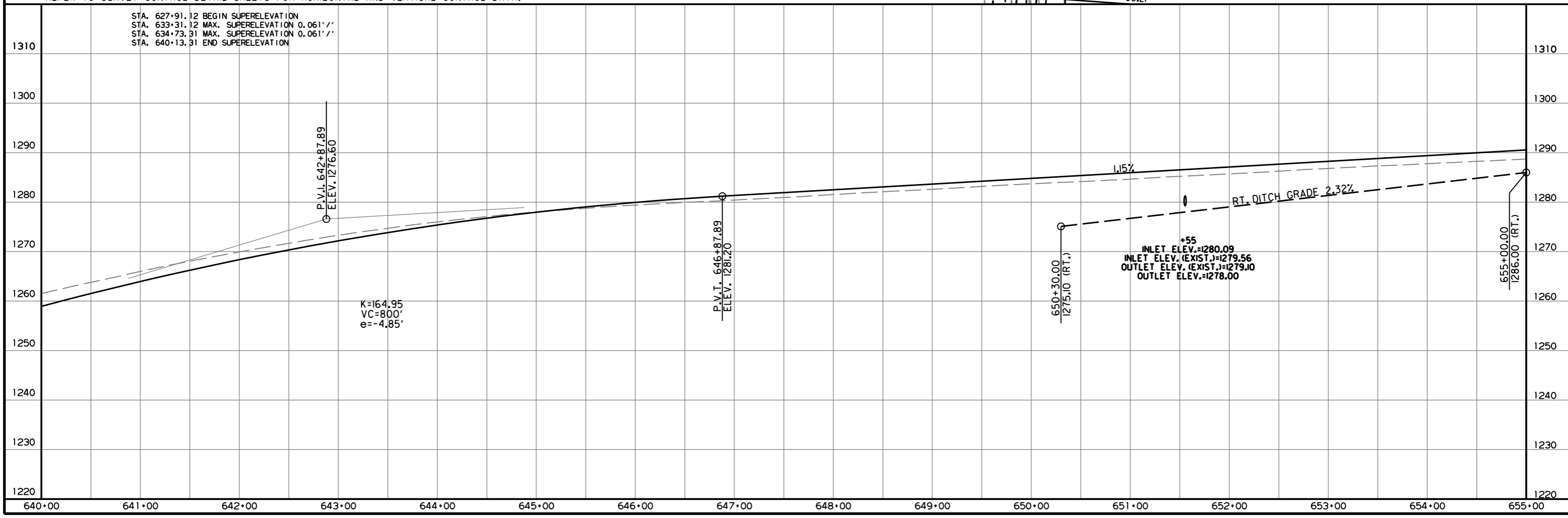
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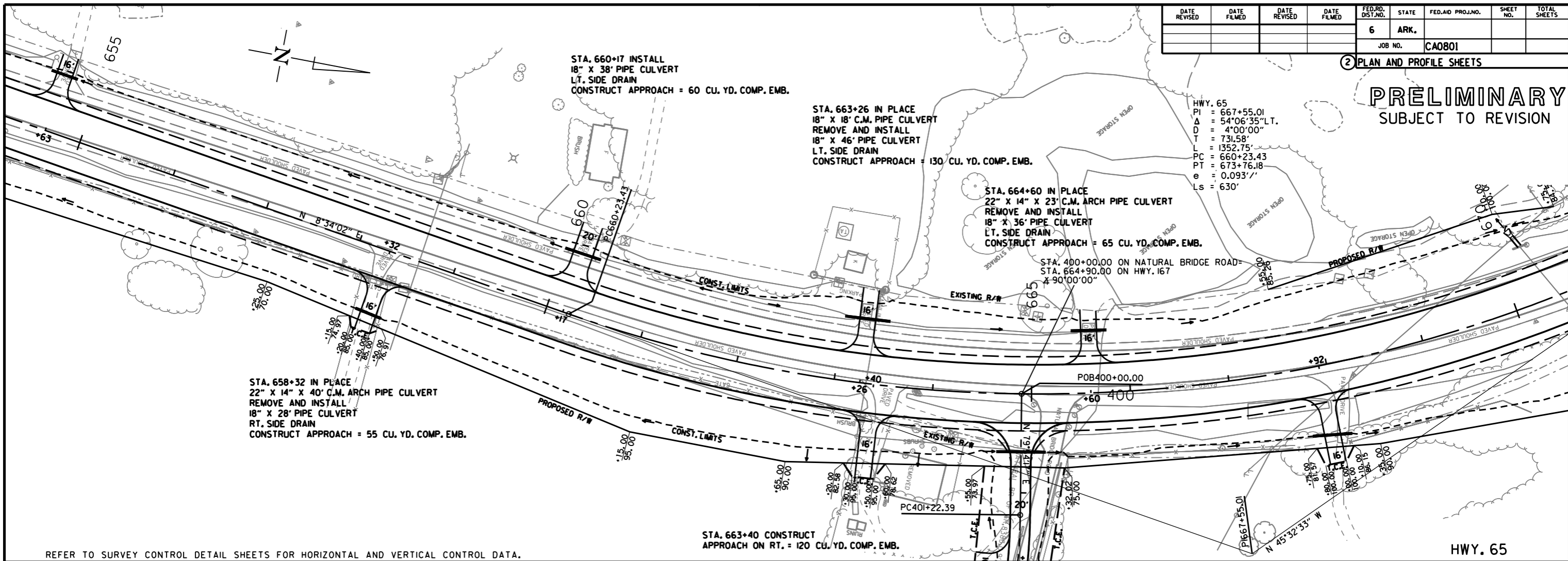


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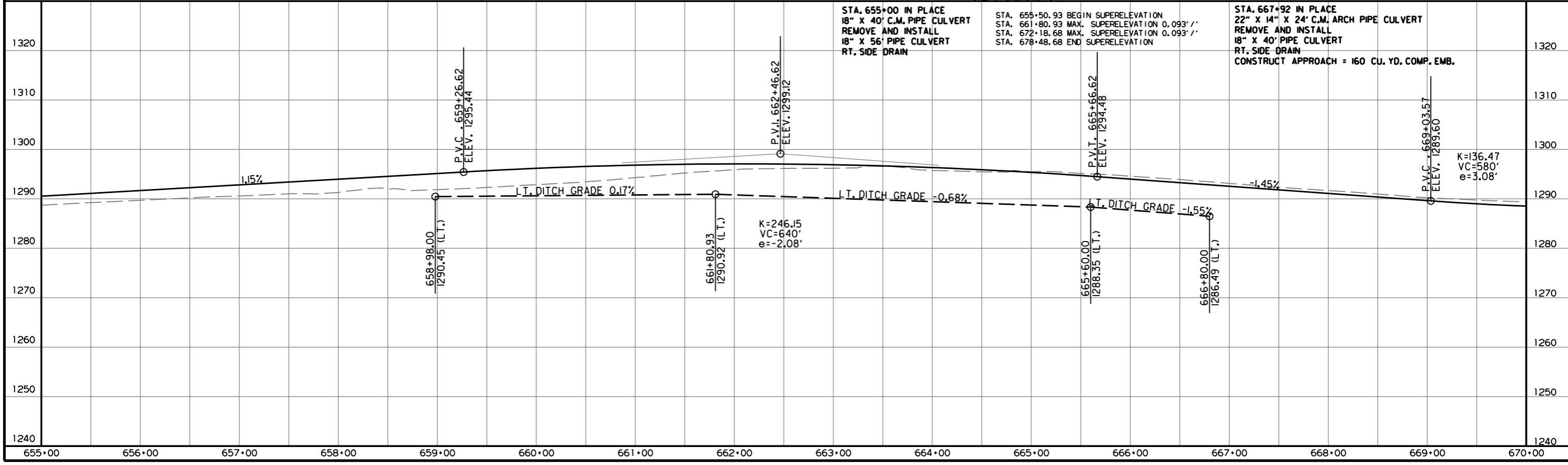
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2 PLAN AND PROFILE SHEETS

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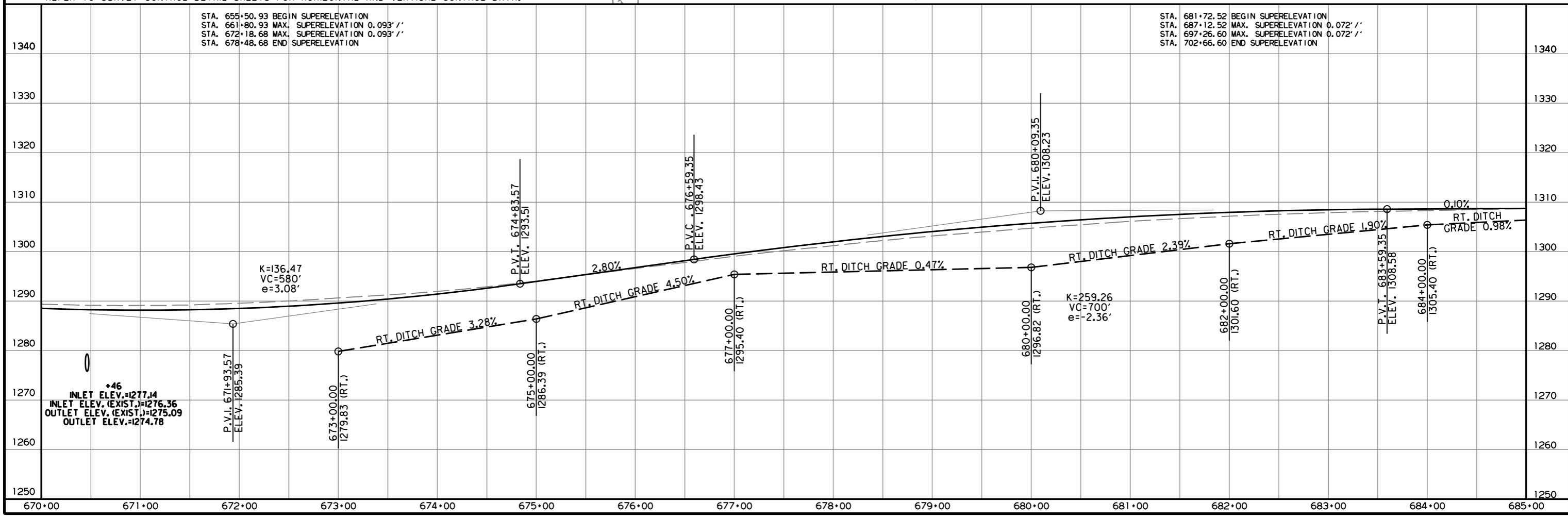
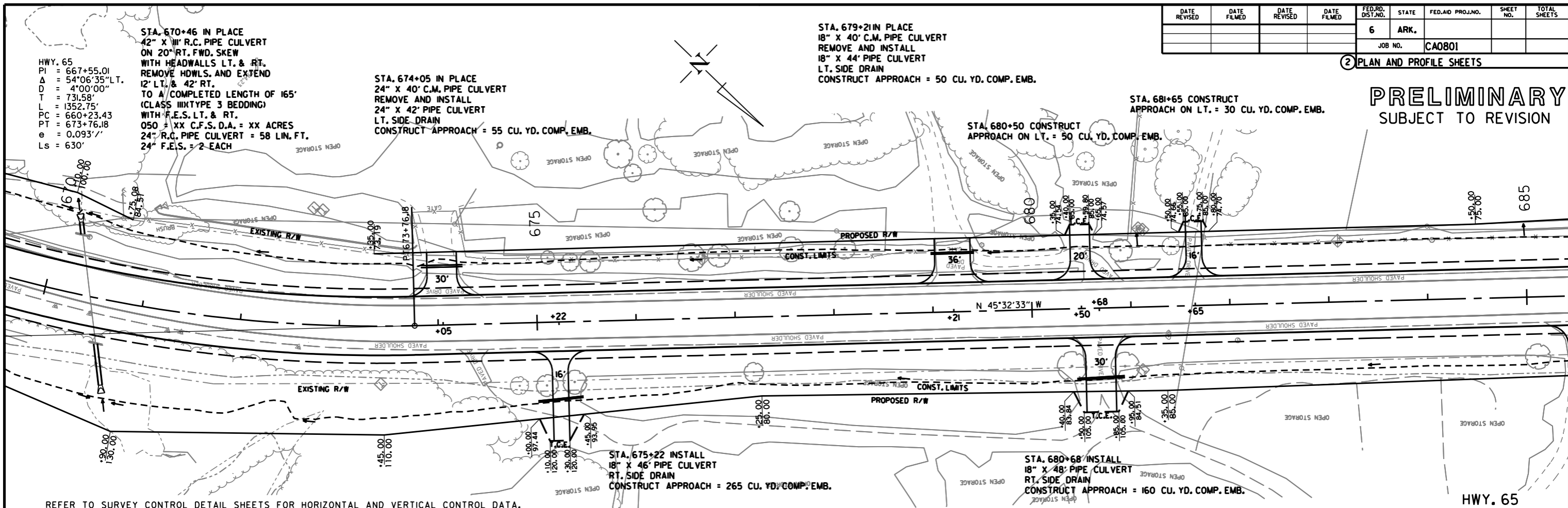


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STA. 688+37 IN PLACE
 22" X 14" X 24' C.M. PIPE CULVERT
 REMOVE AND INSTALL
 18" X 22" PIPE CULVERT
 LT. SIDE DRAIN
 CONSTRUCT APPROACH = XXX CU. YD. COMP. EMB.

HWY. 65
 PI = 693+95.80
 $\Delta = 42^{\circ}53'04''$ L.T.
 $D = 2^{\circ}45'00''$
 $T = 818.28'$
 $L = 1559.44'$
 $PC = 685+77.52$
 $PT = 701+36.96$
 $e = 0.072'/'$
 $Ls = 540'$

STA. 694+86 INSTALL
 18" X 34' PIPE CULVERT
 LT. SIDE DRAIN
 CONSTRUCT APPROACH = 60 CU. YD. COMP. EMB.

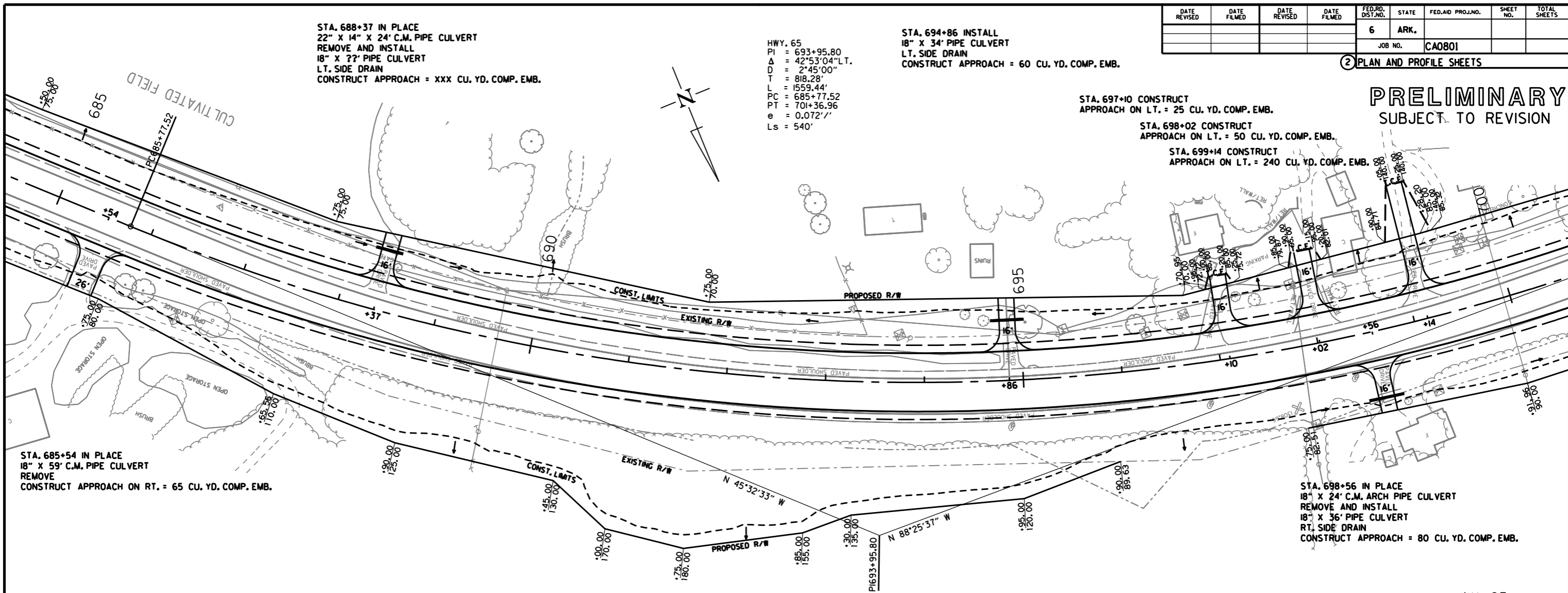
STA. 697+10 CONSTRUCT
 APPROACH ON LT. = 25 CU. YD. COMP. EMB.

STA. 698+02 CONSTRUCT
 APPROACH ON LT. = 50 CU. YD. COMP. EMB.

STA. 699+14 CONSTRUCT
 APPROACH ON LT. = 240 CU. YD. COMP. EMB.

2 PLAN AND PROFILE SHEETS

PRELIMINARY
 SUBJECT TO REVISION

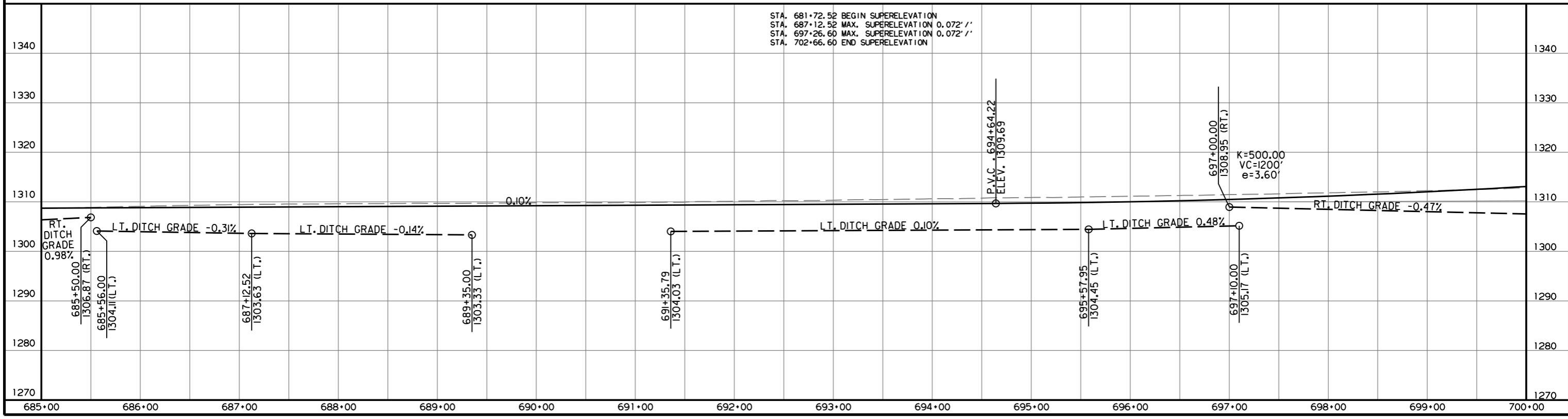


STA. 685+54 IN PLACE
 18" X 59' C.M. PIPE CULVERT
 REMOVE
 CONSTRUCT APPROACH ON RT. = 65 CU. YD. COMP. EMB.

STA. 698+56 IN PLACE
 18" X 24' C.M. ARCH PIPE CULVERT
 REMOVE AND INSTALL
 18" X 36' PIPE CULVERT
 RT. SIDE DRAIN
 CONSTRUCT APPROACH = 80 CU. YD. COMP. EMB.

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

HWY. 65



STA. 681+72.52 BEGIN SUPERELEVATION
 STA. 687+12.52 MAX. SUPERELEVATION 0.072'/'
 STA. 697+26.60 MAX. SUPERELEVATION 0.072'/'
 STA. 702+66.60 END SUPERELEVATION

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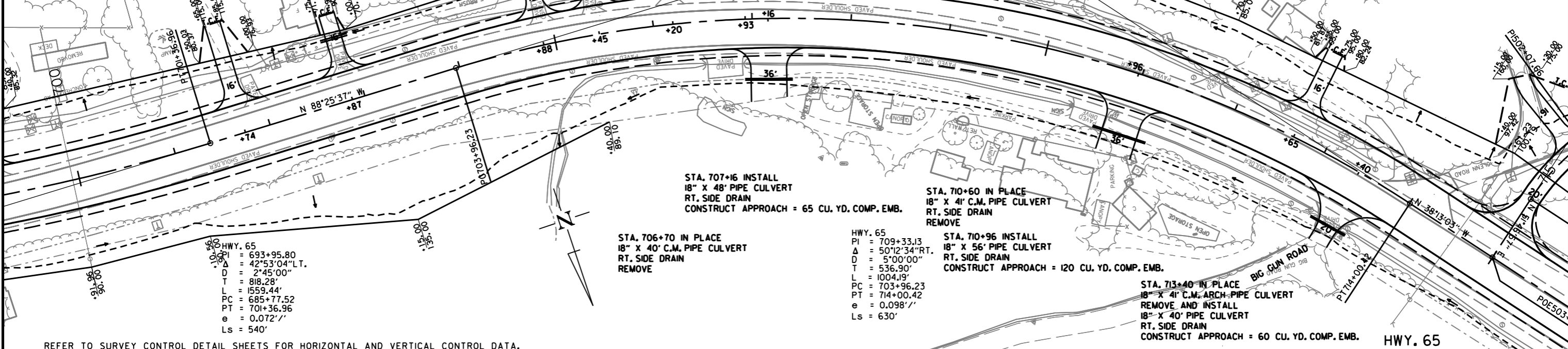
STA. 701+74 CONSTRUCT
 APPROACH ON LT. = 150 CU. YD. COMP. EMB.
 STA. 702+87 IN PLACE
 22" X 14" X 24' C.M. PIPE CULVERT
 REMOVE AND INSTALL
 24" X 28' PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPROACH = 65 CU. YD. COMP. EMB.
 STA. 704+88 IN PLACE
 22" X 14" X 24' C.M. PIPE CULVERT
 REMOVE AND INSTALL
 24" X 28' PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPROACH = 50 CU. YD. COMP. EMB.

STA. 705+45 IN PLACE
 22" X 14" X 24' C.M. PIPE CULVERT
 REMOVE AND INSTALL
 24" X 28' PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPROACH = 45 CU. YD. COMP. EMB.
 STA. 706+20 IN PLACE
 22" X 14" X 24' C.M. PIPE CULVERT
 REMOVE AND INSTALL
 24" X 28' PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPROACH = 55 CU. YD. COMP. EMB.

STA. 706+93 IN PLACE
 24" X 16' C.M. PIPE CULVERT
 REMOVE AND INSTALL
 24" X 40' PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPROACH = 190 CU. YD. COMP. EMB.

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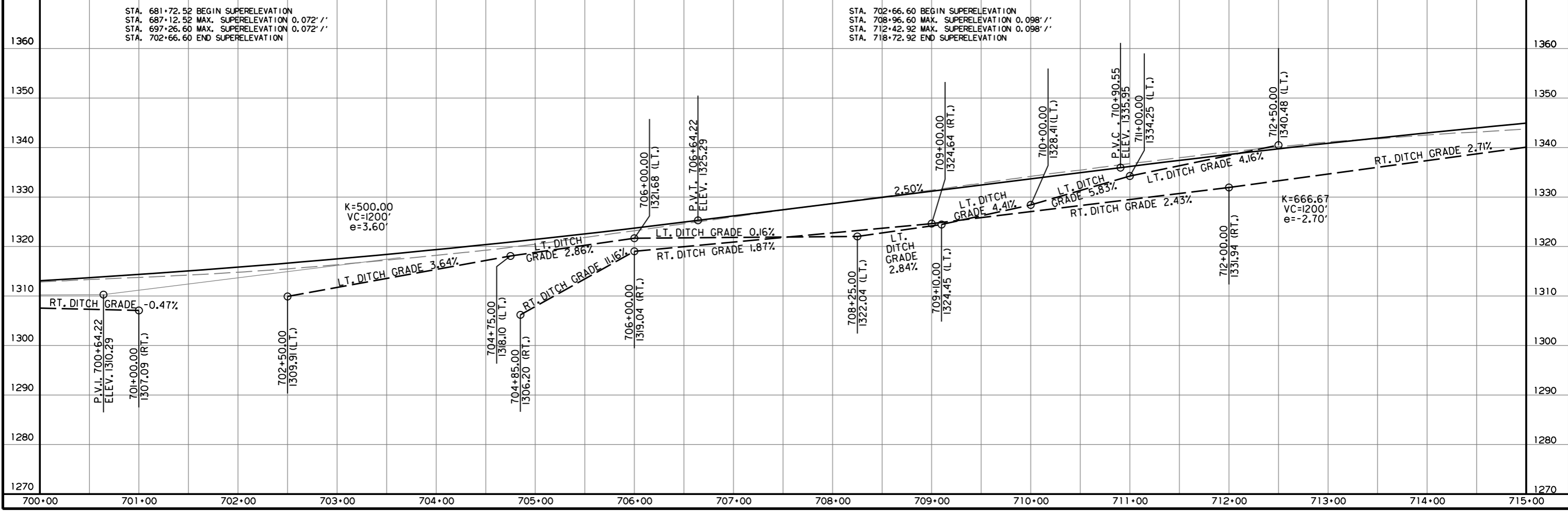
HWY. 65
 PI = 693+95.80
 Δ = 42°53'04" LT.
 D = 2°45'00"
 T = 818.28'
 L = 1559.44'
 PC = 685+77.52
 PT = 701+36.96
 e = 0.072' /'
 Ls = 540'

STA. 707+16 INSTALL
 18" X 48' PIPE CULVERT
 RT. SIDE DRAIN
 CONSTRUCT APPROACH = 65 CU. YD. COMP. EMB.
 STA. 706+70 IN PLACE
 18" X 40' C.M. PIPE CULVERT
 RT. SIDE DRAIN
 REMOVE

STA. 710+60 IN PLACE
 18" X 4' C.M. PIPE CULVERT
 RT. SIDE DRAIN
 REMOVE
 STA. 710+96 INSTALL
 18" X 56' PIPE CULVERT
 RT. SIDE DRAIN
 CONSTRUCT APPROACH = 120 CU. YD. COMP. EMB.

STA. 713+40 IN PLACE
 18" X 4' C.M. ARCH PIPE CULVERT
 REMOVE AND INSTALL
 18" X 40' PIPE CULVERT
 RT. SIDE DRAIN
 CONSTRUCT APPROACH = 60 CU. YD. COMP. EMB.

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.



STA. 681+72.52 BEGIN SUPERELEVATION
 STA. 687+12.52 MAX. SUPERELEVATION 0.072' /'
 STA. 697+26.60 MAX. SUPERELEVATION 0.072' /'
 STA. 702+66.60 END SUPERELEVATION

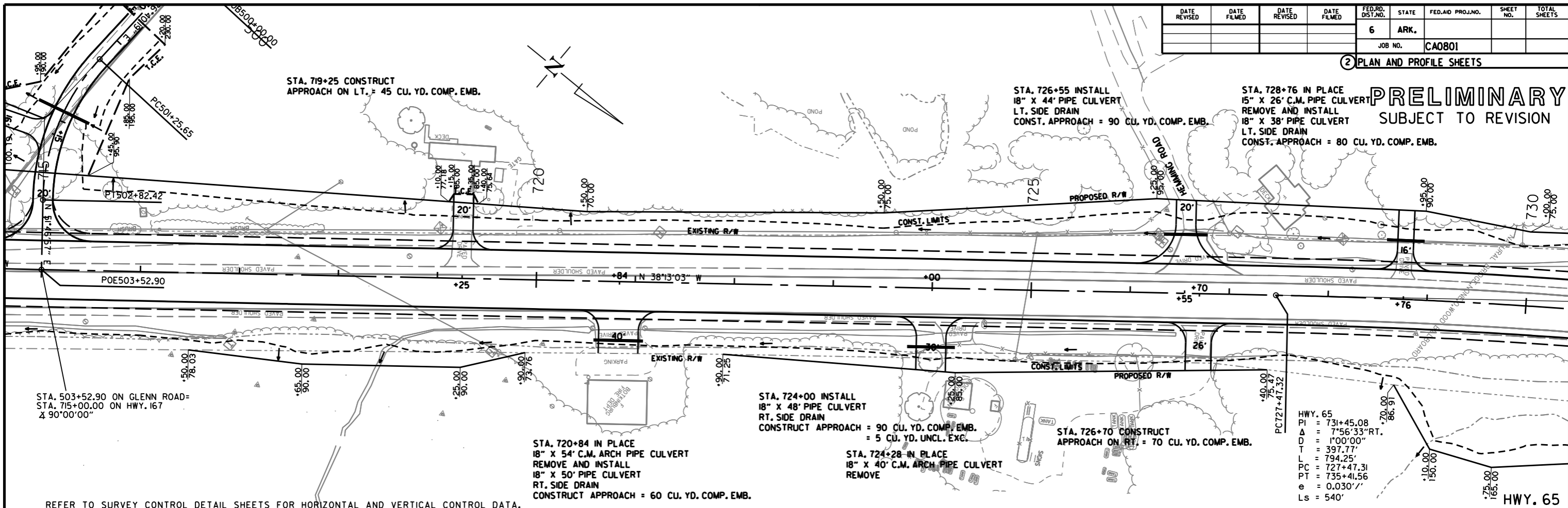
STA. 702+66.60 BEGIN SUPERELEVATION
 STA. 708+96.60 MAX. SUPERELEVATION 0.098' /'
 STA. 712+42.92 MAX. SUPERELEVATION 0.098' /'
 STA. 718+72.92 END SUPERELEVATION

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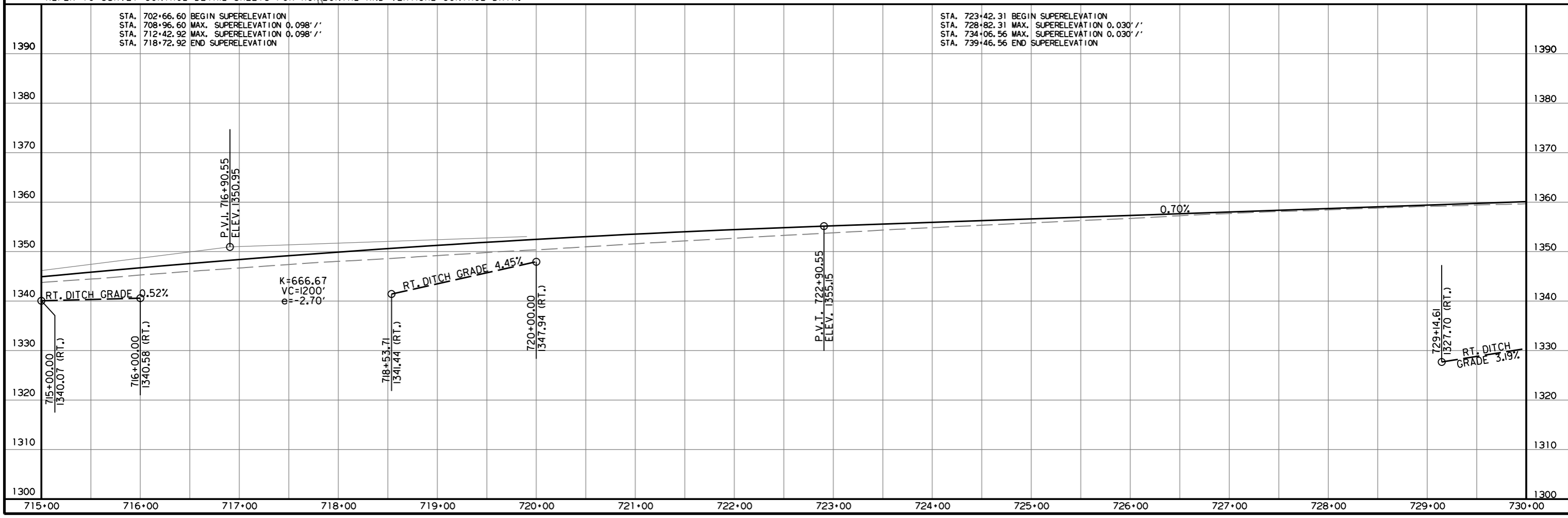
2 PLAN AND PROFILE SHEETS

PRELIMINARY
SUBJECT TO REVISION



REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

HWY. 65
 PI = 731+45.08
 Δ = 7°56'33" RT.
 D = 1°00'00"
 T = 397.77'
 L = 794.25'
 PC = 727+47.31
 PT = 735+41.56
 e = 0.030' /'
 Ls = 540'



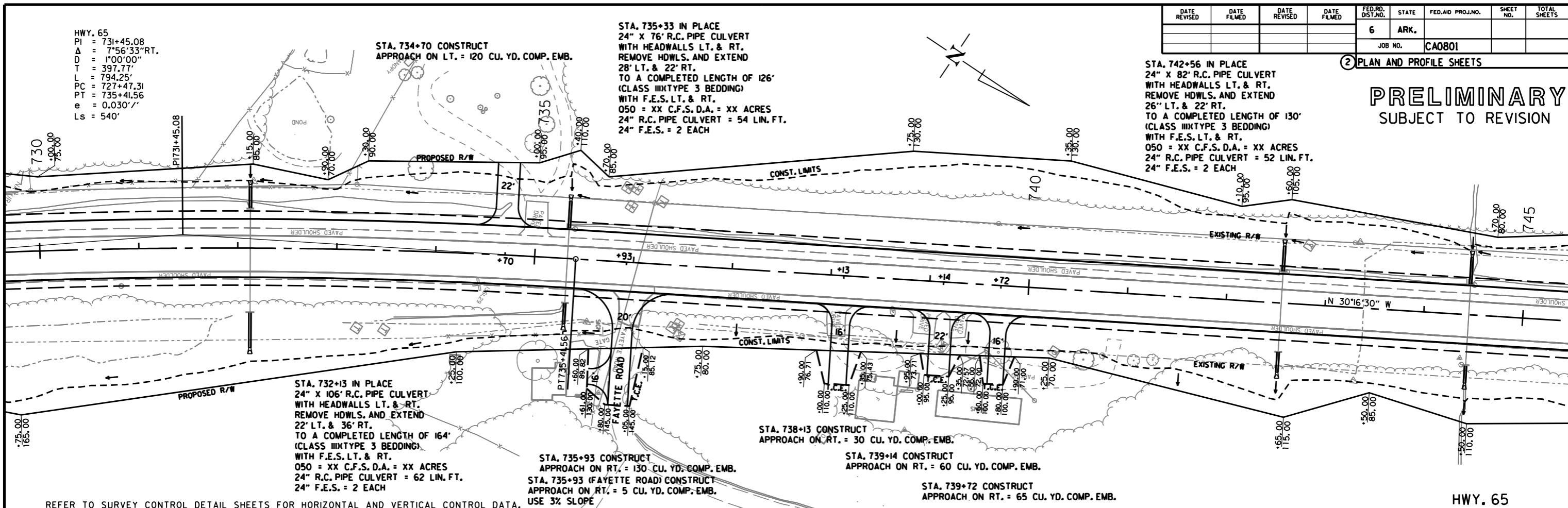
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2 PLAN AND PROFILE SHEETS

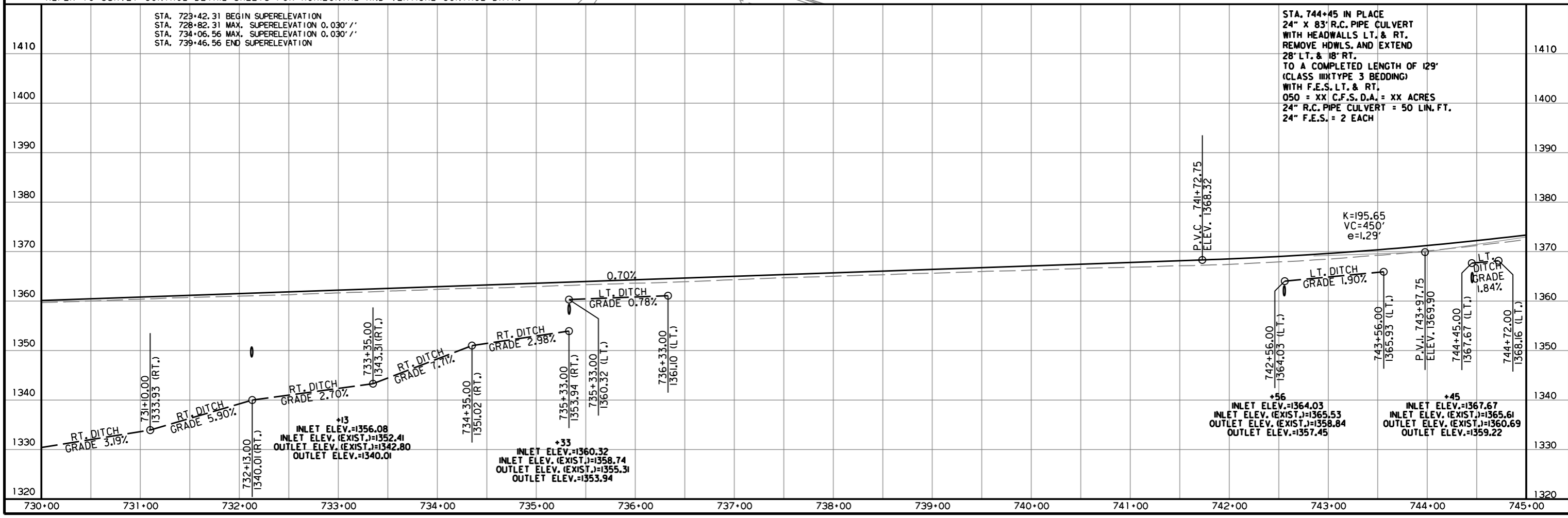
PRELIMINARY
SUBJECT TO REVISION

HWY. 65
PI = 731+45.08
Δ = 7°56'33" RT.
D = 1'00'00"
T = 397.77'
L = 794.25'
PC = 727+47.31
PT = 735+41.56
e = 0.030' /'
Ls = 540'



REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

HWY. 65



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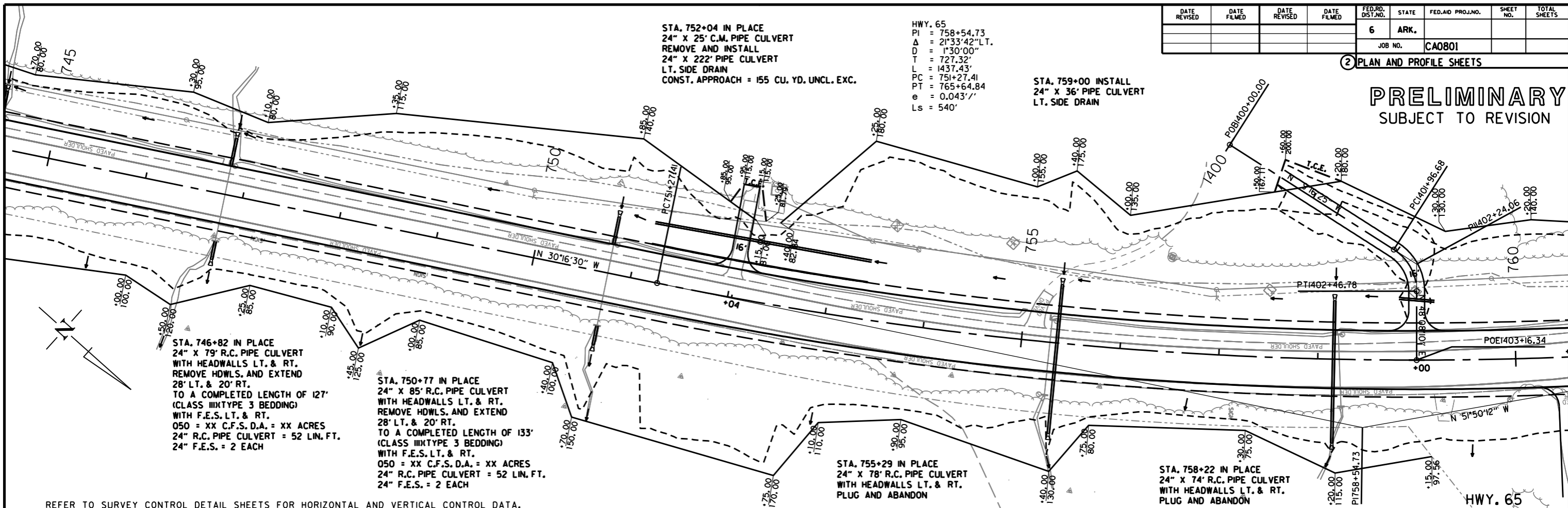
2 PLAN AND PROFILE SHEETS

PRELIMINARY
SUBJECT TO REVISION

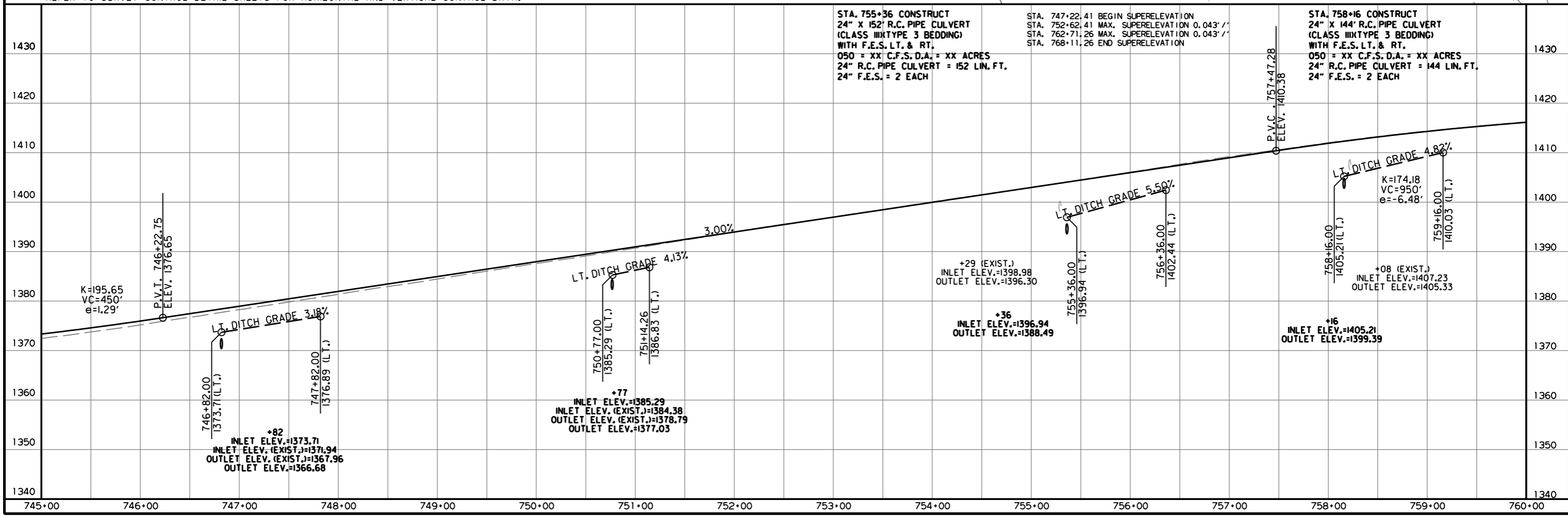
STA. 752+04 IN PLACE
24" X 25' C.M. PIPE CULVERT
REMOVE AND INSTALL
24" X 222' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPROACH = 155 CU. YD. UNCL. EXC.

HWY. 65
PI = 758+54.73
 $\Delta = 21'33''42''$ L.T.
D = 1'30'00"
T = 727.32'
L = 1437.43'
PC = 751+27.41
PT = 765+64.84
e = 0.043'/'
Ls = 540'

STA. 759+00 INSTALL
24" X 36' PIPE CULVERT
LT. SIDE DRAIN



REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.



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HWY. 65
 PI = 758+54.73
 Δ = 21°33'42" L.T.
 D = 1°30'00"
 T = 727.32'
 L = 1437.43'
 PC = 751+27.41
 PT = 765+64.84
 e = 0.043'/'
 Ls = 540'

STA. 763+70 CONSTRUCT
 24" X 146" R.C. PIPE CULVERT
 (CLASS III TYPE 3 BEDDING)
 WITH F.E.S. LT. & RT.
 050 = XX C.F.S. D.A. = XX ACRES
 24" R.C. PIPE CULVERT = 146 LIN. FT.
 24" F.E.S. = 2 EACH

STA. 763+80 IN PLACE
 24" X 79" R.C. PIPE CULVERT
 WITH HEADWALLS LT. & RT.
 PLUG AND ABANDON

STA. 764+28 CONSTRUCT
 APPROACH ON LT. = 25 CU. YD. COMP. EMB.

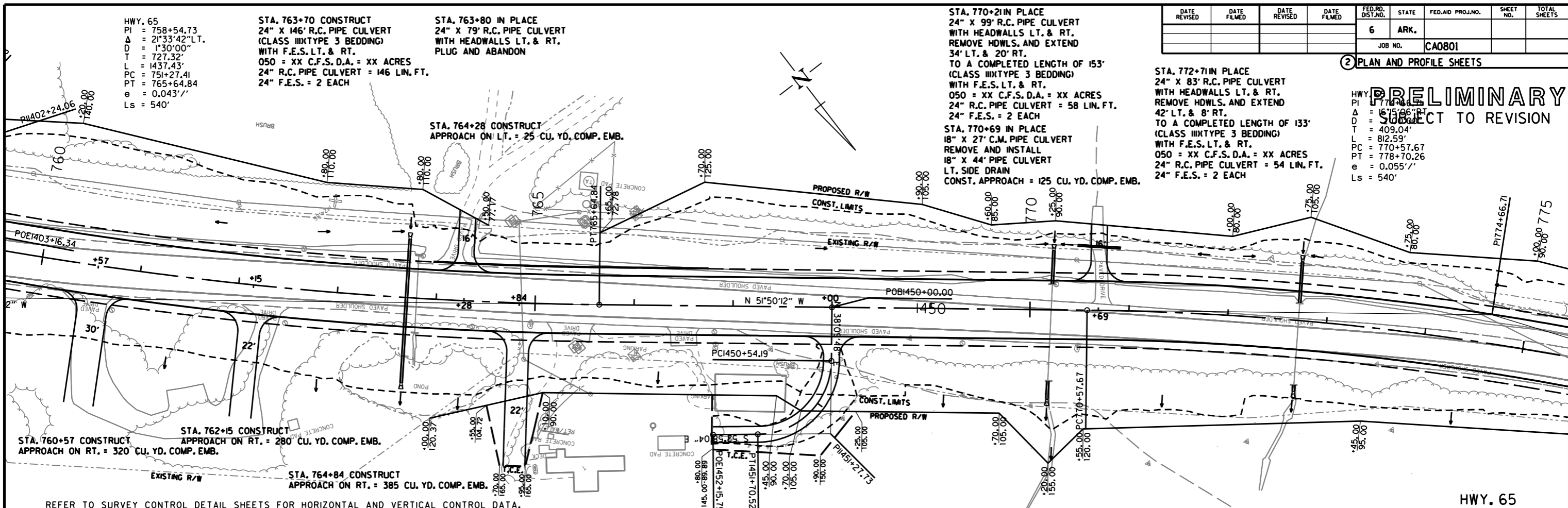
STA. 770+21 IN PLACE
 24" X 99" R.C. PIPE CULVERT
 WITH HEADWALLS LT. & RT.
 REMOVE HDWLS. AND EXTEND
 34' LT. & 20' RT.
 TO A COMPLETED LENGTH OF 153'
 (CLASS III TYPE 3 BEDDING)
 WITH F.E.S. LT. & RT.
 050 = XX C.F.S. D.A. = XX ACRES
 24" R.C. PIPE CULVERT = 58 LIN. FT.
 24" F.E.S. = 2 EACH
 STA. 770+69 IN PLACE
 18" X 27" C.M. PIPE CULVERT
 REMOVE AND INSTALL
 18" X 44" PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPROACH = 125 CU. YD. COMP. EMB.

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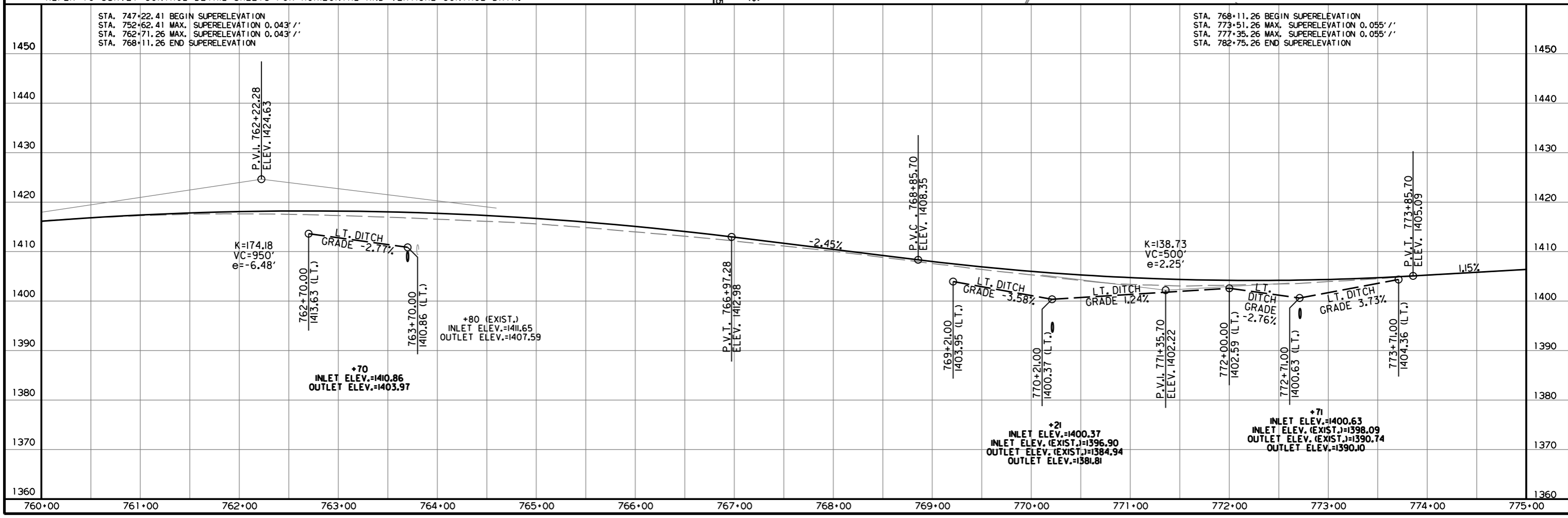
2 PLAN AND PROFILE SHEETS

PRELIMINARY
 SUBJECT TO REVISION

HWY. 65
 PI = 770+86.71
 Δ = 15°56'11" L.T.
 D = 1°30'00"
 T = 409.04'
 L = 812.59'
 PC = 770+57.67
 PT = 778+70.26
 e = 0.055'/'
 Ls = 540'



REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.



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STA. 775+72 IN PLACE
22" X 14" X 24' C.M. PIPE CULVERT
REMOVE AND INSTALL
18" X 34' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPROACH = 60 CU. YD. COMP. EMB.

STA. 777+88 INSTALL
18" X 40' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPROACH = 70 CU. YD. COMP. EMB.

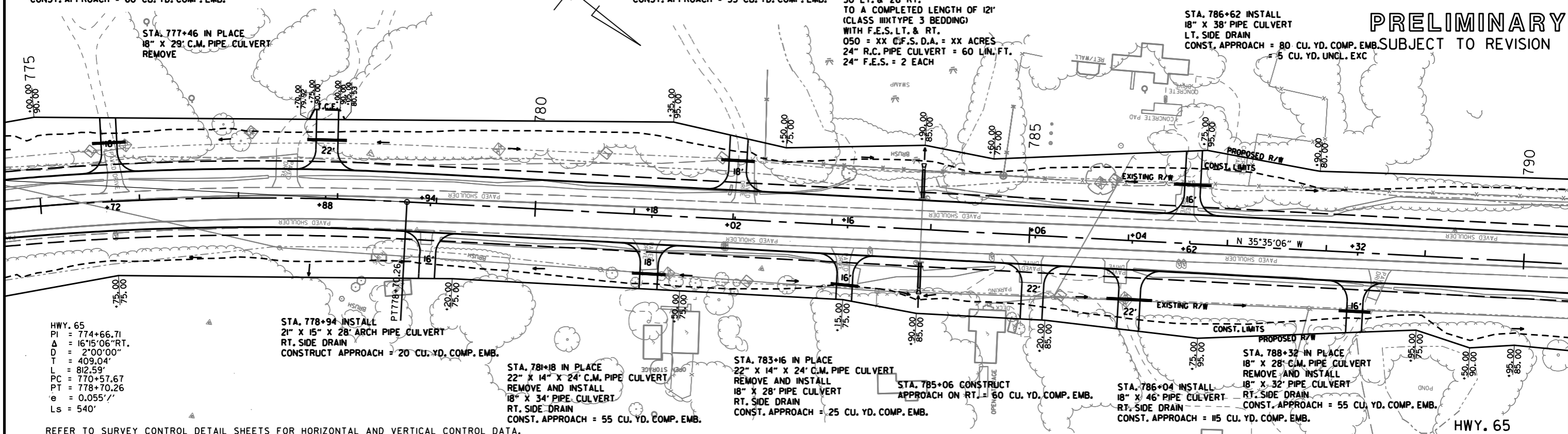
STA. 782+02 IN PLACE
18" X 30' C.M. PIPE CULVERT
REMOVE AND INSTALL
18" X 34' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPROACH = 55 CU. YD. COMP. EMB.

STA. 783+91 IN PLACE
24" X 65' R.C. PIPE CULVERT
WITH HEADWALLS LT. & RT.
REMOVE HDWLS. AND EXTEND
30' LT. & 26' RT.
TO A COMPLETED LENGTH OF 121'
(CLASS III TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
0.50 = XX C.F.S. D.A. = XX ACRES
24" R.C. PIPE CULVERT = 60 LIN. FT.
24" F.E.S. = 2 EACH

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2 PLAN AND PROFILE SHEETS

PRELIMINARY
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HWY. 65
PI = 774+66.71
Δ = 16°15'06" RT.
D = 2°00'00"
T = 409.04'
L = 812.59'
PC = 770+57.67
PT = 778+70.26
e = 0.055'/'
Ls = 540'

STA. 778+94 INSTALL
21" X 15" X 28' ARCH PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 20' CU. YD. COMP. EMB.

STA. 781+18 IN PLACE
22" X 14" X 24' C.M. PIPE CULVERT
REMOVE AND INSTALL
18" X 34' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPROACH = 55 CU. YD. COMP. EMB.

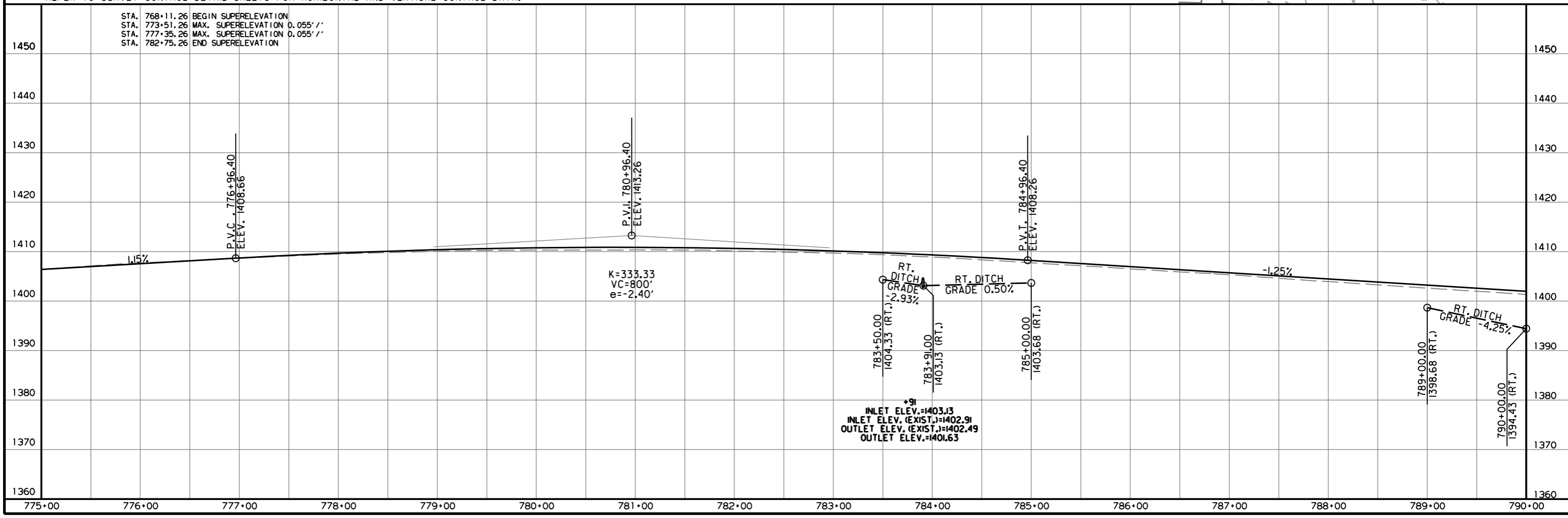
STA. 783+16 IN PLACE
22" X 14" X 24' C.M. PIPE CULVERT
REMOVE AND INSTALL
18" X 28' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPROACH = 25 CU. YD. COMP. EMB.

STA. 785+06 CONSTRUCT
APPROACH ON RT. = 60 CU. YD. COMP. EMB.

STA. 786+04 INSTALL
18" X 46' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPROACH = 15 CU. YD. COMP. EMB.

STA. 788+32 IN PLACE
18" X 28' C.M. PIPE CULVERT
REMOVE AND INSTALL
18" X 32' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPROACH = 55 CU. YD. COMP. EMB.

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.



STA. 768+11.26 BEGIN SUPERELEVATION
STA. 773+51.26 MAX. SUPERELEVATION 0.055'/'
STA. 777+35.26 MAX. SUPERELEVATION 0.055'/'
STA. 782+75.26 END SUPERELEVATION

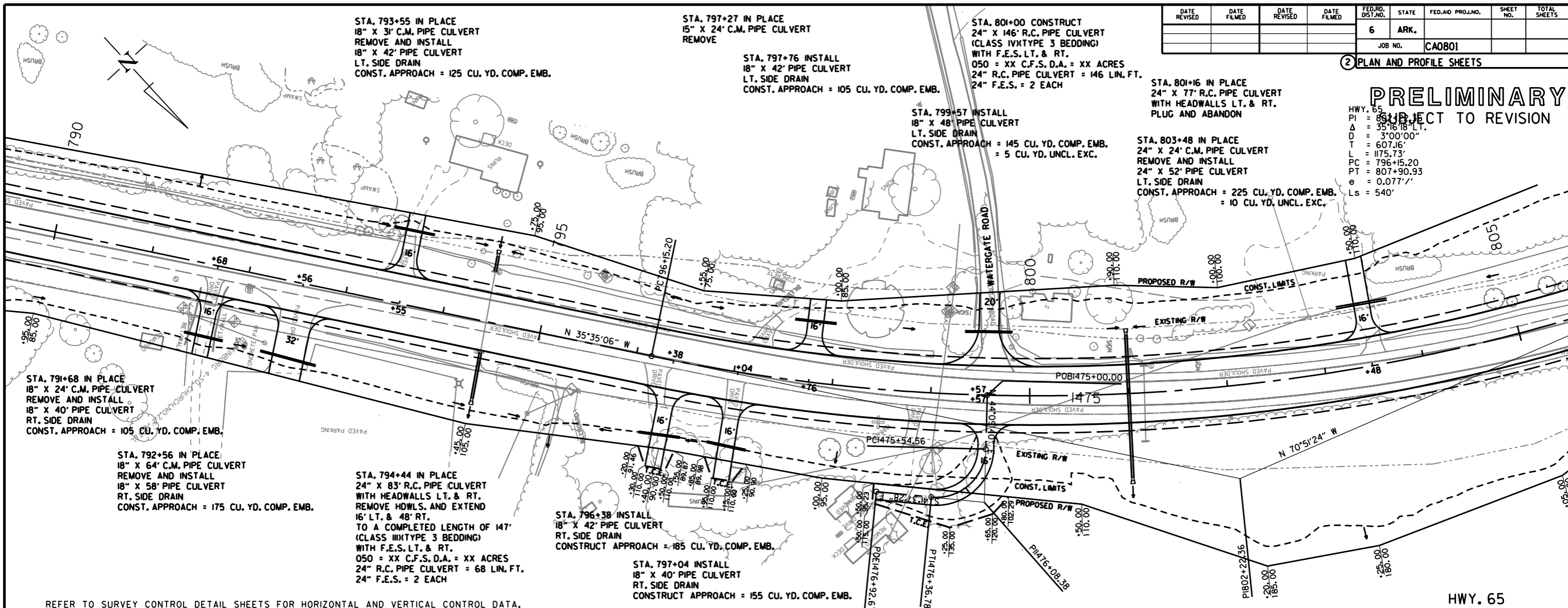
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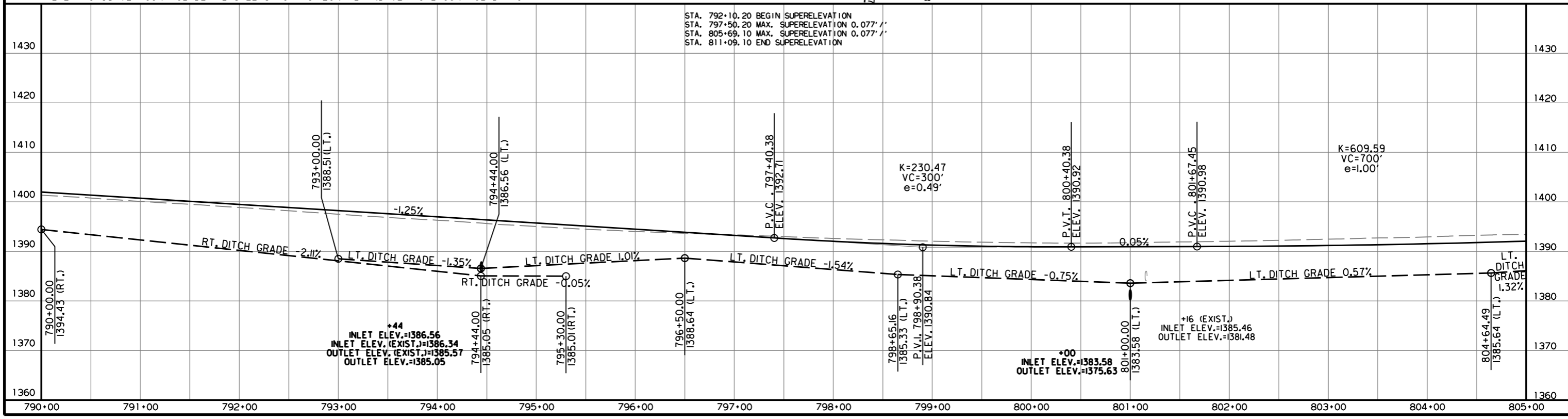
2 PLAN AND PROFILE SHEETS

PRELIMINARY
SUBJECT TO REVISION

HWY. 65
 PI = 801+81.18
 Δ = 35°16'18" LT.
 D = 3'00'00"
 L = 607.16'
 T = 1175.73'
 PC = 796+15.20
 PT = 807+90.93
 e = 0.077'/'
 Ls = 540'



REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.



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STA. 805+90 IN PLACE
24" X 63" R.C. PIPE CULVERT
WITH HEADWALLS LT. & RT.
PLUG AND ABANDON

STA. 806+00 CONSTRUCT
24" X 134" R.C. PIPE CULVERT
(CLASS III TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
050 = XX C.F.S. D.A. = XX ACRES
24" R.C. PIPE CULVERT = 134 LIN. FT.
24" F.E.S. = 2 EACH

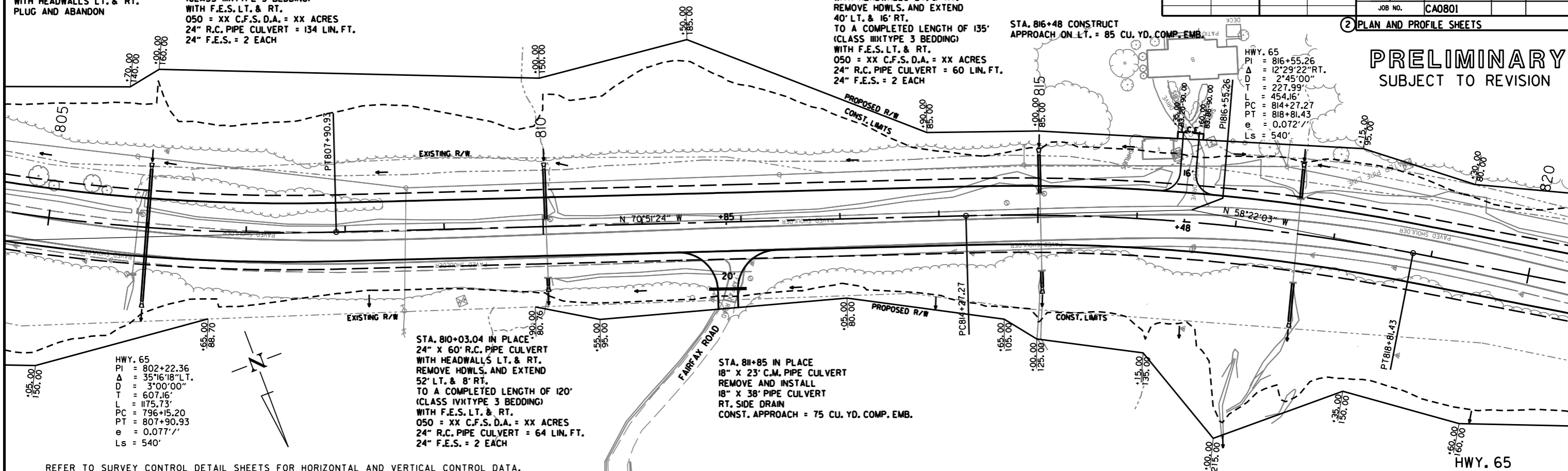
STA. 815+03 IN PLACE
24" X 79" R.C. PIPE CULVERT
WITH HEADWALLS LT. & RT.
REMOVE HDWLS. AND EXTEND
40' LT. & 16' RT.
TO A COMPLETED LENGTH OF 135'
(CLASS III TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
050 = XX C.F.S. D.A. = XX ACRES
24" R.C. PIPE CULVERT = 60 LIN. FT.
24" F.E.S. = 2 EACH

STA. 816+48 CONSTRUCT
APPROACH ON LT. = 85 CU. YD. COMP. EMB.

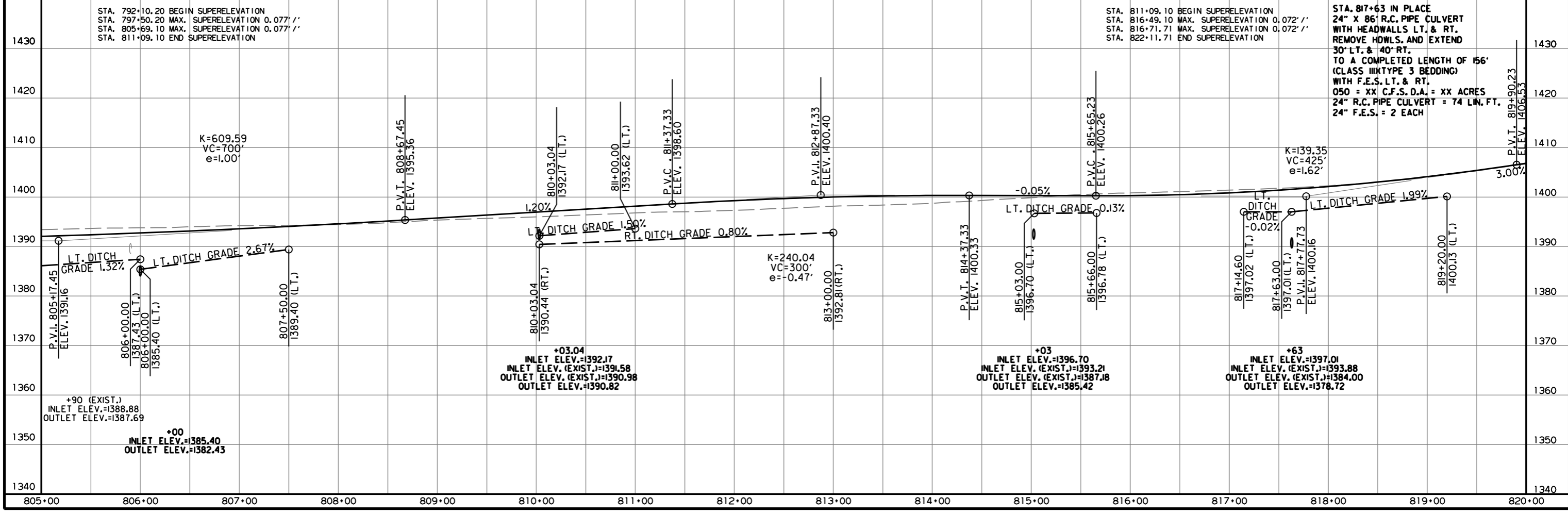
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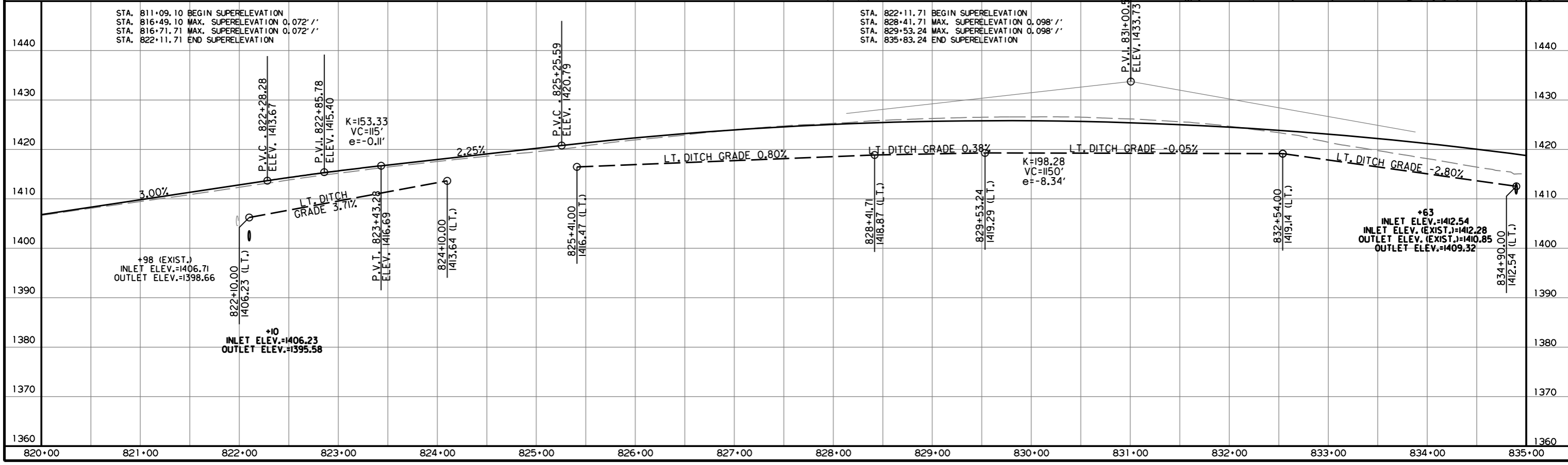
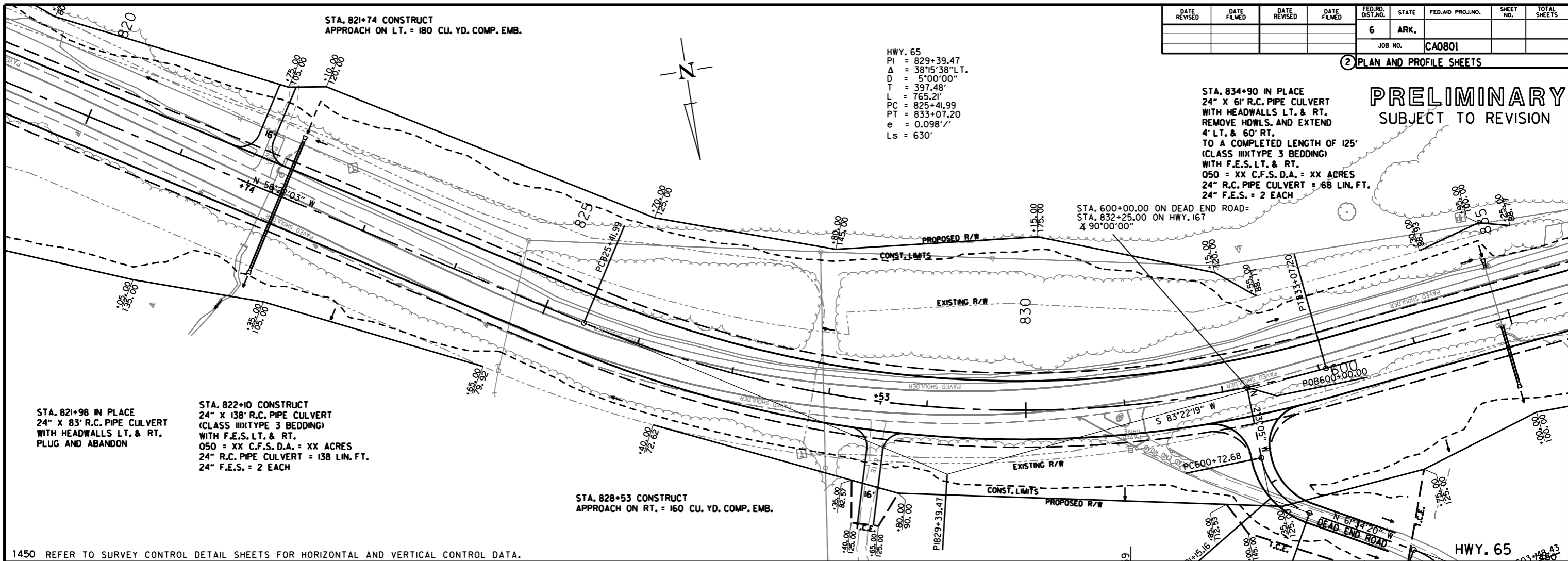
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2 PLAN AND PROFILE SHEETS

HWY. 65
 PI = 829+39.47
 $\Delta = 38^{\circ}15'38''$ L.T.
 D = 5'00'00"
 T = 397.48'
 L = 765.21'
 PC = 825+41.99
 PT = 833+07.20
 e = 0.098'/'
 Ls = 630'

STA. 834+90 IN PLACE
 24" X 61' R.C. PIPE CULVERT
 WITH HEADWALLS LT. & RT.
 REMOVE HDWLS. AND EXTEND
 4' LT. & 60' RT.
 TO A COMPLETED LENGTH OF 125'
 (CLASS III TYPE 3 BEDDING)
 WITH F.E.S. LT. & RT.
 050 = XX C.F.S. D.A. = XX ACRES
 24" R.C. PIPE CULVERT = 68 LIN. FT.
 24" F.E.S. = 2 EACH

PRELIMINARY
 SUBJECT TO REVISION

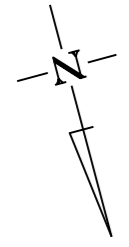


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STA. 844+78 IN PLACE
3' X 3' X 96' R.C. BOX CULVERT
WITH 3/4 WINGS LT. AND RIGHT
RETAIN AND EXTEND
40' LT.
TO A COMPLETED LENGTH OF 136'
050 = XX C.F.S. D.A. = XX ACRES

HWY. 65
PI = 846+22.10
Δ = 67°18'12" RT.
D = 5°00'00"
T = 762.83'
L = 1346.06'
PC = 838+59.27
PT = 852+05.33
e = 0.098' /'
Ls = 630'

STA. 842+25 IN PLACE
24" X 58" R.C. PIPE CULVERT
WITH HEADWALLS LT. & RT.
REMOVE HDWLS. AND EXTEND
30' LT. & 30' RT.
TO A COMPLETED LENGTH OF 118'
(CLASS IV TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
050 = XX C.F.S. D.A. = XX ACRES
24" R.C. PIPE CULVERT = 64 LIN. FT.
24" F.E.S. = 2 EACH

STA. 839+35 IN PLACE
4' X 4' X 165' R.C. BOX CULVERT
WITH 3/4 WINGS LT. AND RIGHT
RETAIN AND EXTEND
8' LT. & 70' RT.
TO A COMPLETED LENGTH OF 243'
050 = XX C.F.S. D.A. = XX ACRES

STA. 836+54 IN PLACE
22" X 14" X 34' C.M. ARCH PIPE CULVERT
REMOVE AND INSTALL
18" X 34' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPROACH = 65 CU. YD. COMP. EMB.

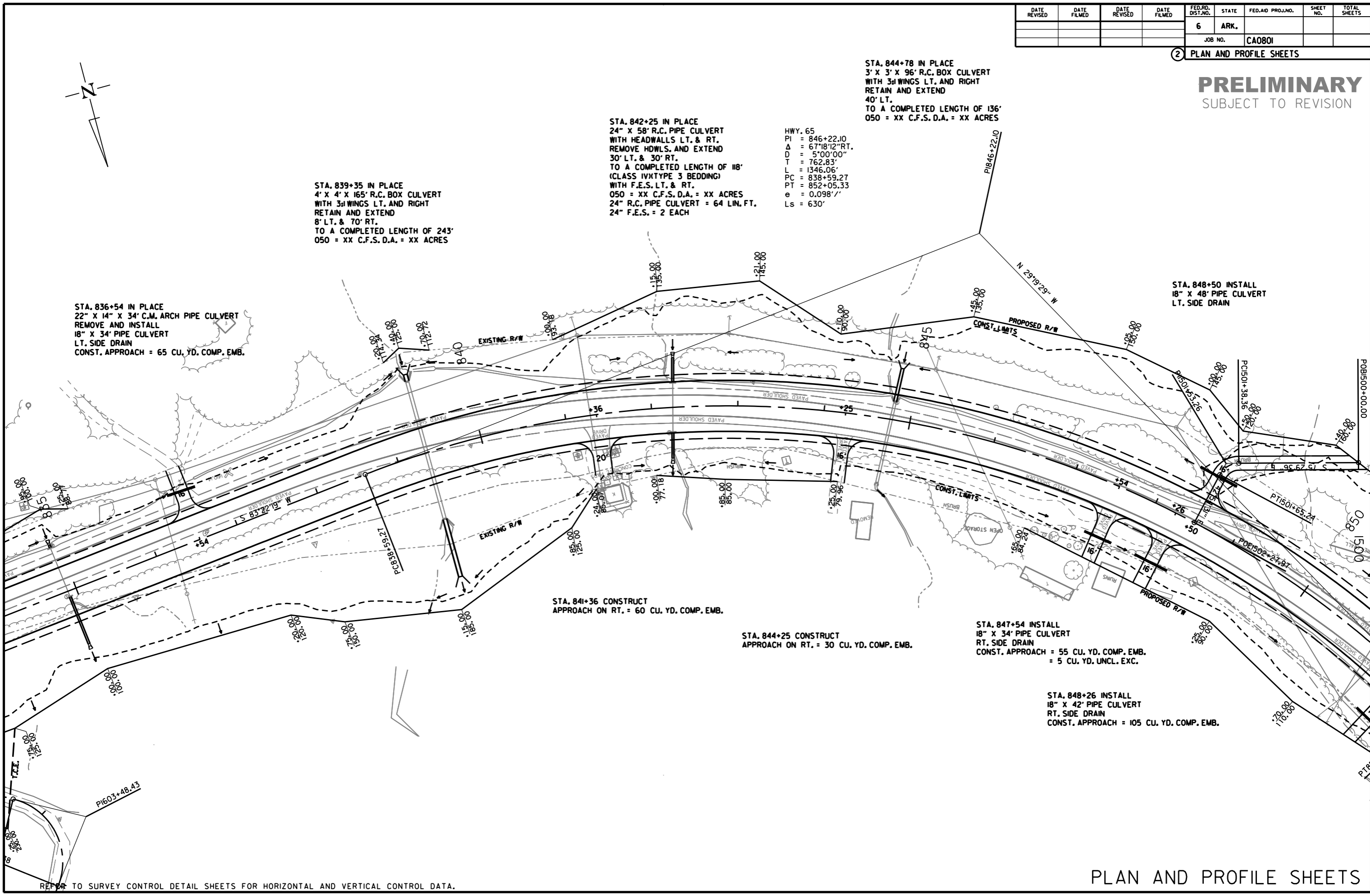
STA. 848+50 INSTALL
18" X 48" PIPE CULVERT
LT. SIDE DRAIN

STA. 841+36 CONSTRUCT
APPROACH ON RT. = 60 CU. YD. COMP. EMB.

STA. 844+25 CONSTRUCT
APPROACH ON RT. = 30 CU. YD. COMP. EMB.

STA. 847+54 INSTALL
18" X 34' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPROACH = 55 CU. YD. COMP. EMB.
= 5 CU. YD. UNCL. EXC.

STA. 848+26 INSTALL
18" X 42' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPROACH = 105 CU. YD. COMP. EMB.



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REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

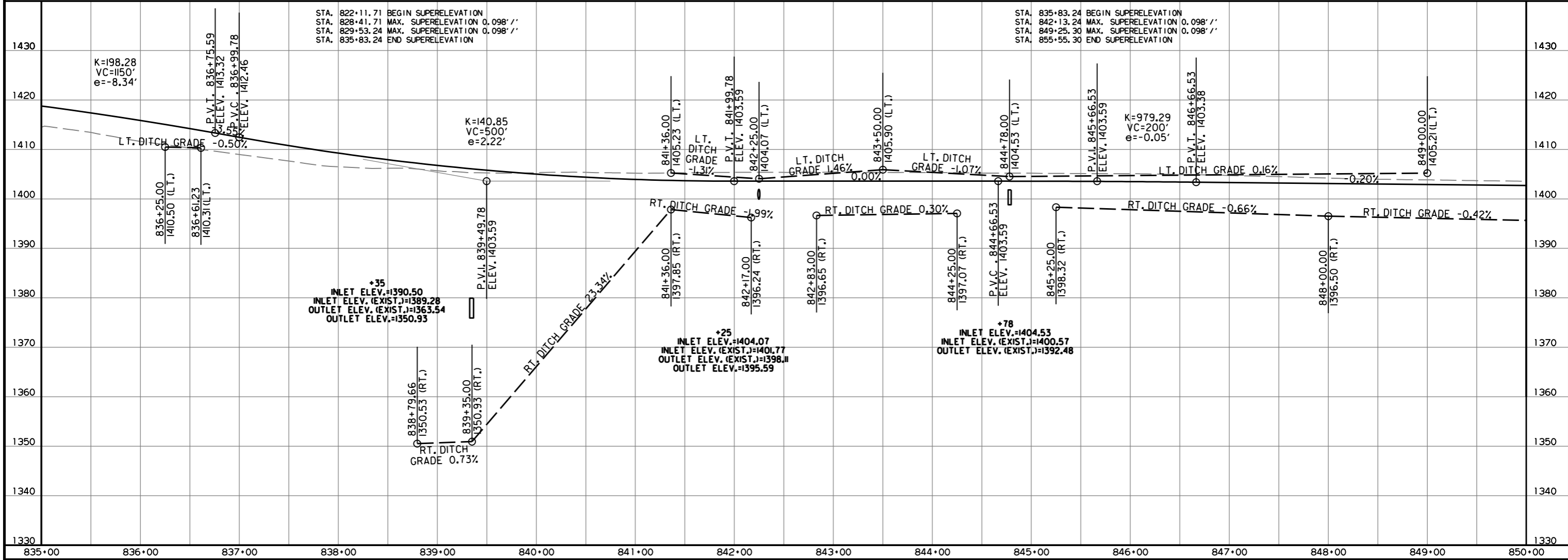
PLAN AND PROFILE SHEETS

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HWY. 65
 PI = 846+22.10
 Δ = 67°18'12" RT.
 D = 5°00'00"
 T = 762.83'
 L = 1346.06'
 PC = 838+59.27
 PT = 852+05.33
 e = 0.098' /'
 Ls = 630'

STA. 852+00 INSTALL
 18" X 46' PIPE CULVERT
 LT. SIDE DRAIN

STA. 854+56 IN PLACE
 12" X 40' C.M. PIPE CULVERT
 REMOVE AND INSTALL
 18" X 56' PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPROACH = 235 CU. YD. COMP. EMB.

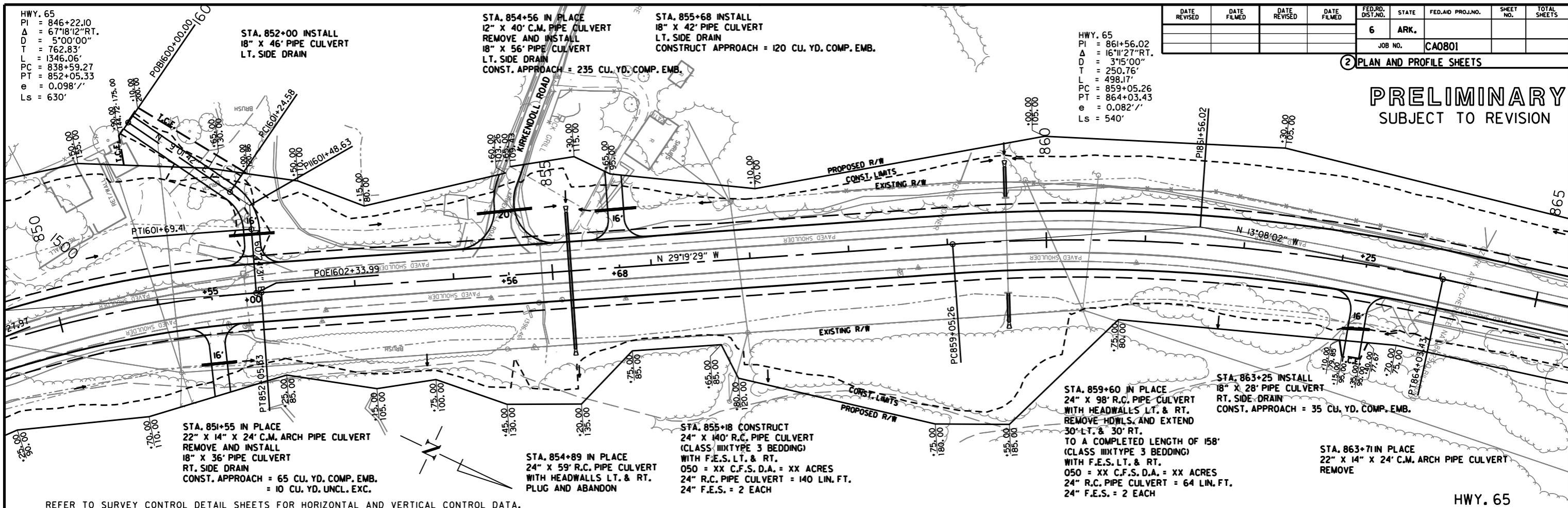
STA. 855+68 INSTALL
 18" X 42' PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPROACH = 120 CU. YD. COMP. EMB.

HWY. 65
 PI = 861+56.02
 Δ = 16°11'27" RT.
 D = 3°15'00"
 T = 250.76'
 L = 498.17'
 PC = 859+05.26
 PT = 864+03.43
 e = 0.082' /'
 Ls = 540'

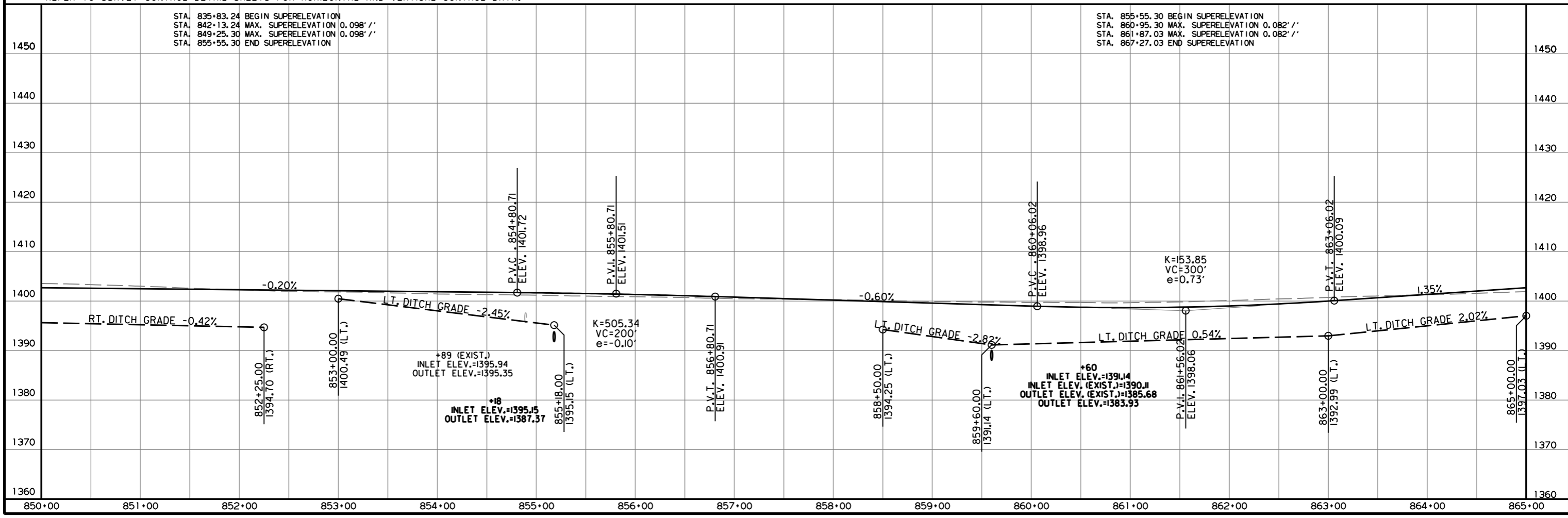
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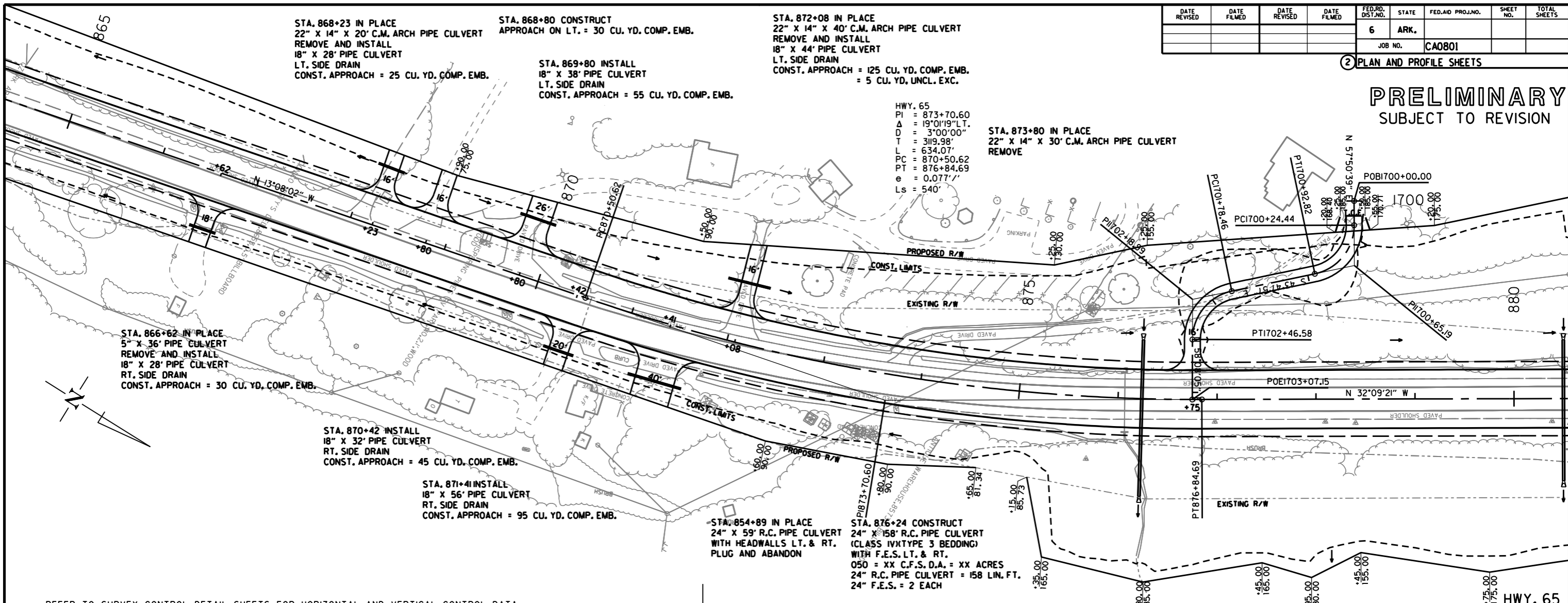


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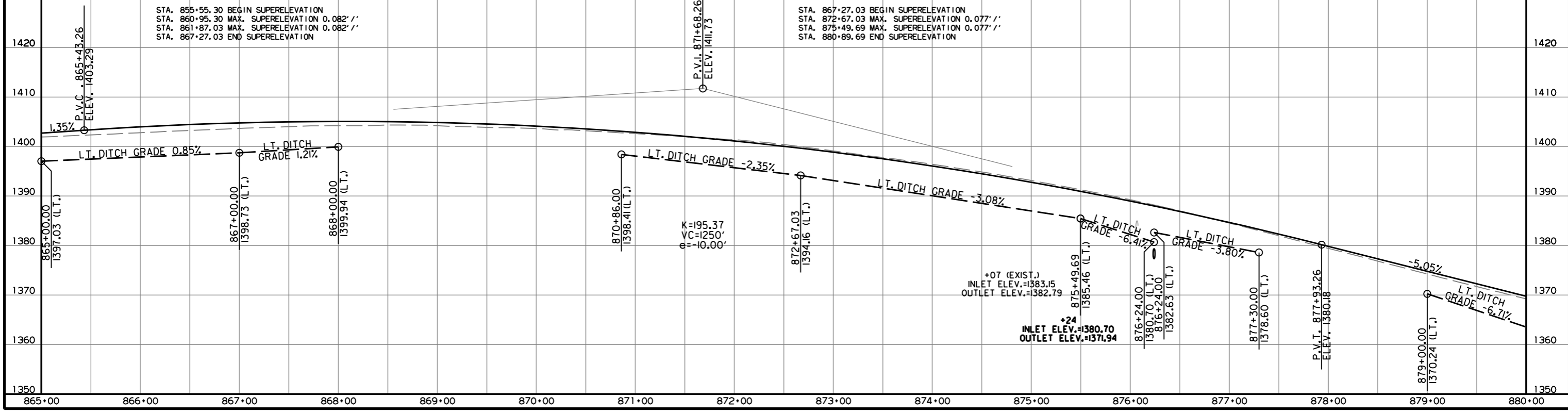
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STA. 880+56 IN PLACE
24" X 78" R.C. PIPE CULVERT
WITH HEADWALLS LT. & RT.
PLUG AND ABANDON

STA. 880+50 CONSTRUCT
24" X 144" R.C. PIPE CULVERT
(CLASS III TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
050 = XX C.F.S. D.A. = XX ACRES
24" R.C. PIPE CULVERT = 144 LIN. FT.
24" F.E.S. = 2 EACH

STA. 886+85 IN PLACE
24" X 86" R.C. PIPE CULVERT
WITH HEADWALLS LT. & RT.
PLUG AND ABANDON

STA. 886+92 CONSTRUCT
24" X 140" R.C. PIPE CULVERT
(CLASS III TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
050 = XX C.F.S. D.A. = XX ACRES
24" R.C. PIPE CULVERT = 140 LIN. FT.
24" F.E.S. = 2 EACH

STA. 891+50 CONSTRUCT
24" X 142" R.C. PIPE CULVERT
(CLASS III TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
050 = XX C.F.S. D.A. = XX ACRES
24" R.C. PIPE CULVERT = 142 LIN. FT.
24" F.E.S. = 2 EACH

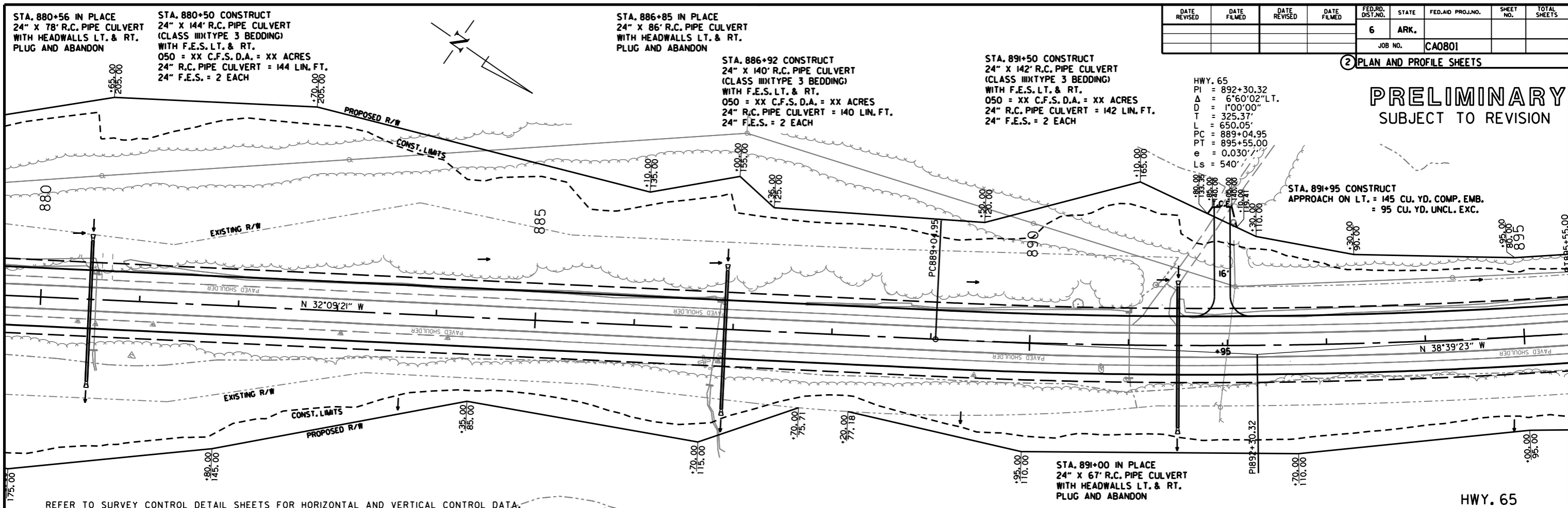
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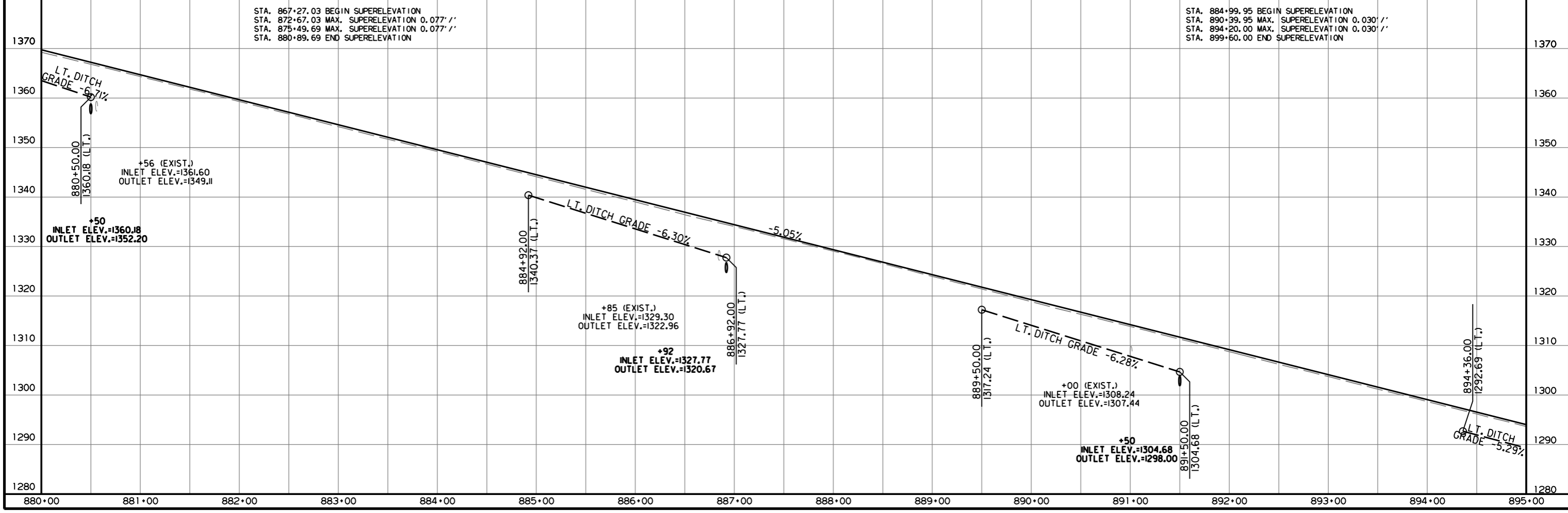
HWY. 65
PI = 892+30.32
Δ = 6°60'02" LT.
D = 1'00'00"
T = 325.37'
L = 650.05'
PC = 889+04.95
PT = 895+55.00
e = 0.030' /'
Ls = 540'

STA. 891+95 CONSTRUCT
APPROACH ON LT. = 145 CU. YD. COMP. EMB.
= 95 CU. YD. UNCL. EXC.



REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

HWY. 65



STA. 867+27.03 BEGIN SUPERELEVATION
STA. 872+67.03 MAX. SUPERELEVATION 0.077' /'
STA. 875+49.69 MAX. SUPERELEVATION 0.077' /'
STA. 880+89.69 END SUPERELEVATION

STA. 884+99.95 BEGIN SUPERELEVATION
STA. 890+99.95 MAX. SUPERELEVATION 0.030' /'
STA. 894+20.00 MAX. SUPERELEVATION 0.030' /'
STA. 899+60.00 END SUPERELEVATION

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HWY. 65
 PI = 892+30.32
 Δ = 6°00'02" LT.
 D = 1'00'00"
 T = 325.37'
 PC = 650.05'
 PT = 889+04.95
 e = 0.030' /'
 Ls = 540'

STA. 896+36 IN PLACE
 24" X 72" R.C. PIPE CULVERT
 WITH HEADWALLS LT. & RT.
 REMOVE HDWLS. AND EXTEND
 28' LT. & 34' RT.
 TO A COMPLETED LENGTH OF 134'
 (CLASS III TYPE 3 BEDDING)
 WITH F.E.S. LT. & RT.
 050 = XX C.F.S. D.A. = XX ACRES
 24" R.C. PIPE CULVERT = 66 LIN. FT.
 24" F.E.S. = 2 EACH

STA. 896+68 CONSTRUCT
 APPROACH ON LT. = 40 CU. YD. COMP. EMB.

STA. 901+20 IN PLACE
 18" X 24" C.M. ARCH PIPE CULVERT
 REMOVE AND INSTALL
 18" X 28" PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPROACH = 30 CU. YD. COMP. EMB.

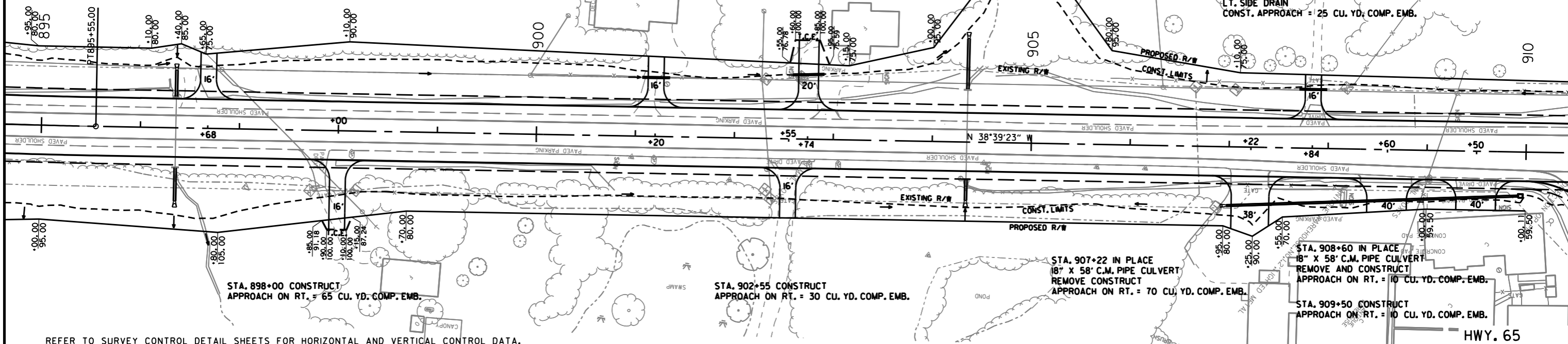
STA. 902+74 IN PLACE
 22" X 14" X 24" C.M. ARCH PIPE CULVERT
 REMOVE AND INSTALL
 18" X 32" PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPROACH = 70 CU. YD. COMP. EMB.

STA. 904+35 IN PLACE
 24" X 92" R.C. PIPE CULVERT
 WITH HEADWALLS LT. & RT.
 REMOVE HDWLS. AND EXTEND
 52' LT. & 22' RT.
 TO A COMPLETED LENGTH OF 166'
 (CLASS III TYPE 3 BEDDING)
 WITH F.E.S. LT. & RT.
 050 = XX C.F.S. D.A. = XX ACRES
 24" R.C. PIPE CULVERT = 78 LIN. FT.
 24" F.E.S. = 2 EACH

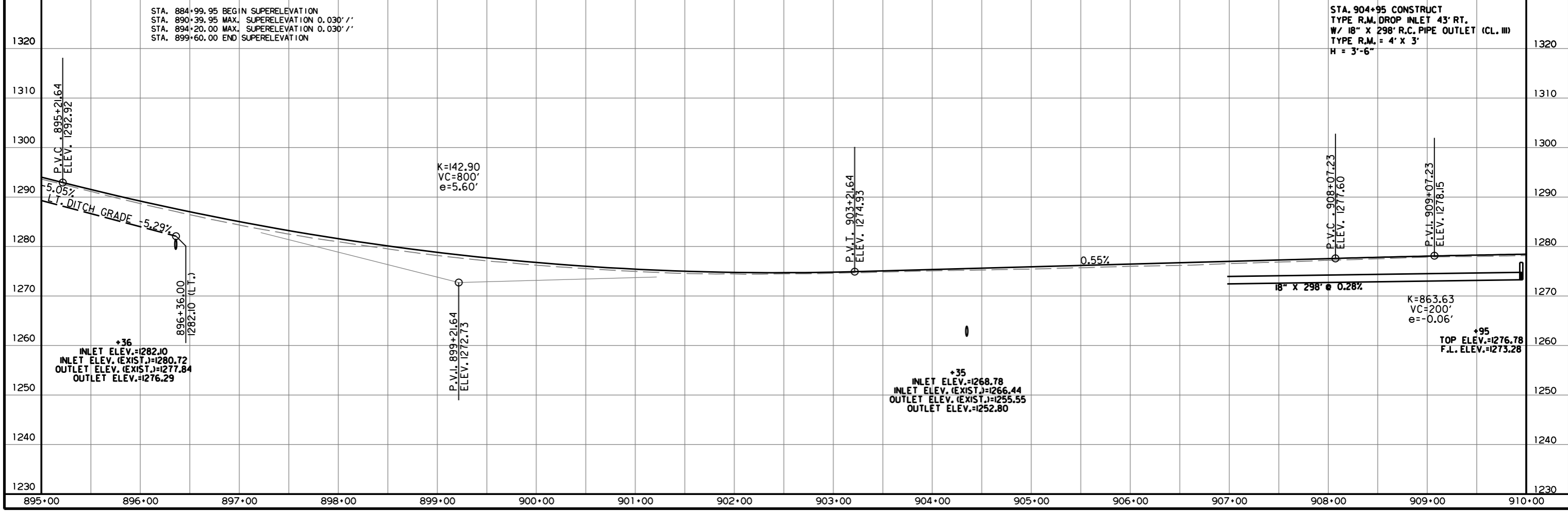
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2 PLAN AND PROFILE SHEETS

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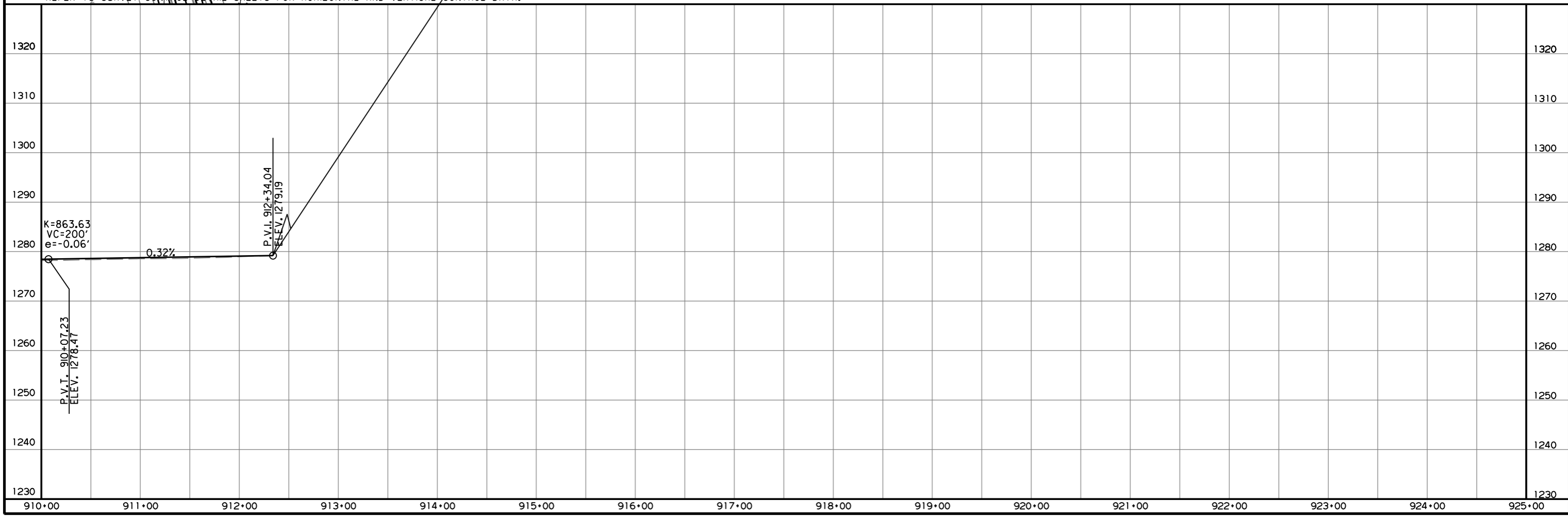
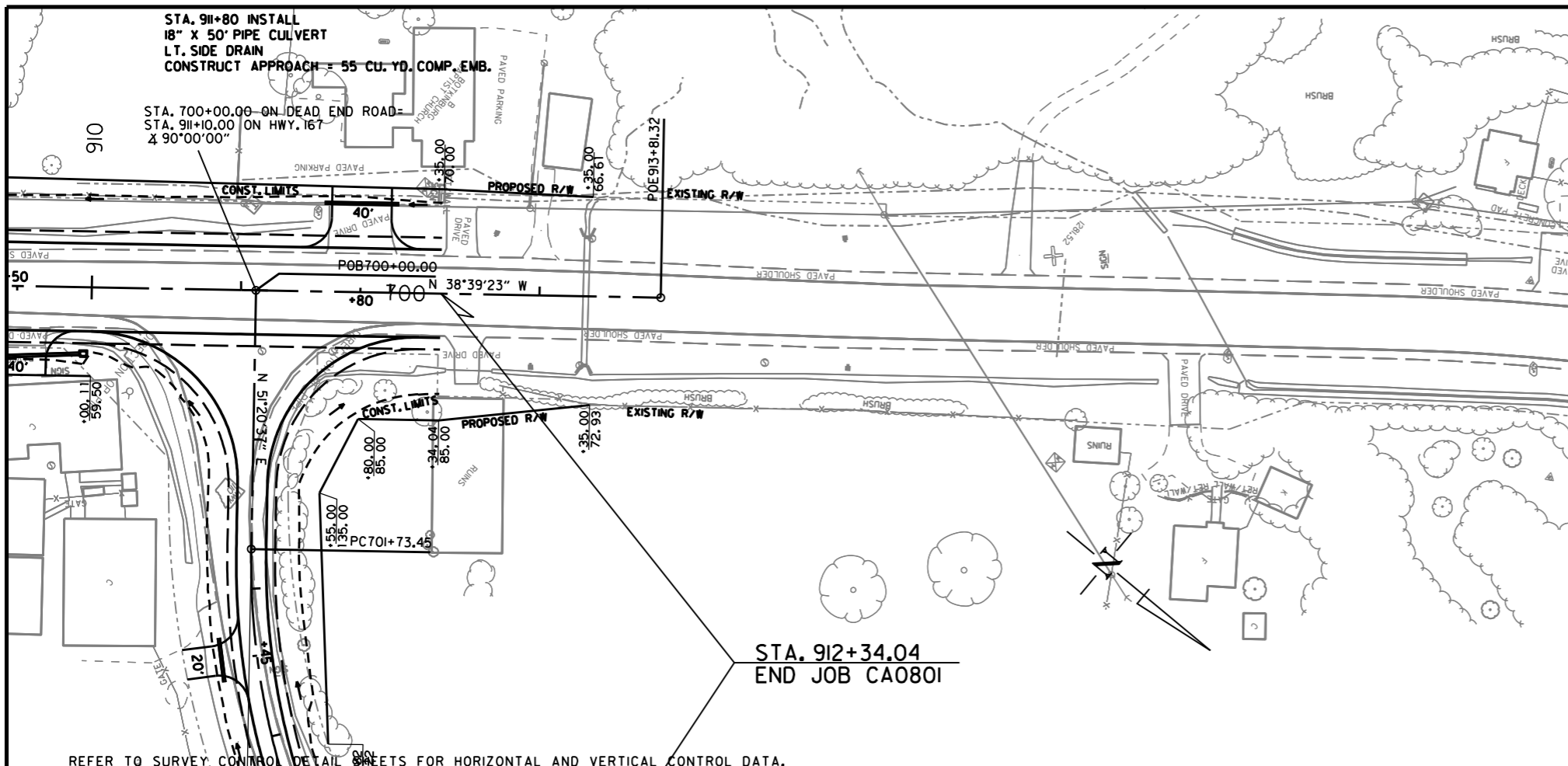


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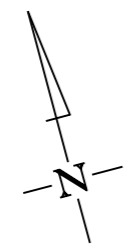
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HWY. 65

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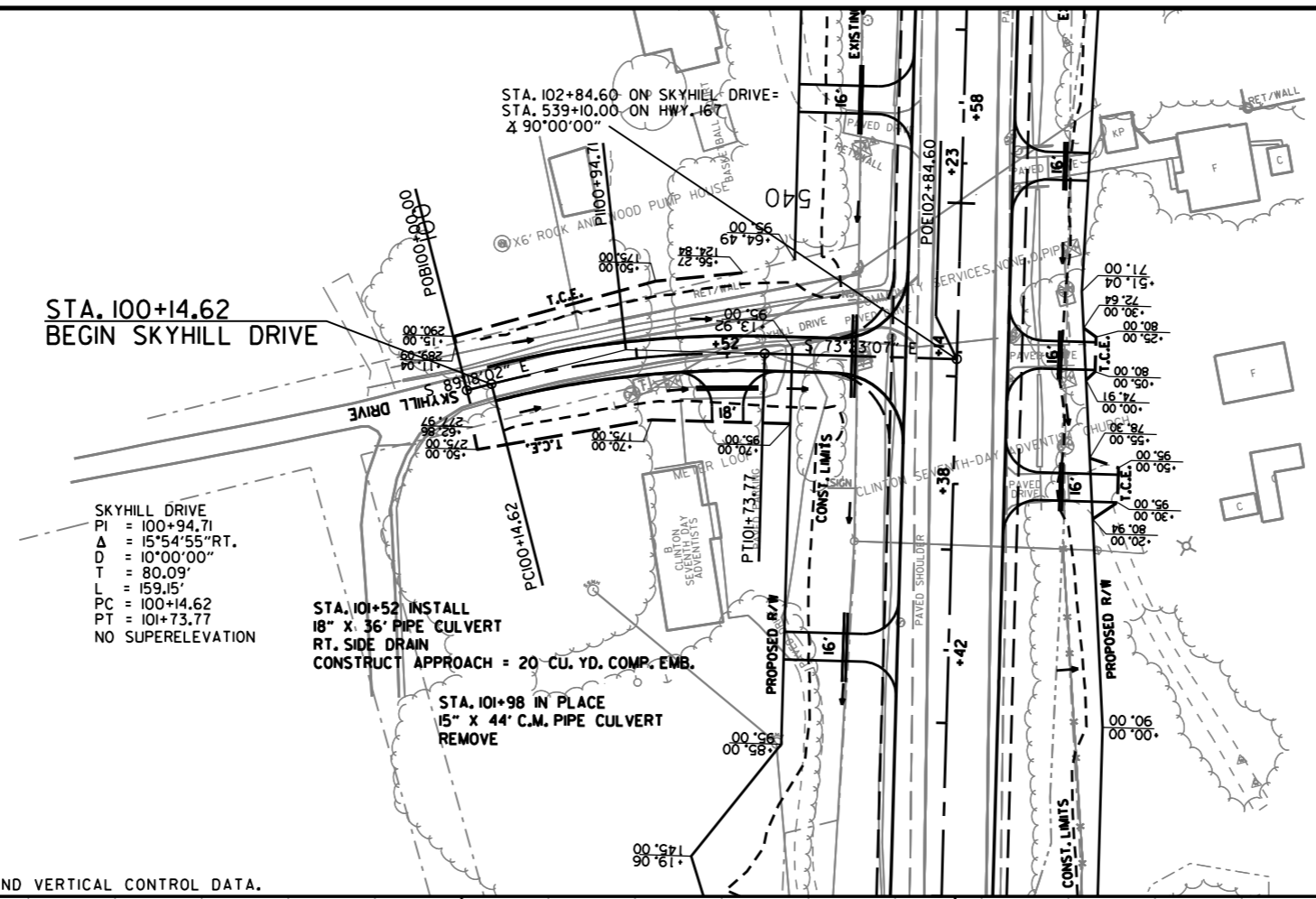


STA. 100+14.62
BEGIN SKYHILL DRIVE

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Δ = 15°54'55" RT.
D = 10°00'00"
T = 80.09'
L = 159.15'
PC = 100+14.62
PT = 101+73.77
NO SUPERELEVATION

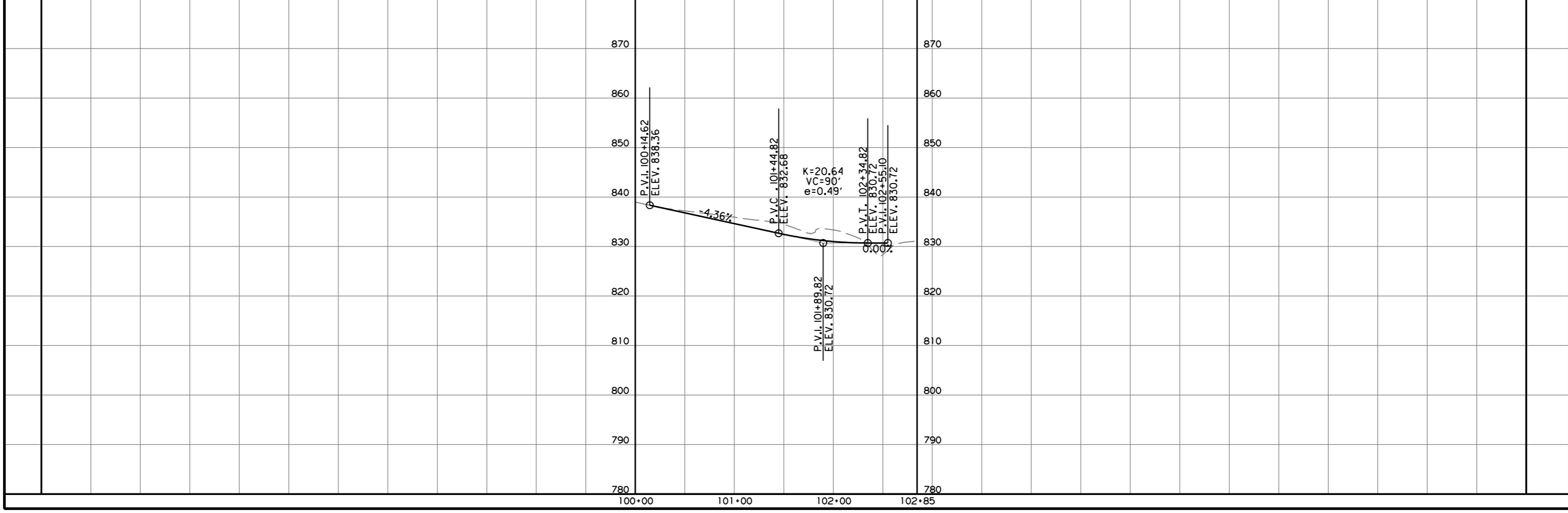
STA. 101+52 INSTALL
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RT. SIDE DRAIN
CONSTRUCT APPROACH = 20 CU. YD. COMP. EMB.

STA. 101+98 IN PLACE
15" X 44" C.M. PIPE CULVERT
REMOVE



REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

SKYHILL DRIVE



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STA. 201+22 INSTALL
18" X 38' PIPE CULVERT
LT. SIDE DRAIN
CONSTRUCT APPROACH = 30 CU. YD. COMP. EMB.
= 5 CU. YD. UNCL. EXC.
STA. 201+53 IN PLACE
18" X 20' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 201+84 IN PLACE
18" X 20' C.M. PIPE CULVERT
REMOVE AND INSTALL
18" X 38' PIPE CULVERT
LT. SIDE DRAIN
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= 40 CU. YD. UNCL. EXC.

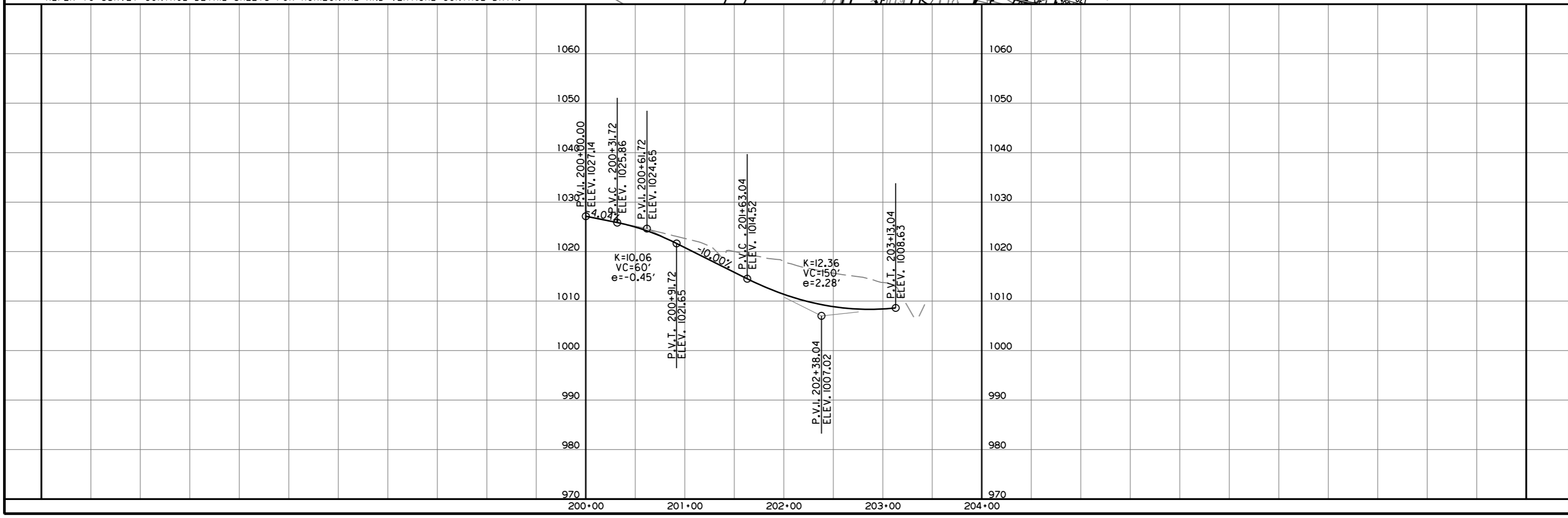
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PI = 201+37.55
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PT = 202+24.48
NO SUPERELEVATION

STA. 200+00
BEGIN ISOM LANE
STA. 201+00 IN PLACE
18" X 32' C.M. PIPE CULVERT
REMOVE AND INSTALL
18" X 36' PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 20 CU. YD. COMP. EMB.
= 5 CU UNCL. EXC.

STA. 201+53 IN PLACE
18" X 20' C.M. PIPE CULVERT
REMOVE AND INSTALL
18" X 38' PIPE CULVERT
RT. SIDE DRAIN
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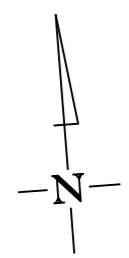
ISOM LANE



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STA. 300+00.00 ON HENDERSON ROAD =
STA. 650+00.00 ON HWY. 167
4 90°00'00"

STA. 301+61 IN PLACE
15" X 30' PIPE CULVERT
REMOVE AND INSTALL
18" X 34' PIPE CULVERT

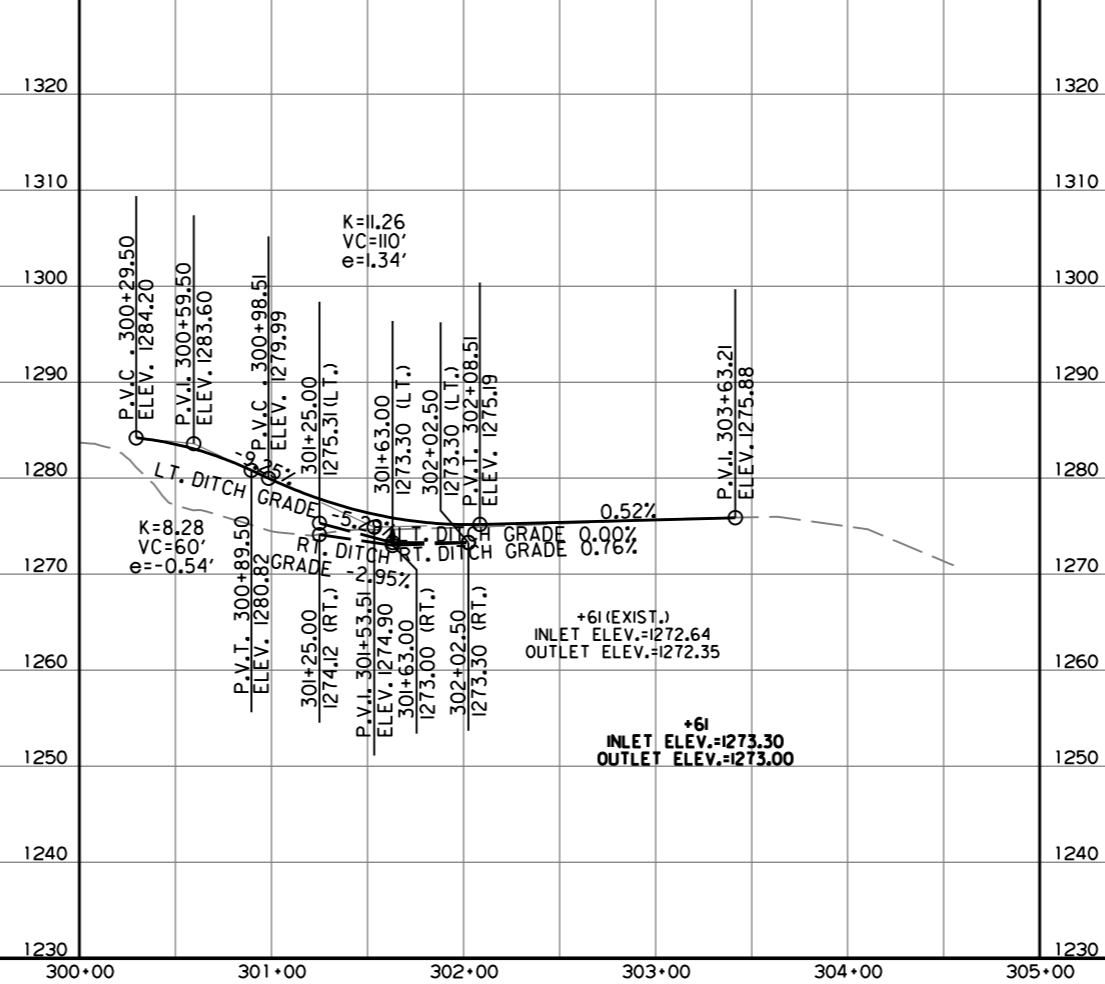
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D = 4°00'00"
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L = 151.28'
PC = 301+90.21
PT = 303+41.49
NO SUPERELEVATION

STA. 303+41.49
END HENDERSON ROAD

STA. 302+88 INSTALL
21" X 15" X 18' ARCH PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 10 CU. YD. COMP. EMB.

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

HENDERSON ROAD

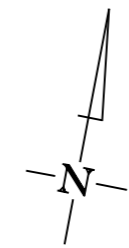
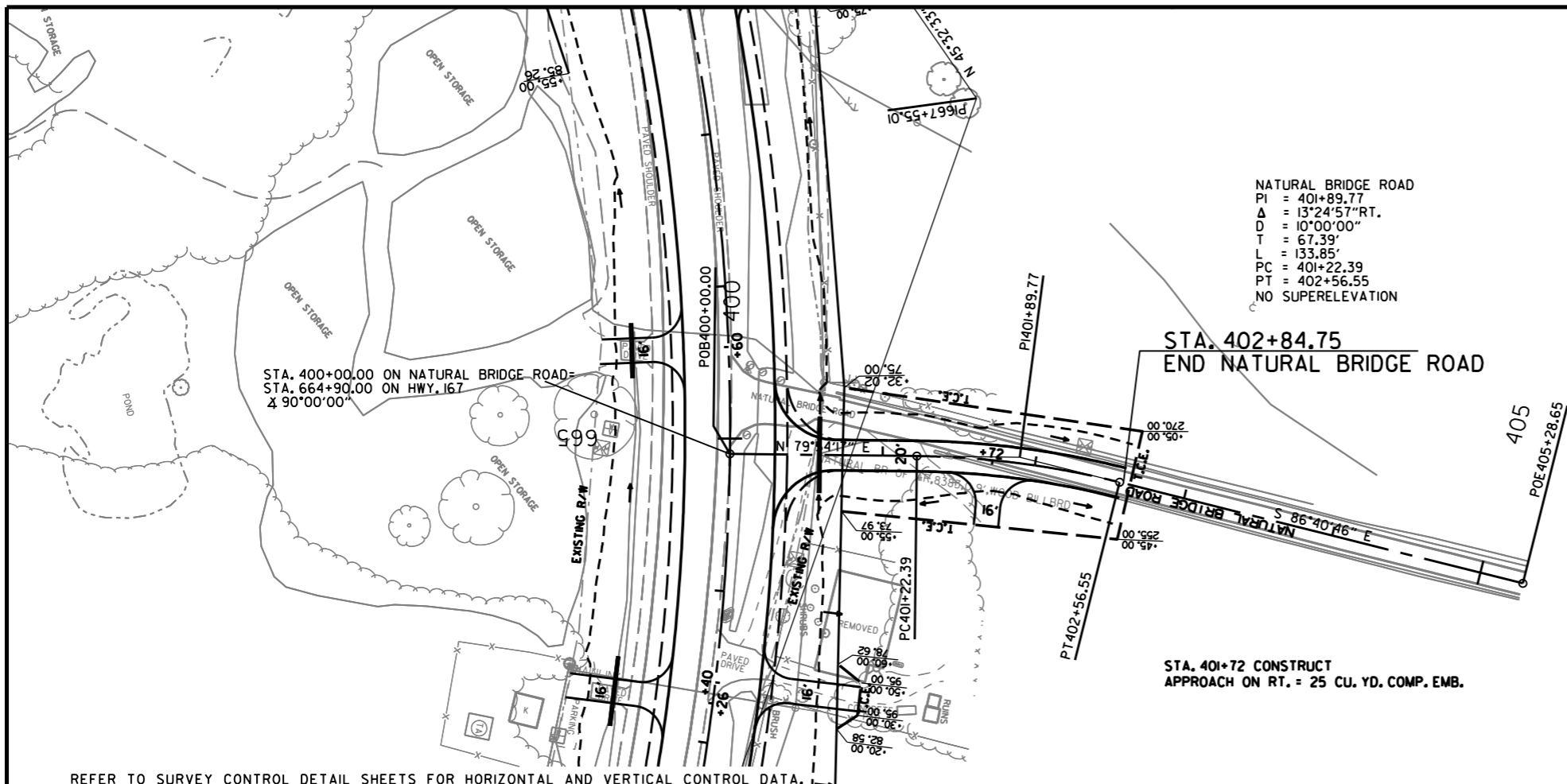


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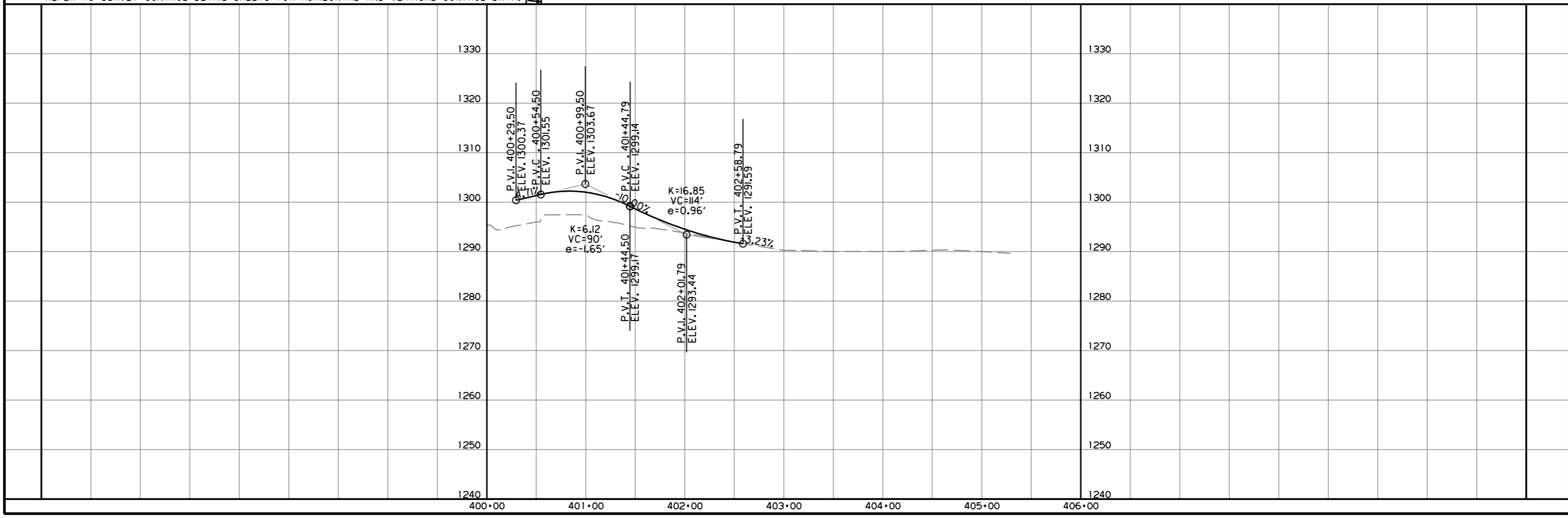
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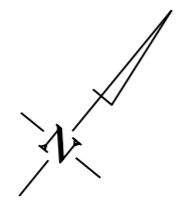
NATURAL BRIDGE ROAD



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**STA. 500+22.64
BEGIN GLENN ROAD**

GLENN ROAD
PI = 502+07.66 STA. 501+90 INSTALL
Δ = 41°32'44" LT. 18" X 56' PIPE CULVERT
D = 26'30"00"
T = 82.01'
L = 156.78'
PC = 501+25.65
PT = 502+82.42
NO SUPERELEVATION

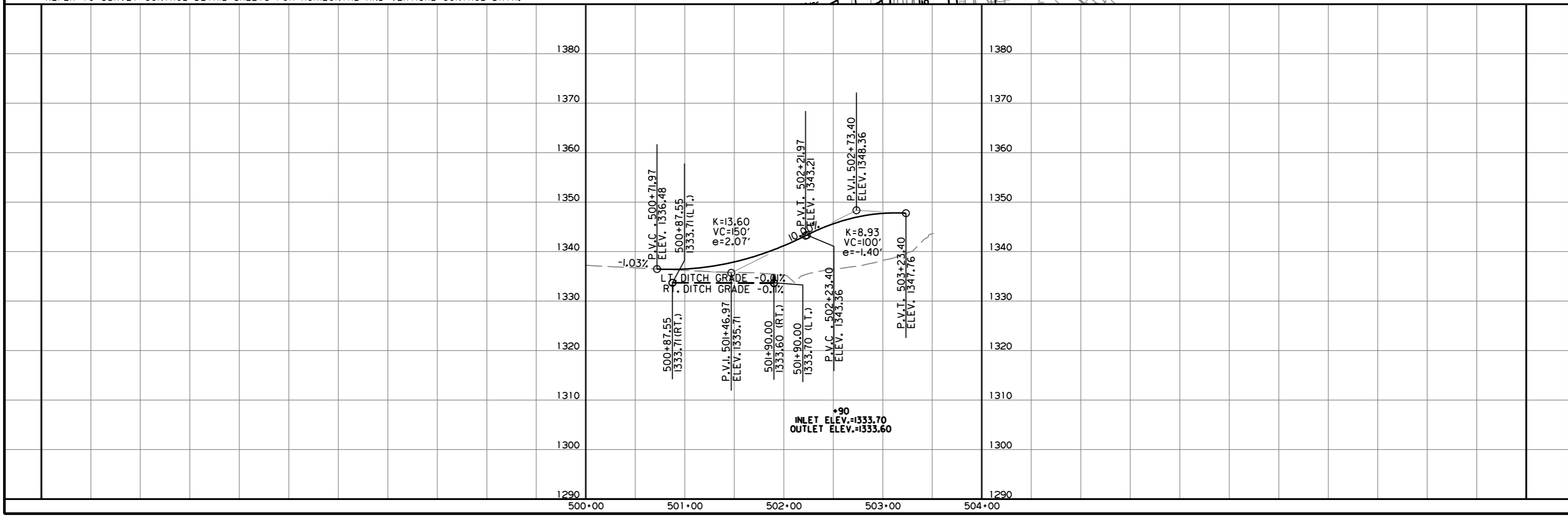
STA. 502+15 CONSTRUCT
APPROACH ON RT. = 295 CU. YD. COMP. EMB.

STA. 502+25 IN PLACE
15" X 24' PIPE CULVERT
REMOVE

STA. 503+52.90 ON GLENN ROAD=
STA. 715+00.00 ON HWY. 167
± 90°00'00"

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

GLENN ROAD

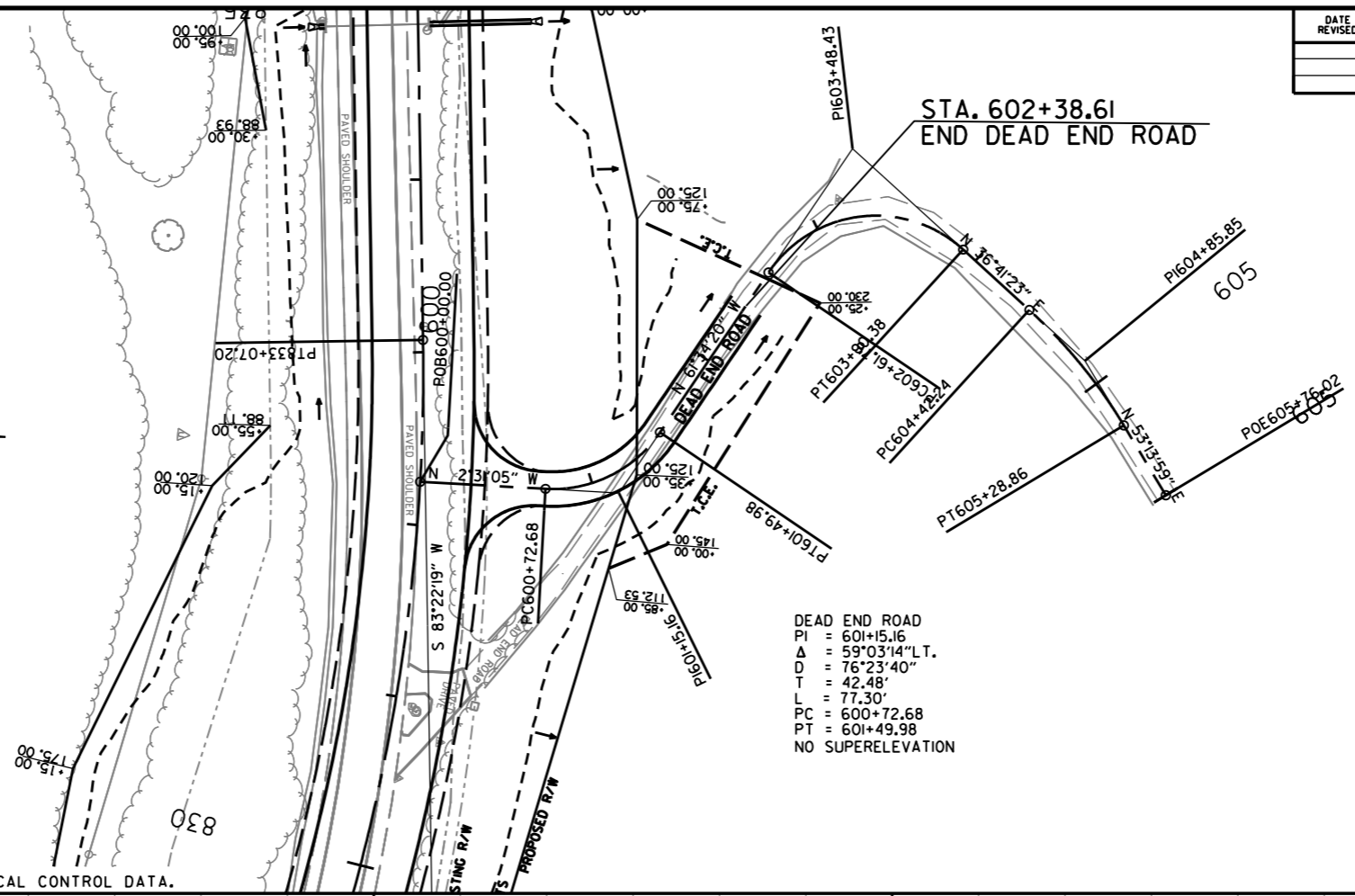
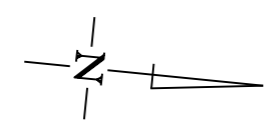


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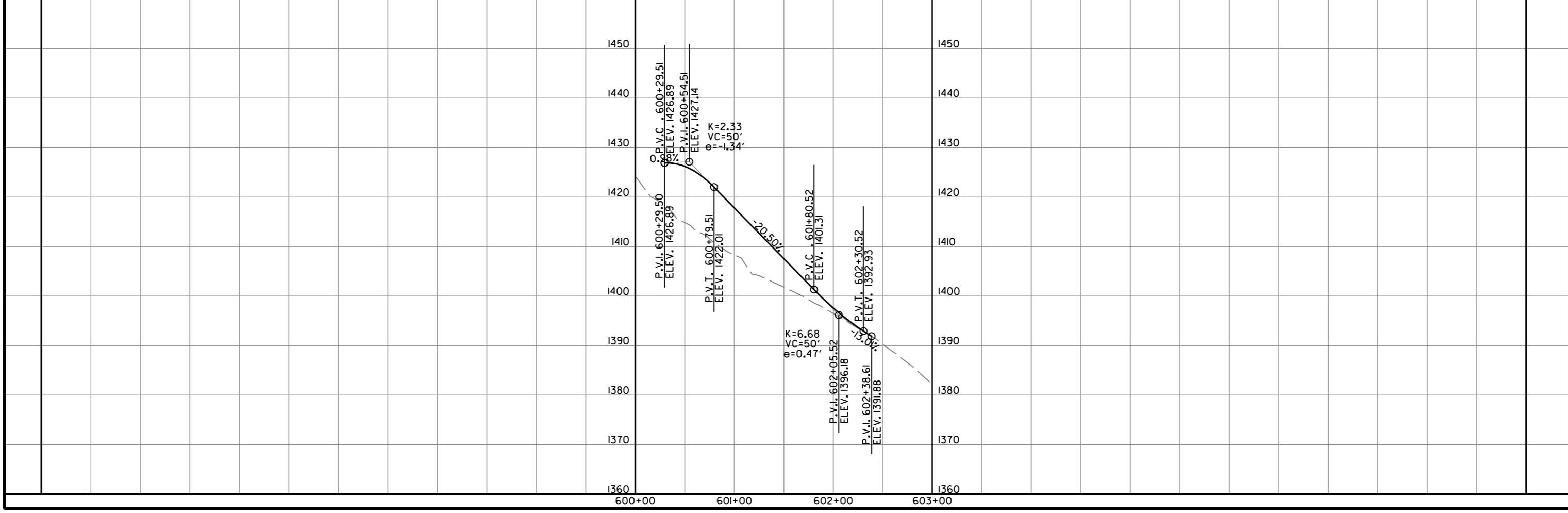
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DEAD END ROAD
 PI = 601+5.16
 Δ = 59°03'14" L.T.
 D = 76°23'40"
 T = 42.48'
 L = 77.30'
 PC = 600+72.68
 PT = 601+49.98
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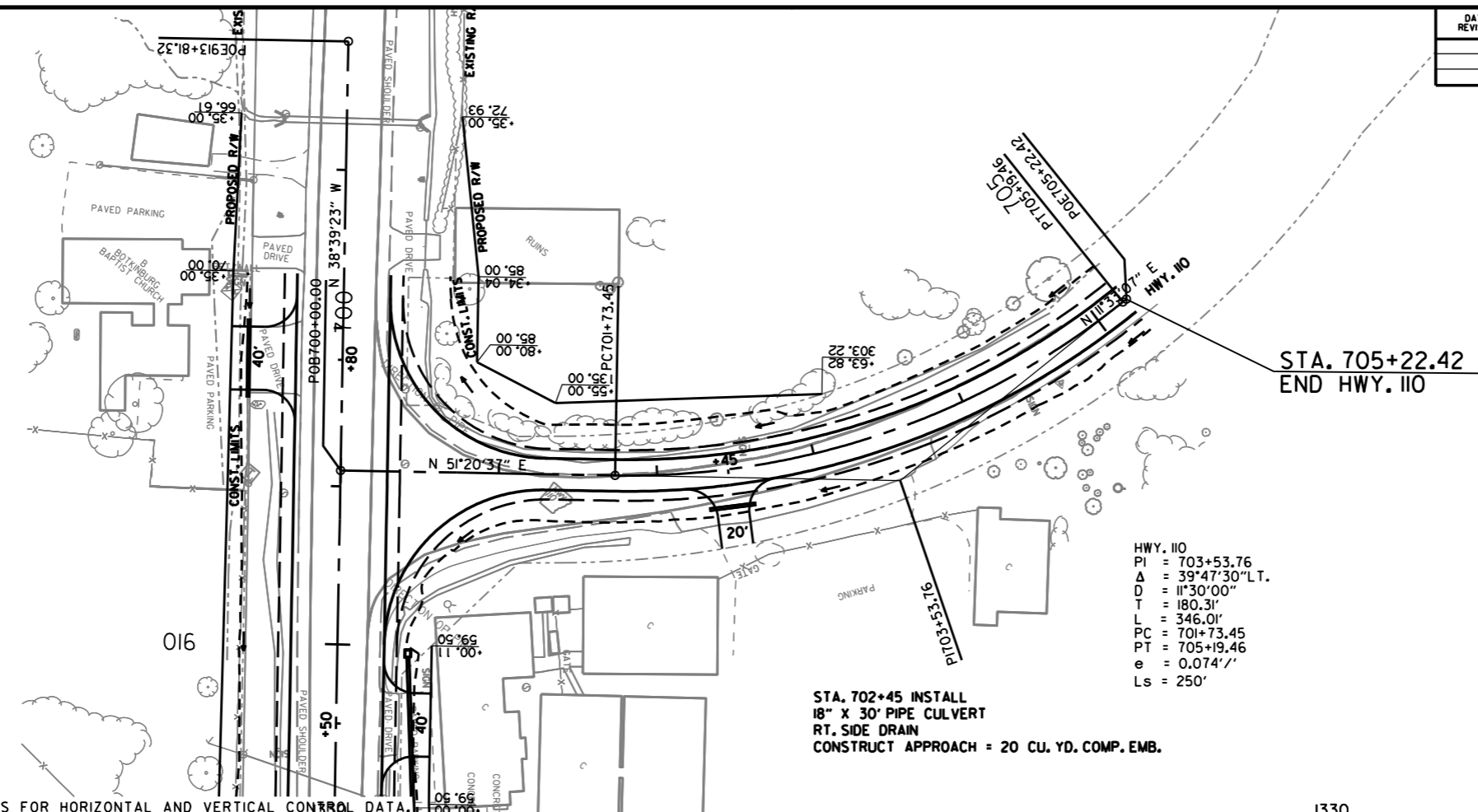
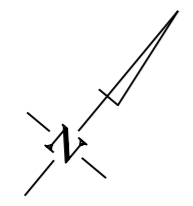
DEAD END ROAD



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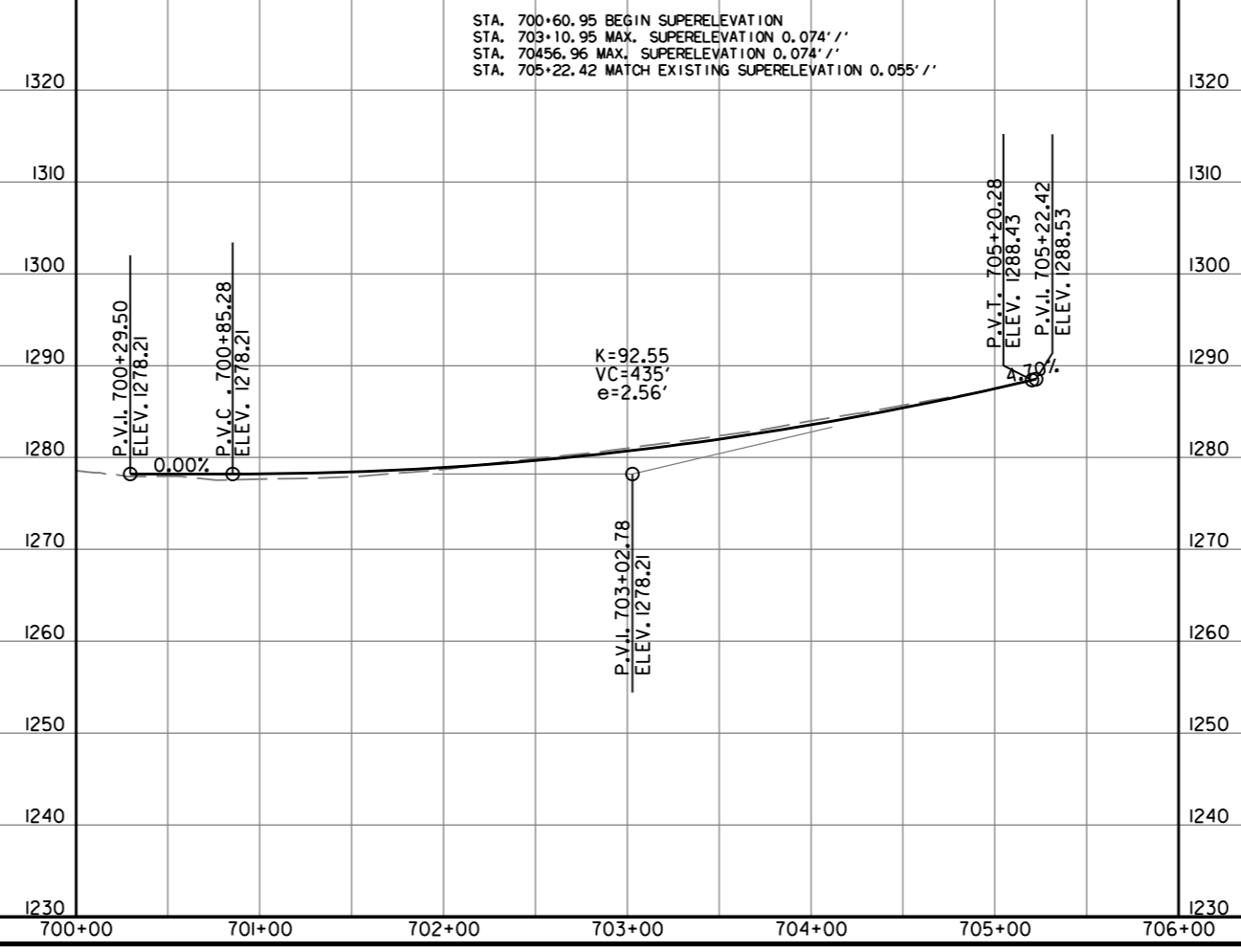


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 D = 11°30'00"
 T = 180.31'
 L = 346.01'
 PC = 701+73.45
 PT = 705+19.46
 e = 0.074' / '
 Ls = 250'

STA. 702+45 INSTALL
 18" x 30' PIPE CULVERT
 RT. SIDE DRAIN
 CONSTRUCT APPROACH = 20 CU. YD. COMP. EMB.

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

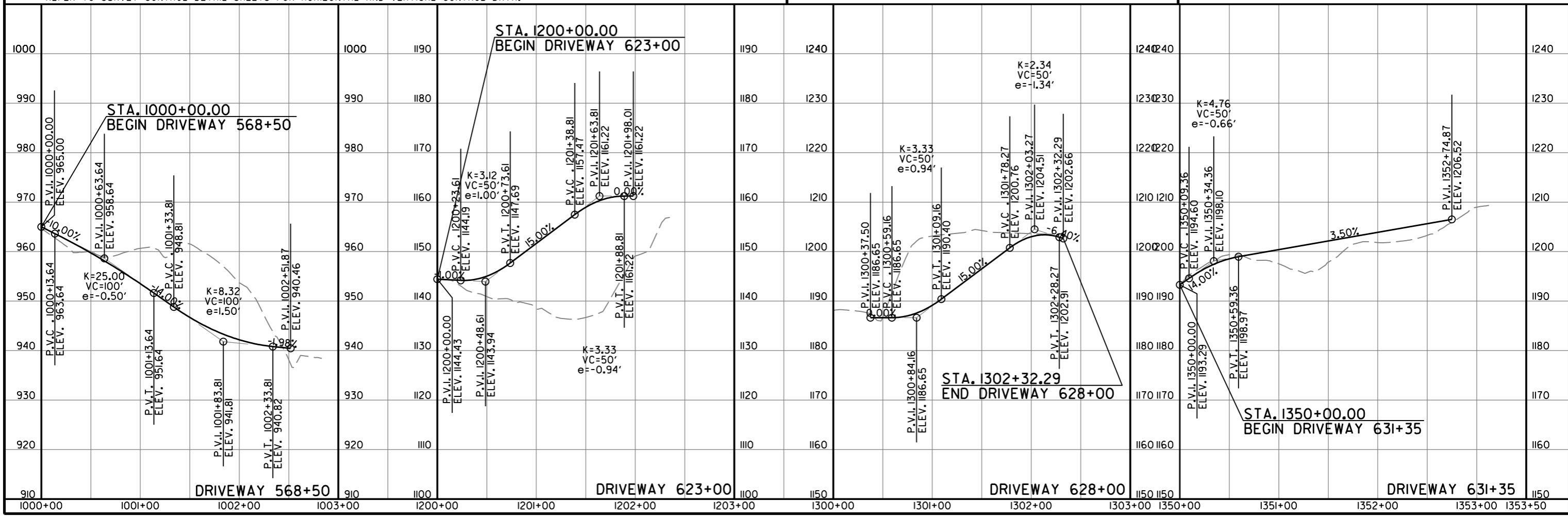
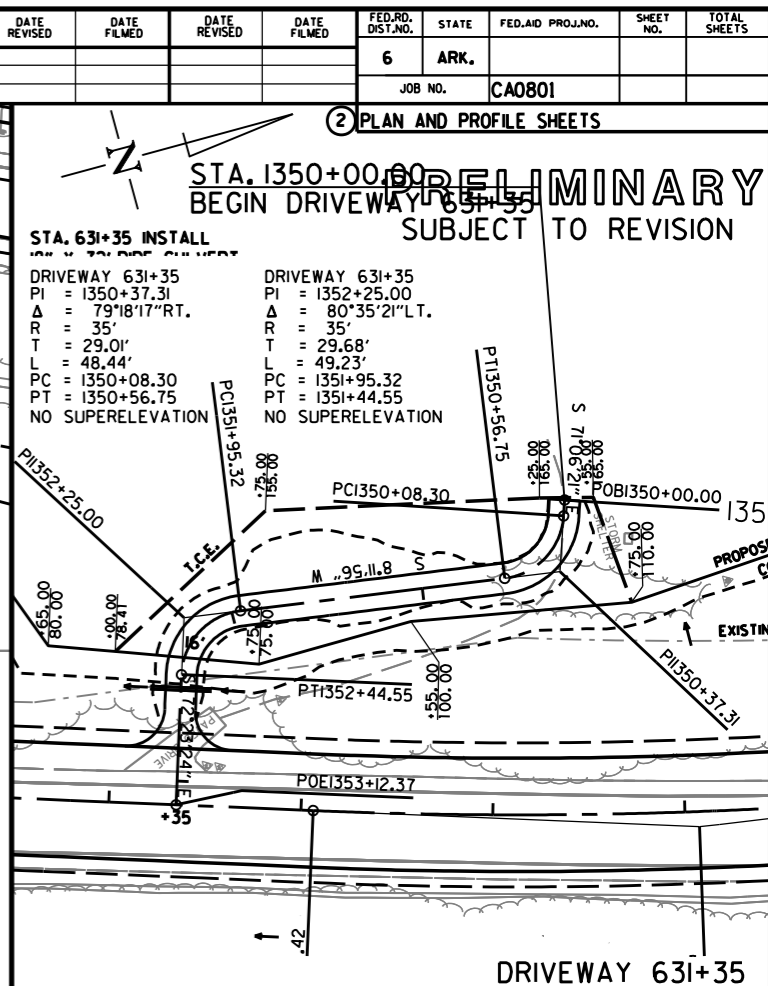
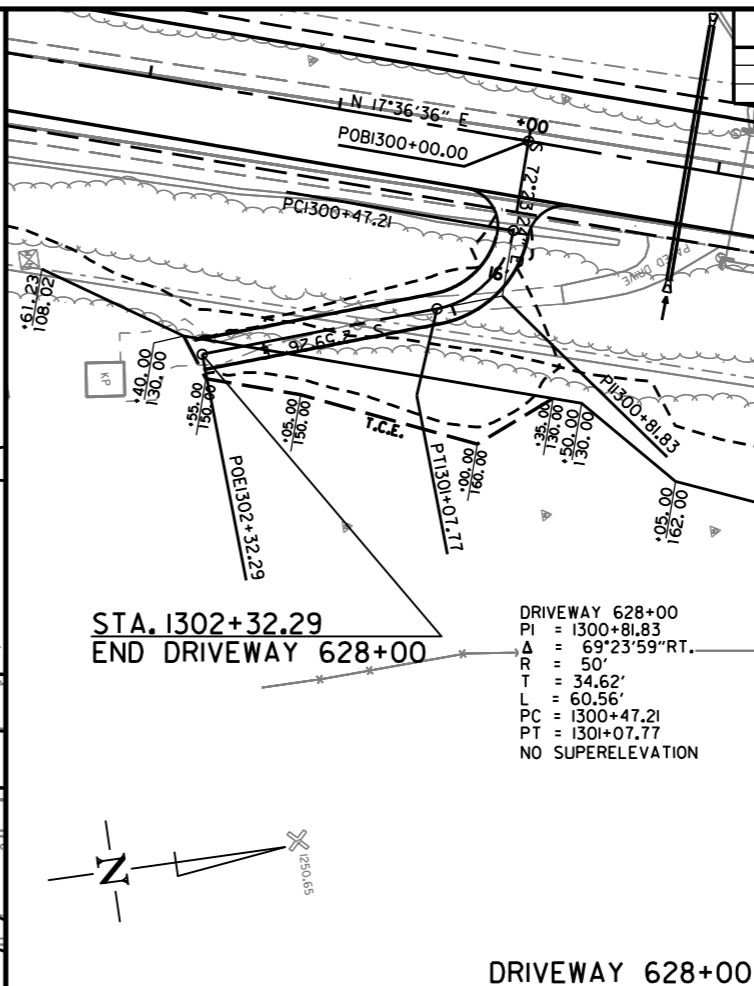
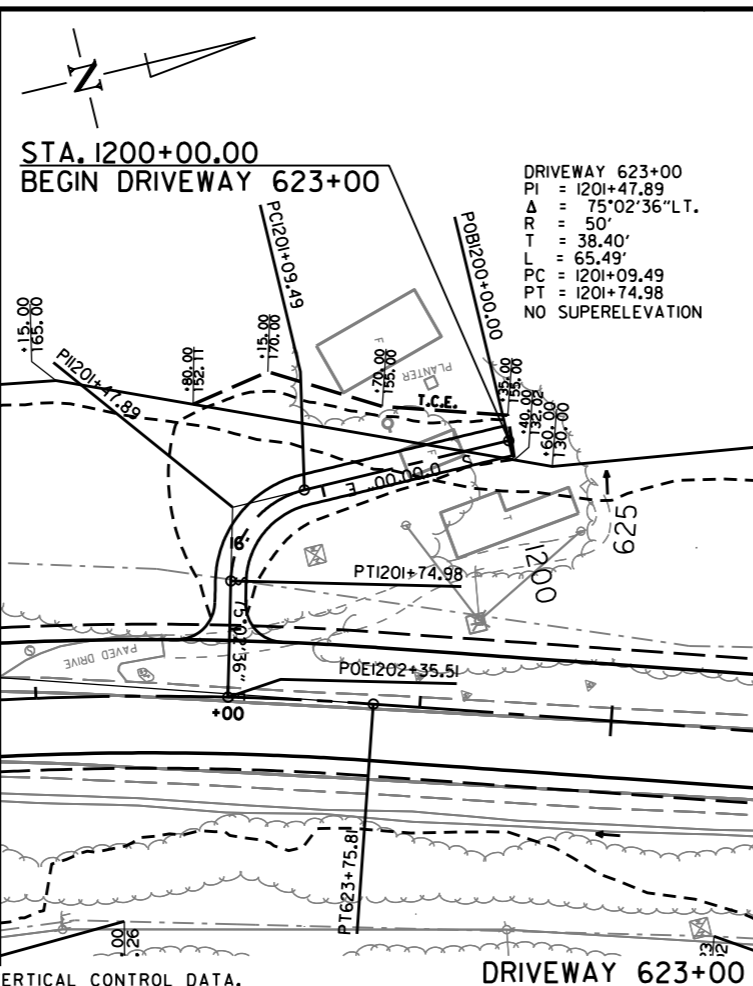
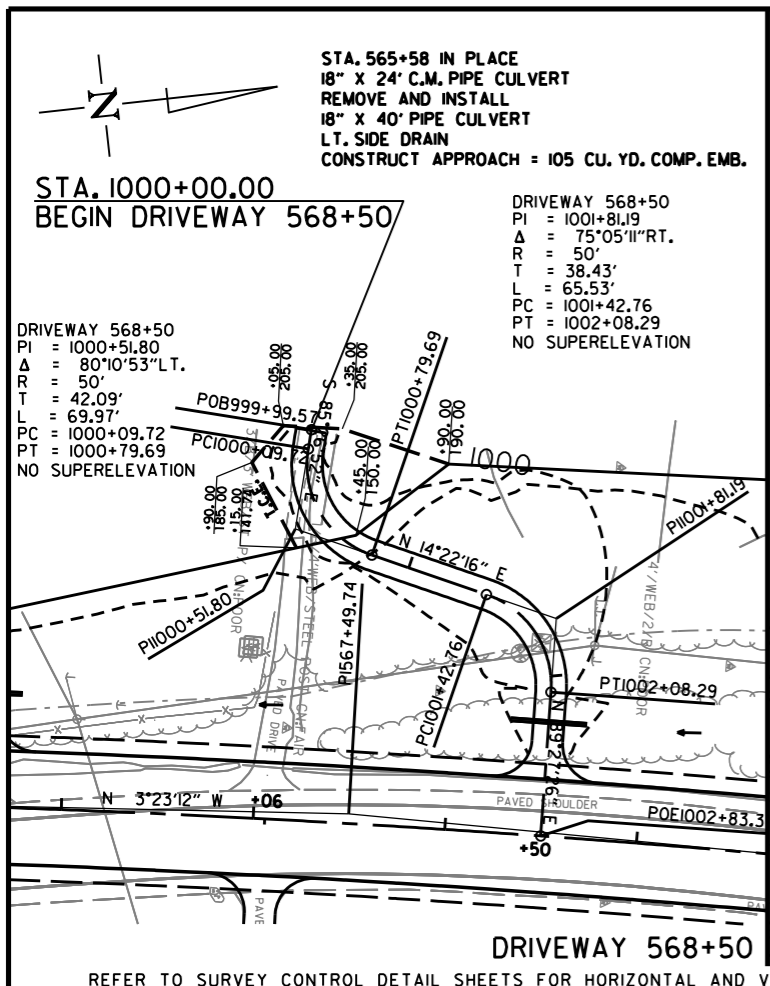
1330 HWY. 110



STA. 700+60.95 BEGIN SUPERELEVATION
 STA. 703+10.95 MAX. SUPERELEVATION 0.074' / '
 STA. 70456.96 MAX. SUPERELEVATION 0.074' / '
 STA. 705+22.42 MATCH EXISTING SUPERELEVATION 0.055' / '

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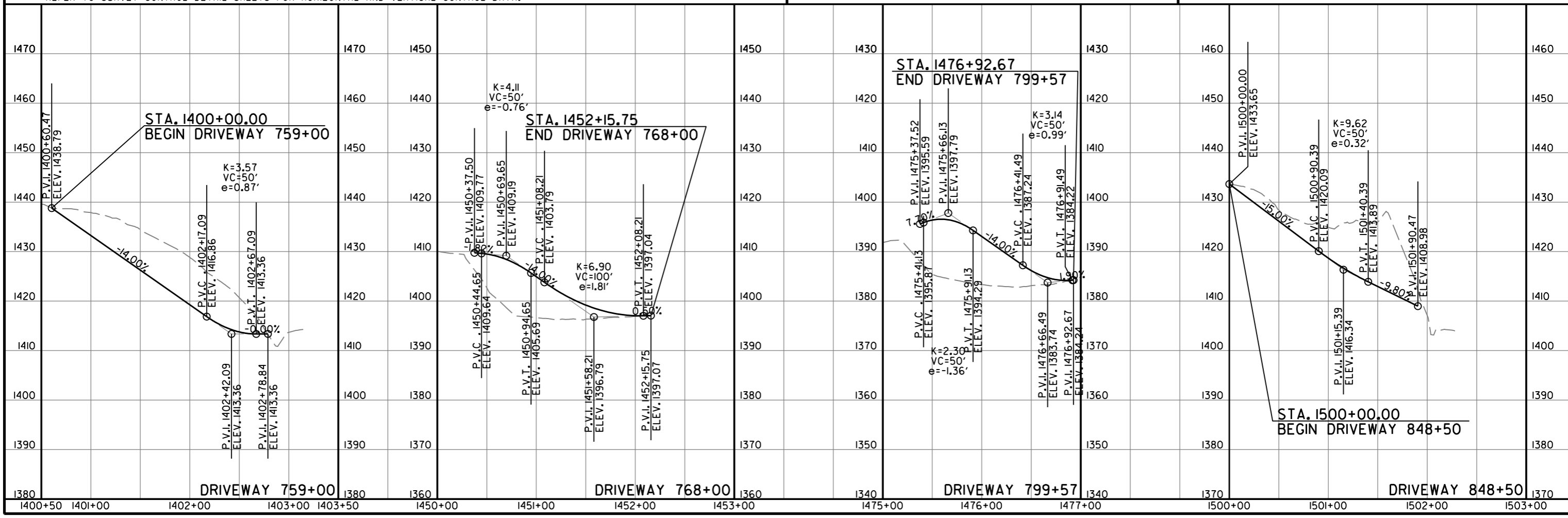
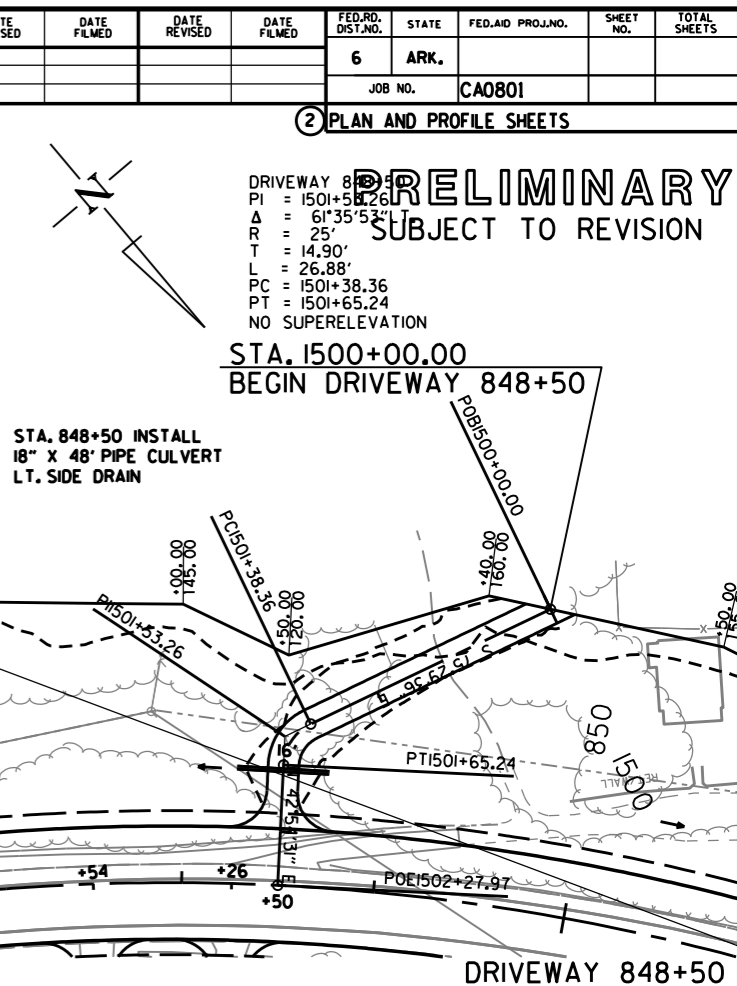
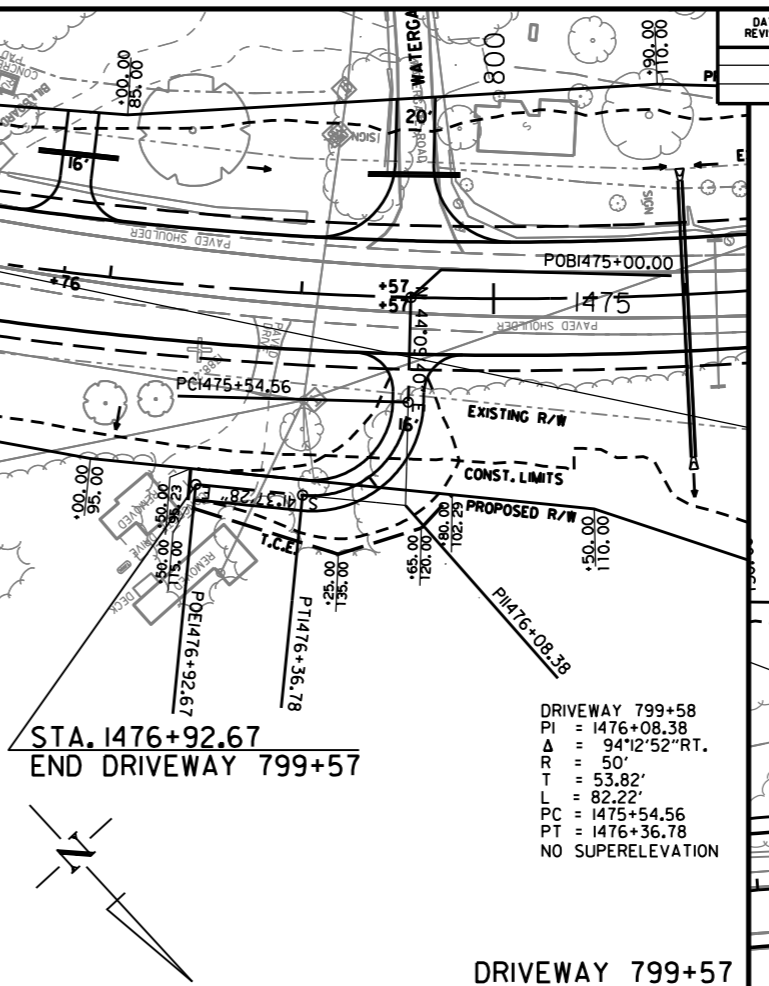
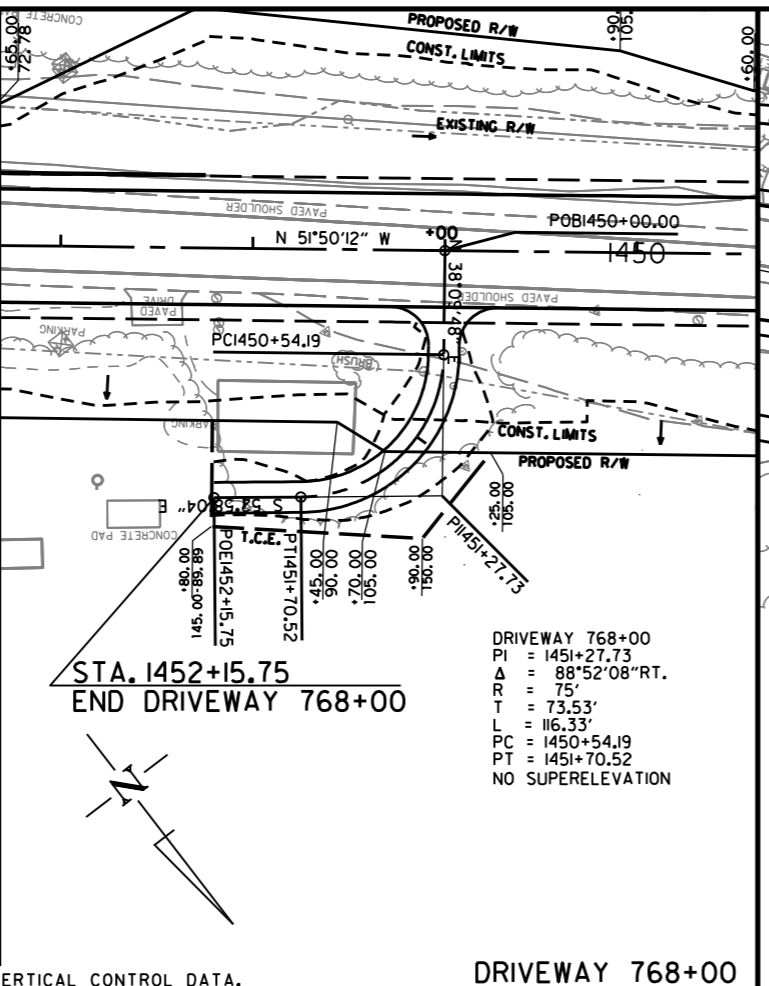
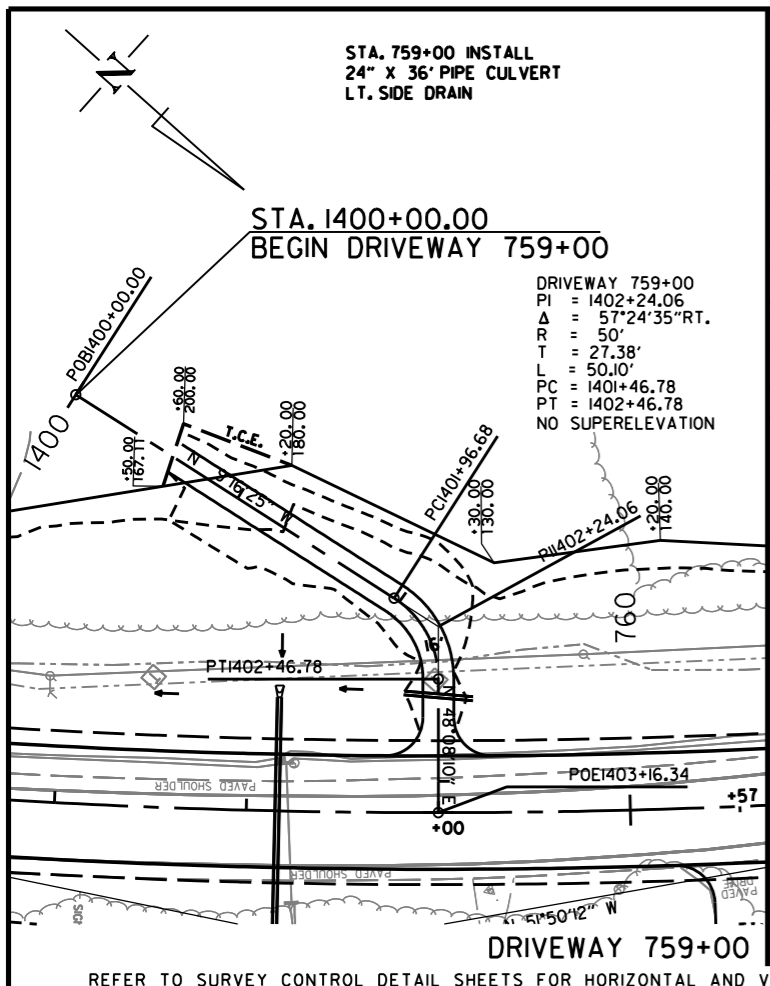
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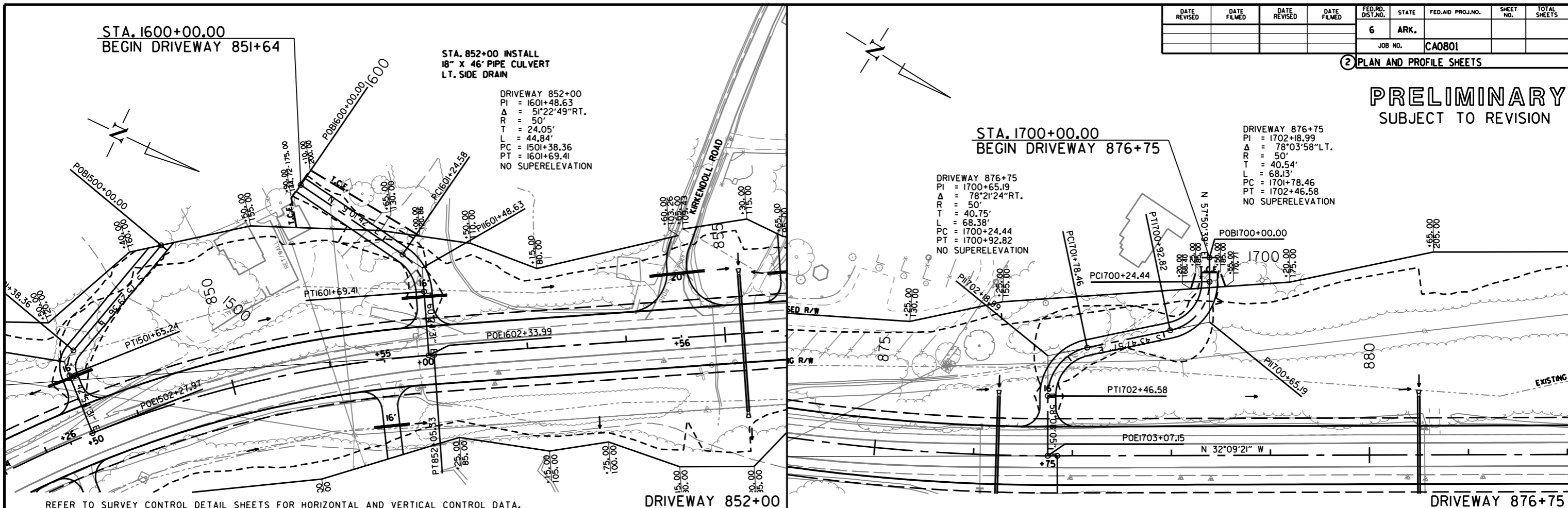
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 R = 25'
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 L = 26.88'
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 PT = 1501+65.24
 NO SUPERELEVATION



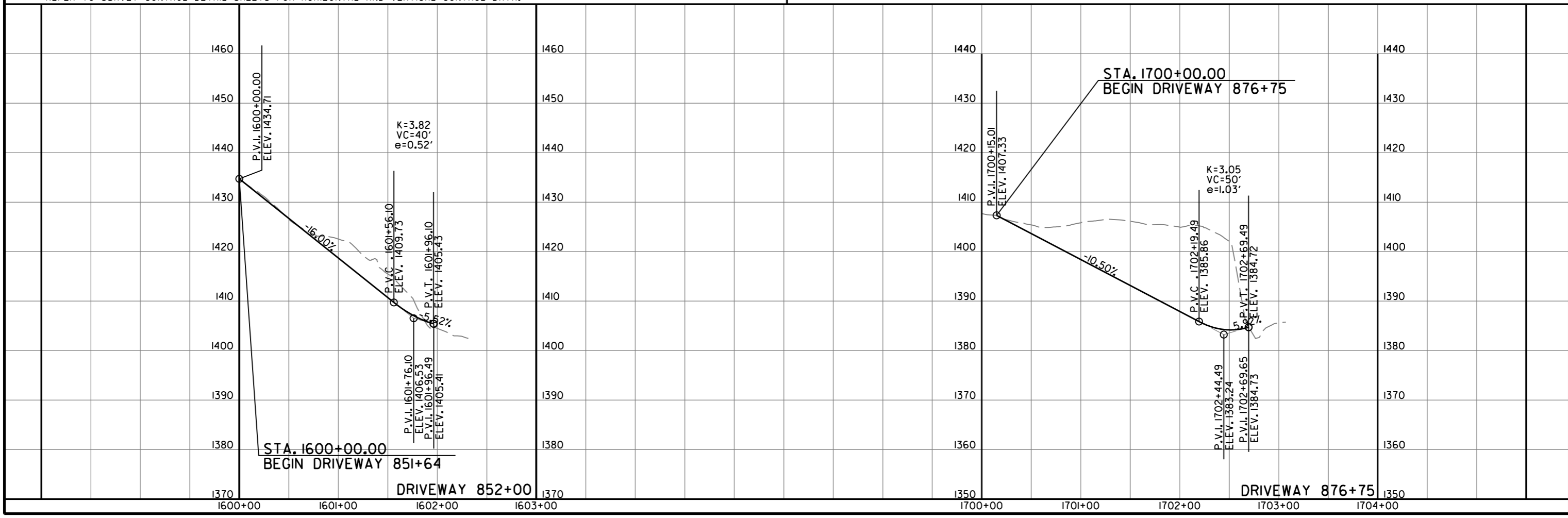
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HWY. 110 – CLINTON (WIDENING) (S)

AHTD Job CA0801

Environmental Assessment



U.S. Department of Transportation
Federal Highway
Administration

October 2016

Arkansas State Highway &
Transportation Department



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HWY. 110 – CLINTON (WIDENING) (S)

F.A.P. Number M001-0071-031

Environmental Assessment

Submitted pursuant to:

The National Environmental Policy Act (NEPA)

42 U.S.C. §4322(2)(c) and 23 C.F.R. §771

Submitted by:

FEDERAL HIGHWAY ADMINISTRATION

and

**ARKANSAS STATE HIGHWAY AND TRANSPORTATION
DEPARTMENT**

The following people may be contacted for additional information concerning this document:

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(501)324-6430

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AHTD
P.O. Box 2261
Little Rock, AR 72203-2261
(501)569-2281

In compliance with the *National Environmental Policy Act*, this Environmental Assessment (EA) describes the plan to widen Highway 65 from just north of Highway 16 within the City of Clinton to its intersection with Highway 110 near Botkinburg, Arkansas. The analysis did not identify any significant adverse environmental impacts and identifies Alternative 1 as the Preferred Alternative.

Comments should be directed to:

Mail: **Environmental - Public Involvement**
AHTD
P.O. Box 2261
Little Rock, AR 72203-2261

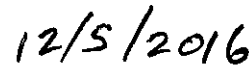
Email: info@ahtd.ar.gov

This EA is also available online at:

<http://www.arkansashighways.com/>



Randal Looney
Environmental Specialist
Federal Highway Administration



Date of Approval



U.S. Department of Transportation
Federal Highway
Administration



Americans with Disabilities Act (ADA) Information

Materials can be provided in alternative formats: large print, Braille, or audiotape for people with disabilities by contacting Joanna P. McFadden Section Head-AHTD's EEO/DBE (ADA/504/Title VI Coordinator), P.O. Box 2261, Little Rock, AR 72203, (501) 569-298, (Voice/TTY 711), or the following email address: Joanna.mcfadden@ahtd.ar.gov. Persons who are deaf or hard of hearing may contact the AHTD through the Arkansas Relay Service at 7-1-1.

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This notice is available from the ADA/504/Title VI Coordinator in large print, on audiotape and in Braille.

A federal agency may publish a notice in the Federal Register, pursuant to 23 USC §139(l), indicating that one or more federal agencies have taken final action on permits, licenses, or approvals for a transportation project. If such notice is published, claims seeking judicial review of those federal agency actions will be barred unless such claims are filed within 180 days after the date of publication of the notice, or within such shorter period as is specified in the federal laws pursuant to which judicial review of the federal agency action is allowed. If no notice is published, then the periods of time that otherwise are provided by the federal laws governing such claims will apply.

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Chapter 1 – Purpose & Need

What's in Chapter 1?

Chapter 1 explains the purpose of the project, why improvements to Highway 65 are needed, and who is leading the project.

1.1 What is the Highway 65 widening project?

The Arkansas State Highway and Transportation Department (AHTD) is proposing improvements to Highway 65 from within the City of Clinton north to its intersection with Highway 110. The project will include highway widening and minor intersection realignments.

1.2 What are the existing conditions on Highway 65?

Highway 65 is a principal arterial on the National Highway System that begins at Clayton, Louisiana, and ends 988 miles later at I-35 in Albert Lea, Minnesota. In Arkansas, Highway 65 enters the State eight miles south of Eudora. The highway runs north and intersects with I-530 at Pine Bluff, southeast of Little Rock. Highway 65 is signed concurrently with I-530 and I-40 through central Arkansas until it diverges from I-40 at Conway, heading north/northwest to the state line, north of Omaha. The total length of Highway 65 in Arkansas is 309 miles.

The project area is located in north-central Van Buren County. The project begins within the city limits of Clinton, just north of the intersection of Highway 65 with Highway 16, and extends north approximately eight miles to the intersection with Highway 110 at Botkinburg (Figure 1). According to the 2010 Census, Clinton has a population of 2,602. Botkinburg is not an incorporated city. The project area is rural and primarily wooded. There is an elevation change of approximately 800 feet in the project area. In the Clinton area, Highway 65 provides access to Greers Ferry Lake as one of the major highways that skirts the western boundary of the lake. Some tourists access Greers Ferry Lake, the Little Red River, and the Buffalo National River while using their recreational vehicles and large motorhomes. Logging operations in the Ozark National Forest routinely utilize Highway 65.

What does it mean when a highway is on the National Highway System?

The National Highway System (NHS) consists of roadways important to the nation's economy, defense, and mobility. The NHS was developed by the Department of Transportation in cooperation with the states, local officials, and metropolitan planning organizations. Placement upon the NHS gives the highway priority in federal funding, maintenance and safety improvements.

Project Area

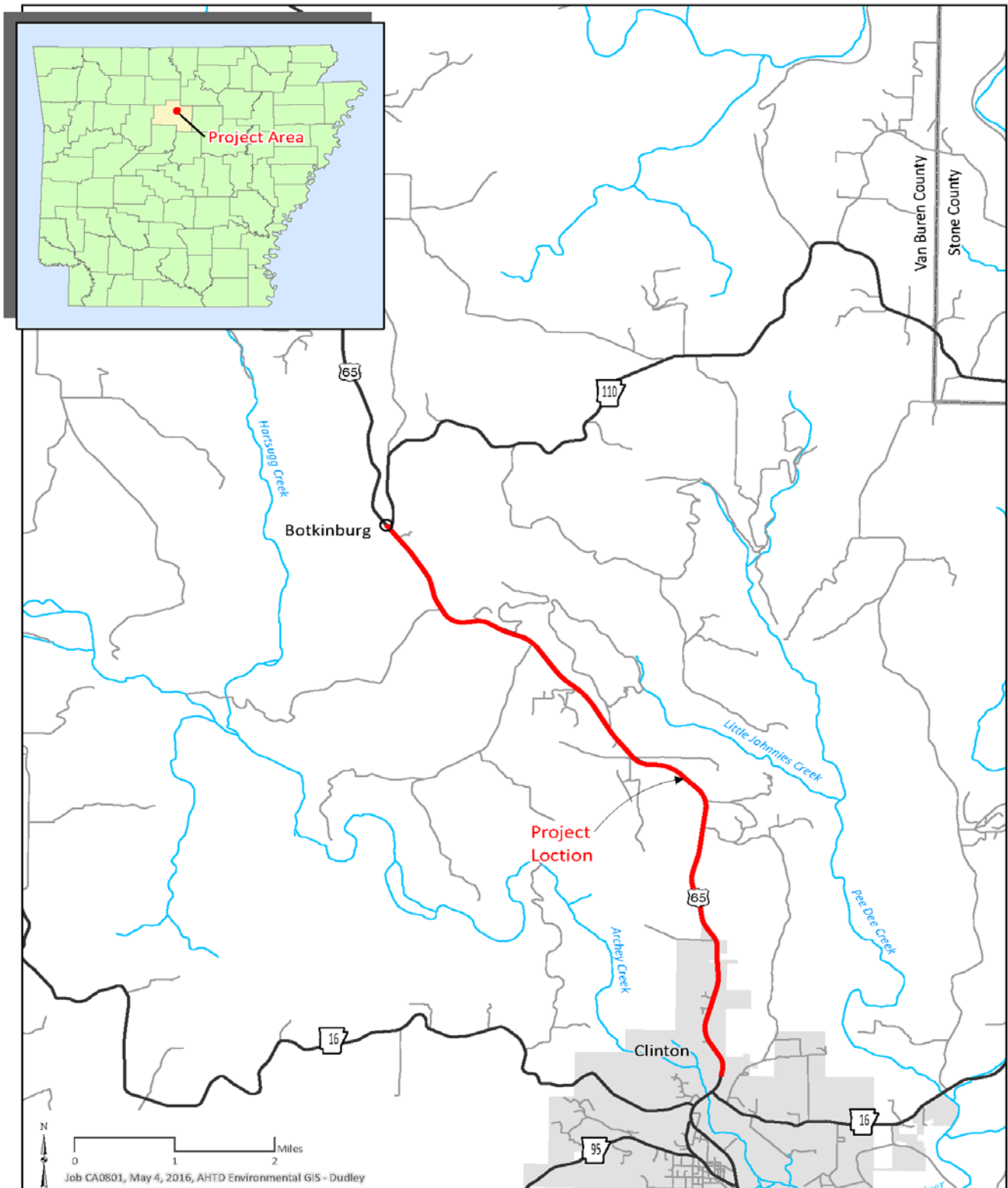


Figure 1

Existing Conditions

From I-40 to the Missouri State line, Highway 65 includes several segments with four travel lanes, including a 4.26-mile segment extending from the southern terminus of the project area, south through Clinton. Within Arkansas, 73% of Highway 65 is currently four lanes, while 27% of the route is still either two or three lanes.

From Highway 16 to the north, for a distance of five miles, Highway 65 in the project area has three 12-foot lanes (one southbound and two northbound) with eight-foot shoulders. The remaining three miles of Highway 65 consists of two 12-foot lanes and eight-foot shoulders. In 2016, there were 5,500 vehicles per day (vpd) traveling this route during traditional weekdays (Monday-Thursday). Sixteen percent of the traffic was trucks. It is estimated that 6,000 vpd will travel this route on weekdays by 2036. Because Highway 65 is a direct route between central Arkansas and several tourist destinations (Buffalo National River, Ozark National Forest, Eureka Springs and Branson, Missouri), seasonal and weekend traffic volumes range from seven percent higher than weekday vpd in February, to 35 percent higher than weekday vpd in August. During specific holiday/event, periods (spring break, Memorial Day weekend, Labor Day weekend), average traffic volumes are as high as 40 percent above weekday vpd over the entire holiday event period. See Figure 2 for existing and projected traffic volumes.

1.3 What is the purpose of this project?

This route is part of Arkansas's four-lane grid system that is being completed as funding becomes available. The purpose of the proposed project is to provide safer and efficient intrastate and interstate movement of people and goods for greater mobility and connectivity.

Average Daily Traffic

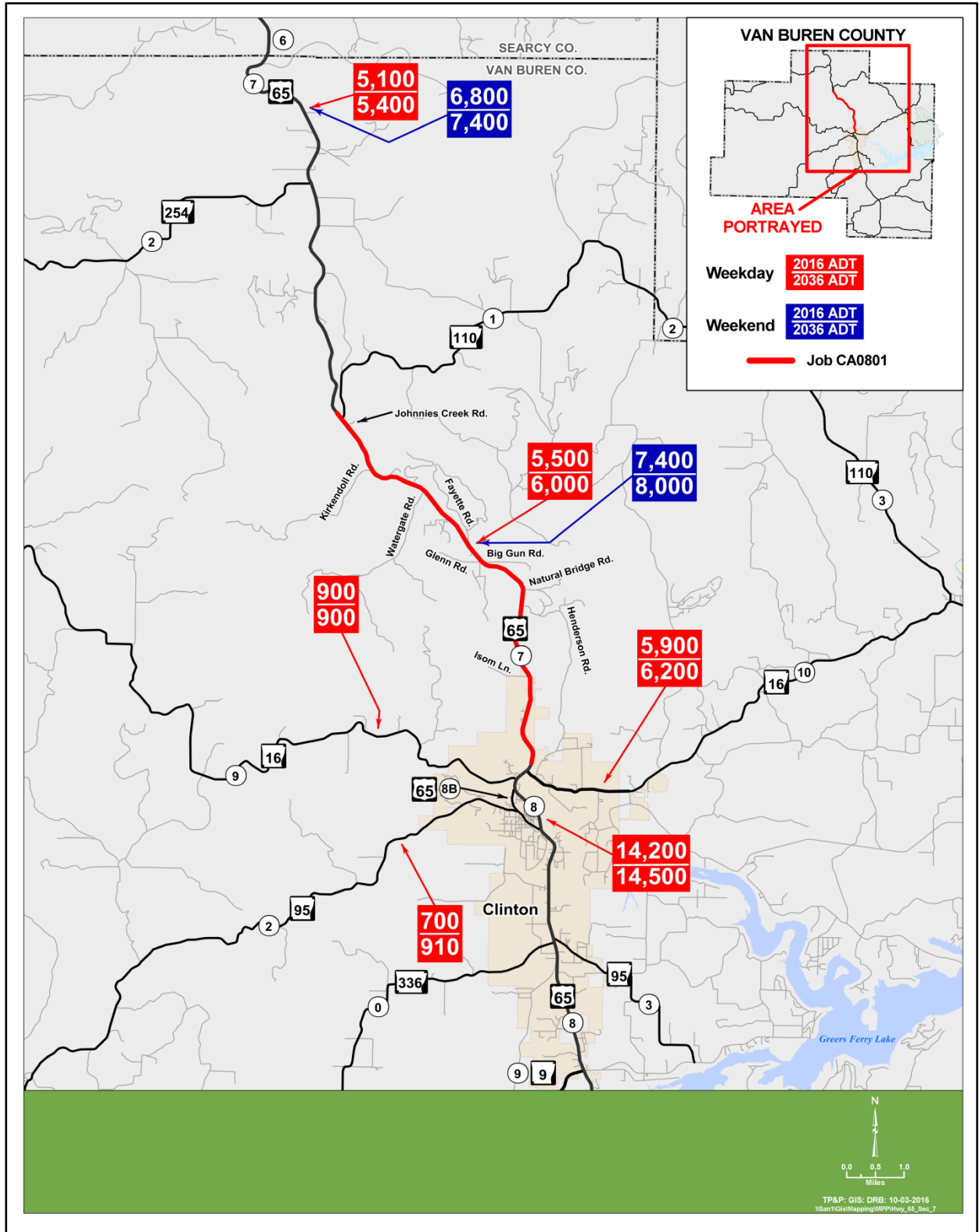


Figure 2

1.4 Why does Highway 65 need to be widened?

Level of Service

In the United States, state highway agencies have categorized traffic flow with a qualitative measure called Level of Service (LOS). The LOS is determined by using the Highway Capacity Software 2010. The LOS calculation results in one of six levels of service (A through F) as described in Appendix A. Weekday traffic distribution is approximately 50 percent each direction. Weekend traffic distribution is as high as 60 percent northbound and 40 percent southbound on Fridays with those percentages reversed on Sundays. The higher traffic volumes and difference in directional distribution can be attributed to recreational activities in the region. Northbound weekday traffic operates at an acceptable LOS C and is expected to continue to operate at an acceptable LOS C through the forecast year of 2036, even if no improvements are made. Weekday southbound, and weekend traffic in both directions, currently operates at unacceptable LOS D and will continue to operate at an unacceptable LOS D if no improvements are made. For southbound traffic, trucks using lower gears for engine braking on the long downhill grade impede traffic flow. See Table 1 for the existing LOS.

What does LOS take into account?

The LOS calculator uses road and traffic conditions that affect traffic flow, such as:

- peak-hour traffic volume
- free-flow speed (how quickly free-flowing traffic would travel)
- shoulder and lane width
- percent of the daily traffic that consists of trucks, buses, or recreational vehicles
- passing opportunities
- number of traffic signals
- density of access points (intersections & driveways)
- terrain
- type of highway (commuter & long-distance routes with higher speeds or scenic & recreational routes with slower speeds)

	Weekday				Weekend			
Year	Northbound		Southbound		Northbound		Southbound	
	LM 7.62 to LM 10.47 (two lanes)	LM 10.47 to LM 15.63 (three lanes)	LM 7.62 to LM 10.47 (two lanes)	LM 10.47 to LM 15.63 (three lanes)	LM 7.62 to LM 10.47 (two lanes)	LM 10.47 to LM 15.63 (three lanes)	LM 7.62 to LM 10.47 (two lanes)	LM 10.47 to LM 15.63 (three lanes)
2016	C	C	D	D	D	D	D	D
2036	C	C	D	D	D	D	D	D

Highlighted LOS D is considered an unacceptable level of service.

Safety Analysis

The relative safety of a route can be determined by comparing the crash rate on the route to a statewide crash rate for similar routes. Crash data for 2010-2014 (the five most recent years for which data are available) were analyzed to determine crash rates for each year and for a five-year average along the study segment. Crash rates were analyzed by cross section (i.e., two-lane and three-lane sections) and compared to a statewide average for similar facilities. See Table 2 for a summary of the crash analysis and Figure 3 for crash locations. The five-year average crash rate was lower than the statewide average on both sections; the five-year KA (combined fatal and severe injury) crash rate was higher than the statewide average on both sections of the study segment. In 2010-2014, rear end crashes caused by turning vehicles stopping in the travel lane accounted for 24 percent of the total crashes as well as 30 percent of the KA crashes not caused by equipment failure (i.e., tire blowout). The addition of a painted median that can be utilized as a continuous, two-way, left-turn lane will remove left turning vehicles from the travel lanes and reduce the potential for rear end crashes.

What are crash rates?

Crash rates are based on the number of crashes per million vehicle miles traveled. Over a 5-year period, the two-lane section of Highway 65 north of Clinton had an average of 2.4 crashes per year, an average traffic volume of 5,620 vehicles per day, and is 2.85 mile long. This translated to a crash rate, per million vehicle miles, of 19.42. These rates are compared to a statewide average crash rate, also per million vehicle miles, for similar highways. In this case, the statewide average crash rate for two-lane undivided urban highways, per million vehicle miles, was 15.26.

Table 2 Crash Analysis							
Year	Crashes	KA Crashes	Weighted ADT	Crash Rate ¹	Statewide Avg. Crash Rate	KA Crash Rate ²	Statewide Avg. KA Crash Rate
Highway 65, Section 7, Highway 110 to Clinton – two-lane section (2.85 miles) ³							
2014	3	1	5700	0.51	0.96	16.87	15.08
2013	3	2	5700	0.51	0.96	33.73	13.98
2012	2	0	5300	0.36	1.02	0	15.65
2011	0	0	5200	0.00	0.99	0	15.19
2010	4	3	6200	0.62	1.01	46.51	14.83
5-Year Avg.	2.4	1.2	5620	0.40	0.99	19.42	15.26
Highway 65, Section 7, Highway 110 to Clinton – three-lane section (5.15 miles) ⁴							
2014	12	2	5700	1.12	0.68	18.67	12.73
2013	6	2	5700	0.56	0.64	18.63	9.77
2012	15	1	5300	1.50	0.65	10.02	10.04
2011	3	2	5200	0.31	0.70	20.42	12.23
2010	6	1	6200	0.51	0.58	8.56	10.09
5-Year Avg.	8.4	1.6	5620	0.47	0.69	15.28	10.50
¹ Crash rates are based on the number of crashes per million vehicle miles (mvm) traveled. ² KA crash rates are based on the number of crashes per 100 mvm traveled. ³ Two-lane, two-way rural highways with no control of access. ⁴ Three-lane, two-way rural highways with no control of access. <i>Highlighted crash rates are above the statewide average.</i>							

Crash Locations

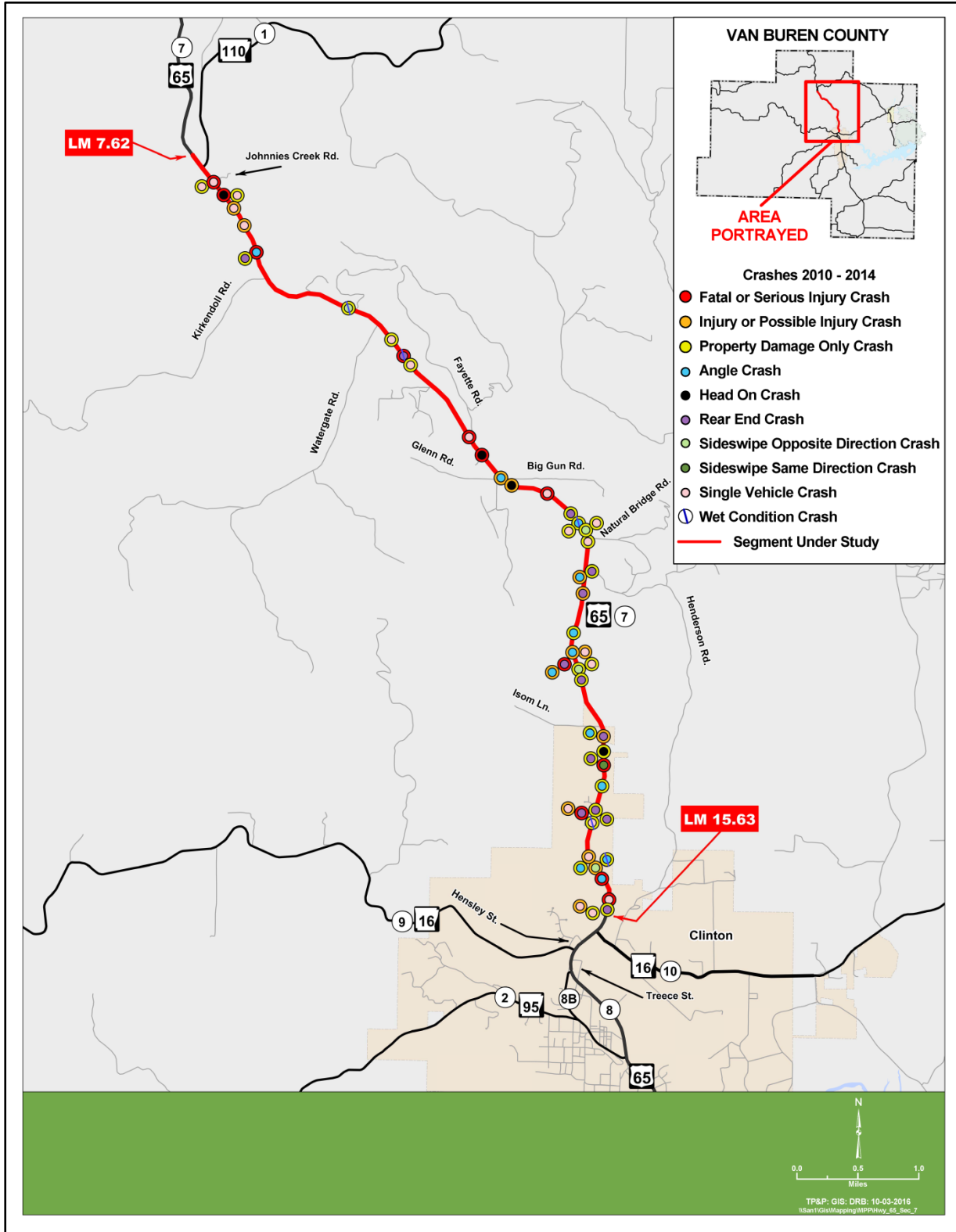


Figure 3

Pavement Analysis

A pavement analysis was conducted using data collected by the Automated Road Analyzer in April 2015, the latest data that is available. The analysis classified the pavement as “fair” and qualifies for preventive maintenance based on the AHTD Preventive Maintenance Plan guidelines. Table 3 below summarizes the analysis.

Table 3 Pavement Analysis				
Location	Average IRI (in/mi) ¹	Crack Rating	Average Rutting (in)	Qualified for Preventive Maintenance ²
LM 7.62-15.63 (three-lane)	89.9 (fair)	Fair to poor	0.23	Yes

¹International Roughness Index
²Qualifying treatments are recommended based on the AHTD Preventive Maintenance Plan dated March 2016

1.5 What is the purpose of this Environmental Assessment?

This Environmental Assessment (EA) is being prepared under the *National Environmental Policy Act (NEPA)* to:

- Evaluate the environmental effects of widening Highway 65.
- Inform and receive feedback from the public and decision makers about the environmental effects of the project.
- Determine whether there are significant impacts requiring an Environmental Impact Statement (EIS) or if the project effects can be sufficiently documented through an EA and issue a Finding of No Significant Impact (FONSI).

1.6 Who is leading this project?

This project is being led by a partnership between the Federal Highway Administration (FHWA) and the AHTD. The FHWA is involved because it is funding a portion of the project and has the

What is NEPA?

The National Environmental Policy Act of 1969 (NEPA) requires Federal agencies to consider the potential environmental consequences for their actions, document the analysis, and provide a public involvement process prior to project implementation. Federal agencies are subject to NEPA as part of their decision-making process, as part of their own projects, by providing funding to other organizations or agencies, through regulatory or permitting processes, or through the involvement of their resources or property.

primary responsibility for the content and accuracy of this NEPA document.

The project is primarily funded through Connecting Arkansas Program (CAP) funds allocated to the AHTD. The AHTD is responsible for administering and maintaining the state highway system, which includes Highway 65. For these reasons, the AHTD is a co-lead agency with the FHWA.

What are significant impacts?

NEPA regulations do not provide specific thresholds to determine if project impacts are considered significant, but they do discuss the process that should be used to evaluate impacts. Consideration is given both to context, where the significance of impacts varies with the setting of the proposed action, and intensity, the severity of the impacts.



What are Connecting Arkansas Program Funds?

In the 2012 general election, Arkansas voters approved a 10 year half-cent sales tax to fund continued construction of four-lane highways to connect all four corners of the state, including the widening of existing four-lane highways to help ease congestion. As revenue is collected, 70 percent of the money will go toward improvements to the state highway system, and 30 percent to local governments – 15 percent for counties and 15 percent for local communities. In 10 years or less (by 2023), all of the work must be completed and the temporary half-cent sales tax will be abolished by the State Constitution.

Chapter 2 – Alternative Development

What’s in Chapter 2?

Chapter 2 identifies the project limits and briefly describes how the alternatives were developed.

2.1 What are the project limits and how were they chosen?

The proposed project begins within the city limits of Clinton just north of Highway 16 and extends north to Highway 110 near the community of Botkinburg. Highway 65 through Clinton is composed of a curb and gutter, four-lane highway with a continuous left turn lane. Highway 65 north of Botkinburg consists of a northbound passing lane for 1.25 miles. Highway 110 is a minor arterial providing a connection to Highway 16 around Greers Ferry Lake.

2.2 How has the public been involved?

A public involvement meeting was held on March 15, 2016, at the Botkinburg Foursquare Church located within the project area along Highway 65. The meeting was attended by 115 people, with 33 comment forms received. A majority (26) of the commenters indicated that they believed that Highway 65 needed to be widened in the project area, but many believed that their personal property would be adversely affected by the proposed project. The public involvement meeting synopsis can be found in Appendix B.

2.3 How have tribal governments been involved?

Section 106 of the *National Historic Preservation Act* requires federal agencies to consult with tribes where projects could affect tribal areas with historical or cultural significance. The FHWA initiated coordination with The Osage Nation and the Quapaw Tribe since these tribes have an active cultural interest in the area. The Tribal Historic Preservation Officer for each tribe was given the opportunity to comment on the proposed project. The Osage Tribe determined a “No Adverse Effect” for the proposed project. To date, the Quapaw Tribe has not responded.

2.4 What alternatives were evaluated for this project?

Two alternatives were considered for this project: the No Action Alternative and one build alternative, Alternative 1. Due to the steep grades, and mountainous terrain, a new location alignment was not considered feasible and prudent.

No Action Alternative

The No Action Alternative would not provide changes to the existing roadway network and would still require routine maintenance. Traffic congestion would remain unacceptable for southbound traffic. The No Action Alternative does not meet the project's purpose and need of improving current and forecasted traffic flow and correcting vehicle safety concerns; however, the No Action Alternative will be considered in this Environmental Assessment as a baseline comparison of impacts against Alternative 1.

Alternative 1

Alternative 1 would provide four 12-foot travel lanes with an 11-foot painted median and 8-foot shoulders along the entire length of the project. The painted median could be utilized as a continuous, two-way, left-turn lane. Left-turning vehicles would be in the painted median and outside the traveled way, reducing delay and chances for crashes. It would include minor realignment at several locations to improve both horizontal and vertical geometrics, and minor realignment of the Highway 110 intersection to reduce construction impacts to the business located at the southeast corner of the intersection. Alternative 1 would increase highway capacity, improve safety, reduce delays, and provide greater regional connectivity to and for the state's existing four-lane grid system.

Alternative 1 is considered feasible, prudent, and able to be constructed. Alternative 1 would improve safety with the addition of a painted median and wider travel lanes, thus improving the forecasted LOS C to LOS A for all of Highway 65 in the project area. A summary of the alternatives are shown in Table 4.

The alignment and design developed for Alternative 1 meets the project's purpose and need while lowering impacts to the community; therefore, the No Action and Alternative 1 will be the only alternatives considered in the remainder of this EA. Figure 4 shows the typical cross section of Alternative 1.

What does it mean for an alternative to be feasible and prudent?

NEPA defines feasible alternatives as those that can be built using current construction practices, while a prudent alternative is one that is reasonable, or makes sense. For example, alternatives that are not prudent may not meet the project's purpose and need, have severe operational or safety problems, unacceptable impacts, or cause severe community disruption.

Why would you consider a No Action Alternative?

The National Environmental Policy Act (NEPA) requires decision makers to consider a "no action" alternative in all NEPA studies. This alternative usually does not meet the project's purpose and need, but is used to compare the beneficial and adverse impacts of "action" alternatives and determine their significance.

Table 4
Summary of Alternatives

Alternative	Construction (\$ millions) ¹	Total (\$ millions) ²	Volume (2016 vpd)	LOS ⁴ (2016)	Volume (2036 vpd)	LOS ⁴ (2036)
No Action ³	\$2.7	\$3.1	6,900	D ⁶	7,500	D ⁶
Alternative 1	\$34.0	\$46.6	6,900	A ⁵	7,500	A ⁵

¹Costs are in 2015 dollars.

²Total cost includes PE, ROW, Construction, and CENG.

³Preventative Maintenance estimate is based on cost of mill and inlay 2" of asphalt.

⁴Two-lane methodology with passing/climbing lane for northbound traffic (LOS C northbound/LOS D southbound).

⁵Multi-lane methodology for two lanes each direction.

⁶Two-lane methodology with passing/climbing lane for northbound traffic.

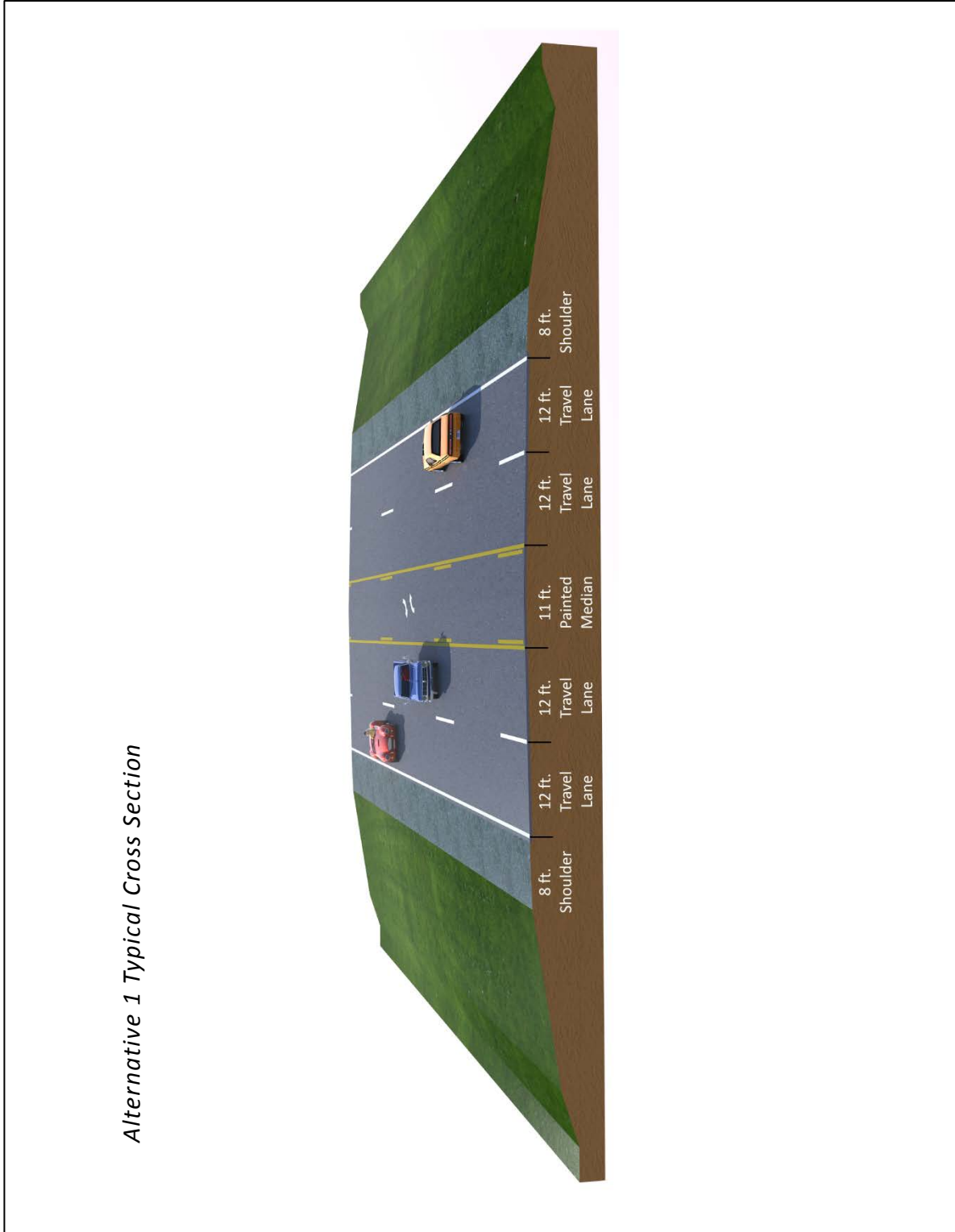


Figure 4

Chapter 3 – Project Impacts

What's in Chapter 3?

Chapter 3 identifies impacts that are expected as a result of the proposed project. Only elements that would be affected by the project are discussed. The impact areas discussed in Chapter 3 are summarized in Table 6 at the end of the Chapter 4.

3.1 How would the project affect traffic and safety?

How would traffic patterns and volumes on Highway 65 and intersecting roads change with the project?

Normal traffic patterns would not change with the No Action Alternative or the construction of Alternative 1. Widening Highway 65 with Alternative 1 may result in land use changes as development extends north, but forecasted traffic growth considers future growth in the project area. Crash rates would be reduced with the additional travel lanes and continuous two-way left-turn lane, lessening the likelihood of traffic disruptions due to collisions. The LOS for Alternative 1 would increase to a level A with the proposed construction. The No Action Alternative would result in increasingly congested traffic flows and higher crash rates as traffic volumes increase over the 20-year study period, and the LOS would remain at unacceptable levels.

How would the project affect safety?

Alternative 1 would result in improved safety with the introduction of additional travel lanes and a painted median. Bicyclist and pedestrian safety will be improved with the addition of wider shoulders on both sides of Highway 65.

The No Action Alternative would not address any of the safety hazards or reduce the crash rates. Bicyclists and pedestrians would have no improvements in safety, and safety would decrease as traffic volumes increase on Highway 65 over the 20-year study period.

How much traffic congestion would be caused by construction?

While Highway 65 traffic would likely experience minor delays during the construction of Alternative 1, traffic would be maintained in both directions during construction. Because Alternative 1 involves constructing additional lanes on Highway 65, traffic can be shifted to either side of the highway throughout construction. The No Action Alternative would only involve periodic highway maintenance and not result in any major traffic delays.

3.2 How much would the proposed project cost?

Using 2015 dollars, estimated construction cost for Alternative 1 is \$34 million, \$1.3 million in acquisition and relocation costs, and \$11.3 million in utility relocation for a total project cost estimated at \$46.6 million. The No Action Alternative would not result in any construction and would involve routine maintenance costs estimated at \$3.1 million over the 20-year study period.

3.3 How would economic and social conditions in the surrounding areas be affected?

The geographic area considered for analysis of existing social and economic conditions consists of a one-county region (Van Buren County) along with the City of Clinton. The project study area consists of commercial, agricultural, and residential development but is generally rural in nature. Alternative 1 would require the relocation of four businesses, four landlord businesses, six residential owners, and three residential tenants. The relocation of these businesses would negatively affect the local economy due to permanent and/or temporary loss of jobs and income, but wouldn't negatively affect the overall economic conditions of the City of Clinton or Van Buren County.

According to the 2010 U.S. Census Data, there has been a 14% population increase in Clinton from 2000 to 2010. This is more than the state average of 9.1%. With this type of population increase comes the need for better highway connections to facilitate accessibility of businesses, communities, and services. Alternative 1 would have direct positive impacts to the social environment by providing the community with enhanced circulation and accessibility for local citizens and travelers alike by widening Highway 65. Demographics and Economic Analysis can be found in Appendix C.

What is a relocation?

Relocations occur when a residence, business, or non-profit is impacted severely enough by a proposed project that they cannot continue to live or do business at their current location. This is usually due to the proposed right of way limits requiring acquisition of a structure (house or business), taking most of a business's parking, or severing access to the property.

Cost estimates, a conceptual stage relocation study, and a housing inventory are provided in Appendix D. The study determined that suitable locations could be found to relocate all eight businesses. The No Action Alternative would not have any direct negative impacts on local businesses or economic conditions.

3.4 How would the project affect how land is used in the area?

Land cover in the immediate project area was historically oak-hickory and oak-hickory-pine upland hardwood forest. Current land use consists of scattered homes, businesses, and pastureland. Residential and commercial development along the Highway 65 corridor has been slow. The land uses affected by Alternative 1 can be found in Table 5.

Development is anticipated to occur throughout the proposed project corridor and surrounding areas, regardless of the implementation of this project. Several utilities including cable television, natural gas, electricity, sewer, telephone, and water, would need to be relocated to accommodate a widened Highway 65. Direct impacts as a result of the proposed project include the additional utility right of way required for existing utilities that have to be relocated. The No Action Alternative would not affect any utilities.

The No Action Alternative would not result in any land use impacts and would not encourage any additional development in and around the project area. Right of way acreages and relocation counts are based on the latest design plans, both are subject to change if design alterations occur as a result of comments received at the Location and Design Public Hearing.

3.5 How would the project affect cultural resources?

Section 106 of the *National Historic Preservation Act* requires agencies to consider the effects of Federal actions to historic properties. In compliance with Section 106 requirements, AHTD cultural resource specialists consulted with the State Historic Preservation Officer (SHPO) and Native American tribes.

Preliminary inquiries with the Arkansas Archeological Survey and Arkansas Historic Preservation Program (AHPP), as well as early maps of the project area, were investigated for records of known archeological sites or historic structures. A cultural resources specialist performed a survey of the project area to identify historic

Land Use Type	Acres
Utility Corridors	15
Wooded	63
Pasture/Field	9
Residential/ Business	6
Total	93

What is a historic property?

Cultural resources include elements of the built environment (buildings, structures, or objects) or evidence of past human activity (archeological sites). Those that are listed on or eligible for inclusion in the National Register of Historic Places are defined as historic properties.

structures and completed archeological surveys of the immediate area impacted by Alternative 1.

From these record investigations, field observations, and surveys, SHPO determined that Alternative 1 and the No Action Alternative would have “No Adverse Effect” on known historic properties or National Register eligible archaeological sites. SHPO clearance can be found in Appendix E.

3.6 Would noise levels change?

Noise modeling indicates that an increase in noise levels will occur along the existing route from the predicted traffic volume increase during the next 20 years. Twenty-five sensitive receptors are currently being impacted by noise along Highway 65, and would continue to be impacted if the No Action Alternative was selected. Forty-seven receptors would be impacted by noise from the project due to the increase in traffic volumes and the design for Alternative 1 bringing the highway closer to some receptors. A noise barrier would be ineffective due to the gaps needed along the route for driveways and streets.

Construction noise from the project would be temporary and relatively minor. A noise analysis detailing the methods used for the noise study and the results can be found in Appendix F.

3.7 How would the project affect views?

The project corridor is situated in low, rolling, forested mountains with cleared valleys used for pastureland and hayfields. Highway-adjacent trees include hardwoods and pines. Tall fescue dominates cleared areas, such as pastureland and utility line easements. Many of the residences and other structures feature grassy lawns, landscaping, and trees. Most of these neighboring structures afford partial or complete views of Highway 65, and are in turn visible to travelers along the route. These are the typical views that would be associated with the No Action Alternative.

In conjunction with the expansion of highway right of way caused by Alternative 1, the increase in roadway width and profile would modify the appearance of the roadway. The removal of residences and businesses would alter the view shed of the project corridor. Likewise, some of the remaining residences and commercial structures would be in closer proximity to the highway. The proposed roadway cross

What is noise?

Sound is anything we hear, while noise can be unwanted or undesirable sound. Traffic noise is a combination of the noises produced by vehicle engines, exhaust, and tires.

What are sensitive noise receptors?

Residences are considered sensitive noise receptors along with businesses that have a special sensitivity to noise, such as schools, churches, libraries, and parks.

What is a view shed?

A view shed is simply the area that is visible from a specific location. The view shed could be from the point of view from a vehicle, pedestrians, bicyclists, or even river users.

section and materials are typical of improvements made to highways throughout the state. Local community design standards do not exist. The proximity of the remaining residences and commercial structures would not exceed zoning codes. Visual elements of the roadway would not discernably differ from the project area's existing overall character. With the exception of the fill areas near the project's southern termini, landforms will not be noticeably altered. For these reasons, permanent impacts to the view shed from Alternative 1 would be minor and localized. These impacts may be adverse for residents for whom views of the roadway will become more prominent.

Project activities caused by Alternative 1 would result in the short-term presence of construction vehicles and equipment, grading and excavation, and vegetation clearing throughout the project area. Equipment and materials would be stored at staging areas yet to be determined. The areas where construction and grading would remove existing natural vegetation would be viewable by travelers and site-specific neighbors. Grading and excavation activities and the presence of construction vehicles and equipment would result in a temporary change in the visual character of the project site. These activities would be short-term. Impacts in roadside fore slope cleared areas would be short/medium-term until new vegetation becomes established. These temporary visual impacts would be minor and not expected to result in an adverse response by typical viewers.

As a result of the project, adverse impacts to the overall visual character of the project corridor from Alternative 1 are not expected. A Visual Impact Assessment Scoping Questionnaire and definitions for the concepts and terms are provided in Appendix G.

3.8 Would any hazardous materials be created or affected?

A visual assessment and database search were performed to determine if any hazardous materials were located in the project area. No underground storage tanks were identified within the project area. An old tire dump was identified outside the existing right of way and will be avoided.

The No Action Alternative would not impact any hazardous materials sites. Neither of the alternatives would involve the creation of hazardous materials.

What are hazardous materials?

A hazardous material is any item or chemical that can cause harm to people, plants, or animals when released into the environment.

If hazardous materials are identified, observed or accidentally uncovered by any AHTD personnel, contracting company(s), or state regulating agency, it would be the AHTD's responsibility to determine the type, size and extent of contamination. The AHTD would identify the type of contaminant, develop a remediation plan, and coordinate disposal methods to be employed for the particular type of contamination. All remediation work would be conducted in conformance with the Arkansas Department of Environmental Quality (ADEQ), Environmental Protection Agency (EPA), and Occupational Safety and Health Administration (OSHA) regulations.

An asbestos survey by a certified asbestos inspector will be conducted on each building identified for demolition. If the survey detects the presence of any asbestos-containing materials, plans will be developed for the safe removal of these materials prior to demolition. All asbestos abatement work will be conducted in accordance with ADEQ, EPA, and OSHA asbestos abatement regulations.

3.9 Would any prime farmland be impacted by the project?

Alternative 1 would acquire approximately 0.6 acre of Prime Farmland. The NRCS-CPA-106 Form is located in Appendix H. The No Action Alternative would not impact any prime farmland.

3.10 How would water resources, such as streams, be affected?

The project will directly impact 24 intermittent streams that are tributaries to Hartsugg, Pee Dee, and Little Johnnies Creek within the Little Red River drainage. All jurisdictional Waters of the United States impacted by this project are located in the adjacent roadside ditches and associated cross drainage structures of Highway 65 (Figures 5 and 6). During construction, culverts will be extended and/or replaced and ditched streams relocated to the new roadside edge, resulting in a total impact of 6,330 linear feet of stream. Compensatory stream mitigation will be provided at a United States Army Corps of Engineers (USACE) mitigation bank. Construction of the proposed project will require AHTD to obtain a Section 404 permit for the discharge of dredged and fill material in waters of the US from the USACE and a Section 402-National Pollutant Discharge Elimination System (NPDES) permit. The No Action Alternative would not affect any water resources.

What is prime farmland?

Prime Farmland is defined by the US Department of Agriculture as land that has the best combination of physical and chemical characteristics for the production of crops. Impacts to Prime Farmland occur when it is converted to highway right of way.

What is an intermittent stream?

Intermittent streams are those that flow for at least three months out of the year, but experience annual drying, usually during the hot dry summer months.

3.11 Would any wetlands be impacted by the project?

Two herbaceous wetlands (0.05-acre total) would be impacted by Alternative 1 (Figure 6). Dominant plant species at each wetland include *Juncus* rushes and *Carex* sedges. Primary hydrologic indicators from a field review in April 2016 include surface water of 3-6 inches, high water table, and saturation.

Wetland impacts will be included in the Section 404 permit application. Wetlands that will be impacted by this project formed many years by the construction of the present highway. Drainage patterns changed by the introduction of the highway created small wetland pockets along roadside ditches.

The No Action Alternative would not affect any wetlands.

3.12 Would any protected species be impacted by the project?

The Information for Planning and Conservation database from the United States Fish and Wildlife Service (USFWS) identified five threatened or endangered species and one area of critical habitat within a 300-foot buffer around the current road alignment. A 300-foot buffer was chosen to account for the widening and for the potential effects of noise during construction. The endangered gray bat (*Myotis grisescens*), endangered Indiana bat (*Myotis sodalis*), threatened northern long-eared bat (*Myotis septentrionalis*), endangered speckled pocketbook mussel (*Lampsilis streckeri*), and endangered yellowcheek darter (*Etheostoma moorei*) all have the potential to be present in and around the project location.

Clearing trees on the proposed right of way directly impacts bat species by removing potential roost trees, creating larger open habitat, and altering foraging areas. Mist nets and acoustic surveys for listed bat species were conducted in July 2016 by the Jackson Group, a private biological consulting group that specializes in bat identification. Acoustic analysis confirmed the presence of northern long-eared bats. No gray or Indiana bats were detected. One juvenile female northern long-eared bat was captured in a mist net and tracked for five days. Three roost trees were identified approximately 4.6 miles from the northern end of the project.

What is a wetland?

Wetlands are areas typically inundated or saturated by surface water or groundwater to the extent that they can support vegetation adapted for life in wet soil conditions.

What is the difference between threatened and endangered species?

An endangered species is one that is in danger of extinction throughout all or a significant portion of its range. Endangered species receive the highest level of protection. A threatened species is one that is likely to become endangered in the near future.

Streams and Wetlands

1 of 2

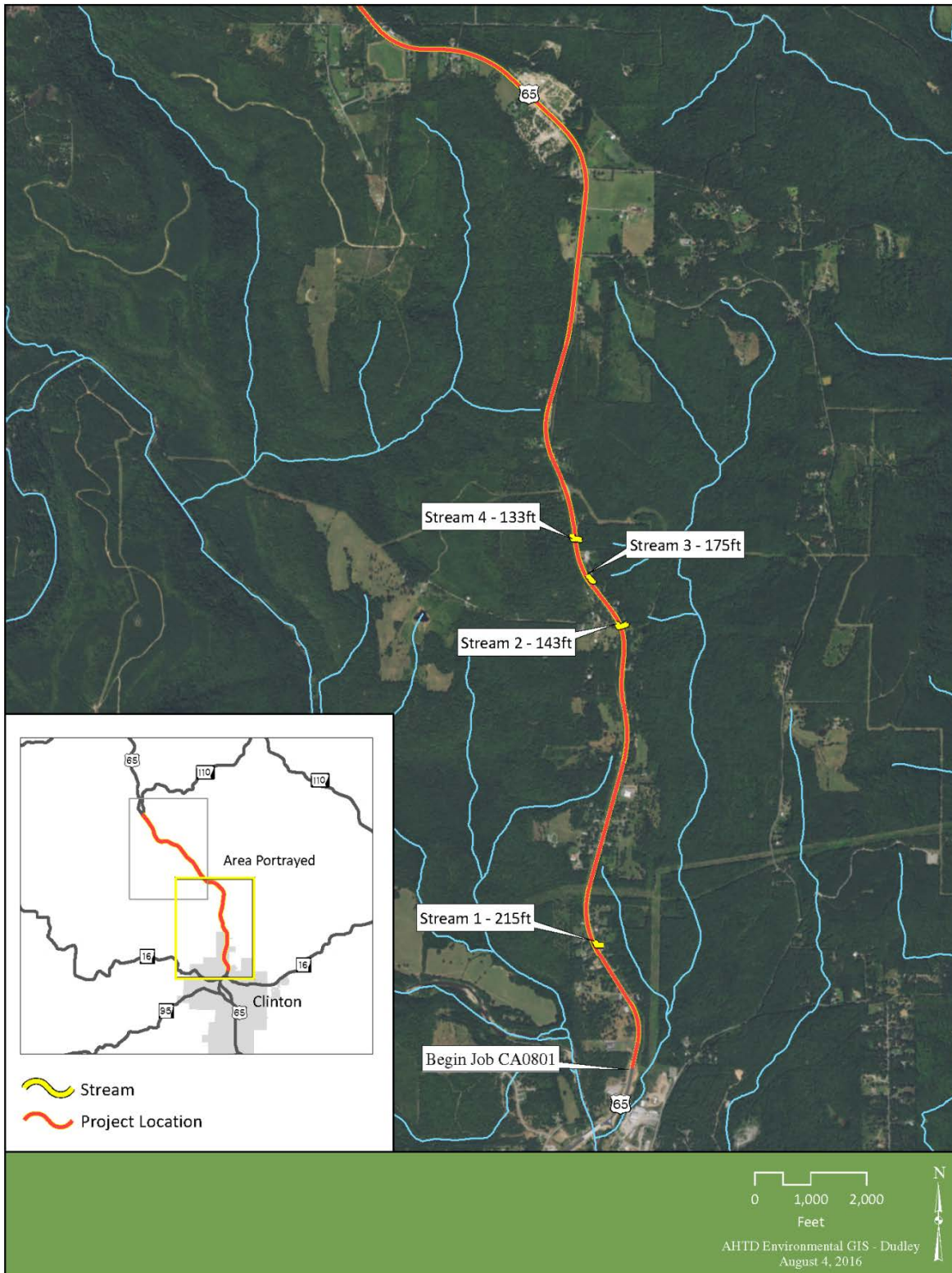


Figure 5

Streams and Wetlands
2 of 2

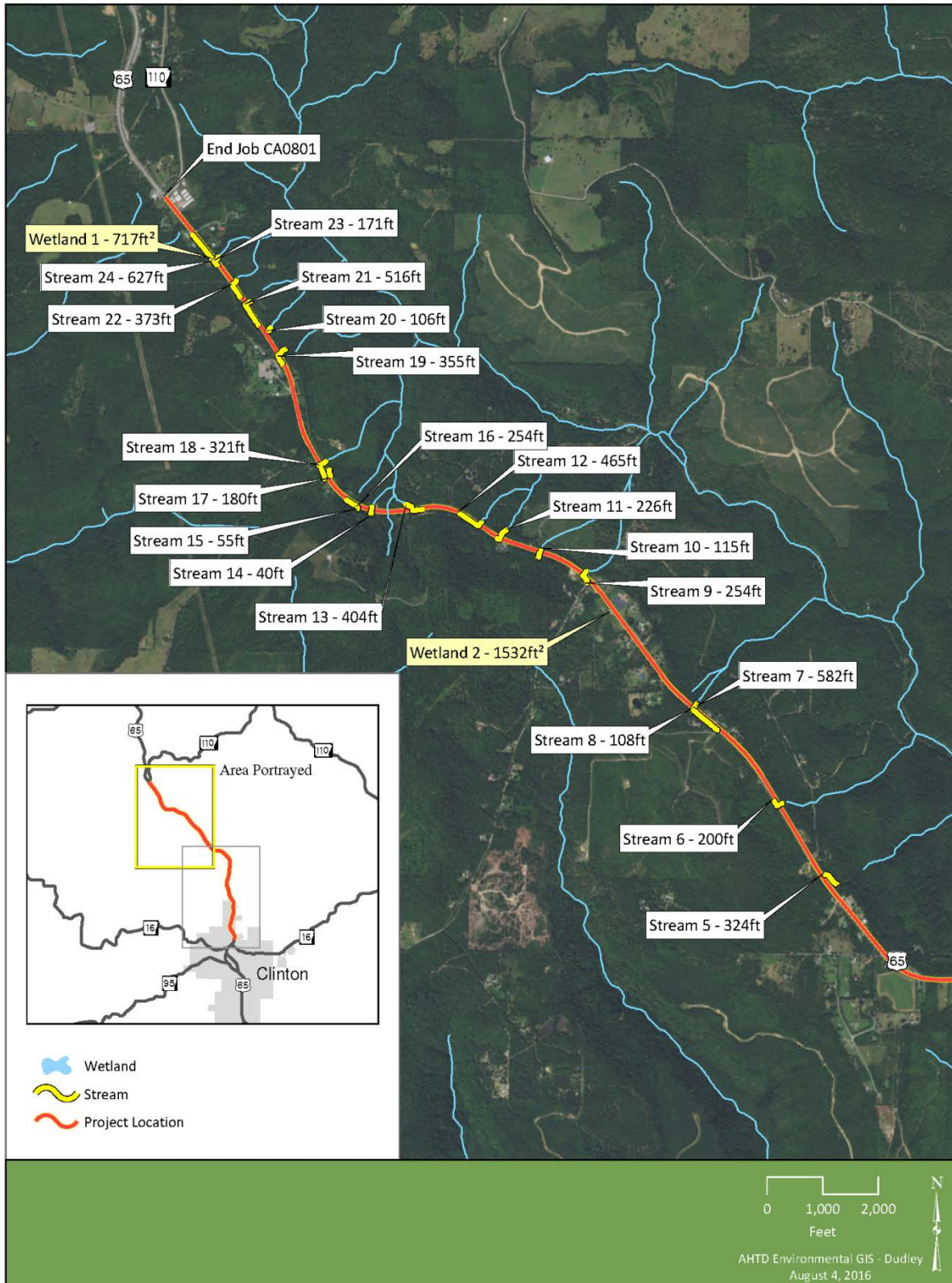


Figure 6

A bat inventory report can be obtained from the Department upon request. The proposed activities associated with this project fall within the guidance of the final 4(d) rule for northern long-eared bats. A streamlined consultation checklist is attached in Appendix I.

Karst topography is a common feature throughout the project. A cave system was identified on the eastern side of Highway 65 and it extends partially under the existing highway. Gray, Indiana and northern long-eared bats utilize caves for winter roosts. Cave surveys for bats took place in July and November of 2015. USFWS correspondence can be found in Appendix I. Guano was observed at the cave entrance during both surveys and one single common tricolored bat (*Perimyotis subflavus*) was observed roosting in the cave during the summer survey. Special provisions outlining procedures for cave discoveries and water pollution control measures will be included in the contract to limit impacts to caves and other karst features. With the use of erosion and sediment controls, no impacts to cave or karst features are anticipated as a result of the project. The No Action Alternative would not affect any protected species.

What is karst topography?

Karst topography is formed from the dissolution of soluble rocks such as limestone, dolomite, and gypsum. It is characterized by underground drainage systems with sinkholes and caves.

3.13 Will public/private wellheads be impacted?

The project area is not within a public drinking water system's wellhead protection area. If any permanent impacts to private drinking water sources occur due to this project, the AHTD will take appropriate action to mitigate these impacts. Impacts to private water sources due to the contractor neglect or misconduct are the responsibility of the contractor. The No Action Alternative would not affect any public or private wellheads.

3.14 How would the project affect the natural environment?

The project is located within the Lower Boston Mountains (EPA 38b Level IV Ecoregion) of the Boston Mountains Ecoregion (EPA 38 Level III Ecoregion) (Woods et al. 2004). The Lower Boston Mountains are described as low, rolling mountains, high hills and undulating plateaus that range from 200-1,900 feet, typically, but can reach up to 2,300 feet (Woods et al. 2004). The landform is comprised largely of forested mountains with a few cleared valleys, the latter of which is used for pastureland and hayfields.

Surface geology in the project area is largely mapped as Bloyd Shale (undifferentiated) and Prairie Grove Member of the Hale Formation,

which is middle Pennsylvanian-aged, Morrowan Series. Numerous rock outcrops occur and form steep slopes on both sides of Highway 65 within the project location. A cave was discovered on the eastern side of Highway 65 south of the roadside park along an exposed rock bluff line. Soils are mapped mostly as Enders, Linker, Mountainburg, Nella, and Steprock in the immediate project area.

Natural vegetation in the area is primarily oak-hickory and oak-hickory-pine upland forests. White oak (*Quercus alba*), northern red oak (*Quercus rubra*), post oak (*Quercus stellata*), blackjack oak (*Quercus marilandica*), black oak (*Quercus velutina*), shagbark hickory (*Carya ovata*) and mockernut hickory (*Carya tomentosa*) are common native trees found in the project area. Shortleaf pine (*Pinus echinata*) is a dominant to co-dominant species found along drier south- and west-facing slopes. Along streams, sweetgum (*Liquidambar styraciflua*), willows (*Salix* spp.), birch (*Betula nigra*), sycamore (*Platanus occidentalis*), and southern red oak (*Quercus falcata*) are common (Woods et al. 2004). Natural vegetation has been displaced where pastureland, residences and loblolly pine (*Pinus taeda*) dominated stands exist in the project area. Alternative 1 would clear approximately 93 and 63 acres of oak-hickory and oak-hickory-pine upland forests respectively.

The No Action Alternative would not affect the existing vegetation adjacent to Highway 65.

3.15 What other resources were examined but not found to be present or impacted?

Air Quality

This project is located in an area that is designated as in attainment for all transportation pollutants. Therefore, the conformity procedures of the *Clean Air Act*, as amended, do not apply.

Floodplains

There are no encroachments into the special flood hazard areas (SFHAs) also known as the 100-year floodplain, which are typically shown on Flood Insurance Rate Maps issued by the Federal Emergency Management Agency. No areas of SFHAs were identified within the project area.

What is air quality attainment?

Areas are considered in attainment for air pollutants when measured levels are below the National Ambient Air Quality Standards set by the U.S. Environmental Protection Agency.

What is a floodplain?

Floodplains are land areas that become covered by water in a flood event. 100-year floodplains are areas that would be covered by a flood event that has a 1% chance of occurring (or being exceeded) each year, also known as a 100-year flood. This is the floodplain commonly used for insurance and regulatory purposes.

Wild and Scenic Rivers

There is no Federal or state regulated waterbodies impacted by this project.

Environmental Justice

Through a review of U.S. Census Data, Health and Human Services Poverty Guidelines, and field observations, a determination was made that the proposed project will not have any adverse or disproportionate impacts on Environmental Justice/Title VI populations. Therefore, in accordance with the provisions of Executive Order 12898, Title VI of the *Civil Rights Act of 1964* and FHWA Order 6640.23, no further analysis is necessary.

3.16 What are indirect and cumulative effects, and does the project have any?

Indirect Effects

An indirect effect is any reasonably foreseeable effect that may be caused by the project but would occur in the future or outside of the project area. Widening Highway 65 could induce additional development north of the City of Clinton, but this area is currently experiencing negative growth which is likely to continue under either Alternative 1 or the No Action Alternative. The No Action Alternative involves no work other than regular maintenance and would not result in any indirect effects other than worsening traffic flow and safety concerns as traffic volumes increase over the 20-year planning period.

Potential indirect impacts to streams outside the construction limits include increased turbidity from sediments leaving the construction site.

Cumulative Effects

Cumulative effects result from the total effects of a proposed project, when added to other past, present, and reasonably foreseeable future projects or actions. Cumulative effects are studied so that the public, decision-makers, and project proponents take time to consider the “big picture” effects a project could have on the community and environment.

The AHTD does have another scheduled job in the area, CA0803. Both AHTD Jobs CA0801 and CA0803 are scheduled to improve Highway 65 north of Clinton. No other reasonably foreseeable public or private projects are known to be in development in the project area. Neither

What is Environmental Justice and Title VI?

An Environmental Justice evaluation determines whether low-income or minority populations would suffer disproportionately high and adverse effects from an action. Title VI of the Civil Rights Act of 1964 (Title VI) prohibits discrimination on the basis of race, color, sex, national origin, religion or disability under any program or activity receiving Federal financial assistance

Alternative 1 nor the No Action Alternative is expected to contribute to any adverse impacts on any natural, cultural, social, or economic resources.

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Chapter 4 – Recommendations

What's in Chapter 4?

Chapter 4 contains the results and conclusions of this Environmental Assessment.

4.1 What are the results of this EA?

The environmental analysis of the proposed project did not identify any significant impacts to the natural and social environment as a result of the No Action Alternative or Alternative 1. A summary of the impacts of these alternatives can be found in Table 6. Alternative 1 has been identified as the Preferred Alternative, because it meets the project's purpose and need and minimizes impacts.

The AHTD's standard commitments associated with relocation procedures, hazardous waste abatement, cultural resources discovery, and control of water quality impacts have been made in association with this project. They are as follows:

- See Relocation procedures located in Appendix D.
- If hazardous materials, unknown illegal dumps, or underground storage tanks are identified or accidentally uncovered by AHTD personnel or its contractors, the AHTD will determine the type, size, and extent of the contamination according to the AHTD's response protocol. The AHTD in cooperation with the ADEQ will determine the remediation and disposal methods suited for that particular type of contamination. The proposed project will comply with local, state, and federal laws and regulations.
- An asbestos survey will be conducted by a certified asbestos inspector on each building slated for acquisition and demolition. If the survey detects the presence of any asbestos-containing materials, plans will be developed to accomplish the safe removal of these materials prior to demolition. All asbestos abatement work will be conducted in conformance with ADEQ, EPA, and OSHA asbestos abatement regulations.
- An intensive cultural resources survey will be conducted for the Preferred Alternative. If sites are affected, a full report documenting the results of the survey and stating the AHTD's

recommendations will be prepared and submitted to the SHPO for review. If prehistoric sites are impacted, consultation led by FHWA with the appropriate Native American Tribe will be conducted and the site(s) evaluated to determine if Phase II testing is necessary. Should any of the sites be found to be eligible or potentially eligible for nomination to the NHRP and avoidance is not possible, then site-specific treatment plans will be prepared, and data recovery conducted at the earliest practicable time. All borrow pits, waste areas and work roads will be surveyed for cultural resources when locations become available.

- Stream and wetland mitigation will be offered at an USACE approved mitigation bank site at a ratio approved by the USACE during the Section 404 permitting process.
- Special provisions outlining procedures for cave discoveries will be included in the contract to limit impacts to caves and other karst features.
- A Restraining Condition and an Archeological Monitoring Special Provision is required by the AHPP: therefore, an AHTD staff archeologist must be present during any ground disturbing activity within the existing roadside park.
- The AHTD will comply with all requirements of the *Clean Water Act*, as amended, for the construction of this project. This includes Section 401-Water Quality Certification, Section 402-NPDES, and Section 404-Permit for Dredged or Fill Material.
- A Water Pollution Control Special Provision will be incorporated into the contract to minimize potential water quality impacts.
- If any permanent impacts to private drinking water sources occur due to this project, the AHTD will take appropriate action to mitigate these impacts.
- A wildflower seed mix will be included in the permanent seeding for the project.

Table 6
Alternative Impact Comparison

Alternative	Total Project Cost (2015 dollars)	Construction Cost (2015 dollars)	Other Cost* (2015 dollars)	Right of Way (acres)	Relocations	Noise Receptors Impacted	Stream Impacts (linear feet)
No Action	3.1 million	2.7 million	400,000	0	0	25	0
Alternative 1	46.6 million	34 million	12.6 million	93	17	47	6,330

Other cost includes preliminary engineering, right of way acquisition costs, business, non-profit, landlord relocation costs, and utility relocation costs.

4.2 Is the NEPA process finished?

After this EA is signed by the FHWA and approved for public dissemination, a Location and Design Public Hearing will be offered.

After a review of comments received from citizens, public officials, and public agencies, a FONSI document will be prepared by the AHTD and submitted to the FHWA. Approval of the FONSI by the FHWA will identify the Selected Alternative and conclude the NEPA process.

Reference Pages

Acronyms

ADEQ	Arkansas Department of Environmental Quality
ADT	Average Daily Traffic
AHPP	Arkansas Historic Preservation Program
AHTD	Arkansas State Highway and Transportation Department
BMP	Best Management Practices
CAP	Connecting Arkansas Program
CENG	Construction Engineering
EA	Environmental Assessment
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
KA	Killed in Accident
LOS	Level of Service
NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System
OSHA	Occupational Safety and Health Administration
PE	Preliminary Engineering
ROW	Right of Way
SHPO	State Historic Preservation Officer
USFWS	United States Fish and Wildlife Service
vpd	Vehicles per Day

References

Arkansas Geological Survey. Stratigraphic Descriptions and Geologic Web Map of Arkansas. Accessed 27 May 2016.
http://www.geology.ar.gov/geology/strat_geomap.htm?formation=pa.

DOT, Department of Transportation, Federal Highway Administration, Office of Planning, Environment, & Realty (HEP)
http://www.fhwa.dot.gov/planning/national_highway_system/

Hutto, R.S., Rains, D.S., and D.P. Holland. 2010a. Geologic Map of the Botkinburg Quadrangle, Van Buren County, Arkansas. Accessed 27 May 2016.
http://www.geology.arkansas.gov/maps_pdf/geologic/24k_maps/Botkinburg.pdf.

Hutto, R.S., Rains, D.S., and D.P. Holland. 2010b. Geologic Map of the Old Lexington Quadrangle, Van Buren County, Arkansas. Accessed 27 May 2016.
http://www.geology.arkansas.gov/maps_pdf/geologic/24k_maps/Old%20Lexington.pdf.

NRCS. Official Soil Series Descriptions. NRCS Soils, USDA. Accessed 27 May 2016.
https://soilseries.sc.egov.usda.gov/OSD_Docs/E/ENDERS.html

NRCS. Official Soil Series Descriptions. NRCS Soils, USDA. Accessed 27 May 2016.
https://soilseries.sc.egov.usda.gov/OSD_Docs/L/LINKER.html.

NRCS. Official Soil Series Descriptions. NRCS Soils, USDA. Accessed 27 May 2016.
https://soilseries.sc.egov.usda.gov/OSD_Docs/M/MOUNTAINBURG.html.

NRCS. Official Soil Series Descriptions. NRCS Soils, USDA. Accessed 27 May 2016.
https://soilseries.sc.egov.usda.gov/OSD_Docs/N/NELLA.html.

NRCS. Official Soil Series Descriptions. NRCS Soils, USDA.

Accessed 27 May 2016.

https://soilseries.sc.egov.usda.gov/OSD_Docs/S/STEPROCK.html

.

Townsend, W.R., Crader K.J., Harris, C., Chism, J.D., Hudson, E. and Harriman, J. 1986. Soil Survey of Cleburne and Van Buren Counties, Arkansas. United States Department of Agriculture, Soil Conservation Service, and Forest Service, in cooperation with the Arkansas Agricultural Experiment Station. Available online at

http://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/arkansas/AR640/0/cleburneandvanburen.pdf. Accessed 27 May 2016.

U.S. Census Bureau. Arkansas Quick Facts. U.S. Department of Commerce. Van Buren County.

<http://www.census.gov/quickfact/table/PST045215/05141,05>.

Accessed 19 October 2016.

U.S. Department of Health & Human Services. Poverty Guidelines.

25 January 2016. <https://aspe.hhs.gov/poverty-guidelines>.

Accessed 19 October 2016.

Appendix A – Level of Service Descriptions

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Two-Lane Highway

LOS A - At LOS A, motorists experience high operating speeds and little difficulty in passing. A small amount of platooning would be expected. Drivers should be able to maintain operating speeds close or equal to the free-flow speed (FFS) of the facility.

LOS B - At LOS B, passing demand and passing capacity are balanced. Platooning becomes noticeable. It becomes difficult to maintain FFS operation, but the speed reduction is still relatively small.

LOS C - At LOS C, most vehicles are traveling in platoons. Speeds are noticeably reduced on all three classes of highway.

LOS D - At LOS D, platooning increases significantly. Passing demand is high but passing capacity approaches zero. A high percentage of vehicles are now traveling in platoons, and percent time-spent-following (PTSF) is quite noticeable. The fall-off from FFS is now significant.

LOS E - At LOS E, demand is approaching capacity. Passing is virtually impossible, and PTSF is more than 80%. Speeds are seriously reduced. Speed is less than two-thirds the FFS. The lower limit of this LOS represents capacity.

LOS F - LOS F exists whenever demand flow in one or both directions exceeds the capacity of the segment. Operating conditions are unstable, and heavy congestion exists on all two-lane highways.

Multi-Lane Highway

LOS A - LOS A describes free-flow operations where FFS prevails and vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream. The effects of incidents or point breakdowns are easily absorbed.

LOS B - LOS B represents reasonably free-flow operations where FFS is maintained. The ability to maneuver within the traffic stream is only slightly restricted, and the general level of physical psychological comfort provided to drivers is still high. The effects of minor incidents and point breakdowns are still easily absorbed.

LOS C - LOS C provides for flow with speeds near the FFS. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver. Minor incidents may still be absorbed, but the local deterioration in service quality will be significant. Queues may be expected to form behind any significant blockages.

LOS D - LOS D is the level at which speeds begin to decline with increasing flows, with density increasing more quickly. Freedom to maneuver within the traffic stream is seriously limited and drivers experience reduced physical and psychological comfort levels. Even minor incidents can be expected to create queuing, because the traffic stream has little space to absorb disruptions.

LOS E - LOS E describes operation at capacity. Operations at this level are highly volatile because there are virtually no usable gaps within the traffic stream, leaving little room to maneuver within the traffic stream. Any disruption to the traffic stream can establish a disruption wave that propagates throughout the upstream traffic flow. At capacity, the traffic stream has no ability to dissipate even the most minor disruption, and any incident can be expected to produce a serious breakdown and substantial queuing. The physical and psychological comfort afforded to drivers is poor.

LOS F - LOS F is determined when the demand flow rate exceeds capacity. At this level, traffic flow has broken down. Whenever queues due to a breakdown exist, they have the potential to extend upstream for considerable distances.

Appendix B – Public Involvement Meeting Synopsis

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PUBLIC INVOLVEMENT SYNOPSIS

Job CA0801 Highway 110 – Clinton (Widening) (Hwy. 65) Van Buren County Tuesday, March 15, 2016

An open-forum public involvement meeting for the proposed Hwy. 110 - Clinton (Widening) project in Van Buren County was held at Botkinburg Foursquare Church (Fellowship Hall), 7054 Highway 65 North, Clinton, Arkansas from 4:00 – 7:00 p.m. on Tuesday, March 15, 2016. A public officials meeting was held at 2:00 p.m. on the same day. Efforts to involve minorities and local property owners in the meeting included:

- Display ads were placed in the *Van Buren County Democrat* on Wednesday, March 2, 2016 and Wednesday, March 9, 2016.
- Distribution of fliers in the project area.

The following information was available for inspection and comment.

- Two aerial photograph roll plots at a scale of 1" = 100', illustrating the entire length of the proposed project.
- Two 34" x 44" aerial photographs on mounted boards at a scale of 1" = 1000', illustrating the entire length of the proposed project.
- One Connecting Arkansas Program board.

Handouts for the public included a comment sheet and a small-scale map (1 inch = 3,142 feet) illustrating the project location. Copies of these are attached to this synopsis.

Table 1 describes the results of public officials participation at the 2 p.m. meeting.

TABLE 1	
Public Official Participation	Totals
Attendance at meeting (including AHTD staff)	18
Comment forms received	2

The two comment forms received were from the Van Buren County Judge and a member of the Van Buren County Road Department. No written comments were received on their forms.

Table 2 describes the results of public participation at the 4-7 p.m. meeting.

TABLE 2	
Public Participation	Totals
Attendance at meeting (including AHTD staff)	97
Comment forms received	31

AHTD Staff reviewed all comments received and evaluated their contents. The summary of comments listed below reflects the personal perception or opinion of the person or Division making the statement. The sequencing of the comments is random and is not intended to reflect importance or numerical values. Some of the comments were combined and/or paraphrased to simplify the synopsis process.

An analysis of the responses received from the public survey is shown in Table 3.

TABLE 3	
Survey Results	Totals
Supports improvements to Hwy. 65	26
Does not support proposed improvements to Hwy. 65	7
Believes the project would have beneficial impacts	8
Believes the project would have adverse impacts	9
Knowledge of historical, archeological or cemetery sites	4
Knowledge of area environmental constraints	4
Home or property offers limitations to the project that need to be considered during the design	9
Suggestion to better serve the needs of the community	3
Additional Comments	7

CA0801 Public Involvement Synopsis

March 15, 2016

Page 3 of 3

The following is a listing of comments concerning issues associated with this project.

- Two commenters noted the roadside park and how the project is affecting it.
- Two commenters noted the cave located under the highway near the roadside park.
- Five commenters thought their septic systems would be impacted.
- Two commenters were concerned about steep grades and how that would affect the entering and leaving of their properties.
- Two commenters were concerned about impacts to the parking lot at Botkinburg Four Square Baptist Church.
- Five comments were about how close the road will be to their residence and how it will affect their residences.

Attachments:

Public handouts, including blank comment form

Small-scale display copies

RJ 
DN 

TT:cb

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT (AHTD)

CITIZEN COMMENT FORM

**AHTD JOB NUMBER CA0801
Hwy. 110 - Clinton (Widening) (Hwy. 65)
VAN BUREN COUNTY**

**LOCATION:
BOTKINBURG FOURSQUARE CHURCH (FELLOWSHIP HALL)
7054 HIGHWAY 65 NORTH
CLINTON, AR
4:00 – 7:00 P.M.
TUESDAY, MARCH 15, 2016**

Make your comments on this form and leave it with AHTD personnel at the meeting or mail it within 15 days to: Arkansas State Highway and Transportation Department, Environmental Division, Post Office Box 2261, Little Rock, Arkansas 72203-2261.
Email: environmentalpimeetings@ahtd.ar.gov.

Yes No

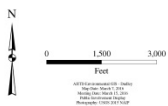
Do you feel there is a need for the proposed widening on Hwy. 65 between Hwy. 110 and the City of Clinton? (optional) _____

Do you know of any historical sites, family cemeteries, or archaeological sites in the project area? Please note and discuss with staff. _____

Do you know of any environmental constraints, such as endangered species, hazardous waste sites, existing or former landfills, or parks and public lands in the vicinity of the project? Please note and discuss with AHTD staff. _____

Does your home or property offer any limitations to the project, such as septic systems, that the Department needs to consider in its design? _____

(Continue on Back)



Job CA0801
Hwy. 110 - Clinton (Widening)
Van Buren County

Preliminary
Subject
to
Revision



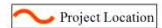


0 1,500 3,000
Feet
AHTD Environmental GIS - Dudley
Map Date: March 7, 2016
Meeting Date: March 15, 2016
Public Involvement Handout
Photography: USGS 2015 NAIP



Job CA0801
Hwy. 110 - Clinton (Widening)
Van Buren County

Preliminary
Subject
to
Revision



Notes:

Appendix C – Demographics and Economic Analysis

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DEMOGRAPHICS
JOB CA0801 – June 2016
HIGHWAY 65 HIGHWAY 110 - CLINTON
Van Buren County

As requested, an economic analysis was conducted for Job CA0801 in Van Buren County. The analysis includes a review of the following demographic data that was compiled for the City of Clinton, Van Buren County and the State.

	City of Clinton	Van Buren County	State
Population, 2010	2,602	17,295	2,915,918
Population, 2000	2,283	16,192	2,673,400
Population 1990	2,213	14,008	2,350,725
Percent Change 1990/2000	3.2%	15.6%	13.7%
Percent Change 2000/2010	14.0%	6.8%	9.1%
Median Resident Age	43.7	46.6	36.9
Median Household Income	\$32,694	\$31,960	\$39,267
Median House Value	\$87,700	\$79,200	\$97,200
White-Non Hispanic	89.6%	96.0%	74.5%
Black	0.3%	0.4%	15.4%
Hispanic	6.9%	2.7%	6.4%
<i><u>Education Attained by Age 25+</u></i>			
High School Graduates	81.4 %	81.0%	81.9%
Bachelor's Degree or higher	12.5%	13.2%	19.1%
<i><u>Employment by Industry Type</u></i>			
Educational and Social Services	13.1%	20.4%	22.4%
Manufacturing	12.3%	11.5%	15.0%
Retail Trade	11.6%	13.1%	13.2%
Unemployment Rate	4.4%	4.2%	4.8 %

Sources include:

UALR Institute for Economic Advancement, 2010 Census Data

U.S. Census Bureau, 2006-2010 American Community Survey 5-Year Estimates

Clinton and Van Buren County Economic Analysis

The City of Clinton is the county seat and largest city in Van Buren County. Clinton experienced growth slightly higher than the statewide average between 2000 and 2010. Compared to the state average, the population of the study area is older, less educated than the statewide average, and has a very small minority representation.

The existing highway network provides access for the labor market, access to Fairfield Bay (a planned community/city of 2,400 located approximately 14 miles east of Clinton), and direct access to the greater Little Rock metropolitan area to the south. To the north, Highway 65 provides access to the Buffalo National River, Ozark National Forest, the City of Harrison, and other tourist destinations in both Arkansas and Missouri. In addition, logging in the Ozark National Forest contributes to truck traffic in the study area. Much of the traffic on the study segment is through traffic accessing recreational and leisure activities at other locations. Traffic volumes average approximately 24-35 percent higher on weekends during the summer, and 14-32 percent higher on weekends during the school year.

The study area includes the Ozark Health facility with a fully operational, professionally staffed hospital, specialty care center, and nursing home. Employers include the healthcare industry, retail and service providers, State and local government, and tourist-oriented cottage industries.

This widening project is part of the “Connecting Arkansas” program and is designed to accomplish the following:

- improve transportation connections between cities throughout the state;
- increase capacity by widening highways to move people and goods more efficiently;
- improve traveler safety;
- ease congestion
- support job growth and improve Arkansas’ economy.

Appendix D – Conceptual Stage Relocation Study

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**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
RIGHT OF WAY DIVISION RELOCATION SECTION**

INTEROFFICE MEMORANDUM

TO: John Fleming, Environmental Division Head

FROM: *John*
FER Perry M. Johnston, Right of Way Division Head

DATE: April 7, 2016

SUBJECT: Job CA0801
Hwy. 110 - Clinton
(Widening) (S)
Van Buren County
CONCEPTUAL STAGE RELOCATION STATEMENT

**RECEIVED
AHTD**

APR 19 2016

**ENVIRONMENTAL
DIVISION**

GENERAL STATEMENT OF RELOCATION PROCEDURE

Persons displaced as a direct result of acquisition for the proposed project will be eligible for relocation assistance in accordance with Public Law 91-646, Uniform Relocation Assistance Act of 1970. The Relocation Program provides advisory assistance and payments to minimize the adverse impact and hardship of displacement upon such persons. No lawful occupant shall be required to move without receiving a minimum of 90 days advance written notice. All displaced persons; residential, business, farm, nonprofit organization, and personal property relocatees are eligible for reimbursement for actual reasonable moving costs.

Construction of the project will not begin until decent, safe and sanitary replacement housing is in place and offered to all affected persons. It is the Department's Policy that adequate replacement housing will be made available, built if necessary, before any person is required to move from their dwelling. All replacement housing must be fair housing and offered to all affected persons regardless of race, color, religion, sex or national origin.

There are two basic types of residential relocation payments: (1) Replacement Housing payments and (2) Moving Expense payments. Replacement Housing payments are made to qualified owners and tenants. An owner may receive a payment of up to \$31,000.00 for the increased cost of a comparable replacement dwelling. The amount of this payment is determined by a study of the housing market. Owners may also be eligible for payments to compensate them for the increased interest cost for a new mortgage and the incidental expenses incurred in connection with the purchase of a replacement dwelling. A tenant may receive a rental subsidy payment of up to \$7,200.00. Tenants may elect to receive a down payment rather than a rental subsidy to enable them to purchase a replacement dwelling. Replacement housing payments are made in addition to moving expense payments.

Businesses, farms and nonprofit organizations are eligible for reestablishment payments, not to exceed \$25,000.00. Reestablishment expense payments are made in addition to moving expense payments. A business, farm or nonprofit organization may be eligible for a fixed

payment in lieu of the moving costs and reestablishment costs if relocation cannot be accomplished without a substantial loss of existing patronage. The fixed payment will be computed in accordance with the Uniform Relocation Act and cannot exceed \$40,000.00.

If the displacee is not satisfied with the amounts offered as relocation payments, they will be provided a form to assist in filing a formal appeal. A hearing will be arranged at a time and place convenient for the displacee, and the facts of the case will be promptly and carefully reviewed.

Relocation services will be provided until all persons are relocated or their relocation eligibility expires. The Relocation Office will have listings of available replacement housing and commercial properties. Information is also maintained concerning other Federal and State Programs offering assistance to displaced persons.

Based on preliminary construction plans, aerial photographs, and an on-site project review, it is estimated that the subject project could cause the following displacements and costs:

Proposed Project:

6 Residential Owners	\$ 210,000.00
3 Residential Tenants	\$ 36,000.00
4 Businesses	\$ 160,000.00
4 Landlord Businesses	\$ 100,000.00
30 Personal Properties	\$ 175,000.00
Services	<u>\$ 125,000.00</u>
Total	\$ 806,000.00

The general characteristics of the displacees to be relocated are listed on the Conceptual Stage Inventory Record forms in the back of this report. The general characteristics have been determined by a visual inspection of the potential displacement locations by Relocation Coordinators. The Relocation Coordinators utilize area demographic data, visual inspections, past experiences and knowledge in making this determination.

An available housing inventory has been compiled and it indicates there are at least fifty-nine comparable replacement dwellings available for sale and seven comparable replacement dwellings available for rent within a reasonable proximity of the project area. At least twenty-two commercial properties are currently for sale in the project area. A breakdown of the available properties is as follows:

Residential (For Sale)	<u>Number Of Units</u>
50,001 - 99,999	18
100,000 - 149,999	19
150,000 - 199,999	16
200,000 - 250,000	6
Total	<u>59</u>

Residential	
(Monthly Rent)	
Other	1
\$ 0.00 - 300.00	0
301.00 - 400.00	0
401.00 - 500.00	2
501.00 - 600.00	1
601.00 and up	3
Total	7
Commercial Properties	
(For Sale)	
\$ 0 - 50,000	1
50,001 - 100,000	6
100,001 - 150,000	1
150,001 - 200,000	3
200,001 - 300,000	3
300,001 - 500,000	1
Total	15
Commercial Land	
(For Sale)	
\$ 0 - 50,000	2
50,001 - 100,000	0
100,001 - 150,000	0
150,001 - 200,000	0
200,001 - 300,000	2
300,001 - 550,000	3
Total	7

This is a highway improvement and widening project for Highway 65 in Clinton, AR and Van Buren County, AR. The units contained in the housing inventory are in Clinton and Van Buren County. The dwellings and number of dwellings are comparable and adequate to provide replacement housing for the families displaced on the project. The housing market should not be detrimentally affected and there should be no problems with insufficient housing at this time. In the event housing cannot be found or can be found but not within the displacees' economic means at the time of displacement, Section 206 of Public Law 91-646 (Housing of Last Resort) will be utilized to its fullest and practical extent.

The replacement property inventory was compiled from data obtained from real estate companies, web sites, and local newspapers for the subject area. The dwellings contained in the inventory have been determined to be comparable and decent, safe and sanitary. The locations of the comparable dwellings are not less desirable in regard to public utilities and public and commercial facilities, are reasonably accessible to the displacees' places of employment, adequate to accommodate the displacees, and in neighborhoods which are not subject to unreasonable adverse environmental factors. It has also been determined that the available housing is within the financial means of the displacees and is fair housing open to all persons regardless of race, color, sex, religion or national origin consistent with the

requirements of 49 CFR, Subpart A, Section 24.2 and Title VIII of the Civil Rights Act of 1968.

A commercial property inventory indicates there are at least twenty-two properties available in the subject area at this time. The businesses and nonprofit organizations displaced on the project may not be able to relocate in the immediate area of their displacement resulting in termination of the operation. However, in order to assist the displaced businesses and nonprofit organizations in relocating, the State will explore all possible sources of funding or other resources that may be available to businesses and nonprofit organizations. Sources that will be considered include: State and Local entities, the Department of Housing and Urban Development, the Economic Development Administration, the Small Business Administration and other Federal Agencies. Emphasis will be given in providing relocation advisory services to the businesses and nonprofit organizations. Appropriate measures will be taken to ensure that each entity displaced is fully aware of their benefits, entitlements, courses of action that are open to it, and any special provisions designed to encourage businesses and nonprofit organizations to relocate within the same community.

All displacees will be offered relocation assistance under provisions in the applicable FHWA regulations. At the time of displacement another inventory of available housing in the subject area will be obtained and an analysis of the market made to ensure that there are dwellings adequate to meet the needs of all displacees. Also, special relocation advisory services and assistance will be administered commensurate with displacees' needs, when necessary. Examples of these include, but are not limited to, Housing of Last Resort as previously mentioned and consultation with local officials, social and federal agencies and community groups.

The Right of Way Division has identified topographical and geographical conditions in the project area which may preclude the modification or replacement of some septic systems which may be located in the acquisition area. Affects upon septic systems in the acquisition area will be monitored. All persons displaced by the acquisition of a septic system that cannot be modified or replaced in a manner that will provide Decent, Safe, and Sanitary conditions will be entitled to the same relocation benefits as any other displaced person. This Conceptual Stage Relocation Statement does not include displacements or costs resulting from the loss of septic systems.

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 CONCEPTUAL STAGE RELOCATION INVENTORY

Job No.: CA0801 Job Name: Hwy. 110 - Clinton (Widening) (S) Date of Inventory: March 23, 2016

Type Relocation	Number	Residential Property Values or Rental Rates	Number in Household (Range)	Employees Affected (Range)	Length of Occupancy (Range)	Minority Households	Elderly Households	Low Income Households
Residential Owners	6	\$25,000 to \$150,000	1 to 4	N/A	8 to 30	1	2	N/A
Residential Tenants	3	\$200 to \$500 per Month	1 to 4	N/A	1 to 8	0	1	2
Businesses	4			6 to 13	1 to 25			
Land Lord Businesses	4							
Nonprofit Organizations	0							
Personal Properties	30							
Totals	47	N/A	N/A	6 to 13	N/A	1	3	2

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
 CONCEPTUAL STAGE RELOCATION INVENTORY

Job No.: CA0801 Job Name: Hwy. 110 - Clinton (Widening) (S) Date of Inventory: April 1, 2016

RELO #	RELO TYPE	Street #	Street Name	Unit #	IMP. VAL	IMP. RENT	Family Size or # Employees	Occ Length	Eld? Y/N/U	Min? Y/N/U	Low Inc? Y/N/U	DSS? Y/N/U
17	Res. Owner	2981	Hwy. 65 N.		\$40,000		1	15	U	N		N
18	Personal Property	180	Isom									
19	Personal Property	3081	Hwy. 65 N.									
20	Personal Property	3234	Hwy. 65 N.									
21	Personal Property	3638	Hwy. 65 N.									
22	Personal Property	3660	Hwy. 65 N.									
23	Personal Property	3686	Hwy. 65 N.									
24	Personal Property		Hwy. 65 N.									
25	Res. Tenant	4230	Hwy. 65 N.			\$400.00	2	1	N	N	Y	N
26	LL Business	4230	Hwy. 65 N.		\$40,000							
27	Personal Property		Hwy. 65 N.									
28	Personal Property	5261	Hwy. 65 N.									
29	Personal Property	5363	Hwy. 65 N.									
30	Personal Property	5433	Hwy. 65 N.									
31	Res. Owner	5563	Hwy. 65 N.		\$40,000		2	15	U	N		N
32	Res. Owner	152	Henning St.		\$80,000		2	22	N	Y		Y

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
CONCEPTUAL STAGE RELOCATION INVENTORY

Job No.: CA0801 Job Name: Hwy. 110 - Clinton (Widening) (S) Date of Inventory: April 1, 2016

RELO #	RELO TYPE	Street #	Street Name	Unit #	IMP. VAL	IMP. RENT	Family Size or # Employees	Occ Length	Eld? Y/N/U	Min? Y/N/U	Low Inc? Y/N/U	DSS? Y/N/U
33	Personal Property		Fayette Rd.									
34	Personal Property		Hwy. 65 N.									
35	Personal Property	6044	Hwy. 65 N.									
36	Business	6534	Hwy. 65 N.		140,000		1	1				
37	Personal Property											
38	Res. Owner	6918	Hwy. 65 N.		\$30,000		4	8	N	N		N
39	Personal Property	6953	Hwy. 65 N.									
40	Personal Property		Hwy. 65 N.									
41	Personal Property	112	Watergate		\$25,000							
42	Personal Property	7519	Hwy. 65 N.		\$20,000							
43	Res. Owner		Hwy. 65 N.		\$20,000		4	10	N	N		N
44	Personal Property		Hwy. 65 N.									
45	Personal Property		Hwy. 65 N.									
46	Res. Tenant	2666	Hwy. 65 N.			\$750	4	5	N	N	N	Y
47	LL Business	2666	Hwy. 65 N.		\$75,000							

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

INTEROFFICE MEMORANDUM

Right of Way Division - Appraisal Section

TO: Perry M. Johnston, Division Head
Right of Way Division

THROUGH: Steven A. Means, Appraisal Section Head
Right of Way Division *Steven A. Means*

FROM: Kenneth Redus, Realty Appraiser II *KLR*
Right of Way Division

DATE: April 1, 2016

SUBJECT: Relocation Tract Cost Estimate
Job CA0801
Hwy. 110-Clinton (Widening)(S)
Van Buren County

Right of Way Appraisal has been tasked to provide a cost study involving relocation tracts.

This study included approximately 22 properties that are current relocation tracts, possible relocation tracts due to septic issues and tracts that are encroaching into the existing right of way.

Based on information provided by preliminary design plan and preliminary market research, a total estimate of the right of way cost to acquire the relocation tracts is provided. This estimate is made subject to the following premises and conditions: Considering the above factors, the estimated right of way cost is:

1. No owner contact has been made.
2. No right of way staking was in place.
3. Only a limited market study has been completed.
4. No Right of Way Plans were provided.
5. Total area of acquisition is estimated.
6. This Is Not An Appraisal.

Considering the above factors, the estimated right of way cost is:

TOTAL:

\$1,310,000.00


One Million Three Hundred Ten Thousand Dollars

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

INTEROFFICE MEMORANDUM

March 16, 2016

TO: Perry Johnston, Division Head, Right of Way Division

FROM: John Fleming, Division Head, Environmental Division 

SUBJECT: AHTD Job Number CA0801
Hwy. 110 - Clinton
Van Buren County
ROW Information Request

Please provide a Conceptual Stage Relocation Analysis and a Conceptual Stage Inventory Record for the referenced project. This information is requested by April 15, 2016. If you have any questions concerning this project, contact Terry Tucker at Extension 2082.

JF:TT:fc

Appendix E – Cultural Resources Clearance

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THE DEPARTMENT OF ARKANSAS
HERITAGE

Asa Hutchinson
Governor

Stacy Hurst
Director

July 20, 2016

Mr. John Fleming
Division Head
Environmental Division
Arkansas State Highway and Transportation Department
P.O. Box 2261
Little Rock, AR 72203-2261

RECEIVED
AHTD

JUL 25 2016

ENVIRONMENTAL
DIVISION

RE: Van Buren County – General
Section 106 Review – FHWA
Report Entitled: *Second Addendum to a Cultural Resources Survey of
AHTD Job Number CA801. Hwy. 110-Clinton (Widening) (S), Van
Buren County*
AHTD Job Number CA801
AHPP Tracking Number 93659.04

Dear Mr. Fleming:

The staff of the Arkansas Historic Preservation Program (AHPP) has reviewed the above-referenced Phase I cultural resources report addendum.

Based on the information presented in the addendum, we concur with the June 20, 2016 AHPP letter stating that Property 16 is not eligible for the National Register of Historic Places (NRHP) and reaffirm that the proposed undertaking will have No Adverse Effect on historic properties.

Thank you for the opportunity to review this undertaking. Please refer to the AHPP Tracking Number listed above in all correspondence. If you have any questions, please call Bob Scoggin of my staff at 501-324-9270

Sincerely,

Frances McSwain
Deputy State Historic Preservation Officer

cc: Mr. Randall Looney, Federal Highway Administration
Dr. Andrea Hunter, Osage Nation
Mr. Everett Bandy, Quapaw Tribe of Oklahoma
Ms. Kim Jumper, Shawnee Tribe of Oklahoma
Mr. Eric Oosahwee-Voss, United Keetoowah Band of Cherokee Indians
Dr. Ann Early, Arkansas Archeological Survey

Arkansas Arts Council

Arkansas Natural
Heritage Commission

Arkansas State Archives

Delta Cultural Center

Historic Arkansas Museum

Mosaic Templars
Cultural Center

Old State House Museum



ARKANSAS HISTORIC
PRESERVATION PROGRAM



National Historic
Preservation Act 1966-2016



323 Center Street, Suite 1500
Little Rock, AR 72201

(501) 324-9880
fax: (501) 324-9184
tdd: 711

e-mail:

info@arkansaspreservation.org

website:

www.arkansaspreservation.com

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Appendix F – Noise Analysis

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Noise Analysis

Fundamentals of Sound and Noise

“Noise” is defined as an unwanted sound. Sounds are described as noise if they interfere with an activity or disturb the person hearing them. Sound is measured in a logarithmic unit called a decibel (dB). The human ear is more sensitive to middle and high frequency sounds than it is to low frequency sounds, so sound levels are weighted to more closely reflect human perceptions. These “A-weighted” sounds are measured using the decibel unit dB(A). Because the dB(A) is based on a logarithmic scale, a 10 dB(A) increase in sound level is generally perceived as twice as loud while a 3 dB(A) increase is just barely perceptible to the human ear.

Sound levels fluctuate with time depending on the sources of the sound audible at a specific location. In addition, the degree of annoyance associated with certain sounds varies by time of day, depending on other ambient sounds affecting the listener and the activities of the listener. The time-varying fluctuations in sound levels at a fixed location can be quite complex, so they are typically reported using statistical or mathematical descriptors that are a function of sound intensity and time. A commonly used descriptor of the equivalent sound level is Leq , which represents the equivalent of a steady, unvarying level over a defined period of time containing the same level of sound energy as the time varying noise environment. $Leq(h)$ is a sound level averaged over one hour. For highway projects, the $Leq(h)$ is commonly used to describe traffic-generated sound levels at locations of outdoor human use and activity (such as residences).

Noise Impact Criteria

Traffic noise impacts take place when the predicted traffic noise levels approach or exceed the noise abatement standard, or when the predicted traffic noise levels exceed the existing noise level by ten dB(A) (decibels on the A-scale). The noise abatement standard of 67 dB(A) is used for sensitive noise receptors such as residences, schools, churches, cemeteries and parks. The term “approach” is considered to be one dB(A) less than the noise abatement standard.

The number of noise receptors was estimated for this project utilizing the Federal Highway Administration’s Traffic Noise Model 2.5, existing and proposed roadway information, existing traffic information, and projected traffic levels for 2036.

Traffic Noise Analyses

Traffic noise analyses were performed for the project utilizing a roadway cross-section for Highway 82 consisting of four 11-foot paved travel lanes with curb and gutter and one 12-foot turn lane.

Effects of Project

The traffic noise estimates for the project resulted in a noise abatement distance of 171 feet from the centerline of Highway 82 in project area. Approximately 47 sensitive receptors will be affected by future noise levels greater than 66 dB(A). Of those 47 receptors, 25 are currently being impacted by highway noise.

Traffic Noise Abatement

Since noise impacts are predicted within 500 feet of the proposed project, the feasibility and reasonableness of potential noise abatement measures must be evaluated. Based upon AHTD's "Policy on Highway Traffic Noise Abatement", any noise abatement effort using barrier walls or berms is not warranted for this project. In order to provide direct access to the highway from adjacent properties, breaks in the barrier walls or berms would be required. These necessary breaks for highway access would render any noise barrier ineffective.

To avoid noise levels in excess of design levels, any future receptors should be located a minimum of 10 feet beyond the distance that the noise abatement standard is projected to occur. This distance should be used as a general guide and not a specific rule since the noise will vary depending upon the roadway grades and other noise contributions.

Any excessive project noise, due to construction operations, should be of short duration and have a minimum adverse effect on land uses or activities associated with this project area.

In compliance with Federal guidelines, a copy of this analysis will be transmitted to the White River Planning and Development District for possible use in present and future land use planning.

Appendix G – Visual Impact Assessment

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June 30, 2016

TO: Terry Tucker, Environmental Scientist I, Environmental Division

FROM: Mary Pearson, Environmental Analyst III, Environmental Division

SUBJECT: AHTD Job Number CA0801
FAP Number M001-0071-031
Hwy. 110-Clinton (Widening) (S)
Van Buren County
Visual Impact Assessment for Environmental Assessment

Purpose of this Memorandum

The purpose of this memorandum (memo) is to evaluate potential impacts to the visual environment associated with the Hwy. 110-Clinton Widening project.

Project Description

The Highway 65 segment between Clinton and Highway 110 is comprised of 12-foot travel lanes and 8-foot shoulders. The roadway includes three travel lanes for 5 miles north from the project start point, then narrows to two travel lanes for 2.9 miles to the project end point. The average right of way width is 142 feet. Nine residences and eight commercial structures will be removed. A total of 11 residences and five commercial structures currently located within approximately 105.5 feet of the centerline will remain. The roadway grade is steepest near the project start point.

The proposed project will replace the existing roadway with four 12-foot travel lanes, an 11-foot painted median, and 8-foot paved shoulders. The average right of way width will be 211 feet. The proposed improvements will occur along the existing alignment. In addition to widening, the roadway profile will be raised by an average of 4 feet or less throughout the majority of the corridor. However, the roadway profile will be raised by more than 4 feet from the project start point northward for approximately 0.40 mile to reduce the existing steep grade. This section of the project corridor will also require the

largest areas of fill. Roadside fore slopes will range from 2:1 to 6:1, with 3:1 being the most common.

Visual Impact Assessment

The Visual Impact Assessment Scoping Questionnaire was completed. As shown in Attachment 1, the response to each question has a corresponding value of either 1 or 2, resulting in an overall score of 11. Consistent with Federal Highway Administration (FHWA) visual assessment guidelines, a score of 10 to 14 recommends the preparation of a brief visual assessment in memo format. This memo serves as the recommended visual assessment memo.

Visual resource and visual impact assessment definitions for the concepts and terms used in the remainder of this memo are provided in Attachment 2.

Existing Environments

The project corridor is situated in low, rolling, forested mountains with cleared valleys used for pastureland and hayfields. Highway-adjacent trees include hardwoods and pines. Tall fescue dominates cleared areas, such as pastureland and utility line easements. Many of the residences and other structures feature grassy lawns, landscaping, and trees. Most of these neighboring structures afford partial or complete views of Highway 65, and are in turn visible to travelers along the route.

Permanent Impacts

In conjunction with the expansion of highway right of way, the increase in roadway width and profile would modify the appearance of the roadway. The removal of residences and businesses would alter the current appearance of the project corridor. Likewise, some of the remaining residences and commercial structures would be in closer proximity to the highway. The proposed roadway cross section and materials are typical of improvements made to highways throughout the state. Local community design standards do not exist, and the proximity of the remaining residences and commercial structures would not exceed zoning codes or discernably differ from the existing overall visual character. Visual elements uncommon in the area would not be introduced, and landforms will not be noticeably altered outside of the fill areas near the project start point. For these reasons, permanent impacts would be minor and localized. These impacts may be adverse for residents for whom views of the roadway will become more prominent.

Temporary Impacts

Project activities would result in the short-term presence of construction vehicles and equipment, grading and excavation, and vegetation clearing throughout the project area. Equipment and materials would be stored at staging areas that have yet to be determined. The areas where construction and grading would remove existing natural vegetation would be viewable by travelers and site-specific neighbors. Grading and excavation activities and the presence of construction vehicles and equipment would result in a temporary change in the visual character of the project site. These activities would be short-term. Impacts in roadside fore slope cleared areas would be short/medium-term until new vegetation becomes established. These temporary visual impacts would be minor and not expected to result in an adverse response to typical viewers.

Avoidance, Minimization and/or Mitigation Measures

Construction of this project would introduce minor changes to views but would not alter the overall character of the project corridor. Impacts to the existing vegetation within the project area would be minimized through revegetation efforts as part of the process to ensure that biological resources are not adversely affected. As a result, adverse impacts to the overall visual character of the project corridor are not expected as a result of the proposed project.

Attachments:

1. Visual Impact Assessment Scoping Questionnaire
2. Impact Definitions

Visual Resource and Visual Assessment Impact Definitions

Visible elements of natural (e.g., vegetation, water bodies), cultural (e.g., residences, commercial structures), or design (e.g., roadway geometrics, bridges) environments comprise visual resources. For highway project assessment purposes, visual resources are considered from two perspectives:

1. The view of the project to the surrounding community (neighbors).
2. The view from the project to motorists (travelers).

Neighbors who can see a highway project and travelers who use it are defined as viewers.

Visual resource changes are assessed by considering the compatibility and/or contrast of the proposed projects with the visual character of existing environments. Viewer responses to these changes are predicted by considering both exposure and sensitivity. Viewer exposure considers the physical limits of the views and the number and type of viewers. Viewer sensitivity considers the expectations of viewers based on existing environments and the extent to which various visual resources may be important to them.

The predicted viewer response to changes in the existing landscape are used to determine visual resource impacts. Potential impacts may be identified as neutral, adverse, or beneficial and described in the following terms:

- Extent – Are the effects site-specific, local, or even regional?
- Duration – Are the effects temporary or permanent, or short-term or long-term?
- Scale – Are the effects negligible, minor, moderate, or major?

Potential impact durations are defined below.

- Short-term – during construction.
- Short/medium-term – 1 to 5 years while new vegetation becomes established after construction.
- Medium/long-term – 5 to 15 years after construction when new vegetation would be effective mitigation.
- Long-term – Over 15 years.

Potential impact scales are defined below.

Negligible: Changes would be non-detectable or, if detected, effects would be slight and local. Impacts would not require mitigation.

Minor: Changes would be noticeable, although the changes would be small and localized. Conventional mitigation measures may be necessary to reduce potential effects.

Moderate: Changes would be noticeable and have localized and potentially regional scale impacts; historical conditions would be altered. Conventional mitigation measures may be necessary to reduce potential effects.

Major: Changes would be noticeable and would have substantial consequences on a local and/or regional level. Mitigation measures to offset the effects would be required to reduce impacts, although long-term changes to the resource would be possible.

Visual Impact Assessment Scoping Questionnaire

Project Name: Hwy. 110-Clinton (Widening) (S)

Location: Hwy. 65, Van Buren County

Special Conditions/Notes:

Conducted By: M. Pearson

Environmental Compatibility

1. *Will the project result in a noticeable change in the physical characteristics of the existing environment? (Consider all project components and construction impacts - both permanent and temporary, including landform changes, structures, noise barriers, vegetation removal, railing, signage, and contractor activities.)*

- High level of permanent change (3) Moderate level of permanent change (2)
 Low level of permanent or temporary change (1) No Noticeable Change (0)

2. *Will the project complement or contrast with the visual character desired by the community? (Evaluate the scale and extent of the project features compared to the surrounding scale of the community. Is the project likely to give an urban appearance to an existing rural or suburban community? Do you anticipate that the change will be viewed by the public as positive or negative? Research planning documents, or talk with local planners and community representatives to understand the type of visual environment local residents envision for their community.)*

- Low Compatibility (3) Moderate Compatibility (2)
 High compatibility (1)

3. *What level of local concern is there for the types of project features (e.g., bridge structures, large excavations, sound barriers, or median planting removal) and construction impacts that are proposed? (Certain project improvements can be of special interest to local citizens, causing a heightened level of public concern, and requiring a more focused visual analysis.)*

- High concern (3) Moderate concern (2)
 Low concern (1) Negligible Project Features (0)

4. *Is it anticipated that to mitigate visual impacts, it may be necessary to develop extensive or novel mitigation strategies to avoid, minimize, or compensate for adverse impacts or will using conventional mitigation strategies, such as landscape or architectural treatment adequately mitigate adverse visual impacts?*

- Extensive Non-Conventional Mitigation Likely (3) Some non-conventional Mitigation Likely (2)
- Only Conventional Mitigation Likely (1) No Mitigation Likely (0)

5. Will this project, when seen collectively with other projects, result in an aggregate adverse change (cumulative impacts) in overall visual quality or character? (Identify any projects [both state and local] in the area that have been constructed in recent years and those currently planned for future construction. The window of time and the extent of area applicable to possible cumulative impacts should be based on a reasonable anticipation of the viewing public's perception.)

- Cumulative Impacts likely: 0-5 years (3) Cumulative Impacts likely: 6-10 years (2)
- Cumulative Impacts unlikely (1)

Viewer Sensitivity

1. *What is the potential that the project proposal may be controversial within the community, or opposed by any organized group? (This can be researched initially by talking with the state DOT and local agency management and staff familiar with the affected community's sentiments as evidenced by past projects and/or current information.)*

- High Potential (3) Moderate Potential (2)
- Low Potential (1) No Potential (0)

2. *How sensitive are potential viewer-groups likely to be regarding visible changes proposed by the project? (Consider among other factors the number of viewers within the group, probable viewer expectations, activities, viewing duration, and orientation. The expected viewer sensitivity level may be scoped by applying professional judgment, and by soliciting information from other DOT staff, local agencies and community representatives familiar with the affected community's sentiments and demonstrated concerns.)*

- High Sensitivity (3) Moderate Sensitivity (2)
- Low Sensitivity (1)

3. *To what degree does the project's aesthetic approach appear to be consistent with applicable laws, ordinances, regulations, policies or standards?*

- Low Compatibility (3) Moderate Compatibility (2)
 High compatibility (1)

4. *Are permits going to be required by outside regulatory agencies (i.e., Federal, State, or local)?*
(Permit requirements can have an unintended consequence on the visual environment. Anticipated permits, as well as specific permit requirements - which are defined by the permitter, may be determined by talking with the project environmental planner and project engineer. Note: coordinate with the state DOT representative responsible for obtaining the permit prior to communicating directly with any permitting agency. Permits that may benefit from additional analysis include permits that may result in visible built features, such as infiltration basins or devices under a storm water permit or a retaining wall for wetland avoidance or permits for work in sensitive areas such as coastal development permits or on Federal lands, such as impacts to Wild and Scenic Rivers.)

- Yes (3) Maybe (2)
 No (1)

5. *Will the project sponsor or public benefit from a more detailed visual analysis in order to help reach consensus on a course of action to address potential visual impacts?* (Consider the proposed project features, possible visual impacts, and probable mitigation recommendations.)

- Yes (3) Maybe (2)
 No (1)

Total Project Score: 11

Determining the Level of Visual Impact Assessment

Total the scores of the answers to all ten questions on the Visual Impact Assessment Scoping Questionnaire. Use the total score from the questionnaire as an indicator of the appropriate level of VIA to perform for the project. Confirm that the level suggested by the checklist is consistent with the project teams' professional judgments. If there remains doubt about whether a VIA needs to be completed, it may be prudent to conduct an Abbreviated VIA. If there remains doubt about the level of the VIA, begin with the simpler VIA process. If visual impacts emerge as a more substantial concern than anticipated, the level of VIA documentation can always be increased.

The level of the VIA can initially be based on the following ranges of total scores:

Score 25-30

An *Expanded VIA* is probably necessary. It is recommended that it should be preceded by a formal visual scoping study prior to beginning the VIA to alert the project team to potential highly adverse impacts and to develop new project alternatives to avoid those impacts. These technical studies will likely receive state-wide, even national, public review. Extensive use of visual simulations and a comprehensive public involvement program would be typical.

Score 20-24

A *Standard VIA* is recommended. This technical study will likely receive extensive local, perhaps state-wide, public review. It would typically include several visual simulations. It would also include a thorough examination of public planning and policy documents supplemented with a direct public engagement processes to determine visual preferences.

Score 15-19

An *Abbreviated VIA* would briefly describe project features, impacts and mitigation requirements. Visual simulations would be optional. An Abbreviated VIA would receive little direct public interest beyond a summary of its findings in the project's environmental documents. Visual preferences would be based on observation and review of planning and policy documents by local jurisdictions.

Score 10-14

A *VIA Memorandum* addressing minor visual issues that indicates the nature of the limited impacts and any necessary mitigation strategies that should be implemented would likely be sufficient along with an explanation of why no formal analysis is required.

Score 6-9

No noticeable physical changes to the environment are proposed and no further analysis is required. Print out a copy of this completed questionnaire for your project file to document that there is no effect. A *VIA Memorandum* may be used to document that there is no effect and to explain the approach used for the determination.

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Appendix H – NRCS-CPA-106 Form

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FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS

PART I (To be completed by Federal Agency) Job CA0801		3. Date of Land Evaluation Request 7/13/2016	4. Sheet 1 of _____
1. Name of Project Hwy. 110 – Clinton (Widening)		5. Federal Agency Involved FHWA	
2. Type of Project Widening		6. County and State Van Buren AR.	
PART II (To be completed by NRCS)		1. Date Request Received by NRCS	2. Person Completing Form
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form).		YES NO	4. Acres Irrigated Average Farm Size
5. Major Crop(s)	6. Farmable Land in Government Jurisdiction Acres: %	7. Amount of Farmland As Defined in FPPA Acres: %	
8. Name Of Land Evaluation System Used	9. Name of Local Site Assessment System	10. Date Land Evaluation Returned by NRCS	

PART III (To be completed by Federal Agency)	Alternative Corridor For Segment			
	Corridor A	Corridor B	Corridor C	Corridor D
	A. Total Acres To Be Converted Directly			
	B. Total Acres To Be Converted Indirectly, Or To Receive Services			
C. Total Acres In Corridor				

PART IV (To be completed by NRCS) Land Evaluation Information				
A. Total Acres Prime And Unique Farmland		.6		
B. Total Acres Statewide And Local Important Farmland				
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted				
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value				

PART V (To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)				
--	--	--	--	--

PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))		Maximum Points			
1. Area in Nonurban Use		15	10		
2. Perimeter in Nonurban Use		10	5		
3. Percent Of Corridor Being Farmed		20	5		
4. Protection Provided By State And Local Government		20	0		
5. Size of Present Farm Unit Compared To Average		10	0		
6. Creation Of Nonfarmable Farmland		25	0		
7. Availability Of Farm Support Services		5	5		
8. On-Farm Investments		20	0		
9. Effects Of Conversion On Farm Support Services		25	0		
10. Compatibility With Existing Agricultural Use		10	0		
TOTAL CORRIDOR ASSESSMENT POINTS		160	25		

PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)		100	100		
Total Corridor Assessment (From Part VI above or a local site assessment)		160	25		
TOTAL POINTS (Total of above 2 lines)		260	125		

1. Corridor Selected: New Location Adjacent to existing	2. Total Acres of Farmlands to be Converted by Project: .6 acres of Prime Farmland	3. Date Of Selection:	4. Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input type="checkbox"/>
--	---	-----------------------	--

5. Reason For Selection:

Signature of Person Completing this Part:

DATE

NOTE: Complete a form for each segment with more than one Alternate Corridor

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Appendix I – Endangered Species

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Northern Long-Eared Bat 4(d) Rule Streamlined Consultation Form

Federal agencies should use this form for the optional streamlined consultation framework for the northern long-eared bat (NLEB). This framework allows federal agencies to rely upon the U.S. Fish and Wildlife Service's (USFWS) January 5, 2016, intra-Service Programmatic Biological Opinion (BO) on the final 4(d) rule for the NLEB for section 7(a)(2) compliance by: (1) notifying the USFWS that an action agency will use the streamlined framework; (2) describing the project with sufficient detail to support the required determination; and (3) enabling the USFWS to track effects and determine if reinitiation of consultation is required per 50 CFR 402.16.

This form is not necessary if an agency determines that a proposed action will have no effect to the NLEB or if the USFWS has concurred in writing with an agency's determination that a proposed action may affect, but is not likely to adversely affect the NLEB (i.e., the standard informal consultation process). Actions that may cause prohibited incidental take require separate formal consultation. Providing this information does not address section 7(a)(2) compliance for any other listed species.

Information to Determine 4(d) Rule Compliance:

YES NO

Information to Determine 4(d) Rule Compliance:	YES	NO
1. Does the project occur wholly outside of the WNS Zone ¹ ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Have you contacted the appropriate agency ² to determine if your project is near known hibernacula or maternity roost trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Could the project disturb hibernating NLEBs in a known hibernaculum?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Could the project alter the entrance or interior environment of a known hibernaculum?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Does the project remove any trees within 0.25 miles of a known hibernaculum at any time of year?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. Would the project cut or destroy known occupied maternity roost trees, or any other trees within a 150-foot radius from the maternity roost tree from June 1 through July 31.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

You are eligible to use this form if you have answered yes to question # 1 **or** yes to question #2 **and** no to questions 3, 4, 5 and 6. The remainder of the form will be used by the USFWS to track our assumptions in the BO.

Agency and Applicant³ (Name, Email, Phone No.):

Arkansas Highway and Transportation Department - John.Fleming@ahtd.ar.gov - 501-569-2281

Project Name: AHTD Job #CA0801 - Hwy. 110-Clinton (Widening) (S)

Project Location (include coordinates if known): Highway 65 Clinton, AR to Botkinburg, AR

Basic Project Description (provide narrative below or attach additional information):

Widening Highway 65 from 2-3 lanes to 5 lanes

¹ <http://www.fws.gov/midwest/endangered/mammals/nleb/pdf/WNSZone.pdf>

² See <http://www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html>

³ If applicable - only needed for federal actions with applicants (e.g., for a permit, etc.) who are party to the consultation.

General Project Information	YES	NO
Does the project occur within 0.25 miles of a known hibernaculum?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the project occur within 150 feet of a known maternity roost tree?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the project include forest conversion ⁴ ? (if yes, report acreage below)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Estimated total acres of forest conversion	~40 acres	
If known, estimated acres ⁵ of forest conversion from April 1 to October 31		
If known, estimated acres of forest conversion from June 1 to July 31 ⁶		
Does the project include timber harvest? (if yes, report acreage below)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated total acres of timber harvest		
If known, estimated acres of timber harvest from April 1 to October 31		
If known, estimated acres of timber harvest from June 1 to July 31		
Does the project include prescribed fire? (if yes, report acreage below)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated total acres of prescribed fire		
If known, estimated acres of prescribed fire from April 1 to October 31		
If known, estimated acres of prescribed fire from June 1 to July 31		
Does the project install new wind turbines? (if yes, report capacity in MW below)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated wind capacity (MW)		

Agency Determination:

By signing this form, the action agency determines that this project may affect the NLEB, but that any resulting incidental take of the NLEB is not prohibited by the final 4(d) rule.

If the USFWS does not respond within 30 days from submittal of this form, the action agency may presume that its determination is informed by the best available information and that its project responsibilities under 7(a)(2) with respect to the NLEB are fulfilled through the USFWS January 5, 2016, Programmatic BO. The action agency will update this determination annually for multi-year activities.

The action agency understands that the USFWS presumes that all activities are implemented as described herein. The action agency will promptly report any departures from the described activities to the appropriate USFWS Field Office. The action agency will provide the appropriate USFWS Field Office with the results of any surveys conducted for the NLEB. Involved parties will promptly notify the appropriate USFWS Field Office upon finding a dead, injured, or sick NLEB.

Signature: _____



Date Submitted: _____

21 Apr 2016

⁴ Any activity that temporarily or permanently removes suitable forested habitat, including, but not limited to, tree removal from development, energy production and transmission, mining, agriculture, etc. (see page 48 of the BO).

⁵ If the project removes less than 10 trees and the acreage is unknown, report the acreage as less than 0.1 acre.

⁶ If the activity includes tree clearing in June and July, also include those acreage in April to October.



IN REPLY REFER TO:

United States Department of the Interior

FISH AND WILDLIFE SERVICE
 110 S. Amity Road, Suite 300
 Conway, Arkansas 72032
 Tel.: 501/513-4470 Fax: 501/513-4480



Hwy. 65 (Botkinburg) Cave Report

Mitch Wine and Michelle Fleming (with support from Ben Thesing and Terry Tucker of AHTD)

One cave near Botkinburg, Arkansas was investigated on July 23, 2015 by the above listed Service personnel. The objective was to perform a biotic survey due to planned highway construction near the cave. The cave is located near a roadside park on private property at approximately: 35.66888, -92.47962.

Park at the roadside park and follow the foot path (can be obscured during spring/summer) down to the cave. The cave entrance is small and has a tight squeeze with an entrance located under an overhanging bluff. The cave appears popular with locals as there are lawn chairs and other items near the entrance. The cave is only about 30 ft. long (passable distance) but continues toward the highway in a narrow crack too small for human exploration. There was some airflow in the cave and standing shallow water in parts. No special equipment is required to explore the cave.

Western Slimy Salamanders were abundant throughout the cave and it was very tough not to disturb them. There was a lot of guano in the cave and it should be investigated again in the winter to look for hibernating Tricolored and possibly Northern Long-eared Bats.

Recommendations for the highway construction would include avoiding widening to the east side of the existing highway to the extent practicable and limiting excavation in the area to the east of the highway. If listed species are discovered in the cave during winter surveys, further consultation with the Service will be required for the construction project.

Animals observed:

56 Western Slimy Salamanders
 1 Tricolored Bat (no signs of disease, distress or injury)
 1 terrestrial millipede
 14 terrestrial snails (*Patera perigrapta*)
 Camel Crickets (hundreds)



IN REPLY REFER TO:

United States Department of the Interior

FISH AND WILDLIFE SERVICE

110 S. Amity Road, Suite 300

Conway, Arkansas 72032

Tel.: 501/513-4470 Fax: 501/513-4480



Hwy. 65 (Botkinburg) Cave Report

Mitch Wine (with support from Ben Thesing and Nate Goddard of AHTD)

One cave near Botkinburg, Arkansas was investigated on November 19, 2015 by the above listed Service personnel and Nate Goddard of the Arkansas Highway and Transportation Department (AHTD). The objective was to follow up on a July visit to determine winter bat use in the cave. The cave is located near a roadside park on private property at approximately: 35.66888, -92.47962.

Park at the roadside park and follow the foot path (can be obscured during spring/summer) down to the cave. The cave entrance is small and has a tight squeeze with an entrance located under an overhanging bluff. The cave appears popular with locals as there are lawn chairs and other items near the entrance. The cave is only about 30 ft. long (passable distance) but continues toward the highway in a narrow crack too small for human exploration. There was some airflow in the cave and some flowing water in parts following recent heavy rains. We spent approximately 20 minutes investigating the cave. No special equipment is required to explore the cave.

Western Slimy Salamanders were once again abundant throughout the cave and we saw many juveniles along with one female adult. There was very little guano in the cave this trip and there were no bats present despite the significant guano trails during the July visit and presence of a Tri-colored Bat. It seems unlikely this cave is being used by Northern Long-eared Bats or any other listed species.

Recommendations for the highway construction would include avoiding widening to the east side of the existing highway to the extent practicable and limiting excavation in the area to the east of the highway. Storm water from the roadway should be diverted away from the cave to extent practicable.

Animals observed:

21 Western Slimy Salamanders (1 female adult, the rest juveniles)

1 terrestrial millipede

>10 Cave Orb Weaver spiders

Camel Crickets (hundreds)

No bats

From: [Thesing, Ben](#)
To: [Tucker, Terry](#)
Cc: [Seagraves, Josh](#)
Subject: FW: CA0801 Concurrence Hwy 65
Date: Monday, November 07, 2016 9:12:58 AM

Terry,

Attached is endangered species clearance for the CA0801. Please let me know if you need anything else for this job.

-Ben

From: Lewis, Lindsey [mailto:lindsey_lewis@fws.gov]
Sent: Monday, November 07, 2016 9:10 AM
To: Thesing, Ben
Subject: Re: CA0801 Concurrence Hwy 65

Ben,

Due to the limited size of the area being cleared, minimal adjacent habitat being disturbed, distance to known species locations, and the standard special provisions and BMPs for sediment and erosion control, the Service concurs with the determination of "may affect, not likely to adversely affect" for the yellowcheek darter and speckled pocketbook.

The Service has reviewed your determination that the proposed action will not result in any prohibited incidental take for Northern Long-eared Bat. This project may affect the Northern Long-eared Bat; however, there are no effects beyond those previously disclosed in the Service's programmatic biological opinion for the final 4(d) rule dated January 5, 2016. Any taking that may occur incidental to this project is not prohibited under the final 4(d) rule (50 CFR §17.40(o)). This project is consistent with the description of the proposed action in the programmatic biological opinion, and the 4(d) rule does not prohibit incidental take of the Northern Long-eared Bat that may occur as a result of this project. Therefore, the programmatic biological opinion satisfies the "action agency" responsibilities under ESA section 7(a)(2) relative to the Northern Long-eared Bat for this project.

Please keep in mind that you must report any departures from the plans submitted; results of any surveys conducted; or any dead, injured, or sick Northern Long-eared Bats that are found to this office. If this project is not completed within one year of this letter, you must update your determination and resubmit the required information.

No further action is required at this time.

Lindsey Lewis
Biologist

US Fish & Wildlife Service
Arkansas Field Office
110 South Amity Rd., Suite 300

Conway, Arkansas 72032

(501) 513-4489 - voice

(501) 513-4480 - fax

Lindsey.Lewis@fws.gov

<http://www.fws.gov/arkansas-es/>

NOTE: This email correspondence and any attachments to and from this sender is subject to the Freedom of Information Act (FOIA) and may be disclosed to third parties.

On Fri, Oct 28, 2016 at 7:20 AM, Thesing, Ben <Ben.Thesing@ahtd.ar.gov> wrote:
Lindsey,

I wanted to check to see if you received the previous email. With the attachment size it might not have gone through. Thanks.

-Ben

From: Thesing, Ben
Sent: Wednesday, October 12, 2016 7:01:36 AM
To: Lewis, Lindsey
Subject: RE: CA0801 Concurrence Hwy 65

Lindsey,

Jackson Group completed the bat survey and provided us a final report (attached). One northern long-eared bat was captured and tracked to roost trees. Acoustic surveys showed potential for gray, Indiana, and Ozark big-eared but were vetted and discounted due to visual vetting, habitat type, and range. Conclusions were that only NLEB were present in the project area. We had previously sent in a 4(d) checklist for NLEB (attached again). I would further like to seek concurrence that the yellowcheek darter and speckled pocketbook will "not likely be adversely affected" due to the potential of sediment and water quality effects minimized by BMPs.

Let me know if you have any questions.

-Ben

From: Lewis, Lindsey [mailto:lindsey_lewis@fws.gov]
Sent: Thursday, April 21, 2016 3:37 PM

To: Thesing, Benjamin D.
Subject: Re: CA0801 Concurrence Hwy 65

Probably best to do a NLAA considering the potential for sediment/water quality effects is there, but they are likely minimal due to being mitigated by the BMPs.

Lindsey Lewis
Biologist

US Fish & Wildlife Service

Arkansas Field Office
110 South Amity Rd., Suite 300
Conway, Arkansas 72032

(501) 513-4489 - voice
(501) 513-4480 - fax
Lindsey_Lewis@fws.gov
<http://www.fws.gov/arkansas-es/>

On Thu, Apr 21, 2016 at 3:30 PM, Thesing, Benjamin D. <Benjamin.Thesing@ahtd.ar.gov> wrote:

No "actions" are scheduled to take place until after surveys. However, since I already have it, please find the attached checklist for files.

What are your initial thoughts on yellowcheek and speckled pocketbook. Do you feel the no effect is appropriate or would it be better for another call?

From: Lewis, Lindsey [mailto:lindsey_lewis@fws.gov]
Sent: Thursday, April 21, 2016 3:24 PM

To: Thesing, Benjamin D.
Subject: Re: CA0801 Concurrence Hwy 65

That depends on whether or not any clearing or other "actions" will take place prior to completion of the surveys and subsequent determinations and concurrence. If no "actions" other than permitted surveys take place then you should just wait, but if some "actions" are going to take place then you should go ahead and submit it and then you can initiate consultation, if necessary, at a later time. Probably the safest thing to do is just go ahead and submit it and then we'll adjust later to whatever the surveys find if necessary.

Lindsey Lewis
Biologist

US Fish & Wildlife Service
Arkansas Field Office
110 South Amity Rd., Suite 300
Conway, Arkansas 72032

(501) 513-4489 - voice
(501) 513-4480 - fax
Lindsey_Lewis@fws.gov
<http://www.fws.gov/arkansas-es/>

On Thu, Apr 21, 2016 at 2:50 PM, Thesing, Benjamin D. <Benjamin.Thesing@ahtd.ar.gov> wrote:

I have been informed that there is a task order to survey the entire length of the project this year for Indiana Bats and with tracking of both Indiana and NLEB bats if caught. I apologize for leaving this out of the original email as I just learned of this yesterday. Would you like the checklist still or would it be better to wait till after the surveys.

From: Lewis, Lindsey [mailto:lindsey_lewis@fws.gov]
Sent: Thursday, April 21, 2016 11:29 AM
To: Thesing, Benjamin D.
Subject: Re: CA0801 Concurrence Hwy 65

Yes, please submit the checklist for NLEB. Thanks.

Lindsey Lewis
Biologist

US Fish & Wildlife Service
Arkansas Field Office
110 South Amity Rd., Suite 300
Conway, Arkansas 72032

(501) 513-4489 - voice
(501) 513-4480 - fax
Lindsey_Lewis@fws.gov
<http://www.fws.gov/arkansas-es/>

On Tue, Apr 19, 2016 at 3:32 PM, Thesing, Benjamin D. <Benjamin.Thesing@ahtd.ar.gov> wrote:
Lindsey,

AHTD plans to widen approximately 8 miles of Highway 65 from Clinton to Botkinburg. Currently the road is 2-3 travel lanes with plans to widen the road to 4 travel lanes with a center turner lane. Widening will occur on both sides of the road along the currently existing road. Some trees will be cleared during the project. A cave, near the center of the job, was discovered that is very close to the construction limits. Two surveys (attached) by USFWS personnel were conducted to check for the possibility of bats. A single tricolored bat was observed during the summer survey. There are no anticipated impacts to this cave and a standard cave discovery SP will be included in the contract. Gray Bats are known from Big Creek Cave approximately 18 miles north of the northern job limit. No known hibernacula or maternity roost trees of northern long-eared bats are known from the area.

During construction 21 first order streams in the Archy and South Fork Little Red River drainage will be impacted. The majority, 15 of 21, are currently confined to road side ditches and will be filled and relocated to the toe of slope. The remaining six will be realigned to allow for culvert extensions. Yellow Cheek Darters and Speckled Pocketbook mussels are known to occur throughout both the Archy and South Fork Little Red River. The closest stream impact is 2.5 miles by stream from the nearest ANHC location of either protected species. Standard erosion control methods will be utilized to minimize runoff.

With consideration of the above information AHTD has determined that there will be "no effect" on threatened and endangered species as a result of the construction of this job. We seek concurrence and ask for guidance or requests at this time. Please let me know if you would like any further information. Would you like a streamlined checklist for NLEB submitted?

Thanks,

Ben

Ben Thesing
Environmental Analyst I
Arkansas State Highway & Transportation Dept.
PO BOX 2261, Little Rock, AR 72203
P: 501-569-2520 F: 501-569-2009

ARKANSAS STATE HIGHWAY
AND
TRANSPORTATION DEPARTMENT

Scott E. Bennett
Director
Telephone (501) 569-2000
Voice/TTY 711



P.O. Box 2261
Little Rock, Arkansas 72203-2261
Telefax (501) 569-2400
www.arkansashighways.com

January 24, 2017

Mr. Angel Correa
Division Administrator
Federal Highway Administration
700 West Capitol, Room 3130
Little Rock, Arkansas 72201-3298

RE: AHTD Job Number CA0801
FAP Number M001-0071-031
Hwy. 110 – Clinton (Widening) (S)
Van Buren County
FONSI Request

Dear Mr. Correa:

An Environmental Assessment (EA) for the referenced project was prepared by the Environmental Division of the Arkansas State Highway and Transportation Department and submitted for your approval. The document was signed and approved for public dissemination on December 5, 2016. A Public Involvement was held March 15, 2016, and a Design Public Hearing was offered from December 21, 2016 to January 25, 2017. No Public Hearing requests were received.

A review of the project and its impacts indicates that its construction will have no significant impact on the environment. We have included a Finding Of No Significant Impact (FONSI) document for your review and approval, if acceptable. A copy of the EA is enclosed.

Should you have questions or require additional information, please contact Terry Tucker at (501) 569-2281.

Sincerely,

A handwritten signature in blue ink that reads 'John Fleming'.

John Fleming
Division Head
Environmental Division

Enclosures
JF:TT:fc

AHTD JOB CA0801
HIGHWAY 65 Widening Project
HWY. 110 - CLINTON (WIDENING) (S)
FINDING OF NO SIGNIFICANT IMPACT





Title VI

The Arkansas State Highway and Transportation Department (AHTD) ensures full compliance with Title VI of the Civil Rights Act of 1964 by prohibiting discrimination against any person on the basis of race, color, national origin, or sex in the provision of benefits and services resulting from its federally assisted programs and activities. The AHTD public involvement process did not exclude any individuals due to income, race, color, religion, national origin, sex, age, or disability. For questions regarding the AHTD's Title VI Program, you may contact the Department's EEO/DBE Section Head (ADA/504/Title VI Coordinator) at (501) 569-2298 (Voice/TTY 711), or at the following email address: EEO_DBE_Section_Head@ahtd.ar.gov.

Americans with Disabilities Act (ADA) Information

Materials are available in alternative formats: large print, Braille, or audiotape for people with disabilities by contacting AHTD's EEO/DBE Section Head (ADA/504/Title VI Coordinator) at (501) 569-2298 (Voice/TTY 711), or at the following email address: EEO_DBE_Section_Head@ahtd.ar.gov.

Persons who are deaf or hard of hearing may contact the AHTD through the Arkansas Relay Service at 7-1-1.

A federal agency may publish a notice in the Federal Register, pursuant to 23 USC §139(l), indicating that one or more federal agencies have taken final action on permits, licenses, or approvals for a transportation project. If such notice is published, claims seeking judicial review of those federal agency actions will be barred unless such claims are filed within 180 days after the date of publication of the notice, or within such shorter time period as is specified in the federal laws pursuant to which judicial review of the federal agency action is allowed. If no notice is published, then the periods of time that otherwise are provided by the federal laws governing such claims will apply.

AHTD JOB NUMBER CA0801

F.A.P. NUMBER M001-0071-031

FINDING OF NO SIGNIFICANT IMPACT

Submitted by the U.S. Department of Transportation, Federal Highway Administration, Arkansas Division

The Arkansas State Highway and Transportation Department (AHTD) has completed the assessment of the proposed project and the Federal Highway Administration (FHWA) issues a Finding of No Significant Impact (FONSI) for the widening of U.S. Highway 65 from within the City of Clinton north to its intersection with Highway 110.

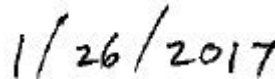
Upon consideration of the FHWA-approved Environmental Assessment (EA) for the proposed project, public comments, and other considerations, the FHWA has determined that Alternative 1 will have no significant impact on the human environment and hereby issues a FONSI pursuant to 23 CFR §771(a).

This FONSI is based on FHWA's independent evaluation. The information contained in the EA has been determined to adequately and accurately discuss the need, environmental issues, and impacts of the proposed project and its appropriate mitigation measures. The EA provides sufficient evidence and analysis for determining that an Environmental Impact Statement is not required. No impacts identified would cause any significant adverse effects to the human or natural environment.

Based upon the EA, additional information included in this document, and public, agency, and organization comments, FHWA concludes that no additional environmental documentation is required for AHTD Job CA0801, Highway 65 Widening.



Randal Looney
Environmental Specialist



Date of Approval



U.S. Department of Transportation
Federal Highway Administration

TABLE OF CONTENTS

FINDING OF NO SIGNIFICANT IMPACT

1	What is the Highway 65 widening project?	1
2	Has the project changed since the publication of the EA?	1
3	How have the public, local officials, state and federal agencies been involved during the EA comment period?.....	1
4	Which alternative was recommended?	3
5	What impacts are expected with the Preferred Alternative?	3
6	What commitments have been made?	4
7	What happens next?	5

APPENDICES

- Appendix A: State Historic Preservation Officer Clearance
- Appendix B: Northern Long-Eared Bat 4(d) Rule Streamlined Consultation

FIGURE

1	Project Location Map	2
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Finding of No Significant Impact

This Finding of No Significant Impact (FONSI) document updates the Environmental Assessment (EA), identifies the Preferred Alternative, and incorporates all applicable comments and responses received during the review period.

1 What is the Highway 65 widening project?

The Arkansas State Highway and Transportation Department (AHTD), in conjunction with the Federal Highway Administration (FHWA), is proposing improvements to Highway 65 from within the City of Clinton north to its intersection with Highway 110. The project will include highway widening and minor intersection realignments. See Figure 1 for the project location.

An EA was approved by the FHWA on December 5, 2016. The EA did not identify any significant adverse environmental impacts.

2 Has the project changed since the publication of the EA?

No changes were made to the proposed design for Alternative 1, as evaluated in the EA, and no additional impacts have been identified. Conditions in the project area have not changed.

3 How have the public, local officials, state, and federal agencies been involved during the EA comment period?

The public, local officials, and government agencies have been coordinated with and kept informed of developments throughout the EA process. A Location and Design Public Hearing and public comment period were offered from December 21, 2016, to January 25, 2017. Copies of the EA were made available to the public and copies were submitted to The Arkansas State Clearinghouse for state agency review. No Public Hearing requests were received.

When does FHWA issue a FONSI?

A FONSI is issued when the environmental analysis and review finds a project to have no significant impacts on the quality of the environment.

Where can I find the EA and other project documents?

The project documents are available for review at the following locations:

By mail or in person:
AHTD District 8 Office
372 Aspen Lane
I-40 Exit 81
Russellville, AR 72811-0070

By email:
info@ahtd.ar.gov

On the AHTD website:
http://web/public_meetings/2017/CA0801/CA0801.aspx

For any other questions, call:
(501) 569-2281

2 Hwy. 110- Clinton (Widening) (S)

Project Location Map

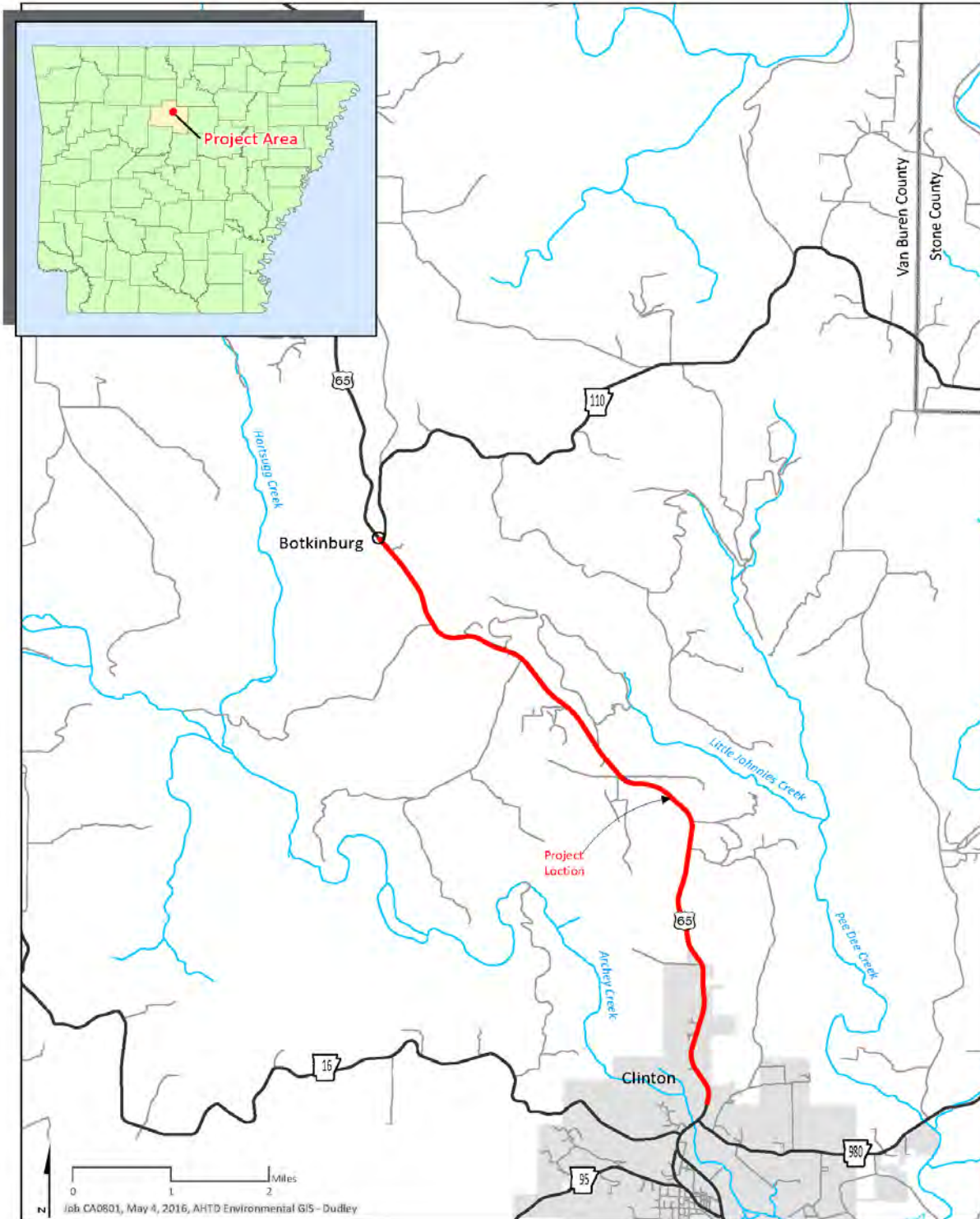


Figure 1

4 Which alternative was recommended?

Alternative 1 was identified as the Preferred Alternative in the EA. The Preferred Alternative meets the project's purpose and need of providing safer and efficient intrastate and interstate movement of people and goods for greater mobility and connectivity while minimizing environmental impacts.

5 What impacts are expected with the Preferred Alternative?

The Preferred Alternative has an estimated construction cost of \$34 million, \$1.3 million in acquisition and relocation costs, and \$11.3 million in utility relocation for a total project cost of \$46.6 million. The project will require approximately 93 acres of new right of way. There are no air quality, wild and scenic rivers, Environmental Justice, or floodplain impacts associated with the Preferred Alternative. State Historic Preservation Officer clearance can be found in Appendix A.

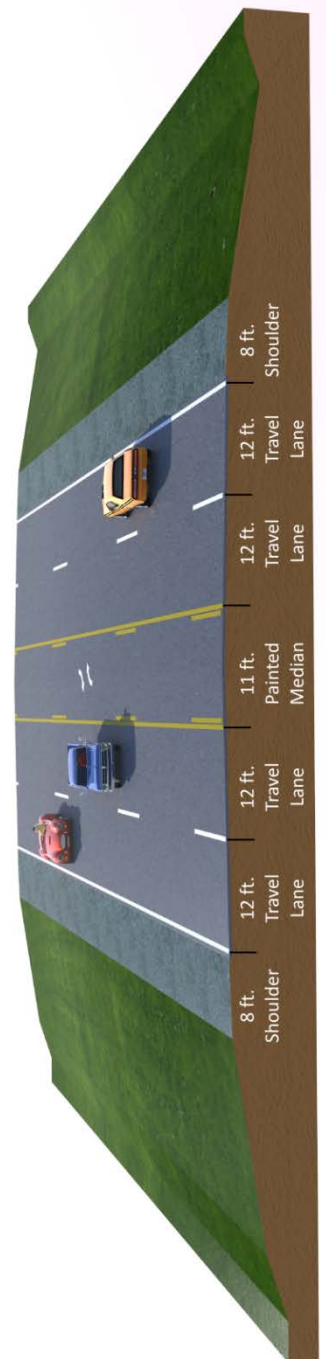
The Preferred Alternative would require the relocation of four businesses, four landlord businesses, six residential owners, and three residential tenants. The relocation of these businesses would have an adverse effect resulting in a temporary and/or permanent loss of jobs and income, but wouldn't adversely effect the overall economic conditions of the City of Clinton or Van Buren County. Several utilities including cable television, natural gas, electricity, sewer, telephone, and water, will be relocated to accommodate the proposed project.

Coordination with the United States Fish and Wildlife Service resulted in findings of "may affect, not likely to adversely affect" for the Indiana bat and gray bat. Impacts to the northern long-eared bat fall under the recent Final 4(d) Rule and Programmatic Biological Opinion. The streamlined consultation form for the northern long-eared bat can be found in Appendix B. Impacts to bat species will be mitigated with a Special Provision restricting when tree clearing and construction activities may occur.

6 What commitments have been made?

- The AHTD will comply with all requirements of *The Clean Water Act, as Amended*, for the construction of this project. This includes Section 401: Water Quality Certification; Section 402: National Pollutant Discharge Elimination Permit (NPDES); and

Preferred Alternative
Typical Section



Section 404: Permits for Dredged or Fill Material.

- An asbestos survey will be conducted on each building prior to the development of demolition plans. If the survey detects the presence of any asbestos-containing materials, plans will be developed to accomplish the safe removal of these materials prior to demolition. All asbestos abatement work will be conducted in conformance with the Arkansas Department of Environmental Quality (ADEQ), United States Environmental Protection Agency and Occupational Safety and Health Administration asbestos abatement regulations.
- If hazardous materials, unknown illegal dumps, or underground storage tanks are identified or accidentally uncovered by any AHTD personnel, contractors, contracting companies, or state regulatory agency, the AHTD will determine the type, size, and extent of the contamination according to the AHTD's response protocol. The AHTD, in consultation with the ADEQ, will decide the type of containment, remediation, and disposal methods to be employed for that particular type of contamination.
- The construction of the proposed project should be allowed under the terms of a Nationwide Permit 14 for Linear Transportation Projects as defined in Federal Register 77(34) 10183-10290. The AHTD will obtain all waterway and stormwater permits before construction begins.
- Impacts to endangered bat species will be limited with the addition of a Special Provision restricting the clearing of trees to the winter hibernating months and placing restrictions on the time of day construction can occur during the summer.
- The Arkansas Historic Preservation Program requires a Restraining Condition and an Archeological Monitoring Special Provision: therefore, an AHTD staff archeologist must be present during any ground disturbing activity within the existing roadside park.
- A Water Pollution Control Special Provision will be incorporated into the contract to minimize potential water quality impacts.
- If any permanent impacts to private drinking water sources occur due to this project, the AHTD will take appropriate action to mitigate these impacts.

- A wildflower seed mix will be included in the permanent seeding for the project.
- Based on current construction plans, seventeen relocatees will be relocated as a result of this project. Relocation services will be provided until all persons are relocated or their relocation eligibility expires.

7 What happens next?

The issuing of the FONSI concludes the National Environmental Policy Act (NEPA) process and results in a Selected Alternative. The signing of the FONSI allows further actions such as property acquisition, relocations, and utility adjustments to begin.

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Appendix A – State Historic Preservation Officer Clearance



THE DEPARTMENT OF ARKANSAS
HERITAGE

Asa Hutchinson
Governor

Stacy Hurst
Director

Arkansas Arts Council

Arkansas Natural
Heritage Commission

Delta Cultural Center

Historic Arkansas Museum

Mosaic Templars
Cultural Center

Old State House Museum



ARKANSAS HISTORIC
PRESERVATION PROGRAM



National Historic
Preservation Act 1966-2016



323 Center Street, Suite 1500
Little Rock, AR 72201

(501) 324-9880
fax: (501) 324-9184
tdd: 711

e-mail:

info@arkansaspreservation.org

website:

www.arkansaspreservation.com

An Equal Opportunity Employer

May 10, 2016

Mr. John Fleming
Division Head
Environmental Division
Arkansas State Highway and Transportation Department
P.O. Box 2261
Little Rock, AR 72203-2261

RECEIVED
AHTD

MAY 12 2016

ENVIRONMENTAL
DIVISION

RE: Van Buren County – General
Section 106 Review – FHWA
Report Entitled *A Cultural Resources Survey of AHTD Job Number
CA0801 Hwy. 110-Clinton (Widening) (S) Van Buren County,
Arkansas*
AHTD Job No. CA0801
AHPP Tracking Number 93659.01

Dear Mr. Fleming:

The staff of the Arkansas Historic Preservation Program has reviewed the above-referenced Phase I cultural resources report.

Based on the information presented in this report, we concur that sites 3VB227, 3VB399, 3VB400 and 3VB401 are Not Eligible for the National Register of Historic Places (NRHP) and require no further work.

In addition we find that the National Register of Historic Places (NRHP) listed Walter Patterson House (VB241) will not be impacted by the project and that the limited impacts to the NRHP eligible Roadside Park (Property 42) will have No Adverse Effect on the historic property.

Thank you for the opportunity to review this undertaking. Please refer to the AHPP Tracking Number listed above in all correspondence. If you have any questions, please call Bob Scoggin of my staff at 501-324-9270

Sincerely,

Frances McSwain
Deputy State Historic Preservation Officer

cc: Mr. Randal Looney, FHWA
Dr. Andrea Hunter, Osage Nation
Mr. Everett Bandy, Quapaw Tribe of Oklahoma
Ms. Kim Jumper, Shawnee Tribe of Oklahoma
Mr. Eric Oosahwee-Voss, United Keetoowah Band of Cherokee Indians
Dr. Ann Early, Arkansas Archeological Survey



THE DEPARTMENT OF ARKANSAS
HERITAGE

Asa Hutchinson
Governor

Stacy Hurst
Director

July 20, 2016

Mr. John Fleming
Division Head
Environmental Division
Arkansas State Highway and Transportation Department
P.O. Box 2261
Little Rock, AR 72203-2261

RECEIVED
AHTD

JUL 25 2016

ENVIRONMENTAL
DIVISION

RE: Van Buren County – General
Section 106 Review – FHWA
Report Entitled: *Second Addendum to a Cultural Resources Survey of
AHTD Job Number CA801. Hwy. 110-Clinton (Widening) (S), Van
Buren County*
AHTD Job Number CA801
AHPP Tracking Number 93659.04

Dear Mr. Fleming:

The staff of the Arkansas Historic Preservation Program (AHPP) has reviewed the above-referenced Phase I cultural resources report addendum.

Based on the information presented in the addendum, we concur with the June 20, 2016 AHPP letter stating that Property 16 is not eligible for the National Register of Historic Places (NRHP) and reaffirm that the proposed undertaking will have No Adverse Effect on historic properties.

Thank you for the opportunity to review this undertaking. Please refer to the AHPP Tracking Number listed above in all correspondence. If you have any questions, please call Bob Scoggin of my staff at 501-324-9270

Sincerely,

Frances McSwain
Deputy State Historic Preservation Officer

cc: Mr. Randall Looney, Federal Highway Administration
Dr. Andrea Hunter, Osage Nation
Mr. Everett Bandy, Quapaw Tribe of Oklahoma
Ms. Kim Jumper, Shawnee Tribe of Oklahoma
Mr. Eric Oosahwee-Voss, United Keetoowah Band of Cherokee Indians
Dr. Ann Early, Arkansas Archeological Survey

Arkansas Arts Council

Arkansas Natural
Heritage Commission

Arkansas State Archives

Delta Cultural Center

Historic Arkansas Museum

Mosaic Templars
Cultural Center

Old State House Museum



ARKANSAS HISTORIC
PRESERVATION PROGRAM



National Historic
Preservation Act 1966-2016



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tdd: 711

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info@arkansaspreservation.org

website:

www.arkansaspreservation.com

Appendix B – NORTHERN LONG-EARED BAT 4(D) RULE STREAMLINED CONSULTATION

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Northern Long-Eared Bat 4(d) Rule Streamlined Consultation Form

Federal agencies should use this form for the optional streamlined consultation framework for the northern long-eared bat (NLEB). This framework allows federal agencies to rely upon the U.S. Fish and Wildlife Service's (USFWS) January 5, 2016, intra-Service Programmatic Biological Opinion (BO) on the final 4(d) rule for the NLEB for section 7(a)(2) compliance by: (1) notifying the USFWS that an action agency will use the streamlined framework; (2) describing the project with sufficient detail to support the required determination; and (3) enabling the USFWS to track effects and determine if reinitiation of consultation is required per 50 CFR 402.16.

This form is not necessary if an agency determines that a proposed action will have no effect to the NLEB or if the USFWS has concurred in writing with an agency's determination that a proposed action may affect, but is not likely to adversely affect the NLEB (i.e., the standard informal consultation process). Actions that may cause prohibited incidental take require separate formal consultation. Providing this information does not address section 7(a)(2) compliance for any other listed species.

Information to Determine 4(d) Rule Compliance:

YES NO

Information to Determine 4(d) Rule Compliance:	YES	NO
1. Does the project occur wholly outside of the WNS Zone ¹ ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Have you contacted the appropriate agency ² to determine if your project is near known hibernacula or maternity roost trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Could the project disturb hibernating NLEBs in a known hibernaculum?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Could the project alter the entrance or interior environment of a known hibernaculum?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Does the project remove any trees within 0.25 miles of a known hibernaculum at any time of year?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. Would the project cut or destroy known occupied maternity roost trees, or any other trees within a 150-foot radius from the maternity roost tree from June 1 through July 31.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

You are eligible to use this form if you have answered yes to question # 1 **or** yes to question #2 **and** no to questions 3, 4, 5 and 6. The remainder of the form will be used by the USFWS to track our assumptions in the BO.

Agency and Applicant³ (Name, Email, Phone No.):

Arkansas Highway and Transportation Department - John.Fleming@ahtd.ar.gov - 501-569-2281

Project Name: AHTD Job #CA0801 - Hwy. 110-Clinton (Widening) (S)

Project Location (include coordinates if known): Highway 65 Clinton, AR to Botkinburg, AR

Basic Project Description (provide narrative below or attach additional information):

Widening Highway 65 from 2-3 lanes to 5 lanes

¹ <http://www.fws.gov/midwest/endangered/mammals/nleb/pdf/WNSZone.pdf>

² See <http://www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html>

³ If applicable - only needed for federal actions with applicants (e.g., for a permit, etc.) who are party to the consultation.

General Project Information	YES	NO
Does the project occur within 0.25 miles of a known hibernaculum?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the project occur within 150 feet of a known maternity roost tree?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the project include forest conversion ⁴ ? (if yes, report acreage below)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Estimated total acres of forest conversion	~40 acres	
If known, estimated acres ⁵ of forest conversion from April 1 to October 31		
If known, estimated acres of forest conversion from June 1 to July 31 ⁶		
Does the project include timber harvest? (if yes, report acreage below)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated total acres of timber harvest		
If known, estimated acres of timber harvest from April 1 to October 31		
If known, estimated acres of timber harvest from June 1 to July 31		
Does the project include prescribed fire? (if yes, report acreage below)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated total acres of prescribed fire		
If known, estimated acres of prescribed fire from April 1 to October 31		
If known, estimated acres of prescribed fire from June 1 to July 31		
Does the project install new wind turbines? (if yes, report capacity in MW below)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated wind capacity (MW)		

Agency Determination:

By signing this form, the action agency determines that this project may affect the NLEB, but that any resulting incidental take of the NLEB is not prohibited by the final 4(d) rule.

If the USFWS does not respond within 30 days from submittal of this form, the action agency may presume that its determination is informed by the best available information and that its project responsibilities under 7(a)(2) with respect to the NLEB are fulfilled through the USFWS January 5, 2016, Programmatic BO. The action agency will update this determination annually for multi-year activities.

The action agency understands that the USFWS presumes that all activities are implemented as described herein. The action agency will promptly report any departures from the described activities to the appropriate USFWS Field Office. The action agency will provide the appropriate USFWS Field Office with the results of any surveys conducted for the NLEB. Involved parties will promptly notify the appropriate USFWS Field Office upon finding a dead, injured, or sick NLEB.

Signature:  _____

Date Submitted: 21 Apr 2016

⁴ Any activity that temporarily or permanently removes suitable forested habitat, including, but not limited to, tree removal from development, energy production and transmission, mining, agriculture, etc. (see page 48 of the BO).
⁵ If the project removes less than 10 trees and the acreage is unknown, report the acreage as less than 0.1 acre.
⁶ If the activity includes tree clearing in June and July, also include those acreage in April to October.



IN REPLY REFER TO:

United States Department of the Interior

FISH AND WILDLIFE SERVICE

110 S. Amity Road, Suite 300
Conway, Arkansas 72032

Tel: 501/513-4470 Fax: 501/513-4480



Hwy. 65 (Botkinburg) Cave Report

Mitch Wine and Michelle Fleming (with support from Ben Thesing and Terry Tucker of AHTD)

One cave near Botkinburg, Arkansas was investigated on July 23, 2015 by the above listed Service personnel. The objective was to perform a biotic survey due to planned highway construction near the cave. The cave is located near a roadside park on private property at approximately: 35.66888, -92.47962.

Park at the roadside park and follow the foot path (can be obscured during spring/summer) down to the cave. The cave entrance is small and has a tight squeeze with an entrance located under an overhanging bluff. The cave appears popular with locals as there are lawn chairs and other items near the entrance. The cave is only about 30 ft. long (passable distance) but continues toward the highway in a narrow crack too small for human exploration. There was some airflow in the cave and standing shallow water in parts. No special equipment is required to explore the cave.

Western Slimy Salamanders were abundant throughout the cave and it was very tough not to disturb them. There was a lot of guano in the cave and it should be investigated again in the winter to look for hibernating Tricolored and possibly Northern Long-eared Bats.

Recommendations for the highway construction would include avoiding widening to the east side of the existing highway to the extent practicable and limiting excavation in the area to the east of the highway. If listed species are discovered in the cave during winter surveys, further consultation with the Service will be required for the construction project.

Animals observed:

56 Western Slimy Salamanders
1 Tricolored Bat (no signs of disease, distress or injury)
1 terrestrial millipede
14 terrestrial snails (*Patena perigrapta*)
Camel Crickets (hundreds)



IN REPLY REFER TO:

United States Department of the Interior

FISH AND WILDLIFE SERVICE

110 S. Amity Road, Suite 300
Conway, Arkansas 72032

Tel: 501/513-4470 Fax: 501/513-4480



Hwy. 65 (Botkinburg) Cave Report

Mitch Wine (with support from Ben Thesing and Nate Goddard of AHTD)

One cave near Botkinburg, Arkansas was investigated on November 19, 2015 by the above listed Service personnel and Nate Goddard of the Arkansas Highway and Transportation Department (AHTD). The objective was to follow up on a July visit to determine winter bat use in the cave. The cave is located near a roadside park on private property at approximately: 35.66888, -92.47962.

Park at the roadside park and follow the foot path (can be obscured during spring/summer) down to the cave. The cave entrance is small and has a tight squeeze with an entrance located under an overhanging bluff. The cave appears popular with locals as there are lawn chairs and other items near the entrance. The cave is only about 30 ft. long (passable distance) but continues toward the highway in a narrow crack too small for human exploration. There was some airflow in the cave and some flowing water in parts following recent heavy rains. We spent approximately 20 minutes investigating the cave. No special equipment is required to explore the cave.

Western Slimy Salamanders were once again abundant throughout the cave and we saw many juveniles along with one female adult. There was very little guano in the cave this trip and there were no bats present despite the significant guano trails during the July visit and presence of a Tri-colored Bat. It seems unlikely this cave is being used by Northern Long-eared Bats or any other listed species.

Recommendations for the highway construction would include avoiding widening to the east side of the existing highway to the extent practicable and limiting excavation in the area to the east of the highway. Storm water from the roadway should be diverted away from the cave to extent practicable.

Animals observed:

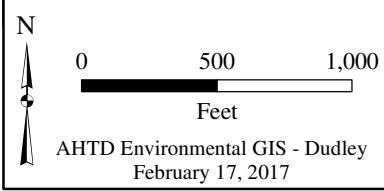
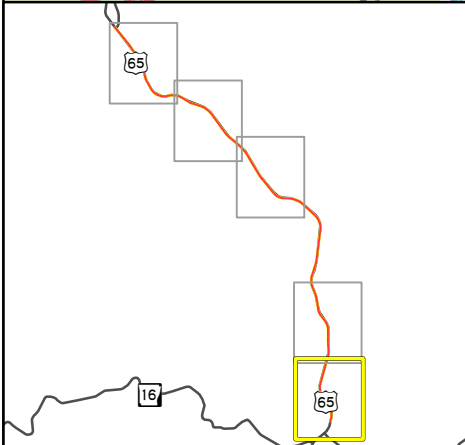
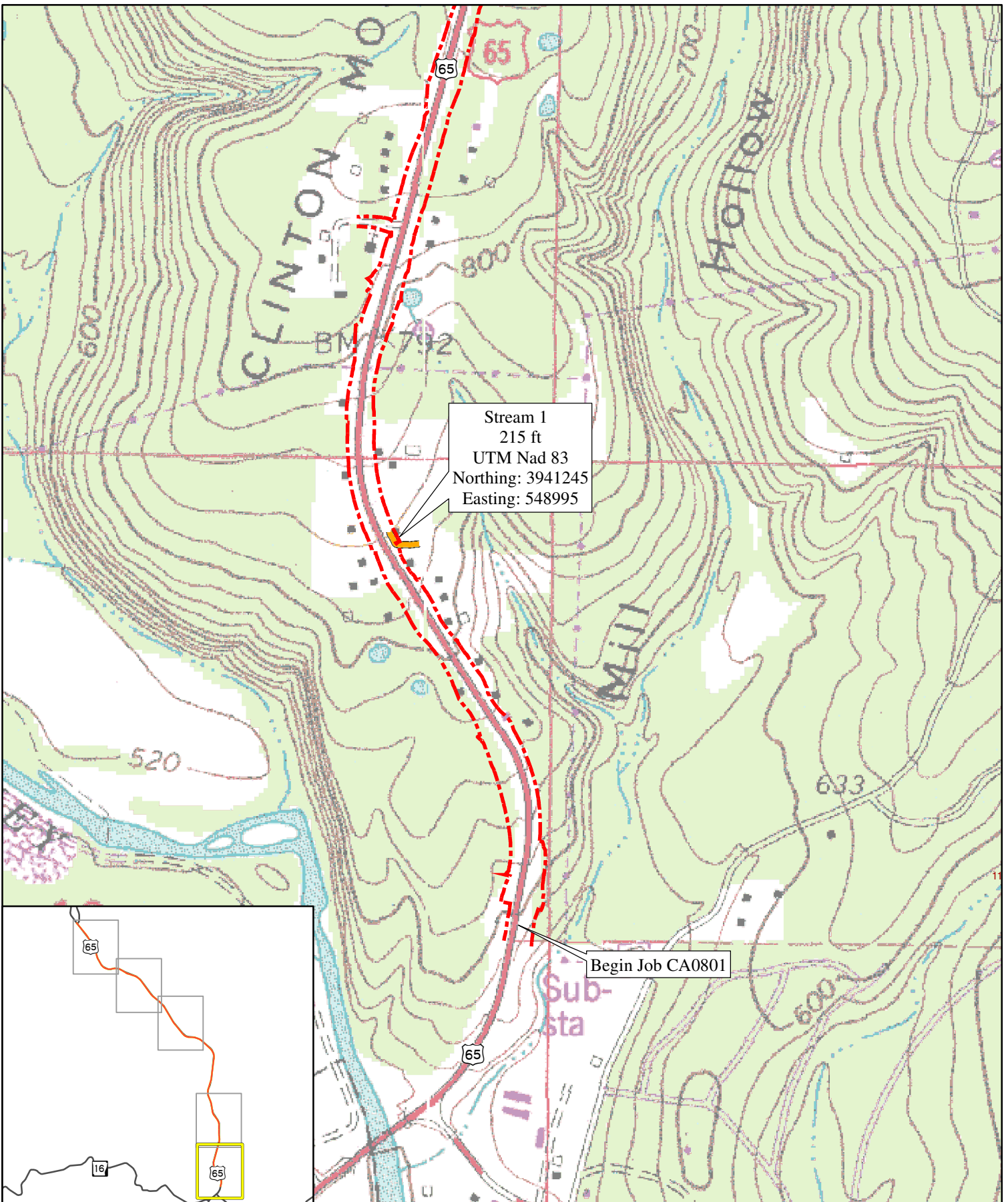
21 Western Slimy Salamanders (1 female adult, the rest juveniles)

1 terrestrial millipede

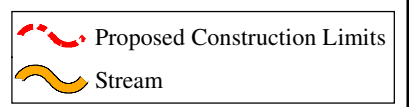
>10 Cave Orb Weaver spiders

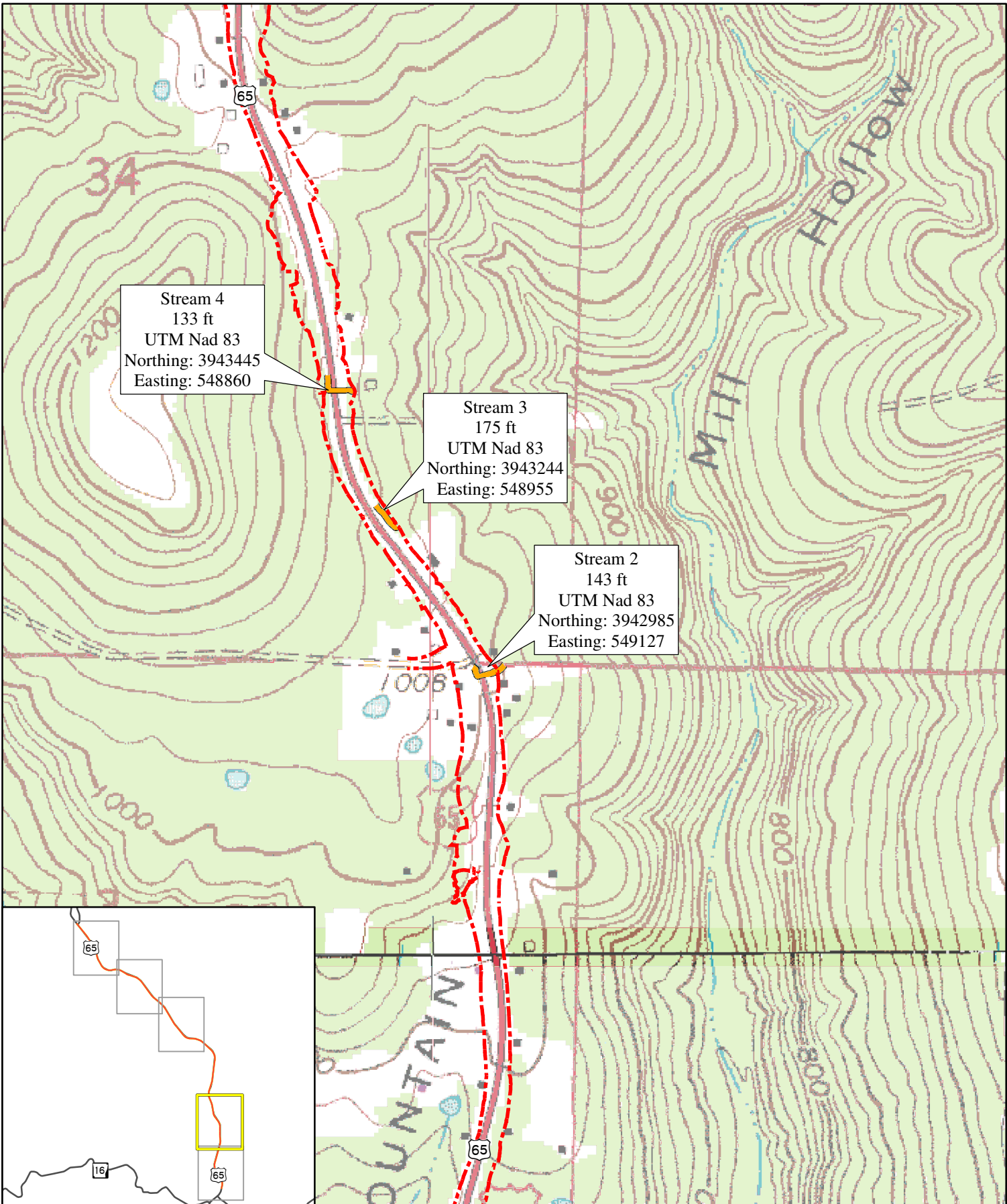
Camel Crickets (hundreds)

No bats



Job CA0801
Hwy. 110-Clinton
(Widening) (Hwy. 65)
Van Buren County
Sheet 1 of 5

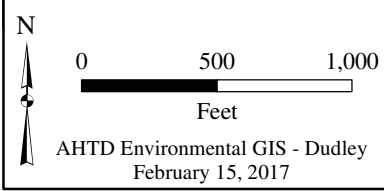
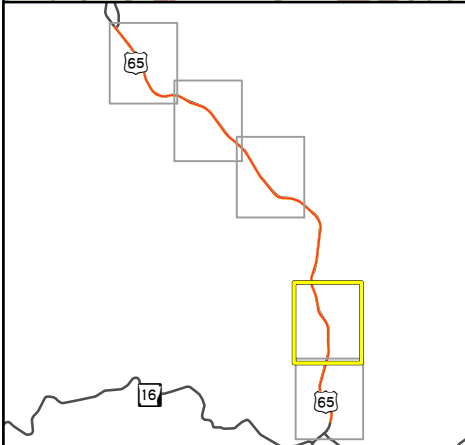




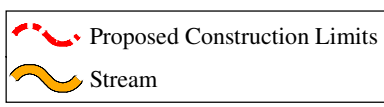
Stream 4
133 ft
UTM Nad 83
Northing: 3943445
Easting: 548860

Stream 3
175 ft
UTM Nad 83
Northing: 3943244
Easting: 548955

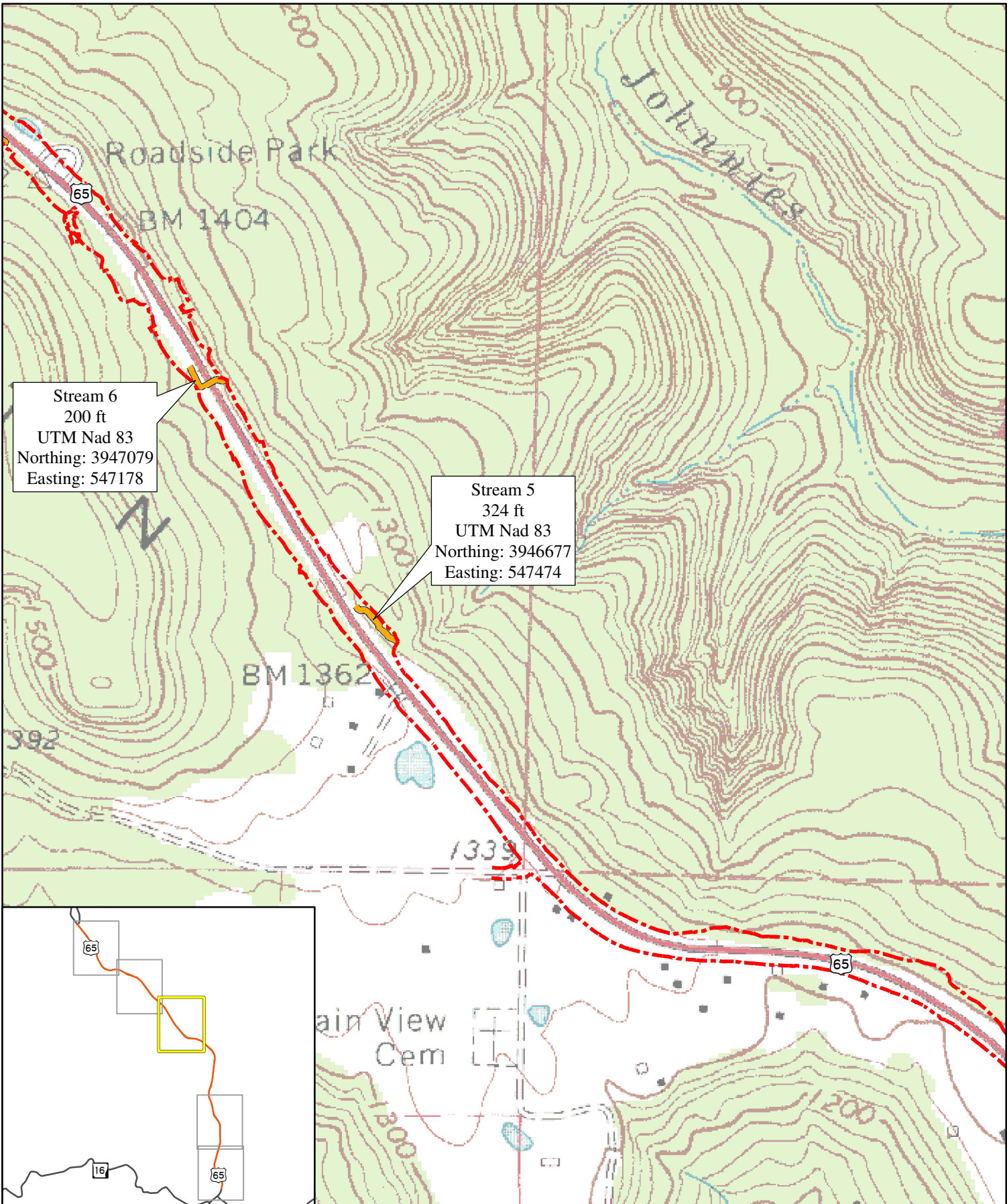
Stream 2
143 ft
UTM Nad 83
Northing: 3942985
Easting: 549127



Job CA0801
Hwy. 110-Clinton
(Widening) (Hwy. 65)
Van Buren County
Sheet 2 of 5

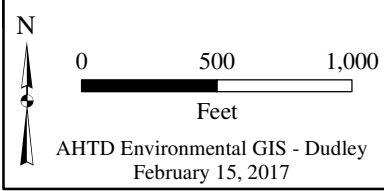
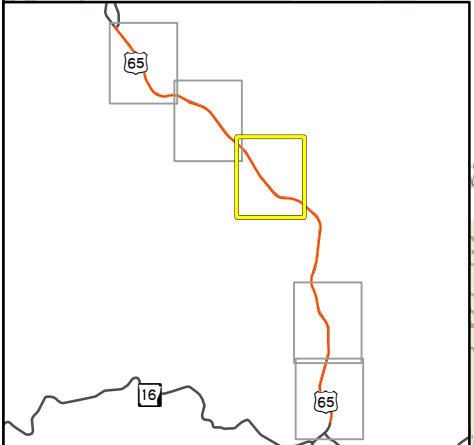


USGS Topographic Maps: Clinton 1981;
Old Lexington 1980

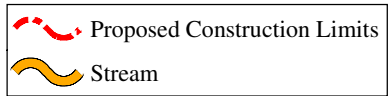


Stream 6
200 ft
UTM Nad 83
Northing: 3947079
Easting: 547178

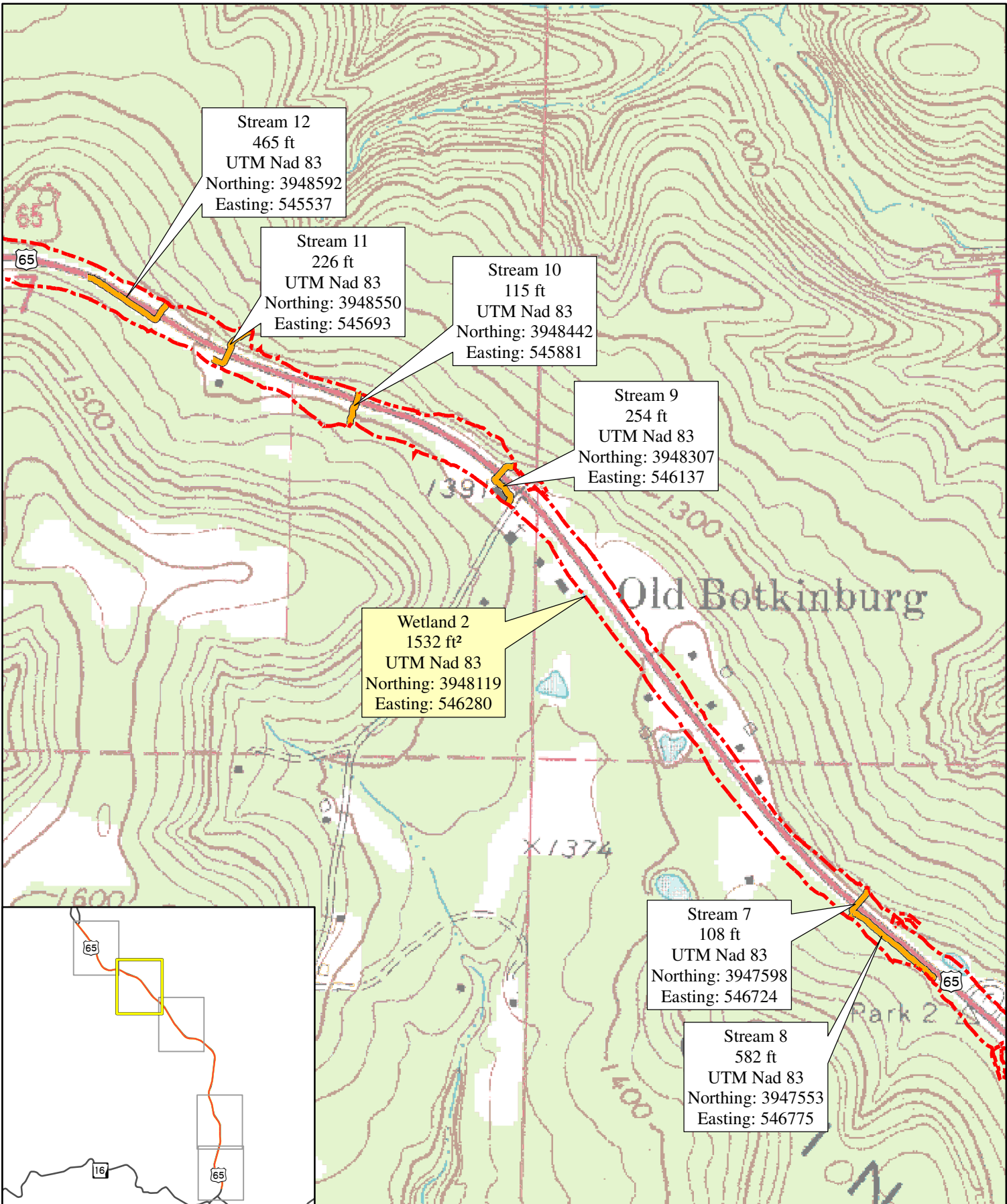
Stream 5
324 ft
UTM Nad 83
Northing: 3946677
Easting: 547474



Job CA0801
Hwy. 110-Clinton
(Widening) (Hwy. 65)
Van Buren County
Sheet 3 of 5



USGS Topographic Map:
Old Lexington 1980



Stream 12
465 ft
UTM Nad 83
Northing: 3948592
Easting: 545537

Stream 11
226 ft
UTM Nad 83
Northing: 3948550
Easting: 545693

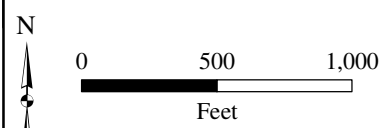
Stream 10
115 ft
UTM Nad 83
Northing: 3948442
Easting: 545881

Stream 9
254 ft
UTM Nad 83
Northing: 3948307
Easting: 546137

Wetland 2
1532 ft²
UTM Nad 83
Northing: 3948119
Easting: 546280

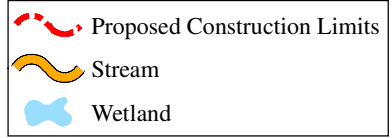
Stream 7
108 ft
UTM Nad 83
Northing: 3947598
Easting: 546724

Stream 8
582 ft
UTM Nad 83
Northing: 3947553
Easting: 546775

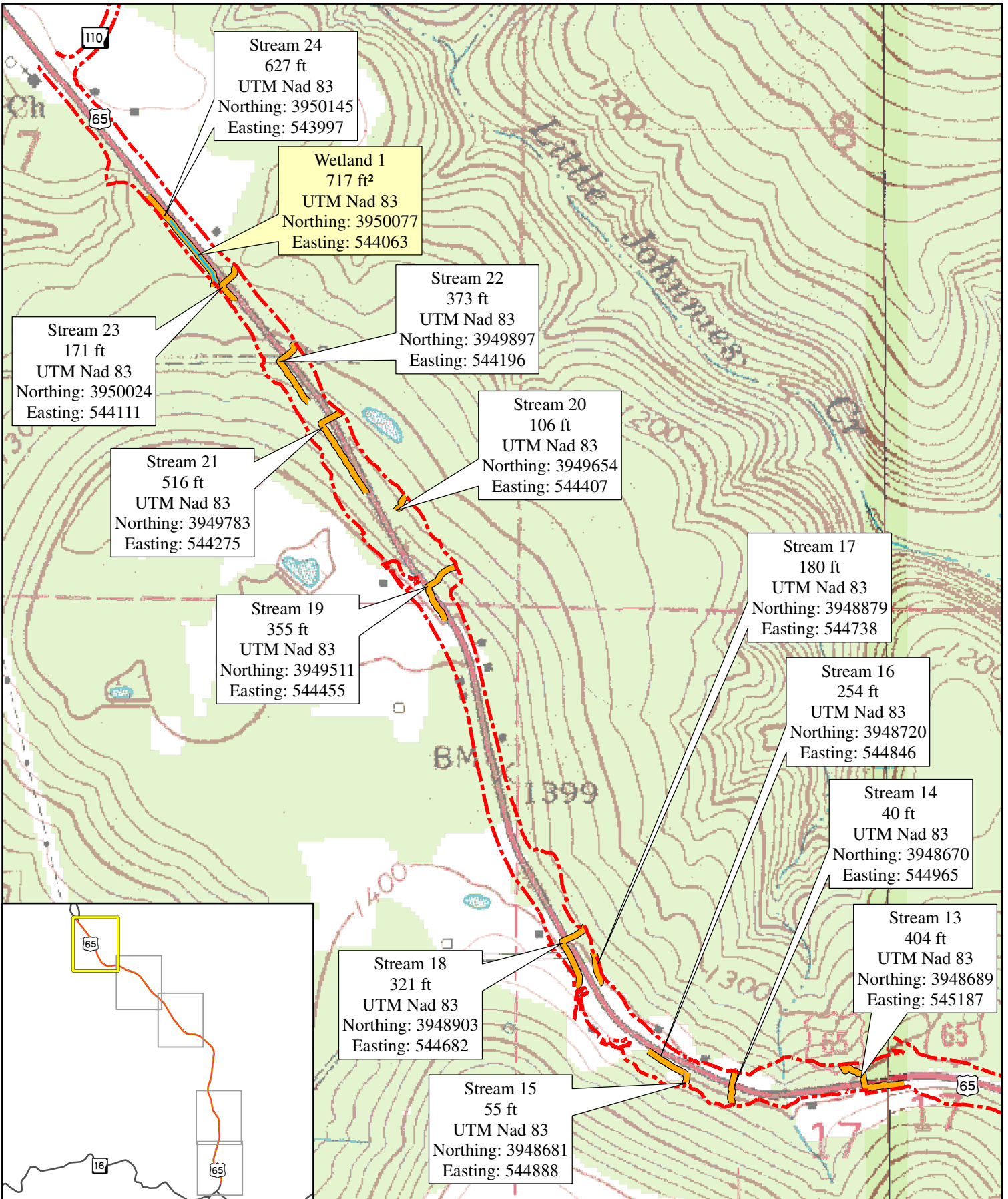


AHTD Environmental GIS - Dudley
February 17, 2017

Job CA0801
Hwy. 110-Clinton
(Widening) (Hwy. 65)
Van Buren County
Sheet 4 of 5



USGS Topographic Map:
Old Lexington 1980



Stream 24
627 ft
UTM Nad 83
Northing: 3950145
Easting: 543997

Wetland 1
717 ft²
UTM Nad 83
Northing: 3950077
Easting: 544063

Stream 22
373 ft
UTM Nad 83
Northing: 3949897
Easting: 544196

Stream 23
171 ft
UTM Nad 83
Northing: 3950024
Easting: 544111

Stream 20
106 ft
UTM Nad 83
Northing: 3949654
Easting: 544407

Stream 21
516 ft
UTM Nad 83
Northing: 3949783
Easting: 544275

Stream 19
355 ft
UTM Nad 83
Northing: 3949511
Easting: 544455

Stream 17
180 ft
UTM Nad 83
Northing: 3948879
Easting: 544738

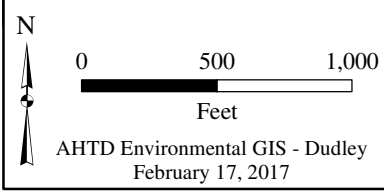
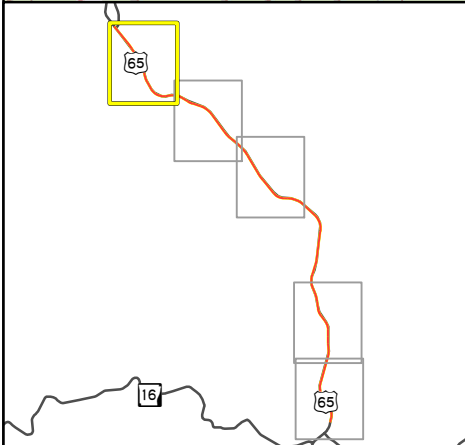
Stream 16
254 ft
UTM Nad 83
Northing: 3948720
Easting: 544846

Stream 14
40 ft
UTM Nad 83
Northing: 3948670
Easting: 544965

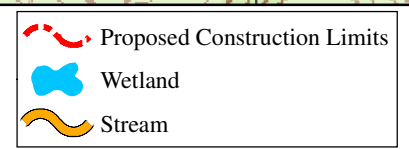
Stream 13
404 ft
UTM Nad 83
Northing: 3948689
Easting: 545187

Stream 18
321 ft
UTM Nad 83
Northing: 3948903
Easting: 544682

Stream 15
55 ft
UTM Nad 83
Northing: 3948681
Easting: 544888



Job CA0801
Hwy. 110-Clinton
(Widening) (Hwy. 65)
Van Buren County
Sheet 5 of 5



USGS Topographic Map:
Botkingurg 1980

ARKANSAS STATE HIGHWAY
AND
TRANSPORTATION DEPARTMENT

Scott E. Bennett P.E.
Director
Telephone (501) 569-2000
Voice/TTY 711



P.O. Box 2261
Little Rock, Arkansas 72203-2261
Telefax (501) 569-2400
www.arkansashighways.com

February 27, 2017

Ms. M. Elaine Edwards
Chief, Regulatory Division
Little Rock District, Corps of Engineers
P.O. Box 867
Little Rock, AR 72203

RE: AHTD Job Number CA0801
Hwy. 110 - Clinton (Widening) (S)
Van Buren County

Dear Ms. Edwards:

Enclosed are the Application for Department of Army Permit, FONSI, proposed construction plans, and supporting illustrations for the referenced AHTD project. This job involves improvements to Highway 65 from within the City of Clinton north to its intersection with Highway 110. The proposed project will widen the existing roadway to accommodate four 12-foot travel lanes, an 11-foot painted median, and 8-foot paved shoulders. The average right of way width will be 211 feet.

A total of 24 stream segments and two herbaceous wetlands will be impacted during construction. During construction, culverts will be extended and/or replaced to accommodate the wider roadway embankment. Streams located within the current rights-of-way will be relocated to the new toe of slope. Due to the proximity to the current roadway, avoidance was not possible. Impacts were minimized as much as possible during the design phase. The relocated channels will provide similar stream functions and are being proposed as compensatory mitigation for unavoidable impacts to waters of the United States. Wetland impacts are estimated at 0.05 acre; therefore, no compensatory mitigation is being offered. A summary table of impacts to waters of the United States is enclosed.

If additional information is required, please contact Josh Seagraves or Ben Thesing of my staff at (501) 569-2281.

Sincerely,

A handwritten signature in blue ink that reads 'John Fleming'.

John Fleming
Division Head
Environmental Division

Enclosures
Application for Department of Army Permit
FONSI
Supporting Illustrations

JF:JS:BT:ym

17. DIRECTIONS TO THE SITE

The project starts within the city limits of Clinton, AR approximately 0.75 miles north of the Highway 65 and Highway 16 intersection. It continues on Highway 65 north for approximately 8 miles and ends at Highway 110 in the town Botkinburg, AR.

18. Nature of Activity (Description of project, include all features)

Highway Department job #CA0801 Hwy. 110 – Clinton (Widening) (S) will widen Highway 65 from Clinton, AR to Botkinburg, AR. The widening will consist of four 12-foot travel lanes, an 11-foot painted median, 8-foot paved shoulders, and 3-1 side slopes. Some areas will have 6-1 safety slopes and some areas where constraints are warranted, the slope will be 2-1. The average right-of-way width is estimated at 211 feet for the project. A detailed discussion is provided in the Environmental Assessment which is attached.

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

The purpose of the proposed project is to widen an approximately 8 mile segment of Highway 65 from Clinton north to Highway 110 in Van Buren County to provide for four 12-foot travel lanes with an 11-foot painted median and 8-foot shoulders. Highway 65 is on AHTD's four-lane grid system. Segments are being widened as funding becomes available. Currently 73% of Highway 65 in Arkansas is four lane.

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

Construction of the wider roadway will permanently fill and relocate 21 stream segments including portions of Hartsugg Creek and Little Johnnies Creek. The stream segments to be impacted are located within the existing rights-of-way and will be moved to the edge of the new right-of-way. Three culverts will also be extended. Two small herbaceous wetlands, totaling 0.05 acre, will be filled as the roadway is widened.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type	Type	Type
Amount in Cubic Yards	Amount in Cubic Yards	Amount in Cubic Yards

See attached supplement

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres 0.05 acre wetland

or

Linear Feet 6,330 linear feet streams

23. Description of Avoidance, Minimization, and Compensation (see instructions)

Wetland and stream impacts were minimized as much as possible during the design of the selected alternative through the NEPA process. Temporary and permanent erosion control measures will minimize adverse impacts to streams and adjacent wetlands. Stream channels will be relocated to the new roadside upon completion of the project resulting in no net loss of stream function.

24. Is Any Portion of the Work Already Complete? Yes No IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).

a. Address- See attached supplemental list.

City - State - Zip -

b. Address-

City - State - Zip -

c. Address-

City - State - Zip -

d. Address-

City - State - Zip -

e. Address-

City - State - Zip -

26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED

* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.




 SIGNATURE OF APPLICANT DATE SIGNATURE OF AGENT DATE

The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN

Section	Township	Range
3	T 11 N	R 14 W
10	T 11 N	R 14 W
7	T 12 N	R 14 W
16	T 12 N	R 14 W
17	T 12 N	R 14 W
18	T 12 N	R 14 W
21	T 12 N	R 14 W
22	T 12 N	R 14 W
27	T 12 N	R 14 W
34	T 12 N	R 14 W

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

a. Streams

Steam #	Easting	Northing	Watershed	Name of Tributary	Stream Type	Activity	Length (feet)	Fill Quantity (cubic yards)
1	548997	3941230	Archey Creek	Hartsugg Creek	Intermittent	Relocate	627	12
2	549121	3942970	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Relocate	171	3
3	548955	3943234	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Relocate	373	3
4	548874	3943447	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Relocate	516	5
5	547481	3946675	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Culvert Extension	106	2
6	547189	3947069	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Relocate	355	7
7	546734	3947604	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Relocate	321	6
8	546778	3947549	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Relocate	180	5
9	546123	3948313	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Relocate	254	2
10	545885	3948437	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Relocate	55	1
11	545671	3948521	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Culvert Extension	40	2
12	545512	3948609	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Relocate	404	7
13	545189	3948676	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Relocate	465	4
14	544965	3948666	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Relocate	226	2
15	544889	3948681	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Culvert Extension	115	2
16	544859	3948706	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Relocate	254	5
17	544737	3948867	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Relocate	108	2
18	544687	3948918	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Relocate	582	11
19	544458	3949515	Greers Ferry Lake	Little Johnnies Creek	Intermittent	Relocate	200	4
20	544407	3949652	Archey Creek	Little Johnnies Creek	Intermittent	Relocate	324	6
21	544296	3949749	Archey Creek	Unnamed Tributary	Intermittent	Relocate	133	2
22	544211	3949878	Archey Creek	Unnamed Tributary	Intermittent	Relocate	175	2
23	544110	3950025	Archey Creek	Unnamed Tributary	Intermittent	Relocate	143	1
24	544043	3950097	Archey Creek	Unnamed Tributary	Intermittent	Relocate	203	2
Total							6330	98

b. Wetlands

Wetland #	Easting	Northing	Watershed	Name of Tributary	Wetland Type	Activity	Area (sq. feet)	Acres
1	544089	3950035	Archey Creek	Unnamed Tributary	Herbaceous	Fill	717	0.016
2	546277	3948116	Greers Ferry Lake	Little Johnnies Creek	Herbaceous	Fill	1532	0.035
Total							2249	0.052

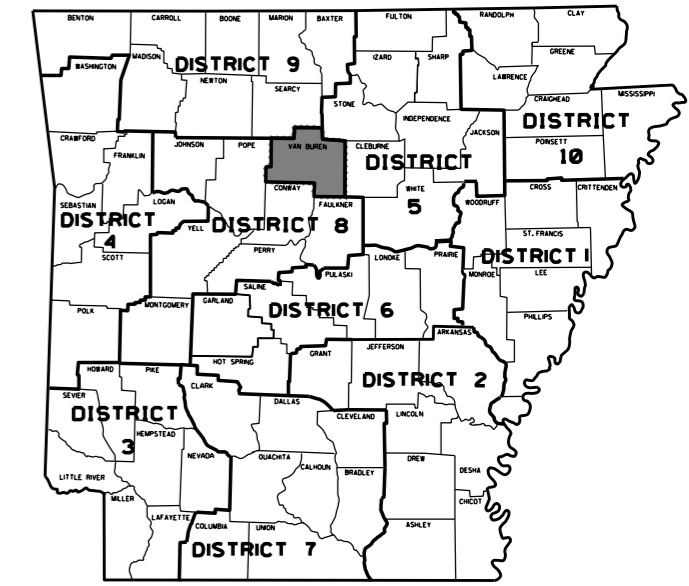
25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody

Name	Address	City	State	Zip code
A.C. Diles and Carolyn Cloud	883 Little Red River Road	Leslie	Arkansas	72645
Angela Dawn Bradford	9129 Highway 65 North	Clinton	Arkansas	72031
Arthur McGee and Nan McGee	8603 Highway 65 North	Clinton	Arkansas	72031
Betty Hickam and Terry Lynn Huyck	3649 Hickory Street	Abilene	Texas	79601
Botkinburg Community Volunteer Fire Department, Inc.	5704 Highway 65 North	Clinton	Arkansas	72031
Charles Palmer and Lois Palmer	2316 Llama Drive	Searcy	Arkansas	72143
Clarence R. Ledbetter and Elma Ledbetter	n/a			
David H. Sanders and Rosetta P. Sander	7519 Highway 65 North	Clinton	Arkansas	72031
David John Pioro	3702 6 Mile Road	Racine	Wisconsin	53402
Dwight R. Watson and Kathy N. Watson	2275 Victory Lane	Conway	Arkansas	72032
Emma Gene Shipp, nee Beavers % Wina Williams	603 Pinewood Road	Clinton	Arkansas	72031
Eugene C. Churches	1170 Plant Church Road	Clinton	Arkansas	72031
First Christian Church (Disciples of Christ)	P.O. Box 369	Paris	Arkansas	72855
Freda Sue Davis	1413 Fore Winds Hill	Ooltewah	Tennessee	37363
Gerald M. Coogan and Kathleen Coogan	P.O. Box 369	Choctaw	Arkansas	72028
Harry H. Prout and Hannah F. Prout	2781 Highway 110	Clinton	Arkansas	72031
Jerel Brown and Kathleen Brown	P.O. Box 21	Shirley	Arkansas	72153
Joanne Hefner, Lavonne Roddy and Dewayne Huggins	5368 Buttercreek Road	Scotland	Arkansas	72031
John N. Durham	1888 Highway 65 North	Clinton	Arkansas	72031
Johnny Huggins and Rebecca Huggins	762 Highway 16 East	Clinton	Arkansas	72031
Kenneth McGee % Arthur McGee	6089 Stone Creek Drive	Reno	Nevada	89511
Milton and Joyce C. Minchew Revocable Trust	2001 South 65th Street	Fork Smith	Arkansas	72903
Riley Scott Keeling and Wanda B. Keeling	P.O. Box 720	Clinton	Arkansas	72031
Ronald Doyle Hodges	216 Hickory	Dardanelle	Arkansas	72834
Ronald Lee Ross and Betty F. Ross	725 Walnut Drive	Rio Dell	California	95562
Ronald S. Beatrez	12126 Rough & Ready Road	Rough & Ready	California	95975
Samuel R. Mezo and Marcie A. Mezo	P.O. Box 434	Clinton	Arkansas	72031
Shawn Anthony Taylor	3394 Highway 65 North	Clinton	Arkansas	72031
Steven Savoie	261 Lake Road	Brick	New Jersey	8724
Ty Blackard	140 Fayette Road	Clinton	Arkansas	72031
Vilene Borgman	8575 Highway 65 North	Clinton	Arkansas	72031
Wayne Vickery and Mary Ann Vickery	111 Deer Trail	Searcy	Arkansas	72143

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	CA0801	
						(2) HWY. 110-CLINTON (WIDENING) (S)		

**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
CONSTRUCTION PLANS FOR STATE HIGHWAY**

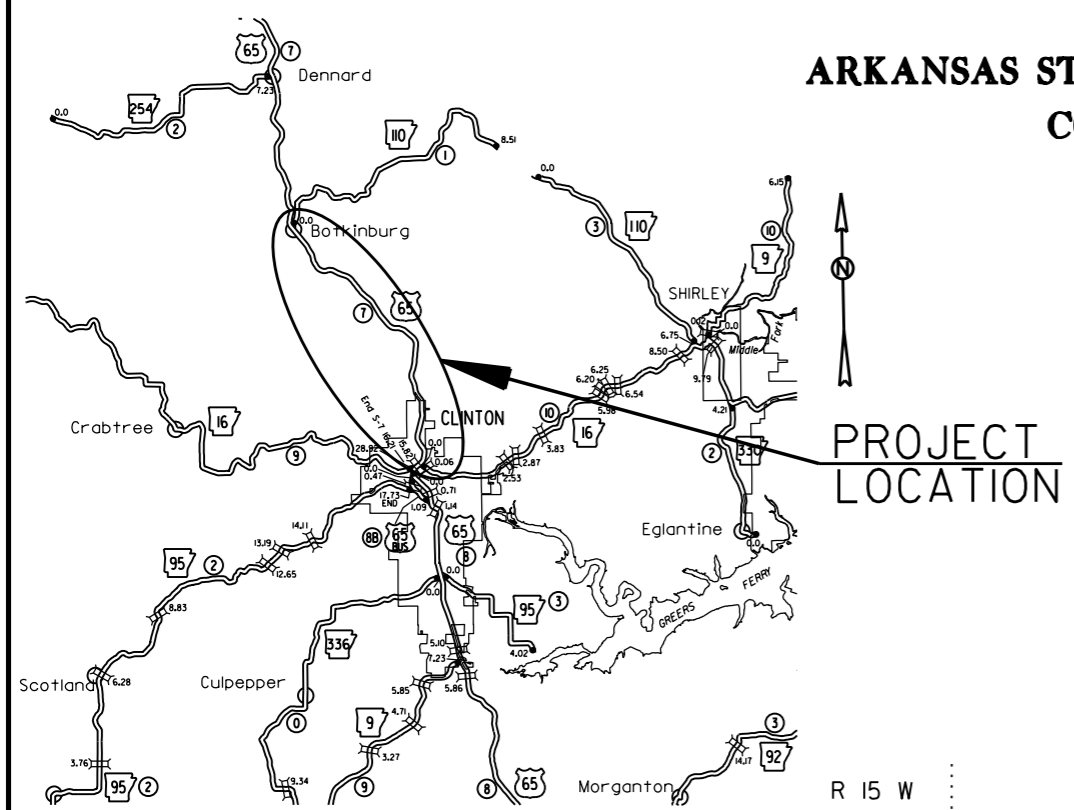
**HWY. 110-CLINTON
(WIDENING) (S)
VAN BUREN COUNTY
ROUTE 65 SECTION 7
F.A.P.
JOB CA0801**



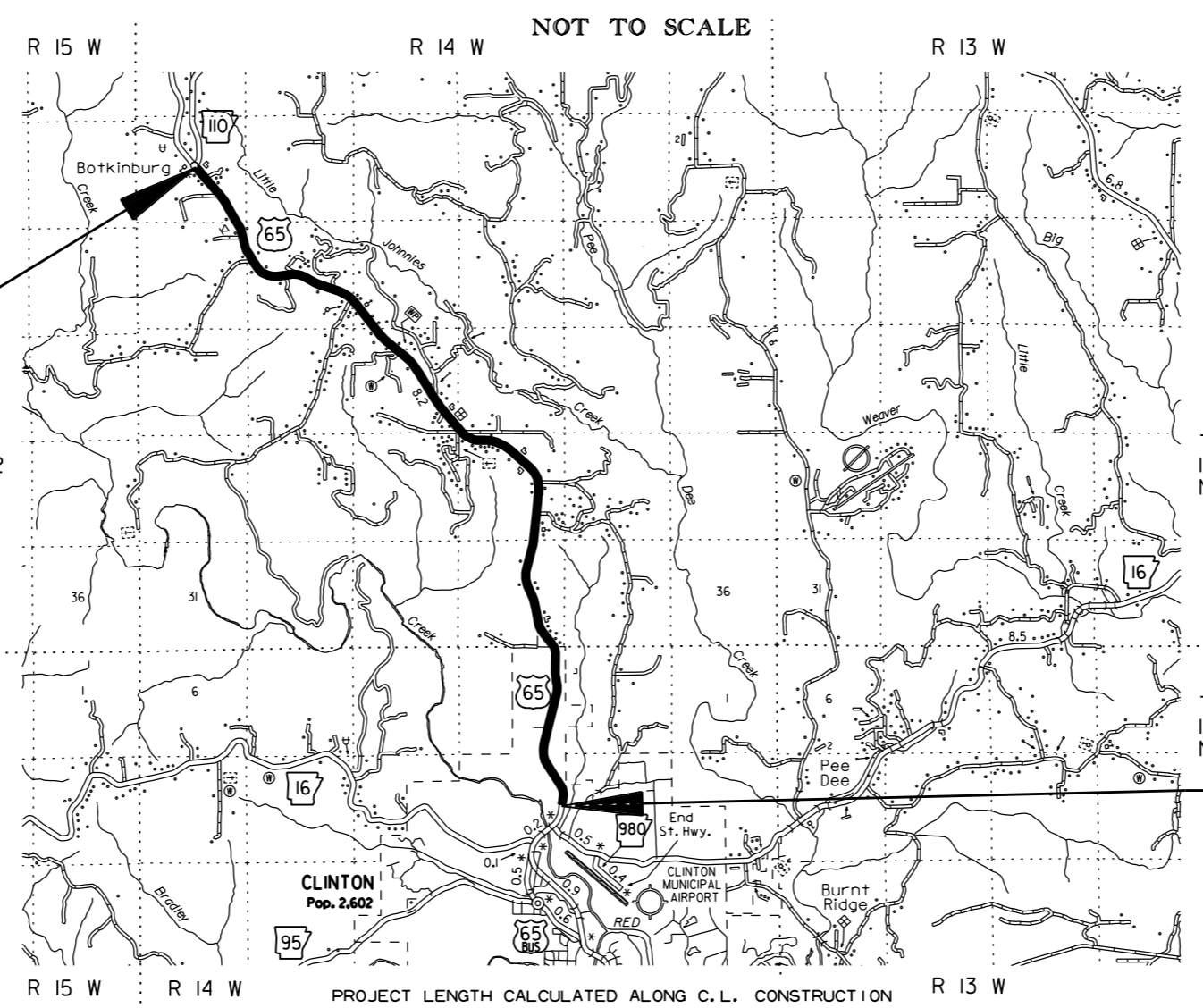
ARKANSAS HWY. DIST. 8

• DESIGN TRAFFIC DATA •

DESIGN YEAR-----	2037
2017 ADT-----	5900
2037 ADT-----	8200
DHV-----	902
DIRECTIONAL DISTRIBUTION-----	0.60
TRUCKS-----	18%
DESIGN SPEED-----	60 MPH



VICINITY MAP



**STA. 912+34.04
END JOB CA0801**

**STA. 497+04.36
BEGIN JOB CA0801
END JOB 080390
LOG MILE 15.63**

**PRELIMINARY
SUBJECT TO REVISION**

P.E. JOB CA0801

PROJECT LENGTH CALCULATED ALONG C.L. CONSTRUCTION
GROSS LENGTH OF PROJECT 41409.37 FEET OR 7.843 MILES
NET LENGTH OF ROADWAY 41409.37 FEET OR 7.843 MILES
NET LENGTH OF BRIDGES XXX.XX FEET OR X.XXX MILES
NET LENGTH OF PROJECT 41409.37 FEET OR 7.843 MILES

PROJECT COORDINATES:

	BEGIN	MID-POINT	END
LAT.	NXX° XX' XX"	N35° 40' 45"	NXX° XX' XX"
LON.	WXX° XX' XX"	W92° 29' 41"	WXX° XX' XX"

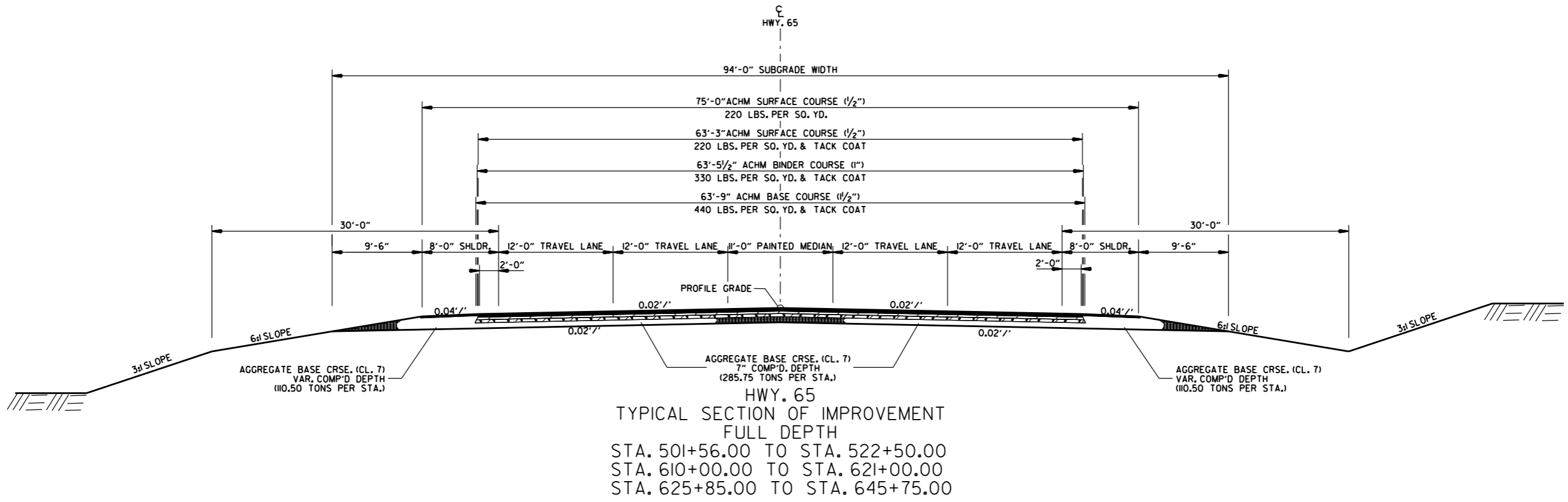
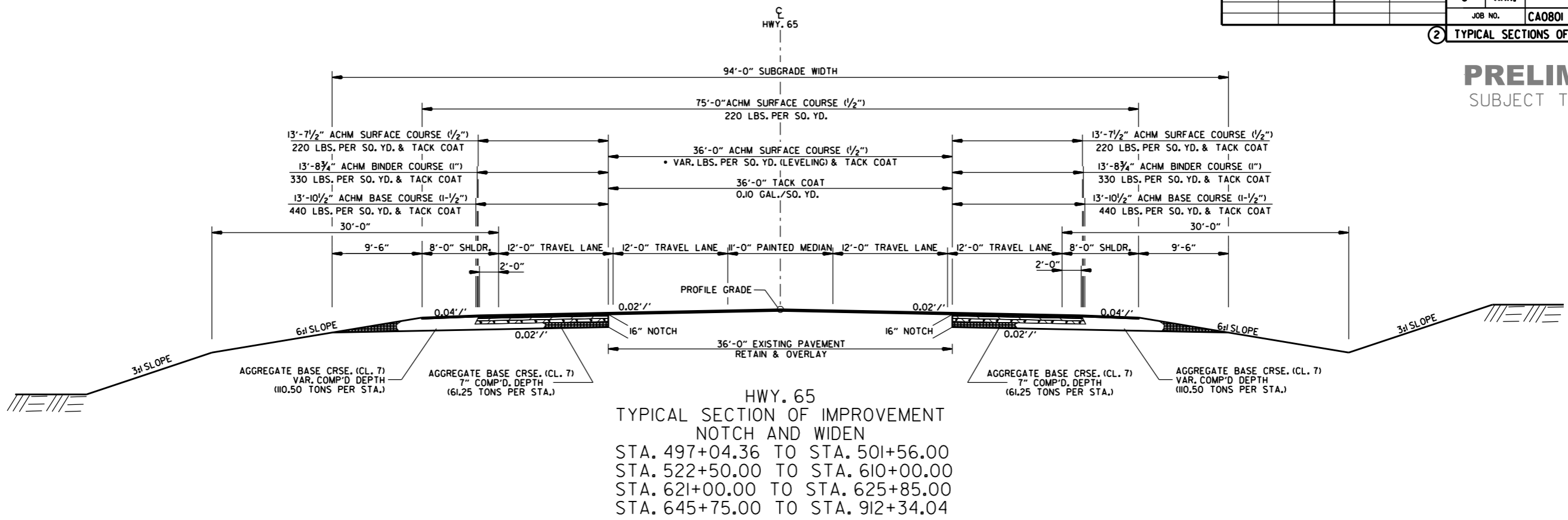
3/16/2016

RCA0801.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	CA0801	

2 TYPICAL SECTIONS OF IMPROVEMENT

PRELIMINARY
SUBJECT TO REVISION



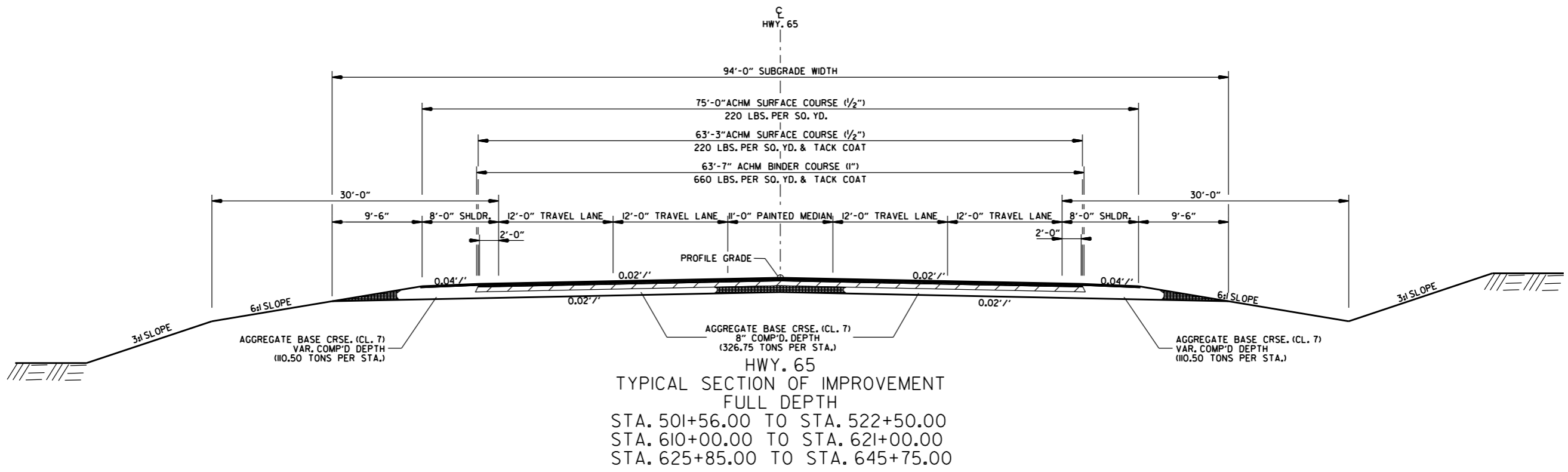
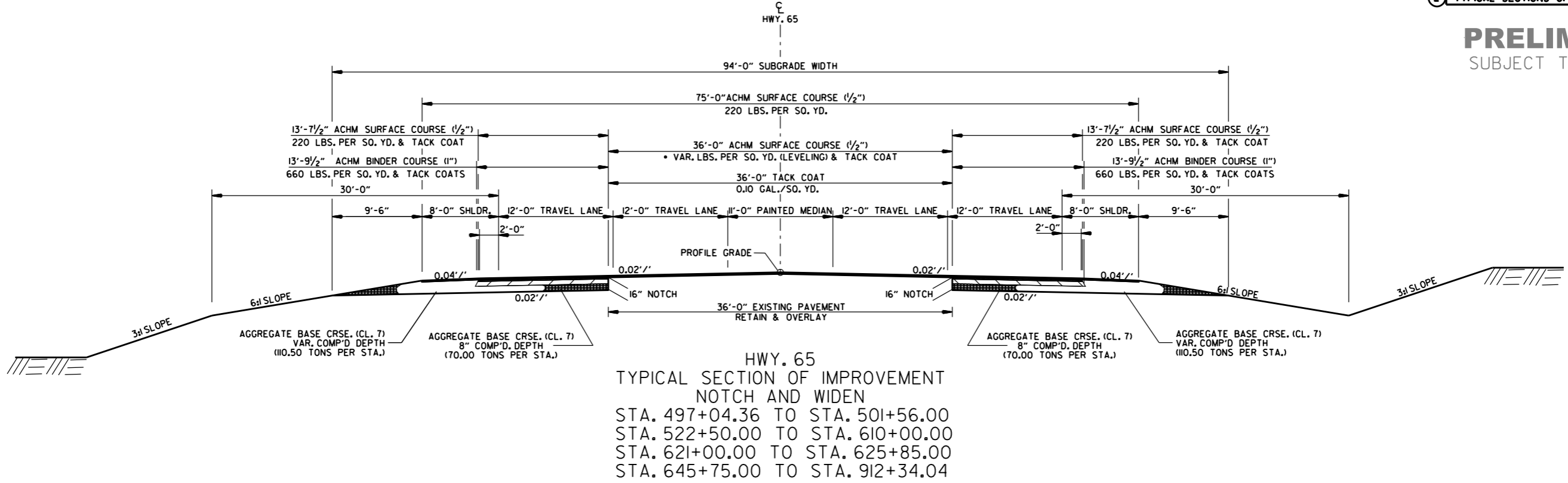
ALTERNATE I
TYPICAL SECTIONS OF IMPROVEMENT

3/17/2016
RCA0801.DGN

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						JOB NO.	CA0801	

2 TYPICAL SECTIONS OF IMPROVEMENT

PRELIMINARY
SUBJECT TO REVISION



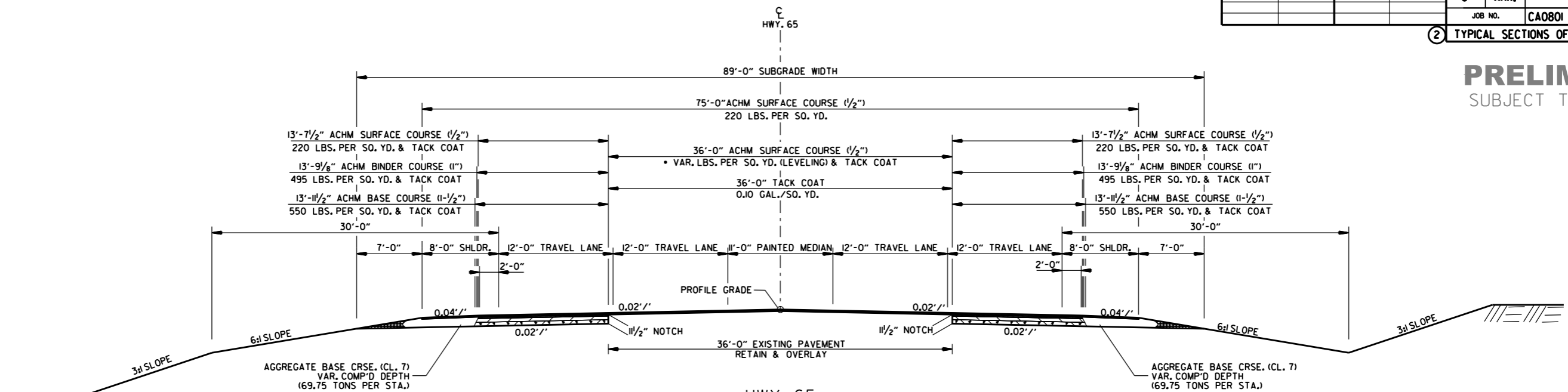
ALTERNATE 2
TYPICAL SECTIONS OF IMPROVEMENT

3/17/2016
RCA0801.DGN

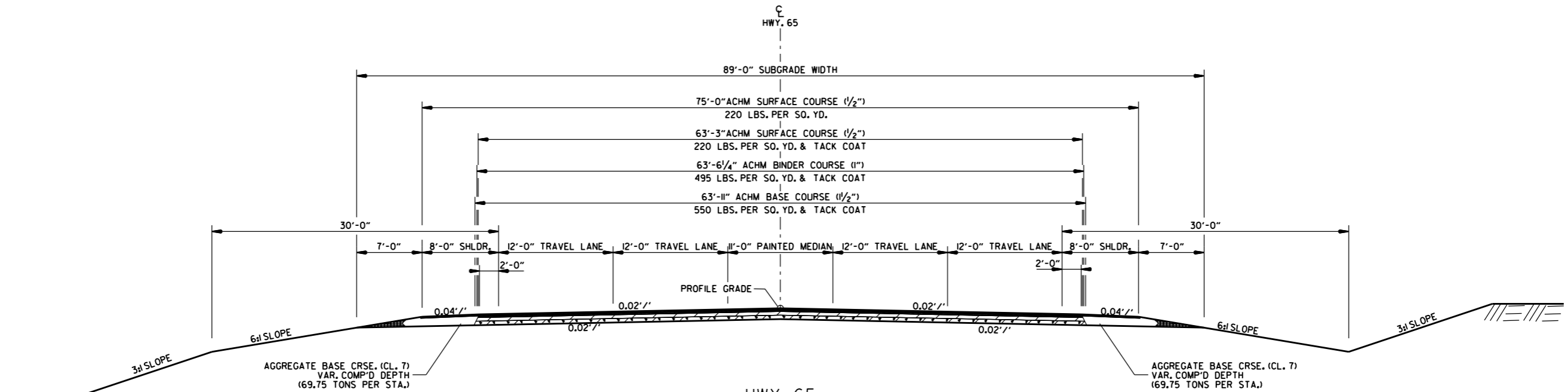
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				6	ARK.			
						JOB NO.	CA0801	

2 TYPICAL SECTIONS OF IMPROVEMENT

PRELIMINARY
SUBJECT TO REVISION



HWY. 65
TYPICAL SECTION OF IMPROVEMENT
NOTCH AND WIDEN
STA. 497+04.36 TO STA. 501+56.00
STA. 522+50.00 TO STA. 610+00.00
STA. 621+00.00 TO STA. 625+85.00
STA. 645+75.00 TO STA. 912+34.04



HWY. 65
TYPICAL SECTION OF IMPROVEMENT
FULL DEPTH
STA. 501+56.00 TO STA. 522+50.00
STA. 610+00.00 TO STA. 621+00.00
STA. 625+85.00 TO STA. 645+75.00

ALTERNATE 3
TYPICAL SECTIONS OF IMPROVEMENT

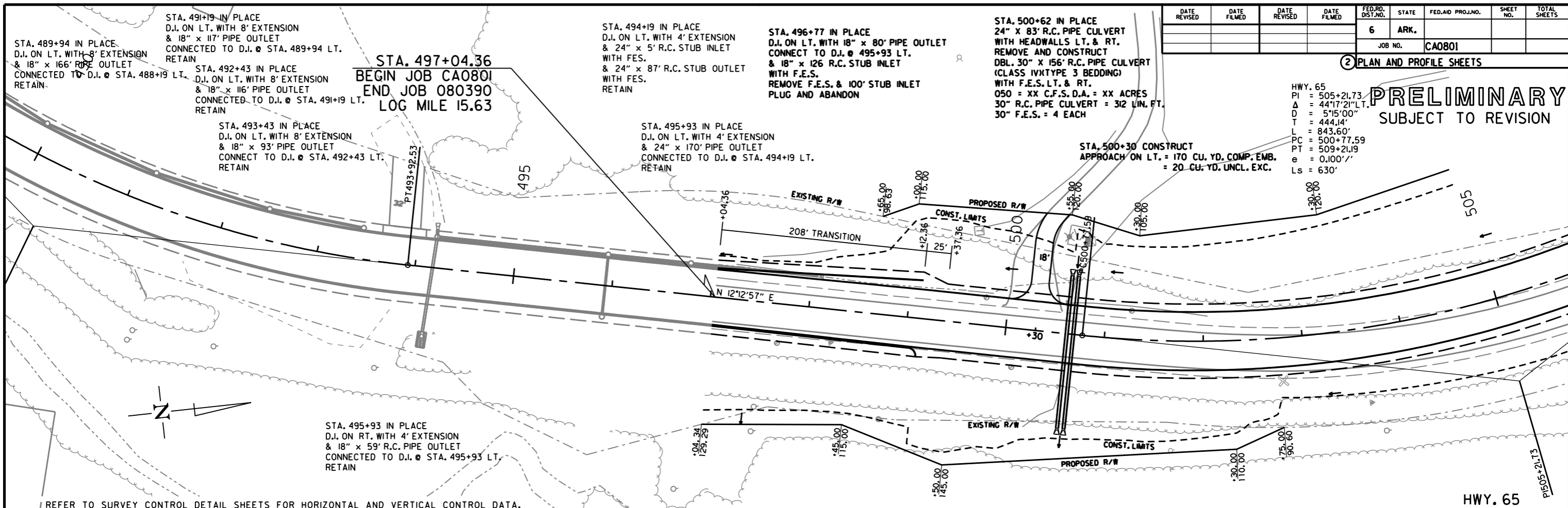
3/17/2016
RCA0801.DGN

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				6	ARK.			
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2 PLAN AND PROFILE SHEETS

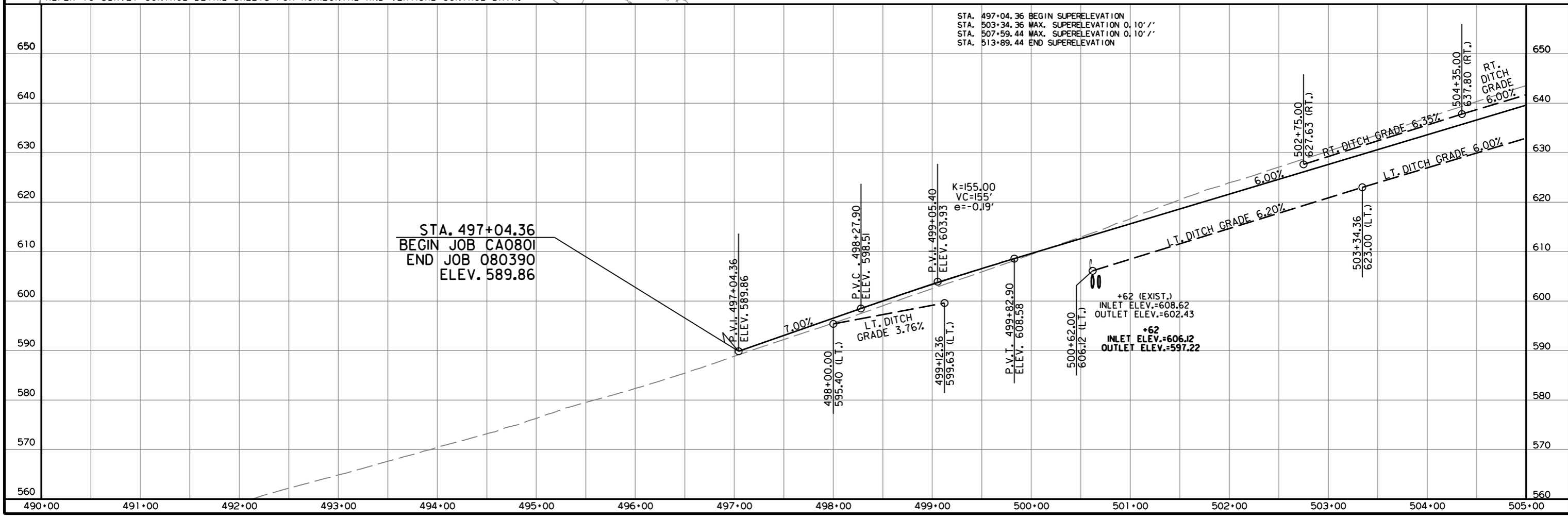
PRELIMINARY
SUBJECT TO REVISION

HWY. 65
 Δ = 505+21.73
 Δ = 44°17'21" LT.
 D = 5°15'00"
 T = 444.14'
 L = 843.60'
 PC = 500+77.59
 PT = 509+21.19
 e = 0.100'/'
 Ls = 630'



REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

HWY. 65



RCA0801.DGN 3/17/2016

HWY. 65
 PI = 505+21.73
 Δ = 44°17'21" L.T.
 D = 5'15'00"
 T = 444.14'
 L = 843.60'
 PC = 500+77.59
 PT = 509+21.19
 e = 0.100'/'
 Ls = 630'

STA. 508+07 IN PLACE
 24" X 9" R.C. PIPE CULVERT
 WITH HEADWALLS LT. & RT.
 REMOVE

STA. 511+04 IN PLACE
 24" X 40" C.M. PIPE CULVERT
 REMOVE AND INSTALL
 24" X 228" PIPE CULVERT
 LT. SIDE DRAIN
 CONSTRUCT APPROACH = 300 CU. YD. UNCL. EXC.

STA. 512+46 INSTALL
 24" X 54" PIPE CULVERT
 LT. SIDE DRAIN
 CONSTRUCT APPROACH = 100 CU. YD. COMP. EMB.
 = 25 CU. YD. UNCL. EXC.

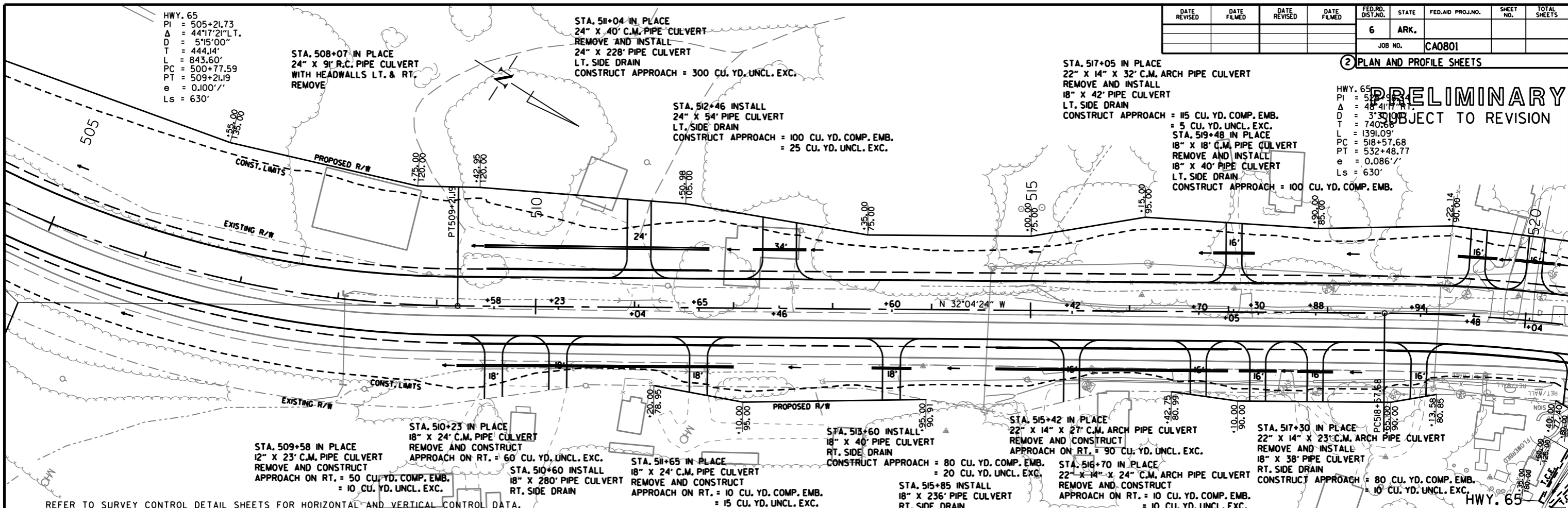
STA. 517+05 IN PLACE
 22" X 14" X 32" C.M. ARCH PIPE CULVERT
 REMOVE AND INSTALL
 18" X 42" PIPE CULVERT
 LT. SIDE DRAIN
 CONSTRUCT APPROACH = 115 CU. YD. COMP. EMB.
 = 5 CU. YD. UNCL. EXC.
 STA. 519+48 IN PLACE
 18" X 18" C.M. PIPE CULVERT
 REMOVE AND INSTALL
 18" X 40" PIPE CULVERT
 LT. SIDE DRAIN
 CONSTRUCT APPROACH = 100 CU. YD. COMP. EMB.

PRELIMINARY
 SUBJECT TO REVISION

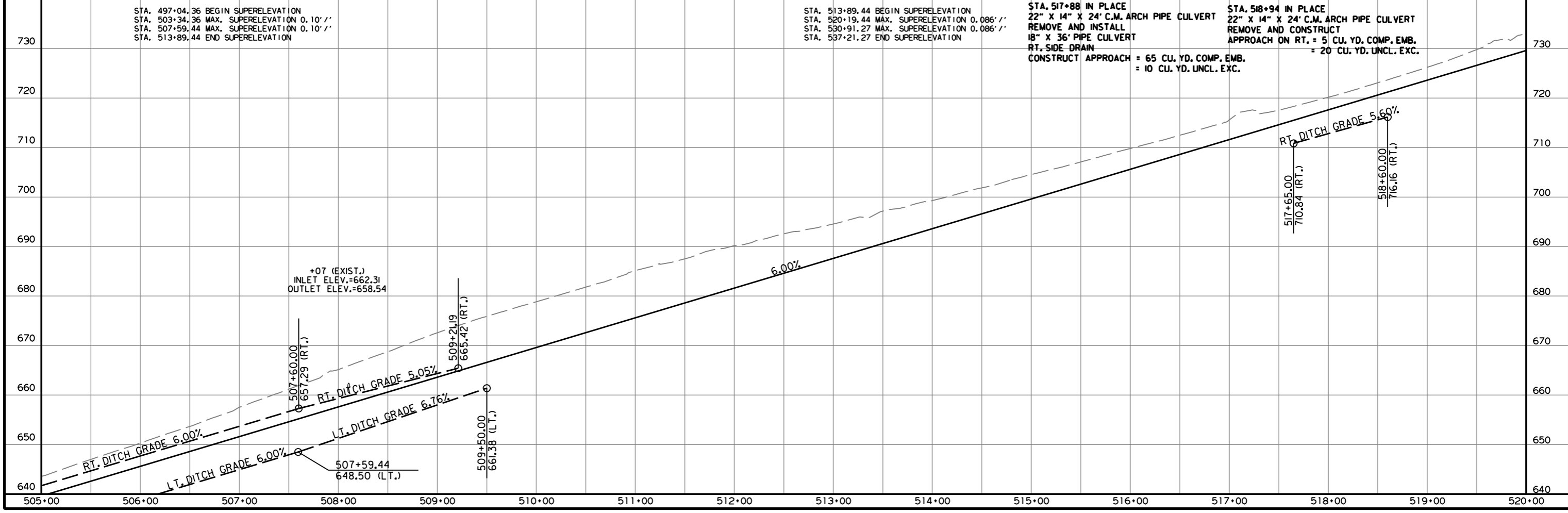
HWY. 65
 PI = 518+57.68
 Δ = 48°41'17" R.T.
 D = 3'30"
 T = 740.66'
 L = 1391.09'
 PC = 518+57.68
 PT = 532+48.77
 e = 0.086'/'
 Ls = 630'

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				6	ARK.			
						JOB NO.	CA0801	

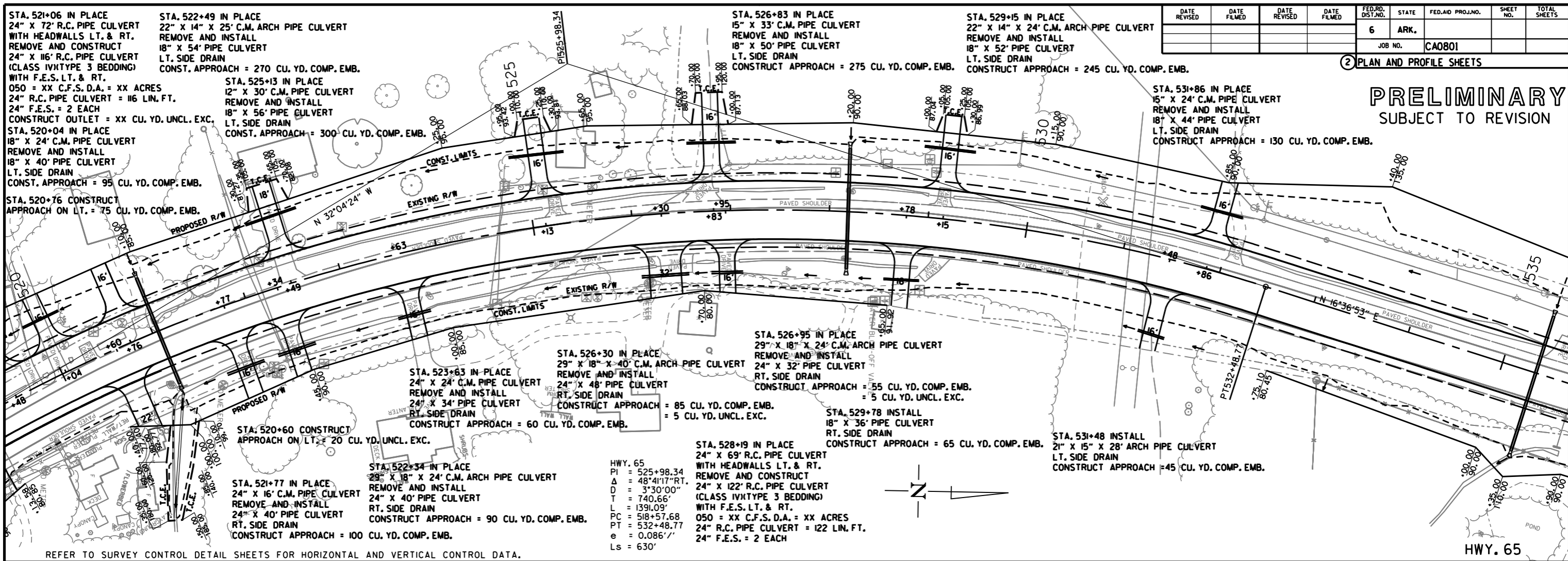
2 PLAN AND PROFILE SHEETS



REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.



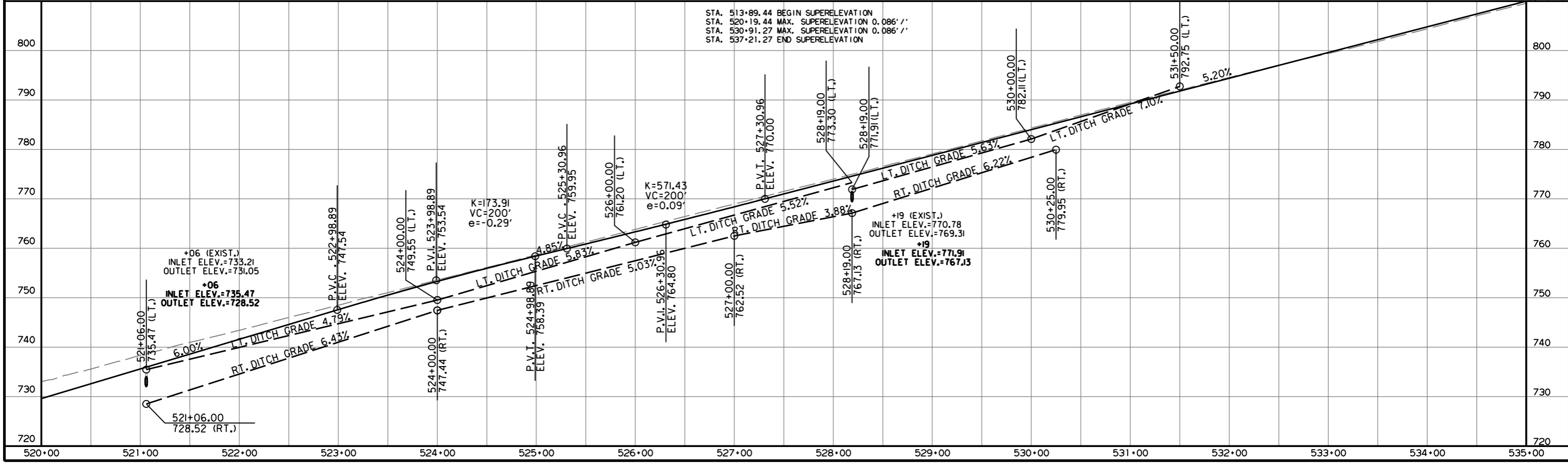
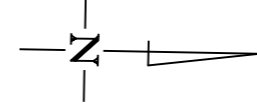
RCA0801.DGN 3/17/2016



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				6	ARK.			
						JOB NO. CA0801		

2 PLAN AND PROFILE SHEETS

PRELIMINARY
SUBJECT TO REVISION

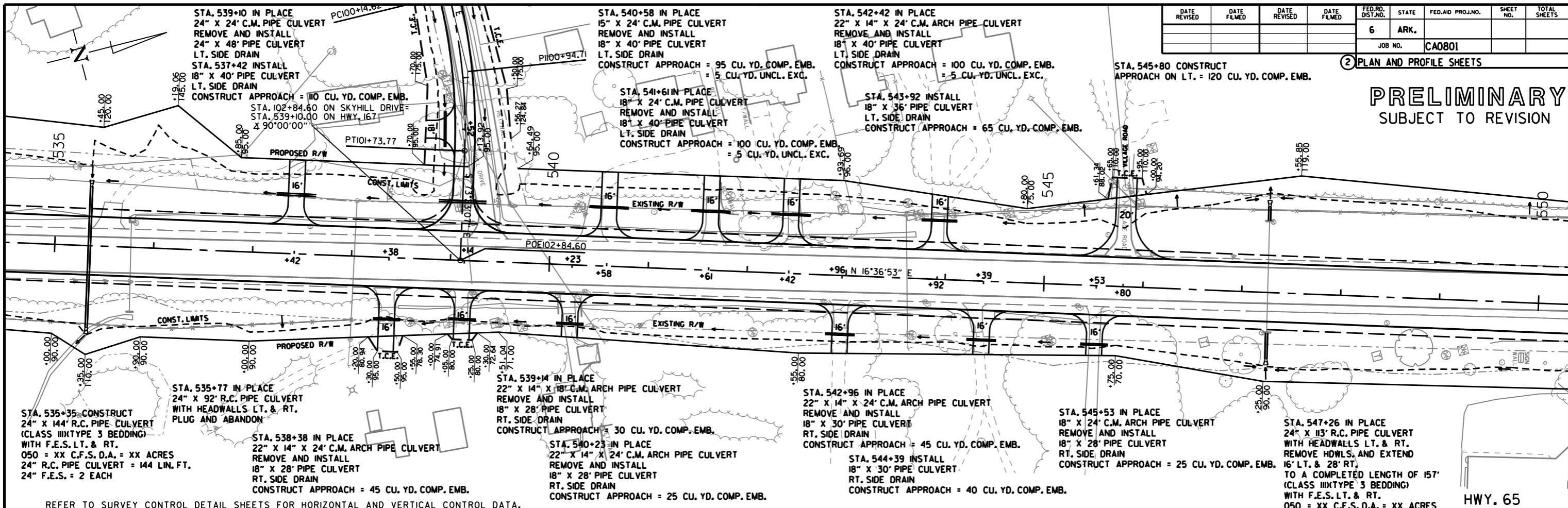


RCA0801.DGN 3/17/2016

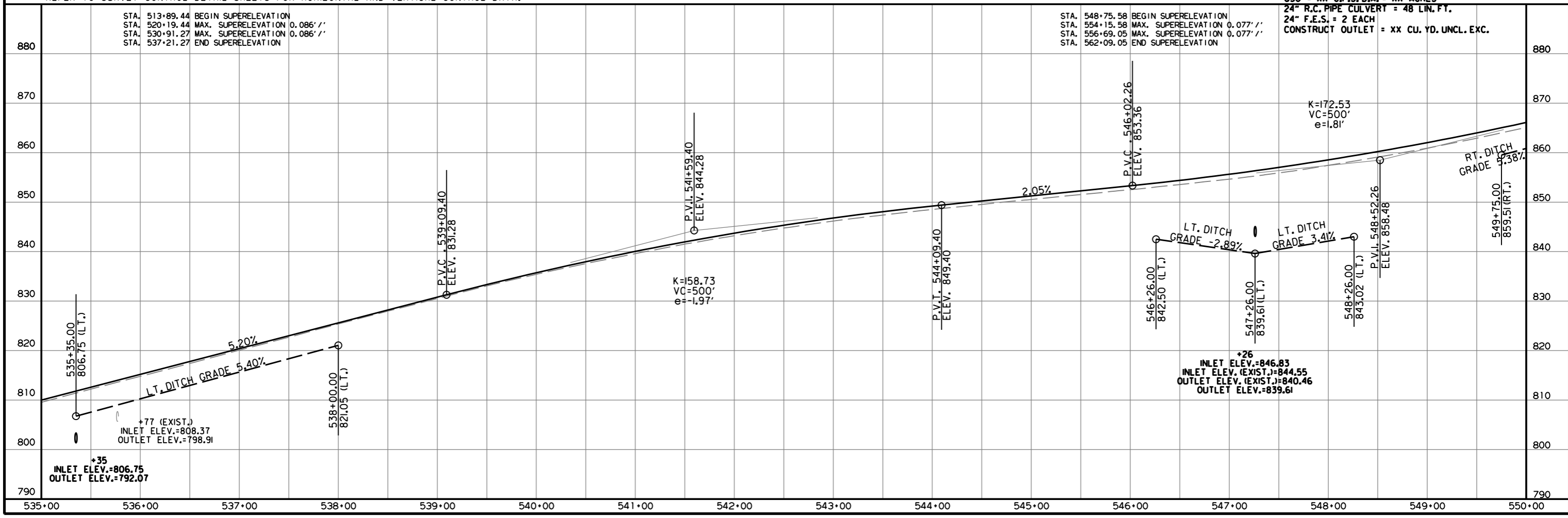
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2 PLAN AND PROFILE SHEETS

PRELIMINARY
SUBJECT TO REVISION



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						JOB NO.	CA0801	

2 PLAN AND PROFILE SHEETS

**PRELIMINARY
SUBJECT TO REVISION**

HWY. 65
 PI = 561.56
 $\Delta = 4^{\circ}10'56''$
 D = 278.94'
 L = 557.62'
 PC = 564+70.80
 PT = 570+28.42
 e = 0.023'/'
 Ls = 540'

STA. 554+18 CONSTRUCT
 APPROACH ON LT. = 15 CU. YD. COMP. EMB.

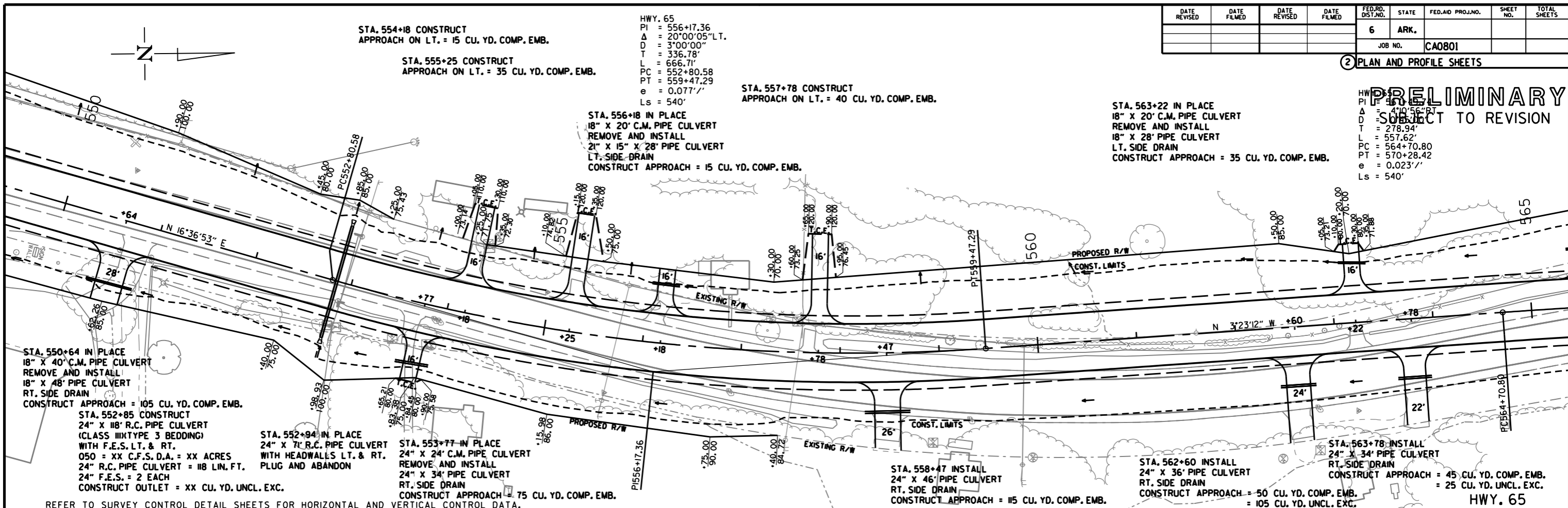
STA. 555+25 CONSTRUCT
 APPROACH ON LT. = 35 CU. YD. COMP. EMB.

HWY. 65
 PI = 556+17.36
 $\Delta = 20^{\circ}00'05''$ LT.
 D = 3'00"00"
 T = 336.78'
 L = 666.71'
 PC = 552+80.58
 PT = 559+47.29
 e = 0.077'/'
 Ls = 540'

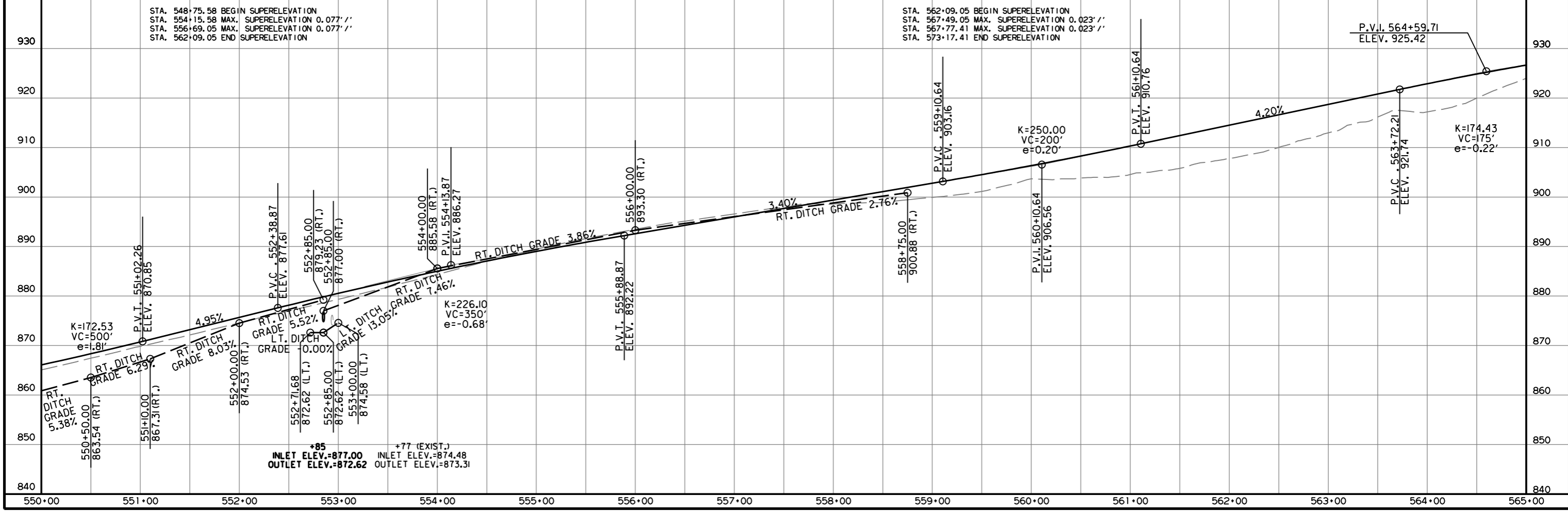
STA. 557+78 CONSTRUCT
 APPROACH ON LT. = 40 CU. YD. COMP. EMB.

STA. 556+18 IN PLACE
 18" X 20' C.M. PIPE CULVERT
 REMOVE AND INSTALL
 21" X 15" X 28' PIPE CULVERT
 LT. SIDE DRAIN
 CONSTRUCT APPROACH = 15 CU. YD. COMP. EMB.

STA. 563+22 IN PLACE
 18" X 20' C.M. PIPE CULVERT
 REMOVE AND INSTALL
 18" X 28' PIPE CULVERT
 LT. SIDE DRAIN
 CONSTRUCT APPROACH = 35 CU. YD. COMP. EMB.



REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.



RCA0801.DGN 3/17/2016

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						JOB NO.	CA0801	

② PLAN AND PROFILE SHEETS

STA. 565+58 IN PLACE
18" X 24" C.M. PIPE CULVERT
REMOVE AND INSTALL
18" X 40" PIPE CULVERT
LT. SIDE DRAIN
CONSTRUCT APPROACH = 105 CU. YD. COMP. EMB.
= 10 CU. YD. UNCL. EXC.

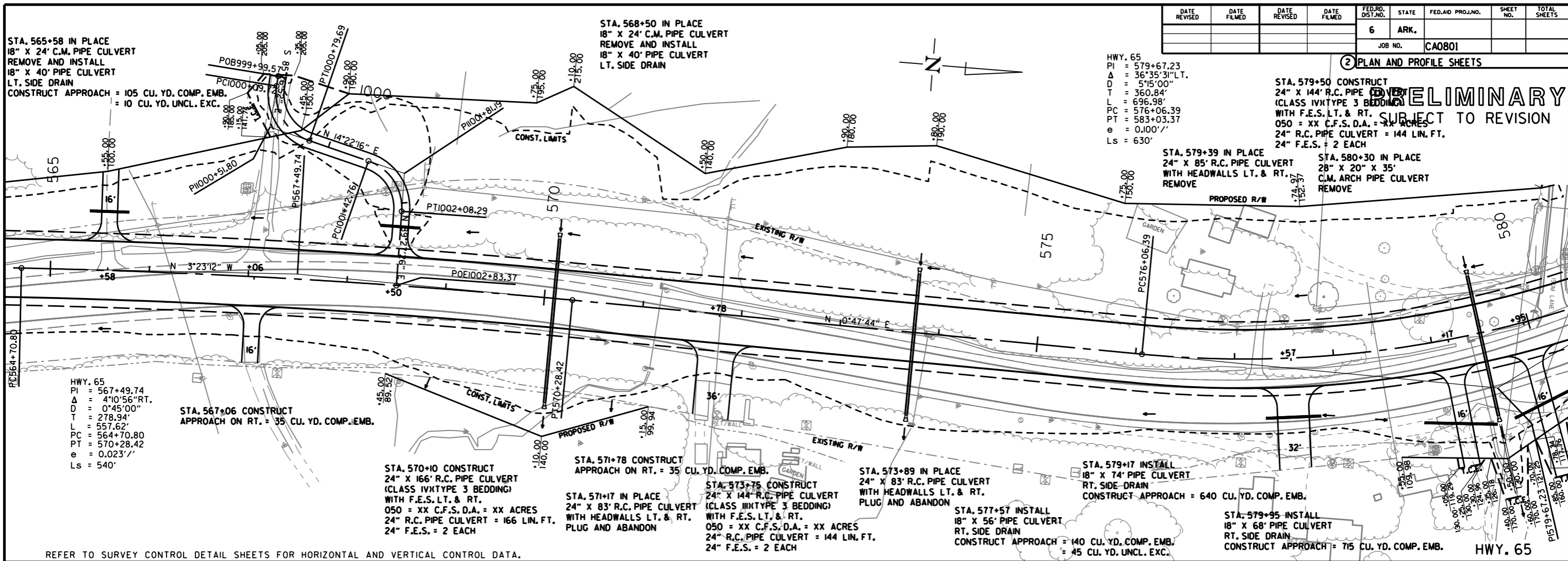
STA. 568+50 IN PLACE
18" X 24" C.M. PIPE CULVERT
REMOVE AND INSTALL
18" X 40" PIPE CULVERT
LT. SIDE DRAIN

HWY. 65
PI = 579+67.23
Δ = 36°35'31" LT.
D = 5'15"00"
L = 360.84'
PC = 576+06.39
PT = 583+03.37
e = 0.100'/'
Ls = 630'

STA. 579+50 CONSTRUCT
24" X 144" R.C. PIPE CULVERT
(CLASS IV) TYPE 3 BEDDING
WITH F.E.S. LT. & RT.
050 = XX C.F.S. D.A. = XX ACRES
24" R.C. PIPE CULVERT = 144 LIN. FT.
24" F.E.S. = 2 EACH

STA. 579+39 IN PLACE
24" X 85" R.C. PIPE CULVERT
WITH HEADWALLS LT. & RT.
REMOVE

STA. 580+30 IN PLACE
28" X 20" X 35'
C.M. ARCH PIPE CULVERT
REMOVE



STA. 567+06 CONSTRUCT
APPROACH ON RT. = 35 CU. YD. COMP. EMB.

STA. 570+10 CONSTRUCT
24" X 166" R.C. PIPE CULVERT
(CLASS IV) TYPE 3 BEDDING
WITH F.E.S. LT. & RT.
050 = XX C.F.S. D.A. = XX ACRES
24" R.C. PIPE CULVERT = 166 LIN. FT.
24" F.E.S. = 2 EACH

STA. 571+78 CONSTRUCT
APPROACH ON RT. = 35 CU. YD. COMP. EMB.

STA. 571+17 IN PLACE
24" X 83" R.C. PIPE CULVERT
WITH HEADWALLS LT. & RT.
PLUG AND ABANDON

STA. 573+75 CONSTRUCT
24" X 144" R.C. PIPE CULVERT
(CLASS III) TYPE 3 BEDDING
WITH F.E.S. LT. & RT.
050 = XX C.F.S. D.A. = XX ACRES
24" R.C. PIPE CULVERT = 144 LIN. FT.
24" F.E.S. = 2 EACH

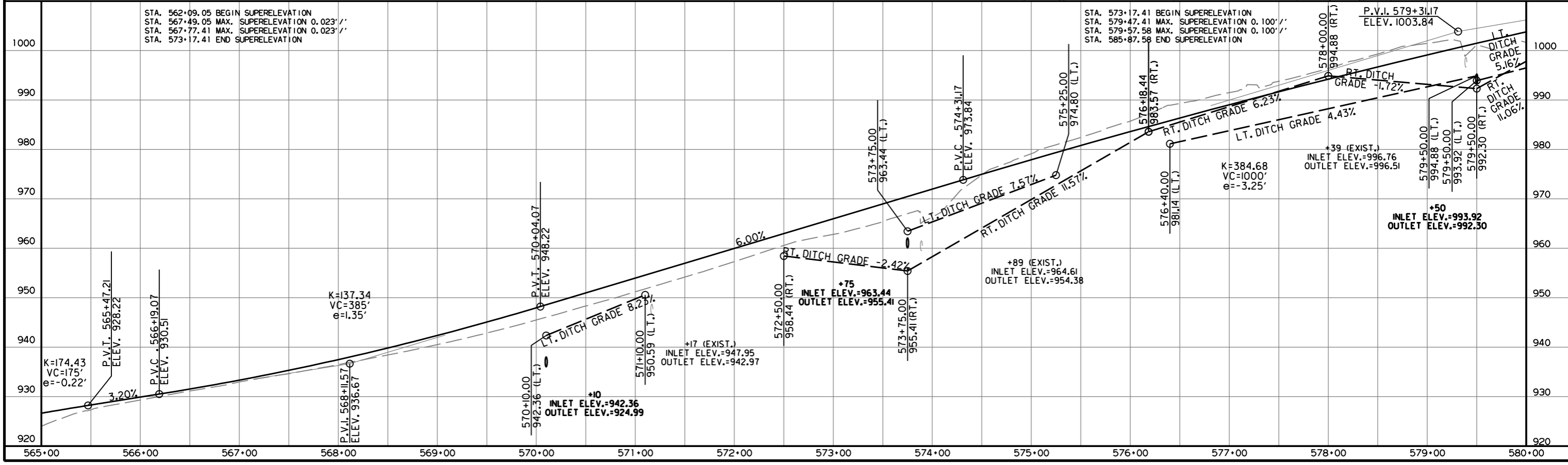
STA. 573+89 IN PLACE
24" X 83" R.C. PIPE CULVERT
WITH HEADWALLS LT. & RT.
PLUG AND ABANDON

STA. 579+17 INSTALL
18" X 74" PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 640 CU. YD. COMP. EMB.

STA. 577+57 INSTALL
18" X 56" PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 140 CU. YD. COMP. EMB.
= 45 CU. YD. UNCL. EXC.

STA. 579+95 INSTALL
18" X 68" PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 715 CU. YD. COMP. EMB.

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.



STA. 562+09.05 BEGIN SUPERELEVATION
STA. 567+49.05 MAX. SUPERELEVATION 0.023'/'
STA. 567+77.41 MAX. SUPERELEVATION 0.023'/'
STA. 573+17.41 END SUPERELEVATION

STA. 573+17.41 BEGIN SUPERELEVATION
STA. 579+47.41 MAX. SUPERELEVATION 0.100'/'
STA. 579+57.58 MAX. SUPERELEVATION 0.100'/'
STA. 585+87.58 END SUPERELEVATION

P.V.I. 579+31.17
ELEV. 1003.84

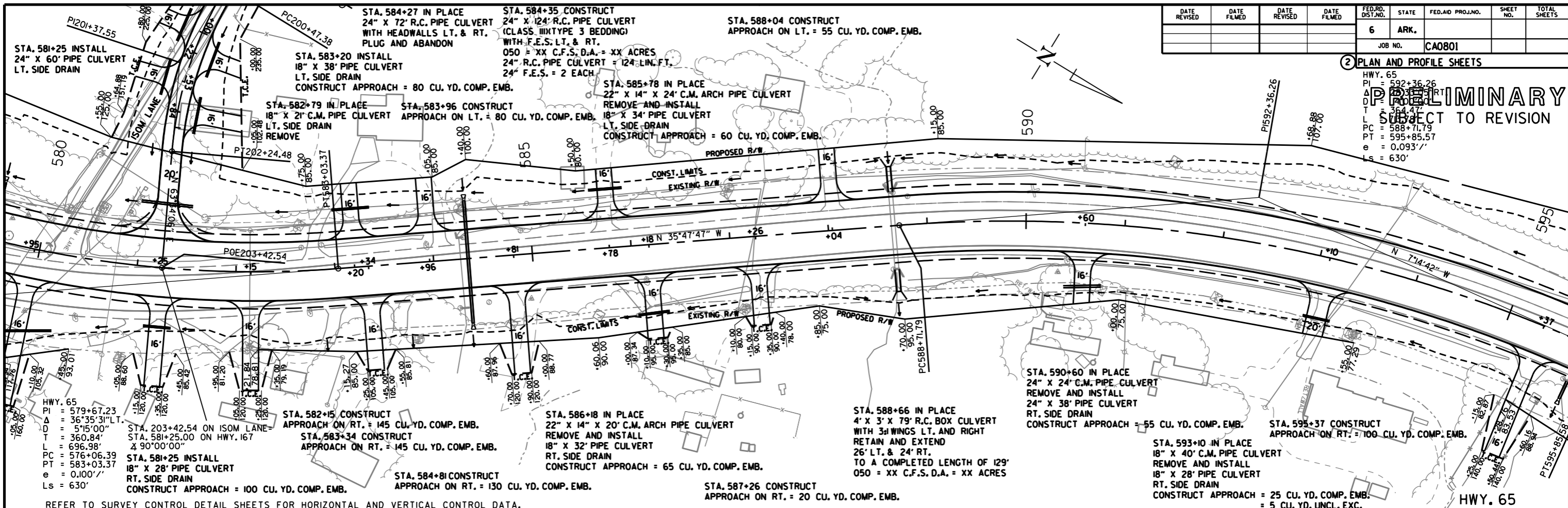
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JOB NO. CA0801								

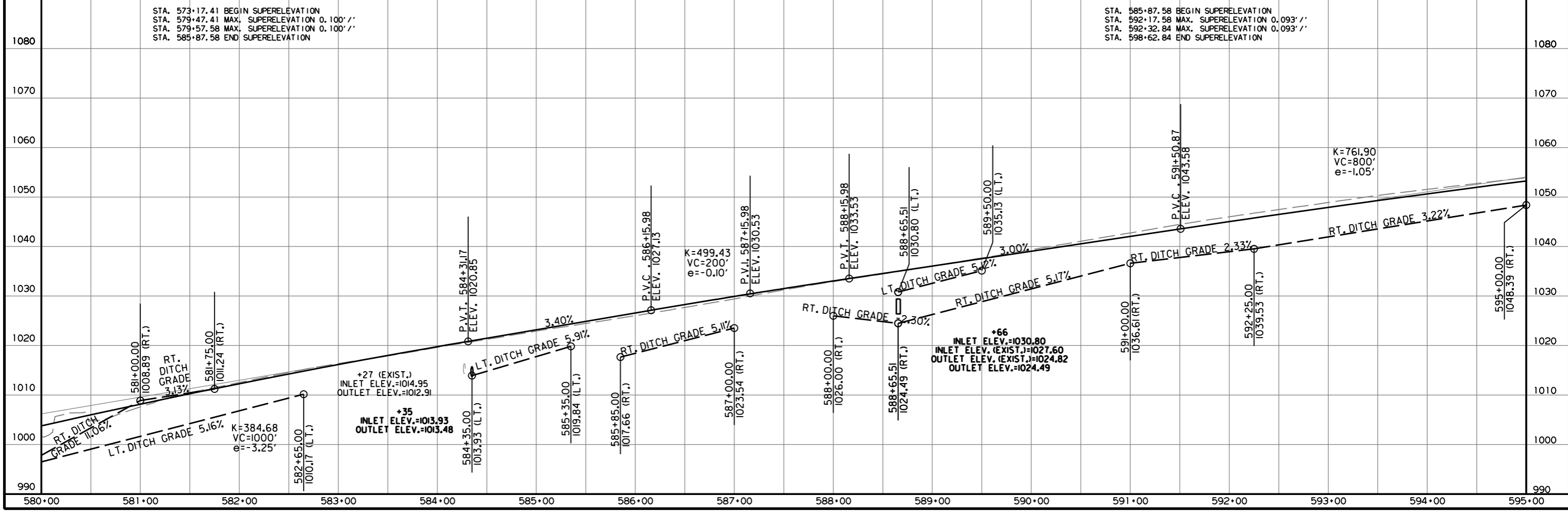
② PLAN AND PROFILE SHEETS

PRELIMINARY
SUBJECT TO REVISION

HWY. 65
 PI = 592+36.26
 Δ = 3.14°
 D = 364.47'
 L = 364.47'
 PC = 588+71.79
 PT = 595+85.57
 e = 0.093'/'
 Ls = 630'



REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.



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HWY. 65
 PI = 592+36.26
 Δ = 28°33'05" RT.
 D = 4°00'00"
 T = 364.47'
 L = 713.78'
 PC = 588+71.79
 PT = 595+85.57
 e = 0.093'/'
 Ls = 630'

STA. 595+82 IN PLACE
 24" X 72" R.C. PIPE CULVERT
 WITH HEADWALLS LT. & RT.
 REMOVE HDWLS. AND EXTEND
 26' LT. & 20' RT.
 TO A COMPLETED LENGTH OF 118'
 (CLASS III TYPE 3 BEDDING)
 WITH F.E.S. LT. & RT.
 050 = XX C.F.S. D.A. = XX ACRES
 24" R.C. PIPE CULVERT = 50 LIN. FT.
 24" F.E.S. = 2 EACH

STA. 597+30 IN PLACE
 24" X 96" R.C. PIPE CULVERT
 WITH HEADWALLS LT. & RT.
 REMOVE HDWLS. AND EXTEND
 30' LT. & 14' RT.
 TO A COMPLETED LENGTH OF 140'
 (CLASS III TYPE 3 BEDDING)
 WITH F.E.S. LT. & RT.
 050 = XX C.F.S. D.A. = XX ACRES
 24" R.C. PIPE CULVERT = 48 LIN. FT.
 24" F.E.S. = 2 EACH

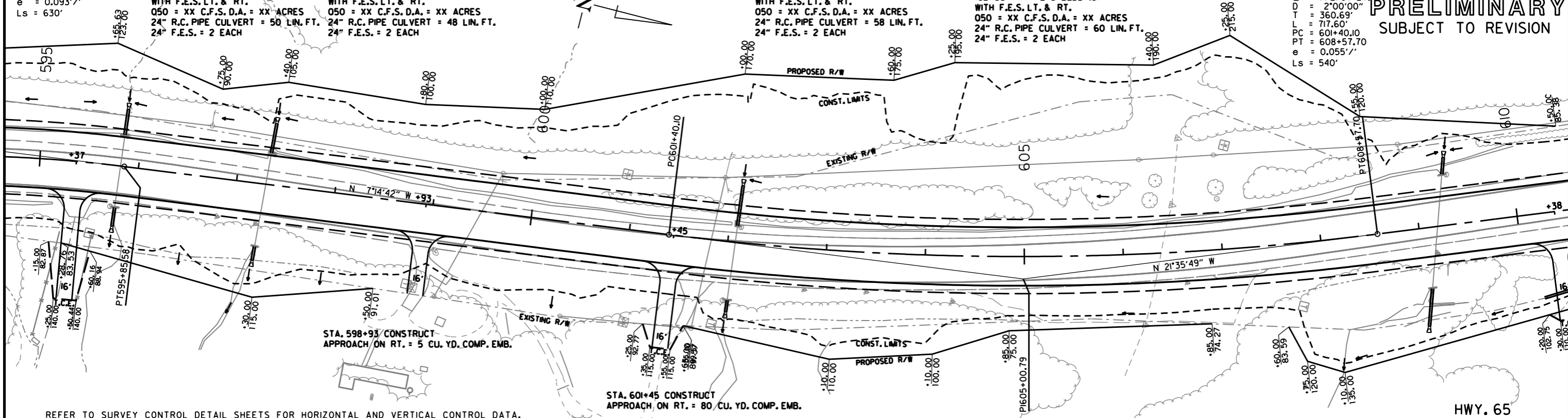
STA. 602+08 IN PLACE
 24" X 76" R.C. PIPE CULVERT
 WITH HEADWALLS LT. & RT.
 REMOVE HDWLS. AND EXTEND
 42' LT. & 12' RT.
 TO A COMPLETED LENGTH OF 130'
 (CLASS III TYPE 3 BEDDING)
 WITH F.E.S. LT. & RT.
 050 = XX C.F.S. D.A. = XX ACRES
 24" R.C. PIPE CULVERT = 58 LIN. FT.
 24" F.E.S. = 2 EACH

STA. 609+19 IN PLACE
 24" X 116" R.C. PIPE CULVERT
 ON 10° LT. FWD. SKEW
 WITH HEADWALLS LT. & RT.
 REMOVE HDWLS. AND EXTEND
 18' LT. & 38' RT.
 TO A COMPLETED LENGTH OF 172'
 (CLASS III TYPE 3 BEDDING)
 WITH F.E.S. LT. & RT.
 050 = XX C.F.S. D.A. = XX ACRES
 24" R.C. PIPE CULVERT = 60 LIN. FT.
 24" F.E.S. = 2 EACH

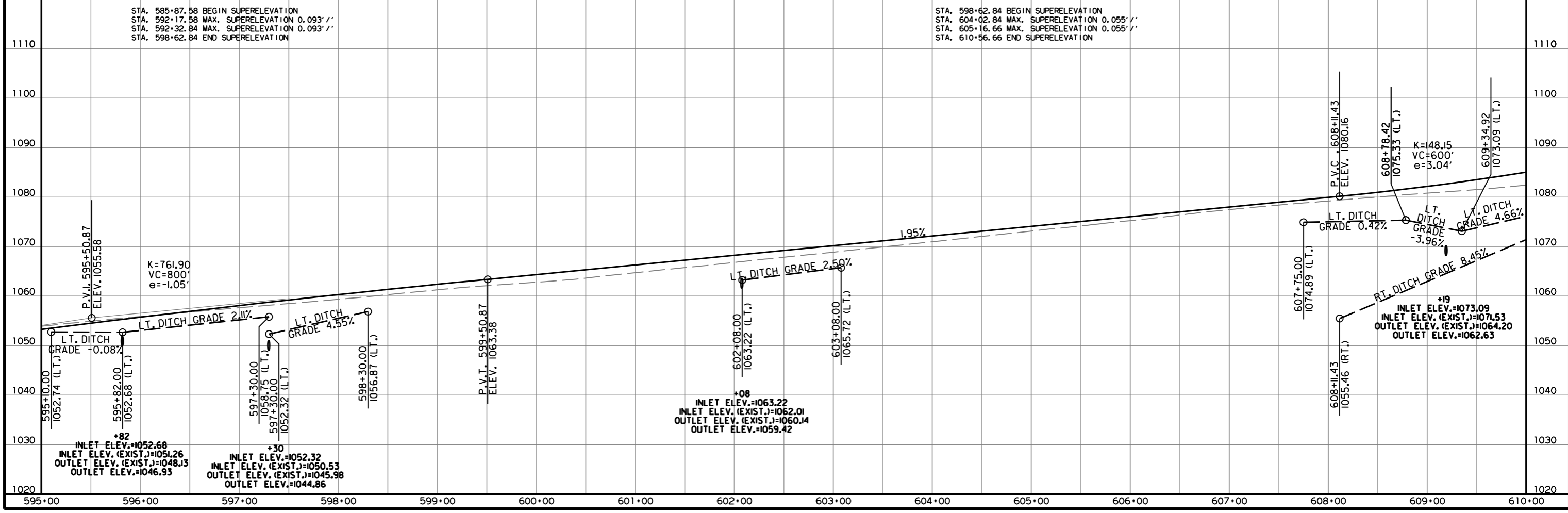
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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2 PLAN AND PROFILE SHEETS
PRELIMINARY
 SUBJECT TO REVISION

HWY. 65
 PI = 605+00.79
 Δ = 14°21'07" LT.
 D = 2°00'00"
 T = 360.69'
 L = 717.60'
 PC = 601+40.10
 PT = 608+57.70
 e = 0.055'/'
 Ls = 540'



REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.



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2 PLAN AND PROFILE SHEETS

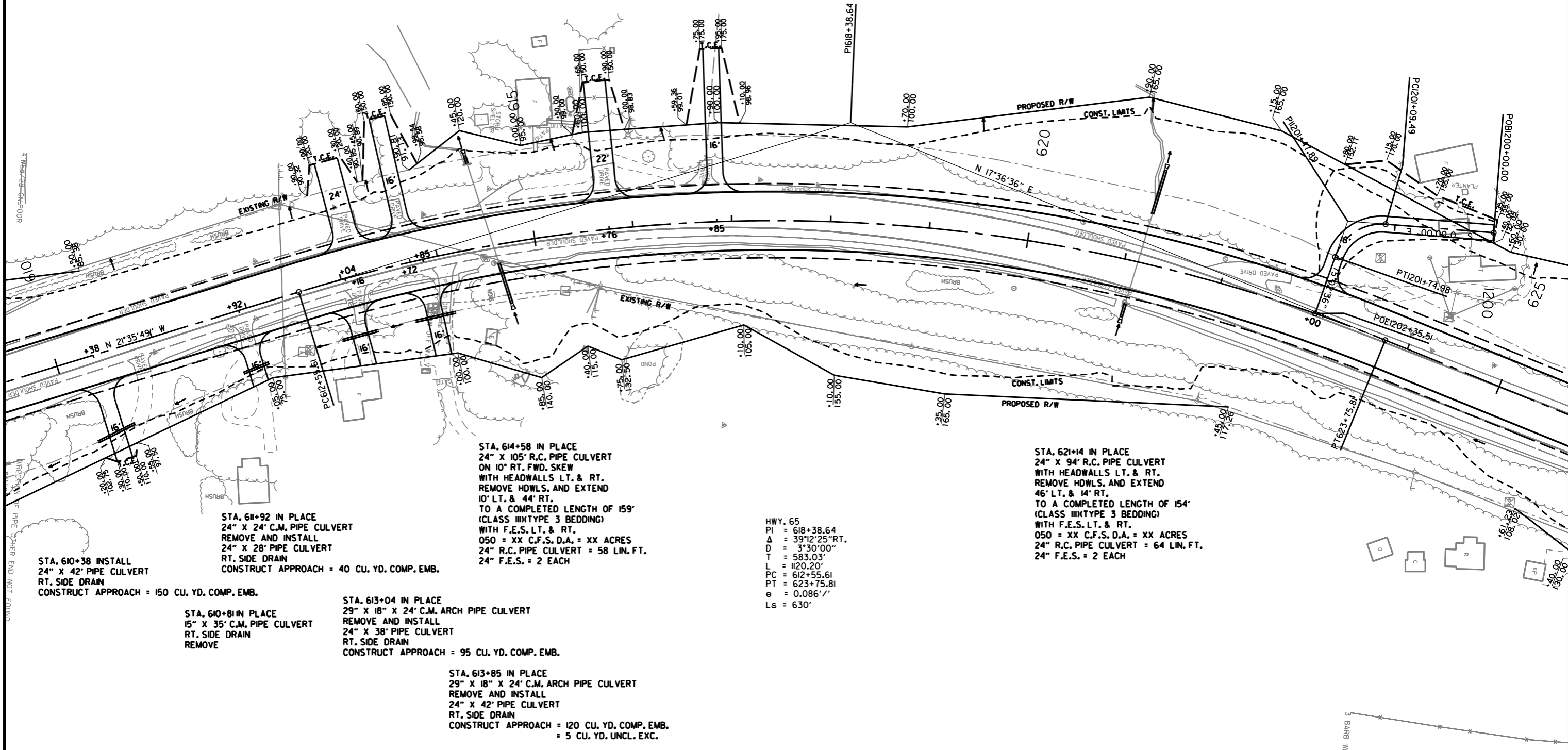
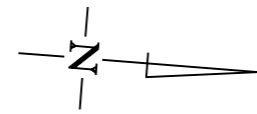
PRELIMINARY
SUBJECT TO REVISION

STA. 613+16 CONSTRUCT
APPROACH ON LT. = 200 CU. YD. COMP. EMB.

STA. 613+72 CONSTRUCT
APPROACH ON LT. = 395 CU. YD. COMP. EMB.

STA. 615+76 CONSTRUCT
APPROACH ON LT. = 380 CU. YD. COMP. EMB.

STA. 616+85 CONSTRUCT
APPROACH ON LT. = 560 CU. YD. COMP. EMB.



STA. 611+92 IN PLACE
24" X 24" C.M. PIPE CULVERT
REMOVE AND INSTALL
24" X 28" PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 40 CU. YD. COMP. EMB.

STA. 610+38 INSTALL
24" X 42" PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 150 CU. YD. COMP. EMB.

STA. 610+81 IN PLACE
15" X 35" C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 613+04 IN PLACE
29" X 18" X 24" C.M. ARCH PIPE CULVERT
REMOVE AND INSTALL
24" X 38" PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 95 CU. YD. COMP. EMB.

STA. 613+85 IN PLACE
29" X 18" X 24" C.M. ARCH PIPE CULVERT
REMOVE AND INSTALL
24" X 42" PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 120 CU. YD. COMP. EMB.
= 5 CU. YD. UNCL. EXC.

STA. 614+58 IN PLACE
24" X 105' R.C. PIPE CULVERT
ON 10° RT. FWD. SKEW
WITH HEADWALLS LT. & RT.
REMOVE HDWLS. AND EXTEND
10' LT. & 44' RT.
TO A COMPLETED LENGTH OF 159'
(CLASS III TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
050 = XX C.F.S. D.A. = XX ACRES
24" R.C. PIPE CULVERT = 58 LIN. FT.
24" F.E.S. = 2 EACH

HWY. 65
PI = 618+38.64
Δ = 39°12'25" RT.
D = 3°30'00"
T = 583.03'
L = 1120.20'
PC = 612+55.61
PT = 623+75.81
e = 0.086'/'
Ls = 630'

STA. 621+14 IN PLACE
24" X 94' R.C. PIPE CULVERT
WITH HEADWALLS LT. & RT.
REMOVE HDWLS. AND EXTEND
46' LT. & 14' RT.
TO A COMPLETED LENGTH OF 154'
(CLASS III TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
050 = XX C.F.S. D.A. = XX ACRES
24" R.C. PIPE CULVERT = 64 LIN. FT.
24" F.E.S. = 2 EACH

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

PLAN AND PROFILE SHEETS

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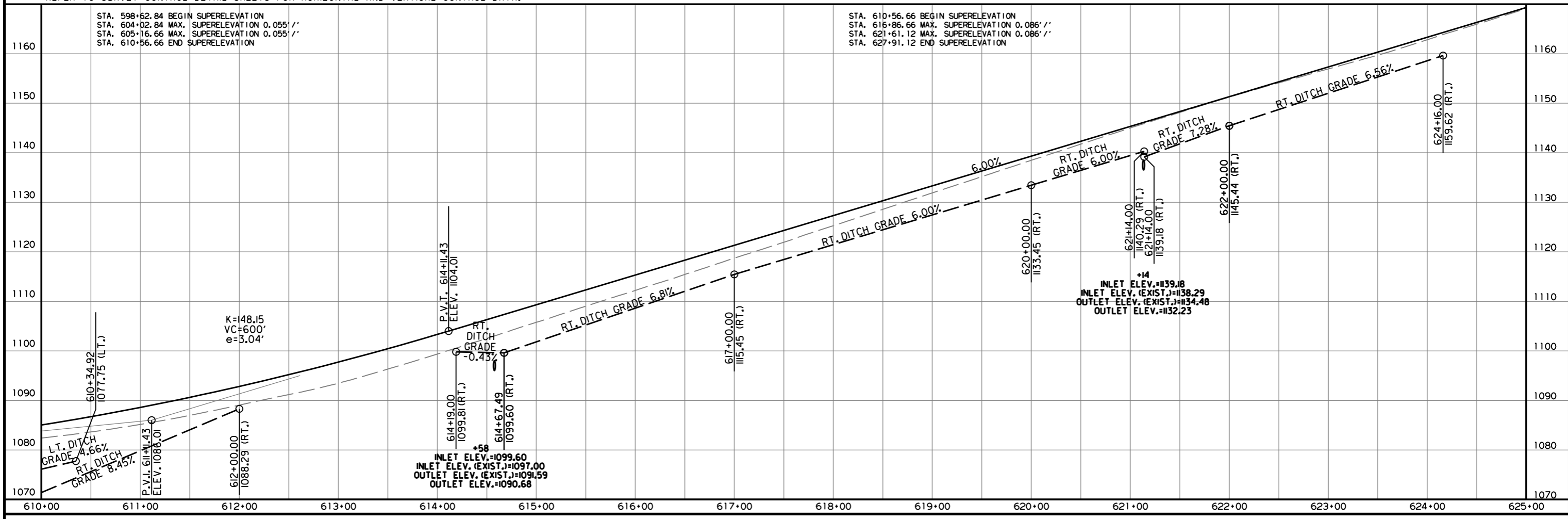
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2 PLAN AND PROFILE SHEETS

PRELIMINARY
SUBJECT TO REVISION

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

HWY. 65



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PLAN AND PROFILE SHEETS

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2 PLAN AND PROFILE SHEETS

PRELIMINARY
SUBJECT TO REVISION

STA. 628+84 CONSTRUCT
24" X 136" R.C. PIPE CULVERT
(CLASS III TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
050 = XX C.F.S. D.A. = XX ACRES
24" R.C. PIPE CULVERT = 136 LIN. FT.
24" F.E.S. = 2 EACH

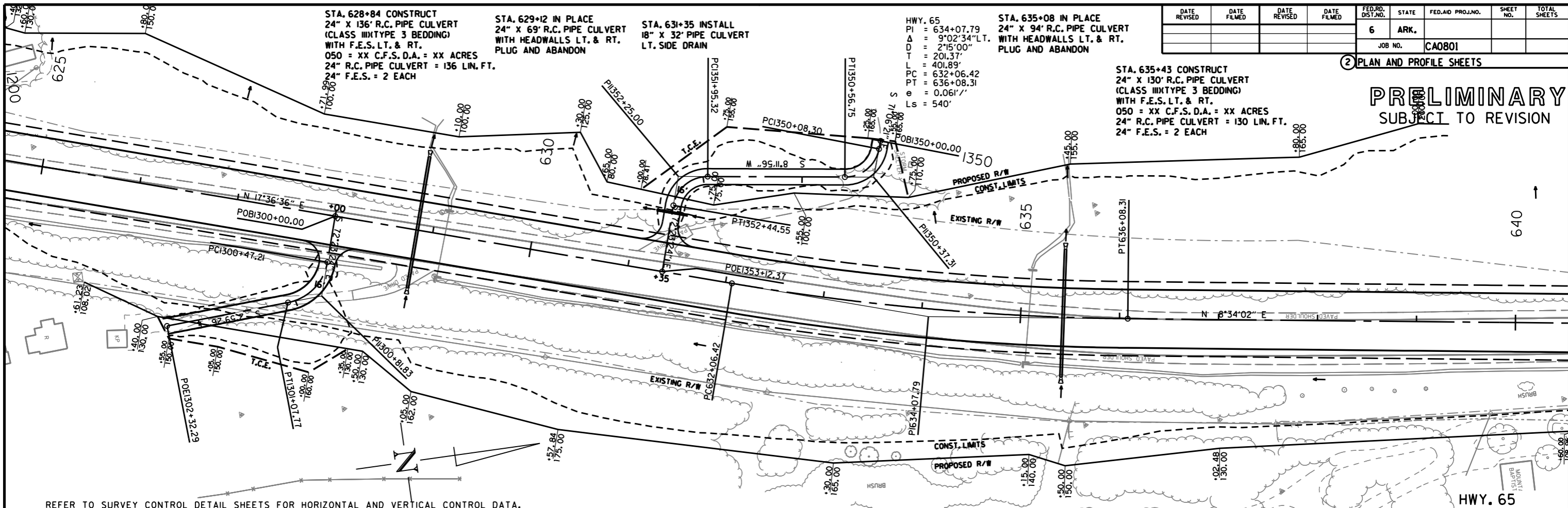
STA. 629+12 IN PLACE
24" X 69" R.C. PIPE CULVERT
WITH HEADWALLS LT. & RT.
PLUG AND ABANDON

STA. 631+35 INSTALL
18" X 32" PIPE CULVERT
LT. SIDE DRAIN

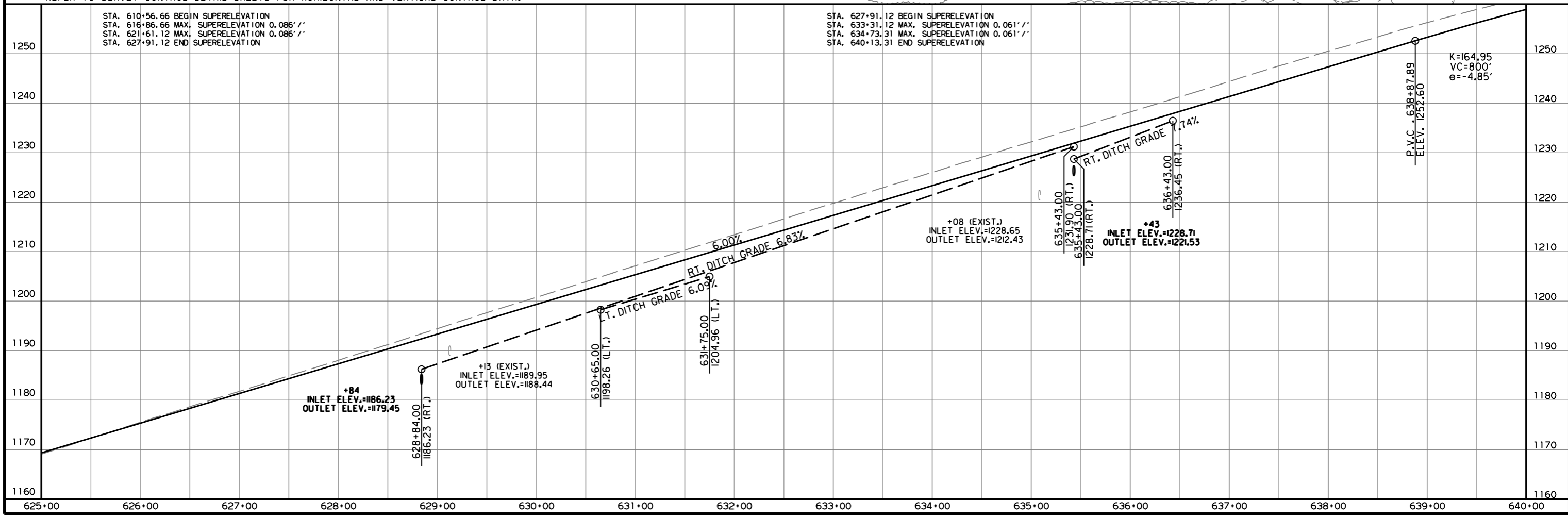
HWY. 65
PI = 634+07.79
Δ = 9°02'34" LT.
D = 2'15" 00"
T = 201.37'
L = 401.89'
PC = 632+06.42
PT = 636+08.31
e = 0.061' / '
Ls = 540'

STA. 635+08 IN PLACE
24" X 94" R.C. PIPE CULVERT
WITH HEADWALLS LT. & RT.
PLUG AND ABANDON

STA. 635+43 CONSTRUCT
24" X 130" R.C. PIPE CULVERT
(CLASS III TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
050 = XX C.F.S. D.A. = XX ACRES
24" R.C. PIPE CULVERT = 130 LIN. FT.
24" F.E.S. = 2 EACH



REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

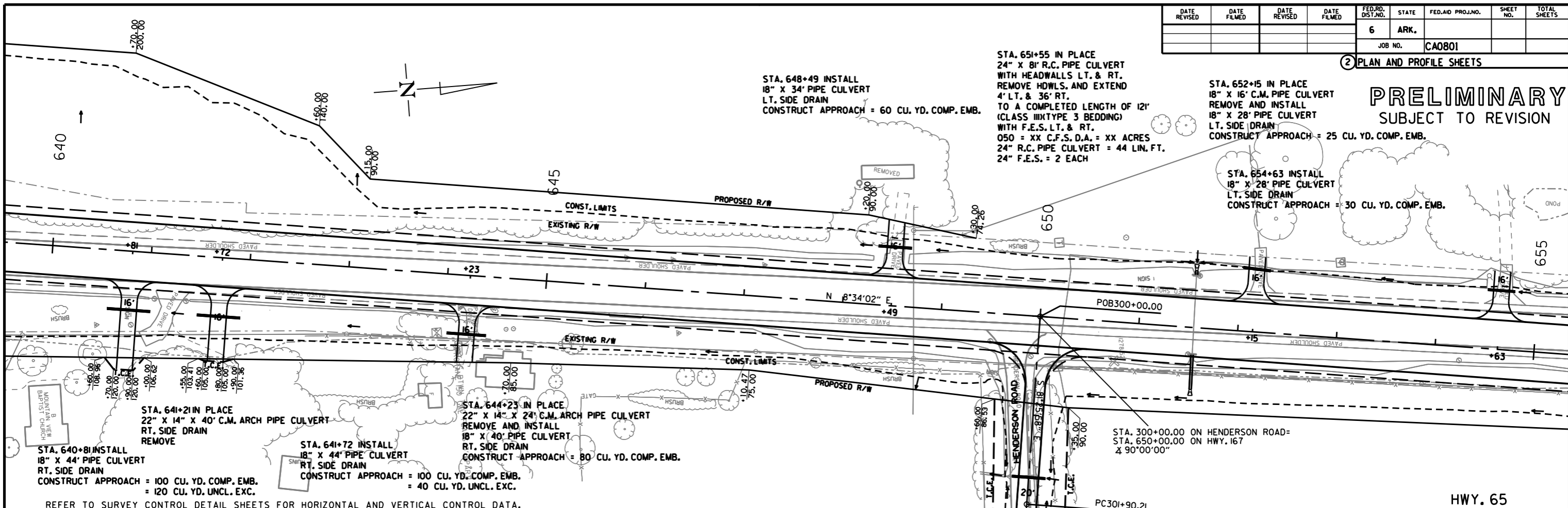


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2 PLAN AND PROFILE SHEETS

PRELIMINARY
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STA. 648+49 INSTALL
18" X 34' PIPE CULVERT
LT. SIDE DRAIN
CONSTRUCT APPROACH = 60 CU. YD. COMP. EMB.

STA. 651+55 IN PLACE
24" X 8' R.C. PIPE CULVERT
WITH HEADWALLS LT. & RT.
REMOVE HDWLS. AND EXTEND
4' LT. & 36' RT.
TO A COMPLETED LENGTH OF 12'
(CLASS III TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
050 = XX C.F.S. D.A. = XX ACRES
24" R.C. PIPE CULVERT = 44 LIN. FT.
24" F.E.S. = 2 EACH

STA. 652+15 IN PLACE
18" X 16' C.M. PIPE CULVERT
REMOVE AND INSTALL
18" X 28' PIPE CULVERT
LT. SIDE DRAIN
CONSTRUCT APPROACH = 25 CU. YD. COMP. EMB.

STA. 654+63 INSTALL
18" X 28' PIPE CULVERT
LT. SIDE DRAIN
CONSTRUCT APPROACH = 30 CU. YD. COMP. EMB.

STA. 641+21 IN PLACE
22" X 14" X 40' C.M. ARCH PIPE CULVERT
RT. SIDE DRAIN
REMOVE

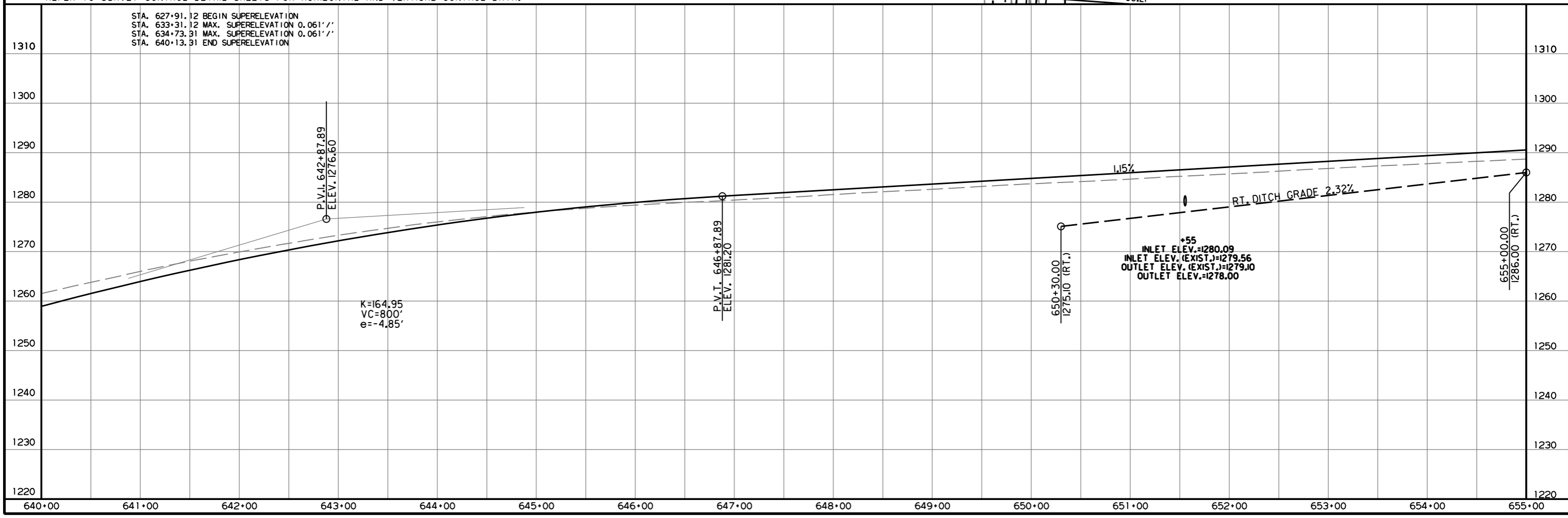
STA. 640+81 INSTALL
18" X 44' PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 100 CU. YD. COMP. EMB.
= 120 CU. YD. UNCL. EXC.

STA. 641+72 INSTALL
18" X 44' PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 100 CU. YD. COMP. EMB.
= 40 CU. YD. UNCL. EXC.

STA. 644+23 IN PLACE
22" X 14" X 24' C.M. ARCH PIPE CULVERT
REMOVE AND INSTALL
18" X 40' PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 80 CU. YD. COMP. EMB.

STA. 300+00.00 ON HENDERSON ROAD=
STA. 650+00.00 ON HWY. 167
± 90°00'00"

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

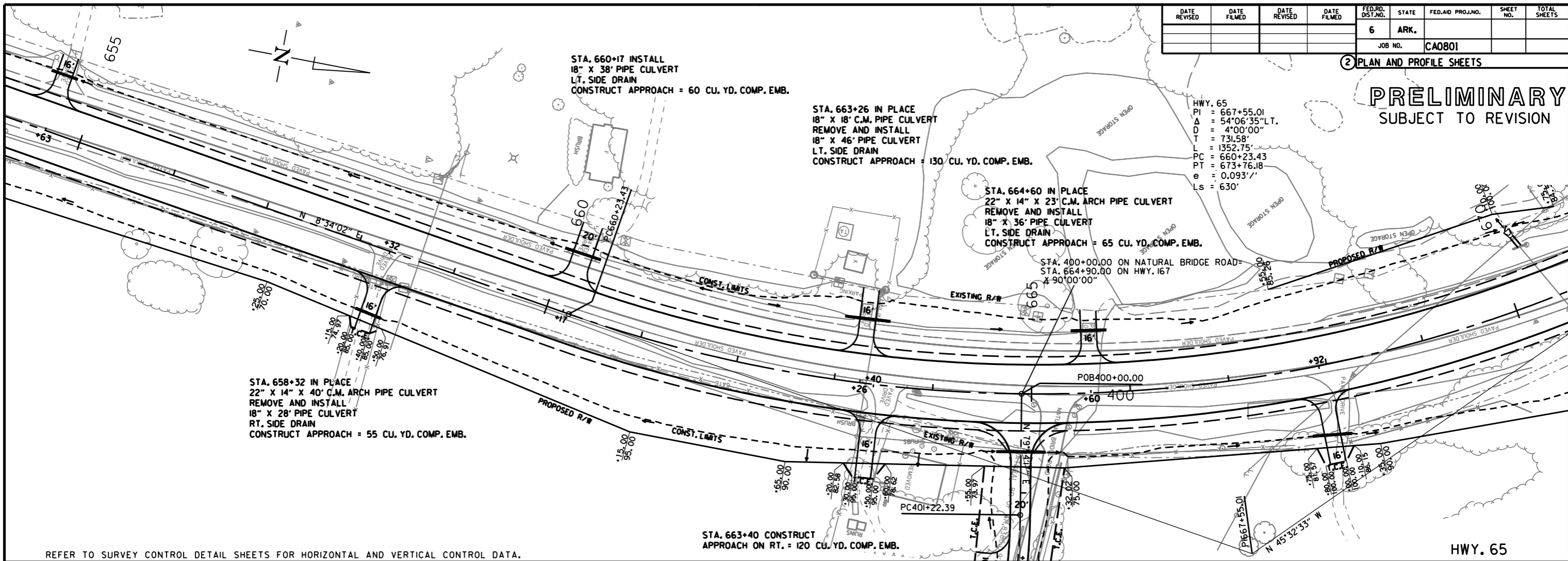


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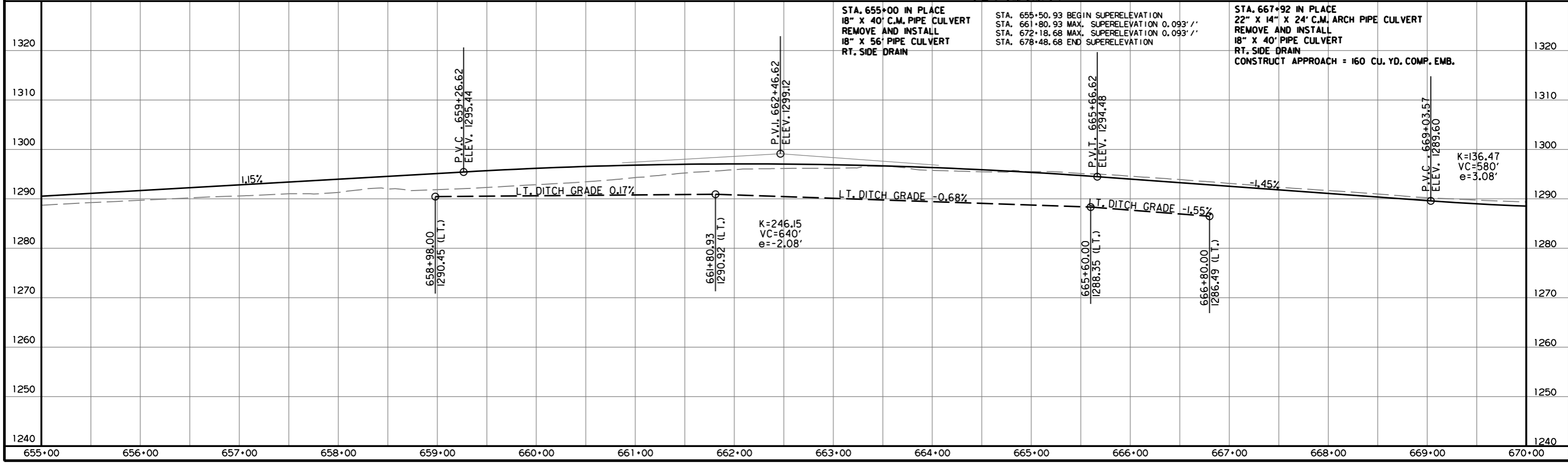
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2 PLAN AND PROFILE SHEETS

PRELIMINARY
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REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

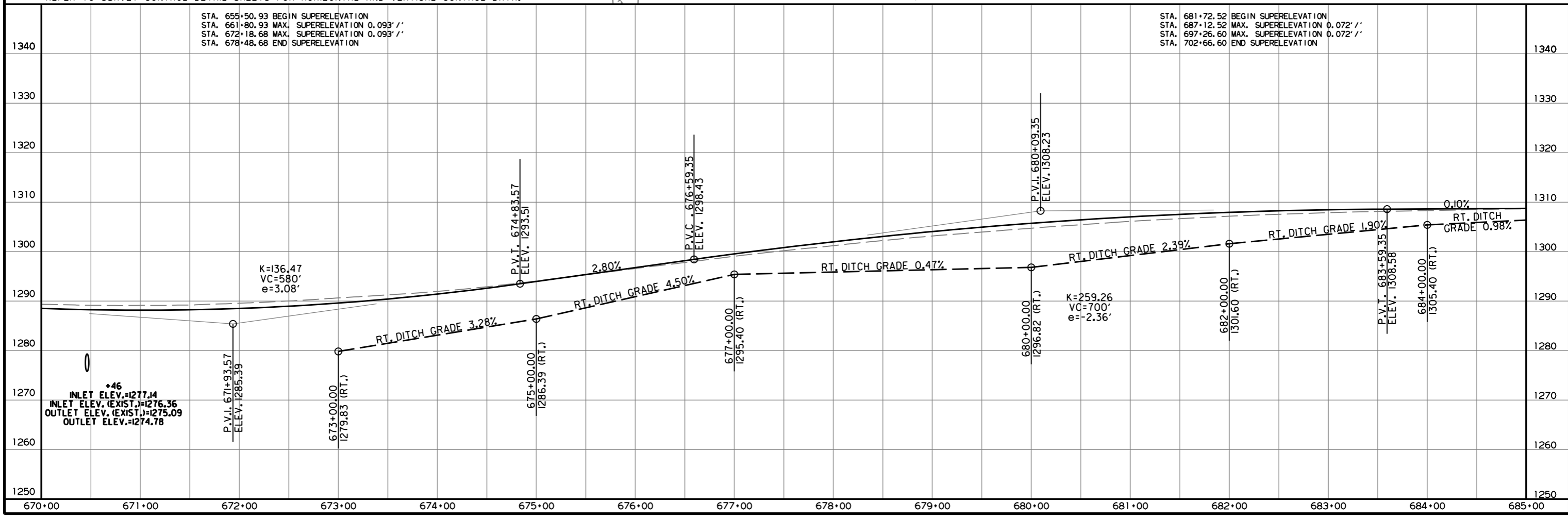
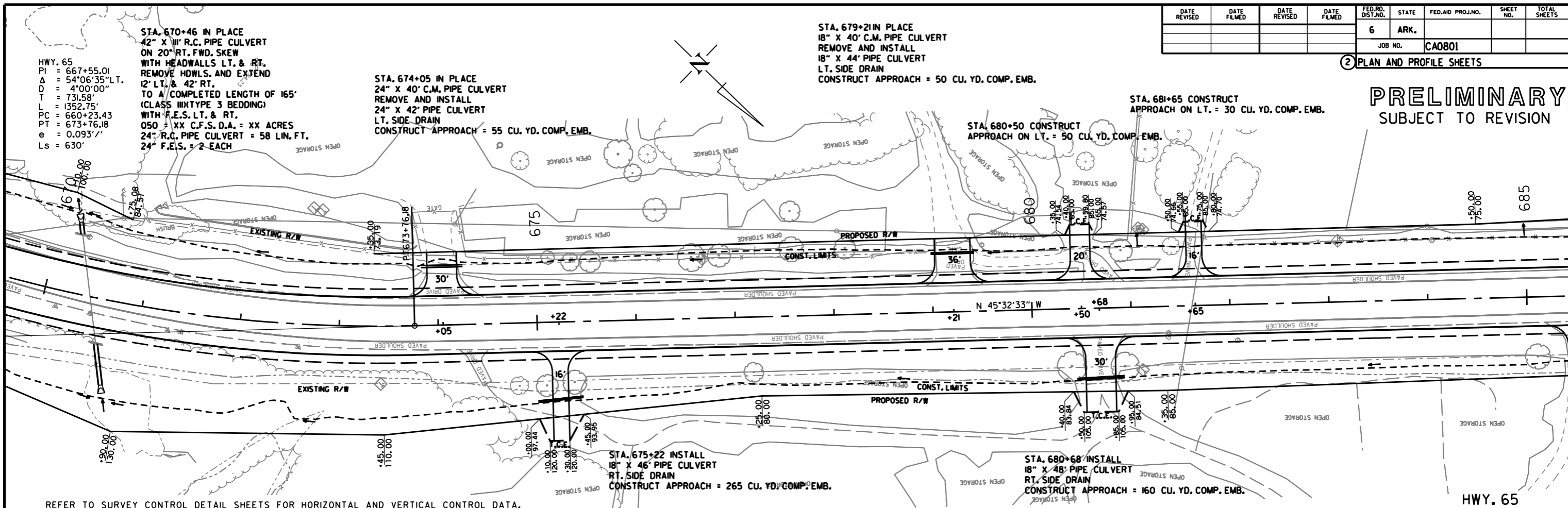


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STA. 688+37 IN PLACE
 22" X 14" X 24' C.M. PIPE CULVERT
 REMOVE AND INSTALL
 18" X 22" PIPE CULVERT
 LT. SIDE DRAIN
 CONSTRUCT APPROACH = XXX CU. YD. COMP. EMB.

HWY. 65
 PI = 693+95.80
 $\Delta = 42^{\circ}53'04''$ LT.
 $D = 2^{\circ}45'00''$
 $T = 818.28'$
 $L = 1559.44'$
 $PC = 685+77.52$
 $PT = 701+36.96$
 $e = 0.072'/'$
 $Ls = 540'$

STA. 694+86 INSTALL
 18" X 34' PIPE CULVERT
 LT. SIDE DRAIN
 CONSTRUCT APPROACH = 60 CU. YD. COMP. EMB.

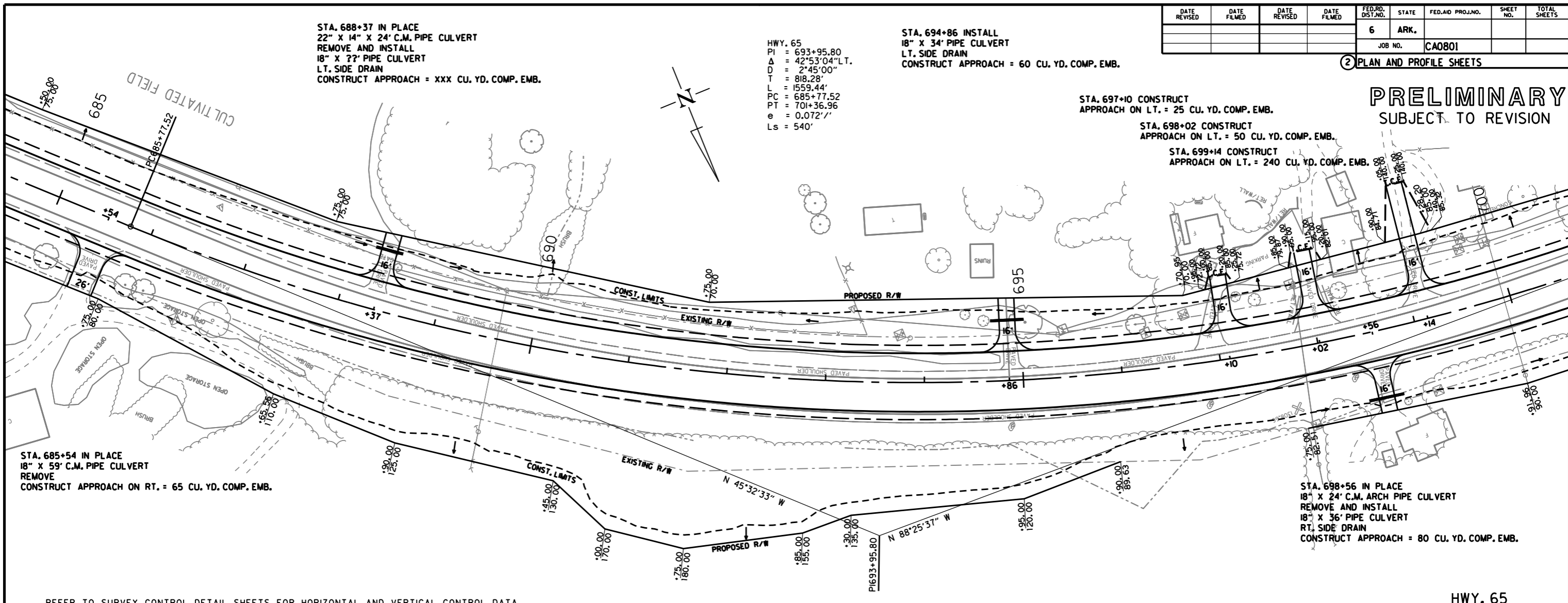
STA. 697+10 CONSTRUCT
 APPROACH ON LT. = 25 CU. YD. COMP. EMB.

STA. 698+02 CONSTRUCT
 APPROACH ON LT. = 50 CU. YD. COMP. EMB.

STA. 699+14 CONSTRUCT
 APPROACH ON LT. = 240 CU. YD. COMP. EMB.

2 PLAN AND PROFILE SHEETS

PRELIMINARY
 SUBJECT TO REVISION

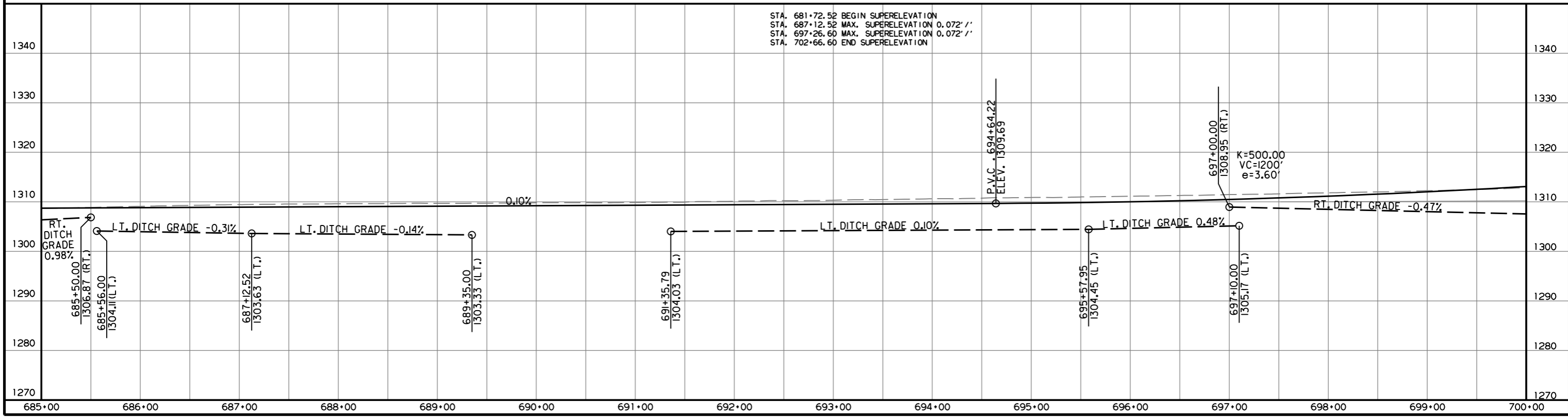


STA. 685+54 IN PLACE
 18" X 59' C.M. PIPE CULVERT
 REMOVE
 CONSTRUCT APPROACH ON RT. = 65 CU. YD. COMP. EMB.

STA. 698+56 IN PLACE
 18" X 24' C.M. ARCH PIPE CULVERT
 REMOVE AND INSTALL
 18" X 36' PIPE CULVERT
 RT. SIDE DRAIN
 CONSTRUCT APPROACH = 80 CU. YD. COMP. EMB.

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

HWY. 65



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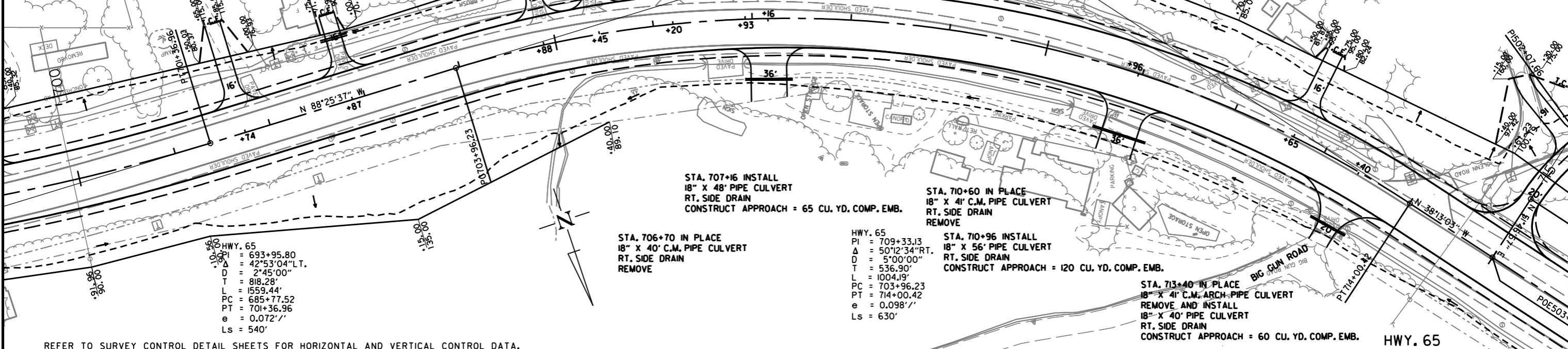
STA. 701+74 CONSTRUCT
 APPROACH ON LT. = 150 CU. YD. COMP. EMB.
 STA. 702+87 IN PLACE
 22" X 14" X 24' C.M. PIPE CULVERT
 REMOVE AND INSTALL
 24" X 28' PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPROACH = 65 CU. YD. COMP. EMB.
 STA. 704+88 IN PLACE
 22" X 14" X 24' C.M. PIPE CULVERT
 REMOVE AND INSTALL
 24" X 28' PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPROACH = 50 CU. YD. COMP. EMB.

STA. 705+45 IN PLACE
 22" X 14" X 24' C.M. PIPE CULVERT
 REMOVE AND INSTALL
 24" X 28' PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPROACH = 45 CU. YD. COMP. EMB.
 STA. 706+20 IN PLACE
 22" X 14" X 24' C.M. PIPE CULVERT
 REMOVE AND INSTALL
 24" X 28' PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPROACH = 55 CU. YD. COMP. EMB.

STA. 706+93 IN PLACE
 24" X 16' C.M. PIPE CULVERT
 REMOVE AND INSTALL
 24" X 40' PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPROACH = 190 CU. YD. COMP. EMB.

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2 PLAN AND PROFILE SHEETS
PRELIMINARY
 SUBJECT TO REVISION



HWY. 65
 PI = 693+95.80
 $\Delta = 42^{\circ}53'04''$ LT.
 D = 2'45'00"
 T = 818.28'
 L = 1559.44'
 PC = 685+77.52
 PT = 701+36.96
 e = 0.072' /'
 Ls = 540'

STA. 707+16 INSTALL
 18" X 48' PIPE CULVERT
 RT. SIDE DRAIN
 CONSTRUCT APPROACH = 65 CU. YD. COMP. EMB.

STA. 706+70 IN PLACE
 18" X 40' C.M. PIPE CULVERT
 RT. SIDE DRAIN
 REMOVE

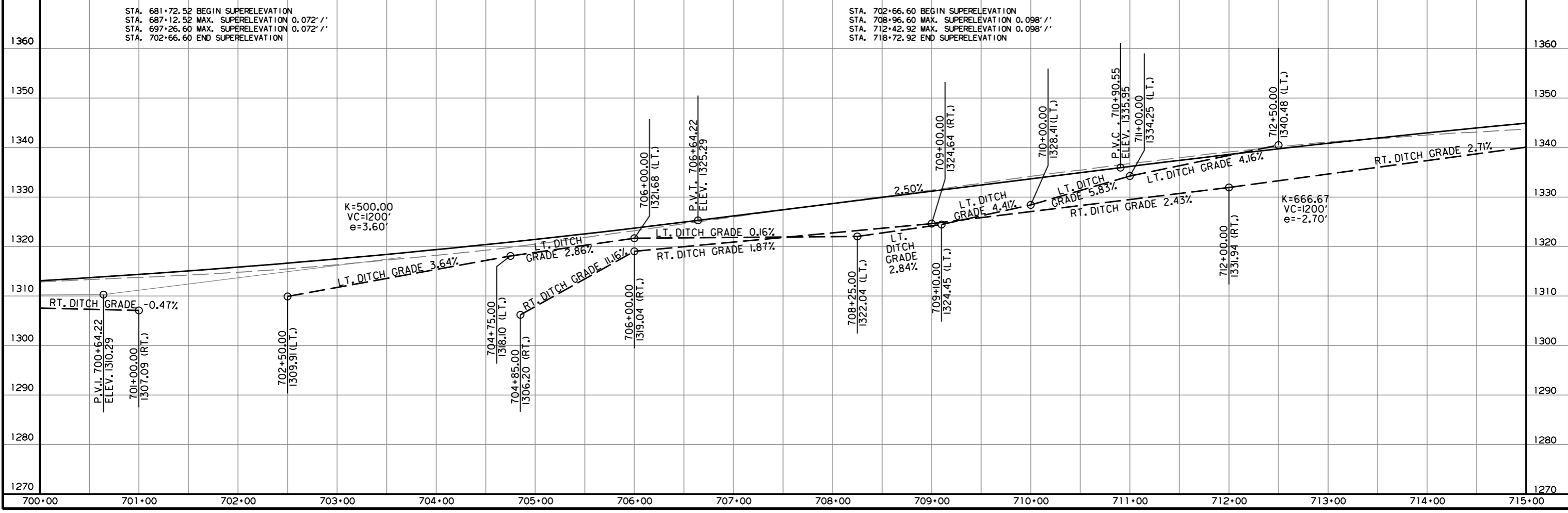
HWY. 65
 PI = 709+33.13
 $\Delta = 50^{\circ}12'34''$ RT.
 D = 5'00'00"
 T = 536.90'
 L = 1004.19'
 PC = 703+96.23
 PT = 714+00.42
 e = 0.098' /'
 Ls = 630'

STA. 710+60 IN PLACE
 18" X 4' C.M. PIPE CULVERT
 RT. SIDE DRAIN
 REMOVE

STA. 710+96 INSTALL
 18" X 56' PIPE CULVERT
 RT. SIDE DRAIN
 CONSTRUCT APPROACH = 120 CU. YD. COMP. EMB.

STA. 713+40 IN PLACE
 18" X 4' C.M. ARCH PIPE CULVERT
 REMOVE AND INSTALL
 18" X 40' PIPE CULVERT
 RT. SIDE DRAIN
 CONSTRUCT APPROACH = 60 CU. YD. COMP. EMB.

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.



STA. 681+72.52 BEGIN SUPERELEVATION
 STA. 687+12.52 MAX. SUPERELEVATION 0.072' /'
 STA. 697+26.60 MAX. SUPERELEVATION 0.072' /'
 STA. 702+66.60 END SUPERELEVATION

STA. 702+66.60 BEGIN SUPERELEVATION
 STA. 708+96.60 MAX. SUPERELEVATION 0.098' /'
 STA. 712+42.92 MAX. SUPERELEVATION 0.098' /'
 STA. 718+72.92 END SUPERELEVATION

K=500.00
 VC=1200'
 e=3.60'

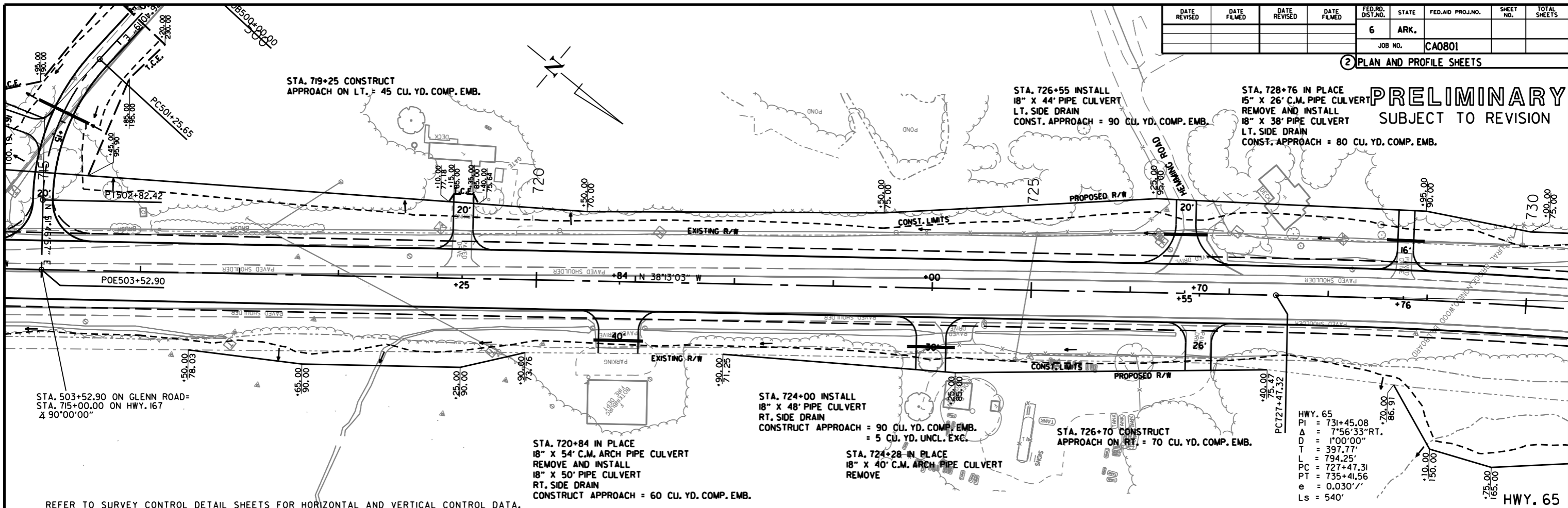
K=666.67
 VC=1200'
 e=-2.70'

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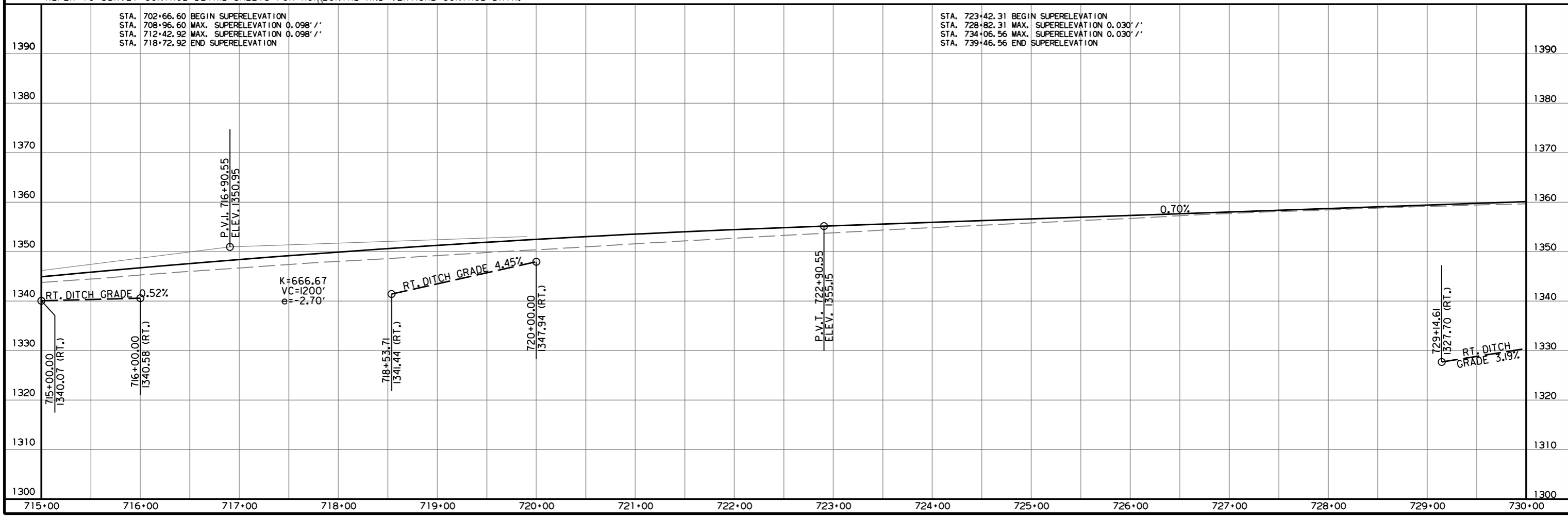
2 PLAN AND PROFILE SHEETS

PRELIMINARY
SUBJECT TO REVISION



REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

HWY. 65
 PI = 731+45.08
 Δ = 7°56'33" RT.
 D = 1°00'00"
 T = 397.77'
 L = 794.25'
 PC = 727+47.31
 PT = 735+41.56
 e = 0.030' /'
 Ls = 540'



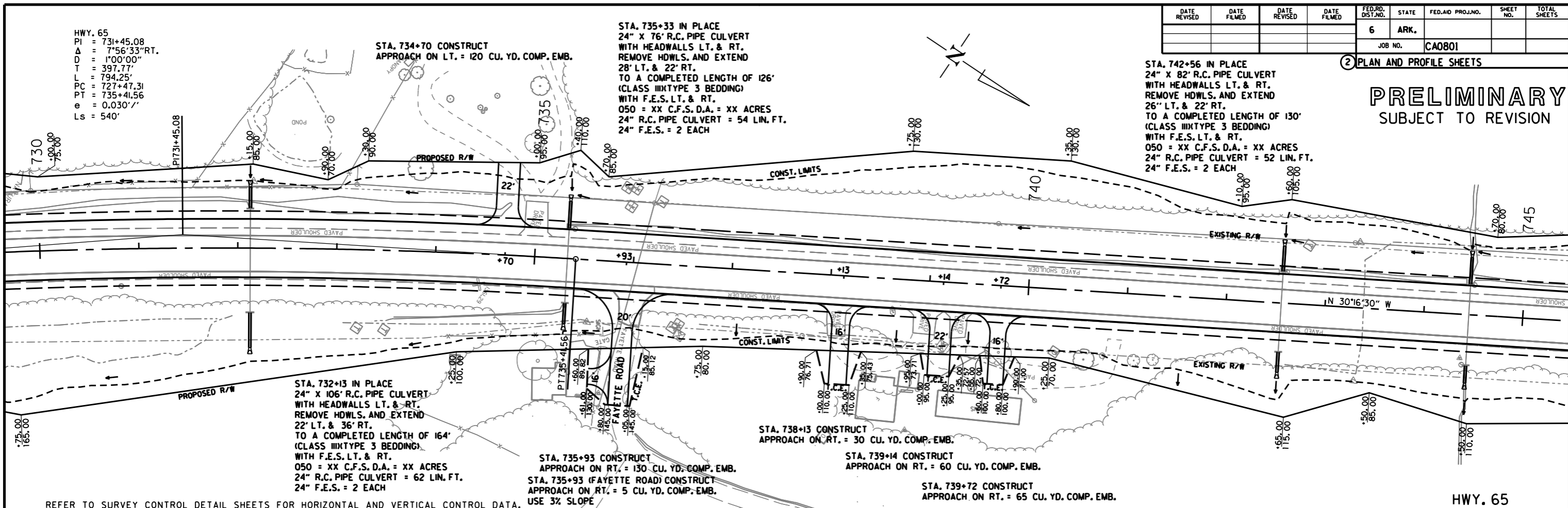
RCA0801.DGN 3/17/2016

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2 PLAN AND PROFILE SHEETS

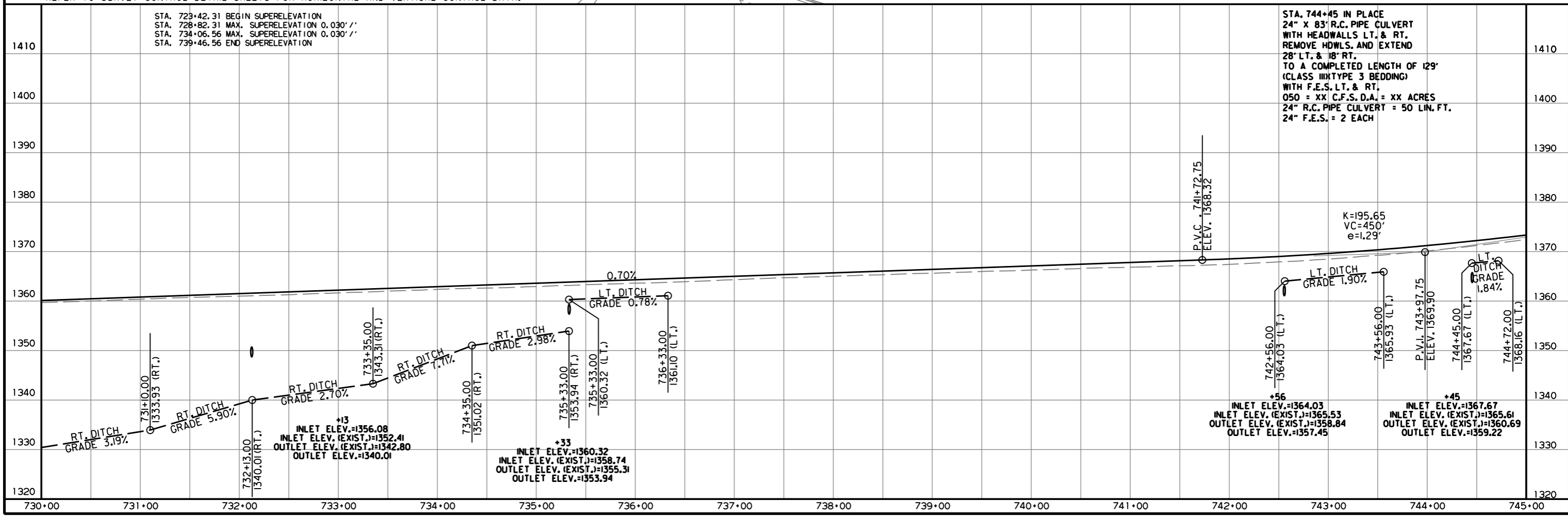
PRELIMINARY
SUBJECT TO REVISION

HWY. 65
PI = 731+45.08
Δ = 7°56'33" RT.
D = 1'00'00"
T = 397.77'
L = 794.25'
PC = 727+47.31
PT = 735+41.56
e = 0.030' /'
Ls = 540'



REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

HWY. 65



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				6	ARK.			
						JOB NO.	CA0801	

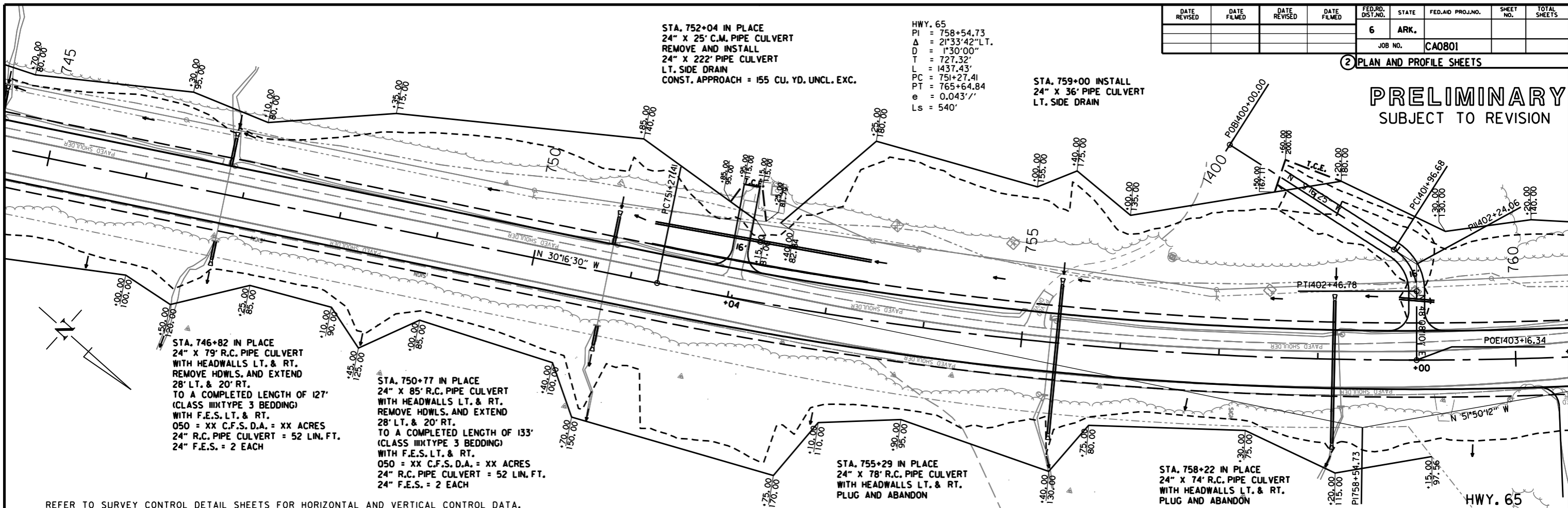
2 PLAN AND PROFILE SHEETS

PRELIMINARY
SUBJECT TO REVISION

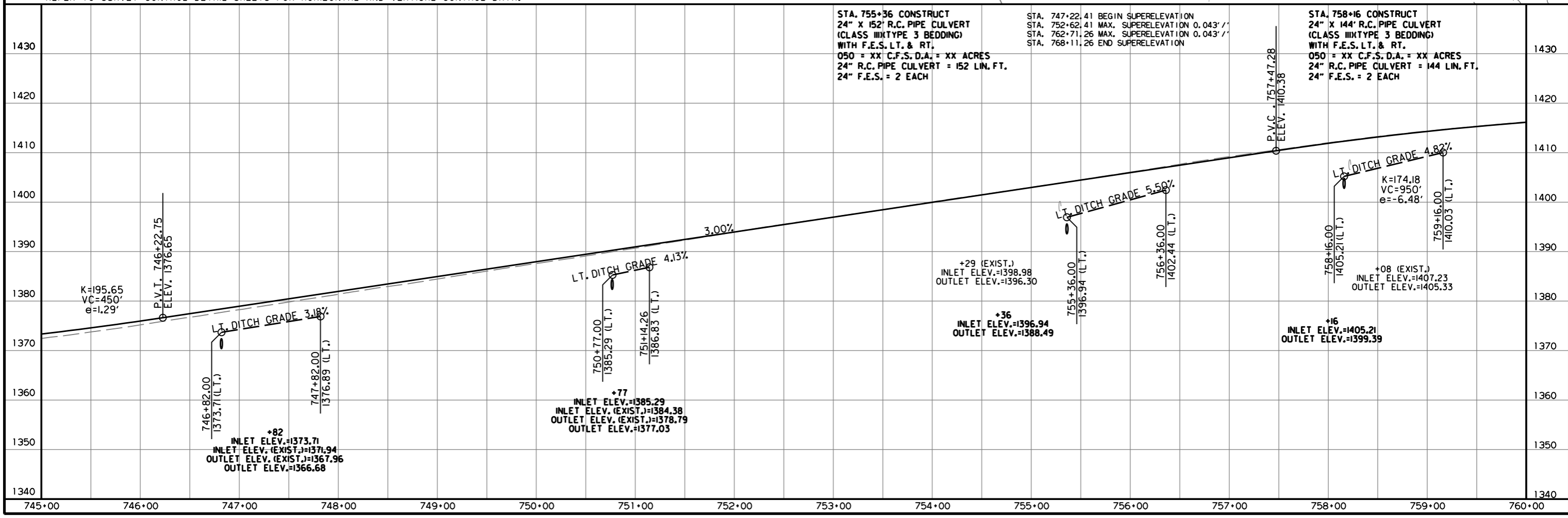
STA. 752+04 IN PLACE
24" X 25' C.M. PIPE CULVERT
REMOVE AND INSTALL
24" X 222' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPROACH = 155 CU. YD. UNCL. EXC.

HWY. 65
PI = 758+54.73
 $\Delta = 21'33''42''$ L.T.
D = 1'30'00"
T = 727.32'
L = 1437.43'
PC = 751+27.41
PT = 765+64.84
e = 0.043'/'
Ls = 540'

STA. 759+00 INSTALL
24" X 36' PIPE CULVERT
LT. SIDE DRAIN



REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.



RCA0801.DGN 3/17/2016

HWY. 65
 PI = 758+54.73
 Δ = 21°33'42" L.T.
 D = 1°30'00"
 T = 727.32'
 L = 1437.43'
 PC = 751+27.41
 PT = 765+64.84
 e = 0.043'/'
 Ls = 540'

STA. 763+70 CONSTRUCT
 24" X 146" R.C. PIPE CULVERT
 (CLASS III TYPE 3 BEDDING)
 WITH F.E.S. LT. & RT.
 050 = XX C.F.S. D.A. = XX ACRES
 24" R.C. PIPE CULVERT = 146 LIN. FT.
 24" F.E.S. = 2 EACH

STA. 763+80 IN PLACE
 24" X 79" R.C. PIPE CULVERT
 WITH HEADWALLS LT. & RT.
 PLUG AND ABANDON

STA. 764+28 CONSTRUCT
 APPROACH ON LT. = 25 CU. YD. COMP. EMB.

STA. 770+21 IN PLACE
 24" X 99" R.C. PIPE CULVERT
 WITH HEADWALLS LT. & RT.
 REMOVE HDWLS. AND EXTEND
 34' LT. & 20' RT.
 TO A COMPLETED LENGTH OF 153'
 (CLASS III TYPE 3 BEDDING)
 WITH F.E.S. LT. & RT.
 050 = XX C.F.S. D.A. = XX ACRES
 24" R.C. PIPE CULVERT = 58 LIN. FT.
 24" F.E.S. = 2 EACH

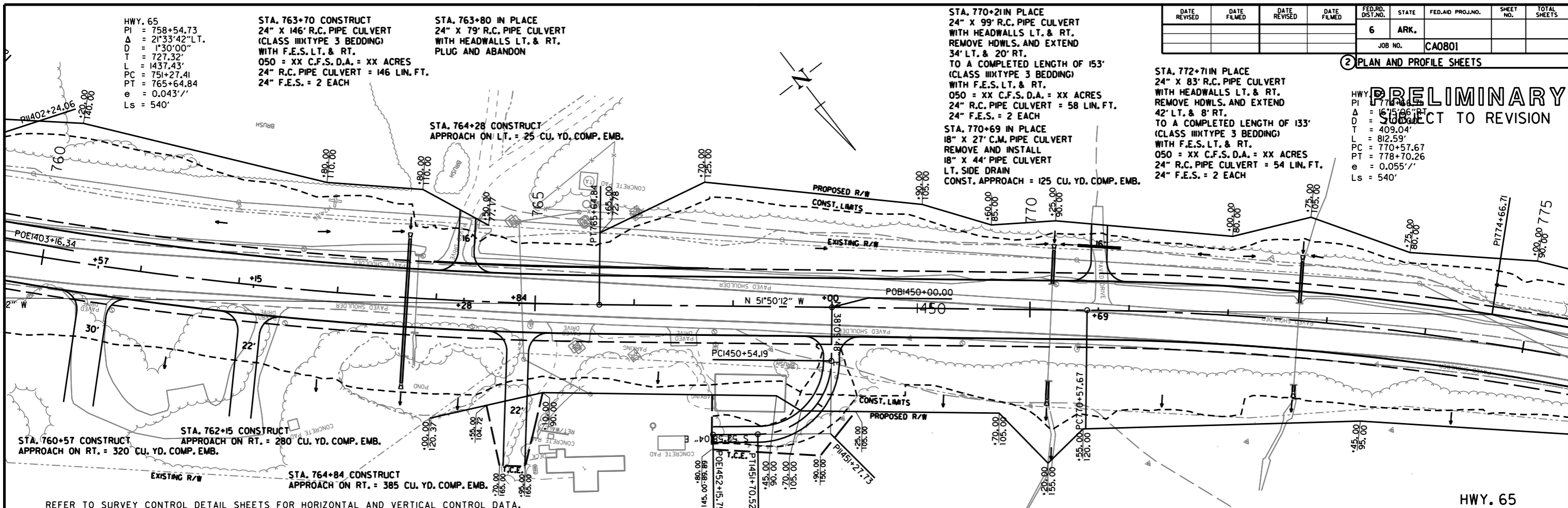
STA. 770+69 IN PLACE
 18" X 27" C.M. PIPE CULVERT
 REMOVE AND INSTALL
 18" X 44" PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPROACH = 125 CU. YD. COMP. EMB.

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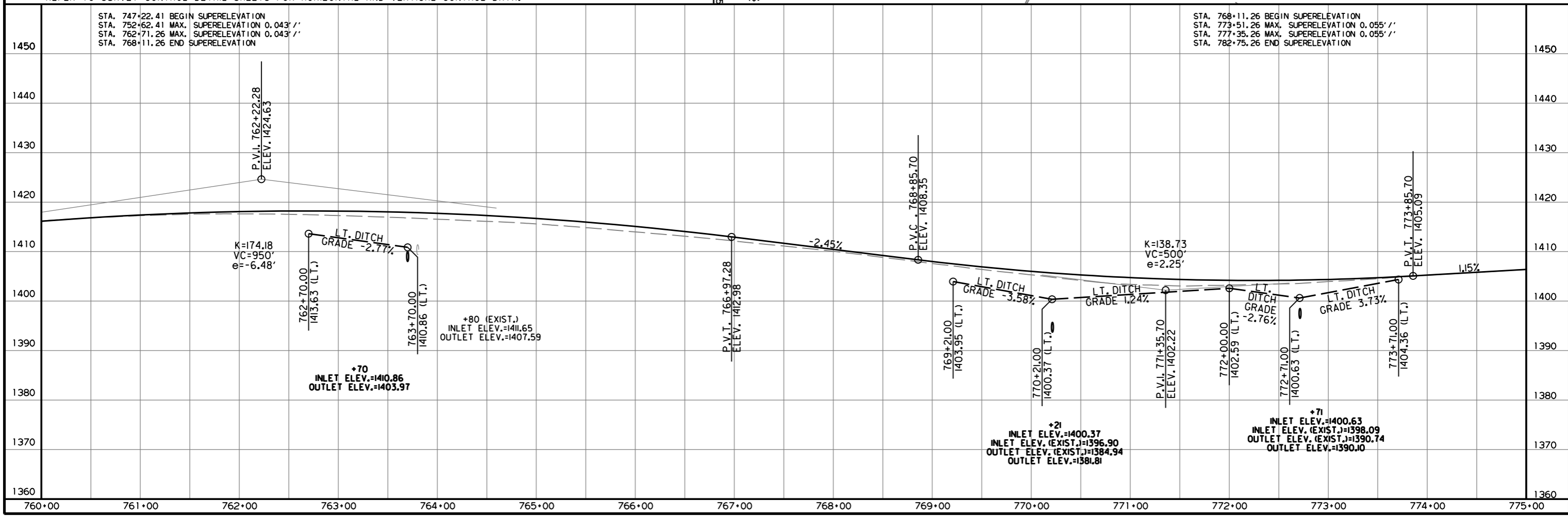
2 PLAN AND PROFILE SHEETS

PRELIMINARY
 SUBJECT TO REVISION

HWY. 65
 PI = 770+86.71
 Δ = 15°56'11" L.T.
 D = 1°30'00"
 T = 409.04'
 L = 812.59'
 PC = 770+57.67
 PT = 778+70.26
 e = 0.055'/'
 Ls = 540'



REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.



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STA. 775+72 IN PLACE
22" X 14" X 24' C.M. PIPE CULVERT
REMOVE AND INSTALL
18" X 34' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPROACH = 60 CU. YD. COMP. EMB.

STA. 777+88 INSTALL
18" X 40' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPROACH = 70 CU. YD. COMP. EMB.

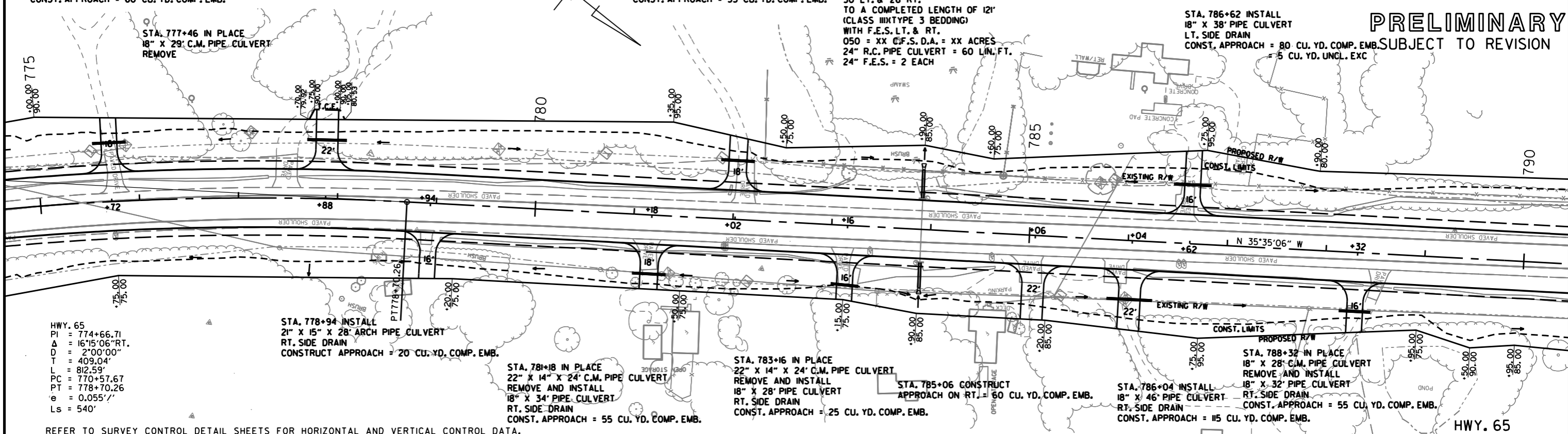
STA. 782+02 IN PLACE
18" X 30' C.M. PIPE CULVERT
REMOVE AND INSTALL
18" X 34' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPROACH = 55 CU. YD. COMP. EMB.

STA. 783+91 IN PLACE
24" X 65' R.C. PIPE CULVERT
WITH HEADWALLS LT. & RT.
REMOVE HDWLS. AND EXTEND
30' LT. & 26' RT.
TO A COMPLETED LENGTH OF 121'
(CLASS III TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
0.50 = XX C.F.S. D.A. = XX ACRES
24" R.C. PIPE CULVERT = 60 LIN. FT.
24" F.E.S. = 2 EACH

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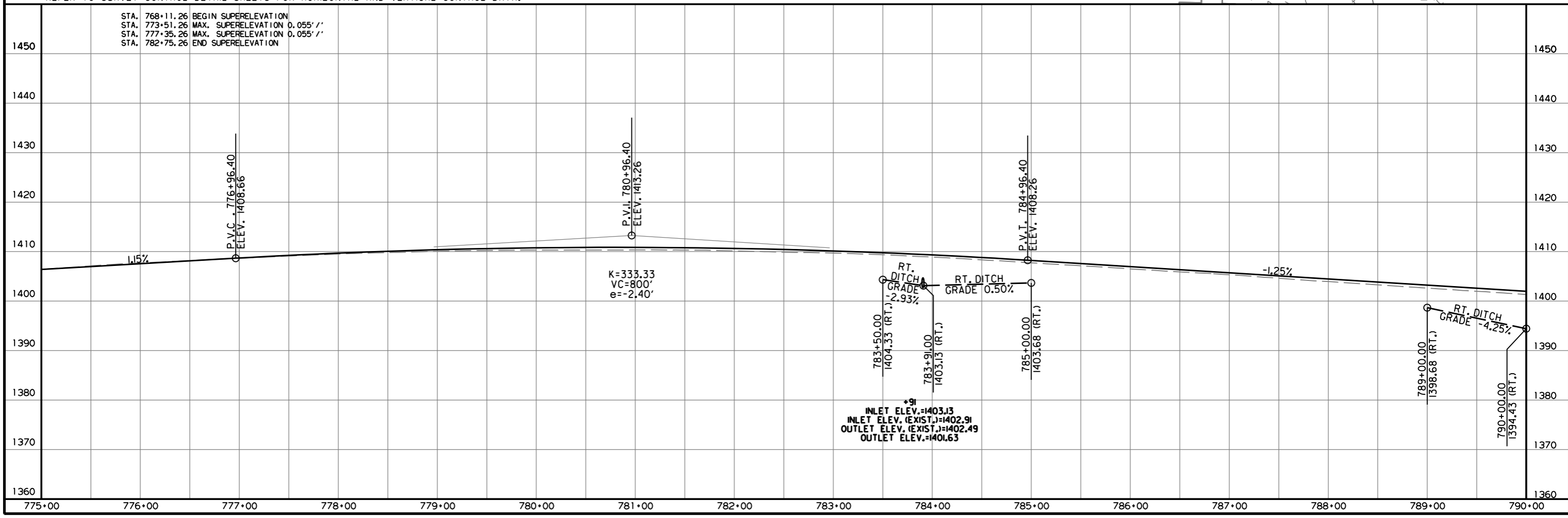
2 PLAN AND PROFILE SHEETS

PRELIMINARY
SUBJECT TO REVISION



HWY. 65
PI = 774+66.71
Δ = 16°15'06" RT.
D = 2°00'00"
T = 409.04'
L = 812.59'
PC = 770+57.67
PT = 778+70.26
e = 0.055'/'
Ls = 540'

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.



STA. 768+11.26 BEGIN SUPERELEVATION
STA. 773+51.26 MAX. SUPERELEVATION 0.055'/'
STA. 777+35.26 MAX. SUPERELEVATION 0.055'/'
STA. 782+75.26 END SUPERELEVATION

STA. 778+94 INSTALL
21" X 15" X 28' ARCH PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 20' CU. YD. COMP. EMB.

STA. 781+18 IN PLACE
22" X 14" X 24' C.M. PIPE CULVERT
REMOVE AND INSTALL
18" X 34' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPROACH = 55 CU. YD. COMP. EMB.

STA. 783+16 IN PLACE
22" X 14" X 24' C.M. PIPE CULVERT
REMOVE AND INSTALL
18" X 28' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPROACH = 25 CU. YD. COMP. EMB.

STA. 785+06 CONSTRUCT
APPROACH ON RT. = 60 CU. YD. COMP. EMB.

STA. 786+04 INSTALL
18" X 46' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPROACH = 15 CU. YD. COMP. EMB.

STA. 788+32 IN PLACE
18" X 28' C.M. PIPE CULVERT
REMOVE AND INSTALL
18" X 32' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPROACH = 55 CU. YD. COMP. EMB.

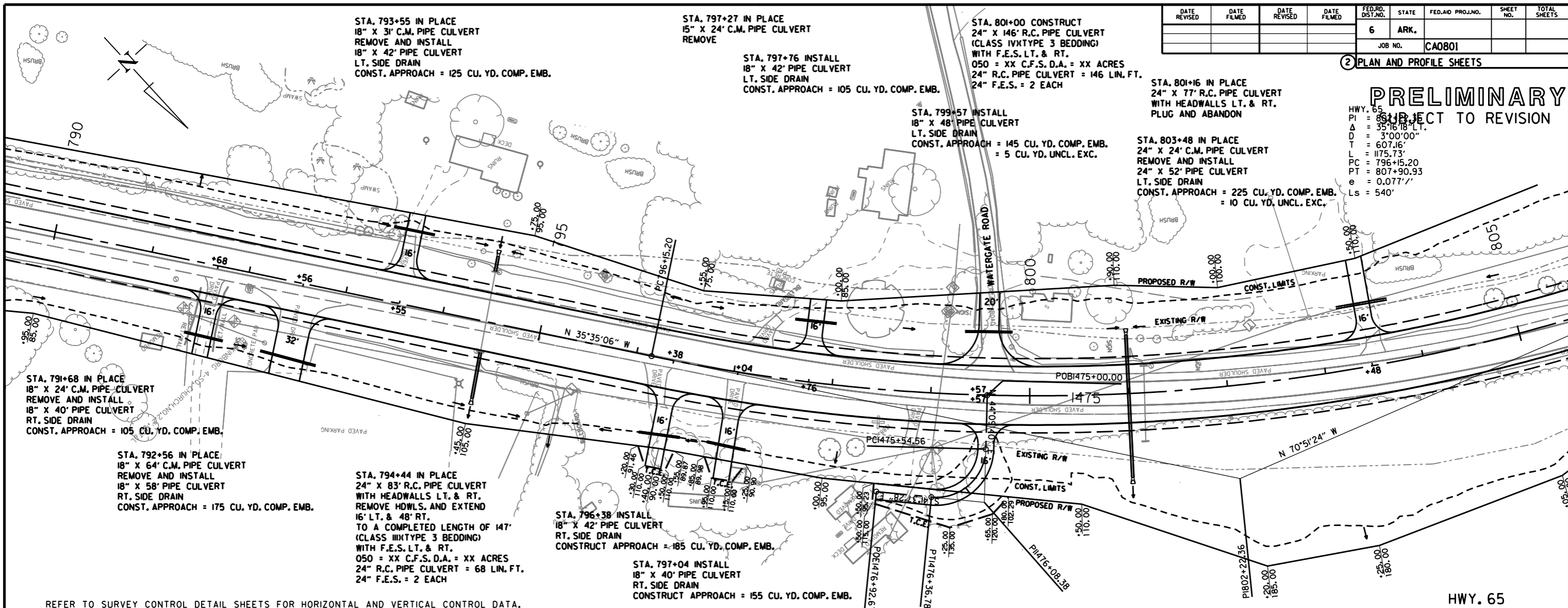
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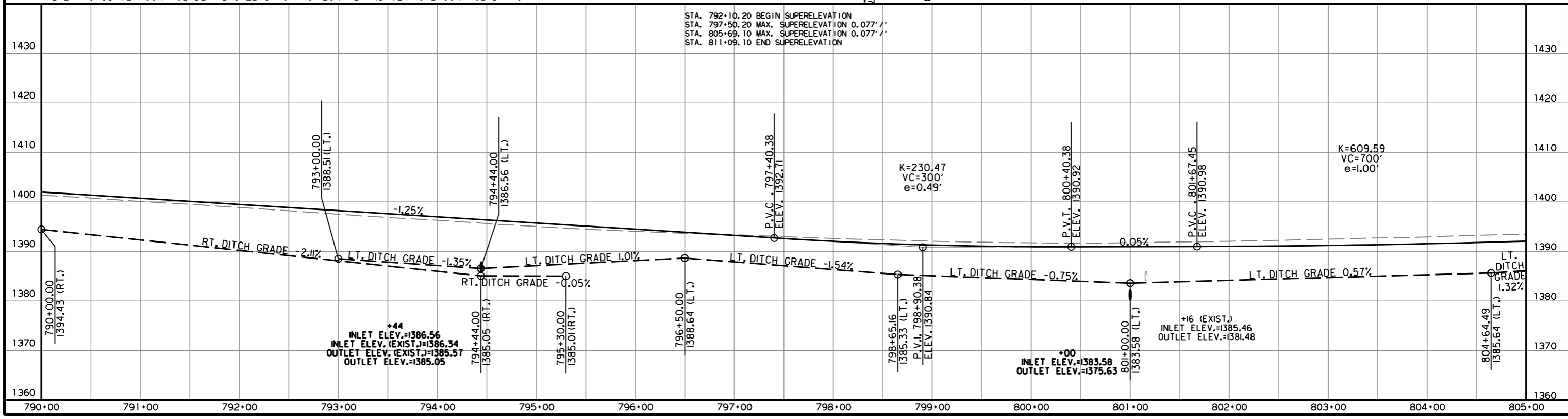
2 PLAN AND PROFILE SHEETS

PRELIMINARY
SUBJECT TO REVISION

HWY. 65
 PI = 801+81.18
 Δ = 35°16'18" LT.
 D = 3'00'00"
 L = 607.16'
 T = 1175.73'
 PC = 796+15.20
 PT = 807+90.93
 e = 0.077'/'
 Ls = 540'



REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.



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STA. 805+90 IN PLACE
24" X 63" R.C. PIPE CULVERT
WITH HEADWALLS LT. & RT.
PLUG AND ABANDON

STA. 806+00 CONSTRUCT
24" X 134" R.C. PIPE CULVERT
(CLASS III TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
050 = XX C.F.S. D.A. = XX ACRES
24" R.C. PIPE CULVERT = 134 LIN. FT.
24" F.E.S. = 2 EACH

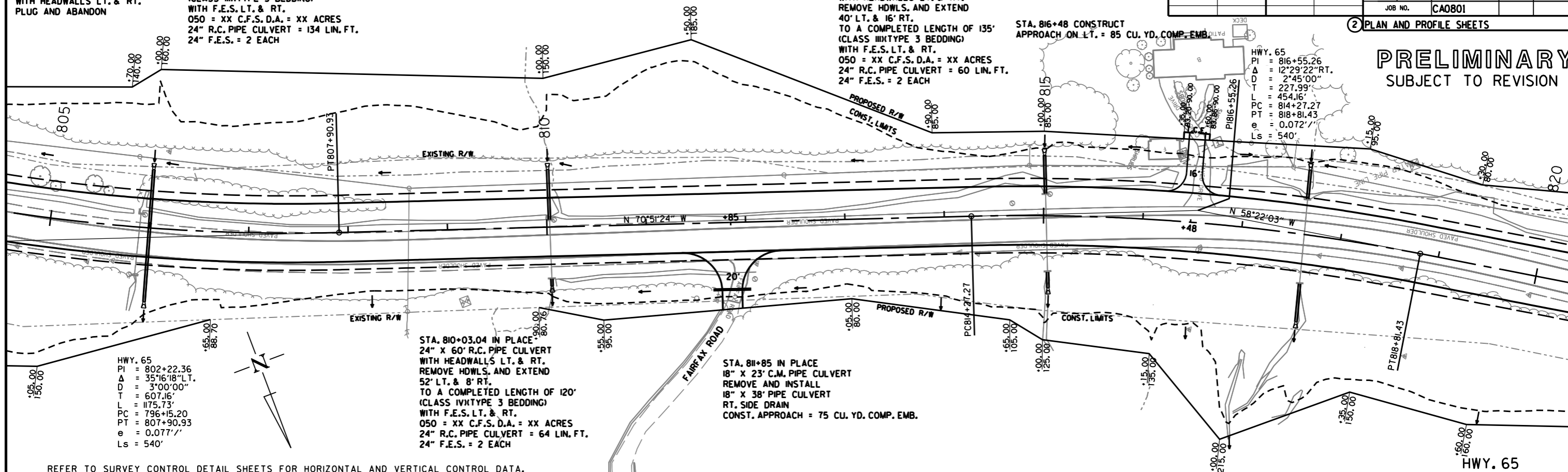
STA. 815+03 IN PLACE
24" X 79" R.C. PIPE CULVERT
WITH HEADWALLS LT. & RT.
REMOVE HDWLS. AND EXTEND
40' LT. & 16' RT.
TO A COMPLETED LENGTH OF 135'
(CLASS III TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
050 = XX C.F.S. D.A. = XX ACRES
24" R.C. PIPE CULVERT = 60 LIN. FT.
24" F.E.S. = 2 EACH

STA. 816+48 CONSTRUCT
APPROACH ON LT. = 85 CU. YD. COMP. EMB.

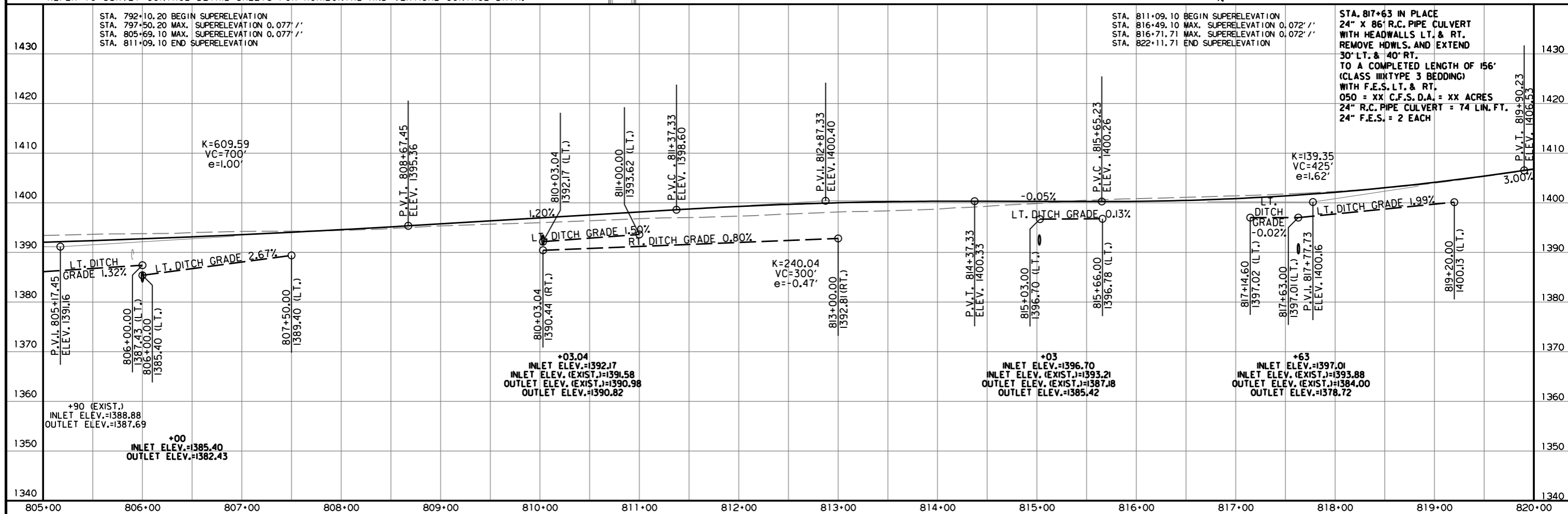
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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2 PLAN AND PROFILE SHEETS

PRELIMINARY
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REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.



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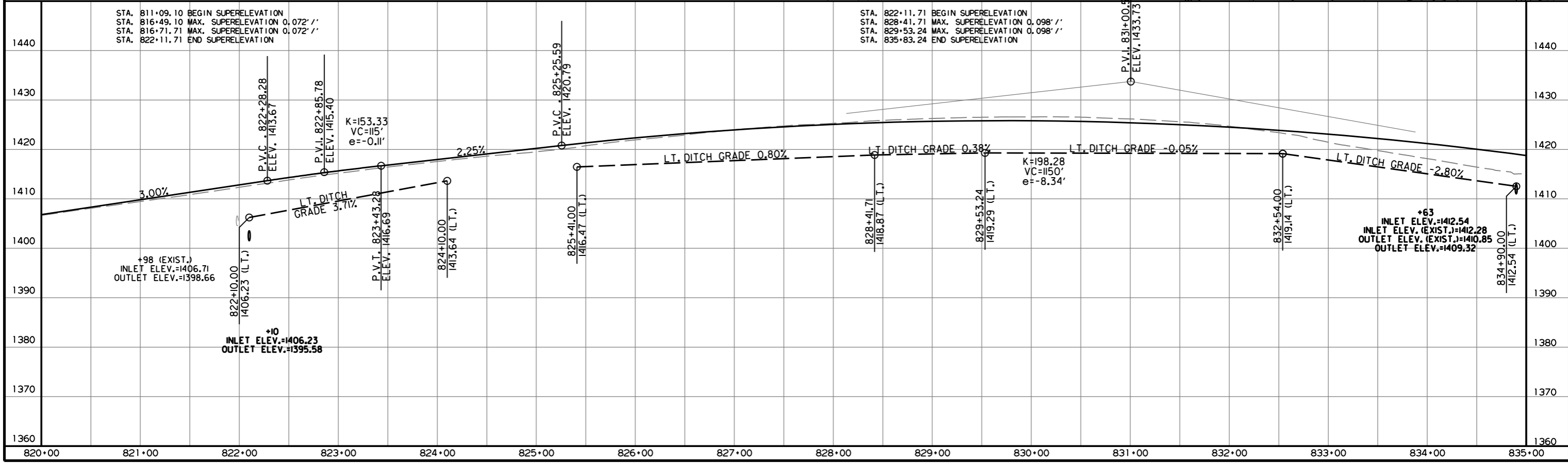
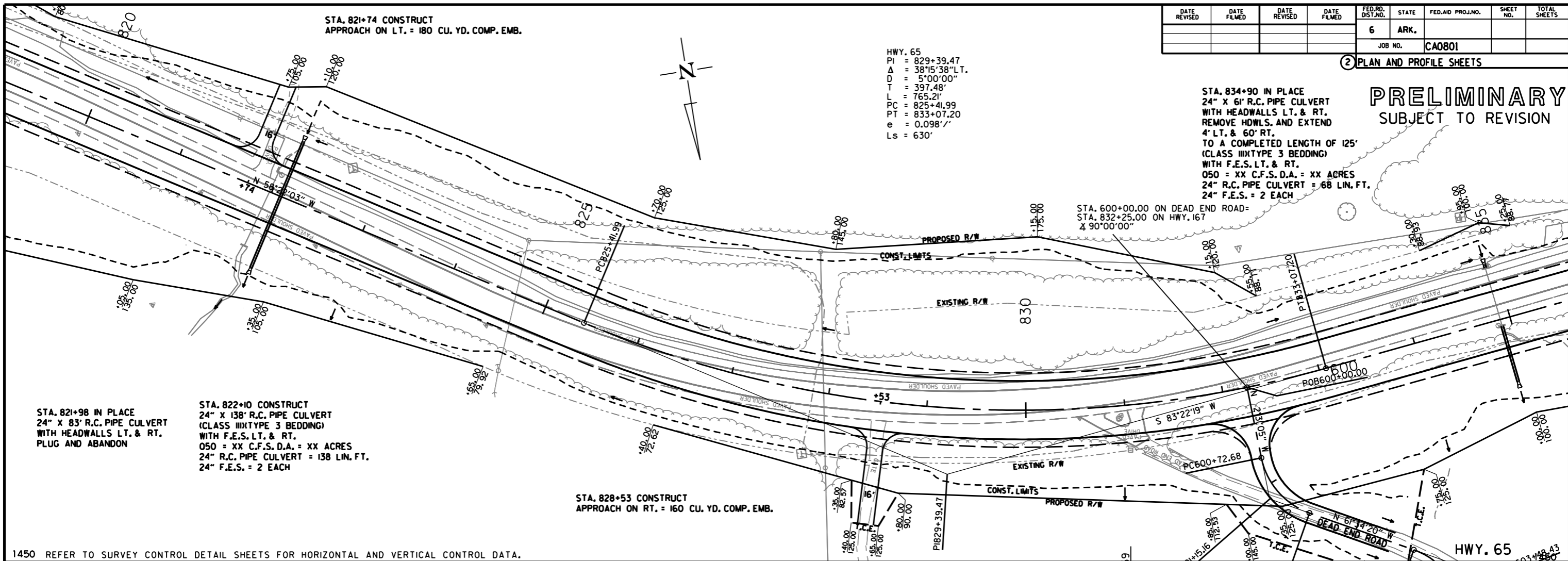
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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2 PLAN AND PROFILE SHEETS

HWY. 65
 PI = 829+39.47
 Δ = 38°15'38" L.T.
 D = 5°00'00"
 T = 397.48'
 L = 765.21'
 PC = 825+41.99
 PT = 833+07.20
 e = 0.098' /'
 Ls = 630'

STA. 834+90 IN PLACE
 24" X 61" R.C. PIPE CULVERT
 WITH HEADWALLS LT. & RT.
 REMOVE HDWLS. AND EXTEND
 4' LT. & 60' RT.
 TO A COMPLETED LENGTH OF 125'
 (CLASS III TYPE 3 BEDDING)
 WITH F.E.S. LT. & RT.
 050 = XX C.F.S. D.A. = XX ACRES
 24" R.C. PIPE CULVERT = 68 LIN. FT.
 24" F.E.S. = 2 EACH

PRELIMINARY
 SUBJECT TO REVISION

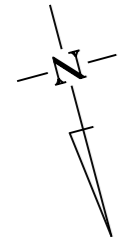


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2 PLAN AND PROFILE SHEETS

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STA. 844+78 IN PLACE
3' X 3' X 96' R.C. BOX CULVERT
WITH 3/4 WINGS LT. AND RIGHT
RETAIN AND EXTEND
40' LT.
TO A COMPLETED LENGTH OF 136'
050 = XX C.F.S. D.A. = XX ACRES

HWY. 65
PI = 846+22.10
Δ = 67°18'12" RT.
D = 5°00'00"
T = 762.83'
L = 1346.06'
PC = 838+59.27
PT = 852+05.33
e = 0.098' /'
Ls = 630'

STA. 842+25 IN PLACE
24" X 58" R.C. PIPE CULVERT
WITH HEADWALLS LT. & RT.
REMOVE HDWLS. AND EXTEND
30' LT. & 30' RT.
TO A COMPLETED LENGTH OF 118'
(CLASS IV TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
050 = XX C.F.S. D.A. = XX ACRES
24" R.C. PIPE CULVERT = 64 LIN. FT.
24" F.E.S. = 2 EACH

STA. 839+35 IN PLACE
4' X 4' X 165' R.C. BOX CULVERT
WITH 3/4 WINGS LT. AND RIGHT
RETAIN AND EXTEND
8' LT. & 70' RT.
TO A COMPLETED LENGTH OF 243'
050 = XX C.F.S. D.A. = XX ACRES

STA. 836+54 IN PLACE
22" X 14" X 34' C.M. ARCH PIPE CULVERT
REMOVE AND INSTALL
18" X 34' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPROACH = 65 CU. YD. COMP. EMB.

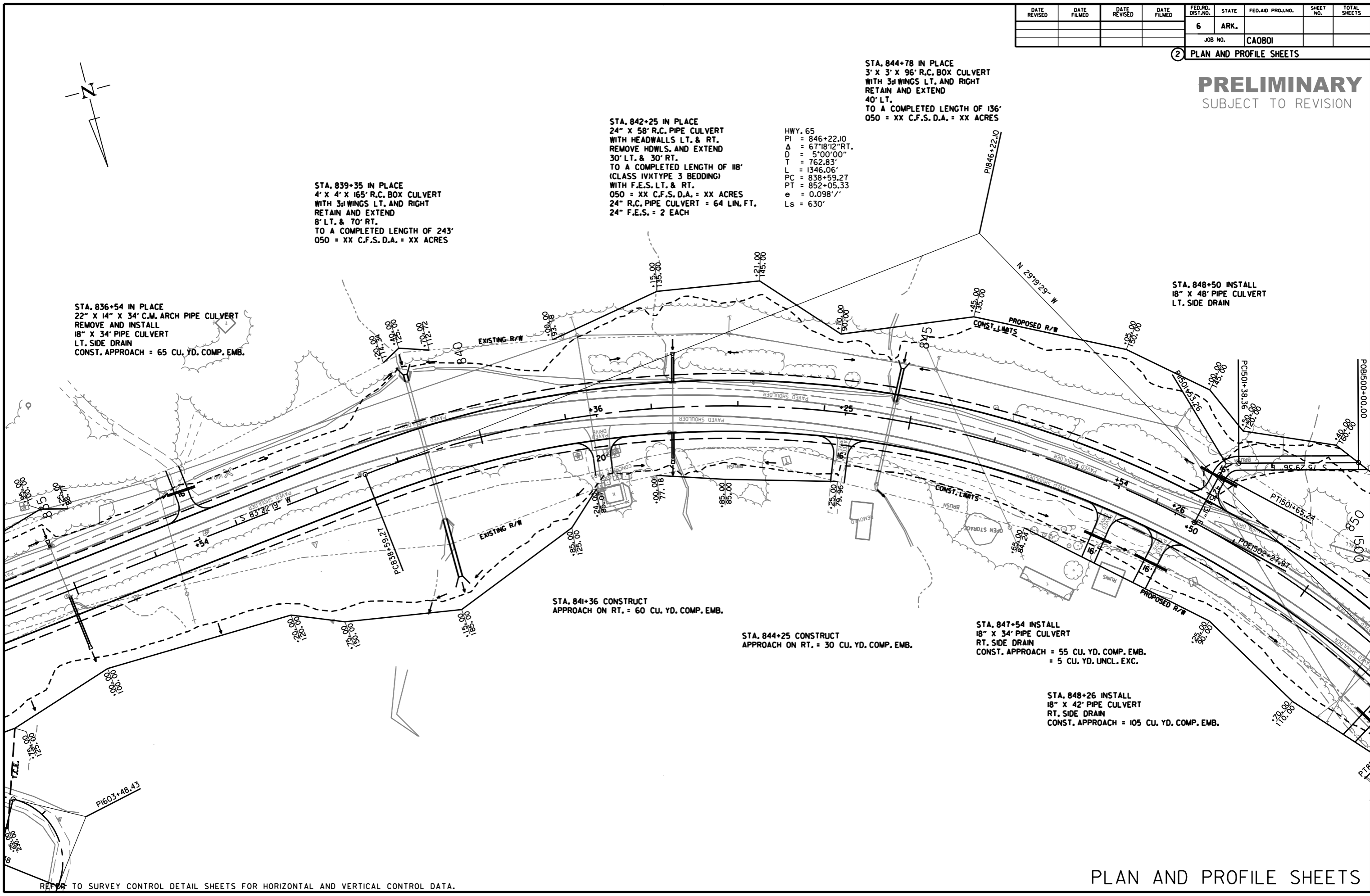
STA. 848+50 INSTALL
18" X 48" PIPE CULVERT
LT. SIDE DRAIN

STA. 841+36 CONSTRUCT
APPROACH ON RT. = 60 CU. YD. COMP. EMB.

STA. 844+25 CONSTRUCT
APPROACH ON RT. = 30 CU. YD. COMP. EMB.

STA. 847+54 INSTALL
18" X 34' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPROACH = 55 CU. YD. COMP. EMB.
= 5 CU. YD. UNCL. EXC.

STA. 848+26 INSTALL
18" X 42' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPROACH = 105 CU. YD. COMP. EMB.



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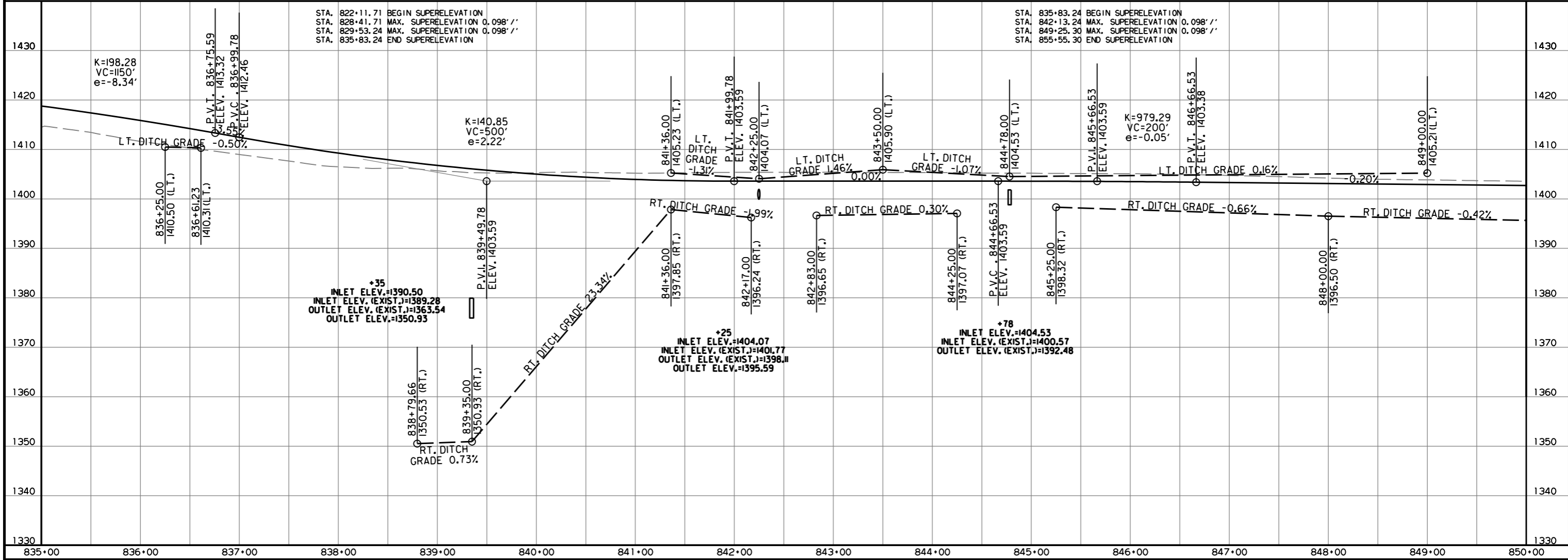
PLAN AND PROFILE SHEETS

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2 PLAN AND PROFILE SHEETS

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REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.



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HWY. 65
 PI = 846+22.10
 Δ = 67°18'12" RT.
 D = 5°00'00"
 T = 762.83'
 L = 1346.06'
 PC = 838+59.27
 PT = 852+05.33
 e = 0.098' /'
 Ls = 630'

STA. 852+00 INSTALL
 18" X 46' PIPE CULVERT
 LT. SIDE DRAIN

STA. 854+56 IN PLACE
 12" X 40' C.M. PIPE CULVERT
 REMOVE AND INSTALL
 18" X 56' PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPROACH = 235 CU. YD. COMP. EMB.

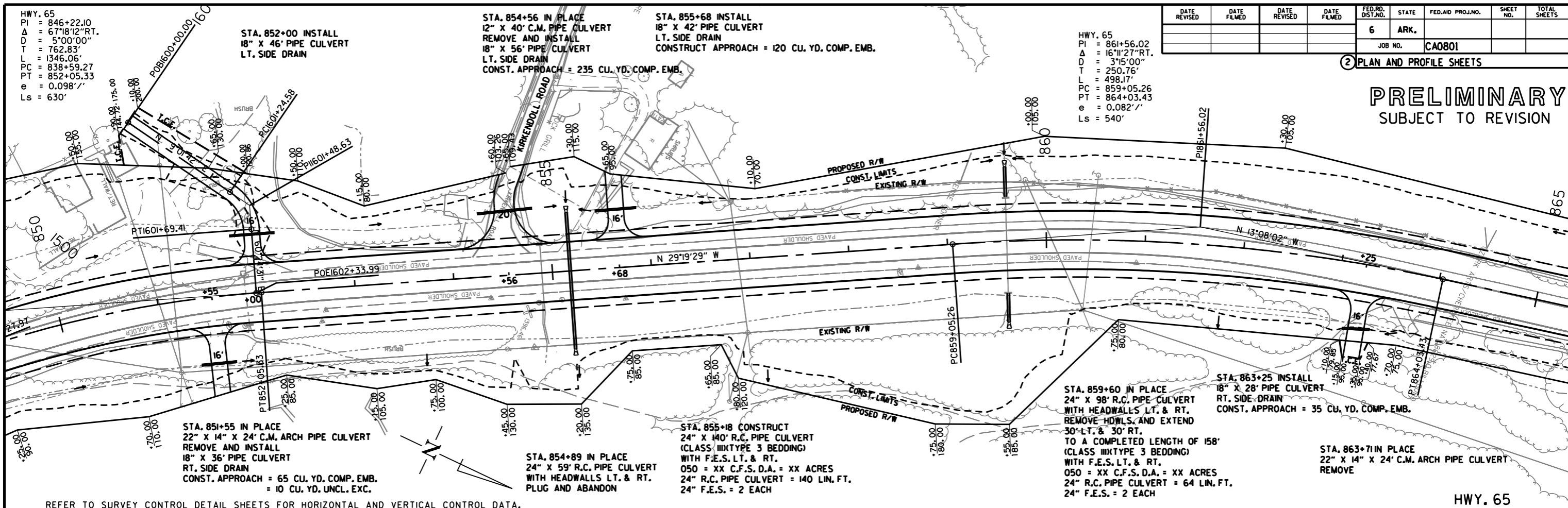
STA. 855+68 INSTALL
 18" X 42' PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPROACH = 120 CU. YD. COMP. EMB.

HWY. 65
 PI = 861+56.02
 Δ = 16°11'27" RT.
 D = 3°15'00"
 T = 250.76'
 L = 498.17'
 PC = 859+05.26
 PT = 864+03.43
 e = 0.082' /'
 Ls = 540'

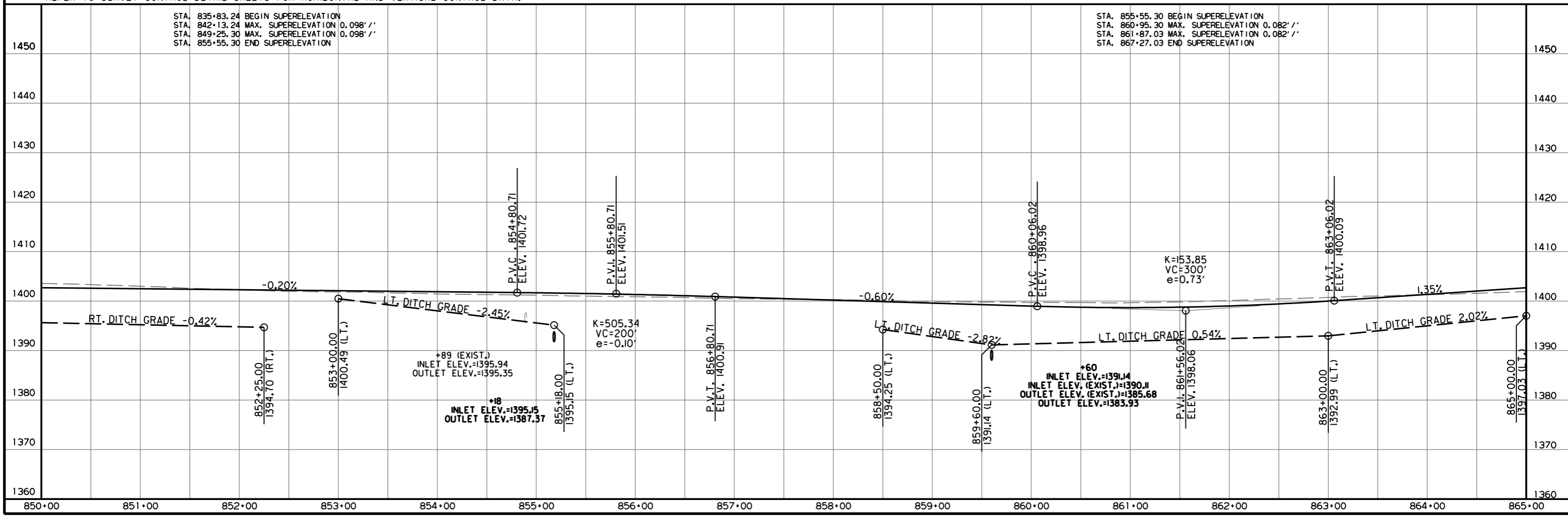
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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2 PLAN AND PROFILE SHEETS

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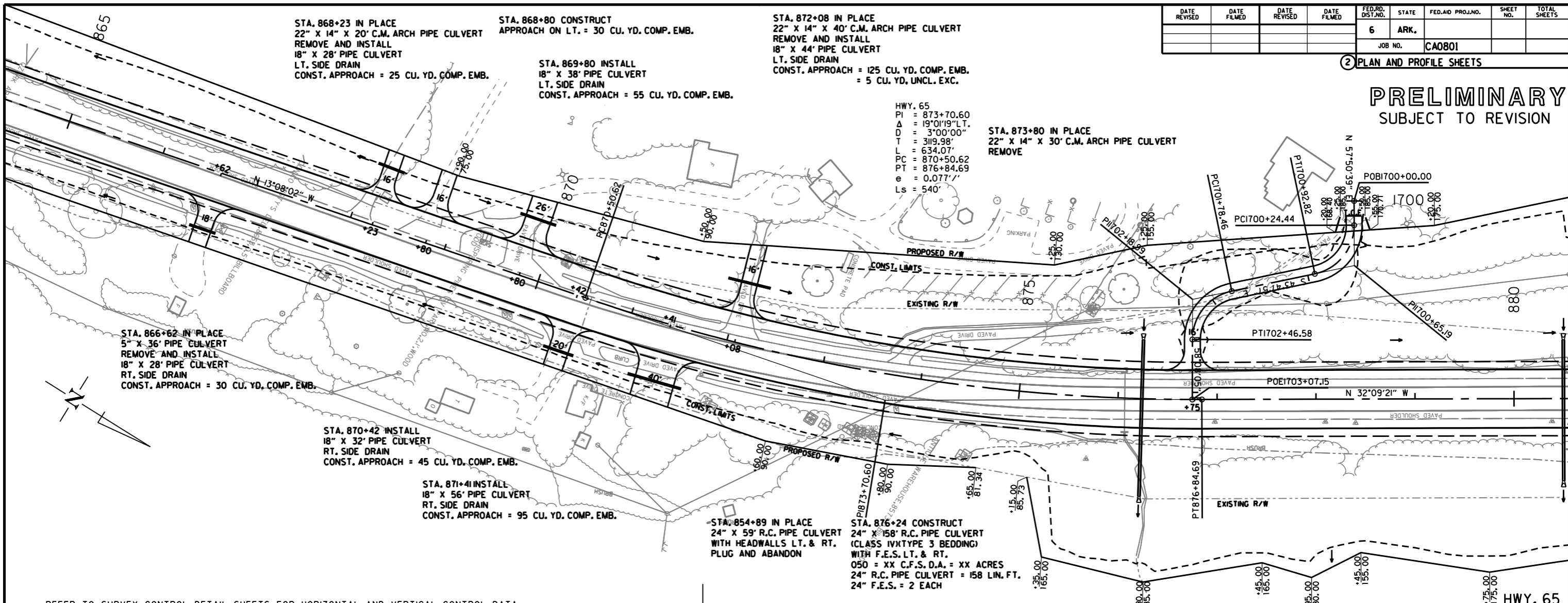


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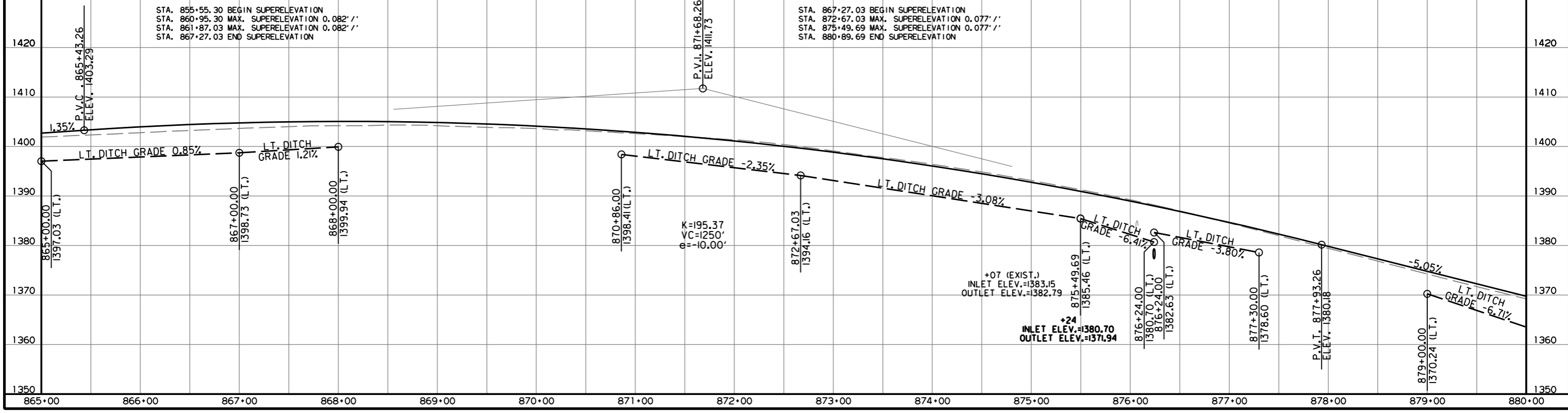
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STA. 880+56 IN PLACE
24" X 78" R.C. PIPE CULVERT
WITH HEADWALLS LT. & RT.
PLUG AND ABANDON

STA. 880+50 CONSTRUCT
24" X 144" R.C. PIPE CULVERT
(CLASS III TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
050 = XX C.F.S. D.A. = XX ACRES
24" R.C. PIPE CULVERT = 144 LIN. FT.
24" F.E.S. = 2 EACH

STA. 886+85 IN PLACE
24" X 86" R.C. PIPE CULVERT
WITH HEADWALLS LT. & RT.
PLUG AND ABANDON

STA. 886+92 CONSTRUCT
24" X 140" R.C. PIPE CULVERT
(CLASS III TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
050 = XX C.F.S. D.A. = XX ACRES
24" R.C. PIPE CULVERT = 140 LIN. FT.
24" F.E.S. = 2 EACH

STA. 891+50 CONSTRUCT
24" X 142" R.C. PIPE CULVERT
(CLASS III TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
050 = XX C.F.S. D.A. = XX ACRES
24" R.C. PIPE CULVERT = 142 LIN. FT.
24" F.E.S. = 2 EACH

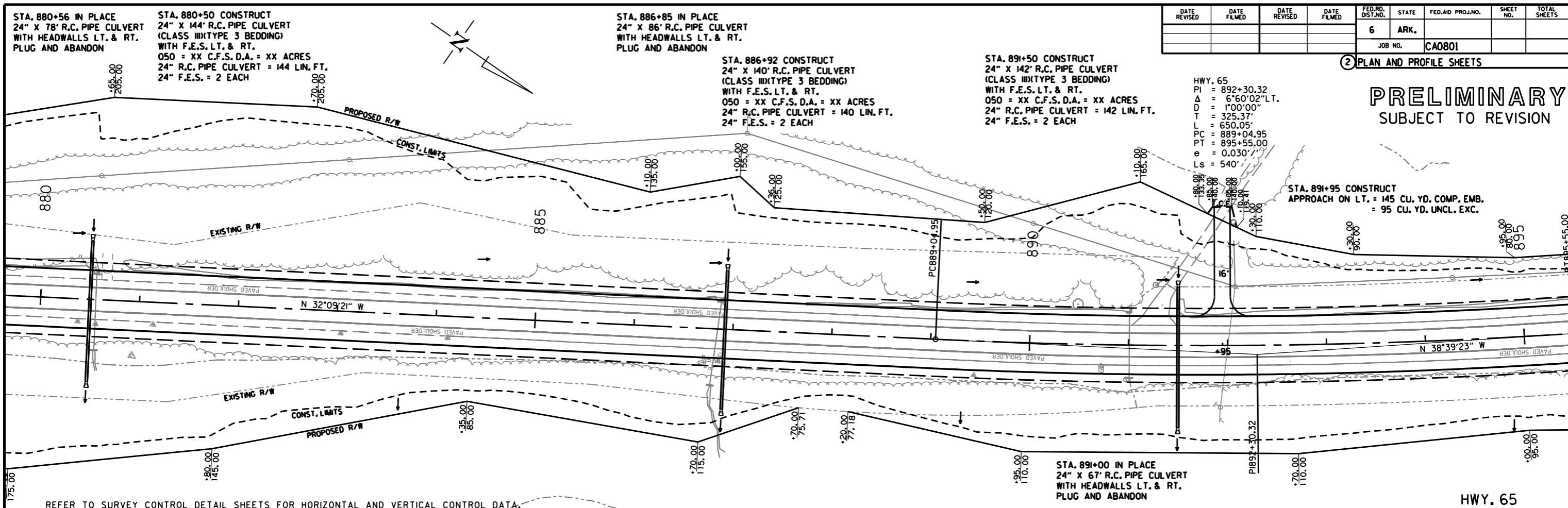
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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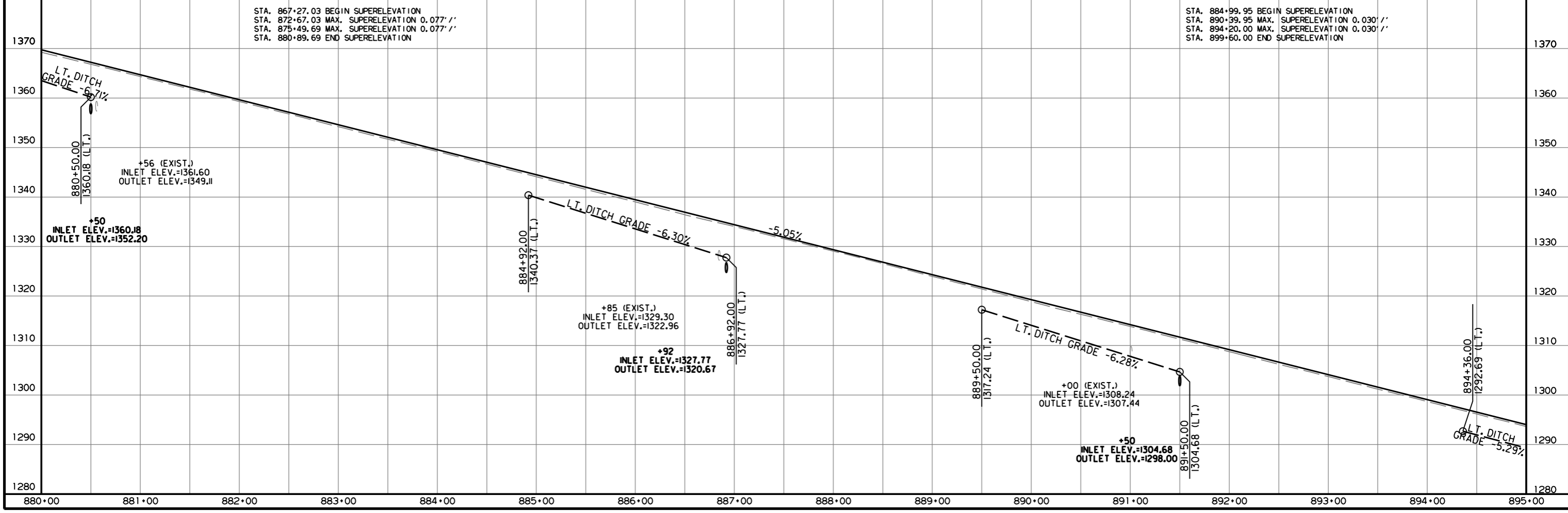
HWY. 65
PI = 892+30.32
Δ = 6°60'02" LT.
D = 1'00'00"
T = 325.37'
L = 650.05'
PC = 889+04.95
PT = 895+55.00
e = 0.030' /'
Ls = 540'

STA. 891+95 CONSTRUCT
APPROACH ON LT. = 145 CU. YD. COMP. EMB.
= 95 CU. YD. UNCL. EXC.



REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

HWY. 65



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2 PLAN AND PROFILE SHEETS

PRELIMINARY
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HWY. 65
PI = 892+30.32
Δ = 6°60'02" LT.
D = 1'00'00"
T = 325.37'
PC = 650.05'
PT = 889+04.95
e = 0.030' /'
Ls = 540'

STA. 896+36 IN PLACE
24" X 72" R.C. PIPE CULVERT
WITH HEADWALLS LT. & RT.
REMOVE HDWLS. AND EXTEND
28' LT. & 34' RT.
TO A COMPLETED LENGTH OF 134'
(CLASS III TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
050 = XX C.F.S. D.A. = XX ACRES
24" R.C. PIPE CULVERT = 66 LIN. FT.
24" F.E.S. = 2 EACH

STA. 896+68 CONSTRUCT
APPROACH ON LT. = 40 CU. YD. COMP. EMB.

STA. 901+20 IN PLACE
18" X 24" C.M. ARCH PIPE CULVERT
REMOVE AND INSTALL
18" X 28" PIPE CULVERT
LT. SIDE DRAIN
CONST. APPROACH = 30 CU. YD. COMP. EMB.

STA. 902+74 IN PLACE
22" X 14" X 24" C.M. ARCH PIPE CULVERT
REMOVE AND INSTALL
18" X 32" PIPE CULVERT
LT. SIDE DRAIN
CONST. APPROACH = 70 CU. YD. COMP. EMB.

STA. 904+35 IN PLACE
24" X 92" R.C. PIPE CULVERT
WITH HEADWALLS LT. & RT.
REMOVE HDWLS. AND EXTEND
52' LT. & 22' RT.
TO A COMPLETED LENGTH OF 166'
(CLASS III TYPE 3 BEDDING)
WITH F.E.S. LT. & RT.
050 = XX C.F.S. D.A. = XX ACRES
24" R.C. PIPE CULVERT = 78 LIN. FT.
24" F.E.S. = 2 EACH

STA. 907+84 IN PLACE
18" X 24" C.M. ARCH PIPE CULVERT
REMOVE AND INSTALL
18" X 28" PIPE CULVERT
LT. SIDE DRAIN
CONST. APPROACH = 25 CU. YD. COMP. EMB.

STA. 907+22 IN PLACE
18" X 58" C.M. PIPE CULVERT
REMOVE CONSTRUCT
APPROACH ON RT. = 70 CU. YD. COMP. EMB.

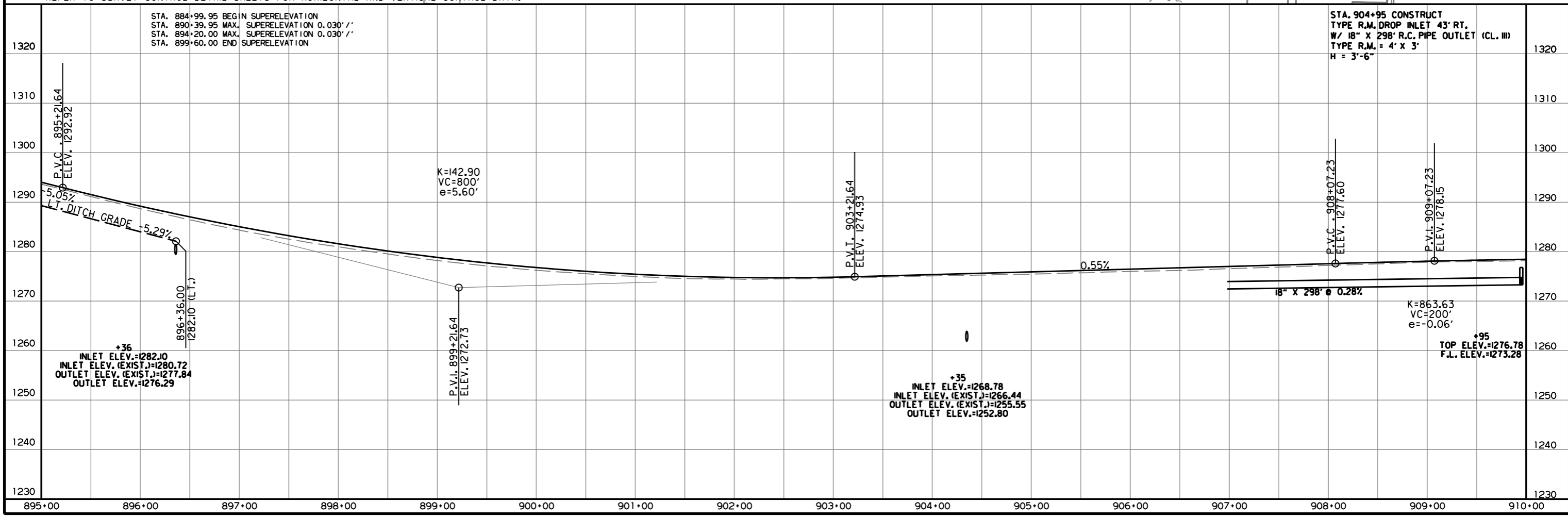
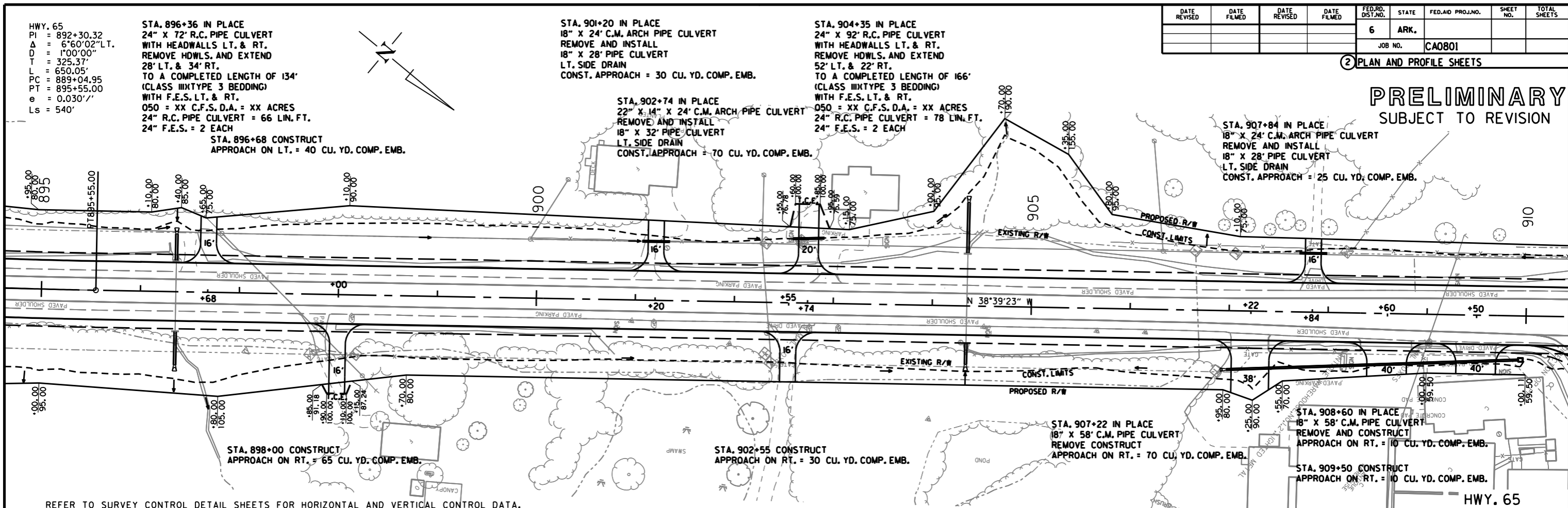
STA. 908+60 IN PLACE
18" X 58" C.M. PIPE CULVERT
REMOVE AND CONSTRUCT
APPROACH ON RT. = 10 CU. YD. COMP. EMB.

STA. 909+50 CONSTRUCT
APPROACH ON RT. = 10 CU. YD. COMP. EMB.

STA. 898+00 CONSTRUCT
APPROACH ON RT. = 65 CU. YD. COMP. EMB.

STA. 902+55 CONSTRUCT
APPROACH ON RT. = 30 CU. YD. COMP. EMB.

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

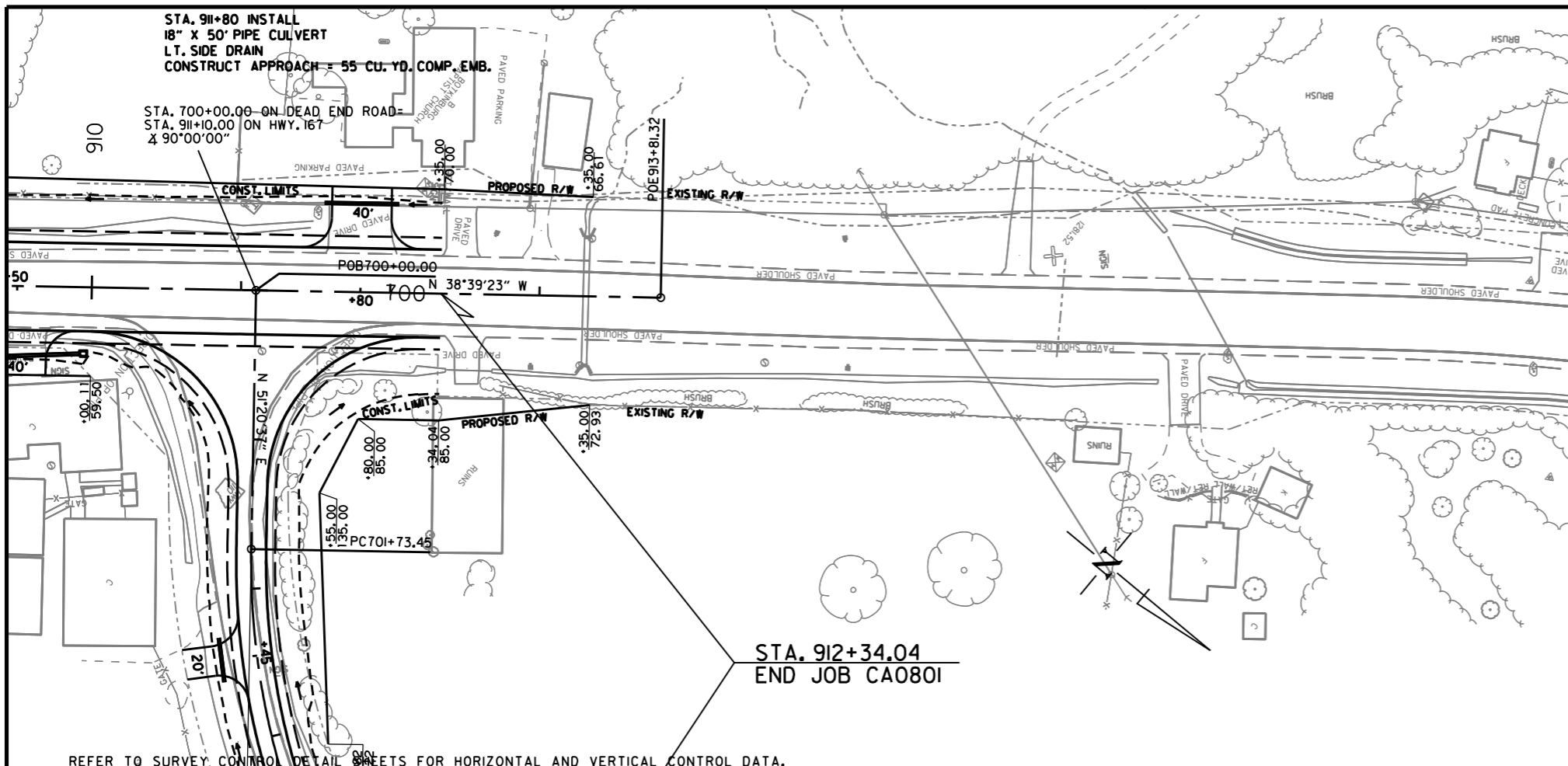


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② PLAN AND PROFILE SHEETS

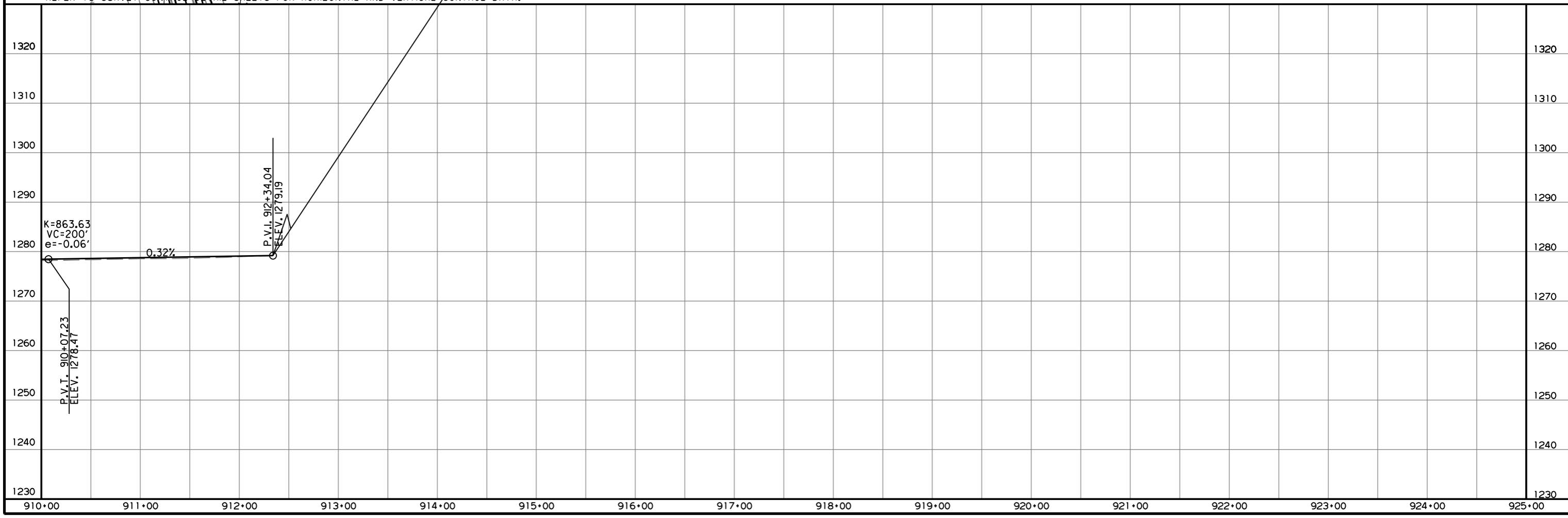
PRELIMINARY
SUBJECT TO REVISION



STA. 912+34.04
END JOB CA0801

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

HWY. 65

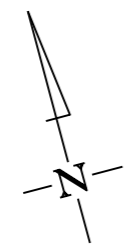


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PRELIMINARY
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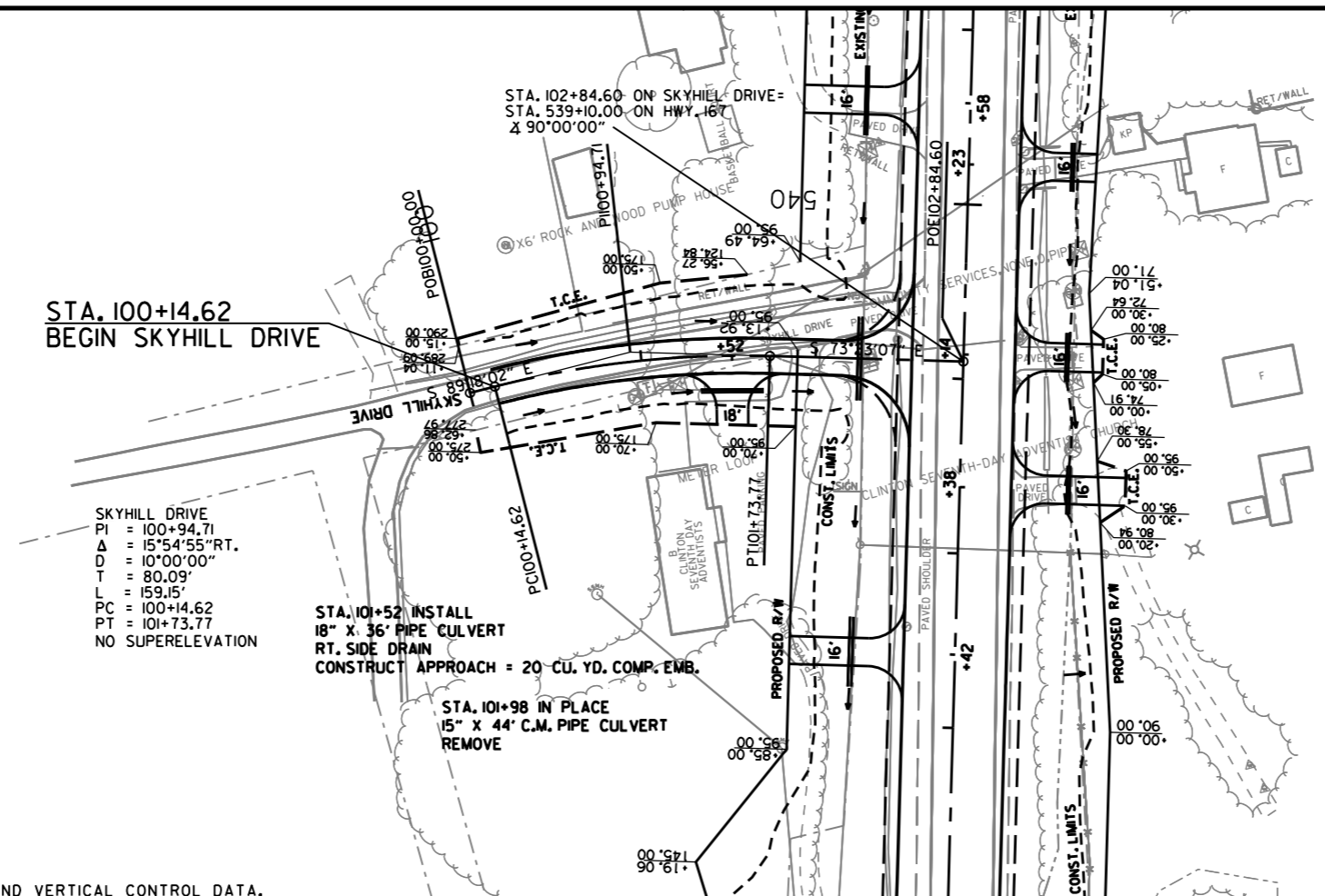


STA. 100+14.62
BEGIN SKYHILL DRIVE

SKYHILL DRIVE
PI = 100+94.71
Δ = 15°54'55" RT.
D = 10°00'00"
T = 80.09'
L = 159.15'
PC = 100+14.62
PT = 101+73.77
NO SUPERELEVATION

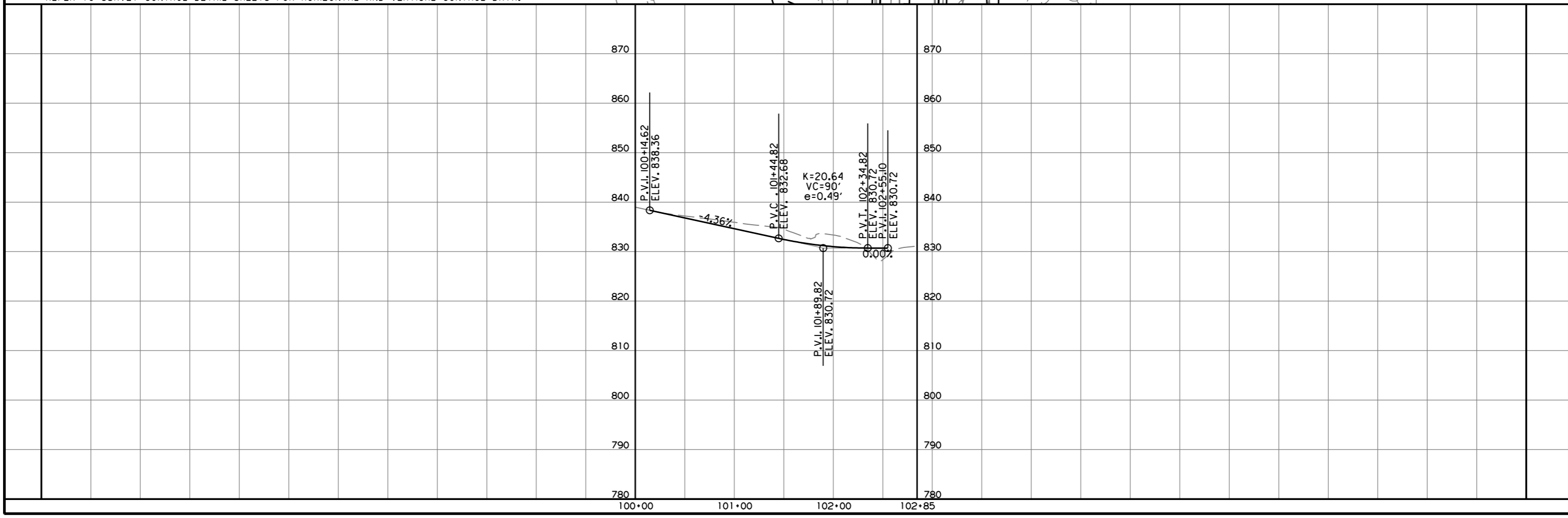
STA. 101+52 INSTALL
18" X 36" PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 20 CU. YD. COMP. EMB.

STA. 101+98 IN PLACE
15" X 44" C.M. PIPE CULVERT
REMOVE



REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

SKYHILL DRIVE



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STA. 201+22 INSTALL
18" X 38' PIPE CULVERT
LT. SIDE DRAIN
CONSTRUCT APPROACH = 30 CU. YD. COMP. EMB.
= 5 CU. YD. UNCL. EXC.
STA. 201+53 IN PLACE
18" X 20' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 201+84 IN PLACE
18" X 20' C.M. PIPE CULVERT
REMOVE AND INSTALL
18" X 38' PIPE CULVERT
LT. SIDE DRAIN
CONSTRUCT APPROACH = 30 CU. YD. COMP. EMB.
= 40 CU. YD. UNCL. EXC.

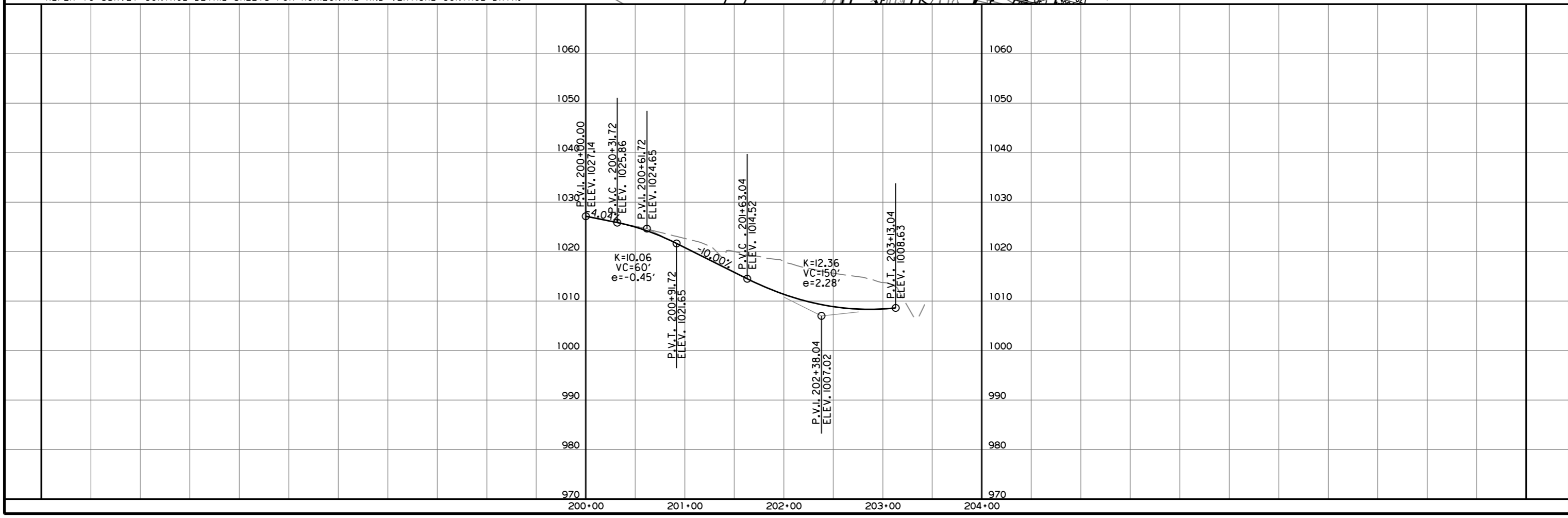
ISOM LANE
PI = 201+37.55
Δ = 26°33'57" L.T.
D = 15°00'00"
T = 90.17'
L = 177.11'
PC = 200+47.38
PT = 202+24.48
NO SUPERELEVATION

STA. 200+00
BEGIN ISOM LANE
STA. 201+00 IN PLACE
18" X 32' C.M. PIPE CULVERT
REMOVE AND INSTALL
18" X 36' PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 20 CU. YD. COMP. EMB.
= 5 CU UNCL. EXC.

STA. 201+53 IN PLACE
18" X 20' C.M. PIPE CULVERT
REMOVE AND INSTALL
18" X 38' PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 30 CU. YD. COMP. EMB.
= 10 CU. YD. UNCL. EXC.

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

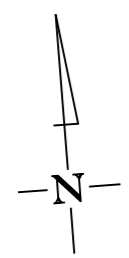
ISOM LANE



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STA. 300+00.00 ON HENDERSON ROAD =
STA. 650+00.00 ON HWY. 167
4 90°00'00"

STA. 301+61 IN PLACE
15" X 30' PIPE CULVERT
REMOVE AND INSTALL
18" X 34' PIPE CULVERT

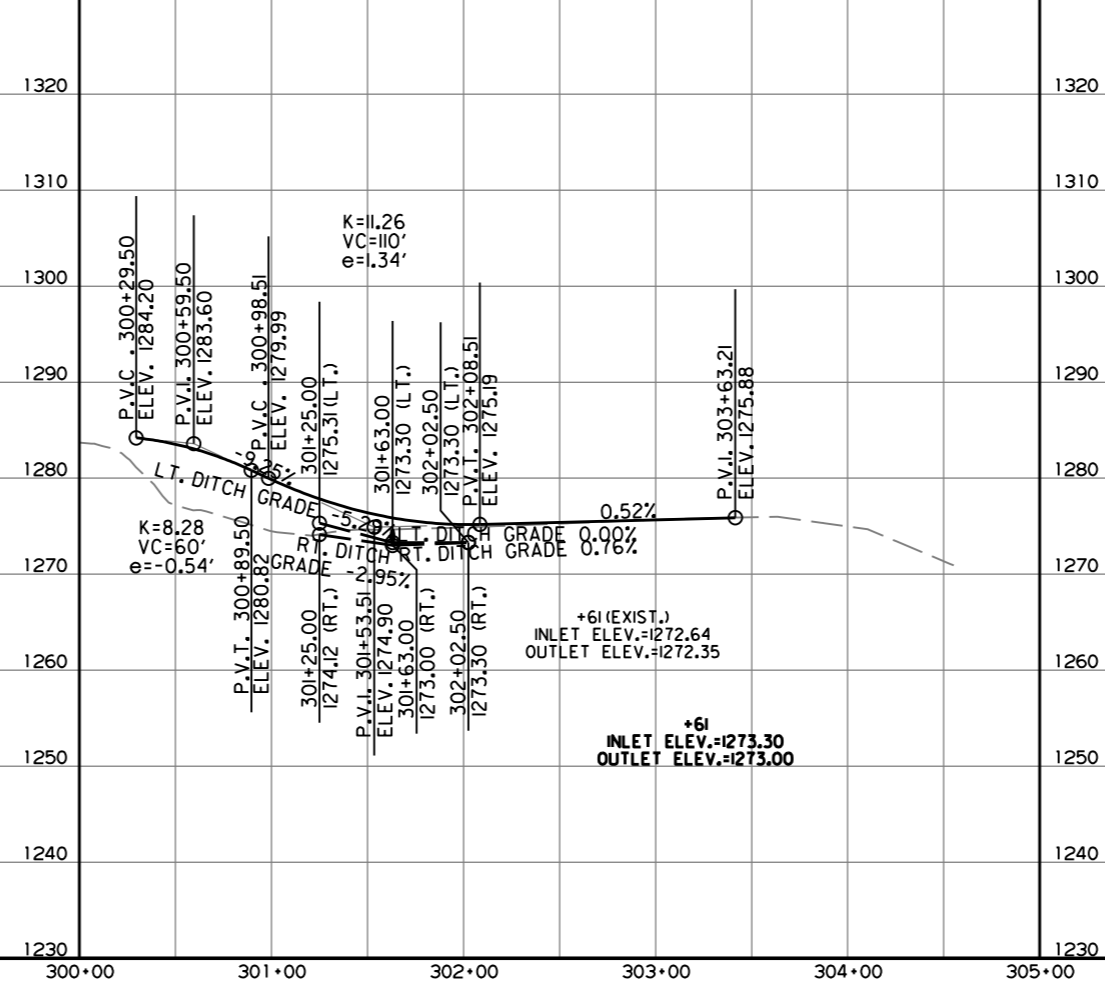
HENDERSON ROAD
PI = 302+65.92
Δ = 6°03'04" L.T.
D = 4°00'00"
T = 75.71'
L = 151.28'
PC = 301+90.21
PT = 303+41.49
NO SUPERELEVATION

STA. 303+41.49
END HENDERSON ROAD

STA. 302+88 INSTALL
21" X 15" X 18' ARCH PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 10 CU. YD. COMP. EMB.

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

HENDERSON ROAD

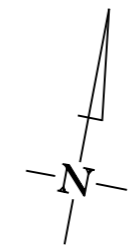
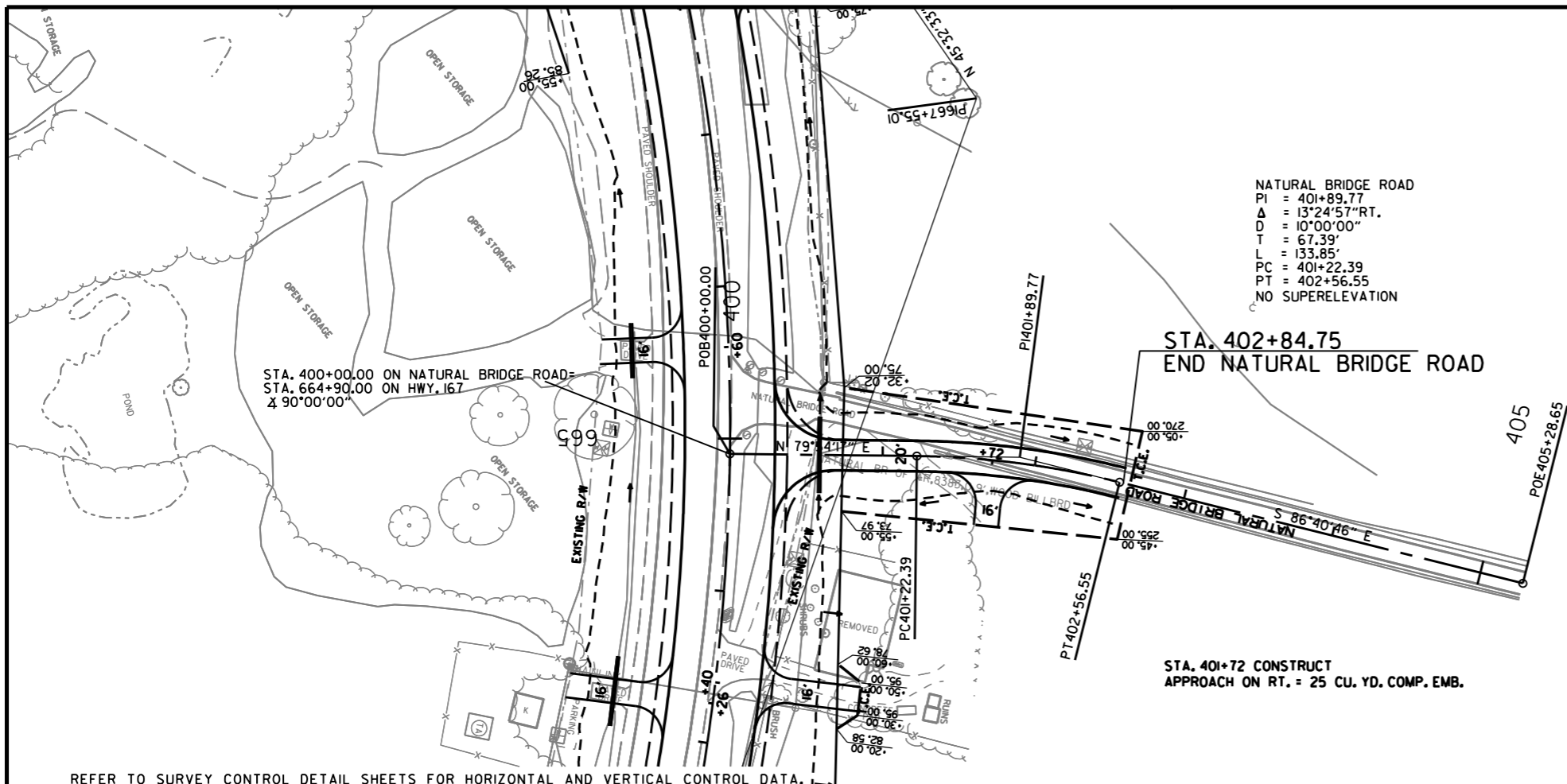


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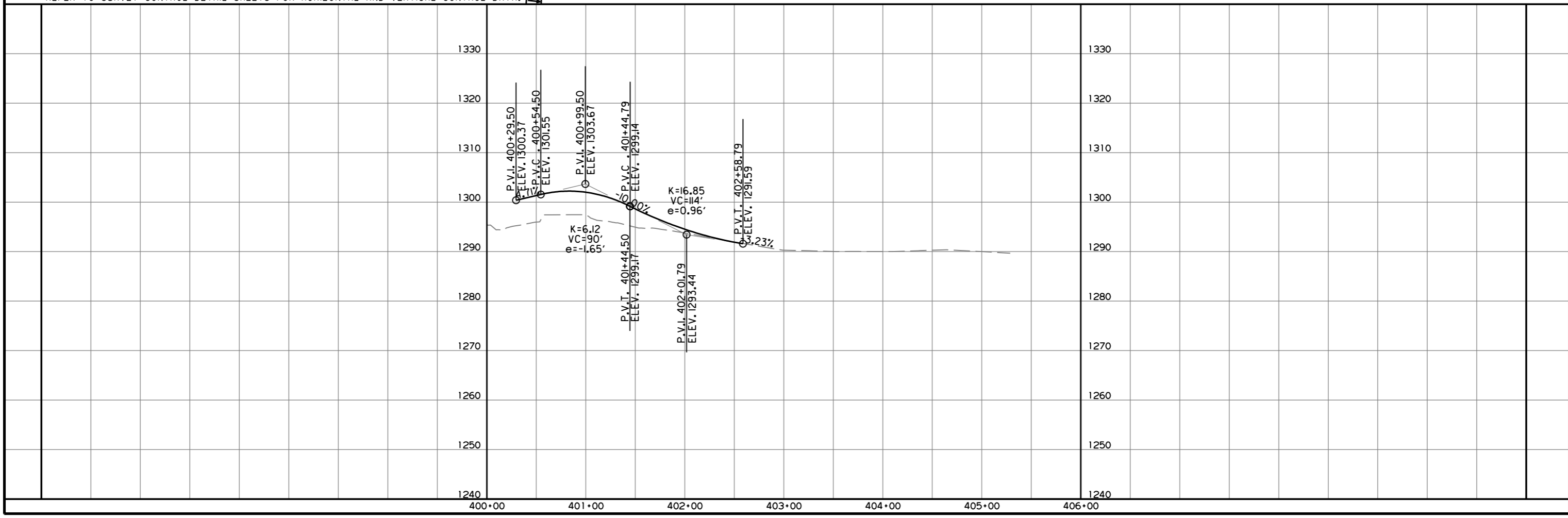
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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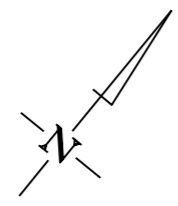
NATURAL BRIDGE ROAD



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**STA. 500+22.64
BEGIN GLENN ROAD**

GLENN ROAD
 PI = 502+07.66 STA. 501+90 INSTALL
 Δ = 41°32'44" L.T. 18" X 56' PIPE CULVERT
 D = 26'30"00"
 T = 82.01'
 L = 156.78'
 PC = 501+25.65
 PT = 502+82.42
 NO SUPERELEVATION

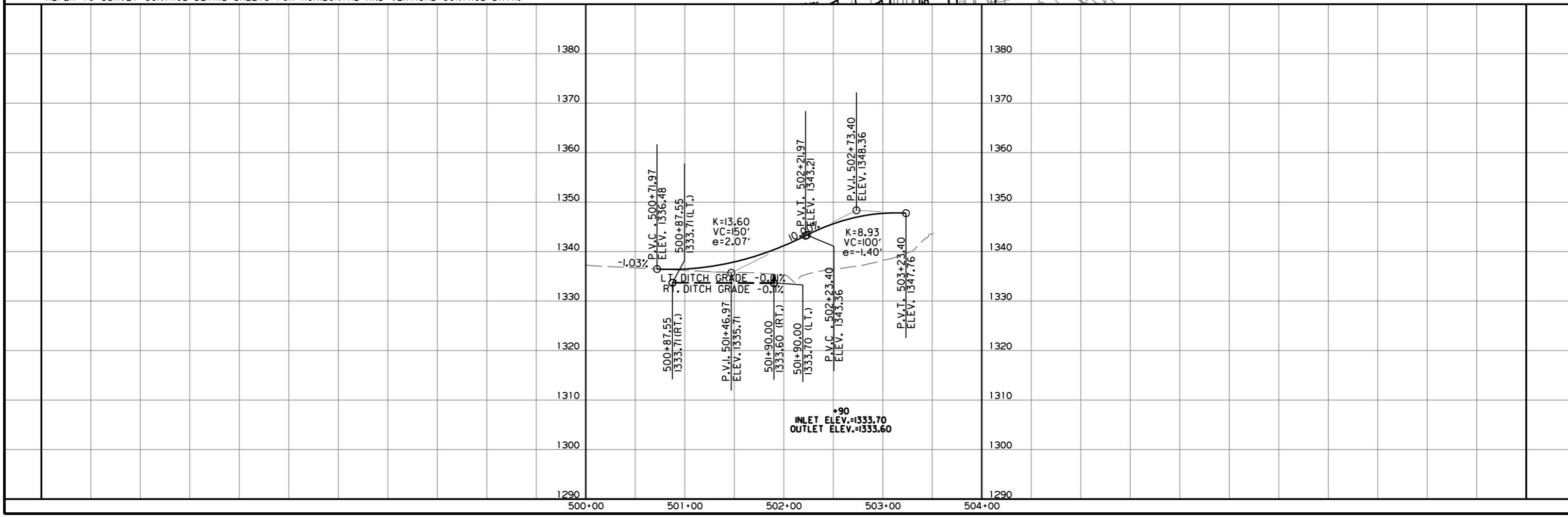
STA. 502+15 CONSTRUCT
 APPROACH ON RT. = 295 CU. YD. COMP. EMB.

STA. 502+25 IN PLACE
 15" X 24' PIPE CULVERT
 REMOVE

STA. 503+52.90 ON GLENN ROAD=
 STA. 715+00.00 ON HWY. 167
 ± 90°00'00"

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

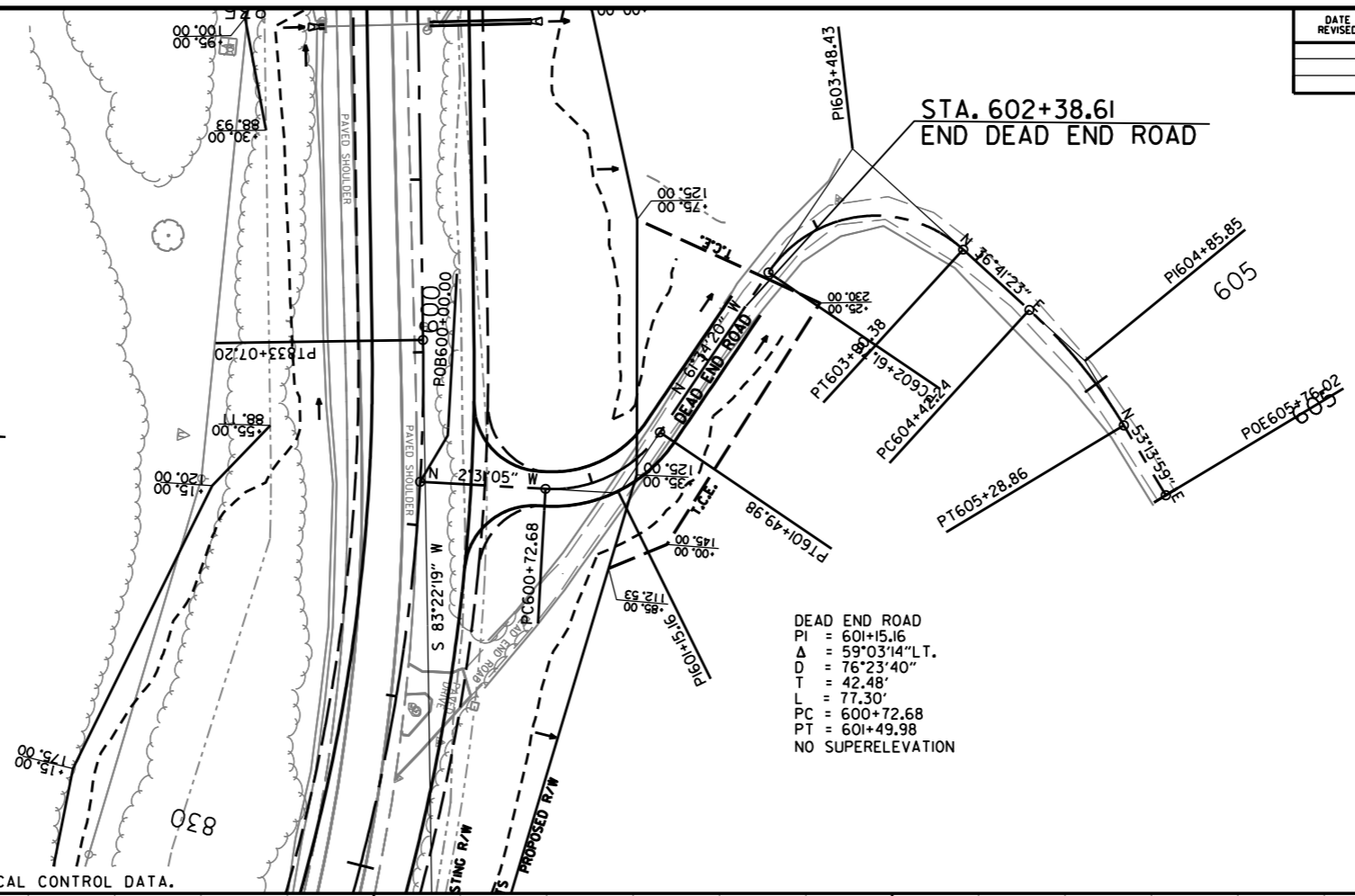
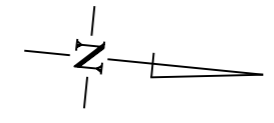
GLENN ROAD



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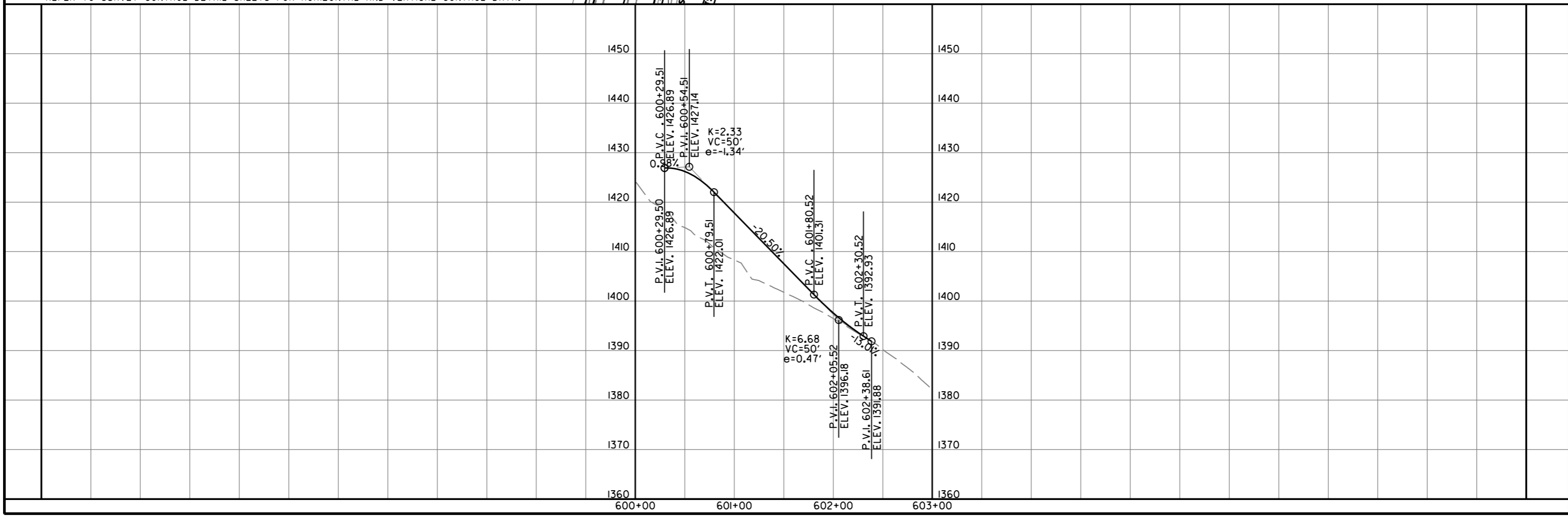
PRELIMINARY
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DEAD END ROAD
 PI = 601+5.16
 Δ = 59°03'14" L.T.
 D = 76°23'40"
 T = 42.48'
 L = 77.30'
 PC = 600+72.68
 PT = 601+49.98
 NO SUPERELEVATION

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

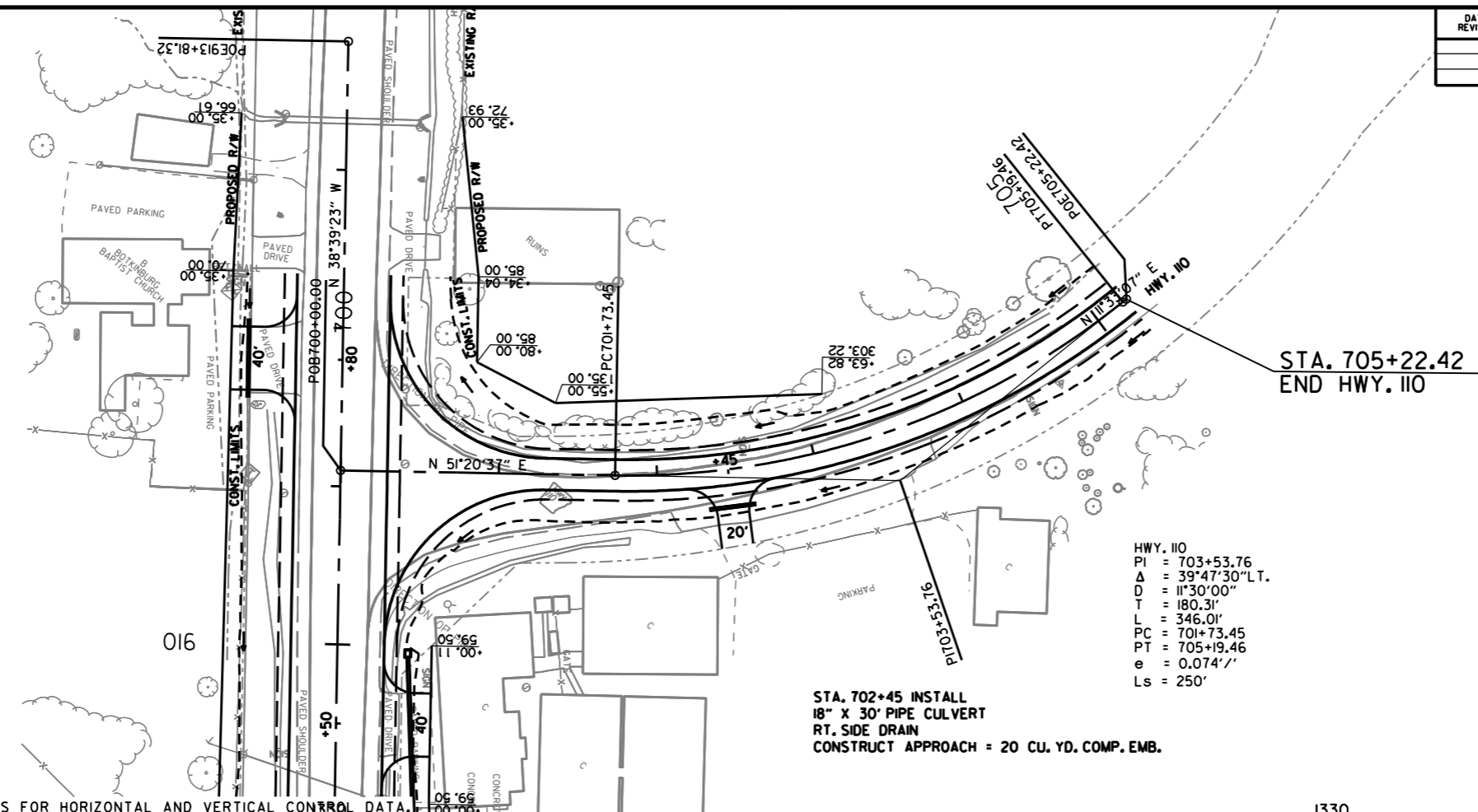
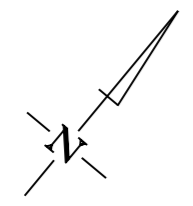
DEAD END ROAD



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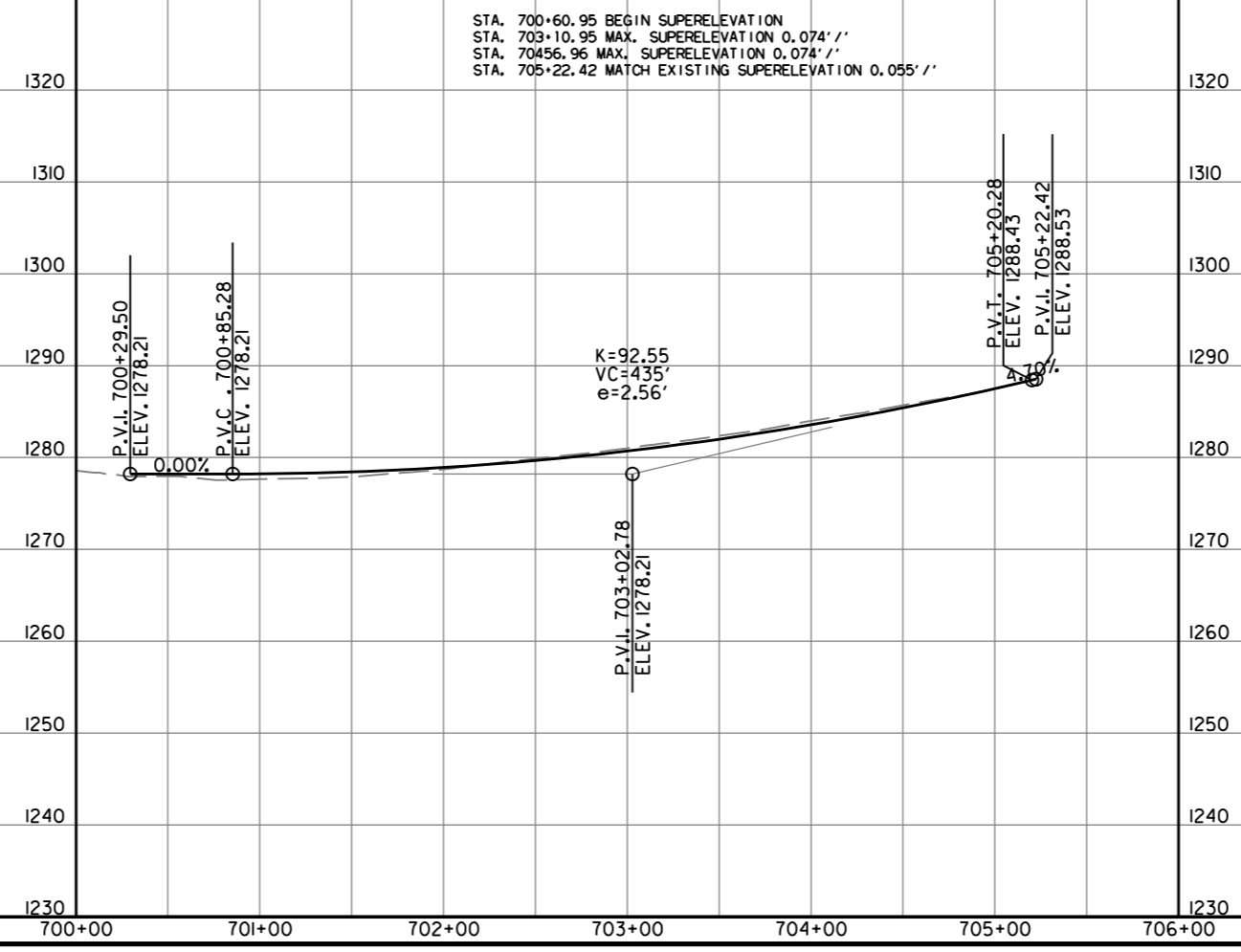


HWY. 110
 PI = 703+53.76
 Δ = 39°47'30" L.T.
 D = 11°30'00"
 T = 180.31'
 L = 346.01'
 PC = 701+73.45
 PT = 705+19.46
 e = 0.074' / '
 Ls = 250'

STA. 702+45 INSTALL
 18" x 30' PIPE CULVERT
 RT. SIDE DRAIN
 CONSTRUCT APPROACH = 20 CU. YD. COMP. EMB.

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

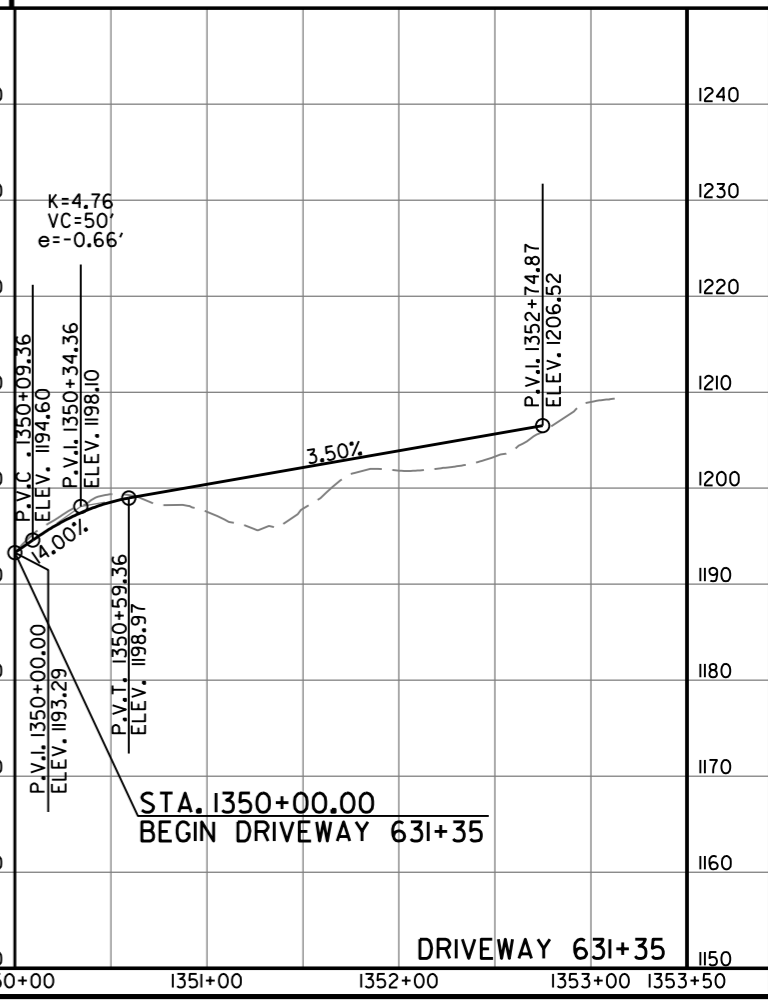
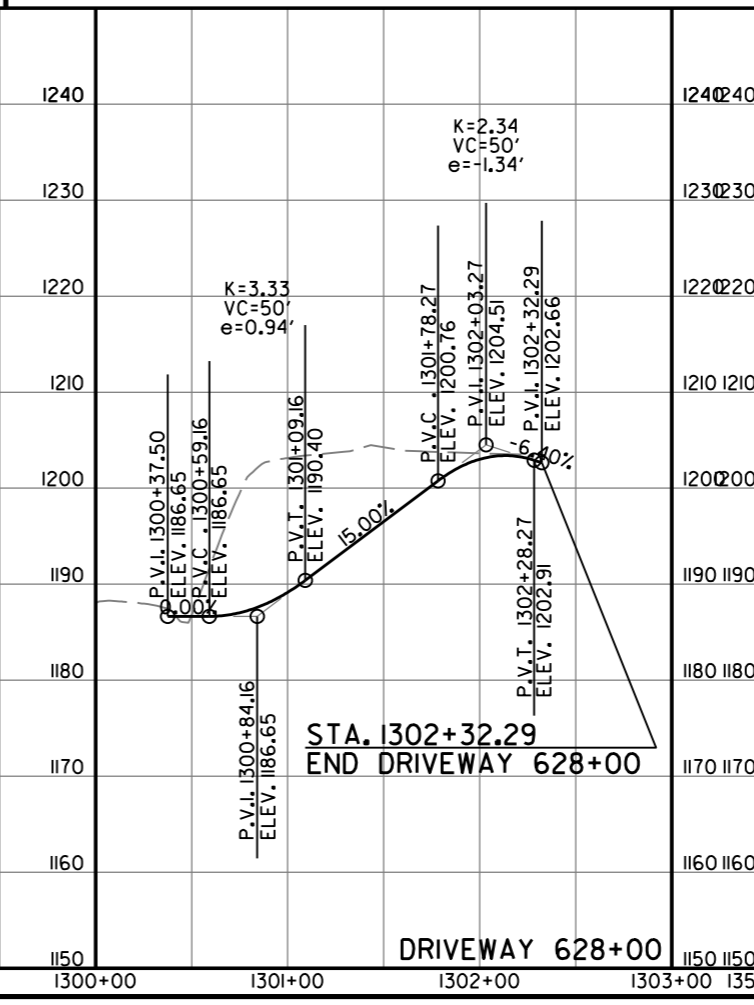
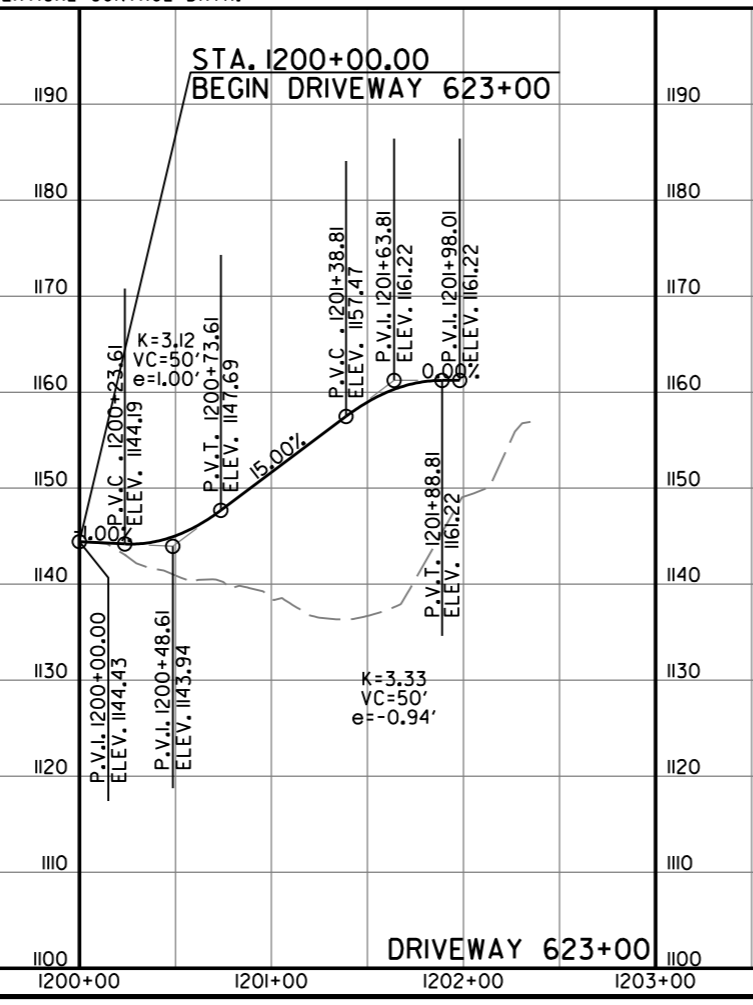
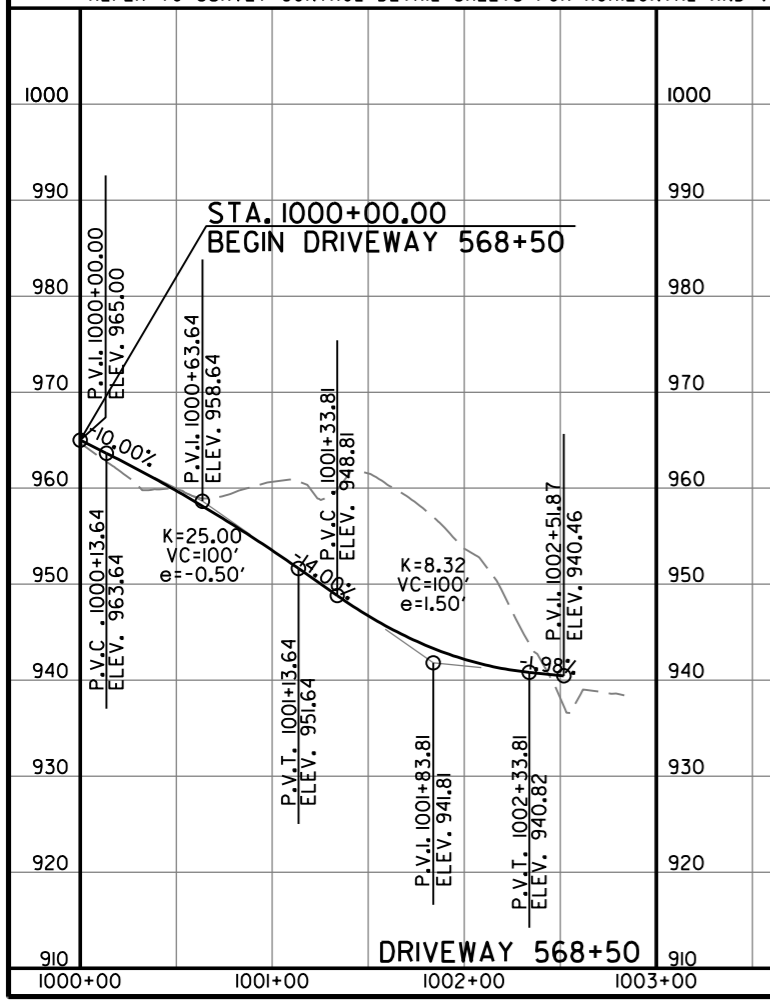
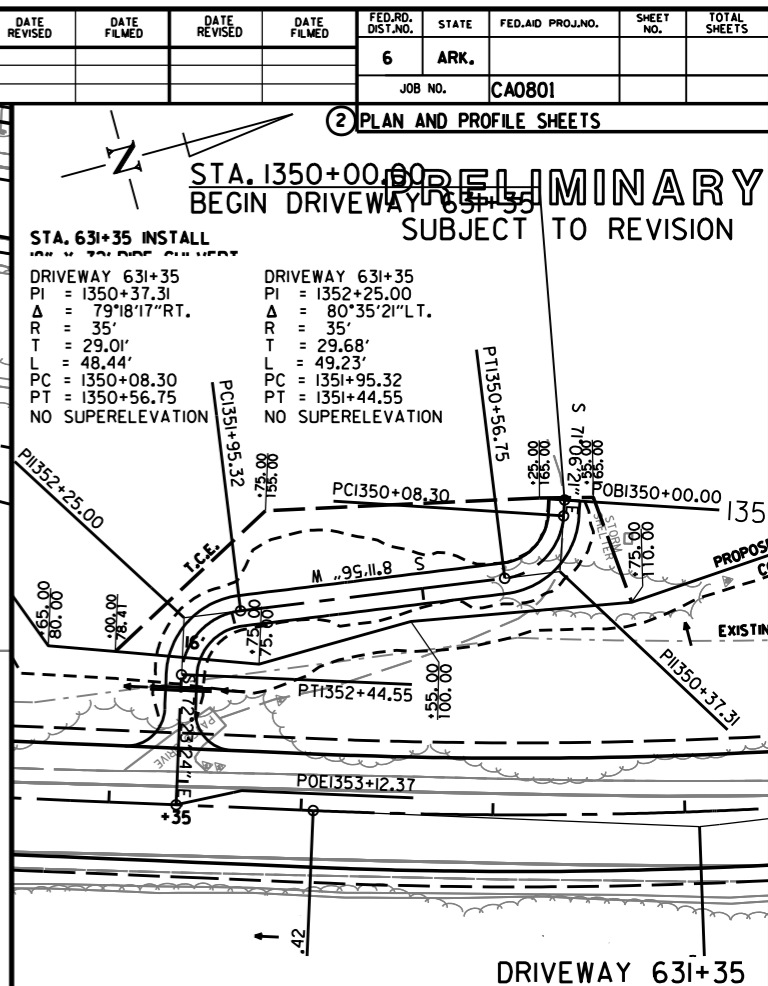
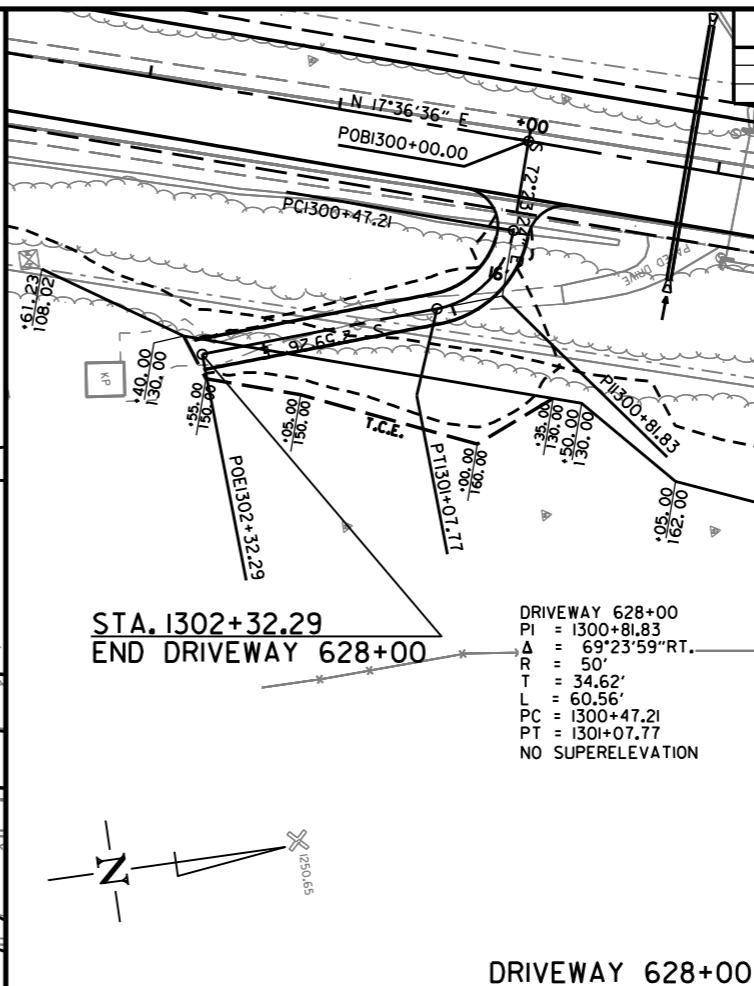
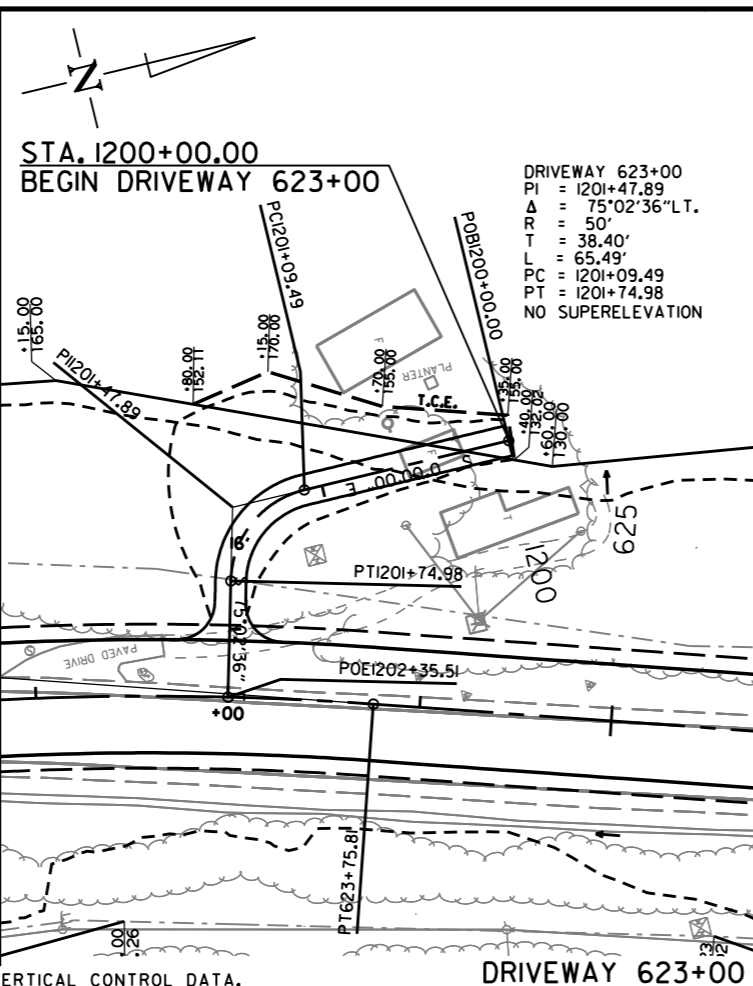
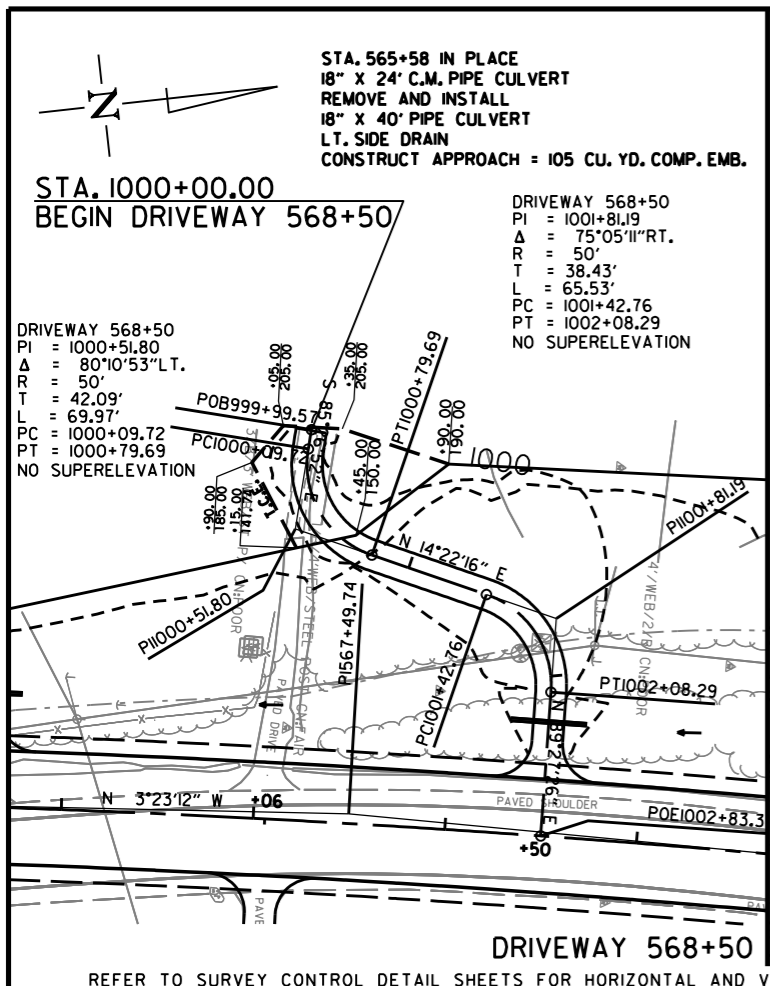
1330 HWY. 110



STA. 700+60.95 BEGIN SUPERELEVATION
 STA. 703+10.95 MAX. SUPERELEVATION 0.074' / '
 STA. 70456.96 MAX. SUPERELEVATION 0.074' / '
 STA. 705+22.42 MATCH EXISTING SUPERELEVATION 0.055' / '

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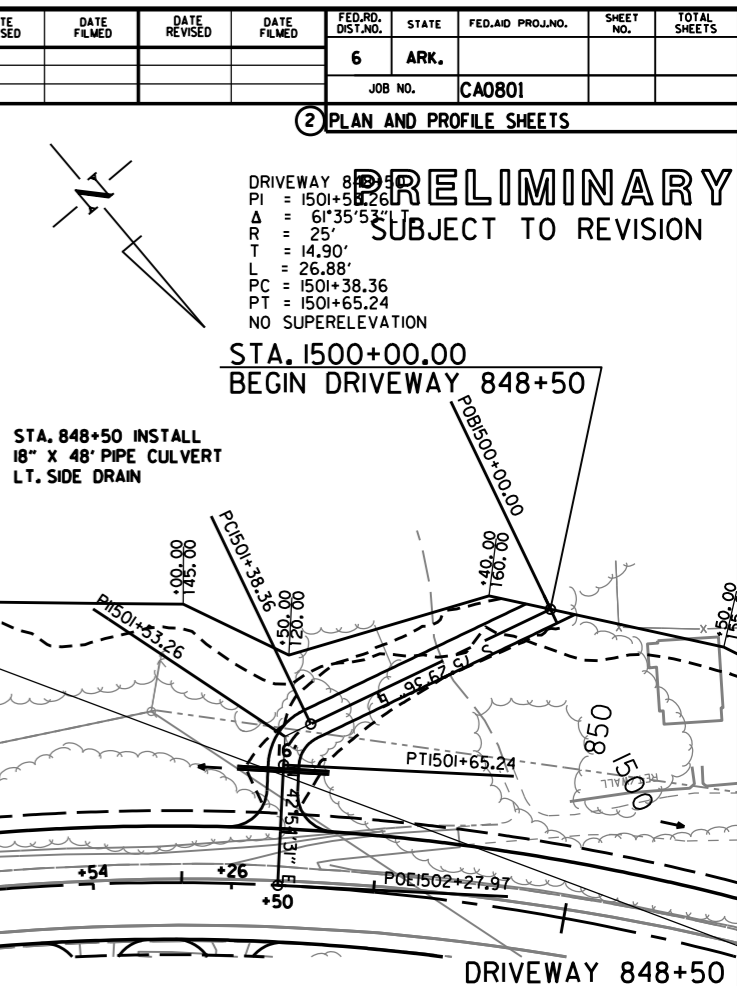
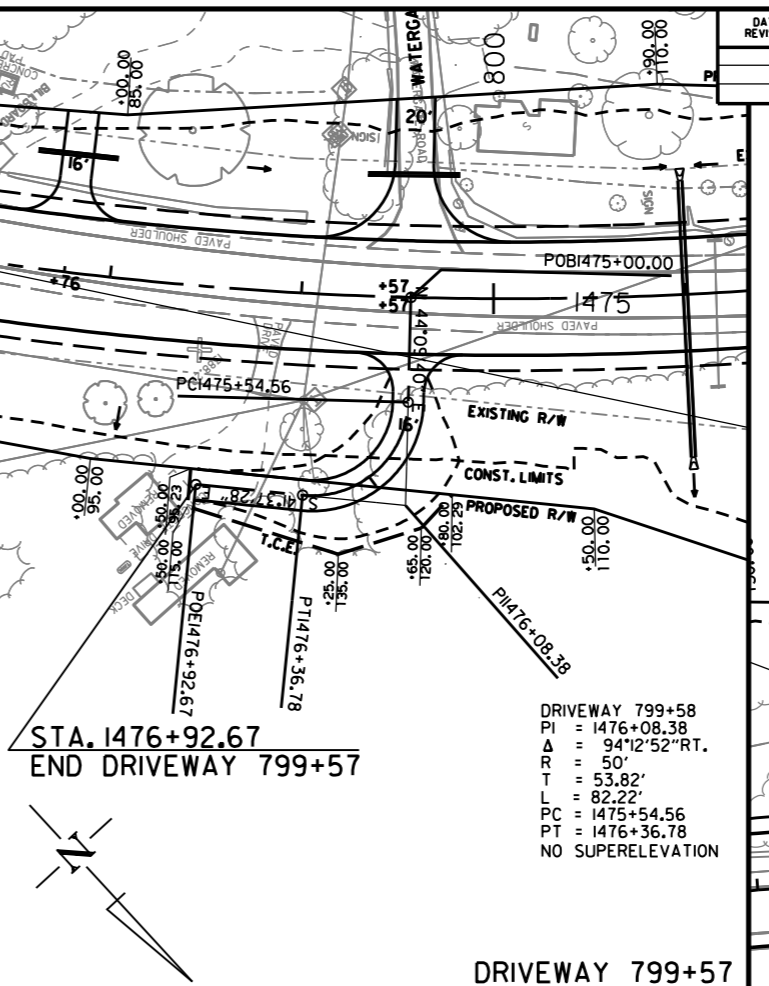
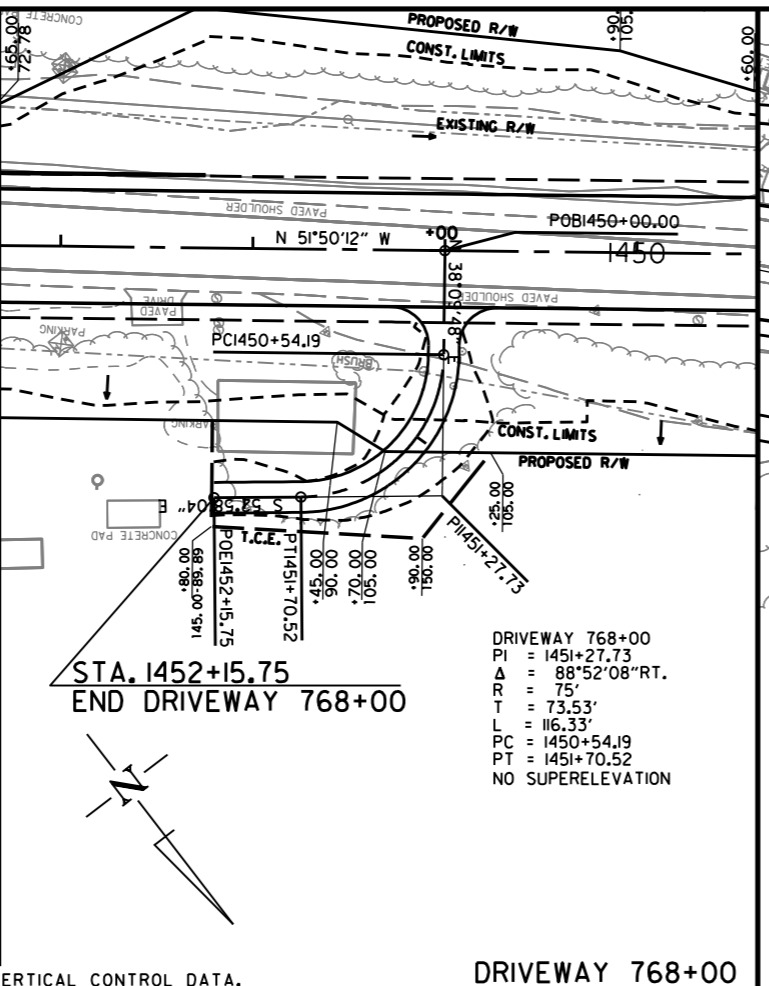
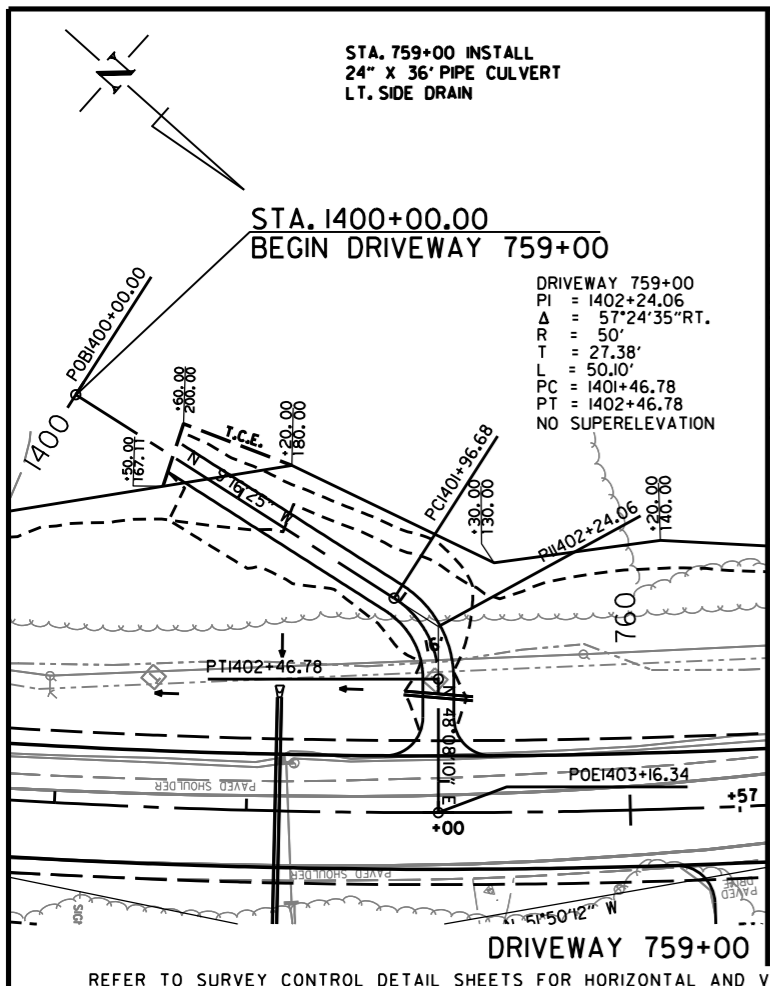
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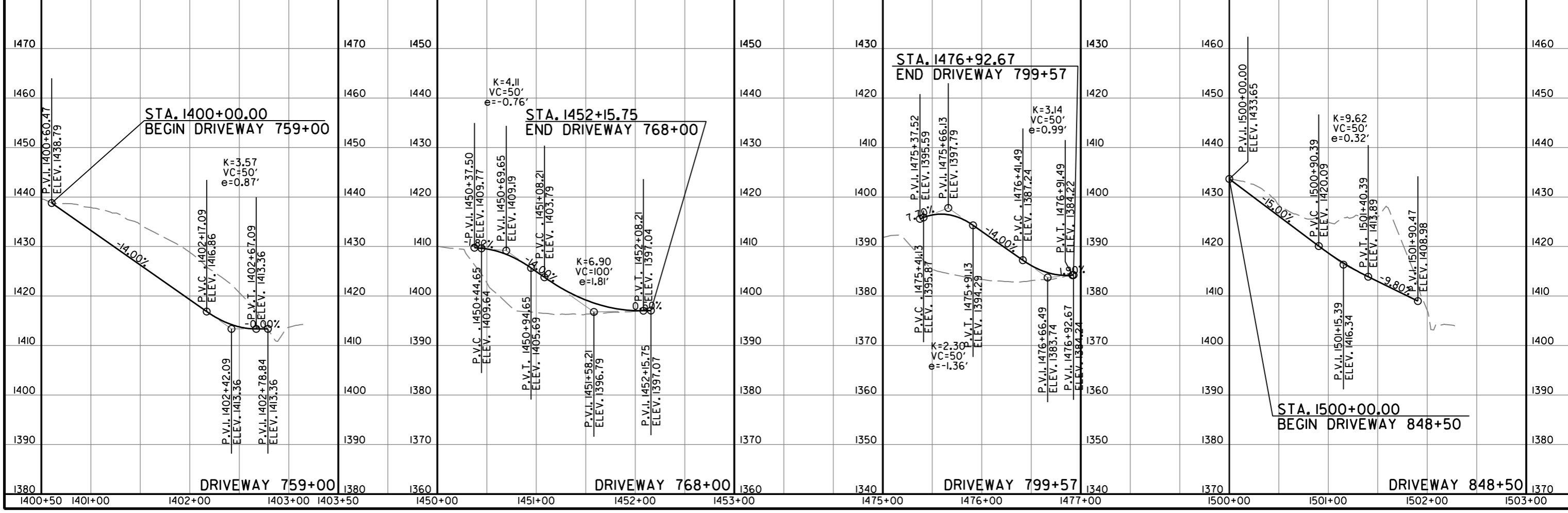
DRIVEWAY 848+50
 PI = 1501+53.26
 $\Delta = 61^{\circ}35'53"$ RT.
 R = 25'
 T = 14.90'
 L = 26.88'
 PC = 1501+38.36
 PT = 1501+65.24
 NO SUPERELEVATION

STA. 1500+00.00
 BEGIN DRIVEWAY 848+50

STA. 848+50 INSTALL
 18" X 48" PIPE CULVERT
 LT. SIDE DRAIN



REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

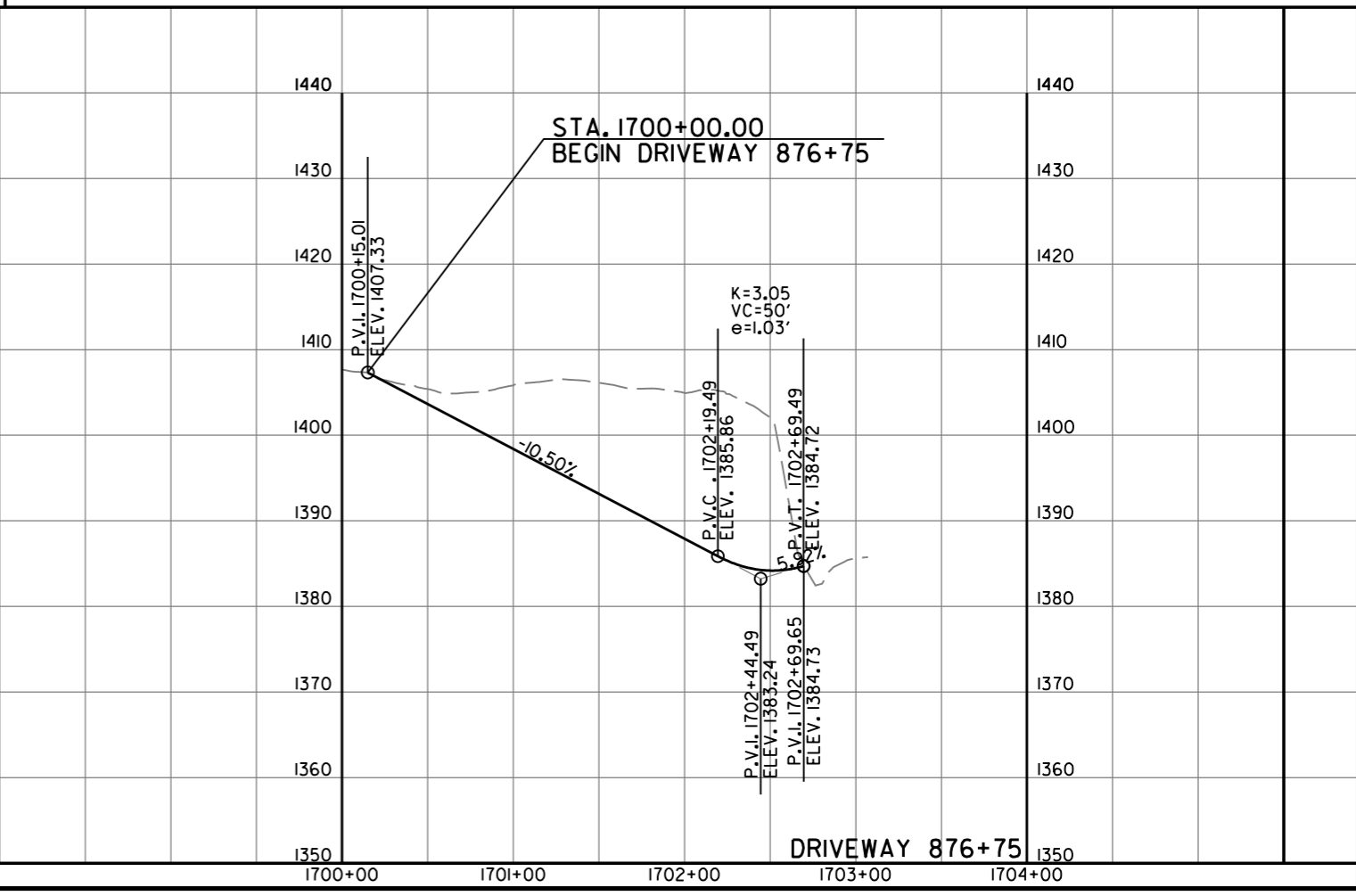
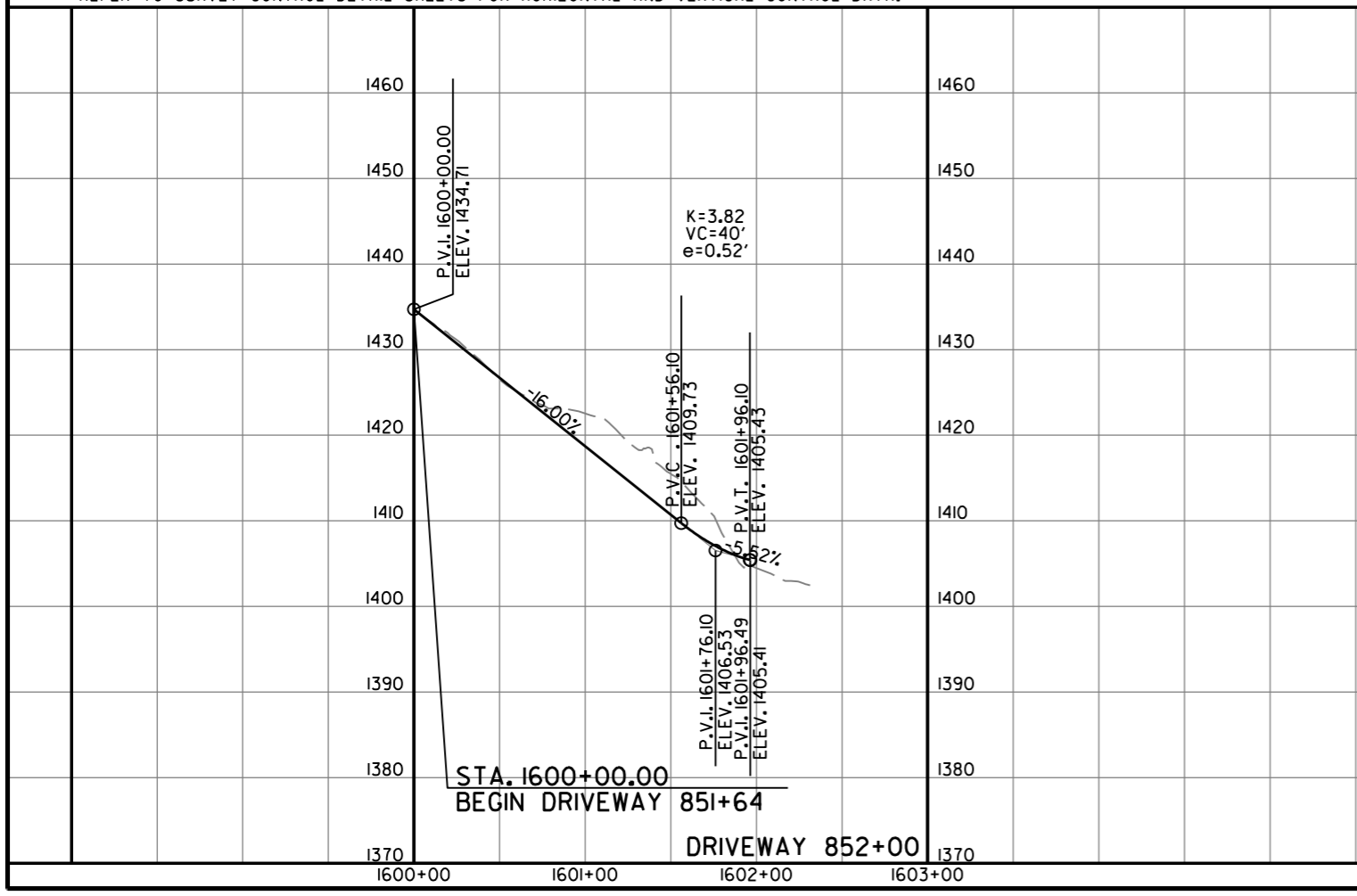
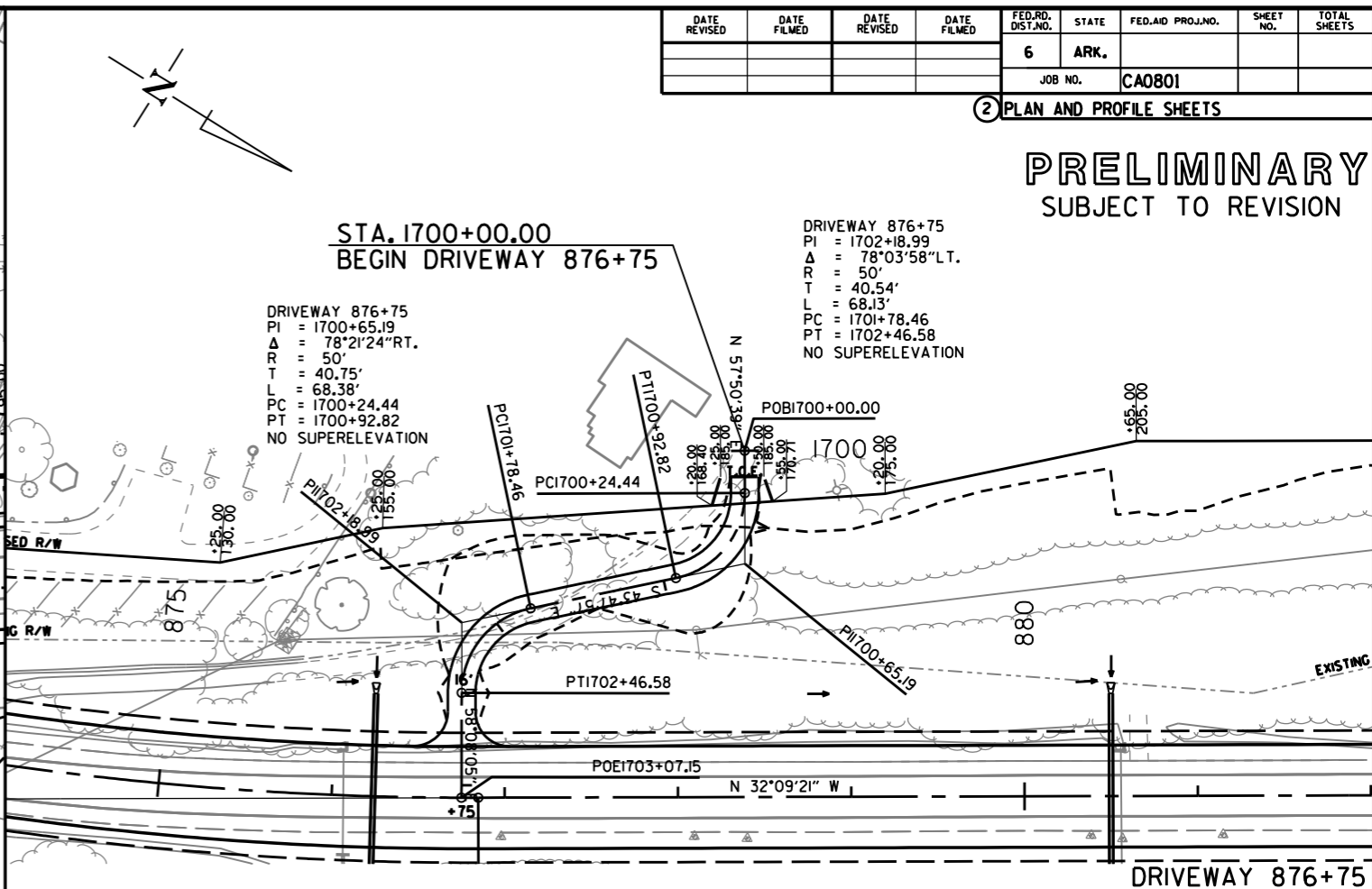
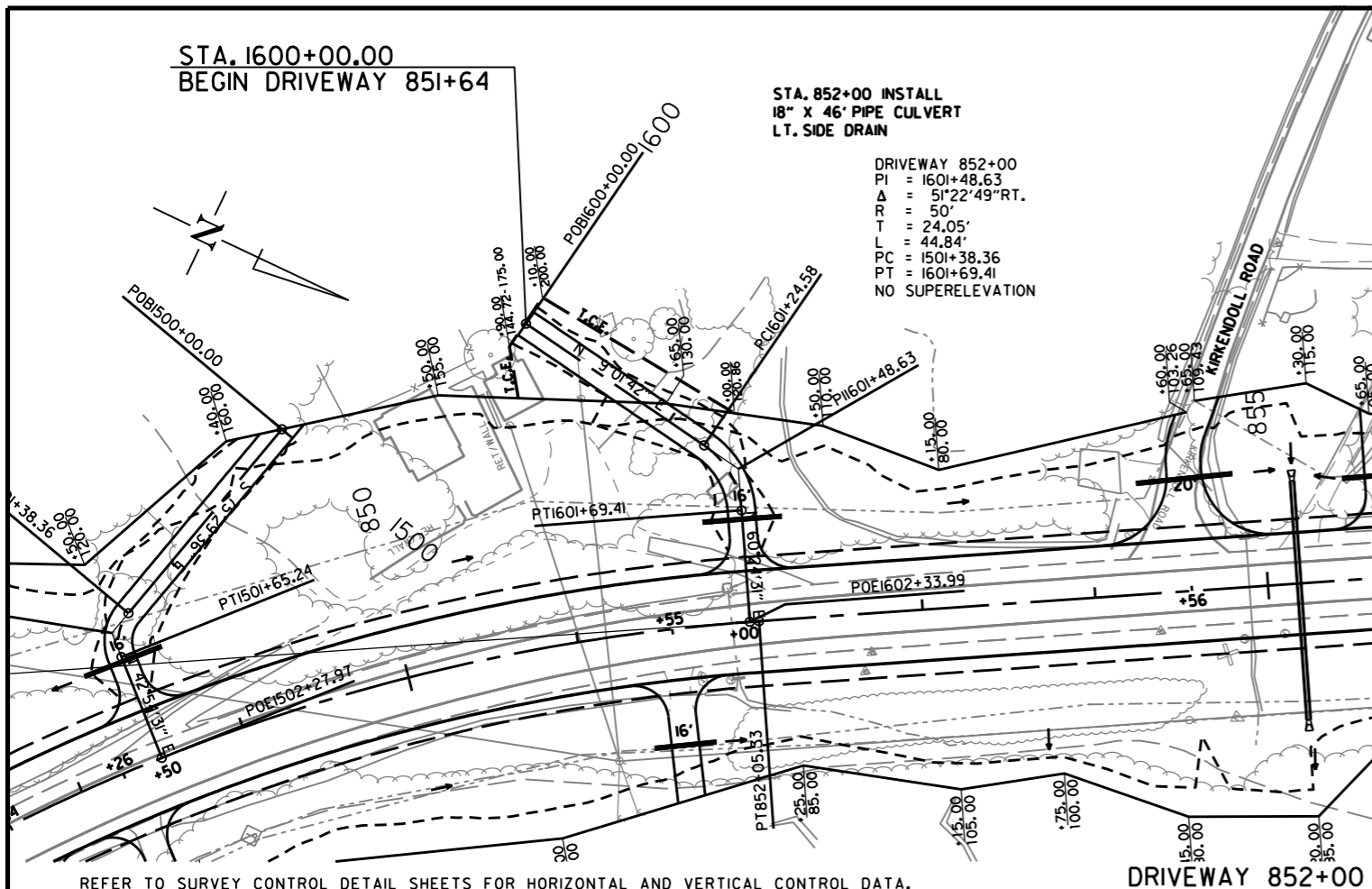


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