PROPOSED DEVELOPMENT TEXT

Subarea C-2 - Noah's (12/15/2013)

Summary:

The subject site includes approximately 2.54 acres of real property located northwest of a vacant tract deemed as a "signature" building site at the intersection of Wall Street and Perimeter Drive. It consists of property, which prior to the date of this application is included in a portion of Subarea C of the Perimeter Center PUD. The application seeks to rezone the property into a new subarea (C-2) to update the allowable uses on this site to enhance its marketability.

The site is presently vacant and will require a lot split. The residual land immediately south of proposed Subarea C-2 will be approximately four acres and remain under the control of the Subarea C standards.

Development Standards:

Unless otherwise set forth in the submitted drawings or in this written text, the development standards of Chapter 153 of the City of Dublin Code shall apply to this PUD for Subarea C-2. In addition to these requirements, the following exceptions shall be permitted:

1. Solid fences not to exceed 4';

2. Synthetic grass in high foot traffic areas. These areas are designated adjacent to the North and South of the patio. Examples photos of turf are provided following this text.

Permitted Uses:

The following uses shall be permitted in the new Subarea C-2 of this PUD:

1. All uses currently permitted in Subarea C of the Perimeter Center PUD
2. Conference Center
3. Multi-Purpose Events Center. A facility to allow for business meeting space, educational workshops and seminars, family and/or corporate parties, weddings and/or receptions, etc.

Ancillary Uses:

The following uses shall be permitted in the new Subarea C-2 in support of the permitted uses

1. Seasonal Outdoor Reception and Gathering. Outdoor gathering space will be provided with a enclosed patio area and high top table. Patio will be utilized for gathering during transitional times (i.e. between wedding ceremony and reception) and for socialization. There will be no table service dining in the reception area. Live music will not be permitted in this area. All exterior activities will comply with Dublin City Ordinances and will be subject to any approvals as noted on the final development plan.

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PROPOSED DEVELOPMENT TEXT

Yard Requirements:

1. Setback from Wall Street shall be 25' for pavement and 50' for buildings.
2. Side Yards shall be 15' for pavement and buildings.
3. Rear Yards shall be 15' for pavement and buildings.
4. Total ground covered by all buildings shall not exceed 25% of the total lot areas. However, parking garages and building areas shall cover no more than 75% of the lot area.
5. Southern walk way may encroach within the side setback.

Height Requirements:

1. Maximum height for structures within Subarea C-2 shall be 65' as measured per the Dublin Zoning Code.

Parking Requirements:

1. Size, ratio, and type of parking and loading facility shall be regulated by Dublin Code Chapters 153.200 to 153.212, except for reception centers which are at a rate of 1 space for 125 sf.

Circulation:

1. Access to site will come from a curb cut along East property line along Wall Street.

Storage and Equipment:

1. No materials, supplies, equipment or products shall be stored or permitted to remain on any portion of a parcel outside a permitted structure. Mechanical equipment or other utility hardware on roof, ground, or buildings shall be screened from public view with materials harmonious with the building.

Landscaping and screening:

1. Landscaping shall be according to the Dublin Landscape Code, Chapters 153.130-153.139.
2. All outdoor seating areas will be screened with a decorative fence and plantings.
3. Pergola adjacent to the patio.
4. Dumpster area to be approved as shown on Final Development Plan and will be screened in according with Dublin Zoning Codes.

Lighting:

1. Parking lot lighting shall be of downcast, cutoff fixtures and shall not exceed 20' in height.

Architecture:

1. Buildings on site shall be finished on all four sides.
2. Buildings on the site shall be consistent with other facilities in the C subarea.
3. Permitted primary exterior materials shall include brick, cast stone, and ceramic tile

PROPOSED DEVELOPMENT TEXT

Signage:

1. There will be no exterior wall signs.
2. A monument sign will be installed along Wall Street and will comply with Dublin City Code.

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NOAH'S

FOR ALL LIFE'S EVENTS™

ADDRESS	PO BOX 1289 RIVERTON, UTAH 84065	PHONE FAX	801 859 8192 801 446 8841	TOLL FREE WEBSITE	1 800 MY NOAHS WWW.MYNOAHS.COM

NOAH'S is typically used Monday through Thursday for corporate and business events, Fridays and Saturdays are for family and social events. On average, a NOAH'S one story building uses on average of about 45 stalls. *See traffic study*

Please find the two attached documents illustrating the building calendar for our Las Colinas, Texas location. This location opened March 2012, and therefore reflects a developed building schedule. The first document is the day-by-day schedule for May 2013, which we consider a busy month for this particular year. The second document is the day-by-day schedule for July 2013, which we consider a slow month for this particular year.

In May 2013 in Las Colinas, one of our busy months, there were only two back-to-back events. In July 2013 there were no back-to-back events. As seen in the day-by-day calendars, when an event gets booked there is a 1-hour NA block placed before and after an event block. This ensures that we will have at least 2 hours to clean the room and reset it for the next event.

NOAH'S staffs the buildings appropriately based upon the events scheduled for that day on the calendar. We staff to ensure good customer service.

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CITY OF DUBLIN
PLANNING

NOAH'S

FOR ALL LIFE'S EVENTS™

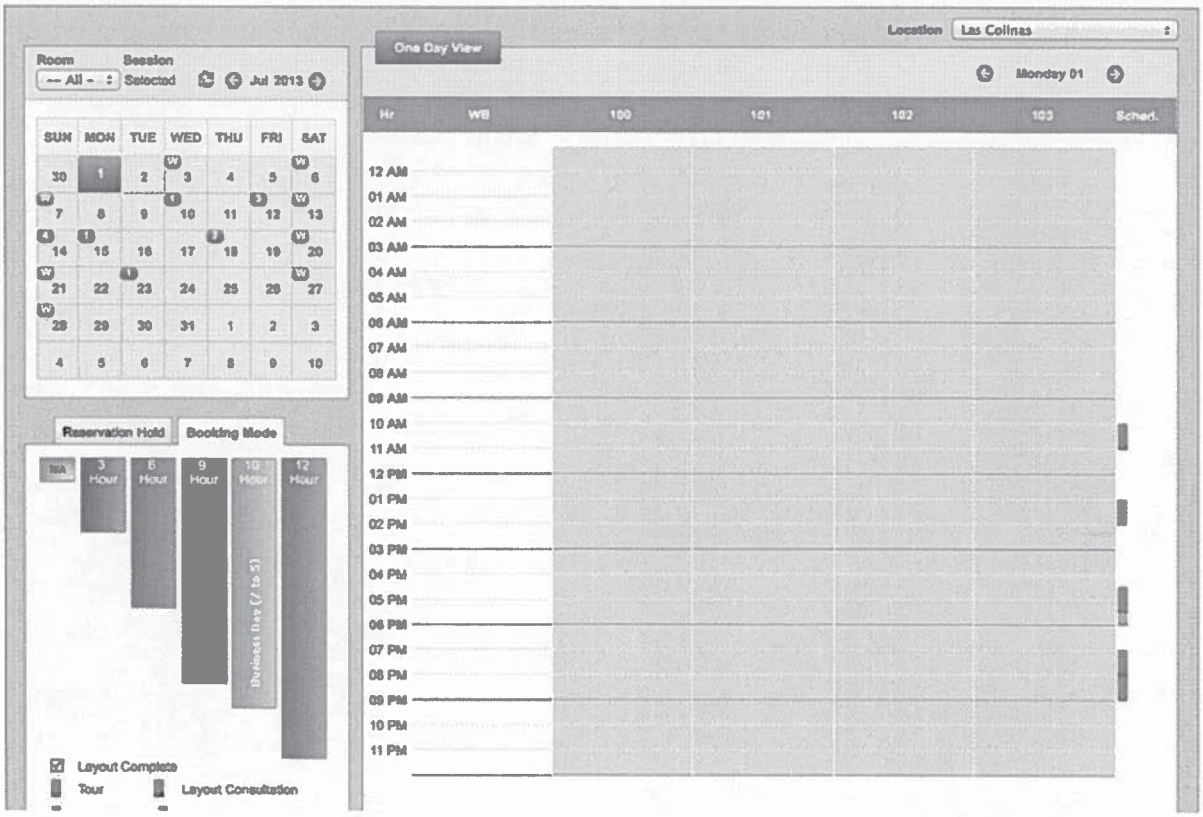
July 2013
Calendar of Events
Las Colinas, TX

Room: -- All -

Session: Selected

Jul 2013

SUN	MON	TUE	WED	THU	FRI	SAT
30	1	2	W 3	4	5	W 6
W 7	8	9	1 10	11	3 12	W 13
4 14	1 15	16	17	2 18	19	W 20
W 21	22	1 23	24	25	26	W 27
W 28	29	30	31	1	2	3
4	5	6	7	8	9	10


Location
Las Colinas
Room
Session
-- All --
Selected
Jul 2013
One Day View
Monday 01
SUN MON TUE WED THU FRI SAT
Hr WB 100 101 102 103 Sched.
12 AM
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10 PM
11 PM
Reservation Hold
Booking Mode
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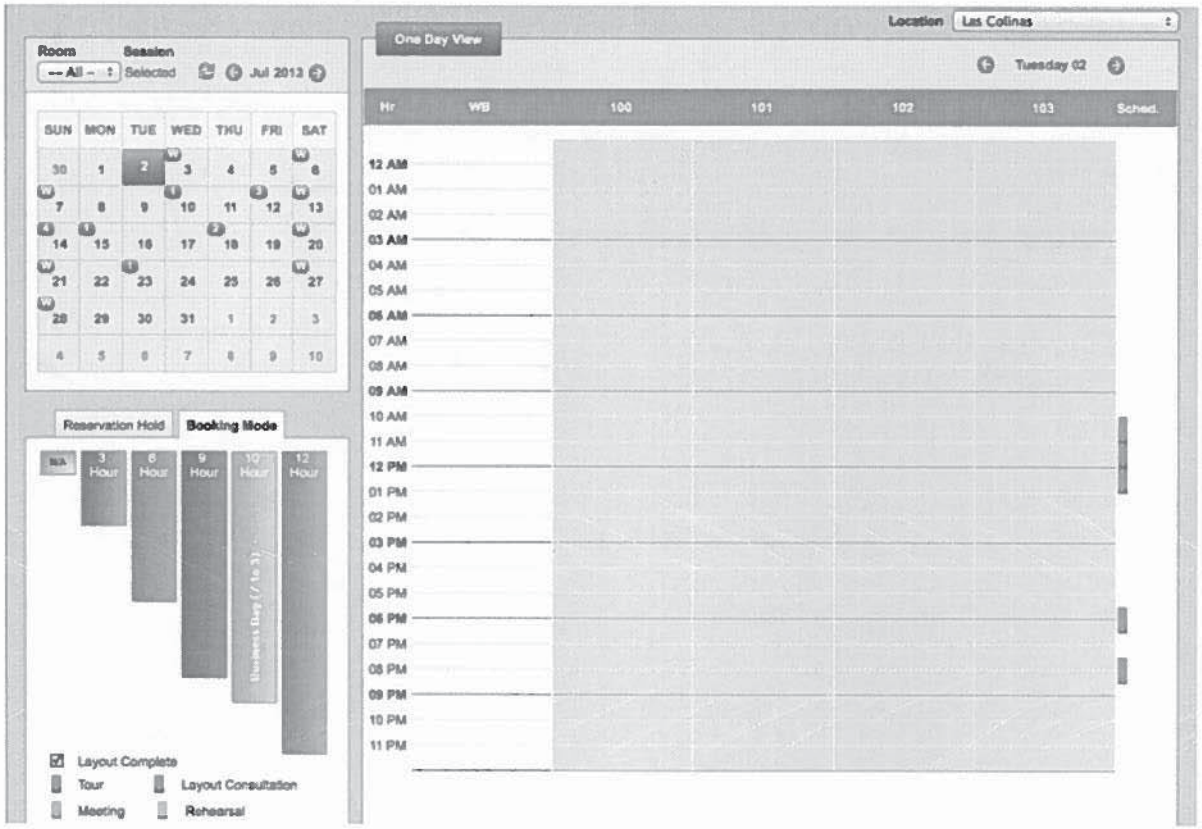
3 Hour
6 Hour
9 Hour
10 Hour
12 Hour
Business Day (7 to 5)
Layout Complete
Tour
Layout Consultation


Location
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Reservation Hold
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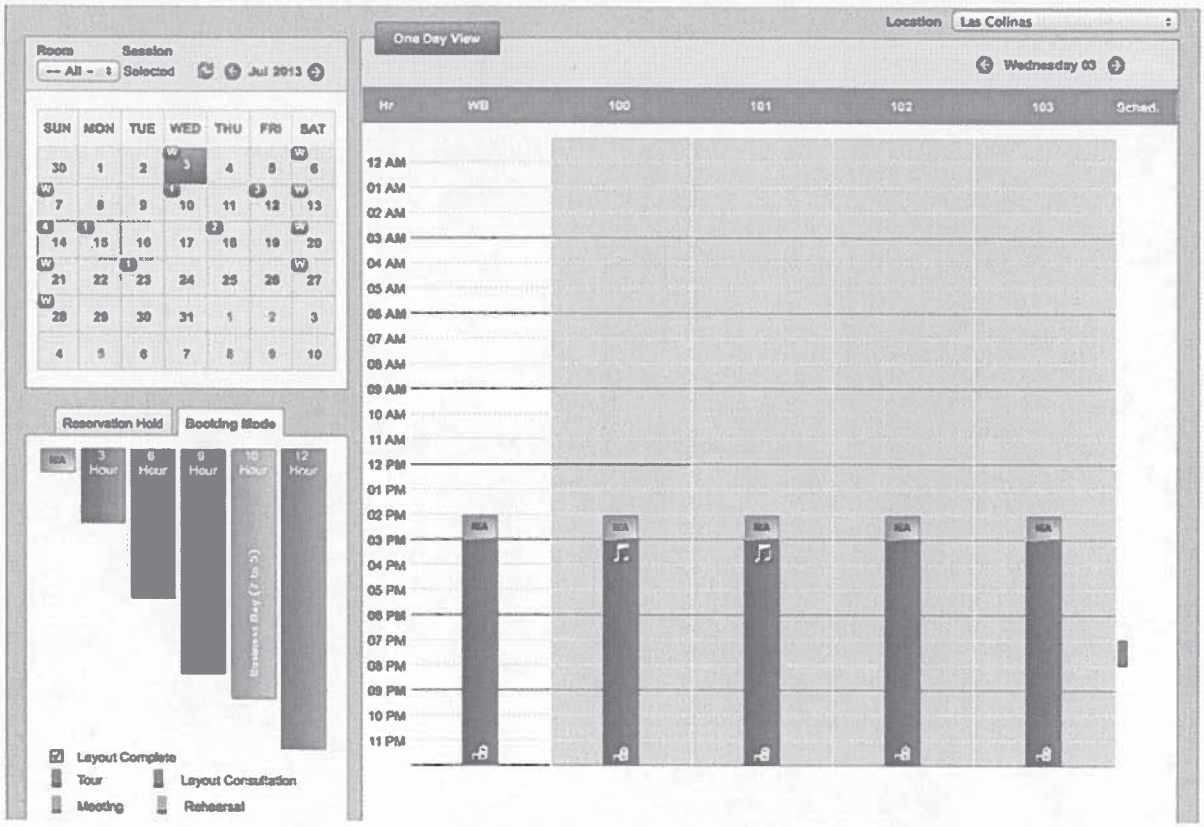
12 Hour
Layout Complete
Tour
Layout Consultation
Meeting
Rehearsal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Las Colinas
One Day View
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Session
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Jul 2013
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Booking Mode
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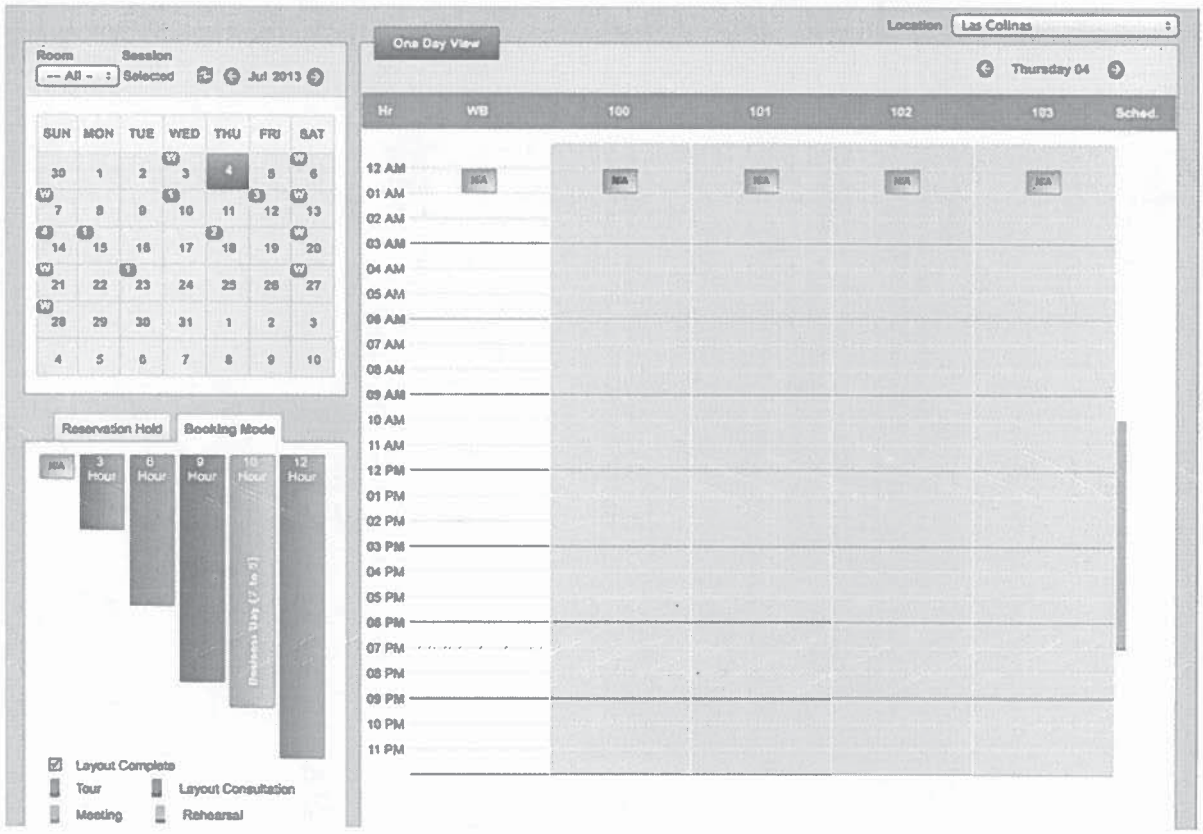
12 Hour
Layout Complete
Tour
Layout Consultation
Meeting
Rehearsal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Jul 2013
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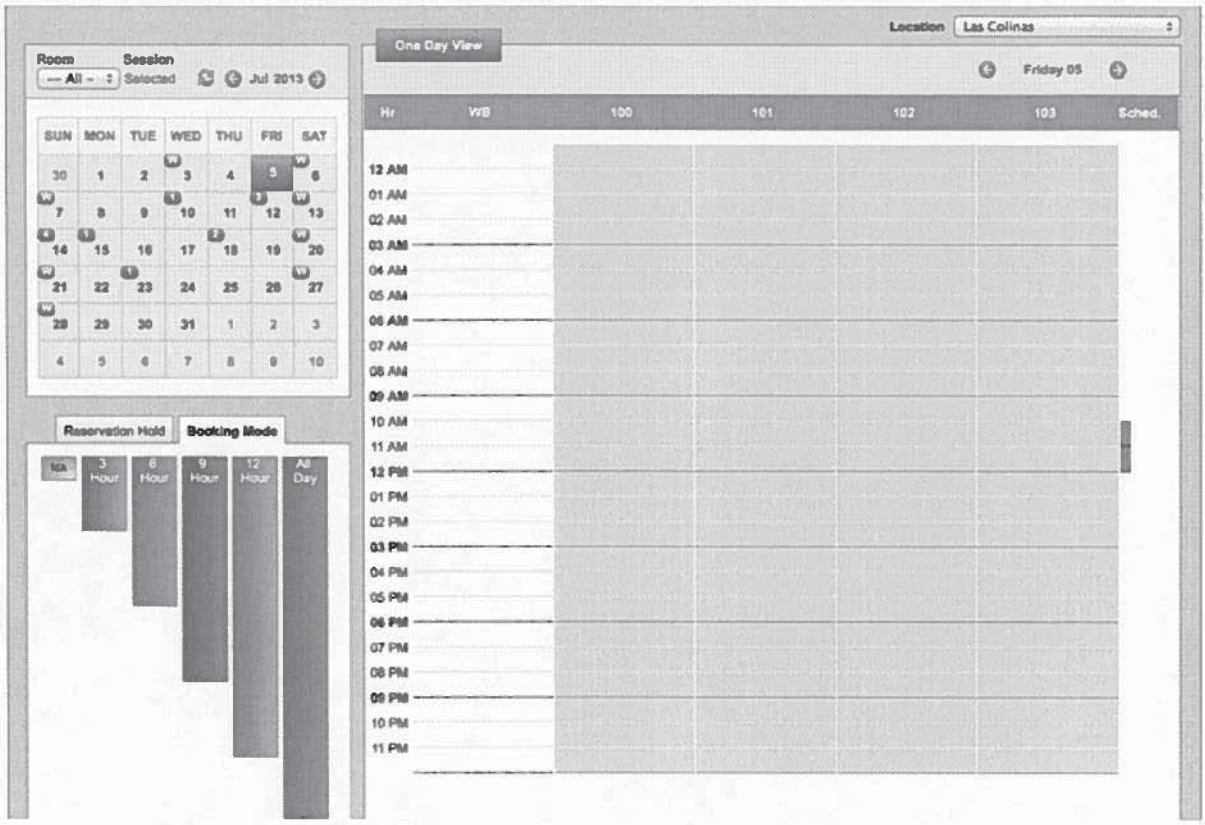
12 Hour
Layout Complete
Tour
Layout Consultation
Meeting
Rehearsal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Session
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Jul 2013
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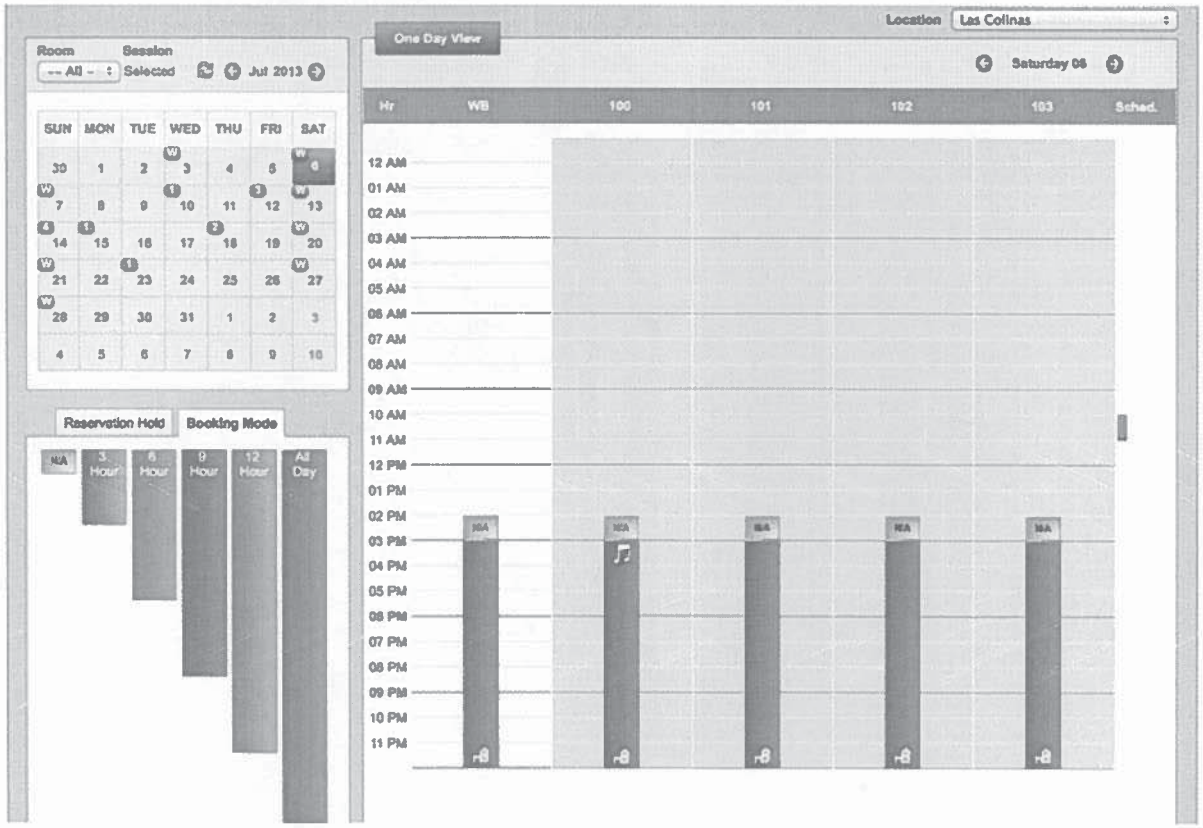
12 Hour
All Day


Location
Las Colinas
One Day View
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Session
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Jul 2013
Saturday 06
SUN MON TUE WED THU FRI SAT
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Reservation Hold
Booking Mode
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12 Hour
All Day

Location
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One Day View
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Session
-- All --
Selected
Jul 2013
Sunday 07
SUN MON TUE WED THU FRI SAT
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12 AM 01 AM 02 AM 03 AM 04 AM 05 AM 06 AM 07 AM 08 AM 09 AM 10 AM 11 AM 12 PM 01 PM 02 PM 03 PM 04 PM 05 PM 06 PM 07 PM 08 PM 09 PM 10 PM 11 PM
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Booking Mode
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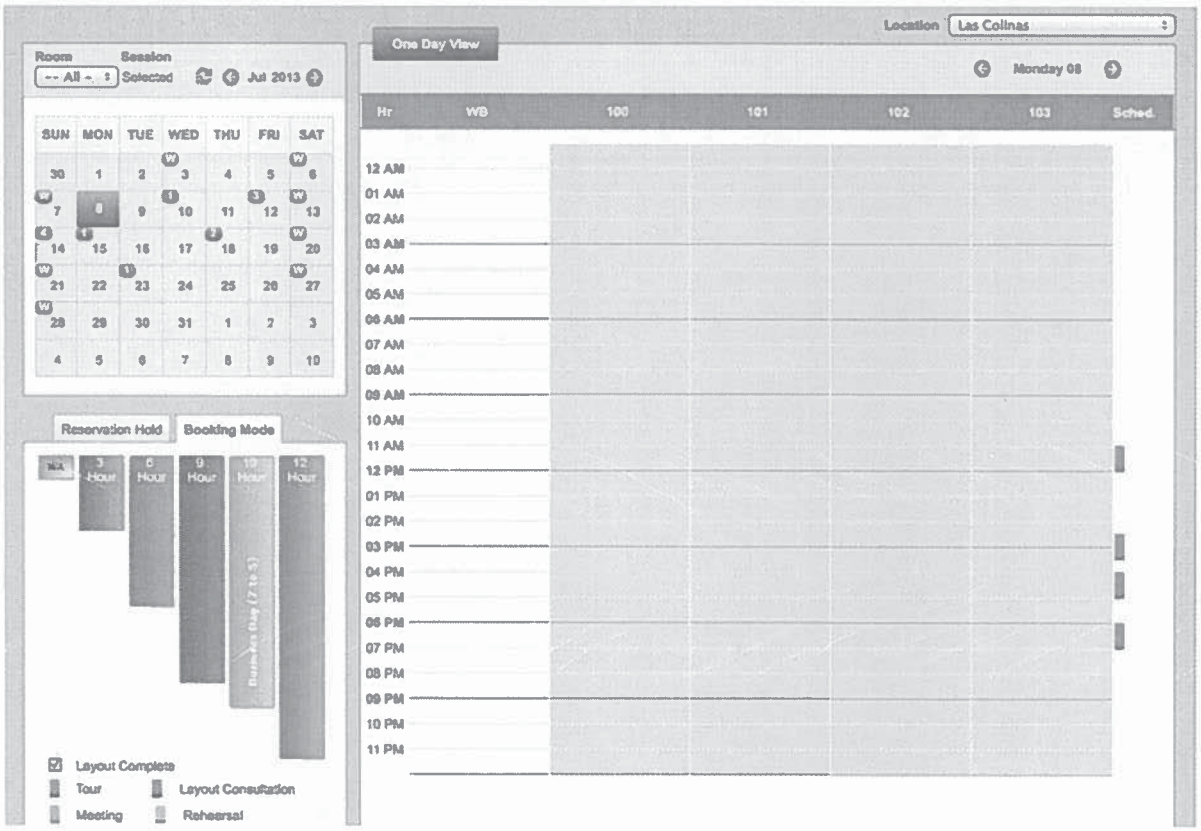
12 Hour
All Day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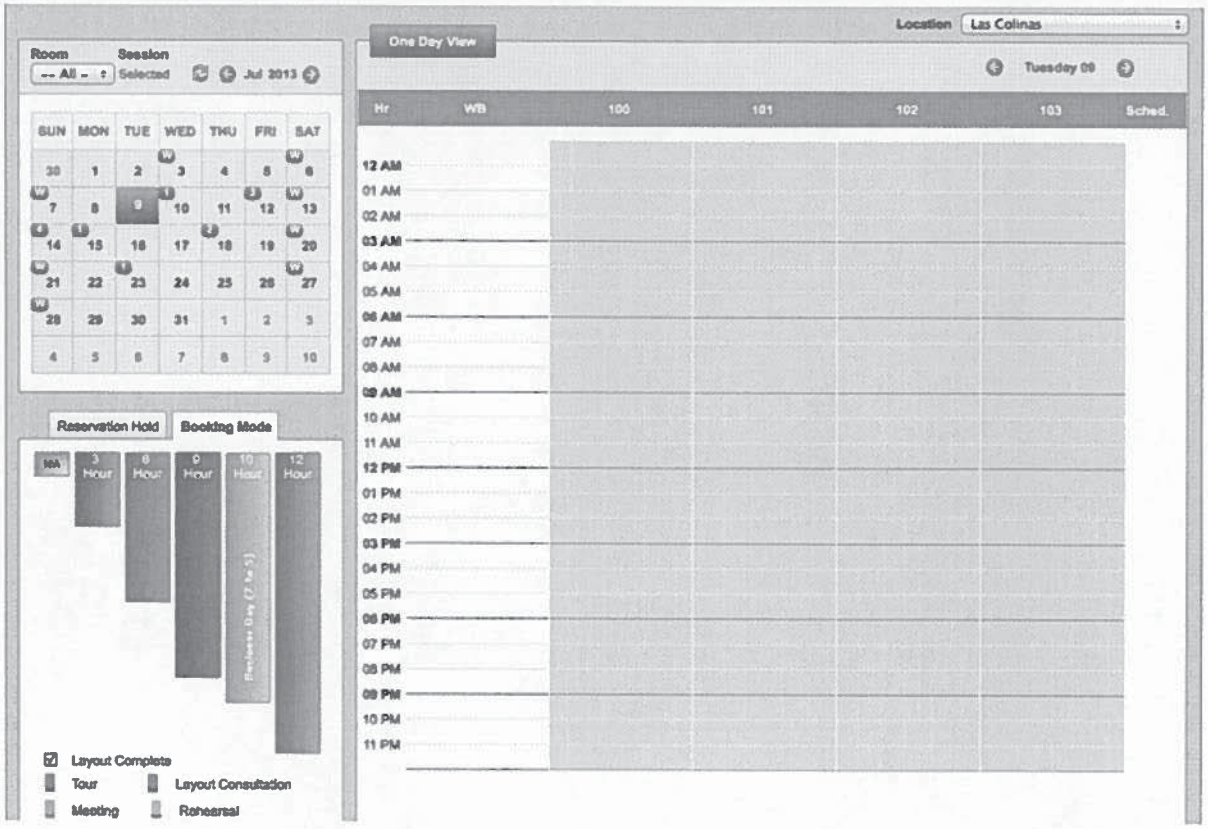
Business Day (7 to 5)
Layout Complete
Tour
Layout Consultation
Meeting
Rehearsal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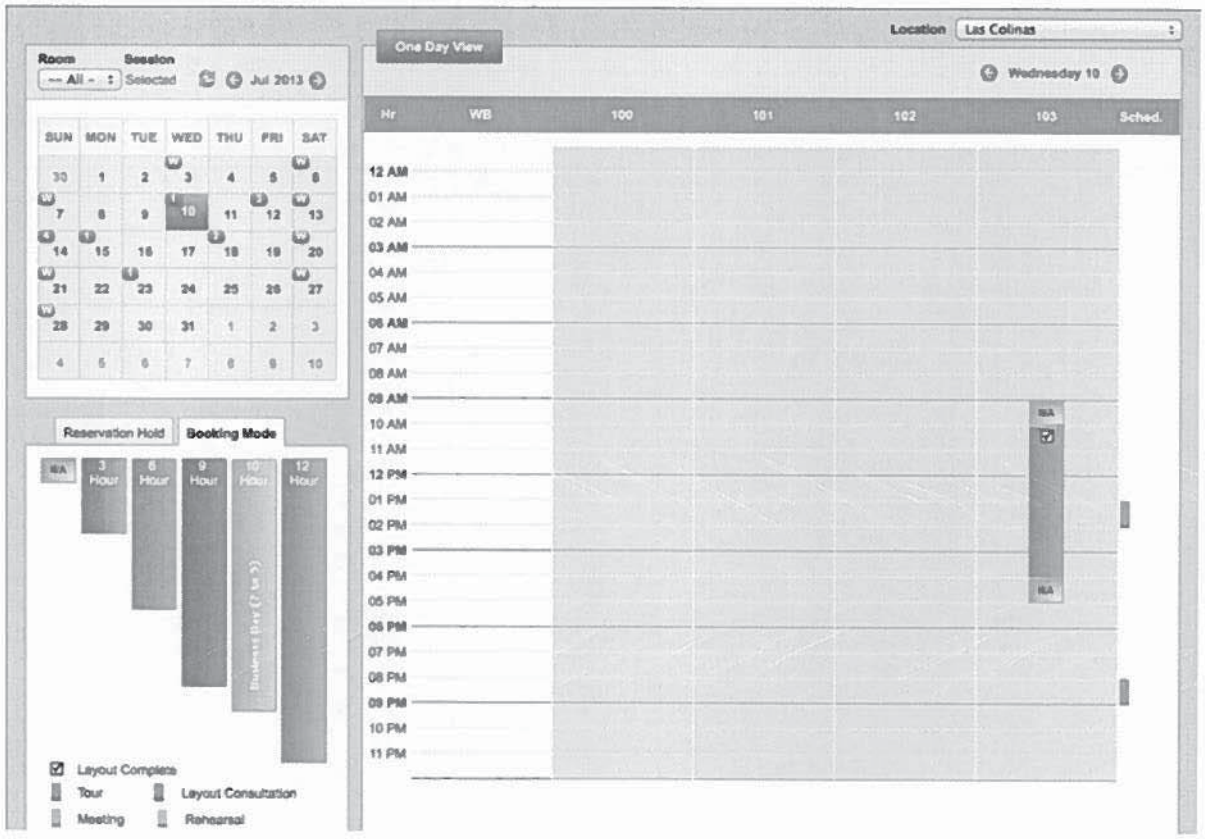
Tour
Layout Consultation
Meeting
Rehearsal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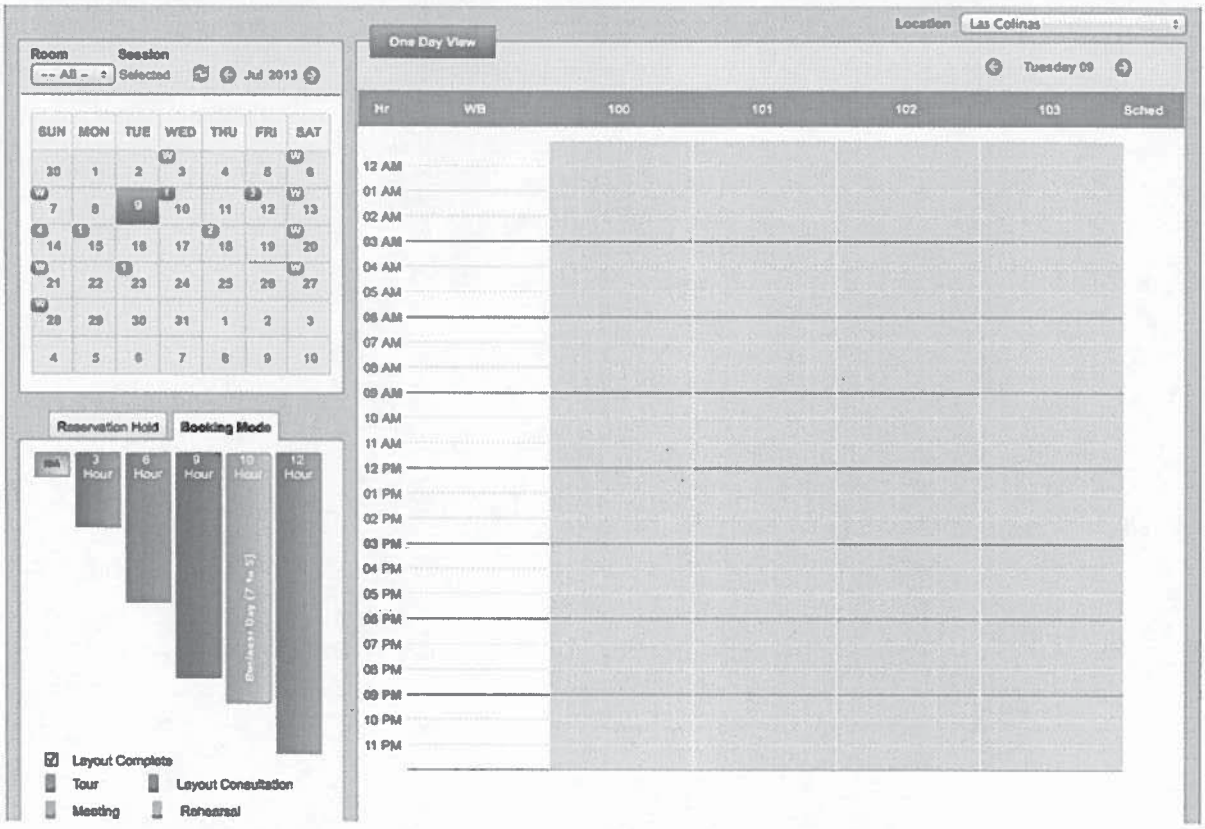
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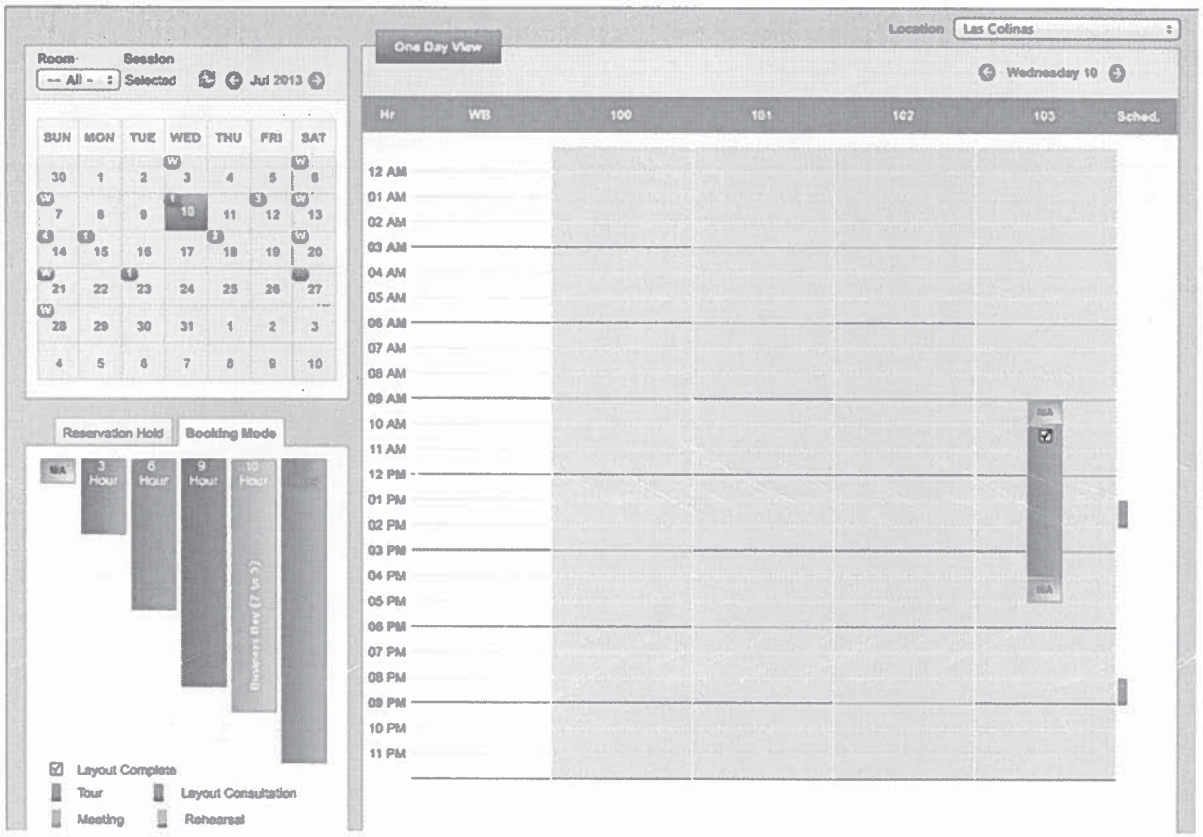
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Jul 2013
SUN MON TUE WED THU FRI SAT
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Business Day (7 to 5)
Layout Complete
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Layout Consultation
Meeting
Rehearsal

Location
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Jul 2013
Saturday 13
SUN MON TUE WED THU FRI SAT
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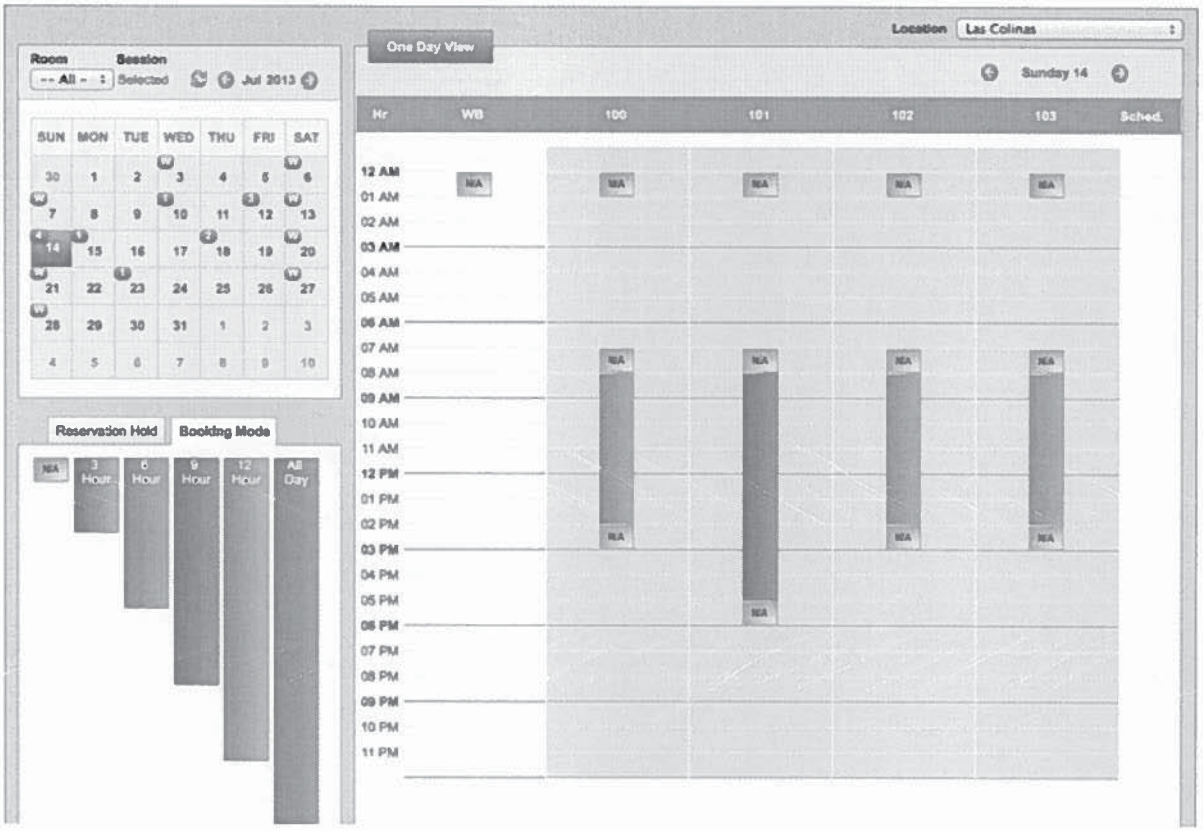
All Day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Jul 2013
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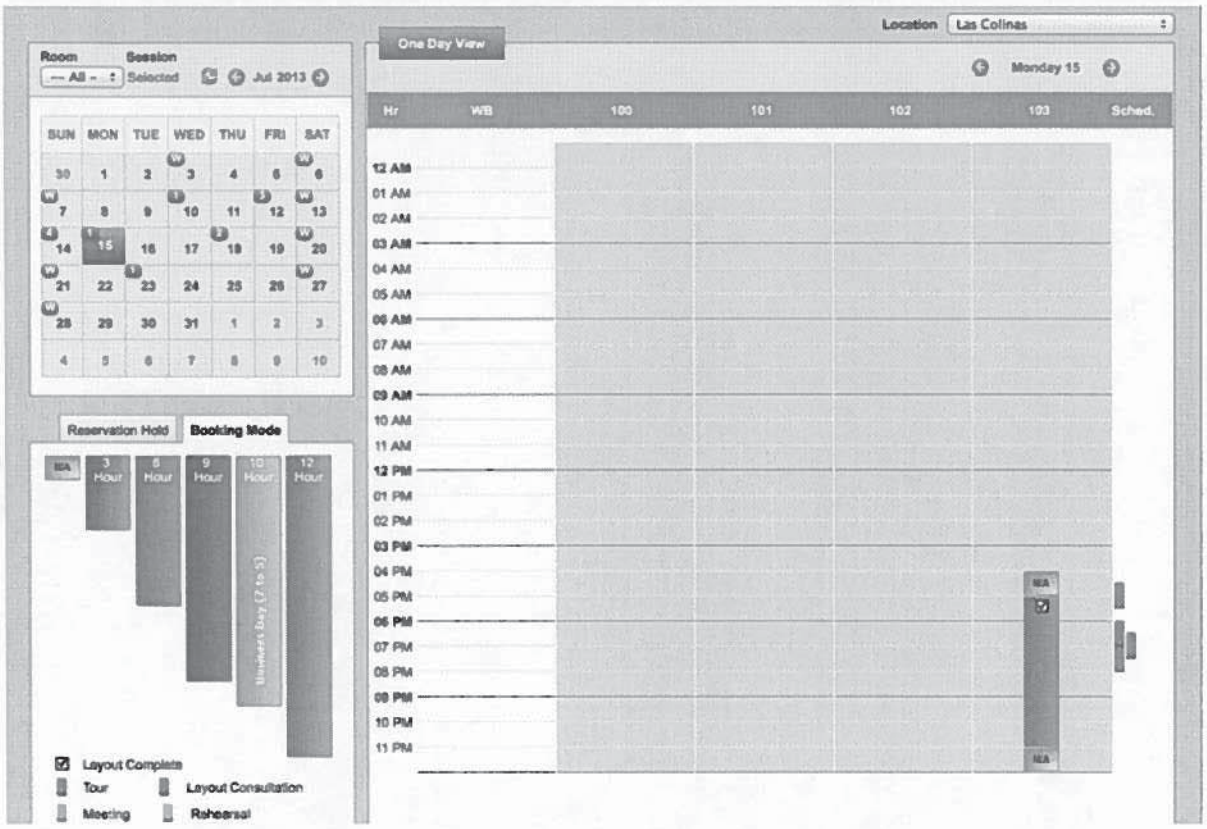
All Day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Jul 2013
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Reservation Hold
Booking Mode
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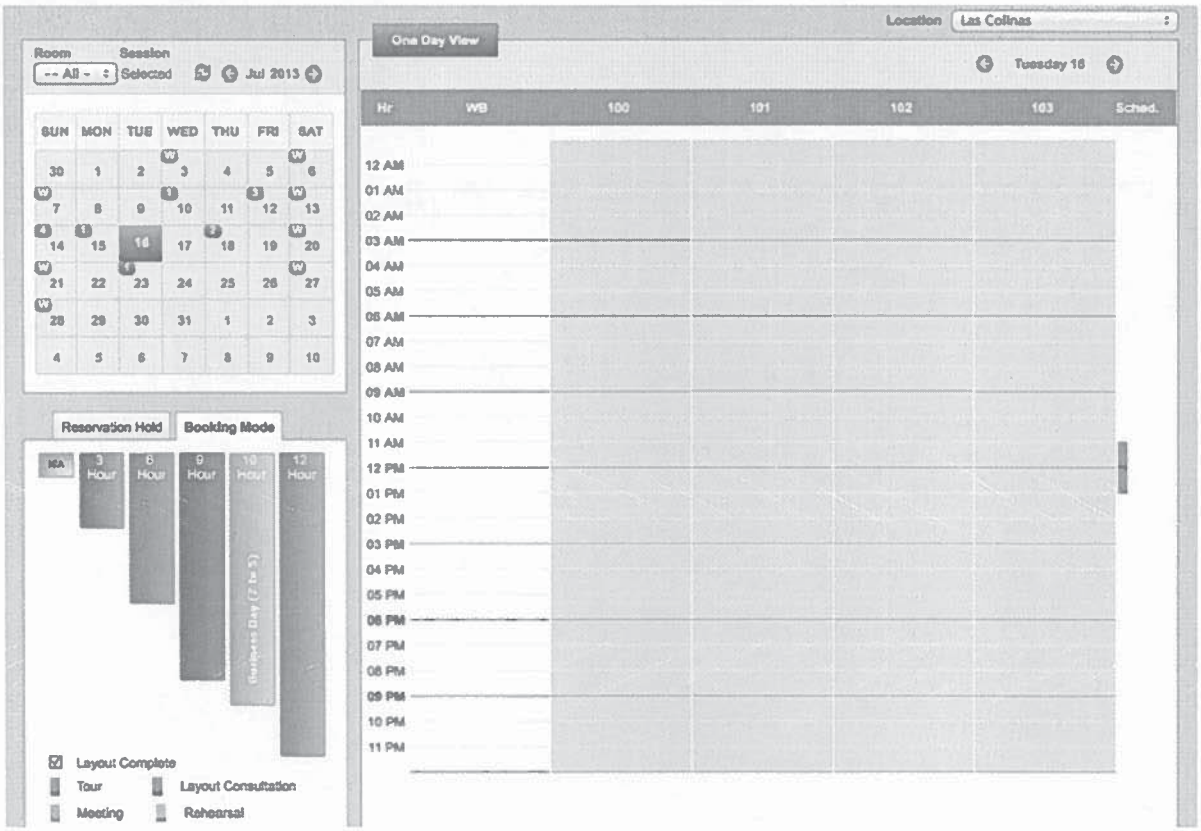
12 Hour
Business Day (7 to 5)
Layout Complete
Tour
Layout Consultation
Meeting
Rehearsal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Jul 2013
Tuesday 16
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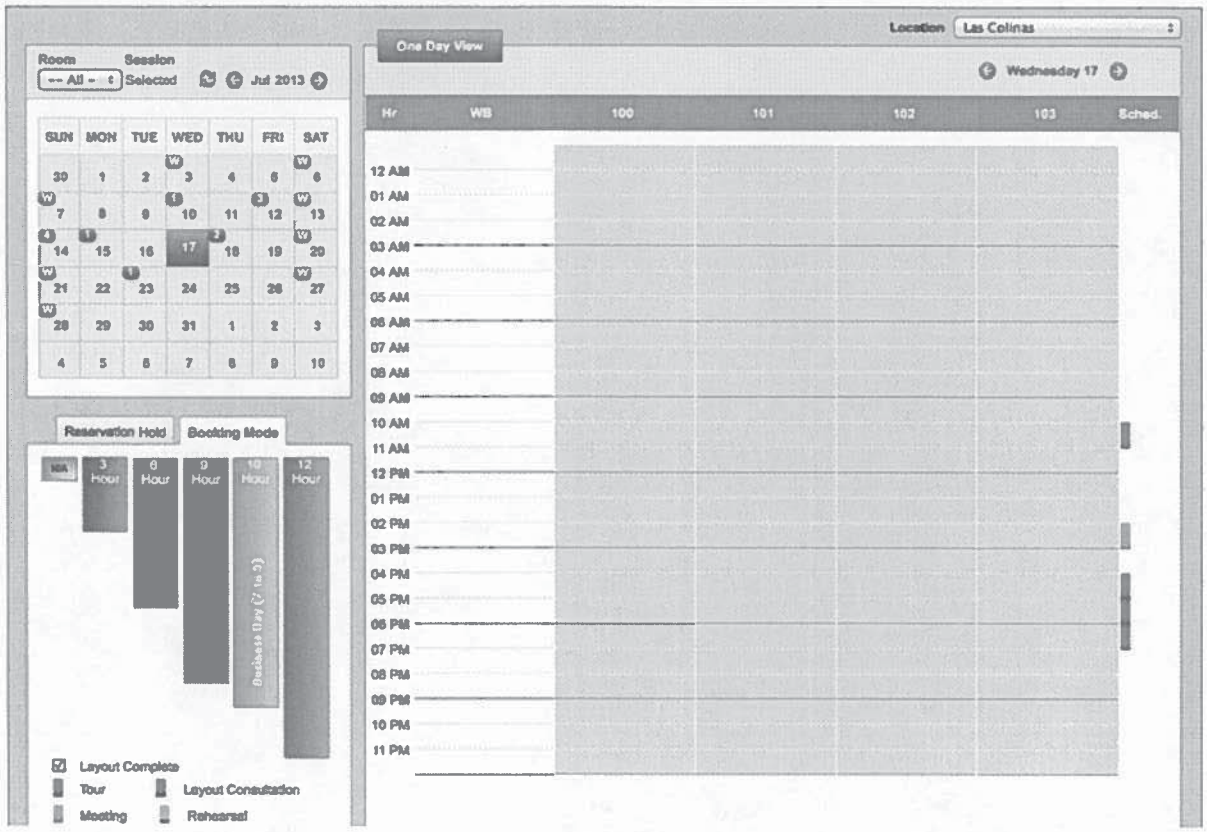
Meeting
Rehearsal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Jul 2013
Wednesday 17
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Reservation Hold
Booking Mode
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Business Day (2 to 5)
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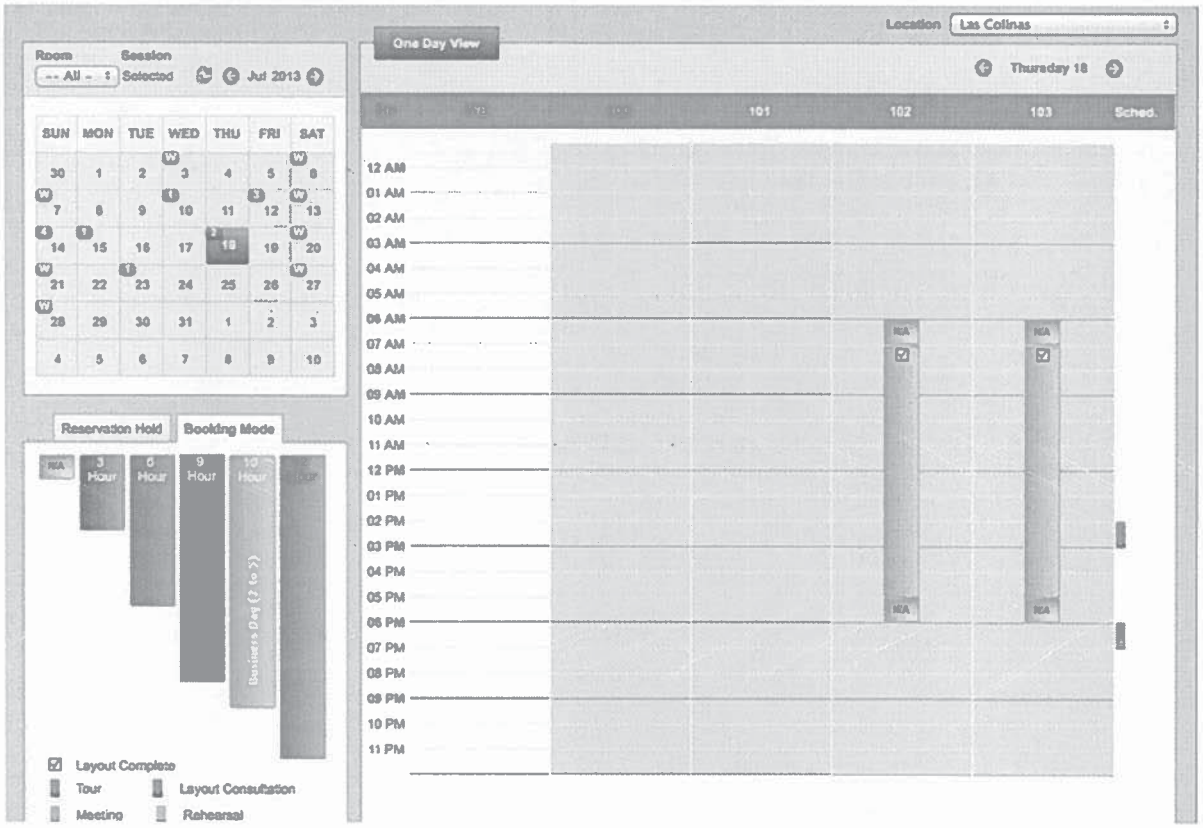
Tour
Layout Consultation
Meeting
Rehearsal


Location
Las Colinas
One Day View
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Session
-- All --
Selected
Jul 2013
Thursday 18
SUN MON TUE WED THU FRI SAT
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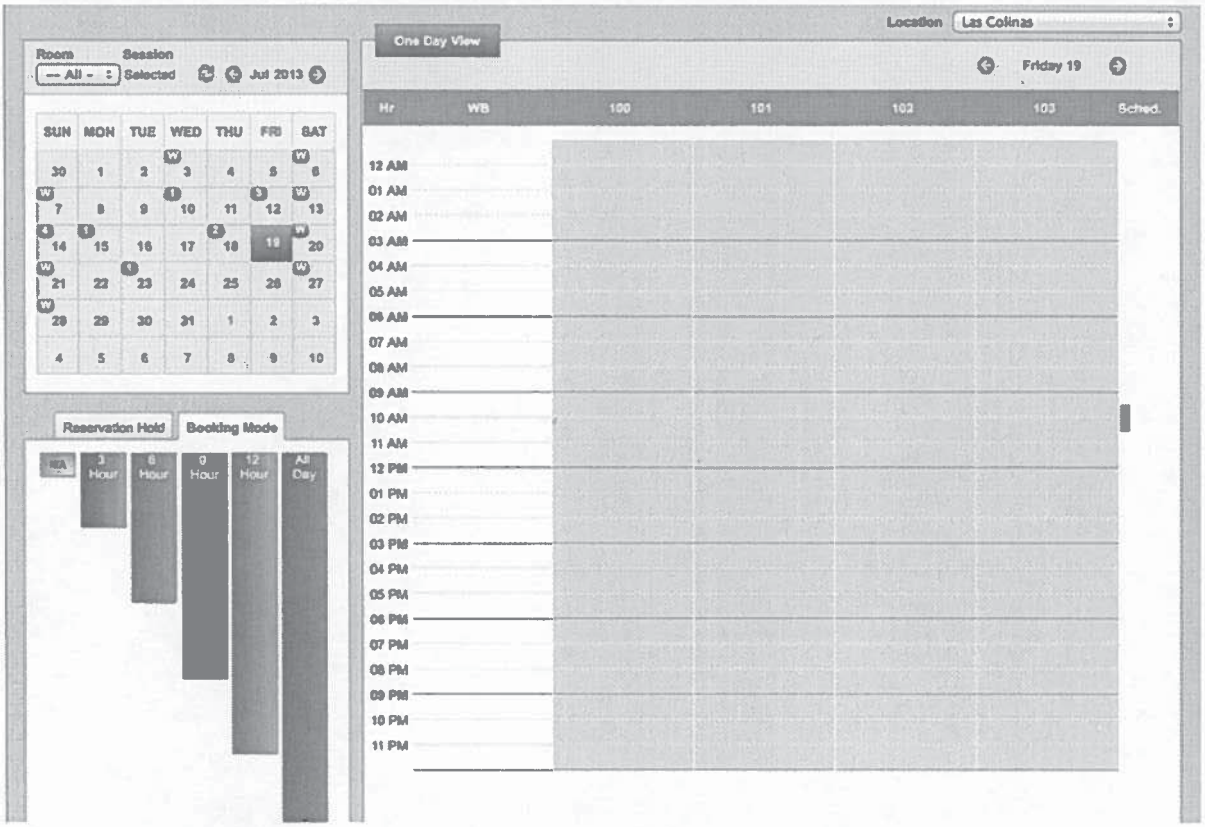
Business Day (2 to 5)
Layout Complete
Tour
Layout Consultation
Meeting
Rehearsal


Location
Las Colinas
One Day View
Friday 19
Room
Session
— All —
Selected
Jul 2013
SUN MON TUE WED THU FRI SAT
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Reservation Hold
Booking Mode
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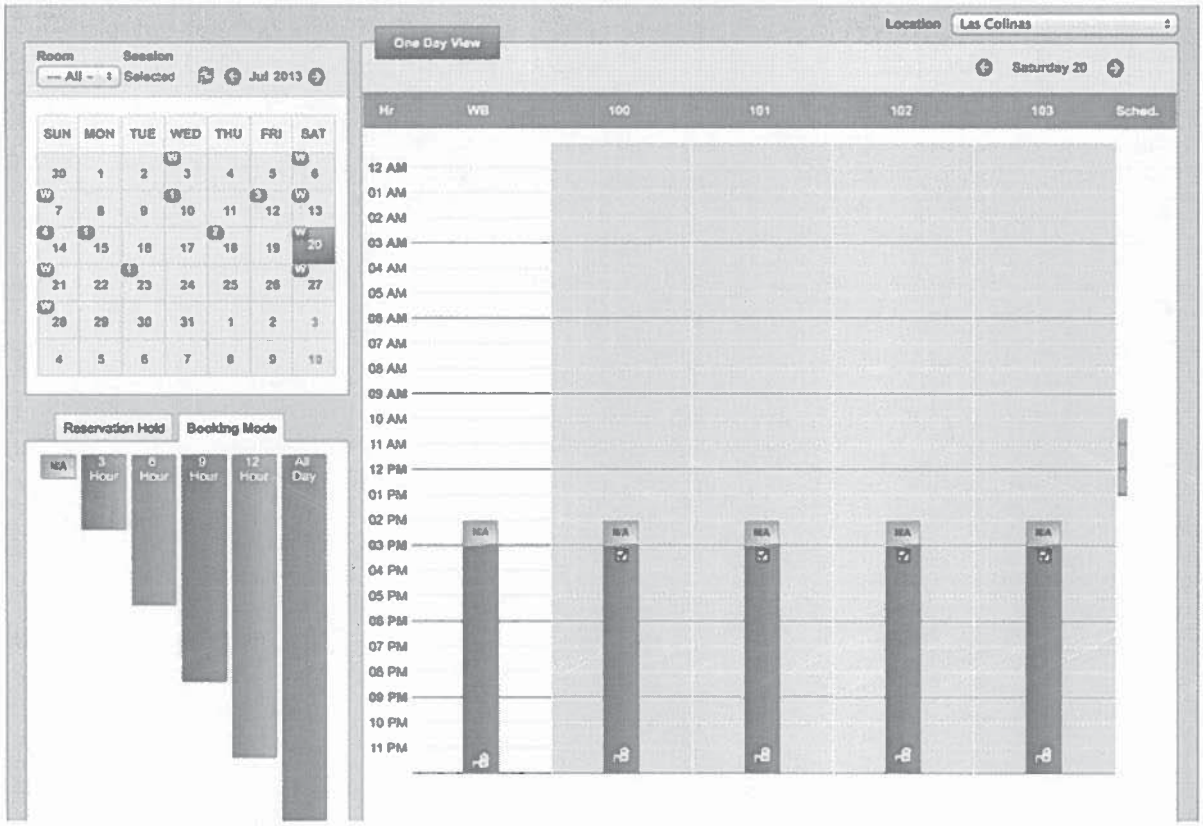
12 Hour
All Day


Location
Las Colinas
One Day View
Saturday 20
Room
Session
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Selected
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Reservation Hold
Booking Mode
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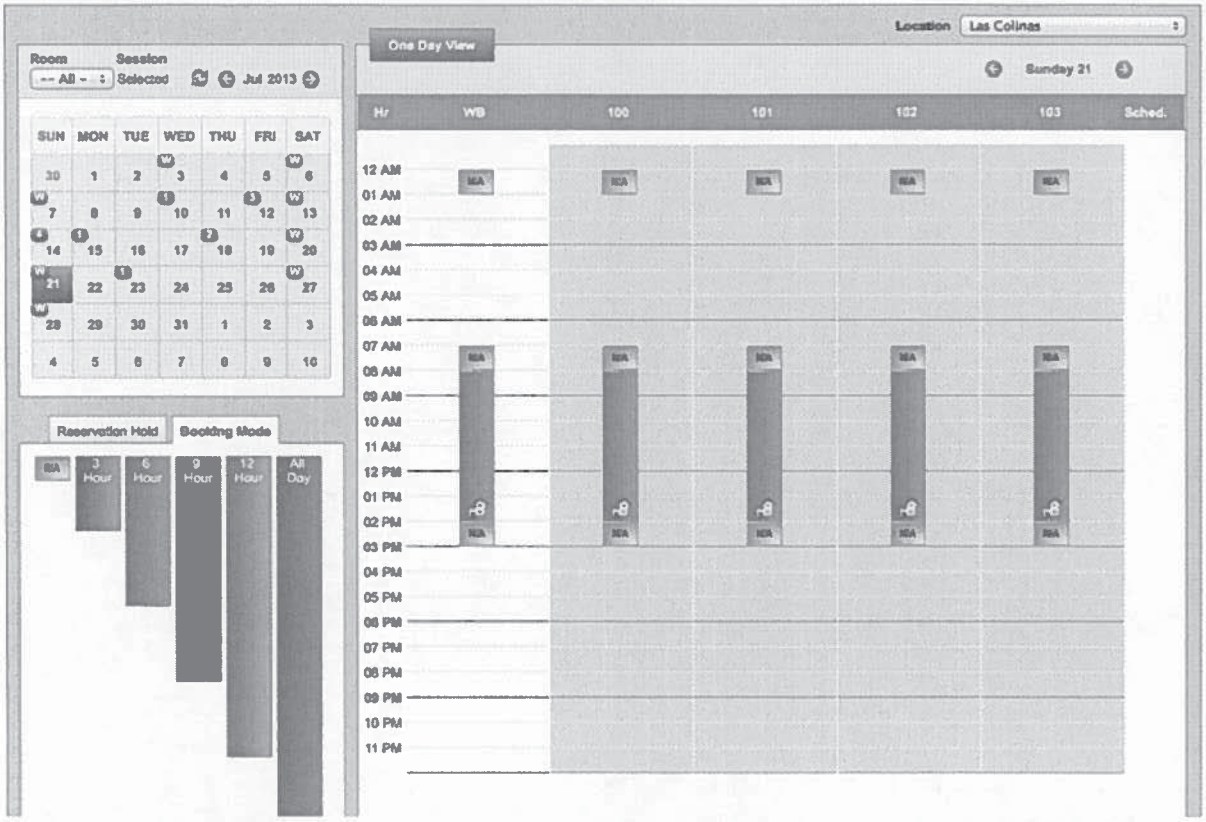
All Day


Location
Las Colinas
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Room
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Jul 2013
Sunday 21
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Booking Mode
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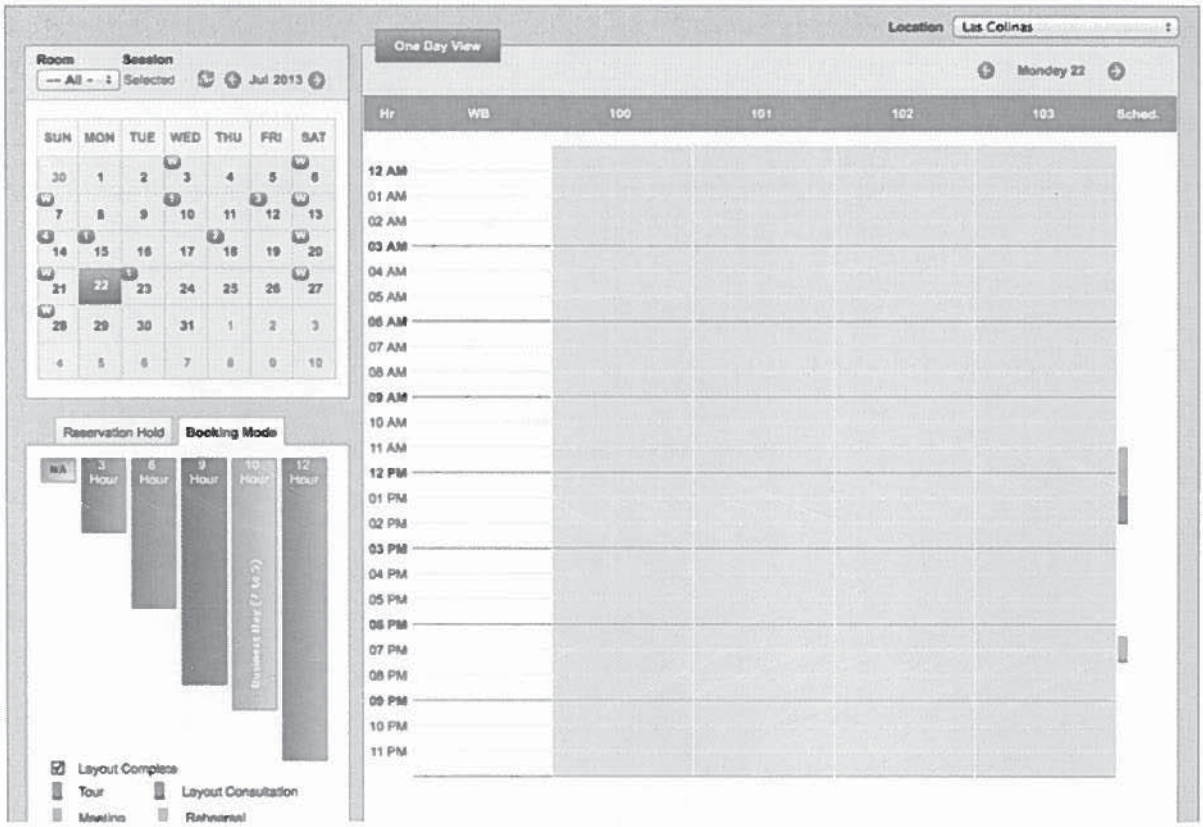
All Day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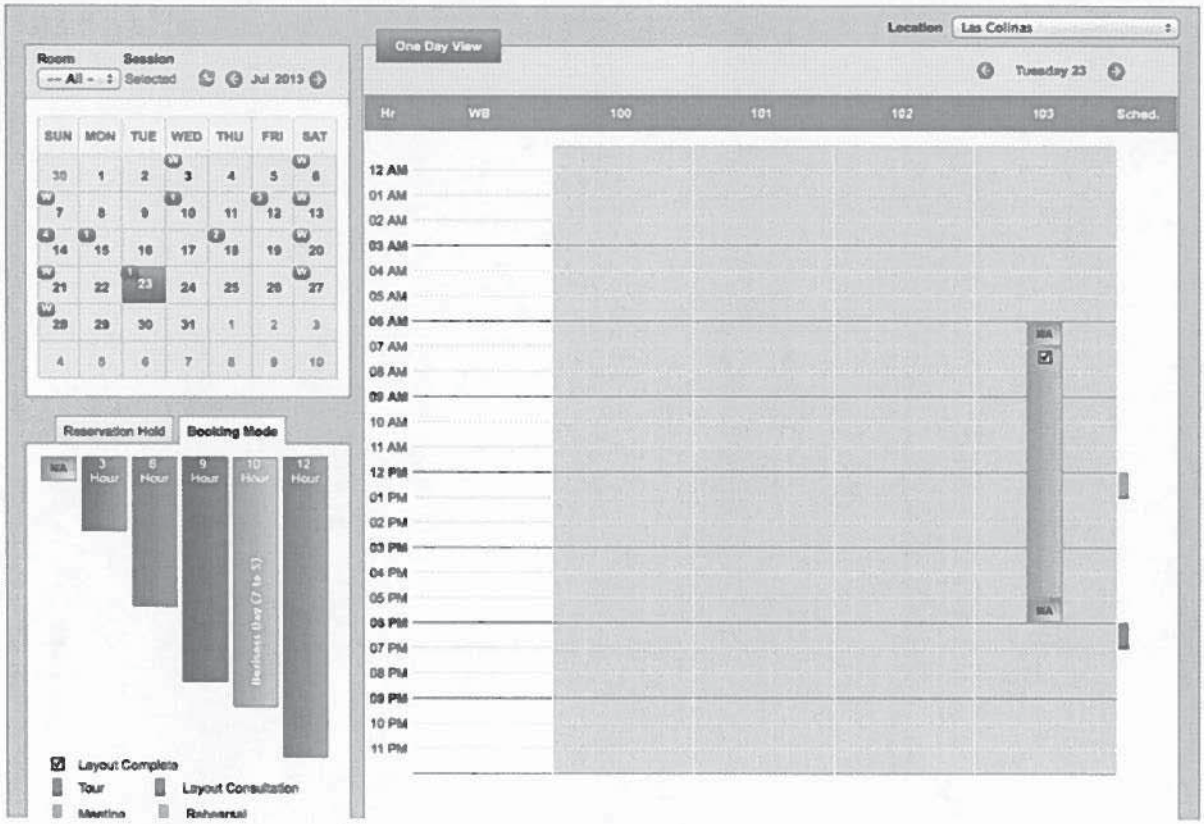
Las Colinas
One Day View
Room
Session
-- All --
Selected
Jul 2013
Monday 22
SUN MON TUE WED THU FRI SAT
Hr WB 100 101 102 103 Sched.
12 AM 01 AM 02 AM 03 AM 04 AM 05 AM 06 AM 07 AM 08 AM 09 AM 10 AM 11 AM 12 PM 01 PM 02 PM 03 PM 04 PM 05 PM 06 PM 07 PM 08 PM 09 PM 10 PM 11 PM
Reservation Hold
Booking Mode
N/A
3 Hour
6 Hour
9 Hour
10 Hour
12 Hour
Layout Complete
Tour
Layout Consultation


Location
Las Colinas
One Day View
Room
Session
-- All --
Selected
Jul 2013
Tuesday 23
SUN MON TUE WED THU FRI SAT
Hr WB 100 101 102 103 Sched.
12 AM
01 AM
02 AM
03 AM
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10 AM
11 AM
12 PM
01 PM
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04 PM
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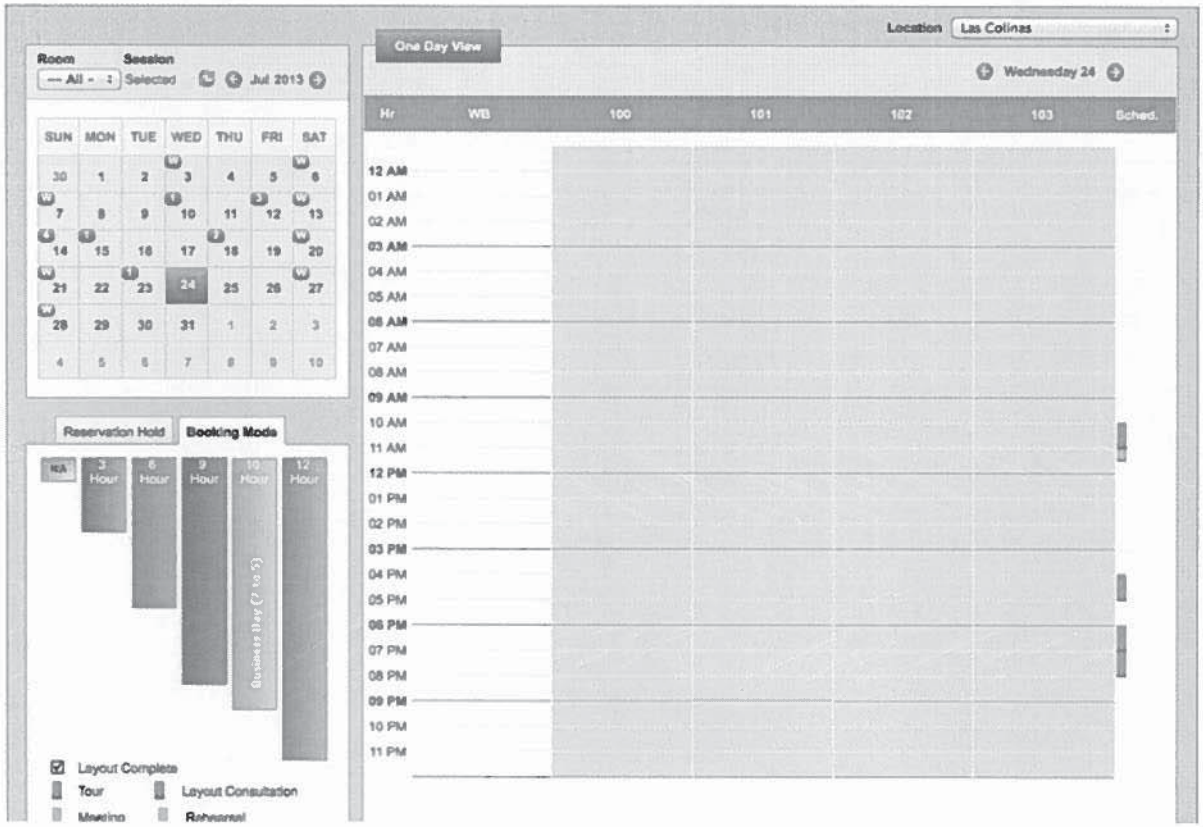
06 PM
07 PM
08 PM
09 PM
10 PM
11 PM
Reservation Hold
Booking Mode
N/A
3 Hour
6 Hour
9 Hour
10 Hour
12 Hour
Business Day (7 to 5)
Layout Complete
Tour
Layout Consultation
Meeting
Rehearsal


Location
Las Colinas
One Day View
Room
Session
-- All --
Selected
Jul 2013
Wednesday 24
SUN MON TUE WED THU FRI SAT
Hr WB 100 101 102 103 Sched.
12 AM
01 AM
02 AM
03 AM
04 AM
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08 AM
09 AM
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11 AM
12 PM
01 PM
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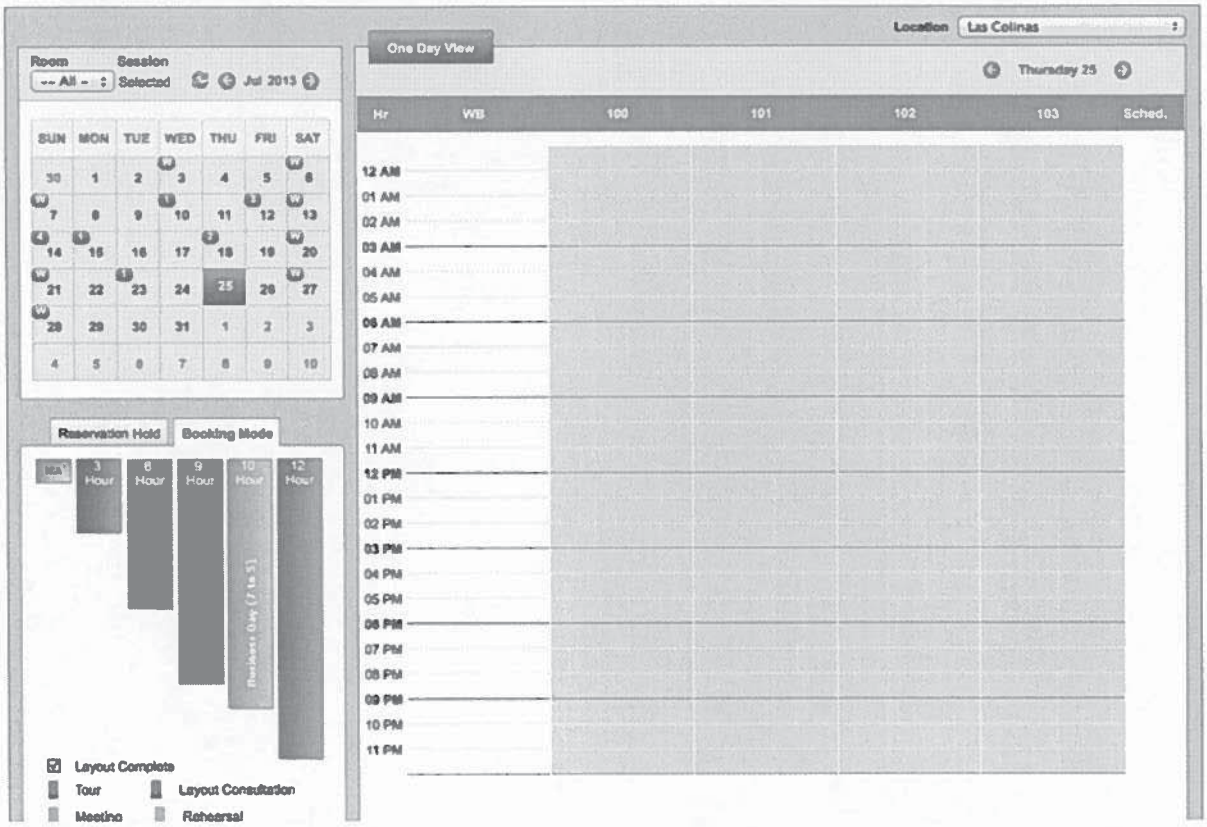
06 PM
07 PM
08 PM
09 PM
10 PM
11 PM
Reservation Hold
Booking Mode
N/A
3 Hour
6 Hour
9 Hour
10 Hour
12 Hour
Business Day (7 to 5)
Layout Complete
Tour
Layout Consultation
Meeting
Rehearsal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Las Colinas
Room
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-- All --
Selected
Jul 2013
One Day View
Thursday 25
Hr
WB
100
101
102
103
Sched.
Reservation Hold
Booking Mode
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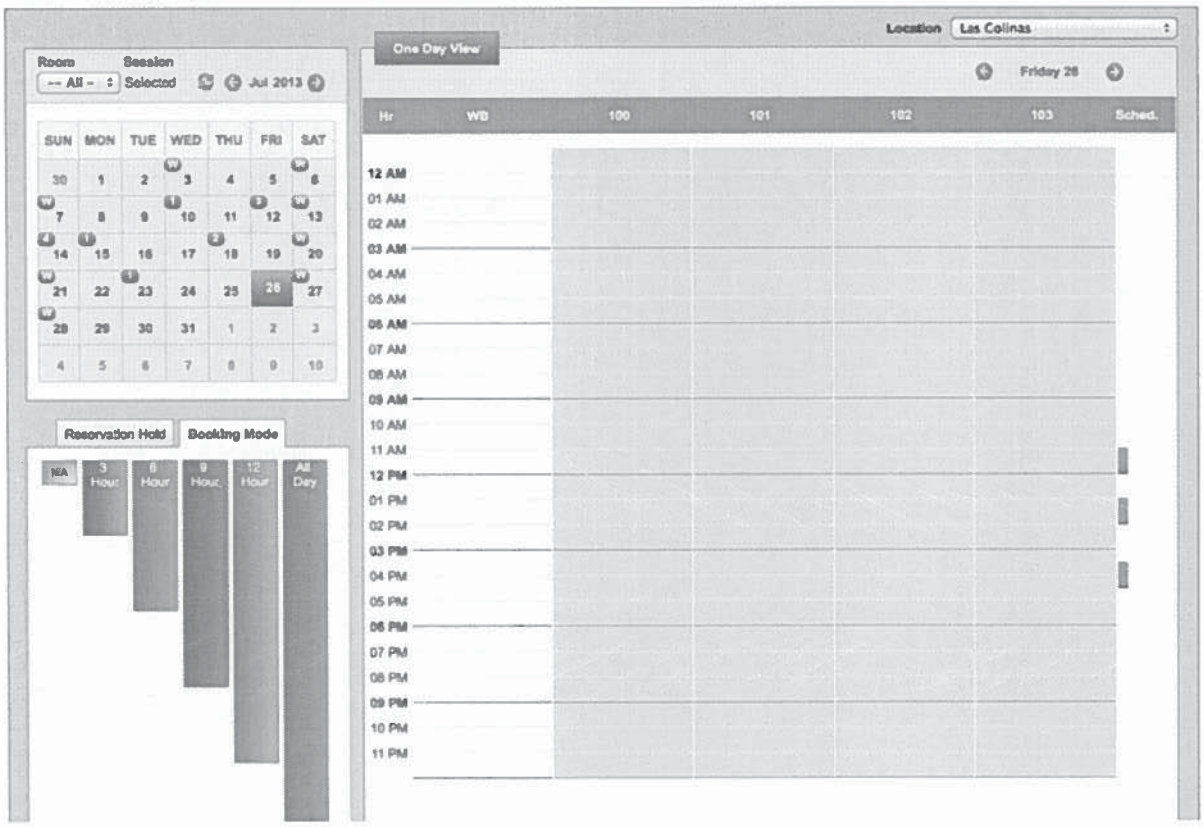
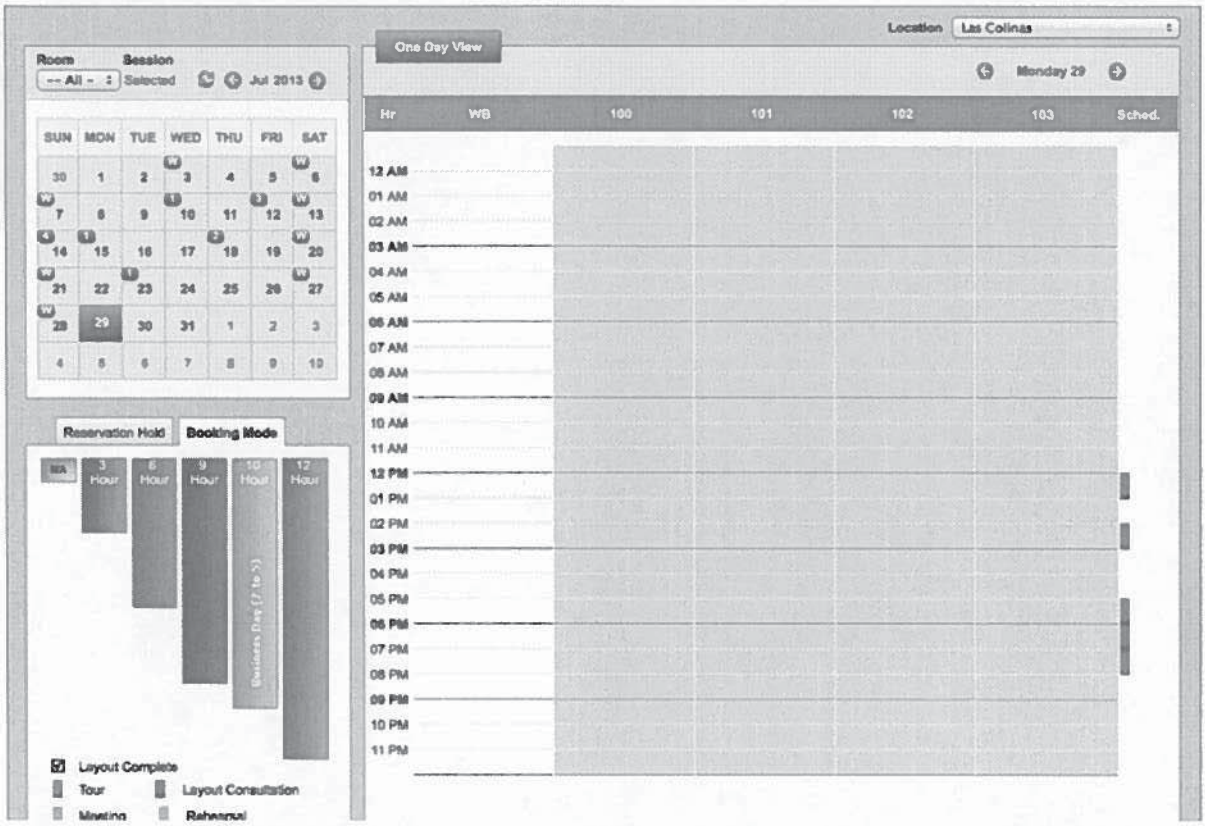
3 Hour
6 Hour
9 Hour
10 Hour
12 Hour
Layout Complete
Tour
Layout Consultation
Meeting
Rehearsal


Location
Las Colinas
Room
Session
-- All --
Selected
Jul 2013
One Day View
Friday 26
Hr
WB
100
101
102
103
Sched.
Reservation Hold
Booking Mode
NA
3 Hour
6 Hour
9 Hour
12 Hour
All Day

Location
Las Colinas
One Day View
Room
Session
-- All -
Selected
Jul 2013
Saturday 27
SUN MON TUE WED THU FRI SAT
Hr WB 100 101 102 103 Sched.
12 AM 01 AM 02 AM 03 AM 04 AM 05 AM 06 AM 07 AM 08 AM 09 AM 10 AM 11 AM 12 PM 01 PM 02 PM 03 PM 04 PM 05 PM 06 PM 07 PM 08 PM 09 PM 10 PM 11 PM
Reservation Hold
Booking Mode
NA
3 Hour
6 Hour
9 Hour
12 Hour
All Day

Location
Las Colinas
One Day View
Room
Session
-- All -
Selected
Jul 2013
Sunday 28
SUN MON TUE WED THU FRI SAT
Hr WB 100 101 102 103 Sched.
12 AM 01 AM 02 AM 03 AM 04 AM 05 AM 06 AM 07 AM 08 AM 09 AM 10 AM 11 AM 12 PM 01 PM 02 PM 03 PM 04 PM 05 PM 06 PM 07 PM 08 PM 09 PM 10 PM 11 PM
Reservation Hold
Booking Mode
NA
3 Hour
6 Hour
9 Hour
12 Hour
All Day


Location
Las Colinas
One Day View
Room
Session
-- All --
Selected
Jul 2013
Monday 29
SUN MON TUE WED THU FRI SAT
Hr WB 100 101 102 103 Sched.
12 AM
01 AM
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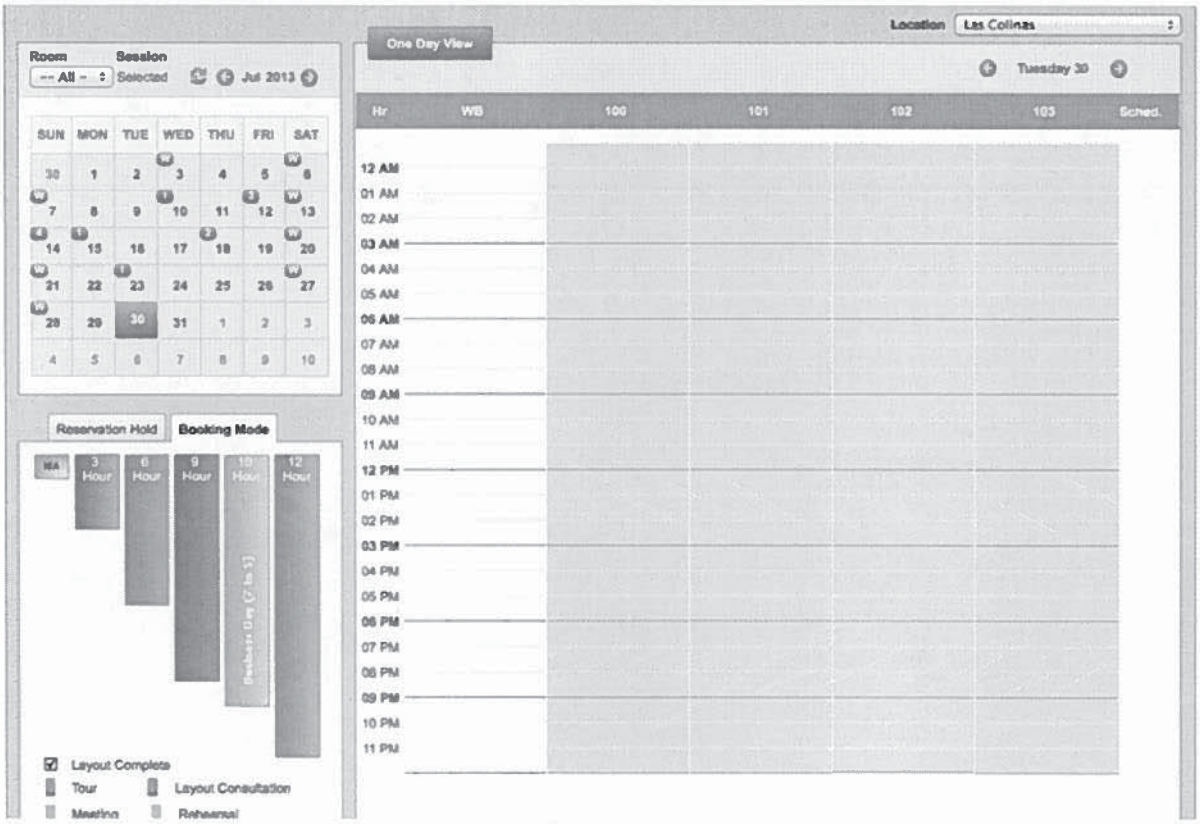
06 PM
07 PM
08 PM
09 PM
10 PM
11 PM
Reservation Hold
Booking Mode
NA
3 Hour
6 Hour
9 Hour
12 Hour
Layout Complete
Tour
Layout Consultation
Meeting
Rehearsal


Location
Las Colinas
One Day View
Room
Session
-- All --
Selected
Jul 2013
Tuesday 30
SUN MON TUE WED THU FRI SAT
Hr WB 100 101 102 103 Sched.
12 AM
01 AM
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03 AM
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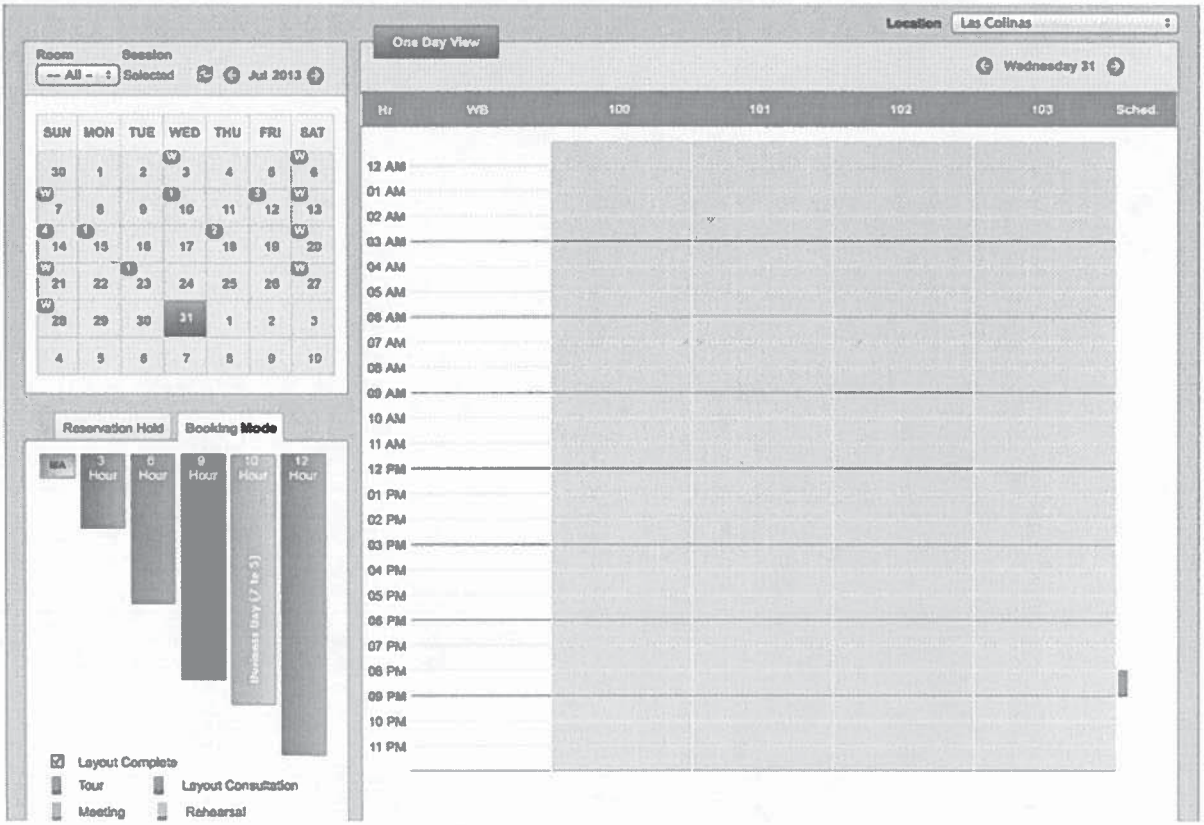
11 PM
Reservation Hold
Booking Mode
NA
3 Hour
6 Hour
9 Hour
12 Hour
Layout Complete
Tour
Layout Consultation
Meeting
Rehearsal


Location
Las Colinas
One Day View
Wednesday 31
Room
Session
-- All --
Selected
Jul 2013
SUN MON TUE WED THU FRI SAT
Hr WB 100 101 102 103 Sched.
12 AM
01 AM
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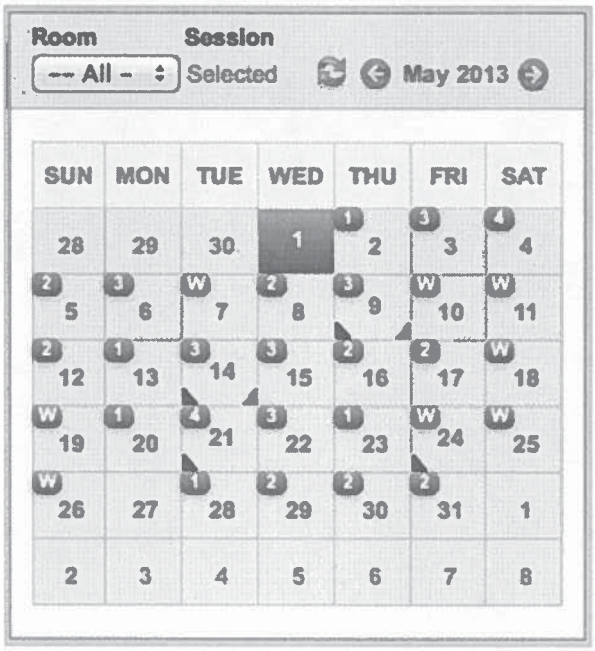
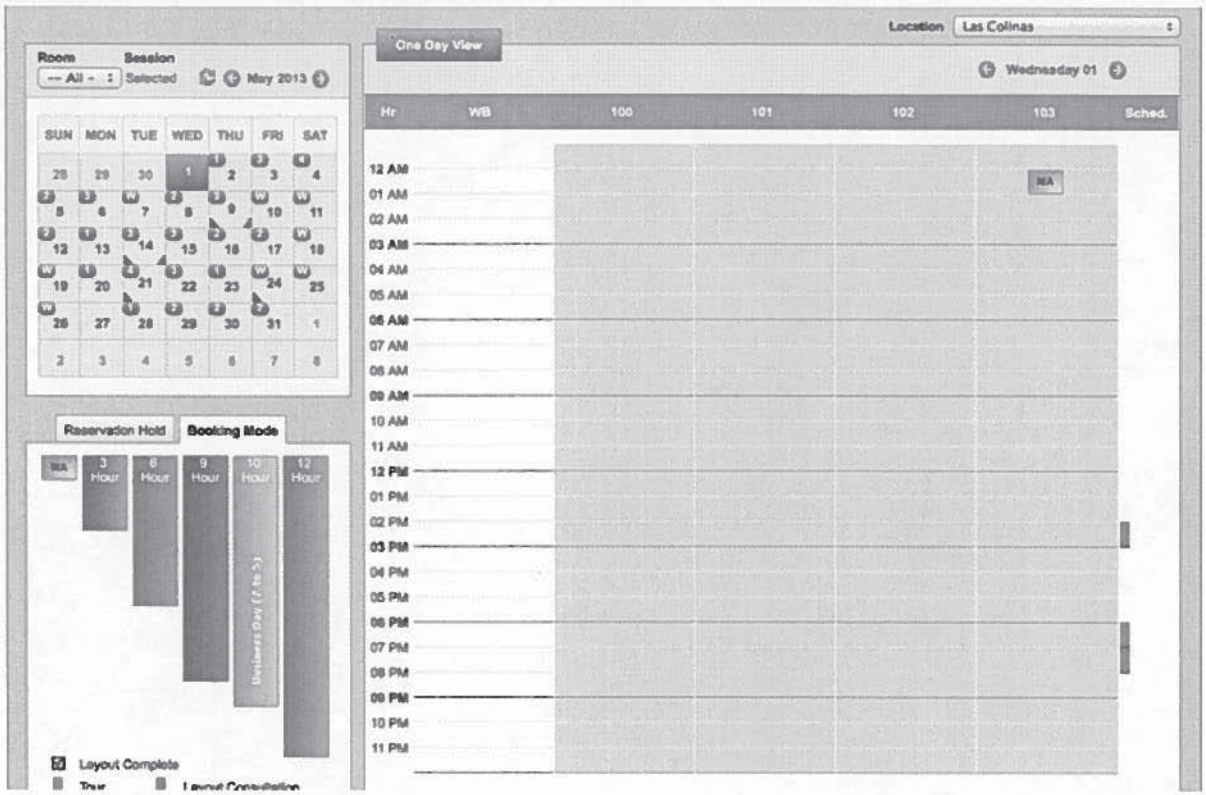
08 PM
09 PM
10 PM
11 PM
Reservation Hold
Booking Mode
3 Hour
6 Hour
9 Hour
10 Hour
12 Hour
Layout Complete
Tour
Layout Consultation
Meeting
Rehearsal

NOAH'S

FOR ALL LIFE'S EVENTS™

May 2013
Calendar of Events
Las Colinas, TX




Location
Las Colinas
One Day View
Room
Session
-- All -
Selected
May 2013
Wednesday 01
SUN MON TUE WED THU FRI SAT
Hr WB 100 101 102 103 Sched.
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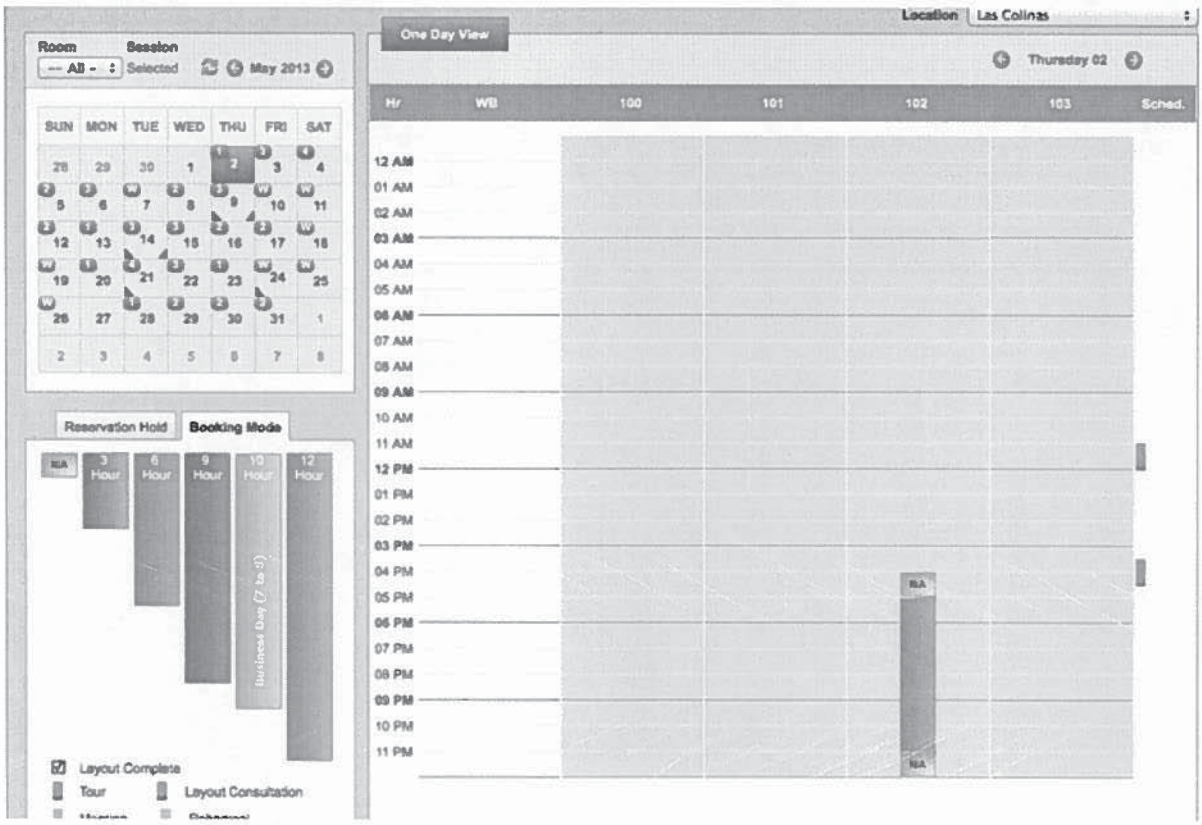
11 PM
NA
Reservation Hold
Booking Mode
3 Hour
6 Hour
9 Hour
10 Hour
12 Hour
Business Day (7 to 3)
Layout Complete


Location
Las Colinas
One Day View
Room
Session
-- All -
Selected
May 2013
Thursday 02
SUN MON TUE WED THU FRI SAT
Hr WB 100 101 102 103 Sched.
12 AM
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12 PM
01 PM
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03 PM
04 PM
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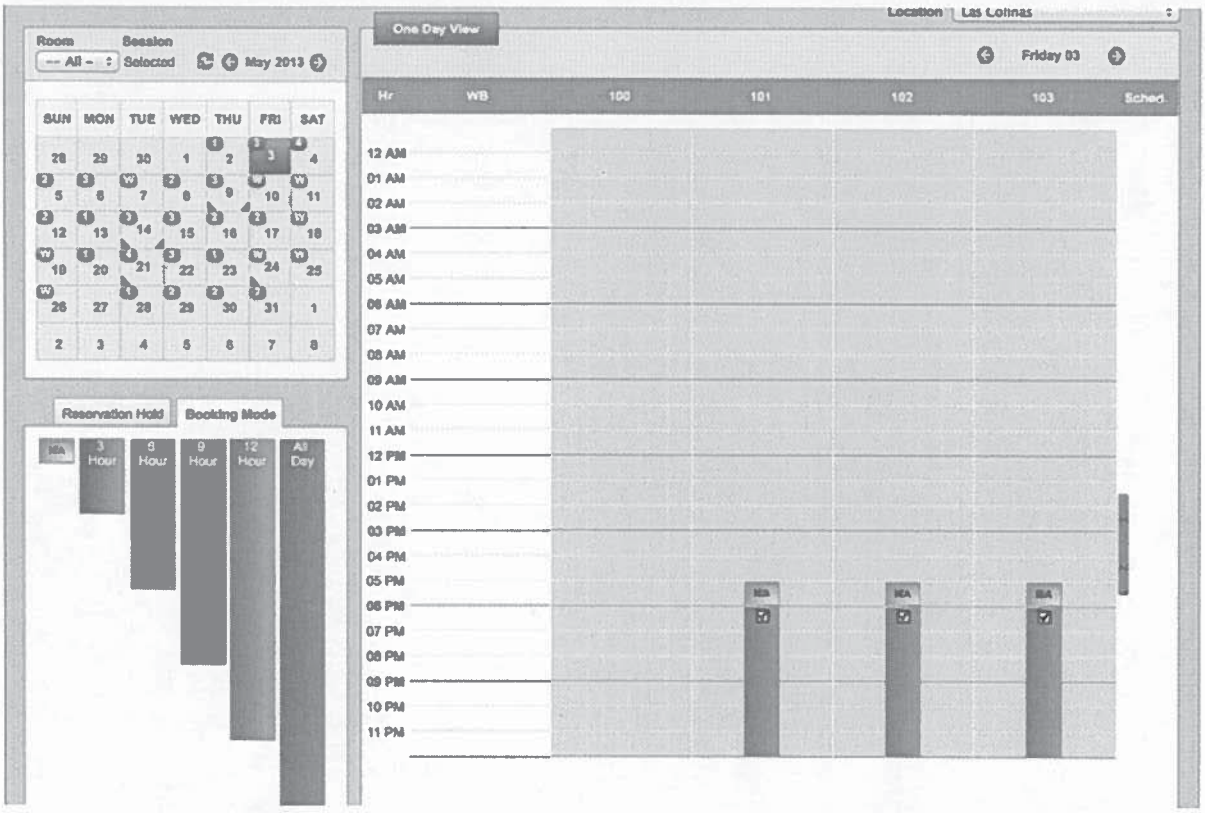
06 PM
07 PM
08 PM
09 PM
10 PM
11 PM
NA
Reservation Hold
Booking Mode
3 Hour
6 Hour
9 Hour
10 Hour
12 Hour
Business Day (7 to 3)
Layout Complete
Tour
Layout Consultation


Location
Las Colinas
One Day View
Room
Session
-- All -
Selected
May 2013
Friday 03
SUN MON TUE WED THU FRI SAT
Hr WB 100 101 102 103 Sched.
12 AM
01 AM
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11 AM
12 PM
01 PM
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03 PM
04 PM
05 PM
06 PM
07 PM
08 PM
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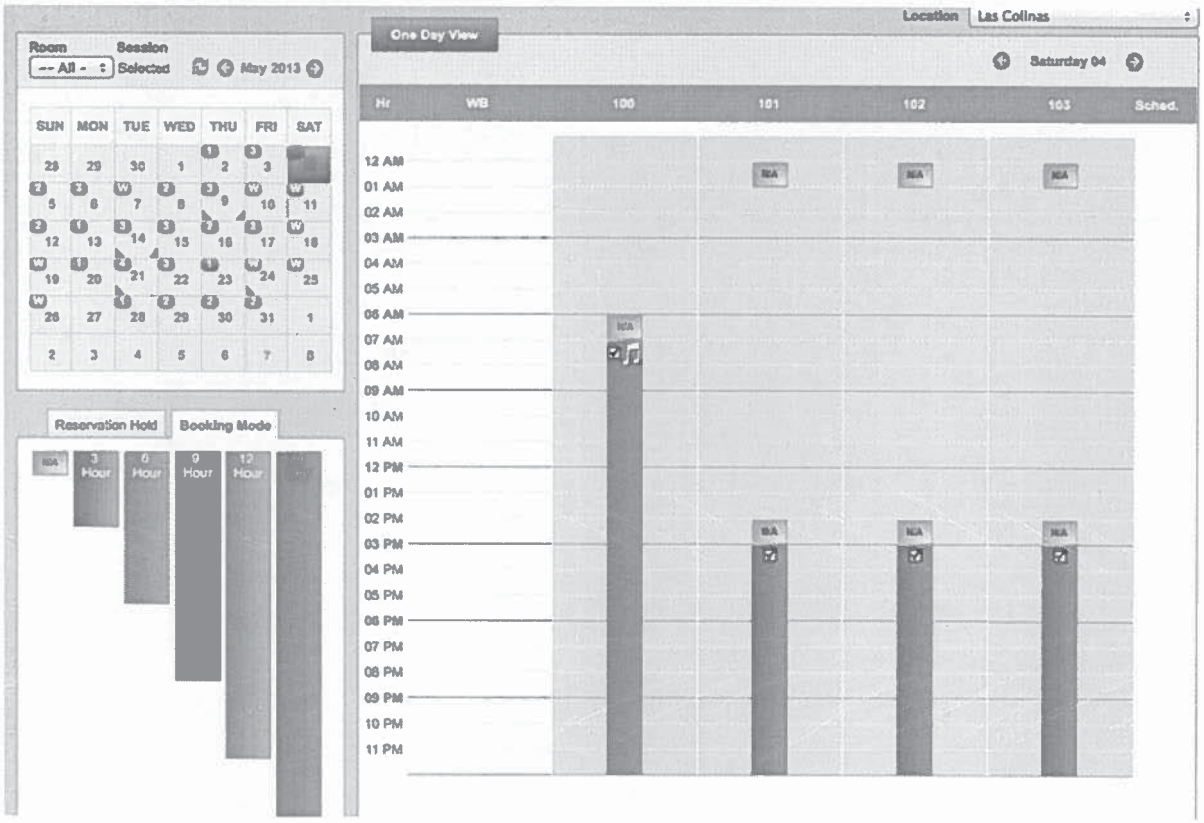
10 PM
11 PM
Reservation Hold
Booking Mode
NA
3 Hour
6 Hour
9 Hour
12 Hour
All Day


Location
Las Colinas
One Day View
Room
Session
-- All -
Selected
May 2013
Saturday 04
SUN MON TUE WED THU FRI SAT
Hr WB 100 101 102 103 Sched.
12 AM
01 AM
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04 AM
05 AM
06 AM
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11 AM
12 PM
01 PM
02 PM
03 PM
04 PM
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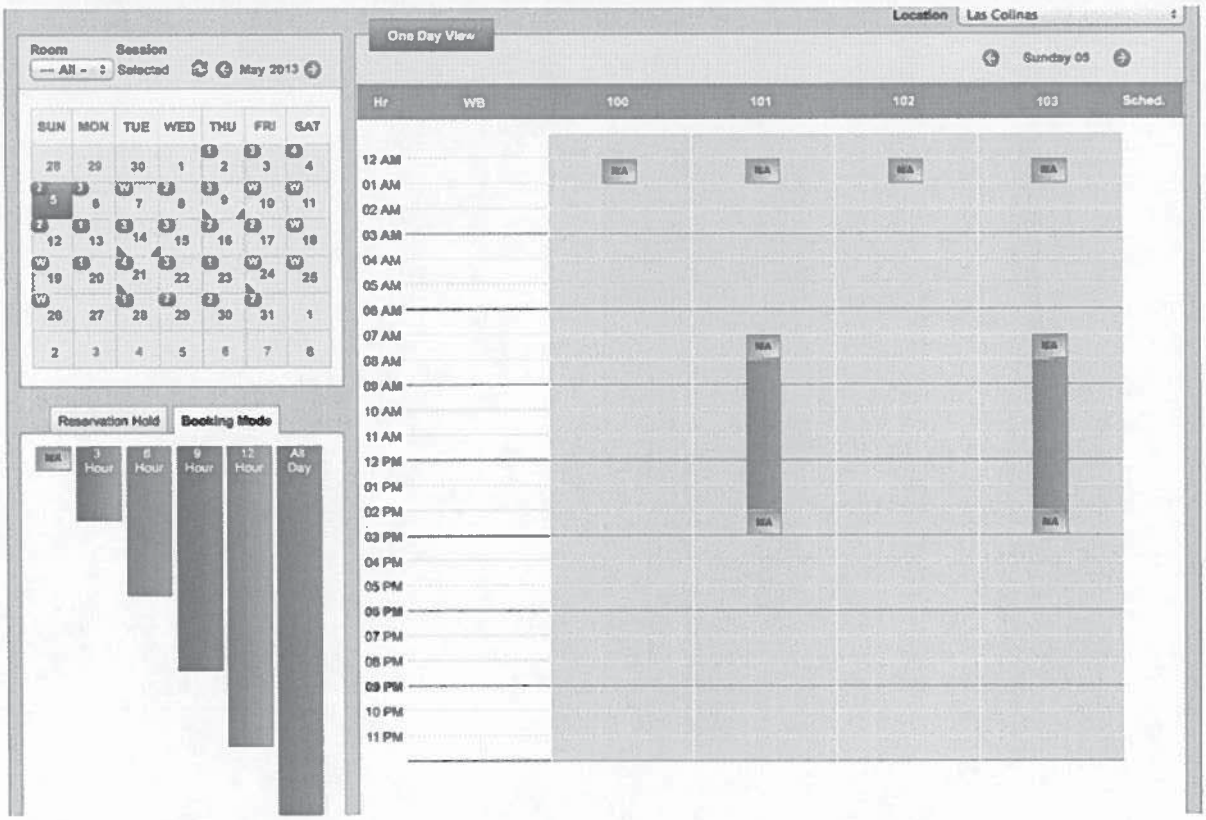
06 PM
07 PM
08 PM
09 PM
10 PM
11 PM
Reservation Hold
Booking Mode
NA
3 Hour
6 Hour
9 Hour
12 Hour


Location
Las Colinas
Room
Session
— All —
Selected
May 2013
One Day View
Sunday 05
SUN MON TUE WED THU FRI SAT
Hr
WB
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Sched.
12 AM
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07 AM
08 AM
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11 AM
12 PM
01 PM
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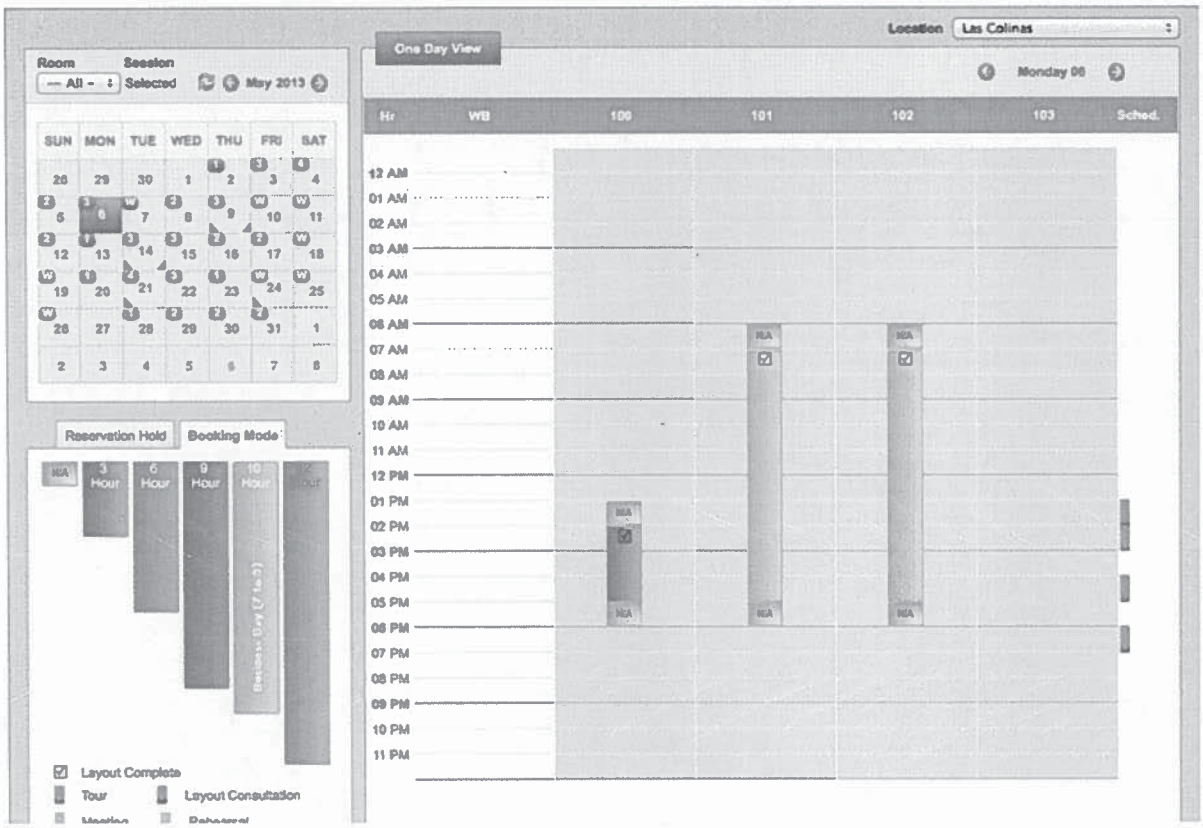
10 PM
11 PM
Reservation Hold
Booking Mode
3 Hour
6 Hour
9 Hour
12 Hour
All Day


Location
Las Colinas
Room
Session
— All —
Selected
May 2013
One Day View
Monday 06
SUN MON TUE WED THU FRI SAT
Hr
WB
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102
103
Sched.
12 AM
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11 AM
12 PM
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03 PM
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09 PM
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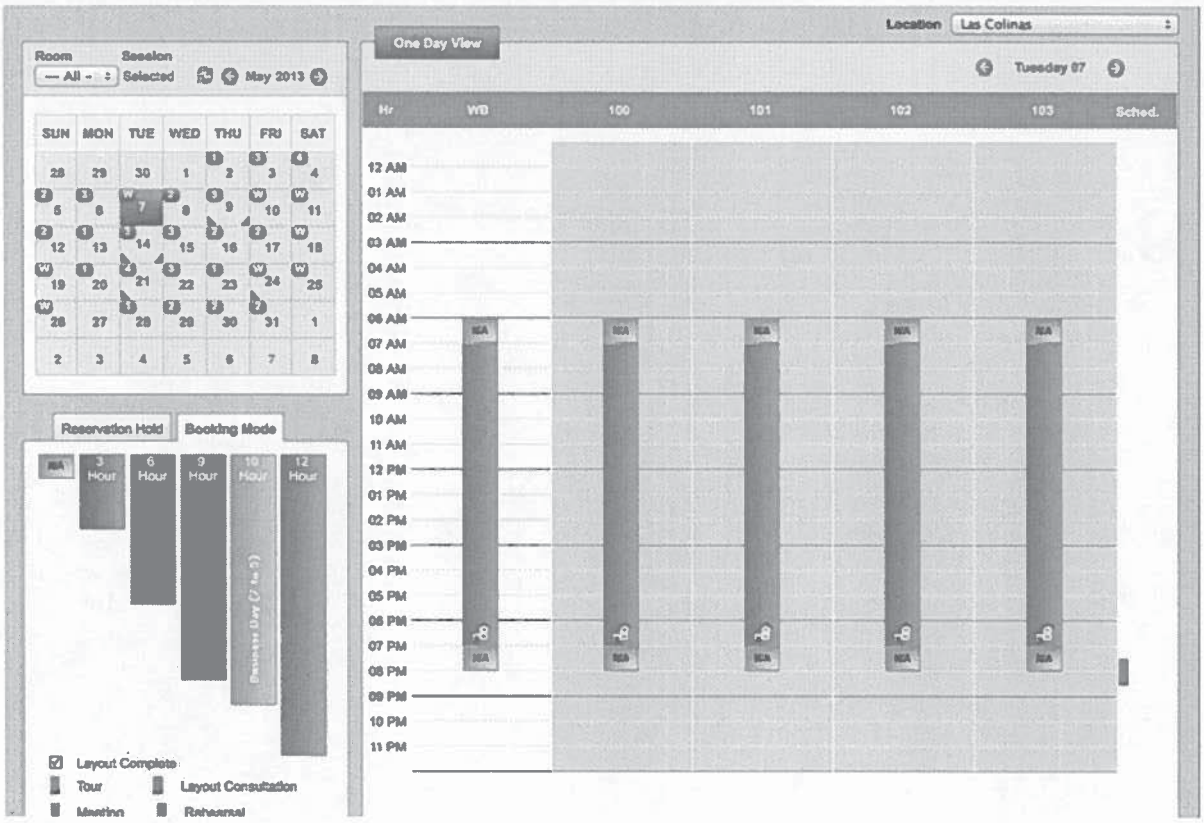
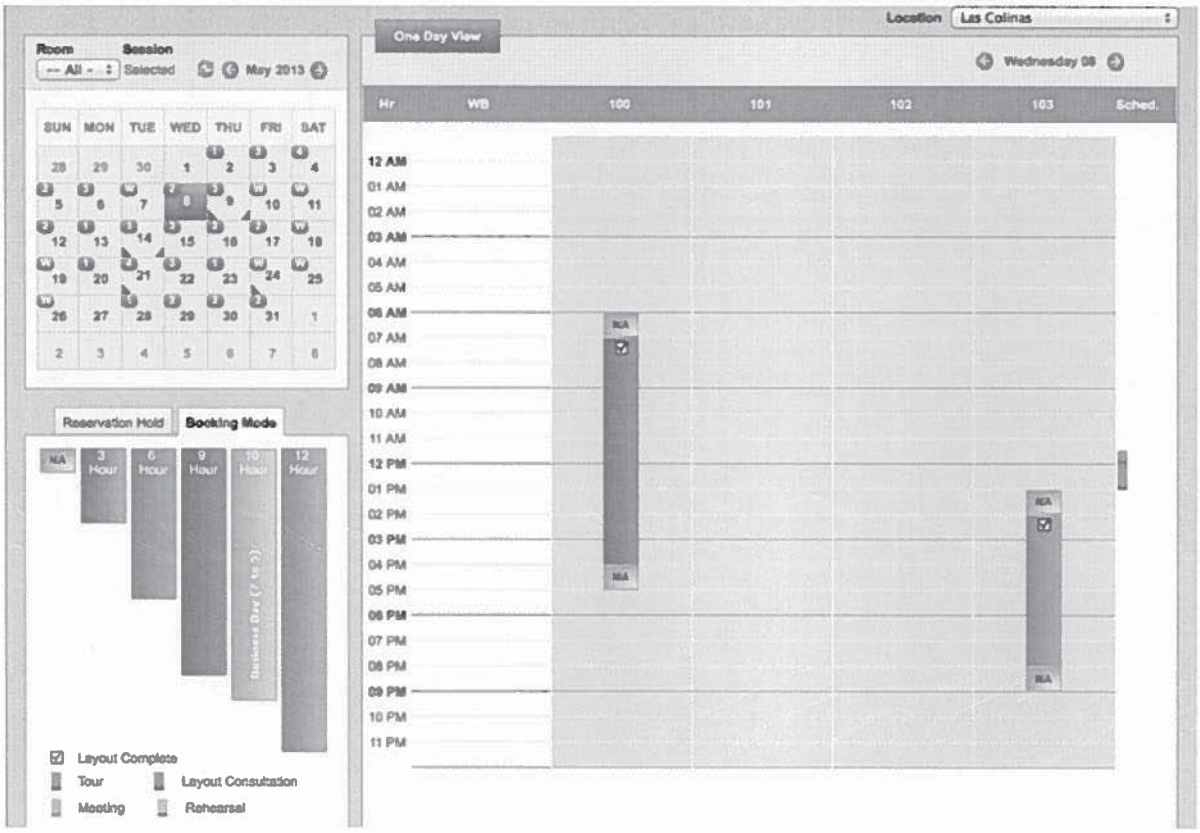
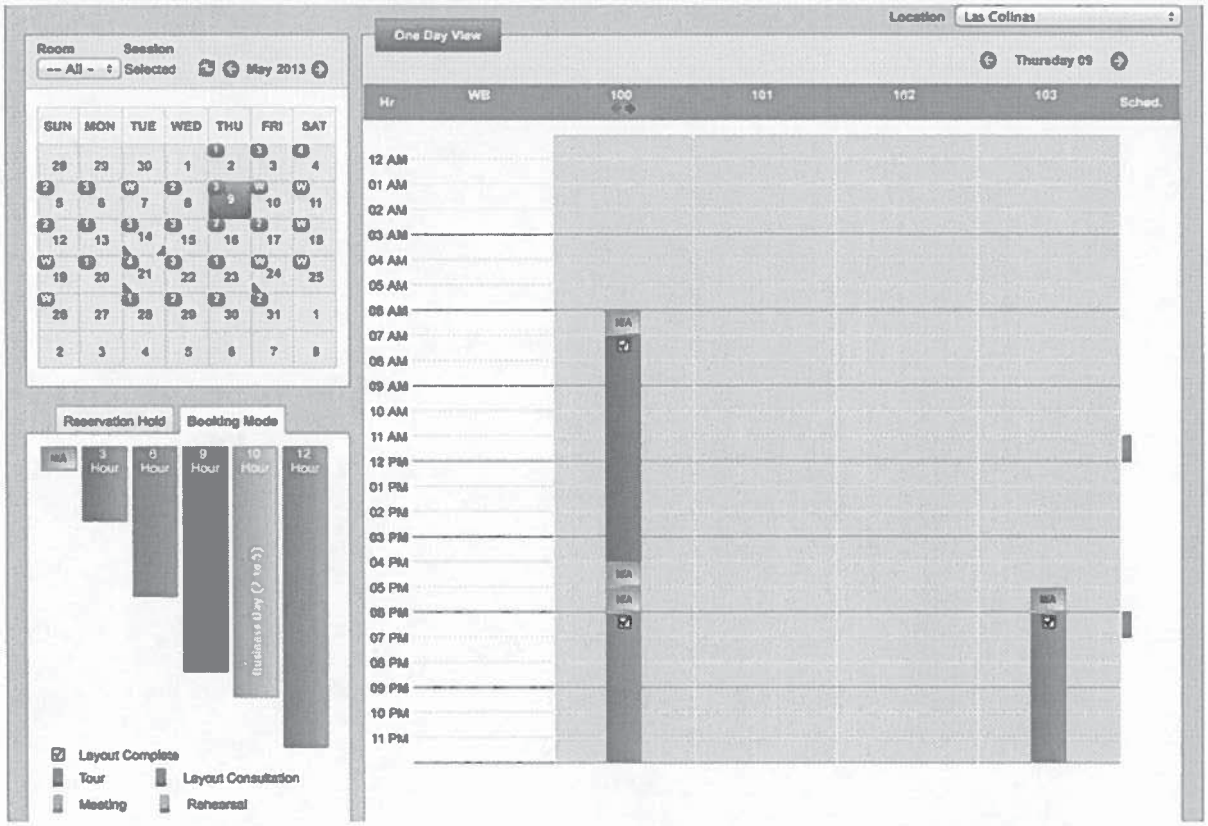
11 PM
Reservation Hold
Booking Mode
3 Hour
6 Hour
9 Hour
10 Hour
Layout Complete
Tour
Layout Consultation


Location
Las Colinas
One Day View
Room
Session
— All —
Selected
May 2013
Tuesday 07
SUN MON TUE WED THU FRI SAT
Hr WB 100 101 102 103 Sched.
12 AM 01 AM 02 AM 03 AM 04 AM 05 AM 06 AM 07 AM 08 AM 09 AM 10 AM 11 AM 12 PM 01 PM 02 PM 03 PM 04 PM 05 PM 06 PM 07 PM 08 PM 09 PM 10 PM 11 PM
Reservation Hold
Booking Mode
3 Hour
6 Hour
9 Hour
10 Hour
12 Hour
Layout Complete
Tour
Layout Consultation
Meeting
Rehearsal


Location
Las Colinas
One Day View
Room
Session
— All —
Selected
May 2013
Wednesday 08
SUN MON TUE WED THU FRI SAT
Hr WB 100 101 102 103 Sched.
12 AM 01 AM 02 AM 03 AM 04 AM 05 AM 06 AM 07 AM 08 AM 09 AM 10 AM 11 AM 12 PM 01 PM 02 PM 03 PM 04 PM 05 PM 06 PM 07 PM 08 PM 09 PM 10 PM 11 PM
Reservation Hold
Booking Mode
3 Hour
6 Hour
9 Hour
10 Hour
12 Hour
Layout Complete
Tour
Layout Consultation
Meeting
Rehearsal


Location
Las Colinas
One Day View
Room
Session
-- All -
Selected
May 2013
Thursday 09
SUN MON TUE WED THU FRI SAT
Hr
WB
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103
Sched.
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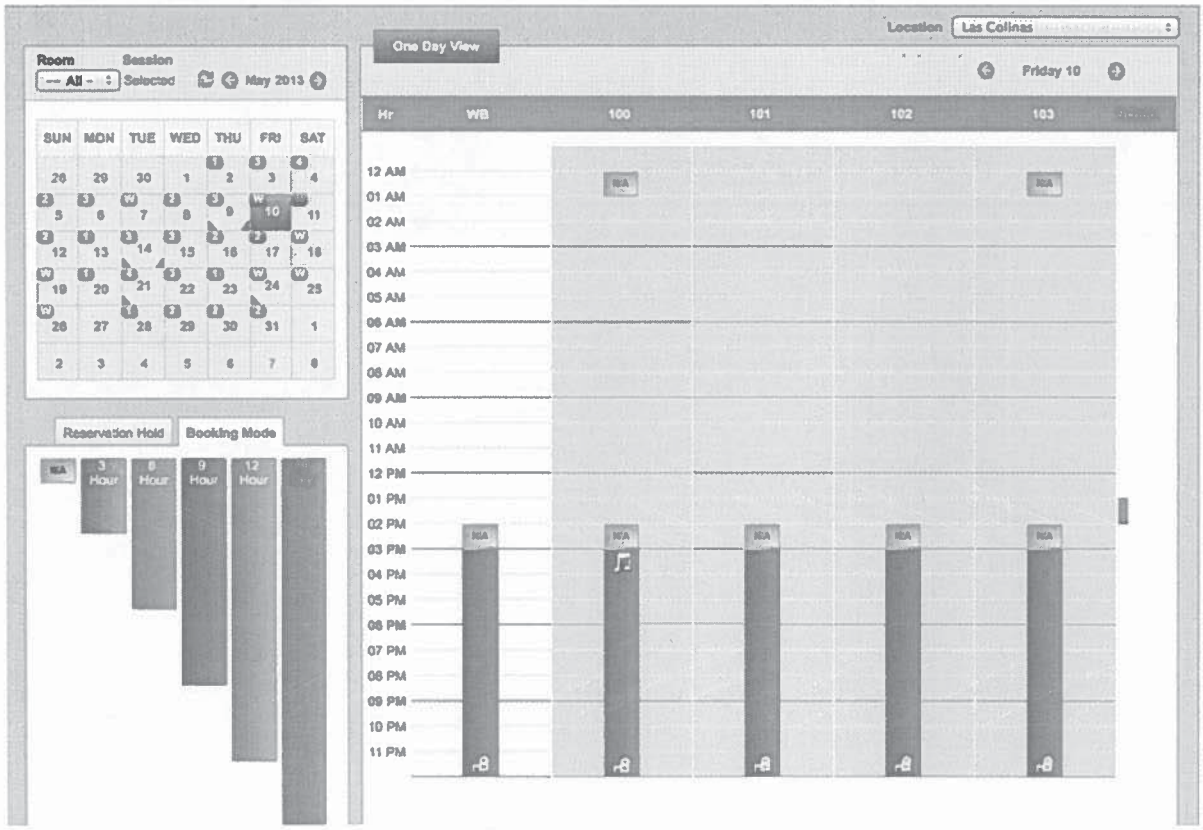
11 PM
Reservation Hold
Booking Mode
3 Hour
8 Hour
9 Hour
10 Hour
12 Hour
Business Day (7 to 5)
Layout Complete
Tour
Layout Consultation
Meeting
Rehearsal


Location
Las Colinas
One Day View
Room
Session
-- All -
Selected
May 2013
Friday 10
SUN MON TUE WED THU FRI SAT
Hr
WB
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10 PM
11 PM
Reservation Hold
Booking Mode
3 Hour
8 Hour
9 Hour
12 Hour

Location
Las Colinas
One Day View
Room
Session
-- All --
Selected
May 2013
Saturday 11
SUN MON TUE WED THU FRI SAT
Hr
WB
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Sched.
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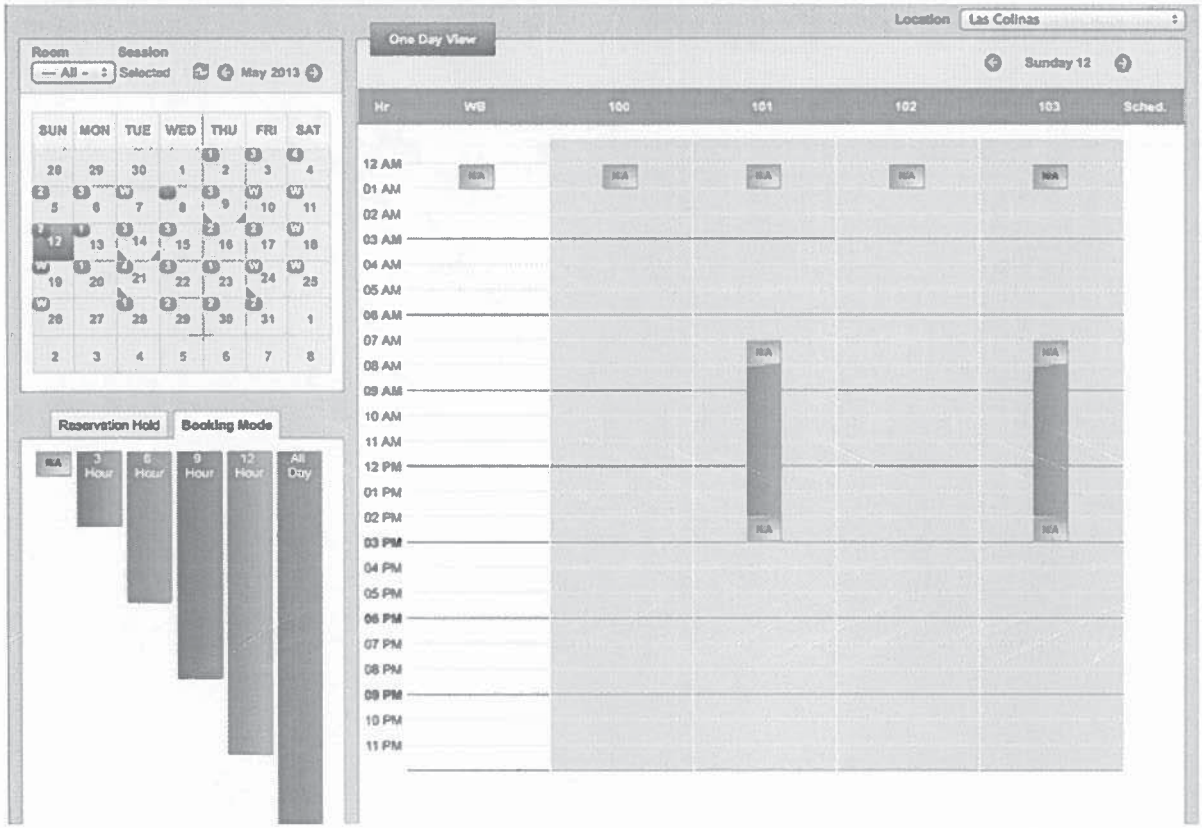
11 PM
Reservation Hold
Booking Mode
NA
3 Hour
6 Hour
9 Hour
12 Hour
All Day


Location
Las Colinas
One Day View
Room
Session
-- All --
Selected
May 2013
Sunday 12
SUN MON TUE WED THU FRI SAT
Hr
WB
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Sched.
12 AM
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Booking Mode
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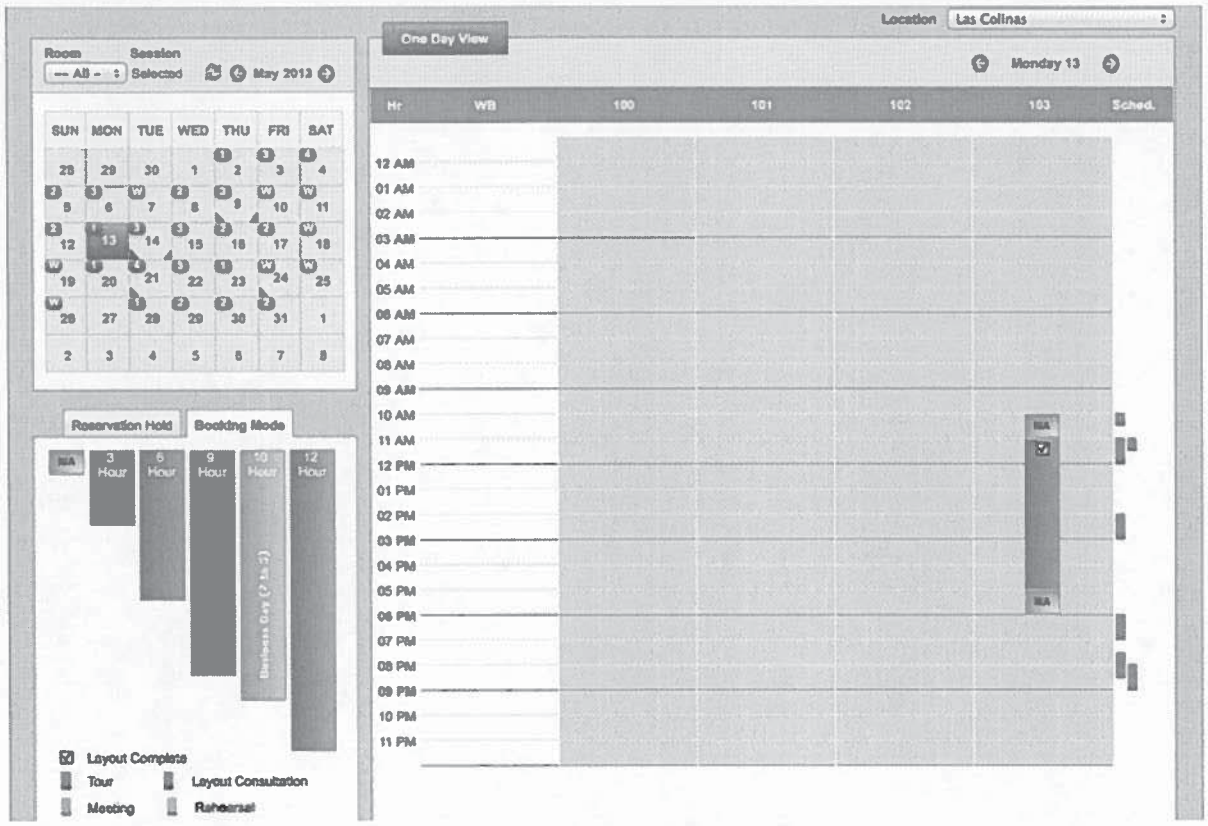
3 Hour
6 Hour
9 Hour
12 Hour
All Day


Location
Las Colinas
One Day View
Room
Session
-- All -
Selected
May 2013
Monday 13
SUN MON TUE WED THU FRI SAT
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Sched.
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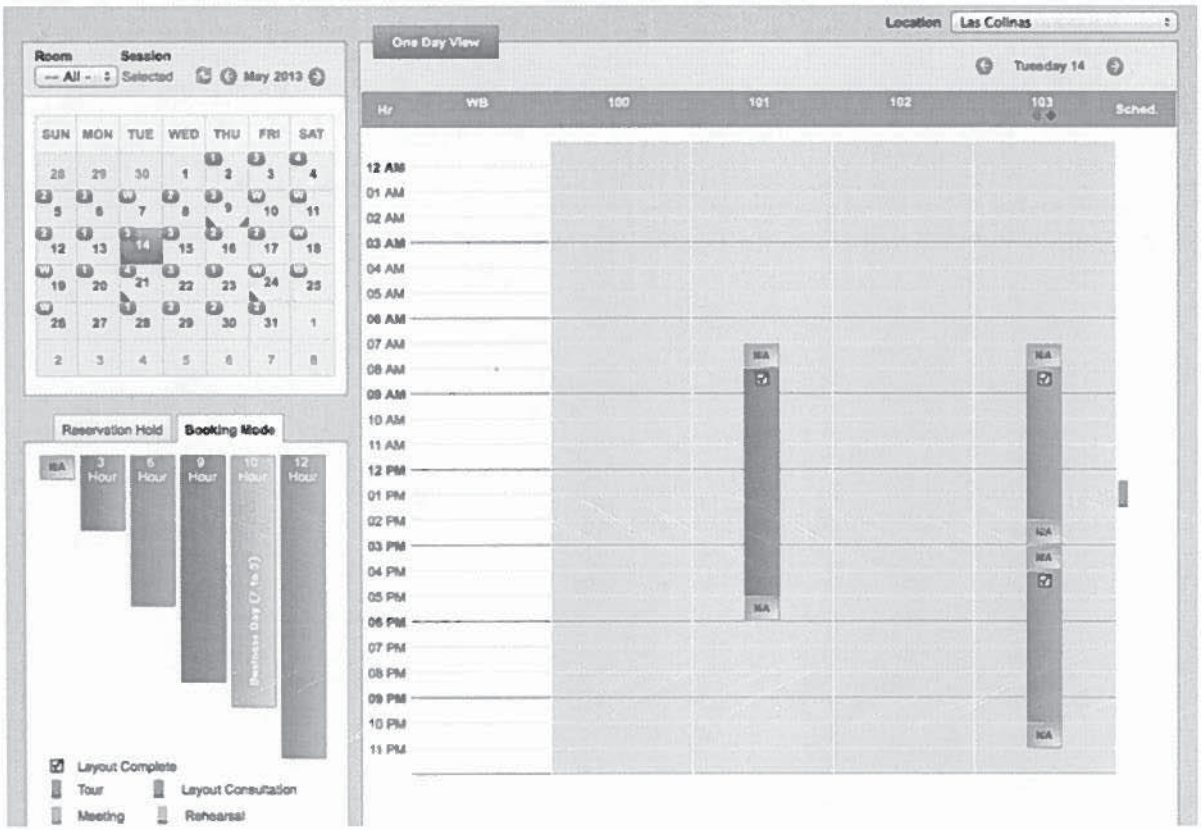
Reservation Hold
Booking Mode
NA
3 Hour
6 Hour
9 Hour
10 Hour
12 Hour
Layout Complete
Tour
Layout Consultation
Meeting
Rehearsal


Location
Las Colinas
One Day View
Room
Session
-- All -
Selected
May 2013
Tuesday 14
SUN MON TUE WED THU FRI SAT
Hr
WB
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Sched.
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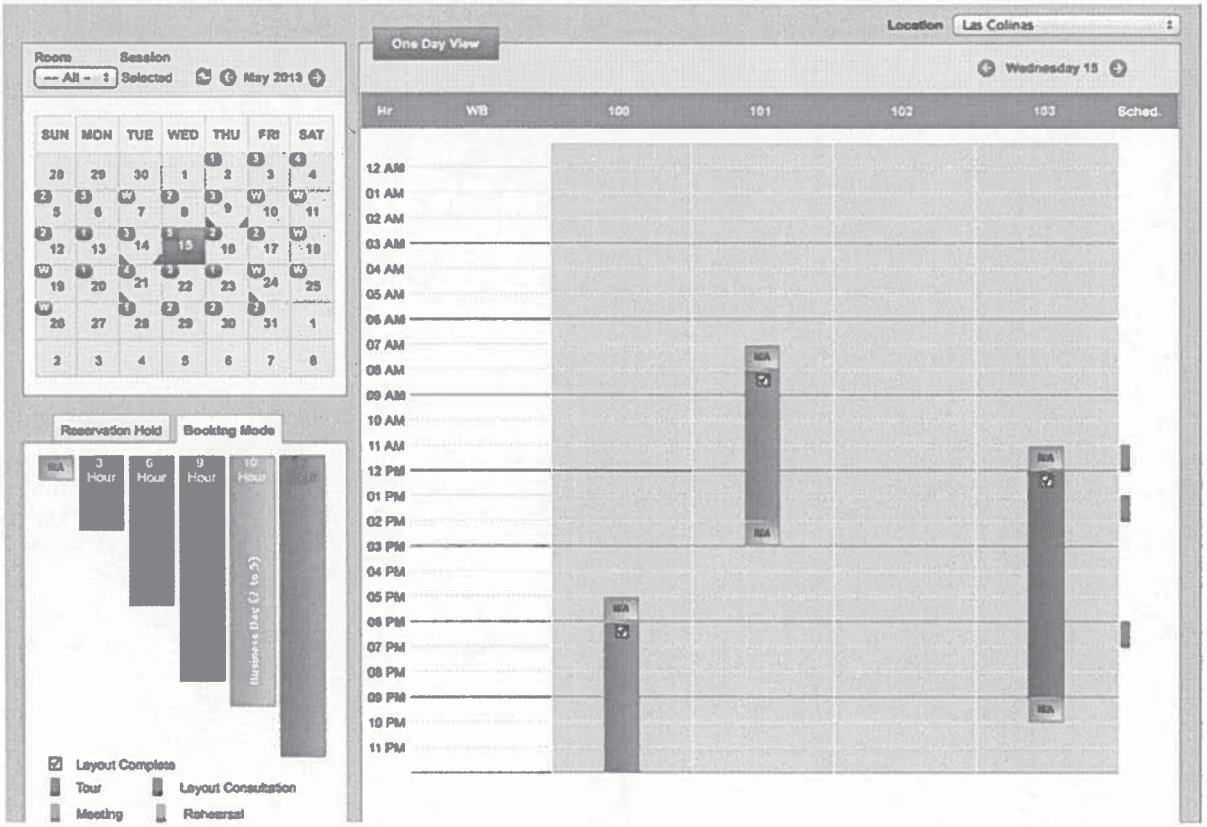
Reservation Hold
Booking Mode
NA
3 Hour
6 Hour
9 Hour
10 Hour
12 Hour
Layout Complete
Tour
Layout Consultation
Meeting
Rehearsal


Location
Las Colinas
One Day View
Wednesday 15
Room
Session
-- All --
Selected
May 2013
SUN MON TUE WED THU FRI SAT
Reservation Hold
Booking Mode
NA
3 Hour
6 Hour
9 Hour
10 Hour
12 Hour
Business Day (7 to 5)
Layout Complete
Tour
Layout Consultation
Meeting
Rehearsal
Hr
WB
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Sched.
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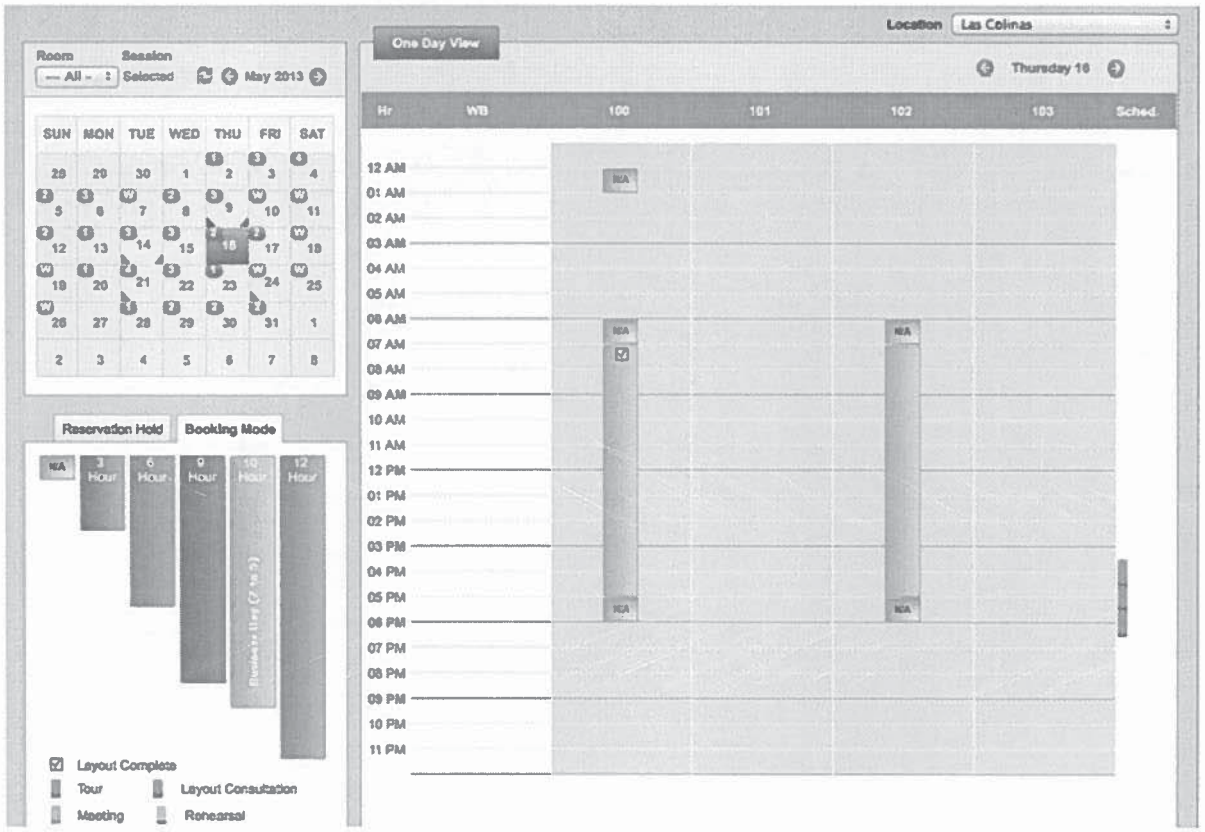
Location
Las Colinas
One Day View
Thursday 16
Room
Session
-- All --
Selected
May 2013
SUN MON TUE WED THU FRI SAT
Reservation Hold
Booking Mode
NA
3 Hour
6 Hour
9 Hour
10 Hour
12 Hour
Business Day (7 to 5)
Layout Complete
Tour
Layout Consultation
Meeting
Rehearsal
Hr
WB
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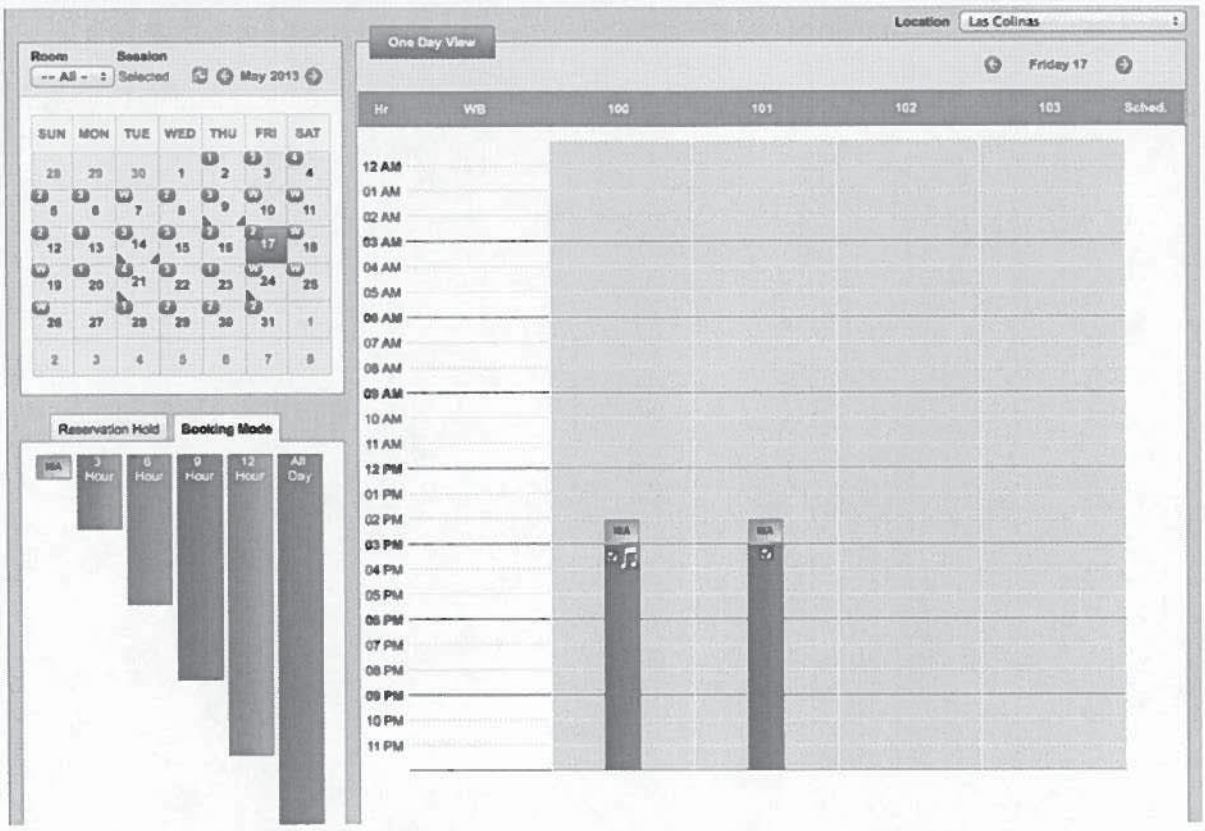
Location
Las Colinas
One Day View
Friday 17
Room
Session
-- All -
Selected
May 2013
SUN MON TUE WED THU FRI SAT
Reservation Hold
Booking Mode
NA
3 Hour
6 Hour
9 Hour
12 Hour
All Day
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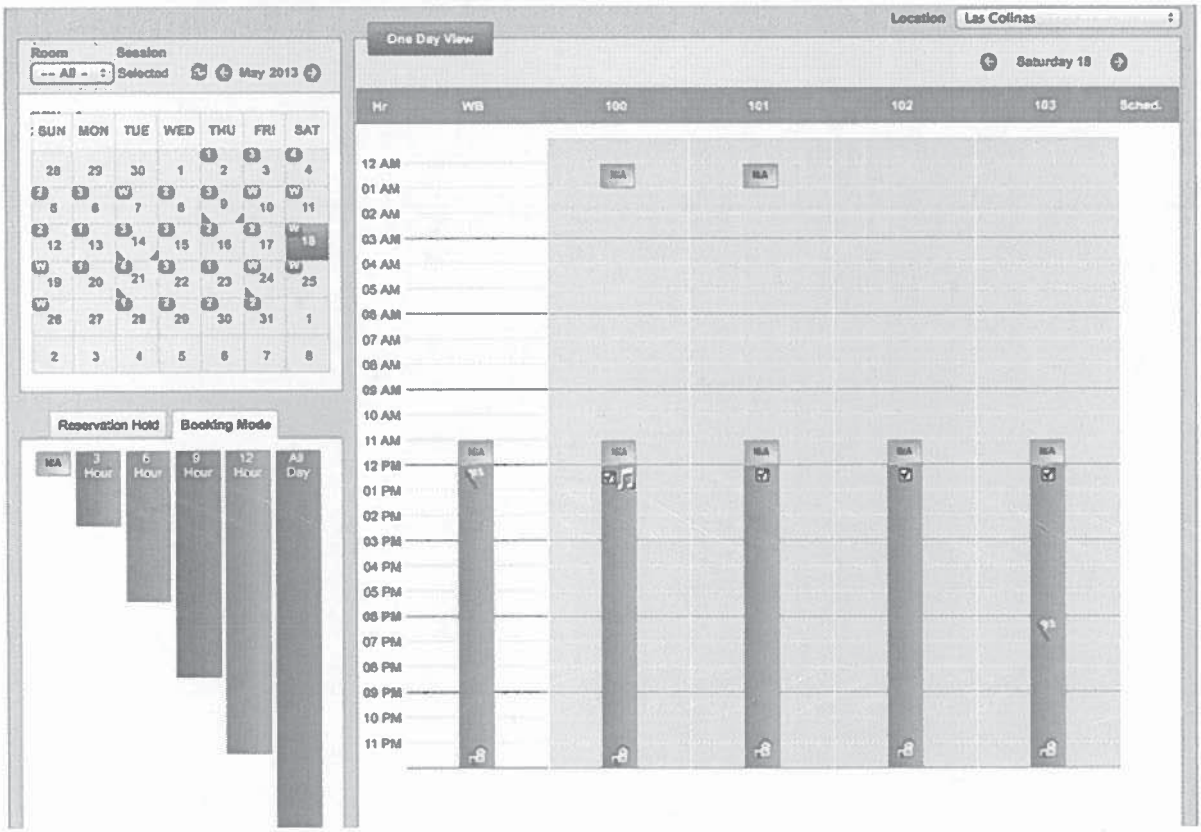
Location
Las Colinas
One Day View
Saturday 18
Room
Session
-- All -
Selected
May 2013
SUN MON TUE WED THU FRI SAT
Reservation Hold
Booking Mode
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May 2013
One Day View
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SUN MON TUE WED THU FRI SAT
Reservation Hold
Booking Mode
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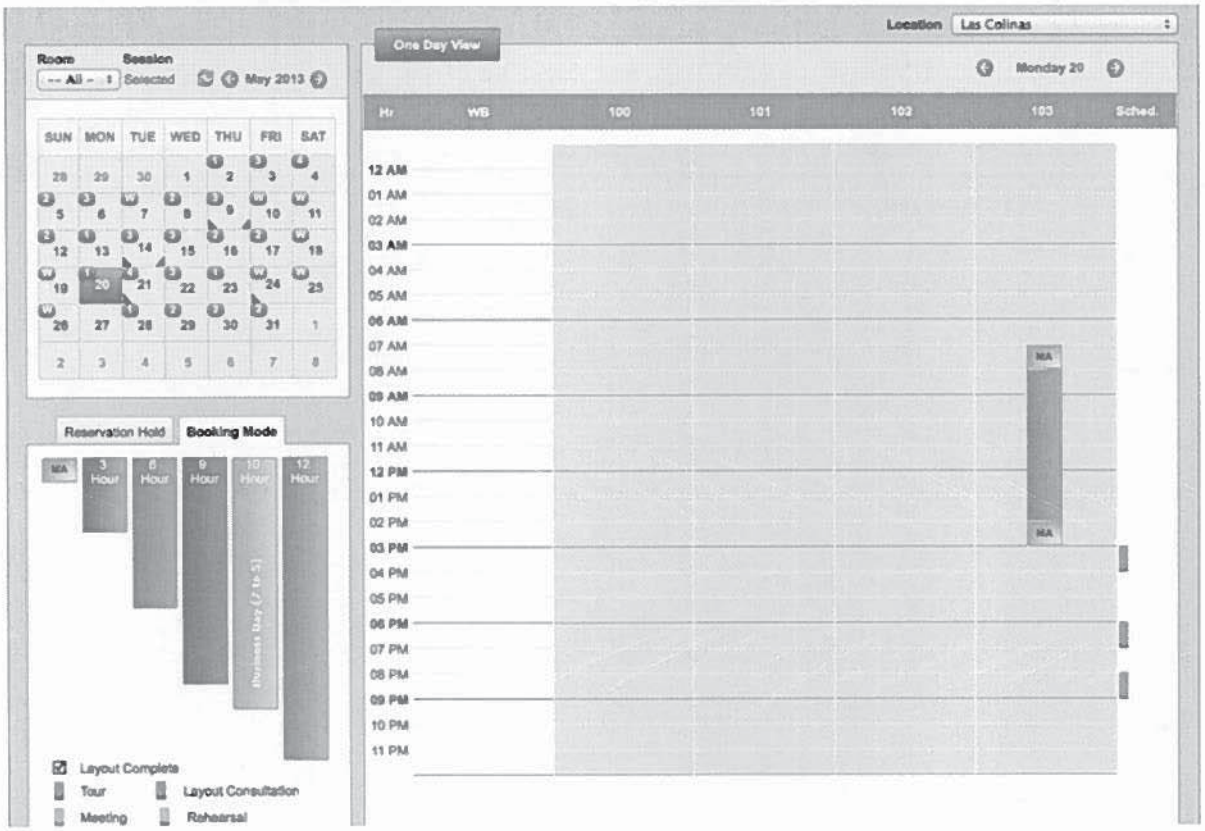
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Las Colinas
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May 2013
One Day View
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SUN MON TUE WED THU FRI SAT
Reservation Hold
Booking Mode
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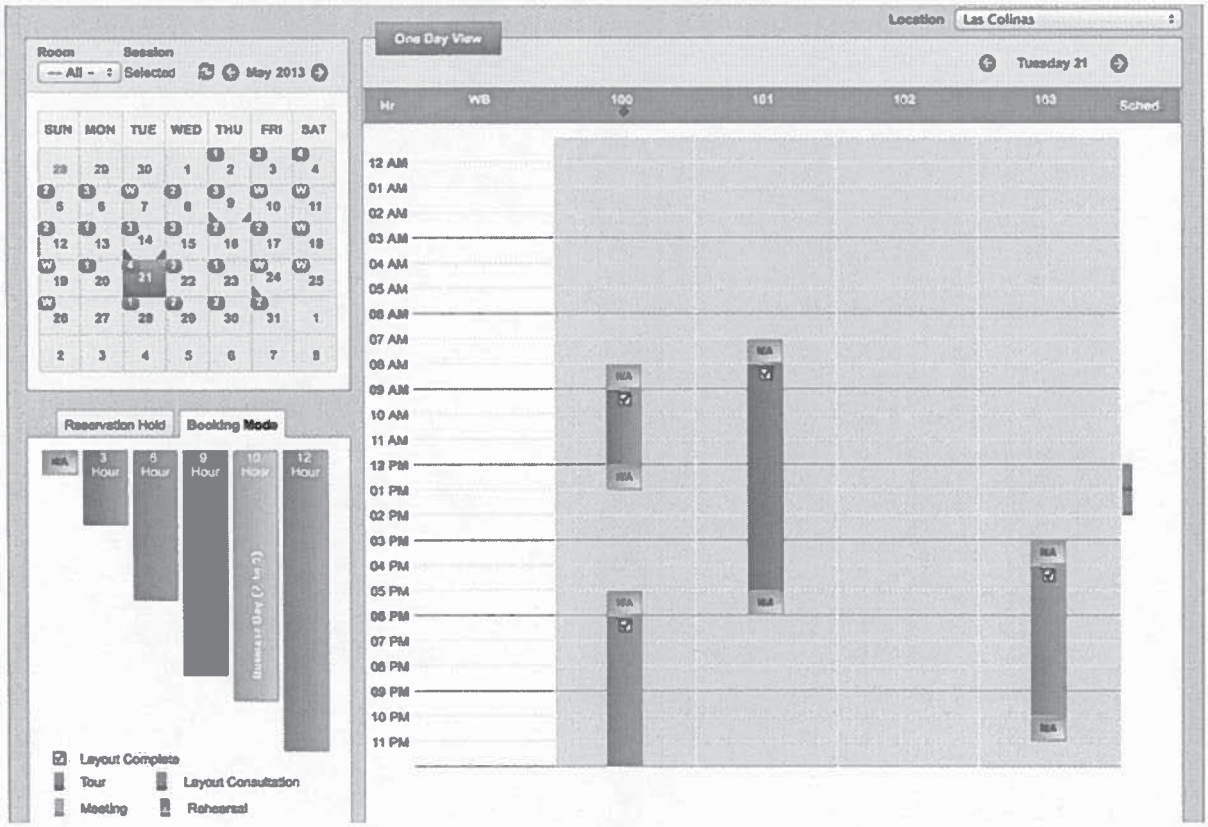
12 Hour
Layout Complete
Tour
Layout Consultation
Meeting
Rehearsal


Location
Las Colinas
One Day View
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May 2013
Tuesday 21
SUN MON TUE WED THU FRI SAT
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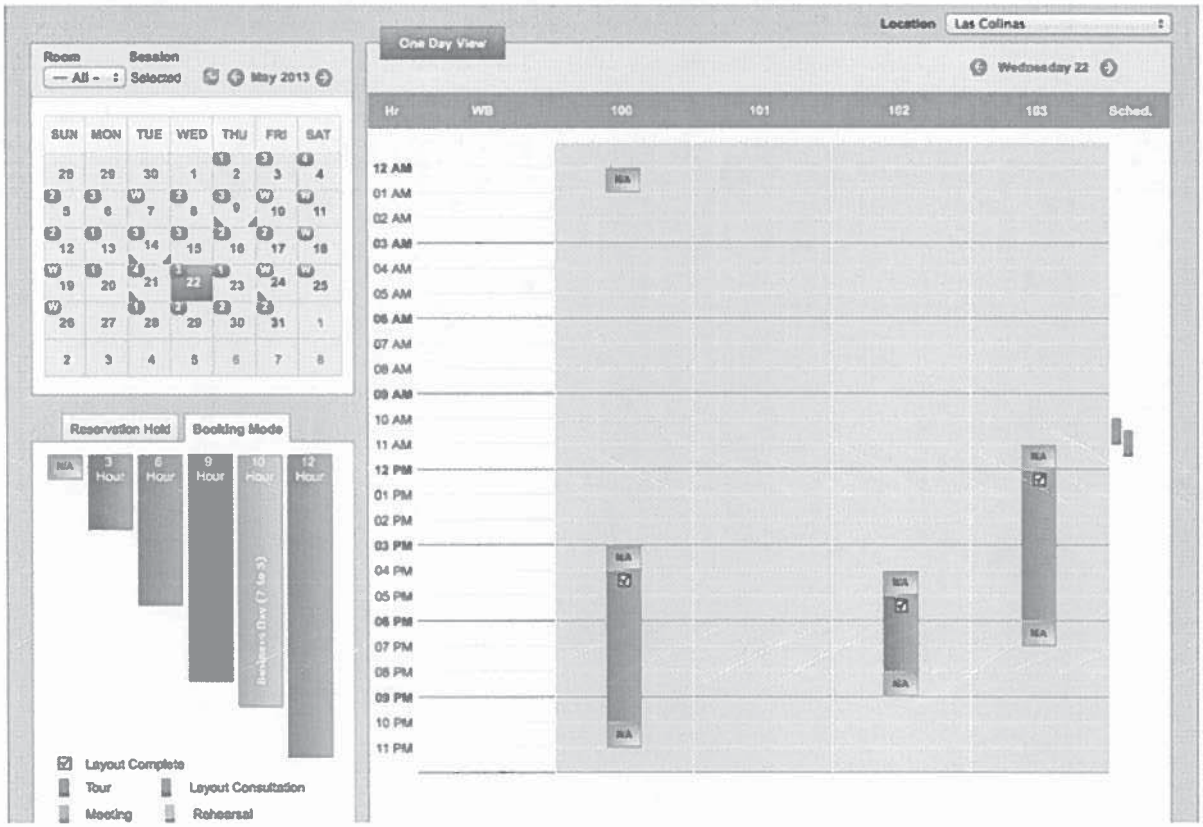
Layout Complete
Tour
Layout Consultation
Meeting
Rehearsal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Las Colinas
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Session
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May 2013
Wednesday 22
SUN MON TUE WED THU FRI SAT
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Layout Complete
Tour
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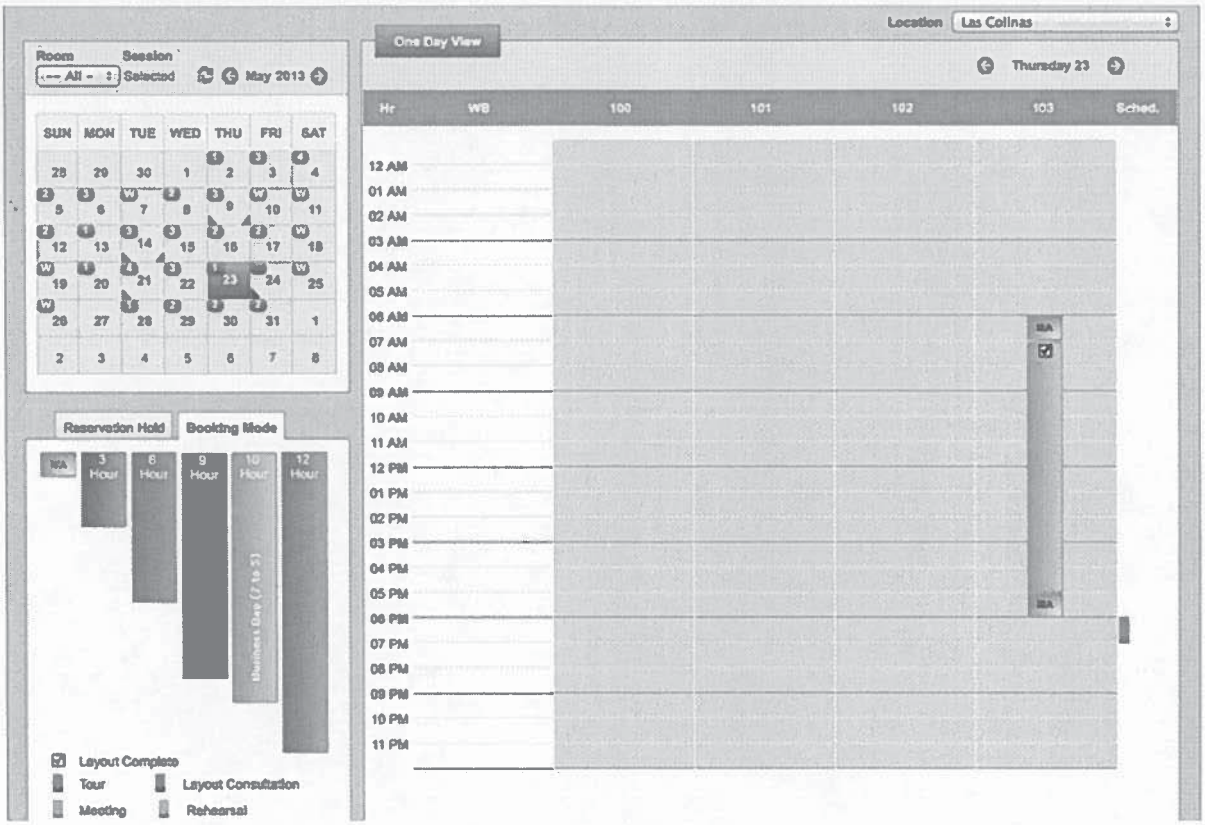
Meeting
Rehearsal


Location
Las Colinas
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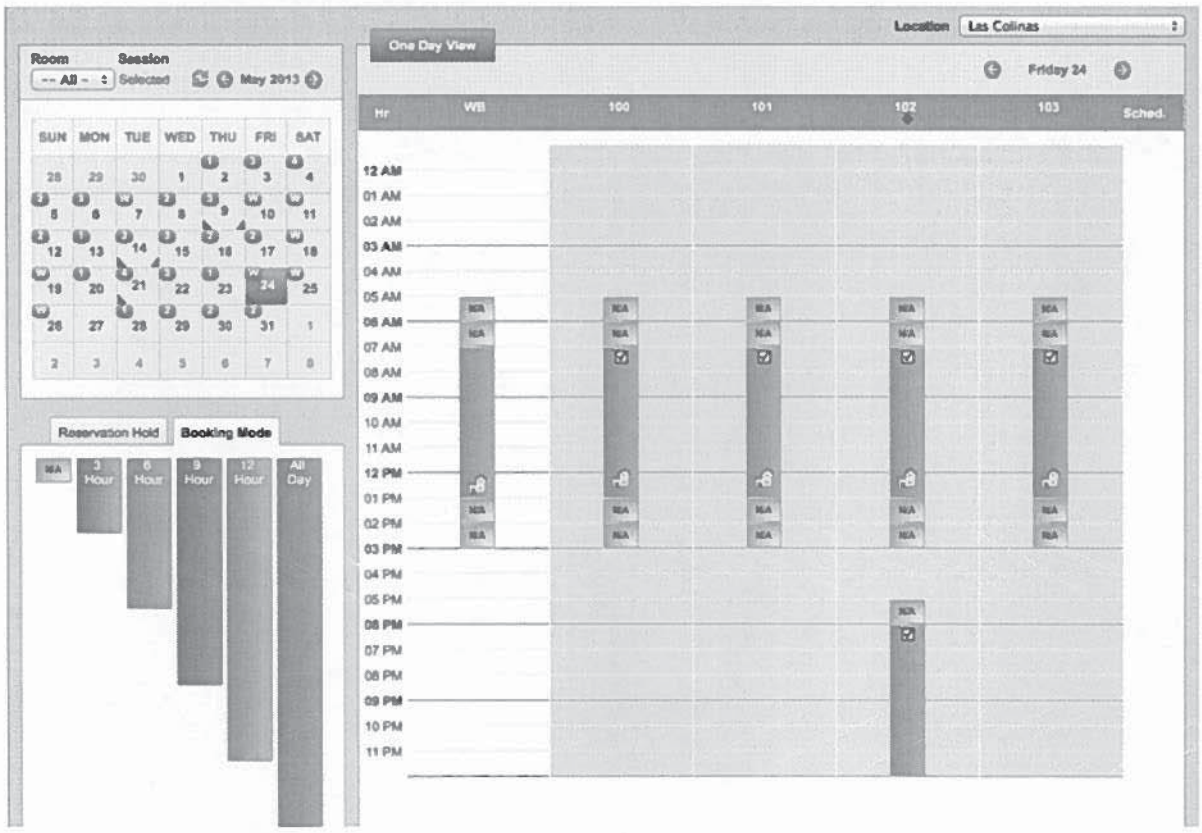
Business Day (7 to 5)
Layout Complete
Tour
Layout Consultation
Meeting
Rehearsal


Location
Las Colinas
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Session
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Selected
May 2013
Friday 24
SUN MON TUE WED THU FRI SAT
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Booking Mode
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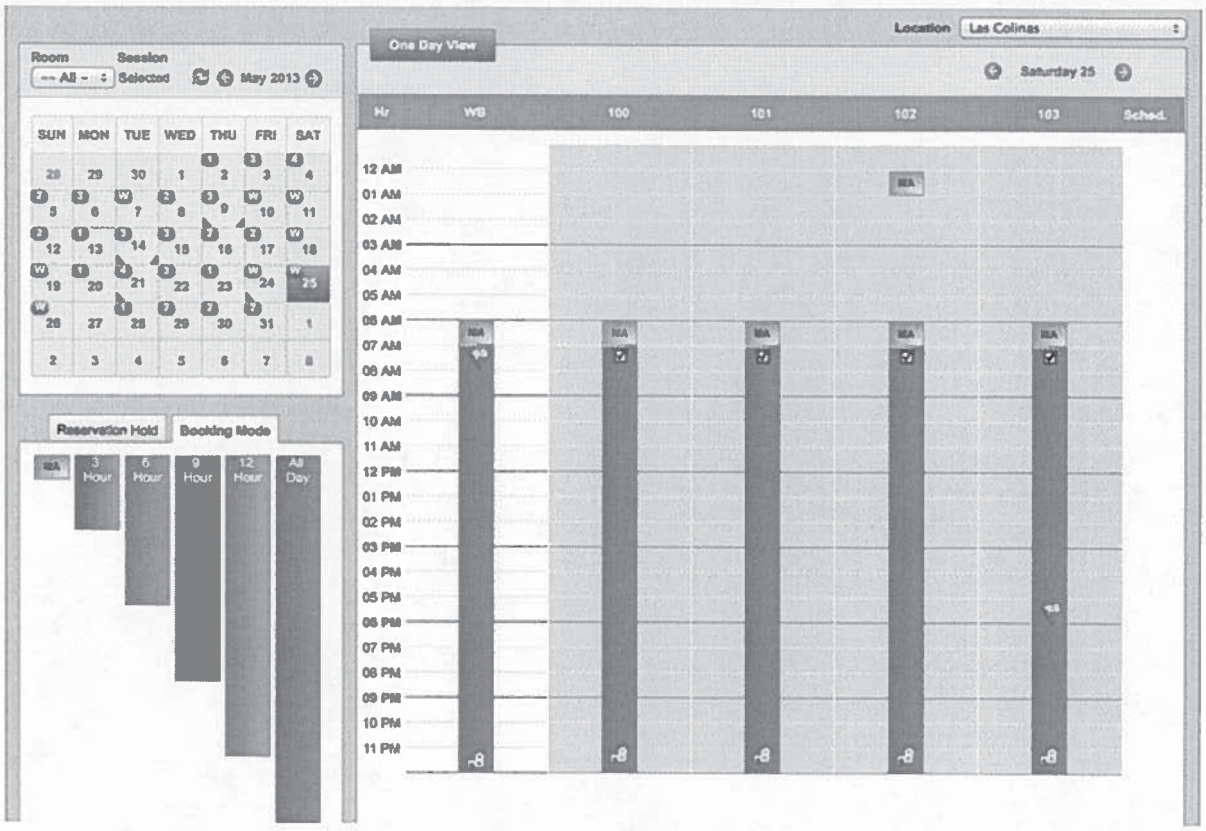
Location
Las Colinas
One Day View
Saturday 25
Room
Session
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May 2013
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Reservation Hold
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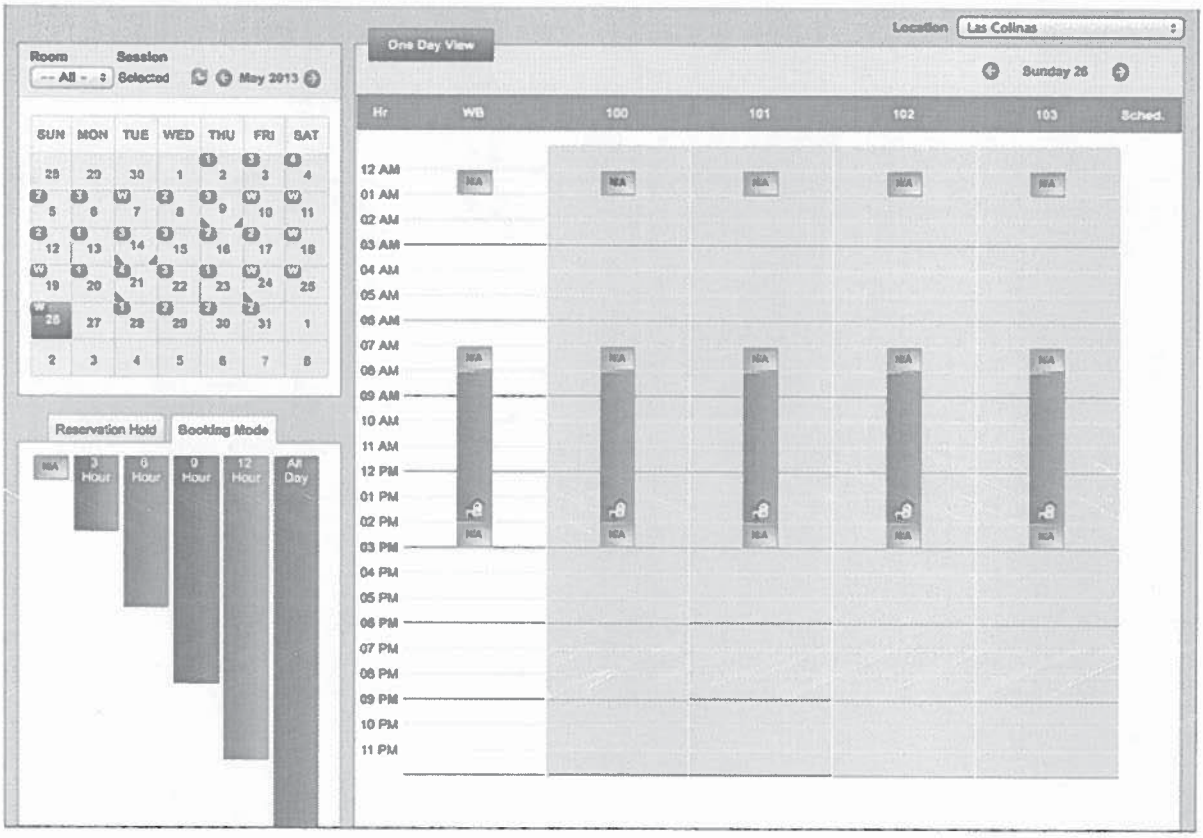
Location
Las Colinas
One Day View
Sunday 26
Room
Session
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May 2013
SUN MON TUE WED THU FRI SAT
Reservation Hold
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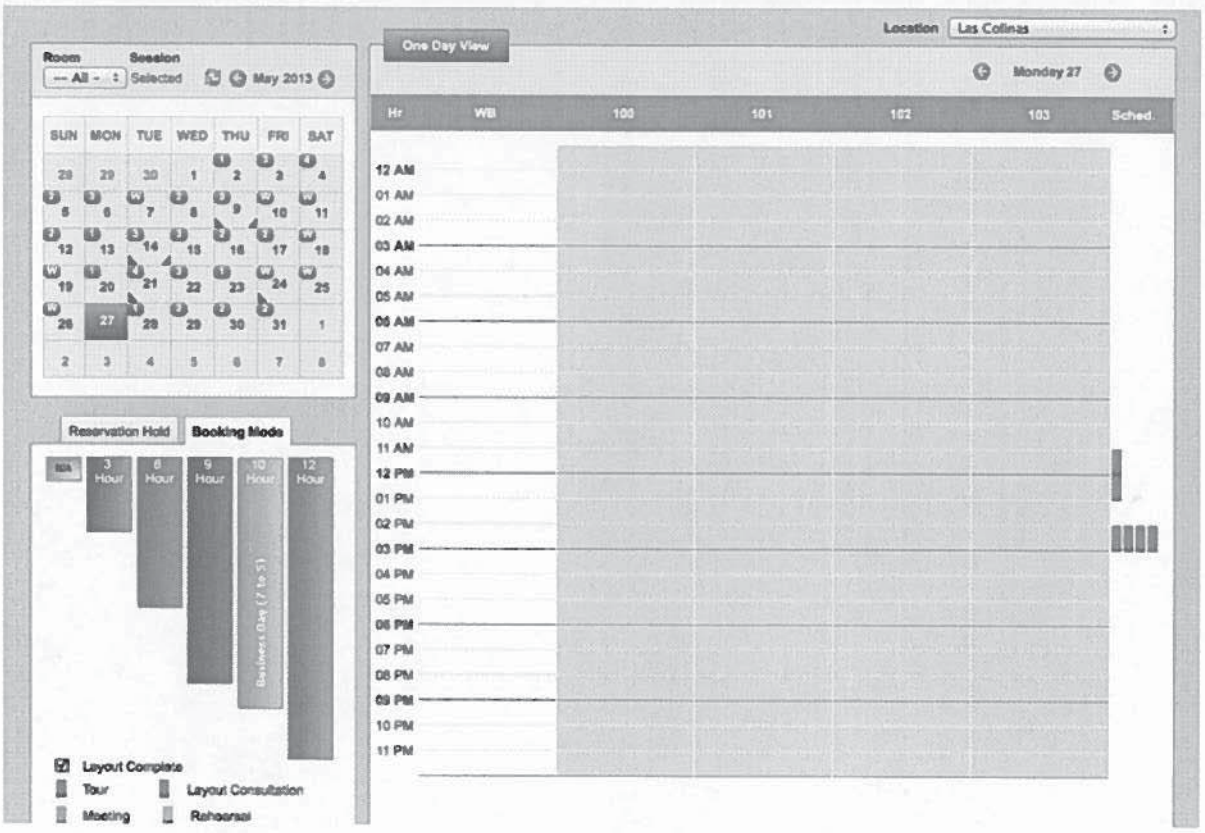
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May 2013
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Reservation Hold
Booking Mode
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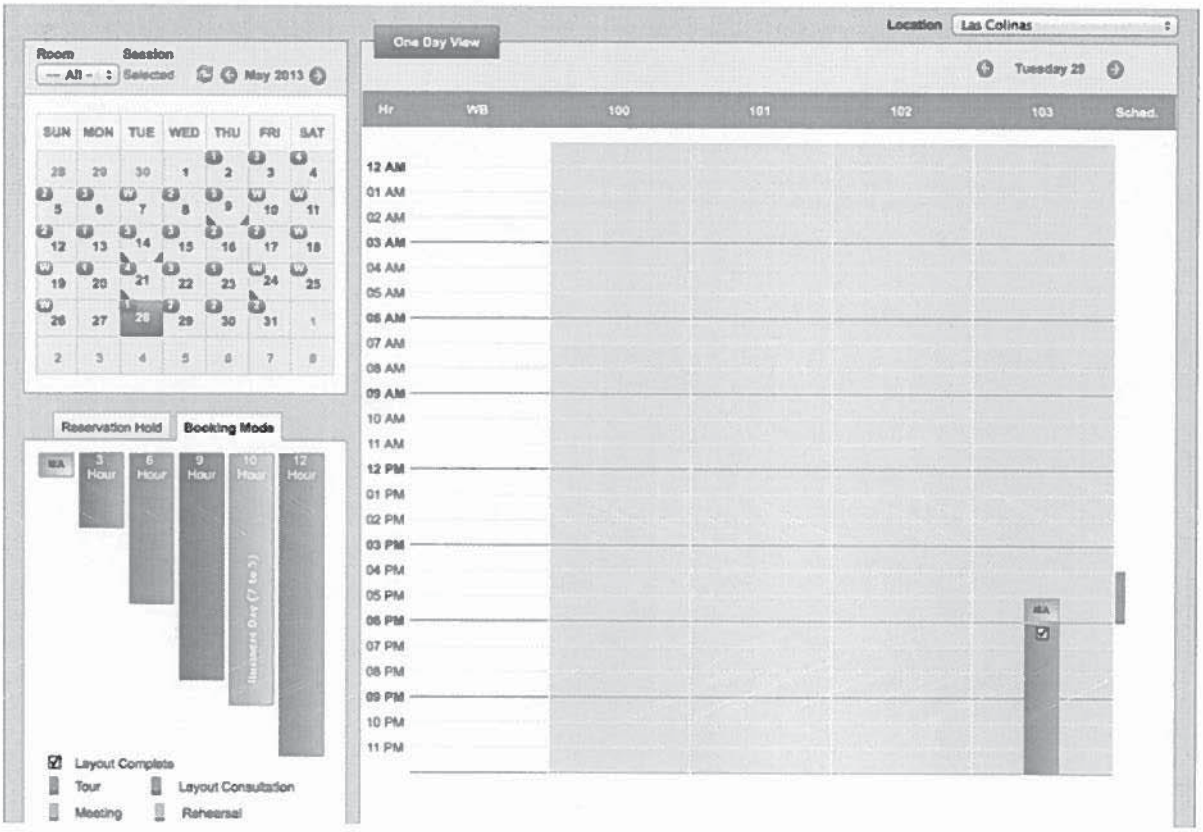
12 Hour
Business Day (7 to 5)
Layout Complete
Tour
Layout Consultation
Meeting
Rehearsal


Location
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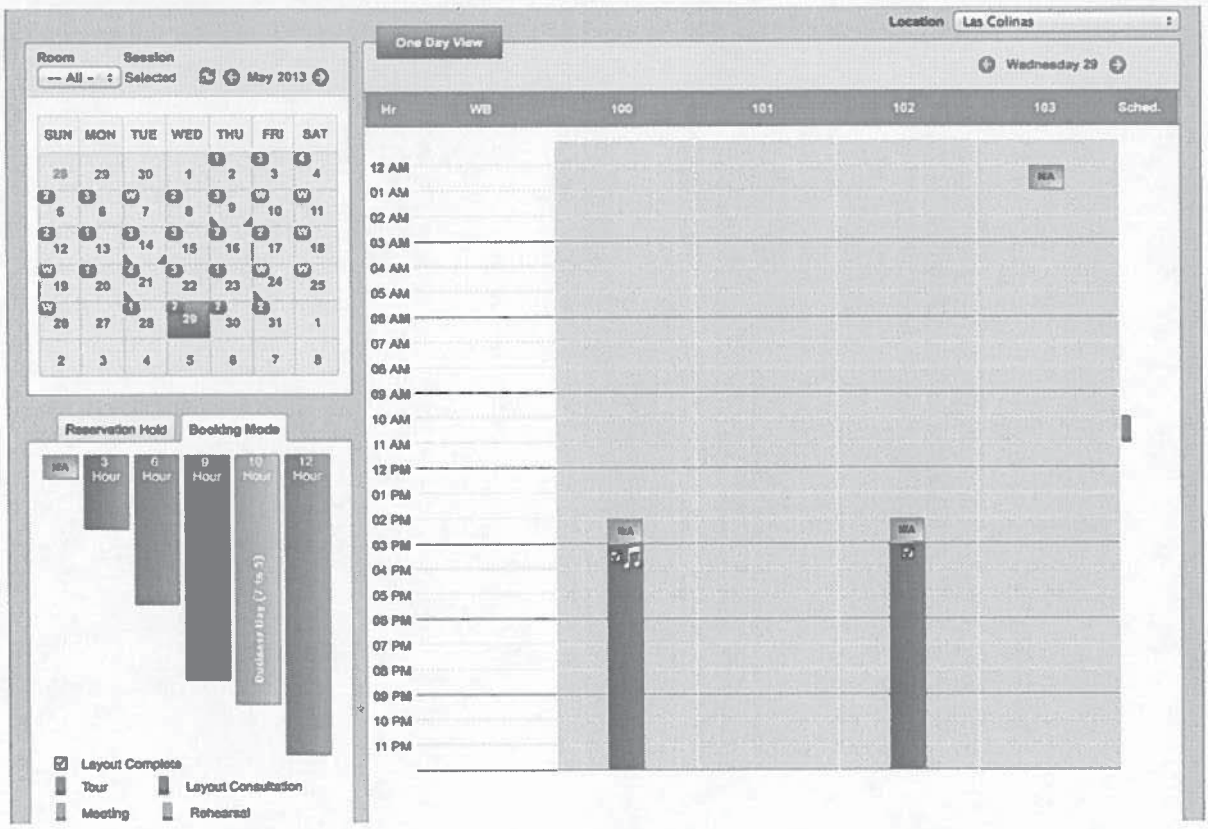
Business Day (7 to 5)
Layout Complete
Tour
Layout Consultation
Meeting
Rehearsal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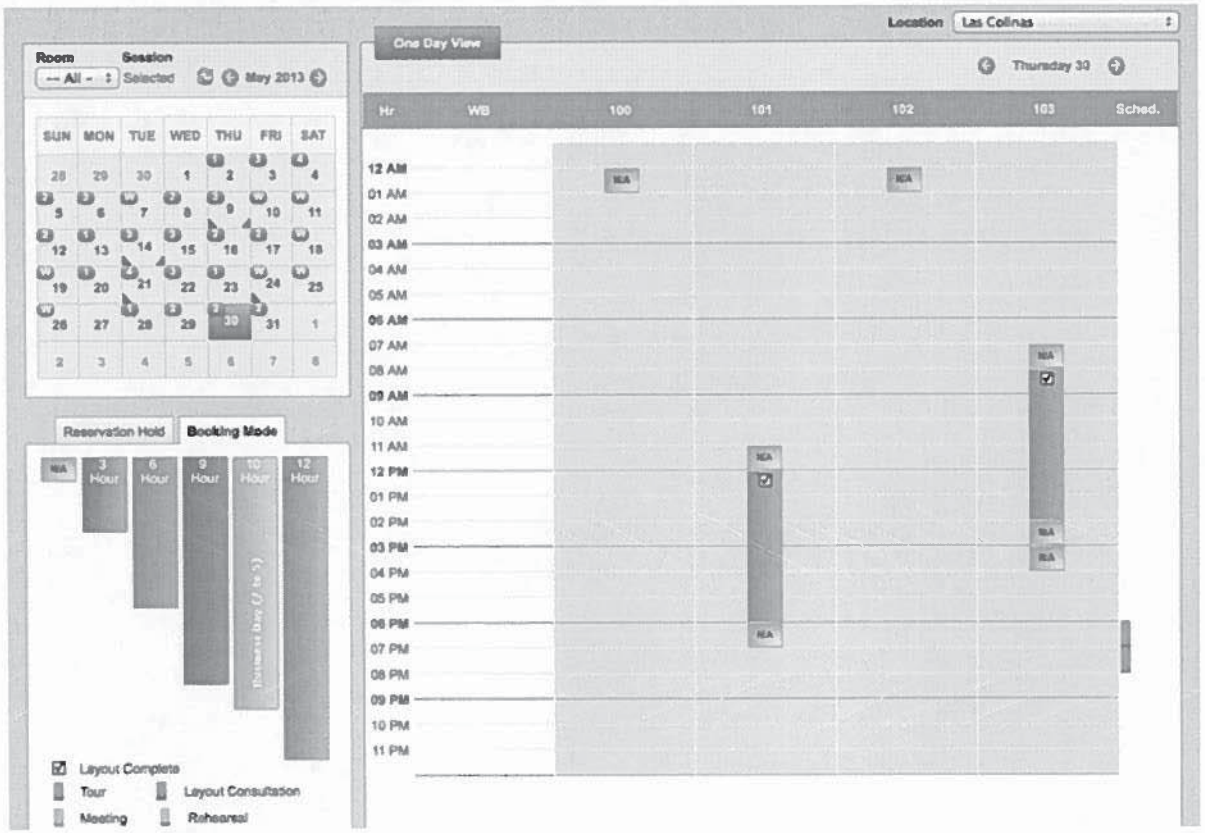
Meeting
Rehearsal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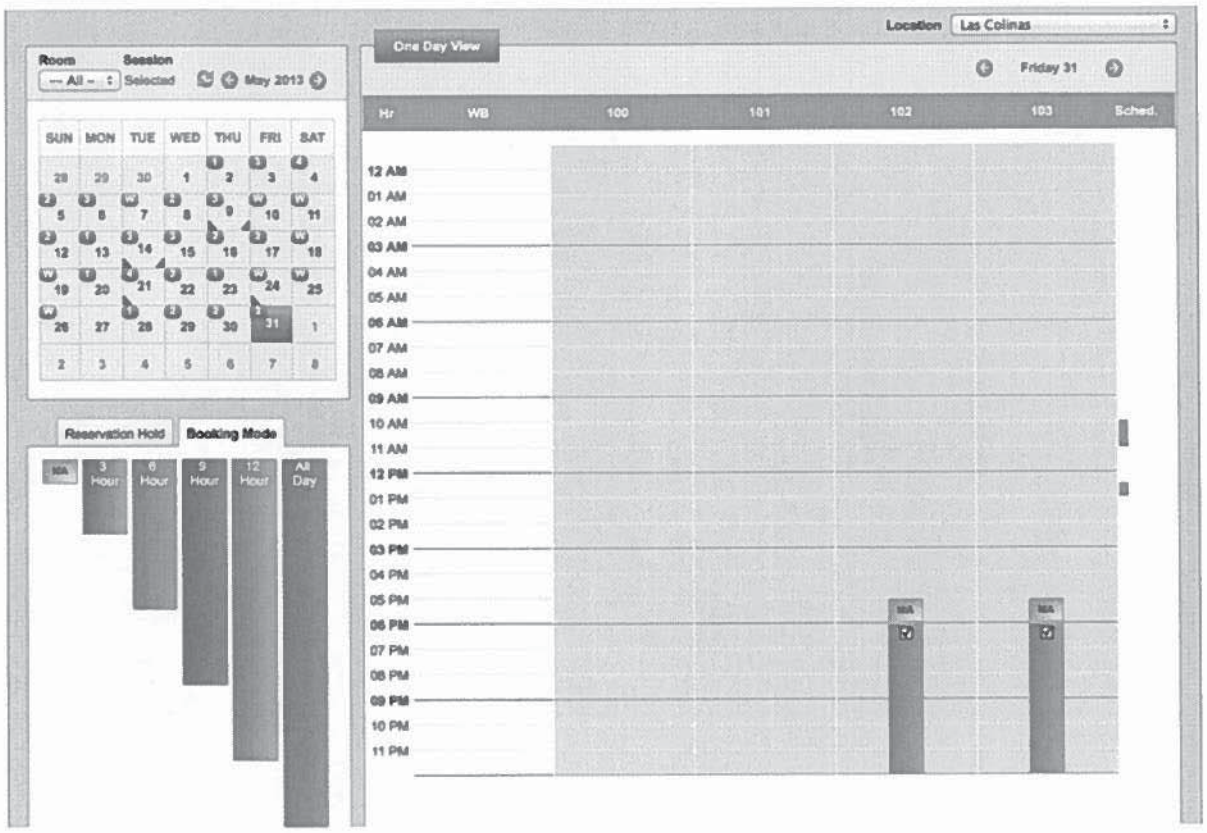
Layout Complete
Tour
Layout Consultation
Meeting
Rehearsal


Location
Las Colinas
Room
Session
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May 2013
SUN MON TUE WED THU FRI SAT
One Day View
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Reservation Hold
Booking Mode
NA
3 Hour
6 Hour
9 Hour
12 Hour
All Day

WDPARTNERS.COM
7007 DISCOVERY BLVD
DUBLIN, OH 43017
T 614.634.7000
F 614.634.7777

wd

Minutes from Noah's neighborhood meeting
December 10, 2013 – 6PM
WD Partners Offices
7007 Discovery Blvd. Dublin, OH 43017

Attendees:
WD Partners – Brain Lorenz, Chris Winkle, Jeff Shetler, Dave Mancino, Cathy Ramondelli, Sam Khalilieh
Guggenheim – Kurt Overmyer (via conference call)
Noah's – Bil Boswer
Village of Coffman Park – Ron Hall and Phyllis Hall, Jim Frazier, Rus Sturdvant
Post Road – Chris Cline

The meeting began at 6:05 P.M. WD Partners provided site plans, landscape plans, and photographs of existing Noah's locations. Brian Lorenz introduced the project and presented details pertaining to the site plan, proposed elevations, and landscaping. Currently the site plan has 83 parking spaces on site. The access points to Wall Street and the future development to the south were shown. The location of the patio was shown as well as the entrances to the building.

Bil Bowser, owner of Noah's gave an overview of the operations. He identified other locations that he owned and their proximity to other uses. He noted that all Noah's have staff available during the events to assist the users. He explained there were two main users to the business: Corporate and Family. He indicated that corporate events are held Monday thru Friday Afternoon with most of these functions revolving around meetings, and seminars. The Family event period is typically Friday PM thru Sunday. Those involve primarily weddings but Noah's also sponsors community events such as youth baseball sign ups, etc.

Mr. Bowser described the functionality of the center and the high quality furniture and finishes, walnut hardwood floors, etc. He described how the ceiling trusses can be raised and lowered to allow guests to decorate, to set the mood of the room, etc. Corporate events range from 50 to 150 at the most; 200 wedding guests are the max.
Mr. Frazier asked Mr. Lorenz why the application was marked retail. Mr. Lorenz indicated that when he filed the application, he and staff were still trying to determine the use. Mr. Lorenz indicated he chose this use in the event the facility was built and sold. That way the new user could comply with the text. Mr. Lorenz stated the application use could be amended once he and Dublin staff agree to the text changes.

Another resident asked about the Westminster, CO. location and its adjacency to residential and referenced a blog where comments indicated traffic and noise was an issue. Mr. Bowser stated he has not received any negative comments from these neighbors and he would proactively manage these if they come up. Further discussion

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ensued where residents stated concerns over traffic, noise, and event guests wandering onto their property. They wouldn't want them jumping into the Coffman Park pond or disturbing their area. Mr. Lorenz referenced the landscape plan and noted the proposed planting, mounding, and retention pond on site should help to deter some of the potential noise and views from the neighborhood. He further indicated the pond would be outfitted with an aerator similar to the one in place at the condos that would help to reduce any potential noise. Mr. Bowser stated that the patio would only be used for cocktail hours and socialization. It is proposed to be surrounded by a four foot wall and has been relocated to the opposite side of the building away from the condos. There would be no bands, outdoor parties, etc. The will be no bartender outside and Noah's does not have a liquor license. It is up to the user to decide what food/drink options they want and arrange this on their own. Mr. Bowser stated based on his pricing structure, higher end finishes, etc. he is marketing to a demographic that is more family and professionally oriented and does not foresee these types of issues at this or any of his facilities. A person wandering off would be more of an exception than the norm.

Mr. Winkle asked if the residents could hear noise from the day care center. Most residents indicated no. Mr. Sturdvant indicated his door would be closest to Noah's if built. Mr. Winkle accessed the Dublin GIS and measured the distance from Mr. Sturdvant's door to the center of the proposed building. The distance measured approximately 856 feet. Mr. Winkle indicated this distance is further than the daycare. A discussion around traffic ensued. Residents voiced concerns over the amount of cars. Mr. Lorenz stated a traffic study was underway and would be presented to staff next week. Residents indicated there was a concern over 100 cars at the same time. Mr. Lorenz estimated most of the traffic during the business day as many people carpool, etc. to weddings where businesspeople travel alone. He indicated they would have to wait for the results of the traffic study and would follow those recommendations. Mr. Winkle added access would be to Wall Street and a stub to south for when that property develops. He further indicated that in discussions with the city, this would be the last curb cut onto Wall Street as there is not enough room based upon the Dublin spacing guidelines.

Mr. Hall asked why Noah's has identified this site. Mr. Lorenz indicated his firm does not preform the brokerage aspect for Noah's but believes its proximity to the numerous businesses in this area makes sense. In addition, he noted Dublin's location and high development standards blend in with Noah's architectural philosophy. Also, it was indicated, the proposed lot size was appropriate for the use. Mr. Bowser indicated this was an area his team examined and Sturdivant want to be a part of this community and echoed Mr. Lorenz's comments.

Several residents noted this use may hurt the future development of their neighborhood as additional condos are to be built out. Currently, there are 11 units in place. They noted concerns of lower property values.

Mr. Cline indicated that land use may be the biggest hurdle to Noah's building here. He indicated that SIC codes would naturally put this type of use in a hotel or near one. Mr. Lorenz indicated he also researched the SIC code and didn't have much success finding a reception center in the code. Further, due to the uniqueness of Noah's, he stated he did not come across any reference for what they were trying to do. He and the Dublin staff spent a great deal of time trying to appropriately define the use and the complete the text. It was noted that the zoning text was a part of the deed restrictions and even if Planning Commission approved the plans, Noah's would have to receive approval from the HOA as well.

The discussion shifted back to traffic. One resident asked how food would be delivered since there is no on site food prep. Mr. Lorenz said there are loading zones and that food would be brought in by the renter of the facility. He stated he would envision caterers would bring this in vans or box trunks. There would be no 53' trucks or any large vehicles like that.

In closing, Mr. Lorenz shared the project's estimated schedule for city approvals and noted they are aiming to appear before Planning Commission on January 9. He thanked those present for attending and indicated copies of the meeting minutes would be made available and that he would provide to these to Justin Goodwin, City Planner.
The meeting adjourned at 6:47 P.M.

Respectfully submitted,

Brian Lorenz, AICP, LEED AP

NOAHS MTG 12/10/13

wd

NAME	PHONE	EMAIL
BRIAN LORENZ, AICP, LEED AP WD PARTNERS	726.0999	brian.lorenz@wdpartners.com
RON HALL	614-451-9253	HALL4254@SBCGLOBAL.NET
PHYLLIS HALL	"	"
JIM FRAZIER	323.0610	jfrazier@frazierfinancial.com
Ross Sturdivant	845 667 9879	sturdivant.11@usu.edu
Chris Cline	614 764 0681	ctc@bhmlaw.com

ACTION ITEMS

RESIDENT CORRESPONDENCE

Justin M. Goodwin

From: Cline, Christopher Thomas <CTC@BHMlaw.com>
Sent: Thursday, December 12, 2013 2:34 PM
To: Justin M. Goodwin
Subject: FW: Noahs Parking Issues

Justin,
FYI

They mentioned that for a wedding reception there might be three people per vehicle and they anticipated 200+ per event and 120 events per year. So that math needs a consistent best case scenario every time. Not too realistic.

The parking would probably be at least as much of an issue for a 150 person conference or off site event during the week where most people would probably drive alone.

The split off the existing Wall Street office building site to create this lot would also cause an issue with the existing use, a 17K sf office needing 68 or so spaces. About 24 appear to be on the part of the site to be split off so the existing developed site would need to be reparked—if possible.

I also find it interesting that the owner is willing to diminish the Perimeter Drive parcel, I think by about an acre to about 4.1 acres (from 5.1) to augment this new lot. This cuts down developable depth of the Perimeter Drive lot which is usually something my clients are very concerned about. The city may also have an issue with decreasing the viability of a highly desirable premium office site, which would cause a hit on anticipated tax revenue.

Seems like the proposal comes with a bit of baggage.
Chris

From: Cline, Christopher Thomas
Sent: Thursday, December 12, 2013 12:08 PM
To: Jim Frazier; Gegray33
Subject: Noahs

Jim and Gary,

Pulled the Noahs plans to look at some details that occurred to me after the meeting.

I have a concern that the site is pretty tight for the use. They show 83 parking spaces for a roughly 10,400 sf building (200 is patio). A conference center or place of assembly would be 1 space per 25 feet or over 400 parking spaces. As you may recall from my question to Brian the other night, they are struggling with determining the parking requirement. The range between what they have and what would appear to be the requirement indicates a potential major issue. Ie, this use might be too tight for the site and they cannot enlarge the site without further threatening the viability of the major site to the south which fronts on Perimeter (from which they have already taken a piece, which diminishes that sites productivity).

Chris

Christopher T. Cline
Blaugrund, Herbert. Myers, Miller, Kessler and Postalakis
300 West Wilson Bridge Road #100
Worthington, Ohio 43085

RESIDENT CORRESPONDENCE

Justin M. Goodwin

From: Jim Frazier <jfrazier@frazierfinancial.com>
Sent: Wednesday, December 11, 2013 12:26 PM
To: Justin M. Goodwin
Cc: ggray33@yahoo.com; Cheryl Frazier; hall4254@sbcglobal.net; Kyle Schneider; Phillip Weisenbach; rsturdivant@cph.osu.edu
Subject: Noah's Party facility

Justin , my home address is 6017 Kenzie Lane , Village at Coffman Park ,VCP.
Last evening several of us attended a briefing at WD Partners. Several of us could not attend .
Many of us VCP residents are strongly opposed to the Noah Party facility and the associated noise ,traffic , use and activities it will expose to our community.
Can you give us several times where we could meet with you to discuss accordingly?

Thank you
Jim Frazier

James A. Frazier CPA/PFS, CFP®, M.TAX
Managing Director
Frazier Financial Advisors, LLC
6300 Frantz Rd. Dublin, OH 43017
www.frazierfinancial.com
614.793.8297
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SITE DATA

SITE DATA:
- APN: 273-010196-00
- ADDRESS: WALL STREET
- SITE AREA: 110,842 S.F. / 2.54 ACRES
- OWNER: WALL STREET HOLDINGS, LLC.

BUILDING DATA:
- BUILDING AREA: 10,200 SQUARE FEET
- BUILDING HEIGHT: 20'-0"
- NUMBER OF STORIES: ONE

ZONING:
- PROPOSED USE: RECEPTION HALL/ CONFERENCE CENTER
- EXISTING ZONING: PCD03-60 - PLANNED COMMERCE DISTRICT WITH PERIMETER CENTER DEVELOPMENT TEXT (SUBAREA C)

ADJACENT ZONING:
- NORTH: PCD03-60 - PLANNED COMMERCE DISTRICT (USE: OFFICE)
- EAST: PCD03-60 - PLANNED COMMERCE DISTRICT (USE: OFFICE)
- SOUTH: PCD03-60 - PLANNED COMMERCE DISTRICT (USE: VACANT)
- WEST: PCD03-60 - PLANNED COMMERCE DISTRICT (USE: OFFICE)

REQUIRED BUILDING SETBACKS:
- FRONT (WALL STREET): 50 FEET
- SIDE (NORTH): 15 FEET
- SIDE (SOUTH): 15 FEET
- REAR (WEST): 15 FEET

REQUIRED PARKING/LANDSCAPE SETBACKS:
- FRONT (WALL STREET): 25 FEET
- SIDE (NORTH): 15 FEET
- SIDE (SOUTH): 15 FEET
- REAR (WEST): 15 FEET

REQUIRED PARKING STALL SIZE: 9 FEET x 19 FEET
DRIVE AISLE WIDTH (1-WAY AND 2-WAY): 24 FEET

PARKING SPACES PROPOSED: 79 PARKING SPACES
+ 4 ACCESSIBLE PARKING STALL PER ADAAG
= 83 PARKING SPACES TOTAL

LOADING ZONE REQUIRED: NONE SPECIFIED

PATIO:
- PATIO AREA: 2,727 S.F.
- PATIO SURFACE: PAVER: INTERSTATE BRICK, BASKET WEAVE
- BOLLARDS: SAFETY RED

BASIS OF INFORMATION

A. ALL EXISTING CONDITIONS, TOPOGRAPHY, UTILITIES, & EASEMENTS ARE ASTAKEN FROM DEVELOPER PLANS RECEIVED 10/27/2012.
AS PREPARED BY: KEVIN CARPENTER
CARPENTER NARTY TRANSPORTATION, INC.
7007 DISCOVERY BLVD.
DUBLIN, OH 43017
614.656.2402

PROJECT

NOAH'S
FOR ALL LIFE'S EVENTS™

SITE ADDRESS:
5505 WALL STREET
DUBLIN, OHIO
43017

PROJECT CONTACT:
KURT OVERMYER
214.872.4092 T
kurt.overmyer@guggenheimpartners.com

CIVIL ENGINEER

wd

7007 DISCOVERY BLVD
DUBLIN, OH 43017
614.634.7000 T

WDPARTNERS.COM

PROJECT CONTACT:
CHRIS WINKLE
614.634.7236 T
chris.winkle@wdpartners.com

DEVELOPMENT CONTACTS

ZONING:
CITY OF DUBLIN LAND USE AND LONG RANGE PLAN.
5800 SHIER RINGS ROAD
DUBLIN, OH 43016
JUSTIN GOODWIN
614.410.4677

SURVEYOR:
CARPENTER NARTY TRANSPORTATION, INC.
7007 DISCOVERY BLVD.
DUBLIN, OH 43017
KEVIN CARPENTER
614.656.2402

ELECTRIC:
AMERICAN ELECTRIC POWER
550 TECH CENTER DRIVE
GAHANNA, OH 43230
JEFF ANTHONY
614.583.6611

GEOTECHNICAL:
GILES ENGINEERING ASSOCIATES
N8 W22250 JOHNSON DR., STE A1
WAUKESHA, WI 53186
TERRY GILES
262.544.0118

TELEPHONE:
AT&T
150 EAST GAY STREET
COLUMBUS, OH 43215
RON HARRISON
614.223.2823

NATURAL GAS:
COLUMBIA GAS OF OHIO, INC.
1600 DUBLIN ROAD
COLUMBUS, OH 43215
NICOLE BOYER
614.260.5900

WATER:
CITY OF COLUMBUS DIVISION OF WATER
910 DUBLIN ROAD
COLUMBUS, OH 43215
DOUG WILSON
614.645.7330

BUILDING:
CITY OF DUBLIN BUILDING DEPARTMENT
5800 SHIER RINGS ROAD
DUBLIN, OH 43016
DAVE UNGRICHAL
614.410.4670

STORM WATER:
CITY OF DUBLIN ENGINEERING
5800 SHIER RINGS ROAD
DUBLIN, OH 43016
KRISTEN YORKO
614.410.4657

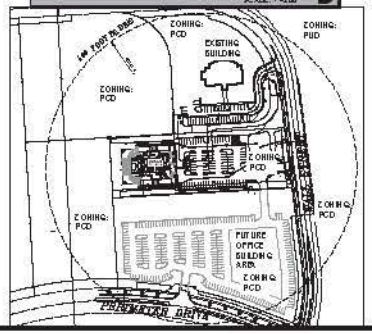
SANITARY SEWER:
CITY OF DUBLIN ENGINEERING
5800 SHIER RINGS ROAD
DUBLIN, OH 43016
KRISTEN YORKO
614.410.4657

FIRE:
CITY OF DUBLIN FIRE DEPARTMENT
4567 HARD ROAD
DUBLIN, OH 43016
-
614.652.3092

HEALTH:
FRANKLIN COUNTY BOARD OF HEALTH
280 EAST BROAD STREET
COLUMBUS, OH 43215
-
-

SITE MAP

SCALE: 1"=200'



CALL BEFORE YOU DIG!
OHIO LAW REQUIRES EXCAVATORS TO NOTIFY THE PROTECTION SERVICE AT LEAST TWO (2) BUSINESS DAYS BUT NOT LONGER THAN TEN (10) CALENDAR DAYS PRIOR TO EXCAVATION
Ohio Utilities Protection Service
www.oupsc.org
1-800-362-2764

SUBMITTAL	ISSUE DATES
PLANNING SUBMITTAL	9/13/13
REVISED PLANNING SUB.	10/28/13
REVISED PLANNING SUB.	11/14/13
REVISED PLANNING SUB.	12/19/13
-	-
-	-
-	-
-	-
-	-

REVISIONS	COMMENTS	BY
1	OWNER/CITY COMMENTS	JDS
-	-	-
-	-	-
-	-	-
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-	-	-
-	-	-
-	-	-

DWG. NO. / REV. / DATE

DWG. NO.		REV.	DATE
1 OF 12	COVER SHEET AND INDEX	1	11/14/13
2 OF 12	ALTA SURVEY	1	10/28/13
3 OF 12	ALTA SURVEY	1	10/28/13
4 OF 12	DEVELOPMENT PLAN	1	11/14/13
5 OF 12	SITE GRADING & DRAINAGE PLAN	1	11/14/13
6 OF 12	SITE UTILITY PLAN	1	11/14/13
7 OF 12	LANDSCAPE PLAN	1	11/14/13
8 OF 12	PLAT OF SURVEY FOR WALL STREET HOLDINGS	1	10/28/13
9 OF 12	BUILDING ELEVATIONS - EAST	-	-
10 OF 12	BUILDING ELEVATIONS - SOUTH	-	-
11 OF 12	BUILDING ELEVATIONS - NORTH	-	-
12 OF 12	BUILDING ELEVATIONS - WEST	-	-

SITE VICINITY MAP

SCALE: 1"=1,000'

CITY OF DUBLIN APPROVALS

SIGNATURES BELOW SIGNIFY ONLY CONCURRENCE WITH THE GENERAL PURPOSES AND GENERAL LOCATION OF THE PROJECT AND DOES NOT CONSTITUTE ASSURANCE TO OPERATE AS INTENDED. ALL TECHNICAL DETAILS REMAIN THE RESPONSIBILITY OF THE PROFESSIONAL ENGINEER PREPARING THE PLANS.

APPROVED:

CITY ENGINEER, CITY OF DUBLIN, OHIO — DATE

* DIRECTOR OF LAND USE & LONG RANGE PLANNING, CITY OF DUBLIN, OHIO — DATE

* FOR COMMERCIAL PERMITS ONLY

SIGNATURES
APPLICANT
PLANNING AND ZONING COMMISSION SECRETARY, CITY OF DUBLIN, OHIO
DATE OF PLANNING AND ZONING COMMISSION AND CITY COUNCIL APPROVALS

V.E. PROJECT NUMBER
MYNOA0001

1
OF 12

DUBLIN, OHIO 43017

5505 WALL STREET

MY NOAH'S

ALTA SURVEY

WALL STREET HOLDINGS, LLC
5555 WALL STREET
DUBLIN, OHIO

PARCEL LEGAL DESCRIPTION

SITUATED IN THE STATE OF OHIO, COUNTY OF FRANKLIN, CITY OF DUBLIN, BEING A PART OF VIRGINIA MILITARY SURVEY NO. 2542, AND FURTHER BEING ALL OF THAT 2.802 ACRE PARCEL CONVEYED TO WALL STREET HOLDINGS, LLC BY INSTRUMENT NO. 200603010041125, ALL OF THAT 4.850 ACRE TRACT CONVEYED TO WALL STREET HOLDINGS, LLC BY INSTRUMENT NO. 201003250142842, AND ALL OF THAT 2.874 ACRE TRACT CONVEYED TO WALL STREET HOLDINGS, LLC BY INSTRUMENT NO. 199811160[illegible], ALL REFERENCES BEING TO THE FRANKLIN COUNTY RECORDER'S OFFICE, FRANKLIN COUNTY, OHIO, AND BEING MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING, FOR REFERENCE, AT A ¾" IRON PIPE FOUND AT THE NORTHWEST CORNER OF A 4.250 ACRE TRACT OF LAND CONVEYED TO PERIMETER A., LTD., BY INSTRUMENT NO. 199811190298745, SAID PIPE ALSO BEING IN THE NORTHEASTERLY RIGHT OF WAY LINE OF WALL STREET (A 60.00 FOOT WIDE PUBLIC ROADWAY), AS DEDICATED BY THE PLAT ENTITLED WALL STREET & EASEMENTS DEDICATION PLAT, RECORDED IN PLAT BOOK 82, PAGE 8;

THENCE ACROSS SAID WALL STREET SOUTH 82°48' 31" WEST A DISTANCE OF 60.00 FEET TO A ¾" IRON PIPE FOUND IN THE SOUTHWESTERLY LINE OF SAID WALL STREET, SAID PIPE ALSO BEING IN THE EASTERLY LINE OF SAID 4.850 ACRE TRACT, SAID PIPE ALSO BEING THE TRUE POINT OF BEGINNING FOR THE PARCEL HEREIN DESCRIBED;

THENCE ALONG THE SOUTHWESTERLY LINE OF SAID WALL STREET, ALSO BEING THE EASTERLY LINE OF SAID 4.850 ACRE TRACT, THE FOLLOWING THREE COURSES:

1) SOUTH 07°10' 23" EAST A DISTANCE OF 165.17 FEET TO A ¾" IRON PIPE FOUND;

2) WITH A CURVE TO THE RIGHT HAVING A RADIUS OF 470.00 FEET, AN ARC LENGTH OF 151.36 FEET, A CENTRAL ANGLE OF 18° 27' 15", A CHORD BEARING SOUTH 02° 07' 05" WEST, AND A CHORD DISTANCE OF 150.70 FEET TO A ¾" IRON PIPE FOUND;

3) SOUTH 11° 10' 08" WEST A DISTANCE OF 16.34 FEET TO A ¾" IRON PIPE FOUND;

4) SOUTH 81° 29' 14" WEST A DISTANCE OF 46.82 FEET TO AN ¾" IRON PIPE FOUND AT THE SOUTHEASTERLY CORNER OF SAID 4.850 ACRE TRACT, ALSO BEING IN THE NORTHERLY LINE OF PERIMETER DRIVE, AS RECORDED IN XXXX

THENCE ALONG THE SOUTHERLY LINE OF SAID 4.850 ACRE TRACT, ALSO BEING THE NORTHERLY LINE OF SAID PERIMETER DRIVE THE FOLLOWING SIX COURSES:

1) NORTH 88° 48' 55" WEST A DISTANCE OF 118.87 FEET TO A ¾" IRON PIPE FOUND;

2) WITH A CURVE TO THE LEFT HAVING A RADIUS OF 1260.00 FEET, A CENTRAL ANGLE OF 08° 31' 56", AN ARC LENGTH OF 188.16 FEET, A CHORD BEARING NORTH 72° 58' 58" WEST, AND A CHORD DISTANCE OF 186.99 FEET TO A ¾" IRON PIPE FOUND;

3) NORTH 29° 13' 44" WEST A DISTANCE OF 27.08 FEET TO A ¾" IRON PIPE FOUND;

4) NORTH 76° 29' 23" WEST A DISTANCE OF 80.18 FEET TO A ¾" IRON PIPE FOUND;

5) SOUTH 57° 54' 46" WEST A DISTANCE OF 41.29 FEET TO A ¾" IRON PIPE FOUND;

6) WITH A CURVE TO THE LEFT HAVING A RADIUS OF 1260.00 FEET, A CENTRAL ANGLE OF 07° 07' 14", AN ARC LENGTH OF 164.10 FEET, A CHORD BEARING NORTH 85° 44' 38" WEST, AND A CHORD DISTANCE OF 164.00 FEET TO A ¾" IRON PIPE FOUND AT THE SOUTHWESTERLY CORNER OF SAID 4.850 ACRE TRACT;

THENCE LEAVING SAID NORTHERLY RIGHT-OF-WAY LINE ALONG THE WESTERLY LINE OF SAID 4.850 ACRE TRACT, ALSO BEING THE EASTERLY LINE OF A 2.836 ACRE TRACT CONVEYED TO CHECKFREE CORPORATION BY INSTRUMENT NO. 199811060272223, NORTH 06° 12' 14" WEST A DISTANCE OF 214.16 FEET TO A ¾" IRON PIPE FOUND AT THE NORTHWESTERLY CORNER OF SAID 4.850 ACRE TRACT, SAID PIPE ALSO BEING THE SOUTHWESTERLY CORNER OF SAID 2.802 ACRE TRACT;

THENCE ALONG THE WESTERLY LINE OF SAID 2.802 ACRE TRACT, ALSO BEING THE EASTERLY LINE OF SAID 2.836 ACRE TRACT, NORTH 05° 12' 14" WEST A DISTANCE OF 168.07 FEET TO THE NORTHWESTERLY CORNER OF SAID 2.802 ACRE TRACT, ALSO BEING THE NORTHEASTERLY CORNER OF SAID 2.836 ACRE TRACT, SAID POINT ALSO BEING IN THE SOUTHERLY LINE OF A 4.265 ACRE TRACT CONVEYED TO CABIN IN THE WOODS, LLC BY INSTRUMENT NO. 200604140069757;

THENCE ALONG THE NORTHERLY LINE OF SAID 2.802 ACRE TRACT, ALSO BEING THE SOUTHERLY LINE OF SAID 4.265 ACRE TRACT, NORTH 88° 51' 57" EAST A DISTANCE OF 276.54 FEET TO A ¾" IRON PIPE FOUND AT THE SOUTHEASTERLY CORNER OF SAID 4.265 ACRE TRACT, SAID PIN ALSO BEING THE SOUTHWESTERLY CORNER OF SAID 2.874 ACRE TRACT;

THENCE ALONG THE WESTERLY LINE OF SAID 2.874 ACRE TRACT, ALSO BEING THE EASTERLY LINE OF SAID 4.265 ACRE TRACT, THE FOLLOWING TWO COURSES:

1) NORTH 02° 11' 10" WEST A DISTANCE OF 230.11 FEET TO A ¾" IRON PIPE FOUND;

2) WITH A CURVE TO THE LEFT HAVING A RADIUS OF 170.00 FEET, A CENTRAL ANGLE OF 90° 03' 27", AN ARC LENGTH OF 267.08 FEET, A CHORD BEARING NORTH 46° 11' 04" WEST, AND A CHORD DISTANCE OF 240.43 FEET TO A ¾" IRON PIPE FOUND AT THE NORTHWESTERLY CORNER OF SAID 2.874 ACRE TRACT, ALSO BEING THE NORTHEASTERLY CORNER OF SAID 4.265 ACRE TRACT, SAID PIN ALSO BEING IN THE SOUTHERLY RIGHT-OF-WAY LINE OF SAID WALL STREET, AS RECORDED IN INSTRUMENT NO. 199911180[illegible];

THENCE ALONG THE NORTHERLY LINE OF SAID 2.874 ACRE TRACT. ALSO BEING THE SOUTHERLY RIGHT-OF-WAY LINE OF SAID WALL STREET THE FOLLOWING TWO COURSES:

1) NORTH 88° 49' 29" EAST A DISTANCE OF 243.49 FEET TO A ¾" IRON PIN FOUND;

2) WITH A CURVE TO THE RIGHT HAVING A RADIUS OF 270.00 FEET, A CENTRAL ANGLE OF 78° 48' 05", AN ARC LENGTH OF 368.37 FEET, A CHORD BEARING SOUTH 48° 18' 50" EAST, AND A CHORD DISTANCE OF 331.48 FEET TO THE SOUTHEASTERLY CORNER OF SAID 2.874 ACRE TRACT. ALSO BEING THE NORTHEASTERLY CORNER OF SAID 2.802 ACE TRACT;

THENCE ALONG THE EASTERLY LINE OF SAID 2.802 ACRE TRACT, ALSO BEING THE WESTERLY RIGHT-OF-WAY LINE OF SAID WALL STREET, THE FOLLOWING TWO COURSES:

1) WITH A CURVE TO THE RIGHT HAVING A RADIUS OF 270.00 FEET, A CENTRAL ANGLE OF 10° 15' 02", AN ARC LENGTH OF 48.30 FEET, A CHORD BEARING SOUTH 12° 17' 58" EAST, AND A CHORD DISTANCE OF 48.24 FEET TO A ¾" IRON PIPE FOUND;

2) SOUTH 07° 10' 20" EAST A DISTANCE OF 468.67 FEET TO THE TRUE PLACE OF BEGINNING FOR THE PARCEL HEREIN DESCRIBED.

BASIS OF BEARINGS

THE BEARINGS CONTAINED HEREIN ARE BASED ON THE OHIO STATE PLANE COORDINATE SYSTEM, OHIO SOUTH ZONE, NAD83. CONTROL FOR THE BEARINGS WAS ESTABLISHED FROM FRANKLIN COUNTY SURVEY CONTROL MONUMENTS FRANK 72 AND 38, AS ESTABLISHED BY THE FRANKLIN COUNTY ENGINEER'S OFFICE. THE BEARING FROM FRANK 72 TO 38 IS NORTH 86° 18' 48" EAST. BEARINGS ARE SHOWN TO INDICATE ANGLES ONLY.

PARCEL AREA

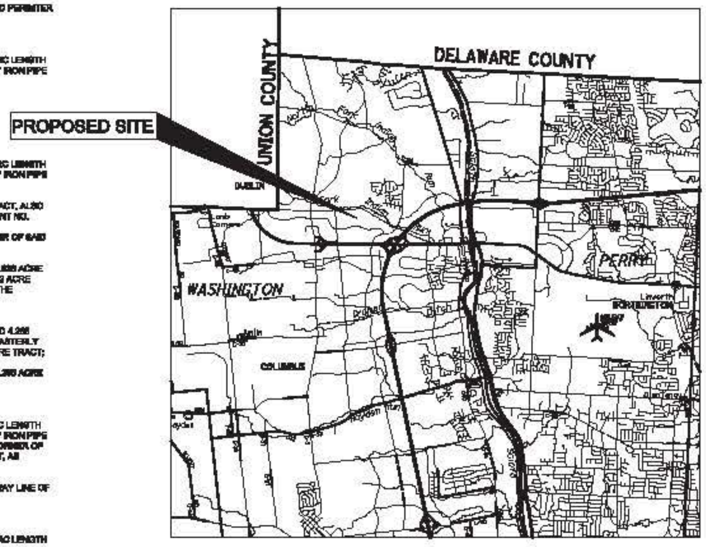
443,799 SQ. FT. OR 10.188 ACRES

ENCROACHMENTS

THERE ARE NO APPARENT ENCROACHMENTS EVIDENT ON THE SUBJECT PROPERTY.

SITE VICINITY MAP

NOT TO SCALE



UTILITY CONTACTS

CABLE:
TIME WARNER CABLE
3760 INTERCHANGE DRIVE
COLUMBUS, OH 43204
(614) 481-5262

FIBER OPTIC:
COLUMBUS FIBERNET
1600 DUBLIN ROAD
COLUMBUS, OH 43215
(614) 324-5100

TELEPHONE:
AT&T - OHIO
111 N FOURTH ST., ROOM 505
COLUMBUS, OH 43215
(614) 223-7378

CITY UTILITIES:
DIVISION OF STREETS & UTILITIES
6555 SHIER RINGS ROAD
DUBLIN, OH 43016
(614) 410-4750

NATURAL GAS:
COLUMBIA GAS OF OHIO
3550 JOHNNY APPLESEED CT.
COLUMBUS, OH 43231
(614) 818-2107

SANITARY & WATER:
CITY OF COLUMBUS
DIV. OF SEWERAGE & DRAINAGE
1250 FAIRWOOD AVE.
COLUMBUS, OH 43206
(614) 645-6056

ELECTRIC:
AMERICAN ELECTRIC POWER
850 TECH CENTER DRIVE
GAHANNA, OH 43230
(614) 883-6802

FLOODPLAIN DATA

PROPERTY LIES WITHIN ZONE X. AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN ONE FOOT OR WITH DRAINAGE AREAS LESS THAN ONE SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.

THE AREA LIES WITHIN COMMUNITY PANEL NUMBER 39049C0138K, EFFECTIVE DATE JUNE 17, 2008.

SURVEYOR'S CERTIFICATION

I HEREBY CERTIFY TO GUGGENHEIM RETAIL REAL ESTATE PARTNERS, INC., A DELAWARE CORPORATION, COMMONWEALTH LAND TITLE INSURANCE COMPANY, AND EACH OF THEIR RESPECTIVE SUCCESSORS AND ASSIGNS THAT:
(A) THIS SURVEY WAS PREPARED BY ME OR UNDER MY SUPERVISION,
(B) THE LEGAL DESCRIPTION OF THE PROPERTY AS SET FORTH HEREIN, AND THE LOCATION OF ALL IMPROVEMENTS, ENCROACHMENTS, FENCES, EASEMENTS, ROADWAYS, RIGHTS OF WAY AND SETBACK LINES WHICH ARE EITHER VISIBLE OR OF RECORD IN FRANKLIN COUNTY, OHIO (ACCORDING TO COMMITMENT FOR TITLE INSURANCE REFERENCE NUMBER 2013[illegible], DATED SEPTEMBER 30, 2013 ISSUED BY COMMONWEALTH LAND TITLE INSURANCE COMPANY), ARE ACCURATELY REFLECTED HEREON,
(C) THIS SURVEY ACCURATELY DEPICTS THE STATE OF FACTS AS THEY APPEAR ON THE GROUND,
(D) EXCEPT AS SHOWN HEREON, THERE ARE NO IMPROVEMENTS, ENCROACHMENTS, FENCES OR ROADWAYS ON ANY PORTION OF THE PROPERTY REFLECTED HEREON,
(E) THE PROPERTY SHOWN HEREON HAS ACCESS TO A PUBLICLY DEDICATED ROADWAY,
(F) ALL PUBLIC STREETS NECESSARY FOR ACCESS TO THE PROPERTY HAVE BEEN COMPLETED AND DEDICATED, AND THERE IS DIRECT ACCESS BETWEEN SUCH PUBLIC STREETS AND THE PROPERTY ALONG THE ENTIRE COMMON BOUNDARIES,
(G) THE PROPERTY IS ZONED PCD - PLANNED UNIT DEVELOPMENT,
(H) PROPERTY LIES WITHIN ZONE X. AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN ONE FOOT OR WITH DRAINAGE AREAS LESS THAN ONE SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.
(I) THE TITLE LINES AND LINE OF ACTUAL POSSESSION ARE THE SAME,
(J) ALL UTILITY SERVICES REQUIRED FOR THE OPERATION OF THE PROPERTY, EITHER ENTER THE PROPERTY THROUGH ADJOINING PUBLIC STREETS, OR THIS SURVEY SHOWS THE POINT OF ENTRY AND LOCATION OF ANY UTILITIES WHICH PASS THROUGH OR ARE LOCATED ON ADJOINING PRIVATE LAND,
(K) THIS SURVEY SHOWS THE LOCATION AND DIRECTION OF ALL STORM DRAINAGE SYSTEMS FOR THE COLLECTION AND DISPOSAL OF ALL SURFACE DRAINAGE, AND
(L) THE PROPERTY SURVEYED CONTAINS 10.188 ACRES. ANY DISCHARGE INTO STREAMS, RIVERS, OR OTHER CONVEYANCE SYSTEMS IS SHOWN ON THE SURVEY.

THE SURVEY MEASUREMENTS FOR THIS SURVEY WERE MADE IN ACCORDANCE WITH THE "MINIMUM ANGLE, DISTANCE, AND CLOSURE REQUIREMENTS FOR SURVEY MEASUREMENTS WHICH CONTROL LAND BOUNDARIES FOR ALTA/ACSM LAND TITLE SURVEYS" JOINTLY ESTABLISHED AND ADOPTED BY THE AMERICAN LAND TITLE ASSOCIATION ("ALTA") AND THE AMERICAN CONGRESS ON SURVEYING AND MAPPING ("ACSM"), AS MOST RECENTLY REVISED OR AMENDED AND MEETS THE ACCURACY REQUIREMENTS, AS DEFINED THEREIN AND INCLUDES ITEMS 1-16, INCLUSIVE, IN TABLE A THEREOF.

DATE: OCTOBER 16, 2013

KEVIN P. CARPENTER P.S. 8134
CARPENTER MARTY TRANSPORTATION
7007 DISCOVERY BOULEVARD
DUBLIN, OHIO 43017
T (614) 656-2424

ZONING INFORMATION

THE PROPERTY IS ZONED PCD: PLANNED UNIT DEVELOPMENT

SETBACKS (PER CODE)

BUILDING	EQUAL TO THE WIDTH OF THE EXISTING R/W (AT LEAST 30')
PARKING	PERMITTED TO EXTEND INTO BUILDING SETBACK NOT MORE THAN A DISTANCE EQUAL TO 40% OF THE REQUIRED BUILDING SETBACK DISTANCE (15' MINIMUM)

SURVEY SYMBOL LEGEND

	AERIAL TARGET/ HORIZ. CONTROL		1 POST SIGN		SITE LIGHT POLE		TELECOMMUNICATION POLE
	AERIAL TARGET/ VERTICAL CONTROL		1 POST SIGN (BACK TO BACK)		ROADWAY LIGHT POLE		TELECOMMUNICATION VAULT
	BENCHMARK FOUND		2 POST SIGN		MAIL BOX		TELECOMMUNICATION /LIGHT POLE
	BENCHMARK SET		2 POST SIGN (BACK TO BACK)		MONITORING WELL		TELECOMMUNICATION LIGHT/POWER POLE
	CONCRETE MONUMENT FOUND		BARBEQUE GRILL		NEWSPAPER BOX		TELECOMMUNICATION /POWER POLE
	DRILL HOLE FOUND		BUSH/SHRUB		OIL TANK		TELEPHONE (PAY)
	DRILL HOLE SET		CATCH BASIN, ROUND		OIL WELL		TELEPHONE BOOTH
	GOVERNMENT DISK FOUND		CATCH BASIN, SQUARE		PARKING METER		TELEPHONE PEDESTAL
	IRON PIN FOUND (NO I.D. CAP)		CURB INLET		POST/BOLLARD		IRRIGATION VALVE
	IRON PIN FOUND W/ I.D. CAP		ELECTRIC BOX		POWER LINE MARKER		TRAFFIC PULL-BOX
	IRON PIN SET W/ I.D. CAP		ELECTRIC JUNCTION/PULL BOX		POWER POLE		TRAFFIC SIGNAL STRAIN/SUPPORT POLE
	IRON PIPE FOUND		ELECTRIC MANHOLE		POWER/LIGHT POLE		TREE, DECIDUOUS
	IRON PIPE SET		ELECTRIC METER		RAILROAD CROSSING		TREE, EVERGREEN
	MAGNETIC NAIL FOUND		ELECTRIC VAULT		RAILROAD GATE		TREE, STUMP
	MAGNETIC NAIL SET		FIRE HYDRANT		RAILROAD SIGNAL		UNKNOWN MANHOLE
	MINE SPIKE FOUND		FLAG POLE		SANITARY LINE MARKER		UNKNOWN OBJECT
	MINE SPIKE SET		FLOOR/YARD DRAIN		SANITARY LINE VENT		UNKNOWN POLE
	MONUMENT BOX FOUND		GAS LINE MARKER		SANITARY MANHOLE		UNKNOWN VALVE
	P. K. NAIL FOUND		GAS LINE VENT		SANITARY VALVE/ CLEANOUT		UNKNOWN WELL
	RAILROAD SPIKE FOUND		GAS MANHOLE		STORM CLEANOUT		WATER GATE VALVE
	RAILROAD SPIKE SET		GAS METER		SEPTIC TANK		WATER LINE VENT
	SECTION CORNER		GAS VALVE		SIGN LUMINAIRE		WATER MANHOLE
	SECTION HALF		GAS WELL		SOIL BORING		WATER METER
	STONE FOUND		GASOLINE PUMP		STORM MANHOLE		WATER SERVICE STOP
	TACKED HUB FOUND		GUYWIRE ANCHOR		TELECOMMUNICATION LINE MARKER		IRRIGATION CONTROL VALVE
	TACKED HUB SET		LANDSCAPE ROCK		TELECOMMUNICATION MANHOLE		YARD/LANDSCAPE LIGHT

NOTE: NOT ALL SYMBOLS MAY BE USED ON THIS SURVEY

CM transportation

7007 DISCOVERY BLVD
DUBLIN, OH 43017
614.656.2424 T

CMTRAN.COM

REVISIONS

NOAH'S
FOR ALL LIFE'S EVENTS

DESIGNED BY - AMM
DRAWN BY - AMM
CHECKED BY - KPC

CM PROJECT NUMBER
CMSP0042

1 OF 2

GENERAL NOTES

A. THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THIS PLAT ARE AS OBTAINED FROM FIELD OBSERVATION, OWNER MARKING, AND OWNER PROVIDED PLANS.

B. NO OTHER ITEM IN COMMITMENT NUMBER 2013009409 AFFECTS THE SURVEY SHOWN HEREON.

C. DIRECTIONS AND DISTANCES SHOWN ON THIS SURVEY BASED ON AN ADJUSTED TRAVERSE.

D. THE PROPERTY SHOWN HEREON IS THE SAME AS THAT SHOWN IN COMMITMENT NUMBER 2013009409.

E. CERTIFICATION IS MADE TO THE ORIGINAL PURCHASER OF THE SURVEY. IT IS NOT TRANSFERABLE TO ADDITIONAL INSTITUTIONS OR SUBSEQUENT OWNERS.

F. SUBSURFACE AND ENVIRONMENTAL CONDITIONS WERE NOT EXAMINED OR CONSIDERED A PART OF THIS SURVEY.

G. ELEVATIONS ALONG CURBS ARE BOTTOM OF CURB, UNLESS NOTED OTHERWISE.

BENCHMARK DATA

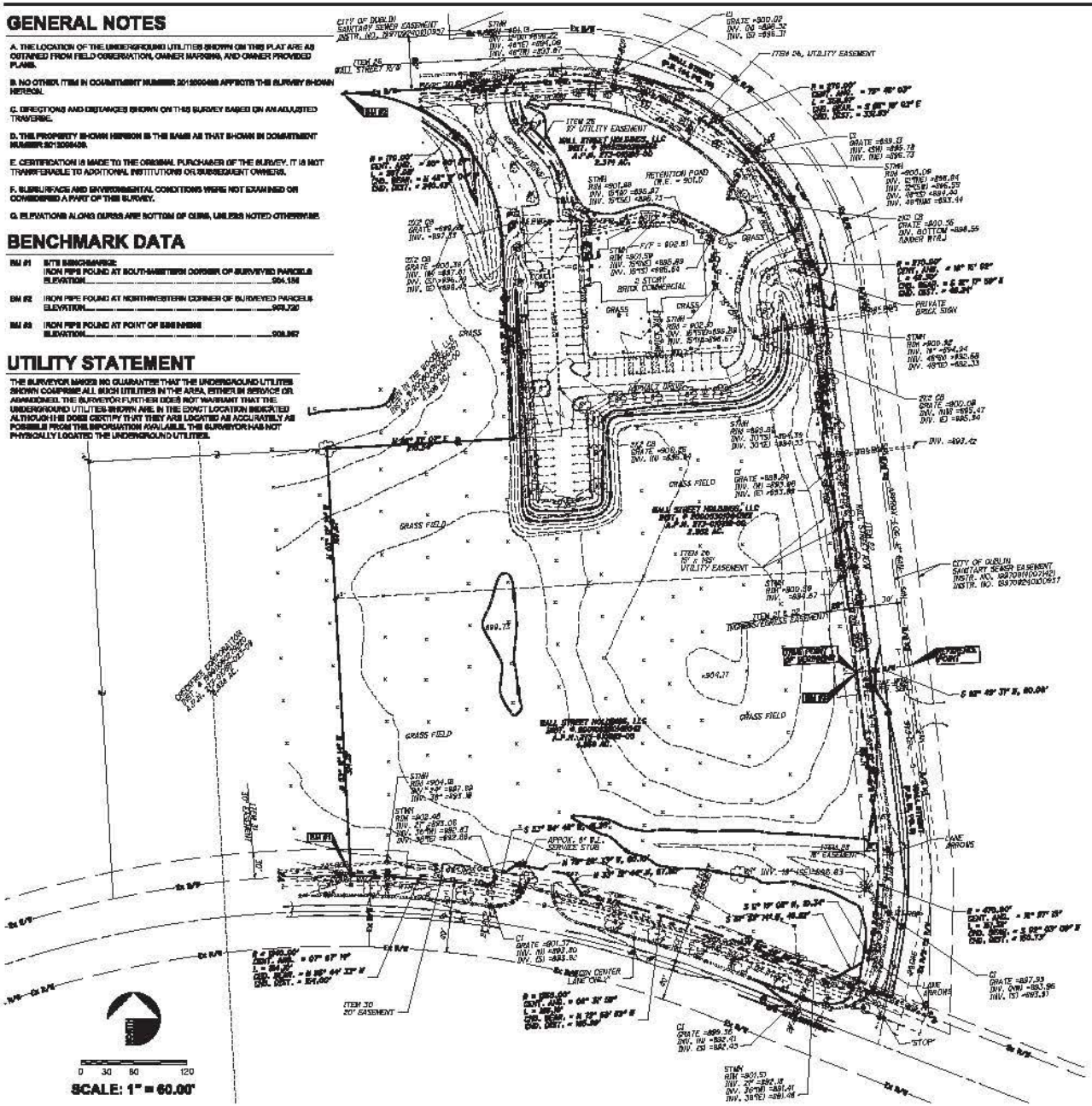
BM #1 — BTB BENCHMARK: IRON PIPE FOUND AT SOUTHWESTERN CORNER OF SURVEYED PARCELS ELEVATION 904.184

BM #2 — IRON PIPE FOUND AT NORTHWESTERN CORNER OF SURVEYED PARCELS ELEVATION 909.720

BM #3 — IRON PIPE FOUND AT POINT OF BEGINNING ELEVATION 908.867

UTILITY STATEMENT

THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE, IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.



EASEMENTS

SCHEDULE "B" ITEM	GRANTEE	DESCRIPTION	RECORDED IN	ENCUMBRANCE
17	UNKNOWN	UNRECORDED STORM SEWER EASEMENT	SURVEY DATED 1/30/1998	NO INFORMATION PROVIDED FOR REVIEW
18a	OLDE POSTE PROPERTIES	DECLARATION OF RESTRICTIONS	O.R.V. 15383, PG. A-01	BUILDING & CONSTR. RESTRICTIONS; SUBDIVISION RULES
18b	OLDE POSTE PROPERTIES	WARRANTY DEED	O.R.V. 13479, PG. B-18	SAME AS ITEM 18a ABOVE
18c	OLDE POSTE PROPERTIES, RUSCILLI CONSTR., & METATEC CORP.	FIRST AMENDMENT TO DECLARATION OF RESTRICTIONS	INSTR. NO. 199709140071419	MODIFIES RESTRICTIONS DEFINED IN O.R.V. 15383, PG. G-05 & O.R.V. 15383, PG. A-01
18d	OLDE POSTE PROPERTIES, & RUSCILLI CONSTR. CO., INC.	SECOND AMENDMENT TO DECLARATION OF RESTRICTIONS	INSTR. NO. 200009220066094	MODIFIES RESTRICTIONS DEFINED IN O.R.V. 15383, PG. A01 AND INSTR. NO. 199709140071419
19	WALL STREET HOLDINGS, LLC	INGRESS/EGRESS EASEMENT	INSTR. NO. 199811190256050	D.N.A. - WALL STREET HOLDINGS, LLC NOW OWNS EASEMENT AREA
20	THE CITY OF DUBLIN	DONATION AND DEDICATION	INSTR. NO. 199811190251555	WALL STREET RIGHT-OF-WAY
21	WALL STREET HOLDINGS, LLC	TEMPORARY INGRESS/EGRESS EASEMENT	INSTR. NO. 199811190256055	D.N.A. - WALL STREET NOW PUBLICLY DEDICATED ROADWAY
22	R.C. OLMSTEAD, INC.	INGRESS/EGRESS EASEMENT	INSTR. NO. 199811190256060	D.N.A. - WALL STREET HOLDINGS, LLC NOW OWNS EASEMENT AREA
23a	OLDE POSTE PROPERTIES	WARRANTY DEED	O.R.V. 15382, PG. G-03	ORIGINAL 115 ACRES
23b	OLDE POSTE PROPERTIES, RUSCILLI CONSTR., & METATEC CORP.	FIRST AMENDMENT TO DECLARATION OF RESTRICTIONS	INSTR. NO. 199709140071419	MODIFIES RESTRICTIONS DEFINED IN O.R.V. 15383, PG. G-05 & O.R.V. 15383, PG. A-01
24	WALL STREET HOLDINGS, LLC	LIMITED WARRANTY DEED	INSTR. NO. 200108280142042	TRANSFER OF 4.968 ACRE TRACT
25	COLUMBUS SOUTHERN POWER	EASEMENT & RIGHT-OF-WAY	INSTR. NO. 200001010176210719	AS SHOWN ON SURVEY 10' ELECTRIC EASEMENT
26	THE CITY OF DUBLIN	WALL STREET & EASEMENT DEDICATION	P.B. 134, PG. 10	AS SHOWN ON SURVEY
27	STERLING INVESTMENTS OF OHIO, INC.	MEMORANDUM OF OPTION TO PURCHASE REAL ESTATE	INSTR. NO. 201012170171782	OPTION TO PURCHASE 2.374 AC. & 2.602 AC TRACTS UNTIL 8/5/2017
28	THE CITY OF DUBLIN	WALL STREET & EASEMENT DEDICATION	P.B. 62, PG. 8	AS SHOWN ON SURVEY
29	THE CITY OF DUBLIN	DEDICATION OF VENTURE DRIVE	P.B. 66, PG. 43	D.N.A. - EASEMENTS SOUTH OF PERIMETER
30	THE CITY OF DUBLIN	PERIMETER DRIVE & EASEMENT DEDICATION	P.B. 68, PG. 51	AS SHOWN ON SURVEY
31	THE CITY OF DUBLIN	DEDICATION OF DISCOVERY BLVD., PERIMETER DR., WALL STREET & EASEMENTS	P.B. 72, PG. 79	EASEMENTS AS SHOWN ON SURVEY
32	WALL STREET HOLDINGS, LLC	USE RESTRICTION	INSTR. NO. 200108280142042	D.N.A. - RESTRICTION EXPIRED ON 8/5/2003

TITLE COMMITMENT NUMBER 2013009409

CM transportation

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REVISIONS

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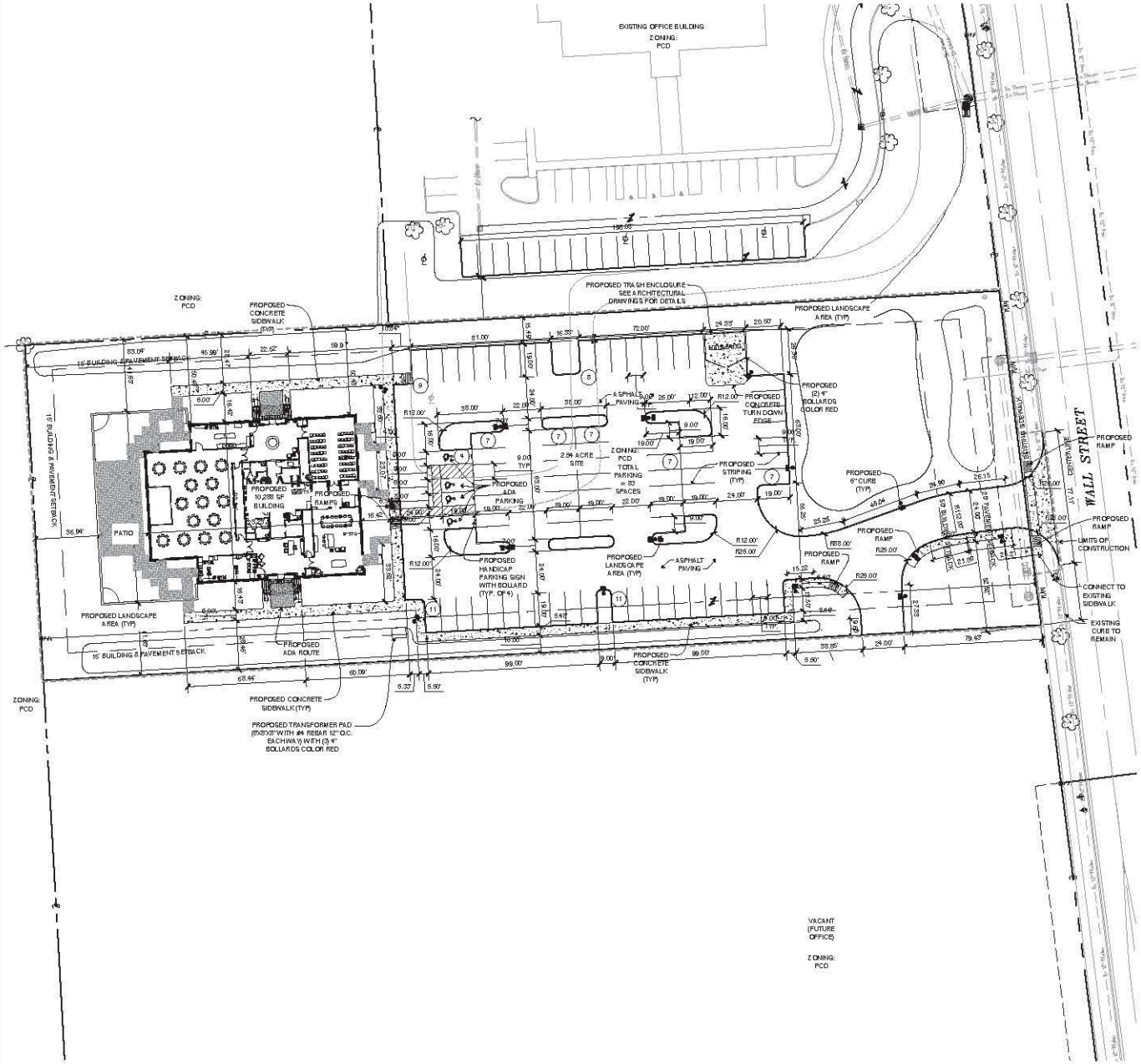
DESIGNED BY - JMM
DRAWN BY - ARW
CHECKED BY - EPC

CM PROJECT NUMBER
CM09042



SIGNATURES

APPLICANT

PLANNING AND ZONING COMMISSION SECRETARY, CITY OF DUBLIN, OHIO

DATE OF PLANNING AND ZONING COMMISSION AND CITY COUNCIL APPROVALS

0 10 20 30 60

SCALE: 1" = 30.00'

NORTH

wd

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FOR ALL LIFE'S EVENTS'

5505 WALL STREET
DUBLIN, OHIO

REVISIONS
1 10/28/13
2 11/14/13

DEVELOPMENT PLAN

DESIGNED BY - JDS
DRAWN BY - BDF
CHECKED BY - CAW
PROTOTYPE
-
STORE NUMBER
-
WD PROJECT NUMBER
MYNOA0001

STORMWATER NOTES

A. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL UTILITY SIZES, TYPES, AND LOCATIONS SHOWN ON PLANS. ALL UTILITY WORK SHALL BE IN COMPLIANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS. NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCY FOUND BETWEEN THE FIELD CONDITIONS, THESE PLANS AND OR GOVERNING REGULATIONS.

B. ALL HDPE PIPE SHALL BE MANUFACTURED IN ACCORDANCE WITH AASHTO M 294 AND M 252-07, SUCH AS ADS N-12 SMOOTH WALL HDPE OR APPROVED EQUIVALENT. ALL DRAINAGE PIPE SHALL BE HDPE UNLESS OTHERWISE NOTED ON PLANS.

C. ALL HDPE PIPE SHALL POSSESS MALE AND FEMALE ENDS TO ALLOW OVERLAPPING GASKETED PIPE JOINTS PER AASHTO M294. GASKET MATERIAL SHALL CONFORM TO ASTM F477. ALL HDPE PIPE SHALL BE CLEARLY MARKED WITH THE FOLLOWING: MANUFACTURER'S NAME, NOMINAL PIPE SIZE, AND PRODUCT/ EXTRUSION CODE.

D. ALL PIPE LENGTHS ARE APPROXIMATE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.

E. GENERAL CONTRACTOR TO MAINTAIN STORM SEWER WATER DRAINAGE THROUGH ENTIRE CONSTRUCTION PROCESS.

F. INVERTS INDICATED ON THE PLAN REGARDING THE INVERT REFERS TO THE CENTER INVERT OF THE STRUCTURE. THE CONTRACTOR SHALL ENSURE THAT A SLOPE IS PROVIDED WITHIN THE STRUCTURE TO PROMOTE POSITIVE DRAINAGE FROM THE INLET(S) TO THE OUTLET(S) OF THE STRUCTURE.

NORTH

0 15 30 60

SCALE: 1" = 30.00'

wd

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1 11/14/13

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CHECKED BY - CAW
PROTOTYPE
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STORE NUMBER
-
WD PROJECT NUMBER
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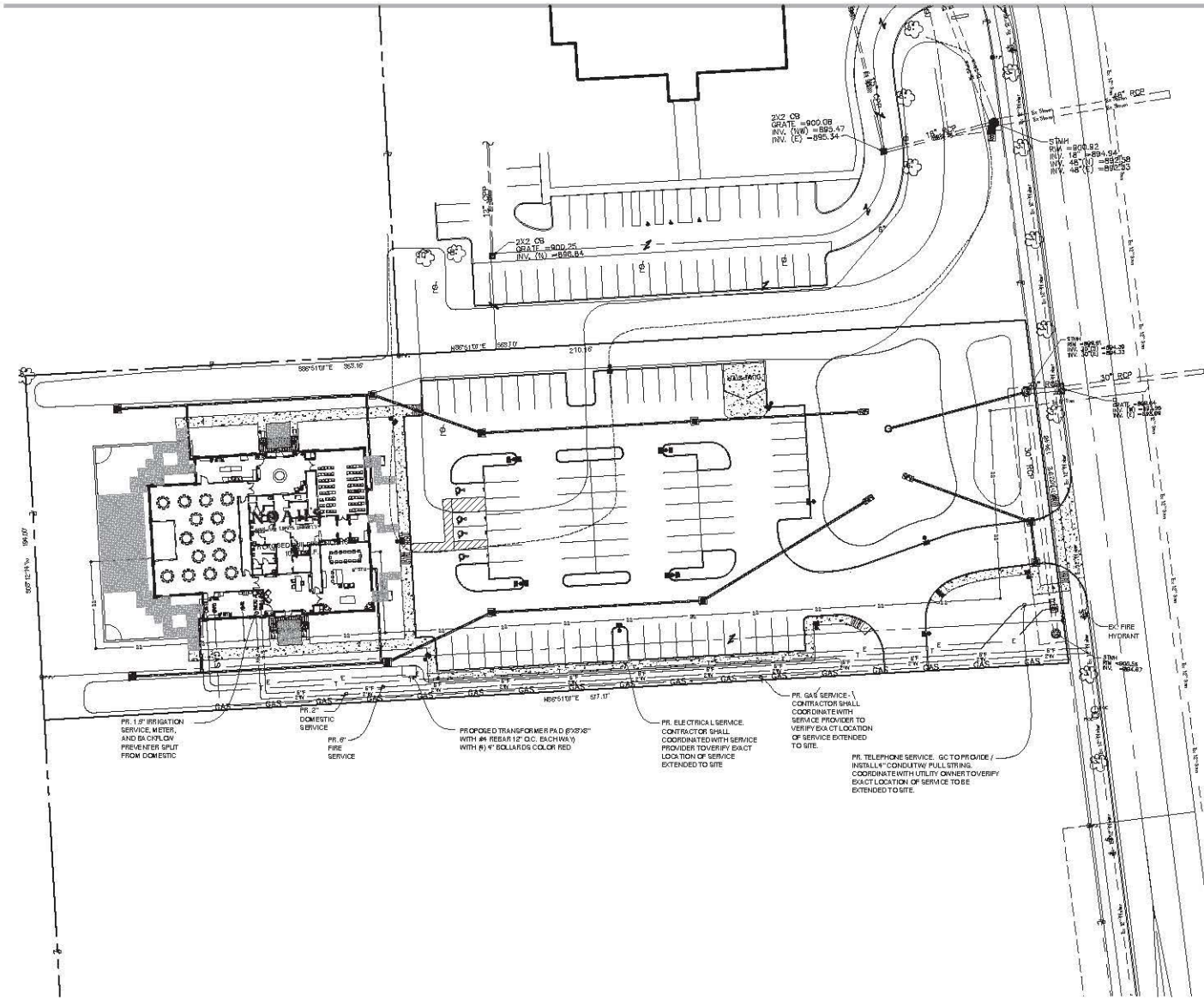
SITE GRADING & DRAINAGE PLAN



UTILITY LINE LEGEND

PROPOSED GAS:	G
PROPOSED ELECTRIC:	E
PROPOSED TELEPHONE:	T
PROPOSED DOMESTIC WATER:	2"W
PROPOSED FIRE WATER:	6"F
PROPOSED METERED WATER SERVICE:	2"MWS
PROPOSED SANITARY SEWER:	SS
PROPOSED STORM SEWER:	S
PROPOSED IRRIGATION SLEEVE:	
EXISTING WATER:	Ex Water
EXISTING GAS:	Ex Gas
EXISTING TELEPHONE:	Ex Tele
EXISTING SANITARY SEWER:	Ex San
EXISTING ELECTRIC:	Ex Elec

CALL BEFORE YOU DIG !
OHIO LAW REQUIRES EXCAVATORS TO NOTIFY THE PROTECTION SERVICE AT LEAST TWO (2) BUSINESS DAYS BUT NOT MORE THAN TEN (10) CALENDAR DAYS PRIOR TO EXCAVATION
Ohio Utilities Protection Service
www.oups.org
1-800-362-2764

SCALE: 1" = 30.00'
0 10 20 30 60
NORTH

INSPECTIONS ARE REQUIRED FOR TAPS INTO EXISTING SANITARY SEWER SYSTEM AND ARE TO BE CORE-DRILLED.

WATER METER ADDRESS:
#TBD WALL STREET

wd

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DUBLIN, OHIO

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1 11/14/13

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PROTOTYPE
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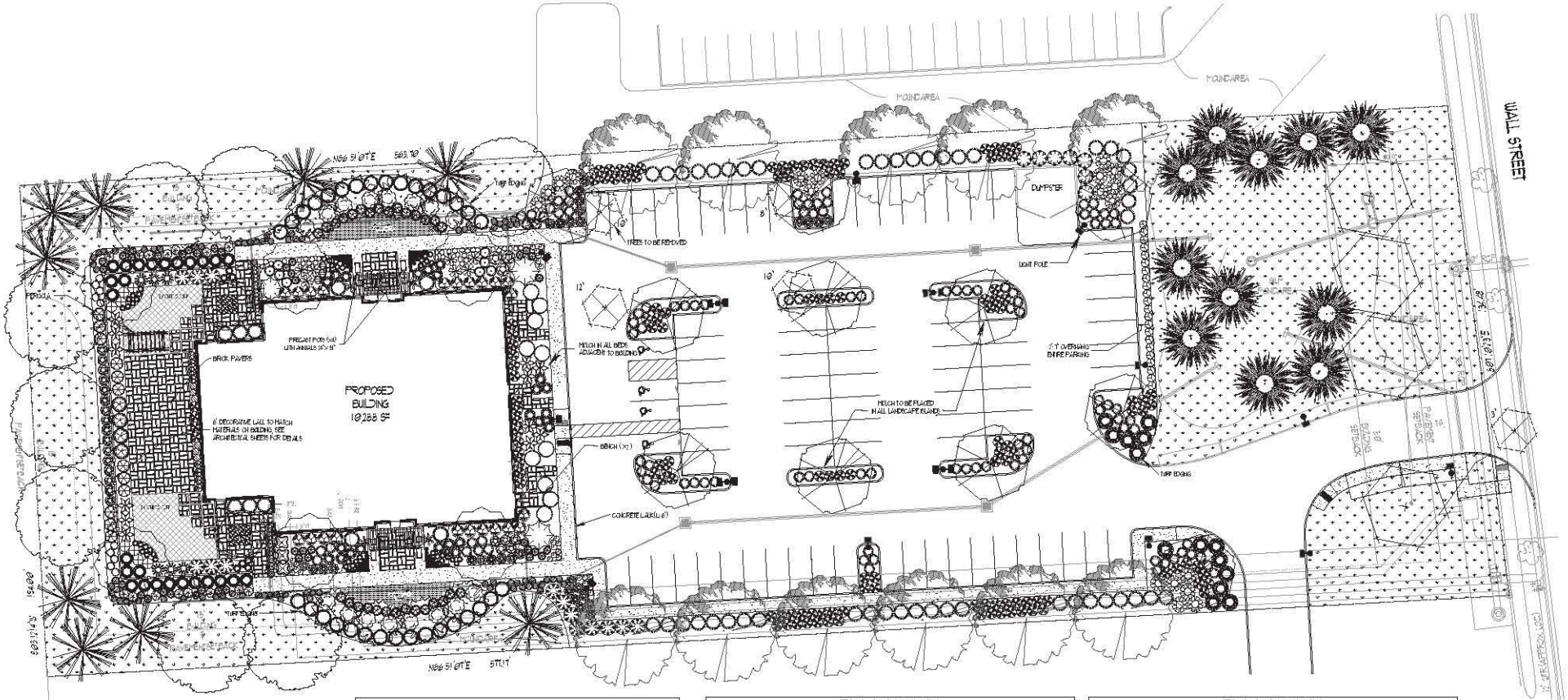
6 OF 12

SITE UTILITY PLAN



GRAPHIC SCALE: 1" = 20'-0"

DESCRIPTION		NOTES
	EDGING	
	SOD TURF	
	GRASS COVER FLOWER MIX	
	SYNTHETIC TURF ALL TURF BY PRESTIGE LANDSCAPE TECH	
	PAVER ALL PAVERS SATISFIED.COM	
	TREES TO BE REMOVED	
MULCH	DECORATIVE MULCH: HARDWOOD DARK MULCH	

NOTES:
1. SYMBOLS TAKE PRECEDENCE OVER PLANT LEGEND COUNT.
2. ALL PLANTER BEDS MUST BE SEPARATED FROM TURF AREAS BY STEEL EDGING OR EQUIVALENT.
3. ALL PLANTINGS LISTED IN THE PLANT LEGEND MUST MATCH. ANY SUBSTITUTIONS MUST BE APPROVED THROUGH THE THE OWNERS REPRESENTATIVE. ALL PLANTS MUST BE INSPECTED AT THE TIME OF DELIVERY PRIOR TO BEING PLANTED FOR IDENTIFICATION, HEALTH AND SIZE.
4. ALL PLANT CONDITIONS SHALL CONFORM TO THE AMERICAN ASSOCIATION OF NURSERYMAN STANDARDS.
5. ALL SCREEN PLANTINGS MUST BE 36" IN HEIGHT WHEN PLANTED ALONG PARKING PERIMETER.

PLANT LEGEND

	COMMON NAME	BOTANICAL NAME	SIZE	QTY
FLOWER GRASS				
	GRASS, VARIEGATED JAPANESE SEDGE	CAREX MORROWII 'AUREA-VARIEGATA'	1 GAL	79
FLOWER, PERENNIAL				
	AJUGA, BRONZE PURPLE	AJUGA	1 GAL	33
	BLEEDING HEART	DICENTRA 'LUXURIANT'	1 GAL	6
	CONEFLOWER, SUMMER	ECHINACEA 'SUMMER'	1 GAL	27
	DAYLILY	HEMEROCALLIS	1 GAL	69
	HOSTA 'FANTRIC'	HOSTA 'FANTRIC'	1 GAL	32
	RUSSIAN SAGE	PEROVSKIA ATRIPLICIFOLIA	3 GAL	19
	YARROW	ACHILLEA FILIPENDULINA	EACH	3
SHRUB, DECIDUOUS				
	ABELIA, GLOSSY	ABELIA GRANDIFLORA	5 GAL	22
	BARBERRY, GOLDEN	BERBERIS 'THUNBERGII'	5 GAL	15
	BARBERRY, ROYAL BURGANDY	BERBERIS 'THUNBERGII' GENTRY	5 GAL	39
	BEAUTYBERRY	CALLICARPA BODINIERI FIRMISION	5 GAL	14
	BLUE SPIREA	CARYOPTERIS X CLANDONENSIS 'BLUE	5 GAL	45
	BURNING BUSH	EUONYMUS ALATA	5 GAL	24
	BUTTERFLY BUSH, PURPLE	BUDDLEIA DAVIDII	5 GAL	12
	CINQUEFOIL, BUSH, RED SUNSET	POTENTILLA FRUTICOSA 'RED SUNSET'	5 GAL	23
	HYDRANGEA, BIG DADDY	HYDRANGEACEAE MACROPHYLLA 'BIG DADDY'	5 GAL	8
	HYDRANGEA, OAK LEAF	HYDRANGEA QUERCIFOLIA	5 GAL	12
	LILAC, CHARLES JOLY	SYRINGA VULGARIS 'CHARLES JOLY'	5 GAL	6
	NINEBARK, DART'S GOLD	PHYSOCARPUS OPULIFOLIUS 'NINEBARK'	5 GAL	6
	ROSE, DRIFT, PEACH	ROSA DRIFT PEACH	5 GAL	8
	ROSE, KNOCKOUT	ROSA 'RADRAZZ'	5 GAL	23
	SPIREA, ANTHONY WATERER	SPIREA BUMALDA 'ANTHONY WATERER'	5 GAL	8
	SPIREA, SNOWMOUND	SPIREA NIPPONICA	5 GAL	4
	SUMMER SWEET CLETHRA	CLETHRA ALNIFOLIA	5 GAL	16
	VIBURNUM, JUDD'S	VIBURNUM X JUDII	5 GAL	5

PLANT LEGEND

	COMMON NAME	BOTANICAL NAME	SIZE	QTY
SHRUB, EVERGREEN BROADLEAF				
	BOXWOOD, LITTLE LEAF	BUXUS MICROPHYLLA VAR. KOREANA	5 GAL	22
	COTONEASTER	COTONEASTER APICULATUS	5 GAL	38
	EUONYMUS, BIG LEAF WINTER CREEPER	EUONYMUS FORTUNEI VEGETUS	5 GAL	4
	GRAPE HOLLY, COMPACT OREGON	MAHONIA AQUIFOLIUM 'COMPACTUM'	5 GAL	29
	HOLLY, BLUE BOY	ILEX X MESERVEAE 'BLUE BOY'	5 GAL	19
	MOUNTAIN LAUREL	KALMIA LATIFOLIA	15 GAL	3
	MOUNTAIN LAUREL, ELF	KALMIA LATIFOLIA ELF	5 GAL	13
	SEA GREEN WAVE	YAXUS CUSPIDATA 'GREEN WAVE'	15 GAL	26
SHRUB, EVERGREEN CONIFER				
	ARBORVITAE, LITTLE GEM	THUJA OCCIDENTALIS 'LITTLE GEM'	5 GAL	32
	ARBORVITAE EMERALD GREEN	THUJA OCCIDENTALIS 'EMERALD GREEN'	5 GAL	7
	HOLLY, NORDIC	ILEX GLABRA 'CHAPIN'	5 GAL	11
	JUNIPER, BLUE CHIP	JUNIPERUS HORIZONTALIS 'BLUE CHIP'	5 GAL	14
	SAWARA CYPRESS	CHAMAECYPARIS PISIFERA 'GOLDEN MOPS'	3 GAL	7
	SPRUCE, ALBERTA, DWARF GLOBE	PICEA ALBERTIANA	5 GAL	6
TREE, DECIDUOUS				
	DOGWOOD, KOUSA	CORNUS KOUSA CHINENSIS	2"	2
	ELM, LACEBARK	ULMUS PARVIFOLIA	2"	11
	GUM, BLACK	NYSSA SYLVATICA	2"	4
	MAPLE, HEDGE	ACER CAMPESTRE	3"	6
	MAPLE, RED SUNSET	ACER RUBRUM 'RED SUNSET'	4"	3
	OAK, SHUMARD	QUERCUS SHUMARDII	4"	6
	SERVICEBERRY, APPLE	AMELANCHIER ARBOREA	2"	8
TREE, EVERGREEN				
	BALD CYPRESS	TAXODIUM DISTICHUM	4"	11
	JUNIPER, CHINESE	JUNIPERUS CHINENSIS	5 GAL	4
	JUNIPER, SKYROCKET	JUNIPERUS VIRGINIANA 'SKYROCKET'	6'	4
	SPRUCE, NORWAY	PICEA ABIES	6'	3

LANDSCAPE PLAN

811 Know what's below. Call before you dig.

LANDSCAPE DESIGN CONSULTANT:
NATURE'S ART
LANDSCAPE ARCHITECTURE
P.E.O. TRAN HOCK
LEED AP, ASLA
LICENSED LANDSCAPE ARCHITECT
TEL/FAX: 614-538-0120
EMAIL: PEOTRANHOCK@AOL.COM

DATE: SUBMITTAL INFO
0/20/13 PRELIMINARY

PROJECT ADDRESS:
5555 WALL STREET
DUBLIN, OH

LANDSCAPE PLAN FOR
NOAH'S OF DUBLIN
CITY OF DUBLIN, OHIO

CONTACT:
GUGGENHEIM REAL ESTATE PARTNERS, INC.
FRISCO, TX 75034
USA

Date: 10.28.13
Rev.: 00.00.00
Project No.: 4598
Drawn By: KP
Checked By:
Scale: 1" = 20'0"

PRELIMINARY LANDSCAPE PLAN

L 1
1 of 1

PLAT OF SURVEY FOR WALL STREET HOLDINGS

VIRGINIA MILITARY SURVEY #2542
CITY OF DUBLIN
FRANKLIN COUNTY
STATE OF OHIO

NORTH

0 25 50 100
SCALE: 1" = 50.00'

V.M.S. 2999
V.M.S. 2542

CHECKFREE CORPORATION
INST. # 199911050279220
A.P.N. 273-01088-023-08
2.938 AC.

30' EASEMENT
PB. 85, PG. 51

CABIN IN THE WOODS, LLC
INST. # 200804140056757
A.P.N. 273-005070-00
4.265 AC.

303.97' (DEED)
N 3°12'14" W, 289.86'

170.00' (DEED)
N 3°12'14" W, 194.00'

R = 1240.00'
Δ = 7°07'14"
L = 154.10'
CHD. BRG. = N 85°44'33" W
CHD. DIST. = 154.00'

R = 1250.00'
Δ = 7°37'29"
CHD. DIST. = 166.22'
(DEED)

40' 40'

AREA BREAKDOWN (ACRES)

TRACT (NEW)	4.958 AC. INST. # 2001062-50142042	2.802 AC. INST. # 20000030-10041125	2.374 AC. INST. # 19991119-0289558	TOTAL
	EXISTING PARCELS			
1	4.670	0.000	0.000	4.670
2	0.324	2.216	0.000	2.540
3	0.000	0.580	2.374	2.954
TOTAL	4.994 *	2.796 *	2.374 *	10.164

* AREAS SHOWN WITHIN TABLE ARE BASED ON FIELD MEASUREMENTS

R = 170.00'
Δ = 90°00'00"
CHD. DIST. = 240.42'
(DEED)

265.32' (DEED)
210.54'

230.00' (DEED)
N 3°11'19" W, 230.11'

R = 170.00'
Δ = 90°00'27"
L = 267.06'
CHD. BRG. = N 48°11'04" W
CHD. DIST. = 240.43'

243.49' (DEED)
N 86°49'26" E, 243.41'

CITY OF DUBLIN
SANITARY SEWER EASEMENT
INSTR. NO. 199709240100957

SITE

DELAWARE CO.
FRANKLIN CO.

PERRY

WORTHINGTON

VICINITY MAP
SCALE 1" = 1 MILE

TRACT 1
4.670 ACRES

TRACT 2
2.540 ACRES

TRACT 3
2.954 ACRES

WALL STREET HOLDINGS, LLC
INST. # 20010625042042
A.P.N. 273-010699-00
4.958 AC.

WALL STREET HOLDINGS, LLC
INST. # 20000301041125
A.P.N. 273-010196-00
2.802 AC.

WALL STREET HOLDINGS, LLC
INST. # 199911190289558
A.P.N. 273-010195-00
2.374 AC.

R = 470.00'
Δ = 8°31'52"
CHD. DIST. = 18.95'
(DEED)

20' EASEMENT
PB. 85, PG. 51

R = 1250.00'
Δ = 8°31'59"
L = 186.16'
CHD. BRG. = N 72°58'59" W
CHD. DIST. = 185.99'

N 86°51'07" E, 577.17'
S 86°51'07" W, 577.17'

N 86°51'07" E, 563.70'
S 86°51'07" W, 353.18'

R = 270.00'
Δ = 86°00'05"
L = 267.06'
CHD. BRG. = S 50°10'32" E
CHD. DIST. = 368.28'

UTIL. EASEMENT
PB. 104, PG. 10

(A) S 11°19'05" W, 10.34'
10.33' (DEED)

(B) S 61°23'14" W, 45.82'
45.96' (DEED)

(C) N 33°12'44" W, 27.00'
26.99' (DEED)

(D) N 79°26'33" W, 60.10'
60.00' (DEED)

(E) S 53°54'46" W, 41.26'
26.99' (DEED)

PERIMETER DR.

P.B. 85, PG. 51, 52, & 53

N 68°40'55" W, 113.67'
114.22' (DEED)

BASIS OF BEARING

THE BEARINGS CONTAINED HEREIN ARE BASED ON THE OHIO STATE PLANE COORDINATE SYSTEM, OHIO SOUTH ZONE, NAD83. CONTROL FOR THE BEARINGS WAS ESTABLISHED FROM FRANKLIN COUNTY SURVEY CONTROL MONUMENTS FRANK 72 AND 3E, AS ESTABLISHED BY THE FRANKLIN COUNTY ENGINEER'S OFFICE. THE BEARING FROM FRANK 72 TO 3E IS NORTH 82° 16' 48" EAST. BEARINGS ARE SHOWN TO INDICATE ANGLES ONLY.

P.O.B.

N 11°19'05" E
10.68'

R = 470.00'
Δ = 18°29'34"
CHD. DIST. = 151.04'
(DEED)

R = 470.00'
Δ = 18°27'13"
L = 151.38'
CHD. BRG. = S 2°03'08" W
CHD. DIST. = 150.72'

R = 500.00'
Δ = 18°29'34"
L = 161.38'
CHD. BRG. = N 2°04'18" E
CHD. DIST. = 160.68'

15' EASEMENT
PB. 92, PG. 8

281.24' (DEED)
S 7°10'29" E, 256.90'

(91.73')

N 7°10'29" W, 256.90'
P.B. 92, PG. 8

T.P.O.B. TRACT 1

T.P.O.B. TRACT 2

T.P.O.B. TRACT 3

15' UTIL. EASEMENT
PB. 104, PG. 10

319.61' (DEED)
S 7°10'29" E, 194.48'

N 7°10'29" W, 194.48'

S 7°10'29" E, 149.46'

CITY OF DUBLIN
1.804 ACRES
INST. #199911190289555

WALL ST.

30' 30'

(F) S 82°49'31" W, 30.00'

(G) S 82°49'31" W, 30.00'

CITY OF DUBLIN
SANITARY SEWER EASEMENT
INSTR. NO. 199708140071421

MONUMENT LEGEND

1 1/4" IRON PIPE FND. "BIRD & BULL"

6" TREE

5/8" X 30" IRON PIN SET W/ YELLOW PLASTIC CAP STAMPED "CM TRANS 8124"

CMtransportation
7007 DISCOVERY BLVD • DUBLIN, OH 43017
614.656.2424 • CMTRAN.COM

P:\CIV\MP\CIVMP0642_Noch_Dublin\00001\row\sheets\Survey Plat.dgn 10/2/2013 10:09:08 AM CMT005

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NOAH'S
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5505 WALL STREET
DUBLIN, OHIO

REVISIONS

DESIGNED BY - JDS
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CHECKED BY - CAW
PROTOTYPE
-
STORE NUMBER
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WD PROJECT NUMBER
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BUILDING ELEVATION - EAST

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CHECKED BY - CAW
PROTOTYPE
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STORE NUMBER
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WD PROJECT NUMBER
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10 OF 12

BUILDING ELEVATION - SOUTH

wd

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WD PROJECT NUMBER
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BUILDING ELEVATION - NORTH

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WD PROJECT NUMBER
MYNOA0001

12 OF 12

BUILDING ELEVATION - WEST

Preliminary Stormwater Management Report

Noahs - Dublin
Wall Street
Dublin, Ohio

December 19, 2013

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7007 DISCOVERY BLVD
DUBLIN, OH 43017
WDPARTNERS.COM
PROJECT NUMBER: MYNOA0001

Colleen Rezabek (PE# E-57088)

contents

1 Project Description

a. Background

b. Stormwater Mgmt. – Existing Conditions

c. Stormwater Mgmt. – Proposed Conditions

d. Design Criteria and Methods

2 Storm Sewer Design Calculations

a. Results

3 Water Quality Calculations

4 Exhibits

a. Drainage Plans

b. Storm Sewer Design & Analysis

c. Runoff Calculations

d. Water Quality Design

e. Charts, Tables & Graphs

Project Description

Background

The subject property is situated on the west side of Wall Street, north of Perimeter Drive. Current development on the site consists of an undeveloped lot with a small section of existing parking for the adjacent property. Proposed improvements at the site include the construction of a 10,288 square foot conference center, associated parking and detention pond. In addition, the existing parking area on the site will be removed and additional parking will be constructed on the adjacent property.

Stormwater Management – Existing Conditions

Stormwater runoff from the existing site currently sheet flows overland to the east side of the site to an existing catch basin along Wall Street. The runoff continues in a 30” RCP under Wall Street to an existing retention pond. There are no storm sewer or detention facilities currently in place on site.

Stormwater Management – Proposed Conditions

Proposed improvements will not impact the general topography of the existing site. The site will continue to fall to the east side. Stormwater will be collected by a series of catch basins around the building and throughout the parking area. Collected runoff will drain through the interconnected 12” and 15" HDPE storm pipes to a detention pond located on the northeast side of the site. The runoff will then be conveyed through the detention pond, designed with a forebay and other required water quality components. The outlet structure in the pond has been designed so that it will provide a controlled release into a proposed 12” HDPE pipe. The stormwater will then travel through a proposed 12” HDPE pipe to an existing manhole, which will convey the runoff under Wall Street to an existing retention pond.

Design Criteria and Methods

The City of Dublin’s Stormwater Management Design Manual, dated June 2013, was used as the basis for all calculations and analysis.

The pre and post developed stormwater runoff was generated using the SCS method. According to the USDA Natural Resources Conservation Service, the soils for the site were Type C/D. Therefore, according to the Soil Conservation Service, a runoff curve number of 80 was used for landscaped (grassy) areas and a runoff curve number of 98 was used for impervious surfaces.

Rainfall depths were found using the rainfall depths from the NOAA Atlas 14, Volume 2, Version 3.0 on page 2-5, see Table 1 below.

Table 1 Rainfall Depths (39.972 N, 83.01 W)

Depth, inches						
1-yr	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr
2.20	2.63	3.24	3.74	4.44	5.02	5.63

These values along with the runoff coefficients were used to determine the pre-developed and post-developed volumes of runoff for the 1 year, 24 hours storm. These volumes were then compared to determine the critical storm.

The calculated pre-developed 1-year, 24-hour storm runoff volume was 6,861 ft^3 and the calculated post-developed 1-year, 24-hour storm runoff volume was 11,138 ft^3.

The following equation was used to determine the critical storm.

(Post-Pre)/Pre x 100 = Percent of Increase in Runoff Volume = Critical Storm
(11,138-6,861)/6,861 x 100 = 62%

Table 2 Critical Storm Determination

If the Percent of increase in runoff volume is		The critical storm runoff rate will be limited to:
Equal to or greater than	And less than	
--	10	1 year
10	20	2 year
20	50	5 year
50	100	10 year
100	250	25 year
250	500	50 year

Upon calculation, the 10-year storm was determined to be the critical storm. See calculations in the appendix.

Based on information provided by the City of Dublin Engineering Department, the site is located in the South Fork Indian Run Watershed, sub-basin 1220. According to the South Fork Indian Run Watershed Release Rate Requirements, sub-basin's release rate is 0.0 cfs/ac. Noted in the requirements, in the case of 0.0 cfs/ac release rate, design based on a default value of 0.01 cfs/ac.

Table 3 Release Rate Requirements

City of Dublin Stormwater Master Plan South Fork Indian Run Watershed Release Rate Requirements														
Design Storm (cfs/ac)														
Sub-basin	1		2		5		20		25		50		100	
1220	1	0.0	1	0.0	2	0.1	5	0.2	10	0.4	19	0.7	31	1.1

Note:
1) When zero is encountered for a release rate, use a default value of 0.01.

Based on the requirements, the allowable release rate for the critical storm is 0.01 cfs/ac x 2.22 ac = **0.022 cfs**

An outlet structure with an orifice and overflow was designed for the detention pond on site. An orifice plate was sized to restrict the flow out of the pipe. While recognizing the requirements set forth in the Stormwater Master Plan, it was unfeasible to size the orifice to release 0.022 cfs. The chances of blockage with an orifice less than 0.5” were highly probably and the modelling software used was unable to compute with such a small size. In order to prevent clogging of the outlet, the orifice was sized to be 3”. While using a 3” orifice allows more flow to leave the site than 0.022 cfs, it is still far below the pre-developed flows from the site, see Table 4 below.

TABLE 4: Discharge to existing storm sewer

Storm Event	Pre-Developed Runoff (cfs)	Post-Developed Runoff (cfs)
1-year	1.492	0.438
2-year	2.168	0.473
5-year	3.201	0.514
10-year	4.091	0.572
25-year	5.387	1.904
50-year	6.489	3.798
100-year	7.664	5.660

WD Partners hopes the city will take into consideration the issues with constructability and potential for blockage with such a small release rate and orifice size and make an exception to the rules.

Storm Sewer Design Calculations

All storm pipes have been designed at a minimum of 2 feet per second and for the 10-year frequency event at full flow capacity. Calculations for pipe capacities have been included in the Report Exhibits.

Water Quality Design Calculations

The post-developed water quality calculations were based on Dublin's Stormwater Management Design Manual. Per the Stormwater Runoff Quality Requirements, the design water quality volume for all stormwater control measures shall be the runoff from the first ¾" of rainfall of each storm event. Stormwater enters the detention pond and travels through a forebay and other required water quality components, treating the first ¾" of runoff. Water Quality calculations have been included in the Report Exhibits.

Water Quality Volume:

WQ_v (ac-ft) = C * (P/12) * A

Where: C = runoff quality coefficient (refer to OEPA Permit # OHC000004 for values)

or use the equation:

$C = 0.858i^3 – 0.78i^2 + 0.774i + 0.04$

Where i = fraction of post-construction impervious surface = 61%

C = (0.858)(.61^3) – (0.774)(.61^2) + (0.774)(.61) + 0.04

C = 0.42

P = 0.75 precipitation depth (inches)

A = area tributary to the basin (acres)

WQ_v = 0.42 * (.75/12) * 2.22

WQ_v = 0.058 ac-ft

Extended Detention Volume = 0.75 * WQ_v = 0.044 ac-ft

Sediment Storage Volume = 0.2 * WQ_v = 0.12 ac-ft

Forebay/Micropool Volume (each) = 0.1 * 0.75 * WQ_v = 0.004 ac-ft

Exhibits

Drainage Plans

Storm Sewer Design & Analysis

MY NOAHS
DUBLIN, OH
MYNOA0001

by: wda2872
date: 10/22/2013
checked: wda###

rational method drainage areas and runoff coefficients

pre-developed

	description		area (S.F.)	area (Ac.)	C	CA
AREA #1P - WEST	pre-developed site					
		pervious	85970.2864	1.97	0.3	0.59
		impervious	0	0.00	0.9	0.00
			85970.2864	1.97	0.30	0.59
AREA #2P - NORTH	pre-developed site					
		pervious	2216.472	0.05	0.3	0.02
		impervious	5464.2578	0.13	0.9	0.11
			7680.7298	0.18	0.73	0.13
AREA #1P - NORTHEAST	pre-developed site					
		pervious	11728.5027	0.27	0.3	0.08
		impervious	0	0.00	0.9	0.00
			11728.5027	0.27	0.30	0.08
AREA #2P - SOUTHEAST	pre-developed site					
		pervious	5260.3217	0.12	0.3	0.04
		impervious	0	0.00	0.9	0.00
			5260.3217	0.12	0.30	0.04
	total site tributary area		**110639.8**	**2.54**	**0.33**	**0.84**

post-developed

	description		area (S.F.)	area (Ac.)	C	CA
AREA #1 -	Area to CB1					
		pervious	3241.89	0.07	0.30	0.02
		impervious	8897.60	0.20	0.90	0.18
			12139.48	0.28	0.74	0.21
AREA #2 -	Area to CB2					
		pervious	11938.05	0.27	0.30	0.08
		impervious	10243.63	0.24	0.90	0.21
			22181.67	0.51	0.58	0.29
AREA #3 -	Area to CB3					
		pervious	3264.44	0.07	0.30	0.02
		impervious	8207.67	0.19	0.90	0.17
			11472.11	0.26	0.73	0.19
AREA #4 -	Area to CB4					
		pervious	4842.33	0.11	0.30	0.03
		impervious	9036.48	0.21	0.90	0.19
			13878.80	0.32	0.69	0.22
AREA #5 -	Area to CB5					
		pervious	3060.15	0.07	0.30	0.02
		impervious	1692.19	0.04	0.90	0.03
			4752.35	0.11	0.51	0.06
AREA #6 -	Area to CB6					
		pervious	2387.21	0.05	0.30	0.02
		impervious	2453.65	0.06	0.90	0.05
			4840.86	0.11	0.60	0.07
AREA #7 -	Area to YD7					
		pervious	2274.05	0.05	0.30	0.02
		impervious	4255.43	0.10	0.90	0.09
			6529.48	0.15	0.69	0.10
AREA #8 -	Area to YD8					
		pervious	3045.66	0.07	0.30	0.02
		impervious	4576.72	0.11	0.90	0.09
			7622.37	0.17	0.66	0.12
AREA #9 -	Area to YD9					
		pervious	1997.84	0.05	0.30	0.01
		impervious	4252.98	0.10	0.90	0.09
			6250.82	0.14	0.71	0.10
AREA #10 -	Area to YD10					
		pervious	2507.82	0.06	0.30	0.02
		impervious	4545.51	0.10	0.90	0.09
			7053.33	0.16	0.69	0.11
	total site tributary area		**96721.28**	**2.22**	**0.66**	**1.47**

MY NOAHS
DUBLIN, OH
MYNOA0001

by: wda2872
date: 10/22/2013
checked: wda###

storm sewer sizing

Struc. ID	Area		Runoff Coefficients			Time		10-yr Design		PIPE DATA								STRUCTURE DATA		
	Trib (Ac.)	Total (Ac.)	C	C x A (Ac.)	∑ CA (Ac.)	Incr. (min.)	Total (min.)	Rainfall Intens. (in/hr)	Dischg Q (cfs)	Dia. (in.)	Length (ft.)	Slope (%)	Veloc. (fps)	Q_{full} (cfs)	% Full (%)	Flow Line Elevation OUT	Flow Line Elevation IN	Top of Casting
CB10	0.15	0.15	0.69	0.10	0.10	10	10	5.58	0.58	Pipe Material: HDPE n= 0.012						900.08		902.05
										12	144	0.50	3.47	2.73				
										Run Label: PIPE A					21%			
CB9	0.17	0.32	0.66	0.12	0.22	0.69	10.69	5.45	1.19	Pipe Material: HDPE n= 0.012						899.36	899.36	901.69
										12	65	0.50	3.47	2.73				
										Run Label: PIPE D					44%			
CB8	0.26	0.59	0.73	0.19	0.41	0.31	11.00	5.39	2.21	Pipe Material: HDPE n= 0.012						899.04	899.04	900.66
										12	120	0.50	3.47	2.73				
										Run Label: PIPE E					81%			
CB7	0.32	0.91	0.69	0.22	0.63	0.58	11.58	5.28	3.33	Pipe Material: HDPE n= 0.012						898.19	898.44	900.67
										15	93	0.74	4.91	6.02				
										Run Label: PIPE F					55%			
HW6		0.91			0.63	0.32	11.89	5.23	3.30								897.50	
CB5	0.14	0.14	0.71	0.10	0.10	10	10	5.58	0.57	Pipe Material: HDPE n= 0.012						900.05		902.05
										12	144	0.50	3.47	2.73				
										Run Label: PIPE L					21%			
CB4	0.16	0.31	0.69	0.11	0.21	0.69	10.69	5.45	1.16	Pipe Material: HDPE n= 0.012						899.33	899.33	901.36
										12	65	0.50	3.47	2.73				
										Run Label: PIPE J					42%			
CB3	0.28	0.58	0.74	0.21	0.42	0.31	11.00	5.39	2.26	Pipe Material: HDPE n= 0.012						899.01	899.01	900.67
										12	119	0.50	3.47	2.73				
										Run Label: PIPE I					83%			
CB2	0.51	1.09	0.58	0.29	0.71	0.57	11.57	5.28	3.77	Pipe Material: HDPE n= 0.012						898.16	898.41	900.67
										15	105	0.50	4.03	4.95				
										Run Label: PIPE H					76%			
HW1		1.09			0.71	0.43	12.01	5.21	3.71								897.64	
CB13	0.11	0.11	0.51	0.06	0.06	10	10	5.58	0.31	Pipe Material: HDPE n= 0.012						897.48		899.48
										12	23	0.50	3.47	2.73				
										Run Label: PIPE N					11%			
CB12	0.11	0.22	0.60	0.07	0.12	0.11	10.11	5.56	0.68	Pipe Material: HDPE n= 0.012						897.37	897.37	899.48
										12	72	0.50	3.47	2.73				
										Run Label: PIPE O					25%			
HW11		0.22			0.12	0.35	10.46	5.49	0.68								897.01	

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DUBLIN, OH
MYNOA0001

by: wda2872
date: 10/22/2013
checked: wda###

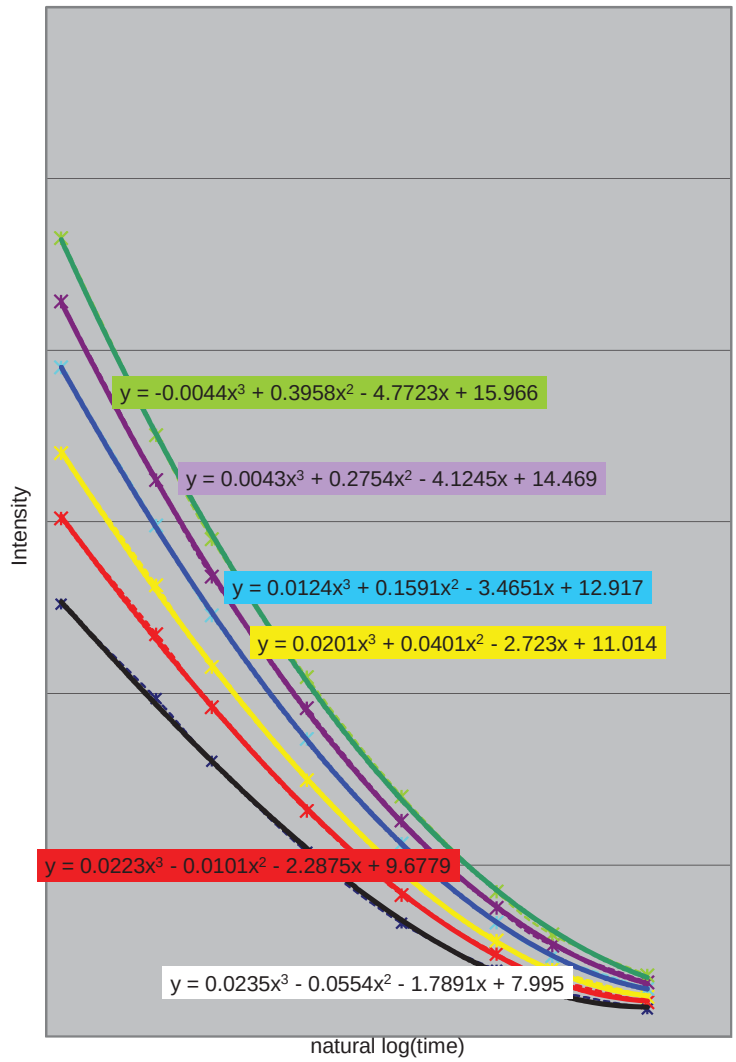
intensity-duration-frequency rainfall data

Table values as provided by: NOAA Atlas 14, Volume 2, Version 3

NOAA Atlas 14, Volume 2,

Time (min)	*ln(time) (x)*	2-yr Intensity (in/hr)	5-yr Intensity (in/hr)	10-yr Intensity (in/hr)	25-yr Intensity (in/hr)	50-yr Intensity (in/hr)	100-yr Intensity (in/hr)
5	*1.61*	5.04	6.04	6.80	7.80	8.57	9.31
10	*2.30*	3.94	4.69	5.26	5.96	6.49	7.01
15	*2.71*	3.21	3.84	4.31	4.91	5.36	5.80
30	*3.40*	2.15	2.63	2.99	3.47	3.83	4.19
60	*4.09*	1.32	1.65	1.90	2.25	2.52	2.80
120	*4.79*	0.77	0.97	1.12	1.33	1.50	1.69
180	*5.19*	0.54	0.68	0.79	0.94	1.06	1.19
360	*5.89*	0.32	0.40	0.46	0.56	0.63	0.71

Plotted IDF Trendlines



Calculated Intensity Coefficients

$$I = ax^3 + bx^2 + cx + d$$

2-year
a = 0.0383
b = -0.02345
c = -1.223
d = 7.9481

5-year
a = 0.042
b = -0.2635
c = -1.3527
d = 9.0477

10-year
a = 0.0432
b = -0.2675
c = -1.5169
d = 9.9668

25-year
a = 0.0411
b = -0.2312
c = -1.8619
d = 11.255

50-year
a = 0.0379
b = -0.1881
c = -2.1649
d = 12.263

100-year
a = 0.0327
b = -0.1237
c = -2.5276
d = 13.303

Runoff Calculations

Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	1.492	2	734	6,861	------	------	------	EXISTING CONDITIONS
2	SCS Runoff	4.279	2	720	11,138	------	------	------	PROPOSED CONDITIONS - 1YR
3	SCS Runoff	1.826	2	720	4,776	------	------	------	HW11
4	SCS Runoff	2.101	2	720	5,468	------	------	------	HW12
5	SCS Runoff	0.358	2	720	930	------	------	------	HW13
6	Combine	4.286	2	720	11,174	3, 4, 5	------	------	SCS COMBINE HYDROGRAPH
7	Reservoir	0.438	2	754	11,171	6	898.56	4,910	NOAHS ROUTING

Hydrograph Report

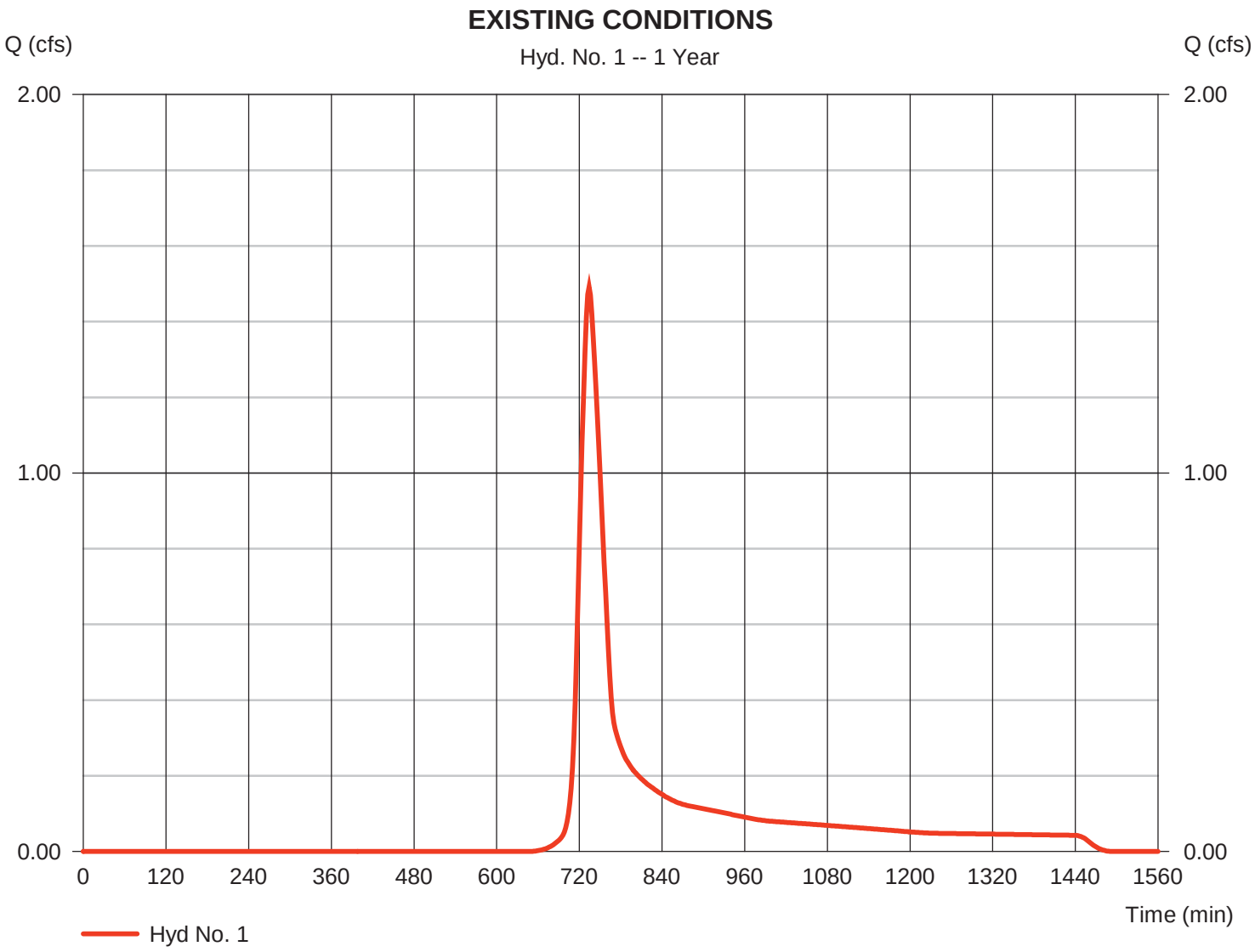
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25 Thursday, Dec 19, 2013

Hyd. No. 1

EXISTING CONDITIONS

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.492 cfs
Storm frequency	=	1 yrs	Time to peak	=	734 min
Time interval	=	2 min	Hyd. volume	=	6,861 cuft
Drainage area	=	2.540 ac	Curve number	=	81*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	32.70 min
Total precip.	=	2.20 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.410 x 80) + (0.130 x 98)] / 2.540



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	2.168	2	734	9,673	------	------	------	EXISTING CONDITIONS
2	SCS Runoff	5.483	2	720	14,370	------	------	------	PROPOSED CONDITIONS - 1YR
3	SCS Runoff	2.317	2	720	6,111	------	------	------	HW11
4	SCS Runoff	2.692	2	720	7,055	------	------	------	HW12
5	SCS Runoff	0.474	2	720	1,230	------	------	------	HW13
6	Combine	5.484	2	720	14,396	3, 4, 5	------	------	SCS COMBINE HYDROGRAPH
7	Reservoir	0.473	2	760	14,393	6	899.15	6,625	NOAHS ROUTING

Hydrograph Report

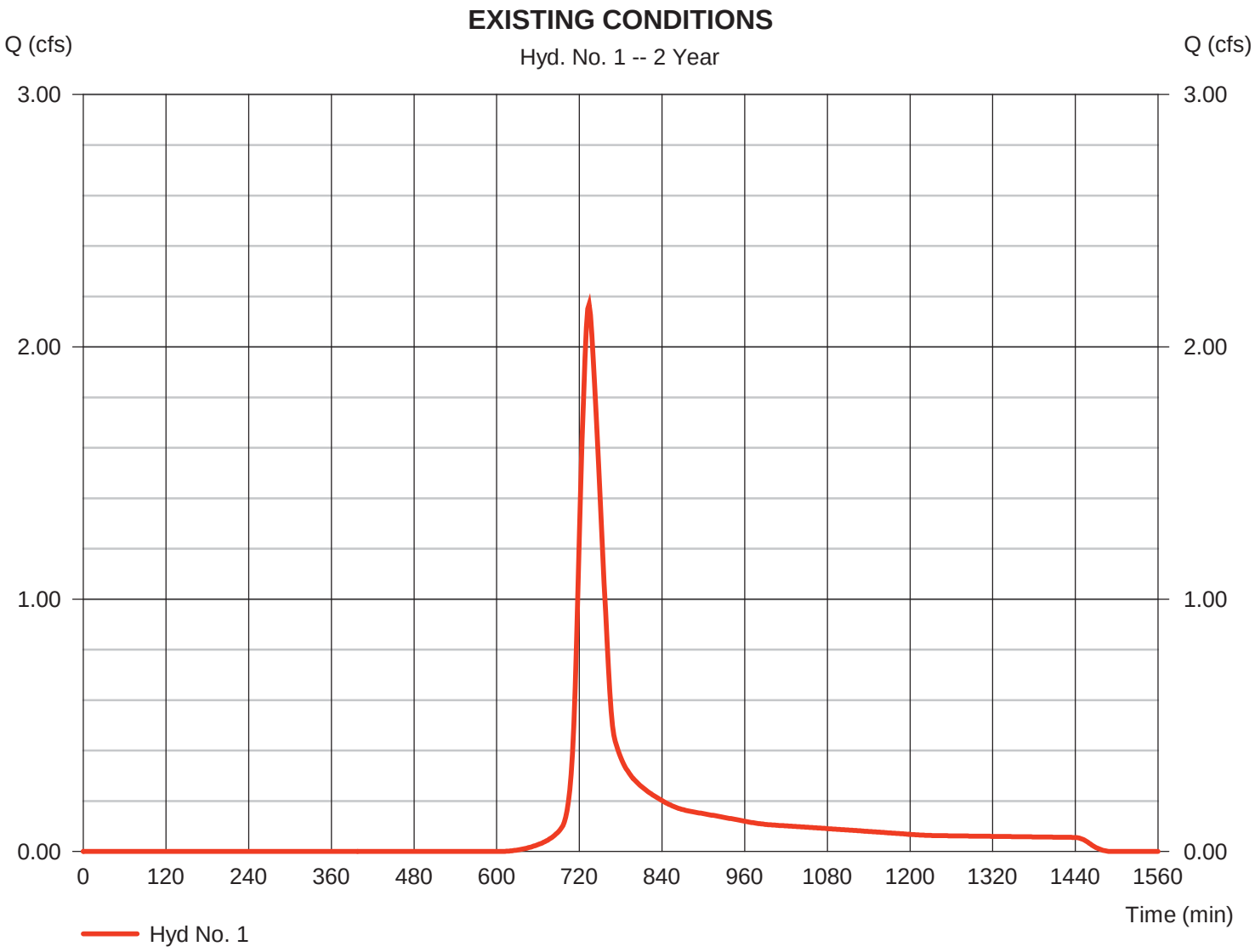
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25 Thursday, Dec 19, 2013

Hyd. No. 1

EXISTING CONDITIONS

Hydrograph type	= SCS Runoff	Peak discharge	= 2.168 cfs
Storm frequency	= 2 yrs	Time to peak	= 734 min
Time interval	= 2 min	Hyd. volume	= 9,673 cuft
Drainage area	= 2.540 ac	Curve number	= 81*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 32.70 min
Total precip.	= 2.63 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(2.410 x 80) + (0.130 x 98)] / 2.540



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	3.201	2	734	14,008	------	------	------	EXISTING CONDITIONS
2	SCS Runoff	7.203	2	720	19,079	------	------	------	PROPOSED CONDITIONS - 1YR
3	SCS Runoff	3.015	2	720	8,048	------	------	------	HW11
4	SCS Runoff	3.537	2	720	9,368	------	------	------	HW12
5	SCS Runoff	0.642	2	720	1,674	------	------	------	HW13
6	Combine	7.194	2	720	19,090	3, 4, 5	------	------	SCS COMBINE HYDROGRAPH
7	Reservoir	0.514	2	772	19,087	6	899.86	9,230	NOAHS ROUTING

Hydrograph Report

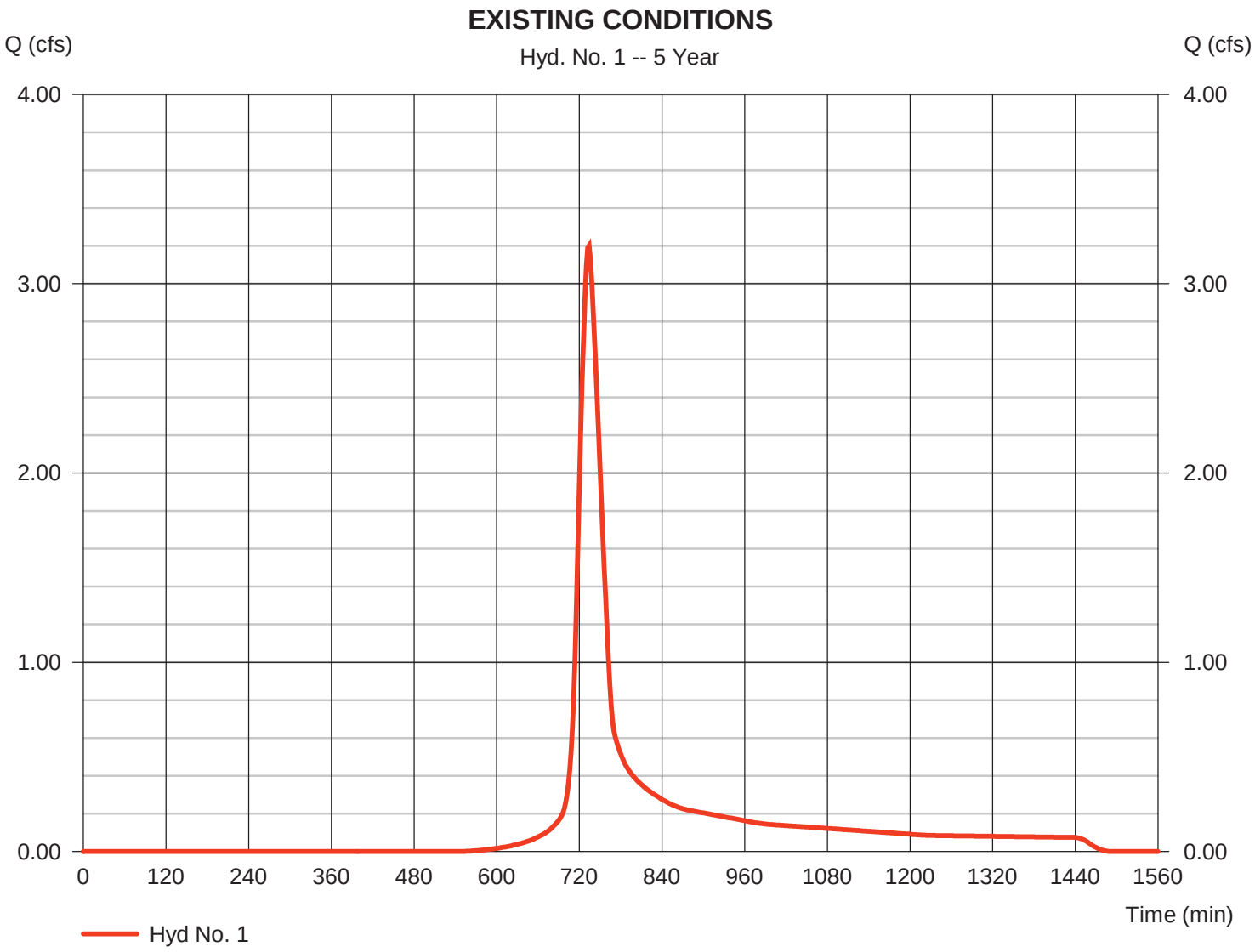
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25 Thursday, Dec 19, 2013

Hyd. No. 1

EXISTING CONDITIONS

Hydrograph type	= SCS Runoff	Peak discharge	= 3.201 cfs
Storm frequency	= 5 yrs	Time to peak	= 734 min
Time interval	= 2 min	Hyd. volume	= 14,008 cuft
Drainage area	= 2.540 ac	Curve number	= 81*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 32.70 min
Total precip.	= 3.24 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(2.410 x 80) + (0.130 x 98)] / 2.540



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	4.091	2	734	17,782	------	------	------	EXISTING CONDITIONS
2	SCS Runoff	8.614	2	720	23,012	------	------	------	PROPOSED CONDITIONS - 1YR
3	SCS Runoff	3.586	2	720	9,659	------	------	------	HW11
4	SCS Runoff	4.229	2	720	11,299	------	------	------	HW12
5	SCS Runoff	0.781	2	720	2,049	------	------	------	HW13
6	Combine	8.596	2	720	23,007	3, 4, 5	------	------	SCS COMBINE HYDROGRAPH
7	Reservoir	0.572	2	776	23,004	6	900.36	11,449	NOAHS ROUTING

Hydrograph Report

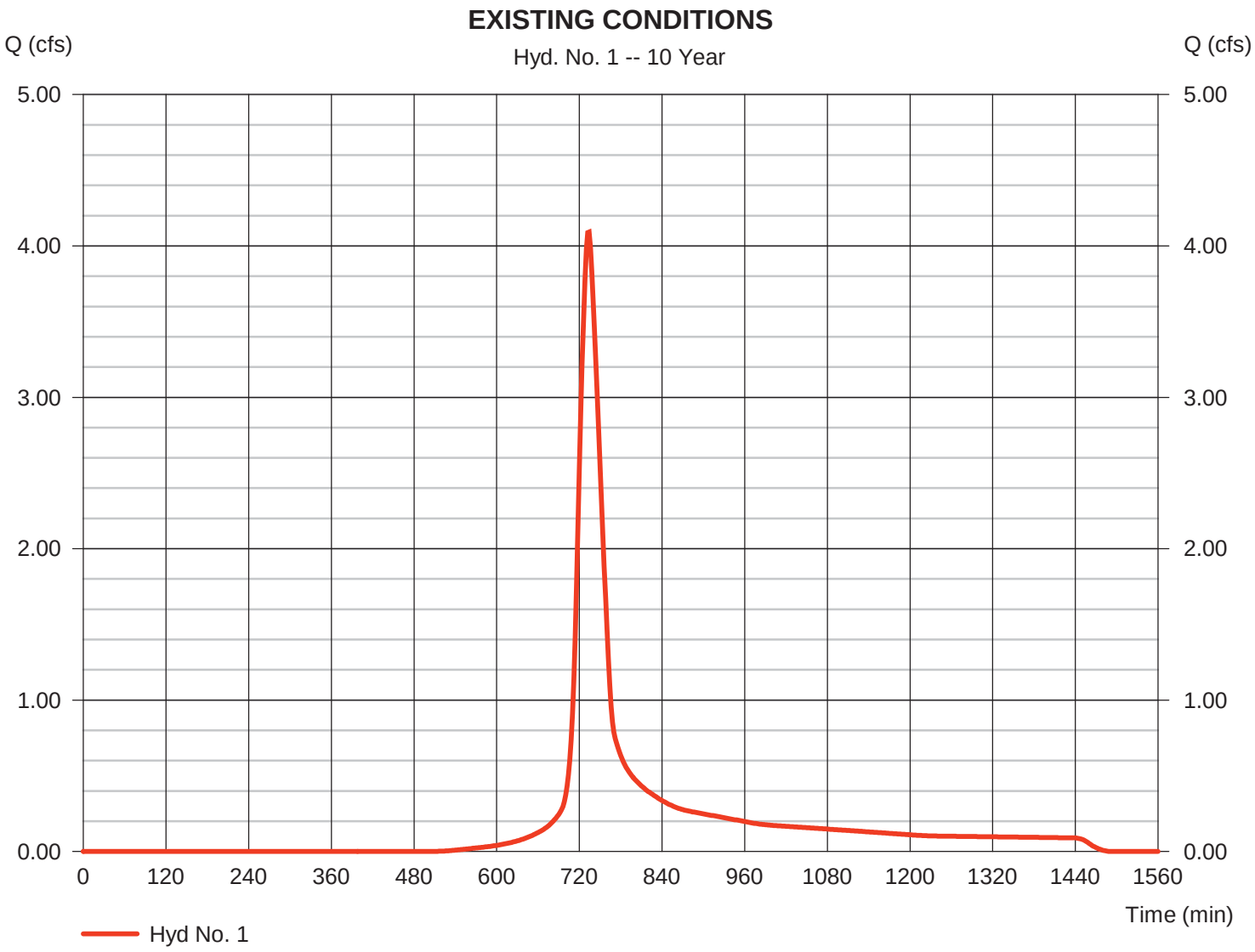
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25 Thursday, Dec 19, 2013

Hyd. No. 1

EXISTING CONDITIONS

Hydrograph type	=	SCS Runoff	Peak discharge	=	4.091 cfs
Storm frequency	=	10 yrs	Time to peak	=	734 min
Time interval	=	2 min	Hyd. volume	=	17,782 cuft
Drainage area	=	2.540 ac	Curve number	=	81*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	32.70 min
Total precip.	=	3.74 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.410 x 80) + (0.130 x 98)] / 2.540



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	5.387	2	732	23,304	------	------	------	EXISTING CONDITIONS
2	SCS Runoff	10.58	2	720	28,589	------	------	------	PROPOSED CONDITIONS - 1YR
3	SCS Runoff	4.381	2	720	11,939	------	------	------	HW11
4	SCS Runoff	5.196	2	720	14,037	------	------	------	HW12
5	SCS Runoff	0.977	2	720	2,586	------	------	------	HW13
6	Combine	10.55	2	720	28,562	3, 4, 5	------	------	SCS COMBINE HYDROGRAPH
7	Reservoir	1.904	2	736	28,559	6	900.70	13,069	NOAHS ROUTING

Hydrograph Report

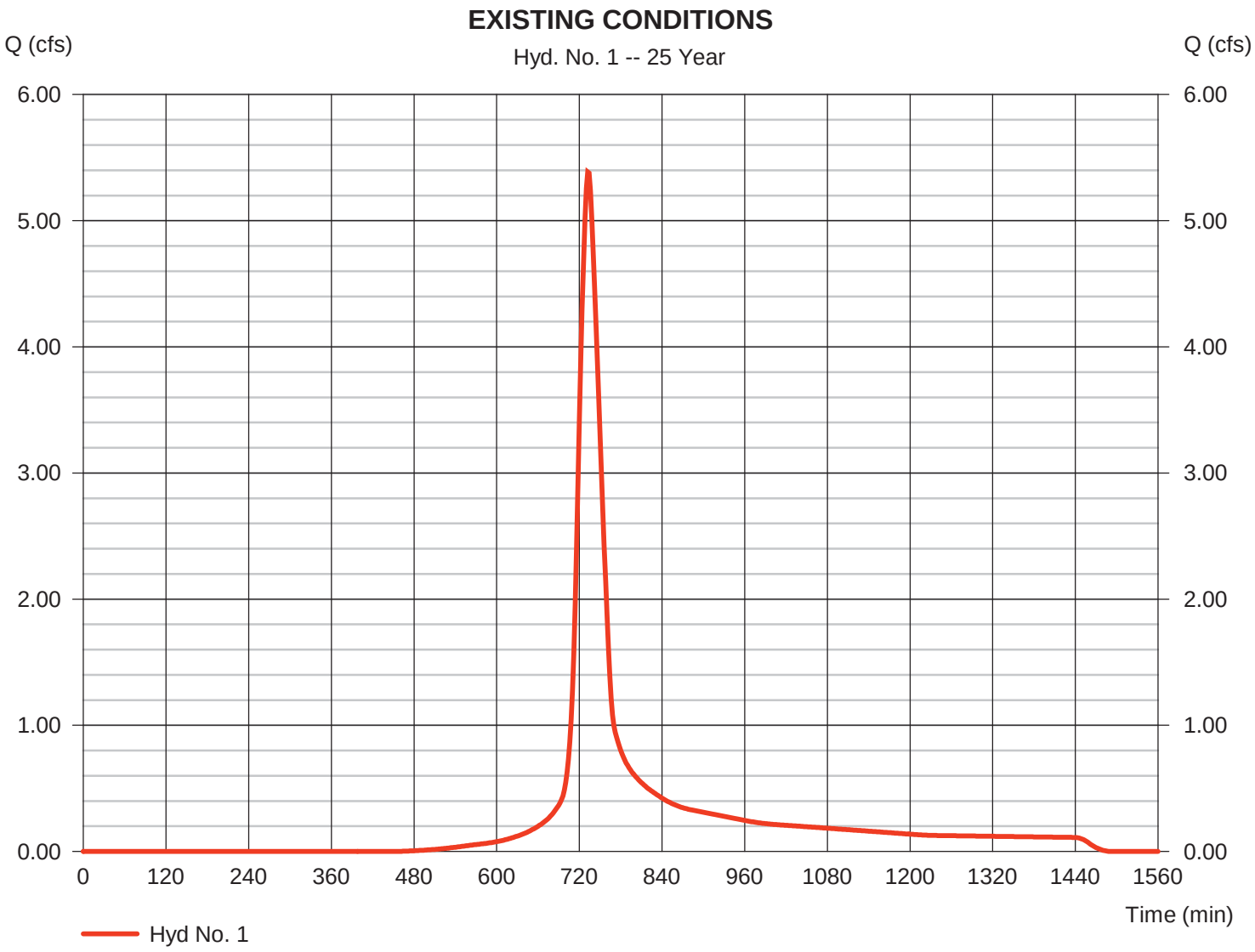
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25 Thursday, Dec 19, 2013

Hyd. No. 1

EXISTING CONDITIONS

Hydrograph type	= SCS Runoff	Peak discharge	= 5.387 cfs
Storm frequency	= 25 yrs	Time to peak	= 732 min
Time interval	= 2 min	Hyd. volume	= 23,304 cuft
Drainage area	= 2.540 ac	Curve number	= 81*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= TR55	Time of conc. (Tc)	= 32.70 min
Total precip.	= 4.44 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

* Composite (Area/CN) = [(2.410 x 80) + (0.130 x 98)] / 2.540



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	6.489	2	732	28,034	------	------	------	EXISTING CONDITIONS
2	SCS Runoff	12.21	2	720	33,254	------	------	------	PROPOSED CONDITIONS - 1YR
3	SCS Runoff	5.037	2	720	13,843	------	------	------	HW11
4	SCS Runoff	5.994	2	720	16,328	------	------	------	HW12
5	SCS Runoff	1.139	2	720	3,037	------	------	------	HW13
6	Combine	12.17	2	720	33,208	3, 4, 5	------	------	SCS COMBINE HYDROGRAPH
7	Reservoir	3.798	2	732	33,205	6	900.97	14,340	NOAHS ROUTING

Hydrograph Report

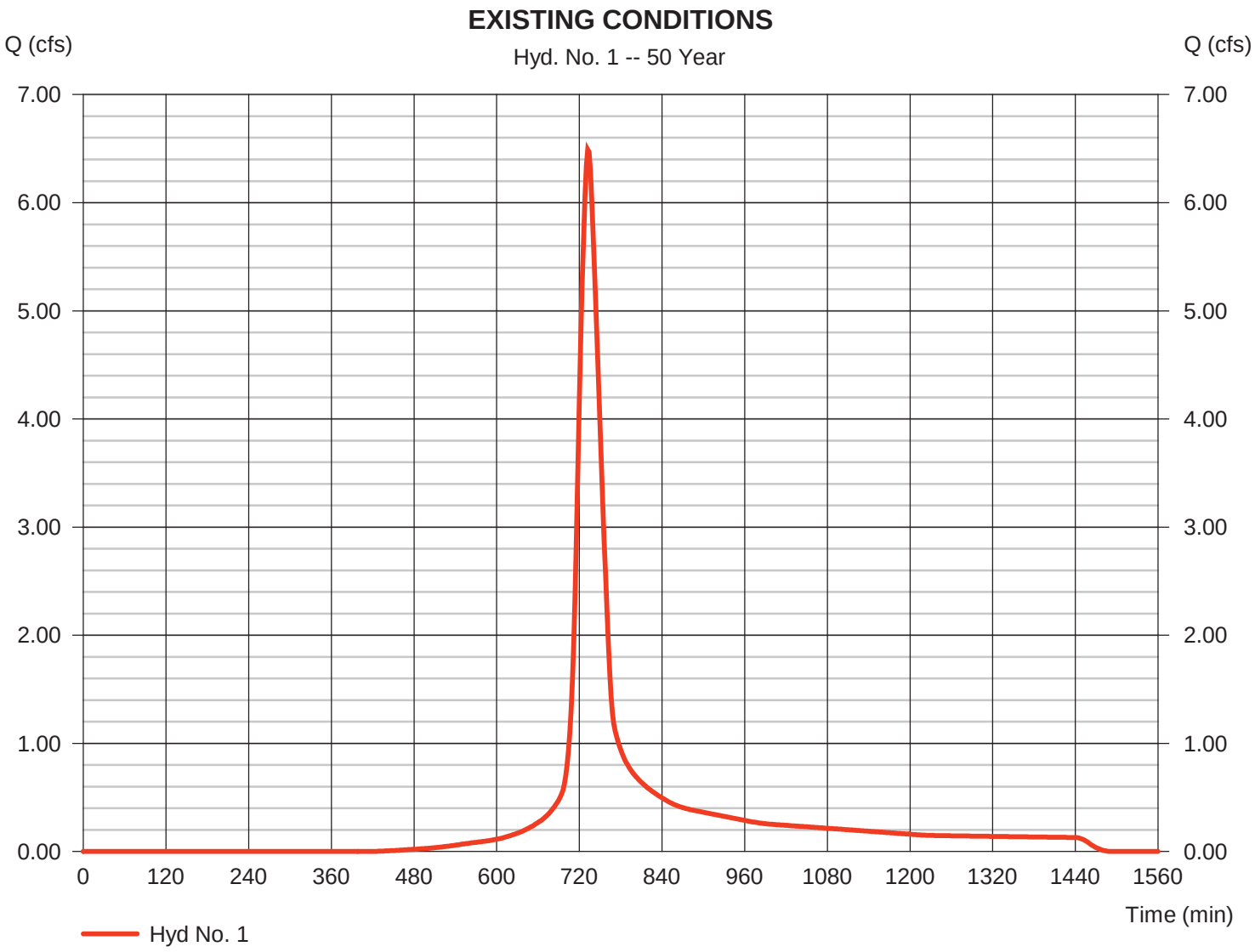
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25 Thursday, Dec 19, 2013

Hyd. No. 1

EXISTING CONDITIONS

Hydrograph type	=	SCS Runoff	Peak discharge	=	6.489 cfs
Storm frequency	=	50 yrs	Time to peak	=	732 min
Time interval	=	2 min	Hyd. volume	=	28,034 cuft
Drainage area	=	2.540 ac	Curve number	=	81*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	32.70 min
Total precip.	=	5.02 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.410 x 80) + (0.130 x 98)] / 2.540



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	7.664	2	732	33,124	------	------	------	EXISTING CONDITIONS
2	SCS Runoff	13.91	2	720	38,191	------	------	------	PROPOSED CONDITIONS - 1YR
3	SCS Runoff	5.723	2	720	15,855	------	------	------	HW11
4	SCS Runoff	6.829	2	720	18,751	------	------	------	HW12
5	SCS Runoff	1.309	2	720	3,517	------	------	------	HW13
6	Combine	13.86	2	720	38,123	3, 4, 5	------	------	SCS COMBINE HYDROGRAPH
7	Reservoir	5.660	2	730	38,120	6	901.19	15,577	NOAHS ROUTING

Hydrograph Report

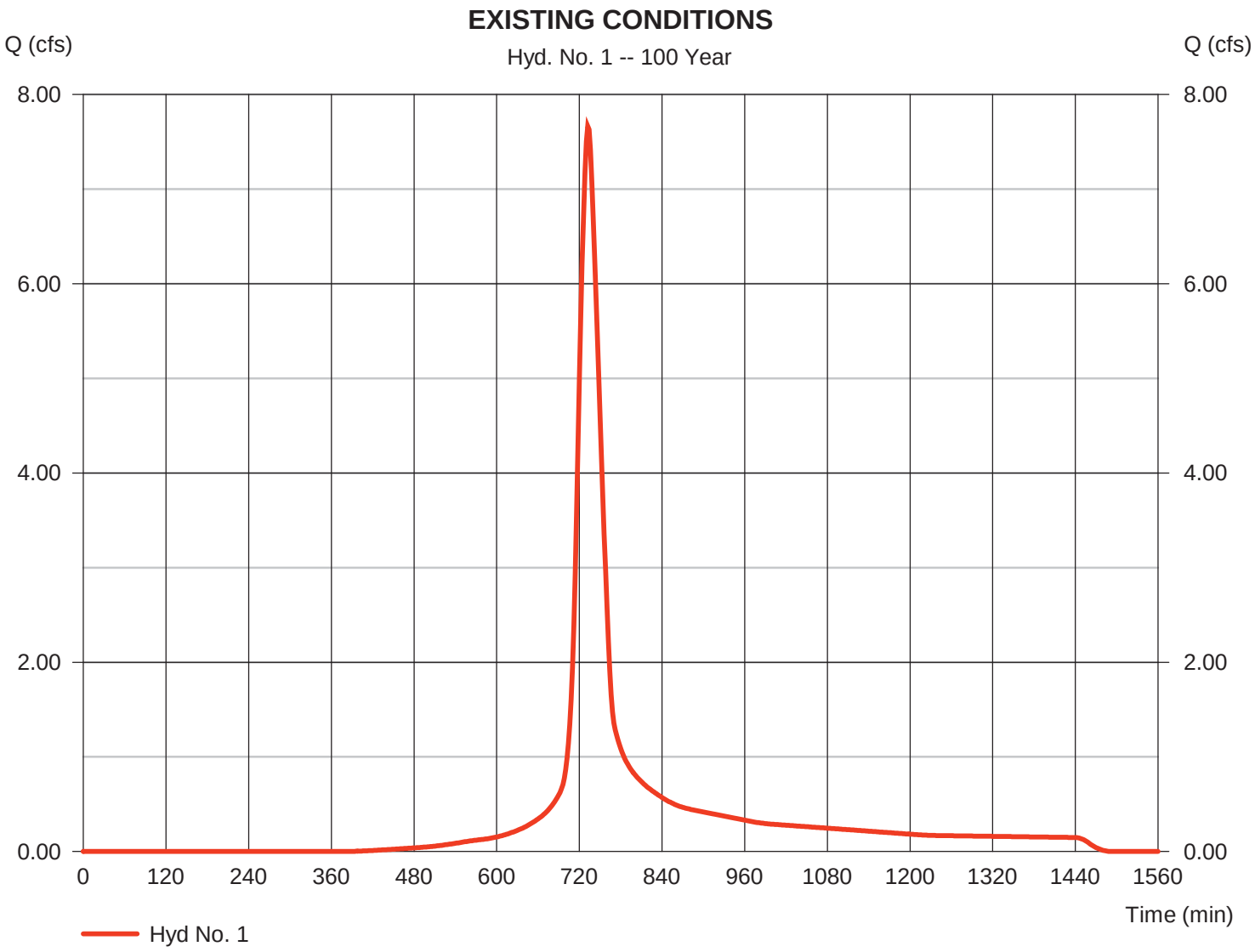
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25 Thursday, Dec 19, 2013

Hyd. No. 1

EXISTING CONDITIONS

Hydrograph type	=	SCS Runoff	Peak discharge	=	7.664 cfs
Storm frequency	=	100 yrs	Time to peak	=	732 min
Time interval	=	2 min	Hyd. volume	=	33,124 cuft
Drainage area	=	2.540 ac	Curve number	=	81*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	TR55	Time of conc. (Tc)	=	32.70 min
Total precip.	=	5.63 in	Distribution	=	Type II
Storm duration	=	24 hrs	Shape factor	=	484

* Composite (Area/CN) = [(2.410 x 80) + (0.130 x 98)] / 2.540



Hydraflow Rainfall Report

Return Period (Yrs)	Intensity-Duration-Frequency Equation Coefficients (FHA)			
	B	D	E	(N/A)
1	0.0000	0.0000	0.0000	--------
2	54.4818	10.2000	0.8751	--------
3	0.0000	0.0000	0.0000	--------
5	53.7547	9.3000	0.8219	--------
10	53.7091	8.7000	0.7901	--------
25	50.1717	7.5000	0.7370	--------
50	47.4734	6.6000	0.6992	--------
100	44.4926	5.7000	0.6608	--------

File name: NOAA_DUBLIN_OH_IDF.IDF

Intensity = B / (Tc + D)^E

Return Period (Yrs)	Intensity Values (in/hr)											
	5 min	10	15	20	25	30	35	40	45	50	55	60
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	5.04	3.93	3.24	2.76	2.41	2.15	1.94	1.77	1.63	1.51	1.41	1.32
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	6.04	4.72	3.90	3.35	2.94	2.63	2.38	2.18	2.02	1.88	1.75	1.65
10	6.79	5.31	4.40	3.79	3.34	2.99	2.72	2.49	2.31	2.15	2.02	1.90
25	7.80	6.09	5.06	4.36	3.86	3.47	3.16	2.92	2.71	2.53	2.38	2.25
50	8.55	6.66	5.54	4.79	4.24	3.83	3.50	3.23	3.01	2.82	2.66	2.52
100	9.29	7.21	6.01	5.21	4.63	4.19	3.84	3.56	3.32	3.12	2.95	2.80

Tc = time in minutes. Values may exceed 60.

Precip. file name: P:\CO\SPD\NB\SPDNB0019_TN_Lebanon_100230\04-Civil\DesignData\Storm\Nashville Precip.pcp

Storm Distribution	Rainfall Precipitation Table (in)							
	1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
SCS 24-hour	2.20	2.63	0.00	3.24	3.74	4.44	5.02	5.63
SCS 6-Hr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-1st	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-3rd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-4th	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-Indy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Custom	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Water Quality Design

Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2010 by Autodesk, Inc. v9.25

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	0.594	2	722	1,644	------	------	------	Water Quality

Charts, Tables & Graphs

Soil Map—Franklin County, Ohio
(Noah's Site - Dublin, Ohio)

Map Scale: 1:957 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 10 20 40 60

Feet: 0 45 90 180 270

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Franklin County, Ohio
Survey Area Data: Version 10, Mar 16, 2012

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 27, 2012—Mar 10, 2012

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Franklin County, Ohio (OH049)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
CrA	Crosby silt loam, 0 to 2 percent slopes	1.1	34.4%
Ko	Kokomo silty clay loam	2.0	65.6%
Totals for Area of Interest		**3.1**	**100.0%**

Franklin County, Ohio

CrA—Crosby silt loam, 0 to 2 percent slopes

Map Unit Setting

Elevation: 600 to 1,200 feet
M l precipitation: 35 to 45 inches
Mean annual air temperature: 50 to 55 degrees F
Frost-free period: 140 to 180 days

Map Unit Composition

Crosby and similar soils: 85 percent
M t

Description of Crosby

Setting

Landform: Till plains
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Loamy till

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 12 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Available water capacity: Moderate (about 8.5 inches)

Interpretive groups

Farmland classification: Prime farmland if drained
Land capability (nonirrigated): 2w
Hydrologic Soil Group: C/D

Typical profile

0 to 9 inches: Silt loam
9 to 36 inches: Silty clay loam
36 to 70 inches: Loam

Minor Components

Kokomo

Percent of map unit: 8 percent
Landform: Depressions

Celina

Percent of map unit: 7 percent
Landform: Till plains, moraines

Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear

Data Source Information

Soil Survey Area: Franklin County, Ohio
Survey Area Data: Version 10, Mar 16, 2012

Franklin County, Ohio

Ko—Kokomo silty clay loam

Map Unit Setting

Elevation: 600 to 1,000 feet
Mean annual precipitation: 35 to 45 inches
Mean annual air temperature: 48 to 55 degrees F
Frost-free period: 140 to 180 days

Map Unit Composition

Kokomo and similar soils: 85 percent
Minor components: 15 percent

Description of Kokomo

Setting

Landform: Depressions
Parent material: Silty and clayey till

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 35 percent
Available water capacity: High (about 9.2 inches)

Interpretive groups

Farmland classification: Prime farmland if drained
Land capability (nonirrigated): 2w
Hydrologic Soil Group: C/D

Typical profile

0 to 9 inches: Silty clay loam
9 to 43 inches: Silty clay loam
43 to 70 inches: Clay loam

Minor Components

Crosby

Percent of map unit: 8 percent
Landform: Till plains
Down-slope shape: Linear
Across-slope shape: Convex

Celina

Percent of map unit: 7 percent
Landform: Till plains, moraines

Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear

Data Source Information

Soil Survey Area: Franklin County, Ohio
Survey Area Data: Version 10, Mar 16, 2012

City of Dublin
Stormwater Master Plan
South Fork Indian Run Watershed Release Rate Requirements

		Design Storm													
		1		2		5		10		25		50		100	
Sub-Basin	Area (Acres)	Peak Flow (CFS)	Rate (CFS/Ac)	Peak Flow (CFS)	Rate (CFS/Ac)	Peak Flow (CFS)	Rate (CFS/Ac)	Peak Flow (CFS)	Rate (CFS/Ac)	Peak Flow (CFS)	Rate (CFS/Ac)	Peak Flow (CFS)	Rate (CFS/Ac)	Peak Flow (CFS)	Rate (CFS/Ac)
1070	1.7	1	0.8	2	1.0	2	1.3	3	1.6	4	2.1	5	2.8	6	3.6
1080	2.9	1	0.5	2	0.6	2	0.7	3	0.9	4	1.3	5	1.8	7	2.4
1090	2.6	2	0.6	2	0.7	3	1.0	3	1.2	4	1.6	6	2.2	7	2.8
1100	3.0	0	0.1	0	0.1	0	0.2	1	0.3	2	0.5	3	0.9	4	1.5
1110	1.9	1	0.6	1	0.7	2	0.9	2	1.1	3	1.4	4	2.0	5	2.6
1120	3.1	1	0.5	2	0.6	3	0.8	3	1.1	5	1.5	6	2.1	9	2.8
1130	19.7	3	0.2	4	0.2	5	0.3	8	0.4	14	0.7	23	1.2	34	1.7
1140	6.1	1	0.2	1	0.2	2	0.3	2	0.3	3	0.5	5	0.8	7	1.1
1150	21.0	6	0.3	8	0.4	9	0.4	15	0.7	26	1.3	43	2.1	64	3.0
1160	1.5	1	0.8	2	1.1	2	1.4	3	2.3	5	3.6	7	5.0	9	6.1
1165	0.7	1	1.6	1	2.1	2	2.7	2	3.3	3	4.2	4	5.2	4	6.1
1170	1.5	2	1.6	3	2.1	4	2.7	5	3.3	6	4.1	8	5.1	9	6.0
1180	0.8	1	1.3	1	1.7	2	2.1	2	2.6	3	3.2	3	4.1	4	5.0
1190	1.2	1	0.7	1	0.9	1	1.1	2	1.4	2	1.8	3	2.5	4	3.2
1200	9.5	14	1.4	17	1.8	23	2.4	28	3.0	36	3.8	46	4.8	54	5.7
1210	3.9	5	1.4	7	1.8	9	2.4	11	2.9	14	3.7	18	4.6	22	5.5
1220	27.8	1	0.0	1	0.0	2	0.1	5	0.2	10	0.4	19	0.7	31	1.1
1230	1.8	2	1.0	2	1.3	3	1.6	4	1.9	4	2.5	6	3.2	7	4.0
1240	3.7	1	0.4	2	0.5	2	0.6	3	0.8	5	1.3	7	1.9	10	2.6
1250	4.6	4	0.8	4	1.0	6	1.2	7	1.5	9	2.0	13	2.7	16	3.5
1260	4.7	6	1.2	7	1.5	10	2.1	12	2.6	16	3.5	21	4.6	26	5.5
1270	2.0	3	1.4	4	1.8	5	2.5	6	3.1	8	4.0	10	5.0	12	6.0
1280	6.2	4	0.7	5	0.9	8	1.3	11	1.8	16	2.6	23	3.7	29	4.7
1290	5.7	4	0.6	4	0.8	6	1.1	8	1.4	11	2.0	16	2.8	21	3.7
1295	19.3	1	0.0	1	0.1	1	0.1	2	0.1	4	0.2	6	0.3	10	0.5
1300	30.2	4	0.1	5	0.2	6	0.2	8	0.3	10	0.3	15	0.5	20	0.7
1310	13.8	3	0.2	4	0.3	5	0.4	7	0.5	9	0.6	13	0.9	17	1.2
1320	21.3	4	0.2	4	0.2	6	0.3	8	0.4	11	0.5	17	0.8	23	1.1
1330	1.8	3	1.6	4	2.4	6	3.4	8	4.2	9	5.0	11	5.9	12	6.7
1340	11.8	5	0.4	6	0.5	8	0.7	10	0.9	13	1.1	18	1.5	23	1.9
1350	14.6	11	0.7	14	0.9	18	1.3	25	1.7	35	2.4	50	3.4	65	4.4
1360	41.3	20	0.5	25	0.6	31	0.7	35	0.9	47	1.1	70	1.7	96	2.3
1370	1.5	2	1.6	3	2.0	4	2.6	5	3.0	6	3.8	7	4.7	8	5.6
1380	1.5	2	1.3	2	1.6	3	2.0	4	2.4	4	3.0	6	3.7	7	4.4
1390	22.1	19	0.9	24	1.1	31	1.4	37	1.7	48	2.2	63	2.9	79	3.6
1400	4.0	6	1.5	8	1.9	10	2.4	12	2.9	14	3.6	18	4.4	21	5.2

Note:
1) When zero is encountered for a release rate, use a default value of 0.01.

Noah's - Dublin Site
Traffic Impact Study

Prepared For:

Guggenheim Partners, LLC

Prepared By:

TRAFFIC ENGINEERING SERVICES
A DIVISION OF SMART SERVICES, INC.

742 Radio Drive
Lewis Center, OH 43035
(740) 549-0070

December 2013

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Noah's - Dublin Site
Traffic Impact Study

Prepared For:

Guggenheim Partners, LLC
3000 Internet Blvd., Suite 570
Frisco, TX 75034

Telephone: (214) 872-4092

Prepared By:

Traffic Engineering Services – Division of Smart Services, Inc.
742 Radio Dr.
Lewis Center, OH 43035

Telephone: (740) 549-0070
Fax: (740) 522-4706
e-mail: todd@trafficcounts.com

Under the direction of:

Registered Engineer No. E-64507, Ohio

12-18-2013
Date

STATE OF OHIO
TODD J. STANHOPE
E-64507
REGISTERED PROFESSIONAL ENGINEER

December 2013

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APPENDIX B – Traffic Counts
APPENDIX C– Trip Distribution
APPENDIX D – Design Traffic
APPENDIX E – Turn Lane Warrants
APPENDIX F – Capacity Analysis
APPENDIX G – Sight Distance
APPENDIX H – Perimeter Drive Site Traffic %

EXECUTIVE SUMMARY

Noah's is proposing to develop a site in the City of Dublin with an event center. The site is located in the City of Dublin on the east side of Wall Street north of Perimeter Drive. The land use proposed for the site is a 10,300 SF event center. There is one proposed access on Wall Street. Since the proposed site will generate more trips than the previously zoned site, a traffic impact study is required by the City of Dublin. The City requires a 10 Year design so 2014 was assumed to be Opening Day which makes 2024 the horizon year.

Typically, trip generation is computed using the current edition of *Trip Generation* published by the Institute of Transportation Engineers (ITE). However, *Trip Generation* does not provide data for Event Centers. In the MOU, the methodologies for projecting traffic and the comparison to the existing zoning were described.

2014 and 2024 'No Build' and 'Build' volumes were developed for use in turn lane warrant analyses and unsignalized capacity analyses. The comparison of the 2024 'No Build' and 'Build' is what the City uses to determine what, if any, mitigation is required. Therefore, the following are the conclusions of the traffic study:

2024 'No Build'

- Post Road & Discovery Boulevard
  - The impeded movements operate at an acceptable Level of Service (LOS).
  - A westbound left turn lane is not warranted.
  - An eastbound right turn lane is warranted.

- Perimeter Drive & Discovery Boulevard-Venture Drive
  - The impeded northbound left turn movement operates at LOS "E". This is a typical LOS for an unsignalized minor street or driveway approach at an intersection with a higher volume street. A roundabout is the only correction to this condition. A roundabout would operate with an acceptable LOS.
  - A westbound right turn lane is not warranted.

- Perimeter Drive & Wall Street-Venture Drive
  - The impeded southbound left turn movement operates at LOS "F". This is a typical LOS for an unsignalized minor street or driveway approach at an intersection with a higher volume street. A roundabout is the only correction to this condition. A roundabout would operate with an acceptable LOS.
  - A westbound right turn lane is warranted.

- Discovery Boulevard & Wall Street
  - The impeded movements operate at an acceptable Level of Service (LOS).
  - A southbound left turn lane is not warranted.
  - A northbound right turn lane is not warranted.

2024 'Build'

- Post Road & Discovery Boulevard
  - Same as No Build: The impeded movements operate at an acceptable Level of Service (LOS).
  - Same as No Build: A westbound left turn lane is not warranted.
  - Same as No Build: An eastbound right turn lane is warranted.

- Perimeter Drive & Discovery Boulevard-Venture Drive
  - Same as No Build: The impeded minor street movements operate at LOS "F". This is a typical LOS for an unsignalized minor street or driveway approach at an intersection with a higher volume street. A roundabout is the only correction to this condition. A roundabout would operate with an acceptable LOS.
  - Same as No Build: A westbound right turn lane is not warranted.
  - Site traffic represents 3.33% of the traffic at the intersection. (Calculations are in Appendix "H")

- Perimeter Drive & Wall Street-Venture Drive
  - Same as No Build: The impeded minor street movements operate at LOS "F". This is a typical LOS for an unsignalized minor street or driveway approach at an intersection with a higher volume street. A roundabout is the only correction to this condition. A roundabout would operate with an acceptable LOS.
  - Same as No Build: A westbound right turn lane is warranted.
  - Site traffic represents 5.83% of the traffic at the intersection. (Calculations are in Appendix "H")

- Discovery Boulevard & Wall Street
  - Same as No Build: The impeded movements operate at an acceptable Level of Service (LOS).
  - Same as No Build: A southbound left turn lane is not warranted.
  - Same as No Build: A northbound right turn lane is not warranted.

- Wall Street & Prop. Noah's Access
  - The impeded movements operate at an acceptable Level of Service (LOS).
  - A northbound left turn lane is not warranted.
  - A southbound right turn lane is not warranted.
  - A site distance exhibit has been provided. See Appendix "G".

BACKGROUND

Noah's is proposing to develop a site in the City of Dublin with an event center. The site is located in the City of Dublin on the east side of Wall Street north of Perimeter Drive. The land use proposed for the site is a 10,300 SF event center. The site location is shown on Figure 1. There is one proposed access on Wall Street. The site plan is shown in Figure 2. Since the proposed site will generate more trips than the previously zoned site, a traffic impact study is required by the City of Dublin. This report outlines the findings of the traffic impact study prepared by Traffic Engineering Services (TES).

After an initial conversation with the City, a Memo of Understanding (MOU) dated September 5, 2013 was submitted to the City. The City provided comments in an e-mail dated September 17, 2013. A revised MOU dated December 4, 2013 was submitted to the City. This was considered approved with comment in an e-mail dated December 12, 2013. Copies of all referenced correspondence is in Appendix "A".

EXISTING CONDITIONS

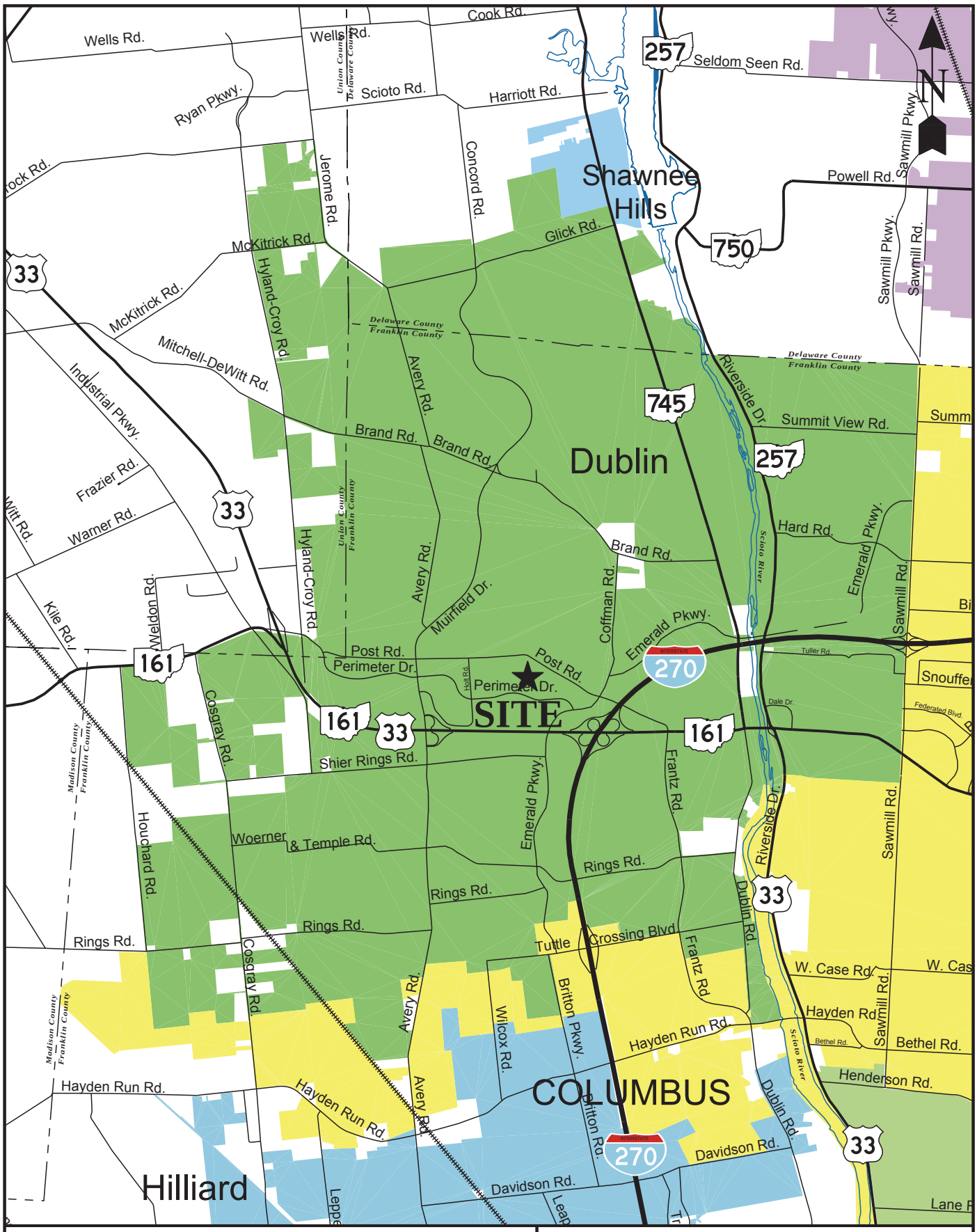
The following is information about the streets in the study area.

- Perimeter Dr.: 3 lanes; 35 MPH speed limit.
- Post Rd.: 2 lanes; 35 MPH speed limit.
- Discovery Blvd.: 2 lanes; 25 MPH speed limit.
- Wall St.: 2 lanes; 25 MPH speed limit.

Peak hour (7-9 AM and 4-6 PM) turning movement counts were available for use in the study at the following locations:

- Post Rd. & Discovery Blvd.
- Discovery Blvd. & Wall St.
- Perimeter Dr. & Discovery Blvd. (AM Peak Only)
- Perimeter Dr. & Wall St.

One consistent peak hour was used in the analysis which was from 7:45-8:45 AM and 5-6 PM. The original reports from all of the available turning movement counts are in Appendix "B".



NOAH'S - DUBLIN SITE
TRAFFIC IMPACT STUDY

PREPARED BY: TRAFFIC ENGINEERING SERVICES 12/2013

FIGURE 1

LOCATION MAP

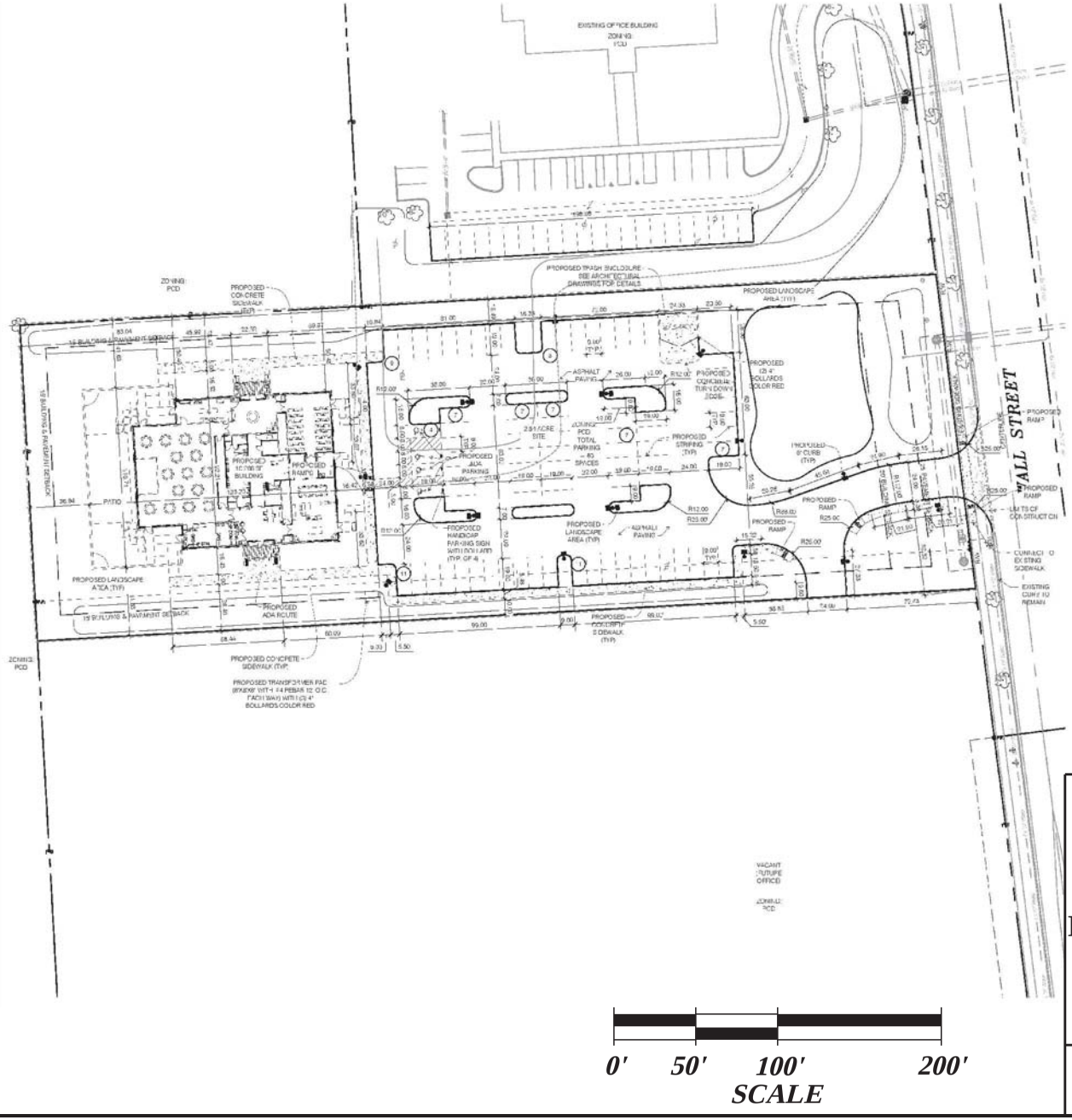


FIGURE 2

SITE PLAN

NOAH'S - DUBLIN SITE TRAFFIC IMPACT STUDY

12/2013

PREPARED BY:

TRAFFIC ENGINEERING SERVICES

SITE GENERATED TRAFFIC

Trip Generation

Typically, trip generation is computed using the current edition of *Trip Generation* published by the Institute of Transportation Engineers (ITE). However, *Trip Generation* does not provide data for Event Centers. In the MOU, the methodologies for projecting traffic and the comparison to the existing zoning were described. A copy of the MOU is in Appendix "A". The result of this was the determination that trip generation for an event center should be used in the analysis.

Table 1 shows the trip generation developed for an event center. The daily traffic in the table was projected by assuming two capacity events would occur in one day. Therefore, there could be 500 people arriving and departing twice. The assumption of two people per car described in the MOU was also applied to the daily traffic.

Traffic volumes generated in off peak hours will vary depending on start and end times of particular events and the size of the events. The number of peak hour trips represents a capacity event which would be the most conservative traffic and could occur in an off peak hour. Based on the Owners parking statistics from two similar sized sites, an average event has approximately 32% of the parking utilized. Based on the traffic projected for the proposed site, an average event would represent about 40 trips within an hour that an event began or ended.

Trip Distribution

The traffic was applied to the street network based on the existing general distribution which is as follows:

AM Peak

- 22% to/from west on Post Road
- 52% to/from west on Perimeter Drive
- 26% to/from east on Perimeter Drive

PM Peak

- 21% to/from west on Post Road
- 35% to/from west on Perimeter Drive
- 44% to/from east on Perimeter Drive

The distribution calculations are in Appendix "C".

Traffic Study Subarea	Land Use	Time of Day	Data Set from *Trip Generation*	Overide with Average	Regression Equation from *Trip Generation*	Total Trips	Entering		Exiting	
							%	Total Trips	%	Total Trips
1	Event Center (Non ITE Source)	Daily	Weekday	☐	Average Rate= 2.00	500	50%	250	50%	250
		AM Peak	Peak Hour of Adj. Street Traffic, One Hour between 7 & 9 AM	☐	Average Rate= 0.50	125	88%	110	12%	15
	Ind. Variable (X) = 250 People	PM Peak	Peak Hour of Adj. Street Traffic, One Hour between 4 & 6 PM	☐	Average Rate= 0.50	125	12%	15	88%	110
				☐						
TOTALS		**Daily**		☐		**500**		**250**		**250**
		AM Peak				**125**		**110**		**15**
		PM Peak				**125**		**15**		**110**

Noah's - Dublin Site Traffic Impact Study - 12/2013

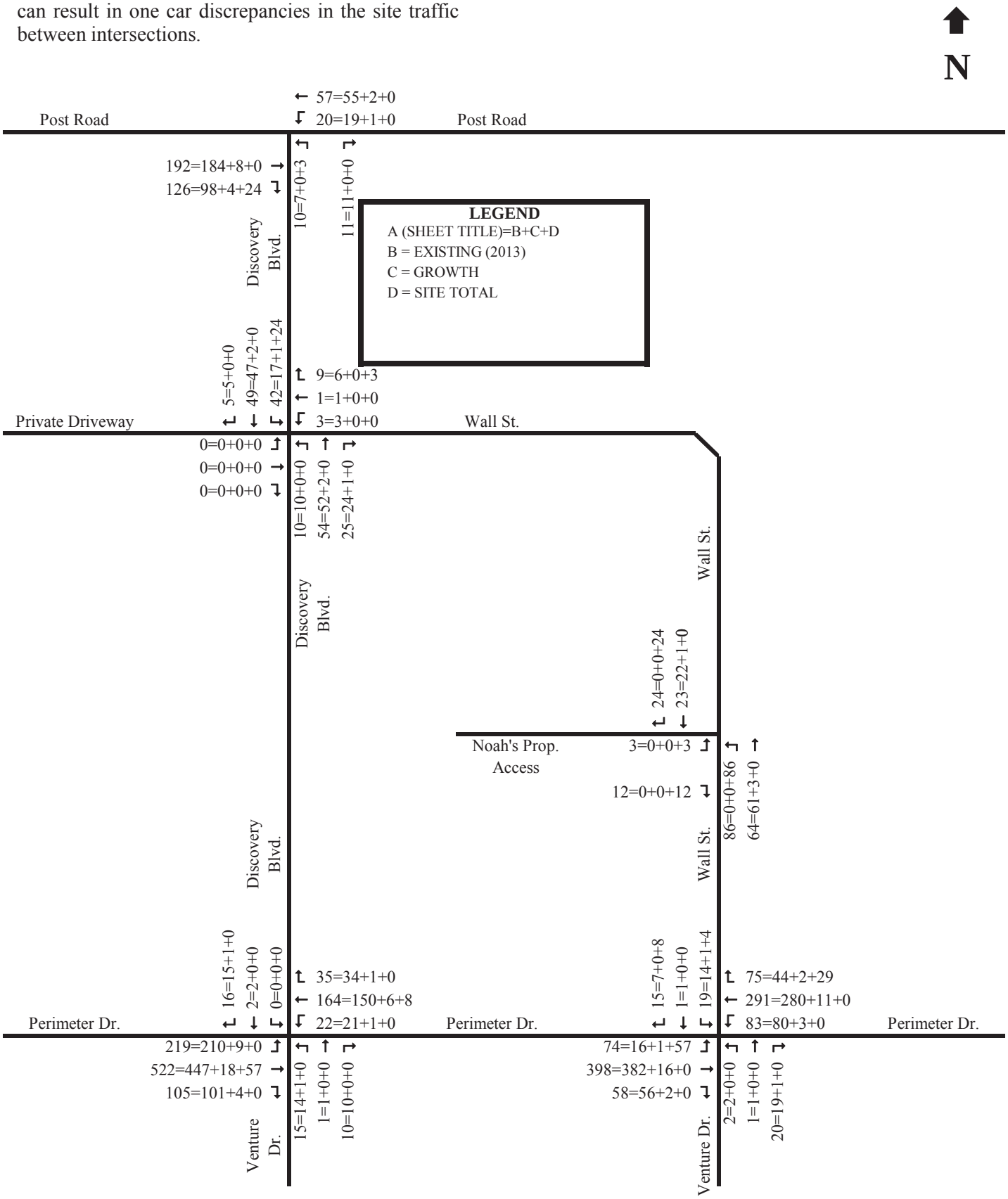
TABLE 1 - SITE TRIP GENERATION SUMMARY

2014 AND 2024 TRAFFIC

An area (all public streets) growth rate of 4.07% per year (compounded) was calculated based on the weighted average of the AM and PM Peak hour for two links. 2030 adjusted volumes based on the travel demand model were available from the *Delta Energy Dublin Development TIS*. The figure from the report is in Appendix "D". The two links that were compared were Perimeter Drive west of Wall Street and Wall Street north of Perimeter Drive. The calculations are also in Appendix "D".

Figures 3-4 show all components of the 2014 'Build' traffic. Figures 5-6 show all components of the 2024 'Build' traffic. To assist with review, exhibits showing the 'No Build' traffic are in Appendix "D".

NOTE: Rounding as a result of software algorithms can result in one car discrepancies in the site traffic between intersections.



NOAH'S - DUBLIN SITE
TRAFFIC IMPACT STUDY

PREPARED BY: TRAFFIC ENGINEERING SERVICES 12/2013

FIGURE 3

2014 'BUILD' - AM PEAK

NOTE: Rounding as a result of software algorithms can result in one car discrepancies in the site traffic between intersections.

N

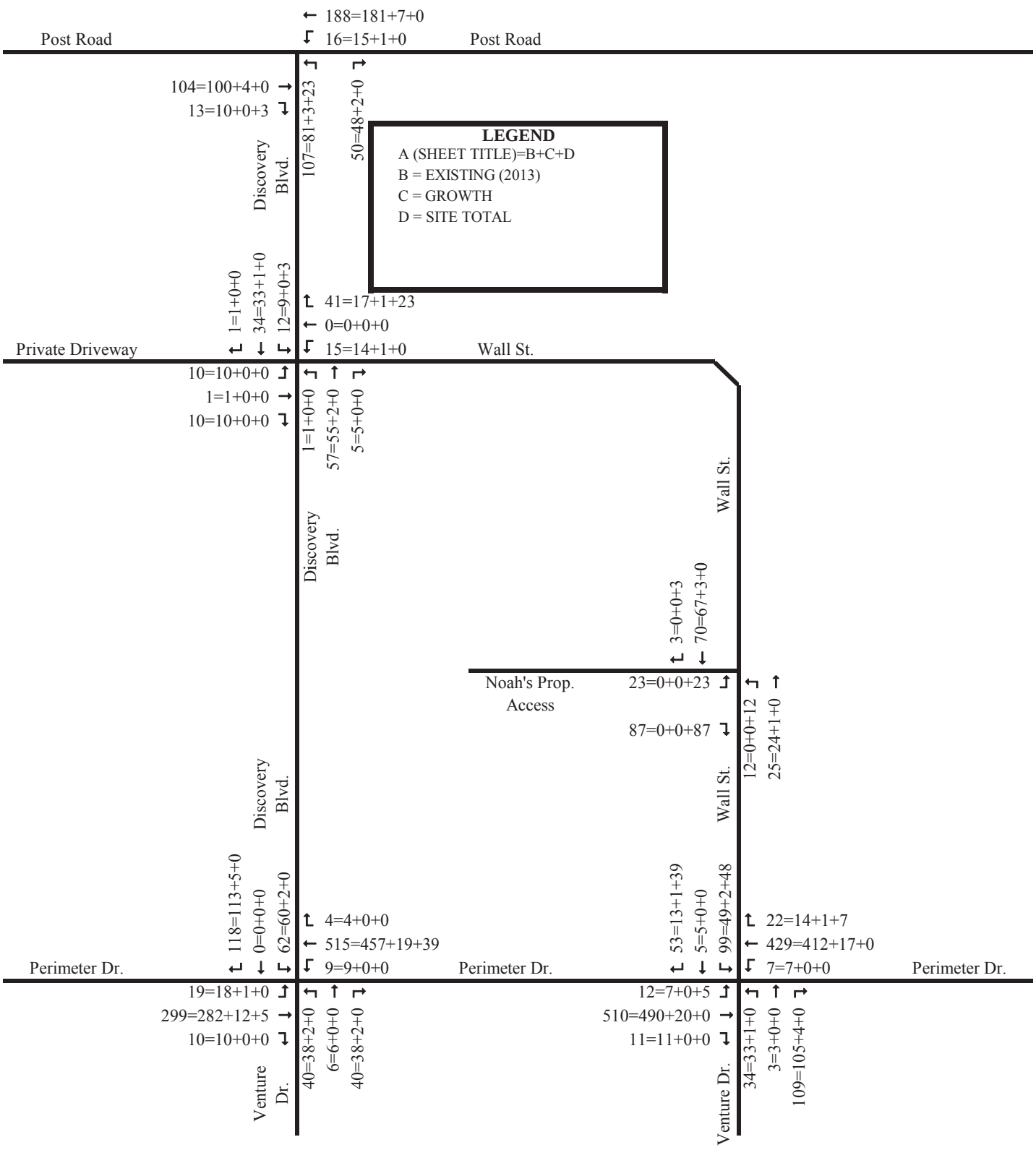


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FIGURE 4

2014 'BUILD' - PM PEAK

NOTE: Rounding as a result of software algorithms can result in one car discrepancies in the site traffic between intersections.

N

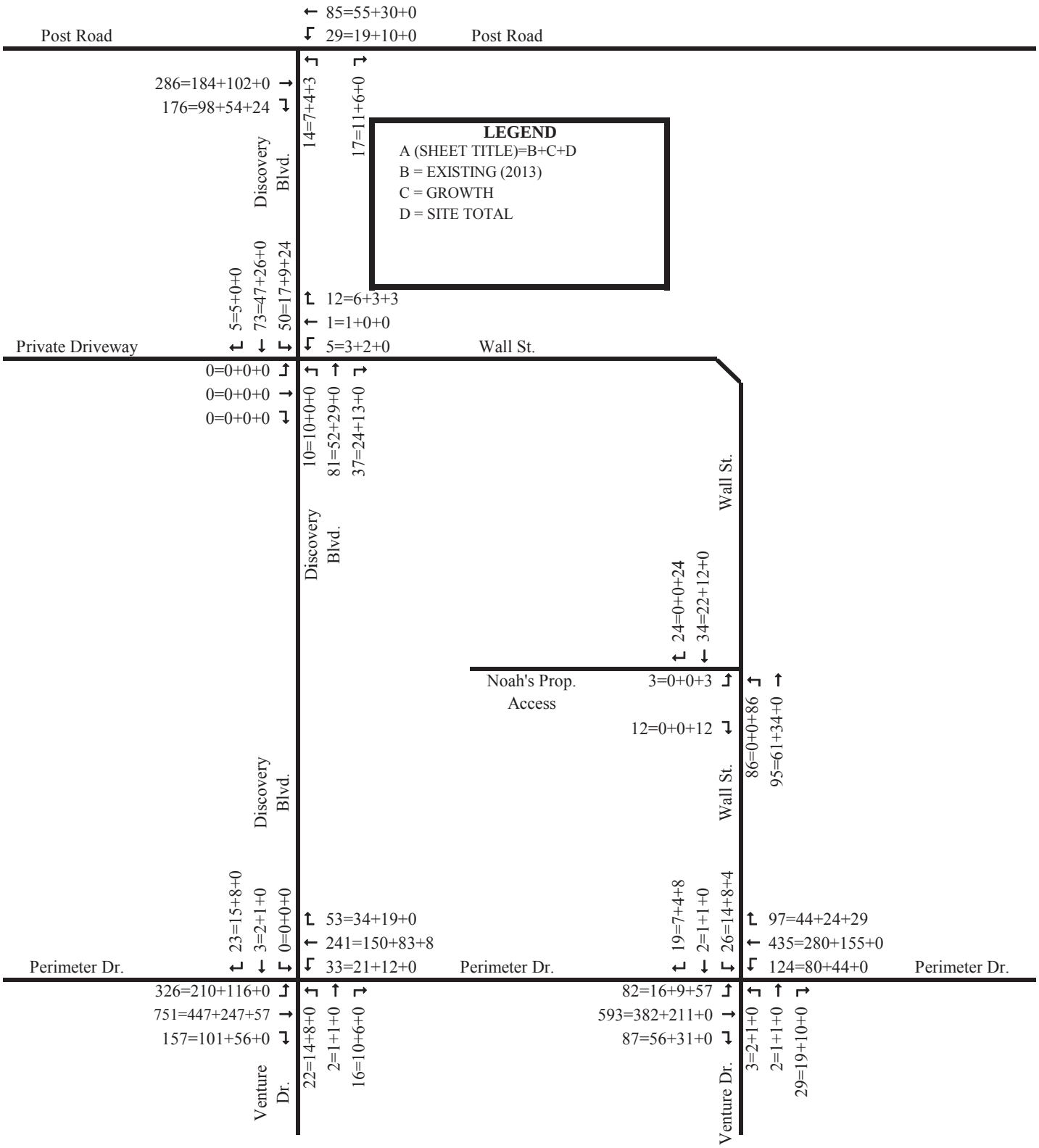

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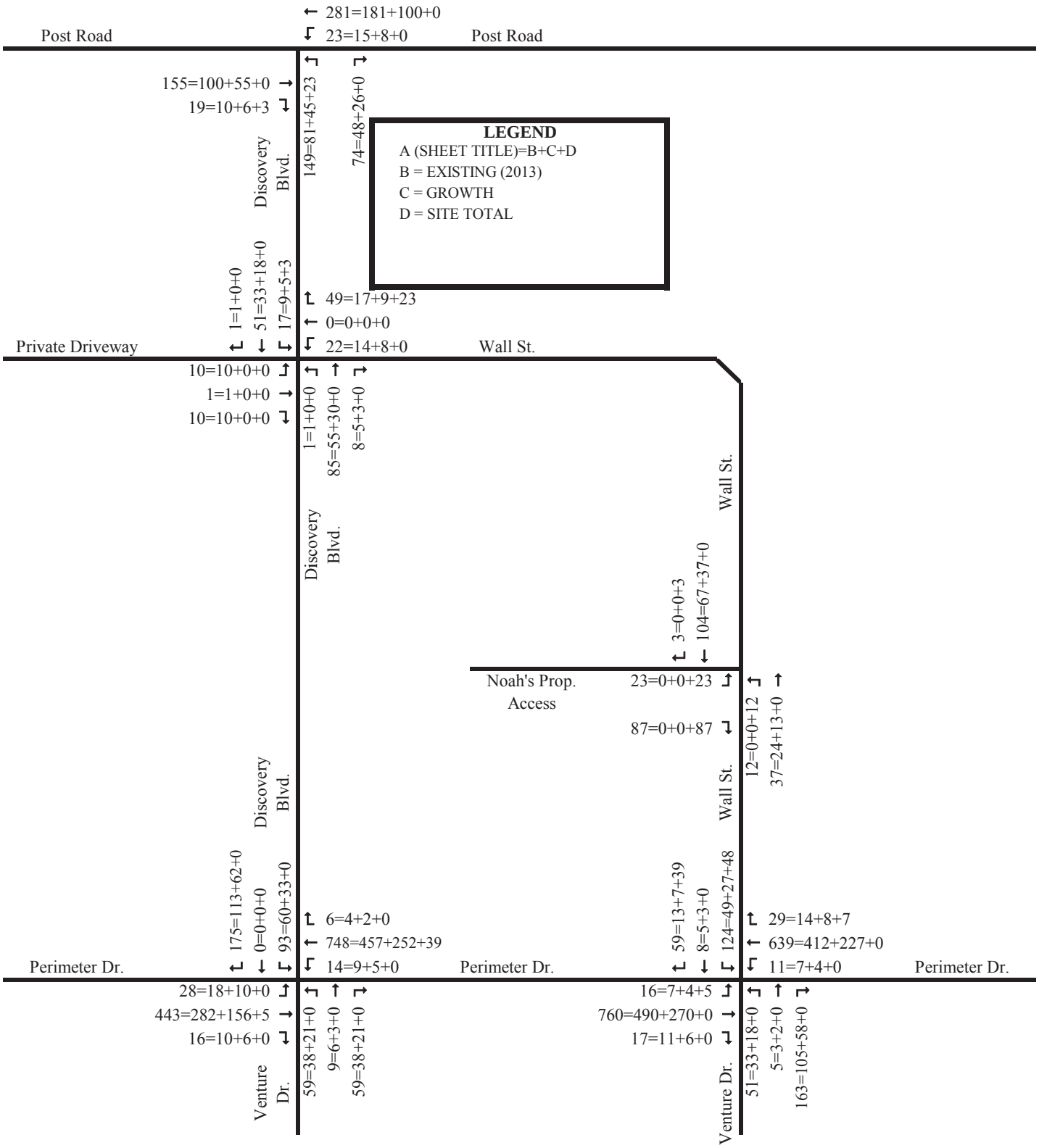
FIGURE 5

2024 'BUILD' - AM PEAK

NOTE: Rounding as a result of software algorithms can result in one car discrepancies in the site traffic between intersections.

N



NOAH'S - DUBLIN SITE
TRAFFIC IMPACT STUDY

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FIGURE 6

2024 'BUILD' - PM PEAK

ANALYSES

Turn Lane Warrant Analysis

The procedure to determine whether turn lanes are warranted is according to the *State Highway Access Management Manual* (*AMM*) published by the Ohio Department of Transportation (ODOT). According to the ODOT *L&D Manual*, turn lane warrants only apply to unsignalized free flow approaches.

Table 2 shows a summary of the results. The graphs from the *AMM* are in Appendix "E". The results show that there are no changes to the status of the turn lanes warrants between the 'No Build' and 'Build' conditions so there are no developer improvements necessary to mitigate the site traffic.

Intersection	Movement	Peak Hour	2014 'No Build'	2014 'Build'	2024 'No Build'	2024 'Build'
Post Road & Discovery Blvd.	WB LT	AM Peak	Not Met	Not Met	Not Met	Not Met
		PM Peak	Not Met	Not Met	Not Met	Not Met
	EB RT	AM Peak	Not Met	Not Met	**MET**	**MET**
		PM Peak	Not Met	Not Met	Not Met	Not Met
*Perimeter Drive& Discovery Blvd.-Venture Drive	WB RT	AM Peak	Not Met	Not Met	Not Met	Not Met
		PM Peak	Not Met	Not Met	Not Met	Not Met
*Perimeter Drive & Wall St.-Venture Drive	WB RT	AM Peak	Not Met	Not Met	**MET**	**MET**
		PM Peak	Not Met	Not Met	Not Met	Not Met
Discovery Blvd. & Wall Street	SB LT	AM Peak	**NA	**NA	Not Met	Not Met
		PM Peak	**NA	**NA	Not Met	Not Met
	NB RT	AM Peak	**NA	**NA	Not Met	Not Met
		PM Peak	**NA	**NA	Not Met	Not Met
Wall St. & Prop. Noah's Access	SB LT	AM Peak	**NA	**NA	Not Met	Not Met
		PM Peak	**NA	**NA	Not Met	Not Met
	NB RT	AM Peak	**NA	**NA	Not Met	Not Met
		PM Peak	**NA	**NA	Not Met	Not Met

*=Left Turn Lane already exists.
**=Due to very low volumes, only 2024 condition was tested

TABLE 2 – Summary of Results for Turn Lane Warrant Analysis

Unsignalized Capacity Analyses

Unsignalized capacity analyses were performed at all intersections in the study area. In the analyses, delays are computed which correspond to a Level of Service (LOS) "A" through "F". Typically, Level of Service (LOS) "D" or above is considered an acceptable LOS. For a Two-Way Stop condition, the unsignalized capacity analysis gives LOS results for vehicles that must wait for gaps to make their maneuver. In this case, the movements experiencing delay would be the left turns from the major street and the minor street movements. All other movements are free flowing so they don't encounter delay. Since driver expectations are different for various types of traffic control, there are different LOS criteria for unsignalized intersections versus signalized intersections. The LOS criteria for unsignalized intersections are shown in Table 3.

Level of Service	Delay Range (seconds/vehicle)
A	< 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50

Source: *Highway Capacity Manual 2010*

TABLE 3 - Level of Service Criteria for Unsignalized Intersections

The following comprises the background of the analysis:

- *HCS+ V5.6* was used to perform the analysis.
- The existing intersection peak hour factor (PHF) was used for existing study area intersections. For existing and proposed driveway intersections a peak hour factor of 0.9 was assumed.
- A 2% heavy vehicle percentage was assumed in the analysis.
- The warranted 'No Build' turn lanes were not considered in the analyses.
- Because of the lower volumes along Discovery Blvd. and Wall St., only the 2024 conditions were analyzed for intersections along those streets.
- If any movement operated below LOS D, roundabout analyses was performed for the intersection in that condition and all subsequent conditions.

A summary of the results are shown in Tables 4-5. The *HCS* reports are in Appendix "F".

Intersection	Time	Year	Delay (Level of Service)					
			Main Street		Minor Street			
			Eastbound Left	Westbound Left	Northbound Approach	Northbound Left	Southbound Approach	Southbound Left
30-Discovery Blvd. & Post Road	AM Peak	2014 'No Build' Traffic		8.0 (A)	10.4 (B)			
		2014 'Build' Traffic		8.1 (A)	10.6 (B)			
		2024 'No Build' Traffic		8.5 (A)	11.9 (B)			
		2024 'Build' Traffic		8.6 (A)	12.2 (B)			
	PM Peak	2014 'No Build' Traffic		7.5 (A)	11.6 (B)			
		2014 'Build' Traffic		7.5 (A)	12.1 (B)			
		2024 'No Build' Traffic		7.7 (A)	15.6 (C)			
		2024 'Build' Traffic		7.7 (A)	16.7 (C)			
5095-Discovery Blvd./Venture Dr. & Perimeter Dr.	AM Peak	2014 'No Build' Traffic	8.2 (A)	8.9 (A)	30.5 (D)	**42.8 (E)**	12.2 (B)	
	PM Peak	2014 'No Build' Traffic	8.6 (A)	8.0 (A)	23.2 (C)	**36.1 (E)**	28.7 (D)	
15-Wall St./Venture Dr. & Perimeter Dr.	AM Peak	2014 'No Build' Traffic	8.1 (A)	8.8 (A)	13.2 (B)	26.1 (D)	23.2 (C)	29.1 (D)
	PM Peak	2014 'No Build' Traffic	8.4 (A)	8.7 (A)	18.6 (C)	31.4 (D)	**44.7 (E)**	**55.3 (F)**

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TABLE 4 - Unsignalized Capacity Summary - (2-Way-Stop, East-West Major Street)

Intersection	Time	Year	Delay (Level of Service)					
			Main Street		Minor Street			
			Northbound Left Turn	Southbound Left Turn	Eastbound All			Westbound All
20-Discovery Blvd. & Private Driveway/Wall St.	AM Peak	2024 'No Build' Traffic	7.4 (A)	7.6 (A)				9.8 (A)
		2024 'Build' Traffic	7.4 (A)	7.6 (A)				9.9 (A)
	PM Peak	2024 'No Build' Traffic	7.4 (A)	7.5 (A)	9.7 (A)			9.9 (A)
		2024 'Build' Traffic	7.4 (A)	7.5 (A)	9.9 (A)			9.8 (A)
27-Wall St. & Noah's Prop. Access	AM Peak	2024 'Build' Traffic	7.5 (A)		9.0 (A)			
	PM Peak	2024 'Build' Traffic	7.4 (A)		9.6 (A)			

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TABLE 5 - Unsignalized Capacity Summary - (2-Way Stop, North-South Major Street)

Roundabout Capacity Analyses

Roundabout capacity analyses were performed at any intersection where an unsignalized movement operated less than LOS "D". In the capacity analyses, delays are computed which correspond to a Level of Service (LOS) "A" through "F". Typically, Level of Service (LOS) "D" or above is considered an acceptable LOS. The LOS criteria for roundabouts are shown in Table 6.

Level of Service	Delay Range (seconds/vehicle)
A	≤ 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50

Source: *Highway Capacity Manual 2010*

TABLE 6 - Level of Service Criteria for Roundabouts

The following comprises the background of the signalized capacity analysis:

- *HCS 2010 6.50* was used to perform the analysis.
- The existing intersection Peak Hour Factor (PHF) was applied.

A summary of the results are shown in Table 7. The *HCS* reports are in Appendix "F".

Intersection	Time	Year	Delay (Level of Service)				
			Intersection	Eastbound	Westbound	Northbound	Southbound
Discovery Blvd./Venture Dr. & Perimeter Dr. (#5095)	AM Peak	2014 'No Build' Traffic	**7.2 (A)**	7.7 (A)	5.6 (A)	7.8 (A)	4.3 (A)
		2014 'Build' Traffic	**7.6 (A)**	8.1 (A)	5.7 (A)	8.3 (A)	4.3 (A)
		2024 'No Build' Traffic	**10.9 (B)**	11.8 (B)	7.5 (A)	12.4 (B)	4.9 (A)
		2024 'Build' Traffic	**11.6 (B)**	12.7 (B)	7.6 (A)	13.4 (B)	4.9 (A)
	PM Peak	2014 'No Build' Traffic	**6.7 (A)**	5.2 (A)	6.2 (A)	6.5 (A)	10.7 (B)
		2014 'Build' Traffic	**6.9 (A)**	5.2 (A)	6.4 (A)	6.5 (A)	11.4 (B)
		2024 'No Build' Traffic	**11.0 (B)**	6.5 (A)	8.3 (A)	9.5 (A)	26.9 (D)
		2024 'Build' Traffic	**11.6 (B)**	6.5 (A)	8.7 (A)	9.6 (A)	30.2 (D)
Wall St./Venture Dr. & Perimeter Dr. (#15)	AM Peak	2014 'No Build' Traffic	**6.0 (A)**	6.5 (A)	5.4 (A)	5.8 (A)	5.5 (A)
		2014 'Build' Traffic	**6.5 (A)**	7.0 (A)	6.1 (A)	6.3 (A)	5.7 (A)
		2024 'No Build' Traffic	**8.0 (A)**	9.1 (A)	6.8 (A)	7.9 (A)	7.2 (A)
		2024 'Build' Traffic	**8.8 (A)**	9.9 (A)	7.8 (A)	8.5 (A)	7.5 (A)
	PM Peak	2014 'No Build' Traffic	**6.7 (A)**	6.4 (A)	5.7 (A)	10.2 (B)	7.0 (A)
		2014 'Build' Traffic	**7.3 (A)**	6.9 (A)	5.8 (A)	11.2 (B)	9.1 (A)
		2024 'No Build' Traffic	**10.3 (B)**	8.9 (A)	7.5 (A)	23.9 (C)	10.8 (B)
		2024 'Build' Traffic	**11.6 (B)**	9.8 (A)	7.6 (A)	27.4 (D)	15.2 (C)

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TABLE 7 - Roundabout (HCS 2010) Capacity Summary

CONCLUSIONS

2014 and 2024 'No Build' and 'Build' volumes were developed for use in turn lane warrant analyses and unsignalized capacity analyses. The comparison of the 2024 'No Build' and 'Build' is what the City uses to determine what, if any, mitigation is required. Therefore, the following are the conclusions of the traffic study:

2024 'No Build'

- Post Road & Discovery Boulevard
  - The impeded movements operate at an acceptable Level of Service (LOS).
  - A westbound left turn lane is not warranted.
  - An eastbound right turn lane is warranted.

- Perimeter Drive & Discovery Boulevard-Venture Drive
  - The impeded northbound left turn movement operates at LOS "E". This is a typical LOS for an unsignalized minor street or driveway approach at an intersection with a higher volume street. A roundabout is the only correction to this condition. A roundabout would operate with an acceptable LOS.
  - A westbound right turn lane is not warranted.

- Perimeter Drive & Wall Street-Venture Drive
  - The impeded southbound left turn movement operates at LOS "F". This is a typical LOS for an unsignalized minor street or driveway approach at an intersection with a higher volume street. A roundabout is the only correction to this condition. A roundabout would operate with an acceptable LOS.
  - A westbound right turn lane is warranted.

- Discovery Boulevard & Wall Street
  - The impeded movements operate at an acceptable Level of Service (LOS).
  - A southbound left turn lane is not warranted.
  - A northbound right turn lane is not warranted.

2024 'Build'

- Post Road & Discovery Boulevard
  - Same as No Build: The impeded movements operate at an acceptable Level of Service (LOS).
  - Same as No Build: A westbound left turn lane is not warranted.
  - Same as No Build: An eastbound right turn lane is warranted.

- Perimeter Drive & Discovery Boulevard-Venture Drive
  - Same as No Build: The impeded minor street movements operate at LOS "F". This is a typical LOS for an unsignalized minor street or driveway approach at an intersection with a higher volume street. A roundabout is the

only correction to this condition. A roundabout would operate with an acceptable LOS.

○Same as No Build: A westbound right turn lane is not warranted.

○Site traffic represents 3.33% of the traffic at the intersection. (Calculations are in Appendix "H")

●Perimeter Drive & Wall Street-Venture Drive

○Same as No Build: The impeded minor street movements operate at LOS "F". This is a typical LOS for an unsignalized minor street or driveway approach at an intersection with a higher volume street. A roundabout is the only correction to this condition. A roundabout would operate with an acceptable LOS.

○Same as No Build: A westbound right turn lane is warranted.

○Site traffic represents 5.83% of the traffic at the intersection. (Calculations are in Appendix "H")

●Discovery Boulevard & Wall Street

○Same as No Build: The impeded movements operate at an acceptable Level of Service (LOS).

○Same as No Build: A southbound left turn lane is not warranted.

○Same as No Build: A northbound right turn lane is not warranted.

●Wall Street & Prop. Noah's Access

○The impeded movements operate at an acceptable Level of Service (LOS).

○A northbound left turn lane is not warranted.

○A southbound right turn lane is not warranted.

○A site distance exhibit has been provided. See Appendix "G".

APPENDIX A

CORRESPONDENCE

Todd Stanhope

From: Tina C. Wawszkiewicz <twawszkiewicz@dublin.oh.us>
Sent: Thursday, December 12, 2013 2:56 PM
To: Todd Stanhope
Cc: Overmyer, Kurt (Kurt.Overmyer@guggenheimpartners.com); Brian Lorenz (brian.lorenz@wdpartners.com) (brian.lorenz@wdpartners.com); Jeannie E. Willis; Kristin K. Yorko; Justin M. Goodwin
Subject: RE: Noah's TIS - MOU

Hi Todd,

Thank you for providing the revised MOU and the additional data for the Noah sites around the country. These are my comments on the MOU:

We discussed needing to quantify daily, off-peak and weekend trips for the proposed land use. Please include assumptions in the study, so that neighborhood traffic concerns can be addressed.

Please include a site plan in the study. If a single access new point is proposed, this is the only location the site distance needs to be evaluated. Cross access and shared parking agreements are encouraged.

Thanks!
Tina

Tina Wawszkiewicz, PE
Civil Engineer

City of Dublin
Engineering
5800 Shier Rings Road
Dublin, Ohio 43016
phone 614.410.4636
cell 614.668.1705

twawszkiewicz@dublin.oh.us
www.dublinohiousa.gov

www.twitter.com/dublinohio
www.facebook.com/dublinohio

-----Original Message-----
From: Todd Stanhope [mailto:todd@trafficcounts.com]
Sent: Wednesday, December 04, 2013 3:18 PM
To: Tina C. Wawszkiewicz
Cc: Overmyer, Kurt (Kurt.Overmyer@guggenheimpartners.com); Brian Lorenz (brian.lorenz@wdpartners.com) (brian.lorenz@wdpartners.com)
Subject: Noah's TIS - MOU

Tina

Attached is a revised MOU for your review. We have addressed your comments received in an e-mail dated 9/17/2013. As you may be aware, we need to submit the TIS by the Dec. 19 to meet the filing deadline for the first planning

commission meeting in January. Therefore, we would appreciate any effort you can make to expedite the review so we can get started on the analysis. Thank you.

Todd J. Stanhope, P.E., PTOE
Project Engineer

_____
Traffic Engineering Services
742 Radio Drive
Lewis Center, OH 43035
V: (740) 549-0070
F: (866) 359-0465
e-mail: todd@trafficcounts.com
web: www.trafficcounts.com

TRAFFIC ENGINEERING SERVICES
A DIVISION OF SMART SERVICES, INC.

742 Radio Drive • Lewis Center, OH 43035 • Phone (740) 549-0070 • Fax (866) 359-0465
www.trafficcounts.com

December 4, 2013

Ms. Tina Wawszkiewicz, P.E.
City of Dublin
5800 Shier Rings Rd
Dublin, OH 43016

Re: Noah's Event Center TIS

Please consider this letter as a Memo of Understanding (MOU) for the TIS required for the subject site. The site is located in the City of Dublin on the east side of Wall Street north of Perimeter Drive. The land use proposed for the site is a 10,300 SF event center. The scope of the study described below is based on conversations with City staff. We have also included some follow up information.

- **Study area** - The study area includes the following intersections:
  - All proposed site access points
  - Discovery Blvd & Post Road
  - Discovery Blvd & Wall St
  - Discovery Blvd & Perimeter Dr
  - Perimeter Dr & Wall St

- **Time Periods** - Weekday AM Peak hour (one hour between 7 AM and 9 AM); Weekday PM Peak hour (one hour between 4 PM and 6 PM).

- **Data Collection** – Turning movement counts taken as part of another study in this area that has been submitted to the City are acceptable for use.

- **Trip Generation** – Typically, trip generation is computed using the current edition of *Trip Generation* published by the Institute of Transportation Engineers (ITE). However, *Trip Generation* does not provide data for Event Centers. A web search for information regarding trip generation at this type of facility resulted in finding a traffic impact study for the proposed The Ridge Event Center in Orem, UT. *The Ridge Event Center TIS* (*Ridge TIS*) is attached. The facility analyzed in the *Ridge TIS* is of similar use and size to the subject site. The owner noted that the capacity of the proposed Noah's facility will be 250 people. Findings for PM Peak Hour trip generation in the *Ridge TIS* were based upon observations, traffic counts, and interviews with management of an existing convention center facility. The *Ridge TIS* also notes that the nature of the use of the facility indicated that most trips occur outside the PM Peak Hour.

  Based upon information from the owner (summary attached), events are scheduled such that there is at least a two hour window to clean and reset for the next event. Therefore, there would not be an event ending and another

beginning within the same hour. The most critical condition for analysis of an event center is proposed to be a capacity business event that begins within the AM Peak hour and concludes within the PM Peak hour.

The *Ridge TIS* applied an assumption of three people per vehicle and 88% of the trips were inbound prior to the beginning of an event. The City has indicated that the assumption of three people per vehicle is not acceptable to apply to a business event.

The owner provided information from a parking study at other sites which is attached. Two sites (Chandler, Arizona and Westminster, Colorado) that have slightly larger buildings than what is proposed in Dublin indicate that less than 1% of events exceed the lot capacity which is in the 126 to 132 range for those sites. Applying an assumption of two people per vehicle for the Dublin site, would result in 125 trips which is consistent with the parking data at the similar sized site. Therefore, an assumption of two people for vehicle is assumed in the trip generation.

The City has indicated that a comparison needs to be made between the trip generation of the proposed use and the trip generation of the permitted uses. Whichever has the most intense traffic is what is considered in the study. In reviewing the permitted uses, it was determined that general office, medical office, and fitness and recreational sports centers should be evaluated. There is not any known limitation to the size of the building in the zoning text so the assumption of a 25,000 SF (2.5 acre* 10,000 SF/Acre) building is assumed for each type of building.

A table with comparisons of trip generation for the event center, office, medical office, and athletic club is attached. Note that for the office use in the PM Peak, utilizing the regression equation yields unrealistic results because the PM outbound is over 66% of the AM Inbound. Therefore, the trips were adjusted such that the outbound trips in the PM peak were equal to the inbound trips in the AM peak. The result is the athletic club generates more trips than the event center in the PM peak but the event center is higher in the AM Peak. Therefore, the event center will be used in the analysis.

Trip Distribution – The traffic will be applied to the street network based on the existing general distribution established in the MOU dated 6/6/2013 for *The Village at Coffman Park Traffic Impact Study.* Since the Noah's site is in closer proximity to Perimeter Drive, it was assumed that all traffic oriented to the east would arrive and depart via Perimeter Drive. The following is the proposed trip generation for the study.

<u>AM Peak</u>

- 22% to/from west on Post Road
- 52% to/from west on Perimeter Drive
- 26% to/from east on Perimeter Drive

PM Peak
●21% to/from west on Post Road
●35% to/from west on Perimeter Drive
●44% to/from east on Perimeter Drive

- **Design Year** – An Opening Day and a 10 Year design horizon are required. Opening day is anticipated to be 2014 so the design year will be 2024.

- **Growth Rates** – An area (all public streets) growth rate of 4.07% per year (compounded) was calculated as part of *The Village of Coffman Park TIS*. This growth rate will be used in the TIS.

- **Analysis**
  - Turn lane warrants
  - Capacity analyses and mitigation strategies (if LOS is less than D on any movement)

- **Site Distance** – An assessment of site distance at the proposed access locations will be made.

If this MOU is acceptable to you, please indicate your approval in the space provided below. If not, please let us know what items need to be changed. Thank you for your attention to this.

Sincerely,

Todd J. Stanhope, P.E., PTOE

cc: K. Overmeyer – Guggenheim Partners, LLC

Approved:_____ Date:_____

The Ridge Event Center

Traffic Impact Study

HORROCKS
ENGINEERS

RECEIVED
AUG 09 2010
By
CITY OF OREM

INTRODUCTION AND SUMMARY

Purpose of Report and Study Objectives

The purpose of this traffic study is to identify traffic impacts associated with the proposed Ridge Event Center development on the surrounding road network. The study objectives include: project description, define the study intersections, estimate trip generation and distribution for the site and adjacent developments, analyze 2010 AM and PM peak traffic conditions, describe traffic impacts of the project under 2010 conditions, and recommend improvements.

Executive Summary

Site Location and Study Area: The Ridge Event Center development is planned to be located on 1000 West and Center Street in Orem, Utah. Three study intersections, 800 West/ Center St., 1000 West/ Center St., and 1200 West/ Center St were analyzed with and without the project.

Development Description: The Ridge Event Center development will be 10,000 sq. ft. It consists of 3,200 sq. ft. of ballroom, a bridal room, support rooms, and an office/storage. The project proposes two full accesses on 1000 West. Surrounding land uses consist of single family homes, retail, and Mountain View High School.

Principal Findings: At build-out, the Ridge Event Center development is expected to generate an average of 53 new PM peak hour trips. Currently, the study intersections operate at level of service (LOS) C or better during the AM and PM peak hours. After traffic generated by the project is added to the roadway network, the study intersections experience some increase in delay, but remain at an LOS C or better in the year 2010.

Conclusions and Recommendations:

- After the project is completed the study intersections are expected to operate at LOS C or better.
- At build-out, the Ridge Event Center development is expected to generate an average of 53 new PM peak hour trips.

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PROPOSED DEVELOPMENT

Site Location

The Ridge Event Center development is planned to be located on 1000 West and Center Street in Orem, Utah. The project site is shown in Figure 1.

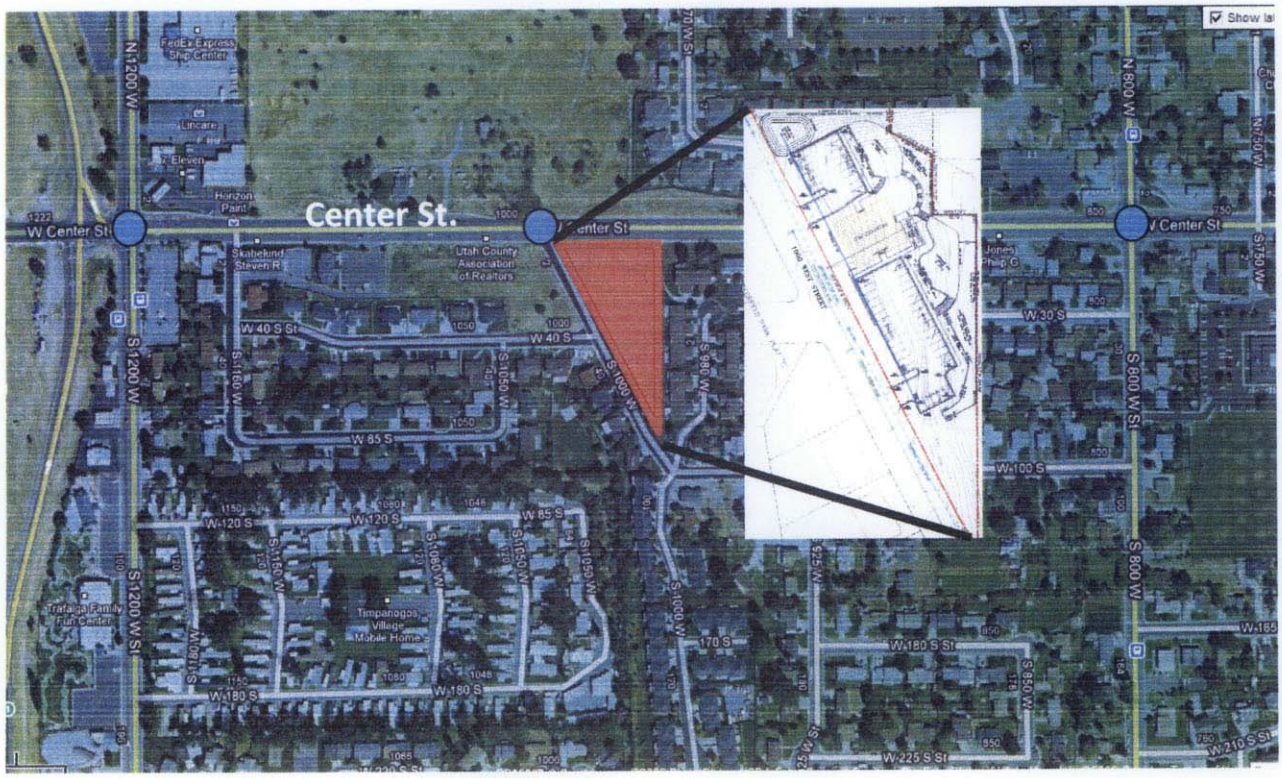

Figure 1 Project Site Location

Land Use

The Ridge Event Center development consists of the 10,000 sq. ft. building with 50 parking stalls; 15 stalls north and 35 stalls south of the building. The surrounding land uses consist of single family homes, retail, and Mountain View High School.

Site Plan and Access

The site proposes two full accesses on 1000 West approximately 150 feet apart. Figure 2 provides the project site plan.

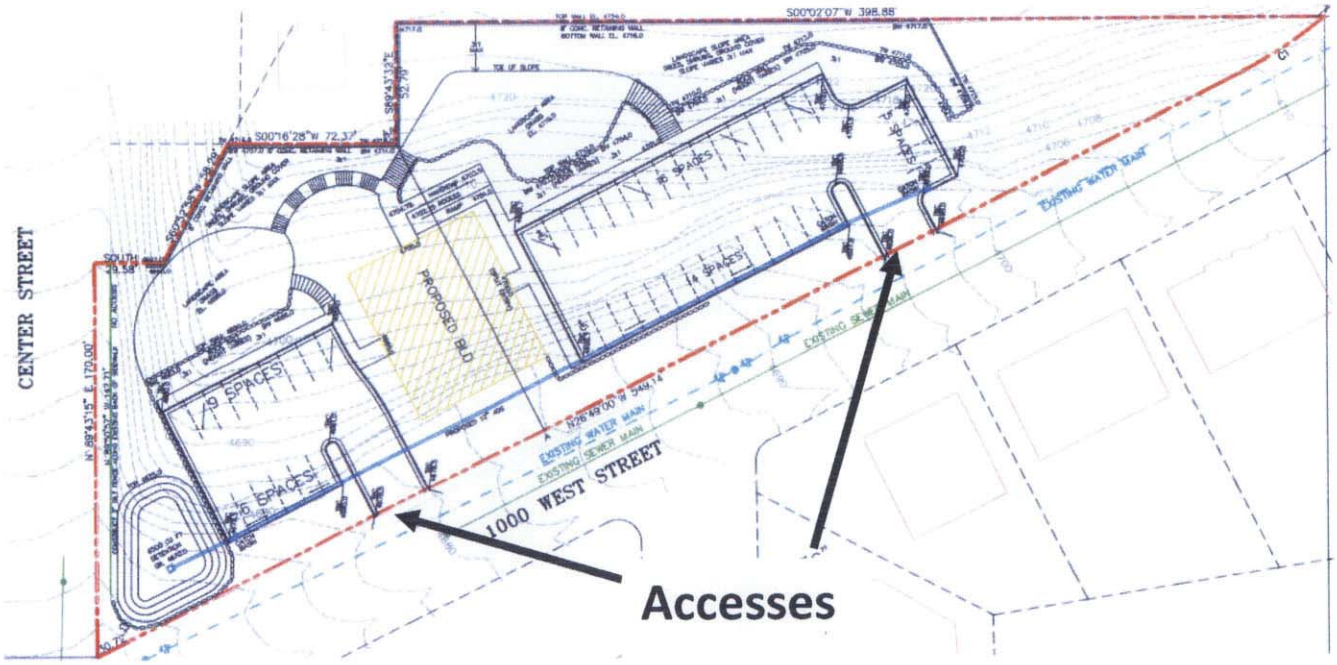

Figure 2 Ridge Event Center Site Plan

STUDY AREA CONDITIONS

Study Area

The intersections studied for this report were:

Center Street/1200 West: This is a four legged signalized intersection. 1200 West is a three-lane road with one right turn lane, one thru lane, and one left turn lane. Center Street is a four-lane road with one right turn lane, two thru lanes, and one left turn lane.

Figure 3 Center Street and 1200 West

Center Street/1000 West: This is a three legged unsignalized intersection. 1000 West is a local street with full access. Center Street is a three-lane road with two thru lanes and one shared middle turn lane.

Figure 4 Center Street and 1000 West

Center Street/800 West: This is a four legged intersection. 800 West is a three-lane road, with one right turn lane, one thru lane, and one left turn lane. Center Street is a four-lane road with one right turn lane, two thru lanes, and one left turn lane.

Figure 5 Center Street and 800 West

ANALYSIS OF 2010 CONDITIONS

Existing Volumes

Traffic counts for the AM and PM peak hour on 1000 West/ Center St. and 800 West/ Center St. were performed for the study intersections on February 4, 2010. Traffic counts for 1200 West/ Center St. intersection was performed previously in connection with the I-15 CORE Project.

Study Intersection Level of Service

Level of service (LOS) is a term used by the Highway Capacity Manual (HCM) to describe the traffic operations of an intersection, based on congestion and delay. It ranges from LOS A (almost no congestion or delay) to LOS F (traffic demand is above capacity and the intersection experiences long queues and delay). LOS C is generally considered acceptable for rural intersections. LOS D is acceptable for urbanized intersections. LOS E is the threshold when the intersection reaches capacity. Tables 1 and 2 summarize the LOS delay for stop controlled movements at unsignalized and signalized intersections.

Table 1: LOS –Unsignalized Intersections Criteria

Level of Service	Average Control Delay (s/veh)
A	≤ 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

Table 2: LOS – Signalized Intersections Criteria

Level of Service	Average Control Delay (s/veh)
A	≤ 10
B	> 10-20
C	> 20-35
D	> 35-55
E	> 55-80
F	> 80

Source: Highway Capacity Manual (HCM) 2000, Transportation Research Board National Research Council, Washington D.C., 2000

Level of Service (LOS) analyses were conducted for the 2010 conditions with the project traffic add to the AM and PM peak hour volumes using Synchro software. Table 3 and 4 show the existing AM and PM peak hour performances at the study intersections. As demonstrated in the results, each intersection performs at LOS C or better under existing conditions during both the AM and PM peak hours.

Table 3 AM Peak Hour Performance Existing 2010 Conditions

Intersection	2010 PM Peak Hour
	LOS
800 West/ Center Street	B
1000 West/ Center Street*	B
1200 West/ Center Street	C

*Unsignalized intersection LOS is given at the worst approach

Table 4 PM Peak Hour Performance Existing 2010 Conditions

Intersection	2010 PM Peak Hour
	LOS
800 West/ Center Street	B
1000 West/ Center Street*	C
1200 West/ Center Street	C

*Unsignalized intersection LOS is given at the worst approach

PROJECT TRAFFIC ANALYSIS

Trip Generation

The Institute of Transportation Engineers' (ITE) Trip Generation Manual, 8th Edition does not provide data on convention centers. As such, Horrocks Engineers performed a similar study at the Davis Conference Center in Layton, UT. From this study Horrocks was able to estimate a trip generation rate for the PM peak hour based on event attendees and used floor space.

Comparable Location

The Davis Conference Center located at 748 West Heritage Park Boulevard, Layton, Utah was chosen as a comparable location to the proposed the Ridge Event Center. The criteria shown in Table 5 demonstrates the suitability of the comparison.

Table 5: Location Comparison

	Facility Details					
Facility	Location	Size	Exhibition Hall	Meeting Rooms	Ballroom	Hotel within 1 block
The Ridge Event Center	Orem, UT	10,000 sf	Yes	Yes	Yes	No
Davis Conference Center	Layton, UT	70,000 sf	Yes	Yes	Yes	Yes

Five separate events were counted at the Davis Conference Center during the PM peak hour. The events studied were a formal military banquet, a corporate training event, a high school graduation ceremony, and a two-day professional conference/trade show. Two of the events studied began during the PM peak while the remaining two events ended during the PM peak. Each event was analyzed based on the number of vehicles entering and exiting the conference center parking lots. These results were then compared to the used amount of space used by each event to estimate the above mentioned trip generation rate.

Using the comparable location, the Ridge Event Center trip generation during the PM peak hour was calculated based on observations, traffic counts, and interviews with convention center management. Based on convention center data, an estimation of 20 sq. ft/person is needed during a seated event. Therefore 160 people, with an average of 3 people per vehicle, will generate 53 vehicles at the event center during this peak. Due to the nature of the use of the facility it is likely that most trips will occur outside the peak PM hour. However, to be conservative, it is assumed that all 53 vehicles will arrive during the PM peak hour. Table 6 summarizes this data for the PM peak hour.

Table 6: Project Trip Generation Beginning PM Peak Hour

Variable	Quantity	Weedkay PM Peak Hour		
		Total	In	Out
Ridge Event Center			88%	12%
1000 sq. ft ballroom	3.2	53	46	7

The proposed development is expected to generate 53 new PM peak hour trips.

Tables 7 and 8 illustrate existing 2010 plus project traffic conditions. Worst case scenario for peak hour volumes occur with an all day event assuming each PM peak hour trip has a corresponding AM peak hour trip.

Table 7 PM Peak Hour Performance with Project

Intersection	2010 PM Peak Hour
	LOS
800 West/ Center Street	B
1000 West/ Center Street*	C
1200 West/ Center Street	C

*Unsignalized intersection LOS is given at the worst approach

Table 8 AM Peak Hour Performance with Project

Intersection	2010 PM Peak Hour
	LOS
800 West/ Center Street	B
1000 West/ Center Street*	C
1200 West/ Center Street	C

*Unsignalized intersection LOS is given at the worst approach

Under existing 2010 conditions with the project, the study intersections operate at a LOS C or better during the AM and PM peak hours.

Trip Distribution

The project site plan shows two parking lots; one north and one south of the building. Both parking lots are accessed from 1000 West. Due to proximity to Interstate-15, vehicles traveling on I-15 will leave the

freeway at the Center Street exit and travel eastbound on Center Street where they will turn right onto 1000 West and enter into either parking lot. Traffic from local residents will travel from State Street to Center Street and travel westbound before turning left onto 1000 West.

Conclusions and Recommendations

- After the project is completed the study intersections are expected to operate at LOS C or better.
- At build-out, the Ridge Event Center development is expected to generate an average of 53 new PM peak hour trips.

ADDRESS PO BOX 1289 RIVERTON, UTAH 84065
PHONE 801 859 8192
FAX 801 446 8841
TOLL FREE 1 800 MY NOAHS
WEBSITE WWW.MYNOAHS.COM

NOAH'S is typically used Monday through Thursday for corporate and business events, Fridays and Saturdays are for family and social events. On average, a NOAH'S one story building uses on average of about 45 stalls. *See traffic study*

Please find the two attached documents illustrating the building calendar for our Las Colinas, Texas location. This location opened March 2012, and therefore reflects a developed building schedule. The first document is the day-by-day schedule for May 2013, which we consider a busy month for this particular year. The second document is the day-by-day schedule for July 2013, which we consider a slow month for this particular year.

In May 2013 in Las Colinas, one of our busy months, there were only two back-to-back events. In July 2013 there were no back-to-back events. As seen in the day-by-day calendars, when an event gets booked there is a 1-hour NA block placed before and after an event block. This ensures that we will have at least 2 hours to clean the room and reset it for the next event.

NOAH'S staffs the buildings appropriately based upon the events scheduled for that day on the calendar. We staff to ensure good customer service.

Traffic Study Subarea	Land Use	Time of Day	Data Set from *Trip Generation*	Regression Equation from *Trip Generation*	Total Trips	Entering		Exiting	
						%	Total Trips	%	Total Trips
1	Event Center (Non ITE Source)	AM Peak	Peak Hour of Adj. Street Traffic, One Hour between 7 & 9 AM	Average Rate= 0.50	125	88%	110	12%	15
	Ind. Variable (X) = 250 People	PM Peak	Peak Hour of Adj. Street Traffic, One Hour between 4 & 6 PM	Average Rate= 0.50	125	12%	15	88%	110
2	General Office Building (ITE Code #710)	Daily	Weekday	ln(T)=0.76ln(X)+3.68	458	50%	229	50%	229
		AM Peak	AM Peak Hour (Per Trip Generation, this represents both the peak hour of the generator and peak hour of adjacent street.)	ln(T)=.80ln(X)+1.57	63	88%	55	12%	8
	Ind. Variable (X) = 25 1000 SF Gross Floor Area	PM Peak	PM Peak Hour (Per Trip Generation, this represents both the peak hour of the generator and peak hour of adjacent street.)	Adjusted to 62% of ITE:T=1.12 (X)+78.45	66	17%	11	83%	55
3	Medical-Dental Office Building (ITE Code #720)	Daily	Weekday	Average Rate= 36.13	903	50%	452	50%	451
		AM Peak	Peak Hour of Adj. Street Traffic, One Hour between 7 & 9 AM	Average Rate= 2.4	60	79%	47	21%	13
	Ind. Variable (X) = 25 1000 SF Gross Floor Area	PM Peak	Peak Hour of Adj. Street Traffic, One Hour between 4 & 6 PM	ln(T)=0.90ln(X)+1.53	84	28%	24	72%	60
4	Athletic Club (ITE Code #493)	Daily	Weekday	Average Rate= 43.00	1075	50%	538	50%	537
		AM Peak	Peak Hour of Adj. Street Traffic, One Hour between 7 & 9 AM	Average Rate= 2.97	74	61%	45	39%	29
	Ind. Variable (X) = 25 1000 SF Gross Floor Area	PM Peak	Peak Hour of Adj. Street Traffic, One Hour between 4 & 6 PM	Average Rate= 5.96	149	62%	92	38%	57

Noah's Traffic Impact Study - 12/2013

APPENDIX EXHIBIT - SITE TRIP GENERATION COMPARISON

December 16, 2011 Thru April 14, 2012	Parking Spaces	Bldg. Sq. Footage	Parking Ratio Spaces : 1000Sq. Feet	Events during Study Period	Number of Weeks	High Number	Avg. Number *	Number of Events Exceeding Lot Capacity	Number of Events Exceeding 10/1000Sq. Feet	Number of Events Exceeding 8/1000Sq. Feet	% of Events Exceeding Lot Capacity	% of Events Exceeding 10/1000Sq. Feet	% of Events Exceeding 8/1000Sq. Feet
Lindon, Utah	144	24,600	5.85	408	17	186	45	6	0	0	1.5%	0.0%	0.0%
South Jordan, Utah	168	33,200	5.06	612	17	279	99	17	0	0	2.8%	0.0%	0.0%
Chandler, Arizona	132	12,500	10.56	316	17	156	52	1	4	7	0.3%	1.3%	2.2%
Westminster, Colorado	126	12,500	10.08	212	17	141	42	2	2	4	0.9%	0.9%	1.9%
Irving, Texas	121	11,700	10.34	19	6	109	42	0	0	1	0.0%	0.0%	5.3%

*Average number is Based on total cars parked for the day. Average number is often times separated by daytime parking and evening parking. Heaviest weighted average in the evening.

Chandler, Westminster and Irving have a higher ratio of large conference space to overall square footage resulting in higher parking counts per 1,000 sq.feet.

Noah's opinion:

The proper ratio for our type of use is 8 to 9 parking stalls per 1000sq. feet. As demonstrated by study, 94 to 98% of the use falls within this parameter.
In practical terms, perhaps 1 to perhaps 2 events per month exceed the capacity.

Todd Stanhope

From: Tina C. Wawszkiewicz <twawszkiewicz@dublin.oh.us>
Sent: Tuesday, September 17, 2013 3:12 PM
To: Todd Stanhope
Cc: Kristin K. Yorko; Jeannie E. Willis; Justin M. Goodwin
Subject: RE: Noah's Reception Center TIS - MOU

Hi Todd,

Could you please include the proposed building size in the MOU? I don't see it in there, and it would be helpful.

I'm also wondering about the 3 people per vehicle assumption. While this may come close on a social function, it probably doesn't make sense for a business conference (judgment based on the engineering conferences I've attended).

I'm surprised there isn't a limitation on the density or size of a building in the development text, but maybe we're just not that far along in the process. I would suggest that you use a conservative assumption as far as trip generation, as we require the traffic study to match or exceed the development text limitations.

As noted below, please revise the text regarding the trip distribution.

Thanks!
Tina

Tina Wawszkiewicz, PE
Civil Engineer

City of Dublin
Engineering
5800 Shier Rings Road
Dublin, Ohio 43016
phone 614.410.4636
cell 614.668.1705

twawszkiewicz@dublin.oh.us
www.dublinohiousa.gov

www.twitter.com/dublinohio
www.facebook.com/dublinohio

-----Original Message-----
From: Todd Stanhope [mailto:todd@trafficcounts.com]
Sent: Thursday, September 05, 2013 1:13 PM
To: Tina C. Wawszkiewicz
Subject: RE: Noah's Reception Center TIS - MOU

Tina

That is the same distribution used in the Village of Coffman Park study with the exception that no traffic from the east was assumed from Post Road based on the location of the site. The percentage to the east on Post Road was added to Perimeter Drive to the east for this study.

We can correct the text along with any other comments you may have.

Todd J. Stanhope, P.E., PTOE
Project Engineer
_____
Traffic Engineering Services, Inc.
742 Radio Drive
Lewis Center, OH 43035
V: (740) 549-0070
F: (866) 359-0465
e-mail: todd@trafficcounts.com
web: www.trafficcounts.com

-----Original Message-----
From: Tina C. Wawszkiewicz [mailto:twawszkiewicz@dublin.oh.us]
Sent: Thursday, September 05, 2013 12:44 PM
To: Todd Stanhope
Subject: RE: Noah's Reception Center TIS - MOU

Hi Todd,

I have a question on the trip distribution. The Village at Coffman Park is the closest site under study. It makes sense to compare this and the existing counts. Were you waiting on any other data to adjust the proposed distribution? I'm confused by the text.

Thanks!
Tina

-----Original Message-----
From: Todd Stanhope [mailto:todd@trafficcounts.com]
Sent: Thursday, September 05, 2013 8:55 AM
To: Tina C. Wawszkiewicz
Cc: Overmyer, Kurt (Kurt.Overmyer@guggenheimpartners.com)
Subject: Noah's Reception Center TIS - MOU

Tina

Attached is the MOU for the subject project.

Todd J. Stanhope, P.E., PTOE
Project Engineer
_____
Traffic Engineering Services, Inc.
742 Radio Drive
Lewis Center, OH 43035
V: (740) 549-0070
F: (866) 359-0465
e-mail: todd@trafficcounts.com
web: www.trafficcounts.com

TRAFFIC ENGINEERING SERVICES, INC.

742 Radio Drive • Lewis Center, OH 43035 • Phone (740) 549-0070 • Fax (866) 359-0465
www.trafficcounts.com

September 5, 2013

Ms. Tina Wawszkiewicz, P.E.
City of Dublin
5800 Shier Rings Rd
Dublin, OH 43016

Re: Noah's Reception Center TIS

Please consider this letter as a Memo of Understanding (MOU) for the TIS required for the subject site. The site is located in the City of Dublin on the east side of Wall Street north of Perimeter Drive. The land uses proposed for the site is a reception center. The scope of the study described below is based on a conversation with the City. We have also included some follow up information.

- **Study area** - The study area includes the following intersections:
  - All proposed site access points
  - Discovery Blvd & Post Road
  - Discovery Blvd & Wall St
  - Discovery Blvd & Perimeter Dr
  - Perimeter Dr & Wall St

- **Time Periods** - Weekday AM Peak hour (one hour between 7 AM and 9 AM); Weekday PM Peak hour (one hour between 4 PM and 6 PM).

- **Data Collection** – Turning movement counts taken as part of another study in this area that has been submitted to the City are acceptable for use.

- **Trip Generation** – Typically, trip generation is computed using the current edition of *Trip Generation* published by the Institute of Transportation Engineers (ITE). However, *Trip Generation* does not provide data for Reception Centers. A web search for information regarding trip generation at this type of facility resulted in finding a traffic impact study for the proposed The Ridge Event Center in Orem, UT. *The Ridge Event Center TIS* (*Ridge TIS*) is attached. The facility in the TIS is of similar use and size to the subject site. The owner noted that the capacity of the proposed Noah's facility is 250 people. Findings for PM Peak Hour trip generation in the *Ridge TIS* were based upon observations, traffic counts, and interviews with management of an existing convention center facility. It noted that three people per car were assumed. The Ridge TIS also notes that the nature of the use of the facility indicated that most trips occur outside the PM Peak Hour.

  We propose to use the assumption of the capacity event arriving during each peak hour. From the *Ridge TIS* we will apply the assumption of 3 people per

vehicle and that 88% of the trips were inbound. This would result in 84 vehicle trip ends in each peak hour and corresponds well to the 103 parking spaces being proposed.
The City has indicated that a comparison needs to be made between trip generation of the proposed use and the trip generation of the permitted use. Whichever is has the most intense traffic is what is considered in the study. It is our understanding that office and medical office is permitted on the site. At this point, there is not any limitation to the size of the building so the assumption of a 25,000 SF (2.5 acre* 10,000 SF/Acre) building is assumed for each type of office building.

The table with comparisons of trip generation of the proposed, office, and medical office is attached. Note that for the office use in the PM Peak, utilizing the regression equation yields unrealistic results because the PM outbound is over 66% the AM Inbound. Therefore, the trips were adjusted such that the outbound trips in the PM were equal to the inbound trips in the AM. The result is the medical office building generates the same number of PM peak trips as the proposed use but the proposed use is higher in the AM Peak. Therefore, the reception center will be used in the analysis.

Trip Distribution –We will propose a distribution once we collect the data. If the City has received other TISs in the area that have distribution information, these may be helpful in proposing a distribution for this site.

<u>AM Peak</u>
- 22% to/from west on Post Road
- 52% to/from west on Perimeter Drive
- 26% to/from east on Perimeter Drive

<u>PM Peak</u>
- 21% to/from west on Post Road
- 35% to/from west on Perimeter Drive
- 44% to/from east on Perimeter Drive

- **Design Year** – An Opening Day and a 10 Year design horizon are required. Opening day is anticipated to be 2014 so the design year will be 2024.

- **Growth Rates** – An area (all public streets) growth rate of 4.07% per year (compounded) was calculated as part of *The Village of Coffman Park TIS* in the area. We propose to use this growth rate in the TIS.

- **Analysis**
  - Turn lane warrants
  - Capacity analyses and mitigation strategies (if LOS is less than D on any movement)

- **Site Distance** – An assessment of site distance at the proposed access locations will be made.

If this MOU is acceptable to you, please indicate your approval in the space provided below. If not, please let us know what items need to be changed. Thank you for your attention to this.

Sincerely,

Todd J. Stanhope, P.E., PTOE

cc: K. Overmeyer – Guggenheim Partners, LLC

Approved:_____ Date:_____

APPENDIX B

TRAFFIC COUNTS

Traffic Engineering Services, Inc.
742 Radio Drive
Lewis Center, OH 43035
(740) 549-0070

File Name : Perimeter Drive & Discovery Boulevard - AM Peak
Site Code : 00000067
Start Date : 6/7/2013
Page No : 1

Groups Printed- Cars & Trucks

	Discovery Boulevard Southbound				Perimeter Drive Westbound				Venture Drive Northbound				Perimeter Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
07:00 AM	1	0	2	3	2	12	1	15	0	0	1	1	20	57	13	90	109
07:15 AM	0	0	0	0	6	26	8	40	1	1	0	2	25	70	18	113	155
07:30 AM	1	1	4	6	2	29	5	36	3	0	0	3	27	119	27	173	218
07:45 AM	0	0	2	2	2	32	6	40	4	0	2	6	52	147	31	230	278
Total	2	1	8	11	12	99	20	131	8	1	3	12	124	393	89	606	760
08:00 AM	0	0	4	4	9	41	10	60	4	1	2	7	58	105	28	191	262
08:15 AM	0	1	4	5	5	36	13	54	3	0	2	5	60	102	19	181	245
08:30 AM	0	1	5	6	5	41	5	51	3	0	4	7	40	93	23	156	220
08:45 AM	1	0	5	6	6	61	9	76	5	0	5	10	47	91	13	151	243
Total	1	2	18	21	25	179	37	241	15	1	13	29	205	391	83	679	970
Grand Total	3	3	26	32	37	278	57	372	23	2	16	41	329	784	172	1285	1730
Apprch %	9.4	9.4	81.3		9.9	74.7	15.3		56.1	4.9	39.0		25.6	61.0	13.4		
Total %	0.2	0.2	1.5	1.8	2.1	16.1	3.3	21.5	1.3	0.1	0.9	2.4	19.0	45.3	9.9	74.3	

	Discovery Boulevard Southbound				Perimeter Drive Westbound				Venture Drive Northbound				Perimeter Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Intersection	07:45 AM																
Volume	0	2	15	17	21	150	34	205	14	1	10	25	210	447	101	758	1005
Percent	0.0	11.8	88.2		10.2	73.2	16.6		56.0	4.0	40.0		27.7	59.0	13.3		
07:45 Volume	0	0	2	2	2	32	6	40	4	0	2	6	52	147	31	230	278
Peak Factor																	0.904
High Int.	08:30 AM				08:00 AM				08:00 AM				07:45 AM				
Volume	0	1	5	6	9	41	10	60	4	1	2	7	52	147	31	230	
Peak Factor				0.708				0.854				0.893				0.824	

City of Dublin
Engineering
5800 Shier Rings Road
Dublin, Ohio 43016

Mike S.
Thurs.

File Name : PerimeterDiscoveryPM2013
Site Code : 00475003
Start Date : 2/28/2013
Page No : 1

Groups Printed- Cars - Trucks

	Discovery Blvd Southbound					Perimeter Drive Westbound					Venture Drive Northbound					Perimeter Drive Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	19	0	9	0	28	1	64	8	0	73	4	3	18	0	25	6	53	6	0	65	191
04:15 PM	13	0	6	0	19	2	75	4	0	81	10	2	17	0	29	12	71	4	0	87	216
04:30 PM	30	1	16	0	47	1	99	3	0	103	12	0	19	0	31	4	56	2	0	62	243
04:45 PM	13	0	14	0	27	1	96	1	0	98	6	0	11	0	17	4	69	5	0	78	220
Total	75	1	45	0	121	5	334	16	0	355	32	5	65	0	102	26	249	17	0	292	870
05:00 PM	32	0	17	0	49	2	122	1	0	125	24	0	9	0	33	5	78	5	0	88	295
05:15 PM	23	0	18	0	41	0	119	3	0	122	7	3	18	0	28	1	62	7	0	70	261
05:30 PM	34	0	6	0	40	0	113	2	0	115	3	1	7	0	11	3	76	6	0	85	251
05:45 PM	24	0	19	0	43	2	103	3	1	109	4	2	4	0	10	1	66	0	0	67	229
Total	113	0	60	0	173	4	457	9	1	471	38	6	38	0	82	10	282	18	0	310	1036
Grand Total	188	1	105	0	294	9	791	25	1	826	70	11	103	0	184	36	531	35	0	602	1906
Apprch %	63.9	0.3	35.7	0		1.1	95.8	3	0.1		38	6	56	0		6	88.2	5.8	0		
Total %	9.9	0.1	5.5	0	15.4	0.5	41.5	1.3	0.1	43.3	3.7	0.6	5.4	0	9.7	1.9	27.9	1.8	0	31.6	
Cars	188	1	104	0	293	9	789	25	1	824	70	11	97	0	178	33	527	34	0	594	1889
% Cars	100	100	99	0	99.7	100	99.7	100	100	99.8	100	100	94.2	0	96.7	91.7	99.2	97.1	0	98.7	99.1
Trucks	0	0	1	0	1	0	2	0	0	2	0	0	6	0	6	3	4	1	0	8	17
% Trucks	0	0	1	0	0.3	0	0.3	0	0	0.2	0	0	5.8	0	3.3	8.3	0.8	2.9	0	1.3	0.9

	Discovery Blvd Southbound					Perimeter Drive Westbound					Venture Drive Northbound					Perimeter Drive Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	**32**	**0**	**17**	**0**	49	2	122	1	0	125	**24**	0	9	0	**33**	**5**	**78**	5	0	**88**	**295**
05:15 PM	23	0	18	0	41	0	119	**3**	0	122	7	**3**	**18**	0	28	1	62	**7**	0	70	261
05:30 PM	**34**	0	6	0	40	0	113	2	0	115	3	1	7	0	11	3	76	6	0	85	251
05:45 PM	24	0	**19**	0	43	2	103	3	**1**	109	4	2	4	0	10	1	66	0	0	67	229
Total Volume	113	0	60	0	173	4	457	9	1	471	38	6	38	0	82	10	282	18	0	310	1036
% App. Total	65.3	0	34.7	0		0.8	97	1.9	0.2		46.3	7.3	46.3	0		3.2	91	5.8	0		
PHF	.831	.000	.789	.000	.883	.500	.936	.750	.250	.942	.396	.500	.528	.000	.621	.500	.904	.643	.000	.881	.878

The AM count was taken 6/12/2013.

Traffic Engineering Services, Inc.
742 Radio Drive
Lewis Center, OH 43035
(740) 549-0070

File Name : Perimeter Drive & Wall St
Site Code : 00006101
Start Date : 6/10/2013
Page No : 1

Groups Printed- All Vehicles

	Wall Street Southbound				Perimeter Drive Westbound				Venture Drive Northbound				Perimeter Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
07:00 AM	2	1	0	3	8	27	5	40	0	0	1	1	3	37	7	47	91
07:15 AM	2	1	0	3	12	39	5	56	1	0	3	4	3	68	10	81	144
07:30 AM	0	0	0	0	18	52	10	80	1	0	1	2	2	87	16	105	187
07:45 AM	1	0	1	2	26	91	9	126	0	1	1	2	5	110	17	132	262
Total	5	2	1	8	64	209	29	302	2	1	6	9	13	302	50	365	684
08:00 AM	4	0	4	8	21	65	10	96	1	0	2	3	5	104	10	119	226
08:15 AM	3	0	1	4	16	71	9	96	0	0	4	4	2	81	15	98	202
08:30 AM	6	1	1	8	17	53	16	86	1	0	12	13	4	87	14	105	212
08:45 AM	3	0	2	5	21	77	11	109	4	0	5	9	2	81	8	91	214
Total	16	1	8	25	75	266	46	387	6	0	23	29	13	353	47	413	854
04:00 PM	9	1	7	17	11	68	2	81	12	2	24	38	1	95	4	100	236
04:15 PM	12	0	3	15	3	89	2	94	6	0	24	30	6	107	5	118	257
04:30 PM	10	0	1	11	5	67	2	74	11	0	32	43	1	111	9	121	249
04:45 PM	4	0	3	7	4	81	5	90	6	1	21	28	0	103	1	104	229
Total	35	1	14	50	23	305	11	339	35	3	101	139	8	416	19	443	971
05:00 PM	15	1	8	24	1	109	3	113	8	0	51	59	1	128	2	131	327
05:15 PM	17	2	4	23	3	123	5	131	11	2	23	36	2	131	5	138	328
05:30 PM	8	0	0	8	1	91	3	95	9	1	24	34	2	124	2	128	265
05:45 PM	9	2	1	12	2	89	3	94	5	0	7	12	2	107	2	111	229
Total	49	5	13	67	7	412	14	433	33	3	105	141	7	490	11	508	1149
Grand Total	105	9	36	150	169	1192	100	1461	76	7	235	318	41	1561	127	1729	3658
Apprch %	70.0	6.0	24.0		11.6	81.6	6.8		23.9	2.2	73.9		2.4	90.3	7.3		
Total %	2.9	0.2	1.0	4.1	4.6	32.6	2.7	39.9	2.1	0.2	6.4	8.7	1.1	42.7	3.5	47.3	

	Wall Street Southbound				Perimeter Drive Westbound				Venture Drive Northbound				Perimeter Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Intersection	07:45 AM																
Volume	14	1	7	22	80	280	44	404	2	1	19	22	16	382	56	454	902
Percent	63.6	4.5	31.8		19.8	69.3	10.9		9.1	4.5	86.4		3.5	84.1	12.3		
07:45 Volume	1	0	1	2	26	91	9	126	0	1	1	2	5	110	17	132	262
Peak Factor																	0.861
High Int.	08:00 AM				07:45 AM				08:30 AM				07:45 AM				
Volume	4	0	4	8	26	91	9	126	1	0	12	13	5	110	17	132	
Peak Factor				0.688				0.802				0.423				0.860	
Peak Hour From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Intersection	05:00 PM																
Volume	49	5	13	67	7	412	14	433	33	3	105	141	7	490	11	508	1149
Percent	73.1	7.5	19.4		1.6	95.2	3.2		23.4	2.1	74.5		1.4	96.5	2.2		
05:15 Volume	17	2	4	23	3	123	5	131	11	2	23	36	2	131	5	138	328
Peak Factor																	0.876
High Int.	05:00 PM				05:15 PM				05:00 PM				05:15 PM				
Volume	15	1	8	24	3	123	5	131	8	0	51	59	2	131	5	138	
Peak Factor				0.698				0.826				0.597				0.920	

Traffic Engineering Services, Inc.
742 Radio Drive
Lewis Center, OH 43035
(740) 549-0070

AM count was taken in 6-11-2013.

File Name : Post Rd & Discovery Blvd
Site Code : 06111302
Start Date : 6/10/2013
Page No : 1

Groups Printed- All Vehicles

	Post Road Westbound			Discovery Boulevard Northbound			Post Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0		1.0	1.0		1.0	1.0		
07:00 AM	2	12	14	1	2	3	17	11	28	45
07:15 AM	3	8	11	1	3	4	31	12	43	58
07:30 AM	2	14	16	0	2	2	41	15	56	74
07:45 AM	8	10	18	2	3	5	68	16	84	107
Total	15	44	59	4	10	14	157	54	211	284
08:00 AM	7	10	17	3	2	5	43	38	81	103
08:15 AM	2	13	15	2	4	6	44	19	63	84
08:30 AM	2	22	24	0	2	2	29	25	54	80
08:45 AM	5	20	25	2	2	4	55	16	71	100
Total	16	65	81	7	10	17	171	98	269	367
04:00 PM	0	18	18	8	4	12	26	0	26	56
04:15 PM	2	29	31	10	3	13	26	0	26	70
04:30 PM	5	34	39	20	9	29	22	3	25	93
04:45 PM	5	34	39	16	5	21	26	3	29	89
Total	12	115	127	54	21	75	100	6	106	308
05:00 PM	3	50	53	25	13	38	31	4	35	126
05:15 PM	6	41	47	24	18	42	27	2	29	118
05:30 PM	2	44	46	17	13	30	15	2	17	93
05:45 PM	4	46	50	15	4	19	27	2	29	98
Total	15	181	196	81	48	129	100	10	110	435
Grand Total	58	405	463	146	89	235	528	168	696	1394
Apprch %	12.5	87.5		62.1	37.9		75.9	24.1		
Total %	4.2	29.1	33.2	10.5	6.4	16.9	37.9	12.1	49.9	

	Post Road Westbound			Discovery Boulevard Northbound			Post Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1										
Intersection	07:45 AM									
Volume	19	55	74	7	11	18	184	98	282	374
Percent	25.7	74.3		38.9	61.1		65.2	34.8		
07:45 Volume	8	10	18	2	3	5	68	16	84	107
Peak Factor										0.874
High Int.	08:30 AM			08:15 AM			07:45 AM			
Volume	2	22	24	2	4	6	68	16	84	
Peak Factor			0.771			0.750			0.839	
Peak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1										
Intersection	05:00 PM									
Volume	15	181	196	81	48	129	100	10	110	435
Percent	7.7	92.3		62.8	37.2		90.9	9.1		
05:00 Volume	3	50	53	25	13	38	31	4	35	126
Peak Factor										0.863
High Int.	05:00 PM			05:15 PM			05:00 PM			
Volume	3	50	53	24	18	42	31	4	35	
Peak Factor			0.925			0.768			0.786	

Traffic Engineering Services, Inc.
742 Radio Drive
Lewis Center, OH 43035
(740) 549-0070

File Name : Discovery & Wall St
Site Code : 00611131
Start Date : 6/11/2013
Page No : 1

Groups Printed- All Vehicles

	Discovery Boulevard Southbound				Wall Street Westbound				Discovery Boulevard Northbound				Driveway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
07:00 AM	2	4	1	7	0	0	0	0	2	3	2	7	0	0	0	0	14
07:15 AM	3	5	2	10	1	0	0	1	3	5	0	8	0	0	0	0	19
07:30 AM	2	10	1	13	0	0	0	0	2	10	2	14	0	0	0	0	27
07:45 AM	4	6	0	10	1	1	1	3	4	10	6	20	0	0	0	0	33
Total	11	25	4	40	2	1	1	4	11	28	10	49	0	0	0	0	93
08:00 AM	4	16	3	23	0	0	3	3	3	17	8	28	0	0	0	0	54
08:15 AM	4	11	1	16	0	0	2	2	2	14	6	22	0	0	0	0	40
08:30 AM	5	14	1	20	2	0	0	2	1	11	4	16	0	0	0	0	38
08:45 AM	2	8	1	11	1	0	1	2	0	7	4	11	0	0	0	0	24
Total	15	49	6	70	3	0	6	9	6	49	22	77	0	0	0	0	156
04:00 PM	2	4	0	6	1	0	1	2	0	17	2	19	0	0	0	0	27
04:15 PM	2	4	0	6	1	0	0	1	0	10	0	10	2	0	1	3	20
04:30 PM	1	14	0	15	3	0	4	7	1	12	0	13	1	1	3	5	40
04:45 PM	0	4	0	4	1	0	2	3	0	18	0	18	0	0	1	1	26
Total	5	26	0	31	6	0	7	13	1	57	2	60	3	1	5	9	113
05:00 PM	3	10	0	13	7	0	6	13	0	21	2	23	4	0	1	5	54
05:15 PM	2	4	1	7	2	0	2	4	0	13	1	14	1	0	4	5	30
05:30 PM	3	11	0	14	3	0	7	10	0	17	1	18	3	0	3	6	48
05:45 PM	1	8	0	9	2	0	2	4	1	4	1	6	2	1	2	5	24
Total	9	33	1	43	14	0	17	31	1	55	5	61	10	1	10	21	156
Grand Total	40	133	11	184	25	1	31	57	19	189	39	247	13	2	15	30	518
Apprch %	21.7	72.3	6.0		43.9	1.8	54.4		7.7	76.5	15.8		43.3	6.7	50.0		
Total %	7.7	25.7	2.1	35.5	4.8	0.2	6.0	11.0	3.7	36.5	7.5	47.7	2.5	0.4	2.9	5.8	

	Discovery Boulevard Southbound				Wall Street Westbound				Discovery Boulevard Northbound				Driveway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Intersection	07:45 AM																
Volume	17	47	5	69	3	1	6	10	10	52	24	86	0	0	0	0	165
Percent	24.6	68.1	7.2		30.0	10.0	60.0		11.6	60.5	27.9		0.0	0.0	0.0		
08:00 Volume	4	16	3	23	0	0	3	3	3	17	8	28	0	0	0	0	54
Peak Factor																	0.764
High Int.	08:00 AM				07:45 AM				08:00 AM				6:45:00 AM				
Volume	4	16	3	23	1	1	1	3	3	17	8	28					
Peak Factor				0.750				0.833				0.768					
Peak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Intersection	04:45 PM																
Volume	8	29	1	38	13	0	17	30	0	69	4	73	8	0	9	17	158
Percent	21.1	76.3	2.6		43.3	0.0	56.7		0.0	94.5	5.5		47.1	0.0	52.9		
05:00 Volume	3	10	0	13	7	0	6	13	0	21	2	23	4	0	1	5	54
Peak Factor																	0.731
High Int.	05:30 PM				05:00 PM				05:00 PM				05:30 PM				
Volume	3	11	0	14	7	0	6	13	0	21	2	23	3	0	3	6	
Peak Factor				0.679				0.577				0.793				0.708	

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APPENDIX C

TRIP DISTRIBUTION

AM Peak Hour Distribution Calculations

Orientation	Movement	Volume		Calc %	Chosen %
To/From west on Post Rd.	Post Rd. EBRT at Discovery Blvd.	98	105	22.1%	**22%**
	Discovery Blvd. NBLT at Post Rd.	7			
To/From east on Post Rd.	Post Rd. WBLT at Discovery Blvd.	19	30	6.3%	**0%**
	Discovery Blvd. NBRT at Post Rd.	11			
To/From west on Perimeter Dr.	Perimeter Dr. EBLT at Discovery Blvd.	210	248	52.2%	**52%**
	Perimeter Dr. EBLT at Wall St.	16			
	Discovery Blvd. SBRT at Perimter Dr.	15			
	Wall St. SBRT at Perimter Dr.	7			
To/From east on Perimeter Dr.	Perimeter Dr.WBRT at Discovery Blvd.	34	92	19.4%	**26%**
	Perimeter Dr. WBRT at Wall St.	44			
	Discovery Blvd. SBLT at Perimter Dr.	0			
	Wall St. SBLT at Perimter Dr.	14			
TOTALS		475	475	100%	100%

PM Peak Hour Distribution Calculations

Orientation	Movement	Volume		Calc %	Chosen %
To/From west on Post Rd.	Post Rd. EBRT at Discovery Blvd.	10	91	21.1%	**21%**
	Discovery Blvd. NBLT at Post Rd.	81			
To/From east on Post Rd.	Post Rd. WBLT at Discovery Blvd.	15	63	14.6%	**0%**
	Discovery Blvd. NBRT at Post Rd.	48			
To/From west on Perimeter Dr.	Perimeter Dr. EBLT at Discovery Blvd.	18	151	35.0%	**35%**
	Perimeter Dr. EBLT at Wall St.	7			
	Discovery Blvd. SBRT at Perimter Dr.	113			
	Wall St. SBRT at Perimter Dr.	13			
To/From east on Perimeter Dr.	Perimeter Dr.WBRT at Discovery Blvd.	4	127	29.4%	**44%**
	Perimeter Dr. WBRT at Wall St.	14			
	Discovery Blvd. SBLT at Perimter Dr.	60			
	Wall St. SBLT at Perimter Dr.	49			
TOTALS		432	432	100%	**100%**

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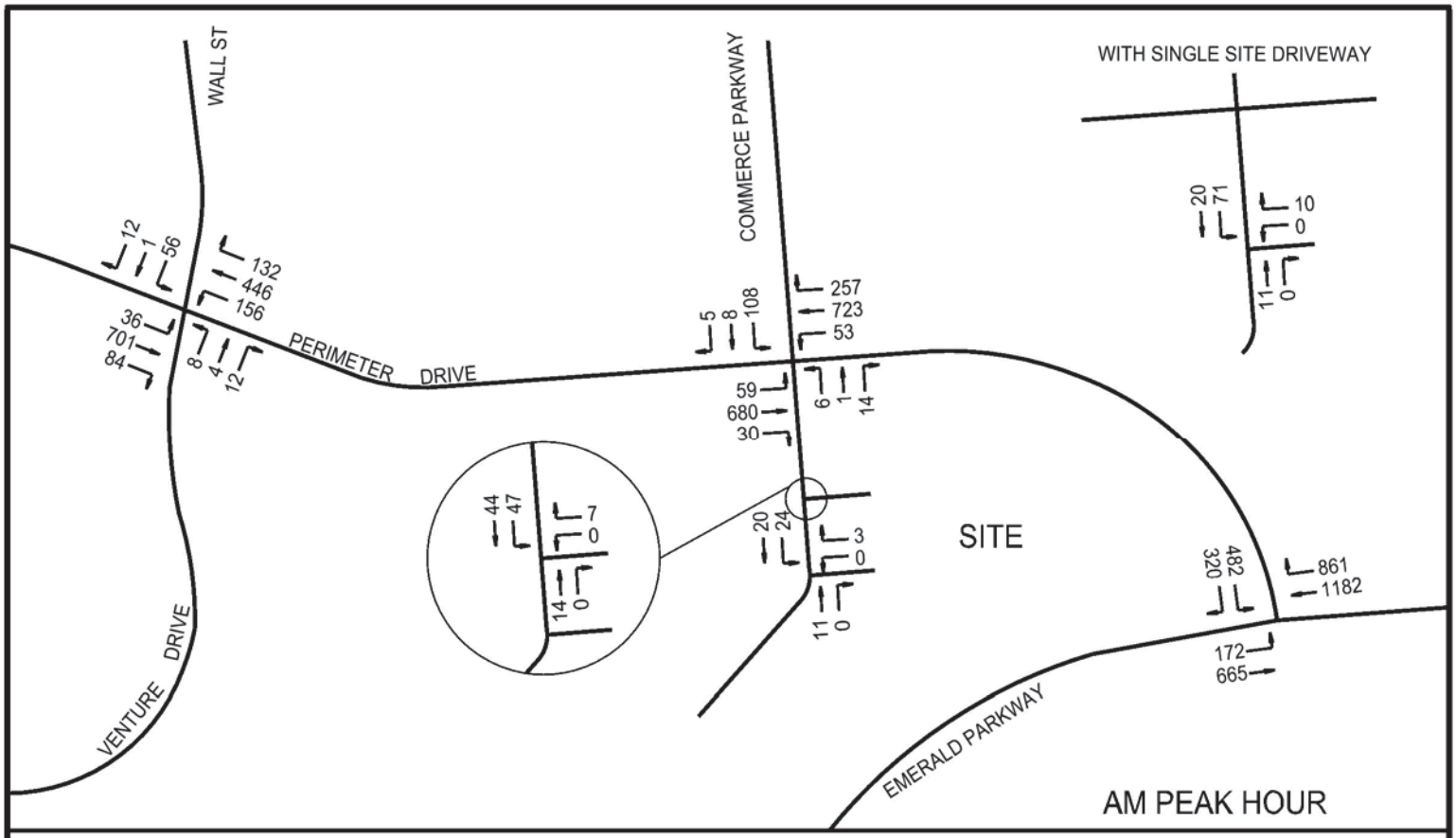
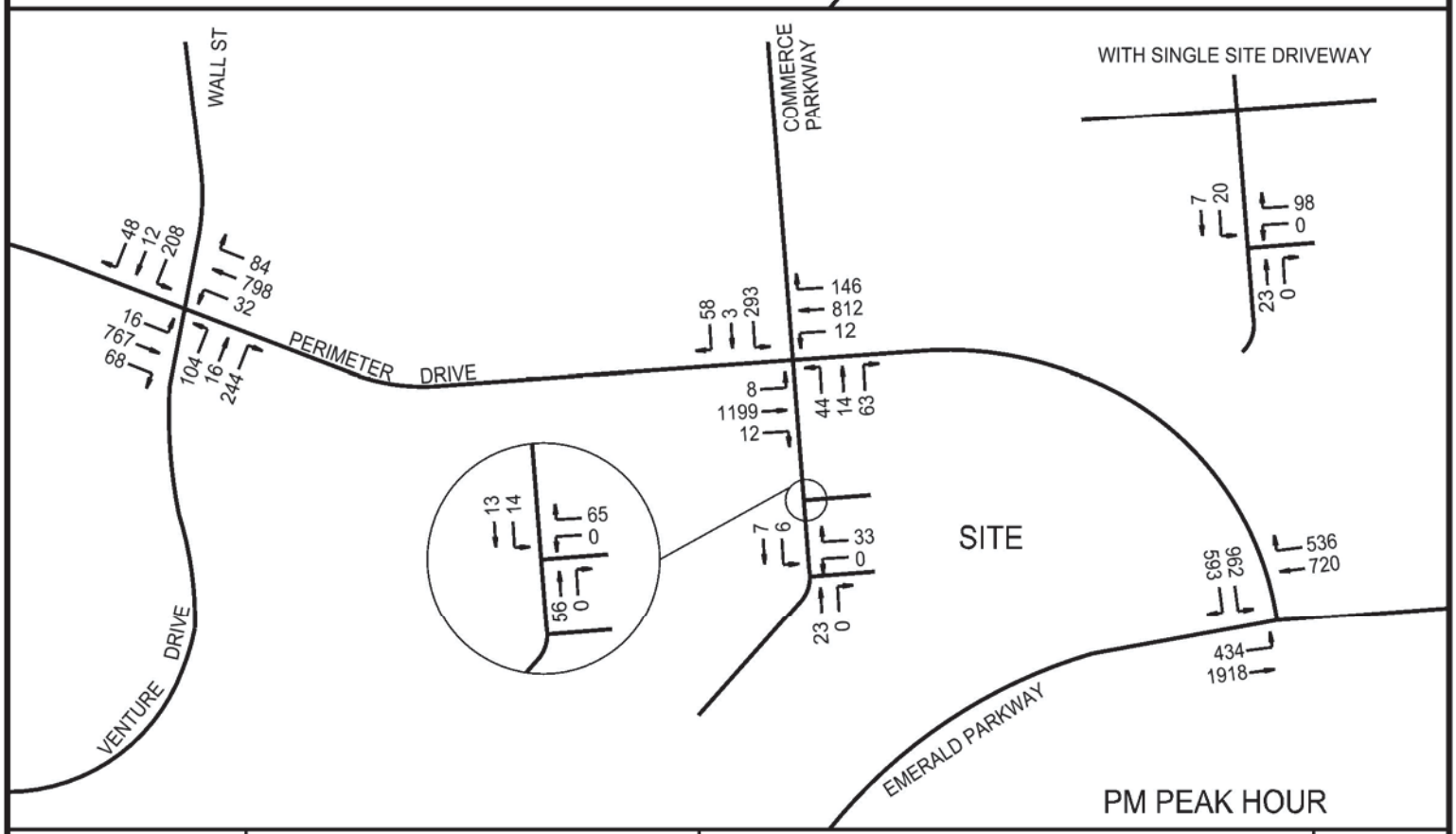
APPENDIX D

DESIGN TRAFFIC





SCALE: N.T.S.

Trans Associates

Transportation Solutions for Today and Tomorrow
941 Chatham Lane, Suite 319
Columbus, OH, 43221 / (614) 459-7930

PROJECT NO. MEACH00-09303

PROJECT: DELTA ENERGY DUBLIN DEVELOPMENT

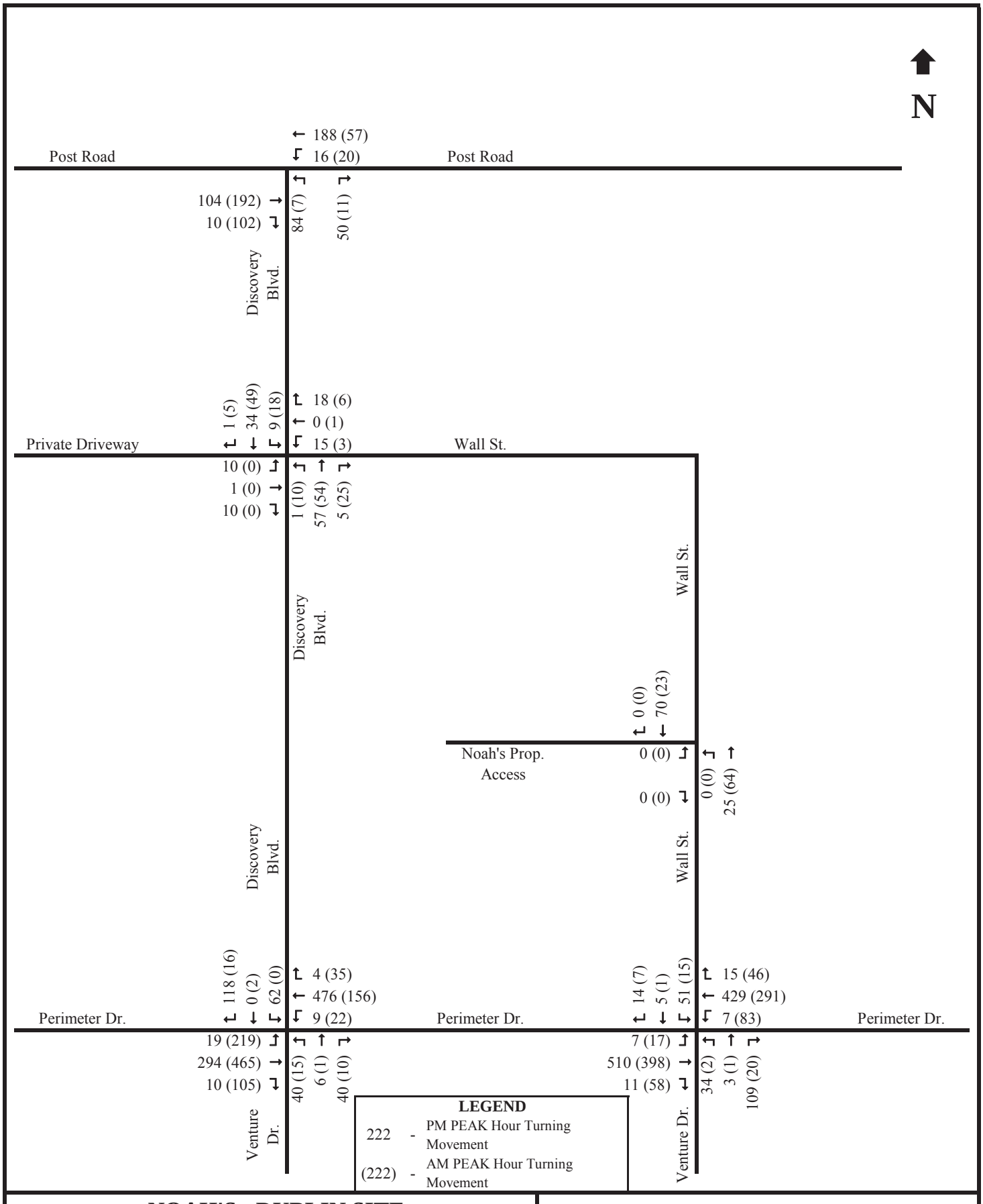
TITLE: TOTAL 2030 TRAFFIC VOLUMES

FIGURE 10

D.B. LDH
C.B. DRC
REV.
DATE 10-15-09

GROWTH FACTOR CALCULATIONS

Jurisdictions:	City of Dublin				
Street:	Perimeter west of Wall AM	Perimeter west of Wall PM	Wall north of Perimeter AM	Wall north of Perimeter PM	**Total Area**
First Count Year:	2013	2013	2013	2013	**2013**
First Count Volume:	743	966	83	91	**1883**
Second Count Year:	2030	2030	2030	2030	**2030**
Second Count Volume:	1287	1801	241	384	**3713**
Years Between Counts:	17	17	17	17	**17**
Compounded Per Year Growth Rate:	3.28%	3.73%	6.47%	8.84%	**4.07%**
Manual Per Year Growth Rate:					
Growth Rate to use in Calculation:	MANUAL (CPD)	MANUAL (CPD)	MANUAL (CPD)	MANUAL (CPD)	CALCULATED
Years to Opening Day:	1	1	1	1	**1**
Opening Day Factor:					**1.041**
Years to Horizon:	11	11	11	11	**11**
Horizon Factor:					**1.552**

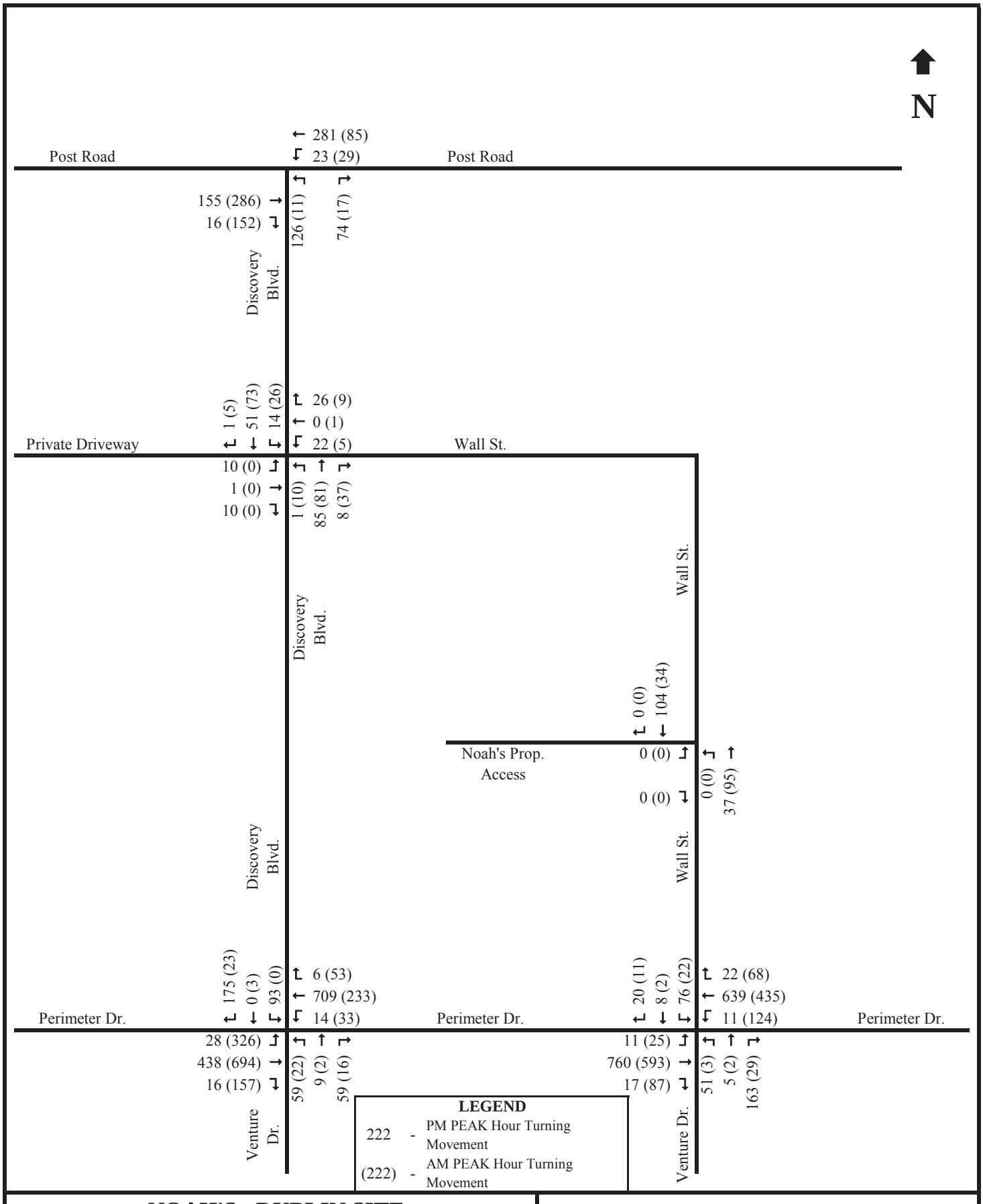


NOAH'S - DUBLIN SITE
TRAFFIC IMPACT STUDY

PREPARED BY: TRAFFIC ENGINEERING SERVICES 12/2013

APPENDIX EXHIBIT

2014 'NO BUILD' TRAFFIC



NOAH'S - DUBLIN SITE
TRAFFIC IMPACT STUDY

PREPARED BY: TRAFFIC ENGINEERING SERVICES 12/2013

APPENDIX EXHIBIT

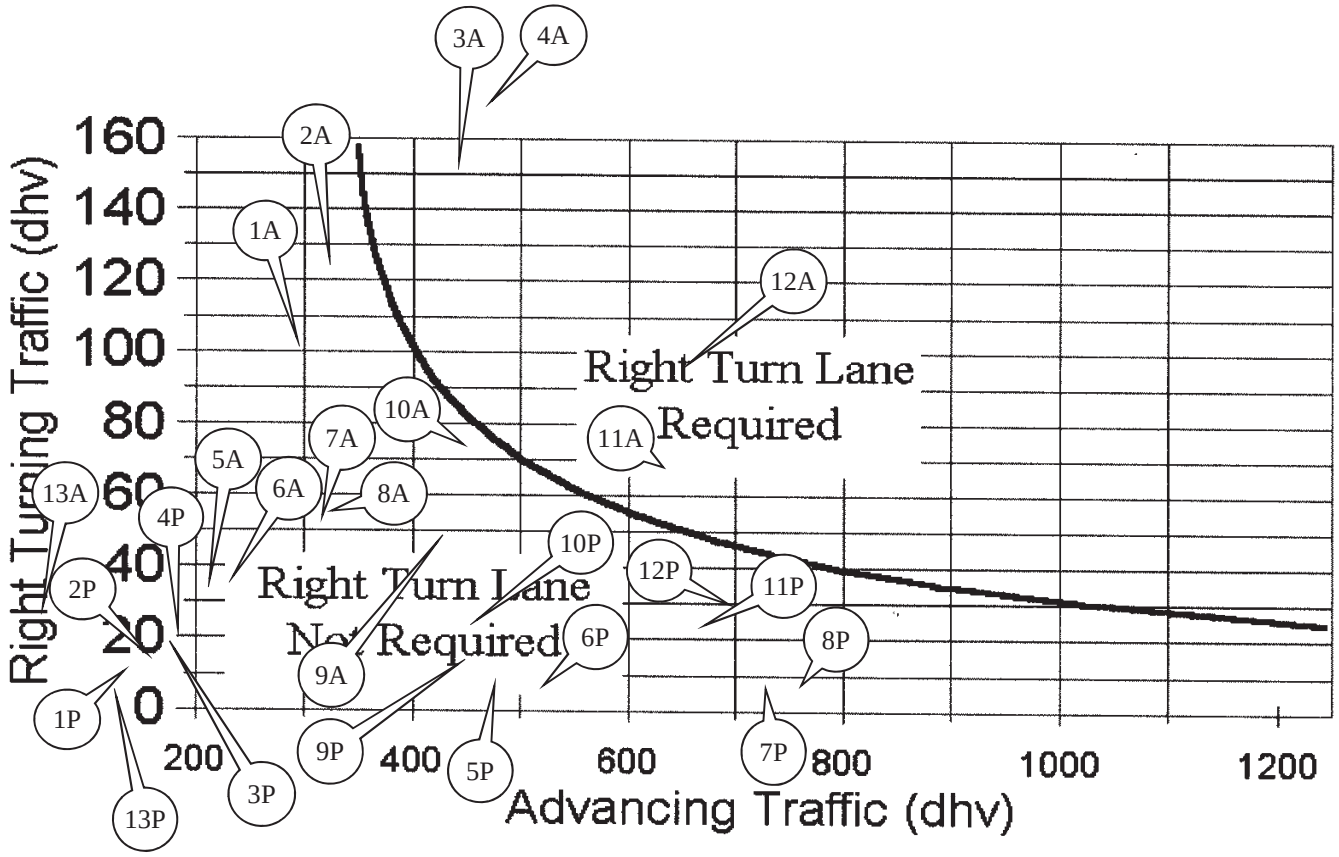
2024 'NO BUILD' TRAFFIC

APPENDIX E

TURN LANE WARRANTS

2-Lane Highway Right Turn Lane Warrant

=< 40 mph or 70 kph Posted Speed



WARRANT SUMMARY

ID	INTERSECTION [MOVEMENT] - VOLUME SET	AM PEAK (A)	PM PEAK (P)		RESULT
1	Discovery Blvd. & Post Road [EB RT] - 2014 'NO BUILD'	(294,102)	(114,10)		NOT MET
2	Discovery Blvd. & Post Road [EB RT] - 2014 'BUILD'	(318,126)	(117,13)		NOT MET
3	**Discovery Blvd. & Post Road [EB RT] - 2024 'NO BUILD'**	**(438,152)**	(171,16)		**MET**
4	**Discovery Blvd. & Post Road [EB RT] - 2024 'BUILD'**	**(462,176)**	(174,19)		**MET**
5	Discovery Blvd./Venture Dr. & Perimeter Dr. [WB RT] - 2014 'NO BUILD'	(213,35)	(489,4)		NOT MET
6	Discovery Blvd./Venture Dr. & Perimeter Dr. [WB RT] - 2014 'BUILD'	(221,35)	(528,4)		NOT MET
7	Discovery Blvd./Venture Dr. & Perimeter Dr. [WB RT] - 2024 'NO BUILD'	(319,53)	(729,6)		NOT MET
8	Discovery Blvd./Venture Dr. & Perimeter Dr. [WB RT] - 2024 'BUILD'	(327,53)	(768,6)		NOT MET
9	Wall St./Venture Dr. & Perimeter Dr. [WB RT] - 2014 'NO BUILD'	(420,46)	(451,15)		NOT MET
10	Wall St./Venture Dr. & Perimeter Dr. [WB RT] - 2014 'BUILD'	(449,75)	(458,22)		NOT MET
11	**Wall St./Venture Dr. & Perimeter Dr. [WB RT] - 2024 'NO BUILD'**	**(627,68)**	(672,22)		**MET**
12	**Wall St./Venture Dr. & Perimeter Dr. [WB RT] - 2024 'BUILD'**	**(656,97)**	(679,29)		**MET**
13	Wall St. & Noah's Prop. Access [SB RT] - 2024 'BUILD'	(58,24)	(107,3)		NOT MET

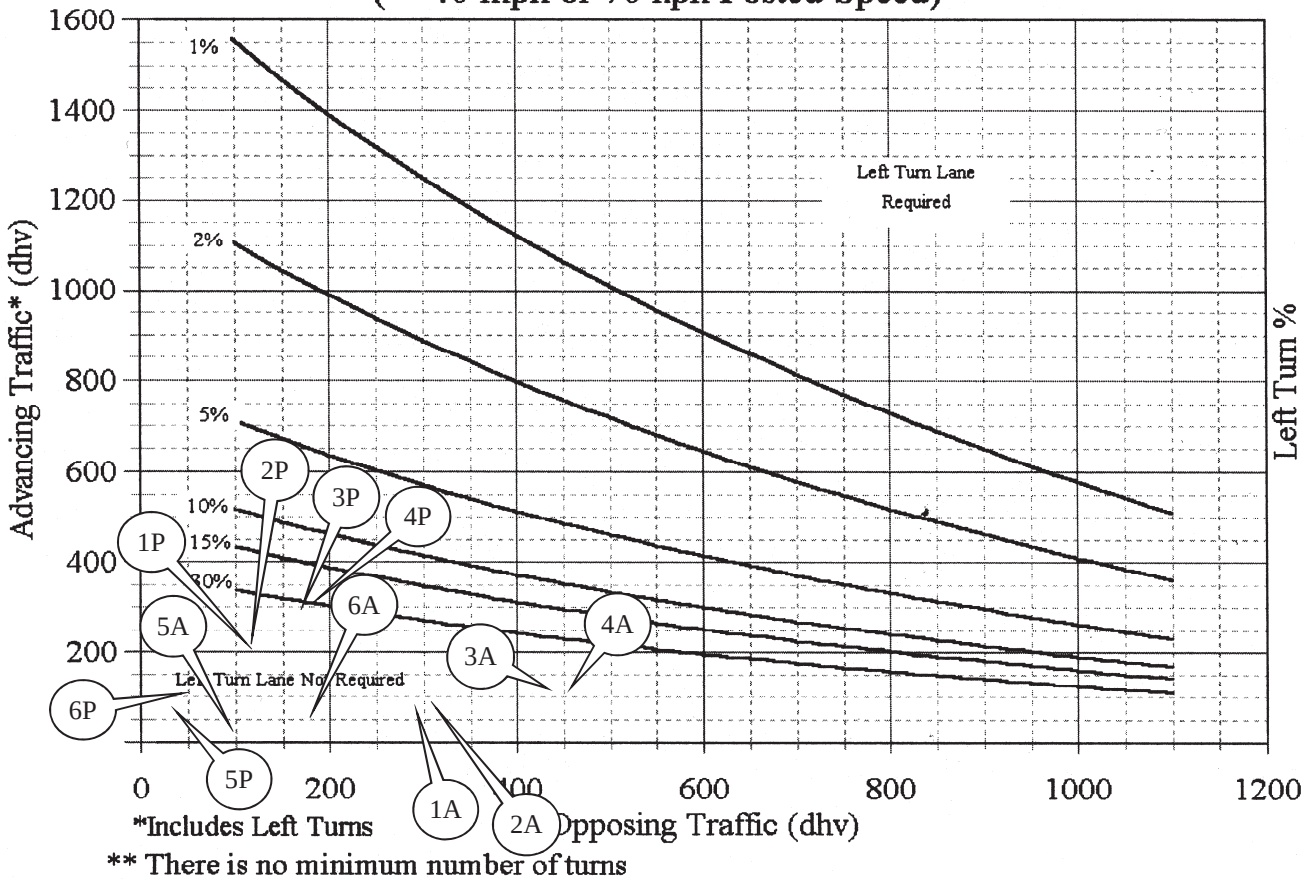
NOAH'S - DUBLIN SITE
TRAFFIC IMPACT STUDY
PREPARED BY: TRAFFIC ENGINEERING SERVICES 12/2013

APPENDIX

2 LANE HIGHWAY RIGHT TURN LANE WARRANT (=< 40 MPH)

2-Lane Highway Left Turn Lane Warrant

(=<40 mph or 70 kph Posted Speed)



WARRANT SUMMARY

ID	INTERSECTION [MOVEMENT] - VOLUME SET	AM PEAK (A)	PM PEAK (P)		RESULT
1	Discovery Blvd. & Post Road [WB LT] - 2014 'NO BUILD'	(294,77 / 26%)	(114,204 / 7.8%)		NOT MET
2	Discovery Blvd. & Post Road [WB LT] - 2014 'BUILD'	(318,77 / 26%)	(117,204 / 7.8%)		NOT MET
3	Discovery Blvd. & Post Road [WB LT] - 2024 'NO BUILD'	(438,114 / 25.4%)	(171,304 / 7.6%)		NOT MET
4	Discovery Blvd. & Post Road [WB LT] - 2024 'BUILD'	(462,114 / 25.4%)	(174,304 / 7.6%)		NOT MET
5	Wall St. & Noah's Prop. Access [SB LT] - 2024 'NO BUILD'	(95,34 / 0%)	(37,104 / 0%)		NOT MET
6	Wall St. & Noah's Prop. Access [SB LT] - 2024 'BUILD'	(181,58 / 0%)	(49,107 / 0%)		NOT MET

NOAH'S - DUBLIN SITE
TRAFFIC IMPACT STUDY
PREPARED BY: TRAFFIC ENGINEERING SERVICES 12/2013

APPENDIX

2 LANE HIGHWAY LEFT TURN LANE WARRANT (=< 40 MPH)

APPENDIX F

CAPACITY ANALYSIS

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*TJS*	Intersection	*Post Rd & Discovery Blvd*
Agency/Co.	*Traffic Engineering Services*	Jurisdiction	*City of Dublin*
Date Performed	*12/2013*	Analysis Year	*2014 No Build*
Analysis Time Period	*AM Peak*		

Project Description

East/West Street: *Post Rd*	North/South Street: *Discovery Blvd*
Intersection Orientation: *East-West*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*192*	*102*	*20*	*57*	
Peak-Hour Factor, PHF	*0.86*	*0.87*	*0.87*	*0.87*	*0.87*	*0.86*
Hourly Flow Rate, HFR (veh/h)	*0*	*220*	*117*	*22*	*65*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*7*		*11*			
Peak-Hour Factor, PHF	*0.87*	*0.86*	*0.87*	*0.86*	*0.86*	*0.86*
Hourly Flow Rate, HFR (veh/h)	*8*	*0*	*12*	*0*	*0*	*0*
Percent Heavy Vehicles	*2*	*0*	*2*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*22*		*20*				
C (m) (veh/h)		*1222*		*690*				
v/c		*0.02*		*0.03*				
95% queue length		*0.05*		*0.09*				
Control Delay (s/veh)		*8.0*		*10.4*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*10.4*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*TJS*	Intersection	*Post Rd & Discovery Blvd*
Agency/Co.	*Traffic Engineering Services*	Jurisdiction	*City of Dublin*
Date Performed	*12/2013*	Analysis Year	*2014 No Build*
Analysis Time Period	*PM Peak*		

Project Description

East/West Street: *Post Rd*	North/South Street: *Discovery Blvd*
Intersection Orientation: *East-West*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*104*	*10*	*16*	*188*	
Peak-Hour Factor, PHF	*0.86*	*0.86*	*0.86*	*0.86*	*0.86*	*0.86*
Hourly Flow Rate, HFR (veh/h)	*0*	*120*	*11*	*18*	*218*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*84*		*50*			
Peak-Hour Factor, PHF	*0.86*	*0.86*	*0.86*	*0.86*	*0.86*	*0.86*
Hourly Flow Rate, HFR (veh/h)	*97*	*0*	*58*	*0*	*0*	*0*
Percent Heavy Vehicles	*2*	*0*	*2*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*18*		*155*				
C (m) (veh/h)		*1454*		*702*				
v/c		*0.01*		*0.22*				
95% queue length		*0.04*		*0.84*				
Control Delay (s/veh)		*7.5*		*11.6*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*11.6*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*TJS*	Intersection	*Post Rd & Discovery Blvd*
Agency/Co.	*Traffic Engineering Services*	Jurisdiction	*City of Dublin*
Date Performed	*8/2013*	Analysis Year	*2014 Build*
Analysis Time Period	*AM Peak*		

Project Description

East/West Street: *Post Rd*	North/South Street: *Discovery Blvd*
Intersection Orientation: *East-West*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*192*	*126*	*20*	*57*	
Peak-Hour Factor, PHF	*0.86*	*0.87*	*0.87*	*0.87*	*0.87*	*0.86*
Hourly Flow Rate, HFR (veh/h)	*0*	*220*	*144*	*22*	*65*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*10*		*11*			
Peak-Hour Factor, PHF	*0.87*	*0.86*	*0.87*	*0.86*	*0.86*	*0.86*
Hourly Flow Rate, HFR (veh/h)	*11*	*0*	*12*	*0*	*0*	*0*
Percent Heavy Vehicles	*2*	*0*	*2*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*22*		*23*				
C (m) (veh/h)		*1195*		*665*				
v/c		*0.02*		*0.03*				
95% queue length		*0.06*		*0.11*				
Control Delay (s/veh)		*8.1*		*10.6*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*10.6*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*TJS*	Intersection	*Post Rd & Discovery Blvd*
Agency/Co.	*Traffic Engineering Services*	Jurisdiction	*City of Dublin*
Date Performed	*12/2013*	Analysis Year	*2014 Build*
Analysis Time Period	*PM Peak*		

Project Description

East/West Street: *Post Rd*	North/South Street: *Discovery Blvd*
Intersection Orientation: *East-West*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*104*	*13*	*16*	*188*	
Peak-Hour Factor, PHF	*0.86*	*0.86*	*0.86*	*0.86*	*0.86*	*0.86*
Hourly Flow Rate, HFR (veh/h)	*0*	*120*	*15*	*18*	*218*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*107*		*50*			
Peak-Hour Factor, PHF	*0.86*	*0.86*	*0.86*	*0.86*	*0.86*	*0.86*
Hourly Flow Rate, HFR (veh/h)	*124*	*0*	*58*	*0*	*0*	*0*
Percent Heavy Vehicles	*2*	*0*	*2*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*18*		*182*				
C (m) (veh/h)		*1449*		*685*				
v/c		*0.01*		*0.27*				
95% queue length		*0.04*		*1.07*				
Control Delay (s/veh)		*7.5*		*12.1*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*12.1*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*TJS*	Intersection	*Post Rd & Discovery Blvd*
Agency/Co.	*Traffic Engineering Services*	Jurisdiction	*City of Dublin*
Date Performed		Analysis Year	*2024 No Build*
Analysis Time Period	*AM Peak*		

Project Description	
East/West Street: *Post Rd*	North/South Street: *Discovery Blvd*
Intersection Orientation: *East-West*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*286*	*152*	*29*	*85*	
Peak-Hour Factor, PHF	*0.86*	*0.87*	*0.87*	*0.87*	*0.87*	*0.86*
Hourly Flow Rate, HFR (veh/h)	*0*	*328*	*174*	*33*	*97*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*11*		*17*			
Peak-Hour Factor, PHF	*0.87*	*0.86*	*0.87*	*0.86*	*0.86*	*0.86*
Hourly Flow Rate, HFR (veh/h)	*12*	*0*	*19*	*0*	*0*	*0*
Percent Heavy Vehicles	*2*	*0*	*2*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*33*		*31*				
C (m) (veh/h)		*1062*		*556*				
v/c		*0.03*		*0.06*				
95% queue length		*0.10*		*0.18*				
Control Delay (s/veh)		*8.5*		*11.9*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*11.9*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*TJS*	Intersection	*Post Rd & Discovery Blvd*
Agency/Co.	*Traffic Engineering Services*	Jurisdiction	*City of Dublin*
Date Performed		Analysis Year	*2024 No Build*
Analysis Time Period	*PM Peak*		

Project Description	
East/West Street: *Post Rd*	North/South Street: *Discovery Blvd*
Intersection Orientation: *East-West*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*155*	*16*	*23*	*281*	
Peak-Hour Factor, PHF	*0.86*	*0.86*	*0.86*	*0.86*	*0.86*	*0.86*
Hourly Flow Rate, HFR (veh/h)	*0*	*180*	*18*	*26*	*326*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*126*		*74*			
Peak-Hour Factor, PHF	*0.86*	*0.86*	*0.86*	*0.86*	*0.86*	*0.86*
Hourly Flow Rate, HFR (veh/h)	*146*	*0*	*86*	*0*	*0*	*0*
Percent Heavy Vehicles	*2*	*0*	*2*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*26*		*232*				
C (m) (veh/h)		*1375*		*569*				
v/c		*0.02*		*0.41*				
95% queue length		*0.06*		*1.97*				
Control Delay (s/veh)		*7.7*		*15.6*				
LOS		*A*		*C*				
Approach Delay (s/veh)	--	--	*15.6*					
Approach LOS	--	--	*C*					

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*TJS*	Intersection	*Post Rd & Discovery Blvd*
Agency/Co.	*Traffic Engineering Services*	Jurisdiction	*City of Dublin*
Date Performed	*12/2013*	Analysis Year	*2024 Build*
Analysis Time Period	*AM Peak*		

Project Description	
East/West Street: *Post Rd*	North/South Street: *Discovery Blvd*
Intersection Orientation: *East-West*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*286*	*176*	*29*	*85*	
Peak-Hour Factor, PHF	*0.86*	*0.87*	*0.87*	*0.87*	*0.87*	*0.86*
Hourly Flow Rate, HFR (veh/h)	*0*	*328*	*202*	*33*	*97*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*14*		*17*			
Peak-Hour Factor, PHF	*0.87*	*0.86*	*0.87*	*0.86*	*0.86*	*0.86*
Hourly Flow Rate, HFR (veh/h)	*16*	*0*	*19*	*0*	*0*	*0*
Percent Heavy Vehicles	*2*	*0*	*2*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*33*		*35*				
C (m) (veh/h)		*1037*		*534*				
v/c		*0.03*		*0.07*				
95% queue length		*0.10*		*0.21*				
Control Delay (s/veh)		*8.6*		*12.2*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*12.2*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*TJS*	Intersection	*Post Rd & Discovery Blvd*
Agency/Co.	*Traffic Engineering Services*	Jurisdiction	*City of Dublin*
Date Performed	*12/2013*	Analysis Year	*2024 Build*
Analysis Time Period	*PM Peak*		

Project Description

East/West Street: *Post Rd*	North/South Street: *Discovery Blvd*
Intersection Orientation: *East-West*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*155*	*22*	*29*	*281*	
Peak-Hour Factor, PHF	*0.86*	*0.86*	*0.86*	*0.86*	*0.86*	*0.86*
Hourly Flow Rate, HFR (veh/h)	*0*	*180*	*25*	*33*	*326*	*0*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*136*		*86*			
Peak-Hour Factor, PHF	*0.86*	*0.86*	*0.86*	*0.86*	*0.86*	*0.86*
Hourly Flow Rate, HFR (veh/h)	*158*	*0*	*99*	*0*	*0*	*0*
Percent Heavy Vehicles	*2*	*0*	*2*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*33*		*257*				
C (m) (veh/h)		*1366*		*561*				
v/c		*0.02*		*0.46*				
95% queue length		*0.07*		*2.39*				
Control Delay (s/veh)		*7.7*		*16.7*				
LOS		*A*		*C*				
Approach Delay (s/veh)	--	--	*16.7*					
Approach LOS	--	--	*C*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*TJS*
Agency/Co.	*Traffic Engineering Services*
Date Performed	
Analysis Time Period	*AM Peak*

Site Information

Intersection	*Perimeter & Discovery-Venture*
Jurisdiction	*City of Dublin*
Analysis Year	*2014 No Build*

Project Description

East/West Street: *Perimeter Drive* | North/South Street: *Venture Drive-Discovery Blvd*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*219*	*465*	*105*	*22*	*156*	*35*
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*243*	*516*	*116*	*24*	*173*	*38*
Percent Heavy Vehicles	*2*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*1*	*0*	*1*	*1*	*0*
Configuration	*L*		*TR*	*L*		*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*15*	*1*	*10*	*0*	*2*	*16*
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*16*	*1*	*11*	*0*	*2*	*17*
Percent Heavy Vehicles	*2*	*2*	*2*	*2*	*2*	*2*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*1*	*0*	*0*	*1*	*0*
Configuration	*L*		*TR*		*LTR*	

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*	*L*	*L*		*TR*		*LTR*	
v (veh/h)	*243*	*24*	*16*		*12*		*19*	
C (m) (veh/h)	*1360*	*951*	*111*		*411*		*516*	
v/c	*0.18*	*0.03*	*0.14*		*0.03*		*0.04*	
95% queue length	*0.65*	*0.08*	*0.49*		*0.09*		*0.11*	
Control Delay (s/veh)	*8.2*	*8.9*	*42.8*		*14.0*		*12.2*	
LOS	*A*	*A*	*E*		*B*		*B*	
Approach Delay (s/veh)	--	--	*30.5*			*12.2*		
Approach LOS	--	--	*D*			*B*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*TJS*
Agency/Co.	*Traffic Engineering Services*
Date Performed	*12/2013*
Analysis Time Period	*PM Peak*

Site Information

Intersection	*Perimeter & Discovery-Venture*
Jurisdiction	*City of Dublin*
Analysis Year	*2014 No Build*

Project Description

East/West Street: *Perimeter Drive*

North/South Street: *Venture Drive-Discovery Blvd*

Intersection Orientation: *East-West*

Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*19*	*294*	*10*	*9*	*476*	*4*
Peak-Hour Factor, PHF	*0.88*	*0.88*	*0.88*	*0.88*	*0.88*	*0.88*
Hourly Flow Rate, HFR (veh/h)	*21*	*334*	*11*	*10*	*540*	*4*
Percent Heavy Vehicles	*2*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*1*	*0*	*1*	*1*	*0*
Configuration	*L*		*TR*	*L*		*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*40*	*6*	*40*	*62*	*0*	*118*
Peak-Hour Factor, PHF	*0.88*	*0.88*	*0.88*	*0.88*	*0.88*	*0.88*
Hourly Flow Rate, HFR (veh/h)	*45*	*6*	*45*	*70*	*0*	*134*
Percent Heavy Vehicles	*2*	*2*	*2*	*2*	*2*	*2*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*1*	*0*	*0*	*1*	*0*
Configuration	*L*		*TR*		*LTR*	

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*	*L*	*L*		*TR*		*LTR*	
v (veh/h)	*21*	*10*	*45*		*51*		*204*	
C (m) (veh/h)	*1025*	*1214*	*160*		*582*		*350*	
v/c	*0.02*	*0.01*	*0.28*		*0.09*		*0.58*	
95% queue length	*0.06*	*0.02*	*1.09*		*0.29*		*3.51*	
Control Delay (s/veh)	*8.6*	*8.0*	*36.1*		*11.8*		*28.7*	
LOS	*A*	*A*	*E*		*B*		*D*	
Approach Delay (s/veh)	--	--	*23.2*			*28.7*		
Approach LOS	--	--	*C*			*D*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*TJS*
Agency/Co.	*Traffic Engineering Services*
Date Performed	*12/2013*
Analysis Time Period	*AM Peak*

Site Information

Intersection	*Perimeter Dr & Wall St-Venture*
Jurisdiction	*City of Dublin*
Analysis Year	*2014 No Build*

Project Description

East/West Street: *Perimeter Drive*

North/South Street: *Venture Drive-Wall Street*

Intersection Orientation: *East-West*

Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*17*	*398*	*58*	*83*	*291*	*46*
Peak-Hour Factor, PHF	*0.86*	*0.86*	*0.86*	*0.86*	*0.86*	*0.86*
Hourly Flow Rate, HFR (veh/h)	*19*	*462*	*67*	*96*	*338*	*53*
Percent Heavy Vehicles	*2*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*1*	*0*	*1*	*1*	*0*
Configuration	*L*		*TR*	*L*		*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*2*	*1*	*20*	*15*	*1*	*7*
Peak-Hour Factor, PHF	*0.86*	*0.86*	*0.86*	*0.86*	*0.86*	*0.86*
Hourly Flow Rate, HFR (veh/h)	*2*	*1*	*23*	*17*	*1*	*8*
Percent Heavy Vehicles	*2*	*2*	*2*	*2*	*2*	*2*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*1*	*0*	*1*	*1*	*0*
Configuration	*L*		*TR*	*L*		*TR*

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*	*L*	*L*		*TR*	*L*		*TR*
v (veh/h)	*19*	*96*	*2*		*24*	*17*		*9*
C (m) (veh/h)	*1168*	*1038*	*173*		*528*	*166*		*524*
v/c	*0.02*	*0.09*	*0.01*		*0.05*	*0.10*		*0.02*
95% queue length	*0.05*	*0.30*	*0.04*		*0.14*	*0.34*		*0.05*
Control Delay (s/veh)	*8.1*	*8.8*	*26.1*		*12.1*	*29.1*		*12.0*
LOS	*A*	*A*	*D*		*B*	*D*		*B*
Approach Delay (s/veh)	--	--	*13.2*			*23.2*		
Approach LOS	--	--	*B*			*C*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*TJS*
Agency/Co.	*Traffic Engineering Services*
Date Performed	*12/2013*
Analysis Time Period	*PM Peak*

Site Information

Intersection	*Perimeter Dr & Wall St-Venture*
Jurisdiction	*City of Dublin*
Analysis Year	*2014 No Build*

Project Description

East/West Street: *Perimeter Drive*

North/South Street: *Venture Drive-Wall Street*

Intersection Orientation: *East-West*

Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*7*	*510*	*11*	*7*	*429*	*15*
Peak-Hour Factor, PHF	*0.88*	*0.88*	*0.88*	*0.88*	*0.88*	*0.88*
Hourly Flow Rate, HFR (veh/h)	*7*	*579*	*12*	*7*	*487*	*17*
Percent Heavy Vehicles	*2*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*1*	*0*	*1*	*1*	*0*
Configuration	*L*		*TR*	*L*		*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*34*	*3*	*109*	*51*	*5*	*14*
Peak-Hour Factor, PHF	*0.88*	*0.88*	*0.88*	*0.88*	*0.88*	*0.88*
Hourly Flow Rate, HFR (veh/h)	*38*	*3*	*123*	*57*	*5*	*15*
Percent Heavy Vehicles	*2*	*2*	*2*	*2*	*2*	*2*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*1*	*0*	*1*	*1*	*0*
Configuration	*L*		*TR*	*L*		*TR*

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*	*L*	*L*		*TR*	*L*		*TR*
v (veh/h)	*7*	*7*	*38*		*126*	*57*		*20*
C (m) (veh/h)	*1061*	*985*	*174*		*493*	*126*		*396*
v/c	*0.01*	*0.01*	*0.22*		*0.26*	*0.45*		*0.05*
95% queue length	*0.02*	*0.02*	*0.80*		*1.01*	*2.01*		*0.16*
Control Delay (s/veh)	*8.4*	*8.7*	*31.4*		*14.8*	*55.3*		*14.6*
LOS	*A*	*A*	*D*		*B*	*F*		*B*
Approach Delay (s/veh)	--	--	*18.6*			*44.7*		
Approach LOS	--	--	*C*			*E*		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*TJS*	Intersection	*Discovery Blvd & Wall St*
Agency/Co.	*Traffic Engineering Services*	Jurisdiction	*City of Dublin*
Date Performed	*12/2013*	Analysis Year	*2024 No Build*
Analysis Time Period	*AM Peak*		

Project Description	
East/West Street: *Wall St*	North/South Street: *Discovery Blvd*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*10*	*81*	*37*	*26*	*73*	*5*
Peak-Hour Factor, PHF	*0.76*	*0.76*	*0.76*	*0.76*	*0.76*	*0.76*
Hourly Flow Rate, HFR (veh/h)	*13*	*106*	*48*	*34*	*96*	*6*
Percent Heavy Vehicles	*2*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LTR*			*LTR*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*0*	*5*	*1*	*9*
Peak-Hour Factor, PHF	*0.76*	*0.76*	*0.76*	*0.76*	*0.76*	*0.76*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*6*	*1*	*11*
Percent Heavy Vehicles	*2*	*2*	*2*	*2*	*2*	*2*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LTR*	*LTR*		*LTR*			*LTR*	
v (veh/h)	*13*	*34*		*18*			*0*	
C (m) (veh/h)	*1490*	*1426*		*766*				
v/c	*0.01*	*0.02*		*0.02*				
95% queue length	*0.03*	*0.07*		*0.07*				
Control Delay (s/veh)	*7.4*	*7.6*		*9.8*				
LOS	*A*	*A*		*A*				
Approach Delay (s/veh)	--	--	*9.8*					
Approach LOS	--	--	*A*					

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*TJS*	Intersection	*Discovery Blvd & Wall St*
Agency/Co.	*Traffic Engineering Services*	Jurisdiction	*City of Dublin*
Date Performed	*12/2013*	Analysis Year	*2024 No Build*
Analysis Time Period	*PM Peak*		

Project Description

East/West Street: *Wall St*	North/South Street: *Discovery Blvd*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*1*	*85*	*8*	*14*	*51*	*1*
Peak-Hour Factor, PHF	*0.73*	*0.73*	*0.73*	*0.73*	*0.73*	*0.73*
Hourly Flow Rate, HFR (veh/h)	*1*	*116*	*10*	*19*	*69*	*1*
Percent Heavy Vehicles	*2*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LTR*			*LTR*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*10*	*1*	*10*	*22*	*0*	*26*
Peak-Hour Factor, PHF	*0.73*	*0.73*	*0.73*	*0.73*	*0.73*	*0.73*
Hourly Flow Rate, HFR (veh/h)	*13*	*1*	*13*	*30*	*0*	*35*
Percent Heavy Vehicles	*2*	*2*	*2*	*2*	*2*	*2*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LTR*	*LTR*		*LTR*			*LTR*	
v (veh/h)	*1*	*19*		*65*			*27*	
C (m) (veh/h)	*1531*	*1460*		*807*			*795*	
v/c	*0.00*	*0.01*		*0.08*			*0.03*	
95% queue length	*0.00*	*0.04*		*0.26*			*0.11*	
Control Delay (s/veh)	*7.4*	*7.5*		*9.9*			*9.7*	
LOS	*A*	*A*		*A*			*A*	
Approach Delay (s/veh)	--	--	*9.9*			*9.7*		
Approach LOS	--	--	*A*			*A*		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*TJS*	Intersection	*Discovery Blvd & Wall St*
Agency/Co.	*Traffic Engineering Services*	Jurisdiction	*City of Dublin*
Date Performed	*12/2013*	Analysis Year	*2024 Build*
Analysis Time Period	*AM Peak*		

Project Description

East/West Street: *Wall St*	North/South Street: *Discovery Blvd*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*10*	*81*	*37*	*50*	*73*	*5*
Peak-Hour Factor, PHF	*0.76*	*0.76*	*0.76*	*0.76*	*0.76*	*0.76*
Hourly Flow Rate, HFR (veh/h)	*13*	*106*	*48*	*65*	*96*	*6*
Percent Heavy Vehicles	*2*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LTR*			*LTR*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*0*	*5*	*1*	*12*
Peak-Hour Factor, PHF	*0.76*	*0.76*	*0.76*	*0.76*	*0.76*	*0.76*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*6*	*1*	*15*
Percent Heavy Vehicles	*2*	*2*	*2*	*2*	*2*	*2*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LTR*	*LTR*		*LTR*			*LTR*	
v (veh/h)	*13*	*65*		*22*			*0*	
C (m) (veh/h)	*1490*	*1426*		*754*				
v/c	*0.01*	*0.05*		*0.03*				
95% queue length	*0.03*	*0.14*		*0.09*				
Control Delay (s/veh)	*7.4*	*7.6*		*9.9*				
LOS	*A*	*A*		*A*				
Approach Delay (s/veh)	--	--	*9.9*					
Approach LOS	--	--	*A*					

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*TJS*	Intersection	*Discovery Blvd & Wall St*
Agency/Co.	*Traffic Engineering Services*	Jurisdiction	*City of Dublin*
Date Performed	*12/2013*	Analysis Year	*2024 Build*
Analysis Time Period	*PM Peak*		

Project Description

East/West Street: *Wall St*	North/South Street: *Discovery Blvd*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*1*	*85*	*8*	*17*	*51*	*1*
Peak-Hour Factor, PHF	*0.73*	*0.73*	*0.73*	*0.73*	*0.73*	*0.73*
Hourly Flow Rate, HFR (veh/h)	*1*	*116*	*10*	*23*	*69*	*1*
Percent Heavy Vehicles	*2*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LTR*			*LTR*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*10*	*1*	*10*	*22*	*0*	*49*
Peak-Hour Factor, PHF	*0.73*	*0.73*	*0.73*	*0.73*	*0.73*	*0.73*
Hourly Flow Rate, HFR (veh/h)	*13*	*1*	*13*	*30*	*0*	*67*
Percent Heavy Vehicles	*2*	*2*	*2*	*2*	*2*	*2*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LTR*	*LTR*		*LTR*			*LTR*	
v (veh/h)	*1*	*23*		*97*			*27*	
C (m) (veh/h)	*1531*	*1460*		*840*			*760*	
v/c	*0.00*	*0.02*		*0.12*			*0.04*	
95% queue length	*0.00*	*0.05*		*0.39*			*0.11*	
Control Delay (s/veh)	*7.4*	*7.5*		*9.8*			*9.9*	
LOS	*A*	*A*		*A*			*A*	
Approach Delay (s/veh)	--	--	*9.8*			*9.9*		
Approach LOS	--	--	*A*			*A*		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*TJS*	Intersection	*Wall St & Prop. Noah's Access*
Agency/Co.	*Traffic Engineering Services*	Jurisdiction	*City of Dublin*
Date Performed	*12/2013*	Analysis Year	*2024 Build*
Analysis Time Period	*AM Peak*		

Project Description

East/West Street: *Prop. Noah's Access*	North/South Street: *Wall St*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*86*	*95*			*34*	*24*
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*95*	*105*	*0*	*0*	*37*	*26*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*3*		*12*			
Peak-Hour Factor, PHF	*0.90*	*0.69*	*0.90*	*0.90*	*0.69*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*3*	*0*	*13*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*2*	*0*	*2*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (veh/h)	*95*						*16*	
C (m) (veh/h)	*1553*						*911*	
v/c	*0.06*						*0.02*	
95% queue length	*0.20*						*0.05*	
Control Delay (s/veh)	*7.5*						*9.0*	
LOS	*A*						*A*	
Approach Delay (s/veh)	--	--	*9.0*					
Approach LOS	--	--	*A*					

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*TJS*	Intersection	*Wall St & Prop. Noah's Access*
Agency/Co.	*Traffic Engineering Services*	Jurisdiction	*City of Dublin*
Date Performed	*12/2013*	Analysis Year	*2024 Build*
Analysis Time Period	*PM Peak*		

Project Description

East/West Street: *Noah's Prop Access*	North/South Street: *Wall St*
Intersection Orientation: *North-South*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*12*	*37*			*104*	*3*
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*13*	*41*	*0*	*0*	*115*	*3*
Percent Heavy Vehicles	*0*	--	--	*2*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*23*		*87*			
Peak-Hour Factor, PHF	*0.90*	*0.69*	*0.90*	*0.90*	*0.69*	*0.90*
Hourly Flow Rate, HFR (veh/h)	*25*	*0*	*96*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*2*	*0*	*2*
Percent Grade (%)	*0*			*0*		
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (veh/h)	*13*						*121*	
C (m) (veh/h)	*1483*						*910*	
v/c	*0.01*						*0.13*	
95% queue length	*0.03*						*0.46*	
Control Delay (s/veh)	*7.4*						*9.6*	
LOS	*A*						*A*	
Approach Delay (s/veh)	--	--	*9.6*					
Approach LOS	--	--	*A*					

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ROUNDABOUT REPORT

General Information		Site Information	
Analyst	*TJS*	Intersection	*Perimeter & Discovery-Venture*
Agency or Co.	*Traffic Engineering Services*	E/W Street Name	*Perimeter Drive*
Date Performed	*12/2013*	N/S Street Name	*Discovery Place/Venture Drive*
Time Period	*AM Peak*	Analysis Year	*2014 No Build*
Peak Hour Factor	*0.90*	Project ID	

Project Description:

Volume Adjustment and Site Characteristics

	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	*0*	*2*	*0*		*0*	*2*	*0*		*0*	*1*	*0*		*0*	*1*	*0*	
Lane Assignment	*LT*		*TR*		*LT*		*TR*				*LTR*				*LTR*	
Right-Turn Bypass	*None*				None				None				None			
Conflicting Lanes	*1*				1				1				1			
Volume (V), veh/h	*219*	*465*	*105*	*0*	*22*	*156*	*35*	*0*	*15*	*1*	*10*	*0*	*0*	*2*	*16*	*0*
Heavy Veh. Adj. (f_{HV}), %	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
Pedestrians Crossing	*0*				0				0				0			

Critical and Follow-Up Headway Adjustment

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (sec)	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*
Follow-Up Headway (sec)	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*

Flow Computations

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Circulating Flow (V_c), pc/h	*27*			*266*			*775*			*219*		
Exiting Flow (V_{ex}), pc/h	*538*			*212*			*289*			*146*		
Entry Flow (V_e), pc/h	*420*	*474*		*113*	*128*			*29*			*20*	
Entry Volume veh/h	*412*	*465*		*111*	*125*			*28*			*20*	

Capacity and v/c Ratios

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Capacity (c_{PCE}), pc/h	*1100*	*1100*		*866*	*866*			*520*			*908*	
Capacity (*c*), veh/h	*1078*	*1078*		*849*	*849*			*510*			*890*	
v/c Ratio (X)	*0.38*	*0.43*		*0.13*	*0.15*			*0.06*			*0.02*	

Delay and Level of Service

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh	*7.3*	*8.0*		*5.5*	*5.7*			*7.8*			*4.2*	
Lane LOS	*A*	*A*		*A*	*A*			*A*			*A*	
Lane 95% Queue	*1.8*	*2.2*		*0.4*	*0.5*			*0.2*			*0.1*	
Approach Delay, s/veh	*7.67*			*5.63*			*7.75*			*4.25*		
Approach LOS, s/veh	*A*			*A*			*A*			*A*		
Intersection Delay, s/veh	*7.20*											
Intersection LOS	*A*											

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ROUNDABOUT REPORT

General Information		Site Information	
Analyst	*TJS*	Intersection	*Perimeter & Discovery-Venture*
Agency or Co.	*Traffic Engineering Services*	E/W Street Name	*Perimeter Drive*
Date Performed	*12/2013*	N/S Street Name	*Discovery Place/Venture Drive*
Time Period	*PM Peak*	Analysis Year	*2014 No Build*
Peak Hour Factor	*0.88*	Project ID	

Project Description:

Volume Adjustment and Site Characteristics

	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	*0*	*2*	*0*		*0*	*2*	*0*		*0*	*1*	*0*		*0*	*1*	*0*	
Lane Assignment	*LT*		*TR*		*LT*		*TR*				*LTR*				*LTR*	
Right-Turn Bypass	*None*				None				None				None			
Conflicting Lanes	*1*				1				1				1			
Volume (V), veh/h	*19*	*294*	*10*	*0*	*9*	*476*	*4*	*0*	*40*	*6*	*40*	*0*	*62*	*0*	*118*	*0*
Heavy Veh. Adj. (f_{HV}), %	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
Pedestrians Crossing	*0*				0				0				0			

Critical and Follow-Up Headway Adjustment

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (sec)	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*
Follow-Up Headway (sec)	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*

Flow Computations

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Circulating Flow (V_c), pc/h	*82*			*75*			*435*			*608*		
Exiting Flow (V_{ex}), pc/h	*459*			*735*			*34*			*22*		
Entry Flow (V_e), pc/h	*176*	*198*		*266*	*300*			*100*			*209*	
Entry Volume veh/h	*173*	*194*		*261*	*294*			*98*			*205*	

Capacity and v/c Ratios

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Capacity (c_{PCE}), pc/h	*1041*	*1041*		*1048*	*1048*			*732*			*615*	
Capacity (*c*), veh/h	*1020*	*1020*		*1027*	*1027*			*717*			*603*	
v/c Ratio (X)	*0.17*	*0.19*		*0.25*	*0.29*			*0.14*			*0.34*	

Delay and Level of Service

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh	*5.1*	*5.3*		*6.0*	*6.3*			*6.5*			*10.7*	
Lane LOS	*A*	*A*		*A*	*A*			*A*			*B*	
Lane 95% Queue	*0.6*	*0.7*		*1.0*	*1.2*			*0.5*			*1.5*	
Approach Delay, s/veh	*5.21*			*6.16*			*6.50*			*10.71*		
Approach LOS, s/veh	*A*			*A*			*A*			*B*		
Intersection Delay, s/veh	*6.66*											
Intersection LOS	*A*											

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ROUNDABOUT REPORT

General Information		Site Information	
Analyst	*TJS*	Intersection	*Perimeter & Discovery-Venture*
Agency or Co.	*Traffic Engineering Services*	E/W Street Name	*Perimeter Drive*
Date Performed	*12/2013*	N/S Street Name	*Discovery Place/Venture Drive*
Time Period	*AM Peak*	Analysis Year	*2014 Build*
Peak Hour Factor	*0.90*	Project ID	

Project Description:

Volume Adjustment and Site Characteristics

	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	*0*	*2*	*0*		*0*	*2*	*0*		*0*	*1*	*0*		*0*	*1*	*0*	
Lane Assignment	*LT*		*TR*		*LT*		*TR*				*LTR*				*LTR*	
Right-Turn Bypass	*None*				None				None				None			
Conflicting Lanes	*1*				1				1				1			
Volume (V), veh/h	*219*	*522*	*105*	*0*	*22*	*164*	*42*	*0*	*15*	*1*	*10*	*0*	*0*	*2*	*16*	*0*
Heavy Veh. Adj. (f_{HV}), %	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
Pedestrians Crossing	*0*				0				0				0			

Critical and Follow-Up Headway Adjustment

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (sec)	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*
Follow-Up Headway (sec)	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*

Flow Computations

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Circulating Flow (V_c), pc/h	*27*			*266*			*840*			*228*		
Exiting Flow (V_{ex}), pc/h	*603*			*221*			*297*			*146*		
Entry Flow (V_e), pc/h	*451*	*508*		*121*	*137*			*29*			*20*	
Entry Volume veh/h	*442*	*498*		*119*	*134*			*28*			*20*	

Capacity and v/c Ratios

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Capacity (c_{PCE}), pc/h	*1100*	*1100*		*866*	*866*			*488*			*900*	
Capacity (c), veh/h	*1078*	*1078*		*849*	*849*			*478*			*882*	
v/c Ratio (X)	*0.41*	*0.46*		*0.14*	*0.16*			*0.06*			*0.02*	

Delay and Level of Service

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh	*7.7*	*8.5*		*5.6*	*5.8*			*8.3*			*4.3*	
Lane LOS	*A*	*A*		*A*	*A*			*A*			*A*	
Lane 95% Queue	*2.0*	*2.5*		*0.5*	*0.6*			*0.2*			*0.1*	
Approach Delay, s/veh	*8.11*			*5.73*			*8.30*			*4.29*		
Approach LOS, s/veh	*A*			*A*			*A*			*A*		
Intersection Delay, s/veh	*7.57*											
Intersection LOS	*A*											

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ROUNDABOUT REPORT

General Information		Site Information	
Analyst	*TJS*	Intersection	*Perimeter & Discovery-Venture*
Agency or Co.	*Traffic Engineering Services*	E/W Street Name	*Perimeter Drive*
Date Performed	*12/2013*	N/S Street Name	*Discovery Place/Venture Drive*
Time Period	*PM Peak*	Analysis Year	*2014 Build*
Peak Hour Factor	*0.88*	Project ID	

Project Description:

Volume Adjustment and Site Characteristics

	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	*0*	*2*	*0*		*0*	*2*	*0*		*0*	*1*	*0*		*0*	*1*	*0*	
Lane Assignment	*LT*		*TR*		*LT*		*TR*				*LTR*				*LTR*	
Right-Turn Bypass	*None*				None				None				None			
Conflicting Lanes	*1*				1				1				1			
Volume (V), veh/h	*19*	*299*	*10*	*0*	*9*	*515*	*4*	*0*	*40*	*6*	*40*	*0*	*62*	*0*	*118*	*0*
Heavy Veh. Adj. (f_{HV}), %	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
Pedestrians Crossing	*0*				0				0				0			

Critical and Follow-Up Headway Adjustment

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (sec)	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*
Follow-Up Headway (sec)	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*

Flow Computations

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Circulating Flow (V_c), pc/h	*82*			*75*			*441*			*653*		
Exiting Flow (V_{ex}), pc/h	*465*			*780*			*34*			*22*		
Entry Flow (V_e), pc/h	*179*	*201*		*288*	*324*			*100*			*209*	
Entry Volume veh/h	*175*	*197*		*282*	*318*			*98*			*205*	

Capacity and v/c Ratios

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Capacity (c_{PCE}), pc/h	*1041*	*1041*		*1048*	*1048*			*727*			*588*	
Capacity (*c*), veh/h	*1020*	*1020*		*1027*	*1027*			*713*			*576*	
v/c Ratio (X)	*0.17*	*0.19*		*0.27*	*0.31*			*0.14*			*0.36*	

Delay and Level of Service

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh	*5.1*	*5.3*		*6.2*	*6.6*			*6.5*			*11.4*	
Lane LOS	*A*	*A*		*A*	*A*			*A*			*B*	
Lane 95% Queue	*0.6*	*0.7*		*1.1*	*1.3*			*0.5*			*1.6*	
Approach Delay, s/veh	*5.24*			*6.42*			*6.54*			*11.44*		
Approach LOS, s/veh	*A*			*A*			*A*			*B*		
Intersection Delay, s/veh	*6.89*											
Intersection LOS	*A*											

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ROUNDABOUT REPORT

General Information		Site Information	
Analyst	*TJS*	Intersection	*Perimeter & Discovery-Venture*
Agency or Co.	*Traffic Engineering Services*	E/W Street Name	*Perimeter Drive*
Date Performed	*12/2013*	N/S Street Name	*Discovery Place/Venture Drive*
Time Period	*AM Peak*	Analysis Year	*2024 No Build*
Peak Hour Factor	*0.90*	Project ID	

Project Description:

Volume Adjustment and Site Characteristics

	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	*0*	*2*	*0*		*0*	*2*	*0*		*0*	*1*	*0*		*0*	*1*	*0*	
Lane Assignment	*LT*		*TR*		*LT*		*TR*				*LTR*				*LTR*	
Right-Turn Bypass	*None*				None				None				None			
Conflicting Lanes	*1*				1				1				1			
Volume (V), veh/h	*326*	*694*	*157*	*0*	*33*	*233*	*53*	*0*	*22*	*2*	*16*	*0*	*0*	*3*	*23*	*0*
Heavy Veh. Adj. (f_{HV}), %	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
Pedestrians Crossing	*0*				0				0				0			

Critical and Follow-Up Headway Adjustment

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (sec)	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*
Follow-Up Headway (sec)	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*

Flow Computations

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Circulating Flow (V_c), pc/h	*40*			*396*			*1156*			*326*		
Exiting Flow (V_{ex}), pc/h	*805*			*315*			*432*			*219*		
Entry Flow (V_e), pc/h	*627*	*707*		*170*	*192*			*45*			*29*	
Entry Volume veh/h	*615*	*693*		*167*	*188*			*44*			*28*	

Capacity and v/c Ratios

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Capacity (c_{PCE}), pc/h	*1085*	*1085*		*760*	*760*			*356*			*815*	
Capacity (c), veh/h	*1064*	*1064*		*745*	*745*			*349*			*799*	
v/c Ratio (X)	*0.58*	*0.65*		*0.22*	*0.25*			*0.13*			*0.04*	

Delay and Level of Service

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh	*10.8*	*12.7*		*7.3*	*7.7*			*12.4*			*4.8*	
Lane LOS	*B*	*B*		*A*	*A*			*B*			*A*	
Lane 95% Queue	*3.8*	*5.1*		*0.9*	*1.0*			*0.4*			*0.1*	
Approach Delay, s/veh	*11.82*			*7.54*			*12.43*			*4.85*		
Approach LOS, s/veh	*B*			*A*			*B*			*A*		
Intersection Delay, s/veh	*10.85*											
Intersection LOS	*B*											

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ROUNDABOUT REPORT

General Information		Site Information	
Analyst	*TJS*	Intersection	*Perimeter & Discovery-Venture*
Agency or Co.	*Traffic Engineering Services*	E/W Street Name	*Perimeter Drive*
Date Performed	*12/2013*	N/S Street Name	*Discovery Place/Venture Drive*
Time Period	*PM Peak*	Analysis Year	*2024 No Build*
Peak Hour Factor	*0.88*	Project ID	

Project Description:

Volume Adjustment and Site Characteristics

	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	*0*	*2*	*0*		*0*	*2*	*0*		*0*	*1*	*0*		*0*	*1*	*0*	
Lane Assignment	*LT*		*TR*		*LT*		*TR*				*LTR*				*LTR*	
Right-Turn Bypass	*None*				None				None				None			
Conflicting Lanes	*1*				1				1				1			
Volume (V), veh/h	*28*	*438*	*16*	*0*	*14*	*709*	*6*	*0*	*59*	*9*	*59*	*0*	*93*	*0*	*175*	*0*
Heavy Veh. Adj. (f_{HV}), %	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
Pedestrians Crossing	*0*				0				0				0			

Critical and Follow-Up Headway Adjustment

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (sec)	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*
Follow-Up Headway (sec)	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*

Flow Computations

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Circulating Flow (V_c), pc/h	*124*			*110*			*648*			*906*		
Exiting Flow (V_{ex}), pc/h	*684*			*1093*			*50*			*35*		
Entry Flow (V_e), pc/h	*263*	*296*		*397*	*448*			*147*			*311*	
Entry Volume veh/h	*258*	*290*		*389*	*439*			*144*			*305*	

Capacity and v/c Ratios

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Capacity (c_{PCE}), pc/h	*998*	*998*		*1011*	*1011*			*591*			*456*	
Capacity (c), veh/h	*979*	*979*		*991*	*991*			*580*			*448*	
v/c Ratio (X)	*0.26*	*0.30*		*0.39*	*0.44*			*0.25*			*0.68*	

Delay and Level of Service

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh	*6.3*	*6.7*		*7.9*	*8.7*			*9.5*			*26.9*	
Lane LOS	*A*	*A*		*A*	*A*			*A*			*D*	
Lane 95% Queue	*1.1*	*1.2*		*1.9*	*2.3*			*1.0*			*5.0*	
Approach Delay, s/veh	*6.51*			*8.34*			*9.49*			*26.90*		
Approach LOS, s/veh	*A*			*A*			*A*			*D*		
Intersection Delay, s/veh	*10.98*											
Intersection LOS	*B*											

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ROUNDABOUT REPORT

General Information		Site Information	
Analyst	*TJS*	Intersection	*Perimeter & Discovery-Venture*
Agency or Co.	*Traffic Engineering Services*	E/W Street Name	*Perimeter Drive*
Date Performed	*12/2013*	N/S Street Name	*Discovery Place/Venture Drive*
Time Period	*AM Peak*	Analysis Year	*2024 Build*
Peak Hour Factor	*0.90*	Project ID	

Project Description:

Volume Adjustment and Site Characteristics

	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	*0*	*2*	*0*		*0*	*2*	*0*		*0*	*1*	*0*		*0*	*1*	*0*	
Lane Assignment	*LT*		*TR*		*LT*		*TR*				*LTR*				*LTR*	
Right-Turn Bypass	*None*				None				None				None			
Conflicting Lanes	*1*				1				1				1			
Volume (V), veh/h	*326*	*751*	*157*	*0*	*33*	*241*	*53*	*0*	*22*	*2*	*16*	*0*	*0*	*3*	*23*	*0*
Heavy Veh. Adj. (f_{HV}), %	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
Pedestrians Crossing	*0*				0				0				0			

Critical and Follow-Up Headway Adjustment

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (sec)	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*
Follow-Up Headway (sec)	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*

Flow Computations

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Circulating Flow (V_c), pc/h	*40*			*396*			*1220*			*335*		
Exiting Flow (V_{ex}), pc/h	*869*			*324*			*432*			*219*		
Entry Flow (V_e), pc/h	*657*	*741*		*174*	*196*			*45*			*29*	
Entry Volume veh/h	*644*	*726*		*171*	*192*			*44*			*28*	

Capacity and v/c Ratios

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Capacity (c_{PCE}), pc/h	*1085*	*1085*		*760*	*760*			*333*			*808*	
Capacity (*c*), veh/h	*1064*	*1064*		*745*	*745*			*327*			*792*	
v/c Ratio (X)	*0.61*	*0.68*		*0.23*	*0.26*			*0.13*			*0.04*	

Delay and Level of Service

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh	*11.5*	*13.7*		*7.4*	*7.8*			*13.4*			*4.9*	
Lane LOS	*B*	*B*		*A*	*A*			*B*			*A*	
Lane 95% Queue	*4.3*	*5.7*		*0.9*	*1.0*			*0.5*			*0.1*	
Approach Delay, s/veh	*12.67*			*7.61*			*13.39*			*4.89*		
Approach LOS, s/veh	*B*			*A*			*B*			*A*		
Intersection Delay, s/veh	*11.55*											
Intersection LOS	*B*											

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ROUNDABOUT REPORT

General Information		Site Information	
Analyst	*TJS*	Intersection	*Perimeter & Discovery-Venture*
Agency or Co.	*Traffic Engineering Services*	E/W Street Name	*Perimeter Drive*
Date Performed	*12/2013*	N/S Street Name	*Discovery Place/Venture Drive*
Time Period	*PM Peak*	Analysis Year	*2024 Build*
Peak Hour Factor	*0.88*	Project ID	

Project Description:

Volume Adjustment and Site Characteristics

	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	*0*	*2*	*0*		*0*	*2*	*0*		*0*	*1*	*0*		*0*	*1*	*0*	
Lane Assignment	*LT*		*TR*		*LT*		*TR*				*LTR*				*LTR*	
Right-Turn Bypass	*None*				None				None				None			
Conflicting Lanes	*1*				1				1				1			
Volume (V), veh/h	*28*	*443*	*16*	*0*	*14*	*748*	*6*	*0*	*59*	*9*	*59*	*0*	*93*	*0*	*175*	*0*
Heavy Veh. Adj. (f_{HV}), %	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
Pedestrians Crossing	*0*				0				0				0			

Critical and Follow-Up Headway Adjustment

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (sec)	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*
Follow-Up Headway (sec)	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*

Flow Computations

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Circulating Flow (V_c), pc/h	*124*			*110*			*653*			*951*		
Exiting Flow (V_{ex}), pc/h	*690*			*1138*			*50*			*35*		
Entry Flow (V_e), pc/h	*265*	*299*		*418*	*472*			*147*			*311*	
Entry Volume veh/h	*260*	*293*		*410*	*463*			*144*			*305*	

Capacity and v/c Ratios

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Capacity (c_{PCE}), pc/h	*998*	*998*		*1011*	*1011*			*588*			*436*	
Capacity (c), veh/h	*979*	*979*		*991*	*991*			*576*			*428*	
v/c Ratio (X)	*0.27*	*0.30*		*0.41*	*0.47*			*0.25*			*0.71*	

Delay and Level of Service

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh	*6.3*	*6.7*		*8.2*	*9.1*			*9.6*			*30.2*	
Lane LOS	*A*	*A*		*A*	*A*			*A*			*D*	
Lane 95% Queue	*1.1*	*1.3*		*2.1*	*2.5*			*1.0*			*5.5*	
Approach Delay, s/veh	*6.54*			*8.70*			*9.57*			*30.23*		
Approach LOS, s/veh	*A*			*A*			*A*			*D*		
Intersection Delay, s/veh	*11.63*											
Intersection LOS	*B*											

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ROUNDABOUT REPORT

General Information		Site Information	
Analyst	*TJS*	Intersection	*Perimeter & Wall-Venture*
Agency or Co.	*Traffic Engineering Services*	E/W Street Name	*Perimeter Drive*
Date Performed	*12/2013*	N/S Street Name	*Wall St-Venture Drive*
Time Period	*AM Peak*	Analysis Year	*2014 No Build*
Peak Hour Factor	*0.86*	Project ID	

Project Description:

Volume Adjustment and Site Characteristics

	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	*0*	*2*	*0*		*0*	*2*	*0*		*0*	*1*	*0*		*0*	*1*	*0*	
Lane Assignment	*LT*		*TR*		*LT*		*TR*				*LTR*				*LTR*	
Right-Turn Bypass	*None*				None				None				None			
Conflicting Lanes	*1*				1				1				1			
Volume (V), veh/h	*17*	*398*	*58*	*0*	*83*	*291*	*46*	*0*	*2*	*1*	*20*	*0*	*15*	*1*	*7*	*0*
Heavy Veh. Adj. (f_{HV}), %	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
Pedestrians Crossing	*0*				0				0				0			

Critical and Follow-Up Headway Adjustment

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (sec)	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*
Follow-Up Headway (sec)	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*

Flow Computations

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Circulating Flow (V_c), pc/h	*117*			*23*			*510*			*445*		
Exiting Flow (V_{ex}), pc/h	*514*			*356*			*76*			*168*		
Entry Flow (V_e), pc/h	*264*	*297*		*234*	*264*			*27*			*27*	
Entry Volume veh/h	*259*	*291*		*229*	*259*			*26*			*26*	

Capacity and v/c Ratios

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Capacity (c_{PCE}), pc/h	*1005*	*1005*		*1104*	*1104*			*679*			*723*	
Capacity (c), veh/h	*985*	*985*		*1082*	*1082*			*665*			*709*	
v/c Ratio (X)	*0.26*	*0.30*		*0.21*	*0.24*			*0.04*			*0.04*	

Delay and Level of Service

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh	*6.3*	*6.7*		*5.3*	*5.6*			*5.8*			*5.5*	
Lane LOS	*A*	*A*		*A*	*A*			*A*			*A*	
Lane 95% Queue	*1.1*	*1.2*		*0.8*	*0.9*			*0.1*			*0.1*	
Approach Delay, s/veh	*6.47*			*5.43*			*5.84*			*5.46*		
Approach LOS, s/veh	*A*			*A*			*A*			*A*		
Intersection Delay, s/veh	*5.97*											
Intersection LOS	*A*											

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ROUNDABOUT REPORT

General Information		Site Information	
Analyst	*TJS*	Intersection	*Perimeter & Wall-Venture*
Agency or Co.	*Traffic Engineering Services*	E/W Street Name	*Perimeter Drive*
Date Performed	*12/2013*	N/S Street Name	*Wall St/Venture Drive*
Time Period	*PM Peak*	Analysis Year	*2014 No Build*
Peak Hour Factor	*0.88*	Project ID	

Project Description:

Volume Adjustment and Site Characteristics

	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	*0*	*2*	*0*		*0*	*2*	*0*		*0*	*1*	*0*		*0*	*1*	*0*	
Lane Assignment	*LT*		*TR*		*LT*		*TR*				*LTR*				*LTR*	
Right-Turn Bypass	*None*				None				None				None			
Conflicting Lanes	*1*				1				1				1			
Volume (V), veh/h	*7*	*510*	*11*	*0*	*7*	*429*	*15*	*0*	*34*	*3*	*109*	*0*	*51*	*5*	*14*	*0*
Heavy Veh. Adj. (f_{HV}), %	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
Pedestrians Crossing	*0*				0				0				0			

Critical and Follow-Up Headway Adjustment

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (sec)	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*
Follow-Up Headway (sec)	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*

Flow Computations

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Circulating Flow (V_c), pc/h	*73*			*50*			*658*			*544*		
Exiting Flow (V_{ex}), pc/h	*777*			*553*			*29*			*27*		
Entry Flow (V_e), pc/h	*288*	*324*		*246*	*277*			*169*			*81*	
Entry Volume veh/h	*282*	*318*		*241*	*272*			*166*			*79*	

Capacity and v/c Ratios

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Capacity (c_{PCE}), pc/h	*1050*	*1050*		*1074*	*1074*			*585*			*655*	
Capacity (*c*), veh/h	*1030*	*1030*		*1053*	*1053*			*574*			*643*	
v/c Ratio (X)	*0.27*	*0.31*		*0.23*	*0.26*			*0.29*			*0.12*	

Delay and Level of Service

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh	*6.2*	*6.6*		*5.6*	*5.9*			*10.2*			*7.0*	
Lane LOS	*A*	*A*		*A*	*A*			*B*			*A*	
Lane 95% Queue	*1.1*	*1.3*		*0.9*	*1.0*			*1.2*			*0.4*	
Approach Delay, s/veh	*6.40*			*5.74*			*10.24*			*7.00*		
Approach LOS, s/veh	*A*			*A*			*B*			*A*		
Intersection Delay, s/veh	*6.66*											
Intersection LOS	*A*											

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ROUNDABOUT REPORT

General Information		Site Information	
Analyst	*TJS*	Intersection	*Perimeter & Wall-Venture*
Agency or Co.	*Traffic Engineering Services*	E/W Street Name	*Perimeter Drive*
Date Performed	*12/2013*	N/S Street Name	*Wall St/Venture Dr*
Time Period	*AM Peak*	Analysis Year	*2014 Build*
Peak Hour Factor	*0.86*	Project ID	

Project Description:

Volume Adjustment and Site Characteristics

	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	*0*	*2*	*0*		*0*	*2*	*0*		*0*	*1*	*0*		*0*	*1*	*0*	
Lane Assignment	*LT*		*TR*		*LT*		*TR*				*LTR*				*LTR*	
Right-Turn Bypass	*None*				None				None				None			
Conflicting Lanes	*1*				1				1				1			
Volume (V), veh/h	*74*	*398*	*58*	*0*	*83*	*291*	*75*	*0*	*2*	*1*	*20*	*0*	*19*	*1*	*15*	*0*
Heavy Veh. Adj. (f_{HV}), %	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
Pedestrians Crossing	*0*				0				0				0			

Critical and Follow-Up Headway Adjustment

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (sec)	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*
Follow-Up Headway (sec)	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*

Flow Computations

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Circulating Flow (V_c), pc/h	*122*			*91*			*583*			*445*		
Exiting Flow (V_{ex}), pc/h	*518*			*365*			*178*			*168*		
Entry Flow (V_e), pc/h	*295*	*333*		*250*	*282*			*27*			*42*	
Entry Volume veh/h	*289*	*326*		*245*	*276*			*26*			*41*	

Capacity and v/c Ratios

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Capacity (c_{PCE}), pc/h	*1000*	*1000*		*1031*	*1031*			*631*			*723*	
Capacity (c), veh/h	*980*	*980*		*1011*	*1011*			*619*			*709*	
v/c Ratio (X)	*0.30*	*0.33*		*0.24*	*0.27*			*0.04*			*0.06*	

Delay and Level of Service

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh	*6.7*	*7.2*		*5.9*	*6.3*			*6.3*			*5.7*	
Lane LOS	*A*	*A*		*A*	*A*			*A*			*A*	
Lane 95% Queue	*1.2*	*1.5*		*1.0*	*1.1*			*0.1*			*0.2*	
Approach Delay, s/veh	*6.94*			*6.10*			*6.29*			*5.68*		
Approach LOS, s/veh	*A*			*A*			*A*			*A*		
Intersection Delay, s/veh	*6.52*											
Intersection LOS	*A*											

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ROUNDABOUT REPORT

General Information		Site Information	
Analyst	*TJS*	Intersection	*Perimeter & Wall-Venture*
Agency or Co.	*Traffic Engineering Services*	E/W Street Name	*Perimeter Drive*
Date Performed	*12/2013*	N/S Street Name	*Wall St/Venture Drive*
Time Period	*PM Peak*	Analysis Year	*2014 Build*
Peak Hour Factor	*0.88*	Project ID	

Project Description:

Volume Adjustment and Site Characteristics

	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	*0*	*2*	*0*		*0*	*2*	*0*		*0*	*1*	*0*		*0*	*1*	*0*	
Lane Assignment	*LT*		*TR*		*LT*		*TR*				*LTR*				*LTR*	
Right-Turn Bypass	*None*				None				None				None			
Conflicting Lanes	*1*				1				1				1			
Volume (V), veh/h	*12*	*510*	*11*	*0*	*7*	*429*	*22*	*0*	*34*	*3*	*109*	*0*	*99*	*5*	*53*	*0*
Heavy Veh. Adj. (f_{HV}), %	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
Pedestrians Crossing	*0*				0				0				0			

Critical and Follow-Up Headway Adjustment

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (sec)	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*
Follow-Up Headway (sec)	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*

Flow Computations

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Circulating Flow (V_c), pc/h	*129*			*56*			*720*			*544*		
Exiting Flow (V_{ex}), pc/h	*832*			*598*			*43*			*27*		
Entry Flow (V_e), pc/h	*290*	*327*		*250*	*281*			*169*			*182*	
Entry Volume veh/h	*284*	*321*		*245*	*275*			*166*			*178*	

Capacity and v/c Ratios

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Capacity (c_{PCE}), pc/h	*994*	*994*		*1068*	*1068*			*550*			*655*	
Capacity (c), veh/h	*974*	*974*		*1047*	*1047*			*539*			*643*	
v/c Ratio (X)	*0.29*	*0.33*		*0.23*	*0.26*			*0.31*			*0.28*	

Delay and Level of Service

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh	*6.7*	*7.1*		*5.7*	*6.0*			*11.2*			*9.1*	
Lane LOS	*A*	*A*		*A*	*A*			*B*			*A*	
Lane 95% Queue	*1.2*	*1.4*		*0.9*	*1.1*			*1.3*			*1.1*	
Approach Delay, s/veh	*6.92*			*5.83*			*11.15*			*9.12*		
Approach LOS, s/veh	*A*			*A*			*B*			*A*		
Intersection Delay, s/veh	*7.28*											
Intersection LOS	*A*											

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ROUNDABOUT REPORT

General Information		Site Information	
Analyst	*TJS*	Intersection	*Perimeter & Wall-Venture*
Agency or Co.	*Traffic Engineering Services*	E/W Street Name	*Perimeter Drive*
Date Performed	*12/2013*	N/S Street Name	*Wall St/Venture Dr*
Time Period	*AM Peak*	Analysis Year	*2024 No Build*
Peak Hour Factor	*0.86*	Project ID	

Project Description:

Volume Adjustment and Site Characteristics

	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	*0*	*2*	*0*		*0*	*2*	*0*		*0*	*1*	*0*		*0*	*1*	*0*	
Lane Assignment	*LT*		*TR*		*LT*		*TR*				*LTR*				*LTR*	
Right-Turn Bypass	*None*				None				None				None			
Conflicting Lanes	*1*				1				1				1			
Volume (V), veh/h	*25*	*593*	*87*	*0*	*124*	*435*	*68*	*0*	*3*	*2*	*29*	*0*	*22*	*2*	*11*	*0*
Heavy Veh. Adj. (f_{HV}), %	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
Pedestrians Crossing	*0*				0				0				0			

Critical and Follow-Up Headway Adjustment

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (sec)	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*
Follow-Up Headway (sec)	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*

Flow Computations

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Circulating Flow (V_c), pc/h	*175*			*36*			*759*			*667*		
Exiting Flow (V_{ex}), pc/h	*764*			*533*			*113*			*253*		
Entry Flow (V_e), pc/h	*393*	*443*		*350*	*394*			*40*			*42*	
Entry Volume veh/h	*385*	*434*		*343*	*386*			*39*			*41*	

Capacity and v/c Ratios

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Capacity (c_{PCE}), pc/h	*948*	*948*		*1091*	*1091*			*529*			*580*	
Capacity (c), veh/h	*930*	*930*		*1069*	*1069*			*519*			*569*	
v/c Ratio (X)	*0.41*	*0.47*		*0.32*	*0.36*			*0.08*			*0.07*	

Delay and Level of Service

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh	*8.7*	*9.6*		*6.6*	*7.1*			*7.9*			*7.2*	
Lane LOS	*A*	*A*		*A*	*A*			*A*			*A*	
Lane 95% Queue	*2.1*	*2.5*		*1.4*	*1.7*			*0.2*			*0.2*	
Approach Delay, s/veh	*9.13*			*6.83*			*7.88*			*7.18*		
Approach LOS, s/veh	*A*			*A*			*A*			*A*		
Intersection Delay, s/veh	*8.02*											
Intersection LOS	*A*											

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ROUNDABOUT REPORT

General Information		Site Information	
Analyst	*TJS*	Intersection	*Perimeter & Wall-Venture*
Agency or Co.	*Traffic Engineering Services*	E/W Street Name	*Perimeter Drive*
Date Performed	*12/2013*	N/S Street Name	*Wall St/Venture Dr*
Time Period	*PM Peak*	Analysis Year	*2024 No Build*
Peak Hour Factor	*0.88*	Project ID	

Project Description:

Volume Adjustment and Site Characteristics

	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	*0*	*2*	*0*		*0*	*2*	*0*		*0*	*1*	*0*		*0*	*1*	*0*	
Lane Assignment	*LT*		*TR*		*LT*		*TR*				*LTR*				*LTR*	
Right-Turn Bypass	*None*				None				None				None			
Conflicting Lanes	*1*				1				1				1			
Volume (V), veh/h	*11*	*760*	*17*	*0*	*11*	*639*	*22*	*0*	*51*	*5*	*163*	*0*	*76*	*8*	*20*	*0*
Heavy Veh. Adj. (f_{HV}), %	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
Pedestrians Crossing	*0*				0				0				0			

Critical and Follow-Up Headway Adjustment

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (sec)	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*
Follow-Up Headway (sec)	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*

Flow Computations

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Circulating Flow (V_c), pc/h	*110*			*78*			*982*			*813*		
Exiting Flow (V_{ex}), pc/h	*1158*			*823*			*44*			*42*		
Entry Flow (V_e), pc/h	*429*	*484*		*366*	*413*			*254*			*121*	
Entry Volume veh/h	*421*	*475*		*359*	*405*			*249*			*119*	

Capacity and v/c Ratios

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Capacity (c_{PCE}), pc/h	*1012*	*1012*		*1046*	*1046*			*423*			*501*	
Capacity (*c*), veh/h	*992*	*992*		*1025*	*1025*			*415*			*492*	
v/c Ratio (X)	*0.42*	*0.48*		*0.35*	*0.40*			*0.60*			*0.24*	

Delay and Level of Service

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh	*8.4*	*9.3*		*7.1*	*7.8*			*23.9*			*10.8*	
Lane LOS	*A*	*A*		*A*	*A*			*C*			*B*	
Lane 95% Queue	*2.1*	*2.6*		*1.6*	*1.9*			*3.8*			*0.9*	
Approach Delay, s/veh	*8.88*			*7.47*			*23.86*			*10.83*		
Approach LOS, s/veh	*A*			*A*			*C*			*B*		
Intersection Delay, s/veh	*10.30*											
Intersection LOS	*B*											

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ROUNDABOUT REPORT

General Information		Site Information	
Analyst	*TJS*	Intersection	*Perimeter & Wall-Venture*
Agency or Co.	*Traffic Engineering Services*	E/W Street Name	*Perimeter Drive*
Date Performed	*12/2013*	N/S Street Name	*Wall St/Venture Dr*
Time Period	*AM Peak*	Analysis Year	*2024 Build*
Peak Hour Factor	*0.86*	Project ID	

Project Description:

Volume Adjustment and Site Characteristics

	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	*0*	*2*	*0*		*0*	*2*	*0*		*0*	*1*	*0*		*0*	*1*	*0*	
Lane Assignment	*LT*		*TR*		*LT*		*TR*				*LTR*				*LTR*	
Right-Turn Bypass	*None*				None				None				None			
Conflicting Lanes	*1*				1				1				1			
Volume (V), veh/h	*82*	*593*	*87*	*0*	*124*	*435*	*97*	*0*	*3*	*2*	*29*	*0*	*26*	*2*	*19*	*0*
Heavy Veh. Adj. (f_{HV}), %	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
Pedestrians Crossing	*0*				0				0				0			

Critical and Follow-Up Headway Adjustment

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (sec)	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*
Follow-Up Headway (sec)	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*

Flow Computations

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Circulating Flow (V_c), pc/h	*180*			*103*			*831*			*667*		
Exiting Flow (V_{ex}), pc/h	*769*			*542*			*215*			*253*		
Entry Flow (V_e), pc/h	*425*	*479*		*366*	*412*			*40*			*56*	
Entry Volume veh/h	*417*	*470*		*359*	*404*			*39*			*55*	

Capacity and v/c Ratios

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Capacity (c_{PCE}), pc/h	*944*	*944*		*1019*	*1019*			*492*			*580*	
Capacity (c), veh/h	*925*	*925*		*999*	*999*			*482*			*569*	
v/c Ratio (X)	*0.45*	*0.51*		*0.36*	*0.40*			*0.08*			*0.10*	

Delay and Level of Service

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh	*9.3*	*10.4*		*7.4*	*8.0*			*8.5*			*7.5*	
Lane LOS	*A*	*B*		*A*	*A*			*A*			*A*	
Lane 95% Queue	*2.4*	*2.9*		*1.6*	*2.0*			*0.3*			*0.3*	
Approach Delay, s/veh	*9.87*			*7.75*			*8.54*			*7.48*		
Approach LOS, s/veh	*A*			*A*			*A*			*A*		
Intersection Delay, s/veh	*8.83*											
Intersection LOS	*A*											

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ROUNDABOUT REPORT

General Information		Site Information	
Analyst	*TJS*	Intersection	*Perimeter & Wall-Venture*
Agency or Co.	*Traffic Engineering Services*	E/W Street Name	*Perimeter Drive*
Date Performed	*12/2013*	N/S Street Name	*Wall St/Venture Dr*
Time Period	*PM Peak*	Analysis Year	*2024 Build*
Peak Hour Factor	*0.88*	Project ID	

Project Description:

Volume Adjustment and Site Characteristics

	EB				WB				NB				SB			
	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U
Number of Lanes (N)	*0*	*2*	*0*		*0*	*2*	*0*		*0*	*1*	*0*		*0*	*1*	*0*	
Lane Assignment	*LT*		*TR*		*LT*		*TR*				*LTR*				*LTR*	
Right-Turn Bypass	*None*				None				None				None			
Conflicting Lanes	*1*				1				1				1			
Volume (V), veh/h	*16*	*760*	*17*	*0*	*11*	*639*	*29*	*0*	*51*	*5*	*163*	*0*	*124*	*8*	*59*	*0*
Heavy Veh. Adj. (f_{HV}), %	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
Pedestrians Crossing	*0*				0				0				0			

Critical and Follow-Up Headway Adjustment

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (sec)	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*	*5.1929*
Follow-Up Headway (sec)	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*	*3.1858*

Flow Computations

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Circulating Flow (V_c), pc/h	*166*			*84*			*1044*			*813*		
Exiting Flow (V_{ex}), pc/h	*1214*			*868*			*58*			*42*		
Entry Flow (V_e), pc/h	*432*	*487*		*370*	*417*			*254*			*221*	
Entry Volume veh/h	*424*	*477*		*363*	*409*			*249*			*217*	

Capacity and v/c Ratios

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Capacity (c_{PCE}), pc/h	*957*	*957*		*1040*	*1040*			*398*			*501*	
Capacity (*c*), veh/h	*939*	*939*		*1019*	*1019*			*390*			*492*	
v/c Ratio (X)	*0.45*	*0.51*		*0.36*	*0.40*			*0.64*			*0.44*	

Delay and Level of Service

	EB			WB			NB			SB		
	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh	*9.2*	*10.3*		*7.3*	*7.9*			*27.4*			*15.2*	
Lane LOS	*A*	*B*		*A*	*A*			*D*			*C*	
Lane 95% Queue	*2.4*	*3.0*		*1.6*	*2.0*			*4.3*			*2.2*	
Approach Delay, s/veh	*9.77*			*7.59*			*27.36*			*15.15*		
Approach LOS, s/veh	*A*			*A*			*D*			*C*		
Intersection Delay, s/veh	*11.57*											
Intersection LOS	*B*											

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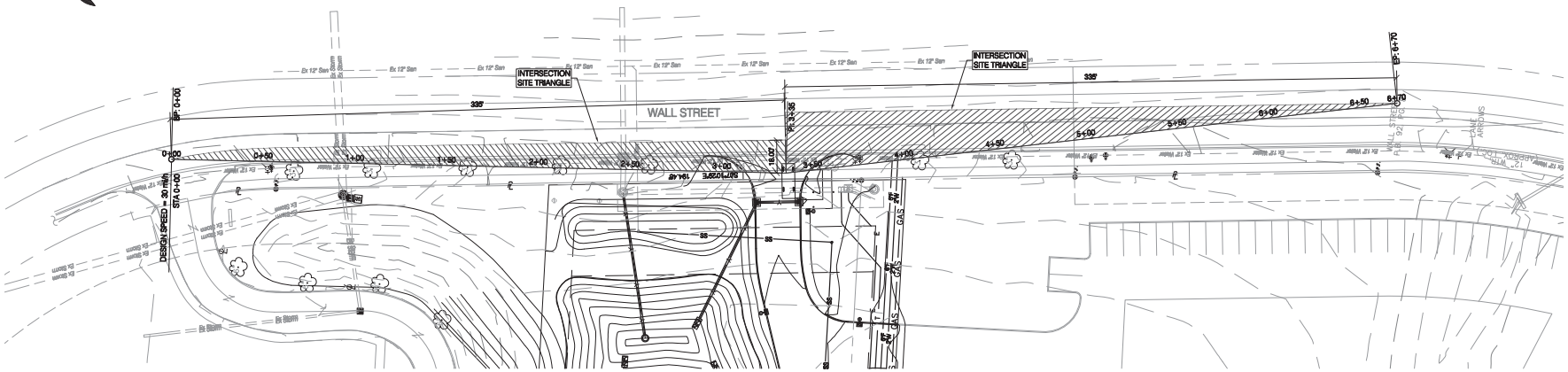
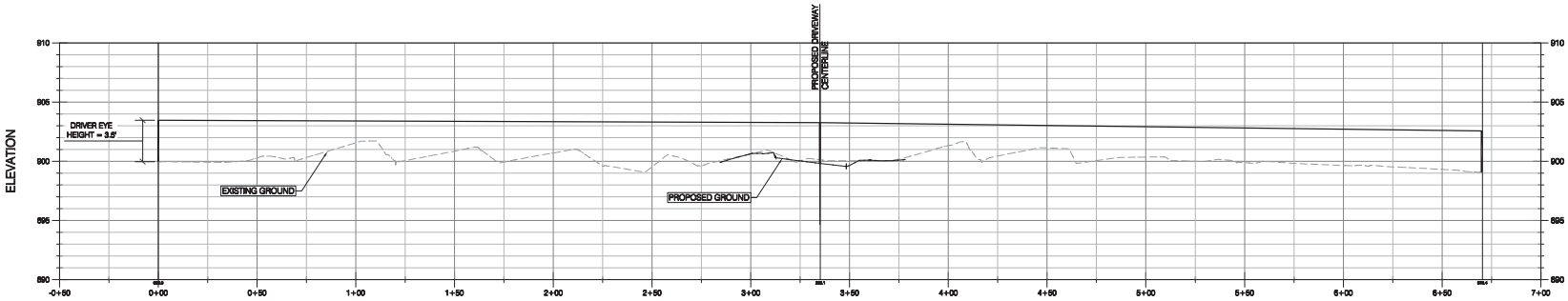
APPENDIX G

SIGHT DISTANCE





SITE DISTANCE

STA -0+50 to STA 7+00
SCALE: 1" = 30' H , 1" = 5' V

CALL BEFORE YOU DIG !
OHIO LAW REQUIRES EXCAVATORS TO NOTIFY THE PROTECTION SERVICE AT LEAST TWO (2) BUSINESS DAYS BUT NOT MORE THAN TEN (10) CALENDAR DAYS PRIOR TO EXCAVATION

Ohio Utilities Protection Service
www.oups.org
1-800-362-2764

0 10 20 30 60
SCALE: 1" = 30.00'

7007 DISCOVERY BLVD
DUBLIN, OH 43017
614.634.7000 T

WDPARTNERS.COM

NOAH'S
FOR ALL LIFE'S EVENTS™

WALL STREET
DUBLIN, OHIO

REVISIONS

DESIGNED BY - JDS
DRAWN BY - BDF
CHECKED BY - CAW
PROTOTYPE
-
STORE NUMBER
-
WD PROJECT NUMBER
MYNOA0001

EX-1

SITE DISTANCE PLAN & PROFILE

File: p:\cs\my\r\coa\mynoa0001_oh_dublin_my_noahs_dublin\04-civil\wd-condocs\mynoa0001_ex1-site distance exhibit.dwg Saved: 12/10/2013 2:13 PM (wda2872) Plotted: 12/18/2013 4:42 PM (wda2829)

APPENDIX H

PERIMETER DRIVE SITE TRAFFIC %

ID	Intersection	2024 'BUILD' - AM PEAK															2024 'BUILD' - PM PEAK														AM PEAK & PM PEAK		
		Intersection			Northbound Total			Southbound Total			Eastbound Total			Westbound Total			Intersection			Northbound Total			Southbound Total			Eastbound Total			Westbound Total			Intersection		
		Site	Total	% Site	Site	Total	% Site	Site	Total	% Site	Site	Total	% Site	Site	Total	% Site	Site	Total	% Site	Site	Total	% Site	Site	Total	% Site	Site	Total	% Site	Site	Total	% Site	Site	Total	% Site
15	Wall St./Venture Dr. & Perimeter Dr.	98	1499	**6.5%**	0	34	0.0%	12	47	25.5%	57	762	7.5%	29	656	4.4%	99	1882	**5.3%**	0	219	0%	87	191	46%	5	793	1%	7	679	1%	197	3381	**5.83%**
5095	Discovery Blvd./Venture Dr. & Perimeter Dr.	65	1627	**4.0%**	0	40	0.0%	0	26	0.0%	57	1234	4.6%	8	327	2.4%	44	1650	**2.7%**	0	127	0%	0	268	0%	5	487	1%	39	768	5%	109	3277	**3.33%**

12/2013

APPENDIX EXHIBIT - SITE GENERATED TRAFFIC AT STUDY INTERSECTIONS

SITE DATA

SITE DATA:
- APN: 273-010196-00
- ADDRESS: WALL STREET
- SITE AREA: 110,842 S.F. / 2.54 ACRES
- OWNER: WALL STREET HOLDINGS, LLC.

BUILDING DATA:
- BUILDING AREA: 10,200 SQUARE FEET
- BUILDING HEIGHT: 20'-0"
- NUMBER OF STORIES: ONE

ZONING:
- PROPOSED USE: RECEPTION HALL/ CONFERENCE CENTER
- EXISTING ZONING: PCD03-60 - PLANNED COMMERCE DISTRICT WITH PERIMETER CENTER DEVELOPMENT TEXT (SUBAREA C)

ADJACENT ZONING:
- NORTH: PCD03-60 - PLANNED COMMERCE DISTRICT (USE: OFFICE)
- EAST: PCD03-60 - PLANNED COMMERCE DISTRICT (USE: OFFICE)
- SOUTH: PCD03-60 - PLANNED COMMERCE DISTRICT (USE: VACANT)
- WEST: PCD03-60 - PLANNED COMMERCE DISTRICT (USE: OFFICE)

REQUIRED BUILDING SETBACKS:
- FRONT (WALL STREET): 50 FEET
- SIDE (NORTH): 15 FEET
- SIDE (SOUTH): 15 FEET
- REAR (WEST): 15 FEET

REQUIRED PARKING/LANDSCAPE SETBACKS:
- FRONT (WALL STREET): 25 FEET
- SIDE (NORTH): 15 FEET
- SIDE (SOUTH): 15 FEET
- REAR (WEST): 15 FEET

REQUIRED PARKING STALL SIZE: 9 FEET x 19 FEET
DRIVE AISLE WIDTH (1-WAY AND 2-WAY): 24 FEET

PARKING SPACES PROPOSED: 79 PARKING SPACES
+ 4 ACCESSIBLE PARKING STALL PER ADAAG
= 83 PARKING SPACES TOTAL

LOADING ZONE REQUIRED: NONE SPECIFIED

PATIO:
- PATIO AREA: 2,727 S.F.
- PATIO SURFACE: PAVER: INTERSTATE BRICK, BASKET WEAVE
- BOLLARDS: SAFETY RED

BASIS OF INFORMATION

A. ALL EXISTING CONDITIONS, TOPOGRAPHY, UTILITIES, & EASEMENTS ARE ASTAKEN FROM DEVELOPER PLANS RECEIVED 10/27/2012.
AS PREPARED BY: KEVIN CARPENTER
CARPENTER NARTY TRANSPORTATION, INC.
7007 DISCOVERY BLVD.
DUBLIN, OH 43017
614.656.2402

PROJECT

NOAH'S
FOR ALL LIFE'S EVENTS™

SITE ADDRESS:
5505 WALL STREET
DUBLIN, OHIO
43017

PROJECT CONTACT:
KURT OVERMYER
214.872.4092 T
kurt.overmyer@guggenheimpartners.com

CIVIL ENGINEER

wd

7007 DISCOVERY BLVD
DUBLIN, OH 43017
614.634.7000 T

WDPARTNERS.COM

PROJECT CONTACT:
CHRIS WINKLE
614.634.7236 T
chris.winkle@wdpartners.com

DEVELOPMENT CONTACTS

ZONING:
CITY OF DUBLIN LAND USE AND LONG RANGE PLAN.
5800 SHIER RINGS ROAD
DUBLIN, OH 43016
JUSTIN GOODWIN
614.410.4677

SURVEYOR:
CARPENTER NARTY TRANSPORTATION, INC.
7007 DISCOVERY BLVD.
DUBLIN, OH 43017
KEVIN CARPENTER
614.656.2402

ELECTRIC:
AMERICAN ELECTRIC POWER
550 TECH CENTER DRIVE
GAHANNA, OH 43230
JEFF ANTHONY
614.583.6611

GEOTECHNICAL:
GILES ENGINEERING ASSOCIATES
N8 W22250 JOHNSON DR., STE A1
WAUKESHA, WI 53186
TERRY GILES
262.544.0118

TELEPHONE:
AT&T
150 EAST GAY STREET
COLUMBUS, OH 43215
RON HARRISON
614.223.2823

NATURAL GAS:
COLUMBIA GAS OF OHIO, INC.
1600 DUBLIN ROAD
COLUMBUS, OH 43215
NICOLE BOYER
614.260.5900

WATER:
CITY OF COLUMBUS DIVISION OF WATER
910 DUBLIN ROAD
COLUMBUS, OH 43215
DOUG WILSON
614.645.7330

BUILDING:
CITY OF DUBLIN BUILDING DEPARTMENT
5800 SHIER RINGS ROAD
DUBLIN, OH 43016
DAVE UNGRICHAL
614.410.4670

STORM WATER:
CITY OF DUBLIN ENGINEERING
5800 SHIER RINGS ROAD
DUBLIN, OH 43016
KRISTEN YORKO
614.410.4657

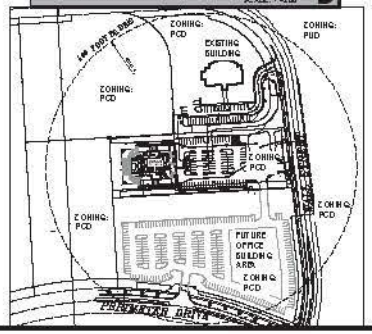
SANITARY SEWER:
CITY OF DUBLIN ENGINEERING
5800 SHIER RINGS ROAD
DUBLIN, OH 43016
KRISTEN YORKO
614.410.4657

FIRE:
CITY OF DUBLIN FIRE DEPARTMENT
4567 HARD ROAD
DUBLIN, OH 43016
-
614.652.3092

HEALTH:
FRANKLIN COUNTY BOARD OF HEALTH
280 EAST BROAD STREET
COLUMBUS, OH 43215
-
-

SITE MAP

SCALE: 1"=200'



CALL BEFORE YOU DIG!
OHIO LAW REQUIRES EXCAVATORS TO NOTIFY THE PROTECTION SERVICE AT LEAST TWO (2) BUSINESS DAYS BUT NOT LONGER THAN TEN (10) CALENDAR DAYS PRIOR TO EXCAVATION
Ohio Utilities Protection Service
www.oupsc.org
1-800-362-2764

SUBMITTAL	ISSUE DATES
PLANNING SUBMITTAL	9/13/13
REVISED PLANNING SUB.	10/28/13
REVISED PLANNING SUB.	11/14/13
REVISED PLANNING SUB.	12/19/13
-	-
-	-
-	-
-	-
-	-

REVISIONS	COMMENTS	BY
1	OWNER/CITY COMMENTS	JDS
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-

DWG. NO. / REV. / DATE

DWG. NO.		REV.	DATE
1 OF 12	COVER SHEET AND INDEX	1	11/14/13
2 OF 12	ALTA SURVEY	1	10/28/13
3 OF 12	ALTA SURVEY	1	10/28/13
4 OF 12	DEVELOPMENT PLAN	1	11/14/13
5 OF 12	SITE GRADING & DRAINAGE PLAN	1	11/14/13
6 OF 12	SITE UTILITY PLAN	1	11/14/13
7 OF 12	LANDSCAPE PLAN	1	11/14/13
8 OF 12	PLAT OF SURVEY FOR WALL STREET HOLDINGS	1	10/28/13
9 OF 12	BUILDING ELEVATIONS - EAST	-	-
10 OF 12	BUILDING ELEVATIONS - SOUTH	-	-
11 OF 12	BUILDING ELEVATIONS - NORTH	-	-
12 OF 12	BUILDING ELEVATIONS - WEST	-	-

SITE VICINITY MAP

SCALE: 1"=1,000'

CITY OF DUBLIN APPROVALS

SIGNATURES BELOW SIGNIFY ONLY CONCURRENCE WITH THE GENERAL PURPOSES AND GENERAL LOCATION OF THE PROJECT AND DOES NOT CONSTITUTE ASSURANCE TO OPERATE AS INTENDED. ALL TECHNICAL DETAILS REMAIN THE RESPONSIBILITY OF THE PROFESSIONAL ENGINEER PREPARING THE PLANS.

APPROVED:

CITY ENGINEER, CITY OF DUBLIN, OHIO — DATE

* DIRECTOR OF LAND USE & LONG RANGE PLANNING, CITY OF DUBLIN, OHIO — DATE

* FOR COMMERCIAL PERMITS ONLY

SIGNATURES
APPLICANT
PLANNING AND ZONING COMMISSION SECRETARY, CITY OF DUBLIN, OHIO
DATE OF PLANNING AND ZONING COMMISSION AND CITY COUNCIL APPROVALS

V.E. PROJECT NUMBER
MYNOA0001

1
OF 12

DUBLIN, OHIO 43017

5505 WALL STREET

MY NOAH'S

ALTA SURVEY

WALL STREET HOLDINGS, LLC
5555 WALL STREET
DUBLIN, OHIO

PARCEL LEGAL DESCRIPTION

SITUATED IN THE STATE OF OHIO, COUNTY OF FRANKLIN, CITY OF DUBLIN, BEING A PART OF VIRGINIA MILITARY SURVEY NO. 2542, AND FURTHER BEING ALL OF THAT 2.802 ACRE PARCEL CONVEYED TO WALL STREET HOLDINGS, LLC BY INSTRUMENT NO. [illegible], ALL OF THAT 4.880 ACRE TRACT CONVEYED TO WALL STREET HOLDINGS, LLC BY INSTRUMENT NO. [illegible], AND ALL OF THAT 2.374 ACRE TRACT CONVEYED TO WALL STREET HOLDINGS, LLC BY INSTRUMENT NO. [illegible], ALL REFERENCES BEING TO THE FRANKLIN COUNTY RECORDER'S OFFICE, FRANKLIN COUNTY, OHIO, AND BEING MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING, FOR REFERENCE, AT A ¾" IRON PIPE FOUND AT THE NORTHWEST CORNER OF A 4.280 ACRE TRACT OF LAND CONVEYED TO PERIMETER A. LTD. BY INSTRUMENT NO. [illegible], SAID PIPE ALSO BEING IN THE NORTHEASTERLY RIGHT OF WAY LINE OF WALL STREET (A 60.00 FOOT WIDE PUBLIC ROADWAY), AS DEDICATED BY THE PLAT ENTITLED WALL STREET & EASEMENTS DEDICATION PLAT, RECORDED IN PLAT BOOK [illegible], PAGE [illegible];

THENCE ACROSS SAID WALL STREET SOUTH [illegible] WEST A DISTANCE OF [illegible] FEET TO A ¾" IRON PIPE FOUND IN THE SOUTHWESTERLY LINE OF SAID WALL STREET, SAID PIPE ALSO BEING IN THE EASTERLY LINE OF SAID 4.880 ACRE TRACT, SAID PIPE ALSO BEING THE TRUE POINT OF BEGINNING FOR THE PARCEL HEREIN DESCRIBED;

THENCE ALONG THE SOUTHWESTERLY LINE OF SAID WALL STREET, ALSO BEING THE EASTERLY LINE OF SAID 4.880 ACRE TRACT, THE FOLLOWING THREE COURSES:

1) SOUTH 57°10' 22" EAST A DISTANCE OF 165.17 FEET TO A ¾" IRON PIPE FOUND;

2) WITH A CURVE TO THE RIGHT HAVING A RADIUS OF 470.00 FEET, AN ARC LENGTH OF 151.38 FEET, A CENTRAL ANGLE OF 18° 27' 18", A CHORD BEARING SOUTH 02° 07' 08" WEST, AND A CHORD DISTANCE OF 150.73 FEET TO A ¾" IRON PIPE FOUND;

3) SOUTH 11° 10' 08" WEST A DISTANCE OF 16.34 FEET TO A ¾" IRON PIPE FOUND;

4) SOUTH 81° 23' 14" WEST A DISTANCE OF 48.82 FEET TO AN ¾" IRON PIPE FOUND AT THE SOUTHEASTERLY CORNER OF SAID 4.880 ACRE TRACT, ALSO BEING IN THE NORTHERLY LINE OF PERIMETER DRIVE, AS RECORDED IN XXXX

THENCE ALONG THE SOUTHERLY LINE OF SAID 4.880 ACRE TRACT, ALSO BEING THE NORTHERLY LINE OF SAID PERIMETER DRIVE THE FOLLOWING SIX COURSES:

1) NORTH 88° 48' 58" WEST A DISTANCE OF 118.87 FEET TO A ¾" IRON PIPE FOUND;

2) WITH A CURVE TO THE LEFT HAVING A RADIUS OF 1268.50 FEET, A CENTRAL ANGLE OF 08° 31' 58", AN ARC LENGTH OF 189.16 FEET, A CHORD BEARING NORTH 72° 58' 08" WEST, AND A CHORD DISTANCE OF 188.99 FEET TO A ¾" IRON PIPE FOUND;

3) NORTH 29° 13' 44" WEST A DISTANCE OF 27.08 FEET TO A ¾" IRON PIPE FOUND;

4) NORTH 79° 28' 28" WEST A DISTANCE OF 80.18 FEET TO A ¾" IRON PIPE FOUND;

5) SOUTH 57° 56' 46" WEST A DISTANCE OF 41.20 FEET TO A ¾" IRON PIPE FOUND;

6) WITH A CURVE TO THE LEFT HAVING A RADIUS OF 1268.50 FEET, A CENTRAL ANGLE OF 07° 07' 14", AN ARC LENGTH OF 164.10 FEET, A CHORD BEARING NORTH 85° 48' 38" WEST, AND A CHORD DISTANCE OF 164.00 FEET TO A ¾" IRON PIPE FOUND AT THE SOUTHWESTERLY CORNER OF SAID 4.880 ACRE TRACT;

THENCE LEAVING SAID NORTHERLY RIGHT-OF-WAY LINE ALONG THE WESTERLY LINE OF SAID 4.880 ACRE TRACT, ALSO BEING THE EASTERLY LINE OF A 2.836 ACRE TRACT CONVEYED TO CHECKFREE CORPORATION BY INSTRUMENT NO. [illegible], NORTH 06° 12' 14" WEST A DISTANCE OF 314.18 FEET TO A ¾" IRON PIPE FOUND AT THE NORTHWESTERLY CORNER OF SAID 4.880 ACRE TRACT, SAID PIPE ALSO BEING THE SOUTHWESTERLY CORNER OF SAID 2.802 ACRE TRACT;

THENCE ALONG THE WESTERLY LINE OF SAID 2.802 ACRE TRACT, ALSO BEING THE EASTERLY LINE OF SAID 2.836 ACRE TRACT. NORTH 06° 12' 14" WEST A DISTANCE OF 165.87 FEET TO THE NORTHWESTERLY CORNER OF SAID 2.802 ACRE TRACT, ALSO BEING THE NORTHEASTERLY CORNER OF SAID 2.836 ACRE TRACT, SAID POINT ALSO BEING IN THE SOUTHERLY LINE OF A 4.269 ACRE TRACT CONVEYED TO CABIN IN THE WOODS, LLC BY INSTRUMENT NO. [illegible];

THENCE ALONG THE NORTHERLY LINE OF SAID 2.802 ACRE TRACT, ALSO BEING THE SOUTHERLY LINE OF SAID 4.269 ACRE TRACT, NORTH 88° 51' 02" EAST A DISTANCE OF 270.54 FEET TO A ¾" IRON PIPE FOUND AT THE SOUTHEASTERLY CORNER OF SAID 4.269 ACRE TRACT, SAID PIN ALSO BEING THE SOUTHWESTERLY CORNER OF SAID 2.374 ACRE TRACT;

THENCE ALONG THE WESTERLY LINE OF SAID 2.374 ACRE TRACT, ALSO BEING THE EASTERLY LINE OF SAID 4.269 ACRE TRACT, THE FOLLOWING TWO COURSES:

1) NORTH 02° 11' 19" WEST A DISTANCE OF 230.11 FEET TO A ¾" IRON PIPE FOUND;

2) WITH A CURVE TO THE LEFT HAVING A RADIUS OF 170.00 FEET, A CENTRAL ANGLE OF 90° 08' 27", AN ARC LENGTH OF 267.05 FEET, A CHORD BEARING NORTH 46° 11' 04" WEST, AND A CHORD DISTANCE OF 240.43 FEET TO A ¾" IRON PIPE FOUND AT THE NORTHWESTERLY CORNER OF SAID 2.374 ACRE TRACT, ALSO BEING THE NORTHEASTERLY CORNER OF SAID 4.269 ACRE TRACT, SAID PIN ALSO BEING IN THE SOUTHERLY RIGHT-OF-WAY LINE OF SAID WALL STREET, AS RECORDED IN INSTRUMENT NO. [illegible];

THENCE ALONG THE NORTHERLY LINE OF SAID 2.374 ACRE TRACT. ALSO BEING THE SOUTHERLY RIGHT-OF-WAY LINE OF SAID WALL STREET THE FOLLOWING TWO COURSES:

1) NORTH 88° 49' 29" EAST A DISTANCE OF 343.49 FEET TO A ¾" IRON PIN FOUND;

2) WITH A CURVE TO THE RIGHT HAVING A RADIUS OF 270.00 FEET, A CENTRAL ANGLE OF 79° 48' 05", AN ARC LENGTH OF 388.07 FEET, A CHORD BEARING SOUTH 88° 18' 58" EAST, AND A CHORD DISTANCE OF 281.68 FEET TO THE SOUTHEASTERLY CORNER OF SAID 2.374 ACRE TRACT. ALSO BEING THE NORTHEASTERLY CORNER OF SAID 2.802 ACE TRACT;

THENCE ALONG THE EASTERLY LINE OF SAID 2.802 ACRE TRACT, ALSO BEING THE WESTERLY RIGHT-OF-WAY LINE OF SAID WALL STREET, THE FOLLOWING TWO COURSES:

1) WITH A CURVE TO THE RIGHT HAVING A RADIUS OF 270.00 FEET, A CENTRAL ANGLE OF 10° 18' 02", AN ARC LENGTH OF 48.39 FEET, A CHORD BEARING SOUTH 12° 17' 09" EAST, AND A CHORD DISTANCE OF 48.24 FEET TO A ¾" IRON PIPE FOUND;

2) SOUTH 57° 10' 22" EAST A DISTANCE OF 488.87 FEET TO THE TRUE PLACE OF BEGINNING FOR THE PARCEL HEREIN DESCRIBED.

BASIS OF BEARINGS

THE BEARINGS CONTAINED HEREIN ARE BASED ON THE OHIO STATE PLANE COORDINATE SYSTEM, OHIO SOUTH ZONE, NAD83. CONTROL FOR THE BEARINGS WAS ESTABLISHED FROM FRANKLIN COUNTY SURVEY CONTROL MONUMENTS FRANK 72 AND 38, AS ESTABLISHED BY THE FRANKLIN COUNTY ENGINEER'S OFFICE. THE BEARING FROM FRANK 72 TO 38 IS NORTH 88° 10' 48" EAST. BEARINGS ARE SHOWN TO INDICATE ANGLES ONLY.

PARCEL AREA

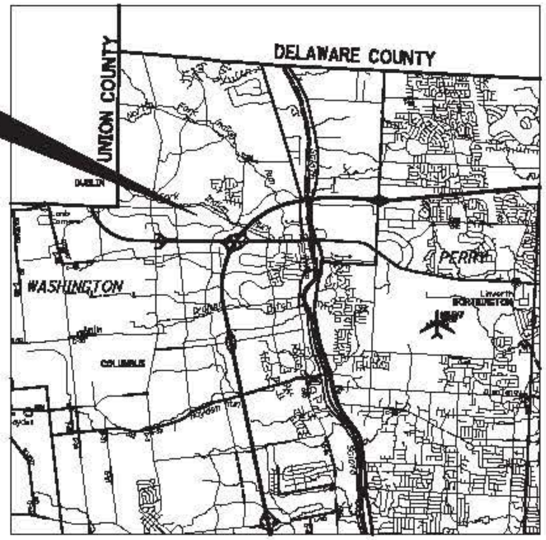
443,799 SQ. FT. OR 10.188 ACRES

ENCROACHMENTS

THERE ARE NO APPARENT ENCROACHMENTS EVIDENT ON THE SUBJECT PROPERTY.

SITE VICINITY MAP

NOT TO SCALE



UTILITY CONTACTS

CABLE:
TIME WARNER CABLE
3760 INTERCHANGE DRIVE
COLUMBUS, OH 43204
(614) 481-5262

FIBER OPTIC:
COLUMBUS FIBERNET
1000 DUBLIN ROAD
COLUMBUS, OH 43215
(614) 324-6100

TELEPHONE:
AT&T - OHIO
111 N FOURTH ST., ROOM 902
COLUMBUS, OH 43215
(614) 223-7378

CITY UTILITIES:
DIVISION OF STREETS & UTILITIES
6555 SHIER RINGS ROAD
DUBLIN, OH 43016
(614) 410-4750

NATURAL GAS:
COLUMBIA GAS OF OHIO
3550 JOHNNY APPLESEED CT.
COLUMBUS, OH 43231
(614) 818-2107

SANITARY & WATER:
CITY OF COLUMBUS
DIV. OF SEWERAGE & DRAINAGE
1250 FAIRWOOD AVE.
COLUMBUS, OH 43206
(614) 645-6030

ELECTRIC:
AMERICAN ELECTRIC POWER
850 TECH CENTER DRIVE
GAHANNA, OH 43230
(614) 883-6802

FLOODPLAIN DATA

PROPERTY LIES WITHIN ZONE X. AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN ONE FOOT OR WITH DRAINAGE AREAS LESS THAN ONE SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.

THE AREA LIES WITHIN COMMUNITY PANEL NUMBER 39049C0158K, EFFECTIVE DATE JUNE 17, 2008.

SURVEYOR'S CERTIFICATION

I HEREBY CERTIFY TO GUGGENHEIM RETAIL REAL ESTATE PARTNERS, INC., A DELAWARE CORPORATION, COMMONWEALTH LAND TITLE INSURANCE COMPANY, AND EACH OF THEIR RESPECTIVE SUCCESSORS AND ASSIGNS THAT:
(A) THIS SURVEY WAS PREPARED BY ME OR UNDER MY SUPERVISION,
(B) THE LEGAL DESCRIPTION OF THE PROPERTY AS SET FORTH HEREIN, AND THE LOCATION OF ALL IMPROVEMENTS, ENCROACHMENTS, FENCES, EASEMENTS, ROADWAYS, RIGHTS OF WAY AND SETBACK LINES WHICH ARE EITHER VISIBLE OR OF RECORD IN FRANKLIN COUNTY, OHIO (ACCORDING TO COMMITMENT FOR TITLE INSURANCE REFERENCE NUMBER [illegible], DATED SEPTEMBER 30, 2013 ISSUED BY COMMONWEALTH LAND TITLE INSURANCE COMPANY), ARE ACCURATELY REFLECTED HEREON,
(C) THIS SURVEY ACCURATELY DEPICTS THE STATE OF FACTS AS THEY APPEAR ON THE GROUND,
(D) EXCEPT AS SHOWN HEREON, THERE ARE NO IMPROVEMENTS, ENCROACHMENTS, FENCES OR ROADWAYS ON ANY PORTION OF THE PROPERTY REFLECTED HEREON,
(E) THE PROPERTY SHOWN HEREON HAS ACCESS TO A PUBLICLY DEDICATED ROADWAY,
(F) ALL PUBLIC STREETS NECESSARY FOR ACCESS TO THE PROPERTY HAVE BEEN COMPLETED AND DEDICATED, AND THERE IS DIRECT ACCESS BETWEEN SUCH PUBLIC STREETS AND THE PROPERTY ALONG THE ENTIRE COMMON BOUNDARIES,
(G) THE PROPERTY IS ZONED PCD - PLANNED UNIT DEVELOPMENT,
(H) PROPERTY LIES WITHIN ZONE X. AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN ONE FOOT OR WITH DRAINAGE AREAS LESS THAN ONE SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.
(I) THE TITLE LINES AND LINE OF ACTUAL POSSESSION ARE THE SAME,
(J) ALL UTILITY SERVICES REQUIRED FOR THE OPERATION OF THE PROPERTY, EITHER ENTER THE PROPERTY THROUGH ADJOINING PUBLIC STREETS, OR THIS SURVEY SHOWS THE POINT OF ENTRY AND LOCATION OF ANY UTILITIES WHICH PASS THROUGH OR ARE LOCATED ON ADJOINING PRIVATE LAND,
(K) THIS SURVEY SHOWS THE LOCATION AND DIRECTION OF ALL STORM DRAINAGE SYSTEMS FOR THE COLLECTION AND DISPOSAL OF ALL SURFACE DRAINAGE, AND
(L) THE PROPERTY SURVEYED CONTAINS 10.188 ACRES. ANY DISCHARGE INTO STREAMS, RIVERS, OR OTHER CONVEYANCE SYSTEMS IS SHOWN ON THE SURVEY.

THE SURVEY MEASUREMENTS FOR THIS SURVEY WERE MADE IN ACCORDANCE WITH THE "MINIMUM ANGLE, DISTANCE, AND CLOSURE REQUIREMENTS FOR SURVEY MEASUREMENTS WHICH CONTROL LAND BOUNDARIES FOR ALTA/ACSM LAND TITLE SURVEYS" JOINTLY ESTABLISHED AND ADOPTED BY THE AMERICAN LAND TITLE ASSOCIATION ("ALTA") AND THE AMERICAN CONGRESS ON SURVEYING AND MAPPING ("ACSM"), AS MOST RECENTLY REVISED OR AMENDED AND MEETS THE ACCURACY REQUIREMENTS, AS DEFINED THEREIN AND INCLUDES ITEMS 1-19, INCLUSIVE, IN TABLE A THEREOF.

DATE: OCTOBER 18, 2013

KEVIN P. CARPENTER P.S. 8124
CARPENTER MARTY TRANSPORTATION
7007 DISCOVERY BOULEVARD
DUBLIN, OHIO 43017
T (614) 656-2424

ZONING INFORMATION

THE PROPERTY IS ZONED PCD: PLANNED UNIT DEVELOPMENT

SETBACKS (PER CODE)

BUILDING	EQUAL TO THE WIDTH OF THE EXISTING R/W (AT LEAST 30')
PARKING	PERMITTED TO EXTEND INTO BUILDING SETBACK NOT MORE THAN A DISTANCE EQUAL TO 40% OF THE REQUIRED BUILDING SETBACK DISTANCE (15' MINIMUM)

SURVEY SYMBOL LEGEND

	AERIAL TARGET/ HORIZ. CONTROL		1 POST SIGN		SITE LIGHT POLE		TELECOMMUNICATION POLE
	AERIAL TARGET/ VERTICAL CONTROL		1 POST SIGN (BACK TO BACK)		ROADWAY LIGHT POLE		TELECOMMUNICATION VAULT
	BENCHMARK FOUND		2 POST SIGN		MAIL BOX		TELECOMMUNICATION /LIGHT POLE
	BENCHMARK SET		2 POST SIGN (BACK TO BACK)		MONITORING WELL		TELECOMMUNICATION/ LIGHT/POWER POLE
	CONCRETE MONUMENT FOUND		BARBEQUE GRILL		NEWSPAPER BOX		TELECOMMUNICATION /POWER POLE
	DRILL HOLE FOUND		BUSH/SHRUB		OIL TANK		TELEPHONE (PAY)
	DRILL HOLE SET		CATCH BASIN, ROUND		OIL WELL		TELEPHONE BOOTH
	GOVERNMENT DISK FOUND		CATCH BASIN, SQUARE		PARKING METER		TELEPHONE PEDESTAL
	IRON PIN FOUND (NO I.D. CAP)		CURB INLET		POST/BOLLARD		IRRIGATION VALVE
	IRON PIN FOUND W/ I.D. CAP		ELECTRIC BOX		POWER LINE MARKER		TRAFFIC PULL-BOX
	IRON PIN SET W/ I.D. CAP		ELECTRIC JUNCTION/PULL BOX		POWER POLE		TRAFFIC SIGNAL STRAIN/SUPPORT POLE
	IRON PIPE FOUND		ELECTRIC MANHOLE		POWER/LIGHT POLE		TREE, DECIDUOUS
	IRON PIPE SET		ELECTRIC METER		RAILROAD CROSSING		TREE, EVERGREEN
	MAGNETIC NAIL FOUND		ELECTRIC VAULT		RAILROAD GATE		TREE, STUMP
	MAGNETIC NAIL SET		FIRE HYDRANT		RAILROAD SIGNAL		UNKNOWN MANHOLE
	MINE SPIKE FOUND		FLAG POLE		SANITARY LINE MARKER		UNKNOWN OBJECT
	MINE SPIKE SET		FLOOR/YARD DRAIN		SANITARY LINE VENT		UNKNOWN POLE
	MONUMENT BOX FOUND		GAS LINE MARKER		SANITARY MANHOLE		UNKNOWN VALVE
	P. K. NAIL FOUND		GAS LINE VENT		SANITARY VALVE/ CLEANOUT		UNKNOWN WELL
	RAILROAD SPIKE FOUND		GAS MANHOLE		STORM CLEANOUT		WATER GATE VALVE
	RAILROAD SPIKE SET		GAS METER		SEPTIC TANK		WATER LINE VENT
	SECTION CORNER		GAS VALVE		SIGN LUMINAIRE		WATER MANHOLE
	SECTION HALF		GAS WELL		SOIL BORING		WATER METER
	STONE FOUND		GASOLINE PUMP		STORM MANHOLE		WATER SERVICE STOP
	TACKED HUB FOUND		GUYWIRE ANCHOR		TELECOMMUNICATION LINE MARKER		IRRIGATION CONTROL VALVE
	TACKED HUB SET		LANDSCAPE ROCK		TELECOMMUNICATION MANHOLE		YARD/LANDSCAPE LIGHT

NOTE: NOT ALL SYMBOLS MAY BE USED ON THIS SURVEY

CM transportation

7007 DISCOVERY BLVD
DUBLIN, OH 43017
614.656.2424 T

CMTRAN.COM

REVISIONS

NOAH'S
FOR ALL LIFE'S EVENTS

DESIGNED BY - JMM
DRAWN BY - ARM
CHECKED BY - KPC

CM PROJECT NUMBER
CMRP0042

GENERAL NOTES

A. THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THIS PLAT ARE AS OBTAINED FROM FIELD OBSERVATION, OWNER MARKING, AND OWNER PROVIDED PLANS.

B. NO OTHER ITEM IN COMMITMENT NUMBER 2013009409 AFFECTS THE SURVEY SHOWN HEREON.

C. DIRECTIONS AND DISTANCES SHOWN ON THIS SURVEY BASED ON AN ADJUSTED TRAVERSE.

D. THE PROPERTY SHOWN HEREON IS THE SAME AS THAT SHOWN IN COMMITMENT NUMBER 2013009409.

E. CERTIFICATION IS MADE TO THE ORIGINAL PURCHASER OF THE SURVEY. IT IS NOT TRANSFERABLE TO ADDITIONAL INSTITUTIONS OR SUBSEQUENT OWNERS.

F. SUBSURFACE AND ENVIRONMENTAL CONDITIONS WERE NOT EXAMINED OR CONSIDERED A PART OF THIS SURVEY.

G. ELEVATIONS ALONG CURBS ARE BOTTOM OF CURB, UNLESS NOTED OTHERWISE.

BENCHMARK DATA

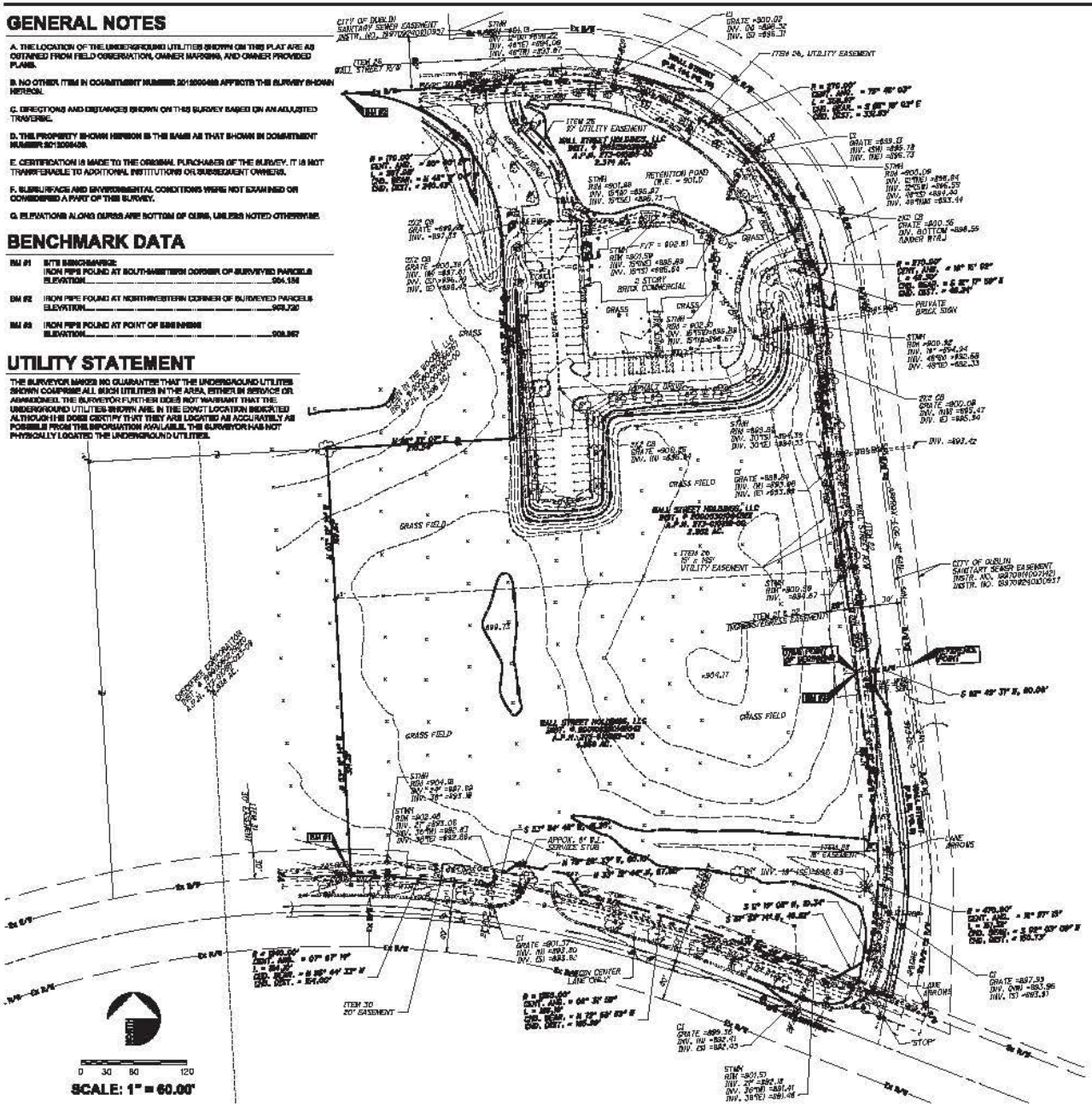
BM #1 — BTB BENCHMARK: IRON PIPE FOUND AT SOUTHWESTERN CORNER OF SURVEYED PARCELS ELEVATION 904.184

BM #2 — IRON PIPE FOUND AT NORTHWESTERN CORNER OF SURVEYED PARCELS ELEVATION 909.720

BM #3 — IRON PIPE FOUND AT POINT OF BEGINNING ELEVATION 908.867

UTILITY STATEMENT

THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE, IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.



EASEMENTS

SCHEDULE "B" ITEM	GRANTEE	DESCRIPTION	RECORDED IN	ENCUMBRANCE
17	UNKNOWN	UNRECORDED STORM SEWER EASEMENT	SURVEY DATED 1/30/1998	NO INFORMATION PROVIDED FOR REVIEW
18a	OLDE POSTE PROPERTIES	DECLARATION OF RESTRICTIONS	O.R.V. 15383, PG. A-01	BUILDING & CONSTR. RESTRICTIONS; SUBDIVISION RULES
18b	OLDE POSTE PROPERTIES	WARRANTY DEED	O.R.V. 13479, PG. B-18	SAME AS ITEM 18a ABOVE
18c	OLDE POSTE PROPERTIES, RUSCILLI CONSTR., & METATEC CORP.	FIRST AMENDMENT TO DECLARATION OF RESTRICTIONS	INSTR. NO. 199709140071419	MODIFIES RESTRICTIONS DEFINED IN O.R.V. 15383, PG. G-05 & O.R.V. 15383, PG. A-01
18d	OLDE POSTE PROPERTIES, & RUSCILLI CONSTR. CO., INC.	SECOND AMENDMENT TO DECLARATION OF RESTRICTIONS	INSTR. NO. 200009220066094	MODIFIES RESTRICTIONS DEFINED IN O.R.V. 15383, PG. A01 AND INSTR. NO. 199709140071419
19	WALL STREET HOLDINGS, LLC	INGRESS/EGRESS EASEMENT	INSTR. NO. 199811190256050	D.N.A. - WALL STREET HOLDINGS, LLC NOW OWNS EASEMENT AREA
20	THE CITY OF DUBLIN	DONATION AND DEDICATION	INSTR. NO. 199811190251555	WALL STREET RIGHT-OF-WAY
21	WALL STREET HOLDINGS, LLC	TEMPORARY INGRESS/EGRESS EASEMENT	INSTR. NO. 199811190256055	D.N.A. - WALL STREET NOW PUBLICLY DEDICATED ROADWAY
22	R.C. OLMSTEAD, INC.	INGRESS/EGRESS EASEMENT	INSTR. NO. 199811190256060	D.N.A. - WALL STREET HOLDINGS, LLC NOW OWNS EASEMENT AREA
23a	OLDE POSTE PROPERTIES	WARRANTY DEED	O.R.V. 15382, PG. G-03	ORIGINAL 115 ACRES
23b	OLDE POSTE PROPERTIES, RUSCILLI CONSTR., & METATEC CORP.	FIRST AMENDMENT TO DECLARATION OF RESTRICTIONS	INSTR. NO. 199709140071419	MODIFIES RESTRICTIONS DEFINED IN O.R.V. 15383, PG. G-05 & O.R.V. 15383, PG. A-01
24	WALL STREET HOLDINGS, LLC	LIMITED WARRANTY DEED	INSTR. NO. 200108280142042	TRANSFER OF 4.968 ACRE TRACT
25	COLUMBUS SOUTHERN POWER	EASEMENT & RIGHT-OF-WAY	INSTR. NO. 200001010176210719	AS SHOWN ON SURVEY 10' ELECTRIC EASEMENT
26	THE CITY OF DUBLIN	WALL STREET & EASEMENT DEDICATION	P.B. 134, PG. 10	AS SHOWN ON SURVEY
27	STERLING INVESTMENTS OF OHIO, INC.	MEMORANDUM OF OPTION TO PURCHASE REAL ESTATE	INSTR. NO. 201012170171782	OPTION TO PURCHASE 2.374 AC. & 2.602 AC TRACTS UNTIL 8/5/2017
28	THE CITY OF DUBLIN	WALL STREET & EASEMENT DEDICATION	P.B. 62, PG. 8	AS SHOWN ON SURVEY
29	THE CITY OF DUBLIN	DEDICATION OF VENTURE DRIVE	P.B. 66, PG. 43	D.N.A. - EASEMENTS SOUTH OF PERIMETER
30	THE CITY OF DUBLIN	PERIMETER DRIVE & EASEMENT DEDICATION	P.B. 68, PG. 51	AS SHOWN ON SURVEY
31	THE CITY OF DUBLIN	DEDICATION OF DISCOVERY BLVD., PERIMETER DR., WALL STREET & EASEMENTS	P.B. 72, PG. 79	EASEMENTS AS SHOWN ON SURVEY
32	WALL STREET HOLDINGS, LLC	USE RESTRICTION	INSTR. NO. 200108280142042	D.N.A. - RESTRICTION EXPIRED ON 8/5/2003

TITLE COMMITMENT NUMBER 2013009409

CM transportation

7007 DISCOVERY BLVD
DUBLIN, OH 43017
614.556.2424 T

CMTRAN.COM

REVISIONS

NOAH'S
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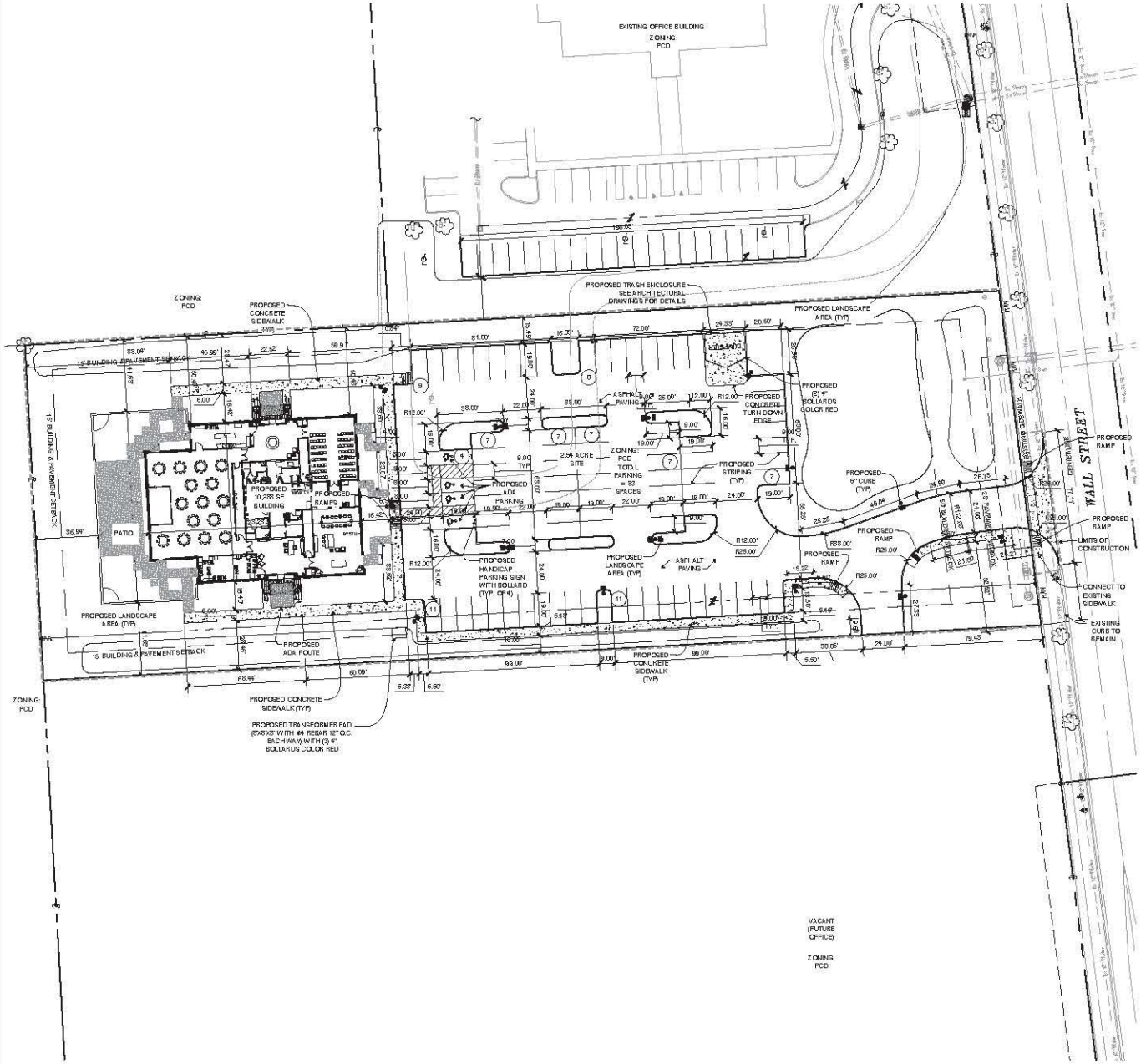
DESIGNED BY - JMM
DRAWN BY - ARW
CHECKED BY - EPC

CM PROJECT NUMBER
CM09042



SIGNATURES

APPLICANT

PLANNING AND ZONING COMMISSION SECRETARY, CITY OF DUBLIN, OHIO

DATE OF PLANNING AND ZONING COMMISSION AND CITY COUNCIL APPROVALS

0 10 20 30 60

SCALE: 1" = 30.00'

NORTH

wd

7007 DISCOVERY BLVD
DUBLIN, OH 43017
614.634.7000 T

WDPARTNERS.COM

NOAH'S
FOR ALL LIFE'S EVENTS'

5505 WALL STREET
DUBLIN, OHIO

REVISIONS
1 10/28/13
2 11/14/13

DEVELOPMENT PLAN

DESIGNED BY - JDS
DRAWN BY - BDF
CHECKED BY - CAW
PROTOTYPE
-
STORE NUMBER
-
WD PROJECT NUMBER
MYNOA0001

STORMWATER NOTES

A. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL UTILITY SIZES, TYPES, AND LOCATIONS SHOWN ON PLANS. ALL UTILITY WORK SHALL BE IN COMPLIANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS. NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCY FOUND BETWEEN THE FIELD CONDITIONS, THESE PLANS AND OR GOVERNING REGULATIONS.

B. ALL HDPE PIPE SHALL BE MANUFACTURED IN ACCORDANCE WITH AASHTO M 294 AND M 252-07, SUCH AS ADS N-12 SMOOTH WALL HDPE OR APPROVED EQUIVALENT. ALL DRAINAGE PIPE SHALL BE HDPE UNLESS OTHERWISE NOTED ON PLANS.

C. ALL HDPE PIPE SHALL POSSESS MALE AND FEMALE ENDS TO ALLOW OVERLAPPING GASKETED PIPE JOINTS PER AASHTO M294. GASKET MATERIAL SHALL CONFORM TO ASTM F477. ALL HDPE PIPE SHALL BE CLEARLY MARKED WITH THE FOLLOWING: MANUFACTURER'S NAME, NOMINAL PIPE SIZE, AND PRODUCT/ EXTRUSION CODE.

D. ALL PIPE LENGTHS ARE APPROXIMATE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.

E. GENERAL CONTRACTOR TO MAINTAIN STORM SEWER WATER DRAINAGE THROUGH ENTIRE CONSTRUCTION PROCESS.

F. INVERTS INDICATED ON THE PLAN REGARDING THE INVERT REFERS TO THE CENTER INVERT OF THE STRUCTURE. THE CONTRACTOR SHALL ENSURE THAT A SLOPE IS PROVIDED WITHIN THE STRUCTURE TO PROMOTE POSITIVE DRAINAGE FROM THE INLET(S) TO THE OUTLET(S) OF THE STRUCTURE.

NORTH

0 15 30 60

SCALE: 1" = 30.00'

wd

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614.634.7000 T

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NOAH'S
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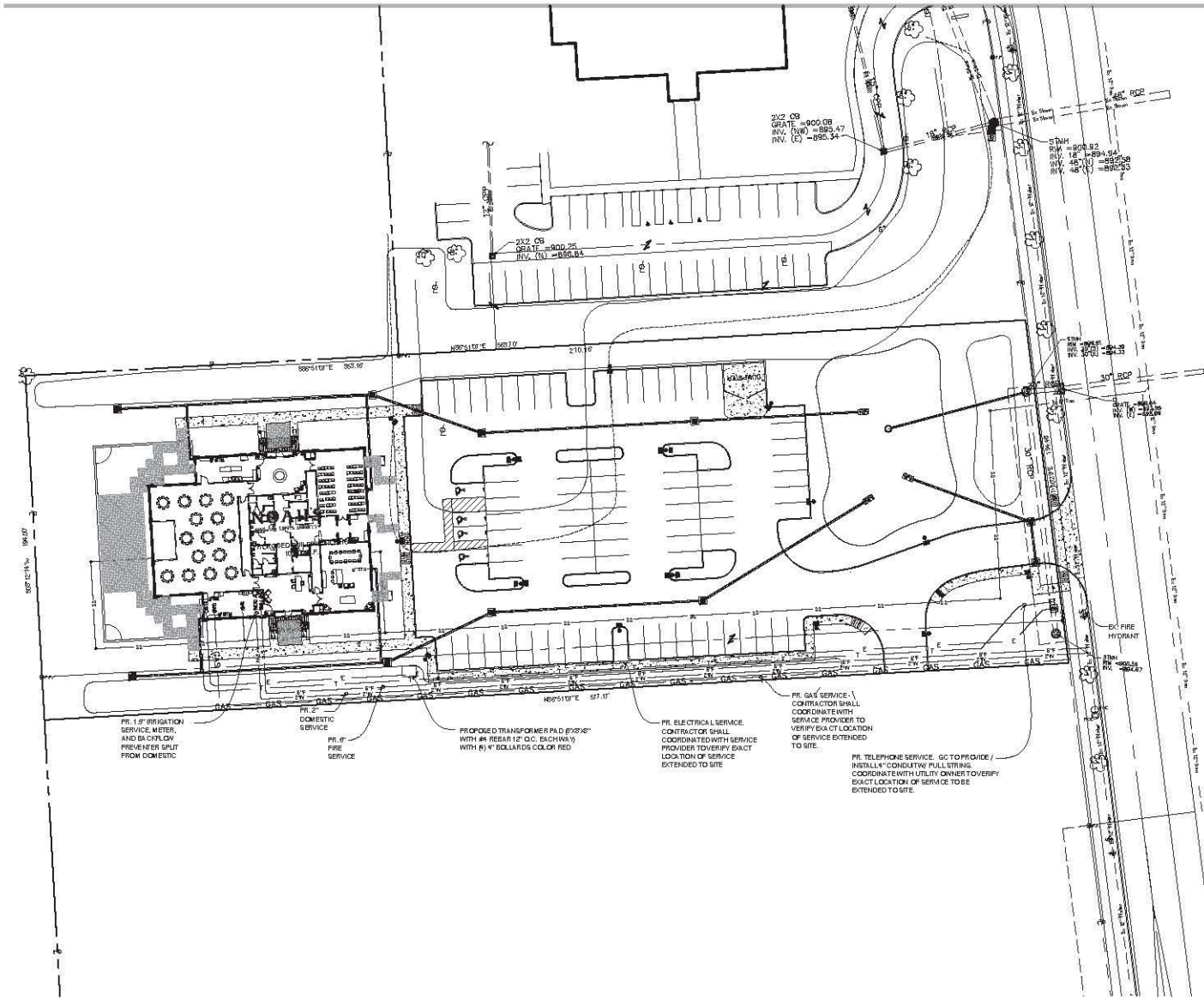
5505 WALL STREET
DUBLIN, OHIO

REVISIONS
1 11/14/13

DESIGNED BY - JDS
DRAWN BY - BDF
CHECKED BY - CAW
PROTOTYPE
-
STORE NUMBER
-
WD PROJECT NUMBER
MYNOA0001

SITE GRADING & DRAINAGE PLAN



UTILITY LINE LEGEND

PROPOSED GAS:	G
PROPOSED ELECTRIC:	E
PROPOSED TELEPHONE:	T
PROPOSED DOMESTIC WATER:	2"W
PROPOSED FIRE WATER:	6"F
PROPOSED METERED WATER SERVICE:	2"MWS
PROPOSED SANITARY SEWER:	SS
PROPOSED STORM SEWER:	S
PROPOSED IRRIGATION SLEEVE:	
EXISTING WATER:	Ex Water
EXISTING GAS:	Ex Gas
EXISTING TELEPHONE:	Ex Tele
EXISTING SANITARY SEWER:	Ex San
EXISTING ELECTRIC:	Ex Elec

CALL BEFORE YOU DIG !
OHIO LAW REQUIRES EXCAVATORS TO NOTIFY THE PROTECTION SERVICE AT LEAST TWO (2) BUSINESS DAYS BUT NOT MORE THAN TEN (10) CALENDAR DAYS PRIOR TO EXCAVATION
Ohio Utilities Protection Service
www.oups.org
1-800-362-2764

SCALE: 1" = 30.00'
0 10 20 30 60
NORTH

INSPECTIONS ARE REQUIRED FOR TAPS INTO EXISTING SANITARY SEWER SYSTEM AND ARE TO BE CORE-DRILLED.

WATER METER ADDRESS:
#TBD WALL STREET

wd

7007 DISCOVERY BLVD
DUBLIN, OH 43017
614.634.7000 T

WDPARTNERS.COM

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FOR ALL LIFE'S EVENTS'

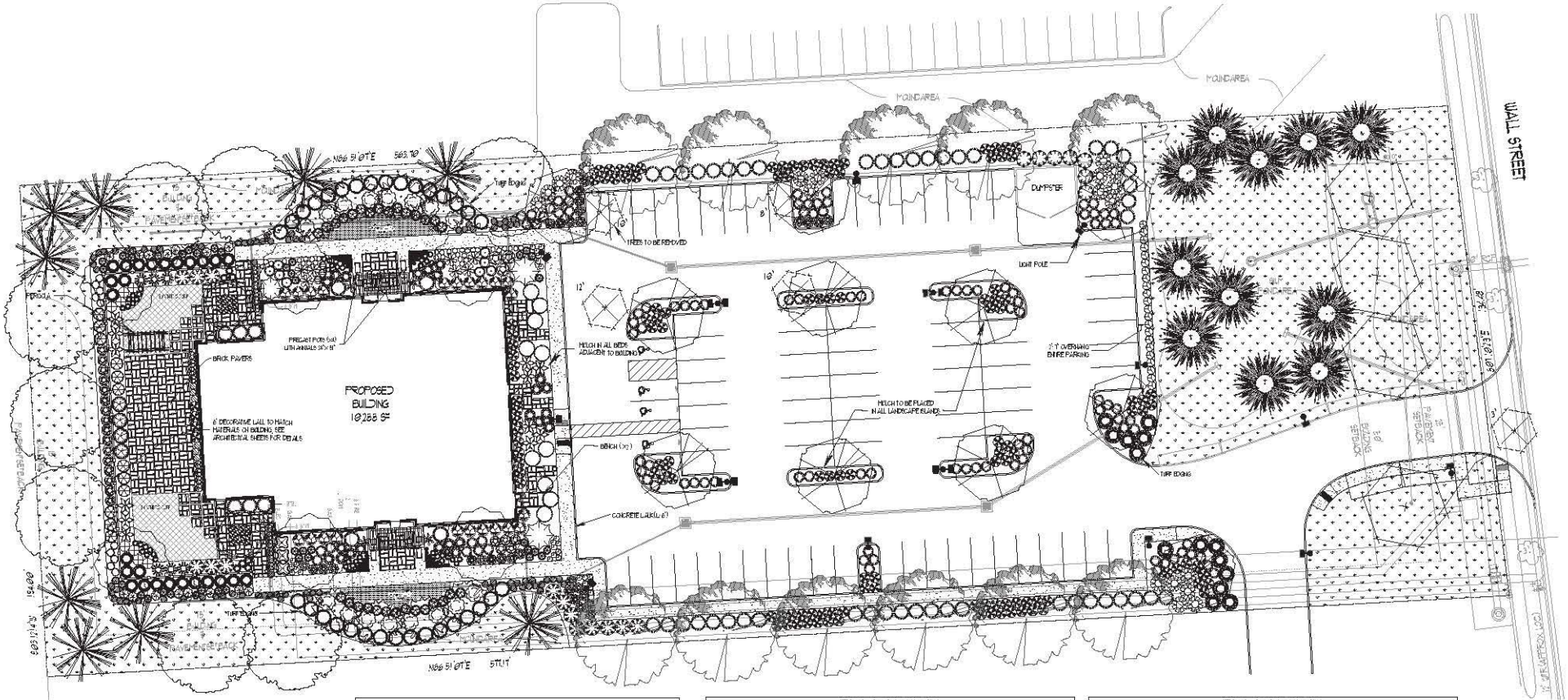
5505 WALL STREET
DUBLIN, OHIO

REVISIONS
1 11/14/13

DESIGNED BY - JDS
DRAWN BY - BDF
CHECKED BY - CAW
PROTOTYPE
-
STORE NUMBER
-
WD PROJECT NUMBER
MYNOA0001

6 OF 12

SITE UTILITY PLAN



GRAPHIC SCALE: 1" = 20'-0"

DESCRIPTION		NOTES
	EDGING	
	SOD TURF	
	GRASS COVER FLOWER MIX	
	SYNTHETIC TURF ALL TURF BY PRESTIGE LANDSCAPE TECH	
	PAVER ALL PAVERS SATISFIED.COM	
	TREES TO BE REMOVED	
MULCH	DECORATIVE MULCH: HARDWOOD DARK MULCH	

NOTES:
1. SYMBOLS TAKE PRECEDENCE OVER PLANT LEGEND COUNT.
2. ALL PLANTER BEDS MUST BE SEPARATED FROM TURF AREAS BY STEEL EDGING OR EQUIVALENT.
3. ALL PLANTINGS LISTED IN THE PLANT LEGEND MUST MATCH. ANY SUBSTITUTIONS MUST BE APPROVED THROUGH THE THE OWNERS REPRESENTATIVE. ALL PLANTS MUST BE INSPECTED AT THE TIME OF DELIVERY PRIOR TO BEING PLANTED FOR IDENTIFICATION, HEALTH AND SIZE.
4. ALL PLANT CONDITIONS SHALL CONFORM TO THE AMERICAN ASSOCIATION OF NURSERYMAN STANDARDS.
5. ALL SCREEN PLANTINGS MUST BE 36" IN HEIGHT WHEN PLANTED ALONG PARKING PERIMETER.

PLANT LEGEND

	COMMON NAME	BOTANICAL NAME	SIZE	QTY
FLOWER GRASS				
	GRASS, VARIEGATED JAPANESE SEDGE	CAREX MORROWII 'AUREA-VARIEGATA'	1 GAL	79
FLOWER, PERENNIAL				
	AJUGA, BRONZE PURPLE	AJUGA	1 GAL	33
	BLEEDING HEART	DICENTRA 'LUXURIANT'	1 GAL	6
	CONEFLOWER, SUMMER	ECHINACEA 'SUMMER'	1 GAL	27
	DAYLILY	HEMEROCALLIS	1 GAL	69
	HOSTA 'FANTRIC'	HOSTA 'FANTRIC'	1 GAL	32
	RUSSIAN SAGE	PEROVSKIA ATRIPLICIFOLIA	3 GAL	19
	YARROW	ACHILLEA FILIPENDULINA	EACH	3
SHRUB, DECIDUOUS				
	ABELIA, GLOSSY	ABELIA GRANDIFLORA	5 GAL	22
	BARBERRY, GOLDEN	BERBERIS 'THUNBERGII'	5 GAL	15
	BARBERRY, ROYAL BURGANDY	BERBERIS 'THUNBERGII' GENTRY	5 GAL	39
	BEAUTYBERRY	CALLICARPA BODINIERI FIRMISION	5 GAL	14
	BLUE SPIREA	CARYOPTERIS X CLANDONENSIS 'BLUE	5 GAL	45
	BURNING BUSH	EUONYMUS ALATA	5 GAL	24
	BUTTERFLY BUSH, PURPLE	BUDDLEIA DAVIDII	5 GAL	12
	CINQUEFOIL, BUSH, RED SUNSET	POTENTILLA FRUTICOSA 'RED SUNSET'	5 GAL	23
	HYDRANGEA, BIG DADDY	HYDRANGEACEAE MACROPHYLLA 'BIG DADDY'	5 GAL	8
	HYDRANGEA, OAK LEAF	HYDRANGEA QUERCIFOLIA	5 GAL	12
	LILAC, CHARLES JOLY	SYRINGA VULGARIS 'CHARLES JOLY'	5 GAL	6
	NINEBARK, DART'S GOLD	PHYSOCARPUS OPULIFOLIUS 'NINEBARK'	5 GAL	6
	ROSE, DRIFT, PEACH	ROSA DRIFT PEACH	5 GAL	8
	ROSE, KNOCKOUT	ROSA 'RADRAZZ'	5 GAL	23
	SPIREA, ANTHONY WATERER	SPIREA BUMALDA 'ANTHONY WATERER'	5 GAL	8
	SPIREA, SNOWMOUND	SPIREA NIPPONICA	5 GAL	4
	SUMMER SWEET CLETHRA	CLETHRA ALNIFOLIA	5 GAL	16
	VIBURNUM, JUDD'S	VIBURNUM X JUDII	5 GAL	5

PLANT LEGEND

	COMMON NAME	BOTANICAL NAME	SIZE	QTY
SHRUB, EVERGREEN BROADLEAF				
	BOXWOOD, LITTLE LEAF	BUXUS MICROPHYLLA VAR. KOREANA	5 GAL	22
	COTONEASTER	COTONEASTER APICULATUS	5 GAL	38
	EUONYMUS, BIG LEAF WINTER CREEPER	EUONYMUS FORTUNEI VEGETUS	5 GAL	4
	GRAPE HOLLY, COMPACT OREGON	MAHONIA AQUIFOLIUM 'COMPACTUM'	5 GAL	29
	HOLLY, BLUE BOY	ILEX X MESERVEAE 'BLUE BOY'	5 GAL	19
	MOUNTAIN LAUREL	KALMIA LATIFOLIA	15 GAL	3
	MOUNTAIN LAUREL, ELF	KALMIA LATIFOLIA ELF	5 GAL	13
	SEA GREEN WAVE	YAXUS CUSPIDATA 'GREEN WAVE'	15 GAL	26
SHRUB, EVERGREEN CONIFER				
	ARBORVITAE, LITTLE GEM	THUJA OCCIDENTALIS 'LITTLE GEM'	5 GAL	32
	ARBORVITAE EMERALD GREEN	THUJA OCCIDENTALIS 'EMERALD GREEN'	5 GAL	7
	HOLLY, NORDIC	ILEX GLABRA 'CHAPIN'	5 GAL	11
	JUNIPER, BLUE CHIP	JUNIPERUS HORIZONTALIS 'BLUE CHIP'	5 GAL	14
	SAWARA CYPRESS	CHAMAECYPARIS PISIFERA 'GOLDEN MOPS'	3 GAL	7
	SPRUCE, ALBERTA, DWARF GLOBE	PICEA ALBERTIANA	5 GAL	6
TREE, DECIDUOUS				
	DOGWOOD, KOUSA	CORNUS KOUSA CHINENSIS	2"	2
	ELM, LACEBARK	ULMUS PARVIFOLIA	2"	11
	GUM, BLACK	NYSSA SYLVATICA	2"	4
	MAPLE, HEDGE	ACER CAMPESTRE	3"	6
	MAPLE, RED SUNSET	ACER RUBRUM 'RED SUNSET'	4"	3
	OAK, SHUMARD	QUERCUS SHUMARDII	4"	6
	SERVICEBERRY, APPLE	AMELANCHIER ARBOREA	2"	8
TREE, EVERGREEN				
	BALD CYPRESS	TAXODIUM DISTICHUM	4"	11
	JUNIPER, CHINESE	JUNIPERUS CHINENSIS	5 GAL	4
	JUNIPER, SKYROCKET	JUNIPERUS VIRGINIANA 'SKYROCKET'	6'	4
	SPRUCE, NORWAY	PICEA ABIES	6'	3

LANDSCAPE PLAN

811 Know what's below. Call before you dig.

LANDSCAPE DESIGN CONSULTANT:
NATURE'S ART
LANDSCAPE ARCHITECTURE
P.E.O. TRAN HOCK
LEED AP, ASLA
LICENSED LANDSCAPE ARCHITECT
TEL/FAX: 614-538-0120
EMAIL: PEOTRANHOCK@AOL.COM

DATE: SUBMITTAL INFO
0/20/13 PRELIMINARY

PROJECT ADDRESS:
5555 WALL STREET
DUBLIN, OH

LANDSCAPE PLAN FOR
NOAH'S OF DUBLIN
CITY OF DUBLIN, OHIO

CONTACT:
GUGGENHEIM REAL ESTATE PARTNERS, INC.
FRISCO, TX 75034
USA

Date: 10.28.13
Rev.: 00.00.00
Project No.: 4598
Drawn By: KP
Checked By:
Scale: 1" = 20'0"

PRELIMINARY LANDSCAPE PLAN

L 1
1 of 1

PLAT OF SURVEY FOR WALL STREET HOLDINGS

VIRGINIA MILITARY SURVEY #2542
CITY OF DUBLIN
FRANKLIN COUNTY
STATE OF OHIO

NORTH

0 25 50 100
SCALE: 1" = 50.00'

V.M.S. 2999
V.M.S. 2542

CHECKFREE CORPORATION
INST. # 199911050279220
A.P.N. 273-01088-023-08
2.938 AC.

30' EASEMENT
PB. 85, PG. 51

CABIN IN THE WOODS, LLC
INST. # 200804140056757
A.P.N. 273-005070-00
4.265 AC.

303.97' (DEED)
N 3°12'14" W, 289.86'

170.00' (DEED)
N 3°12'14" W, 194.00'

R = 1240.00'
Δ = 7°07'14"
L = 154.10'
CHD. BRG. = N 85°44'33" W
CHD. DIST. = 154.00'

R = 1250.00'
Δ = 7°37'29"
CHD. DIST. = 166.22'
(DEED)

40' 40'

AREA BREAKDOWN (ACRES)

TRACT (NEW)	4.958 AC. INST. # 2001062-50142042	2.802 AC. INST. # 20000030-10041125	2.374 AC. INST. # 19991119-0289558	TOTAL
	EXISTING PARCELS			
1	4.670	0.000	0.000	4.670
2	0.324	2.216	0.000	2.540
3	0.000	0.580	2.374	2.954
TOTAL	4.994 *	2.796 *	2.374 *	10.164

* AREAS SHOWN WITHIN TABLE ARE BASED ON FIELD MEASUREMENTS

R = 170.00'
Δ = 90°00'00"
CHD. DIST. = 240.42'
(DEED)

265.32' (DEED)
210.54'

230.00' (DEED)
N 3°11'19" W, 230.11'

R = 170.00'
Δ = 90°00'27"
L = 267.06'
CHD. BRG. = N 48°11'04" W
CHD. DIST. = 240.43'

243.49' (DEED)
N 86°49'26" E, 243.41'

CITY OF DUBLIN
SANITARY SEWER EASEMENT
INSTR. NO. 199709240100957

SITE

DELAWARE CO.
FRANKLIN CO.

PERRY

WORTHINGTON

VICINITY MAP
SCALE 1" = 1 MILE

TRACT 1
4.670 ACRES

TRACT 2
2.540 ACRES

TRACT 3
2.954 ACRES

WALL STREET HOLDINGS, LLC
INST. # 20010625042042
A.P.N. 273-010699-00
4.958 AC.

WALL STREET HOLDINGS, LLC
INST. # 20000301041125
A.P.N. 273-010196-00
2.802 AC.

WALL STREET HOLDINGS, LLC
INST. # 199911190289558
A.P.N. 273-010195-00
2.374 AC.

R = 470.00'
Δ = 8°31'52"
CHD. DIST. = 18.95'
(DEED)

20' EASEMENT
PB. 85, PG. 51

R = 1250.00'
Δ = 8°31'59"
L = 186.16'
CHD. BRG. = N 72°58'59" W
CHD. DIST. = 185.99'

N 86°51'07" E, 577.17'
S 86°51'07" W, 577.17'

N 86°51'07" E, 563.70'
S 86°51'07" W, 353.18'

R = 270.00'
Δ = 86°00'05"
L = 267.06'
CHD. BRG. = S 50°10'32" E
CHD. DIST. = 368.28'

UTIL. EASEMENT
PB. 104, PG. 10

(A) S 11°19'05" W, 10.34'
10.33' (DEED)

(B) S 61°23'14" W, 45.82'
45.96' (DEED)

(C) N 33°12'44" W, 27.00'
26.99' (DEED)

(D) N 79°26'33" W, 60.10'
60.00' (DEED)

(E) S 53°54'46" W, 41.26'
26.99' (DEED)

PERIMETER DR.

P.B. 85, PG. 51, 52, & 53

N 68°40'55" W, 113.67'
114.22' (DEED)

BASIS OF BEARING

THE BEARINGS CONTAINED HEREIN ARE BASED ON THE OHIO STATE PLANE COORDINATE SYSTEM, OHIO SOUTH ZONE, NAD83. CONTROL FOR THE BEARINGS WAS ESTABLISHED FROM FRANKLIN COUNTY SURVEY CONTROL MONUMENTS FRANK 72 AND 3E, AS ESTABLISHED BY THE FRANKLIN COUNTY ENGINEER'S OFFICE. THE BEARING FROM FRANK 72 TO 3E IS NORTH 82° 16' 48" EAST. BEARINGS ARE SHOWN TO INDICATE ANGLES ONLY.

P.O.B.

N 11°19'05" E
10.68'

R = 470.00'
Δ = 18°29'34"
CHD. DIST. = 151.04'
(DEED)

R = 470.00'
Δ = 18°27'13"
L = 151.38'
CHD. BRG. = S 2°03'08" W
CHD. DIST. = 150.72'

R = 500.00'
Δ = 18°29'34"
L = 161.38'
CHD. BRG. = N 2°04'18" E
CHD. DIST. = 160.68'

15' EASEMENT
PB. 92, PG. 8

281.24' (DEED)
S 7°10'29" E, 256.90'

(91.73')

N 7°10'29" W, 256.90'
P.B. 92, PG. 8

T.P.O.B. TRACT 1

T.P.O.B. TRACT 2

T.P.O.B. TRACT 3

15' UTIL. EASEMENT
PB. 104, PG. 10

319.61' (DEED)
S 7°10'29" E, 194.48'

N 7°10'29" W, 194.48'

S 7°10'29" E, 149.46'

CITY OF DUBLIN
1.804 ACRES
INST. #199911190289555

WALL ST.

30' 30'

(F) S 82°49'31" W, 30.00'

(G) S 82°49'31" W, 30.00'

CITY OF DUBLIN
SANITARY SEWER EASEMENT
INSTR. NO. 199708140071421

MONUMENT LEGEND

1 1/4" IRON PIPE FND. "BIRD & BULL"

6" TREE

5/8" X 30" IRON PIN SET W/ YELLOW PLASTIC CAP STAMPED "CM TRANS 8124"

CMtransportation
7007 DISCOVERY BLVD • DUBLIN, OH 43017
614.656.2424 • CMTRAN.COM

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WDPARTNERS.COM

NOAH'S
FOR ALL LIFE'S EVENTS'

5505 WALL STREET
DUBLIN, OHIO

REVISIONS

DESIGNED BY - JDS
DRAWN BY - BDF
CHECKED BY - CAW
PROTOTYPE
-
STORE NUMBER
-
WD PROJECT NUMBER
MYNOA0001

BUILDING ELEVATION - EAST

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WDPARTNERS.COM

NOAH'S
FOR ALL LIFE'S EVENTS'

5505 WALL STREET
DUBLIN, OHIO

REVISIONS

DESIGNED BY - JDS
DRAWN BY - BDF
CHECKED BY - CAW
PROTOTYPE
-
STORE NUMBER
-
WD PROJECT NUMBER
MYNOA0001

10 OF 12

BUILDING ELEVATION - SOUTH

wd

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5505 WALL STREET
DUBLIN, OHIO

REVISIONS

DESIGNED BY - JDS
DRAWN BY - BDF
CHECKED BY - CAW
PROTOTYPE
-
STORE NUMBER
-
WD PROJECT NUMBER
MYNOA0001

BUILDING ELEVATION - NORTH

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DUBLIN, OHIO

REVISIONS

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DRAWN BY - BDF
CHECKED BY - CAW
PROTOTYPE
-
STORE NUMBER
-
WD PROJECT NUMBER
MYNOA0001

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BUILDING ELEVATION - WEST