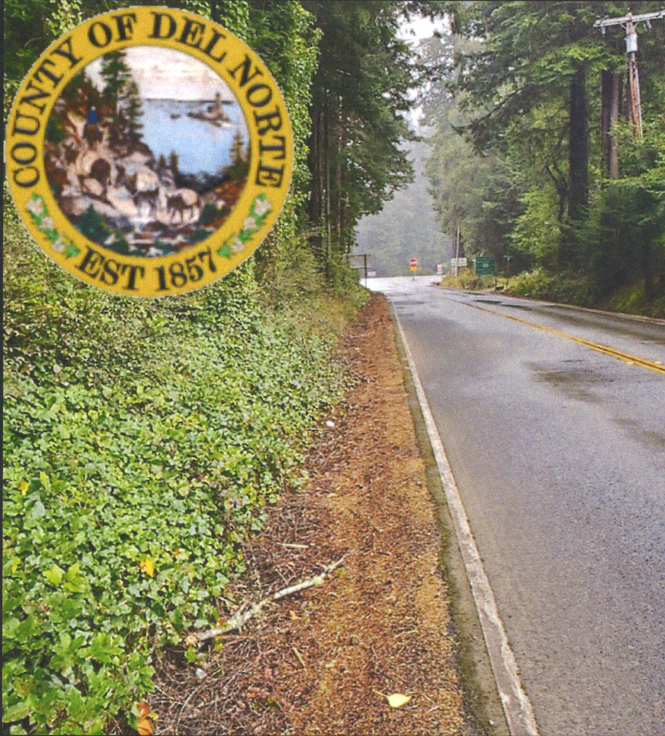
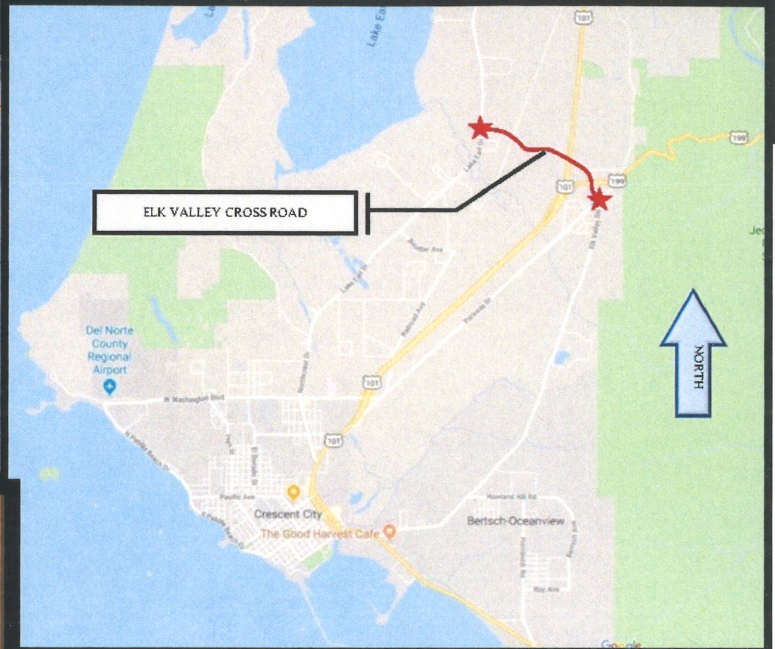


Elk Valley Cross Road Corridor Plan

01-DN-EVCR
PM 0.0-1.5
May 2020



In Del Norte County, along Elk Valley Cross Road
from Lake Earl Drive to Parkway Drive, Crescent City,
California
PM 0.0 to 1.5



I have reviewed the information contained in this Plan and the R/W Data Sheet attached hereto, and find the data to be complete, current and accurate:

Brian Stephenson

Brian Stephenson, Dokken Engineering

Tamera Leighton

Tamera Leighton, Executive Director
Del Norte Local Transportation Commission

Gerry Hemmingsen

Gerry Hemmingsen, Chair
Board of Supervisors

Date: 06/09/20

I hereby certify that according to the
provisions of Government Code
Section 25103, delivery of this
document has been made.

Clerk of the Board
By: *Hyler Goughman*

06/09/20
Date

01-DN-EVR-PM 0.0-1.5

This Corridor Plan has been prepared under the direction of the following Registered Engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.



Brian R. Stephenson

REGISTERED CIVIL ENGINEER

5/28/2020

DATE

Table of Contents

1. Introduction	3
2. Background.....	4
3. Purpose and Need Statement	4
4. Deficiencies.....	5
5. Corridor and System Coordination.....	8
6. Alternatives	9
7. Alternatives Comparison Matrix	17
8. Alternatives Cost Estimates	18
9. Community Involvement.....	20
10. Environmental Determination/Document.....	20
11. Funding	20
12. Schedule.....	21
13. FHWA Coordination	21
14. Development Team	21

ATTACHMENTS:

A	Project Location Map
B	Alternative Exhibits
C	Alternative Cost Estimates
D	Environmental Constraints Overview Report
E	Existing Right of Way Records Sheet
F	Existing Conditions Report
G	Public Meeting Records
H	Signal Warrant Analysis (101 & 199)
I	Northbound US 199 Speed Survey at Elk Valley Cross Road
J	Intersections (199 & 101) Technical Memorandum

1. INTRODUCTION

Brief Project Description:

The Elk Valley Cross Road Corridor Plan proposes to improve safety and address traffic crash rates. The Corridor Plan includes improvements to pedestrian and bicycle facilities, lateral sight distance improvements and intersection improvement alternatives.

See the cost estimates for specific work items included in each alternative.

Project Limits (Dist., Co., Rte., PM)	01-DN-EVCR-PM 0.0-1.5
Number of Alternatives:	10, Roadway Segments and Intersections
Programmed or Proposed Capital Construction Costs	Varies
Programmed or Proposed Capital Right of Way Costs:	Varies
Programmed or Proposed Support Costs:	Varies
Funding Source:	To Be Determined
Type of Facility (conventional, expressway, freeway):	Conventional
Number of Structures:	0
Anticipated Environmental Determination/Document	Initial Study/Mitigated Negative Declaration /Categorical Exclusion
Legal Description	In Del Norte County, along Elk Valley Cross Road from Lake Earl Drive to Parkway Drive, Crescent City, California.

2. BACKGROUND

Elk Valley Cross Road (EVCR) is a 1.5 mile stretch of roadway between Lake Earl Drive and Parkway Drive. Within this segment of roadway, US Highway 101 (US-101) and US Highway 199 (US-199) intersect Elk Valley Cross Road with at-grade intersections. Elk Valley Cross Road is classified as a Rural Major Collector for its entirety and currently consists of a two lane cross section with 12' standard lanes and shoulder widths 8' wide from Lake Earl Drive to Wonder Stump Road, 0'-1' wide from Wonder Stump Road to US 199 and 4' wide from US 199 to Parkway Drive.

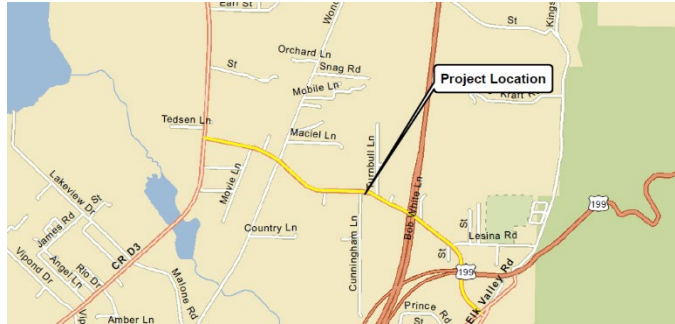


Figure 1 Project Location Map

This roadway serves residential neighborhoods, Sunset High School, Kings Valley Golf Course, Florence Keller Regional Park, and is the direct connecting route from US 199 eastbound to northbound US 101. EVCR indirectly serves traffic commuting to the Pelican Bay State Prison which is located off Lake Earl Drive. Bicycles and pedestrian traffic were observed along EVCR even though a continuous paved shoulder does not exist. The Elk Valley Cross Road Corridor Plan is a product of the Del Norte Local Transportation Commission. Alternatives have been evaluated for the roadway segments defined in this report, for each at-grade intersection of EVCR and US 101 and US 199, and for two local road connections.

3. PURPOSE AND NEED STATEMENT

Need:

Improvements along Elk Valley Cross Road are needed to address safety. The existing major intersections have a collision rate higher than the local, county and statewide averages for similar roadways. The existing corridor does not meet current design standards.

Purpose:

The purpose of the Elk Valley Cross Road Corridor Plan is to provide conceptual engineering design alternatives to improve safety for all users (motorists, bicyclists, and pedestrians) along Elk Valley Cross Road.

Other Goals and Objectives

- Provide a paved shoulder for bicycle and pedestrian use.
- Identify collision rates at intersections.

- Identify sight distance deficiencies along the existing corridor.
- Identify existing environmental constraints along the corridor.
- Identify existing Right of Way constraints along the corridor.

4. DEFICIENCIES

The existing alignment was compared to the December 2018 version of the Caltrans Highway Design Manual (HDM). Based on the standards and guidance set forth by the HDM, there are geometric features present along the Elk Valley Cross Road that do not meet the HDM standards. Several road intersections along EVCR do not offer the minimum corner sight distance required for the posted speed limit of 45 mph on EVCR.

There are nonstandard shoulder width and non-motorized facility deficiencies along the current corridor between Wonder Stump Lane and Elk Valley Road. Alternatives in this Plan propose to provide paved shoulder widening to the 4' wide standard width for use by bicycle and pedestrian traffic.

At the intersection of EVCR and US 101, the unsignalized at-grade intersection configuration with a median refuge serves as a nonstandard intersection between a multilane highway and two-lane rural connector. At the intersection of EVCR and US 199, the unsignalized at-grade intersection lane configuration was modified between 2005 and 2009 to reduce approaching westbound US 199 traffic from two approaching lanes to one approaching through lane before entering the intersection. Since those modifications, the intersection continues to have collisions and in 2014 one of those crashes resulted in a fatality. The existing corner sight distance from the southern EVCR approach to eastbound US 199 approaching vehicles does not meet the current HDM Section 405.1(2) Corner Sight Distance for approaching speeds of 55 MPH (due to right of way limitations) or 45 MPH (due to vegetation limitations and road signs blocking view).

For the minor roadway intersections along EVCR, deficiencies in sight distance have resulted in concentrations of crashes, discussed in the Collision Data below.

Traffic Data

Intersection and traffic volumes were monitored on Tuesday, May 7, 2019 at both AM and PM peak hour period. Roadway traffic volumes were conducted on the same day with continuous 24-hour traffic volume counts. The Level of Service (LOS) was evaluated as B, signifying no increase in capacity is required for this roadway. A few traffic generators observed include Sunset High School, Florence Keller Regional Park, Kings Valley Golf Course and Pelican Bay State Prison located north of EVCR off Lake Early Drive. One noted traffic generator for the segment located between US 199 and US 101 is that

Elk Valley Cross Road Corridor Plan

westbound US 199 traffic must travel EVCR to go northbound on US 101. That required movement generated more truck traffic (3.9% of total) in this segment over other segments.

Collision Data

Historical crash data for EVCR between 2009-2019 was gathered using the State Wide Integrated Records System (SWITRS). Table 1 below discusses crash data by intersection location and Table 2 details crash data by roadway segment. More details and an exhibit showing the segments can be found in the Existing Conditions Report, Attachment F. Tables 3 and 4 show the comparison of roadway and intersection crash rates to the regional averages for rural 2 and 3 lane roadways statewide, district wide, and county wide.

Roadway segment crash rates exceed Statewide average in the segment between Wonder Stump Road and US 101. The existing sight distance limitations, limited clear recovery area and narrow shoulder widths could be contributing factors along this segment. Five of the six intersection crash rates along EVCR are higher than State and County averages, in collisions per million vehicle miles (mvm), when compared to similar intersection types. Both major intersections; US 101 and US 199, exceed the statewide averages. The US 101 intersection being over 2 times the statewide average crash rates and US 199 being 7 to 8 times the Statewide Average. The intersection of EVCR with US 199 should be the focus of improvements made to EVCR to optimize the safety benefits initiated by this corridor plan.

Supplemental information can be found in Attachment F, Elk Valley Cross Road Existing Conditions Report, along with a collision summary table.

TABLE 1: Elk Valley Cross Road - Crash Data by Intersection Location																					
2009 to 2018			Includes Crashes on Cross Streets Within 200 Feet of the Intersection																		
Does not include crashes on Elk Valley Cross Road greater than 200' from the intersections listed																					
Intersecting Street	Total Study Intersection Crashes	% Total Crashes	Crashes By Severity			Alcohol Involved	Crashes by Type							Weather			Lighting				
			Property Damage Only	Injury	Fatality		Broadside	Sideswipe	Rear End	Hit Object	Head-On	Auto/Ped	Other	Clear	Cloudy	Raining	Daylight	Dusk/Dawn	Dark- ST LTS	Dark- NO ST LTS	Other
Lake Earl Drive	7	12%	6	1	0	1	2	0	0	4	0	0	1	2	3	2	4	0	0	2	1
Wonder Stump Road	5	8%	3	2	0	0	0	0	1	2	0	0	2	4	1	0	4	0	1	0	0
High School Driveway	1	2%	1	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0
Cunningham Lane	1	2%	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0
US 101	18	31%	10	8	0	1	13	1	1	3	0	0	0	11	6	1	14	0	3	1	0
SR 199	21	36%	10	10	1	0	12	1	1	7	0	0	0	11	5	5	18	0	2	1	0
Parkway Drive	5	9%	3	2	0	0	1	0	1	2	1	0	0	4	1	0	4	0	0	1	0
TOTAL	58	100%	34	23	1	2	28	2	4	20	1	0	3	33	16	9	45	0	6	6	1
% Study Intersection Crashes			58%	40%	2%	3%	49%	3%	7%	34%	2%	0%	5%	56%	28%	16%	78%	0%	10%	10%	2%
Note: No crashes involving bicyclists or pedestrians were reported at the intersections.																					
Source: SWITRS, NHTSA																					
Source: LSC Transportation Consultants Inc.																					
EVCR Crash Tables.xls																					

Elk Valley Cross Road Corridor Plan

TABLE 2: Elk Valley Cross Road - Crash Data by Roadway Segment

2009 to 2018 Includes Crashes on Street Segments Greater than 200 Feet From Intersections
Does not include crashes within 200' of the study intersections

On Elk Valley Cross Road Between And	Total Study Segment Crashes	Property Damage			Bike/Ped Involved	Alcohol Involved	Crashes by Type							Weather				Lighting			
		Only	Injury	Fatality			Broadside	Sideswipe	Rear End	Hit Object	Head-On	Auto/Ped	Other	Clear	Cloudy	Raining	Fog	Daylight	Dusk/Dawn	Dark-STLTS	Dark-NO-STLTS
Lake Earl Drive Wonder Stump Road	1	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0
Wonder Stump Road US 101	7	1	6	0	1	2	0	0	2	4	0	0	1	2	5	0	0	6	0	0	1
US 101 SR 199	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SR 199 Parkway Drive	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	8	1	7	0	1	2	0	0	3	4	0	0	1	2	6	0	0	7	0	0	1
% Roadway Segment Crashes							0%	0%	38%	50%	0%	0%	12%	25%	75%	0%	0%	88%	0%	0%	12%

Note 1: ST LTS = Street lights

Source: SWITRS

Source: LSC Transportation Consultants, Inc.

TABLE 3: Intersection Crash Rates

2009 to 2018 Includes Crashes on Cross Streets Within 200 Feet of the Intersection

Intersecting Street with Elk Valley Cross Road	Intersection Crashes			Actual Crash Rate (Crashes per MV) ¹		Percent of Statewide Average Rate		Statewide Average Crash Rate By Intersection Type (Crashes per MV) ¹	
	Total	Injury or Fatality	% Injury Crashes	Total	Injury or Fatality	Total	Injury or Fatality	Total	Injury or Fatal
Lake Earl Drive	7	1	14%	0.35	0.05	219%	76%	0.16	0.07
Wonder Stump Road	5	2	40%	0.46	0.19	211%	184%	0.22	0.10
Cunningham Lane	1	0	0%	0.10	0	60%	0%	0.16	0.07
US 101	18	8	44%	0.53	0.24	241%	234%	0.22	0.10
SR 199	21	11	52%	1.56	0.82	711%	811%	0.22	0.10
Parkway Drive	5	2	40%	0.63	0.25	287%	250%	0.22	0.10
TOTAL	58	24	41%						
% Study Intersection Crashes									

Note: MV = Million Vehicles entering intersection

Note 1: Bold indicates a crash rate higher than the average rate

Source: SWITRS, NHTSA, 2015 Collision Data on California State Highways

Source: LSC Transportation Consultants Inc.

EVCR Crash Tables.xls

Elk Valley Cross Road Corridor Plan

TABLE 4: Roadway Segment Crash Rates									
2009 to 2018 Includes Crashes on Street Segments Greater than 200 Feet From Intersections									
Between	And	Total Study Segment Crashes	Crashes By Severity				Total Persons Injured	Crashes Per Million Vehicle Miles (MVM)	
			Property Damage Only	Injury	Fatality	Bike/Ped Involved		Total Crash Rate	Injury Crash Rate
Lake Earl Drive	Wonder Stump Road	1	0	1	0	0	0	0.41	0.41
Wonder Stump Road	US 101	7	1	6	0	1	1	1.28	1.1
US 101	SR 199	0	0	0	0	0	0	0	0
SR 199	Parkway Drive	0	0	0	0	0	0	0	0
TOTAL		8	1	7	0	1	1		
% Roadway Segment Crashes			13%	88%	0%	13%	13%		
Regional Averages (Rural 2 and 3 Lane)									
Statewide								1.04	0.48
Caltrans District 1								1.48	0.68
Del Norte County								1.38	0.71
Note: Bold indicates an exceedance of at least one average rate Source: SWITRS, Statewide and Del Norte County crash rates are from Caltrans's 2015 Collision Data on California Highways Publication Note: Statewide and District 1 Injury Crash Rate reflects Injury + Fatality Accident Rate. Source: LSC Transportation Consultants, Inc.									

TABLE 5: Intersection Crash Rates									
2009 to 2018 Includes Crashes on Cross Streets Within 200 Feet of the Intersection									
Intersecting Street with Elk Valley Cross Road	Intersection Crashes			Actual Crash Rate (Crashes per MV) ¹		Percent of Statewide Average Rate		Statewide Average Crash Rate By Intersection Type (Crashes per MV) ¹	
	Total	Injury or Fatality	% Injury Crashes	Total	Injury or Fatality	Total	Injury or Fatality	Total	Injury or Fatal
Lake Earl Drive	7	1	14%	0.35	0.05	219%	76%	0.16	0.07
Wonder Stump Road	5	2	40%	0.46	0.19	211%	184%	0.22	0.10
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US 101	18	8	44%	0.53	0.24	241%	234%	0.22	0.10
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Parkway Drive	5	2	40%	0.63	0.25	287%	250%	0.22	0.10
TOTAL	58	24	41%						
% Study Intersection Crashes									
Note: MV = Million Vehicles entering intersection Note 1: Bold indicates a crash rate higher than the average rate Source: SWITRS, NHTSA, 2015 Collision Data on California State Highways Source: LSC Transportation Consultants Inc.									

EVCR Crash Tables.xls

5. CORRIDOR AND SYSTEM COORDINATION

Elk Valley Cross Road Corridor Plan was developed to initiate multimodal and intersection safety improvements along the adjacent Elk Valley Cross Road. This conceptual document will complement the Elk Valley Road Multimodal Corridor Plan in providing for safer multimodal travel in the rural area north of the Crescent City limits.

Elk Valley Cross Road is classified as a Major Collector county road by the 2016 Del Norte County Regional Transportation Plan. Major collectors connect to arterials or regional destinations. Elk Valley Cross Road serves as a connector between US 101 and US 199.

6. ALTERNATIVES

Alternatives have been developed for the Corridor Plan that include lane and shoulder widening, intersection improvements, sight distance improvements, re-striping and no-build. The following description of the alternatives gives location, types and limits of the improvements. Following the alternatives, is the planning level cost estimates associated with each alternative that has estimated costs for construction, right of way, environmental mitigation, preliminary engineering, and construction engineering for a total estimated cost. All alternatives increase the shoulder width and the distance from the edge of traveled way to any fixed object to improve the Clear Recovery Zone (CRZ).

Segments developed are shown in the Attachment B, described as follows:

- Segment 1 - Lake Earl Drive to Wonder Stump Road (1,677 ft)
- Segment 2 - Wonder Stump Road to US 101 (3,340 ft)
- Segment 3 - US 101 to Parkway Drive (2,720 ft)
- Intersection of Movie Lane/Wonder Stump Road with EVCR
- Intersection of Cunningham Lane with EVCR
- Intersection of EVCR and US 101
- Intersection of EVCR and US 199

Alternatives have been developed for both roadway segments and intersections separately to differentiate the improvement options available for the EVCR. Intersection improvements involving the State Right of Way (US 101 and US 199) will require approval by Caltrans, District 1, as alternatives are advanced through the project development process.

Roadway Segment 1 Lake Earl Drive to Wonder Stump Road (1,677 ft) Alternatives

Roadway Segment 1 Improvement Alternative A: Shoulder widening would not require any changes. The existing shoulder widths of 6' to 8' satisfy current design standards resulting in no proposed improvement to this segment under Alternative A.

Roadway Segment 1 Improvement Alternative B: Two-Way Left Turn Lane will begin restriping the roadway west of the Movie Lane intersection. Additional widening would need to occur to accommodate the new 12' left turn lane for westbound traffic turning onto Movie Lane. Continue widening for the

left turn lane for eastbound traffic turning onto Wonder Stump Road. Widening would require tree and vegetation removal, utility pole relocations and potential fence line relocations to establish a 60' wide County Right of Way width. Road connections would be reconstructed to connect to the widened roadway.

Roadway Segment 2 Wonder Stump Road to US 101 (3,340 ft) Alternatives

Roadway Segment 2 Improvement Alternative A: Shoulder widening construct standard 4' shoulder widths on both sides of the EVCR from Wonder Stump Road to US 101. The existing roadside utilities and drainage ditch will need to be relocated to construct the standard shoulder widths. A 60-foot wide Right of Way corridor would be secured for lengths that have deficient width to contain the standard lane, shoulders, drainage ditches and utility pole relocations. The 4' paved shoulder would be striped and signed as a Class 2 bike lane.

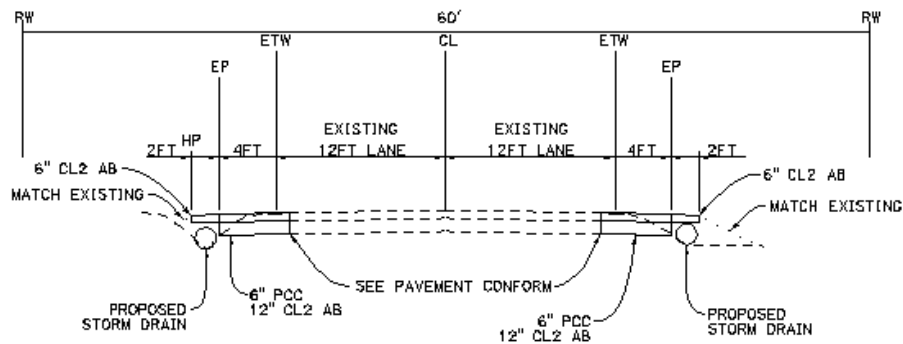


Figure 2 Alternative A, Roadway Segment 2

Roadway Segment 2 Improvement Alternative B: Two-Way Left Turn Lane will continue the widening and restriping of EVCR from Wonder Stump Road to the Park Exit road connection before US 101. This length of two-way left turn lane would improve the intersection sight distance of all connecting roads along this segment, as well as allow for safer movement of vehicles to and from the EVCR corridor. This length would require utility pole relocations, right of way acquisitions, ditch excavation and vegetation removal.

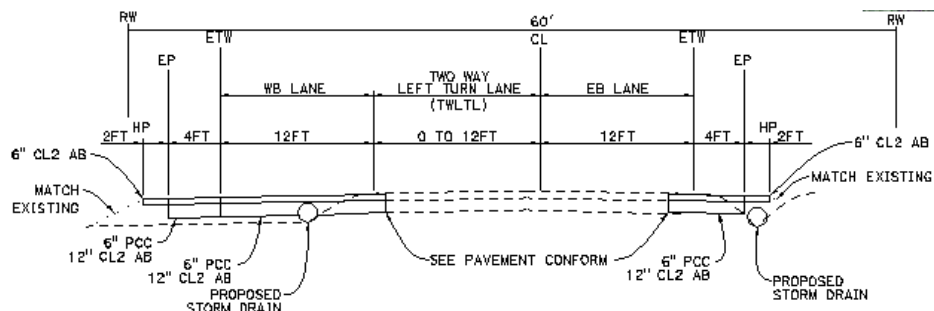


Figure 3 Alternative B, Roadway Segment 2

Roadway Segment 3 US 101 to Parkway Drive (2,720 ft) Alternatives

Roadway Segment 3 Improvement Alternative A: Shoulder widening construct standard 4' shoulder widths on both sides of the EVCR from US 101 to US 199. Elk Valley Cross Road from US 199 to Parkway Drive already has sufficient shoulder width and therefore does not need further improvement with this alternative. The 4-foot paved shoulders would be striped and signed as a Class 2 bike lane.

The following alternatives address improvements at specific intersections along the corridor that have been identified as needing improvement.

Intersection Improvement: Movie Lane & Wonder Stump Road and EVCR Turn Pocket

The Movie Lane and Wonder Stump Road turn pocket would widen the EVCR corridor from Movie Lane to east of Wonder Stump Road as shown on the exhibit. Restriping would be necessary to allow for a left merge lane for traffic merging onto EVCR moving westbound from Movie Lane, and eastbound from Wonder Stump Road.

Intersection Improvement: Cunningham Lane Turn Pocket

The Cunningham Lane turn pocket would widen the EVCR corridor from Sunset High School to the exit for Florence Keller Regional Park. This length of widening will require right of way acquisition, tree removal and utility pole relocations. A dedicated turning movement for westbound EVCR traffic turning into Cunningham Lane is provided with the turn pocket. The widening west of the intersection allows for a safety refuge for Cunningham Lane traffic turning westbound onto EVCR.

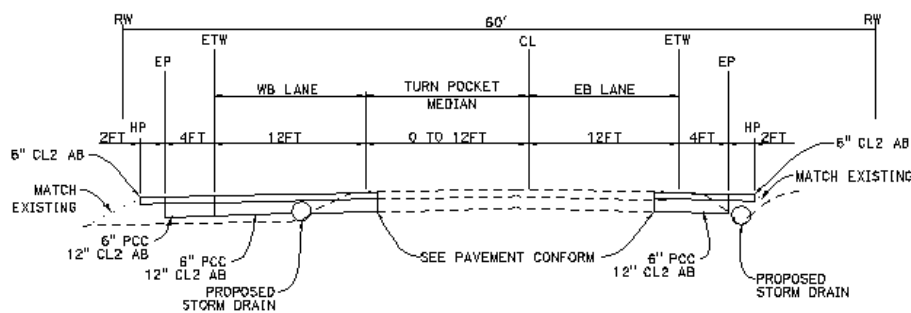


Figure 4 Cunningham Lane Turn Pocket, Intersection Improvement

Intersection Improvement: US 101 and EVCR Alternative A, Signing and Striping Improvements

The existing intersection of US 101 and EVCR is a nonstandard at-grade intersection configuration which involves a refuge area in the median of the US 101 traffic. Proposed signing and striping to improve the median refuge area by delineating the refuge space available to both directions of traffic.

Signing will assist the drivers in understanding traffic flow patterns of this configuration; only one vehicle space is available in the median refuge for each direction of traffic. EVCR traffic must yield to major road traffic and median refuge traffic. This alternative is proposed to improve the traffic pattern in the median refuge area.

Intersection Improvement: US 101 and EVCR Alternative B, Restricted Crossing U-Turn (RCUT)

The restricted Crossing U-Turn configuration at the intersection of US 101 and EVCR will require signing, striping, early lane reduction of the northbound US 101 traffic, late lane addition of the southbound US 101 traffic, and additional median paving for the separated U-turn crossing locations. This alternative is based on FHWA design standards.

Restricted Crossing U-Turn (RCUT)/Superstreet Intersection – RCUT is an intersection design to improve safety and operations while not changing any of the movements possible from the major road. Drivers stopped on Elk Valley Cross Road (EVCR) waiting to cross or turn left onto US 101 would not have to navigate an intersection of two directions of traffic traveling at high speeds along US 101. Through and left turn EVCR traffic makes a right turn onto US 101, followed by a U-TURN to continue in the desired direction. The RCUT is used as an alternative to signalization and would maintain US 101 as an unsignalized expressway/major highway. The RCUT intersection configuration will reduce the vehicle to vehicle conflict points and reduce the potential conflict severity (reduces the number of potential broadside impact conflict points). The RCUT can support multimodal goals with bicycle crossings that are provided with bike lanes and bike lane buffers with a refuge island in the median to provide through and left turn movements for the bikes.

Intersection Improvement: US 101 and EVCR Alternative C, US 101 Single Lane Through Intersection, Signing and Striping Improvements

This alternative proposes to reduce the northbound US 101 traffic down to one lane before the intersection and postpone the increase in lanes for traffic traveling southbound on US 101. The reduction of through lanes entering into the US 101 and EVCR intersection reduces the conflict points at this location. EVCR traffic stop bars would move closer into the center of the intersection to reduce the distance needed to cross the highway. This would improve sight distance for the traffic on EVCR and greater stopping sight distance for US 101 highway traffic. Additional signing and striping would occur in the median refuge area to improve the path of travel for the traveling public, as discussed in Alternative A, Intersection Improvement for this intersection.

Intersection Improvement: US 101 and EVCR Alternative D, Roundabout

This alternative proposes to construct a 160 ft diameter inscribed circle, single lane roundabout located at the intersection of US 101 and EVCR. The roundabout would require updated intersection lighting and approach signing on both the EVCR and US 101 approaches. The roundabout may include a crosswalk for safe multimodal travel. This alternative would allow for yield controlled separated right turning movement from northbound US 101 to eastbound EVCR which includes a high volume of traffic generated from the connection between westbound US 199 and northbound US 101. A roundabout could handle the future traffic volume growth on US 101. The design speed for the roundabout would be per current guidelines (20 mph) and approaching roadway geometrics adjusted to reduce the approaching vehicle speeds before reaching the entrance yield line.

Intersection Improvement: US 199 and EVCR Alternative A, Signing, Striping and Glare Reduction

This alternative proposes to clear the Clear Recovery Zone (CRZ) within the corner sight distance length for the westbound EVCR traffic looking west at the northbound US 199 on-ramp. The existing corner sight distance is obstructed by the "Do Not Enter" ramp signs, the tall grass length, and tree limbs. The additional clearing proposed for corner sight distance is for the design speed of the northbound US 199 ramp of 45 mph.

To further implement the existing advisory 45mph speed limit, a speed radar feedback has been installed. Additional efforts to reduce traffic speed on this ramp include adding a flashing beacon to the "Cross Traffic Ahead" sign and implementing the Speed Reduction Markings as supported by Section 3B.22 of the MUTCD. Speed reduction markings (see figure below) are transverse markings that are placed on the roadway within a lane, perpendicular to the lane lines, in a pattern of progressively reduced spacing to give drivers the impression that their speed is increasing. These markings might be placed in advance of an unexpectedly severe horizontal or vertical curve or other roadway feature where drivers need to decelerate prior to reaching the feature and where the desired reduction in speeds has not been achieved by the installation of warning signs and/or other traffic control devices. Del Norte County performed a speed survey for northbound US 199 vehicles on March 26 at the intersection. The results indicate that the 85th percentile speed observed that day for 100 vehicles was 58 mph, which is above the posted 55 mph and the advisory 45 mph.

Figure 3B-28. Example of the Application of Speed Reduction Markings

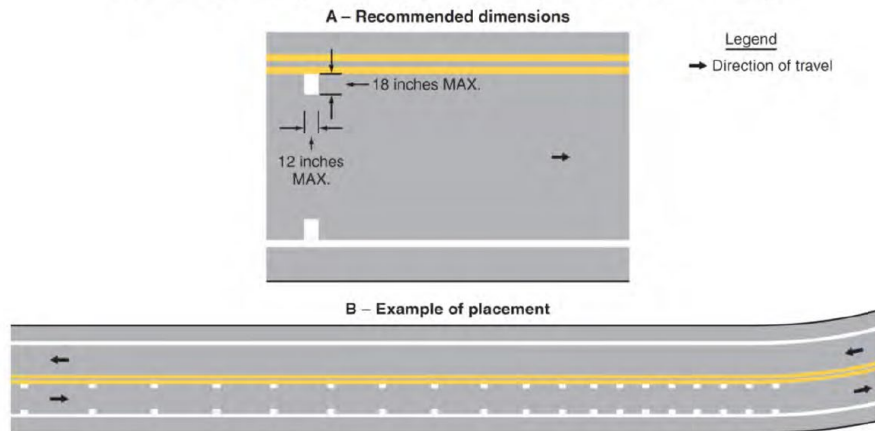


Figure 5 Speed Reduction Striping per MUTCD Fig 3B-28

Other additional improvements include yield striping on the US 199 to US 101 turn movement which serves as a connection between both routes for traffic traveling from westbound US 199 to northbound US 101. This yield striping will ensure that the connecting traffic is acknowledging and yielding to the intersection traffic and will prevent the broadside and sideswipe collisions for this short merge distance.

Intersection Improvement: US 199 and EVCR Alternative B, Traffic Signal

This improvement would require the installation of traffic signals at all four branches of the four-way intersection, as well as restriping and resigning at the approaches of each roadway.

Signals offer the maximum control at intersections and the primary function is to assign right-of-way to conflicting movements. Low traffic counts suggest no objectionable backup would occur at any of the intersecting branches. This alternative allows for the minor movements, such as EVCR local traffic crossing the US 199 route, to navigate through the intersection with right of way *if* the traveling public complies to the signal. However, as described in the Table 6 below, adding a traffic signal may increase collision rates at this intersection. This alternative was analyzed to provide a comparison of a more traditional intersection configuration to that of a roundabout.

Intersection Improvement: US 199 and EVCR Alternative C, Roundabout

This alternative proposes to construct a 150 ft diameter inscribed circle roundabout located at the intersection of US 199 and EVCR. The roundabout would require additional Right of Way and updated intersection lighting and approach signing on both the EVCR and US 199 approaches. The roundabout

may include a crosswalk on one approach for safe multimodal travel. The nearby private driveways would be modified to conform to the new road geometrics. This alternative would allow for yield controlled separated right turning movement from westbound US 199 to westbound EVCR which includes a high volume of traffic generated from the connection between westbound US 199 and northbound US 101. A roundabout could handle the future traffic volume growth on US 199. The design speed of the roundabout would be 20 mph. The comparison of traffic control options at EVCR and US 199 is described below.

COMPARISON OF TRAFFIC CONTROL OPTIONS AT ELK VALLEY CROSS ROAD / US 199 -- IMPACTS ON TRAFFIC SAFETY

Traffic safety at the key intersection of Elk Valley Cross Road and US Highway 199 would be impacted by changes in the traffic controls. Table 6 below presents an analysis of the existing controls (Stop signs on the Elk Valley Cross Road approaches only) in comparison with a traffic signal and with a roundabout. Key results are as follows:

- Over the most recent 10-year period, there were a total of 21 crashes at or within 200' of the intersection, of which 11 resulted in injuries and the remaining 10 resulted in property damage only. This corresponds to a rate of 1.56 total crashes per Million Vehicle Movements (MVM) and 0.82 injury or fatal crashes per MVM. In comparison with statewide averages for four-legged intersections in rural areas with side-street Stop controls, the observed rates at this location are 711 percent above statewide average for total crashes, and 811 percent above the statewide average for injury/fatal crashes.
- The California statewide crash rate data indicates that conversion to a traffic signal would increase the expected total crash rate by 164 percent and increase the injury/fatal crash rate by 286 percent. Crash rates would therefore increase significantly if a traffic signal is installed at the intersection.
- A detailed analysis of crash data for modern U.S. roundabouts yields an estimation equation, as documented in the National Cooperative Highway Research Program's Report 672: Roundabouts – An Informational Guide. Entering the geometrics and volumes for a roundabout at the subject location, the expected annual crashes would be substantially lower than today, for both total crashes and for injury/fatal crashes.
- As shown in the bottom portion of the table, conversion to a **Traffic Signal** control would increase the expected number of crashes over a 10-year period by 34, of which 32 would be injury or fatal crashes.

Elk Valley Cross Road Corridor Plan

- Conversion to a **Roundabout** control would reduce the number of crashes from that expected under the current control by 16 total crashes, of which 10 would be injury or fatal crashes.

This analysis clearly depicts the traffic safety benefits of a roundabout, as well as the negative safety impacts of a traffic signal. From a traffic safety perspective, a roundabout would be the optimal modification to this intersection to address the poor existing traffic safety condition.

Table 6 US 199 and EVCR Comparison

Elk Valley Cross Rd/State Route 199 Traffic Control Options -- Safety Impacts		
Annual Average Daily Traffic	3680	
Annual Million Vehicles Entering Intersection (MV)	1.34	
	Crashes	
	Total	Injury or Fatal
Existing (Over 10 Years)	21	11
Crash Rate (Per MV)	1.56	0.82
Statewide Avg. for Rural 4-Leg Intx with Side-Street Stop (1)	0.22	0.10
Ratio of Observed to Statewide Average	7.11	8.11
Annual Expected Crashes		
Existing Side-Street Stop	2.10	1.10
Traffic Signal (1)	5.54	4.25
Roundabout (2)	0.5	0.10
Impact of Traffic Control Change		
<u>Convert to Traffic Signal</u>		
Change in Crash Rate	164%	286%
Change in Crashes Over 10 Years	34	32
<u>Convert to Roundabout</u>		
Change in Crash Rate	-75%	-91%
Change in Crashes Over 10 Years	-16	-10
Source 1: 2015 Collision Data on California State Highways (Caltrans).		
Source 2: NCHRP Report 672: Roundabouts - An Informational Guide		
Source: LSC Transportation Consultants, Inc.		
2018 EVCR Crash Tables.xlsx		

ELK VALLEY CROSS ROAD / US 199 & US 101 SIGNAL WARRANT ANALYSIS

A signal warrant analysis was performed for the US 101/Elk Valley Cross Road and US 199/Elk Valley Cross Road intersections. A signal warrant analysis is required for each intersection with the State Highway to evaluate the need for a roundabout per Caltrans standard protocol. Nine warrants exist in the 2014 MUTCD – none of which are met by the current volumes, location, or crash experience criteria for the EVCR/199 intersection and EVCR/101 intersection. More details on this warrant analysis can be found as Attachment H.

Alternative 7: No-Build Alternative

The No-Build Alternative proposes to maintain the existing configuration of Elk Valley Cross Road in its current configuration. However, this alternative does not allow Elk Valley Cross Road to comply with standard shoulder widths, stopping sight distances, intersection configuration or multimodal safety standards. The crash rates along this corridor are above local, County and State averages for the given classification and volume of traffic. The No-Build option would not address any issues or concerns with the safety of this transportation facility.

Supplemental: 60-foot-wide Corridor Right of Way

In the event that funding for right of way is secured, an estimate to acquire the 60-foot wide Right of Way along Elk Valley Cross Road from Lake Earl Drive to Parkway Drive in all areas not already secured to the 60-foot width was estimated. Estimated square footages and estimated costs for parcels requiring additional right of way can be found in Attachment E. Based on preliminary right of way record search, it is estimated an additional 109,505 SQFT at an estimated cost of \$4 per square foot would cost approximately \$440,000.

This estimate is based on available right of way records for existing roadway easements as recorded in the County Recorder's office. Preliminary Title Reports were not generated for this Corridor, so there is the possibility that certain easements along Elk Valley Cross Road are not shown on the maps and records of surveys gathered for this effort.

Access to and from all existing parcels is proposed to be maintained for drivers traveling in either direction along the roadway.

7. ALTERNATIVES COMPARISON MATRIX

For each alternative generated, a scale of 1 to 5 was given for the safety factor of each alternative with respect to each safety aspect. A value of 1 signifies minimal safety improvements; a value of 5 signifies a large safety improvement value. A Cost per Improvement Score ratio calculated for each

alternative result in Roadway Alternative A, US 101/EVCR Alternative C, and US 199/EVCR Alternative C having the most beneficial improvements per dollar spent.

Table 7 Alternative Comparison Matrix

Alternative	Description	Vehicle Safety Improvement	Pedestrian Safety	Bicycle Safety	Transportation Safety	Total	Total Cost
Roadway Segments							
Roadway Alternative A	Shoulder Widening	3	4	4	3	14	\$ 10,186
Roadway Alternative B	Two-Way Left Turn Lane	3	3	3	3	12	\$ 11,348
Intersection Improvements							
Movie Lane & Wonder Stump Road	Turn Pockets	4	3	3	3	13	\$ 4,182
Cunningham Lane	Turn Pockets	4	3	3	3	13	\$ 4,213
US 101 and EVCR - Alt A	Signing and Striping Improvements	2	2	2	2	8	\$ 320
US 101 and EVCR - Alt B	Restricted Crossing U-Turn	2	1	2	1	6	\$ 1,964
US 101 and EVCR - Alt C	One Through Lane, Signing and Striping Improvements	4	3	3	4	14	\$ 508
US 101 and EVCR - Alt D	Roundabout	5	4	4	5	18	\$ 6,380
US 199 and EVCR - Alt A	Signing, Sight Line and Glare Reduction	1	0	0	1	2	\$ 735
US 199 and EVCR - Alt B	Traffic Signal	0	1	1	0	2	\$ 1,063
US 199 and EVCR - Alt C	Roundabout	5	4	4	5	18	\$ 5,985

8. ALTERNATIVE COST ESTIMATES

The following table is the summary of the alternative cost estimates. See Attachment C for individual detailed alternative cost estimates.

Table 8 Alternative Cost Estimates Summary

Alternative	Description	Construction Cost	Right of Way	Permits & Environmental Mitigation	PA&ED/PS&E	Construction Engineering	Total Cost
		Costs in \$1,000's					
Roadway Segments							
Roadway Alternative A - Segment 2	Shoulder Widening	\$4,805	\$418	\$300	\$721	\$577	\$6,820
Roadway Alternative A - Segment 3	Shoulder Widening	\$2,398	\$20	\$300	\$360	\$288	\$3,365
Roadway Alternative B - Segment 1	Two-Way Left Turn Lane	\$1,422	\$20	\$125	\$213	\$171	\$1,951
Roadway Alternative B - Segment 2	Two-Way Left Turn Lane	\$6,874	\$418	\$250	\$1,031	\$825	\$9,398
Intersection Improvements							
Movie Lane & Wonder Stump Road	Turn Pockets	\$3,097	\$125	\$125	\$464	\$372	\$4,182
Cunningham Lane Turn Pocket	Turn Pockets	\$2,957	\$333	\$125	\$444	\$355	\$4,213
US 101 and EVCR - Alt A	Signing and Striping Improvements	\$244	\$10	\$0	\$37	\$29	\$320
US 101 and EVCR - Alt B	Restricted Crossing U-Turn	\$1,530	\$20	\$0	\$230	\$184	\$1,964
US 101 and EVCR - Alt C	One Through Lane, Signing and Striping Improvements	\$392	\$10	\$0	\$59	\$47	\$508
US 101 and EVCR - Alt D	Roundabout	\$4,935	\$27	\$85	\$740	\$592	\$6,380
US 199 and EVCR - Alt A	Signing, Striping and Glare Reduction	\$575	\$5	\$0	\$86	\$69	\$735
US 199 and EVCR - Alt B	Traffic Signal	\$829	\$10	\$0	\$124	\$100	\$1,063
US 199 and EVCR - Alt C	Roundabout	\$4,629	\$21	\$85	\$694	\$555	\$5,985

9. COMMUNITY INVOLVEMENT

A preliminary public workshop was conducted on June 26, 2019 at Sunset High School off Elk Valley Cross Road to inform the community of the corridor plan investigation. The information and public input can be found in Attachment G.

A second public workshop was conducted on February 27, 2020 at Sunset High School to inform the community about the proposed alternative elements and to allow the opportunity for community members to comment on the proposed alternatives. A summary of comments received from this workshop can also be found in Attachment G.

To inform the public of these workshops, direct emailing of local officials, posting on DNLTC project website, social media, flyers and roadside banners were displayed in and around Elk Valley Cross Road and Crescent City. After each public workshop the website was updated with the current information presented at the workshop so the public could review the information presented.

10. ENVIRONMENTAL DETERMINATION/DOCUMENT

An Environmental Constraints Overview Report was completed for the Elk Valley Cross Road Corridor Plan. Various potential environmental constraints exist along the corridor, such as jurisdictional waters summer low flow considerations, potential wetlands, and special status wildlife species habitat. Marbled Murrelet Critical Habitat is directly adjacent to the proposed ECVR corridor and potentially suitable marbled murrelet habitat exists along the EVCR corridor. In addition, fish passage within jurisdictional waters that provide connection to Jordon Creek, and potentially suitable habitat for Western lily are also environmental constraints to be considered. Finally, cultural resource sensitivity has been identified within the EVCR corridor, and collaboration with the Elk Valley Rancheria would be required for work activities in these areas. Further alternative review will be prepared for alternative advancement. See Attachment D.

11. FUNDING

The specific funding source for this project has yet to be determined. The current federal authorization is Fixing America's Surface transportation (FAST) Act, which include Highway Safety Improvement Program (HSIP) and Congestion Mitigation & Air Quality (CMAQ). State funding options range from the Caltrans Senate Bill 1 (SB1) program to the State Active Transportation Program (ATP), High Risk Rural Roads Program (HR3) and the State

Transportation Improvement Program (STIP). The purpose of this corridor plan is to provide the County and DNLTC the needed information to program future projects to improve Elk Valley Cross Road. Different funding sources have different application cycles, and due to Elk Valley Cross Road's collision history, HSIP and ATP funding are two of the more likely viable funding options.

12. SCHEDULE

Milestones	Delivery Date (Month, Day, Year)
Draft Corridor Plan	3/5/2020
Final Corridor Plan	5/28/20

Advancement of alternatives is dependent on future funding as it becomes available.

13. FHWA COORDINATION

FHWA coordination will depend on the funding type for this project. The specific funding source for future projects has yet to be determined.

14. DEVELOPMENT TEAM

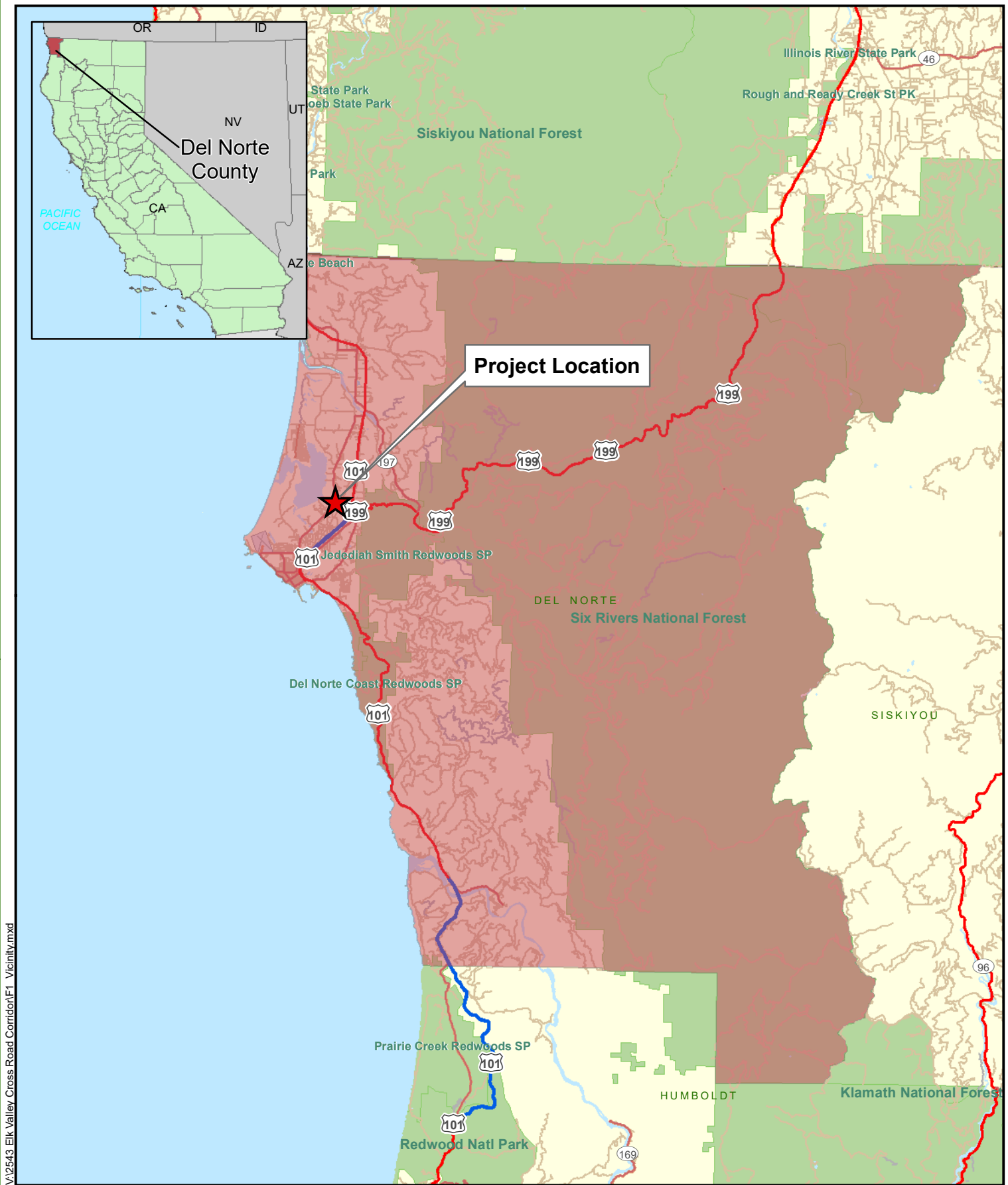
<u>Name</u>	<u>Title</u>	<u>Telephone</u>
Heidi Kunstal	Director Community Development, DNC	707-464-7254
Rosanna Bower	Assist. County Engineer, Del Norte County	707-464-7229
Tamera Leighton	Executive Director, DNLTC	707-465-3878
Brian Stephenson	Project Engineer, Dokken Engr.	530-768-2420
Namat Hosseinion	Enviro. Coordinator, Dokken Engr.	916-858-0642
Tim Chamberlain	Assoc. Enviro. Planner, Dokken Engr.	916-274-0557

ATTACHMENTS:

- A Project Location Map
- B Alternatives Exhibits
- C Alternatives Cost Estimates
- D Environmental Constraints Overview Report
- E Existing Right of Way Records Sheet
- F Existing Conditions Report
- G Public Meeting Records
- H Signal Warrant Analysis (101 & 199)
- I Northbound US 199 Speed Survey at Elk Valley Cross Road
- J Intersections (199 & 101) Technical Memorandum

Attachment A

Project Location Map



V:\2543 Elk Valley Cross Road Corridor\F1_Vicinity.mxd

Source: ESRI 2008; Dokken Engineering 2/25/2020; Created By: adellas

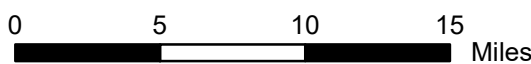


FIGURE 1
Project Vicinity

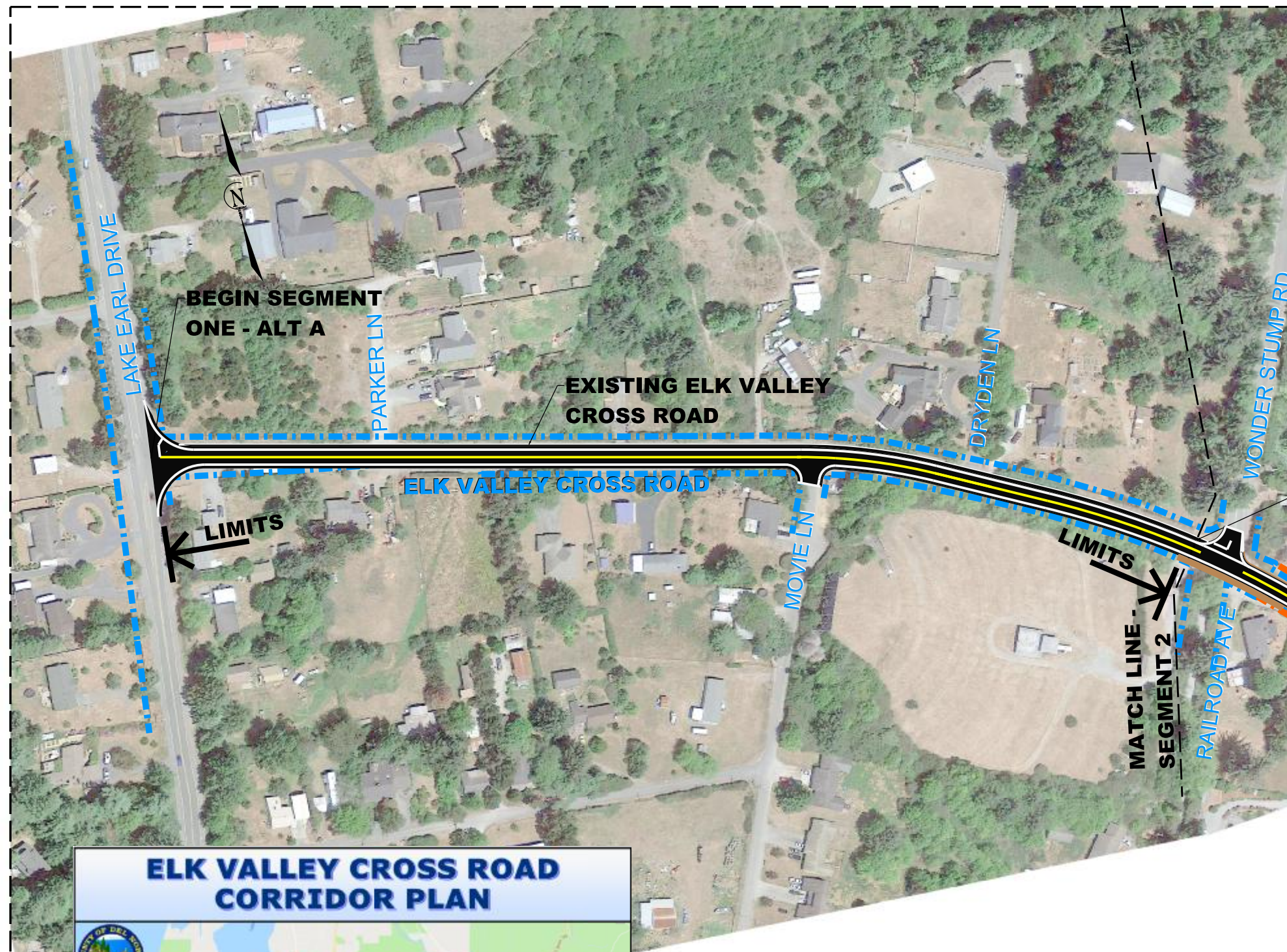
Elk Valley Cross Road
Del Norte County, California



Elk Valley Cross Road Corridor Plan, Attachments

Attachment B

Alternatives Exhibits



Alternative A, Roadway Segment 1:

8' SHOULDERS ALREADY EXIST

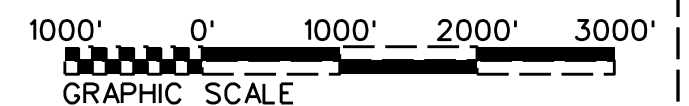
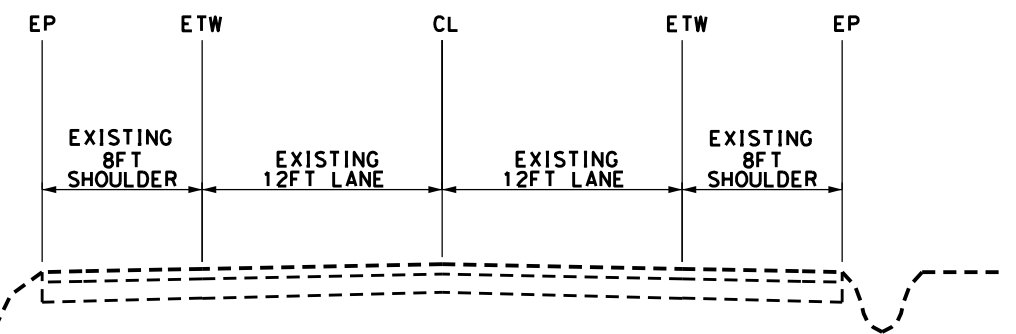
NO CHANGES PROPOSED
FOR THIS SEGMENT

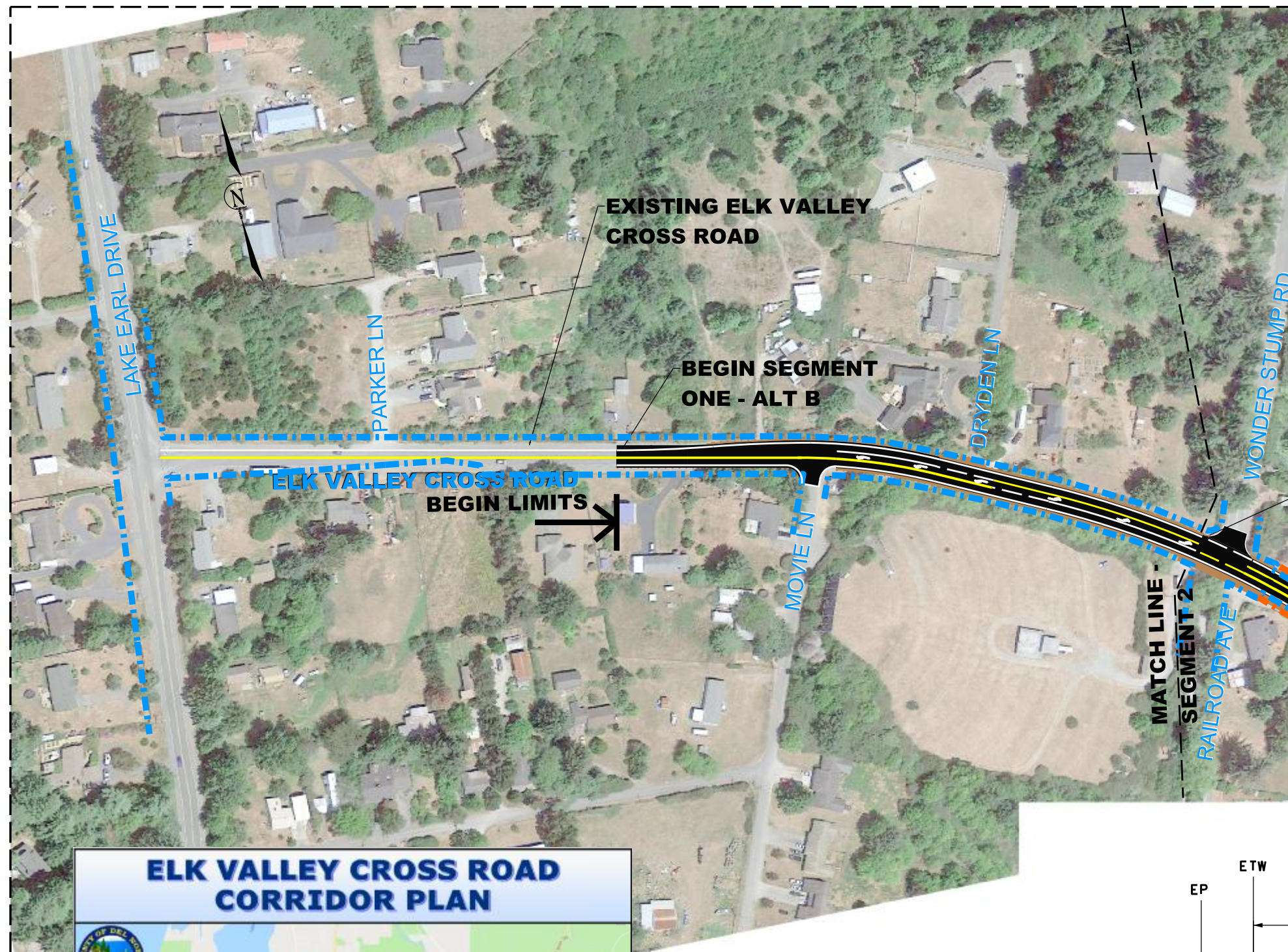
LENGTH = 1,677 FT

LEGEND

- Existing Right of Way
- New Proposed Right of Way

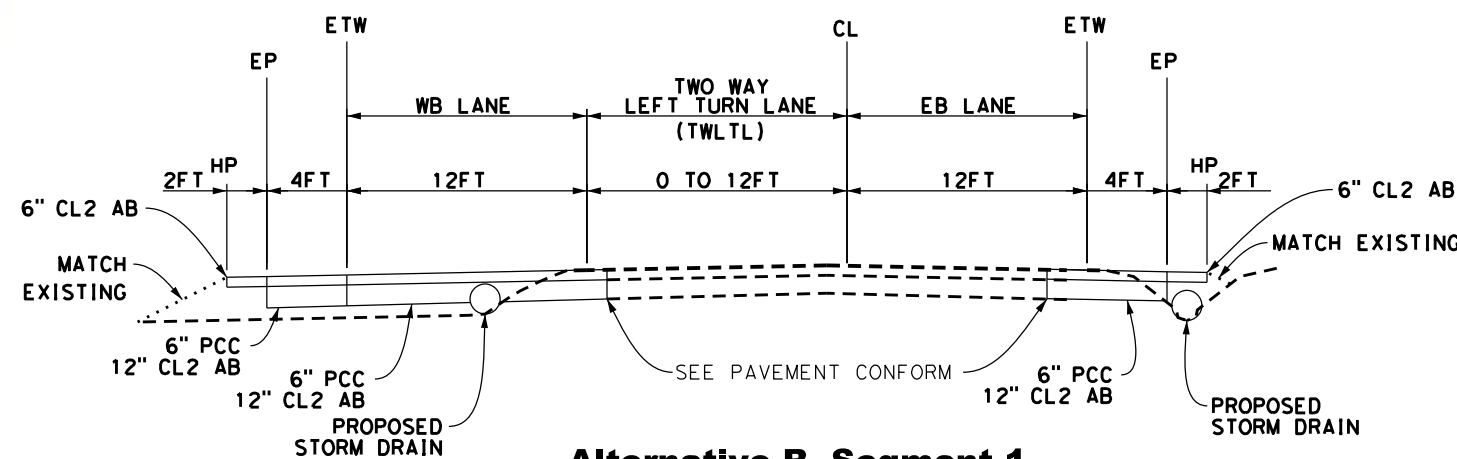
END SEGMENT ONE - ALT A



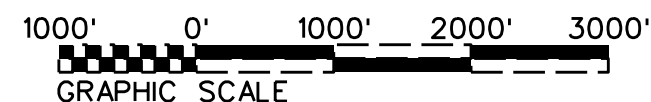


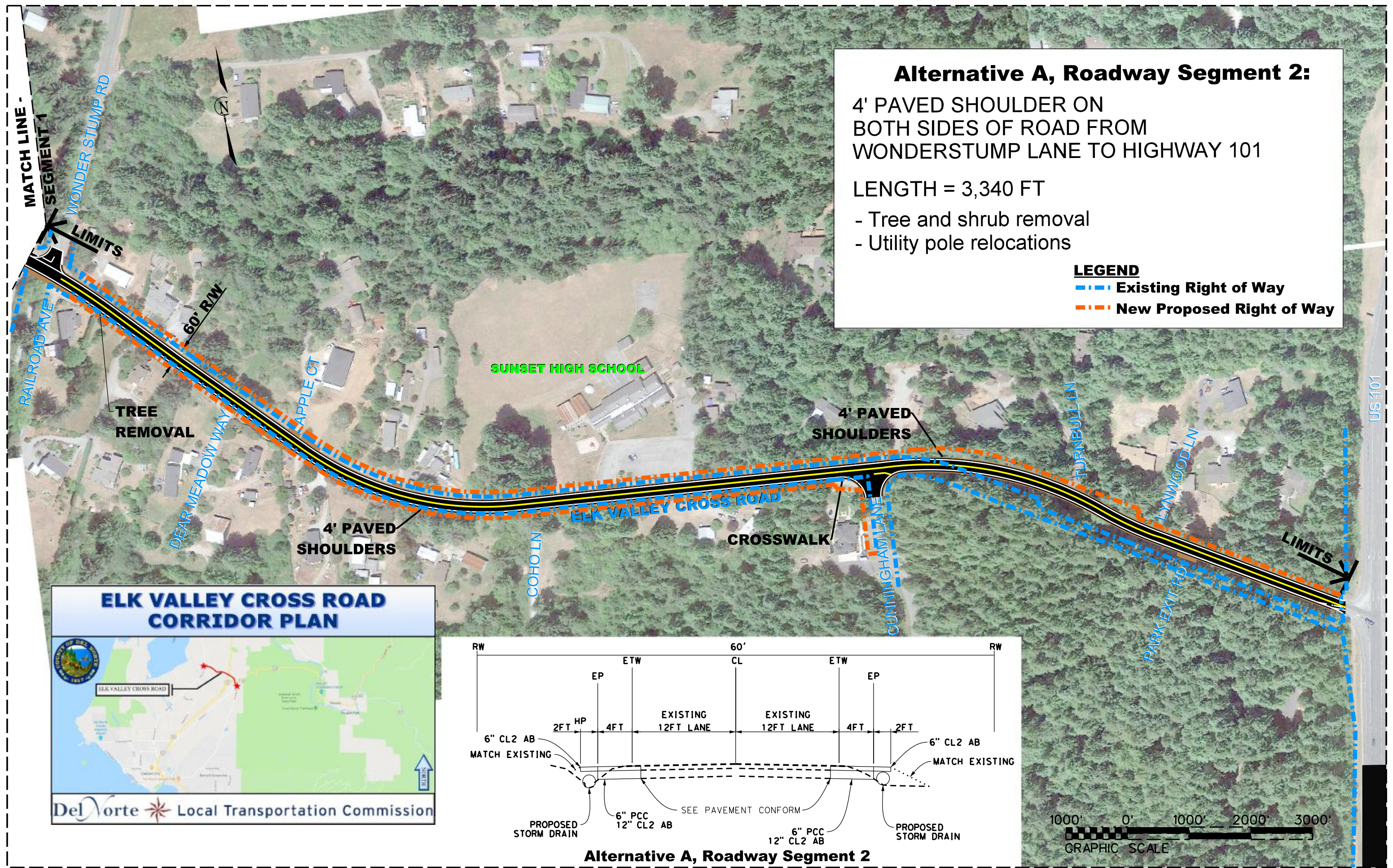
Alternative B, Segment 1:
 MEDIAN WIDENING FOR TWO-WAY
 LEFT TURN LANE FROM
 MOVIE LANE TO US 101
 LENGTH = 1,000 FT (THIS SEGMENT)

LEGEND:
 - - - Existing Right of Way
 - - - Proposed New Right of Way



Alternative B, Segment 1





Alternative A, Roadway Segment 2:

4' PAVED SHOULDER ON BOTH SIDES OF ROAD FROM WONDERSTUMP LANE TO HIGHWAY 101

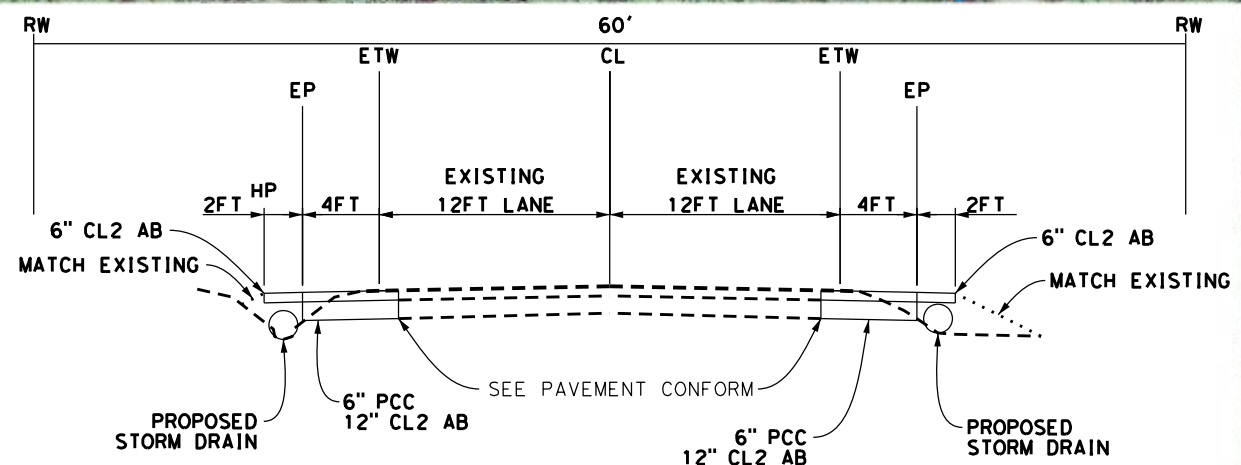
LENGTH = 3,340 FT

- Tree and shrub removal
- Utility pole relocations

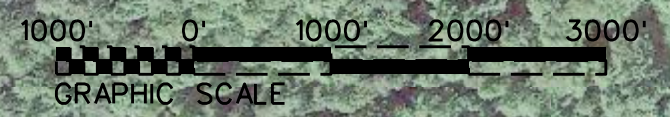
LEGEND

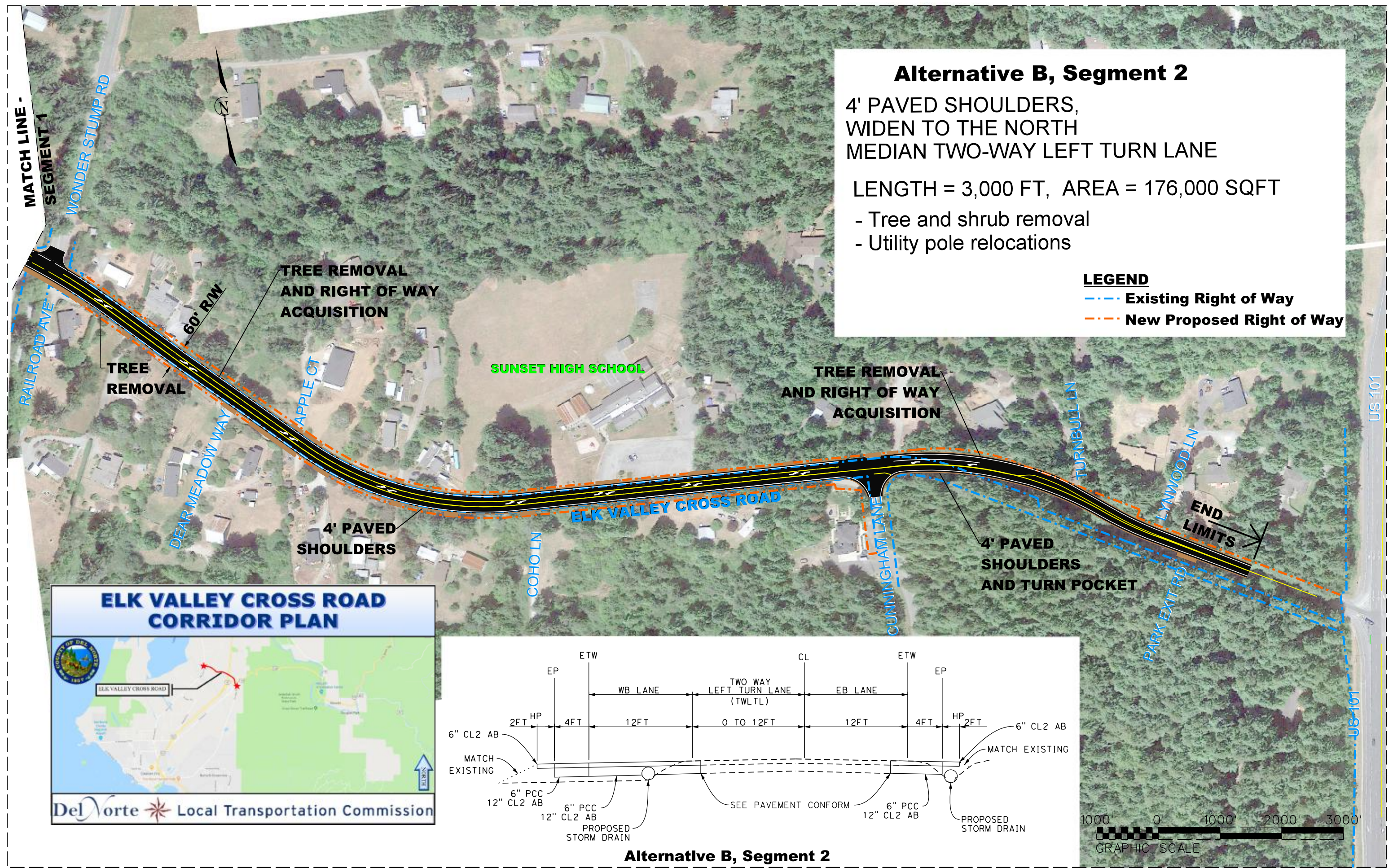
- Existing Right of Way
- New Proposed Right of Way

ELK VALLEY CROSS ROAD CORRIDOR PLAN



Alternative A, Roadway Segment 2





Alternative B, Segment 2

4' PAVED SHOULDERS,
WIDEN TO THE NORTH
MEDIAN TWO-WAY LEFT TURN LANE

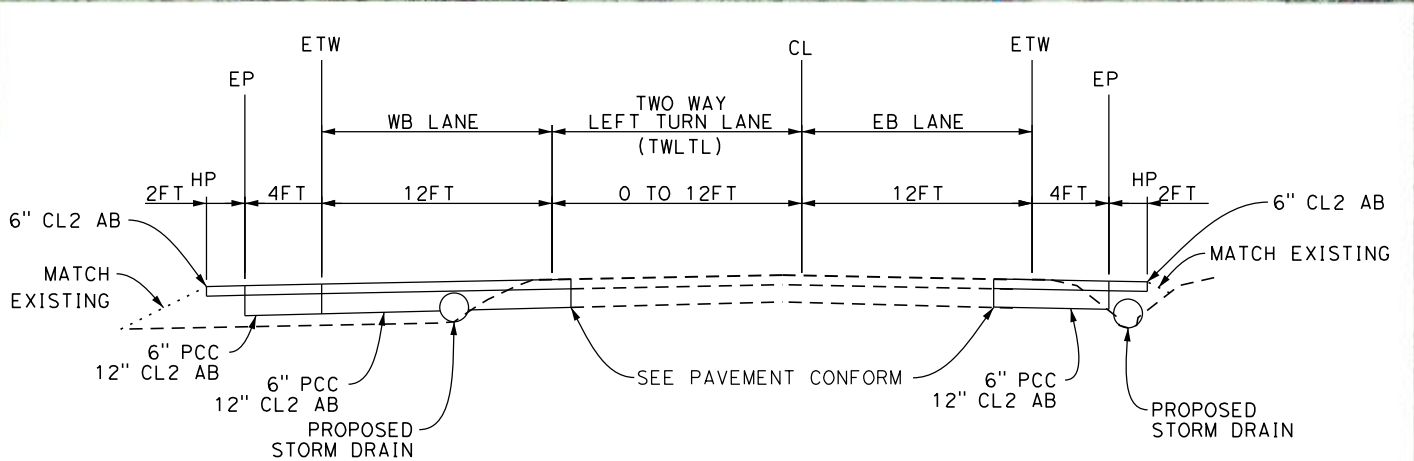
LENGTH = 3,000 FT, AREA = 176,000 SQFT

- Tree and shrub removal
- Utility pole relocations

LEGEND

- Existing Right of Way
- New Proposed Right of Way

ELK VALLEY CROSS ROAD CORRIDOR PLAN



Alternative B, Segment 2



Alternative A, Roadway Segment 3

4' PAVED SHOULDER ON
BOTH SIDES OF ROAD FROM
HIGHWAY 101 TO PARKWAY DR
IMPROVEMENT LENGTH = 1,690 FT
SEGMENT LENGTH = 2,720 FT

- Tree and shrub removal
- Utility pole relocations

LEGEND

- Existing Right of Way
- New Proposed Right of Way

See separate intersection
improvements exhibits for
details

4' PAVED
SHOULDERS

OUR RD

TITUS RD

ELK VALLEY CROSS ROAD

4' PAVED
SHOULDERS

LIMITS

See separate intersection
improvements exhibits for
details

NO ADDITIONAL PAVING
NECESSARY

SCHLACK LN

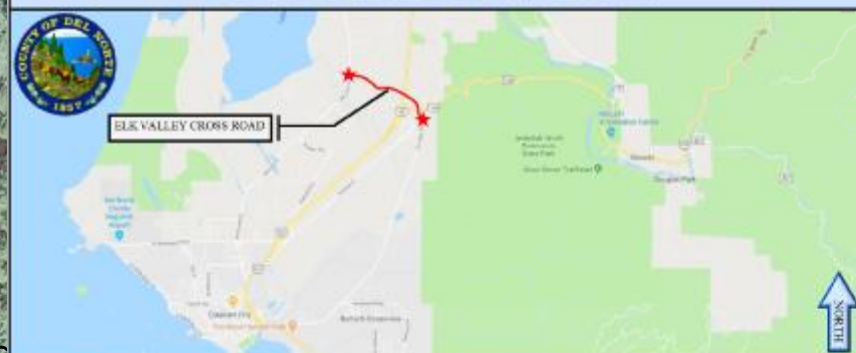
US 199

LIMITS

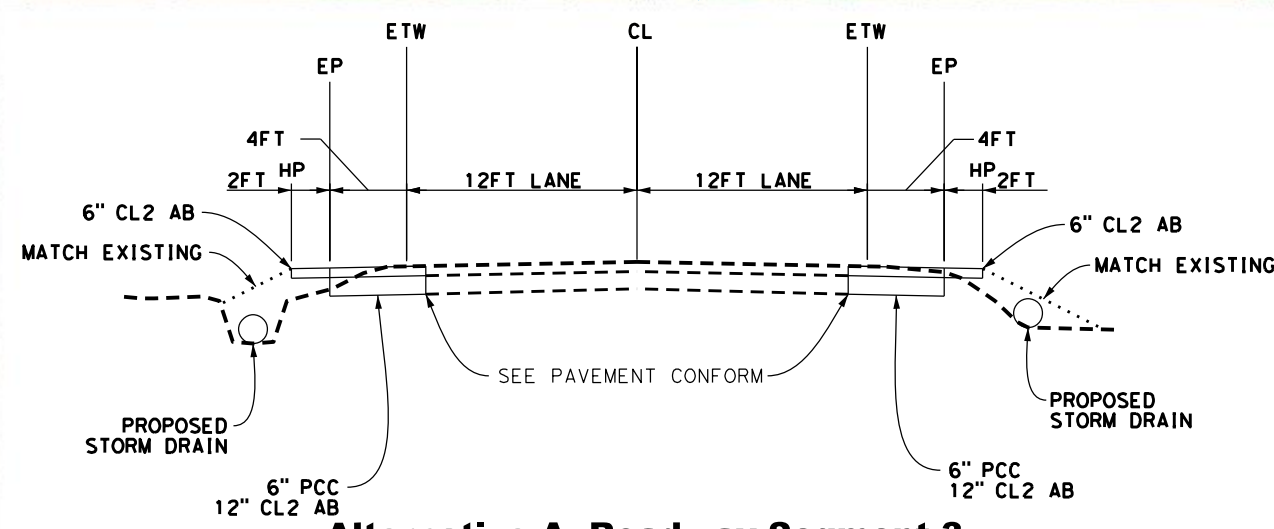
EXISTING 4' PAVED
SHOULDERS

PARKWAY DR

ELK VALLEY CROSS ROAD CORRIDOR PLAN



Del Norte Local Transportation Commission



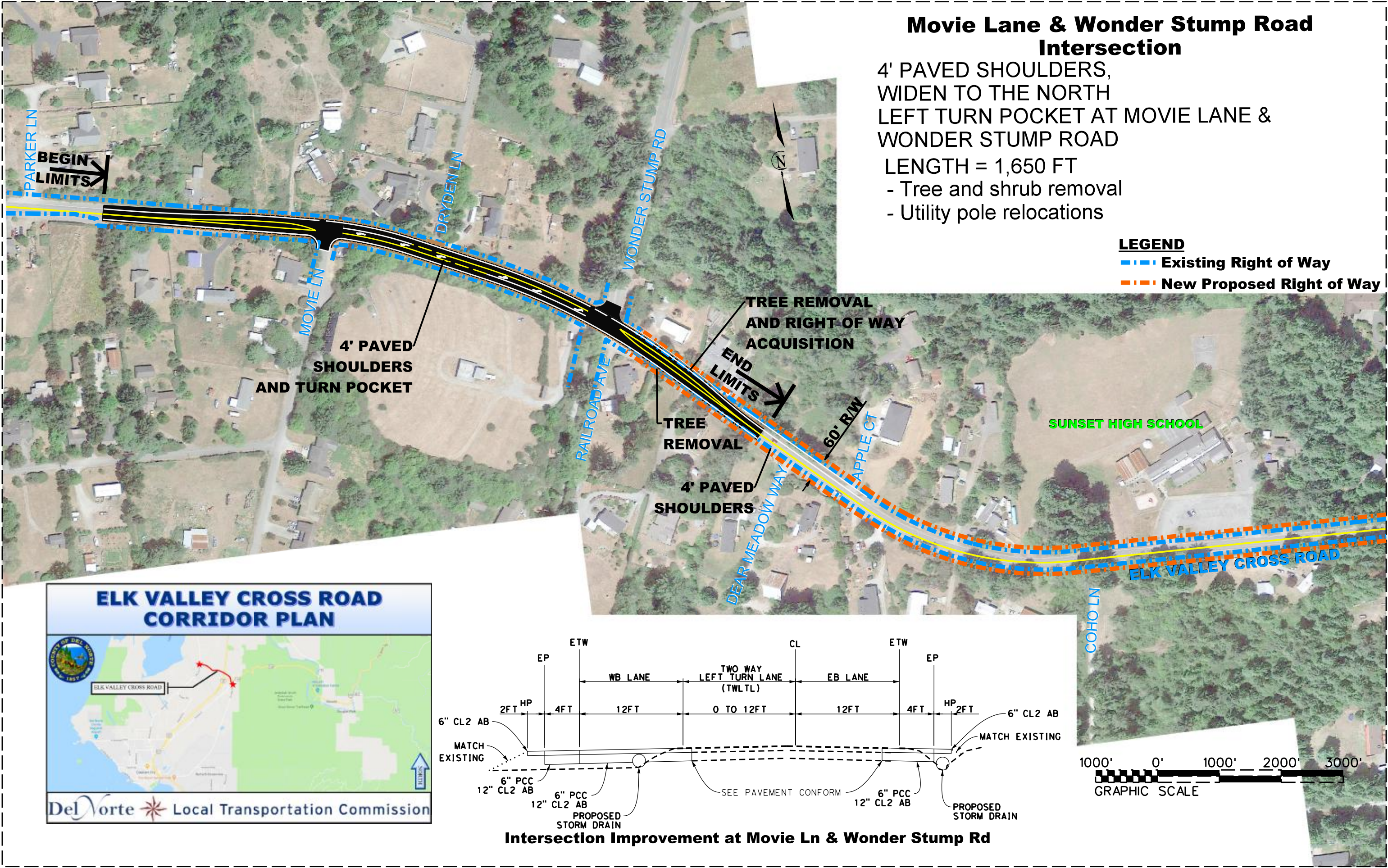
Alternative A, Roadway Segment 3



Movie Lane & Wonder Stump Road Intersection

4' PAVED SHOULDERS,
WIDEN TO THE NORTH
LEFT TURN POCKET AT MOVIE LANE &
WONDER STUMP ROAD
LENGTH = 1,650 FT
- Tree and shrub removal
- Utility pole relocations

- LEGEND**
- Existing Right of Way
 - New Proposed Right of Way



Cunningham Lane Intersection

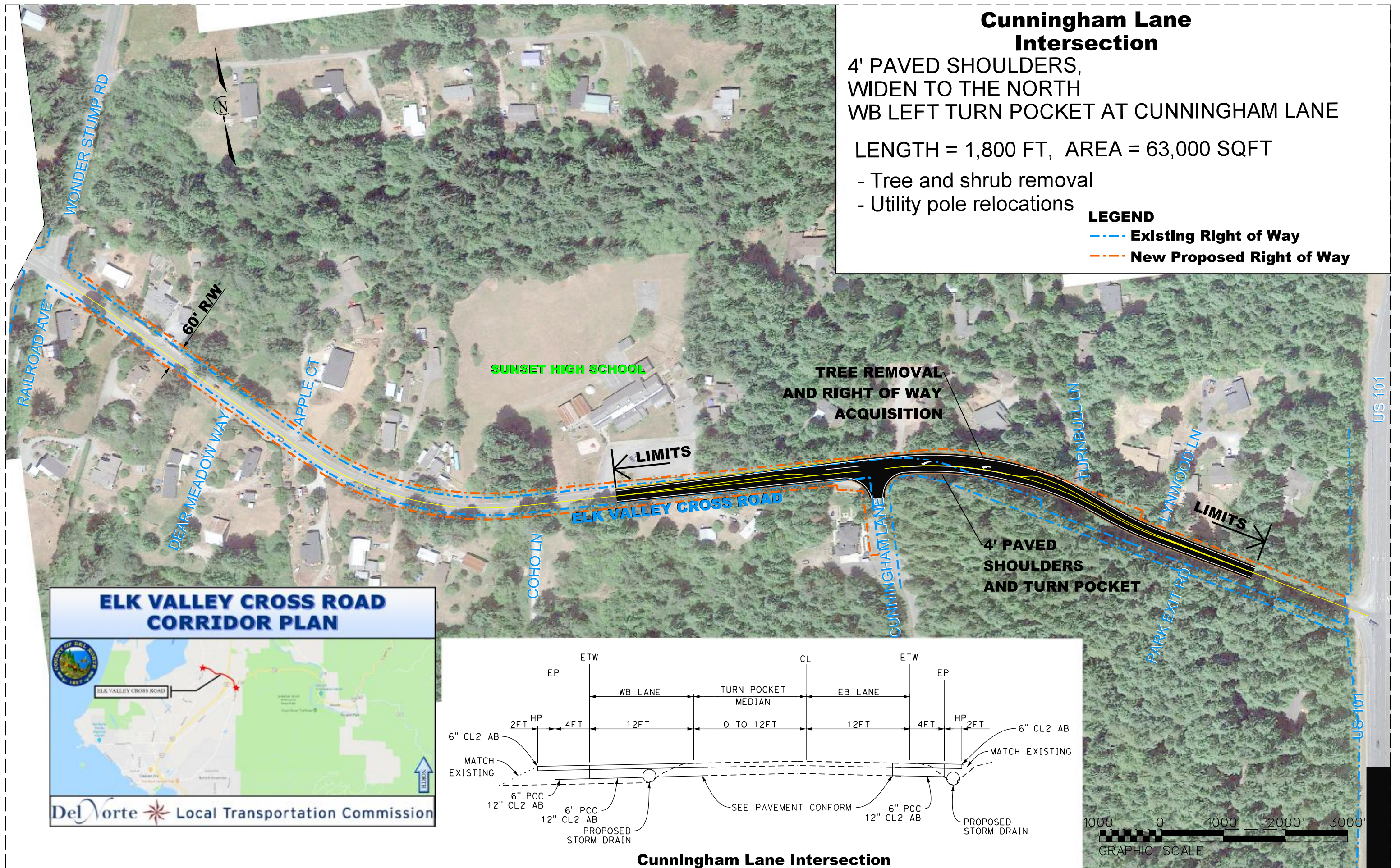
4' PAVED SHOULDERS,
WIDEN TO THE NORTH
WB LEFT TURN POCKET AT CUNNINGHAM LANE

LENGTH = 1,800 FT, AREA = 63,000 SQFT

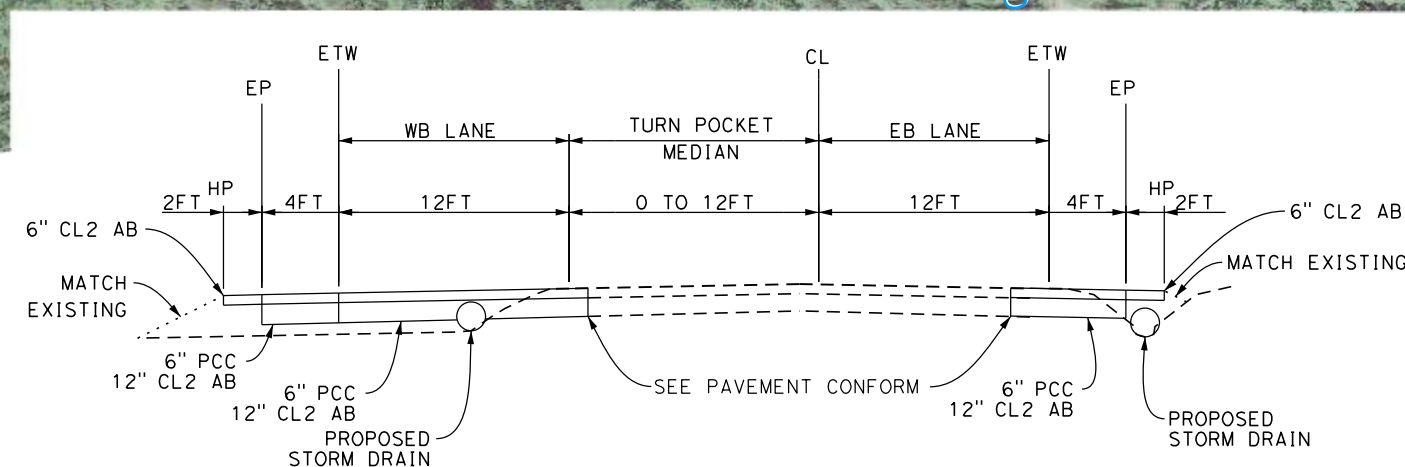
- Tree and shrub removal
- Utility pole relocations

LEGEND

- Existing Right of Way
- New Proposed Right of Way



ELK VALLEY CROSS ROAD CORRIDOR PLAN



Cunningham Lane Intersection



ELK VALLEY CROSS ROAD & US 101 INTERSECTION

Alt A: SIGNING & STRIPING IMPROVEMENTS

LEGEND:
--- Existing Right of Way
--- Proposed New Striping

YIELD SIGN



US 101

US 101

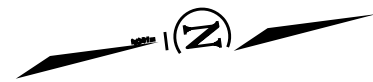
ALT A:
MEDIAN STRIPING

ELK VALLEY CROSS ROAD

BOB-WHITE LN

ELK VALLEY CROSS ROAD CORRIDOR PLAN





ELK VALLEY CROSS ROAD & US 101 INTERSECTION

Alt B: RESTRICTED CROSSING U-TURN (RCUT)

LEGEND:

- Existing Right of Way
- Proposed New Right of Way

ALT B:
ACCELERATION LANE
BECOMES LANE 1

ALT B:
LIMITED LEFT TURN MOVEMENTS
AND CONCRETE BARRIER

ALT B:
SINGLE THRU LANE

ALT B:
SEPARATED MEDIAN U-TURN

ALT B:
SINGLE THRU LANE

BIKE PATH

ALT B:
SEPARATED MEDIAN U-TURN

ALT B:
ACCELERATION LANE

PARK EXIT RD

US 101

US 101

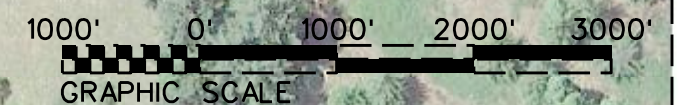
BOB-WHITE LN

ELK VALLEY CROSS ROAD

ELK VALLEY CROSS ROAD CORRIDOR PLAN



Del Norte Local Transportation Commission



ELK VALLEY CROSS ROAD & US 101 INTERSECTION

**Alt C:
SIGNING & STRIPING IMPROVEMENTS
SINGLE LANE THROUGH INTERSECTION**

LEGEND:
--- Existing Right of Way
--- Proposed New Striping

ALT C:
ACCELERATION LANE
BECOMES LANE 1

YIELD SIGN

ALT C:
SINGLE LANE THROUGH
INTERSECTION

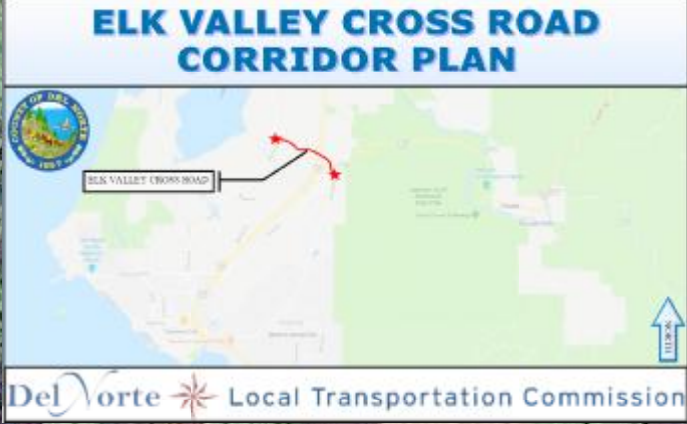
US 101

US 101

ALT C:
SINGLE LANE THROUGH
INTERSECTION

ALT C:
MEDIAN STRIPING
YIELD SIGN IN CENTER OF INTERSECTION

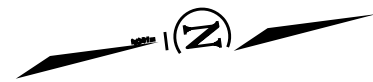
ALT C:
ACCELERATION LANE
TO LATER MERGE



ELK VALLEY CROSS ROAD

BOB-WHITE LN





ELK VALLEY CROSS ROAD & US 101 INTERSECTION

**Alt D:
Roundabout**

LEGEND

- Existing Right of Way
- New Proposed Right of Way

FREE RIGHT FROM
EVCR TO US 101 SB
TO BEGIN LANE 1

YIELD CONTROLLED RIGHT FROM
US 101 TO WB EVCR

YIELD CONTROLLED RIGHT FROM
US 101 TO EB EVCR

FREE RIGHT FROM
EVCR TO US 101 NB
WITH LOW SPEED MERGING

US 101

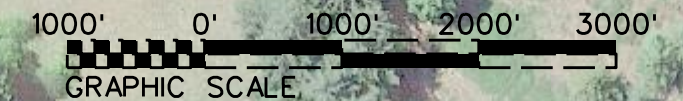
BOB-WHITE LN

ELK VALLEY CROSS ROAD

ELK VALLEY CROSS ROAD CORRIDOR PLAN



Del Norte Local Transportation Commission



ELK VALLEY CROSS ROAD & US 199 INTERSECTION

-Alt A: SIGNING & STRIPING IMPROVEMENTS

LEGEND

- Existing Right of Way
- New Proposed Right of Way

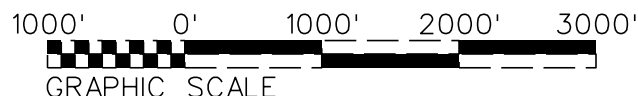
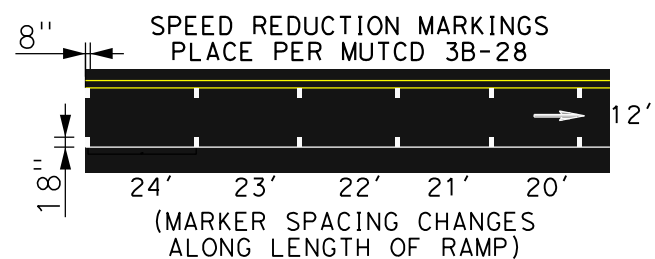
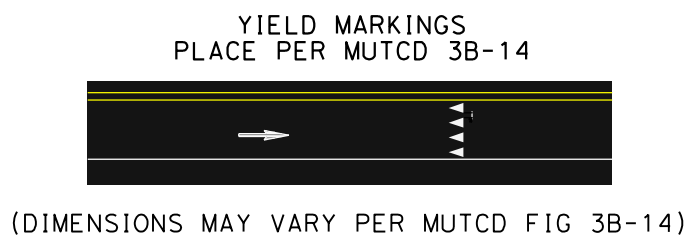
ALT A:
OPEN GRADED SURFACE PAVEMENT
TREATMENT FOR REFLECTION REDUCTION

ALT A:
YIELD MARKINGS

ALT A:
REGULAR MAINTENANCE MOWING
FOR CLEAR CORNER SIGHT
DISTANCE

ALT A:
SPEED REDUCTION MARKINGS

420' CORNER SIGHT DISTANCE FOR 55MPH RAMP PER HDM 405.1
160' CORNER SIGHT DISTANCE FOR 40MPH RAMP PER HDM 405.1



ELK VALLEY CROSS ROAD CORRIDOR PLAN

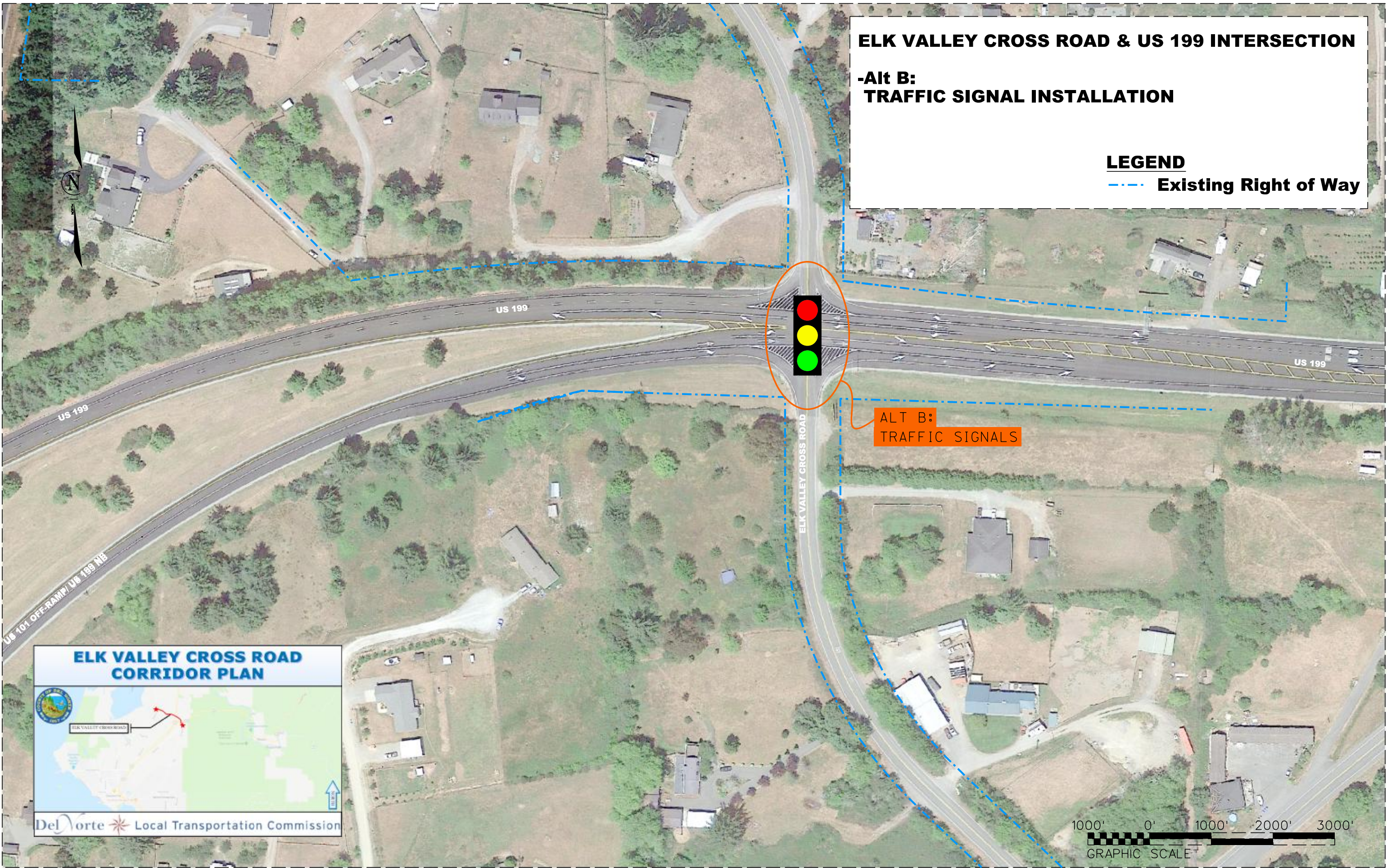


ELK VALLEY CROSS ROAD & US 199 INTERSECTION

-Alt B:
TRAFFIC SIGNAL INSTALLATION

LEGEND

--- Existing Right of Way



ELK VALLEY CROSS ROAD & US 199 INTERSECTION

**Alt C:
ROUNDAABOUT**

LEGEND

- Existing Right of Way
- - - New Proposed Right of Way

SINGLE EXITING LANE

FREE RIGHT FROM
TO EVCR (WEST)

US 199 TO SB US 101

US 199 TO NB US 101

FREE RIGHT
TO EVCR (EAST)
YIELD CONTROLLED

SINGLE EXITING LANE

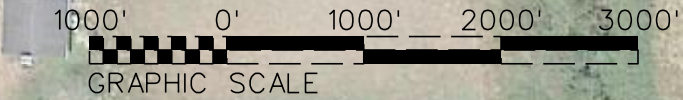
ICD = 150 FT

POTENTIAL
PEDESTRIAN
ROUTE LOCATION

**ELK VALLEY CROSS ROAD
CORRIDOR PLAN**



Del Norte Local Transportation Commission



Attachment C

Alternatives Cost Estimates

PROJECT PLANNING COST ESTIMATE

EA: 01-LOCAL

EA: 01-LOCAL PID: EVCRCP

PID: EVCRCP

District-County-Route: 01-DN-EVCR

PM: 0.0 - 1.5

Type of Estimate : Programming

Program Code : k

Project Limits : Along Elk Valley Cross Road from Lake Earl Drive to Parkway Drive

Project Description: Widen roadway to have 12' Lanes, 4' Paved Shoulders and 2' graded soft shoulder.

Scope :

Alternative : Alternative A, Roadway Segment 2 (L=3,340ft)

SUMMARY OF PROJECT COST ESTIMATE

	Current Year Cost	Escalated Cost
TOTAL ROADWAY COST	\$ 4,324,200	\$ 4,805,347
TOTAL STRUCTURES COST	\$ -	\$ -
SUBTOTAL CONSTRUCTION COST	\$ 4,324,200	\$ 4,805,347
TOTAL RIGHT OF WAY COST	\$ 417,600	\$ 417,600
TOTAL CAPITAL OUTLAY COSTS	\$ 4,742,000	\$ 5,223,000
PR/ED SUPPORT	\$ -	\$ -
PS&E SUPPORT	\$ -	\$ -
RIGHT OF WAY SUPPORT	\$ -	\$ -
CONSTRUCTION SUPPORT	\$ -	\$ -
TOTAL SUPPORT COST	\$ -	\$ -

TOTAL PROJECT COST	\$ 4,750,000	\$ 5,250,000
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If Project has been programmed enter Programmed Amount

Month / Year

Date of Estimate (Month/Year) _____ 1 / 2020

Estimated Construction Start (Month/Year) _____ 4 / 2024

Number of Working Days = 120

Estimated Mid-Point of Construction (Month/Year) _____ 8 / 2024

Estimated Construction End (Month/Year) _____ 12 / 2024

Number of Plant Establishment Days 261

Estimated Project Schedule

PID Approval	6/1/2021
PA/ED Approval	7/1/2022
PS&E	10/1/2023
RTL	12/1/2023
Begin Construction	4/1/2024

Reviewed by District O.E.

xx/xx/xxxx

(xxx) xxx-xxxx

Office Engineer

Date

Phone

Approved by Project
Manager

xx/xx/xxxx

(xxx) xxx-xxxx

Project Manager

Date

Phone

I. ROADWAY ITEMS SUMMARY

	Section	Cost
1	Earthwork	\$ 158,200
2	Pavement Structural Section	\$ 308,500
3	Drainage	\$ 1,252,500
4	Specialty Items	\$ 155,000
5	Environmental	\$ 224,700
6	Traffic Items	\$ 171,100
7	Detours	\$ -
8	Minor Items	\$ 227,000
9	Roadway Mobilization	\$ 249,700
10	Supplemental Work	\$ 149,900
11	State Furnished	\$ 85,000
12	Time-Related Overhead	\$ 149,900
13	Roadway Contingency	\$ 1,192,700
TOTAL ROADWAY ITEMS		\$ 4,324,200

Estimate Prepared By :

Name and Title	Date	Phone
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Estimate Reviewed By :

Name and Title	Date	Phone
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By signing this estimate you are attesting that you have discussed your project with all functional units and have incorporated all their comments or have discussed with them why they will not be incorporated.

SECTION 1: EARTHWORK

Item code		Unit	Quantity		Unit Price (\$)		Cost
190101	Roadway Excavation	CY	1,484	x	83.00	= \$	123,172
19010X	Roadway Excavation (Type X) ADL	CY		x		= \$	-
194001	Ditch Excavation	CY		x		= \$	-
19801X	Imported Borrow	CY/TON		x		= \$	-
192037	Structure Excavation (Retaining Wall)	CY		x		= \$	-
193013	Structure Backfill (Retaining Wall)	CY		x		= \$	-
193031	Pervious Backfill Material (Retaining Wall)	CY		x		= \$	-
16010X	Clearing & Grubbing	LS/ACRE	1	x	35,000.00	= \$	35,000
170101	Develop Water Supply	LS		x		= \$	-
19801X	Imported Borrow	CY/TON		x		= \$	-
210130	Duff	ACRE		x		= \$	-
XXXXXX	Some Item	Unit		x		= \$	-

TOTAL EARTHWORK SECTION ITEMS	\$	158,200
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SECTION 2: PAVEMENT STRUCTURAL SECTION

Item code		Unit	Quantity		Unit Price (\$)		Cost
401050	Jointed Plain Concrete Pavement	CY		x		= \$	-
400050	Continuously Reinforced Concrete Pavement	CY		x		= \$	-
404092	Seal Pavement Joint	LF		x		= \$	-
404093	Seal Isolation Joint	LF		x		= \$	-
413117	Seal Concrete Pavement Joint (Silicone)	LF		x		= \$	-
413118	Seal Pavement Joint (Asphalt Rubber)	LF		x		= \$	-
280010	Rapid Strength Concrete Base	CY		x		= \$	-
410095	Dowel Bar (Drill and Bond)	EA		x		= \$	-
390132	Hot Mix Asphalt (Type A)	TON	1,253	x	130.00	= \$	162,890
390137	Rubberized Hot Mix Asphalt (Gap Graded)	TON		x		= \$	-
39300X	Geosynthetic Pavement Interlayer (Type X)	SQYD		x		= \$	-
26020X	Class 2 Aggregate Base	TON/CY	1,484	x	90.00	= \$	133,560
290201	Asphalt Treated Permeable Base	CY		x		= \$	-
250401	Class 4 Aggregate Subbase	CY		x		= \$	-
374002	Asphaltic Emulsion (Fog Seal Coat)	TON		x		= \$	-
397005	Tack Coat	TON	6	x	2,000.00	= \$	12,000
377501	Slurry Seal	TON		x		= \$	-
3750XX	Screenings (Type XX)	TON		x		= \$	-
374492	Asphaltic Emulsion (Polymer Modified)	TON		x		= \$	-
370001	Sand Cover (Seal)	TON		x		= \$	-
731530	Minor Concrete (Textured Paving)	CY		x		= \$	-
731502	Minor Concrete (Miscellaneous Construction)	CY		x		= \$	-
39407X	Place Hot Mix Asphalt Dike (Type X)	LF		x		= \$	-
150771	Remove Asphalt Concrete Dike	LF		x		= \$	-
420201	Grind Existing Concrete Pavement	SQYD		x		= \$	-
150860	Remove Base and Surfacing	CY		x		= \$	-
390095	Replace Asphalt Concrete Surfacing	CY		x		= \$	-
15312X	Remove Concrete	LF/CY/LS		x		= \$	-
394090	Place Hot Mix Asphalt (Miscellaneous Area)	SQYD		x		= \$	-
153103	Cold Plane Asphalt Concrete Pavement	SQYD		x		= \$	-
39405X	Shoulder Rumble Strip (HMA, X-In Indentations)	STA		x		= \$	-
413113	Repair Spalled Joints, Polyester Grout	SQYD		x		= \$	-
420102	Groove Existing Concrete Pavement	SQYD		x		= \$	-
390136	Minor Hot Mix Asphalt	TON		x		= \$	-
394095	Roadside Paving (Miscellaneous Areas)	SQYD		x		= \$	-
XXXXXX	Some Item	Unit		x		= \$	-

TOTAL PAVEMENT STRUCTURAL SECTION ITEMS	\$	308,500
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SECTION 3: DRAINAGE

Item code		Unit	Quantity	Unit Price (\$)	Cost
15080X	Remove Culvert	EA/LF	x	= \$	-
150820	Modify Inlet	EA	x	= \$	-
155232	Sand Backfill	CY	x	= \$	-
15020X	Abandon Culvert	EA/LF	x	= \$	-
152430	Adjust Inlet	LF	x	= \$	-
155003	Cap Inlet	EA	x	= \$	-
510501	Minor Concrete	CY	x	= \$	-
510502	Minor Concrete (Minor Structure)	CY	x	= \$	-
5105XX	Minor Concrete (Type XX)	CY	x	= \$	-
620XXX	XX" Alternative Pipe Culvert (Type X)	LF	x	= \$	-
641107	18" Plastic Pipe	LF	5,010	x 250.00 = \$	1,252,500
65XXXX	XX" Reinforced Concrete Pipe (Type X)	LF	x	= \$	-
6650XX	XX" Corrugated Steel Pipe (0.XXX" Thick)	LF	x	= \$	-
68XXXX	XX" Plastic Pipe (Edge Drain)	LF	x	= \$	-
69011X	XX" Corrugated Steel Pipe Downrain (0.XXX" Thi	LF	x	= \$	-
70321X	XX" Corrugated Steel Pipe Inlet (0.XXX" Thick)	LF	x	= \$	-
70XXXX	XX" Corrugated Steel Pipe Riser (0.XXX" Thick)	LF	x	= \$	-
7050XX	XX" Steel Flared End Section	EA	x	= \$	-
703233	Grated Line Drain	LF	x	= \$	-
72XXXX	Rock Slope Protection (Type and Method)	CY/TON	x	= \$	-
72901X	Rock Slope Protection Fabric (Class X)	SQYD	x	= \$	-
721420	Concrete (Ditch Lining)	CY	x	= \$	-
721430	Concrete (Channel Lining)	CY	x	= \$	-
750001	Miscellaneous Iron and Steel	LB	x	= \$	-
XXXXXX	Additional Drainage	LS	x	= \$	-

TOTAL DRAINAGE ITEMS	\$ 1,252,500
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SECTION 4: SPECIALTY ITEMS

Item code		Unit	Quantity	Unit Price (\$)	Cost
080050	Progress Schedule (Critical Path Method)	LS	1	x 5,000.00 = \$	5,000
582001	Sound Wall (Masonry Block)	SQFT	x	= \$	-
510530	Minor Concrete (Wall)	CY	x	= \$	-
15325X	Remove Sound Wall	LF/LS	x	= \$	-
070030	Lead Compliance Plan	LS	1	x 10,000.00 = \$	10,000
141120	Treated Wood Waste	LB	x	= \$	-
153221	Remove Concrete Barrier	LF	x	= \$	-
150662	Remove Metal Beam Guard Railing	LF	x	= \$	-
150668	Remove Flared End Section	EA	x	= \$	-
8000XX	Chain Link Fence (Type XX)	LF	x	= \$	-
80XXXX	XX" Chain Link Gate (Type CL-6)	EA	x	= \$	-
832001	Metal Beam Guard Railing	LF	x	= \$	-
839301	Single Thrie Beam Barrier	LF	x	= \$	-
839310	Double Thrie Beam Barrier	LF	x	= \$	-
839521	Cable Railing	LF	x	= \$	-
8395XX	Terminal System (Type CAT)	EA	x	= \$	-
839585	Alternative Flared Terminal System	EA	x	= \$	-
839584	Alternative In-line Terminal System	EA	x	= \$	-
4906XX	CIDH Concrete Piling (Insert Diameter)	LF	x	= \$	-
839XXX	Crash Cushion (Insert Type)	EA	x	= \$	-
83XXXX	Concrete Barrier (Insert Type)	LF	x	= \$	-
520103	Bar Reinforced Steel (Retaining Wall)	LB	x	= \$	-
510060	Structural Concrete, Retaining Wall	CY	x	= \$	-
513553	Retaining Wall (Masonry Wall)	SQFT	x	= \$	-
511035	Architectural Treatment	SQFT	x	= \$	-
598001	Anti-Graffiti Coating	SQFT	x	= \$	-
203070	Rock Stain	SQFT	x	= \$	-
5136XX	Reinforced Concrete Crib Wall (Type X)	SQFT	x	= \$	-
83954X	Transition Railing (Type X)	EA	x	= \$	-
597601	Prepare and Stain Concrete	SQFT	x	= \$	-
839561	Rail Tensioning Assembly	EA	x	= \$	-
83958X	End Anchor Assembly (Type X)	EA	x	= \$	-
XXXXXX	Relocate Utility Pole	EA	14	x 10,000.00 = \$	140,000

TOTAL SPECIALTY ITEMS	\$ 155,000
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SECTION 5: ENVIRONMENTAL**5A - ENVIRONMENTAL MITIGATION**

Item code	Unit	Quantity	Unit Price (\$)	Cost
Biological Mitigation	LS	x	= \$	-
160120 Remove Tree	EA	200	250.00 = \$	50,000
141000 Temporary Fence (Type ESA)	LF	6,680	5.00 = \$	33,400
<i>Subtotal Environmental Mitigation</i>				<i>\$ 83,400</i>

5B - LANDSCAPE AND IRRIGATION

Item code	Unit	Quantity	Unit Price (\$)	Cost
20XXXX Highway Planting	LS	x	= \$	-
20XXXX Irrigation System	LS	x	= \$	-
204099 Plant Establishment Work	LS	1	10,000.00 = \$	10,000
204101 Extend Plant Establishment Work	LS	x	= \$	-
20XXXX Follow-up Landscape Project	LS	x	= \$	-
150685 Remove Irrigation Facility	LS	x	= \$	-
20XXXX Maintain Existing (Irrigation or Planted Areas)	LS	x	= \$	-
206400 Check and Test Existing Irrigation Facilities	LS	x	= \$	-
21011X Imported Topsoil (X)	CY/TON	x	= \$	-
20XXXX Rock Blanket, Rock Mulch, DG, Gravel Mulch	SQFT/SQYD	x	= \$	-
200122 Weed Germination	SQYD	x	= \$	-
208304 Water Meter	EA	x	= \$	-
2087XX XX" Conduit (Use for Irrigation x-overs)	LF	x	= \$	-
20890X Extended Conduit (Use for Extension of Irrigation x-overs)	LF	x	= \$	-
<i>Subtotal Landscape and Irrigation</i>				<i>\$ 10,000</i>

5C - EROSION CONTROL

Item code	Unit	Quantity	Unit Price (\$)	Cost
210010 Move In/Move Out (Erosion Control)	EA	x	= \$	-
210350 Fiber Rolls	LF	6680	5 = \$	33,400
210360 Compost Sock	LF	x	= \$	-
2102XX Rolled Erosion Control Product (X)	SQFT	x	= \$	-
21025X Bonded Fiber Matrix	SQFT/ACRE	x	= \$	-
210300 Hydromulch	SQFT	x	= \$	-
210420 Straw	SQFT	x	= \$	-
210430 Hydroseed	SQFT	x	= \$	-
210600 Compost	SQFT	x	= \$	-
210630 Incorporate Materials	SQFT	x	= \$	-
<i>Subtotal Erosion Control</i>				<i>\$ 33,400</i>

5D - NPDES

Item code	Unit	Quantity	Unit Price (\$)	Cost
130300 Prepare SWPPP	LS	1	10,000.00 = \$	10,000
130200 Prepare WPCP	LS	x	= \$	-
130100 Job Site Management	LS	1	7,500.00 = \$	7,500
130330 Storm Water Annual Report	EA	2	2,000.00 = \$	4,000
130310 Rain Event Action Plan (REAP)	EA	4	550.00 = \$	2,200
130320 Storm Water Sampling and Analysis Day	EA	4	575.00 = \$	2,300
130520 Temporary Hydraulic Mulch	SQYD	x	= \$	-
130550 Temporary Hydroseed	SQYD	x	= \$	-
130505 Move-In/Move-Out (Temporary Erosion Control)	EA	2	1,500.00 = \$	3,000
130640 Temporary Fiber Roll	LF	6,680	5.00 = \$	33,400
130900 Temporary Concrete Washout	LS	1	2,500.00 = \$	2,500
130710 Temporary Construction Entrance	EA	2	4,000.00 = \$	8,000
130610 Temporary Check Dam	LF	x	= \$	-
130620 Temporary Drainage Inlet Protection	EA	x	= \$	-
130730 Street Sweeping	LS	1	25,000.00 = \$	25,000
<i>Subtotal NPDES</i>				<i>\$ 97,900</i>

Supplemental Work for NPDES

066595 Water Pollution Control Maintenance Sharing*	LS	1	10,000.00 = \$	10,000
066596 Additional Water Pollution Control**	LS	1	10,000.00 = \$	10,000
066597 Storm Water Sampling and Analysis***	LS	1	10,000.00 = \$	10,000
XXXXXX Some Item	LS	x	= \$	-
<i>Subtotal Supplemental Work for NDPS</i>				<i>\$ 30,000</i>

*Applies to all SWPPPs and those WPCPs with sediment control or soil stabilization BMPs.

**Applies to both SWPPPs and WPCP projects.

*** Applies only to project with SWPPPs.

TOTAL ENVIRONMENTAL	\$ 224,700
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SECTION 6: TRAFFIC ITEMS**6A - Traffic Electrical**

Item code	Unit	Quantity	Unit Price (\$)	Cost
860460 Lighting and Sign Illumination	LS	1 x	10,000.00 = \$	10,000
860201 Signal and Lighting	LS	x	= \$	-
860990 Closed Circuit Television System	LS	x	= \$	-
86110X Ramp Metering System (Location X)	LS	x	= \$	-
86070X Interconnection Conduit and Cable	LF/LS	x	= \$	-
5602XX Furnish Sign Structure (Type X)	LB	x	= \$	-
5602XX Install Sign Structure (Type X)	LB	x	= \$	-
498040 XX" CIDHC Pile (Sign Foundation)	LF	x	= \$	-
86080X Inductive Loop Detectors	EA/LS	x	= \$	-
8609XX Traffic Monitoring Station (Type X)	LS	x	= \$	-
15075X Remove Sign Structure	EA/LS	x	= \$	-
151581 Reconstruct Sign Structure	EA	x	= \$	-
152641 Modify Sign Structure	EA	x	= \$	-
860090 Maintain Existing Traffic Management System Eler	LS	x	= \$	-
86XXXX Fiber Optic Conduit System	LS	x	= \$	-
XXXXX Some Item	Unit	x	= \$	-
Subtotal Traffic Electrical				\$ 10,000

6B - Traffic Signing and Striping

Item code	Unit	Quantity	Unit Price (\$)	Cost
566011 Roadside Sign - One Post	EA	9 x	500.00 = \$	4,500
566012 Roadside Sign - Two Post	EA	x	= \$	-
5602XX Furnish Sign	SQFT	x	= \$	-
568016 Install Sign Panel on Existing Frame	SQFT	x	= \$	-
150711 Remove Painted Traffic Stripe	LF	x	= \$	-
141101 Remove Yellow Painted Traffic Stripe (Hazardous Waste)	LF	x	= \$	-
150712 Remove Painted Pavement Marking	SQFT	x	= \$	-
150742 Remove Roadside Sign	EA	9 x	500.00 = \$	4,500
152320 Reset Roadside Sign	EA	x	= \$	-
152390 Relocate Roadside Sign	EA	x	= \$	-
82010X Delineator (Class X)	EA	x	= \$	-
840502 Thermoplastic Traffic Stripe (Enhanced Wet Night)	LF	10,020 x	3.30 = \$	33,066
846012 Thermoplastic Crosswalk and Pavement Marking (T	SQFT	x	= \$	-
120090 Construction Area Signs	LS	1 x	10,000.00 = \$	10,000
84XXXX Permanent Pavement Delineation	LS	x	= \$	-
Subtotal Traffic Signing and Striping				\$ 52,066

6C - Traffic Management Plan

Item code	Unit	Quantity	Unit Price (\$)	Cost
12865X Portable Changeable Message Signs	EA/LS	6 x	\$ 1,500 = \$	9,000
Subtotal Traffic Management Plan				\$ 9,000

6C - Stage Construction and Traffic Handling

Item code	Unit	Quantity	Unit Price (\$)	Cost
120199 Traffic Plastic Drum	EA	x	= \$	-
12016X Channelizer (Type X)	EA	x	= \$	-
120120 Type III Barricade	EA	x	= \$	-
129100 Temporary Crash Cushion Module	EA	x	= \$	-
120100 Traffic Control System	LS	1 x	100,000.00 = \$	100,000
129110 Temporary Crash Cushion	EA	x	= \$	-
129000 Temporary Railing (Type K)	LF	x	= \$	-
120149 Temporary Pavement Marking (Paint)	SQFT	x	= \$	-
82010X Delineator (Class X)	EA	x	= \$	-
XXXXXX Some Item	Unit	x	= \$	-
Subtotal Stage Construction and Traffic Handling				\$ 100,000

TOTAL TRAFFIC ITEMS	\$ 171,100
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SECTION 7: DETOURS

Includes constructing, maintaining, and removal

Item code	Unit	Quantity	Unit Price (\$)	Cost
190101 Roadway Excavation	CY	x	= \$	-
19801X Imported Borrow	CY/TON	x	= \$	-
390132 Hot Mix Asphalt (Type A)	TON	x	= \$	-
26020X Class 2 Aggregate Base	TON/CY	x	= \$	-
250401 Class 4 Aggregate Subbase	CY	x	= \$	-
130620 Temporary Drainage Inlet Protection	EA	x	= \$	-
129000 Temporary Railing (Type K)	LF	x	= \$	-
128601 Temporary Signal System	LS	x	= \$	-
120149 Temporary Pavement Marking (Paint)	SQFT	x	= \$	-
80010X Temporary Fence (Type X)	LF	x	= \$	-
XXXXXX Some Item	LS	x	5,000,000 = \$	-

* Includes constructing, maintaining, and removal

TOTAL DETOURS	\$	-
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SUBTOTAL SECTIONS 1 through 7	\$	2,270,000
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SECTION 8: MINOR ITEMS**8A - Americans with Disabilities Act Items**

ADA Items	1.0%	\$	22,700
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8B - Bike Path Items

Bike Path Items	1.0%	\$	22,700
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8C - Other Minor Items

Other Minor Items	8.0%	\$	181,600
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Total of Section 1-7	\$	2,270,000	x	10.0%	= \$	227,000
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TOTAL MINOR ITEMS	\$	227,000
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SECTIONS 9: MOBILIZATION

Item code						
999990	Total Section 1-8	\$	2,497,000	x	10%	= \$ 249,700

TOTAL MOBILIZATION	\$	249,700
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SECTION 10: SUPPLEMENTAL WORK

Item code	Unit	Quantity	Unit Price (\$)	Cost
066670 Payment Adjustments For Price Index Fluctuations	LS	x	= \$	-
066094 Value Analysis	LS	1	x 10,000.00 = \$	10,000
066070 Maintain Traffic	LS	1	x 10,000.00 = \$	10,000
066919 Dispute Resolution Board	LS	x	= \$	-
066921 Dispute Resolution Advisor	LS	x	= \$	-
066015 Federal Trainee Program	LS	x	= \$	-
066610 Partnering	LS	x	= \$	-
066204 Remove Rock and Debris	LS	x	= \$	-
066222 Locate Existing Crossover	LS	x	= \$	-
XXXXXX Some Item	Unit	x	= \$	-

Cost of NPDES Supplemental Work specified in Section 5D	= \$	30,000
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Total Section 1-8	\$	2,497,000	4%	= \$	99,880
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TOTAL SUPPLEMENTAL WORK	\$	149,900
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SECTION 11: STATE FURNISHED MATERIALS AND EXPENSES

Item code		Unit	Quantity		Unit Price (\$)		Cost
066105	Resident Engineers Office	LS	1	x	10,000.00	=	\$10,000
066063	Traffic Management Plan - Public Information	LS	1	x	10,000.00	=	\$10,000
066901	Water Expenses	LS	1	x	10,000.00	=	\$10,000
8609XX	Traffic Monitoring Station (X)	LS		x		=	\$0
066841	Traffic Controller Assembly	LS		x		=	\$0
066840	Traffic Signal Controller Assembly	LS		x		=	\$0
066062	COZEEP Contract	LS		x		=	\$0
066838	Reflective Numbers and Edge Sealer	LS		x		=	\$0
066065	Tow Truck Service Patrol	LS		x		=	\$0
066916	Annual Construction General Permit Fee	LS	1	x	5,000.00	=	\$5,000
XXXXXX	Some Item	Unit		x		=	\$0
Total Section 1-8		\$	2,497,000		2%	= \$	49,940

TOTAL STATE FURNISHED	\$85,000
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SECTION 12: TIME-RELATED OVERHEAD

Total of Roadway and Structures Contract Items excluding Mobilization	\$2,497,000 (used to calculate TRO)
Total Construction Cost (excluding TRO and Contingency)	\$2,981,600 (used to check if project is greater than \$5 million excluding contingency)

Estimated Time-Related Overhead (TRO) Percentage (0% to 10%) = **6%**

Item code		Unit	Quantity		Unit Price (\$)		Cost
070018	Time-Related Overhead	WD	120	X	\$1,249	=	\$149,900

TOTAL TIME-RELATED OVERHEAD	\$149,900
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Note: If the building portion of the project is greater than 50% of the total project cost, then TRO is not included.

SECTION 13: ROADWAY CONTINGENCY

Recommended Contingency: (Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Total Section 1-11	\$	2,981,600	x	40%	=	\$1,192,640
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TOTAL CONTINGENCY	\$1,192,700
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II. STRUCTURE ITEMS

	<u>Bridge 1</u>		<u>Bridge 2</u>		
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Bridge Name	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Bridge Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot	\$150		\$150		\$0
COST OF EACH	\$0		\$0		\$0

	<u>Building 1</u>				
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Building Name	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Building Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot	\$300		\$0		\$0
COST OF EACH	\$0		\$0		\$0

TOTAL COST OF BRIDGES	\$0
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TOTAL COST OF BUILDINGS	\$0
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Structures Mobilization Percentage	10%	\$0
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Recommended Contingency: (Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Structures Contingency Percentage	10%	\$0
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TOTAL COST OF STRUCTURES	\$0
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Estimate Prepared By: _____
 XXXXXXXXXXXXXXXXXXXX ----- Division of Structures

 Date

III. RIGHT OF WAY

Fill in all of the available information from the Right of Way data sheet.

A)	A1)	Acquisition, including Excess Land Purchases, Damages & Goodwill, Fees	\$	377,600
	A2)	SB-1210	\$	0
B)		Acquisition of Offsite Mitigation	\$	0
C)	C1)	Utility Relocation (State Share)	\$	0
	C2)	Potholing (Design Phase)	\$	40,000
D)		Railroad Acquisition	\$	0
E)		Clearance / Demolition	\$	0
F)		Relocation Assistance (RAP and/or Last Resort Housing Costs)	\$	0
G)		Title and Escrow	\$	0
H)		Environmental Review	\$	0
I)		Condemnation Settlements <u>0%</u>	\$	0
J)		Design Appreciation Factor <u>0%</u>	\$	0
K)		Utility Relocation (Construction Cost)	\$	0

L)	TOTAL RIGHT OF WAY ESTIMATE	\$417,600
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M)	TOTAL R/W ESTIMATE: Escalated	\$417,600
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N)	RIGHT OF WAY SUPPORT	\$0
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Support Cost Estimate
Prepared By _____ Project Coordinator¹ _____ Phone _____

Utility Estimate Prepared
By _____ Utility Coordinator² _____ Phone _____

R/W Acquisition Estimate
Prepared By _____ Right of Way Estimator³ _____ Phone _____

Note: Items G & H applied to items A + B

¹ When estimate has Support Costs only² When estimate has Utility Relocation³ When R/W Acquisition is required

EA: 01-LOCAL PID: EVCRCP

IV. SUPPORT COST ESTIMATE SUMMARY

Note: Use PRSM project data.

Total by FY		Escalated Support Cost for Estimate To Completion (ETC)				
		PA&ED	PS&E	RW	CON	Total \$
< 2010	Expended					
	ETC					
2011	Expended					
	ETC					
2012	Expended					
	ETC					
2013	Expended					
	ETC					
2014	Expended					
	ETC					
2015	Expended					
	ETC					
2016	Expended					
	ETC					
2017	Expended					
	ETC					
2018	Expended					
	ETC					
2019	Expended					
	ETC					
2020	Expended					
	ETC					
2021	Expended					
	ETC					
2022	Expended					
	ETC					
2023	Expended					
	ETC					
2024	Expended					
	ETC					
2025 >	Expended					
	ETC					
EAC (Expended + ETC)		\$0	\$0	\$0	\$0	\$0
Approved Budget (PRSM)						
Difference (Budget - EAC)		\$0	\$0	\$0	\$0	\$0
Support Ratio (EAC / Cap Cost)		0.0%	0.0%	0.0%	0.0%	0.0%

Total Capital Cost:	\$4,742,000
Total Capital Outlay Support Cost:	\$0
Overall Percent Support Cost:	0.00%

PRSM workplan hours/costs verified
against approved MWA:

Office Chief -

Date

Approved by:

Project Control -

Date

PROJECT PLANNING COST ESTIMATE

EA: 01-LOCAL

EA: 01-LOCAL PID: EVCRCP

PID: EVCRCP

District-County-Route: 01-DN-EVCR

PM: 0.0 - 1.5

Type of Estimate : Programming

Program Code : k

Project Limits : Along Elk Valley Cross Road from Lake Earl Drive to Parkway Drive

Project Description: **Widen roadway to have 12' Lanes, 4' Paved Shoulders and 2' graded soft shoulder**

Scope :

Alternative : **Alternative A, Roadway Segment 3 (L=1,690 ft)**

SUMMARY OF PROJECT COST ESTIMATE

	Current Year Cost	Escalated Cost
TOTAL ROADWAY COST	\$ 2,157,900	\$ 2,398,006
TOTAL STRUCTURES COST	\$ -	\$ -
SUBTOTAL CONSTRUCTION COST	\$ 2,157,900	\$ 2,398,006
TOTAL RIGHT OF WAY COST	\$ 20,000	\$ 20,000
TOTAL CAPITAL OUTLAY COSTS	\$ 2,178,000	\$ 2,419,000
PR/ED SUPPORT	\$ -	\$ -
PS&E SUPPORT	\$ -	\$ -
RIGHT OF WAY SUPPORT	\$ -	\$ -
CONSTRUCTION SUPPORT	\$ -	\$ -
TOTAL SUPPORT COST	\$ -	\$ -

TOTAL PROJECT COST	\$ 2,200,000	\$ 2,450,000
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If Project has been programmed enter Programmed Amount

Date of Estimate (Month/Year) Month / Year
1 / 2020

Estimated Construction Start (Month/Year) 4 / 2024

Number of Working Days = 80

Estimated Mid-Point of Construction (Month/Year) 8 / 2024

Estimated Construction End (Month/Year) 12 / 2024

Number of Plant Establishment Days 261

Estimated Project Schedule

PID Approval	6/1/2021
PA/ED Approval	7/1/2022
PS&E	10/1/2023
RTL	12/1/2023
Begin Construction	4/1/2024

Reviewed by District O.E.

xx/xx/xxxx

(xxx) xxx-xxxx

Office Engineer

Date

Phone

Approved by Project
Manager

xx/xx/xxxx

(xxx) xxx-xxxx

Project Manager

Date

Phone

I. ROADWAY ITEMS SUMMARY

Section		Cost
1	Earthwork	\$ 82,400
2	Pavement Structural Section	\$ 240,900
3	Drainage	\$ 528,300
4	Specialty Items	\$ 45,000
5	Environmental	\$ 114,300
6	Traffic Items	\$ 164,800
7	Detours	\$ -
8	Minor Items	\$ 117,600
9	Roadway Mobilization	\$ 129,400
10	Supplemental Work	\$ 101,800
11	State Furnished	\$ 45,900
12	Time-Related Overhead	\$ -
13	Roadway Contingency	\$ 587,500
TOTAL ROADWAY ITEMS		\$ 2,157,900

Estimate Prepared By :

Name and Title	Date	Phone
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Estimate Reviewed By :

Name and Title	Date	Phone
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By signing this estimate you are attesting that you have discussed your project with all functional units and have incorporated all their comments or have discussed with them why they will not be incorporated.

SECTION 1: EARTHWORK

Item code		Unit	Quantity	Unit Price (\$)		Cost
190101	Roadway Excavation	CY	751	x 83.00	= \$	62,333
19010X	Roadway Excavation (Type X) ADL	CY		x	= \$	-
194001	Ditch Excavation	CY		x	= \$	-
19801X	Imported Borrow	CY/TON		x	= \$	-
192037	Structure Excavation (Retaining Wall)	CY		x	= \$	-
193013	Structure Backfill (Retaining Wall)	CY		x	= \$	-
193031	Pervious Backfill Material (Retaining Wall)	CY		x	= \$	-
16010X	Clearing & Grubbing	LS	1	x 20,000.00	= \$	20,000
170101	Develop Water Supply	LS		x	= \$	-
19801X	Imported Borrow	CY/TON		x	= \$	-
210130	Duff	ACRE		x	= \$	-
XXXXXX	Some Item	Unit		x	= \$	-

TOTAL EARTHWORK SECTION ITEMS	\$ 82,400
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SECTION 2: PAVEMENT STRUCTURAL SECTION

Item code		Unit	Quantity	Unit Price (\$)		Cost
401050	Jointed Plain Concrete Pavement	CY		x	= \$	-
400050	Continuously Reinforced Concrete Pavement	CY		x	= \$	-
404092	Seal Pavement Joint	LF		x	= \$	-
404093	Seal Isolation Joint	LF		x	= \$	-
413117	Seal Concrete Pavement Joint (Silicone)	LF		x	= \$	-
413118	Seal Pavement Joint (Asphalt Rubber)	LF		x	= \$	-
280010	Rapid Strength Concrete Base	CY		x	= \$	-
410095	Dowel Bar (Drill and Bond)	EA		x	= \$	-
390132	Hot Mix Asphalt (Type A)	TON	1,394	x 120.00	= \$	167,280
390137	Rubberized Hot Mix Asphalt (Gap Graded)	TON		x	= \$	-
39300X	Geosynthetic Pavement Interlayer (Type X)	SQYD		x	= \$	-
26020X	Class 2 Aggregate Base	CY	751	x 90.00	= \$	67,590
290201	Asphalt Treated Permeable Base	CY		x	= \$	-
250401	Class 4 Aggregate Subbase	CY		x	= \$	-
374002	Asphaltic Emulsion (Fog Seal Coat)	TON		x	= \$	-
397005	Tack Coat	TON	3	x 2,000.00	= \$	6,000
377501	Slurry Seal	TON		x	= \$	-
3750XX	Screenings (Type XX)	TON		x	= \$	-
374492	Asphaltic Emulsion (Polymer Modified)	TON		x	= \$	-
370001	Sand Cover (Seal)	TON		x	= \$	-
731530	Minor Concrete (Textured Paving)	CY		x	= \$	-
731502	Minor Concrete (Miscellaneous Construction)	CY		x	= \$	-
39407X	Place Hot Mix Asphalt Dike (Type X)	LF		x	= \$	-
150771	Remove Asphalt Concrete Dike	LF		x	= \$	-
420201	Grind Existing Concrete Pavement	SQYD		x	= \$	-
150860	Remove Base and Surfacing	CY		x	= \$	-
390095	Replace Asphalt Concrete Surfacing	CY		x	= \$	-
15312X	Remove Concrete	LF/CY/LS		x	= \$	-
394090	Place Hot Mix Asphalt (Miscellaneous Area)	SQYD		x	= \$	-
153103	Cold Plane Asphalt Concrete Pavement	SQYD		x	= \$	-
39405X	Shoulder Rumble Strip (HMA, X-In Indentations)	STA		x	= \$	-
413113	Repair Spalled Joints, Polyester Grout	SQYD		x	= \$	-
420102	Groove Existing Concrete Pavement	SQYD		x	= \$	-
390136	Minor Hot Mix Asphalt	TON		x	= \$	-
394095	Roadside Paving (Miscellaneous Areas)	SQYD		x	= \$	-
XXXXXX	Some Item	Unit		x	= \$	-

TOTAL PAVEMENT STRUCTURAL SECTION ITEMS	\$ 240,900
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SECTION 3: DRAINAGE

Item code		Unit	Quantity	Unit Price (\$)	Cost
15080X	Remove Culvert	EA/LF	x	= \$	-
150820	Modify Inlet	EA	x	= \$	-
155232	Sand Backfill	CY	x	= \$	-
15020X	Abandon Culvert	EA/LF	x	= \$	-
152430	Adjust Inlet	LF	x	= \$	-
155003	Cap Inlet	EA	x	= \$	-
510501	Minor Concrete	CY	x	= \$	-
510502	Minor Concrete (Minor Structure)	CY	x	= \$	-
5105XX	Minor Concrete (Type XX)	CY	x	= \$	-
620XXX	XX" Alternative Pipe Culvert (Type X)	LF	x	= \$	-
641107	18" Plastic Pipe	LF	2,113	x 250.00 = \$	528,250
65XXXX	XX" Reinforced Concrete Pipe (Type X)	LF	x	= \$	-
6650XX	XX" Corrugated Steel Pipe (0.XXX" Thick)	LF	x	= \$	-
68XXXX	XX" Plastic Pipe (Edge Drain)	LF	x	= \$	-
69011X	XX" Corrugated Steel Pipe Downrain (0.XXX" Thi	LF	x	= \$	-
70321X	XX" Corrugated Steel Pipe Inlet (0.XXX" Thick)	LF	x	= \$	-
70XXXX	XX" Corrugated Steel Pipe Riser (0.XXX" Thick)	LF	x	= \$	-
7050XX	XX" Steel Flared End Section	EA	x	= \$	-
703233	Grated Line Drain	LF	x	= \$	-
72XXXX	Rock Slope Protection (Type and Method)	CY/TON	x	= \$	-
72901X	Rock Slope Protection Fabric (Class X)	SQYD	x	= \$	-
721420	Concrete (Ditch Lining)	CY	x	= \$	-
721430	Concrete (Channel Lining)	CY	x	= \$	-
750001	Miscellaneous Iron and Steel	LB	x	= \$	-
XXXXXX	Additional Drainage	LS	x	= \$	-

TOTAL DRAINAGE ITEMS	\$	528,300
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SECTION 4: SPECIALTY ITEMS

Item code		Unit	Quantity	Unit Price (\$)	Cost
080050	Progress Schedule (Critical Path Method)	LS	1	x 5,000.00 = \$	5,000
582001	Sound Wall (Masonry Block)	SQFT	x	= \$	-
510530	Minor Concrete (Wall)	CY	x	= \$	-
15325X	Remove Sound Wall	LF/LS	x	= \$	-
070030	Lead Compliance Plan	LS	1	x 10,000.00 = \$	10,000
141120	Treated Wood Waste	LB	x	= \$	-
153221	Remove Concrete Barrier	LF	x	= \$	-
150662	Remove Metal Beam Guard Railing	LF	x	= \$	-
150668	Remove Flared End Section	EA	x	= \$	-
8000XX	Chain Link Fence (Type XX)	LF	x	= \$	-
80XXXX	XX" Chain Link Gate (Type CL-6)	EA	x	= \$	-
832001	Metal Beam Guard Railing	LF	x	= \$	-
839301	Single Thrie Beam Barrier	LF	x	= \$	-
839310	Double Thrie Beam Barrier	LF	x	= \$	-
839521	Cable Railing	LF	x	= \$	-
8395XX	Terminal System (Type CAT)	EA	x	= \$	-
839585	Alternative Flared Terminal System	EA	x	= \$	-
839584	Alternative In-line Terminal System	EA	x	= \$	-
4906XX	CIDH Concrete Piling (Insert Diameter)	LF	x	= \$	-
839XXX	Crash Cushion (Insert Type)	EA	x	= \$	-
83XXXX	Concrete Barrier (Insert Type)	LF	x	= \$	-
520103	Bar Reinforced Steel (Retaining Wall)	LB	x	= \$	-
510060	Structural Concrete, Retaining Wall	CY	x	= \$	-
513553	Retaining Wall (Masonry Wall)	SQFT	x	= \$	-
511035	Architectural Treatment	SQFT	x	= \$	-
598001	Anti-Graffiti Coating	SQFT	x	= \$	-
203070	Rock Stain	SQFT	x	= \$	-
5136XX	Reinforced Concrete Crib Wall (Type X)	SQFT	x	= \$	-
83954X	Transition Railing (Type X)	EA	x	= \$	-
597601	Prepare and Stain Concrete	SQFT	x	= \$	-
839561	Rail Tensioning Assembly	EA	x	= \$	-
83958X	End Anchor Assembly (Type X)	EA	x	= \$	-
XXXXXX	Relocate Utility Pole	EA	3	x 10,000.00 = \$	30,000

TOTAL SPECIALTY ITEMS	\$	45,000
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SECTION 5: ENVIRONMENTAL**5A - ENVIRONMENTAL MITIGATION**

Item code	Unit	Quantity	Unit Price (\$)	Cost
	LS	x	= \$	-
130670 Biological Mitigation	LF	30	250.00	7,500
141000 Remove Tree	LF	3,380	5.00	16,900
Temporary Fence (Type ESA)				
Subtotal Environmental Mitigation				\$ 24,400

5B - LANDSCAPE AND IRRIGATION

Item code	Unit	Quantity	Unit Price (\$)	Cost
20XXXX Highway Planting	LS	x	= \$	-
20XXXX Irrigation System	LS	x	= \$	-
204099 Plant Establishment Work	LS	x	= \$	-
204101 Extend Plant Establishment Work	LS	x	= \$	-
20XXXX Follow-up Landscape Project	LS	x	= \$	-
150685 Remove Irrigation Facility	LS	x	= \$	-
20XXXX Maintain Existing (Irrigation or Planted Areas)	LS	x	= \$	-
206400 Check and Test Existing Irrigation Facilities	LS	x	= \$	-
21011X Imported Topsoil (X)	CY/TON	x	= \$	-
20XXXX Rock Blanket, Rock Mulch, DG, Gravel Mulch	SQFT/SQYD	x	= \$	-
200122 Weed Germination	SQYD	x	= \$	-
208304 Water Meter	EA	x	= \$	-
2087XX XX" Conduit (Use for Irrigation x-overs)	LF	x	= \$	-
20890X Extended Conduit (Use for Extension of Irrigation x-overs)	LF	x	= \$	-
Subtotal Landscape and Irrigation				\$ -

5C - EROSION CONTROL

Item code	Unit	Quantity	Unit Price (\$)	Cost
210010 Move In/Move Out (Erosion Control)	EA	x	= \$	-
210350 Fiber Rolls	LF	1690	5	8,450
210360 Compost Sock	LF	x	= \$	-
2102XX Rolled Erosion Control Product (X)	SQFT	x	= \$	-
21025X Bonded Fiber Matrix	SQFT/ACRE	x	= \$	-
210300 Hydromulch	SQFT	x	= \$	-
210420 Straw	SQFT	x	= \$	-
210430 Hydroseed	SQFT	x	= \$	-
210600 Compost	SQFT	x	= \$	-
210630 Incorporate Materials	SQFT	x	= \$	-
Subtotal Erosion Control				\$ 8,450

5D - NPDES

Item code	Unit	Quantity	Unit Price (\$)	Cost
130300 Prepare SWPPP	LS	1	10,000.00	10,000
130200 Prepare WPCP	LS	x	= \$	-
130100 Job Site Management	LS	1	7,500.00	7,500
130330 Storm Water Annual Report	EA	2	2,000.00	4,000
130310 Rain Event Action Plan (REAP)	EA	4	550.00	2,200
130320 Storm Water Sampling and Analysis Day	EA	4	575.00	2,300
130520 Temporary Hydraulic Mulch	SQYD	x	= \$	-
130550 Temporary Hydroseed	SQYD	x	= \$	-
130505 Move-In/Move-Out (Temporary Erosion Control)	EA	2	1,500.00	3,000
130640 Temporary Fiber Roll	LF	3,380	5.00	16,900
130900 Temporary Concrete Washout	LS	1	2,500.00	2,500
130710 Temporary Construction Entrance	EA	2	4,000.00	8,000
130610 Temporary Check Dam	LF	x	= \$	-
130620 Temporary Drainage Inlet Protection	EA	x	= \$	-
130730 Street Sweeping	LS	1	25,000.00	25,000
Subtotal NPDES				\$ 81,400

Supplemental Work for NPDES

066595 Water Pollution Control Maintenance Sharing*	LS	1	10,000.00	10,000
066596 Additional Water Pollution Control**	LS	1	10,000.00	10,000
066597 Storm Water Sampling and Analysis***	LS	1	10,000.00	10,000
XXXXXX Some Item	LS	x	= \$	-
Subtotal Supplemental Work for NPDES				\$ 30,000

*Applies to all SWPPPs and those WPCPs with sediment control or soil stabilization BMPs.

**Applies to both SWPPPs and WPCP projects.

*** Applies only to project with SWPPPs.

TOTAL ENVIRONMENTAL	\$	114,300
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SECTION 6: TRAFFIC ITEMS**6A - Traffic Electrical**

Item code	Unit	Quantity	Unit Price (\$)	Cost
860460 Lighting and Sign Illumination	LS	1 x	5,000.00 = \$	5,000
860201 Signal and Lighting	LS	x	= \$	-
860990 Closed Circuit Television System	LS	x	= \$	-
86110X Ramp Metering System (Location X)	LS	x	= \$	-
86070X Interconnection Conduit and Cable	LF/LS	x	= \$	-
5602XX Furnish Sign Structure (Type X)	LB	x	= \$	-
5602XX Install Sign Structure (Type X)	LB	x	= \$	-
498040 XX" CIDHC Pile (Sign Foundation)	LF	x	= \$	-
86080X Inductive Loop Detectors	EA/LS	x	= \$	-
8609XX Traffic Monitoring Station (Type X)	LS	x	= \$	-
15075X Remove Sign Structure	EA/LS	x	= \$	-
151581 Reconstruct Sign Structure	EA	x	= \$	-
152641 Modify Sign Structure	EA	x	= \$	-
860090 Maintain Existing Traffic Management System Eler	LS	x	= \$	-
86XXXX Fiber Optic Conduit System	LS	x	= \$	-
XXXXX Some Item	Unit	x	= \$	-
Subtotal Traffic Electrical				\$ 5,000

6B - Traffic Signing and Striping

Item code	Unit	Quantity	Unit Price (\$)	Cost
566011 Roadside Sign - One Post	EA	9 x	500.00 = \$	4,500
566012 Roadside Sign - Two Post	EA	x	= \$	-
5602XX Furnish Sign	SQFT	x	= \$	-
568016 Install Sign Panel on Existing Frame	SQFT	x	= \$	-
150711 Remove Painted Traffic Stripe	LF	x	= \$	-
141101 Remove Yellow Painted Traffic Stripe (Hazardous Waste)	LF	x	= \$	-
150712 Remove Painted Pavement Marking	SQFT	x	= \$	-
150742 Remove Roadside Sign	EA	9 x	500.00 = \$	4,500
152320 Reset Roadside Sign	EA	x	= \$	-
152390 Relocate Roadside Sign	EA	x	= \$	-
82010X Delineator (Class X)	EA	x	= \$	-
840502 Thermoplastic Traffic Stripe (Enhanced Wet Night)	LF	5,070 x	3.30 = \$	16,731
846012 Thermoplastic Crosswalk and Pavement Marking (T	SQFT	x	= \$	-
120090 Construction Area Signs	LS	1 x	5,000.00 = \$	5,000
84XXXX Permanent Pavement Delineation	LS	x	= \$	-
Subtotal Traffic Signing and Striping				\$ 30,731

6C - Traffic Management Plan

Item code	Unit	Quantity	Unit Price (\$)	Cost
12865X Portable Changeable Message Signs	EA/LS	6 x	\$ 1,500 = \$	9,000
Subtotal Traffic Management Plan				\$ 9,000

6C - Stage Construction and Traffic Handling

Item code	Unit	Quantity	Unit Price (\$)	Cost
120199 Traffic Plastic Drum	EA	x	= \$	-
12016X Channelizer (Type X)	EA	x	= \$	-
120120 Type III Barricade	EA	x	= \$	-
129100 Temporary Crash Cushion Module	EA	x	= \$	-
120100 Traffic Control System	LS	1 x	120,000.00 = \$	120,000
129110 Temporary Crash Cushion	EA	x	= \$	-
129000 Temporary Railing (Type K)	LF	x	= \$	-
120149 Temporary Pavement Marking (Paint)	SQFT	x	= \$	-
82010X Delineator (Class X)	EA	x	= \$	-
XXXXXX Some Item	Unit	x	= \$	-
Subtotal Stage Construction and Traffic Handling				\$ 120,000

TOTAL TRAFFIC ITEMS	\$ 164,800
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SECTION 7: DETOURS

Includes constructing, maintaining, and removal

Item code	Unit	Quantity	Unit Price (\$)	Cost
190101 Roadway Excavation	CY	x	= \$	-
19801X Imported Borrow	CY/TON	x	= \$	-
390132 Hot Mix Asphalt (Type A)	TON	x	= \$	-
26020X Class 2 Aggregate Base	TON/CY	x	= \$	-
250401 Class 4 Aggregate Subbase	CY	x	= \$	-
130620 Temporary Drainage Inlet Protection	EA	x	= \$	-
129000 Temporary Railing (Type K)	LF	x	= \$	-
128601 Temporary Signal System	LS	x	= \$	-
120149 Temporary Pavement Marking (Paint)	SQFT	x	= \$	-
80010X Temporary Fence (Type X)	LF	x	= \$	-
XXXXXX Some Item	LS	x	= \$	-

* Includes constructing, maintaining, and removal

TOTAL DETOURS	\$	-
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SUBTOTAL SECTIONS 1 through 7	\$	1,175,700
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SECTION 8: MINOR ITEMS**8A - Americans with Disabilities Act Items**

ADA Items

1.0% \$ 11,757

8B - Bike Path Items

Bike Path Items

1.0% \$ 11,757

8C - Other Minor Items

Other Minor Items

8.0% \$ 94,056

Total of Section 1-7	\$	1,175,700	x	10.0%	= \$	117,570
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TOTAL MINOR ITEMS	\$	117,600
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SECTIONS 9: MOBILIZATION

Item code						
999990	Total Section 1-8	\$	1,293,300	x	10%	= \$ 129,330

TOTAL MOBILIZATION	\$	129,400
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SECTION 10: SUPPLEMENTAL WORK

Item code	Unit	Quantity	Unit Price (\$)	Cost
066670 Payment Adjustments For Price Index Fluctuations	LS	x	= \$	-
066094 Value Analysis	LS	1	x 10,000.00	= \$ 10,000
066070 Maintain Traffic	LS	1	x 10,000.00	= \$ 10,000
066919 Dispute Resolution Board	LS	x	= \$	-
066921 Dispute Resolution Advisor	LS	x	= \$	-
066015 Federal Trainee Program	LS	x	= \$	-
066610 Partnering	LS	x	= \$	-
066204 Remove Rock and Debris	LS	x	= \$	-
066222 Locate Existing Crossover	LS	x	= \$	-
XXXXXX Some Item	Unit	x	= \$	-

Cost of NPDES Supplemental Work specified in Section 5D	= \$	30,000
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Total Section 1-8	\$	1,293,300	4%	= \$	51,732
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TOTAL SUPPLEMENTAL WORK	\$	101,800
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SECTION 11: STATE FURNISHED MATERIALS AND EXPENSES

Item code		Unit	Quantity		Unit Price (\$)		Cost
066105	Resident Engineers Office	LS	1	x	10,000.00	=	\$10,000
066063	Traffic Management Plan - Public Information	LS	1	x	10,000.00	=	\$10,000
066901	Water Expenses	LS		x		=	\$0
8609XX	Traffic Monitoring Station (X)	LS		x		=	\$0
066841	Traffic Controller Assembly	LS		x		=	\$0
066840	Traffic Signal Controller Assembly	LS		x		=	\$0
066062	COZEEP Contract	LS		x		=	\$0
066838	Reflective Numbers and Edge Sealer	LS		x		=	\$0
066065	Tow Truck Service Patrol	LS		x		=	\$0
066916	Annual Construction General Permit Fee	LS		x		=	\$0
XXXXXX	Some Item	Unit		x		=	\$0
Total Section 1-8		\$	1,293,300	2%	=	\$	25,866

TOTAL STATE FURNISHED	\$45,900
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SECTION 12: TIME-RELATED OVERHEAD

Total of Roadway and Structures Contract Items excluding Mobilization \$1,293,300 (used to calculate TRO)
Total Construction Cost (excluding TRO and Contingency) \$1,570,400 (used to check if project is greater than \$5 million excluding contingency)

Estimated Time-Related Overhead (TRO) Percentage (0% to 10%) = **10%**

Item code		Unit	Quantity		Unit Price (\$)		Cost
070018	Time-Related Overhead	WD	80	X	\$0	=	\$0

TOTAL TIME-RELATED OVERHEAD	\$0
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Note: If the building portion of the project is greater than 50% of the total project cost, then TRO is not included.

SECTION 13: ROADWAY CONTINGENCY

Recommended Contingency: (Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Total Section 1-11 \$ 1,468,600 x **40%** = \$587,440

TOTAL CONTINGENCY	\$587,500
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II. STRUCTURE ITEMS

	<u>Bridge 1</u>		<u>Bridge 2</u>		
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Bridge Name	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Bridge Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot	\$150		\$150		\$0
COST OF EACH	\$0		\$0		\$0

	<u>Building 1</u>				
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Building Name	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Building Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot	\$300		\$0		\$0
COST OF EACH	\$0		\$0		\$0

TOTAL COST OF BRIDGES	\$0
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TOTAL COST OF BUILDINGS	\$0
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Structures Mobilization Percentage	10%	\$0
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Recommended Contingency: (Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Structures Contingency Percentage	10%	\$0
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TOTAL COST OF STRUCTURES	\$0
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Estimate Prepared By: _____
 XXXXXXXXXXXXXXXXXXXX ----- Division of Structures

 Date

III. RIGHT OF WAY

Fill in all of the available information from the Right of Way data sheet.

A)	A1)	Acquisition, including Excess Land Purchases, Damages & Goodwill, Fees	\$	0
	A2)	SB-1210	\$	0
B)		Acquisition of Offsite Mitigation	\$	0
C)	C1)	Utility Relocation (State Share)	\$	0
	C2)	Potholing (Design Phase)	\$	20,000
D)		Railroad Acquisition	\$	0
E)		Clearance / Demolition	\$	0
F)		Relocation Assistance (RAP and/or Last Resort Housing Costs)	\$	0
G)		Title and Escrow	\$	0
H)		Environmental Review	\$	0
I)		Condemnation Settlements <u>0%</u>	\$	0
J)		Design Appreciation Factor <u>0%</u>	\$	0
K)		Utility Relocation (Construction Cost)	\$	0

L)	TOTAL RIGHT OF WAY ESTIMATE	\$20,000
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M)	TOTAL R/W ESTIMATE: Escalated	\$20,000
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N)	RIGHT OF WAY SUPPORT	\$0
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Support Cost Estimate
Prepared By _____ Project Coordinator¹ _____ Phone _____

Utility Estimate Prepared
By _____ Utility Coordinator² _____ Phone _____

R/W Acquisition Estimate
Prepared By _____ Right of Way Estimator³ _____ Phone _____

Note: Items G & H applied to items A + B

¹ When estimate has Support Costs only² When estimate has Utility Relocation³ When R/W Acquisition is required

EA: 01-LOCAL PID: EVCRCP

IV. SUPPORT COST ESTIMATE SUMMARY

Note: Use PRSM project data.

Total by FY		Escalated Support Cost for Estimate To Completion (ETC)				
		PA&ED	PS&E	RW	CON	Total \$
< 2010	Expended					
	ETC					
2011	Expended					
	ETC					
2012	Expended					
	ETC					
2013	Expended					
	ETC					
2014	Expended					
	ETC					
2015	Expended					
	ETC					
2016	Expended					
	ETC					
2017	Expended					
	ETC					
2018	Expended					
	ETC					
2019	Expended					
	ETC					
2020	Expended					
	ETC					
2021	Expended					
	ETC					
2022	Expended					
	ETC					
2023	Expended					
	ETC					
2024	Expended					
	ETC					
2025 >	Expended					
	ETC					
EAC (Expended + ETC)		\$0	\$0	\$0	\$0	\$0
Approved Budget (PRSM)						
Difference (Budget - EAC)		\$0	\$0	\$0	\$0	\$0
Support Ratio (EAC / Cap Cost)		0.0%	0.0%	0.0%	0.0%	0.0%

Total Capital Cost:	\$2,178,000
Total Capital Outlay Support Cost:	\$0
Overall Percent Support Cost:	0.00%

PRSM workplan hours/costs verified
against approved MWA:

Office Chief -

Date

Approved by:

Project Control -

Date

PROJECT PLANNING COST ESTIMATE

EA: 01-LOCAL

EA: 01-LOCAL PID: EVCRCP

PID: EVCRCP

District-County-Route: 01-DN-EVCR

PM: 0.0 - 1.5

Type of Estimate : Programming

Program Code : k

Project Limits : Along Elk Valley Cross Road from Lake Earl Drive to Parkway Drive

Project Description: Median widening for Two-Way Left Turn Lane

Scope :

Alternative : Alternative B, Roadway Segment 1

SUMMARY OF PROJECT COST ESTIMATE

	Current Year Cost	Escalated Cost
TOTAL ROADWAY COST	\$ 1,279,400	\$ 1,421,757
TOTAL STRUCTURES COST	\$ -	\$ -
SUBTOTAL CONSTRUCTION COST	\$ 1,279,400	\$ 1,421,757
TOTAL RIGHT OF WAY COST	\$ 20,000	\$ 20,000
TOTAL CAPITAL OUTLAY COSTS	\$ 1,300,000	\$ 1,442,000
PR/ED SUPPORT	\$ -	\$ -
PS&E SUPPORT	\$ -	\$ -
RIGHT OF WAY SUPPORT	\$ -	\$ -
CONSTRUCTION SUPPORT	\$ -	\$ -
TOTAL SUPPORT COST	\$ -	\$ -

TOTAL PROJECT COST	\$ 1,300,000	\$ 1,450,000
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If Project has been programmed enter Programmed Amount \$ 250,000,000

Month / Year

Date of Estimate (Month/Year) 1 / 2020

Estimated Construction Start (Month/Year) 4 / 2024

Number of Working Days = 40

Estimated Mid-Point of Construction (Month/Year) 8 / 2024

Estimated Construction End (Month/Year) 12 / 2024

Number of Plant Establishment Days 261

Estimated Project Schedule

PID Approval	6/1/2024
PA/ED Approval	7/1/2022
PS&E	10/1/2023
RTL	12/1/2023
Begin Construction	4/1/2024

Reviewed by District O.E.

xx/xx/xxxx

(xxx) xxx-xxxx

Office Engineer

Date

Phone

Approved by Project
Manager

xx/xx/xxxx

(xxx) xxx-xxxx

Project Manager

Date

Phone

I. ROADWAY ITEMS SUMMARY

	Section	Cost
1	Earthwork	\$ 86,600
2	Pavement Structural Section	\$ 133,000
3	Drainage	\$ 375,000
4	Specialty Items	\$ 35,000
5	Environmental	\$ 49,700
6	Traffic Items	\$ 77,100
7	Detours	\$ -
8	Minor Items	\$ 75,700
9	Roadway Mobilization	\$ -
10	Supplemental Work	\$ 83,300
11	State Furnished	\$ 22,200
12	Time-Related Overhead	\$ -
13	Roadway Contingency	\$ 341,800
TOTAL ROADWAY ITEMS		\$ 1,279,400

Estimate Prepared By :

Name and Title	Date	Phone
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Estimate Reviewed By :

Name and Title	Date	Phone
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By signing this estimate you are attesting that you have discussed your project with all functional units and have incorporated all their comments or have discussed with them why they will not be incorporated.

SECTION 1: EARTHWORK

Item code		Unit	Quantity		Unit Price (\$)		Cost
190101	Roadway Excavation	CY	741	x	83.00	= \$	61,503
19010X	Roadway Excavation (Type X) ADL	CY		x		= \$	-
194001	Ditch Excavation	CY		x		= \$	-
19801X	Imported Borrow	CY/TON		x		= \$	-
192037	Structure Excavation (Retaining Wall)	CY		x		= \$	-
193013	Structure Backfill (Retaining Wall)	CY		x		= \$	-
193031	Pervious Backfill Material (Retaining Wall)	CY		x		= \$	-
16010X	Clearing & Grubbing	LS/ACRE	1	x	25,000.00	= \$	25,000
170101	Develop Water Supply	LS		x		= \$	-
19801X	Imported Borrow	CY/TON		x		= \$	-
210130	Duff	ACRE		x		= \$	-
XXXXXX	Some Item	Unit		x		= \$	-

TOTAL EARTHWORK SECTION ITEMS	\$	86,600
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SECTION 2: PAVEMENT STRUCTURAL SECTION

Item code		Unit	Quantity		Unit Price (\$)		Cost
401050	Jointed Plain Concrete Pavement	CY		x		= \$	-
400050	Continuously Reinforced Concrete Pavement	CY		x		= \$	-
404092	Seal Pavement Joint	LF		x		= \$	-
404093	Seal Isolation Joint	LF		x		= \$	-
413117	Seal Concrete Pavement Joint (Silicone)	LF		x		= \$	-
413118	Seal Pavement Joint (Asphalt Rubber)	LF		x		= \$	-
280010	Rapid Strength Concrete Base	CY		x		= \$	-
410095	Dowel Bar (Drill and Bond)	EA		x		= \$	-
390132	Hot Mix Asphalt (Type A)	TON	788	x	120.00	= \$	94,560
390137	Rubberized Hot Mix Asphalt (Gap Graded)	TON		x		= \$	-
39300X	Geosynthetic Pavement Interlayer (Type X)	SQYD		x		= \$	-
26020X	Class 2 Aggregate Base	TON/CY	204	x	90.00	= \$	18,360
290201	Asphalt Treated Permeable Base	CY		x		= \$	-
250401	Class 4 Aggregate Subbase	CY		x		= \$	-
374002	Asphaltic Emulsion (Fog Seal Coat)	TON		x		= \$	-
397005	Tack Coat	TON	10	x	2,000.00	= \$	20,000
377501	Slurry Seal	TON		x		= \$	-
3750XX	Screenings (Type XX)	TON		x		= \$	-
374492	Asphaltic Emulsion (Polymer Modified)	TON		x		= \$	-
370001	Sand Cover (Seal)	TON		x		= \$	-
731530	Minor Concrete (Textured Paving)	CY		x		= \$	-
731502	Minor Concrete (Miscellaneous Construction)	CY		x		= \$	-
39407X	Place Hot Mix Asphalt Dike (Type X)	LF		x		= \$	-
150771	Remove Asphalt Concrete Dike	LF		x		= \$	-
420201	Grind Existing Concrete Pavement	SQYD		x		= \$	-
150860	Remove Base and Surfacing	CY		x		= \$	-
390095	Replace Asphalt Concrete Surfacing	CY		x		= \$	-
15312X	Remove Concrete	LF/CY/LS		x		= \$	-
394090	Place Hot Mix Asphalt (Miscellaneous Area)	SQYD		x		= \$	-
153103	Cold Plane Asphalt Concrete Pavement	SQYD		x		= \$	-
39405X	Shoulder Rumble Strip (HMA, X-In Indentations)	STA		x		= \$	-
413113	Repair Spalled Joints, Polyester Grout	SQYD		x		= \$	-
420102	Groove Existing Concrete Pavement	SQYD		x		= \$	-
390136	Minor Hot Mix Asphalt	TON		x		= \$	-
394095	Roadside Paving (Miscellaneous Areas)	SQYD		x		= \$	-
XXXXXX	Some Item	Unit		x		= \$	-

TOTAL PAVEMENT STRUCTURAL SECTION ITEMS	\$	133,000
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SECTION 3: DRAINAGE

Item code		Unit	Quantity	Unit Price (\$)	Cost
15080X	Remove Culvert	EA/LF	x	= \$	-
150820	Modify Inlet	EA	x	= \$	-
155232	Sand Backfill	CY	x	= \$	-
15020X	Abandon Culvert	EA/LF	x	= \$	-
152430	Adjust Inlet	LF	x	= \$	-
155003	Cap Inlet	EA	x	= \$	-
510501	Minor Concrete	CY	x	= \$	-
510502	Minor Concrete (Minor Structure)	CY	x	= \$	-
5105XX	Minor Concrete (Type XX)	CY	x	= \$	-
620XXX	XX" Alternative Pipe Culvert (Type X)	LF	x	= \$	-
641107	18" Plastic Pipe	LF	1,500	x 250.00 = \$	375,000
65XXXX	XX" Reinforced Concrete Pipe (Type X)	LF	x	= \$	-
6650XX	XX" Corrugated Steel Pipe (0.XXX" Thick)	LF	x	= \$	-
68XXXX	XX" Plastic Pipe (Edge Drain)	LF	x	= \$	-
69011X	XX" Corrugated Steel Pipe Downrain (0.XXX" Thi	LF	x	= \$	-
70321X	XX" Corrugated Steel Pipe Inlet (0.XXX" Thick)	LF	x	= \$	-
70XXXX	XX" Corrugated Steel Pipe Riser (0.XXX" Thick)	LF	x	= \$	-
7050XX	XX" Steel Flared End Section	EA	x	= \$	-
703233	Grated Line Drain	LF	x	= \$	-
72XXXX	Rock Slope Protection (Type and Method)	CY/TON	x	= \$	-
72901X	Rock Slope Protection Fabric (Class X)	SQYD	x	= \$	-
721420	Concrete (Ditch Lining)	CY	x	= \$	-
721430	Concrete (Channel Lining)	CY	x	= \$	-
750001	Miscellaneous Iron and Steel	LB	x	= \$	-
XXXXXX	Additional Drainage	LS	x	= \$	-

TOTAL DRAINAGE ITEMS	\$	375,000
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SECTION 4: SPECIALTY ITEMS

Item code		Unit	Quantity	Unit Price (\$)	Cost
080050	Progress Schedule (Critical Path Method)	LS	1	x 5,000.00 = \$	5,000
582001	Sound Wall (Masonry Block)	SQFT	x	= \$	-
510530	Minor Concrete (Wall)	CY	x	= \$	-
15325X	Remove Sound Wall	LF/LS	x	= \$	-
070030	Lead Compliance Plan	LS	1	x 10,000.00 = \$	10,000
141120	Treated Wood Waste	LB	x	= \$	-
153221	Remove Concrete Barrier	LF	x	= \$	-
150662	Remove Metal Beam Guard Railing	LF	x	= \$	-
150668	Remove Flared End Section	EA	x	= \$	-
8000XX	Chain Link Fence (Type XX)	LF	x	= \$	-
80XXXX	XX" Chain Link Gate (Type CL-6)	EA	x	= \$	-
832001	Metal Beam Guard Railing	LF	x	= \$	-
839301	Single Thrie Beam Barrier	LF	x	= \$	-
839310	Double Thrie Beam Barrier	LF	x	= \$	-
839521	Cable Railing	LF	x	= \$	-
8395XX	Terminal System (Type CAT)	EA	x	= \$	-
839585	Alternative Flared Terminal System	EA	x	= \$	-
839584	Alternative In-line Terminal System	EA	x	= \$	-
4906XX	CIDH Concrete Piling (Insert Diameter)	LF	x	= \$	-
839XXX	Crash Cushion (Insert Type)	EA	x	= \$	-
83XXXX	Concrete Barrier (Insert Type)	LF	x	= \$	-
520103	Bar Reinforced Steel (Retaining Wall)	LB	x	= \$	-
510060	Structural Concrete, Retaining Wall	CY	x	= \$	-
513553	Retaining Wall (Masonry Wall)	SQFT	x	= \$	-
511035	Architectural Treatment	SQFT	x	= \$	-
598001	Anti-Graffiti Coating	SQFT	x	= \$	-
203070	Rock Stain	SQFT	x	= \$	-
5136XX	Reinforced Concrete Crib Wall (Type X)	SQFT	x	= \$	-
83954X	Transition Railing (Type X)	EA	x	= \$	-
597601	Prepare and Stain Concrete	SQFT	x	= \$	-
839561	Rail Tensioning Assembly	EA	x	= \$	-
83958X	End Anchor Assembly (Type X)	EA	x	= \$	-
XXXXXX	Relocate Utility Pole	EA	2	x 10,000.00 = \$	20,000

TOTAL SPECIALTY ITEMS	\$	35,000
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SECTION 5: ENVIRONMENTAL**5A - ENVIRONMENTAL MITIGATION**

Item code	Unit	Quantity	Unit Price (\$)	Cost
	LS	x	= \$	-
160120 Biological Mitigation	EA	1	10,000.00	10,000
141000 Remove Tree	LF	1,000	5.00	5,000
Temporary Fence (Type ESA)				
Subtotal Environmental Mitigation				\$ 15,000

5B - LANDSCAPE AND IRRIGATION

Item code	Unit	Quantity	Unit Price (\$)	Cost
20XXXX Highway Planting	LS	x	= \$	-
20XXXX Irrigation System	LS	x	= \$	-
204099 Plant Establishment Work	LS	x	= \$	-
204101 Extend Plant Establishment Work	LS	x	= \$	-
20XXXX Follow-up Landscape Project	LS	x	= \$	-
150685 Remove Irrigation Facility	LS	x	= \$	-
20XXXX Maintain Existing (Irrigation or Planted Areas)	LS	x	= \$	-
206400 Check and Test Existing Irrigation Facilities	LS	x	= \$	-
21011X Imported Topsoil (X)	CY/TON	x	= \$	-
20XXXX Rock Blanket, Rock Mulch, DG, Gravel Mulch	SQFT/SQYD	x	= \$	-
200122 Weed Germination	SQYD	x	= \$	-
208304 Water Meter	EA	x	= \$	-
2087XX XX" Conduit (Use for Irrigation x-overs)	LF	x	= \$	-
20890X Extended Conduit (Use for Extension of Irrigation x-overs)	LF	x	= \$	-
Subtotal Landscape and Irrigation				\$ -

5C - EROSION CONTROL

Item code	Unit	Quantity	Unit Price (\$)	Cost
210010 Move In/Move Out (Erosion Control)	EA	x	= \$	-
210350 Fiber Rolls	LF	1000	5	5,000
210360 Compost Sock	LF	x	= \$	-
2102XX Rolled Erosion Control Product (X)	SQFT	x	= \$	-
21025X Bonded Fiber Matrix	SQFT/ACRE	x	= \$	-
210300 Hydromulch	SQFT	x	= \$	-
210420 Straw	SQFT	x	= \$	-
210430 Hydroseed	SQFT	x	= \$	-
210600 Compost	SQFT	x	= \$	-
210630 Incorporate Materials	SQFT	x	= \$	-
Subtotal Erosion Control				\$ 5,000

5D - NPDES

Item code	Unit	Quantity	Unit Price (\$)	Cost
130300 Prepare SWPPP	LS	x	= \$	-
130200 Prepare WPCP	LS	1	2,500.00	2,500
130100 Job Site Management	LS	1	7,500.00	7,500
130330 Storm Water Annual Report	EA	1	2,000.00	2,000
130310 Rain Event Action Plan (REAP)	EA	1	550.00	550
130320 Storm Water Sampling and Analysis Day	EA	1	575.00	575
130520 Temporary Hydraulic Mulch	SQYD	x	= \$	-
130550 Temporary Hydroseed	SQYD	x	= \$	-
130505 Move-In/Move-Out (Temporary Erosion Control)	EA	1	1,500.00	1,500
130640 Temporary Fiber Roll	LF	x	= \$	-
130900 Temporary Concrete Washout	LS	x	= \$	-
130710 Temporary Construction Entrance	EA	x	= \$	-
130610 Temporary Check Dam	LF	x	= \$	-
130620 Temporary Drainage Inlet Protection	EA	x	= \$	-
130730 Street Sweeping	LS	1	15,000.00	15,000
Subtotal NPDES				\$ 29,625

Supplemental Work for NPDES

066595 Water Pollution Control Maintenance Sharing*	LS	1	10,000.00	10,000
066596 Additional Water Pollution Control**	LS	1	10,000.00	10,000
066597 Storm Water Sampling and Analysis***	LS	1	10,000.00	10,000
XXXXXX Some Item	LS	x	= \$	-
Subtotal Supplemental Work for NDPS				\$ 30,000

*Applies to all SWPPPs and those WPCPs with sediment control or soil stabilization BMPs.

**Applies to both SWPPPs and WPCP projects.

*** Applies only to project with SWPPPs.

TOTAL ENVIRONMENTAL	\$ 49,700
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SECTION 6: TRAFFIC ITEMS**6A - Traffic Electrical**

Item code		Unit	Quantity		Unit Price (\$)		Cost
860460	Lighting and Sign Illumination	LS	1	x	10,000.00	= \$	10,000
860201	Signal and Lighting	LS		x		= \$	-
860990	Closed Circuit Television System	LS		x		= \$	-
86110X	Ramp Metering System (Location X)	LS		x		= \$	-
86070X	Interconnection Conduit and Cable	LF/LS		x		= \$	-
5602XX	Furnish Sign Structure (Type X)	LB		x		= \$	-
5602XX	Install Sign Structure (Type X)	LB		x		= \$	-
498040	XX" CIDHC Pile (Sign Foundation)	LF		x		= \$	-
86080X	Inductive Loop Detectors	EA/LS		x		= \$	-
8609XX	Traffic Monitoring Station (Type X)	LS		x		= \$	-
15075X	Remove Sign Structure	EA/LS		x		= \$	-
151581	Reconstruct Sign Structure	EA		x		= \$	-
152641	Modify Sign Structure	EA		x		= \$	-
860090	Maintain Existing Traffic Management System Eler	LS		x		= \$	-
86XXXX	Fiber Optic Conduit System	LS		x		= \$	-
XXXXX	Some Item	Unit		x		= \$	-
Subtotal Traffic Electrical							\$ 10,000

6B - Traffic Signing and Striping

Item code		Unit	Quantity		Unit Price (\$)		Cost
566011	Roadside Sign - One Post	EA	3	x	10,000.00	= \$	30,000
566012	Roadside Sign - Two Post	EA		x		= \$	-
5602XX	Furnish Sign	SQFT		x		= \$	-
568016	Install Sign Panel on Existing Frame	SQFT		x		= \$	-
150711	Remove Painted Traffic Stripe	LF		x		= \$	-
141101	Remove Yellow Painted Traffic Stripe (Hazardous Waste)	LF		x		= \$	-
150712	Remove Painted Pavement Marking	SQFT		x		= \$	-
150742	Remove Roadside Sign	EA	3	x	500.00	= \$	1,500
152320	Reset Roadside Sign	EA		x		= \$	-
152390	Relocate Roadside Sign	EA		x		= \$	-
82010X	Delineator (Class X)	EA		x		= \$	-
840502	Thermoplastic Traffic Stripe (Enhanced Wet Night)	LF	2,900	x	3.30	= \$	9,570
846012	Thermoplastic Crosswalk and Pavement Marking (E)	SQFT		x		= \$	-
120090	Construction Area Signs	LS	1	x	10,000.00	= \$	10,000
84XXXX	Permanent Pavement Delineation	LS		x		= \$	-
Subtotal Traffic Signing and Striping							\$ 51,070

6C - Traffic Management Plan

Item code		Unit	Quantity		Unit Price (\$)		Cost
12865X	Portable Changeable Message Signs	EA/LS	4	x	\$ 1,500	= \$	6,000
Subtotal Traffic Management Plan							\$ 6,000

6C - Stage Construction and Traffic Handling

Item code		Unit	Quantity		Unit Price (\$)		Cost
120199	Traffic Plastic Drum	EA		x		= \$	-
12016X	Channelizer (Type X)	EA		x		= \$	-
120120	Type III Barricade	EA		x		= \$	-
129100	Temporary Crash Cushion Module	EA		x		= \$	-
120100	Traffic Control System	LS	1	x	10,000.00	= \$	10,000
129110	Temporary Crash Cushion	EA		x		= \$	-
129000		LF		x		= \$	-
120149	Temporary Pavement Marking (Paint)	SQFT		x		= \$	-
82010X	Delineator (Class X)	EA		x		= \$	-
XXXXXX	Some Item	Unit		x		= \$	-
Subtotal Stage Construction and Traffic Handling							\$ 10,000

TOTAL TRAFFIC ITEMS	\$ 77,100
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SECTION 7: DETOURS

Includes constructing, maintaining, and removal

Item code		Unit	Quantity	Unit Price (\$)	Cost
190101	Roadway Excavation	CY	x	= \$	-
19801X	Imported Borrow	CY/TON	x	= \$	-
390132	Hot Mix Asphalt (Type A)	TON	x	= \$	-
26020X	Class 2 Aggregate Base	TON/CY	x	= \$	-
250401	Class 4 Aggregate Subbase	CY	x	= \$	-
130620	Temporary Drainage Inlet Protection	EA	x	= \$	-
129000	Temporary Railing (Type K)	LF	x	= \$	-
128601	Temporary Signal System	LS	x	= \$	-
120149	Temporary Pavement Marking (Paint)	SQFT	x	= \$	-
80010X	Temporary Fence (Type X)	LF	x	= \$	-
XXXXXX	Some Item	LS	x	5,000,000 = \$	-

* Includes constructing, maintaining, and removal

TOTAL DETOURS	\$	-
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SUBTOTAL SECTIONS 1 through 7	\$	756,400
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SECTION 8: MINOR ITEMS**8A - Americans with Disabilities Act Items**

ADA Items

1.0% \$ 7,564

8B - Bike Path Items

Bike Path Items

1.0% \$ 7,564

8C - Other Minor Items

Other Minor Items

8.0% \$ 60,512

Total of Section 1-7	\$	756,400	x	10.0%	= \$	75,640
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TOTAL MINOR ITEMS	\$	75,700
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SECTIONS 9: MOBILIZATION

Item code

999990

Total Section 1-8

\$	832,100	x	10%	= \$	-
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TOTAL MOBILIZATION	\$	-
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SECTION 10: SUPPLEMENTAL WORK

Item code		Unit	Quantity	Unit Price (\$)	Cost
066670	Payment Adjustments For Price Index Fluctuations	LS	x	= \$	-
066094	Value Analysis	LS	1	x 10,000.00 = \$	10,000
066070	Maintain Traffic	LS	1	x 10,000.00 = \$	10,000
066919	Dispute Resolution Board	LS	x	= \$	-
066921	Dispute Resolution Advisor	LS	x	= \$	-
066015	Federal Trainee Program	LS	x	= \$	-
066610	Partnering	LS	x	= \$	-
066204	Remove Rock and Debris	LS	x	= \$	-
066222	Locate Existing Crossover	LS	x	= \$	-
XXXXXX	Some Item	Unit	x	= \$	-

Cost of NPDES Supplemental Work specified in Section 5D	= \$	30,000
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Total Section 1-8	\$	832,100	4%	= \$	33,284
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TOTAL SUPPLEMENTAL WORK	\$	83,300
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SECTION 11: STATE FURNISHED MATERIALS AND EXPENSES

Item code		Unit	Quantity		Unit Price (\$)		Cost
066105	Resident Engineers Office	LS	1	x	500.00	=	\$500
066063	Traffic Management Plan - Public Information	LS	1	x	2,500.00	=	\$2,500
066901	Water Expenses	LS		x		=	\$0
8609XX	Traffic Monitoring Station (X)	LS		x		=	\$0
066841	Traffic Controller Assembly	LS		x		=	\$0
066840	Traffic Signal Controller Assembly	LS		x		=	\$0
066062	COZEEP Contract	LS		x		=	\$0
066838	Reflective Numbers and Edge Sealer	LS		x		=	\$0
066065	Tow Truck Service Patrol	LS		x		=	\$0
066916	Annual Construction General Permit Fee	LS	1	x	2,500.00	=	\$2,500
XXXXXX	Some Item	Unit		x		=	\$0
Total Section 1-8		\$	832,100		2%	= \$	16,642

TOTAL STATE FURNISHED	\$22,200
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SECTION 12: TIME-RELATED OVERHEAD

Total of Roadway and Structures Contract Items excluding Mobilization \$832,100 (used to calculate TRO)
Total Construction Cost (excluding TRO and Contingency) \$937,600 (used to check if project is greater than \$5 million excluding contingency)

Estimated Time-Related Overhead (TRO) Percentage (0% to 10%) = **10%**

Item code		Unit	Quantity		Unit Price (\$)		Cost
070018	Time-Related Overhead	WD	40	X	\$0	=	\$0

TOTAL TIME-RELATED OVERHEAD	\$0
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Note: If the building portion of the project is greater than 50% of the total project cost, then TRO is not included.

SECTION 13: ROADWAY CONTINGENCY

Recommended Contingency: (Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Total Section 1-11 \$ 854,300 x **40%** = \$341,720

TOTAL CONTINGENCY	\$341,800
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II. STRUCTURE ITEMS

	<u>Bridge 1</u>		<u>Bridge 2</u>		
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Bridge Name	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Bridge Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot	\$150		\$150		\$0
COST OF EACH	\$0		\$0		\$0

	<u>Building 1</u>				
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Building Name	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Building Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot	\$300		\$0		\$0
COST OF EACH	\$0		\$0		\$0

TOTAL COST OF BRIDGES	\$0
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TOTAL COST OF BUILDINGS	\$0
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Structures Mobilization Percentage	10%	\$0
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Recommended Contingency: (Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Structures Contingency Percentage	10%	\$0
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TOTAL COST OF STRUCTURES	\$0
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Estimate Prepared By: _____
 XXXXXXXXXXXXXXXXXXXX ----- Division of Structures

 Date

III. RIGHT OF WAY

Fill in all of the available information from the Right of Way data sheet.

A)	A1)	Acquisition, including Excess Land Purchases, Damages & Goodwill, Fees	\$	0
	A2)	SB-1210	\$	0
B)		Acquisition of Offsite Mitigation	\$	0
C)	C1)	Utility Relocation (State Share)	\$	0
	C2)	Potholing (Design Phase)	\$	20,000
D)		Railroad Acquisition	\$	0
E)		Clearance / Demolition	\$	0
F)		Relocation Assistance (RAP and/or Last Resort Housing Costs)	\$	0
G)		Title and Escrow	\$	0
H)		Environmental Review	\$	0
I)		Condemnation Settlements <u>0%</u>	\$	0
J)		Design Appreciation Factor <u>0%</u>	\$	0
K)		Utility Relocation (Construction Cost)	\$	0

L)	TOTAL RIGHT OF WAY ESTIMATE	\$20,000
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M)	TOTAL R/W ESTIMATE: Escalated	\$20,000
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N)	RIGHT OF WAY SUPPORT	\$0
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Support Cost Estimate
Prepared By _____ Project Coordinator¹ _____ Phone _____

Utility Estimate Prepared
By _____ Utility Coordinator² _____ Phone _____

R/W Acquisition Estimate
Prepared By _____ Right of Way Estimator³ _____ Phone _____

Note: Items G & H applied to items A + B

¹ When estimate has Support Costs only² When estimate has Utility Relocation³ When R/W Acquisition is required

EA: 01-LOCAL PID: EVCRCP

IV. SUPPORT COST ESTIMATE SUMMARY

Note: Use PRSM project data.

Total by FY		Escalated Support Cost for Estimate To Completion (ETC)				
		PA&ED	PS&E	RW	CON	Total \$
< 2010	Expended					
	ETC					
2011	Expended					
	ETC					
2012	Expended					
	ETC					
2013	Expended					
	ETC					
2014	Expended					
	ETC					
2015	Expended					
	ETC					
2016	Expended					
	ETC					
2017	Expended					
	ETC					
2018	Expended					
	ETC					
2019	Expended					
	ETC					
2020	Expended					
	ETC					
2021	Expended					
	ETC					
2022	Expended					
	ETC					
2023	Expended					
	ETC					
2024	Expended					
	ETC					
2025 >	Expended					
	ETC					
EAC (Expended + ETC)		\$0	\$0	\$0	\$0	\$0
Approved Budget (PRSM)						
Difference (Budget - EAC)		\$0	\$0	\$0	\$0	\$0
Support Ratio (EAC / Cap Cost)		0.0%	0.0%	0.0%	0.0%	0.0%

Total Capital Cost:	\$1,300,000
Total Capital Outlay Support Cost:	\$0
Overall Percent Support Cost:	0.00%

PRSM workplan hours/costs verified
against approved MWA:

Office Chief -

Date

Approved by:

Project Control -

Date

PROJECT

PLANNING COST ESTIMATE

EA: 01-LOCAL

EA: 01-LOCAL PID: EVCRCP

PID: EVCRCP

District-County-Route: 01-DN-EVCR

PM: 0.0 - 1.5

Type of Estimate : Programming

Program Code : k

Project Limits : Along Elk Valley Cross Road from Lake Earl Drive to Parkway Drive

Project Description: Median widening for Two-Way Left Turn Lane.

Scope :

Alternative : Alternative B, Roadway Segment 2 (L=3,340ft)

SUMMARY OF PROJECT COST ESTIMATE

	Current Year Cost	Escalated Cost
TOTAL ROADWAY COST	\$ 6,185,800	\$ 6,874,084
TOTAL STRUCTURES COST	\$ -	\$ -
SUBTOTAL CONSTRUCTION COST	\$ 6,185,800	\$ 6,874,084
TOTAL RIGHT OF WAY COST	\$ 417,600	\$ 417,600
TOTAL CAPITAL OUTLAY COSTS	\$ 6,604,000	\$ 7,292,000
PR/ED SUPPORT	\$ -	\$ -
PS&E SUPPORT	\$ -	\$ -
RIGHT OF WAY SUPPORT	\$ -	\$ -
CONSTRUCTION SUPPORT	\$ -	\$ -
TOTAL SUPPORT COST	\$ -	\$ -

TOTAL PROJECT COST	\$ 6,650,000	\$ 7,300,000
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If Project has been programmed enter Programmed Amount

Month / Year

Date of Estimate (Month/Year) 1 / 2020

Estimated Construction Start (Month/Year) 1 / 2023

Number of Working Days = 1305

Estimated Mid-Point of Construction (Month/Year) 6 / 2020

Estimated Construction End (Month/Year) 12 / 2023

Number of Plant Establishment Days 261

Estimated Project Schedule

PID Approval	6/1/2021
PA/ED Approval	7/1/2022
PS&E	10/1/2023
RTL	12/1/2023
Begin Construction	4/1/2024

Reviewed by District O.E.

xx/xx/xxxx

(xxx) xxx-xxxx

Office Engineer

Date

Phone

Approved by Project
Manager

xx/xx/xxxx

(xxx) xxx-xxxx

Project Manager

Date

Phone

I. ROADWAY ITEMS SUMMARY

	Section	Cost
1	Earthwork	\$ 378,500
2	Pavement Structural Section	\$ 618,000
3	Drainage	\$ 1,670,000
4	Specialty Items	\$ 135,000
5	Environmental	\$ 282,800
6	Traffic Items	\$ 182,100
7	Detours	\$ -
8	Minor Items	\$ 326,700
9	Roadway Mobilization	\$ 359,400
10	Supplemental Work	\$ 193,800
11	State Furnished	\$ 111,900
12	Time-Related Overhead	\$ 215,600
13	Roadway Contingency	\$ 1,712,000
TOTAL ROADWAY ITEMS		\$ 6,185,800

Estimate Prepared By :

Name and Title	Date	Phone
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Estimate Reviewed By :

Name and Title	Date	Phone
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By signing this estimate you are attesting that you have discussed your project with all functional units and have incorporated all their comments or have discussed with them why they will not be incorporated.

SECTION 1: EARTHWORK

Item code		Unit	Quantity		Unit Price (\$)		Cost
190101	Roadway Excavation	CY	3,897	x	83.00	= \$	323,451
19010X	Roadway Excavation (Type X) ADL	CY		x		= \$	-
194001	Ditch Excavation	CY		x		= \$	-
19801X	Imported Borrow	CY/TON		x		= \$	-
192037	Structure Excavation (Retaining Wall)	CY		x		= \$	-
193013	Structure Backfill (Retaining Wall)	CY		x		= \$	-
193031	Pervious Backfill Material (Retaining Wall)	CY		x		= \$	-
16010X	Clearing & Grubbing	LS/ACRE	1	x	55,000.00	= \$	55,000
170101	Develop Water Supply	LS		x		= \$	-
19801X	Imported Borrow	CY/TON		x		= \$	-
210130	Duff	ACRE		x		= \$	-
XXXXXX	Some Item	Unit		x		= \$	-

TOTAL EARTHWORK SECTION ITEMS	\$	378,500
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SECTION 2: PAVEMENT STRUCTURAL SECTION

Item code		Unit	Quantity		Unit Price (\$)		Cost
401050	Jointed Plain Concrete Pavement	CY		x		= \$	-
400050	Continuously Reinforced Concrete Pavement	CY		x		= \$	-
404092	Seal Pavement Joint	LF		x		= \$	-
404093	Seal Isolation Joint	LF		x		= \$	-
413117	Seal Concrete Pavement Joint (Silicone)	LF		x		= \$	-
413118	Seal Pavement Joint (Asphalt Rubber)	LF		x		= \$	-
280010	Rapid Strength Concrete Base	CY		x		= \$	-
410095	Dowel Bar (Drill and Bond)	EA		x		= \$	-
390132	Hot Mix Asphalt (Type A)	TON	2,630	x	130.00	= \$	341,900
390137	Rubberized Hot Mix Asphalt (Gap Graded)	TON		x		= \$	-
39300X	Geosynthetic Pavement Interlayer (Type X)	SQYD		x		= \$	-
26020X	Class 2 Aggregate Base	CY	2,845	x	90.00	= \$	256,050
290201	Asphalt Treated Permeable Base	CY		x		= \$	-
250401	Class 4 Aggregate Subbase	CY		x		= \$	-
374002	Asphaltic Emulsion (Fog Seal Coat)	TON		x		= \$	-
397005	Tack Coat	TON	10	x	2,000.00	= \$	20,000
377501	Slurry Seal	TON		x		= \$	-
3750XX	Screenings (Type XX)	TON		x		= \$	-
374492	Asphaltic Emulsion (Polymer Modified)	TON		x		= \$	-
370001	Sand Cover (Seal)	TON		x		= \$	-
731530	Minor Concrete (Textured Paving)	CY		x		= \$	-
731502	Minor Concrete (Miscellaneous Construction)	CY		x		= \$	-
39407X	Place Hot Mix Asphalt Dike (Type X)	LF		x		= \$	-
150771	Remove Asphalt Concrete Dike	LF		x		= \$	-
420201	Grind Existing Concrete Pavement	SQYD		x		= \$	-
150860	Remove Base and Surfacing	CY		x		= \$	-
390095	Replace Asphalt Concrete Surfacing	CY		x		= \$	-
15312X	Remove Concrete	LF/CY/LS		x		= \$	-
394090	Place Hot Mix Asphalt (Miscellaneous Area)	SQYD		x		= \$	-
153103	Cold Plane Asphalt Concrete Pavement	SQYD		x		= \$	-
39405X	Shoulder Rumble Strip (HMA, X-In Indentations)	STA		x		= \$	-
413113	Repair Spalled Joints, Polyester Grout	SQYD		x		= \$	-
420102	Groove Existing Concrete Pavement	SQYD		x		= \$	-
390136	Minor Hot Mix Asphalt	TON		x		= \$	-
394095	Roadside Paving (Miscellaneous Areas)	SQYD		x		= \$	-
XXXXXX	Some Item	Unit		x		= \$	-

TOTAL PAVEMENT STRUCTURAL SECTION ITEMS	\$	618,000
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SECTION 3: DRAINAGE

Item code		Unit	Quantity	Unit Price (\$)		Cost
15080X	Remove Culvert	EA/LF	x	= \$		-
150820	Modify Inlet	EA	x	= \$		-
155232	Sand Backfill	CY	x	= \$		-
15020X	Abandon Culvert	EA/LF	x	= \$		-
152430	Adjust Inlet	LF	x	= \$		-
155003	Cap Inlet	EA	x	= \$		-
510501	Minor Concrete	CY	x	= \$		-
510502	Minor Concrete (Minor Structure)	CY	x	= \$		-
5105XX	Minor Concrete (Type XX)	CY	x	= \$		-
620XXX	XX" Alternative Pipe Culvert (Type X)	LF	x	= \$		-
641107	18" Plastic Pipe	LF	6,680	x 250.00	= \$	1,670,000
65XXXX	XX" Reinforced Concrete Pipe (Type X)	LF	x	= \$		-
6650XX	XX" Corrugated Steel Pipe (0.XXX" Thick)	LF	x	= \$		-
68XXXX	XX" Plastic Pipe (Edge Drain)	LF	x	= \$		-
69011X	XX" Corrugated Steel Pipe Downrain (0.XXX" Thi	LF	x	= \$		-
70321X	XX" Corrugated Steel Pipe Inlet (0.XXX" Thick)	LF	x	= \$		-
70XXXX	XX" Corrugated Steel Pipe Riser (0.XXX" Thick)	LF	x	= \$		-
7050XX	XX" Steel Flared End Section	EA	x	= \$		-
703233	Grated Line Drain	LF	x	= \$		-
72XXXX	Rock Slope Protection (Type and Method)	CY/TON	x	= \$		-
72901X	Rock Slope Protection Fabric (Class X)	SQYD	x	= \$		-
721420	Concrete (Ditch Lining)	CY	x	= \$		-
721430	Concrete (Channel Lining)	CY	x	= \$		-
750001	Miscellaneous Iron and Steel	LB	x	= \$		-
XXXXXX	Additional Drainage	LS	x	= \$		-

TOTAL DRAINAGE ITEMS	\$ 1,670,000
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SECTION 4: SPECIALTY ITEMS

Item code		Unit	Quantity	Unit Price (\$)		Cost
080050	Progress Schedule (Critical Path Method)	LS	1	x 5,000.00	= \$	5,000
582001	Sound Wall (Masonry Block)	SQFT	x	= \$		-
510530	Minor Concrete (Wall)	CY	x	= \$		-
15325X	Remove Sound Wall	LF/LS	x	= \$		-
070030	Lead Compliance Plan	LS	1	x 10,000.00	= \$	10,000
141120	Treated Wood Waste	LB	x	= \$		-
153221	Remove Concrete Barrier	LF	x	= \$		-
150662	Remove Metal Beam Guard Railing	LF	x	= \$		-
150668	Remove Flared End Section	EA	x	= \$		-
8000XX	Chain Link Fence (Type XX)	LF	x	= \$		-
80XXXX	XX" Chain Link Gate (Type CL-6)	EA	x	= \$		-
832001	Metal Beam Guard Railing	LF	x	= \$		-
839301	Single Thrie Beam Barrier	LF	x	= \$		-
839310	Double Thrie Beam Barrier	LF	x	= \$		-
839521	Cable Railing	LF	x	= \$		-
8395XX	Terminal System (Type CAT)	EA	x	= \$		-
839585	Alternative Flared Terminal System	EA	x	= \$		-
839584	Alternative In-line Terminal System	EA	x	= \$		-
4906XX	CIDH Concrete Piling (Insert Diameter)	LF	x	= \$		-
839XXX	Crash Cushion (Insert Type)	EA	x	= \$		-
83XXXX	Concrete Barrier (Insert Type)	LF	x	= \$		-
520103	Bar Reinforced Steel (Retaining Wall)	LB	x	= \$		-
510060	Structural Concrete, Retaining Wall	CY	x	= \$		-
513553	Retaining Wall (Masonry Wall)	SQFT	x	= \$		-
511035	Architectural Treatment	SQFT	x	= \$		-
598001	Anti-Graffiti Coating	SQFT	x	= \$		-
203070	Rock Stain	SQFT	x	= \$		-
5136XX	Reinforced Concrete Crib Wall (Type X)	SQFT	x	= \$		-
83954X	Transition Railing (Type X)	EA	x	= \$		-
597601	Prepare and Stain Concrete	SQFT	x	= \$		-
839561	Rail Tensioning Assembly	EA	x	= \$		-
83958X	End Anchor Assembly (Type X)	EA	x	= \$		-
XXXXXX	Relocate Utility Pole	EA	12	x 10,000.00	= \$	120,000

TOTAL SPECIALTY ITEMS	\$ 135,000
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SECTION 5: ENVIRONMENTAL**5A - ENVIRONMENTAL MITIGATION**

Item code	Unit	Quantity	Unit Price (\$)	Cost
Biological Mitigation	LS	x	= \$	-
130670 Remove Tree	LF	400	250.00 = \$	100,000
141000 Temporary Fence (Type ESA)	LF	5,845	5.00 = \$	29,225
<i>Subtotal Environmental Mitigation</i>				<i>\$ 129,225</i>

5B - LANDSCAPE AND IRRIGATION

Item code	Unit	Quantity	Unit Price (\$)	Cost
20XXXX Highway Planting	LS	x	= \$	-
20XXXX Irrigation System	LS	x	= \$	-
204099 Plant Establishment Work	LS	1	10,000.00 = \$	10,000
204101 Extend Plant Establishment Work	LS	x	= \$	-
20XXXX Follow-up Landscape Project	LS	x	= \$	-
150685 Remove Irrigation Facility	LS	x	= \$	-
20XXXX Maintain Existing (Irrigation or Planted Areas)	LS	x	= \$	-
206400 Check and Test Existing Irrigation Facilities	LS	x	= \$	-
21011X Imported Topsoil (X)	CY/TON	x	= \$	-
20XXXX Rock Blanket, Rock Mulch, DG, Gravel Mulch	SQFT/SQYD	x	= \$	-
200122 Weed Germination	SQYD	x	= \$	-
208304 Water Meter	EA	x	= \$	-
2087XX XX" Conduit (Use for Irrigation x-overs)	LF	x	= \$	-
20890X Extended Conduit (Use for Extension of Irrigation x-overs)	LF	x	= \$	-
<i>Subtotal Landscape and Irrigation</i>				<i>\$ 10,000</i>

5C - EROSION CONTROL

Item code	Unit	Quantity	Unit Price (\$)	Cost
210010 Move In/Move Out (Erosion Control)	EA	x	= \$	-
210350 Fiber Rolls	LF	6680	5 = \$	33,400
210360 Compost Sock	LF	x	= \$	-
2102XX Rolled Erosion Control Product (X)	SQFT	x	= \$	-
21025X Bonded Fiber Matrix	SQFT/ACRE	x	= \$	-
210300 Hydromulch	SQFT	x	= \$	-
210420 Straw	SQFT	x	= \$	-
210430 Hydroseed	SQFT	x	= \$	-
210600 Compost	SQFT	x	= \$	-
210630 Incorporate Materials	SQFT	x	= \$	-
<i>Subtotal Erosion Control</i>				<i>\$ 33,400</i>

5D - NPDES

Item code	Unit	Quantity	Unit Price (\$)	Cost
130300 Prepare SWPPP	LS	1	10,000.00 = \$	10,000
130200 Prepare WPCP	LS	x	= \$	-
130100 Job Site Management	LS	1	7,500.00 = \$	7,500
130330 Storm Water Annual Report	EA	2	2,000.00 = \$	4,000
130310 Rain Event Action Plan (REAP)	EA	6	550.00 = \$	3,300
130320 Storm Water Sampling and Analysis Day	EA	6	575.00 = \$	3,450
130520 Temporary Hydraulic Mulch	SQYD	x	= \$	-
130550 Temporary Hydroseed	SQYD	x	= \$	-
130505 Move-In/Move-Out (Temporary Erosion Control)	EA	2	1,500.00 = \$	3,000
130640 Temporary Fiber Roll	LF	6,680	5.00 = \$	33,400
130900 Temporary Concrete Washout	LS	1	2,500.00 = \$	2,500
130710 Temporary Construction Entrance	EA	2	4,000.00 = \$	8,000
130610 Temporary Check Dam	LF	x	= \$	-
130620 Temporary Drainage Inlet Protection	EA	x	= \$	-
130730 Street Sweeping	LS	1	35,000.00 = \$	35,000
<i>Subtotal NPDES</i>				<i>\$ 110,150</i>

Supplemental Work for NPDES

066595 Water Pollution Control Maintenance Sharing*	LS	1	10,000.00 = \$	10,000
066596 Additional Water Pollution Control**	LS	1	10,000.00 = \$	10,000
066597 Storm Water Sampling and Analysis***	LS	1	10,000.00 = \$	10,000
XXXXXX Some Item	LS	x	= \$	-
<i>Subtotal Supplemental Work for NPDES</i>				<i>\$ 30,000</i>

*Applies to all SWPPPs and those WPCPs with sediment control or soil stabilization BMPs.

**Applies to both SWPPPs and WPCP projects.

*** Applies only to project with SWPPPs.

TOTAL ENVIRONMENTAL	\$ 282,800
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SECTION 6: TRAFFIC ITEMS**6A - Traffic Electrical**

Item code	Unit	Quantity	Unit Price (\$)	Cost
860460 Lighting and Sign Illumination	LS	1 x	10,000.00 = \$	10,000
860201 Signal and Lighting	LS	x	= \$	-
860990 Closed Circuit Television System	LS	x	= \$	-
86110X Ramp Metering System (Location X)	LS	x	= \$	-
86070X Interconnection Conduit and Cable	LF/LS	x	= \$	-
5602XX Furnish Sign Structure (Type X)	LB	x	= \$	-
5602XX Install Sign Structure (Type X)	LB	x	= \$	-
498040 XX" CIDHC Pile (Sign Foundation)	LF	x	= \$	-
86080X Inductive Loop Detectors	EA/LS	x	= \$	-
8609XX Traffic Monitoring Station (Type X)	LS	x	= \$	-
15075X Remove Sign Structure	EA/LS	x	= \$	-
151581 Reconstruct Sign Structure	EA	x	= \$	-
152641 Modify Sign Structure	EA	x	= \$	-
860090 Maintain Existing Traffic Management System Eler	LS	x	= \$	-
86XXXX Fiber Optic Conduit System	LS	x	= \$	-
XXXXX Some Item	Unit	x	= \$	-
Subtotal Traffic Electrical				\$ 10,000

6B - Traffic Signing and Striping

Item code	Unit	Quantity	Unit Price (\$)	Cost
566011 Roadside Sign - One Post	EA	9 x	500.00 = \$	4,500
566012 Roadside Sign - Two Post	EA	x	= \$	-
5602XX Furnish Sign	SQFT	x	= \$	-
568016 Install Sign Panel on Existing Frame	SQFT	x	= \$	-
150711 Remove Painted Traffic Stripe	LF	x	= \$	-
141101 Remove Yellow Painted Traffic Stripe (Hazardous Waste)	LF	x	= \$	-
150712 Remove Painted Pavement Marking	SQFT	x	= \$	-
150742 Remove Roadside Sign	EA	9 x	500.00 = \$	4,500
152320 Reset Roadside Sign	EA	x	= \$	-
152390 Relocate Roadside Sign	EA	x	= \$	-
82010X Delineator (Class X)	EA	x	= \$	-
840502 Thermoplastic Traffic Stripe (Enhanced Wet Night)	LF	13,360 x	3.30 = \$	44,088
846012 Thermoplastic Crosswalk and Pavement Marking (E)	SQFT	x	= \$	-
120090 Construction Area Signs	LS	1 x	10,000.00 = \$	10,000
84XXXX Permanent Pavement Delineation	LS	x	= \$	-
Subtotal Traffic Signing and Striping				\$ 63,088

6C - Traffic Management Plan

Item code	Unit	Quantity	Unit Price (\$)	Cost
12865X Portable Changeable Message Signs	EA/LS	6 x	\$ 1,500 = \$	9,000
Subtotal Traffic Management Plan				\$ 9,000

6C - Stage Construction and Traffic Handling

Item code	Unit	Quantity	Unit Price (\$)	Cost
120199 Traffic Plastic Drum	EA	x	= \$	-
12016X Channelizer (Type X)	EA	x	= \$	-
120120 Type III Barricade	EA	x	= \$	-
129100 Temporary Crash Cushion Module	EA	x	= \$	-
120100 Traffic Control System	LS	1 x	100,000.00 = \$	100,000
129110 Temporary Crash Cushion	EA	x	= \$	-
129000	LF	x	= \$	-
120149 Temporary Pavement Marking (Paint)	SQFT	x	= \$	-
82010X Delineator (Class X)	EA	x	= \$	-
XXXXXX Some Item	Unit	x	= \$	-
Subtotal Stage Construction and Traffic Handling				\$ 100,000

TOTAL TRAFFIC ITEMS	\$ 182,100
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SECTION 7: DETOURS

Includes constructing, maintaining, and removal

Item code	Unit	Quantity	Unit Price (\$)	Cost
190101 Roadway Excavation	CY	x	= \$	-
19801X Imported Borrow	CY/TON	x	= \$	-
390132 Hot Mix Asphalt (Type A)	TON	x	= \$	-
26020X Class 2 Aggregate Base	TON/CY	x	= \$	-
250401 Class 4 Aggregate Subbase	CY	x	= \$	-
130620 Temporary Drainage Inlet Protection	EA	x	= \$	-
129000 Temporary Railing (Type K)	LF	x	= \$	-
128601 Temporary Signal System	LS	x	= \$	-
120149 Temporary Pavement Marking (Paint)	SQFT	x	= \$	-
80010X Temporary Fence (Type X)	LF	x	= \$	-
XXXXXX Some Item	LS	x	= \$	-

* Includes constructing, maintaining, and removal

TOTAL DETOURS	\$	-
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SUBTOTAL SECTIONS 1 through 7	\$	3,266,400
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SECTION 8: MINOR ITEMS**8A - Americans with Disabilities Act Items**

ADA Items	1.0%	\$	32,664
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8B - Bike Path Items

Bike Path Items	1.0%	\$	32,664
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8C - Other Minor Items

Other Minor Items	8.0%	\$	261,312
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Total of Section 1-7	\$	3,266,400	x	10.0%	= \$	326,640
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TOTAL MINOR ITEMS	\$	326,700
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SECTIONS 9: MOBILIZATION

Item code						
999990	Total Section 1-8	\$	3,593,100	x	10%	= \$ 359,310

TOTAL MOBILIZATION	\$	359,400
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SECTION 10: SUPPLEMENTAL WORK

Item code	Unit	Quantity	Unit Price (\$)	Cost
066670 Payment Adjustments For Price Index Fluctuations	LS	x	= \$	-
066094 Value Analysis	LS	1	x 10,000.00	= \$ 10,000
066070 Maintain Traffic	LS	1	x 10,000.00	= \$ 10,000
066919 Dispute Resolution Board	LS	x	= \$	-
066921 Dispute Resolution Advisor	LS	x	= \$	-
066015 Federal Trainee Program	LS	x	= \$	-
066610 Partnering	LS	x	= \$	-
066204 Remove Rock and Debris	LS	x	= \$	-
066222 Locate Existing Crossover	LS	x	= \$	-
XXXXXX Some Item	Unit	x	= \$	-

Cost of NPDES Supplemental Work specified in Section 5D	= \$	30,000
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Total Section 1-8	\$	3,593,100	4%	= \$	143,724
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TOTAL SUPPLEMENTAL WORK	\$	193,800
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SECTION 11: STATE FURNISHED MATERIALS AND EXPENSES

Item code		Unit	Quantity		Unit Price (\$)		Cost
066105	Resident Engineers Office	LS	1	x	10,000.00	=	\$10,000
066063	Traffic Management Plan - Public Information	LS	1	x	10,000.00	=	\$10,000
066901	Water Expenses	LS	1	x	10,000.00	=	\$10,000
8609XX	Traffic Monitoring Station (X)	LS		x		=	\$0
066841	Traffic Controller Assembly	LS		x		=	\$0
066840	Traffic Signal Controller Assembly	LS		x		=	\$0
066062	COZEEP Contract	LS		x		=	\$0
066838	Reflective Numbers and Edge Sealer	LS		x		=	\$0
066065	Tow Truck Service Patrol	LS		x		=	\$0
066916	Annual Construction General Permit Fee	LS	1	x	10,000.00	=	\$10,000
XXXXXX	Some Item	Unit		x		=	\$0
Total Section 1-8		\$	3,593,100	2%	=	\$	71,862

TOTAL STATE FURNISHED	\$111,900
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SECTION 12: TIME-RELATED OVERHEAD

Total of Roadway and Structures Contract Items excluding Mobilization \$3,593,100 (used to calculate TRO)
Total Construction Cost (excluding TRO and Contingency) \$4,258,200 (used to check if project is greater than \$5 million excluding contingency)

Estimated Time-Related Overhead (TRO) Percentage (0% to 10%) = **6%**

Item code		Unit	Quantity		Unit Price (\$)		Cost
070018	Time-Related Overhead	WD	1,305	X	\$165	=	\$215,600

TOTAL TIME-RELATED OVERHEAD	\$215,600
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Note: If the building portion of the project is greater than 50% of the total project cost, then TRO is not included.

SECTION 13: ROADWAY CONTINGENCY

Recommended Contingency: (Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Total Section 1-11 \$ 4,280,000 x **40%** = \$1,712,000

TOTAL CONTINGENCY	\$1,712,000
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II. STRUCTURE ITEMS

	<u>Bridge 1</u>		<u>Bridge 2</u>		
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Bridge Name	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Bridge Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot	\$150		\$150		\$0
COST OF EACH	\$0		\$0		\$0

	<u>Building 1</u>				
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Building Name	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Building Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot	\$300		\$0		\$0
COST OF EACH	\$0		\$0		\$0

TOTAL COST OF BRIDGES	\$0
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TOTAL COST OF BUILDINGS	\$0
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Structures Mobilization Percentage	10%	\$0
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Recommended Contingency: (Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Structures Contingency Percentage	10%	\$0
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TOTAL COST OF STRUCTURES	\$0
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Estimate Prepared By: _____
 XXXXXXXXXXXXXXXXXXXX ----- Division of Structures

 Date

III. RIGHT OF WAY

Fill in all of the available information from the Right of Way data sheet.

A)	A1)	Acquisition, including Excess Land Purchases, Damages & Goodwill, Fees	\$	377,600
	A2)	SB-1210	\$	0
B)		Acquisition of Offsite Mitigation	\$	0
C)	C1)	Utility Relocation (State Share)	\$	0
	C2)	Potholing (Design Phase)	\$	40,000
D)		Railroad Acquisition	\$	0
E)		Clearance / Demolition	\$	0
F)		Relocation Assistance (RAP and/or Last Resort Housing Costs)	\$	0
G)		Title and Escrow	\$	0
H)		Environmental Review	\$	0
I)		Condemnation Settlements <u>0%</u>	\$	0
J)		Design Appreciation Factor <u>0%</u>	\$	0
K)		Utility Relocation (Construction Cost)	\$	0

L)	TOTAL RIGHT OF WAY ESTIMATE	\$417,600
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M)	TOTAL R/W ESTIMATE: Escalated	\$417,600
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N)	RIGHT OF WAY SUPPORT	\$0
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Support Cost Estimate
Prepared By _____ Project Coordinator¹ _____ Phone _____

Utility Estimate Prepared
By _____ Utility Coordinator² _____ Phone _____

R/W Acquisition Estimate
Prepared By _____ Right of Way Estimator³ _____ Phone _____

Note: Items G & H applied to items A + B

¹ When estimate has Support Costs only² When estimate has Utility Relocation³ When R/W Acquisition is required

IV. SUPPORT COST ESTIMATE SUMMARY

Note: Use PRSM project data.

Total by FY		Escalated Support Cost for Estimate To Completion (ETC)				
		PA&ED	PS&E	RW	CON	Total \$
< 2010	Expended					
	ETC					
2011	Expended					
	ETC					
2012	Expended					
	ETC					
2013	Expended					
	ETC					
2014	Expended					
	ETC					
2015	Expended					
	ETC					
2016	Expended					
	ETC					
2017	Expended					
	ETC					
2018	Expended					
	ETC					
2019	Expended					
	ETC					
2020	Expended					
	ETC					
2021	Expended					
	ETC					
2022	Expended					
	ETC					
2023	Expended					
	ETC					
2024	Expended					
	ETC					
2025 >	Expended					
	ETC					
EAC (Expended + ETC)		\$0	\$0	\$0	\$0	\$0
Approved Budget (PRSM)						
Difference (Budget - EAC)		\$0	\$0	\$0	\$0	\$0
Support Ratio (EAC / Cap Cost)		0.0%	0.0%	0.0%	0.0%	0.0%

Total Capital Cost:	\$6,604,000
Total Capital Outlay Support Cost:	\$0
Overall Percent Support Cost:	0.00%

PRSM workplan hours/costs verified
against approved MWA:

Office Chief -

Date

Approved by:

Project Control -

Date

PROJECT PLANNING COST ESTIMATE

EA: 01-LOCAL

EA: 01-LOCAL PID: EVCRCP

PID: EVCRCP

District-County-Route: 01-DN-EVCR

PM: 0.0 - 1.5

Type of Estimate : Programming

Program Code : k

Project Limits : Along Elk Valley Cross Road from Lake Earl Drive to Parkway Drive

Project Description: 4' paved shoulders, widen to the north, turn pocket

Scope :

Alternative : Intersection Improvements - Movie Lane and Wonder Stump Road

SUMMARY OF PROJECT COST ESTIMATE

	Current Year Cost	Escalated Cost
TOTAL ROADWAY COST	\$ 2,786,600	\$ 3,096,661
TOTAL STRUCTURES COST	\$ -	\$ -
SUBTOTAL CONSTRUCTION COST	\$ 2,786,600	\$ 3,096,661
TOTAL RIGHT OF WAY COST	\$ 124,548	\$ 124,548
TOTAL CAPITAL OUTLAY COSTS	\$ 2,912,000	\$ 3,222,000
PR/ED SUPPORT	\$ -	\$ -
PS&E SUPPORT	\$ -	\$ -
RIGHT OF WAY SUPPORT	\$ -	\$ -
CONSTRUCTION SUPPORT	\$ -	\$ -
TOTAL SUPPORT COST	\$ -	\$ -

TOTAL PROJECT COST	\$ 2,950,000	\$ 3,250,000
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If Project has been programmed enter Programmed Amount \$ 250,000,000

Month / Year

Date of Estimate (Month/Year) 1 / 2020

Estimated Construction Start (Month/Year) 4 / 2024

Number of Working Days = 50

Estimated Mid-Point of Construction (Month/Year) 8 / 2024

Estimated Construction End (Month/Year) 12 / 2024

Number of Plant Establishment Days 261

Estimated Project Schedule

PID Approval	6/1/2024
PA/ED Approval	7/1/2022
PS&E	10/1/2023
RTL	12/1/2023
Begin Construction	4/1/2024

Reviewed by District O.E.

xx/xx/xxxx

(xxx) xxx-xxxx

Office Engineer

Date

Phone

Approved by Project
Manager

xx/xx/xxxx

(xxx) xxx-xxxx

Project Manager

Date

Phone

I. ROADWAY ITEMS SUMMARY

	Section	Cost
1	Earthwork	\$ 144,400
2	Pavement Structural Section	\$ 207,600
3	Drainage	\$ 905,000
4	Specialty Items	\$ 5,000
5	Environmental	\$ 157,300
6	Traffic Items	\$ 99,900
7	Detours	\$ -
8	Minor Items	\$ 152,000
9	Roadway Mobilization	\$ 167,200
10	Supplemental Work	\$ 116,900
11	State Furnished	\$ 68,500
12	Time-Related Overhead	\$ -
13	Roadway Contingency	\$ 762,800
TOTAL ROADWAY ITEMS		\$ 2,786,600

Estimate Prepared By :

Name and Title	Date	Phone
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Estimate Reviewed By :

Name and Title	Date	Phone
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By signing this estimate you are attesting that you have discussed your project with all functional units and have incorporated all their comments or have discussed with them why they will not be incorporated.

SECTION 1: EARTHWORK

Item code		Unit	Quantity		Unit Price (\$)		Cost
190101	Roadway Excavation	CY	1,378	x	83.00	= \$	114,374
19010X	Roadway Excavation (Type X) ADL	CY		x		= \$	-
194001	Ditch Excavation	CY		x		= \$	-
19801X	Imported Borrow	CY/TON		x		= \$	-
192037	Structure Excavation (Retaining Wall)	CY		x		= \$	-
193013	Structure Backfill (Retaining Wall)	CY		x		= \$	-
193031	Pervious Backfill Material (Retaining Wall)	CY		x		= \$	-
16010X	Clearing & Grubbing	LS/ACRE	1	x	30,000.00	= \$	30,000
170101	Develop Water Supply	LS		x		= \$	-
19801X	Imported Borrow	CY/TON		x		= \$	-
210130	Duff	ACRE		x		= \$	-
XXXXXX	Some Item	Unit		x		= \$	-

TOTAL EARTHWORK SECTION ITEMS	\$	144,400
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SECTION 2: PAVEMENT STRUCTURAL SECTION

Item code		Unit	Quantity		Unit Price (\$)		Cost
401050	Jointed Plain Concrete Pavement	CY		x		= \$	-
400050	Continuously Reinforced Concrete Pavement	CY		x		= \$	-
404092	Seal Pavement Joint	LF		x		= \$	-
404093	Seal Isolation Joint	LF		x		= \$	-
413117	Seal Concrete Pavement Joint (Silicone)	LF		x		= \$	-
413118	Seal Pavement Joint (Asphalt Rubber)	LF		x		= \$	-
280010	Rapid Strength Concrete Base	CY		x		= \$	-
410095	Dowel Bar (Drill and Bond)	EA		x		= \$	-
390132	Hot Mix Asphalt (Type A)	TON	1,238	x	120.00	= \$	148,560
390137	Rubberized Hot Mix Asphalt (Gap Graded)	TON		x		= \$	-
39300X	Geosynthetic Pavement Interlayer (Type X)	SQYD		x		= \$	-
26020X	Class 2 Aggregate Base	TON/CY	611	x	90.00	= \$	54,990
290201	Asphalt Treated Permeable Base	CY		x		= \$	-
250401	Class 4 Aggregate Subbase	CY		x		= \$	-
374002	Asphaltic Emulsion (Fog Seal Coat)	TON		x		= \$	-
397005	Tack Coat	TON	2	x	2,000.00	= \$	4,000
377501	Slurry Seal	TON		x		= \$	-
3750XX	Screenings (Type XX)	TON		x		= \$	-
374492	Asphaltic Emulsion (Polymer Modified)	TON		x		= \$	-
370001	Sand Cover (Seal)	TON		x		= \$	-
731530	Minor Concrete (Textured Paving)	CY		x		= \$	-
731502	Minor Concrete (Miscellaneous Construction)	CY		x		= \$	-
39407X	Place Hot Mix Asphalt Dike (Type X)	LF		x		= \$	-
150771	Remove Asphalt Concrete Dike	LF		x		= \$	-
420201	Grind Existing Concrete Pavement	SQYD		x		= \$	-
150860	Remove Base and Surfacing	CY		x		= \$	-
390095	Replace Asphalt Concrete Surfacing	CY		x		= \$	-
15312X	Remove Concrete	LF/CY/LS		x		= \$	-
394090	Place Hot Mix Asphalt (Miscellaneous Area)	SQYD		x		= \$	-
153103	Cold Plane Asphalt Concrete Pavement	SQYD		x		= \$	-
39405X	Shoulder Rumble Strip (HMA, X-In Indentations)	STA		x		= \$	-
413113	Repair Spalled Joints, Polyester Grout	SQYD		x		= \$	-
420102	Groove Existing Concrete Pavement	SQYD		x		= \$	-
390136	Minor Hot Mix Asphalt	TON		x		= \$	-
394095	Roadside Paving (Miscellaneous Areas)	SQYD		x		= \$	-
XXXXXX	Some Item	Unit		x		= \$	-

TOTAL PAVEMENT STRUCTURAL SECTION ITEMS	\$	207,600
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SECTION 3: DRAINAGE

Item code		Unit	Quantity	Unit Price (\$)	Cost
15080X	Remove Culvert	EA/LF	x	= \$	-
150820	Modify Inlet	EA	x	= \$	-
155232	Sand Backfill	CY	x	= \$	-
15020X	Abandon Culvert	EA/LF	x	= \$	-
152430	Adjust Inlet	LF	x	= \$	-
155003	Cap Inlet	EA	x	= \$	-
510501	Minor Concrete	CY	x	= \$	-
510502	Minor Concrete (Minor Structure)	CY	x	= \$	-
5105XX	Minor Concrete (Type XX)	CY	x	= \$	-
620XXX	XX" Alternative Pipe Culvert (Type X)	LF	200	x 25.00 = \$	5,000
641107	18" Plastic Pipe	LF	3,600	x 250.00 = \$	900,000
65XXXX	XX" Reinforced Concrete Pipe (Type X)	LF	x	= \$	-
6650XX	XX" Corrugated Steel Pipe (0.XXX" Thick)	LF	x	= \$	-
68XXXX	XX" Plastic Pipe (Edge Drain)	LF	x	= \$	-
69011X	XX" Corrugated Steel Pipe Downrain (0.XXX" Thi	LF	x	= \$	-
70321X	XX" Corrugated Steel Pipe Inlet (0.XXX" Thick)	LF	x	= \$	-
70XXXX	XX" Corrugated Steel Pipe Riser (0.XXX" Thick)	LF	x	= \$	-
7050XX	XX" Steel Flared End Section	EA	x	= \$	-
703233	Grated Line Drain	LF	x	= \$	-
72XXXX	Rock Slope Protection (Type and Method)	CY/TON	x	= \$	-
72901X	Rock Slope Protection Fabric (Class X)	SQYD	x	= \$	-
721420	Concrete (Ditch Lining)	CY	x	= \$	-
721430	Concrete (Channel Lining)	CY	x	= \$	-
750001	Miscellaneous Iron and Steel	LB	x	= \$	-
XXXXXX	Additional Drainage	LS	x	= \$	-

TOTAL DRAINAGE ITEMS	\$	905,000
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SECTION 4: SPECIALTY ITEMS

Item code		Unit	Quantity	Unit Price (\$)	Cost
080050	Progress Schedule (Critical Path Method)	LS	1	x 5,000.00 = \$	5,000
582001	Sound Wall (Masonry Block)	SQFT	x	= \$	-
510530	Minor Concrete (Wall)	CY	x	= \$	-
15325X	Remove Sound Wall	LF/LS	x	= \$	-
070030	Lead Compliance Plan	LS	x	= \$	-
141120	Treated Wood Waste	LB	x	= \$	-
153221	Remove Concrete Barrier	LF	x	= \$	-
150662	Remove Metal Beam Guard Railing	LF	x	= \$	-
150668	Remove Flared End Section	EA	x	= \$	-
8000XX	Chain Link Fence (Type XX)	LF	x	= \$	-
80XXXX	XX" Chain Link Gate (Type CL-6)	EA	x	= \$	-
832001	Metal Beam Guard Railing	LF	x	= \$	-
839301	Single Thrie Beam Barrier	LF	x	= \$	-
839310	Double Thrie Beam Barrier	LF	x	= \$	-
839521	Cable Railing	LF	x	= \$	-
8395XX	Terminal System (Type CAT)	EA	x	= \$	-
839585	Alternative Flared Terminal System	EA	x	= \$	-
839584	Alternative In-line Terminal System	EA	x	= \$	-
4906XX	CIDH Concrete Piling (Insert Diameter)	LF	x	= \$	-
839XXX	Crash Cushion (Insert Type)	EA	x	= \$	-
83XXXX	Concrete Barrier (Insert Type)	LF	x	= \$	-
520103	Bar Reinforced Steel (Retaining Wall)	LB	x	= \$	-
510060	Structural Concrete, Retaining Wall	CY	x	= \$	-
513553	Retaining Wall (Masonry Wall)	SQFT	x	= \$	-
511035	Architectural Treatment	SQFT	x	= \$	-
598001	Anti-Graffiti Coating	SQFT	x	= \$	-
203070	Rock Stain	SQFT	x	= \$	-
5136XX	Reinforced Concrete Crib Wall (Type X)	SQFT	x	= \$	-
83954X	Transition Railing (Type X)	EA	x	= \$	-
597601	Prepare and Stain Concrete	SQFT	x	= \$	-
839561	Rail Tensioning Assembly	EA	x	= \$	-
83958X	End Anchor Assembly (Type X)	EA	x	= \$	-
XXXXXX	Some Item	Unit	x	= \$	-

TOTAL SPECIALTY ITEMS	\$	5,000
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SECTION 5: ENVIRONMENTAL**5A - ENVIRONMENTAL MITIGATION**

Item code	Unit	Quantity	Unit Price (\$)	Cost
Biological Mitigation	LS	x	= \$	-
130670 Remove Tree	LF	20	x 250.00 = \$	5,000
141000 Temporary Fence (Type ESA)	LF	1,650	x 5.00 = \$	8,250
<i>Subtotal Environmental Mitigation</i>				<i>\$ 13,250</i>

5B - LANDSCAPE AND IRRIGATION

Item code	Unit	Quantity	Unit Price (\$)	Cost
20XXXX Highway Planting	LS	x	= \$	-
20XXXX Irrigation System	LS	x	= \$	-
204099 Plant Establishment Work	LS	x	5,000.00 = \$	-
204101 Extend Plant Establishment Work	LS	x	= \$	-
20XXXX Follow-up Landscape Project	LS	x	= \$	-
150685 Remove Irrigation Facility	LS	x	= \$	-
20XXXX Maintain Existing (Irrigation or Planted Areas)	LS	x	= \$	-
206400 Check and Test Existing Irrigation Facilities	LS	x	= \$	-
21011X Imported Topsoil (X)	CY/TON	x	= \$	-
20XXXX Rock Blanket, Rock Mulch, DG, Gravel Mulch	SQFT/SQYD	x	= \$	-
200122 Weed Germination	SQYD	x	= \$	-
208304 Water Meter	EA	x	= \$	-
2087XX XX" Conduit (Use for Irrigation x-overs)	LF	x	= \$	-
20890X Extended Conduit (Use for Extension of Irrigation x-overs)	LF	x	= \$	-
<i>Subtotal Landscape and Irrigation</i>				<i>\$ -</i>

5C - EROSION CONTROL

Item code	Unit	Quantity	Unit Price (\$)	Cost
210010 Move In/Move Out (Erosion Control)	EA	x	= \$	-
210350 Fiber Rolls	LF	3600	x 5 = \$	18,000
210360 Compost Sock	LF	x	= \$	-
2102XX Rolled Erosion Control Product (X)	SQFT	x	= \$	-
21025X Bonded Fiber Matrix	SQFT/ACRE	x	= \$	-
210300 Hydromulch	SQFT	x	= \$	-
210420 Straw	SQFT	x	= \$	-
210430 Hydroseed	SQFT	x	= \$	-
210600 Compost	SQFT	x	= \$	-
210630 Incorporate Materials	SQFT	x	= \$	-
<i>Subtotal Erosion Control</i>				<i>\$ 18,000</i>

5D - NPDES

Item code	Unit	Quantity	Unit Price (\$)	Cost
130300 Prepare SWPPP	LS	1	x 10,000.00 = \$	10,000
130200 Prepare WPCP	LS	x	= \$	-
130100 Job Site Management	LS	1	x 75,800.00 = \$	75,800
130330 Storm Water Annual Report	EA	2	x 2,000.00 = \$	4,000
130310 Rain Event Action Plan (REAP)	EA	4	x 550.00 = \$	2,200
130320 Storm Water Sampling and Analysis Day	EA	4	x 575.00 = \$	2,300
130520 Temporary Hydraulic Mulch	SQYD	x	= \$	-
130550 Temporary Hydroseed	SQYD	x	= \$	-
130505 Move-In/Move-Out (Temporary Erosion Control)	EA	2	x 1,500.00 = \$	3,000
130640 Temporary Fiber Roll	LF	1,650	x 5.00 = \$	8,250
130900 Temporary Concrete Washout	LS	1	x 2,500.00 = \$	2,500
130710 Temporary Construction Entrance	EA	2	x 4,000.00 = \$	8,000
130610 Temporary Check Dam	LF	x	= \$	-
130620 Temporary Drainage Inlet Protection	EA	x	= \$	-
130730 Street Sweeping	LS	1	x 10,000.00 = \$	10,000
<i>Subtotal NPDES</i>				<i>\$ 126,050</i>

Supplemental Work for NPDES

066595 Water Pollution Control Maintenance Sharing*	LS	1	x 10,000.00 = \$	10,000
066596 Additional Water Pollution Control**	LS	1	x 10,000.00 = \$	10,000
066597 Storm Water Sampling and Analysis***	LS	1	x 10,000.00 = \$	10,000
XXXXXX Some Item	LS	x	= \$	-
<i>Subtotal Supplemental Work for NPDES</i>				<i>\$ 30,000</i>

*Applies to all SWPPPs and those WPCPs with sediment control or soil stabilization BMPs.

**Applies to both SWPPPs and WPCP projects.

*** Applies only to project with SWPPPs.

TOTAL ENVIRONMENTAL	\$ 157,300
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SECTION 6: TRAFFIC ITEMS**6A - Traffic Electrical**

Item code	Unit	Quantity	Unit Price (\$)	Cost
860460 Lighting and Sign Illumination	LS	1 x	10,000.00 = \$	10,000
860201 Signal and Lighting	LS	x	= \$	-
860990 Closed Circuit Television System	LS	x	= \$	-
86110X Ramp Metering System (Location X)	LS	x	= \$	-
86070X Interconnection Conduit and Cable	LF/LS	x	= \$	-
5602XX Furnish Sign Structure (Type X)	LB	x	= \$	-
5602XX Install Sign Structure (Type X)	LB	x	= \$	-
498040 XX" CIDHC Pile (Sign Foundation)	LF	x	= \$	-
86080X Inductive Loop Detectors	EA/LS	x	= \$	-
8609XX Traffic Monitoring Station (Type X)	LS	x	= \$	-
15075X Remove Sign Structure	EA/LS	x	= \$	-
151581 Reconstruct Sign Structure	EA	x	= \$	-
152641 Modify Sign Structure	EA	x	= \$	-
860090 Maintain Existing Traffic Management System Eler	LS	x	= \$	-
86XXXX Fiber Optic Conduit System	LS	x	= \$	-
XXXXX Some Item	Unit	x	= \$	-
Subtotal Traffic Electrical				\$ 10,000

6B - Traffic Signing and Striping

Item code	Unit	Quantity	Unit Price (\$)	Cost
566011 Roadside Sign - One Post	EA	1 x	3,000.00 = \$	3,000
566012 Roadside Sign - Two Post	EA	x	= \$	-
5602XX Furnish Sign	SQFT	x	= \$	-
568016 Install Sign Panel on Existing Frame	SQFT	x	= \$	-
150711 Remove Painted Traffic Stripe	LF	x	= \$	-
141101 Remove Yellow Painted Traffic Stripe (Hazardous Waste)	LF	x	= \$	-
150712 Remove Painted Pavement Marking	SQFT	x	= \$	-
150742 Remove Roadside Sign	EA	x	= \$	-
152320 Reset Roadside Sign	EA	x	= \$	-
152390 Relocate Roadside Sign	EA	x	= \$	-
82010X Delineator (Class X)	EA	x	= \$	-
840502 Thermoplastic Traffic Stripe (Enhanced Wet Night)	LF	6,936 x	3.30 = \$	22,889
846012 Thermoplastic Crosswalk and Pavement Marking (E)	SQFT	x	= \$	-
120090 Construction Area Signs	LS	1 x	5,000.00 = \$	5,000
84XXXX Permanent Pavement Delineation	LS	x	= \$	-
Subtotal Traffic Signing and Striping				\$ 30,889

6C - Traffic Management Plan

Item code	Unit	Quantity	Unit Price (\$)	Cost
12865X Portable Changeable Message Signs	EA/LS	6 x	\$ 1,500 = \$	9,000
Subtotal Traffic Management Plan				\$ 9,000

6C - Stage Construction and Traffic Handling

Item code	Unit	Quantity	Unit Price (\$)	Cost
120199 Traffic Plastic Drum	EA	x	= \$	-
12016X Channelizer (Type X)	EA	x	= \$	-
120120 Type III Barricade	EA	x	= \$	-
129100 Temporary Crash Cushion Module	EA	x	= \$	-
120100 Traffic Control System	LS	1 x	50,000.00 = \$	50,000
129110 Temporary Crash Cushion	EA	x	= \$	-
129000 Temporary Railing (Type K)	LF	x	= \$	-
120149 Temporary Pavement Marking (Paint)	SQFT	x	= \$	-
82010X Delineator (Class X)	EA	x	= \$	-
XXXXXX Some Item	Unit	x	= \$	-
Subtotal Stage Construction and Traffic Handling				\$ 50,000

TOTAL TRAFFIC ITEMS	\$ 99,900
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SECTION 7: DETOURS

Includes constructing, maintaining, and removal

Item code	Unit	Quantity	Unit Price (\$)	Cost
190101 Roadway Excavation	CY	x	= \$	-
19801X Imported Borrow	CY/TON	x	= \$	-
390132 Hot Mix Asphalt (Type A)	TON	x	= \$	-
26020X Class 2 Aggregate Base	TON/CY	x	= \$	-
250401 Class 4 Aggregate Subbase	CY	x	= \$	-
130620 Temporary Drainage Inlet Protection	EA	x	= \$	-
129000 Temporary Railing (Type K)	LF	x	= \$	-
128601 Temporary Signal System	LS	x	= \$	-
120149 Temporary Pavement Marking (Paint)	SQFT	x	= \$	-
80010X Temporary Fence (Type X)	LF	x	= \$	-
XXXXXX Some Item	LS	x	5,000,000 = \$	-

* Includes constructing, maintaining, and removal

TOTAL DETOURS	\$	-
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SUBTOTAL SECTIONS 1 through 7	\$	1,519,200
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SECTION 8: MINOR ITEMS**8A - Americans with Disabilities Act Items**

ADA Items

1.0% \$ 15,192

8B - Bike Path Items

Bike Path Items

1.0% \$ 15,192

8C - Other Minor Items

Other Minor Items

8.0% \$ 121,536

Total of Section 1-7	\$	1,519,200	x	10.0%	= \$	151,920
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TOTAL MINOR ITEMS	\$	152,000
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SECTIONS 9: MOBILIZATION

Item code

999990

Total Section 1-8

\$	1,671,200	x	10%	= \$	167,120
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TOTAL MOBILIZATION	\$	167,200
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SECTION 10: SUPPLEMENTAL WORK

Item code	Unit	Quantity	Unit Price (\$)	Cost
066670 Payment Adjustments For Price Index Fluctuations	LS	x	= \$	-
066094 Value Analysis	LS	1	x 10,000.00 = \$	10,000
066070 Maintain Traffic	LS	1	x 10,000.00 = \$	10,000
066919 Dispute Resolution Board	LS	x	= \$	-
066921 Dispute Resolution Advisor	LS	x	= \$	-
066015 Federal Trainee Program	LS	x	= \$	-
066610 Partnering	LS	x	= \$	-
066204 Remove Rock and Debris	LS	x	= \$	-
066222 Locate Existing Crossover	LS	x	= \$	-
XXXXXX Some Item	Unit	x	= \$	-

Cost of NPDES Supplemental Work specified in Section 5D	= \$	30,000
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Total Section 1-8	\$	1,671,200	4%	= \$	66,848
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TOTAL SUPPLEMENTAL WORK	\$	116,900
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SECTION 11: STATE FURNISHED MATERIALS AND EXPENSES

Item code		Unit	Quantity		Unit Price (\$)		Cost
066105	Resident Engineers Office	LS	1	x	10,000.00	=	\$10,000
066063	Traffic Management Plan - Public Information	LS	1	x	10,000.00	=	\$10,000
066901	Water Expenses	LS	1	x	10,000.00	=	\$10,000
8609XX	Traffic Monitoring Station (X)	LS		x		=	\$0
066841	Traffic Controller Assembly	LS		x		=	\$0
066840	Traffic Signal Controller Assembly	LS		x	7,000.00	=	\$0
066062	COZEEP Contract	LS		x		=	\$0
066838	Reflective Numbers and Edge Sealer	LS		x		=	\$0
066065	Tow Truck Service Patrol	LS		x		=	\$0
066916	Annual Construction General Permit Fee	LS	1	x	5,000.00	=	\$5,000
XXXXXX	Some Item	Unit		x		=	\$0
Total Section 1-8		\$	1,671,200		2%	= \$	33,424

TOTAL STATE FURNISHED	\$68,500
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SECTION 12: TIME-RELATED OVERHEAD

Total of Roadway and Structures Contract Items excluding Mobilization	\$1,671,200 (used to calculate TRO)
Total Construction Cost (excluding TRO and Contingency)	\$2,023,800 (used to check if project is greater than \$5 million excluding contingency)

Estimated Time-Related Overhead (TRO) Percentage (0% to 10%) = **6%**

Item code		Unit	Quantity		Unit Price (\$)		Cost
070018	Time-Related Overhead	WD	50	X	\$0	=	\$0

TOTAL TIME-RELATED OVERHEAD	\$0
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Note: If the building portion of the project is greater than 50% of the total project cost, then TRO is not included.

SECTION 13: ROADWAY CONTINGENCY

Recommended Contingency: (Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Total Section 1-11	\$	1,906,900	x	40%	=	\$762,760
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TOTAL CONTINGENCY	\$762,800
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II. STRUCTURE ITEMS

	<u>Bridge 1</u>		<u>Bridge 2</u>		
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Bridge Name	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Bridge Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot	\$150		\$150		\$0
COST OF EACH	\$0		\$0		\$0

	<u>Building 1</u>				
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Building Name	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Building Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot	\$300		\$0		\$0
COST OF EACH	\$0		\$0		\$0

TOTAL COST OF BRIDGES	\$0
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TOTAL COST OF BUILDINGS	\$0
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Structures Mobilization Percentage	10%	\$0
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Recommended Contingency: (Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Structures Contingency Percentage	10%	\$0
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TOTAL COST OF STRUCTURES	\$0
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Estimate Prepared By: _____
 XXXXXXXXXXXXXXXXXXXX ----- Division of Structures

 Date

III. RIGHT OF WAY

Fill in all of the available information from the Right of Way data sheet.

A)	A1)	Acquisition, including Excess Land Purchases, Damages & Goodwill, Fees	\$	84,548
	A2)	SB-1210	\$	0
B)		Acquisition of Offsite Mitigation	\$	0
C)	C1)	Utility Relocation (State Share)	\$	0
	C2)	Potholing (Design Phase)	\$	40,000
D)		Railroad Acquisition	\$	0
E)		Clearance / Demolition	\$	0
F)		Relocation Assistance (RAP and/or Last Resort Housing Costs)	\$	0
G)		Title and Escrow	\$	0
H)		Environmental Review	\$	0
I)		Condemnation Settlements <u>0%</u>	\$	0
J)		Design Appreciation Factor <u>0%</u>	\$	0
K)		Utility Relocation (Construction Cost)	\$	0

L)	TOTAL RIGHT OF WAY ESTIMATE	\$124,548
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M)	TOTAL R/W ESTIMATE: Escalated	\$124,548
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N)	RIGHT OF WAY SUPPORT	\$0
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Support Cost Estimate Prepared By	Project Coordinator ¹	Phone
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Utility Estimate Prepared By	Utility Coordinator ²	Phone
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R/W Acquisition Estimate Prepared By	Right of Way Estimator ³	Phone
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Note: Items G & H applied to items A + B

¹ When estimate has Support Costs only² When estimate has Utility Relocation³ When R/W Acquisition is required

EA: 01-LOCAL PID: EVCRCP

IV. SUPPORT COST ESTIMATE SUMMARY

Note: Use PRSM project data.

Total by FY		Escalated Support Cost for Estimate To Completion (ETC)				
		PA&ED	PS&E	RW	CON	Total \$
< 2010	Expended					
	ETC					
2011	Expended					
	ETC					
2012	Expended					
	ETC					
2013	Expended					
	ETC					
2014	Expended					
	ETC					
2015	Expended					
	ETC					
2016	Expended					
	ETC					
2017	Expended					
	ETC					
2018	Expended					
	ETC					
2019	Expended					
	ETC					
2020	Expended					
	ETC					
2021	Expended					
	ETC					
2022	Expended					
	ETC					
2023	Expended					
	ETC					
2024	Expended					
	ETC					
2025 >	Expended					
	ETC					
EAC (Expended + ETC)		\$0	\$0	\$0	\$0	\$0
Approved Budget (PRSM)						
Difference (Budget - EAC)		\$0	\$0	\$0	\$0	\$0
Support Ratio (EAC / Cap Cost)		0.0%	0.0%	0.0%	0.0%	0.0%

Total Capital Cost:	\$2,912,000
Total Capital Outlay Support Cost:	\$0
Overall Percent Support Cost:	0.00%

PRSM workplan hours/costs verified
against approved MWA:

Office Chief -

Date

Approved by:

Project Control -

Date

PROJECT

PLANNING COST ESTIMATE

EA: 01-LOCAL

EA: 01-LOCAL PID: EVCRCP

PID: EVCRCP

District-County-Route: 01-DN-EVCR

PM: 0.0 - 1.5

Type of Estimate : Programming

Program Code : k

Project Limits : Along Elk Valley Cross Road from Lake Earl Drive to Parkway Drive

Project Description: 4' paved shoulders, widen to the north, westbound left turn pocket at Cunningham Lane.

Scope :

Alternative : Intersection Improvement - Cunningham Lane

SUMMARY OF PROJECT COST ESTIMATE

	Current Year Cost	Escalated Cost
TOTAL ROADWAY COST	\$ 2,660,900	\$ 2,956,974
TOTAL STRUCTURES COST	\$ -	\$ -
SUBTOTAL CONSTRUCTION COST	\$ 2,660,900	\$ 2,956,974
TOTAL RIGHT OF WAY COST	\$ 333,052	\$ 333,052
TOTAL CAPITAL OUTLAY COSTS	\$ 2,994,000	\$ 3,291,000
PR/ED SUPPORT	\$ -	\$ -
PS&E SUPPORT	\$ -	\$ -
RIGHT OF WAY SUPPORT	\$ -	\$ -
CONSTRUCTION SUPPORT	\$ -	\$ -
TOTAL SUPPORT COST	\$ -	\$ -

TOTAL PROJECT COST	\$ 3,000,000	\$ 3,300,000
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If Project has been programmed enter Programmed Amount

Month / Year

Date of Estimate (Month/Year) 1 / 2020

Estimated Construction Start (Month/Year) 4 / 2024

Number of Working Days = 120

Estimated Mid-Point of Construction (Month/Year) 8 / 2024

Estimated Construction End (Month/Year) 12 / 2024

Number of Plant Establishment Days 261

Estimated Project Schedule

PID Approval	6/1/2021
PA/ED Approval	7/1/2022
PS&E	10/1/2023
RTL	12/1/2023
Begin Construction	4/1/2024

Reviewed by District O.E.

xx/xx/xxxx

(xxx) xxx-xxxx

Office Engineer

Date

Phone

Approved by Project
Manager

xx/xx/xxxx

(xxx) xxx-xxxx

Project Manager

Date

Phone

I. ROADWAY ITEMS SUMMARY

Section		Cost
1	Earthwork	\$ 196,000
2	Pavement Structural Section	\$ 176,500
3	Drainage	\$ 562,500
4	Specialty Items	\$ 70,000
5	Environmental	\$ 153,500
6	Traffic Items	\$ 217,800
7	Detours	\$ -
8	Minor Items	\$ 137,700
9	Roadway Mobilization	\$ 151,400
10	Supplemental Work	\$ 110,600
11	State Furnished	\$ 65,300
12	Time-Related Overhead	\$ 90,900
13	Roadway Contingency	\$ 728,700
TOTAL ROADWAY ITEMS		\$ 2,660,900

Estimate Prepared By :

Name and Title	Date	Phone
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Estimate Reviewed By :

Name and Title	Date	Phone
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By signing this estimate you are attesting that you have discussed your project with all functional units and have incorporated all their comments or have discussed with them why they will not be incorporated.

SECTION 1: EARTHWORK

Item code		Unit	Quantity		Unit Price (\$)		Cost
190101	Roadway Excavation	CY	2,000	x	83.00	= \$	166,000
19010X	Roadway Excavation (Type X) ADL	CY		x		= \$	-
194001	Ditch Excavation	CY		x		= \$	-
19801X	Imported Borrow	CY/TON		x		= \$	-
192037	Structure Excavation (Retaining Wall)	CY		x		= \$	-
193013	Structure Backfill (Retaining Wall)	CY		x		= \$	-
193031	Pervious Backfill Material (Retaining Wall)	CY		x		= \$	-
16010X	Clearing & Grubbing	LS	1	x	30,000.00	= \$	30,000
170101	Develop Water Supply	LS		x		= \$	-
19801X	Imported Borrow	CY/TON		x		= \$	-
210130	Duff	ACRE		x		= \$	-
XXXXXX	Some Item	Unit		x		= \$	-

TOTAL EARTHWORK SECTION ITEMS	\$	196,000
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SECTION 2: PAVEMENT STRUCTURAL SECTION

Item code		Unit	Quantity		Unit Price (\$)		Cost
401050	Jointed Plain Concrete Pavement	CY		x		= \$	-
400050	Continuously Reinforced Concrete Pavement	CY		x		= \$	-
404092	Seal Pavement Joint	LF		x		= \$	-
404093	Seal Isolation Joint	LF		x		= \$	-
413117	Seal Concrete Pavement Joint (Silicone)	LF		x		= \$	-
413118	Seal Pavement Joint (Asphalt Rubber)	LF		x		= \$	-
280010	Rapid Strength Concrete Base	CY		x		= \$	-
410095	Dowel Bar (Drill and Bond)	EA		x		= \$	-
390132	Hot Mix Asphalt (Type A)	TON	1,024	x	120.00	= \$	122,880
390137	Rubberized Hot Mix Asphalt (Gap Graded)	TON		x		= \$	-
39300X	Geosynthetic Pavement Interlayer (Type X)	SQYD		x		= \$	-
26020X	Class 2 Aggregate Base	TON/CY	506	x	90.00	= \$	45,540
290201	Asphalt Treated Permeable Base	CY		x		= \$	-
250401	Class 4 Aggregate Subbase	CY		x	63.00	= \$	-
374002	Asphaltic Emulsion (Fog Seal Coat)	TON		x		= \$	-
397005	Tack Coat	TON	4	x	2,000.00	= \$	8,000
377501	Slurry Seal	TON		x		= \$	-
3750XX	Screenings (Type XX)	TON		x		= \$	-
374492	Asphaltic Emulsion (Polymer Modified)	TON		x		= \$	-
370001	Sand Cover (Seal)	TON		x		= \$	-
731530	Minor Concrete (Textured Paving)	CY		x		= \$	-
731502	Minor Concrete (Miscellaneous Construction)	CY		x		= \$	-
39407X	Place Hot Mix Asphalt Dike (Type X)	LF		x		= \$	-
150771	Remove Asphalt Concrete Dike	LF		x		= \$	-
420201	Grind Existing Concrete Pavement	SQYD		x		= \$	-
150860	Remove Base and Surfacing	CY		x		= \$	-
390095	Replace Asphalt Concrete Surfacing	CY		x		= \$	-
15312X	Remove Concrete	LF/CY/LS		x		= \$	-
394090	Place Hot Mix Asphalt (Miscellaneous Area)	SQYD		x		= \$	-
153103	Cold Plane Asphalt Concrete Pavement	SQYD		x		= \$	-
39405X	Shoulder Rumble Strip (HMA, X-In Indentations)	STA		x		= \$	-
413113	Repair Spalled Joints, Polyester Grout	SQYD		x		= \$	-
420102	Groove Existing Concrete Pavement	SQYD		x		= \$	-
390136	Minor Hot Mix Asphalt	TON		x		= \$	-
394095	Roadside Paving (Miscellaneous Areas)	SQYD		x		= \$	-
XXXXXX	Some Item	Unit		x		= \$	-

TOTAL PAVEMENT STRUCTURAL SECTION ITEMS	\$	176,500
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SECTION 3: DRAINAGE

Item code		Unit	Quantity	Unit Price (\$)	Cost
15080X	Remove Culvert	EA/LF	x	= \$	-
150820	Modify Inlet	EA	x	= \$	-
155232	Sand Backfill	CY	x	= \$	-
15020X	Abandon Culvert	EA/LF	x	= \$	-
152430	Adjust Inlet	LF	x	= \$	-
155003	Cap Inlet	EA	x	= \$	-
510501	Minor Concrete	CY	x	= \$	-
510502	Minor Concrete (Minor Structure)	CY	x	= \$	-
5105XX	Minor Concrete (Type XX)	CY	x	= \$	-
620XXX	XX" Alternative Pipe Culvert (Type X)	LF	x	= \$	-
641107	18" Plastic Pipe	LF	2,250 x	250.00 = \$	562,500
65XXXX	XX" Reinforced Concrete Pipe (Type X)	LF	x	= \$	-
6650XX	XX" Corrugated Steel Pipe (0.XXX" Thick)	LF	x	= \$	-
68XXXX	XX" Plastic Pipe (Edge Drain)	LF	x	= \$	-
69011X	XX" Corrugated Steel Pipe Downrain (0.XXX" Thi	LF	x	= \$	-
70321X	XX" Corrugated Steel Pipe Inlet (0.XXX" Thick)	LF	x	= \$	-
70XXXX	XX" Corrugated Steel Pipe Riser (0.XXX" Thick)	LF	x	= \$	-
7050XX	XX" Steel Flared End Section	EA	x	= \$	-
703233	Grated Line Drain	LF	x	= \$	-
72XXXX	Rock Slope Protection (Type and Method)	CY/TON	x	= \$	-
72901X	Rock Slope Protection Fabric (Class X)	SQYD	x	= \$	-
721420	Concrete (Ditch Lining)	CY	x	= \$	-
721430	Concrete (Channel Lining)	CY	x	= \$	-
750001	Miscellaneous Iron and Steel	LB	x	= \$	-
XXXXXX	Additional Drainage	LS	x	= \$	-

TOTAL DRAINAGE ITEMS	\$	562,500
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SECTION 4: SPECIALTY ITEMS

Item code		Unit	Quantity	Unit Price (\$)	Cost
080050	Progress Schedule (Critical Path Method)	LS	1 x	5,000.00 = \$	5,000
582001	Sound Wall (Masonry Block)	SQFT	x	= \$	-
510530	Minor Concrete (Wall)	CY	x	= \$	-
15325X	Remove Sound Wall	LF/LS	x	= \$	-
070030	Lead Compliance Plan	LS	1 x	5,000.00 = \$	5,000
141120	Treated Wood Waste	LB	x	= \$	-
153221	Remove Concrete Barrier	LF	x	50.00 = \$	-
150662	Remove Metal Beam Guard Railing	LF	x	75.00 = \$	-
150668	Remove Flared End Section	EA	x	200.00 = \$	-
8000XX	Chain Link Fence (Type XX)	LF	x	= \$	-
80XXXX	XX" Chain Link Gate (Type CL-6)	EA	x	= \$	-
832001	Metal Beam Guard Railing	LF	x	= \$	-
839301	Single Thrie Beam Barrier	LF	x	= \$	-
839310	Double Thrie Beam Barrier	LF	x	= \$	-
839521	Cable Railing	LF	x	= \$	-
8395XX	Terminal System (Type CAT)	EA	x	= \$	-
839585	Alternative Flared Terminal System	EA	x	= \$	-
839584	Alternative In-line Terminal System	EA	x	= \$	-
4906XX	CIDH Concrete Piling (Insert Diameter)	LF	x	= \$	-
839XXX	Crash Cushion (Insert Type)	EA	x	= \$	-
83XXXX	Concrete Barrier (Insert Type)	LF	x	= \$	-
520103	Bar Reinforced Steel (Retaining Wall)	LB	x	= \$	-
510060	Structural Concrete, Retaining Wall	CY	x	= \$	-
513553	Retaining Wall (Masonry Wall)	SQFT	x	= \$	-
511035	Architectural Treatment	SQFT	x	= \$	-
598001	Anti-Graffiti Coating	SQFT	x	= \$	-
203070	Rock Stain	SQFT	x	= \$	-
5136XX	Reinforced Concrete Crib Wall (Type X)	SQFT	x	= \$	-
83954X	Transition Railing (Type X)	EA	x	= \$	-
597601	Prepare and Stain Concrete	SQFT	x	= \$	-
839561	Rail Tensioning Assembly	EA	x	= \$	-
83958X	End Anchor Assembly (Type X)	EA	x	= \$	-
XXXXXX	Relocate Utility Pole	EA	6 x	10,000.00 = \$	60,000

TOTAL SPECIALTY ITEMS	\$	70,000
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SECTION 5: ENVIRONMENTAL**5A - ENVIRONMENTAL MITIGATION**

Item code	Unit	Quantity	Unit Price (\$)	Cost
Biological Mitigation	LS	x	= \$	-
130670 Remove Tree	LF	100	x 250.00 = \$	25,000
141000 Temporary Fence (Type ESA)	LF	3,600	x 5.00 = \$	18,000
<i>Subtotal Environmental Mitigation</i>				<i>\$ 43,000</i>

5B - LANDSCAPE AND IRRIGATION

Item code	Unit	Quantity	Unit Price (\$)	Cost
20XXXX Highway Planting	LS	x	= \$	-
20XXXX Irrigation System	LS	x	= \$	-
204099 Plant Establishment Work	LS	1	x 10,000.00 = \$	10,000
204101 Extend Plant Establishment Work	LS	x	= \$	-
20XXXX Follow-up Landscape Project	LS	x	= \$	-
150685 Remove Irrigation Facility	LS	x	= \$	-
20XXXX Maintain Existing (Irrigation or Planted Areas)	LS	x	= \$	-
206400 Check and Test Existing Irrigation Facilities	LS	x	= \$	-
21011X Imported Topsoil (X)	CY/TON	x	= \$	-
20XXXX Rock Blanket, Rock Mulch, DG, Gravel Mulch	SQFT/SQYD	x	= \$	-
200122 Weed Germination	SQYD	x	= \$	-
208304 Water Meter	EA	x	= \$	-
2087XX XX" Conduit (Use for Irrigation x-overs)	LF	x	= \$	-
20890X Extended Conduit (Use for Extension of Irrigation x-overs)	LF	x	= \$	-
<i>Subtotal Landscape and Irrigation</i>				<i>\$ 10,000</i>

5C - EROSION CONTROL

Item code	Unit	Quantity	Unit Price (\$)	Cost
210010 Move In/Move Out (Erosion Control)	EA	x	= \$	-
210350 Fiber Rolls	LF	3600	x 5 = \$	18,000
210360 Compost Sock	LF	x	= \$	-
2102XX Rolled Erosion Control Product (X)	SQFT	x	= \$	-
21025X Bonded Fiber Matrix	SQFT/ACRE	x	= \$	-
210300 Hydromulch	SQFT	x	= \$	-
210420 Straw	SQFT	x	= \$	-
210430 Hydroseed	SQFT	x	= \$	-
210600 Compost	SQFT	x	= \$	-
210630 Incorporate Materials	SQFT	x	= \$	-
<i>Subtotal Erosion Control</i>				<i>\$ 18,000</i>

5D - NPDES

Item code	Unit	Quantity	Unit Price (\$)	Cost
130300 Prepare SWPPP	LS	1	x 10,000.00 = \$	10,000
130200 Prepare WPCP	LS	x	= \$	-
130100 Job Site Management	LS	1	x 7,500.00 = \$	7,500
130330 Storm Water Annual Report	EA	2	x 2,000.00 = \$	4,000
130310 Rain Event Action Plan (REAP)	EA	4	x 550.00 = \$	2,200
130320 Storm Water Sampling and Analysis Day	EA	4	x 575.00 = \$	2,300
130520 Temporary Hydraulic Mulch	SQYD	x	= \$	-
130550 Temporary Hydroseed	SQYD	x	= \$	-
130505 Move-In/Move-Out (Temporary Erosion Control)	EA	2	x 1,500.00 = \$	3,000
130640 Temporary Fiber Roll	LF	3,600	x 5.00 = \$	18,000
130900 Temporary Concrete Washout	LS	1	x 2,500.00 = \$	2,500
130710 Temporary Construction Entrance	EA	2	x 4,000.00 = \$	8,000
130610 Temporary Check Dam	LF	x	= \$	-
130620 Temporary Drainage Inlet Protection	EA	x	= \$	-
130730 Street Sweeping	LS	1	x 25,000.00 = \$	25,000
<i>Subtotal NPDES</i>				<i>\$ 82,500</i>

TOTAL ENVIRONMENTAL	\$ 153,500
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Supplemental Work for NPDES

066595 Water Pollution Control Maintenance Sharing*	LS	1	x 10,000.00 = \$	10,000
066596 Additional Water Pollution Control**	LS	1	x 10,000.00 = \$	10,000
066597 Storm Water Sampling and Analysis***	LS	1	x 10,000.00 = \$	10,000
XXXXXX Some Item	LS	x	= \$	-
<i>Subtotal Supplemental Work for NPDES</i>				<i>\$ 30,000</i>

*Applies to all SWPPPs and those WPCPs with sediment control or soil stabilization BMPs.

**Applies to both SWPPPs and WPCP projects.

*** Applies only to project with SWPPPs.

SECTION 6: TRAFFIC ITEMS**6A - Traffic Electrical**

Item code	Unit	Quantity	Unit Price (\$)	Cost
860460 Lighting and Sign Illumination	LS	1 x	15,000.00 = \$	15,000
860201 Signal and Lighting	LS	x	= \$	-
860990 Closed Circuit Television System	LS	x	= \$	-
86110X Ramp Metering System (Location X)	LS	x	= \$	-
86070X Interconnection Conduit and Cable	LF/LS	x	= \$	-
5602XX Furnish Sign Structure (Type X)	LB	x	= \$	-
5602XX Install Sign Structure (Type X)	LB	x	= \$	-
498040 XX" CIDHC Pile (Sign Foundation)	LF	x	= \$	-
86080X Inductive Loop Detectors	EA/LS	x	= \$	-
8609XX Traffic Monitoring Station (Type X)	LS	x	= \$	-
15075X Remove Sign Structure	EA/LS	x	= \$	-
151581 Reconstruct Sign Structure	EA	x	= \$	-
152641 Modify Sign Structure	EA	x	= \$	-
860090 Maintain Existing Traffic Management System Eler	LS	x	= \$	-
86XXXX Fiber Optic Conduit System	LS	x	100,000.00 = \$	-
XXXXX Some Item	Unit	x	= \$	-
Subtotal Traffic Electrical				\$ 15,000

6B - Traffic Signing and Striping

Item code	Unit	Quantity	Unit Price (\$)	Cost
566011 Roadside Sign - One Post	EA	6 x	10,000.00 = \$	60,000
566012 Roadside Sign - Two Post	EA	x	= \$	-
5602XX Furnish Sign	SQFT	x	= \$	-
568016 Install Sign Panel on Existing Frame	SQFT	x	= \$	-
150711 Remove Painted Traffic Stripe	LF	x	= \$	-
141101 Remove Yellow Painted Traffic Stripe (Hazardous Waste)	LF	x	= \$	-
150712 Remove Painted Pavement Marking	SQFT	x	= \$	-
150742 Remove Roadside Sign	EA	x	= \$	-
152320 Reset Roadside Sign	EA	x	= \$	-
152390 Relocate Roadside Sign	EA	x	= \$	-
82010X Delineator (Class X)	EA	x	= \$	-
840502 Thermoplastic Traffic Stripe (Enhanced Wet Night)	LF	7,200 x	3.30 = \$	23,760
846012 Thermoplastic Crosswalk and Pavement Marking (T	SQFT	x	= \$	-
120090 Construction Area Signs	LS	1 x	10,000.00 = \$	10,000
84XXXX Permanent Pavement Delineation	LS	x	= \$	-
Subtotal Traffic Signing and Striping				\$ 93,760

6C - Traffic Management Plan

Item code	Unit	Quantity	Unit Price (\$)	Cost
12865X Portable Changeable Message Signs	EA/LS	6 x	\$ 1,500 = \$	9,000
Subtotal Traffic Management Plan				\$ 9,000

6C - Stage Construction and Traffic Handling

Item code	Unit	Quantity	Unit Price (\$)	Cost
120199 Traffic Plastic Drum	EA	x	= \$	-
12016X Channelizer (Type X)	EA	x	= \$	-
120120 Type III Barricade	EA	x	= \$	-
129100 Temporary Crash Cushion Module	EA	x	= \$	-
120100 Traffic Control System	LS	1 x	100,000.00 = \$	100,000
129110 Temporary Crash Cushion	EA	x	= \$	-
129000 Temporary Railing (Type K)	LF	x	= \$	-
120149 Temporary Pavement Marking (Paint)	SQFT	x	= \$	-
82010X Delineator (Class X)	EA	x	= \$	-
XXXXXX Some Item	Unit	x	= \$	-
Subtotal Stage Construction and Traffic Handling				\$ 100,000

TOTAL TRAFFIC ITEMS	\$ 217,800
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SECTION 7: DETOURS

Includes constructing, maintaining, and removal

Item code	Unit	Quantity	Unit Price (\$)	Cost
190101 Roadway Excavation	CY	x	= \$	-
19801X Imported Borrow	CY/TON	x	= \$	-
390132 Hot Mix Asphalt (Type A)	TON	x	= \$	-
26020X Class 2 Aggregate Base	TON/CY	x	= \$	-
250401 Class 4 Aggregate Subbase	CY	x	= \$	-
130620 Temporary Drainage Inlet Protection	EA	x	= \$	-
129000 Temporary Railing (Type K)	LF	x	= \$	-
128601 Temporary Signal System	LS	x	= \$	-
120149 Temporary Pavement Marking (Paint)	SQFT	x	= \$	-
80010X Temporary Fence (Type X)	LF	x	= \$	-
XXXXXX Some Item	LS	x	5,000,000 = \$	-

* Includes constructing, maintaining, and removal

TOTAL DETOURS	\$	-
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SUBTOTAL SECTIONS 1 through 7	\$	1,376,300
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SECTION 8: MINOR ITEMS**8A - Americans with Disabilities Act Items**

ADA Items

1.0% \$ 13,763

8B - Bike Path Items

Bike Path Items

1.0% \$ 13,763

8C - Other Minor Items

Other Minor Items

8.0% \$ 110,104

Total of Section 1-7	\$	1,376,300	x	10.0%	= \$	137,630
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TOTAL MINOR ITEMS	\$	137,700
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SECTIONS 9: MOBILIZATION

Item code

999990

Total Section 1-8

\$	1,514,000	x	10%	= \$	151,400
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TOTAL MOBILIZATION	\$	151,400
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SECTION 10: SUPPLEMENTAL WORK

Item code

066670

Payment Adjustments For Price Index
Fluctuations

Unit

LS

Quantity

x

Unit Price (\$)

= \$

Cost

-

066094

Value Analysis

LS

1

x

10,000.00

= \$

10,000

066070

Maintain Traffic

LS

1

x

10,000.00

= \$

10,000

066919

Dispute Resolution Board

LS

x

= \$

-

066921

Dispute Resolution Advisor

LS

x

= \$

-

066015

Federal Trainee Program

LS

x

= \$

-

066610

Partnering

LS

x

= \$

-

066204

Remove Rock and Debris

LS

x

= \$

-

066222

Locate Existing Crossover

LS

x

= \$

-

XXXXXX

Some Item

Unit

x

= \$

-

Cost of NPDES Supplemental Work specified in Section 5D	= \$	30,000
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Total Section 1-8	\$	1,514,000	4%	= \$	60,560
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TOTAL SUPPLEMENTAL WORK	\$	110,600
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SECTION 11: STATE FURNISHED MATERIALS AND EXPENSES

Item code		Unit	Quantity		Unit Price (\$)		Cost
066105	Resident Engineers Office	LS	1	x	10,000.00	=	\$10,000
066063	Traffic Management Plan - Public Information	LS	1	x	10,000.00	=	\$10,000
066901	Water Expenses	LS	1	x	10,000.00	=	\$10,000
8609XX	Traffic Monitoring Station (X)	LS		x		=	\$0
066841	Traffic Controller Assembly	LS		x		=	\$0
066840	Traffic Signal Controller Assembly	LS		x		=	\$0
066062	COZEEP Contract	LS		x		=	\$0
066838	Reflective Numbers and Edge Sealer	LS		x		=	\$0
066065	Tow Truck Service Patrol	LS		x		=	\$0
066916	Annual Construction General Permit Fee	LS	1	x	5,000.00	=	\$5,000
XXXXXX	Some Item	Unit		x		=	\$0
Total Section 1-8		\$	1,514,000		2%	= \$	30,280

TOTAL STATE FURNISHED	\$65,300
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SECTION 12: TIME-RELATED OVERHEAD

Total of Roadway and Structures Contract Items excluding Mobilization	\$1,514,000 (used to calculate TRO)
Total Construction Cost (excluding TRO and Contingency)	\$1,841,300 (used to check if project is greater than \$5 million excluding contingency)

Estimated Time-Related Overhead (TRO) Percentage (0% to 10%) = **6%**

Item code		Unit	Quantity		Unit Price (\$)		Cost
070018	Time-Related Overhead	WD	120	X	\$758	=	\$90,900

TOTAL TIME-RELATED OVERHEAD	\$90,900
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Note: If the building portion of the project is greater than 50% of the total project cost, then TRO is not included.

SECTION 13: ROADWAY CONTINGENCY

Recommended Contingency: (Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Total Section 1-11	\$	1,821,600	x	40%	=	\$728,640
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TOTAL CONTINGENCY	\$728,700
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II. STRUCTURE ITEMS

	<u>Bridge 1</u>		<u>Bridge 2</u>		
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Bridge Name	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Bridge Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot	\$150		\$150		\$0
COST OF EACH	\$0		\$0		\$0

	<u>Building 1</u>				
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Building Name	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Building Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot	\$300		\$0		\$0
COST OF EACH	\$0		\$0		\$0

TOTAL COST OF BRIDGES	\$0
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TOTAL COST OF BUILDINGS	\$0
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Structures Mobilization Percentage	10%	\$0
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Recommended Contingency: (Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Structures Contingency Percentage	10%	\$0
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TOTAL COST OF STRUCTURES	\$0
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Estimate Prepared By: _____
 XXXXXXXXXXXXXXXXXXXX ----- Division of Structures

 Date

III. RIGHT OF WAY

Fill in all of the available information from the Right of Way data sheet.

A)	A1)	Acquisition, including Excess Land Purchases, Damages & Goodwill, Fees	\$	293,052
	A2)	SB-1210	\$	0
B)		Acquisition of Offsite Mitigation	\$	0
C)	C1)	Utility Relocation (State Share)	\$	0
	C2)	Potholing (Design Phase)	\$	40,000
D)		Railroad Acquisition	\$	0
E)		Clearance / Demolition	\$	0
F)		Relocation Assistance (RAP and/or Last Resort Housing Costs)	\$	0
G)		Title and Escrow	\$	0
H)		Environmental Review	\$	0
I)		Condemnation Settlements <u>0%</u>	\$	0
J)		Design Appreciation Factor <u>0%</u>	\$	0
K)		Utility Relocation (Construction Cost)	\$	0

L)	TOTAL RIGHT OF WAY ESTIMATE	\$333,052
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M)	TOTAL R/W ESTIMATE: Escalated	\$333,052
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N)	RIGHT OF WAY SUPPORT	\$0
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Support Cost Estimate
Prepared By _____ Project Coordinator¹ _____ Phone _____

Utility Estimate Prepared
By _____ Utility Coordinator² _____ Phone _____

R/W Acquisition Estimate
Prepared By _____ Right of Way Estimator³ _____ Phone _____

Note: Items G & H applied to items A + B

¹ When estimate has Support Costs only² When estimate has Utility Relocation³ When R/W Acquisition is required

EA: 01-LOCAL PID: EVCRCP

IV. SUPPORT COST ESTIMATE SUMMARY

Note: Use PRSM project data.

Total by FY		Escalated Support Cost for Estimate To Completion (ETC)				
		PA&ED	PS&E	RW	CON	Total \$
< 2010	Expended					
	ETC					
2011	Expended					
	ETC					
2012	Expended					
	ETC					
2013	Expended					
	ETC					
2014	Expended					
	ETC					
2015	Expended					
	ETC					
2016	Expended					
	ETC					
2017	Expended					
	ETC					
2018	Expended					
	ETC					
2019	Expended					
	ETC					
2020	Expended					
	ETC					
2021	Expended					
	ETC					
2022	Expended					
	ETC					
2023	Expended					
	ETC					
2024	Expended					
	ETC					
2025 >	Expended					
	ETC					
EAC (Expended + ETC)		\$0	\$0	\$0	\$0	\$0
Approved Budget (PRSM)						
Difference (Budget - EAC)		\$0	\$0	\$0	\$0	\$0
Support Ratio (EAC / Cap Cost)		0.0%	0.0%	0.0%	0.0%	0.0%

Total Capital Cost:	\$2,994,000
Total Capital Outlay Support Cost:	\$0
Overall Percent Support Cost:	0.00%

PRSM workplan hours/costs verified
against approved MWA:

Office Chief -

Date

Approved by:

Project Control -

Date

PROJECT PLANNING COST ESTIMATE

EA: 01-LOCAL

EA: 01-LOCAL PID: EVCRCP

PID: EVCRCP

District-County-Route: 01-DN-EVCR

PM: 0.0 - 1.5

Type of Estimate : Programming

Program Code : k

Project Limits : Along Elk Valley Cross Road from Lake Earl Drive to Parkway Drive

Project Description:	Signing and striping improvements at intersection of US 101 and Elk Valley Crossroad, median striping and yield sign in center of intersection.
Scope :	
Alternative :	Alternative A, Intersection Improvement at US 101 and Elk Valley Cross Road

SUMMARY OF PROJECT COST ESTIMATE

	Current Year Cost	Escalated Cost
TOTAL ROADWAY COST	\$ 219,300	\$ 243,701
TOTAL STRUCTURES COST	\$ -	\$ -
SUBTOTAL CONSTRUCTION COST	\$ 219,300	\$ 243,701
TOTAL RIGHT OF WAY COST	\$ 10,000	\$ 10,000
TOTAL CAPITAL OUTLAY COSTS	\$ 230,000	\$ 254,000
PR/ED SUPPORT	\$ -	\$ -
PS&E SUPPORT	\$ -	\$ -
RIGHT OF WAY SUPPORT	\$ -	\$ -
CONSTRUCTION SUPPORT	\$ -	\$ -
TOTAL SUPPORT COST	\$ -	\$ -

TOTAL PROJECT COST	\$ 230,000	\$ 255,000
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If Project has been programmed enter Programmed Amount \$ 250,000,000

Month / Year

Date of Estimate (Month/Year) 1 / 2020

Estimated Construction Start (Month/Year) 4 / 2024

Number of Working Days = 25

Estimated Mid-Point of Construction (Month/Year) 8 / 2024

Estimated Construction End (Month/Year) 12 / 2024

Number of Plant Establishment Days 261

Estimated Project Schedule

PID Approval	6/1/2021
PA/ED Approval	7/1/2022
PS&E	10/1/2022
RTL	12/1/2023
Begin Construction	4/1/2024

Reviewed by District O.E.

xx/xx/xxxx

(xxx) xxx-xxxx

Office Engineer

Date

Phone

Approved by Project
Manager

xx/xx/xxxx

(xxx) xxx-xxxx

Project Manager

Date

Phone

I. ROADWAY ITEMS SUMMARY

	Section	Cost
1	Earthwork	\$ -
2	Pavement Structural Section	\$ -
3	Drainage	\$ -
4	Specialty Items	\$ 2,500
5	Environmental	\$ 18,000
6	Traffic Items	\$ 105,900
7	Detours	\$ -
8	Minor Items	\$ 12,700
9	Roadway Mobilization	\$ -
10	Supplemental Work	\$ 6,600
11	State Furnished	\$ 12,800
12	Time-Related Overhead	\$ -
13	Roadway Contingency	\$ 60,800
TOTAL ROADWAY ITEMS		\$ 219,300

Estimate Prepared By :

Name and Title	Date	Phone
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Estimate Reviewed By :

Name and Title	Date	Phone
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By signing this estimate you are attesting that you have discussed your project with all functional units and have incorporated all their comments or have discussed with them why they will not be incorporated.

SECTION 1: EARTHWORK

Item code		Unit	Quantity	Unit Price (\$)	Cost
190101	Roadway Excavation	CY	x	= \$	-
19010X	Roadway Excavation (Type X) ADL	CY	x	= \$	-
194001	Ditch Excavation	CY	x	= \$	-
19801X	Imported Borrow	CY/TON	x	= \$	-
192037	Structure Excavation (Retaining Wall)	CY	x	= \$	-
193013	Structure Backfill (Retaining Wall)	CY	x	= \$	-
193031	Pervious Backfill Material (Retaining Wall)	CY	x	= \$	-
16010X	Clearing & Grubbing	LS/ACRE	x	= \$	-
170101	Develop Water Supply	LS	x	= \$	-
19801X	Imported Borrow	CY/TON	x	= \$	-
210130	Duff	ACRE	x	= \$	-
XXXXXX	Some Item	Unit	x	= \$	-

TOTAL EARTHWORK SECTION ITEMS	\$	-
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SECTION 2: PAVEMENT STRUCTURAL SECTION

Item code		Unit	Quantity	Unit Price (\$)	Cost
401050	Jointed Plain Concrete Pavement	CY	x	= \$	-
400050	Continuously Reinforced Concrete Pavement	CY	x	= \$	-
404092	Seal Pavement Joint	LF	x	= \$	-
404093	Seal Isolation Joint	LF	x	= \$	-
413117	Seal Concrete Pavement Joint (Silicone)	LF	x	= \$	-
413118	Seal Pavement Joint (Asphalt Rubber)	LF	x	= \$	-
280010	Rapid Strength Concrete Base	CY	x	= \$	-
410095	Dowel Bar (Drill and Bond)	EA	x	= \$	-
390132	Hot Mix Asphalt (Type A)	TON	x	= \$	-
390137	Rubberized Hot Mix Asphalt (Gap Graded)	TON	x	= \$	-
39300X	Geosynthetic Pavement Interlayer (Type X)	SQYD	x	= \$	-
26020X	Class 2 Aggregate Base	TON/CY	x	= \$	-
290201	Asphalt Treated Permeable Base	CY	x	= \$	-
250401	Class 4 Aggregate Subbase	CY	x	= \$	-
374002	Asphaltic Emulsion (Fog Seal Coat)	TON	x	= \$	-
397005	Tack Coat	TON	x	= \$	-
377501	Slurry Seal	TON	x	= \$	-
3750XX	Screenings (Type XX)	TON	x	= \$	-
374492	Asphaltic Emulsion (Polymer Modified)	TON	x	= \$	-
370001	Sand Cover (Seal)	TON	x	= \$	-
731530	Minor Concrete (Textured Paving)	CY	x	= \$	-
731502	Minor Concrete (Miscellaneous Construction)	CY	x	= \$	-
39407X	Place Hot Mix Asphalt Dike (Type X)	LF	x	= \$	-
150771	Remove Asphalt Concrete Dike	LF	x	= \$	-
420201	Grind Existing Concrete Pavement	SQYD	x	= \$	-
150860	Remove Base and Surfacing	CY	x	= \$	-
390095	Replace Asphalt Concrete Surfacing	CY	x	= \$	-
15312X	Remove Concrete	LF/CY/LS	x	= \$	-
394090	Place Hot Mix Asphalt (Miscellaneous Area)	SQYD	x	= \$	-
153103	Cold Plane Asphalt Concrete Pavement	SQYD	x	= \$	-
39405X	Shoulder Rumble Strip (HMA, X-In Indentations)	STA	x	= \$	-
413113	Repair Spalled Joints, Polyester Grout	SQYD	x	= \$	-
420102	Groove Existing Concrete Pavement	SQYD	x	= \$	-
390136	Minor Hot Mix Asphalt	TON	x	= \$	-
394095	Roadside Paving (Miscellaneous Areas)	SQYD	x	= \$	-
XXXXXX	Some Item	Unit	x	= \$	-

TOTAL PAVEMENT STRUCTURAL SECTION ITEMS	\$	-
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SECTION 3: DRAINAGE

Item code		Unit	Quantity	Unit Price (\$)	Cost
15080X	Remove Culvert	EA/LF	x	= \$	-
150820	Modify Inlet	EA	x	= \$	-
155232	Sand Backfill	CY	x	= \$	-
15020X	Abandon Culvert	EA/LF	x	= \$	-
152430	Adjust Inlet	LF	x	= \$	-
155003	Cap Inlet	EA	x	= \$	-
510501	Minor Concrete	CY	x	= \$	-
510502	Minor Concrete (Minor Structure)	CY	x	= \$	-
5105XX	Minor Concrete (Type XX)	CY	x	= \$	-
620XXX	XX" Alternative Pipe Culvert (Type X)	LF	x	= \$	-
6411XX	XX" Plastic Pipe	LF	x	= \$	-
65XXXX	XX" Reinforced Concrete Pipe (Type X)	LF	x	= \$	-
6650XX	XX" Corrugated Steel Pipe (0.XXX" Thick)	LF	x	= \$	-
68XXXX	XX" Plastic Pipe (Edge Drain)	LF	x	= \$	-
69011X	XX" Corrugated Steel Pipe Downrain (0.XXX" Thi	LF	x	= \$	-
70321X	XX" Corrugated Steel Pipe Inlet (0.XXX" Thick)	LF	x	= \$	-
70XXXX	XX" Corrugated Steel Pipe Riser (0.XXX" Thick)	LF	x	= \$	-
7050XX	XX" Steel Flared End Section	EA	x	= \$	-
703233	Grated Line Drain	LF	x	= \$	-
72XXXX	Rock Slope Protection (Type and Method)	CY/TON	x	= \$	-
72901X	Rock Slope Protection Fabric (Class X)	SQYD	x	= \$	-
721420	Concrete (Ditch Lining)	CY	x	= \$	-
721430	Concrete (Channel Lining)	CY	x	= \$	-
750001	Miscellaneous Iron and Steel	LB	x	= \$	-
XXXXXX	Additional Drainage	LS	x	= \$	-

TOTAL DRAINAGE ITEMS	\$	-
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SECTION 4: SPECIALTY ITEMS

Item code		Unit	Quantity	Unit Price (\$)	Cost
080050	Progress Schedule (Critical Path Method)	LS	x	= \$	-
582001	Sound Wall (Masonry Block)	SQFT	x	= \$	-
510530	Minor Concrete (Wall)	CY	x	= \$	-
15325X	Remove Sound Wall	LF/LS	x	= \$	-
070030	Lead Compliance Plan	LS	1	2,500.00	2,500
141120	Treated Wood Waste	LB	x	= \$	-
153221	Remove Concrete Barrier	LF	x	= \$	-
150662	Remove Metal Beam Guard Railing	LF	x	= \$	-
150668	Remove Flared End Section	EA	x	= \$	-
8000XX	Chain Link Fence (Type XX)	LF	x	= \$	-
80XXXX	XX" Chain Link Gate (Type CL-6)	EA	x	= \$	-
832001	Metal Beam Guard Railing	LF	x	= \$	-
839301	Single Thrie Beam Barrier	LF	x	= \$	-
839310	Double Thrie Beam Barrier	LF	x	= \$	-
839521	Cable Railing	LF	x	= \$	-
8395XX	Terminal System (Type CAT)	EA	x	= \$	-
839585	Alternative Flared Terminal System	EA	x	= \$	-
839584	Alternative In-line Terminal System	EA	x	= \$	-
4906XX	CIDH Concrete Piling (Insert Diameter)	LF	x	= \$	-
839XXX	Crash Cushion (Insert Type)	EA	x	= \$	-
83XXXX	Concrete Barrier (Insert Type)	LF	x	= \$	-
520103	Bar Reinforced Steel (Retaining Wall)	LB	x	= \$	-
510060	Structural Concrete, Retaining Wall	CY	x	= \$	-
513553	Retaining Wall (Masonry Wall)	SQFT	x	= \$	-
511035	Architectural Treatment	SQFT	x	= \$	-
598001	Anti-Graffiti Coating	SQFT	x	= \$	-
203070	Rock Stain	SQFT	x	= \$	-
5136XX	Reinforced Concrete Crib Wall (Type X)	SQFT	x	= \$	-
83954X	Transition Railing (Type X)	EA	x	= \$	-
597601	Prepare and Stain Concrete	SQFT	x	= \$	-
839561	Rail Tensioning Assembly	EA	x	= \$	-
83958X	End Anchor Assembly (Type X)	EA	x	= \$	-
XXXXXX	Some Item	Unit	x	= \$	-

TOTAL SPECIALTY ITEMS	\$	2,500
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SECTION 5: ENVIRONMENTAL**5A - ENVIRONMENTAL MITIGATION**

Item code	Unit	Quantity	Unit Price (\$)	Cost
Biological Mitigation	LS	x	= \$	-
130670 Temporary Reinforced Silt Fence	LF	x	= \$	-
141000 Temporary Fence (Type ESA)	LF	x	= \$	-
Subtotal Environmental Mitigation				\$ -

5B - LANDSCAPE AND IRRIGATION

Item code	Unit	Quantity	Unit Price (\$)	Cost
20XXXX Highway Planting	LS	x	= \$	-
20XXXX Irrigation System	LS	x	= \$	-
204099 Plant Establishment Work	LS	x	= \$	-
204101 Extend Plant Establishment Work	LS	x	= \$	-
20XXXX Follow-up Landscape Project	LS	x	= \$	-
150685 Remove Irrigation Facility	LS	x	= \$	-
20XXXX Maintain Existing (Irrigation or Planted Areas)	LS	x	= \$	-
206400 Check and Test Existing Irrigation Facilities	LS	x	= \$	-
21011X Imported Topsoil (X)	CY/TON	x	= \$	-
20XXXX Rock Blanket, Rock Mulch, DG, Gravel Mulch	SQFT/SQYD	x	= \$	-
200122 Weed Germination	SQYD	x	= \$	-
208304 Water Meter	EA	x	= \$	-
2087XX XX" Conduit (Use for Irrigation x-overs)	LF	x	= \$	-
20890X Extended Conduit (Use for Extension of Irrigation x-overs)	LF	x	= \$	-
Subtotal Landscape and Irrigation				\$ -

5C - EROSION CONTROL

Item code	Unit	Quantity	Unit Price (\$)	Cost
210010 Move In/Move Out (Erosion Control)	EA	x	= \$	-
210350 Fiber Rolls	LF	x	= \$	-
210360 Compost Sock	LF	x	= \$	-
2102XX Rolled Erosion Control Product (X)	SQFT	x	= \$	-
21025X Bonded Fiber Matrix	SQFT/ACRE	x	= \$	-
210300 Hydromulch	SQFT	x	= \$	-
210420 Straw	SQFT	x	= \$	-
210430 Hydroseed	SQFT	x	= \$	-
210600 Compost	SQFT	x	= \$	-
210630 Incorporate Materials	SQFT	x	= \$	-
Subtotal Erosion Control				\$ -

5D - NPDES

Item code	Unit	Quantity	Unit Price (\$)	Cost
130300 Prepare SWPPP	LS	x	= \$	-
130200 Prepare WPCP	LS	1	1,500.00	1,500
130100 Job Site Management	LS	1	1,500.00	1,500
130330 Storm Water Annual Report	EA	x	= \$	-
130310 Rain Event Action Plan (REAP)	EA	x	= \$	-
130320 Storm Water Sampling and Analysis Day	EA	x	= \$	-
130520 Temporary Hydraulic Mulch	SQYD	x	= \$	-
130550 Temporary Hydroseed	SQYD	x	= \$	-
130505 Move-In/Move-Out (Temporary Erosion Control)	EA	x	= \$	-
130640 Temporary Fiber Roll	LF	x	= \$	-
130900 Temporary Concrete Washout	LS	x	= \$	-
130710 Temporary Construction Entrance	EA	x	= \$	-
130610 Temporary Check Dam	LF	x	= \$	-
130620 Temporary Drainage Inlet Protection	EA	x	= \$	-
130730 Street Sweeping	LS	1	15,000.00	15,000
Subtotal NPDES				\$ 18,000

TOTAL ENVIRONMENTAL	\$ 18,000
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Supplemental Work for NPDES

066595 Water Pollution Control Maintenance Sharing*	LS	x	= \$	-
066596 Additional Water Pollution Control**	LS	x	= \$	-
066597 Storm Water Sampling and Analysis***	LS	x	= \$	-
XXXXXX Some Item	LS	x	= \$	-
Subtotal Supplemental Work for NPDES				\$ -

*Applies to all SWPPPs and those WPCPs with sediment control or soil stabilization BMPs.

**Applies to both SWPPPs and WPCP projects.

*** Applies only to project with SWPPPs.

SECTION 6: TRAFFIC ITEMS**6A - Traffic Electrical**

Item code	Unit	Quantity	Unit Price (\$)	Cost
860460 Lighting and Sign Illumination	LS	1 x	10,000.00 = \$	10,000
860201 Signal and Lighting	LS	x	= \$	-
860990 Closed Circuit Television System	LS	x	= \$	-
86110X Ramp Metering System (Location X)	LS	x	= \$	-
86070X Interconnection Conduit and Cable	LF/LS	x	= \$	-
5602XX Furnish Sign Structure (Type X)	LB	x	= \$	-
5602XX Install Sign Structure (Type X)	LB	x	= \$	-
498040 XX" CIDHC Pile (Sign Foundation)	LF	x	= \$	-
86080X Inductive Loop Detectors	EA/LS	x	= \$	-
8609XX Traffic Monitoring Station (Type X)	LS	x	= \$	-
15075X Remove Sign Structure	EA/LS	x	= \$	-
151581 Reconstruct Sign Structure	EA	x	= \$	-
152641 Modify Sign Structure	EA	x	= \$	-
860090 Maintain Existing Traffic Management System Eler	LS	x	= \$	-
86XXXX Fiber Optic Conduit System	LS	x	= \$	-
XXXXX Some Item	Unit	x	= \$	-
Subtotal Traffic Electrical				\$ 10,000

6B - Traffic Signing and Striping

Item code	Unit	Quantity	Unit Price (\$)	Cost
566011 Roadside Sign - One Post	EA	1 x	10,000.00 = \$	10,000
566012 Roadside Sign - Two Post	EA	x	= \$	-
5602XX Furnish Sign	SQFT	x	= \$	-
568016 Install Sign Panel on Existing Frame	SQFT	x	= \$	-
150711 Remove Painted Traffic Stripe	LF	x	= \$	-
141101 Remove Yellow Painted Traffic Stripe (Hazardous Waste)	LF	x	= \$	-
150712 Remove Painted Pavement Marking	SQFT	x	= \$	-
150742 Remove Roadside Sign	EA	x	= \$	-
152320 Reset Roadside Sign	EA	x	= \$	-
152390 Relocate Roadside Sign	EA	x	= \$	-
82010X Delineator (Class X)	EA	x	= \$	-
840502 Thermoplastic Traffic Stripe (Enhanced Wet Night)	LF	x	= \$	-
846012 Thermoplastic Crosswalk and Pavement Marking (E)	SQFT	771 x	11.00 = \$	8,481
120090 Construction Area Signs	LS	1 x	15,000.00 = \$	15,000
84XXXX Permanent Pavement Delineation	LS	x	= \$	-
Subtotal Traffic Signing and Striping				\$ 33,481

6C - Traffic Management Plan

Item code	Unit	Quantity	Unit Price (\$)	Cost
12865X Portable Changeable Message Signs	EA/LS	8 x	\$ 1,500 = \$	12,000
Subtotal Traffic Management Plan				\$ 12,000

6C - Stage Construction and Traffic Handling

Item code	Unit	Quantity	Unit Price (\$)	Cost
120199 Traffic Plastic Drum	EA	x	= \$	-
12016X Channelizer (Type X)	EA	x	= \$	-
120120 Type III Barricade	EA	x	= \$	-
129100 Temporary Crash Cushion Module	EA	x	= \$	-
120100 Traffic Control System	LS	1 x	50,000.00 = \$	50,000
129110 Temporary Crash Cushion	EA	x	= \$	-
129000 Temporary Railing (Type K)	LF	x	= \$	-
120149 Temporary Pavement Marking (Paint)	SQFT	x	= \$	-
82010X Delineator (Class X)	EA	20 x	20.00 = \$	400
XXXXXX Some Item	Unit	x	= \$	-
Subtotal Stage Construction and Traffic Handling				\$ 50,400

TOTAL TRAFFIC ITEMS	\$ 105,900
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SECTION 7: DETOURS

Includes constructing, maintaining, and removal

Item code	Unit	Quantity	Unit Price (\$)	Cost
190101 Roadway Excavation	CY	x	= \$	-
19801X Imported Borrow	CY/TON	x	= \$	-
390132 Hot Mix Asphalt (Type A)	TON	x	= \$	-
26020X Class 2 Aggregate Base	TON/CY	x	= \$	-
250401 Class 4 Aggregate Subbase	CY	x	= \$	-
130620 Temporary Drainage Inlet Protection	EA	x	= \$	-
129000 Temporary Railing (Type K)	LF	x	= \$	-
128601 Temporary Signal System	LS	x	= \$	-
120149 Temporary Pavement Marking (Paint)	SQFT	x	= \$	-
80010X Temporary Fence (Type X)	LF	x	= \$	-
XXXXXX Some Item	LS	x	= \$	-

* Includes constructing, maintaining, and removal

TOTAL DETOURS	\$	-
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SUBTOTAL SECTIONS 1 through 7	\$	126,400
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SECTION 8: MINOR ITEMS**8A - Americans with Disabilities Act Items**

ADA Items

1.0% \$ 1,264

8B - Bike Path Items

Bike Path Items

1.0% \$ 1,264

8C - Other Minor Items

Other Minor Items

8.0% \$ 10,112

Total of Section 1-7	\$	126,400	x	10.0%	= \$	12,640
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TOTAL MINOR ITEMS	\$	12,700
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SECTIONS 9: MOBILIZATION

Item code

999990

Total Section 1-8

\$	139,100	x	10%	= \$	-
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TOTAL MOBILIZATION	\$	-
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SECTION 10: SUPPLEMENTAL WORK

Item code	Unit	Quantity	Unit Price (\$)	Cost
066670 Payment Adjustments For Price Index Fluctuations	LS	x	= \$	-
066094 Value Analysis	LS	x	= \$	-
066070 Maintain Traffic	LS	1	x 1,000.00 = \$	1,000
066919 Dispute Resolution Board	LS	x	= \$	-
066921 Dispute Resolution Advisor	LS	x	= \$	-
066015 Federal Trainee Program	LS	x	= \$	-
066610 Partnering	LS	x	= \$	-
066204 Remove Rock and Debris	LS	x	= \$	-
066222 Locate Existing Crossover	LS	x	= \$	-
XXXXXX Some Item	Unit	x	= \$	-

Cost of NPDES Supplemental Work specified in Section 5D	= \$	-
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Total Section 1-8	\$	139,100	4%	= \$	5,564
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TOTAL SUPPLEMENTAL WORK	\$	6,600
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SECTION 11: STATE FURNISHED MATERIALS AND EXPENSES

Item code		Unit	Quantity		Unit Price (\$)		Cost
066105	Resident Engineers Office	LS		x		=	\$0
066063	Traffic Management Plan - Public Information	LS	1	x	10,000.00	=	\$10,000
066901	Water Expenses	LS		x		=	\$0
8609XX	Traffic Monitoring Station (X)	LS		x		=	\$0
066841	Traffic Controller Assembly	LS		x		=	\$0
066840	Traffic Signal Controller Assembly	LS		x		=	\$0
066062	COZEEP Contract	LS		x		=	\$0
066838	Reflective Numbers and Edge Sealer	LS		x		=	\$0
066065	Tow Truck Service Patrol	LS		x		=	\$0
066916	Annual Construction General Permit Fee	LS		x		=	\$0
XXXXXX	Some Item	Unit		x		=	\$0
Total Section 1-8		\$	139,100	2%	=	\$	2,782

TOTAL STATE FURNISHED	\$12,800
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SECTION 12: TIME-RELATED OVERHEAD

Total of Roadway and Structures Contract Items excluding Mobilization \$139,100 (used to calculate TRO)
Total Construction Cost (excluding TRO and Contingency) \$158,500 (used to check if project is greater than \$5 million excluding contingency)

Estimated Time-Related Overhead (TRO) Percentage (0% to 10%) = **6%**

Item code		Unit	Quantity		Unit Price (\$)		Cost
070018	Time-Related Overhead	WD	25	X	\$0	=	\$0

TOTAL TIME-RELATED OVERHEAD	\$0
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Note: If the building portion of the project is greater than 50% of the total project cost, then TRO is not included.

SECTION 13: ROADWAY CONTINGENCY

Recommended Contingency: (Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Total Section 1-11 \$ 151,900 x **40%** = \$60,760

TOTAL CONTINGENCY	\$60,800
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II. STRUCTURE ITEMS

	<u>Bridge 1</u>		<u>Bridge 2</u>		
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Bridge Name	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Bridge Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot	\$150		\$150		\$0
COST OF EACH	\$0		\$0		\$0

	<u>Building 1</u>				
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Building Name	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Building Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot	\$300		\$0		\$0
COST OF EACH	\$0		\$0		\$0

TOTAL COST OF BRIDGES	\$0
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TOTAL COST OF BUILDINGS	\$0
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Structures Mobilization Percentage	10%	\$0
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Recommended Contingency: (Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Structures Contingency Percentage	10%	\$0
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TOTAL COST OF STRUCTURES	\$0
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Estimate Prepared By: _____
 XXXXXXXXXXXXXXXXXXXX ----- Division of Structures

 Date

III. RIGHT OF WAY

Fill in all of the available information from the Right of Way data sheet.

A)	A1)	Acquisition, including Excess Land Purchases, Damages & Goodwill, Fees	\$	0
	A2)	SB-1210	\$	0
B)		Acquisition of Offsite Mitigation	\$	0
C)	C1)	Utility Relocation (State Share)	\$	0
	C2)	Potholing (Design Phase)	\$	10,000
D)		Railroad Acquisition	\$	0
E)		Clearance / Demolition	\$	0
F)		Relocation Assistance (RAP and/or Last Resort Housing Costs)	\$	0
G)		Title and Escrow	\$	0
H)		Environmental Review	\$	0
I)		Condemnation Settlements <u>0%</u>	\$	0
J)		Design Appreciation Factor <u>0%</u>	\$	0
K)		Utility Relocation (Construction Cost)	\$	0

L)	TOTAL RIGHT OF WAY ESTIMATE	\$10,000
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M)	TOTAL R/W ESTIMATE: Escalated	\$10,000
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N)	RIGHT OF WAY SUPPORT	\$0
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Support Cost Estimate Prepared By	Project Coordinator ¹	Phone
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Utility Estimate Prepared By	Utility Coordinator ²	Phone
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R/W Acquisition Estimate Prepared By	Right of Way Estimator ³	Phone
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Note: Items G & H applied to items A + B

¹ When estimate has Support Costs only² When estimate has Utility Relocation³ When R/W Acquisition is required

IV. SUPPORT COST ESTIMATE SUMMARY

Note: Use PRSM project data.

Total by FY		Escalated Support Cost for Estimate To Completion (ETC)				
		PA&ED	PS&E	RW	CON	Total \$
< 2010	Expended					
	ETC					
2011	Expended					
	ETC					
2012	Expended					
	ETC					
2013	Expended					
	ETC					
2014	Expended					
	ETC					
2015	Expended					
	ETC					
2016	Expended					
	ETC					
2017	Expended					
	ETC					
2018	Expended					
	ETC					
2019	Expended					
	ETC					
2020	Expended					
	ETC					
2021	Expended					
	ETC					
2022	Expended					
	ETC					
2023	Expended					
	ETC					
2024	Expended					
	ETC					
2025 >	Expended					
	ETC					
EAC (Expended + ETC)		\$0	\$0	\$0	\$0	\$0
Approved Budget (PRSM)						
Difference (Budget - EAC)		\$0	\$0	\$0	\$0	\$0
Support Ratio (EAC / Cap Cost)		0.0%	0.0%	0.0%	0.0%	0.0%

Total Capital Cost:	\$230,000
Total Capital Outlay Support Cost:	\$0
Overall Percent Support Cost:	0.00%

PRSM workplan hours/costs verified
against approved MWA:

Office Chief -

Date

Approved by:

Project Control -

Date

PROJECT PLANNING COST ESTIMATE

EA: 01-LOCAL

EA: 01-LOCAL PID: EVCRCP

PID: EVCRCP

District-County-Route: 01-DN-EVCR

PM: 0.0 - 1.5

Type of Estimate : Programming

Program Code : k

Project Limits : Along Elk Valley Cross Road from Lake Earl Drive to Parkway Drive

Project Description: Restricted Crossing U-turn at the intersection of US 101 and Elk Valley Cross Road

Scope :

Alternative : Alternative B, Intersection Improvements at US 101 and Elk Valley Cross Road

SUMMARY OF PROJECT COST ESTIMATE

	Current Year Cost	Escalated Cost
TOTAL ROADWAY COST	\$ 1,377,200	\$ 1,530,439
TOTAL STRUCTURES COST	\$ -	\$ -
SUBTOTAL CONSTRUCTION COST	\$ 1,377,200	\$ 1,530,439
TOTAL RIGHT OF WAY COST	\$ 20,000	\$ 20,000
TOTAL CAPITAL OUTLAY COSTS	\$ 1,398,000	\$ 1,551,000
PR/ED SUPPORT	\$ -	\$ -
PS&E SUPPORT	\$ -	\$ -
RIGHT OF WAY SUPPORT	\$ -	\$ -
CONSTRUCTION SUPPORT	\$ -	\$ -
TOTAL SUPPORT COST	\$ -	\$ -

TOTAL PROJECT COST	\$ 1,400,000	\$ 1,600,000
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If Project has been programmed enter Programmed Amount \$ 250,000,000

Month / Year

Date of Estimate (Month/Year) 1 / 2020

Estimated Construction Start (Month/Year) 4 / 2024

Number of Working Days = 50

Estimated Mid-Point of Construction (Month/Year) 8 / 2024

Estimated Construction End (Month/Year) 12 / 2024

Number of Plant Establishment Days 0

Estimated Project Schedule

PID Approval	6/1/2024
PA/ED Approval	7/1/2022
PS&E	10/1/2023
RTL	12/1/2023
Begin Construction	4/1/2024

Reviewed by District O.E.

xx/xx/xxxx

(xxx) xxx-xxxx

Office Engineer

Date

Phone

Approved by Project
Manager

xx/xx/xxxx

(xxx) xxx-xxxx

Project Manager

Date

Phone

I. ROADWAY ITEMS SUMMARY

	Section	Cost
1	Earthwork	\$ 20,100
2	Pavement Structural Section	\$ 200,200
3	Drainage	\$ 9,300
4	Specialty Items	\$ 30,000
5	Environmental	\$ 32,200
6	Traffic Items	\$ 450,400
7	Detours	\$ -
8	Minor Items	\$ 74,300
9	Roadway Mobilization	\$ 81,700
10	Supplemental Work	\$ 82,700
11	State Furnished	\$ 26,400
12	Time-Related Overhead	\$ -
13	Roadway Contingency	\$ 369,900
TOTAL ROADWAY ITEMS		\$ 1,377,200

Estimate Prepared By :

Name and Title	Date	Phone
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Estimate Reviewed By :

Name and Title	Date	Phone
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By signing this estimate you are attesting that you have discussed your project with all functional units and have incorporated all their comments or have discussed with them why they will not be incorporated.

SECTION 1: EARTHWORK

Item code		Unit	Quantity		Unit Price (\$)		Cost
190101	Roadway Excavation	CY	1,114	x	9.00	= \$	10,026
19010X	Roadway Excavation (Type X) ADL	CY		x		= \$	-
194001	Ditch Excavation	CY		x		= \$	-
19801X	Imported Borrow	CY/TON		x		= \$	-
192037	Structure Excavation (Retaining Wall)	CY		x		= \$	-
193013	Structure Backfill (Retaining Wall)	CY		x		= \$	-
193031	Pervious Backfill Material (Retaining Wall)	CY		x		= \$	-
16010X	Clearing & Grubbing	LS/ACRE		x		= \$	-
170101	Develop Water Supply	LS	1	x	10,000.00	= \$	10,000
19801X	Imported Borrow	CY/TON		x		= \$	-
210130	Duff	ACRE		x		= \$	-
XXXXXX	Some Item	Unit		x		= \$	-

TOTAL EARTHWORK SECTION ITEMS	\$	20,100
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SECTION 2: PAVEMENT STRUCTURAL SECTION

Item code		Unit	Quantity		Unit Price (\$)		Cost
401050	Jointed Plain Concrete Pavement	CY		x		= \$	-
400050	Continuously Reinforced Concrete Pavement	CY		x		= \$	-
404092	Seal Pavement Joint	LF		x		= \$	-
404093	Seal Isolation Joint	LF		x		= \$	-
413117	Seal Concrete Pavement Joint (Silicone)	LF		x		= \$	-
413118	Seal Pavement Joint (Asphalt Rubber)	LF		x		= \$	-
280010	Rapid Strength Concrete Base	CY		x		= \$	-
410095	Dowel Bar (Drill and Bond)	EA		x		= \$	-
390132	Hot Mix Asphalt (Type A)	TON	752	x	120.00	= \$	90,240
390137	Rubberized Hot Mix Asphalt (Gap Graded)	TON		x		= \$	-
39300X	Geosynthetic Pavement Interlayer (Type X)	SQYD		x		= \$	-
26020X	Class 2 Aggregate Base	CY	743	x	90.00	= \$	66,870
290201	Asphalt Treated Permeable Base	CY		x		= \$	-
250401	Class 4 Aggregate Subbase	CY		x		= \$	-
374002	Asphaltic Emulsion (Fog Seal Coat)	TON		x		= \$	-
397005	Tack Coat	TON	1	x	2,000.00	= \$	2,000
377501	Slurry Seal	TON		x		= \$	-
3750XX	Screenings (Type XX)	TON		x		= \$	-
374492	Asphaltic Emulsion (Polymer Modified)	TON		x		= \$	-
370001	Sand Cover (Seal)	TON		x		= \$	-
731502	Minor Concrete (Miscellaneous Construction)	CY	24	x	1,300.00	= \$	31,200
731504	Minor Concrete (Curb and Gutter)	LF	197	x	50.00	= \$	9,850
39407X	Place Hot Mix Asphalt Dike (Type X)	LF		x		= \$	-
150771	Remove Asphalt Concrete Dike	LF		x		= \$	-
420201	Grind Existing Concrete Pavement	SQYD		x		= \$	-
150860	Remove Base and Surfacing	CY		x		= \$	-
390095	Replace Asphalt Concrete Surfacing	CY		x		= \$	-
15312X	Remove Concrete	LF/CY/LS		x		= \$	-
394090	Place Hot Mix Asphalt (Miscellaneous Area)	SQYD		x		= \$	-
153103	Cold Plane Asphalt Concrete Pavement	SQYD		x		= \$	-
39405X	Shoulder Rumble Strip (HMA, X-In Indentations)	STA		x		= \$	-
413113	Repair Spalled Joints, Polyester Grout	SQYD		x		= \$	-
420102	Groove Existing Concrete Pavement	SQYD		x		= \$	-
390136	Minor Hot Mix Asphalt	TON		x		= \$	-
394095	Roadside Paving (Miscellaneous Areas)	SQYD		x		= \$	-
XXXXXX	Some Item	Unit		x		= \$	-

TOTAL PAVEMENT STRUCTURAL SECTION ITEMS	\$	200,200
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SECTION 3: DRAINAGE

Item code		Unit	Quantity	Unit Price (\$)	Cost
15080X	Remove Culvert	EA/LF	x	= \$	-
150820	Modify Inlet	EA	x	= \$	-
155232	Sand Backfill	CY	x	= \$	-
15020X	Abandon Culvert	EA/LF	x	= \$	-
152430	Adjust Inlet	LF	x	= \$	-
155003	Cap Inlet	EA	x	= \$	-
510501	Minor Concrete	CY	x	= \$	-
510502	Minor Concrete (Minor Structure)	CY	x	= \$	-
5105XX	Minor Concrete (Type XX)	CY	x	= \$	-
620XXX	XX" Alternative Pipe Culvert (Type X)	LF	1,154	x 8.00 = \$	9,232
6411XX	XX" Plastic Pipe	LF	x	= \$	-
65XXXX	XX" Reinforced Concrete Pipe (Type X)	LF	x	= \$	-
6650XX	XX" Corrugated Steel Pipe (0.XXX" Thick)	LF	x	= \$	-
68XXXX	XX" Plastic Pipe (Edge Drain)	LF	x	= \$	-
69011X	XX" Corrugated Steel Pipe Downrain (0.XXX" Thi	LF	x	= \$	-
70321X	XX" Corrugated Steel Pipe Inlet (0.XXX" Thick)	LF	x	= \$	-
70XXXX	XX" Corrugated Steel Pipe Riser (0.XXX" Thick)	LF	x	= \$	-
7050XX	XX" Steel Flared End Section	EA	x	= \$	-
703233	Grated Line Drain	LF	x	= \$	-
72XXXX	Rock Slope Protection (Type and Method)	CY/TON	x	= \$	-
72901X	Rock Slope Protection Fabric (Class X)	SQYD	x	= \$	-
721420	Concrete (Ditch Lining)	CY	x	= \$	-
721430	Concrete (Channel Lining)	CY	x	= \$	-
750001	Miscellaneous Iron and Steel	LB	x	= \$	-
XXXXXX	Additional Drainage	LS	x	1,000.00 = \$	-

TOTAL DRAINAGE ITEMS	\$	9,300
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SECTION 4: SPECIALTY ITEMS

Item code		Unit	Quantity	Unit Price (\$)	Cost
080050	Progress Schedule (Critical Path Method)	LS	1	x 10,000.00 = \$	10,000
582001	Sound Wall (Masonry Block)	SQFT	x	= \$	-
510530	Minor Concrete (Wall)	CY	x	= \$	-
15325X	Remove Sound Wall	LF/LS	x	= \$	-
070030	Lead Compliance Plan	LS	1	x 5,000.00 = \$	5,000
141120	Treated Wood Waste	LB	x	= \$	-
153221	Remove Concrete Barrier	LF	x	= \$	-
150662	Remove Metal Beam Guard Railing	LF	x	= \$	-
150668	Remove Flared End Section	EA	x	= \$	-
8000XX	Chain Link Fence (Type XX)	LF	x	= \$	-
80XXXX	XX" Chain Link Gate (Type CL-6)	EA	x	= \$	-
832001	Metal Beam Guard Railing	LF	x	= \$	-
839301	Single Thrie Beam Barrier	LF	x	= \$	-
839310	Double Thrie Beam Barrier	LF	x	= \$	-
839521	Cable Railing	LF	x	= \$	-
8395XX	Terminal System (Type CAT)	EA	x	= \$	-
839585	Alternative Flared Terminal System	EA	x	= \$	-
839584	Alternative In-line Terminal System	EA	x	= \$	-
4906XX	CIDH Concrete Piling (Insert Diameter)	LF	x	= \$	-
839XXX	Crash Cushion (Insert Type)	EA	x	= \$	-
83XXXX	Concrete Barrier (Insert Type)	LF	x	= \$	-
520103	Bar Reinforced Steel (Retaining Wall)	LB	x	= \$	-
510060	Structural Concrete, Retaining Wall	CY	x	= \$	-
513553	Retaining Wall (Masonry Wall)	SQFT	x	= \$	-
511035	Architectural Treatment	SQFT	x	= \$	-
598001	Anti-Graffiti Coating	SQFT	x	= \$	-
203070	Rock Stain	SQFT	x	= \$	-
5136XX	Reinforced Concrete Crib Wall (Type X)	SQFT	x	= \$	-
83954X	Transition Railing (Type X)	EA	x	= \$	-
597601	Prepare and Stain Concrete	SQFT	x	= \$	-
839561	Rail Tensioning Assembly	EA	x	= \$	-
83958X	End Anchor Assembly (Type X)	EA	x	= \$	-
XXXXXX	Aesthetic Treatment	ls	1	x 15,000.00 = \$	15,000

TOTAL SPECIALTY ITEMS	\$	30,000
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SECTION 5: ENVIRONMENTAL**5A - ENVIRONMENTAL MITIGATION**

Item code	Unit	Quantity	Unit Price (\$)	Cost
Biological Mitigation	LS	x	= \$	-
130670 Temporary Reinforced Silt Fence	LF	x	= \$	-
141000 Temporary Fence (Type ESA)	LF	x	= \$	-
<i>Subtotal Environmental Mitigation</i>				\$ -

5B - LANDSCAPE AND IRRIGATION

Item code	Unit	Quantity	Unit Price (\$)	Cost
20XXXX Highway Planting	LS	x	= \$	-
20XXXX Irrigation System	LS	x	= \$	-
204099 Plant Establishment Work	LS	x	= \$	-
204101 Extend Plant Establishment Work	LS	x	= \$	-
20XXXX Follow-up Landscape Project	LS	x	= \$	-
150685 Remove Irrigation Facility	LS	x	= \$	-
20XXXX Maintain Existing (Irrigation or Planted Areas)	LS	x	= \$	-
206400 Check and Test Existing Irrigation Facilities	LS	x	= \$	-
21011X Imported Topsoil (X)	CY/TON	x	= \$	-
20XXXX Rock Blanket, Rock Mulch, DG, Gravel Mulch	SQFT/SQYD	x	= \$	-
200122 Weed Germination	SQYD	x	= \$	-
208304 Water Meter	EA	x	= \$	-
2087XX XX" Conduit (Use for Irrigation x-overs)	LF	x	= \$	-
20890X Extended Conduit (Use for Extension of Irrigation x-overs)	LF	x	= \$	-
<i>Subtotal Landscape and Irrigation</i>				\$ -

5C - EROSION CONTROL

Item code	Unit	Quantity	Unit Price (\$)	Cost
210010 Move In/Move Out (Erosion Control)	EA	1 x	\$ 500.00 = \$	500
210350 Fiber Rolls	LF	600 x	\$ 5.00 = \$	3,000
210360 Compost Sock	LF	x	= \$	-
2102XX Rolled Erosion Control Product (X)	SQFT	x	= \$	-
21025X Bonded Fiber Matrix	SQFT/ACRE	5769 x	\$ 1.50 = \$	8,654
210300 Hydromulch	SQFT	x	= \$	-
210420 Straw	SQFT	x	= \$	-
210430 Hydroseed	SQFT	x	= \$	-
210600 Compost	SQFT	x	= \$	-
210630 Incorporate Materials	SQFT	x	= \$	-
<i>Subtotal Erosion Control</i>				\$ 12,154

5D - NPDES

Item code	Unit	Quantity	Unit Price (\$)	Cost
130300 Prepare SWPPP	LS	1 x	15,000.00 = \$	15,000
130200 Prepare WPCP	LS	x	= \$	-
130100 Job Site Management	LS	1 x	5,000.00 = \$	5,000
130330 Storm Water Annual Report	EA	x	= \$	-
130310 Rain Event Action Plan (REAP)	EA	x	= \$	-
130320 Storm Water Sampling and Analysis Day	EA	x	= \$	-
130520 Temporary Hydraulic Mulch	SQYD	x	= \$	-
130550 Temporary Hydroseed	SQYD	x	= \$	-
130505 Move-In/Move-Out (Temporary Erosion Control)	EA	x	= \$	-
130640 Temporary Fiber Roll	LF	x	= \$	-
130900 Temporary Concrete Washout	LS	x	= \$	-
130710 Temporary Construction Entrance	EA	x	= \$	-
130610 Temporary Check Dam	LF	x	= \$	-
130620 Temporary Drainage Inlet Protection	EA	x	= \$	-
130730 Street Sweeping	LS	x	= \$	-
<i>Subtotal NPDES</i>				\$ 20,000

Supplemental Work for NPDES

066595 Water Pollution Control Maintenance Sharing*	LS	x	= \$	-
066596 Additional Water Pollution Control**	LS	1 x	10,000.00 = \$	10,000
066597 Storm Water Sampling and Analysis***	LS	x	= \$	-
XXXXXX Some Item	LS	1 x	15,000.00 = \$	15,000
<i>Subtotal Supplemental Work for NDPS</i>				\$ 25,000

*Applies to all SWPPPs and those WPCPs with sediment control or soil stabilization BMPs.

**Applies to both SWPPPs and WPCP projects.

*** Applies only to project with SWPPPs.

TOTAL ENVIRONMENTAL	\$ 32,200
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SECTION 6: TRAFFIC ITEMS**6A - Traffic Electrical**

Item code	Unit	Quantity	Unit Price (\$)	Cost
860460 Lighting and Sign Illumination	LS	x	= \$	-
860201 Signal and Lighting	LS	1	x 250,000.00 = \$	250,000
860990 Closed Circuit Television System	LS	x	= \$	-
86110X Ramp Metering System (Location X)	LS	x	= \$	-
86070X Interconnection Conduit and Cable	LF/LS	x	= \$	-
5602XX Furnish Sign Structure (Type X)	LB	x	= \$	-
5602XX Install Sign Structure (Type X)	LB	x	= \$	-
498040 XX" CIDHC Pile (Sign Foundation)	LF	x	= \$	-
86080X Inductive Loop Detectors	EA/LS	x	= \$	-
8609XX Traffic Monitoring Station (Type X)	LS	x	= \$	-
15075X Remove Sign Structure	EA/LS	x	= \$	-
151581 Reconstruct Sign Structure	EA	x	= \$	-
152641 Modify Sign Structure	EA	x	= \$	-
860090 Maintain Existing Traffic Management System Eler	LS	x	= \$	-
86XXXX Fiber Optic Conduit System	LS	x	= \$	-
XXXXX Some Item	Unit	x	= \$	-
Subtotal Traffic Electrical				\$ 250,000

6B - Traffic Signing and Striping

Item code	Unit	Quantity	Unit Price (\$)	Cost
566011 Roadside Sign - One Post	EA	x	10,000.00 = \$	-
566012 Roadside Sign - Two Post	EA	x	= \$	-
5602XX Furnish Sign	SQFT	x	= \$	-
568016 Install Sign Panel on Existing Frame	SQFT	x	= \$	-
150711 Remove Painted Traffic Stripe	LF	15,900	x 1.50 = \$	23,850
141101 Remove Yellow Painted Traffic Stripe (Hazardous Waste)	LF	x	= \$	-
150712 Remove Painted Pavement Marking	SQFT	1,422	x 6.50 = \$	9,243
150742 Remove Roadside Sign	EA	x	= \$	-
152320 Reset Roadside Sign	EA	x	= \$	-
152390 Relocate Roadside Sign	EA	x	= \$	-
82010X Delineator (Class X)	EA	x	= \$	-
840502 Thermoplastic Traffic Stripe (Enhanced Wet Night)	LF	15,746	x 3.30 = \$	51,962
846012 Thermoplastic Crosswalk and Pavement Marking (E)	SQFT	3,841	x 11.00 = \$	42,251
120090 Construction Area Signs	LS	1	x 25,000.00 = \$	25,000
84XXXX Permanent Pavement Delineation	LS	x	= \$	-
Subtotal Traffic Signing and Striping				\$ 152,306

6C - Traffic Management Plan

Item code	Unit	Quantity	Unit Price (\$)	Cost
12865X Portable Changeable Message Signs	EA/LS	6	x \$ 1,500 = \$	9,000
Subtotal Traffic Management Plan				\$ 9,000

6C - Stage Construction and Traffic Handling

Item code	Unit	Quantity	Unit Price (\$)	Cost
120199 Traffic Plastic Drum	EA	x	= \$	-
12016X Channelizer (Type X)	LF	960	x 25.00 = \$	24,000
120120 Type III Barricade	EA	x	= \$	-
129100 Temporary Crash Cushion Module	EA	x	= \$	-
120100 Traffic Control System	LS	1	x 15,000.00 = \$	15,000
129110 Temporary Crash Cushion	EA	x	= \$	-
129000 Temporary Railing (Type K)	LF	x	= \$	-
120149 Temporary Pavement Marking (Paint)	SQFT	x	= \$	-
82010X Delineator (Class X)	EA	x	= \$	-
XXXXXX Some Item	Unit	x	= \$	-
Subtotal Stage Construction and Traffic Handling				\$ 39,000

TOTAL TRAFFIC ITEMS	\$ 450,400
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SECTION 7: DETOURS

Includes constructing, maintaining, and removal

Item code	Unit	Quantity	Unit Price (\$)	Cost
190101 Roadway Excavation	CY	x	= \$	-
19801X Imported Borrow	CY/TON	x	= \$	-
390132 Hot Mix Asphalt (Type A)	TON	x	= \$	-
26020X Class 2 Aggregate Base	TON/CY	x	= \$	-
250401 Class 4 Aggregate Subbase	CY	x	= \$	-
130620 Temporary Drainage Inlet Protection	EA	x	= \$	-
129000 Temporary Railing (Type K)	LF	x	= \$	-
128601 Temporary Signal System	LS	x	= \$	-
120149 Temporary Pavement Marking (Paint)	SQFT	x	= \$	-
80010X Temporary Fence (Type X)	LF	x	= \$	-
XXXXXX Some Item	LS	x	5,000,000 = \$	-

* Includes constructing, maintaining, and removal

TOTAL DETOURS	\$	-
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SUBTOTAL SECTIONS 1 through 7	\$	742,200
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SECTION 8: MINOR ITEMS**8A - Americans with Disabilities Act Items**

ADA Items

1.0% \$ 7,422

8B - Bike Path Items

Bike Path Items

1.0% \$ 7,422

8C - Other Minor Items

Other Minor Items

8.0% \$ 59,376

Total of Section 1-7	\$	742,200	x	10.0%	= \$	74,220
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TOTAL MINOR ITEMS	\$	74,300
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SECTIONS 9: MOBILIZATION

Item code	Total Section 1-8	\$	816,500	x	10%	= \$	81,650
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TOTAL MOBILIZATION	\$	81,700
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SECTION 10: SUPPLEMENTAL WORK

Item code	Unit	Quantity	Unit Price (\$)	Cost
066670 Payment Adjustments For Price Index Fluctuations	LS	x	= \$	-
066094 Value Analysis	LS	x	= \$	-
066070 Maintain Traffic	LS	x	= \$	-
066919 Dispute Resolution Board	LS	1	x 25,000.00 = \$	25,000
066921 Dispute Resolution Advisor	LS	x	= \$	-
066015 Federal Trainee Program	LS	x	= \$	-
066610 Partnering	LS	x	= \$	-
066204 Remove Rock and Debris	LS	x	= \$	-
066222 Locate Existing Crossover	LS	x	= \$	-
XXXXXX Some Item	Unit	x	= \$	-

Cost of NPDES Supplemental Work specified in Section 5D	= \$	25,000
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Total Section 1-8	\$	816,500	4%	= \$	32,660
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TOTAL SUPPLEMENTAL WORK	\$	82,700
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SECTION 11: STATE FURNISHED MATERIALS AND EXPENSES

Item code		Unit	Quantity		Unit Price (\$)		Cost
066105	Resident Engineers Office	LS		x		=	\$0
066063	Traffic Management Plan - Public Information	LS	1	x	10,000.00	=	\$10,000
066901	Water Expenses	LS		x		=	\$0
8609XX	Traffic Monitoring Station (X)	LS		x		=	\$0
066841	Traffic Controller Assembly	LS		x		=	\$0
066840	Traffic Signal Controller Assembly	LS		x		=	\$0
066062	COZEEP Contract	LS		x		=	\$0
066838	Reflective Numbers and Edge Sealer	LS		x		=	\$0
066065	Tow Truck Service Patrol	LS		x		=	\$0
066916	Annual Construction General Permit Fee	LS		x		=	\$0
XXXXXX	Some Item	Unit		x		=	\$0
Total Section 1-8		\$	816,500	2%	=	\$	16,330

TOTAL STATE FURNISHED	\$26,400
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SECTION 12: TIME-RELATED OVERHEAD

Total of Roadway and Structures Contract Items excluding Mobilization \$816,500 (used to calculate TRO)
Total Construction Cost (excluding TRO and Contingency) \$1,007,300 (used to check if project is greater than \$5 million excluding contingency)

Estimated Time-Related Overhead (TRO) Percentage (0% to 10%) = **6%**

Item code		Unit	Quantity		Unit Price (\$)		Cost
070018	Time-Related Overhead	WD	50	X	\$0	=	\$0

TOTAL TIME-RELATED OVERHEAD	\$0
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Note: If the building portion of the project is greater than 50% of the total project cost, then TRO is not included.

SECTION 13: ROADWAY CONTINGENCY

Recommended Contingency: (Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Total Section 1-11	\$	924,600	x	40%	=	\$369,840
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TOTAL CONTINGENCY	\$369,900
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II. STRUCTURE ITEMS

	<u>Bridge 1</u>		<u>Bridge 2</u>		
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Bridge Name	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Bridge Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot	\$150		\$150		\$0
COST OF EACH	\$0		\$0		\$0

	<u>Building 1</u>				
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Building Name	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Building Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot	\$300		\$0		\$0
COST OF EACH	\$0		\$0		\$0

TOTAL COST OF BRIDGES	\$0
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TOTAL COST OF BUILDINGS	\$0
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Structures Mobilization Percentage	10%	\$0
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Recommended Contingency: (Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Structures Contingency Percentage	10%	\$0
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TOTAL COST OF STRUCTURES	\$0
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Estimate Prepared By: _____
 XXXXXXXXXXXXXXXXXXXX ----- Division of Structures

 Date

III. RIGHT OF WAY

Fill in all of the available information from the Right of Way data sheet.

A)	A1)	Acquisition, including Excess Land Purchases, Damages & Goodwill, Fees	\$	0
	A2)	SB-1210	\$	0
B)		Acquisition of Offsite Mitigation	\$	0
C)	C1)	Utility Relocation (State Share)	\$	0
	C2)	Potholing (Design Phase)	\$	20,000
D)		Railroad Acquisition	\$	0
E)		Clearance / Demolition	\$	0
F)		Relocation Assistance (RAP and/or Last Resort Housing Costs)	\$	0
G)		Title and Escrow	\$	0
H)		Environmental Review	\$	0
I)		Condemnation Settlements <u>0%</u>	\$	0
J)		Design Appreciation Factor <u>0%</u>	\$	0
K)		Utility Relocation (Construction Cost)	\$	0

L)	TOTAL RIGHT OF WAY ESTIMATE	\$20,000
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M)	TOTAL R/W ESTIMATE: Escalated	\$20,000
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N)	RIGHT OF WAY SUPPORT	\$10,000
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Support Cost Estimate Prepared By	Project Coordinator ¹	Phone
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Utility Estimate Prepared By	Utility Coordinator ²	Phone
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R/W Acquisition Estimate Prepared By	Right of Way Estimator ³	Phone
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Note: Items G & H applied to items A + B

¹ When estimate has Support Costs only² When estimate has Utility Relocation³ When R/W Acquisition is required

IV. SUPPORT COST ESTIMATE SUMMARY

Note: Use PRSM project data.

Total by FY		Escalated Support Cost for Estimate To Completion (ETC)				
		PA&ED	PS&E	RW	CON	Total \$
< 2010	Expended					
	ETC					
2011	Expended					
	ETC					
2012	Expended					
	ETC					
2013	Expended					
	ETC					
2014	Expended					
	ETC					
2015	Expended					
	ETC					
2016	Expended					
	ETC					
2017	Expended					
	ETC					
2018	Expended					
	ETC					
2019	Expended					
	ETC					
2020	Expended					
	ETC					
2021	Expended					
	ETC					
2022	Expended					
	ETC					
2023	Expended					
	ETC					
2024	Expended					
	ETC					
2025 >	Expended					
	ETC					
EAC (Expended + ETC)		\$0	\$0	\$0	\$0	\$0
Approved Budget (PRSM)						
Difference (Budget - EAC)		\$0	\$0	\$0	\$0	\$0
Support Ratio (EAC / Cap Cost)		0.0%	0.0%	0.0%	0.0%	0.0%

Total Capital Cost:	\$1,398,000
Total Capital Outlay Support Cost:	\$0
Overall Percent Support Cost:	0.00%

PRSM workplan hours/costs verified
against approved MWA:

Office Chief -

Date

Approved by:

Project Control -

Date

PROJECT

PLANNING COST ESTIMATE

EA: 01-LOCAL

EA: 01-LOCAL PID: EVCRCP

PID: EVCRCP

District-County-Route: 01-DN-EVCR

PM: 0.0 - 1.5

Type of Estimate : Programming

Program Code : k

Project Limits : Along Elk Valley Cross Road from Lake Earl Drive to Parkway Drive

Project Description: Lane drop along US 101 to allow single lane through intersection, signing and striping.

Scope :

Alternative : Alternative C, Intersection Improvements at US 101 and Elk Valley Cross Road

SUMMARY OF PROJECT COST ESTIMATE

	Current Year Cost	Escalated Cost
TOTAL ROADWAY COST	\$ 352,900	\$ 392,167
TOTAL STRUCTURES COST	\$ -	\$ -
SUBTOTAL CONSTRUCTION COST	\$ 352,900	\$ 392,167
TOTAL RIGHT OF WAY COST	\$ 10,000	\$ 10,000
TOTAL CAPITAL OUTLAY COSTS	\$ 363,000	\$ 403,000
PR/ED SUPPORT	\$ -	\$ -
PS&E SUPPORT	\$ -	\$ -
RIGHT OF WAY SUPPORT	\$ -	\$ -
CONSTRUCTION SUPPORT	\$ -	\$ -
TOTAL SUPPORT COST	\$ -	\$ -

TOTAL PROJECT COST	\$ 365,000	\$ 405,000
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If Project has been programmed enter Programmed Amount \$ 250,000,000

Month / Year

Date of Estimate (Month/Year) 1 / 2020

Estimated Construction Start (Month/Year) 1 / 2023

Number of Working Days = 1305

Estimated Mid-Point of Construction (Month/Year) 6 / 2020

Estimated Construction End (Month/Year) 12 / 2023

Number of Plant Establishment Days 261

Estimated Project Schedule

PID Approval	1/15/2014
PA/ED Approval	12/10/2016
PS&E	6/25/2016
RTL	12/18/2017
Begin Construction	1/19/2018

Reviewed by District O.E.

xx/xx/xxxx

(xxx) xxx-xxxx

Office Engineer

Date

Phone

Approved by Project Manager

xx/xx/xxxx

(xxx) xxx-xxxx

Project Manager

Date

Phone

I. ROADWAY ITEMS SUMMARY

Section		Cost
1	Earthwork	\$ -
2	Pavement Structural Section	\$ -
3	Drainage	\$ -
4	Specialty Items	\$ 10,000
5	Environmental	\$ 23,000
6	Traffic Items	\$ 135,300
7	Detours	\$ -
8	Minor Items	\$ 16,900
9	Roadway Mobilization	\$ 18,600
10	Supplemental Work	\$ 32,500
11	State Furnished	\$ 13,800
12	Time-Related Overhead	\$ 11,200
13	Roadway Contingency	\$ 91,600
TOTAL ROADWAY ITEMS		\$ 352,900

Estimate Prepared By :

Name and Title	Date	Phone
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Estimate Reviewed By :

Name and Title	Date	Phone
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By signing this estimate you are attesting that you have discussed your project with all functional units and have incorporated all their comments or have discussed with them why they will not be incorporated.

SECTION 1: EARTHWORK

Item code		Unit	Quantity	Unit Price (\$)	Cost
190101	Roadway Excavation	CY	x	= \$	-
19010X	Roadway Excavation (Type X) ADL	CY	x	= \$	-
194001	Ditch Excavation	CY	x	= \$	-
19801X	Imported Borrow	CY/TON	x	= \$	-
192037	Structure Excavation (Retaining Wall)	CY	x	= \$	-
193013	Structure Backfill (Retaining Wall)	CY	x	= \$	-
193031	Pervious Backfill Material (Retaining Wall)	CY	x	= \$	-
16010X	Clearing & Grubbing	LS/ACRE	x	= \$	-
170101	Develop Water Supply	LS	x	= \$	-
19801X	Imported Borrow	CY/TON	x	= \$	-
210130	Duff	ACRE	x	= \$	-
XXXXXX	Some Item	Unit	x	= \$	-

TOTAL EARTHWORK SECTION ITEMS	\$	-
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SECTION 2: PAVEMENT STRUCTURAL SECTION

Item code		Unit	Quantity	Unit Price (\$)	Cost
401050	Jointed Plain Concrete Pavement	CY	x	= \$	-
400050	Continuously Reinforced Concrete Pavement	CY	x	= \$	-
404092	Seal Pavement Joint	LF	x	= \$	-
404093	Seal Isolation Joint	LF	x	= \$	-
413117	Seal Concrete Pavement Joint (Silicone)	LF	x	= \$	-
413118	Seal Pavement Joint (Asphalt Rubber)	LF	x	= \$	-
280010	Rapid Strength Concrete Base	CY	x	= \$	-
410095	Dowel Bar (Drill and Bond)	EA	x	= \$	-
390132	Hot Mix Asphalt (Type A)	TON	x	= \$	-
390137	Rubberized Hot Mix Asphalt (Gap Graded)	TON	x	= \$	-
39300X	Geosynthetic Pavement Interlayer (Type X)	SQYD	x	= \$	-
26020X	Class 2 Aggregate Base	TON/CY	x	= \$	-
290201	Asphalt Treated Permeable Base	CY	x	= \$	-
250401	Class 4 Aggregate Subbase	CY	x	= \$	-
374002	Asphaltic Emulsion (Fog Seal Coat)	TON	x	= \$	-
397005	Tack Coat	TON	x	= \$	-
377501	Slurry Seal	TON	x	= \$	-
3750XX	Screenings (Type XX)	TON	x	= \$	-
374492	Asphaltic Emulsion (Polymer Modified)	TON	x	= \$	-
370001	Sand Cover (Seal)	TON	x	= \$	-
731530	Minor Concrete (Textured Paving)	CY	x	= \$	-
731502	Minor Concrete (Miscellaneous Construction)	CY	x	= \$	-
39407X	Place Hot Mix Asphalt Dike (Type X)	LF	x	= \$	-
150771	Remove Asphalt Concrete Dike	LF	x	= \$	-
420201	Grind Existing Concrete Pavement	SQYD	x	= \$	-
150860	Remove Base and Surfacing	CY	x	= \$	-
390095	Replace Asphalt Concrete Surfacing	CY	x	= \$	-
15312X	Remove Concrete	LF/CY/LS	x	= \$	-
394090	Place Hot Mix Asphalt (Miscellaneous Area)	SQYD	x	= \$	-
153103	Cold Plane Asphalt Concrete Pavement	SQYD	x	= \$	-
39405X	Shoulder Rumble Strip (HMA, X-In Indentations)	STA	x	= \$	-
413113	Repair Spalled Joints, Polyester Grout	SQYD	x	= \$	-
420102	Groove Existing Concrete Pavement	SQYD	x	= \$	-
390136	Minor Hot Mix Asphalt	TON	x	= \$	-
394095	Roadside Paving (Miscellaneous Areas)	SQYD	x	= \$	-
XXXXXX	Some Item	Unit	x	= \$	-

TOTAL PAVEMENT STRUCTURAL SECTION ITEMS	\$	-
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SECTION 3: DRAINAGE

Item code		Unit	Quantity	Unit Price (\$)	Cost
15080X	Remove Culvert	EA/LF	x	= \$	-
150820	Modify Inlet	EA	x	= \$	-
155232	Sand Backfill	CY	x	= \$	-
15020X	Abandon Culvert	EA/LF	x	= \$	-
152430	Adjust Inlet	LF	x	= \$	-
155003	Cap Inlet	EA	x	= \$	-
510501	Minor Concrete	CY	x	= \$	-
510502	Minor Concrete (Minor Structure)	CY	x	= \$	-
5105XX	Minor Concrete (Type XX)	CY	x	= \$	-
620XXX	XX" Alternative Pipe Culvert (Type X)	LF	x	= \$	-
6411XX	XX" Plastic Pipe	LF	x	= \$	-
65XXXX	XX" Reinforced Concrete Pipe (Type X)	LF	x	= \$	-
6650XX	XX" Corrugated Steel Pipe (0.XXX" Thick)	LF	x	= \$	-
68XXXX	XX" Plastic Pipe (Edge Drain)	LF	x	= \$	-
69011X	XX" Corrugated Steel Pipe Downrain (0.XXX" Thi	LF	x	= \$	-
70321X	XX" Corrugated Steel Pipe Inlet (0.XXX" Thick)	LF	x	= \$	-
70XXXX	XX" Corrugated Steel Pipe Riser (0.XXX" Thick)	LF	x	= \$	-
7050XX	XX" Steel Flared End Section	EA	x	= \$	-
703233	Grated Line Drain	LF	x	= \$	-
72XXXX	Rock Slope Protection (Type and Method)	CY/TON	x	= \$	-
72901X	Rock Slope Protection Fabric (Class X)	SQYD	x	= \$	-
721420	Concrete (Ditch Lining)	CY	x	= \$	-
721430	Concrete (Channel Lining)	CY	x	= \$	-
750001	Miscellaneous Iron and Steel	LB	x	= \$	-
XXXXXX	Additional Drainage	LS	x	= \$	-

TOTAL DRAINAGE ITEMS	\$	-
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SECTION 4: SPECIALTY ITEMS

Item code		Unit	Quantity	Unit Price (\$)	Cost
080050	Progress Schedule (Critical Path Method)	LS	1	x 5,000.00 = \$	5,000
582001	Sound Wall (Masonry Block)	SQFT	x	= \$	-
510530	Minor Concrete (Wall)	CY	x	= \$	-
15325X	Remove Sound Wall	LF/LS	x	= \$	-
070030	Lead Compliance Plan	LS	1	x 5,000.00 = \$	5,000
141120	Treated Wood Waste	LB	x	= \$	-
153221	Remove Concrete Barrier	LF	x	= \$	-
150662	Remove Metal Beam Guard Railing	LF	x	= \$	-
150668	Remove Flared End Section	EA	x	= \$	-
8000XX	Chain Link Fence (Type XX)	LF	x	= \$	-
80XXXX	XX" Chain Link Gate (Type CL-6)	EA	x	= \$	-
832001	Metal Beam Guard Railing	LF	x	= \$	-
839301	Single Thrie Beam Barrier	LF	x	= \$	-
839310	Double Thrie Beam Barrier	LF	x	= \$	-
839521	Cable Railing	LF	x	= \$	-
8395XX	Terminal System (Type CAT)	EA	x	= \$	-
839585	Alternative Flared Terminal System	EA	x	= \$	-
839584	Alternative In-line Terminal System	EA	x	= \$	-
4906XX	CIDH Concrete Piling (Insert Diameter)	LF	x	= \$	-
839XXX	Crash Cushion (Insert Type)	EA	x	= \$	-
83XXXX	Concrete Barrier (Insert Type)	LF	x	= \$	-
520103	Bar Reinforced Steel (Retaining Wall)	LB	x	= \$	-
510060	Structural Concrete, Retaining Wall	CY	x	= \$	-
513553	Retaining Wall (Masonry Wall)	SQFT	x	= \$	-
511035	Architectural Treatment	SQFT	x	= \$	-
598001	Anti-Graffiti Coating	SQFT	x	= \$	-
203070	Rock Stain	SQFT	x	= \$	-
5136XX	Reinforced Concrete Crib Wall (Type X)	SQFT	x	= \$	-
83954X	Transition Railing (Type X)	EA	x	= \$	-
597601	Prepare and Stain Concrete	SQFT	x	= \$	-
839561	Rail Tensioning Assembly	EA	x	= \$	-
83958X	End Anchor Assembly (Type X)	EA	x	= \$	-
XXXXXX	Some Item	Unit	x	= \$	-

TOTAL SPECIALTY ITEMS	\$	10,000
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SECTION 5: ENVIRONMENTAL**5A - ENVIRONMENTAL MITIGATION**

Item code	Unit	Quantity	Unit Price (\$)	Cost
Biological Mitigation	LS	x	= \$	-
130670 Temporary Reinforced Silt Fence	LF	x	= \$	-
141000 Temporary Fence (Type ESA)	LF	x	= \$	-
<i>Subtotal Environmental Mitigation</i>				\$ -

5B - LANDSCAPE AND IRRIGATION

Item code	Unit	Quantity	Unit Price (\$)	Cost
20XXXX Highway Planting	LS	x	= \$	-
20XXXX Irrigation System	LS	x	= \$	-
204099 Plant Establishment Work	LS	x	= \$	-
204101 Extend Plant Establishment Work	LS	x	= \$	-
20XXXX Follow-up Landscape Project	LS	x	= \$	-
150685 Remove Irrigation Facility	LS	x	= \$	-
20XXXX Maintain Existing (Irrigation or Planted Areas)	LS	x	= \$	-
206400 Check and Test Existing Irrigation Facilities	LS	x	= \$	-
21011X Imported Topsoil (X)	CY/TON	x	= \$	-
20XXXX Rock Blanket, Rock Mulch, DG, Gravel Mulch	SQFT/SQYD	x	= \$	-
200122 Weed Germination	SQYD	x	= \$	-
208304 Water Meter	EA	x	= \$	-
2087XX XX" Conduit (Use for Irrigation x-overs)	LF	x	= \$	-
20890X Extended Conduit (Use for Extension of Irrigation x-overs)	LF	x	= \$	-
<i>Subtotal Landscape and Irrigation</i>				\$ -

5C - EROSION CONTROL

Item code	Unit	Quantity	Unit Price (\$)	Cost
210010 Move In/Move Out (Erosion Control)	EA	x	= \$	-
210350 Fiber Rolls	LF	x	= \$	-
210360 Compost Sock	LF	x	= \$	-
2102XX Rolled Erosion Control Product (X)	SQFT	x	= \$	-
21025X Bonded Fiber Matrix	SQFT/ACRE	x	= \$	-
210300 Hydromulch	SQFT	x	= \$	-
210420 Straw	SQFT	x	= \$	-
210430 Hydroseed	SQFT	x	= \$	-
210600 Compost	SQFT	x	= \$	-
210630 Incorporate Materials	SQFT	x	= \$	-
<i>Subtotal Erosion Control</i>				\$ -

5D - NPDES

Item code	Unit	Quantity	Unit Price (\$)	Cost
130300 Prepare SWPPP	LS	x	= \$	-
130200 Prepare WPCP	LS	1	1,500.00	1,500
130100 Job Site Management	LS	1	1,500.00	1,500
130330 Storm Water Annual Report	EA	x	= \$	-
130310 Rain Event Action Plan (REAP)	EA	x	= \$	-
130320 Storm Water Sampling and Analysis Day	EA	x	= \$	-
130520 Temporary Hydraulic Mulch	SQYD	x	= \$	-
130550 Temporary Hydroseed	SQYD	x	= \$	-
130505 Move-In/Move-Out (Temporary Erosion Control)	EA	x	= \$	-
130640 Temporary Fiber Roll	LF	x	= \$	-
130900 Temporary Concrete Washout	LS	x	= \$	-
130710 Temporary Construction Entrance	EA	x	= \$	-
130610 Temporary Check Dam	LF	x	= \$	-
130620 Temporary Drainage Inlet Protection	EA	x	= \$	-
130730 Street Sweeping	LS	1	20,000.00	20,000
<i>Subtotal NPDES</i>				\$ 23,000

TOTAL ENVIRONMENTAL	\$ 23,000
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Supplemental Work for NPDES

066595 Water Pollution Control Maintenance Sharing*	LS	x	= \$	-
066596 Additional Water Pollution Control**	LS	x	= \$	-
066597 Storm Water Sampling and Analysis***	LS	x	= \$	-
XXXXXX Some Item	LS	x	= \$	-
<i>Subtotal Supplemental Work for NPDES</i>				\$ -

*Applies to all SWPPPs and those WPCPs with sediment control or soil stabilization BMPs.

**Applies to both SWPPPs and WPCP projects.

*** Applies only to project with SWPPPs.

SECTION 6: TRAFFIC ITEMS**6A - Traffic Electrical**

Item code	Unit	Quantity	Unit Price (\$)	Cost
860460 Lighting and Sign Illumination	LS	1 x	10,000.00 = \$	10,000
860201 Signal and Lighting	LS	x	= \$	-
860990 Closed Circuit Television System	LS	x	= \$	-
86110X Ramp Metering System (Location X)	LS	x	= \$	-
86070X Interconnection Conduit and Cable	LF/LS	x	= \$	-
5602XX Furnish Sign Structure (Type X)	LB	x	= \$	-
5602XX Install Sign Structure (Type X)	LB	x	= \$	-
498040 XX" CIDHC Pile (Sign Foundation)	LF	x	= \$	-
86080X Inductive Loop Detectors	EA/LS	x	= \$	-
8609XX Traffic Monitoring Station (Type X)	LS	x	= \$	-
15075X Remove Sign Structure	EA/LS	x	= \$	-
151581 Reconstruct Sign Structure	EA	x	= \$	-
152641 Modify Sign Structure	EA	x	= \$	-
860090 Maintain Existing Traffic Management System Eler	LS	x	= \$	-
86XXXX Fiber Optic Conduit System	LS	x	= \$	-
XXXXX Some Item	Unit	x	= \$	-
Subtotal Traffic Electrical				\$ 10,000

6B - Traffic Signing and Striping

Item code	Unit	Quantity	Unit Price (\$)	Cost
566011 Roadside Sign - One Post	EA	1 x	10,000.00 = \$	10,000
566012 Roadside Sign - Two Post	EA	x	= \$	-
5602XX Furnish Sign	SQFT	x	= \$	-
568016 Install Sign Panel on Existing Frame	SQFT	x	= \$	-
150711 Remove Painted Traffic Stripe	LF	12,900 x	1.50 = \$	19,350
141101 Remove Yellow Painted Traffic Stripe (Hazardous Waste)	LF	x	= \$	-
150712 Remove Painted Pavement Marking	SQFT	1,472 x	6.50 = \$	9,568
150742 Remove Roadside Sign	EA	x	= \$	-
152320 Reset Roadside Sign	EA	x	= \$	-
152390 Relocate Roadside Sign	EA	x	= \$	-
82010X Delineator (Class X)	EA	x	= \$	-
840502 Thermoplastic Traffic Stripe (Enhanced Wet Night)	LF	10,400 x	3.30 = \$	34,320
846012 Thermoplastic Crosswalk and Pavement Marking (E)	SQFT	1,801 x	6.25 = \$	11,256
120090 Construction Area Signs	LS	1 x	15,000.00 = \$	15,000
84XXXX Permanent Pavement Delineation	LS	x	= \$	-
Subtotal Traffic Signing and Striping				\$ 99,494

6C - Traffic Management Plan

Item code	Unit	Quantity	Unit Price (\$)	Cost
12865X Portable Changeable Message Signs	EA/LS	6 x	\$ 1,500 = \$	9,000
Subtotal Traffic Management Plan				\$ 9,000

6C - Stage Construction and Traffic Handling

Item code	Unit	Quantity	Unit Price (\$)	Cost
120199 Traffic Plastic Drum	EA	x	= \$	-
12016X Channelizer (Type X)	EA	86 x	20.00 = \$	1,720
120120 Type III Barricade	EA	x	= \$	-
129100 Temporary Crash Cushion Module	EA	x	= \$	-
120100 Traffic Control System	LS	1 x	15,000.00 = \$	15,000
129110 Temporary Crash Cushion	EA	x	= \$	-
129000 Temporary Railing (Type K)	LF	x	= \$	-
120149 Temporary Pavement Marking (Paint)	SQFT	x	= \$	-
82010X Delineator (Class X)	EA	x	= \$	-
XXXXXX Some Item	Unit	x	= \$	-
Subtotal Stage Construction and Traffic Handling				\$ 16,720

TOTAL TRAFFIC ITEMS	\$ 135,300
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SECTION 7: DETOURS

Includes constructing, maintaining, and removal

Item code	Unit	Quantity	Unit Price (\$)	Cost
190101 Roadway Excavation	CY	x	= \$	-
19801X Imported Borrow	CY/TON	x	= \$	-
390132 Hot Mix Asphalt (Type A)	TON	x	= \$	-
26020X Class 2 Aggregate Base	TON/CY	x	= \$	-
250401 Class 4 Aggregate Subbase	CY	x	= \$	-
130620 Temporary Drainage Inlet Protection	EA	x	= \$	-
129000 Temporary Railing (Type K)	LF	x	= \$	-
128601 Temporary Signal System	LS	x	= \$	-
120149 Temporary Pavement Marking (Paint)	SQFT	x	= \$	-
80010X Temporary Fence (Type X)	LF	x	= \$	-
XXXXXX Some Item	LS	x	5,000,000 = \$	-

* Includes constructing, maintaining, and removal

TOTAL DETOURS	\$	-
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SUBTOTAL SECTIONS 1 through 7	\$	168,300
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SECTION 8: MINOR ITEMS**8A - Americans with Disabilities Act Items**

ADA Items

1.0% \$ 1,683

8B - Bike Path Items

Bike Path Items

1.0% \$ 1,683

8C - Other Minor Items

Other Minor Items

8.0% \$ 13,464

Total of Section 1-7	\$	168,300	x	10.0%	= \$	16,830
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TOTAL MINOR ITEMS	\$	16,900
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SECTIONS 9: MOBILIZATION

Item code						
999990	Total Section 1-8	\$	185,200	x	10%	= \$ 18,520

TOTAL MOBILIZATION	\$	18,600
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SECTION 10: SUPPLEMENTAL WORK

Item code	Unit	Quantity	Unit Price (\$)	Cost
066670 Payment Adjustments For Price Index Fluctuations	LS	x	= \$	-
066094 Value Analysis	LS	x	= \$	-
066070 Maintain Traffic	LS	x	= \$	-
066919 Dispute Resolution Board	LS	x	= \$	-
066921 Dispute Resolution Advisor	LS	x	= \$	-
066015 Federal Trainee Program	LS	x	= \$	-
066610 Partnering	LS	x	= \$	-
066204 Remove Rock and Debris	LS	x	= \$	-
066222 Locate Existing Crossover	LS	x	= \$	-
XXXXXX Some Item	Unit	1	x 25,000.00 = \$	25,000

Cost of NPDES Supplemental Work specified in Section 5D	= \$	-
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Total Section 1-8	\$	185,200	4%	= \$	7,408
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TOTAL SUPPLEMENTAL WORK	\$	32,500
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SECTION 11: STATE FURNISHED MATERIALS AND EXPENSES

Item code		Unit	Quantity		Unit Price (\$)		Cost
066105	Resident Engineers Office	LS		x		=	\$0
066063	Traffic Management Plan - Public Information	LS	1	x	10,000.00	=	\$10,000
066901	Water Expenses	LS		x		=	\$0
8609XX	Traffic Monitoring Station (X)	LS		x		=	\$0
066841	Traffic Controller Assembly	LS		x		=	\$0
066840	Traffic Signal Controller Assembly	LS		x		=	\$0
066062	COZEEP Contract	LS		x		=	\$0
066838	Reflective Numbers and Edge Sealer	LS		x		=	\$0
066065	Tow Truck Service Patrol	LS		x		=	\$0
066916	Annual Construction General Permit Fee	LS		x		=	\$0
XXXXXX	Some Item	Unit		x		=	\$0
Total Section 1-8		\$	185,200	2%	=	\$	3,704

TOTAL STATE FURNISHED	\$13,800
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SECTION 12: TIME-RELATED OVERHEAD

Total of Roadway and Structures Contract Items excluding Mobilization \$185,200 (used to calculate TRO)
Total Construction Cost (excluding TRO and Contingency) \$250,100 (used to check if project is greater than \$5 million excluding contingency)

Estimated Time-Related Overhead (TRO) Percentage (0% to 10%) = **6%**

Item code		Unit	Quantity		Unit Price (\$)		Cost
070018	Time-Related Overhead	WD	1,305	X	\$9	=	\$11,200

TOTAL TIME-RELATED OVERHEAD	\$11,200
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Note: If the building portion of the project is greater than 50% of the total project cost, then TRO is not included.

SECTION 13: ROADWAY CONTINGENCY

Recommended Contingency: (Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Total Section 1-11	\$	228,800	x	40%	=	\$91,520
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TOTAL CONTINGENCY	\$91,600
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II. STRUCTURE ITEMS

	<u>Bridge 1</u>		<u>Bridge 2</u>		
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Bridge Name	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Bridge Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot	\$150		\$150		\$0
COST OF EACH	\$0		\$0		\$0

	<u>Building 1</u>				
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Building Name	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Building Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot	\$300		\$0		\$0
COST OF EACH	\$0		\$0		\$0

TOTAL COST OF BRIDGES	\$0
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TOTAL COST OF BUILDINGS	\$0
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Structures Mobilization Percentage	10%	\$0
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Recommended Contingency: (Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Structures Contingency Percentage	10%	\$0
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TOTAL COST OF STRUCTURES	\$0
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Estimate Prepared By: _____
 XXXXXXXXXXXXXXXXXXXX ----- Division of Structures

 Date

III. RIGHT OF WAY

Fill in all of the available information from the Right of Way data sheet.

A)	A1)	Acquisition, including Excess Land Purchases, Damages & Goodwill, Fees	\$	0
	A2)	SB-1210	\$	0
B)		Acquisition of Offsite Mitigation	\$	0
C)	C1)	Utility Relocation (State Share)	\$	0
	C2)	Potholing (Design Phase)	\$	10,000
D)		Railroad Acquisition	\$	0
E)		Clearance / Demolition	\$	0
F)		Relocation Assistance (RAP and/or Last Resort Housing Costs)	\$	0
G)		Title and Escrow	\$	0
H)		Environmental Review	\$	0
I)		Condemnation Settlements <u>0%</u>	\$	0
J)		Design Appreciation Factor <u>0%</u>	\$	0
K)		Utility Relocation (Construction Cost)	\$	0

L)	TOTAL RIGHT OF WAY ESTIMATE	\$10,000
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M)	TOTAL R/W ESTIMATE: Escalated	\$10,000
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N)	RIGHT OF WAY SUPPORT
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Support Cost Estimate
Prepared By _____ Project Coordinator¹ _____ Phone _____

Utility Estimate Prepared
By _____ Utility Coordinator² _____ Phone _____

R/W Acquisition Estimate
Prepared By _____ Right of Way Estimator³ _____ Phone _____

Note: Items G & H applied to items A + B

¹ When estimate has Support Costs only² When estimate has Utility Relocation³ When R/W Acquisition is required

IV. SUPPORT COST ESTIMATE SUMMARY

Note: Use PRSM project data.

Total by FY		Escalated Support Cost for Estimate To Completion (ETC)				
		PA&ED	PS&E	RW	CON	Total \$
< 2010	Expended					
	ETC					
2011	Expended					
	ETC					
2012	Expended					
	ETC					
2013	Expended					
	ETC					
2014	Expended					
	ETC					
2015	Expended					
	ETC					
2016	Expended					
	ETC					
2017	Expended					
	ETC					
2018	Expended					
	ETC					
2019	Expended					
	ETC					
2020	Expended					
	ETC					
2021	Expended					
	ETC					
2022	Expended					
	ETC					
2023	Expended					
	ETC					
2024	Expended					
	ETC					
2025 >	Expended					
	ETC					
EAC (Expended + ETC)		\$0	\$0	\$0	\$0	\$0
Approved Budget (PRSM)						
Difference (Budget - EAC)		\$0	\$0	\$0	\$0	\$0
Support Ratio (EAC / Cap Cost)		0.0%	0.0%	0.0%	0.0%	0.0%

Total Capital Cost:	\$363,000
Total Capital Outlay Support Cost:	\$0
Overall Percent Support Cost:	0.00%

PRSM workplan hours/costs verified
against approved MWA:

Office Chief -

Date

Approved by:

Project Control -

Date

PROJECT

PLANNING COST ESTIMATE

EA: 01-LOCAL

EA: 01-LOCAL PID: EVCRCP

PID: EVCRCP

District-County-Route: 01-DN-EVCR

PM: 0.0 - 1.5

Type of Estimate : Programming

Program Code : k

Project Limits : Along Elk Valley Cross Road from Lake Earl Drive to Parkway Drive

Project Description: Roundabout at US 101 and EVCR

Scope :

Alternative : Alternative C, Intersection Improvements at US 101 and Elk Valley Cross Road

SUMMARY OF PROJECT COST ESTIMATE

	Current Year Cost	Escalated Cost
TOTAL ROADWAY COST	\$ 4,441,000	\$ 4,935,143
TOTAL STRUCTURES COST	\$ -	\$ -
SUBTOTAL CONSTRUCTION COST	\$ 4,441,000	\$ 4,935,143
TOTAL RIGHT OF WAY COST	\$ 27,212	\$ 27,212
TOTAL CAPITAL OUTLAY COSTS	\$ 4,469,000	\$ 4,963,000
PR/ED SUPPORT	\$ -	\$ -
PS&E SUPPORT	\$ -	\$ -
RIGHT OF WAY SUPPORT	\$ -	\$ -
CONSTRUCTION SUPPORT	\$ -	\$ -
TOTAL SUPPORT COST	\$ -	\$ -

TOTAL PROJECT COST	\$ 4,500,000	\$ 5,000,000
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If Project has been programmed enter Programmed Amount

Month / Year

Date of Estimate (Month/Year) 1 / 2020

Estimated Construction Start (Month/Year) 4 / 2024

Number of Working Days = 160

Estimated Mid-Point of Construction (Month/Year) 4 / 2025

Estimated Construction End (Month/Year) 10 / 2025

Number of Plant Establishment Days 261

Estimated Project Schedule

PID Approval	6/1/2024
PA/ED Approval	7/1/2022
PS&E	10/1/2023
RTL	12/1/2023
Begin Construction	4/1/2024

Reviewed by District O.E.

xx/xx/xxxx

(xxx) xxx-xxxx

Office Engineer

Date

Phone

Approved by Project Manager

xx/xx/xxxx

(xxx) xxx-xxxx

Project Manager

Date

Phone

I. ROADWAY ITEMS SUMMARY

	Section	Cost
1	Earthwork	\$ 309,500
2	Pavement Structural Section	\$ 1,658,200
3	Drainage	\$ 8,000
4	Specialty Items	\$ 10,000
5	Environmental	\$ 47,600
6	Traffic Items	\$ 345,000
7	Detours	\$ -
8	Minor Items	\$ 237,900
9	Roadway Mobilization	\$ 261,700
10	Supplemental Work	\$ 104,700
11	State Furnished	\$ 62,400
12	Time-Related Overhead	\$ 157,000
13	Roadway Contingency	\$ 1,239,000
TOTAL ROADWAY ITEMS		\$ 4,441,000

Estimate Prepared By :

Name and Title	Date	Phone
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Estimate Reviewed By :

Name and Title	Date	Phone
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By signing this estimate you are attesting that you have discussed your project with all functional units and have incorporated all their comments or have discussed with them why they will not be incorporated.

SECTION 1: EARTHWORK

Item code		Unit	Quantity		Unit Price (\$)		Cost
190101	Roadway Excavation	CY	3,991	x	60.00	= \$	239,460
19010X	Roadway Excavation (Type X) ADL	CY		x		= \$	-
194001	Ditch Excavation	CY		x		= \$	-
19801X	Imported Borrow	CY/TON		x		= \$	-
192037	Structure Excavation (Retaining Wall)	CY		x		= \$	-
193013	Structure Backfill (Retaining Wall)	CY		x		= \$	-
193031	Pervious Backfill Material (Retaining Wall)	CY		x		= \$	-
16010X	Clearing & Grubbing	LS	1	x	60,000.00	= \$	60,000
170101	Develop Water Supply	LS	1	x	10,000.00	= \$	10,000
19801X	Imported Borrow	CY/TON		x		= \$	-
210130	Duff	ACRE		x		= \$	-
XXXXXX	Some Item	Unit		x		= \$	-

TOTAL EARTHWORK SECTION ITEMS	\$	309,500
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SECTION 2: PAVEMENT STRUCTURAL SECTION

Item code		Unit	Quantity		Unit Price (\$)		Cost
401050	Jointed Plain Concrete Pavement	CY		x		= \$	-
400050	Continuously Reinforced Concrete Pavement	CY		x		= \$	-
404092	Seal Pavement Joint	LF		x		= \$	-
404093	Seal Isolation Joint	LF		x		= \$	-
413117	Seal Concrete Pavement Joint (Silicone)	LF		x		= \$	-
413118	Seal Pavement Joint (Asphalt Rubber)	LF		x		= \$	-
280010	Rapid Strength Concrete Base	CY		x		= \$	-
410095	Dowel Bar (Drill and Bond)	EA		x		= \$	-
390132	Hot Mix Asphalt (Type A)	TON	3,440	x	120.00	= \$	412,800
390137	Rubberized Hot Mix Asphalt (Gap Graded)	TON		x		= \$	-
39300X	Geosynthetic Pavement Interlayer (Type X)	SQYD		x		= \$	-
26020X	Class 2 Aggregate Base	CY	2,831	x	80.00	= \$	226,480
290201	Asphalt Treated Permeable Base	CY		x		= \$	-
250401	Class 4 Aggregate Subbase	CY		x		= \$	-
374002	Asphaltic Emulsion (Fog Seal Coat)	TON		x		= \$	-
397005	Tack Coat	TON		x		= \$	-
377501	Slurry Seal	TON		x		= \$	-
3750XX	Screenings (Type XX)	TON		x		= \$	-
374492	Asphaltic Emulsion (Polymer Modified)	TON		x		= \$	-
370001	Sand Cover (Seal)	TON		x		= \$	-
731530	Minor Concrete (Textured Paving)	CY		x		= \$	-
731502	Minor Concrete (Miscellaneous Construction)	CY	104	x	900.00	= \$	93,600
731521	Minor Concrete (Sidewalk)	CY	124	x	500.00	= \$	62,000
731501	Minor Concrete (Curb & Gutter)	LF	2,571	x	325.00	= \$	835,575
39407X	Place Hot Mix Asphalt Dike (Type X)	LF		x		= \$	-
150771	Remove Asphalt Concrete Dike	LF		x		= \$	-
420201	Grind Existing Concrete Pavement	SQYD		x		= \$	-
150860	Remove Base and Surfacing	CY		x		= \$	-
390095	Replace Asphalt Concrete Surfacing	CY		x		= \$	-
15312X	Remove Concrete	LF/CY/LS		x		= \$	-
394090	Place Hot Mix Asphalt (Miscellaneous Area)	SQYD		x		= \$	-
153103	Cold Plane Asphalt Concrete Pavement	SQYD		x		= \$	-
39405X	Shoulder Rumble Strip (HMA, X-In Indentations)	STA		x		= \$	-
413113	Repair Spalled Joints, Polyester Grout	SQYD		x		= \$	-
420102	Groove Existing Concrete Pavement	SQYD		x		= \$	-
390136	Minor Hot Mix Asphalt	TON		x		= \$	-
394095	Roadside Paving (Miscellaneous Areas)	SQYD		x		= \$	-
XXXXXX	GreenSpace	SQFT	18,459	x	1.5	= \$	27,689

TOTAL PAVEMENT STRUCTURAL SECTION ITEMS	\$	1,658,200
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SECTION 3: DRAINAGE

Item code		Unit	Quantity	Unit Price (\$)	Cost
15080X	Remove Culvert	EA/LF	x	= \$	-
150820	Modify Inlet	EA	x	= \$	-
155232	Sand Backfill	CY	x	= \$	-
15020X	Abandon Culvert	EA/LF	x	= \$	-
152430	Adjust Inlet	LF	x	= \$	-
155003	Cap Inlet	EA	x	= \$	-
510501	Minor Concrete	CY	x	= \$	-
510502	Minor Concrete (Minor Structure)	CY	x	= \$	-
5105XX	Minor Concrete (Type XX)	CY	x	= \$	-
620XXX	XX" Alternative Pipe Culvert (Type X)	LF	1,000	8.00 = \$	8,000
6411XX	XX" Plastic Pipe	LF	x	= \$	-
65XXXX	XX" Reinforced Concrete Pipe (Type X)	LF	x	= \$	-
6650XX	XX" Corrugated Steel Pipe (0.XXX" Thick)	LF	x	= \$	-
68XXXX	XX" Plastic Pipe (Edge Drain)	LF	x	= \$	-
69011X	XX" Corrugated Steel Pipe Downrain (0.XXX" Thi	LF	x	= \$	-
70321X	XX" Corrugated Steel Pipe Inlet (0.XXX" Thick)	LF	x	= \$	-
70XXXX	XX" Corrugated Steel Pipe Riser (0.XXX" Thick)	LF	x	= \$	-
7050XX	XX" Steel Flared End Section	EA	x	= \$	-
703233	Grated Line Drain	LF	x	= \$	-
72XXXX	Rock Slope Protection (Type and Method)	CY/TON	x	= \$	-
72901X	Rock Slope Protection Fabric (Class X)	SQYD	x	= \$	-
721420	Concrete (Ditch Lining)	CY	x	= \$	-
721430	Concrete (Channel Lining)	CY	x	= \$	-
750001	Miscellaneous Iron and Steel	LB	x	= \$	-
XXXXXX	Additional Drainage	LS	x	= \$	-

TOTAL DRAINAGE ITEMS	\$	8,000
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SECTION 4: SPECIALTY ITEMS

Item code		Unit	Quantity	Unit Price (\$)	Cost
080050	Progress Schedule (Critical Path Method)	LS	1	5,000.00 = \$	5,000
582001	Sound Wall (Masonry Block)	SQFT	x	= \$	-
510530	Minor Concrete (Wall)	CY	x	= \$	-
15325X	Remove Sound Wall	LF/LS	x	= \$	-
070030	Lead Compliance Plan	LS	1	5,000.00 = \$	5,000
141120	Treated Wood Waste	LB	x	= \$	-
153221	Remove Concrete Barrier	LF	x	= \$	-
150662	Remove Metal Beam Guard Railing	LF	x	= \$	-
150668	Remove Flared End Section	EA	x	= \$	-
8000XX	Chain Link Fence (Type XX)	LF	x	= \$	-
80XXXX	XX" Chain Link Gate (Type CL-6)	EA	x	= \$	-
832001	Metal Beam Guard Railing	LF	x	= \$	-
839301	Single Thrie Beam Barrier	LF	x	= \$	-
839310	Double Thrie Beam Barrier	LF	x	= \$	-
839521	Cable Railing	LF	x	= \$	-
8395XX	Terminal System (Type CAT)	EA	x	= \$	-
839585	Alternative Flared Terminal System	EA	x	= \$	-
839584	Alternative In-line Terminal System	EA	x	= \$	-
4906XX	CIDH Concrete Piling (Insert Diameter)	LF	x	= \$	-
839XXX	Crash Cushion (Insert Type)	EA	x	= \$	-
83XXXX	Concrete Barrier (Insert Type)	LF	x	= \$	-
520103	Bar Reinforced Steel (Retaining Wall)	LB	x	= \$	-
510060	Structural Concrete, Retaining Wall	CY	x	= \$	-
513553	Retaining Wall (Masonry Wall)	SQFT	x	= \$	-
511035	Architectural Treatment	SQFT	x	= \$	-
598001	Anti-Graffiti Coating	SQFT	x	= \$	-
203070	Rock Stain	SQFT	x	= \$	-
5136XX	Reinforced Concrete Crib Wall (Type X)	SQFT	x	= \$	-
83954X	Transition Railing (Type X)	EA	x	= \$	-
597601	Prepare and Stain Concrete	SQFT	x	= \$	-
839561	Rail Tensioning Assembly	EA	x	= \$	-
83958X	End Anchor Assembly (Type X)	EA	x	= \$	-
XXXXXX	Some Item	Unit	x	1,000.00 = \$	-

TOTAL SPECIALTY ITEMS	\$	10,000
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SECTION 5: ENVIRONMENTAL**5A - ENVIRONMENTAL MITIGATION**

Item code	Unit	Quantity	Unit Price (\$)	Cost
Biological Mitigation	LS	x	= \$	-
130670 Temporary Reinforced Silt Fence	LF	x	= \$	-
141000 Temporary Fence (Type ESA)	LF	x	= \$	-
<i>Subtotal Environmental Mitigation</i>				\$ -

5B - LANDSCAPE AND IRRIGATION

Item code	Unit	Quantity	Unit Price (\$)	Cost
20XXXX Highway Planting	LS	1 x	10,000.00 = \$	10,000
20XXXX Irrigation System	LS	x	= \$	-
204099 Plant Establishment Work	LS	x	= \$	-
204101 Extend Plant Establishment Work	LS	x	= \$	-
20XXXX Follow-up Landscape Project	LS	x	= \$	-
150685 Remove Irrigation Facility	LS	x	= \$	-
20XXXX Maintain Existing (Irrigation or Planted Areas)	LS	x	= \$	-
206400 Check and Test Existing Irrigation Facilities	LS	x	= \$	-
21011X Imported Topsoil (X)	CY/TON	x	= \$	-
20XXXX Rock Blanket, Rock Mulch, DG, Gravel Mulch	SQFT/SQYD	x	= \$	-
200122 Weed Germination	SQYD	x	= \$	-
208304 Water Meter	EA	x	= \$	-
2087XX XX" Conduit (Use for Irrigation x-overs)	LF	x	= \$	-
20890X Extended Conduit (Use for Extension of Irrigation x-overs)	LF	x	= \$	-
<i>Subtotal Landscape and Irrigation</i>				\$ 10,000

5C - EROSION CONTROL

Item code	Unit	Quantity	Unit Price (\$)	Cost
210010 Move In/Move Out (Erosion Control)	EA	2 x	500 = \$	1,000
210350 Fiber Rolls	LF	660 x	5 = \$	3,300
210360 Compost Sock	LF	x	= \$	-
2102XX Rolled Erosion Control Product (X)	SQFT	x	= \$	-
21025X Bonded Fiber Matrix	SQFT/ACRE	44967 x	0.15 = \$	6,745
210300 Hydromulch	SQFT	x	= \$	-
210420 Straw	SQFT	x	= \$	-
210430 Hydroseed	SQFT	x	= \$	-
210600 Compost	SQFT	x	= \$	-
210630 Incorporate Materials	SQFT	x	= \$	-
<i>Subtotal Erosion Control</i>				\$ 11,045

5D - NPDES

Item code	Unit	Quantity	Unit Price (\$)	Cost
130300 Prepare SWPPP	LS	1 x	10,000.00 = \$	10,000
130200 Prepare WPCP	LS	x	= \$	-
130100 Job Site Management	LS	1 x	1,500.00 = \$	1,500
130330 Storm Water Annual Report	EA	x	= \$	-
130310 Rain Event Action Plan (REAP)	EA	x	= \$	-
130320 Storm Water Sampling and Analysis Day	EA	x	= \$	-
130520 Temporary Hydraulic Mulch	SQYD	x	= \$	-
130550 Temporary Hydroseed	SQYD	x	= \$	-
130505 Move-In/Move-Out (Temporary Erosion Control)	EA	x	= \$	-
130640 Temporary Fiber Roll	LF	x	= \$	-
130900 Temporary Concrete Washout	LS	x	= \$	-
130710 Temporary Construction Entrance	EA	x	= \$	-
130610 Temporary Check Dam	LF	x	= \$	-
130620 Temporary Drainage Inlet Protection	EA	x	= \$	-
130730 Street Sweeping	LS	1 x	15,000.00 = \$	15,000
<i>Subtotal NPDES</i>				\$ 26,500

TOTAL ENVIRONMENTAL	\$ 47,600
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Supplemental Work for NPDES

066595 Water Pollution Control Maintenance Sharing*	LS	x	100,000.00 = \$	-
066596 Additional Water Pollution Control**	LS	x	10,000.00 = \$	-
066597 Storm Water Sampling and Analysis***	LS	x	= \$	-
XXXXXX Some Item	LS	x	= \$	-
<i>Subtotal Supplemental Work for NPDES</i>				\$ -

*Applies to all SWPPPs and those WPCPs with sediment control or soil stabilization BMPs.

**Applies to both SWPPPs and WPCP projects.

*** Applies only to project with SWPPPs.

SECTION 6: TRAFFIC ITEMS**6A - Traffic Electrical**

Item code	Unit	Quantity	Unit Price (\$)	Cost
860460 Lighting and Sign Illumination	LS	1 x	75,000.00 = \$	75,000
860201 Signal and Lighting	LS	x	= \$	-
860990 Closed Circuit Television System	LS	x	= \$	-
86110X Ramp Metering System (Location X)	LS	x	= \$	-
86070X Interconnection Conduit and Cable	LF/LS	x	= \$	-
5602XX Furnish Sign Structure (Type X)	LB	x	= \$	-
5602XX Install Sign Structure (Type X)	LB	x	= \$	-
498040 XX" CIDHC Pile (Sign Foundation)	LF	x	= \$	-
86080X Inductive Loop Detectors	EA/LS	x	= \$	-
8609XX Traffic Monitoring Station (Type X)	LS	x	= \$	-
15075X Remove Sign Structure	EA/LS	x	= \$	-
151581 Reconstruct Sign Structure	EA	x	= \$	-
152641 Modify Sign Structure	EA	x	= \$	-
860090 Maintain Existing Traffic Management System Eler	LS	x	= \$	-
86XXXX Fiber Optic Conduit System	LS	x	= \$	-
XXXXX Some Item	Unit	x	= \$	-
Subtotal Traffic Electrical				\$ 75,000

6B - Traffic Signing and Striping

Item code	Unit	Quantity	Unit Price (\$)	Cost
566011 Roadside Sign - One Post	EA	1 x	15,000.00 = \$	15,000
566012 Roadside Sign - Two Post	EA	x	= \$	-
5602XX Furnish Sign	SQFT	x	= \$	-
568016 Install Sign Panel on Existing Frame	SQFT	x	= \$	-
150711 Remove Painted Traffic Stripe	LF	12,900 x	1.50 = \$	19,350
141101 Remove Yellow Painted Traffic Stripe (Hazardous Waste)	LF	x	= \$	-
150712 Remove Painted Pavement Marking	SQFT	1,472 x	6.50 = \$	9,568
150742 Remove Roadside Sign	EA	x	= \$	-
152320 Reset Roadside Sign	EA	x	= \$	-
152390 Relocate Roadside Sign	EA	x	= \$	-
82010X Delineator (Class X)	EA	x	= \$	-
840502 Thermoplastic Traffic Stripe (Enhanced Wet Night)	LF	10,400 x	3.30 = \$	34,320
846012 Thermoplastic Crosswalk and Pavement Marking (T)	SQFT	1,801 x	6.25 = \$	11,256
120090 Construction Area Signs	LS	1 x	15,000.00 = \$	15,000
84XXXX Permanent Pavement Delineation	LS	x	= \$	-
Subtotal Traffic Signing and Striping				\$ 104,494

6C - Traffic Management Plan

Item code	Unit	Quantity	Unit Price (\$)	Cost
12865X Portable Changeable Message Signs	EA/LS	7 x	\$ 1,500 = \$	10,500
Subtotal Traffic Management Plan				\$ 10,500

6C - Stage Construction and Traffic Handling

Item code	Unit	Quantity	Unit Price (\$)	Cost
120199 Traffic Plastic Drum	EA	x	= \$	-
12016X Channelizer (Type X)	EA	x	= \$	-
120120 Type III Barricade	EA	x	= \$	-
129100 Temporary Crash Cushion Module	EA	x	= \$	-
120100 Traffic Control System	LS	1 x	15,000.00 = \$	15,000
129110 Temporary Crash Cushion	EA	2 x	35,000.00 = \$	70,000
129000 Temporary Railing (Type K)	LF	2,000 x	35.00 = \$	70,000
120149 Temporary Pavement Marking (Paint)	SQFT	x	= \$	-
82010X Delineator (Class X)	EA	x	= \$	-
XXXXXX Some Item	Unit	x	= \$	-
Subtotal Stage Construction and Traffic Handling				\$ 155,000

TOTAL TRAFFIC ITEMS	\$ 345,000
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SECTION 7: DETOURS

Includes constructing, maintaining, and removal

Item code	Unit	Quantity	Unit Price (\$)	Cost
190101 Roadway Excavation	CY	x	= \$	-
19801X Imported Borrow	CY/TON	x	= \$	-
390132 Hot Mix Asphalt (Type A)	TON	x	= \$	-
26020X Class 2 Aggregate Base	TON/CY	x	= \$	-
250401 Class 4 Aggregate Subbase	CY	x	= \$	-
130620 Temporary Drainage Inlet Protection	EA	x	= \$	-
129000 Temporary Railing (Type K)	LF	x	= \$	-
128601 Temporary Signal System	LS	x	= \$	-
120149 Temporary Pavement Marking (Paint)	SQFT	x	= \$	-
80010X Temporary Fence (Type X)	LF	x	= \$	-
XXXXXX Some Item	LS	x	5,000,000 = \$	-

* Includes constructing, maintaining, and removal

TOTAL DETOURS	\$	-
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SUBTOTAL SECTIONS 1 through 7	\$	2,378,300
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SECTION 8: MINOR ITEMS**8A - Americans with Disabilities Act Items**

ADA Items

1.0% \$ 23,783

8B - Bike Path Items

Bike Path Items

1.0% \$ 23,783

8C - Other Minor Items

Other Minor Items

8.0% \$ 190,264

Total of Section 1-7	\$	2,378,300	x	10.0%	= \$	237,830
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TOTAL MINOR ITEMS	\$	237,900
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SECTIONS 9: MOBILIZATION

Item code

999990

Total Section 1-8

\$	2,616,200	x	10%	= \$	261,620
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TOTAL MOBILIZATION	\$	261,700
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SECTION 10: SUPPLEMENTAL WORK

Item code

066670 Payment Adjustments For Price Index
Fluctuations

Unit

LS

Quantity

Unit Price (\$)

x

= \$

Cost

-

066094 Value Analysis

LS

x

= \$

-

066070 Maintain Traffic

LS

x

= \$

-

066919 Dispute Resolution Board

LS

x

= \$

-

066921 Dispute Resolution Advisor

LS

x

= \$

-

066015 Federal Trainee Program

LS

x

= \$

-

066610 Partnering

LS

x

= \$

-

066204 Remove Rock and Debris

LS

x

= \$

-

066222 Locate Existing Crossover

LS

x

= \$

-

XXXXXX Some Item

Unit

x

= \$

-

Cost of NPDES Supplemental Work specified in Section 5D	= \$	-
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Total Section 1-8	\$	2,616,200	4%	= \$	104,648
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TOTAL SUPPLEMENTAL WORK	\$	104,700
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SECTION 11: STATE FURNISHED MATERIALS AND EXPENSES

Item code		Unit	Quantity		Unit Price (\$)		Cost
066105	Resident Engineers Office	LS		x		=	\$0
066063	Traffic Management Plan - Public Information	LS	1	x	10,000.00	=	\$10,000
066901	Water Expenses	LS		x		=	\$0
8609XX	Traffic Monitoring Station (X)	LS		x		=	\$0
066841	Traffic Controller Assembly	LS		x		=	\$0
066840	Traffic Signal Controller Assembly	LS		x		=	\$0
066062	COZEEP Contract	LS		x		=	\$0
066838	Reflective Numbers and Edge Sealer	LS		x		=	\$0
066065	Tow Truck Service Patrol	LS		x		=	\$0
066916	Annual Construction General Permit Fee	LS		x		=	\$0
XXXXXX	Some Item	Unit		x		=	\$0
Total Section 1-8		\$	2,616,200	2%	=	\$	52,324

TOTAL STATE FURNISHED	\$62,400
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SECTION 12: TIME-RELATED OVERHEAD

Total of Roadway and Structures Contract Items excluding Mobilization	\$2,616,200	(used to calculate TRO)
Total Construction Cost (excluding TRO and Contingency)	\$3,045,000	(used to check if project is greater than \$5 million excluding contingency)

Estimated Time-Related Overhead (TRO) Percentage (0% to 10%) = **6%**

Item code		Unit	Quantity		Unit Price (\$)		Cost
070018	Time-Related Overhead	WD	160	X	\$981	=	\$157,000

TOTAL TIME-RELATED OVERHEAD	\$157,000
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Note: If the building portion of the project is greater than 50% of the total project cost, then TRO is not included.

SECTION 13: ROADWAY CONTINGENCY

Recommended Contingency: (Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Total Section 1-11	\$	3,097,300	x	40%	=	\$1,238,920
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TOTAL CONTINGENCY	\$1,239,000
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II. STRUCTURE ITEMS

	<u>Bridge 1</u>		<u>Bridge 2</u>		
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Bridge Name	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Bridge Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot	\$150		\$150		\$0
COST OF EACH	\$0		\$0		\$0

	<u>Building 1</u>				
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Building Name	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Building Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot	\$300		\$0		\$0
COST OF EACH	\$0		\$0		\$0

TOTAL COST OF BRIDGES	\$0
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TOTAL COST OF BUILDINGS	\$0
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Structures Mobilization Percentage	10%	\$0
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Recommended Contingency: (Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Structures Contingency Percentage	10%	\$0
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TOTAL COST OF STRUCTURES	\$0
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Estimate Prepared By: _____
 XXXXXXXXXXXXXXXXXXXX ----- Division of Structures

 Date

III. RIGHT OF WAY

Fill in all of the available information from the Right of Way data sheet.

A)	A1)	Acquisition, including Excess Land Purchases, Damages & Goodwill, Fees	\$	7,212
	A2)	SB-1210	\$	0
B)		Acquisition of Offsite Mitigation	\$	0
C)	C1)	Utility Relocation (State Share)	\$	0
	C2)	Potholing (Design Phase)	\$	20,000
D)		Railroad Acquisition	\$	0
E)		Clearance / Demolition	\$	0
F)		Relocation Assistance (RAP and/or Last Resort Housing Costs)	\$	0
G)		Title and Escrow	\$	0
H)		Environmental Review	\$	0
I)		Condemnation Settlements <u>0%</u>	\$	0
J)		Design Appreciation Factor <u>0%</u>	\$	0
K)		Utility Relocation (Construction Cost)	\$	0

L)	TOTAL RIGHT OF WAY ESTIMATE	\$27,212
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M)	TOTAL R/W ESTIMATE: Escalated	\$27,212
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N)	RIGHT OF WAY SUPPORT	\$25,000
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Support Cost Estimate
Prepared By _____ Project Coordinator¹ _____ Phone _____

Utility Estimate Prepared
By _____ Utility Coordinator² _____ Phone _____

R/W Acquisition Estimate
Prepared By _____ Right of Way Estimator³ _____ Phone _____

Note: Items G & H applied to items A + B

¹ When estimate has Support Costs only² When estimate has Utility Relocation³ When R/W Acquisition is required

EA: 01-LOCAL PID: EVCRCP

IV. SUPPORT COST ESTIMATE SUMMARY

Note: Use PRSM project data.

Total by FY		Escalated Support Cost for Estimate To Completion (ETC)				
		PA&ED	PS&E	RW	CON	Total \$
< 2010	Expended					
	ETC					
2011	Expended					
	ETC					
2012	Expended					
	ETC					
2013	Expended					
	ETC					
2014	Expended					
	ETC					
2015	Expended					
	ETC					
2016	Expended					
	ETC					
2017	Expended					
	ETC					
2018	Expended					
	ETC					
2019	Expended					
	ETC					
2020	Expended					
	ETC					
2021	Expended					
	ETC					
2022	Expended					
	ETC					
2023	Expended					
	ETC					
2024	Expended					
	ETC					
2025 >	Expended					
	ETC					
EAC (Expended + ETC)		\$0	\$0	\$0	\$0	\$0
Approved Budget (PRSM)						
Difference (Budget - EAC)		\$0	\$0	\$0	\$0	\$0
Support Ratio (EAC / Cap Cost)		0.0%	0.0%	0.0%	0.0%	0.0%

Total Capital Cost:	\$4,469,000
Total Capital Outlay Support Cost:	\$0
Overall Percent Support Cost:	0.00%

PRSM workplan hours/costs verified
against approved MWA:

Office Chief -

Date

Approved by:

Project Control -

Date

PROJECT PLANNING COST ESTIMATE

EA: 01-LOCAL

EA: 01-LOCAL PID: EVCRCP

PID: EVCRCP

District-County-Route: 01-DN-EVCR

PM: 0.0 - 1.5

Type of Estimate : Programming

Program Code : k

Project Limits : Along Elk Valley Cross Road from Lake Earl Drive to Parkway Drive

Project Description: Signing, Striping, Anti-Glare treatment, Clearing and Grubbing

Scope :

Alternative : Alternative A, Intersection Improvements at US 199 and Elk Valley Cross Road

SUMMARY OF PROJECT COST ESTIMATE

	Current Year Cost	Escalated Cost
TOTAL ROADWAY COST	\$ 517,500	\$ 575,081
TOTAL STRUCTURES COST	\$ -	\$ -
SUBTOTAL CONSTRUCTION COST	\$ 517,500	\$ 575,081
TOTAL RIGHT OF WAY COST	\$ 5,000	\$ 5,000
TOTAL CAPITAL OUTLAY COSTS	\$ 523,000	\$ 581,000
PR/ED SUPPORT	\$ -	\$ -
PS&E SUPPORT	\$ -	\$ -
RIGHT OF WAY SUPPORT	\$ -	\$ -
CONSTRUCTION SUPPORT	\$ -	\$ -
TOTAL SUPPORT COST	\$ -	\$ -

TOTAL PROJECT COST	\$ 525,000	\$ 585,000
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If Project has been programmed enter Programmed Amount \$ 250,000,000

Month / Year

Date of Estimate (Month/Year) 1 / 2020

Estimated Construction Start (Month/Year) 4 / 2024

Number of Working Days = 30

Estimated Mid-Point of Construction (Month/Year) 8 / 2024

Estimated Construction End (Month/Year) 12 / 2024

Number of Plant Establishment Days 0

Estimated Project Schedule

PID Approval	6/1/2021
PA/ED Approval	7/1/2022
PS&E	10/1/2023
RTL	12/1/2023
Begin Construction	4/1/2024

Reviewed by District O.E.

xx/xx/xxxx

(xxx) xxx-xxxx

Office Engineer

Date

Phone

Approved by Project
Manager

xx/xx/xxxx

(xxx) xxx-xxxx

Project Manager

Date

Phone

I. ROADWAY ITEMS SUMMARY

	Section	Cost
1	Earthwork	\$ 10,000
2	Pavement Structural Section	\$ 149,900
3	Drainage	\$ -
4	Specialty Items	\$ 5,000
5	Environmental	\$ 10,500
6	Traffic Items	\$ 140,600
7	Detours	\$ -
8	Minor Items	\$ 31,600
9	Roadway Mobilization	\$ -
10	Supplemental Work	\$ 14,000
11	State Furnished	\$ 12,000
12	Time-Related Overhead	\$ -
13	Roadway Contingency	\$ 143,900
TOTAL ROADWAY ITEMS		\$ 517,500

Estimate Prepared By :

Name and Title	Date	Phone
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Estimate Reviewed By :

Name and Title	Date	Phone
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By signing this estimate you are attesting that you have discussed your project with all functional units and have incorporated all their comments or have discussed with them why they will not be incorporated.

SECTION 1: EARTHWORK

Item code		Unit	Quantity	Unit Price (\$)	Cost
190101	Roadway Excavation	CY	x	= \$	-
19010X	Roadway Excavation (Type X) ADL	CY	x	= \$	-
194001	Ditch Excavation	CY	x	= \$	-
19801X	Imported Borrow	CY/TON	x	= \$	-
192037	Structure Excavation (Retaining Wall)	CY	x	= \$	-
193013	Structure Backfill (Retaining Wall)	CY	x	= \$	-
193031	Pervious Backfill Material (Retaining Wall)	CY	x	= \$	-
16010X	Clearing & Grubbing	LS/ACRE	1	x 10,000.00	= \$ 10,000
170101	Develop Water Supply	LS	x	= \$	-
19801X	Imported Borrow	CY/TON	x	= \$	-
210130	Duff	ACRE	x	= \$	-
XXXXXX	Some Item	Unit	x	= \$	-

TOTAL EARTHWORK SECTION ITEMS	\$ 10,000
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SECTION 2: PAVEMENT STRUCTURAL SECTION

Item code		Unit	Quantity	Unit Price (\$)	Cost
401050	Jointed Plain Concrete Pavement	CY	x	= \$	-
400050	Continuously Reinforced Concrete Pavement	CY	x	= \$	-
404092	Seal Pavement Joint	LF	x	= \$	-
404093	Seal Isolation Joint	LF	x	= \$	-
413117	Seal Concrete Pavement Joint (Silicone)	LF	x	= \$	-
413118	Seal Pavement Joint (Asphalt Rubber)	LF	x	= \$	-
280010	Rapid Strength Concrete Base	CY	x	= \$	-
410095	Dowel Bar (Drill and Bond)	EA	x	= \$	-
390132	Hot Mix Asphalt (Type A)	TON	x	= \$	-
390137	Rubberized Hot Mix Asphalt (Gap Graded)	TON	x	= \$	-
39300X	Geosynthetic Pavement Interlayer (Type X)	SQYD	x	= \$	-
26020X	Class 2 Aggregate Base	TON/CY	x	= \$	-
290201	Asphalt Treated Permeable Base	CY	x	= \$	-
250401	Class 4 Aggregate Subbase	CY	x	= \$	-
374002	Asphaltic Emulsion (Fog Seal Coat)	TON	x	= \$	-
397005	Tack Coat	TON	7	x 2,000.00	= \$ 14,000
377501	Slurry Seal	TON	x	= \$	-
3750XX	Screenings (Type XX)	TON	x	= \$	-
374492	Asphaltic Emulsion (Polymer Modified)	TON	x	= \$	-
370001	Sand Cover (Seal)	TON	x	= \$	-
731530	Minor Concrete (Textured Paving)	CY	x	= \$	-
731502	Minor Concrete (Miscellaneous Construction)	CY	x	= \$	-
39407X	Place Hot Mix Asphalt Dike (Type X)	LF	x	= \$	-
150771	Remove Asphalt Concrete Dike	LF	x	= \$	-
420201	Grind Existing Concrete Pavement	SQYD	x	= \$	-
150860	Remove Base and Surfacing	CY	x	= \$	-
390095	Replace Asphalt Concrete Surfacing	CY	x	= \$	-
15312X	Remove Concrete	LF/CY/LS	x	= \$	-
394090	Place Hot Mix Asphalt (Miscellaneous Area)	SQYD	x	= \$	-
153103	Cold Plane Asphalt Concrete Pavement	SQYD	x	= \$	-
39405X	Shoulder Rumble Strip (HMA, X-In Indentations)	STA	x	= \$	-
413113	Repair Spalled Joints, Polyester Grout	SQYD	x	= \$	-
420102	Groove Existing Concrete Pavement	SQYD	x	= \$	-
390136	Minor Hot Mix Asphalt	TON	x	= \$	-
394095	Roadside Paving (Miscellaneous Areas)	SQYD	x	= \$	-
390401	Hot Mix Asphalt-Open Graded (Open Graded Fricti	TON	1,617	x 84	= \$ 135,828

TOTAL PAVEMENT STRUCTURAL SECTION ITEMS	\$ 149,900
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SECTION 3: DRAINAGE

Item code		Unit	Quantity	Unit Price (\$)	Cost
15080X	Remove Culvert	EA/LF	x	= \$	-
150820	Modify Inlet	EA	x	= \$	-
155232	Sand Backfill	CY	x	= \$	-
15020X	Abandon Culvert	EA/LF	x	= \$	-
152430	Adjust Inlet	LF	x	= \$	-
155003	Cap Inlet	EA	x	= \$	-
510501	Minor Concrete	CY	x	= \$	-
510502	Minor Concrete (Minor Structure)	CY	x	= \$	-
5105XX	Minor Concrete (Type XX)	CY	x	= \$	-
620XXX	XX" Alternative Pipe Culvert (Type X)	LF	x	= \$	-
6411XX	XX" Plastic Pipe	LF	x	= \$	-
65XXXX	XX" Reinforced Concrete Pipe (Type X)	LF	x	= \$	-
6650XX	XX" Corrugated Steel Pipe (0.XXX" Thick)	LF	x	= \$	-
68XXXX	XX" Plastic Pipe (Edge Drain)	LF	x	= \$	-
69011X	XX" Corrugated Steel Pipe Downrain (0.XXX" Thi	LF	x	= \$	-
70321X	XX" Corrugated Steel Pipe Inlet (0.XXX" Thick)	LF	x	= \$	-
70XXXX	XX" Corrugated Steel Pipe Riser (0.XXX" Thick)	LF	x	= \$	-
7050XX	XX" Steel Flared End Section	EA	x	= \$	-
703233	Grated Line Drain	LF	x	= \$	-
72XXXX	Rock Slope Protection (Type and Method)	CY/TON	x	= \$	-
72901X	Rock Slope Protection Fabric (Class X)	SQYD	x	= \$	-
721420	Concrete (Ditch Lining)	CY	x	= \$	-
721430	Concrete (Channel Lining)	CY	x	= \$	-
750001	Miscellaneous Iron and Steel	LB	x	= \$	-
XXXXXX	Additional Drainage	LS	x	= \$	-

TOTAL DRAINAGE ITEMS	\$	-
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SECTION 4: SPECIALTY ITEMS

Item code		Unit	Quantity	Unit Price (\$)	Cost
080050	Progress Schedule (Critical Path Method)	LS	1	x 5,000.00 = \$	5,000
582001	Sound Wall (Masonry Block)	SQFT	x	= \$	-
510530	Minor Concrete (Wall)	CY	x	= \$	-
15325X	Remove Sound Wall	LF/LS	x	= \$	-
070030	Lead Compliance Plan	LS	x	= \$	-
141120	Treated Wood Waste	LB	x	= \$	-
153221	Remove Concrete Barrier	LF	x	= \$	-
150662	Remove Metal Beam Guard Railing	LF	x	= \$	-
150668	Remove Flared End Section	EA	x	= \$	-
8000XX	Chain Link Fence (Type XX)	LF	x	= \$	-
80XXXX	XX" Chain Link Gate (Type CL-6)	EA	x	= \$	-
832001	Metal Beam Guard Railing	LF	x	= \$	-
839301	Single Thrie Beam Barrier	LF	x	= \$	-
839310	Double Thrie Beam Barrier	LF	x	= \$	-
839521	Cable Railing	LF	x	= \$	-
8395XX	Terminal System (Type CAT)	EA	x	= \$	-
839585	Alternative Flared Terminal System	EA	x	= \$	-
839584	Alternative In-line Terminal System	EA	x	= \$	-
4906XX	CIDH Concrete Piling (Insert Diameter)	LF	x	= \$	-
839XXX	Crash Cushion (Insert Type)	EA	x	= \$	-
83XXXX	Concrete Barrier (Insert Type)	LF	x	= \$	-
520103	Bar Reinforced Steel (Retaining Wall)	LB	x	= \$	-
510060	Structural Concrete, Retaining Wall	CY	x	= \$	-
513553	Retaining Wall (Masonry Wall)	SQFT	x	= \$	-
511035	Architectural Treatment	SQFT	x	= \$	-
598001	Anti-Graffiti Coating	SQFT	x	= \$	-
203070	Rock Stain	SQFT	x	= \$	-
5136XX	Reinforced Concrete Crib Wall (Type X)	SQFT	x	= \$	-
83954X	Transition Railing (Type X)	EA	x	= \$	-
597601	Prepare and Stain Concrete	SQFT	x	= \$	-
839561	Rail Tensioning Assembly	EA	x	= \$	-
83958X	End Anchor Assembly (Type X)	EA	x	= \$	-
XXXXXX	Some Item	Unit	x	= \$	-

TOTAL SPECIALTY ITEMS	\$	5,000
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SECTION 5: ENVIRONMENTAL**5A - ENVIRONMENTAL MITIGATION**

Item code	Unit	Quantity	Unit Price (\$)	Cost
Biological Mitigation	LS	x	= \$	-
130670 Temporary Reinforced Silt Fence	LF	x	= \$	-
141000 Temporary Fence (Type ESA)	LF	x	= \$	-
<i>Subtotal Environmental Mitigation</i>				\$ -

5B - LANDSCAPE AND IRRIGATION

Item code	Unit	Quantity	Unit Price (\$)	Cost
20XXXX Highway Planting	LS	x	= \$	-
20XXXX Irrigation System	LS	x	= \$	-
204099 Plant Establishment Work	LS	x	= \$	-
204101 Extend Plant Establishment Work	LS	x	= \$	-
20XXXX Follow-up Landscape Project	LS	x	= \$	-
150685 Remove Irrigation Facility	LS	x	= \$	-
20XXXX Maintain Existing (Irrigation or Planted Areas)	LS	x	= \$	-
206400 Check and Test Existing Irrigation Facilities	LS	x	= \$	-
21011X Imported Topsoil (X)	CY/TON	x	= \$	-
20XXXX Rock Blanket, Rock Mulch, DG, Gravel Mulch	SQFT/SQYD	x	= \$	-
200122 Weed Germination	SQYD	x	= \$	-
208304 Water Meter	EA	x	= \$	-
2087XX XX" Conduit (Use for Irrigation x-overs)	LF	x	= \$	-
20890X Extended Conduit (Use for Extension of Irrigation x-overs)	LF	x	= \$	-
<i>Subtotal Landscape and Irrigation</i>				\$ -

5C - EROSION CONTROL

Item code	Unit	Quantity	Unit Price (\$)	Cost
210010 Move In/Move Out (Erosion Control)	EA	x	= \$	-
210350 Fiber Rolls	LF	x	= \$	-
210360 Compost Sock	LF	x	= \$	-
2102XX Rolled Erosion Control Product (X)	SQFT	x	= \$	-
21025X Bonded Fiber Matrix	SQFT/ACRE	x	= \$	-
210300 Hydromulch	SQFT	x	= \$	-
210420 Straw	SQFT	x	= \$	-
210430 Hydroseed	SQFT	x	= \$	-
210600 Compost	SQFT	x	= \$	-
210630 Incorporate Materials	SQFT	x	= \$	-
<i>Subtotal Erosion Control</i>				\$ -

5D - NPDES

Item code	Unit	Quantity	Unit Price (\$)	Cost
130300 Prepare SWPPP	LS	x	= \$	-
130200 Prepare WPCP	LS	1	10,000.00	10,000
130100 Job Site Management	LS	1	500.00	500
130330 Storm Water Annual Report	EA	x	= \$	-
130310 Rain Event Action Plan (REAP)	EA	x	= \$	-
130320 Storm Water Sampling and Analysis Day	EA	x	= \$	-
130520 Temporary Hydraulic Mulch	SQYD	x	= \$	-
130550 Temporary Hydroseed	SQYD	x	= \$	-
130505 Move-In/Move-Out (Temporary Erosion Control)	EA	x	= \$	-
130640 Temporary Fiber Roll	LF	x	= \$	-
130900 Temporary Concrete Washout	LS	x	= \$	-
130710 Temporary Construction Entrance	EA	x	= \$	-
130610 Temporary Check Dam	LF	x	= \$	-
130620 Temporary Drainage Inlet Protection	EA	x	= \$	-
130730 Street Sweeping	LS	x	= \$	-
<i>Subtotal NPDES</i>				\$ 10,500

Supplemental Work for NPDES

066595 Water Pollution Control Maintenance Sharing*	LS	x	100,000.00	= \$ -
066596 Additional Water Pollution Control**	LS	x	10,000.00	= \$ -
066597 Storm Water Sampling and Analysis***	LS	x	= \$ -	
XXXXXX Some Item	LS	x	= \$ -	
<i>Subtotal Supplemental Work for NPDES</i>				\$ -

*Applies to all SWPPPs and those WPCPs with sediment control or soil stabilization BMPs.

**Applies to both SWPPPs and WPCP projects.

*** Applies only to project with SWPPPs.

TOTAL ENVIRONMENTAL	\$	10,500
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SECTION 6: TRAFFIC ITEMS**6A - Traffic Electrical**

Item code	Unit	Quantity	Unit Price (\$)	Cost
860460 Lighting and Sign Illumination	LS	x	= \$	-
860201 Signal and Lighting	LS	x	= \$	-
860990 Closed Circuit Television System	LS	x	= \$	-
86110X Ramp Metering System (Location X)	LS	x	= \$	-
86070X Interconnection Conduit and Cable	LF/LS	x	= \$	-
5602XX Furnish Sign Structure (Type X)	LB	x	= \$	-
5602XX Install Sign Structure (Type X)	LB	x	= \$	-
498040 XX" CIDHC Pile (Sign Foundation)	LF	x	= \$	-
86080X Inductive Loop Detectors	EA/LS	x	= \$	-
8609XX Traffic Monitoring Station (Type X)	LS	x	= \$	-
15075X Remove Sign Structure	EA/LS	x	= \$	-
151581 Reconstruct Sign Structure	EA	x	= \$	-
152641 Modify Sign Structure	EA	x	= \$	-
860090 Maintain Existing Traffic Management System Eler	LS	x	= \$	-
86XXXX Fiber Optic Conduit System	LS	x	100,000.00 = \$	-
XXXXX Some Item	Unit	x	= \$	-
Subtotal Traffic Electrical				\$ -

6B - Traffic Signing and Striping

Item code	Unit	Quantity	Unit Price (\$)	Cost
566011 Roadside Sign - One Post	EA	x	10,000.00 = \$	-
566012 Roadside Sign - Two Post	EA	x	= \$	-
5602XX Furnish Sign	SQFT	x	= \$	-
568016 Install Sign Panel on Existing Frame	SQFT	x	= \$	-
150711 Remove Painted Traffic Stripe	LF	6,559 x	1.50 = \$	9,839
141101 Remove Yellow Painted Traffic Stripe (Hazardous Waste)	LF	x	= \$	-
150712 Remove Painted Pavement Marking	SQFT	4,574 x	6.50 = \$	29,731
150742 Remove Roadside Sign	EA	x	= \$	-
152320 Reset Roadside Sign	EA	x	= \$	-
152390 Relocate Roadside Sign	EA	x	= \$	-
82010X Delineator (Class X)	EA	x	= \$	-
840502 Thermoplastic Traffic Stripe (Enhanced Wet Night)	LF	6,559 x	3.30 = \$	21,645
846012 Thermoplastic Crosswalk and Pavement Marking (E)	SQFT	4,574 x	11.00 = \$	50,314
120090 Construction Area Signs	LS	1 x	5,000.00 = \$	5,000
84XXXX Permanent Pavement Delineation	LS	x	= \$	-
Subtotal Traffic Signing and Striping				\$ 116,528

6C - Traffic Management Plan

Item code	Unit	Quantity	Unit Price (\$)	Cost
12865X Portable Changeable Message Signs	EA/LS	6 x	\$ 1,500 = \$	9,000
Subtotal Traffic Management Plan				\$ 9,000

6C - Stage Construction and Traffic Handling

Item code	Unit	Quantity	Unit Price (\$)	Cost
120199 Traffic Plastic Drum	EA	x	= \$	-
12016X Channelizer (Type X)	EA	x	= \$	-
120120 Type III Barricade	EA	x	= \$	-
129100 Temporary Crash Cushion Module	EA	x	= \$	-
120100 Traffic Control System	LS	1 x	15,000.00 = \$	15,000
129110 Temporary Crash Cushion	EA	x	= \$	-
129000 Temporary Railing (Type K)	LF	x	= \$	-
120149 Temporary Pavement Marking (Paint)	SQFT	x	= \$	-
82010X Delineator (Class X)	EA	x	= \$	-
XXXXXX Some Item	Unit	x	= \$	-
Subtotal Stage Construction and Traffic Handling				\$ 15,000

TOTAL TRAFFIC ITEMS	\$ 140,600
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SECTION 7: DETOURS

Includes constructing, maintaining, and removal

Item code	Unit	Quantity	Unit Price (\$)	Cost
190101 Roadway Excavation	CY	x	= \$	-
19801X Imported Borrow	CY/TON	x	= \$	-
390132 Hot Mix Asphalt (Type A)	TON	x	= \$	-
26020X Class 2 Aggregate Base	TON/CY	x	= \$	-
250401 Class 4 Aggregate Subbase	CY	x	= \$	-
130620 Temporary Drainage Inlet Protection	EA	x	= \$	-
129000 Temporary Railing (Type K)	LF	x	= \$	-
128601 Temporary Signal System	LS	x	= \$	-
120149 Temporary Pavement Marking (Paint)	SQFT	x	= \$	-
80010X Temporary Fence (Type X)	LF	x	= \$	-
XXXXXX Some Item	LS	x	= \$	-

* Includes constructing, maintaining, and removal

TOTAL DETOURS	\$	-
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SUBTOTAL SECTIONS 1 through 7	\$	316,000
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SECTION 8: MINOR ITEMS**8A - Americans with Disabilities Act Items**

ADA Items	1.0%	\$	3,160
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8B - Bike Path Items

Bike Path Items	1.0%	\$	3,160
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8C - Other Minor Items

Other Minor Items	8.0%	\$	25,280
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Total of Section 1-7	\$	316,000	x	10.0%	= \$	31,600
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TOTAL MINOR ITEMS	\$	31,600
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SECTIONS 9: MOBILIZATION

Item code						
999990	Total Section 1-8	\$	347,600	x	10%	= \$ -

TOTAL MOBILIZATION	\$	-
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SECTION 10: SUPPLEMENTAL WORK

Item code	Unit	Quantity	Unit Price (\$)	Cost
066670 Payment Adjustments For Price Index Fluctuations	LS	x	= \$	-
066094 Value Analysis	LS	x	= \$	-
066070 Maintain Traffic	LS	x	= \$	-
066919 Dispute Resolution Board	LS	x	= \$	-
066921 Dispute Resolution Advisor	LS	x	= \$	-
066015 Federal Trainee Program	LS	x	= \$	-
066610 Partnering	LS	x	= \$	-
066204 Remove Rock and Debris	LS	x	= \$	-
066222 Locate Existing Crossover	LS	x	= \$	-
XXXXXX Some Item	Unit	x	= \$	-

Cost of NPDES Supplemental Work specified in Section 5D	= \$	-
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Total Section 1-8	\$	347,600	4%	= \$	13,904
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TOTAL SUPPLEMENTAL WORK	\$	14,000
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SECTION 11: STATE FURNISHED MATERIALS AND EXPENSES

Item code		Unit	Quantity		Unit Price (\$)		Cost
066105	Resident Engineers Office	LS		x		=	\$0
066063	Traffic Management Plan - Public Information	LS	1	x	5,000.00	=	\$5,000
066901	Water Expenses	LS		x		=	\$0
8609XX	Traffic Monitoring Station (X)	LS		x		=	\$0
066841	Traffic Controller Assembly	LS		x		=	\$0
066840	Traffic Signal Controller Assembly	LS		x		=	\$0
066062	COZEEP Contract	LS		x		=	\$0
066838	Reflective Numbers and Edge Sealer	LS		x		=	\$0
066065	Tow Truck Service Patrol	LS		x		=	\$0
066916	Annual Construction General Permit Fee	LS		x		=	\$0
XXXXXX	Some Item	Unit		x		=	\$0
Total Section 1-8		\$	347,600	2%	=	\$	6,952

TOTAL STATE FURNISHED	\$12,000
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SECTION 12: TIME-RELATED OVERHEAD

Total of Roadway and Structures Contract Items excluding Mobilization \$347,600 (used to calculate TRO)
Total Construction Cost (excluding TRO and Contingency) \$373,600 (used to check if project is greater than \$5 million excluding contingency)

Estimated Time-Related Overhead (TRO) Percentage (0% to 10%) = **6%**

Item code		Unit	Quantity		Unit Price (\$)		Cost
070018	Time-Related Overhead	WD	30	X	\$0	=	\$0

TOTAL TIME-RELATED OVERHEAD	\$0
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Note: If the building portion of the project is greater than 50% of the total project cost, then TRO is not included.

SECTION 13: ROADWAY CONTINGENCY

Recommended Contingency: (Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Total Section 1-11	\$	359,600	x	40%	=	\$143,840
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TOTAL CONTINGENCY	\$143,900
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II. STRUCTURE ITEMS

	<u>Bridge 1</u>		<u>Bridge 2</u>		
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Bridge Name	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Bridge Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot	\$150		\$150		\$0
COST OF EACH	\$0		\$0		\$0

	<u>Building 1</u>				
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Building Name	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Building Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot	\$300		\$0		\$0
COST OF EACH	\$0		\$0		\$0

TOTAL COST OF BRIDGES	\$0
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TOTAL COST OF BUILDINGS	\$0
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Structures Mobilization Percentage	10%	\$0
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Recommended Contingency: (Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Structures Contingency Percentage	10%	\$0
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TOTAL COST OF STRUCTURES	\$0
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Estimate Prepared By: _____
 XXXXXXXXXXXXXXXXXXXX ----- Division of Structures

 Date

III. RIGHT OF WAY

Fill in all of the available information from the Right of Way data sheet.

A)	A1)	Acquisition, including Excess Land Purchases, Damages & Goodwill, Fees	\$	0
	A2)	SB-1210	\$	0
B)		Acquisition of Offsite Mitigation	\$	0
C)	C1)	Utility Relocation (State Share)	\$	0
	C2)	Potholing (Design Phase)	\$	5,000
D)		Railroad Acquisition	\$	0
E)		Clearance / Demolition	\$	0
F)		Relocation Assistance (RAP and/or Last Resort Housing Costs)	\$	0
G)		Title and Escrow	\$	0
H)		Environmental Review	\$	0
I)		Condemnation Settlements <u>0%</u>	\$	0
J)		Design Appreciation Factor <u>0%</u>	\$	0
K)		Utility Relocation (Construction Cost)	\$	0

L)	TOTAL RIGHT OF WAY ESTIMATE	\$5,000
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M)	TOTAL R/W ESTIMATE: Escalated	\$5,000
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N)	RIGHT OF WAY SUPPORT	\$5,000
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Support Cost Estimate
Prepared By _____ Project Coordinator¹ _____ Phone _____

Utility Estimate Prepared
By _____ Utility Coordinator² _____ Phone _____

R/W Acquisition Estimate
Prepared By _____ Right of Way Estimator³ _____ Phone _____

Note: Items G & H applied to items A + B

¹ When estimate has Support Costs only² When estimate has Utility Relocation³ When R/W Acquisition is required

IV. SUPPORT COST ESTIMATE SUMMARY

Note: Use PRSM project data.

Total by FY		Escalated Support Cost for Estimate To Completion (ETC)				
		PA&ED	PS&E	RW	CON	Total \$
< 2010	Expended					
	ETC					
2011	Expended					
	ETC					
2012	Expended					
	ETC					
2013	Expended					
	ETC					
2014	Expended					
	ETC					
2015	Expended					
	ETC					
2016	Expended					
	ETC					
2017	Expended					
	ETC					
2018	Expended					
	ETC					
2019	Expended					
	ETC					
2020	Expended					
	ETC					
2021	Expended					
	ETC					
2022	Expended					
	ETC					
2023	Expended					
	ETC					
2024	Expended					
	ETC					
2025 >	Expended					
	ETC					
EAC (Expended + ETC)		\$0	\$0	\$0	\$0	\$0
Approved Budget (PRSM)						
Difference (Budget - EAC)		\$0	\$0	\$0	\$0	\$0
Support Ratio (EAC / Cap Cost)		0.0%	0.0%	0.0%	0.0%	0.0%

Total Capital Cost:	\$523,000
Total Capital Outlay Support Cost:	\$0
Overall Percent Support Cost:	0.00%

PRSM workplan hours/costs verified
against approved MWA:

Office Chief -

Date

Approved by:

Project Control -

Date

PROJECT

PLANNING COST ESTIMATE

EA: 01-LOCAL

EA: 01-LOCAL PID: EVCRCP

PID: EVCRCP

District-County-Route: 01-DN-EVCR

PM: 0.0 - 1.5

Type of Estimate : Programming

Program Code : k

Project Limits : Along Elk Valley Cross Road from Lake Earl Drive to Parkway Drive

Project Description: Traffic Signals installed at the intersection of US 199 and Elk Valley Cross Road.

Scope :

Alternative : Alternative B, Intersection Improvements at SR 199 and Elk Valley Cross Road

SUMMARY OF PROJECT COST ESTIMATE

	Current Year Cost	Escalated Cost
TOTAL ROADWAY COST	\$ 746,400	\$ 829,451
TOTAL STRUCTURES COST	\$ -	\$ -
SUBTOTAL CONSTRUCTION COST	\$ 746,400	\$ 829,451
TOTAL RIGHT OF WAY COST	\$ 10,000	\$ 10,000
TOTAL CAPITAL OUTLAY COSTS	\$ 757,000	\$ 840,000
PR/ED SUPPORT	\$ -	\$ -
PS&E SUPPORT	\$ -	\$ -
RIGHT OF WAY SUPPORT	\$ -	\$ -
CONSTRUCTION SUPPORT	\$ -	\$ -
TOTAL SUPPORT COST	\$ -	\$ -

TOTAL PROJECT COST	\$ 760,000	\$ 840,000
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If Project has been programmed enter Programmed Amount

Month / Year

Date of Estimate (Month/Year) 1 / 2020

Estimated Construction Start (Month/Year) 4 / 2024

Number of Working Days = 25

Estimated Mid-Point of Construction (Month/Year) 8 / 2024

Estimated Construction End (Month/Year) 12 / 2024

Number of Plant Establishment Days 261

Estimated Project Schedule

PID Approval	6/1/2021
PA/ED Approval	7/1/2022
PS&E	10/1/2023
RTL	12/1/2023
Begin Construction	4/1/2024

Reviewed by District O.E.

xx/xx/xxxx

(xxx) xxx-xxxx

Office Engineer

Date

Phone

Approved by Project
Manager

xx/xx/xxxx

(xxx) xxx-xxxx

Project Manager

Date

Phone

I. ROADWAY ITEMS SUMMARY

	Section	Cost
1	Earthwork	\$ -
2	Pavement Structural Section	\$ -
3	Drainage	\$ -
4	Specialty Items	\$ 7,500
5	Environmental	\$ 17,000
6	Traffic Items	\$ 417,100
7	Detours	\$ -
8	Minor Items	\$ 44,200
9	Roadway Mobilization	\$ -
10	Supplemental Work	\$ 24,500
11	State Furnished	\$ 29,800
12	Time-Related Overhead	\$ -
13	Roadway Contingency	\$ 206,300
TOTAL ROADWAY ITEMS		\$ 746,400

Estimate Prepared By :

Name and Title	Date	Phone
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Estimate Reviewed By :

Name and Title	Date	Phone
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By signing this estimate you are attesting that you have discussed your project with all functional units and have incorporated all their comments or have discussed with them why they will not be incorporated.

SECTION 1: EARTHWORK

Item code		Unit	Quantity	Unit Price (\$)	Cost
190101	Roadway Excavation	CY	x	= \$	-
19010X	Roadway Excavation (Type X) ADL	CY	x	= \$	-
194001	Ditch Excavation	CY	x	= \$	-
19801X	Imported Borrow	CY/TON	x	= \$	-
192037	Structure Excavation (Retaining Wall)	CY	x	= \$	-
193013	Structure Backfill (Retaining Wall)	CY	x	= \$	-
193031	Pervious Backfill Material (Retaining Wall)	CY	x	= \$	-
16010X	Clearing & Grubbing	LS/ACRE	x	= \$	-
170101	Develop Water Supply	LS	x	= \$	-
19801X	Imported Borrow	CY/TON	x	= \$	-
210130	Duff	ACRE	x	= \$	-
XXXXXX	Some Item	Unit	x	= \$	-

TOTAL EARTHWORK SECTION ITEMS	\$	-
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SECTION 2: PAVEMENT STRUCTURAL SECTION

Item code		Unit	Quantity	Unit Price (\$)	Cost
401050	Jointed Plain Concrete Pavement	CY	x	= \$	-
400050	Continuously Reinforced Concrete Pavement	CY	x	= \$	-
404092	Seal Pavement Joint	LF	x	= \$	-
404093	Seal Isolation Joint	LF	x	= \$	-
413117	Seal Concrete Pavement Joint (Silicone)	LF	x	= \$	-
413118	Seal Pavement Joint (Asphalt Rubber)	LF	x	= \$	-
280010	Rapid Strength Concrete Base	CY	x	= \$	-
410095	Dowel Bar (Drill and Bond)	EA	x	= \$	-
390132	Hot Mix Asphalt (Type A)	TON	x	= \$	-
390137	Rubberized Hot Mix Asphalt (Gap Graded)	TON	x	= \$	-
39300X	Geosynthetic Pavement Interlayer (Type X)	SQYD	x	= \$	-
26020X	Class 2 Aggregate Base	TON/CY	x	= \$	-
290201	Asphalt Treated Permeable Base	CY	x	= \$	-
250401	Class 4 Aggregate Subbase	CY	x	= \$	-
374002	Asphaltic Emulsion (Fog Seal Coat)	TON	x	= \$	-
397005	Tack Coat	TON	x	= \$	-
377501	Slurry Seal	TON	x	= \$	-
3750XX	Screenings (Type XX)	TON	x	= \$	-
374492	Asphaltic Emulsion (Polymer Modified)	TON	x	= \$	-
370001	Sand Cover (Seal)	TON	x	= \$	-
731530	Minor Concrete (Textured Paving)	CY	x	= \$	-
731502	Minor Concrete (Miscellaneous Construction)	CY	x	= \$	-
39407X	Place Hot Mix Asphalt Dike (Type X)	LF	x	= \$	-
150771	Remove Asphalt Concrete Dike	LF	x	= \$	-
420201	Grind Existing Concrete Pavement	SQYD	x	= \$	-
150860	Remove Base and Surfacing	CY	x	= \$	-
390095	Replace Asphalt Concrete Surfacing	CY	x	= \$	-
15312X	Remove Concrete	LF/CY/LS	x	= \$	-
394090	Place Hot Mix Asphalt (Miscellaneous Area)	SQYD	x	= \$	-
153103	Cold Plane Asphalt Concrete Pavement	SQYD	x	= \$	-
39405X	Shoulder Rumble Strip (HMA, X-In Indentations)	STA	x	= \$	-
413113	Repair Spalled Joints, Polyester Grout	SQYD	x	= \$	-
420102	Groove Existing Concrete Pavement	SQYD	x	= \$	-
390136	Minor Hot Mix Asphalt	TON	x	= \$	-
394095	Roadside Paving (Miscellaneous Areas)	SQYD	x	= \$	-
XXXXXX	Some Item	Unit	x	= \$	-

TOTAL PAVEMENT STRUCTURAL SECTION ITEMS	\$	-
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SECTION 3: DRAINAGE

Item code		Unit	Quantity	Unit Price (\$)	Cost
15080X	Remove Culvert	EA/LF	x	= \$	-
150820	Modify Inlet	EA	x	= \$	-
155232	Sand Backfill	CY	x	= \$	-
15020X	Abandon Culvert	EA/LF	x	= \$	-
152430	Adjust Inlet	LF	x	= \$	-
155003	Cap Inlet	EA	x	= \$	-
510501	Minor Concrete	CY	x	= \$	-
510502	Minor Concrete (Minor Structure)	CY	x	= \$	-
5105XX	Minor Concrete (Type XX)	CY	x	= \$	-
620XXX	XX" Alternative Pipe Culvert (Type X)	LF	x	= \$	-
6411XX	XX" Plastic Pipe	LF	x	= \$	-
65XXXX	XX" Reinforced Concrete Pipe (Type X)	LF	x	= \$	-
6650XX	XX" Corrugated Steel Pipe (0.XXX" Thick)	LF	x	= \$	-
68XXXX	XX" Plastic Pipe (Edge Drain)	LF	x	= \$	-
69011X	XX" Corrugated Steel Pipe Downrain (0.XXX" Thi	LF	x	= \$	-
70321X	XX" Corrugated Steel Pipe Inlet (0.XXX" Thick)	LF	x	= \$	-
70XXXX	XX" Corrugated Steel Pipe Riser (0.XXX" Thick)	LF	x	= \$	-
7050XX	XX" Steel Flared End Section	EA	x	= \$	-
703233	Grated Line Drain	LF	x	= \$	-
72XXXX	Rock Slope Protection (Type and Method)	CY/TON	x	= \$	-
72901X	Rock Slope Protection Fabric (Class X)	SQYD	x	= \$	-
721420	Concrete (Ditch Lining)	CY	x	= \$	-
721430	Concrete (Channel Lining)	CY	x	= \$	-
750001	Miscellaneous Iron and Steel	LB	x	= \$	-
XXXXXX	Additional Drainage	LS	x	= \$	-

TOTAL DRAINAGE ITEMS	\$	-
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SECTION 4: SPECIALTY ITEMS

Item code		Unit	Quantity	Unit Price (\$)	Cost
080050	Progress Schedule (Critical Path Method)	LS	1	x 5,000.00 = \$	5,000
582001	Sound Wall (Masonry Block)	SQFT	x	= \$	-
510530	Minor Concrete (Wall)	CY	x	= \$	-
15325X	Remove Sound Wall	LF/LS	x	= \$	-
070030	Lead Compliance Plan	LS	1	x 2,500.00 = \$	2,500
141120	Treated Wood Waste	LB	x	= \$	-
153221	Remove Concrete Barrier	LF	x	= \$	-
150662	Remove Metal Beam Guard Railing	LF	x	= \$	-
150668	Remove Flared End Section	EA	x	= \$	-
8000XX	Chain Link Fence (Type XX)	LF	x	= \$	-
80XXXX	XX" Chain Link Gate (Type CL-6)	EA	x	= \$	-
832001	Metal Beam Guard Railing	LF	x	= \$	-
839301	Single Thrie Beam Barrier	LF	x	= \$	-
839310	Double Thrie Beam Barrier	LF	x	= \$	-
839521	Cable Railing	LF	x	= \$	-
8395XX	Terminal System (Type CAT)	EA	x	= \$	-
839585	Alternative Flared Terminal System	EA	x	= \$	-
839584	Alternative In-line Terminal System	EA	x	= \$	-
4906XX	CIDH Concrete Piling (Insert Diameter)	LF	x	= \$	-
839XXX	Crash Cushion (Insert Type)	EA	x	= \$	-
83XXXX	Concrete Barrier (Insert Type)	LF	x	= \$	-
520103	Bar Reinforced Steel (Retaining Wall)	LB	x	= \$	-
510060	Structural Concrete, Retaining Wall	CY	x	= \$	-
513553	Retaining Wall (Masonry Wall)	SQFT	x	= \$	-
511035	Architectural Treatment	SQFT	x	= \$	-
598001	Anti-Graffiti Coating	SQFT	x	= \$	-
203070	Rock Stain	SQFT	x	= \$	-
5136XX	Reinforced Concrete Crib Wall (Type X)	SQFT	x	= \$	-
83954X	Transition Railing (Type X)	EA	x	= \$	-
597601	Prepare and Stain Concrete	SQFT	x	= \$	-
839561	Rail Tensioning Assembly	EA	x	= \$	-
83958X	End Anchor Assembly (Type X)	EA	x	= \$	-
XXXXXX	Some Item	Unit	x	= \$	-

TOTAL SPECIALTY ITEMS	\$	7,500
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SECTION 5: ENVIRONMENTAL**5A - ENVIRONMENTAL MITIGATION**

Item code	Unit	Quantity	Unit Price (\$)	Cost
Biological Mitigation	LS	x	= \$	-
130670 Temporary Reinforced Silt Fence	LF	x	= \$	-
141000 Temporary Fence (Type ESA)	LF	x	= \$	-
Subtotal Environmental Mitigation				\$ -

5B - LANDSCAPE AND IRRIGATION

Item code	Unit	Quantity	Unit Price (\$)	Cost
20XXXX Highway Planting	LS	x	= \$	-
20XXXX Irrigation System	LS	x	= \$	-
204099 Plant Establishment Work	LS	x	= \$	-
204101 Extend Plant Establishment Work	LS	x	= \$	-
20XXXX Follow-up Landscape Project	LS	x	= \$	-
150685 Remove Irrigation Facility	LS	x	= \$	-
20XXXX Maintain Existing (Irrigation or Planted Areas)	LS	x	= \$	-
206400 Check and Test Existing Irrigation Facilities	LS	x	= \$	-
21011X Imported Topsoil (X)	CY/TON	x	= \$	-
20XXXX Rock Blanket, Rock Mulch, DG, Gravel Mulch	SQFT/SQYD	x	= \$	-
200122 Weed Germination	SQYD	x	= \$	-
208304 Water Meter	EA	x	= \$	-
2087XX XX" Conduit (Use for Irrigation x-overs)	LF	x	= \$	-
20890X Extended Conduit (Use for Extension of Irrigation x-overs)	LF	x	= \$	-
Subtotal Landscape and Irrigation				\$ -

5C - EROSION CONTROL

Item code	Unit	Quantity	Unit Price (\$)	Cost
210010 Move In/Move Out (Erosion Control)	EA	x	= \$	-
210350 Fiber Rolls	LF	x	= \$	-
210360 Compost Sock	LF	x	= \$	-
2102XX Rolled Erosion Control Product (X)	SQFT	x	= \$	-
21025X Bonded Fiber Matrix	SQFT/ACRE	x	= \$	-
210300 Hydromulch	SQFT	x	= \$	-
210420 Straw	SQFT	x	= \$	-
210430 Hydroseed	SQFT	x	= \$	-
210600 Compost	SQFT	x	= \$	-
210630 Incorporate Materials	SQFT	x	= \$	-
Subtotal Erosion Control				\$ -

5D - NPDES

Item code	Unit	Quantity	Unit Price (\$)	Cost
130300 Prepare SWPPP	LS	x	= \$	-
130200 Prepare WPCP	LS	1	5,000.00	5,000
130100 Job Site Management	LS	x	= \$	-
130330 Storm Water Annual Report	EA	x	= \$	-
130310 Rain Event Action Plan (REAP)	EA	x	= \$	-
130320 Storm Water Sampling and Analysis Day	EA	x	= \$	-
130520 Temporary Hydraulic Mulch	SQYD	x	= \$	-
130550 Temporary Hydroseed	SQYD	x	= \$	-
130505 Move-In/Move-Out (Temporary Erosion Control)	EA	x	= \$	-
130640 Temporary Fiber Roll	LF	x	= \$	-
130900 Temporary Concrete Washout	LS	x	= \$	-
130710 Temporary Construction Entrance	EA	x	= \$	-
130610 Temporary Check Dam	LF	x	= \$	-
130620 Temporary Drainage Inlet Protection	EA	x	= \$	-
130730 Street Sweeping	LS	1	12,000.00	12,000
Subtotal NPDES				\$ 17,000

TOTAL ENVIRONMENTAL	\$ 17,000
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Supplemental Work for NPDES

066595 Water Pollution Control Maintenance Sharing*	LS	x	= \$	-
066596 Additional Water Pollution Control**	LS	x	= \$	-
066597 Storm Water Sampling and Analysis***	LS	x	= \$	-
XXXXXX Some Item	LS	x	= \$	-
Subtotal Supplemental Work for NPDES				\$ -

*Applies to all SWPPPs and those WPCPs with sediment control or soil stabilization BMPs.

**Applies to both SWPPPs and WPCP projects.

*** Applies only to project with SWPPPs.

SECTION 6: TRAFFIC ITEMS**6A - Traffic Electrical**

Item code	Unit	Quantity	Unit Price (\$)	Cost
860460 Lighting and Sign Illumination	LS	x	= \$	-
860201 Signal and Lighting	LS	1 x	300,000.00 = \$	300,000
860990 Closed Circuit Television System	LS	x	= \$	-
86110X Ramp Metering System (Location X)	LS	x	= \$	-
86070X Interconnection Conduit and Cable	LF/LS	x	= \$	-
5602XX Furnish Sign Structure (Type X)	LB	x	= \$	-
5602XX Install Sign Structure (Type X)	LB	x	= \$	-
498040 XX" CIDHC Pile (Sign Foundation)	LF	x	= \$	-
86080X Inductive Loop Detectors	EA/LS	x	= \$	-
8609XX Traffic Monitoring Station (Type X)	LS	x	= \$	-
15075X Remove Sign Structure	EA/LS	x	= \$	-
151581 Reconstruct Sign Structure	EA	x	= \$	-
152641 Modify Sign Structure	EA	x	= \$	-
860090 Maintain Existing Traffic Management System Eler	LS	x	= \$	-
86XXXX Fiber Optic Conduit System	LS	x	= \$	-
XXXXX Some Item	Unit	x	= \$	-
Subtotal Traffic Electrical				\$ 300,000

6B - Traffic Signing and Striping

Item code	Unit	Quantity	Unit Price (\$)	Cost
566011 Roadside Sign - One Post	EA	12 x	500.00 = \$	6,000
566012 Roadside Sign - Two Post	EA	x	= \$	-
5602XX Furnish Sign	SQFT	x	= \$	-
568016 Install Sign Panel on Existing Frame	SQFT	x	= \$	-
150711 Remove Painted Traffic Stripe	LF	6,559 x	1.50 = \$	9,839
141101 Remove Yellow Painted Traffic Stripe (Hazardous Waste)	LF	x	= \$	-
150712 Remove Painted Pavement Marking	SQFT	4,574 x	6.50 = \$	29,731
150742 Remove Roadside Sign	EA	x	= \$	-
152320 Reset Roadside Sign	EA	x	= \$	-
152390 Relocate Roadside Sign	EA	x	= \$	-
82010X Delineator (Class X)	EA	x	= \$	-
840502 Thermoplastic Traffic Stripe (Enhanced Wet Night)	LF	6,559 x	3.30 = \$	21,645
846012 Thermoplastic Crosswalk and Pavement Marking (E)	SQFT	4,530 x	11.00 = \$	49,830
120090 Construction Area Signs	LS	x	= \$	-
84XXXX Permanent Pavement Delineation	LS	x	= \$	-
Subtotal Traffic Signing and Striping				\$ 117,044

6C - Traffic Management Plan

Item code	Unit	Quantity	Unit Price (\$)	Cost
12865X Portable Changeable Message Signs	EA/LS	x	\$ 1,500 = \$	-
Subtotal Traffic Management Plan				\$ -

6C - Stage Construction and Traffic Handling

Item code	Unit	Quantity	Unit Price (\$)	Cost
120199 Traffic Plastic Drum	EA	x	= \$	-
12016X Channelizer (Type X)	EA	x	= \$	-
120120 Type III Barricade	EA	x	= \$	-
129100 Temporary Crash Cushion Module	EA	x	= \$	-
120100 Traffic Control System	LS	x	= \$	-
129110 Temporary Crash Cushion	EA	x	= \$	-
129000 Temporary Railing (Type K)	LF	x	= \$	-
120149 Temporary Pavement Marking (Paint)	SQFT	x	= \$	-
82010X Delineator (Class X)	EA	x	= \$	-
XXXXXX Some Item	Unit	x	= \$	-
Subtotal Stage Construction and Traffic Handling				\$ -

TOTAL TRAFFIC ITEMS	\$ 417,100
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SECTION 7: DETOURS

Includes constructing, maintaining, and removal

Item code	Unit	Quantity	Unit Price (\$)	Cost
190101 Roadway Excavation	CY	x	= \$	-
19801X Imported Borrow	CY/TON	x	= \$	-
390132 Hot Mix Asphalt (Type A)	TON	x	= \$	-
26020X Class 2 Aggregate Base	TON/CY	x	= \$	-
250401 Class 4 Aggregate Subbase	CY	x	= \$	-
130620 Temporary Drainage Inlet Protection	EA	x	= \$	-
129000 Temporary Railing (Type K)	LF	x	= \$	-
128601 Temporary Signal System	LS	x	= \$	-
120149 Temporary Pavement Marking (Paint)	SQFT	x	= \$	-
80010X Temporary Fence (Type X)	LF	x	= \$	-
XXXXXX Some Item	LS	x	= \$	-

* Includes constructing, maintaining, and removal

TOTAL DETOURS	\$	-
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SUBTOTAL SECTIONS 1 through 7	\$	441,600
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SECTION 8: MINOR ITEMS**8A - Americans with Disabilities Act Items**

ADA Items

1.0% \$ 4,416

8B - Bike Path Items

Bike Path Items

1.0% \$ 4,416

8C - Other Minor Items

Other Minor Items

8.0% \$ 35,328

Total of Section 1-7	\$	441,600	x	10.0%	= \$	44,160
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TOTAL MINOR ITEMS	\$	44,200
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SECTIONS 9: MOBILIZATION

Item code

999990

Total Section 1-8

\$	485,800	x	10%	= \$	-
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TOTAL MOBILIZATION	\$	-
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SECTION 10: SUPPLEMENTAL WORK

Item code	Unit	Quantity	Unit Price (\$)	Cost
066670 Payment Adjustments For Price Index Fluctuations	LS	x	= \$	-
066094 Value Analysis	LS	x	= \$	-
066070 Maintain Traffic	LS	1	x 5,000.00 = \$	5,000
066919 Dispute Resolution Board	LS	x	= \$	-
066921 Dispute Resolution Advisor	LS	x	= \$	-
066015 Federal Trainee Program	LS	x	= \$	-
066610 Partnering	LS	x	= \$	-
066204 Remove Rock and Debris	LS	x	= \$	-
066222 Locate Existing Crossover	LS	x	= \$	-
XXXXXX Some Item	Unit	x	= \$	-

Cost of NPDES Supplemental Work specified in Section 5D	= \$	-
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Total Section 1-8	\$	485,800	4%	= \$	19,432
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TOTAL SUPPLEMENTAL WORK	\$	24,500
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SECTION 11: STATE FURNISHED MATERIALS AND EXPENSES

Item code		Unit	Quantity		Unit Price (\$)		Cost
066105	Resident Engineers Office	LS		x		=	\$0
066063	Traffic Management Plan - Public Information	LS		x		=	\$0
066901	Water Expenses	LS		x		=	\$0
8609XX	Traffic Monitoring Station (X)	LS		x		=	\$0
066841	Traffic Controller Assembly	LS		x		=	\$0
066840	Traffic Signal Controller Assembly	LS	1	x	20,000.00	=	\$20,000
066062	COZEEP Contract	LS		x		=	\$0
066838	Reflective Numbers and Edge Sealer	LS		x		=	\$0
066065	Tow Truck Service Patrol	LS		x		=	\$0
066916	Annual Construction General Permit Fee	LS		x		=	\$0
XXXXXX	Some Item	Unit		x		=	\$0
Total Section 1-8		\$	485,800		2%	= \$	9,716

TOTAL STATE FURNISHED	\$29,800
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SECTION 12: TIME-RELATED OVERHEAD

Total of Roadway and Structures Contract Items excluding Mobilization \$485,800 (used to calculate TRO)
Total Construction Cost (excluding TRO and Contingency) \$540,100 (used to check if project is greater than \$5 million excluding contingency)

Estimated Time-Related Overhead (TRO) Percentage (0% to 10%) = **6%**

Item code		Unit	Quantity		Unit Price (\$)		Cost
070018	Time-Related Overhead	WD	25	X	\$0	=	\$0

TOTAL TIME-RELATED OVERHEAD	\$0
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Note: If the building portion of the project is greater than 50% of the total project cost, then TRO is not included.

SECTION 13: ROADWAY CONTINGENCY

Recommended Contingency: (Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Total Section 1-11 \$ 515,600 x **40%** = \$206,240

TOTAL CONTINGENCY	\$206,300
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II. STRUCTURE ITEMS

	<u>Bridge 1</u>		<u>Bridge 2</u>		
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Bridge Name	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Bridge Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot	\$150		\$150		\$0
COST OF EACH	\$0		\$0		\$0

	<u>Building 1</u>				
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Building Name	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Building Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot	\$300		\$0		\$0
COST OF EACH	\$0		\$0		\$0

TOTAL COST OF BRIDGES	\$0
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TOTAL COST OF BUILDINGS	\$0
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Structures Mobilization Percentage	10%	\$0
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Recommended Contingency: (Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Structures Contingency Percentage	10%	\$0
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TOTAL COST OF STRUCTURES	\$0
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Estimate Prepared By: _____
 XXXXXXXXXXXXXXXXXXXX ----- Division of Structures

 Date

III. RIGHT OF WAY

Fill in all of the available information from the Right of Way data sheet.

A)	A1)	Acquisition, including Excess Land Purchases, Damages & Goodwill, Fees	\$	0
	A2)	SB-1210	\$	0
B)		Acquisition of Offsite Mitigation	\$	0
C)	C1)	Utility Relocation (State Share)	\$	0
	C2)	Potholing (Design Phase)	\$	10,000
D)		Railroad Acquisition	\$	0
E)		Clearance / Demolition	\$	0
F)		Relocation Assistance (RAP and/or Last Resort Housing Costs)	\$	0
G)		Title and Escrow	\$	0
H)		Environmental Review	\$	0
I)		Condemnation Settlements <u>0%</u>	\$	0
J)		Design Appreciation Factor <u>0%</u>	\$	0
K)		Utility Relocation (Construction Cost)	\$	0

L)	TOTAL RIGHT OF WAY ESTIMATE	\$10,000
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M)	TOTAL R/W ESTIMATE: Escalated	\$10,000
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N)	RIGHT OF WAY SUPPORT	\$5,000
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Support Cost Estimate
Prepared By _____ Project Coordinator¹ _____ Phone _____

Utility Estimate Prepared
By _____ Utility Coordinator² _____ Phone _____

R/W Acquisition Estimate
Prepared By _____ Right of Way Estimator³ _____ Phone _____

Note: Items G & H applied to items A + B

¹ When estimate has Support Costs only² When estimate has Utility Relocation³ When R/W Acquisition is required

IV. SUPPORT COST ESTIMATE SUMMARY

Note: Use PRSM project data.

Total by FY		Escalated Support Cost for Estimate To Completion (ETC)				
		PA&ED	PS&E	RW	CON	Total \$
< 2010	Expended					
	ETC					
2011	Expended					
	ETC					
2012	Expended					
	ETC					
2013	Expended					
	ETC					
2014	Expended					
	ETC					
2015	Expended					
	ETC					
2016	Expended					
	ETC					
2017	Expended					
	ETC					
2018	Expended					
	ETC					
2019	Expended					
	ETC					
2020	Expended					
	ETC					
2021	Expended					
	ETC					
2022	Expended					
	ETC					
2023	Expended					
	ETC					
2024	Expended					
	ETC					
2025 >	Expended					
	ETC					
EAC (Expended + ETC)		\$0	\$0	\$0	\$0	\$0
Approved Budget (PRSM)						
Difference (Budget - EAC)		\$0	\$0	\$0	\$0	\$0
Support Ratio (EAC / Cap Cost)		0.0%	0.0%	0.0%	0.0%	0.0%

Total Capital Cost:	\$757,000
Total Capital Outlay Support Cost:	\$0
Overall Percent Support Cost:	0.00%

PRSM workplan hours/costs verified
against approved MWA:

Office Chief -

Date

Approved by:

Project Control -

Date

PROJECT

PLANNING COST ESTIMATE

EA: 01-LOCAL

EA: 01-LOCAL PID: EVCRCP

PID: EVCRCP

District-County-Route: 01-DN-EVCR

PM: 0.0 - 1.5

Type of Estimate : Programming

Program Code : k

Project Limits : Along Elk Valley Cross Road from Lake Earl Drive to Parkway Drive

Project Description: Roundabout at the intersection of US 199 and Elk Valley Cross Road.

Scope :

Alternative : Alternative C, Roundabout at US 199 and Elk Valley Cross Road

SUMMARY OF PROJECT COST ESTIMATE

	Current Year Cost	Escalated Cost
TOTAL ROADWAY COST	\$ 4,165,200	\$ 4,628,655
TOTAL STRUCTURES COST	\$ -	\$ -
SUBTOTAL CONSTRUCTION COST	\$ 4,165,200	\$ 4,628,655
TOTAL RIGHT OF WAY COST	\$ 21,325	\$ 21,325
TOTAL CAPITAL OUTLAY COSTS	\$ 4,187,000	\$ 4,650,000
PR/ED SUPPORT	\$ -	\$ -
PS&E SUPPORT	\$ -	\$ -
RIGHT OF WAY SUPPORT	\$ -	\$ -
CONSTRUCTION SUPPORT	\$ -	\$ -
TOTAL SUPPORT COST	\$ -	\$ -

TOTAL PROJECT COST	\$ 4,200,000	\$ 4,650,000
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If Project has been programmed enter Programmed Amount

Month / Year

Date of Estimate (Month/Year) 1 / 2020

Estimated Construction Start (Month/Year) 1 / 2024

Number of Working Days = 160

Estimated Mid-Point of Construction (Month/Year) 4 / 2024

Estimated Construction End (Month/Year) 10 / 2025

Number of Plant Establishment Days 261

Estimated Project Schedule

PID Approval	6/1/20247
PA/ED Approval	7/1/2022
PS&E	10/1/2023
RTL	12/1/2023
Begin Construction	4/1/2024

Reviewed by District O.E.

xx/xx/xxxx

(xxx) xxx-xxxx

Office Engineer

Date

Phone

Approved by Project Manager

xx/xx/xxxx

(xxx) xxx-xxxx

Project Manager

Date

Phone

I. ROADWAY ITEMS SUMMARY

Section		Cost
1	Earthwork	\$ 163,700
2	Pavement Structural Section	\$ 1,619,900
3	Drainage	\$ 30,000
4	Specialty Items	\$ 60,000
5	Environmental	\$ 45,000
6	Traffic Items	\$ 311,600
7	Detours	\$ -
8	Minor Items	\$ 223,100
9	Roadway Mobilization	\$ 245,400
10	Supplemental Work	\$ 98,200
11	State Furnished	\$ 59,100
12	Time-Related Overhead	\$ 147,200
13	Roadway Contingency	\$ 1,162,000
TOTAL ROADWAY ITEMS		\$ 4,165,200

Estimate Prepared By :

Name and Title	Date	Phone
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Estimate Reviewed By :

Name and Title	Date	Phone
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By signing this estimate you are attesting that you have discussed your project with all functional units and have incorporated all their comments or have discussed with them why they will not be incorporated.

SECTION 1: EARTHWORK

Item code		Unit	Quantity		Unit Price (\$)		Cost
190101	Roadway Excavation	CY	4,104	x	35.00	= \$	143,640
19010X	Roadway Excavation (Type X) ADL	CY		x		= \$	-
194001	Ditch Excavation	CY		x		= \$	-
19801X	Imported Borrow	CY/TON		x		= \$	-
192037	Structure Excavation (Retaining Wall)	CY		x		= \$	-
193013	Structure Backfill (Retaining Wall)	CY		x		= \$	-
193031	Pervious Backfill Material (Retaining Wall)	CY		x		= \$	-
16010X	Clearing & Grubbing	LS/ACRE	2	x	5,000.00	= \$	10,000
170101	Develop Water Supply	LS	1	x	10,000.00	= \$	10,000
19801X	Imported Borrow	CY/TON		x		= \$	-
210130	Duff	ACRE		x		= \$	-
XXXXXX	Some Item	Unit		x		= \$	-

TOTAL EARTHWORK SECTION ITEMS	\$	163,700
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SECTION 2: PAVEMENT STRUCTURAL SECTION

Item code		Unit	Quantity		Unit Price (\$)		Cost
401050	Jointed Plain Concrete Pavement	CY		x		= \$	-
400050	Continuously Reinforced Concrete Pavement	CY		x		= \$	-
404092	Seal Pavement Joint	LF		x		= \$	-
404093	Seal Isolation Joint	LF		x		= \$	-
413117	Seal Concrete Pavement Joint (Silicone)	LF		x		= \$	-
413118	Seal Pavement Joint (Asphalt Rubber)	LF		x		= \$	-
280010	Rapid Strength Concrete Base	CY		x		= \$	-
410095	Dowel Bar (Drill and Bond)	EA		x		= \$	-
390132	Hot Mix Asphalt (Type A)	TON	2,065	x	120.00	= \$	247,800
390137	Rubberized Hot Mix Asphalt (Gap Graded)	TON		x		= \$	-
39300X	Geosynthetic Pavement Interlayer (Type X)	SQYD		x		= \$	-
26020X	Class 2 Aggregate Base	TON/CY	2,317	x	80.00	= \$	185,360
290201	Asphalt Treated Permeable Base	CY		x		= \$	-
250401	Class 4 Aggregate Subbase	CY		x		= \$	-
374002	Asphaltic Emulsion (Fog Seal Coat)	TON		x		= \$	-
397005	Tack Coat	TON	3	x	2,000.00	= \$	6,000
377501	Slurry Seal	TON		x		= \$	-
3750XX	Screenings (Type XX)	TON		x		= \$	-
374492	Asphaltic Emulsion (Polymer Modified)	TON		x		= \$	-
370001	Sand Cover (Seal)	TON		x		= \$	-
731530	Minor Concrete (Textured Paving)	CY	59	x	615.00	= \$	36,285
731521	Minor Concrete (Sidewalk)	CY	89	x	750	= \$	66,750
731501	Minor Concrete (Curb)	LF		x		= \$	-
150771	Remove Asphalt Concrete Dike	LF		x		= \$	-
420201	Grind Existing Concrete Pavement	SQYD		x		= \$	-
150860	Remove Base and Surfacing	CY		x		= \$	-
390095	Replace Asphalt Concrete Surfacing	CY		x		= \$	-
15312X	Remove Concrete	LF/CY/LS		x		= \$	-
394090	Place Hot Mix Asphalt (Miscellaneous Area)	SQYD		x		= \$	-
153103	Cold Plane Asphalt Concrete Pavement	SQYD		x		= \$	-
39405X	Shoulder Rumble Strip (HMA, X-In Indentations)	STA		x		= \$	-
413113	Repair Spalled Joints, Polyester Grout	SQYD		x		= \$	-
420102	Groove Existing Concrete Pavement	SQYD		x		= \$	-
390136	Minor Hot Mix Asphalt	TON		x		= \$	-
394095	Roadside Paving (Miscellaneous Areas)	SQYD		x		= \$	-
731504	Minor Concrete (Curb and Gutter)	LF	3,316	x	325	= \$	1,077,700

TOTAL PAVEMENT STRUCTURAL SECTION ITEMS	\$	1,619,900
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SECTION 3: DRAINAGE

Item code		Unit	Quantity	Unit Price (\$)	Cost
15080X	Remove Culvert	EA/LF	x	= \$	-
150820	Modify Inlet	EA	x	= \$	-
155232	Sand Backfill	CY	x	= \$	-
15020X	Abandon Culvert	EA/LF	x	= \$	-
152430	Adjust Inlet	LF	x	= \$	-
155003	Cap Inlet	EA	x	= \$	-
510501	Minor Concrete	CY	x	= \$	-
510502	Minor Concrete (Minor Structure)	CY	x	= \$	-
5105XX	Minor Concrete (Type XX)	CY	x	= \$	-
620XXX	XX" Alternative Pipe Culvert (Type X)	LF	600	50.00 = \$	30,000
6411XX	XX" Plastic Pipe	LF	x	= \$	-
65XXXX	XX" Reinforced Concrete Pipe (Type X)	LF	x	= \$	-
6650XX	XX" Corrugated Steel Pipe (0.XXX" Thick)	LF	x	= \$	-
68XXXX	XX" Plastic Pipe (Edge Drain)	LF	x	= \$	-
69011X	XX" Corrugated Steel Pipe Downrain (0.XXX" Thi	LF	x	= \$	-
70321X	XX" Corrugated Steel Pipe Inlet (0.XXX" Thick)	LF	x	= \$	-
70XXXX	XX" Corrugated Steel Pipe Riser (0.XXX" Thick)	LF	x	= \$	-
7050XX	XX" Steel Flared End Section	EA	x	= \$	-
703233	Grated Line Drain	LF	x	= \$	-
72XXXX	Rock Slope Protection (Type and Method)	CY/TON	x	= \$	-
72901X	Rock Slope Protection Fabric (Class X)	SQYD	x	= \$	-
721420	Concrete (Ditch Lining)	CY	x	= \$	-
721430	Concrete (Channel Lining)	CY	x	= \$	-
750001	Miscellaneous Iron and Steel	LB	x	= \$	-
XXXXXX	Additional Drainage	LS	x	= \$	-

TOTAL DRAINAGE ITEMS	\$	30,000
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SECTION 4: SPECIALTY ITEMS

Item code		Unit	Quantity	Unit Price (\$)	Cost
080050	Progress Schedule (Critical Path Method)	LS	1	5,000.00 = \$	5,000
582001	Sound Wall (Masonry Block)	SQFT	x	= \$	-
510530	Minor Concrete (Wall)	CY	x	= \$	-
15325X	Remove Sound Wall	LF/LS	x	= \$	-
070030	Lead Compliance Plan	LS	1	5,000.00 = \$	5,000
141120	Treated Wood Waste	LB	x	= \$	-
153221	Remove Concrete Barrier	LF	x	= \$	-
150662	Remove Metal Beam Guard Railing	LF	x	= \$	-
150668	Remove Flared End Section	EA	x	= \$	-
8000XX	Chain Link Fence (Type XX)	LF	x	= \$	-
80XXXX	XX" Chain Link Gate (Type CL-6)	EA	x	= \$	-
832001	Metal Beam Guard Railing	LF	x	= \$	-
839301	Single Thrie Beam Barrier	LF	x	= \$	-
839310	Double Thrie Beam Barrier	LF	x	= \$	-
839521	Cable Railing	LF	x	= \$	-
8395XX	Terminal System (Type CAT)	EA	x	= \$	-
839585	Alternative Flared Terminal System	EA	x	= \$	-
839584	Alternative In-line Terminal System	EA	x	= \$	-
4906XX	CIDH Concrete Piling (Insert Diameter)	LF	x	= \$	-
839XXX	Crash Cushion (Insert Type)	EA	x	= \$	-
83XXXX	Concrete Barrier (Insert Type)	LF	x	= \$	-
520103	Bar Reinforced Steel (Retaining Wall)	LB	x	= \$	-
510060	Structural Concrete, Retaining Wall	CY	x	= \$	-
513553	Retaining Wall (Masonry Wall)	SQFT	x	= \$	-
511035	Architectural Treatment	LS	1	50,000.00 = \$	50,000
598001	Anti-Graffiti Coating	SQFT	x	= \$	-
203070	Rock Stain	SQFT	x	= \$	-
5136XX	Reinforced Concrete Crib Wall (Type X)	SQFT	x	= \$	-
83954X	Transition Railing (Type X)	EA	x	= \$	-
597601	Prepare and Stain Concrete	SQFT	x	= \$	-
839561	Rail Tensioning Assembly	EA	x	= \$	-
83958X	End Anchor Assembly (Type X)	EA	x	= \$	-
XXXXXX	Some Item	Unit	x	= \$	-

TOTAL SPECIALTY ITEMS	\$	60,000
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SECTION 5: ENVIRONMENTAL**5A - ENVIRONMENTAL MITIGATION**

Item code	Unit	Quantity	Unit Price (\$)	Cost
Biological Mitigation	LS	x	= \$	-
130670 Temporary Reinforced Silt Fence	LF	x	= \$	-
141000 Temporary Fence (Type ESA)	LF	x	= \$	-
<i>Subtotal Environmental Mitigation</i>				\$ -

5B - LANDSCAPE AND IRRIGATION

Item code	Unit	Quantity	Unit Price (\$)	Cost
20XXXX Highway Planting	LS	x	= \$	-
20XXXX Irrigation System	LS	x	= \$	-
204099 Plant Establishment Work	LS	1	x 10,000.00	= \$ 10,000
204101 Extend Plant Establishment Work	LS	x	= \$	-
20XXXX Follow-up Landscape Project	LS	x	= \$	-
150685 Remove Irrigation Facility	LS	x	= \$	-
20XXXX Maintain Existing (Irrigation or Planted Areas)	LS	x	= \$	-
206400 Check and Test Existing Irrigation Facilities	LS	x	= \$	-
21011X Imported Topsoil (X)	CY/TON	x	= \$	-
20XXXX Rock Blanket, Rock Mulch, DG, Gravel Mulch	SQFT/SQYD	x	= \$	-
200122 Weed Germination	SQYD	x	= \$	-
208304 Water Meter	EA	x	= \$	-
2087XX XX" Conduit (Use for Irrigation x-overs)	LF	x	= \$	-
20890X Extended Conduit (Use for Extension of Irrigation x-overs)	LF	x	= \$	-
<i>Subtotal Landscape and Irrigation</i>				\$ 10,000

5C - EROSION CONTROL

Item code	Unit	Quantity	Unit Price (\$)	Cost
210010 Move In/Move Out (Erosion Control)	EA	2	x 500	= \$ 1,000
210350 Fiber Rolls	LF	900	x 5	= \$ 4,500
210360 Compost Sock	LF	x	= \$	-
2102XX Rolled Erosion Control Product (X)	SQFT	x	= \$	-
21025X Bonded Fiber Matrix	SQFT/ACRE	20000	x 0.15	= \$ 3,000
210300 Hydromulch	SQFT	x	= \$	-
210420 Straw	SQFT	x	= \$	-
210430 Hydroseed	SQFT	x	= \$	-
210600 Compost	SQFT	x	= \$	-
210630 Incorporate Materials	SQFT	x	= \$	-
<i>Subtotal Erosion Control</i>				\$ 8,500

5D - NPDES

Item code	Unit	Quantity	Unit Price (\$)	Cost
130300 Prepare SWPPP	LS	1	x 10,000.00	= \$ 10,000
130200 Prepare WPCP	LS	x	= \$	-
130100 Job Site Management	LS	1	x 1,500.00	= \$ 1,500
130330 Storm Water Annual Report	EA	x	= \$	-
130310 Rain Event Action Plan (REAP)	EA	x	= \$	-
130320 Storm Water Sampling and Analysis Day	EA	x	= \$	-
130520 Temporary Hydraulic Mulch	SQYD	x	= \$	-
130550 Temporary Hydroseed	SQYD	x	= \$	-
130505 Move-In/Move-Out (Temporary Erosion Control)	EA	x	= \$	-
130640 Temporary Fiber Roll	LF	x	= \$	-
130900 Temporary Concrete Washout	LS	x	= \$	-
130710 Temporary Construction Entrance	EA	x	= \$	-
130610 Temporary Check Dam	LF	x	= \$	-
130620 Temporary Drainage Inlet Protection	EA	x	= \$	-
130730 Street Sweeping	LS	1	x 15,000.00	= \$ 15,000
<i>Subtotal NPDES</i>				\$ 26,500

TOTAL ENVIRONMENTAL	\$ 45,000
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Supplemental Work for NPDES

066595 Water Pollution Control Maintenance Sharing*	LS	x	100,000.00	= \$	-
066596 Additional Water Pollution Control**	LS	x	10,000.00	= \$	-
066597 Storm Water Sampling and Analysis***	LS	x	= \$	-	
XXXXXX Some Item	LS	x	= \$	-	
<i>Subtotal Supplemental Work for NPDES</i>				\$	-

*Applies to all SWPPPs and those WPCPs with sediment control or soil stabilization BMPs.

**Applies to both SWPPPs and WPCP projects.

*** Applies only to project with SWPPPs.

SECTION 6: TRAFFIC ITEMS**6A - Traffic Electrical**

Item code	Unit	Quantity	Unit Price (\$)	Cost
860460 Lighting and Sign Illumination	LS	x	= \$	-
860201 Signal and Lighting	LS	1 x	75,000.00 = \$	75,000
860990 Closed Circuit Television System	LS	x	= \$	-
86110X Ramp Metering System (Location X)	LS	x	= \$	-
86070X Interconnection Conduit and Cable	LF/LS	x	= \$	-
5602XX Furnish Sign Structure (Type X)	LB	x	= \$	-
5602XX Install Sign Structure (Type X)	LB	x	= \$	-
498040 XX" CIDHC Pile (Sign Foundation)	LF	x	= \$	-
86080X Inductive Loop Detectors	EA/LS	x	= \$	-
8609XX Traffic Monitoring Station (Type X)	LS	x	= \$	-
15075X Remove Sign Structure	EA/LS	x	= \$	-
151581 Reconstruct Sign Structure	EA	x	= \$	-
152641 Modify Sign Structure	EA	x	= \$	-
860090 Maintain Existing Traffic Management System Eler	LS	x	= \$	-
86XXXX Fiber Optic Conduit System	LS	x	= \$	-
XXXXX Some Item	Unit	x	= \$	-
Subtotal Traffic Electrical				\$ 75,000

6B - Traffic Signing and Striping

Item code	Unit	Quantity	Unit Price (\$)	Cost
566011 Roadside Sign - One Post	EA	1 x	10,000.00 = \$	10,000
566012 Roadside Sign - Two Post	EA	x	= \$	-
5602XX Furnish Sign	SQFT	x	= \$	-
568016 Install Sign Panel on Existing Frame	SQFT	x	= \$	-
150711 Remove Painted Traffic Stripe	LF	9,433 x	1.50 = \$	14,150
141101 Remove Yellow Painted Traffic Stripe (Hazardous Waste)	LF	x	= \$	-
150712 Remove Painted Pavement Marking	SQFT	4,354 x	6.50 = \$	28,301
150742 Remove Roadside Sign	EA	x	= \$	-
152320 Reset Roadside Sign	EA	x	= \$	-
152390 Relocate Roadside Sign	EA	x	= \$	-
82010X Delineator (Class X)	EA	x	= \$	-
840502 Thermoplastic Traffic Stripe (Enhanced Wet Night)	LF	11,000 x	3.30 = \$	36,300
846012 Thermoplastic Crosswalk and Pavement Marking (E)	SQFT	775 x	11.00 = \$	8,525
120090 Construction Area Signs	LS	x	= \$	-
84XXXX Permanent Pavement Delineation	LS	x	= \$	-
Subtotal Traffic Signing and Striping				\$ 97,276

6C - Traffic Management Plan

Item code	Unit	Quantity	Unit Price (\$)	Cost
12865X Portable Changeable Message Signs	EA/LS	7 x	\$ 1,500 = \$	10,500
Subtotal Traffic Management Plan				\$ 10,500

6C - Stage Construction and Traffic Handling

Item code	Unit	Quantity	Unit Price (\$)	Cost
120199 Traffic Plastic Drum	EA	x	100,000.00 = \$	-
12016X Channelizer (Type X)	EA	x	= \$	-
120120 Type III Barricade	EA	x	= \$	-
129100 Temporary Crash Cushion Module	EA	x	= \$	-
120100 Traffic Control System	LS	1 x	15,000.00 = \$	15,000
129110 Temporary Crash Cushion	EA	2 x	35,000.00 = \$	70,000
129000 Temporary Railing (Type K)	LF	1,250 x	35.00 = \$	43,750
120149 Temporary Pavement Marking (Paint)	SQFT	x	= \$	-
82010X Delineator (Class X)	EA	x	= \$	-
XXXXXX Some Item	Unit	x	= \$	-
Subtotal Stage Construction and Traffic Handling				\$ 128,750

TOTAL TRAFFIC ITEMS	\$ 311,600
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SECTION 7: DETOURS

Includes constructing, maintaining, and removal

Item code	Unit	Quantity	Unit Price (\$)	Cost
190101 Roadway Excavation	CY	x	= \$	-
19801X Imported Borrow	CY/TON	x	= \$	-
390132 Hot Mix Asphalt (Type A)	TON	x	= \$	-
26020X Class 2 Aggregate Base	TON/CY	x	= \$	-
250401 Class 4 Aggregate Subbase	CY	x	= \$	-
130620 Temporary Drainage Inlet Protection	EA	x	= \$	-
129000 Temporary Railing (Type K)	LF	x	= \$	-
128601 Temporary Signal System	LS	x	= \$	-
120149 Temporary Pavement Marking (Paint)	SQFT	x	= \$	-
80010X Temporary Fence (Type X)	LF	x	= \$	-
XXXXXX Some Item	LS	x	5,000,000 = \$	-

* Includes constructing, maintaining, and removal

TOTAL DETOURS	\$	-
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SUBTOTAL SECTIONS 1 through 7	\$	2,230,200
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SECTION 8: MINOR ITEMS**8A - Americans with Disabilities Act Items**

ADA Items

1.0% \$ 22,302

8B - Bike Path Items

Bike Path Items

1.0% \$ 22,302

8C - Other Minor Items

Other Minor Items

8.0% \$ 178,416

Total of Section 1-7	\$	2,230,200	x	10.0%	= \$	223,020
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TOTAL MINOR ITEMS	\$	223,100
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SECTIONS 9: MOBILIZATION

Item code

999990

Total Section 1-8

\$	2,453,300	x	10%	= \$	245,330
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TOTAL MOBILIZATION	\$	245,400
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SECTION 10: SUPPLEMENTAL WORK

Item code	Unit	Quantity	Unit Price (\$)	Cost
066670 Payment Adjustments For Price Index Fluctuations	LS	x	= \$	-
066094 Value Analysis	LS	x	= \$	-
066070 Maintain Traffic	LS	x	= \$	-
066919 Dispute Resolution Board	LS	x	25,000.00 = \$	-
066921 Dispute Resolution Advisor	LS	x	= \$	-
066015 Federal Trainee Program	LS	x	= \$	-
066610 Partnering	LS	x	= \$	-
066204 Remove Rock and Debris	LS	x	= \$	-
066222 Locate Existing Crossover	LS	x	= \$	-
XXXXXX Some Item	Unit	x	= \$	-

Cost of NPDES Supplemental Work specified in Section 5D	= \$	-
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Total Section 1-8	\$	2,453,300	4%	= \$	98,132
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TOTAL SUPPLEMENTAL WORK	\$	98,200
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SECTION 11: STATE FURNISHED MATERIALS AND EXPENSES

Item code		Unit	Quantity		Unit Price (\$)		Cost
066105	Resident Engineers Office	LS		x		=	\$0
066063	Traffic Management Plan - Public Information	LS	1	x	10,000.00	=	\$10,000
066901	Water Expenses	LS		x		=	\$0
8609XX	Traffic Monitoring Station (X)	LS		x		=	\$0
066841	Traffic Controller Assembly	LS		x		=	\$0
066840	Traffic Signal Controller Assembly	LS		x	7,000.00	=	\$0
066062	COZEEP Contract	LS		x		=	\$0
066838	Reflective Numbers and Edge Sealer	LS		x		=	\$0
066065	Tow Truck Service Patrol	LS		x		=	\$0
066916	Annual Construction General Permit Fee	LS		x		=	\$0
XXXXXX	Some Item	Unit		x		=	\$0
Total Section 1-8		\$	2,453,300	2%	=	\$	49,066

TOTAL STATE FURNISHED	\$59,100
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SECTION 12: TIME-RELATED OVERHEAD

Total of Roadway and Structures Contract Items excluding Mobilization	\$2,453,300 (used to calculate TRO)
Total Construction Cost (excluding TRO and Contingency)	\$2,856,000 (used to check if project is greater than \$5 million excluding contingency)

Estimated Time-Related Overhead (TRO) Percentage (0% to 10%) = **6%**

Item code		Unit	Quantity		Unit Price (\$)		Cost
070018	Time-Related Overhead	WD	160	X	\$920	=	\$147,200

TOTAL TIME-RELATED OVERHEAD	\$147,200
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Note: If the building portion of the project is greater than 50% of the total project cost, then TRO is not included.

SECTION 13: ROADWAY CONTINGENCY

Recommended Contingency: (Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Total Section 1-11	\$	2,905,000	x	40%	=	\$1,162,000
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TOTAL CONTINGENCY	\$1,162,000
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II. STRUCTURE ITEMS

	<u>Bridge 1</u>		<u>Bridge 2</u>		
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Bridge Name	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Bridge Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot	\$150		\$150		\$0
COST OF EACH	\$0		\$0		\$0

	<u>Building 1</u>				
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Building Name	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Building Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX
Cost Per Square Foot	\$300		\$0		\$0
COST OF EACH	\$0		\$0		\$0

TOTAL COST OF BRIDGES	\$0
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TOTAL COST OF BUILDINGS	\$0
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Structures Mobilization Percentage	10%	\$0
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Recommended Contingency: (Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Structures Contingency Percentage	10%	\$0
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TOTAL COST OF STRUCTURES	\$0
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Estimate Prepared By: _____
 XXXXXXXXXXXXXXXXXXXX ----- Division of Structures

 Date

III. RIGHT OF WAY

Fill in all of the available information from the Right of Way data sheet.

A)	A1)	Acquisition, including Excess Land Purchases, Damages & Goodwill, Fees	\$	1,325
	A2)	SB-1210	\$	0
B)		Acquisition of Offsite Mitigation	\$	0
C)	C1)	Utility Relocation (State Share)	\$	0
	C2)	Potholing (Design Phase)	\$	20,000
D)		Railroad Acquisition	\$	0
E)		Clearance / Demolition	\$	0
F)		Relocation Assistance (RAP and/or Last Resort Housing Costs)	\$	0
G)		Title and Escrow	\$	0
H)		Environmental Review	\$	0
I)		Condemnation Settlements <u>0%</u>	\$	0
J)		Design Appreciation Factor <u>0%</u>	\$	0
K)		Utility Relocation (Construction Cost)	\$	0

L)	TOTAL RIGHT OF WAY ESTIMATE	\$21,325
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M)	TOTAL R/W ESTIMATE: Escalated	\$21,325
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N)	RIGHT OF WAY SUPPORT	\$25,000
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Support Cost Estimate
Prepared By _____ Project Coordinator¹ _____ Phone _____

Utility Estimate Prepared
By _____ Utility Coordinator² _____ Phone _____

R/W Acquisition Estimate
Prepared By _____ Right of Way Estimator³ _____ Phone _____

Note: Items G & H applied to items A + B

¹ When estimate has Support Costs only² When estimate has Utility Relocation³ When R/W Acquisition is required

IV. SUPPORT COST ESTIMATE SUMMARY

Note: Use PRSM project data.

Total by FY		Escalated Support Cost for Estimate To Completion (ETC)				
		PA&ED	PS&E	RW	CON	Total \$
< 2010	Expended					
	ETC					
2011	Expended					
	ETC					
2012	Expended					
	ETC					
2013	Expended					
	ETC					
2014	Expended					
	ETC					
2015	Expended					
	ETC					
2016	Expended					
	ETC					
2017	Expended					
	ETC					
2018	Expended					
	ETC					
2019	Expended					
	ETC					
2020	Expended					
	ETC					
2021	Expended					
	ETC					
2022	Expended					
	ETC					
2023	Expended					
	ETC					
2024	Expended					
	ETC					
2025 >	Expended					
	ETC					
EAC (Expended + ETC)		\$0	\$0	\$0	\$0	\$0
Approved Budget (PRSM)						
Difference (Budget - EAC)		\$0	\$0	\$0	\$0	\$0
Support Ratio (EAC / Cap Cost)		0.0%	0.0%	0.0%	0.0%	0.0%

Total Capital Cost:	\$4,187,000
Total Capital Outlay Support Cost:	\$0
Overall Percent Support Cost:	0.00%

PRSM workplan hours/costs verified
against approved MWA:

Office Chief -

Date

Approved by:

Project Control -

Date

Attachment D

Environmental Constraints Overview Report

Environmental Constraints Overview Report

Elk Valley Cross Road Corridor Plan

Attention: Tamera Leighton, Executive Director, Del Norte Local Transportation Commission

From: Tim Chamberlain, Senior Environmental Planner, Dokken Engineering

Subject: Elk Valley Cross Road Multimodal Corridor Project

Date: February 10, 2020

Project Introduction

The Del Norte Local Transportation Commission (DNLTC) is evaluating Elk Valley Cross Road to determine potential transportation improvements along the corridor to improve safety, traffic and multimodal use. Elk Valley Cross Road is located in Del Norte County (see Figures 1 and 2). The Elk Valley Cross Road Corridor Plan is evaluating potential improvements that would improve the safety and multimodal use of Elk Valley Cross Road. Corridor improvements are expected to be proposed as individual project packages which may include adding shoulders, changing the roadway profile, improving sight distance, and realigning curves.

Elk Valley is a northwest/southeast roadway between US Highway 101 (US 101) and US Highway 199 (US 199). In the project area, Elk Valley Cross Road is a two-lane roadway between Elk Valley Road and Parkway Drive. Between Lake Earl Drive and Railroad Avenue Extension/Wonder Stump Road also has 8-foot paved shoulders. Numerous residents live off of Elk Valley Cross Road or attached side streets. The roadway is also used as a route from US-199 to US-101 north of Crescent City (Figure 3).

Need: Improvements along Elk Valley Cross Road are needed to address safety issues. The existing major intersections have a collision rate higher than the local, county and statewide averages for similar roadways. The existing corridor does not meet current design standards.

Purpose: The purpose of the Elk Valley Cross Road Corridor Plan is to provide conceptual engineering design solutions to improve safety for all users (motorists, bicyclists, and pedestrians) along Elk Valley Cross Road.

Other Goals and Objectives

- Provide a paved shoulder for safe bicycle and pedestrian use.
- Identify collision rates at intersections.
- Identify horizontal and vertical sight distance deficiencies along the existing corridor.
- Identify existing environmental constraints along the corridor.
- Identify existing Right of Way constraints along the corridor.

Deficiencies

The existing alignment was compared to the December 2018 version of the Caltrans Highway Design Manual (HDM). There are geometric deficiencies present along the Elk Valley Cross Road corridor. Many intersection roads do not offer the minimum corner sight distant required for the posted speed limit of 45 mph.

There are nonstandard shoulder width and non-motorized facility deficiencies along the current corridor between Wonder Stump Road and Parkway Drive. Improvements to be made will require paved shoulder widening to the 4' standard for bike and pedestrian traffic.

At the intersection of EVCR and US 101, the unsignalized at-grade intersection configuration with a median refuge serves as a nonstandard intersection between a multilane highway and two-lane rural connector. At the intersection of EVCR and US 199, the unsignalized at-grade intersection configuration was modified between 2005 and 2009 to reduce WB US 199 traffic from two lanes down to one before entering the intersection. This modification has not yielded beneficial results with the existing collision data. This intersection lacks the corner sight distance needed per the current HDM, along with stopping sight distance for traffic traveling along the major route.



\\1836-11thSt\Bridges\Cultural\F2 Loc 10-12-10.mxd

Source: ESRI World Street Maps Online; Dokken Engineering 5/7/2019; Created By: brianm

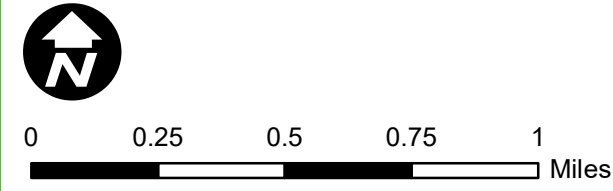
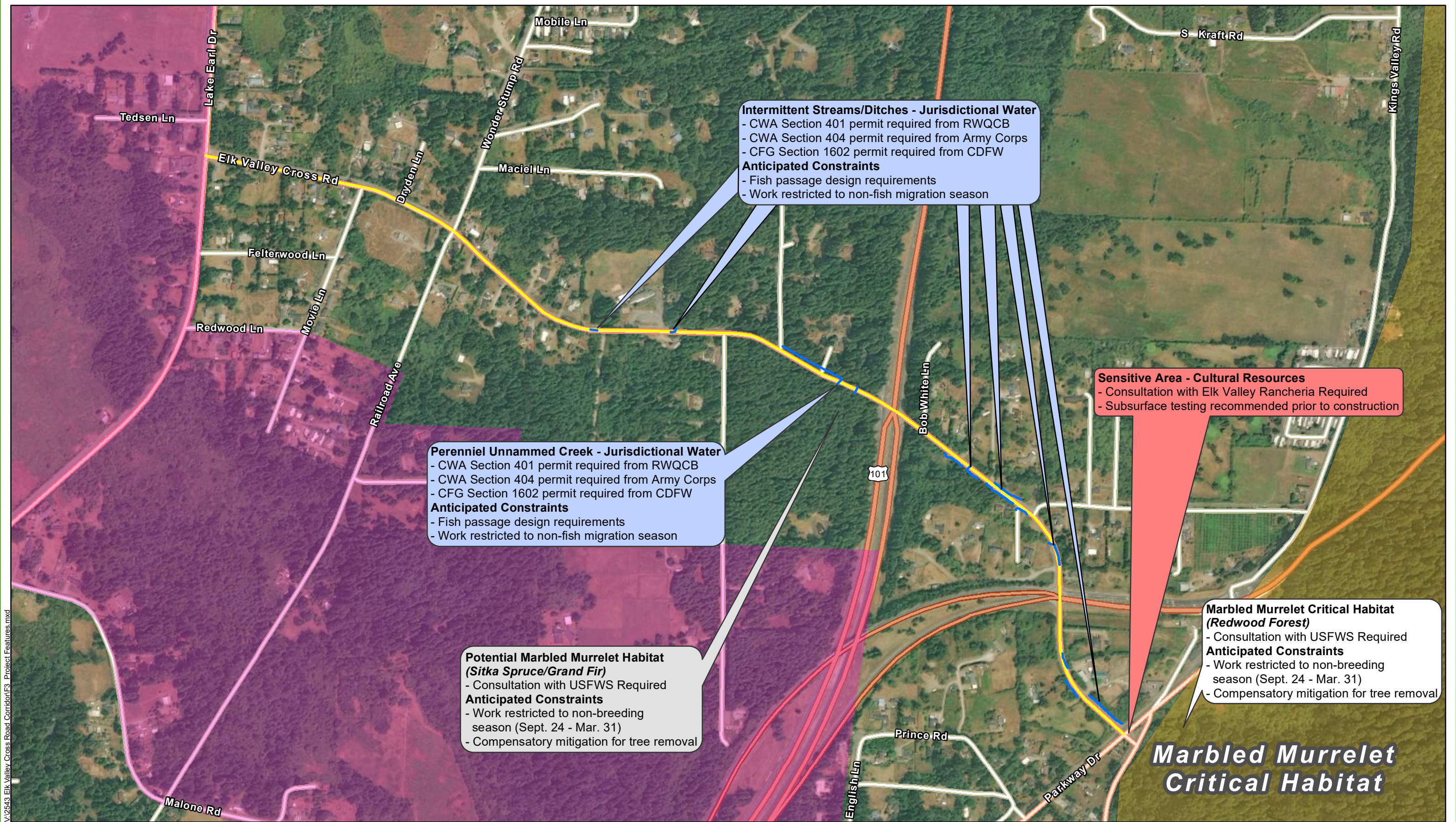


FIGURE 2
Project Location

Elk Valley Cross Road
Del Norte County, California



V:\2543 Elk Valley Cross Road Corridor\F3 Project Features.mxd

Source: ESRI Maps Online; Dokken Engineering 5/7/2019; Created By: brianm



1 inch = 600 feet

0 300 600 900 1,200 1,500 Feet

- | | |
|--------------------------------------|-------------------------------|
| Stream Channels and Roadside Ditches | California Coastal Commission |
| Elk Valley Cross Road Corridor | Critical Habitat |

Figure 3
Project Features

Elk Valley Cross Road
Del Norte County, California

ALTERNATIVES

Alternatives have been developed for the Corridor Plan that include lane and shoulder widening, intersection improvements, sight distance improvements, re-striping and no-build. The following description of the alternatives gives location, types and limits of the improvements. All alternatives increase the shoulder width and the distance from the edge of traveled way to any fixed object to improve the Clear Recovery Zone (CRZ) area.

Segments have been developed which are described as follows:

- Segment 1 - Lake Earl Drive to Wonder Stump Road (1,677 ft)
- Segment 2 – Wonder Stump Road to US 101 (3,340 ft)
- Segment 3 – US 101 to Parkway Drive (2,720 ft)
- Intersection of Movie Lane/Wonder Stump Road with EVCR
- Intersection of Cunningham Lane with EVCR
- Intersection of EVCR and US 101
- Intersection of EVCR and US 199

Alternatives have been developed for both roadway segments and intersections separately to differentiate the improvement options available for the EVCR. Intersections involving the State Right of Way (US 101 and US 199) will require approval by District 1.

Roadway Segment 1 Lake Earl Drive to Wonder Stump Road (1,677 ft) Alternatives

Alternative A, **Roadway Segment 1 Improvement Alternative A: Shoulder widening** would not require any changes. The existing shoulder widths of 6' to 8' satisfy current design standards making this segment exempt from improvements under Alternative A.

Alternative B, **Roadway Segment 1 Improvement Alternative B: Two-Way Left Turn Lane** will begin restriping the roadway west of the Movie Lane intersection. Additional widening would need to occur to accommodate the new 12' left turn lane for westbound traffic turning onto Movie Lane. Continue widening for the left turn lane for eastbound traffic turning onto Wonder Stump Road. Widening would require tree and vegetation removal, utility pole relocations and potential fence line relocations to establish a 60' Right of Way width. Road connections would be reconstructed to connect to the widened roadway.

Roadway Segment 2 Wonder Stump Road to US 101 (3,340 ft) Alternatives

Roadway Segment 2 Improvement Alternative A: Shoulder widening construct standard 4' shoulder widths on both sides of the EVCR from Wonder Stump Road to US 101. The existing roadside utilities and drainage ditch will need to be relocated to construct the standard shoulder widths. A 60-foot wide Right of Way corridor would be secured for lengths that have deficient width to contain the standard lane, shoulders, drainage ditches and utility pole relocations. The 4' paved shoulder would be striped and signed as a Class 2 bike lane.

Roadway Segment 2 Improvement Alternative B: Two-Way Left Turn Lane will continue the widening and restriping of EVCR from Wonder Stump Road to the exit to Florence Keller Regional Park before US 101. This length of two-way left turn lane would increase the intersection sight distance of all connecting roads along this segment, as well as allow for safer movement of vehicles to and from the EVCR corridor. This length would require utility pole relocations, right of way acquisitions, ditch excavation and vegetation removal.

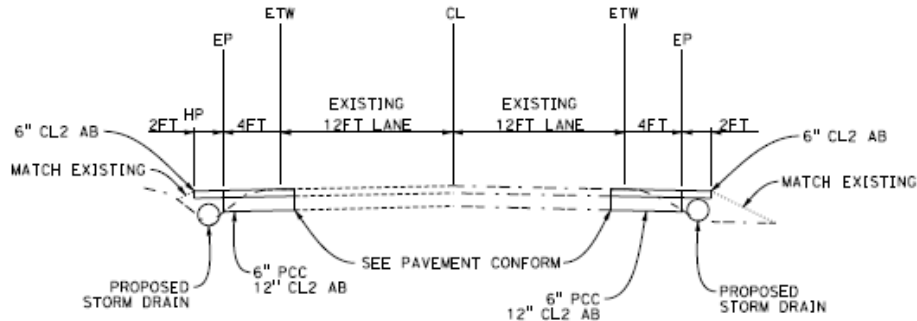


Figure 4 Alternative A, Roadway Segment 2

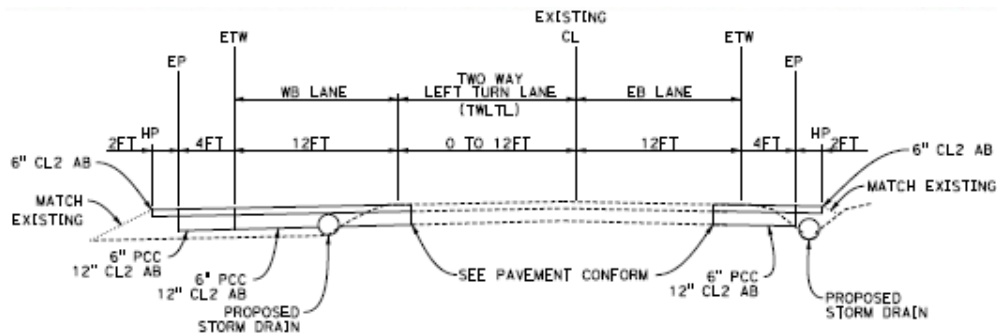


Figure 5 Alternative B, Roadway Segment 2

Roadway Segment 3 US 101 to Parkway Drive (2,720 ft) Alternatives

Roadway Segment 3 Improvement Alternative A: Shoulder widening construct standard 4' shoulder widths on both sides of the EVCR from US 101 to US 199. Elk Valley Cross Road from US 199 to Parkway Drive already has sufficient shoulder width and therefore does not need further improvement with this alternative. The 4-foot paved shoulders would be striped and signed as a Class 2 bike lane.

The following alternatives address improvements at specific intersections along the corridor that have been identified as needing improvement.

Intersection Improvement: Movie Lane & Wonder Stump Road and EVCR Turn Pocket

The Movie Lane and Wonder Stump Road turn pocket would widen the EVCR corridor from Movie Lane to east of Wonder Stump Road as shown on the exhibit. Restriping would be necessary to allow for a left merge lane for traffic merging onto EVCR moving westbound from Movie Lane, and eastbound from Wonder Stump Road.

Intersection Improvement: Cunningham Lane Turn Pocket

The Cunningham Lane turn pocket would widen the EVCR corridor from Sunset High School to the Park Exit Road connection. This length of widening will require right of way acquisition, tree removal and utility pole relocations. A dedicated turning movement for westbound EVCR traffic turning into Cunningham Lane is provided with the turn pocket. The widening west of the intersection allows for a safety refuge for Cunningham Lane traffic turning westbound onto EVCR.

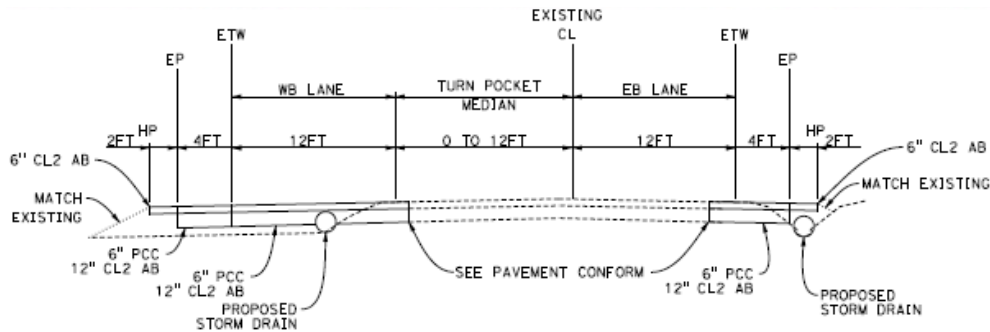


Figure 6 Cunningham Lane Turn Pocket, Intersection Improvement

Intersection Improvement: US 101 and EVCR Alternative A, Signing and Striping Improvements

The existing intersection of US 101 and EVCR is a nonstandard at-grade intersection configuration which involves a refuge area in the median of the US 101 traffic. Proposed signing and striping to improve the median refuge area by delineating the refuge space available to both directions of traffic. Signing will assist the drivers in understanding traffic flow patterns of this configuration; only one vehicle space is available in the median refuge for each direction of traffic. EVCR traffic must yield to major road traffic and median refuge traffic. This alternative is proposed to improve the traffic pattern in the median refuge area.

Intersection Improvement: US 101 and EVCR Alternative B, Restricted Crossing U-Turn (RCUT)

The restricted Crossing U-Turn configuration at the intersection of US 101 and EVCR will require signing, striping, early lane reduction of the northbound US 101 traffic, late lane addition of the southbound US 101 traffic, and additional median paving for the separated U-turn crossing locations. This alternative is based on FHWA design standards.

Restricted Crossing U-Turn (RCUT)/Superstreet Intersection – RCUT is an intersection design to improve safety and operations while not changing any of the movements possible from the major road. Drivers stopped on Elk Valley Cross Road (EVCR) waiting to cross or turn left onto US 101 would not have to navigate an intersection of two directions of traffic traveling at high speeds along US 101. Through and left turn EVCR traffic makes a right turn onto US 101, followed by a U-TURN to continue in the desired direction. The RCUT is used as an alternative to signalization and would maintain US 101 as an unsignalized expressway/major highway. The RCUT intersection configuration will reduce the vehicle to vehicle conflict points and reduce the potential conflict severity (reduces the number of potential broadside impact conflict points). The RCUT can support multimodal goals with bicycle crossings that are provided with bike lanes and bike lane buffers with a refuge island in the median to provide through and left turn movements for the bikes.

Intersection Improvement: US 101 and EVCR Alternative C, US 101 Single Lane Through Intersection, Signing and Striping Improvements

This alternative proposes to construct a 160 ft diameter inscribed circle, single lane roundabout located at the intersection of US 101 and EVCR. The roundabout would require updated intersection lighting and approach signing on both the EVCR and US 101 approaches. The roundabout may include a crosswalk for safe multimodal travel. This alternative would allow for yield controlled separated right turning movement from northbound US 101 to eastbound EVCR which includes a high volume of traffic generated from the

connection between westbound US 199 and northbound US 101. A roundabout could handle the future traffic volume growth on US 101. The design speed for the roundabout would be per current guidelines (20 mph) and approaching roadway geometrics adjusted to reduce the approaching vehicle speeds before reaching the entrance yield line.

Intersection Improvement: US 101 and EVCR Alternative D, Roundabout

This alternative proposes to construct a 160 ft diameter inscribed circle, single lane roundabout located at the intersection of US 101 and EVCR. The roundabout would require updated intersection lighting and approach signing on both the EVCR and US 101 approaches. The roundabout may include a crosswalk for safe multimodal travel. This alternative would allow for yield controlled separated right turning movement from northbound US 101 to eastbound EVCR which includes a high volume of traffic generated from the connection between westbound US 199 and northbound US 101.

Intersection Improvement: US 199 and EVCR Alternative A, Signing, Striping and Glare Reduction

This alternative proposes to clear the Clear Recovery Zone (CRZ) within the corner sight distance length for the westbound EVCR traffic looking west at the eastbound US 199 on-ramp. The existing corner sight distance is obstructed by the “Do Not Enter” ramp signs, the tall grass length, and tree limbs. The additional clearing proposed for corner sight distance is for the design speed of the eastbound US 199 ramp of 45 mph.

To further implement the existing advisory 45mph speed limit, a speed radar feedback has been installed. Additional efforts to reduce traffic speed on this ramp include adding a flashing beacon to the “Cross Traffic Ahead” sign and implementing the Speed Reduction Markings as supported by Section 3B.22 of the MUTCD. Speed reduction markings (see figure below) are transverse markings that are placed on the roadway within a lane, perpendicular to the lane lines, in a pattern of progressively reduced spacing to give drivers the impression that their speed is increasing. These markings might be placed in advance of an unexpectedly severe horizontal or vertical curve or other roadway feature where drivers need to decelerate prior to reaching the feature and where the desired reduction in speeds has not been achieved by the installation of warning signs and/or other traffic control devices. Del Norte County performed a speed survey for northbound US 199 vehicles on March 26 at the intersection. The results indicate that the 85th percentile speed observed that day for 100 vehicles was 58 mph, which is above the posted 55 mph and the advisory 45 mph.

Figure 3B-28. Example of the Application of Speed Reduction Markings

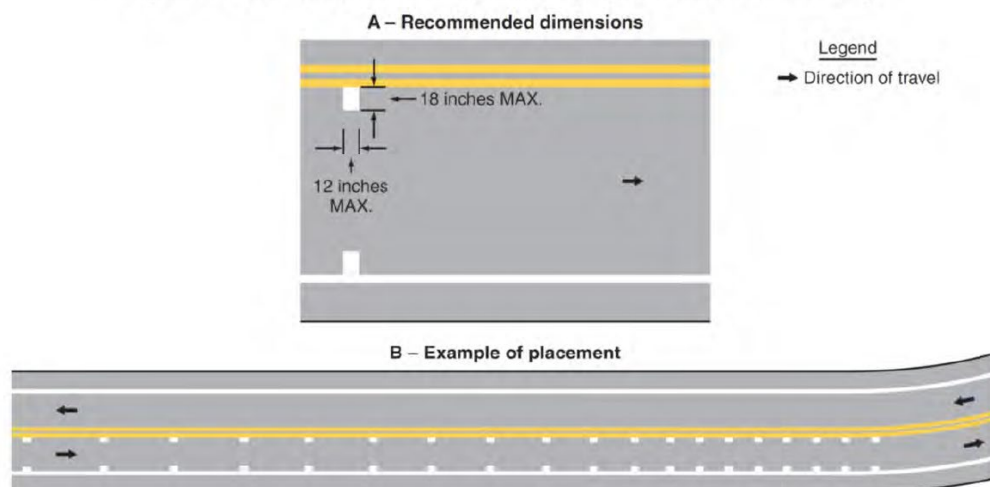


Figure 1 Speed Reduction Striping per MUTCD Fig 3B-28

Other additional improvements include yield striping on the US 199 to US 101 turn movement which is serves as a connection between both routes for traffic traveling from westbound US 199 to northbound US 101. This yield striping will ensure that the connecting traffic is acknowledging and yielding to the intersection traffic and will prevent the broadside and sideswipe collisions for this short merge distance.

Intersection Improvement: US 199 and EVCR Alternative B, Traffic Signal

This improvement would require the installation of traffic signals at all four branches of the four-way intersection, as well as restriping and resigning at the approaches of each roadway.

Signals offer the maximum control at intersections and the primary function is to assign right-of-way to conflicting movements. Low traffic counts suggest no objectionable backup would occur at any of the intersecting branches. This alternative allows for the minor movements, such as EVCR local traffic crossing the US 199 route, to navigate through the intersection with right of way if the traveling public complies to the signal. However, as described in the Table 1 below, adding a traffic signal may increase collision rates at this intersection. This alternative was analyzed to provide a comparison of a more traditional intersection configuration to that of a roundabout.

Intersection Improvement: US 199 and EVCR Alternative C, Roundabout

This alternative proposes to construct a 150 ft diameter inscribed circle roundabout located at the intersection of US 199 and EVCR. The roundabout would require additional Right of Way and updated intersection lighting and approach signing on both the EVCR and US 199 approaches. The roundabout may include a crosswalk on one approach for safe multimodal travel. The nearby private driveways would be modified to conform to the new road geometrics. This alternative would allow for yield controlled separated right turning movement from westbound US 199 to westbound EVCR which includes a high volume of traffic generated from the connection between westbound US 199 and northbound US 101. A roundabout could handle the future traffic volume growth on US 199. The design speed of the roundabout would be 20 mph. The comparison of traffic control options at EVCR and US 199 is described below.

Comparison of Traffic Control Options at Elk Valley Cross Road / US 199 – Impacts on Traffic Safety

Traffic safety at the key intersection of Elk Valley Cross Road and US 199 would be impacted by changes in the traffic controls. The table below presents an analysis of the existing controls (Stop signs on the Elk Valley Cross Road approaches only) in comparison with a traffic signal and with a roundabout. Key results are as follows:

- Over the most recent 10-year period, there were a total of 21 crashes at or within 200' of the intersection, of which 11 resulted in injuries and the remaining 10 resulted in property damage only. This corresponds to a rate of 1.56 total crashes per Million Vehicle Movements (MVM) and 0.82 injury or fatal crashes per MVM. In comparison with statewide averages for four-legged intersections in rural areas with side-street Stop controls, the observed rates at this location are 711 percent above statewide average for total crashes, and 811 percent above the statewide average for injury/fatal crashes.
- The California statewide crash rate data indicates that conversion to a traffic signal would increase the expected total crash rate by 164 percent and increase the injury/fatal crash rate by 286 percent. Crash rates would therefore increase significantly if a traffic signal is installed at the intersection.
- A detailed analysis of crash data for modern U.S. roundabouts yields an estimation equation, as documented in the National Cooperative Highway Research Program's Report 672: Roundabouts – An Informational Guide. Entering the geometrics and volumes for a roundabout at the subject

location, the expected annual crashes would be substantially lower than today, for both total crashes and for injury/fatal crashes.

- As shown in the bottom portion of the table, conversion to a **Traffic Signal** control would increase the expected number of crashes over a 10-year period by 34, of which 32 would be injury or fatal crashes.
- Conversion to a **Roundabout** control would reduce the number of crashes from that expected under the current control by 16 total crashes, of which 10 would be injury or fatal crashes.

This analysis clearly depicts the traffic safety benefits of a roundabout, as well as the negative safety impacts of a traffic signal. From a traffic safety perspective, a roundabout would be the optimal modification to this intersection to address the poor existing traffic safety condition.

Table 1 US 199 and EVCR Comparison

Elk Valley Cross Rd/State Route 199 Traffic Control Options -- Safety Impacts		
Annual Average Daily Traffic	3680	
Annual Million Vehicle Movements	1.34	
	Crashes	
	Total	Injury or Fatal
Existing (Over 10 Years)	21	11
Crash Rate (Per Million Vehicle Movements)	1.56	0.82
Statewide Avg. for Rural 4-Leg Intx with Side-Street Stop (1)	0.22	0.10
Ratio of Observed to Statewide Average	7.11	8.11
Annual Expected Crashes		
Existing Side-Street Stop	2.10	1.10
Traffic Signal (1)	5.54	4.25
Roundabout (2)	0.5	0.10
Impact of Traffic Control Change		
<u>Convert to Traffic Signal</u>		
Change in Crash Rate	164%	286%
Change in Crashes Over 10 Years	34	32
<u>Convert to Roundabout</u>		
Change in Crash Rate	-75%	-91%
Change in Crashes Over 10 Years	-16	-10
Source 1: 2015 Collision Data on California State Highways (Caltrans).		
Source 2: NCHRP Report 672: Roundabouts - An Informational Guide		
Source: LSC Transportation Consultants, Inc.		
2018 EVCR Crash Tables.xlsx		

Alternative 7: No-Build Alternative

The No-Build Alternative proposes to maintain the existing configuration of Elk Valley Cross Road in its current configuration. However, this alternative does not allow Elk Valley Cross Road to comply with standard shoulder widths, stopping sight distances, intersection configuration or multimodal safety standards. The crash rates along this corridor are above local, County and State averages for the given classification and volume of traffic. The No-Build option would not address any issues or concerns with the safety of this transportation facility.

Supplemental: 60-foot wide Corridor Right of Way

In the event that funding for right of way is secured, an estimate to acquire the 60-foot wide Right of Way along Elk Valley Cross Road from Lake Earl Drive to Parkway Drive in all areas not already secured to the 60-foot width was estimated. Estimated square footages and estimated costs for parcels requiring additional right of way can be found in Attachment E. Based on preliminary right of way record search, it is estimated an additional 109,505 SQFT at an estimated cost of \$4 per square foot would cost approximately \$440,000.

This estimate is based on available right of way records for existing roadway easements as recorded in the County Recorder's office. Preliminary Title Reports were not generated for this Corridor, so there is the possibility that certain easements along Elk Valley Cross Road are not shown on the maps and records of surveys gathered for this effort.

Access to and from all existing parcels is proposed to be maintained for drivers traveling in either direction along the roadway.

ENVIRONMENTAL TECHNICAL SUMMARIES

Land Use

As designated in the Del Norte County General Plan Land Use Map, the area between Parkway Drive and Lake Earl Drive, the land uses surrounding Elk Valley Cross Road in the project area include the following: Resource Conservation Area, Rural Residential, Timberland, Agriculture Prime, Public Lands, and Rural Neighborhood.

Future transportation improvement projects are expected to require varying amounts of right-of-way acquisition and conversion to a transportation land-use, these conversions are consistent with the Del Norte County General Plan goal to provide a safe and adequate transportation system throughout the region. Acquisitions would be expected to be predominantly small slivers directly adjacent to the existing road right-of-way. The proposed changes in land use designation would not be substantial in terms of overall direction of the General Plans and is anticipated to only be a minor environmental impact. The right-of-way acquisition would not result in the displacement or relocation of any residents.

The project is also included in the list of Long Term Projects (11-20 years) of the Del Norte County 2019 Regional Transportation Plan, and local general plans. Consistency with state, regional, and local plans will be included and discussed further in the Land Use portion of the environmental document.

Growth

Each of the build alternatives are designed to improve roadway safety and traffic operations along the EVCR corridor and would not cause growth as a result of project implementation. In addition, the proposed improvements would be in a semi-rural area, therefore the additional capacity would not encourage future growth. No impacts to growth are anticipated.

Farmlands/Timberlands

According to the National Resources Conservation Service (NRCS), the entire roadway is located within soils designated as Prime Farmland if irrigated. No Williamson Act Contract lands were identified adjacent to EVCR, or within Del Norte County.

Community Impacts

As the project will not be capacity increasing, there would be no community impacts in terms of substantive changes in access and the transportation network, changes in visual environment, increases in noise, and housing displacements. There is the potential for some nuisance noise impacts during construction

Section 4(f) Resources

A preliminary review of the project area identified one Section 4(f) resource that could be affected by the proposed project. The Florence Keller Regional Park is adjacent to the southwestern corner of the intersection of EVCR and US 101 along approximately 1,100 feet of the project. The proposed project is anticipated to impact approximately 11,000 square feet (1/4 acre) of Florence Keller Regional Park. Considering the 26-acre (1,136,000 square feet) size of the Park, project related impacts would have little to no effect on the function of the park and, if impacts did occur, they would be anticipated to result in a *de minimus* impact to this Section 4(f) resource.

If other sensitive cultural resources are located during future investigations, evaluation of these resources may be necessary to determine if they are eligible for inclusion on the NRHP. If the sites are determined to be eligible, a Section 4(f) evaluation of these properties will also be necessary.

Traffic and Operations Analysis

An analysis of existing traffic conditions and operations analysis for future conditions has been prepared as part of the preliminary engineering effort. This analysis includes data review from prior studies and as well as State Wide Integrated Traffic Records Systems (SWITRS). Data collection has been done to determine an existing baseline condition including existing levels-of-service (LOS) volume to capacity ratios, average delay and queuing. Using the baseline as a comparison, traffic forecast volumes will be modeled for an opening day as well as the design year 2030. The assumptions, methodologies, and findings of the traffic forecast results will be used to prepare a Traffic Operational Analysis for the existing condition, the opening day condition, as well as the design year condition for each of the build alternatives and compared to the conditions modeled for the No-Build Alternative. The final report would include recommendations for design changes (if necessary) based on the results of the traffic operations analysis.

Visual/Aesthetics

Depending on the modifications proposed for EVCR, there would be negligible to minor changes to the views of the surrounding area. The roadway is visible to residents and users of the roadway. The addition of shoulders to the roadway would not change the overall visual characteristic of the roadway, and the proposed changes would likely result in no further analysis beyond the Visual Impact Assessment Questionnaire. However, a change in elevation profile may require a higher level document such as a Visual Impact Assessment. Other minor changes could occur if any trees that are adjacent to the existing roadway were removed. Although these types of impacts are expected to be minor, specific impacts by project should be evaluated individually to confirm that no substantial impacts would occur.

Cultural Resources

As part of this environmental constraints overview, a cultural resources records search was obtained from the Northwestern Information Center (NWIC) at the Sonoma State University on October 3, 2016. The record search revealed no previously recorded resources within the corridor, as well as two previously recorded resources adjacent to the corridor. The previously recorded resources adjacent to the corridor is the Crescent City Plank and Turnpike Road (P-08-0469), which roughly followed the current alignment of Elk Valley Road and is identified as California Historical Landmark #643. The other resources include the old school property (P-08-0366) and the Native American ceremonial site (C-33) located on the east side of Elk Valley Road, approximately 120 feet south of the intersection of EVCR and Parkway Drive. In conjunction with this search, a letter requesting a search of the Sacred Land File at Native American Heritage Commission was obtained revealing that Native American sites were found on the Sacred Land File (location is confidential).

The project has little potential to impact the Crescent City Plank and Turnpike Road but could have moderate potential to impact known and unknown prehistoric archaeological resources. The potential of effect on these resources depends on the type of changes that will occur to EVCR. Based on current knowledge of resources within the area, it is unlikely the project will impact prehistoric cultural resources; however, additional resource investigation and testing will be required on a project by project basis to ensure that the sensitive cultural materials would be identified and avoided wherever possible.

In order to ensure that all cultural resources in the project area are identified and all potential impacts to those resources are evaluated, full archaeological and historic resource surveys and reports will be prepared for each future project. Identification of an Area of Potential Effects, additional background research, Native American Consultation, and a pedestrian survey of the project by a professionally qualified staff would be part of these technical studies. Additional surveys and subsurface testing may be necessary and could include Extended Phase 1 or Phase 2 archaeological investigations.

Consistent with Caltrans' policy, the County intends to consider avoidance of sensitive cultural resources during the preliminary environmental evaluations of any project. After avoidance alternatives are considered and an Area of Potential Effects has been determined, each cultural resource will be evaluated to determine if it is eligible for inclusion in the National Register of Historic Places. Any eligible resources that would be impacted by project construction will require a Finding of Effect Report documenting what impacts are expected and determining if those impacts would be considered adverse. Consultation with SHPO would be required and if impacts are determined to be adverse, a Memorandum of Agreement would be prepared to minimize those adverse effects to the cultural resource in compliance with Section 106 of the National Historic Preservation Act.

Hydrology and Floodplain

No floodplains identified on FEMA's floodplain maps occur within the proposed study. As a result, future project are not expected to encroach into any floodplain.

Water Quality and Storm Water Runoff

Most of EVCR is flanked by drainage ditches that convey storm water runoff either to the unnamed creeks that cross at Florence Keller Regional Park, east of Cunningham Lane. This creek flows into Jordan Creek, which flows north and empties into Lake Earl. Elk Creek flows south, emptying into the Pacific Ocean.

Future projects are expected to have increases in impervious surfaces which would increase stormwater run-off from the roadway. Drainage improvements may need to be incorporated into the proposed design as necessary to control additional runoff, and further investigation would be necessary to determine if the existing flood control facilities would be adequate for diverting the extra runoff. With the appropriate storm

water design features incorporated, any additional runoff created by the improvements is not expected to exceed the facility's capacity.

Future projects over 1 acre would be required to comply with the National Pollutant Discharge Elimination System (NPDES) General Permit with BMPs as required by the County and the Regional Water Quality Control Board to minimize water erosion of exposed soils and resultant sediment and surface contaminant loading into the storm drain system and downstream water bodies. As part of the NPDES General Permit, a SWPPP would be prepared. Consequently, the proposed project is not expected to violate any water quality or waste discharge standard, in this regard.

Using the Caltrans Highway Design Manual as a guide, storm water management strategies would be incorporated. Construction site BMPs would also be implemented for temporary construction impacts. A more thorough discussion of water quality and associated BMPs will be provided in a Water Quality Study and will be included in the environmental document.

Geology, Soils, Seismic, and Topography

The proposed project would improve the safety of the existing EVCR and would be designed to be consistent with Caltrans and federal guidelines for safety and design standards. However, the overall change to the roadway and depth of excavation is expected to be minimal. Should more substantial earthwork or structures be required for a future project (retaining walls or drainage culverts) a Preliminary Geotechnical Report would be prepared for this project. The report would consist of archival research of pre-existing data, field reconnaissance, and preliminary analysis and recommendations. The study would evaluate existing topography, site geology, subsurface soil conditions, groundwater, seismicity, and the potential for impacts as a result of this project's ground disturbing activities.

Paleontology

The project area is underlain by the Quaternary-aged Battery Formation. The Battery formation is a thin marine terrace and is known to contain invertebrate fossils.

Future projects are expected to have a relatively small depth of excavation to complete the roadway improvements. If more substantial earthwork is necessary for a future project, a Paleontological Identification Report may be necessary to evaluate if paleontological monitoring would be recommended during construction.

Hazardous Waste/Materials

Future project will require a Phase I Hazardous Waste Initial Site Assessment in order to assess the potential for hazardous waste or other hazardous materials in the study area. The report will include an evaluation of the study area history through review of available reports and historic maps/aerial photographs etc., field reconnaissance to document the potential occurrence of and contamination by waste or hazardous materials in the study area, and review of regulatory agency files and databases regarding the use, storage, unauthorized release and remediation of hazardous materials in the project area. If any sites are found additional testing may be required. During preliminary field investigations, no major hazardous sites were observed or otherwise identified along the EVCR Corridor.

Air Quality

Future projects are not expected to be capacity increasing and would be exempt from regional air quality conformity review. Temporary air quality impacts would be minimized by requiring BMPs during construction to minimize construction vehicle emissions and generation of particulate matter (dust). No Air Quality Reports are expected to be necessary for future projects.

Noise and Vibration

Future projects are not expected to be Type 1 for noise analysis as they would not include additional through lanes and would not substantially change the vertical or horizontal alignment of the roadway. Temporary noise increases will occur during construction activities, as such, only a brief technical memo evaluating the predicted construction noise is expected to be required and the results would be included in the project specific environmental document.

Energy and Climate Change

The range of transportation improvements proposed are not expected to have any substantial change in energy usage or generation of greenhouse gasses associated with climate change. No additional study for these resources is expected to be necessary.

Biological Environment

The proposed project could have potentially significant impacts on sensitive biological habitat and resources present adjacent to EVCR. It is anticipated that a biological technical report would be required for any transportation improvement project to fully document biological resources present along EVCR.

Description of Vegetation Communities along EVCR

Vegetation communities along EVCR include: coastal redwood forest, Sitka spruce/grand fir forest, coastal riparian forest, and landscaped areas. These vegetation communities may provide suitable habitat for rare, threatened, or endangered species protected by the Endangered Species Act or State Regulations.

Coastal Redwood Forest

Coastal redwood forest is present across from the intersection of EVCR and Parkway Drive and in the area of Florence Keller Regional Park, just west of US 101 for 1,100 feet along EVCR. Dominant overstory species of this community include coast redwood (*Sequoia sempervirens*), and coastal Douglas fir (*Pseudotsuga menziesii*). Understory trees include red alder (*Alnus rubra*), and immature overstory trees. The shrub/vine layer consists of a mix coast rhododendron (*Rhododendron macrophyllum*), Western sword fern (*Polystichum munitum*), and Himalayan blackberry (*Rubus armeniacus*).

Sitka Spruce/Grand Fir Forest

Sitka spruce/grand fir forest is found in three distinct locations along EVCR (see Biological Constraints Map). Dominant overstory species in this vegetation community include Sitka spruce (*Picea sitchensis*), and grand fir (*Abies grandis*). Occasional coast redwoods and lodgepole pine (*Pinus contorta*) are also present in this community but are not dominant. Understory trees include red alder and immature overstory trees. The shrub/vine layer primarily consists of Western sword fern (*Polystichum munitum*), and Himalayan blackberry (*Rubus armeniacus*).

Redwood Riparian Forest

Redwood riparian forest associated with the area around Florence Keller Regional Park, west of US 101. The overstory is comprised of coast redwood and red alder with an understory Himalayan blackberry, and mixed forbs.

Landscaped areas Along EVCR

Landscaped areas along EVCR consist primarily of planted hedgerow, planted trees, and Residential landscapes. Common planted species include red alder, cherry-plum (*Prunus cerasifera*), Himalayan blackberry, and redwood.

Sensitive Habitats along EVCR

Jurisdictional Waters and Wetlands

Jurisdictional waters are present directly adjacent to EVCR in multiple locations along four individual stream channels that cross under the roadway. There are no named creeks within the Project area. There is one unnamed stream that flows through Florence Keller Regional Park that connects to Jordan Creek which flows south to north before terminating at Lake Earl. The other three culverts carried stormwater ditches underneath the roadway where necessary. All culverts were corrugated metal culverts between 18 and 24 inches in diameter. All four of the creek channels are under the jurisdiction of the United States Army Corps of Engineers (USACE). Project related impacts to these creeks will require permitting under Section 404 of the Clean Water Act (CWA). It is anticipated that future projects would be able to obtain a Nationwide 14 Permit for impacts to Waters of the U.S.

The bed, bank, channel, active floodplains, and associated riparian vegetation of each of these creeks are under the jurisdiction of the California State Water Resources Control Board and California Department of Fish and Wildlife (CDFW). Project related impacts to these areas would require a Section 401 Water Quality Certification and Section 1600 Lake or Streambed Alteration Agreement from CDFW.

Additionally, potential wetland features were identified directly adjacent to EVCR in multiple locations. These locations may be associated with waters of the U.S or State and may be defined as jurisdictional features. A formal jurisdictional delineation would be conducted during the environmental document phase of a future project to define the specific boundaries of jurisdictional waters that could be affected during construction.

Marbled Murrelet Critical Habitat

Final designated marbled murrelet critical habitat is present adjacent to EVCR near the intersection of EVCR and Parkway Drive, which is approximately 120 feet southeast of Parkway Drive (see Biological Constraints Map). Prior to any work in this area within or adjacent to marbled murrelet critical habitat, the County will need to consult with the United States Fish and Wildlife Service (USFWS), as required under Section 7 or Section 10 of the Federal Endangered Species Act. Consultation would likely result in work timing restrictions and compensatory mitigation if the project has impacts to marbled murrelet critical habitat.

Potential Threatened or Endangered Species along EVCR

Based on a review of the USFWS Information for Planning and Conservation (IPaC) official species list, CDFW California Natural Diversity Database (CNDDDB) species occurrences, and the habitat requirements of each species, the following two threatened or endangered species were determined to have potential to occur along EVCR:

Marbled Murrelet (Brachyramphus marmoratus)

The marbled murrelet is a small sea bird that nests in mature coniferous forests along the coast of Northern California, Oregon, Washington, British Columbia, and Alaska. Marbled murrelet is listed as threatened under the Federal Endangered Species Act and as endangered under the California Endangered Species Act. The species nests in the upper portion of large conifers during their nesting season (Defined as April 1st – September 23rd) before returning to the sea, where it spends the remaining months of the year (USFWS 2012). Marbled murrelet has potential to occur within the Coastal Redwood Forest and Sitka Spruce/Grand Fir Forest vegetation communities found along EVCR. Prior to construction, the County will need to consult with USFWS for potential project related impacts to marbled murrelet, as required under Section 7 or Section 10 of the Endangered Species Act.

It is likely that construction work in the vicinity of potential marbled murrelet habitat would be limited to the non-nesting season (September 24th – March 31st) to avoid potential direct impacts to the species. If large trees are removed from potential marbled murrelet habitat, compensatory mitigation may be required.

Western Lily (Lilium occidentale)

The Western lily is a perennial bulb found in fens, poorly drained forests, riparian habitats, and coastal prairies. The species is listed as endangered under the Federal Endangered Species Act and by California State Law. Fens, and coastal prairies are not found adjacent to EVCR, but the Sitka Spruce/Grand Fir Forest and Coastal Riparian Forest vegetation communities may provide potentially suitable habitat for the species. A botanical survey should be conducted during the blooming season for the species prior to construction by a qualified botanist. If the species is present in the project area and direct or indirect impacts would occur, consultation with USFWS and CDFW would be required.

Environmental Document Type

For locally funded projects, the most likely CEQA documents would be either a Categorical Exemption or an Initial Study with Mitigated Negative Declaration. A mitigated negative declaration would be required when potentially significant environmental impacts are identified which would require mitigation measures to reduce them to a less than significant level.

If federal funds are used for future projects, compliance with the National Environmental Policy Act (NEPA) would also be required. For most transportation projects in California, NEPA is administered by Caltrans Local Assistance under delegation from the Federal Highways Administration. All of the proposed transportation improvements along EVCR would be processed with a NEPA Categorical Exclusion supported by environmental technical studies.

Permits and Other Approvals

Depending on the location and type of improvements proposed, the following permits listed below may be necessary to ensure compliance with federal, state, and local environmental laws.

- Section 7 or Section 10 Consultation with USFWS would be required for potential project related impacts to marbled murrelet and designated critical habitat. Consultation would result in USFWS issuing a Letter of Concurrence or Biological Opinion that will include final avoidance/minimization measures and compensatory mitigation recommended by USFWS to reduce potential project related impacts to marbled murrelet to less than significant levels. If Western Lily is discovered adjacent to EVCR during botanical surveys, Consultation with USFWS will also be required for this species.
- A 2080.1 consistency determination will be required from CDFW for potential project related impacts to species protected under the California Endangered Species Act after consultation with USFWS for the same species has been completed.
- Clean Water Act Section 404 Permit would be required for fill activities within Waters of the U.S. and within the Army Corps of Engineers jurisdiction. It is anticipated that Del Norte County will be able to obtain a Nationwide 14 permit for this project.
- Clean Water Act Section 401 Water Quality Certification is required from the Regional Water Quality Control Board to ensure that construction activities are managed such that water quality is not substantially impacted.
- Clean Water Act Section 402 General Construction Permit through the State Water Resources Control Board is required for all project over one acre in construction impacts. This permit enforces the requirements of the NPDES.
- A Section 1602 Streambed Alteration Agreement is required before work can commence within areas under CDFW jurisdiction. The 1602 permit issued by CDFW will include final

avoidance/minimization measures and compensatory mitigation recommended by CDFW to avoid, minimize, or mitigate for potential project related impacts to jurisdictional waters of the state and associated sensitive species.

- Coastal Development Permit/Coastal Grading Permit issued by Del Norte County for development within the California Coastal Zone.
- Grading Permit issued by Del Norte County for project activities.
- Encroachment Permit issued by Del Norte County for work in the County right-of-way.

Attachment A

Environmental Studies Required

Environmental Studies that may be Required

- Community Impact Assessment
- Section 4(f) Evaluation
- Traffic and Operations Study
- Visual Impact Assessment
- Cultural Resources Report
 - Archaeological Survey Report
 - Historic Resources Evaluation Report
 - Extended Phase 1 Testing*
 - Phase 2 Testing*
 - Finding of Effect Report*
 - Memorandum of Agreement*
- Water Quality Study
- Preliminary Geotechnical Report
- Paleontological Identification Report
- Phase 1 Hazardous Waste Initial Site Assessment
- Construction Noise Memorandum
- Biological Resources Report
- Biological Assessment (Marbled Murrelet, Western Lily)
- Wetland Delineation Report

*Additional cultural reports noted above will only be required if resources are identified within the APE and cannot be avoided by the project. Some or all of these studies may not be required if resources can be avoided.

Attachment B

California Natural Diversity Database Species List



Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad IS (Crescent City (4112472) OR Smith River (4112482) OR Sister Rocks (4112462))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
alpine marsh violet <i>Viola palustris</i>	PDVIO041G0	None	None	G5	S1S2	2B.2
arctic starflower <i>Lysimachia europaea</i>	PDPRI0A020	None	None	G5	S1	2B.2
bald eagle <i>Haliaeetus leucocephalus</i>	ABNKC10010	Delisted	Endangered	G5	S3	FP
bank swallow <i>Riparia riparia</i>	ABPAU08010	None	Threatened	G5	S2	
black crowberry <i>Empetrum nigrum</i>	PDEMP03020	None	None	G5	S1?	2B.2
black-crowned night heron <i>Nycticorax nycticorax</i>	ABNGA11010	None	None	G5	S4	
bluff wallflower <i>Erysimum concinnum</i>	PDBRA160E3	None	None	G3	S2	1B.2
cackling (=Aleutian Canada) goose <i>Branta hutchinsii leucopareia</i>	ABNJB05035	Delisted	None	G5T3	S3	WL
Chace juga <i>Juga chacei</i>	IMGASK4180	None	None	G1	S1	
coast checkerbloom <i>Sidalcea oregana ssp. eximia</i>	PDMAL110K9	None	None	G5T1	S1	1B.2
coast cutthroat trout <i>Oncorhynchus clarkii clarkii</i>	AFCHA0208A	None	None	G4T4	S3	SSC
Coastal and Valley Freshwater Marsh <i>Coastal and Valley Freshwater Marsh</i>	CTT52410CA	None	None	G3	S2.1	
Coastal Brackish Marsh <i>Coastal Brackish Marsh</i>	CTT52200CA	None	None	G2	S2.1	
dark-eyed gilia <i>Gilia millefoliata</i>	PDPLM04130	None	None	G2	S2	1B.2
Del Norte buckwheat <i>Eriogonum nudum var. paralinum</i>	PDPGN08498	None	None	G5T2	S1	2B.2
Del Norte pyrrocoma <i>Pyrrocoma racemosa var. congesta</i>	PDASTDT0F4	None	None	G5T4	S2	2B.3
Del Norte salamander <i>Plethodon elongatus</i>	AAAAD12050	None	None	G4	S3	WL
double-crested cormorant <i>Phalacrocorax auritus</i>	ABNFD01020	None	None	G5	S4	WL
eulachon <i>Thaleichthys pacificus</i>	AFCHB04010	Threatened	None	G5	S3	



Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
fibrous pondweed <i>Potamogeton foliosus ssp. fibrillosus</i>	PMPOT030B1	None	None	G5T2T4	S1S2	2B.3
foothill yellow-legged frog <i>Rana boylei</i>	AAABH01050	None	Candidate Threatened	G3	S3	SSC
fork-tailed storm-petrel <i>Oceanodroma furcata</i>	ABNDC04010	None	None	G5	S1	SSC
Fort Dick limnephilus caddisfly <i>Limnephilus atercus</i>	IITRI15020	None	None	G3G4	S1	
ghost-pipe <i>Monotropa uniflora</i>	PDMON03030	None	None	G5	S2	2B.2
great blue heron <i>Ardea herodias</i>	ABNGA04010	None	None	G5	S4	
great burnet <i>Sanguisorba officinalis</i>	PDROS1L060	None	None	G5?	S2	2B.2
great egret <i>Ardea alba</i>	ABNGA04040	None	None	G5	S4	
green yellow sedge <i>Carex viridula ssp. viridula</i>	PMCYP03EM5	None	None	G5T5	S2	2B.3
Greenland cochlearia <i>Cochlearia groenlandica</i>	PDBRA0S020	None	None	G4	S1	2B.3
horned butterwort <i>Pinguicula macroceras</i>	PDLNT01040	None	None	G4	S2	2B.2
Howell's jewelflower <i>Streptanthus howellii</i>	PDBRA2G0N0	None	None	G2G3	S2	1B.2
Howell's sandwort <i>Sabulina howellii</i>	PDCAR0G0F0	None	None	G4	S3	1B.3
Humboldt marten <i>Martes caurina humboldtensis</i>	AMAJF01012	None	Endangered	G5T1	S1	SSC
lagoon sedge <i>Carex lenticularis var. limnophila</i>	PMCYP037A7	None	None	G5T5	S1	2B.2
Langsdorf's violet <i>Viola langsdorffii</i>	PDVIO04100	None	None	G4	S1	2B.1
leafy-stemmed mitrewort <i>Mitellastrum caulescens</i>	PDSAX0N020	None	None	G5	S4	4.2
little willow flycatcher <i>Empidonax traillii brewsteri</i>	ABPAE33041	None	Endangered	G5T3T4	S1S2	
Lyngbye's sedge <i>Carex lyngbyei</i>	PMCYP037Y0	None	None	G5	S3	2B.2
maple-leaved checkerbloom <i>Sidalcea malachroides</i>	PDMAL110E0	None	None	G3	S3	4.2
marbled murrelet <i>Brachyramphus marmoratus</i>	ABNNN06010	Threatened	Endangered	G3G4	S1	



Selected Elements by Common Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
marsh pea <i>Lathyrus palustris</i>	PDFAB250P0	None	None	G5	S2	2B.2
North American porcupine <i>Erethizon dorsatum</i>	AMAFJ01010	None	None	G5	S3	
northern clustered sedge <i>Carex arcta</i>	PMCYP030X0	None	None	G5	S1	2B.2
Northern Coastal Salt Marsh <i>Northern Coastal Salt Marsh</i>	CTT52110CA	None	None	G3	S3.2	
northern harrier <i>Circus hudsonius</i>	ABNKC11011	None	None	G5	S3	SSC
northern meadow sedge <i>Carex praticola</i>	PMCYP03B20	None	None	G5	S2	2B.2
northern red-legged frog <i>Rana aurora</i>	AAABH01021	None	None	G4	S3	SSC
obscure bumble bee <i>Bombus caliginosus</i>	IIHYM24380	None	None	G4?	S1S2	
Oregon coast paintbrush <i>Castilleja litoralis</i>	PDSCR0D012	None	None	G3	S3	2B.2
Oregon polemonium <i>Polemonium carneum</i>	PDPLM0E050	None	None	G3G4	S2	2B.2
Oregon silverspot butterfly <i>Speyeria zerene hippolyta</i>	IILEPJ6087	Threatened	None	G5T1	S1	
osprey <i>Pandion haliaetus</i>	ABNKC01010	None	None	G5	S4	WL
Pacific gilia <i>Gilia capitata ssp. pacifica</i>	PDPLM040B6	None	None	G5T3	S2	1B.2
Pacific tailed frog <i>Ascaphus truei</i>	AAABA01010	None	None	G4	S3S4	SSC
pink sand-verbena <i>Abronia umbellata var. breviflora</i>	PDNYC010N4	None	None	G4G5T2	S2	1B.1
rhinoceros auklet <i>Cerorhinca monocerata</i>	ABNNN11010	None	None	G5	S3	WL
rocky coast Pacific sideband <i>Monadenia fidelis pronotis</i>	IMGASC7032	None	None	G4G5T1	S1	
sand dune phacelia <i>Phacelia argentea</i>	PDHYD0C070	None	None	G2	S1	1B.1
Sanford's arrowhead <i>Sagittaria sanfordii</i>	PMALI040Q0	None	None	G3	S3	1B.2
Scouler's catchfly <i>Silene scouleri ssp. scouleri</i>	PDCAR0U1MC	None	None	G5T4T5	S2S3	2B.2
seacoast ragwort <i>Packera bolanderi var. bolanderi</i>	PDAST8H0H1	None	None	G4T4	S2S3	2B.2



Selected Elements by Common Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
seaside bittercress <i>Cardamine angulata</i>	PDBRA0K010	None	None	G4G5	S3	2B.1
seaside pea <i>Lathyrus japonicus</i>	PDFAB250C0	None	None	G5	S2	2B.1
serpentine sedge <i>Carex serpenticola</i>	PMCYP03KM0	None	None	G4	S3	2B.3
short-leaved evax <i>Hesperievax sparsiflora</i> var. <i>brevifolia</i>	PDASTE5011	None	None	G4T3	S2	1B.2
Siskiyou checkerbloom <i>Sidalcea malviflora</i> ssp. <i>patula</i>	PDMAL110F9	None	None	G5T2	S2	1B.2
snowy egret <i>Egretta thula</i>	ABNGA06030	None	None	G5	S4	
Sonoma tree vole <i>Arborimus pomo</i>	AMAFF23030	None	None	G3	S3	SSC
southern torrent salamander <i>Rhyacotriton variegatus</i>	AAAAJ01020	None	None	G3G4	S2S3	SSC
spiral-spored gilded-head pin lichen <i>Calicium adspersum</i>	NLT0005640	None	None	G3G4	S1	2B.2
Thurber's reed grass <i>Calamagrostis crassiglumis</i>	PMPOA17070	None	None	G3Q	S2	2B.1
tidewater goby <i>Eucyclogobius newberryi</i>	AFCQN04010	Endangered	None	G3	S3	SSC
Tracy's romanzoffia <i>Romanzoffia tracyi</i>	PDHYD0E030	None	None	G4	S2	2B.3
tufted puffin <i>Fratercula cirrhata</i>	ABNNN12010	None	None	G5	S1S2	SSC
twisted horsehair lichen <i>Bryoria spirallifera</i>	NLTEST5460	None	None	G1G2	S1S2	1B.1
vanilla-grass <i>Anthoxanthum nitens</i> ssp. <i>nitens</i>	PMPOA0F041	None	None	G5	S2	2B.3
western bumble bee <i>Bombus occidentalis</i>	IIHYM24250	None	Candidate Endangered	G2G3	S1	
western lily <i>Lilium occidentale</i>	PMLIL1A0G0	Endangered	Endangered	G1	S1	1B.1
western pond turtle <i>Emys marmorata</i>	ARAAD02030	None	None	G3G4	S3	SSC
western snowy plover <i>Charadrius alexandrinus nivosus</i>	ABNNB03031	Threatened	None	G3T3	S2S3	SSC
white-tailed kite <i>Elanus leucurus</i>	ABNKC06010	None	None	G5	S3S4	FP
Wolf's evening-primrose <i>Oenothera wolfii</i>	PDONA0C1K0	None	None	G2	S1	1B.1



Selected Elements by Common Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
woodnymph <i>Moneses uniflora</i>	PDPYR02010	None	None	G5	S2	2B.2
yellow rail <i>Coturnicops noveboracensis</i>	ABNME01010	None	None	G4	S1S2	SSC
yellow-tubered toothwort <i>Cardamine nuttallii</i> var. <i>gemmata</i>	PDBRA0K0R3	None	None	G5T3Q	S2	3.3
Yontocket satyr <i>Coenonympha tullia yontockett</i>	IILEPN6035	None	None	G5T1T2	S1	

Record Count: 86

Attachment E

Existing Right of Way Records

Elk Valley Cross Road Corridor Plan
60' wide County Road Easement Needs

<u>ID #</u>	<u>APN</u>	<u>Width (ft)</u>	<u>Area (sqft)</u>	<u>Description</u>
1	110-222-026	10	1782	North Side, West of 101
2	110-222-028	10	1424	North Side, West of 101
3	110-222-032	10	3291	North Side, West of 101
4	110-222-031	10	1025	North Side, West of 101
5	110-222-033	10	1662	North Side, West of 101
6	110-222-034	10	1549	North Side, West of 101
7	110-032-032	10	5593	North Side, West of 101
8	110-380-003	10	1835	North Side, West of 101
9	110-380-004	10	1784	North Side, West of 101
10	110-380-002	10-12	577	North Side, West of 101
11	110-380-009	12-65	14363	North Side, West of 101
12	110-380-017	60-65	14545	North Side, West of 101
13	110-380-026	60	16499	North Side, West of 101
14	110-380-027	60	1803	North Side, West of 101
15	110-222-039	10	1504	South Side, West of 101
16	110-222-027	10	1317	South Side, West of 101
17	110-222-047	10	1361	South Side, West of 101
18	110-222-048	10	1179	South Side, West of 101
19	110-330-017	10	2225	South Side, West of 101
20	110-330-016	10	2080	South Side, West of 101
21	110-330-019	10	738	South Side, West of 101
22	110-330-025	10	1357	South Side, West of 101
23	110-330-026	10	5530	South Side, West of 101
24	110-330-027	10	5022	South Side, West of 101
25	110-330-028	10	4355	South Side, West of 101
26	110-210-053	varies	331	SW Quadrant, US 199

Total Acquisition Area	94731	ft ²
Estimated Acquisition Price	\$ 4.00	per ft ²
Right of Way Total Cost	\$ 378,925	

Attachment F

Existing Conditions Report

ELK VALLEY CROSS ROAD CORRIDOR PLAN

EXISTING TRANSPORTATION CONDITIONS

Introduction

Elk Valley Cross Road is a 1.5-mile long roadway located in the Crescent City area of Del Norte County, California. The road lies outside the City Limits. Elk Valley Cross Road has a general northwest-southeast orientation. According to the Del Norte County General Plan, this roadway is classified as a Rural Collector for its entirety. According to the County Road System Map, Elk Valley Cross Road is a Major Collector.

Roadway Characteristics

Elk Valley Cross Road can be divided into two distinct segments. For the western 0.8-mile immediately east of Lake Earl Drive, Elk Valley Cross Road primarily serves rural residential uses and the high school. The remaining 0.7 mile provides both residential access and primary corridor access, with at-grade intersections accessing US Highway 101 and State Route US Highway 199. Elk Valley Cross Road is a two-lane undivided roadway with approximately 11-foot wide travel lanes and generally little to no shoulders, except the western segment between Lake Earl Drive and Wonder Stump Road, which has paved shoulders about 6 to 8 feet wide. The posted speed limit along Elk Valley Cross Road is 45 mph, with a 25-mph school zone extending approximately 1,000 feet west and east of Sunset High School.

Note that the County Road Standards (Section 12.04.070B) call for a minimum pavement width of 24 feet with 4-foot graded shoulders for this type of roadway. The existing roadway to the east of Wonder Stump Road does not meet these standards. Turn pockets are not present along Elk Valley Cross Road, except channelized right-turn lanes are provided at the intersections with US 101 and US 199.

Intersection Traffic Volumes

Intersection turning-movement volumes were conducted at the following intersections along Elk Valley Cross Road during the AM and PM peak hours on Tuesday May 7, 2019:

- Lake Earl Drive
- Wonder Stump Road
- Cunningham Lane
- US 101
- US 199
- Parkway Drive

The traffic counts included vehicles, heavy trucks, bicyclists, pedestrians, and other non-motorized trips. The peak-hour traffic volumes are summarized in [Table 1](#). The AM peak hour for all the intersections

started at 7:30 AM and the PM peak hour started at 4:00 PM at all the intersections except US 101/Elk Valley Cross Road, where the PM peak hour started at 4:30 PM.

In addition to the 2019 counts, traffic counts were conducted at the Lake Earl Drive/Elk Valley Cross Road intersection on Thursday May 3, 2018 as a part of Del Norte Data Collection Project and at the Parkway Drive/Elk Valley Road/Elk Valley Cross Road intersection on Friday October 21, 2016 as a part of the Elk Valley Road Multimodal Corridor study. A comparison of these counts with the 2019 counts is provided in [Table 2](#). In general, the traffic distributions at both intersections did not change over time. However, the 2019 volumes are higher than the previous volumes. Specifically, the total intersection volumes at Lake Earl Drive are 15% higher in the AM and 8% higher in the PM, while the volumes at Parkway Drive are 35% higher in the AM and 19% higher in the PM.

Traffic Generators

In addition to residential neighborhoods, the following properties are identified as key traffic generators along the study corridor:

- Sunset High School, located along the north side of the corridor west of Cunningham Lane
- Florence Keller Regional Park, located along south side of the corridor east of Cunningham Lane
- Kings Valley Golf Course, accessed via the Elk Valley Cross Road/Lesina Road intersection

Students access the Sunset High School site by various travel modes (private auto, walk, bike, skateboard) and some ride the school bus. The high school site also functions as a drop-off/pick-up location for students living in nearby residential neighborhoods that attend other schools in the area (such as Redwood Elementary School).

There was a drive-in movie theater located in the southwest corner of the Elk Valley Cross Road/Railroad Avenue Extension intersection, which was closed in 2015. Finally, although not situated on the study corridor, Pelican Bay State Prison to the north on Lake Earl Drive is accessed via Elk Valley Cross Road. Some traffic generators have peak traffic periods which occur outside the traffic count periods in this study. For example, a shift change at the State Prison occurs at 6:00 AM (although the traffic volumes on Elk Valley Cross Road on the day of the counts in May were substantially higher during the 7:30 AM to 8:30 AM hour).

Roadway Traffic Volumes

Continuous 24-hour traffic volume counts were conducted on Tuesday May 7, 2019 at the following three locations along Elk Valley Cross Road:

- Between Lake Earl Drive and Wonder Stump Road
- Between Wonder Stump Road and US 101
- Between US 101 and US 199

[Table 3](#) shows the total two-way traffic volumes on Elk Valley Cross Road at the three count locations for both the entire 24-hour period and the peak hours. The highest volumes occurred between Wonder

Stump Road and US 101, with a total daily volume of 2,768 one-way trips, 268 of which occurred in the PM peak hour and 253 in the AM peak hour. On this segment, traffic is highest in the eastbound direction in the AM peak hour and in the westbound direction in the PM peak hour. Conversely, on the other two segments of Elk Valley Cross Road, there is more westbound traffic in the AM and eastbound traffic in the PM peak hour.

The AM peak hour of total 2-way traffic occurred from 7:30 AM to 8:30 AM on all three segments, while the PM peak hour fell between 3:15 PM and 5:00 PM. The traffic volumes along the corridor tend to gradually increase throughout the early morning hours. For example, the total 2-way volume from 5:30 AM to 6:30 AM (the hour surrounding the 6:00 shift change at the State Prison) is only roughly 35% to 40% of that during the AM peak hour.

Roadway Level of Service

Level of Service (LOS) is a quantitative and qualitative measure of traffic conditions on isolated sections of roadway or intersections. LOS ranges from “A” (with no congestion) to “F” (where the system fails with gridlock or stop-and-go conditions prevailing). Roadway LOS was evaluated for Elk Valley Cross Road using the standard set forth in the 2016 Regional Transportation Plan (Del Norte Local Transportation Commission). For a Rural Major Collector (2-lane) such as Elk Valley Cross Road, the LOS and correlating daily traffic volumes (ADT) are as follows:

- LOS A - 1,300
- LOS B - 3,900
- LOS C - 7,500
- LOS D - 12,600
- LOS F - 16,900

Based on the data collected by LSC as a part of this study, a maximum volume of about 2,770 ADT was observed on Elk Valley Cross Road, which correlates to LOS B. Compared to the County’s LOS threshold for this type of roadway, which is LOS C (Del Norte County General Plan, 2003), the roadway currently operates at an acceptable LOS.

Speed Survey

Speed surveys were conducted using pneumatic road tube counters at the following three locations along Elk Valley Cross Road:

- Between Lake Earl Drive and Wonder Stump Road
- Between Wonder Stump Road and US 101
- Between US 101 and US 199

The posted speed limit at all locations is 45 mph, except between Wonder Stump Road and US 101 where it additionally has a 25-mph school speed zone when children are present. The survey results are presented in [Table 4](#). In general, the segment between Lake Earl Drive and Wonder Stump Road has the highest speeds and noticeably more vehicles exceeding 50 mph, though the average and 85th-percentile

speeds are only slightly higher than those recorded east of US 101. This may be due to the fact that the segment between US 101 and US 199 is only about one-third mile long, and there are “Stop Ahead” signs about 600 feet before the highway intersections, while there are no Stop signs or traffic signals along Elk Valley Cross Road between the Lake Earl Drive and US 101 intersections.

The speeds near Turnbull Lane are much slower than those in the other two locations, likely due to the school zone and the shorter sight distance (limited by denser trees). The traffic volume at this location is also the highest (as shown in [Table 3](#)). However, the average speed at this location is 37 mph, significantly higher than the posted school zone speed limit of 25 mph. Between 7:50 AM and 8:10 AM is the school morning peak traffic time (Sunset High School starts at 8:10 AM), but the average speed during this period was 35 mph, only 2 mph less than daily average speed, and 56% of vehicles travelled over 35 mph in this period.

Moreover, westbound vehicles exhibit faster travel speeds than eastbound vehicles in all surveyed locations. The roads at all three locations curve towards the south, so the visibility/sight distance for westbound drivers is better than that of eastbound drivers.

Truck Traffic

The volume of heavy truck traffic was collected using pneumatic tube counters at the same three locations where the traffic volume and speed surveys were collected for the 24-hour period from 12:00 AM to 11:59 PM Tuesday May 7, 2019. The daily truck volumes were analyzed and are shown in [Table 5](#). The truck volumes between Lake Earl Drive and US 101 are approximately 2.3% of total daily traffic. The truck volume between US 101 and US 199 is higher, at approximately 3.9% of total traffic.

Transit Conditions

Redwood Coast Transit provides public transportation in Crescent City and the surrounding area. There are no public transit facilities or routes located along the Elk Valley Cross Road study corridor. However, Redwood Coast Transit’s Route 20 provides service along Lake Earl Drive with a stop at J & L Market, located at Lake Earl Drive and Alder Road (approximately 0.8 miles south of the study corridor). Route 20 provides service to this stop every 2 to 2 ½ hours northbound and southbound, Monday through Saturday from 6:45 AM to 8:45 PM.

In addition, Greyhound provides service along Lake Earl Drive with a stop located at Lake Earl Drive and Alder Road. Similar to Route 20, Greyhound service continues north on Lake Earl Drive with another stop located near the Pelican Bay Prison. Greyhound operates 24 hours a day 7 days a week, however this particular stop must be booked in advance.

Bicycle and Pedestrian Conditions

A Class II bicycle facility is provided along Elk Valley Cross Road between Lake Earl Drive and Wonder Stump Road. There are no existing bicycle or pedestrian facilities along the remaining segments of the corridor. Bicycle and pedestrian counts were conducted at the three locations where the roadway traffic counts and speed surveys were conducted. The volumes were recorded over a 15-hour period from 6

AM to 9 PM, and the results are summarized in [Table 6](#). In general, bike and pedestrian activity is minimal along Elk Valley Cross Road. There were 2-3 bicyclists and 2 pedestrians over the 15-hour period at each location, except at the western end of the corridor: between Lake Earl Drive and Wonder Stump Road, there were 3 total bicyclists and 12 pedestrians.

Bike and pedestrian counts were also recorded as a part of the intersection turning-movement counts shown in [Table 1](#). Minimal activity was observed as well, except at the intersection of Elk Valley Cross Road/Cunningham Lane where 36 pedestrians crossed during the morning peak hour. This intersection is near the high school and all 36 pedestrians travelled between 7:50 AM and 8:10 AM, which corresponds to the high school starting time (8:10 AM). According to the recorded data, all of the pedestrians crossed the southern leg (the Cunningham Lane leg). There is a trail in the southeast corner of this intersection providing unofficial access to portions of the park.

Driver Sight Distance

There are two types of driver sight distance criteria to consider in the study area: stopping sight distance (SSD) and corner sight distance (CSD). Stopping sight distance is the minimum distance required by the driver of a vehicle to bring his/her vehicle to a stop after an object on the road becomes visible. This is the minimum distance needed for a driver on the main roadway approaching an intersection or driveway to see an object in his/her travel path (such as a vehicle exiting a driveway) and safely come to a stop. SSD is measured from the center of the travel lane on Elk Valley Cross Road at a height of 3.5 feet to an object on the road with a height of 0.5 feet. The Caltrans Highway Design Manual specifies minimum stopping sight distance requirements as a function of roadway design speed.

Corner sight distance (CSD) is the minimum distance that a driver waiting at a cross street should be able to see in either direction along the main roadway in order to accurately identify an acceptable gap in through traffic. CSD is measured from a point on the side of Elk Valley Cross Road at a 15-foot setback from the edge of traveled way at a height of 3.5 feet, to a point in the center of each approaching travel lane at a height of 4.25 feet. The Caltrans Highway Design Manual sets forth minimum CSD values as a function of design speed.

Driver sight distance was reviewed along the study corridor. In general, the horizontal curvature of Elk Valley Cross Road hinders the driver sight distance at various locations, as well as trees and other vegetation along the roadway. Some examples are as follows:

- The CSD from Railroad Avenue Extension looking to the west along Elk Valley Cross Road is about 140 feet short of the minimum value (minimum value of 550 feet, assuming a speed of 50 mph for eastbound traffic on Elk Valley Cross Road), due to both the horizontal curvature of the roadway and the vegetation along the south side of the road. Looking to the east, the CSD is about 165 feet short of the minimum value (minimum value of 495 feet, assuming a speed of 45 mph for westbound traffic on Elk Valley Cross Road), due to the presence of a large tree infringing on the traveled way on the south side of the road.

- Similarly, the CSD from Coho Lane looking to the east is only about 120 feet, which is 375 feet short of the minimum value (minimum value of 495 feet, assuming a speed of 45 mph for westbound traffic), due to a large tree and vegetation along the south side of the road.
- At the high school, the CSD looking to the west from the exit driveway is about 155 feet short of the minimum value of 495 feet (assuming a speed of 45 mph for eastbound traffic).
- The CSD from Cunningham Lane looking to the west is about 400 feet, which is 95 feet short of the minimum value. The CSD looking to the east is only 234 feet, or about 260 feet short of the minimum value.

Some flexibility in corner sight distance is allowed. The Caltrans standards state that where restrictive conditions exist (such as horizontal and vertical curvature of an existing roadway), the minimum value for corner sight distance at unsignalized intersections shall be equal to the stopping sight distance value. Based on speeds of 45 mph and 50 mph, the required minimum stopping sight distances are 360 feet and 430 feet, respectively. As the CSD at the locations described above do not meet these minimum values (except the CSD looking west from Cunningham), these are considered existing driver sight distance deficiencies.

Historical Crash Data

SWITRS Crash Data 2009-2018

Crash data for Elk Valley Cross Road over the last 10 years (January 2009-December 2018) was obtained from the Statewide Integrated Traffic Records System (SWITRS). This data base centrally stores crash information submitted by county and statewide agencies such as Highway Patrol, Sheriffs, and local law enforcement. In addition, the National Highway Traffic Safety Administration's (NHTSA) Fatality Analysis Reporting System (FARS) data was reviewed regarding fatal crashes. The crash data for this period of time is summarized in [Tables 7 and 8](#). [Table 7](#) includes crashes within 200 feet of the key intersections and [Table 8](#) reports crashes on the remaining segments. The total number of reported crashes on Elk Valley Cross Road over the last ten years is 65, 58 of which occurred within 200 feet of an intersection. The following findings are made based on the data:

- One fatality occurred over the 10-year period. This incident occurred at the Elk Valley Cross Road/US 199 intersection in July 2014. A vehicle crossing the intersection (Vehicle 1) was struck by another vehicle (Vehicle 2) proceeding straight along US 199. Vehicle 2 had a reported travel speed of 55 mph. Vehicle 1 was reported to have previously "successfully avoided another event". A third vehicle (Vehicle 3) was reported to have been previously stopped in the roadway, and the front end of Vehicle 3 was damaged after the crash (although the vehicle was still functional). The crash occurred during the daylight and the weather was clear. None of the vehicles were reported to have pre-existing defects or maintenance conditions that may have contributed to the crash. None of the drivers received a traffic violation in this crash.

- About 40% of intersection crashes resulted in injuries, while almost all (7 of 8) roadway crashes had injuries.
- No pedestrian-related crashes were recorded.
- Only one crash involved a bicyclist. This crash occurred along the segment of Elk Valley Cross Road between Wonder Stump Road and Cunningham Lane. The bicyclist was reported to be under the influence of alcohol. Although the bicyclist was injured, no vehicles were involved.
- To no surprise, the majority (67%) of the intersection crashes occurred at the two intersections with highways (the US 101 and US 199 intersections), which also have the highest speeds and greatest traffic volumes.
- Most (7 of 8) of the roadway crashes occurred on the segment between Wonder Stump Road and US 101, which is the longest segment. Two (2) of the 7 crashes on this segment involved alcohol.
- Most crashes took place in the daylight and under clear or cloudy conditions (not raining, foggy and/or with poor lighting).
- “Hit Object” was the primary collision type at most of the intersections and roadway segments (which is not surprising, given the lack of shoulders and close proximity of fencing, trees and mailboxes) except the two intersections with Highways 101 and 199, where 24 crashes (or 63 percent) were “Broadside” crashes. Most “Broadside” collisions were due to violation of automobile right of way. Finally, “Rear End” crashes represent 38% of the total roadway crashes.

Crash Rates

Crash rates are analyzed and compared to average crash rates for similar facilities. Caltrans publishes an annual *Collision Data on California State Highways* report (2015 is the latest year available) containing crash rates for various roadway and intersection types and counties within California. The Statewide average crash rates for the key intersections are shown in the far right columns of [Table 9](#). The estimated actual crash rates for each intersection were calculated and are shown in the middle columns of the table. The following intersections along Elk Valley Cross Road have crash rates exceeding the Statewide average rates:

- Lake Earl Drive (“total” crash rate only)
- Wonder Stump Road (“total” and “injury” crash rates)
- US 101 (“total” and “injury/fatal”)
- US 199 (“total” and “injury/fatal”)
- Parkway Drive (“total” and “injury/fatal”)

The crash rates at these intersections are more than double the Statewide average rates for similar facilities, except that the Elk Valley Cross Road/US 199 intersection has crash rates that are about 7 to 8 times higher than the Statewide average crash rates for similar intersections.

Table 10 presents crash rates for the roadway segments. The average crash rates for rural 2- and 3- lane highways with values for the State of California, Caltrans District 1, and Del Norte County are shown in the lower portion of the table. Del Norte County and Caltrans District 1 have higher average crash rates than the Statewide average. The segment of Elk Valley Cross Road between Wonder Stump Road and US 101 has a total crash rate exceeding the Statewide average, although it's lower than that of the County and Caltrans District 1. However, the injury crash rate on this segment is higher than all of the regional average rates.

Attachments: Tables 1-10

TABLE 1: Elk Valley Cross Road - Intersection Peak-Hour Traffic Volumes

Intersection	Northbound			Southbound			Eastbound			Westbound			Total			Peak Hour Start
	L	T	R	L	T	R	L	T	R	L	T	R	Vehicles	Peds	Bikes	Time
AM Peak Hour																
Lake Earl Dr/Elk Valley Cross Rd	0	154	53	37	159	0	0	0	0	56	0	63	522	0	0	7:30 AM
Wonder Stump Rd/Elk Valley Cross Rd	1	0	1	30	0	16	7	94	1	0	102	8	260	0	0	7:30 AM
Cunningham Ln/Elk Valley Cross Rd	1	0	3	0	0	0	0	139	2	1	130	0	276	36	0	7:30 AM
US Hwy 101/Elk Valley Cross Rd	53	213	2	39	342	27	23	37	90	4	47	59	936	0	0	7:30 AM
US Hwy 199/Elk Valley Cross Rd	6	69	1	0	169	23	11	66	7	5	87	0	444	0	0	7:30 AM
Parkway Dr/Elk Valley Cross Rd	30	12	1	0	8	2	0	54	14	1	57	0	179	0	0	7:30 AM
PM Peak Hour																
Lake Earl Dr/Elk Valley Cross Rd	0	143	57	53	153	0	0	0	0	64	0	40	510	0	1	4:00 PM
Wonder Stump Rd/Elk Valley Cross Rd	0	0	1	16	0	11	18	91	1	3	104	28	273	0	0	4:00 PM
Cunningham Ln/Elk Valley Cross Rd	2	0	2	0	0	0	0	108	3	6	139	0	260	0	0	4:00 PM
US Hwy 101/Elk Valley Cross Rd	63	342	4	59	268	33	16	41	41	3	41	37	948	0	0	4:30 PM
US Hwy 199/Elk Valley Cross Rd	5	136	8	2	103	26	13	76	3	5	59	0	436	0	0	4:00 PM
Parkway Dr/Elk Valley Cross Rd	19	21	3	0	15	2	2	59	26	1	42	0	190	0	0	4:00 PM

Note: Based on intersection traffic counts conducted from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM on Tuesday May 7, 2019.

Note: For the intersections at US Hwy 199 and Parkway Dr, the eastbound and westbound traffic indicated traffic on Elk Valley Cross Rd.

Source: LSC Transportation Consultants, Inc.

Table 2: Intersection Traffic Volumes Compared with Previous Studies

Intersection, Time	Northbound			Southbound			Eastbound			Westbound			Total			Peak Hour Start Time
AM Peak Hour	L	T	R	L	T	R	L	T	R	L	T	R	Vehicles	Peds	Bikes	
Lake Earl Dr/Elk Valley Cross Rd, 2019 ¹	0	154	53	37	159	0	0	0	0	56	0	63	522	0	0	7:30 AM
Lake Earl Dr/Elk Valley Cross Rd, 2018 ²	0	136	47	32	139	0	0	0	0	61	0	40	455	0	2	7:30 AM
Parkway Dr/Elk Valley Cross Rd, 2019 ³	30	12	1	0	8	2	0	54	14	1	57	0	179	0	-	7:30 AM
Parkway Dr/Elk Valley Rd/Elk Valley Cross Rd, 2016 ⁴	29	4	2	-	4	0	0	46	13	2	33	-	133	0	-	7:30 AM
PM Peak Hour																
Lake Earl Dr/Elk Valley Cross Rd, 2019	0	143	57	53	153	0	0	0	0	64	0	40	510	0	1	4:00 PM
Lake Earl Dr/Elk Valley Cross Rd, 2018	0	114	36	56	172	0	0	0	0	54	0	40	472	0	4	4:00 PM
Parkway Dr/Elk Valley Cross Rd, 2019	19	21	3	0	15	2	2	59	26	1	42	0	190	0	-	4:00 PM
Parkway Dr/Elk Valley Rd/Elk Valley Cross Rd, 2016	15	12	5	-	9	4	2	44	31	1	36	-	159	0	-	3:30 PM

¹Based on traffic counts conducted on Tuesday May 7, 2019.

²Based on traffic counts conducted on Thursday May 3, 2018.

Note: Parkway Drive, Elk Valley Road, and Elk Valley Cross Road were viewed as one intersection in the previous study, and it is essentially the same as the intersection of Parkway Dr/Elk Valley Cross Rd.

³Based on traffic counts conducted on Tuesday May 7, 2019. The left-turn southbound traffic and right-turn westbound traffic would use intersection of Parkway Dr/Elk Valley Rd, which were not recorded in this study.

⁴Based on traffic counts conducted on Friday October 21, 2016. The left-turn southbound traffic and right-turn westbound traffic counts are hidden for comparisons.

Source: LSC Transportation Consultants, Inc.

TABLE 3: Roadway Traffic Volumes on Elk Valley Cross Road

Location	Time Period	Eastbound	Westbound	Total 2-way	% Trucks
West of Wonder Stump Rd (between Lake Earl Drive and Wonder Stump Rd)	Daily Volume	1,231	1,256	2,487	2.3%
	AM (7:30-8:30)	101	117	218	
	PM (3:45-4:45)	128	104	232	
West of Turnbull Lane (between Wonder Stump Road and US 101)	Daily Volume	1,339	1,429	2,768	2.3%
	AM (7:30-8:30)	137	131	268	
	PM (4:00-5:00)	109	144	253	
West of Lesina/Titus Rd (between US 101 and US 199)	Daily Volume	1,124	1,088	2,212	3.9%
	AM (7:30-8:30)	81	117	198	
	PM (3:15-4:15)	111	83	194	

Note: Based on surveys conducted during 24-hour period from 12:00 AM to 11:59 PM Tuesday May 7th, 2019.

Note: Percent trucks includes buses and vehicles with 3 or more axles.

Source: LSC Transportation Consultants, Inc.

Table 4: Speed Survey Results on Elk Valley Cross Road

Location	Speed (mph)							Number of Vehicles > 50 mph	Percent of Vehicles > 50 mph
	Eastbound		Westbound		Total				
	Average	85 th %	Average	85 th %	Average	85 th %	Max		
West of Wonder Stump Rd (between Lake Earl Drive and Wonder Stump Rd)	40	46	42	48	41	47	79 ¹	174	7%
AM Peak hour (7:30-8:30)	39	45	40	47	40	46	56	9	5%
PM Peak hour (3:45-4:45)	41	47	42	49	41	48	56	13	6%
West of Turnbull Lane (between Wonder Stump Road and US 101)	37	43	37	44	37	43	60	38	1%
AM Peak hour (7:30-8:30)	35	42	34	41	35	41	50	0	0%
PM Peak hour (4:00-5:00)	38	43	39	44	39	44	52	5	2%
West of Lesina/Titus Rd (between US 101 and US 199)	39	44	42	48	40	47	59	127	5%
AM Peak hour (7:30-8:30)	38	45	42	48	40	48	55	11	6%
PM Peak hour (3:15-4:15)	39	46	43	49	41	48	54	14	7%

Note: Based on speed surveys conducted during 24-hour period with dry road conditions from 12:00 AM to 11:59 PM Tuesday May 7th, 2019.

Note: Posted speed limit on Elk Valley Cross Road is 45 mph, and there is a 25 mph school zone between Wonder Stump Road and US 101.

¹It was the only car exceeding 65 mph in the 24-hour period and this maximum speed was recorded at 10:00 PM.

Source: LSC Transportation Consultants, Inc.

TABLE 5: Truck Traffic on Elk Valley Cross Road

Location		Eastbound	Westbound	Daily Total
West of Wonder Stump Rd (between Lake Earl Drive and Wonder Stump Rd)	# of Heavy Trucks	30	29	59
	% of Heavy Trucks	2.4%	2.3%	2.3%
West of Turnbull Lane (between Wonder Stump Road and US 101)	# of Heavy Trucks	29	34	63
	% of Heavy Trucks	2.1%	2.4%	2.3%
West of Lesina/Titus Rd (between US 101 and US 199)	# of Heavy Trucks	52	35	87
	% of Heavy Trucks	4.6%	3.2%	3.9%

Note: Based on surveys conducted during 24-hour period from 12:00 AM to 11:59 PM Tuesday May 7th, 2019.

Heavy trucks are any trucks with 3 or more axles and buses.

Source: LSC Transportation Consultants, Inc.

TABLE 6: Bicycle and Pedestrian Volumes Along Elk Valley Cross Road

Location	Pedestrian			Bicycle		
	Eastbound	Westbound	Total	Eastbound	Westbound	Total
West of Wonder Stump Rd (between Lake Earl Drive and Wonder Stump Rd)	5	7	12	1	2	3
West of Turnbull Lane (between Wonder Stump Road and US 101)	1	1	2	1	1	2
West of Lesina/Titus Rd (between US 101 and US 199)	1	1	2	2	1	3

Note: Based on counts conducted from 6:00 AM to 9:00 PM Tuesday May 7, 2019.

Source: LSC Transportation Consultants, Inc.

TABLE 7: Elk Valley Cross Road - Crash Data by Intersection Location

2009 to 2018

Includes Crashes on Cross Streets Within 200 Feet of the Intersection

Does not include crashes on Elk Valley Cross Road greater than 200' from the intersections listed

Intersecting Street	Total Study Intersection Crashes	% Total Crashes	Crashes By Severity			Alcohol Involved	Crashes by Type							Weather			Lighting				
			Property Damage Only	Injury	Fatality		Broadside	Sideswipe	Rear End	Hit Object	Head-On	Auto/Ped	Other	Clear	Cloudy	Raining	Daylight	Dusk/Dawn	Dark-ST LTS	Dark- NO ST LTS	Other
Lake Earl Drive	7	12%	6	1	0	1	2	0	0	4	0	0	1	2	3	2	4	0	0	2	1
Wonder Stump Road	5	8%	3	2	0	0	0	0	1	2	0	0	2	4	1	0	4	0	1	0	0
High School Driveway	1	2%	1	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0
Cunningham Lane	1	2%	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0
US 101	18	31%	10	8	0	1	13	1	1	3	0	0	0	11	6	1	14	0	3	1	0
US 199	21	36%	10	10	1	0	12	1	1	7	0	0	0	11	5	5	18	0	2	1	0
Parkway Drive	5	9%	3	2	0	0	1	0	1	2	1	0	0	4	1	0	4	0	0	1	0
TOTAL	58	100%	34	23	1	2	28	2	4	20	1	0	3	33	16	9	45	0	6	6	1
% Study Intersection Crashes			58%	40%	2%	3%	49%	3%	7%	34%	2%	0%	5%	56%	28%	16%	78%	0%	10%	10%	2%

Note: No crashes involving bicyclists or pedestrians were reported at the intersections.

Source: SWITRS, NHTSA

Source: LSC Transportation Consultants Inc.

EVCR Crash Tables.xls

TABLE 8: Elk Valley Cross Road - Crash Data by Roadway Segment

2009 to 2018 Includes Crashes on Street Segments Greater than 200 Feet From Intersections

Does not include crashes within 200' of the study intersections

On Elk Valley Cross Road Between And		Total Study Segment Crashes	Property Damage Only Injury Fatality Bike/Ped Involved				Alcohol Involved	Crashes by Type							Weather				Lighting			
								Broadside	Sideswipe	Rear End	Hit Object	Head-On	Auto/Ped	Other	Clear	Cloudy	Raining	Fog	Daylight	Dusk/Dawn	Dark- ST LTS	Dark- NO ST LTS
Lake Earl Drive	Wonder Stump Road	1	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0
Wonder Stump Road	US 101	7	1	6	0	1	2	0	0	2	4	0	0	1	2	5	0	0	6	0	0	1
US 101	US 199	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
US 199	Parkway Drive	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL		8	1	7	0	1	2	0	0	3	4	0	0	1	2	6	0	0	7	0	0	1
% Roadway Segment Crashes								0%	0%	38%	50%	0%	0%	12%	25%	75%	0%	0%	88%	0%	0%	12%

Note 1: ST LTS = Street lights

Source: SWITRS

Source: LSC Transportation Consultants, Inc.

TABLE 9: Intersection Crash Rates

2009 to 2018 Includes Crashes on Cross Streets Within 200 Feet of the Intersection

Intersecting Street with Elk Valley Cross Road	Intersection Crashes			Actual Crash Rate (Crashes per MV) ¹		Percent of Statewide Average Rate		Statewide Average Crash Rate By Intersection Type (Crashes per MV) ¹	
	Total	Injury or Fatality	% Injury Crashes	Total	Injury or Fatality	Total	Injury or Fatality	Total	Injury or Fatal
Lake Earl Drive	7	1	14%	0.35	0.05	219%	76%	0.16	0.07
Wonder Stump Road	5	2	40%	0.46	0.19	211%	184%	0.22	0.10
Cunningham Lane	1	0	0%	0.10	0	60%	0%	0.16	0.07
US 101	18	8	44%	0.53	0.24	241%	234%	0.22	0.10
US 199	21	11	52%	1.56	0.82	711%	811%	0.22	0.10
Parkway Drive	5	2	40%	0.63	0.25	287%	250%	0.22	0.10
TOTAL	58	24	41%						
% Study Intersection Crashes									

Note: MV = Million Vehicles entering intersection

Note 1: Bold indicates a crash rate higher than the average rate

Source: SWITRS, NHTSA, 2015 Collision Data on California State Highways

Source: LSC Transportation Consultants Inc.

EVCR Crash Tables.xls

TABLE 10: Roadway Segment Crash Rates

2009 to 2018 Includes Crashes on Street Segments Greater than 200 Feet From Intersections

			Crashes By Severity				Total Persons Injured	Crashes Per Million Vehicle Miles (MVM)	
			Property Damage Only	Injury	Fatality	Bike/Ped Involved		Total Crash Rate	Injury Crash Rate
Between	And	Total Study Segment Crashes							
Lake Earl Drive	Wonder Stump Road	1	0	1	0	0	0	0.41	0.41
Wonder Stump Road	US 101	7	1	6	0	1	1	1.28	1.1
US 101	US 199	0	0	0	0	0	0	0	0
US 199	Parkway Drive	0	0	0	0	0	0	0	0
TOTAL		8	1	7	0	1	1		
% Roadway Segment Crashes			13%	88%	0%	13%	13%		
Regional Averages (Rural 2 and 3 Lane)									
Statewide								1.04	0.48
Caltrans District 1								1.48	0.68
Del Norte County								1.38	0.71
Note: Bold indicates an exceedance of at least one average rate Source: SWITRS, Statewide and Del Norte County crash rates are from Caltrans's 2015 Collision Data on California Highways Publication Note: Statewide and District 1 Injury Crash Rate reflects Injury + Fatality Collision Rate. Source: LSC Transportation Consultants, Inc.									

Attachment G

Public Meeting Records

Add to mailing list?	Full Name	E-Mail Address	Site/Mailing Address	City	State	ZIP
YES	Brian Stephenson	bstephenson@dokkenengineering.com	2192 Civic Center Dr.	Redding	CA	96001
YES	Rosanna Bower	rbowers@co.del-norte.ca.us	981 H Street, Suite 1b	Crescent City	CA	95531
YES	Ron Sandler	DNAMB@aol.com	PO Box 306	Crescent City	CA	95531
YES	Don Micheletti	d.micheletti@charter.net	130 Vivienne Lane	Crescent City	CA	95531
YES	Barbara Lee	barbarajLee.LMFT@gmail.com	PO Box 1543	Crescent City	CA	95531
NO	Yvonne O'Neill	ypoTpo@aol.com	1940 Malone Rd	Crescent City	CA	95531
YES	Melvin Haggard	Haggardm@charter.net	150 Turnbull Ln	Crescent City	CA	95531
YES	Laura Haban	lhaban@charter.net	PO Box 1344	Crescent City	CA	95531
NO	Darrel Parlasca		PO Box 1344	Crescent City	CA	95531
	Loe Cowan	lcowan@co.del-norte.ca.us	424 N. Pebble Beach	Crescent City	CA	95531
NO	Bill Cook	Surferbill@charter.net		Crescent City	CA	95531
	Suresh Ralnam	Suresh.ralnam@dot.ca.gov		Eureka	CA	95521
YES	Kimberley Haban	kmhaban@aol.com	2980 Elk Valley Cross Rd	Crescent City	CA	95531
YES	Tim Haban	mudman02@habanconstruction.com	2980 Elk Valley Cross Rd	Crescent City	CA	95531
YES	Beth Reyman	b_reyman@yahoo.com	181 Apple Ct.	Crescent City	CA	95531
YES	Lonnie Reyman	lpreyman@gmail.com	181 Apple Ct.	Crescent City	CA	95531
YES	Chuck Sherman	CLSE7488@gmail.com	3725 Wonder Stump Rd	Crescent City	CA	95531
YES	Linda Sherman	LindaSherman31@gmail.com	3725 Wonder Stump Rd	Crescent City	CA	95531
YES	Chuck Clarkson	Chuck.Clarkson@firsTgroup.com	150 Williams	Crescent City	CA	95531
YES	Kristen Zumeta	dividedsky1984@gmail.com	2440 Elk Valley Cross Rd	Crescent City	CA	95531
	John Roberts			Smith River	CA	95567
YES	Karen Haban	karenhaban@gmail.com	PO Box 1292	Crescent City	CA	95531
	Phil Jamieson	karenhaban@gmail.com	PO Box 1292	Crescent City	CA	95531
	Randy Pincombe	rpincombe@charter.net	400 Critter's Way	Crescent City	CA	95531
	Chris Howard	choward@co.del-norte.ca.us	1625 Ashford Rd	Crescent City	CA	95531
YES	Ryan Forsht	greenescapes707@gmail.com	2401 Elk Valley Cross Rd	Crescent City	CA	95531
YES	Ben Zumeta	bzumeta@frcrredwoods.org	2440 Elk Valley Cross Rd	Crescent City	CA	95531
NO	Janet Haley	unlear@earthlink.att	361 Critter's Way	Crescent City	CA	95531
YES	Susie Hawkins	Srhawki@msn.com	113 Apple Ct.	Crescent City	CA	95531
YES	Star Blackburn	shifteight@charter.net	275 Elk Valley Cross Rd	Crescent City	CA	95531
YES	Dan Blackburn	shifteight@charter.net	275 Elk Valley Cross Rd	Crescent City	CA	95531
YES	Tawesa Leighton	Tawesa@DNCTC.org		Crescent City	CA	95531
YES	Jill Lewis	rnj6162@aol.com		Crescent City	CA	95531
YES	Gene Hilger	hilgerharley@yahoo.com	Parkway Dr.	Crescent City	CA	95531
YES	Mary Anne Buckles	mabuckles2@hotmail.com	4531 Wonder Stump Rd	Crescent City	CA	95531
YES	Gerry Hemmingsen	ghemmingsen@co.del-norte.ca.us	981 H Street	Crescent City	CA	95531
	David Williams		PO Box 387	Smith River	CA	95567
NO	Leslie Bower	lehbower@gmail.com	451 Critter's Way	Crescent City	CA	95531
	Heidi Kunstal	hkunstal@co.del-norte.ca.us	981 H Street	Crescent City	CA	95531
NO	Mario Westpaal			Crescent City	CA	95531
NO	Jeamnce Westpaal			Crescent City	CA	95531

Elk Valley Cross Road Corridor Plan Public Workshop No. 1

Wednesday, June 26, 2019

Name	Telephone	Address	Email Address	Individual/Group Representative	Comments	Add to contact list?
Zumeta		2450 Elk Valley Cross Rd			Our neighbors share a driveway w/ us and asked us to submit a comment on their behalf. They also have close calls pulling in/out of our drive way on a daily basis. Speed limit needs to be lowered and shoulders for people to walk.	
Jill Lewis	(707)-464-4076	155 Deer Meadow Way	rnj6162@aol.com		1. Speed Limit to high 2. Need sidewalks 3. No semi trucks	YES
Patrick Hawkins	(707)-218-2086	113 Apple Ct.	patrick@firstservice.cc	Individual	We have buried two animals, had incidents with traffic getting in and out of driveway onto Elk Valley Cross Road. The road needs to be slowed to 30 miles an hour highway to Northcrest. We have seen many times where traffic comes off the highway speeds up to 45 miles per hour and narrowly avoids high school students walking to school. Someone is going to get killed!	YES
Ron Sandler	(707)-487-1116		DNAMB@aol.com	Del Norte Ambulance	1. Major blindspot at cross road and 199. A post of units block view 100% of 101 offramp. 2. Brush on/near fog line block views on cross road.	YES
Richard Lewis	(707)-464-4076	155 Deer Meadow Way	rnj6162@aol.com		1. Speed Limit to high 2. Need sidewalks 3. No semi trucks	YES
Kim Haban		2980 Elk Valley Cross Rd			I would like to see something done to slow down traffic, I have lived at this address for 37 years have seen countless accidents and the death of my mother in law coming to our house to pick blackberries, cars speed through 199 and cross road intersection 60-65 mph constantly, confused by all the turn lanes then last minute lane change is what causes it all if a overpass or not crossing at all would be to my liking. The amount of traffic stats are not correct. From my house I can hear them accelerating across the intersection by the time they are passing my driveway they're going 50 MPH, don't even bother to stop at parkway stop sign. I truly think this project is needed and completed before more accidents and lifes are taken.	
Laura Haban		PO Box 1344	lhaban@charter.net	Haban Family	I travel the HWY 199/ Elk Valley Cross Road corridor daily and almost on a daily basis I witness a close call or stupid maneuver by a driver, both in northbound and southbound lanes. I know it is probably cost prohibitive, but an overpass at this intersection would eliminate any cross traffic interaction. My mother was killed in an accident at this intersection. This is my motivation for hoping that safety issues along this corridor will be addressed.	YES
Chuck Sherman	(949)-689-7748		CLSE7488@gmail.com		School children and pedestrians need a shoulder to walk on, in particular where road narrows in curves (e.g. tree eastbound side just east of Wonder Stump Rd.)	YES
Pat Hawkins	(707)-218-2086			Individual	We need to slow this road down, we cannot get out of our driveways without having a near miss from traffic. On top of that there are no shoulders.	YES
Darrel Parlasca		PO Box 1344	lhaban@charter.net	Haban Family	Please refer to comments by Laura Haban. Also traffic signals which control all east, west, north, and south bound traffic.	YES
Ryan Forsht	(707)-954-7157	2401 Elk Valley Cross Rd	greenscapes707@gmail.com	self/neighbors	The confusion of crossing from HWY 101 and Elk Valley Cross Rd has caused several accidents/year. There should be a pedestrian walkway/ bike lanes between Florence Keller and Lake Earl Dr. kids at school or walking home are in danger daily. There needs to be flashing lights and a crosswalk. I've also seen on average 3-4 accidents between Sunset High and Deer Meadow Way, low visibility and high speed is a problem there.	YES
Ben Zumeta	(206)-913-3359	2440 Elk Valley Cross Rd	bzumeta@frcwood.org	Individual	My dog, Wilson, was hit by a truck with a trailer that appeared to be going the speed limit and which stopped as quickly as possible but still hit him. Our dog got out by accident, but he likely would not have been hit if they were going 35 MPH instead of 45 MPH. The difference in travel time between 45 MPH and 30 MPH would be a matter of 30 seconds, but costs lives and property damage. I have seen 5 accidents in 5 years in person in front of my house. Moreover, tourists in RVs looking for tourist destinations are often lost on Elk Valley Cross Road but think they are on Elk Valley Road (which leads to National and State Parks), making greater hazards than would be normal on such a road.	YES
Tim Haban	(707)-464-7686	2980 Elk Valley Cross Rd	mudman02@habanconstruction.com	Individual	Moving into my current location in 1985 I can't count the amount of accidents I've seen on the 199 and Cross Road intersection, 3 fatalities that I know of one being my mother 4 years ago. I run my construction business out of my shop daily. Crossing this intersection on an average of 10-12 times a day. I'm extremely cautious when crossing but still seem to have close calls very often, traffic has to slow down! I think a round about at each intersection of 199 and 101 is a answer, some may not like it but it will save lives, maybe one yours. What ever your decision the speed needs to decrease, safety has to be #1, at any cost, also the freeway needs to start southbound 101 after Elk Valley Cross Rd, and merge to one lane northbound before the Cross Rd. Line of site is critical when placing road signs so traffic can not be impaired!	YES
Bryan Fraser, Dokken					Talking with contractor prior to meeting. Driving cattle trailer across 101, almost get tagged every time due to people speeding/ not realizing how big the trailer is.	
Beth Reyman	(707)-951-0795	181 Apple Ct.	b_reyman@yahoo.com		Speed needs to decrease to 35/ 40 MPH max. Need shoulders, cannot walk to school bus safely. If no shoulders than sidewalks. Take down large tree on south side of Wonder Stump Rd/ Elk Valley Cross Rd, it creates a blind corner. Better paint/ markings for the 101/ Elk Valley Cross Rd intersection. More signage for speed. School (flashing school sign) Florence Keller. Without better shoulders there will be a school kid hit.	
Mario Westpaal	(707)-954-1315	191 Church Tree	lafireresq@yahoo.com		Flashing warning lights on 101 and 199 ahead of Elk Valley Cross Rd to warn drivers on a highway to upcoming cross traffic. Increased shoulder/ bike lane the lengths of the corridor.	
Bryan Fraser, Dokken					Concrete sidewalk would not fit surroundings. Gravel/ decomposed granite path would fit the surroundings better	
Leslie Bower	(707)-464-9169	451 Critters's Way	lehbower@gmail.com		I've lived at my present address for 15 years, My concerns are: I cant make a left hand turn from Cunningham Ln onto Elk Valley due to a lack of visibility. A convex mirror would be huge. The road needs the bike lanes completed. Young children are dropped at Sunset High School and walk along the verge. The traffic is too fast, especially with all the driveways/ roads that come onto Elk Valley. The 101/ Elk Valley middle intersection is not understood by many drivers and leads to dangerous decisions. The bike lane on parkway needs to be extended to include the Elk Valley Cross Rd corridor, all the way to Lake Earl Dr (I know the last part has a lane).	
Kristen Zumeta	(757)-285-7881	2440 Elk Valley Cross Rd	dividedsky1984@gmail.com	Individual	I have a close call pulling in/ out of my driveway every single day! We desperately need shoulders and reduced speed! Please.	YES
Linda Sherman	(949)-689-7758	3725 Wonder Stump Rd	lindasherman31@gmail.com		There is a problem on Wonder Stump with speeding cars, one solution could be a "caution" sign with the speed limit clearly displayed. Kids exiting school bus at several stops on Elk Valley Cross Rd, there is no sidewalk or enough shoulder for the school kids to walk. Idea = flashing lights displaying cars actual speed. Please no traffic signals or speed bumps.	

Barbara Lee	(707)-954-0124	2345 Elk Valley Cross Rd	barbarajlee.LMFT@gmail.com		We need to slow the traffic, the visibility is poor and with increased houses/ traffic it is difficult to pull out of driveways. There are many more pedestrians due to the school and no safe way to walk along the street. I have a difficulty pulling out of my driveway. I am almost hit 2-3 times per week. Speed at night is especially a problem. Traffic at shift change is high at the same time kids are going and leaving school. Some type of traffic control at 101 and Elk Valley Cross Rd intersection. Clear instructions for the on ramp/ entry lanes and control for turns. Move the start of 65 MPH zone south of the intersection.	YES
Yvonne O'Neill	(707)-464-3200	1940 Malone Rd			Suggestions: 1.) Rumble strips at Wonder Stump Rd and Elk Valley Cross Rd. 2.) Sidewalks for students from Sunset High School to walk on. 3.) Flashing lights at either side of school. 4.) I love "roundabouts" but not at 199 and Elk Valley Cross Rd, 55 MPH is hard to slow for "roundabout". 5.) Better lighting at 101 and Elk Valley Cross Road. 6.) Better lighting and flashers at 199 and Elk Valley Cross Rd. Other: Speed limit changes from 55 MPH to 65 MPH just past Elk Valley Cross Rd and 101 exchange, people start speeding up sooner.	
Susie Hawkins	(707)-218-7087	113 Apple Ct.	Srhawki@msn.com		Pulling out of our driveway is always a crap shoot. We move out such a ways then gun it and hope we make it. Getting the mail is always a little scary. And trying to take a walk...is taking your life out of your hands. I'm always concerned for the school kids walking by, cars going around those curves! Very dangerous. The 101 and Cross road intersection is down right scary. It's a regular occurrence when people convey into the intersection from all 4 directions and have a complete look of confusion as to what they are supposed to do. Many don't know how to turn, where to go or what to do. Scary! Almost got T-boned waiting at the 199 and Cross road intersection from 101 towards Parkway. A truck coming from Hiouchi in the right lane didn't realize it turned off and ended. He came straight through and barely missed us.	YES
Karen Haban		PO Box 1292	karenhaban@gmail.com	Haban Family - In memory of Patti M. Haban	Would like to see a speed study done on both highways at the crossroads intersections. It is the highway speed that makes both intersections so dangerous. Reduce the speed! Should be a 45 MPH zone on 199 coming out of the Redwoods. Change the 199 Intersection to make crossing it easier, the markings on the 199 highway are extremely confusing coming out of the trees.	YES
Chuck Clarkson		150 Williams Dr	chuck.clarkson@firsTgroup.com	Redwood Coast Transit	A straighter road and wider road would help public transport. Our big concern on the road is blind spots and the speed of other vehicles.	
Mary Anne Buckles	(562)-533-4810				One of my main concerns is the intersection at 101 and Wonder Stump going south. The bit is not paved adequately and if you're turning into Wonder Stump sometimes you take your life in your hands as cars and trucks behind you aren't slowing down.	
Gene Hilger					Speed is the biggest problem...	

Elk Valley Cross Road Corridor Plan

Public Workshop #2

February 27, 2020

Add to mailing list?	Full Name	E-Mail Address	Site/Mailing Address	City	State	ZIP
	Roanna Bower	rbowers@co.del-norte.ca.us	981 H Street, Suite 1b	Crescent City	CA	95531
	Linda Sherman	lindasherman31@gmail.com	3725 Wonder Stump Rd	Crescent City	CA	95531
	Chuck Sherman	CLSE7488@gmail.com	3725 Wonder Stump Rd	Crescent City	CA	95531
	David Morgan	Caltrans D1				
	Suresh Rutman	Suresh.Rutman@dot.ca.gov	Caltrans D1			
YES	Janet Jones	Mapiglet@yahoo.com	2145 Laurel Lane 2155 Elk Valley Rd	Crescent City	CA	95531
YES	Laura Haban	lhaban@charter.net	PO box 1344	Crescent City	CA	95531
YES	Karen Haban	KarenHaban@gmail.com	PO Box 1929	Crescent City	CA	95531
	Robert T. Bucks	Wonderstump@hotmail.com	4531 Wonder Stump Rd	Crescent City	CA	95531
YES	Mike Vessels	mikalvessels@gmail.com	2133 Elk Valley x Rd	Crescent City	CA	95531
	Don Micheletti	d.micheletti@charter.net	130 Viviana Ln	Crescent City	CA	95531
	Tamera Leighton	Tamera@dnctc.org	900 Northcrest	Crescent City	CA	95531
NO	Chris Howard	choward@co.del-norte.ca.us				
	Corhiss Jones		2375 Elk Valley Cross Rd	Crescent City	CA	95531
	Paul Reyman	paulreyman@gmail.com	181 Apple Ct	Crescent City	CA	95531
YES	Troy Wakefield	Twake5557@gmail.com	400 Coho Ln	Crescent City	CA	95531
YES	Kim Chareht	canthookem@gmail.com	2580 Elk Valley Cross Rd	Crescent City	CA	95531
YES	Elizabeth Kim	eliz.art@gmail.com	2380 Elk Valley Cross Rd	Crescent City	CA	95531
YES	Venny Bayon	lejardinart@hotmail.com	2901 Elk Valley Cross Rd	Crescent City	CA	95531
YES	Leslie Bower	lehbower@gmail.com	451 Critter's Way	Crescent City	CA	95531
NO	Heidi Kunstal	hkunstal@dhco.org	981 H St. Ste 110	Crescent City	CA	95531

Name	Telephone	Address	Email Address	vidual/Group Representa	Comments	Add to contact list?
NA	NA	NA	NA	NA	Crosswalk should not be at Cunningham Lane. Visibility too poor. Place crosswalk at Sunset High school or none crosswalk.	
Elizabeth Kim	NA	2380 Elk Valley Cross Rd.	NA	NA	I live in segment 2, I would love sidewalks with limited impact to property line...I DON'T think Alternative B is necessary. Elk Valley Cross @ US 101 - I like Alt. C or Alt. A Elk Valley Cross @ SR 199 - I like Alt. A or C	Yes
Mike Vessels	707-460-1477	2133 Elk valley Cross Rd Crescent City, CA 95531	mikalvessels@gmail.com	NA	Lower and monitor speed between Lake Earl and 101, relocate drainage grate @ Wonder Stump. Better walking & bike paths. Start with painted lines at 101 for Elk Valley Crossing. Limited signage also (don't overwhelm drivers)	Yes
Kim Charette	707-465-3006	2580 Elk Valley Cross Rd	canthookem@gmail.com	NA	Any existing improvements should have minimal change to existing trees or environmental but should be implemented with the intention to slow increasing congestion to 25 mph. Improve safety for bikes and peds. Restrict commercial truck traffic, 10,000 pounds or more forbidden. Will City replace water meters hookups? Will law enforcement take speeding seriously as it will increase if road is widened. Roundabouts, speedbumps!	Yes
Don Micheletti	NA	NA	D.micheletti@charter.net	NA	Put a no U turn sign on Hwy 101 at Elk Valley Cross Rd. People driving north make U turns onto 101 South. They hug the left side and mess up the intersection. Preferred alternatives is roundabout at both locations.	Yes
C. Charles (Chuck) Sherman	949-689-7748	3725 Wonder Stump Rd	CLSE7488@gmail.com	NA	No pedestrian/bike lane, if a ped/bike lane is added these should be a traffic barrier to deter car/truck crossover (line do not work). I suggest a path on other side of drainage ditch.	Yes
Mary Anne Buckles	562-533-4810	4531 Wonder Stump	NA	NA	No roundabouts please, no signal! Love the U turn lanes Currently-no speed limit signs by Sunset High School	
Laura Haban	707-457-3294	PO box 1344 CCC 95531	lhaban@charter.net	Family of Patti Haban	Patti Haban killed at the intersection of Elk Valley Cross Road and Hwy 199. I prefer the roundabout alternative for this intersection.	Yes
Chris Howard	NA	1625 Ashford Rd	Chris.forrest.howard@gmail.com	NA	EV & 199 => Alt. C EVCR & 101 => Alt. D	
Beth Reyman	NA	181 Apple Ct	NA	NA	Alternative A roadway segment 2 is preferred for roadway. Should allow for enough walkway.	
Karen Haban	457-3207	PO box 1292 CCC	Karenhaban@gmail.com	Haban Family	What slows traffic down on 199 is the most important thing. The roundabout would accomplish this. The accident rate MUST be reduced.	
Linda Sherman	949-689-7758	3725 Wonder Stump Rd	NA	NA	Options that might work and what I prefer as follows: Segment 1: alt A no changes Seg 2: Seg 3: EVCR & 101: Alt "A" or Alt "C" are very good in my opinion, Alt "B" or Alt "D" not desired EVCR & SR 199: Stripping Alt "A"	
Robert T. Buckles	NA	4531 Wonder Stump Rd. CC CA 95531	Wonderstump@hotmail.com	NA	Adding Restricted Crossing U turn on US 101 is a very good idea. No Roundabout No Signal	Yes
Tauera Leighton	NA	NA	NA	NA	Alt C on 101 at Elk Valley Cross road is best alternative to start. Alt C on 199 at Elk Valley crossroad is best Alternative.	

Attachment H

Signal Warrant Analysis

Elk Valley Cross Road – Signal Warrant Analysis

A signal warrant analysis is performed for the US 101/Elk Valley Cross Road and US 199/Elk Valley Cross Road intersections. The investigation of the need for a traffic control signal should include analysis of factors related to the existing operation and safety at the study location and the potential to improve these conditions with installation of a signal. A traffic control signal warrant study is the first step in determining whether to consider the provision of a traffic signal (or roundabout) at an intersection. The *2014 California Manual on Uniform Traffic Control Devices (CA MUTCD), Revision 4* (published by Caltrans, last updated on March 29, 2019 and based on the federal MUTCD published by the Federal Highway Administration) specifies nine traffic signal warrants, as follows:

- Warrant 1 - Eight-Hour Vehicular Volume
- Warrant 2 - Four-Hour Vehicular Volume
- Warrant 3 - Peak-Hour Vehicular Volume
- Warrant 4 - Pedestrian Volume Warrant
- Warrant 5 - School Crossing Warrant
- Warrant 6 - Coordinated Signal System Warrant
- Warrant 7 - Crash Experience Warrant
- Warrant 8 - Roadway Network Warrant
- Warrant 9 - Intersection Near a Grade Crossing

Most of the traffic signal warrants are based on vehicular and pedestrian traffic volumes. The nine warrants have been developed to identify those locations where a signal would provide an overall benefit. Locating traffic signals consistent with the conclusions of a warrant analysis is important in limiting the potential liability of the authorizing jurisdiction. The California MUTCD states that, “The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.” A signal can be considered if at least one of the warrants are met and an engineering study indicates that installing a traffic signal will improve the overall safety and/or operation of the intersection.

The Peak Hour volume warrant (Warrant 3) is intended for use at a location where traffic conditions are such that for a minimum of 1 hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major street. The peak-hour warrant is the most commonly used, as it is usually the first warrant to be met. The Crash Experience warrant (Warrant 7) is also applied in this analysis, as it is intended for application where the severity and frequency of crashes are the principal reasons to consider installing a traffic control signal.

US 101 Intersection

The AM and PM peak-hour traffic volumes at the US 101/Elk Valley Cross Road intersection do not meet the Peak-Hour Volume Warrant (Warrant 3) criteria.

Warrant 7 indicates all of the following three criteria should be met for a traffic signal to be considered:

1. An adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency; and
2. Five (5) or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash; and
3. For each of any 8 hours of an average day, the vehicles per hour on the major street and the higher-volume minor-street approach to the intersection meet the conditions in the Eight-Hour Vehicular Volume Warrant (Warrant 1), or the volume of pedestrian traffic is not less than the requirements specified in the Pedestrian Volume Warrant (Warrant 4).

Criteria 1 could potentially be met at this intersection. Criteria 2 does not appear to be met, as there are 15 recorded crashes over the 5-year period from 2014 through 2018, for an average of 3 crashes per year. Most (80%) of these crashes are broadside crashes. Based on a review of the movements preceding the crashes, most crashes appear to involve conflicts between vehicles either pulling out from Elk Valley Cross Road or departing the median refuge area and through vehicles on the highway. Based on a review of the continuous daily roadway count data on Elk Valley Cross Road, Criteria 3 is not met. As such, Warrant 7 is not met.

It can be concluded that the signal warrant criteria is not met at the US 101/Elk Valley Cross Road intersection.

US 199 Intersection

The AM and PM peak-hour traffic volumes at the US 199 / Elk Valley Cross Road intersection are well below meeting the signal warrant criteria. (The major street volumes are too small to be charted.)

Regarding the Crash Experience Warrant (Warrant 7), Criteria 1 could potentially be met at this intersection. Criteria 2 does not appear to be met, as there are 10 recorded crashes over the 5-year period from 2014 through 2018, for an average of 2 crashes per year. Most (80%) of these crashes are broadside crashes. Based on a review of the continuous daily roadway count data on Elk Valley Cross Road, Criteria 3 is not met. As such, Warrant 7 is not met.

It can be concluded that the signal warrant criteria is not met at the US 199/Elk Valley Cross Road intersection.

Attachment I

Speed Survey, Northbound 101 traffic at
Elk Valley Cross Road intersection

March 26, 2020

1:15 PM to 2:38 PM

ENGINEERING AND TRAFFIC SURVEY	
STREET NAME	US 199 EASTBOUND
LIMITS	US 101 TO ELK VALLEY CROSS ROAD
COLLECTION LOCATION	SOUTHEAST CORNER OF US 199 AT ELK VALLEY CROSS ROAD
ROAD DESCRIPTION	2 LANE (1-WESTBOUND, 1-EASTBOUND)
POSTED SPEED	55 MPH
85TH PERCENTILE SPEED	58 MPH
DATE OF SURVEY	2020-03-26.
START TIME	13:15.
END TIME	14:38.
WEATHER	CLEAR
ROAD SURFACE	DRY
ROADWAY CONDITION	NO UNUSUAL CONDITION
FUNCTIONAL CLASSIFICATION	OTHER PRINCIPAL ARTERIAL
OBSERVER	MIKE PEEPLES
CHP RADAR #	137377
RADAR SERIAL #	AS001222

ENGINEERING AND TRAFFIC SURVEY			
STREET NAME	US 199 EASTBOUND		
LIMITS	US 101 TO ELK VALLEY CROSS ROAD		
SPEED	# OF VEHICLES	% OF VEHICLES	CUMMULATIVE % OF VEHICLES
70	0	0%	100%
69	0	0%	100%
68	0	0%	100%
67	0	0%	100%
66	0	0%	100%
65	4	4%	100%
64	1	1%	96%
63	0	0%	95%
62	2	2%	95%
61	5	5%	93%
60	1	1%	88%
59	1	1%	87%
58	2	2%	86%
57	8	8%	84%
56	10	10%	76%
55	8	8%	66%
54	12	12%	58%
53	11	11%	46%
52	5	5%	35%
51	4	4%	30%
50	5	5%	26%
49	1	1%	21%
48	4	4%	20%
47	1	1%	16%
46	5	5%	15%
45	1	1%	10%
44	3	3%	9%
43	1	1%	6%
42	4	4%	5%
41	0	0%	1%
40	1	1%	1%
TOTAL	100		
~ SPEEDS GREATER THAN 70 MPH INCLUDED AT 70 MPH ~			
~ SPEEDS LESS THAN 40 MPH INCLUDED AT 40 MPH ~			

Attachment J

Intersections (199 & 101) Technical Memorandum

TECHNICAL MEMORANDUM

Company: Del Norte Local Transportation Commission

Attention: Tamera Leighton, Executive Director

From: Brian Stephenson, PE

Subject: Elk Valley Cross Road Intersections (US 199 & US 101)

Date: May 27, 2020

The purpose of this technical memorandum is to document the coordination efforts between Caltrans District 1, Del Norte Local Transportation Commission (DNLTC) and Del Norte County regarding the Elk Valley Cross Road (EVCRCR)/US 199 intersection and the EVCRCR/US 101 intersection.

Background

The Elk Valley Cross Road Corridor Plan (EVCRCP) was produced for the Del Norte Local Transportation Commission. During the development of the EVCRCP the latest 5 years of collision history (2014-2018) for the US 199 and US 101 intersections of EVCRCR were analyzed and summarized in the EVCRCP. Of concern to the DNLTC was the high collision rate at the EVCRCR/US 199 intersection, which was eight to ten times the state average for similar intersection types. A further detailed analysis was performed at the EVCRCR/US 199 intersection and based on collision data from the 2014 calendar year, collision diagrams were developed for the 5 collisions documented in that year. This analysis and other project information was used to create a slide show presentation that was presented to Caltrans District 1 Management on March 30th, 2020 (see Attachment to this memo). Based on the collision data from 2014, all five of the collisions involved a vehicle proceeding north on US 199 from US 101, approaching the EVCRCR intersection. The results of the March 30th presentation was to schedule a field meeting with Caltrans staff to discuss options at the EVCRCR/US 199 intersection.

Field Meeting

On May 6th, 2020 a field meeting at the EVCRCR/US 199 was held and attended by:

- David Morgan (Chief, Office of Traffic Safety, Dist. 1)
- Tom Fitzgerald (Deputy District Director, Maintenance & Operations, Dist. 1)
- Tamera Leighton (Executive Director, DNLTC)
- Heidi Kunstal (Director, Del Norte County Community Development Department)
- Rosanna Bower (Assistant County Engineer)
- Brian Stephenson (Project Manager, Dokken Engineering)

At this field meeting, it was observed that westbound vehicle on EVCRCR waiting at the stop sign to enter the US 199 intersection had impaired sight distance to the approaching northbound US 199 traffic. A field measurement was performed with a rolling wheel measurement device and at a distance of 690 feet from the

intersection, approaching vehicles are not visible. Per Table 405.1A of the Highway Design Manual, a Corner Sight Distance Time Gap for Unsignalized Intersections, Single Unit Truck, crossing 4 lanes (2 through lanes, 2 left turn lanes) should be 10.9 seconds, and approaching traffic at 45 MPH should have 721 feet of sight distance, and at 55 MPH should have 881 feet of sight distance.

The County performed a speed survey in late February 2020 and determined the northbound US 199 traffic continuing through the EVCR intersection had an 85th percentile speed of 58 MPH (see EVCRCP Attachment I). The current posted speed is 55 MPH and there is a 45 MPH advisory (black text on yellow background) radar speed feedback sign prior to the intersection.

The EVCRCP determined there are two major contributing factors to the limited sight distance at the EVCR/US 199 intersection. The first factor is the tall grass and vegetation in the southwest quadrant of the intersection and along the approaching northbound US 199 leg. The second factor is the placement and height of the existing "DO NOT ENTER" sign on the left-hand side of the approaching northbound US 199 roadway. The participants of the field meeting also observed traffic at the intersection and determined that the northbound 199 approaching traffic was visible for 7 seconds before entering the intersection.

In Figures 1 and 2 are photos of the intersection, from the point of view of EVCR traffic waiting at the stop sign to cross the US 199 intersection.

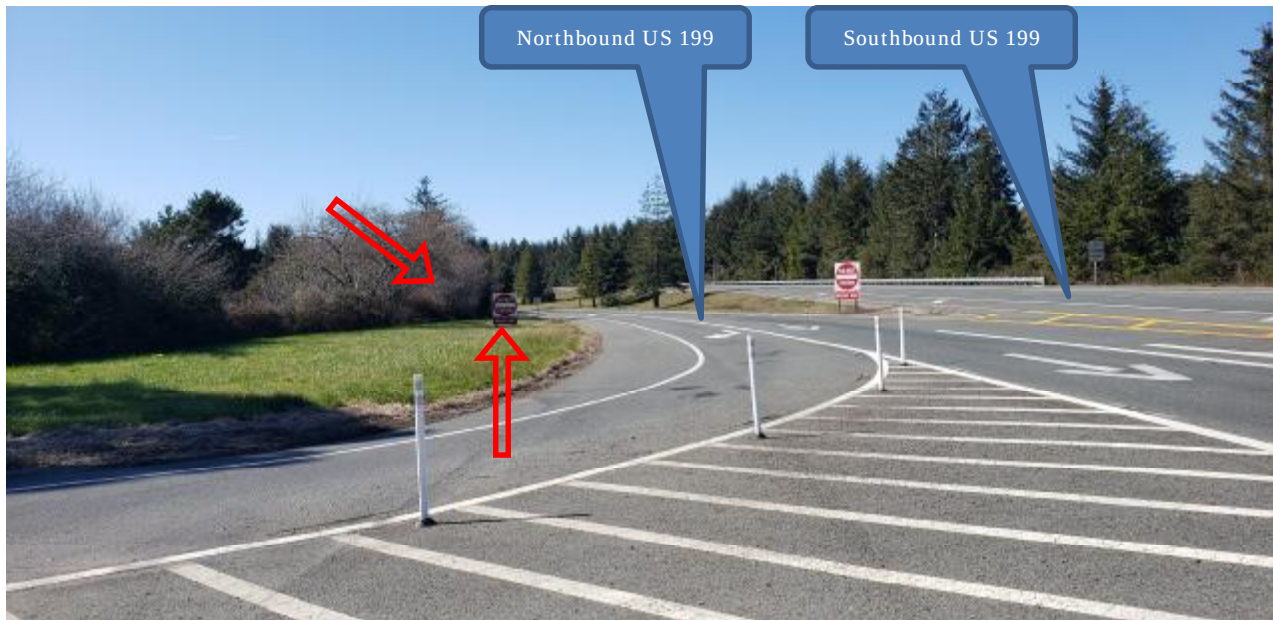


Figure 1: February 27th, 2020-EVCR looking at approaching north bound US 199 traffic

Northbound US 199 traffic is blocked from sight of the EVCR waiting vehicle by the two factors mentioned above and identified by the red arrows in the photos.

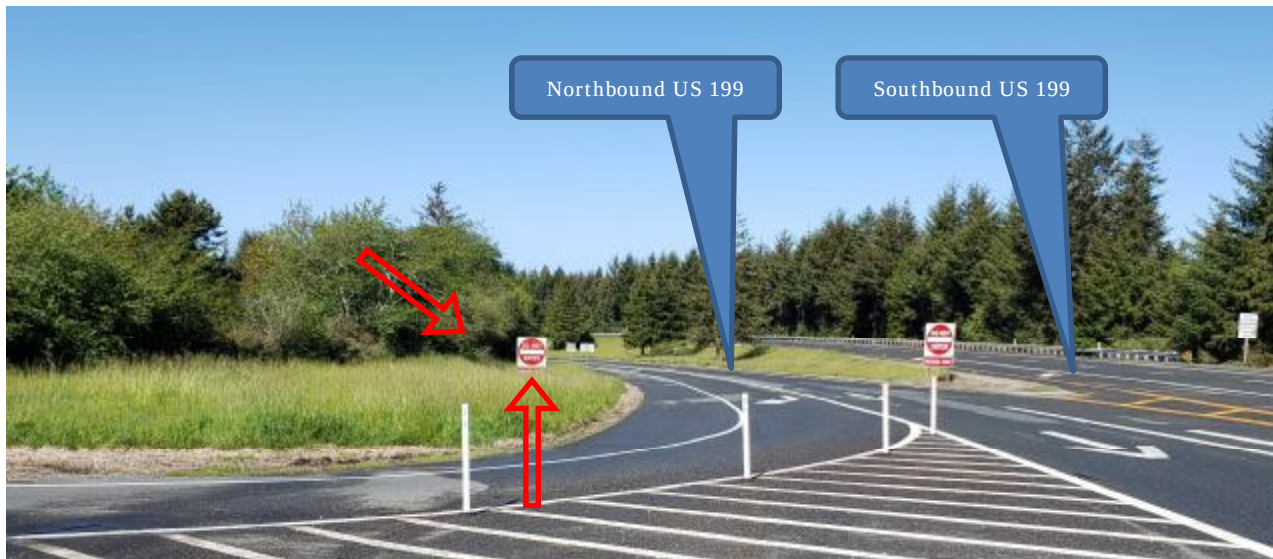


Figure 2: May 6th, 2020-EVCR looking at approaching northbound US 199 traffic

Proposed Intersection Improvements

During the field meeting on May 6th several ideas were discussed about how to improve the EVCR/US 199 intersection, and the EVCR/US 101 intersection. These ideas are broken down into two classifications, Maintenance and Design. Maintenance actions are those items that are based on current operating procedures at Caltrans for maintenance of the State Right of Way and roadways. Design actions are those items that will require further development and proceed through the standard Caltrans project delivery process.

Maintenance Actions

The first maintenance item identified at the EVCR/US 199 was to mow the existing grass along the roadside, up to the right of way fence and/or vegetation. As seen in the Figure 1 and Figure 2 above, the existing grass grows and blocks the view of approaching traffic and blocks the view of the “Do Not Enter” sign on the left side of US 199. David Morgan and Tom Fitzgerald contacted the local Caltrans Maintenance yard and requested that the mowing be performed as soon as possible. For the future, Caltrans needs to maintain the mowing schedule at this intersection to keep the grass from obstructing the sight distance.

The second maintenance item identified at the EVCR/US 199 was the trimming of the vegetation encroaching into the State Right of Way to improve sight distance. David Morgan and Tom Fitzgerald contacted the local Caltrans Maintenance yard and requested that the trimming be performed as soon as possible. For the future, Caltrans needs to maintain the vegetation trimming at this intersection to keep any new vegetation growth from obstructing the sight distance.

Below in Figure 3 is a photo of the intersection after Caltrans Maintenance performed the mowing and trimming operation on May 7th, 2020.

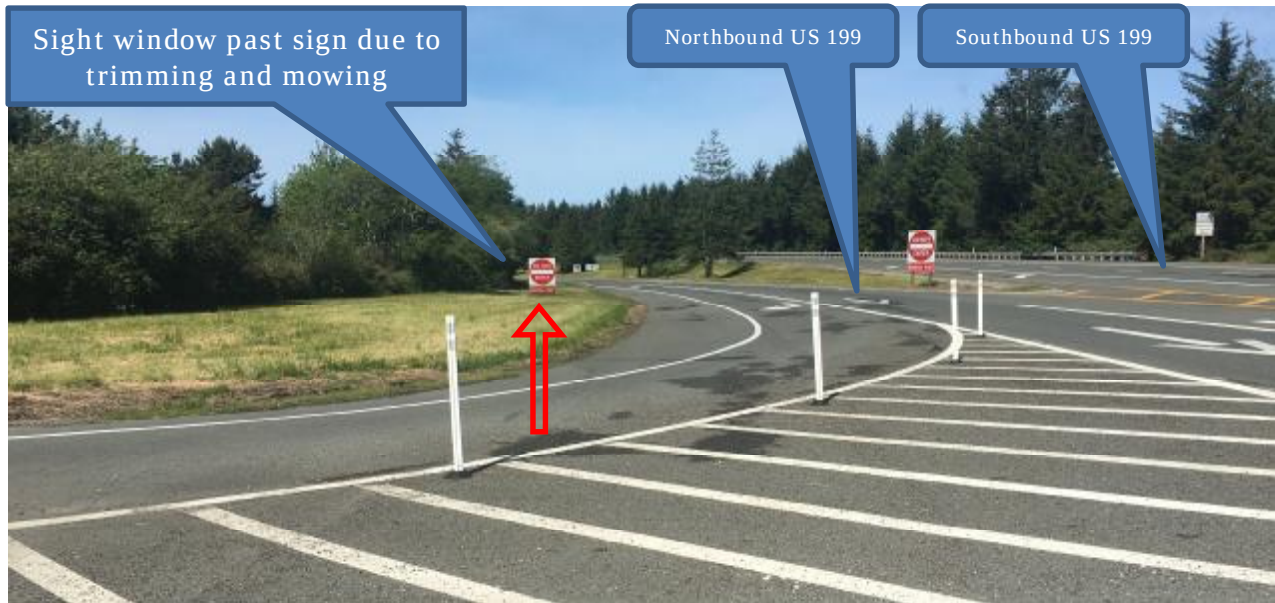


Figure 3: May 15th, 2020-EVCR looking at approaching northbound US 199

Notice that there is a sight window past the left-hand side of the “Do Not Enter” sign located on the left side of US 199. This is the result of the mowing and trimming operations of Caltrans Maintenance, but the “Do Not Enter” sign is still an obstruction to sight distance and needs to be relocated. With the sign relocated the sight distance would approach the distance prescribed in Table 405.1A for a 45 MHP design speed.

At the EVCR/US 101 intersection the only maintenance item identified was to apply traffic striping to better delineate the suggested traffic pattern in the median area of the intersection. On May 6th 2020 Dokken Engineering sent to David Morgan and Tom Fitzgerald, a proposed striping layout of the median area for the Caltrans Maintenance striping crew to install (See Figure 4).



Figure 4: EVCR/US 101 Intersection Striping

The second item discussed was the installation of on-demand advanced flashing beacons for northbound US 199 traffic approaching the EVCR intersection. The design of this advanced beacon would be as follows: EVCR traffic that approaches the intersection to cross US 199 from either direction would be detected by in-pavement induction loops (or other means) located near the stop bars. That would trigger the advanced beacons located approximately 900 to 1,200 feet before the intersection along northbound US 199. The flashing beacons would also have the appropriate signage alerting US 199 drivers of the intersection and cross traffic ahead. See Figure 6 below for conceptual layout.



Figure 6: Advanced Flashing Beacon Conceptual Layout

The third option discussed in the field was to perform grading in the roadside area located in the southwest quadrant (approaching NB US 199 traffic, right hand side) lowering the existing grade and moving the existing roadside swale (currently located 3 feet from edge of pavement) as close to the existing right of way as feasible. This would result in a lower of the existing grade in the sight line path of approximately 2 feet vertically. See Figure 7 below.

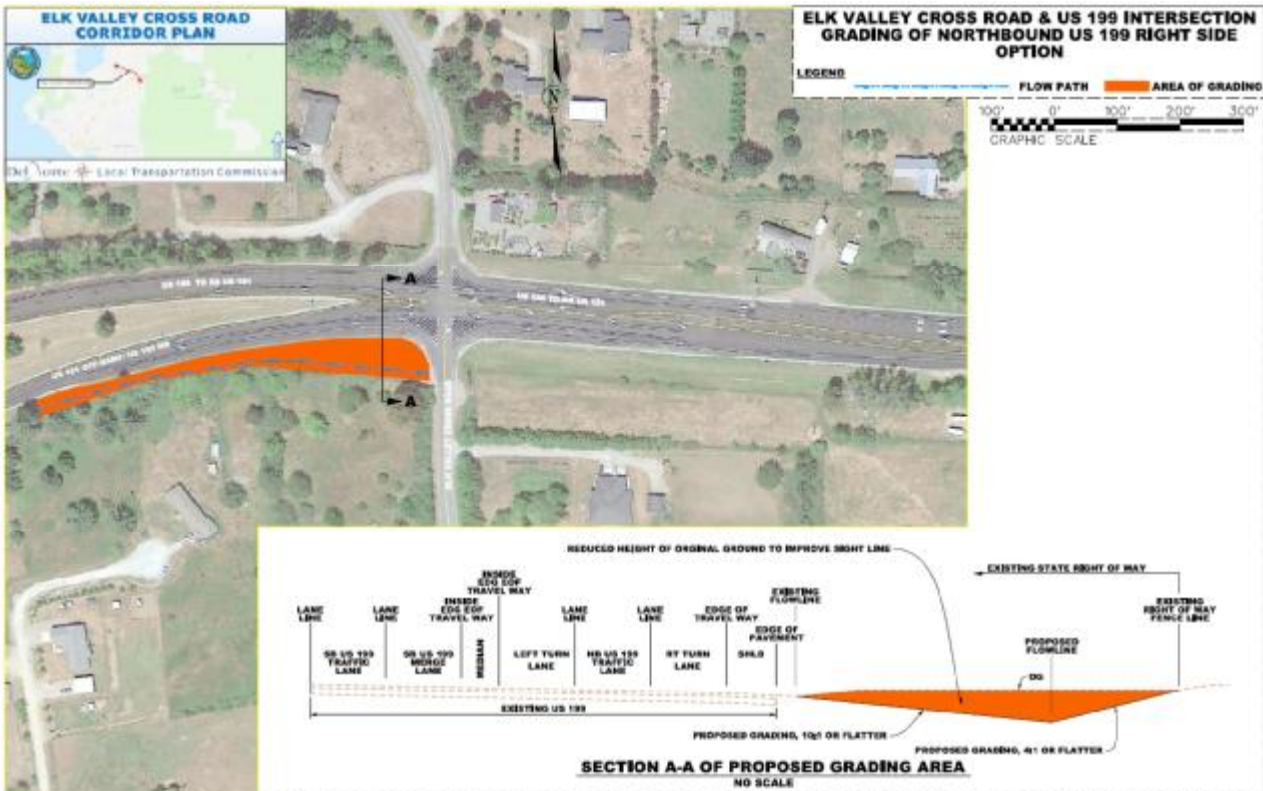


Figure 7: Roadside grading to improve sight line

The fourth option discussed in the field was to change the intersection control type. A traffic signal, or a roundabout are the two feasible modifications to the cross-street stop-controlled intersection. Per *Attachment H of the EVCRCP*, a traffic signal at the EVCR/US 199 intersection does not meet the signal warrants. The use of a roundabout at this intersection would have to be supported by the collision severity reduction, and the reduction in approach speeds. Caltrans stated that the cost of the roundabout (\$6.3 million, per *EVCRCP, Section 7*) would not be covered by safety funding, and other means of funding would need to be secured by the local agencies.

Conclusions and future actions

The intersection of Elk Valley Cross Road and US 199 has a higher than average collision rate, as does the Elk Valley Cross Road and US 101 intersection, that needs to be addressed. Based on the field meeting on May 6th, Caltrans has two maintenance activities to perform at the EVCR/US 199 intersection, and one maintenance activity to perform at the EVCR/US 101 intersection as outlined above. As of May 19, 2020, the mowing and trimming of vegetation at the EVCR/US 199 intersection has been performed, but the relocation of the "DO NOT ENTER" sign is still needing to be done. The striping work at the EVCR/US 101 intersection is still needing to be done.

The Del Norte Local Transportation Commission and Del Norte County Community Development Department are supportive of advancing the Design Actions outlined in this memorandum. The advanced flashing beacon system that is activated by Elk Valley Cross Road traffic at the intersection of US 199 is an incremental improvement that the local agencies believe Caltrans should advance through the Project Development Process as quickly as possible. The grading of the roadside area to lower the existing grade has the benefits of improving the sight lines and providing a dedicated stormwater treatment area. The regular maintenance mowing and vegetation trimming to improve and maintain the maximum possible sight distance at the intersection also needs to be diligently performed.

Attachment: Elk Valley Cross Road @ US 199 Intersection Presentation, 3/30/2020

**cc: Rosanna Bower, Del Norte County
David Morgan, Caltrans District 1
Tom Fitzgerald, Caltrans District 1**

File: 2543-200/brs

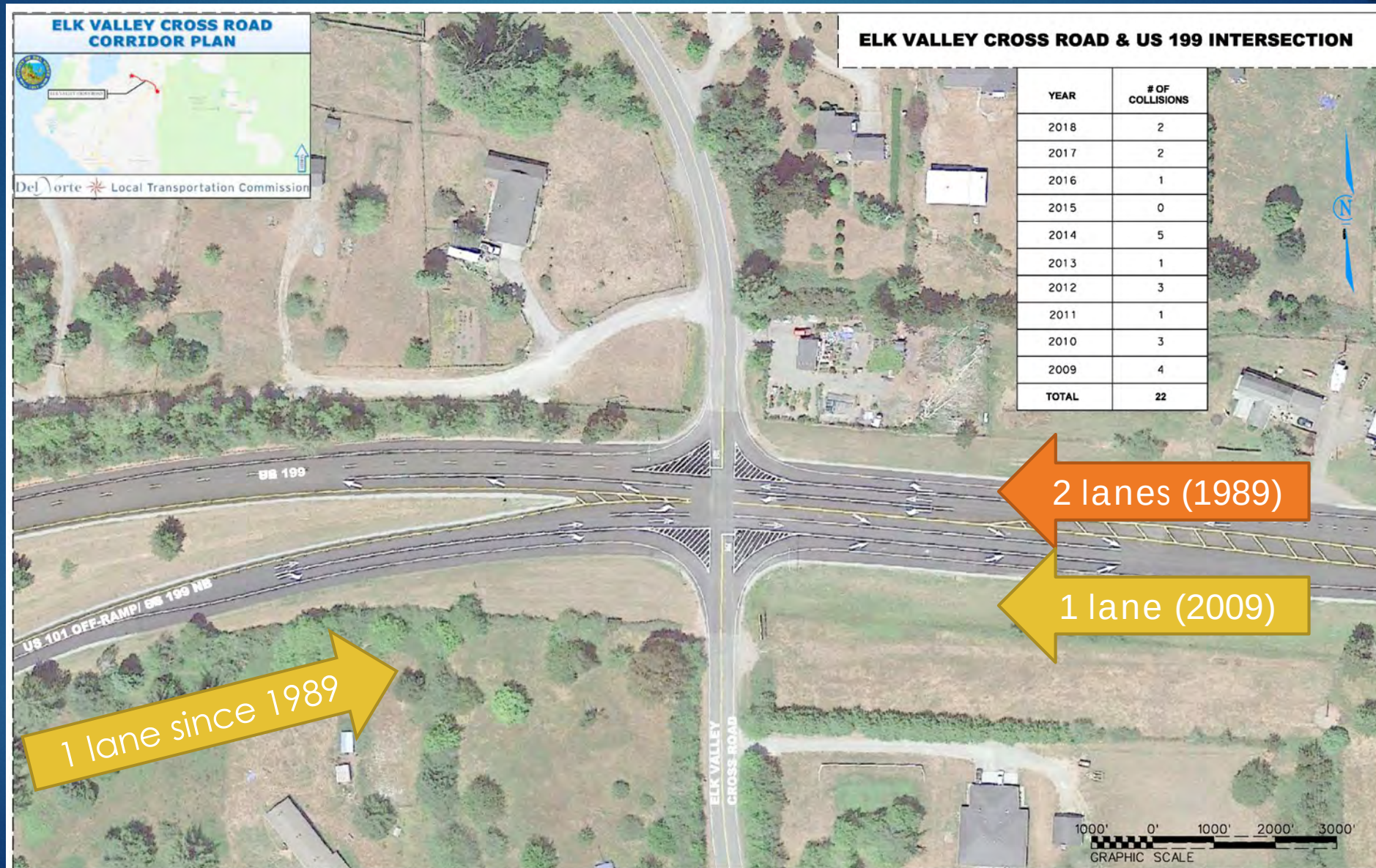


Elk Valley Cross Road @ US 199 Intersection

DISCUSSION BETWEEN COUNTY, DNLTC AND CALTRANS DISTRICT 1 STAFF

MARCH 30, 2020

Intersection Overview



2014-2018 Collision Data

No.	CAH's Incident No	CASE_ID	ACCIDENT_YEAR	PROC_DATE	JURIS	COLLISION_DATE	COLLISION_TIME	OFFICER_ID	DAY_OF_WEEK	CHP_SHIFT	POPULATION	CNTY_CITY_LOC	SPECIAL_COND	BEAT_TYPE	CHP_BEAT_TYPE	CITY_DIVISION_LAPD	CHP_BEAT_CLASS	BEAT_NUMBER	PRIMARY_RD	SECONDARY_RD	DISTANCE	DIRECTION	INTERSECTION	WEATHER_1	WEATHER_2	STATE_HWY_IND	CALTRANS_COUNTY	CALTRANS_DISTRICT	STATE_ROUTE	ROUTE_SUFFIX	POSTMILE_PREFIX	POSTMILE	LOCATION_TYPE	RAMP_INTERSECTION	SIDE_OF_HWY	TOW_AWAY	COLLISION_SEVERITY	NUMBER_KILLED	NUMBER_INJURED	PARTY_COUNT	PRIMARY_COLL_FACTOR	PCF_CODE_OF_VIOL	PCF_VIOL_CATEGORY	PCF_VIOLATION	PCF_VIOL_SUBSECTION	HIT_AND_RUN	TYPE_OF_COLLISION	MVW	PED_ACTION	ROAD_SURFACE	ROAD_COND_1	ROAD_COND_2	LIGHTING	CONTROL_DEVICE	CHP_ROAD_TYPE	PEDESTRIAN_ACCIDENT	BICYCLE_ACCIDENT	MOTORCYCLE_ACCIDENT	TRUCK_ACCIDENT	NOT_PRIVATE_PROPERTY	ALCOHOL_INVOLVED	STWD_VEHTYPE_AT_FAULT	CHP_VEHTYPE_AT_FAULT	COUNT_SEVERE_INJ	COUNT_VISIBLE_INJ	COUNT_COMPLAINT_PAIN	
1	1355	6505815	2014	20160509	9120	20140526	1230	15557	1	1	9	800	0	1	2		2	3	RT 199	ELK VALLEY CROSS RD	0		Y	A	-	Y	D	N	1	199	-	T	0.797	I	5	N	Y	4	0	1	2	A	-	9	21802	A	N	D	C	A	A	H	-	A	A	1					Y		A	1	0	0	1
2	1358	6512602	2014	20160324	9120	20140616	1028	15557	1	1	9	800	0	1	2		2	3	RT 199	ELK VALLEY CROSS RD	86	N	N	A	-	Y	D	N	1	199	-	T	0.82	H	-	N	Y	0	0	0	2	A	-	9	21802	A	N	B	C	A	A	H	-	A	A	1			Y	Y		F	26	0	0	0	
3	1381	6555083	2014	20160423	9120	20140703	1555	15913	4	2	9	800	0	1	2		2	3	RT 199	ELK VALLEY CROSS RD	0		Y	A	-	Y	D	N	1	199	-	T	80.797	I	6	N	Y	0	0	0	2	A	-	1	23152	E	N	D	C	A	A	H	-	A	A	0					Y		A	7	0	0	0
4	1464	6669127	2014	20160611	9120	20141007	1643	13564	2	2	9	800	0	1	2		2	3	RT 199	ELK VALLEY CROSS RD	0		Y	B	-	Y	D	N	1	199	-	T	0.797	I	5	N	Y	3	0	3	3	A	-	9	21802	A	N	D	C	A	A	D	H	A	A	1			Y		A	7	0	1	2		
5		6291236	2014	10/20/2014	9120	7/25/2014	1250	13388	5	1	9	800	0	1	2		2	3	RT 199	ELK VALLEY CROSS RD	0		Y	A	-	Y	D	N	1	199	-	T	0.797	I	5	N	Y	1	1	5	3	A	-	9	21802	A	N	D	C	A	A	H	-	A	A	1			Y		A	1	0	4	1		
6	743	90178633	2016	20160513	9120	20160423	1320	21221	6	1	9	800	0	1	2		2	3	UNITED STATES HIGHWAY 199	ELK VALLEY CROSS RD	0		Y	B	-	Y			199								Y	2	0	5	2	A	-	9	21802	A	N	D	C	A	B	H	-	A	A	0				Y		A	7	1	1	3	
7	367	90404858	2017	20170302	9120	20170225	2500	19072	6	4	9	800	0	1	2		2	1	ELK VALLEY CROSS RD	UNITED STATES HIGHWAY 199	70	N	N	B	-	N		199							N	0	0	0	1	A	-	8	22107		M	E	I	A	B	H	-	D	D	0				Y		D	22	0	0	0			
8		90408997	2017	3/9/2017	9120	3/4/2017	1300	18748	6	1	9	800	0	1	2		2	3	RT 199	ELK VALLEY CROSS RD	0		Y	C	-	Y		199							Y	4	0	2	2	A	-	9	21801	A	N	D	C	A	B	H	-	A	D	0			Y		A	7	0	0	2				
9	23	90661411	2018	20180214	9120	20180203	1047	21863	6	1	9	800	0	1	2		2	3	US-199	ELK VALLEY CROSS RD	0		Y	A	-	Y		199							Y	4	0	1	2	A	-	9	21802	A	N	D	C	A	A	H	-	A	A	0			Y		A	1	0	0	1				
10		90795164	2018	20180821	9120	20180816	20	21221	4	3	9	800	0	1	2		2	3	UNITED STATES HIGHWAY 199	ELK VALLEY CROSS RD	0		Y	B	-	Y		199							N	0	0	0	1	A	-	8	22107		M	E	I	A	A	H	-	C	D	0			Y		-	99	0	0	0				

2014-2018 Collisions and Rates

TABLE 7A: Elk Valley Cross Road - Crash Data by Intersection Location

2014 to 2018

Includes Crashes on Cross Streets Within 200 Feet of the Intersection

Does not include crashes on Elk Valley Cross Road greater than 200' from the intersections listed

Intersecting Street	Total Study Intersection Crashes	% Total Crashes	Crashes By Severity			Alcohol or Drugs Involved	Crashes by Type								Weather			Lighting				
			Property Damage Only	Injury	Fatality		Broadside	Sideswipe	Rear End	Hit Object	Head-On	Auto/Ped	Other	Clear	Cloudy	Raining	Daylight	Dusk/Dawn	Dark- ST LTS	Dark- NO ST LTS	Other	
US 101	15	60%	9	6	0	2	12	0	1	2	0	0	0	8	6	1	4	6	5	0	0	
SR 199	10	40%	3	6	1	2	8	1	0	1	0	0	0	5	4	1	9	0	1	0	0	
TOTAL	25	100%	12	12	1	4	20	1	1	3	0	0	0	13	10	2	13	6	6	0	0	
% Study Intersection Crashes			48%	48%	4%	16%	80%	4%	4%	12%	0%	0%	0%	52%	40%	8%	52%	24%	24%	0%	0%	

Note: No crashes involving bicyclists or pedestrians were reported at the intersections.

Source: SWITRS, NHTSA, TIMS.

Source: LSC Transportation Consultants Inc.

EVCR Crash Tables.xls

TABLE 9A: Intersection Crash Rates

2014 to 2018

Includes Crashes on Cross Streets Within 200 Feet of the Intersection

Intersecting Street with Elk Valley Cross Road	Intersection Crashes			Actual Crash Rate (Crashes per MV)		Percent of Statewide Average Rate		Statewide Average Crash Rate By Intersection Type (Crashes per MV)	
	Total	Injury or Fatality	% Injury or Fatal Crashes	Total	Injury or Fatality	Total	Injury or Fatality	Total	Injury or Fatal
US 101	15	6	40%	0.88	0.35	402%	350%	0.22	0.10
SR 199	10	7	70%	1.49	1.04	677%	1032%	0.22	0.10
TOTAL	25	13	52%						

Note: MV = Million Vehicles entering intersection

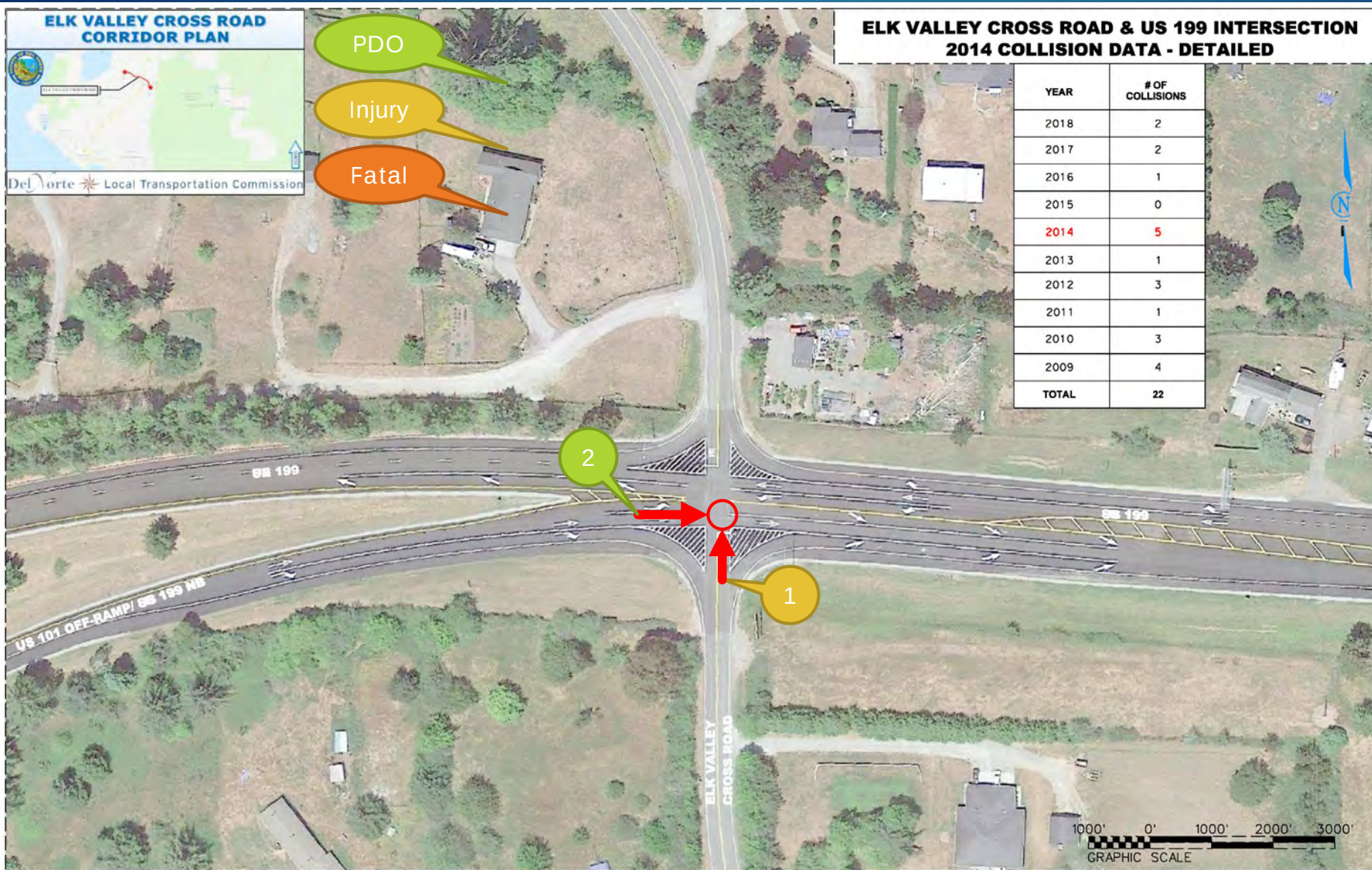
Note: Bold indicates a crash rate higher than the average rate

Source: SWITRS, NHTSA, TIMS, 2015 Collision Data on California State Highways

Source: LSC Transportation Consultants Inc.

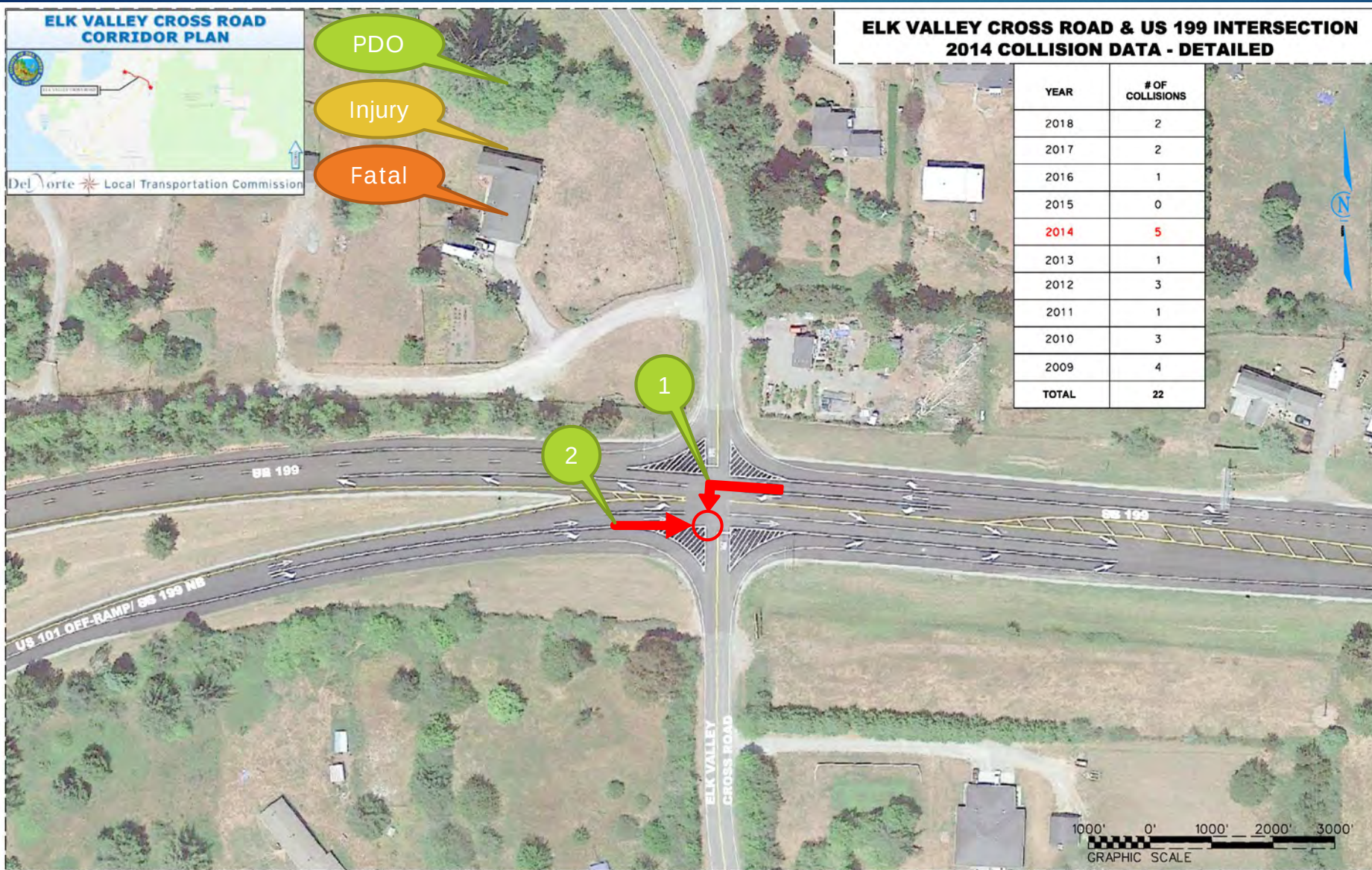
EVCR Crash Tables.xls

2014 Detailed look



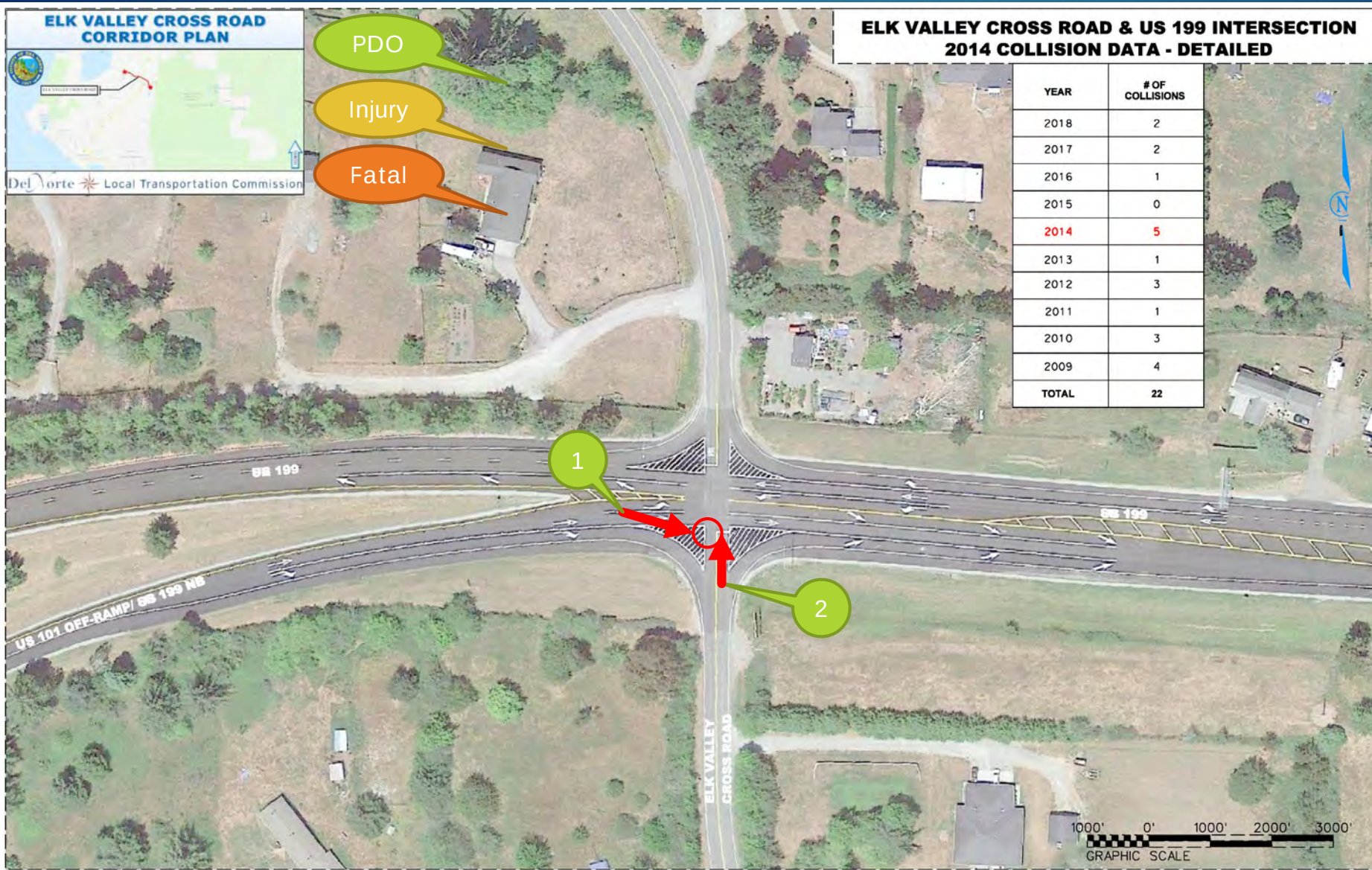
CASE_ID	TIME	Weather	Road
6505815	1230	Clear	Dry
6512602	1028	Clear	Dry
6555083	1555	Clear	Dry
6669127	1643	Cloudy	Dry
6291236	1250	Clear	Dry

2014 Detailed look



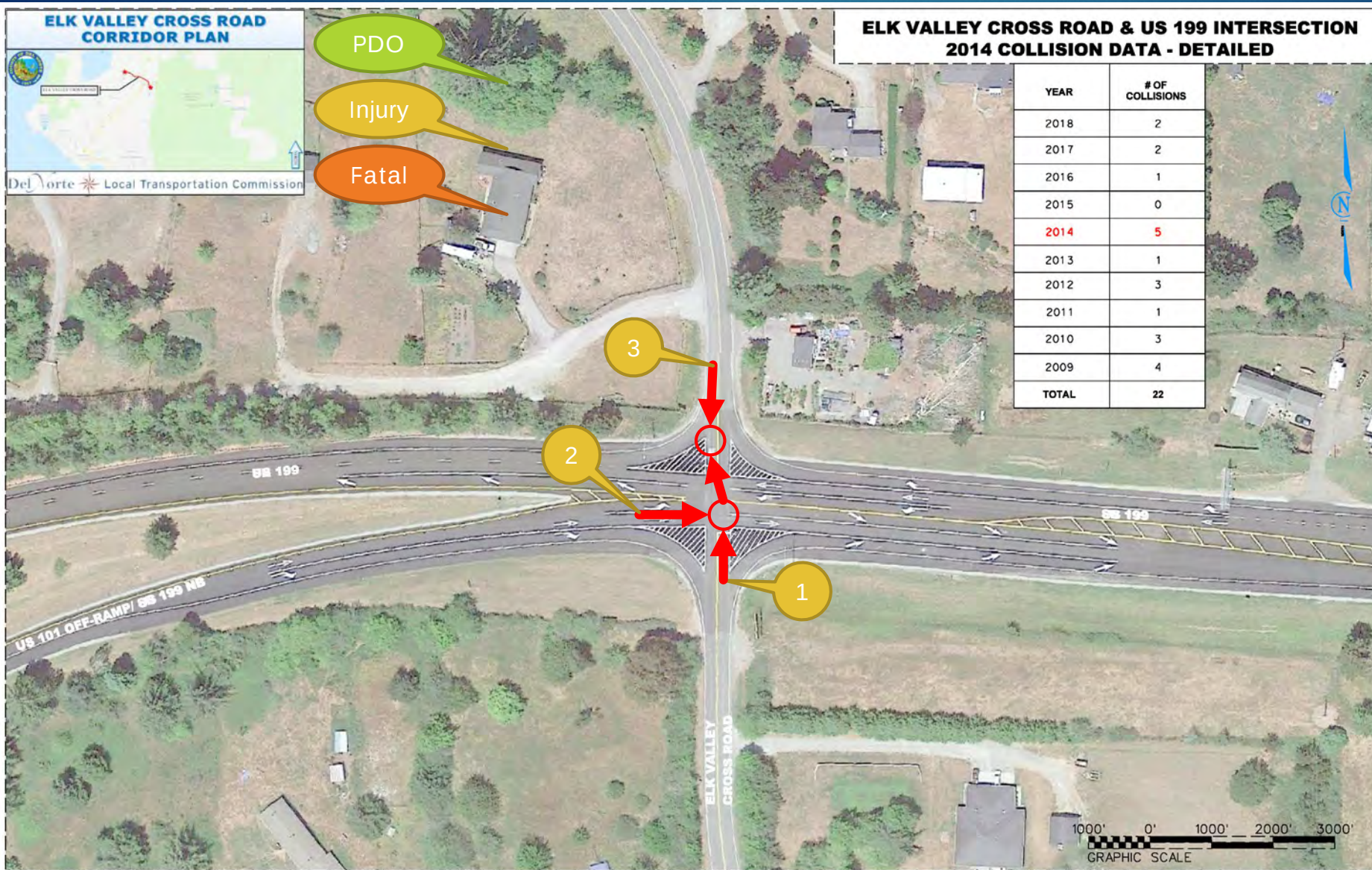
CASE_ID	TIME	Weather	Road
6505815	1230	Clear	Dry
6512602	1028	Clear	Dry
6555083	1555	Clear	Dry
6669127	1643	Cloudy	Dry
6291236	1250	Clear	Dry

2014 Detailed look



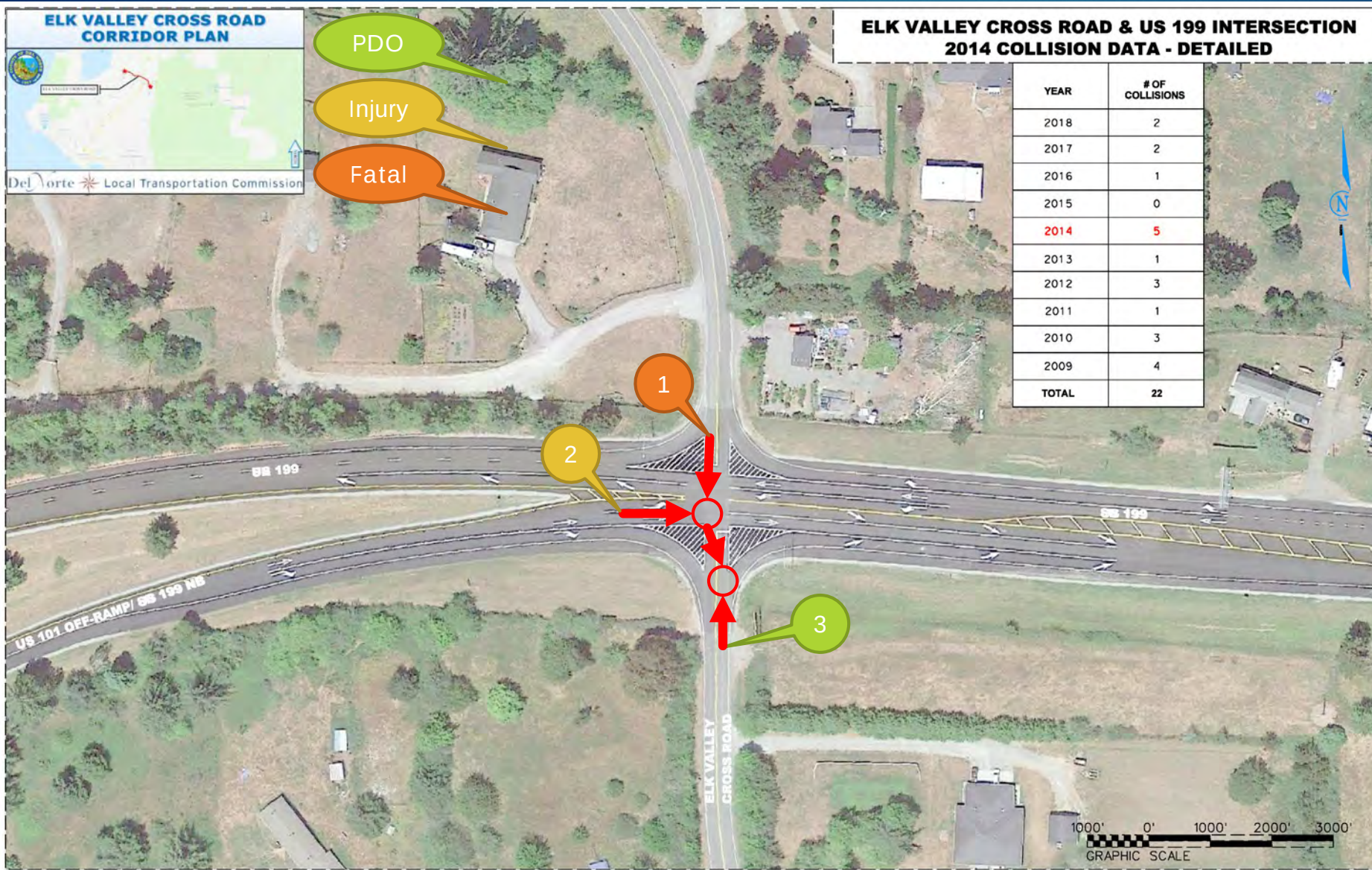
CASE_ID	TIME	Weather	Road
6505815	1230	Clear	Dry
6512602	1028	Clear	Dry
6555083	1555	Clear	Dry
6669127	1643	Cloudy	Dry
6291236	1250	Clear	Dry

2014 Detailed look



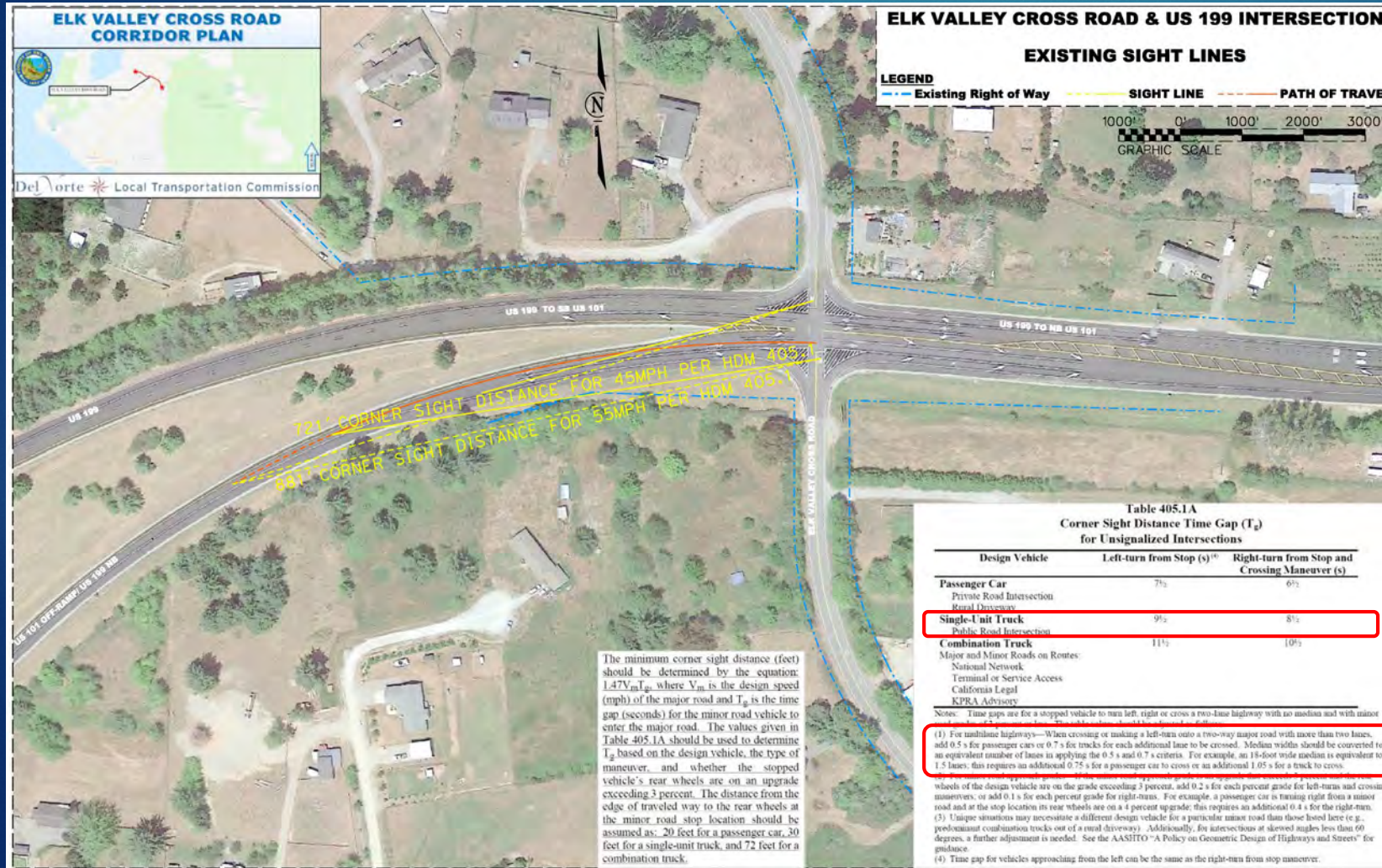
CASE_ID	TIME	Weather	Road
6505815	1230	Clear	Dry
6512602	1028	Clear	Dry
6555083	1555	Clear	Dry
6669127	1643	Cloudy	Dry
6291236	1250	Clear	Dry

2014 Detailed look



CASE_ID	TIME	Weather	Road
6505815	1230	Clear	Dry
6512602	1028	Clear	Dry
6555083	1555	Clear	Dry
6669127	1643	Cloudy	Dry
6291236	1250	Clear	Dry

Elk Valley Cross Road @ US 199 Sight Distance



Corner Sight Distance, per HDM 405.1				Design Speed, MPH		
Design Vehicle	Left Turn from Stop	Median Additional Time (2 lanes)	Total	45	50	55
	Sec	Sec	Sec	Distance, Ft		
Passenger Car	7.5	1.0	8.5	562	625	687
Single Unit Truck	9.5	1.4	10.9	721	801	881
Combination Truck	11.5	1.4	12.9	853	948	1043

Steps moving forward



Photo taken 2/27/2020 at 12:38 PM

