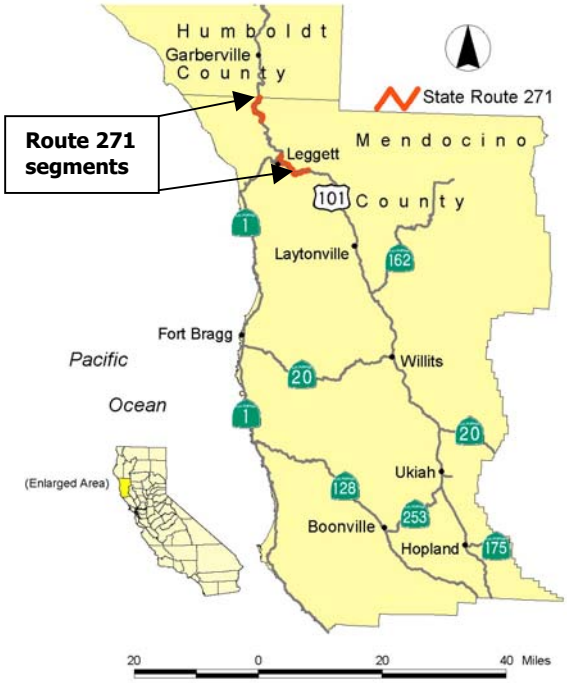
ROUTE CONCEPT REPORT



ROUTE 271 CORRIDOR

01-MEN-271-KP 0.0/36.5 (PM 0.0/22.7)
01-HUM-271-KP 0.0/T0.5 (PM 0.0/T0.3)

All information in this Route Concept Report is subject to change as conditions change and new information is obtained.

I approve this Route Concept Report as an analysis and conceptual long-range guide for Caltrans, our Regional Transportation Planning Partners, local entities and the public.

Approval Recommended:

CHARLIE FIELDER Date
Deputy District Director
Program/Project Management

Approval Recommended:

CHERYL S. WILLIS Date
Deputy District Director
Planning

Approved:

RICK KNAPP Date
District Director
District 1

JANUARY 2002

For individuals with sensory disabilities, this document is available in alternate formats. To obtain a copy in an alternate format, please call or write to the Caltrans Office of System and Community Planning, 1656 Union Street, Eureka, CA 95501. (707) 445-6398 Voice, (916) 654-3847 TTY

ROUTE CONCEPT REPORT

Statement of Planning Intent

The Route Concept Report (RCR) is a planning document which describes the Department's conceptual improvement options for a given transportation route or corridor. Considering reasonable financial constraints and projected travel demand over a 20-year planning period, the RCR considers transportation facility needs for each route or corridor. The RCR is a tool for implementing interregional and statewide continuity of the State's transportation network, and will be updated as needed as conditions change, or new information is obtained.

Purpose of the Route Concept Report

The objective of the RCR is to have local, regional, and state consensus on route or corridor concepts, improvement goals, and strategies. This document provides concept information only and does not determine policy nor establish a course of action. Route Concept Reports are prepared by District staff in cooperation with local and regional agencies.

Assumptions

The following assumptions form the basis for the development of Route Concept Reports:

1. The relative importance of State highways in the District is generally based on functional classification. In general, higher priority is given to major improvements on principal arterial routes as compared to minor arterials and collectors.

2. State highways with improvement concepts must have realistic concept levels of service. Concept levels of service are not established on State highways that will only be maintained (since improvements would not be made to address level of service concerns).

3. Level of service methodology is based on the 2000 Highway Capacity Manual. No level of service calculations have been made for Class II Highways, as these facilities are used primarily for access.

4. Determinations of future level of service for State highways in District 1 are based in part upon Statewide and Regional forecasts of State highway travel developed by Caltrans.

5. Route concepts apply generally to an entire route or corridor, unless there are overriding considerations (e.g. a major change in function along the route or feasibility concerns).

6. Major projects will be developed to meet design standards acceptable to the Federal Highway Administration in order to receive Federal funding for projects. Otherwise, a "design exception" must be secured during the project development process.

7. Safety projects will be pursued on an on-going basis in order to be responsive to safety concerns as they are identified.

8. No planned or programmed improvements were assumed to be complete in analyzing present and future operating conditions. The Route Concept Report details programmed improvements in the 2000 STIP.

9. Environmental documents are not required for Route Concept Reports. Individual improvement projects identified in Route Concept Reports will follow established environmental processes when development is proposed as required by law.

ROUTE CONCEPT REPORT

ROUTE 271

01-MEN-271-KP 0.0/36.5 (PM 0.0/22.7)
01-HUM-271-KP 0.0/T0.5 (PM 0.0/T0.3)

I. ROUTE CONCEPT AND RATIONALE

FACILITY CONCEPT

Route 271 should remain a 2-lane conventional highway, maintained as necessary at its existing width and on existing alignment.

Route 271 parallels Route 101 and is designated as a Class II Highway under the provisions of the 2000 Highway Capacity Manual, as the facility is used primarily for access for a few small, unincorporated northern Mendocino County communities situated along the Route, and mobility is secondary.

LEVEL OF SERVICE CONCEPT

No level of service calculations have been made for Class II Highways as these are used primarily for access.

The 2000 Highway Capacity Manual defines Class I and Class II Highways based upon expected use. Mobility is paramount in Class I facilities, while Class II facilities are used primarily for access or for recreational purposes. Class II facilities are not expected to be the subject of capacity improvement projects but will be maintained on existing alignments as necessary.

ROUTE CONCEPT FUNCTION

This Route Concept should serve as a tool for long range planning for Route 271. It provides recommendations to protect the state's investment in this Route, while recognizing financial constraints that will not allow the programming of extensive improvements for all highways.

II. ROUTE MANAGEMENT STRATEGIES

REHABILITATION STRATEGY

Route 271 should be maintained as necessary.

Based on functional classification, traffic volumes, and maintenance service levels, Route 271 in District 1 should be maintained as necessary at its present width and on

existing alignment. Portions of the Route may be rehabilitated on an exception basis, when maintaining the facility would be less cost effective than rehabilitating it.

SAFETY AND OPERATIONAL IMPROVEMENT STRATEGY

Route 271 includes one segment (KP 0.0/11.7 or PM 0.0/7.3 in Mendocino County), that has experienced a collision rate slightly over one and one-half times the statewide average, based on similar facilities. The District has an established collision surveillance and monitoring program, which identifies locations with collision concerns and recommends safety improvements when warranted. **Safety improvements at spot locations will be considered as necessary.**

Bridge replacement and storm damage projects will also be considered as necessary, and operational improvement projects will be considered on a limited basis. These projects, in addition to safety projects, should be constructed to appropriate State and/or Federal standards.

In the late 1980's, Caltrans barrier striped two-lane highways to comply with Federal standards. This reduced the number of passing opportunities on most two-lane highways. The impact of barrier striping is less severe on Route 271 than on other Routes within the District, since traffic volumes are generally low on this Route and Route 101 is available as a bypass for high speed through traffic.

GOODS MOVEMENT STRATEGY

Consistent with the relatively low truck traffic volumes on this Route, and the availability of a through Route constructed to modern standards, no goods movement improvements are planned for Route 271 at this time.

NON-MOTORIZED FACILITIES STRATEGY

Relatively light volumes of non-motorized traffic use Route 271, generally concentrated in the small communities along the Route (e.g. Leggett, Piercy). No bicycle or pedestrian improvements have been identified along the Route 271 corridor at this time.

CORRIDOR PRESERVATION STRATEGY

It is anticipated that Route 271 will remain as it exists (a 2-lane conventional highway). No substantial long-term right of way needs are anticipated.

III. ALTERNATIVE CONCEPTS CONSIDERED

No alternative concepts were considered for Route 271 in District 1.

IV. ROUTE ANALYSIS

DESCRIPTION

Route 271 consists of two discontinuous segments of old Route 101 in northern Mendocino and southern Humboldt Counties, that were bypassed with freeway construction. Route 271 generally parallels Route 101 alignment, and the Eel River. A portion of Segment 1 (MEN-271-KP 0.0/11.7 or PM 0.0/7.3) south of the community of Leggett follows Rattlesnake Creek, a tributary of the Eel River. The two segments of Route 271 total approximately 24 kilometers (15 miles) in length.

Route 271 originates at Route 101 near the small community of Cummings. The Route proceeds in a northwesterly direction, crossing Route 101 twice before it intersects with Route 1 near Route 101 in the community of Leggett. Route 271 resumes again near Red Mountain Creek, about one and one-half mile south of the Reynolds Overcrossing. It continues in a generally northerly direction again crossing Route 101 twice near the Humboldt/Mendocino County Line. The Route consists of portions of old Route 101 that were bypassed with freeway/expressway construction. The post mile description of the Route is 1-MEN-271-KP 0.0/36.5 (PM 0.0/22.7) and 1-HUM-271-KP 0.0/T0.5 (PM 0.0/T0.3).

ROUTE PURPOSE

Route 271 is used primarily as access for a few small, unincorporated northern Mendocino County communities situated along the Route. Included are the communities of Cummings, Leggett, and Piercy. Route 271 is functionally classified as a Rural Minor Collector.

Historically, portions of Route 271 have served as a detour for Route 101 when storm damage occurred, or during storm damage restoration.

ROUTE SEGMENTATION

Route 271 is segmented in Table 1 below for System Planning purposes:

TABLE 1
ROUTE 271 SEGMENTATION

SEG #	MEN 271		DESCRIPTION
	KP	PM	
1	0.0/11.7	0.0/7.3	Route 101 to Route 1
2	27.5/36.5	17.1/22.7	1.5 miles so. of Reynolds Overcrossing to the MEN/HUM Co. line
	HUM 271		
3	0.0/T0.5	0.0/T0.3	MEN/HUM Co. line to Route 101

LAND USE

Land use adjacent to Route 271 is generally open space forest, with some agricultural land (used primarily for grazing) and scattered low-density residential development. It is anticipated that these land uses will continue, with little additional development.

EXISTING FACILITIES

Table 2 below summarizes existing facility characteristics for the Route 271 corridor in District 1.

TABLE 2
EXISTING FACILITY CHARACTERISTICS
ROUTE 271

SEG #	MEN 271		DESCRIPTION	EXISITNG FACILITY
	KP	PM		
1	0.0/11.7	0.0/7.3	Route 101 to Route 1	2-lane Conventional
2	27.5/36.5	17.1/22.7	1.5 miles so. of Reynolds Overcrossing to the MEN/HUM County line	2-lane Conventional
	HUM 271			
3	0.0/T0.5	0.0/T0.3	MEN/HUM Co. line to Route 101	2-lane Conventional

Functional Classification	Rural Minor Collector
Eligible for Federal Funding	No
Freeway and Expressway System:	No
Eligible for Scenic Highway Designation:	No
Subsystem of Highways for Extra Legal Loads (SHELL)	No
Surface Transportation Assistance Act (STAA) Trucks Allowed:	No
Strategic Highway Network:	No
National Highway System:	No
Interregional Road System:	No
Public Airports Served:	None
Rail Service	None
Intercity Bus Service:	Greyhound
Intersecting State Highway Routes:	101, 1
Park and Ride Lots	None

OPERATING CONDITIONS

Present and future operating conditions, including traffic volume ranges, level of service, and volume to capacity ratios for both existing and anticipated future conditions for Route 271 are shown on Map 1 below. Further information regarding specific operating and geometric conditions may be found in Caltrans source documents (e.g. the State Highway Inventory, the State Highway Log, and Traffic Volumes on California State Highways, etc.)

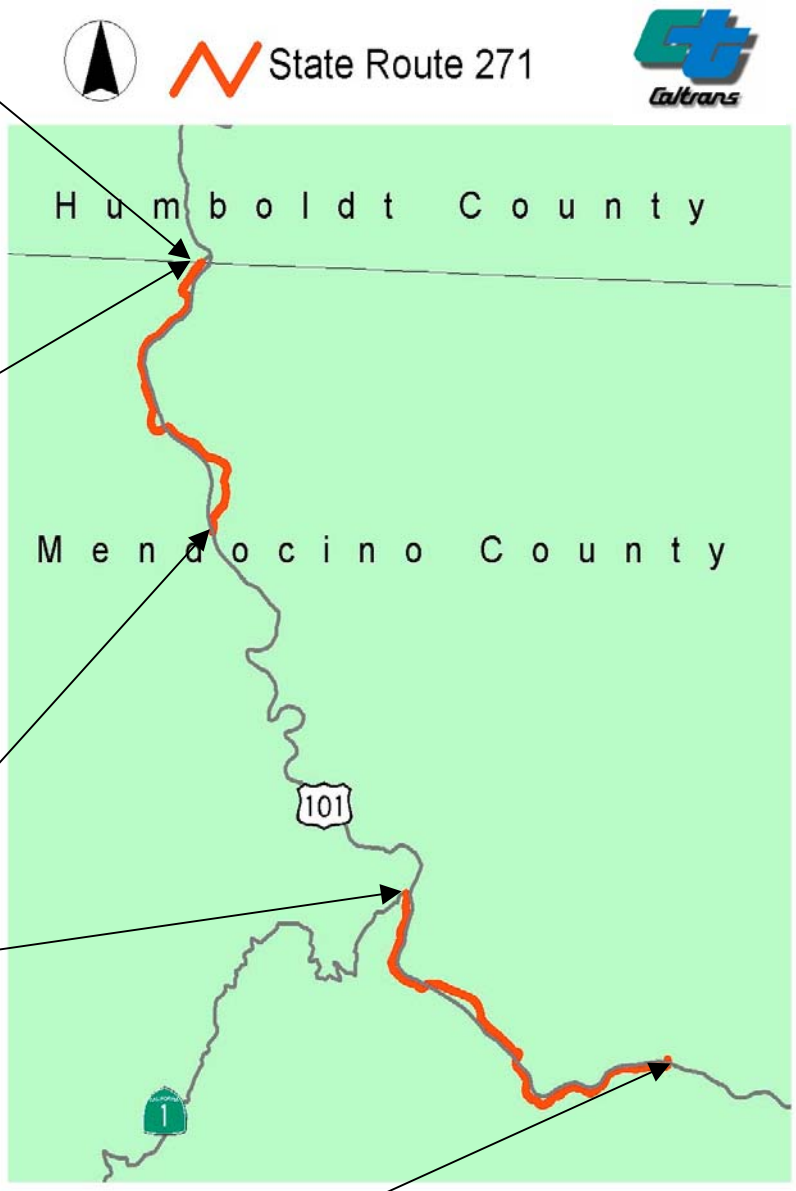
MAP 1
PRESENT AND FUTURE OPERATING CONDITIONS
ROUTE 271

HUM-271-KP 0.0/T0.5 (PM 0.0/T0.3)
Terrain: Rolling
Gradeline: Rolling
Existing (2000)
2-lane conventional
3.0 m (10') lanes
7.3 m (24') paved
120 AADT
Class II Facility-no LOS calculated
V/C=0.02
Collision Rate=greater than 1.5 times the statewide average
Trucks=26%
Future (2020)
130 AADT
Class II facility- no LOS calculated
V/C=0.02

MEN-271-KP 27.5/36.5 (PM 17.1/22.7)
Terrain: Mountainous
Gradeline: Rolling
Existing (2000)
2-lane conventional
3.35 m (11') lanes
7.3-9.8 m (24'-32') paved
130 AADT
Class II Facility-no LOS calculated
V/C=0.16
Collision Rate=less than 1.5 times the statewide average
Trucks=13%
Future (2020)
210 AADT
Class II Facility-no LOS calculated
V/C=0.16

Break in Route

MEN-271-KP 0.0/11.7 (PM 0.0/7.3)
Terrain: Mountainous
Gradeline: Rolling
Existing (2000)
2-lane conventional
3.0 m (10') lanes
7.3-9.1 m (24'-30') paved
1100 AADT
Class II Facility-no LOS calculated
V/C=0.19
Collision Rate=greater than 1.5 times the statewide average
Trucks=6%
Future (2020)
1200 AADT
Class II Facility-no LOS calculated
V/C=0.19



PROGRAMMED IMPROVEMENTS

There are no programmed improvements for Route 271 in the 2000 State Transportation Improvement Program (STIP) nor the State Highway Operation and Protection Program (SHOPP).

V. ENVIRONMENTAL CONSIDERATIONS

Primary environmental considerations on Route 271 include the water quality and scenic value of the Eel River, a Wild and Scenic River, which is also a critical salmon and steelhead spawning and nursery habitat.

The Reynolds State Wayside Campground is located near the beginning of the northern segment of Route 271, at approximately kilometer post 27 (post mile 17). An old-growth Redwood grove is located within the limits of this Campground.

There is an area of archaeological sensitivity near the community of Piercy, and geologic instability throughout most of the Route.

VI. REGIONAL TRANSPORTATION PLANNING

The 1996/1998 Mendocino County Regional Transportation Plan authored by the Mendocino Council of Governments (MCOG) calls for:

Section I – 2.02, 2.20(A)

GOAL Provide an adequate, well-maintained efficient and safe network of state highways that form the central element of the Region's highway road and street system, and provides for both the regional and inter-regional transportation needs of the County. [1]

There are no specific references to development of Route 271 in the 1996/98 Mendocino County Regional Transportation Plan, nor in the Humboldt County Regional Transportation Plan.

VII. AREAS OF CONCERN

A segment is considered to be a "safety concern" if the total collision rate for a five year period for that segment exceeds one and one-half times the Statewide average for similar facilities.

One segment of Route 271 was identified as a safety concern. This segment, KP 0.0/11.7 (PM 0.0/7.3) in Mendocino County, has experienced a rate of 5.70 collisions per million vehicle-miles compared with the Statewide average rate of 3.67 (or 155% of the Statewide average, based on similar facilities).

[1] Regional Transportation Plan Mendocino County pg. P-16

VIII. IMPROVEMENTS NECESSARY TO ACHIEVE THE ROUTE CONCEPT

No new facility improvements are necessary to achieve the Route Concept (2-lane conventional highway maintained as necessary) through the twenty-year period. Safety improvements should be made when warranted and operational improvements should be considered on an exception basis.

IX. TRANSIT AND HIGH OCCUPANCY VEHICLE (HOV) CONSIDERATIONS

Route 271 does not have regional transit service. No State-owned park and ride lots exist adjacent to this Route.

X. ACCESS MANAGEMENT

Access management involves managing where vehicles are allowed to enter the highway, to improve highway operations and reduce collisions. Access management issues are not likely to be a concern on Route 271.

XI. ADOPTIONS, RESCISSIONS AND RELINQUISHMENTS

New or changed highway routings generally require adopting a new route and rescinding the previously adopted route. The Route may also be relinquished to a city, county or other public entity.

No significant adoptions, rescissions, or relinquishments are anticipated on Route 271 in District 1.