



Nibley City  
Planning Commission  
Wednesday, October 12, 2016  
455 W. 3200 S.  
Nibley, UT

5:30 p.m. Call to Order  
Approval of Agenda  
Approval of Minutes

#### **Preliminary Plat**

1. Discussion and consideration of a preliminary plat for The Cottonwoods at Hollow Rd, a 17-lot conservation residential subdivision located at approximately 4030 Hollow Road (Applicant: Jim Johnson)

#### **Ordinance Revision**

2. Discussion and consideration of an update to the Nibley City conservation residential subdivision ordinance.

#### **Workshop**

3. Discussion of future Planning Commission projects.
4. Staff Report

*Planning Commission agenda items may be tabled if: 1) Additional information is needed in order to take action on the item; OR 2) The Planning Commission feels there are unresolved issues that may need further attention before the Commission is ready to make a motion. **No agenda item will begin after 10:00 p.m. without a unanimous vote of the Commission.** The Commission may carry over agenda items, scheduled late in the evening and not heard, to the next regularly scheduled meeting.*

*IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT, REASONABLE ACCOMMODATIONS FOR INDIVIDUALS WITH DISABILITIES WILL BE PROVIDED UPON REQUEST. FOR ASSISTANCE, PLEASE CALL 752-0431 A MINIMUM OF 24 HOURS BEFORE THE MEETING.*



## MEMO

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10/8/16

Hi all-

I apologize that this is coming to you a day late. I was out of the office for most of the week, a combination of being sick and a death in the family. I appreciate your patience with me.

I was contacted by the developers of Valley View Meadows. They have opted to not move forward with the project at this time. I let them know that the preliminary plat approval was valid for one year and that they could proceed to final any time during that year.

### **Preliminary Plat**

1. Discussion and consideration of a preliminary plat for The Cottonwoods at Hollow Rd, a 19-lot conservation residential subdivision located at approximately 4030 Hollow Road (Applicant: Jim Johnson)

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- Mr. Johnson has submitted a revised preliminary plat for the subdivision which was discussed at our previous meeting. He is proposing a 19-lot conservation residential subdivision located at approximately 4030 Hollow Rd. The property is a mixture of the R-1 and R-1A zones. The property will be developed in a single phase.
  - City Code 10-18-4 states that in existing R-1 zones, the base density is calculated as if the property were R-1A zones. Thus, despite there being a blend of the R-1 and R-1A zones, City code dictates that this property all be developed as if it were an R-1A zone.
    - “Applicants in existing R-1 zones may also choose to apply for a subdivision approval using the conservation residential subdivision. By so doing, the density from which all calculations shall be made shall be equal to 0.75 acre lots or the same density as the R-1A zone.”
- **Revisions Since Public Hearing**

At the last public hearing, residents spoke about the stand of cottonwood trees on the property. Mr. Johnson has submitted a revised plat which will preserve those trees as conservation property. It will also take the walking trail and curve it away from the James’ home and down through the conservation area by the cottonwood trees. Doing this opened up additional open space, which allows for an increased density bonus. The revised preliminary plat reflects that increased density bonus. Additionally, the

developer has represented that the following changes were made (Items 1-5 below have been taken directly from an email received from Mr. Johnson, so any wording (I, My, We, etc.) is from that email):

1. The sensitive area have been removed from the drawings. My engineer put it on the drawings based on his field review. There is no official study or demarcation we need to consider. The wetland boundary is correct.
2. We have redesigned the lot layout to provide open space at the intersection of Cottonwood Lane and Cove. Thus the large stand of trees existing on the property has been save on what was lot 13.
3. I have also added additional open space on 15 which is now 16 on the new drawings. As indicated on the landscape architect concept drawing. I have intend to plant cottonwood trees throughout the subdivision in open spaces and along the trail.
4. I have realigned the road Cottonwood Lane so it dead-ends facing the existing cottonwood grove and also provide open space along the end of the road to meet Councilman Hansen's recommendations.
5. The trail system is now "serpentine" and requested again by Councilman Hansen.

In addition to the changes on the plat, you will see that Mr. Johnson has had a concept drawn up, showing the trees and home and walking trails, etc. This is so that the City and residents can get a feel for how the subdivision will look.

- **Open Space/Density Calculations**

Project Size:	11.17 acres	Original Lot Yield:	13 lots
ROW acreage:	1.08 acres	Developable Property:	10.09 acres
Open Space:	4.15 acres	Percentage of Open Space:	41.13%
Density Bonus:	50%	Lot Yield:	19 lots
Avg. Lot Size:	13,091 sq ft	Req. Avg. Lot Size:	11,000 sq ft
Req. Frontage:	90'- all lots meet or exceed the required frontage.		

- **Irrigation Canal**

There is a ditch on the property that will be relocated. Mr. Johnson has provided those drawings to the Nibley Blacksmith Fork Irrigation Company, who has acknowledged receipt of the drawings. The drawings have been submitted to the NBFIC. The infrastructure details of the ditch relocation will be addressed as part of the construction drawings which will be submitted as part of the final plat.

- **Right-of-Way Width**

You will notice that the r-o-w is shown as 34', with 29' of asphalt and 2.5' stormwater swale on each side. This is not the typical road cross-section. A standard 60' r-o-w, typical of neighborhood roads, will have 29' of asphalt, but on each side of the asphalt,

there will be 5' sidewalk, 7' park strip, 2.5' curb/gutter and 1' in between the sidewalk and the home.

This alternative cross-section is being proposed in order to match the cross-section of Hollow Road. Having stormwater handled by swales rather than a larger pond, is a low-impact development technique, which is encouraged by Federal and State stormwater regulations. Additionally, not requiring curb/gutter/sidewalk allows this subdivision to maintain a more rural feel and blend in with the surrounding roads.

City Code 11-5-5(D)(2) allows the requirements for curb/gutter/sidewalk to be waived in rural estates and the agricultural zones, if those requirements would detract from the rural setting of the subdivision. Because this property is immediately adjacent to the rural estate zones, and because the whole of Hollow Road is commonly accepted as a rural setting, I believe the requirement should be waived on this property.

If the Commission opts to have a traditional 60' cross-section, which is typical for local roads, it is possible to have that and still maintain the required average lot size of 14,157. Each lot would lose about 1,200 square feet with the increased space for a traditional 60' cross-section. The width of the asphalt would not increase- the increase width would be in park strip, curb, gutter and sidewalk. The proposed asphalt width is consistent with a typical 60' cross-section. Any changes to the road cross-section will require the developer to submit a revised plat showing the modified stormwater accommodations and increased cross-section.

- **250 East**

The Transportation Master Plan shows that a connection should be made off of Hollow Road into the area of 250 East. The current Road Master Plan map has that connection coming directly from the current end of 250 East down through Hollow Road, as shown below.



In this configuration, Mr. Johnson would be required to construct and dedicate a portion of 250 East. As I have looked over the plans for this project, there are several problems with having this connection of 250 East and Hollow Road. These problems, as I see them are:

- This runs directly through a FEMA Flood Zone A. To construct a road through this property would require significant costs and mitigation work with the Army Corps of Engineers, and it is not guaranteed that they would issue the necessary permits to construct the road through there.
- There are at least two homes/parcels that the City would need to purchase, if we were to require this configuration of connecting the two neighborhoods.
- This configuration will make a direct connection down 250 East and will lead to increased speeds in the area, detracting from the rural feel of the neighborhood.

For these reasons above, staff's position is that this configuration will create an unnecessary financial burden on the City, as construction of much of this road would come at taxpayer's expense. Additionally, the potential safety burden on the residents of Brookfield Meadows and this portion of Hollow Road requires the City to have a closer look at an alternative configuration for connecting these two neighborhoods.

I believe the intent in placing this on the Master Road Plan was to provide a connection off of Hollow Road to the Brookfield Meadows subdivision. Mr. Johnson's proposal lays out a connection between the neighborhoods which will offset the safety concern, will take the development of the road out of any floodplain or sensitive lands, and removes the need for the City to purchase any property to complete the road. The intent is still accomplished, thus an amendment to the master road plan is necessary to allow this alternate connection.

- **Engineer Review**

Our engineer has not had time (as of today) to review this revised plat, as the revisions have come in since the last P&Z meeting. I have forwarded the drawings to him and will meet with him on this and a variety of other matters prior to the meeting on Wednesday. He will also be at the meeting on Wednesday to discuss and provide input on any concerns you may have on the layout of the subdivision.

- **Staff Recommendation**

Pending our engineer's review and comment on the revised plat, I believe that this project should be given a favorable recommendation to the City Council. This project accomplishes the goals the City had in mind when it opted to adopt a conservation residential subdivision ordinance. The traffic concerns related to cars on Hollow Road have been addressed by the commissioned traffic study. The density, open space and lot size requirements are in compliance with the regulations outlined in our ordinance. The

maintenance plan outlines how the conservancy lots will be maintained and gives the details required.

If there are concerns with the plat that the Commission does not feel have been adequately addressed, then it would be appropriate to continue this item so that those concerns can be addressed, or to add conditions to the recommendation that have to happen prior to the plat going to the City Council.

### **Ordinance Revision**

2. Discussion and consideration of an update to the Nibley City conservation residential subdivision ordinance.
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No changes have been made to the ordinance draft since our last meeting. It was my understanding that the Commission wanted to go through the ordinance a section at a time, so the ordinance in this packet is identical to the previous meeting version.

3. Discussion of future Planning Commission projects.
- 

David interviewed a few candidates for my replacement this week. I'm hopeful that by Wednesday, we will have made an offer and have that individual hired. Regardless, one of the things that I would like to leave for my replacement is a list of projects that we (the Commission and I) have worked on that will serve as their guide for the first while of their job. I will have a few ideas, some are current projects, others are projects that have been suggested to me. I would like each of you to come with your "wish list" so we can discuss your ideas and have a great list for whomever replaces me.

See you all on Wednesday. Have a great weekend.

Cheers-

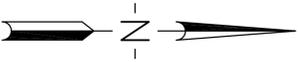


Shari Phippen  
City Planner

**PRELIMINARY PLAT**

FOR THE  
**COTTONWOODS AT HOLLOW ROAD SUBDIVISION**  
 NIBLEY CITY, CACHE COUNTY, UTAH  
 A PART OF THE SOUTHWEST QUARTER  
 OF SECTION 27, TOWNSHIP 11 N., RANGE 1 E.  
 SALT LAKE BASE AND MERIDIAN  
 AUGUST 2016

SCALE : 1" = 80'



**LEGEND**

PROPOSED	EXISTING
SANITARY SEWER MANHOLE	○
SANITARY CLEANOUT	●
SANITARY SEWER	— SA —
STORM MANHOLE	⊙
STORM SEWER	— SD —
IRRIGATION INLET	■
WATERMAIN & VALVE	□
WATER METER & SERVICE	— V —
WATERLINE BLOWOFF	— V —
FIRE HYDRANT	— V —
CONCRETE CURB	— C —
LIGHT POLE	★
POWER POLE	✦
BENCH MARK	⊕
EXISTING PAVEMENT	▬
PROPOSED PAVEMENT	▬

**OWNER'S AFFIDAVIT**

Know all men by these presents that we, the undersigned, are registered representatives of the owner of the property. Authorization of this action has been given expressly by New Directions IRA Inc. FBO James E. Johnson Jr. Under this designation of representation, we submit the certificate of clear title on the land shown on this plat.

In witness we have hereunto set our signature this the \_\_\_\_ day of \_\_\_\_\_, 2016.

**CITY COUNCIL APPROVAL**

Approved this the \_\_\_\_ day of \_\_\_\_\_, 2016  
 By the \_\_\_\_\_ City Council

**PLANNING COMMISSION APPROVAL**

Approved this the \_\_\_\_ day of \_\_\_\_\_, 2016  
 By the \_\_\_\_\_ Planning Commission

**FIRE DEPARTMENT APPROVAL**

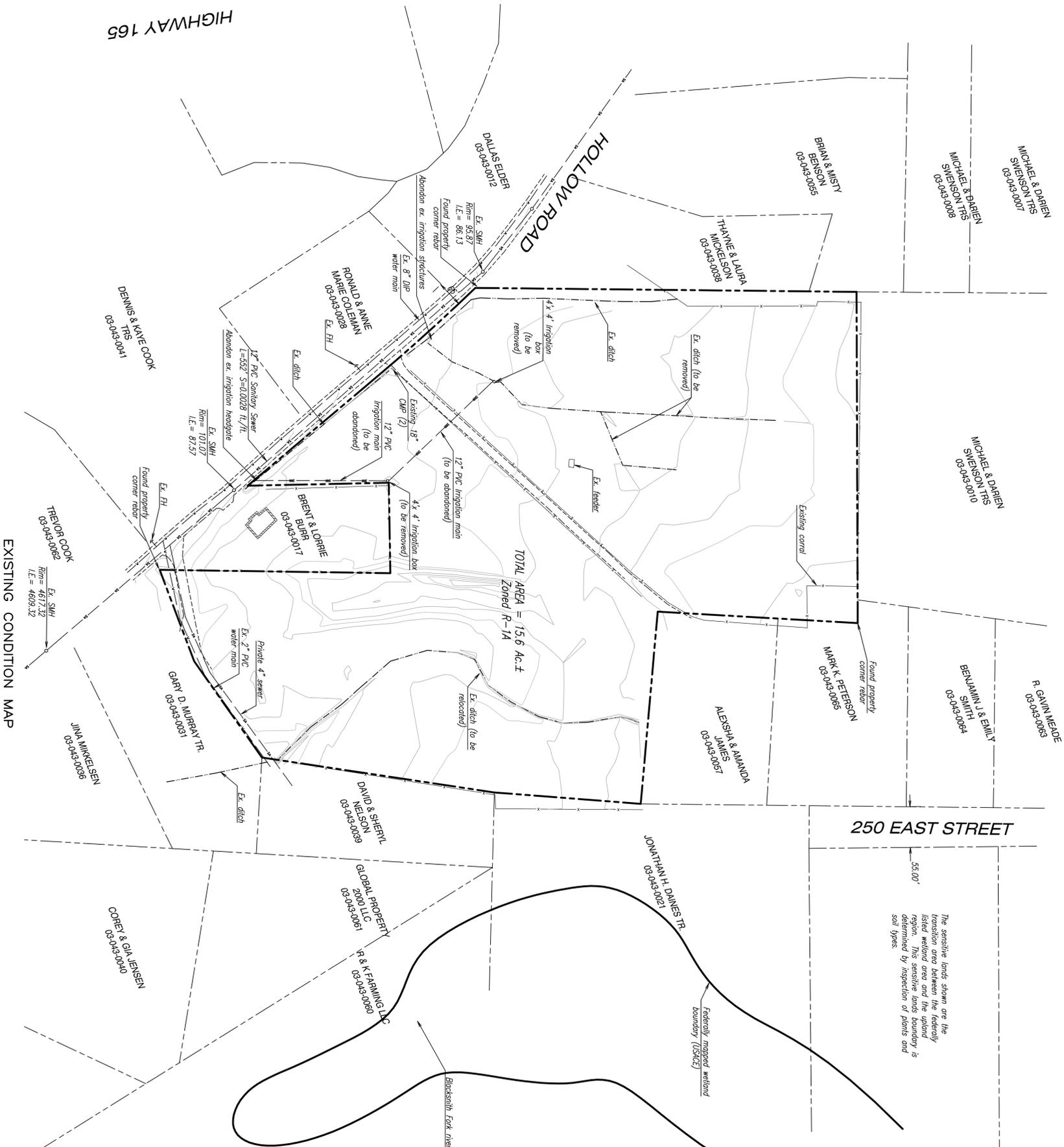
I certify that I have had this plat examined and find that it is correct and in accordance with the codes and regulations set forth by the fire department.

**ENGINEER'S CERTIFICATE**

I certify that I have had this plat examined and find that it is correct and in accordance with the information on file at the Nibley City office.

**PUBLIC UTILITY ACKNOWLEDGEMENT**

We have reviewed this plat and approved it according to our utility. The utility agrees to place specific utilities underground, within the right of way, or easement, as shown on the plan. The utility is willing to provide needed service for the development. Any restrictions, fees, and limitations shall be provided before construction begins.



**LEGAL DESCRIPTION**

Included is the legal description as recorded in the County office. Overall, "S&T Survey" is completing a boundary survey of the parcel as a condition of the sale. This new survey will be submitted to Nibley City for review when completed and certified.

BEG. N. 39°46'30" W. 621.6 FT. ALG. NIBLEY HOLLOW RD. FROM PT. 4.64 CHS. N. & 20 CHS. E. OF SW COR. SEC. 27 T. 11N. R. 1E. & TH. N. 69°45' E. 158.5 FT. TH. N. 59°17' E. 208.4 FT. TH. N.E. 1/4 30 FT. BR. (N. 119°11'1" E. 396.03 FT. (CALC.) TH. S. 89°40' E. TO U-S CENTER. LN. SD. SEC. TH. N. TO PT. 15.07 CHS. N. 10' W. FROM CENTER. SD. SEC. TH. N. 89°09' W. 3.87 CHS. TO PT. IN LN. BR. N/4. TH. S. 9°23' W. 3.93 CHS. TH. N. 89°09' W. 8.06 CHS. TO E. BANK OF DITCH. TH. S. 0°32'59" W. 10.10 LN. OF HOLLOW ROAD. TH. S.E. 1/4 ALG. ROAD. TO BEG. LESS 0.017'. BEG. 759.44 FT. N. & 934.04 FT. E. OF SW COR. SD. SEC. 27 & TH. N. 2°17'30" E. 390.19 FT. TH. S. 88°39'30" W. 150. FT. TH. S. 1°20'30" E. 240 FT. TH. S. 40°02'30" E. 200 FT. ALG. CO. ROAD. TO BEG. ALSO. BEG. IN E. LN. ST. HWY. 165 AT PT. 166.22 FT. N. OF SE COR. SEC. 28 SD. T. & R. & TH. S. 0°42'40" W. 166.22 FT. N. OF SE COR. SEC. 28 SD. T. & R. & TH. S. 0°42'40" W. 166.22 FT. ALG. HWY. TH. S. 53°58'40" E. ALG. HOLLOW ROAD. TO PT. S. 7°34'39" WEST. 407.69 FT. TH. N. 89°29' W. 280 FT. TO BEG. LESS 0.11 AC. TO UDOT. 556.1095-1099 NET. 21.77 AC. M/L. IN ALL. LESS 0.21 AC. TO UDOT. 556.1095-1099 NET. 21.77 AC. M/L. LESS 0.057.0063.0064.0065. BEG. 294.42 FT. N. OF CENTER OF SW/4 SEC. 27 T. 11N. R. 1E. & TH. N. 84°19'27" W. 322.21 FT. TH. N. S. 89°09' E. 255.42 FT. TH. S. 23.61 FT. TH. N. 9°23' E. 392.7 FT. TH. S. 89°09' E. 255.42 FT. TH. S. 745.2 FT. TO BEG. CORN. 5.00 AC. M/8. NET. 16.27 AC. M/L. 50.00 TO A. 25 FT. N/4. THE SE. 1/4 OF WHICH BEGINS AT SW COR. OF SD. TRACT & RUNS SW 1/4 ALG. EXHIBING LANE. TO N. LN. OF HOLLOW ROAD, NIBLEY

**VICINITY MAP**



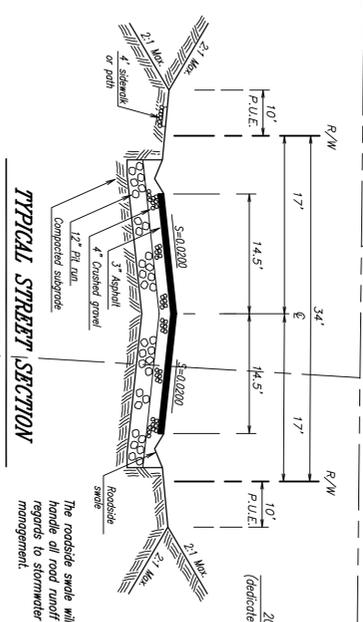
**OWNER / DEVELOPER**

**HAROLD M. & DELORES K. PETERSEN**  
 3950 S. MAIN STREET  
 HYRUM, UTAH  
**NEW DIRECTIONS IRA, INC.**  
**FBO JAMES E. JOHNSON JR.**  
 202-494-6894

PRELIMINARY PLAT  
**THE COTTONWOODS**  
 AT HOLLOW ROAD  
 NIBLEY, UTAH

**Turner Design Engineering, Inc.**  
 CIVIL ENGINEERING & LAND PLANNING  
 307 HAMMOND LANE PROVIDENCE, UTAH  
 (435) 695-8245

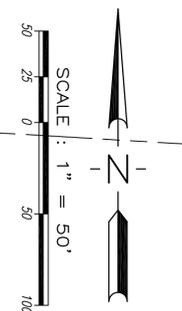
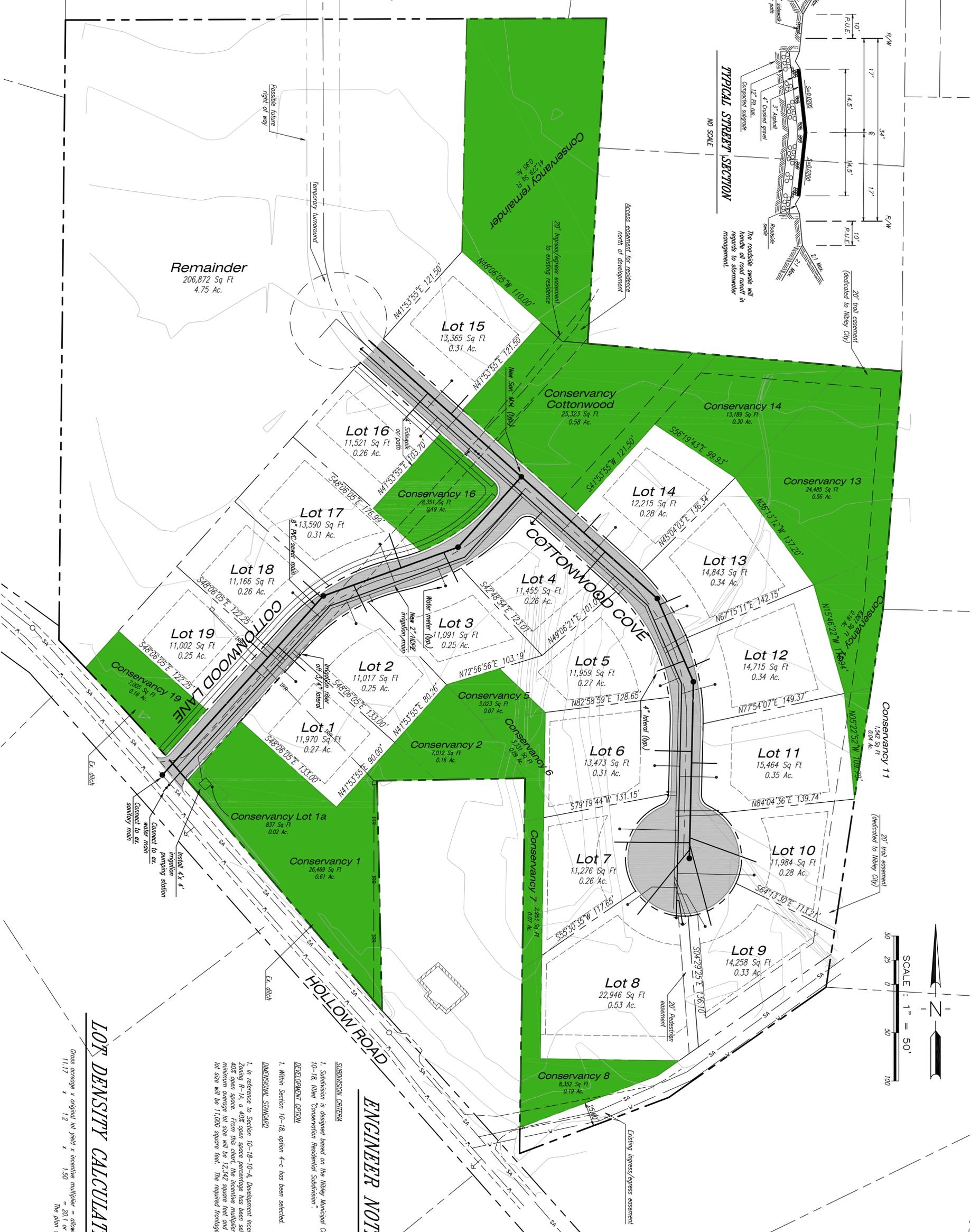
<p><b>CITY COUNCIL APPROVAL</b></p> <p>Approved this the ____ day of _____, 2016                  By the _____ City Council</p> <p>Mayor _____</p>	<p><b>PLANNING COMMISSION APPROVAL</b></p> <p>Approved this the ____ day of _____, 2016                  By the _____ Planning Commission</p> <p>Chairman _____</p>	<p><b>FIRE DEPARTMENT APPROVAL</b></p> <p>I certify that I have had this plat examined and find that it is correct and in accordance with the codes and regulations set forth by the fire department.</p> <p>Date _____                  Fire Department _____</p>	<p><b>ENGINEER'S CERTIFICATE</b></p> <p>I certify that I have had this plat examined and find that it is correct and in accordance with the information on file at the Nibley City office.</p> <p>Date _____                  Engineer _____</p>	<p><b>PUBLIC UTILITY ACKNOWLEDGEMENT</b></p> <p>We have reviewed this plat and approved it according to our utility. The utility agrees to place specific utilities underground, within the right of way, or easement, as shown on the plan. The utility is willing to provide needed service for the development. Any restrictions, fees, and limitations shall be provided before construction begins.</p> <table border="1"> <tr> <td>Date _____</td> <td>Question Gas _____</td> <td>Date _____</td> <td>Utah Power _____</td> </tr> <tr> <td>Date _____</td> <td>Question Telephone _____</td> <td>Date _____</td> <td>Comcast _____</td> </tr> </table>	Date _____	Question Gas _____	Date _____	Utah Power _____	Date _____	Question Telephone _____	Date _____	Comcast _____	<p>Job Number <b>16-006</b></p> <p>Sheet <b>1 of 3</b></p>
Date _____	Question Gas _____	Date _____	Utah Power _____										
Date _____	Question Telephone _____	Date _____	Comcast _____										



**LOT AREAS**

Total parcel = 15.6 Ac.  
 Area to be developed = 11.17 Ac.  
 Project right of way area = 47,238 sf (1.08 Ac.)  
 Total lot area = 249,311 sf (5.72 Ac.)  
 Total Conservancy area = 180,935 sf (4.15 Ac.)  
 The percentage of Conservancy area is:  
 Total conservancy area  
 Total lot area + total conservancy area  
 or:  $\frac{180,935}{249,311 + 180,935} = 42\%$

The area to be developed is the total parcel area minus the area reserved. This remainder parcel will be held by the owner at the present time. The average lot size is 13,121 sf and the smallest lot is 11,002 sf.



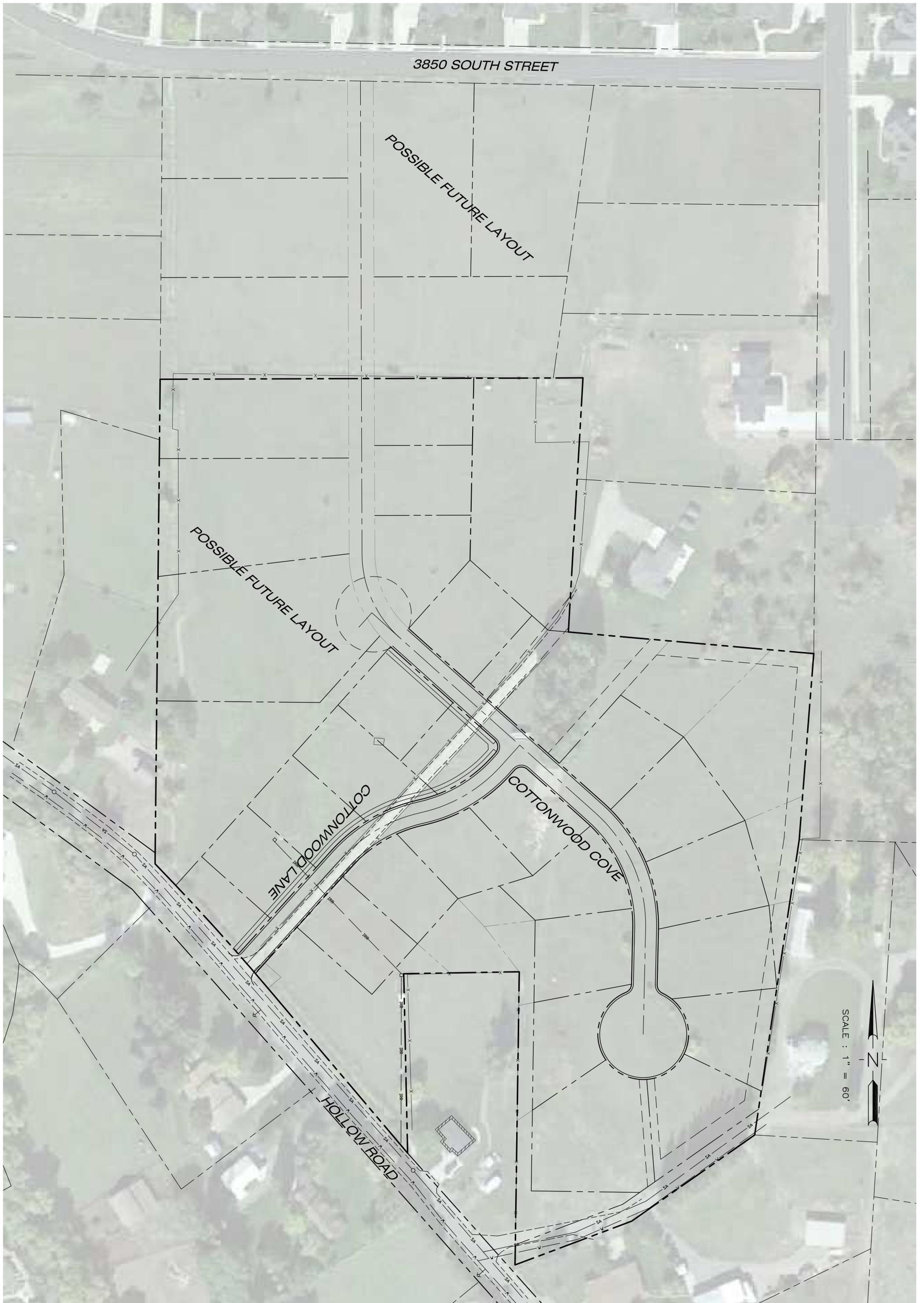
**ENGINEER NOTES**

- SUBDIVISION CRITERIA**
1. Subdivision is designed based on the Nibley Municipal Code Section 10-18, titled "Conservation Residential Subdivision."
- DEVELOPMENT OPTION**
1. Within Section 10-18, option 4-c has been selected.
- DIMENSIONAL STANDARDS**
1. In reference to Section 10-18-10-4, Development Incentive Chart, Zoning R-14, a 40% open space percentage has been selected, requiring 40% open space. From this chart, the incentive multiplier is 50.0%. The minimum average lot size will be 12,342 square feet and the minimum lot size will be 11,000 square feet. The required frontage is 90 feet.

**LOT DENSITY CALCULATIONS**

Gross acreage x original lot yield x incentive multiplier = allowable lots  
 $11.17 \times 1.2 \times 1.50 = 20.1$  or 20 lots  
 The plan shows 19 lots

<p><b>Turner Design Engineering, Inc.</b>          CIVIL ENGINEERING ▲ LAND PLANNING          307 HAMMOND LANE PROVIDENCE, UT. 84332          (435) 695-8245</p>		PROPOSED CONDITIONS <b>THE COTTONWOODS</b>	Revisions _____ _____ _____	Oct. 3, 2016 Date 1" = 50' Scale D.T. Designed by D.T. Drawn By	Job Number <b>16-006</b>
		NIBLEY. UTAH	_____ _____ _____	Sheet <b>2 of 3</b>	



**Turner Design Engineering, Inc.**

CIVIL ENGINEERING ▲ LAND PLANNING  
 307 HAMMOND LANE PROVIDENCE, UT. 84332  
 (435) 695-8245



LAYOUT WITH NORTH PARCEL INCLUDED

**THE COTTONWOODS**

NIBLEY.

UTAH

Revisions

Oct. 4, 2016  
 Date  
 1" = 60'  
 Scale  
 D.T.  
 Designed by  
 D.T.  
 Drawn By

Job Number

16-006

Sheet

3 of 3

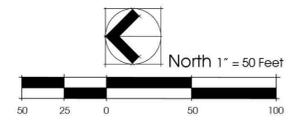


Theme Tree: Seedless Cottonwood  
 Trail Corridor  
 • 5 ft. wide trail  
 • Compacted road base  
 • Tall Grass seed mix  
 Wood Rail Fence

**Legend** - The Cottonwoods at Hollow Road - Nibley, Utah

-  Theme Tree: *Populus deltoids* 'Siouxland' Cottonless Cottonwood  
Plant as 5 gallon
  -  Street Tree: *Tilia cordata* 'Greenspire' Little Leaf Linden  
To be planted as 2" caliper by homeowner in locations shown on plan. If utilities or driveway interfere with placement, location may be adjusted, but trees are to be roughly 40 feet on center.
  -  Accent Tree: *Pyrus calleryana* 'Chanticleer' Flowering Pear  
Plant as 2" caliper
  -  Tall Grass Mix  
To be planted within trail corridor at rates shown. May be broadcast or hydroseeded.
- | BOTANICAL NAME            | COMMON NAME        | RATE: PLS/Acre | % BY WT       |
|---------------------------|--------------------|----------------|---------------|
| <i>Agrostis palustris</i> | Creeping Bentgrass | 2.0            | 15.0%         |
| <i>Bromus inermis</i>     | Smooth Brome       | 4.0            | 20.0%         |
| <i>Festuca rubra</i>      | Red Fescue         | 5.0            | 25.0%         |
| <i>Pascopyrum smithii</i> | Western Wheatgrass | 5.0            | 25.0%         |
| <i>Poa compressa</i>      | Canada Bluegrass   | 2.0            | 15.0%         |
| <b>TOTAL:</b>             |                    | <b>18.0</b>    | <b>100.0%</b> |
-  Conservation Lots  
Existing vegetation is to be protected and preserved throughout any and all construction activity.

Wood Rail Fence  
 Street Tree: Little Leaf Linden  
 Accent Tree: Flowering Pear  
 Entry Monument and pump house  
 • See Concept Drawing



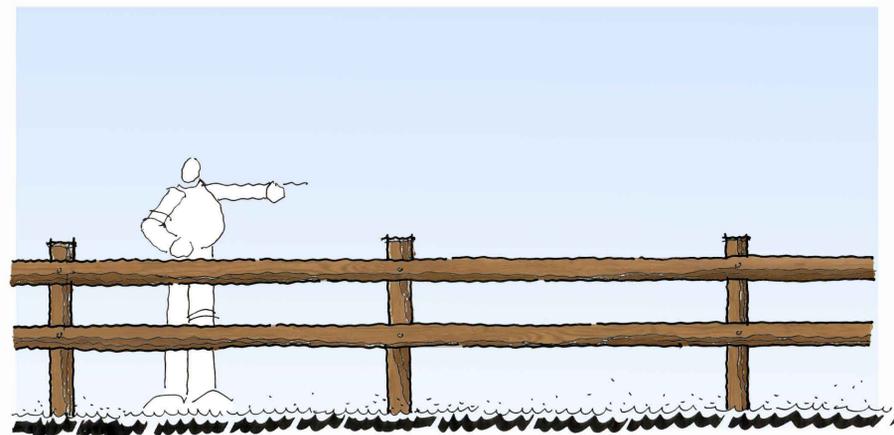
SHEET ONE  
 5 OCTOBER 2016  
 Conceptual Landscape Plan

# THE COTTONWOODS

AT HOLLOW ROAD  
 Nibley City, Utah  
 James Johnson . 202.494.6894



ENTRY MONUMENT  
ELEVATION  
1/2" = 1 FOOT



WOOD RAIL FENCE  
ELEVATION  
1/2" = 1 FOOT

# THE COTTONWOODS

AT HOLLOW ROAD  
Nibley City, Utah  
James Johnson . 202.494.6894

# **The Cottonwoods at Hollow Road**

## **Traffic Impact Study**

**Prepared for:  
Jim Johnson**

October 4, 2016

UT16-2028

**FEHR & PEERS**

2180 South 1300 East, Suite 220  
Salt Lake City, Utah 84106



## MEMORANDUM

Date: October 4, 2016  
To: Jim Johnson  
From: Fehr & Peers  
**Subject: The Cottonwoods at Hollow Road Traffic Impact Study**

UT16-2028

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### EXECUTIVE SUMMARY

Fehr & Peers performed a traffic study to analyze existing and existing plus project conditions at SR-165 / Hollow Rd and Subdivision Rd / Hollow Rd for The Cottonwoods at Hollow Road development. The purpose of this memorandum is to provide a summary of the findings of the existing and existing plus project conditions. Existing plus project conditions were based on the assumption of a 19 single home subdivision accessing from Subdivision Rd / Hollow Rd.

Traffic counts at the study intersections were collected to establish a baseline of existing and existing plus project conditions and operations for the area. Using Synchro software and the HCM 2010 delay thresholds the existing and existing plus project AM and PM peak hour LOS were computed for each study intersection.

For the existing conditions, the two intersections operate at Level of Service (LOS) B or better conditions in the AM peak hour. In the PM peak hour, the two intersection operate at a LOS C or better. Both AM and PM peak hours operate under acceptable conditions.

Similar to the existing conditions, the study intersections operate at LOS B or better during the AM peak hour. In the PM peak hour, the two intersections operate at a LOS C or better for existing plus project conditions. The LOS C for the eastbound left-turn at SR-165 / Hollow Rd does not impact the operations of the intersection after adding the generated project trips. The added trips would only impact the westbound approach at SR-165 / Hollow Rd, which the analysis shows that it is under acceptable conditions and still has capacity to absorb additional traffic.

The analysis has shown that traffic generated by the proposed The Cottonwoods at Hollow Road development will have negligible impact to the traffic operations at the two study intersections. The traffic added by the development adds one second or less average delay to the worst movement at SR-165 / Hollow Rd. Both SR-165 and Hollow Road have the capacity to absorb additional traffic without deteriorating the traffic flow on those respective roadways. Neither Hollow Road nor SR-165 roadways are on the State or Federal High Priority Transportation Corridor list. No improvements to the existing roadways are needed to accommodate the traffic from The Cottonwoods at Hollow Road development.

## INTRODUCTION

This memorandum summarizes existing traffic conditions and existing plus project traffic conditions based on the proposed 19 single family home project on Hollow Road approximately ¼ mile from SR-165 in Nibley, Utah. The purpose of these analyses is to identify the transportation impacts and needs associated with the proposed development. See **Figure 1** for a project location map.

The analysis presented within this document is based on traditional traffic engineering principles. Synchro software was used to analyze both existing and existing plus project conditions. Existing plus project volumes were obtain by adding Trip Generation trips to the existing counts.

## STUDY AREA

This study analyzes the traffic operations at the following study intersections:

- SR-165 / Hollow Rd
- Subdivision Rd / Hollow Rd

## DATA COLLECTION

Traffic counts at the study intersections were collected and provided to Fehr & Peers to establish a baseline of existing conditions and operations for the area. At the study intersections, traffic counts were recorded from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM on Tuesday, August 2, 2016 to capture vehicular activity for the AM and PM peak periods. Detailed traffic counts at each intersection are presented in the Appendix.



FIGURE 1

STUDY AREA

## ANALYSIS METHODOLOGY

Level of Service (LOS) is a term that describes the operating performance of an intersection or roadway. LOS is measured quantitatively and reported on a scale from A to F, with A representing the best performance and F the worst. **Table 1** provides a brief description of each LOS letter designation and an accompanying average delay per vehicle for unsignalized intersections. The Highway Capacity Manual 2010 (HCM 2010) methodology was used in this study to remain consistent with “state-of-the-practice” professional standards.

**TABLE 1 LEVEL OF SERVICE DESCRIPTIONS**

LOS	Description	Signalized Intersections	Unsignalized Intersections
		Avg. Delay (sec/veh) <sup>1</sup>	Avg. Delay (sec/veh) <sup>2</sup>
A	<i>Free Flow / Insignificant Delay</i> Extremely favorable progression. Individual users are virtually unaffected by others in the traffic stream.	< 10.0	< 10.0
B	<i>Stable Operations / Minimum Delays</i> Good progression. The presence of other users in the traffic stream becomes noticeable.	> 10.0 to 20.0	> 10.0 to 15.0
C	<i>Stable Operations / Acceptable Delays</i> Fair progression. The operation of individual users is affected by interactions with others in the traffic stream	> 20.0 to 35.0	> 15.0 to 25.0
D	<i>Approaching Unstable Flows / Tolerable Delays</i> Marginal progression. Operating conditions are noticeably more constrained.	> 35.0 to 55.0	> 25.0 to 35.0
E	<i>Unstable Operations / Significant Delays Can Occur</i> Poor progression. Operating conditions are at or near capacity.	> 55.0 to 80.0	> 35.0 to 50.0
F	<i>Forced, Unpredictable Flows / Excessive Delays</i> Unacceptable progression with forced or breakdown of operating conditions.	> 80.0	> 50.0

1. Overall intersection LOS and average delay (seconds/vehicle) for all approaches.
2. Worst approach LOS and delay (seconds/vehicle) only.
3. Volume to capacity (v/c) rate, average values.

Source: Fehr & Peers descriptions, based on *2010 Highway Capacity Manual*.

## EXISTING 2016 CONDITIONS

### PURPOSE

The purpose of the 2016 existing conditions analysis is to study the intersections during the peak travel periods of the day under existing traffic and geometric conditions. Through this analysis, existing traffic operational deficiencies can be identified.

### LEVEL OF SERVICE ANALYSIS

Using Synchro software and the HCM 2010 delay thresholds introduced above, the existing AM and PM peak hour LOS were computed for each study intersection (see appendix for detailed LOS reports). The results of this analysis are reported in **Figure 2** and **Table 2**.

**TABLE 2 EXISTING 2016 BACKGROUND CONDITIONS PEAK HOUR LEVEL OF SERVICE**

Intersection				Worst Movement <sup>1</sup>			Overall Intersection	
ID	Location	Period	Control	Movement <sup>3</sup>	Delay (sec/veh)	LOS	Avg. Delay (sec/veh) <sup>2</sup>	LOS
1	SR-165 / Hollow Rd	AM	Side-Street	EBL	13.8	B	-	-
		PM	Stop	EBL	23.4	C	-	-
2	Subdivision / Hollow Rd	AM	Side-Street	WBL	<5	A	-	-
		PM	Stop	WBL	<5	A	-	-

1. This represents the worst movement LOS and delay (seconds/vehicle) and is only reported for unsignalized intersections.

2. This represents the overall intersection LOS and delay (seconds/vehicle).

3. NB=Northbound, SB=Southbound, EB=Eastbound, WB=Westbound, LT=Left-turn, RT=Right-turn, and TH=Through  
Source: Fehr & Peers.

As shown in **Table 2**, the two intersections operate at LOS B or better conditions the AM peak hour. In the PM peak hour, the two intersection operate at a LOS C or better. The EBL approach operates at a LOS C because of the higher volume travelling along SR-165 that limits the available gaps for the left-turning vehicles to make their movement, though the EBL approach represents less than 1% (two total vehicles) of the overall volume at the intersection. Both AM and PM peak hours operate under acceptable conditions.



FIGURE 2

EXISTING CONDITIONS



## EXISTING PLUS PROJECT CONDITIONS

### PURPOSE

The purpose of existing plus project analysis is to study the intersections during the peak travel periods of the day under forecasted traffic conditions. Through this analysis, future traffic operational deficiencies can be identified.

### TRAFFIC VOLUMES / TRIP GENERATION

Trip generation models provide estimates of the number of trips produced by or attracted to a given land use or activity as a function of the demographic, socioeconomic, locational, and land use characteristics of the zone. This analysis was based on the most common trip generation method used in the industry, which is the Institute of Transportation Engineer's (ITE) 2012 Trip Generation Manual. **Figure 3** and **Table 3** show the trips generated by the 19 single-family home development.

**TABLE 3 PROJECT TRIP GENERATION**

<i>Land Use</i>	<i>Number of Units</i>	<i>Unit Type</i>	<i>Daily Trip Generation</i>	<i>% Entering</i>	<i>% Exiting</i>	<i>Trips Entering</i>	<i>Trips Exiting</i>	<i>New Daily Trips</i>
Single-Family Detached (210)	19	Dwelling Units	228	50%	50%	114	114	228
<b>Weekday Trips</b>						<b>114</b>	<b>114</b>	<b>228</b>
<i>Land Use</i>	<i>Number of Units</i>	<i>Unit Type</i>	<i>Daily Trip Generation</i>	<i>% Entering</i>	<i>% Exiting</i>	<i>Trips Entering</i>	<i>Trips Exiting</i>	<i>New AM Peak Trips</i>
Single-Family Detached (210)	19	Dwelling Units	23	25%	75%	6	17	23
<b>AM Peak Trips</b>						<b>6</b>	<b>17</b>	<b>23</b>
<i>Land Use</i>	<i>Number of Units</i>	<i>Unit Type</i>	<i>Daily Trip Generation</i>	<i>% Entering</i>	<i>% Exiting</i>	<i>Trips Entering</i>	<i>Trips Exiting</i>	<i>New PM Peak Trips</i>
Single-Family Detached (210)	19	Dwelling Units	24	63%	37%	15	9	24
<b>PM Peak Trips</b>						<b>15</b>	<b>9</b>	<b>24</b>

\*The ITE Generation Manual (2012) was used to produce the trips.  
Source: Fehr & Peers 2016.

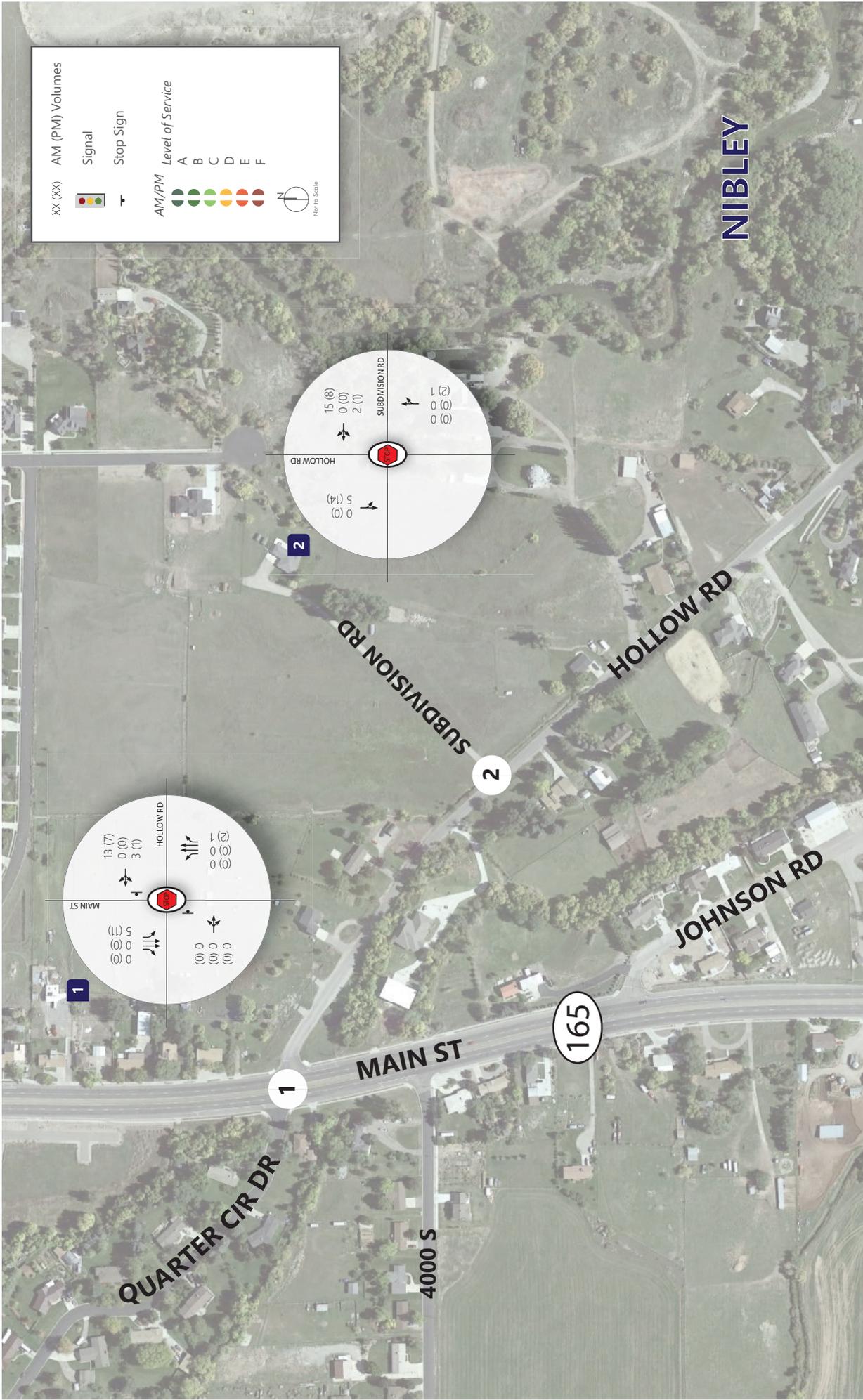


FIGURE 3

PROJECT TRIPS



## LEVEL OF SERVICE ANALYSIS

Using Synchro software and the HCM 2010 delay thresholds introduced above, the existing plus project AM and PM peak hour LOS were computed for each study intersection (see appendix for detailed LOS reports). The results of this analysis are reported in **Figure 4** and **Table 4**.

**TABLE 4 EXISTING PLUS PROJECT CONDITIONS PEAK HOUR LEVEL OF SERVICE**

Intersection				Worst Movement <sup>1</sup>			Overall Intersection	
ID	Location	Period	Control	Movement <sup>3</sup>	Delay (sec/veh)	LOS	Avg. Delay (sec/veh) <sup>2</sup>	LOS
1	SR-165 / Hollow Rd	AM	Side-Street Stop	EBL	14.2	B	-	-
		PM	Side-Street Stop	EBL	24.5	C	-	-
2	Subdivision Rd / Hollow Rd /	AM	Side-Street Stop	WBL	8.7	A	-	-
		PM	Side-Street Stop	WBL	8.6	A	-	-

4. This represents the worst movement LOS and delay (seconds/vehicle) and is only reported for unsignalized intersections.

5. This represents the overall intersection LOS and delay (seconds/vehicle).

6. NB=Northbound, SB=Southbound, EB=Eastbound, WB=Westbound, LT=Left-turn, RT=Right-turn, and TH=Through  
Source: Fehr & Peers.

As shown in **Table 4**, similarly to the existing conditions, the study intersections operate at LOS B or better during the AM peak hour. In the PM peak hour, the two intersections operate at a worse LOS C or better. The LOS C at the EBL does not impact the operations of the intersection after adding the generated project trips. The added trips would only impact the WB approach at SR-165 / Hollow Rd, which the analysis shows that it is under acceptable conditions. The traffic added by the development adds one second or less average delay to the worst movement at SR-165 / Hollow Rd.

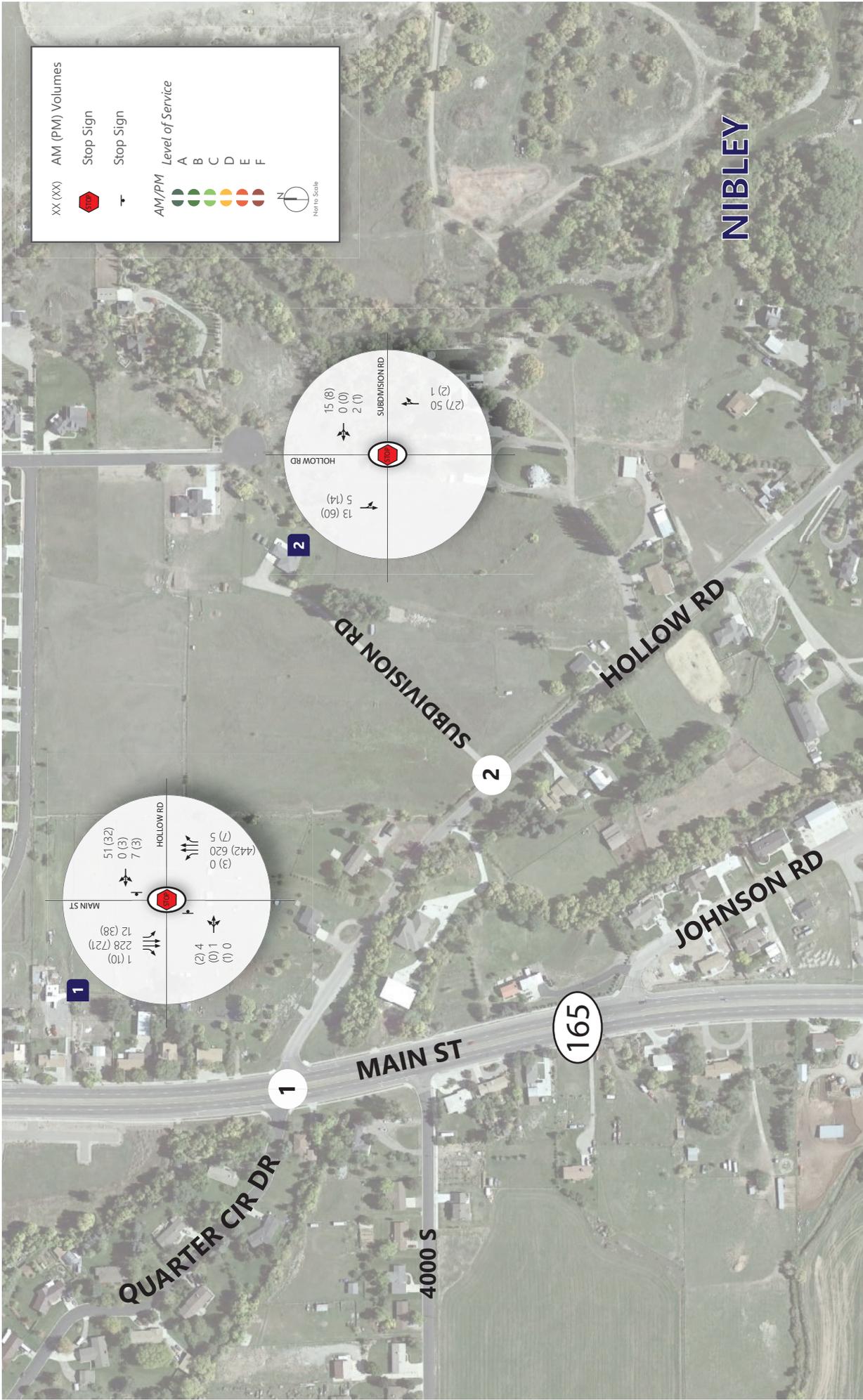


FIGURE 4

EXISTING PLUS PROJECT CONDITIONS

## CONCLUSIONS

The analysis has shown that traffic generated by the proposed The Cottonwoods at Hollow Road development will have negligible impact to the traffic operations at the two study intersections. The traffic added by the development adds one second or less average delay to the worst movement at SR-165 / Hollow Rd. Both SR-165 and Hollow Road have the capacity to absorb additional traffic without deteriorating the traffic flow on those respective roadways. Neither Hollow Road nor SR-165 roadways are on the State or Federal High Priority Transportation Corridor list. No improvements to the existing roadways are needed to accommodate the traffic from The Cottonwoods at Hollow Road development.

The summary of LOS for all scenarios is shown in **Table 5**.

**TABLE 5 LOS SUMMARY**

Intersection			Existing	Existing Plus Project
ID	Location	Period	LOS & Sec/Veh <sup>1</sup>	LOS & Sec/Veh <sup>1</sup>
1	SR-165 / Hollow Rd	AM	B / 13.8	B /14.2
		PM	C / 23.4	C /24.5
2	Subdivision Rd / Hollow Rd	AM	A / <5	A / 8.7
		PM	A / <5	A / 8.6

1. Overall intersection LOS and average delay (seconds/vehicle) for the signalized intersections and worst movement LOS and average delay for the unsignalized intersections.

Source: Fehr & Peers, 2016

# FEHR & PEERS

## APPENDIX

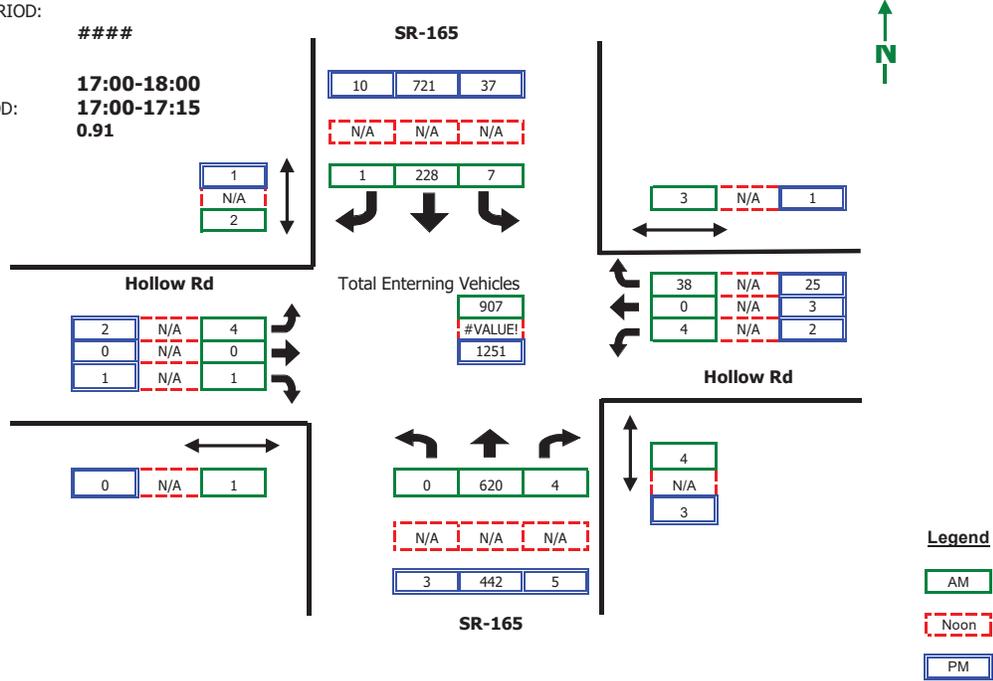
Intersection Turning Movement Summary

<b>Intersection:</b>	<b>North/South:</b> SR-165 <b>East/West:</b> Hollow Rd	<b>Date:</b> 10-21-15, Wed <b>Day of Week Adjustment:</b> 100.0% <b>Month of Year Adjustment:</b> 100.0%
<b>Jurisdiction:</b>	Cottonwood	<b>Adjustment Station #:</b>
<b>Project Title:</b>	SR-165	<b>Growth Rate:</b> 0.0%
<b>Project No:</b>		<b>Number of Years:</b> 0
<b>Weather:</b>		

AM PEAK HOUR PERIOD: **7:30-8:30**  
AM PEAK 15 MINUTE PERIOD: **7:45-8:00**  
AM PHF: **0.87**

NOON PEAK HOUR PERIOD:  
NOON PEAK 15 MINUTE PERIOD:  
NOON PHF: **####**

PM PEAK HOUR PERIOD: **17:00-18:00**  
PM PEAK 15 MINUTE PERIOD: **17:00-17:15**  
PM PHF: **0.91**



RAW COUNT SUMMARIES	SR-165 Northbound				SR-165 Southbound				Hollow Rd Eastbound				Hollow Rd Westbound			
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds

AM PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
7:00-7:15	0	89	0	1	2	47	0	0	1	0	0	0	0	0	7	3	146
7:15-7:30	1	98	0	6	2	50	0	1	0	0	0	1	0	1	4	1	156
7:30-7:45	0	167	0	1	1	46	0	1	0	0	0	0	1	0	9	0	224
7:45-8:00	0	185	0	2	1	62	1	1	3	0	0	0	1	0	9	2	262
8:00-8:15	0	172	3	1	2	59	0	0	1	0	1	1	0	0	7	1	245
8:15-8:30	0	96	1	0	3	61	0	0	0	0	0	0	2	0	13	0	176
8:30-8:45	0	120	1	0	4	46	0	0	1	0	0	0	4	0	13	2	189
8:45-9:00	0	156	0	0	2	64	0	0	0	0	1	0	0	0	9	2	232

NOON PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
11:00-11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15-11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30-11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45-12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00-12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15-12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30-12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45-13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PM PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
16:00-16:15	0	119	1	2	6	147	2	0	1	0	0	0	0	0	3	0	279
16:15-16:30	0	103	1	0	6	135	1	0	1	0	0	0	1	0	4	0	252
16:30-16:45	0	112	1	0	14	161	1	0	0	0	0	0	0	0	2	0	291
16:45-17:00	1	126	2	0	17	135	0	0	0	0	0	0	1	0	9	0	291
17:00-17:15	1	143	0	1	13	180	1	1	0	0	0	0	0	0	5	1	343
17:15-17:30	1	96	2	1	11	201	2	0	0	0	1	0	1	0	5	0	320
17:30-17:45	0	97	2	0	9	172	3	0	1	0	0	0	0	0	6	0	290
17:45-18:00	1	106	1	1	4	168	4	0	1	0	0	0	1	3	9	0	298

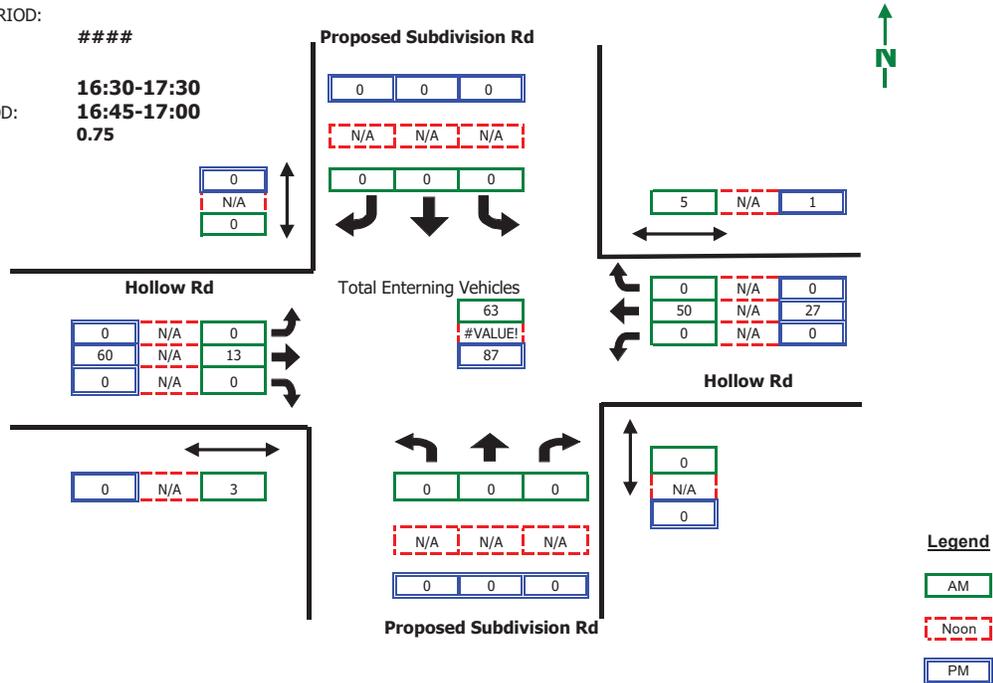
Intersection Turning Movement Summary

<b>Intersection:</b>	North/South: Proposed Subdivision Rd East/West: Hollow Rd	<b>Date:</b> 10-21-15, Wed <b>Day of Week Adjustment:</b> 100.0% <b>Month of Year Adjustment:</b> 100.0%
<b>Jurisdiction:</b>	Cottonwood	<b>Adjustment Station #:</b>
<b>Project Title:</b>	SR-165	<b>Growth Rate:</b> 0.0%
<b>Project No:</b>		<b>Number of Years:</b> 0
<b>Weather:</b>		

AM PEAK HOUR PERIOD: **7:45-8:45**  
AM PEAK 15 MINUTE PERIOD: **8:30-8:45**  
AM PHF: **0.72**

NOON PEAK HOUR PERIOD:  
NOON PEAK 15 MINUTE PERIOD:  
NOON PHF: **####**

PM PEAK HOUR PERIOD: **16:30-17:30**  
PM PEAK 15 MINUTE PERIOD: **16:45-17:00**  
PM PHF: **0.75**



RAW COUNT SUMMARIES	Proposed Subdivision Rd Northbound				Proposed Subdivision Rd Southbound				Hollow Rd Eastbound				Hollow Rd Westbound			
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds

AM PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
7:00-7:15	0	0	0	0	0	0	0	0	0	2	0	0	0	7	0	3	9
7:15-7:30	0	0	0	0	0	0	0	0	0	2	0	2	0	4	0	1	6
7:30-7:45	0	0	0	0	0	0	0	0	0	1	0	0	0	10	0	0	11
7:45-8:00	0	0	0	0	0	0	0	0	0	0	0	1	0	11	0	2	11
8:00-8:15	0	0	0	0	0	0	0	0	0	4	0	2	0	7	0	1	11
8:15-8:30	0	0	0	0	0	0	0	0	0	4	0	0	0	15	0	0	19
8:30-8:45	0	0	0	0	0	0	0	0	0	5	0	0	0	17	0	2	22
8:45-9:00	0	0	0	0	0	0	0	0	0	2	0	2	0	9	0	1	11

NOON PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
11:00-11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15-11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30-11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45-12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00-12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15-12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30-12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45-13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PM PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
16:00-16:15	0	0	0	0	0	0	0	0	0	7	0	0	0	4	0	0	11
16:15-16:30	0	0	0	0	0	0	0	0	0	7	0	0	0	5	0	0	12
16:30-16:45	0	0	0	0	0	0	0	0	0	15	0	0	0	3	0	0	18
16:45-17:00	0	0	0	0	0	0	0	0	0	19	0	0	0	10	0	0	29
17:00-17:15	0	0	0	0	0	0	0	0	0	13	0	0	0	8	0	1	21
17:15-17:30	0	0	0	0	0	0	0	0	0	13	0	0	0	6	0	0	19
17:30-17:45	0	0	0	0	0	0	0	0	0	11	0	2	0	6	0	0	17
17:45-18:00	0	0	0	0	0	0	0	0	0	4	0	1	0	10	0	0	14

Existing Conditions AM Peak Hour  
3: SR-165 & Hollow Rd

8/5/2016

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↑↑	↗		↑↑	↗
Traffic Vol, veh/h	4	1	0	4	0	38	0	620	4	7	228	1
Future Vol, veh/h	4	1	0	4	0	38	0	620	4	7	228	1
Conflicting Peds, #/hr	0	0	2	0	0	4	0	0	1	0	0	3
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	400	-	-	400
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	1	1	1	1	1	1	1	1	1
Mvmt Flow	5	1	0	5	0	44	0	713	5	8	262	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	641	995	136	864	995	361	-	0	0	714	0	0
Stage 1	281	281	-	714	714	-	-	-	-	-	-	-
Stage 2	360	714	-	150	281	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.52	6.52	6.92	-	-	-	4.12	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.52	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.52	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.51	4.01	3.31	-	-	-	2.21	-	-
Pot Cap-1 Maneuver	364	247	894	250	245	639	0	-	-	889	-	-
Stage 1	708	682	-	391	436	-	0	-	-	-	-	-
Stage 2	636	438	-	840	680	-	0	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	334	243	890	247	241	636	-	-	-	886	-	-
Mov Cap-2 Maneuver	441	341	-	331	342	-	-	-	-	-	-	-
Stage 1	708	673	-	391	436	-	-	-	-	-	-	-
Stage 2	590	438	-	828	671	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.8	11.7	0	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	-	-	417	585	886	-
HCM Lane V/C Ratio	-	-	0.014	0.083	0.009	-
HCM Control Delay (s)	-	-	13.8	11.7	9.1	-
HCM Lane LOS	-	-	B	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0.3	0	-

Existing Conditions AM Peak Hour  
4: Hollow Rd & Subdivision Rd

8/5/2016

Intersection

Int Delay, s/veh 0

Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	13	50	0
Future Vol, veh/h	0	0	0	13	50	0
Conflicting Peds, #/hr	0	0	3	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	1	1	1	1
Mvmt Flow	0	0	0	15	57	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	77	62	62	0	-	0
Stage 1	62	-	-	-	-	-
Stage 2	15	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.11	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.209	-	-	-
Pot Cap-1 Maneuver	931	1009	1547	-	-	-
Stage 1	966	-	-	-	-	-
Stage 2	1013	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	922	1004	1547	-	-	-
Mov Cap-2 Maneuver	922	-	-	-	-	-
Stage 1	961	-	-	-	-	-
Stage 2	1008	-	-	-	-	-

Approach	WB	SE	NW
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NWT	NWRWBLn1	SEL	SET
Capacity (veh/h)	-	-	-	1547
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

Existing Conditions PM Peak Hour  
3: SR-165 & Hollow Rd

8/5/2016

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↑↑	↑		↑↑	↑
Traffic Vol, veh/h	2	0	1	2	3	25	3	442	5	27	721	10
Future Vol, veh/h	2	0	1	2	3	25	3	442	5	27	721	10
Conflicting Peds, #/hr	0	0	2	0	0	4	0	0	1	0	0	3
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	400	-	-	400
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	1	1	1	1	1	1	1	1	1
Mvmt Flow	2	0	1	2	3	27	3	486	5	30	792	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1110	1348	401	950	1348	248	795	0	0	487	0	0
Stage 1	855	855	-	493	493	-	-	-	-	-	-	-
Stage 2	255	493	-	457	855	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.52	6.52	6.92	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.52	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.52	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.51	4.01	3.31	2.21	-	-	2.21	-	-
Pot Cap-1 Maneuver	166	152	604	216	151	755	829	-	-	1079	-	-
Stage 1	323	378	-	529	548	-	-	-	-	-	-	-
Stage 2	733	550	-	556	375	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	149	143	601	206	142	751	827	-	-	1075	-	-
Mov Cap-2 Maneuver	149	143	-	206	142	-	-	-	-	-	-	-
Stage 1	320	358	-	526	545	-	-	-	-	-	-	-
Stage 2	696	547	-	526	355	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	23.4	13.3	0.1	0.3
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	827	-	-	199	468	1075	-	-
HCM Lane V/C Ratio	0.004	-	-	0.017	0.07	0.028	-	-
HCM Control Delay (s)	9.4	-	-	23.4	13.3	8.4	-	-
HCM Lane LOS	A	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0.1	-	-

Existing Conditions PM Peak Hour  
4: Hollow Rd & Subdivision Rd

8/5/2016

Intersection

Int Delay, s/veh 0

Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	60	27	0
Future Vol, veh/h	0	0	0	60	27	0
Conflicting Peds, #/hr	0	0	3	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	1	1	1	1
Mvmt Flow	0	0	0	69	31	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	105	36	36	0	-	0
Stage 1	36	-	-	-	-	-
Stage 2	69	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.11	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.209	-	-	-
Pot Cap-1 Maneuver	898	1042	1581	-	-	-
Stage 1	992	-	-	-	-	-
Stage 2	959	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	889	1037	1581	-	-	-
Mov Cap-2 Maneuver	889	-	-	-	-	-
Stage 1	987	-	-	-	-	-
Stage 2	954	-	-	-	-	-

Approach	WB	SE	NW
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NWT	NWRWBLn1	SEL	SET
Capacity (veh/h)	-	-	-	1581
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

Existing plus project conditions AM peak hour  
3: SR-165 & Hollow Rd

10/4/2016

Intersection

Int Delay, s/veh 1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↑↑	↗		↑↑	↗
Traffic Vol, veh/h	4	1	0	7	0	51	0	620	5	12	228	1
Future Vol, veh/h	4	1	0	7	0	51	0	620	5	12	228	1
Conflicting Peds, #/hr	0	0	2	0	0	4	0	0	1	0	0	3
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	400	-	-	400
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	5	1	0	8	0	59	0	713	6	14	262	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	653	1007	136	875	1007	361	-	0	0	714	0	0
Stage 1	293	293	-	714	714	-	-	-	-	-	-	-
Stage 2	360	714	-	161	293	-	-	-	-	-	-	-
Critical Hdwy	7.56	6.56	6.96	7.56	6.56	6.96	-	-	-	4.16	-	-
Critical Hdwy Stg 1	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.53	4.03	3.33	3.53	4.03	3.33	-	-	-	2.23	-	-
Pot Cap-1 Maneuver	350	238	885	242	238	633	0	-	-	875	-	-
Stage 1	688	666	-	386	431	-	0	-	-	-	-	-
Stage 2	628	431	-	822	666	-	0	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	311	233	881	237	233	630	-	-	-	872	-	-
Mov Cap-2 Maneuver	418	329	-	324	335	-	-	-	-	-	-	-
Stage 1	688	651	-	386	431	-	-	-	-	-	-	-
Stage 2	567	431	-	803	651	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.2	12.2	0	0.5
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	-	-	397	566	872	-	-
HCM Lane V/C Ratio	-	-	0.014	0.118	0.016	-	-
HCM Control Delay (s)	-	-	14.2	12.2	9.2	-	-
HCM Lane LOS	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	-	-	0	0.4	0	-	-

Existing plus project conditions AM peak hour  
4: Hollow Rd & Subdivision Rd

10/4/2016

**Intersection**

Int Delay, s/veh 2.1

Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Vol, veh/h	2	15	5	13	50	1
Future Vol, veh/h	2	15	5	13	50	1
Conflicting Peds, #/hr	0	0	3	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	1	1	1	1
Mvmt Flow	2	17	6	15	57	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	89	63	64	0	-	0
Stage 1	63	-	-	-	-	-
Stage 2	26	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.11	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.209	-	-	-
Pot Cap-1 Maneuver	917	1007	1545	-	-	-
Stage 1	965	-	-	-	-	-
Stage 2	1002	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	905	1002	1545	-	-	-
Mov Cap-2 Maneuver	905	-	-	-	-	-
Stage 1	960	-	-	-	-	-
Stage 2	993	-	-	-	-	-

Approach	WB	SE	NW
HCM Control Delay, s	8.7	2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NWT	NWRWBLn1	SEL	SET
Capacity (veh/h)	-	-	990	1545
HCM Lane V/C Ratio	-	-	0.02	0.004
HCM Control Delay (s)	-	-	8.7	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Existing plus project conditions PM peak hour  
3: SR-165 & Hollow Rd

10/4/2016

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↑↑	↑		↑↑	↑
Traffic Vol, veh/h	2	0	1	3	3	32	3	442	7	38	721	10
Future Vol, veh/h	2	0	1	3	3	32	3	442	7	38	721	10
Conflicting Peds, #/hr	0	0	2	0	0	4	0	0	1	0	0	3
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	400	-	-	400
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	1	1	1	1	1	1	1	1	1
Mvmt Flow	2	0	1	3	3	35	3	486	8	42	792	11
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1134	1372	401	975	1372	248	795	0	0	487	0	0
Stage 1	879	879	-	493	493	-	-	-	-	-	-	-
Stage 2	255	493	-	482	879	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.52	6.52	6.92	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.52	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.52	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.51	4.01	3.31	2.21	-	-	2.21	-	-
Pot Cap-1 Maneuver	160	147	604	207	146	755	829	-	-	1079	-	-
Stage 1	313	368	-	529	548	-	-	-	-	-	-	-
Stage 2	733	550	-	537	366	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	140	135	601	194	134	751	827	-	-	1075	-	-
Mov Cap-2 Maneuver	140	135	-	194	134	-	-	-	-	-	-	-
Stage 1	311	341	-	526	545	-	-	-	-	-	-	-
Stage 2	688	547	-	497	339	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	24.5			13.4			0.1			0.4		
HCM LOS	C			B								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	827	-	-	188	472	1075	-	-				
HCM Lane V/C Ratio	0.004	-	-	0.018	0.088	0.039	-	-				
HCM Control Delay (s)	9.4	-	-	24.5	13.4	8.5	-	-				
HCM Lane LOS	A	-	-	C	B	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	0.3	0.1	-	-				

Existing plus project conditions PM peak hour  
4: Hollow Rd & Subdivision Rd

10/4/2016

**Intersection**

Int Delay, s/veh 1.6

Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Vol, veh/h	1	8	14	60	27	2
Future Vol, veh/h	1	8	14	60	27	2
Conflicting Peds, #/hr	0	0	3	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	1	1	1	1
Mvmt Flow	1	9	16	69	31	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	138	37	38	0	-	0
Stage 1	37	-	-	-	-	-
Stage 2	101	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.11	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.209	-	-	-
Pot Cap-1 Maneuver	860	1041	1579	-	-	-
Stage 1	991	-	-	-	-	-
Stage 2	928	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	842	1036	1579	-	-	-
Mov Cap-2 Maneuver	842	-	-	-	-	-
Stage 1	986	-	-	-	-	-
Stage 2	913	-	-	-	-	-

Approach	WB	SE	NW
HCM Control Delay, s	8.6	1.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NWT	NWRWBLn1	SEL	SET
Capacity (veh/h)	-	-	1010	1579
HCM Lane V/C Ratio	-	-	0.01	0.01
HCM Control Delay (s)	-	-	8.6	7.3
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

## CONSERVATION RESIDENTIAL SUBDIVISION ORDINANCE

10-18-1	Purpose
10-18-2	Applicability
10-18-3	Definitions
10-18-4	Development Options
10-18-5	Approval Process
10-18-6	Development Activities Prohibited
10-18-7	Waiver
10-18-8	Sensitive Area Designation Plan
10-18-9	Master Development Plan
10-18-10	Dimensional Standards
10-18-11	Design Standards
10-18-12	Attached Housing
10-18-13	Conservancy Lots
10-18-14	Use Regulations
10-18-15	Conservation Land Design Standards
10-18-16	Permanent Protection of Conservation Lands
10-18-17	Ownership of Conservation Lands
10-18-18	Maintenance of Conservation Lands

**10-18-1 Purpose:** The purpose of this Chapter is to provide for subdivision development within Nibley City in a manner that:

- A. Protects areas of the City with productive agricultural soils for continued agricultural use by conserving blocks of land large enough to allow for farm operations;
- B. Provides standards accommodating to some extent the varying circumstances and interests of individual landowners and the individual characteristics of their properties; and
- C. Protects constrained and sensitive lands, including those areas containing sensitive and undevelopable features such as steep slopes, floodplains and wetlands, by setting them aside from development;
- D. Conserves conservation and open space land, including those areas containing unique or natural features such as meadows, grasslands, tree stands, streams, stream corridors, berms, watercourses, farmland, wildlife corridors and/or habitat, historical buildings and/or sites, archeological sites, and green space, by setting them aside from development;
- E. Provides greater design flexibility and efficiency in the siting of services and infrastructure, including the opportunity to reduce length of roads, utility runs, and the amount of paving required for residential development;

- F. Reduces erosion and sedimentation by the retention of existing vegetation and the minimization of development on steep slopes and other constrained and sensitive lands;
- G. Provides for a diversity of lot sizes to accommodate a variety of age and income groups and residential preferences, so that the community's population diversity may be enhanced;
- H. Provides incentives for the creation of greenway systems and open space within the City for the benefit of present and future residents;
- I. Implements adopted City policies to conserve a variety of irreplaceable and environmentally sensitive resource and agricultural lands as set forth in the Comprehensive General Plan;
- J. Implements adopted land use, environment, natural hazards, transportation, and community policies, as identified in the Comprehensive General Plan;
- K. Creates neighborhoods with direct visual and/or recreational access to constrained, sensitive and conservation land;
- L. Provides for the conservation and maintenance of constrained, sensitive and conservation land within the City to achieve the goals of the Nibley City General Plan;
- M. Provides incentives and design alternatives for landowners to minimize impacts on environmental resources such as, sensitive lands, wetlands, floodplain, and steep slopes, and to minimize disturbance of natural or cultural features such as, mature woodlands, tree lines, wildlife habitats and corridors, and historic buildings;
- N. Conserves scenic views and elements of the City's rural and scenic character and minimizes perceived density by minimizing views of new development from existing roads.

**10-18-2      Applicability**

- A. The intent of this Chapter and the Conservation Residential Subdivision options is to encourage the creation and development of flexibly-designed open space subdivisions. Conservation Residential Subdivisions may be developed within applicable residential zones of the City. Conservation Residential Subdivisions shall be developed in accordance with and subject to the development standards, conditions, procedures and regulations of this Chapter and with all other applicable subdivision ordinances and zoning regulations of the City which are not otherwise in conflict with the provisions of this Chapter.
- B. Residential subdivisions in the R-2 and R-2A zones in Nibley City shall develop as conservation subdivisions, if the gross acreage of the property, prior to subdividing, is at least five (5) acres.

- C. In the R-1 and R-1A zones in Nibley City, developers may elect to develop the conservation residential subdivision if the gross acreage of the property, prior to subdividing, is at least five (5) acres.
- D. Conservation residential subdivisions shall not be permitted in the R-E zone.
- E. In cases of conflict with other Nibley City ordinances, this shall be the prevailing ordinance.

**10-18-3 Definitions.** For purposes of this Chapter, the following words shall have the meanings set forth herein:

- A. Conservation Land. Conservation land means land containing unique, historic, cultural, archeological, natural or other significant features, including, but not limited to, meadows, grasslands, tree stands, streams, stream corridors, flood walls, berms, watercourses, farmland, wildlife corridors and/or habitat, historic buildings and/or sites, archeological sites, and open space.
- B. Constrained and Sensitive Land. Constrained and sensitive land means land which is generally unbuildable and which contains constrained and sensitive features including, but not limited to, wetlands, floodplains, steep slopes, faults and other geologically or environmentally sensitive features.

**10-18-4 Development Options**

- A. The intent of the conservation residential subdivision is to encourage the preservation of usable open space, thus helping to maintain the rural character of Nibley City. The City will provide density bonuses to developers as outlined in this ordinance, and as an incentive for preservation of an increased amount of open space. Density bonuses shall be calculated in accordance with the provisions outlined in this chapter.
- B. Developers desiring to develop property as a Conservation Residential Subdivision are subject to the development standards, conditions, procedures and regulations of this Chapter.

**10-18-5 Approval Process**

- A. **Concept Plan.** All applications for a Conservation Residential Subdivision shall submit a concept plan to the Nibley City Planning Commission for their review and comment. The concept plan shall include an overall layout of the property, including road alignments and lot sizes. Additionally, the developer shall submit a brief written plan for development, ownership and management of the open space, including conceptual landscape plans, and options for amenities.

- B. Once the Planning Commission has had an opportunity to review and comment on the concept plan, applications for a Conservation Residential Subdivision shall be submitted and processed in accordance with the requirements and procedures set forth in the City Subdivision Ordinance, including submission and approval of schematic, preliminary and final plans or plats, and any additional procedural requirements set forth in this Chapter, including, but not limited to, submission of a Sensitive Area Designation Plan and/or Master Development Plan.

#### **10-18-6 Development Activities Prohibited**

- A. In order to ensure the preservation and enhancement of existing conditions of certain property within the City, including, but not limited to, constrained and sensitive lands, natural and cultural resources, wildlife habitat and other unique and sensitive lands, no new development activity shall be permitted on property proposed for development as a Conservation Residential Subdivision prior to final plat approval as provided herein. Upon final plat approval, all development activity shall be conducted in accordance with and subject to applicable permit and development approval processes required by City Ordinances, rules and regulations. For purposes of this Section, "development activity" shall include any disturbance or alteration of the property in any way, but shall not include continuation of any currently existing permitted use of the property.

#### ~~10-18-7 Waiver~~

- ~~A. Subject to the provisions set forth herein, any provision of this Chapter may be waived by the City Council upon a vote of not less than three (3) members of the City Council. Such waiver(s) shall be granted only in limited circumstances as deemed appropriate and necessary by the City Council. No waiver shall be granted absent a finding of good cause based upon specific special circumstances attached to the property, nor shall any waiver be granted for reasons of financial hardship. No waiver shall be granted that would be contrary to the public interest or contrary to the underlying intent of this Chapter. Any waiver of the required minimum conservation land dedication shall require comparable compensation, off-site improvements, amenities or other consideration of comparable size, quality and/or value.~~

#### **10-18-8 Sensitive Area Designation Plan Map**

- A. All applications for a Conservation Residential Subdivision shall include a Sensitive Area Designation Plan Map prepared in accordance with the provisions set forth herein. The Sensitive Area Designation Plan Map shall identify all constrained and sensitive lands within the property boundaries and within four hundred (400) feet outside of the property boundaries, including, but not limited to, floodplains, wetlands, and steep slopes. The Sensitive Area Designation Plan Map shall also clearly identify all natural or cultural resources present on the property and within four hundred (400) feet outside of the property, including, but not limited to, geographic features, including, but not limited to,

meadows, grasslands, tree stands, streams, stream corridors, flood walls, berms, watercourses, farmland, wildlife corridors and/or habitat; historic buildings and/or sites; archeological sites; cultural features and green space. Applicants are solely responsible for checking and ensuring the accuracy and designation of constrained and sensitive lands and natural and cultural resources on the Sensitive Area Designation Plan Map for their particular project and applicable adjacent property. If site analysis, surveying and/or identification of constrained and sensitive lands and natural and cultural resources require entry onto adjacent properties, applicants are solely responsible for obtaining all required permits and/or approvals for such entry and analysis, surveying and/or identification.

**10-18-9 Master Development Plan**

A. Application and approval for a Conservation Residential Subdivision shall include a Master Development Plan and/or Development Agreement. Such Master Development Plan and/or Development Agreement shall be reviewed and approved as part of the subdivision approval process.

**10-18-10 Dimensional Standards**

A. Density. The permitted density for development within a Conservation Residential Subdivision shall be determined in accordance with the following chart, hereinafter referred to as the “Development Incentive Chart”.

Development Incentive Chart- R-2			
Conservation Land	Incentive Multiplier	Lot Size Minimum	Minimum Frontage
25%	25%	12,000	100'
30%	31.25	10,500	95'
35%	37.5	9,000	90'
40%	45%	7,500	85'

Development Incentive Chart- R-2A			
Conservation Land	Incentive Multiplier	Lot Size Minimum	Minimum Frontage
25%	18.75%	9,000	95'
30%	25%	8,000	<del>90'85'</del>
35%	31.25%	7,000	<del>8085'</del>
40%	37.5%	6,000	<del>70'80'</del>

**Comment [SP1]:** I've been looking at the buildable area of small lots and how that is impacted by our setback requirements. Building lots typically need more depth than width in order to accommodate quality housing. I would suggest reducing the required frontage so that people can have the depth needed on their yard to maintain our current setbacks but still have enough space to build a high-quality, good sized home.

Developers who opt to develop a conservation residential subdivision in the R-1 and R-1A zones shall do so in accordance with the development incentive charts listed below, and in accordance with all other applicable provisions of this Chapter.

<b>Development Incentive Chart- R-1</b>			
Conservation Land	Incentive Multiplier	Lot Size Minimum	Minimum Frontage
25%	18.75%	25,000	100'
30%	25%	22,500	95'
35%	31.25%	20,000	85'
40%	37.5%	18,000	80'

<b>Development Incentive Chart- R-1A</b>			
Conservation Land	Incentive Multiplier	Lot Size Minimum	Minimum Frontage
25%	25%	17,000	100'
30%	33.33	15,000	100'
35%	41.67%	13,000	95'
40%	50%	11,000	90'

- B. Procedure For Calculating Density Bonuses. The density bonus for a conservation subdivision shall be arrived at by multiplying the incentive multiplier for the percentage of conservation land by the original number of lots. The original number of lots shall be calculated as follows:
1. R-1 zone: Gross acreage x .8 = original yield
  2. R-1A zone: Gross acreage x 1.2= original lot yield
  3. R-2 zone: Gross acreage x 1.6= original lot yield
  4. R-2a zone: Gross acreage x 2.3 = original lot yield
- C. Minimum Required Conservation Land. All Conservation Residential Subdivisions shall provide a minimum of 25% conservation land within the Conservation Residential Subdivision as set forth in the Development Incentive Chart in Subsection A. The percentage of required conservation land for any given Conservation Residential Subdivision shall be calculated based upon the gross acreage of property within the proposed subdivision, less the acreage needed for publicly dedicated rights-of-way. Except as otherwise provided herein, conservation land shall not be included within any residential lot.
- D. Density Bonuses Not Otherwise Listed. Developers may choose to set aside open space in excess of what is provided for in the incentive charts included herein. The City Council may choose to approve an increase in density beyond what is provided for in the charts in exchange for an increased percentage of open space. However, in no case shall the density bonus exceed fifty percent (50%).
- E. Lot Area. The lot area and minimum lot size for lots within a Conservation Residential Subdivision shall be determined in accordance with the Development Incentive Chart set

forth in Subsection A. The typical lot area is likely to be much closer in size to the established threshold for each zone because that lot size can be delivered by developers while still meeting the minimum conservation land requirements set forth herein.

- F. Lot Width at Front Setback. The minimum lot width at the front setback (Required Frontage) for main buildings within a Conservation Residential Subdivision shall be in accordance with the Development Incentive Chart.
- G. Yard Regulations. All yard regulations, including building setbacks, heights and regulations on accessory structures shall be in compliance with the Nibley City zoning and subdivision codes.

#### **10-18-11 Design Standards**

- A. As part of the application for a Conservation Residential Subdivision, developers shall be required to submit drawings showing the design options for the primary dwelling on lots within the subdivision. Such designs shall be in accordance with the provisions contained in this section.
- B. **Individual Lots.** Individual lots in Conservation Residential Subdivisions shall be laid out pursuant to the dimensional standards set forth herein. With the exception of conservancy lots, individual residential lots shall not encroach upon or contain any of the required minimum designated conservation land for the Subdivision or any constrained or sensitive lands, as defined herein.
- C. **Orientation.** All principal dwelling structures shall front a publicly dedicated street or private drive.
- D. **Building Height.** All building heights shall comply with Nibley City Code 10-11-1 "Space Requirements Chart".
- E. **Materials.**
  - 1. Allowable primary materials for shall be wood clapboard, cementitious fiber board, wood board and batten, wood siding, brick, stone, stucco, or similar material.
  - 2. Allowable secondary materials can include cementitious fiber board, brick, wood, exposed smooth-finish concrete block, stone, glass, architectural metal panels, EIFS, corrugated metal, or similar material.
  - 3. Pitched roofs of structures shall be clad in asphalt shingles, wood shingles, standing seam metal, a similar material, or a combination of similar materials.
- F. **Porches, Landings, Stoops, or Porticos.** All buildings shall have a covered porch, a covered landing, a stoop, or a portico. This element shall be:
  - 1. The primary architectural element of the façade where located;

2. Located on the front facade of the structure; and
3. Porches must be at least six feet deep;
4. Stoops and landings must be at least four feet deep.
5. Porticos must provide a depth of covering of at least four feet.

G. **Roofs and Overhangs.** Roofs and overhangs on buildings using shall comply with the following standards:

1. Pitched roofs covering the main body of the structure shall be hip style, shed style, mansard, or shall have symmetrical gables.
2. Shed roofs shall maintain a minimum pitch of 2:12 and all other roofs covering the main body shall maintain a minimum roof pitch of 6:12 or steeper.
3. Overhanging eaves may expose rafters, but flush eaves shall be finished with profiled molding or gutters.
4. Flat roofs may not be used.

H. **Facades.** Any structure with a front façade of thirty feet (30') or more shall incorporate wall offsets in the form of projections or recesses in the front façade plane. Offsets shall have a minimum depth of two feet (2').

I. **Garages.** All structures intended for residential occupancy shall include a garage. The following garage standards shall apply:

1. Street facing garage façades shall not visually or architecturally dominate the front façade elevation of the primary building. Compliance is determined by:
  - a. The living space is the dominant element of the front façade;
  - b. The roof accent gabling is visually dominant over the living space instead of the garage;
  - c. Front facing garages must contain at least two of the following:
    - i. Single carriage house garage doors with windows;
    - ii. Garage doors that include windows and are painted to match the main or accent color of the dwelling;
    - iii. Ornamental light fixtures flanking the doors;
    - iv. Arbor or trellis;
    - v. Columns flanking doors and/or an eyebrow overhand;
    - vi. Portico;
    - vii. Dormers;
    - viii. Twelve-inch overhangs over garage doors;

- ix. Eaves with exposed rafters with a minimum six inch (6") projection from the front plane;
  - x. A vertical element such as a tower, placed over the primary pedestrian entrance; or
  - xi. Roof line changes.
- d. In addition to the two required elements described in the section above, front-facing garages protruding up to four (4) feet from the front plane shall have garage doors with windows.
- e. Front facing garages protruding more than four feet (4') from the front façade shall include a porch or covered landing that extends a minimum of six feet (6') from the plane of the living space. In no case shall a street facing garage protrude more than eight feet (8') from the plane of the living space.
- f. In no case shall front facing garage doors comprise more than fifty percent (50%) of the primary façade.
- i. Front facing garage doors that comprise from forty percent (40%) to fifty percent (50%) of the primary façade shall be recessed from the primary façade by at least four feet (4') Front facing garage doors that are flush with the primary façade or that protrude up to four feet (4') from the front façade shall comprise no more than forty percent (40%) of the primary façade
  - ii. Front facing garage doors protruding more than four feet (4') from the front façade shall comprise no more than thirty percent (30%) of the primary façade.
2. All garages with more than two bays or with doors exceeding sixteen feet (16') in width shall be located behind the rear façade of a structure or shall be side-loaded. Buildings using this form that incorporate side-loaded garages shall emphasize the pedestrian entrance to the building. Side loaded garages along front facades shall incorporate a portico, arbor, trellis, or some other element to articulate the façade incorporating the garage

**J. Architectural Variability.**

1. All residential subdivision of three lots or more that are intended solely for single-family detached structures shall include multiple distinctly different front façade designs within any single phase of the development. Developments of three to ten units shall have a minimum of three façade variations. One additional façade variation will be required to be included for each additional ten units.
2. No structure shall be of the same primary façade design as any other structure within three building lots along the same block face, and no single front façade design may

constitute more than 25 percent of the front façade design within any single phase of a subdivision.

- K. Conservation Land Coordination. Conservation land shall be coordinated and located so as to maximize the continued use of the space. In order to create larger areas of conservation land and to combine open space from a variety of developments, conservation land shall be coordinated either with existing adjacent conservation land or with planned future conservation land. If no adjacent parcels of land are planned for development, conservation land shall be planned to provide the greatest likelihood of adjoining future developments' conservation land.
- L. Conservation Lands. Standards pertaining to the quantity, quality, configuration, use, permanent protection, ownership, and maintenance of the conservation land within a Conservation Residential Subdivision shall be complied with as provided herein.
- M. Constrained and Sensitive Lands. Restrictions and regulations regarding the preservation, protection, ownership and maintenance of constrained and sensitive lands within a Conservation Residential Subdivision shall be complied with as provided herein.

**10-18-12 Attached Housing Development**

- A. Conservation residential subdivisions in the R-1a, R-2 and R-2a zones in excess of twenty-five (25) acres may develop as a Planned Unit Development and include up to fifty percent (50%) of the property as single-family attached (townhome) housing, subject to the standards outlined in the Nibley City ordinance regulating Planned Unit Developments.

**10-18-12 Conservancy Lots**

- A. Conservancy Lots. Conservation land and constrained and sensitive land may be included within individual residential lots in limited circumstances when such areas can be properly protected and preserved in accordance with the intent and purpose of this Chapter. Such lots shall be known and referred to as "Conservancy Lots" and must be approved by the City Council in conjunction with the subdivision approval.
- B. Regulations. Conservation land and constrained and sensitive land within a Conservancy Lot shall remain subject to all regulations and requirements for such land as set forth herein, including, but not limited to, use, design, maintenance, ownership and permanent protection.
- C. Ownership. Ownership may be held in perpetuity by an individual or corporation with a restriction on the recorded plat preventing further development by providing a conservation easement to Nibley City.

**10-18-13 Use Regulations**

A. Subdivision. Subject to use and development restrictions of constrained and sensitive lands as set forth herein, land within Conservation Residential Subdivisions may be used for the following purposes:

1. Permitted Uses. Any uses permitted in the relevant zone.
2. Conservation Land. Conservation land, subject to the use and development restrictions of conservation land as set forth herein.
3. Accessory Uses. Any permitted accessory uses as provided in the relevant zoning regulations.

B. Conservation Land. Conservation land may be used for the following purposes:

1. Permitted Uses. The following uses are permitted in conservation land areas:
  - a. Conservation of open land in its natural state; e.g., meadow, grassland, tree stands, farmland, etc.
  - b. Agricultural and horticultural uses, including raising crops.
  - c. Underground utility easements for drainage, access, sewer or water lines, or other public purposes.
  - d. Above-ground utility and street rights-of-way may traverse conservation land if permitted under City Ordinances; provided, areas encumbered by such facilities and/or rights-of-way shall not be counted towards the minimum required conservation land for the Subdivision.
  - e. Conservation land of less than one half (.5) acre may be used as landscaped buffers for road ways, landscaped entrances to subdivisions, neighborhood “pocket parks” or similar amenities as approved by the Planning Commission.
2. Conditional Uses. The following uses shall be considered as conditional in conservation land areas:
  - a. Agricultural uses, not otherwise permitted, including livestock and associated buildings that support an active, agricultural or horticultural operation, but excluding livestock operations involving swine, poultry, and mink.
  - b. Pastureland for sheep, cows and horses.
  - c. Equestrian facilities.

- d. Wholesale nurseries and associated buildings that are specifically needed to support active, viable horticultural operations.
  - e. Silviculture, in keeping with established standards for selective harvesting and sustained-yield forestry.
  - f. Neighborhood open space uses such as village greens, commons, picnic areas, community gardens, trails, passive recreation parks and similar low-impact passive recreational uses specifically excluding motorized off-road vehicles, rifle ranges, and other uses similar in character and potential impact.
  - g. Active non-commercial recreation areas, such as trails, playing fields, playgrounds, courts, and bikeways.
  - h. Golf courses, not including miniature golf.
  - i. Water supply and sewage disposal systems, and stormwater detention areas designed, landscaped, and available for use as an integral part of the conservation land.
  - j. Fencing, when deemed necessary and appropriate for the particular use, condition, purpose and/or location of the conservation land.
3. Prohibited Uses. The following uses shall be considered prohibited in conservation land areas:
- a. Any residential, commercial or industrial activity;
  - b. Any development, construction or location of any manmade modification or improvements such as buildings, structures, roads, parking lots, or other improvements, except as may be necessary to support a permitted or conditional use;
  - c. Any filling, dredging, excavating, mining, drilling, or exploration for and extraction of oil, gas, minerals or other resources from the property;
  - d. Any dumping or storing of ashes, trash, garbage or junk vehicles or equipment;
  - e. Burning of any materials, except as necessary for agricultural, drainage and fire protection purposes;

- f. The use of motor vehicles, including snowmobiles, all-terrain vehicles, motorcycles and other recreational vehicles, except as may be necessary to maintain and operate the property and/or utility facilities within the property;
- g. Hunting or trapping for any purpose other than predatory or problem animal control;
- h. Advertising of any kind or nature and any billboards or signs; provided, directory and information signs may be displayed describing the easement and prohibited or authorized use of the same;
- i. Any cutting of trees or vegetation, except as necessary for fire protection, thinning, elimination of diseased growth, control of non-native plant species, maintenance of landscaped areas, and similar protective measures or those activities relating to permitted agricultural uses;
- j. The change, disturbance, alteration, or impairment of significant natural ecological features and values of the property or destruction of other significant conservation interests on the property;
- k. The division, subdivision or de facto subdivision of the property;
- l. Changing the topography of the property by placing on it any soil, dredging spoils, land fill, or other materials, except as necessary to conduct specific permitted purposes; and
- m. All other uses and practices inconsistent with and detrimental to the stated objectives and purpose of the easement.

C. Constrained and Sensitive Lands. Except for passive recreational activities, no development or residential uses shall be permitted within constrained and sensitive lands.

**10-18-14 Conservation Land Design Standards.** Designated conservation land within a Conservation Residential Subdivision shall meet the following standards:

- A. Construction of Conservation Land and other Amenities. Regardless of the overall phasing of the project, all conservation land and other amenities that will be constructed as part of the Conservation Residential Subdivision shall be constructed and installed in the first phase of the development.
- B. Significant Areas and Features. Conservation land should include the most unique and sensitive resources and locally significant features of the property within the Subdivision such as meadows, grasslands, tree stands, streams, stream corridors, berms, watercourses, farmlands, wildlife corridors and/or habitat, historic buildings and/or sites, archeological

sites, cultural features, green space, scenic views, etc. Developers, as part of the subdivision application, shall submit a report detailing why the conservation land was selected and what features and resources it is preserving.

- C. Contiguous Land. Conservation lands within a development shall be contiguous to provide for large and integrated open space areas within the Subdivision. Non-contiguous parcels of conservation lands may be approved by the City Council during plat approval process upon a finding that such exception is necessary and/or desirable based upon consideration of the size of the project, the size of the conservation parcels, the types of features and resources included within the conservation lands, and other relevant considerations. Long thin strips of conservation land (less than one hundred (100) feet wide) are prohibited, unless approved by the City Council during plat approval process upon a finding that such configuration of the conservation land is necessary and/or desirable to connect other significant areas, to protect linear resources such as streams or trails, or to provide a buffer.
- D. Open Space Network Connection. Conservation land within a Conservation Residential Subdivision shall be designed and laid out as part of a larger continuous and integrated open space system to ensure that an interconnected network of open space will be provided throughout the City.
- E. Trail Connection. Wherever practical, conservation land within a Conservation Residential Subdivision shall incorporate trail connections into the design of the conservation land.
- F. Canal. Wherever canals traverse the property on which the Conservation Residential Subdivision, the Developer shall leave a minimum of ten feet (10') of open space on each side of the canal's top banks. This open space may count towards the required open space and also towards the required trail connections, provided the open space along the canal is developed in a manner that it can be reasonably and safely used as a pedestrian corridor.
- G. Visibility. Conservation land shall be located and designed within the Conservation Residential Subdivision to add to the visual amenities of neighborhoods and to the surrounding area by maximizing the visibility of internal open space. Such enhanced visibility of conservation land may be accomplished through design and location of such open space as terminals at the ends of streets or along "single-loaded" street segments, particularly along the outside edges of street curves, and by maximizing the visibility of external open space as perimeter "greenbelt" conservation land.
- H. Buffering. Conservation land shall be designed to provide buffers and to protect scenic views as seen from existing roadways and from public parks. Where the proposed development abuts a national forest or other public park, open space, wildlife sanctuary or preserve, a natural greenway buffer at least twenty-five (25') feet wide shall be provided within the development along its common boundary with said land, within which no new structures shall be constructed, nor shall any clearing of trees or understory growth be permitted (except as may be necessary for street or trail construction or fire safety). Where

this buffer is unwooded, the City may require vegetative screening to be planted at developer's sole cost and expense and/or that the buffer be managed to encourage natural forest succession through policies and the periodic removal of invasive alien plant and tree species.

- I. Pedestrian Access. Developer shall provide adequate pedestrian access to conservation land which is open to public or resident use.
- J. Maintenance Access. Developer shall provide sufficient maintenance access to all conservation land and constrained and sensitive lands within the Conservation Residential Subdivision.
- K. Landscaping. All conservation land that is not wooded, farmed, or maintained as conservation meadows, grassland, or other approved open space, shall be landscaped at developer's sole cost and expense in accordance with landscaping requirements for subdivisions.

**10-18-15 Permanent Protection of Conservation Lands.**

- A. Conservation Easement. All conservation land shall be permanently restricted from future development by a conservation easement or other method of protection and preservation acceptable to the City. Under no circumstances shall any development be permitted in the conservation land at any time, except for those permitted or conditional uses listed herein and approved in conjunction with the Conservation Residential Subdivision. All conservation easements, or other acceptable method of protection and preservation of the conservation land within a Conservation Residential Subdivision, shall be approved by the City Council and recorded prior to or concurrent with the recording of the final plat for the Conservation Residential Subdivision.
- B. Terms and Conditions. All conservation easements, or other acceptable method of protection and preservation of the conservation land within a Conservation Residential Subdivision, shall be in substantially the same form as the standard conservation easement form provided by the City and shall include, at a minimum, the following terms and/or conditions:
  - 1. legal description of the easement;
  - 2. description of the current use and condition of the property;
  - 3. permanent duration of easement;
  - 4. permitted and conditional uses;
  - 5. prohibited development and/or uses;
  - 6. maintenance responsibilities and duties; and
  - 7. enforcement rights and procedures.

C. Grantee. Unless otherwise approved by the City Council, the grantee of a conservation easement shall consist of one of the following acceptable entities which entity shall be qualified to maintain and enforce such conservation easement: land trust, conservation organization or governmental entity. The City may, but shall not be required to, accept, as grantee, a Conservation Easement encumbering conservation lands within a Conservation Residential Subdivision, provided there is no cost of acquisition to the City for the easement and sufficient access to and maintenance responsibilities regarding the conservation land are provided.

**10-18-16 Ownership of Conservation Lands.**

- A. Undivided Ownership. Unless otherwise approved by the City and subject to the provisions set forth in this Chapter, the underlying fee ownership of the conservation land shall remain in single ownership and may be owned and maintained by one of the following entities: homeowners' association, land trust, conservation organization, governmental entity, or private individual.
- B. Property subject to a conservation easement, or other acceptable method of protection and preservation, shall not be subdivided.
- C. Owners' Association. Conservation land may be held in common ownership by a condominium homeowners' or other acceptable owners' association, subject to all of the provisions for owners' associations set forth in State regulations and the City's Subdivision regulations. In addition, the following regulations shall be met:
1. A description of the organization of the proposed association, including its by-laws, and all documents governing ownership, maintenance, and use restrictions for conservation land, including restrictive covenants for the Subdivision, shall be submitted by the developer with the Final Plat application.
  2. The proposed association shall be established and operating (with financial subsidization, if necessary) prior to or concurrent with the recording of the Final Plat for the Subdivision.
  3. Membership in the association shall be mandatory for all purchasers of property within the Subdivision and their successors in title.
  4. The association shall be responsible for maintenance and insurance of conservation land.
  5. The by-laws of the association and restrictive covenants for the Subdivision shall confer legal authority on the association to place a lien on the real property of any member who falls delinquent in dues. Such dues shall be paid with the accrued interest before the lien may be lifted.

6. Written notice of any proposed transfer of conservation land by the association or the assumption of maintenance for the conservation land must be given to all members of the association and to the City no less than thirty (30) days prior to such event.
7. The association shall have adequate staff to administer, maintain, and operate such conservation land.

**10-18-17      Development and Maintenance of Conservation Lands.**

- A. Costs. Unless otherwise agreed to by the City, the cost and responsibility of maintaining conservation land shall be borne by the owner of the underlying fee of the conservation land.
- B. Plan. Each stage of required approval of a Conservation Residential Subdivision, developers shall submit an Open Space Development Plan, with increasing levels of detail.
  1. At the concept plan stage, the developer shall submit a brief written plan for development, ownership and management of the open space, including conceptual landscape plans, and options for amenities.
  2. As part of the preliminary plat approval, developers shall submit a detailed Open Space Development Plan, outlining landscaping, maintenance and operations of the conservation land and providing for and addressing the means for permanent maintenance of the conservation land within the proposed Conservation Residential Subdivision with the Preliminary Plat application for the Subdivision. Schematics for the landscaping shall be included with the preliminary Open Space Development Plan.
  3. As part of final plat approval, developers shall submit an Open Space Development Plan which, in addition to the items required of the preliminary Open Space Development Plan, shall include the following items:
    - a. The Plan shall define ownership.
    - b. The Plan shall establish necessary regular and periodic operation and maintenance responsibilities for the various kinds of open space (e.g., lawns, playing fields, meadow, pasture, wetlands, stream corridors, hillsides, cropland, woodlands, etc.).
    - c. The Plan shall estimate staffing needs, insurance requirements, and associated costs, and define the means for funding the maintenance of the conservation land and operation of any common facilities on an on-going basis. Such funding plan shall include the means for funding long-term capital improvements as well as regular yearly operating and maintenance costs.
    - d. At the City's discretion, the applicant may be required to escrow sufficient funds for the maintenance and operation costs of common facilities for up to one year following acceptance by the City.

- C. Approval. The Maintenance Plan must be approved by the City Council prior to or concurrent with Final Plat approval for the Subdivision. The Maintenance Plan shall be recorded against the property and shall include provisions for the City's corrective action rights as set forth herein. Any changes or amendments to the Maintenance Plan shall be approved by the City Council.
- D. Failure to Maintain. In the event that the organization established to maintain the conservation land and the common facilities, or any successor organization thereto, fails to maintain all or any portion thereof in reasonable order and condition, the City may assume responsibility, as a right but not an obligation, for maintenance, in which case any escrow funds may be forfeited and any permits may be revoked or suspended.
- E. Corrective Action. The City may enter the premises and take corrective action, including extended maintenance. The costs of such corrective action may be charged to the property owner and may include administrative costs and penalties. Such costs shall become a lien on said properties. Notice of such lien shall be filed by the City in the County Recorder's office. The Maintenance Plan and all other documents creating or establishing any association or conservation organization for the property shall reference the City's corrective action authority set forth herein and shall be recorded against the property.
- F. The developer shall fund implementation and maintenance of the conservation easement until such time as the control of the easement is transferred to the long-term manager. The developer shall address implementation, development, maintenance and transfer procedures in the Sensitive Area Designation Plan Map or Master Development Plan, as applicable