

AGENDA
HIGHLAND CITY COUNCIL MEETING
September 15, 2015

7:00 p.m. Regular City Council Session
Highland City Council Chambers, 5400 West Civic Center Drive, Highland Utah 84003

7:00 P.M. REGULAR SESSION – CITY COUNCIL CHAMBERS

CALL TO ORDER – Mayor Mark Thompson
INVOCATION – Tim Irwin
PLEDGE OF ALLEGIANCE – Mayor Thompson

APPEARANCES

Time has been set aside for the public to express their ideas, concerns, and comments.
(Please limit your comments to three minutes each.)

PRESENTATIONS

1. Utah Lake Commission – Eric Ellis, Executive Director
2. Utah Local Government Trust Insurance Update – Gary LeCheminant
3. Open Meeting Law – Tim Merrill

CONSENT

4. **MOTION: Extension of an Agreement for the Purchase and Extraction of Aggregate until November 30, 2015 - Westroc**
5. **MOTION: Final Plat Approval for an 11 lot subdivision located at 5650W. 9600 No. - Flats at Fox Hollow**

ACTION ITEMS

6. **MOTION: Conditional Use Permit, Site Plan and Architectural Approval for an 86 Unit Multi-Family Townhome Development in the Town Center Flex Use Zoning District - Blackstone**
7. **MOTION: Authorization to Proceed with Construction - Dry Creek Trail, Phase 3**
8. **MOTION: Urban Deer Control Program – Maintenance Plan**
9. **MOTION: Conditional Use Permit Salt Storage Building – Northwest corner of Park Drive and SR92**

10. MOTION: Operational Safety Report – 11800 North and Highland Blvd.

11. MAYOR/ CITY COUNCIL & STAFF COMMUNICATION ITEMS

- A.** Everbridge Communications – Nathan Crane
- B.** Alpine School District – Mayor Thompson
- C.** Saved Water Shares – Mayor Thompson

ADJOURNMENT

(These items are for information purposes only.)

Description	Requested/Owner	Due Date	Status
Road Capital Improvement Plan for FY 15-16 <i>Prioritize and Communicate to Residents</i>	City Council		Continued Discussion
Determine Park Use for Recreation	City Council Parks Staff	4 th Quarter of 2015	Staff to make Recommendations
Building Use Policy Fees	Rod Emily	3 rd Quarter of 2015	Staff Gathering Information
SR74 Median at Pebble Lane Subdivision	Staff	2015	Removal of Median
HW Bldg. – PW Storage Status	City Council Mayor/PW	End of 2015	In Progress
Moratorium for the Town Center Overlay	City Council	January 2016	
Historical Society Request for Storage Room and Display area in Community Center	City Council	End of 2015	

CERTIFICATE OF POSTING

The undersigned duly appointed City Recorder does hereby certify that on this **10th day of September, 2015**, the above agenda was posted in three public places within Highland City limits. Agenda also posted on State (<http://pmn.utah.gov>) and City websites (www.highlandcity.org).

JOD'ANN BATES, City Recorder

- In accordance with the Americans with Disabilities Act, Highland City will make reasonable accommodations to participate in the meeting. Requests for assistance can be made by contacting the City Recorder at 801-772-4505, at least 3 days in advance to the meeting.
- The order of agenda items may change to accommodate the needs of the City Council, the staff and the public.
- This meeting may be held electronically via telephone to permit one or more of the council members to participate.

THE PUBLIC IS INVITED TO PARTICIPATE IN ALL CITY COUNCIL MEETINGS.



CITY COUNCIL AGENDA REPORT

Item #4

DATE: September 15, 2105

TO: Honorable Mayor and Members of the City Council

FROM: Nathan Crane, AICP
City Administrator/Community Development Director

SUBJECT: EXTENSION OF AGREEMENT FOR THE PURCHASE AND EXTRACTION OF
AGGREGATE UNTIL NOVEMBER 30, 2015.

STAFF RECOMMENDATION:

Extend an agreement and license for the purchase and extraction of aggregate until November 30, 2015. This agreement only applies to property owned by the City.

BACKGROUND:

In June 2009, the City and Westroc entered into an agreement to allow for the gravel extraction at 4365 West 1100 North. This property is part of a larger gravel mining operation.

An amendment was entered into in 2012 that allowed the remove and extraction of gravel until August 2014. A second amendment, in August 2014, extended the agreement until September 30, 2015. The operator is requesting an extension until November 30, 2015. The contract was prepared by the City Attorney.

FISCAL IMPACT:

None

ATTACHMENTS:

1. Vicinity Map
2. Contract

3rd AMENDMENT TO AGREEMENT AND LICENSE FOR THE PURCHASE AND EXTRACTION OF AGGREGATE

This 3rd Amendment to Agreement and License for the Purchase and Extraction of Aggregate (hereinafter referred to as the "3rd Amendment") between Highland City ("City") and Westroc, Inc. ("Westroc") is a third amendment to the Agreement entered into in or about June 2009 between the City, Westroc, and The Cyrus W. Spurlino Revocable Trust.

RECITALS

WHEREAS, in or about June 2009, the City and Westroc entered into an Agreement relating to the extraction of aggregate from certain real property located within the City; and

WHEREAS, the parties to that Agreement entered into an Amendment ("1st Amendment") in August 2012; and

WHEREAS, the 1st Amendment granted Westroc until September 2, 2014 to excavate and remove aggregate from the property; and

WHEREAS, the parties entered into a second Amendment ("2nd Amendment") in August 2014, extending the Agreement until September 30, 2015; and

WHEREAS, the parties desire to extend that period to allow additional time for the extraction and removal;

NOW THEREFORE, in consideration of the mutual promises and covenants contained herein, the parties agree as follows:

TERMS

1. The deadline of September 30, 2015 to excavate and remove aggregate is hereby extended to November 30, 2015.
2. Any other deadlines or timelines that are directly related to this extension are hereby adjusted accordingly. All other provisions and terms of the original contact and the 1st Amendment thereto shall remain in full force and effect.

HIGHLAND CITY

Attest:

MAYOR MARK THOMPSON
DATE:

CITY RECORDER

WESTROC

NAME:
TITLE:
DATE:



CITY COUNCIL AGENDA REPORT

Item # 5

DATE: September 15, 2015

TO: Honorable Mayor and Members of the City Council

FROM: Nathan Crane, AICP
City Administrator/Community Development Director

SUBJECT: JEREMY ACKLEY FOR MILLHAVEN CONSTRUCTION IS REQUESTING FINAL PLAT APPROVAL FOR A 11 LOT SINGLE FAMILY RESIDENTIAL SUBDIVISION – FLATS AT FOX HOLLOW (PP-15-03).

STAFF RECOMMENDATION:

The City Council review a request for final plat approval for the Flats at Fox Hollow, a 11 lot single family residential subdivision located at 5650 West and 9600 North.

BACKGROUND:

The property is 9.8 acres and is owned by Millhaven Construction, LLC.

The property is designated as Low Density Residential on the General Plan Land Use Map. The property is zoned R-1-40 (Single Family Residential). The R-1-40 District allows one home per 40,000 square feet. The minimum lot width is 130 feet.

The preliminary plat was approved by the Council on September 1, 2015.

Subdivision review and approval is an administrative process.

SUMMARY OF REQUEST:

1. The applicant is requesting approval of an 11 lot single family residential subdivision. The proposed density is approximately .90 units per acre.

Lot	Square Footage		Lot	Square Footage
1	35,926		7	35,471
2	35,783		8	35,409
3	35,555		9	37,850
4	44,304		10	34,523
5	41,717		11	27,253
6	26,982			

2. Access to the site will be from 5650 West and 9600 North.

CITIZEN PARTICIPATION:

Notification is not required for final plats.

ANALYSIS:

- The property is designated as low density residential in the General Plan Land Use Map. The proposed subdivision meets the intent of the General Plan.
- The property to the north and west is existing single family residential. To the south and east are agricultural uses. The proposed subdivision is compatible with surrounding uses, but an agricultural area notification on the plat would be a reasonable requirement to assure future buyers are aware of potential conditions resulting from adjacent agricultural operations.
- The proposed development includes one existing home, located on lot 11, which fronts on 9600 North. By including this home in the subdivision the improvements along 9600 North adjacent to the lot will be completed. In addition, the applicant has agreed to install the curb and asphalt along 9600 North to complete the improvements. The City will reimburse the applicant for this cost.
- There is an existing ditch on the property. This ditch will need to be piped and relocated. Approval from the American Fork Irrigation District will be required prior to final approval of the civil construction plans.
- Utilities will be extended from 9600 North to serve the site.
- Water will be dedicated as required by the Development Code prior to final plat recordation.

FINDINGS:

The proposed subdivision plat meets the following findings with stipulations:

- It is in conformance with the General Plan, the R-1-40 District and the Highland city Development Code

Reccomendation:

The Council should accept the findings at approve the final plat subject to the following stipulations:

1. The final plat shall be in substantial conformance with the final plat dated Septmber 10, 2015.
2. Final civil engineering plans to be reviewed and approved by the City Engineer.
3. Prospective homebuyers shall be informed by an affidavit of the proximity of agricultural uses.

4. Written approval from the American Fork Irrigation District regarding the piping and relocation of the ditch shall be provided prior to approval of the final civil construction plans.
5. All required public improvements shall be installed as per City Engineer's approval.

PROPOSED MOTION:

I move that the City Council accept the findings and **APPROVE** case FP-15-04 a request for final plat approval subject to the five stipulations recommended by staff.

ALTERNATIVE MOTION:

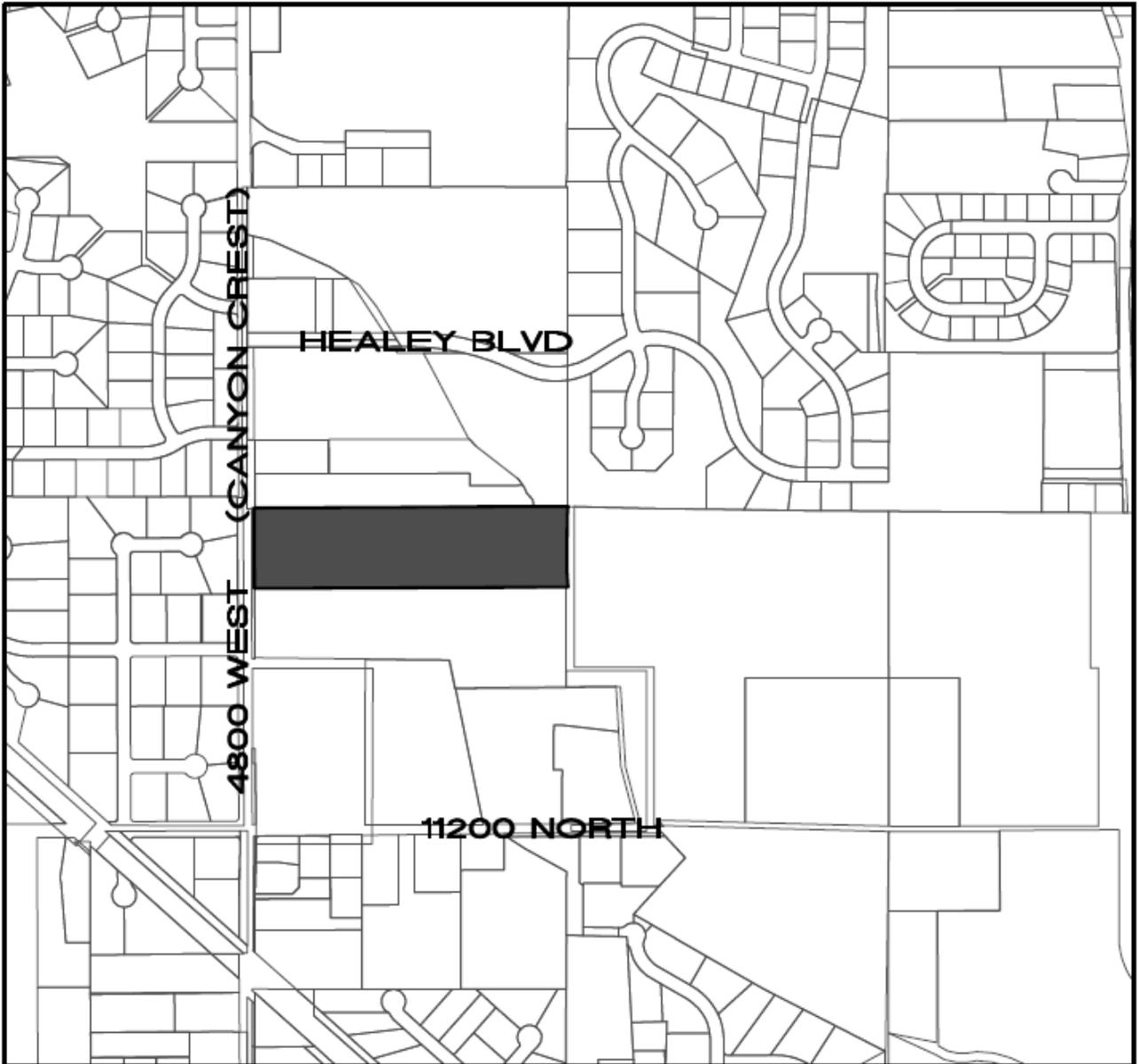
I move that the City Council deny the proposed preliminary plat subject to the following findings: (The Council should draft appropriate findings).

FISCAL IMPACT:

Unknown

ATTACHMENTS:

1. Vicinity Map
2. Proposed Plat date stamped September 10, 2015



VICINITY MAP



CITY COUNCIL AGENDA REPORT

Item # 6

DATE: September 15, 2015

TO: Honorable Mayor and Members of the City Council

FROM: Nathan Crane, AICP
City Administrator/Community Development Director

SUBJECT: MOTION – CONDITIONAL USE PERMIT, SITE PLAN, AND ARCHITECTURAL APPROVAL FOR A 86 UNIT MULTI-FAMILY TOWNHOME DEVELOPMENT IN THE TOWN CENTER FLEX USE ZONING DISTRICT (CU-15-02 – BLACKSTONE)

STAFF RECOMMENDATION:

The City Council should hold a public meeting and:

- 1) Approve the conditional use permit with appropriate stipulations. Staff has prepared draft stipulations that could be used. Additional stipulations may also be needed. The Council may include any conditions which are deemed necessary to mitigate potential impacts and insure compatibility of the use with surrounding development, insure compliance with this ordinance, and which are required to preserve the public health, safety, and general welfare.
- 2) Deny the conditional use permit. If the Council denies the conditional use permit, appropriate and specific findings will need to be drafted.
- 3) Continue the conditional use permit to allow a traffic study to be completed by the City and the applicant to address the issues outlined by the Council in accordance with Section 3-4732.

PRIOR REVIEW:

The Council considered this item at their July 21, 2015 meeting and voted to continue the request to a future Council meeting.

The Council considered this item at their September 1, 2015 meeting and voted 6-0 to continue the item to allow for additional time for review of the revised site plan submitted late on September 1, 2015. An additional section in the staff report has been included discussing the revised site plan.

BACKGROUND:

Tim Alders is requesting a conditional use permit for an 86 unit multi-family development located at the northeast corner of Town Square East and Parkway East. The site is 7.76 acres in size and is owned by Frank and Maria Carlone.

The site is designated as Mixed Use Development on the General Plan Land Use Map. The site is zoned Town Center Flex-Use District. Multi-family residential developments are permitted in this district subject to review and approval of a conditional use permit.

A maximum of 342 units are permitted in the Town Center Flex-Use District. A project cannot exceed 12 units per acre. Toscana was approved for 200 units leaving 142 units. If this project is approved 56 units will remain.

CONDITIONAL USES:

Conditional uses are tolls that are meant to give limited flexibility in the review of an application. In Highland, the Planning Commission makes a recommendation to the City Council. A conditional use is regulated by the following standards:

Utah State Code 10-9a-507. Conditional Uses.

(1) A land use ordinance may include conditional uses and provisions for conditional uses that require compliance with standards set forth in an applicable ordinance.

(2)

(a) A conditional use shall be approved if reasonable conditions are proposed, or can be imposed, to mitigate the reasonably anticipated detrimental effects of the proposed use in accordance with applicable standards.

(b) If the reasonably anticipated detrimental effects of a proposed conditional use cannot be substantially mitigated by the proposal or the imposition of reasonable conditions to achieve compliance with applicable standards, the conditional use may be denied.

If a use is allowed as a conditional use it is assumed that the use is desirable but that it may require an extra level of review. Denial must be based on some factor unique to the proposed location that renders the potential negative effects of the proposed use beyond mitigation. Mitigation means to temper or reduce the negative aspects, not eliminate them.

The action taken in response to an application must be supported by substantial evidence in the record. Substantial evidence is evidence that is relevant and credible. To be relevant, it must relate to the standards in the ordinance. To be credible it must be objective and independent.

TOWN CENTER OVERLAY REVIEW STANDARDS/PROCESS:

Architectural

For development in the Town Center, the Planning Commission is the land use authority for the Architectural Review. The review is based on the following findings:

- The proposed development complies with all provisions of this ordinance, Commercial Design Standards, and all other ordinances, master plans, general plans, goals, objectives and standards of Highland City.
- The height, location, materials, color, texture, area, setbacks, and mass, as well as parts of any structure (buildings, walls, signs, lighting, etc.) and landscaping, is appropriate to the development, the community and the Transit Center Overlay.
- The architectural character of the proposed structures is in harmony with, and compatible to, structures in the neighboring environment and the architectural character desired for the Transit Center Overlay; avoiding excessive variety or monotonous repetition.

Site Plans

For site plans, the Planning Commission makes a recommendation to the City Council. The review is based on the following findings:

- The proposed development complies with all provisions of this ordinance, Commercial Design Standards, and all other ordinances, master plans, general plans, goals, objectives and standards of Highland City.
- The proposed site development plan's building heights, building locations, access points, and parking areas will not negatively impact adjacent properties or the surrounding neighborhood.
- The proposed development promotes a functional relationship of structures to one another, to open spaces, and to topography both on the site and in the surrounding neighborhood.
- Ingress, egress, internal and external traffic circulation, off-street parking facilities, loading and service areas, and pedestrian ways, is so designed as to promote safety and convenience.
- All mechanical equipment, appurtenances and utility lines are concealed from view and integral to the building and site design.

SUMMARY OF REQUEST:

1. The applicant is requesting approval of a conditional use permit for an 86 unit multi-family development. All units are three bedroom units that are 3,667 square feet (3,139 square foot of living area and 528 square foot garage). The number of units per building will range from three to six. Owners will own each unit.
2. The primary ingress/egress to the project will be from Parkway East and Town Square East/ Parkway East will be completed as part of this project.
3. The project will be built in two phases. The first phase will be north of Parkway East and the second phase will be south of Parkway East.
4. The maximum setback is provided along Parkway East and Town Square East.
5. Approximately 1.71 acres (22%) of the site will be landscaping (15.6%) and hardscape (6.4%) meeting the requirement for 15% landscape and 5% hardscape areas. Amenities include a pool, play structure, and gazebos.
6. All roads within the development are private and will be owned and maintained by a Home Owners Association (HOA). The roads include 26 feet of asphalt with two feet of flat curbing.
7. The site provides 265 parking spaces. Each unit will have a two car garage (24'X 22') and there are 86 guest parking spaces. The Development Code requires 3 spaces per unit. The standard two car garage is typically 24' X 24'
8. Each unit will have their own garbage and recycling containers. The containers will be stored in the garage.
9. A wrought iron fence will be on the perimeter of the property except adjacent to street right of ways. The applicant has indicated he is willing to install a six foot concrete wall.

10. The buildings are three stories and 36' 11" high to the top of the roof. The maximum height permitted is 50 feet. The maximum number of stories is three. The applicant has chosen a Tuscan architectural theme. Colors include different shades of brown.

CITIZEN PARTICIPATION:

Notice of the June 18, 2015 Neighborhood meeting was mailed to all property owners within 500' of the proposed plat on June 3, 2015. Four residents attended the meeting. The developer presented and overview of the project. One gentleman came to the meeting asking if they could be rentals, developer said they were not intended to be. One person was concerned with the density and building height, the developer assured her that they were in compliance with the code. One couple was concerned with the rod iron fence and children feeding their horses through it and her flood irrigation.

Notice of the June 30, 2015 Planning Commission meeting was published in the Daily Herald on June 14, 2015. Notice of the meeting was also mailed to all property owners on June 10, 2015. Several residents spoke in opposition of the project.

Notice of the July 21, 2015 Planning Commission meeting was published in the Daily Herald on July 5, 2015. Notice of the meeting was also mailed to all property owners on July 9, 2015. One comment in opposition of the project has been received.

Public notification of the City Council meeting is not required.

REQUIRED FINDINGS:

The City Council must determine that the proposed use meets three findings prior to granting a Conditional Use Permit. The burden of proof rests with the applicant. Each finding is presented below along with staff's analysis.

- 1. The use will not be detrimental to the health, safety, or general welfare of persons residing or working in the vicinity or injurious to property or improvements in the vicinity.**

The property to the north and east is zoned Town Center Commercial Retail and is the Ridley's shopping center, Tim Tire, Arctic Circle, Ace Hardware, and an existing home. The property to the south is zoned Town Flex-Use and is planned for a City library. The property to the west is zoned Town Center Civic. The proposed use is compatible with the surrounding properties.

- 2. The use complies with all applicable regulations in the Development Code.**

The proposed density is 11.27 which is less than the maximum of 12 units per acre permitted.

The number of units will not exceed what is allowed in the district.

There does not appear to be enough room in the garage for these containers and two vehicles. In addition, some of the garage space may be used for personal storage. This could result in the loss of a parking spaces and/or the storage of garbage and recycling containers in the private drive. Staff recommends that trash enclosures be used.

The Fire Marshall has reviewed the site plan for fire access requirements. The proposed project meets the requirements of the Fire Code.

An irrevocable maintenance fund will need to be established by the CC+R's to ensure maintenance of the private roads. Staff is recommending that a note be placed on the final plat to inform potential home buyers of this issue.

Public water, sewer, and storm drain lines are proposed in the private roads. The City Engineer and Public Works Department will need to approve the location of all utilities prior to final plat approval. In addition, an easement to allow access to these lines will need to be included.

The location of water, sewer, and pressurized irrigation lines in relation to lot lines and building foundations will need to be reviewed with the civil improvement plans to ensure adequate spacing.

The City Engineer is concerned about the location of the balconies in relation to the right-of-way line. As such a stipulation requiring a minimum of five feet from the balcony to the right-of-way has been included.

The character and long term success of this type of development requires an effective homeowners association and involved property owners. These types of units may be very attractive to investors and could become rental units over time. The developer will be able to limit the number of initial investors, but has no control over subsequent buyers. Staff has no way of knowing if rental units will be more of a problem here than in any other single family neighborhood.

3. Conditions are imposed to mitigate any detrimental effects.

Draft stipulations have been included to ensure compliance with the Development Code.

PLANNING COMMISSION ACTION:

The Planning Commission held two public hearings on this item on June 30, 2015 and July 14, 2015. At the July 14, 2105 meeting, the Commission voted 5-0 to recommend denial of the project for the following reasons:

- It does not meet the goals, objectives and standards of Highland City
- It does not meet the purposes set forth for the area around the Town Center as set forth in the Highland City Development Code in Section 3-4701
- It has access problems particularly in the northern area
- It has negative impact on the southern property which will become landlocked
- It does not promote a functional relationship within the development and within the surrounding areas particularly as it relates to open space functionality as it relates to its similarities to Toscana and the negative functional relationship that has been developed there
- It impacts the safety of the area in that the sidewalks are not functional and leading to the open spaces
- The open spaces are inconvenient
- Guest parking is sporadic

- There is no traffic impact study
- The entrance, exit and parking locations for service vehicles and signage for those service vehicles is currently undefined and appears to be unacceptable

APPLICANT RESPONSE:

During the Commission public hearings there were a number of issues that were brought forward that need clarification. It is important to note that Section 3-4732 Application Procedures allows, staff, the Planning Commission, and the City Council to request any additional information to evaluate the character and impact of the proposed project. The applicant submitted a response to each of these items (Attachment 4). Staff has summarized the response below.

1. The applicant submitted two signed affidavits that they were the owners of the property. However, at the July 15, 2015 meeting the owners were stated as Frank and Maria Carlone. The City cannot process an application for development without authorization from the property owner. ***SUMMARIZED RESPONSE: The applicant provided the necessary documentation.***
2. According to the information submitted by the applicant the basement and storage areas were not listed as options. At the June 30, 2015 meeting the applicant stated that these areas are options. Approximately 924 square feet of the living space is in the basement and storage which is a buyer option. Excluding the garage and the basement, the living area is 2,215 square feet. Additionally, it is unclear how the buildings will be constructed to accommodate this option. Further the applicant stated that a place in the garage will be created to store garbage and recycling containers. However, a revised floor plan showing this area has not been submitted. ***SUMMARIZED RESPONSE: A 449 square feet of underground room will be provided. Each owner will have the option to expand this area underneath the garage. A revised floor plan has been submitted addressing this issue and the garbage can issue.***
3. The elevations submitted do not list any options; however, at the June 30, 2015 meeting the applicant stated that the elevations included options. The elevations should be revised so that it is clear what approval the applicant requesting. ***SUMAMRIZED RESPONSE: The elevations have been revised.***
4. Parcel #11:0039:0135 is a 0.022 acre piece of property owned by Frank and Maria Carlone. According to the applicant this parcel is included as part of the project. However, this is not consistent with the submittal materials. If this parcel is not included in the development it leaves a small triangular piece of property with no street frontage or access. ***SUMMARIZED RESPONSE: The real estate purchase agreement has been revised to include this property.***
5. The applicant mentioned that there is a reciprocal access easement for all land owners adjoining the access drive for the shopping center to the north. Staff has not received or reviewed the easement. ***SUMMARIZED RESPONSE: Staff has reviewed the agreement and believes that this agreement does not apply to this property. This position has been communicated with the applicant.***
6. The applicant stated that parking on the private roads will be prohibited. It is unclear how this restriction will be enforced. Since they are private streets, this restriction cannot be enforced

by the Lone Peak Police Department. In addition, some of guest parking units are up to 220 feet away from a unit. This could lead to onsite circulation and parking issues for guest, delivery and service vehicles as users are more likely to park on the private roads. **SUMMARIZED RESPONSE: Parking will be prohibited on private roads. Enforcement will be done by the HOA. Seven parking spaces have been relocated near the pool area.**

7. The proposed driveway throat adjacent to unit 86 will create a conflict with users entering/exiting the garage and users entering/exiting the property. **SUMMARIZED RESPONSE: The applicant's traffic engineer disagrees that this is an issue.**
8. The units are three bedroom units which will attract young families. There is a lack of active play areas south of Parkway East. **SUMMARIZED RESPONSE: A tot lot has been added to the southeast corner of the site.**
9. The applicant stated that the pool will be 60' X 24'. It is unknown what the public health requirements are. Specifically, whether or not showers and restrooms are required. **SUMAMRIZED RESPONSE: The project will comply with the public health requirements. Requirements were not identified.**
10. The traffic impact on the surrounding streets is unknown. Section 3-4732 Application Procedures allows the City to request a traffic impact analysis. Staff suggests the City hire a traffic engineer to do a full traffic study. **SUMMARIZED RESPONSE: The applicant has submitted a traffic study that shows minimal impact on adjacent streets.**

TRAFFIC AND INFRASTRUCTURE STUDIES:

Subsequent to the City Council meeting, staff commissioned a traffic study and an engineer's analysis of the infrastructure demands created by the proposed development. The studies are summarized as follows:

Traffic Study

- The proposed development will not have a deferential impact to intersection level of service, vehicle delay, or the surrounding traffic network.
- A second public access is recommended for the units north of Parkway East for circulation and emergency access.
- The parking is sufficient for the proposed use.
- The traffic generated during the Midday peak hour is minimal and will not provide a safety hazard to the individuals that use the splash pad and Town Center Plaza during the summer months.

Infrastructure Study

- Storm Drainage is addressed by using sumps.
- The existing pressurized irrigation system has sufficient pressures and volume to supply the needs of the development.
- The project will connect to the sewer line in 10400 North. This line is nearing capacity. The Sewer Master Plan has identified a need to upsize the line. The project is currently under design and is planned for construction in the spring of 2016. It is recommended that the new sewer line be built before adding the additional connections that would

exceed the capacity of the sewer. Adding all of the units proposed by the development would exceed the existing capacity.

- The existing culinary water system has sufficient pressures and flows to supply the needs of the development.

The applicant has provided a revised site plan that shows an access onto Town Center Boulevard. This will result in the elimination of parking spaces and require an alternative design on Town Center Boulevard. This proposal is still being evaluated by staff and needs approval from the City Council.

SURROUNDING PROPERTIES:

One of the concerns raised was access to the properties to the south and east. These issues are being resolved as follows:

South Property – This property has frontage on Town Center East and is owned by AF Consulting. A road and utilities will be stubbed from the subject property for future potential future use.

East Property – This property has frontage on SR74 and is owned by the Spykes. The City Engineer contacted UDOT regarding an access onto SR74. UDOT stated that the current access can be used in perpetuity as long as the property is being used as residential. If the use of the property changes to commercial then any access will need to meet commercial standards. Ace Hardware and the Alpine Credit Union are part of the Highland Square Subdivision. With this subdivision two joint access easements were recorded. The first one runs east/west and is located over the exit to the Alpine Credit Union. The second one runs north/south and aligns with the first driveway into the center. This easement also includes public utility and sewer easement. There is a sewer line and a man whole within easement that will serve the Spykes property. In addition, road and utilities will be stubbed from the subject property to the rear of the Spykes property for future use.

REVISED SITE PLAN:

The applicant submitted a revised site plans showing two alternatives to provide a second access to a public street. The first alternative showed a connection to Town Center Boulevard. The second access showed a connection to Town Center East. The City Engineer has determined that this is the best alternative is the Town Center East access (Attachment 8). Staff has revised the stipulations as appropriate.

RECOMMENDATION:

The City Council should hold a public meeting and:

- 1) Approve the conditional use permit with appropriate stipulations. Staff has prepared draft stipulations that could be used. Additional stipulations may also be needed. The Council may include any conditions which are deemed necessary to mitigate potential impacts and insure compatibility of the use with surrounding development, insure compliance with this ordinance, and which are required to preserve the public health, safety, and general welfare.
- 2) Deny the conditional use permit. If the Council denies the conditional use permit, appropriate and specific findings will need to be drafted.
- 3) Continue the conditional use permit to allow a traffic study to be completed by the City and the

applicant to address the issues outlined by the Council in accordance with Section 3-4732.

DRAFT STIPUALTIONS:

The following are the draft stipulations:

1. The site plan shall conform to the site plan and elevations dated August 10, 2015, except as modified by these stipulations.
2. The location of water and sewer lines in relation to lot lines and building foundations shall be reviewed by the Engineering Department and Building Division with the civil improvement plans to ensure adequate spacing and appropriate locations.
3. Potential homebuyers shall be informed by CC&R's, affidavit, and posted notice in the model home sales office of the following:
 - a. Ownership and maintenance of private streets.
 - b. Responsibility for repairing private streets after utility maintenance.
 - c. Parking restrictions for residents and visitors.
 - d. Ownership and maintenance responsibility for all common areas.
 - e. No more than four unrelated persons may live in a unit.
4. The property owner shall establish an irrevocable maintenance fund by the CC+R's to ensure maintenance of the private streets. In addition, all private streets shall be constructed to meet Town design standards.
5. A note shall be added to the Final Plat and the Covenants, Conditions, and Restrictions stating the Homeowner's Association shall be responsible for the maintenance of all private streets.
6. The civil construction drawings shall meet all requirements as determined by the Town Engineer.
7. The final landscape plans shall be reviewed and approved prior to issuance of a building permit.
8. A comprehensive sign plan addressing private drive signage, building addressing and permanent directional signage shall be submitted and approved prior to preliminary plat approval. All signs shall be uniform in theme and appearance.
9. The Fire Marshall shall approve the location of all fire hydrants prior to approval of the civil construction plans.
10. Parking shall be prohibited on all private roads and enforced by the Home Owners Association.
11. A six foot concrete wall shall be installed along the property perimeter.
12. No building permits shall be issued until the 10400 North sewer line has been completed.

13. The access to the shopping center service drive shall be removed and the area redesigned to meet all emergency access and subdivision requirements.
14. Utilities and a road stub shall be provided to the property to parcel #11:039:0010 and parcel #41:617:0007.
15. A minimum 449 square foot basement shall be provided for each unit.
16. All garbage cans shall be stored inside the garage. This shall be enforced by the HOA.
17. The north parcel shall be the first phase.
18. All perimeter walls, open space, and guest parking shall be completed in the first phase of development on each site.
19. A minimum driveway throat distance of twenty feet shall be provided for all entrances.
20. A revised landscape plan shall be submitted with the preliminary plat application.

FISCAL IMPACT:

Unknown

ATTACHMENTS:

1. Original Site Plan, Landscape Plan, Elevations
2. Neighborhood Meeting Summary
3. Modified Site Plan
4. Applicants Response with the revised Site Plan and Architectural Elevations
5. Applicants Traffic Study
6. InterPlan Traffic Study
7. Infrastructure Analysis Memo
8. Revised Site Plan Showing a Second Access to Town Center East

Blackstone Project



Submitted By:
Summit Engineering
55 W. Center St.
Heber City, Utah 84032
April 16, 2015
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Submitted To:
Highland City Planning Dept.
5400 W. Civic Center Dr.
Highland City, Utah 84003

August 10, 2015

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Purpose of this Submittal

At the July 28 Highland City Council meeting, the owners of the project known as Blackstone were seeking a conditional use approval for their proposed 86 unit townhome development. At that meeting a motion was made to continue the item in order for the applicant to prepare additionally requested information and supply it to the City Council for their review in moving forward with a decision. The following letter provides an outline of the additional information requested by the city and a response from the applicant.

City Concern 1 - Property Affidavits

The applicant submitted two signed affidavits that they were the owners of the property. However, at the July 15, 2015 meeting the owners were stated as Frank and Maria Carlone. The City cannot process an application for development without authorization from the property owner.

Applicant Response 1

Please see the attached letter from Jim Haslam at Eagle Point Title. Mr. Haslam is an attorney/title officer. His letter confirms that the owner of the property and the signers of the affidavit are in fact the same person.

City Concern 2 – Basement and Storage Areas

According to the information submitted by the applicant the basement and storage areas were not listed as options. At the June 30, 2015 meeting the applicant stated that these areas are options. Approximately 924 square feet of the living space is in the basement and storage which is a buyer option. Excluding the garage and the basement, the living area is 2,215 square feet. Additionally, it is unclear how the buildings will be constructed to accommodate this option. Further the applicant stated that a place in the garage will be created to store garbage and recycling containers. However, a revised floor plan showing this area has not been submitted.

Applicant Response 2

This information is not relevant to a conditional use permit as it implicates no “applicable [City] standards” (10-9a-507(2)(a)). However, please see the attached architectural plans. Here is a breakdown of the square footage of the units:

Ground Level: 491 Square feet of living space. 528 square feet of garage space

Main Level: 827 Square feet

Upper level: 927 square feet

Basement: 449 square feet under the living area of the ground floor. 473 square feet of precast concrete under the garage.

All units will have the same 2,285 square feet of above ground living space. All units will have a 527 square foot garage. All units will have 449 square feet of basement space. This 449 square feet can be used as storage.

In addition, each townhome buyer has the option to include the precast 473 square feet in their unit. We will start each building when the units are presold. Each townhome owner will chose if they want to pay for the additional precast square footage.

A garbage can is 3x3 feet. The garage is 24 feet wide with a 16 foot garage door. This leaves 4 feet on each side of the garage door. Owners will store their garbage cans on each side of the garage door. This leaves them tucked in a place that has no effect on the ability of two cars to park in the garage.

City Concern 3 – Building Elevations

The elevations submitted do not list any options; however, at the June 30, 2015 meeting the applicant stated that the elevations included options. The elevations should be revised so that it is clear what approval the applicant requesting.

Applicant Response 3

This information is not relevant to a conditional use permit as it implicates no “applicable [City] standards” (10-9a-507(2)(a)). However, please see Appendix C for the attached architectural plans and color rendering.

The architectural plans show exactly what materials we will use on the exterior of our townhomes. We will be using asphalt shingles, stone, and stucco. We are in complete compliance with the architectural requirements of the development code. We have also included a color board of materials to the city staff.

City Concern 4 – 0.22 acre parcel

Parcel #11:0039:0135 is a 0.022 acre piece of property owned by Frank and Maria Carlone. According to the applicant this parcel is included as part of the project. However, this is not consistent with the submittal materials. If this parcel is not included in the development it leaves a small triangular piece of property with no street frontage or access.

Applicant Response 4

Please see the attached addendum #5 of the Real Estate Purchase Contract and letter from Jim Haslam at Eagle Point Title. Mr. Haslam states that the small .022 parcel is included in the real estate contract. It will be included in the Blackstone Development. Please see the revised site plan and project survey shown in Appendix A

City Concern 5 – Access Easement

The applicant mentioned that there is a reciprocal access easement for all land owners adjoining the access drive for the shopping center to the north. Staff has not received or reviewed the easement.

Applicant Response 5

We have included a copy of the reciprocal access agreement with our response.

City Concern 6 – Project Parking

The applicant stated that parking on the private roads will be prohibited. It is unclear how this restriction will be enforced. Since they are private streets, this restriction cannot be enforced by the Lone Peak Police Department. In addition, some of guest parking units are up to 220 feet away from a unit. This could lead to onsite circulation and parking issues for guest, delivery and service vehicles as users are more likely to park on the private roads.

Applicant Response 6

This information is not relevant to a conditional use permit as it implicates no “applicable [City] standards” (10-9a-507(2)(a)). However, parking will be prohibited on the private roads. The parking restrictions will be enforced by the HOA (the same way they are in every other context involving HOA regulations). The HOA will have the power and authority to determine the best parking situation of the development. Possible options include hiring a tow truck service, issuing fines, giving warnings, etc.

An Additional 7 guest / residence parking stalls have been added near the project pool area. With the addition of these parking stalls, there is no unit that is farther than 150 feet from a parking stall. Please see Appendix E for the attached letter from Hales Engineering concerning the 220 foot distance of the guest parking.

City Concern 7 – Unit 86 Driveway

The proposed driveway throat adjacent to unit 86 will create a conflict with users entering/exiting the garage and users entering/exiting the property.

Applicant Response 7

This information is not relevant to a conditional use permit as it implicates no “applicable [City] standards” (10-9a-507(2)(a)). However we have slid the bank of units where 86 is located 5 feet further south to increase as much as possible the distance the driveway is from Parkway East. Please see Appendix E for the attached letter from Hales Engineering. Hales states that lot 86’s driveway situation is common and not a concern.

City Concern 8 – Play Areas

The units are three bedroom units which will attract young families. There is a lack of active play areas south of Parkway East.

Applicant Response 8

This is not a conditional use permit issue as it implicates no “applicable [City] standards” (10-9a-507(2)(a)). This does not have a detrimental effect on the property.

However, please see the revised site plan. We have included a tot lot in the south east corner of the property to give a play area for young kids in this area. We have also included a cross walk across the street for increased safety.

City Concern 9 – Project Pool Area

The applicant stated that the pool will be 60' X 24'. It is unknown what the public health requirements are. Specifically, whether or not showers and restrooms are required.

Applicant Response 9

This information is not relevant to a conditional use permit as it implicates no “applicable [City] standards” (10-9a-507(2)(a)).

We will be in compliance with the public health requirements of the public health department requirements for pools of this type. We will provide showers and restrooms that meet any such requirements.

City Concern 10 – Project Traffic

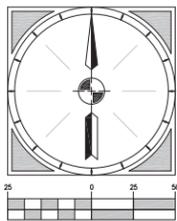
The traffic impact on the surrounding streets is unknown. Section 3-4732 Application Procedures allows the City to request a traffic impact analysis. Staff suggests the City hire a traffic engineer to do a full traffic study

Applicant Response 10

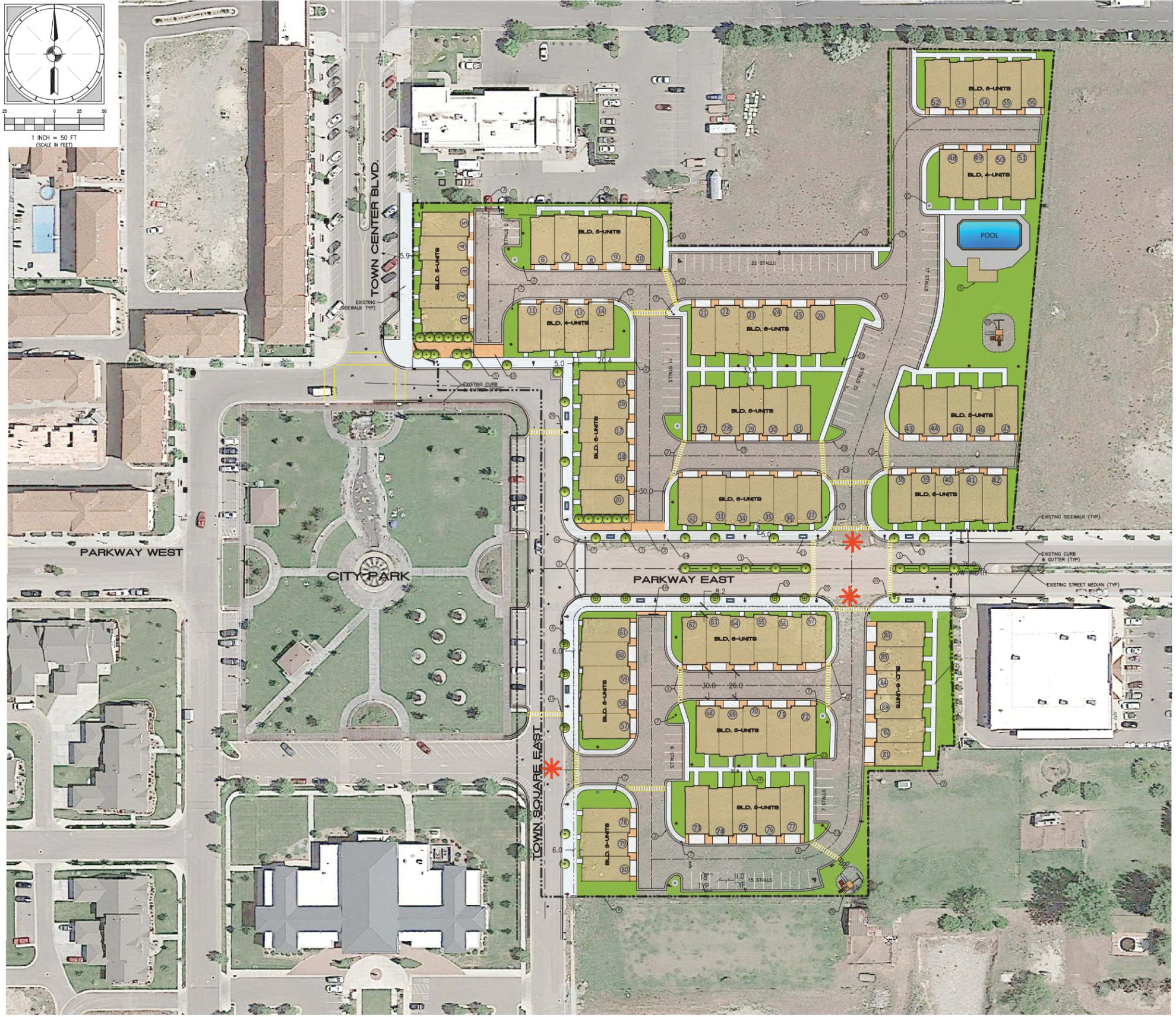
Please see Appendix E for the attached traffic study completed by Hales Engineering. We await the City's similar study.

Appendix A – Updated Site Plan and Record of Survey





1 INCH = 50 FT
(SCALE IN FEET)



LEGEND

- ① LANDSCAPED STREET MEDIAN
- ② ADA RAMP
- ③ ACCESS GATE IN EXTERIOR FENCING
- ④ NEW SIDEWALK
- ⑤ PASEO/ PLAZA AREAS-SEE SITE PLAN DETAIL SHEET
- ⑥ COMMUNITY FACILITY AREA
- ⑦ STOP/ STREET SIGN
- ⑧ EXISTING 5' WIDE SIDEWALK TO BE UPGRADED TO A 15' WIDE SIDEWALK
- ⑨ WROUGHT IRON FENCING-SEE DETAIL SHEETS
- ⑩ FIRE ACCESS
- ⑪ LANDSCAPE PLANTER
- ⑫ CROSSWALK
- ⑬ POLE LIGHT-SEE LIGHTING SITE PLAN
- ⑭ STREET LIGHT-SEE LIGHTING SITE PLAN
- ⑮ STREET TREE AND GRATE-SEE DETAIL SHEETS
- ⑯ BIKE RACK-SEE DETAIL SHEETS
- ⑰ HIGH BACK CURB AND GUTTER
- ⑱ ROLLED GUTTER (All private roads)
- ⑲ CONCRETE DRIVEWAY
- ⑳ CHILDREN'S PLAY AREA
- ㉑ DOG WASTE STATION
- ㉒ MAIL BOXES
- ㉓ PAINTED CROSSWALKS
- ㉔ PEDESTRIAN-ACTUATED CROSSING LIGHT

JURISDICTION

LEGAL JURISDICTION: HIGHLAND CITY
DISTRICT/ PLANING ZONE: TOWN CENTER FLEX USE

AREA TABULATIONS

	AREA	% of total
TOTAL AREA:	7.76 acres	100%
BUILDING(S) AREA:	2.45 acres (107,136 sf)	32%
LANDSCAPE:	1.21 acres (52,793 sf)	15.6%
HARDSCAPE:	0.5 acres (21,780 sf)	6.4%
ROADS:	1.9 acres (82,764 sf)	23%

PARKING TABULATIONS

TOTAL UNITS: 86
ON SITE PARKING PROVIDED:
172 GARAGE
93 STALLS
265 TOTAL ON SITE
(3.0 SPACES/ UNIT)

ACCESSIBILITY

ALL UNITS TO OFFER ELEVATORS FOR HANDICAPPED ACCESS

Project access point-full access

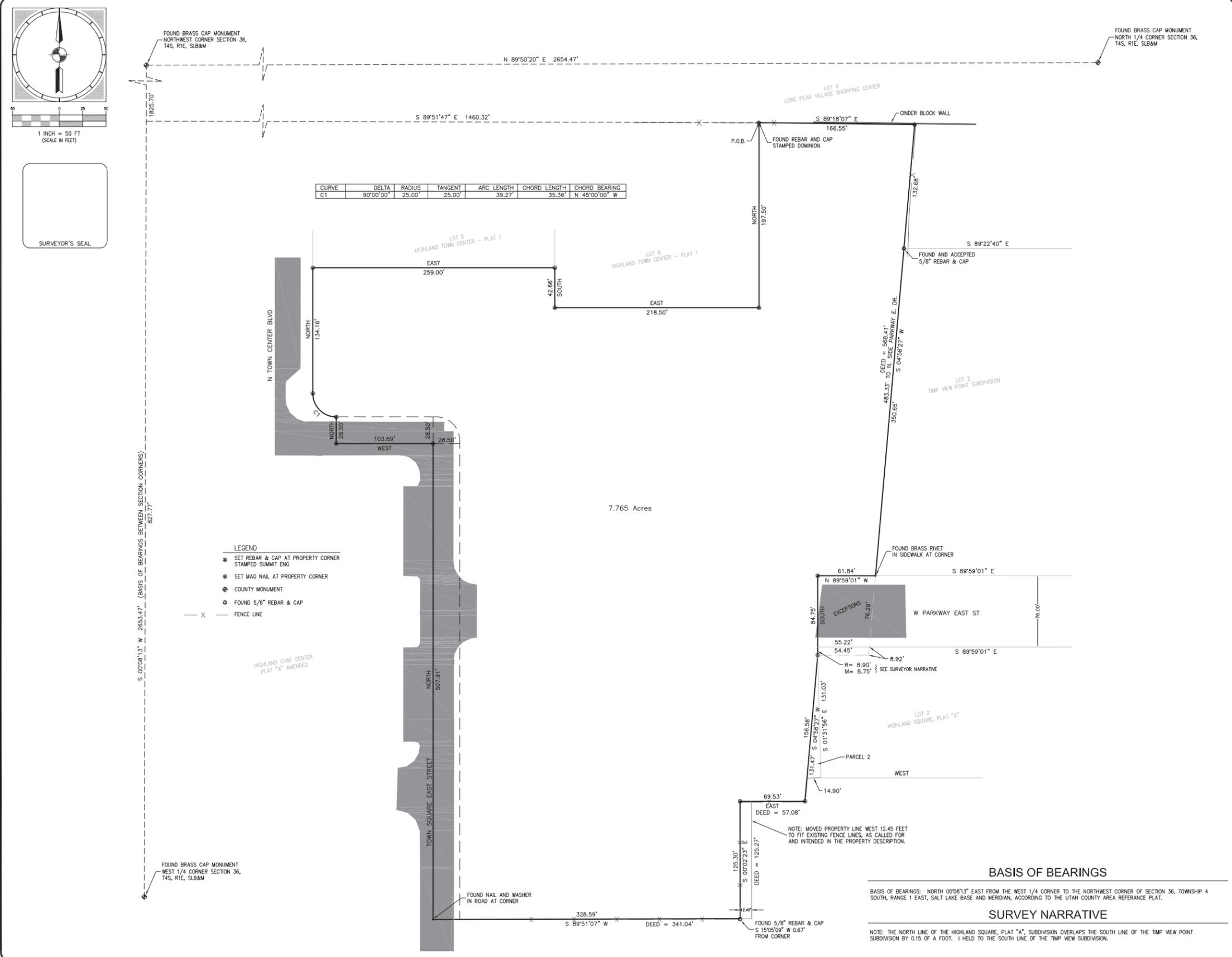
REVISIONS	DATE (BY)
1	
2	
3	
4	
5	
6	
7	
8	

PROJECT ENGINEER: BMB
PROJECT MANAGER: BMB
DRAWN BY: SCS
SCALE: AS SHOWN
ISSUE DATE: 8-10-15

DESIGN ENGINEER'S SEAL
CITY ENGINEER

PROJECT: **BLACKSTONE PROJECT**
SHEET TITLE: **SITE PLAN**

PROJECT: C15-006
SHEET: C-1



CURVE	DELTA	RADIUS	TANGENT	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C1	90°00'00"	25.00'	25.00'	39.27'	35.36'	N 45°00'00" W

- LEGEND**
- SET REBAR & CAP AT PROPERTY CORNER STAMPED SUMMIT ENG
 - SET MAG NAIL AT PROPERTY CORNER
 - ⊕ COUNTY MONUMENT
 - FOUND 5/8" REBAR & CAP
 - X — FENCE LINE

SURVEYOR'S CERTIFICATE

I, CLINTON S. PEATROSS, CERTIFY THAT I AM LICENSED AS A PROFESSIONAL LAND SURVEYOR IN THE STATE OF UTAH (REF. NO. 155666) IN ACCORDANCE WITH TITLE 36, CHAPTER 22, PROFESSIONAL ENGINEERS AND PROFESSIONAL LAND SURVEYORS LICENSING ACT. I FURTHER CERTIFY THAT:

- THIS PLAT REPRESENTS THE RESULTS OF A BOUNDARY SURVEY CONDUCTED UNDER MY SUPERVISION AT THE REQUEST OF HANDCRAFTED HOMES.
- THE LAND SURVEYED LIES WITHIN SECTION 36, TOWNSHIP 4 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN, UTAH COUNTY, UTAH, AND THE SURVEY WAS COMPLETED DURING APRIL 2015.
- THIS PLAT COMPLIES WITH APPLICABLE STATUTES OF THIS STATE AND ANY LOCAL ORDINANCES IN EFFECT ON THE DATE THAT THE SURVEY WAS COMPLETED, AND THE SURVEY WAS CONDUCTED IN ACCORDANCE WITH TITLE 17, CHAPTER 23, PARAGRAPH 17, OF THE UTAH CODE.
- THE MONUMENTS DEPICTED AS FOUND AND/OR SET ON THE PLAT ARE OF THE CHARACTER SHOWN, OCCUPY THE POSITIONS INDICATED, AND ARE OF SUFFICIENT DURABILITY.

PROPERTY DESCRIPTION

ACCORDING TO THAT CERTAIN TITLE REPORT PREPARED BY FIRST AMERICAN TITLE INSURANCE, LLC FOR KEYSTONE LAND DEVELOPMENT, LLC FILE NUMBER 0714-11383, EFFECTIVE DATE JANUARY, 2015

PART OF THE NORTHWEST QUARTER OF SECTION 36, TOWNSHIP 4 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEAST CORNER OF LOT 6 OF HIGHLAND TOWN CENTER - PLAT 1, AS RECORDED IN THE OFFICE OF THE UTAH COUNTY RECORDER, WHICH POINT LIES 827.77 FEET NORTH 00°08'13" EAST ALONG THE SECTION LINE AND 1460.32 FEET SOUTH 89°51'47" EAST FROM THE LOCATION REFERENCED BY THE UTAH COUNTY SURVEYOR AS THE WEST QUARTER CORNER OF SAID SECTION 36, AND RUNNING THENCE SOUTH 89°18'07" EAST 166.55 FEET ALONG THE SOUTH LINE OF THE LONE PEAK VILLAGE SHOPPING CENTER SUBDIVISION, AS RECORDED IN THE OFFICE OF THE UTAH COUNTY RECORDER; THENCE ALONG THE EASTERLY LINE OF THAT PARCEL RECORDED AS ENTRY NO. 35101-020 IN THE OFFICE OF THE UTAH COUNTY RECORDER THE FOLLOWING FIVE (5) COURSES: (1) SOUTH 04°58'27" WEST 568.41 FEET; (2) NORTH 89°59'43" WEST 54.45 FEET; (3) SOUTH 04°58'27" WEST 156.58 FEET TO AN EXISTING FENCE LINE; (4) WEST 57.08 FEET ALONG SAID FENCE LINE; (5) SOUTH 00°22'23" EAST 125.27 FEET ALONG AN EXISTING FENCE LINE; THENCE SOUTH 89°51'07" WEST 341.04 FEET ALONG THE NORTH LINE OF THAT CERTAIN PARCEL RECORDED IN BOOK 2882 AT PAGE 216 IN THE OFFICE OF THE UTAH COUNTY RECORDER TO THE CENTER LINE OF PROPOSED TOWNSQUARE STREET - EAST, AS SHOWN ON THAT CERTAIN HIGHLAND CITY TOWNE CENTER IMPROVEMENTS; APPROVED FOR CONSTRUCTION 4-1-03, PREPARED BY CIVIL SCIENCE; THENCE NORTH 507.91 FEET ALONG SAID CENTER LINE; THENCE WEST 103.69 FEET ALONG SAID LINE; THENCE NORTH 28.50 FEET TO THE NORTHERLY RIGHT OF WAY LINE OF SAID TOWNE SQUARE STREET - EAST AND A POINT OF NON-TANGENCY WITH A 25.00 FOOT RADIUS CURVE TO THE RIGHT (RADIUS POINT BEARS NORTH); THENCE NORTHWESTERLY 39.27 FEET ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 90°00'00" (CHORD BEARS NORTH 45°00'00" WEST 35.36 FEET) TO A TANGENT LINE AND THE EASTERLY RIGHT OF WAY LINE OF TOWNE CENTER BOULEVARD; THENCE NORTH 134.16 FEET ALONG SAID LINE TO THE SOUTHWEST CORNER OF LOT 5 OF SAID HIGHLAND TOWNE CENTER - PLAT 1; THENCE EAST 259.00 FEET ALONG THE SOUTH LINE OF SAID LOT 5 TO THE WEST LINE OF SAID LOT 6; THENCE SOUTH 42.66 FEET ALONG SAID LINE TO THE SOUTHWEST CORNER OF SAID LOT 6; THENCE EAST 218.50 FEET ALONG THE SOUTH LINE OF SAID LOT 6 TO THE SOUTHWEST CORNER OF SAID LOT 6; THENCE NORTH 197.50 FEET ALONG THE EAST LINE OF SAID LOT 6 TO THE POINT OF BEGINNING.

LESS AND EXCEPTING: COMMENCING AT A POINT LOCATED NORTH 00°08'13" EAST ALONG THE SECTION LINE 264.88 FEET AND EAST 1524.49 FEET FROM THE WEST QUARTER CORNER OF SECTION 36, TOWNSHIP 4 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN; THENCE NORTH 76.00 FEET; THENCE SOUTH 89°59'01" EAST 61.84 FEET; THENCE SOUTH 04°58'27" WEST 76.29 FEET; THENCE NORTH 89°59'01" WEST 55.22 FEET TO THE POINT OF BEGINNING.

ALSO LESS AND EXCEPTING: COMMENCING AT A POINT LOCATED NORTH 00°08'13" EAST ALONG THE SECTION LINE 255.98 FEET AND EAST 1524.49 FEET FROM THE WEST QUARTER CORNER OF SECTION 36, TOWNSHIP 4 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN; THENCE NORTH 8.90 FEET; THENCE SOUTH 89°59'01" EAST 55.22 FEET; THENCE SOUTH 04°58'27" WEST 8.92 FEET; THENCE NORTH 89°59'43" WEST 54.45 FEET TO THE POINT OF BEGINNING.

PARCEL 2: COMMENCING AT A POINT LOCATED NORTH 00°08'13" EAST ALONG THE SECTION LINE 255.98 FEET AND EAST 1524.49 FEET FROM THE WEST QUARTER CORNER OF SECTION 36, TOWNSHIP 4 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN; THENCE SOUTH 01°31'56" EAST 131.03 FEET; THENCE WEST 14.90 FEET; THENCE NORTH 04°58'27" EAST 131.47 FEET TO THE POINT OF BEGINNING.

AS SURVEYED DESCRIPTION

TOWNSHIP 4 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN, SECTION 36: BEGINNING AT THE NORTHEAST CORNER OF LOT 6 OF HIGHLAND TOWNE CENTER - PLAT 1, WHICH POINT LIES 827.77 FEET NORTH 00°08'13" EAST ALONG THE SECTION LINE AND 1460.32 FEET SOUTH 89°51'47" EAST FROM THE WEST QUARTER CORNER OF SAID SECTION 36; AND RUNNING THENCE SOUTH 89°18'07" EAST 166.55 FEET ALONG THE SOUTH LINE OF THE LONE PEAK VILLAGE SHOPPING CENTER SUBDIVISION, THENCE SOUTH 4°58'27" WEST 132.68 FEET TO THE NORTHWEST CORNER OF LOT 2, TMP VIEW POINT SUBDIVISION; THENCE CONTINUING SOUTH 4°58'27" WEST 350.65 FEET TO THE SOUTHWEST CORNER OF SAID LOT 2 SAID TMP VIEW POINT SUBDIVISION, SAID POINT BEING ON THE NORTH LINE OF PARKWAY EAST DRIVE, THENCE NORTH 89°59'01" WEST 61.84 FEET ALONG SAID NORTH LINE OF SAID PARKWAY EAST DRIVE TO THE NORTHWEST CORNER OF HIGHLAND SQUARE, PLAT "A" SUBDIVISION; THENCE SOUTH 84.75 FEET; THENCE SOUTH 4°58'27" WEST 156.58 FEET TO AN EXISTING FENCE LINE; THENCE WEST 69.53 FEET ALONG SAID FENCE LINE TO A FENCE CORNER; THENCE SOUTH 00°22'23" EAST 125.30 FEET ALONG SAID FENCE LINE TO A FENCE CORNER; THENCE SOUTH 89°51'07" WEST 328.59 FEET TO THE CENTER LINE OF TOWNE SQUARE EAST STREET; THENCE NORTH 507.91 FEET ALONG SAID CENTER LINE; THENCE WEST 103.69 FEET ALONG SAID CENTER LINE; THENCE NORTH 28.50 FEET TO THE NORTHERLY RIGHT OF WAY LINE OF SAID TOWNE SQUARE STREET AND A POINT OF NON-TANGENCY WITH A 25.00 FOOT RADIUS CURVE TO THE RIGHT (RADIUS POINT BEARS NORTH); THENCE NORTHWESTERLY 39.27 FEET ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 90°00'00" (CHORD BEARS NORTH 45°00'00" WEST 35.36 FEET) TO A TANGENT LINE AND THE EASTERLY RIGHT OF WAY LINE OF TOWNE CENTER BOULEVARD; THENCE NORTH 134.16 FEET ALONG SAID LINE TO THE SOUTHWEST CORNER OF LOT 5 OF SAID HIGHLAND TOWNE CENTER - PLAT 1; THENCE EAST 259.00 FEET ALONG THE SOUTH LINE OF SAID LOT 5 TO THE WEST LINE OF SAID LOT 6; THENCE SOUTH 42.66 FEET ALONG SAID LINE TO THE SOUTHWEST CORNER OF SAID LOT 6; THENCE EAST 218.50 FEET ALONG THE SOUTH LINE OF SAID LOT 6 TO THE SOUTHWEST CORNER OF SAID LOT 6; THENCE NORTH 197.50 FEET ALONG THE EAST LINE OF SAID LOT 6 TO THE POINT OF BEGINNING.

DESCRIPTION OF CROSS ACCESS EASEMENTS

ACCORDING TO THAT CERTAIN RECIPROCAL EASEMENT AGREEMENT BETWEEN THE LONE PEAK VILLAGE SHOPPING CENTER AND WESTFIELD PROPERTIES RECORDED 6 FEBRUARY 2003 AS FOUND BY ENTRY 1897-2003 PAGES 1 THROUGH 10

THREE ACCESS OPENINGS FOR PEDESTRIAN AND VEHICULAR TRAFFIC ALONG THE SOUTH LINE OF THE LONE PEAK VILLAGE SHOPPING CENTER - A COMMERCIAL SUBDIVISION IN THE CITY OF HIGHLAND, UTAH COUNTY, UTAH WITHIN THE NORTHWEST QUARTER OF SECTION 36, TOWNSHIP 4 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN, U.S. SURVEY, AND BEING DEFINED BY REFERENCE POINTS AS FOLLOWS:

- A 42.16 FOOT WIDE OPENING FROM POINT A TO POINT B;
- A 49.00 FOOT WIDE OPENING FROM POINT C TO POINT D;
- A 36.00 FOOT WIDE OPENING FROM POINT E TO POINT F;

MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF SAID LONE PEAK VILLAGE SHOPPING CENTER BEING 666.20 FEET SOUTH 89°49'50" WEST ALONG THE SECTION LINE, 1367.09 FEET SOUTH TO THE NORTHEAST CORNER OF SAID SUBDIVISION, 255.16 FEET WEST 4°28'25" WEST AND 219.80 FEET SOUTH 4°58'27" WEST TO SAID SOUTHWEST CORNER OF SAID SUBDIVISION FROM THE NORTH QUARTER CORNER OF SAID SECTION 36; AND RUNNING THENCE WESTERLY ALONG THE SOUTH LINE OF SAID SUBDIVISION THE FOLLOWING SEVEN COURSES: NORTH 89°18'07" WEST 656.86 FEET TO REFERENCE POINT A; THENCE CONTINUING NORTH 89°18'07" WEST 42.16 FEET TO REFERENCE POINT B; THENCE CONTINUING NORTH 89°18'07" WEST 26.00 FEET TO REFERENCE POINT C; THENCE CONTINUING NORTH 89°18'07" WEST 49.00 FEET TO REFERENCE POINT D; THENCE CONTINUING NORTH 89°18'07" WEST 95.00 FEET TO REFERENCE POINT E; THENCE CONTINUING NORTH 89°18'07" WEST 36.00 FEET TO REFERENCE POINT F; AND THENCE CONTINUING NORTH 89°18'07" WEST 73.09 FEET TO THE SOUTHWEST CORNER OF SAID SUBDIVISION.

ERROR OF CLOSURE

IN CONSIDERATION OF THE INFORMATION TAKEN FROM THE UTAH COUNTY AREA REFERENCE PLATS, RECORDED SUBDIVISION PLATS, AND FILED RECORD OF SURVEYS, THE "AVERAGE POSITIONAL TOLERANCE" OR "THEORETICAL UNCERTAINTY" FOR THE PROPERTY CORNERS SET FOR THIS SURVEY ARE PLUS OR MINUS 0.10 FEET, THIS FOLLOWS THE CLASS A SPECIFICATIONS FOR SURVEYS CONDUCTED IN A DOWNTOWN COMMERCIAL AREA.

GENERAL NOTES

- THIS SURVEY DOES NOT GUARANTEE TITLE TO LINE, NOR IS IT PROOF OF OWNERSHIP, NOR IS IT A LEGAL INSTRUMENT OF CONVEYANCE. FURTHERMORE, ANY SURVEY MARKERS SET IN CONJUNCTION WITH THIS SURVEY ARE NOT INTENDED TO REPRESENT EVIDENCE OF OWNERSHIP OF THE SUBJECT PROPERTY OR ITS ADJOINERS. THE GENERAL INTENT OF THIS SURVEY IS TO PORTRAY WHERE POSSIBLE THE RECORD TITLE LINES OF THE SUBJECT PROPERTY AND TO SHOW THEIR RELATIONSHIP TO ANY EVIDENCE OF USE AND/OR POSSESSION.
- IN THE EVENT THAT THIS SURVEY DETERMINES THAT THE CREATION OF A NEW/IMPROVED LEGAL DESCRIPTION IS ADVISABLE AND NECESSARY TO AID THE RESOLUTION OF KNOWN BOUNDARY CONFLICTS, IT SHOULD BE UNDERSTOOD THAT SUCH A LEGAL DESCRIPTION, AS MAY BE SHOWN AND PROVIDED HEREON, DOES NOT AUTOMATICALLY REPLACE OR EXTINGUISH RECORD TITLE LINES AND SHOULD NOT BE USED IN INSTRUMENTS OF CONVEYANCE BY WARRANTY OR FOR THE BOUNDARY LINES OF FUTURE DEVELOPMENTS UNLESS THE BOUNDARY LINES OF SUCH A LEGAL DESCRIPTION, AS MAY BE PROVIDED HEREON, HAVE BEEN ESTABLISHED AND AGREED UPON BY APPROPRIATE AND LEGAL MEANS BETWEEN RELEVANT PARTIES. TO HELP PREPARE SUCH AGREEMENTS, SOLICITATION OF COMPETENT LEGAL COUNSEL IS STRONGLY RECOMMENDED.
- IN THE EVENT THAT THIS SURVEY WAS PERFORMED FOR THE PURPOSE OF PARCELING PROPERTY ACCORDING TO DIRECTIONS FROM THE CLIENT, UNDER NO CIRCUMSTANCE SHOULD THE PARCELING OF PROPERTY AS MIGHT BE SHOWN HEREON AND DESCRIBED BY LEGAL DESCRIPTION AND/OR INSTRUMENTS BE CONSIDERED AS REPRESENTING A LEGAL SUBDIVISION OF LOTS OF RECORD SANCTIONED OR APPROVED BY CITY OR COUNTY GOVERNMENT OFFICES. INDEED, THIS SURVEY AND ANY INFORMATION PROVIDED HEREON ARE INTENDED NEITHER TO CREATE NOR DESTROY LOT OF RECORD STATUS AND ASSOCIATIVE ENTITLEMENTS AND MAKES NO CLAIM AS TO LOT CONFORMANCE BY STATUTE. PROPERTY OWNERS AND PROSPECTIVE BUYERS ARE ADVISED TO CONTACT CITY AND COUNTY PLANNING OFFICES FOR INFORMATION AND DIRECTION PERTAINING TO ISSUES OF LOT CONFORMANCE AND REQUIREMENTS FOR DEVELOPMENT.
- THIS SURVEY REPRESENTS OPINIONS BASED ON FACTS AND EVIDENCE. AS THE EVIDENCE CHANGES OR IF NEW EVIDENCE IS DISCOVERED OR RECOVERED, THEN THE SURVEYOR RESERVES THE RIGHT TO MODIFY OR ALTER HIS OPINIONS PERTAINING TO THIS SURVEY ACCORDING TO THIS NEW EVIDENCE.
- THIS SURVEY DOES NOT PURPORT TO DETAIL THE LOCATIONS OF ANY OR ALL EASEMENTS OR RIGHTS-OF-WAY OF RECORD AND USE.
- THIS PLAT MAP DOES NOT PURPORT TO SHOW, EITHER IN FACT OR BY CIRCUMSTANCE, ANY OR ALL UTILITY COMPANY PIPES, WIRES, ETC., EITHER IN SERVICE OR ABANDONED, THAT MAY EXIST ON OR NEAR THE SUBJECT PROPERTY. FURTHERMORE, ANY INDICATION AS TO THE LOCATION OF UNDERGROUND UTILITIES THAT MAY BE SHOWN ON THIS PLAT MAP IS BASED STRICTLY ON OBSERVABLE SURFACE EVIDENCE AND/OR VERBAL EXPLANATIONS. ALSO, FOR THIS SURVEY NO UTILITY MAPS OF RECORD WERE AVAILABLE TO THE SURVEYOR TO HELP DETERMINE THE PROPER LOCATION. INDEED, ONLY BY EXCAVATION CAN THE EXACT LOCATION OF UNDERGROUND UTILITIES BE DETERMINED. CONTRACTORS, BUILDERS, AND EXCAVATORS ARE ADVISED TO VERIFY THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION AND/OR EXCAVATION BY CONTACTING CORRESPONDING UTILITY COMPANIES (FOR BLUE STAKES OF UTAH CALL 1-800-662-4111).

BASIS OF BEARINGS

BASIS OF BEARINGS: NORTH 00°08'13" EAST FROM THE WEST 1/4 CORNER TO THE NORTHWEST CORNER OF SECTION 36, TOWNSHIP 4 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN, ACCORDING TO THE UTAH COUNTY AREA REFERENCE PLAT.

SURVEY NARRATIVE

NOTE: THE NORTH LINE OF THE HIGHLAND SQUARE, PLAT "A", SUBDIVISION OVERLAPS THE SOUTH LINE OF THE TMP VIEW POINT SUBDIVISION BY 0.15 OF A FOOT. 1 HELD TO THE SOUTH LINE OF THE TMP VIEW SUBDIVISION.

PROJECT C15-006	PREPARED FOR HANDCRAFTED HOMES	RECORD OF SURVEY	LOCATED IN THE NORTHWEST 1/4 OF SECTION 36, TOWNSHIP 4 SOUTH, RANGE 1 EAST, SALT LAKE BASE & MERIDIAN UTAH COUNTY, UTAH	DRAWN BY: KMB	REVIEWED BY: CSP	<p>Structural • Civil • Surveying 55 WEST CENTER • P.O. BOX 176 REBER CITY, UTAH 84652 P: 435-854-9229 • F: 435-854-9231</p>	COPYRIGHT © 2015 SUMMIT ENGINEERING GROUP, INC.
SHEET 1 OF 1	PROJECT BLACKSTONE			SCALE: 1" = 50'	ISSUE DATE 04/13/2015		

Attention: Matt Robinson

Re: *Blackstone Project in Highland City*

To Whom It May Concern:

Please be advised that Tax Parcel No. 11-039-0135 came into existence November 28, 2007, when Knight West Construction, Inc. deeded the small parcel of land to the Carlones. At that same time, the Carlones, who already owned their larger parcel (having acquired it in May of 2005), deeded a portion of their larger parcel to Knight West Construction, Inc.

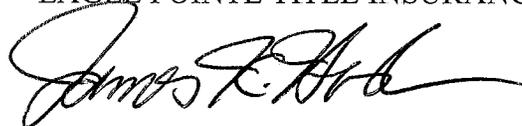
Prior to that time, 11-039-0135 was part of a larger parcel to the east of the Carlone land that was owned by Knight West Construction, Inc. (11-039-0120). The remainder of 11-039-0120 (along with the small parcel deeded from the Carlones to Knight West and land owned by Alpine Credit Union) was included in, and became part of, Plat A of the Highland Square Subdivision just a few months later. That subdivision currently consists of two lots (Alpine Credit Union and ACE Hardware) and land dedicated to the City for the road.

It appears the two deeds in November 2007 allowed Knight West to essentially "square off" its land for purposes of the Highland Square Subdivision. Because the Carlones and Knight West already owned the adjoining lands being traded, what they accomplished was really just a boundary line adjustment between their two existing lands (and perhaps a boundary line agreement would have been the preferred method to accomplish their purposes). In any event, the creation of 11-039-0135 should be of no concern; indeed, the new parcel deeded to Knight West has already been included in the above-mentioned Highland Square Subdivision.

Including 11-039-0135 in the Blackstone Project would seem the appropriate action.

Sincerely yours,

EAGLE POINTE TITLE INSURANCE AGENCY, INC.



James K. Haslam
President & Chief Title Officer

JKH/da

Appendix B – Property Affidavit and Letter from Title Company



EAGLE  **POINTE**
Title Insurance Agency, Inc.
Phone Number: (801) 766-9401 3315 West Mayflower Ave. Ste. #3
FAX: (801) 766-9404 Lehi, Utah 84043

Attention: Matt Robinson

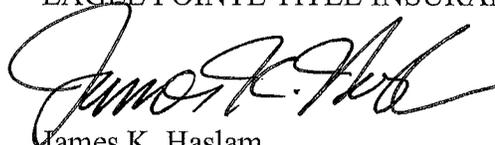
Re: *Blackstone Project in Highland City*

To Whom It May Concern:

Please be advised that a search of the public records has revealed that Frank A. Carlone and Maria-Laura Carlone are the owners of record of the real property parcels identified as Tax Parcel Nos. 11-039-0140 and 11-039-0135, in their capacities as Trustees of The 2001 Frank and Maria-Laura Carlone Family Trust. The attached Property Owners Affidavit was in fact signed by Frank A. and Maria Laura Carlone, as was the Agent Authorization Affidavit whereby the Carlones appointed Tim Aalders as their agent to represent them with regard to the application.

Sincerely yours,

EAGLE POINTE TITLE INSURANCE AGENCY, INC.



James K. Haslam
President & Chief Title Officer

JKH/da



PROPERTY OWNERS AFFIDAVIT

I (we) Frank & Maria Louisa Carbone being first duly sworn, depose and say that I (we) am (are) the current owner of the property involved in this application; that I (we) have read the application and attached plans and other exhibits and are familiar with its contents; and that said contents are in all respects true and correct based upon personal knowledge.

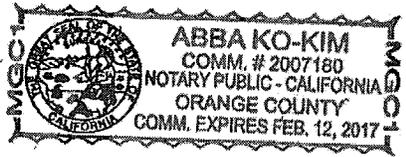
Frank Carbone
Owner's Signature

Maria Louisa Carbone
Owner's Signature (co-owner, if any)

State of California

County of Orange

Subscribed and sworn to (affirmed) before me this 19 day of Dec., 2014.



[Signature]
Notary Public

AGENT AUTHORIZATION AFFIDAVIT

I (we) Frank & Maria Louisa Carbone, owner(s) of the real property located at 10820 Town Center Parkway in Highland City, Utah, do hereby appoint Tim Alders as my (our) agent to represent me (us) with regard to this application affecting the able described real property.

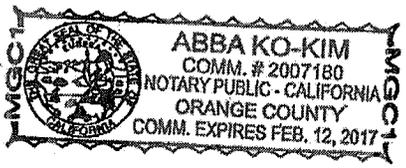
Frank Carbone
Owner's Signature

Maria Louisa Carbone
Owner's Signature (co-owner, if any)

State of Calif.

County of Orange

Subscribed and sworn to (affirmed) before me this 19 day of Dec, 2014.



[Signature]
Notary Public

Appendix C – Architectural Plans, Elevations and Color Renderings



IMPORTANT NOTE!

Modifications may be made on these plans according to the city and lot requirements where the plan is built.

3D VIEWS ARE
CONCEPT ONLY



WALKER
HOME DESIGN
801-930-9499 office

www.walkerhomedesign.com

KEYNOTES

10820 Town Center Parkway
Highland, Utah



GENERAL NOTES	
A. EXCAVATION, BACKFILL, AND GRADING	
1. All excavations for footings shall be placed on natural, undisturbed soil.	
2. All footings shall be placed on undisturbed soil and below Frost depth as per local codes, where plan is being built. Tops of foundation shall be placed a minimum of 6" above finished grade.	
3. Finish grading shall be done so as to provide positive drainage away from all building foundations. Grade shall slope away 6" minimum for the first 10' of building. No negative slope driveways.	
B. WEATHER PROTECTION	
1. Install (1) layer of grade 'D' (15 lb.) felt under asphalt roof shingles.	
2. Install (1) layer of grade 'D' (15 lb.) Tyvek Housewrap under aluminum/vinyl siding.	
3. Install (1) layer of grade 'D' (15 lb.) felt under brick/rock veneer.	
4. Install (2) layers of grade 'D' (15 lb.) felt under synthetic stucco system.	
5. Install (1) layer No. 40 coated roofing or coated glass base from the roof eaves to a line 24" inside the exterior wall line with all laps cemented together.	
6. All exposed beams to be flashed and caulked or must be Pressured Treated. Or treated with a waterproof product i.e. DeckScapes Exterior Waterborne Stain or WoodScapes Exterior Polyurethane Semi-Transparent Stain	
C. CONCRETE	
1. All materials, mixing, forming and reinforcement shall comply with ACI 318, ACI 347 publication applicable ASTM publications and local codes.	
2. Install foundation and footing reinforcement as follows	
3. Reinforcement schedule as noted on foundation plan and per state amendment	
4. Install minimum (2) #4 rebar grade 60 see footing schedule on foundation plan for rebar placement	
D. WINDOWS	
1. All windows shall be U-35 or better, aluminum or vinyl, thermal break type.	
2. All window tops shall be at door header height, i.e. 6'-8" (unless otherwise noted).	
3. Windows located 24" or closer to any exterior door must be tempered.	
4. Habitable rooms require 10% light(window space), and 5% ventilation (operable window).	
5. All windows in sleeping rooms shall have sills located no more than 44" above floor with an operable opening not less than 5.7 sq. ft. The window height shall not be less than 24", with a net clear width of no less than 20".	
6. Upper level window sills shall not be less than 24" above the finished floor.	
7. Use 9" Flashing & Caulk. Install as per Manufacturer's Instructions	
E. WINDOW WELLS	
1. Window wells serving required egress windows shall have dimensions in keeping with the minimums required for the windows:	
a. Window wells shall have a net clear opening of 9 sq. ft. min.	
b. Guardrails or grates protecting window wells shall be easily removable or be designed not to hinder egress.	
c. 44" max. depth or provide steps or ladder rungs. Ladder must be Min. 12" wide, 3' from Well with rungs no more than 18" apart.	
e. 36" vertical clearance required from any projection in horizontal clearance started above (i.e. bay windows and cantilevers).	
F. VENTILATION	
1. Ventilation shall be provided in all crawl spaces by means of screened vents placed to provide cross ventilation per I.R.C. 408.1, 408.2 or section 408 IRC.	
2. Attics will have one square foot of ventilation for every 150 sq. ft. of living space for gable vents, 1/300 for gable/leave combo's.	
3. Enclosed attics and spaces between rafters shall have clear ventilation to outside.	
4. There shall be no gas connections allowed in any rooms used for sleeping or in any corridors leading to or through any sleeping room.	
5. All ducts in unconditioned spaces i.e attic, crawlspace) will be insulated to an R8 minimum.	
6. Dryer to terminate at a location more than 3' from any openings back into the home.	
7. Allow for .35 Air Changes Per Hour in all Theater/Sport Court spaces	
8. Bathroom exhaust fan ducts must continue and discharge directly outside the Structure. Close proximity to attic vents or to soffit areas are specifically prohibited. All exhaust ducts must connect to an opening with proper screen for terminations in soffit and wall areas and to an approved thru the roof discharge fitting installed as not to be blocked or stopped by snow or ice.	
9. Ducts used for kitchen range, dryer, bathroom & laundry room ventilation shall have a smooth, noncombustible, non-absorbent surface. Ducts shall terminate outside the building and shall be equipped with back draft dampers. Flexible ducts are allowed for bathroom exhaust fans, but must be tested to UL 181 and installed in accordance with the listing. IRC ch 16 also cannot terminate in Soffit, attic crawl space or ridge vents.	
10. The minimum diameter of a dryer exhaust duct shall be per manufacturers recommendation, but at least the diameter of the outlet. Maximum length is 25' to be reduced 2 1/2' for each 45 degree bend and 5' for each 90 degree bend	
G. FIRE PROTECTION AND WARNING	
1. Fireplace chimneys shall extend 24" min. above any roof within a 10' radius.	
2. Smoke detectors are required to meet local codes. Wire all smoke detectors in series with battery backup.	
3. Provide 5/8" type, X gyp. board on all walls and ceilings of the garage common to living areas, walls supporting upper floors, and any exposed beams and posts.	
4. Provide 5/8" type 'x' gyp. board on walls and underside of all stairs. Fireblock walls at all stair stringers.	
H. STAIRWAYS	
1. Max. rise = 7 3/4" and min. tread = 10".	
2. Min. headroom = 6'-8" and min. width = 36".	
3. Every stairway landing shall be as long as its width, (unless otherwise noted).	
4. Any door opening at the top of any interior flight of stairs must swing away from the stairs.	
5. Enclosed space under stairs shall be protected on the enclosed side with 1/2" sheet rock.	
6. Exterior steps shall have a minimum tread of 10".	
7. Winder Stairs to be built as follows: 10" width at 12" from narrowest point, 6" minimum width at any point, 3/8" max variance.	
I. RAILINGS	
1. Handrails are required at all stairways that have more than 2 risers.	
2. Handrails shall be placed between 34" and 38" above stair nosing.	
3. Guardrails shall be at a minimum of 36" above floor.	
4. Handrails deeper than 2 1/4" shall have finger grooves 3/4" x 1/4" deep, the full length of one side of the rail.	
5. Balusters for handrails and guardrails shall be spaced so that a 4" sphere cannot pass through.	
6. Handrails shall return to wall or post.	
7. Handrails shall not project more than 4.5" on either side & Shall have a space of not less than 1.5" between the wall & Handrail	
J. PLUMBING	
1. All work performed shall comply with current national and local building codes.	
2. Toilets shall be 1.6 gallon flush type. Shower heads shall be 2.5 GPM type.	
3. All work shall be performed by a licensed contractor.	
4. Provide C.P. escutcheons at pipe sleeves for exposed bare pipe. Pack annulus at one-hour fire walls.	
5. Provide pressure regulator and shut-off valve.	
6. Interior waste and vent lines shall be A.B.S.	
7. All Baths and Showers shall have Temp. Limiting device to limit hot water to 120 degrees F. Provide anti-scald faucets on all Bath/Shower combinations.	
8. Plumbing penetrations through garage firewall must be with metal piping. This includes waste lines, water lines vacuum lines, etc. All plumbing vent lines through the Roof shall be a MIN. of 3"	
9. Vented Floor Drain at all Washing Machines. Washer valves require water Hammer arrestors.	
10. Water meter cannot be located in the driveway, sidewalk or similar area. Meter must be placed in landscaping area. Sewer line cannot be located under the driveway.	
11. Insulate Ducts, Water lines & Plumbing P-traps in crawl space	
12. Shower Pans must have approved liner extending 3" past the Threshold. Solid blocking is required behind the liner. Slope must be built up under the liner	

FRAMING	
1. All dimensions on floor plans are to rough framing. Walls calculated to be 3 1/2" wide and 5 1/2" wide.	
2. Solid blocking is to be at least 1 1/2" thick and full depth of joist at ends and at each support of joist. Provide solid blocking at bearing points of trusses.	
3. All structural sheathing shall be APA rated and shall not exceed maximum span rating. Floor sheathing shall be tongue and groove. H-clips shall be installed on roof sheathing. Cap all waterboard sheathing.	
4. Spike together all 2 x laminated built up beams using at least 16d nails at no less than 12" O.C. staggered.	
5. Trusses are to be engineered, designed and constructed by manufacturer to meet all local loads and codes.	
6. All exterior walls and cross-stud partitions are to be braced at each end of building and at least every 25' of length.	
7. Truss anchors shall be provided at each end of all trusses. (Install as per local code requirements.)	
8. Bi-pass doors shall be framed one inch smaller in width than the door. Example: a 5'-0" slider shall have a 59" rough opening. Also, bi-fold doors shall be framed one inch wider than door and 82" in height. Bi-pass doors shall be 83" in height.	
9. Cross-briding shall be required in spans exceeding 8'-0".	
10. Gable-ended trusses shall be provided where required.	
11. Interior framing that is non-bearing shall be 16" O.C. unless otherwise noted.	
12. Framing will include all furr downs, ceiling joists, and plant shelves as per architectural drawings.	
13. Interior Bearing walls shall be blocked at mid-height.	
14. Triple studs shall be installed at all corners.	
15. All hangers (joist, rafter, and beam) shall be installed as per manufacturers specs.	
16. Multiple plates and ledgers shall be Lag Bolted into Rim Joists @ 16" O.C.	
17. Block all horizontal edges of plywood wall sheathing with 2" nominal blocking. Edges of plywood on floors and roofs shall be blocked as directed on drawings.	
18. All ledger bolts shall have standard washers with a minimum diameter equal to three times the bolt diameter unless shown otherwise in details.	
19. Minimum nailing shall be as per I.R.C.	
20. Fasteners such as staples can only be substituted for nails at a rate equal to load values provided by I.C.B.O & I.R.C approval. But, all floor sheathing shall be fastened with continuous glue bead and deformed shank nails.	
21. Shear wall location shall be indicated on the floor plans.	
22. Install blocking between joists that are over all bearing points.	
23. Wood beams made of two or more pieces shall have the pieces securely bolted or nailed together to prevent separation and to insure mutual load sharing. Each interconnected piece shall be continuous between supports, and supports shall have the same width as the composite beam.	
24. Extend 7/16" sheathing over rim joist. Nail to rim and upper and lower wall plates using 8d nail at 6" O.C. or as called out on shear wall schedule.	
25. All framing studs shall be 16" O.C. max. All floor sheathing shall be 3/4" T&G APA rated 40/20 CDX sheathing nailed with 8d nails at all panel edges, supported edges, and all blocking. Use 8d nails 12" O.C. in field. Nails shall be min. 3/8" from edge of panel. Lay sheathing with face grain at right angles to framing and glue with glue conforming to APA specs. Floor joists shall be blocked at all bearing points. Block all horizontal edges of wall sheathing with 2 x 4 blocking. Use 8d nails 6" O.C. edges + 12" O.C. field.	
26. All roof sheathing shall be 15/32" (typ.) (5/8" w/ balanced snow (if 45psf or greater) rated sheathing nailed with 8d nails @ 6" O.C. at panel edges, supported edges, and all blocking with 8d nails, 12" O.C. along intermediate framing members.	
27. All wood that is connected to concrete, steel, and wood to wood (except stud to plate) shall be connected with Simpson (or equivalent) connectors. Solid 2" nominal blocking shall be provided at ends or points of support of all wood joists and trusses.	
28. All exterior wall and vertical surfaces at steps in roof shall be sheathed with 7/16" APA rated 24/O or better structural wood panel or grades covered in the I.R.C., block all horizontal edges with 2" nominal or wider. 3" or wider framing at adjoining panel edges and nails shall be staggered where 10d nails are spaced 3' or less. Sheathing shall be placed not less than 1/2" from edge of panel and driven flush but shall not fracture the surface of the sheathing.	
29. All Lumber in contact w/ concrete or masonry including ledgers & furring walls must be preservative treated or foundation-grade redwood	
30. These shall be the member grades used on this structure:	
Joists	24F-V4 DF/DF (cantilevered)
Headers	24F-V8 DF/DF
Posts DF	DF #2 (or better)
Studs	DF stud grade (or better) (non-bearing walls) DF #2 (or better) (bearing walls)
Sill plates in contact w/ concrete	DF #2 (pressure treated)
Pre-Fab trusses or joists	As per manufacturers specifications
31. Steel Beams to be 50ksi, Steel Columns to be 46ksi, Steel Base Plates to be 36ksi	
32. Special Instructions: Steel Construction, Welding, Use an approved Steel Fabricator and Field Inspections are not required. See chapter 17 of IBC	
STRUCTURAL CONDITIONS	
1. GENERAL CONTRACTORS SHALL COMPARE ALL DIMENSIONS AND CONDITIONS AT SITE AND IN CONTRACT DOCUMENTS; ANY CONFLICT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND DESIGNER IMMEDIATELY.	
2. CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY BRACING FOR UNCOMPLETED PORTIONS OF THE BUILDING DURING CONSTRUCTION	
3. OBSERVATION VISITS TO THE SITE BY ENGINEER'S FIELD REPRESENTATIVE SHALL NOT BE CONSTRUED AS INSPECTION OR APPROVAL OF CONSTRUCTION	
4. BUILDING CODE: INTERNATIONAL BUILDING CODE (IBC) 2012 AND 2012 INTERNATIONAL RESIDENTIAL BUILDING CODE (IRC) .	
DEFERRED SUBMITTAL ITEMS: Trusses, Floor Trusses, Gas Line Schematic, Fireplace Manufacture, Stucco Installation, Res Check, Fire Sprinkler Submittal, Precast Concrete Floors	
SHOWERS	
Showers shall have doors sized to provide a minimum of 22" Net clear opening	
FLASHING	
Flashings shall be installed in such a manner so as to prevent moisture from entering a wall, roof or floor and redirect it to the exterior. Flashing shall be installed at the perimeters of exterior door and window assemblies, penetrations and terminations of exterior wall assemblies, exterior wall intersections with roofs, chimneys, porches, decks, balconies and similar projections and at built-in gutters and similar locations where moisture could enter the wall. Flashing with projected flanges shall be installed on both sides and the ends of coping, under sills and continuously above projected trim. A flashing shall be installed at the intersection of foundation to stucco, masonry, siding or brick veneer. The flashing shall be an approved corrosion-resistant flashing.	
WINDOWS	
Sills of Windows which are located more than 6" above grade, and less than 24" above the interior floor surface, must be fixed or have an opening of a guard which does not allow the passage of a 4" sphere.	
ROOF SLOPE	
Composition Shingles shall not be installed on roofs having a slope less than 12/12 unless double underlayment is installed	
TEMPERED GLASS	
Glassing used in Doors and Panels of Showers & Bathub Enclosures & Walls enclosing these compartments shall be Tempered	
Tempered Glass shall be provided in Framing glass doors, glass in doors, glass within 24" and of doors, glassing less than 60" above a walking Surface that is within 5ft. of stairs or pools, certain fixed glass panels, and similar glazing openings subject to human impact.	
GAS LINE INSTALLATION	
Gas piping installed underground beneath buildings is prohibited except where the piping is encased in a conduit. Such conduit shall extend not less than 4" outside the building, shall be vented above grade to the outdoors and shall be installed so as to prevent the entrance of water or insects. Gas piping shall not penetrate building foundation walls at any point below grade. Gas piping shall not penetrate building foundation walls at any point below grade.	
PROHIBITED LOCATIONS	
Gas piping shall not be installed in or through a ducted supply, return, exhaust, clothes chute, chimney, dumbwaiter, or elevator shaft. Gas piping installed downstream of the point of delivery shall not extend through any lowvoltage unit other than the unit served by such piping	

Engineered By:
Wayne Staker, P.E., S.E.
Compass Engineering
801-664-2197

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Blackstone 6 Unit Townhomes	
Designed for	
Blackstone Group	
Finished Footage	2,285
Date	OCT. 2014
Drawn by	DSW
PRINTED: 12/11/2014 2:04:40 PM	PRE-CAST: 473 FLEX: 449 GROUND LEVEL: 491 MAIN LEVEL: 867 UPPER LEVEL: 927 TOTAL: 3,207
Sheet 1 of 12	

CONCRETE NOTES:

- 1 - CONCRETE MATERIAL PROPERTIES FOR FOOTING, GRADE BEAMS AND WALLS 28 DAY COMPRESSIVE STRENGTH ARE TO BE 3000 PSI. STRUCTURAL DESIGN IS BASED ON 2500 PSI.
- 2 - CONCRETE MATERIAL PROPERTIES FOR ALL EXTERIOR FLATWORK INCLUDING GARAGE FLOORS TO BE 4000 PSI.
- 3 - CONCRETE MATERIAL PROPERTIES FOR SUSPENDED SLABS AND CANTILEVER SLABS 28 DAY COMPRESSIVE STRENGTH TO BE 4000 PSI.
- 4 - PROVIDE ISOLATION JOINTS AROUND ALL COLLARS AT ALL EXPOSED SLAB ON GRADE AREAS.
- 5 - ALL HOLD-DOWNS ARE PER SIMPSON STRONGTIE OR APPROVED ECU EQUIV.
- 6 - ALL STD STRAP HOLD-DOWNS SHALL HAVE (1) #4 X 30" LONG PER MFR'S. DESIGN RECOMMENDATION.
- 7 - SHEARWALL EDGE NAILING SHALL BE INSTALLED TO THE SAME JOISTS ON WHICH THE HOLD-DOWNS ARE ATTACHED.
- 8 - HOLD-DOWNS W/ "R" DESIGNATION TO BE USED AT ALL RM JOIST APPLICATIONS.
- 9 - HOLD-DOWN LOCATIONS ARE APPROXIMATE. REFER TO FLOOR PLANS FOR ADDITIONAL INFORMATION FOR ACCURATE PLACEMENT.
- 10 - FOOTING STEP LOCATIONS AND ELEVATIONS ARE ASSUMED. ADJUST AS REQUIRED ON SITE TO BRING FOOTING TO BEAR ON NATURAL UNDISTURBED SOIL.
- 11 - BEFORE CONCRETE IS POURED VERIFY WITH ALL TRADES TO INSURE PROPER PLACEMENT OF ALL OPENINGS, SLEEVES, CURBS, CONDUITS, BOLTS, INSERTS, HOLD-DOWNS, ETC., RELATIVE TO WORK.
- 12 - CONTRACTOR IS RESPONSIBLE FOR ALL SHORING & FORM WORK.
- 13 - ALL REINFORCEMENT SHALL BE ASTM A-615 GRADE 60 OR BETTER.
- 14 - REINFORCEMENT SHALL BE FREE FROM MUD, OIL, OR OTHER NONMETALLIC COATINGS THAT ADVERSELY EFFECT BONDING CAPACITY.
- 15 - ALL EXTERIOR FOOTINGS SHALL BE CONTINUOUS & POURED MONOLITHICALLY.
- 16 - ALL CHANGES IN VERTICAL FOOTING ELEVATION SHALL BE STEPPED. THE MINIMUM DISTANCE OF THE VERTICAL STEP SHALL BE NO LESS THAN 6"
- 17 - MINIMUM FOOTING THICKNESS SHALL BE NOT LESS THAN 12"
- 18 - USE 5/8" DIA. ANCHOR BOLTS @ 32" O.C. W/ 3"X3"X1/4" PLATE WASHERS. STANDARD CUT WASHERS TO BE EMBED (U.N.O.) PROVIDE PRESSURE TREATED PLATE @ ALL SILL PLATES (U.N.O. PER SHEAR WALL REQ.) SEE SHEARWALL SCHEDULE FOR SIZE & SPACING @ SHEARWALL LOCATIONS.
- 19 - SOIL BEARING PRESSURE = 1200 P.S.F. CONTRACTOR SHALL BE RESPONSIBLE FOR EVALUATING SOIL CONDITIONS & SUITABILITY AFTER EXCAVATION.
- 20 - PROVIDE 2 COATS OF ASPHALT EMULSION DAMP-PROOFING CONTINUOUS OVER TOP OF FOOTING AND EXTERIOR OF FOUNDATION WALLS TO FINISHED GRADE. PLASTER WARDER EXPOSED FOUNDATION WALLS ABOVE FINISHED GRADE.
- 21 - CONTRACTOR SHALL BE RESPONSIBLE FOR LATERALLY SUPPORTING FOUNDATION WALLS WHILE BACK-FILLING AND UNTIL ALL SUPPORTING MEMBERS HAVE BEEN PLACED (SUCH AS FLOORS).
- 22 - BACK FILL FOUNDATIONS IN 8' LIFTS TO 90% MAX DENSITY. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF CONCRETE SLAB PLACEMENT FOR GARAGE AND DRIVEWAYS OVER ADEQUATE COMPACTED BACK FILL MATERIAL (4" FREE DRAINING GRAVEL OVER EXISTING GRADE OR APPROVED FILL).
- 23 - ALL FOOTING SHALL BE PLACED 12" BELOW EXISTING GRADE AND MINIMUM 6" BELOW FINISHED GRADE OR PER LOCAL CODE FOR FROST DEPTH.
- 24 - FOUNDATION WALLS SHALL HAVE A MINIMUM EXPOSURE OF 6" ABOVE FINISHED GRADE.
- 25 - THE LOCAL BUILDING OFFICIAL IS TO ASSURE COMPLIANCE WITH CODE AND CONSTRUCTION REQUIREMENTS.
- 26 - CONCRETE FLOOR SLABS, EXCEPT FOR THOSE IN UNHABITATED ACCESSORY STRUCTURES, SHALL HAVE A VAPOR BARRIER CONSISTING OF A MIN. 6 MIL INCH POLYETHYLENE OR APPROVED VAPOR BARRIER WITH JOINTS LAPPED NOT LESS THAN 6" PLACED BETWEEN THE CONCRETE FLOOR SLAB AND THE BASE COURSE OR THE PREPARED SUB-GRADE WHERE NO BASE COURSE EXISTS.

NOTE:
FOUNDATION CREW, PLEASE MARK LOCATION OF UFER GROUND WITH HIGHLY VISIBLE SPRAY PAINT ON INTERIOR OF FOUNDATION WALL

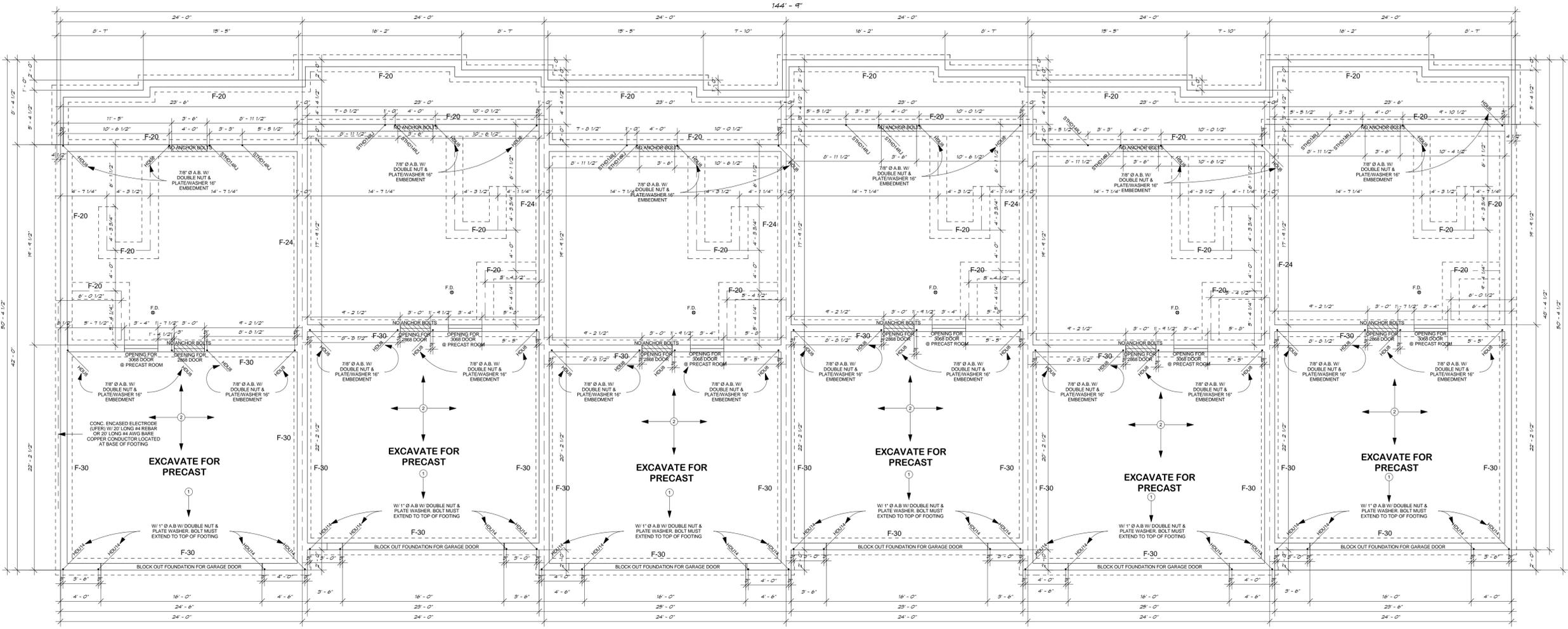
SCHEDULES ARE ON DETAIL SHEET 11

NOTE:
SPACE ANCHOR BOLTS BETWEEN FLOOR JOISTS

ALL FOUNDATION STRAPS MUST BE NAILED WITH A 0.148 MINIMUM DIAMETER NAIL
NOTE:
ALL CONCRETE OPENINGS TO HAVE (2) #5 HORIZONTAL IN BOTTOM OF LINTEL ABOVE OPENING EXTENDING 2" PAST OPENING (1) #4 BAR ON EACH SIDE OF OPENING TERMINATING 3" FROM TOP OF CONCRETE (1) #4 HORIZONTAL BAR BELOW OPENING EXTENDING 2" PAST

KEYNOTES

1. SLOPE OF FLOOR AT GARAGE SLAB (3" TOTAL)
2. 4" CONCRETE SLAB ON GRADE



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Blackstone	
6 Unit Townhomes	
Designed for	Blackstone Group
Finished Footage	2,285
Date	OCT. 2014
Drawn by	DSW
PRINTED: 12/1/2014 2:04:41 PM	PRE-CAST: 473
Sheet	FLEX: 449
2	GROUND LEVEL: 491
of 12	MAIN LEVEL: 867
	UPPER LEVEL: 927
	TOTAL: 3,207
SCALE: 3/16" = 1'-0"	

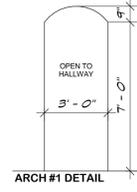
FOUNDATION PLAN



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KEYNOTES

- (1) 50 GALLON GAS WATER HEATERS W/ EXPANSION TANK, 40,000 BTUS (WITH SEISMIC HOLD-DOWNS PLACED A 3RD WAY UP & A 3RD DOWN) (WITH ONE WAY CHECK HEAT VALVES) (1/2" FOAM INS. AT HOT WATER LINES)
- (1) 80% EFFICIENCY CLASS FURNACES 100,000 BTUS (i.e. TEMPSTAR NUG5100 DFA)
- FLUE CHASE
- GUARD RAILING
- 36" WIDE REFRIGERATOR SPACE (WITH INSTALLED WATER LINE)
- GRANITE COUNTERTOP ON BASE CABINET
- UPPER CABINETS (TOP @ 7'-0")
- 36" WIDE RANGE COOK-TOP W/ RANGE HOOD ABOVE
- DOUBLE SINK W/ DISPOSAL AND SPRAYER
- DISHWASHER
- ISLAND SNACK BAR
- (5) 16" SHELVES STARTING @ 24" ABOVE FINISHED FLOOR
- 1.6 GALLON PER FLUSH TOILET
- 44" X 60" JETTED TUB W/ DURA-CRETE BACKER BOARD W/ MIN. 18" X 18" ACCESS@FRONT
- 36" X 40" WALK-IN TILE SHOWER W/ 2.5 GPM SHOWER HEADS W/ DURA-CRETE BACKER BOARD
- 30" X 60" TUB-SHOWER W/ 2.5 GPM SHOWER HEAD W/ DURA-CRETE BACKER BOARD
- WASHER/DRYER SPACE (VENT DRYER TO EXTERIOR W/ 4" VENT)
- 22" X 30" ATTIC ACCESS W/ LOCKING LATCH
- HOSE BIB W/ SHUT-OFF BALL VALVE (FREEZE PROTECTED)
- CONC. LANDING @ MIN. 36" X 36"



- NOTE:**
MAIN LEVEL WINDOW'S HEAD HEIGHT @ 7'-8" UNO
- NOTE:**
UPPER LEVEL WINDOW SILLS TO BE A MIN. OF 24" ABOVE FLOOR
- NOTE:**
HOMEOWNER TO MEET WITH BUILDER & TRUSS COMPANY TO DISCUSS VAULTED/TREY/COFFERED CEILING OPTIONS

NOTE:
8' TALL WALLS FRAMED WITH STUDS @ 16" O.C. 10' AND TALLER WALLS SEE ENGINEERING.

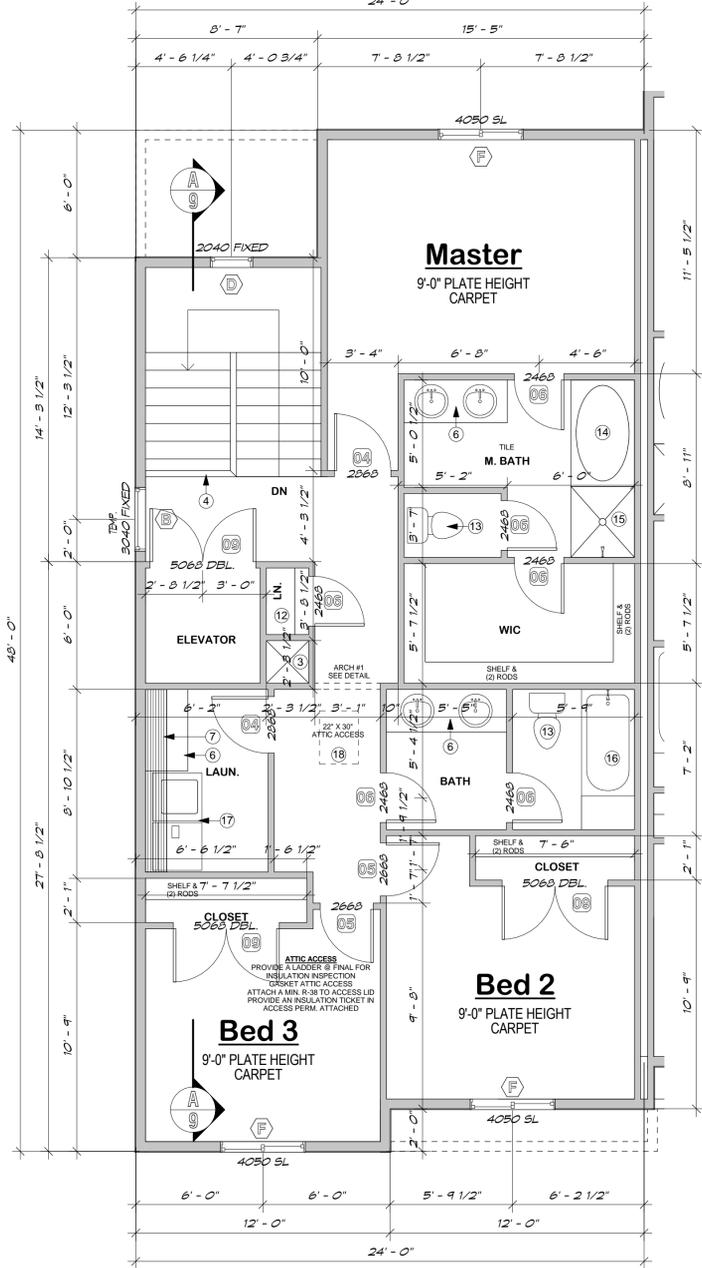
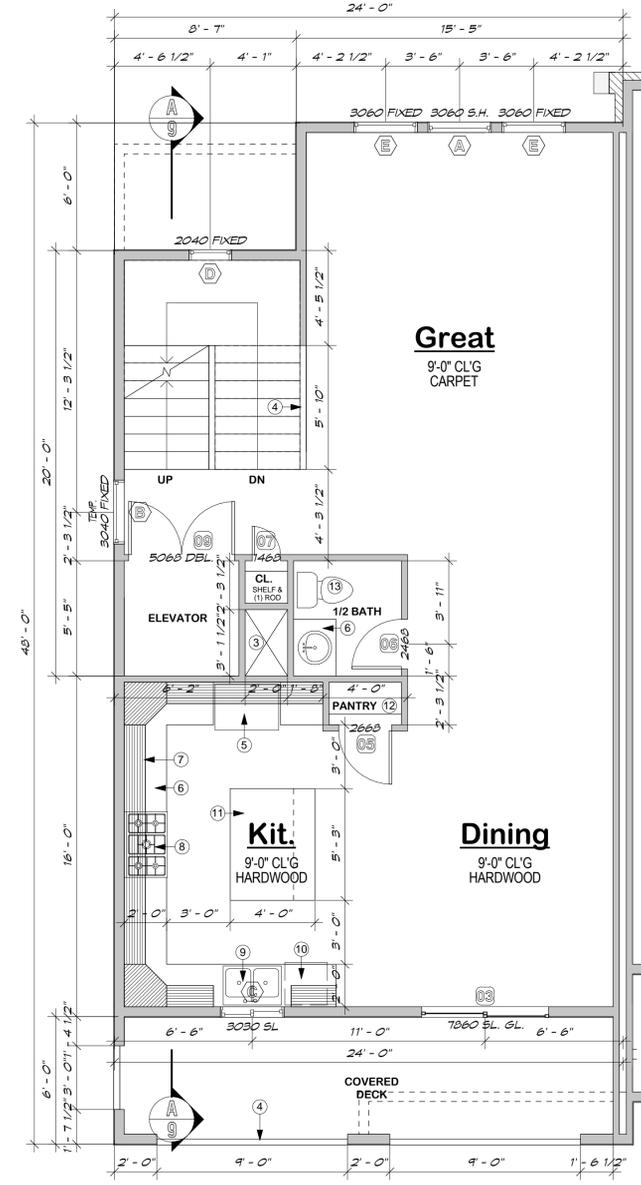
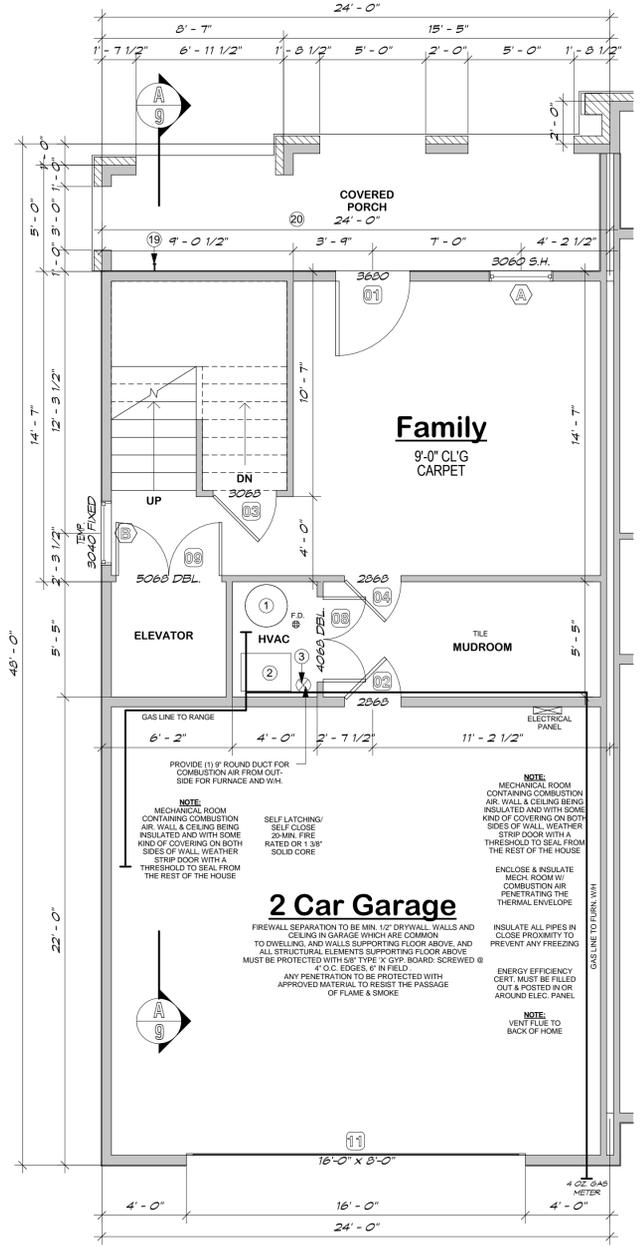
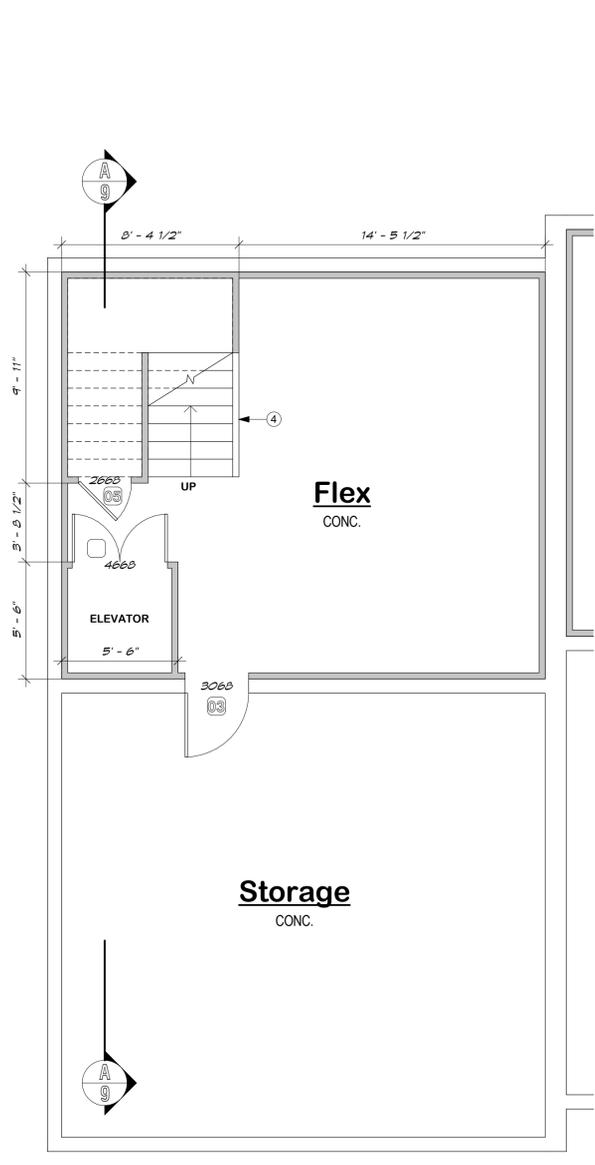
DIMENSIONS ON FLOOR PLANS ARE TO ROUGH FRAMING UNLESS OTHERWISE NOTED.

2 X 4 STUD WALLS ASSUMED TO BE 3 1/2" WIDE.

2 X 6 STUD WALLS ASSUMED TO BE 5 1/2" WIDE.

NOTE:
A BACK WATER VALVE IS REQUIRED TO PROTECT PLUMBING FIXTURES THAT ARE LOCATED BELOW THE ELEVATION LEVEL OF THE NEAREST UPSTREAM MAN HOLE COVER. FIXTURES THAT ARE ABOVE THE ELEVATION OF THE MAN HOLE COVER SHALL NOT DISCHARGE THROUGH THE BACK WATER VALVE

NOTE:
FLOOR DRAINS MUST HAVE TRAP PRIMERS OR DEEP SEAL TRAPS



PRE-CAST LEVEL

GROUND LEVEL

MAIN LEVEL

UPPER LEVEL

FLOOR PLANS

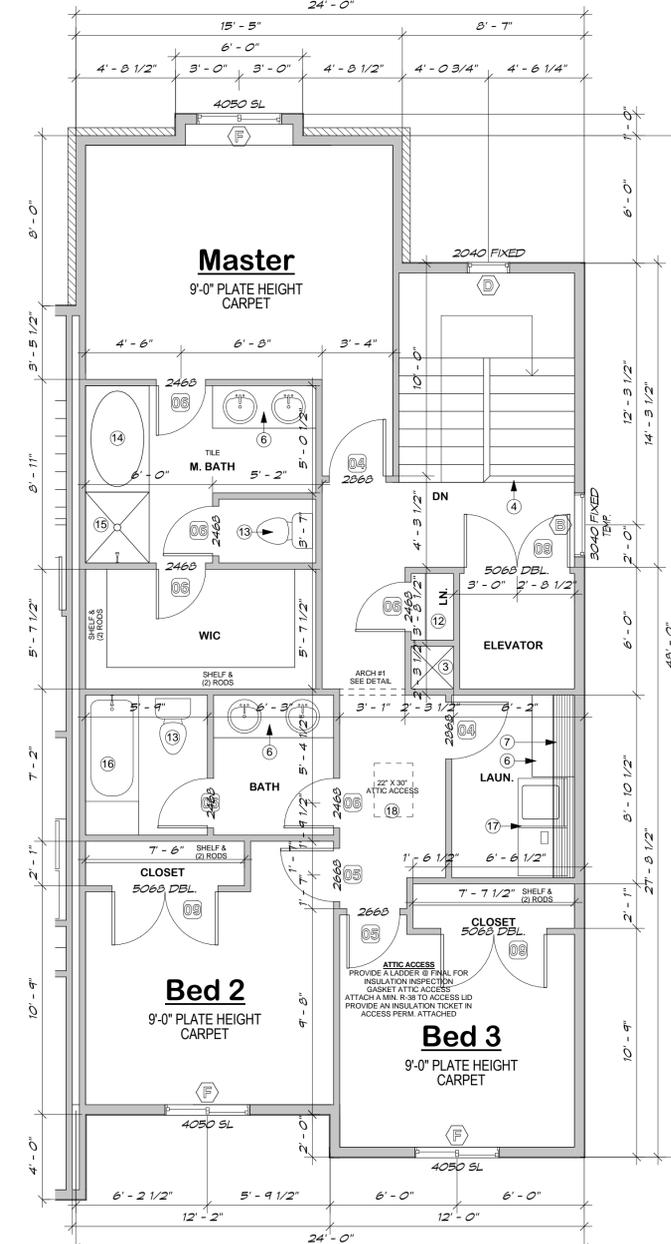
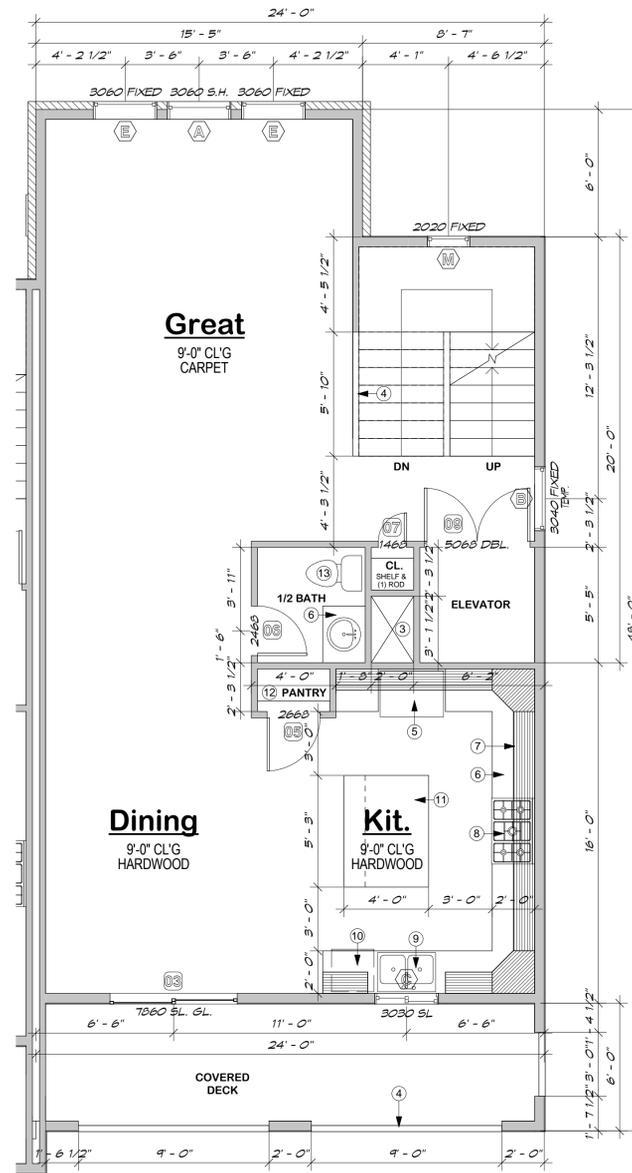
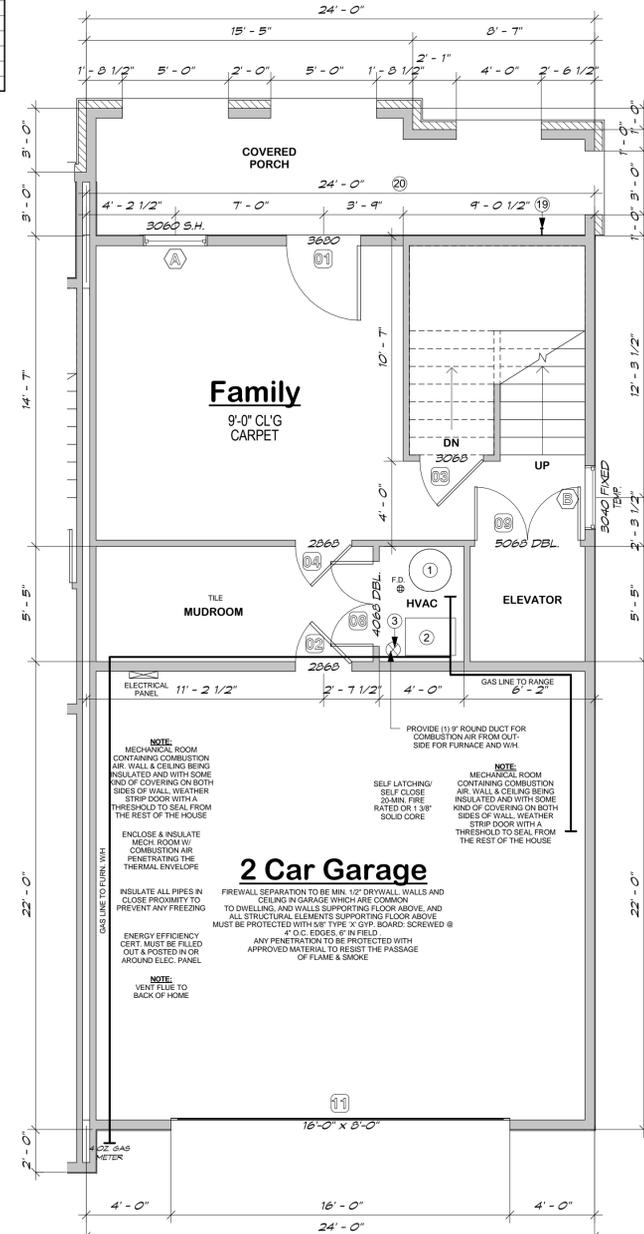
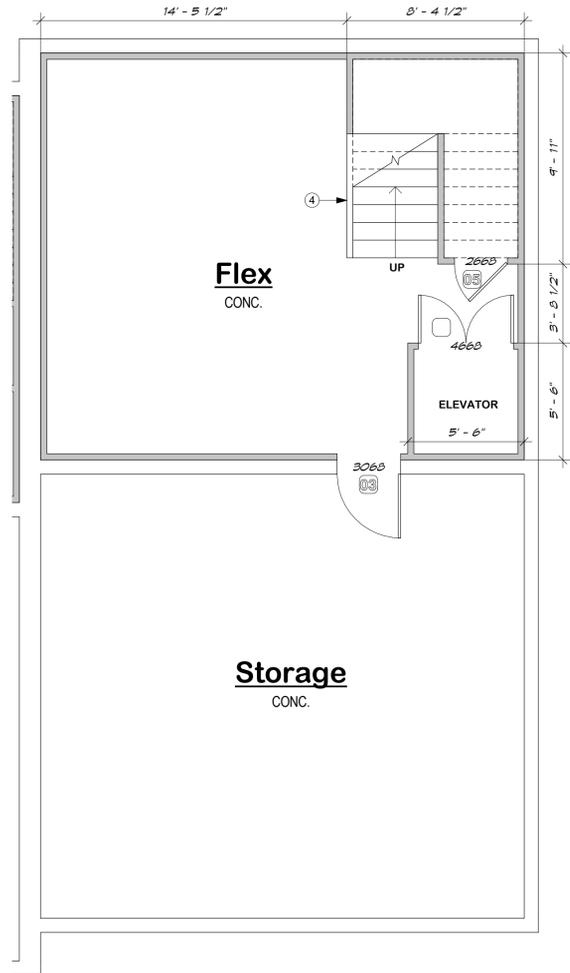
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Blackstone	
6 Unit Townhomes	
Designed for	Blackstone Group
Finished Footage	2,285
Date	OCT. 2014
Drawn by	DSW
PRINTED:	PRE-CAST: 473
12/1/2014 2:04:41 PM	FLEX: 449
Sheet	3 GROUND LEVEL: 491
of 12	MAIN LEVEL: 867
	UPPER LEVEL: 927
	TOTAL: 3,207
SCALE: 1/4" = 1'-0"	

Window Schedule						
NUMBER	WIDTH	HEIGHT	FRAME	GLAZING	DESCRIPTION	COUNT
A	3'-0"	6'-0"	VINYL	LOW-E	INSULATED, WHITE, CLEAR	11
B	3'-0"	4'-0"	VINYL	LOW-E	INSULATED, WHITE, CLEAR	6
C	3'-0"	3'-0"	VINYL	LOW-E	INSULATED, WHITE, CLEAR	6
D	2'-0"	4'-0"	VINYL	LOW-E	INSULATED, WHITE, CLEAR	5
E	3'-0"	6'-0"	VINYL	LOW-E	INSULATED, WHITE, CLEAR	10
F	4'-0"	5'-0"	VINYL	LOW-E	INSULATED, WHITE, CLEAR	16
G	4'-0"	6'-0"	VINYL	LOW-E	INSULATED, WHITE, CLEAR	2
H	1'-0"	3'-0"	VINYL	LOW-E	INSULATED, WHITE, CLEAR	6
I	5'-0"	5'-0"	VINYL	LOW-E	INSULATED, WHITE, CLEAR	1
J	4'-0"	4'-0"	VINYL	LOW-E	INSULATED, WHITE, CLEAR	4
K	3'-0"	5'-0"	VINYL	LOW-E	INSULATED, WHITE, CLEAR	2
L	3'-0"	5'-0"	VINYL	LOW-E	INSULATED, WHITE, CLEAR	1
M	2'-0"	2'-0"	VINYL	LOW-E	INSULATED, WHITE, CLEAR	1
Grand total						71

NOTE:
A BACK WATER VALVE IS REQUIRED TO PROTECT PLUMBING FIXTURES THAT ARE LOCATED BELOW THE ELEVATION LEVEL OF THE NEAREST UPSTREAM MAN HOLE COVER. FIXTURES THAT ARE ABOVE THE ELEVATION OF THE MAN HOLE COVER SHALL NOT DISCHARGE THROUGH THE BACK WATER VALVE

Door Schedule								
NUMBER	WIDTH	HEIGHT	THICKNESS	JAMB	MATERIAL	HARDWARE	DESCRIPTION	COUNT
01	3'-6"	8'-0"	0'-2"	FIR	WOOD	LOCK & DEAD BOLT	INSULATED COLONIAL	1
02	2'-8"	6'-8"	0'-1 1/2"	FIR	WOOD	LOCK & DEAD BOLT	INSULATED COLONIAL	1
03	3'-0"	6'-8"	0'-1 1/2"	FIR	WOOD	KNOB	COLONIAL	2
04	6'-0"	7'-8"	0'-1 1/2"	FIR	GLASS	LOCK & DEAD BOLT	INSULATED GLASS	1
05	2'-8"	6'-8"	0'-1 1/2"	FIR	WOOD	KNOB	COLONIAL	3
06	2'-6"	6'-8"	0'-1 1/2"	FIR	WOOD	KNOB	COLONIAL	4
07	2'-4"	6'-8"	0'-1 1/2"	FIR	WOOD	KNOB	COLONIAL	7
08	1'-4"	6'-8"	0'-1 1/2"	FIR	WOOD	KNOB	COLONIAL	1
09	4'-0"	6'-8"	0'-1 1/2"	FIR	WOOD	KNOB	DOUBLE PANEL	1
10	5'-0"	6'-8"	0'-1 1/2"	FIR	WOOD	KNOB	DOUBLE PANEL	5
11	2'-8"	6'-8"	0'-1 1/2"	FIR	WOOD	LOCK & DEAD BOLT	GARAGE DOOR	1
12	2'-8"	6'-8"	0'-1 1/2"	FIR	WOOD	LOCK & DEAD BOLT	GARAGE DOOR	1
Grand total								28

NOTE:
FLOOR DRAINS MUST HAVE TRAP PRIMERS OR DEEP SEAL TRAPS



NOTE:
MAIN LEVEL WINDOW'S HEAD HEIGHT @ 7'-8" UNO

NOTE:
UPPER LEVEL WINDOW SILLS TO BE A MIN. OF 24" ABOVE FLOOR

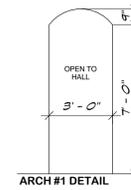
NOTE:
HOMEOWNER TO MEET WITH BUILDER & TRUSS COMPANY TO DISCUSS VAULTED/TREY/COFFERED CEILING OPTIONS

NOTE:
8' TALL WALLS FRAMED WITH STUDS @ 16" O.C. 10' AND TALLER WALLS SEE ENGINEERING.

DIMENSIONS ON FLOOR PLANS ARE TO ROUGH FRAMING UNLESS OTHERWISE NOTED.

2 X 4 STUD WALLS ASSUMED TO BE 3 1/2" WIDE.

2 X 6 STUD WALLS ASSUMED TO BE 5 1/2" WIDE.



KEYNOTES

- (1) 50 GALLON GAS WATER HEATERS W/ EXPANSION TANK, 40,000 BTUS (WITH SEISMIC HOLD-DOWNS PLACED A 3RD WAY UP & A 3RD DOWN) (WITH ONE WAY CHECK HEAT VALVES) (1/2" FOAM INS. AT HOT WATER LINES)
- (1) 180% EFFICIENCY CLASS FURNACES 100,000 BTUS (i.e. TEMPSTAR NUG5100 DFA)
- FLUE CHASE
- GUARD RAILING
- 36" WIDE REFRIGERATOR SPACE (WITH INSTALLED WATER LINE)
- GRANITE COUNTERTOP ON BASE CABINET
- UPPER CABINETS (TOP @ 7'-0")
- 36" WIDE RANGE COOK-TOP W/ RANGE HOOD ABOVE
- DOUBLE SINK W/ DISPOSAL AND SPRAYER
- DISHWASHER
- ISLAND SNACK BAR
- (5) 16" SHELVES STARTING @ 24" ABOVE FINISHED FLOOR
- 1.6 GALLON PER FLUSH TOILET
- 44" X 60" JETTED TUB W/ DURA-CRETE BACKER BOARD W/ MIN. 18" X 18" ACCESS@FRONT
- 36" X 40" WALK-IN TILE SHOWER W/ 2.5 GPM SHOWER HEADS W/ DURA-CRETE BACKER BOARD
- 30" X 60" TUB/SHOWER W/ 2.5 GPM SHOWER HEAD W/ DURA-CRETE BACKER BOARD
- WASHER/DRYER SPACE (VENT DRYER TO EXTERIOR W/ 4" VENT)
- 22" X 30" ATTIC ACCESS W/ LOCKING LATCH
- HOSE BIB W/ SHUT-OFF BALL VALVE (FREEZE PROTECTED)
- CONC. LANDING @ MIN. 36" X 36"

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Blackstone
6 Unit Townhomes

Designed for

Blackstone Group

Finished Footage 2,285

Date OCT. 2014

Drawn by DSW

PRINTED: 12/1/2014 2:04:44 PM

PRE-CAST: 473

FLEX: 449

Sheet 4

GROUND LEVEL: 491

MAIN LEVEL: 867

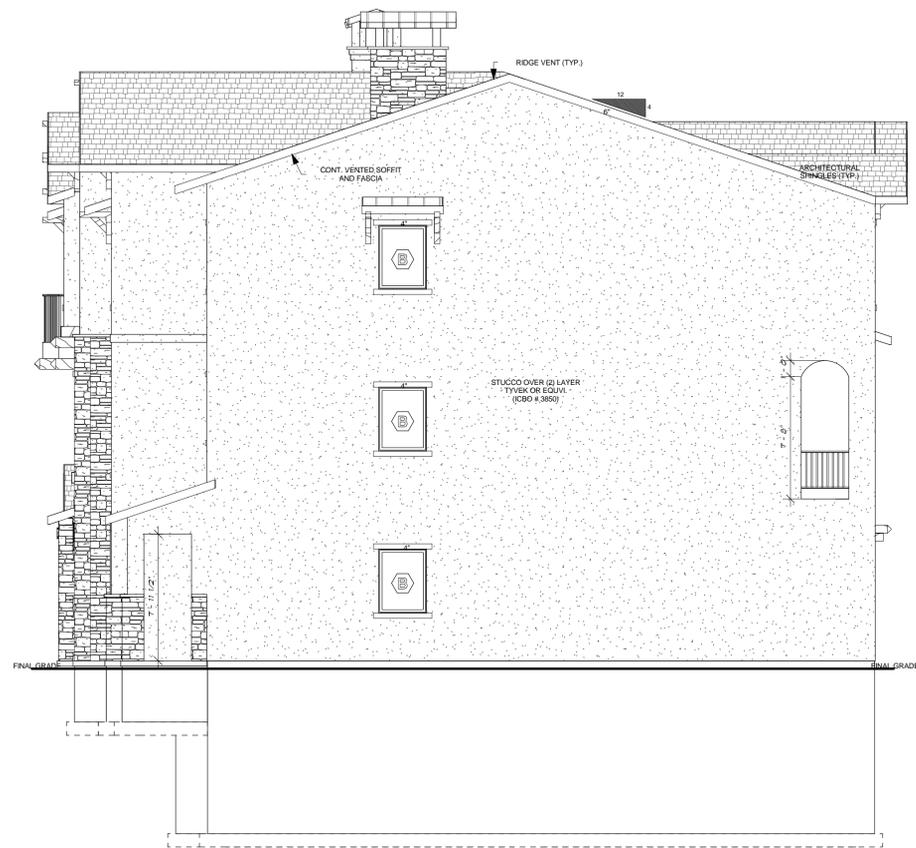
UPPER LEVEL: 927

TOTAL: 3,207

SCALE: 1/4" = 1'-0"

FLOOR PLANS

6 UNIT RIGHT ELEVATION



NOTE:
GROUND LEVEL WINDOW'S HEAD HEIGHT @ 7'-8" UNO

NOTE:
MAIN LEVEL WINDOW'S HEAD HEIGHT @ 7'-8" UNO

NOTE:
UPPER LEVEL WINDOW SILLS TO BE A MIN. OF 24" ABOVE FLOOR

NOTE:
INSPECTIONS ARE REQUIRED FOR ALL STUCCO & EIFS SYSTEMS

NOTE:
NO MECHANICAL VENTS ON FRONT OF HOME



WALKER HOME DESIGN

801-930-9499 office

www.walkerhomedesign.com

KEYNOTES



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Blackstone

6 Unit Townhomes

Designed for

Blackstone Group

Finished Footage 2,285

Date OCT. 2014

Drawn by DSW

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PRE-CAST: 473

FLEX: 449

Sheet 5

GROUND LEVEL: 491

MAIN LEVEL: 867

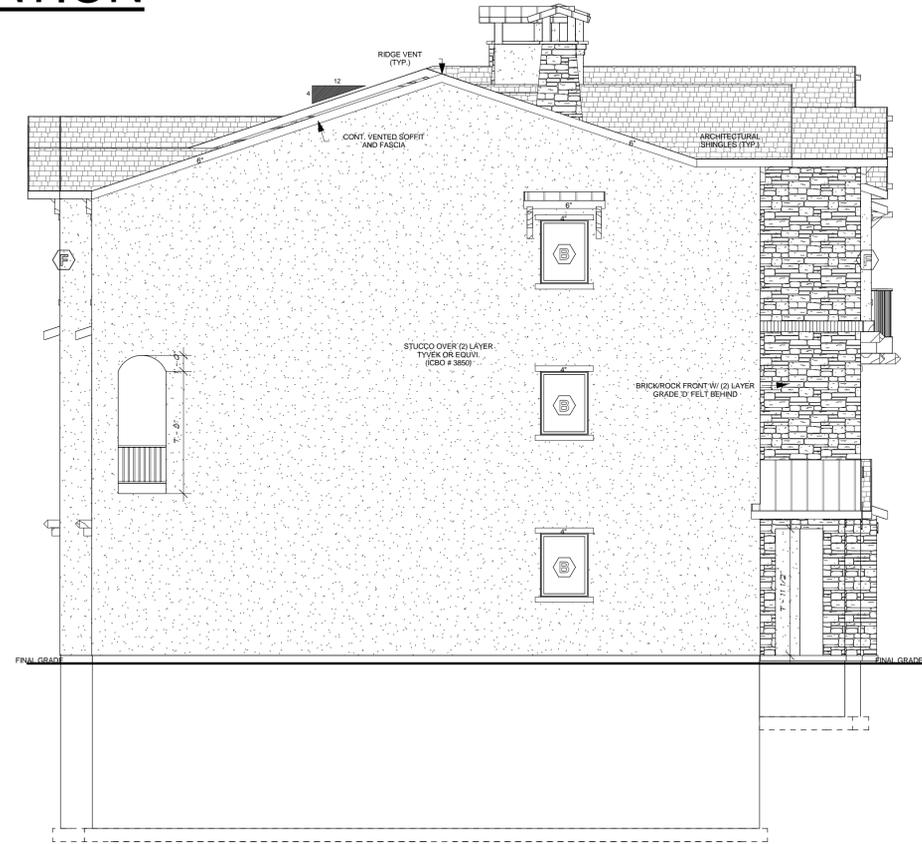
UPPER LEVEL: 927

TOTAL: 3,207

SCALE: 3/16" = 1'-0"

6 UNIT FRONT ELEVATION

6 UNIT LEFT ELEVATION



NOTE:
GROUND LEVEL WINDOW'S
HEAD HEIGHT @ 7'-8" UNO

NOTE:
MAIN LEVEL WINDOW'S
HEAD HEIGHT @ 7'-8" UNO

NOTE:
UPPER LEVEL WINDOW
SILLS TO BE A MIN. OF 24"
ABOVE FLOOR

NOTE:
INSPECTIONS ARE
REQUIRED FOR ALL
STUCCO & EIFS SYSTEMS

NOTE:
NO MECHANICAL VENTS
ON FRONT OF HOME



**WALKER
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KEYNOTES



6 UNIT REAR ELEVATION

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Blackstone

6 Unit Townhomes

Designed for

**Blackstone
Group**

Finished Footage 2,285

Date OCT. 2014

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12/1/2014
2:04:48 PM

PRE-CAST: 473

FLEX: 449

GROUND LEVEL: 491

MAIN LEVEL: 867

UPPER LEVEL: 927

TOTAL: 3,207

SCALE: 3/16" = 1'-0"

Sheet

6

of

12



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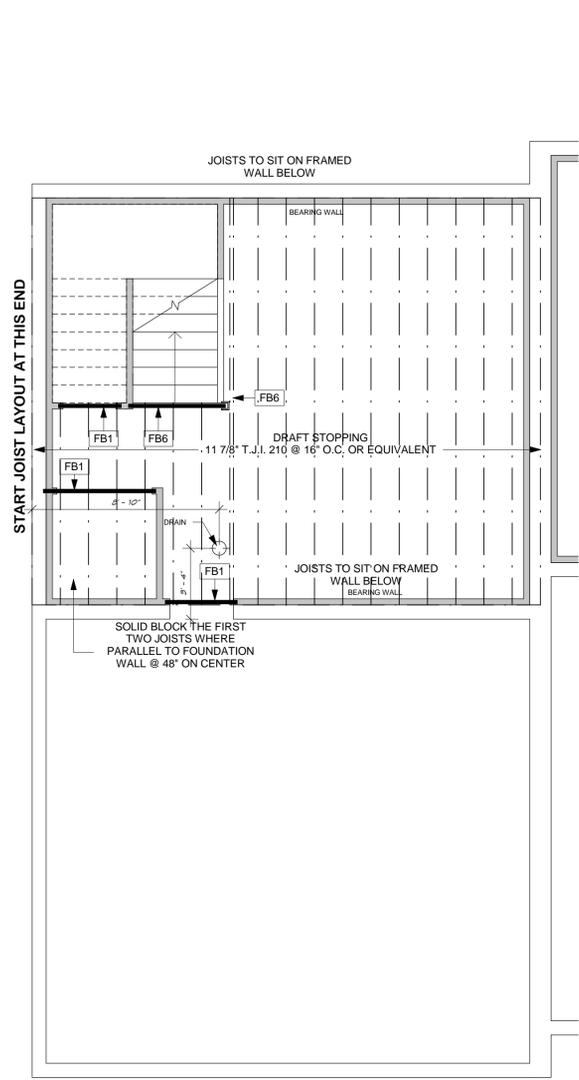
KEYNOTES

BEAM SCHEDULE

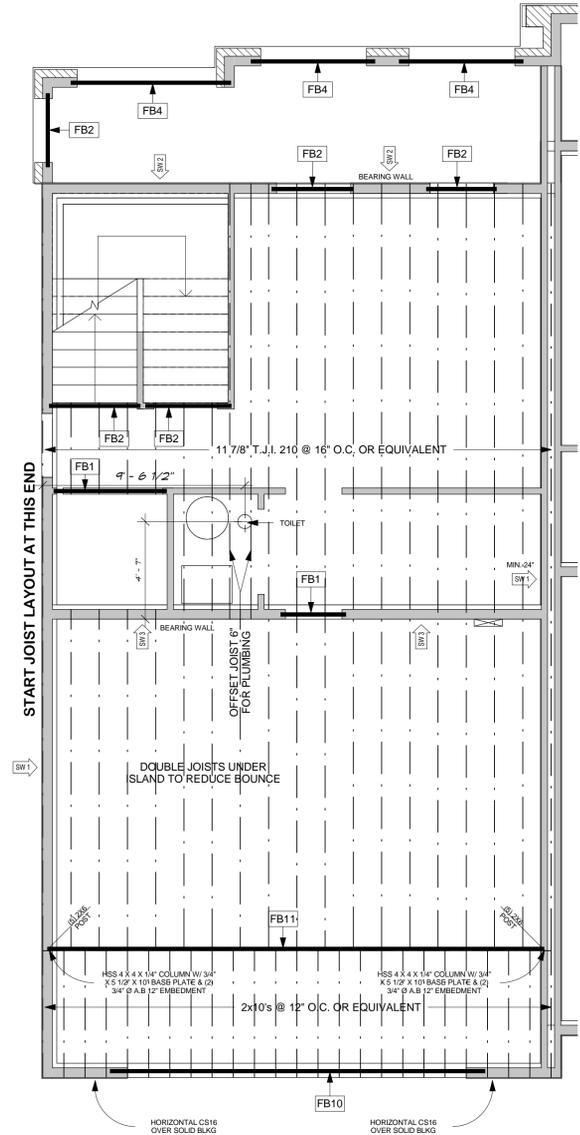
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- FB-2 (2) 2X10
- FB-3 (3) 2X10
- FB-4 (2) 1 3/4 X 9 1/2 LVL
- FB-5 (3) 1 3/4 X 9 1/2 LVL
- FB-6 (2) 1 3/4 X 11 7/8 LVL
- FB-7 (1) 1 3/4 X 16 LVL
- FB-8 (2) 1 3/4 X 16 LVL
- FB-9 (4) 1 3/4 X 16 LVL
- FB-10 5 1/8 X 16 1/2 GLB
- FB-11 5 1/8 X 21 GLB OR W 12 X 35

FRAMING NOTES

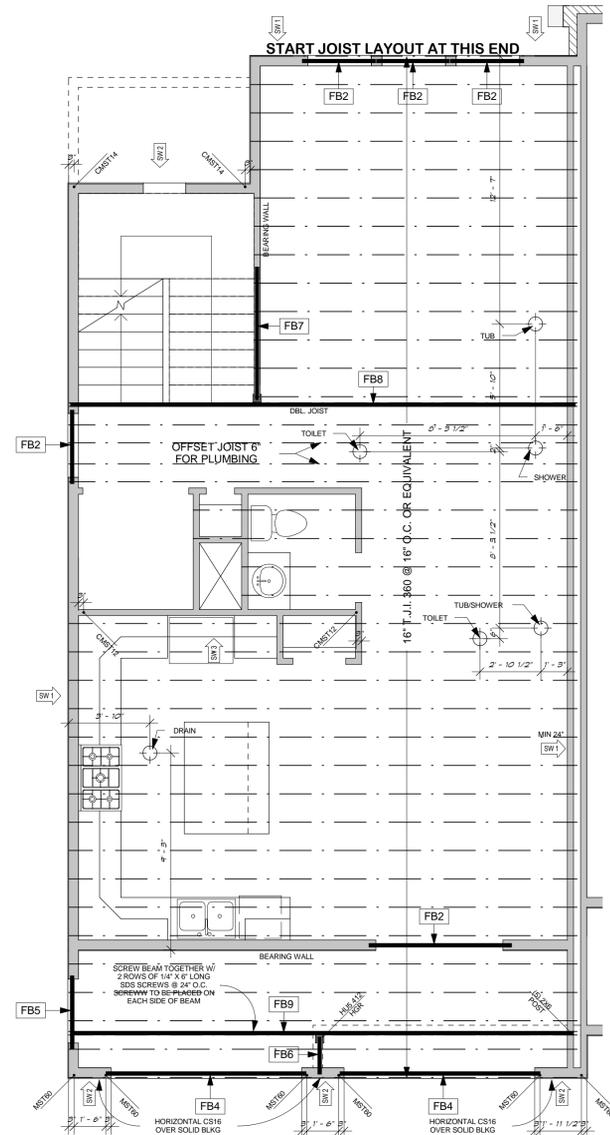
- 1- INSTALL JOIST HANGERS AS PER MANUFACTURE SPECIFICATIONS.
- 2- INSTALL WEB STIFFENERS AS PER MANUF. SPECS.
- 3- EXTERIOR HEADERS NOT CALLED OUT SHALL BE (2)-2X10. ALL TRIMMERS FOR THESE HEADERS ARE (1)-2 UNLESS NOTED OTHERWISE.
- 4- ALL HOLDINGS ARE SHOWN ON FOUNDATION DRAWING. SHEAR WALL NOTES FOR MAIN FLOOR SHOWN ON UPPER FLOOR.
- 5- SUB FLOORING SHALL BE 3/4" APA RATE OSB T & G SHEATHING, NAILED & GLUED W/ 8D NAILS @ 6" O.C. @ DAPHRAGM BOUNDARIES & PANEL SUPPORTED EDGES. FIELD NAIL W/ 8D NAILS @ 12" O.C. NAILING SHALL BE SPACED 3" (MIN.) FROM EDGE OF PANEL.
- 7- LAY SHEATHING WITH FACE GRAIN AT RIGHT ANGLES TO FRAMING WITH END JOINTS STAGGERED. GAP ALL OSB BOARD 1/8". (SEE SHEATHING DETAIL).
- 8- ALL OLD-LAM BEAMS SHALL BE COMB. 24F-V4 DF/DF (UNLESS OTHERWISE NOTED).
- 9- PLACE (2)-STUDS MINIMUM UNDER ALL BEARING POINTS FOR BEAMS AND HEADERS (UNLESS OTHERWISE NOTED).
- 10- USE SIMPSON HS CLIPS @ 32" O.C. FOR ALL CANT. JOISTS TO SILL PLATE CONNECTIONS.
- 11- EXTERIOR 8" TALL WALLS FRAMED WITH 2X6 STUDS @ 16" O.C. 10" AND 14" WALLS TO BE 2X6 STUDS @ 16" O.C.
- 12- DIMENSIONS ON FLOOR PLANS ARE TO ROUGH FRAMING UNLESS OTHERWISE NOTED.
- 13- DROP SHEATHING DOWN OVER RIM JOIST AND NAIL TO LOWER PLATE AS PER SCHEDULE. BLOCK ALL EDGES. WALL SHEATHING MUST BREAK ON & NAIL INTO SAME FRAMING MEMBER. NAIL ALL WALL SHEATHING W/ 8D NAILS @ 12" O.C. IN PANEL FIELD & 6" O.C. @ PANEL EDGES UN O ON SHEARWALL SCHEDULE.
- 14- ROOF FRAMING TO BE ROOF TRUSSES @ 24" O.C. MAX SPACING PER M.P. UNLESS NOTED OTHERWISE.
- 15- PROVIDE BLOCKING AT JOIST BEARING.
- 16- ALL EXTERIOR EXPOSED STRUCTURAL FRAMING MEMBERS TO BE OF PRESSURE TREATED WOOD OR WOOD NATURALLY RESISTANT TO DECAY.
- 17- FLOOR FRAMING TO BE INSPECTED PRIOR TO SHEATHING THE FLOOR.
- 18- STEEL BEAMS TO BE 50 KSI. COLUMNS TO BE 46 KSI. PLATES TO BE 36 KSI.



LOWER LEVEL



MAIN LEVEL



UPPER LEVEL

FRAMING PLANS

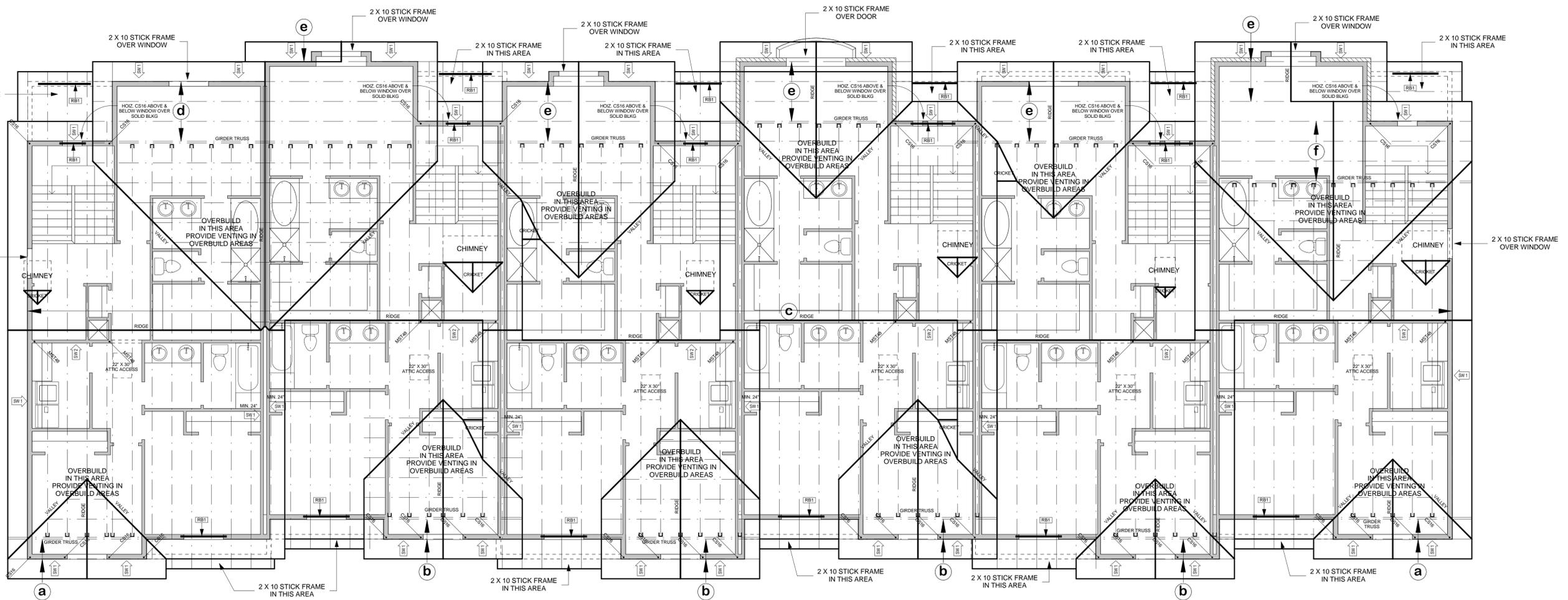
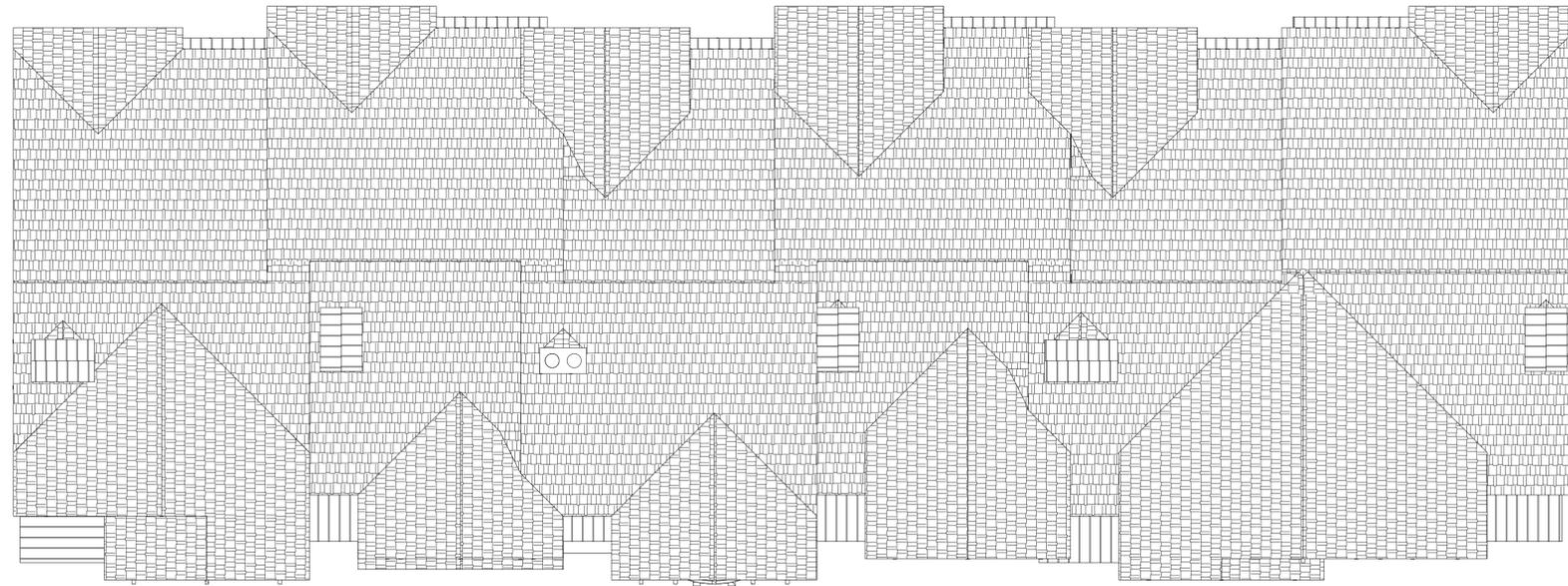
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Blackstone	
6 Unit Townhomes	
Designed for	
Blackstone Group	
Finished Footage	2,285
Date	OCT. 2014
Drawn by	DSW
PRINTED: 12/1/2014 2:04:49 PM	PRE-CAST: 473
Sheet 7	FLEX: 449
of 12	GROUND LEVEL: 491
	MAIN LEVEL: 867
	UPPER LEVEL: 927
	TOTAL: 3,207
SCALE:	1/4" = 1'-0"

FRAMING NOTES:

- 1- INSTALL JOIST HANGERS AS PER MANUFACTURE SPECIFICATIONS.
- 2- INSTALL WEB STIFFENERS AS PER MANUF. SPECS.
- 3- EXTERIOR HEADERS NOT CALLED OUT SHALL BE (2)-2X10 ALL FRAMERS FOR THESE HEADERS ARE (1)-2X UNLESS NOTED OTHERWISE.
- 4- ALL HOLD-DOWNS ARE SHOWN ON FOUNDATION DRAWING. SHEAR WALL NOTES FOR MAIN FLOOR SHOWN ON UPPER FLOOR.
- 5- SUB FLOORING SHALL BE 3/4" APA RATE OSB T & G SHEATHING, NAILED & CLUED W/ 8D NAILS @ 6" O.C. @ DRAPERY BOUNDARIES & PANEL SUPPORTED EDGES. FIELD NAIL W/ 8D NAILS @ 12" O.C. NAILING SHALL BE SPACED 36" MIN) FROM EDGE OF PANEL.
- 7- LAY SHEATHING WITH FACE GRAIN AT RIGHT ANGLES TO FRAMING WITH END JOINTS STAGGERED. GAP ALL OSB BOARD 1/8" (SEE SHEATHING DETAIL).
- 8- ALL GULLAM BEAMS SHALL BE COMB. 24F-V4 DFD/DF (UNLESS OTHERWISE NOTED).
- 9- PLACE (2)-STUDS MINIMUM UNDER ALL BEARING POINTS FOR BEAMS AND HEADERS (UNLESS OTHERWISE NOTED).
- 10- USE SIMPSON HS CLIPS @ 32" O.C. FOR ALL CANT. JOISTS TO SILL PLATE CONNECTIONS.
- 11- EXTERIOR 8' TALL WALLS FRAMED WITH 2X8 STUDS @ 16" O.C. 10' AND 14' WALLS TO BE 2X6 DFLK2 STUDS @ 16" O.C.
- 12- DIMENSIONS ON FLOOR PLANS ARE TO ROUGH FRAMING UNLESS OTHERWISE NOTED.
- 13- DROP SHEATHING DOWN OVER RIM JOIST AND NAIL TO LOWER PLATE AS PER SCHEDULE. BLOCK ALL EDGES. WALL SHEATHING MUST BREAK ON A NAIL INTO SAME FRAMING MEMBER. NAIL ALL WALL SHEATHING W/ 8D NAILS @ 12" O.C. IN PANEL FIELD & 6" O.C. @ PANEL EDGES UNO ON SHEARWALL SCHEDULE.
- 14- ROOF FRAMING TO BE ROOF TRUSSES @ 24" O.C. MAX SPACING PER IFC, UNLESS NOTED OTHERWISE.
- 15- PROVIDE BLOCKING AT JOIST BEARING.
- 16- ALL EXTERIOR EXPOSED STRUCTURAL FRAMING MEMBERS TO BE OF PRESSURE TREATED WOOD OR WOOD NATURALLY RESISTANT TO DECAY.
- 17- FLOOR FRAMING TO BE INSPECTED PRIOR TO SHEATHING THE FLOOR.
- 18- STEEL BEAMS TO BE 50 KSI, COLUMNS TO BE 46 KSI. PLATES TO BE 36 KSI.

ROOF VIEW



KEYNOTES

BEAM SCHEDULE
RB-1 (2) 2X10

- LOADS**
- A. ROOF SNOW LOAD = 35 psf + SNOW DRIFT PER IBC
 - B. ROOF DEAD LOAD = 15 psf
 - C. FLOOR LIVE LOAD = 40 psf
 - D. FLOOR DEAD LOAD = 10 psf
 - E. DECK DEAD LOAD = 15 psf
 - F. DECK LIVE LOAD = 60 psf
 - G. WIND LOAD = 115 MPH ZONE- EXPOSURE B
 - H. SEISMIC ZONE D2 (IBC)
 - I. SOIL BEARING PRESSURE = 1500 psf (ASSUMED)

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Blackstone	
6 Unit Townhomes	
Designed for	Blackstone Group
Finished Footage	2,285
Date	OCT. 2014
Drawn by	DSW
PRINTED:	PRE-CAST: 473
12/1/2014 2:04:50 PM	FLEX: 449
Sheet	GROUND LEVEL: 491
0	MAIN LEVEL: 867
of 12	UPPER LEVEL: 927
	TOTAL: 3,207
SCALE: 3/16" = 1'-0"	

ROOF FRAMING PLAN



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KEYNOTES

1. ROOF SHEATHING W/30 YR. ARCH GRADE SHINGLES W/6 NAILS PER SHINGLE @ 24" O.C. AND 2 X MTL.
2. PREMANUFACTURED TRUSSES @ 24" O.C. AND 2 X MTL.
3. R-38 INSULATION (TYP. @ CEILING)
4. 1/2" GYP. BOARD @ WALLS AND CEILING
5. FLOOR JOISTS (REFER TO FRAMING PLAN FOR SIZE AND SPACING)
6. SUBFLOOR (REFER TO FRAMING PLAN FOR SPECIFICATIONS)
7. INSULATION TO 24" BELOW GRADE IF REQUIRED
8. 4" CONCRETE SLAB
9. (3) 2 X 12 (OR EQUIV.) STAIR STRINGERS (TYP.)
10. 1/2" SHEET ROCK ON ENCLOSED SIDE OF STAIRS
11. 2 X 6 FASCIA W/ ALUMINUM WRAP AND CONTINUOUS VENTED ALUM. SOFFIT
12. SIDING W/ (1) LAYER OF GRADE 'D' FELT & STUCCO W/ (2) LAYERS GRADE 'D' FELT
13. R-19 INSULATION (TYPICAL @ ALL EXTERIOR WALLS)
14. 2 X 4 STUDS @ 16" O.C. (TYP. @ ALL EXT. WALLS UNLESS NOTED) TYVEK OR EQUIV.
15. INSULATION Baffles @ EXTERIOR PERIMETER (TYP.)
16. ICE DAM PROTECTION @ VALLEYS & @ EAVES (TYP.)
17. R-38 INSULATION (TYPICAL @ MAIN LEVEL FLOORS (w/ unfin. bsmt.))
18. MID-HEIGHT BLOCKING AT ALL BASEMENT BEARING WALLS (TYP.)
19. INS. DEPTH SHALL BE MARKED @ 300' INTERVALS
20. CROSS VENTILATION FOR ENCLOSED ATTICS AND SPACES BETWEEN RAFTERS
21. R-13 INSULATION
22. WATERPROOFING AS PER IRC R-406.2 MEMBRANE SHALL CONSIST OF 2-PLY HOT-ADAPTED FELT'S, 55 POUND (25 kg) ROLL ROOFING, 6-MIL. (15mm) POLY OR 40-MIL (1mm) POLYMER-MODIFIED ASPHALT
23. 4" FRENCH DRAIN
24. CONT. SOFFIT VENT (TYP.)

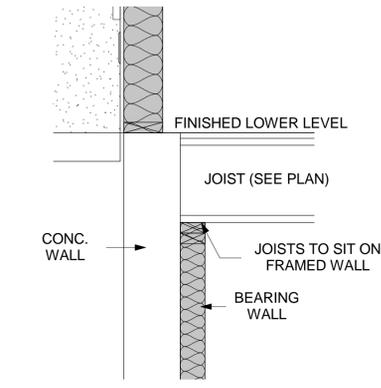
NOTE:
TRUSS COMPANY TO MEET WITH BUILDER & HOME OWNER BEFORE TRUSSES ARE BUILT

TRUSS DIAGRAMS

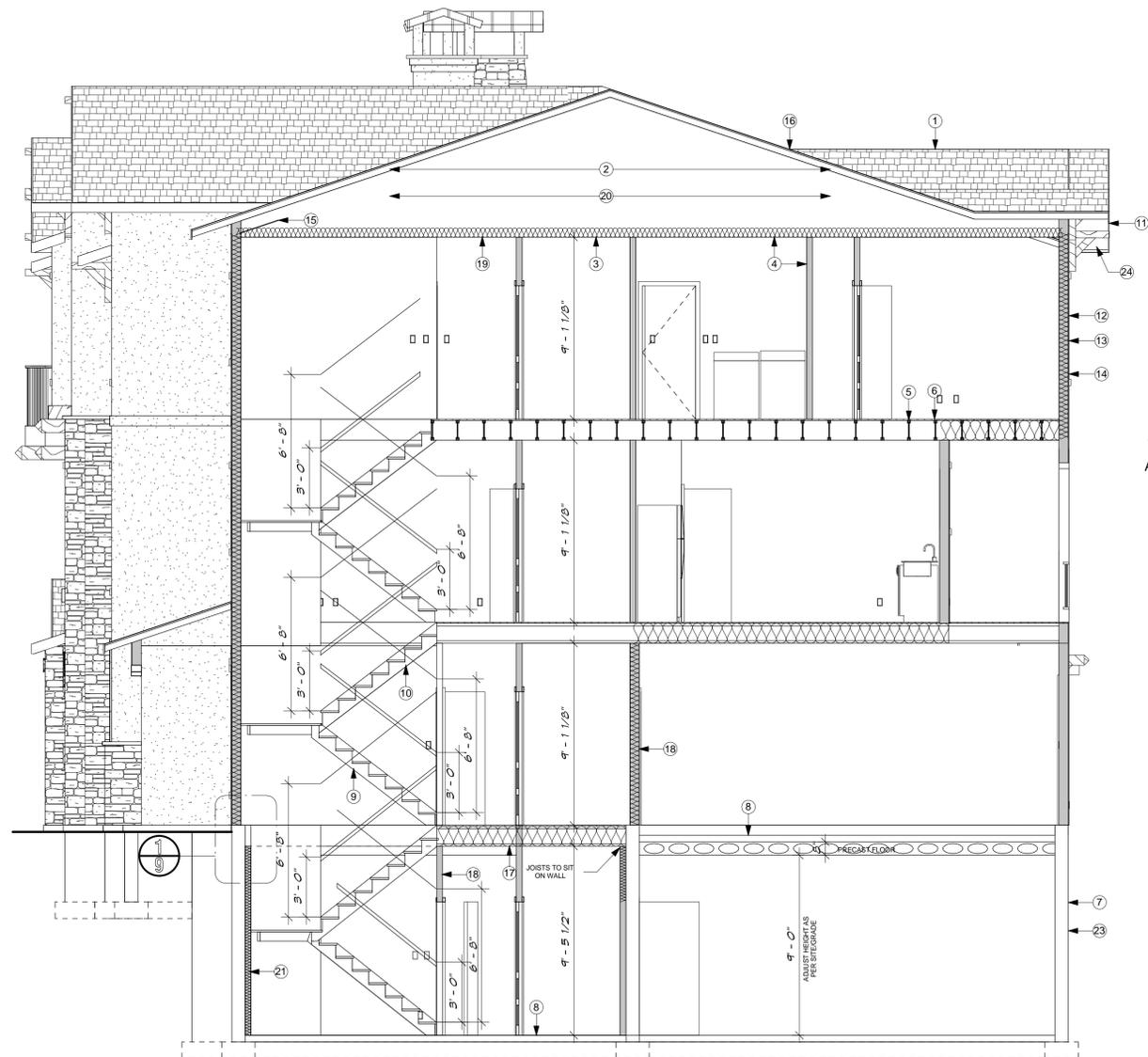
(TRUSSES SHALL BE ENGINEERED, DESIGNED AND MANUFACTURED BY TRUSS SUPPLIER) TRUSS MANUF. TO MEET W/ HOMEOWNER TO CONFIRM ALL CEILING DESIGNS, VAULTS & ATTIC SPACES, ETC. SO THAT ROOF IS DESIGNED AS PER THEIR NEEDS AND DISCUSS COST OF USING 12" HEEL HEIGHT AND HOMEOWNER SHOULD MEET W/ INSULATION COMPANY TO DISCUSS ADVANTAGES OF INCREASED INSULATION AT TRUSS ENDS

NOTE!
ALL TAILS SHALL BE PLUMB CUT

NOTE!
TRUSS DIAGRAMS ARE FOR REFERENCE ONLY. TRUSS COMPANY TO DESIGN TRUSS

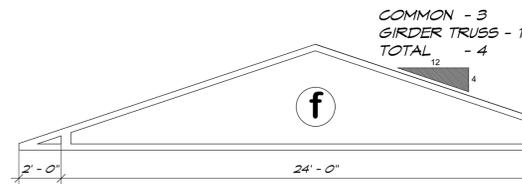
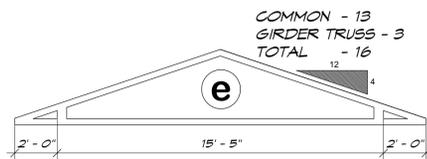
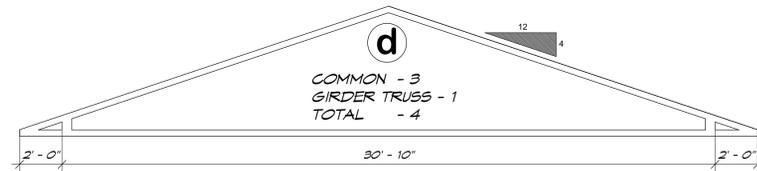
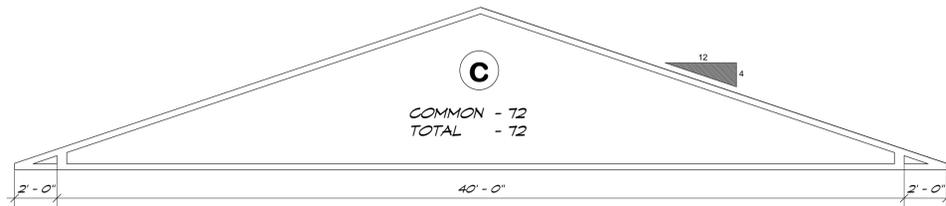
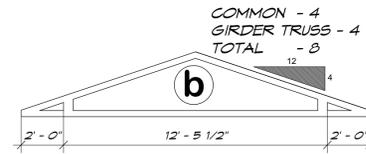
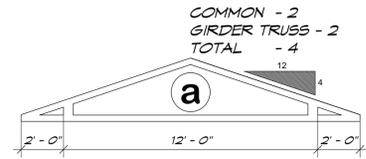


1. JOISTS @ LOWER LEVEL



ALL BSMT. BEARING WALLS REQ. MECH. ANCHORS @ 32" O.C.

STAIR NOTE
7.34" MAX RISE
12" MIN TREAD
36" MIN WIDTH
80" MIN HEADROOM
SEE SHEET 1 FOR TYPICAL STAIR & RAILING NOTES
ALL NOTES SHALL BE AS PER LOCAL CODE



CROSS SECTION 'A'

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Blackstone	
6 Unit Townhomes	
Designed for	
Blackstone Group	
Finished Footage	2,285
Date	OCT. 2014
Drawn by	DSW
PRINTED: 12/1/2014 2:04:51 PM	PRE-CAST: 473 FLEX: 449
Sheet	GROUND LEVEL: 491
of 12	UPPER LEVEL: 927
	TOTAL: 3,207
SCALE 1/4" = 1'-0"	



**WALKER
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KEYNOTES

**LEGEND AND NOTES ARE
ON DETAIL SHEET XX**

NOTE:
FLASH BEHIND METER
PROVIDE (2) UNI-STRUTS ON SERVICE RISER
CORROSION RESISTANT TAPE @ SERVICE RISER
PROVIDE AN INTERSYSTEM BONDING
TERMINATION @ SERVICE PANEL
ALL EXTERIOR APPLIANCES MUST BE 3" MIN.
ABOVE FINISH GRADE & ON A CONCRETE PAD

NOTE TO ELECTRICIAN
INCANDESCENT FIXTURES IN CLOSETS SHALL
BE A MIN. OF 12" FROM ANY SHELF EDGE
MEASURED HORIZONTALLY (6" FOR
FLUORESCENT FIXTURES). THE DIMENSION
FOR SHELVES LESS THAN 12" WIDE WILL BE
24" FROM THE WALL

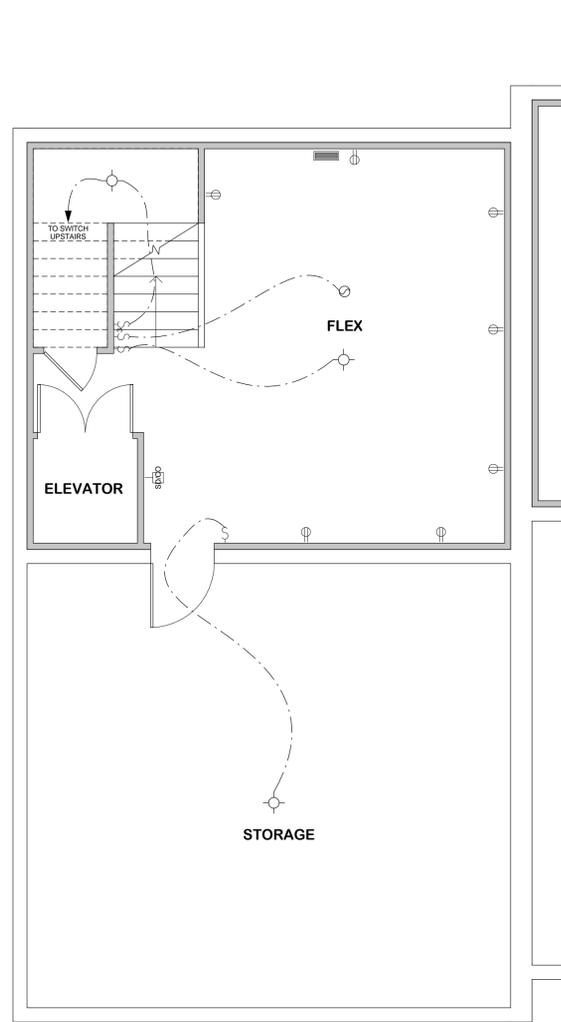
NOTE:
A MIN. OF (2) 20-AMPERE SMALL-APPLIANCE
BRANCH CIRCUITS SHALL SERVE ALL WALL &
FLOOR RECEPTACLE OUTLETS

NOTE:
ALL JETTED TUBS TO BE GFCI
PROTECTED AND CIRCUITS SIZED
AS PER TUB MANUF. SPECS.

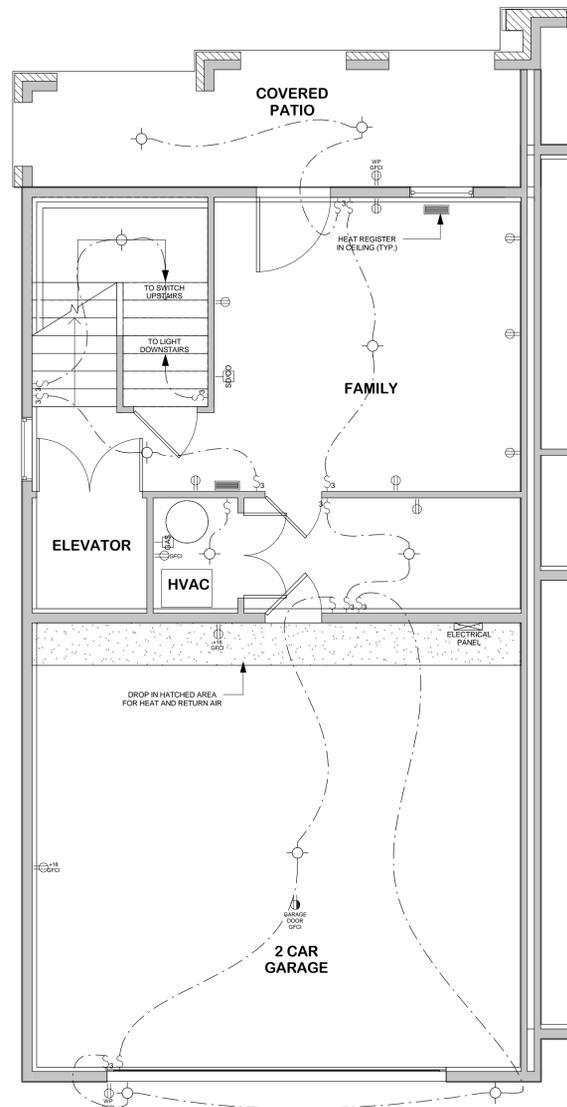
NOTE:
FIXTURES LOCATED WITHIN 3' HORIZONTALLY
OR 8' VERTICALLY OF TUBS OR SHOWERS
MUST BE RATED FOR WET OR DAMP
LOCATIONS

NOTE:
ADD 3 LUG BONDING TERMINAL AT SERVICE
FOR COMMUNICATIONS SYSTEMS

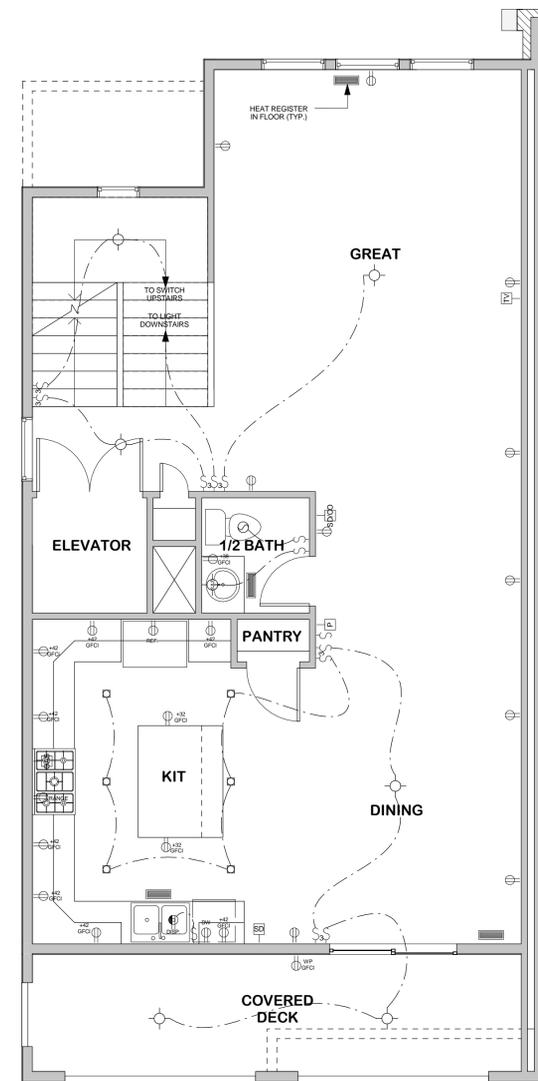
NOTE:
A 125-VOLT SINGLE-PHASE, 15 OR 20 AMPERE
RATED GFCI RECEPTACLE OUTLET SHALL BE
INSTALLED WITHIN 25' OF MECHANICAL
EQUIPMENT AND NOT BE CONNECTED TO THE
LOAD SIDE OF THE DISCONNECTING MEANS



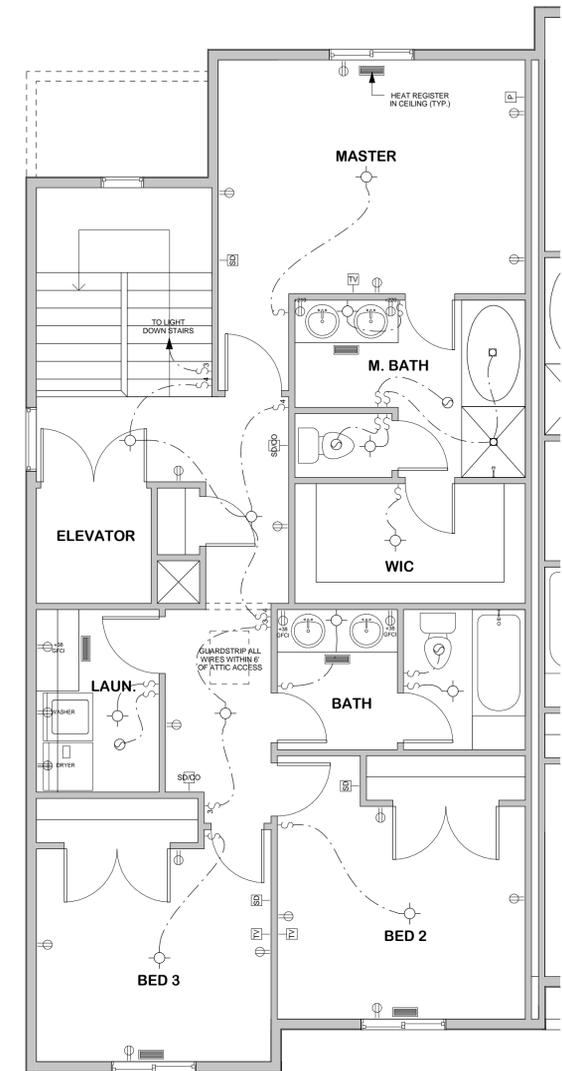
PRE-CAST LEVEL



GROUND LEVEL



MAIN LEVEL

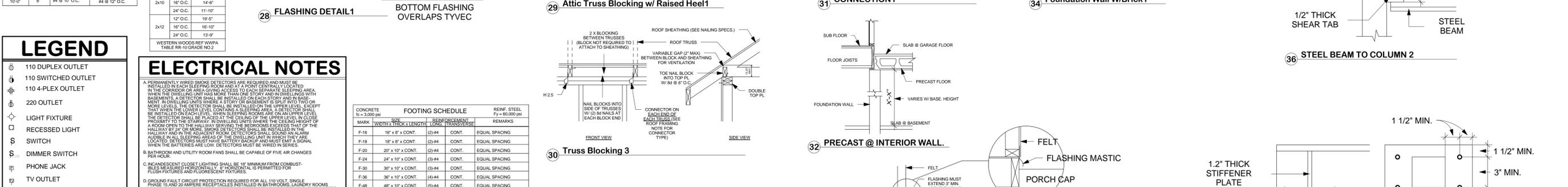
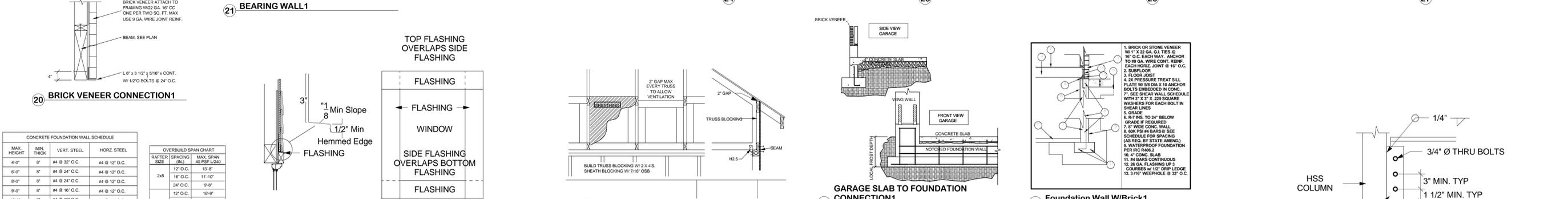
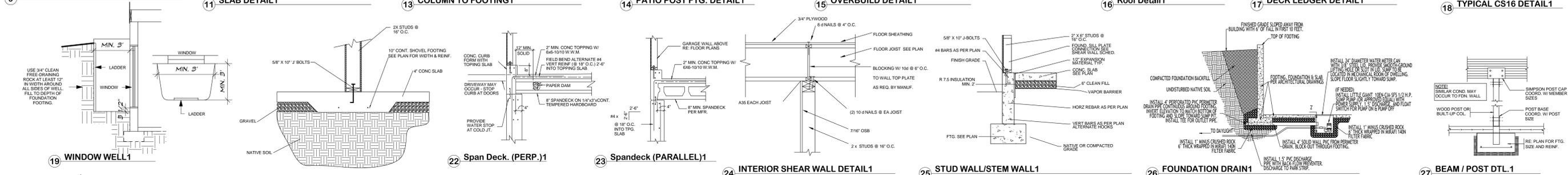
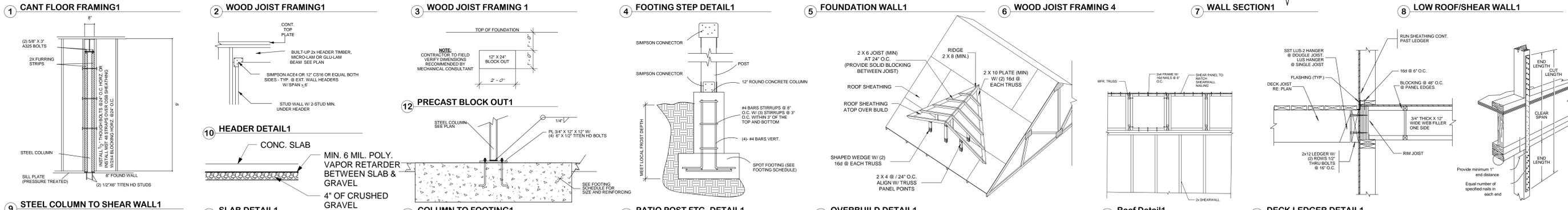
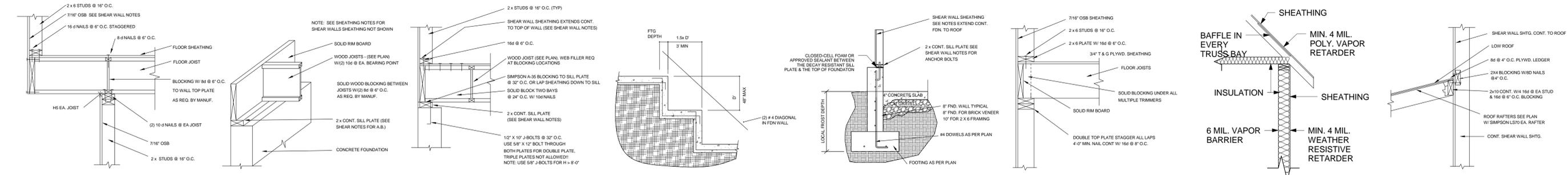


UPPER LEVEL

ELECTRICAL PLANS

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Blackstone	
6 Unit Townhomes	
Designed for	
Blackstone Group	
Finished Footage	2,285
Date	OCT. 2014
Drawn by	DSW
PRINTED: 12/1/2014 2:04:52 PM	PRE-CAST: 473
Sheet	FLEX: 449
10	GROUND LEVEL: 491
of 12	MAIN LEVEL: 867
	UPPER LEVEL: 927
	TOTAL: 3,207
SCALE: 1/4" = 1'-0"	



LEGEND

- ⊕ 110 DUPLEX OUTLET
- ⊕ 110 SWITCHED OUTLET
- ⊕ 110 4-PLEX OUTLET
- ⊕ 220 OUTLET
- ⊕ LIGHT FIXTURE
- ⊕ RECESSED LIGHT
- ⊕ SWITCH
- ⊕ DIMMER SWITCH
- ⊕ PHONE JACK
- ⊕ TV OUTLET
- ⊕ SMOKE ALARM
- ⊕ EXHAUST FAN W/ 50 CFM VENTILATION
- ⊕ GAS OUTLET
- ⊕ GAS OUTLET
- ⊕ DOOR BELL
- ⊕ THERMOSTAT
- ⊕ CARBON MONOXIDE DET.
- ⊕ INTERNET CONNECTION
- ⊕ SOUND SYSTEM SPEAKER
- ⊕ WALL SCONCE
- ⊕ HEAT REGISTER

ELECTRICAL NOTES

A. PERMANENTLY WIRED SMOKE DETECTORS ARE REQUIRED AND MUST BE INSTALLED IN EACH SLEEPING ROOM AND AT A POINT CENTRALLY LOCATED IN THE CORRIDOR OR AREA GIVING ACCESS TO EACH SEPARATE SLEEPING AREA. WHEN THE DETECTING UNIT HAS MORE THAN ONE STORY AND INTERFERENCE WITH BASEMENTS, A DETECTOR SHALL BE INSTALLED ON EACH STORY AND IN BASEMENTS. IN OVERBUILDINGS WHERE A STORY OR BASEMENT IS CUT INTO TWO OR MORE LEVELS, THE DETECTOR SHALL BE INSTALLED ON THE UPPER LEVEL, EXCEPT IN BASEMENTS AND LOWER LEVELS. CONTINGENCY PLANS FOR DETECTOR BATTERY LIFE SHALL BE INSTALLED ON EACH LEVEL. WHEN SLEEPING ROOMS ARE ON UPPER LEVELS, THE DETECTOR SHALL BE PLACED AT THE CEILING OF THE UPPER LEVEL IN CLOSE PROXIMITY TO THE STAIRWAY. DETECTING UNITS SHALL BE THE SAME HEIGHT AS A ROOM OPEN TO THE HALLWAY SERVING THE BEDROOM EXCEPT THAT OF THE HALLWAY BY 24" MAX. DETECTORS SHALL BE INSTALLED IN THE HALLWAY AND IN THE ADJACENT ROOM. DETECTORS SHALL SOUND AN ALARM LOCATED IN THE SLEEPING AREAS OF THE BUILDING UNIT IN WHICH THEY ARE LOCATED. DETECTORS MUST HAVE BATTERY GROUP AND MUST BE IN SIGNAL WHEN THE BATTERIES ARE LOW. DETECTORS MUST BE WIRED IN SERIES.

B. BATHROOM AND UTILITY ROOM FANS SHALL BE CAPABLE OF FIVE AIR CHANGES PER HOUR.

C. INCANDESCENT CLOSET LIGHTING SHALL BE 18" MINIMUM FROM COMBUSTIBLE MATERIALS. HORIZONTAL 1" HORIZONTAL IS PERMITTED FOR FLUOR FLUORESCENT FIXTURES.

D. GROUND FAULT CIRCUIT PROTECTION REQUIRED FOR ALL 110 VOLT, SINGLE PHASE 15 AND 20 AMPERE RECEPTACLES INSTALLED IN BATHROOMS, LAUNDRY ROOMS, UTILITY ROOMS, GARAGES, AND OUTDOORS WHERE THERE IS DIRECT GRADE-LEVEL ACCESS TO SWIMMING POOLS AND POWER TOOLS. ALL SWITCHES AND RECEPTACLES MUST BE A MINIMUM OF 18" ABOVE FLOOR & BE GFCI AND EXCEPTED.

E. GAS VENTS AND NON-COMBUSTIBLE PIPING IN WALLS PASSING THROUGH THREE FLOORS OR LESS SHALL BE EFFECTIVELY STOPPED AT EACH FLOOR OR CEILING.

F. ALL INCANDESCENT LIGHTING FIXTURES RECESSED INTO INSULATED AREAS SHALL BE APPROVED FOR CLEARANCE INSULATION COVER (CIC) PER THE TYPICAL MANDATORY ENERGY REQUIREMENTS.

G. CONDUIT FOR METER AND SERVICE ENTRANCE SHALL BE ANCHORED TO FOUNDATION WITH UNDESTAILED AND CONDUIT CLAMPS (POWER ACTIVATED FASTENERS ARE NOT ACCEPTABLE).

H. PLASTIC ELECTRICAL BOXES IN GARAGE FIRE WALLS SHALL BE A MINIMUM 2 HOUR LISTING.

I. ALL LIGHTS, SMOKE DETECTORS, BEDROOM OUTLETS & SWITCHES SHALL BE ARC FAULT PROTECTED AND OUTDOOR RECEPTACLES TO HAVE BUBBLE COVER.

J. PERMANENTLY WIRED CARBON MONOXIDE DETECTORS ARE REQUIRED ON EACH FLOOR WIRED IN SERIES WITH SMOKE DETECTORS AND BATTERY BACK UP (PER CITY).

K. ARC FAULT INTERRUPTERS ON ALL BEDROOM CIRCUITS.

L. ALL 15A, 20A & 25V RECEPTACLES TO BE TAMPER RESISTANT.

M. A MINIMUM OF 50% OF THE LAMPS IN PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE HIGH EFFICIENCY LAMPS.

N. LIGHTING TO MEET 2012 IECC CODES, AT LEAST 75% OF LAMPS IN PERMANENT LIGHT FIXTURES MUST BE HIGH EFFICIENCY.

NOTE: WHERE THERE IS A CONFLICT BETWEEN NOTES, DETAILS, & PLANS THE MOST STRINGENT CONDITION WILL APPLY.

FOOTING SCHEDULE

MARK	WIDTH	TRUCK LENGTH	REINFORCEMENT	REMARKS
F-16	16" x 8" x CONT.	(2) #4	CONT.	EQUAL SPACING
F-18	18" x 8" x CONT.	(2) #4	CONT.	EQUAL SPACING
F-20	20" x 10" x CONT.	(2) #4	CONT.	EQUAL SPACING
F-24	24" x 10" x CONT.	(2) #4	CONT.	EQUAL SPACING
F-30	30" x 10" x CONT.	(2) #4	CONT.	EQUAL SPACING
F-36	36" x 10" x CONT.	(2) #4	CONT.	EQUAL SPACING
F-48	48" x 10" x CONT.	(2) #4	CONT.	EQUAL SPACING
F-54	54" x 10" x CONT.	(2) #4	CONT.	EQUAL SPACING
F-24	24" x 10" x 24"	(2) #4	EACH WAY	EQUAL SPACING
F-30	30" x 10" x 30"	(2) #4	EACH WAY	EQUAL SPACING
F-36	36" x 10" x 36"	(2) #4	EACH WAY	EQUAL SPACING
F-40	40" x 12" x 40"	(2) #4	EACH WAY	EQUAL SPACING
F-48	48" x 12" x 48"	(2) #4	EACH WAY	EQUAL SPACING
F-60	60" x 12" x 60"	(2) #4	EACH WAY	EQUAL SPACING

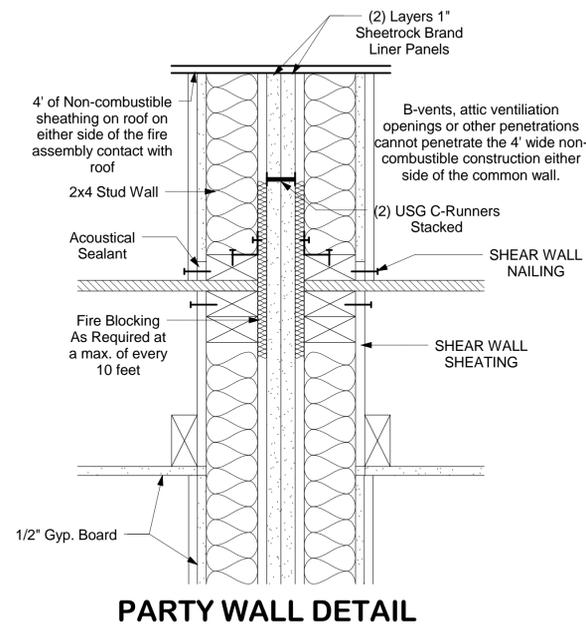
SHEAR WALL SCHEDULE

MARK	SHEATHING TYPE	EDGE NAILING	FIELD NAILING	ANCHOR BOLTING	HOLDOWN REQUIRED
SW-1	7/16" O.S.B. NAIL	8d @ 6"	8d @ 10"	5/8" @ 32" O.C.	SEE DRAWING
SW-2	7/16" O.S.B. NAIL	8d @ 4"	8d @ 10"	5/8" @ 32" O.C.	SEE DRAWING
SW-3	7/16" O.S.B. NAIL	8d @ 3"	8d @ 10"	5/8" @ 32" O.C.	SEE DRAWING
SW-4	7/16" O.S.B. NAIL	8d @ 2"	8d @ 10"	5/8" @ 12" O.C.	SEE DRAWING

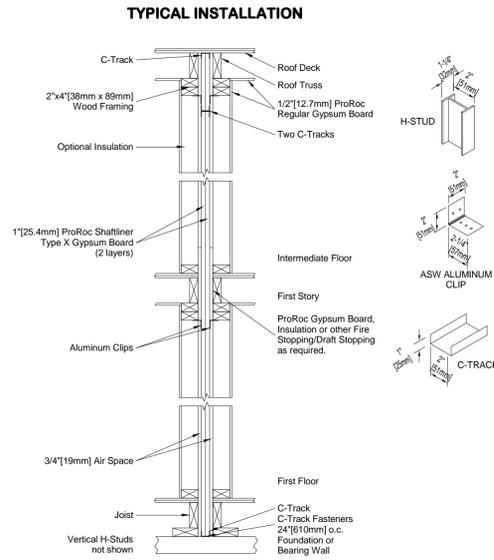
BRACED WALL: GLUE AND NAILS/SCREW SHEETROCK 7" O.C. BOTH SIDES
NAILING: 16 GAUGE 1 1/2" STAPLES SPACED @ 1/2" THE SPACING MAY BE SUBSTITUTED FOR 8d NAILS
DRYWALL SCREWS: 1 1/2" MAY BE USED IN PLACE OF NAILS AT SHEET ROCK LOCATIONS

Blackstone
6 Unit Townhomes
Designed for
Blackstone Group
Finished Footage 2,285
Date OCT. 2014
Drawn by DSW
PRINTED: 12/11/2014 2:04:56 PM
Sheet 11 of 12
PRE-CAST: 473
FLEX: 449
GROUND LEVEL: 491
MAIN LEVEL: 867
UPPER LEVEL: 927
TOTAL: 3207
SCALE: NO SCALE

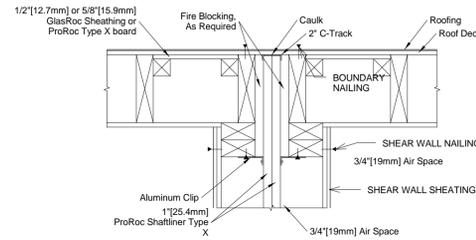
STRUCTURAL DETAILS



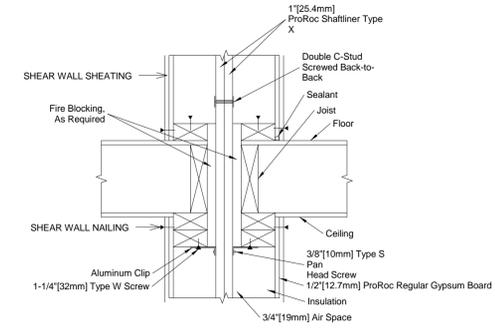
PARTY WALL DETAIL



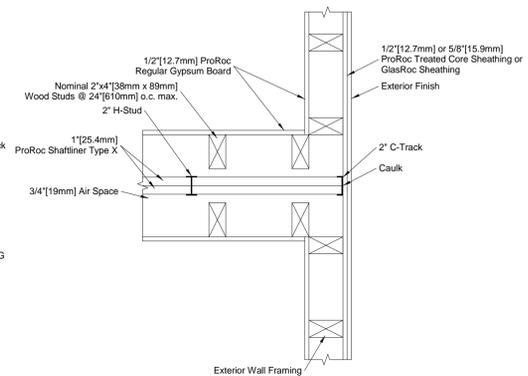
TYPICAL ROOF JUNCTION DETAIL



INTERMEDIATE FLOOR INTERSECTION LOCATION OF ASW CLIPS



EXTERIOR WALL INTERSECTION



PARTY WALL DETAILS

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Blackstone	
6 Unit Townhomes	
Designed for	
Blackstone Group	
Finished Footage	2,285
Date	OCT. 2014
Drawn by	DSW
PRINTED:	
12/1/2014 2:04:57 PM	PRE-CAST: 473
Sheet	FLEX: 449
1	GROUND LEVEL: 491
of 12	MAIN LEVEL: 867
	UPPER LEVEL: 927
	TOTAL: 3,207
SCALE:	NO SCALE

Appendix D - Reciprocal Easement Agreement



**ADDENDUM NO. 5
TO
REAL ESTATE PURCHASE CONTRACT**

THIS IS AN ADDENDUM to that REAL ESTATE PURCHASE CONTRACT (the "REPC") with an Offer Reference Date of JUNE 11, 2014, including all prior addenda and counteroffers, between KEYSTONE LAND DEVELOPMENT LLC as Buyer, and FRANK A & MARIA LAURA CARLONE as Seller, regarding the Property located at 10820 TOWN CENTER PARKWAY [1020 N 5800 W], HIGHLAND, UT 84003, TAX ID: 11-039-0140. The following terms are hereby incorporated as part of the REPC.

- 1. The "Property" which is subject to the REPC consists of two parcels, as set forth in the commitment for title insurance prepared on behalf of Seller and provided to Buyer as part of the Seller Disclosures in this matter, and expressly includes a parcel identified as Tax ID No. 11-039-0135, which is more particularly described as follows: Commencing at a point located North 00°08'13" East along the Section line 255.98 feet and East 1524.49 feet from the West quarter corner of Section 36, Township 4 South, Range 1 East, Salt Lake Base and Meridian; thence South 01°31'56" East 131.03 feet; thence West 14.90 feet; thence North 04°58'27" East 131.47 feet to the point of beginning (in the event of any discrepancy between the foregoing legal description and the legal description set forth in the commitment for title insurance provided as part of the Seller Disclosures, the legal description set forth in such commitment for title insurance shall control).

To the extent the terms of this Addendum modify or conflict with any provisions of the REPC, including all prior addenda and counteroffers, these terms shall control. All other terms of the REPC, including all prior addenda and counteroffers, not modified by this Addendum shall remain the same.

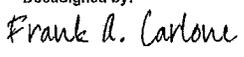
Buyer: KEYSTONE LAND DEVELOPMENT LLC

Dated: February 13, 2015.

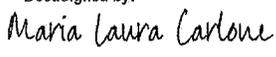
By: 
Tim Aalders, Manager

ACCEPTANCE

Seller hereby accepts the terms of this Addendum No. 5.

DocuSigned by:

69AD27609D5147B... 2/16/2015 | 16:19 MT

FRANK A. CARLONE (Date)

DocuSigned by:

7E136EDB21A1449... 2/16/2015 | 18:29 MT

MARIA-LAURA CARLONE (Date)

30
/10

After Recording, Return To:

Wm. Shane Topham
PARSONS, DAVIES, KINGHORN & PETERS
185 South State Street, Suite 700
Salt Lake City, Utah 84111
File No. 33016.06

ENT 18975:2003 PG 1 of 10
RANDALL A. COVINGTON
UTAH COUNTY RECORDER
2003 Feb 06 4:20 pm FEE 30.00 BY SS
RECORDED FOR TITLE WEST TITLE CO

Reciprocal Easement Agreement

THIS RECIPROCAL EASEMENT AGREEMENT (this "*Agreement*") is made effective 29 January 2003 by **HIGHLAND TOWN PLAZA, L.C.**, a Utah limited liability company whose address is 2749 East Parley's Way, #310, Salt Lake City, UT 84109 ("*HTP*"); by **DOYLE E. KOHLER** and **LILLIE I. KOHLER**, individuals whose address is 855 Whipple Drive, Lehi, UT 84043 (collectively, "*Kohler*"); by **BANK OF AMERICAN FORK**, whose address is 33 East Main Street, American Fork, UT 84003 ("*Bank*"); and by **LONE PEAK VILLAGE, L.C.**, 2749 East Parley's Way, #310, Salt Lake City, UT 84109 ("*LPV*").

RECITALS:

A. Kohler, Bank and LPV (the "*LPV Owners*") each owns one or more parcels of real property which collectively constitute the Lone Peak Village Shopping Center ("*Lone Peak Village*") in Highland, Utah County, Utah. The legal description of Lone Peak Village is shown on exhibit "A" annexed hereto.

B. HTP owns a parcel of real property (the "*HTP Parcel*") as shown on exhibit "A" annexed hereto.

C. HTP and the LPV Owners desire to consent to, create and reciprocally grant an easement (the "*Easement*") across the Common Areas Roadways (described below) of Lone Peak Village and the HTP Parcel in order to provide free and unimpeded cross access to and from adjoining public roads (including Parkway East and Town Center Boulevard), and from and between Lone Peak Village and the HTP Parcel, on the terms and conditions specified below.

D. The parties that have executed this Agreement intend to set forth herein their entire agreement concerning the Easement, and to consolidate herein and to supersede hereby all other negotiations and/or agreements, oral and/or written, concerning the Easement.

AGREEMENT:

NOW, THEREFORE, in consideration of the premises and for other good and valuable consideration, the receipt and legal sufficiency of which is hereby acknowledged, the parties hereto agree as follows:

Section 1 **Reciprocal Grant of Easement.** Subject to the terms and conditions specified in this Agreement, the LPV Owners and HTP hereby consent to, convey and grant to each other reciprocal, non-exclusive right-of-ways and easements across the Common Area Roadways located on Lone Peak Village and the HTP Parcel for the purpose of providing free and

unimpeded cross access to and from adjoining public roads whether now or hereafter existing (and specifically including, without limitation, Parkway East and Town Center Boulevard), and from and between Lone Peak Village and the HTP Parcel. As used in this Agreement, the term "*Common Area Roadways*" shall mean and include all surface roadways, sidewalks and other vehicular or pedestrian roadways, aisles, passageways or walkways, now or from time to time hereafter located on the exterior public/common areas ("*Common Areas*") of the parcels (the "*Parcels*") constituting Lone Peak Village and the HTP Parcel.

Section 2. **Nature of Easement.** The Easement shall be exist for the sole purpose of allowing free and unimpeded passage, ingress and egress of vehicles (including, without limitation, delivery vehicles) and pedestrians among and between the Parcels and the public or private roadway(s), sidewalks or the like now or hereafter adjoining or accessible from any of the Parcels. The LPV Owners freely may reconfigure Lone Peak Village's Common Area Roadways as provided in the "Declaration of Restrictions and Grant of Easements" dated 1 November 1993, as amended (the "*Declaration*"), covering Lone Peak Village, so long as reasonably equivalent cross access between the Parcels remains in place as provided in this Agreement.

Section 3. **Access Points.** The access points between Lone Peak Village and the HTP Parcel shall be limited and restricted to those shown on attached exhibit "B" (the "*Access Points*"). Those Access Points shall be improved by or on behalf of HTP at its sole cost in connection with the development of the HTP Parcel. Any current improvements (such as curbing, landscaping, etc.) on Lone Peak Village which would interfere with the free and unimpeded cross-access intended by this Agreement may be removed or reconfigured in a good, workmanlike and attractive manner by or on behalf of HTP at its sole cost.

Section 4. **Limitations on Use; No Cross Parking Rights.** Use of the Easement granted herein shall be limited to corresponding use of the Parcels for permitted commercial purposes in accordance with all applicable zoning and use laws, ordinances and requirements. No cross-parking rights between Lone Peak Village and the HTP Parcel are intended or created by this Agreement.

Section 5. **No Interference.** Except to the extent necessary (on a temporary basis) for construction, for repair and maintenance, or to prevent a public dedication thereof or the accrual of any rights to the public therein, no fence, wall, barricade or other obstruction, whether temporary or permanent in nature, which materially limits or impairs the free and unimpeded use of the Easement by the owners or occupants of any of the Parcels, or their respective employees, agents, customers, licensees or invitees, shall be constructed or erected on any of the Parcels, nor shall any party in any other manner obstruct or interfere with the free flow of vehicular or pedestrian traffic on any portion of the Easement; provided, however, that the LPV Owners freely may reconfigure Lone Peak Village's Common Area Roadways as provided in the Declaration, so long as reasonably equivalent cross access between the Parcels remains in place as provided in this Agreement.

Section 6. **Maintenance.** Each party shall, at its sole cost and expense, maintain those portions of the Easement located on that party's respective Parcel in reasonably good condition and repair, reasonably free from snow, ice, rubbish and other debris, and shall take such other actions

in connection therewith as are commercially reasonable under the circumstances; provided, however, that HTP shall maintain at its sole cost any of HTP's improvements to the Access Points that are located on the Kohler Parcel.

Section 7. **Duration.** The Easement granted herein shall be perpetual in duration.

Section 8. **Not a Public Dedication.** Nothing contained in this Agreement shall be deemed to be a gift or dedication of any portion of any of the Parcels or the Easement to or for the general public or for any public purposes whatsoever, it being the parties' intention that this Agreement be strictly limited to and for the purposes expressed herein.

Section 9. **Appurtenance to Parcels.** The Easement created hereby is appurtenant to each of the Parcels and may not be transferred, assigned or encumbered except as an appurtenance to such realty.

Section 10. **Covenants Run With Land.** The Easement shall (a) create an equitable servitude on the HTP Parcel and Lone Peak Village, as appropriate, in favor of Lone Peak Village and the HTP Parcel, as appropriate; (b) constitute a covenant running with the land; (c) bind every person having any fee, leasehold or other interest in any portion of any of the Parcels at any time or from time to time; and (d) inure to the benefit of and be binding upon HTP and the LPV Owners, and their respective successors and assigns as to their respective Parcels.

Section 11. **Relocation of Easement.** The parties acknowledge that the location of the Easement on a Parcel shall be deemed relocated as reasonably necessary from time to time in connection with any permitted reconfiguration of the Common Area Roadways on that Parcel.

Section 12. **No Partnership.** The parties do not by this Agreement in any way or for any purpose become partners or joint venturers with each other.

Section 13. **General Provisions.** The following provisions are also an integral part of this Agreement:

(a) **Binding Agreement.** This Agreement shall be binding upon and shall inure to the benefit of the successors and assigns of the respective parties hereto.

(b) **Captions.** The headings used in this Agreement are inserted for reference purposes only and shall not be deemed to define, limit, extend, describe, or affect in any way the meaning, scope or interpretation of any of the terms or provisions of this Agreement or the intent hereof.

(c) **Counterparts.** This Agreement may be signed in any number of counterparts with the same effect as if the signatures upon any counterpart were upon the same instrument. All signed counterparts shall be deemed to be one original.

(d) Severability. The provisions of this Agreement are severable, and should any provision hereof be void, voidable, unenforceable or invalid, such void, voidable, unenforceable or invalid provision shall not affect the other provisions of this Agreement.

(e) Waiver of Breach. Any waiver by either party of any breach of any kind or character whatsoever by the other, whether such be direct or implied, shall not be construed as a continuing waiver of, or consent to any subsequent breach of this Agreement.

(f) Remedies. If a party defaults hereunder, the non-defaulting party may pursue any and all remedies available to it in law or equity, including, without limitation, the remedy of specific performance.

(g) Amendment. This Agreement may not be modified except by an instrument in writing signed by the parties hereto.

(h) Interpretation. This Agreement shall be interpreted, construed and enforced according to the substantive laws of the state of Utah.

(i) Attorneys' Fees. In the event any action or proceeding is brought by either party regarding this Agreement, the prevailing party shall be entitled to recover its costs and reasonable attorneys' fees, whether such sums are expended with or without suit, at trial, on appeal, or in any bankruptcy or insolvency proceeding.

(j) Notice. Any notice or other communication required or permitted to be given hereunder shall be deemed to have been received (a) upon personal delivery or actual receipt thereof or (b) within three (3) days after such notice is deposited in the United States mail, postage prepaid and certified and addressed to the respective addresses set forth above or to such other address(es) as may be supplied by a party to the other from time to time in writing.

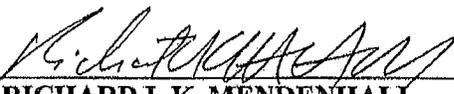
(k) Time of Essence. Time is the essence of this Agreement.

(l) No Assignment. A party may assign or otherwise convey its rights or delegate its duties under this Agreement only in connection with the conveyance of fee title to such party's Parcel.

DATED effective the date first above written.

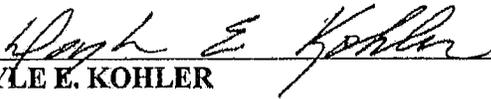
HTP:

HIGHLAND TOWN PLAZA, L.C.,
a Utah limited liability company

By 

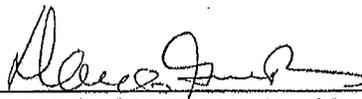
RICHARD L.K. MENDENHALL,
Member/Manager

LPV OWNERS:


DOYLE E. KOHLER


LILLIE I. KOHLER

BANK OF AMERICAN FORK

By 
DALE O. GUNTHER, President

LONE PEAK VILLAGE, L.C.,
a Utah limited liability company

By 
RICHARD L.K. MENDENHALL,
Member/Manager

Exhibit "A" to Reciprocal Easement Agreement

HTP PARCEL:

The following-described real property located in Utah County, Utah:

Legal Description for That Portion of Commercial Area 2 Highland Town Plaza Lying within Utah County Parcel No. 11-039-73

Part of the Northwest Quarter of Section 36, Township 4 South, Range 1 East, Salt Lake Base and Meridian, more particularly described as follows:

Beginning at the intersection of the South line of the Lone Peak Village Shopping Center subdivision, as recorded in the Office of the Utah County Recorder and the Easterly line of that certain parcel of land described as Entry No. 35101:2000 in the Office of the Utah County Recorder, which point lies 666.20 feet South 89°49'50" West along the Section line and 1367.05 feet South to the Northeast corner of said subdivision and 255.16 feet South 04°28'25" West along the East line of said subdivision and 219.80 feet South 04°58'22" West along said line to the Southeast corner of said subdivision and 326.76 feet North 89°18'07" West along the South line of said subdivision from the North Quarter corner of said Section 36, and running thence South 04°58'27" West 485.80 feet along the Easterly line of said parcel described as Entry No. 35101:2000 to the Northerly right-of-way line of proposed Parkway East; thence West 422.89 feet along said line to the point of curvature with a 15.00 foot radius curve to the right; thence Northwesterly 23.62 feet along the arc of said curve through a central angle of 90°12'17" (chord bears North 44°53'52" West 21.25 feet to the Easterly right-of-way line of proposed Town Square Street East; thence North 00°12'17" East 156.95 feet along said line to the Northerly right-of-way line of said proposed Town Square Street East; thence West 139.59 feet along said line to the point of curvature with a 25.00 foot radius curve to the right; thence Northwesterly 39.27 feet along the arc of said curve through a central angle of 90°00'00" (chord bears North 45°00'00" West 35.36 feet) to the East right of way line of Town Center Boulevard; thence North 294.82 feet to the South line of said Lone Peak Village Shopping Center subdivision; thence South 89°18'07" East 644.09 feet to the point of beginning. Contains 6.33 acres, more or less.

LONE PEAK VILLAGE:

The following-described real property located in Utah County, Utah:

Lone Peak Village, a commercial subdivision, according to the official plat thereof on file and of record in the office of the Recorder of Utah County, Utah.

Exhibit "B" to
Reciprocal Easement Agreement

(Attach Description or Drawing of Access Points)

**Westfield Properties
Lone Peak Village Shopping Center**

**November 1, 2002
Revised November 4, 2002
Revised November 6, 2002
Revised December 30, 2002**

Three Access Openings for pedestrian and vehicular traffic along the South Line of the Lone Peak Village Shopping Center – a Commercial Subdivision in the City of Highland, Utah County, Utah within the Northwest Quarter of Section 36, Township 4 South, Range 1 East, Salt Lake Base and Meridian, U.S. Survey, and being defined by reference points as follows:

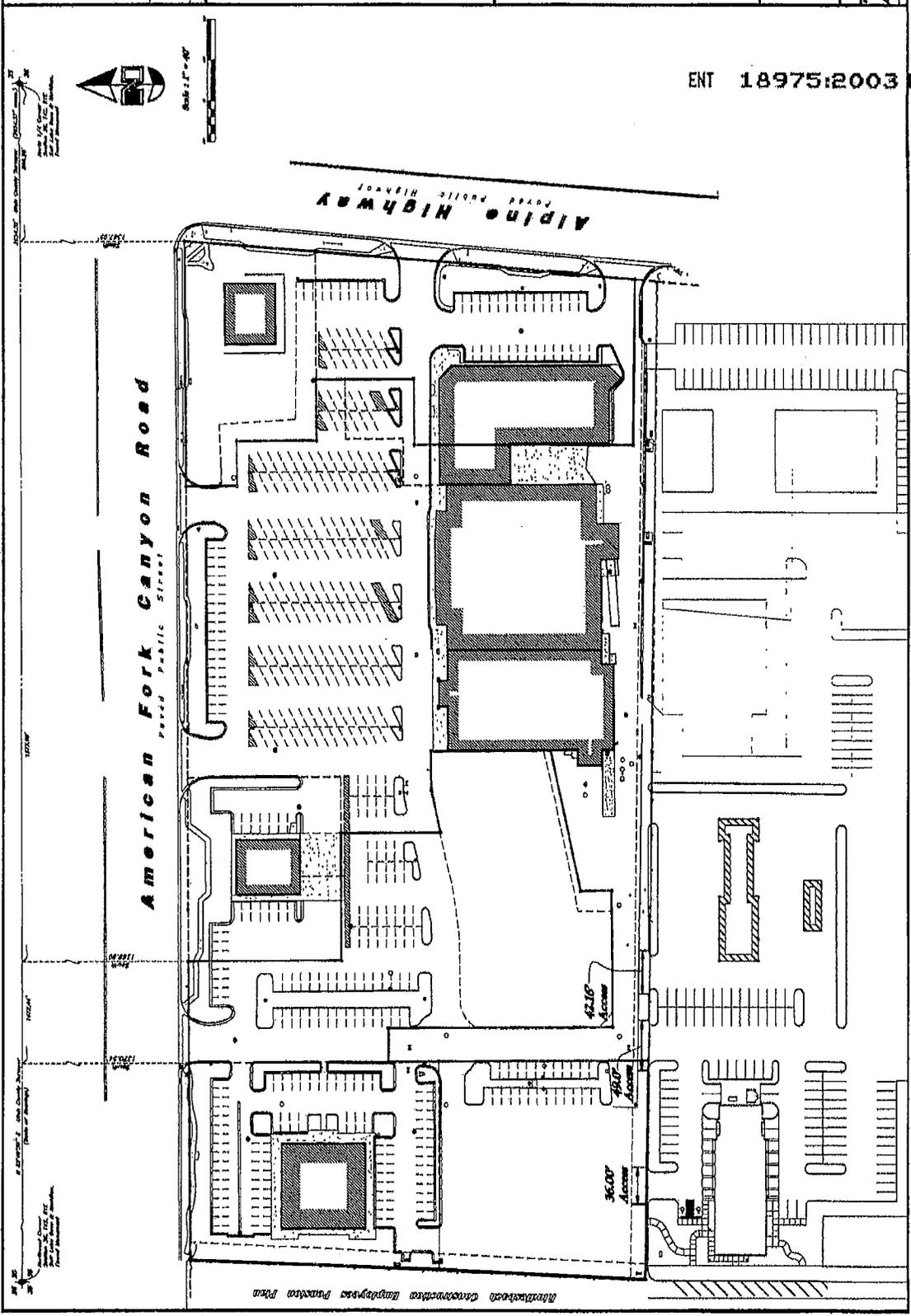
- A 42.16 foot wide opening from point A to point B;
- A 49.0 foot wide opening from point C to point D;
- A 36.0 foot wide opening from point E to point F;

more particularly described as follows:

Beginning at the Southeast Corner of said Lone Peak Village Center being 666.20 feet South $89^{\circ}49'50''$ West along the Section Line, 1367.05 feet South to the Northeast Corner of said Subdivision, 255.16 feet South $4^{\circ}28'25''$ West, and 219.80 feet South $4^{\circ}58'22''$ West to said Southeast Corner of said Subdivision from the North Quarter Corner of said Section 36; and running thence Westerly along the South Line of said Subdivision the following Seven courses: North $89^{\circ}18'07''$ West 656.86 feet to reference point A; thence continuing North $89^{\circ}18'07''$ West 42.16 feet to reference point B; thence continuing North $89^{\circ}18'07''$ West 26.00 feet to reference point C; thence continuing North $89^{\circ}18'07''$ West 49.00 feet to reference point D; thence continuing North $89^{\circ}18'07''$ West 95.00 feet to reference point E; thence continuing North $89^{\circ}18'07''$ West 36.00 feet to reference point F; and thence continuing North $89^{\circ}18'07''$ West 73.09 feet to the Southwest Corner of said Subdivision.

Access Exhibit Westfield Properties American Fork Canyon Road and Alpine Highway Located in the Northern Quarter of Section 28, T2S, R12E, S14W		Asphalt 30' Dec. 2007
GREAT BASIN ENGINEERING - SOUTH CONSULTING ENGINEERS AND LAND SURVEYORS 2010 MAIN STREET, SUITE 100, DENVER, CO 80202 AND LAND SURVEYORS, CIVIL ENGINEERS AND ARCHITECTS 2010 MAIN STREET, SUITE 100, DENVER, CO 80202		

ENT 18975:2003 PG 10 of 10



Northwestern Construction Employees Puncture Plan

Appendix E – Traffic Report from Hales Engineering



MEMORANDUM

Date: August 7, 2015

To: Matt Robinson
Handcrafted Homes

From: Hales Engineering

Subject: Highland Blackstone Traffic Concerns

UT15-763

PURPOSE

The purpose of this memorandum is to address several concerns expressed by Highland City regarding the proposed Highland Blackstone development. Blackstone is a proposed residential development located on Alpine Highway (SR-74) between 10700 North on the south and Highland Highway (SR-92) on the north. Figure 1 shows a vicinity map of the project. The project will include a total of 86 units of townhouses, planned to be built on a total of 7.8 acres.



Figure 1 Vicinity map of the proposed project location in Highland, UT.

LAND USE / TRIP GENERATION

As mentioned previously, the proposed land use for this project are residential townhouses. There have been some concerns regarding the number of trips that would be generated by the residential townhome development. Several commercial alternative land uses have been mentioned as possibilities. In recognition of this concern, Hales Engineering has performed a trip generation comparison analysis to evaluate the impact different land uses may have on the City’s existing roadway system. The different land uses that were compared include:

- residential townhouse
- shopping center,
- high-turnover sit-down restaurant,
- pharmacy/drugstore without drive-through window,
- medical/dental office building, and
- general office building.

Using the Institute of Transportation Engineers (ITE) *Trip Generation Manual (9th Edition, 2012)*, the trip generation for the proposed development was calculated. An approximate building square footage was calculated using a floor to area ratio (FAR) of 0.25. This equates to approximately 85,000 square feet of retail floor space. This provides a conservative analysis of the number of trips generated by the development. Total trip generation for the site for each land use is summarized in Table 1.

Table 1 Highland Blackstone Trip Generation								
Weekday Daily								
Land Use ¹	Number of Units	Unit Type	Trip Generation	%	%	Trips	Trips	Total Daily Trips
				Entering	Exiting	Entering	Exiting	
Residential Condominium/Townhouse (230)	86	Dwelling Units	566	50%	50%	283	283	566
Shopping Center (820) [average rate]	85	1,000 Sq. Ft. GLA	3,630	50%	50%	1,815	1,815	3,630
High-Turnover (Sit-Down) Restaurant (932)	85	1,000 Sq. Ft. GFA	10,808	50%	50%	5,404	5,404	10,808
Pharmacy/Drugstore without Drive-Through Window (880)	85	1,000 Sq. Ft. GFA	7,656	50%	50%	3,828	3,828	7,656
Medical/Dental Office Building (720)	85	1,000 Sq. Ft. GFA	3,262	50%	50%	1,631	1,631	3,262
General Office Building (710) [average rate]	85	1,000 Sq. Ft. GFA	938	50%	50%	469	469	938
A.M. Peak Hour								
Land Use ¹	Number of Units	Unit Type	Trip Generation	%	%	Trips	Trips	Total a.m. Trips
				Entering	Exiting	Entering	Exiting	
Residential Condominium/Townhouse (230)	86	Dwelling Units	46	17%	83%	8	38	46
Shopping Center (820) [average rate]	85	1,000 Sq. Ft. GLA	82	62%	38%	51	31	82
High-Turnover (Sit-Down) Restaurant (932)	85	1,000 Sq. Ft. GFA	920	55%	45%	506	414	920
Pharmacy/Drugstore without Drive-Through Window (880)	85	1,000 Sq. Ft. GFA	794	65%	35%	516	278	794
Medical/Dental Office Building (720)	85	1,000 Sq. Ft. GFA	204	79%	21%	161	43	204
General Office Building (710) [average rate]	85	1,000 Sq. Ft. GFA	134	88%	12%	118	16	134
P.M. Peak Hour								
Land Use ¹	Number of Units	Unit Type	Trip Generation	%	%	Trips	Trips	Total p.m. Trips
				Entering	Exiting	Entering	Exiting	
Residential Condominium/Townhouse (230)	86	Dwelling Units	54	67%	33%	36	18	54
Shopping Center (820) [average rate]	85	1,000 Sq. Ft. GLA	316	48%	52%	152	164	316
High-Turnover (Sit-Down) Restaurant (932)	85	1,000 Sq. Ft. GFA	838	60%	40%	503	335	838
Pharmacy/Drugstore without Drive-Through Window (880)	85	1,000 Sq. Ft. GFA	714	49%	51%	350	364	714
Medical/Dental Office Building (720)	85	1,000 Sq. Ft. GFA	252	28%	72%	71	181	252
General Office Building (710) [average rate]	85	1,000 Sq. Ft. GFA	128	17%	83%	22	106	128

1. Land Use Code from the Institute of Transportation Engineers Trip Generation Manual (9th Edition - 2012)

SOURCE: Hales Engineering, 2015

As shown in Table 1, the residential townhomes are anticipated to generate far less traffic than the other land uses. The office building is the next lowest trip generator, and it is anticipated to generate approximately 40 percent more trips than the townhomes on a typical weekday. During the p.m. peak hour period, it is anticipated that the office building will generate approximately 128 trips, which is more than double the number of trips generated by the townhomes.

Based on the trip generation comparison analysis, residential townhomes are anticipated to generate the lowest amount of traffic when compared to any of the aforementioned commercial land uses.

GUEST PARKING

Additionally, the City has expressed concerns regarding the distance to guest parking from some of the units. In multi-family residential areas, it is not uncommon for guest parking to be located further away from the building and does not pose a significant safety concern to the end users. As shown in Figure 2, and Figure 3 the guest parking in similar developments is located more than 350 feet from some of the buildings.



Figure 2 Townhomes in Spanish Fork, UT.



Figure 3 Townhomes in Herriman, UT.

DRIVEWAY LOCATION

The City has expressed concern regarding the proximity of the proposed driveway for Unit 86 to Parkway Drive East. Parkway Drive East is classified as a local roadway with a posted speed limit of 25 mph. Although the access location is not ideal, it is not uncommon to have a driveway within close proximity to the proposed project access. As shown in Figure 4, there are several examples where the access driveway is located within 20 feet of an intersection.

It is recommended that the proposed project access that the driveway fronts onto is constructed to a minimum width of 24 feet. This will provide adequate space to back out the driveway without impeding incoming vehicles. Parkway Drive East is a low speed / volume road and the proposed driveway location is not anticipated to be a significant safety concern.



Figure 4 Access driveway within close proximity of intersection, in Highland, UT.

CONCLUSIONS

Hales Engineering makes the following conclusions:

- Residential townhomes are anticipated to generate the lowest amount of traffic when compared to other commercial land uses.
- In multi-family residential areas, it is not uncommon for guest parking to be located further away from the building and does not pose a significant safety concern to the end users.
- It is recommended that the proposed project access that the driveway fronts onto is constructed to a minimum width of 24 feet. This will provide adequate space to back out the driveway without impeding with incoming vehicles.

EXECUTIVE SUMMARY

This study addresses the traffic impacts associated with the proposed Blackstone residential development in Highland City, Utah. The proposed development is bordered by Highland Highway (SR-692) on the north and 5300 West on the east.

Included within the analyses for this study are the traffic operations and recommended mitigation measures for existing conditions and plus project conditions (conditions after development of the proposed project) at the key intersection and roadway in the vicinity of the site.

TRAFFIC ANALYSIS

The following is an outline of the traffic analysis performed by Hales Engineering for the traffic conditions of this project.

Existing (2015) Background Conditions Analysis

Hales Engineering performed weekday morning (7:00 to 9:00 a.m.) and afternoon (4:00 to 6:00 p.m.) peak period traffic counts at the following intersection:

- Town Center Boulevard / Highland Highway (SR-92)
- Toscana & Tim Tire Access / Town Center Boulevard
- Parkway Drive / 5400 West
- Parkway Drive / Alpine Highway (SR-74)
- Park Access Road / 5400 West

These counts were performed on Tuesday, July 21, Wednesday, July 22, and Wednesday, August 5, 2015. The afternoon volumes were approximately 36 percent higher than the morning volumes and will be used for this analysis. The p.m. peak hour was determined to be between the hours of 5:00 and 6:00 p.m.

As shown in Table ES-1, all study intersections are currently operating at acceptable levels of service during the p.m. peak hour, with the exception with of the Town Center Boulevard / Highland Highway (SR-92) intersection, which is operating at LOS E. During the p.m. peak hour, the 95th percentile queue is approximately 100 feet on the northbound approach to the Town Center Boulevard / Alpine Highway (SR-92) intersection. No other significant queueing is observed during the p.m. peak hour.

TABLE ES-1 P.M. Peak Hour South Salt Lake - WinCo Foods TIS		
Intersection	Existing 2015 Background	Existing 2015 Plus Project
Description	LOS (Sec/Veh ¹)	LOS (Sec/Veh ¹)
Town Center Blvd / Highland Highway (SR-92)	E (49.0) / NB	F (>50.0) / NB
Town Center Blvd / Toscana / Timp Tire Access	A (5.0) / EB	A (5.0) / EB
10890 North / Town Center Blvd	A (4.0) / EB	A (4.0) / EB
5400 West / Parkway Drive	A (1.0) / WB	A (3.0) / WB
5400 West / Park Access	A (1.0) / EB	A (3.0) / EB
Southwest Access / Parkway Drive / 5400 West ²	-	A (3.0) / NB
Parkway Drive / Alpine Highway (SR-74)	C (17.0) / EB	C (22.0) / EB
Town Square Access / Alpine Highway (SR-74)	B (10.0) / EB	B (11.0) / WB
Northeast Access / Town Square Access ²	-	A (3.0) / NB
<p>1. Intersection LOS and delay (seconds/vehicle) values represent the overall intersection average for signalized and all-way stop controlled intersections and the worst approach for all other unsignalized intersections.</p> <p>2. This is a project intersection and is only analyzed in the plus project scenarios.</p>		
Source: Hales Engineering, August 2015		

Project Conditions Analysis

The proposed land use for the development has been identified as follows:

- Residential Condominium/Townhouse: 86 Dwelling Units

The total trip generation for the development is as follows:

- Daily Trips: 556
- a.m. Peak Hour Trips: 46
- p.m. Peak Hour Trips: 54

Existing (2015) Plus Project Conditions Analysis

As shown in Table ES-1, all study intersections are anticipated to operate at acceptable levels of service during the p.m. peak hour, with the exception of the Town Center Boulevard / Highland Highway (SR-92) intersection, which is anticipated to operate at LOS F. During the

p.m. peak hour, the 95th percentile queue is anticipated to be approximately 200 feet on the northbound approach to the Town Center Boulevard / Highland Highway (SR-92) intersection. No other significant queueing is anticipated during the p.m. peak hour.

RECOMMENDATIONS

The following mitigation measures are recommended:

Existing (2015) Background Conditions Analysis

The Town Center Boulevard / Highland Highway (SR-92) intersection is currently operating at level of service E. It is recommended that a northbound right-turn pocket be added at the Town Center Boulevard / Highland Highway (SR-92) to help improve flow and minimize delay at the intersection. No other mitigation measures are recommended at this time.

Existing (2015) Plus Project Conditions Analysis

No mitigation measures are recommended.

SUMMARY OF KEY FINDINGS/RECOMMENDATIONS

The following is a summary of key findings and recommendations:

- All study intersections are currently operating at acceptable levels of service during the p.m. peak hour, with the exception with of the Town Center Boulevard / Highland Highway (SR-92) intersection, which is operating at LOS E.
- During the p.m. peak hour, the 95th percentile queue is approximately 100 feet on the northbound approach to the Town Center Boulevard / Alpine Highway (SR-92) intersection. No other significant queueing is observed during the p.m. peak hour.
- The Town Center Boulevard / Highland Highway (SR-92) intersection is currently operating at level of service E. It is recommended that a northbound right-turn pocket be added at the Town Center Boulevard / Highland Highway (SR-92) to help improve flow and minimize delay at the intersection.
- With the addition of the proposed project, all study intersections are currently operating at acceptable levels of service during the p.m. peak hour, with the exception of the Town Center Boulevard / Highland Highway (SR-92) intersection, which is anticipated to operate at LOS F.
- During the p.m. peak hour, the 95th percentile queue is anticipated to be approximately 200 feet on the northbound approach to the Town Center Boulevard / Highland Highway (SR-92) intersection. No other significant queueing is anticipated during the p.m. peak hour.
- No additional mitigation measures are recommended with the addition of the project.

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I. INTRODUCTION

A. Purpose

This study addresses the traffic impacts associated with the proposed Blackstone residential development in Highland City, Utah. The proposed development is bordered by Highland Highway (SR-92) on the north and 5300 West on the east. Figure 1 shows a vicinity map of the proposed development.

Included within the analyses for this study are the traffic operations and recommended mitigation measures for existing conditions and plus project conditions (conditions after development of the proposed project) at the key intersection and roadway in the vicinity of the site.



Figure 1 Vicinity map showing the project location in Highland City, Utah

B. Scope

The study area was defined based on conversations with the development team. This study was scoped to evaluate the traffic operational performance impacts of the project on the following intersection:

- Town Center Boulevard / Highland Highway (SR-92)

- Toscana & Timp Tire Access / Town Center Boulevard
- Parkway Drive / 5400 West
- Parkway Drive / Alpine Highway (SR-74)
- Park Access Road / 5400 West

C. 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 both signalized and 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. This methodology has different quantitative evaluations for signalized and unsignalized intersections. For signalized and all-way stop intersections, the LOS is provided for the overall intersection (weighted average of all approach delays). For all other unsignalized intersections LOS is reported based on the worst approach.

D. Level of Service Standards

For the purposes of this study, a minimum overall intersection performance for each of the study intersections was set at LOS D. However, if LOS E or F conditions exist, an explanation and/or mitigation measures will be presented. An LOS D threshold is consistent with “state-of-the-practice” traffic engineering principles for urbanized areas.

Table 1 Level of Service Descriptions

Level of Service	Description of Traffic Conditions	Average Delay (seconds/vehicle)
Signalized Intersections		Overall Intersection
A	Extremely favorable progression and a very low level of control delay. Individual users are virtually unaffected by others in the traffic stream.	$0 \leq 10.0$
B	Good progression and a low level of control delay. The presence of other users in the traffic stream becomes noticeable.	> 10.0 and ≤ 20.0
C	Fair progression and a moderate level of control delay. The operation of individual users becomes somewhat affected by interactions with others in the traffic stream.	>20.0 and ≤ 35.0
D	Marginal progression with relatively high levels of control delay. Operating conditions are noticeably more constrained.	> 35.0 and ≤ 55.0
E	Poor progression with unacceptably high levels of control delay. Operating conditions are at or near capacity.	> 55.0 and ≤ 80.0
F	Unacceptable progression with forced or breakdown operating conditions.	> 80.0
Unsignalized Intersections		Worst Approach
A	Free Flow / Insignificant Delay	$0 \leq 10.0$
B	Stable Operations / Minimum Delays	>10.0 and ≤ 15.0
C	Stable Operations / Acceptable Delays	>15.0 and ≤ 25.0
D	Approaching Unstable Flows / Tolerable Delays	>25.0 and ≤ 35.0
E	Unstable Operations / Significant Delays Can Occur	>35.0 and ≤ 50.0
F	Forced Flows / Unpredictable Flows / Excessive Delays Occur	> 50.0

Source: Hales Engineering Descriptions, based on Highway Capacity Manual, 2010 Methodology (Transportation Research Board, 2010)

II. EXISTING (2015) BACKGROUND CONDITIONS

A. Purpose

The purpose of the existing (2015) background analysis is to study the intersections and roadways during the peak travel periods of the day with background traffic and geometric conditions. Through this analysis, background traffic operational deficiencies can be identified and potential mitigation measures recommended. This analysis will provide a baseline condition that may be compared to the build conditions to identify the impacts of the development.

B. Roadway System

The primary roadways that will provide access to the project site are described below:

Highland Highway (SR-92) - is a state-maintained roadway that is classified by UDOT as a “principal arterial.” Highland Highway (SR-92) is an east/west route that provides direct connectivity between northeastern Lehi on the west and Highland City on the east. This road is classified by UDOT as an Access Category 5 (Regional priority-urban importance) and therefore has minimum signal spacing of 2,640 feet, minimum street spacing of 660 feet, and minimum access spacing of 350 feet. Adjacent to the proposed project, Highland Highway (SR-92) has two travel lanes in each direction with a two-way left-turn lane (TWLTL) and the posted speed limit is 45 mph.

Alpine Highway (SR-74) - is a state-maintained roadway that is classified by UDOT as a “principal arterial.” Alpine Highway (SR-74) is a north/south route that provides connectivity between Highland on the north and American Fork on the south. This road is classified by UDOT as an Access Category 6 (Regional-urban importance) and therefore has minimum signal spacing of 1,320 feet, minimum street spacing of 350 feet, and minimum access spacing of 200 feet. Adjacent to the proposed project, Alpine Highway (SR-74) has one travel lane in each direction with a two-way left-turn lane (TWLTL) and the posted speed limit is 45 mph.

Town Center Boulevard - is a city-maintained roadway that is classified by the City of Highland as a “minor collector.” Town Center Boulevard is a north/south route that goes from Highland Highway (SR-92) on the north to its terminus at 10890 north on the south. Across from the proposed project, Town Center Boulevard has one travel lane in each direction with residential parking stalls on both sides and the posted speed limit is assumed to 25 mph.

C. Traffic Volumes

Hales Engineering performed weekday morning (7:00 to 9:00 a.m.) and afternoon (4:00 to 6:00 p.m.) peak period traffic counts at the following intersection:

- Town Center Boulevard / Highland Highway (SR-92)

- Toscana & Timp Tire Access / Town Center Boulevard
- Parkway Drive / 5400 West
- Parkway Drive / Alpine Highway (SR-74)
- Park Access Road / 5400 West

These counts were performed on Tuesday, July 21, Wednesday, July 22, and Wednesday, August 5, 2015. The August 5 counts were performed while the splash pad west of the proposed project was in operation. The p.m. peak hour volumes were approximately 36 percent higher than the morning volumes and will be used for this analysis. The p.m. peak hour was determined to be between the hours of 5:00 and 6:00 p.m. Detailed count data are included in Appendix A.

Figure 2 shows the existing p.m. peak hour volume as well as intersection geometry at the study intersection.

D. Level of Service Analysis

Using Synchro/SimTraffic, which follow the Highway Capacity Manual (HCM) 2010 methodology introduced in Chapter I, the p.m. peak hour LOS was computed for the study intersection. The results of this analysis are reported in Table 2 (see Appendix B for the detailed LOS reports). Multiple runs of SimTraffic were used to provide a statistical evaluation of the interaction at the intersection. These results serve as a baseline condition for the impact analysis of the proposed development during existing (2015) conditions. As shown in Table 2, all study intersections are currently operating at acceptable levels of service during the p.m. peak hour, with the exception of the Town Center Boulevard / Highland Highway (SR-92) intersection, which is operating at LOS E.

E. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for the study intersection. The queue reports can be found in Appendix D. During the p.m. peak hour, the 95th percentile queue is approximately 100 feet on the northbound approach to the Town Center Boulevard / Alpine Highway (SR-92) intersection. No other significant queuing is observed during the p.m. peak hour.

F. Mitigation Measures

The Town Center Boulevard / Highland Highway (SR-92) intersection is currently operating at level of service E. It is recommended that a northbound right-turn pocket be added at the Town Center Boulevard / Highland Highway (SR-92) to help improve flow and minimize delay at the intersection. No other mitigation measures are recommended at this time.

Table 2 Existing (2015) Background p.m. Peak Hour Level of Service

Intersection		Worst Approach			Overall Intersection	
Description	Control	Approach ^{1,3}	Aver. Delay (Sec/Veh) ¹	LOS ¹	Aver. Delay (Sec/Veh) ²	LOS ²
Town Center Boulevard / Highland Highway (SR-92)	NB Stop	NB	49.0	E	-	-
Town Center Boulevard / Toscana / Timp Tire Accesses	EB & WB Stop	EB	5.0	A	-	-
10890 North / Town Center Boulevard	EB & WB Stop	EB	4.0	A	-	-
5400 West / Parkway Drive	WB Stop	WB	1.0	A	-	-
5400 West / Park Access	EB Stop	EB	1.0	A	-	-
Parkway Drive / Alpine Highway (SR-74)	EB Stop	EB	17.0	C	-	-
Town Square Access / Alpine Highway (SR-74)	EB & WB Stop	EB	10.0	B	-	-

1. This represents the worst approach LOS and delay (seconds / vehicle) and is only reported for non-all-way stop unsignalized intersections.
2. This represents the overall intersection LOS and delay (seconds / vehicle) and is reported for all-way stop and signal controlled intersections.
3. SB = Southbound approach, etc.

Source: Hales Engineering, August 2015



III. PROJECT CONDITIONS

A. Purpose

The project conditions analysis explains the type and intensity of development. This provides the basis for trip generation, distribution, and assignment of project trips to the surrounding study intersections defined in the Introduction.

B. Project Description

This study addresses the traffic impacts associated with the proposed Blackstone residential development in Highland City, Utah. The proposed development is bordered by Highland Highway (SR-692) on the north and 5300 West on the east. A site plan for the proposed development has been included in Appendix C.

The proposed land use for the development has been identified as follows:

- Residential Condominium/Townhouse: 86 Dwelling Units

The total trip generation for the development is as follows:

- Daily Trips: 556
- a.m. Peak Hour Trips: 46
- p.m. Peak Hour Trips: 54

C. Trip Generation

Trip generation for the development was calculated using rates published in the ITE *Trip Generation Manual (9th Edition, 2012)*. Trip Generation for the proposed project is included in Table 3.

D. Trip Distribution and Assignment

Project traffic is assigned to the roadway network based on the type of trip and the proximity of project access points to major streets, high population densities, and regional trip attractions. Existing travel patterns observed during data collection also provide helpful guidance to establishing these distribution percentages, especially in close proximity to the site. The resulting distribution of project generated trips is as follows:

P.M. Peak Period To/From Project:

- 15% North (via Alpine Highway (SR-74))
- 30% South (via Alpine Highway (SR-74))
- 40% West (via Highland Highway (SR-92))

- 15% East (via Alpine Highway (SR-92))

These trip distribution assumptions were used to assign the p.m. peak hour generated traffic at the study intersections to create trip assignment for the proposed development. Trip assignment for the development is shown in Figure 3.

Table 1 Highland Blackstone Trip Generation								
Weekday Daily								
Land Use ¹	Number of Units	Unit Type	Trip Generation	% Entering	% Exiting	Trips Entering	Trips Exiting	Total Daily Trips
Residential Condominium/Townhouse (230)	86	Dwelling Units	566	50%	50%	283	283	566
Project Total Daily Trips						283	283	566
A.M. Peak Hour								
Land Use ¹	Number of Units	Unit Type	Trip Generation	% Entering	% Exiting	Trips Entering	Trips Exiting	Total a.m. Trips
Residential Condominium/Townhouse (230)	86	Dwelling Units	46	17%	83%	8	38	46
Project Total a.m. Peak Hour Trips						8	38	46
P.M. Peak Hour								
Land Use ¹	Number of Units	Unit Type	Trip Generation	% Entering	% Exiting	Trips Entering	Trips Exiting	Total p.m. Trips
Residential Condominium/Townhouse (230)	86	Dwelling Units	54	67%	33%	36	18	54
Project Total p.m. Peak Hour Trips						36	18	54
Saturday Daily								
Land Use ¹	Number of Units	Unit Type	Trip Generation	% Entering	% Exiting	Trips Entering	Trips Exiting	Total Sat. Daily Trips
Residential Condominium/Townhouse (230)	86	Dwelling Units	740	50%	50%	370	370	740
Project Total Saturday Trips						370	370	740
Saturday Peak Hour								
Land Use ¹	Number of Units	Unit Type	Trip Generation	% Entering	% Exiting	Trips Entering	Trips Exiting	Total Sat Pk Hr Trips
Residential Condominium/Townhouse (230)	86	Dwelling Units	68	54%	46%	37	31	68
Project Total Saturday Peak Hour Trips						37	31	68

1. Land Use Code from the Institute of Transportation Engineers Trip Generation Manual (9th Edition - 2012)

SOURCE: Hales Engineering, 2015

E. Access

The proposed accesses for the site will be gained at the following location (see also site plan in Appendix C):

Parkway Drive:

- Southwest Access: A proposed full movement access for this development will be located on Parkway Drive, approximately 250 feet east of the 5400 West / Parkway Drive intersection.

5400 West:

- West Access: A proposed access for this development will be located on 5400 West, approximately 130 feet north of the 5400 West / Parkway Drive intersection. This is

proposed to be a full movement access that will be aligned with the Park Access directly across from the proposed development.

Town Square Access:

- **Northeast Access:** A proposed full movement access for this development will be located on the existing access to the Town Square and Tim Tire, north of the proposed development. The proposed Northeast Access will be located approximately 450 feet east of the Town Center Drive / Tim Tire Access intersection.



IV. EXISTING (2015) PLUS PROJECT CONDITIONS

A. Purpose

This section of the report examines the traffic impacts of the proposed project at the study intersections. The net trips generated by the proposed development were combined with the existing background traffic volumes to create the existing plus project conditions. This scenario provides valuable insight into the potential impacts of the proposed project on background traffic conditions.

B. Traffic Volumes

Project trips were assigned to the study intersections based on the trip distribution percentages discussed in Chapter III and permitted intersection turning movements. The existing (2015) plus project p.m. peak hour volumes were generated for the study intersections and are shown in Figure 4.

C. Level of Service Analysis

Using Synchro/SimTraffic, which follow the Highway Capacity Manual (HCM) 2010 methodology introduced in Chapter I, the p.m. peak hour LOS was computed for the study intersections. The results of this analysis are reported in Table 3 (see Appendix B for the detailed LOS reports). Multiple runs of SimTraffic were used to provide a statistical evaluation of the interaction at the intersections. As shown in Table 3, all study intersections are anticipated to operate at acceptable levels of service during the p.m. peak hour, with the exception of the Town Center Boulevard / Highland Highway (SR-92) intersection, which is anticipated to operate at LOS F.

D. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. The queue reports can be found in Appendix D. During the p.m. peak hour, the 95th percentile queue is anticipated to be approximately 200 feet on the northbound approach to the Town Center Boulevard / Highland Highway (SR-92) intersection. No other significant queuing is anticipated during the p.m. peak hour.

E. Mitigation Measures

No mitigation measures are recommended

Table 4 Existing (2015) Plus Project p.m. Peak Hour Level of Service

Intersection		Worst Approach			Overall Intersection	
Description	Control	Approach ^{1,3}	Aver. Delay (Sec/Veh) ¹	LOS ¹	Aver. Delay (Sec/Veh) ²	LOS ²
Town Center Blvd / Highland Highway (SR-92)	NB Stop	NB	> 50	F	-	-
Town Center Boulevard / Toscana / Tim Tire Accesses	EB & WB Stop	EB	5.0	A	-	-
10890 North / Town Center Boulevard	EB & WB Stop	EB	4.0	A	-	-
5400 West / Parkway Drive	WB Stop	WB	3.0	A	-	-
5400 West / Park Access / West Access	EB & WB Stop	EB	3.0	A	-	-
Southwest Access / Parkway Drive	NB & SB Stop	NB	3.0	A	-	-
Parkway Drive / Alpine Highway (SR-74)	EB Stop	EB	22.0	C	-	-
Town Square Access / Alpine Highway (SR-74)	EB & WB Stop	WB	11.0	B	-	-
Northeast Access / Tim Tire / Town Square Access	NB Stop	NB	3.0	A	-	-

1. This represents the worst approach LOS and delay (seconds / vehicle) and is only reported for non-all-way stop unsignalized intersections.
 2. This represents the overall intersection LOS and delay (seconds / vehicle) and is reported for all-way stop and signal controlled intersections.
 3. SB = Southbound approach, etc.

Source: Hales Engineering, August 2015



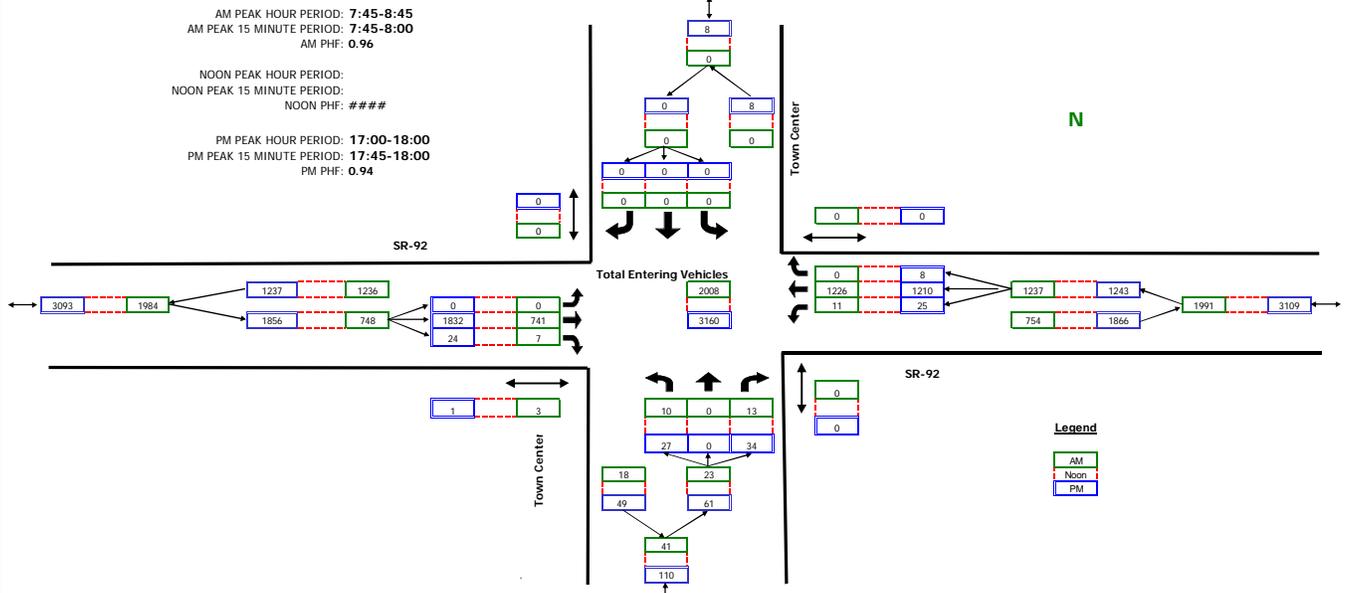
APPENDIX A

Turning Movement Counts

Intersection Turning Movement Summary

Intersection: Town Center Blvd / SR-92
North/South: Town Center Blvd
East/West: SR-92
Jurisdiction: Highland
Project Title: Highland Blackstone
Project No: UT15-763
Weather:

Date: 7-21-15, Tue
Day of Week Adjustment: 100.0%
Month of Year Adjustment: 100.0%
Adjustment Station #: 0
Growth Rate: 0.0%
Number of Years: 0

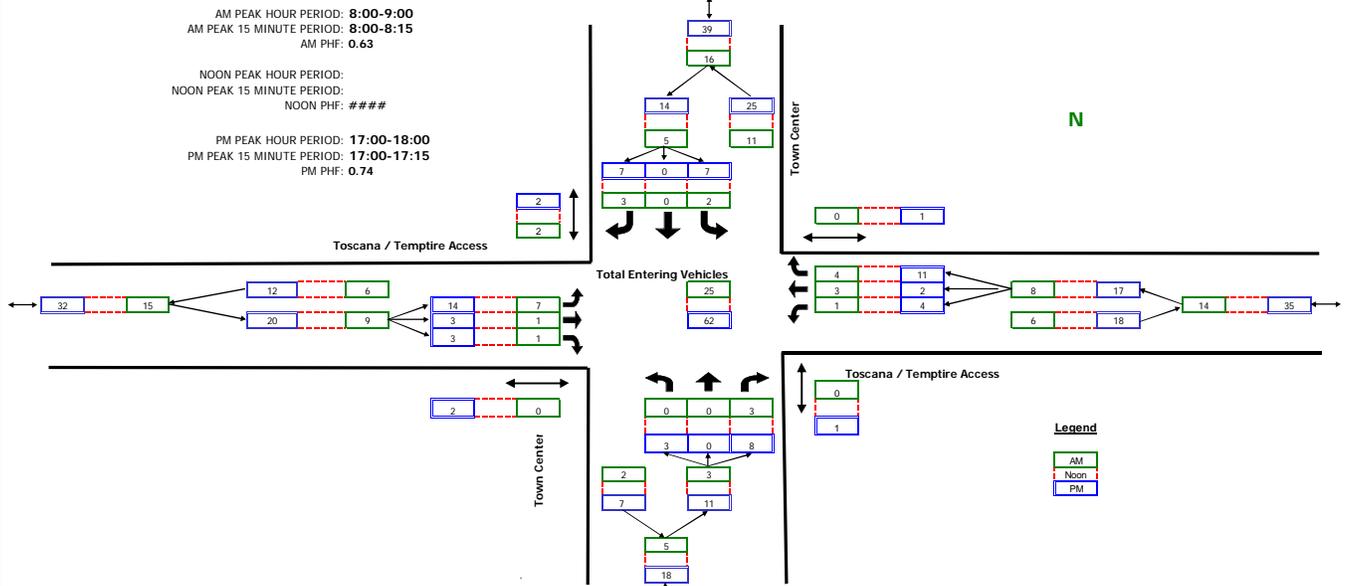


RAW COUNT SUMMARIES	Town Center Blvd Northbound				Town Center Blvd Southbound				SR-92 Eastbound				SR-92 Westbound				TOTAL
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
AM PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
7:00-7:15	1	0	2	0	0	0	0	0	0	124	0	0	1	225	0	1	353
7:15-7:30	1	0	3	0	0	0	0	0	0	127	1	0	0	251	0	0	383
7:30-7:45	1	0	2	0	0	0	0	0	0	132	5	0	1	290	0	0	431
7:45-8:00	2	0	4	0	0	0	0	0	0	214	2	0	2	301	0	0	525
8:00-8:15	1	0	3	0	0	0	0	0	0	157	3	1	4	312	0	0	480
8:15-8:30	4	0	4	0	0	0	0	0	0	201	1	2	2	277	0	0	489
8:30-8:45	3	0	2	0	0	0	0	0	0	169	1	0	3	336	0	0	514
8:45-9:00	2	0	2	0	0	0	0	0	0	227	2	4	3	280	0	0	516
NOON PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
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
13:00-13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15-13:30	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	9	0	11	0	0	0	0	1	0	377	6	0	3	248	3	0	657
16:15-16:30	4	0	10	0	0	0	0	0	0	318	5	0	6	284	7	0	634
16:30-16:45	1	0	6	0	0	0	0	0	0	394	8	0	10	246	1	0	666
16:45-17:00	8	0	3	0	0	0	0	0	0	382	7	0	0	234	11	0	645
17:00-17:15	6	0	10	0	0	0	0	0	0	396	10	0	5	304	7	0	738
17:15-17:30	7	0	7	0	0	0	0	0	0	509	4	0	6	299	1	0	833
17:30-17:45	7	0	6	0	0	0	0	0	0	428	4	1	3	302	0	0	750
17:45-18:00	7	0	11	0	0	0	0	0	0	499	6	0	11	305	0	0	839

Intersection Turning Movement Summary

Intersection: Town Center Blvd / Toscana / Tempire Access
North/South: Town Center Blvd
East/West: Toscana / Tempire Access
Jurisdiction: Highland
Project Title: Highland Blackstone
Project No: UT15-763
Weather:

Date: 7-22-15, Wed
Day of Week Adjustment: 100.0%
Month of Year Adjustment: 100.0%
Adjustment Station #: 0
Growth Rate: 0.0%
Number of Years: 0

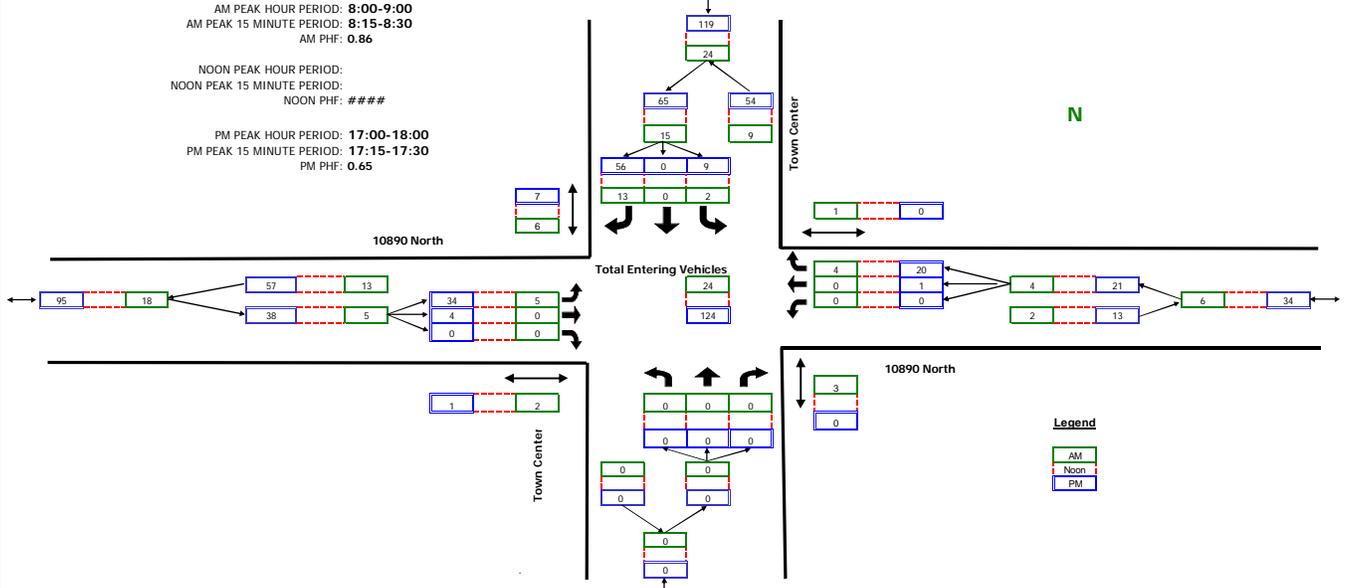


RAW COUNT SUMMARIES	Town Center Blvd Northbound				Town Center Blvd Southbound				Toscana / Tempire Access Eastbound				Toscana / Tempire Access Westbound				TOTAL
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
AM PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
7:00-7:15	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1
7:15-7:30	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2
7:30-7:45	0	0	0	0	0	0	3	1	1	2	0	0	0	0	1	0	7
7:45-8:00	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	3
8:00-8:15	0	0	1	0	0	0	3	0	2	0	0	0	0	3	1	0	10
8:15-8:30	0	0	0	0	0	0	0	1	3	0	0	0	0	0	1	0	4
8:30-8:45	0	0	2	0	1	0	0	0	0	0	1	0	0	0	2	0	6
8:45-9:00	0	0	0	0	1	0	0	1	2	1	0	0	1	0	0	0	5
NOON PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
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
13:00-13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15-13:30	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	1	0	1	0	2	3	2	2	0	0	3	0	1	0	12
16:15-16:30	1	0	0	0	1	0	2	10	1	0	0	0	3	2	2	0	12
16:30-16:45	0	0	3	1	1	0	2	2	1	0	0	0	1	0	0	1	8
16:45-17:00	0	0	3	2	1	0	1	3	1	2	1	0	0	0	1	0	10
17:00-17:15	0	0	2	0	5	0	3	2	6	1	1	0	1	0	2	0	21
17:15-17:30	0	0	1	1	0	0	0	0	2	1	1	1	2	2	3	0	12
17:30-17:45	2	0	1	0	1	0	3	0	4	1	0	0	1	0	4	1	17
17:45-18:00	1	0	4	0	1	0	1	0	2	0	1	1	0	0	2	0	12

Intersection Turning Movement Summary

Intersection: Town Center Blvd / 10890 North
North/South: Town Center Blvd
East/West: 10890 North
Jurisdiction: Highland
Project Title: Highland Blackstone
Project No: UT15-763
Weather:

Date: 7-21-15, Tue
Day of Week Adjustment: 100.0%
Month of Year Adjustment: 100.0%
Adjustment Station #: 0
Growth Rate: 0.0%
Number of Years: 0

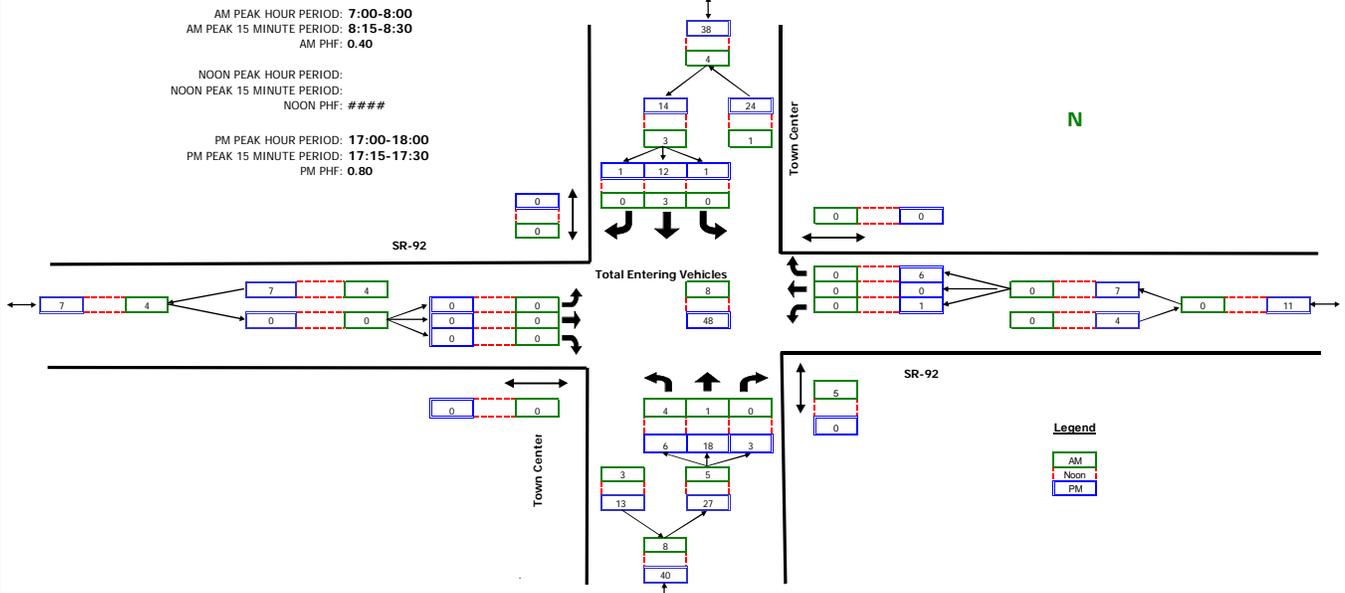


RAW COUNT SUMMARIES	Town Center Blvd Northbound				Town Center Blvd Southbound				10890 North Eastbound				10890 North Westbound				TOTAL
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
AM PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
7:00-7:15	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	3
7:15-7:30	0	0	0	4	1	0	0	0	0	0	0	0	0	0	1	0	2
7:30-7:45	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	2
7:45-8:00	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	3
8:00-8:15	0	0	0	0	0	0	4	3	0	0	0	0	0	0	1	0	5
8:15-8:30	0	0	0	3	2	0	1	1	3	0	0	0	0	0	1	0	7
8:30-8:45	0	0	0	0	0	0	4	2	1	0	0	2	0	0	1	1	6
8:45-9:00	0	0	0	0	0	0	4	0	1	0	0	0	0	0	1	0	6
NOON PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
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
13:00-13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15-13:30	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	1	0	10	0	12	0	0	0	0	0	0	3	26
16:15-16:30	0	0	0	0	4	0	12	3	4	0	0	8	0	0	2	0	22
16:30-16:45	0	0	0	0	1	0	10	0	6	0	0	2	0	1	1	0	19
16:45-17:00	0	0	0	0	3	0	6	1	9	0	0	9	0	1	2	0	21
17:00-17:15	0	0	0	0	2	0	9	1	7	1	0	0	0	0	4	0	23
17:15-17:30	0	0	0	0	4	0	22	3	13	1	0	0	0	1	7	0	48
17:30-17:45	0	0	0	0	1	0	13	2	7	1	0	0	0	0	5	0	27
17:45-18:00	0	0	0	0	2	0	12	1	7	1	0	1	0	0	4	0	26

Intersection Turning Movement Summary

Intersection: Town Center Blvd / SR-92
North/South: Town Center Blvd
East/West: SR-92
Jurisdiction: Highland
Project Title: Highland Blackstone
Project No: UT15-763
Weather:

Date: 7-21-15, Tue
Day of Week Adjustment: 100.0%
Month of Year Adjustment: 100.0%
Adjustment Station #: 0
Growth Rate: 0.0%
Number of Years: 0

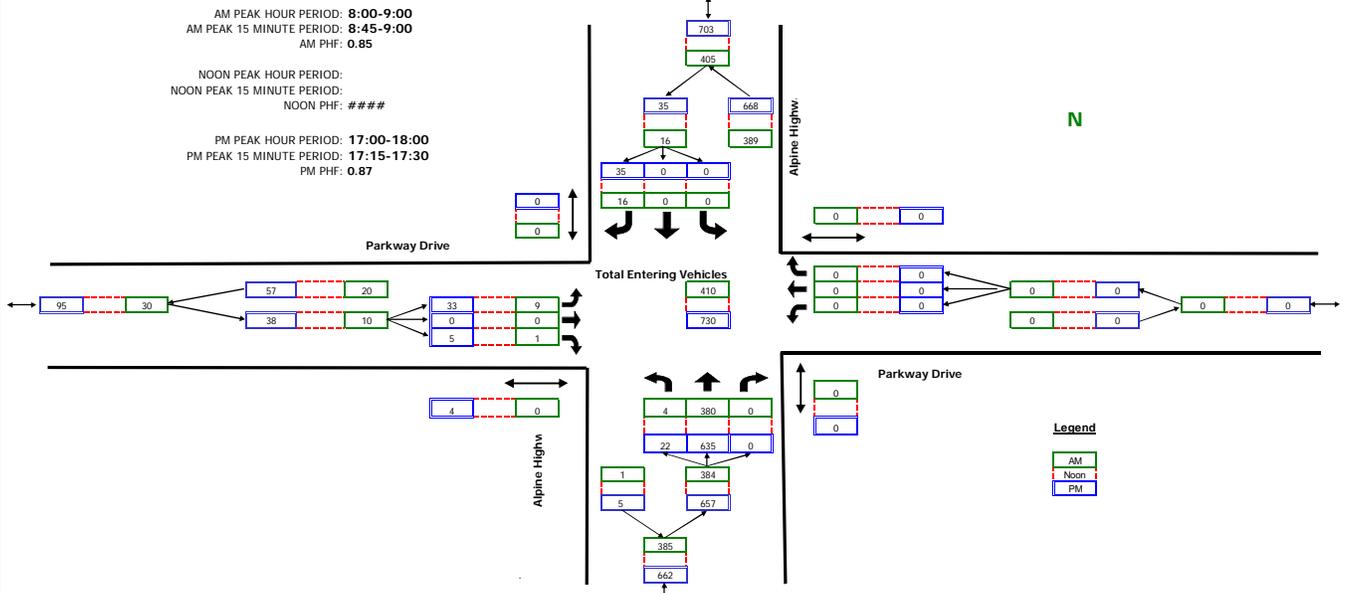


RAW COUNT SUMMARIES	Town Center Blvd Northbound				Town Center Blvd Southbound				SR-92 Eastbound				SR-92 Westbound				TOTAL
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
AM PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
7:00-7:15	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
7:15-7:30	3	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	4
7:30-7:45	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45-8:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00-8:15	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15-8:30	1	3	0	1	0	1	0	3	0	0	0	0	0	0	0	0	5
8:30-8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45-9:00	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1
NOON PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
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
13:00-13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15-13:30	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	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4
16:15-16:30	2	2	0	0	1	1	0	0	0	0	0	0	0	0	0	0	6
16:30-16:45	0	2	1	0	1	3	0	0	0	0	0	0	1	0	0	0	8
16:45-17:00	1	2	0	0	1	1	1	0	0	0	0	0	0	0	1	0	7
17:00-17:15	2	2	0	0	1	1	1	0	0	0	0	0	0	0	1	0	8
17:15-17:30	2	5	2	0	0	3	0	0	0	0	0	0	1	0	2	0	15
17:30-17:45	1	4	0	0	0	5	0	0	0	0	0	0	0	0	2	0	12
17:45-18:00	1	7	1	0	0	3	0	0	0	0	0	0	0	0	1	0	13

Intersection Turning Movement Summary

Intersection: Alpine Highway / Parkway Drive
North/South: Alpine Highway
East/West: Parkway Drive
Jurisdiction: Highland
Project Title: Highland Blackstone
Project No: UT15-763
Weather:

Date: 7-21-15, Tue
Day of Week Adjustment: 100.0%
Month of Year Adjustment: 100.0%
Adjustment Station #: 0
Growth Rate: 0.0%
Number of Years: 0

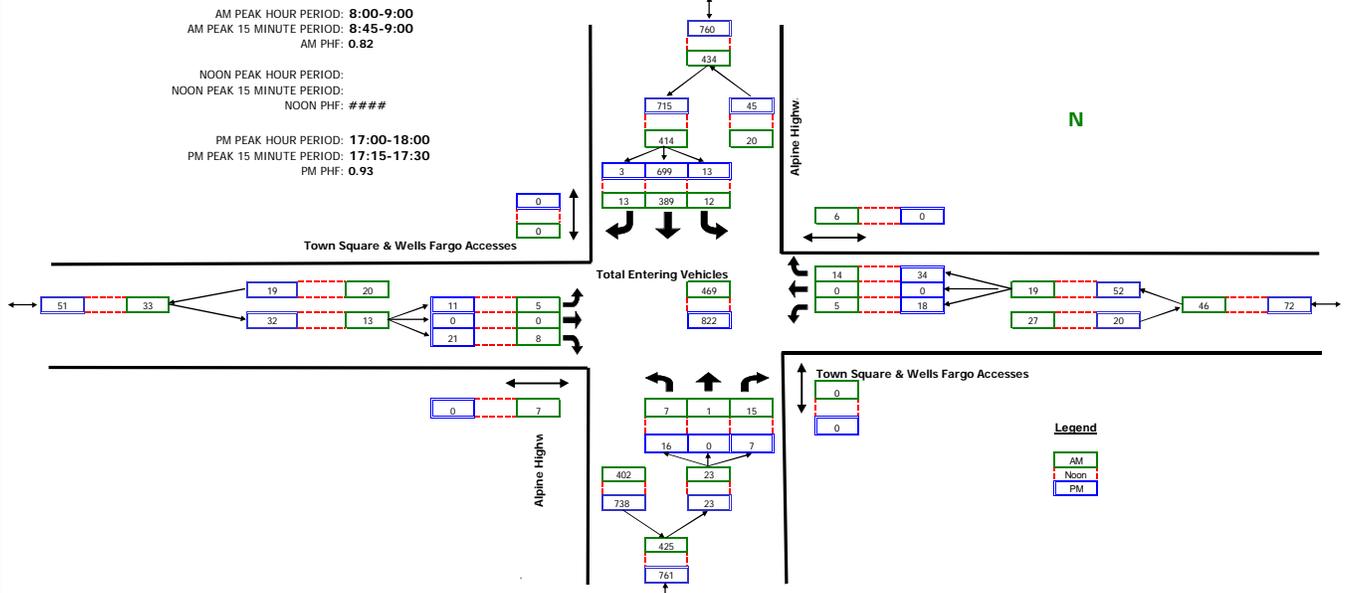


RAW COUNT SUMMARIES	Alpine Highway Northbound				Alpine Highway Southbound				Parkway Drive Eastbound				Parkway Drive Westbound				TOTAL
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
AM PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
7:00-7:15	0	63	0	0	0	0	1	0	1	0	0	0	0	0	0	0	65
7:15-7:30	0	56	0	0	0	0	1	0	0	0	0	0	0	0	0	0	57
7:30-7:45	0	71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	71
7:45-8:00	2	102	0	0	0	0	2	0	0	0	0	0	0	0	0	0	106
8:00-8:15	0	76	0	0	0	0	3	0	2	0	0	0	0	0	0	0	81
8:15-8:30	1	95	0	0	0	0	3	0	2	0	1	0	0	0	0	0	102
8:30-8:45	1	102	0	0	0	0	3	0	1	0	0	0	0	0	0	0	107
8:45-9:00	2	107	0	0	0	0	7	0	4	0	0	0	0	0	0	0	120
NOON PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
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
13:00-13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15-13:30	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	4	120	0	0	0	0	6	0	10	0	4	0	0	0	0	0	144
16:15-16:30	2	157	0	0	0	0	12	0	6	0	3	0	0	0	0	0	180
16:30-16:45	7	99	0	0	0	0	5	0	6	0	4	0	0	0	0	0	121
16:45-17:00	6	103	0	0	0	0	11	0	2	0	6	0	0	0	0	0	128
17:00-17:15	7	146	0	0	0	0	6	0	8	0	2	0	0	0	0	0	169
17:15-17:30	5	185	0	0	0	0	8	0	8	0	3	0	0	0	0	0	209
17:30-17:45	8	151	0	0	0	0	13	0	7	0	0	3	0	0	0	0	179
17:45-18:00	2	153	0	0	0	0	8	0	10	0	0	1	0	0	0	0	173

Intersection Turning Movement Summary

Intersection: Alpine Highway / Town Square & Wells Fargo Accesses
North/South: Alpine Highway
East/West: Town Square & Wells Fargo Accesses
Jurisdiction: Highland
Project Title: Highland Blackstone
Project No: UT15-763
Weather:

Date: 7-22-15, Wed
Day of Week Adjustment: 100.0%
Month of Year Adjustment: 100.0%
Adjustment Station #: 0
Growth Rate: 0.0%
Number of Years: 0



RAW COUNT SUMMARIES	Alpine Highway Northbound				Alpine Highway Southbound				Town Square & Wells Fargo Accesses Eastbound				Town Square & Wells Fargo Accesses Westbound				TOTAL
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
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	2	0	0	0	2	57	2	0	0	0	3	3	1	0	2	4	69
7:15-7:30	0	0	1	0	1	67	0	0	1	0	0	3	0	0	2	0	72
7:30-7:45	0	0	1	0	4	85	1	0	3	0	3	0	1	0	2	0	100
7:45-8:00	0	0	2	0	3	119	0	0	1	0	0	9	0	0	0	2	125
8:00-8:15	3	0	3	0	0	92	4	0	3	0	1	1	0	0	1	1	107
8:15-8:30	2	0	3	0	6	88	5	0	2	0	1	0	1	0	1	3	109
8:30-8:45	1	0	7	0	3	88	2	0	0	0	2	2	2	0	5	2	110
8:45-9:00	1	1	2	0	3	121	2	0	0	0	4	4	2	0	7	0	143
NOON PERIOD COUNTS																	
Period	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	TOTAL
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
13:00-13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15-13:30	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	1	0	0	0	5	155	2	0	3	0	5	0	6	2	14	0	193
16:15-16:30	8	0	3	0	0	140	5	0	1	0	6	0	1	2	5	0	171
16:30-16:45	5	0	1	0	5	162	0	0	6	0	5	0	2	0	1	0	187
16:45-17:00	2	0	1	0	3	191	0	0	2	1	9	0	4	1	4	0	218
17:00-17:15	2	0	0	0	4	156	2	0	4	0	6	0	3	0	11	0	188
17:15-17:30	7	0	4	0	5	180	1	0	4	0	4	0	5	0	10	0	220
17:30-17:45	4	0	1	0	1	171	0	0	1	0	6	0	4	0	6	0	194
17:45-18:00	3	0	2	0	3	192	0	0	2	0	5	0	6	0	7	0	220

APPENDIX B

LOS Results

SimTraffic LOS Report

Project: Highland - Blackstone TIS
Analysis Period: Existing (2015) Background
Time Period: p.m. Peak Hour **Project #:** UT15-763

Intersection: Town Center Boulevard & Highland Highway (SR-92)
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	27	26	97	70.4	F
	T	17	16	94	0.3	A
	R	38	38	101	53.8	F
	Subtotal	82	80	98	48.5	E
EB	T	1,870	1,682	90	2.3	A
	R	24	23	97	0.3	A
	Subtotal	1,894	1,705	90	2.3	A
WB	L	33	29	89	43.2	E
	T	1,234	1,217	99	8.7	A
	Subtotal	1,267	1,246	98	9.5	A
Total		3,242	3,031	93	6.5	A

Intersection: Town Center Boulevard & Toscana Access/Town Square Access
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	3	3	100	2.1	A
	T	53	52	98	0.5	A
	R	8	9	109	0.4	A
	Subtotal	64	64	100	0.6	A
SB	L	7	7	100	2.3	A
	T	44	41	93	0.6	A
	R	7	6	86	0.6	A
Subtotal	58	54	93	0.8	A	
EB	L	14	14	98	4.3	A
	T	3	3	100	6.5	A
	R	3	3	100	2.8	A
	Subtotal	20	20	100	4.4	A
WB	L	4	5	125	4.8	A
	T	2	1	50	5.3	A
	R	13	12	91	3.5	A
	Subtotal	19	18	95	4.0	A
Total		162	156	96	1.5	A

SimTraffic LOS Report

Project: Highland - Blackstone TIS
Analysis Period: Existing (2015) Background
Time Period: p.m. Peak Hour **Project #:** UT15-763

Intersection: 10890 North/10890 North & Town Center Boulevard
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SB	L	9	7	76	0.5	A
	R	56	55	98	0.2	A
	Subtotal	65	62	95	0.2	A
EB	L	34	32	95	4.0	A
	T	4	4	100	4.6	A
	Subtotal	38	36	95	4.1	A
WB	T	4	4	100	4.6	A
	R	20	22	109	2.8	A
	Subtotal	24	26	108	3.1	A
Total		128	124	97	2.0	A

Intersection: 5400 West/5400 West & Parkway Drive
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	18	19	104	0.0	A
	R	3	4	133	0.0	A
	Subtotal	21	23	110	0.0	A
SB	L	1	0	0	0.0	A
	T	12	10	82	0.0	A
	Subtotal	13	10	77	0.0	A
WB	L	1	0	0	0.3	A
	T	50	54	108	2.6	A
	R	6	7	117	0.6	A
Subtotal	57	61	107	0.6	A	
Total		92	94	103	0.4	A

SimTraffic LOS Report

Project: Highland - Blackstone TIS
Analysis Period: Existing (2015) Background
Time Period: p.m. Peak Hour **Project #:** UT15-763

Intersection: 5400 West & Park Access
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	6	5	83	1.6	A
	T	21	23	108	0.0	A
	Subtotal	27	28	104	0.3	A
SB	T	12	10	82	0.0	A
	R	1	1	100	0.0	A
	Subtotal	13	11	85	0.0	A
Total		40	39	96	0.2	A

Intersection: Alpine Highway (SR-74) & Parkway Drive
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	22	23	103	4.8	A
	T	635	638	101	0.8	A
	Subtotal	657	661	101	0.9	A
SB	T	705	702	100	1.5	A
	R	35	38	109	0.6	A
	Subtotal	740	740	100	1.5	A
EB	L	33	32	98	19.4	C
	R	5	8	160	9.4	A
	Subtotal	38	40	105	17.4	C
Total		1,434	1,441	100	1.7	A

SimTraffic LOS Report

Project: Highland - Blackstone TIS
Analysis Period: Existing (2015) Background
Time Period: p.m. Peak Hour **Project #:** UT15-763

Intersection: Alpine Highway (SR-74) & Town Square Access/Wells Fargo Access
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	16	15	92	3.7	A
	T	644	649	101	0.9	A
	R	7	7	100	0.1	A
	Subtotal	667	671	101	1.0	A
SB	L	13	15	113	4.4	A
	T	699	700	100	1.4	A
	R	3	3	100	0.1	A
	Subtotal	715	718	100	1.5	A
EB	L	11	10	89	16.7	C
	R	21	22	104	7.2	A
	Subtotal	32	32	100	10.2	B
WB	L	18	16	88	16.0	C
	R	34	36	107	7.2	A
	Subtotal	52	52	100	9.9	A
Total		1,467	1,473	100	1.7	A

Intersection:
Type:

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
Total						

1: Town Center Boulevard & Highland Highway (SR-92) Performance by movement Interval #1 5:00

Movement	EBT	EBR	WBL	WBT	NBL	NBT	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.3	0.0	0.1	0.6	0.1	0.0	0.2	1.3
Total Del/Veh (s)	2.3	0.4	46.6	7.5	73.8	0.3	62.4	6.4
Vehicles Entered	418	5	8	292	6	4	10	743
Vehicles Exited	421	5	8	294	6	4	9	747
Hourly Exit Rate	1684	20	32	1176	24	16	36	2988
Input Volume	1830	23	32	1208	26	17	37	3173
% of Volume	92	87	100	97	92	94	97	94

1: Town Center Boulevard & Highland Highway (SR-92) Performance by movement Interval #2 5:15

Movement	EBT	EBR	WBL	WBT	NBL	NBT	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.3	0.0	0.1	0.8	0.1	0.0	0.1	1.4
Total Del/Veh (s)	2.3	0.3	44.1	9.1	58.7	0.2	49.5	6.5
Vehicles Entered	433	7	6	323	6	4	9	788
Vehicles Exited	430	6	6	320	6	4	10	782
Hourly Exit Rate	1720	24	24	1280	24	16	40	3128
Input Volume	1988	26	35	1313	29	17	40	3448
% of Volume	87	92	69	97	83	94	100	91

1: Town Center Boulevard & Highland Highway (SR-92) Performance by movement Interval #3 5:30

Movement	EBT	EBR	WBL	WBT	NBL	NBT	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.3	0.0	0.1	0.8	0.1	0.0	0.1	1.4
Total Del/Veh (s)	2.3	0.3	37.6	8.8	57.2	0.2	44.1	6.4
Vehicles Entered	416	6	8	300	7	4	10	751
Vehicles Exited	417	6	8	305	7	4	10	757
Hourly Exit Rate	1668	24	32	1220	28	16	40	3028
Input Volume	1830	23	32	1208	26	17	37	3173
% of Volume	91	104	100	101	108	94	108	95

1: Town Center Boulevard & Highland Highway (SR-92) Performance by movement Interval #4 5:45

Movement	EBT	EBR	WBL	WBT	NBL	NBT	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.3	0.0	0.1	0.7	0.1	0.0	0.1	1.3
Total Del/Veh (s)	2.2	0.4	38.5	8.8	63.5	0.6	44.3	6.4
Vehicles Entered	413	5	6	297	7	4	10	742
Vehicles Exited	413	5	7	298	6	4	9	742
Hourly Exit Rate	1652	20	28	1192	24	16	36	2968
Input Volume	1830	23	32	1208	26	17	37	3173
% of Volume	90	87	88	99	92	94	97	94

1: Town Center Boulevard & Highland Highway (SR-92) Performance by movement Entire Run

Movement	EBT	EBR	WBL	WBT	NBL	NBT	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	1.1	0.0	0.3	3.0	0.5	0.0	0.6	5.5
Total Del/Veh (s)	2.3	0.3	43.2	8.7	70.4	0.3	53.8	6.5
Vehicles Entered	1680	23	28	1213	26	15	39	3024
Vehicles Exited	1682	23	29	1217	26	16	38	3031
Hourly Exit Rate	1682	23	29	1217	26	16	38	3031
Input Volume	1870	24	33	1234	27	17	38	3242
% of Volume	90	97	89	99	97	94	101	93

2: Town Center Boulevard & Toscana Access/Town Square Access Performance by movement Interval #

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.2	0.0		0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.1	5.7	2.9	6.6		2.6	1.6	0.6	0.4	2.1	0.6	0.3
Vehicles Entered	4	1	1	1	0	2	1	14	2	2	11	2
Vehicles Exited	4	1	1	1	0	2	1	14	2	2	10	2
Hourly Exit Rate	16	4	4	4	0	8	4	56	8	8	40	8
Input Volume	14	3	3	4	2	13	3	52	8	7	43	7
% of Volume	114	133	133	100	0	62	133	108	100	114	93	114

2: Town Center Boulevard & Toscana Access/Town Square Access Performance by movement Interval #

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.0
Total Delay (hr)	0.0
Total Del/Veh (s)	1.5
Vehicles Entered	41
Vehicles Exited	40
Hourly Exit Rate	160
Input Volume	159
% of Volume	101

2: Town Center Boulevard & Toscana Access/Town Square Access Performance by movement Interval #

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.0	3.3	3.2	7.5		3.0	1.0	0.5	0.4	1.8	0.6	0.5
Vehicles Entered	3	1	1	1	0	3	1	13	3	2	10	2
Vehicles Exited	3	1	1	1	0	3	1	13	3	2	10	2
Hourly Exit Rate	12	4	4	4	0	12	4	52	12	8	40	8
Input Volume	15	3	3	4	2	14	3	56	9	7	47	7
% of Volume	80	133	133	100	0	86	133	93	133	114	85	114

2: Town Center Boulevard & Toscana Access/Town Square Access Performance by movement Interval #

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.0
Total Delay (hr)	0.0
Total Del/Veh (s)	1.4
Vehicles Entered	40
Vehicles Exited	40
Hourly Exit Rate	160
Input Volume	170
% of Volume	94

2: Town Center Boulevard & Toscana Access/Town Square Access Performance by movement Interval #

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.4	6.3		6.6		3.8	1.6	0.4	0.5	2.3	0.6	0.4
Vehicles Entered	3	1	0	1	0	3	1	14	2	2	11	2
Vehicles Exited	3	1	0	1	0	3	1	14	2	2	11	1
Hourly Exit Rate	12	4	0	4	0	12	4	56	8	8	44	4
Input Volume	14	3	3	4	2	13	3	52	8	7	43	7
% of Volume	86	133	0	100	0	92	133	108	100	114	102	57

2: Town Center Boulevard & Toscana Access/Town Square Access Performance by movement Interval #

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.0
Total Delay (hr)	0.0
Total Del/Veh (s)	1.5
Vehicles Entered	40
Vehicles Exited	39
Hourly Exit Rate	156
Input Volume	159
% of Volume	98

2: Town Center Boulevard & Toscana Access/Town Square Access Performance by movement Interval #

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.7	4.1	1.3	3.5		3.4	2.2	0.4	0.4	1.6	0.5	0.9
Vehicles Entered	4	1	1	1	0	4	1	11	2	2	10	1
Vehicles Exited	4	1	0	1	0	4	1	11	2	2	10	1
Hourly Exit Rate	16	4	0	4	0	16	4	44	8	8	40	4
Input Volume	14	3	3	4	2	13	3	52	8	7	43	7
% of Volume	114	133	0	100	0	123	133	85	100	114	93	57

2: Town Center Boulevard & Toscana Access/Town Square Access Performance by movement Interval #

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.0
Total Delay (hr)	0.0
Total Del/Veh (s)	1.6
Vehicles Entered	38
Vehicles Exited	37
Hourly Exit Rate	148
Input Volume	159
% of Volume	93

2: Town Center Boulevard & Toscana Access/Town Square Access Performance by movement Entire Ru

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.3	6.5	2.8	4.8	5.3	3.5	2.1	0.5	0.4	2.3	0.6	0.6
Vehicles Entered	14	3	3	5	1	12	3	52	9	7	41	6
Vehicles Exited	14	3	3	5	1	12	3	52	9	7	41	6
Hourly Exit Rate	14	3	3	5	1	12	3	52	9	7	41	6
Input Volume	14	3	3	4	2	13	3	53	8	7	44	7
% of Volume	98	100	100	125	50	91	100	98	109	100	93	86

2: Town Center Boulevard & Toscana Access/Town Square Access Performance by movement Entire Ru

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.0
Total Delay (hr)	0.1
Total Del/Veh (s)	1.5
Vehicles Entered	156
Vehicles Exited	156
Hourly Exit Rate	156
Input Volume	162
% of Volume	96

3: 10890 North/10890 North & Town Center Boulevard Performance by movement Interval #1 5:00

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.3	0.0	0.0	0.0	0.0	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.7	5.6	4.4	2.6	0.4	0.2	1.9
Vehicles Entered	9	1	1	5	2	14	32
Vehicles Exited	9	1	1	5	2	14	32
Hourly Exit Rate	36	4	4	20	8	56	128
Input Volume	33	4	4	20	9	55	125
% of Volume	109	100	100	100	89	102	102

3: 10890 North/10890 North & Town Center Boulevard Performance by movement Interval #2 5:15

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.1	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.9	5.6	5.7	2.7	0.6	0.3	2.0
Vehicles Entered	9	1	1	6	2	15	34
Vehicles Exited	9	1	1	6	2	15	34
Hourly Exit Rate	36	4	4	24	8	60	136
Input Volume	36	4	4	21	10	60	135
% of Volume	100	100	100	114	80	100	101

3: 10890 North/10890 North & Town Center Boulevard Performance by movement Interval #3 5:30

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.8	2.8	4.3	2.7	0.4	0.2	1.8
Vehicles Entered	8	1	1	7	2	14	33
Vehicles Exited	8	1	1	7	2	14	33
Hourly Exit Rate	32	4	4	28	8	56	132
Input Volume	33	4	4	20	9	55	125
% of Volume	97	100	100	140	89	102	106

3: 10890 North/10890 North & Town Center Boulevard Performance by movement Interval #4 5:45

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.8	4.3	3.9	2.7	0.4	0.1	1.9
Vehicles Entered	7	1	1	5	2	12	28
Vehicles Exited	7	1	1	5	2	11	27
Hourly Exit Rate	28	4	4	20	8	44	108
Input Volume	33	4	4	20	9	55	125
% of Volume	85	100	100	100	89	80	86

3: 10890 North/10890 North & Town Center Boulevard Performance by movement Entire Run

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	4.0	4.6	4.6	2.8	0.5	0.2	2.0
Vehicles Entered	32	4	4	22	7	55	124
Vehicles Exited	32	4	4	22	7	55	124
Hourly Exit Rate	32	4	4	22	7	55	124
Input Volume	34	4	4	20	9	56	128
% of Volume	95	100	100	109	76	98	97

4: 5400 West/5400 West & Parkway Drive Performance by movement Interval #1 5:00

Movement	WBL	WBT	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)		0.0	0.0	0.0	0.0		0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)		0.2	2.8	0.1	0.0		0.0	0.5
Vehicles Entered	0	13	2	3	1	0	3	22
Vehicles Exited	0	13	2	3	1	0	3	22
Hourly Exit Rate	0	52	8	12	4	0	12	88
Input Volume	1	49	6	18	3	1	12	90
% of Volume	0	106	133	67	133	0	100	98

4: 5400 West/5400 West & Parkway Drive Performance by movement Interval #2 5:15

Movement	WBL	WBT	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)		0.0	0.0	0.0	0.0		0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)		0.3	2.2	0.0	0.0		0.0	0.4
Vehicles Entered	0	13	2	6	1	0	3	25
Vehicles Exited	0	13	2	6	0	0	3	24
Hourly Exit Rate	0	52	8	24	0	0	12	96
Input Volume	1	53	6	19	3	1	13	96
% of Volume	0	98	133	126	0	0	92	100

4: 5400 West/5400 West & Parkway Drive Performance by movement Interval #3 5:30

Movement	WBT	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	0.3	2.4	0.0	0.0		0.0	0.3
Vehicles Entered	14	2	6	2	0	2	26
Vehicles Exited	14	2	6	2	0	2	26
Hourly Exit Rate	56	8	24	8	0	8	104
Input Volume	49	6	18	3	1	12	90
% of Volume	114	133	133	267	0	67	116

4: 5400 West/5400 West & Parkway Drive Performance by movement Interval #4 5:45

Movement	WBL	WBT	WBR	NBT	NBR	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)		0.0	0.0	0.0		0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)		0.3	3.5	0.0		0.0	0.3
Vehicles Entered	0	15	1	5	0	2	23
Vehicles Exited	0	15	1	5	0	2	23
Hourly Exit Rate	0	60	4	20	0	8	92
Input Volume	1	49	6	18	3	12	90
% of Volume	0	122	67	111	0	67	102

4: 5400 West/5400 West & Parkway Drive Performance by movement Entire Run

Movement	WBL	WBT	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)		0.0	0.0	0.0	0.0		0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)		0.3	2.6	0.0	0.0		0.0	0.4
Vehicles Entered	0	54	7	19	4	0	10	94
Vehicles Exited	0	54	7	19	4	0	10	94
Hourly Exit Rate	0	54	7	19	4	0	10	94
Input Volume	1	50	6	18	3	1	12	92
% of Volume	0	108	117	104	133	0	82	103

5: 5400 West & Park Access Performance by movement Interval #1 5:00

Movement	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0		0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	1.3	0.1	0.0		0.2
Vehicles Entered	1	5	3	0	9
Vehicles Exited	1	4	3	0	8
Hourly Exit Rate	4	16	12	0	32
Input Volume	6	21	12	1	40
% of Volume	67	76	100	0	80

5: 5400 West & Park Access Performance by movement Interval #2 5:15

Movement	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0		0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	1.8	0.0	0.0		0.2
Vehicles Entered	1	6	3	0	10
Vehicles Exited	1	6	3	0	10
Hourly Exit Rate	4	24	12	0	40
Input Volume	6	22	13	1	42
% of Volume	67	109	92	0	95

5: 5400 West & Park Access Performance by movement Interval #3 5:30

Movement	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0		0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	1.3	0.1	0.0		0.3
Vehicles Entered	2	7	2	0	11
Vehicles Exited	2	7	2	0	11
Hourly Exit Rate	8	28	8	0	44
Input Volume	6	21	12	1	40
% of Volume	133	133	67	0	110

5: 5400 West & Park Access Performance by movement Interval #4 5:45

Movement	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0		0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	1.1	0.0	0.0		0.3
Vehicles Entered	2	5	2	0	9
Vehicles Exited	2	5	2	0	9
Hourly Exit Rate	8	20	8	0	36
Input Volume	6	21	12	1	40
% of Volume	133	95	67	0	90

5: 5400 West & Park Access Performance by movement Entire Run

Movement	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	1.6	0.0	0.0	0.0	0.2
Vehicles Entered	5	23	10	1	39
Vehicles Exited	5	23	10	1	39
Hourly Exit Rate	5	23	10	1	39
Input Volume	6	21	12	1	40
% of Volume	83	108	82	100	96

6: Alpine Highway (SR-74) & Parkway Drive Performance by movement Interval #1 5:00

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	3.4	0.5	0.0	0.0	0.3
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.1
Total Del/Veh (s)	13.9	6.8	4.0	0.8	1.5	0.6	1.5
Vehicles Entered	8	2	5	151	172	9	347
Vehicles Exited	8	2	5	152	172	9	348
Hourly Exit Rate	32	8	20	608	688	36	1392
Input Volume	32	5	22	621	690	34	1404
% of Volume	100	160	91	98	100	106	99

6: Alpine Highway (SR-74) & Parkway Drive Performance by movement Interval #2 5:15

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	3.4	0.6	0.0	0.0	0.3
Total Delay (hr)	0.1	0.0	0.0	0.0	0.1	0.0	0.2
Total Del/Veh (s)	25.7	15.0	7.5	0.9	1.7	0.6	2.1
Vehicles Entered	10	2	5	166	192	10	385
Vehicles Exited	10	2	5	166	192	9	384
Hourly Exit Rate	40	8	20	664	768	36	1536
Input Volume	35	5	23	676	749	37	1525
% of Volume	114	160	87	98	103	97	101

6: Alpine Highway (SR-74) & Parkway Drive Performance by movement Interval #3 5:30

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	2.7	0.5	0.0	0.0	0.3
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.2
Total Del/Veh (s)	20.0	6.5	4.1	0.8	1.5	0.6	1.7
Vehicles Entered	8	3	6	161	176	9	363
Vehicles Exited	8	2	6	160	176	10	362
Hourly Exit Rate	32	8	24	640	704	40	1448
Input Volume	32	5	22	621	690	34	1404
% of Volume	100	160	109	103	102	118	103

6: Alpine Highway (SR-74) & Parkway Drive Performance by movement Interval #4 5:45

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	3.1	0.6	0.0	0.0	0.3
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.1
Total Del/Veh (s)	14.2	5.8	3.9	0.8	1.4	0.7	1.5
Vehicles Entered	7	2	7	160	162	9	347
Vehicles Exited	7	2	7	160	163	9	348
Hourly Exit Rate	28	8	28	640	652	36	1392
Input Volume	32	5	22	621	690	34	1404
% of Volume	88	160	127	103	94	106	99

6: Alpine Highway (SR-74) & Parkway Drive Performance by movement Entire Run

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.1
Denied Del/Veh (s)	0.1	0.1	3.1	0.6	0.0	0.0	0.3
Total Delay (hr)	0.2	0.0	0.0	0.1	0.3	0.0	0.7
Total Del/Veh (s)	19.4	9.4	4.8	0.8	1.5	0.6	1.7
Vehicles Entered	32	8	23	637	702	38	1440
Vehicles Exited	32	8	23	638	702	38	1441
Hourly Exit Rate	32	8	23	638	702	38	1441
Input Volume	33	5	22	635	705	35	1434
% of Volume	98	160	103	101	100	109	100

7: Alpine Highway (SR-74) & Town Square Access/Wells Fargo Access Performance by movement Interval

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	2.1	0.0	0.1	0.2	0.0	0.0	0.0	3.4	0.6	0.2	0.3
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2
Total Del/Veh (s)	11.8	7.7	11.1	5.9	4.4	0.9	0.2	3.4	1.4	0.1	1.6
Vehicles Entered	2	5	5	9	3	155	2	3	172	1	357
Vehicles Exited	3	5	5	9	3	156	2	3	172	1	359
Hourly Exit Rate	12	20	20	36	12	624	8	12	688	4	1436
Input Volume	11	21	18	33	16	630	7	13	684	3	1436
% of Volume	109	95	111	109	75	99	114	92	101	133	100

7: Alpine Highway (SR-74) & Town Square Access/Wells Fargo Access Performance by movement Interval

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	1.3	0.1	0.2	0.1	0.0	0.0	0.0	2.7	0.8		0.4
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2
Total Del/Veh (s)	18.3	8.4	14.3	7.2	3.9	1.0	0.1	4.4	1.5	0.0	1.8
Vehicles Entered	3	6	4	9	4	171	1	5	192	0	395
Vehicles Exited	3	6	4	9	4	170	1	5	192	1	395
Hourly Exit Rate	12	24	16	36	16	680	4	20	768	4	1580
Input Volume	12	22	19	36	17	687	7	14	744	3	1561
% of Volume	100	109	84	100	94	99	57	143	103	133	101

7: Alpine Highway (SR-74) & Town Square Access/Wells Fargo Access Performance by movement Interval

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	1.7	0.0	0.2	0.1	0.0	0.0	0.0	2.9	0.6	0.6	0.3
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2
Total Del/Veh (s)	19.6	7.0	23.8	8.7	3.7	0.9	0.1	4.6	1.4	0.1	1.9
Vehicles Entered	2	7	4	10	4	162	2	4	173	1	369
Vehicles Exited	2	7	4	10	4	162	2	4	174	1	370
Hourly Exit Rate	8	28	16	40	16	648	8	16	696	4	1480
Input Volume	11	21	18	33	16	630	7	13	684	3	1436
% of Volume	73	133	89	121	100	103	114	123	102	133	103

7: Alpine Highway (SR-74) & Town Square Access/Wells Fargo Access Performance by movement Interval

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	1.9	0.0	0.1	0.1	0.0	0.0	0.0	3.5	0.5	0.4	0.3
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2
Total Del/Veh (s)	19.0	5.3	16.1	5.9	3.0	0.9	0.1	7.4	1.3	0.0	1.6
Vehicles Entered	2	4	4	8	4	161	2	2	163	1	351
Vehicles Exited	2	4	4	8	4	161	2	2	163	1	351
Hourly Exit Rate	8	16	16	32	16	644	8	8	652	4	1404
Input Volume	11	21	18	33	16	630	7	13	684	3	1436
% of Volume	73	76	89	97	100	102	114	62	95	133	98

7: Alpine Highway (SR-74) & Town Square Access/Wells Fargo Access Performance by movement Entire

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
Denied Del/Veh (s)	1.5	0.0	0.1	0.1	0.0	0.0	0.0	2.8	0.6	0.5	0.3
Total Delay (hr)	0.0	0.0	0.1	0.1	0.0	0.2	0.0	0.0	0.3	0.0	0.7
Total Del/Veh (s)	16.7	7.2	16.0	7.2	3.7	0.9	0.1	4.4	1.4	0.1	1.7
Vehicles Entered	10	23	17	36	15	649	7	15	700	3	1475
Vehicles Exited	10	22	16	36	15	649	7	15	700	3	1473
Hourly Exit Rate	10	22	16	36	15	649	7	15	700	3	1473
Input Volume	11	21	18	34	16	644	7	13	699	3	1467
% of Volume	89	104	88	107	92	101	100	113	100	100	100

17: Highland Highway (SR-92) Performance by movement Interval #1 5:00

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.1	0.0	0.0	0.0	0.0	0.8	1.7	2.5	2.8	5.6	1.5
Denied Del/Veh (s)	2.9	1.1	2.8	0.1	0.0	0.1	109.8	111.5	117.0	189.5	188.1	198.9
Total Delay (hr)	0.2	1.5	0.1	0.6	1.3	0.1	0.9	1.1	1.3	0.7	0.8	0.2
Total Del/Veh (s)	34.3	16.0	8.0	79.7	17.0	10.3	151.2	89.8	72.4	78.9	44.3	32.9
Vehicles Entered	24	322	47	23	246	34	19	40	59	32	66	18
Vehicles Exited	23	326	48	23	251	34	15	38	56	31	65	17
Hourly Exit Rate	92	1304	192	92	1004	136	60	152	224	124	260	68
Input Volume	98	1306	196	98	1002	134	98	196	300	210	391	98
% of Volume	94	100	98	94	100	101	61	78	75	59	66	69

17: Highland Highway (SR-92) Performance by movement Interval #1 5:00

Movement	All
Denied Delay (hr)	15.0
Denied Del/Veh (s)	52.0
Total Delay (hr)	8.8
Total Del/Veh (s)	31.9
Vehicles Entered	930
Vehicles Exited	927
Hourly Exit Rate	3708
Input Volume	4127
% of Volume	90

17: Highland Highway (SR-92) Performance by movement Interval #2 5:15

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.2	0.1	0.0	0.0	0.0	2.8	6.0	9.1	8.9	16.3	4.0
Denied Del/Veh (s)	4.2	2.3	4.1	0.0	0.0	0.1	325.7	322.9	323.6	405.9	403.7	404.5
Total Delay (hr)	0.3	1.6	0.1	0.5	1.3	0.1	1.5	0.9	1.3	1.0	0.8	0.1
Total Del/Veh (s)	47.1	15.7	6.5	69.5	16.2	11.1	254.1	94.0	88.9	101.0	47.6	40.2
Vehicles Entered	24	360	55	24	269	33	15	32	46	30	58	12
Vehicles Exited	25	362	53	20	266	32	15	32	47	30	58	12
Hourly Exit Rate	100	1448	212	80	1064	128	60	128	188	120	232	48
Input Volume	106	1419	213	106	1090	146	106	213	327	229	426	106
% of Volume	94	102	100	75	98	88	57	60	57	52	54	45

17: Highland Highway (SR-92) Performance by movement Interval #2 5:15

Movement	All
Denied Delay (hr)	47.4
Denied Del/Veh (s)	139.1
Total Delay (hr)	9.7
Total Del/Veh (s)	33.9
Vehicles Entered	958
Vehicles Exited	952
Hourly Exit Rate	3808
Input Volume	4487
% of Volume	85

17: Highland Highway (SR-92) Performance by movement Interval #3 5:30

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.1	0.0	0.0	0.0	0.0	5.6	11.7	17.2	15.6	26.5	7.6
Denied Del/Veh (s)	2.9	1.2	2.8	0.1	0.0	0.1	475.9	493.7	476.1	541.1	535.4	560.1
Total Delay (hr)	0.3	1.3	0.1	0.8	1.2	0.1	1.7	1.0	1.3	0.8	0.9	0.2
Total Del/Veh (s)	44.1	13.3	7.2	85.6	15.6	11.3	290.9	103.2	90.8	87.9	52.4	42.4
Vehicles Entered	21	333	52	25	255	34	14	30	46	30	57	14
Vehicles Exited	21	324	53	28	255	35	13	30	46	31	58	14
Hourly Exit Rate	84	1296	212	112	1020	140	52	120	184	124	232	56
Input Volume	98	1306	196	98	1002	134	98	196	300	210	391	98
% of Volume	86	99	108	114	102	104	53	61	61	59	59	57

17: Highland Highway (SR-92) Performance by movement Interval #3 5:30

Movement	All
Denied Delay (hr)	84.3
Denied Del/Veh (s)	232.0
Total Delay (hr)	9.6
Total Del/Veh (s)	35.2
Vehicles Entered	911
Vehicles Exited	908
Hourly Exit Rate	3632
Input Volume	4127
% of Volume	88

17: Highland Highway (SR-92) Performance by movement Interval #4 5:45

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.1	0.0	0.0	0.0	0.0	7.7	15.3	24.1	21.0	35.3	10.0
Denied Del/Veh (s)	3.4	1.5	3.2	0.0	0.0	0.1	531.8	519.0	545.3	591.1	590.9	577.8
Total Delay (hr)	0.3	1.7	0.1	0.5	1.4	0.1	1.2	1.0	1.3	1.0	0.7	0.2
Total Del/Veh (s)	39.8	17.5	6.1	72.9	18.7	12.4	160.3	86.7	75.7	96.9	43.0	30.6
Vehicles Entered	23	327	48	23	248	31	19	40	57	35	57	18
Vehicles Exited	22	331	48	21	249	31	23	39	55	34	56	18
Hourly Exit Rate	88	1324	192	84	996	124	92	156	220	136	224	72
Input Volume	98	1306	196	98	1002	134	98	196	300	210	391	98
% of Volume	90	101	98	86	99	93	94	80	73	65	57	73

17: Highland Highway (SR-92) Performance by movement Interval #4 5:45

Movement	All
Denied Delay (hr)	113.5
Denied Del/Veh (s)	287.0
Total Delay (hr)	9.6
Total Del/Veh (s)	34.3
Vehicles Entered	926
Vehicles Exited	927
Hourly Exit Rate	3708
Input Volume	4127
% of Volume	90

17: Highland Highway (SR-92) Performance by movement Entire Run

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.1	0.6	0.2	0.0	0.0	0.0	16.8	34.6	52.9	48.4	83.6	23.1
Denied Del/Veh (s)	3.3	1.6	3.3	0.0	0.0	0.1	604.8	602.1	613.9	788.4	760.1	784.9
Total Delay (hr)	1.1	6.0	0.4	2.4	5.3	0.5	5.3	4.0	5.2	3.6	3.3	0.6
Total Del/Veh (s)	42.6	16.0	7.1	88.3	18.2	12.2	272.8	100.6	87.7	98.3	48.9	37.6
Vehicles Entered	93	1341	202	95	1018	133	67	141	208	128	238	62
Vehicles Exited	92	1343	203	92	1022	132	66	140	204	125	237	62
Hourly Exit Rate	92	1343	203	92	1022	132	66	140	204	125	237	62
Input Volume	100	1334	200	100	1024	137	100	200	307	215	400	100
% of Volume	92	101	101	92	100	96	66	70	67	58	59	62

17: Highland Highway (SR-92) Performance by movement Entire Run

Movement	All
Denied Delay (hr)	260.3
Denied Del/Veh (s)	221.8
Total Delay (hr)	37.6
Total Del/Veh (s)	35.7
Vehicles Entered	3726
Vehicles Exited	3718
Hourly Exit Rate	3718
Input Volume	4217
% of Volume	88

22: Highland Highway (SR-92) Performance by movement Interval #1 5:00

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.0	0.0	0.1
Denied Del/Veh (s)	0.1	0.0	0.1	2.4	0.2	2.3	8.6	6.6	9.1	3.5	1.6	3.4
Total Delay (hr)	0.8	2.5	0.4	3.0	1.5	0.1	0.6	0.5	0.1	0.5	0.1	0.2
Total Del/Veh (s)	67.5	30.4	13.9	261.1	34.2	9.1	34.1	20.6	12.0	37.7	17.8	7.5
Vehicles Entered	41	282	106	38	147	23	64	72	36	47	26	93
Vehicles Exited	38	272	106	21	133	23	67	78	36	50	27	94
Hourly Exit Rate	152	1088	424	84	532	92	268	312	144	200	108	376
Input Volume	181	1210	475	147	585	98	245	294	147	196	98	387
% of Volume	84	90	89	57	91	94	109	106	98	102	110	97

22: Highland Highway (SR-92) Performance by movement Interval #1 5:00

Movement	All
Denied Delay (hr)	0.6
Denied Del/Veh (s)	2.1
Total Delay (hr)	10.4
Total Del/Veh (s)	36.4
Vehicles Entered	975
Vehicles Exited	945
Hourly Exit Rate	3780
Input Volume	4063
% of Volume	93

22: Highland Highway (SR-92) Performance by movement Interval #2 5:15

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.1
Denied Del/Veh (s)	0.1	0.0	0.1	2.4	0.6	2.2	3.9	2.3	4.0	3.4	1.6	3.4
Total Delay (hr)	0.8	2.2	0.4	7.6	3.6	0.3	0.5	0.6	0.2	0.8	0.1	0.3
Total Del/Veh (s)	60.1	25.3	12.0	457.7	71.5	40.4	29.5	25.7	14.0	51.6	20.8	11.3
Vehicles Entered	42	288	108	40	161	27	64	82	40	54	21	105
Vehicles Exited	44	306	109	21	160	26	60	78	39	48	20	103
Hourly Exit Rate	176	1224	436	84	640	104	240	312	156	192	80	412
Input Volume	197	1316	516	160	636	106	266	319	160	213	106	420
% of Volume	89	93	84	52	101	98	90	98	98	90	75	98

22: Highland Highway (SR-92) Performance by movement Interval #2 5:15

Movement	All
Denied Delay (hr)	0.4
Denied Del/Veh (s)	1.4
Total Delay (hr)	17.5
Total Del/Veh (s)	56.2
Vehicles Entered	1032
Vehicles Exited	1014
Hourly Exit Rate	4056
Input Volume	4415
% of Volume	92

22: Highland Highway (SR-92) Performance by movement Interval #3 5:30

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.0	0.1
Denied Del/Veh (s)	0.0	0.0	0.2	7.1	6.7	6.9	4.9	2.6	5.6	4.6	2.5	4.4
Total Delay (hr)	1.0	2.3	0.4	12.0	4.3	0.3	0.5	0.5	0.1	0.7	0.1	0.3
Total Del/Veh (s)	82.7	28.4	11.9	570.4	89.0	40.1	30.0	22.3	11.4	46.7	19.7	10.4
Vehicles Entered	41	275	112	37	152	27	61	74	37	49	24	93
Vehicles Exited	40	257	112	20	142	26	64	78	38	55	25	95
Hourly Exit Rate	160	1028	448	80	568	104	256	312	152	220	100	380
Input Volume	181	1210	475	147	585	98	245	294	147	196	98	387
% of Volume	88	85	94	54	97	106	104	106	103	112	102	98

22: Highland Highway (SR-92) Performance by movement Interval #3 5:30

Movement	All
Denied Delay (hr)	0.8
Denied Del/Veh (s)	2.9
Total Delay (hr)	22.7
Total Del/Veh (s)	74.9
Vehicles Entered	982
Vehicles Exited	952
Hourly Exit Rate	3808
Input Volume	4063
% of Volume	94

22: Highland Highway (SR-92) Performance by movement Interval #4 5:45

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.7	2.7	0.5	0.1	0.0	0.0	0.1	0.0	0.1
Denied Del/Veh (s)	0.1	0.0	0.1	62.0	64.7	67.0	3.5	1.7	3.6	3.8	2.0	3.8
Total Delay (hr)	0.7	2.0	0.4	15.4	3.8	0.3	0.6	0.5	0.1	0.7	0.2	0.3
Total Del/Veh (s)	58.3	23.3	11.1	621.6	87.7	36.5	33.3	23.3	12.3	47.1	23.9	10.9
Vehicles Entered	39	277	109	33	124	23	61	74	37	51	26	100
Vehicles Exited	42	293	111	23	141	25	56	69	37	48	24	99
Hourly Exit Rate	168	1172	444	92	564	100	224	276	148	192	96	396
Input Volume	181	1210	475	147	585	98	245	294	147	196	98	387
% of Volume	93	97	93	63	96	102	91	94	101	98	98	102

22: Highland Highway (SR-92) Performance by movement Interval #4 5:45

Movement	All
Denied Delay (hr)	4.2
Denied Del/Veh (s)	15.2
Total Delay (hr)	24.8
Total Del/Veh (s)	81.8
Vehicles Entered	954
Vehicles Exited	968
Hourly Exit Rate	3872
Input Volume	4063
% of Volume	95

22: Highland Highway (SR-92) Performance by movement Entire Run

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.8	3.0	0.6	0.4	0.3	0.2	0.2	0.1	0.4
Denied Del/Veh (s)	0.1	0.0	0.1	18.7	17.7	20.5	5.3	3.2	5.5	3.8	1.9	3.8
Total Delay (hr)	3.4	9.0	1.6	38.1	13.1	1.0	2.3	2.0	0.5	2.7	0.6	1.1
Total Del/Veh (s)	73.2	28.4	12.7	908.0	80.1	34.7	32.7	23.5	12.5	48.0	20.9	10.3
Vehicles Entered	163	1122	435	147	584	101	250	302	151	201	97	391
Vehicles Exited	164	1127	437	85	576	101	248	303	150	200	97	392
Hourly Exit Rate	164	1127	437	85	576	101	248	303	150	200	97	392
Input Volume	185	1236	485	150	598	100	250	300	150	200	100	395
% of Volume	89	91	90	57	96	101	99	101	100	100	97	99

22: Highland Highway (SR-92) Performance by movement Entire Run

Movement	All
Denied Delay (hr)	6.0
Denied Del/Veh (s)	5.4
Total Delay (hr)	75.4
Total Del/Veh (s)	67.8
Vehicles Entered	3944
Vehicles Exited	3880
Hourly Exit Rate	3880
Input Volume	4151
% of Volume	93

Total Network Performance By Interval

Interval Start	5:00	5:15	5:30	5:45	All
Denied Delay (hr)	15.7	47.9	85.2	117.8	266.5
Denied Del/Veh (s)	33.2	88.3	155.1	201.9	138.0
Total Delay (hr)	22.9	31.3	35.9	38.0	128.1
Total Del/Veh (s)	45.6	59.1	68.9	74.4	69.5
Vehicles Entered	1589	1681	1579	1566	6419
Vehicles Exited	1577	1610	1605	1538	6336
Hourly Exit Rate	6308	6440	6420	6152	6336
Input Volume	24217	26311	24217	24217	24740
% of Volume	26	24	27	25	26

Intersection: 1: Town Center Boulevard & Highland Highway (SR-92), Interval #1

Movement	EB	EB	WB	WB	NB
Directions Served	T	TR	L	T	LR
Maximum Queue (ft)	3	4	58	2	124
Average Queue (ft)	0	1	27	0	66
95th Queue (ft)	7	8	70	4	131
Link Distance (ft)	211	211		1044	409
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	185				
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 1: Town Center Boulevard & Highland Highway (SR-92), Interval #2

Movement	EB	EB	WB	WB	NB
Directions Served	T	TR	L	T	LR
Maximum Queue (ft)	6	4	50	6	114
Average Queue (ft)	1	0	22	1	58
95th Queue (ft)	12	0	55	11	120
Link Distance (ft)	211	211		1044	409
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	185				
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 1: Town Center Boulevard & Highland Highway (SR-92), Interval #3

Movement	EB	B20	WB	WB	NB
Directions Served	T	T	L	T	LR
Maximum Queue (ft)	6	3	59	11	104
Average Queue (ft)	1	0	25	2	60
95th Queue (ft)	12	7	63	17	114
Link Distance (ft)	211	2870		1044	409
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	185				
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 1: Town Center Boulevard & Highland Highway (SR-92), Interval #4

Movement	EB	WB	WB	NB
Directions Served	T	L	T	LR
Maximum Queue (ft)	2	53	18	120
Average Queue (ft)	0	23	3	60
95th Queue (ft)	5	58	37	138
Link Distance (ft)	211		1044	409
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		185		
Storage Blk Time (%)			0	
Queuing Penalty (veh)			0	

Intersection: 1: Town Center Boulevard & Highland Highway (SR-92), All Intervals

Movement	EB	EB	B20	WB	WB	NB
Directions Served	T	TR	T	L	T	LR
Maximum Queue (ft)	17	4	3	82	30	161
Average Queue (ft)	1	0	0	24	1	61
95th Queue (ft)	9	4	3	62	21	127
Link Distance (ft)	211	211	2870		1044	409
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)				185		
Storage Blk Time (%)					0	
Queuing Penalty (veh)					0	

Intersection: 2: Town Center Boulevard & Toscana Access/Town Square Access, Interval #1

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	35	33	3	3
Average Queue (ft)	16	13	0	1
95th Queue (ft)	41	38	6	9
Link Distance (ft)	445	1009	322	409
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: Town Center Boulevard & Toscana Access/Town Square Access, Interval #2

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	31	30	3
Average Queue (ft)	11	13	0
95th Queue (ft)	35	38	6
Link Distance (ft)	445	1009	409
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: Town Center Boulevard & Toscana Access/Town Square Access, Interval #3

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	30	33	9
Average Queue (ft)	15	17	1
95th Queue (ft)	40	43	12
Link Distance (ft)	445	1009	409
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: Town Center Boulevard & Toscana Access/Town Square Access, Interval #4

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	28	37	3	3
Average Queue (ft)	15	13	0	0
95th Queue (ft)	40	39	6	7
Link Distance (ft)	445	1009	322	409
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: Town Center Boulevard & Toscana Access/Town Square Access, All Intervals

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	35	42	6	12
Average Queue (ft)	14	14	0	1
95th Queue (ft)	39	40	4	9
Link Distance (ft)	445	1009	322	409
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: 10890 North/10890 North & Town Center Boulevard, Interval #1

Movement	EB	WB
Directions Served	LT	TR
Maximum Queue (ft)	38	31
Average Queue (ft)	25	17
95th Queue (ft)	50	42
Link Distance (ft)	221	130
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: 10890 North/10890 North & Town Center Boulevard, Interval #2

Movement	EB	WB
Directions Served	LT	TR
Maximum Queue (ft)	43	31
Average Queue (ft)	23	20
95th Queue (ft)	50	44
Link Distance (ft)	221	130
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: 10890 North/10890 North & Town Center Boulevard, Interval #3

Movement	EB	WB
Directions Served	LT	TR
Maximum Queue (ft)	36	36
Average Queue (ft)	22	21
95th Queue (ft)	47	45
Link Distance (ft)	221	130
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: 10890 North/10890 North & Town Center Boulevard, Interval #4

Movement	EB	WB
Directions Served	LT	TR
Maximum Queue (ft)	39	33
Average Queue (ft)	22	18
95th Queue (ft)	48	43
Link Distance (ft)	221	130
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: 10890 North/10890 North & Town Center Boulevard, All Intervals

Movement	EB	WB
Directions Served	LT	TR
Maximum Queue (ft)	46	38
Average Queue (ft)	23	19
95th Queue (ft)	49	44
Link Distance (ft)	221	130
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: 5400 West/5400 West & Parkway Drive , Interval #1

Movement	WB
Directions Served	LR
Maximum Queue (ft)	28
Average Queue (ft)	8
95th Queue (ft)	30
Link Distance (ft)	783
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: 5400 West/5400 West & Parkway Drive , Interval #2

Movement	WB
Directions Served	LR
Maximum Queue (ft)	25
Average Queue (ft)	7
95th Queue (ft)	29
Link Distance (ft)	783
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: 5400 West/5400 West & Parkway Drive , Interval #3

Movement	WB
Directions Served	LR
Maximum Queue (ft)	27
Average Queue (ft)	7
95th Queue (ft)	27
Link Distance (ft)	783
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: 5400 West/5400 West & Parkway Drive , Interval #4

Movement	WB
Directions Served	LR
Maximum Queue (ft)	28
Average Queue (ft)	5
95th Queue (ft)	24
Link Distance (ft)	783
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: 5400 West/5400 West & Parkway Drive , All Intervals

Movement	WB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	7
95th Queue (ft)	28
Link Distance (ft)	783
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: 5400 West & Park Access, Interval #1

Movement	
Directions Served	
Maximum Queue (ft)	
Average Queue (ft)	
95th Queue (ft)	
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: 5400 West & Park Access, Interval #2

Movement	NB
Directions Served	LT
Maximum Queue (ft)	3
Average Queue (ft)	0
95th Queue (ft)	7
Link Distance (ft)	667
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: 5400 West & Park Access, Interval #3

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 5: 5400 West & Park Access, Interval #4

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 5: 5400 West & Park Access, All Intervals

Movement	NB
Directions Served	LT
Maximum Queue (ft)	3
Average Queue (ft)	0
95th Queue (ft)	3
Link Distance (ft)	667
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Alpine Highway (SR-74) & Parkway Drive , Interval #1

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	43	26
Average Queue (ft)	25	9
95th Queue (ft)	50	29
Link Distance (ft)	783	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		150
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Alpine Highway (SR-74) & Parkway Drive , Interval #2

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	69	30
Average Queue (ft)	35	11
95th Queue (ft)	71	33
Link Distance (ft)	783	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		150
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Alpine Highway (SR-74) & Parkway Drive , Interval #3

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	57	27
Average Queue (ft)	26	11
95th Queue (ft)	59	32
Link Distance (ft)	783	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	150	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Alpine Highway (SR-74) & Parkway Drive , Interval #4

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	47	30
Average Queue (ft)	25	11
95th Queue (ft)	53	33
Link Distance (ft)	783	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	150	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Alpine Highway (SR-74) & Parkway Drive , All Intervals

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	73	34
Average Queue (ft)	28	10
95th Queue (ft)	59	32
Link Distance (ft)	783	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	150	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Alpine Highway (SR-74) & Town Square Access/Wells Fargo Access, Interval #1

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	LTR	L	L
Maximum Queue (ft)	24	35	51	22	19
Average Queue (ft)	10	16	32	4	4
95th Queue (ft)	33	42	55	19	19
Link Distance (ft)		1009	326		
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	65			80	80
Storage Blk Time (%)		0			
Queuing Penalty (veh)		0			

Intersection: 7: Alpine Highway (SR-74) & Town Square Access/Wells Fargo Access, Interval #2

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	LTR	L	L
Maximum Queue (ft)	31	39	50	23	28
Average Queue (ft)	10	17	31	6	8
95th Queue (ft)	35	45	56	23	30
Link Distance (ft)		1009	326		
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	65			80	80
Storage Blk Time (%)	0	0			
Queuing Penalty (veh)	0	0			

Intersection: 7: Alpine Highway (SR-74) & Town Square Access/Wells Fargo Access, Interval #3

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	LTR	L	L
Maximum Queue (ft)	32	40	62	23	27
Average Queue (ft)	9	20	35	5	7
95th Queue (ft)	33	48	68	21	27
Link Distance (ft)		1009	326		
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	65			80	80
Storage Blk Time (%)		0			
Queuing Penalty (veh)		0			

Intersection: 7: Alpine Highway (SR-74) & Town Square Access/Wells Fargo Access, Interval #4

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	LTR	L	L
Maximum Queue (ft)	32	31	49	20	28
Average Queue (ft)	9	14	28	5	6
95th Queue (ft)	32	39	57	22	26
Link Distance (ft)		1009	326		
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	65			80	80
Storage Blk Time (%)	0				
Queuing Penalty (veh)	0				

Intersection: 7: Alpine Highway (SR-74) & Town Square Access/Wells Fargo Access, All Intervals

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	LTR	L	L
Maximum Queue (ft)	40	49	68	31	33
Average Queue (ft)	9	17	31	5	6
95th Queue (ft)	33	44	60	21	26
Link Distance (ft)		1009	326		
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	65			80	80
Storage Blk Time (%)	0	0			
Queuing Penalty (veh)	0	0			

Intersection: 17: Highland Highway (SR-92), Interval #1

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	L	TR	L	TR
Maximum Queue (ft)	193	389	379	206	159	317	327	204	200	286	139	130
Average Queue (ft)	72	239	182	62	87	173	181	54	111	267	94	120
95th Queue (ft)	174	441	402	182	177	346	350	174	226	301	166	171
Link Distance (ft)		385	385			2870	2870		254	254	115	115
Upstream Blk Time (%)		6	2						1	74	38	62
Queuing Penalty (veh)		0	0						0	0	0	0
Storage Bay Dist (ft)	150			150	120			120				
Storage Blk Time (%)	0	16	11	0	9	13	16					
Queuing Penalty (veh)	0	16	22	2	45	13	22					

Intersection: 17: Highland Highway (SR-92), Interval #2

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	L	TR	L	TR
Maximum Queue (ft)	176	402	387	196	171	370	389	165	209	281	140	132
Average Queue (ft)	80	250	197	67	88	164	170	44	154	253	109	114
95th Queue (ft)	186	446	412	201	174	347	354	150	312	343	168	177
Link Distance (ft)		385	385			2870	2870		254	254	115	115
Upstream Blk Time (%)		8	5						20	74	53	58
Queuing Penalty (veh)		0	0						0	0	0	0
Storage Bay Dist (ft)	150			150	120			120				
Storage Blk Time (%)	3	16	10		10	11	13					
Queuing Penalty (veh)	23	17	21		51	12	19					

Intersection: 17: Highland Highway (SR-92), Interval #3

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	L	TR	L	TR
Maximum Queue (ft)	163	362	337	166	193	324	331	154	229	290	134	136
Average Queue (ft)	67	205	165	57	116	164	164	47	170	254	100	123
95th Queue (ft)	153	375	344	166	216	349	348	159	323	349	164	158
Link Distance (ft)		385	385			2870	2870		254	254	115	115
Upstream Blk Time (%)		3	2						29	72	40	64
Queuing Penalty (veh)		0	0						0	0	0	0
Storage Bay Dist (ft)	150			150	120			120				
Storage Blk Time (%)	2	13	8		22	10	11					
Queuing Penalty (veh)	12	12	16		105	10	15					

Intersection: 17: Highland Highway (SR-92), Interval #4

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	L	TR	L	TR
Maximum Queue (ft)	212	391	383	215	185	366	377	174	203	285	146	138
Average Queue (ft)	78	248	192	70	94	167	178	58	143	265	122	107
95th Queue (ft)	195	447	408	202	190	361	369	183	289	326	165	181
Link Distance (ft)		385	385			2870	2870		254	254	115	115
Upstream Blk Time (%)		7	4						14	78	64	49
Queuing Penalty (veh)		0	0						0	0	0	0
Storage Bay Dist (ft)	150			150	120			120				
Storage Blk Time (%)	0	18	12		12	13	16	0				
Queuing Penalty (veh)	2	18	23		58	13	21	0				

Intersection: 17: Highland Highway (SR-92), All Intervals

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	L	TR	L	TR
Maximum Queue (ft)	249	408	406	250	214	471	487	220	257	302	160	141
Average Queue (ft)	74	236	184	64	96	167	174	51	144	260	106	116
95th Queue (ft)	178	430	393	188	191	351	356	167	293	335	169	175
Link Distance (ft)		385	385			2870	2870		254	254	115	115
Upstream Blk Time (%)		6	3						16	74	49	58
Queuing Penalty (veh)		0	0						0	0	0	0
Storage Bay Dist (ft)	150			150	120			120				
Storage Blk Time (%)	1	16	10	0	13	12	14	0				
Queuing Penalty (veh)	9	16	20	0	65	12	19	0				

Intersection: 22: Highland Highway (SR-92), Interval #1

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	L
Maximum Queue (ft)	288	504	543	290	239	555	536	53	204	237	130	188
Average Queue (ft)	155	288	308	176	202	343	303	22	155	167	60	120
95th Queue (ft)	311	514	557	364	287	671	649	52	237	265	151	193
Link Distance (ft)		1044	1044			1817	1817			232		
Upstream Blk Time (%)									1	5	0	
Queuing Penalty (veh)									0	0	0	
Storage Bay Dist (ft)	140			140	140			140	120		120	120
Storage Blk Time (%)	15	29	32	2	74	7	2		20	11	1	8
Queuing Penalty (veh)	89	52	153	14	217	10	2		89	44	5	39

Intersection: 22: Highland Highway (SR-92), Interval #1

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	166	127
Average Queue (ft)	74	79
95th Queue (ft)	181	146
Link Distance (ft)	354	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		120
Storage Blk Time (%)	0	2
Queuing Penalty (veh)	2	5

Intersection: 22: Highland Highway (SR-92), Interval #2

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	L
Maximum Queue (ft)	274	491	545	290	240	1187	1143	111	215	242	198	199
Average Queue (ft)	161	311	334	169	235	867	824	36	146	166	80	132
95th Queue (ft)	302	492	533	349	251	1508	1442	117	233	271	199	215
Link Distance (ft)		1044	1044			1817	1817			232		
Upstream Blk Time (%)						2	1		0	3	0	
Queuing Penalty (veh)						0	0		0	0	0	
Storage Bay Dist (ft)	140			140	140			140	120		120	120
Storage Blk Time (%)	15	25	29	2	99	8	5	0	12	16	1	21
Queuing Penalty (veh)	93	49	150	11	316	13	5	0	59	68	6	112

Intersection: 22: Highland Highway (SR-92), Interval #2

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	235	143
Average Queue (ft)	82	96
95th Queue (ft)	224	159
Link Distance (ft)	354	
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		120
Storage Blk Time (%)	0	6
Queuing Penalty (veh)	1	20

Intersection: 22: Highland Highway (SR-92), Interval #3

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	L
Maximum Queue (ft)	264	418	453	289	240	1493	1459	114	188	220	157	186
Average Queue (ft)	161	274	288	165	238	1288	1249	34	141	164	70	130
95th Queue (ft)	308	469	504	349	244	1894	1874	101	213	249	165	214
Link Distance (ft)		1044	1044			1817	1817			232		
Upstream Blk Time (%)						11	6		1	4	0	
Queuing Penalty (veh)						0	0		0	0	0	
Storage Bay Dist (ft)	140			140	140			140	120		120	120
Storage Blk Time (%)	26	26	29	1	100	9	6		14	13	0	19
Queuing Penalty (veh)	152	47	139	7	291	13	6		61	51	2	90

Intersection: 22: Highland Highway (SR-92), Interval #3

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	242	130
Average Queue (ft)	113	80
95th Queue (ft)	297	146
Link Distance (ft)	354	
Upstream Blk Time (%)	2	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		120
Storage Blk Time (%)	1	3
Queuing Penalty (veh)	3	9

Intersection: 22: Highland Highway (SR-92), Interval #4

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	L
Maximum Queue (ft)	264	393	413	288	240	1667	1629	70	198	219	155	198
Average Queue (ft)	145	280	302	185	238	1542	1507	27	128	138	63	121
95th Queue (ft)	274	429	460	361	244	2028	2010	79	213	243	158	214
Link Distance (ft)		1044	1044			1817	1817			232		
Upstream Blk Time (%)						32	20		0	2	0	
Queuing Penalty (veh)						0	0		0	0	0	
Storage Bay Dist (ft)	140			140	140			140	120		120	120
Storage Blk Time (%)	13	21	26	2	100	7	5		14	11	0	19
Queuing Penalty (veh)	78	38	121	9	291	10	5		62	45	1	92

Intersection: 22: Highland Highway (SR-92), Interval #4

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	234	140
Average Queue (ft)	95	85
95th Queue (ft)	253	152
Link Distance (ft)	354	
Upstream Blk Time (%)	1	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		120
Storage Blk Time (%)	0	6
Queuing Penalty (veh)	3	17

Intersection: 22: Highland Highway (SR-92), All Intervals

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	L
Maximum Queue (ft)	290	578	622	290	240	1674	1631	171	215	252	220	218
Average Queue (ft)	155	288	308	174	228	1010	971	30	142	159	68	126
95th Queue (ft)	299	480	518	356	279	1928	1894	91	226	259	170	210
Link Distance (ft)		1044	1044			1817	1817			232		
Upstream Blk Time (%)						11	7		0	3	0	
Queuing Penalty (veh)						0	0		0	0	0	
Storage Bay Dist (ft)	140			140	140			140	120		120	120
Storage Blk Time (%)	17	25	29	2	93	8	4	0	15	13	1	17
Queuing Penalty (veh)	103	47	141	10	279	12	4	0	68	52	3	84

Intersection: 22: Highland Highway (SR-92), All Intervals

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	316	144
Average Queue (ft)	91	85
95th Queue (ft)	243	152
Link Distance (ft)	354	
Upstream Blk Time (%)	1	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		120
Storage Blk Time (%)	0	4
Queuing Penalty (veh)	2	13

Network Summary

Network wide Queuing Penalty, Interval #1: 841
 Network wide Queuing Penalty, Interval #2: 1047
 Network wide Queuing Penalty, Interval #3: 1042
 Network wide Queuing Penalty, Interval #4: 906
 Network wide Queuing Penalty, All Intervals: 959

SimTraffic LOS Report

Project: Highland - Blackstone TIS
Analysis Period: Existing (2015) Plus Project Conditions
Time Period: p.m. Peak Hour **Project #:** UT15-763

Intersection: Town Center Boulevard & Highland Highway (SR-92)
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	33	32	98	114.8	F
	T	17	17	99	0.6	A
	R	38	38	101	84.9	F
	Subtotal	88	87	99	79.4	F
EB	T	1,860	1,672	90	2.4	A
	R	34	32	95	0.4	A
	Subtotal	1,894	1,704	90	2.4	A
WB	L	34	30	89	42.5	E
	T	1,233	1,196	97	8.3	A
	Subtotal	1,267	1,226	97	9.1	A
Total		3,248	3,017	93	7.4	A

Intersection: Town Center Boulevard & Toscana Access/Town Square Access
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	3	3	100	2.0	A
	T	56	59	105	0.5	A
	R	8	10	121	0.4	A
	Subtotal	67	72	107	0.5	A
SB	L	14	13	91	2.1	A
	T	48	44	92	0.7	A
	R	7	6	86	0.5	A
	Subtotal	69	63	91	1.0	A
EB	L	14	13	91	4.5	A
	T	3	2	67	5.3	A
	R	3	4	133	2.8	A
	Subtotal	20	19	95	4.2	A
WB	L	4	3	75	5.1	A
	T	2	2	100	6.0	A
	R	16	15	92	3.1	A
	Subtotal	22	20	91	3.7	A
Total		179	174	97	1.5	A

SimTraffic LOS Report

Project: Highland - Blackstone TIS
Analysis Period: Existing (2015) Plus Project Conditions
Time Period: p.m. Peak Hour **Project #:** UT15-763

Intersection: 10890 North/10890 North & Town Center Boulevard
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
SB	L	13	11	83	0.4	A
	R	56	53	94	0.3	A
	Subtotal	69	64	93	0.3	A
EB	L	34	36	107	4.0	A
	T	6	6	100	4.5	A
	Subtotal	40	42	105	4.1	A
WB	T	4	4	94	4.8	A
	R	23	23	99	2.9	A
	Subtotal	27	27	100	3.2	A
Total		137	133	97	2.1	A

Intersection: 5400 West/5400 West & Parkway Drive
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	20	19	97	0.1	A
	R	6	6	100	0.0	A
	Subtotal	26	25	96	0.1	A
SB	L	5	4	80	1.2	A
	T	14	13	91	0.0	A
	Subtotal	19	17	89	0.3	A
WB	L	2	2	100	3.7	A
	R	8	8	97	2.9	A
	Subtotal	10	10	100	3.1	A
Total		55	52	95	0.7	A

SimTraffic LOS Report

Project: Highland - Blackstone TIS
Analysis Period: Existing (2015) Plus Project Conditions
Time Period: p.m. Peak Hour **Project #:** UT15-763

Intersection: 5400 West & Park Access/West Access
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	6	6	100	1.4	A
	T	24	22	93	0.1	A
	R	4	4	100	0.0	A
	Subtotal	34	32	94	0.3	A
SB	L	2	2	100	1.2	A
	T	13	12	91	0.1	A
	R	1	1	100	0.0	A
	Subtotal	16	15	94	0.2	A
WB	L	2	1	50	4.2	A
	R	1	2	200	2.3	A
	Subtotal	3	3	100	2.9	A
Total		53	50	94	0.4	A

Intersection: Southwest Access & Parkway Drive
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	1	1	100	3.0	A
	R	4	4	100	3.2	A
	Subtotal	5	5	100	3.2	A
SB	L	1	0	0		
	R	2	3	150	2.7	A
	Subtotal	3	3	100	2.7	A
EB	L	3	2	67	1.8	A
	T	4	4	100	0.1	A
	R	4	4	100	0.1	A
	Subtotal	11	10	91	0.4	A
WB	L	4	2	50	1.7	A
	T	56	58	103	0.3	A
	R	6	7	117	0.3	A
	Subtotal	66	67	102	0.3	A
Total		86	85	99	0.6	A

SimTraffic LOS Report

Project: Highland - Blackstone TIS
Analysis Period: Existing (2015) Plus Project Conditions
Time Period: p.m. Peak Hour **Project #:** UT15-763

Intersection: Alpine Highway (SR-74) & Parkway Drive
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	28	28	101	4.2	A
	T	636	633	100	0.9	A
	Subtotal	664	661	100	1.0	A
SB	T	706	712	101	2.0	A
	R	39	39	101	0.9	A
	Subtotal	745	751	101	1.9	A
EB	L	36	36	101	25.4	D
	R	7	9	129	9.2	A
	Subtotal	43	45	105	22.2	C
Total		1,451	1,457	100	2.1	A

Intersection: Alpine Highway (SR-74) & Town Square Access/Wells Fargo Access
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	17	16	93	4.2	A
	T	647	649	100	0.9	A
	R	7	6	86	0.2	A
	Subtotal	671	671	100	1.0	A
SB	L	13	12	91	3.6	A
	T	703	712	101	1.6	A
	R	9	9	97	0.1	A
	Subtotal	725	733	101	1.6	A
EB	L	15	14	92	15.3	C
	T	1	1	100	0.0	A
	R	22	23	103	7.2	A
	Subtotal	38	38	100	10.0	A
WB	L	18	15	82	17.9	C
	R	34	34	101	7.3	A
	Subtotal	52	49	94	10.5	B
Total		1,488	1,491	100	1.8	A

SimTraffic LOS Report

Project: Highland - Blackstone TIS
Analysis Period: Existing (2015) Plus Project Conditions
Time Period: p.m. Peak Hour **Project #:** UT15-763

Intersection: Northeast Access & Town Square Access
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	3	2	67	4.1	A
	R	5	5	100	2.8	A
	Subtotal	8	7	88	3.2	A
EB	T	32	30	94	0.2	A
	R	7	7	100	0.1	A
	Subtotal	39	37	95	0.2	A
WB	L	7	6	86	1.9	A
	T	20	19	97	0.3	A
	Subtotal	27	25	93	0.7	A
Total		73	69	94	0.7	A

Intersection:
Type:

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
Total						

1: Town Center Boulevard & Highland Highway (SR-92) Performance by movement Interval #1 5:00

Movement	EBT	EBR	WBL	WBT	NBL	NBT	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.1	0.4	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.3	0.0	0.1	0.6	0.2	0.0	0.2	1.4
Total Del/Veh (s)	2.3	0.4	45.1	7.4	85.8	0.3	70.1	6.8
Vehicles Entered	407	8	8	296	9	4	9	741
Vehicles Exited	410	8	8	298	9	4	9	746
Hourly Exit Rate	1640	32	32	1192	36	16	36	2984
Input Volume	1820	33	33	1207	32	17	37	3179
% of Volume	90	97	97	99	112	94	97	94

1: Town Center Boulevard & Highland Highway (SR-92) Performance by movement Interval #2 5:15

Movement	EBT	EBR	WBL	WBT	NBL	NBT	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.3	0.0	0.1	0.8	0.4	0.0	0.3	1.8
Total Del/Veh (s)	2.4	0.4	35.9	8.4	128.6	0.4	111.7	8.3
Vehicles Entered	431	8	8	321	9	4	11	792
Vehicles Exited	429	8	8	317	8	5	10	785
Hourly Exit Rate	1716	32	32	1268	32	20	40	3140
Input Volume	1978	36	36	1312	35	18	40	3455
% of Volume	87	89	89	97	91	111	100	91

1: Town Center Boulevard & Highland Highway (SR-92) Performance by movement Interval #3 5:30

Movement	EBT	EBR	WBL	WBT	NBL	NBT	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.3	0.0	0.1	0.7	0.2	0.0	0.2	1.6
Total Del/Veh (s)	2.3	0.4	34.6	8.6	112.5	1.7	80.1	7.3
Vehicles Entered	416	8	7	299	6	4	9	749
Vehicles Exited	418	7	7	304	7	4	10	757
Hourly Exit Rate	1672	28	28	1216	28	16	40	3028
Input Volume	1820	33	33	1207	32	17	37	3179
% of Volume	92	85	85	101	88	94	108	95

1: Town Center Boulevard & Highland Highway (SR-92) Performance by movement Interval #4 5:45

Movement	EBT	EBR	WBL	WBT	NBL	NBT	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.3	0.0	0.1	0.7	0.2	0.0	0.2	1.4
Total Del/Veh (s)	2.4	0.6	45.0	8.3	82.8	0.3	57.9	6.8
Vehicles Entered	414	8	7	278	8	4	10	729
Vehicles Exited	415	8	7	276	8	4	9	727
Hourly Exit Rate	1660	32	28	1104	32	16	36	2908
Input Volume	1820	33	33	1207	32	17	37	3179
% of Volume	91	97	85	91	100	94	97	91

1: Town Center Boulevard & Highland Highway (SR-92) Performance by movement Entire Run

Movement	EBT	EBR	WBL	WBT	NBL	NBT	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	1.1	0.0	0.4	2.8	1.1	0.0	0.9	6.2
Total Del/Veh (s)	2.4	0.4	42.5	8.3	114.8	0.6	84.9	7.4
Vehicles Entered	1668	32	30	1195	32	17	38	3012
Vehicles Exited	1672	32	30	1196	32	17	38	3017
Hourly Exit Rate	1672	32	30	1196	32	17	38	3017
Input Volume	1860	34	34	1233	33	17	38	3248
% of Volume	90	95	89	97	98	99	101	93

2: Town Center Boulevard & Toscana Access/Town Square Access Performance by movement Interval #

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1			0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.9			5.7	5.6	2.7		0.5	0.3	2.0	0.7	0.5
Vehicles Entered	4	0	0	1	1	5	0	14	3	4	11	1
Vehicles Exited	4	0	0	1	1	4	0	14	3	4	11	1
Hourly Exit Rate	16	0	0	4	4	16	0	56	12	16	44	4
Input Volume	14	3	3	4	2	16	3	55	8	14	47	7
% of Volume	114	0	0	100	200	100	0	102	150	114	94	57

2: Town Center Boulevard & Toscana Access/Town Square Access Performance by movement Interval #

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.0
Total Delay (hr)	0.0
Total Del/Veh (s)	1.7
Vehicles Entered	44
Vehicles Exited	43
Hourly Exit Rate	172
Input Volume	176
% of Volume	98

2: Town Center Boulevard & Toscana Access/Town Square Access Performance by movement Interval #

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.8	3.0	2.7	2.9	3.2	3.2	1.2	0.4	0.4	1.5	0.7	0.5
Vehicles Entered	3	1	1	1	1	4	1	16	4	2	12	2
Vehicles Exited	3	1	1	1	1	4	1	17	4	2	12	2
Hourly Exit Rate	12	4	4	4	4	16	4	68	16	8	48	8
Input Volume	15	3	3	4	2	17	3	60	9	15	51	7
% of Volume	80	133	133	100	200	94	133	113	178	53	94	114

2: Town Center Boulevard & Toscana Access/Town Square Access Performance by movement Interval #

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.0
Total Delay (hr)	0.0
Total Del/Veh (s)	1.3
Vehicles Entered	48
Vehicles Exited	49
Hourly Exit Rate	196
Input Volume	189
% of Volume	104

2: Town Center Boulevard & Toscana Access/Town Square Access Performance by movement Interval #

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1	0.0		0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.3	3.3	3.1	2.6		2.9	2.1	0.4	0.4	1.7	0.5	0.7
Vehicles Entered	3	1	1	1	0	3	1	13	2	3	11	1
Vehicles Exited	3	1	1	1	0	3	1	13	2	3	11	1
Hourly Exit Rate	12	4	4	4	0	12	4	52	8	12	44	4
Input Volume	14	3	3	4	2	16	3	55	8	14	47	7
% of Volume	86	133	133	100	0	75	133	95	100	86	94	57

2: Town Center Boulevard & Toscana Access/Town Square Access Performance by movement Interval #

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.0
Total Delay (hr)	0.0
Total Del/Veh (s)	1.3
Vehicles Entered	40
Vehicles Exited	40
Hourly Exit Rate	160
Input Volume	176
% of Volume	91

2: Town Center Boulevard & Toscana Access/Town Square Access Performance by movement Interval #

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1		0.1	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	5.3		3.3	4.1		2.8	1.9	0.5	0.4	2.3	0.8	0.4
Vehicles Entered	3	0	1	1	0	3	1	15	2	4	10	2
Vehicles Exited	3	0	1	1	0	4	1	15	2	4	10	2
Hourly Exit Rate	12	0	4	4	0	16	4	60	8	16	40	8
Input Volume	14	3	3	4	2	16	3	55	8	14	47	7
% of Volume	86	0	133	100	0	100	133	109	100	114	85	114

2: Town Center Boulevard & Toscana Access/Town Square Access Performance by movement Interval #

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.0
Total Delay (hr)	0.0
Total Del/Veh (s)	1.5
Vehicles Entered	42
Vehicles Exited	43
Hourly Exit Rate	172
Input Volume	176
% of Volume	98

2: Town Center Boulevard & Toscana Access/Town Square Access Performance by movement Entire Ru

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.5	5.3	2.8	5.1	6.0	3.1	2.0	0.5	0.4	2.1	0.7	0.5
Vehicles Entered	13	2	4	3	2	15	3	58	10	13	44	6
Vehicles Exited	13	2	4	3	2	15	3	59	10	13	44	6
Hourly Exit Rate	13	2	4	3	2	15	3	59	10	13	44	6
Input Volume	14	3	3	4	2	16	3	56	8	14	48	7
% of Volume	91	67	133	75	100	92	100	105	121	91	92	86

2: Town Center Boulevard & Toscana Access/Town Square Access Performance by movement Entire Ru

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.0
Total Delay (hr)	0.1
Total Del/Veh (s)	1.5
Vehicles Entered	173
Vehicles Exited	174
Hourly Exit Rate	174
Input Volume	179
% of Volume	97

3: 10890 North/10890 North & Town Center Boulevard Performance by movement Interval #1 5:00

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.1	6.5	4.8	2.7	0.4	0.2	2.1
Vehicles Entered	8	1	1	6	2	12	30
Vehicles Exited	8	1	1	6	2	12	30
Hourly Exit Rate	32	4	4	24	8	48	120
Input Volume	33	6	4	23	13	55	134
% of Volume	97	67	100	104	62	87	90

3: 10890 North/10890 North & Town Center Boulevard Performance by movement Interval #2 5:15

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.0	4.9	3.5	2.8	0.2	0.3	2.0
Vehicles Entered	10	1	1	7	4	16	39
Vehicles Exited	10	1	1	7	3	16	38
Hourly Exit Rate	40	4	4	28	12	64	152
Input Volume	36	6	5	24	14	60	145
% of Volume	111	67	80	117	86	107	105

3: 10890 North/10890 North & Town Center Boulevard Performance by movement Interval #3 5:30

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.2	3.9	5.5	2.7	0.4	0.3	2.0
Vehicles Entered	8	2	1	5	3	13	32
Vehicles Exited	8	2	1	5	3	13	32
Hourly Exit Rate	32	8	4	20	12	52	128
Input Volume	33	6	4	23	13	55	134
% of Volume	97	133	100	87	92	95	96

3: 10890 North/10890 North & Town Center Boulevard Performance by movement Interval #4 5:45

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.9	4.0	5.4	2.7	0.6	0.2	2.2
Vehicles Entered	10	2	1	6	2	12	33
Vehicles Exited	10	2	1	6	2	12	33
Hourly Exit Rate	40	8	4	24	8	48	132
Input Volume	33	6	4	23	13	55	134
% of Volume	121	133	100	104	62	87	99

3: 10890 North/10890 North & Town Center Boulevard Performance by movement Entire Run

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	4.0	4.5	4.8	2.9	0.4	0.3	2.1
Vehicles Entered	36	6	4	23	11	54	134
Vehicles Exited	36	6	4	23	11	53	133
Hourly Exit Rate	36	6	4	23	11	53	133
Input Volume	34	6	4	23	13	56	137
% of Volume	107	100	94	99	83	94	97

4: 5400 West/5400 West & Parkway Drive Performance by movement Interval #1 5:00

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.6	3.4	0.1	0.0	1.2	0.0	1.0
Vehicles Entered	1	2	5	1	1	3	13
Vehicles Exited	1	2	4	1	1	3	12
Hourly Exit Rate	4	8	16	4	4	12	48
Input Volume	2	8	19	6	5	14	54
% of Volume	200	100	84	67	80	86	89

4: 5400 West/5400 West & Parkway Drive Performance by movement Interval #2 5:15

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)		0.0	0.0	0.0		0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)		2.8	0.0	0.0		0.0	0.5
Vehicles Entered	0	2	6	2	0	4	14
Vehicles Exited	0	2	6	2	0	4	14
Hourly Exit Rate	0	8	24	8	0	16	56
Input Volume	2	9	21	6	5	15	58
% of Volume	0	89	114	133	0	107	97

4: 5400 West/5400 West & Parkway Drive Performance by movement Interval #3 5:30

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)		2.2	0.1	0.0	2.0	0.0	0.7
Vehicles Entered	0	2	4	2	1	3	12
Vehicles Exited	0	2	4	2	1	3	12
Hourly Exit Rate	0	8	16	8	4	12	48
Input Volume	2	8	19	6	5	14	54
% of Volume	0	100	84	133	80	86	89

4: 5400 West/5400 West & Parkway Drive Performance by movement Interval #4 5:45

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)		3.3	0.2	0.0	1.4	0.0	0.9
Vehicles Entered	0	2	4	2	1	3	12
Vehicles Exited	0	2	4	2	1	3	12
Hourly Exit Rate	0	8	16	8	4	12	48
Input Volume	2	8	19	6	5	14	54
% of Volume	0	100	84	133	80	86	89

4: 5400 West/5400 West & Parkway Drive Performance by movement Entire Run

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.7	2.9	0.1	0.0	1.2	0.0	0.7
Vehicles Entered	2	8	19	6	4	13	52
Vehicles Exited	2	8	19	6	4	13	52
Hourly Exit Rate	2	8	19	6	4	13	52
Input Volume	2	8	20	6	5	14	55
% of Volume	100	97	97	100	80	91	95

5: 5400 West & Park Access/West Access Performance by movement Interval #1 5:00

Movement	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)		0.1	0.1	0.1	0.1		0.0		0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)		1.6	1.5	0.2	0.0	0.9	0.1		0.5
Vehicles Entered	0	1	2	5	1	0	3	0	12
Vehicles Exited	0	1	2	5	1	1	3	0	13
Hourly Exit Rate	0	4	8	20	4	4	12	0	52
Input Volume	2	1	6	23	4	2	13	1	52
% of Volume	0	400	133	87	100	200	92	0	100

5: 5400 West & Park Access/West Access Performance by movement Interval #2 5:15

Movement	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)			0.1	0.1	0.1		0.0		0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)			0.9	0.0	0.0		0.1		0.3
Vehicles Entered	0	0	1	7	2	0	4	0	14
Vehicles Exited	0	0	1	7	2	0	4	0	14
Hourly Exit Rate	0	0	4	28	8	0	16	0	56
Input Volume	2	1	6	26	4	2	14	1	56
% of Volume	0	0	67	108	200	0	114	0	100

5: 5400 West & Park Access/West Access Performance by movement Interval #3 5:30

Movement	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)		0.1	0.1	0.1	0.1		0.0		0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)		1.6	2.0	0.1	0.0		0.1		0.6
Vehicles Entered	0	1	1	5	1	0	3	0	11
Vehicles Exited	0	1	1	5	1	0	3	0	11
Hourly Exit Rate	0	4	4	20	4	0	12	0	44
Input Volume	2	1	6	23	4	2	13	1	52
% of Volume	0	400	67	87	100	0	92	0	85

5: 5400 West & Park Access/West Access Performance by movement Interval #4 5:45

Movement	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)			0.1	0.1	0.1		0.0		0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)			1.1	0.1	0.0		0.1		0.5
Vehicles Entered	0	0	2	5	1	0	3	0	11
Vehicles Exited	0	0	1	5	0	0	3	0	9
Hourly Exit Rate	0	0	4	20	0	0	12	0	36
Input Volume	2	1	6	23	4	2	13	1	52
% of Volume	0	0	67	87	0	0	92	0	69

5: 5400 West & Park Access/West Access Performance by movement Entire Run

Movement	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.2	2.3	1.4	0.1	0.0	1.2	0.1	0.0	0.4
Vehicles Entered	1	2	6	22	4	2	12	1	50
Vehicles Exited	1	2	6	22	4	2	12	1	50
Hourly Exit Rate	1	2	6	22	4	2	12	1	50
Input Volume	2	1	6	24	4	2	13	1	53
% of Volume	50	200	100	93	100	100	91	100	94

6: Southwest Access & Parkway Drive Performance by movement Interval #1 5:00

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)		0.0	0.0		0.0	0.0		0.1		0.1	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)		0.1	0.1		0.3	0.2		3.7		3.9	0.8
Vehicles Entered	0	1	1	0	14	2	0	1	0	1	20
Vehicles Exited	0	1	1	0	14	2	0	1	0	1	20
Hourly Exit Rate	0	4	4	0	56	8	0	4	0	4	80
Input Volume	3	4	4	4	55	6	1	4	1	2	84
% of Volume	0	100	100	0	102	133	0	100	0	200	95

6: Southwest Access & Parkway Drive Performance by movement Interval #2 5:15

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0		0.0	0.0	0.0		0.1		0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	1.0	0.1		0.9	0.3	0.3		2.8		0.5
Vehicles Entered	1	1	0	1	16	2	0	1	0	22
Vehicles Exited	1	1	0	1	16	2	0	1	0	22
Hourly Exit Rate	4	4	0	4	64	8	0	4	0	88
Input Volume	3	4	4	4	61	6	1	4	2	90
% of Volume	133	100	0	100	105	133	0	100	0	98

6: Southwest Access & Parkway Drive Performance by movement Interval #3 5:30

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)		0.0	0.0	0.0	0.0	0.0	0.1			0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)		0.1	0.1	1.4	0.3	0.5	2.5			0.5
Vehicles Entered	0	1	2	1	13	1	1	0	0	19
Vehicles Exited	0	1	2	1	14	1	1	0	0	20
Hourly Exit Rate	0	4	8	4	56	4	4	0	0	80
Input Volume	3	4	4	4	55	6	4	1	2	84
% of Volume	0	100	200	100	102	67	100	0	0	95

6: Southwest Access & Parkway Drive Performance by movement Interval #4 5:45

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.1		0.1	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	1.5	0.1	0.1	1.0	0.3	0.4		3.6		2.4	0.6
Vehicles Entered	1	1	1	1	14	2	0	1	0	1	22
Vehicles Exited	1	1	1	1	14	2	0	1	0	1	22
Hourly Exit Rate	4	4	4	4	56	8	0	4	0	4	88
Input Volume	3	4	4	4	55	6	1	4	1	2	84
% of Volume	133	100	100	100	102	133	0	100	0	200	105

6: Southwest Access & Parkway Drive Performance by movement Entire Run

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1		0.1	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	1.8	0.1	0.1	1.7	0.3	0.3	3.0	3.2		2.7	0.6
Vehicles Entered	2	4	4	2	58	7	1	4	0	3	85
Vehicles Exited	2	4	4	2	58	7	1	4	0	3	85
Hourly Exit Rate	2	4	4	2	58	7	1	4	0	3	85
Input Volume	3	4	4	4	56	6	1	4	1	2	86
% of Volume	67	100	100	50	103	117	100	100	0	150	99

7: Alpine Highway (SR-74) & Parkway Drive Performance by movement Interval #1 5:00

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	3.2	0.6	0.0	0.0	0.3
Total Delay (hr)	0.1	0.0	0.0	0.0	0.1	0.0	0.2
Total Del/Veh (s)	22.3	7.9	4.0	0.8	2.0	0.9	2.2
Vehicles Entered	11	2	7	151	174	10	355
Vehicles Exited	11	2	6	152	174	10	355
Hourly Exit Rate	44	8	24	608	696	40	1420
Input Volume	35	7	27	622	691	38	1420
% of Volume	126	114	89	98	101	105	100

7: Alpine Highway (SR-74) & Parkway Drive Performance by movement Interval #2 5:15

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.2	3.1	0.6	0.0	0.0	0.3
Total Delay (hr)	0.1	0.0	0.0	0.0	0.1	0.0	0.3
Total Del/Veh (s)	30.0	14.9	4.1	0.9	2.1	0.9	2.4
Vehicles Entered	10	2	7	172	184	10	385
Vehicles Exited	10	2	8	172	184	11	387
Hourly Exit Rate	40	8	32	688	736	44	1548
Input Volume	38	7	30	677	750	41	1543
% of Volume	105	114	107	102	98	107	100

7: Alpine Highway (SR-74) & Parkway Drive Performance by movement Interval #3 5:30

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	2.7	0.6	0.0	0.0	0.3
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.2
Total Del/Veh (s)	21.6	7.9	4.0	0.8	1.8	0.7	1.9
Vehicles Entered	7	2	7	154	177	9	356
Vehicles Exited	7	2	6	154	176	9	354
Hourly Exit Rate	28	8	24	616	704	36	1416
Input Volume	35	7	27	622	691	38	1420
% of Volume	80	114	89	99	102	95	100

7: Alpine Highway (SR-74) & Parkway Drive Performance by movement Interval #4 5:45

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	2.8	0.5	0.0	0.0	0.3
Total Delay (hr)	0.1	0.0	0.0	0.0	0.1	0.0	0.2
Total Del/Veh (s)	21.7	10.7	3.7	0.8	1.9	1.0	2.0
Vehicles Entered	8	2	8	156	178	9	361
Vehicles Exited	9	2	7	155	178	9	360
Hourly Exit Rate	36	8	28	620	712	36	1440
Input Volume	35	7	27	622	691	38	1420
% of Volume	103	114	104	100	103	95	101

7: Alpine Highway (SR-74) & Parkway Drive Performance by movement Entire Run

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.1
Denied Del/Veh (s)	0.1	0.1	3.1	0.6	0.0	0.0	0.3
Total Delay (hr)	0.3	0.0	0.0	0.2	0.4	0.0	0.9
Total Del/Veh (s)	25.4	9.2	4.2	0.9	2.0	0.9	2.1
Vehicles Entered	36	9	28	632	712	39	1456
Vehicles Exited	36	9	28	633	712	39	1457
Hourly Exit Rate	36	9	28	633	712	39	1457
Input Volume	36	7	28	636	706	39	1451
% of Volume	101	129	101	100	101	101	100

8: Alpine Highway (SR-74) & Town Square Access/Wells Fargo Access Performance by movement Interval

Movement	EBL	EBT	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.4		0.0	0.1	0.1	0.0	0.0	0.0	2.6	0.7	0.7	0.4
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2
Total Del/Veh (s)	16.7		7.0	15.4	7.9	3.9	0.8	0.2	3.3	1.6	0.1	1.7
Vehicles Entered	2	0	6	4	7	3	158	1	4	174	4	363
Vehicles Exited	2	0	6	4	6	4	158	1	4	174	4	363
Hourly Exit Rate	8	0	24	16	24	16	632	4	16	696	16	1452
Input Volume	15	1	22	18	33	17	633	7	13	688	9	1456
% of Volume	53	0	109	89	73	94	100	57	123	101	178	100

8: Alpine Highway (SR-74) & Town Square Access/Wells Fargo Access Performance by movement Interval

Movement	EBL	EBT	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0		0.0	0.1	0.1	0.0	0.0	0.0	4.1	0.7	0.6	0.4
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2
Total Del/Veh (s)	21.0		8.4	21.4	6.0	3.7	0.9	0.5	5.1	1.7	0.1	2.0
Vehicles Entered	4	0	5	4	9	5	176	1	3	185	3	395
Vehicles Exited	4	0	5	4	10	5	175	1	3	184	3	394
Hourly Exit Rate	16	0	20	16	40	20	700	4	12	736	12	1576
Input Volume	16	1	23	19	36	18	690	7	14	748	10	1582
% of Volume	100	0	87	84	111	111	101	57	86	98	120	100

8: Alpine Highway (SR-74) & Town Square Access/Wells Fargo Access Performance by movement Interv

Movement	EBL	EBT	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.3		0.0	0.2	0.1	0.0	0.0	0.0	4.3	0.6	0.8	0.3
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2
Total Del/Veh (s)	13.5		7.3	15.4	7.2	4.1	0.9	0.1	3.7	1.6	0.1	1.9
Vehicles Entered	3	0	6	5	10	4	156	2	2	175	1	364
Vehicles Exited	3	0	6	5	10	4	156	2	2	175	1	364
Hourly Exit Rate	12	0	24	20	40	16	624	8	8	700	4	1456
Input Volume	15	1	22	18	33	17	633	7	13	688	9	1456
% of Volume	80	0	109	111	121	94	99	114	62	102	44	100

8: Alpine Highway (SR-74) & Town Square Access/Wells Fargo Access Performance by movement Interv

Movement	EBL	EBT	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.3		0.0	0.1	0.1	0.0	0.0	0.0	3.0	0.7	1.2	0.4
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2
Total Del/Veh (s)	13.9		6.2	14.9	6.9	4.0	0.9	0.2	2.5	1.6	0.1	1.8
Vehicles Entered	4	0	5	3	8	4	158	1	3	178	1	365
Vehicles Exited	4	0	6	3	8	4	159	1	3	178	1	367
Hourly Exit Rate	16	0	24	12	32	16	636	4	12	712	4	1468
Input Volume	15	1	22	18	33	17	633	7	13	688	9	1456
% of Volume	107	0	109	67	97	94	100	57	92	103	44	101

8: Alpine Highway (SR-74) & Town Square Access/Wells Fargo Access Performance by movement Entire

Movement	EBL	EBT	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2
Denied Del/Veh (s)	0.2	0.0	0.0	0.2	0.1	0.0	0.0	0.0	3.4	0.7	0.7	0.4
Total Delay (hr)	0.1	0.0	0.0	0.1	0.1	0.0	0.2	0.0	0.0	0.3	0.0	0.8
Total Del/Veh (s)	15.3	0.0	7.2	17.9	7.3	4.2	0.9	0.2	3.6	1.6	0.1	1.8
Vehicles Entered	14	1	22	15	34	15	648	6	12	712	9	1488
Vehicles Exited	14	1	23	15	34	16	649	6	12	712	9	1491
Hourly Exit Rate	14	1	23	15	34	16	649	6	12	712	9	1491
Input Volume	15	1	22	18	34	17	647	7	13	703	9	1488
% of Volume	92	100	103	82	101	93	100	86	91	101	97	100

9: Northeast Access & Town Square Access Performance by movement Interval #1 5:00

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	0.2	0.2	2.3	0.3	3.1	2.4	0.6
Vehicles Entered	8	2	1	6	1	1	19
Vehicles Exited	8	2	1	6	1	1	19
Hourly Exit Rate	32	8	4	24	4	4	76
Input Volume	31	7	7	19	3	5	72
% of Volume	103	114	57	126	133	80	106

9: Northeast Access & Town Square Access Performance by movement Interval #2 5:15

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0		0.1	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	0.3	0.4	1.8	0.3		3.5	0.7
Vehicles Entered	8	1	2	6	0	1	18
Vehicles Exited	8	1	2	6	0	1	18
Hourly Exit Rate	32	4	8	24	0	4	72
Input Volume	34	7	7	21	3	5	77
% of Volume	94	57	114	114	0	80	94

9: Northeast Access & Town Square Access Performance by movement Interval #3 5:30

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0		0.1	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	0.2	0.1	1.5	0.2		2.4	0.7
Vehicles Entered	6	2	2	3	0	2	15
Vehicles Exited	7	1	2	4	0	2	16
Hourly Exit Rate	28	4	8	16	0	8	64
Input Volume	31	7	7	19	3	5	72
% of Volume	90	57	114	84	0	160	89

9: Northeast Access & Town Square Access Performance by movement Interval #4 5:45

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0		0.1	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	0.2	0.0	1.1	0.3	3.1	3.4	0.6
Vehicles Entered	8	2	1	4	0	1	16
Vehicles Exited	8	2	2	4	1	1	18
Hourly Exit Rate	32	8	8	16	4	4	72
Input Volume	31	7	7	19	3	5	72
% of Volume	103	114	114	84	133	80	100

9: Northeast Access & Town Square Access Performance by movement Entire Run

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	0.2	0.1	1.9	0.3	4.1	2.8	0.7
Vehicles Entered	30	6	6	19	2	5	68
Vehicles Exited	30	7	6	19	2	5	69
Hourly Exit Rate	30	7	6	19	2	5	69
Input Volume	32	7	7	20	3	5	73
% of Volume	94	100	86	97	67	100	94

17: Highland Highway (SR-92) Performance by movement Interval #1 5:00

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.1	0.0	0.0	0.0	0.0	1.0	2.2	3.0	3.4	6.5	1.5
Denied Del/Veh (s)	3.0	1.4	3.1	0.0	0.0	0.1	137.8	144.3	142.9	219.3	218.0	231.1
Total Delay (hr)	0.2	1.5	0.1	0.6	1.4	0.1	0.7	1.1	1.3	1.0	0.7	0.2
Total Del/Veh (s)	31.5	17.3	7.0	76.3	18.9	11.8	119.1	89.3	76.0	93.7	37.5	39.0
Vehicles Entered	24	319	46	25	247	34	19	40	55	34	64	15
Vehicles Exited	23	312	47	24	248	33	17	40	54	32	64	15
Hourly Exit Rate	92	1248	188	96	992	132	68	160	216	128	256	60
Input Volume	98	1306	196	98	1002	134	98	196	300	210	391	98
% of Volume	94	96	96	98	99	99	69	82	72	61	65	61

17: Highland Highway (SR-92) Performance by movement Interval #1 5:00

Movement	All
Denied Delay (hr)	17.7
Denied Del/Veh (s)	61.4
Total Delay (hr)	9.0
Total Del/Veh (s)	32.8
Vehicles Entered	922
Vehicles Exited	909
Hourly Exit Rate	3636
Input Volume	4127
% of Volume	88

17: Highland Highway (SR-92) Performance by movement Interval #2 5:15

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.2	0.0	0.0	0.0	0.0	3.3	6.9	10.9	9.3	17.5	4.4
Denied Del/Veh (s)	2.9	1.9	3.1	0.0	0.0	0.0	360.0	363.0	358.0	440.6	435.6	440.0
Total Delay (hr)	0.3	1.4	0.1	0.6	1.2	0.1	1.2	1.1	1.5	0.9	0.9	0.2
Total Del/Veh (s)	40.5	13.6	6.5	75.5	15.0	10.7	242.3	113.8	99.6	108.4	59.4	56.1
Vehicles Entered	27	360	52	25	260	38	14	29	48	25	51	10
Vehicles Exited	27	365	52	23	262	38	13	29	48	26	51	10
Hourly Exit Rate	108	1460	208	92	1048	152	52	116	192	104	204	40
Input Volume	106	1419	213	106	1090	146	106	213	327	229	426	106
% of Volume	102	103	98	87	96	104	49	54	59	45	48	38

17: Highland Highway (SR-92) Performance by movement Interval #2 5:15

Movement	All
Denied Delay (hr)	52.6
Denied Del/Veh (s)	153.9
Total Delay (hr)	9.6
Total Del/Veh (s)	34.1
Vehicles Entered	939
Vehicles Exited	944
Hourly Exit Rate	3776
Input Volume	4487
% of Volume	84

17: Highland Highway (SR-92) Performance by movement Interval #3 5:30

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.1	0.0	0.0	0.0	0.0	6.1	12.5	18.8	13.7	27.0	7.5
Denied Del/Veh (s)	2.8	1.0	2.6	0.0	0.0	0.1	487.0	504.7	495.1	498.5	504.4	531.9
Total Delay (hr)	0.3	1.5	0.1	0.5	1.5	0.1	1.3	0.9	1.2	0.8	0.8	0.2
Total Del/Veh (s)	36.2	16.5	8.7	60.9	18.9	11.8	235.6	91.8	75.4	69.3	40.5	36.5
Vehicles Entered	24	318	51	21	261	33	15	31	51	38	70	19
Vehicles Exited	24	308	51	23	253	34	15	32	53	39	72	19
Hourly Exit Rate	96	1232	204	92	1012	136	60	128	212	156	288	76
Input Volume	98	1306	196	98	1002	134	98	196	300	210	391	98
% of Volume	98	94	104	94	101	101	61	65	71	74	74	78

17: Highland Highway (SR-92) Performance by movement Interval #3 5:30

Movement	All
Denied Delay (hr)	85.8
Denied Del/Veh (s)	233.7
Total Delay (hr)	9.2
Total Del/Veh (s)	33.1
Vehicles Entered	932
Vehicles Exited	923
Hourly Exit Rate	3692
Input Volume	4127
% of Volume	89

17: Highland Highway (SR-92) Performance by movement Interval #4 5:45

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.3	0.1	0.0	0.0	0.0	8.1	15.2	23.4	17.1	33.0	8.3
Denied Del/Veh (s)	4.6	3.4	4.6	0.1	0.0	0.0	540.7	516.0	522.7	554.4	550.1	525.4
Total Delay (hr)	0.3	1.8	0.1	0.5	1.5	0.1	1.5	0.9	1.2	0.8	0.8	0.2
Total Del/Veh (s)	36.7	19.4	8.2	77.9	20.6	12.7	223.7	84.7	69.5	75.5	40.0	35.6
Vehicles Entered	26	324	48	21	230	30	18	37	58	35	69	20
Vehicles Exited	26	330	48	21	241	31	18	37	56	33	69	20
Hourly Exit Rate	104	1320	192	84	964	124	72	148	224	132	276	80
Input Volume	98	1306	196	98	1002	134	98	196	300	210	391	98
% of Volume	106	101	98	86	96	93	73	76	75	63	71	82

17: Highland Highway (SR-92) Performance by movement Interval #4 5:45

Movement	All
Denied Delay (hr)	105.5
Denied Del/Veh (s)	274.2
Total Delay (hr)	9.8
Total Del/Veh (s)	35.5
Vehicles Entered	916
Vehicles Exited	930
Hourly Exit Rate	3720
Input Volume	4127
% of Volume	90

17: Highland Highway (SR-92) Performance by movement Entire Run

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.1	0.7	0.2	0.0	0.0	0.0	18.5	36.7	56.2	43.5	84.1	21.7
Denied Del/Veh (s)	3.3	1.9	3.3	0.0	0.0	0.1	651.4	641.2	642.0	755.7	755.3	766.9
Total Delay (hr)	1.1	6.3	0.4	2.2	5.6	0.5	4.7	4.1	5.2	3.4	3.3	0.8
Total Del/Veh (s)	37.8	17.0	7.7	82.5	19.8	12.7	249.2	102.7	86.5	92.2	45.8	41.2
Vehicles Entered	101	1320	198	91	998	136	66	137	212	131	254	65
Vehicles Exited	100	1315	198	92	1004	135	63	139	211	130	255	65
Hourly Exit Rate	100	1315	198	92	1004	135	63	139	211	130	255	65
Input Volume	100	1334	200	100	1024	137	100	200	307	215	400	100
% of Volume	100	99	99	92	98	99	63	69	69	61	64	65

17: Highland Highway (SR-92) Performance by movement Entire Run

Movement	All
Denied Delay (hr)	261.6
Denied Del/Veh (s)	225.4
Total Delay (hr)	37.5
Total Del/Veh (s)	35.8
Vehicles Entered	3709
Vehicles Exited	3707
Hourly Exit Rate	3707
Input Volume	4217
% of Volume	88

22: Highland Highway (SR-92) Performance by movement Interval #1 5:00

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1
Denied Del/Veh (s)	0.1	0.0	0.1	2.3	0.2	2.3	3.6	1.7	3.5	3.7	1.9	3.9
Total Delay (hr)	0.9	2.1	0.4	3.3	1.6	0.1	0.5	0.4	0.1	0.7	0.1	0.2
Total Del/Veh (s)	73.6	27.3	11.4	284.0	36.3	9.6	27.5	18.5	11.7	48.1	19.8	8.8
Vehicles Entered	42	269	110	37	148	22	63	74	39	50	22	97
Vehicles Exited	39	255	109	19	133	21	67	78	39	52	24	98
Hourly Exit Rate	156	1020	436	76	532	84	268	312	156	208	96	392
Input Volume	181	1210	475	147	585	98	245	294	147	196	98	387
% of Volume	86	84	92	52	91	86	109	106	106	106	98	101

22: Highland Highway (SR-92) Performance by movement Interval #1 5:00

Movement	All
Denied Delay (hr)	0.4
Denied Del/Veh (s)	1.3
Total Delay (hr)	10.5
Total Del/Veh (s)	36.8
Vehicles Entered	973
Vehicles Exited	934
Hourly Exit Rate	3736
Input Volume	4063
% of Volume	92

22: Highland Highway (SR-92) Performance by movement Interval #2 5:15

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.2
Denied Del/Veh (s)	0.3	0.3	0.2	2.3	0.2	2.3	4.3	2.7	4.1	7.6	5.9	7.4
Total Delay (hr)	1.3	2.5	0.5	7.6	2.8	0.2	0.6	0.6	0.2	0.8	0.2	0.4
Total Del/Veh (s)	90.9	28.3	14.5	453.1	56.8	23.0	32.3	26.5	15.5	56.1	27.2	13.5
Vehicles Entered	44	286	116	37	156	30	69	83	42	50	28	101
Vehicles Exited	45	303	118	20	159	30	65	77	42	44	26	99
Hourly Exit Rate	180	1212	472	80	636	120	260	308	168	176	104	396
Input Volume	197	1316	516	160	636	106	266	319	160	213	106	420
% of Volume	91	92	91	50	100	113	98	97	105	83	98	94

22: Highland Highway (SR-92) Performance by movement Interval #2 5:15

Movement	All
Denied Delay (hr)	0.6
Denied Del/Veh (s)	2.2
Total Delay (hr)	17.6
Total Del/Veh (s)	55.8
Vehicles Entered	1042
Vehicles Exited	1028
Hourly Exit Rate	4112
Input Volume	4415
% of Volume	93

22: Highland Highway (SR-92) Performance by movement Interval #3 5:30

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.2
Denied Del/Veh (s)	0.1	0.2	0.1	2.7	0.5	2.4	4.2	2.7	4.4	6.6	4.9	7.1
Total Delay (hr)	1.4	2.3	0.5	12.1	3.8	0.3	0.6	0.5	0.1	0.9	0.2	0.4
Total Del/Veh (s)	98.5	29.3	14.1	581.9	84.6	39.7	30.3	22.9	11.5	55.3	19.9	13.1
Vehicles Entered	44	277	109	35	143	25	63	77	36	54	25	94
Vehicles Exited	44	259	108	19	138	25	67	83	37	58	27	97
Hourly Exit Rate	176	1036	432	76	552	100	268	332	148	232	108	388
Input Volume	181	1210	475	147	585	98	245	294	147	196	98	387
% of Volume	97	86	91	52	94	102	109	113	101	118	110	100

22: Highland Highway (SR-92) Performance by movement Interval #3 5:30

Movement	All
Denied Delay (hr)	0.6
Denied Del/Veh (s)	2.1
Total Delay (hr)	23.0
Total Del/Veh (s)	76.0
Vehicles Entered	982
Vehicles Exited	962
Hourly Exit Rate	3848
Input Volume	4063
% of Volume	95

22: Highland Highway (SR-92) Performance by movement Interval #4 5:45

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.3	1.0	0.2	0.1	0.0	0.0	0.1	0.0	0.1
Denied Del/Veh (s)	0.1	0.0	0.1	25.6	23.9	24.6	3.8	1.8	3.7	4.3	2.6	5.5
Total Delay (hr)	0.7	1.9	0.4	15.3	4.2	0.3	0.4	0.5	0.1	0.6	0.2	0.3
Total Del/Veh (s)	48.5	22.6	12.1	610.8	95.0	47.5	29.5	22.5	12.9	49.6	21.2	9.4
Vehicles Entered	42	270	113	34	135	24	53	72	39	45	26	97
Vehicles Exited	47	290	115	24	135	22	49	67	38	43	24	95
Hourly Exit Rate	188	1160	460	96	540	88	196	268	152	172	96	380
Input Volume	181	1210	475	147	585	98	245	294	147	196	98	387
% of Volume	104	96	97	65	92	90	80	91	103	88	98	98

22: Highland Highway (SR-92) Performance by movement Interval #4 5:45

Movement	All
Denied Delay (hr)	1.7
Denied Del/Veh (s)	6.5
Total Delay (hr)	24.8
Total Del/Veh (s)	82.7
Vehicles Entered	950
Vehicles Exited	949
Hourly Exit Rate	3796
Input Volume	4063
% of Volume	93

22: Highland Highway (SR-92) Performance by movement Entire Run

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.3	1.0	0.2	0.3	0.2	0.2	0.3	0.1	0.6
Denied Del/Veh (s)	0.1	0.1	0.1	8.1	6.1	7.8	4.0	2.2	3.9	5.7	3.9	6.0
Total Delay (hr)	4.2	8.8	1.7	38.3	12.3	0.9	2.2	2.0	0.6	3.1	0.7	1.2
Total Del/Veh (s)	86.2	28.5	13.6	930.6	75.5	31.1	30.8	23.3	13.0	55.0	23.0	11.4
Vehicles Entered	174	1101	448	144	581	101	248	306	156	198	102	389
Vehicles Exited	174	1106	450	82	565	98	248	305	156	197	101	388
Hourly Exit Rate	174	1106	450	82	565	98	248	305	156	197	101	388
Input Volume	185	1236	485	150	598	100	250	300	150	200	100	395
% of Volume	94	89	93	55	95	98	99	102	104	98	101	98

22: Highland Highway (SR-92) Performance by movement Entire Run

Movement	All
Denied Delay (hr)	3.3
Denied Del/Veh (s)	3.0
Total Delay (hr)	76.0
Total Del/Veh (s)	68.3
Vehicles Entered	3948
Vehicles Exited	3870
Hourly Exit Rate	3870
Input Volume	4151
% of Volume	93

Total Network Performance By Interval

Interval Start	5:00	5:15	5:30	5:45	All
Denied Delay (hr)	18.1	53.3	86.5	107.3	265.2
Denied Del/Veh (s)	38.2	97.5	156.9	186.6	137.5
Total Delay (hr)	23.1	31.7	36.2	38.5	129.5
Total Del/Veh (s)	46.2	59.5	68.9	74.5	69.9
Vehicles Entered	1591	1676	1595	1589	6460
Vehicles Exited	1564	1624	1618	1567	6380
Hourly Exit Rate	6256	6496	6472	6268	6380
Input Volume	24482	26595	24482	24482	25010
% of Volume	26	24	26	26	26

Intersection: 1: Town Center Boulevard & Highland Highway (SR-92), Interval #1

Movement	EB	EB	WB	WB	NB
Directions Served	T	TR	L	T	LR
Maximum Queue (ft)	8	4	70	2	120
Average Queue (ft)	2	1	27	0	76
95th Queue (ft)	20	9	73	5	144
Link Distance (ft)	211	211		1041	408
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	185				
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 1: Town Center Boulevard & Highland Highway (SR-92), Interval #2

Movement	EB	WB	NB
Directions Served	TR	L	LR
Maximum Queue (ft)	5	56	181
Average Queue (ft)	1	26	101
95th Queue (ft)	8	67	203
Link Distance (ft)	211		408
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	185		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 1: Town Center Boulevard & Highland Highway (SR-92), Interval #3

Movement	EB	EB	WB	WB	WB	NB
Directions Served	T	TR	L	T	T	LR
Maximum Queue (ft)	6	10	62	21	17	146
Average Queue (ft)	1	1	22	3	2	79
95th Queue (ft)	11	14	62	44	35	176
Link Distance (ft)	211	211		1041	1041	408
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	185					
Storage Blk Time (%)	0					
Queuing Penalty (veh)	0					

Intersection: 1: Town Center Boulevard & Highland Highway (SR-92), Interval #4

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (ft)	4	56	4	122
Average Queue (ft)	1	22	1	67
95th Queue (ft)	8	59	9	132
Link Distance (ft)	211		1041	408
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		185		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 1: Town Center Boulevard & Highland Highway (SR-92), All Intervals

Movement	EB	EB	WB	WB	WB	NB
Directions Served	T	TR	L	T	T	LR
Maximum Queue (ft)	8	20	89	23	21	212
Average Queue (ft)	1	1	25	1	1	81
95th Queue (ft)	11	10	66	22	18	168
Link Distance (ft)	211	211		1041	1041	408
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			185			
Storage Blk Time (%)				0		
Queuing Penalty (veh)				0		

Intersection: 2: Town Center Boulevard & Toscana Access/Town Square Access, Interval #1

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	33	31	6
Average Queue (ft)	17	18	1
95th Queue (ft)	42	43	9
Link Distance (ft)	445	583	408
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: Town Center Boulevard & Toscana Access/Town Square Access, Interval #2

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	30	31	6
Average Queue (ft)	12	15	1
95th Queue (ft)	36	40	9
Link Distance (ft)	445	583	408
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: Town Center Boulevard & Toscana Access/Town Square Access, Interval #3

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	31	33
Average Queue (ft)	13	10
95th Queue (ft)	37	34
Link Distance (ft)	445	583
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Town Center Boulevard & Toscana Access/Town Square Access, Interval #4

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	31	35	14
Average Queue (ft)	15	16	2
95th Queue (ft)	40	42	19
Link Distance (ft)	445	583	408
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: Town Center Boulevard & Toscana Access/Town Square Access, All Intervals

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	36	38	23
Average Queue (ft)	14	15	1
95th Queue (ft)	39	40	11
Link Distance (ft)	445	583	408
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: 10890 North/10890 North & Town Center Boulevard, Interval #1

Movement	EB	WB
Directions Served	LT	TR
Maximum Queue (ft)	33	33
Average Queue (ft)	23	17
95th Queue (ft)	46	43
Link Distance (ft)	221	130
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: 10890 North/10890 North & Town Center Boulevard, Interval #2

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	36	35	6
Average Queue (ft)	26	21	1
95th Queue (ft)	47	46	9
Link Distance (ft)	221	130	322
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: 10890 North/10890 North & Town Center Boulevard, Interval #3

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	36	31	5
Average Queue (ft)	25	17	1
95th Queue (ft)	48	42	10
Link Distance (ft)	221	130	322
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: 10890 North/10890 North & Town Center Boulevard, Interval #4

Movement	EB	WB
Directions Served	LT	TR
Maximum Queue (ft)	38	36
Average Queue (ft)	26	19
95th Queue (ft)	50	46
Link Distance (ft)	221	130
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: 10890 North/10890 North & Town Center Boulevard, All Intervals

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	43	43	8
Average Queue (ft)	25	18	0
95th Queue (ft)	48	44	7
Link Distance (ft)	221	130	322
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: 5400 West/5400 West & Parkway Drive , Interval #1

Movement	WB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	9
95th Queue (ft)	33
Link Distance (ft)	300
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: 5400 West/5400 West & Parkway Drive , Interval #2

Movement	WB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	8
95th Queue (ft)	31
Link Distance (ft)	300
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: 5400 West/5400 West & Parkway Drive , Interval #3

Movement	WB
Directions Served	LR
Maximum Queue (ft)	28
Average Queue (ft)	7
95th Queue (ft)	29
Link Distance (ft)	300
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: 5400 West/5400 West & Parkway Drive , Interval #4

Movement	WB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	9
95th Queue (ft)	32
Link Distance (ft)	300
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: 5400 West/5400 West & Parkway Drive , All Intervals

Movement	WB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	9
95th Queue (ft)	31
Link Distance (ft)	300
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: 5400 West & Park Access/West Access , Interval #1

Movement	WB
Directions Served	LTR
Maximum Queue (ft)	18
Average Queue (ft)	3
95th Queue (ft)	17
Link Distance (ft)	244
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: 5400 West & Park Access/West Access , Interval #2

Movement	WB
Directions Served	LTR
Maximum Queue (ft)	15
Average Queue (ft)	3
95th Queue (ft)	16
Link Distance (ft)	244
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: 5400 West & Park Access/West Access , Interval #3

Movement	WB
Directions Served	LTR
Maximum Queue (ft)	9
Average Queue (ft)	3
95th Queue (ft)	16
Link Distance (ft)	244
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: 5400 West & Park Access/West Access , Interval #4

Movement	WB	NB
Directions Served	LTR	LTR
Maximum Queue (ft)	9	3
Average Queue (ft)	2	0
95th Queue (ft)	13	0
Link Distance (ft)	244	652
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: 5400 West & Park Access/West Access , All Intervals

Movement	WB	NB
Directions Served	LTR	LTR
Maximum Queue (ft)	31	3
Average Queue (ft)	2	0
95th Queue (ft)	16	0
Link Distance (ft)	244	652
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Southwest Access & Parkway Drive , Interval #1

Movement	NB	SB
Directions Served	LTR	LTR
Maximum Queue (ft)	25	30
Average Queue (ft)	6	5
95th Queue (ft)	26	23
Link Distance (ft)	268	222
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Southwest Access & Parkway Drive , Interval #2

Movement	NB	SB
Directions Served	LTR	LTR
Maximum Queue (ft)	20	12
Average Queue (ft)	5	2
95th Queue (ft)	22	13
Link Distance (ft)	268	222
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Southwest Access & Parkway Drive , Interval #3

Movement	NB	SB
Directions Served	LTR	LTR
Maximum Queue (ft)	18	12
Average Queue (ft)	3	2
95th Queue (ft)	19	13
Link Distance (ft)	268	222
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Southwest Access & Parkway Drive , Interval #4

Movement	EB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	3	22	24
Average Queue (ft)	0	6	3
95th Queue (ft)	6	26	19
Link Distance (ft)	300	268	222
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Southwest Access & Parkway Drive , All Intervals

Movement	EB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	3	31	30
Average Queue (ft)	0	5	3
95th Queue (ft)	3	23	18
Link Distance (ft)	300	268	222
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: Alpine Highway (SR-74) & Parkway Drive , Interval #1

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	56	33
Average Queue (ft)	33	14
95th Queue (ft)	63	37
Link Distance (ft)	421	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		150
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Alpine Highway (SR-74) & Parkway Drive , Interval #2

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	72	31
Average Queue (ft)	36	14
95th Queue (ft)	76	38
Link Distance (ft)	421	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		150
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Alpine Highway (SR-74) & Parkway Drive , Interval #3

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	55	30
Average Queue (ft)	28	13
95th Queue (ft)	58	36
Link Distance (ft)	421	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		150
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Alpine Highway (SR-74) & Parkway Drive , Interval #4

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	67	30
Average Queue (ft)	30	12
95th Queue (ft)	65	35
Link Distance (ft)	421	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		150
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Alpine Highway (SR-74) & Parkway Drive , All Intervals

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	85	39
Average Queue (ft)	32	13
95th Queue (ft)	66	36
Link Distance (ft)	421	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		150
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: Alpine Highway (SR-74) & Town Square Access/Wells Fargo Access, Interval #1

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	LTR	L	L
Maximum Queue (ft)	27	33	58	22	26
Average Queue (ft)	9	19	27	5	6
95th Queue (ft)	32	44	58	22	26
Link Distance (ft)		370	326		
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	65			80	80
Storage Blk Time (%)		0			
Queuing Penalty (veh)		0			

Intersection: 8: Alpine Highway (SR-74) & Town Square Access/Wells Fargo Access, Interval #2

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	LTR	L	L
Maximum Queue (ft)	37	35	57	23	27
Average Queue (ft)	16	15	33	6	8
95th Queue (ft)	42	41	59	24	28
Link Distance (ft)		370	326		
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	65			80	80
Storage Blk Time (%)	0	0			
Queuing Penalty (veh)	0	0			

Intersection: 8: Alpine Highway (SR-74) & Town Square Access/Wells Fargo Access, Interval #3

Movement	EB	EB	WB	NB	SB	SB
Directions Served	L	TR	LTR	L	L	TR
Maximum Queue (ft)	33	37	59	24	22	2
Average Queue (ft)	11	18	34	5	3	0
95th Queue (ft)	35	45	64	21	18	0
Link Distance (ft)		370	326			148
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	65			80	80	
Storage Blk Time (%)	0	0				
Queuing Penalty (veh)	0	0				

Intersection: 8: Alpine Highway (SR-74) & Town Square Access/Wells Fargo Access, Interval #4

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	LTR	L	L
Maximum Queue (ft)	30	33	48	21	22
Average Queue (ft)	14	18	28	5	4
95th Queue (ft)	38	43	56	20	19
Link Distance (ft)		370	326		
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	65			80	80
Storage Blk Time (%)		0			
Queuing Penalty (veh)		0			

Intersection: 8: Alpine Highway (SR-74) & Town Square Access/Wells Fargo Access, All Intervals

Movement	EB	EB	WB	NB	SB	SB
Directions Served	L	TR	LTR	L	L	TR
Maximum Queue (ft)	40	42	73	28	30	2
Average Queue (ft)	13	17	31	5	5	0
95th Queue (ft)	37	43	60	22	23	0
Link Distance (ft)		370	326			148
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	65			80	80	
Storage Blk Time (%)	0	0				
Queuing Penalty (veh)	0	0				

Intersection: 9: Northeast Access & Town Square Access, Interval #1

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	3	24
Average Queue (ft)	0	6
95th Queue (ft)	6	25
Link Distance (ft)	370	284
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: Northeast Access & Town Square Access, Interval #2

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	3	20
Average Queue (ft)	0	5
95th Queue (ft)	7	24
Link Distance (ft)	370	284
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: Northeast Access & Town Square Access, Interval #3

Movement	NB
Directions Served	LR
Maximum Queue (ft)	24
Average Queue (ft)	7
95th Queue (ft)	28
Link Distance (ft)	284
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 9: Northeast Access & Town Square Access, Interval #4

Movement	NB
Directions Served	LR
Maximum Queue (ft)	29
Average Queue (ft)	7
95th Queue (ft)	28
Link Distance (ft)	284
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 9: Northeast Access & Town Square Access, All Intervals

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	6	30
Average Queue (ft)	0	6
95th Queue (ft)	5	26
Link Distance (ft)	370	284
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 17: Highland Highway (SR-92), Interval #1

Movement	EB	EB	EB	EB	WB	WB	WB	WB	B20	B20	NB	NB
Directions Served	L	T	T	R	L	T	T	R	T	T	L	TR
Maximum Queue (ft)	175	396	382	202	189	362	364	219	2	2	166	285
Average Queue (ft)	66	234	185	67	106	174	189	70	0	0	88	267
95th Queue (ft)	161	434	397	196	201	358	363	208	4	5	195	324
Link Distance (ft)		385	385			2870	2870		211	211	254	254
Upstream Blk Time (%)		7	3								2	80
Queuing Penalty (veh)		0	0								0	0
Storage Bay Dist (ft)	150			150	120			120				
Storage Blk Time (%)	0	17	11		12	14	17					
Queuing Penalty (veh)	0	17	21		59	14	22					

Intersection: 17: Highland Highway (SR-92), Interval #1

Movement	SB	SB
Directions Served	L	TR
Maximum Queue (ft)	139	138
Average Queue (ft)	110	114
95th Queue (ft)	168	180
Link Distance (ft)	115	115
Upstream Blk Time (%)	50	53
Queuing Penalty (veh)	0	0
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 17: Highland Highway (SR-92), Interval #2

Movement	EB	EB	EB	EB	WB	WB	WB	WB	B20	B20	NB	NB
Directions Served	L	T	T	R	L	T	T	R	T		L	TR
Maximum Queue (ft)	170	384	390	220	173	335	352	138	9	9	187	289
Average Queue (ft)	75	221	171	66	94	149	154	42	1	1	126	271
95th Queue (ft)	173	386	374	204	188	323	333	144	19	20	257	294
Link Distance (ft)		385	385			2870	2870		211	211	254	254
Upstream Blk Time (%)		5	4								5	87
Queuing Penalty (veh)		0	0								0	0
Storage Bay Dist (ft)	150			150	120			120				
Storage Blk Time (%)	2	13	9		16	9	11					
Queuing Penalty (veh)	17	14	19		84	10	16					

Intersection: 17: Highland Highway (SR-92), Interval #2

Movement	SB	SB
Directions Served	L	TR
Maximum Queue (ft)	130	144
Average Queue (ft)	104	122
95th Queue (ft)	164	177
Link Distance (ft)	115	115
Upstream Blk Time (%)	46	70
Queuing Penalty (veh)	0	0
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 17: Highland Highway (SR-92), Interval #3

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	L	TR	L	TR
Maximum Queue (ft)	193	386	374	188	175	358	379	181	200	290	132	140
Average Queue (ft)	81	247	196	70	84	194	205	67	141	235	98	124
95th Queue (ft)	191	447	403	198	180	409	417	204	293	378	161	167
Link Distance (ft)		385	385			2870	2870		254	254	115	115
Upstream Blk Time (%)		5	2						21	72	34	63
Queuing Penalty (veh)		0	0						0	0	0	0
Storage Bay Dist (ft)	150			150	120			120				
Storage Blk Time (%)	0	16	10	1	9	14	16					
Queuing Penalty (veh)	1	16	19	3	42	13	22					

Intersection: 17: Highland Highway (SR-92), Interval #4

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	L	TR	L	TR
Maximum Queue (ft)	220	402	409	200	146	408	425	172	212	276	139	135
Average Queue (ft)	94	250	212	64	85	180	194	52	161	250	98	121
95th Queue (ft)	221	459	439	195	171	406	420	180	317	338	173	167
Link Distance (ft)		385	385			2870	2870		254	254	115	115
Upstream Blk Time (%)		9	6						28	65	41	61
Queuing Penalty (veh)		0	0						0	0	0	0
Storage Bay Dist (ft)	150			150	120			120				
Storage Blk Time (%)	0	19	13		9	15	18					
Queuing Penalty (veh)	1	19	26		44	15	24					

Intersection: 17: Highland Highway (SR-92), All Intervals

Movement	EB	EB	EB	EB	WB	WB	WB	WB	B20	B20	B20	NB
Directions Served	L	T	T	R	L	T	T	R	T	T		L
Maximum Queue (ft)	249	406	413	250	215	488	502	220	2	11	9	243
Average Queue (ft)	79	238	191	67	92	174	185	58	0	0	0	129
95th Queue (ft)	189	433	405	198	186	377	387	186	2	9	10	274
Link Distance (ft)		385	385			2870	2870		211	211	211	254
Upstream Blk Time (%)		7	4									14
Queuing Penalty (veh)		0	0									0
Storage Bay Dist (ft)	150			150	120			120				
Storage Blk Time (%)	1	16	11	0	11	13	15					
Queuing Penalty (veh)	5	16	21	1	57	13	21					

Intersection: 17: Highland Highway (SR-92), All Intervals

Movement	NB	SB	SB
Directions Served	TR	L	TR
Maximum Queue (ft)	303	148	151
Average Queue (ft)	256	103	120
95th Queue (ft)	348	167	174
Link Distance (ft)	254	115	115
Upstream Blk Time (%)	76	43	62
Queuing Penalty (veh)	0	0	0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 22: Highland Highway (SR-92), Interval #1

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	L
Maximum Queue (ft)	289	465	483	290	240	613	570	46	200	223	140	202
Average Queue (ft)	165	271	279	141	211	369	316	22	148	156	61	134
95th Queue (ft)	318	454	484	322	293	689	655	52	216	236	139	214
Link Distance (ft)		1041	1041			1817	1817				232	
Upstream Blk Time (%)									0	1	0	
Queuing Penalty (veh)									0	0	0	
Storage Bay Dist (ft)	140			140	140			140	120		120	120
Storage Blk Time (%)	23	24	28	2	84	6	3		15	10	1	19
Queuing Penalty (veh)	133	43	131	10	244	9	3		64	38	4	91

Intersection: 22: Highland Highway (SR-92), Interval #1

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	243	123
Average Queue (ft)	81	76
95th Queue (ft)	215	133
Link Distance (ft)	354	
Upstream Blk Time (%)	1	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		120
Storage Blk Time (%)	0	2
Queuing Penalty (veh)	1	5

Intersection: 22: Highland Highway (SR-92), Interval #2

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	L
Maximum Queue (ft)	289	560	589	290	240	1071	1025	73	213	244	194	190
Average Queue (ft)	173	368	389	209	238	826	783	36	153	169	84	126
95th Queue (ft)	320	666	702	378	244	1279	1232	76	243	271	191	223
Link Distance (ft)		1041	1041			1817	1817			232		
Upstream Blk Time (%)									0	4	0	
Queuing Penalty (veh)									0	0	0	
Storage Bay Dist (ft)	140			140	140			140	120		120	120
Storage Blk Time (%)	26	24	28	2	100	6	4		18	16	1	23
Queuing Penalty (veh)	166	48	146	14	318	10	4		85	69	4	122

Intersection: 22: Highland Highway (SR-92), Interval #2

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	259	136
Average Queue (ft)	130	89
95th Queue (ft)	332	157
Link Distance (ft)	354	
Upstream Blk Time (%)	4	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		120
Storage Blk Time (%)	1	7
Queuing Penalty (veh)	5	23

Intersection: 22: Highland Highway (SR-92), Interval #3

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	L
Maximum Queue (ft)	278	487	496	284	240	1446	1422	108	215	242	207	210
Average Queue (ft)	192	320	324	162	238	1277	1229	35	165	187	76	152
95th Queue (ft)	341	628	634	344	243	1769	1721	113	243	289	186	235
Link Distance (ft)		1041	1041			1817	1817			232		
Upstream Blk Time (%)			0			4	1		0	5	0	
Queuing Penalty (veh)			0			0	0		0	0	0	
Storage Bay Dist (ft)	140			140	140			140	120		120	120
Storage Blk Time (%)	36	23	27	3	100	11	6		16	14	0	28
Queuing Penalty (veh)	212	42	130	16	291	16	6		70	54	3	136

Intersection: 22: Highland Highway (SR-92), Interval #3

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	289	141
Average Queue (ft)	148	96
95th Queue (ft)	351	166
Link Distance (ft)	354	
Upstream Blk Time (%)	5	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		120
Storage Blk Time (%)	0	7
Queuing Penalty (veh)	2	20

Intersection: 22: Highland Highway (SR-92), Interval #4

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	L
Maximum Queue (ft)	271	406	456	289	240	1688	1656	69	203	212	134	178
Average Queue (ft)	156	288	306	181	237	1564	1522	27	112	127	56	110
95th Queue (ft)	293	433	478	361	246	2017	1985	80	201	233	136	200
Link Distance (ft)		1041	1041			1817	1817			232		
Upstream Blk Time (%)						22	9		0	2	0	
Queuing Penalty (veh)						0	0		0	0	0	
Storage Bay Dist (ft)	140			140	140			140	120		120	120
Storage Blk Time (%)	12	20	23	4	99	6	4	0	9	10	1	15
Queuing Penalty (veh)	69	36	112	21	290	9	4	1	38	40	5	73

Intersection: 22: Highland Highway (SR-92), Interval #4

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	204	135
Average Queue (ft)	75	71
95th Queue (ft)	227	140
Link Distance (ft)	354	
Upstream Blk Time (%)	2	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		120
Storage Blk Time (%)	1	3
Queuing Penalty (veh)	4	9

Intersection: 22: Highland Highway (SR-92), All Intervals

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	L
Maximum Queue (ft)	290	605	629	290	240	1688	1657	141	220	249	220	218
Average Queue (ft)	171	312	324	173	231	1009	963	30	144	160	69	131
95th Queue (ft)	320	563	591	356	277	1874	1835	84	233	264	166	222
Link Distance (ft)		1041	1041			1817	1817			232		
Upstream Blk Time (%)			0			6	2		0	3	0	
Queuing Penalty (veh)			0			0	0		0	0	0	
Storage Bay Dist (ft)	140			140	140			140	120		120	120
Storage Blk Time (%)	24	23	27	3	96	7	4	0	14	12	1	21
Queuing Penalty (veh)	145	42	130	15	286	11	4	0	64	50	4	105

Intersection: 22: Highland Highway (SR-92), All Intervals

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	319	145
Average Queue (ft)	108	83
95th Queue (ft)	291	151
Link Distance (ft)	354	
Upstream Blk Time (%)	3	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		120
Storage Blk Time (%)	0	5
Queuing Penalty (veh)	3	14

Network Summary

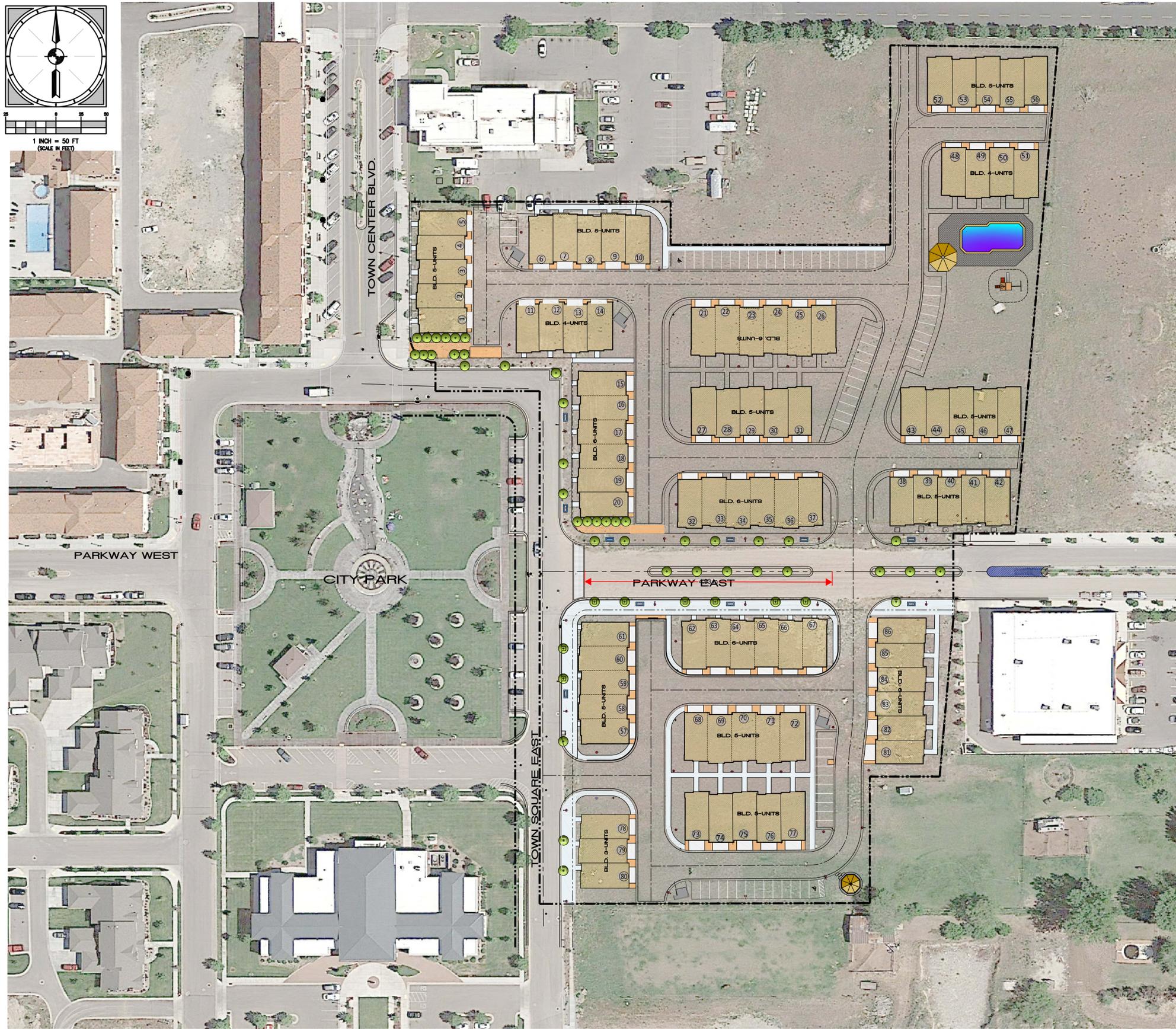
Network wide Queuing Penalty, Interval #1: 909
Network wide Queuing Penalty, Interval #2: 1171
Network wide Queuing Penalty, Interval #3: 1114
Network wide Queuing Penalty, Interval #4: 839
Network wide Queuing Penalty, All Intervals: 1008

APPENDIX C

Site Plan



1 INCH = 50 FT
(SCALE IN FEET)



LEGEND

- ① LANDSCAPED STREET MEDIAN
- ② ADA RAMP
- ③ ACCESS GATE IN EXTERIOR FENCING
- ④ NEW SIDEWALK
- ⑤ PASEO/ PLAZA AREAS-SEE SITE PLAN DETAIL SHEET
- ⑥ GAZEBO/ GRILL AREA
- ⑦ STOP/ STREET SIGN
- ⑧ EXISTING 5' WIDE SIDEWALK TO BE UPGRADED TO A 15' WIDE SIDEWALK
- ⑨ WROUGHT IRON FENCING-SEE DETAIL SHEETS
- ⑩ FIRE ACCESS
- ⑪ LANDSCAPE PLANTER
- ⑫ CROSSWALK
- ⑬ POLE LIGHT-SEE LIGHTING SITE PLAN
- ⑭ STREET LIGHT-SEE LIGHTING SITE PLAN
- ⑮ STREET TREE AND GRATE-SEE DETAIL SHEETS
- ⑯ BIKE RACK-SEE DETAIL SHEETS
- ⑰ HIGH BACK CURB AND GUTTER
- ⑱ ROLLED GUTTER (All private roads)
- ⑲ CONCRETE DRIVEWAY
- ⑳ COMMUNITY FACILITY AREA
- ㉑ CHILDREN'S PLAY AREA
- ㉒ RECONSTRUCT MEDIAN FOR NEW INTERSECTION
- ㉓ TRASH ENCLOSURE

JURISDICTION

LEGAL JURISDICTION: HIGHLAND CITY
DISTRICT/ PLANNING ZONE: TOWN CENTER FLEX USE

AREA TABULATIONS

	AREA	% of total
TOTAL AREA:	___ acres	___%
BUILDING(S) AREA:	___ acres (sf)	___%
LANDSCAPE:	___ acres (sf)	___%
HARDSCAPE:	___ acres (sf)	___%
ROADS:	___ acres (sf)	___%

PARKING TABULATIONS

TOTAL UNITS:	86
ON SITE PARKING PROVIDED:	172 GARAGE
	___ STALLS
	___ TOTAL ON SITE
	(3.0 SPACES/ UNIT)

ACCESSIBILITY

ALL UNITS TO OFFER ELEVATORS FOR HANDICAPPED ACCESS

Project access point-full access

NO.	DATE	BY	REVISIONS
1			
2			
3			
4			
5			
6			
7			
8			

PROJECT ENGINEER: BMB
PROJECT MANAGER: BMB

DRAWN BY: SCS
SCALE: AS SHOWN
ISSUE DATE: 7-06-15

DESIGN ENGINEER'S SEAL
CITY ENGINEER

BLACKSTONE PROJECT

SHEET TITLE: SITE PLAN
PROJECT: C15-006
SHEET: C-1

7/6/2015 12:07:06 PM \\Serp-server\users\scs\Projects\CURRENT PROJECTS\C15-006 Highland Working Files\Planning\Map\C15-006 Base Map.dwg design: JMF, ZJW

APPENDIX D

95th Percentile Queue Length Reports

SimTraffic Queuing Report

Project: Highland - Blackstone TIS

Time Period: p.m. Peak Hour

95th Percentile Queue Length (feet)

Intersection	Time Period	EB					NB				SB		WB						
		L	LR	LT	LTR	T	TR	L	LR	LT	LTR	L	LTR	L	LR	LTR	T	TR	
10890 North/10890 North & Town Center Boulevard	Existing (2015) Background	--	--	49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	44
5400 West & Park Access	Existing (2015) Background	--	--	--	--	--	--	--	--	3	--	--	--	--	--	--	--	--	--
5400 West/5400 West & Parkway Drive	Existing (2015) Background	--	--	--	--	--	--	--	--	--	--	--	--	--	28	--	--	--	--
Alpine Highway (SR-74) & Parkway Drive	Existing (2015) Background	--	59	--	--	--	--	32	--	--	--	--	--	--	--	--	--	--	--
Alpine Highway (SR-74) & Town Square Access/Wells Fargo Access	Existing (2015) Background	33	--	--	--	--	44	21	--	--	--	26	--	--	--	--	60	--	--
Town Center Boulevard & Highland Highway (SR-92)	Existing (2015) Background	--	--	--	--	9	4	--	127	--	--	--	--	62	--	--	--	21	--
Town Center Boulevard & Toscana Access/Town Square Access	Existing (2015) Background	--	--	--	39	--	--	--	--	--	4	--	9	--	--	40	--	--	--

SimTraffic Queueing Report

Project: Highland - Blackstone TIS

Time Period: p.m. Peak Hour

95th Percentile Queue Length (feet)

Intersection	Time Period	EB						NB			SB				WB						
		L	LR	LT	LTR	T	TR	L	LR	LTR	L	LR	LTR	TR	L	LR	LT	LTR	T	TR	
10890 North/10890 North & Town Center Boulevard	Existing (2015) Plus Project Conditions	--	--	48	--	--	--	--	--	--	--	7	--	--	--	--	--	--	--	--	44
5400 West & Park Access/West Access	Existing (2015) Plus Project Conditions	--	--	--	--	--	--	--	--	0	--	--	--	--	--	--	--	16	--	--	--
5400 West/5400 West & Parkway Drive	Existing (2015) Plus Project Conditions	--	--	--	--	--	--	--	--	--	--	--	--	--	31	--	--	--	--	--	--
Alpine Highway (SR-74) & Parkway Drive	Existing (2015) Plus Project Conditions	--	66	--	--	--	--	36	--	--	--	--	--	--	--	--	--	--	--	--	--
Alpine Highway (SR-74) & Town Square Access/Wells Fargo Access	Existing (2015) Plus Project Conditions	37	--	--	--	--	43	22	--	--	23	--	--	0	--	--	--	60	--	--	--
Northeast Access & Town Square Access	Existing (2015) Plus Project Conditions	--	--	--	--	--	--	--	26	--	--	--	--	--	--	5	--	--	--	--	--
Southwest Access & Parkway Drive	Existing (2015) Plus Project Conditions	--	--	--	3	--	--	--	--	23	--	--	18	--	--	--	--	--	--	--	--
Town Center Boulevard & Highland Highway (SR-92)	Existing (2015) Plus Project Conditions	--	--	--	--	11	10	--	168	--	--	--	--	--	66	--	--	--	--	20	--
Town Center Boulevard & Toscana Access/Town Square Access	Existing (2015) Plus Project Conditions	--	--	--	39	--	--	--	--	--	--	11	--	--	--	--	--	40	--	--	--

HIGHLAND CITY BLACKSTONE TOWNHOMES TRAFFIC IMPACT STUDY



DRAFT August 2015
Project Number 150419



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Midvale, Utah 84047
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Introduction

InterPlan was hired by Highland City to evaluate the general traffic operations of the proposed Blackstone development in Highland, Utah. The overall purpose of this traffic study is to identify planning related issues associated with the design plans and concepts in order to mitigate any transportation related concerns and identify site specific design issues that may be addressed at a later stage in project development and design. This report summarizes the traffic analysis and recommendations for the proposed development.

The proposed development is a 7.76 acre site located in Highland, Utah at the intersection of Town Square East and Parkway East, adjacent to the town center. The site is located east of Town Square East and on both sides of Parkway East. The site is for a proposed townhouse development. Figure 1 shows the development site plan.

Summary of Issues and Recommendations

Through analysis of the traffic operations, current and planned land uses and local concerns, InterPlan has determined the major issues to be:

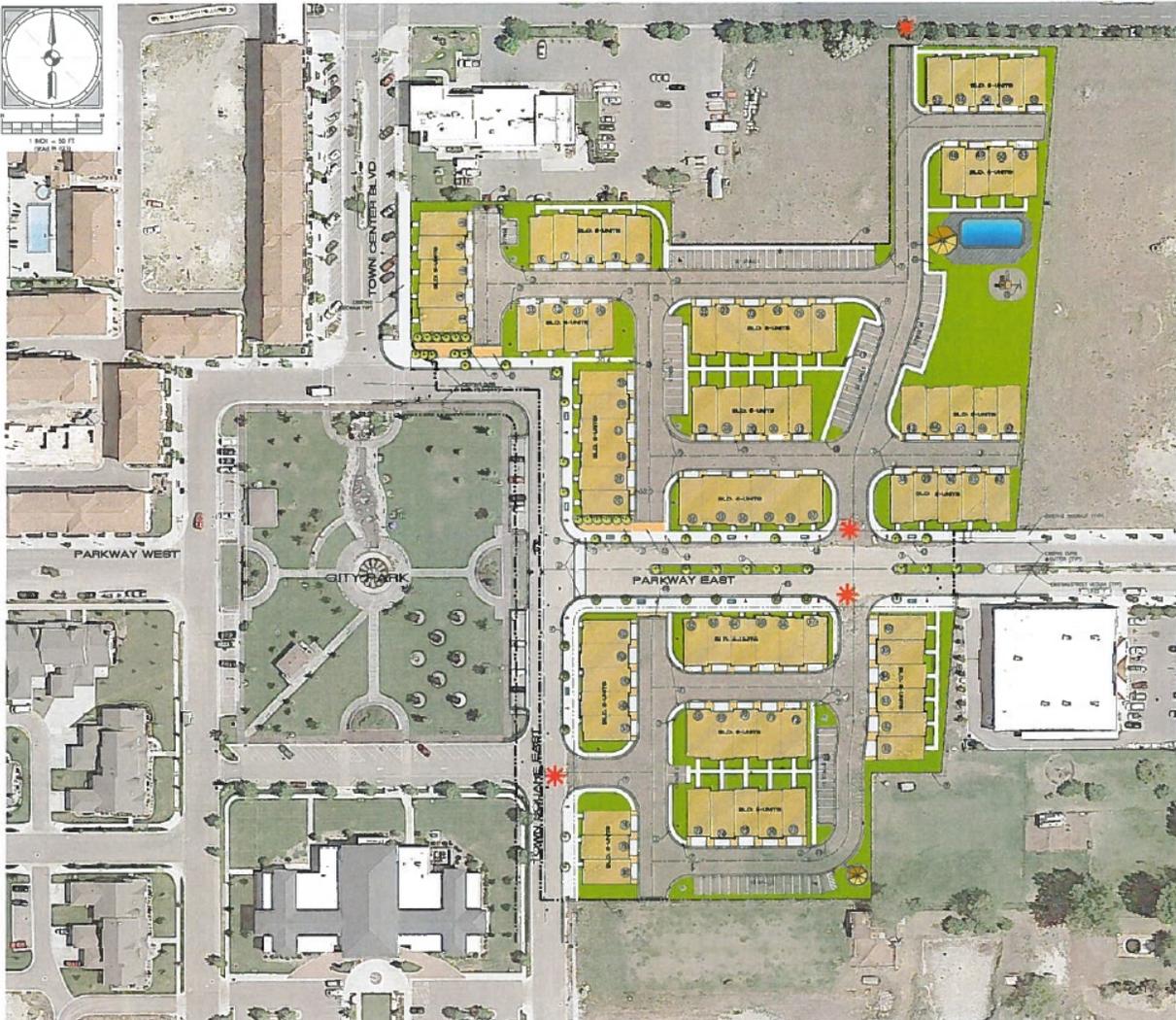
1. The impact of development trips to adjacent intersection operation and the surrounding traffic network
2. Driveway access and site circulation
3. Pedestrian safety

The traffic volumes generated by the proposed development will not have a significant impact on the surrounding road network for opening day conditions.

The north section of the development only provides one full access for 56 townhouse units. InterPlan recommends an additional public access driveway for the north section of the development for traffic circulation and emergency access.

The traffic generated during the Midday peak hour is minimal and will not provide a safety hazard to the individuals that use the splash pad and Town Center Plaza during the summer months.

Figure 1 – Development Site Plan



Description of Existing Conditions and Proposal

The proposed development is located in the town center of Highland, Utah at the intersection of Town Square East and Parkway East. The 7.76 acre site is a proposed residential development for 86 attached multi-family unit townhomes. The proposed development is adjacent to Highland City Hall and the Highland Town Center Plaza. The development site will lie on both sides of Parkway East, which runs east-west and will connect Town Square East on the west with Alpine Highway (SR-74) on the east. Parkway East is approximately 52 feet wide with one lane in each direction and a center median. The section of Parkway East immediately adjacent to the development site is not fully improved, but is anticipated for completion as part of the development project.

Town Square East is a north-south minor street that runs along the east side of the Highland City civic area and connects Town Center Boulevard on the north to Town

Center Parkway on the south. Town Square East is approximately 32 feet wide adjacent to the development site with one lane in each direction and no center turn lane.

The Blackstone townhouse development is proposed to have one access driveway onto Town Square East that will align with Civic Center Drive. Access driveways are also proposed onto Parkway East that will align and provide access to the north and south sections of the development. The proposed development will provide on-site parking for three spaces per townhouse (172 garage spaces and 86 parking stalls).

The proposed development is zoned Town Center Flex Use District and is part of the town center special overlay district. The surrounding land use is a mix of residential, commercial, and civic land uses, including Toscana, another high density townhouse development to the west. The Town Center Plaza which lies directly west of the proposed development site contains a splash pad that is open from Memorial Day to Labor Day from 10:00 a.m. to 8:00 p.m. and can attract crowds during the summer season. There is commercial retail development to the north and east of the proposed development including a grocery store, hardware store, bank, and several fast food restaurants.

Trip Generation

For purposes of evaluation and planning, transportation engineers have defined a unit of measure as a vehicle trip. A trip is a one-direction vehicle movement with either the origin or the destination (exiting or entering) inside the study site. (Source: Institute of Transportation Engineers (ITE), Trip Generation User's Guide 2003) In general terms, any time a vehicle passes through a driveway, a trip is registered. The ITE has performed studies on various types of land uses and the trips generated by those individual land uses. The ITE has published detailed average trip counts by type of development. ITE trip generation rates are available for various periods of the day including AM and PM peaks on weekdays and on weekends. InterPlan typically uses these industry-accepted standards when evaluating traffic impacts unless local variations to the standards are readily apparent or are an area of concern.

Trip generation for the proposed development was calculated using the ITE's trip rate for Residential Townhouse (ITE Land Use Code 230). Table 1 summarizes the trip generation for the AM and PM peak hour. The development is anticipated to generate approximately 500 total daily trips, with 38 AM peak hour trips and 45 PM peak hour trips.

Table 1 – Trip Generation

Land Use	ITE Code	Units	# of Units	Time Period	Trip Rate	In/Out Split	Trips		
							In	Out	Total
Residential Townhomes/ Condos	230	# of Dwelling Units	86	Weekday Daily	5.81	50/50	250	250	500
				AM Peak Hour	0.44	17/83	7	31	38
				Midday Peak Hour*	5% of Daily Total*	40/60*	10*	15*	25*
				PM Peak Hour	0.52	67/33	30	15	45

Source: Trip Generation Manual, 9th Edition, 2012

*Based on engineering judgment and field observation of residential trip generation characteristics

The Trip Generation Manual does not contain trip generation rates for the Midday hour for residential land uses. Engineering judgment and field observation suggest that trips generated by the proposed development during the Midday hour are expected to be less than the both the AM and PM peak hours. The AM and PM peak hours generate trips equal to 7.6 percent and 9 percent of the weekday daily trip total, respectively. Thus, it was determined to assume the Midday peak hour would generate approximately 5 percent of the daily trips.

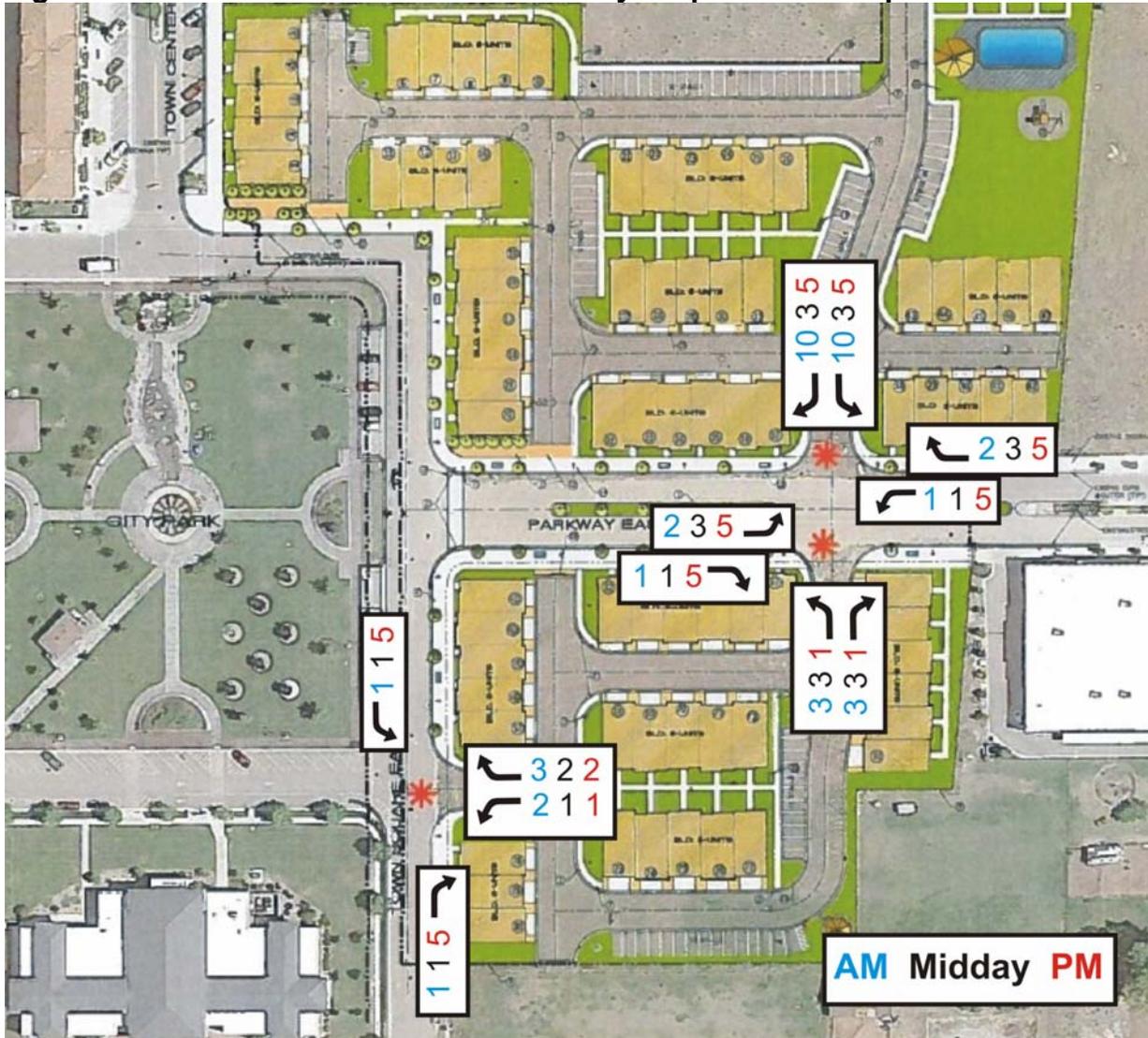
Trip Distribution

With the calculated trip generation, InterPlan estimates how the trips impact adjacent roads and intersections. To do this, engineers look at the existing trip distribution obtained during data collection, specifically the traffic counts. Traffic counts and observations were conducted on Tuesday August 4, 2015 during the AM peak hour (7:00 a.m. to 8:00 a.m.), at Midday (1:00 p.m. to 2:00 p.m.), and during the PM peak hour (5:00 p.m. to 6:00 p.m.). Based on existing traffic patterns, including the distribution of current traffic, and consideration of the location of major urban centers, the following trip distribution will be used for development-generated trips:

- 40 percent to/from west on Parkway East Drive
- 40 percent to/from east on Parkway East Drive
- 10 percent to/from north on Town Square East
- 10 percent to/from south on Town Square East

Figure 2 details the traffic volumes at each access driveway that are expected to be generated during the AM and PM peak hour by the proposed townhouse development.

Figure 2 – Peak Hour Volumes Generated by Proposed Development



Level of Service (LOS)

In analyzing how well an intersection operates, the capacity and/or operational Level of Service (LOS) for the intersection is determined. LOS is defined as how well an intersection or road operates based on levels A through F. Level A represents the best operating conditions and level F the worst. Typically, LOS C or D service flow rates are used as minimally acceptable standards in order to ensure acceptable traffic operations.

- A – free flow operation
- B – reasonably unimpeded operation
- C – stable operation
- D – small increases in flow may cause substantial delay
- E – operates with significant delays
- F – operates with extremely slow speeds and/or intersection failures

InterPlan calculates LOS using *Synchro*, a traffic engineering software program published by Trafficware. *Synchro* methods are consistent with the methods and procedures of the *Highway Capacity Manual 2010* to calculate vehicle delay on the roadway network. Built-in default parameters of *Synchro*, such as the use of a peak hour factor of 0.92, are generally used in our analysis. Field observations validate the appropriateness of default parameters. Table 2 illustrates the LOS definitions for stop sign controlled (unsignalized) intersections. It should be noted that Highway Capacity Manual definitions for LOS do not apply to uncontrolled movements.

Table 2 – LOS Criteria for Unsignalized Intersections

Level of Service	Stop-Controlled Intersection Approaches Average Control delay (seconds/vehicle)
A	0 – 10
B	> 10 – 15
C	> 15 – 25
D	> 25- 35
E	> 35 – 50
F	> 50

Source: Highway Capacity Manual (HCM) 2000, Transportation Research Board National Research Council, Washington D.C., 2000.

Analysis

Existing Performance

Existing LOS was analyzed for the AM, Midday, and PM peak hours for the following stop-controlled intersections:

1. Town Center Boulevard/Timpanogos Highway (SR-92)
2. Town Center Boulevard/10890 North
3. Parkway East/Alpine Highway (SR-74)

Existing 2015 traffic volumes for each movement are shown in Figure 3. The AM volumes are represented in blue, Midday volumes in black, and PM volumes in red. Volumes include existing and anticipated traffic volumes from the nearby Toscana townhome development which is currently approaching completion. According to Highland City, approximately 124 of the planned 200 units at Toscana were completed at the time of the data collection. Thus, traffic volumes from the 124 completed units were captured in the traffic counts. For the remaining 76 units, InterPlan applied the same trip generation rates for the proposed Blackstone development to estimate the number of additional trips the Toscana development is expected to add to the roadway system in the immediate future. Because the unfinished units are at the back (west) end of the Toscana development, it is anticipated that most of these new trips would access the roadway network via the driveway on Parkway West and proceed to 5600 West. The remaining trips are expected to primarily use the main Toscana driveway on Town Center Boulevard and proceed to SR-92. Thus, the only study intersection likely to be significantly affected by future Toscana development is the Town Center Boulevard/ Timpanogos Highway (SR-92) intersection. These trips (which are less than 10 total trips for each peak hour) were added to the existing conditions analysis

Under existing conditions, the intersection at Town Center Boulevard and Timpanogos Highway operates at an LOS F during the Midday and PM peak hours. The heavy east-west traffic flow on Timpanogos Highway does not provide many gaps for northbound left-turn vehicles, resulting in high vehicle delay for the NB left-turn movement at the intersection. All other intersections operate at acceptable LOS under existing conditions for the AM, Midday, and PM peak hours. It should be noted that drivers have alternate, signalized access to Timpanogos Highway at the intersection with Alpine Highway (SR-74).

Table 3 – Existing Level of Service

Stop-Controlled Intersection	Approach	Level of Service (average delay) [seconds/vehicle]		
		AM	Midday	PM
Town Center Boulevard/SR-92	NB	C (17)	F (> 50)	F (> 50)
Town Center Boulevard/10890 North	SB	A (8)	A (9)	A (9)
Parkway East/Alpine Highway	EB	B (15)	C (19)	D (27)
Parkway East/Town Square East	N/A			

Figure 3 – 2015 Existing Traffic Volumes



Existing Plus Development Level of Service

Existing Plus Development LOS was analyzed for the AM, Midday, and PM peak hours for four intersections:

1. Town Center Boulevard/Timpanogos Highway (SR-92)
2. Town Center Boulevard/10890 North
3. Parkway East/Alpine Highway (SR-74)
4. Parkway East/Town Square East

In addition to the three intersections analyzed under existing conditions, the Parkway East/Town Square East intersection was also analyzed under the Existing Plus Development scenario. The Existing Plus Development analysis assumes that Parkway East will be a completed roadway adjacent to the development. In addition to the trips generated by the development, additional traffic volumes were added to Parkway East. Based on background traffic counts and surrounding land uses, it was assumed that Parkway East will carry an additional 30 through vehicles during the AM peak hour, 40 vehicles during the Midday hour and 50 vehicles during the PM peak hour as a completed through street. These adjustments have been included in the Existing Plus Development traffic volumes.

Figure 4 shows traffic volumes with the added development traffic, and Table 4 details the resulting intersection LOS and vehicle delay. The addition of the vehicle trips generated by the proposed development does not significantly affect the surrounding traffic network. The intersection at Town Center Boulevard/Timpanogos Highway only worsens by four seconds of delay during the AM peak hour and remains at an acceptable LOS C with the addition of development traffic. This intersection is already LOS F under existing conditions during the Midday and PM peak hour, and does not increase significantly in vehicle delay with development traffic. The other intersections remain nearly unchanged in LOS and delay with the addition of the development vehicle trips to the traffic network. The intersection nearest the development at Parkway East/Town Square East operates at an acceptable LOS A.

Table 4 – Existing Plus Development LOS

Stop-Controlled Intersection	Approach	Level of Service (average delay) [seconds/vehicle]		
		AM	Midday	PM
Town Center Boulevard/SR-92	NB	C (21)	F (> 50)	F (> 50)
Town Center Boulevard/10890 North	SB	A (9)	A (9)	A (9)
Parkway East/Alpine Highway	EB	B (11)	C (20)	D (29)
Parkway East/Town Square East	WB	A (9)	A (9)	A (9)

Figure 4 – Existing Plus Development Traffic Volumes



Site Circulation

The proposed Blackstone development is divided into two sections, the northern section lies north of Parkway East and has 56 units, and the southern section lies south of Parkway East and has 30 units. The south section has two accesses, one from Town Square East and one from Parkway East. With 30 units and two access points, the south section provides good site circulation. The northern section only has one access from Parkway East for 56 units, although there may also be a one lane access on the north end of the development to the Ridley’s grocery store service drive. InterPlan did not consider this north access in its analysis as there is uncertainty whether this access will be open to public use. Additionally this north access would exit onto private property and will not be wide enough to allow for emergency vehicles to access the development. To provide better site circulation, InterPlan recommends that another access be added to the north section of the development from Parkway East.

Parking Requirements

The Blackstone development will provide three parking spaces per townhouse unit which includes two garage spaces and one parking stall per unit. There is also limited on-street parking available adjacent to the development site along 10890 North and Town Square East. The parking space allotment proposed by the developer will provide a sufficient amount of parking for the development. Based on the current site plan, InterPlan has observed that the outside parking stalls are located on the edges of the development and they do not allow close access for several of the townhouse units.

Pedestrian Safety

The Town Center Plaza and park lies directly west of the proposed development site and contains a splash pad that can attract large crowds during the summer. The splash pad is open from Memorial Day to Labor Day from 10:00 a.m. to 8:00 p.m. Concerns have been expressed that traffic from the proposed development will negatively affect pedestrian safety for those using Town Center Plaza and the splash pad. As mentioned earlier in this report, traffic generated during the midday hours from the proposed development will be minimal (less than 25 vehicles per hour), and will not significantly affect pedestrian activity for those using the Town Center Plaza and splash pad.

Conclusions

The proposed Blackstone development will not have a detrimental impact to intersection LOS, vehicle delay, or the surrounding traffic network. InterPlan recommends an additional public access driveway for the north section of the development for traffic circulation and emergency access. The parking requirements are sufficient for the development with three spaces per unit. Often, the outside parking stalls are located on the edges of the development and do not allow close access for several of the townhouse units, although each unit will have two dedicated parking spaces within its garage. The traffic generated during the Midday peak hour is minimal and will not provide a safety hazard to the individuals that use the splash pad and Town Center Plaza during the summer months.

About InterPlan

InterPlan is a Utah-owned and operated firm founded in 2001 and dedicated to offering creative and client-focused solutions to transportation planning issues. This report has been performed by InterPlan and its staff and is not intended to advocate a position on behalf of any client. Further information and assistance about the contents of this report may be obtained from any of those who worked on this project including Vern Keeslar, AICP, Charles Allen, P.E., PTOE, and Tim Peterson.

InterPlan Co.
7719 South Main Street
Midvale, UT 84047
www.interplanco.com

Appendix

DATE: August 28, 2015
TO: Highland City
FROM: Tavis Timothy, P.E.
SUBJECT: Blackstone Infrastructure Requirements
PROJECT NO: 314.05.115

INTRODUCTION

The purpose of this memo is to provide master planned infrastructure information for Storm Drain, Pressurized Irrigation, Sanitary Sewer and Drinking Water necessary for the proposed new Blackstone development. The development is located in the Town Center to the northeast of City Hall. Information has been compiled from previous Master Planning and modeling efforts.

STORM DRAIN

All new development in the Town Center must comply with a zero discharge rate. Each developer will need to plan on a retention/sump facility. The most recent proposed development plans provided sumps as the means of retaining storm water runoff.

PRESSURIZED IRRIGATION

Existing pressurized irrigation lines are within the existing streets that bound the proposed development. Connections to the new lines will be required. The existing system has sufficient pressures and volume of water to supply the needs of the development. No system upgrades are anticipated to provide secondary water to the Blackstone Development.

SANITARY SEWER

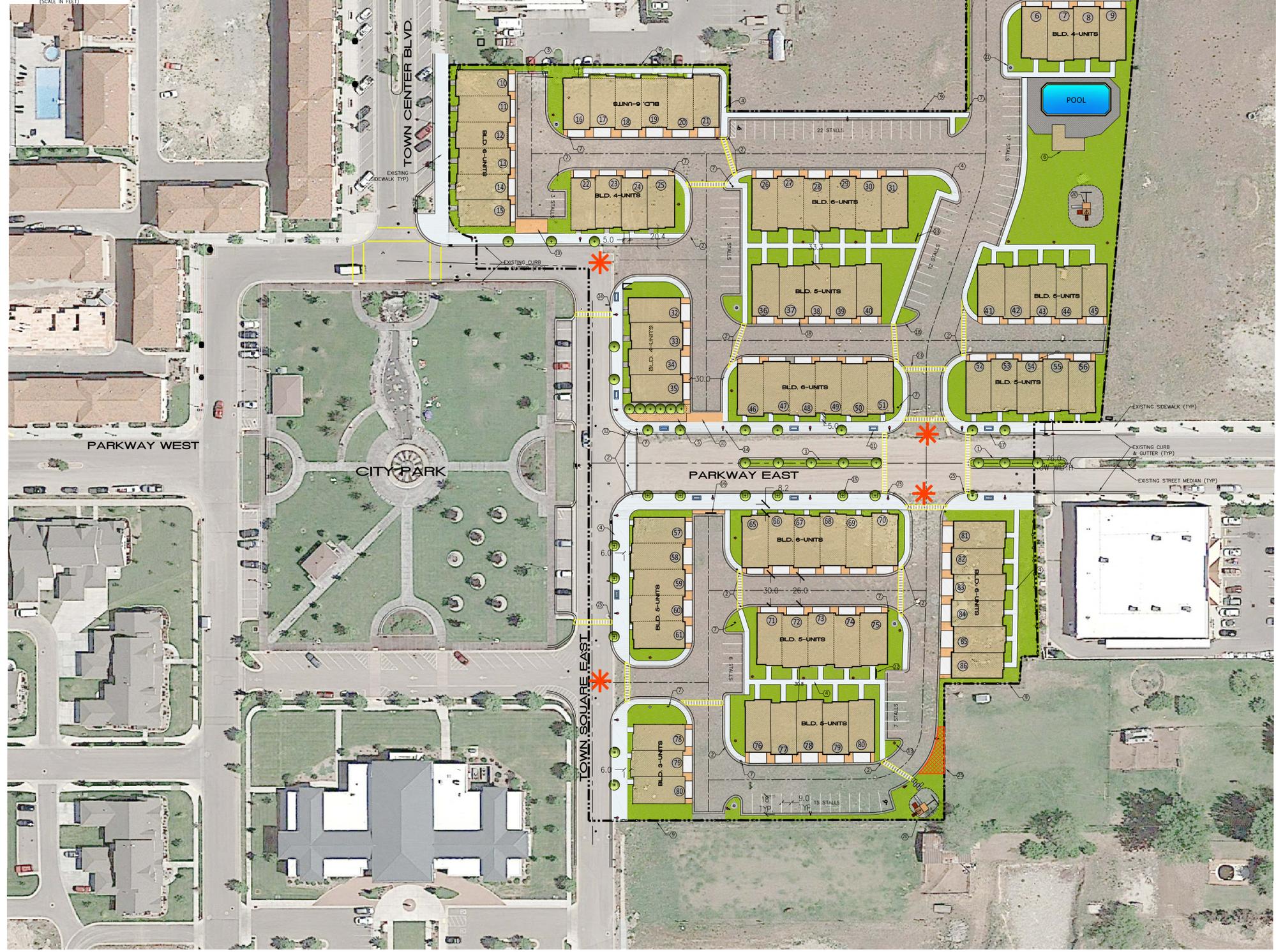
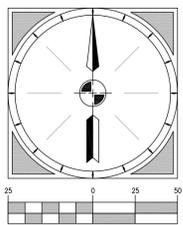
A sewer line, in anticipation of development in the Town Center, is located near the Blackstone development at the corner of 5400 W. and Town Center Parkway. The developer will be required to extend the line approximately 800-feet in 5400 W. The 10400 N. sewer replacement project is required for new development in the Town Center. The project was identified in the Sewer Master Plan, due to the existing 10-inch line not having sufficient capacity for new growth. The line is nearing 100% capacity for peak flows with existing and approved development.

City Council approved the replacement project earlier in the year after a study of the 10400 N. trunk line verified the existing and future sewer flows. It is recommended that the new sewer line be built before adding connections that would exceed the capacity of the sewer. Adding all

of the residences proposed by the Blackstone Development would exceed the capacity of the sewer system. The current schedule is that the new sewer line would be completed by early summer of 2016.

DRINKING WATER

Existing drinking water lines are found within the streets around the proposed development. Hydraulic modeling provided sufficient flows and pressures during peak demands. The new development will need to connect into the existing lines at a number of locations to get sufficient looping. No system upgrades are anticipated to provide secondary water to the Blackstone Development.



LEGEND

- ① LANDSCAPED STREET MEDIAN
- ② ADA RAMP
- ③ ACCESS GATE IN EXTERIOR FENCING
- ④ NEW SIDEWALK
- ⑤ PASEO/ PLAZA AREAS-SEE SITE PLAN DETAIL SHEET
- ⑥ COMMUNITY FACILITY AREA
- ⑦ STOP/ STREET SIGN
- ⑧ EXISTING 5' WIDE SIDEWALK TO BE UPGRADED TO A 15' WIDE SIDEWALK
- ⑨ WROUGHT IRON FENCING-SEE DETAIL SHEETS
- ⑩ FIRE ACCESS
- ⑪ LANDSCAPE PLANTER
- ⑫ CROSSWALK
- ⑬ POLE LIGHT-SEE LIGHTING SITE PLAN
- ⑭ STREET LIGHT-SEE LIGHTING SITE PLAN
- ⑮ STREET TREE AND GRATE-SEE DETAIL SHEETS
- ⑯ BIKE RACK-SEE DETAIL SHEETS
- ⑰ HIGH BACK CURB AND GUTTER
- ⑱ ROLLED GUTTER (All private roads)
- ⑲ CONCRETE DRIVEWAY
- ⑳ CHILDREN'S PLAY AREA
- ㉑ DOG WASTE STATION
- ㉒ MAIL BOXES
- ㉓ PAINTED CROSSWALKS
- ㉔ PEDESTRIAN-ACTUATED CROSSING LIGHT
- ㉕ 30' UTILITY EASEMENT FOR THE BENEFIT OF PROPERTIES TO THE EAST

JURISDICTION
 LEGAL JURISDICTION: HIGHLAND CITY
 DISTRICT/ PLANNING ZONE: TOWN CENTER FLEX USE

AREA TABULATIONS	AREA	% of total
TOTAL AREA:	7.76 acres	100%
BUILDING(S) AREA:	2.45 acres (107,136 sf)	32%
LANDSCAPE:	1.21 acres (52,793 sf)	15.6%
HARDSCAPE:	0.5 acres (21,780 sf)	6.4%
ROADS:	1.9 acres (82,764 sf)	23%

PARKING TABULATIONS	
TOTAL UNITS:	86
ON SITE PARKING PROVIDED:	172 GARAGE 93 STALLS 265 TOTAL ON SITE (3.0 SPACES/ UNIT)

ACCESSIBILITY
 ALL UNITS TO OFFER ELEVATORS FOR HANDICAPPED ACCESS

Project access point-full access

REVISIONS	DATE BY
1	
2	
3	
4	
5	
6	
7	
8	

CITY ENGINEER

DESIGN ENGINEER'S SEAL

PROJECT ENGINEER: BMB
 PROJECT MANAGER: BMB
 DRAWN BY: SCS
 SCALE: AS SHOWN
 ISSUE DATE: 8-10-15

BLACKSTONE PROJECT

SHEET TITLE
 SITE PLAN

\S:\projects\15000\15000-006_Highland\Working Files\Planning\Site\015-006_Bose_Rise_sit_plan_Sep14.rvt



CITY COUNCIL AGENDA REPORT

Item # 7

DATE: September 15, 2015

TO: Honorable Mayor and Members of the City Council

FROM: Nathan Crane, Interim City Administrator/Community Development Director
Justin Parduhn, Operations and Maintenance Director

SUBJECT: Motion – authorization to proceed with construction of the Dry Creek Phase 3 Trail

STAFF RECOMMENDATION:

City Council authorizes the construction of the Dry Creek Phase 3 Trail.

BACKGROUND:

Over the past several months the City Council has been discussing the status of the Dry Creek Bench Trail. On May 5, 2015, the Council directed staff to return with a phase plan for engineering work, removal and replacement of asphalt for Phase II and III or the expansion of the easements.

At the August 4, 2015 the Council approved a contract for Hansen Allen and Luce, Inc. to design the trail. The preliminary trail design has been completed. Staff has prepared two estimated costs listed below. A third cost based on a bid from a contractor will be presented during the Council meeting.

Cost 1 – Hansen Allen and Luce Engineer’s Estimate
Total Cost: \$40,000 to \$50,000

Cost 2 – Staff Construction
Material Cost: \$21,311 to \$23,811
Labor Cost: Estimate five employees for three weeks

Reassigning staff from daily responsibilities to this project will result in impacts on completing scheduled work (crack sealing, sprinkler winterization, snow plowing equipment preparation, subdivision inspections, etc.). We may be able to work on this project throughout the winter to lessen the impact on current responsibilities.

In July of 2015 the Council adopted new Engineering Design Standards. One of the standards prohibits the laying of asphalt after October 31 to April 1. It is unlikely that staff can complete the project by this deadline. If a contractor is hired meeting this deadline could be problematic. In addition, the cost will be higher given the short deadline. We may get a better cost if we bid the project no but construction takes place in the spring.

RECOMMENDATION AND PROPOSED MOTION:

There are four options for the Council to consider:

- 1) Proceed quickly with hiring a contractor to try and complete the project before October 31.
- 2) Staff completes the project prior to October 31 knowing existing service will be heavily impacted.
- 3) Staff completes the project over the winter with paving occurring after April 1 knowing existing service will be impacted.
- 4) A contractor completes the project over the winter with paving occurring after April 1.

The Council will need to discuss the options and provide staff with direction.

FISCAL IMPACT:

Funding for the trail was included in the FY 2015/2016 Budget in account 10-70-38 which has \$80,000.

ATTACHMENTS:

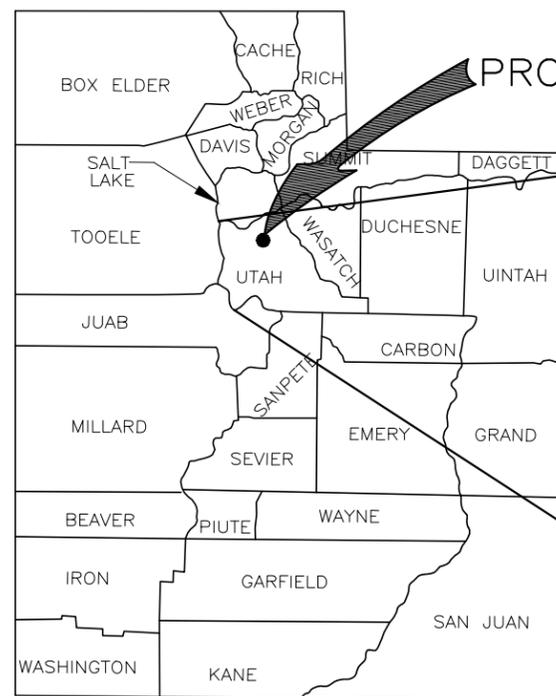
1. Preliminary Construction Plans



PROGRESS PRINT
8.21.2015
DATE
Not to be used for construction.
Hansen, Allen, & Luce, Inc.
Consultants/Engineers

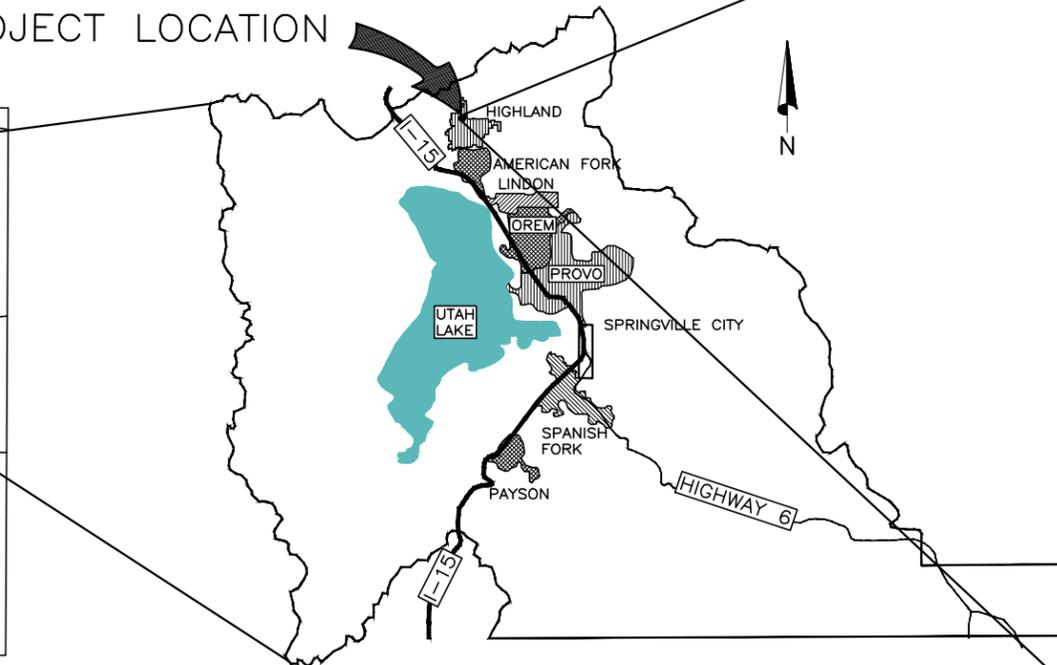
MERCER HOLLOW TRAIL

SEPTEMBER 2015

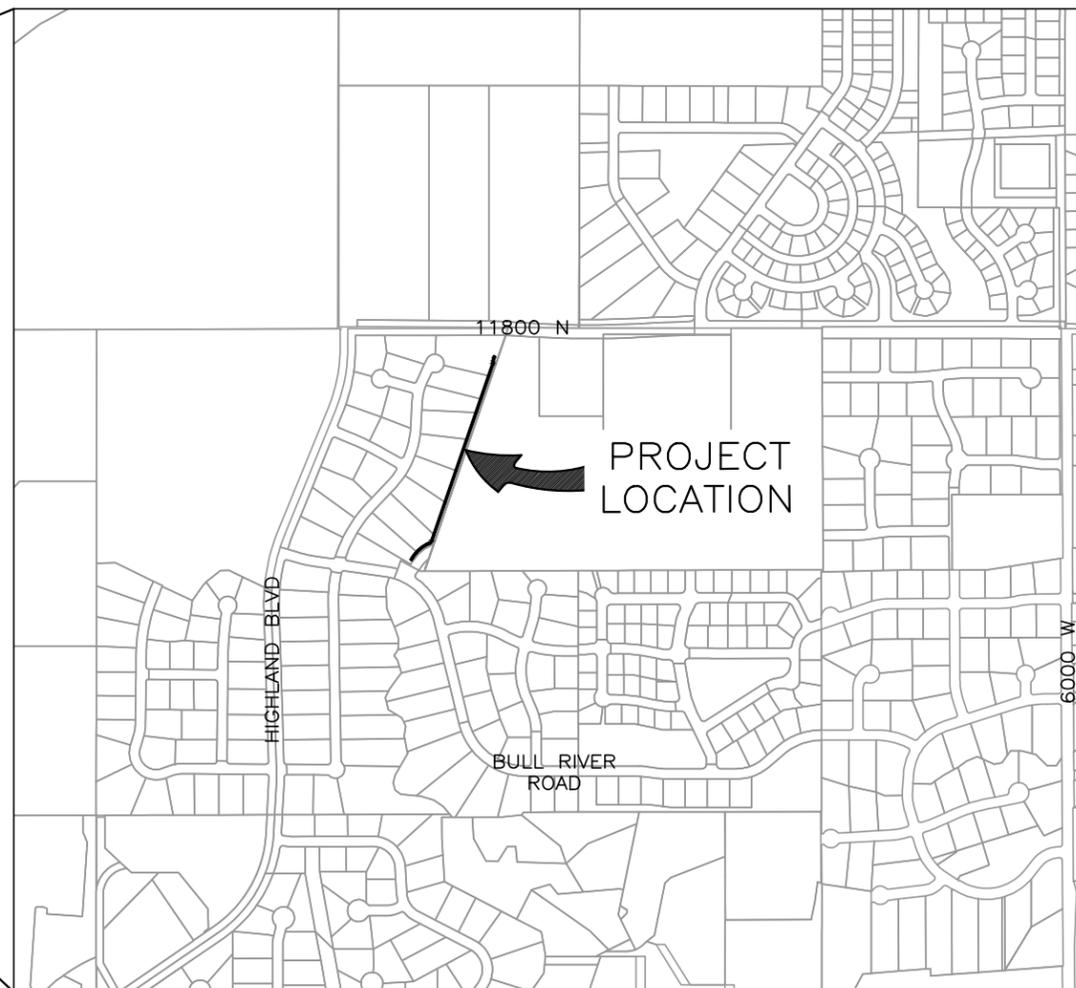


STATE OF UTAH

PROJECT LOCATION



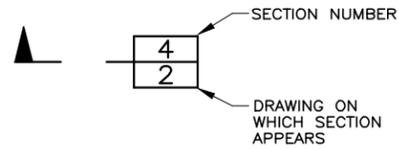
UTAH COUNTY



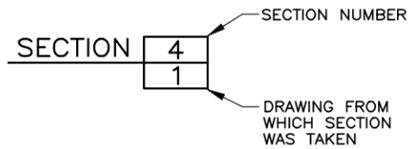
SECTION & DETAIL IDENTIFICATION

SECTION IDENTIFICATION

SECTION CUT ON DRAWING NO. 1:

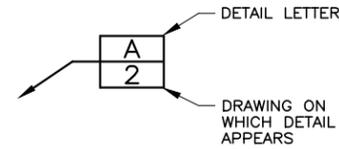


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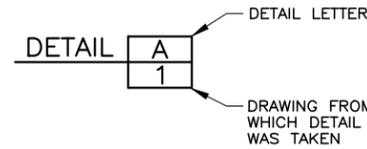


DETAIL IDENTIFICATION

DETAIL CALL-OUT ON DRAWING NO. 1:



ON DRAWING NO. 2, THIS DETAIL IS IDENTIFIED AS:



NOTES:

- IF SECTION CUT AND SECTION OR DETAIL CALL-OUT AND DETAIL ARE SHOWN ON SAME DRAWING, DRAWING NUMBER IS REPLACED BY A LINE.
- DETAIL LETTERS "I" AND "O" NOT USED.

LEGEND

-----	T-UG	-----	EXISTING TELEPHONE LINE
-----	P-UG	-----	EXISTING ELECTRIC LINE
-----		-----	RIGHT OF WAY
-----	2-G	-----	EXISTING GAS LINE W/ DIAMETER
-----	8-W	-----	EXISTING WATER LINE W/ DIAMETER
-----	8-SS	-----	EXISTING SEWER LINE W/ DIAMETER
-----	8-SD	-----	EXISTING STORM DRAIN LINE W/ DIAMETER
-----	FD	-----	EXISTING FIBER OPTICS LINE
--- WS --- WS --- WS ---			EXISTING WATER SERVICE
--- GS --- GS --- GS ---			EXISTING GAS SERVICE
=====			NEW SEWER LINE
-x-x-x-x-x-			EXISTING FENCE
○	MANHOLE	⊙	WATER METER
⌚	POWER POLE	∇	WATER VALVE
⊙	LIGHT POLE	■	SURVEY MONUMENT
⊙	FIRE HYDRANT	☁	TREE

ABBREVIATIONS

CLR. = CLEARANCE	OHP = OVERHEAD POWER LINE
DIA. = DIAMETER	PE = PLAIN END
DIP = DUCTILE IRON PIPE	PSI = POUNDS PER SQUARE INCH
EL. = ELEVATION	PVC = POLYVINYL CHLORIDE
FL = FLOW LINE	R.O.W. = RIGHT OF WAY
FLG = FLANGE	HP = HIGH PRESSURE
ID = INSIDE DIAMETER	SQ. = SQUARE
MAX. = MAXIMUM	STA. = STATION
MIN. = MINIMUM	THD. = THREAD
MJ = MECHANICAL JOINT	TYP. = TYPICAL
N.T.S. = NOT TO SCALE	UBC = UNTREATED BASE COURSE

INDEX OF DRAWINGS

SHEET NO.	TITLE
1	COVER SHEET
2	GENERAL NOTES, LEGEND & INDEX OF DRAWINGS
3	PLAN AND PROFILE - STA. 0+00 TO STA. 6+00
4	PLAN AND PROFILE - STA. 6+00 TO STA. 12+22

GENERAL NOTES

- THE CONTRACTOR SHALL MEET ALL UTAH STATE DEPARTMENT OF ENVIRONMENTAL QUALITY AND U.S. EPA REQUIREMENTS WITH RESPECT TO THEIR MINIMUM RULES AND REGULATIONS.
- STATIONING, CURVE DATA, AND STRAIGHT SECTIONS AS LISTED ARE GROUND DISTANCES. HORIZONTAL AND VERTICAL CONTROL IS BASED ON MODIFIED NAD 83, STATE PLANE, UTAH CENTRAL COORDINATE SYSTEM.
- CONSTRUCTION OPERATIONS SHALL BE CONDUCTED, AND SIGNS, BARRICADES, AND FLASHERS SHALL BE PLACED, SO AS TO COMPLY WITH OSHA, UTAH STATE INDUSTRIAL COMMISSION, LOCAL SAFETY STANDARDS, AND MANUAL ON UNIFORM TRAFFIC CONTROL. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO CITY FOR REVIEW AND APPROVAL PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES, INCLUDING SEWER LINES, WATER LINES, IRRIGATION LINES, TELEPHONE CABLES, GAS LINES, AND ANY OTHER OBSTRUCTION DURING THE COURSE OF CONSTRUCTION AND INSTALLATION OF THE PIPELINES. CONTRACTOR SHALL CALL BLUE STAKES (811) BEFORE BEGINNING CONSTRUCTION. SAID UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE RESTORED TO A CONDITION AT LEAST EQUAL TO THEIR ORIGINAL CONDITION.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN RIGHTS OF INGRESS AND EGRESS SHOULD HE VENTURE ONTO PRIVATE PROPERTY WHICH IS NOT INCLUDED IN CITY OR OWNER ACQUIRED RIGHTS-OF-WAY AND EASEMENTS.
- UNLESS DETAILED, SPECIFIED OR INDICATED OTHERWISE, CONSTRUCTION SHALL BE AS INDICATED IN THE APPLICABLE TYPICAL DETAILS AND GENERAL NOTES. TYPICAL DETAILS ARE MEANT TO APPLY EVEN THOUGH NOT REFERENCED AT SPECIFIC LOCATIONS OR IN SPECIFIC DRAWINGS.
- CONTRACTOR SHALL BE RESPONSIBLE TO PROTECT ALL EXISTING IMPROVEMENTS DURING CONSTRUCTION AND SHALL REPLACE OR RESTORE ANY IMPROVEMENTS DAMAGED AS A RESULT OF THE CONSTRUCTION ACTIVITY AS DIRECTED BY THE ENGINEER.
- THIS PROJECT IS LOCATED IN HIGHLAND CITY LIMITS. THE CONTRACTOR SHALL OBTAIN ALL APPLICABLE PERMITS AND APPROVALS FROM HIGHLAND CITY AND SHALL COMPLY WITH HIGHLAND CITY REGULATIONS FOR TRAFFIC CONTROL, SAFETY AND EXCAVATION IN CITY OWNED RIGHTS OF WAY, ETC.
- IF REQUIRED, THE CONTRACTOR SHALL OBTAIN NOTICE OF INTENT, PREPARE STORM WATER POLLUTION PREVENTION PLAN, AND COMPLY WITH ALL UPDES REQUIREMENTS AND SHALL OBTAIN NOTICE OF TERMINATION AT JOB COMPLETION. AS A MINIMUM, CONTRACTOR SHALL CONTROL STORM WATER DISCHARGE USING APPROPRIATE BMP'S.
- ALL WORK SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH THE CURRENT HIGHLAND CITY STANDARDS, PLAN AND SPECIFICATIONS, EXCEPT WHERE NOTED ON THESE PLANS.

FILE NAME: PROJECTS\14 - HIGHLAND CITY\16.300 - MERCER HOLLOW TRAIL\CAD\WORKING\2 INDEX.DWG
FILE DATE: 8/26/2015 15:58:39 (JEB)

PROGRESS PRINT
8/26/2015



DESIGNED JEB
DRAFTED JEB
CHECKED TBT
DATE SEPTEMBER 2015

NO. 3
2
1
NO. DATE

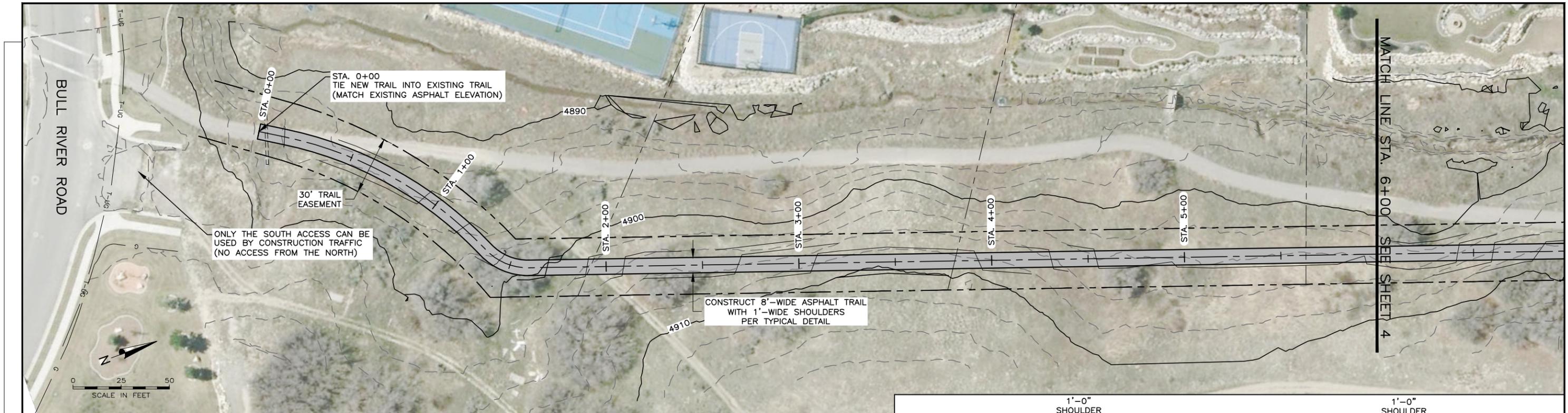
REVISIONS	BY	APVD.

SCALE
NOT
TO
SCALE

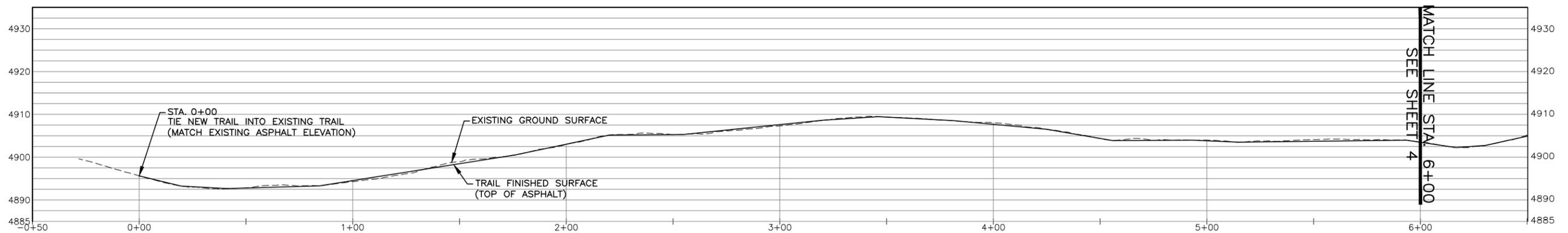
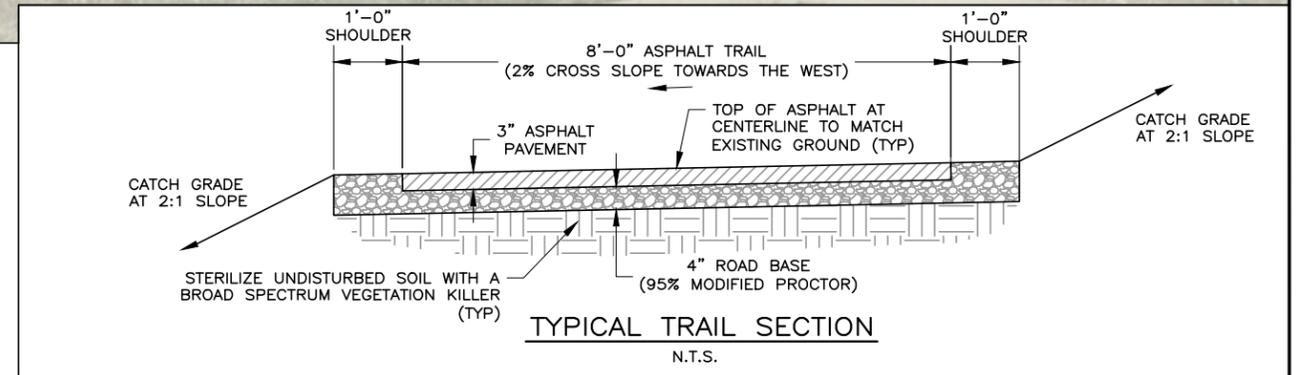


MERCER HOLLOW TRAIL
GENERAL NOTES, LEGEND & INDEX OF DRAWINGS

SHEET
2
314.16.300



- NOTES:
1. TOP OF NEW ASPHALT TRAIL TO MATCH EXISTING GROUND SURFACE
 2. CONTRACTOR SHALL STAKE TRAIL ALIGNMENT IN THE FIELD FOR APPROVAL BY OWNER PRIOR TO CONSTRUCTION
 3. CONTRACTOR SHALL PROVIDE SWPPP MEASURES AS REQUIRED



FILE NAME: PROJECTS\314 - HIGHLAND CITY\16.300 - MERCER HOLLOW TRAIL\CAD\WORKING\3 PP-1.DWG
FILE DATE: 8.26.2015 15:53:01 (GEB)

HANSEN ALLEN & LUCE, INC.
ENGINEERS

8.26.2015
DATE
not to be used for construction
Hansen, Allen, & Luce, Inc.
PROJECT ENGINEER

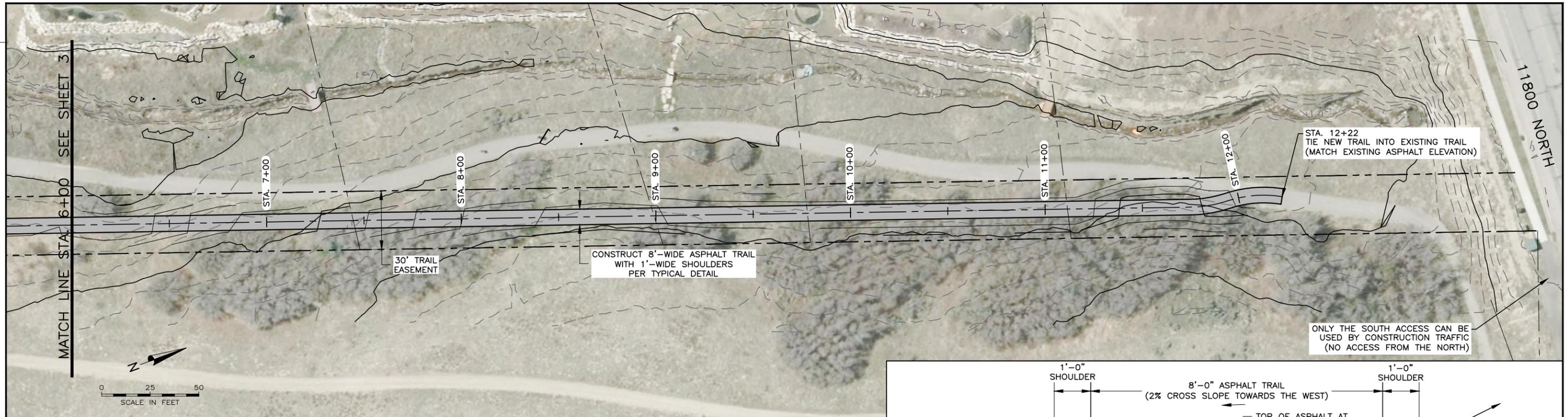
DESIGNED JEB	3				
DRAFTED JEB	2				
CHECKED TBT	1				
DATE	SEPTEMBER 2015	NO.		DATE	
REVISIONS		BY	APVD.		

SCALE
AS SHOWN

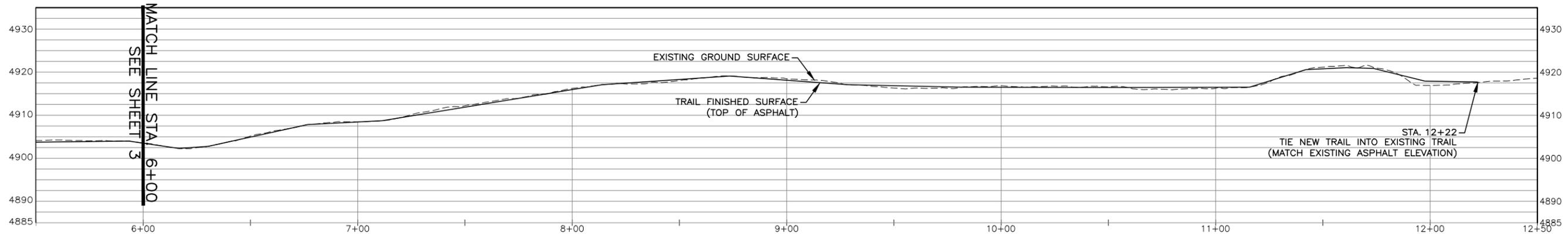
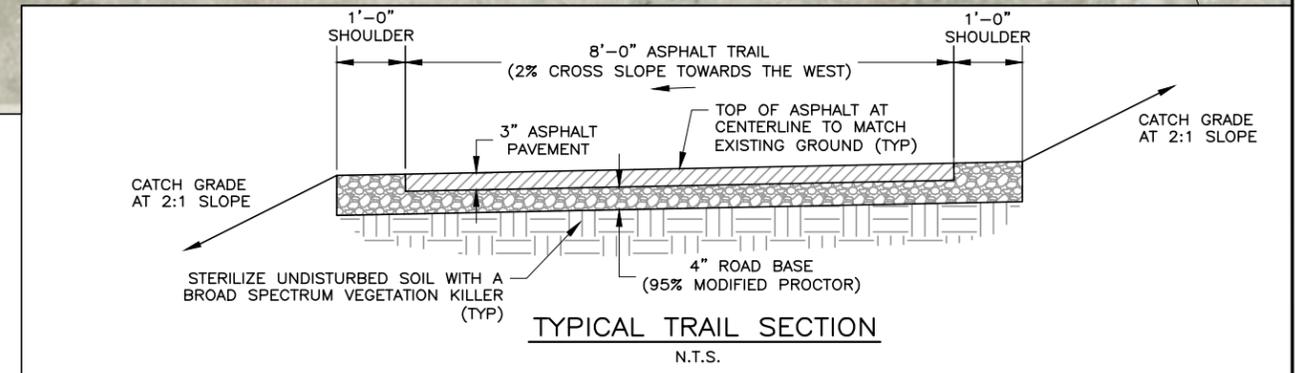


MERCER HOLLOW TRAIL
PLAN AND PROFILE VIEW
STA. 0+00 TO STA. 6+00

FILE NAME: PROJECTS\314 - HIGHLAND CITY\16.300 - MERCER HOLLOW TRAIL\CAD\WORKING\4 PP-2.DWG
 FILE DATE: 8/26/2015 15:59:28 (GEB)



- NOTES:
1. TOP OF NEW ASPHALT TRAIL TO MATCH EXISTING GROUND SURFACE
 2. CONTRACTOR SHALL STAKE TRAIL ALIGNMENT IN THE FIELD FOR APPROVAL BY OWNER PRIOR TO CONSTRUCTION
 3. CONTRACTOR SHALL PROVIDE SWPPP MEASURES AS REQUIRED



HANSEN ALLEN & LUCE, INC.
 ENGINEERS

8.26.2015
 DATE
 not to be used for construction
 Hansen, Allen, & Luce, Inc.
 Co. PROJECT ENGINEER

DESIGNED	JEB	3			
DRAFTED	JEB	2			
CHECKED	TBT	1			
DATE	SEPTEMBER 2015	NO.	DATE	REVISIONS	BY
					APVD.

SCALE
 AS SHOWN



MERCER HOLLOW TRAIL
 PLAN AND PROFILE VIEW
 STA. 6+00 TO STA. 12+22

SHEET
 4
 314.16.300



CITY COUNCIL AGENDA REPORT

Item # 8

DATE: Tuesday, September 15, 2015

TO: Honorable Mayor and Members of the City Council

FROM: Nathan Crane, AICP
City Administrator/Community Development Director

BY: JoD'Ann Bates,
City Recorder

SUBJECT: MOTION: APPROVAL OF THE URBAN DEER CONTROL MAINTENANCE PROGRAM

STAFF RECOMMENDATION:

The City Council consideration for the continuation of the Urban Deer Control Plan Program (Maintenance)

BACKGROUND:

Human encroachment into traditional wildlife habitat by urban sprawl and housing subdivisions created a problem with mule deer within Highland City. Couple that with the ability of deer to adapt to their new neighbors and to multiply unchecked, problems like health concerns, property damage, ecological damage, and deer/vehicle accidents occur. Highland City determined that new management controls are needed.

Highland City Council in August of 2013 approved a Plan in conjunction with the Division of Wildlife Resources (DWR) for an Urban Deer Control Pilot Program. This program was for the 2013-2014 fall hunting seasons.

Highland City entered into an agreement with Brian Cook (resident of Highland) from Humphries Archery in American Fork, Utah, to serve as the Program Coordinator. As Program Coordinator, Mr. Cook selected a limited group of experienced bowhunters to participate in the program. Hunting locations were identified by Highland City and hunting regulations followed the DWR Proclamation for opening dates and times.

Brian Cook made a report to the Council at the end of each season indicating the success of the program with 72 deer being taken in 2013 which were donated to a local food bank and local families, and 43 deer being taken in 2014, being donated to needy families in the area. Due to the success of the Pilot Program, DWR has adopted the Urban Deer Control Program as an official program for cities state wide to participate in upon fulfilling specific requirements.

During the approval of the plan in 2013 Highland City fulfilled all of DWR's requirements for the program, in order to continue the program Highland City is was required to accept "public comment" which was taken Tuesday, September 1, 2015. Only one resident voiced their opinion in favor of continuing the program. DWR has approved the program to run in conjunction with their Proclamation rules from 2015-2017. The plan, process and terms approved by the City Council in 2013 will remain the same for the new program. Changes in the language where it indicated it being a pilot program and dates will be the only changes.

Brian Cook has agreed to continue to be the Program Coordinator over the specialists and coordinate with City Staff, Lone Peak Police Department and those families in need of the donation of the meat.

FISCAL IMPACT:

Approval: Brian Cook, Program Coordinator is asking for a minimal amount of funding to help with the cost of bait (apples, salt) in order to place in preferred hunting areas, in order to help keep them and the deer as far away from residents as possible.

Approx. \$250.00

If the program does not continue, and Highland in the future wishes to start up the program again will then be treated as a new applicant with the following requirements:

In order for a new municipality to have the UDP in their area their plan must include both lethal removal and trap and relocate methods, under DWR requirements.

(Due to Highland City participating in the pilot program and after two years we are considered in a maintenance stage, we are not required to include any trap and relocate methods.)

Provo City, American Fork City and Herriman City are all cities close to us that are participating and are required to trap and relocate.

Cost to the city to do a Trap and Relocate under new UDP program:

\$200.00/deer	Tracking collar from DWR
\$85.00/deer	Blood Tests by DWR
\$600.00/each	Clover Trap (approved as humane trap by DWR)
?	The purchase of a horse trailer for transport – Cities must purchase and insure.
?	Employee Time for transport (deer must be relocated to specific location as directed by DWR w/in 6-8 hours of capture)
?	Mileage and wear and tear on city vehicles for transport (minimum location distance is 150 mile round trip)

Brian Cook is contracting with those cities listed above to do the relocation for them at the following cost:

\$5,000.00/year	Contract fee (coverage for traps, purchase and insurance for trailer)
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\$200.00/deer	Tracking collar from DWR
\$85.00/deer	Blood Tests by DWR
\$500.00/ trip	Relocating one deer or more per trip (time, and vehicle)
\$0.50/mile	Mileage (fuel and wear and tear on vehicle)

During the two year pilot program Highland City was not charged for the processing because the meat was donated and those excepting the donation was responsible for the processing fee.

Brian Cook has stated that because he is a resident of Highland and he helped initiate this program he has agreed to continue to do the UDC Program here in Highland at no cost to Highland City and the deer he and his specialists recover are donated to families here in Highland at again no cost to the city. Brian has already received calls requesting to be on the list for the donation of the meat. He feels he will be able to donate all the meat recovered.

ATTACHMENTS:

- 2015 Urban Deer Control Program

HIGHLAND CITY URBAN DEER CONTROL PLAN

Introduction

Human encroachment into natural environments traditionally reserved for wildlife continues to create human-wildlife problems with little end in sight. Urban sprawl, housing developments and new roads and highways destroy more and more acres of animal habitat each year. Wild area losses are alarming. Utah is not immune from this problem.

The adaptability of mule deer to human encroachment is surprising to many residents of new subdivisions. Deer not only accept their new human neighbors but have flourished in an environment never before believed possible. Deer feeding in backyards, flower gardens, parks, and playgrounds and along suburban byways are now a fairly common occurrence. Any little thicket or woodlot can hold mule deer year-round.

Many new suburbanites don't know how to address the backyard deer situation. They see deer, at first, as beautiful animals indicative of the wild and natural state of the region in which we live. They are correct in this assessment. But, as the number of deer increases the problems they cause increase, as well. Deer often consume expensive ornamental plants, vegetable gardens, flowers and shrubs. Small trees are killed by antler rubs made by bucks. Deer/vehicle accidents cause thousands of dollars of damage and raise the potential for serious injury to drivers and passengers. It doesn't take long for suburbanites to identify deer as "a problem."

Left to breed and populate an urban area, mule deer can quickly become a problem as many municipalities in America have found out the hard way. Since the discharge of firearms and other projectile-firing devices has been banned within most suburban communities for safety reasons, deer populations will grow, unchecked. One breeding pair of deer could lead to 40 deer in seven years!

Many forward-looking city councils have come to accept the use of trained veteran bowhunters to maintain deer herds. Bowhunting has an impeccable record of safety, is an efficient and proven method of killing big game and is quiet and unobtrusive – the perfect solution to urban deer problems.

Highland City has asked a group of certified bowhunters to remove certain problem deer from within the Highland City limits. The goal of this program is to safely, quietly and efficiently remove these deer. In doing so, all bowhunters must comply with DWR's rule for urban deer control and the Highland City COR.

Purpose of Plan

Human encroachment into traditional wildlife habitat by urban sprawl and housing subdivisions has created problems mule deer within Highland City. Couple that with the ability of deer to adapt to their new neighbors and to multiply unchecked and really big problems like health concerns, property damage, ecological damage, and deer/vehicle accidents occur. Highland City has determined that new management controls are needed.

History has shown that the bowhunting option for removal of urban deer is more effective than trapping and relocating deer, birth control of deer, special fencing, deer repellents, firearms

hunting and using sharpshooters. These other methods have been found to be impractical, prohibitively expensive, unpopular and limited in application. Properly implemented bowhunting is the key to success.

Bowhunting is a safe and efficient method of managing the growing numbers of urban deer. The long-term survival of this program, however, depends upon each urban bowhunting specialist acting responsibly. Each hunter must play by the rules and always maintain the highest level of conduct while hunting. He/she must show respect for private landowners and their property. Hunters must maintain impeccable landowner relations if the program is to work.

Goals

- Improve safety on major roads and highways
- Significantly reduce deer numbers within city limits
- Promote safe and cost effective deer removal, as a public service to the local community
- Reduce property damage caused by urban deer

Deer Removal Methods

Lethal removal using archery equipment is the only method recommended by Highland City to remove deer during the 2015-2017 program season.

Bowhunter Selection Process

Highland City has asked Brian Cook from Humphries Archery in American Fork, Utah, to serve as the Program Coordinator. Bowhunters who want to participate in the program should contact Highland City to be placed on a list. As Program Coordinator, Mr. Cook will select a limited group of experienced bowhunters to participate in the program. Prior to being certified as an “urban bowhunting specialist,” each hunter selected by Mr. Cook must demonstrate that they understand the applicable rules and pass a shooting proficiency test. Once that is completed, the Program Coordinator will certify the hunter as an urban bowhunting specialist.

Bowhunter Participation Requirements

Each urban bowhunting specialist that is selected and qualified to participate in this program must:

1. Always put your best foot forward in appearance and conduct, and always be considerate of others.
2. Never drink alcohol or use drugs before or while hunting.
3. Only hunt in areas pre-approved by the Program Coordinator and Highland City.
4. Make sure no other bowhunter is already scheduled to hunt the area you are planning to hunt.
5. Respect landowners and their land. Obtain prior-written approval to hunt on private land. Assume that landowners are concerned about the deer, your bow and arrows being safe, parking problems, neighborhood relations.
6. Know state, county and city hunting regulations and abide by them. Be familiar with the requirements and obligations of the Highland Urban Deer Control Plan.
7. Before hunting, know where you can take a safe shot and where you may not.

8. Be certified as an urban bowhunting specialist and have a valid written authorization and urban deer control permit issued by Highland City.
9. Only hunt from a designated blind/stand. Always wear a certified safety harness when hunting from a stand. Only high downward angling shots are allowed for maximum effectiveness and safety, and guaranteed arrow recovery.
10. Install your stand to provide shots that will be 40 yards distance or less.
11. In order to achieve close shots, baiting is permitted.
12. Take only responsible shots at deer that are relaxed and not on alert. Don't shoot unless you're certain that your arrow will strike the vitals and produce a quick and ethical kill.
13. Razor sharp broad heads are mandatory.
14. Only hunt with arrows that have a unique fletching and crest pattern that have been pre-approved by the Program Coordinator.
15. Retrieve all arrows and arrow parts shot at deer.
16. Once the deer is struck, do not trail it until you're sure it's down for good. It is your responsibility to ensure that no animal will travel very far after being hit.
17. Do not trespass on neighboring land to retrieve a deer without permission. Contact the Program Coordinator prior to seeking permission to initiate "retrieval trespass only". The local conservation officer and/or police may be of assistance when retrieval trespass cannot be obtained.
18. Deer hit or killed but not retrieved must be reported to the Program Coordinator and Highland City.
19. Properly tag the deer immediately upon recovery. Promptly notify the Program Coordinator of all kills and submit the Deer Control Harvest Survey to Highland City for their records.
20. Avoid confrontations with neighbors and others.
21. Keep a low profile. You will be under the microscope, so be as inconspicuous as possible. When walking to and from your hunting area, try to minimize the appearance that you are hunting.
22. All evidence of the deer must be removed from the property. Field dress the deer at another permissible site.
23. Be discreet when removing a deer from the property. You may wish to cover the deer with a plastic tarp while it's being removed. Most people don't like seeing a dead animal so keep it out of sight as much as possible. You may wish to use an alternate, less conspicuous, route when removing a deer. Think about removal before your hunt.
24. Stay on your assigned property during the hunt and when accessing the hunting area. Do not take shortcuts across ground where you don't have permission to trespass.
25. Don't invite friends to hunt with you. Certification is for you and you only.
26. Avoid confrontations, no matter the circumstances. Utah has a hunter harassment law that protects you while engaged in legal hunting pursuits but it is best not to argue with an antagonist. You may wish to report harassment to local authorities if confrontations continue.
27. The object of the program is to help control deer numbers inside the Highland City limits. Bowhunters can only accomplish this goal by shooting deer. If a buck is inadvertently harvested, the antlers must be surrendered to the Highland City for temporary storage until DWR can collect them.
28. The hunter is allowed to keep the animal if desired. Donations of venison are also encouraged. If the hunter does not desire to keep or donate the animal, then the hunter will take the animal to a game processor as designated by Highland City.

Bowhunters who are selected and qualified to participate in this program play a vital role in solving the problem of managing the ever-growing urban deer population. They must, however, maintain safe, ethical hunting practices and be fully responsible for their actions if they're to be recognized as the best option for controlling urban deer. Mistakes and/or irresponsible behavior could jeopardize the program.

Hunter Identification Process

Cards will be issued by Highland City, to all certified bowhunting specialists.

Conditions and Restrictions for Baiting and Spotlighting

Bowhunters may use bait to facilitate safe and effective deer removal activities at their shooting locations. They may use a flashlight while walking to and from their stand/area in low light to distinguish themselves from intruders. The casting of a light across the landscape to detect deer is illegal. Highland City will authorize spotlighting to facilitate carcass recovery efforts.

Hunting Locations and Time Periods

Hunting locations have been identified by Highland City – See attached map

Bowhunters will be allowed to remove deer from ½-hour before sunrise to ½-hour after sunset, unless stated otherwise on the urban deer control permit.

The 2015-2017 season for the urban deer control hunt will follow the DWR Proclamation for opening dates for general archery season and continue through December 31st of each year.

Written Authorization and Permitting Process

All certified bowhunting specialists must receive a written authorization and an urban deer control permit from Highland City prior to participating in deer removal activities (see attached copies of the written authorization and permit/tag). Upon being successful, the bowhunter must notch the tag to indicate the sex, month and date of kill, detach the tag from the permit and attach it to the carcass. The tag must remain attached to the carcass for processing. Also, the bowhunter must fill out and return the Deer Control Harvest Survey portion of the permit to Highland City.

Public Comment heard by Highland City Council: September 1, 2015.



CITY COUNCIL AGENDA REPORT

Item # 9

DATE: September 15, 2015

TO: Honorable Mayor and Members of the City Council

FROM: Nathan Crane, AICP
City Administrator/Community Development Director
Justin Parduhn
Operations Manager

SUBJECT: MOTION: CONDITIONAL USE PERMIT SALT STORAGE BUILDING – (CU-15-04).

STAFF RECOMMENDATION:

The City Council review a request for a conditional use permit for a 1,600 square foot salt storage building located at the northwest corner of Park Drive and SR92.

PRIOR REVIEW:

This item was continued from the September 1, 2015 Council meeting.

BACKGROUND:

The property is 2.46 acres in size and is owned by Highland City. A subdivision is not required.

The site is designated as Low Density Residential on the General Plan Land Use Map. The site is zoned R-1-40 (Residential Zone). Public buildings and grounds are permitted in the R-1-40 District subject to a conditional use permit.

One of the requirements of the Environmental Protection Agency (EPA) requires that all salt storage be contained and covered to prevent ground water discharge during storms. The EPA has been active in auditing this requirement on surrounding cities. The purpose of this facility is to address these requirements before an audit.

With the light snow fall last year monies were left over from the salt budget and carried over to this fiscal year. The project budget is \$70,000. Staff believes this will cover the building and the concrete pad. The building may not cost this much but this will not be known until the project is bid.

The property is currently being used as a bus stop for the View Point subdivision. The property is also being used for loading and unloading of materials related to the operation of the Public Works. Park Maintenance Seasonal employees also use the area for parking.

Staff observed school bus activities on August 31, 2015 and September 1, 2015 from 7:00 am to 8:45 am and found the following:

August 31, 2015

Bus	Time	Cars	Approximate # of Children
1	7:15 am	1	4
2	7:20 am	4	15
3	7:30 am	0	2
4	7:45 am	9	20
5	8:45 am	5	18

September 1, 2015

Bus	Time	Cars	Approximate # of Children
1	7:15 am	1	6
2	7:20 am	4	13
3	7:30 am	1	1
4	7:45 am	12	30
5	8:45 am	6	18

A Conditional Use Permit is an administrative action.

SUMMARY OF REQUEST:

1. The Highland City Council is requesting approval of a 1,600 square covered salt storage facility with a 1,600 square foot concrete pad. The facility will be used to store salt for use during the winter. The facility has been sized to meet current and future needs.
2. The facility is enclosed on three sides with a cover. The fourth side will have metal gate that will be locked. Salt will be delivered to the site and placed on the concrete pad. It will then be pushed with a front end loader into the storage facility. When needed a front end loader will be used to remove the salt and load it into the plow trucks.
3. Hours of operation will be dependent on weather. Deliveries will occur early to the middle of fall. There will be no staff stationed at this site. The only use will be during winter storms.
4. Depending on the storm, plowing begins at 4:00 am. Trucks need to be filled twice from 4:00 am to 9:00 am. In the afternoon/evenings, plowing begins at approximately 4:00 pm in preparation for the evening commute. Staff will alter the loading schedule to have the trucks top off at 6:30 am. For storms that last throughout the day, staff will try to minimize trips during school bus pick-up and drop-off hours.
5. Access to the site is provided from Park Drive which has been constructed.
6. There will be no staff parking associated with the salt storage building.

7. The proposed building is a maximum of 16' feet in height.
8. The site includes over 35% of existing natural vegetation. The road improvements adjacent to SR92 will be constructed in conjunction with a road widening project in the future.

CITIZEN PARTICIPATION:

Since this is a City application, the Planning Commission meeting serves as the neighborhood meeting.

Notice of the August 25, 2015 Planning Commission meeting was published in the Daily Herald on August 9, 2015. Notification letters were mailed out to surrounding property owners on August 10, 2015. No comments have been received.

Notification of the City Council meeting is not required. However, the meeting date and time was announced at the August 25, 2015 Planning Commission meeting.

REQUIRED FINDINGS:

The City Council must determine that the proposed use meets three findings prior to granting a Conditional Use Permit. The burden of proof rests with the applicant. Each finding is presented below along with staff's analysis.

- 1. The use will not be detrimental to the health, safety, or general welfare of persons residing or working in the vicinity or injurious to property or improvements in the vicinity.**

The surrounding property is zoned R-1-40. The property to the north and west is an active gravel pit. The property to the east is the existing public works facility. The property to the south is the debris basin. There are no existing homes adjacent to the property. The proposed use is compatible with the existing land uses.

- 2. The use complies with all applicable regulations in the Development Code.**

The building is setback in excess of 30 feet from both streets. The site meets the minimum 35% landscaping. There will be no lighting. There will be a two foot berm on the north side of the site that will protect the American Fork River from potential runoff. The proposed building will meet all requirements of the Development Code.

- 3. Conditions are imposed to mitigate any detrimental effects.**

Three stipulations have been included to ensure compliance with the Development Code.

CONCLUSION:

The City Council will need to determine if the proposed site plan meets the required findings for approval.

PLANNING COMMISSION ACTION:

The Planning Commission held a public hearing on August 25, 2015. There was opposition from residents in the View Point Subdivision. The Commission made the following motion:

Commissioner Brammer moved to recommend that the Storage Building identified as CU-15-04 be modified to incorporate additional safety procedures relative to the school bus situation in the area, as well as the public improvements required by Chapters 5-9 of the Highland Development Code, to address the aesthetics to match the public works building directly to the East, and to study if there can be an access off of SR-92. Commissioner Rock seconded the motion.

The motion passed 7-0.

REVISED SITE PLAN:

Staff has prepared a revised site plan to address the Planning Commission concerns. The revised site plan provides a fenced in area for the bus stop and an additional access for the salt storage building from SR92. UDOT approval is required for this access. The building will also be enclosed instead of having an open area between the wall and roof.

CONCLUSION:

The City Council will need to determine if the proposed site plan meets the required findings for approval.

RECCOMENDATION:

The City Council should hold a public meeting and determine if the proposed site plan meets the required findings for approval. The Council should draft appropriate findings.

The following stipualtions have been included for the Council's consideration:

1. Development of the site shall conform to the site plan date stamped September 10, 2015.
2. The building shall be enclosed.
3. Except in an emergency, delieveries shall be scheduled for times during normal school bus pickup and drop off hours.
4. To the fullest extent possible the salt building shall not be used during normal school bus pickup and drop off hours.

ATTACHMENTS:

- Attachment 1 – Proposed Site Plan
- Attachment 2 – Proposed Building Elevations
- Attachment 3 – Revised Site Plan

File: 50-14-031_C-101_SITELAN
 JUB PROJ#: 50-14-031
 DRAWN BY: CRW
 DESIGN BY: CRW
 CHECKED BY: TMF
 AT FULL SIZE, FNOTONE
 INCH SCALE ACCORDINGLY
 LAST UPDATED: 9/10/2015
 SHEET NUMBER:
C-101



NOTES:
 1. GRADE SITE AROUND CONSTRUCTED BUILDING AND CONCRETE PAD AS NECESSARY TO MATCH EXISTING, 10:1 MAX SLOPE.


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PRELIMINARY PLANS
 NOT FOR CONSTRUCTION

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NO.	REVISION	DESCRIPTION	BY	DATE

HIGHLAND CITY SALT STORAGE BUILDING
HIGHLAND CITY
 SITE PLAN

FILE: 50-14-031_C-101_SITELAN
 JUB PROJ#: 50-14-031
 DRAWN BY: CRW
 DESIGN BY: CRW
 CHECKED BY: TMF
 AT FULL SIZE, FNOTONE
 INCH SCALE ACCORDINGLY
 LAST UPDATED: 9/10/2015
 SHEET NUMBER:
C-101



CITY COUNCIL AGENDA REPORT

DATE: September 15, 2015

Item # 10

TO: Honorable Mayor and Members of the City Council

FROM: Nathan Crane, City Administrator/Community Development Director.

SUBJECT: Operation Safety Reports for Highland Boulevard and 11800 North

STAFF RECOMMENDATION:

Discussion improvement options for the intersection of Highland Boulevard and 11800 North. This item is being presented for Council direction.

PRIOR REVIEW:

The Council considered this item at the September 1, 2015 Council meeting and directed staff to proceed with the warrant study and prepare a list of recommendations. The City Engineer has provided the recommendations which are summarized as follows:

1. Remove the tree(s) located furthest south in the median to allow for a further line of sight.
2. Replace the paint stop line with thermoplastic for better visibility and longevity with a pavement message marking STOP prior to the stop line.
3. Install side road warning signs on Highland Boulevard for both the northbound and southbound approaches.

In addition, staff has ordered the flashing speed limit sign, flashing stop sign, and three advanced warning signs. It is estimated that the signs will be installed by the end of September. Utah County will also be ordering one flashing speed limit sign. Staff has also contacted PEC and InterPlan and requested a scope of work and price for completion of the warrant study. As of this writing we are still waiting on a response.

BACKGROUND:

With the recent accident at the intersection of Highland Boulevard and 11800 North, a concern has been raised relation to the safety and operation of this intersection. In June 2015, the Council authorized the hiring of two firms to complete an Operation Safety Report (OSR). An OSR report reviews the intersection design, traffic speeds, sight issues, crash history, etc. and provides a report with recommendations. Two firms were hired to complete this work; Project Engineering Consultants (PEC) and InterPlan. Both studies were also reviewed by the City Engineer. A summary of the findings of the reports are as follows:

Project Engineering Consultants

Summary

Analyzing the historical crash data (2009 to 2015) indicates that four of the 12 crashes (33%) that occurred at the intersection involved a westbound left-turn vehicle (including two severe crashes) which represents a crash pattern that is a safety issue.

PEC Recommendations

- Increase the size of the existing 30-inch stop sign to 36 inches and add flashing light emitting diode (LED) units within the border of the stop sign.
- Restripe the northbound Highland Boulevard approach to provide a through lane and a right turn lane.
- Replace the painted stop line with thermoplastic for better visibility and longevity.
- Install side road warning signs on Highland Boulevard for both the northbound and southbound approaches.
- Install a two-direction large arrow warning sign on the far side of the T-intersection in line with 11800 North to bring the intersection into compliance with MUTCD standards for T-intersections.
- Re-stripe existing double yellow striping on 11800 North.
- Install the pavement message marking STOP prior to the stop line.
- Remove the trees from the center median in the south leg of the intersection and replace with shrubs or bushes less than 2-feet tall.
- Install a stop ahead warning sign on 11800 North.
- Consider rebuilding the intersection as a roundabout.

InterPlan

Summary

The crash history for this intersection does not suggest a major concern when compared to other Highland City intersections with similar function and size. Likewise the trend does not suggest a sudden increase or decrease in crash frequency over time. Several of the crashes at the intersection have extenuating circumstances, such as vehicle brake problems, driver inattention, or the presence of wildlife. However, the most common crash type - a northbound vehicle on Highland Boulevard striking a left-turning vehicle from 11800 North - occurred three times in seven years, not including the recent fatality.

Recommendations:

- Consider installing a pedestrian facility opposite the southeast corner pedestrian ramp or consider removing the pedestrian ramp altogether. Visually impaired people could mistakenly assume a crosswalk and pedestrian facilities continue across the street due to the existing pedestrian ramp when in fact no such facilities exist. The benefit of such treatments should be considered in the context of future development and the demand for pedestrian treatments.
- Consider adding paved shoulders or restriping lanes to create shoulders on Highland Boulevard north of 11800 North to accommodate bicycle traffic. This action would require coordination

with other agencies since Highland Boulevard north of 11800 North is outside Highland City boundaries.

- Consider alterations to median landscaping south of the intersection to improve driver visibility.
- Consider restriping northbound Highland Boulevard to feature one through lane and one right-turn lane at 11800 North. This action would not eliminate concerns about visibility of trailing vehicles being blocked by right-turning vehicles on Highland Boulevard, but could help clarify to drivers on 11800 North which movements vehicles on Highland Boulevard are conducting. The effects of eliminating the shoulder through restriping need to be considered in tandem with any potential bicycle treatments, as discussed above.

FISCAL IMPACT:

Unknown

ATTACHMENTS:

1. PEC Report
2. InterPlan Report
3. City Engineer's Recommendation

Nathan Crane

From: Todd Trane <ttrane@jub.com>
Sent: Thursday, September 10, 2015 3:32 PM
To: Nathan Crane
Subject: Highland Boulevard/11800 North

Nathan,

After doing another review of the Intersection Safety Plans for Highland Boulevard/ 11800 North, I have the following comments about the safety recommendations:

Interplan

Safety Recommendation with a Potential Correlating Crash History

a. Consider alterations to median landscaping south of the intersection to improve driver visibility.



There is one tree, maybe two, that could be removed to help with sight distance. The tree furthest south in the planter should be removed, and maybe the next one going north. It is the tree that is shown blocking the white car in the picture above. Removing more landscaping would not help sight distance.

b. Consider restriping northbound Highland Boulevard to feature one through lane and one right-turn lane at 11800 North. **This action would not eliminate concerns about visibility of trailing vehicles being blocked by right-turning vehicles on Highland Boulevard**, but could help clarify to drivers on 11800 North which movements vehicles on Highland Boulevard are conducting. The effects of eliminating the shoulder through restriping need to be considered in tandem with any potential bicycle treatments, as discussed above.

Restriping for a turn lane will not help with the current problem, as stated above. I would recommend postponing any lane stripping changes until after the warrant study has been completed.

PEC

The recommended improvements to the Highland Boulevard and 11800 North intersection to reduce the number of left-turn crashes are:

Increase the size of the existing 30-inch stop sign to 36 inches and add flashing light emitting diode (LED) units within the border of the stop sign.

This would help with safety, but there is no evidence that any of the crashes were due to running the stop sign, or lack of seeing the stop sign.

Restripe the northbound Highland Boulevard approach to provide a through lane and a right turn lane.

See my comments above.

Replace the painted stop line with thermoplastic for better visibility and longevity.

This would help with the safety of the intersection. Having a more prominent stop bar may help with drivers tendency to stop beyond the current paint line. The studies have shown that sight distance decreases as drivers stop in the intersection beyond the current painted line. With this a pavement message marking STOP prior to the stop line could be added.

Install side road warning signs on Highland Boulevard for both the northbound and southbound approaches.

This would make drivers more aware of the upcoming intersection and may help reduce the number of accidents.

To summarize, I would recommend that the City move forward with the warrant study and implement the following until more information is available through the study.

- 1- Remove the tree(s) located furthest south in the median to allow for a further line of sight.
- 2- Replace the paint stop line with thermoplastic for better visibility and longevity with a pavement message marking STOP prior to the stop line.
- 3- Install side road warning signs on Highland Boulevard for both the northbound and southbound approaches.

The City Council also asked that public works install a speed limit sign with radar. I would also recommend this. It should help with minimizing the severity of the accidents that occur.

If you have any questions, please let me know.

Thanks,

Todd Trane, P.E.

Project Engineer

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Item # 11 A

ADMINISTRATION

MEMORANDUM

DATE: September 15, 2015

TO: Mayor and City Council

FROM: Nathan Crane, AICP
City Administrator/Community Development Director

SUBJECT: Everbridge Mass Notification System

Attached is a report prepared by Devril Barfuss regarding a mass notification system that is being proposed by the County. The purpose of this report is to familiarize the Council with the proposed system. The system can be used for emergencies or any other mass notification needs. This item is being presented as discussion. If the Council would like to participate in the project it will be considered on a future agenda. Mr. Barfuss will be attending the Council meeting.

ATTACHMENTS:
Everbridge Mass Notification System Report

Everbridge Mass Notification System

20 August 2015

by

E. D. Barfuss

Everbridge Emergency Notification System Update Addendum to the 14 August Trip Report

What is Everbridge? It is a software program for mass notification.

Everbridge is a software program that enables users to send a Wireless Emergency Alert (WEA) to a “geographically targeted” area using FEMA’s Integrated Public Alert & Warning System (IPAWS). Alerts are sent to mobile devices (cell phones, Ipads, etc.) without the individual having to download or open an application. This “geographic targeting” is called Specific Area Message Encoding (SAME).

The message can only be sent to people for whom the contact information is in the city/LPPS/county database. Privacy laws will probably require the “recipients” to opt into the system. The database is typically maintained and utilized by Emergency Management personnel.

The Emergency Management personnel are generally associated with the fire and/or police organizations and the system is traditionally used for emergency notification. Spanish Fork, on the other hand, will be using Everbridge daily for mass messaging like reminding employees of staff meetings, etc. The reasoning is, the more the system is used and the more people know how to use it, the more useful it will be in the time of an emergency.

Does Highland need Everbridge or something like it?

Highland City currently depends on the Utah County dispatch service for mass notification in the event of an emergency. The service is called Citywatch and is owned by the county. Citywatch, however, is an old hardware-based system that is dependent on phone lines and is no longer reliable. In addition, it does not provide the service we want today. It will no longer be supported as the county stopped paying for its maintenance. The county is replacing it with Everbridge because Everbridge uses a cloud-based infrastructure and can be operated from any computer or smart phone with an Internet connection.

Integrating Everbridge Into An Area Preparedness Plan

Sheldon Wimmer in Alpine has been hired in April/May by the LPPS district to develop and implement an integrated emergency preparedness plan for the district. The intent is to integrate the municipal assets with the LDS Church’s local assessment and assistance system. The notification capability of Everbridge or something like it would greatly enhance the effectiveness of both.

Facts About Everbridge

1. There are 24 cities in Utah County of which 9 are implementing or have implemented the Everbridge software. The biggest hurdle appears to be building the database. Spanish Fork has an aggressive plan and should be emulated if they are successful.
2. Two cities, Springville and Mapleton already have contracts with Everbridge but will probably switch to the Utah County umbrella agreement.
3. American Fork will not (at this time) adopt the county system.
4. Cedar Hills and Alpine are using Parlett. Larry Ellertson will personally work with Cedar Hills to encourage them to adopt Everbridge.

5. It is reported that Everbridge is significantly less expensive than the competing systems.
6. The agreement with Everbridge is for 5 years.
7. The recurring software cost to Highland will be \$3,744.59 the first year. It appears the second and subsequent years may be about 5% higher. This has to be verified.
8. The city will have to pay for the "API" connection, furnish its own computer(s), pay for training not provided by the county, and pay for additional "ORGS" and their implementation fee. Most cities have 2 ORGs.
9. The city can choose to be independent or can tie into the countywide system.
10. The more creative cities intend to use the system for things other than emergency notification.
11. The Everbridge system is quite versatile. You can notify people by geographical area or by predetermined groups like "park employees".
12. The first formal training class was 13 & 14 August. The County is planning monthly user group training. The system is Excel based and appears to be straightforward.
13. Everbridge is a wireless system that utilizes the Internet.

Issues

1. Turf. The county has an interest in and jurisdiction over county land, much of which is undeveloped. Wild fires and mudslides are generally a county issue. An earthquake, on the other hand, will impact the cities over which the local fire and police departments have the greater interest and jurisdiction. When the County Commissioner signed the agreement with Everbridge and empowered the County Sheriff's department to implement it, it was assumed the Sheriff's Department would still be the communications center and thus it would also be the command center. This notion is resisted locally.
2. When communications were routed through a central switching station, it made sense for that central location to also be the "command center". Utilizing the omnipresent "cloud" will also necessitate an adjustment in the command center concept. The concept of a universal policy but local administration comes to mind.
3. Utah County imposed the FATPOT computerized reporting system a few years ago and it was a total failure. Some folks are wary of another county sponsored software system.
4. Alpine and Cedar Hills are both using the Parlett notification system and are satisfied with it.
5. Highland currently does not have a mass notification system and the county dispatch/emergency notification system (Citywatch) is going away.
6. There is no standardization among the LPPS cities. Highland is using the defunct county dispatch system. Alpine and Cedar Hills have implemented Parlett but because Cedar Hills is tied to Pleasant Grove for police protection, they are also associated with Everbridge via PG.

Recommendation

Encourage all three cities in the LPPS to adopt Everbridge. If unity cannot be achieved within the LPPS community, Highland should consider implementing Everbridge as the less expensive mass notification option and to be able to integrate with the county system.

Chronology

Chronology

31 March 2015

Larry Ellertson (County Commissioner) signed an interlocal agreement between Utah County and Everbridge for a mass notification system.

5 May 2015

The interlocal agreement was sent to cities for signature. Requested return by 26 May 2015.

5 June 2015

Revised/updated IA sent to cities. Provo edits and Spanish Fork included.

16 June 2015

Updated IA resent plus a "City Implementation Sheet" requesting the names and contact information for those who will be using the system. The purpose of the CI Sheet is to make a "Users Group" and an "Implementation Group".

13-14 July 2015

On site (County?) implementation scheduled with Everbridge.

27 July 2015

Cities notified of implementation meeting on 30 July. Mayors and Emergency Management Group members were notified.

28 July 2015

Mayor Thompson forwarded notification to Nathan Crane.

30 July 2015

Everbridge implementation meeting at 10:00 a.m.

11 August 2015

Ed Barfuss was given assignment to research Everbridge.

12 August 2015

EDB contacted Mayor Thompson for his information.

13 August 2015

Mayor Thompson provided contact info. for Sheldon Wimmer, LPPS Emergency Manager.

14 August 2015

EDB Contacted Mr. Wimmer. He had little information about Everbridge but was scheduled to talk with Sargent Peter Quittner (Utah County Sheriff's Office) next week.

14 August 2015

EDB called Sargent Quittner and learned about a two-day training class that was finishing that afternoon. He attended the last 4 hours of the training class and got contact information for people from five cities who are implementing or using Everbridge.

17 August 2015

Sargent Quittner sent EDB the interlogcal agreement, the WEA/IPAWS Addendum and the user information sheet.

18 August 2015

EDB reviewed the documents, finally understood the Everbridge connection to FEMA and wrote the addendum to the trip report.

18 August 2015

EDB interviewed Chief Gwilliam, Chief Freeman and Sheldon Wimmer. Interesting interviews. Selecting a mass notification system appears to be more about personalities than it is about technology.

19 August 2015

Sargent Quittner informed me that the county dispatch service will no longer maintain the Citywatch system. It appears that means Highland has no mass notification system. Sargent Quittner also clarified that Everbridge is Internet based thus enabling users unlimited access.

20 August 2015

The Everbridge report was published and submitted.

**Cost
and
Status by City**

Exhibit "B"

Initial Pro Rata Calculation

Population Calculated using 2013 US Census

City	Population	Total Households (Including Business)	% of Utah County households	Share of \$115,000/Annually by households
Alpine	10024	4,594	0.019	2,206.56
American Fork	0	0	0.000	0.00
Cedar Fort	368	169	0.001	81.01
Cedar Hills	10179	4,665	0.019	2,240.68
Eagle Mountain	24217	11,099	0.046	5,330.83
Elk Ridge	2435	1,116	0.005	536.01
Fairfield	119	55	0.000	26.20
Genola	1370	628	0.003	330.51
Goshen	921	422	0.002	202.74
HIGHLAND	17011	7,797	0.033	3,744.59
Lehi	54382	24,925	0.104	11,970.99
Lindon	10611	4,863	0.020	2,335.78
Mapleton	8784	4,026	0.017	1,933.60
Orem	91648	42,005	0.175	20,174.26
Payson	19154	8,779	0.037	4,216.33
Pleasant Grove	34988	16,036	0.067	7,701.83
Provo	116288	53,299	0.223	25,598.21
Salem	6928	3,175	0.013	1,525.04
Santaquin	9843	4,511	0.019	2,166.72
Saratoga Springs	22749	10,427	0.044	5,007.69
Spanish Fork	36956	16,938	0.071	8,135.04
Springville	31205	14,302	0.060	6,869.09
Vineyard	900	413	0.002	198.11
Woodland Hills	1344	616	0.003	295.85
Utah County Uninc.	10000	4,583	0.019	2,201.28
	522424	239,444		

Total Calculated Households 239,444

LPPS members
Recently Signed up
Already Using The System
NOT Interested

Everbridge Formula = (Population) divided by (2.4) Multiplied by (1.1) = Households including businesses..... Multiplied by .46 = Annual Cost

Total Utah County Households (Including Business Factor) = 252,950 - American Fork & Draper = 239,444

Interlocal Agreement

MASS NOTIFICATION INTERLOCAL COOPERATION AGREEMENT

THIS MASS NOTIFICATION INTERLOCAL COOPERATION AGREEMENT (hereinafter "Agreement"), is executed in duplicate this ____ day of _____, 2015, by and among **UTAH COUNTY**, a political subdivision of the State of Utah (hereinafter referred to as "County"), and **ALPINE CITY, AMERICAN FORK CITY, CEDAR FORT TOWN, CITY OF CEDAR HILLS, EAGLE MOUNTAIN CITY, ELK RIDGE CITY, FAIRFIELD TOWN, GENOLA CITY, GOSHEN CITY, HIGHLAND CITY, LEHI CITY, LINDON CITY, MAPLETON CITY, the CITY OF OREM, PAYSON CITY, PLEASANT GROVE CITY, PROVO CITY, SALEM CITY, SANTAQUIN CITY, SARATOGA SPRINGS CITY, SPANISH FORK CITY, SPRINGVILLE CITY, VINEYARD CITY, and WOODLAND HILLS CITY**, all municipal corporations and political subdivisions of the State of Utah, (the combined group of cities to be hereinafter collectively referred to as the "Cities" or "City" when used in the singular).

RECITALS

WHEREAS, mass notification services provide an important means to notify the citizens residing in the boundaries of Utah County of disasters, emergencies and other important matters, thereby promoting the health, safety and welfare of the citizens residing in Utah County; and

WHEREAS, the parties to this Agreement will benefit by reduced fees for mass notification services to the citizens of their respective jurisdictions by entering into this Agreement while maintaining autonomy of notifications in their respective jurisdictions; and

WHEREAS, the parties to this Agreement desire to benefit from the mass notification services provided in accordance with the Agreement and the cost savings associated therewith; and

WHEREAS, County has entered into an agreement more particularly described below for countywide mass notification services to promote the health safety and welfare of citizens residing in Utah County; and

WHEREAS, the parties to this Agreement desire to enter into this Agreement to provide for the funding and use of the mass notification system; and

WHEREAS, the parties desire to set forth the terms of their agreement and the parties' respective rights and obligations in this Agreement; and

WHEREAS, the parties and each of the Cities have approved this Agreement by resolutions adopted by their respective governing bodies;

NOW THEREFORE, in consideration of the covenants and promises contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. **Agreement with Everbridge.** County has entered into a Quote, Service Agreement and IPAWS Addendum to Service Agreement with Everbridge, Inc., (the “Mass Notification Agreement”), in the form attached hereto as Exhibit A, allowing Cities to utilize the mass notification services provided by Everbridge. Upon entering into this interlocal agreement and payment of fees to County as provided herein, each city may participate in the Everbridge mass notification services as provided in the Mass Notification Agreement.

All Cities who are contracting with Everbridge prior to entering into this Agreement have the option to remain separate organizations within the Everbridge system as currently established and may continue to contact Everbridge directly with support needs for their organizations.

2. **Funding and Apportionment of Mass Notification Expenses.**

2.1 For the first year of the Mass Notification Agreement, each City without an existing mass notification provider will pay County their share of the Mass Notification Agreement contract price as stated in the last column of the attached Exhibit B.

In the first year of the Mass Notification Agreement, Cities with an existing mass notification provider, commencing upon the termination of their respective existing mass notification contracts will pay County their pro rata share of the Mass Notification Agreement price determined as follows: (number of days remaining in the first year of the Mass Notification Agreement/365) times the city’s yearly contract price with the previous provider, or as otherwise determined and confirmed in writing between the City and County.

2.2 In the second and subsequent years of the Mass Notification Agreement, each City’s pro rata share of the contract price of the Mass Notification Agreement will be based on the number of households in their respective jurisdictions divided by the total number of households in the jurisdictions of all parties to this Agreement, times the Mass Notification Agreement contract price. The number of households in a respective jurisdiction is determined as follows: Population divided by 2.4, multiplied by 1.1, equals total households. The population used in the formula will be determined by the most recent United States Census figures. All parties shall promptly pay County in advance for the next succeeding year for their respective shares of the Mass Notification Agreement contract price as provided in section 3.1. The percentage of the expenses due from each party will be recalculated in the event updated US Census figures are released during the term of this Agreement and will be effective for the next payment period. In the second year only, a city’s pro rata share shall not exceed the amount stated in the last column of Exhibit B.

2.3 A credit against the Quote price (Special Incentive Discount) has been applied by Everbridge for the renewal price paid by Springville and Mapleton for the renewal of the Springville/Mapleton Everbridge agreement. All amounts due County from Springville and Mapleton under this Agreement will first be

applied to the credit which will be apportioned equitably between Springville and Mapleton until the amount of the credit has been satisfied. Thereafter, Springville and Mapleton shall pay County their respective shares of the Mass Notification Agreement contract price as provided above.

2.4 If American Fork enters into this Agreement, the totals in Exhibit B shall be recalculated for the applicable contract year and any refunds applied to the next contract year payments, to the extent that the recalculated amounts result in a reduction of a City's share of the Mass Notification Agreement contract price.

2.5 Any additional fees incurred by County or a Participating City, including fees listed in the Quote Supplemental Notes, will be paid by the County or Participating City incurring the fee or service, including but not limited to API connections, additional ORGS and training not listed in the quote, and new ORG implementation fees.

3. **Payment.**

3.1 The County shall send an invoice to each of the Cities for the amount of each City's payment to County for their respective share of the Mass Notification Agreement contract price. The County shall include a detail calculating each party's contract price share. A City's contract price share will be allocated as provided in the preceding section. Each party shall pay the County not less than thirty (30) days prior to commencement of the next contract year or within 30 days of receipt of an invoice from the County, whichever is later.

4. **Coordination.**

4.1 The parties shall meet at least annually to coordinate use of the mass notification services and to discuss issues regarding the services.

5. **Indemnification, Insurance, and Mass Notification Agreement Compliance.**

5.1 The parties shall maintain such liability insurance as they deem prudent and appropriate. The parties anticipate that the protections of the Utah Governmental Immunity Act, 63G-7-101 *et. seq.* will apply to any claims which may be made against any or all of the parties arising out of the use of the Mass Notification System. However, notwithstanding these protections, and without in any way waiving the defenses afforded by the Utah Governmental Immunity Act, 63G-7-101 *et. seq.*, each party to this Agreement agrees to indemnify and hold harmless each and every other party from all claims for personal injuries or damage to property to the extent that such injuries or damages directly or indirectly arise out of that party's own acts or omissions. Nothing in this Agreement shall be construed as releasing, indemnifying or holding harmless any party to this agreement from liability for that party's own acts or omissions. The indemnification obligations hereunder, or as provided in any section of this Agreement, shall not be

considered a waiver of the protections and immunities afforded by the Utah Governmental Immunity Act (Utah Code Section 63G-7-101, *et. seq.*) The obligation of the parties to indemnify under this section, or as provided in any section of this Agreement, is limited to the limits of liability specified in the Governmental Immunity Act (Utah Code Section 63G-7-604), or as amended by statute or the state risk manager as provided by statute.

5.2 All parties to this Agreement shall comply with all terms and conditions of the Mass Notification Agreement and will indicate their willingness to do so by signing the Mass Notification Agreement as a Participating City. By such signature as a Participating City, the city agrees to be bound by the terms and conditions of the Mass Notification Agreement only, and does not make the City a party to the Mass Notification Agreement.

In the event any party to this Agreement breaches any term or condition of the Mass Notification Agreement, and fails to timely cure any such breach, the breaching party to this Agreement shall indemnify and hold harmless all non breaching parties to this Agreement for all claims, injuries or damages resulting from the breaching party to this Agreement's acts or omissions, including but not limited to court costs and attorney's fees incurred as a result of the breaching party to this Agreement's acts or omissions. The indemnification obligations hereunder, or as provided in any section of this Agreement, shall not be considered a waiver of the protections and immunities afforded by the Utah Governmental Immunity Act (Utah Code Section 63G-7-101, *et. seq.*) The obligation of the parties to indemnify under this section, or as provided in any section of this Agreement, is limited to the limits of liability specified in the Governmental Immunity Act (Utah Code Section 63G-7-604), or as amended by statute or the state risk manager as provided by statute.

6. **Duration.** This Agreement shall be effective immediately upon the signature hereof by at least two named parties to this Agreement and shall remain in full force and effect as to all signatories to this Agreement for a period of five (5) years including any subsequent renewal of the Mass Notification Agreement on the same terms and conditions as the original agreement, or until such time as the Mass Notification Agreement is terminated, whichever is sooner.

7. **Interlocal Cooperation Act.** The following terms are included in the Agreement to comply with the requirements of the Interlocal Cooperation Act:

7.1 **Resolution.** This Agreement shall be authorized by resolution of the legislative bodies of the signatories hereto as required by Section 11-13-202.5 of the Interlocal Act.

7.2 **Purpose.** This Interlocal Cooperation Agreement has been established and entered into by the parties to provide mass notification services within Utah County.

7.3 No Separate Entity, Administration. The parties to this Agreement do not contemplate nor intend to establish a separate legal entity under the terms of this Agreement. The parties hereto agree that, pursuant to Section 11-13-207, Utah Code Annotated, 1953 as amended, COUNTY shall act as the administrator responsible for the administration of this Interlocal Cooperation Agreement. The parties further agree that this Interlocal Cooperation Agreement does not anticipate nor provide for any organizational changes in the parties. The administrator agrees to keep all books and records in such form and manner as the Utah County Clerk/Auditor shall specify and further agrees that said books shall be open for examination by the signatories hereto at all reasonable times. The parties agree that they will not acquire, hold nor dispose of any real property pursuant to this Agreement. The parties further agree that they will not acquire, hold, or dispose of any personal property pursuant to this Agreement.

7.4 Financing. There shall not be a separate budget to carry out the terms of this Agreement, but each party shall fund and pay for its respective responsibilities pursuant to this Agreement. Except as otherwise specifically provided herein, each party shall be responsible for its own costs of any action done pursuant to this Agreement, and for any financing of such costs.

7.5 Filing. A duly executed original counterpart of this Agreement shall be filed with the keeper of records of each party, pursuant to Section 11-13-209 of the Interlocal Act.

7.6 Legal Review. This Agreement shall be reviewed as to proper form and compliance with applicable law by a duly authorized attorney on behalf of each party, pursuant to Section 11-13-202.5 of the Interlocal Act.

7.7 Termination. Upon the termination of the Mass Notification Agreement, the parties will each pay County their pro rata share for the cost of any services due under the Mass Notification Agreement as determined in section 2.2.

7.8 Equipment. The parties will provide and maintain such equipment as they determine necessary for their own use of the mass notification services. Any equipment provided by a party shall remain the property of the party providing the equipment. No real or personal property shall be acquired jointly by the parties as a result of this Agreement. To the extent that a party acquires, holds, or disposes of any real or personal property for use in the joint or cooperative undertaking contemplated by this Agreement, such party shall do so in the same manner that it deals with other property of such party.

8. Interpretation of Agreement. Whenever the context of any provision shall require it, the singular number shall be held to include the plural number, and vice versa, and the use of any gender shall include the other gender. The paragraph and section headings in this Agreement are for convenience only and do not constitute a part of the provisions hereof.

9. **Amendments.** This Agreement may be amended, changed, modified or altered only by an instrument in writing which shall be (a) approved by Resolution of the governing or legislative body of each of the parties, (b) executed by a duly authorized official of each of the Parties, (c) submitted to an attorney for each party that is authorized to represent said party for review as to proper form and compliance with applicable law, pursuant to Section 11-13-202.5 of the Interlocal Act, and (d) filed in the official records of each party.

10. **No Presumption.** Should any provision of this Agreement require judicial interpretation, the Court interpreting or construing the same shall not apply a presumption that the terms hereof shall be more strictly construed against one party, by reason of the rule of construction that a document is to be construed more strictly against the person who himself or through his agents prepared the same, it being acknowledged that all parties have participated in the preparation hereof.

11. **Notices.** All notices, demands and other communications required or permitted to be given hereunder shall be in writing and shall be deemed to have been properly given if delivered by hand or by certified mail, return receipt requested, postage paid, to the parties directed to their respective County Commission Chairman or City Mayors at their respective County and City Offices, or at such other addresses as may be designated by notice given hereunder.

12. **Assignment.** The parties to this Agreement shall not assign this Agreement, or any part hereof, without the prior written consent of all other parties to this Agreement. No assignment shall relieve the original parties from any liability hereunder.

13. **Utah Law.** This Agreement shall be interpreted pursuant to the laws of the State of Utah.

14. **Time of Essence.** Time shall be of the essence of this Agreement.

15. **Lawful Agreement.** The parties represent that each of them has lawfully entered into this Agreement, having complied with all relevant statutes, ordinances, resolutions, by-laws, and other legal requirements applicable to their operation.

16. **Breach.** In the event that any party breaches this Agreement, a non-breaching party may serve the breaching party with a notice to cure the breach by certified mail, return receipt requested or personal delivery to the breaching party. The breaching party shall cure the breach within thirty days of receiving notice to cure, or if the breach is not capable of curing within thirty days, commence corrective action within thirty days and diligently pursue correction of the breach until the breach is cured. Failure to cure or diligently pursue corrective action constitutes a breach.

17. **Incorporation of Recitals.** The Recitals to this Agreement are hereby incorporated into the Covenants section of this Agreement as if fully set forth herein.

18. **Binding Agreement.** This Agreement shall be binding upon the heirs, successors, administrators, and assigns of each of the parties hereto.

19. **Mass Notification Agreement.** The parties to this Agreement shall not violate, breach or cause the violation or breach of any term, condition or provision of the Mass Notification Agreement.

20. **Conflict.** This Agreement is subject to the terms, provisions and conditions of the Mass Notification Agreement and all applicable state and federal laws, rules, and regulations. In the event of any conflict between any term of this Agreement and the Mass Notification Agreement, the Mass Notification Agreement shall govern. The parties to this Agreement shall comply with all applicable state and federal laws, rules, and regulations.

21. **Entire Agreement.** This Agreement shall constitute the entire agreement between the parties and any prior understanding or representation of any kind proceeding the date of this Agreement shall not be binding upon either party except to the extent incorporated in this Agreement.

22. **Force of Nature.** The parties to this Agreement shall not hold any other parties liable for damages or otherwise responsible in any way if any party is prevented from the performance of this Agreement by reason of acts of God, riot, strike, fire, weather, illness, war, lock-up, energy shortages, or illegality.

23. **Severability.** If any term or provision of this Agreement or the application thereof shall to any extent be invalid or unenforceable, the remainder of this Agreement, or the application of such term or provision to circumstances other than those with respect to which it is invalid or unenforceable, shall not be affected thereby, and shall be enforced to the extent permitted by law. To the extent permitted by applicable law, the parties hereby waive any provision of law which would render any of the terms of this Agreement unenforceable.

24. **Counterparts.** This Agreement may be executed in one or more counterparts, all of which together shall be considered as one agreement.

25. **Third Party Beneficiaries.** This Agreement governs the rights and liabilities of the signatories to this Agreement only. No third party beneficiaries are created, or intended to be created by this Agreement for any person or entity not a signatory to this Agreement.

SIGNED and ENTERED INTO this _____ day of _____, 2015.

UTAH COUNTY

By: _____

Larry Ellertson
Chairman, Board of Utah County
Commissioners

ATTEST:

By: _____
Bryan Thompson
Utah County Clerk Auditor

Reviewed as to proper form and
compliance with applicable law:
Jeffrey R. Buhman, Utah County Attorney

By: _____
Deputy

SIGNED and ENTERED INTO this ____ day of _____, 2015.

HIGHLAND CITY

By: _____
Mayor

ATTEST AND COUNTERSIGN:

City Recorder

Reviewed as to proper form and
Compliance with applicable law:

City Attorney

WEA/IPAWS Addendum

To

Everbridge, Inc. Service Agreement

WEA/IPAWS Addendum
to
Everbridge, Inc. Service Agreement

This WEA/IPAWS Addendum to the Everbridge Service Agreement ("Addendum") is entered into this 31st day of March, 2014⁵ by and between Everbridge, Inc., a Delaware corporation ("Everbridge"), and Utah County ("Customer"). Everbridge and Customer entered into an Everbridge Service Agreement effective April 1st, 201⁵ ("Agreement"). All capitalized terms used herein without definition shall have their respective meanings set forth in the Agreement.

WHEREAS, Customer desires to access the Integrated Public Alert Warning System ("IPAWS") Open Platform for Emergency Networks through the Everbridge mass notification services;

WHEREAS, the Parties desire to reflect the additional terms and conditions on which Customer will have such access;

NOW, THEREFORE, in consideration of the mutual covenants and promises set forth below, and other good and valuable consideration, the Parties agree to amend the Agreement as follows:

1. **IPAWS Authorization:** Customer represents and warrants to Everbridge that any employee, agents, or representatives of Customer who access IPAWS-OPEN using Customer's credentials provided by FEMA (each, an "IPAWS User"), are authorized by FEMA to use IPAWS-OPEN, have completed all required training, and Customer has executed an IPAWS Memorandum of Agreement ("MOA") with FEMA. Customer shall contact Everbridge immediately upon any change in Customer or any IPAWS User's right to access IPAWS-OPEN. Customer shall only access IPAWS-OPEN using its designated credentials and FEMA issued digital certificate ("Digital Certificate"). Customer acknowledges and agrees that Everbridge shall not have access to its credentials and that Customer assumes full responsibility for maintaining the confidentiality of any credentials issued to it. Customer shall be solely responsible for any and all claims, damages, expenses (including attorneys' fees and costs) that arise from any unauthorized use or access to IPAWS-OPEN.
2. **Credentials:** Customer shall load and maintain within its Everbridge account Organization, its Digital Certificate, COG ID, and Common Name. Customer authorizes and requests Everbridge to use the foregoing stored information to connect Customer to IPAWS-OPEN.
3. **Messaging:** Customer acknowledges and agrees that: (i) upon submission of messages to IPAWS-OPEN, Everbridge shall have no further liability for the distribution of such message, and that the distribution through IPAWS-OPEN, including, but not limited to, delivery through the Emergency Alert System or the Commercial Mobile Alert System, is in no way guaranteed or controlled by Everbridge; (ii) Everbridge shall not be liable as a result of any failure to receive messages distributed through IPAWS-OPEN; (iii) IPAWS may include additional features not supported through the Everbridge system, and Everbridge shall not be required to provide such additional features to Customer; and (iv) Customer shall be solely responsible and liable for the content of any and all messages sent through IPAWS-OPEN utilizing its access codes.
4. **Term:** Customer acknowledges and agrees that access to IPAWS-OPEN shall be available once Customer has provided Everbridge with the Digital Certificate and any other reasonably requested information to verify access to the system. Upon termination of the Agreement access to IPAWS-OPEN shall immediately terminate. In addition, Everbridge may immediately terminate, without liability, access to IPAWS-OPEN, if Customer breaches this Addendum, the MOA, or FEMA changes the IPAWS-OPEN system so that it materially change the business terms and/or feasibility for Everbridge to provide such access.
5. **Remaining Terms.** All other terms and conditions of the Agreement remain in full force and effect as amended by this Amendment.
6. **Authority.** Customer represents and warrants that it has all necessary legal authority to enter into this Addendum for itself and on behalf of any of its affiliates that are parties to the Agreement or that have been using the Services under the Agreement.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their duly authorized representatives as of the day and year first above written.

EVERBRIDGE, INC.

By _____
Title _____

CUSTOMER: UTAH COUNTY

By [Signature]

Title [Signature]

Board of County Commissioners of Utah County
State of Utah