

TEDS DESIGN EXCEPTION REQUEST

Project: Country Squire II
Site Address: 2074 Broadway Street and 2076 Ferree Drive
City File Number: PP-2008-054
Applicant: Kenton Page
Representative: Vortex Engineering & Architecture, Inc.
Date: December 3, 2008

1. BRIEF DESCRIPTION OF THE REQUEST

This request is made to allow the CDOT sight distance requirement for passenger vehicles and pickups be accepted by the TEDS Committee as the required site distance at the Ferree Drive intersection with State Highway 340. (The TEDS requirement approximately equals the CDOT requirement for single unit trucks)

2. SITE DESCRIPTION

Generally the project site is west of Grand Junction in the Redlands area. The site is north and east of the existing intersection of Ferree Drive and State Highway 340 (Broadway).

The project is comprised of two parcels: 2074 Broadway (2947-154-00-120) and 2076 Ferree Drive (2947-154-00-127). Combined, the total site is approximately 17 acres. The project proposes to develop a 45 lot residential subdivision.

The proposed development will only have access to Ferree Drive and subsequently the Ferree Drive intersection with State Highway 340 (Broadway). Future access north of the project is provided for.

Ferree Drive is a low volume local street connecting only to a limited area of residential lots. It does not provide access to any commercial or industrially zoned property.

The following excerpt is from the Traffic Report prepared for this project:

Country Squire Subdivision, SH 340 mp 7.512
Level Two – Auxiliary Turn Lane Assessment
March 14, 2008
Jacobs Carter Burgess
David R. Woolfall, P. E.

Sight Distance Requirements

The speed limit on this portion of SH 340 is 45mph. The following intersection sight distance criterion from Table 4-2 in the SHAC applies at 45mph:

- *450 ft. for passenger cars, pickup trucks*
- *585 ft. for single unit trucks.*

Transportation Engineering Design Standards (TEDS) Exception Recommendation Form

Date: December 31, 2008

To: TEDS Review Committee

From: Kent Harbert, Development Engineer

Project Number: **TED- 2008-371**

Project Location: Ferre Drive and Highway 340

Parent Project:

Name: Country Squire II Subdivision

File No.: PP-2008-054

Planner: Scott Peterson

TEDS Exception Request #1: TEDS 4.2.7 Sight Distance – Request to allow a sight distance of 450 feet at the intersection of Ferree Drive and Highway 340 (Broadway) instead of the 575 feet required in the Sight Distance exhibit in TEDS.

Comment: The 450' sight distance is acceptable to CDOT, but is below the City's requirements. The City's requirements are based on an older version of the AASHTO Geometric Design of Highways and Streets. In the current, 2004, version the sight distance is calculated in Table 9-54 using the equation: Intersection Sight Distance = $1.47 V t$, where "V" is the posted speed limit (45 mph) and "t" is 7.5 second for the required gap for passenger vehicles. The result is a sight distance of 496 feet.

Jody Kliska, City Transportation Engineer, and I concur that a sight distance of 496 feet will be acceptable. It is proposed and anticipated that the sight distance requirements in TEDS will be revised to those determined by the AASHTO formula when TEDS is updated.

The full sight window will not be clear at the time of development because of existing vegetation and structures on the adjacent property. The recommendation is that the project be allowed to proceed and that the City will require the additional area to be cleared when the adjacent property develops.

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The project is comprised of two parcels: 2074 Broadway (2947-154-00-120) and 2076 Ferree Drive (2947-154-00-127). Combined, the total site is approximately 17 acres. The project proposes to develop a 45 lot residential subdivision.

The proposed development will only have access to Ferree Drive and subsequently the Ferree Drive intersection with State Highway 340 (Broadway). Future access north of the project is provided for.

Ferree Drive is a low volume local street connecting only to a limited area of residential lots. It does not provide access to any commercial or industrially zoned property.

The following excerpt is from the Traffic Report prepared for this project:

***Country Squire Subdivision, SH 340 mp 7.512
Level Two – Auxiliary Turn Lane Assessment
March 14, 2008
Jacobs Carter Burgess
David R. Woolfall, P. E.***

Sight Distance Requirements

The speed limit on this portion of SH 340 is 45mph. The following intersection sight distance criterion from Table 4-2 in the SHAC applies at 45mph:

- *450 ft. for passenger cars, pickup trucks*
- *585 ft. for single unit trucks.*

Passenger cars will be the predominant vehicle type at this access. The existing available sight distance for a vehicle exiting Ferree Drive to the west is well over 1,000 ft. as SH 340 is straight and there are no visual obstructions. For exiting drivers looking east, the curve of the highway and the topography combine to restrict the sight distance to about 350 ft.

Based on the determination that a warrant for a right turn deceleration lane would be met for this access, the right turn lane and the redevelopment of the topography along SH 340 will allow the sight distance to be increased to about the 450 ft. requirement.

Conclusions

The proposed 43 single family homes in the Country Squire Phase II development are forecasted to add about 400 two-way trips per day at the access point on SH 340.

About 80% of the trips are forecasted to be oriented east, to/from Grand Junction. The existing traffic volume plus the development traffic are forecasted to result in the highest peak hour turning movement of 25vph inbound right turns in the PM peak. This 25vph right turn volume would meet the threshold for a right turn deceleration lane on an NR-A facility as defined by the SHAC.

*Assuming the right turn deceleration lane for Ferree Drive is constructed, the additional width of pavement plus setbacks of **the development plan will allow for the required sight distance of 450 ft. to be met looking east.** There are no sight distance issues looking west from the access.*

END OF EXCERPT

3. REQUEST

a. Description

This request is for an exception to Chapter 4.2.7, Site Distance Design Standards of the TEDS manual, and to instead accept the CDOT sight distance requirement of 450 ft. for passenger vehicles and pickups as the acceptable site distance requirement at the Ferree Drive intersection with State Highway 340.

The existing sight distance is 350 feet. With the proposed right turn deceleration lane for Ferree Drive, the additional width of pavement plus setbacks for a pedestrian trail and wall, the development plan will allow for the CDOT required sight distance of 450 ft. to be met looking east. There are no sight distance issues looking west from the access.

Devin Drayton, CDOT Region 3 – Traffic & Safety, has collaborated on the design of the intersection improvements including the deceleration lane and reshaping of the topography to achieve CDOT requirements. The CDOT Access Permit has been approved.

Please note: as Devin Drayton, CDOT, explained in a 4/21/08 email to Kent Harbert, City of Grand Junction; *CDOT has requested the City of Grand Junction allow the developer, Kenton Page Trust,*

to be the permittee for the intersection improvements since the City owns Ferree Drive. CDOT has jurisdiction of improvements on State Highway 340.

b. Exception Consideration

1. Will the exemption compromise safety? No.

2. Alternatives

- The removal of trees, topography and structures further east to achieve a greater sight distance are beyond this projects' control.
- The acquisition of additional right of way from several property owners in order to realign State Highway 340 for greater sight distance along its horizontal alignment is beyond the feasibility of this project.

3. Has the proposed design been used in other areas?

The design MEETS the sight distance requirements of CDOT for access to this State Highway.

4. Will the exception require CDOT or FHWA coordination?

YES. The access is under the jurisdiction of CDOT and meets the CDOT requirements. A CDOT Access Permit to allow for the improvement this intersection is in process. CDOT has requested authorization from the City of Grand Junction to allow the developer to be the permittee on the proposed intersection improvements.

5. Is this a one-time exception or a manual revision?

This is a one-time exception due to the unique constraints of the parcel and CDOT's jurisdiction of access to State Highway 340.

Recommended by: _____
Approved as Requested: _____
Approved as Modified: _____
More information needed: _____
Denied: _____

TEDS – Transportation Engineering & Design Standards.



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ENGINEERING & ARCHITECTURE, INC.
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• CONSTRUCTION MANAGERS & SITE PLANNERS
• PROJECT MANAGERS
• CIVIL & CONSULTING ENGINEERS / ARCHITECTS

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EXHIBIT B

PROJECT: Country Square Subdivision
2076 Ferrer Drive
Grand Junction, Colorado

TITLE: LINE OF SIGHT
PERIMETER WALL EXHIBIT

R.W. JONES II
S. S. MIKOSZ

PROFESSIONAL ENGINEER
COLORADO LICENSE NO. 3796

PROFESSIONAL ENGINEER
COLORADO LICENSE NO. 4019

DATE: 12/25/06
SCALE: 1"=40'
DRAWN BY: [blank]
CHECKED BY: [blank]
DATE: 12/25/06
SHEET NO. 1 OF 1
REV. NO. [blank]

CONSTRUCTION CHECK: [blank] DATE: [blank]

Recommendation:

Approve as requested.

Approve with the following modification(s): The sight distance may be reduced from 575 feet to a minimum of 496 feet.

Deny.

Hold until the following additional information is submitted and reviewed:

January 19, 2008

Robert Jones
Vortex Engineering & Architecture, Inc.
255 Vista Valley Drive
Fruita CO 81521

Re: TEDS Exception-2008-371

The TED's Exception Committee has approved your request with modifications that are identified on the attached.

If you have any questions, please feel free to contact the Development Engineer in charge of your project or Tim Moore, Public Works and Planning Director at 970.244.1557.

Sincerely,



Sue Mueller
Sr. Administrative Assistant

Cc: Kent Harbert, Development Engineer
Scott Peterson, Sr. Planner
File

Transportation Engineering Design Standards (TEDS) Exception Approval / Denial Form

Project Number: **TED- 2008-371**

Site Location: Ferree Drive and Highway 340

Applicant: Kenton Page

Representative: Vortex Engineering & Architecture, Inc.

Development Engr.: Kent Harbert

Parent Project:

Name: Country Squire II Subdivision

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Approved as requested.

Approved with the following modification(s): The sight distance may be reduced from 575 feet to a minimum of 496 feet.

Denied.

The following additional information is required before a decision can be made:

TEDS Review Committee:

Public Works:

Tom Moran

Date: 1-8-09

Planning Division:

Lisa Cox

Date: 1/6/09

Fire Department:

Charles Walters

Date: 1/8/09