APPENDICES

For

Project No. STP-1767 (101)

US-91, NORTH CORRIDOR PLAN & ENVIRONMENTAL DOCUMENT
(SHELLEY to YORK ROAD)

BINGHAM & BONNEVILLE COUNTIES

Key No. 8116

SUBMITTED BY

DISTRICT 5

JANUARY 2007

APPENDIX A – TECHNICAL REPORTS

Noise Report

Wetlands Delineation Report

Draft Section 4(f) Evaluation

Biological Evaluation

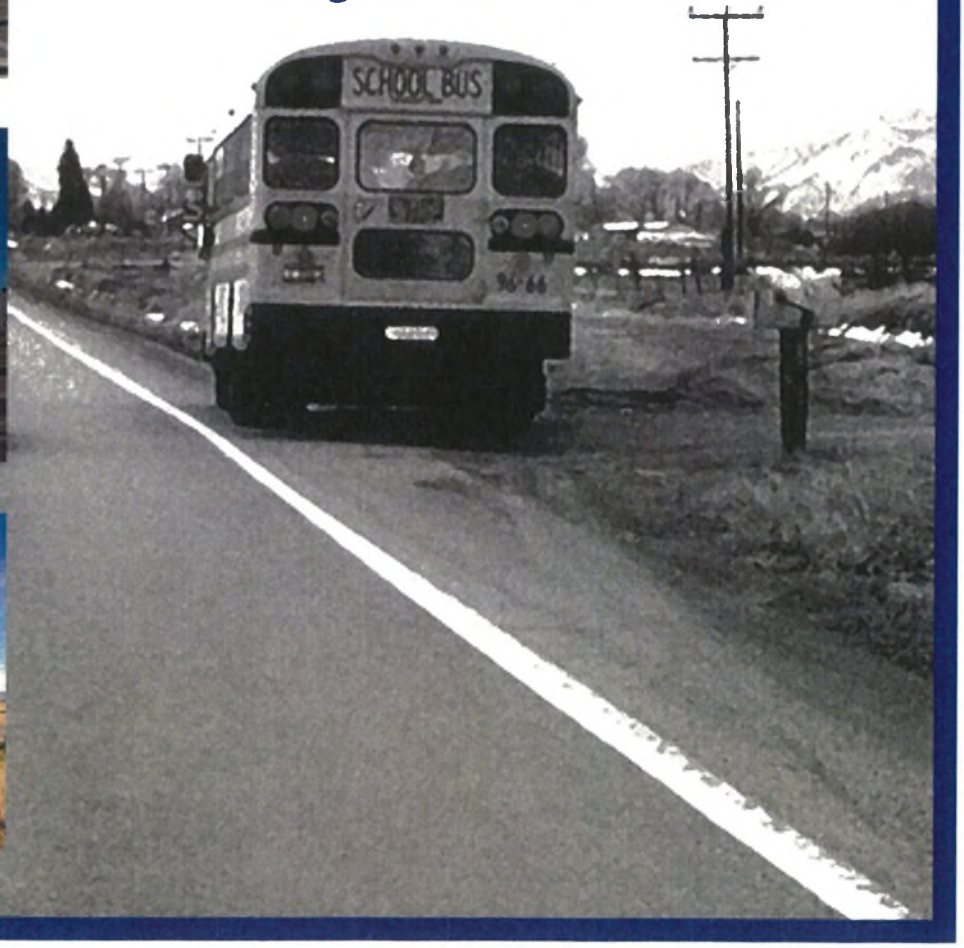
Shelley To York Road

US-91 Shelley to York Road
BINGHAM AND BONNEVILLE COUNTIES, IDAHO

ITD Project No. STP-1767(101),
Key No. 8116

NOISE IMPACTS ANALYSIS

August 30, 2005



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1.0 EXECUTIVE SUMMARY

This report describes the potential noise impacts associated with the construction and operation of a project to widen and realign US-91 between the City of Shelley and York Road. The analysis of noise impacts in the project area is based on a comparison of future noise levels with existing levels and applicable criteria. Construction noise impacts are described based on maximum noise levels of construction equipment published by the U.S. Environmental Protection Agency (EPA). Traffic noise levels are predicted at sensitive receptors based on projected future traffic operations using the Federal Highway Administration (FHWA) Traffic Noise Model (TNM). Mitigation measures are discussed, where appropriate, to avoid or reduce potential noise impacts.

Environmental noise is composed of many frequencies, each occurring simultaneously at its own sound pressure level. Environmental sound levels are commonly reported in A-weighted decibels (dBA) a logarithmic frequency-weighted scale that simulates how an average person hears sound. The equivalent A-weighted sound level (Leq), a common sound descriptor, is a measure of the average sound energy over time.

Applicable noise regulations and guidelines provide a basis for evaluating potential noise impacts. For Federally funded highway projects, traffic noise impacts occur when predicted $L_{eq}(h)$ noise levels approach or exceed noise abatement criteria (NAC) as established by the FHWA, or substantially exceed existing noise levels (US Department of Transportation, 1982, Noise Abatement Council). FHWA does not define "approach" and requires that state highway agencies establish a definition of "approach" that is at least one dBA less than the NAC. (USDOT, 1995). ITD as the State Highway Agency has developed procedures, analysis criteria, and definitions that are contained within their Environmental Procedures Manual (ITD 2003) and in the ITD Noise Policy (May 2003). ITD's noise policy uses the noise criteria of one dBA less than the NAC. This will be referred to as the" ITD noise criteria" throughout this technical report. ITD's policy defines a relative noise impact as one that occurs when the future design noise level exceeds the existing traffic noise level by 15 dBA or more.

Ambient noise levels were measured during May 2005 along the US-91 Shelley to York Road project corridor to describe the existing noise environment and to calibrate the existing conditions noise model. Existing noise levels are typical of rural environments near a minor highway.

Currently traffic noise levels are above the ITD noise criteria at 2 modeling locations representing 4 residential units. Under No Build, traffic noise levels in 2032 will be at or will exceed the ITD noise criteria at 6 residential units. Table 1 summarizes the noise impacts and mitigation measures identified and assessed during this study.

Without mitigation, traffic noise levels are predicted to be at or will exceed the ITD noise criteria at 5 modeling locations (see Table 1). Four of the 8 residential units represented by the 5 modeling locations at or above the ITD noise criteria are planned for acquisition as a part of the project; therefore, noise impacts are predicted at 4 remaining residences. Mitigation in the form of noise barriers was evaluated to determine if it will be feasible and reasonable to substantially reduce traffic noise levels at each of the sensitive receivers where traffic noise impacts are predicted. Barriers would not be feasible or reasonable in the areas of the sensitive receivers where traffic noise impacts are predicted.

Table 1
Summary of Noise Impacts and Mitigation

Alternative	Construction Impacts	Operation Impacts	Mitigation Measures
Alternative 1 No Build	None	Noise levels are predicted to exceed the ITD noise criteria at 6 residential receptors.	None
Alternative 2 5-Lane	Nearby receptors would experience temporary noise impacts during construction of the project.	Without mitigation, noise levels would exceed the ITD noise criteria at the 4 remaining residential receptors.	Mitigation would not be feasible and/or reasonable at the residences where noise levels are predicted to exceed the ITD noise criteria due to the distance between residences and the need to maintain access to these residences.

2.0 PROJECT BACKGROUND

This report describes the potential noise quality impacts associated with construction and operation of the US-91 City of Shelley to York Road project (see Figure 1). The results of the analysis documented in this report will be incorporated into this section of US-91 through the National Environmental Policy Act (NEPA) (U.S.C. 4332(2)(c)).

2.1 Project Description

The Idaho Transportation Department (ITD), District Five, is planning for improvements to U.S. Highway 91 (US-91) from New Sweden Road (Milepost 118.8) in the City of Shelley to York Road (Milepost 122.9). Figure 1 shows the project location. This segment of US-91 is approximately four miles long and is located in two counties. The intersection of US-91 with Canyon Road is the dividing line between Bonneville County to the north and Bingham County is to the south. ITD proposes to extend the existing 5-lane highway cross-section from New Sweden Road in north Shelley to the US-91/York Road intersection.

US-91 serves as main street, called State Street, through the City of Shelley. This road is classified as a rural collector road. US-91 in the City of Shelley has five lanes until the New Sweden Road where it transitions to two-lanes. The posted speed limit is 55 mph and the roadway is fairly straight with level terrain and no horizontal curves. There are several intersections along the length of the project, many of them at skewed angles. The Snake River Valley Canal Bridge is the only structure in this segment of US-91, located at milepost 120.3. The Union Pacific Railroad parallels US-91 on the east side for the entire length of the project and is elevated from the existing roadway.

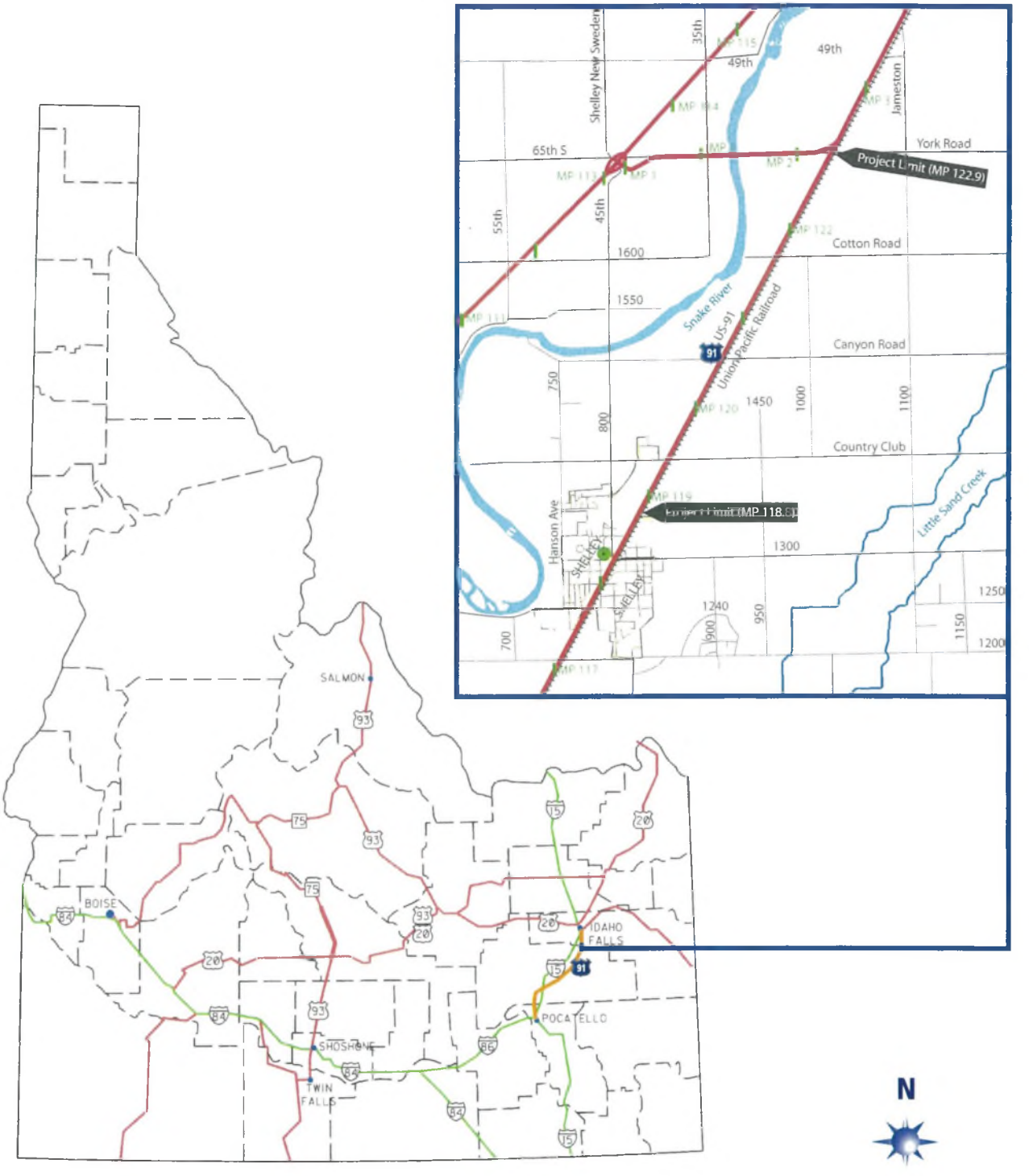
The existing land use between Shelley to York Road is primarily agricultural with some single family residences dispersed along this four mile section. According to the Bonneville County Comprehensive Plan, the land in this area is planned for industrial and commercial uses and is zoned Industrial/Manufacturing and Commercial.

2.1.1 Alternative 1 – No Build

The NEPA environmental review process requires considering the effect that making no changes will have on the roadway system. The No Build Alternative must be evaluated so that the level of impacts from the Build Alternatives can be clearly distinguished from the conditions expected without the proposed action.

2.1.2 Alternative 2 – Five Lanes

With this alternative, the section of US-91 from New Sweden Road York Road would be realigned from the current 2-lane configuration to a 5-lane highway cross-section.



91 Shelley To York Road	Project No. STP-1767(101) Key No. 8116	IDAHO TRANSPORTATION DEPARTMENT
	Title: Project Location	Figure No. 1
		Date: June 2005

2.1 Purpose and Need

The purpose of this project is to improve US-91 from New Sweden Road in the City of Shelley to York Road from Milepost 118.8 to Milepost 122.8 to address existing and future capacity, safety and substandard roadway characteristics, and operational problems.

US-91 between the City of Shelley and the City of Idaho Falls serves as both a commuter route between those two cities and as a farm-to-market roadway for transport of both raw and processed agricultural products. The City of Shelley is experiencing rapid growth and development that will continue to contribute to traffic volumes on US-91.

The current Level of Service (LOS) is C and is expected to decrease to LOS D by year 2032. Two intersections will fall below ITD's LOS C standard by 2032. The intersection of US-91 and Country Club Road operates at LOS C but will decline to LOS D in the future. The intersection of US-91 at New Sweden Road is currently at LOS B but will decline to LOS D by 2032. LOS D is below ITD's policy of achieving LOS C.

The US-91 intersections with New Sweden, Canyon, Country Club, and York all currently meet ITD criteria for a right-turn lane in at least one direction on US-91, and New Sweden, Country Club, and York all meet ITD's criteria for a left turn lane in at least one direction as well.

US-91 is experiencing a number of operations problems. The lack of dedicated turn lanes requires that traffic must slow and queue behind turning traffic, particularly for left-turning vehicles. This contributes to congestion and increased potential for rear-end accidents. Slow moving vehicles hinder traffic flow as following vehicles must wait for gaps in oncoming traffic to pass. Wide vehicles can obstruct traffic flow as the existing narrow roadway cross-section requires that they encroach into oncoming traffic lane.

The proximity of the elevated grade of Union Pacific Railroad to US-91 has resulted in very limited storage space between the railroad and US-91 for cross-street traffic as well as intersections with poor sight distance and substandard storage lengths. This creates both a capacity and a safety issue.

The skewed nature of the US-91 intersections results in difficult turning movements for larger vehicles such as trucks, school buses, and farm equipment.

The existing 3-foot shoulders are substandard and do not provide adequate room for incident management, right turn movements, and bicycling. Power poles parallel the US-91 pavement within 7 feet of the edge of pavement resulting in a substandard clear zone. The proximity of these obstructions to the traffic lanes forces wide equipment to encroach into the opposing lane to avoid obstructions.

While the New Sweden to York Road corridor has not experienced an above-average collision history, as traffic volumes increase and the time spent following slower moving vehicles increases, there is a risk of increased crash rates due to driver frustration and risk-taking passing maneuvers.

3.0 STUDIES AND COORDINATION

3.1 Characteristics of Noise

Sound is created when objects vibrate, resulting in a minute variation in surrounding atmospheric pressure called sound pressure. The human response to sound depends on the magnitude of a sound as a function of its frequency and time pattern (EPA, 1974). Magnitude measures the physical sound energy in the air. The range of magnitude from the faintest to the loudest sound the ear can hear is so large that sound pressure is expressed on a logarithmic scale in units called decibels (dB). Loudness, compared to physical sound measurement, refers to how people subjectively judge a sound and varies from person to person. Magnitudes of typical noise levels are presented in Table 2.

Humans respond to a sound's frequency or pitch. The human ear is very effective at perceiving sounds with a frequency between approximately 1,000 and 5,000 Hz, with the efficiency decreasing outside this range. Environmental noise is composed of many frequencies, each occurring simultaneously at its own sound pressure level. Frequency weighting, which is applied electronically by a sound level meter, combines the overall sound frequency into one sound level that simulates how an average person hears sounds. The commonly used frequency weighting for environmental noise is A-weighting (dBA), which is most similar to how humans perceive sounds of low to moderate magnitude.

Because of the logarithmic decibel scale, a doubling of the number of noise sources, such as the number of cars operating on a roadway, increases noise levels by 3 dBA. A tenfold increase in the number of noise sources will add 10 dBA. As a result, a noise source emitting a noise level of 60 dBA combined with another noise source of 60 dBA yields a combined noise level of 63 dBA, not 120 dBA. The human ear can barely perceive a 3 dBA increase, while a 5 or 6 dBA increase is readily noticeable and sounds as if the noise is about one and one-half times as loud. A 10 dBA increase appears to be a doubling in noise level to most listeners.

Noise levels from traffic sources depend on volume, speed, and the type of vehicle emitting the noise. Generally, an increase in volume, speed, or vehicle size increases traffic noise levels. Vehicular noise is a combination of noises from the engine, exhaust, and tires. Other conditions affecting traffic noise include defective mufflers, steep grades, terrain, vegetation, distance from the roadway, and shielding by barriers and buildings.

Noise levels decrease with distance from the noise source. For a line source such as a roadway, noise levels decrease 3 dBA over hard ground (concrete, pavement) or 4.5 dBA over soft ground (grass) for every doubling of distance between the source and the receptor. For a point source such as construction sources, noise levels will decrease between 6 and 7.5 dBA for every doubling of distance from the source.

The propagation of noise can be greatly affected by terrain and the elevation of the receiver relative to the noise source. Breaking the line of sight between the receiver and the highest noise source results in a noise reduction of approximately 5 dBA.

Table 2
Typical Noise Levels

Transportation Sources	Noise Level (dBA)	Other Sources	Description
	130		Painfully loud
Jet takeoff (200 feet)	120		
Car horn (3 feet)			Maximum vocal
	110		Effort
	100	Shout (.5 feet)	
			Very annoying
Heavy truck (50 feet)	90	Jack hammer (50 feet)	Loss of hearing with
		Home shop tools (3 feet)	prolonged exposure
Train on a structure (50 feet)	85	Backhoe (50 feet)	
City bus (50 feet)	80	Bulldozer (50 feet)	Annoying
		Vacuum cleaner (3 feet)	
Train (50 feet)	75	Blender (3 feet)	
City bus at stop (50 feet)			
Freeway traffic (50 feet)	70	Lawn mower (50 feet)	
		Large office	
Train in station (50 feet)	65	Washing machine (3 feet)	Intrusive
	60	TV (10 feet)	
Light traffic (50 feet)		Talking (10 feet)	
Light traffic (100 feet)	50		Quiet
		Refrigerator (3 feet)	
	40	Library	
	30	Soft whisper (15 feet)	Very quiet

Sources: FTA, 1995; EPA, 1971; EPA, 1974

3.2 Noise Level Descriptors

A widely used descriptor for environmental noise is the equivalent sound level (L_{eq}). The L_{eq} can be considered a measure of the average noise level during a specified period of time. It is a measure of total noise, or a summation of all sounds during a time period. It places more emphasis on occasional high noise levels that accompany general background noise levels. L_{eq} is defined as the constant level that, over a given period of time, transmits to the receiver the same amount of acoustical energy as the actual time-varying sound. For example, two sounds, one of which contain twice as much energy but lasts only half as long, have the same L_{eq} noise levels. L_{eq} measured over a one-hour period is the hourly L_{eq} [$L_{eq}(h)$], which is used for highway noise impact and abatement analyses.

Short-term noise levels, such as those from a single truck pass-by, can be described by either the total noise energy or the highest instantaneous noise level that occurs during the event. The sound exposure level (SEL) is a measure of total sound energy from an event, and is useful in determining what the L_{eq} will be over a period in time when several noise events occur. The maximum sound level (L_{max}) is the greatest short-duration sound level that occurs during a single event. L_{max} is related to impacts on speech interference and sleep disruption. In comparison, L_{min} is the minimum sound level during a period of time.

3.3 Effects of Noise

Environmental noise at high intensities directly affects human health by causing the disease of hearing loss. Although scientific evidence currently is not conclusive, noise is suspected of causing or aggravating other diseases. Environmental noise indirectly affects human welfare by interfering with sleep, thought, and conversation. The FHWA noise abatement criteria are based on speech interference, which is a well-documented impact that is relatively reproducible in human response studies.

3.4 Noise Regulations and Impact Criteria

Applicable noise regulations and guidelines provide a basis for evaluating potential noise impacts. For federally funded highway projects, traffic noise impacts occur when predicted $L_{eq}(h)$ noise levels approach or exceed noise abatement criteria (NAC) as established by the FHWA, or substantially exceed existing noise levels (U.S. Department of Transportation, 1982, Noise Abatement Council). FHWA does not define "approach" and requires that State Highway Agencies establish a definition of "approach" that is at last 1 dBA less than the NAC. (USDOT, 1995). ITD as the State Highway Agency has developed procedures, analysis criteria and definitions that are contained within their Environmental Procedures Manual (ITD 2003) and in the ITD Noise Policy (May 2003). ITD's policy defines a relative noise impact as one that occurs when the future design level exceeds the existing traffic noise level of 15 dBA or more.

The FHWA noise abatement criteria are noise standards that specify exterior $L_{eq}(h)$ noise levels for various land activity categories (Table 3). For receptors where serenity and quiet are of extraordinary significance, such as historical memorials or outdoor amphitheaters, the noise criterion is 57 dBA. For residences, parks, schools, churches, and similar areas, the noise criterion is 67 dBA. For other developed lands, the noise criterion is 72 dBA. ITD noise policy defines a noise impact to occur if predicted L_{eq} (h) noise levels approach within 1 dBA of the noise abatement criteria in Table 3. Thus, if a noise level are 66 dBA or higher, it will approach or exceed the FHWA noise abatement criterion of 67 dBA for residences. ITD noise policy requires that mitigation be evaluated when traffic noise levels with a project would be equal or greater than the ITD noise criteria or where a relative noise impact is predicted. The mitigation must be constructed where it is determined to be feasible and reasonable under the department's policy. Feasibility and reasonableness are described in Section 7.2 of this Technical Report.

Table 3
FHWA Noise Abatement Criteria

Activity Category	L_{eq} (h) (dBA)	Description of Activity Category
A	57 (exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (exterior)	Developed lands, properties, or activities not included in Categories A or B above.
D	-	Undeveloped lands.
E	52 (interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.
Source: U.S. Department of Transportation, 1982.		

4.0 METHODOLOGY

Ambient noise levels are measured to describe the existing noise environment, identify major noise sources in the project area, and calibrate the noise model. Ambient noise levels are measured at several locations near the project area to characterize the weekday noise levels. Appendix B contains noise measurement and modeling locations. Measurement locations represent a variety of noise conditions and are representative of other sensitive receptors near the proposed project. Existing and future noise levels for Alternatives 1 No Build and for Alternatives 2 are modeled at all of the monitoring locations and at several additional locations that potentially will be affected by the project.

FHWA's Traffic Noise Model (TNM) Version 2.5 computer model (FHWA, 2004) was used to predict $L_{eq}(h)$ traffic noise levels. TNM is used to obtain precise estimates of noise levels at discrete points by considering interactions between different noise sources and the effects of topographical features on the noise level. The model estimates the acoustic intensity at a receiver location calculated from a series of straight-line roadway segments. Noise emissions from free-flowing traffic depend on the number of automobiles, medium trucks, and heavy trucks per hour; vehicular speed; and reference noise emission levels of an individual vehicle. TNM also considers effects of intervening barriers, topography, trees, and atmospheric absorption. Noise from sources other than traffic is not included; therefore, when non-traffic noise, such as aircraft, is considerable in an area, TNM will under-predict the actual noise level. Noise monitoring results are used to calibrate the Existing Conditions noise model. An AutoCAD DXF file of the proposed design of Alternative 2 was imported into the TNM package, and major roadways and sensitive receptors are digitized into the model.

Five measured sites, representative of approximately 22 residences in the corridor, are chosen as representative of noise-sensitive sites in the US-91 corridor. For noise model calibration, traffic volumes in the noise model are adjusted to match field counts during the time of day of the noise measurement. Additional topographical and geometrical detail was added to the existing conditions TNM model until the modeled peak-hour noise levels at each of the five measurement sites are within 2 dBA of the measured level. Model adjustment factors are applied where necessary to ensure that calibration was within 2 dBA. Field counted traffic volumes were lower than the existing conditions peak volumes modeled which accounts for modeling existing conditions dBA levels being over 2 dBA higher on average, than the field measurement dBA levels. One residential unit represented by Site 4, one of the two residential units represented by Site 5, and two of the three residential units represented by Site 8 are planned for acquisition as part of the project and are not considered in Alternative 2.

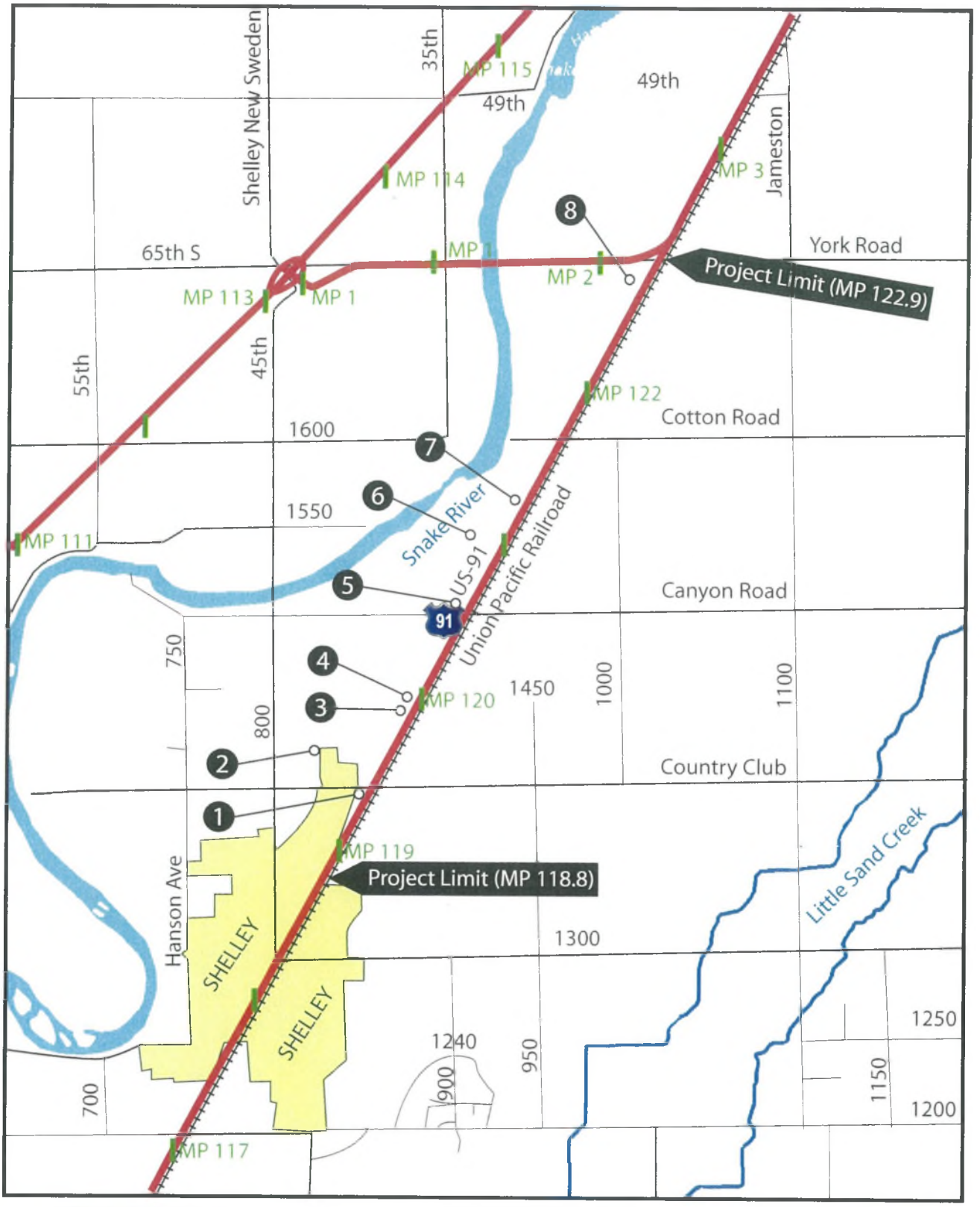
Predicted noise levels are based on PM peak-hour traffic conditions to estimate worst-case noise levels. Existing traffic volumes for 2004 and expected future traffic volumes for 2032 are modeled. Traffic volumes are taken from the traffic analysis conducted for this NEPA process. Traffic volumes and vehicle mix for US-91 are summarized in Table 4.

Figure 2 shows the location of noise measurement and modeling locations. The 8 modeled sites are representative of similar receptors in the area, although noise levels at adjacent receptors may vary slightly. The receptors include both worst-case (closest to the US-91 alignment) and other local noise-sensitive receptors that could be affected by either increases or decreases in traffic noise as a result of this project. The Plan View of the Existing Conditions TNM model is shown in Appendix A.

Predicted noise levels are compared to the FHWA NAC and the numbers of affected receptors are counted for the build alternative. Mitigation measures are evaluated using ITD's reasonableness and effectiveness criteria along with engineering feasibility at receptors where noise levels are modeled to be at or exceed the ITD noise criteria. ITD's approach to this analysis is contained in their Environmental Procedures Manual (ITD, 2003). Construction noise was qualitatively assessed using EPA reference levels.

Table 4
Noise Modeling Traffic Volumes

US-91 Roadway Section	Modeled Traffic Volumes											
	Existing – 2004				Alternative 1 – No Build 2032				Alternative 2 – Build 2032			
	Total	Autos	Medium Trucks	Heavy Trucks	Total	Autos	Medium Trucks	Heavy Trucks	Total	Autos	Medium Trucks	Heavy Trucks
South End Northbound	255	230	5	21	485	437	9	39	485	437	9	39
South End Southbound	479	432	9	39	830	748	15	67	830	748	15	67
Country Club Road Northbound	301	271	5	24	503	453	9	41	503	453	9	41
Country Club Road Southbound	387	349	7	31	591	533	11	48	591	533	11	48
Canyon Road Northbound	276	249	5	22	422	380	8	34	422	380	8	34
Canyon Road Southbound	447	403	8	36	682	615	12	55	682	615	12	55
York Road Northbound	252	227	5	20	385	347	7	31	385	347	7	31
York Road Southbound	397	358	7	32	583	525	10	47	583	525	10	47



91 Shelley To York Road	Project No. STP-1767(101) Key No. 8116	IDAHO TRANSPORTATION DEPARTMENT
	Title: Noise Measurement And Modeling Locations	Figure No. 2
		Date: June 2005

5.0 AFFECTED ENVIRONMENT

5.1 Land Use

The existing land use between Shelley to York Road is primarily agricultural with some single family residences and limited commercial uses along this four mile section. According to the Bonneville County Comprehensive Plan, the land in this area is planned for industrial and commercial uses and is zoned Industrial/Manufacturing and Commercial.

5.2 Existing Conditions

Existing noise levels are measured at 5 locations within the project area (Table 5 and Figure 2). Sites 1 and 2 were measured at different times of the day to evaluate noise levels during PM Peak Hour traffic and noise levels at other times of the day. There are no significant differences between the two measurements taken. Fifteen-minute noise measurements are taken at the 5 noise measurement locations (Sites 1, 2, 4, 6, and 8 on Figure 2). The fifteen-minute measured noise levels are used to verify the results of the traffic noise model used to predict noise levels of the proposed alternatives, existing conditions, and the no build alternative. Traffic noise was the dominant noise source in the project area, with minor contributions from aircraft using airports in Idaho Falls.

Noise levels at the 5 measurement locations and at an additional 3 locations are modeled using the FHWA Traffic Noise Model (TNM) (Table 6). Noise levels at two existing locations are measured and modeled to be at or exceed the ITD noise criteria of 66 dBA for residence, parks, schools, churches, and similar areas. These receptors are Sites 4 and 8 and are located along the northern half of the project area, and west of US-91. Receptor 4 represents one first row unit along the west side of US-91. The receptor is located approximately 60 feet from US-91 and near the same elevation as US-91. Because of the receptor's proximity, elevated levels will be expected. Receptor 8, just south of York Road near the northern project limits, is representative of 3 residences. The receptor was located approximately 30 feet from US-91 and near the same elevation as US-91. Because of the receptor's proximity to US-91 and the lack of shielding, these higher levels are to be expected.

Table 5
Fifteen-minute Noise Measurements

Measured Site		Date	Start Time	Leq (dBA)
1a	1396 US-91	5/16/05	12:30 p.m.	63
1b	1396 US-91	5/16/05	5:00 p.m.	63
2a	1412 North 850E	5/16/05	12:50 p.m.	47
2b	1412 North 850E	5/16/05	5:20 p.m.	47
4	Residence at Snake River Valley Canal	5/16/05	5:45 p.m.	62
6	Residence quarter-mile north of Canyon Road	5/16/05	3:30 p.m.	52
8	6624 US-91	5/16/05	3:00 p.m.	63

Table 6
Leq (h) Noise Modeling Results at Measured and Modeled-Only Sites

Location	Residences Represented	Existing	Alternative 1 No Build 2025	Alternative 2 Build 2025
1	1	63	65	**68**
2	6	48	49	50
3*	1	64	65	**68**
4	1	**67**	**69**	**70**
5*	2	64	65	**67**
6	5	56	57	59
7*	2	61	62	65
8	3	**66**	**68**	**68**

Numbers in **bold** represent a noise level that is an impact under the ITD Noise Policy (approach within 1 dBA or exceed the FHWA NAC of 57 dBA).
* Modeled-Only Site

6.0 IMPACTS

The noise impacts of the three alternatives are discussed below.

6.1 Alternative 1 No Build

Under the Alternative 1 No Build, noise levels are projected to increase between 1 and 2 dBA at most receptors in the study area (Table 6) as a result of increased traffic on US-91 in the future. A 1 to 2 dBA increase is not perceptible to most individuals. Four receptors (Receptors 4 and 8) are predicted to be at or exceed the ITD noise criteria in 2025 under the No Build Alternative. The increase at each of these receptors will result from increased traffic on US-91. The number of receptors and their number of affected units that are at or exceed the ITD noise criteria is summarized in Table 7.

Table 7
Receptors Affected by each Alternative

Modeled Receptor Location	Number of residential units represented	Number of affected units by Modeled Receptor by Alternative		
		Existing	Alternative 1 No Build	Alternative 2 5-Lane
1	1	0	0	1
2	6	0	0	0
3	1	0	0	1
4	1	1	1	0 (ACQ)
5	2	0	0	1 (1 ACQ)
6	5	0	0	0
7	2	0	0	0
8	3	3	3	1 (2 ACQ)
Total		4	4	4

ACQ represents residences which are planned for acquisition as part of the US-91 project

6.2 Alternative 2 – 5 Lanes

With this alternative, the section of US-91 from New Sweden Road York Road would be realigned from the current 2-lane configuration to a 5-lane highway cross-section. Traffic volumes would be similar to Alternative 1 No Build. Predicted sound levels for Alternative 2 are within 3 dBA of Alternative 1. A 3 to 4 dBA increase is barely perceptible to most individuals. Five receptors (Receptors 1, 3, 4, 5, and 8) are predicted to be at or exceed the ITD noise criteria in 2032 under the Build Alternative. The increase at each of these receptors will result from increased traffic on US-91 and minor roadway realignment in the future. The number of receptors and their number of affected units that are at or exceed the ITD noise criteria is summarized in Table 7. As shown in this table, four of the eight affected residential units are planned for acquisition as part of the US-91 project. As a 2 dBA difference is less than perceptible to humans, the following discussion applies to both of these alternatives.

6.2.1 Operation Noise

Under Alternative 2, noise levels will increase between 2 and 5 dBA relative to existing conditions (Table 6). Noise levels at five modeled receptors under Alternative 2 will be at or exceed the ITD noise criteria. The number of represented sensitive receivers that will be at or exceed the ITD noise criteria is summarized in Table 7. Fewer receptors will be at or exceed the ITD noise criteria under Alternative 1 No Build than under Alternative 2 as Alternative 2 has additional lanes and the alignment of US-91 will be slightly closer to sensitive receivers. Receptors where traffic noise levels are predicted to approach or exceed the noise abatement criteria are described by project section below, from south to north.

New Sweden Road to Country Club Road

Noise levels at receptor 1 would be at 68 dBA, 2 dBA greater than the ITD noise criteria, as a result of the increased traffic and minor US-91 realignment. This receptor represents one home adjacent to US-91. This residence has direct driveway access onto US-91. ITD's abatement policy and procedures states that noise barriers would not be expected for dwellings with direct access onto highways and that reconfiguration of access would not be considered feasible. The current speed limit on US-91 at this receptor is a transition from 45 miles per hour to 55 miles per hour.

Country Club Road to Canyon Road

Receptors 3 and 4 would have noise levels of 68 and 71 dBA, exceeding the ITD noise criteria. Receptor 3 represents one first row home and Receptor 4 represents one home that would be acquired by the project. These homes have direct driveway access onto US-91. The current and future speed limit is 55 miles per hour.

Canyon Road to York Road

Receptor 5 is located just north of Canyon Road and represents two first row residences with one of the two residences planned for acquisition as part of the project. Noise levels at receptor 5 for Alternative 2 Build would be 68 dBA, exceeding the ITD noise criteria level of 66 dBA. Both residences have direct driveway access onto US-91. The speed limit on US-91 is currently 55 miles per hour.

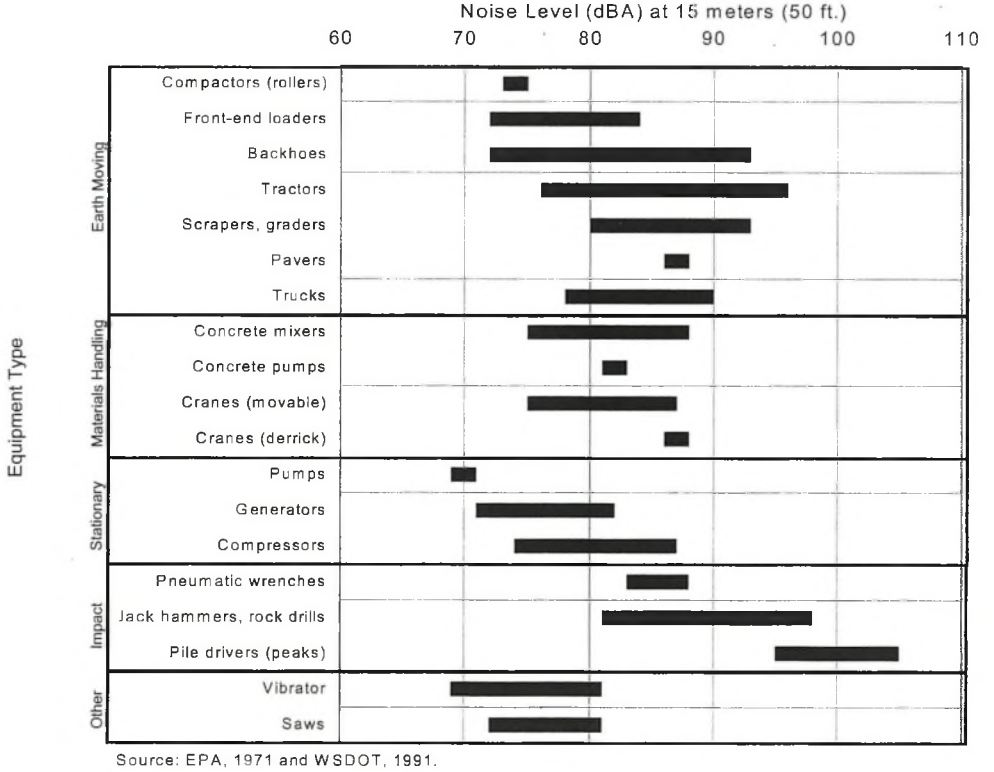
Receptor 8 represents three units and is located on the west side of US-91 approximately 250 feet south of York Road. Two of the three residential units would be acquired as a part of the US-91 project. Noise levels at receptor 8 would be 69, exceeding the ITD noise criteria level. All three residences have direct driveway access onto US-91. The speed limit on US-91 is currently 55 miles per hour.

6.3 Construction Noise

Construction activities will generate noise during the construction period. Construction usually will be carried out in several reasonably discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. Roadway construction will involve clearing, cut-and-fill activities, removing old roadways, importing fill, and paving.

The most prevalent noise source at construction sites will be the internal combustion engine. Engine-powered equipment includes earth-moving equipment, material-handling equipment, and stationary equipment. Mobile equipment operates in a cyclic fashion, while stationary equipment, such as generators and compressors, operates at sound levels fairly constant over time. Because trucks will be present during most phases and will not be confined to the project site, noise from trucks could affect more receptors. Other noise sources may include impact equipment and tools such as pile drivers. Impact tools could be pneumatically powered, hydraulic, or electric. Construction noise will be intermittent and occurring seasonally. Construction noise levels will depend on the type, amount, and location of construction activities. The type of construction methods will establish the maximum noise levels of construction equipment used. The amount of construction activity will quantify how often construction noise will occur throughout the day. The location of construction equipment relative to adjacent properties will determine any effects of distance in reducing construction noise levels. Maximum noise levels of construction equipment under all build alternatives will be similar to typical maximum construction equipment noise levels presented in Figure 3.

Figure 3
Typical Construction Noise Levels



Source: EPA, 1971 and WSDOT, 1991.

As shown in Figure 3, maximum noise levels from construction equipment will range from 69 to 106 dBA at 50 feet (15 meters). Construction noise at residences farther away will decrease at a rate of 6 dBA per doubling of distance from the source. The number of occurrences of the Lmax noise peaks will increase during construction, particularly during pile-driving activities. Because various equipment will be turned off, idling, or operating at less than full power at any time, and because construction machinery is typically used to complete short-term tasks at any given location, average Leq noise levels during the day will be less than maximum noise levels presented in Figure 2. Construction noise levels could be reduced by the construction practices identified in the Mitigation Section.

7.0 MITIGATION

Noise can be controlled at three locations: (1) at the source, such as with mufflers and quieter engines; (2) along the noise path, with barriers; and (3) at the receptor, with insulation. Noise abatement is necessary only where frequent human use occurs and where a lower noise level will have benefits (U.S. DOT, 1982).

7.1 Operational Noise Mitigation Options

The ITD Noise Policy defines noise abatement measures as those that must be considered when a project will result in a noise impact. Abatement measures include:

- Traffic management,
- Alteration of horizontal and vertical alignments,
- Acquisition of real property to serve as a buffer zone,
- Acquisition of property rights for barrier construction purposes, and
- Insulation of public use, non-profit institutional structures.
- Construction of noise barriers,

These mitigation measures were evaluated for their potential to reduce noise impacts from the proposed action. The results of the evaluation are summarized below. Final determination of size and placement of noise barriers or berms and implementation of other mitigation methods takes place during detailed project design, after an opportunity for public involvement and approval at the local, state, and federal levels. The ITD Noise Policy outlines the process once a decision under NEPA has been made and the project enters the design phase.

Traffic Management Measures

Management measures could include restricting travel times, restrictions on truck traffic, modified speed limits, and exclusive land designations. Restriction of truck traffic is not feasible as US-91 functions as a farm-to-market road, providing direct access to farms, and farm products storage and processing facilities. There is no alternative route for those trucks that access these facilities. Noise impacts could be reduced by land use controls throughout the project area to limit the proximity of future construction to major facilities. This could be achieved through building setback requirements. The undeveloped lands adjacent to US-91 on the west side is zoned Industrial/Commercial. Such future uses would not require noise attenuation.

Acquisition of Property to Serve as a Buffer Zone

Undeveloped parcels adjacent to US-91 study area could be acquired to provide noise buffers. While this could limit the effects of traffic noise on future development, it would not mitigate impacts to any of the currently existing receptors that would experience elevated noise levels under this project.

Alteration of Roadway Horizontal and/or Vertical Alignment

The proposed horizontal and vertical alignment of US-91 for Alternative 2 addresses both capacity, geometric deficiencies and intersection safety, particularly where cross streets must cross both an elevated UP railroad grade to the east of US-91 and join the current grade of US-91. The horizontal alignment was shifted west to improve both sight distance, safety and vehicle queuing at these railroad locations. Movement of the horizontal alignment to the east away from existing sensitive receptors would worsen these crossing points and encroach into the UP railroad cross-section. Changes of the vertical alignment, such as depressing the roadway, would not be feasible. As the topography of the US-91 corridor is flat and there is limited existing development adjacent to the roadway, lowering the roadway would worsen direct impacts on adjacent properties and resources. It would also worsen the existing sight distance problems at the railroad crossings.

Insulation of Public Use, Nonprofit Institutional Buildings

The receptors that would be impacted are not public use, nonprofit institutions and therefore would not be eligible for acoustic insulation.

Noise barriers

Noise barriers include noise walls, berms, and buildings that are not sensitive to noise. The effectiveness of a noise barrier is determined by its height and length and by the topography of the project site. To be effective, the barrier must block the "line of sight" between the highest point of a noise source, such as a truck's exhaust stack, and the highest part of a receiver. It must be long enough to prevent sounds from passing around the ends, have no openings such as driveway connections, and be dense enough so that noise will not be transmitted through it. Intervening rows of buildings that are not noise sensitive also could be used as barriers.

7.2 Noise Mitigation Measure Feasibility and Reasonableness

ITD evaluates many factors to determine whether mitigation measures would be feasible and reasonable. The evaluation consists of determining the engineering feasibility of constructing the mitigation in a certain location and determining the effectiveness of the potential mitigation measure. The ITD Noise Policy defines effective mitigation as providing a noise reduction of at least 10 dBA at a distance of ten feet from the mitigation and 5 dBA at a distance of 100 feet. Five dBA of reduction must also be achievable at the receptors of concern. Determination of reasonableness includes the number of sensitive receptors benefited by at least 5 dBA, cost-effectiveness of the mitigation, and concerns such as the desires of nearby residents, aesthetics, and safety. The ITD Noise Policy provides definitions of cost-effectiveness, as well as the post-NEPA process for considering the desires of the community and property owners directly affected by proposed noise mitigation.

Cost effectiveness is determined by multiplying the total number of benefited receptors by $20,000 and subtracting the estimated cost of constructing effective mitigation. If this calculation results in a positive figure, the mitigation measure is cost effective (ITD, 2003). The dollar figure per benefited house and the construction cost information is adjusted every few years.

For noise barriers, ITD currently uses a planning-level cost estimate of $25 per square foot of barrier for barriers less than 0.25 miles in length and $20 per square foot of barrier for longer barriers. All proposed barriers for Alternatives 2 and 3 are less than 0.25 miles in length; therefore, the estimated construction cost for each barrier is determined by multiplying the length times the height of a proposed noise wall by $25 per square foot.

Noise barriers would not be reasonable to protect the affected receptors in the US 91 corridor because of the need to maintain access to these residences. Construction of a continuous barrier would require that these access points be blocked. Walls with openings for driveways and local roadways are not effective at noise reduction. For noise barriers to meet reasonability requirements, the sensitive receptors benefited by the barrier need to be either numerous or closely grouped together. In the US-91 project area, no more than two affected receptors are located next to one another.

Both Alternative 1 No Build and Alternative 2 Build for US 91 would increase noise levels that approach or exceed the FHWA noise abatement criteria; however it would not be feasible or reasonable to mitigate noise levels at these receptors, as it would eliminate access to properties and/or require relocation of additional residences.

7.3 Construction Noise Mitigation

Construction noise could be reduced by using enclosures or walls to surround noisy equipment, installing mufflers on engines, substituting quieter equipment or construction methods, minimizing times of operation, and locating equipment farther from sensitive receptors. To reduce construction noise at nearby receptors, the following mitigation measures could be incorporated into construction plans and contractor specifications:

- Limiting construction activities to between 7 a.m. and 10 p.m. will reduce construction noise levels during sensitive nighttime hours;
- Equipping construction equipment engines with adequate mufflers, intake silencers, and engine enclosures will reduce their noise by 5 to 10 dBA (U.S. EPA, 1971);
- Specifying the quietest equipment available will reduce noise by 5 to 10 dBA;
- Turning off construction equipment during prolonged periods of nonuse will eliminate noise from construction equipment during those periods;
- Requiring contractors to maintain all equipment and to train their equipment operators will reduce noise levels and increase efficiency of operation;
- Locating stationary equipment away from receiving properties will decrease noise from that equipment as the distance increases;
- Constructing temporary noise barriers or curtains around stationary equipment that must be located close to residences will decrease noise levels at nearby sensitive receptors.

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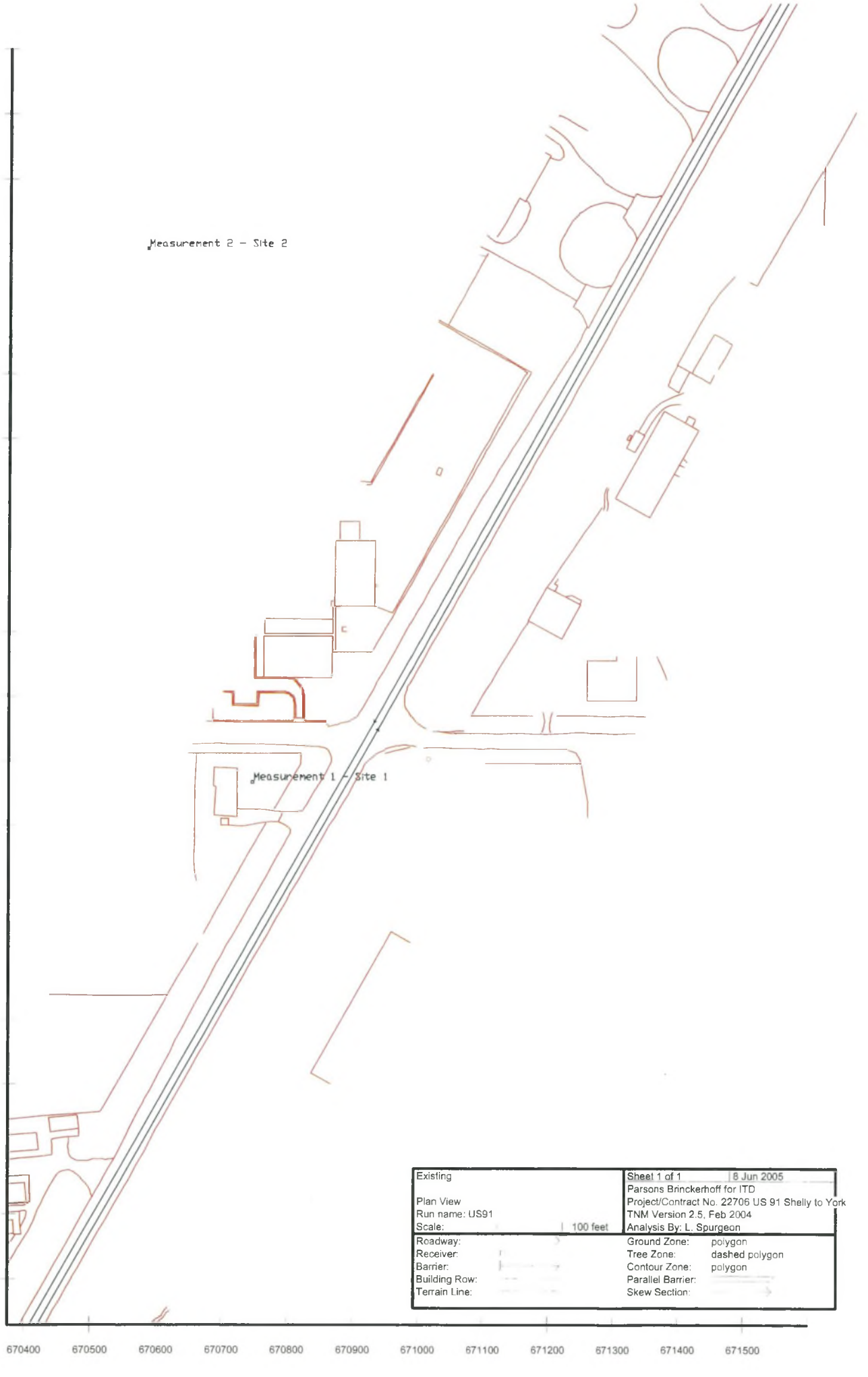
APPENDIX A
PLAN VIEW REPRESENTATION OF THE TRAFFIC NOISE MODEL



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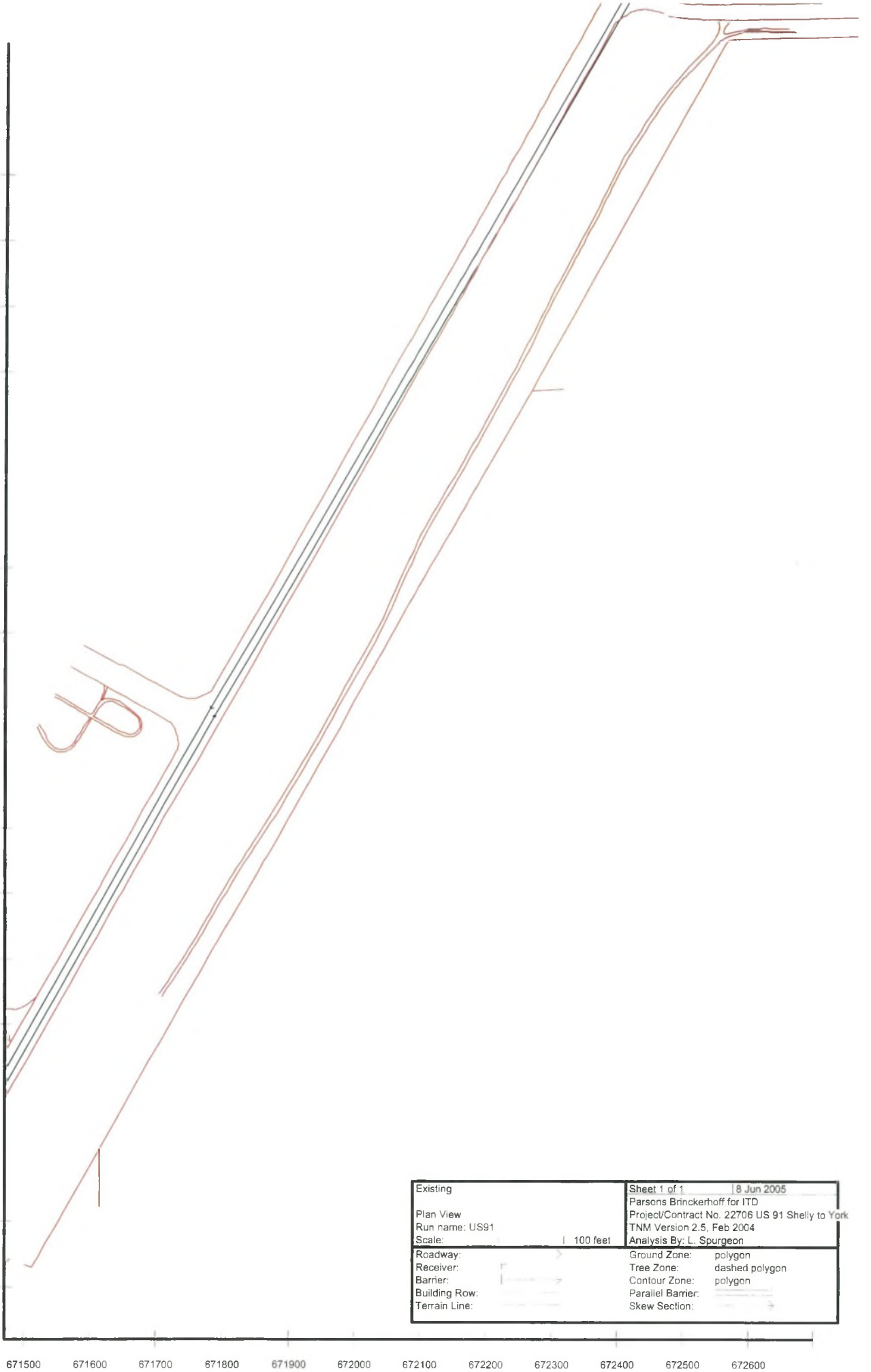
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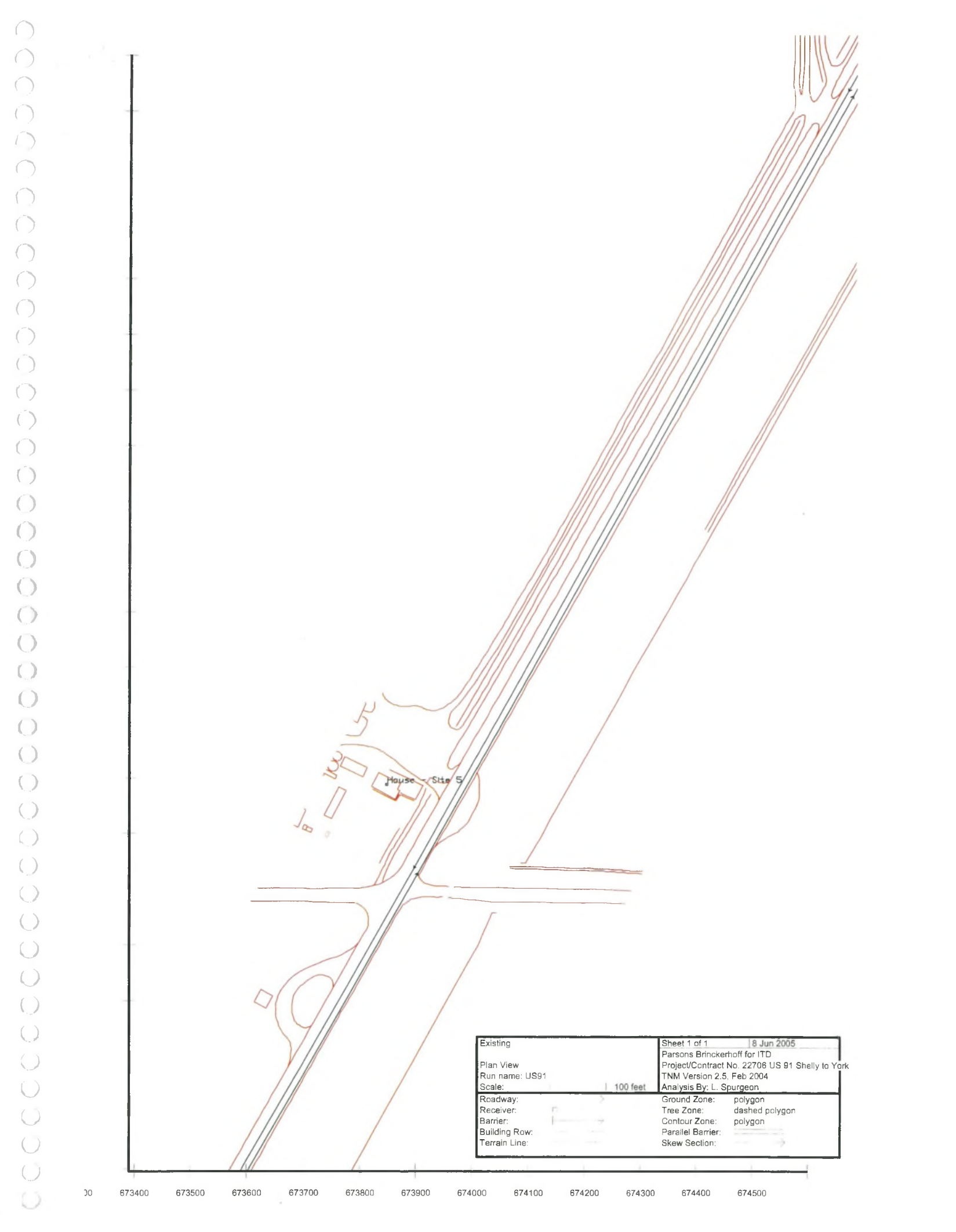
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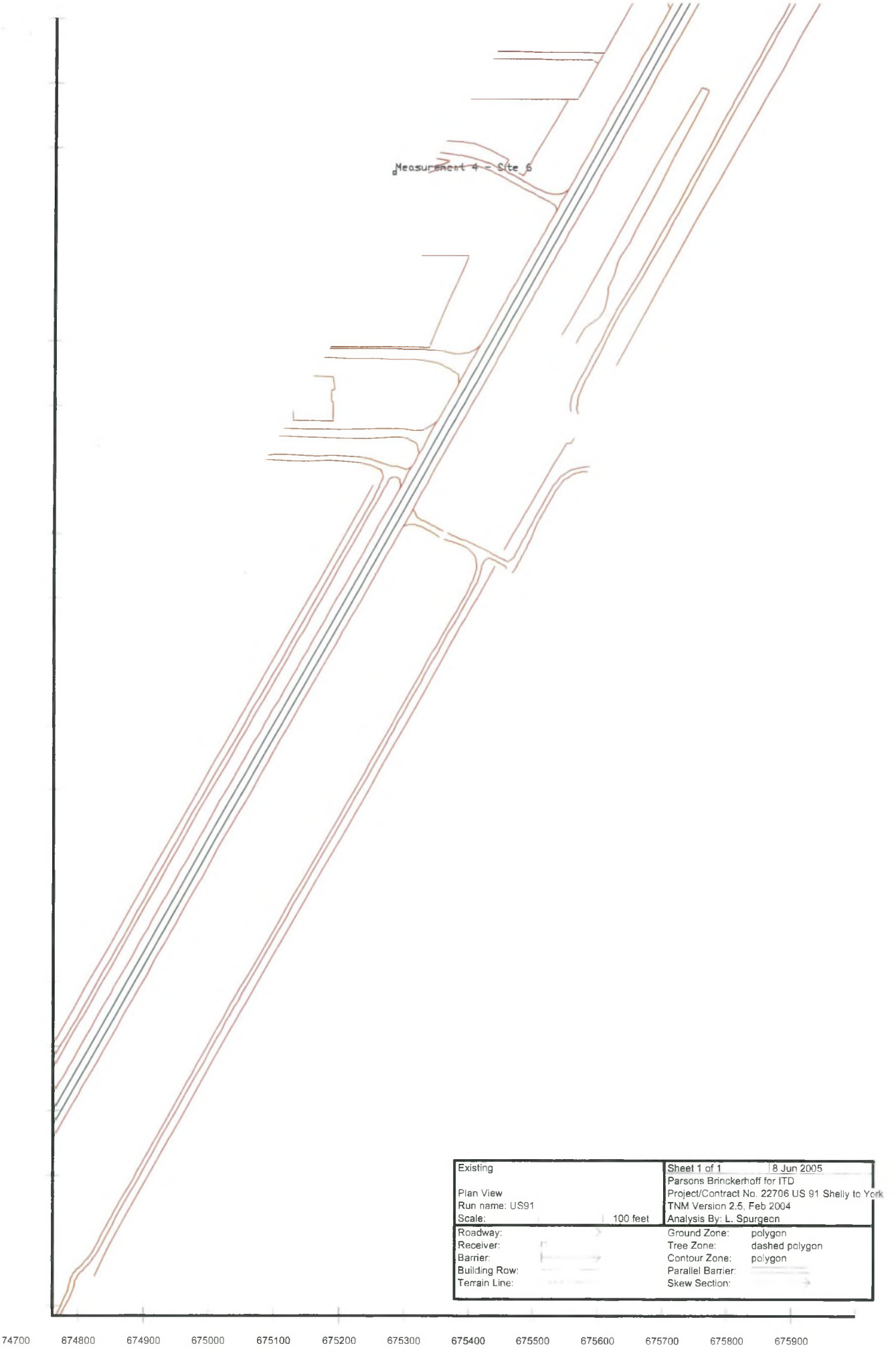

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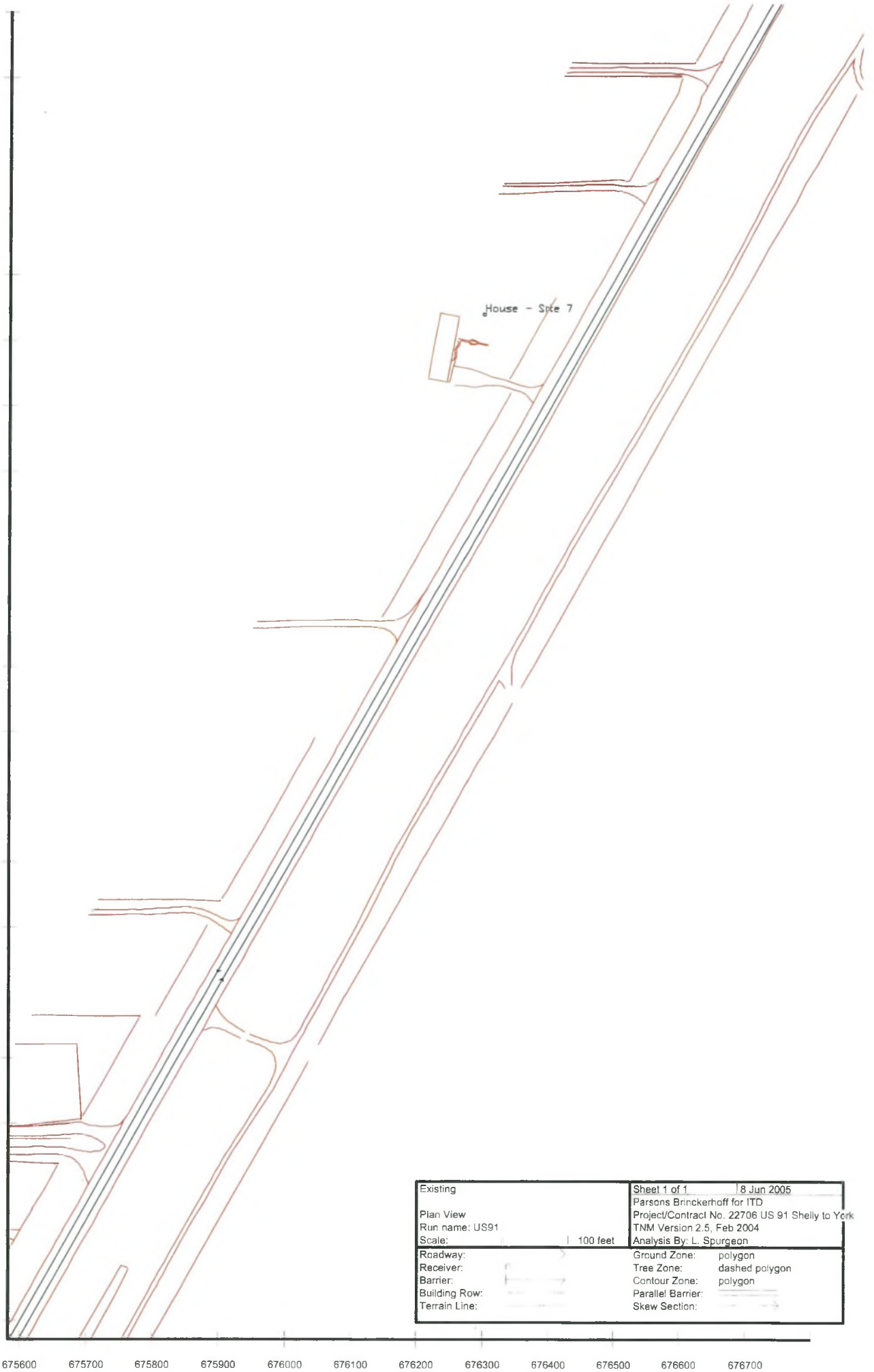
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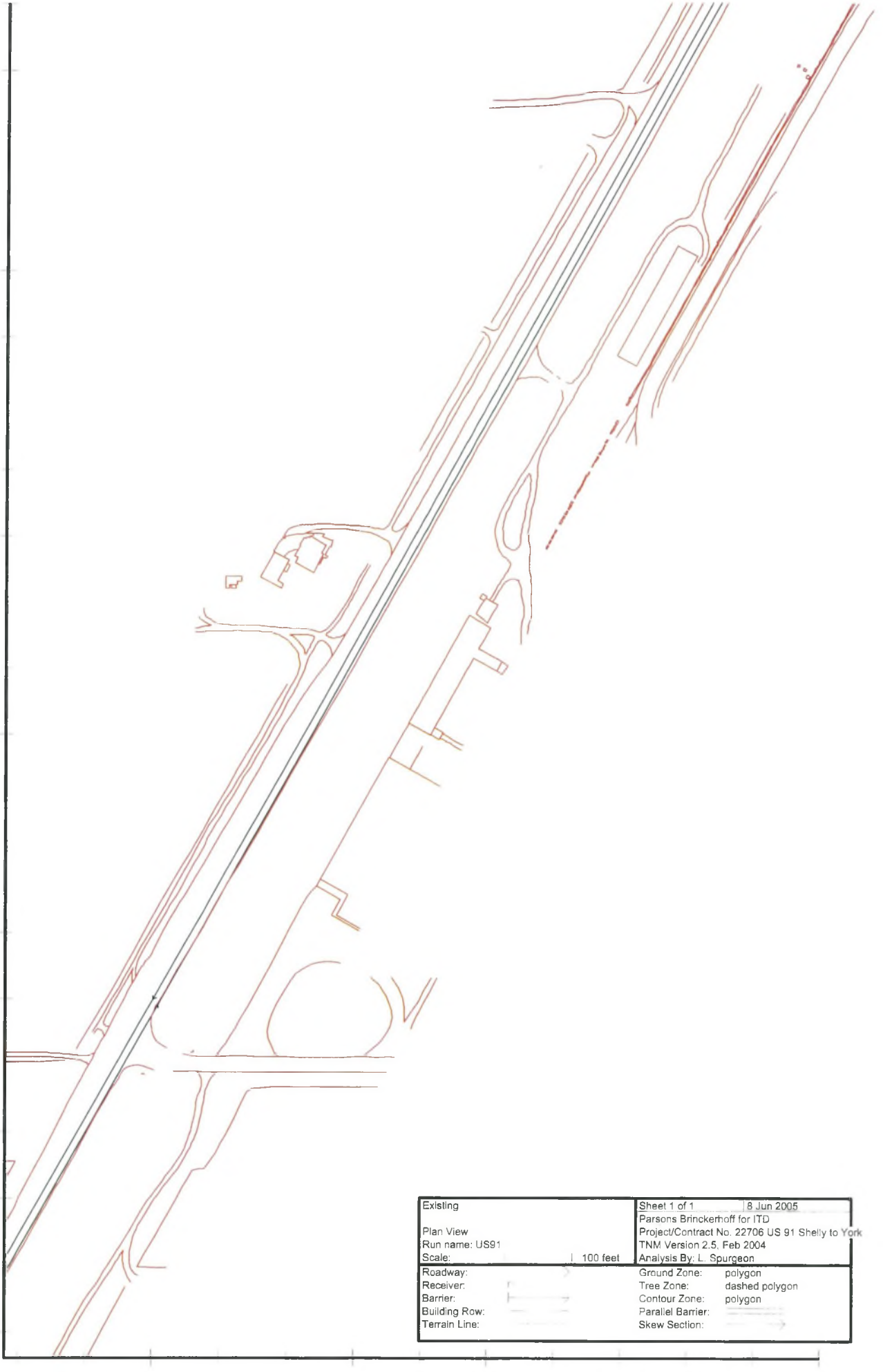

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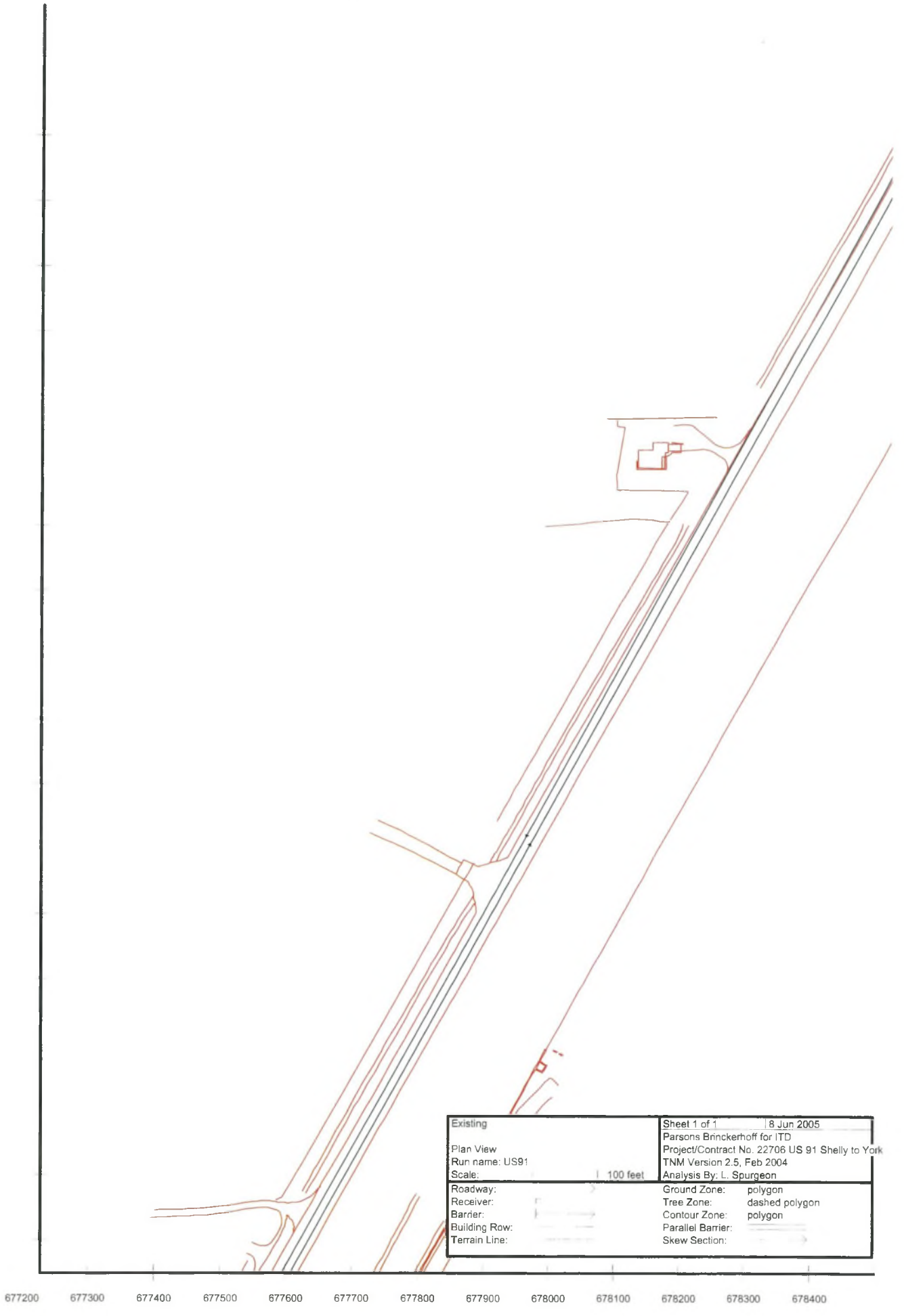
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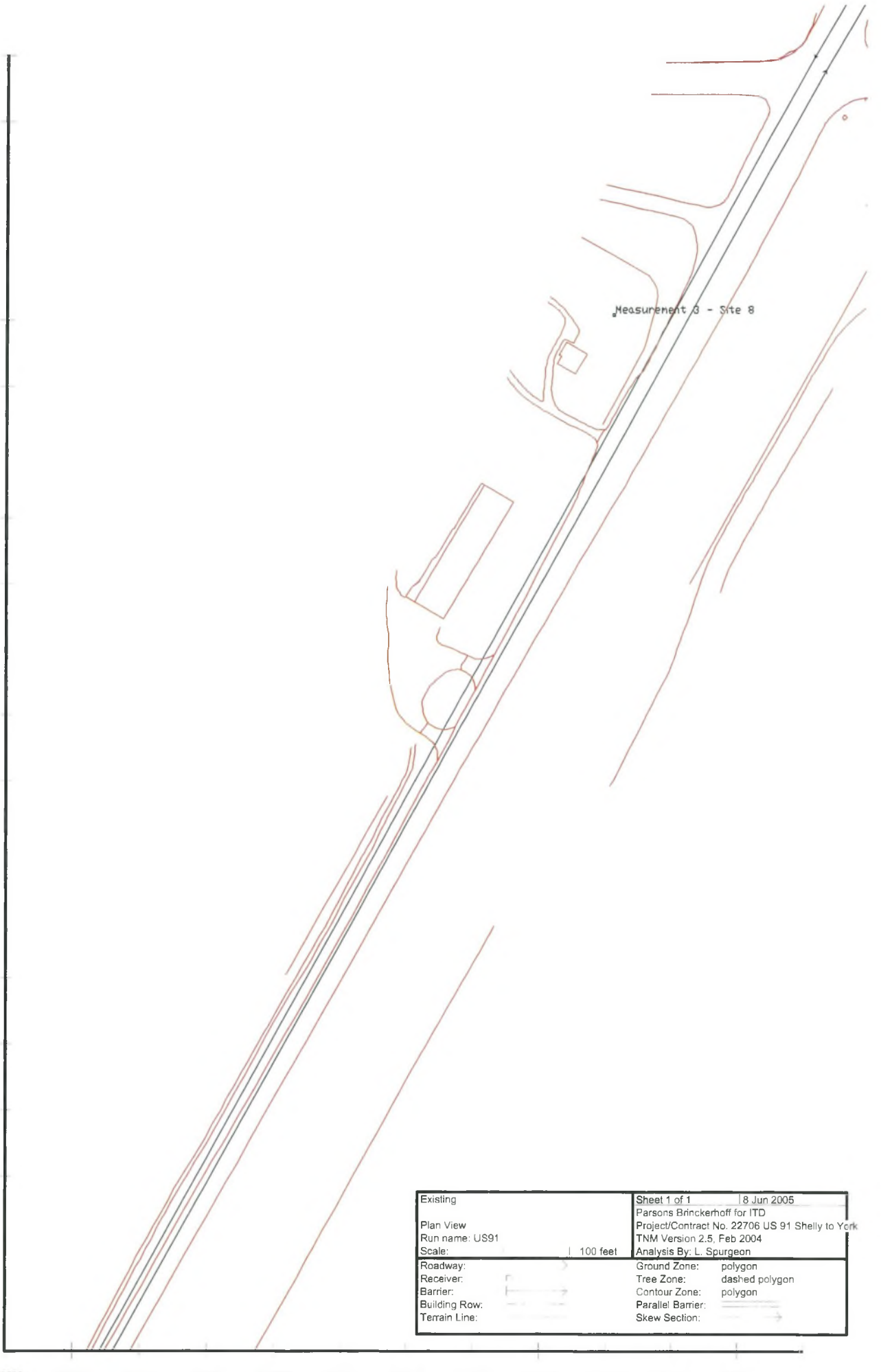

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APPENDIX B
ITD NOISE EXHIBITS 1300-4, 1300-5, AND 1300-6

EXHIBIT 1300-4

Project Name:_**US-91 Shelley to York Road** Project #**STP-1767(101)** Key#_8116

Receptor(s) #_**Receptor numbers 1, 3, 4, 5 and 8**

Idaho Transportation Department (ITD)

NON-BARRIER NOISE ABATEMENT CHECKLIST

FEASIBILITY:	**YES**	**NO**
1. Can traffic management measures be implemented which conform to the purpose of the project and achieve at least a 5 dBA reduction in sound levels at the impacted receptor(s)?	___	_X_
2. Can alignment alteration be implemented which conforms to design standards and achieves a 5 dBA reduction in sound levels at the impacted receptor(s)?	___	_X_
3. Can a buffer zone be provided which achieves a 5 dBA reduction in sound levels at the impacted receptor(s) and results in no displacements?	___	_X_
4. Is there an impacted public use or non-profit institutional structure in the project area and can insulation be provided which achieves a 5 dBA reduction in sound levels inside the structure?	___	_X_

If **no** to all of the above, these measures are not feasible. **END**

If **yes** to any of the above, the measure is feasible, therefore consider the following:

REASONABILITY:	**YES**	**NO**
1. Does cost of implementation meet the cost per benefited residence criterion?	___	___
2. Does this measure conform to local plans and land use regulations?	___	___
3. Is the measure consistent with state and federal environmental laws, regulations and best management practices?	___	___
4. Additional considerations:		

DESIRABILITY:	**YES**	**NO**
Does the local jurisdiction endorse the measure(s)?	___	___

EXHIBIT 1300-5

Project Name:_**US-91 Shelley to York Road** Project#**STP-1767(101)** Key#**8116**
Receptor(s) #....**Receptor numbers 1, 3, 4, 5, and 8**
Design year 'build' dBA level: (2032) 51 dBA to 71 dBA with 4 residences at or above 66 dBA___

ITD NOISE BARRIER ABATEMENT CHECKLIST

BARRIER FEASIBILITY:	YES	NO
1. Can the barrier achieve at least a 5dBA sound level reduction at the impacted receptor without limiting property or neighborhood access?	___	_X_
2. Does the barrier conform to project standards regarding traffic safety, maintenance and drainage concerns, considering that these issues can often be resolved through use of good design practices?	___	_X_
3. Can an effective barrier be constructed considering the existing site characteristics and topography, and without reconfiguring the site or neighborhood (not including minor access modifications)?	___	_X_
4. Is traffic noise the dominate noise source in the project area, and will the barrier be effective in spite of any other source not associated with the project?	___	_X_

If **no** to <u>any</u> of the above, the barrier is not feasible. **END**
If **yes** to <u>all</u> of the above the barrier is feasible, therefore consider the following:

BARRIER REASONABILITY:	YES		NO	
	High	Low	Low	High
1. Development pre-dated highway construction	___ >80%	___ 50-80%	___ 30-49%	___ <30%
2. Development in place before 1976	___ >80%	___ 50-80%	___ 30-49%	___ <30%
3. Type of Development*	___ Dwelling	___ School	___ Office	___ Retail
4. Design year 'build' dBA level > current year no-build	___ >10dBA	___ 5-10	___ 3-4	___ <3dBA
5. Design year 'build' dBA level > design year no-build	___ >5dBA	___ 3-5	___ 0-2	___ <0dBA
6. Cost per residence benefited	___ <$16K	___ $16-21K	___ $21-26K	___ >$26K
7. Have efforts been made at the local level to prevent incompatible development adjacent to highways?	___ Major	___ Moderate	___ Minor	___ None

BARRIER DESIRABILITY:
Do a majority (50% + 1) of impacted residents want a barrier? YES____ NO____(END)

*Dwelling-includes residences, condos, apt's., areas of frequent outdoor use associated with quiet & 'Cat. A' uses.
School- includes libraries, churches, hospitals, and outdoor areas associated with infrequent or noisier activities.
Office- includes low volume commercial uses, and motels/hotels with outdoor accommodations for guests.
Retail-includes parking lots, industrial uses, shopping centers, convenience stores, highway businesses, etc.

EXHIBIT 1300-6

Project Name: **US-91 Shelley to York Road** Project **#STP-1767(101)** Key **#8116**

Idaho Transportation Department (ITD)
NOISE ABATEMENT DECISION CHECKLIST

DISTRICT/LHTAC DECISION regarding the following receptor(s) Receptors number 1 through 8

Yes No

__Yes__ A traffic noise impact has been identified [23 CFR 772.13(a)(1)]. (Relative or Absolute)

__No__ The noise abatement measures will (effectively) reduce the traffic noise impact [23 CFR 772.13(a)(2)].

__No__ The impacts for which the mitigation is proposed actually result from the Administration action [23 CFR 771.105(d)(1)].

__N/A__ The proposed mitigation represents a reasonable public expenditure after considering the impacts of the action and the benefits of the proposed mitigation measures [23 CFR 771.105(d)(2)] & [23 CFR 772.13(a)(1)].

_N/A___Based on the studies so far accomplished, the State/local jurisdiction **intends to install** noise abatement measures in the form of: e.g., a barrier at _____N/A_____. These preliminary indications of likely abatement measures are based upon preliminary design for a barrier cost of $_____N/A_____ that will reduce the noise level by _N/A_____dBA for ___N/A_____ residents.

(Note: If it subsequently develops during final design that these conditions have subsequently changed, the abatement measures might not be provided. A final decision of the installation of the abatement measure(s) will be made upon completion of the project design and the public involvement processes. Also, a barrier should not be rejected for any one single reasonability criterion noted on 'Barrier Checklist', unless a majority of impacted residents do not want it.)

__X__Based on the studies so far accomplished, the State/local jurisdiction **does not intend to install** noise abatement measures for the following reasons:

- _X__Abatement measures are not effective
- ___Project traffic noise is not the dominate noise source
- _X__Abatement measures conflict with the purpose of the project
- ___Receptors are considered noise tolerant (ie., commercial, highway business, industrial, etc.)
- ___Unnoticeable change (<3dBA) in noise level between design year build and no-build alternatives
- ___Local ordinances allow development along highways without consideration for noise abatement
- ___Traffic noise impacts are a result of development occurring after the highway was constructed
- ___Traffic noise impacts resulted from development occurring after the 1976 NAC became effective
- ___Cost per benefited residence is excessive
- ___Other, comment:

PREPARED BY _____ DATE 5/23/06

District/LHTAC Environmental Planner/Engineer

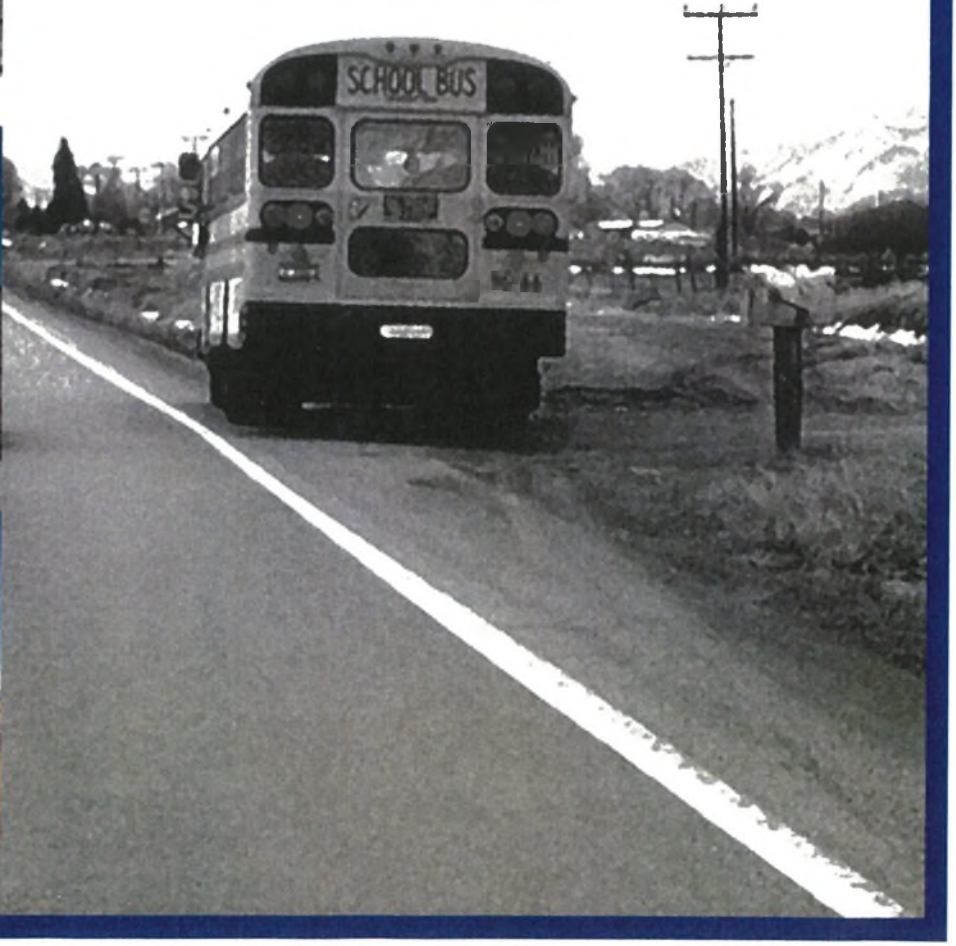
Shelley To York Road

US-91 Shelley to York Road
BINGHAM AND BONNEVILLE COUNTIES, IDAHO

ITD Project No. STP-1767(101),
Key No. 8116

WETLAND DELINEATION REPORT

October 18, 2005



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1. INTRODUCTION

The Idaho Transportation Department (ITD) proposes to improve US-91 between the City of Shelley and York Road in Bingham and Bonneville Counties. The general location of the project area is shown in Figure 1. The project begins at New Sweden Road in the City of Shelley and terminates at York Road at Milepost 122.9.

This wetland delineation report was prepared to determine the location and extent of areas that would likely be subject to regulation by the United States Army Corps of Engineers (Corps) under Section 404 of the Clean Water Act (CWA).

2.0 PROPOSED PROJECT

The Proposed Project will widen the existing two-lane road to a four-lane highway with a center turn lane and eight-foot shoulders. The existing horizontal road alignment will be shifted to the west to increase storage capacity between US-91 and the Union Pacific rail line that parallels the highway and to improve sight distance at the intersecting streets. The existing structure over the Snake River Canal would be replaced. The intersections of US-91 and Canyon Road, Cotton Road, Clinger Street, Country Club and Sidwell Avenue will be reconstructed with improved geometry.

The jurisdictional waters in the project area are associated with irrigation canals that are perpendicular to US-91. These are shown on the two drawings in Appendix A.

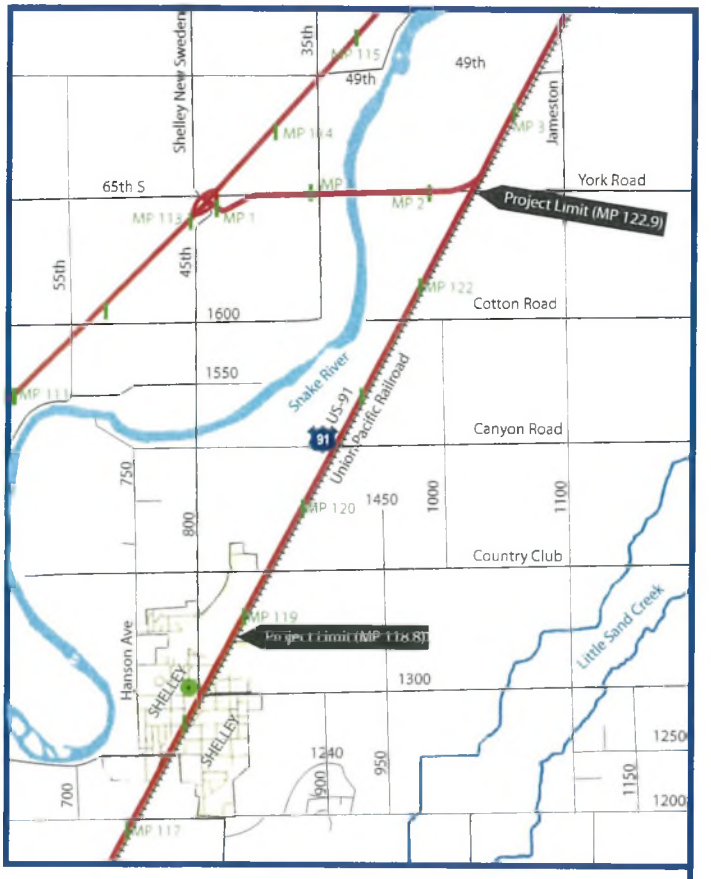
This report includes general information (Section 2, Source Materials and Methods) and site-specific information (Section 3, Existing Site Characteristics; Section 4, Results; and Section 5, Summary) to support the assessment.

3.0 SOURCE MATERIALS AND METHODS

3.1 Source Materials

Primary guidance for this investigation was the *U.S. Army Corps of Engineers Wetlands Delineation Manual* (Manual) (Environmental Laboratory 1987). The U.S. Army Corps of Engineers (Corps) and the State of Idaho recognize the use of the 1987 Manual for delineation of wetlands.

The Manual provides technical guidance and recommended procedures to be used in determining whether an area is a jurisdictional wetland and the location of wetland boundaries. The Manual requires that three criteria be met before areas can be considered a wetland under federal or state jurisdiction. These three criteria are the presence of hydric soils, hydrophytic vegetation, and wetland hydrology under normal circumstances. If one of these criteria cannot be determined because of disturbance caused by recent natural events or human activities, alternative methods are provided in the Manual to make wetland determinations.



91 Shelley To York Road	Project No. STP-1767(101) Key No. 8116	
	Title: Project Location	Figure No. 1
		Date: June 2005
		IDAHO TRANSPORTATION DEPARTMENT

3.2 Background Information

Existing data were reviewed to determine potential wetland locations and site conditions prior to initiating the fieldwork. Data sources used in this study include the following:

- Aerial photography (1 inch = 200 feet) provided by Parsons Brinckerhoff Quade and Douglas, Inc. (PB);
- U.S. Geological Survey 1:24,000 topographic maps for Idaho Falls South 7.5' (1979);
- Soil Survey of Bingham County Area, Idaho, (NRCS 1991);
- Soil Survey of Bonneville County Area, Idaho, (NRCS 1991);
- Hydric Soils List for Bingham County, Idaho (NRCS 2004);
- Hydric Soils List for Bonneville County, Idaho (NRCS 2004); and
- U.S. Fish and Wildlife Service National Wetland Inventory Maps (USFWS 2002);
- Draft Phase I Materials Report and Geologic Reconnaissance (Terracon, 2005).

This information was used to develop preliminary wetland locations and aid on-site data collection.

3.3 Data Collection Methods

All potential jurisdictional areas within the project area's ROW were investigated. Soils, vegetation, and hydrology were observed using the Manual's standard on-site method. Data sites were selected to provide a valid representation of site conditions and representative sampling locations to justify the location of the wetland boundary. Each jurisdictional drainage that would be impacted by the project was given a unique number, and field data were recorded.

Irrigation-dependent wetland boundaries were investigated.

3.3.1 Hydrologic Assessment

Wetland hydrology field indicators were recorded for each wetland site. Typically recorded data included depth of inundation, water table, and soil saturation. Primary indicators, such as sediment deposits, watermarks, drift lines, and drainage patterns, or secondary indicators, such as oxidized rhizospheres (root zones) and local soil survey data, were also recorded.

3.3.2 Soils Assessment

Soils were examined for hydric soil characteristics. Hydric soils are those that have formed exclusively under wet conditions. Hydric soils mapped in the project area were obtained from the Bingham County hydric soils list and the Bonneville County hydric soils list (NRCS 2004).

3.3.3 Vegetation Assessment

Hydrophytic vegetation consists of those plant species that have adapted to growing in substrates that are periodically deficient of oxygen because of saturated soil conditions. Five basic groups of vegetation are recognized based on their frequency of occurrence in wetlands (Reed 1988; Reed et al. 1993). These categories, referred to as the "wetland indicator status" (from the wettest to driest habitats), are as follows: obligate wetland (OBL) plants, facultative wetland (FACW) plants, facultative (FAC) plants, facultative upland (FACU) plants, and obligate upland (UPL) plants. A sixth indicator status, no indicator (NI), is assigned when there is insufficient information.

A visual estimate of the percentage of cover by dominant species in the plant community was performed for each jurisdictional area. Dominant species are the most abundant plant species (when ranked in descending order of abundance and cumulatively totaled) that, when totaled, immediately exceed 50% cover, as well as any species comprising more than 20% cover (Federal Interagency Committee for Wetland Delineation 1989). If more than 50% of the dominant species included by the above criteria are FAC or those that prefer wetter conditions, the vegetation community is considered hydrophytic. FAC– species are excluded and are considered non-hydrophytic vegetation. The "–" indicates plant species that prefer slightly drier conditions on average. A "+" indicates plant species that prefer slightly wetter conditions on average.

4.0 EXISTING SITE CHARACTERISTICS

4.1 Landscape Context and Position

This project extends for approximately 4 miles between the City of Shelley, Idaho, and York Road. The project area begins north of US-91 Milepost (MP) 118 and ends north of MP 122. Beginning at Oak Street and near the northern city limits of Shelley, US-91 constricts from four lanes to two lanes (MP 118.7). On the west side of the road, several privately owned businesses are situated approximately 95 feet west of the existing roadway. The Union Pacific Railroad parallels US-9 on the east side of the roadway between Shelley and York Road. The railroad track is located approximately 65 feet east of the existing US-91 road prism edge.

US-91 crosses the Snake River Valley Canal and Bridge at MP 120.4 before reaching Canyon Road at MP 120.7. North of Canyon Road, US-91 comes within 0.25 mile of the Snake River at Milepost 121.7.

North of the City of Shelley, the adjacent land use is primarily agriculture to the east of US-91 and the Union Pacific railroad. West of US-91 is a mixture of active agricultural fields, farmsteads, and single family homes on large lots. The vegetation reflects this land use pattern as irrigated agricultural crops and residential landscaping also dominate the project area.

4.2 Topography

The US-91 Shelley to York Road project area is dominated by the relatively flat topography of the Snake River floodplain and terraces formed along the rivers. The elevation is approximately 4600 feet above sea level.

US-91 in the project area traverses a river terrace formed generally above the present day flood plain on the east bank of the Snake River. This terrace was deposited during the Holocene to Upper Pleistocene periods (Scott, 1982). The native subsurface soils generally consist of sandy silt or silty sand overlying gravel that covers basalt bedrock. These soils generally constitute a two to four foot stratum overlying dense gravels and gravelly sand soils. Soil association for the project area includes the Bannock-Heiseton-Harston unit. This soil unit is nearly level, very deep, and well drained.

The Snake River plain is not considered to be seismically active although the areas along its borders have active faults. Mapped active faults are located within 45 miles of US-91 with the nearest active fault located near Soda Springs, Idaho.

4.3 Hydrology

Sources of hydrology within the project area are associated with irrigation ditches and canals that drain into tributaries of the Snake River. Several canals traverse the US-91 ROW, supplying hydrology to their banks as well as portions of the agricultural lands that they irrigate.

4.4 Soils

Common indicators for wetland soils in the project area include very low chroma (Munsell chroma of 1) or low chroma (Munsell chroma of 2), with redoximorphic features in the upper 10 to 12 inches. No hydric soils are mapped within the project area (NRCS 2004). Soils in the area include the following.

- *Bannock loam, 0 to 2% slopes.* Bannock soils are well-drained, nearly level to moderately sloping loam soils. Bannock loam is generally used for irrigated crops and pastureland.

- *Heiseton fine sandy loam, drained.* This soil is considered a deep soil formed in mixed alluvium. This soil is considered to have moderately rapid permeability with most areas of this soil being used for irrigated crops.

- *Harston fine sandy loam.* This very deep, well-drained soil is also formed in mixed alluvium. The upper portions of this soil are considered to have moderately rapid permeability, and most areas of this soil are used for irrigated crops.

4.5 Vegetation

Roadside construction, maintenance, residential landscaping, and agricultural seeding have significantly modified native vegetation within the project area.

Upland portions of the project area are most frequently dominated by grass communities, which include tall wheatgrass (*Agropyron elongatum)*, intermediate wheatgrass (*Agropryon intermedium)*, and smooth brome (*Bromus inermus*), along with cheat grass (*Bromus tectorum)* and bulbous bluegrass (*Poa bulbosa)*. Weedy forbs including common mullein (*Verbascum thapsus)*, common dandelion (*Taraxacum officianale)*, yellow salsify (*Tragopogon dubuis)*, white sweetclover (*Melilotus alba)*, and tall tumble mustard (*Sisymbrium altissimum)* are common in these grass communities. Agricultural areas include crops such as alfalfa *(Medicago sativa)*, sugar beets *(Beta vulgaris saccharifera*, oats *(Avena sativa*, *A. fatua)*, barley *(Hordeum* sp.*)*, wheat *(Triticum aesitivum)*, rye *(Elymus* sp.*)*, and clover *(Trifolium* sp.*)*.

Plants species found in the project area and their wetland indicator status are listed below in Table 1, including common names, scientific names, and wetland indicator status.

The irrigation ditches and canals are dominated by the vegetation from the adjacent agricultural crops and the residential landscaping.

4.6 Irrigation Features

The Snake River Valley irrigation canal crosses nearly perpendicular to US 91 near station 102+25. The smaller Quigg Lateral canal crosses US 91 perpendicular to the roadway near station 117+25. Additional small, earthen irrigation canals run approximately parallel to US 91 on the western side of the roadway.

Table 1. Vegetation Identified in the US-91 Shelley to York Road Project Area

Common Name	Scientific Name	Wetland Indicator Status
Common yarrow	*Achillea millefolium*	FACU
Crested wheatgrass	*Agropyron cristatum*	NI
Tall wheatgrass	*Agropyron elongatum*	NI
Intermediate wheatgrass	*Agropryon intermedium*	NI
Western wheatgrass	*Agropyron smithii*	FACU
Blue-bunch wheatgrass	*Agropyron spicatum*	FACU
Smooth brome	*Bromus inermus*	NI
Japanese brome	*Bromus japonicus*	UPL
Cheat grass	*Bromus tectorum*	NI
Curly-cup gumweed	*Grindelia squarrosa*	FACU
Alfalfa	*Medicago sativa*	NI
White sweetclover	*Melilotus alba*	FACU
Bulbous bluegrass	*Poa bulbosa*	NI
Kentucky bluegrass	*Poa pratensis*	FAC
Sedge	*Carex* sp.	FACW
Horsetail	*Equisetum* sp.	NI
Fox-tail barley	*Hordeum jubatum*	FAC
Rush	*Juncus* sp.	FACW
Panic grass	*Panicum* sp.	NI
Narrow-leaf cotton-wood	*Populus angustifolia*	FACW
Shrubby cinquefoil	*Potentilla fruticosa*	FAC-

5.0 IDENTIFIED WETLANDS

5.1 Jurisdictional Characteristics

Two jurisdictional irrigation canals or laterals were identified in the project area. Table 2 lists the impacted wetlands using the station locations from the provided plan and profile schematics. No natural wetlands were found in the project area adjacent to US-91.

Table 2. Irrigation Ditches and Canals

Name	Approximate Station Location	Length (feet)	Width (feet)	Area (acres)
Snake River Canal	Station 102+25 to station 103+50	32	114.0	0.084
Quigg Lateral	Station 117+25 to station 117+75	100	10.0	0.023

Based on field investigations, these canals are regularly maintained to allow free flow of seasonal irrigation water. Vegetation that does encroach into the canals tends to be consistent with that in the adjacent cropland and/or residential landscaping. The seasonal irrigation water flow as well as maintenance precludes establishment of wetland vegetation.

5.2 Wetlands Impacts

The impact of the Proposed Project on the identified irrigation dependent wetlands was manually calculated from the conceptual engineering drawings. Approximately 0.107 acres of jurisdictional drainage would be impacted.

SUMMARY

A total of two irrigation dependent wetlands were identified adjacent to the Proposed Project. As the Snake River Canal and the Quigg Lateral discharge into the Snake River, they are jurisdictional. The Proposed Project will impact 0.107 acres of these irrigation dependent wetlands.

6. REFERENCES

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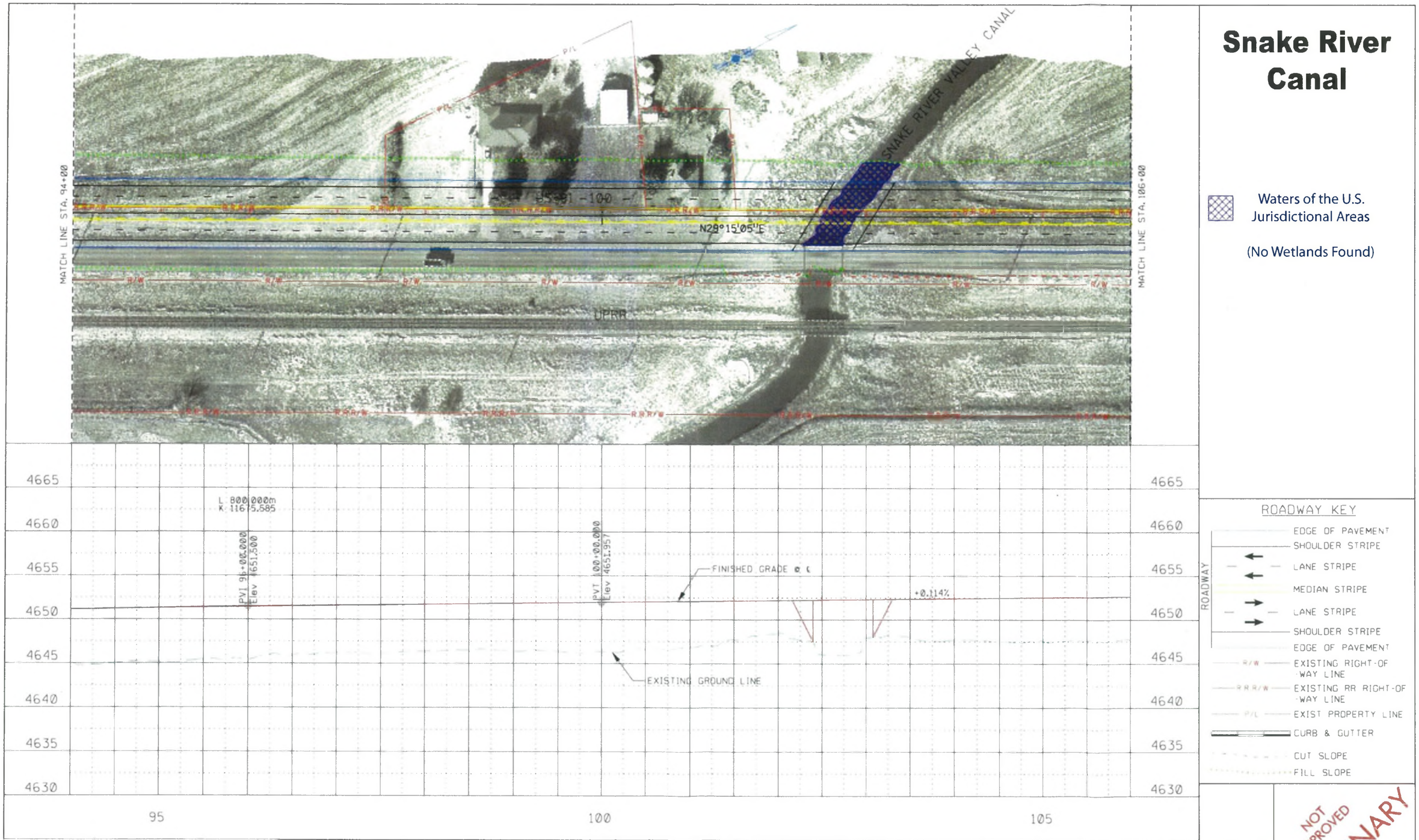
Terracon, Draft Phase I Materials Report and Geologic Reconnaissance US-91 Shelley to York Road, June, 2005

USFWS (U.S. Fish and Wildlife Service). 2002. *National Wetland Inventory Maps for Bingham and Bonneville Counties.*

Appendix A

Jurisdictional Boundary Maps

NOTE: The following conceptual engineering drawings the two locations where jurisdictional wetlands were identified.



Snake River Canal

Waters of the U.S. Jurisdictional Areas

(No Wetlands Found)

ROADWAY KEY

ROADWAY

- EDGE OF PAVEMENT
- SHOULDER STRIPE
- LANE STRIPE
- MEDIAN STRIPE
- LANE STRIPE
- SHOULDER STRIPE
- EDGE OF PAVEMENT
- R/W — EXISTING RIGHT-OF-WAY LINE
- RRR/W — EXISTING RR RIGHT-OF-WAY LINE
- P/L — EXIST PROPERTY LINE
- CURB & GUTTER
- CUT SLOPE
- FILL SLOPE

NOT APPROVED FOR CONSTRUCTION PRELIMINARY

REVISIONS

NO.	DATE	BY	DESCRIPTION

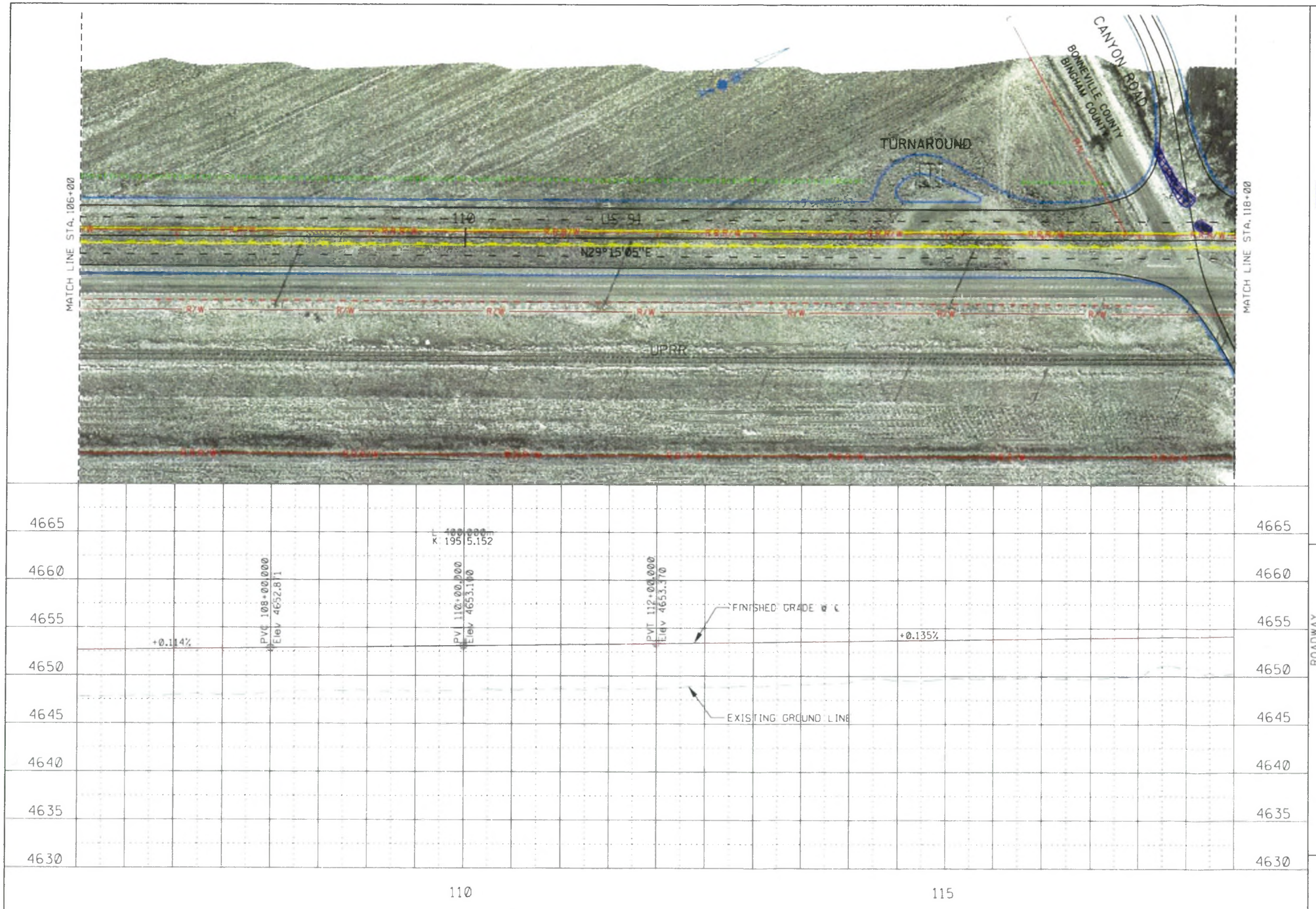
DESIGNED M. Golang	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED J. Bleyl	
DETAILED R. Belnap	CADD FILE NAME 8#6p106.dgn
DRAWING CHECKED M. Golang	DRAWING DATE: April, 2005

IDAHO TRANSPORTATION DEPARTMENT

PB PARSONS BRINCKERHOFF

PROJECT NO.	PLAN & PROFILE	English
STP-1767(101)	US-91 CORRIDOR PLAN & NEPA DOCUMENT	COUNTY BINGHAM/BONNEVILLE KEY NUMBER 8116 SHEET 1 OF 2

Quigg Lateral



Waters of the U.S. Jurisdictional Areas

(No Wetlands Found)

ROADWAY KEY

- EDGE OF PAVEMENT
- SHOULDER STRIPE
- LANE STRIPE
- MEDIAN STRIPE
- LANE STRIPE
- SHOULDER STRIPE
- EDGE OF PAVEMENT
- R/W — EXISTING RIGHT-OF-WAY LINE
- RR R/W — EXISTING RR RIGHT-OF-WAY LINE
- P/L — EXIST PROPERTY LINE
- CURB & GUTTER
- CUT SLOPE
- FILL SLOPE

ROADWAY

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED M. Galang	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED J. Bleyl	
DETAILED R. Belnap	CADD FILE NAME 8116pl07.dgn
DRAWING CHECKED M. Galang	DRAWING DATE: April, 2005

IDAHO TRANSPORTATION DEPARTMENT

PB PARSONS BRINCKERHOFF

PROJECT NO.

STP-1767(101)

PLAN & PROFILE

US-91 CORRIDOR PLAN & NEPA DOCUMENT

English

COUNTY BINGHAM/BONNEVILLE

KEY NUMBER 8116

SHEET 2 OF 2

NOT APPROVED PRELIMINARY FOR CONSTRUCTION

PROGRAMMATIC 4(F) EVALUATION USE OF HISTORIC BRIDGES

PROGRAMMATIC SECTION 4(F) EVALUATION AND APPROVAL FOR FEDERALLY-AIDED PROJECTS THAT NECESSITATE THE USE OF HISTORIC BRIDGES

SNAKE RIVER VALLEY CANAL BRIDGE
US-91 SHELLEY TO YORK ROAD
Project STP-1767(101), Key No. 8116
Bingham County, Idaho

Section 4(f) was created when the United States Department of Transportation (USDOT) was formed in 1966. It was initially codified at Title 49 United States Code (U.S.C.) Section 1653(f) (Section 4(f) of the USDOT Act of 1966). Later that year, Title 23 U.S.C. Section 138 was added. Section 138 states: "The Secretary shall not approve any program or project (other than any project for a park road or parkway under Section 204 of this title) which requires the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance as determined by the Federal, State, or local officials having jurisdiction thereof, or any land from an historic site of national, State, or local significance as so determined by such officials unless (1) there is no feasible and prudent alternative to the use of such land, and (2) such program includes all possible planning to minimize harm to such park, recreational area, wildlife and waterfowl refuge, or historic site resulting from such use." In 1983 Section 1653(f) was reworded and recodified at Title 49 U.S.C. Section 303. These two statutes have no real practical distinction and are still commonly referred to as Section 4(f).

Because the statute does not require the preparation of any written document, the FHWA has developed procedures for the preparation, circulation and coordination of Section 4(f) documents in two places - Title 23 C.F.R Part 771.135 and FHWA's Technical Advisory, *Guidance for Preparing and Processing of Environmental and Section 4(f) Documents*: T6640.8A. This Section 4(f) Evaluation has been prepared in accordance with these procedures and the Nationwide Programmatic Section 4(f) Evaluation and Approval for FHWA Projects that Necessitate Use of Historic Bridges.

INTRODUCTION

The US-91 Shelley to York Road project would widen US-91 from 2 lanes to a 5-lane cross-section (4 lanes with a center turn lane and shoulders) from Milepost 118.8 in Bingham County to Milepost 122.9 in Bonneville County. This widening is needed to resolve existing traffic operations problems and accommodate future traffic volumes.

The Snake River Valley Canal Bridge is a concrete slab deck that spans 30 feet over the Snake River Valley Canal at milepost 120.4. The bridge was constructed in 1941. It accommodates two lanes of traffic on approximately 28 feet of pavement curb to curb.

Alternatives considered included a 3-lane cross-section and No Build but neither met the purpose and need for the project. The 5-lane alternative is the preferred alternative as it meets the future transportation needs and function of US-91.

Before removal or demolition, the existing Historic Bridge will be subjected to documentation of a level to be determined in consultation with the SHPO.

APPLICABILITY

The programmatic Section 4(f) evaluation may be applied to this project because it meets the following criteria:

1. The bridge is to be replaced with Federal funds.
2. The project will require the use of a historic bridge structure that is eligible for listing on the National Register of Historic Places.
3. The bridge is not a National Historic Landmark.

DESCRIPTION OF THE PROJECT

The Idaho Transportation Department (ITD) is proposing improvements to US-91 between New Sweden Road at Milepost 118.8 in the north portion of the City of Shelley to the York Road and US-91 intersection at Milepost 122.9.

ALTERNATIVES CONSIDERED

During the National Environmental Policy Act (NEPA) process, three alternatives were considered for this 4.1 mile long highway: No Build, a 3-Lane Alternative, and a 5-Lane Alternative.

The ability of project alternatives to meet future travel needs was evaluated by analyzing Level of Service (LOS). LOS is a quality measure describing operational conditions within a traffic stream generally in terms of such service measures as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience.[1] There are six categories of Level of Service ranging from A to F that describe the general traffic operating conditions.[2] In summary these are described[3] as follows:

Level of Service	General Operating Conditions
A	Free flow
B	Reasonably free flow
C	Stable flow
D	Approaching unstable flow
E	Unstable flow
F	Forced or breakdown flow

The Idaho Transportation Department and the American Association of State Highway and Transportation Officials (AASHTO) have a recommended minimum LOS for a rural collector of LOS B. US-91 is currently a rural collector.

No Build Alternative

The No Build Alternative would leave the existing highway as is. The Snake River Valley Canal Bridge would remain in its current position and condition and would be unaffected by this alternative.

The No Build Alternative would result in a LOS D in the year 2032. The intersections of US-91 with New Sweden Road and Country Club Road would operate at LOS D. These are below ITD's Level of Service C policy for New Sweden Road (urban) and LOS B for Country Club Road (rural) and for US-91 in the vicinity of the Snake River Valley Canal Bridge. The existing substandard shoulder widths, inadequate clear zone, poor intersection geometry, and the lack of passing opportunities would result in decreased safety and poor traffic operations. The existing vehicle storage between the UPPR tracks and US-91 at the intersections of Country Club, Clinger, Cotton and Canyon Roads would not be improved.

This alternative does not meet the purpose and need for the project and is therefore not feasible or prudent.

3-Lane Alternative

The 3-Lane Alternative would widen US-91 from 2 lanes to 3 lanes, including 1 lane in each direction, a continuous center turn lane and widened shoulders. This widening would occur to the west of the existing roadway to avoid adverse impacts to the parallel Union Pacific Railroad and to improve vehicle storage between the railroad and US-91 at cross-streets. The 3-Lane Alternative would construct a new bridge to replace the existing Snake River Valley Canal Bridge, as shown in Figure 1 on page 4. The shaded blue area represents the footprint of the widened road.

[1] Transportation Research Board, Highway Capacity Manual 2000, National Research Council, page 2-2.
[2] Transportation Research Board, Highway Capacity Manual 2000, National Research Council, page 12-16.
[3] AASHTO, A Policy on Geometric Design of Highways and Streets, 2004, Exhibit 2-31, page 84

The approximate location of the abutments for the new bridge is shown. The new edge of pavement would be located approximately on the center line of the existing bridge.

he 3-Lane Alternative would not have sufficient additional traffic capacity and would result in a Level of Service of D for US-91. Traffic operations would continue to be hindered as motorists would be unable to pass slower moving vehicles, and passing would not be permitted in the center turn lane.

Because the 3-Lane Alternative would not provide the needed additional traffic capacity and would have limited safety improvements south and north of the Snake River Valley Canal Bridge, it does not meet purpose and need and is therefore not reasonable or prudent.

Five-Lane Alternative

This alternative would widen the existing two-lane facility to five lanes, with two 12-foot lanes in each direction, a 14-foot center median, and 8-foot shoulders.

The horizontal alignment of US-91 would be shifted to the west, generally maintaining the existing east edge of pavement. This shift is necessary to improve both the sight distance problems associated with side street traffic entering US-91, and the limited vehicle storage between the Union Pacific Railroad tracks and existing roadway. The shift also avoids encroaching into the Union Pacific track cross-section and its associated maintenance requirements.

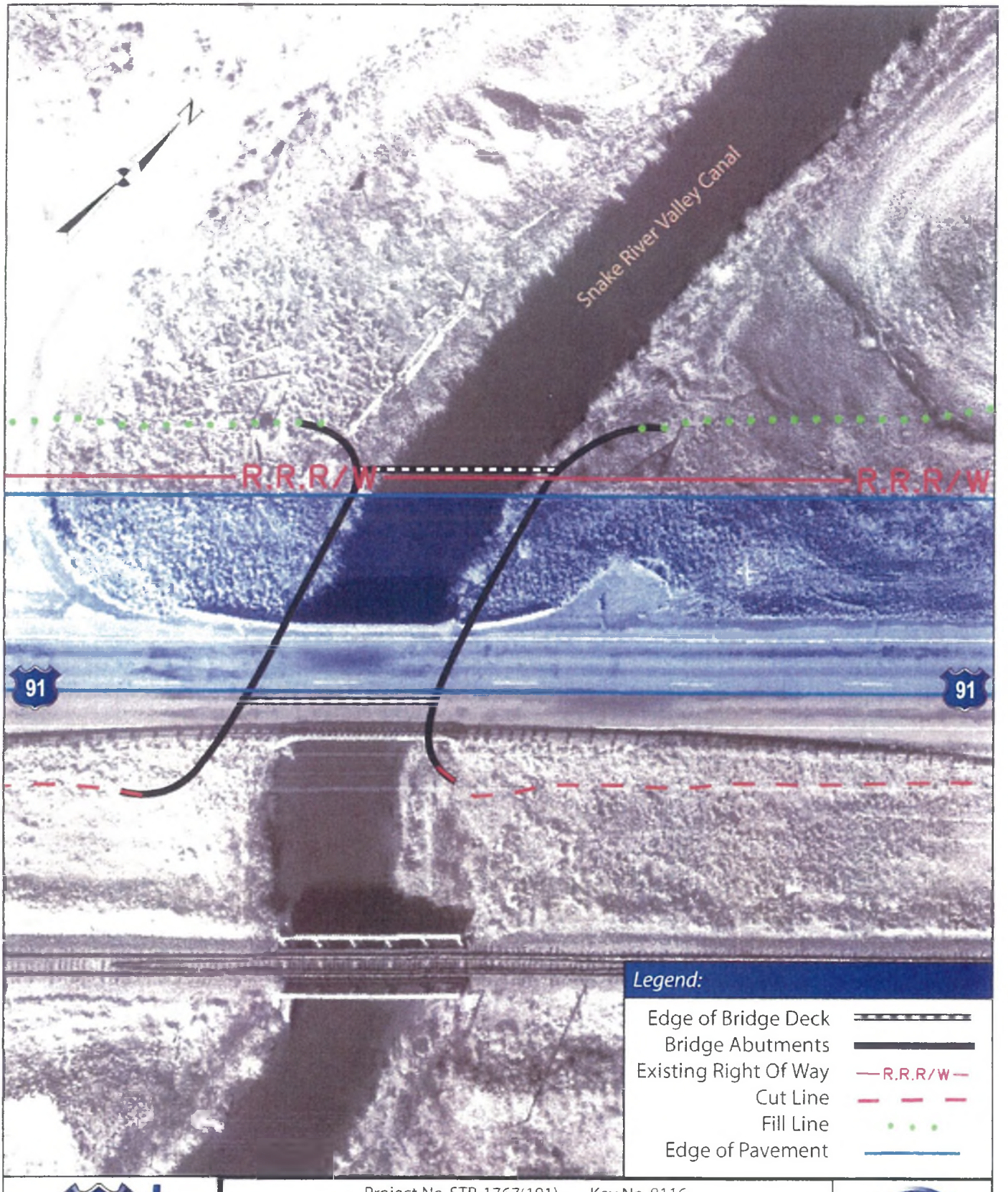
The vertical alignment of US-91 would be raised by 2 to 5 feet to address existing vertical curve issues on the US-91 mainline, improve tie-ins to Country Club Road, Canyon Road, Cotton Road, and Clinger Road, minimize the need for cuts that would increase the width of the roadway footprint, and to facilitate drainage by eliminating the need for drainage ditches.

The Proposed Action would replace the existing Snake River Valley Canal Bridge with a new structure that would accommodate the wider cross-section and meet ITD and AASHTO standards. The new edge of pavement of the Five Lane Alternative would coincide with the west rail of the existing bridge, as shown in Figure 2, page 6. The location of the proposed new bridge, its abutments and edge of bridge deck is also shown.

The Five-Lane Alternative would operate at LOS A for both north and southbound through lanes in 2032. All intersections would operate at LOS C or better. It would provide increased roadway capacity to meet design year 2032 traffic volumes. The Five Lane Alternative would have the following additional operational characteristics:

- Traffic operations would be improved as a result of continuous opportunities for passing slower moving vehicles. With two lanes in each direction, there would be a continuous opportunity to pass.
- Intersections would operate an LOS C or better.
- Standard 8-foot shoulders provide room to help accommodate oversize vehicles, snow storage, bicycle traffic, and refuge for incident management.
- The center left turn lane would provide refuge for left turning vehicles, eliminating queuing behind turning traffic and decreasing the potential for rear-end accidents.
- Skewed intersections will be improved.
- Storage length at intersections between the Union Pacific railroad tracks and US-91 would be increased to help accommodate longer vehicles.
- Roadside obstacles will be relocated or removed from the clear zone.
- The provision of right and left turn lane capacity would improve both safety and capacity at intersections.

As the 5-Lane Alternative fully meets the purpose and need for the project, it was advanced into the NEPA Environmental Evaluation and is the Proposed Action for this Section 4(f) Evaluation.



US-91 North Corridor Plan

Project No. STP-1767(101) Key No. 8116

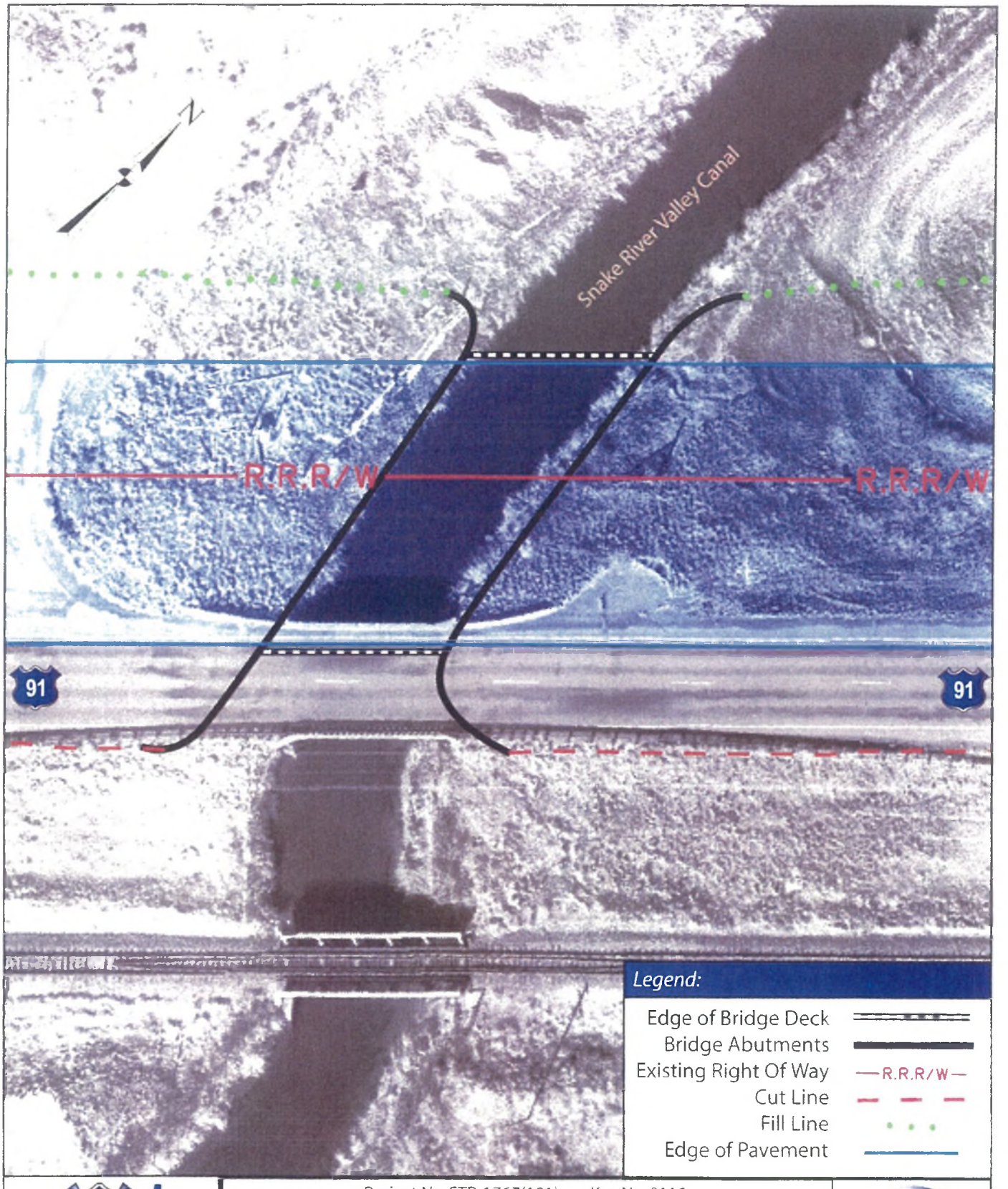
Title

Snake River Canal Bridge
3 Lane Alternative

Figure No.
1

Date:
April 2006

IDAHO TRANSPORTATION DEPARTMENT



91
US-91 North Corridor Plan

Project No. STP-1767(101) Key No. 8116

Title
Snake River Canal Bridge
5 Lane Alternative

Figure No.
2

Date:
April 2006

IDAHO TRANSPORTATION DEPARTMENT

PROJECT USES OF THE 4(F) PROPERTY

The Proposed Action, referred to as the 5-Lane Alternative, would construct a new bridge. The east wall of the new bridge would be located at the approximate location of the existing concrete railing, as shown in Figure 2, page 5.

The Proposed Action would remove the Snake River Valley Canal Bridge.

PURPOSE AND NEED OF PROPOSED ACTION

Purpose: The purpose of this project is to improve US-91 from New Sweden Road in the City of Shelley to York Road from Milepost 118.8 to Milepost 122.8 to address existing and future capacity, safety and substandard roadway characteristics, and operational problems.

Need: US-91 between the City of Shelley and the City of Idaho Falls serves as both a commuter route between those two cities and as a farm-to-market roadway for transport of both raw and processed agricultural products. The City of Shelley is experiencing rapid growth and development that will continue to contribute to traffic volumes on US-91.

The current Level of Service (LOS) is C and is expected to decrease to LOS D by year 2032. Two intersections will fall below ITD's LOS C standard by 2032. The intersection of US-91 and Country Club Road operates at LOS C but will decline to LOS D in the future. The intersection of US-91 at New Sweden Road is currently at LOS B but will decline to LOS D by 2032. LOS D is below ITD's policy of achieving LOS C in rural areas and LOS B in rural areas.

The US-91 intersections with New Sweden, Canyon, Country Club, and York all currently meet ITD criteria for a right-turn lane in at least one direction on US-91, and New Sweden, Country Club, and York all meet ITD's criteria for a left turn lane in at least one direction as well.

US-91 is experiencing a number of operations problems. The lack of dedicated turn lanes requires that traffic must slow and queue behind turning traffic, particularly for left-turning vehicles. This contributes to congestion and increased potential for rear-end accidents. Slow moving vehicles hinder traffic flow as following vehicles must wait for gaps in oncoming traffic to pass. Wide vehicles can obstruct traffic flow as the existing narrow roadway cross-section requires that they encroach into oncoming traffic lane.

The proximity of the elevated grade of Union Pacific Railroad to US-91 has resulted in very limited storage space between the railroad and US-91 for cross-street traffic as well as intersections with poor sight distance and substandard storage lengths. This creates both a capacity and a safety issue.

The skewed nature of the US-91 intersections results in difficult turning movements for larger vehicles such as trucks, school buses, and farm equipment.

The existing 3-foot shoulders are substandard and do not provide adequate room for incident management, right turn movements, and bicycling. AASHTO requires 8-foot shoulders for this category of roadway[4]. Power poles parallel the US-91 pavement within 7 feet of the edge of pavement resulting in a substandard clear zone. Clear zone standards are specified in the AASHTO Roadside Design Guide and also in the ITD Design Manual. In the section of US-91

[4] American Association of State Highway and Transportation Officials, A Policy on Geometric Design of Highways and Streets, 2004, Exhibit 7-3, page 448.

where the Snake River Valley Canal Bridge is located, the clear zone should be 20 feet.[5] The proximity of these obstructions to the traffic lanes forces wide equipment to encroach into the opposing lane to avoid obstructions. The narrow 32-foot width of the existing bridge does not provide adequate clear zone such that the existing abutments constitute obstructions.

While the New Sweden to York Road corridor has not experienced an above-average collision history, as traffic volumes increase and the time spent following slower moving vehicles increases, there is a risk of increased crash rates due to driver frustration and risk-taking passing maneuvers.

DESCRIPTION OF 4(F) HISTORIC BRIDGE

The Snake River Valley Canal Bridge (ITD Bridge Key #17555) is constructed from reinforced concrete with a concrete slab deck. The bridge spans approximately 30 feet across the Snake River Valley Canal at US-91 milepost 120.4. Built in 1941, the bridge decorative railings are constructed from reinforced concrete. Each concrete railing stands about 2.5 to 3 feet tall, stretches the length of the bridge, and contains 22 decorative arches. Recent photographs of the bridge are contained in Attachment B.

Attachment E contains the original drawings for the Snake River Valley Canal Bridge. The bridge appears to have been built by the State of Idaho Department of Public Works Bureau of Highways, based on the plans of the existing historic bridge contained in Attachment E.

The bridge has a structure sufficiency rating of 48.8 and is recommended for replacement by ITD Bridge. The Structure Inventory and Appraisal Update data sheets from the Idaho Transportation Department are contained in Attachment E. Both railings show evidence of decompositions (e.g., fractured and crumbling concrete) and exposed rebar. Concrete jersey barriers are situated on both sides of the Bridge's approach to prevent motorists from accidentally driving into the canal. Both bridge abutments are in a severe state of disrepair.

The Snake River Valley Canal Bridge does exhibit distinctive architectural or engineering qualities, and is therefore eligible for listing in the NRHP under Criterion C.

ALTERNATIVES

The following alternatives avoid any use of the Historic Bridge:

1. Do Nothing.
2. Build on a New Location Without Using the Old Bridge.
3. Rehabilitation Without Affecting the Historic Integrity of the Bridge

The following provides the documentation and findings that address each of these alternatives.

1. Do Nothing

The Do Nothing Alternative has been studied. The Do Nothing Alternative ignores the basic transportation needs. For the following reasons, this alternative is not feasible and prudent:

Do Nothing would result in a LOS D in the design year 2032. The intersections of US-91 with New Sweden Road and Country Club Road would operate at LOS D. These are below ITD's Level of Service C policy for New Sweden Road (urban) and LOS B for Country Club Road (rural). The existing substandard shoulder widths, inadequate clear zone, poor intersection geometry, and the lack of passing opportunities would result in decreased safety and poor

[5] AASHTO, Roadside Design Guide, 2002, Table 3.1, page 3-6.

traffic operations. The existing vehicle storage between the UPPR tracks and US-91 at the intersections of Country Club, Clinger, Cotton and Canyon Roads would not be improved.

2. Build Alternative on a New Location Without Using the Section 4(f) Historic Bridge

Investigations have been conducted to construct a bridge on a new location or parallel to the Historic Bridge, however, for the following reasons this alternative is not feasible and prudent:

Adverse social, economic and/or environmental effects:

- *Located on Union Pacific Railroad Company (UPPR) right-of-way*. US-91 and its associated infrastructure including the Snake River Valley Canal Bridge are located within an easement on UPRR right-of-way. Construction of a new bridge across the Snake River Valley Canal adjacent to the old bridge would result in the abandonment of transportation infrastructure within UP's right-of-way. Union Pacific was approached concerning leaving the old bridge in place. Their response is contained in Appendix A of this Draft Section 4(f) Evaluation and indicates that Union Pacific will not accept the maintenance of and liability for the old structure.

- *Bridge Crosses Snake River Valley Irrigation Canal:* The Snake River Valley Irrigation Company was contacted regarding the bridge as they operate and maintain the Snake River Valley Canal that the bridge spans. The canal company responded that they will not accept responsibility for liability and maintenance of the existing bridge if a new bridge were constructed at a different location. The irrigation company also stated that the abandoned bridge would also impede regular maintenance of the canal. Their response is contained in Appendix A of this Draft Section 4(f) Evaluation.

- *Retention of Existing Bridge and Construction of a New Parallel Facility:* Construction of a new Snake River Valley Canal Bridge west of the existing historic structure would require a new crossing of the Snake River Canal, an historic resource deemed eligible for the National Register of Historic Places by the State Historic Preservation Office. (The canal is shown on the Site Map contained in this document.) Replacement of the existing bridge in the same location will minimize additional impacts to the Snake River Valley Canal.

3. Rehabilitation Without Affecting the Historic Integrity of the Bridge

Rehabilitation measures have been examined; however, for the following reasons, this Alternative is not feasible and prudent:

Structural Deficiency:

- *Low Structural Sufficiency Rating* – The rating for this bridge is 48.4, as established through regular bridge inspections by the Idaho Transportation Department. The ITD "Structure Inventory and Appraisal Update" indicates that the condition of the structure is "5 above minimum – tolerable" and recommended replacement of the bridge. The deck geometry is noted as "intolerable – replace". Although the bridge might be repaired, such repairs would not address the geometric deficiencies discussed below.

Geometric Deficiency:

- *Insufficient Roadway Capacity* – The existing bridge is 32.2 feet wide and carries one lane of traffic in each direction, as shown in Photograph 2 in Attachment B. Based on future projected traffic levels, two lanes of traffic in each direction are needed to accommodate future traffic at an acceptable Level of Service. If the existing bridge were left in place, traffic would need to merge from the proposed two lanes in each direction north and south of the bridge, into a single lane to cross. This would result in congestion and an increase in potential for accidents as motorists must merge from two lanes to one to cross the narrow bridge. The purpose and need for the project would not be met under this scenario.

- *Substandard Geometry* –The current bridge structure does not meet ITD's and AASHTO's current standards. Standard 8-foot shoulder widths and shy distance to bridge parapets are not provided. As US-

91 is used extensively by a variety of wide agricultural equipment, such equipment must use both existing lanes to cross the Snake River Valley Canal Bridge. This affects any on-coming traffic as it must slow or stop to wait for wide equipment to clear the bridge. The lack of shoulders and inadequate shy distance exacerbate the problem and create safety issues.

MITIGATION

Before removal or demolition, the existing Historic Bridge will be subjected to documentation of a level to be determined in consultation with the SHPO.

COORDINATION/CONSULTATION

An Idaho Archaeological and Historic Survey Report for the US-91 Shelley to York Road Project was prepared and submitted to the Idaho State Historic Preservation Office (SHPO). ITD, as delegated by the Federal Highway Administration, determined that the project would have an adverse effect on the Snake River Valley Canal Bridge, which is an NRHP-eligible cultural resource. The SHPO concurred with these findings.

ITD coordinated with the Union Pacific Railroad Company as the Snake River Canal Bridge falls within Union Pacific right-of-way. The Snake River Valley Irrigation District was also contacted as the bridge crosses over their canal.

The general public had the opportunity to view and comment on the Proposed Action at the following meetings:

- February 15, 2005 from 4:00 – 7:00 p.m., at the Shelley High School cafeteria, 570 Fir Street, Shelley, Idaho.
- February 16, 2005 from 4:00 – 6:30 p.m., at the Blackfoot City Hall Council Chambers, 157 North Broadway, Blackfoot, Idaho.
- February 17, 2005 from 4:00 – 7:00 p.m., at the Chubbuck City Hall Council Room, 5160 Yellowstone Avenue, Chubbuck, Idaho.
- March 30, 2005, from 4:00 to 7:00 p.m., Dome Room, Shoshone-Bannock Tribes Tribal Business Center, Fort Hall, Idaho
- June 21, 2005 from 4:00 to 7:00 p.m., Shelley City Council Chambers, Invitational landowner meeting
- January 19, 2006, 10 a.m. to 12:00 p.m., City of Blackfoot Council Chambers

Both the Union Pacific Railroad Company and the Snake River Valley Irrigation District provided correspondence stating that neither would accept liability for nor maintain the existing bridge if it were left in place but abandoned for US-91 traffic. This correspondence is contained in Attachment A.

CONCLUSION

The Do Nothing Alternative would not meet the transportation needs of US-91 and would not address the purpose and need for the project.

Rehabilitation of the Snake River Valley Canal Bridge would not be feasible or prudent as this alternative would not address the structural and geometric deficiencies of the bridge, nor accommodate future traffic volumes.

Building on a new location without using the Snake River Valley Canal Bridge would result an abandoned bridge that both the Union Pacific Railroad Company and the Snake River Valley Irrigation District will not maintain nor accept liability for.

Before removal or demolition, the existing Historic Bridge will be subjected to documentation of a level to be determined in consultation with the SHPO.

ATTACHMENT A - CORRESPONDENCE

Union Pacific Railroad Company

Snake River Valley Irrigation District

State Historic Preservation Office Form 1502

UNION PACIFIC RAILROAD COMPANY

ENGINEERING SERVICES DEPARTMENT

J. W. TRUMBULL
Manager
Industrial & Public Projects

5424 S. E. McLoughlin Blvd.
Portland, OR 97202
(503) 872-1809
Fax: (503) 872-1900

November 10, 2005

Idaho Transportation Department
District 5
PO Box 4700
Pocatello, ID 83205

ATTN: Ed Bala

8116

RE: Shelley – York (Key 9225); Snake River Canal

Dear Ed,

Based on our field review of the captioned project, it appears that ITD's current plans are to re-locate US 91 to the west, in order to avoid impacting the bridge over the Snake River Canal. It's my understanding that the old bridge would be left in place as a 4(f) avoidance measure.

The Union Pacific Railroad's right-of-way line lies well to the west of the old bridge, so it's my understanding this old structure would remain within company right-of-way. Due to liability and maintenance concerns, it is the company's preference not to leave the old structure in place. Please plan to remove the bridge accordingly.

Thanks for your assistance on this matter. If you have any questions, please feel free to call me at (503) 872-1809.

Sincerely,

John Trumbull,
Manager, Industry & Public Projects

ITD 0096 District 5 Routing

Copy	District 5	Act
✓	Dist. Engr.	
	Rec. Inspect	
	Trms. Plan	
	E/S/T	
	Train Spec.	
✓	ADE	
	R/W	
	Env. Plan	
	Res. "A"	
	Res. "B"	
✓	Design	
	Proj. Mgrs.	
	Local Roads	
	Materials	
	Traffic	
	OBM	
	Mtce. Engr.	
	Mtce. TSEA	

RECEIVED
I.T.D.
NOV 17 2005
DIVISION OF HIGHWAYS

SNAKE RIVER VALLEY IRRIGATION DISTRICT
221 So. Emerson - Shelley, Idaho 83274
Phone (208) 357-3420 Fax (208) 357-0450

Jan. 11, 2006

Idaho Transportation Department
District 5
PO Box 4700
Pocatello, Idaho 83205

ATT: Ed Bala

Dear Ed,

The Snake River Valley Irrigation District Board of Directors met with Judy Harmon at our Dec. board meeting and was informed of the proposed plans to improvements on US 91. These plans will impact the Snake River Canal bridge that the district operates and maintains.

The Board of Directors of the Snake River Valley Irrigation District will not accept responsibility for liability and maintenance of the bridge if it is left in place. Leaving the old bridge would impede regular maintenance of the canal. Therefore we would like to see the bridge removed.

Thank you for your assistance on the matter. If you have any further questions, please contact the office at 208-357-3420.

Sincerely,

Snake River Valley Irrigation District Board

Carlos Nielson
Blaine Hillman
Larry Jacobsen

ITD 0096 District 5 Routing

Copy	District 5	Act
✓	Dist. Engr.	
	Rec. Inspect	
✓	Trms. Plan	
	E/S/T	
	Train Spec.	
✓	ADE	
	R/W	
	Env. Plan	
	Res. "A"	
	Res. "B"	
	Design	
	Proj. Mgrs.	
	Local Roads	
	Materials	
	Traffic	
	DBM	
	Mtce. Engr.	
	Mtce. TSEA	

RECEIVED
I.T.D.
JAN 19 2006
DIVISION OF HIGHWAYS
DISTRICT 5

ITD 1502 (Rev. 6-05)
itd.idaho.gov

Determination Of Significance And Effect

Idaho Transportation Department – State or Tribal Historic Preservation Office

RECEIVED
I.T.D.
DEC 23 2005
DIVISION OF HIGHWAYS
DISTRICT 5

Project Title			Project Number
US-91 North Corridor Plan: Shelley to York Road			STP-1767(101)
District	Key Number	County	Field Notes
5	8116	Bingham & Bonneville	ITD-HQ
Clearance Authorized Without Survey ☐ PA ☐ ER ☐ Other			Township/Range/Section T.1N, R.37E, Sections 2, 10, 11, 15, 21, 22, & 28

Determination of Eligibility

	Site Numbers	Comments
☐ No Sites		
☒ Not Eligible	Temp # JS-1, Temp # JS-4, Temp # JS-5, Temp # JS-6, Temp # JS-7	historic structure, historic structure, Quigg Lateral & siphon, historic structure historic structure
☒ Eligible	19-18042 (Temp # JS-2),Temp # JS-3	Snake River Valley Canal, Snake River Valley Canal Bridge

Determination of Effect

	Rationale	Sites/Comments
☐ No sites		
☐ No Effect Because:	☐ They are outside the project area	
	☐ They are outside impact zones	
	☐ Final project plans will avoid them	
	☐ NR character will not be changed	

☒ Sites will be affected (See Comments section below): 19-18042 (Temp # JS-2) and Temp # JS-3

Comments: Idaho Transportation Department District 5 maintenance is proposing to improve US-91 between the City of Shelley and York Road. The existing two-lane road prism will be expanded to a four-lane highway with a median.

An intensive-complete survey was completed within the proposed project area, and cultural resources HAVE BEEN identified. A total of seven sites are located within the APE. Two sites, **19-18042 (Temp # JS-2)** and **Temp # JS-3**, are **ELIGIBLE** for inclusion on the National Register of Historic Places.

Site **19-18042 (Temp # JS-2)** consists of the historic Snake River Valley Canal. Project actions, which include spanning the canal, will have **NO ADVERSE EFFECT** on the property. Site **Temp # JS-3** is the Snake River Valley Canal Bridge. Project actions, which include removing the bridge, will have an **ADVERSE EFFECT** on the property.

It is recommended that the project be allowed to proceed as proposed. If any additional cultural resources are encountered during the course of the project, all ground disturbing activities will cease until a qualified ITD archaeologist is consulted.

☐ Project will be monitored during construction due to the potential for cultural resources

Transportation Archaeologist's Signature	Date
Mary Minch	November 9, 2005

SHPO or THPO Comment: I have reviewed the documentation and recommendations provided by ITD and

☑ I agree with the above determination of eligibility and effect and with the conditions of compliance.

☐ I agree with the above determinations of eligibility and effect given stipulations explained below or in the attached letter.

☐ I disagree with the above determinations of eligibility and effect as explained below or in the attached letter.

State or Tribal Historic Preservation Officer's Signature	Date
Steven L. Kim	12/2/05

ATTACHMENT B PHOTOS

View of Snake River Valley Canal and Bridge looking southwest.
(Photo taken Nov. 2004)

Photo 1

View of Snake River Valley Canal and Bridge
looking north along the west side of US-91. (Photo taken May 2005)

Photo 2

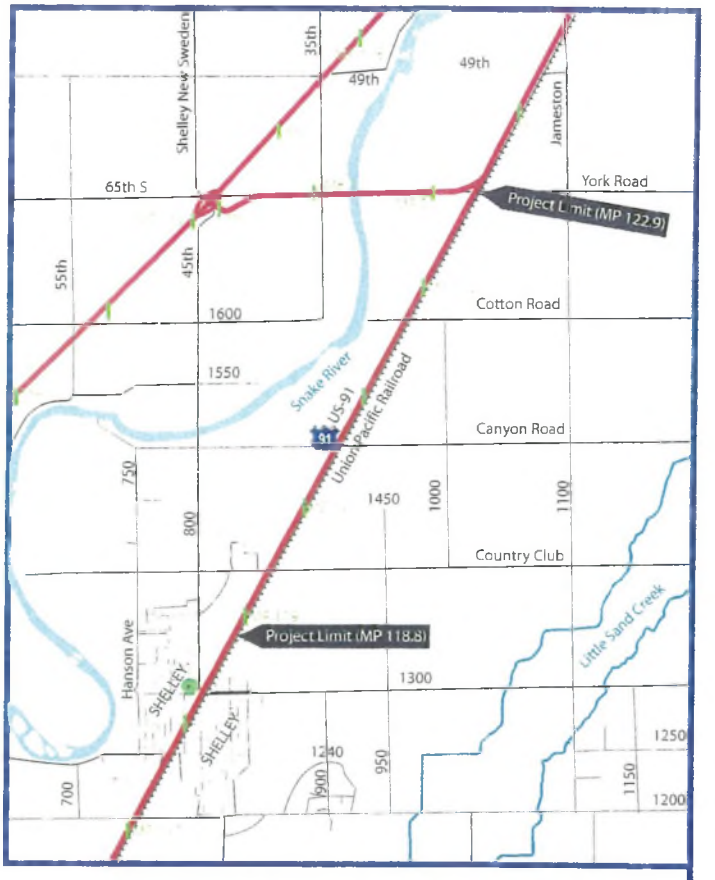
	Project No. STP-1767(101) Key No. 8116	
	Title Snake River Valley Canal Bridge	Figure No. Date: March 2006

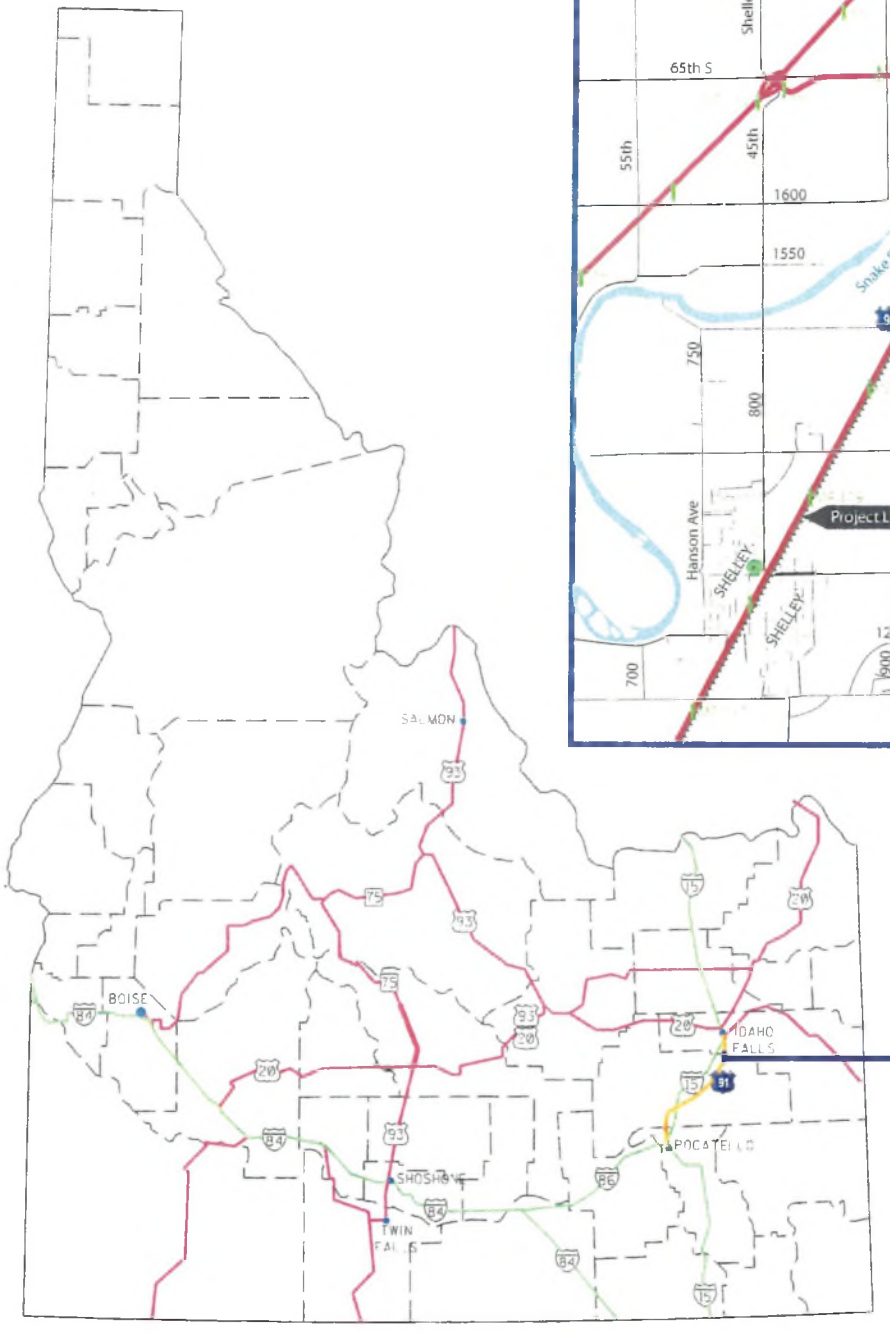
View of Snake River Valley Canal Bridge on the east side of US-91.
(Photo taken Nov. 2004)

Photo 3

	Project No. STP-1767(101) Key No. 8116	
	Title Snake River Valley Canal Bridge	Figure No. Date: March 2006

ATTACHMENT C VICINITY MAP





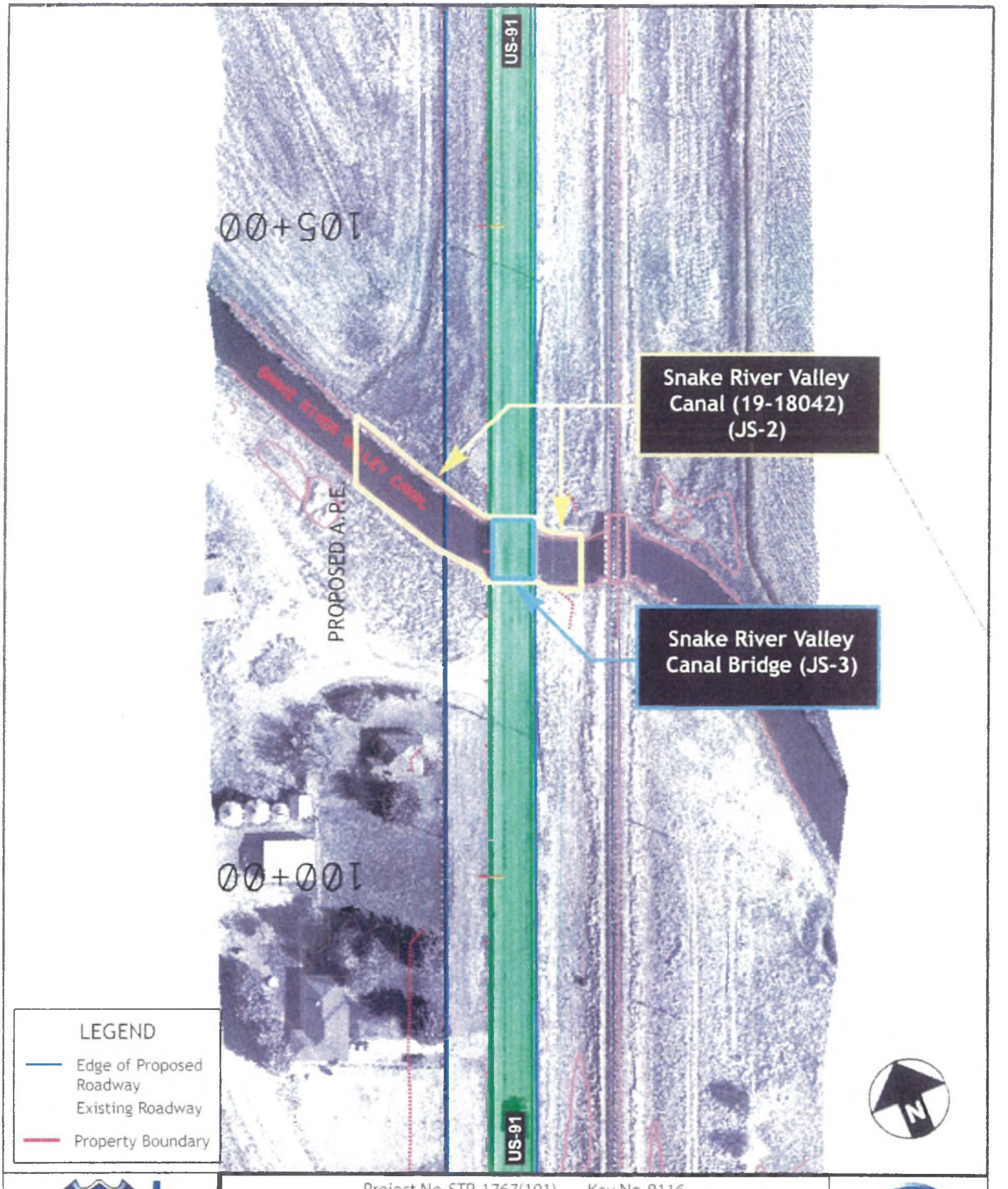
N

91
Shelley To York Road

Project No. STP-1767(101) Key No. 8116	
Title Vicinity Map	Figure No.
	Date: March 2006

IDAHO TRANSPORTATION DEPARTMENT

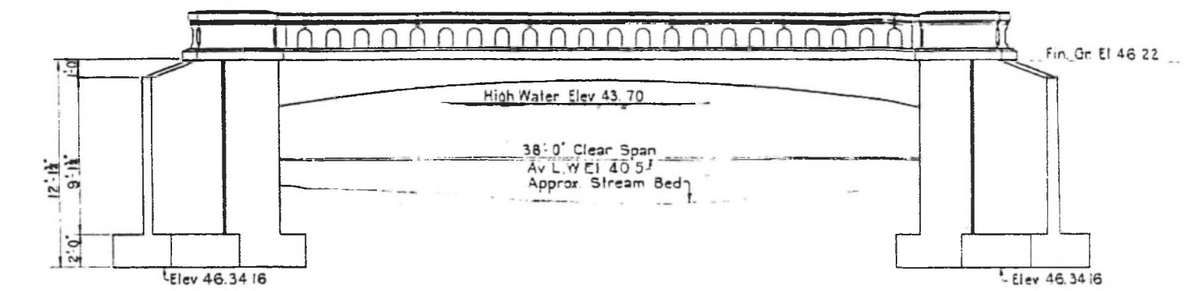
ATTACHMENT D SITE MAP



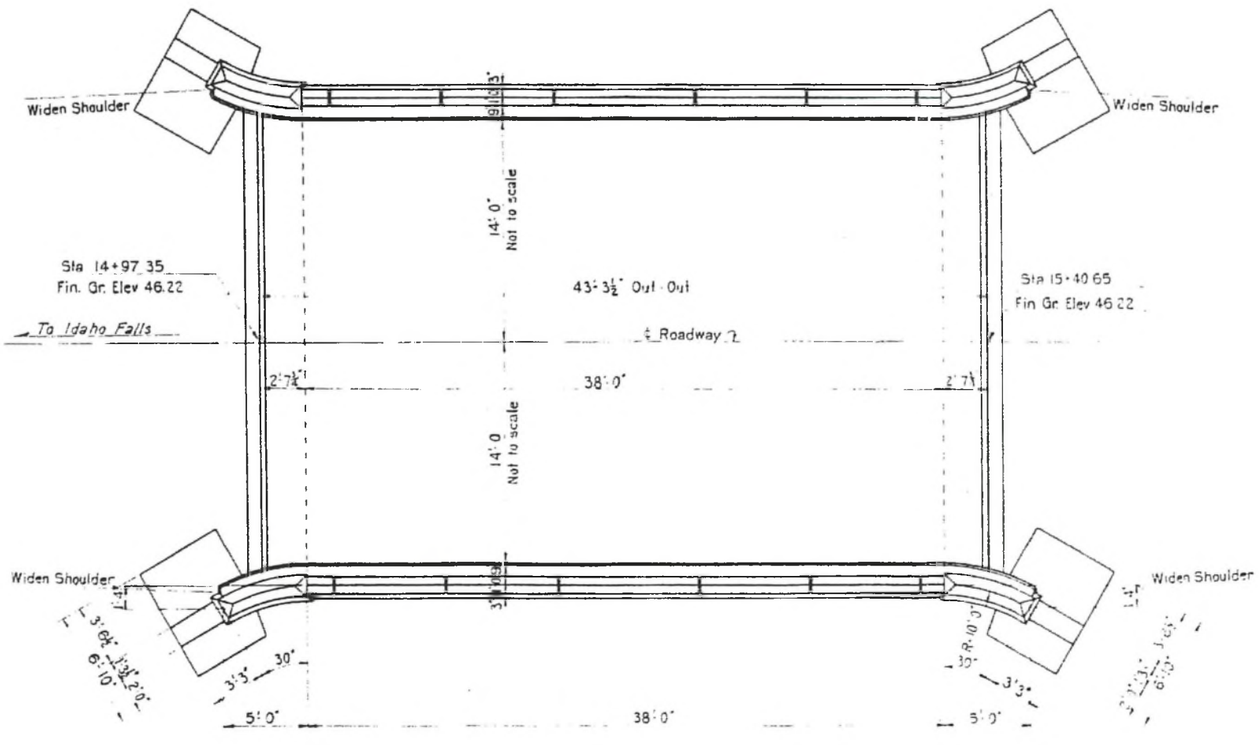
91 US-91 North Corridor Plan	Project No. STP-1767(101) Key No. 8116	IDAHO TRANSPORTATION DEPARTMENT
	Title: Site Map	Figure No.
		Date: March 2006

ATTACHMENT E PLANS OF EXISTING HISTORIC BRIDGE

FED. ROAD DIST. NO.	STATE	F. A. PROJ. NO.	TOTAL SHEETS	SHEET NO.
12	IDAHO	61 A(2)		



ELEVATION



PLAN

GENERAL NOTES

Structure designed in accordance with A.A.S.H.O. Specns. of 1935.

Live Load - 2.15 ton trucks passing ⅔ of load on rear axle 30.3% impact.

Unit Stresses: fs = 18000#/□", fc = 900#/□", v = 90#/□" without shear reinforcement, 160#/□" with shear reinforcement, bond 120#/□". Unit Stresses based on 3000# concrete at 28 days.

3.5' live load surcharge used in the design of wing walls.

All concrete to be Class "A" Maximum aggregate 1½".

All reinforcing to be deformed bars of intermediate grade and shall conform to A.S.T.M. Specn's. Series Des. A-15-35.

All reinforcing to have a 2" covering to outside of bar unless otherwise shown. Dimensions refer to rod centers.

Cost of expansion joint filler and 16 Ga. Galv. Metal Plates to be included in the unit price bid for Class "A" concrete.

Structure excavation to be computed from elevations taken after present structure has been removed.

Backfill to be placed in horizontal layers and compacted so that pressure is equal on both ends of the structure. No surplus excavated material shall be left to obstruct the natural flow of the stream.

Use Bureau of Highways Standard Specifications, except where otherwise shown.

Temperature change 55° from normal.

LIST OF DRAWINGS

General Layout	Drawing	No. 4065
Plan & Elevation	"	" 4066
Abut. & Wing Details & Sections	"	" 4067
Reinforcing Details & Contour Map	"	" 4068

ESTIMATE OF QUANTITIES

Structure Excavation	200 Cu. Yds.
Concrete Class "A"	178 Cu. Yds.
Metal Reinforcement	22165 Lbs.
Remove Existing Structure	Lump Sum

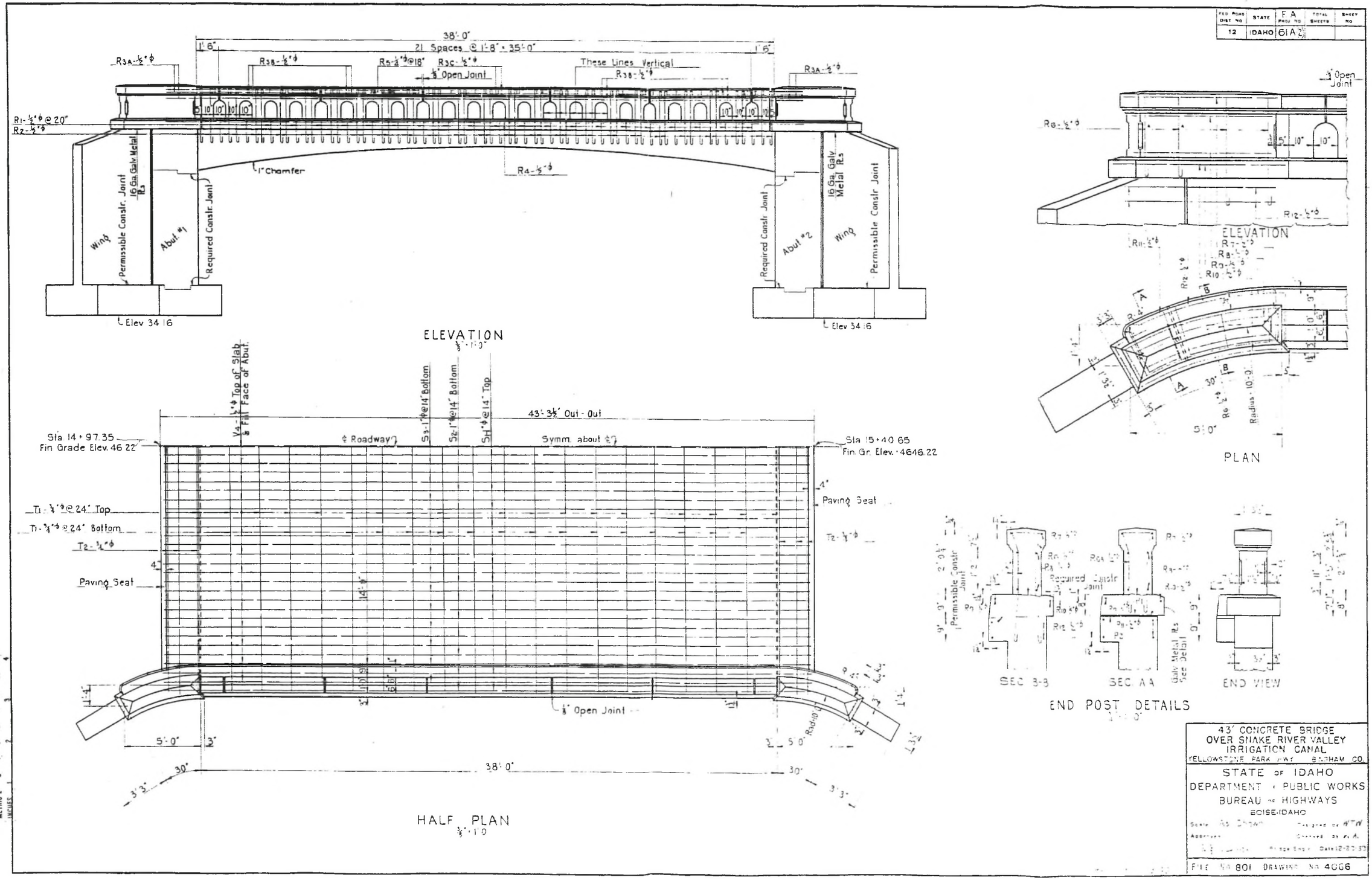
42' CONCRETE BRIDGE
OVER SNAKE RIVER VALLEY
IRRIGATION CANAL
YELLOWSTONE PARK HWY. BINGHAM CO.

STATE OF IDAHO
DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS
BOISE, IDAHO

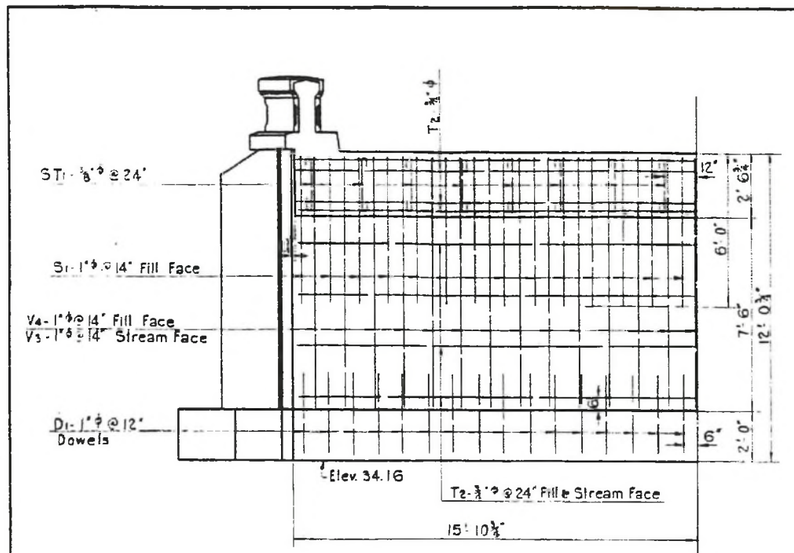
Scale: 1" Designed by: [illegible]
Approved: Checked by: [illegible]
[illegible]

FILE NO. [illegible] DRAWING NO. 4065

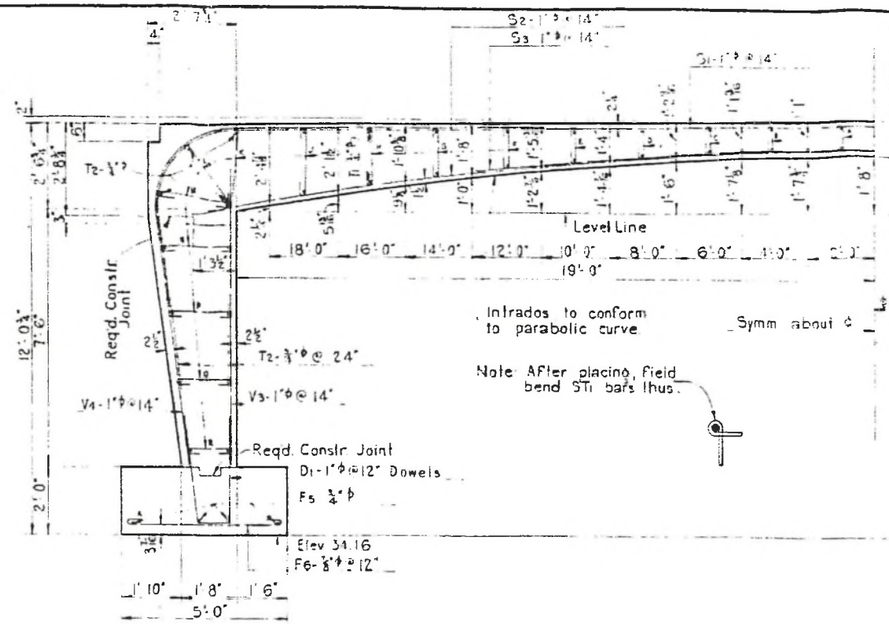
MICROFILM RECORD
DATE 9-24-77 ROLL NO. 9 AP-CARD or FRAME NO. 318
METRIC 2 3 4 5 6 7 8 9 10



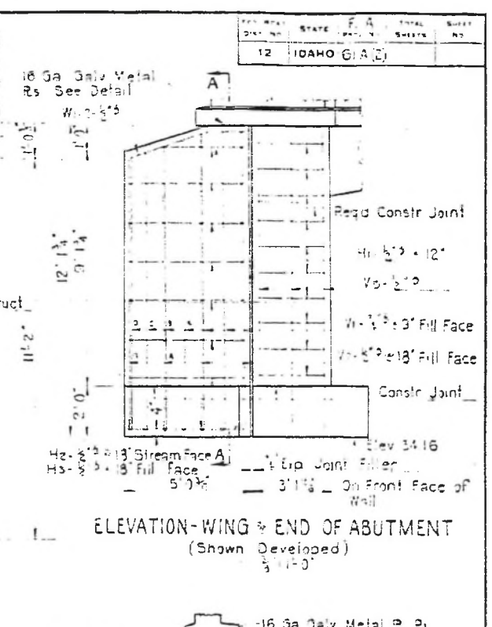
FED. ROAD DIST. NO. 12
STATE IDAHO
F.A. PROJ. NO. 61A(2)
TOTAL SHEETS
SHEET NO.
38'-0"
21 Spaces @ 1'-8" = 35'-0"
1'-6"
These Lines Vertical
1/8" Open Joint
R1-1/2"φ @ 20"
R2-1/2"φ
R4-1/2"φ
1" Chamfer
Wing
Permissible Constr. Joint
16 Ga. Galv. Metal Rs
Abut. #1
Required Constr. Joint
Abut. #2
Elev 34.16
ELEVATION
3/8" = 1'-0"
43'-3 1/2" Out - Out
Sta 14 + 97.35
Fin Grade Elev. 46.22
Sta 15 + 40.65
Fin. Gr. Elev. 4646.22
℄ Roadway
Symm. about ℄
Paving Seat
T1-3/4"φ @ 24" Top
T1-3/4"φ @ 24" Bottom
T2-3/4"φ
V4-1/2"φ Top of Slab
8" Fill Face of Abut.
S3-1"φ @ 14" Bottom
S2-1"φ @ 14" Bottom
SH"φ @ 14" Top
1/8" Open Joint
5'-0"
3"
30"
3'-3"
38'-0"
HALF PLAN
3/8" = 1'-0"
R6-1/2"φ
R12-1/2"φ
ELEVATION
R11-1/2"φ
R7-1/2"φ
R8-1/2"φ
R9-1/2"φ
R10-1/2"φ
Radius 10'-0"
PLAN
Permissible Constr. Joint
Required Constr. Joint
Galv. Metal Rs See Detail
SEC. B-B
SEC. A-A
END VIEW
END POST DETAILS
43' CONCRETE BRIDGE
OVER SNAKE RIVER VALLEY
IRRIGATION CANAL
YELLOWSTONE PARK HWY. BINGHAM CO.
STATE OF IDAHO
DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS
BOISE, IDAHO
Scale As Shown
Designed by W.T.W.
Approved
Checked by F.A.
Bridge Engr.
Date 12-20-33
FILE NO. 801 DRAWING NO. 4066
MICROFILM RECORD
DATE 7-19-77
ROLL NO. 9
AP-CARD or FRAME NO. 349
METRIC 2 3 4 5 6 7 8 9 10
INCHES 1 2 3 4



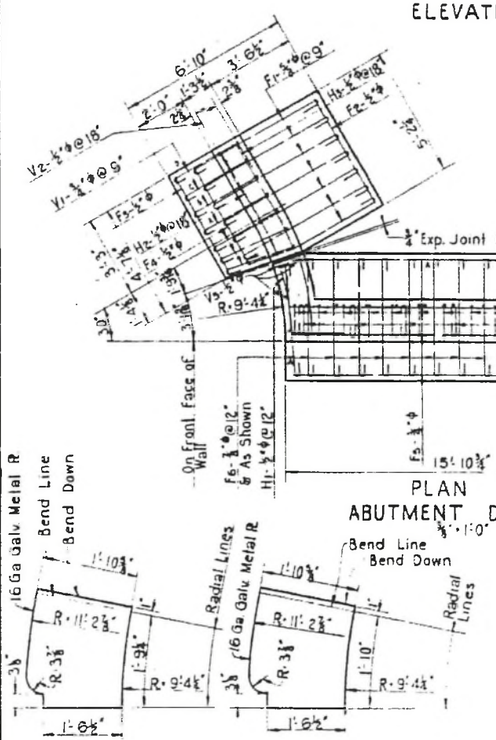
ELEVATION



HALF LONGITUDINAL SECTION



ELEVATION - WING & END OF ABUTMENT
(Shown Developed)



PLAN
ABUTMENT DETAILS

PLATE P2
Make - 2 Thus
Make - 2 Opp Hand

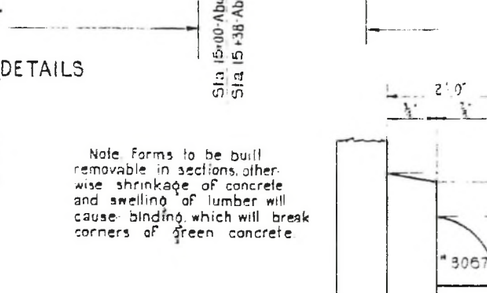
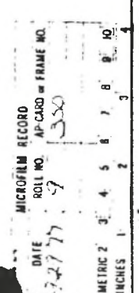
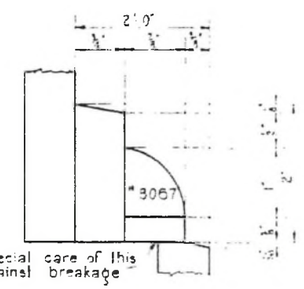


PLATE P1
Make - 2 Thus
Make - 2 Opp Hand

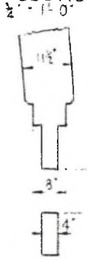
DETAILS OF METAL EXPANSION PLATES

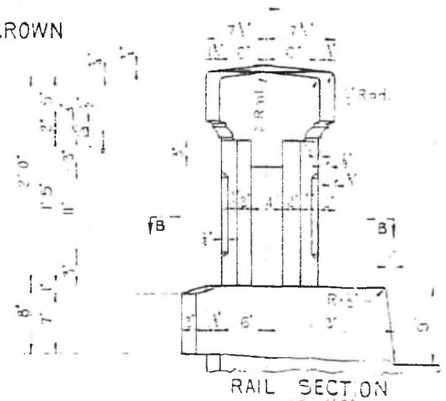


Note Forms to be built removable in sections, otherwise shrinkage of concrete and swelling of lumber will cause binding, which will break corners of green concrete.

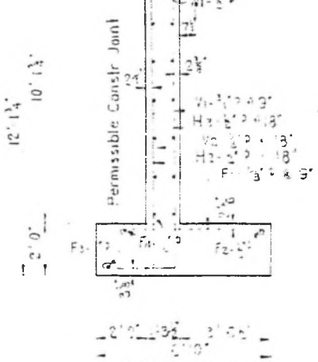


RAIL FORMS

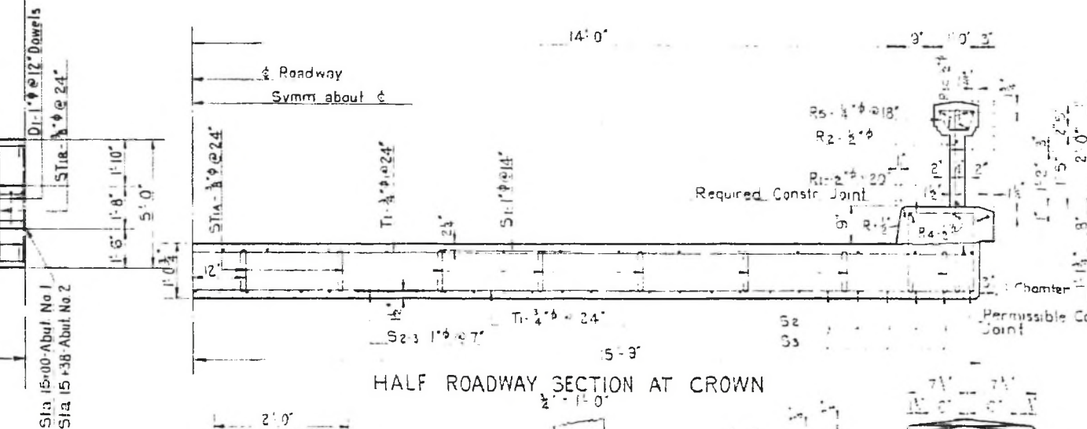




RAIL SECTION



SECTION AA



HALF ROADWAY SECTION AT CROWN

DIST. NO.	STATE	FED. AID PROJ. NO.	TOTAL SHEETS	SHEET NO.
12	IDAHO	G-A-(2)		

43' CONCRETE BRIDGE
OVER SNAKE RIVER VALLEY
IRRIGATION CANAL
YELLOWSTONE PARK HWY. BINGHAM CO.

STATE OF IDAHO
DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS
BOISE, IDAHO

Name A.S. Grant Designed by H.E.W.
Approved Checked by W.A.
Date 2-20-39

FILE NO. 801 DRAWING NO. 4067

Revised 3 (2-39)

43' CONC. BRIDGE — F.A.P. 61A(2)

Mark	Location	Size	Total Length	No	Sketch	Out Out
F1	Wing Footing	½"ϕ	8'-11"	28		5'-6½"
F2	" "	⅝"ϕ	4'-10"	4		
F3	" "	"	4'-3"	4		
F4	" "	"	4'-5"	4		
F5	Wall "	½"ϕ	31'-8"	6		
F5A	" "	"	32'-6"	2	Field Bend	
F6	" "	⅜"ϕ	6'-7"	62		4'-8"
F6A	" "	"	6'-5"	4		4'-6"
D1	" "	1"ϕ	8'-4"	64		
V1	Wing Wall	⅝"ϕ	15'-5"	12		11'-8½"
V1A	" "	"	15'-1"	4		11'-5¼"
V1B	" "	"	14'-11"	4		11'-2¾"
V1C	" "	"	14'-8"	4		10'-11½"
V1D	" "	"	14'-5"	4		10'-9"
V2	" "	½"ϕ	11'-9"	8		
V2A	" "	"	11'-4"	4		
V2B	" "	"	10'-10"	4		
V3	Main Wall	1"ϕ	8'-8"	54		
V4	" "	"	20'-5"	54		
V5	Abutment End	½"ϕ	11'-9"	16		
W1	Wing Wall	"	4'-10"	8	Field Bend	
H1	Abutment End	"	6'-6"	40		

Part of Drawing No 4068 — Sheet 1 of 6

43' CONC. BRIDGE — F.A.P. 61A(2)

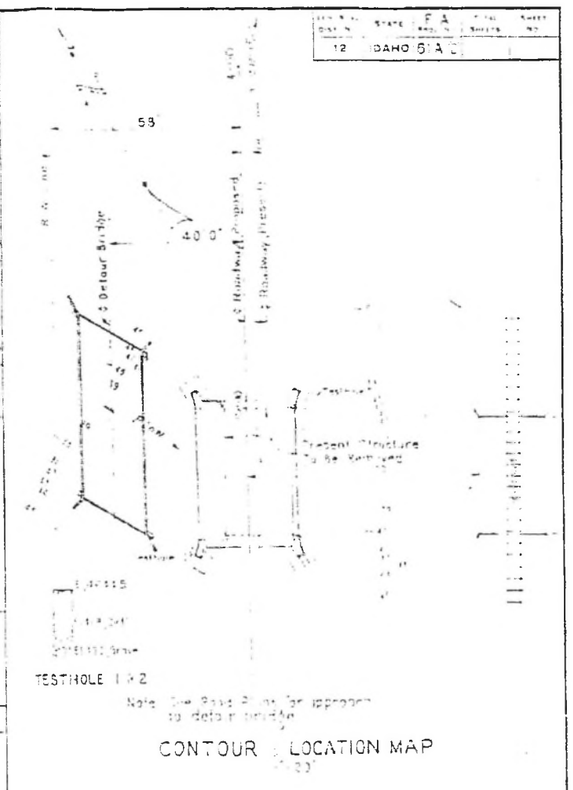
Mark	Location	Size	Total Length	No	Sketch	Out Out
H2	Wing Wall	½"ϕ	4'-9"	24		
H2A	"	"	3'-6"	4		
H3	"	"	4'-10"	24		
H3A	"	"	3'-7"	4		
S1	Slab	1"ϕ	57'-9"	28		
S2	"	"	40'-3"	28		
S3	"	"	24'-9"	27		
T1	"	½"ϕ	31'-5"	36		
T2	Wall "	"	31'-5"	24		
ST1A	Slab & Wall	⅜"ϕ	1'-7"	32		0'-3½"
ST1B	"	"	1'-8"	32		0'-3½"
ST1C	"	"	1'-9"	32		0'-0"
ST1D	"	"	1'-11"	32		0'-1½"
ST1E	"	"	2'-0"	32		0'-3"
ST1F	"	"	2'-2"	32		0'-4½"
ST1G	"	"	2'-3"	32		0'-5½"

Part of Drawing No 4068 — Sheet 2 of 6

43' CONC BRIDGE — F.A.P. 61A(2)

Mark	Location	Size	Total Length	No	Sketch	Out Out
S4	Slab & Wall	⅜"ϕ	2'-6"	32		
ST2	"	"	2'-9"	32		
ST3	"	"	3'-3"	32		
ST4	"	"	3'-8"	32		
ST5	"	"	3'-8"	32		
ST6	"	"	2'-10"	32		
ST7	"	"	2'-7"	32		
ST8	"	"	2'-4"	32		
ST9	"	"	2'-1"	32		
R1	Curb	½"ϕ	5'-5"	44		
R2	Rail	"	4'-10"	92		5'-8½"
R3A	"	"	3'-4"	20		
R3B	"	"	6'-4"	40		
R3C	"	"	8'-0"	10		
R4	Curb	"	42'-0"	6		
R5	Rail	⅜"ϕ	2'-7"	60		
R6	Posts	½"ϕ	9'-1"	8		
R6A	"	"	7'-5"	8		

Part of Drawing No 4068 — Sheet 3 of 6



CONTOUR & LOCATION MAP

43' CONC BRIDGE — F.A.P. 61A(2)

Mark	Location	Size	Total Length	No	Sketch	Out Out
R7	Post	½"ϕ	12'-11"	4		
R8	"	"	11'-0"	8		
R9	Curb	"	7'-9"	4		
R10	"	"	8'-7"	4		
R11	"	"	5'-8"	8		
R12	"	"	10'-5"	8		

Part of Drawing No 4068 — Sheet 4 of 6

43' CONC BRIDGE — F.A.P. 61A(2)

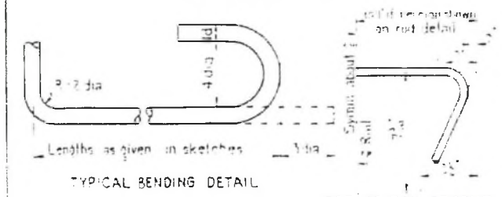
Mark	Location	Size	Total Length	No	Sketch	Out Out
X1	Test Bar	⅜"ϕ	4'-1"	2		
X2	"	½"ϕ	5'-2"	2		
X3	Splice Bar for Test Bar	⅜"ϕ	6'-2"	2		
X4	"	½"ϕ	7'-3"	2		
X5	"	"	8'-3"	2		
X6	"	⅝"ϕ	9'-4"	2		
X7	"	"	10'-4"	2		

Test bars shall be cut from bars used in the structure X3 to X7 inclusive shall be used as splice bars

Part of Drawing No 4068 — Sheet 5 of 6

43' CONC. BRIDGE — F.A.P. 61A(2)

ROD HOOKS & BENDS



ROD NOTES

When hooks are called for the lengths given in the "Total Length" column include allowance for hooks & bends as shown in detail above.

Lengths given in sketches are center to center of bend points and to outside of rods except as shown in detail above. All bars to be bent around a radius of 3 dia.

All reinforcing to be deformed bars of intermediate grade and shall conform to A.S.T.M. Designation Serial Des. A15 35

Dimensions refer to rod centers

ROD WEIGHTS

Size	Lineal Feet	Weight
⅜"	683.7	467
½"	1078	978
⅝"	1213.67	1264
¾"	203.17	344
1"	3604.33	6505
1¼"	4444.33	12344
1⅜"	554.67	2181
		Total Weight

Part of Drawing No 4068 — Sheet 6 of 6

43' CONCRETE BRIDGE
OVER SNAKE RIVER VALLEY
IRRIGATION CANAL

STATE OF IDAHO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

No. 801 — 4068

MICROFILM RECORD
DATE
ROLL NO
AP-CARD or FRAME NO.

Idaho Transportation Department: Division of Highways
Structure Inventory and Appraisal Update

Bridge Key:	17555	Structure Name:	09120C 120.27
(6)Feature Intersected:	SNAKE RIVER VALLEY CANAL	(9)Location:	19.6 N. BLACKFOOT
		Admin Jurisdiction:	0005 - District 5

Sufficiency Rating: 48.4

Deficiency: Functionally Obsolete

IDENTIFICATION

(1)State:	16 Idaho
(2)District:	District 5
(3)County Code:	011 Bingham
(4)Place Code:	00000 Not within City/Town
(5)Inventory Route:	121000910
(7)Facility Carried:	US 91
(11)Milepoint:	120.266
(12)Base Hwy Network:	Not on Base Network
(13a)LRS Inventory Route:	
(13b)LRS Sub Route:	
(16)Latitude:	43d 24' 24"
(17)Longitude:	112d 06' 14"
(98)Border Bridge Code/Pct:	
(99)Border Bridge Number:	
Macs Segment on Route:	002350
Macs Segment Under Rte:	
Macs Segment Other Rte:	
Drawing Number:	4065
Project Key Number:	801
Inspection Area:	0005

CLASSIFICATION

(112)NBIS Bridge Length:	Yes
(104)Highway System:	0 Not on NHS
(26)Functional Class:	07 Rural Mjr Collector
(100)Defense Highway:	0 Not a STRAHNET hwy
(101)Parallel Structure:	No || bridge exists
(102)Direction of Traffic:	2 2-way traffic
(103)Temporary Structure:	
(105)Federal Lands Highway:	0 N/A (NBI)
(110)Designated Natl Network:	0 Not part of natl netwo
(20)Toll Facility:	3 On free road
(21)Custodian:	State Highway Agency
(22)Owner:	State Highway Agency
(37)Historical Significance:	3 Possibly eligible for

STRUCTURE TYPE AND MATERIALS

(43a/b)Main Span Material/Design:

1 Concrete 01 Slab

(44a/b)Approach Span Material/Design:

(45)Number of Spans Main Unit:	1
(46)Number of Approach Spans:	0
(107)Deck Type:	1 Concrete-Cast-in-Place
(108a)Wearing Surface:	6 Bituminous
(108b)Membrane:	0 None
(108c)Deck Protection:	None

GEOMETRIC DATA

(48)Maximum Span Length:	39 ft
(49)Structure Length:	43 ft
(50a)Curb/Sidewalk Width Lt:	0.0 ft
(50b)Curb/Sidewalk Width Rt:	0.0 ft
(51)Width Curb to Curb:	28.2 ft
(52)Width Out to Out:	32.2 ft
(32)Approach Roadway Width:	32 ft
(33)Median:	0 No median
(34)Skew:	0 °
(35)Structure Flared:	0 No flare
(10)Vertical Clearance:	99.99 ft
(47)Total Horiz Clearance:	28.2 ft
(53)Min Vert Clr Over Deck:	99.99 ft
(54a)Min Vert Undrclear Ref:	N Feature not hwy or RR
(54b)Min Vert Undrclear:	00.0 ft
(55a)Min Lat Undrclear Ref Rt:	N Feature not hwy or RR
(55b)Min Lat Undrclear Rt:	00.0 ft
(56)Min Lat Undrclearance Lt:	00.0 ft

Idaho Transportation Department: Division of Highways
Structure Inventory and Appraisal Update

Bridge Key:	17555	Structure Name:	09120C 120.27
(6)Feature Intersected:	SNAKE RIVER VALLEY CANAL	(9)Location:	19.6 N. BLACKFOOT
		Admin Jurisdiction:	0005 - District 5

LOAD RATING

(31)Design Load:	2 M 13.5 (H 15)
(64)Operating Rating:	HS20.0 / 36 tons
(66)Inventory Rating:	HS12.2 / 22 tons
(70)Posting:	5 At/Above Legal Loads
(41)Posting status:	A Open, no restriction

AGE AND SERVICE

(27)Year Built:	1941
(106)Year Reconstructed:	
(42a)Type of Service On:	1 Highway
(42b)Type of Service Under:	5 Waterway
(28a)Lanes On: 2	(28b)Lanes Under: 0
(29)ADT:	6800
(30)Year of ADT:	2004
(109)Truck ADT:	04 %
(19)Detour Length:	3 miles

PROPOSED IMPROVEMENTS

(75a)Type of Work:	31 Repl-Load Capacity
(75b)Work Done By:	1 Contract
(76)Length of Improvment:	64 ft
(94)Bridge Improvement Cost:	$ 268,000
(95)Rdwy Improvement Cost:	$ 2,700
(96)Total Project Cost:	$ 401,000
(97)Year of Cost Estimate:	2005
(114)Future ADT:	10200
(115)Year of Future ADT:	2024
YEAR PROGRAMMED:	

CONDITION

(58)Deck:	5 Fair
(59)Superstructure:	5 Fair
(60)Substructure:	5 Fair
(61)Channel/Channel Protection:	8 Protected
(62)Culvert:	N N/A (NBI)

APPRAISAL

(67)Structure Condition:	5 Above Min Tolerable
(68)Deck Geometry:	2 Intolerable - Replace
(69)Undrclear, Vert and Horiz:	N Not applicable (NBI)
(71)Waterway Adequacy:	8 Equal Desirable
(72)Approach Alignment:	8 Equal Desirable Crit
(36)Traffic Safety Features:	
(a)Bridge Rail:	0 Substandard
(b)Transition:	0 Substandard
(c)Approach Rail:	0 Substandard
(d)Approach Rail Ends:	0 Substandard
(113)Scour Critical:	8 Stable Above Footing

NAVIGATION DATA

(38)Navigation Control:	0 Permit Not Required
(39)Vertical Clearance:	
(40)Horizontal Clearance:	
(111)Pier Protection:	
(116)Lift Bridge Vert Clr:	

INSPECTION

(90)Inspection Date: 4/6/2005 (91)Inspection Frequency: 24 months

(92)Supplemental Inspections Frequency:		(93)Date of Inspections:
a) Fracture Critical Detail:	NA	a) FC Inspection Date:
b)Underwater Inspection:	NA	b) UW Inspection Date:
c) Fatigue Detail (OS) Inspection:	NA	c) Fatigue Detail (OS) Date:
d) ReachAll Inspection:	NA	d) ReachAll Date:
e) Confined Space Inspection:	NA	e) Confined Space Date:

Equipment Needed for Regular Inspection? None

Idaho Transportation Department: Division of Highways
Structure Inventory and Appraisal Update

Bridge Key:	17555	Structure Name:	09120C 120.27
(6)Feature Intersected:	SNAKE RIVER VALLEY CANAL	(9)Location:	19.6 N. BLACKFOOT
		Admin Jurisdiction:	0005 - District 5

POSTING INFORMATION

WEIGHT

Load Analysis Date: 02/15/00

Load Analysis Required: (N) No

	Load Rating Analysis IR (tons)	Load Rating Analysis OR (tons)		Recommended Posting (tons)	Actual Posting (tons)
H Truck	18	30			
HS Truck	22	36			
Type3 (3 axle)	18	30	**Type3 (3 axle)**		
Type3S2 (5 axle)	32	52	**Type3S2 (5 axle)**		
Type3-3 (6 axle)	33	55	**Type3-3 (6 axle)**		
			Max Axle		

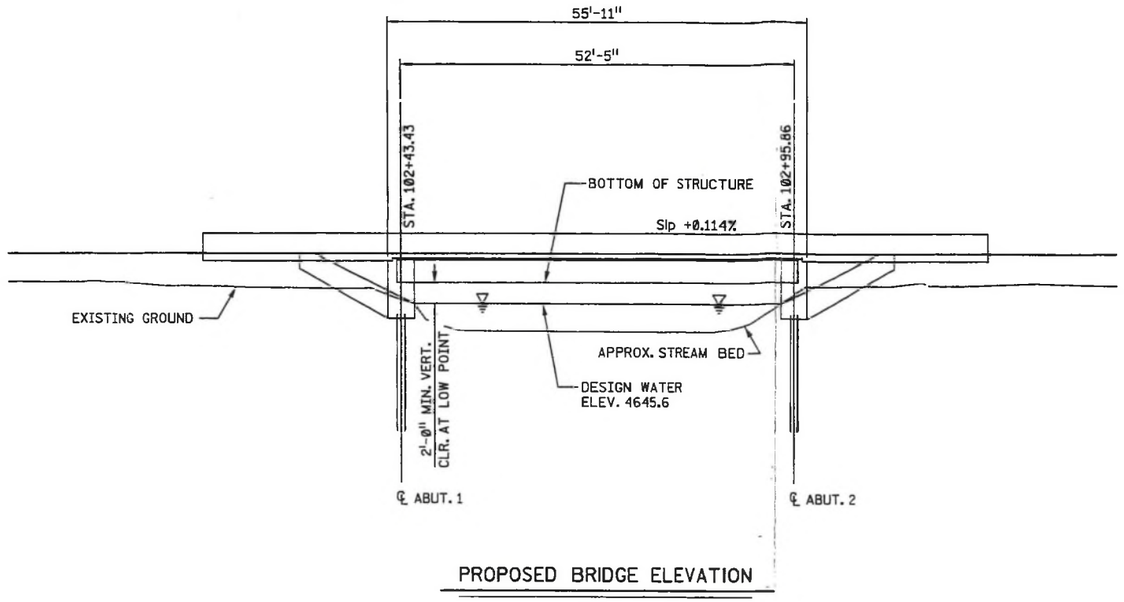
HEIGHT

	Recommended	Actual
Height Posting:		

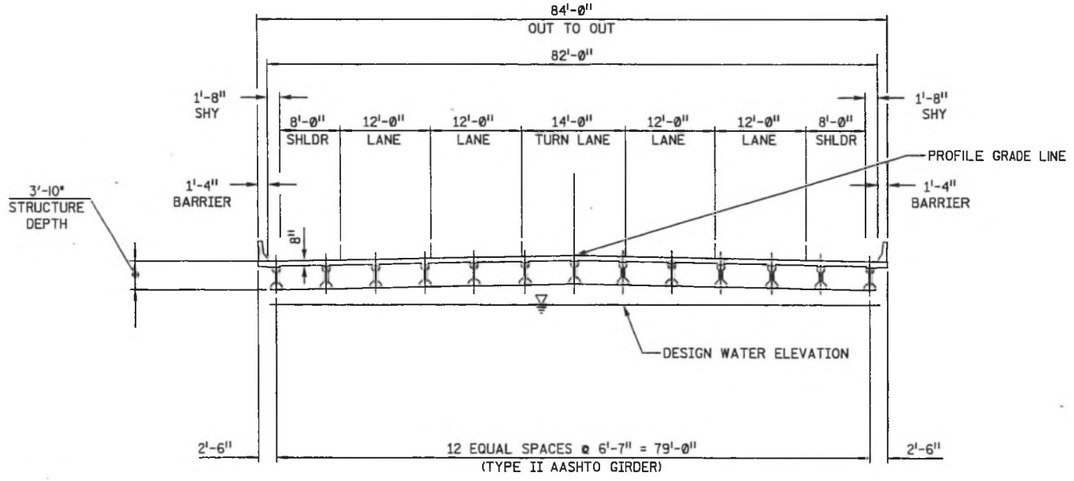
WIDTH

	Recommended	Actual
Single Lane All Vehicles:	No	No
Single Lane Trucks/Buses:	No	No

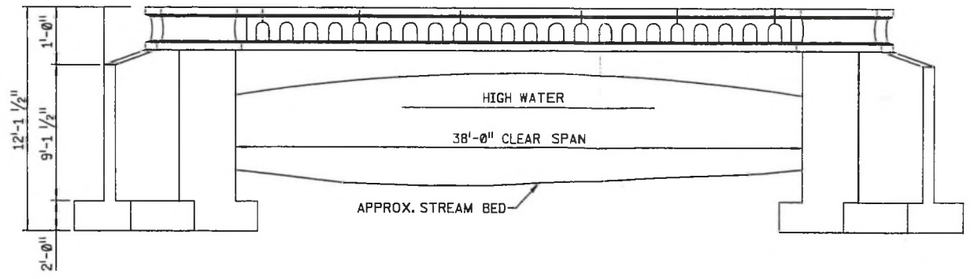
ATTACHMENT F PLANS OF PROPOSED BRIDGE



PROPOSED BRIDGE ELEVATION



SECTION THRU PROPOSED STRUCTURE



EXISTING BRIDGE ELEVATION

NOTES

1. NO UTILITIES (IF ANY) SHOWN.

P:\project\22106A_WSP\Reports\Categorical Exclusion\March Final Cat Ex\Section 4(f)\8116pl_Snake River Bridge - 4f.dgn
3/8/2006

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED Gloria T-K	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED D. Church	
DETAILED Gloria T-K	CADD FILE NAME 8116pl_Snake River Bridge.dgn
DRAWING CHECKED D. Church	DRAWING DATE: March, 2006

IDAHO TRANSPORTATION DEPARTMENT

PB PARSONS BRINCKERHOFF

PROJECT NO.

STP-1767(101)

Proposed Snake River Canal Bridge

English

COUNTY BINGHAM/BONNEVILLE

KEY NUMBER 8116

SHEET 1 OF 1

NOT APPROVED PRELIMINARY FOR CONSTRUCTION

SECTION 4(F) EVALUATION
SNAKE RIVER CANAL AT US-91
Bingham and Bonneville Counties, Idaho

A Section 4(f) Evaluation and Approval for Federal-Aid Projects that Require the Use of Land from Protected Resources

1. INTRODUCTION

Section 4(f) was created when the United States Department of Transportation (USDOT) was formed in 1966. It was initially codified at Title 49 United States Code (U.S.C.) Section 1653(f) (Section 4(f) of the USDOT Act of 1966). Later that year, Title 23 U.S.C. Section 138 was added. Section 138 states: "The Secretary shall not approve any program or project (other than any project for a park road or parkway under Section 204 of this title) which requires the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance as determined by the Federal, State, or local officials having jurisdiction thereof, or any land from an historic site of national, State, or local significance as so determined by such officials unless (1) there is no feasible and prudent alternative to the use of such land, and (2) such program includes all possible planning to minimize harm to such park, recreational area, wildlife and waterfowl refuge, or historic site resulting from such use." In 1983 Section 1653(f) was reworded and recodified at Title 49 U.S.C. Section 303. These two statutes have no real practical distinction and are still commonly referred to as Section 4(f).

Congress recently amended Section 4(f) when it enacted the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (Public Law 109-59, enacted August 10, 2005)("SAFETEA-LU"). Section 6009 of SAFETEA-LU added a new subsection to Section 4(f), which authorizes the FHWA to approve a project that uses Section 4(f) lands that are part of a historic property, without analysis of feasible and prudent avoidance alternatives, if it makes a finding that such uses would have de minimis impacts upon the Section 4(f) resource, with the concurrence of the relevant SHPO. A finding of de minimis impact can be made if the FHWA, in consultation with the SHPO, has made a "no adverse effect" determination for the resource under Section 106 of the National Historic Preservation Act ("NHPA"). Because NHPA "no adverse effect" determinations have been made by FHWA and the Idaho SHPO for all historic properties impacted by the US-91 Proposed Project, the FHWA, with the concurrence of the Idaho SHPO, has made a finding that this Project qualifies for the de minimis" exception to the avoidance analysis requirement of Section 4(f). (A copy of the FHWA's de minimis determination and SHPO concurrence is included as Attachment A of the introduction to this Section 4(f) Evaluation document.) Accordingly, this Section 4(f) Evaluation does not contain an analysis of avoidance alternatives.

Because the statute does not require the preparation of any written document, the FHWA has developed procedures for the preparation, circulation and coordination of Section 4(f) documents in two places - Title 23 C.F.R Part 771.135 and FHWA's Technical Advisory, *Guidance for Preparing and Processing of Environmental and Section 4(f) Documents*: T6640.8A. This Section 4(f) Evaluation has been prepared in accordance with these procedures, the Section 4(f) Policy Paper issued on March 1, 2005 by the FHWA Office of Planning, Environment and Realty, Project Development and Environmental Review, and Section 6009 of SAFETEA-LU.

2. PURPOSE AND NEED OF PROPOSED ACTION

Purpose: The purpose of this project is to improve US-91 from New Sweden Road in the City of Shelley to York Road from Milepost 118.8 to Milepost 122.8 to address existing and future capacity, safety and substandard roadway characteristics, and operational problems.

Need: US-91 between the City of Shelley and the City of Idaho Falls serves as both a commuter route between those two cities and as a farm-to-market roadway for transport of both raw and processed agricultural products. The City of Shelley is experiencing rapid growth and development that will continue to contribute to traffic volumes on US-91.

The current Level of Service (LOS) is C and is expected to decrease to LOS D by year 2032. Two intersections will fall below ITD's LOS C standard by 2032. The intersection of US-91 and Country Club Road operates at LOS C but will decline to LOS D in the future. The intersection of US-91 at New Sweden Road is currently at LOS B but will decline to LOS D by 2032. LOS D is below ITD's policy of achieving LOS C.

The US-91 intersections with New Sweden, Canyon, Country Club, and York all currently meet ITD criteria for a right-turn lane in at least one direction on US-91, and New Sweden, Country Club, and York all meet ITD's criteria for a left turn lane in at least one direction as well.

US-91 is experiencing a number of operations problems. The lack of dedicated turn lanes requires that traffic must slow and queue behind turning traffic, particularly for left-turning vehicles. This contributes to congestion and increased potential for rear-end accidents. Slow moving vehicles hinder traffic flow as following vehicles must wait for gaps in oncoming traffic to pass. Wide vehicles can obstruct traffic flow as the existing narrow roadway cross-section requires that they encroach into oncoming traffic lane.

The proximity of the elevated grade of Union Pacific Railroad to US-91 has resulted in very limited storage space between the railroad and US-91 for cross-street traffic as well as intersections with poor sight distance and substandard storage lengths. This creates both a capacity and a safety issue.

The skewed nature of the US-91 intersections results in difficult turning movements for larger vehicles such as trucks, school buses, and farm equipment.

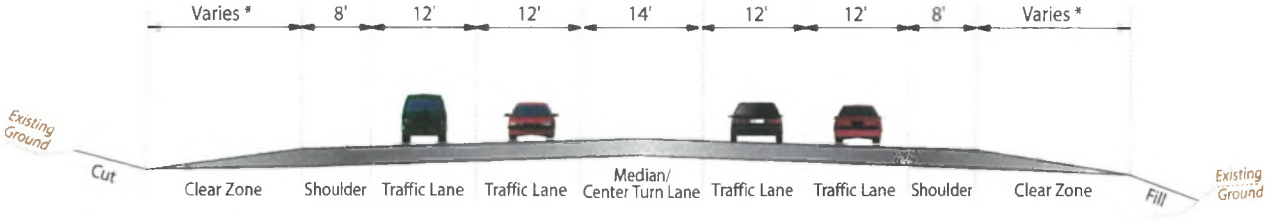
The existing 3-foot shoulders are substandard and do not provide adequate room for incident management, right turn movements, and bicycling. Power poles parallel the US-91 pavement within 7 feet of the edge of pavement resulting in a substandard clear zone. The proximity of these obstructions to the traffic lanes forces wide equipment to encroach into the opposing lane to avoid obstructions.

While the New Sweden to York Road corridor has not experienced an above-average collision history, as traffic volumes increase and the time spent following slower moving vehicles increases, there is a risk of increased crash rates due to driver frustration and risk-taking passing maneuvers.

4. DESCRIPTION OF PROPOSED ACTION

The Idaho Transportation Department (ITD) is proposing improvements to US-91 between New Sweden Road at Milepost 118.8 in the north portion of the City of Shelley to the York Road and US-91 intersection at Milepost 122.9. Figure 1 shows the location of the project.

The Proposed Action would widen the existing two-lane facility to five lanes, with two 12-foot lanes in each direction, a 14-foot center median, and 8-foot shoulders. A typical cross-section is shown below:

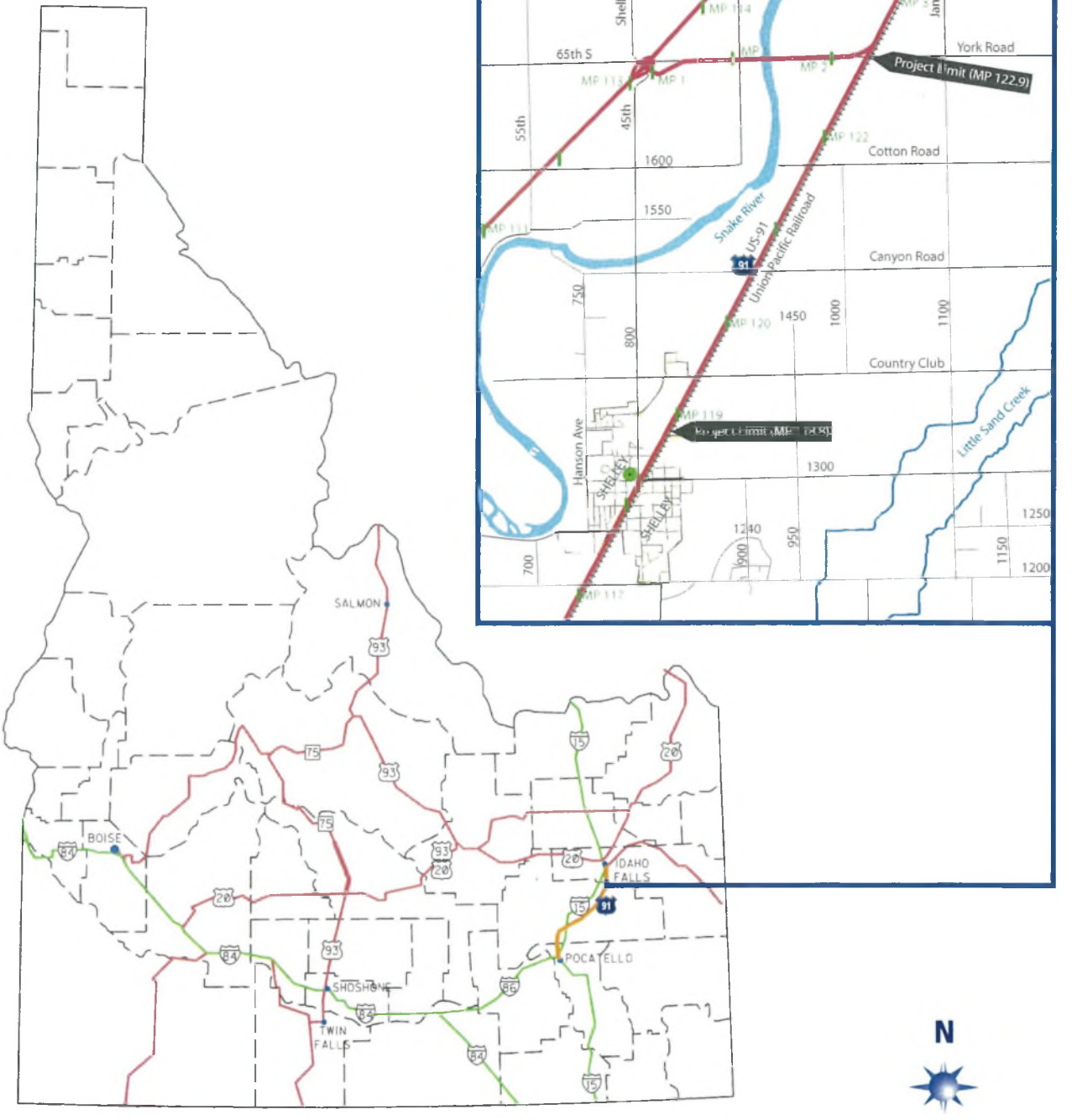


* Clear Zone varies 36' to 44' in the cut sections and 24' to 26' in the fill sections.

The horizontal alignment of US-91 would be shifted to the west, generally maintaining the existing east edge of pavement. This shift is necessary to improve both the sight distance problems associated with side street traffic entering US-91, and the limited vehicle storage between the Union Pacific Railroad tracks and existing roadway. The shift also avoids encroaching into the Union Pacific track cross-section and its associated maintenance requirements.

The vertical alignment of US-91 would be raised by 2 to 5 feet to address existing vertical curve issues on the US-91 mainline, improve tie-ins to Country Club Road, Canyon Road, Cotton Road, and Clinger Road, minimize the need for cuts that would increase the width of the roadway footprint, and to facilitate drainage by eliminating the need for drainage ditches.

The Proposed Action would replace the existing Snake River Valley Canal Bridge with a new structure that would accommodate the wider cross-section and meet ITD and AASHTO standards.



Shelley To York Road	Project No. STP-1767(101) Key No. 8116	
	Title: Project Location	Figure No. 1
		Date: February 2006

5. DESCRIPTION OF THE SECTION 4(F) PROPERTY

The Snake River Canal flows to the southeast under US-91 and is a tributary of the Snake River. The unlined canal is a about 40 feet wide at the canal rim and is 4 to 5 feet deep as it crosses under the roadway. Completed in the late 1880's, the Snake River Valley Canal came under the control of the Snake River Valley Irrigation District around 1906. By that time, almost 15,000 acres were being reached by the canal and neighboring Cedar Point Canal system. It currently provides irrigation water to 22,000 acres per year.

Photographs of the canal are shown in Figures 2, 3 and 4.

The Snake River Valley Canal proper is eligible for listing in the NRHP under Criteria A and D.

6. PROJECT USES OF SECTION 4(F) PROPERTIES

Use of the Snake River Canal will occur at one location, as shown on Figure 5. The proposed expansion of US-91 to a wider cross-section will cover more lateral area of the canal bank to bank. It will decrease the exposed portion of the canal surface by 40 feet. Construction of a new Snake River Canal Bridge will clear span the canal, avoiding impact to the canal and its banks.

This Section 4(f) use has been determined to have "no adverse effect" on the Snake River Canal for purposes of the National Historic Preservation Act, as documented in Attachment A .

View of Snake River Valley Canal looking northwest. (Photo taken May 2005)

Photo 1

View of Snake River Valley Canal looking south between the Snake River Valley Canal Bridge (on the right) and UPRR (on the left). (Photo taken May 2005)

Photo 2

	Project No. STP-1767(101) Key No. 8116	
	Title Snake River Valley Canal	Figure No. 2 Date: February 2006

View of Snake River Valley Canal Bridge on the east side of US-91.
(Photo taken Nov. 2004)

Photo 4

View of Snake River Valley Canal and Snake River Valley Canal Bridge looking south.
(Photo taken Nov. 2004)

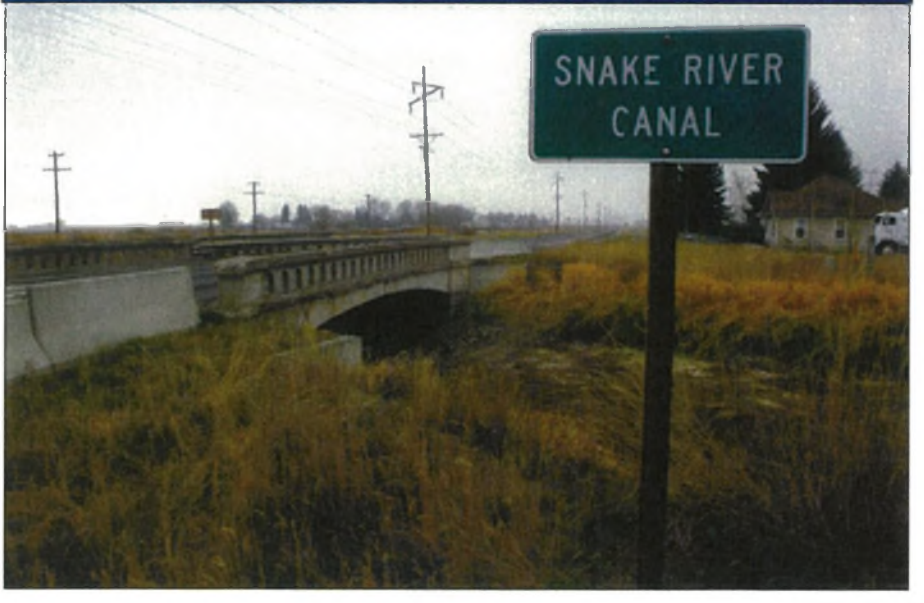


Photo 5

Project No. STP-1767(101)	Key No. 8116	
Title Snake River Valley Canal	Figure No. 3	
	Date: February 2006	

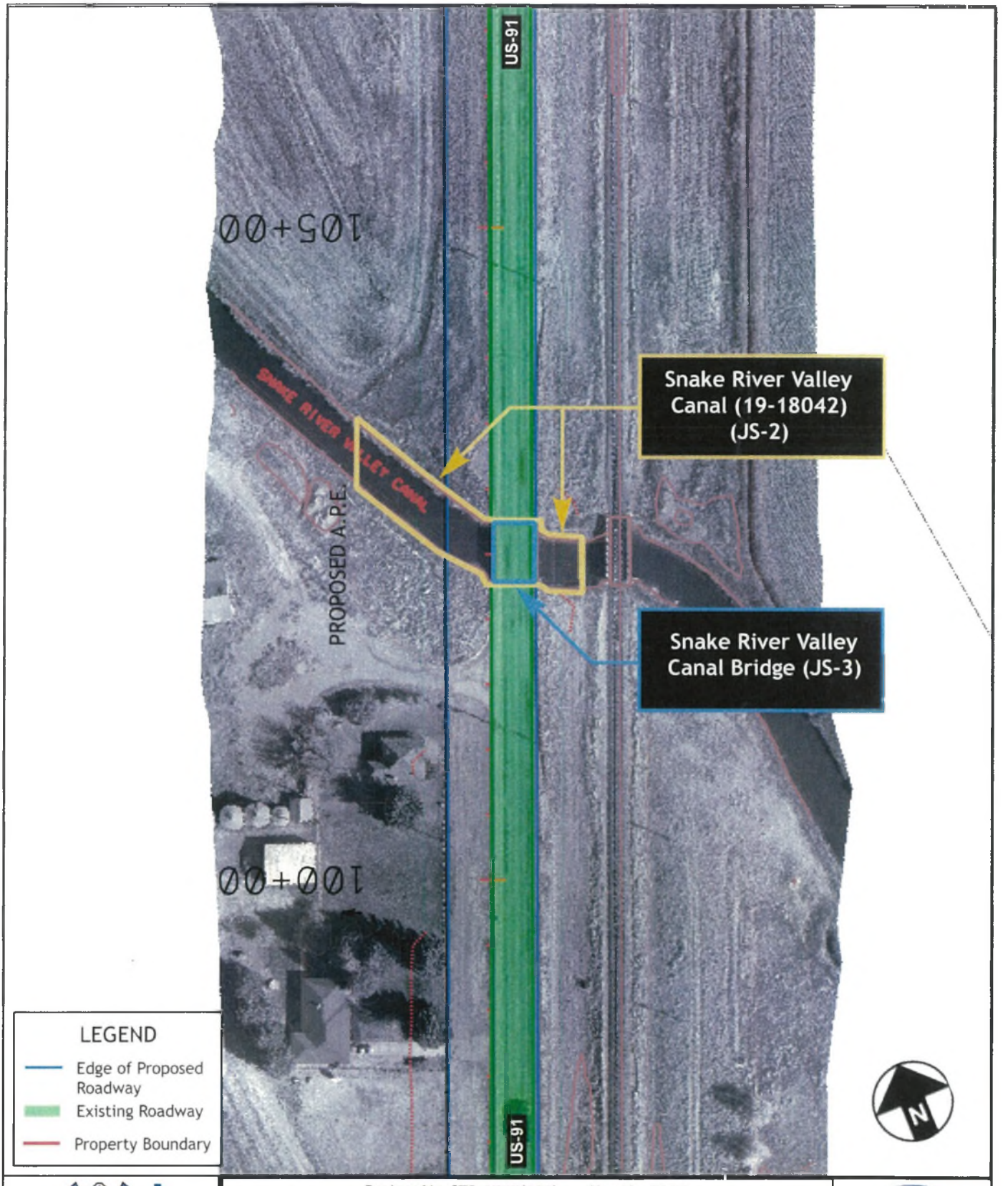
View of Snake River Valley Canal and Bridge looking southwest.
(Photo taken Nov. 2004)

Photo 4

View of Snake River Valley Canal and Bridge
looking north along the west side of US-91. (Photo taken May 2005)

Photo 5

	Project No. STP-1767(101) Key No. 8116	
	Title Snake River Valley Canal	Figure No. 4
		Date: February 2006



US-91 North Corridor Plan	Project No. STP-1767(101) Key No. 8116	
	Title: Aerial View of Snake River Valley Canal (19-18042) (JS-2) & Snake River Valley Canal Bridge (JS-3)	Figure No. 5
		Date: February 2006
		IDAHO TRANSPORTATION DEPARTMENT

7. DE MINIMUS DETERMINATION REGARDING AVOIDANCE ALTERNATIVES

As previously noted, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users ("SAFETEA-LU"), Public Law 109-59, was enacted August 10, 2005. Section 6009(a)(1) of SAFETEA-LU added a new subsection to Section 4(f), which authorizes the FHWA to approve a project that uses Section 4(f) lands that are part of a historic property, without preparation of an Avoidance Analysis, if it makes a finding that such uses would have de minimis impacts upon the Section 4(f) resource, with the concurrence of the relevant SHPO.

More specifically, with regard to Section 4(f) resources that are historic resources, Section 6009 of SAFETEA-LU adds the following language to Section 4(f):[1]

> (b) De Minimis Impacts. --
>
> (1) REQUIREMENTS.--
>
> (A) REQUIREMENTS FOR HISTORIC SITES.--The requirements of this section shall be considered to be satisfied with respect to an area described in paragraph (2) if the Secretary determines, in accordance with this subsection, that a transportation program or project will have a de minimis impact on the area.
>
> ******
>
> (C) CRITERIA.--In making any determination under this subsection, the Secretary shall consider to be part of a transportation program or project any avoidance, minimization, mitigation, or enhancement measures that are required to be implemented as a condition of approval of the transportation program or project.
>
> (2) HISTORIC SITES.--With respect to historic sites, the Secretary may make a finding of de minimis impact only if--
>
> (A) the Secretary has determined, in accordance with the consultation process required under section 106 of the National Historic Preservation Act (16 U.S.C. 470f), that--
>
> (i) the transportation program or project will have no adverse effect on the historic site; or
>
> (ii) there will be no historic properties affected by the transportation program or project;
>
> (B) the finding of the Secretary has received written concurrence from the applicable State historic preservation officer or tribal historic preservation officer (and from the Advisory Council on Historic Preservation if the Council is participating in the consultation process); and
>
> (C) the finding of the Secretary has been developed in consultation with parties consulting as part of the process referred to in subparagraph (A).

[1] This provision will be codified as 23 U.S.C. § 138(b). Section 6009(a)(2) of SAFETEA-LU adds identical language at 49 U.S.C. § 303(d).

7.1 De Minimis Determination

FHWA has made a determination and the Idaho SHPO has concurred in this determination, that the use of the Snake RIver Canal that would be affected by the Proposed Action would cause "no adverse effect" for purposes of Section 106 of the NHPA. This determination, which is documented in Attachment A, satisfies the Section 4(f) provisions added by Section 6009 of SAFETEA-LU at 23 U.S. C. § 138(b)(2)(A)(i) and 49 U.S.C. § 303(d)(2)(a)(i). Concurrence from the Idaho State Historic Preservation Office was obtained and is included as Attachment A of the introduction to this Section 4(f) Evaluation document.

These findings of "no adverse effect" reflect a conclusion that for the Snake River Canal, those impacts will not "alter, directly or indirectly, any of the characteristics of [the] historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association." See 36 CFR § 805(a)(1).

Based on those findings, and taking into consideration the harm minimization and mitigation measures that have been incorporated into the Proposed Project as documented in Sections 7.2 and 8.0 of the Section 4(f) Evaluation for the Snake River Valley Canal, it is the conclusion of the FHWA that the Proposed Action would have de minimis impacts on the Snake River Valley Canal and that an analysis of feasible and prudent avoidance alternatives under Section 4(f) is therefore not required.

7.2 Measures to Minimize Harm

Minimizing impacts to the Snake River Canal were considered throughout the development of the Proposed Action. The new Snake River Canal Bridge will be designed to clear span the Canal, thereby minimizing harm to the resource.

There are no additional ways to further minimize Section 4(f) impacts by additional measures to minimize harm.

8. MITIGATION

Mitigation measures for the use of the Snake RIver Canal include black and white photographic documentation of the existing condition of the canal before construction. During construction, equipment will not be staged or placed on the canal bank outside the Area of Potential Effect (APE) to ensure that the banks are not crushed or disturbed. Similarly, construction-related fill will not be placed in the canal outside the APE.

9. COORDINATION/CONSULTATION

An Idaho Archaeological and Historic Survey Report for the US-91 Shelley to York Road Project was prepared and submitted to the Idaho State Historic Preservation Office (SHPO). ITD, as delegated by the Federal Highway Administration, determined that the project would have no adverse effect on the Snake River Canal, which is an NRHP-eligible cultural resource. The SHPO concurred with these findings. As described above, the SHPO also concurred in the finding of de minimis Section 4(f) impacts on the Snake River Canal.

The Shelley to York Road project was presented as part of a series of public open houses. These open houses were held:

- February 15, 2005 from 4:00 – 7:00 p.m., at the Shelley High School cafeteria, 570 Fir Street, Shelley, Idaho.
- February 16, 2005 from 4:00 – 6:30 p.m., at the Blackfoot City Hall Council Chambers, 157 North Broadway, Blackfoot, Idaho.
- February 17, 2005 from 4:00 – 7:00 p.m., at the Chubbuck City Hall Council Room, 5160 Yellowstone Avenue, Chubbuck, Idaho.

- March 30, 2005, from 4:00 to 7:00 p.m., Dome Room, Shoshone-Bannock Tribes Tribal Business Center, Fort Hall, Idaho

Registered landowners adjacent to US-91 between New Sweden Road and York Road were invited to a meeting held June 22st , 2005 in the Shelley City Hall. The Proposed Project was shown at this meeting.

Consultation with the Union Pacific Railroad occurred at a site visit on November 10, 2005 to address treatment of at-grade railroad crossings at Country Club Road, Clinger Road, Canyon Road and Cotton Road, impacts to their right-of-way, and the Snake River Valley Canal Bridge.

ITD consulted with the Bingham County Commissioners and Bingham County Public Works Department concerning possible project alternatives. Correspondence from both entities is contained in Section 7.0.

An overview of the Shelley to York Road project was discussed with the Bingham County Transportation Coalition on January 19, 2006 in the City of Blackfoot City Hall.

10. SUMMARY

1. The use of the Snake River Canal has been determined to have "no adverse effect" for the purposes of Section 106 of the National Historic Preservation Act.
2. The Proposed Action would have de minimis impacts on the Snake River Canal and an avoidance analysis under Section 4(f) of the Surface Transportation Act is therefore not required.
3. Impacts to the Snake River Canal will be minimized by construction of a new bridge that will clear span the Canal.
4. Mitigation measures for the use of the Snake River Canal include photographic documentation of the existing condition of the canal before the project is built.
5. During construction, equipment will not be staged or placed on the canal bank outside the Area of Potential Effect (APE) to ensure that the banks are not crushed or disturbed. Similarly, construction-related fill will not be placed in the canal outside the APE.

11. DETERMINATION

The Proposed Action would have de minimus impacts on the Snake River Valley Canal and an avoidance analysis under Section 4(f) of the Transportation Act is therefore not required. The Proposed Action includes all possible planning to minimize harm to the Snake River Valley Canal system resulting from such use.

U.S. Department
of Transportation
Federal Highway Administration

Idaho Division

3050 Lakeharbor Lane, Suite 126
Boise, Idaho 83703-6217
208-334-1843
Idaho.FHWA@fhwa.dot.gov

July 3, 2007

Reply To: HFO-ID.3

Ms. Pamela K. Lowe, Director
Idaho Transportation Department
P.O. Box 7129
Boise, ID 83707

Attention: Mr. Dennis M. Clark, Environmental Section Manager

RE: Project No. STP-1767(101), Key No. 8116
US-91, North Corridor Plan & Environmental Document (Shelley to York Road)

Dear Ms. Lowe:

We received the enclosed June 25, 2007 letter from the Advisory Council on Historic Preservation (ACHP) saying they do not believe their participation in the consultation to resolve adverse effects on the subject project is needed. We will send a copy of the MOA pursuant to 36 CFR 800.6(b)(1)(iv) to the ACHP for their files.

Please contact me at (208) 334-9180, ext. 123 if you have any questions.

Sincerely,

(original signed by)

Reid L. Dudley
Operations Engineer

Enclosure

E-Mail cc: ejohnson, Mr. Allen Wubker, ITD District 5 Senior Environmental Planner

MOVING THE AMERICAN ECONOMY

Alan Wubker

From: Dudley, Reid [Reid.Dudley@fhwa.dot.gov]
Sent: Monday, May 01, 2006 10:09 AM
To: Roy Jost; Alan Wubker
Cc: Johnson, Edwin
Subject: RE: Revised BA for Shelley to York Rd.

Mr. Wubker,

We have reviewed your documentation for Project No. STP-1767(101), Key No. 8116.

Based on the information provided, we have determined that this project will have no effect on any of the listed T&E species listed in either Bingham or Bonneville Counties. Should any of this information change or become invalid, we will then need to revisit this determination. Please include a copy of this concurrence in the environmental document.

Please direct any questions to Mr. Reid Dudley at (208) 334-9180, ext. 123.

Reid Dudley

From: Jordan, Keith **On Behalf Of** FHWA, Idaho
Sent: Wednesday, April 26, 2006 10:58 AM
To: Dudley, Reid
Cc: Johnson, Edwin
Subject: FW: Revised BA for Shelley to York Rd.

From: Alan Wubker [mailto:Alan.Wubker@itd.idaho.gov]
Sent: Wednesday, April 26, 2006 10:32 AM
To: FHWA, Idaho
Subject: FW: Revised BA for Shelley to York Rd.

From: Alan Wubker
Sent: Tuesday, April 11, 2006 9:06 AM
To: FHWA Idaho Division Office
Subject: Revised BA for Shelley to York Rd.

Atten: Reid Dudley

Reid, here is the revised "No Effect" BA for Shelley to York Rd. which includes the Utes ladies tresses and the Yellow-billed cuckoo. Please review and reply.
Alan Wubker
Sr. Environmental Planner Dist. 5

US-91 SHELLEY TO YORK ROAD

BIOLOGICAL EVALUATION

1.0 INTRODUCTION

This Biological Evaluation (BE) was prepared for the proposed US-91 Highway Improvement Project between New Sweden Road in the City of Shelley and York Road. The BE evaluates potential effects of the proposed project on species listed as threatened or endangered under the Endangered Species Act (ESA) of 1973, as amended and having the potential to occur in the project area.

2.0 PURPOSE AND NEED

The purpose of this project is to improve US-91 from New Sweden Road in the City of Shelley to York Road from Milepost 118.8 to Milepost 122.8 to address existing and future capacity, safety, substandard roadway characteristics, and operational problems.

US-91 between the City of Shelley and the City of Idaho Falls serves as both a commuter route between those two cities and as a farm-to-market roadway for transport of both raw and processed agricultural products. The City of Shelley is experiencing rapid growth and development that will continue to contribute to traffic volumes on US-91.

The current Level of Service (LOS) is C and is expected to decrease to LOS D by year 2025. Two intersections will fall below ITD's LOS C standard by 2025. The intersection of US-91 and Country Club Road operates at LOS C but will decline to LOS D in the future. The intersection of US-91 at New Sweden Road is currently at LOS B but will decline to LOS D by 2025. LOS D is below ITD's policy of achieving LOS C.

The US-91 intersections with New Sweden Road, Canyon Road, Country Club Road, and York Road all currently meet ITD criteria for a right-turn lane in at least one direction on US-91. New Sweden Road and Country Club Road meet ITD's criteria for a left turn lane in at least one direction.

US-91 is experiencing a number of operations problems. The lack of dedicated turn lanes requires that traffic must slow and queue behind turning traffic, particularly for left-turning vehicles. This contributes to congestion and increased potential for rear-end accidents. Slow moving vehicles hinder traffic flow as following vehicles must wait for gaps in oncoming traffic to pass. Wide vehicles can obstruct traffic flow as the existing narrow roadway cross-section requires that they encroach into oncoming traffic lane.

The proximity of the elevated grade of Union Pacific Railroad to US-91 has resulted in very limited storage space between the railroad and US-91 for cross-street traffic as well as intersections with poor sight distance and substandard storage lengths. This creates both a capacity and a safety issue.

The skewed nature of the US-91 intersections results in difficult turning movements for larger vehicles such as trucks, school buses, and farm equipment.

The existing narrow shoulders are substandard and do not provide adequate room for incident management, right turn movements, and bicycling. Power poles parallel the US-91 pavement within 7 feet of the edge of pavement resulting in a substandard clear zone. The proximity of these obstructions to the traffic lanes forces wide equipment to encroach into the opposing lane to avoid obstructions.

While the New Sweden to York Road corridor has not experienced an above-average collision history, as traffic volumes increase and the time spent following slower moving vehicles increases, there is a risk of increased crash rates due to driver frustration and risk-taking passing maneuvers.

3.0 PROPOSED ACTION

The Idaho Transportation Department proposes to improve U.S. 91 between the City of Shelley and York Road, located in Township 1 North; Range 37 East; Sections 2, 10, 11, 15, 21, 22, and 28. In general, the existing two-lane road will be expanded to a four-lane highway with a median. The width of the current roadway is approximately 40 feet, including shoulders. Under this project, US-91 will be widened and will consist of two 8-foot wide road shoulders, four 12-foot wide lanes, and a 14-foot center left turn lane. Cross-street intersection approaches that will be improved as part of this project include Country Club Road (113th S) near the Mitchell siding, Clinger Road east of the Union Pacific Railroad easement, Canyon Road (97th S), and Cotton Road (81st S).

4.0 SPECIES OCCURRENCE

The U.S. Fish and Wildlife Service provided a list of species for Bingham and Bonneville Counties that are listed as either threatened or endangered under the Endangered Species Act and with the potential to occur within the project area. This list, File #912.0000 2007-SL-0497, is used by the Idaho Transportation Department in assessing affects of the proposed project. Listed species that may occur in the project area and their listing status are shown in the following table:

Common name	Scientific name	Status
Utah valvata snail	*Valvata utahensis*	Endangered
Bald eagle	*Haliaeetus leucocephalus*	Threatened
Canada lynx	*Lynx canadensis*	Threatened
Gray wolf	*Canis lupus*	Experimental/non-essential
Ute Ladies'-tresses	*Spiranthes diluvialis*	Threatened
Yellow-billed cuckoo	*Coccyzus americanus*	Candidate species

4.1 Utah Valvata Snail

The Utah valvata snail was listed as endangered in 1992 along with 3 other species of aquatic Snake River snails and one limpet. A recovery area has been defined for the Utah valvata snail and that extends from American Falls downstream to approximately Hagerman (USFWS 1995). The project area is not located within the recovery area. Since the recovery plan was issued, the Utah valvata snail has been found to occur outside of the recovery area in the Snake River. The proposed project is approximately 0.25 mile from the Snake River at its closest point. There would be no project related impacts to either the Snake River or associated riparian habitat. The nearest known occurrence of this species to the project area is approximately 2.25 miles north of the project area near Sunnyside Road, with another known occurrence approximately 6 miles south of the project area, near the Firth Bridge.

The US-91 proposed project will have *no effect* on the Utah valvata snail as habitat for the Utah valvata snail does not occur in the project area, the project area is not within the recovery area for this species, and this species in not expected to occur in the project area.

4.2 Bald Eagle

The bald eagle is listed as threatened by the USFWS. The species has been proposed for removal from the Federal list of endangered and threatened wildlife (64 FR 36454-36464). Bald eagles both nest and winter in Idaho. The number of known bald eagle nesting territories in Idaho has increased from 12 in 1980 to 113

Bald eagles typically nest in stands of old-growth trees near large water bodies. Nests are often constructed in the largest tree in a stand with an open view of the surrounding environment. Nest trees are usually near water and have large horizontal limbs. Snags and dead-topped live trees may be important in providing perch and roost sites within territories. Because of their large size, eagles require ready access to an abundant supply of medium sized to large fish during breeding (Johnsgard 1990). Freedom from human disturbance is probably another important component of suitable nesting habitat (Rodrick and Milner 1991).

Bald eagles winter along rivers, lakes, and reservoirs that support adequate fish or water bird prey and have mature trees or large snags available for perch sites. Bald eagles often roost communally during the winter, typically in a stand of mature trees with an open branching structure and well-developed canopies. Winter roost areas are usually isolated from human disturbance (Johnsgard 1990).

The Snake River corridor between Idaho Falls and the outlet of the American Falls Reservoir is bald eagle wintering habitat (ICDC 2005). The U.S. 91 corridor is not located within this habitat. No bald eagle nesting habitat has been identified in the project area (ICDC 2005) and no potential nesting habitat was observed within the area of potential affect of the project during the two-day field visit to the site.

There are no known bald eagle nesting territories within the project area and the project area does not contain habitat suitable for bald eagle nesting. The proposed project would not affect nesting bald eagles. Bald eagles are known to winter along the Snake River, outside of but near the project area. The proposed project would not affect suitable bald eagle wintering habitat. No riparian habitat along the Snake River would not be altered or removed by the project.

The US-91 proposed project would have *no effect* on Bald eagles as they are not known to regularly occur within the project area, and the proposed project would not alter suitable nesting or wintering habitat for bald eagles.

4.3 Canada lynx

Canada lynx occur in moderately moist coniferous forest habitats that have cold, snowy winters and contain an adequate prey base of snowshoe hare. In the northern Rocky Mountains lynx generally occur at elevations ranging from approximately 4,900 feet to 6,500 feet (Ruediger et. al. 2000).

In Idaho, Lynx habitat has been identified and mapped in the mountainous northern and central portion of the State and along the eastern border from approximately State Route 34 north to the Montana border and west along the Caribou Range in Idaho. No lynx habitat occurs in the project area, with the nearest habitat located approximately 25 miles to the east, in the Caribou Range (USFS 2005).

Linkage zones, defined as areas that provide landscape connectivity between blocks of lynx habitat, have also been identified and mapped. The project area is not located within a linkage zone (USFS 2005).

The US-91 proposed project would have *no effect* on Lynx as habitat is lacking in the project area and the project area is not located in a linkage zone.

4.4 Gray wolf

Wolves within the State of Idaho are two different population segments, with wolves located north of Interstate 90 in the northern portion of the State listed as threatened and managed as such under the ESA. Wolves south of Interstate 90 are listed as an experimental/ non-essential population and managed under special regulations as allowed in Section 10(j) of the ESA (59 FR 60266-60281). Since the U.S. 91 project area is located south of Interstate 90, wolves in or near the project area would be a part of the experimental/ non-essential population.

Wolves in Idaho occur primarily in the central, mountainous portion of the State and no wolf packs or pairs are known to occur in the project area (Mack and Holyan, 2004). A member of the public reported a wolf observation in the vicinity of U.S. 91 (IDFG 2005b). Gray wolves are not expected to regularly occur within the project area, however, due to predominance of agricultural lands and a lack of suitable habitat for the species in the area. The project area is located approximately 75 miles east of the area considered occupied by the Idaho experimental/non-essential population (IDFG 2005b) and approximately 50 miles west of the area considered occupied by the Greater Yellowstone Ecosystem experimental/nonessential population. If the animal reported as a wolf in the project area was correctly identified (e.g. was not a wolf-dog hybrid) it is likely that it was a dispersing individual from one of these populations.

Gray wolves are not expected to regularly occur in the project area, although dispersing individuals may occur on occasion. The proposed project is not expected to alter the permeability of the landscape for these individuals as the roadway design would not present a barrier. The proposed project would not alter any habitat currently suitable for gray wolves and would not lead to increased disturbance in areas of known wolf use. For these reasons, the proposed project would have *no effect* on gray wolves.

LITERATURE CITED

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Johnsgard, P. A. 1990. Hawks, eagles, and falcons of North America. Smithsonian Institution Press. Washington, DC.

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Ruediger, Bill, J. Claar, S. Gniadek, B. Holt, L. Lewis, S. Mighton, B. Naney, G. Patton, T. Rinaldi, J. Trick, A. Vandehey, F. Wahl, N. Warren, D. Wenger, and A. Williamson. 2000. Canada lynx conservation assessment and strategy. USDA Forest Service, USDI Fish and Wildlife Service, USDI Bureau of Land Management, and USDI National Park Service. Missoula MT.

Roderick, E., and R. Milner (tech. eds.). 1991. Management recommendations for Washington priority habitats and species. Washington Department of Wildlife. Olympia, WA.

U.S. Fish and Wildlife Service. 1995. Snake River Aquatic Species Recovery Plan. Snake River Basin Office, Ecological Services, Boise, Idaho. 92pp.

U.S. Fish and Wildlife Service. 2005. Bald Eagle Fact Sheet. Accessed via the internet at http://idahoes.fws.gov/Fact/Eagle.html on April 6, 2005.

U.S. Forest Service. 2005. Northern Rockies Lynx Habitat and Linkage Zones Map. Accessed via the internet at http://www.fx.fed.us/r1/planning/lynx.html May 24, 2005.

ITD 0783 (Rev. 7-04)

Supply # 27-032650-7

Concept Approval
Idaho Transportation Department

Project Number			Key Number
STP-1767(101)			8116
Highway Route	**Beginning Mile Post**	**Ending Mile Post**	**Federal Aid Route**
US-91	118.8	122.9	STC 1836 from MP 118.8 to MP 120.561 STC 6836 from MP 120.561 to MP 122.9
Project Title			**WA Number**
Shelley to York Road			
Project Category			
☐ ST Simple ☐ ST Complex ☐ FA Simple ☒ FA Complex			

Revisions or additions to these established project concept and design standards shall require appropriate supporting data and Idaho Transportation Department approval.

Recommended By (Local Sponsor)	Date
Recommended/Approved By (District Engineer)	Date 4/7/06
Reviewed By (Roadway Design Engineer)	Date 5-2-06
Approved By (Assistant Chief Engineer, Development)	Date 5/10/06
☐ Design Exception Approved by Committee	Date

0757 (Rev. 5-04)

Design Standards

☒ Complex (submit to HQ for approval) ☐ Simple (approve within the District)

Project Identification

Project Number	Key Number	Project Title	Date
STP-1767(101)	8116	SHELLEY TO YORK ROAD	December 2, 2005

County	Terrain Type	Highway Number	Milepost to Milepost	Functional Class
BINGHAM/BONNEVILLE	LEVEL	US-91	118.8 122.9	RURAL COLLECTOR

Project Type

Project Standards	☐ AASHTO	☐ 3R	☒ State	☐ ST
Oversight	☐ Full	☒ Exempt	☐ Non-Federal Aid	

General Project Description

The purpose of this project is to improve US-91 from New Sweden Road to York Road for its users by increasing roadway capacity, improving transportation safety, and updating substandard roadway features. The following solutions are planned improvements to the existing roadway: reconstruct intersections, increase shoulder widths, add additional lanes, add median for left turning movements and replace existing Snake River Valley Canal Bridge.

Standards for Pavement Width

AASHTO Standard Width	3R Standard Width	State Standard Width	ITD Standard Width *Corridor Plan (A-14-02)*
n/a	n/a	62' w/curb & gutter 74' w/o curb & gutter	n/a

Roadway Widths *(Attach existing and proposed typical sections)*

Milepost	to Milepost	Existing Pavement Width	Proposed Pavement Width
118.8	119.7	30'	68' (see Appendix A)
119.7	122.9	30'	78' (see Appendix A)

☐ Proposed width includes a 2-foot shoe for each side (AASHTO Standards Only)

Proposed Maximum Superevelation	Proposed Design Vehicle	Design Year
Normal Crown – no superelevated sections	WB-62	2032

Traffic ADT				Traffic DHV				Posted Speed	Design Speed
Present	7000	Future	10710	Present	780	Future	1190	45 mph to MP 119.4 55 mph to MP 122.9	50 mph to MP 119.7 60 mph to MP 122.9

Minimum Level of Service *(Attach capacity analysis)*

Milepost	to Milepost	Existing	Proposed
118.8	122.9	C	A

Access Control

Milepost	to Milepost	Existing	Proposed
118.8	122.9	TYPE I COLLECTOR	TYPE IV ARTERIAL

Maximum Grade		Maximum Curve	
Existing +0.8%	Proposed +0.832%	Existing R N/A	Proposed R 20,000'

Proposed Structures *(Attach typical sections)*

Deck Width		Vertical Clearance (Roadway/Q_{50})	Design Load
(C-C) 82'-0"	(0-0) 84'-8"	2'-0"	HL-93 LRFD

Existing Bridge Sufficiency Rating	Rail Type	Clear Zone	
		Cut	Fill
48.4	Concrete Parapet	15' to MP 119.7 20' to MP 122.9	15' to MP 119.7 20' to MP 122.9

Proposed Work (*Mark appropriate items*)

☒ Excavation	☐ Bicycle Lanes	☒ Curb and Gutter	☐ Lighting	☐ ITS
☒ Drainage	☐ Separated Pathway	☒ Utilities	☐ Sidewalk	☐ Other
☒ Base	☐ Traffic Signal	☒ Bridge(s)	☐ Seal Coat	
☒ Surfacing	☒ Erosion Control	☒ Guard Rail	☐ Detour	

Traffic Signals

Existing Location (Milepost)	Type of Controller	Proposed Location (Milepost)	Type of Warrant
York Road & US-91 (122.87)	Traffic Signal	N/A	Existing

Railroad Crossing Protection

Existing Location (Milepost)	Type of Protection	Proposed Location (Milepost)	Type of Protection
Country Club Rd. (119.4)	RR signal warning device	Country Club Rd. (119.4)	RR crossing gates and lights
Clinger St. (119.98)	RR Signage	Clinger St. (119.98)	RR Signage
Canyon Road (120.55)	RR Signage	Canyon Road (120.55)	RR Signage
Cotton Road (121.7)	RR signal warning device	Cotton Road (121.7)	RR crossing gates and lights

Accident History

Accident Rate	Accident Base Rate (ACC/MV)	Existing Accident Rate within Project Limits (ACC/MV)
	1.22	1.22

Spot Locations within Project Limits that exceed the Base Rate (list Milepost)

MP 119.4

Proposed Improvements to Reduce Accidents *Attach worksheet for accident reduction, if necessary.

Milepost	Type of Improvements	Estimated Accident Reduction
119.4	Reconstruct intersection, improve sight distance	52%

Environmental

Conceptual Environmental Evaluation (ITD 0651) Complete ☒ Yes – Attach a copy to this form. ☐ No – Explain below

Environmental Checklist for State Funded Projects Complete ☐ Yes – Attach a copy to this form. ☒ No – Explain below

Project is Federally funded

Environmental Concerns

ITD 0758 (Rev. 5-04)

Alternate Solutions And Costs

Various options and cost comparisons should be analyzed. If appropriate, equivalent uniform annual cost should be computed for the expected life of the proposed options.

Project Number	Key Number
STP-1767(101)	8116

Location

Shelley to York Road

Description:

The US-91 Shelley to York project begins at New Sweden Road in the City of Shelley at MP 118.8 and ends at York Road milepost 122.9. Figure 1 (found at the end of this section) illustrates the project location within the State of Idaho and includes a vicinity map for the project. The total length of the project is approximately 4 miles.

The existing roadway characteristics for this section of US-91 are as follows:

- One 12-foot travel lane in each direction provides limited capacity for future traffic volumes.
- 3-foot shoulders on both sides of the road are substandard and do not provide space for oversize vehicles, snow storage, bicycle accommodation, and refuge for stalled vehicles.
- The lack of a center turn lane requires traffic to slow down and queue behind turning traffic, particularly left -turning vehicles. This contributes to poor traffic operations and increased potential for rear-end accidents.
- Slow moving vehicles also hinder traffic flow as following vehicles must wait for gaps in oncoming traffic to pass.
- Intersections of US-91 with Country Club, Canyon, and Cotton Road are skewed, contributing to sight distance problems. Side street crossings of parallel UPRR track have abrupt vertical curvature, contributing to poor sight distance.
- Vehicle storage length at intersections between the railroad tracks and US-91 creates unsafe conditions for long trucks and school busses turning onto US-91.
- Clear zone distance on east side of US-91 (power poles within clear zone distance) is substandard.
- Vertical curvature over Snake River Valley Canal bridge contributes to sight distance problems.
- Bridge structure over the Snake River Valley Canal is narrow with 2.5' shoulder/shy distance to barrier.
- There are no existing bicycle or pedestrian facilities along this section of US-91.

The projected growth on US-91 between Shelley and York Road will require improvements to the existing roadway to accommodate increased traffic volumes, improve safety, and resolve existing operational problems as noted above. Three alternatives were evaluated for US-91 from New Sweden Road to York Road including Do Nothing, a Three Lane Cross-Section, and the Five Lane Cross-Section. Each of these alternatives is discussed below.

Do Nothing Alternative

The Do Nothing Alternative does not provide for any improvements to the existing roadway deficiencies noted above. The substandard shoulder widths, inadequate clear zone, poor intersection geometry, and the lack of passing opportunities will result in decreased safety and poor traffic operations under design year traffic conditions. Although pedestrian and bicycle traffic is minimal along this section of US-91, the Do Nothing Alternative does not accommodate occasional bicycle traffic safely with the existing three foot shoulders. The AASHTO "Guide for the Development of Bicycle Facilities" recommends a minimum paved shoulder width of four feet to accommodate bicycle travel with additional width for roadways with speeds that exceed 50 mph.

Currently, the ITD Corridor Highway Needs Studies identifies a resurfacing with minor shoulder improvements from MP 118.99 to 120.56 in the year 2014 at a cost of $352,000 ($224,200 per mile). This amount includes $6,000 for right-of-way and utilities and $346,000 for construction. Assuming the same cost per mile for US-91 from the Bingham/Bonneville County Line to York Road, the total cost of the Do Nothing Alternative is approximately $920,000. On-going maintenance costs would be at a standard ITD rate.

Alternate Solutions And Costs

Various options and cost comparisons should be analyzed. If appropriate, equivalent uniform annual cost should be computed for the expected life of the proposed options.

Project Number	Key Number
STP-1767(101)	8116

Location

Shelley to York Road

Alternative One: Three Lane Cross-Section

The Three Lane Cross-Section Alternative consists of one travel lane in each direction with a center left turn lane and standard width shoulders. The horizontal and vertical alignments are generally west of existing centerline and three to five feet above existing grade to minimize impacts to railroad right-of-way and minimize the overall footprint while providing for necessary roadway drainage. This alternative requires additional right-of-way from parcels located on the west side of US-91 abutting the existing highway right-of-way. The Three Lane Cross-Section will have the following characteristics:

- The Three Lane Alternative does not provide the needed additional capacity for the projected design year traffic volumes. This alternative operates at a LOS D in the design year. ITD and AASHTO recommended minimum level of service for a rural collector is LOS C.
- Traffic operations will continue to be hindered since motorists are unable to pass slower moving vehicles, since passing is not permitted in the center shared left turn lane.
- The intersections at Country Club Road and Canyon Road will operate at LOS E and D respectively, below ITD and AASHTO minimum of LOS C.
- Standard 8-foot shoulders will help accommodate oversize vehicles, snow storage, bicycle accommodation, and refuge for stalled vehicles.
- The center left turn lane will provide refuge for left turning vehicles eliminating queuing behind turning traffic and decreasing the potential for rear-end accidents.
- Skewed intersections will be improved to the extent possible with minor adjustments to skew angle and vertical curvature.
- Storage length at intersections between the railroad tracks and US-91 will be increased to help accommodate oversize vehicles.
- The Snake River Valley Canal Bridge at milepost 120.277 will be replaced.
- Roadside obstacles will be relocated or removed from the clear zone.
- Widened shoulders will accommodate bicycle travel along this section of US-91.
- No specific design elements are included for accommodating pedestrians.

This alternative provides some safety improvements to US-91 between Shelley and York Road. However, it does not provide the necessary capacity improvements needed in the design year to operate at an acceptable level of service. Design exceptions are not anticipated for the Three Lane Cross-Section alternative.

Estimated Construction Cost: $11,408,000

Estimated Right-of-Way Cost: $350,000

ITD 0758 (Rev. 5-04)

Alternate Solutions And Costs

Various options and cost comparisons should be analyzed. If appropriate, equivalent uniform annual cost should be computed for the expected life of the proposed options.

Project Number	Key Number
STP-1767(101)	8116

Location

Shelley to York Road

Alternative Two: Five Lane Cross-Section

The Five Lane Cross-Section Alternative consists of two travel lanes in each direction with a center left turn lane and standard width shoulders. The horizontal alignment is shifted to the west to avoid impacts to the railroad right-of-way and ballast section and improve intersection operations. The vertical alignment is approximately 3 to 5 feet above the existing profile to facilitate roadway drainage and minimize the overall footprint. This alternative requires 21.0 acres of right-of-way from the parcels on the west side of US-91 abutting the existing highway right-of-way. The Five Lane Cross-Section will have the following characteristics:

- The Five Lane Alternative provides sufficient capacity for the design year traffic volumes. It operates at a LOS A in the design year.
- Traffic operations will be improved as a result of continuous opportunities for passing slower moving vehicles.
- All intersections along this segment of US-91 will operate at an acceptable level of service.
- 8-foot shoulders will help accommodate oversize vehicles, snow storage, bicycle traffic, and refuge for incident management, exceeding State standard, and consistent with other US-91 projects.
- The center left turn lane will provide refuge for left turning vehicles eliminating queuing behind turning traffic and decreasing the potential for rear-end accidents.
- Skewed intersections will be improved to the extent possible with minor adjustments to skew angle and vertical curvature.
- Storage length at intersections between the railroad tracks and US-91 will be increased to help accommodate longer vehicles.
- The Snake River Valley Canal Bridge at milepost 120.277 will be replaced.
- Roadside obstacles will be relocated or removed from the clear zone.
- Widened shoulders will accommodate bicycle travel along this section of US-91.
- No specific design elements are included for accommodating pedestrians.

This alternative provides considerable safety and capacity improvements to US-91 between Shelley and York Road. It is the only alternative evaluated that meets or exceeds the minimum level of service requirement for design year traffic on both the highway and at intersections. This alternative, the 3-Lane Alternative and Do Nothing alternative are all included in the NEPA Environmental Evaluation under review. Design exceptions are not anticipated for the Five Lane Cross-Section alternative.

Estimated Construction Cost: $14,461,000

Estimated Right-of-Way Cost: $757,000

Proposed Design Exceptions

Describe and Justify All Design Exceptions:

Design exceptions are not anticipated.

Design Exception Committee Chairman	Title	
FHWA Committee Member	Design Exception No.	Date

ITD 1150 (Rev. 3-04)

Project Cost Summary Sheet

Round Estimates to Nearest $1,000

Date	Project Number	Key Number
3/10/2006	STP-1767(101)	8116

Location	District
SHELLEY TO YORK ROAD (5-LANE)	5

Segment Code	Begin Mile Post	End Mile Post	Length in Miles
2350	118.8	122.9	4.1

	Previous ITD 1150	Initial or Revise To
1. Preliminary Engineering		$1,500,000
2. Right-of-Way: Number of Parcels 34 Number of Relocations 7		$757,000
3. Utility Adjustments: ☑ Work ☑ Materials ☐ By State ☑ By Others		$1,409,000
4. Earthwork		$1,085,000
5. Drainage and Minor Structures		$975,000
6. Pavement and Base		$3,902,000
7. Railroad Crossing: (See ITD-0757)		$650,000
Grade/Separation Structure _____		
At-Grade Signals ☐ Yes ☐ No		
8. Bridges/Grade Separation Structures:		
☑ New Structure		$565,000
Location Snake River Valley Canal Milepost 120.266		
Length/Width Length 55'-11" Width 84'-0"		
☐ Repair/Widening/Rehabilitation		
Location _____		
Length/Width		
9. Traffic Items (Delineators, Signing, Channelization, Lighting, and Signals)		$250,000
10. Construction Traffic Control (Sign, Pavement Markings, Flagging, and Traffic Separation)		$470,000
11. Detours		
12. Other Items (Roadside Development, Guardrail, Fencing, Sidewalks, Curb and Gutter)		$994,000
13. Cost of Constructions (Items 3 through 12)		$10,300,000
14. Mobilization 8 % of Item 13		$824,000
15. Construction Engineer and Contingencies 30 % of Items 13 and 14		$3,337,000
16. Total Construction Cost (13 + 14 + 15)		$14,461,000
17. Total Project Cost (1 + 2 + 16)		$16,718,000
18. Project Cost Per Mile		$4,078,000

Prepared By:

Jason Bleyl

ITD-2839 27-228070-2

Right of Way Cost Estimate

Date: July 18, 2006

Key No: 8116
Project No: STP-1767(101)
Project Name: Shelley to York Road

No. of parcels requiring acquisitions: 34
Number of parcels requiring relocations: 7

New Alignment: 4.10 miles
Basic R/W Width: 82.00 ft.

Existing Alignment: 4.10 miles
Additional R/W Width: Varies ft.

DIRECT ACQUISITION COSTS:

A. Land only

Agriculture	Irrigated	14.81	acres @	$1,200	/acre	=	$17,772
	Dry		acres @		/acre	=	$0
	n/a	0.00	acres @	$0	/acre	=	$0
Graze	Irrigated	0.00	acres @	$0	/acre	=	$0
	Dry	0.00	acres @	$0	/acre	=	$0
		0.00	acres @	$0	/acre	=	$0
Timber	Income Producing	0.00	acres @	$0	/acre	=	$0
	Harvestable	0.00	acres @	$0	/acre	=	$0
	Non-Harvestable	0.00	acres @	$0	/acre	=	$0
Residential	Developed	5.96	acres @	$18,150	/acre	=	$108,174
	Undeveloped	0.00	acres @	$0	/acre	=	$0
Commercial\Industria	Developed	0.24	acres @	$20,250	/acre	=	$4,860
	Undeveloped	0.00	acres @	$0	/acre	=	$0
Damages Anticipated						=	
Miscellaneous						=	

B. Site Improvements

Agriculture	No. of Structures	0	@	$0	(average)	=	$0
Residential	No. of Structures	0	@	$0	(average)	=	$0
Commercial\Industria	No. of Structures	0	@	$0	(average)	=	$0
Damages Anticipated							
Miscellaneous						=	

C. Relocation

Developed Agricultur	No. Expected	0	@	$0	(average)	=	$0
Developed Residential							
Single Family	No. Expected	7	@	$70,000	(average)	=	$490,000
Multi-Family	No. Expected	0	@	$0	(average)	=	$0
Developed Comm\In	No. Expected	0	@	$0	(average)	=	$0
Miscellaneous						=	

INDIRECT ACQUISITION COSTS:

Appra./Imp.Agri.	No. Expected	0	@	$0	(average)	=	$0
Appra./Imp.Resid.							
2685	No. Expected	0	@	$0	(average)	=	$0
2288	No. Expected	0	@	$0	(average)	=	$0
B & A	No. Expected	0	@	$0	(average)	=	$0
Appra./Imp.Com.-Ind	No. Expected	0	@	$0	(average)	=	$0
Appraisals/Land	No. Expected	0	@	$0	(average)	=	$0
Negotiations	No. Expected	34	@	$4,000	(average)	=	$136,000
Demolitions	No. Expected	0	@	$0	(average)	=	$0
					Sub-Total		$756,806

INCIDENTALS:

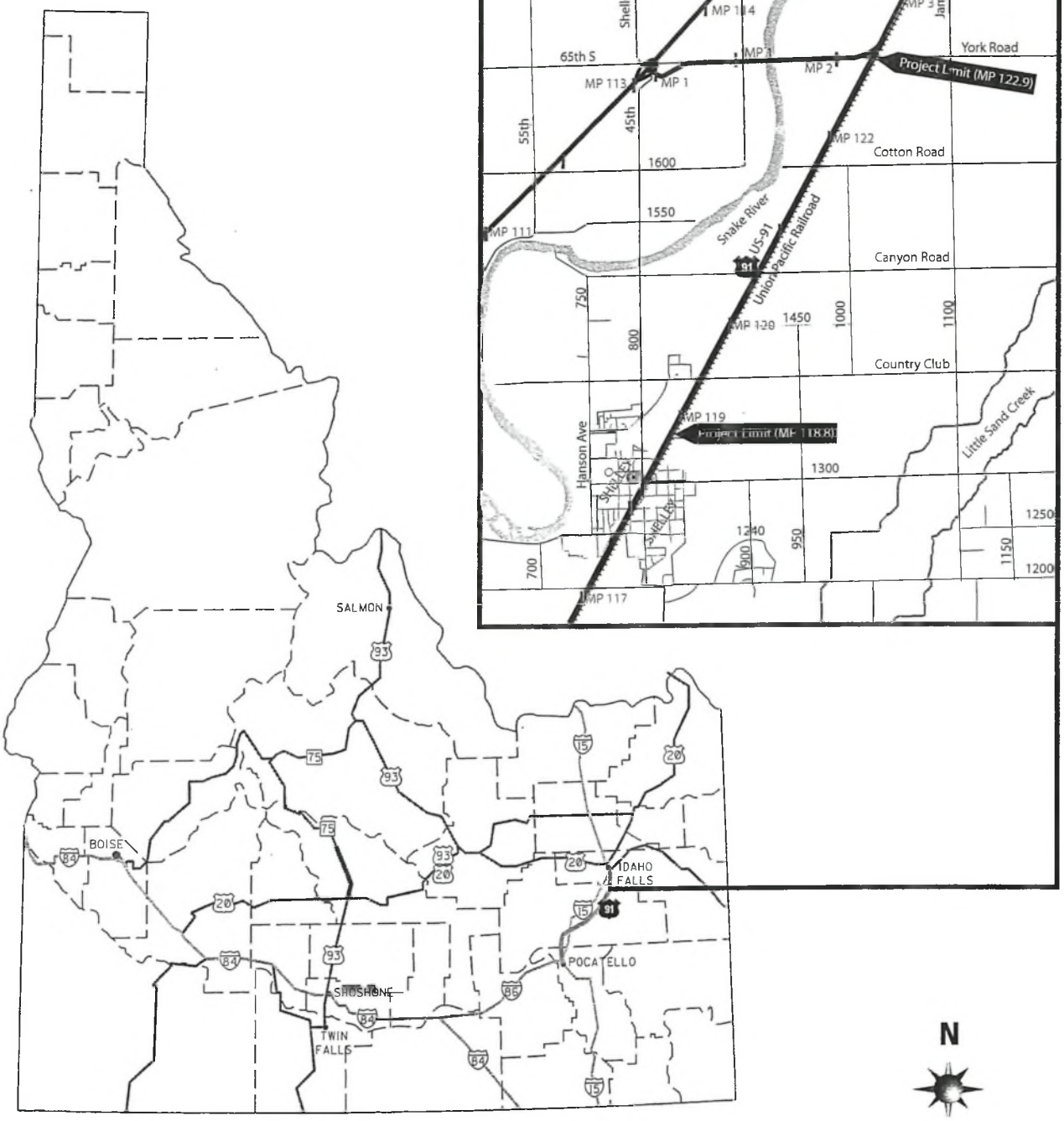
Estimated as a percentage of overall costs. 0.00 % $0

(Includes Title Costs, Admin. Settle., Legal Settle., Attorney & Court Costs, Property Mngmnt. & Misc.)

Total Estimated Project R/W Costs: **$756,806**

Proposed R/W Plans Approval Date	Projected R/W Expenditure Years	Contruction Year(s)

Estimtd. By: Jason Bleyl, P.E. Title: Project Engineer Date: 12/1/2005



91 Shelley To York Road	Project No. STP-1767(101) Key No. 8116	IDAHO TRANSPORTATION DEPARTMENT
	Title: Project Location	Figure No. 1
		Date: December 2005

ITD 00606 (Rev. 8/01)

ACCESS CONTROL DETERMINATION

Project Number	STP-1767(101)	Key Number	8116	District	5
Location	Shelley to York Road				
Route Number	US-91	Functional Classification	Minor Arterial		
Design Year	2032	ADT	10,710	DHV	1190
Design Speed	60				

ACCESS CONTROL

Limits	Type
MP 118.8 (Shelley) to 122.9 (York Road)	Type III

REMARKS

In accordance with Rural Highways Access Control Guide, Administrative Policy A-12-01, any changes to existing Access Control must be documented. The existing classification of the roadway is a Major Collector (Type I). The proposed improvements to US-91, including two lanes, a median, and increased shoulder width warrants a change in access control. Given the substantive investment in the improvements to US-91, Type III Access Control is the most appropriate for the function of this highway.

RECOMMENDED BY

District Engineer	Date
District Traffic Engineer	Date
District R/W Supervisor	Date
HQ Traffic Engineer	Date
Roadway Design Engineer	Date

APPROVED BY

ACE (D)	Date

Distribution: Original - Transportation Planning Administrator
Copies - HQ Traffic Roadway Design PDE District Right of Way District Traffic District

INSTRUCTIONS

1. Complete all blanks as indicated.
2. Refer to "Access Management: Standards and Procedures for Highway Right-of-Way Encroachments" for further information.
3. Indicate the units under "Limits" as either Milepost (MP) or Station (Sta.)
4. Use "Remarks" to explain or justify all revisions to an existing access control.
5. Add more lines if more than one type of Access Control is recommended.
6. Attach an 8 1/2" x 11" Vicinity Map showing the limits of Access Control if the limits are not readily understood (e.g., an interchange or major intersection).
7. Complete the ITD 00606 and send it to Headquarters Traffic Section for approval.

TYPE OF ACCESS CONTROL

<table>
<tr><th rowspan="2">Method of Access</th><th>Full Control</th><th colspan="4">Partial Control</th><th rowspan="2">ITD Spacing Standards</th></tr>
<tr><th>V</th><th>IV</th><th>III</th><th>II</th><th>I</th></tr>
<tr><td>Public Road Connections</td><td>Via interchange ramps only.</td><td colspan="4">Per ITD spacing standards or as shown on project plans.</td><td rowspan="2">As established in:
IDAPA 39.03.42
"Rules Governing Highway Right-of-Way Encroach-ments on State Rights-of-Way"</td></tr>
<tr><td>Existing Approaches</td><td>Interchange only.</td><td>Frontage road and joint use is encouraged.
Public roads and private approaches must meet ITD spacing standards.</td><td>Urban
Maximum is 4/mile per side.
Rural
Maximum is 3/mile per side.</td><td colspan="2">As shown on the project plans or right-of-way documents.</td></tr>
<tr><td>New Approaches</td><td>Prohibited except for interchanges.</td><td>Frontage road access ONLY.
Must meet ITD spacing standards.</td><td>Frontage road and joint use is encouraged.
Urban
Maximum is 4/mile per side.
Rural
Maximum is 3/mile per side.</td><td colspan="2">Must meet ITD spacing standards.</td><td>Intersections, approaches, and signals must meet ITD spacing standards.</td></tr>
</table>

ACCESS CONTROL ON ALL SEGMENTS OF THE STATE HIGHWAY SYSTEM SHALL BE UPGRADED TO MATCH THE MOST CURRENT FUNCTIONAL CLASSIFICATION.

Full Control Access (Type V) prohibits all at-grade intersections, including those with railroads, except as approved by the Federal Highway Administration.

An existing access that is allowed to remain during a highway project and does not meet criteria for the newly established access control type must be documented on the ITD 00606, Access Control Determination, right-of-way documents, and the "As Constructed" plans.

Any existing access removed during a highway project shall be documented on the right-of-way documents and the "As Constructed" plans.

Adequate right-of-way for frontage roads should be obtained under Type III and Type IV partial access control.

To maintain system capacity, safety and efficiency, maximize signal progression, and minimize delays to the traveling public, all approaches and signals shall be spaced in accordance with ITD standards. Variances to the spacing standards shall not be permitted unless a need can be demonstrated for the variance. Any variance must be fully documented on the ITD 00606 form.

See page 3 for spacing standards and functional classification.

MINIMUM APPROACH AND SIGNAL SPACING

Access Type	Urban/ Rural	Type	Approaches		Signals	Frontage Roads
			Intersection Spacing	Approach Spacing	Signal Spacing	
I	U	Sections shall be upgraded to Type II or greater				
	R	At-Grade	0.25 mile	300 feet	0.5 mile	0.25 mile
II	U	At-Grade	660 feet	150 feet	0.25 mile	0.25 mile
	R	At-Grade	0.25 mile	500 feet	0.5 mile	0.25 mile
III	U	At-Grade/ Interchange	0.25 mile	300 feet	0.5 mile	0.25 mile
	R	At-Grade/ Interchange	0.5 mile	1,000 feet	0.5 mile	0.25 mile
IV	U	At-Grade/ Interchange	0.5 mile	N/A	0.5 mile	0.25 mile
	R	At-Grade/ Interchange	1 mile	N/A	1 mile	0.25 mile
V	U	Interchange	1 mile	N/A	None	N/A
	R	Interchange	3 miles	N/A	None	N/A

The distance between approaches is measured along the curb line or outside edge of the shoulder between the nearest edges of adjacent approaches, excluding the flares, transitions, or radii. The distance between approaches shall be such that the curb approach transition or radii of an approach does not encroach upon the transition or radii of the adjacent approach. Frontage road distance is measured from the intersecting point of a primary highway and secondary roadway to a point on the secondary roadway at which a new frontage road intersects.

ACCESS TYPES AND THEIR RELATIONSHIP TO FUNCTIONAL CLASSIFICATION

Greater Control ↓

Access Type	Rural Functional Class	Urban Functional Class
I →	Minor Collector, Major Collector	
II →	Minor Arterial	Collector, Minor Arterial
III →	Principal Arterial	Principal Arterial
IV →	Principal Arterial (Multiple-Lane)*	Principal Arterial (Multiple-Lane)*
V →	Interstate	Interstate

↓ *Higher Function*

*Multiple-lane implies two or more thru lanes in each direction. The highway may or may not be divided.

NOTE: Functional classification reports are available from the Headquarters Traffic Section or the Division of Transportation Planning.

ITD 0651 (Rev. 11-02)

Conceptual Environmental Evaluation

Date	District	Route #	City/County
March 10, 2006	5	US-91	Bingham/Bonneville Counties

Project Name	Project #	Key #
US-91 Shelley to York Road	STP-1767(101)	8116

Work Authority	Program Year	Termini (Mp To Mp)
	Prel	118.8 to 122.9

Acres of New Public R/W	Acres of New Private R/W	Located on Indian Reservation, Tribal Lands, Etc.?
0	21.0	☐ Yes ☒ No

Air Quality
☒ Attainment Area ☐ Non-Attainment Area ☐ CO ☐ PM 10 ☐ PM 2.5 ☐ Exempt Project

Type One Project (I.E., New Location, Substantial Alignment Change, Addition of a Through-Traffic Lane):
☒ Yes ☐ No

Construction Impacts Requiring Special Provisions (Enter Details on Separate Sheet)
☐ Yes ☒ No

Project Purpose and Benefits

Double mark (xx) only the item that best describes the Primary Reason for Proposing this Project
Single mark (x) all Other Relevant Items

x	Maintain/Improve User Operating Conditions	___	Enhance Accessibility for the Disabled/Safety
x	Maintain/Improve Traffic Flow	___	Enhance Pedestrian Safety and/or Capacity
x	Time Savings	___	Enhance Bicycle Safety and/or Capacity
xx	Increase Capacity	___	Traffic Composition Enhancement (e.g., Truck Route, HOV Lane, Climbing Lane)
x	Reduce Congestion	___	Visual/Cultural Enhancement (e.g., Landscaping, Historic Preservation)
x	Hazard Reduction	___	Environmental Enhancement (e.g., Air Quality, Noise Attenuation, Water Quality)
___	Reduce Highway User Operating Costs	___	Economic Prudence (e.g., Repair Less Expensive than Replacement, B/C Ratio)
___	Other, List (e.g., Driver Convenience and Comfort regarding Rest Area Projects)		

Check Any of the Following That Are Adversely Impacted by the Project

		Yes	Unknown
1.	Noise Criteria Impacts	X	☐
2.	Change in Access or Access Control	X	☐
3.	Change in Travel Patterns	☐	☐
4.	Neighborhood or Service Impacts	☐	☐
5.	Economic Disruption	☐	☐
6.	Inconsistent W/Local or State Planning	☐	☐
7.	Environmental Justice	☐	☐
8.	Displacements	X	☐
9.	Section 4(f) Lands-DOT Act 1966	X	☐
10.	LWCF Recreation Areas/6(f) Lands	☐	☐
11.	Section 106-Nat. Hist. Preserv. Act	X	☐
12.	FAA Airspace Intrusion	☐	☐
13.	Visual Impacts	☐	☐
14.	Prime Farmland, Parcel Splits	X	☐
15.	Known/Suspected "Hazmat" Risks	☐	☐
16.	Wildlife/Fish Resources/Habitat	☐	☐
17.	Threatened/Endangered Species ☐ Listed ☐ Proposed	☐	☐
18.	Air Quality Impacts	☐	☐
19.	Inconsistent With Air Quality Plan ☐ SIP ☐ TIP	☐	☐
20.	Stream Alteration/Encroachment ☐ IWDR ☐ F&G ☐ COE (404)	☐	☐
21.	Flood Plain Encroachment ☐ Longitudinal ☐ Traverse	☐	☐
22.	Regulatory Floodway ☐ PE Cert. & FEMA Approval ☐ Revision	☐	☐
23.	Navigable Waters ☐ CG (Sec 9) ☐ COE (Sec 10) ☐ Dept. Lands	☐	☐
24.	Wetlands ☒ Jurisdictional (404) ☐ Non-Jurisdictional	X	☐
25.	Sole Source Aquifer ☐ Exempt Project ☐ Non-Exempt	☐	☐
26.	Water Quality, Runoff Impacts	☐	☐
27.	NPDES-General Permit (If no, complete sediment-erosion control plan)	☒	☐

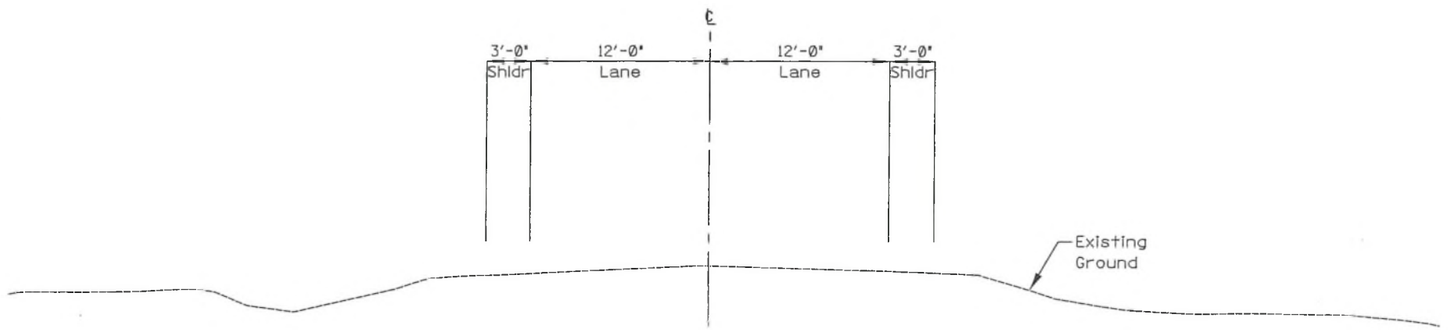
Prepared By	Date
Diana L. Atkins	03/10/2006

Comments

TYPICAL SECTION

Scale N.T.S.

Existing Conditions



REVISIONS				DESIGNED	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY	IDAHO TRANSPORTATION DEPARTMENT	PROJECT NO.	TYPICAL SECTION	English
NO.	DATE	BY	DESCRIPTION	J. Christensen			STP-1767(101)	SHELLEY TO YORK ROAD	COUNTY BINGHAM/BONNEVILLE
				DESIGN CHECKED J. Bleyl		PB PARSONS BRINCKERHOFF			KEY NUMBER 8116
				DETAILED J. McGee	CADD FILE NAME 8116tyex.dgn				SHEET 1 OF 2
				DRAWING CHECKED J. Bleyl	DRAWING DATE: December, 2005				

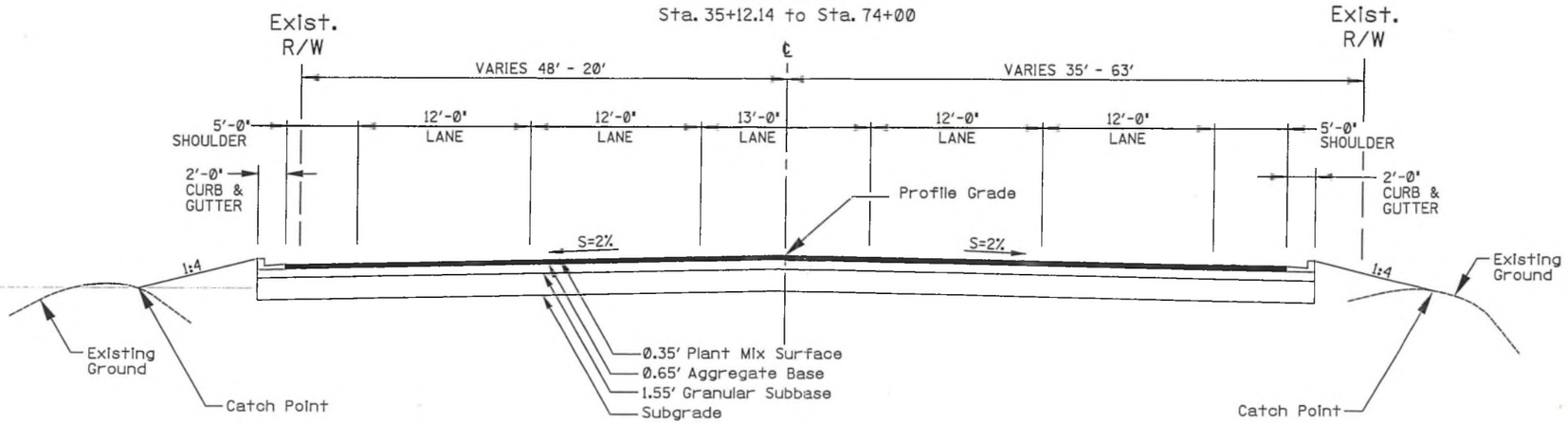
NOT APPROVED PRELIMINARY FOR CONSTRUCTION

P:\project\22706A_US91\Prelim. Design\Sht-Files\Concept Reports\8116tyex.dgn
12/1/2005

TYPICAL SECTION

Scale N.T.S.

Sta. 35+12.14 to Sta. 74+00

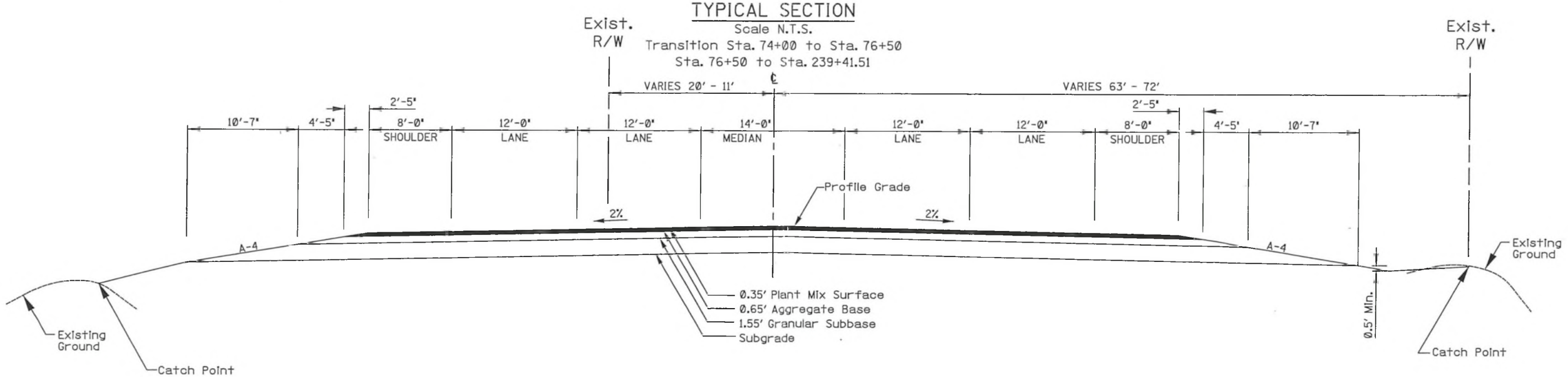


TYPICAL SECTION

Scale N.T.S.

Transition Sta. 74+00 to Sta. 76+50

Sta. 76+50 to Sta. 239+41.51



REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED J. Christensen	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED J. Bleyl	
DETAILED J. McGee	CADD FILE NAME 8116ty01.dgn
DRAWING CHECKED J. Bleyl	DRAWING DATE: December, 2005

IDAHO TRANSPORTATION DEPARTMENT

PB PARSONS BRINCKERHOFF

PROJECT NO.	TYPICAL SECTION
STP-1767(101)	SHELLEY TO YORK ROAD

English

COUNTY BINGHAM/BONNEVILLE

KEY NUMBER 8116

SHEET 2 OF 2

NOT APPROVED FOR CONSTRUCTION PRELIMINARY

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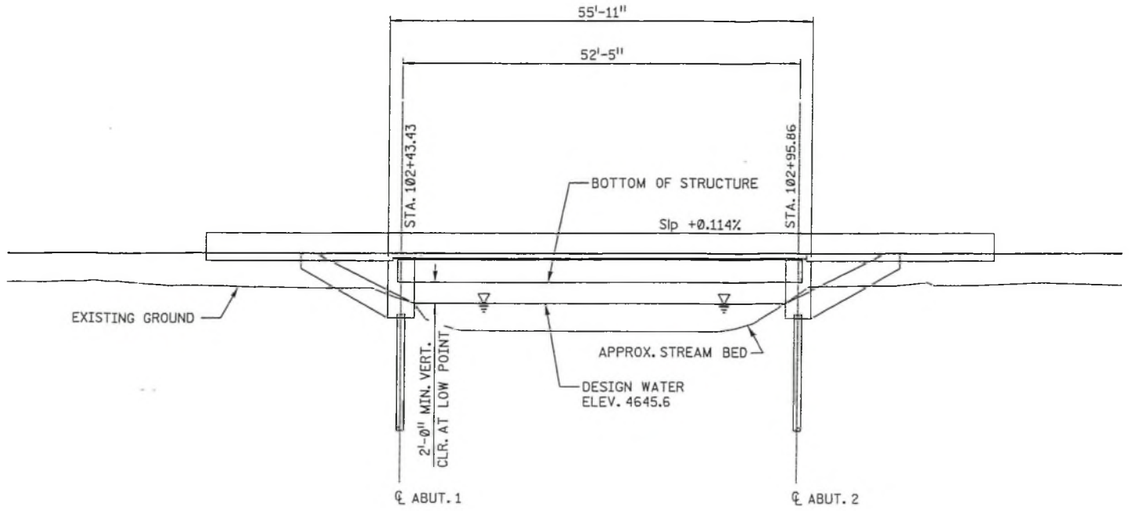
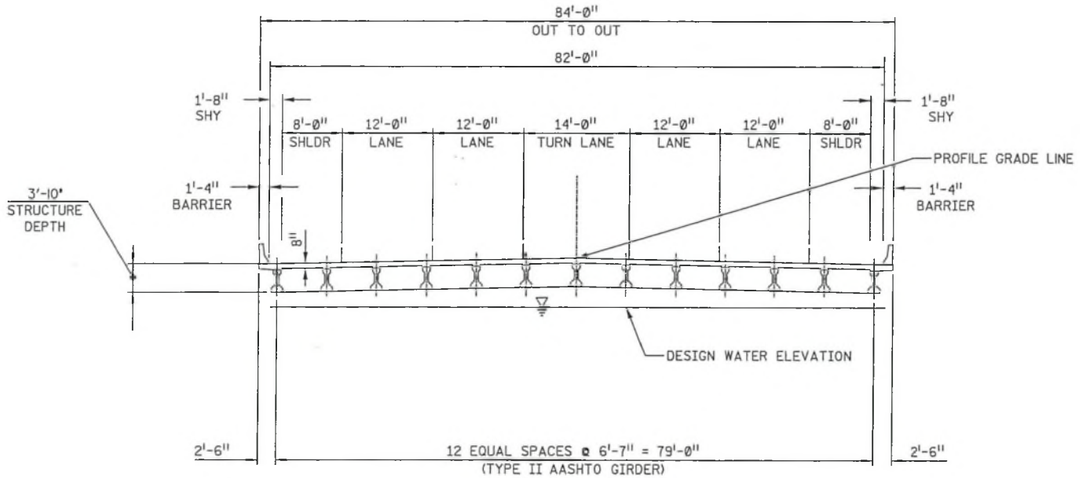
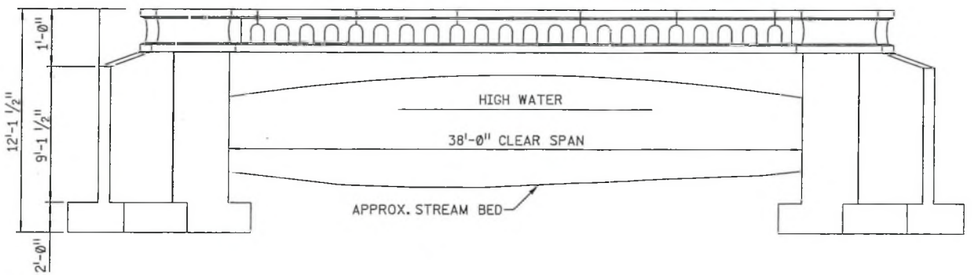
7/18/2006



PROPOSED BRIDGE ELEVATION



SECTION THRU PROPOSED STRUCTURE



EXISTING BRIDGE ELEVATION

NOTES

1. NO UTILITIES (IF ANY) SHOWN.

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED Gloria T-K	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED D. Church	
DETAILED Gloria T-K	CADD FILE NAME 8116pl_Snake River Bridge.dgn
DRAWING CHECKED D. Church	DRAWING DATE: March, 2006

IDAHO TRANSPORTATION DEPARTMENT

PARSONS BRINCKERHOFF

PROJECT NO.	CONCEPT REPORT	
STP-1767(101)	SHELLEY TO YORK ROAD	English
		COUNTY BINGHAM/BONNEVILLE
		KEY NUMBER 8116
		SHEET 1 OF 1

NOT APPROVED PRELIMINARY FOR CONSTRUCTION

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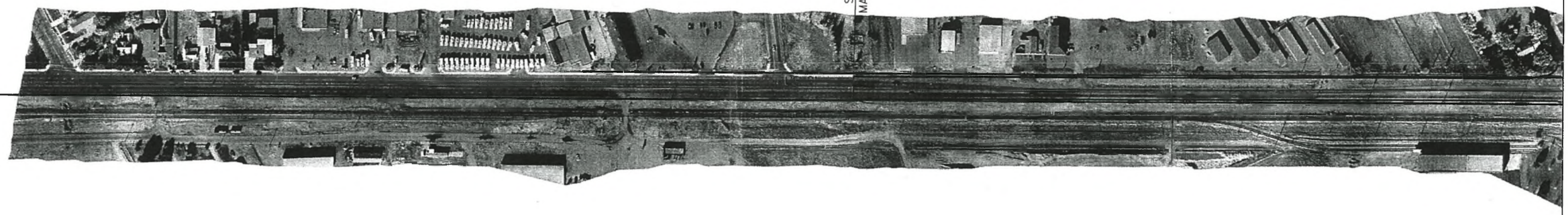


LEGEND

- PROPOSED ALIGNMENT CENTERLINE
- EDGE OF PAVEMENT (5-LANE)
- RIGHT-OF-WAY

150 0 300
SCALE IN FEET

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	J. Christensen
DESIGN CHECKED	J. Bleyl
DETAILED	J. McGee
DRAWING CHECKED	J. Bleyl

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME: Align_1of5.dgn

DRAWING DATE: December, 2005

IDAHO TRANSPORTATION DEPARTMENT

PB PARSONS BRINCKERHOFF

PROJECT NO.	CONCEPT REPORT
STP-1767(101)	SHELLEY TO YORK ROAD

English

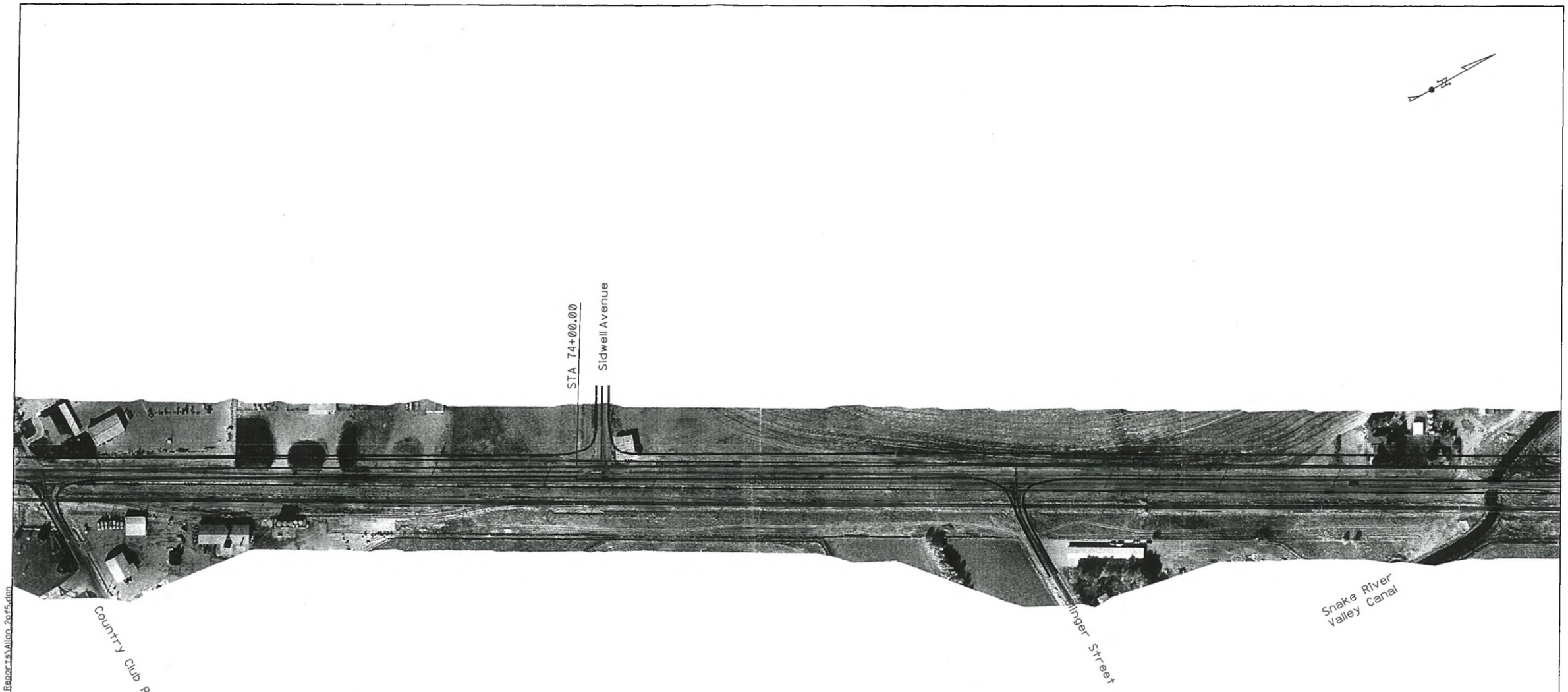
COUNTY BINGHAM/BONNEVILLE

KEY NUMBER 8116

SHEET 1 OF 5

NOT APPROVED FOR PRELIMINARY CONSTRUCTION

12/6/2005 P:\Project\22706A_USIN\Prelim_Design\Sht-Files\Concept_Reports\Align_1of5.dgn



LEGEND

- PROPOSED ALIGNMENT CENTERLINE
- EDGE OF PAVEMENT (5-LANE)
- RIGHT-OF-WAY

150 0 300
SCALE IN FEET

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED J. Christensen	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED J. Bleyl	
DETAILED J. McGee	CADD FILE NAME Align_2of5.dgn
DRAWING CHECKED J. Bleyl	DRAWING DATE: December, 2005

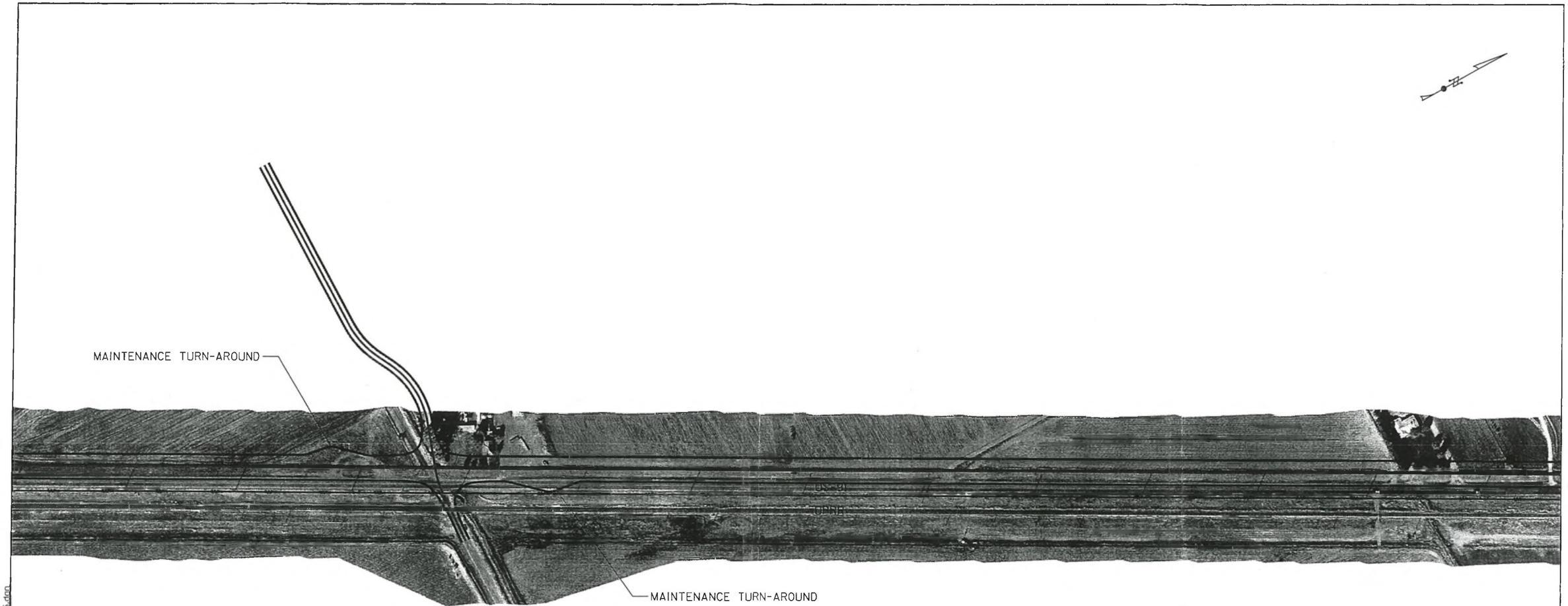
IDAHO TRANSPORTATION DEPARTMENT

PARSONS BRINCKERHOFF

PROJECT NO.	CONCEPT REPORT	
STP-1767(101)	SHELLEY TO YORK ROAD	English
		COUNTY BINGHAM/BONNEVILLE
		KEY NUMBER 8116
		SHEET 2 OF 5

NOT APPROVED
PRELIMINARY
FOR CONSTRUCTION

P:\project\22706A US91\Prelim Design\Sht-Files\Concept Reports\Align_2of5.dgn
12/6/2005



LEGEND

- PROPOSED ALIGNMENT CENTERLINE
- EDGE OF PAVEMENT (5-LANE)
- RIGHT-OF-WAY

150 0 300
SCALE IN FEET

REVISIONS				DESIGNED J. Christensen	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY	IDAHO TRANSPORTATION DEPARTMENT	PROJECT NO.	CONCEPT REPORT	English
NO.	DATE	BY	DESCRIPTION	DESIGN CHECKED J. Bleyl			STP-1767(101)	SHELLEY TO YORK ROAD	COUNTY BINGHAM/BONNEVILLE
				DETAILED J. McGee	CADD FILE NAME Align_3of5.dgn				KEY NUMBER 8116
				DRAWING CHECKED J. Bleyl	DRAWING DATE: December, 2005	PARSONS BRINCKERHOFF			SHEET 3 OF 5

NOT APPROVED FOR CONSTRUCTION
PRELIMINARY

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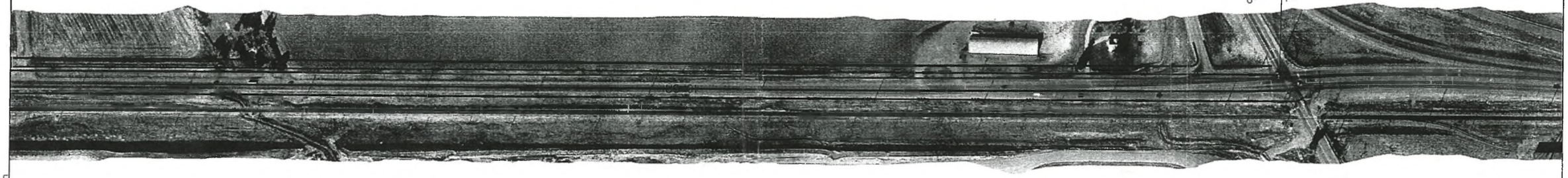
12/6/2005



LEGEND

- PROPOSED ALIGNMENT CENTERLINE
- EDGE OF PAVEMENT (5-LANE)
- RIGHT-OF-WAY

150 0 300
SCALE IN FEET

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED J. Christensen
DESIGN CHECKED J. Bleyl
DETAILED J. McGee
DRAWING CHECKED J. Bleyl

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME Align_5of5.dgn
DRAWING DATE: December, 2005

IDAHO TRANSPORTATION DEPARTMENT

PARSONS BRINCKERHOFF

PROJECT NO.
STP-1767(101)

CONCEPT REPORT
SHELLEY TO YORK ROAD

English
COUNTY BINGHAM/BONNEVILLE
KEY NUMBER 8116
SHEET 5 OF 5

NOT APPROVED
PRELIMINARY
FOR CONSTRUCTION

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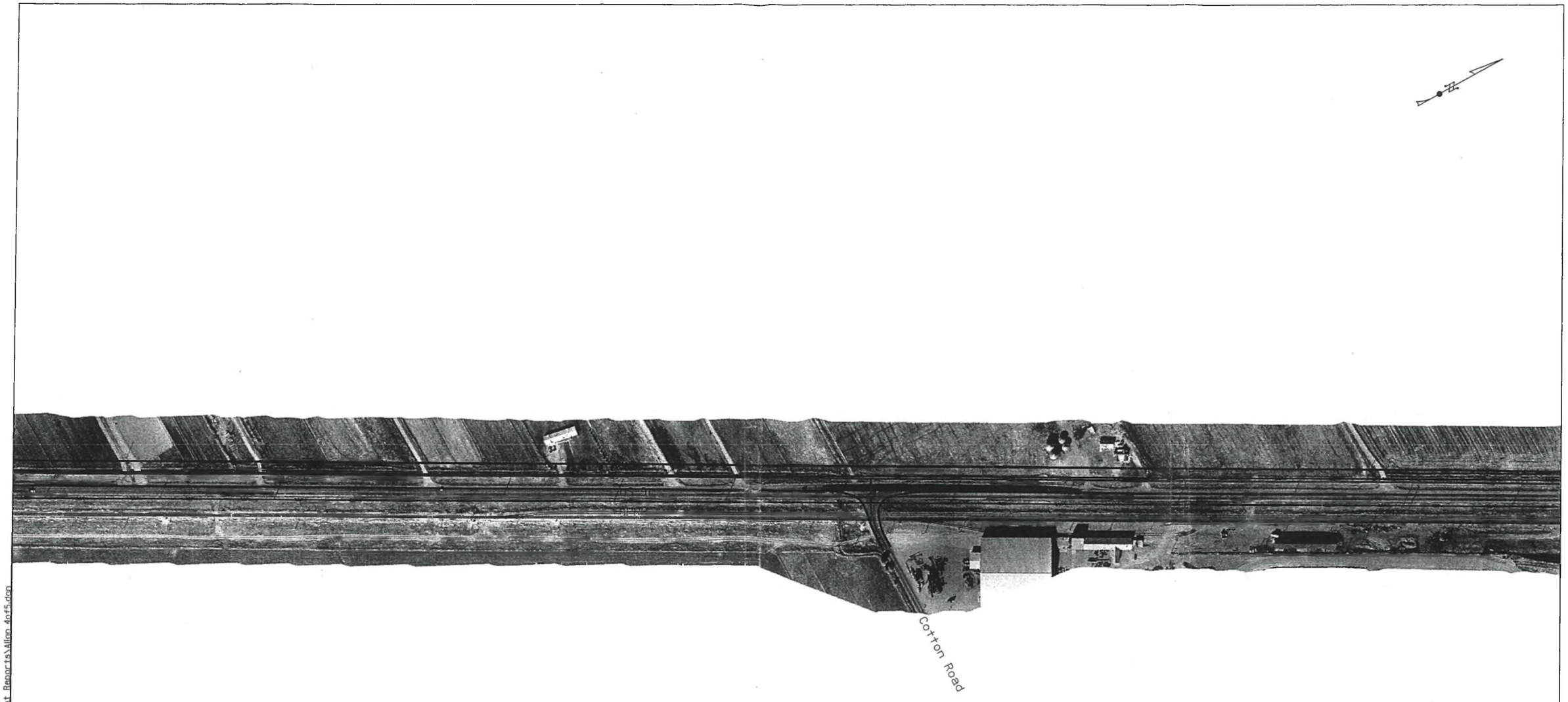
12/6/2005



LEGEND

- PROPOSED ALIGNMENT CENTERLINE
- EDGE OF PAVEMENT (5-LANE)
- RIGHT-OF-WAY

150 0 300
SCALE IN FEET

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED J. Christensen	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED J. Bleyl	
DETAILED J. McGee	CADD FILE NAME Align_4of5.dgn
DRAWING CHECKED J. Bleyl	DRAWING DATE: December, 2005

IDAHO TRANSPORTATION DEPARTMENT

PARSONS BRINCKERHOFF

PROJECT NO.	CONCEPT REPORT
STP-1767(101)	SHELLEY TO YORK ROAD

English

COUNTY BINGHAM/BONNEVILLE

KEY NUMBER 8116

SHEET 4 OF 5

NOT APPROVED
PRELIMINARY
FOR CONSTRUCTION

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12/6/2005