

# **2012 TRIBAL TRANSPORTATION SAFETY SUMMIT**

HELENA, MT

JUNE 5, 2012

## **ENGINEERING & PLANNING**

### **“HOW ENGINEERING PLAYS INTO SAFETY ON OUR TRIBAL ROADS”**

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#### **PRESENTERS:**

**SAM WINDY BOY FOR MIKE TOLAND, P.E – BIA ROCKY MTN REGION**

**DAN LOZAR, P.E. – CS&KT ROADS PROGRAM**

# INDIAN RESERVATION ROADS PROGRAM

- ✘ CFR Title 25 Part 170...

# TRIBAL TRANSPORTATION PLANNING

- ✘ Community meetings
- ✘ Tribal council, State & Local Government
- ✘ Etc...

# LONG RANGE TRANSPORTATION PLAN

- ✘ 20 year planning document
- ✘ Community, Tribal Council, Local & State Governments
- ✘ Guide document for 5 year Transportation Improvement Plans

# TRANSPORTATION IMPROVEMENT PLAN (TIP)

- ✘ 5 year plan
- ✘ *“The TIP includes projects or phases of projects that can be completed, with justification based on Tribal transportation needs and funding availability.” 2012-2015 CSKT TIP*
- ✘ Prioritization of projects
  - + New Road Construction
  - + New Bridge Construction
  - + Safety Projects & Enhancements
  - + Restoration & Rehabilitation Projects
  - + Transit System Projects

# SCOPING/PRIORITIZATION MATRIX

## 2012 Transportation Improvement Program CSKT Roads Program

Route and Length	Condition	# of Homes Served	ADT	Economic Access	Recreational Access	Fire Control Access	Irrigation Use	Cultural Activities Access	Access to Public/Private Facilities	Safety Imps.	Irreversible Impacts	Air Quality Improvements	Total Points	Const. Or Maint.	Cost Est.
Elmo East (0.993 miles)	Fair	18		Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	12	Const.	
Maggie Ashley Court (0.8 miles)	Fair	60		Yes	Yes	No	No	No	Yes	Yes	Yes	Yes	12	Const.	
Mollman Pass Trail (1.5 miles)	Fair	18		Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	12	Const.	
College Streets (0.8 miles)	Fair	7		Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	10	Const.	
Chief Martin Charlo Homesite (0.7 miles)	Planned Homesite	24		No	Yes	No	Yes	No	Yes	No	Yes	Yes	9	Const.	
South Arlee Homesite (0.5 miles)	Poor	7		Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	9	Const.	
Elmo West (Ktunaxa Homesite) (0.7 miles)	New - Gravel	16		Yes	No	Yes	No	Yes	No	No	Yes	Yes	9	Const.	
Dixon Homesite (1.0 miles)	Poor	16		Yes	No	No	No	No	Yes	No	No	No	8	Const.	
Ronan Streets (0.2 miles)	Poor – Chip Seal	8		No	No	No	No	No	Yes	Yes	No	Yes	8	Const.	
Big Arm Townsite (1.7 miles)	Poor	16		No	No	Yes	No	No	Yes	No	Yes	Yes	8	Const.	
Hughes Road Homesites (0.4 miles)	Fair – Gravel	14		No	No	No	No	No	Yes	No	No	Yes	6	Const.	
South Valley Creek Homesites (0.3 miles)	Planned Homesite	9		No	No	Yes	No	No	Yes	No	No	Yes	6	Const.	
Terrace Lake Road (1.7 miles)	Fair	16		No	No	No	Yes	No	Yes	Yes	Yes	No	3	Const.	
Mountain View Homesites (0.5 miles)	Planned Homesite	12		No	No	Yes	No	No	No	No	Yes	Yes	5	Const.	
Hot Springs Homesites (0.2 miles)	Poor	8		No	No	No	No	No	No	No	No	Yes	5	Const.	

Rating System: Road Condition – Poor = 2, Fair = 1, Good = 0  
 Classification – Minor Collector = 1, Major Collector = 2, New Streets = 1  
 Families Served – 16 or more = 3, 8 or more = 2, 4-7 = 1, 0-3 = 0  
 ADT – 400 or more = 3, 100 to 399 = 2, 0 to 99 = 1  
 Irreversible Impacts (i.e. land use development) – Yes = -1, No = 0  
 Air Quality Improvements – Yes = 1, No = 0

# DESIGN & SAFETY FEATURE

- ✘ Rural Road Design
  - + Road Width
  - + Road Surfacing Type
  - + Design Speed
  - + Grading & Drainage
  - + Shoulder & Catch Slopes
  - + Stopping Site Distance
  - + Vertical & Horizontal Site Distance
  - + Signage & Lighting
  - + EMS Accessibility
  - + Pedestrian Access
  - + Wildlife Issues



# DESIGN & SAFETY FEATURE (CONT'D)

## ✘ Residential Road Design

- + Road Width
- + Curb/Gutter & Sidewalk
- + Design Speed
- + EMS Accessibility
- + Pedestrian Crossings & Access
- + ADA & Handicap Accessibility
- + Signage & Striping
- + Day & Night Considerations
- + Intersection Lighting



# DESIGN & SAFETY FEATURES (CONT'D)

## ✘ Bridge Design

- + Design Loading
- + Approaches
- + Guardrails
- + Decking Options
- + Signage
- + Vertical & Horizontal Site Distance
- + Hydrology



# ROAD REHABILITATION & RESTORATION

- ✘ Road R&R Design
  - + Construction As-builts (if possible!)
  - + Accurate Traffic Counts
  - + Re-surface vs. Re-construct
  - + Surfacing Options

