CITY OF BEAUFORT
DESIGN REVIEW BOARD
Staff Report
Meeting of March 12, 2015

Case Number:	15-02 DRB.3
Project:	Taco Bell
Property Address:	209 Robert Smalls Parkway
Parcel #:	R122-029-000-0245-0000
Zoning:	Highway Commercial
Design District:	S.C. Highway 170 District
Type of Review:	**Final Review – New Construction**

Request:
The applicant is requesting to construct a new 2,486 SF Taco Bell with a drive-thru on an outparcel in front of Lowes. This would replace their existing store in Beaufort Plaza.

Background:
This project last appeared before the DRB on January 26, 2015. The Board gave **Conceptual Approval** to this project with the following conditions as per staff recommendations and board discussion:

- On the site, the number of parking spaces should be clarified, and sidewalks should be added [to the east and south street frontages] as discussed.
- On the building, an oyster shell base should be installed around the building, at the height of the shopfront window sills. Also consideration should be given to moving the mechanical equipment to the western elevation and enclosing it with proper screening.

Zoning Issues:
This property was recently rezoned to Highway Commercial (HC) and is in the S. C. Highway 170 Design District from SC 280 to US 21.

Setbacks:

Front Setback :	20’
Side:	10’
Rear:	15’
Percent Impervious	65%; the applicant needs to provide this information

Applicable Guidelines:
- The Design District Standards in Section 6.6 of the UDO apply to this project
- The Civic Master Plan, Adopted in February 2014, has a long-term vision for this area to be a walkable, mixed-use neighborhood center, pages 130, 174.

Staff Comments & Suggestions:
Site: A revised site plan has been submitted.

- Staff appreciates the updated site plan based on previous DRB comments. Since the December submission, the following modifications have occurred:
    - An oyster shell base has been added to the side elevations of the building;
    - The mechanical equipment and utilities have been relocated to the rear (west) of the building.
- Parking: 24 parking spaces, 6 of which are pervious, are shown on this plan. This is based upon the following assumptions: 54 seats (14 spots) and 12 employees (6 spaces). This is a total of 20 minimum spaces, and that can be increased by 140% if the additional spaces are pervious. This requirement has been met.
- A sidewalk has not been added along the east street frontage, where the entry road into Lowe's is. *There is north/south connectivity through the site, so this should be a discussion for the DRB as to whether or not to require an additional sidewalk on this portion of the property.* There are some existing trees that would have to be worked around.
- All stormwater requirements have been met.
- A bike rack has been shown on the site plan.
- *All mechanical equipment and trash/recycling receptacles must be screened from view.* Details of the screening will be required in future submissions.

<u>Lighting:</u> A lighting plan has been submitted.

- *Are the building light fixtures full-cut off?* All exterior light fixtures should be full cut off unless specifically approved otherwise by the Board (Section 6.6.E.1)
- The parking lot light poles have been changed to be 25' which complies with the City's ordinance.

<u>Building:</u> Building elevations have been submitted.

- *On the Lowe's/Drive-Thru elevation, landscaping (e.g. in the form of a trellis) should be used to break up the unarticulated mass of the façade on the left portion of the building.*
- All signage will have to be approved via a separate sign permit.

<u>Landscaping plan:</u> A landscaping plan has been submitted

<u>Front buffer:</u>
Length: 224 LF
Front buffer requirement: 2 overstory and 4 understory trees per 100 LF
Overstory tree requirement: 5; overstory requirement met with existing overstory trees in buffer
Understory tree requirement: 9; *need notation that native understory trees, such as Wax Myrtle, exist and meet minimum standard of 1" DBH* (equivalent to 7' to 8' ht. tree)) and will be retained.

Side buffer**:**
Length: 230 LF
Side buffer requirement: 1 overstory tree per 80 LF
Need to add one tree to left of entry off of Lowes Entranceway. Need to add two trees to buffer area along west property line.

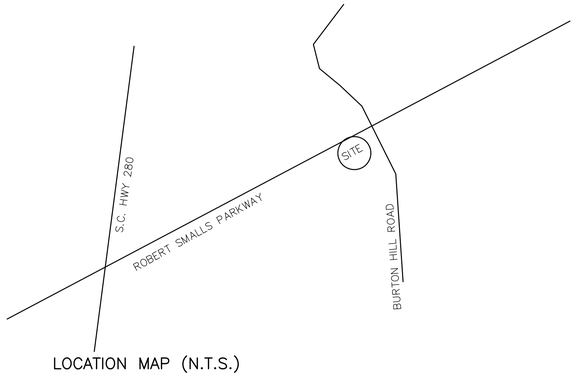
Foundation planting:
66% of front and 50% of sides of building to support 3' wide plant bed. *No beds provided on front or east side of building.*

Additional recommendations:

- Increase shrub planting in plant bed shown to right of Lowes entranceway entry to screen drive through.
- Only grand trees on site are 26", 27" and 30" Live oaks. All are being removed. 26" and 27" are located at curb. May be opportunity for some revision of roadway layout to preserve these trees. *Also would request staking of curb to learn if tree locations are accurate. These trees are healthy and should be preserved*. Efforts of root pruning, etc. may be employed in order to save.
- If alterations to site plan or arboricultural efforts do not result in preservation of these trees, *recommend mitigation of ½ of total caliper inches removed (42")*. Landscape plan shows 18.5 inches of broad leaf overstory trees proposed. Additional 23.5" required to meet recommendation. This could be accomplished by increasing caliper of proposed and additional required trees to 4"+ caliper.
- Grading plan acceptable re: impact on trees to remain

Staff Recommendation
Staff recommends final approval of the project with the following conditions to be approved by staff:

- Pervious/impervious surface calculation;
- Resolution on eastern-most sidewalk, per DRB discussion;
- Dumpster/mechanical equipment screening;
- Additional landscape to break up the long blank façade on the drive-thru/left elevation; and
- Approval of revised landscaping plan including staking out of curb line and mitigation of grand trees being removed.



LOCATION MAP (N.T.S.)

NOTES:

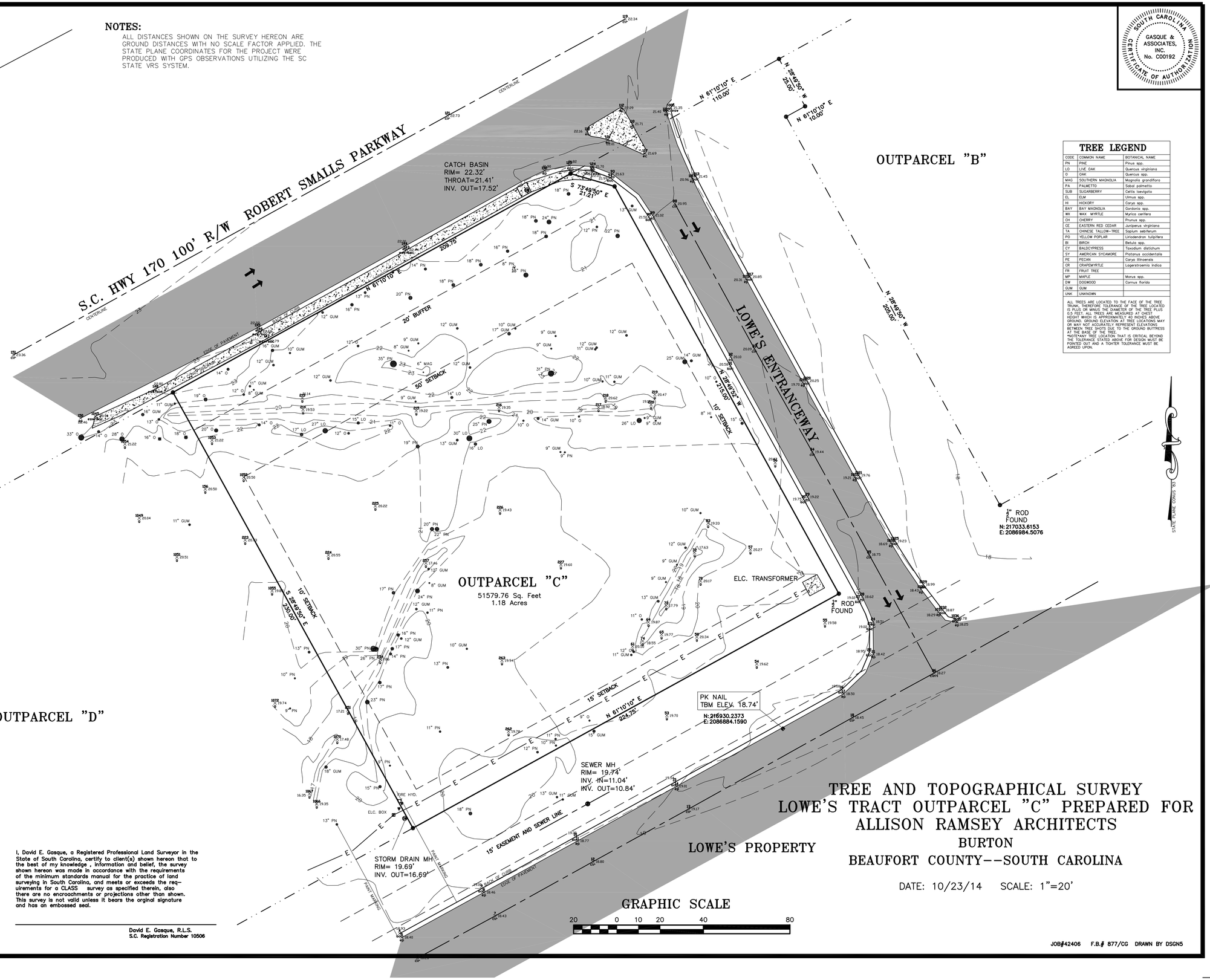
ALL DISTANCES SHOWN ON THE SURVEY HEREON ARE GROUND DISTANCES WITH NO SCALE FACTOR APPLIED. THE STATE PLANE COORDINATES FOR THE PROJECT WERE PRODUCED WITH GPS OBSERVATIONS UTILIZING THE SC STATE VRS SYSTEM.

NOTES:

1.) THE BEARINGS SHOWN HEREON ARE MAGNETIC AND AS SUCH ARE SUBJECT TO LOCAL ATTRACTION.
2.) THIS PLAT DOES NOT CERTIFY THE PRESENCE OR ABSENCE OF U.S. ARMY CORPS OF ENGINEERS JURISDICTIONAL WETLANDS.
3.) METHOD OF AREA CALCULATION BASED ON COORDINATE METHOD.
4.) LOCATION OF UNDERGROUND UTILITIES ARE FROM SURFACE INDICATIONS ONLY AND ARE NOT CERTIFIABLE.
5.) THIS PLAT REPRESENTS A SURVEY BASED ON THE LISTED REFERENCES ONLY AND IS NOT THE RESULT OF A TITLE SEARCH.
6.) CERTIFICATIONS ARE NOT TRANSFERABLE TO ADDITIONAL INSTITUTIONS OR SUBSEQUENT OWNERS.
7.) THE CERTIFIER HAS NOT INVESTIGATED OR BEEN INSTRUCTED TO INVESTIGATE THE EXISTENCE OR NONEXISTENCE OF ANY OVERLAY DISTRICTS, SUCH AS; AIRPORT, MILITARY, NOISE, CRASH POTENTIAL, OR ENVIRONMENTAL ISSUES.
8.) BEFORE ANY DESIGN WORK OR CONSTRUCTION ON THIS SITE IS STARTED FLOOD ZONE INFORMATION MUST BE VERIFIED BY PROPER BUILDING CODES OFFICIAL.
9.) THIS PROPERTY IS LOCATED IN A ZONE "C" AS DETERMINED BY FEMA FIRM COMM-PANEL 450025 0065D. DATED 9/29/86
10.) CONTOUR INTERVAL IS 1'.
11.) VERTICAL DATUM IS 1929 NGVD.

REFERENCES:

1.) T.M.S. R122-029-000-0243-0000
2.) PLAT BY DAVID S. YOUMANS
DATED: APRIL 13, 2001
PLAT BOOK 80 PAGE 103
RMC BEAUFORT COUNTY
3.) PLAT BY SOUTHERN PARTNERS INC.
DATED: SEPTEMBER 10, 2001
PLAT BOOK 82 PAGE 192
RMC BEAUFORT COUNTY
4.) PLAT BY DAVID S. YOUMANS
DATED: NOVEMBER 15, 2001
PLAT BOOK 84 PAGE 197
RMC BEAUFORT COUNTY



TREE LEGEND

CODE	COMMON NAME	BOTANICAL NAME
PN	PINE	Pinus spp.
LO	LIVE OAK	Quercus virginiana
O	OAK	Quercus spp.
MAG	SOUTHERN MAGNOLIA	Magnolia grandiflora
PA	PALMETTO	Sabal palmetto
SUB	SUGARBERRY	Celtis laevigata
EL	ELM	Ulmus spp.
HI	HICKORY	Carya spp.
BAY	BAY MAGNOLIA	Gordonia spp.
WX	WAX MYRTLE	Myrica cerifera
CH	CHERRY	Prunus spp.
CE	EASTERN RED CEDAR	Juniperus virginiana
TA	CHINESE TALLOW-TREE	Sapium sebiferum
PO	YELLOW POPLAR	Liriodendron tulipifera
BI	BIRCH	Betula spp.
CY	BALDCYPRESS	Taxodium distichum
SY	AMERICAN SYCAMORE	Platanus occidentalis
PE	PECAN	Carya Illinoensis
CR	CRAPEMYRTLE	Lagerstroemia indica
FR	FRUIT TREE	
MP	MAPLE	Morus spp.
DW	DOGWOOD	Cornus florida
GUM	GUM	
UNK	UNKNOWN	

ALL TREES ARE LOCATED TO THE FACE OF THE TREE TRUNK, THEREFORE TOLERANCE OF THE TREE LOCATED IS PLUS OR MINUS THE DIAMETER OF THE TREE PLUS 6 INCHES. ALL TREE DIAMETERS ARE TAKEN AT A HEIGHT WHICH IS APPROXIMATELY 60 INCHES ABOVE GROUND. GROUND ELEVATION AT TREE LOCATIONS MAY OR MAY NOT ACCURATELY REPRESENT ELEVATIONS BETWEEN TREE SHOTS DUE TO THE GROUND BUTTRESS AT THE BASE OF THE TREE.
*NOTE*ANY TREE LOCATION THAT IS CRITICAL BEYOND THE TOLERANCE STATED ABOVE FOR DESIGN MUST BE POINTED OUT AND A TIGHTER TOLERANCE MUST BE AGREED UPON.

SOUTH CAROLINA
GASQUE & ASSOCIATES, INC.
No. C00192
CERTIFICATE OF AUTHORIZATION

TREE AND TOPOGRAPHICAL SURVEY
LOWE'S TRACT OUTPARCEL "C" PREPARED FOR ALLISON RAMSEY ARCHITECTS
BURTON
BEAUFORT COUNTY--SOUTH CAROLINA

DATE: 10/23/14 SCALE: 1"=20'

GASQUE & ASSOCIATES INC.
LAND SURVEYORS · PLANNERS
28 PROFESSIONAL VILLAGE CIRCLE, BEAUFORT, S.C.
P.O. BOX 1363, BEAUFORT, S.C.
(843) 522-1798

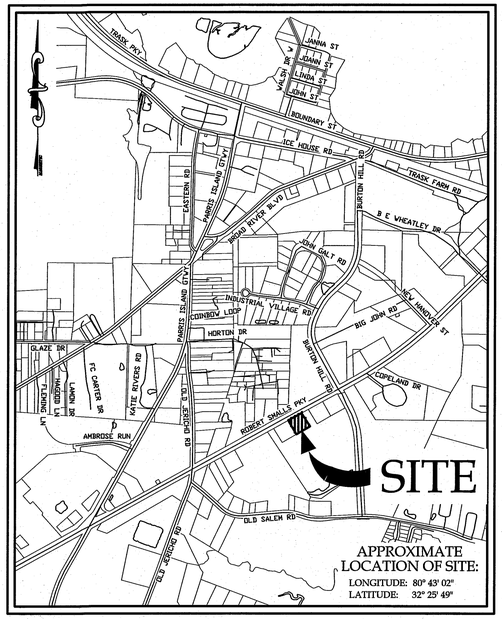
I, David E. Gasque, a Registered Professional Land Surveyor in the State of South Carolina, certify to client(s) shown hereon that to the best of my knowledge , information and belief, the survey shown hereon was made in accordance with the requirements of the minimum standards manual for the practice of land surveying in South Carolina, and meets or exceeds the requirements for a CLASS survey as specified therein, also there are no encroachments or projections other than shown. This survey is not valid unless it bears the orginal signature and has an embossed seal.

David E. Gasque, R.L.S.
S.C. Registration Number 10506

THIS PLAT IS COPYRIGHTED AND IS ONLY INTENDED FOR THE USE OF THE ENTITY OR PERSON(S) SHOWN HERE ON.

JOB#42406 F.B.# 877/CG DRAWN BY DSGN5

SITE DEVELOPMENT PLANS
TACO BELL
ROBERT SMALLS PARKWAY
BEAUFORT COUNTY, SC



VICINITY MAP

NTS

SOUTH CAROLINA
CAROLINA ENGINEERING CONSULTANTS INC.
No. C02324
CERTIFICATE OF AUTHORIZATION

I HAVE PLACED MY SIGNATURE AND SEAL ON THE DESIGN DOCUMENTS SUBMITTED SIGNAFYING THAT I ACCEPT RESPONSIBILITY FOR THE DESIGN OF THE SYSTEM. FURTHER, I CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF THE THE DESIGN IS CONSISTENT WITH THE REQUIREMENTS OF TITLE 48, CHAPTER 14 OF THE CODE OF LAWS OF SC, 1976 AS AMENDED, PURSUANT TO TEGULATION 72-300 ET SEQ. (IF APPLICABLE), AND IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF SCR100000.

SITE DEVELOPMENT TABLE

SITE AREA	1.18 AC	
BUILDING AREA	2,489 SF	
IMPERVIOUS AREA	0.70 AC	59%
PERVIOUS AREA	0.48 AC	41%
PARKING SPACES PROVIDED (INCLUDING 2 HANDICAP SPACES)	24 SPACES	

GENERAL NOTES

CONTRACTOR TO IDENTIFY & LOCATE ALL UNDERGROUND UTILITIES PRIOR TO STARTING CONSTRUCTION.

CONTRACTOR RESPONSIBLE FOR TRAFFIC CONTROL & SAFETY DURING CONSTRUCTION.

CONTRACTOR RESPONSIBLE FOR SECURING SITE DURING NON-WORKING HOURS TO ENSURE TRAFFIC & PEDESTRIAN SAFETY.

SITE DEVELOPMENT PLANS
TACO BELL

DEVELOPER:

TACO BELL
BILLY BAKER
PO BOX 8
WALHALLA, SC 29691
864/638-2490

TAX MAP #R122 029 000 0243 0000

DATE: 02/18/15
REVISED: 02/18/15
PROJECT: 1751

PREPARED BY:

CAROLINA ENGINEERING CONSULTANTS, INC.

PO BOX 294
BEAUFORT, SC 29901

WWW.CAROLINAENGINEERING.COM

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(843)322-0556 (FAX)

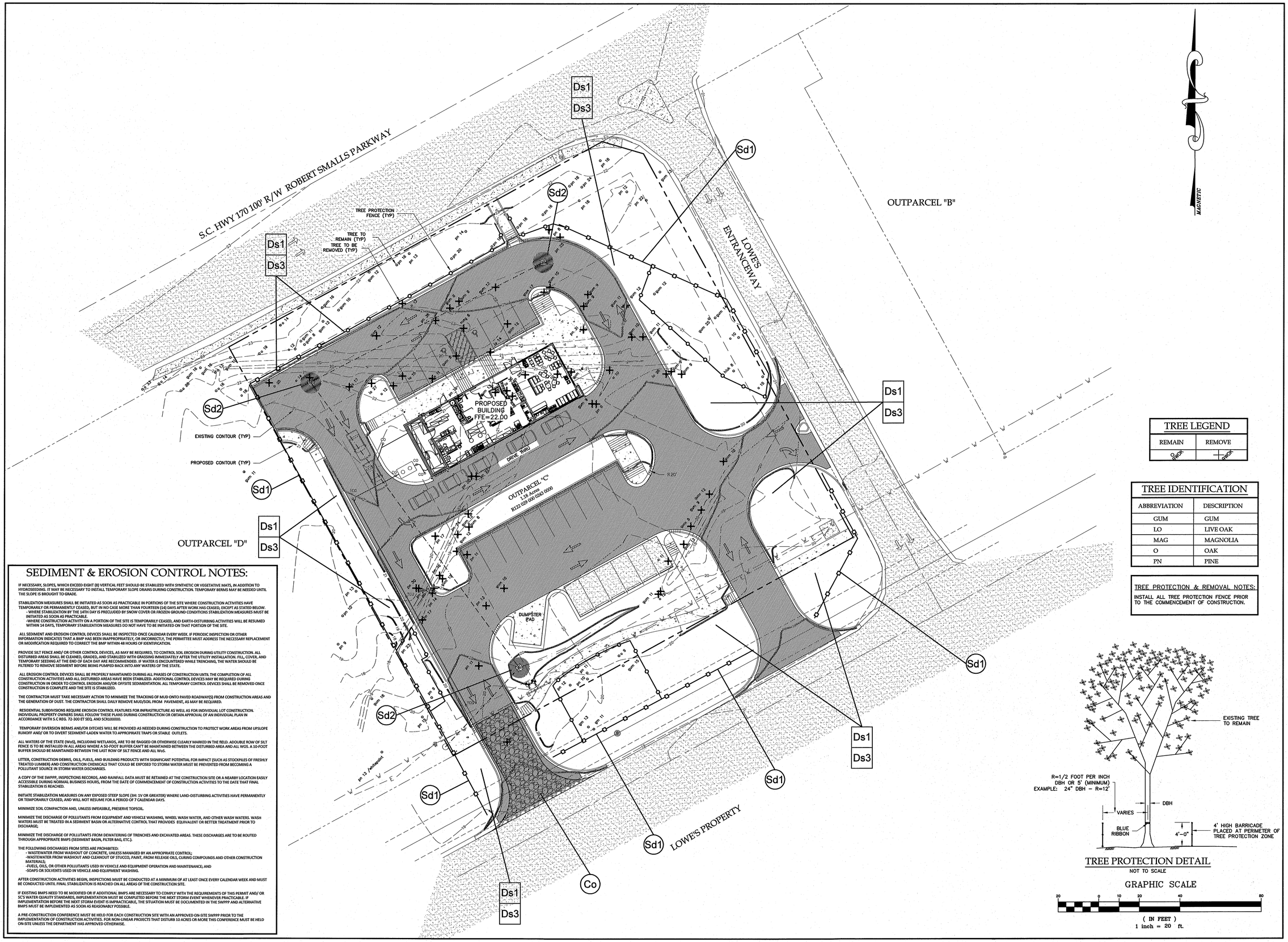
SCHEDULE OF DRAWINGS

SHEET NO.	DESCRIPTION
1 of 7	TITLE SHEET
2 of 7	TREE PROTECTION & REMOVAL AND SEDIMENT & EROSION CONTROL PLAN
3 of 7	SEDIMENT & EROSION CONTROL DETAILS
4 of 7	PAVING, GRADING & DRAINAGE PLAN
5 of 7	WATER & SANITARY SEWER PLAN
6 of 7	PAVING, GRADING & DRAINAGE DETAILS
7 of 7	WATER & SANITARY SEWER DETAILS

TACO BELL

BJWSA NO. XX-XXXX

3 DAYS BEFORE DIGGING IN SOUTH CAROLINA
CALL 1-888-721-7877
PALMETTO UTILITY PROTECTION SERVICE



SEDIMENT & EROSION CONTROL NOTES:

IF NECESSARY, SLOPES, WHICH EXCEED EIGHT (8) VERTICAL FEET SHOULD BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MATS, IN ADDITION TO HYDROSEEDING. IT MAY BE NECESSARY TO INSTALL TEMPORARY SLOPE DRAINS DURING CONSTRUCTION. TEMPORARY BERMS MAY BE NEEDED UNTIL THE SLOPE IS BROUGHT TO GRADE.

STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN (14) DAYS AFTER WORK HAS CEASED, EXCEPT AS STATED BELOW:
- WHERE STABILIZATION BY THE 14TH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE.
-WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH-DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 14 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE.

ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED ONCE CALENDAR EVERY WEEK. IF PERIODIC INSPECTION OR OTHER INFORMATION INDICATES THAT A BMP HAS BEEN INAPPROPRIATELY, OR INCORRECTLY, THE PERMITTEE MUST ADDRESS THE NECESSARY REPLACEMENT OR MODIFICATION REQUIRED TO CORRECT THE BMP WITHIN 48 HOURS OF IDENTIFICATION.

PROVIDE SILT FENCE AND/ OR OTHER CONTROL DEVICES, AS MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED, AND STABILIZED WITH GRASSING IMMEDIATELY AFTER THE UTILITY INSTALLATION. FILL, COVER, AND TEMPORARY SEEDING AT THE END OF EACH DAY ARE RECOMMENDED. IF WATER IS ENCOUNTERED WHILE TRENCHING, THE WATER SHOULD BE FILTERED TO REMOVE SEDIMENT BEFORE BEING PUMPED BACK INTO ANY WATERS OF THE STATE.

ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.

THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO PAVED ROADWAY(S) FROM CONSTRUCTION AREAS AND THE GENERATION OF DUST. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS MAY BE REQUIRED.

RESIDENTIAL SUBDIVISIONS REQUIRE EROSION CONTROL FEATURES FOR INFRASTRUCTURE AS WELL AS FOR INDIVIDUAL LOT CONSTRUCTION. INDIVIDUAL PROPERTY OWNERS SHALL FOLLOW THESE PLANS DURING CONSTRUCTION OR OBTAIN APPROVAL OF AN INDIVIDUAL PLAN IN ACCORDANCE WITH S.C REG. 72-300 ET SEQ. AND SCR100000.

TEMPORARY DIVERSION BERMS AND/OR DITCHES WILL BE PROVIDED AS NEEDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/ OR TO DIVERT SEDIMENT-LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS.

ALL WATERS OF THE STATE (WOS), INCLUDING WETLANDS, ARE TO BE FLAGGED OR OTHERWISE CLEARLY MARKED IN THE FIELD. ADDUBLE ROW OF SILT FENCE IS TO BE INSTALLED IN ALL AREAS WHERE A 50-FOOT BUFFER CAN'T BE MAINTAINED BETWEEN THE DISTURBED AREA AND ALL WOS. A 10-FOOT BUFFER SHOULD BE MAINTAINED BETWEEN THE LAST ROW OF SILT FENCE AND ALL WOS.

LITTER, CONSTRUCTION DEBRIS, OILS, FUELS, AND BUILDING PRODUCTS WITH SIGNIFICANT POTENTIAL FOR IMPACT (SUCH AS STOCKPILES OF FRESHLY TREATED LUMBER) AND CONSTRUCTION CHEMICALS THAT COULD BE EXPOSED TO STORM WATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE IN STORM WATER DISCHARGES.

A COPY OF THE SWPPP, INSPECTIONS RECORDS, AND RAINFALL DATA MUST BE RETAINED AT THE CONSTRUCTION SITE OR A NEARBY LOCATION EASILY ACCESSIBLE DURING NORMAL BUSINESS HOURS, FROM THE DATE OF COMMENCEMENT OF CONSTRUCTION ACTIVITIES TO THE DATE THAT FINAL STABILIZATION IS REACHED.

INITIATE STABILIZATION MEASURES ON ANY EXPOSED STEEP SLOPE (3H: 1V OR GREATER) WHERE LAND-DISTURBING ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED, AND WILL NOT RESUME FOR A PERIOD OF 7 CALENDAR DAYS.

MINIMIZE SOIL COMPACTION AND, UNLESS INFEASIBLE, PRESERVE TOPSOIL.

MINIMIZE THE DISCHARGE OF POLLUTANTS FROM EQUIPMENT AND VEHICLE WASHING, WHEEL WASH WATER, AND OTHER WASH WATERS. WASH WATERS MUST BE TREATED IN A SEDIMENT BASIN OR ALTERNATIVE CONTROL THAT PROVIDES EQUIVALENT OR BETTER TREATMENT PRIOR TO DISCHARGE;

MINIMIZE THE DISCHARGE OF POLLUTANTS FROM DEWATERING OF TRENCHES AND EXCAVATED AREAS. THESE DISCHARGES ARE TO BE ROUTED THROUGH APPROPRIATE BMPS (SEDIMENT BASIN, FILTER BAG, ETC.).

THE FOLLOWING DISCHARGES FROM SITES ARE PROHIBITED:
- WASTEWATER FROM WASHOUT OF CONCRETE, UNLESS MANAGED BY AN APPROPRIATE CONTROL;
-WASTEWATER FROM WASHOUT AND CLEANOUT OF STUCCO, PAINT, FROM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS;
-FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE; AND
-SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING.

AFTER CONSTRUCTION ACTIVITIES BEGIN, INSPECTIONS MUST BE CONDUCTED AT A MINIMUM OF AT LEAST ONCE EVERY CALENDAR WEEK AND MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.

IF EXISTING BMPS NEED TO BE MODIFIED OR IF ADDITIONAL BMPS ARE NECESSARY TO COMPLY WITH THE REQUIREMENTS OF THIS PERMIT AND/ OR SC'S WATER QUIALITY STANDARDS, IMPLEMENTATION MUST BE COMPLETED BEFORE THE NEXT STORM EVENT WHENEVER PRACTICABLE. IF IMPLEMENTATION BEFORE THE NEXT STORM EVENT IS IMPRACTICABLE, THE SITUATION MUST BE DOCUMENTED IN THE SWPPP AND ALTERNATIVE BMPS MUST BE IMPLEMENTED AS SOON AS REASONABLY POSSIBLE.

A PRE-CONSTRUCTION CONFERENCE MUST BE HELD FOR EACH CONSTRUCTION SITE WITH AN APPROVED ON-SITE SWPPP PRIOR TO THE IMPLEMENTATION OF CONSTRUCTION ACTIVITIES. FOR NON-LINEAR PROJECTS THAT DISTURB 10 ACRES OR MORE THIS CONFERENCE MUST BE HELD ON-SITE UNLESS THE DEPARTMENT HAS APPROVED OTHERWISE.

TREE LEGEND

REMAIN	REMOVE

TREE IDENTIFICATION

ABBREVIATION	DESCRIPTION
GUM	GUM
LO	LIVE OAK
MAG	MAGNOLIA
O	OAK
PN	PINE

TREE PROTECTION & REMOVAL NOTES:

INSTALL ALL TREE PROTECTION FENCE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

TREE PROTECTION DETAIL
NOT TO SCALE

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

*ANY INFRINGEMENT MAY BE SUBJECT TO LEGAL ACTION. THE DESIGNS AND IDEAS PRESENTED IN THESE DRAWINGS, LETTERS, NOTES AND SPECIFICATIONS, THE REPRODUCTION, COPY, OR USE OF THESE PLANS OR THE INFORMATION IS STRICTLY PROHIBITED WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

SOUTH CAROLINA ENGINEERING CONSULTANTS INC. No. C02324 CERTIFICATE OF AUTHORIZATION

PLAN REVISIONS

NO.	DESCRIPTION	DATE
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-

TACO BELL
ROBERT SMALLS PARKWAY
BEAUFORT COUNTY, SC

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843/322-0553
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WWW.CAROLINAENGINEERING.COM

PROJECT:	1751
DATE:	02/18/15
REVISED:	02/18/15
DRAWN BY:	TAB
ENGINEER:	DRK
SCALE:	1"=20'

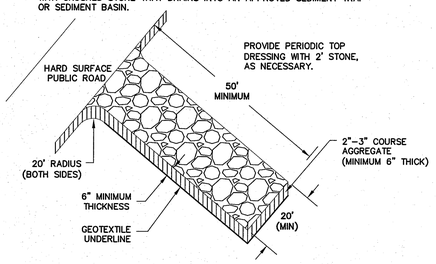
TREE PROTECTION & REMOVAL AND SEDIMENT & EROSION CONTROL PLAN

2
OF 7

THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

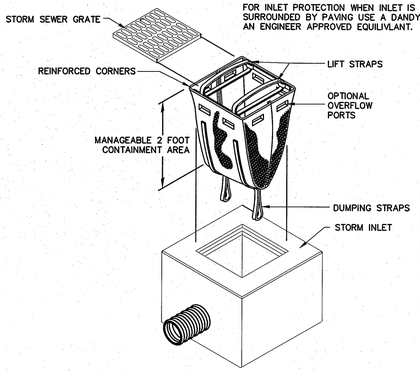
WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.

WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.



Co STONE PAD CONSTRUCTION EXIT

NOT TO SCALE



NOTES:

FOR INLET PROTECTION WHEN INLET IS SURROUNDED BY PAVING USE A DANDY SACK OR AN ENGINEER APPROVED EQUILIVLANT.

PAVED APPLICATION

NOTES:

FOR STAKES, USE 2x4 INCH WOOD WITH MIN. LENGTH OF 3 FEET.

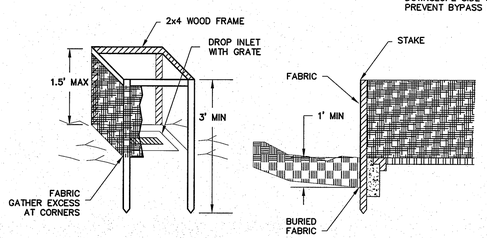
SPACE STAKES EVENLY AROUND THE PERIMETER OF THE INLET A MAXIMUM OF 3 FEET APART, AND DRIVE SECURELY INTO THE GROUND, APPROXIMATELY 18 INCHES DEEP.

TO PROVIDE LATERAL STABILITY, FRAME 2x4 INCH WOOD STRIPS AROUND THE CREST OF THE OVERFLOW AREA AT A MAXIMUM OF 1.5 FEET ABOVE DROP INLET CREST.

PLACE THE BOTTOM 12 INCHES OF THE FABRIC IN A TRENCH AND BACKFILL WITH AT LEAST 4 INCHES OF CRUSHED STONE OR 12 INCHES COMPACTED SOIL.

FASTEN FABRIC SECURELY TO THE STAKES AND FRAME. JOINTS MUST BE OVERLAPPED TO THE NEXT STAKE.

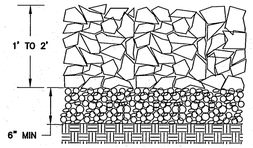
THE TOP OF THE FRAME AND FABRIC MUST BE WELL BELOW THE GROUND ELEVATION DOWNSLOPE FROM THE DROP INLET TO KEEP RUNOFF FROM BYPASSING THE INLET. IT MAY BE NECESSARY TO BUILD A TEMPORARY DIKE ON THE DOWNSLOPE SIDE OF THE STRUCTURE TO PREVENT BYPASS FLOW.



UNPAVED APPLICATION

Sd2 INLET SEDIMENT TRAP

NOT TO SCALE

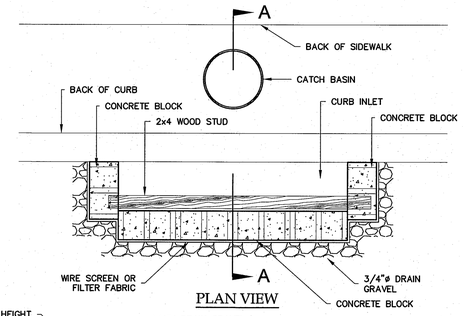


HARD, DURABLE ROCK OR CONCRETE RUBBLE WEIGHING AT LEAST 150 LBS. CU. FT. MIN. STONE SIZE 50 LBS.

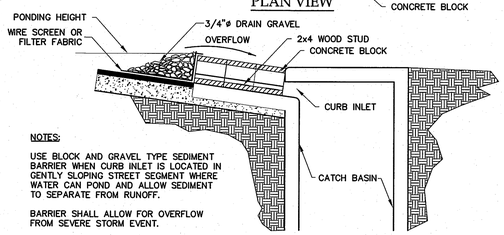
LAYER OF HARD, DURABLE SAND AND GRAVEL OR MIRAFI ENGINEERED FABRIC. MAX. SIZE = 3

Rp DUMPED RIP-RAP

NOT TO SCALE



PLAN VIEW



NOTES:

USE BLOCK AND GRAVEL TYPE SEDIMENT BARRIER WHEN CURB INLET IS LOCATED IN GENTLY SLOPING STREET SEGMENT WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF.

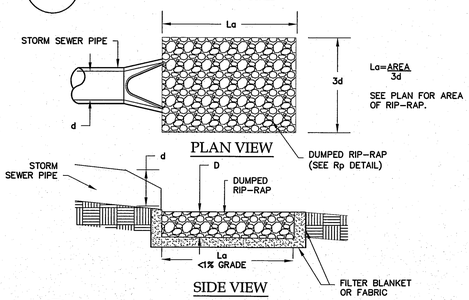
BARRIER SHALL ALLOW FOR OVERFLOW FROM SEVERE STORM EVENT.

INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT. SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY.

SECTION A-A

Sd2a CURB INLET SEDIMENT BARRIER

NOT TO SCALE

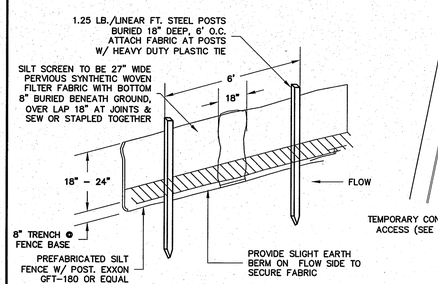


PLAN VIEW

SIDE VIEW

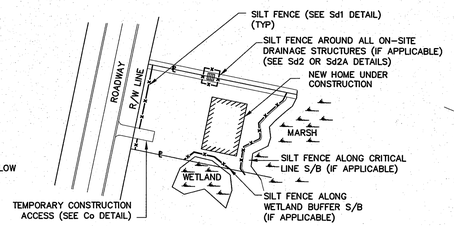
St RIP-RAP OUTLET PROTECTION

NOT TO SCALE



Sd1 SEDIMENT BARRIERS

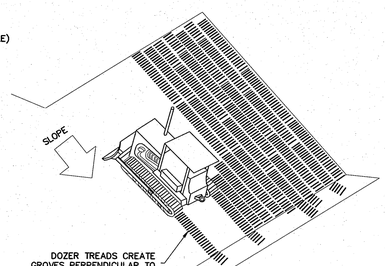
NOT TO SCALE



NOTE:
SILT FENCE TO BE INSTALLED BY LOT OWNER PRIOR TO CONSTRUCTION AND TO BE MAINTAINED UNTIL LOT IS GRADED AND TURF IS ESTABLISHED

LOT SILT FENCE PLAN

NOT TO SCALE



Su SURFACE ROUGHENING

NOT TO SCALE

STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECKDAM	Sd1		A small temporary barrier or dam constructed across a swale,drainage ditch or area of concentrated flow.
Ch	CHANNEL STABILIZATION			Improving,constructing or stabilizing an open channel,existing stream,or ditch.
Co	CONSTRUCTION EXIT		Co (LABEL)	A crushed stone pad located at the construction site exit to provide a place for removing mud from tires thereby protecting public streets.
Di	DIVERSION			An earth channel or dike located above,below,or across a slope to divert runoff. This may be a temporary or permanent structure.
Dn1	TEMPORARY DOWN DRAIN STRUCTURE		Dn1 (LABEL)	A flexible conduit of heavy-duty fabric or other material designed to safely conduct surface runoff down a slope. This is temporary and inexpensive.
Dn2	PERMANENT DOWN DRAIN STRUCTURE		Dn2 (LABEL)	A paved chute,pipe,sectional conduit or similar material designed to safely conduct surface runoff down a slope.
Ga	GABION			Rock filled baskets which are hand-placed into position forming soil stabilizing structures.
Gr	GRADE STABILIZATION STRUCTURE		Gr (LABEL)	Permanent structures installed to protect natural or artificial channels or waterways where otherwise the slope would be sufficient for the running water to form gullies.
Lv	LEVEL SPREADER			A structure to convert concentrated flow of water into less erosive sheet flow. This should be constructed only on undisturbed soils.
Rd	ROCK FILTER DAM			A permanent or temporary stone filter dam installed across small streams or drainageways.
Re	RETAINING WALL		Re (LABEL)	A wall installed to stabilize cut and fill slopes where maximum permissible slopes are not obtainable. Each situation will require special design.
Rt	RETROFITTING		Rt (LABEL)	A device or structure placed in front of a permanent storm water detention pond outlet structure to serve as a temporary sediment filter.
Sd1	SEDIMENT BARRIER		Sd1	A barrier to prevent sediment from leaving the construction site. It may be sandbags,bales or straw or hay, brush,logs and poles,gravel,or a sediment fence. The barriers are usually temporary and inexpensive.
Sd2	INLET SEDIMENT TRAP			A barrier to prevent sediment from entering the protected inlet. The barrier is temporary and will be removed when final stabilization of site has been achieved.
Sd2a	CURB INLET SEDIMENT TRAP			A barrier to prevent sediment from entering the protected inlet. The barrier is temporary and will be removed when final stabilization of site has been achieved.
Sd3	TEMPORARY SEDIMENT BASIN			A basin created by excavation or a dam across a waterway. The surface water runoff is temporarily stored allowing the bulk of the sediment to drop out. The basin is usually temporary but may be designed as a permanent pond or storm water retention device.
Sr	TEMPORARY STREAM CROSSING		Sr (LABEL)	A temporary bridge or culvert-type structure protecting a stream or watercourse from damage by crossing construction equipment.
St	STORM DRAIN OUTLET PROTECTION		St	A paved or short section of rip-rap channel at the outlet of a storm drain system preventing erosion from the concentrated runoff.
Su	SURFACE ROUGHENING		Su	A rough soil surface with horizontal depressions on a contour or slopes left in a roughened condition after grading.
Tp	TOP SOILING		Tp (Show Stripping & Storage Areas)	The practice of stripping off the more fertile top soil,storing it,then spreading it over the disturbed area after the completion of construction activities.
Wt	VEGETATED WATERWAY OR STORM WATER CONVEYANCE CHANNEL			Paved or vegetative water outlets for diversions,terraces,berms,dikes or similar structures.

VEGETATIVE MEASURES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Bf	BUFFER ZONE		Bf (LABEL)	An undisturbed natural"green belt"separating the land-disturbed site from surrounding property and bordering streams. It serves to reduce water velocity and remove some sediment. It is also at times a noise or"vision pollution barrier.
Cs	COASTAL DUNE STABILIZATION W/VEGETATION		Cs	Planting vegetation on dunes that are denuded,artificially constructed,or re-nourished.
Ds1	DISTURBED AREA STABILIZATION W/MULCHING ONLY		Ds1	Establishing temporary protection for disturbed areas where seeding may not have a suitable growing season to produce an erosion retarding cover. See Carolina Engineering Consultants, Inc. Written Technical Specifications Section 02485 for further details.
Ds2	DISTURBED AREA STABILIZATION W/TEMPORARY SEEDING		Ds2	Establishing temporary vegetative cover with fast growing seedings on disturbed areas. See Carolina Engineering Consultants, Inc. Written Technical Specifications Section 02485 for futher details.
Ds3	DISTURBED AREA STABILIZATION W/PERMANENT VEGETATION		Ds3	Establishing permanent vegetative cover such as trees, shrubs, vines, grasses, sod, or legumes on disturbed areas. See Carolina Engineering Consultants, Inc. Written Technical Specifications Section 02485 for further details.
Du	DUST CONTROL ON DISTURBED AREAS		Du	Controlling surface and air movement of dust on construction sites,roadways and similar sites.

Ds1 MULCHING NOTES

MULCHING:

USE MULCH ON ALL SLOPES STEEPER THAN 3%; WHEN SEEDINGS ARE MADE SO LATE IN THE FALL AND WINTER THAT GERMINATION CANNOT BE EXPECTED UNTIL SPRING; IN THE BOTTOM OF SPILLWAYS; AND ON ROADBANKS. TEMPORARY VEGETATION SEEDED ALONE MAY BE ESTABLISHED ON GOOD SITES WITHOUT THE USE OF MULCH. MULCHING MATERIAL WILL CONSIST OF:

A. USE DRY STRAW OR DRY HAY OF GOOD QUALITY AND FREE OF WEED SEEDS. DRY STRAW WILL BE APPLIED AT THE RATE OF 2 TONS PER ACRE. DRY HAY WILL BE USED AT A RATE OF 2.5 TONS PER ACRE; OR,

B. FOR HYDRAULIC SEEDING, USE WOOD CELLULOSE MULCH OR WOOD PULP FIBER AT THE RATE OF 500 POUNDS PER ACRE AND DRY STRAW OR DRY HAY AT THE RATE LISTED IN "A" ABOVE; OR,

C. FOR HYDRAULIC SEEDING ON SLOPES 3/4:1 OR STEEPER, 1,000 POUNDS OF WOOD CELLULOSE OR WOOD PULP FIBER WHICH INCLUDES A TACKIFIER MAY BE SUBSTITUTED FOR THE TREATMENT IN "B" ABOVE; OR,

D. USE THREE TONS PER ACRE OF SERICEA LESPEDEZA HAY CONTAINING MATURE SEED; OR,

E. APPLY PINE STRAW OR PINE BARK AT A THICKNESS OF 3 INCHES. OTHER SUITABLE MATERIALS IN SUFFICIENT QUANTITY MAY BE USED WHERE ORNAMENTALS OR OTHER GROUND COVERS ARE PLANTED; OR,

F. SOIL RETENTION BLANKETS, EROSION CONTROL NETTING, OTHER MANUFACTURED MATERIALS, OR BLOCK SOD MAY BE REQUIRED IN ADDITION TO MULCH ON UNSTABLE SOILS AND CONCENTRATED FLOW AREAS. WOOD CELLULOSE AND WOOD PULP FIBERS SHALL NOT CONTAIN GERMINATION OR GROWTH INHIBITING FACTORS. THEY WILL HAVE THE PROPERTY TO BE EVENLY DISPERSED WHEN AGITATED IN WATER. THE FIBERS SHALL HAVE A CONTRASTING COLOR TO THE SOIL TO ALLOW VISUAL METERING AND AID IN UNIFORM APPLICATION DURING SEEDING.

APPLYING MULCH:

A. STRAW OR HAY MULCH WILL BE SPREAD UNIFORMLY WITHIN 24 HOURS AFTER SEEDING AND OR PLANTING. THE MULCH MAY BE SPREAD BY BLOWER TYPE SPREADING EQUIPMENT, OTHER SPREADING EQUIPMENT, OR BY HAND. ABOUT 75% OF THE SOIL SURFACE WILL BE COVERED.

B. WOOD CELLULOSE OR WOOD FIBER MULCH WILL BE APPLIED WITH HYDRAULIC SEEDING EQUIPMENT.

ANCHORING MULCH:

A. ANCHOR STRAW OR HAY MULCH IMMEDIATELY AFTER APPLICATION BY ONE OF THE FOLLOWING METHODS:

1. BY EMULSIFIED ASPHALT, (A) SPRAYED UNIFORMLY ONTO THE MULCH AS IT IS EJECTED FROM THE BLOWER MACHINE, OR (B) SPRAYED ON THE MULCH IMMEDIATELY FOLLOWING MULCH APPLICATION WHEN STRAW OR HAY IS SPREAD BY METHODS OTHER THAN SPECIAL BLOWER EQUIPMENT. THE COMBINATION OF ASPHALT EMULSION AND WATER SHALL CONSIST OF A HOMOGENEOUS MIXTURE SATISFACTORY FOR SPRAYING. THE MIXTURE SHALL CONSIST OF 100 GALLONS OF GRADE SS-1H OR CSS-1H EMULSIFIED ASPHALT AND 100 GALLONS OF WATER PER TON OF MULCH. CARE SHALL BE TAKEN AT ALL TIMES TO PROTECT THE PUBLIC, ADJACENT PROPERTY, PAVEMENTS, CURBS, SIDEWALKS, AND ALL OTHER STRUCTURES FROM ASPHALT DISCOLORATION.

2. PRESS THE MULCH INTO THE SOIL IMMEDIATELY AFTER THE MULCH IS SPREAD. A SPECIAL "PACKER DISK" OR DISK HARROW WITH THE DISKS SET STRAIGHT MAY BE USED. THE DISKS MAY BE SMOOTH OR SERRATED AND SHOULD BE 20 INCHES OR MORE IN DIAMETER AND 8 TO 12 INCHES APART. THE EDGES OF THE DISKS SHALL BE DULL ENOUGH TO PRESS THE MULCH INTO THE GROUND WITHOUT CUTTING IT, LEAVING MUCH OF IT IN AN ERECT POSITION.

3. APPLY SYNTHETIC TACKIFIERS OR BINDERS APPLIED IMMEDIATELY AFTER THE MULCH IS SPREAD. SYNTHETIC TACKIFIERS WILL BE MIXED AND APPLIED TO MANUFACTURER'S SPECIFICATIONS.

4. FALL AND WINTER PLANTINGS MAY INCLUDE 1/2 BUSHEL OF RYE OR WHEAT TO STABILIZE THE MULCH.

5. PLASTIC MESH OR NETTING WITH NO LARGER THAN ONE INCH BY ONE INCH MESH MAY BE NEEDED TO ANCHOR STRAW OR HAY MULCH ON UNSTABLE SOILS AND CONCENTRATED FLOW AREAS.

B. WHERE WOOD CELLULOSE OR WOOD PULP FIBER MULCH IS APPLIED ALONE, A TACKIFIER WILL BE USED.

LIME AND MAINTENANCE APPLICATION:

APPLY ONE TON OF AGRICULTURAL LIME EVERY 4 TO 6 YEARS.

ACTIVITY SCHEDULE

ACTIVITY	SCHEDULE
EROSION CONTROL IMPLEMENTATION	X
MINIMAL CLEARING AND GRUBBING	X
POND INSTALLATION	X
CLEARING AND GRUBBING	X
CUT AND FILL	X X
GRASSING (LIMIT EXPOSURE TO 7 DAYS)	X
UTILITY INSTALLATION	X X
BUILDING-CONSTRUCTION	X X X X X
FINISH GRADING	X
FINAL STABILIZATION	X
MAINT. EROSION CONTROL MEASURES	X THROUGHOUT LIFE OF PROJECT

SOUTH CAROLINA CAROLINA ENGINEERING CONSULTANTS INC. No. C02324 CERTIFICATE OF AUTHORIZATION

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PLAN REVISIONS

NO.	DESCRIPTION	DATE
1	-	-
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6	-	-
7	-	-
8	-	-

TACO BELL
ROBERT SMALLS PARKWAY
BEAUFORT COUNTY, SC

CAROLINA ENGINEERING CONSULTANTS, INC.
PO BOX 294
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(843)322-0553
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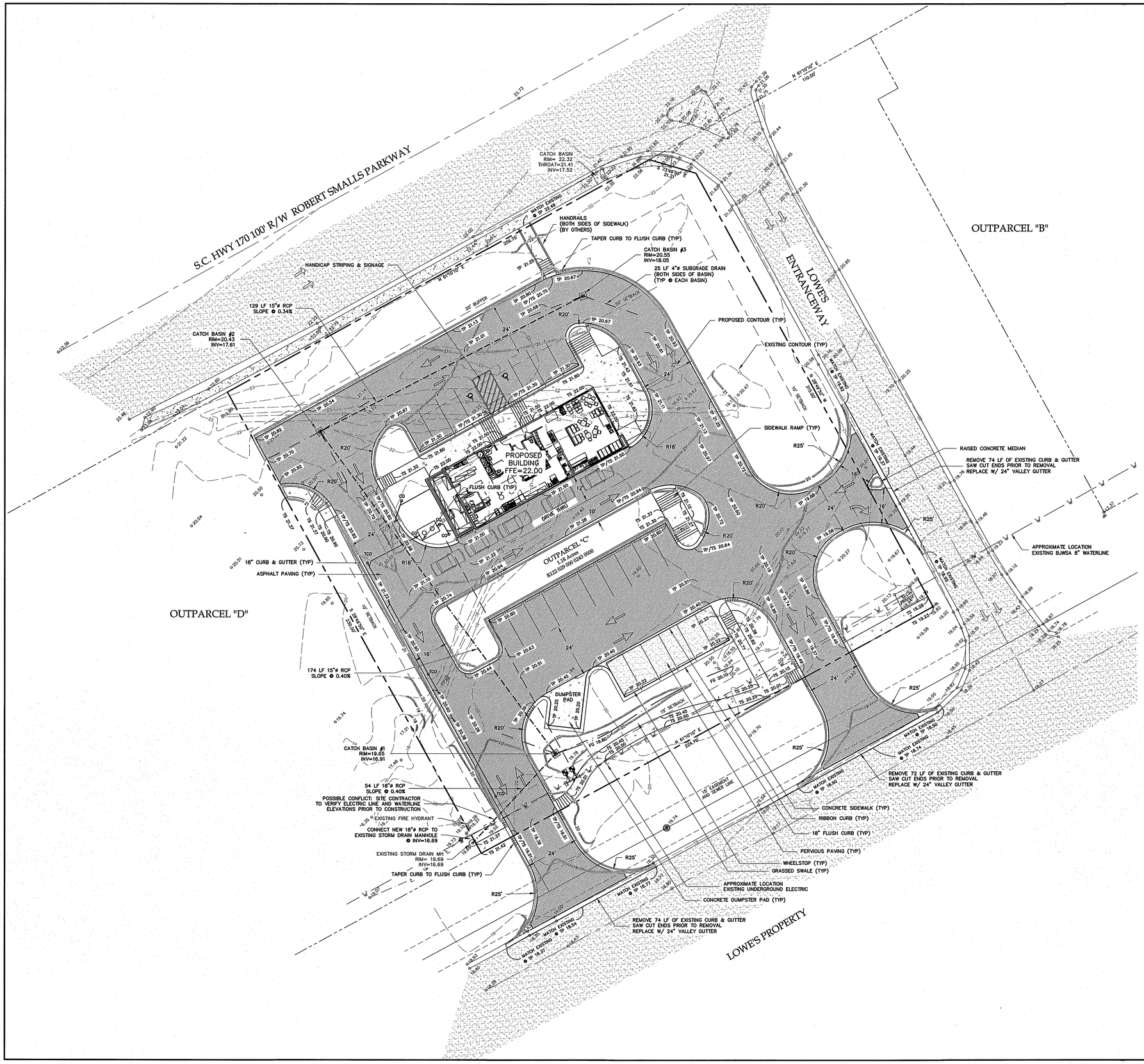
PROJECT:	1751
DATE:	02/18/15
REVISED:	02/18/15
DRAWN BY:	TAB
ENGINEER:	DRK
SCALE:	NTS

SEDIMENT & EROSION CONTROL DETAILS

3



GENERAL NOTES, PAVING, GRADING & DRAINAGE NOTES:

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TOPOGRAPHY, BOUNDARY, WETLAND AND BASE INFORMATION PROVIDED BY GASQUE & ASSOCIATES.

BENCHMARKS ARE TO BE VERIFIED BY CONTRACTOR.

CONTRACTOR SHALL VERIFY ALL MANHOLE AND INVERT ELEVATIONS BEFORE STARTING WORK.

CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES.

SILT FENCE AND TREE FENCES TO BE IN PLACE PRIOR TO COMMENCING WORK.

MAINTAIN A 10' HORIZONTAL SEPARATION BETWEEN SANITARY SEWER AND WATER MAINS. WHERE THIS SEPARATION CANNOT BE MAINTAINED OR THE LINES CROSS, THE BOTTOM OF THE WATER MAIN SHALL BE 18" ABOVE THE TOP OF THE SEWER MAIN LAID IN SEPARATE TRENCHES.

WHERE NEW CONSTRUCTION IS NEAR THE EDGE OF AN EXISTING PAVED ROADWAY, A TRAFFIC LANE WILL BE TEMPORARILY CLOSED TO PROVIDE SAFETY TO THE PUBLIC AND TO THE WORKMEN. NO LANE CLOSURES DURING 7:00 AM TO 9:00 AM OR FROM 3:30 PM TO 6:00 PM ARE ALLOWED.

APPLICANT WILL REPAIR ALL DAMAGE DONE TO ROADSIDE AND RESEED WITH PERMANENT GRASS.

TRAFFIC CONTROLS FOR THIS INSTALLATION SHALL BE IN ACCORDANCE WITH S.C.M.U.T.C.D.

PAVEMENT MARKING LINES TO BE THERMOPLASTIC.

RAISED REFLECTIVE PAVEMENT MARKER RRPM'S TO BE INSTALLED IN ACCORDANCE WITH SCDOT'S STANDARD DRAWINGS NO. 603-1 THRU 603-8 JULY, 1997.

ALL PROPOSED SIGNAGE AND PAVEMENT MARKINGS SHOULD BE IN ACCORDANCE WITH THE 2003 EDITION OF THE MUTCD.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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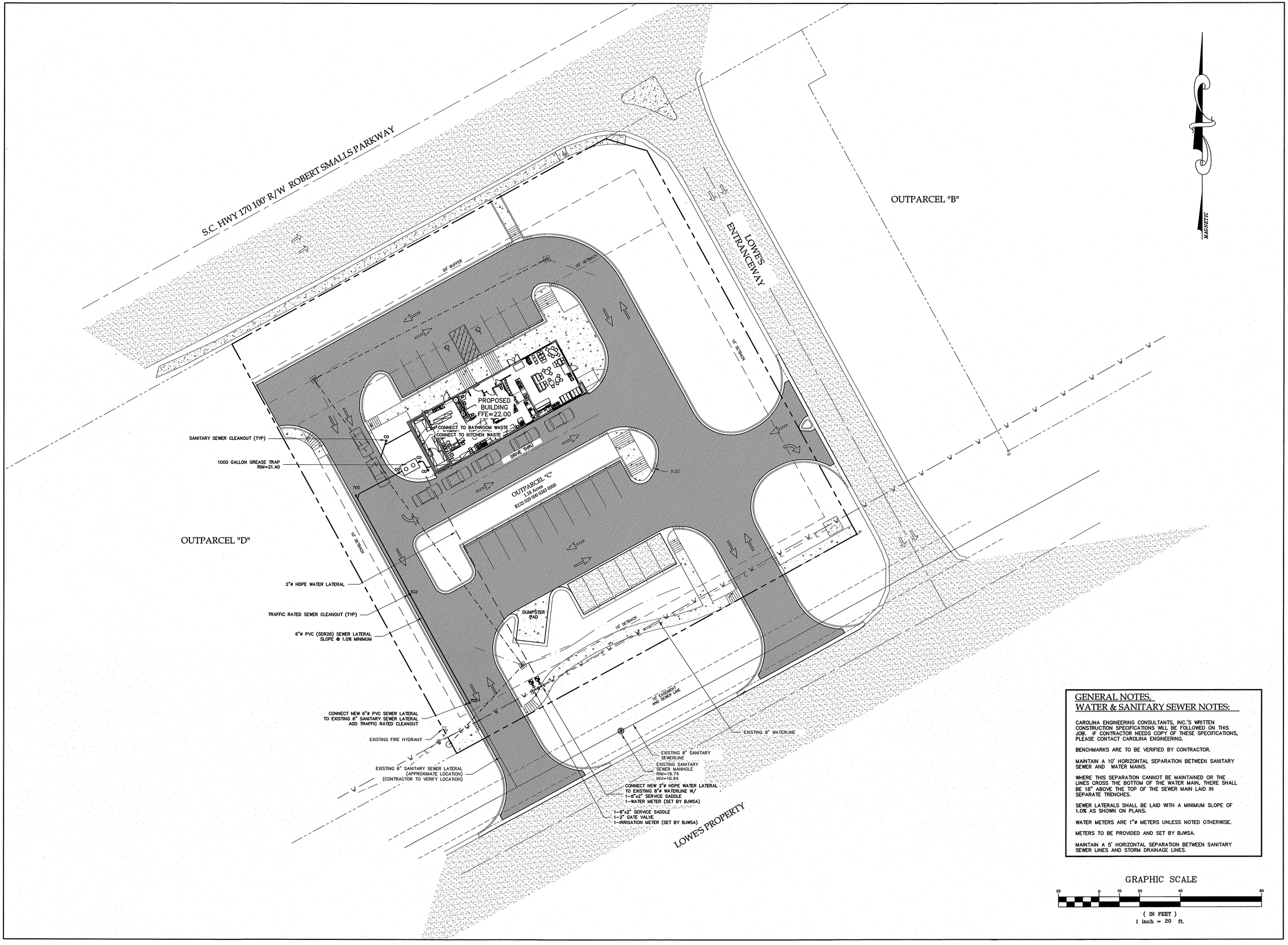
PROJECT:	1751
DATE:	02/18/15
REVISED:	02/18/15
DRAWN BY:	TAB
ENGINEER:	DRK
SCALE:	1"=20'

PAVING, GRADING & DRAINAGE PLAN



GENERAL NOTES, WATER & SANITARY SEWER NOTES:

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BENCHMARKS ARE TO BE VERIFIED BY CONTRACTOR.

MAINTAIN A 10' HORIZONTAL SEPARATION BETWEEN SANITARY SEWER AND WATER MAINS.

WHERE THIS SEPARATION CANNOT BE MAINTAINED OR THE LINES CROSS THE BOTTOM OF THE WATER MAIN, THERE SHALL BE 18" ABOVE THE TOP OF THE SEWER MAIN LAID IN SEPARATE TRENCHES.

SEWER LATERALS SHALL BE LAID WITH A MINIMUM SLOPE OF 1.0% AS SHOWN ON PLANS.

WATER METERS ARE 1"ø METERS UNLESS NOTED OTHERWISE.

METERS TO BE PROVIDED AND SET BY BJWSA.

MAINTAIN A 5' HORIZONTAL SEPARATION BETWEEN SANITARY SEWER LINES AND STORM DRAINAGE LINES.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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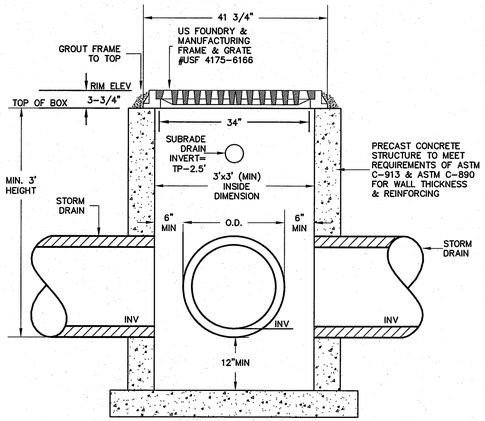
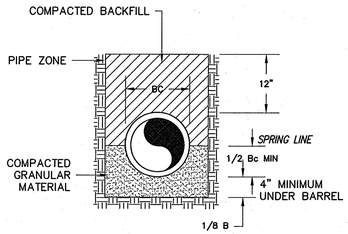
PROJECT:	1751
DATE:	02/18/15
REVISED:	02/18/15
DRAWN BY:	TAB
ENGINEER:	DRK
SCALE:	1"=20'

WATERLINE & SANITARY SEWER PLAN



CATCH BASIN DETAIL

NOT TO SCALE



STORM PIPE BEDDING

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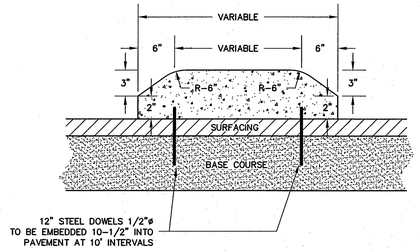

RAISED CONCRETE MEDIAN

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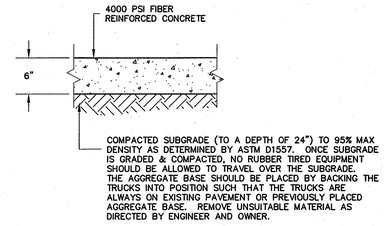
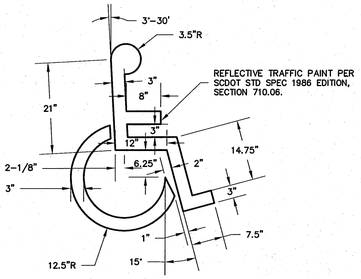


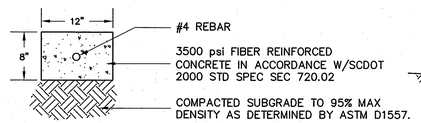
CONCRETE DUMPSTER PAD DETAIL

NOT TO SCALE



HANDICAP PARKING SYMBOL STRIPE DETAIL

NOT TO SCALE

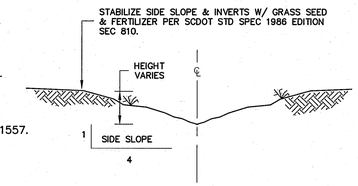


NOTE: TRANSVERSE EXPANSION & CONTROL JOINTS SHALL BE PROVIDED IN THE CURB & GUTTER IN ACCORDANCE W/SCDOT 2000 STD SPEC SEC 720.08 & 720.10.

EXPANSION JOINTS SHALL BE PLACED AT INTERVALS OF NOT MORE THAN 50' IN CURB & GUTTER. CONTROL JOINTS SHALL BE PLACED AT INTERVALS OF NOT MORE THAN 10' IN CURB & GUTTER.

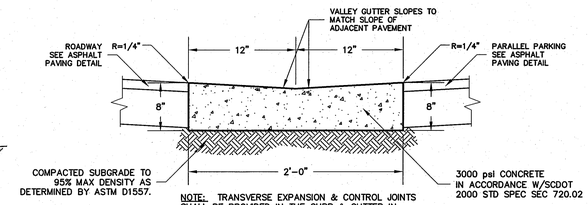
CONCRETE RIBBON CURB W/ REBAR

NOT TO SCALE



GRASS SWALE DETAIL

NOT TO SCALE



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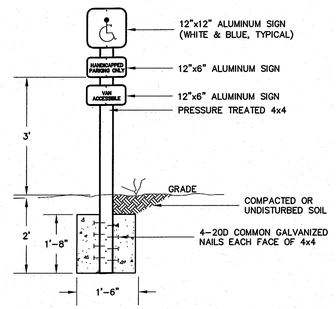
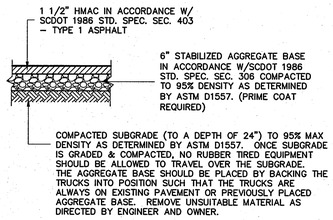
CONCRETE VALLEY GUTTER

NOT TO SCALE



HANDICAPPED PARKING SIGN

NOT TO SCALE

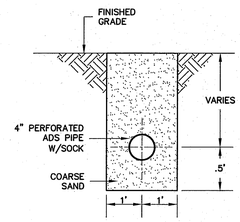


ASPHALT PAVING DETAIL

NOT TO SCALE

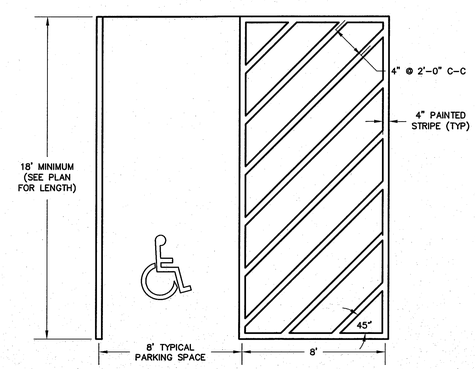
SUBGRADE CONNECTION TO STRUCTURE

NOT TO SCALE



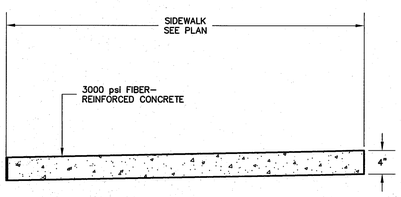
SUBGRADE DRAIN DETAIL

NOT TO SCALE



H/C PASSENGER VEHICLE PARKING SPACE STRIPE DETAIL

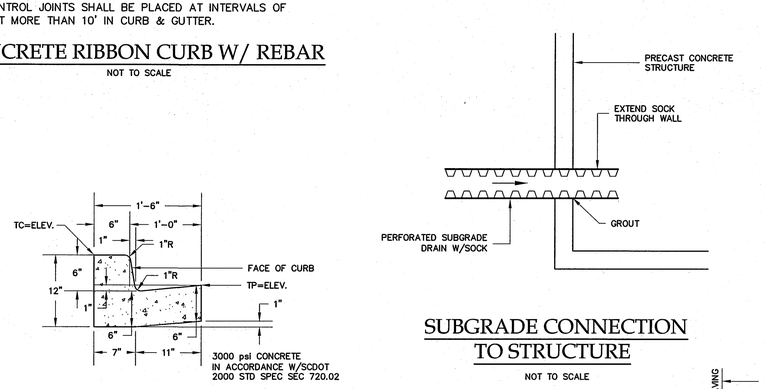
NOT TO SCALE



NOTE: CONTRACTION JOINTS SHALL BE PLACED AT NO MORE THAN 5' AND EXPANSION JOINTS SHALL BE PLACED AT NO MORE THAN 20' IN SIDEWALK

CONCRETE SIDEWALK DETAIL

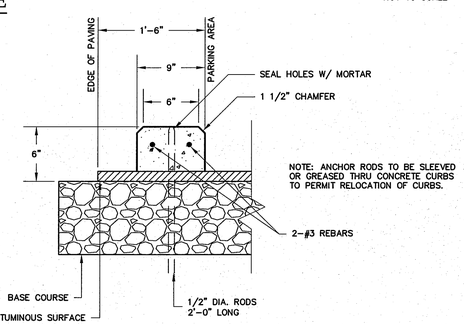
NOT TO SCALE



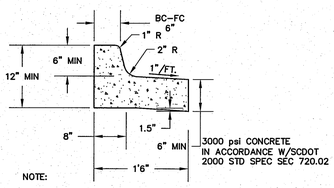
NOTE: TRANSVERSE EXPANSION & CONTROL JOINTS SHALL BE PROVIDED IN THE CURB & GUTTER IN ACCORDANCE W/SCDOT 2000 STD SPEC SEC 720.08 & 720.10. EXPANSION JOINTS SHALL BE PLACED AT INTERVALS OF NOT MORE THAN 50' N CURB & GUTTER. CONTROL JOINTS SHALL BE PLACED AT INTERVALS OF NOT MORE THAN 10' IN CURB & GUTTER.

18" STANDARD CONCRETE CURB & GUTTER DETAIL

NOT TO SCALE



SECTION A-A

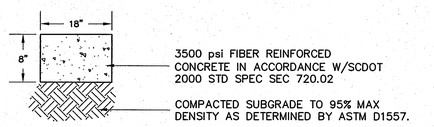


NOTE:

TRANSVERSE EXPANSION & CONTROL JOINTS SHALL BE PROVIDED IN THE CURB & GUTTER IN ACCORDANCE W/SCDOT 2000 STD SPEC SEC 720.08 & 720.10. EXPANSION JOINTS SHALL BE PLACED AT INTERVALS OF NOT MORE THAN 50' IN CURB & GUTTER. CONTROL JOINTS SHALL BE PLACED AT INTERVALS OF NOT MORE THAN 10' IN CURB & GUTTER.

18" REVERSE PITCH STANDARD CONCRETE CURB & GUTTER DETAIL

NOT TO SCALE

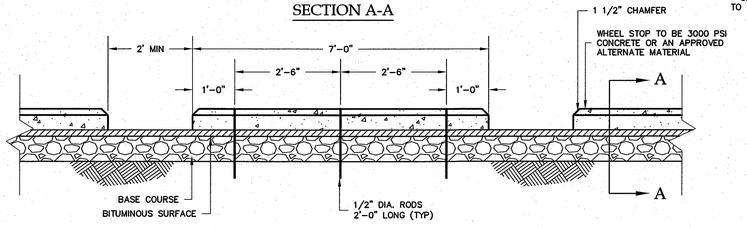


NOTE: TRANSVERSE EXPANSION & CONTROL JOINTS SHALL BE PROVIDED IN THE CURB & GUTTER IN ACCORDANCE W/SCDOT 2000 STD SPEC SEC 720.08 & 720.10.

EXPANSION JOINTS SHALL BE PLACED AT INTERVALS OF NOT MORE THAN 50' IN CURB & GUTTER. CONTROL JOINTS SHALL BE PLACED AT INTERVALS OF NOT MORE THAN 10' IN CURB & GUTTER.

18" FLUSH CURB

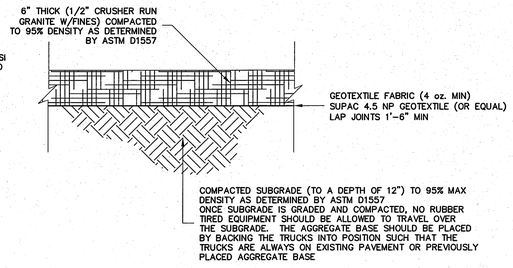
NOT TO SCALE



ELEVATION

WHEELSTOP - CONCRETE

NOT TO SCALE



PERVIOUS GRANITE PAVING

NOT TO SCALE

CAROLINA ENGINEERING CONSULTANTS INC. No. C02324 NORTH CAROLINA CERTIFICATE OF AUTHORIZATION

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PLAN REVISIONS

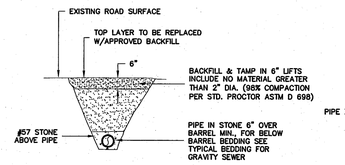
NO.	DESCRIPTION	DATE
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-

TACO BELL
ROBERT SMALLS PARKWAY
BEAUFORT COUNTY, SC

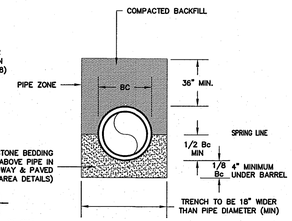
CAROLINA ENGINEERING CONSULTANTS, INC.
PO BOX 294
BEAUFORT, SC 29901
WWW.CAROLINAENGINEERING.COM
843/322-0553
843/322-0556 (FAX)

PROJECT:	1751
DATE:	02/18/15
REVISED:	02/18/15
DRAWN BY:	TAB
ENGINEER:	DRK
SCALE:	NTS

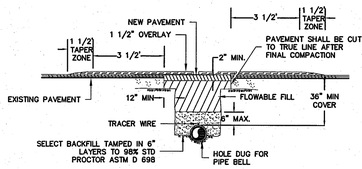
PAVING, GRADING & DRAINAGE DETAILS



UNPAVED ROADWAY BEDDING DETAIL



TYPICAL BEDDING FOR GRAVITY SEWER PIPE



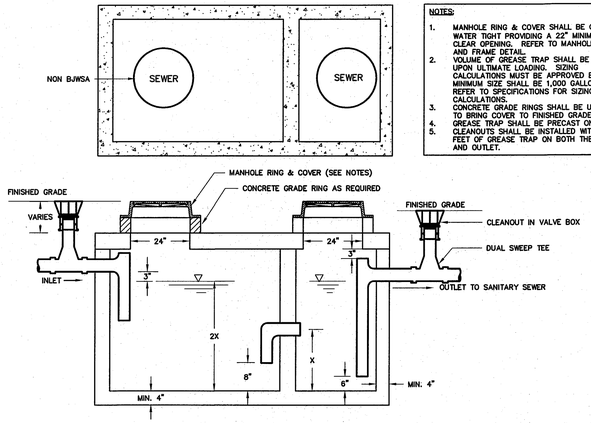
PAVED AREA DETAIL

NOTES:

1. PAVEMENT CUT TO EXTEND 12" BEYOND EDGES OF TRENCH INSTALLATION CUT. FINAL CUT TO BE MADE AFTER FINAL COMPACTION.
2. MATCH EXISTING PAVEMENT TYPE. THICKNESS IS TO BE 2" UNLESS EXISTING IS THICKER.
3. ALL INSTALLATIONS IN PUBLIC ROADWAYS SHALL COMPLY WITH CONDITIONS OUTLINED ON APPLICABLE ENCROACHMENT PERMIT, IF MORE STRINGENT.

GRAVITY PIPE BEDDING DETAIL

NOT TO SCALE

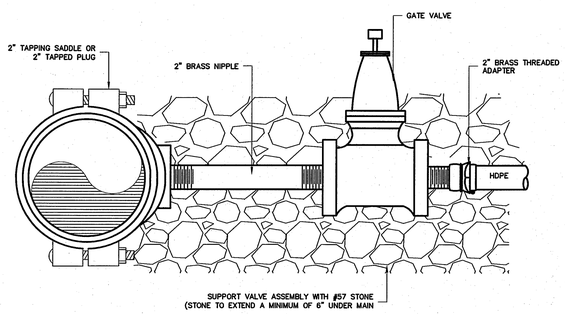


NOTES:

1. MANHOLE RING & COVER SHALL BE GAS AND WATER TIGHT PROVIDING A 22" MINIMUM CLEAR OPENING. REFER TO MANHOLE COVER AND FRAME DETAIL.
2. VOLUME OF GREASE TRAP SHALL BE BASED UPON ULTIMATE LOADING. SIZING CALCULATIONS MUST BE APPROVED BY BJWSA. MINIMUM SIZE SHALL BE 1,000 GALLONS. REFER TO SPECIFICATIONS FOR SIZING CALCULATIONS.
3. CONCRETE GRADE RINGS SHALL BE UTILIZED TO BRING COVER TO FINISHED GRADE.
4. GREASE TRAP SHALL BE PRECAST ONLY.
5. CLEANOUTS SHALL BE INSTALLED WITHIN 2 FEET OF GREASE TRAP ON BOTH THE INLET AND OUTLET.

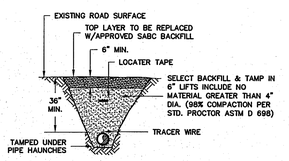
GREASE TRAP DETAIL

NOT TO SCALE

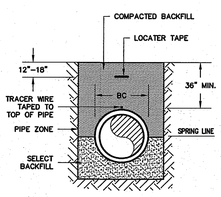


2" CONNECTION

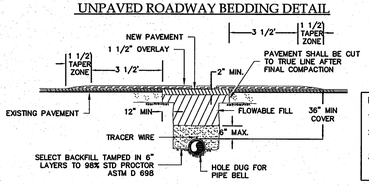
NOT TO SCALE



UNPAVED ROADWAY BEDDING DETAIL



TYPICAL BEDDING DETAIL



PAVED AREA DETAIL

NOTES:

1. PAVEMENT CUT TO EXTEND 12" BEYOND EDGES OF TRENCH AS SHOWN.
2. MATCH EXISTING PAVEMENT TYPE AND THICKNESS. MINIMUM THICKNESS OVER TRENCH IS 2".
3. ALL INSTALLATIONS IN PUBLIC ROADWAYS SHALL COMPLY WITH CONDITIONS OUTLINED ON APPLICABLE ENCROACHMENT PERMIT.

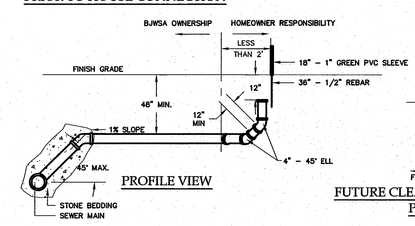
BEDDING PRESSURE PIPE DETAIL

NOT TO SCALE

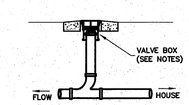
NOTES:

1. SERVICE LATERAL SHALL BE INSTALLED 12" BELOW FINISHED GRADE AND CAPPED IN A MANNER SUITABLE FOR PRESSURE TESTING.
2. CLEAN OUT INSIDE GRASSED AREA SHALL CONSIST OF PVC PLUG IN SEWER LIDDED VALVE BOX SURROUNDED BY A CONCRETE COLLAR. COLLAR SHALL BE FLUSH WITH FINISHED GRADE. VALVE BOX SHALL NOT PROTRUDE ABOVE COLLAR TOP.
3. ALL CLEAN OUTS ARE TO BE 4", INCLUDING CLEANOUTS ON 6" SEWER LATERALS

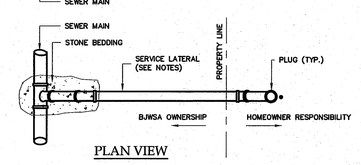
PRIOR TO HOUSE CONNECTION



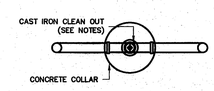
PROFILE VIEW



FUTURE CLEAN OUT INSTALLATION - PROFILE VIEW



PLAN VIEW



FUTURE CLEAN OUT PLAN VIEW

SINGLE SEWER SERVICE

NOT TO SCALE

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PLAN REVISIONS

NO.	DESCRIPTION	DATE
1	-	-
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TACO BELL
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WWW.CAROLINAENGINEERING.COM

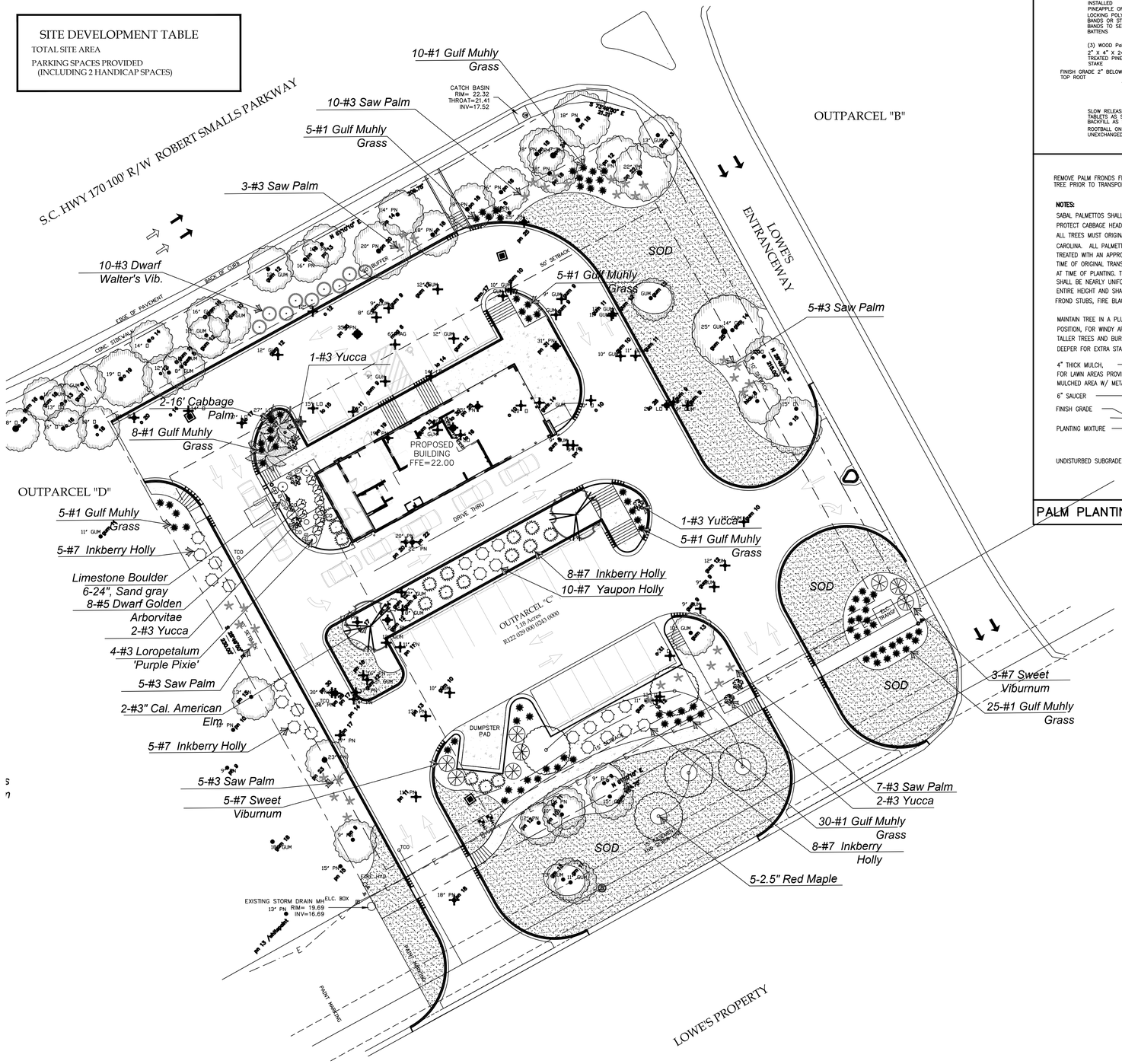
PROJECT:	1751
DATE:	02/18/15
REVISED:	02/18/15
DRAWN BY:	TAB
ENGINEER:	DRK
SCALE:	NTS

WATER & SANITARY SEWER DETAILS

SITE DEVELOPMENT TABLE

TOTAL SITE AREA

PARKING SPACES PROVIDED
(INCLUDING 2 HANDICAP SPACES)

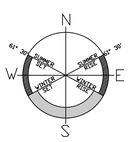


LANDSCAPE PLAN
SCALE: 1.0"=20'

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.



CALL BEFORE YOU DIG:
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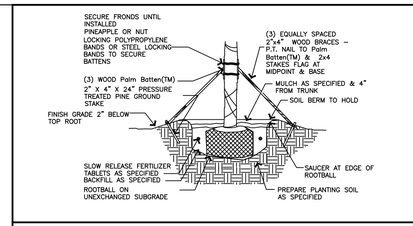
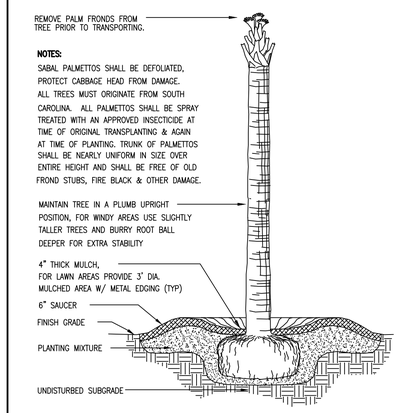
WWW.SC1PUPS.ORG





PALM PLANTING DETAIL

LANDSCAPE NOTES:

1. Materials list was prepared for estimating purposes, contractor shall make own quantity take-off using drawings and specifications to determine quantities to his satisfaction, reporting promptly any discrepancies which may effect bidding.

2. Root types may be freely substituted in case of balled and burlapped or container grown, all other specifications to remain unchanged. Now plant or variety substitutions shall be approved without approval from the owner or LA.

3. Contractor to verify that all plant materials are available as specified when proposal is submitted.

4. See tree, shrub, and ground cover planting details and special provisions for planting specifications. All plantings All plantings shall be guaranteed for 1 year from the date of acceptance.

5. Top soil shall be added to within 1" of top of curb / edge of pavement

6. "Treegator" portable or drip irrigation systems are required for trees during establishment period.

7. Contractor shall located and protect underground utilities during construction and is responsible for any damage to utilities which may occur as a result of his negligence in the execution of work.

8. All trees not located in plant beds must have a mulch ring at least 4' in diameter. All plant beds, tree rings, and disturbed areas to recieve 3" deep longleaf pinestraw mulch.

9. GUARANTEE:
The contractor shall guarantee all workmanship and plant material to be free of defects for a period of one (1) year from final acceptance of the project. Contractor shall replace any plant material found to be defective within the period of guarantee at no cost to the owner, except repairs or replacement necessitated by damage by others or dieback due to insufficient irrigation/watering schedule. Contractor to maintain the plantins and control weeds in mulch areas through the duration of construction until final acceptance.

10. All plant material must meet all minimum size/height standards and must comply with the american standard for nursery stock guidelines.

11. All sizes specified are a minimum size required at the time of planting based nursery stock availability at time of installation.

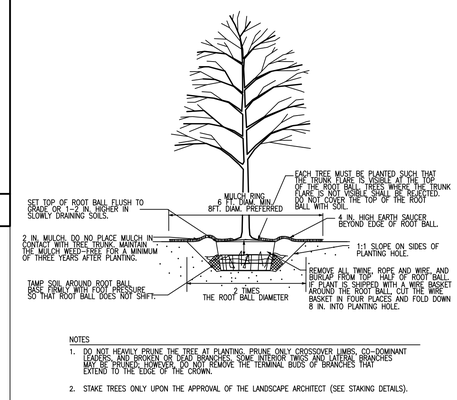
13. Median soil based to be inspected prior to plant installation. All debris from dot construction to be removed and soil amended as needed for positive sheet flow to gutter.

14. A drip irrigation system shall be installed for all plants and at least one zone for zoysia sod.

15. All plant bed and sod areas to recieve 100% irrigation coverage.
The underground irrigation system shall comply with all local codes and regulations and also comply with the latest national electric code rules for all electric works and materials. System shal incorporate separate zones for grass and shrub areas. avoid over spraying on to roads, parking, and sidewalks. Contractor shall use flex risers or swing joints adjacent to street and parking areas.

16. In plant schedule, plants notes as "specimen", shall be selected by the landscape architect at the nursery or photos of the planting stock shall be submitted to the landscape architect for approval.

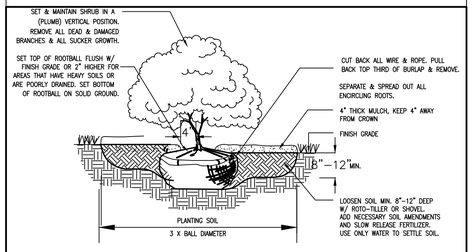
17. Pre-emergent herbicide shall be applied to planting areas prior to landscape installation and according to manufacturer's instructions.



NOTES
1. DO NOT HEAVILY PRUNE THE TREE AT PLANTING. PRUNE ONLY CROSSOVER LIMBS, CO-DOMINANT LEADERS, AND BROKEN OR DEAD BRANCHES. SOME INTERIOR TWIGS AND LATERAL BRANCHES MAY BE PRUNED; HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.

2. STAKE TREES ONLY UPON THE APPROVAL OF THE LANDSCAPE ARCHITECT (SEE STAKING DETAILS).

TREE PLANTING DETAIL
N.T.S.



SHRUB PLANTING DETAIL

	TACO BELL PLANT SCHEDULE					
Trees:						
Common Name	**Botanical Name**	**Height**	**Spread**	**Gallon**	**QTY**	**Unit**
Red Maple	*Acer rubrum*	8'	6'	2.5"	5	Ea.
American Elm	*Ulmus american*	10'	8'	3"	2	Ea.
Cabbage Palm	*Sabal Palmetto*	16'	10'	B&B	2	Ea.
SHRUBS:						
Common Name	**Botanical Name**	**Height**	**Spread**	**Gallon**	**QTY**	**Unit**
Purple Pixie Fringe flower	*Loropetalum chinensis 'Purple Pixie'*	12"	14"	3	4	Ea.
Inkberry Holly	*Illex glabra*	18"	18"	3	26	Ea.
Upright Yaupon Holly	*Ilex vomitoria*	24"	15"	7	13	Ea.
Dwarf Golden Arborvitea	*Thuja occidentalis 'Rheingold'*	24"	24"	5	8	Ea.
Sweet Viburnum	*Viburnum odoratissimum*	42"	30"	7	8	Ea.
Dwarf Walter's Viburnum	*Viburnum obovatum 'Densa'*	18"	18"	3	10	Ea.
Saw Palmetto	*Serenoa repens*	42"	30"	7	36	Ea.
Spanish Bayonet	*Yucca aloifolia*	~	~	5	6	Ea.
GROUNDCOVERS & PERENNIALS:						
Common Name	**Botanical Name**	**Height**	**Spread**	**Gallon**	**QTY**	**Unit**
Gulf Muhly Grass	*Muhlenbergia capillaris*	12-15"	6-8"	1	93	Ea.
GRASS & MULCH:						
Mulch	Pine Straw				6000	SF
Sod	Centipede (Eremochloa ophiuroides)				4100	SF
IRRIGATION:						
Item	**Notes**				**QTY**	**Unit**
Irrigation system	Drip system with automatic timer				6	Ea

State of South Carolina
REGISTERED LANDSCAPE ARCHITECT
No. 1076
JOHN MICHAEL BROCK

No.	Issue / Revision Description	Date
1	-	-

TACO BELL
ROBERT SMALLS PKWY
Beaufort County, South Carolina

M.B.D.
M. BROCK DESIGNS, LLC
LANDSCAPE ARCHITECTURE - LAND PLANNING

J. M. BROCK
RLA

po box 358, port royal
south carolina, 29935

ph. 843.540.6407
mbrock@mbrockdesigns.com

Drawn By:	M. Brock
Drawn Date:	02.20.15
Chk'd By:	M. Brock
Project ID:	14163

Landscape Plan
Sheet No.
LS-101
SHEET 1 OF 1

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TACO BELL

DRIVE THRU RESTAURANT
LIVE MAS LARGE40

A. ALL WORK SHALL CONFORM TO THE _____EDITION OF THE _____AND ALL OTHER APPLICABLE CODES, STANDARDS, AND REGULATIONS OF THE CITY OF _____AND COUNTY OF_____.

B. IT IS INTENDED THAT A COMPLETE OCCUPIABLE BUILDING PROJECT IS PROVIDED.

C. THE GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION (A.I.A. A201 LATEST EDITION) ARE A PART OF THESE CONTRACT DOCUMENTS. A COPY IS ON FILE AT THE ARCHITECTS OFFICE.

D. DRAWINGS ARE BASED ON A SURVEY, DATED _____ PREPARED BY _____ AND IS INCLUDED IN THESE DOCUMENTS.

E. THIS BUILDING HAS BEEN DESIGNED IN ACCORDANCE WITH THE RECOMMENDATIONS OF A GEOTECHNICAL INVESTIGATION DATED _____ BY _____. THE REPORT IS PART OF THESE CONTRACT DOCUMENTS, AND THE CONTRACTOR IS RESPONSIBLE FOR CARRYING OUT ITS RECOMMENDATIONS, THOUGH SOME MAY NOT BE SPECIFICALLY DETAILED ON THE PLANS.

F. DO NOT SCALE THESE DRAWINGS. VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD. ANY DISCREPANCIES IN THESE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO STARTING WORK.

G. ALL PROPOSED SUBSTITUTIONS SHALL BE APPROVED BY THE YUM BRANDS CONSTRUCTION MANAGER, IN WRITING, PRIOR TO INSTALLATION.

H. RETAIN THE PROJECT GEOTECHNICAL ENGINEER TO PROVIDE OBSERVATION AND TESTING SERVICES DURING THE GRADING (INCLUDING UTILITY TRENCHES) AND FOUNDATION PHASE OF CONSTRUCTION AS RECOMMENDED IN THE GEOTECHNICAL REPORT. ALL TESTING AND INSPECTION REPORTS, INCLUDING FINAL SUMMATION LETTER, SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND OWNER. G.C. SHALL CERTIFY PAD ELEVATION PRIOR TO START OF FOUNDATION WORK.

I. SUBMIT PAY FEES AND OBTAIN ALL PERMITS ASSOCIATED WITH THE PROJECT EXCEPT GENERAL BUILDING PERMIT. THIS INCLUDES, BUT IS NOT LIMITED TO ELECTRICAL, MECHANICAL, PLUMBING, FIRE SPRINKLER, HOOD ANSUL, OR OTHER RELATED FIRE PERMITS, ENCROACHMENT PERMIT, ETC. YUM BRANDS WILL PAY FOR "CONNECTION FEES" ASSOCIATED WITH UTILITY PERMITS. PAY FOR TEMPORARY FACILITIES FEES AS REQUIRED TO COMPLETE THE WORK IN A TIMELY MANNER.

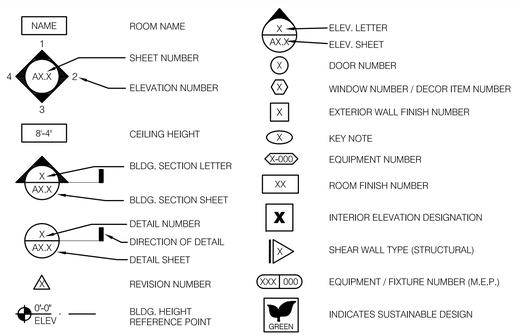
J. PROVIDE EACH SUBCONTRACTOR WITH A COMPLETE AGENCY-PERMITTED DRAWING SET AT TIME OF CONSTRUCTION.

K. ALL ABBREVIATIONS INCLUDED FOLLOW INDUSTRY STANDARDS. CONTACT ARCHITECT IF ANY ABBREVIATIONS ARE NOT CLEAR.

L. GC SHALL SUPPLY AND INSTALL ALL ASPECTS OF THE PROJECT DESCRIBED IN THIS DRAWING SET UNLESS OTHERWISE NOTED. SEE SCOPE OF WORK FOR EXCEPTIONS.

M. GRAPHIC AND WRITTEN INFORMATION ON DRAWINGS SHALL BE COORDINATED WITH ALL TRADES PRIOR TO INSTALLATION.

PROJECT GENERAL NOTES



REFER TO STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL SHEETS FOR SPECIFIC SYMBOLS

GENERAL DRAWING SYMBOLS

VICINITY MAP

LEGAL JURISDICTION: ----

BUILDING CODE: IBC2006, IMC2006, IPC2006, IEC2006, NEC2005

BUILDING AREA: BUILDING FOOTPRINT = 2,489 SF

TOTAL = 2,489 SF

SEATING: 40

OCCUPANCY: A2

TYPE CONSTRUCTION: TYPE V - UNSPRINKLED

PHONE LINES: 25 PAIR CABLE IN 2" CONDUIT

ELECTRIC SERVICE: 800 AMPS / 3 PHASE / 120-208 VOLT

GAS: 689,900 BTUH

PROJECT SUMMARY

WIND SPEED:

EARTHQUAKE ZONE:

ROOF LIVE LOAD:

DESIGN CRITERIA

REFER TO CIVIL DRAWINGS.

LEGAL DESCRIPTION

OWNER
(NAME)
(ADDRESS)
(CITY, STATE, ZIP)
CONTACT:
PHONE:

ARCHITECT
COOTER RAMSEY
1003 CHARLES STREET
BEAUFORT, SOUTH CAROLINA, 29902
CONTACT:
PHONE: 843-986-0559

CONSTRUCTION MANAGER
(NAME)
(ADDRESS)
(CITY, STATE, ZIP)
CONTACT:
PHONE:

STRUCTURAL ENGINEER
(NAME)
(ADDRESS)
(CITY, STATE, ZIP)
CONTACT:
PHONE:

CIVIL ENGINEER
(NAME)
(ADDRESS)
(CITY, STATE, ZIP)
CONTACT:
PHONE:

MECH. / ELEC. ENGINEER
(NAME)
(ADDRESS)
(CITY, STATE, ZIP)
CONTACT:
PHONE:

GEOTECHNICAL ENGINEER
(NAME)
(ADDRESS)
(CITY, STATE, ZIP)
CONTACT:
PHONE:

LANDSCAPE ARCHITECT
(NAME)
(ADDRESS)
(CITY, STATE, ZIP)
CONTACT:
PHONE:

PROJECT DIRECTORY

SEWER
(NAME)
(ADDRESS)
(CITY, STATE, ZIP)
CONTACT:
PHONE:

TELEPHONE
(NAME)
(ADDRESS)
(CITY, STATE, ZIP)
CONTACT:
PHONE:

WATER
(NAME)
(ADDRESS)
(CITY, STATE, ZIP)
CONTACT:
PHONE:

ROADS
(NAME)
(ADDRESS)
(CITY, STATE, ZIP)
CONTACT:
PHONE:

GAS
(NAME)
(ADDRESS)
(CITY, STATE, ZIP)
CONTACT:
PHONE:

TRASH
(NAME)
(ADDRESS)
(CITY, STATE, ZIP)
CONTACT:
PHONE:

ELECTRIC
(NAME)
(ADDRESS)
(CITY, STATE, ZIP)
CONTACT:
PHONE:

HEALTH
(NAME)
(ADDRESS)
(CITY, STATE, ZIP)
CONTACT:
PHONE:

UTILITY CONTACTS

TITLE/SITE
T1.0 TITLE SHEET

CIVIL AND LANDSCAPE DRAWINGS BY SITE SPECIFIC CONSULTANT.

CIVIL
C1.0 SITE DETAILS
C1.1 SITE DETAILS

LANDSCAPE
L1.0 SITE LANDSCAPE PLAN

STRUCTURAL
S1.0 FOUNDATION PLAN
S2.0 WALL FRAMING PLAN
S3.0 ROOF FRAMING PLAN
S4.0 STRUCTURAL DETAILS (FOUNDATION)
S4.1 STRUCTURAL DETAILS (FRAMING)
S4.2 STRUCTURAL DETAILS (ROOF)
S4.3 STRUCTURAL DETAILS (TACO BELL TOWER)
S5.0 CANOPY / AWNING BLOCKING ELEVATIONS

ARCHITECTURAL
A1.0 FLOOR PLAN
A1.1 DOOR & WINDOW ELEVATIONS & SCHEDULES
A2.0 EQUIPMENT AND SEATING PLAN
A2.1 EQUIPMENT SCHEDULE
A3.0 ROOF PLAN
A4.0 EXTERIOR ELEVATIONS
A4.1 EXTERIOR ELEVATIONS
A5.0 WALL SECTIONS
A5.1 WALL SECTIONS
A5.2 WALL SECTIONS
A6.0 CONSTRUCTION DETAILS - ROOF
A6.1 CONSTRUCTION DETAILS - DOOR / WINDOW
A6.2 CONSTRUCTION DETAILS - WALL
A6.3 FINISH DETAILS
A6.4 CONSTRUCTION DETAILS - WALL
A7.0 FLOOR FINISH PLAN
A7.1 REFLECTED CEILING PLAN
A7.2 FINISH SCHEDULE
A8.0 INTERIOR ELEVATIONS - DINING ROOM
A8.1 INTERIOR ELEVATIONS, ENLARGED RESTROOMS & OFFICE PLAN
A8.2 INTERIOR ELEVATIONS - KITCHEN
A8.3 INTERIOR ELEVATIONS - KITCHEN

ACCESSIBILITY
ADA1.0 ACCESSIBILITY REQUIREMENTS
ADA1.1 ACCESSIBILITY REQUIREMENTS

MECHANICAL
M1.0 MECHANICAL SCHEDULES AND NOTES
M2.0 DUCT AND DIFFUSER PLAN
M3.0 HOOD DRAWINGS - PLANS AND SECTIONS
M4.0 MECHANICAL & HOOD DETAILS

PLUMBING
P1.0 PLUMBING SCHEDULES AND NOTES
P2.0 WASTE AND VENT PLAN
P3.0 WATER AND GAS PLAN
P4.0 PLUMBING ROUGH-IN PLAN
P5.0 RISER DIAGRAMS
P6.0 PLUMBING DETAILS

ELECTRICAL
E1.0 SITE ELECTRICAL PLAN
E2.0 RISER DIAGRAM AND LEGEND
E2.1 PANEL SCHEDULES AND LOAD SUMMARY
E3.0 POWER FLOOR PLAN
E3.1 ENLARGED POWER PLAN AND DETAILS
E3.2 POWER ROOF PLAN
E4.0 LIGHTING PLAN & SCHEDULE
E5.0 COMMUNICATIONS PLAN
E6.0 ELECTRICAL DETAILS
E7.0 ELECTRICAL DETAILS

SCOPE OF WORK
SEE SPECIFICATIONS

SPECIFICATIONS
IN BOOK FORMAT

SHEET INDEX

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Beaufort SC, 29902
(843) 986-0559
www.allisonramseyarchitect.com

CONSULTANT'S SEAL

CONTRACT DATE: XX.XX.XX
BUILDING TYPE: LIVE MAS LARGE40
PLAN VERSION: SEPT 2014
SITE NUMBER: XXX-XXX
STORE NUMBER: XXXXX

TACO BELL

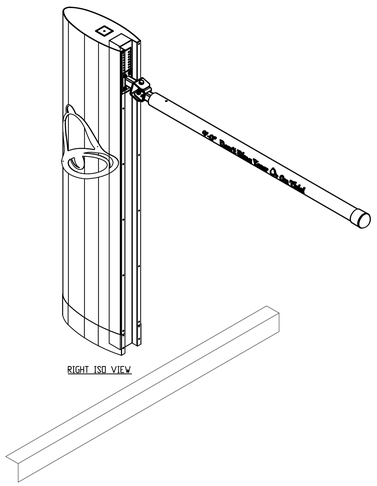
209 ROBERT SMALLS PKWY.
BEAUFORT, SC, USA 29902

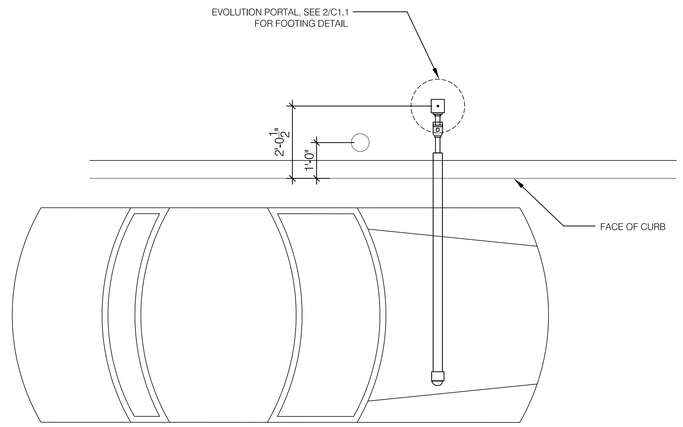
LIVE MAS
LARGE40

TITLE SHEET

T1.0

PLOT DATE:



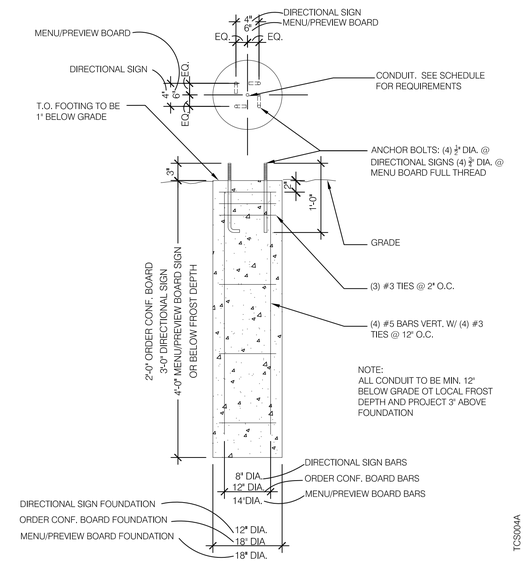


PORTAL PLACEMENT DETAIL 1/2" = 1'-0" | 3

NOTE:
BOLT PATTERN PROVIDED AS EXAMPLE - OBTAIN ANCHOR BOLT TEMPLATE FROM SUPPLIER

CONDUIT SCHEDULE

DEVICE	POWER	DATA
DIRECTIONAL	(1) 3/4"	-
DCB	(1) 3/4"	(3) 1"
MENU BOARD	(1) 3/4"	



MENU BOARD FOOTING 1:16 SCALE | 1

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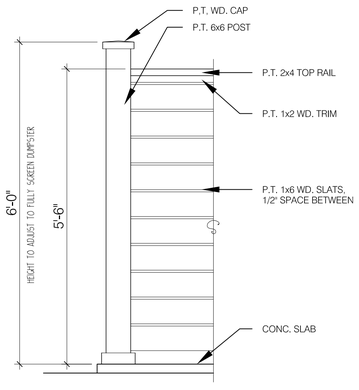
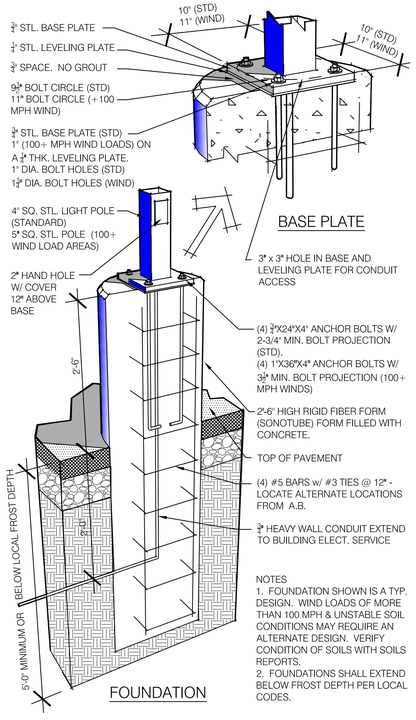
CONSULTANT'S SEAL

NOT USED | 20

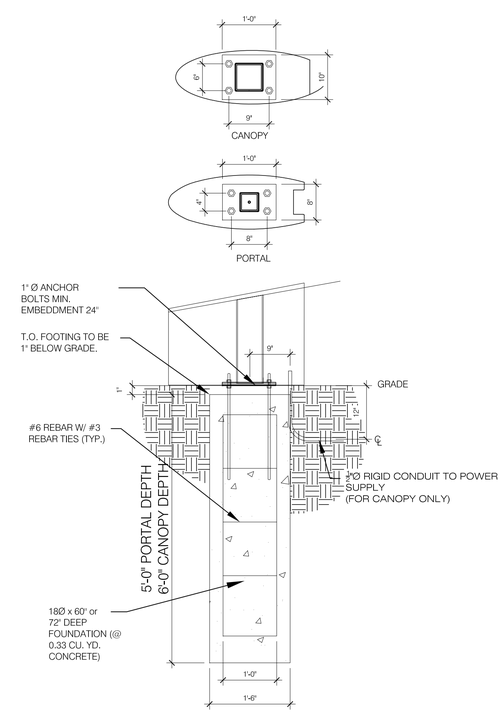


DUMPSTER SCREENING 3/4" = 1'-0" | 16



NOTES
1. FOUNDATION SHOWN IS A TYP. DESIGN. WIND LOADS OF MORE THAN 100 MPH & UNSTABLE SOIL CONDITIONS MAY REQUIRE AN ALTERNATE DESIGN. VERIFY CONDITION OF SOILS WITH SOILS REPORTS.
2. FOUNDATIONS SHALL EXTEND BELOW FROST DEPTH PER LOCAL CODES.

LIGHT POLE FOOTING N.T.S. | 12



ECP-Footing

EVOLUTION FOOTINGS 1:16 SCALE | 2

CONTRACT DATE:	XX.XX.XX
BUILDING TYPE:	LIVE MAS LARGE40
PLAN VERSION:	SEPT 2014
SITE NUMBER:	XXX-XXX
STORE NUMBER:	XXXXX

TACO BELL

209 ROBERT SMALLS PKWY.
BEAUFORT, SC, USA 29902

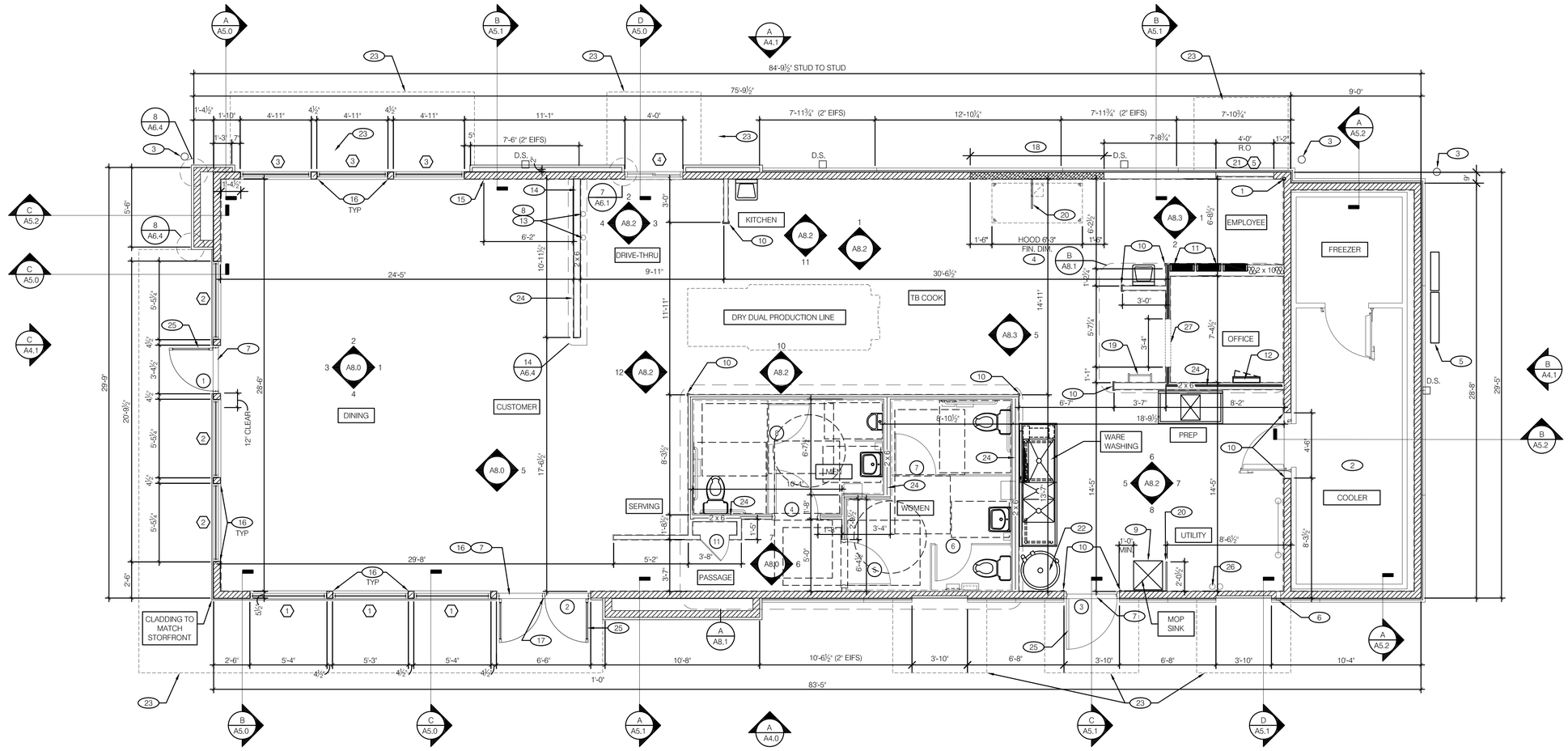
TACO BELL

LIVE MAS
LARGE40

SITE DETAILS

C1.1

PLOT DATE:



FLOOR PLAN 1/4" = 1'-0" **A**

TYPICAL EXTERIOR WALL:
2x6 WD STUDS AT 16" O.C. W/ SHEATHING AS SCHEDULED (SEE STRUCT. DWGS.) AND R-19 KRAFT-FACED FIBERGLASS BATT INSULATION U.O.N. GC SHALL PROVIDE 2 LAYERS OF GRADE 'D' 60 lb BUILDING PAPER. PROVIDE 2X4 WD STUDS AT 16" O.C. AT FUTURE WINDOW INFILL.

TYPICAL INTERIOR WALL :
2x4 WD STUDS AT 16" O.C. (2x6 OR 2x8 WHERE NOTED.)

INTERIOR SOUND-RATED WALL:
TYPICAL INTERIOR WALL W/ 3-1/2" UNFACED FIBERGLASS BATT INSULATION.

HOODWALL:
TYPICAL EXTERIOR WALL WITH 20 GA. S.S. PANEL BEHIND HOOD. REFER TO DETAIL 2/M3.0 FOR EXTENT OF S.S. PANEL.

DASHED LINE INDICATES INTERIOR SUBSTRATE LOCATION.

WALL SUBSTRATES:
1. EXTERIOR:
1/2" CDX PLYWOOD AT ALL EXTERIOR SURFACES, IF WOOD FRAMED. ADDED PLYWOOD ON INTERIOR SIDE OF WALL FOR SHEAR AS NOTED ON SHEET S2.0. PROVIDE NAILING ETC. FOR SHEAR PER "WALL SHEATHING AND SHEAR WALL SCHEDULE" ON SHEET S2.0. WHERE PLYWOOD SUBSTRATE IS NOT CALLED FOR PROVIDE 1/2" GYPSUM WALLBOARD. PROVIDE 1/2" CDX PLYWOOD WHERE WALL SUPPORTED EQUIPMENT ON INTERIOR SURFACE IS NOTED. EXTEND PLYWOOD TO NEXT WOOD STUD BEYOND WALL SUPPORTED EQUIPMENT. SHEAR REQUIREMENTS TAKE PRECEDENCE.
2. DINING ROOM:
1/2" GYPSUM WALLBOARD FROM T.O. CURB TO 6" ABOVE CEILING HEIGHT U.O.N. SEE 6, 8 & 16 / A6.3.
3. INTERIOR (EXCLUDING TOILET ROOM):
6" HIGH - 1/2" CEMENT WALLBOARD STARTING FROM T.O. SLAB. 1/2" CDX PLYWOOD WHERE WALL SUPPORTED EQUIPMENT IS NOTED. EXTEND PLYWOOD TO NEXT WOOD STUD BEYOND WALL SUPPORTED EQUIPMENT. PROVIDE 1/2" GYPSUM WALLBOARD FOR ALL OTHER WALL SURFACES. EXTEND ALL SUBSTRATES 6" ABOVE SUSPENDED CEILINGS. WALL PLYWD. IS SPECIFIED THE PLYWOOD SHALL SHALL BE CONTINUOUS FROM SILL PLATE TO TOP PLATE. SEE 4, 11 & 20 / A6.3.
4. RESTROOM WALLS:
INTERIOR WALLS USE 5/8" CEMENT WALLBOARD TO 6" ABOVE T.O. SLAB. ALL OTHER SUBSTRATE 5/8" HI-IMPACT BRAND XP WALLBOARD, TYPE X CORE FROM T.O. CEMENT BOARD OR CURB TO 6" ABOVE CEILING HEIGHT U.O.N.. NO SUBSTITUTIONS ALLOWED. FINISH AS SCHEDULED. SEE 11 (SIM), 12 /A6.3.

WALL LEGEND **E**

DIMENSIONS:
A. ALL DIMENSIONS ARE TO FACE OF STUD U.O.N. REFER TO FOUNDATION PLAN FOR FACE OF CONC. DIMENSIONS.
B. DIMENSIONS NOTED AS "CLEAR" OR "HOLD" ARE MIN. REQ'D. NET CLEARANCE FROM FACE OF WALL / WAINSCOT FINISH. VERIFY FINAL EQUIPMENT SIZES W/ VENDOR PRIOR TO INT. WALL FRAMING.

WINDOWS / DOORS:
A. SEE SHT. A1.1 FOR WINDOW TYPES AND DOOR SCHEDULE.
B. ALL DOOR AND WINDOW OPENING DIMENSIONS ARE TO ROUGH OPENING.

FINISH SUBSTRATES:
A. PROVIDE 1/2" THICK CEMENTITIOUS BD. FROM FLOOR SLAB TO 12" A.F.F. MIN. IN LIEU OF GYP. BD. AT ALL WALLS EXCEPT SHEARWALL SURFACES, U.O.N.
B. ALL JOINTS, GAPS OR SPACES LEADING TO ALL HOLLOW OR INACCESSIBLE SPACES SHALL BE SEALED WITH "NSF INTERNATIONAL" APPROVED SEALANTS.
C. ALL BACK OF HOUSE AND OFFICE WALLS SHALL HAVE 1/2" CDX PLYWOOD SUBSTRATE, U.O.N.

DECOR:
A. SEE A2.0 FOR SEATING PLAN AND DETAILS.
B. SEE A7.0 FOR FLOOR FINISHES.
C. SEE A8.0 - A8.3 FOR WALL FINISHES.
D. SEE A7.1 FOR CEILING FINISHES.

GENERAL:
A. PROVIDE THREE FIRE EXTINGUISHERS - (2) 10 lb. BC and (1) 10 lb. ABC - TO COMPLY WITH LOCAL FIRE CODE. LOCATE PER DIRECTION OF FIRE MARSHALL OR LOCAL AUTHORIZING AGENT.
B. DRAWINGS ARE BASED UPON WOOD FRAMING. UTILIZATION OF METAL STUDS ON NON-BEARING INTERIOR PARTITIONS, BULKHEADS AND SOFFITS IS ACCEPTABLE.
C. ALL ATTACHMENTS MADE THROUGH E.I.F.S. SHALL BE BUSHED TO PREVENT DAMAGE TO THE FINISH. PER 9/A6.2.
D. ALL PENETRATIONS THROUGH E.I.F.S. SHALL BE SEALED USING MFR'S. APPROVED METHOD.

FLOOR PLAN NOTES **D**

1. STARTING POINT. ALL SUB-TRADES SHALL USE THIS POINT AS A BEGINNING LAY-OUT (INSIDE FACE OF EXT. WALL STUDS.
2. NO FRP BEHIND (W-08) WALK-IN COOLER/FREEZER.
3. PIPE BOLLARD. SEE DETAIL 8/C1.0.
4. HOOD WALL. SEE WALL LEGEND.
5. ELECTRICAL MAIN SWITCH BOARD. REFER TO ELECT. DWGS.
6. CO2 FILL BOX LOCATION. SEE SHEET A4.0 ELEVATION "A".
7. TILE TO CONCRETE METAL THRESHOLD.
8. KEEP CLEAR FOR UTILITIES & SYRUP LINES. SEE DETAIL 14 & 19/A6.4 FOR STUD LAYOUT REQUIREMENTS.
9. MOP SINK. REFER TO SHEET A2.0 & A2.1.
10. S.S. CORNER GUARD / WALL CAP, TYP, ALL CORNERS IN BACK-OF-HOUSE FROM REAR WALL TO THE KITCHEN SIDE OF THE SERVICE COUNTER. SEE DETAIL 19/A6.3.
11. ELECT. PANELS RECESSED IN 2x10 WALL.
12. LIGHTING CONTROL PANEL SURFACE MOUNTED. REFER TO ELECT. DWGS.
13. SYRUP LINE CHASE (ABOVE). SEE DETAIL 19/A6.4.
14. HORIZONTAL OPENING FOR SYRUP TUBES. COORDINATE WALL PENETRATION WITH COUNTER INSTALLER. SEAL CHASE TO COUNTER. SEE 15/A6.4.
15. START OF CHAIR RAIL.
16. INTERIOR FINISHES AT STOREFRONT TO MATCH EXTERIOR.
17. REMOVABLE ASTRAGAL FROM INSIDE ONLY.
18. METAL STUDS REQUIRED PER LOCAL CODES.
19. ROOF LADDER. SEE DETAIL D/A8.3.
20. SPLASHGUARD. SEE DETAIL 9/A6.3. INSTALLATION SHALL BE COORDINATED WITH INSTALLATION OF MOP SINK.
21. ROUGH-IN FRAMING FOR FUTURE WINDOW. SEE (5) ON A1.1.
22. INDICATES WATER HEATER LOCATION. COMES WITH METAL STAND.
23. CANOPY & VALANCE ABOVE.
24. 6" STUD INTERIOR WALL, FINISHED PER WALL LEGEND E / THIS SHEET.
25. PROVIDE HORIZONTAL DOOR SWEEPS AT ALL EXTERIOR DOORS. SEE SHEET A1.1.
26. 6" PVC STUB THRU CEILING FOR SYRUP BUNDLE. SEE DETAIL 18/A6.4.
27. CASED OPENING, REFER TO DETAIL 18/A6.1. DOOR OPTIONAL, REFER TO DOOR SCHEDULE ON A1.1 (DOOR #10).

KEY NOTES **B**

ALLISON RAMSEY Architects, Inc. creating sustainable timeless design
1003 Charles St.
Beaufort SC, 29902
(843) 986-0559
www.allisonramseyarchitect.com

CONSULTANT'S SEAL

CONTRACT DATE:	XX.XX.XX
BUILDING TYPE:	LIVE MAS LARGE40
PLAN VERSION:	SEPT 2014
SITE NUMBER:	XXX-XXX
STORE NUMBER:	XXXXX

TACO BELL

209 ROBERT SMALLS PKWY.
BEAUFORT, SC, USA 29902

TACO BELL

LIVE MAS
LARGE40

FLOOR PLAN

A1.0

PLOT DATE:

NOT USED | 10

NOT USED | 7

1. DIMENSIONS ON THIS DWG. ARE TO FRAME EDGE. REFER TO SHEETS A1.0 AND A5 SHEETS FOR ROUGH OPENING DIMENSIONS.
2. ENTIRE STOREFRONT SYSTEM SHALL BE DARK BRONZE ANODIZED.
3. ALL SPANDREL GLASS SHALL BE DARK BRONZE TO MATCH FRAMES.
4. SEE SCHEDULE FOR GLASS TYPES.
5. REFER TO FLOOR PLAN, ELEVATIONS AND WALL SECTIONS FOR ROUGH OPENING DIMENSIONS.
6. ALL STOREFRONT MATERIAL AND GLAZING SHALL BE SUPPLIED AND INSTALLED BY G.C. U.O.N.

PREFERRED SUPPLIER

INTERIOR DOORS, FRAMES & HARDWARE

LOCKNET
MIKE MOYNAHAN
100 COURCHELLE DRIVE
NICHOLASVILLE, KY 40356
800-887-4307 FAX : 859-887-4958

GLASS SCHEDULE

(A) 1" INSULATED GLASS
(B) 1" INSULATED TEMPERED GLASS
(C) 1/4" TEMPERED GLASS
(D) SAFETY GLASS BY MFR.

NOTE:
SHADING COEFFICIENT SPECIFICATION PER LOCAL CODE REQUIREMENTS.
DAYTIME VISIBILITY INTO DINING ROOM SHALL BE MAINTAINED.

**** ALL STOREFRONT GLAZING SHALL BE LOW "E" SOLAR GLASS ****

GREEN

NOTES | 4

1. LAMINATE DOORS 4, 5, 10 & 11. SEE FINISH SCHEDULE SHEET A7.2.
2. ALL HARDWARE SHALL BE US32D U.O.N.
3. ALL HM FRAMES SHALL BE 16 GA STEEL U.O.N.
4. ALL LOCKS SHALL BE FALCON 6 PIN INTERCHANGEABLE CORE SUPPLIED AND INSTALLED BY THE G.C. ALL EXTERIOR LOCKS SHALL BE PROVIDED WITH CONSTRUCTION CORES. ALL PERMANENT CORES SHALL BE KEYED ALIKE.
5. PERMANENT CORES SHALL BE SHIPPED TO THE RESTAURANT GENERAL MANAGER.
6. MOUNT DOOR CLOSERS ON RESTROOM OR KITCHEN SIDE ONLY.
7. COMPLETE DOOR, FRAME AND HARDWARE PACKAGE INCLUDING: VISION PANEL (WITH 18 GA. HOLLOW METAL FRAME), CONTINUOUS HINGE, HEAVY DUTY CLOSER, RAIN DRIP, DOOR BOTTOM/ SWEEP WEATHERSTRIP, KICKPLATE AND PANIC HARDWARE, ORDERED THRU LOCKNET SECURITY DOORS, PART #DU3670L52VED (1-800-887-4307).
8. PROVIDE PUSH/ PULL PLATES.
IF REQUIRED BY LOCAL CODE, STOREFRONT DOOR PANIC HARDWARE SHALL BE :
DOR-O-MATIC 2092 RIM PANIC HARDWARE AND EXTERIOR PULLS WITH QUALITY #520 DOOR PULL.
9. MOUNT KICKPLATE ON PUSH SIDE ONLY.
10. MAXIMUM DOOR OPERATING PRESSURE : 5 LBS INTERIOR : 8.5 LBS EXTERIOR MEASURED AT 90 DEGREES TO THE DOOR AT THE STRIKE SIDE EDGE.
11. ADA COMPLIANT ACCESSIBILITY SIGNAGE WHERE REQUIRED (OR AS REQUIRED BY LOCAL JURISDICTION) - (1) MEN; (1) WOMEN
12. RESTROOM SIGN IF REQUIRED. VERIFY LOCAL REQUIREMENTS.
13. FRAMES SHALL BE PAINTED.
14. BOBRICK 1090 SERIES, WITH STAINLESS STL. 1 1/2" WALL POST, LATCH . KEEPER, COAT HOOK (DTL 20/ADA1.0) & MOUNTING BRACKETS. INSTALL PER MANUFACTURER'S SPECIFICATIONS & DETAILS. DOOR HANDLE AND LATCH SHALL BE MOUNTED AT 36" A.F.F. HINGES SHALL BE SELF-CLOSING, SEE NOTE 16.
15. DOOR FRAME SHALL HAVE REMOVABLE DOOR STOPS.
16. PROVIDE SELF CLOSING HINGES AT THE ADA STALL DOORS ONLY.
17. PROVIDE BRUSH TYPE DOOR SWEEP AT ALL EXTERIOR DOOR LOCATIONS. DOOR SWEEP FINISH TO MATCH DOOR FINISH. SWEEPS SHALL BE PROVIDED BY SEALEZE, PART #D480CLA09BL. 1-800-SEALEZE
18. PROVIDE LATCH AND STRIKE PLATE HARDWARE BY DOOR MFR. TO BE COMPATIBLE WITH LOCKS
19. PROVIDE PULL HANDLE ON BOTH SIDES EVEN HEIGHT WITH DOOR LATCH. SEE DETAIL 16/ADA1.0.

DOOR SCHEDULE NOTES | 1

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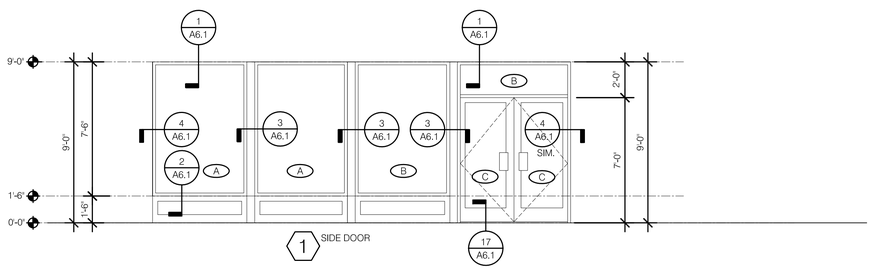
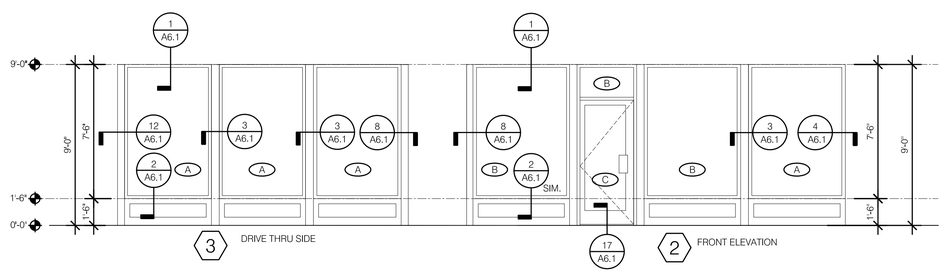
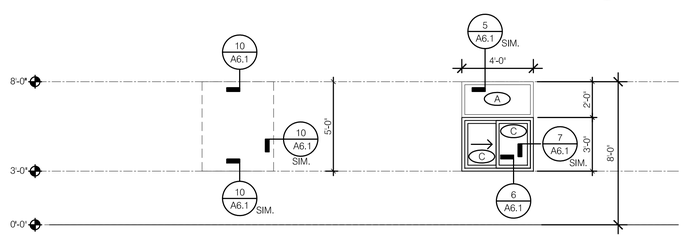




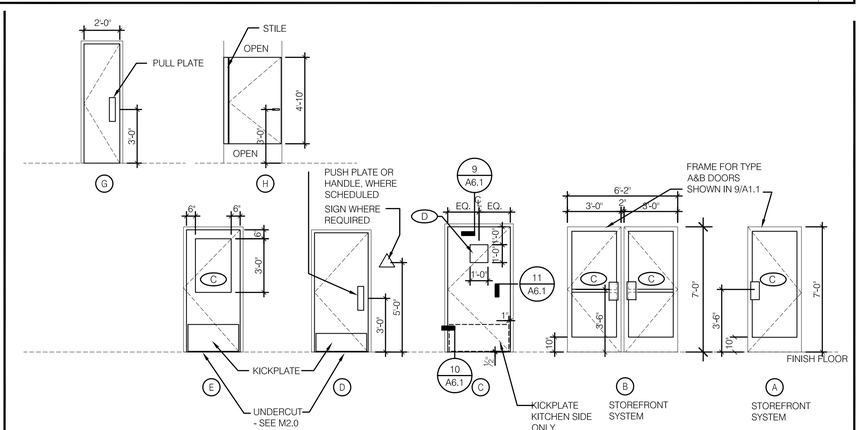


NOTE: ELEVATIONS DRAWN AS VIEWED FROM EXTERIOR OF BUILDING.

WINDOW TYPES 1/4" = 1'-0" | 9

DOOR NO.	DOOR SIZE	TYPE	DOOR	FRAME	BUTTS 1	BUTTS 2	BUTTS 3	BUTTS 4	LOCKS 1	LOCKS 2	LOCKS 3	LOCKS 4	LOCKS 5	LOCKS 6	LOCKS 7	CLOSERS 1	CLOSERS 2	CLOSERS 3	KICKPLATE 1	KICKPLATE 2	KICKPLATE 3	KICKPLATE 4	THRESHOLD 1	THRESHOLD 2	THRESHOLD 3	DOOR STOP 1	DOOR STOP 2	DOOR STOP 3	PUSH	PULL	MISCELLANEOUS 1	MISCELLANEOUS 2	MISCELLANEOUS 3	MISCELLANEOUS 4	MISCELLANEOUS 5	MISCELLANEOUS 6	DETAIL LOCATIONS HEAD	DETAIL LOCATIONS JAMB	DETAIL LOCATIONS SILL	DOOR NOTES
		SEE DOOR TYPE ELEVATIONS			ONE PAIR OFFSET PIVOTS PER DOOR MANUFACTURER SPECIFICATION	1 1/2 PR HUMMINEY #1142T3 L 4-1/2" x 4-1/2"	CONT. HINGE INCLUDED IN PACKAGE	H.D. TYPE 304 S.S. BOBRICK SPRING LOADED	FALCON #T351 CLOSET LOCK	FALCON #T511 DG WC	FULL LENGTH LATCH PROTECTOR INCL. IN PKG.	PANIC HARDWARE INCLUDED IN PACKAGE	FALCON C953-7 OR C987-7 AS REQUIRED		BOBRICK LATCH & KEEPER	FALCON 1690 CONCEALED VERT. PANIC HDWR	I.D.C. 8051	CLOSER INCLUDED IN PACKAGE	I.D.C. 8052	STAINLESS STEEL 10" x .050 X 24" L.T.D.W. *	KICKPLATE INCLUDED IN PACKAGE		ACCESSIBLE ALUM. THRESHOLD BY DOOR MFR.	THRESHOLD INCLUDED IN PACKAGE		FLOOR STOP - ROCKWOOD 441 CU	HINGE STOP - ROCKWOOD 532 NP	DOOR STOP - ASA0714 COAT HOOK/DOOR STOP	PUSH PLATE ROCKWOOD 70F - 9" x 16"	PULL PLATE TRIMCO 1017-3B - 4" x 16"	STD. ADJUSTABLE DOOR SWEEP PER DR. MFR.	SWEEP (WSTA 231 STD) NGP 101VA	UNDERCUT 3/4"	PROVIDE A SIGN STATING "THIS DOOR TO REMAIN UNLOCKED DURING BUSINESS HOURS"	COAT HOOK - BOBRICK	DOOR SIGN	HEAD	JAMB	SILL	* LESS THAN DOOR WIDTH
1	3'-0" x 7'-0" x 1-3/4"	A	AL	AL	X							X			X	X							X									X		X			1/A6.1	4/A6.1	17/A6.1	8, 10, 17, 18
2	PR. 3'-0" x 7'-0" x 1-3/4"	B	AL	AL	X							X			X	X							X									X		X			1/A6.1	4/A6.1	17/A6.1	8, 10, 15, 17, 18
3	3'-6" x 7'-0" x 1-3/4"	C	HM	HM			X				X	X					X			X				X		X					X						9/A6.1	11/A6.1	10/A6.1	6, 7, 9, 10, 13, 17
4	3'-0" x 6'-8" x 1-3/4"	D	WD	HM		X												X	X								X		X	X			X			X	10/A6.4	10/A6.4		1, 6, 9, 10, 11, 12, 13
5	3'-0" x 6'-8" x 1-3/4"	D	WD	HM		X												X	X								X		X	X			X			X	10/A6.4	10/A6.4		1, 6, 9, 10, 11, 12, 13
6	2'-6" x 4'-10" x 1"	H	-	-										X														X												14
7	2'-10" x 4'-10" x 1"	H	-	-			X							X														X												14, 16
8	2'-10" x 4'-10" x 1"	H	-	-			X							X														X												14, 16, 19
9	NOT USED	-	-	-																																				
10 (OPTIONAL)	3'-0" x 7'-0" x 1-3/4"	E	WD	HM		X				X								X								X						X					10/A6.4	10/A6.4		1, 9,13, 19
11	2'-0" x 6'-8" x 1-3/4"	G	WD	HM		X		X																			X		X	X			X				10/A6.4	10/A6.4		1, 9, 13

DOOR SCHEDULE | 2



NOTE: ELEVATIONS DRAWN AS VIEWED FROM EXTERIOR OF BUILDING OR OUTSIDE ROOM.

DOOR TYPES 1/4" = 1'-0" | 3

CONSULTANT'S SEAL

CONTRACT DATE: XX.XX.XX
BUILDING TYPE: LIVE MAS LARGE40
PLAN VERSION: SEPT 2014
SITE NUMBER: XXX-XXX
STORE NUMBER: XXXXX

TACO BELL

209 ROBERT SMALLS PKWY.
BEAUFORT, SC, USA 29902

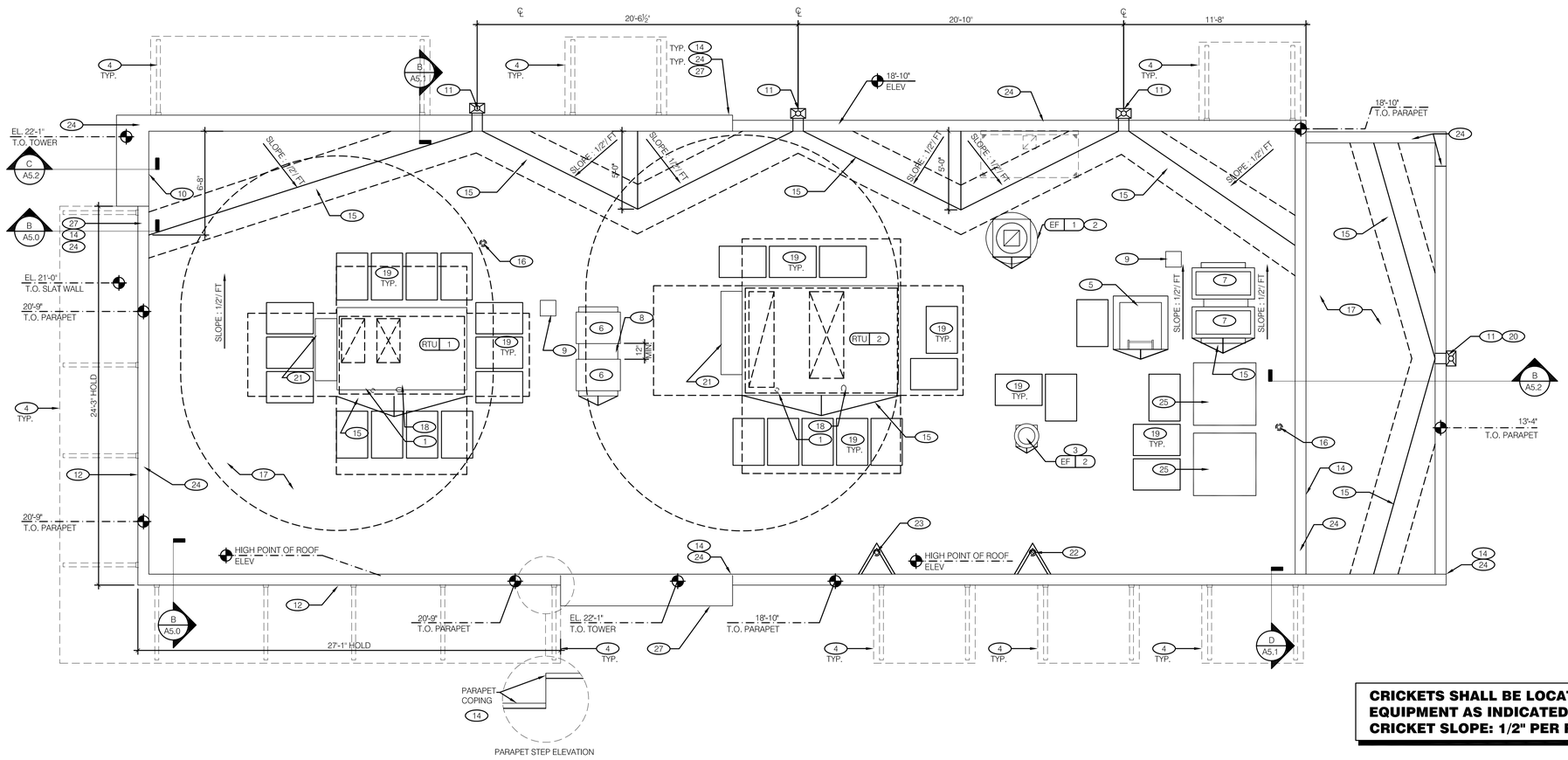
TACO BELL

LIVE MAS
LARGE40

DOOR & WINDOW ELEVATIONS AND SCHEDULES

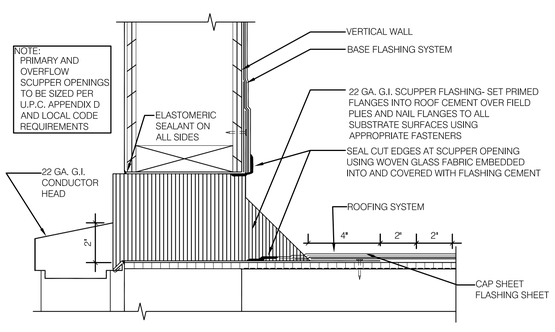
A1.1

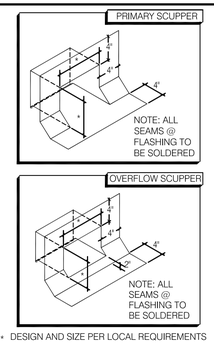
PLOT DATE:



CRICKETS SHALL BE LOCATED AT THE EQUIPMENT AS INDICATED. MINIMUM CRICKET SLOPE: 1/2" PER FOOT.

ROOF PLAN 1/4"=1'-0" **A**





* DESIGN AND SIZE PER LOCAL REQUIREMENTS

TAR103

SCUPPER FLASHING **F**

WATERPROOFING:
A. PAINT UNDERSIDE OF PARAPET CAP FLASHING WITH FACTORY BONDED PAINT GRIP OR PRIMER.
B. TOP NAILING AT PARAPET CAP FLASHING WILL NOT BE ACCEPTED.
C. PENETRATIONS IN ROOFING MEMBRANE AND FLASHING SHALL ONLY BE MADE AS INDICATED ON THE DRAWINGS OR SPECS.
D. SEE SPECIFICATIONS FOR SEALANT SPECS.
E. ALL SHEET MTL FLASHING SHALL BE 22 GA MIN.

MISCELLANEOUS:
A. ROOF PENETRATIONS CLOSER THAN 12" FROM ANOTHER WILL NOT BE ALLOWED.
B. EXHAUST FANS MIN. 10-0" AWAY FROM ALL AIR INTAKE / SUPPLY.
C. LOCATE WALK-IN CONDENSERS ON ROOF ONLY IF REQUIRED BY CODE.

ROOF PLAN NOTES **E**

GREEN

1. ROOFTOP UNIT. INSTALL PLUMB AND LEVEL.
2. KITCHEN HOOD EXHAUST FAN. SEE SHEETS M3.0 & DETAIL 19/A6.0.
3. RESTROOM EXHAUST FAN. SEE 18/A6.0.
4. CANOPY. SEE SCOPE OF WORK.
5. ROOF HATCH: SEE 7/A6.0.
6. ICE MACHINE CONDENSERS.
7. WALK-IN COOLER / FREEZER CONDENSERS. SEE SCOPE OF WORK SHEET.
8. EQUIPMENT PLATFORM. SEE DETAIL 15/A6.0.
9. PIPE HOOD FOR UTILITIES. SEE DETAIL 9/A6.0.
10. 24" x 24" HINGED LOUVER. SEE DETAIL 8/A6.0.
11. SCUPPER AND DOWNSPOUT. SEE DETAIL F.
12. ALUMINUM SLAT WALL BY VENDOR. SEE SCOPE OF WORK.
13. NOT USED
14. CHANGE IN PARAPET ELEVATION. SEE 14/A6.2.
15. ROOF CRICKET. SEE DETAIL 16/A6.0.
16. WASTE VENT THROUGH ROOF. THE TOP OF WASTE VENTS SHALL BE 12" HIGHER THAN THE CLOSEST PARAPET CAP U.N.O. OR NOT ALLOWED BY LOCAL JURISDICTION. SEE 12/A6.0 FOR FLASHING ASSEMBLY.

GREEN

17. "DURO-LAST" SINGLE PLY ROOF MEMBRANE OVER 1/2" EXTERIOR GRADE PLYWOOD OVER TRUSSES. INSTALL PER MANUFACTURERS SPECIFICATIONS.
18. POWER / GAS / CONDENSATE ENTRY UNDER HVAC UNIT (PER HVAC MFR. SPECS.) REFER TO MECH. AND PLUMB DWGS. UTILITY ACCESS FROM WITHIN CURB - NO ROOF PENETRATIONS. DO NOT RUN ON ROOF SURFACE. SEE 13/P6.0.
19. 24x36 WALK MATS. SEE ROOF SPECS.
20. MAINTAIN MFR'S ROOFTOP UNIT MAINTAINANCE CLEARANCE.
21. OUTSIDE AIR INTAKE FOR ROOFTOP UNIT. MAINTAIN MIN 10'-0" SEPARATION FROM PLUMBING VENTS, FLUES AND BUILDING EXHAUST.
22. WATER HEATER INTAKE. SEE DETAIL 13/A6.0 FOR BRACING.
23. WATER HEATER EXHAUST FLUE SHALL BE MIN. 6' HIGHER THAN INTAKE-MAINTAIN MIN. 10'-0" FROM NEAREST POINT OF RTU INTAKE. SEE DETAIL 13/A6.0 FOR BRACING.
24. PAINTED METAL PARAPET CAP. SEE DETAIL 2/A6.0.
25. PREFERRED LOCATION OF SATELITE DISH SLED. SEE SCOPE OF WORK. USE ADJACENT PIPE HOOD FOR DATA WIRE
26. NOT USED
27. CARRY TOWER FRAMING UP TO PARAPET. SEE FLOOR PLAN SHEET A1.0.

KEY NOTES **B**

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CONSULTANT'S SEAL

CONTRACT DATE:	XX.XX.XX
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STORE NUMBER:	XXXXX

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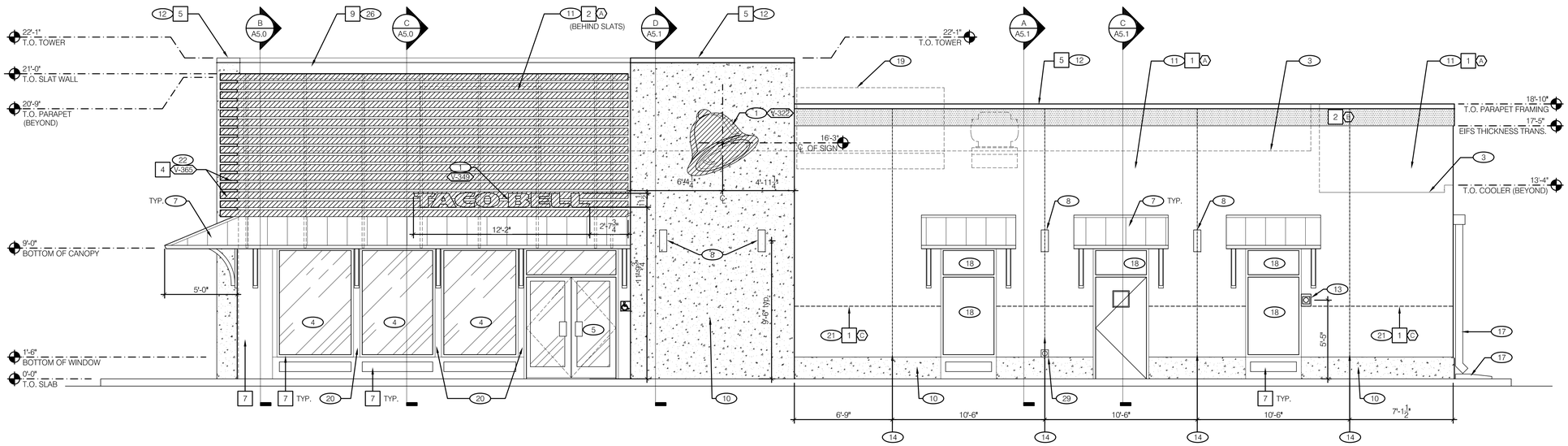
BEAUFORT, SC, USA 29902

LIVE MAS
LARGE40

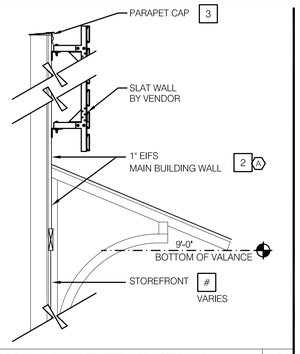
ROOF PLAN

A3.0

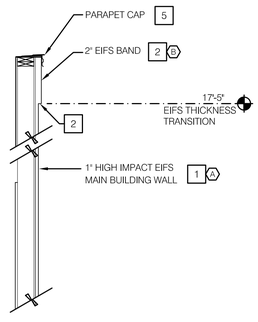
PLOT DATE:



RIGHT SIDE ELEVATION 1/4"=1'-0" A



SLAT WALL COLOR TRANSITION N.T.S. I



EIFS THICKNESS COLOR TRANSITION N.T.S. G

MISCELLANEOUS
A. SEE SHT A1.1 "WINDOW TYPES" FOR WINDOW ELEVATIONS.
B. SEE SCOPE OF WORK FOR RESPONSIBILITIES.
C. "HIGH IMPACT" MESH SHALL BE USED WHERE NOTED C
D. THE PAINT COLORS SHOWN ARE COLOR REFERENCES FOR THE E.I.F.S. SUPPLIER
E. E.I.F.S. TEXTURE SHALL BE 'FINE'.

SEALERS (REFER TO SPECS):
A. SEALANT AT ALL WALL AND ROOF PENETRATIONS.
B. SEALANT AT ALL WINDOW AND DOOR FRAMES AT HEAD AND JAMB. DO NOT SEAL SILL @ WINDOWS.
C. APPLY NEOPRENE GASKET (CONT.) BETWEEN BUILDING & CANOPY/TRELLIS.

LEGEND:
A. VENDOR SCOPE INCLUDES SUPPLY AND INSTALLATION OF AWNINGS, CANOPIES, AND SIGNAGE.
B. DENOTES 2" THICK EIFS

"CRITICAL" DIMENSIONS:
A. REQUIRED CLEAR OPENING WIDTH TO ENSURE COORDINATION WITH STANDARD SIGNAGE/ BUILDING ELEMENTS DIMENSIONS.
2. OWNER REPRESENTATIVE WILL IDENTIFY IF LOTUSAN PAINT WILL BE USED.

GENERAL NOTES F

V-XXX	QTY	ITEM DESCRIPTION	ELEC
V-350	1	TACO BELL DRIVE THRU CANOPY	X
V-348	1	TACO BELL "BUILDING ACCENT" - OPTIONAL SHADING & LED LAMPING.	X
V-365	1	SLAT WALL SYSTEM	
		* REQUIRES ELECTRICAL CONNECTION. SEE ELECTRICAL PLANS.	

CANOPY AND BLDG. ACCENT SCHED. N.T.S. E

A BASE THICKNESS - 1" THICK E.I.F.S.
B BASE THICKNESS - 2" THICK E.I.F.S.
C BASE THICKNESS -1" THICK E.I.F.S. WITH HIGH IMPACT MESH (ONLY WHERE NOTED). SEE DETAIL 2/A6.2.
D BASE THICKNESS -2" THICK OYSTER SHELL STUCCO WITH HIGH IMPACT MESH (ONLY WHERE NOTED).SEE DETAIL 2/A6.2.

E.I.F.S. THICKNESS N.T.S. B

V-XXX	QTY	ITEM DESCRIPTION	ELEC
V-349	3	TACO BELL LETTERS 12" HIGH, WHITE, FLAT FACED	X
V-322	3	TACO BELL 'BELL' SIGN 4'-10 1/2"W x 4'-6 1/4"H	X
		LED LAMPING.	

SIGN SCHEDULE N.T.S. C

SYMBOL	AREA	MANUFACTURER	COLOR	ALTERNATE MFR.	ALTERNATE COLOR	CONTACT INFORMATION
1	MAIN BUILDING COLOR	SHERWIN WILLIAMS	SW 6122 "CAMEL BACK"	LOTUSAN	NA08-0011	SHERWIN WILLIAMS: BRAD HARRINGTON, 216-341-5558 X115 (PHONE), BRAD.E.HARRINGTON@SHERWIN.COM EIFS CONTACT: STO CORP.: CHUCK DUFFIN, 940-894-2092 (PHONE), 940-894-2095 (FAX), *CDUFFIN@STOCORP.COM* OWNER REPRESENTATIVE WILL IDENTIFY IF LOTUSAN PAINT WILL BE USED.
2	WALL COLOR BEHIND SCREEN WALL	SHERWIN WILLIAMS	SW 6831 "CLEMATIS"			
~~3~~	~~ACCENT COLOR~~	~~SHERWIN WILLIAMS~~	~~SW 2823 "ROOKWOOD CLAY"~~	~~LOTUSAN~~	~~NA08-0010~~	
4	SLAT WALL COLOR	VENDOR	SW 7034 "STATUS BRONZE" (EQUAL)			
5	PARAPET CAP COLOR	27 DUROLAST	MEDIUM BRONZE (FACTORY FINISH)	SHERWIN WILLIAMS	SW 7069 "IRON ORE"	DURO-LAST:CURT JAFFEE, 800-356-6646 (PHONE), CJAFFE@DURO-LAST.COM
6	STONE WALL	BORAL - VERSETTA STONE	TIGHT CUT - " PLUM CREEK"	OWENS CORNING	IDAHO DRYSTACK, CARMEL MOUNTAIN FULLY TOOLED GROUT	VERSETTA STONE WALL: ASHLEY JOYCE 770-645-4531 ALTERNATE: CORONADO: 1-800-847-8663
7	STOREFRONT WINDOWS	TBD	" DARK BRONZE"			
8	PIPE BOLLARDS	STREET SMART	YELLOW - 1/4" THCIK PLASTIC COVER (US.POSTMAN.COM) OR EQUAL			
9	PARAPET BACK ROOFING	DUROLAST	THE COLOR SHALL BE FACTORY COLORED "TAN." EQUAL ALTERNATE ALLOWED.			DURO-LAST: LEE COBB, 800-434-3876 (PHONE)

EXTERIOR FINISH SCHEDULE H

1. BUILDING SIGN, SEE SCOPE OF WORK.
2. DRIVE THRU WINDOW. SEE SHEET A1.0 AND A1.1.
3. ROOF BEYOND.
4. STOREFRONT TYPICAL.
5. DOUBLE DOOR.
6. SWITCH GEAR. PAINT TO MATCH WALL.
7. STANDING SEAM METAL CANOPY. SEE DETAIL.
8. LIGHT SCONCE. (CENTER OF BRACKET AT 9'-6").
9. ASSUME D/T LANE SURFACE IS 6" BELOW THE FINISH FLOOR. REFER TO GRADING & SITE PLAN.
10. 2" OYSTER SHELL STUCCO
11. EIFS (TYP). SEE 2 & 4/A6.2.
12. PARAPET COPING. IF DURO-LAST EDGE TRIM IS USED. USE THE DURO-LAST PRE-FINISHED EDGE TRIM. SEE DETAIL 2/A6.0.
13. CO2 FILLER VALVE & COVER. SEE DETAIL 5/A6.2 SIM.
14. EIFS REVEAL JOINT.
15. GAS SERVICE.
16. WALL SHALL BE FINISHED PRIOR TO INSTALLATION OF SWITCHGEAR.
17. SCUPPER, COLLECTOR, AND VERTICAL DOWNSPOUT 6" MIN. PAINT TO MATCH ADJACENT WALL.
18. SPANDREL GLASS
19. RTU BEYOND. PAINT TO MATCH MAIN BUILDING COLOR.
20. BREAK METAL COVER OVER WOOD STUDS TO MATCH STOREFRONT. SEE 3,4 & 7/A6.1
21. HIGH IMPACT E.I.F.S. WHERE SHOWN ON ELEVATIONS. TOP EXTENT AT 5'-0". SEE 2/A6.2.
22. ALUMINUM SLAT WALL BY VENDOR.
23. BOLLARD
24. EIFS TRANSITION. SEE DETAIL 7/A6.2 (SIM.)
25. EXTEND FRAMING FOR BUMP-OUT DOWN TO ROOF. USE DETAIL 7/A6.2 FOR EIFS TRANSITION.
26. DUROLAST SINGLE MEMBRANE ROOFING OR EQUAL.
27. IF THE DURO LAST PARAPET CAP TRIM IS USED IT SHALL NOT BE PAINTED.
28. OVERFLOW DRAIN.
29. HOSE BIBB. SEE DETAIL 8/A6.2.
30. NOT USED

KEY NOTES D

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CONSULTANT'S SEAL

CONTRACT DATE: XX.XX.XX
BUILDING TYPE: LIVE MAS LARGE40
PLAN VERSION: SEPT 2014
SITE NUMBER: XXX-XXX
STORE NUMBER: XXXXX

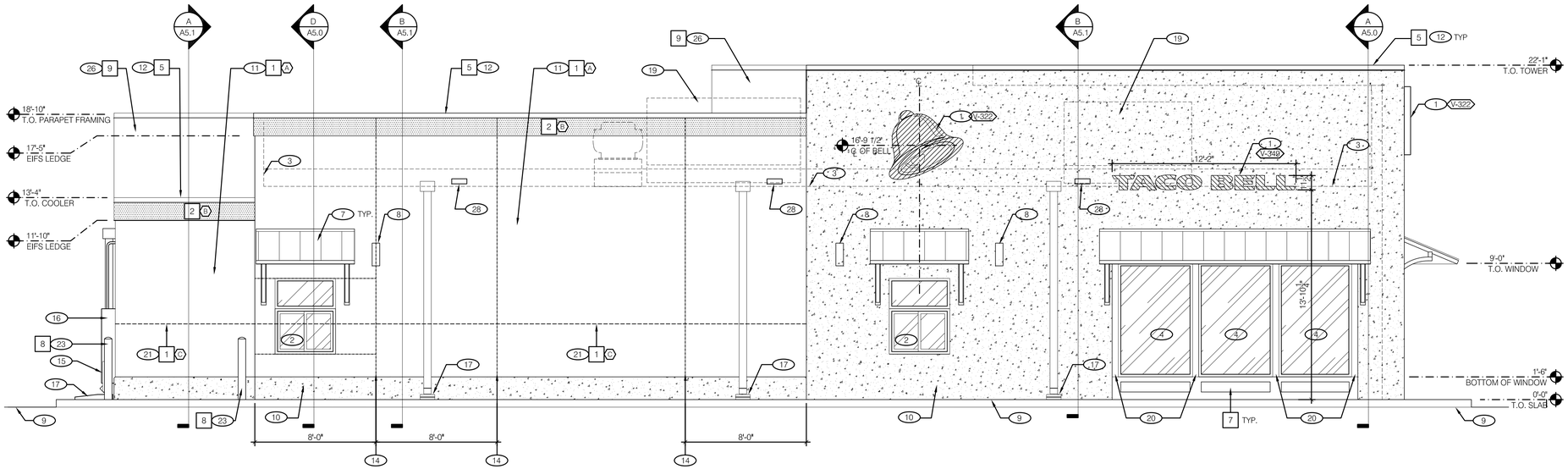
TACO BELL
209 ROBERT SMALLS PKWY.
BEAUFORT, SC, USA 29902

LIVE MAS
LARGE40

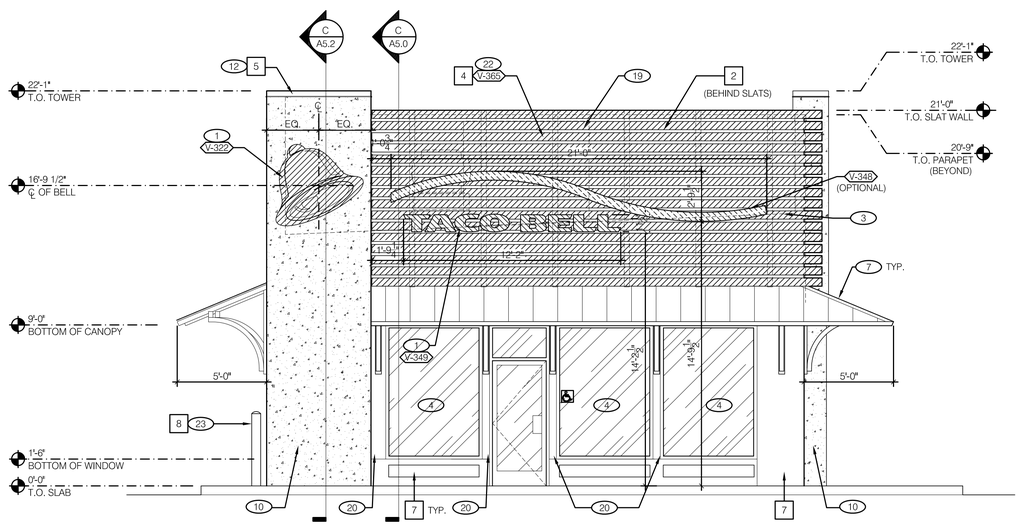
EXTERIOR ELEVATIONS

A4.0

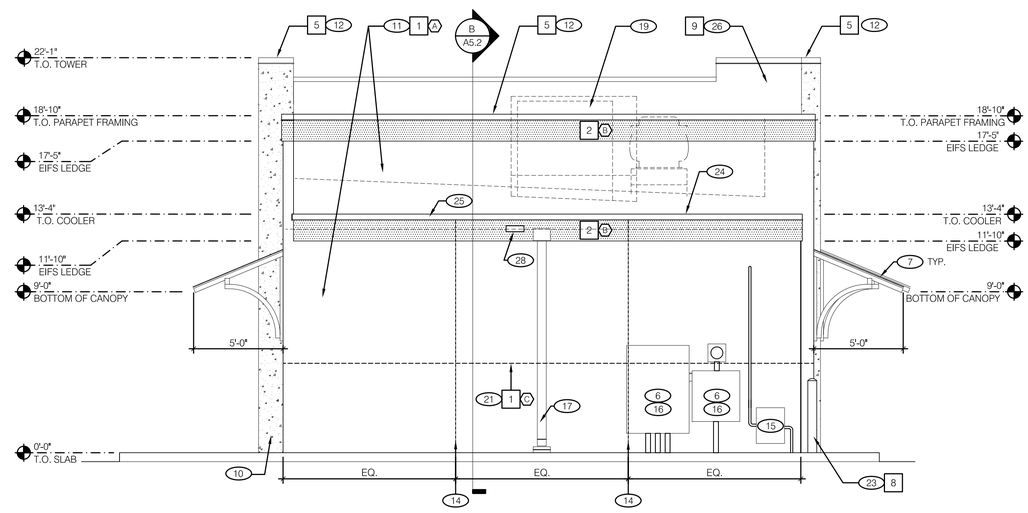
PLOT DATE:



LEFT SIDE ELEVATION 1/4" = 1'-0" | **A**



FRONT ELEVATION 1/4" = 1'-0" | **C**



REAR ELEVATION 1/4" = 1'-0" | **B**

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CONSULTANT'S SEAL

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TACO BELL

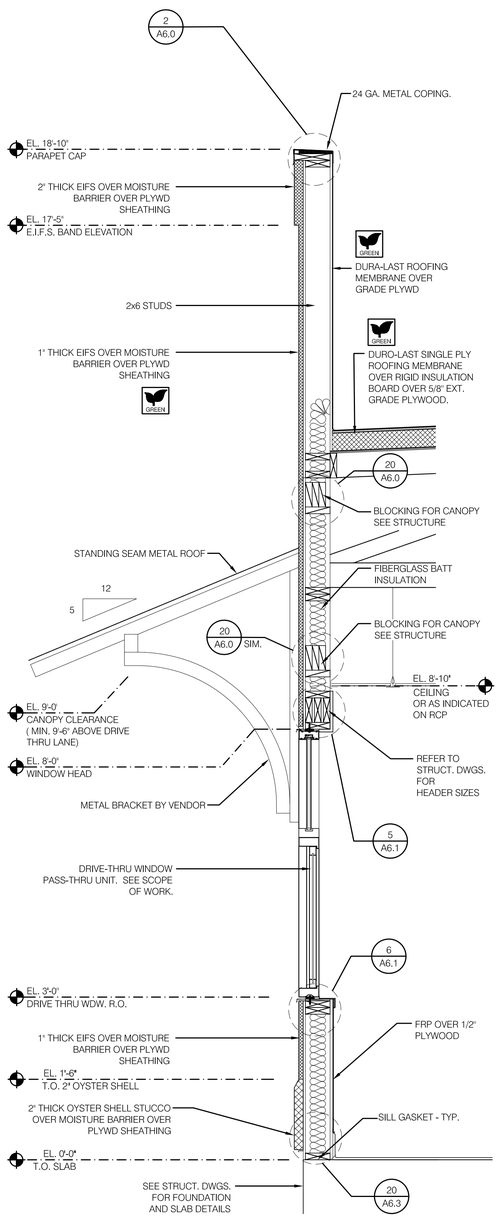
209 ROBERT SMALLS PKWY.
BEAUFORT, SC, USA 29902

LIVE MAS
LARGE40

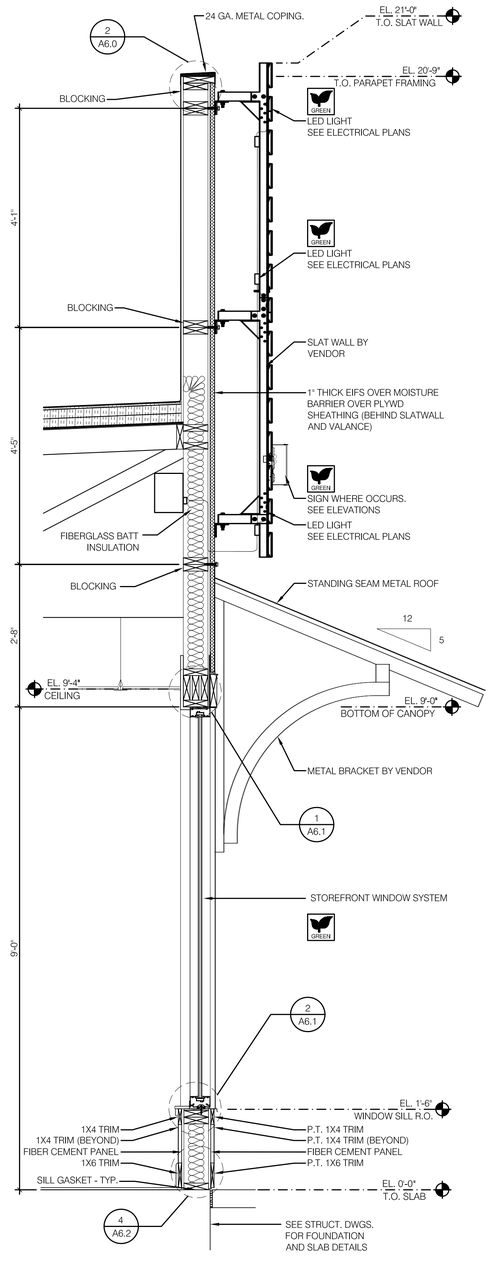
EXTERIOR ELEVATIONS

A4.1

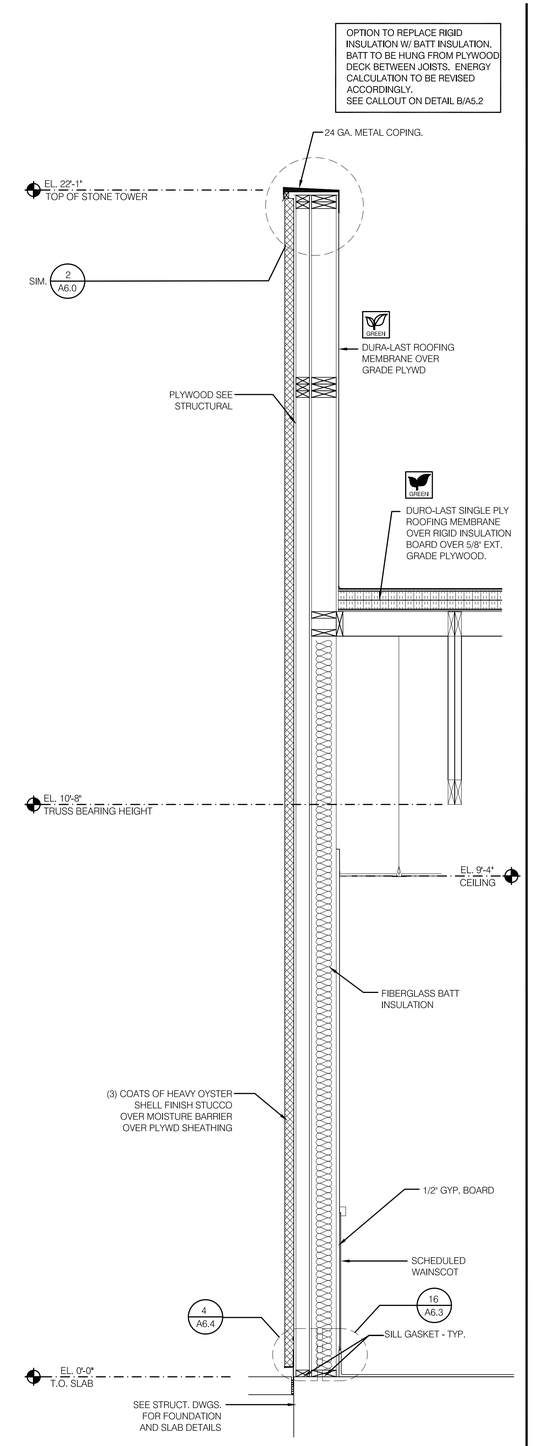
PLOT DATE:



WALL SECTION AT DRIVE THRU 3/4" = 1'-0" **D**



WALL SECTION AT DINING - ENTRY SIDE 3/4" = 1'-0" **C**



SECTION AT DINING - DRIVE THRU SIDE TOWER 3/4" = 1'-0" **A**

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TACO BELL

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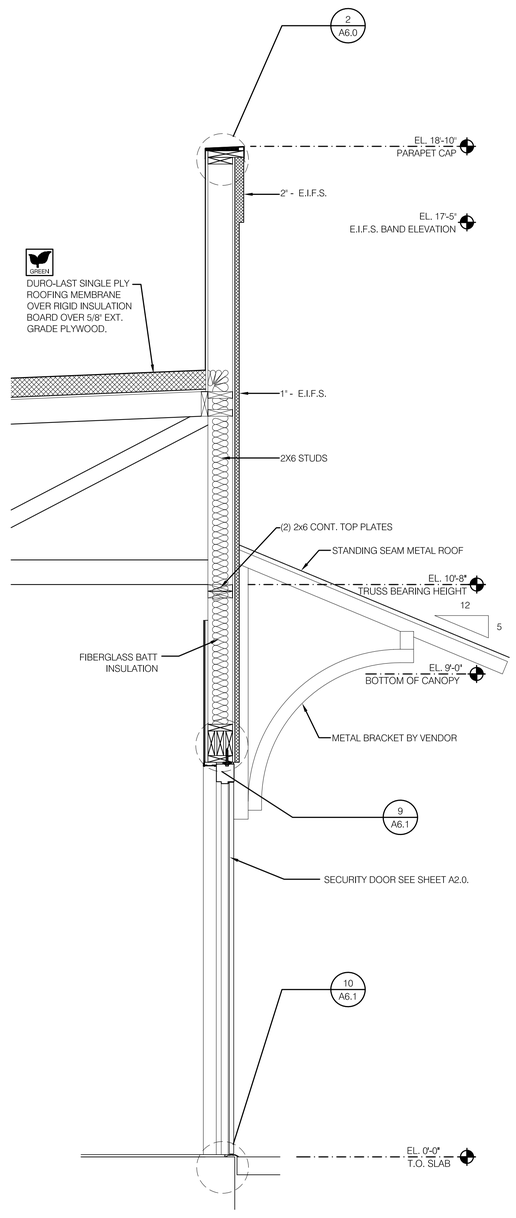
LIVE MAS
LARGE40

WALL SECTIONS

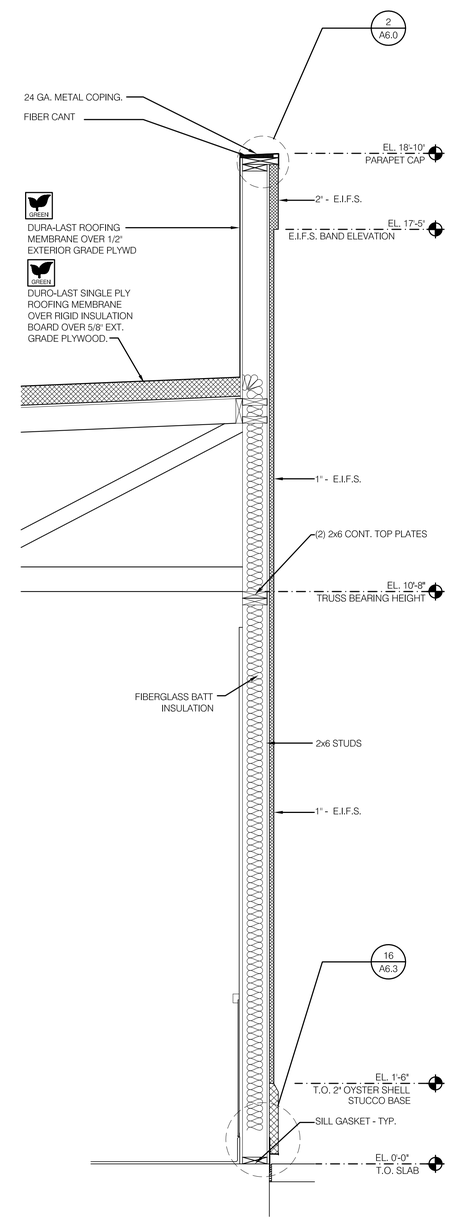
A5.0

PLOT DATE:



WALL SECTION AT SERVICE DOOR 3/4" = 1'-0" **C**

OPTION TO REPLACE RIGID INSULATION W/ BATT INSULATION. BATT TO BE HUNG FROM PLYWOOD DECK BETWEEN JOISTS. ENERGY CALCULATION TO BE REVISED ACCORDINGLY.
SEE CALLOUT ON DETAIL B/A5.2



TYPICAL WALL SECTION 3/4" = 1'-0" **A**

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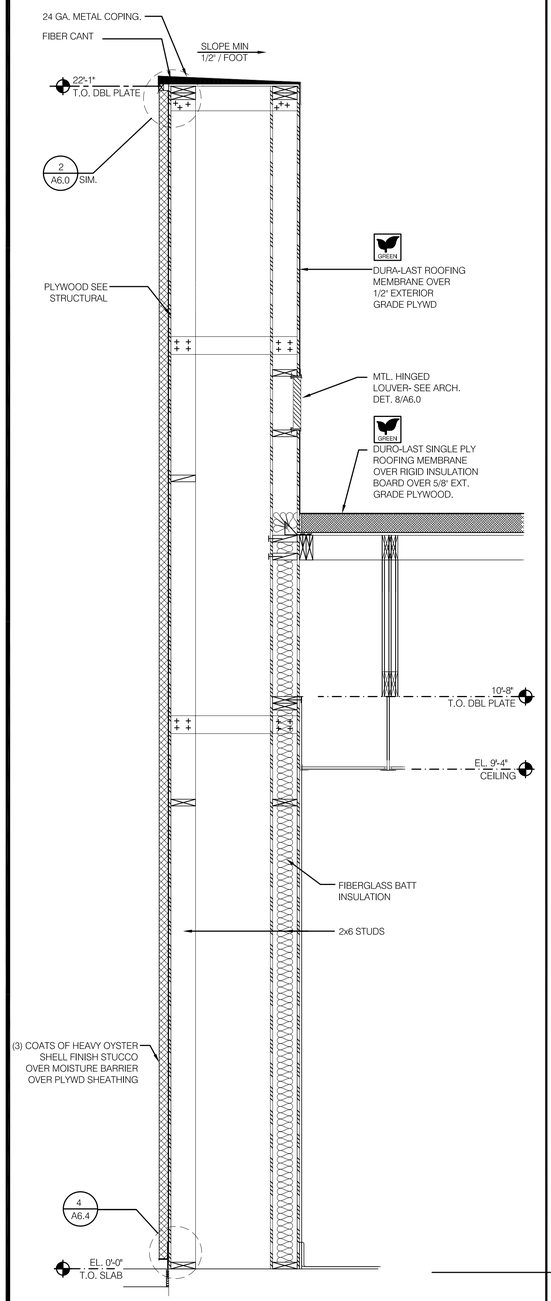
LIVE MAS
LARGE40

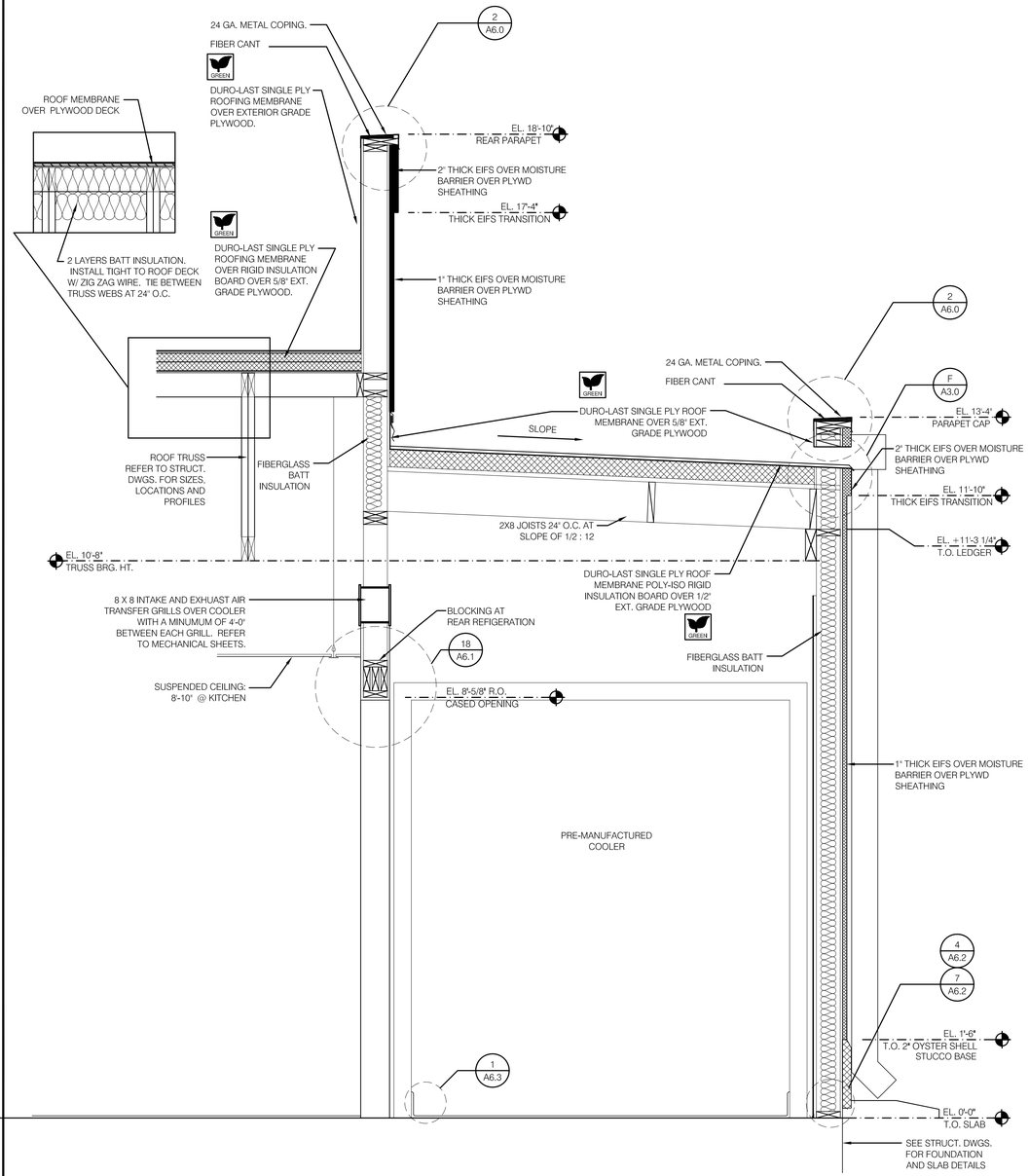
WALL SECTIONS

A5.1

PLOT DATE:

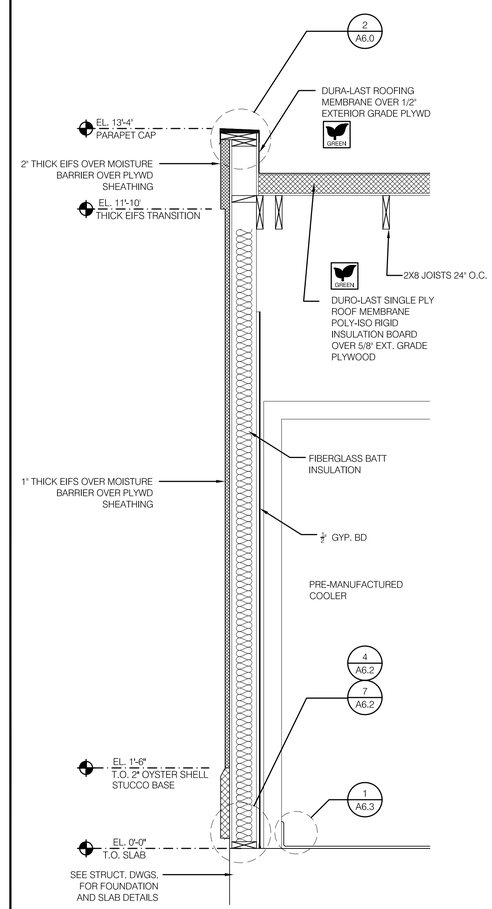


FRONT WALL SECTION 3/4" = 1'-0" **C**



REAR WALL SECTION AT COOLER 3/4" = 1'-0" **B**

OPTION TO REPLACE RIGID INSULATION W/ BATT INSULATION. BATT TO BE HUNG FROM PLYWOOD DECK BETWEEN JOISTS. ENERGY CALCULATION TO BE REVISED ACCORDINGLY.
SEE CALLOUT ON DETAIL B/A5.2



WALL SECTION AT COOLER 3/4" = 1'-0" **A**

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Beaufort SC. 29902
(843) 986-0559
www.allisonramseyarchitect.com

CONSULTANT'S SEAL

CONTRACT DATE:	XX.XX.XX
BUILDING TYPE:	LIVE MAS LARGE40
PLAN VERSION:	SEPT 2014
SITE NUMBER:	XXX-XXX
STORE NUMBER:	XXXXX

TACO BELL

209 ROBERT SMALLS PKWY.
BEAUFORT, SC, USA 29902

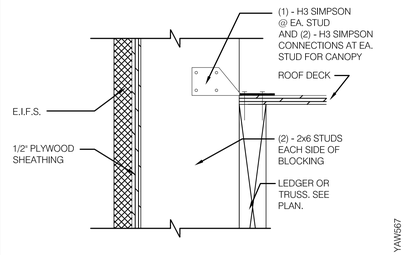
TACO BELL

LIVE MAS
LARGE40

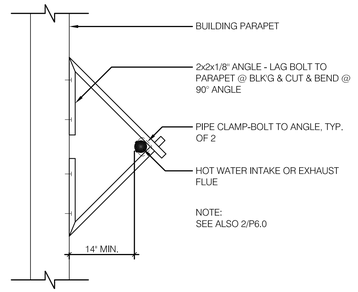
WALL SECTIONS

A5.2

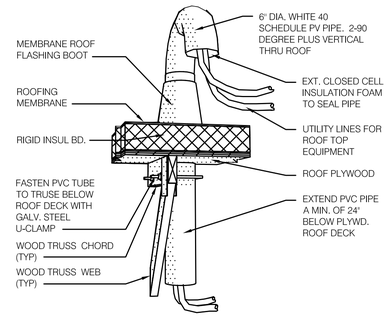
PLOT DATE:



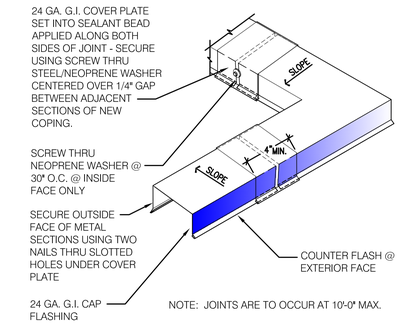
CON. @ STUD AND @ BLOCKING 3" = 1'-0" **17**



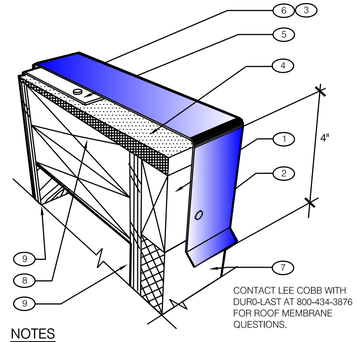
W.H. FLU / INTAKE PIPE SUPPORT N.T.S. **13**



PIPE HOOD N.T.S. **9**



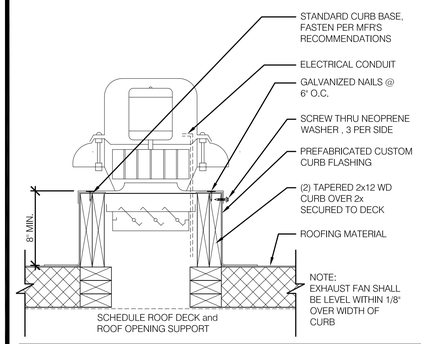
COPING JOINT N.T.S. **5**



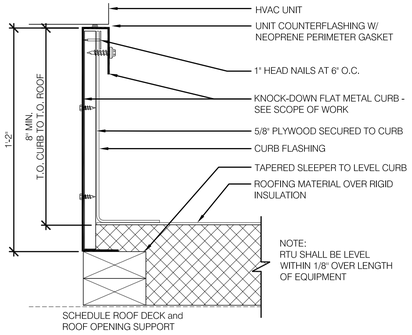
NOTES

1. PROVIDE A WOOD NAILER TO MATCH THE THICKNESS OF THE WALL FINISH. APRROX. 1" THICK IS TYPICAL BUT MAY VARY. TOP OF WOOD NAILER SHALL BE FLUSH WITH TOP OF WALL FINISH. THE WOOD NAILER SHALL EXTEND AT LEAST 1/2" INCH BEYOND THE LOWER HORIZONTAL EDGE OF THE PARAPET COPING TO ALLOW FOR PROPER FASTENING.
2. FASTENERS USED TO ATTACH THE COPING TO WOOD NAILERS, MUST BE SPACED NO GREATER THAN 18 - INCHES ON-CENTER.
3. ALLOW FOR 1/8 - INCH EXPANSION GAP BETWEEN 10-FOOT LENGTHS OF COPING. PROVIDE A COPING JOINT COVERS BETWEEN ENDS OF COPING PIECES AND AT CORNERS. JOINT COVERS SHOULD BE MADE FROM THE SAME MATERIAL AS THE COPING AND SHOULD LAP THE JOINTS A MINIMUM OF 6" ON EITHER SIDE. JOINT COVERS SHALL BE FASTENED THE SAME WAY AS THE COPING.
4. FIBER CANT STRIP SLOPED 1/4;12 TOWARDS ROOF..
5. ROOF MEMBRANE
6. FACTORY PAINTED 24 GAUGE METAL COPING WITH 4" DROP FRONT, BACK AND ENDS (WHERE SHOWN).
7. WALL FINISH: TYPICALLY 1" THK EIFS OR 7/8" THK STUCCO
8. DOUBLE 2X TOP PLATE
9. PLYWOOD SUBSTRATE. SEE SHEET A1.0 & S2.0 FOR ADDITIONAL DETAILS

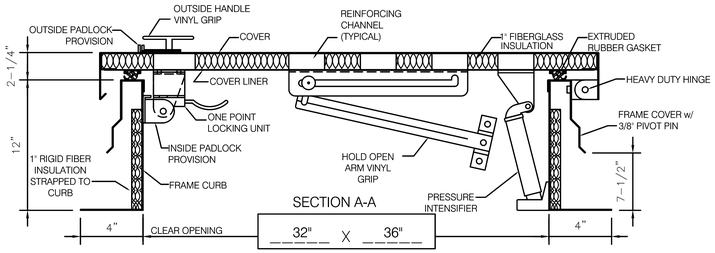
PARAPET CAP N.T.S. **2**

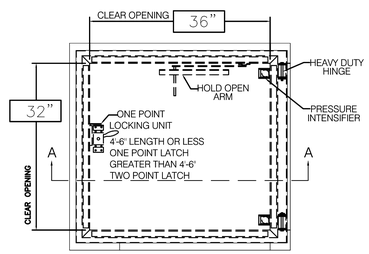


EXHAUST FAN CURB 1-1/2" = 1'-0" **18**



HVAC CURB 3"=1'-0" **14**





HATCH MATERIAL:

GALVANIZED STEEL (PRIME PAINTED)
COVER - 14 GA. GALV STEEL
FRAME COVER - 14 GA. GALV STEEL
FRAME CURB - 14 GA. GALV STEEL
COVER LINER - 22 GA. GALV STEEL

HATCH FINISH:

GALV - PRIME PAINTED

MANUFACTURER:

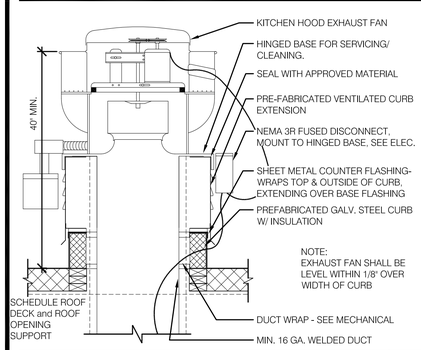
PRECISION LADDERS, LLC OR EQUAL

NOTES:

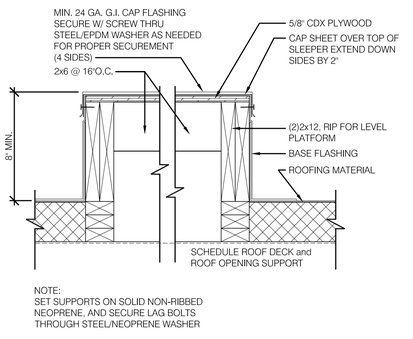
(1) ALL MOUNTING HARDWARE TO BE SUPPLIED BY OTHERS.
(2) FOR OPERATING EFFICIENCY, HATCH HARDWARE VARIES BY SIZE.

EXAMPLE MODEL#: PH- A/G OPENING SIZE IN FEET-INCHES (PH-G2630)

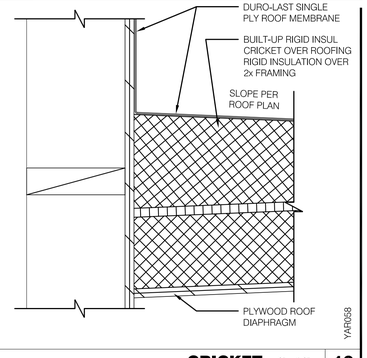
ROOF LADDER AND HATCH 1"=1'-0" **7**



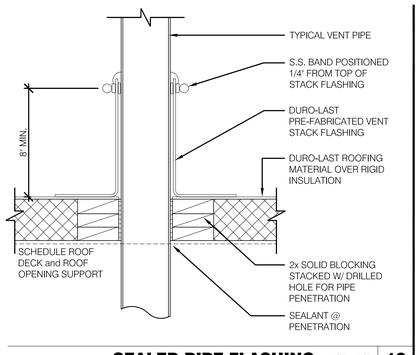
EXHAUST FAN CURB N.T.S. **19**



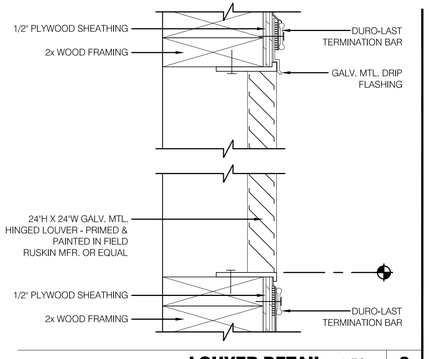
SLEEPER SUPPORT 1-1/2"=1'-0" **15**



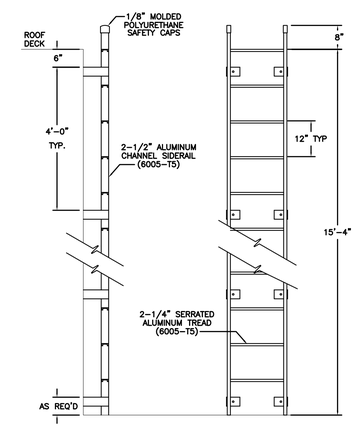
CRICKET 3"=1'-0" **16**

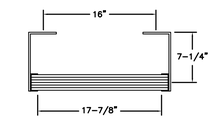


SEALED PIPE FLASHING 1 1/2"=1'-0" **12**

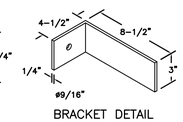


LOUVER DETAIL N.T.S. **8**





PLAN



BRACKET DETAIL

ROOF LADDER N.T.S. **4**

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CONSULTANT'S SEAL

CONTRACT DATE:	XX.XX.XX
BUILDING TYPE:	LIVE MAS LARGE40
PLAN VERSION:	SEPT 2014
SITE NUMBER:	XXX-XXX
STORE NUMBER:	XXXXX

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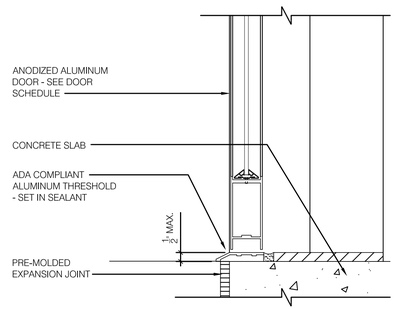
BEAUFORT, SC, USA 29902

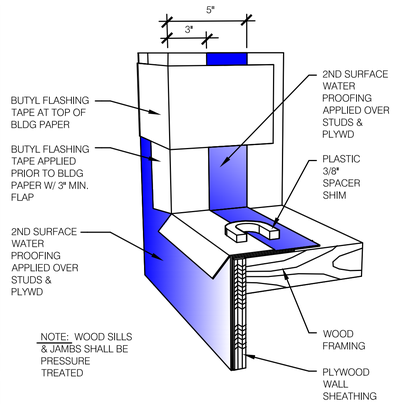
LIVE MAS
LARGE40

CONSTRUCTION DETAILS
ROOF
A6.0

PLOT DATE:



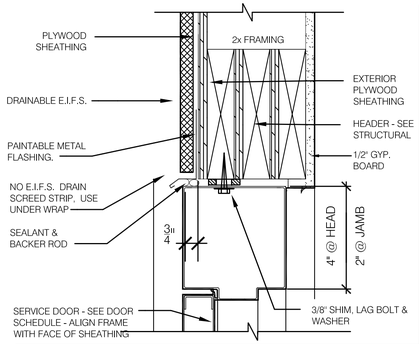
STOREFRONT DOOR SILL 3"=1'-0" **17**



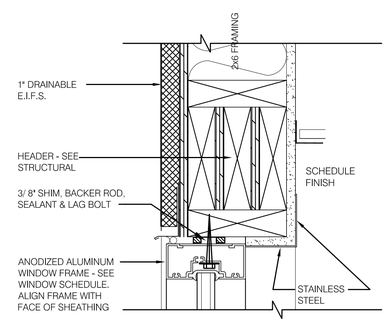
NOTE: WOOD SILLS & JAMBS SHALL BE PRESSURE TREATED

WATER PROOFING ROUGH OPENING

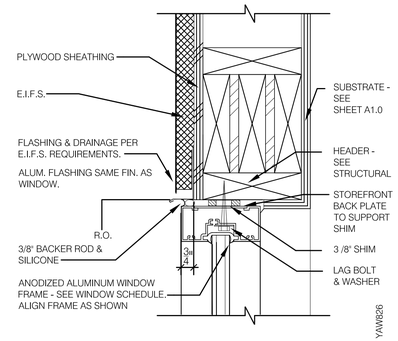
AFTER FRAMING 2ND SURFACE WATER PROOFING PER EIFS MANUFACTURER. ADD FLASHING TAPE AROUND THE ROUGH OPENING FOR THE WINDOW AND DOOR OPENING



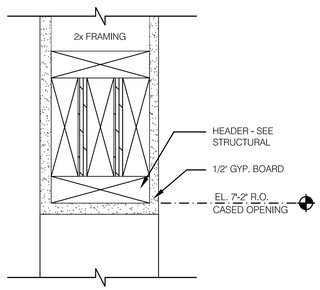
HEAD / JAMB @ SERVICE DOOR 3"=1'-0" **9**



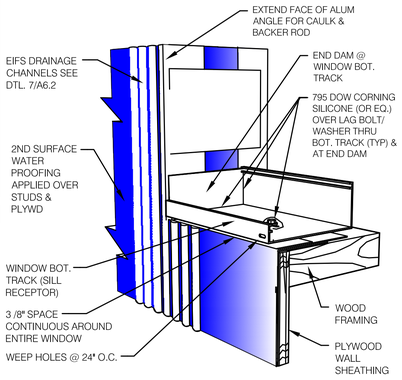
WINDOW HEAD @ DRIVE THRU 3" = 1'-0" **5**



TYPICAL WINDOW HEAD 3" = 1'-0" **1**

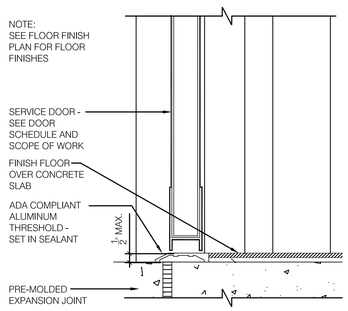


CASED OPENING DETAIL 3"=1'-0" **18**

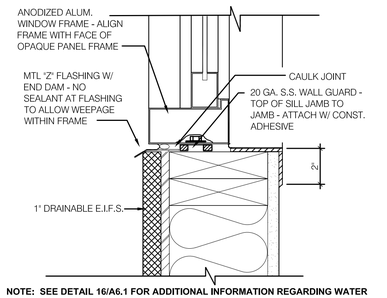


ADD SILL RECEPTOR AND END DAM

THIS DIAGRAM SHOWS THE APPLICATION OF SILL RECEPTOR AND VERTICAL EIFS ADHESIVE DRAINAGE CHANNELS. USE 100% PURE ISOPROPYL ALCOHOL TO CLEAN METAL SURFACE PRIOR TO APPLYING SILICONE.

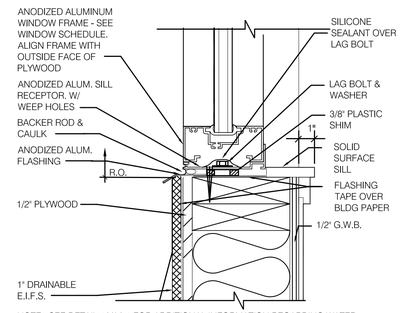


THRESHOLD @ SERVICE DOOR 3"=1'-0" **10**



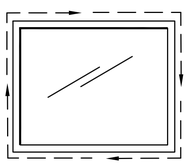
NOTE: SEE DETAIL 16/A6.1 FOR ADDITIONAL INFORMATION REGARDING WATER PROOFING AT AND NEAR WINDOWS / DOORS

WINDOW SILL @ DRIVE THRU 3"=1'-0" **6**



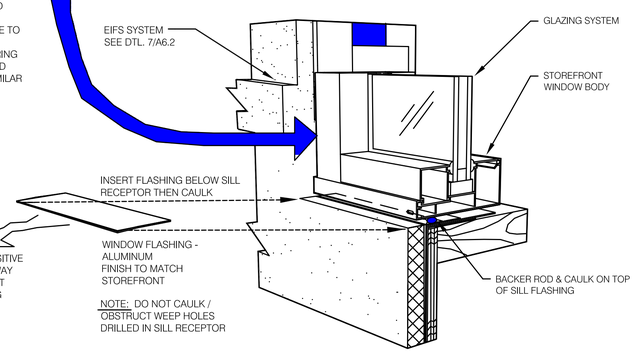
NOTE: SEE DETAIL 16/A6.1 FOR ADDITIONAL INFORMATION REGARDING WATER PROOFING AT AND NEAR WINDOWS / DOORS

TYPICAL WINDOW SILL 3"=1'-0" **2**



WINDOW ELEVATION

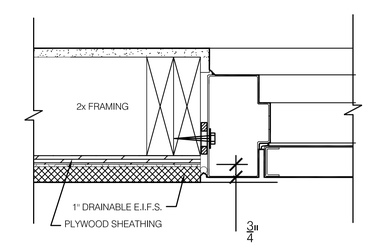
NOTE: THERE SHOULD BE A 3 /8" SPACE AROUND THE ENTIRE WINDOW FRAME TO ALLOW FOR A CONTINUOUS RING OF BACKER ROD AND CAULK SIMILAR TO A TYPICAL GASKET ON A BOTTLE TOP.



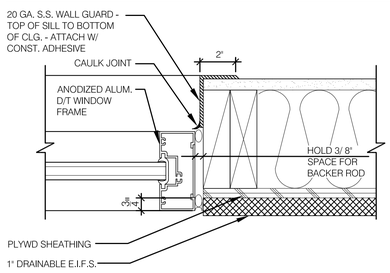
COMPLETING WINDOW SYSTEM

SET STOREFRONT WINDOW, APPLY EIFS SYSTEM AND THEN ADD WINDOW FLASHING OVER TOP OF EIFS AT WINDOW SILL

TYPICAL WINDOW WALL WATER PROOFING **16**

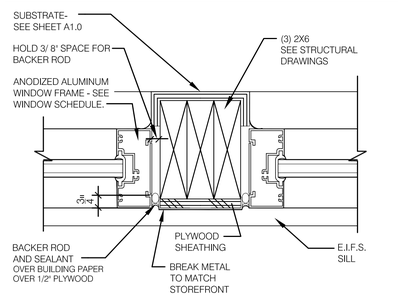


E.I.F.S. JAMB @ SERVICE DOOR 3"=1'-0" **11**



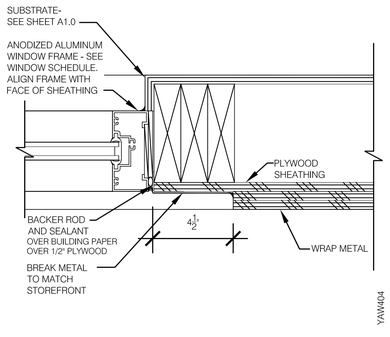
NOTE: SEE DETAIL 16/A6.1 FOR ADDITIONAL INFORMATION REGARDING WATER PROOFING AT AND NEAR WINDOWS / DOORS

WINDOW JAMB @ DRIVE THRU 3"=1'-0" **7**

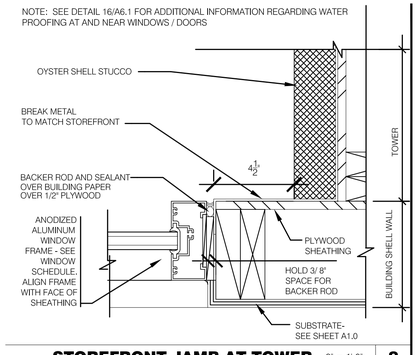


NOTE: SEE DETAIL 16/A6.1 FOR ADDITIONAL INFORMATION REGARDING WATER PROOFING AT AND NEAR WINDOWS / DOORS

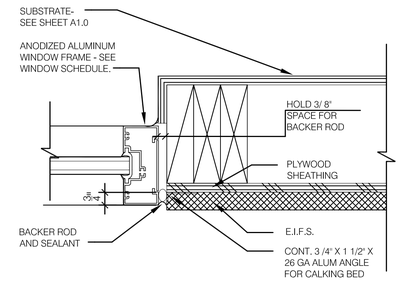
STOREFRONT JAMB DETAIL 3" = 1'-0" **3**



STOREFRONT JAMB DETAIL 3" = 1'-0" **12**



STOREFRONT JAMB AT TOWER 3" = 1'-0" **8**



NOTE: SEE DETAIL 16/A6.1 FOR ADDITIONAL INFORMATION REGARDING WATER PROOFING AT AND NEAR WINDOWS / DOORS

TYPICAL WINDOW JAMB 3"=1'-0" **4**

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Beaufort SC, 29902
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www.allisonramseyarchitect.com

CONSULTANT'S SEAL

CONTRACT DATE:	XX.XX.XX
BUILDING TYPE:	LIVE MAS LARGE40
PLAN VERSION:	SEPT 2014
SITE NUMBER:	XXX-XXX
STORE NUMBER:	XXXXX

TACO BELL

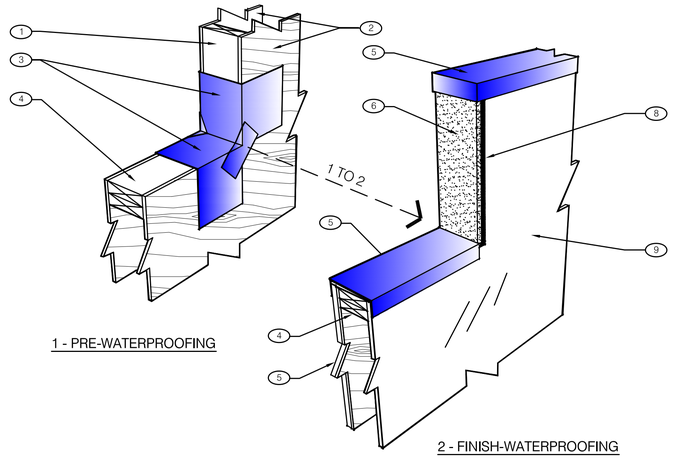
209 ROBERT SMALLS PKWY.
BEAUFORT, SC, USA 29902

LIVE MAS
LARGE40

CONSTRUCTION DETAILS DOOR/WINDOW

A6.1

PLOT DATE:

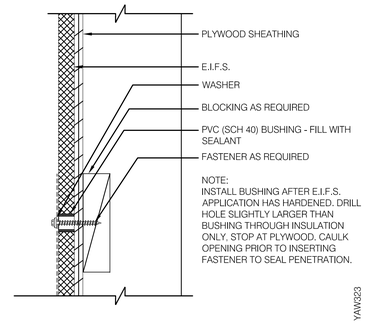


NOTES

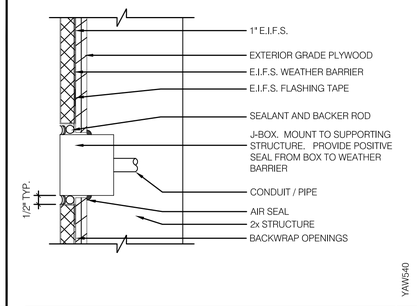
1. 2X WOOD STUDS
2. PLYWOOD SUBSTRATE FOR EXTERIOR WALLS
3. FLASHING TAPE AT ALL VERTICAL PARAPET TRANSITIONS. EXTEND TAPE 12" OUTWARD AND UPWARD FROM CORNER AS SHOWN. LAP CORNERS WITH ANGLED TAPE AS SHOWN TO INSURE FULL COVERAGE AT CORNERS
4. DOUBLE 2X TOP PLATE.
5. PAINTED 24 GAUGE PARAPET COPING. SLOPE 1/4:1 TOWARDS ROOF WITH FIBER CANT STRIPS UNDER COPING. LAP FRONT AND BACK EDGE 2" DOWN VERTICAL FACE. LAP EXPOSED COPING EDGE EXPOSED ENDS AT VERTICAL PARAPET TRANSITION.
6. WRAP 1" THICK EIFS ONTO VERTICAL FACE OF PARAPET TRANSITION
7. EIFS FINISH ON OUTER SURFACE OF EXTERIOR WALL. THICKNESS PER THE EXTERIOR ELEVATIONS ON SHEET A4.0
8. TERMINATION BAR AT VERTICAL TRANSITION OF EIFS AND MEMBRANE ROOFING. SEAL VERTICAL GAP BETWEEN TERMINATION BAR AND EIFS PER ROOFING MANUFACTURER SPECIFICATIONS.
9. PVC ROOFING MEMBRANE ON BACKSIDE OF PARAPET.

IMPORTANT: ONLY FASTEN PARAPET COPING ALONG THE FRONT AND BACK VERTICAL EDGE. NEVER ON TOP OF COPING.

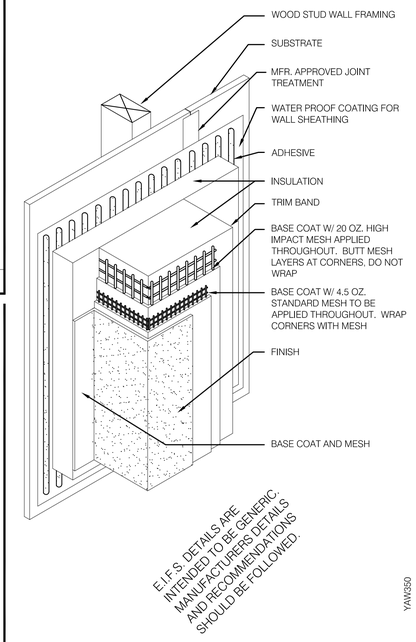
PARAPET CAP & TRANSITION N.T.S. **14**



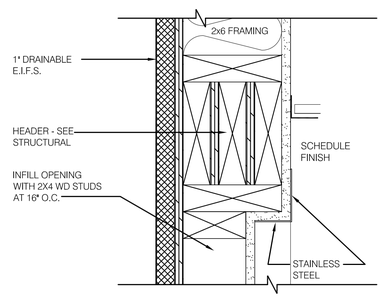
CONNECTION THRU EIFS 3" = 1'-0" **9**



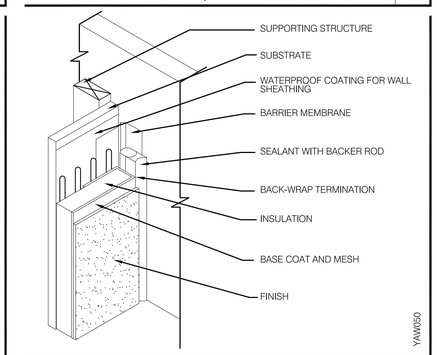
CO2 FILL / J-BOX IN EIFS 3" = 1'-0" **5**



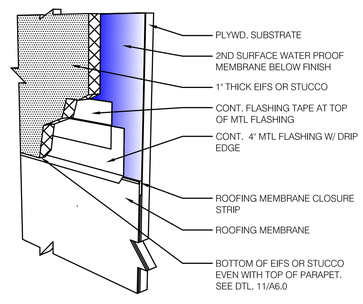
TYP. E.I.F.S. TRIM HIGH-IMPACT N.T.S. **2**



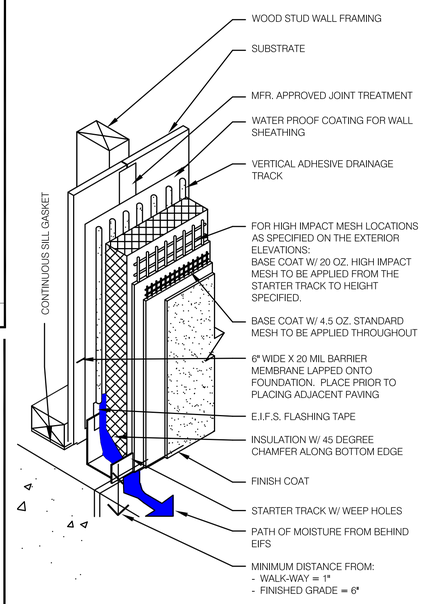
WINDOW HEAD @ PRE-PAY 3" = 1'-0" **10**



TYP. E.I.F.S. @ INSIDE CORNER N.T.S. **6**

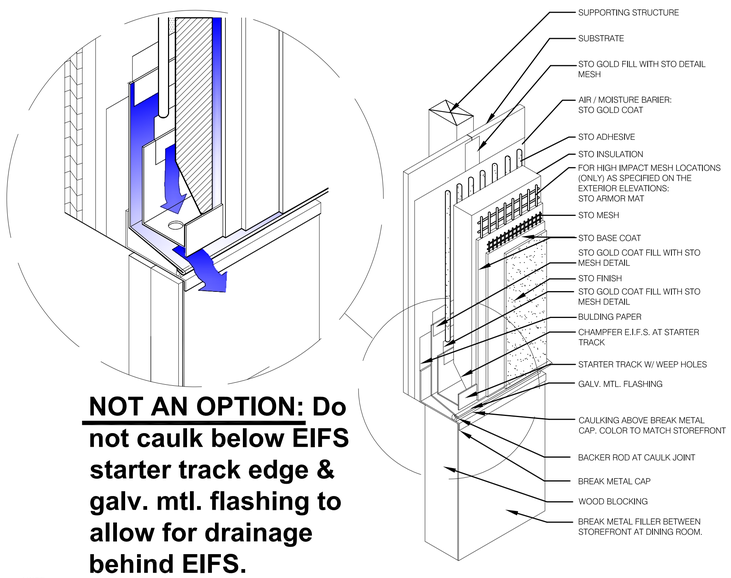


E.I.F.S. TO BASE FLASHING N.T.S. **7**



TYP. E.I.F.S. BASE TERMINATION N.T.S. **4**

NOT USED N.T.S. **20**

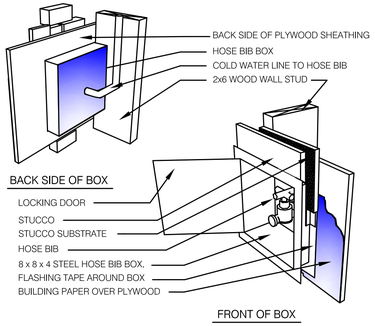


NOT AN OPTION: Do not caulk below EIFS starter track edge & galv. mtl. flashing to allow for drainage behind EIFS.

NOTE:
E.I.F.S. DETAILS ARE INTENDED TO BE GENERIC. MANUFACTURER'S DETAILS AND RECOMMENDATIONS SHOULD BE FOLLOWED. REFER TO SECTION 07240 OF THE SPECIFICATIONS MANUAL.

E.I.F.S FLASHING AT TOP OF BREAK METAL **12**

NOTE: HOSE BIB BOX SHALL BE ACUDOR-ARVB OR EQUAL



HOSE BIB BOX N.T.S. **8**

ALLISON RAMSEY Architects Inc. creating sustainable timeless design
1003 Charles St.
Beaufort SC, 29902
(843) 986-0559
www.allisonramseyarchitect.com

CONSULTANT'S SEAL

CONTRACT DATE: XX.XX.XX
BUILDING TYPE: LIVE MAS LARGE40
PLAN VERSION: SEPT 2014
SITE NUMBER: XXX-XXX
STORE NUMBER: XXXXX

TACO BELL

209 ROBERT SMALLS PKWY.
BEAUFORT, SC, USA 29902

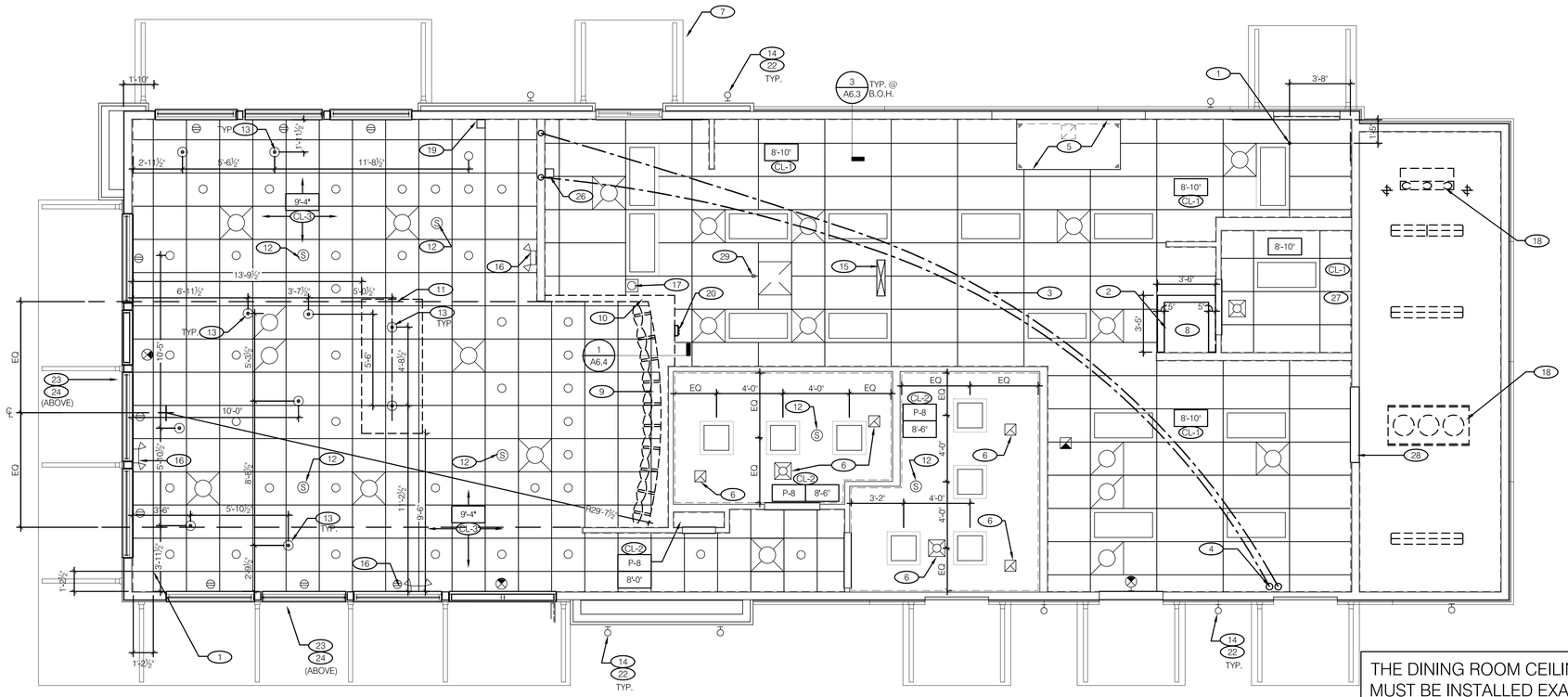
TACO BELL

LIVE MAS
LARGE40

CONST. DETAILS WALL

A6.2

PLOT DATE:



THE DINING ROOM CEILING GRID LOCATION MUST BE INSTALLED EXACTLY AS SHOWN IN ORDER TO AVOID CONFLICTS BETWEEN THE TRUSSES AND THE DIFFUSERS

REFLECTED CEILING PLAN 1/4"=1'-0" A

NOT USED 1/4"=1'-0" F

CEILING SYMBOL LEGEND E

- 2'-0" x 2'-0" LED TROFFER
- 2'-0" x 4'-0" T-GRID LED TROFFER
- DOWNLIGHT @ WALK-IN (BY WALK-IN MFR.)
- SUSPENDED DOWNLIGHT AT OPEN TRUSS
- PENDANT FIXTURE
- DOWNLIGHT
- EMERGENCY LIGHTS
- EXIT LIGHT (WALL MOUNTED)
- EXIT LIGHT (CEILING MOUNTED)
- PENDANT OR DIRECTIONAL FIXTURE, TRACK MOUNTED
- EXTERIOR WALL FIXTURE
- SPEAKER
- 12" EXHAUST FAN
- HVAC RETURN GRILLE
- HVAC SUPPLY DIFFUSER
- HVAC SUPPLY DIFFUSER
- HVAC PERFORATED SUPPLY DIFFUSER
- BACK DOOR SECURITY STROBE LIGHT
- EXTERIOR CANOPY FLUORESCENT LIGHT

REFLECTED CEILING PLAN NOTES D

DIMENSIONS:
A. ALL DIMENSIONS ARE TO FACE OF FINISH U.O.N.

CEILING FINISHES:
A. REFER TO ROOM FINISH SCHEDULE (SHT A7.2) FOR CLG. FINISHES.

SUSPENDED CEILING:
A. ACOUSTICAL PANEL INSTALLATION: INSTALL ACOUSTICAL PANELS WITH EDGES IN CLOSE CONTACT WITH METAL SUPPORTS AND IN TRUE ALIGNMENT.
B. ALLOWABLE VARIATIONS FROM FLAT AND LEVEL SURFACE: 1/8" IN 10'-0" MAX.
C. ALLOWABLE VARIATIONS FROM PLUMB OF GRID MEMBERS: AS CAUSED BY ECCENTRIC LOADS, 2° MAX.
D. INSTALL SYSTEM AFTER MAJOR ABOVE CLG. WORK IS COMPLETE. COORD LOCATIONS OF HANGERS WITH RELATED WORK.
E. SEE SPECS FOR ADDITIONAL INFORMATION.

GYPSUM BOARD CEILING:
A. SUBSTRATE SHALL BE 1/2" THICK GYP BD.
B. ACOUSTICAL SEALANT: APPLY TO GYP. BD. PANELS AS INDICATED IN SPECS. GYP. BD. FINISHING AND DECORATING: REFER TO DWGS FOR TEXTURE AND FINISHES.

ELECTRICAL:
A. SEE ELECT. DWGS. FOR FIXTURE SCHED.

KEY NOTES B

1. CEILING GRID STARTING POINT.
2. BULKHEAD @ 8'-0" A.F.F.
3. NON-INSULATED BUNDLED SYRUP LINES FOR DRINK SYSTEM. SEE SCOPE OF WORK. SEE DETAIL 17/A6.4.
4. 6" DIA PVC STUB THROUGH CEILING, SEE DETAIL 18/A6.4.
5. HOOD.
6. FOR ROUGH FRAMING OPENINGS SEE AIR DEVICE SCHED. (TYP. AT RESTROOMS).
7. DRIVE THRU CANOPY.
8. ROOF HATCH. SEE 7/A6.0.
9. MENU BOARD. SEE SCOPE OF WORK.
10. MENU BOARD BULKHEAD - BOTTOM OF SOFFIT AT 7'-0" A.F.F. / SEE DETAIL 1/A6.4.
11. PRE-FABRICATED & PRE-FINISHED SOFFIT BY 3RD PARTY VENDOR. PROVIDE CLG. TILES ABOVE SOFFIT. (D-550) (OPTIONAL)
12. SPEAKER. CENTER IN CEILING TILE PANEL.
13. PENDANT LTG - CENTER OVER TABLE TOP (TYP). COORDINATE WITH DECOR FIELD INSTALLATION.
14. EXTERIOR WALL LIGHT FIXTURES, SEE ELEVATIONS AND ELECT. DWGS.
15. UTILITY CHASE BY 3RD PARTY VENDOR TO CEILING.
16. EMERGENCY DUAL HEAD FIXTURE. SEE ELECT. DWGS.
17. SECURITY STROBE LIGHT, REFER TO ELECT. DWGS.
18. FAN COIL FOR WALK-IN.
19. 6" x 6" 18 GA. STAINLESS STEEL CHASE ALONG WALL FOR ICE MACHINE REFRIGERANT LINES: 6" ABOVE CEILING TO TOP OF ICE MACHINE.
20. ALERT LIGHT BOX FOR 3-COMP POWER SOAK MOUNTED AT C.L. OF BOX 7-11" AFF
21. RAISED INDICATED SECTION OF CEILING TO 8'-10".
22. ALIGN LIGHT FIXTURE MOUNTING PLATE AS INDICATED ON ELEVATIONS.
23. DECORATIVE SLAT WALL BY VENDOR. SEE BUILDING ELEVATIONS.
24. 3 ROWS OF LED LIGHTS BEHIND SLAT WALL. SEE BUILDING SECTIONS.
25. NOT USED
26. STAINLESS STEEL SYRUP CHASE ON WALL. SEE DETAIL 19/A6.4.
27. AS-BUILT PLANS ROLLED UP STORED ABOVE CEILING TILES.
28. 30"X30" ACCESS OPENING IN REAR WALL ABOVE CEILING. FIN. WITH DRYWALL.
29. WATER INLET CHASE FOR CHEESE MELTER SCREWED TO HEATED AIR SCREEN

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CONSULTANT'S SEAL

CONTRACT DATE:	XX.XX.XX
BUILDING TYPE:	LIVE MAS LARGE40
PLAN VERSION:	SEPT 2014
SITE NUMBER:	XXX-XXX
STORE NUMBER:	XXXXX

TACO BELL

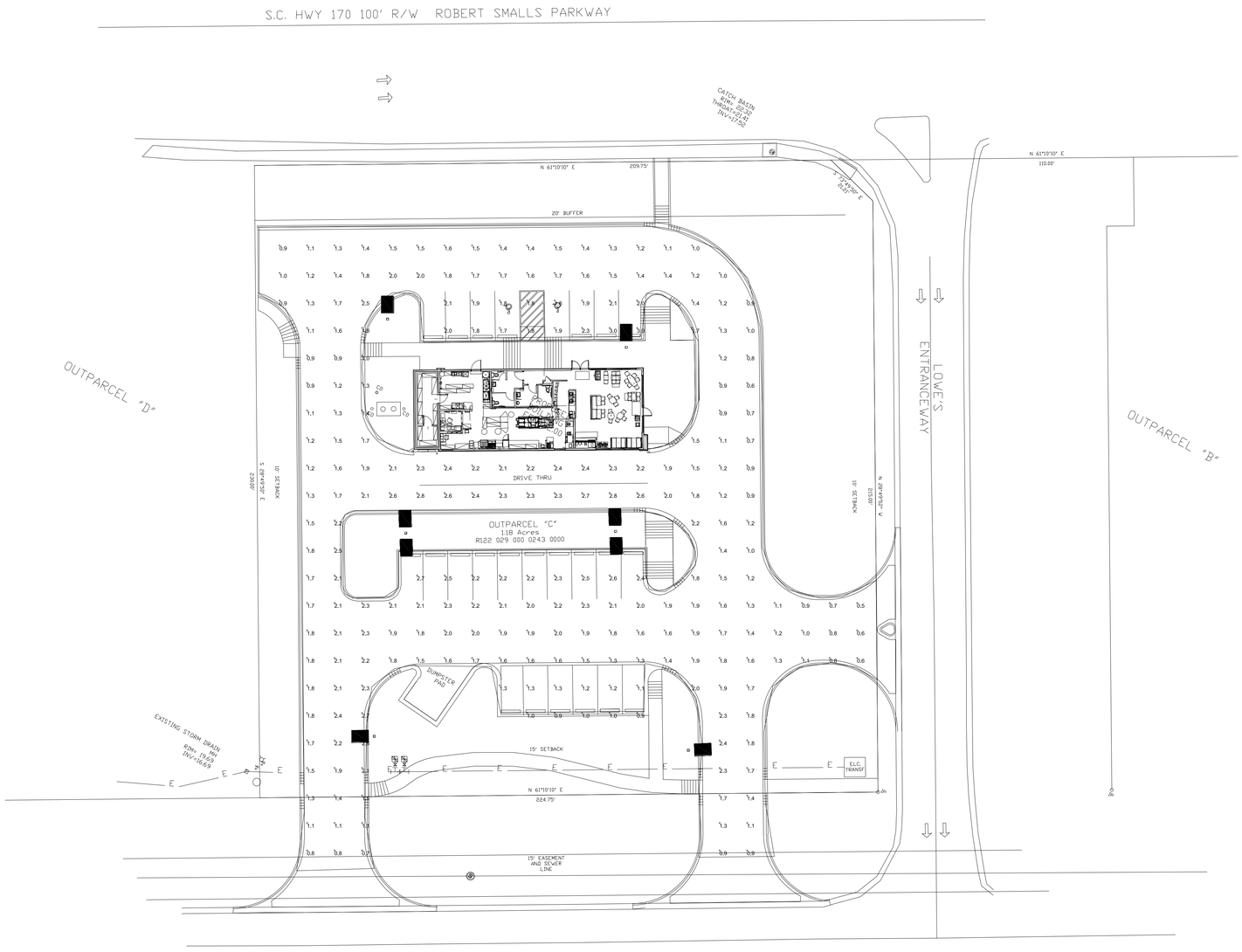
209 ROBERT SMALLS PKWY.
BEAUFORT, SC, USA 29902

LIVE MAS
LARGE40

REFLECTED CEILING PLAN

A7.1

PLOT DATE:



LIGHTS ARE 146 W ATB2 LED SHOEBOXES
ON 25' POLES.
NUMBER=4 SINGLE AND 2 DOUBLE.
STATISTICS:
AVG=1.7 fc
MAX=3.0 fc
MIN=0.5 fc
AVG/MIN=3.4:1

SCE&G
A SCANA COMPANY

TACO BELL
ROBERT SMALLS PKWY

Designer
R. SPROWLS
Date
3/5/2015
Scale
Not to Scale
Drawing No.
REVISION 1
Summary

Consistent with LEED® goals & Green Globes™ criteria for light pollution reduction

Autobahn Series ATB2

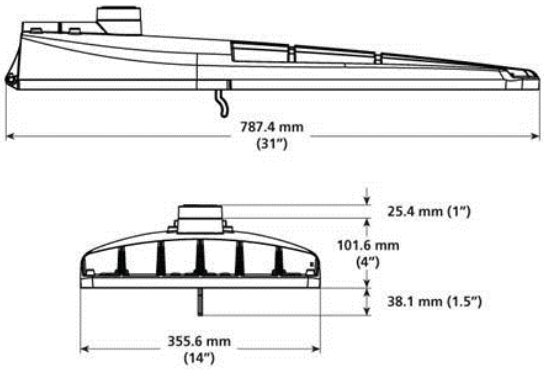
Roadway Lighting

PRODUCT OVERVIEW

Applications:

- Roadways
- Off ramps
- Residental streets
- Parking lots

DIMENSIONS



Effective Projected Area (EPA): The EPA for the ATB2 is .78 sq. ft.
Approx. Wt. = 21 lbs.

Features:

OPTICAL

Same Light: Performance is comparable to 200-400W HPS roadway luminaires.

White Light: Correlated color temperature - standard 4000K, 70 CRI minimum or optional 5000K, 65 CRI minimum.

Unique IP66 rated LED light engines provided 0% uplight and restrict backlight to within sidewalk depth, providing optimal application coverage and optimal pole spacing.

Available in Type II, III, IV, & V roadway distributions.

ELECTRICAL

Expected Life: LED light engines are rated >100,000 hours at 25°C, L70. Electronic driver has an expected life of 100,000 hours at a 25°C ambient.

Lower Energy: Saves an average of 40-50% over comparable HPS platforms.

Robust Surge Protection: Acuity's proprietary SPD provides IEEE/ANSI C62.41 Category C (10kV/5kA) level of protection.

MECHANICAL

Easy to Maintain: Includes standard AEL lineman-friendly features such as tool-less entry, tool-less NEMA photocontrol receptacle, terminal block and quick disconnects. Bubble level located inside the electrical compartment for easy leveling at installation.

Rugged die-cast aluminum housing is polyester powder-coated for durability and corrosion resistance. Rigorous five-stage pre-treating and painting process yields a finish that achieves a scribe creepage rating of 8 (per ASTM D1654) after over 1000 hours exposure to salt fog chamber (operated per ASTM B117) Optional Enhanced Corrosion Resistant finish (CR) increases the salt spray exposure to 5000 hours.

Four-bolt mast arm mount is adjustable for arms from 1-1/4" to 2" (1-5/8" to 2-3/8" O.D.) diameter and provides a 3G vibration rating per ANSI C136.

Wildlife shield is cast into the housing (not a separate piece).

Die-cast trigger latch on doorframe allows for tool-less entry and enables easy and secure opening with one hand.

CONTROLS

NEMA photocontrol receptacle is standard; tool-less "lift and turn" receptacle.

Dimming version (available with DE and VE option) uses proprietary Acuity Brands components to enable continuous 0-10V dimming down to 10% output via the ROAM® smart controls system (sold separately).

Photocontrol for solid-state lighting (available with PCSS and PCLL options) meets ANSI C136.10 criteria.

WARRANTY & STANDARDS

5 year limited warranty. Full warranty terms located at http://www.acuitybrands.com/Libraries/Terms_and_Conds/ABL_LED_Commerical_Outdoor.sflb.ashx

Rated for -40°C to 40°C ambient.

CSA Certified to U.S. and Canadian standards

Autobahn Series ATB2

Roadway Lighting

ORDERING INFORMATION

Example: ATB2 40BLEDE70 MVOLT R2

Series

ATB2	Autobahn LED Roadway, Large

Performance Packages

40BLEDE53	40B Chips, 525 mA Driver
40BLEDE70	40B Chips, 700 mA Driver
40BLEDE10	40B Chips, 1000 mA Driver
60BLEDE53	60B Chips, 525 mA Driver
60BLEDE70	60B Chips, 700 mA Driver
60BLEDE10	60B Chips, 1000 mA Driver
80BLEDE53	80B Chips, 525 mA Driver
80BLEDE70	80B Chips, 700 mA Driver
80BLEDE10	80B Chips, 1000 mA Driver

Voltage

120	120V
MVOLT	Multi-volt, 120-277V
347	347V
480	480V

Optics

R2	Roadway Type II
R3	Roadway Type III
R4	Roadway Type IV
R5	Roadway Type V

Options

Color Temperature (CCT)

(blank)	4000K (standard)
5K	5000K

Mounting

(blank)	4-bolt Internal (standard)

Paint

(blank)	Gray (standard)
GI	Graphite
BK	Black
BZ	Bronze
DDB	Dark Bronze
WH	White
UP	Unpainted

Terminal Block

(blank)	Terminal Block (standard)
T2	Wired to L1 and L2 Position

Misc.

HS	House-Side Shield
BL	External Bubble
CR	Enhanced Corrosion Resistant Finish
NL	Nema Label
XL	Not CSA Listed

Controls

(blank)	3-Pin Photocontrol Receptacle (standard)
NR[1]	No Photocontrol Receptacle
PCSS	Solid State Lighting Photocontrol(120-277V)
PCLL	Solid State Long Life Photocontrol
SH	Shorting Cap
DE[2, 3]	ROAM CONCIERGE Dimming Control
VE[2,3]	ROAMVIEW Dimming control
DM	0V - 10V dimmable driver (controls provided by others)

Notes:

1. Not available with PCSS, PCLL, SH, DE, or VE
2. Specifies a ROAM dimming enabled fixture with a dimming control module factory installed. NEMA photocontrol receptacle required. Addtional hardware and services required ROAM deployment must be purchased seperately
3. 60BLEDE10, 80BLEDE70 AND 80BLEDE10, Not available in 347V or 480V for DE and VE options

American Electric Lighting
An Acuity Brands Company

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American Electric Lighting
Acuity Brands Lighting, Inc.
3825 Columbus Rd. S.W., Granville, OH 43023
Phone: 800-313-2557 option 2
Fax: 740-587-6114
www.americanelectriclighting.com

DESIGN DATA

DESIGN DATA

Performance Package	Drive Current (mA)	Input Watts	Optic	4000K CCT	
				Delivered Lumens	Efficacy (LPW)
40B	525	70	R2	7027	100
	700	94		8975	95
	1000	146		12556	86
	525	70	R3	7106	102
	700	94		9075	97
	1000	146		12642	87
	525	70	R4	7106	102
	700	94		9075	97
	1000	146		12702	87
	525	70	R5	7418	106
	700	94		9474	101
	1000	146		12118	83
60B	525	105	R2	10503	100
	700	140		13374	96
	1000	216		18437	85
	525	105	R3	10620	101
	700	140		13522	97
	1000	216		18642	86
	525	105	R4	10620	101
	700	140		13522	97
	1000	216		18642	86
	525	105	R5	11086	106
	700	140		14117	101
	1000	216		19462	90
80B	525	139	R2	13890	100
	700	185		17601	95
	1000	284		23925	84
	525	139	R3	14044	101
	700	185		17796	96
	1000	284		24191	85
	525	139	R4	14044	101
	700	185		17796	96
	1000	284		24191	85
	525	139	R5	14661	105
	700	185		18578	100
	1000	284		25254	89

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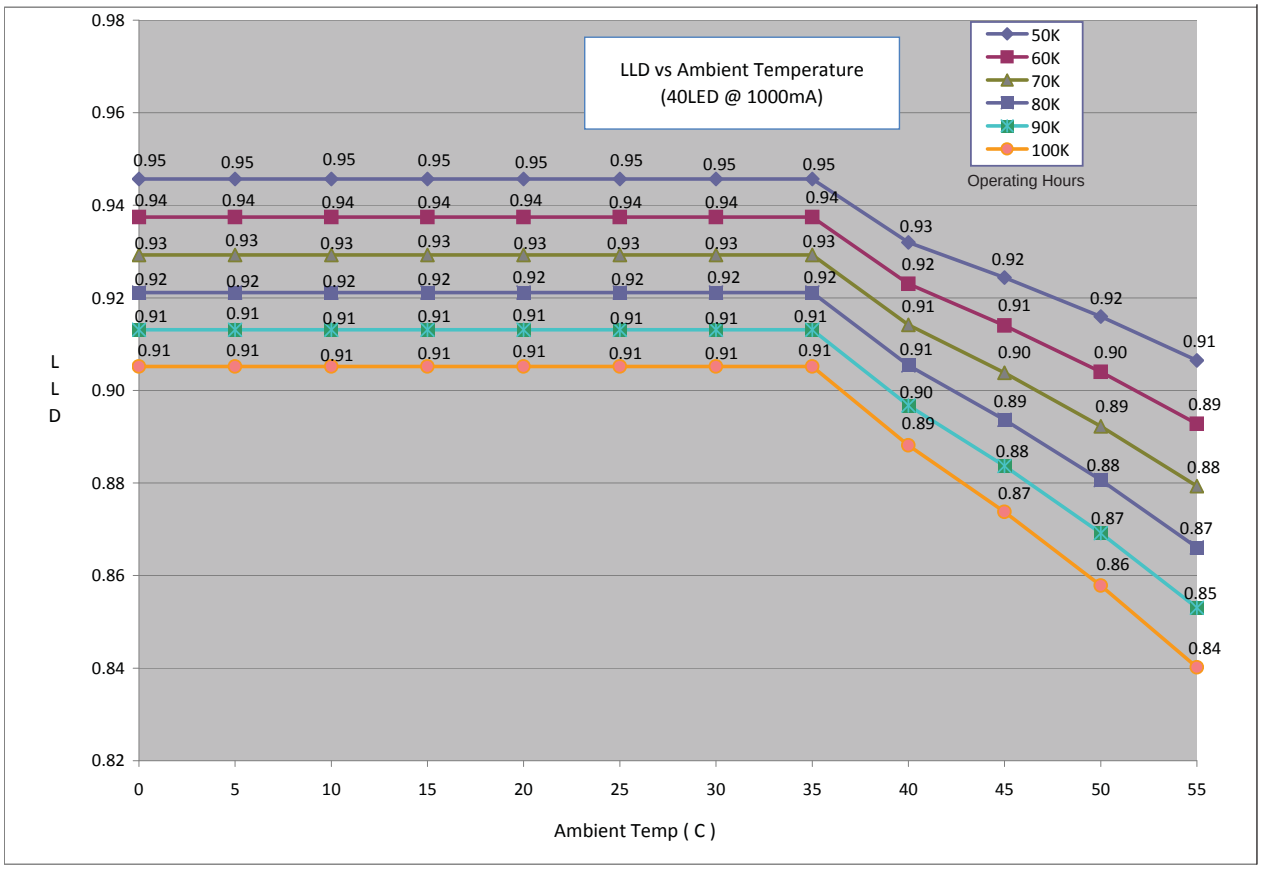
Autobahn Series ATB2

Roadway Lighting

DESIGN DATA



* LLD vs. temperature charts are based on LM-80 chip data and in-situ thermal test testing per IES TM-21

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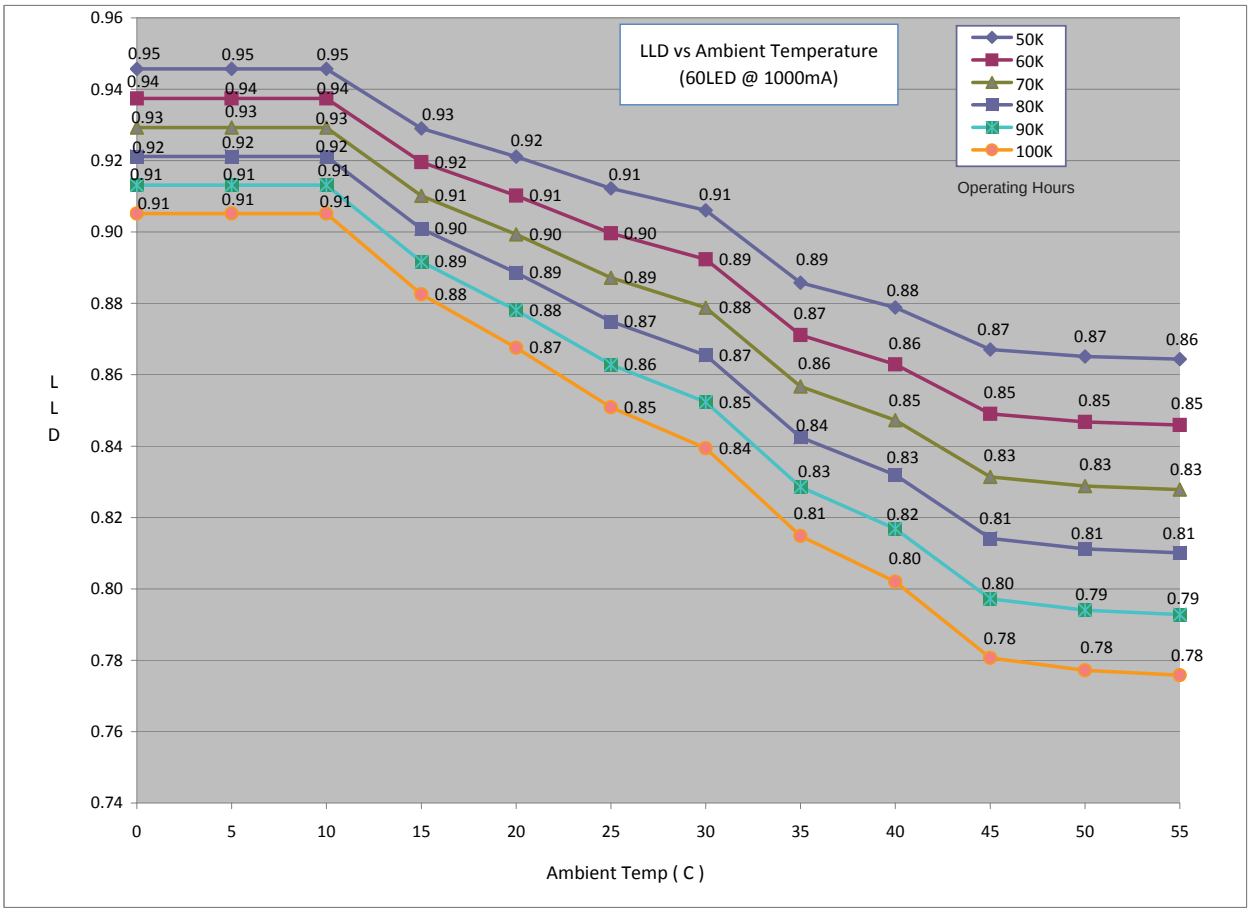
DESIGN DATA



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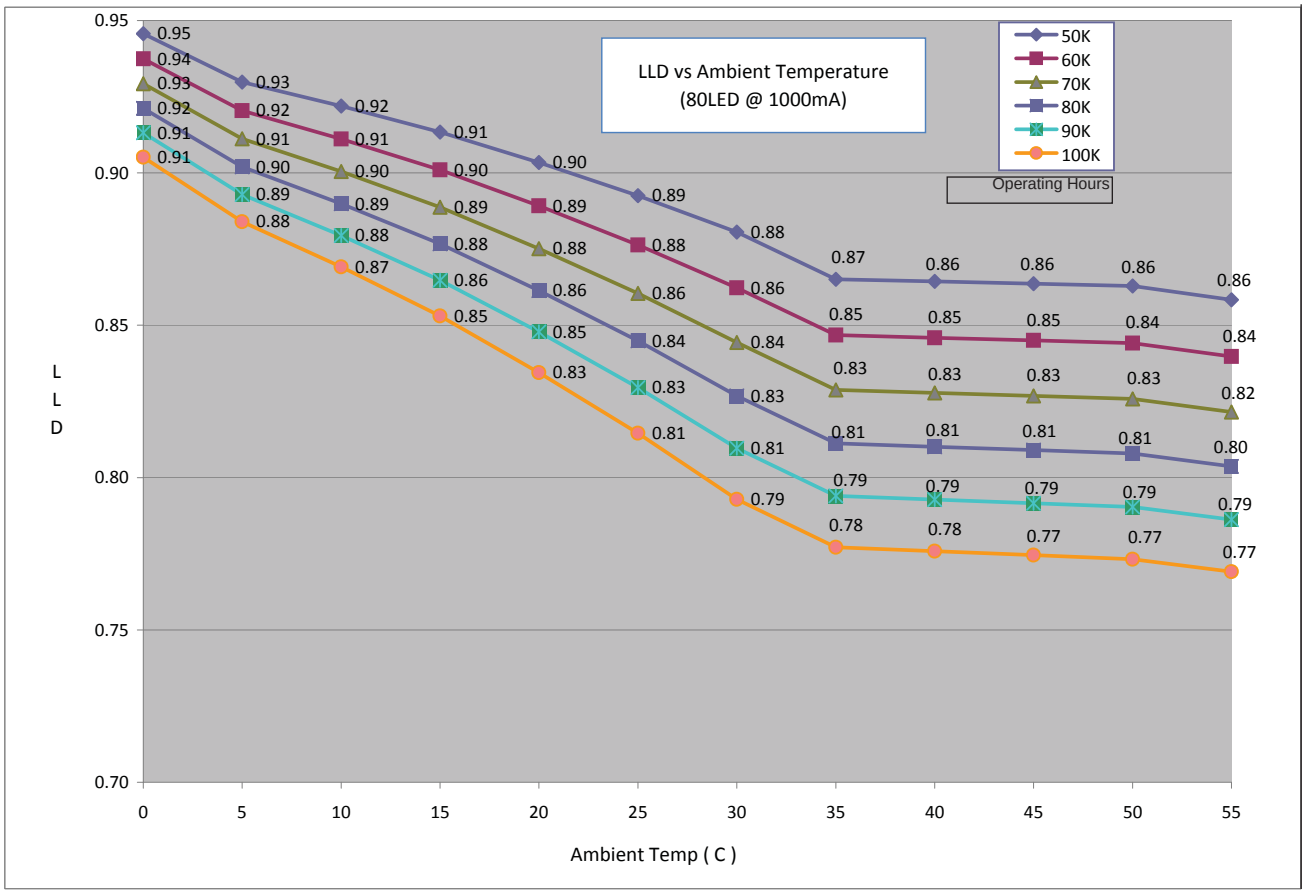
Autobahn Series ATB2

Roadway Lighting

DESIGN DATA



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3825 Columbus Rd. S.W., Granville, OH 43023
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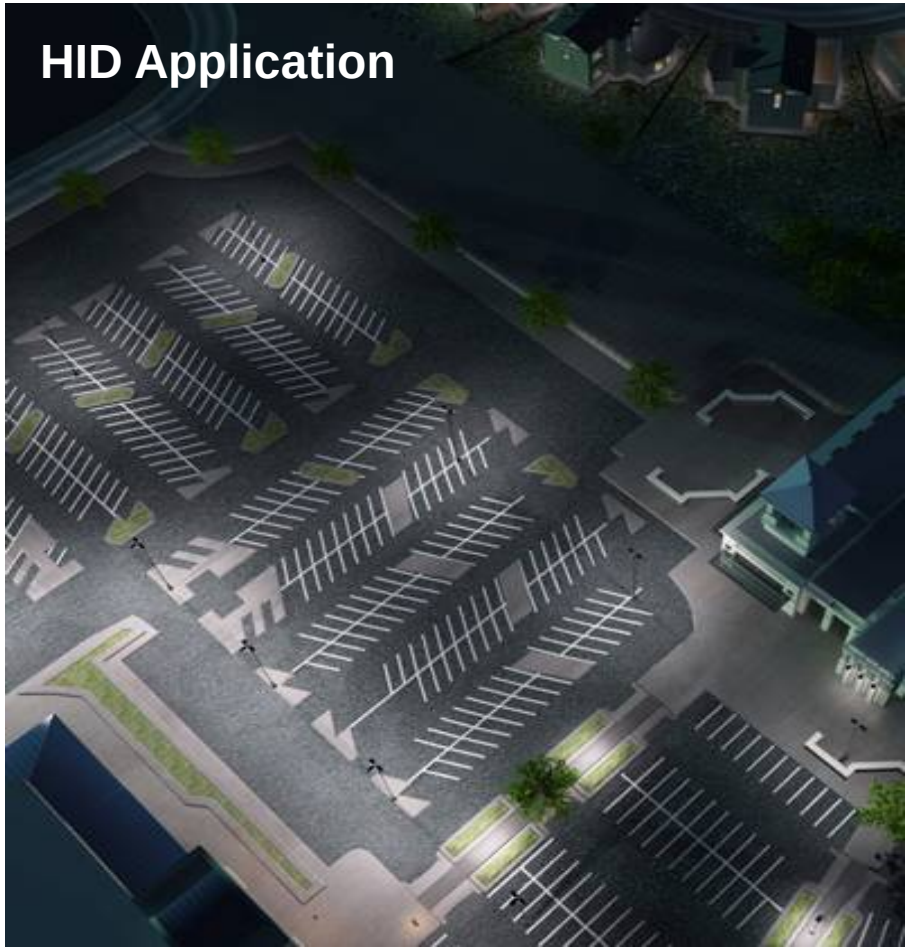
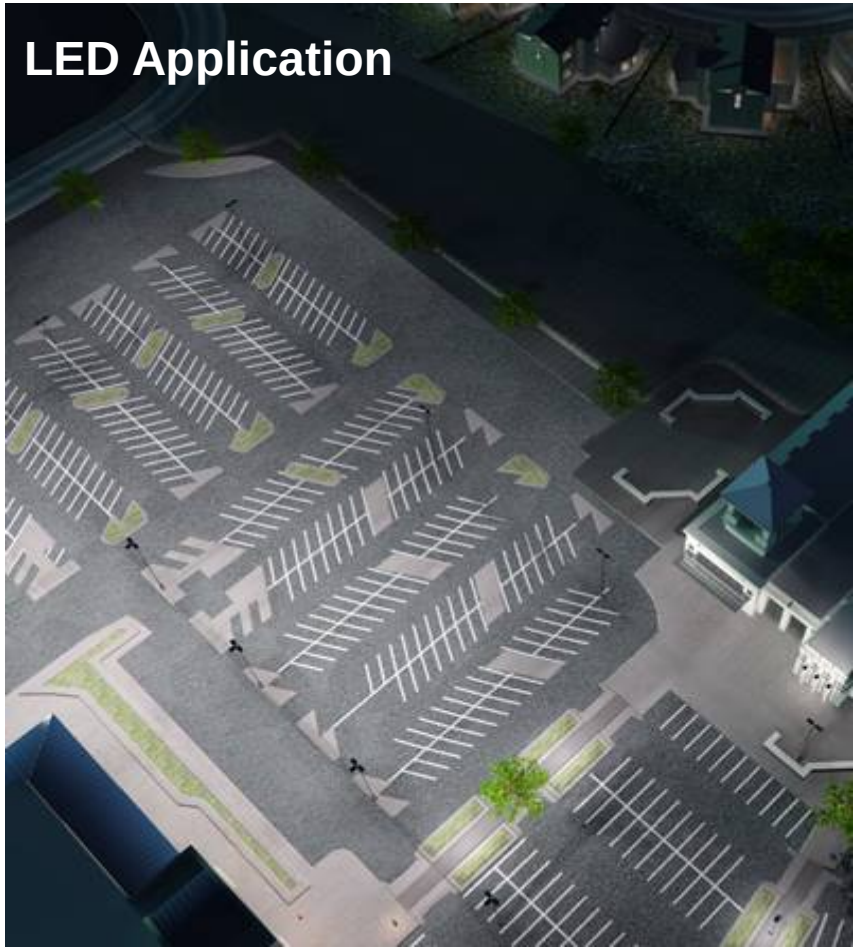
www.americanelectriclighting.com

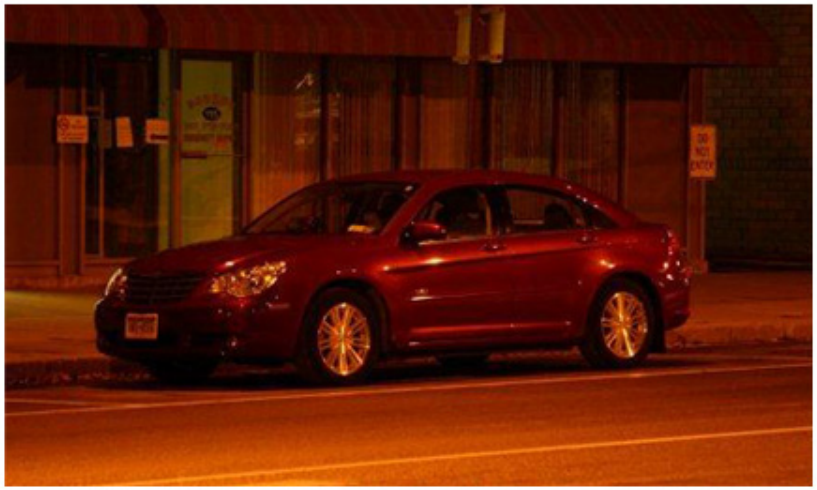
Better Uniformity: Parking Lots





Color Impact

HPS



LED

H-16058-B

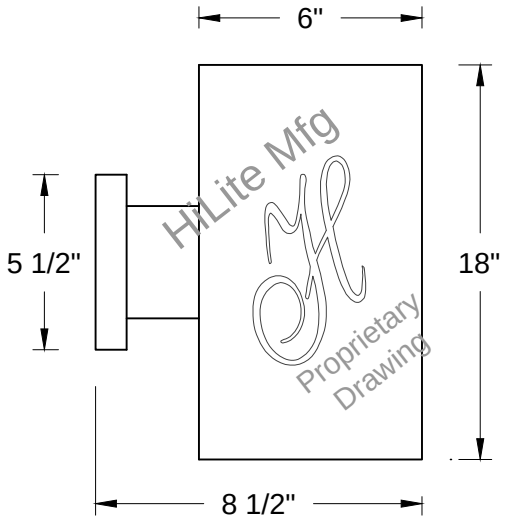
Cylinder Collection

Job Name:

Type:

Quantity:

HI-LITE MFG. CO., INC
13450 Monte Vista Avenue
Chino, California 91710
Telephone: (909) 465-1999
Toll Free: (800) 465-0211
Fax: (909) 465-0907
web: www.hilitemfg.com
e-mail: sales@hilitemfg.com



(Glass lens top, 1-lamp uplight and 1-lamp downlight)

FINISH -Offered in exceptional finishes, comprised of: polyester/polished powder coat, baking enamal liquid, raw metal, or galvanized finishes.

Standard Finishes are: 91(Black), 93(White), 95(Dark Green), 96(Galvanized), BR47(Powder Coat Rust), BK01(Black Texture), GN20(Powder Coat Patina).

Upgraded Finishes are: 29, 66, 82, 90, 92, 94, 97, 99, 100, 103, 104, 105, 110, 112, 113, 114, 115, 117, 118, 119, 120, 127, 128, 129, 133, 134, 135, 136, 98, 101, 102, 137, 138, 139, 140, 121, 122, 123, 124, 125, 126.

For interior finish of fixture refer to color chart on pages 344-348.

MOUNTING - Wall mounting available.

ACCESSORIES - LS(Light Shield) available.

REFLECTOR - Heavy duty, spun shade, aluminum 6061-0 and/or 1100-0, galvanized 22 gauge, steel 20/22 gauge, copper 032/040 and brass 032/040 construction. Dependant on finish.

SOCKETS/LAMPS - Available in:

Incandescent
- rated 150 watt max/120 volt, medium base.

Compact Fluorescent(CFL)
- rated 13/18/26/32/42 watt max/120/277 volt, GX24Q base.

Metal Halide(MH)
- rated 35/50/70/100 watt max/120/208/240/277 volt, medium base, 4KV socket.

High Pressure Sodium(HPS)
- rated 50/70/100 watt max/120/277 volt, medium base.

Light-Emitted Diode (LED)
- rated 20w LED max. See LED specifications for complete part number.

MADE IN THE U.S.A.

Suitable for wet location.
(Except when cord mounted)

c UL US LISTED

LIGHT LABORATORY INC.
8165 E Kaiser Blvd. Anaheim, CA 92808
p. 714.282.2270
f. 714.676.5558

NVLAP LAB CODE 200927-0

Test Report: **L02130803**

Model Number: **H-16044**

Report Prepared For: HI-LITE MFG
13450 MONTE VISTA AVE, CHINO, CA. 91710

Test: Electrical and Photometric tests as required by the IESNA test standards.

Standards Used: Appropriate part or all test guidelines were used for test performed:
IESNA LM79: 2008 Approved Methods for Electrical and Photometric Measurements of Solid-State Lighting Products
ANSI NEMA ANSLG C78.377: 2008 Specification of the Chromaticity of Solid State Lighting Products

Description of Sample: Client submitted the sample. Fixture catalog number is H-16044. Received in working and undamaged condition. No modifications were necessary.

Sample Arrival Date: 2/13/13

Date of Tests: 2/13/13 - 2/18/13

Seasoning of Sample SSL: No seasoning was performed in accordance with IESNA LM-79.

Equipment List

Equipment Used	Model No	Stock No	Calibration Due Date
Chroma Programmable AC Source	61604	PS-AC02	--
Yokogawa Digital Power Meter	WT210	MT-EL06-S1	01/04/14
Xitron Power Analysis System	2503AH	MT-EL01	01/09/14
Fluke Digital Thermometer	52k/J	MT-TP02-GC	01/04/14
LLI Type C Goniophotometer System	RMG-C-MKII	CD-LL04-GC	--
LLI 2M Sphere	2MR97	CD-SN03-S2	--
LLI Spectroradiometer	SPR-3000	MT-SC01-S2	Before Use

*All Results in accordance to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.

LIGHT LABORATORY INC.
8165 E Kaiser Blvd. Anaheim, CA 92808
p. 714.282.2270
f. 714.676.5558

Test #: L02130803
Date: 2/13/2013

NVLAP LAB CODE 200927-0

LM-79 Test Summary	
Manufacturer:	HI-LITE MFG
Model Number:	H-16044
LAMPCAT:	N/A
Driver Model Number:	THOMAS RESEARCH PRODUCTS TRC-040S105DS
Total Lumens:	1326.42
Input Voltage (VAC):	120.00
Input Current (Amp):	0.29
Input Power (W):	37.09
Input Power Factor:	0.9951
Total Harmonic Distortion @ 120V(%):	8.4%
Total Harmonic Distortion @ 277V(%):	N/A
Efficacy:	35.76
Color Rendering Index (CRI):	65.50
Correlated Color Temperature (K):	4004
Chromaticity Coordinate x:	0.3850
Chromaticity Coordinate y:	0.3941
Ambient Temperature (^{o}F):	77.0
Stabilization Time (Hours):	1:35
Total Operating Time (Hours):	2:25

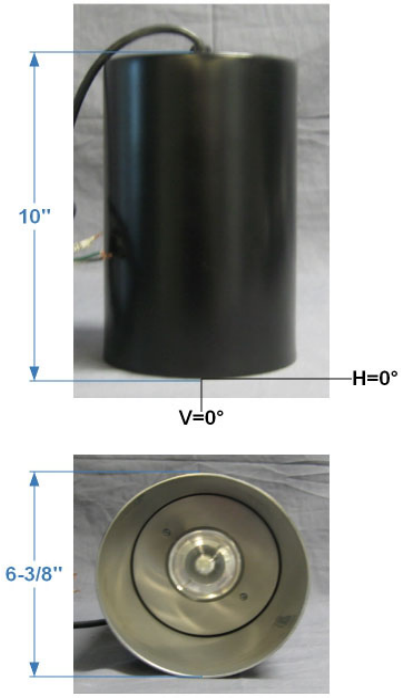


FIG. 1 LUMINAIRE

*All Results in accordance to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.

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Test #: L02130803
Date: 2/13/2013

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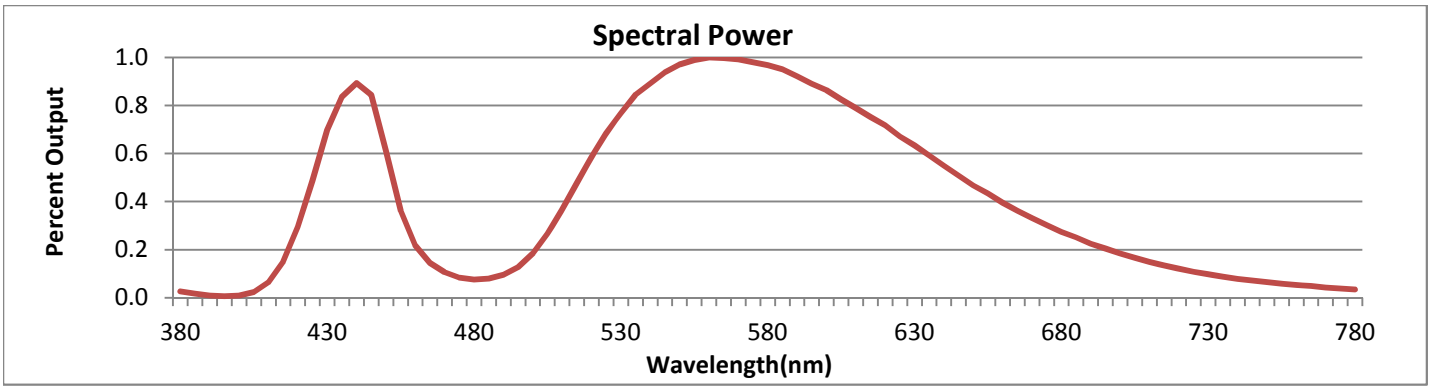


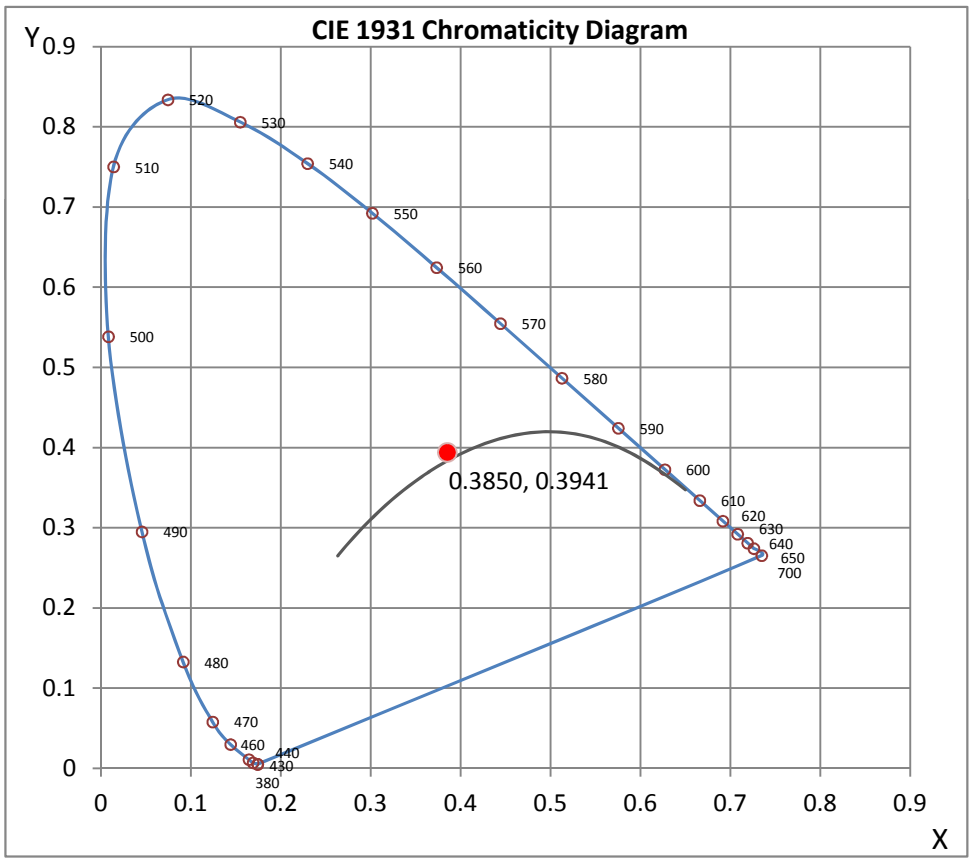
Wavelength	W/m²nm	440	0.0967	510	0.0397	580	0.1049	650	0.0506	720	0.0131
380	0.0029	450	0.0660	520	0.0632	590	0.0998	660	0.0428	730	0.0107
390	0.0009	460	0.0237	530	0.0832	600	0.0936	670	0.0359	740	0.0085
400	0.0010	470	0.0115	540	0.0966	610	0.0856	680	0.0297	750	0.0070
410	0.0070	480	0.0082	550	0.1052	620	0.0777	690	0.0244	760	0.0057
420	0.0318	490	0.0103	560	0.1083	630	0.0686	700	0.0198	770	0.0046
430	0.0756	500	0.0201	570	0.1075	640	0.0595	710	0.0161	780	0.0038

CRI & CCT

x	0.3850
y	0.3941
u'	0.2213
v'	0.5097
CRI	65.50
CCT	4004
Duv	0.00661

R Values

R1	63.21
R2	70.09
R3	74.71
R4	66.77
R5	61.42
R6	56.83
R7	77.23
R8	54.07
R9	-30.12
R10	28.64
R11	60.21
R12	29.73
R13	63.36
R14	84.99



*All Results in accordance to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.

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f. 714.676.5558

Test #: L02130803
Date: 2/13/2013

NVLAP LAB CODE 200927-0

Test Methods

Photometric Measurements - Goniophotometer

A Custom Light Laboratory Type C Rotating Mirror Goniophotometer was used to measure candelas(intensity) at each angle of distribution as defined by IESNA for the appropriate fixture type.

Ambient temperature is set to 25°C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25°C throughout the testing process and the sample is stabilized for at least 30mins and longer as necessary for the sample to achieve stabilization.

Electrical measurements are measured using the listed equipment.

Spectral Measurements - Integrating Sphere

A Sensing Spectroradiometer SPR-3000, in conjunction with Light Laboratory 2 meter integrating sphere was used to measure chromaticity coordinates, correlated color temperature(CCT) and the color rendering index(CRI) for each sample.

Ambient temperature is set to 25°C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25°C throughout the testing process and the sample is stabilized for at least 30mins and longer as necessary for the sample to achieve stabilization.

Electrical measurements are measured using the listed equipment.

Test Report Released by:

Jeff Ahn
Engineering Manager

Test Report Reviewed by:

Steve Kang
Quality Assurance

**Attached are photometric data reports. Total number of pages: 11*

*All Results in accordance to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.

LIGHT LABORATORY INC.
8165 E. Kaiser Blvd. Anaheim, CA 92808
p. 714.282.2270
f. 714.676.5558

Photometric Test Report

IES ROAD REPORT
PHOTOMETRIC FILENAME : L02130803.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L02130803
[TESTLAB] LIGHT LABORATORY, INC.
[ISSUEDATE] 2/18/2013
[MANUFAC] HI-LITE MFG
[LUMCAT] H-16044
[LUMINAIRE] 6-3/8"DIA. X 10"H. PENDANT CYLINDER LUMINAIRE
[MORE] 30W LED WITH SEMI-SPECULAR REFLECTOR, RIBBED GLASSLENS
[BALLASTCAT] THOMAS RESEARCH PRODUCTS TRC-040S105DS
[BALLAST] INPUT: 100-277VAC, 50/60HZ, 0.48A OUTPUT: 12-36VDC, 1.05A, 38Wmax
[LAMPPOSITION] 0,0
[LAMPCAT] N/A
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[_INPUT] 120VAC, 37.09W
[_TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

IES Classification	Type V
Longitudinal Classification	Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1326
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	36
Total Luminaire Watts	37.09
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	595.04
Maximum Candela Angle	0H 45V
Maximum Candela (<90 Degrees Vertical)	595.04
Maximum Candela Angle (<90 Degrees Vertical)	0H 45V
Maximum Candela At 90 Degrees Vertical	0 (0.0% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	21.46 (1.6% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

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Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

IES ROAD REPORT
PHOTOMETRIC FILENAME : L02130803.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	115.5	N.A.	8.7
FM - Front-Medium (30-60)	457.1	N.A.	34.4
FH - Front-High (60-80)	86.3	N.A.	6.5
FVH - Front-Very High (80-90)	5.0	N.A.	0.4
BL - Back-Low (0-30)	115.5	N.A.	8.7
BM - Back-Medium (30-60)	457.1	N.A.	34.4
BH - Back-High (60-80)	86.3	N.A.	6.5
BVH - Back-Very High (80-90)	5.0	N.A.	0.4
UL - Uplight-Low (90-100)	0.0	N.A.	0.0
UH - Uplight-High (100-180)	0.0	N.A.	0.0
Total	1327.8	N.A.	100.0
BUG Rating	B1-U0-G0		

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Results derived from content of manufacturers photometric file.

IES ROAD REPORT
PHOTOMETRIC FILENAME : L02130803.IES

CANDELA TABULATION

Vert. Angles	Horizontal Angles
	0
0.0	198.61
5.0	204.62
15.0	235.50
25.0	299.03
35.0	434.97
45.0	595.04
55.0	230.08
60.0	147.94
62.5	134.07
65.0	120.63
67.5	106.56
70.0	91.00
72.5	70.54
75.0	46.24
77.5	31.15
80.0	21.46
82.5	13.82
85.0	7.96
87.5	4.00
90.0	0.00

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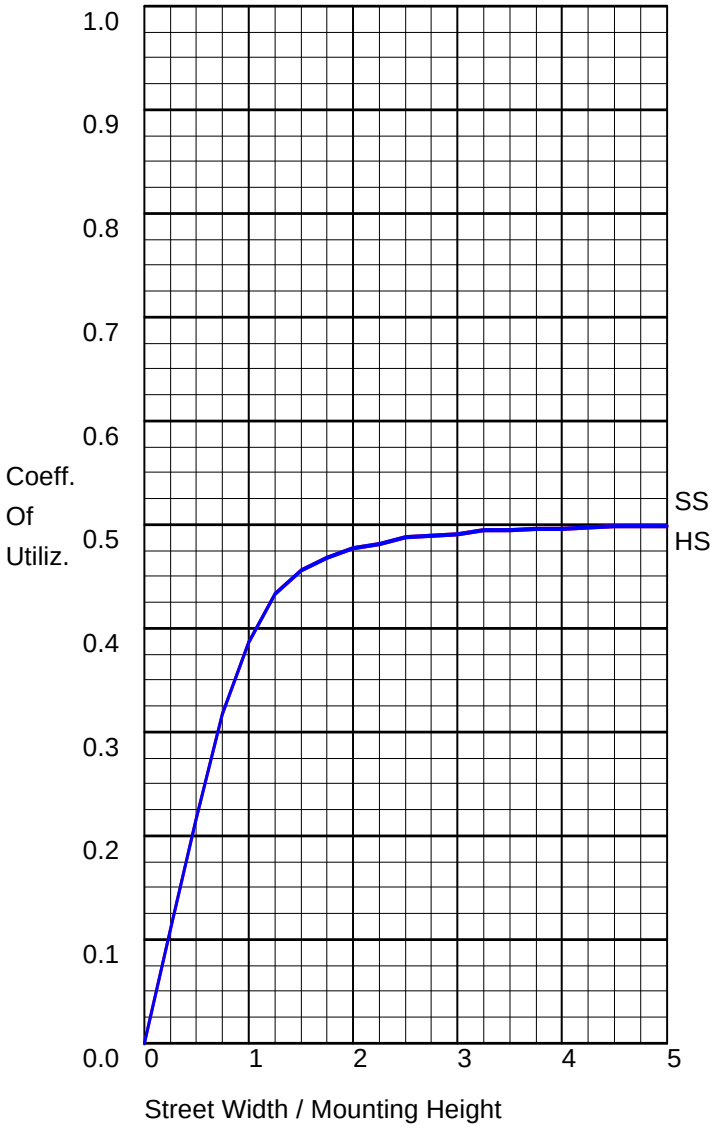
Results derived from content of manufacturers photometric file.

IES ROAD REPORT
PHOTOMETRIC FILENAME : L02130803.IES

COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

	Lumens	Percent Of Luminaire
Downward Street Side	663.2	50.0
Downward House Side	663.2	50.0
Downward Total	1326.4	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	1326.4	100.0

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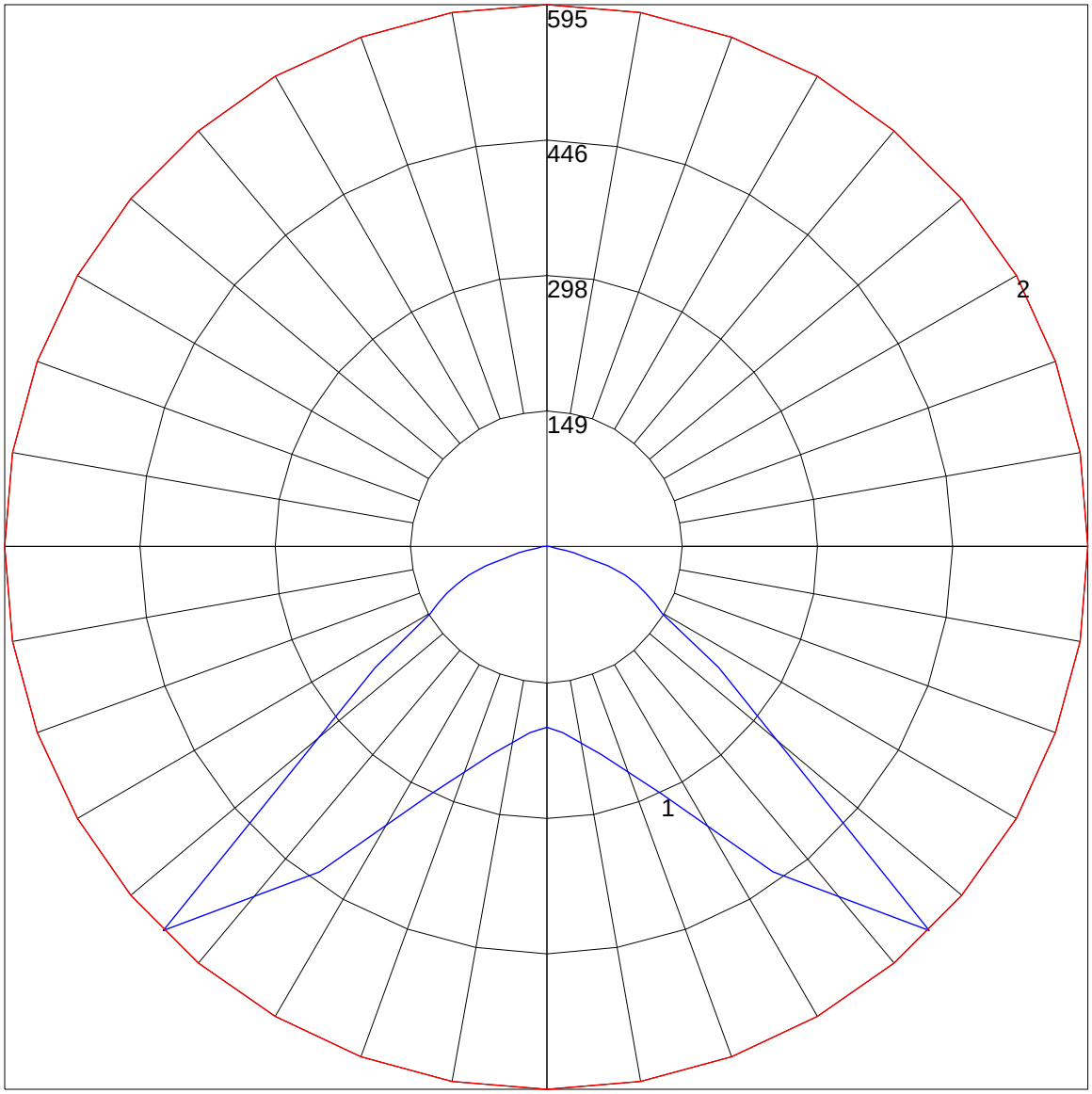
Results derived from content of manufacturers photometric file.

IES ROAD REPORT
PHOTOMETRIC FILENAME : L02130803.IES

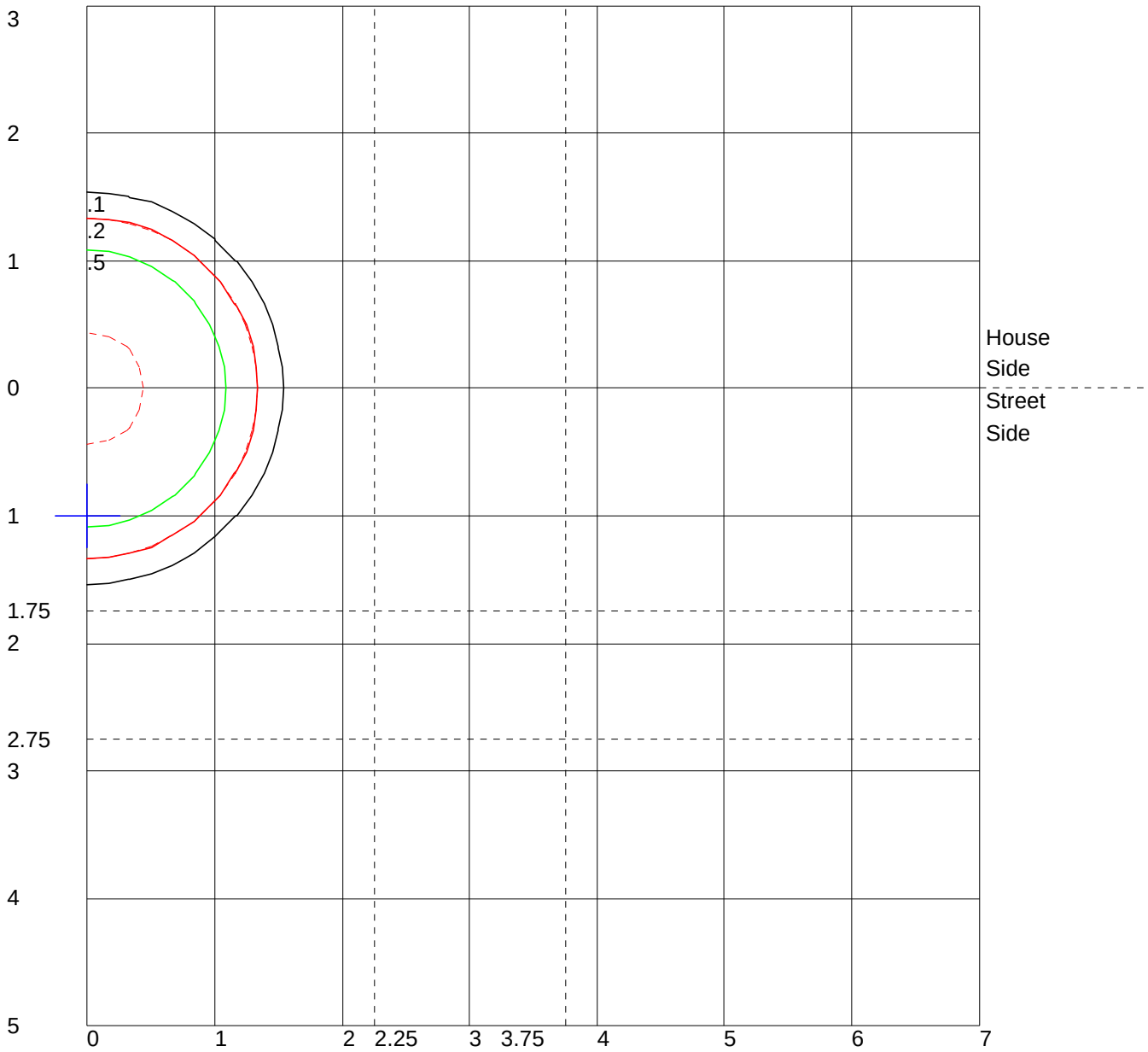
POLAR GRAPH



Maximum Candela = 595.04 Located At Horizontal Angle = 0, Vertical Angle = 45
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (45) (Through Max. Cd.)

IES ROAD REPORT
PHOTOMETRIC FILENAME : L02130803.IES

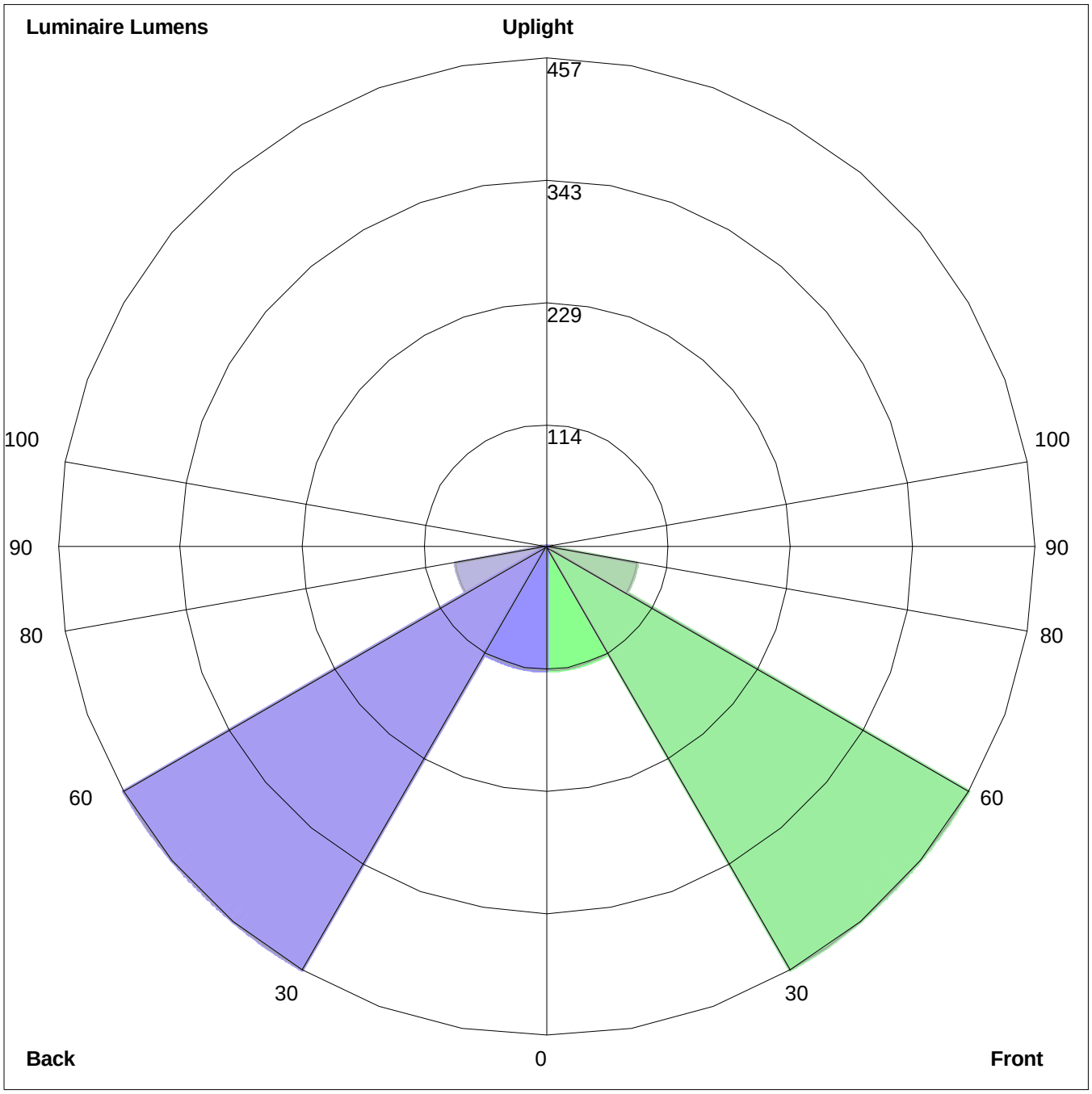
ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



Distance In Units Of Mounting Height
Values Based On 18 Foot Mounting Height
1/2 Maximum Candela Trace Shown As Dashed Curve
(+) = Maximum Candela Point

IES ROAD REPORT
PHOTOMETRIC FILENAME : L02130803.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=115.5, Medium=457.1, High=86.3, Very High=5.0
Back: Low=115.5, Medium=457.1, High=86.3, Very High=5.0
Uplight: Low=0.0, High=0.0

BUG Rating : B1-U0-G0

FINISH: 91(BLACK)

Traffic Impact Analysis

Taco Bell on Robert Smalls Parkway
Beaufort, SC

Prepared for:
Allison Ramsey Architects, Inc.

© Bihl Engineering, LLC 2015

BIHL

ENGINEERING

Traffic Impact Analysis
Taco Bell on Robert Smalls Parkway
Beaufort, SC

Prepared for:
Allison Ramsey Architects, Inc.

Prepared by:
Bihl Engineering, LLC
304 Meeting Street, Suite D
Charleston, SC 29401
Mail:
P.O. Box 31318
Charleston, SC 29417
(843) 637-9187

SOUTH CAROLINA
BIHL ENGINEERING LLC.
No. 4620
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
No. 25271
02/19/15
JENNIFER TROPEA BIHL

February 2015

TABLE OF CONTENTS

Page No.

1.0 EXECUTIVE SUMMARY 1
2.0 INTRODUCTION 1
3.0 INVENTORY 1
3.1 STUDY AREA 1
3.2 EXISTING CONDITIONS 2
4.0 TRAFFIC GENERATION 2
5.0 SITE TRAFFIC DISTRIBUTION 6
6.0 TRAFFIC VOLUMES 8
6.1 2015 EXISTING TRAFFIC 8
6.2 2015 BACKGROUND TRAFFIC 8
6.3 PROJECT TRAFFIC 8
6.4 2015 BUILDOUT TRAFFIC 8
7.0 CAPACITY ANALYSIS 12
8.0 CONCLUSION 13

LIST OF FIGURES

Figure No. Title Page No.

Figure 1: Site Location 3

Figure 2: Conceptual Site Plan 4

Figure 3: Existing Laneage 5

Figure 4: Trip Distribution 7

Figure 5: Existing Traffic Volumes 9

Figure 6: 2015 AM Peak Hour Traffic Volumes 10

Figure 7: 2015 PM Peak Hour Traffic Volumes 11

LIST OF TABLES

Table No. Title Page No.

Table 1: Trip Generation 6

Table 2: Level of Service and Delay 13

1.0 Executive Summary

The proposed Taco Bell on Robert Smalls Parkway will be located in the southwest corner of the intersection of the Lowe's entryway (just west of Burton Hill Road) at Robert Smalls Parkway in Beaufort, SC at the Lowe's shopping center. The development will consist of a 2,450 square foot (sf) fast food restaurant with a drive-through window. Three access points are planned: one right-in, right-out driveway on the Lowe's entryway and two full access driveways on the Lowe's driveway. These roadways are internal access roads in the shopping center. For the purposes of this study, the proposed development is assumed complete in 2015.

This report presents the trip generation, distribution, traffic analyses, and any recommendations for transportation improvements required to meet anticipated traffic demands. The following existing intersections were included in this analysis:

- SC 170 (Robert Smalls Parkway) at Burton Hill Road
- SC 170 (Robert Smalls Parkway) at the Lowe's entryway

Based on the results of the analysis, the study area intersections are projected to operate acceptably in both the existing and future AM and PM peak conditions.

Therefore, the project is not expected to have a significant impact on the transportation network and no roadway improvements are recommended as a part of this project.

2.0 Introduction

The proposed Taco Bell on Robert Smalls Parkway will be located in the southwest corner of the intersection of the Lowe's entryway (just west of Burton Hill Road) at Robert Smalls Parkway in Beaufort, SC. The development will consist of a 2,450 sf fast food restaurant with a drive-through window.

Three access points are planned for the development on the Lowe's shopping center access roadways. Access is not planned on SC 170. For the purposes of this study, the proposed development is assumed complete in 2015.

3.0 Inventory

3.1 Study Area

The study area for the traffic impact analysis was established based on discussions with local staff and includes the following intersections:

- SC 170 (Robert Smalls Parkway) at Burton Hill Road
- SC 170 (Robert Smalls Parkway) at the Lowe's entryway

Figure 1 shows the site location and **Figure 2** shows the conceptual site plan for the project. Cross access is planned with the adjacent outparcel as shown in the conceptual plan.

3.2 Existing Conditions

Roadways included in this analysis are Burton Hill Road and SC 170 (Robert Smalls Parkway). The characteristics of the roadways in the project vicinity are described below.

SC 170 (Robert Smalls Parkway) is a four-lane northeast/southwest roadway with a two-way-left-turn-lane and a 45 mph posted speed limit in the vicinity of the project. Per South Carolina Department of Transportation (SCDOT) data, SC 170 has a 2013 Average Annual Daily Traffic (AADT) count of 16,100 vehicles per day (vpd) east of the site. For the purposes of this study, this roadway was considered east/west.

Burton Hill Road (S-764) is a two-lane northwest/southeast roadway with a 40 mph posted speed limit north of the intersection with SC 170 (Robert Smalls Parkway) and posted at 30 mph south of the intersection. For the purposes of this study, this roadway was considered north/south.

Existing roadway laneage for the external intersections is shown on **Figure 3**.

There are two internal access roadways in the Lowe's shopping center included in the analysis. The Lowe's shopping center has two access points on SC 170 (Robert Smalls Parkway) that connect to a parallel roadway to SC 170 (Robert Smalls Parkway); the latter roadway is referred to as Lowe's driveway in this study. The Lowe's driveway is a two-lane roadway that provides access to Lowe's and the outparcels and also connects to Burton Hill Road. The SC 170 (Robert Smalls Parkway) access point directly adjacent to this project, referred to as the Lowe's entryway in this report, is a four-lane divided roadway.

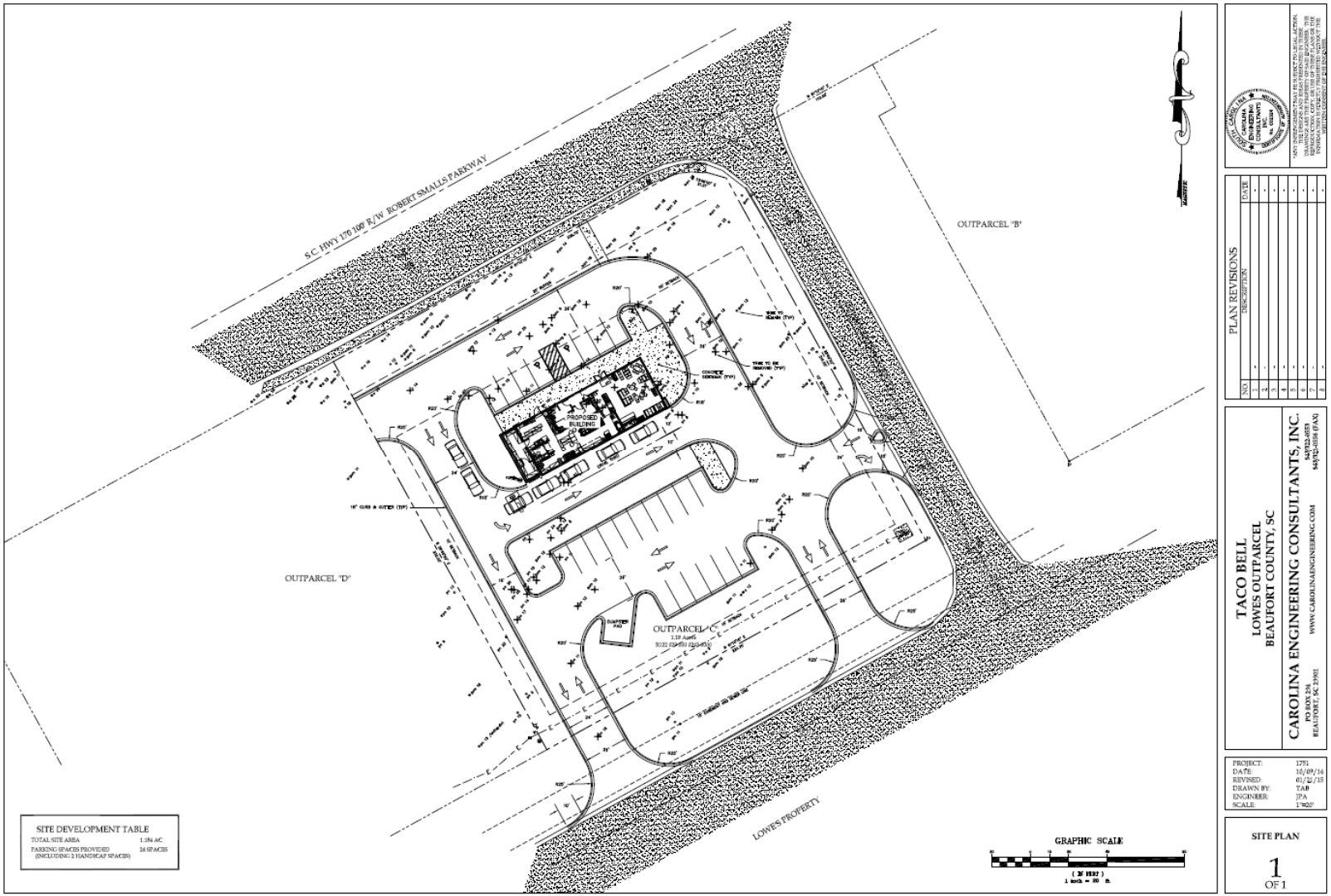
4.0 Traffic Generation

The traffic generation potential of the proposed development and expected pass-by percentages were determined using trip generation information published in Institute of Transportation Engineers' (ITE) *Trip Generation, Ninth Edition.* Pass-by trips are those trips that will pass-by the site during their original trip, enter the development, and then return to their original trip.

NOT TO SCALE

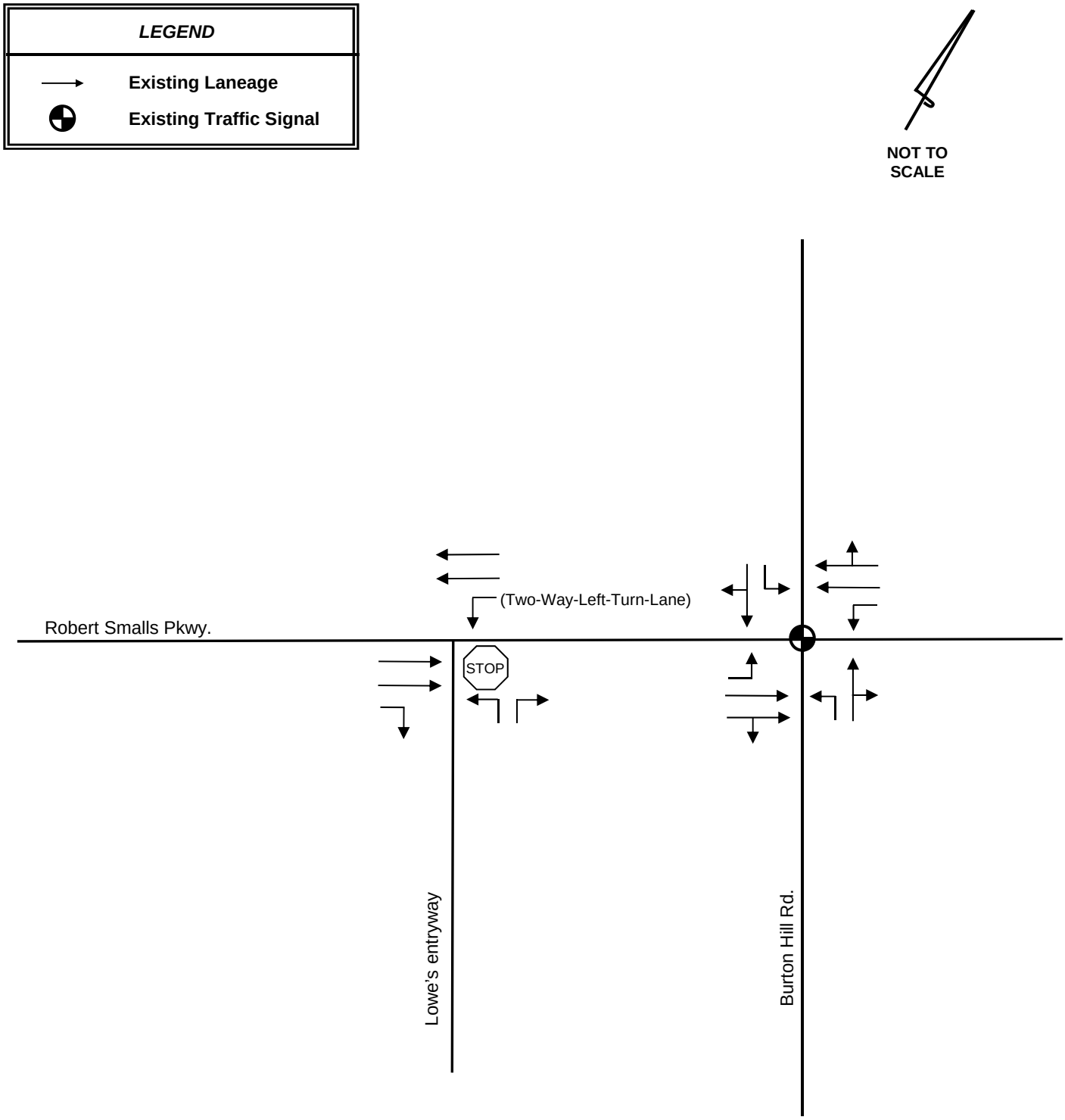
LEGEND
★ Project Site

BIHL ENGINEERING	Taco Bell on Robert Smalls Parkway Traffic Impact Analysis	Site Location	Figure 1



Source: Carolina Engineering Consultants, Inc**.**

Figure 2. Conceptual Site Plan



BIHL ENGINEERING	**Taco Bell on Robert Smalls Parkway Traffic Impact Analysis**	**Existing Laneage**	**Figure 3**

To be conservative, an internal capture credit for trips that would be captured within the overall Lowe's shopping center was not assumed in this analysis.

Table 1 summarizes the daily and peak hour trips associated with the proposed site.

Table 1:
Trip Generation

Land Use and Intensity	ITE Land Use Code	Daily	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
2,450 sf Fast Food Restaurant with Drive-Through Window	934	1,215	111	57	54	80	42	38
Driveway Trips		1,215	111	57	54	80	42	38
Pass-by Trips		-	54	28	26	40	21	19
New Trips		**-**	**57**	**29**	**28**	**40**	**21**	**19**

The proposed development is projected to generate 111 trips during the AM peak hour (57 entering and 54 exiting, where 54 of the total trips are pass-by) and 80 trips during the PM peak hour (42 entering and 38 exiting, where 40 of the total trips are pass-by).

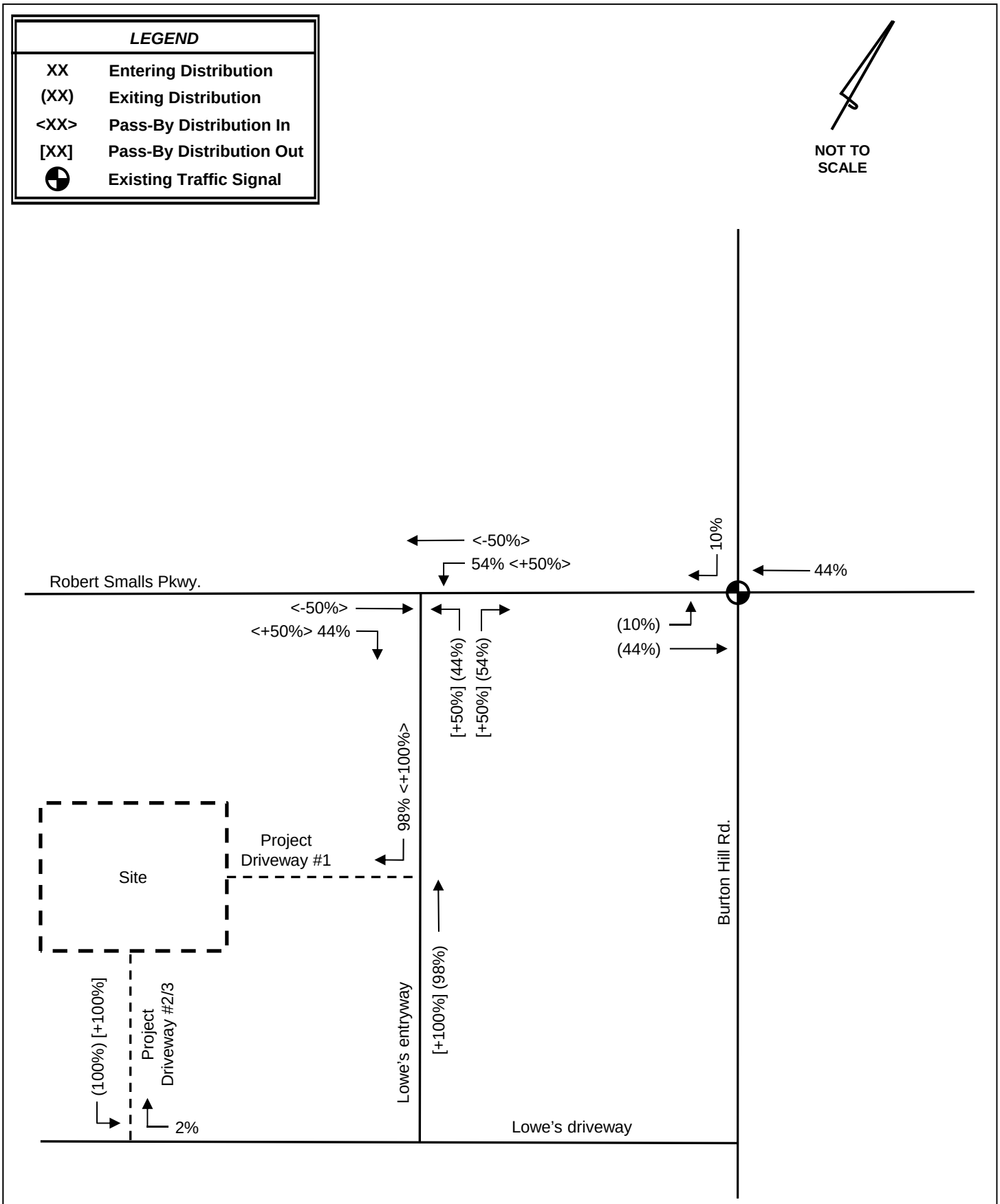
5.0 Site Traffic Distribution

The proposed project traffic was assigned to the surrounding roadway network. The directional distribution and assignment were based on qualitative knowledge of the project area and quantitative application of existing traffic patterns and expected trip length. The following general trip distribution was applied to the project trips:

- 44% to/from SC 170 (Robert Smalls Parkway) from the east
- 44% to/from SC 170 (Robert Smalls Parkway) from the west
- 10% to/from Burton Hill Road from the north
- 2% to/from Burton Hill Road from the south

To model the worst case project driveway conditions, 98% of the entering traffic was assigned to enter the site at Project Driveway #1. All exiting traffic was assigned to Project Driveway #2 or Project Driveway #3. The latter two driveways were combined in the analysis to represent a worst case condition where all the left turns were exiting at one location, though the left turns are expected to be split between the driveways.

The project traffic distribution is shown for the study area intersections in **Figure 4.**



BIHL ENGINEERING	**Taco Bell on Robert Smalls Parkway Traffic Impact Analysis**	**Trip Distribution**	**Figure 4**

6.0 Traffic Volumes

6.1 2015 Existing Traffic

Peak hour intersection turning movement counts were performed in February 2015 from 7 AM to 9 AM and 4 PM to 6 PM at the following intersections:

- Burton Hill Road at SC 170 (Robert Smalls Parkway)
- SC 170 (Robert Smalls Parkway) at the Lowe's entryway

The turning movement count data are included in the **Appendix** and the AM and PM peak hour existing traffic volumes are shown in **Figure 5**.

Based on the configuration of the existing shopping center and its internal roadway system, the traffic counts collected for the Lowe's entryway were also applied to the Lowe's driveway in the future conditions analysis.

6.2 2015 Background Traffic

Historic growth is defined as the increase in existing traffic volumes due to usage increases and non-specific growth throughout the area. The proposed development is assumed complete in the same year the intersection turning movements were collected; therefore no growth rate was applied in the analysis.

Figure 6 and **Figure 7** show the 2015 background AM and PM peak hour traffic volumes.

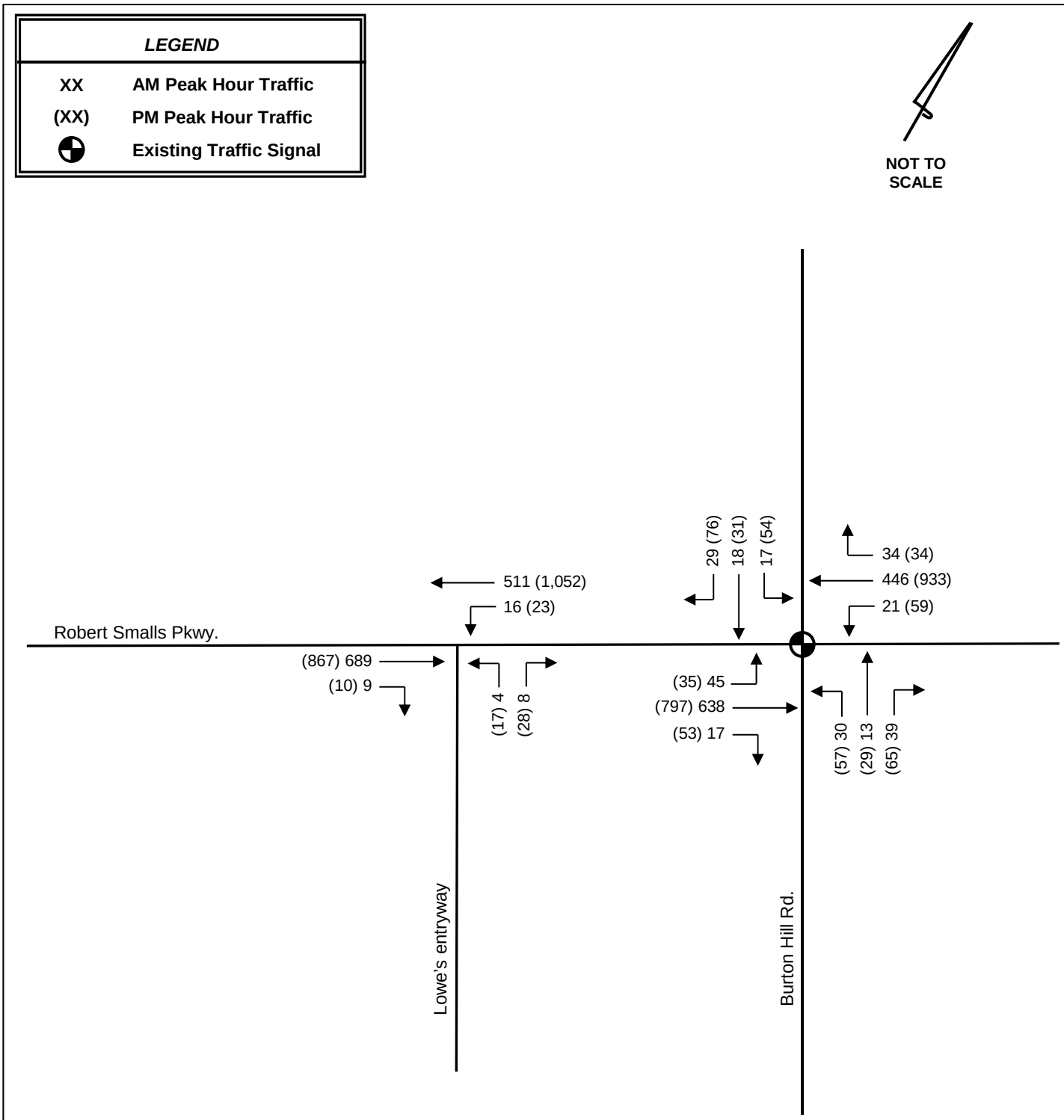
6.3 Project Traffic

The AM peak hour and PM peak hour projected project trips were assigned based on the trip distribution discussed in **Section 5.**

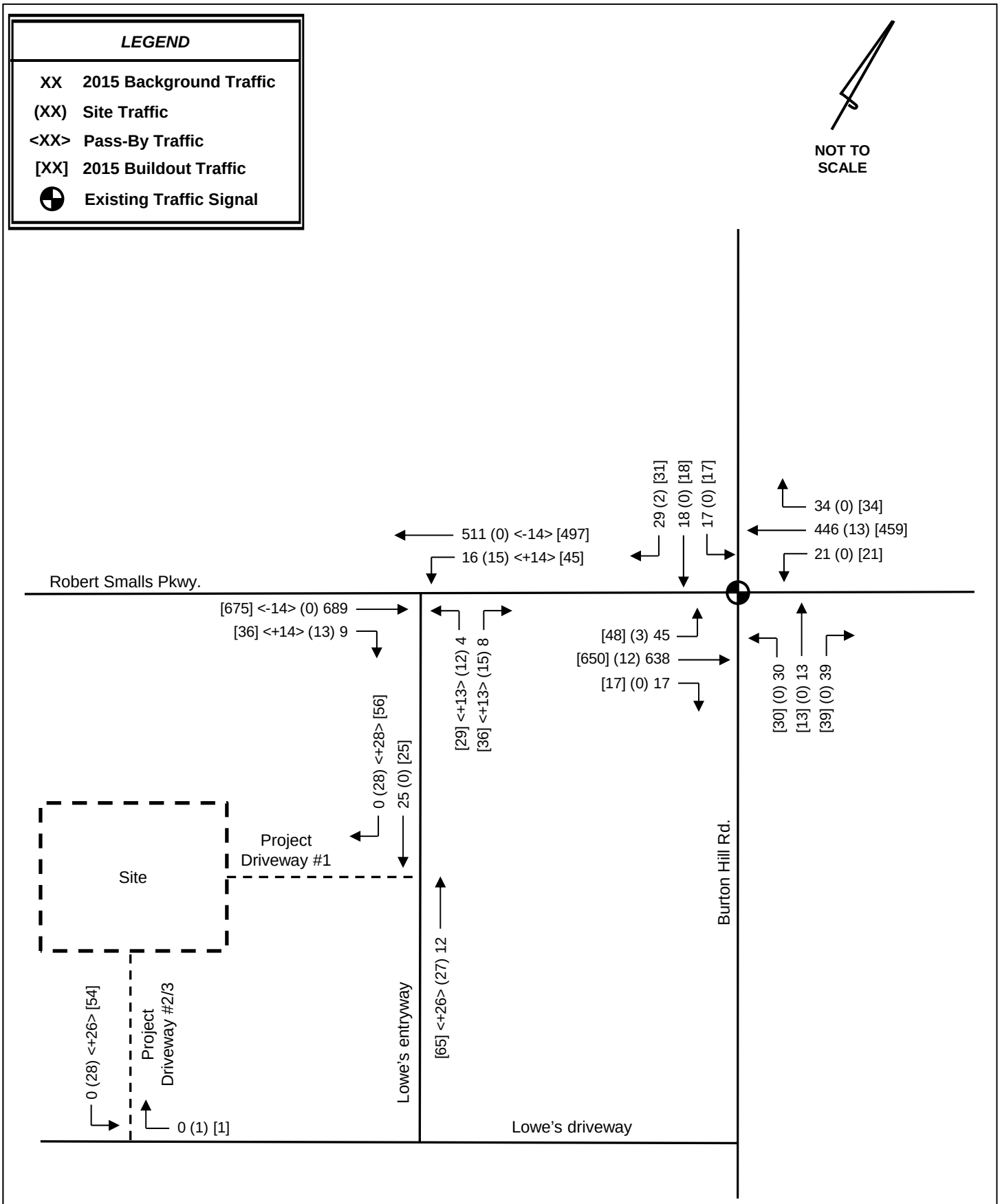
6.4 2015 Buildout Traffic

The 2015 total traffic volumes include the 2015 background traffic and the proposed development traffic at buildout. The 2015 AM peak hour and PM peak hour total traffic volumes are shown in **Figure 6** and **Figure 7**, respectively.

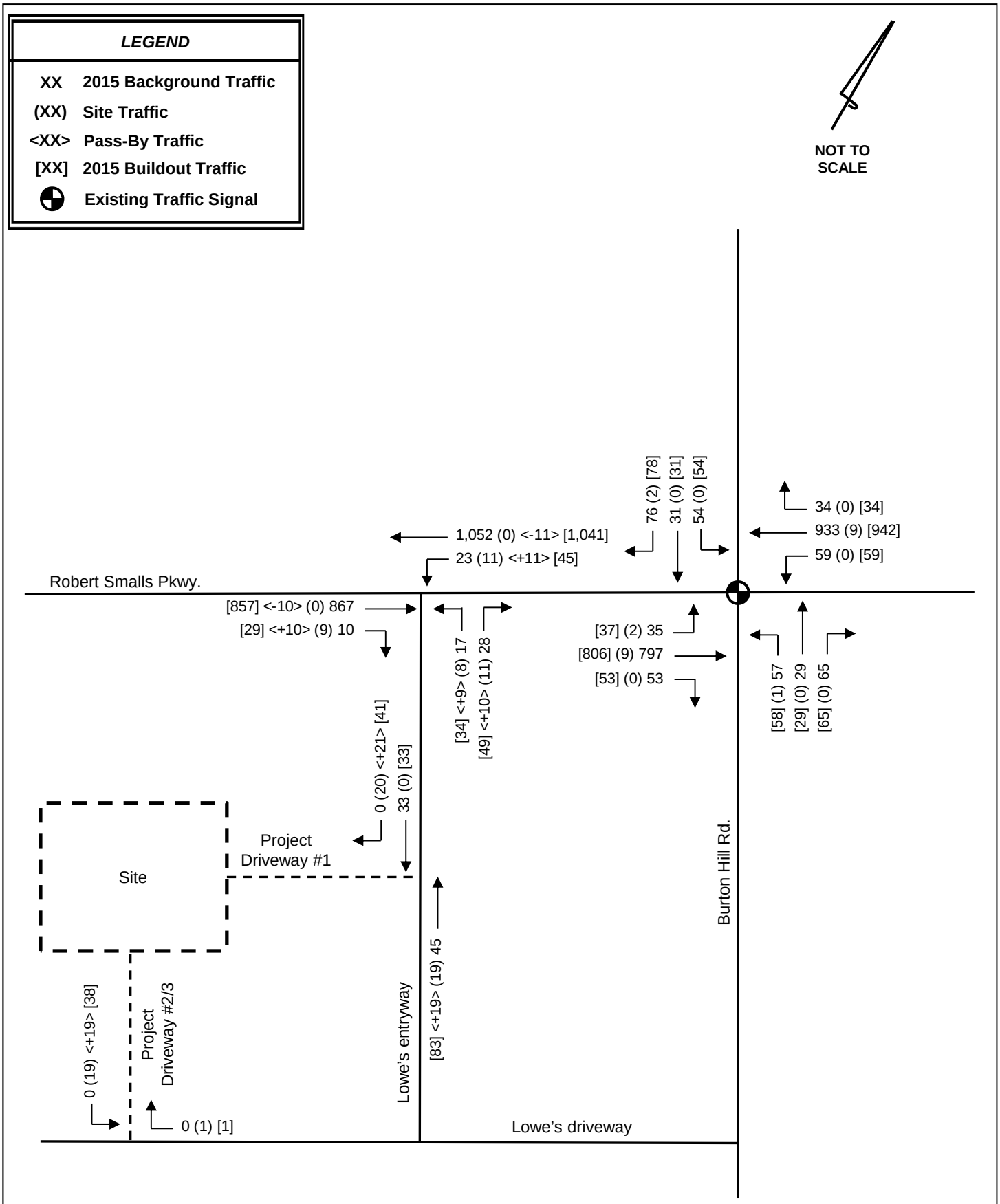
Intersection volume development worksheets are included in the **Appendix**.



BIHL ENGINEERING	**Taco Bell on Robert Smalls Parkway Traffic Impact Analysis**	**Existing Traffic Volumes**	**Figure 5**



BIHL ENGINEERING	**Taco Bell on Robert Smalls Parkway Traffic Impact Analysis**	**2015 AM Peak Hour Traffic Volumes**	**Figure 6**



BIHL ENGINEERING	**Taco Bell on Robert Smalls Parkway Traffic Impact Analysis**	**2015 PM Peak Hour Traffic Volumes**	**Figure 7**

7.0 Capacity Analysis

Capacity analyses were performed for the AM and PM peak hours for the 2015 existing and 2015 buildout conditions using the Synchro Version 8 software to determine the operating characteristics of the adjacent roadway network and the impacts of the proposed project. The analyses were conducted with methodologies contained in the *2010 Highway Capacity Manual* (Transportation Research Board, December 2010).

Capacity of an intersection is defined as the maximum number of vehicles that can pass through an intersection during a specified time, typically an hour. Capacity is described by Level-of-Service (LOS) for the operating characteristics of an intersection. LOS is a qualitative measure that describes operational conditions and motorist perceptions within a traffic stream. The *Highway Capacity Manual* defines six levels of service, LOS A through LOS F, with A being the best and F being the worst.

LOS for a two-way stop-controlled (TWSC) intersection is determined by the delay of the poorest performing minor approach, as LOS is not defined for TWSC intersections as a whole.

Capacity analyses were performed for the 2015 existing and 2015 buildout traffic conditions for the following intersections:

- SC 170 (Robert Smalls Parkway) at Burton Hill Road
- SC 170 (Robert Smalls Parkway) at the Lowe's entryway
- Project Driveway #1 at the Lowe's entryway (future conditions only)
- Project Driveway #2/3 at Lowe's driveway (future conditions only)

Table 2 summarizes the level of service (LOS) and control delay (average seconds of delay per vehicle) for the 2015 existing and 2015 during the AM and PM peak hours.

Existing signal timings were obtained from Beaufort County and applied to the signalized intersection of SC 170 (Robert Smalls Parkway) at Burton Hill Road. Signal timing splits were optimized at the intersection in future conditions analysis.

Based on discussions with the team, Driveway #2 is planned to be aligned with the existing Lowe's parking lot driveway to limit turning conflicts between the driveways.

Table 2:
Level of Service and Delay (average seconds per vehicle)[1]

Intersection	Traffic Control[2]	2015 Existing Conditions		2015 Buildout Conditions	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
SC 170 (Robert Smalls Parkway) at Burton Hill Road	S	A (9.8)	B (12.9)	B (11.0)	B (13.2)
SC 170 (Robert Smalls Parkway) at the Lowe's entryway	U	B (12.9) - NB	C (16.7) - NB	C (15.4) - NB	C (19.4) - NB
Project Driveway #1 at Lowe's entryway	U	N/A	N/A	A (0.0) - EB	A (0.0) - EB
Project Driveway #2/3 at Lowe's driveway	U	N/A	N/A	A (9.0) - SB	A (9.2) - SB

1. For unsignalized intersections, the level of service of the poorest performing minor approach is reported.
2. S = Signalized, U = Unsignalized
3. N/A = Not applicable

The existing intersections are shown to be operating at LOS C or better.

In the future conditions the study area intersections are projected to continue to operate at LOS C or better. The future conditions analysis also shows that no significant queueing is expected at the unsignalized study area intersection or driveways with the addition of the project traffic.

Therefore, the project is not expected to have a significant impact on the surrounding transportation network.

Capacity analysis reports are included in the **Appendix**.

8.0 Conclusion

The proposed 2,450 sf Taco Bell on Robert Smalls Parkway will be located in the southwest corner of the intersection of the Lowe's entryway (just west of Burton Hill Road) at Robert Smalls Parkway in Beaufort, SC.

Based on the results of the analysis, study area intersections are projected continue to operate acceptably in future conditions and the project is not expected to have a significant impact on the surrounding transportation network.

Appendix

Bihl Engineering, LLC

File Name : Burton Hill at Robert Smalls
Site Code : 00000000
Start Date : 2/5/2015
Page No : 1

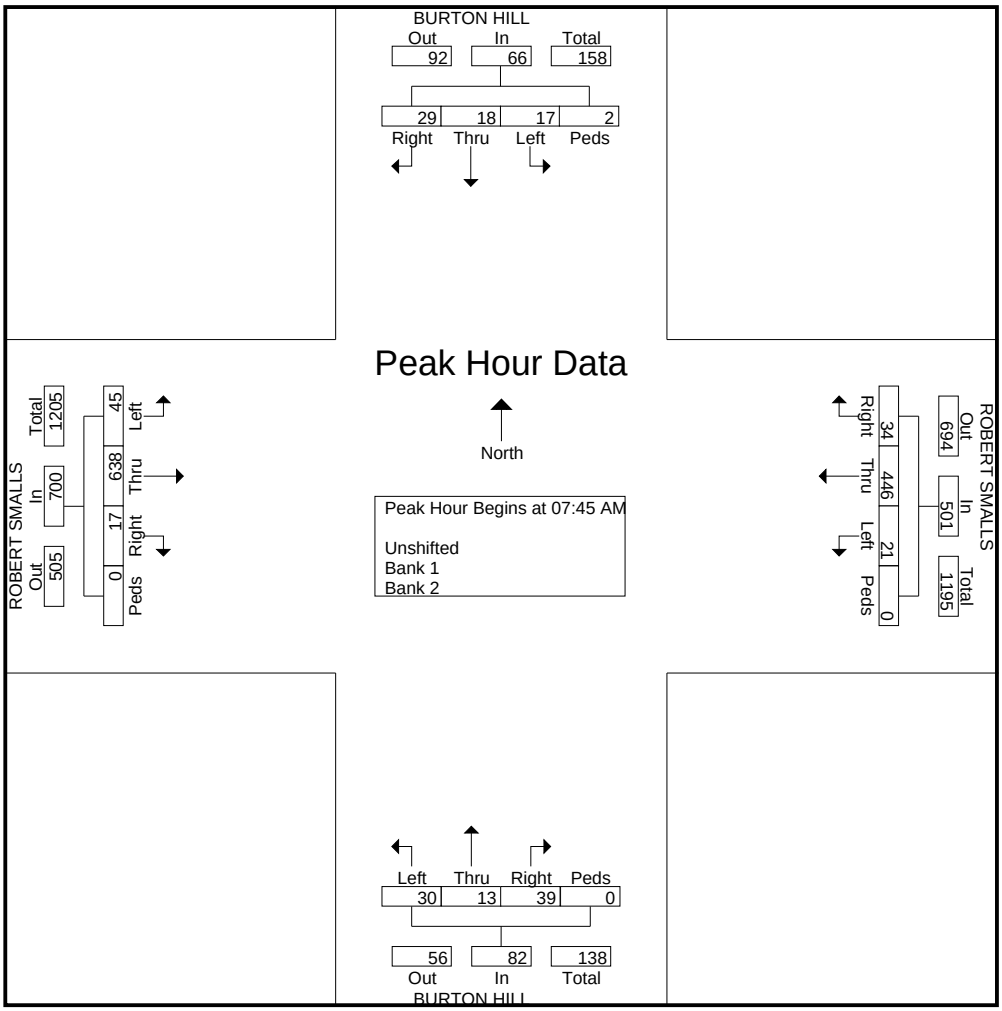
Groups Printed- Unshifted - Bank 1 - Bank 2

	BURTON HILL From North					ROBERT SMALLS From East					BURTON HILL From South					ROBERT SMALLS From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	1	2	3	0	6	2	76	4	0	82	7	5	4	0	16	5	91	1	0	97	201
07:15 AM	5	3	13	0	21	2	72	7	0	81	19	9	4	0	32	7	111	1	0	119	253
07:30 AM	6	4	7	0	17	2	72	2	0	76	4	2	3	0	9	4	118	3	0	125	227
07:45 AM	3	2	9	0	14	1	102	7	0	110	7	3	12	0	22	12	174	6	0	192	338
Total	15	11	32	0	58	7	322	20	0	349	37	19	23	0	79	28	494	11	0	533	1019
08:00 AM	4	6	7	0	17	7	110	13	0	130	9	2	7	0	18	9	163	2	0	174	339
08:15 AM	4	5	1	0	10	3	113	5	0	121	6	6	9	0	21	15	143	1	0	159	311
08:30 AM	6	5	12	2	25	10	121	9	0	140	8	2	11	0	21	9	158	8	0	175	361
08:45 AM	6	5	9	0	20	5	106	4	0	115	7	4	6	0	17	8	162	5	0	175	327
Total	20	21	29	2	72	25	450	31	0	506	30	14	33	0	77	41	626	16	0	683	1338
*** BREAK ***																					
04:00 PM	15	10	16	0	41	22	199	10	0	231	16	7	22	0	45	14	191	6	0	211	528
04:15 PM	10	8	13	1	32	12	201	7	0	220	10	6	17	0	33	14	213	13	0	240	525
04:30 PM	10	10	19	0	39	18	192	10	0	220	14	6	18	0	38	14	197	10	0	221	518
04:45 PM	13	2	21	0	36	13	218	14	0	245	17	3	14	0	34	10	203	10	0	223	538
Total	48	30	69	1	148	65	810	41	0	916	57	22	71	0	150	52	804	39	0	895	2109
05:00 PM	15	12	29	0	56	17	234	5	0	256	13	8	13	0	34	8	192	16	0	216	562
05:15 PM	13	10	17	0	40	17	270	4	0	291	12	10	22	0	44	13	178	16	0	207	582
05:30 PM	13	7	9	0	29	12	211	11	0	234	15	8	16	0	39	4	224	11	0	239	541
05:45 PM	11	4	7	0	22	11	184	10	0	205	13	7	9	2	31	5	201	12	0	218	476
Total	52	33	62	0	147	57	899	30	0	986	53	33	60	2	148	30	795	55	0	880	2161
Grand Total	135	95	192	3	425	154	2481	122	0	2757	177	88	187	2	454	151	2719	121	0	2991	6627
Apprch %	31.8	22.4	45.2	0.7		5.6	90	4.4	0		39	19.4	41.2	0.4		5	90.9	4	0		
Total %	2	1.4	2.9	0	6.4	2.3	37.4	1.8	0	41.6	2.7	1.3	2.8	0	6.9	2.3	41	1.8	0	45.1	
Unshifted	133	94	182	3	412	152	2454	122	0	2728	173	85	185	2	445	150	2701	120	0	2971	6556
% Unshifted	98.5	98.9	94.8	100	96.9	98.7	98.9	100	0	98.9	97.7	96.6	98.9	100	98	99.3	99.3	99.2	0	99.3	98.9
Bank 1	2	1	10	0	13	2	27	0	0	29	4	3	2	0	9	1	18	1	0	20	71
% Bank 1	1.5	1.1	5.2	0	3.1	1.3	1.1	0	0	1.1	2.3	3.4	1.1	0	2	0.7	0.7	0.8	0	0.7	1.1
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Bihl Engineering, LLC

File Name : Burton Hill at Robert Smalls
Site Code : 00000000
Start Date : 2/5/2015
Page No : 2

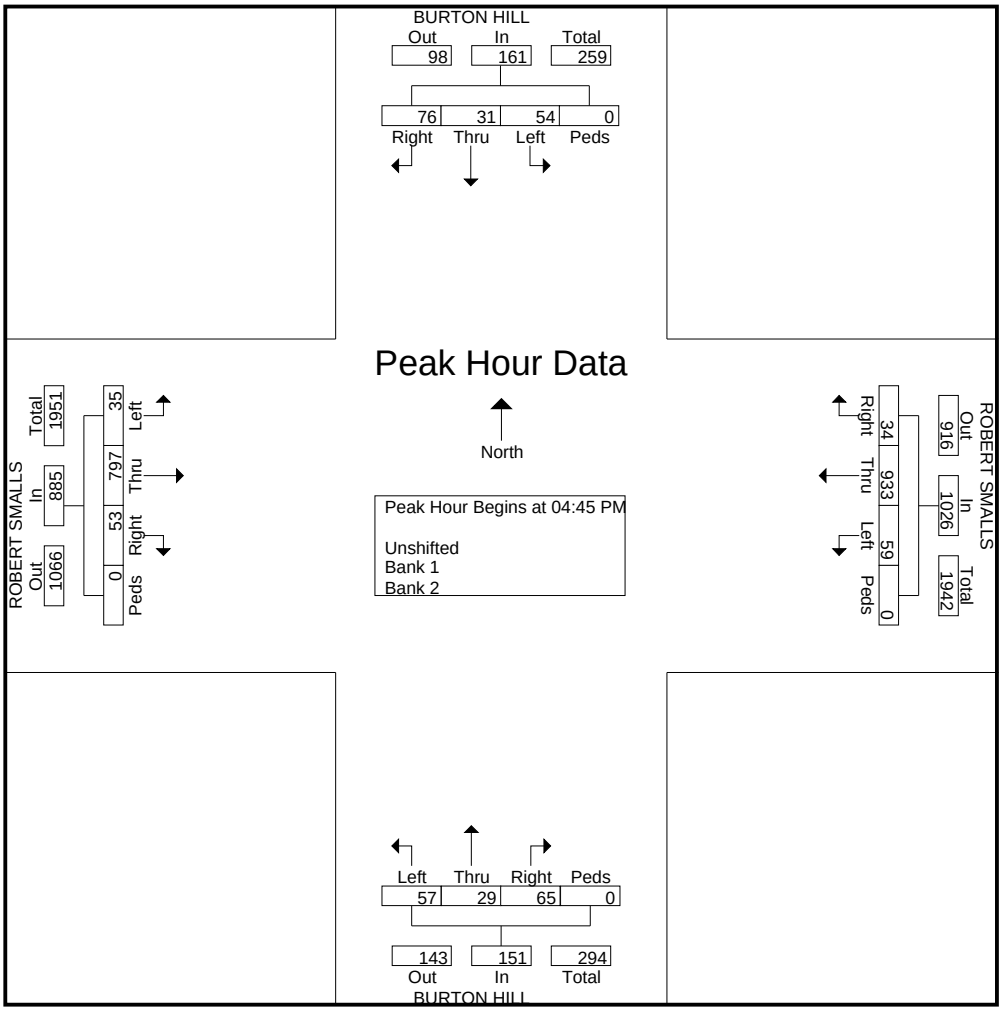
	BURTON HILL From North					ROBERT SMALLS From East					BURTON HILL From South					ROBERT SMALLS From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	3	2	9	0	14	1	102	7	0	110	7	3	**12**	0	**22**	12	**174**	6	0	**192**	338
08:00 AM	4	**6**	7	0	17	7	110	**13**	0	130	**9**	2	7	0	18	9	163	2	0	174	339
08:15 AM	4	5	1	0	10	3	113	5	0	121	6	**6**	9	0	21	**15**	143	1	0	159	311
08:30 AM	**6**	5	**12**	**2**	**25**	**10**	**121**	9	0	**140**	8	2	11	0	21	9	158	**8**	0	175	**361**
Total Volume	17	18	29	2	66	21	446	34	0	501	30	13	39	0	82	45	638	17	0	700	1349
% App. Total	25.8	27.3	43.9	3		4.2	89	6.8	0		36.6	15.9	47.6	0		6.4	91.1	2.4	0		
PHF	.708	.750	.604	.250	.660	.525	.921	.654	.000	.895	.833	.542	.813	.000	.932	.750	.917	.531	.000	.911	.934



Bihl Engineering, LLC

File Name : Burton Hill at Robert Smalls
Site Code : 00000000
Start Date : 2/5/2015
Page No : 3

	BURTON HILL From North					ROBERT SMALLS From East					BURTON HILL From South					ROBERT SMALLS From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	13	2	21	0	36	13	218	**14**	0	245	**17**	3	14	0	34	10	203	10	0	223	538
05:00 PM	**15**	**12**	**29**	0	**56**	**17**	234	5	0	256	13	8	13	0	34	8	192	**16**	0	216	562
05:15 PM	13	10	17	0	40	17	**270**	4	0	**291**	12	**10**	**22**	0	**44**	**13**	178	16	0	207	**582**
05:30 PM	13	7	9	0	29	12	211	11	0	234	15	8	16	0	39	4	**224**	11	0	**239**	541
Total Volume	54	31	76	0	161	59	933	34	0	1026	57	29	65	0	151	35	797	53	0	885	2223
% App. Total	33.5	19.3	47.2	0		5.8	90.9	3.3	0		37.7	19.2	43	0		4	90.1	6	0		
PHF	.900	.646	.655	.000	.719	.868	.864	.607	.000	.881	.838	.725	.739	.000	.858	.673	.890	.828	.000	.926	.955



Bihl Engineering, LLC

File Name : Lowes at Robert Smalls
Site Code : 00000000
Start Date : 2/5/2015
Page No : 1

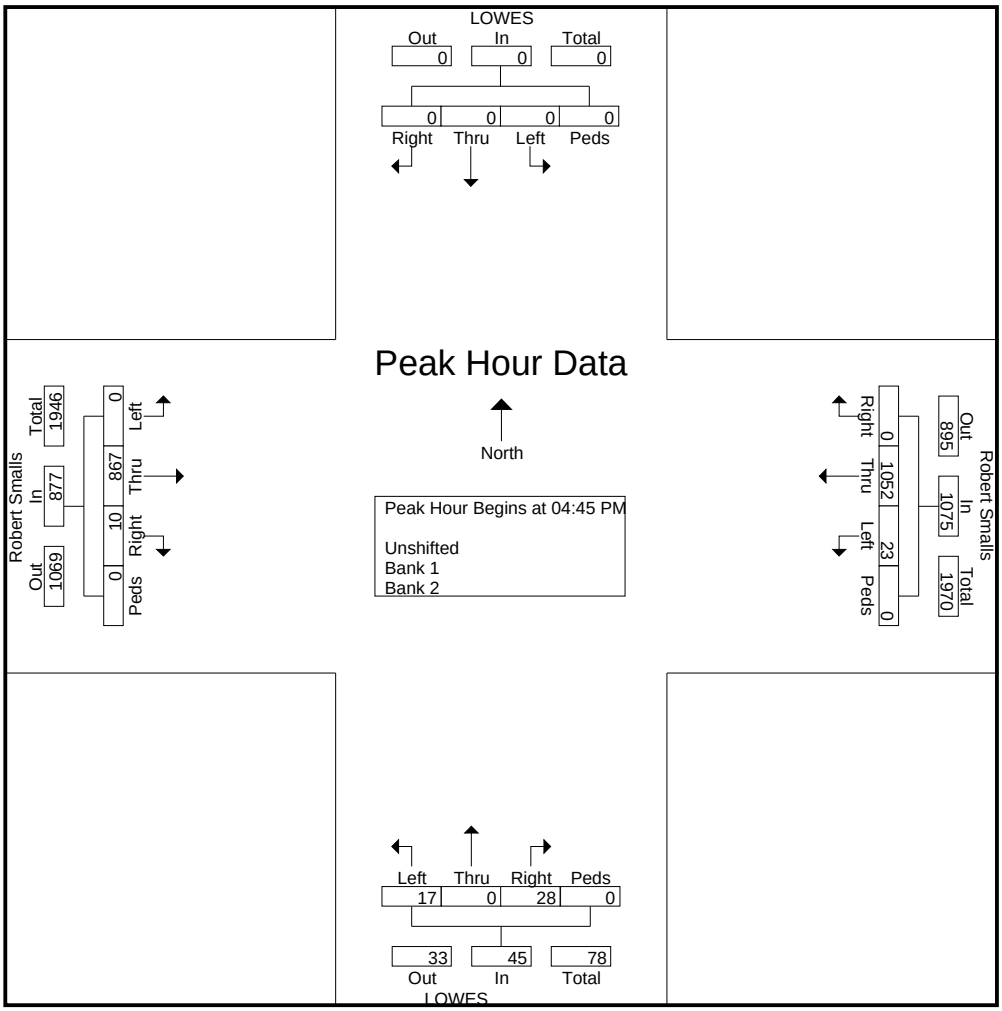
Groups Printed- Unshifted - Bank 1 - Bank 2

	LOWES From North					Robert Smalls From East					LOWES From South					Robert Smalls From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	78	1	0	80	0	0	1	0	1	0	78	0	0	78	159
07:15 AM	0	0	0	0	0	2	95	0	0	97	0	0	0	0	0	0	127	0	0	127	224
07:30 AM	0	0	0	0	0	1	100	0	0	101	0	0	1	0	1	0	100	1	0	101	203
07:45 AM	0	0	0	0	0	5	90	0	0	95	0	0	3	0	3	0	186	1	0	187	285
Total	0	0	0	0	0	9	363	1	0	373	0	0	5	0	5	0	491	2	0	493	871
08:00 AM	0	0	0	0	0	6	116	0	0	122	0	0	2	0	2	0	184	3	0	187	311
08:15 AM	0	0	0	0	0	3	120	0	0	123	1	0	2	0	3	0	159	1	0	160	286
08:30 AM	0	0	0	0	0	1	149	0	0	150	3	0	3	0	6	0	156	2	0	158	314
08:45 AM	0	0	0	0	0	6	126	0	0	132	0	0	1	0	1	0	190	3	0	193	326
Total	0	0	0	0	0	16	511	0	0	527	4	0	8	0	12	0	689	9	0	698	1237
*** BREAK ***																					
04:00 PM	0	0	0	0	0	3	239	0	0	242	3	0	12	0	15	0	200	5	0	205	462
04:15 PM	0	0	0	0	0	9	225	0	0	234	4	0	7	0	11	0	216	2	0	218	463
04:30 PM	0	0	0	0	0	8	210	0	0	218	1	0	10	0	11	0	224	3	0	227	456
04:45 PM	0	0	0	0	0	9	248	0	0	257	4	0	9	0	13	0	214	2	0	216	486
Total	0	0	0	0	0	29	922	0	0	951	12	0	38	0	50	0	854	12	0	866	1867
05:00 PM	0	0	0	0	0	3	226	0	0	229	6	0	8	0	14	0	230	5	0	235	478
05:15 PM	0	0	0	0	0	8	305	0	0	313	3	0	5	0	8	0	191	2	0	193	514
05:30 PM	0	0	0	0	0	3	273	0	0	276	4	0	6	0	10	0	232	1	0	233	519
05:45 PM	0	0	0	0	0	3	227	0	0	230	7	0	6	0	13	0	237	3	0	240	483
Total	0	0	0	0	0	17	1031	0	0	1048	20	0	25	0	45	0	890	11	0	901	1994
Grand Total	0	0	0	0	0	71	2827	1	0	2899	36	0	76	0	112	0	2924	34	0	2958	5969
Apprch %	0	0	0	0		2.4	97.5	0	0		32.1	0	67.9	0		0	98.9	1.1	0		
Total %	0	0	0	0	0	1.2	47.4	0	0	48.6	0.6	0	1.3	0	1.9	0	49	0.6	0	49.6	
Unshifted	0	0	0	0	0	69	2762	1	0	2832	35	0	76	0	111	0	2862	33	0	2895	5838
% Unshifted	0	0	0	0	0	97.2	97.7	100	0	97.7	97.2	0	100	0	99.1	0	97.9	97.1	0	97.9	97.8
Bank 1	0	0	0	0	0	2	65	0	0	67	1	0	0	0	1	0	62	1	0	63	131
% Bank 1	0	0	0	0	0	2.8	2.3	0	0	2.3	2.8	0	0	0	0.9	0	2.1	2.9	0	2.1	2.2
Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Bihl Engineering, LLC

File Name : Lowes at Robert Smalls
Site Code : 00000000
Start Date : 2/5/2015
Page No : 2

	LOWES From North					Robert Smalls From East					LOWES From South					Robert Smalls From West					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	0	0	0	0	**9**	248	0	0	257	4	0	**9**	0	13	0	214	2	0	216	486
05:00 PM	0	0	0	0	0	3	226	0	0	229	**6**	0	8	0	**14**	0	230	**5**	0	**235**	478
05:15 PM	0	0	0	0	0	8	**305**	0	0	**313**	3	0	5	0	8	0	191	2	0	193	514
05:30 PM	0	0	0	0	0	3	273	0	0	276	4	0	6	0	10	0	**232**	1	0	233	**519**
Total Volume	0	0	0	0	0	23	1052	0	0	1075	17	0	28	0	45	0	867	10	0	877	1997
% App. Total	0	0	0	0		2.1	97.9	0	0		37.8	0	62.2	0		0	98.9	1.1	0		
PHF	.000	.000	.000	.000	.000	.639	.862	.000	.000	.859	.708	.000	.778	.000	.804	.000	.934	.500	.000	.933	.962



INTERSECTION VOLUME DEVELOPMENT

Burton Hill Road at Robert Smalls Parkway
AM PEAK HOUR

Description	Burton Hill Road Northbound			Burton Hill Road Southbound			Robert Smalls Parkway Eastbound			Robert Smalls Parkway Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing 2015 AM Volumes	30	13	39	17	18	29	45	638	17	21	446	34
Heavy Vehicle %	2.0%			3.0%			1.0%			1.0%		
Peak Hour Factor	0.93			0.66			0.91			0.89		
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Approved Development Traffic												
2015 Background Traffic	30	13	39	17	18	29	45	638	17	21	446	34
New Project Trips												
Trip Distribution IN						10%					44%	
Trip Distribution OUT							10%	44%				
Pass-by Project Trips												
Trip Distribution IN												
Trip Distribution OUT												
New Trips	0	0	0	0	0	2	3	12	0	0	13	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	0	0	0	0	2	3	12	0	0	13	0
2015 Buildout Total	**30**	**13**	**39**	**17**	**18**	**31**	**48**	**650**	**17**	**21**	**459**	**34**

PM PEAK HOUR

Description	Burton Hill Road Northbound			Burton Hill Road Southbound			Robert Smalls Parkway Eastbound			Robert Smalls Parkway Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing 2015 PM Volumes	57	29	65	54	31	76	35	797	53	59	933	34
Heavy Vehicle %	2.0%			3.0%			1.0%			1.0%		
Peak Hour Factor	0.86			0.72			0.93			0.88		
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Approved Development Traffic												
2015 Background Traffic	57	29	65	54	31	76	35	797	53	59	933	34
New Project Trips												
Trip Distribution IN						10%					44%	
Trip Distribution OUT							10%	44%				
Pass-by Project Trips												
Trip Distribution IN												
Trip Distribution OUT												
New Trips	0	0	0	0	0	2	2	9	0	0	9	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	0	0	0	0	2	2	9	0	0	9	0
2015 Buildout Total	**57**	**29**	**65**	**54**	**31**	**78**	**37**	**806**	**53**	**59**	**942**	**34**

INTERSECTION VOLUME DEVELOPMENT

Lowe's Entryway at Robert Smalls Parkway
AM PEAK HOUR

Description	Lowe's Entryway Northbound			N/A Southbound			Robert Smalls Parkway Eastbound			Robert Smalls Parkway Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing 2015 AM Volumes	4	0	8	0	0	0	0	689	9	16	511	0
Heavy Vehicle %	1.0%			0.0%			2.0%			2.0%		
Peak Hour Factor	0.50			0.00			0.90			0.88		
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Approved Development Traffic												
2015 Background Traffic	4	0	8	0	0	0	0	689	9	16	511	0
New Project Trips												
Trip Distribution IN									44%	54%		
Trip Distribution OUT	44%		54%									
Pass-by Project Trips												
Trip Distribution IN								-50%	50%	50%	-50%	
Trip Distribution OUT	50%		50%									
New Trips	12	0	15	0	0	0	0	0	13	15	0	0
Pass-By Trips	13	0	13	0	0	0	0	-14	14	14	-14	0
Total Project Trips	25	0	28	0	0	0	0	-14	27	29	-14	0
2015 Buildout Total	**29**	**0**	**36**	**0**	**0**	**0**	**0**	**675**	**36**	**45**	**497**	**0**

PM PEAK HOUR

Description	Lowe's Entryway Northbound			N/A Southbound			Robert Smalls Parkway Eastbound			Robert Smalls Parkway Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing 2015 PM Volumes	17	0	28	0	0	0	0	867	10	23	1,052	0
Heavy Vehicle %	1.0%			0.0%			2.0%			2.0%		
Peak Hour Factor	0.80			0.00			0.93			0.86		
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Approved Development Traffic												
2015 Background Traffic	17	0	28	0	0	0	0	867	10	23	1,052	0
New Project Trips												
Trip Distribution IN									44%	54%		
Trip Distribution OUT	44%		54%									
Pass-by Project Trips												
Trip Distribution IN								-50%	50%	50%	-50%	
Trip Distribution OUT	50%		50%									
New Trips	8	0	11	0	0	0	0	0	9	11	0	0
Pass-By Trips	9	0	10	0	0	0	0	-10	10	11	-11	0
Total Project Trips	17	0	21	0	0	0	0	-10	19	22	-11	0
2015 Buildout Total	**34**	**0**	**49**	**0**	**0**	**0**	**0**	**857**	**29**	**45**	**1,041**	**0**

INTERSECTION VOLUME DEVELOPMENT

Project Driveway #1 at Lowe's Entryway
AM PEAK HOUR

Description	Lowe's Entryway Northbound			Lowe's Entryway Southbound			Project Driveway #1 Eastbound			N/A Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing 2015 AM Volumes	0	12	0	0	25	0	0	0	0	0	0	0
Heavy Vehicle %	1.0%			2.0%			0.0%			0.0%		
Peak Hour Factor	0.50			0.89			0.00			0.00		
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Approved Development Traffic												
2015 Background Traffic	0	12	0	0	25	0	0	0	0	0	0	0
New Project Trips												
Trip Distribution IN						98%						
Trip Distribution OUT		98%										
Pass-by Project Trips												
Trip Distribution IN						100%						
Trip Distribution OUT		100%										
New Trips	0	27	0	0	0	28	0	0	0	0	0	0
Pass-By Trips	0	26	0	0	0	28	0	0	0	0	0	0
Total Project Trips	0	53	0	0	0	56	0	0	0	0	0	0
2015 Buildout Total	**0**	**65**	**0**	**0**	**25**	**56**	**0**	**0**	**0**	**0**	**0**	**0**

PM PEAK HOUR

Description	Lowe's Entryway Northbound			Lowe's Entryway Southbound			Project Driveway #1 Eastbound			N/A Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing 2015 PM Volumes	0	45	0	0	33	0	0	0	0	0	0	0
Heavy Vehicle %	1.0%			2.0%			0.0%			0.0%		
Peak Hour Factor	0.80			0.88			0.00			0.00		
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Approved Development Traffic												
2015 Background Traffic	0	45	0	0	33	0	0	0	0	0	0	0
New Project Trips												
Trip Distribution IN						98%						
Trip Distribution OUT		98%										
Pass-by Project Trips												
Trip Distribution IN						100%						
Trip Distribution OUT		100%										
New Trips	0	19	0	0	0	20	0	0	0	0	0	0
Pass-By Trips	0	19	0	0	0	21	0	0	0	0	0	0
Total Project Trips	0	38	0	0	0	41	0	0	0	0	0	0
2015 Buildout Total	**0**	**83**	**0**	**0**	**33**	**41**	**0**	**0**	**0**	**0**	**0**	**0**

INTERSECTION VOLUME DEVELOPMENT

Project Driveway #2/3 at Lowe's Collector Road
AM PEAK HOUR

Description	N/A Northbound			Project Driveway #2/3 Southbound			Lowe's Collector Road Eastbound			Lowe's Collector Road Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing 2015 AM Volumes	0	0	0	0	0	0	0	25	0	0	12	0
Heavy Vehicle %		0.0%			0.0%			2.0%			1.0%	
Peak Hour Factor		0.00			0.00			0.89			0.50	
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Approved Development Traffic												
2015 Background Traffic	0	0	0	0	0	0	0	25	0	0	12	0
New Project Trips												
Trip Distribution IN												2%
Trip Distribution OUT				100%								
Pass-by Project Trips												
Trip Distribution IN												
Trip Distribution OUT				100%								
New Trips	0	0	0	28	0	0	0	0	0	0	0	1
Pass-By Trips	0	0	0	26	0	0	0	0	0	0	0	0
Total Project Trips	0	0	0	54	0	0	0	0	0	0	0	1
2015 Buildout Total	**0**	**0**	**0**	**54**	**0**	**0**	**0**	**25**	**0**	**0**	**12**	**1**

PM PEAK HOUR

Description	N/A Northbound			Project Driveway #2/3 Southbound			Lowe's Collector Road Eastbound			Lowe's Collector Road Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing 2015 PM Volumes	0	0	0	0	0	0	0	33	0	0	45	0
Heavy Vehicle %		0.0%			0.0%			2.0%			1.0%	
Peak Hour Factor		0.80			0.88			0.88			0.80	
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Approved Development Traffic												
2015 Background Traffic	0	0	0	0	0	0	0	33	0	0	45	0
New Project Trips												
Trip Distribution IN												2%
Trip Distribution OUT				100%								
Pass-by Project Trips												
Trip Distribution IN												
Trip Distribution OUT				100%								
New Trips	0	0	0	19	0	0	0	0	0	0	0	1
Pass-By Trips	0	0	0	19	0	0	0	0	0	0	0	0
Total Project Trips	0	0	0	38	0	0	0	0	0	0	0	1
2015 Buildout Total	**0**	**0**	**0**	**38**	**0**	**0**	**0**	**33**	**0**	**0**	**45**	**1**

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	689	9	16	511	4	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	88	88	50	50
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	766	10	18	581	8	16

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	776	0	1098	388
Stage 1	-	-	-	-	771	-
Stage 2	-	-	-	-	327	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	836	-	207	611
Stage 1	-	-	-	-	417	-
Stage 2	-	-	-	-	703	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	836	-	200	611
Mov Cap-2 Maneuver	-	-	-	-	319	-
Stage 1	-	-	-	-	417	-
Stage 2	-	-	-	-	681	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	12.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	319	611	-	-	836	-
HCM Lane V/C Ratio	0.025	0.026	-	-	0.022	-
HCM Control Delay (s)	16.6	11.1	-	-	9.4	0.1
HCM Lane LOS	C	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0.1	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	45	638	17	21	446	34	30	13	39	17	18	29
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1845	1845	1900
Adj Flow Rate, veh/h	49	701	19	24	501	38	32	14	42	26	27	44
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.89	0.89	0.89	0.93	0.93	0.93	0.66	0.66	0.66
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	3	3	3
Cap, veh/h	561	2117	57	469	2006	152	291	73	220	302	113	184
Arrive On Green	0.60	0.60	0.60	0.60	0.60	0.60	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	863	3520	95	729	3335	252	1324	411	1234	1329	632	1030
Grp Volume(v), veh/h	49	352	368	24	265	274	32	0	56	26	0	71
Grp Sat Flow(s),veh/h/ln	863	1770	1846	729	1770	1818	1324	0	1645	1329	0	1663
Q Serve(g_s), s	2.0	6.9	6.9	1.2	4.9	4.9	1.5	0.0	2.0	1.2	0.0	2.6
Cycle Q Clear(g_c), s	6.9	6.9	6.9	8.1	4.9	4.9	4.1	0.0	2.0	3.2	0.0	2.6
Prop In Lane	1.00		0.05	1.00		0.14	1.00		0.75	1.00		0.62
Lane Grp Cap(c), veh/h	561	1064	1110	469	1064	1094	291	0	294	302	0	297
V/C Ratio(X)	0.09	0.33	0.33	0.05	0.25	0.25	0.11	0.00	0.19	0.09	0.00	0.24
Avail Cap(c_a), veh/h	561	1064	1110	469	1064	1094	291	0	294	302	0	297
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.2	6.9	6.9	9.0	6.5	6.5	26.4	0.0	24.4	25.8	0.0	24.7
Incr Delay (d2), s/veh	0.3	0.8	0.8	0.2	0.6	0.5	0.8	0.0	1.4	0.6	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	3.6	3.7	0.3	2.5	2.6	0.6	0.0	1.0	0.5	0.0	1.3
LnGrp Delay(d),s/veh	8.5	7.8	7.7	9.2	7.1	7.1	27.2	0.0	25.9	26.4	0.0	26.6
LnGrp LOS	A	A	A	A	A	A	C		C	C		C
Approach Vol, veh/h		769			563			88			97	
Approach Delay, s/veh		7.8			7.2			26.4			26.5	
Approach LOS		A			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		50.0		20.0		50.0		20.0
Change Period (Y+Rc), s		7.9		7.5		7.9		7.5
Max Green Setting (Gmax), s		42.1		12.5		42.1		12.5
Max Q Clear Time (g_c+I1), s		8.9		5.2		10.1		6.1
Green Ext Time (p_c), s		8.9		0.4		8.9		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	9.8
HCM 2010 LOS	A

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	867	10	23	1052	17	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	86	86	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	932	11	27	1223	21	35

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	943	0	1603	472
Stage 1	-	-	-	-	938	-
Stage 2	-	-	-	-	665	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	723	-	96	538
Stage 1	-	-	-	-	341	-
Stage 2	-	-	-	-	473	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	723	-	85	538
Mov Cap-2 Maneuver	-	-	-	-	210	-
Stage 1	-	-	-	-	341	-
Stage 2	-	-	-	-	418	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	16.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	210	538	-	-	723	-
HCM Lane V/C Ratio	0.101	0.065	-	-	0.037	-
HCM Control Delay (s)	24.1	12.2	-	-	10.2	0.6
HCM Lane LOS	C	B	-	-	B	A
HCM 95th %tile Q(veh)	0.3	0.2	-	-	0.1	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	35	797	53	59	933	34	57	29	65	54	31	76
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1845	1845	1900
Adj Flow Rate, veh/h	38	857	57	67	1060	39	66	34	76	75	43	106
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.93	0.93	0.93	0.88	0.88	0.88	0.86	0.86	0.86	0.72	0.72	0.72
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	3	3	3
Cap, veh/h	321	2026	135	386	2094	77	222	92	205	255	84	208
Arrive On Green	0.60	0.60	0.60	0.60	0.60	0.60	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	511	3369	224	608	3482	128	1234	513	1147	1266	473	1166
Grp Volume(v), veh/h	38	450	464	67	539	560	66	0	110	75	0	149
Grp Sat Flow(s),veh/h/ln	511	1770	1823	608	1770	1840	1234	0	1660	1266	0	1639
Q Serve(g_s), s	3.2	9.5	9.5	4.6	12.2	12.2	3.6	0.0	4.1	3.9	0.0	5.8
Cycle Q Clear(g_c), s	15.4	9.5	9.5	14.2	12.2	12.2	9.3	0.0	4.1	8.0	0.0	5.8
Prop In Lane	1.00		0.12	1.00		0.07	1.00		0.69	1.00		0.71
Lane Grp Cap(c), veh/h	321	1064	1097	386	1064	1107	222	0	296	255	0	293
V/C Ratio(X)	0.12	0.42	0.42	0.17	0.51	0.51	0.30	0.00	0.37	0.29	0.00	0.51
Avail Cap(c_a), veh/h	321	1064	1097	386	1064	1107	222	0	296	255	0	293
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.4	7.5	7.5	11.2	8.0	8.0	30.2	0.0	25.3	28.8	0.0	26.0
Incr Delay (d2), s/veh	0.8	1.2	1.2	1.0	1.7	1.7	3.4	0.0	3.5	2.9	0.0	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	5.0	5.1	0.9	6.3	6.6	1.4	0.0	2.2	1.6	0.0	3.1
LnGrp Delay(d),s/veh	13.2	8.7	8.7	12.2	9.7	9.6	33.6	0.0	28.8	31.7	0.0	32.2
LnGrp LOS	B	A	A	B	A	A	C		C	C		C
Approach Vol, veh/h		952			1166			176			224	
Approach Delay, s/veh		8.9			9.8			30.6			32.0	
Approach LOS		A			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		50.0		20.0		50.0		20.0
Change Period (Y+Rc), s		7.9		7.5		7.9		7.5
Max Green Setting (Gmax), s		42.1		12.5		42.1		12.5
Max Q Clear Time (g_c+I1), s		17.4		10.0		16.2		11.3
Green Ext Time (p_c), s		15.0		0.5		15.5		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	12.9
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	1.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	675	36	45	497	29	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	88	88	50	50
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	750	40	51	565	58	72

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	790	0	1155	395
Stage 1	-	-	-	-	770	-
Stage 2	-	-	-	-	385	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	826	-	190	604
Stage 1	-	-	-	-	417	-
Stage 2	-	-	-	-	657	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	826	-	173	604
Mov Cap-2 Maneuver	-	-	-	-	299	-
Stage 1	-	-	-	-	417	-
Stage 2	-	-	-	-	598	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	15.4
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	299	604	-	-	826	-
HCM Lane V/C Ratio	0.194	0.119	-	-	0.062	-
HCM Control Delay (s)	19.9	11.8	-	-	9.6	0.4
HCM Lane LOS	C	B	-	-	A	A
HCM 95th %tile Q(veh)	0.7	0.4	-	-	0.2	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	48	650	17	21	459	34	30	13	39	17	18	31
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1845	1845	1900
Adj Flow Rate, veh/h	53	714	19	24	516	38	32	14	42	26	27	47
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.89	0.89	0.89	0.93	0.93	0.93	0.66	0.66	0.66
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	3	3	3
Cap, veh/h	509	1967	52	424	1867	137	347	91	273	361	134	233
Arrive On Green	0.56	0.56	0.56	0.56	0.56	0.56	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	851	3522	94	721	3343	246	1320	411	1234	1329	605	1054
Grp Volume(v), veh/h	53	359	374	24	273	281	32	0	56	26	0	74
Grp Sat Flow(s),veh/h/ln	851	1770	1846	721	1770	1819	1320	0	1645	1329	0	1659
Q Serve(g_s), s	2.4	7.9	7.9	1.3	5.6	5.7	1.4	0.0	1.9	1.1	0.0	2.5
Cycle Q Clear(g_c), s	8.1	7.9	7.9	9.2	5.6	5.7	4.0	0.0	1.9	3.0	0.0	2.5
Prop In Lane	1.00		0.05	1.00		0.14	1.00		0.75	1.00		0.64
Lane Grp Cap(c), veh/h	509	988	1031	424	988	1016	347	0	364	361	0	367
V/C Ratio(X)	0.10	0.36	0.36	0.06	0.28	0.28	0.09	0.00	0.15	0.07	0.00	0.20
Avail Cap(c_a), veh/h	509	988	1031	424	988	1016	347	0	364	361	0	367
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.2	8.6	8.6	11.1	8.1	8.1	23.8	0.0	22.0	23.2	0.0	22.2
Incr Delay (d2), s/veh	0.4	1.0	1.0	0.3	0.7	0.7	0.5	0.0	0.9	0.4	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	4.1	4.2	0.3	2.9	3.0	0.6	0.0	1.0	0.5	0.0	1.3
LnGrp Delay(d),s/veh	10.6	9.6	9.5	11.4	8.8	8.7	24.3	0.0	22.9	23.6	0.0	23.4
LnGrp LOS	B	A	A	B	A	A	C		C	C		C
Approach Vol, veh/h		786			578			88			100	
Approach Delay, s/veh		9.6			8.9			23.4			23.5	
Approach LOS		A			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		47.0		23.0		47.0		23.0
Change Period (Y+Rc), s		7.9		7.5		7.9		7.5
Max Green Setting (Gmax), s		39.1		15.5		39.1		15.5
Max Q Clear Time (g_c+I1), s		10.1		5.0		11.2		6.0
Green Ext Time (p_c), s		8.9		0.6		8.8		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	11.0
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	0	0	65	25	57
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	50	50	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	130	28	64

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	125	46	92	0	-	0
Stage 1	60	-	-	-	-	-
Stage 2	65	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	857	1014	1501	-	-	-
Stage 1	955	-	-	-	-	-
Stage 2	950	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	857	1014	1501	-	-	-
Mov Cap-2 Maneuver	857	-	-	-	-	-
Stage 1	955	-	-	-	-	-
Stage 2	950	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1501	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	0	25	12	1	54	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	50	50	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	28	24	2	60	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	26	0	-	0	53	25
Stage 1	-	-	-	-	25	-
Stage 2	-	-	-	-	28	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1588	-	-	-	955	1051
Stage 1	-	-	-	-	998	-
Stage 2	-	-	-	-	995	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1588	-	-	-	955	1051
Mov Cap-2 Maneuver	-	-	-	-	955	-
Stage 1	-	-	-	-	998	-
Stage 2	-	-	-	-	995	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1588	-	-	-	955
HCM Lane V/C Ratio	-	-	-	-	0.063
HCM Control Delay (s)	0	-	-	-	9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	857	29	45	1041	34	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	86	86	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	922	31	52	1210	42	61

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	953	0	1647	476
Stage 1	-	-	-	-	937	-
Stage 2	-	-	-	-	710	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	717	-	90	535
Stage 1	-	-	-	-	342	-
Stage 2	-	-	-	-	448	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	717	-	70	535
Mov Cap-2 Maneuver	-	-	-	-	190	-
Stage 1	-	-	-	-	342	-
Stage 2	-	-	-	-	349	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.5	19.4
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	190	535	-	-	717	-
HCM Lane V/C Ratio	0.224	0.114	-	-	0.073	-
HCM Control Delay (s)	29.3	12.6	-	-	10.4	1.1
HCM Lane LOS	D	B	-	-	B	A
HCM 95th %tile Q(veh)	0.8	0.4	-	-	0.2	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	37	806	53	59	942	34	57	29	65	54	31	78
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1845	1845	1900
Adj Flow Rate, veh/h	40	867	57	67	1070	39	66	34	76	75	43	108
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.93	0.93	0.93	0.88	0.88	0.88	0.86	0.86	0.86	0.72	0.72	0.72
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	3	3	3
Cap, veh/h	307	1980	130	371	2045	75	239	99	221	274	90	226
Arrive On Green	0.59	0.59	0.59	0.59	0.59	0.59	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	506	3372	222	603	3483	127	1231	513	1147	1266	466	1171
Grp Volume(v), veh/h	40	455	469	67	544	565	66	0	110	75	0	151
Grp Sat Flow(s),veh/h/ln	506	1770	1824	603	1770	1840	1231	0	1660	1266	0	1638
Q Serve(g_s), s	3.6	10.0	10.0	4.9	12.8	12.8	3.5	0.0	4.0	3.8	0.0	5.7
Cycle Q Clear(g_c), s	16.4	10.0	10.0	14.9	12.8	12.8	9.3	0.0	4.0	7.8	0.0	5.7
Prop In Lane	1.00		0.12	1.00		0.07	1.00		0.69	1.00		0.72
Lane Grp Cap(c), veh/h	307	1039	1071	371	1039	1081	239	0	320	274	0	316
V/C Ratio(X)	0.13	0.44	0.44	0.18	0.52	0.52	0.28	0.00	0.34	0.27	0.00	0.48
Avail Cap(c_a), veh/h	307	1039	1071	371	1039	1081	239	0	320	274	0	316
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.5	8.0	8.0	12.2	8.6	8.6	29.2	0.0	24.4	27.8	0.0	25.1
Incr Delay (d2), s/veh	0.9	1.3	1.3	1.1	1.9	1.8	2.8	0.0	2.9	2.4	0.0	5.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	5.2	5.3	0.9	6.7	7.0	1.4	0.0	2.1	1.5	0.0	3.0
LnGrp Delay(d),s/veh	14.4	9.4	9.3	13.2	10.5	10.4	32.1	0.0	27.3	30.2	0.0	30.2
LnGrp LOS	B	A	A	B	B	B	C		C	C		C
Approach Vol, veh/h		964			1176			176			226	
Approach Delay, s/veh		9.6			10.6			29.1			30.2	
Approach LOS		A			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		49.0		21.0		49.0		21.0
Change Period (Y+Rc), s		7.9		7.5		7.9		7.5
Max Green Setting (Gmax), s		41.1		13.5		41.1		13.5
Max Q Clear Time (g_c+I1), s		18.4		9.8		16.9		11.3
Green Ext Time (p_c), s		14.4		0.7		15.0		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	13.2
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	0	0	83	33	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	80	80	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	104	38	47

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	113	42	84	0	-	0
Stage 1	61	-	-	-	-	-
Stage 2	52	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	872	1019	1511	-	-	-
Stage 1	954	-	-	-	-	-
Stage 2	964	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	872	1019	1511	-	-	-
Mov Cap-2 Maneuver	872	-	-	-	-	-
Stage 1	954	-	-	-	-	-
Stage 2	964	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1511	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	0	33	45	1	38	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	88	88	80	80	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	38	56	1	42	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	58	0	-	0	95	57
Stage 1	-	-	-	-	57	-
Stage 2	-	-	-	-	38	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1546	-	-	-	905	1009
Stage 1	-	-	-	-	966	-
Stage 2	-	-	-	-	984	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1546	-	-	-	905	1009
Mov Cap-2 Maneuver	-	-	-	-	905	-
Stage 1	-	-	-	-	966	-
Stage 2	-	-	-	-	984	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1546	-	-	-	905
HCM Lane V/C Ratio	-	-	-	-	0.047
HCM Control Delay (s)	0	-	-	-	9.2
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Tree Mitigation Chart Example

SCHEDULE OF TREES TO BE SAVED

TREE TYPE	6"	8"	9"	10"	11"	12"	13"	14"	15"	16"	17"	18"	19"	20"	21"	22"	23"	24"	25"	26"	27"	29"	30"	31"	35"	TOTALS (TYPE)
LIVE OAK																										-
OAK			1	1		1		1	1				1													6
PINE			1	1	1	2	1	1		2		5		1		1	1	1								18
GUM		1		1	3	4	1	1	1	1									1							14
HICKORY		1																								1
TOTALS (SIZE)		**2**	**2**	**3**	**4**	**7**	**2**	**3**	**2**	**3**	**-**	**5**	**1**	**1**	**-**	**1**	**1**	**1**	**1**	**-**	**-**	**-**	**-**	**-**	**-**	**39**

SCHEDULE OF TREES TO BE REMOVED

TREE TYPE	6"	8"	9"	10"	11"	12"	13"	14"	15"	16"	17"	18"	19"	20"	21"	22"	23"	24"	25"	26"	27"	29"	30"	31"	35"	TOTALS (TYPE)
LIVE OAK								1	1	1										1	1		1			6
OAK				2	2	3		1			1			1												10
PINE		1	1		2		1	1		1	3	1	1	1		1		1	2	1			1	1	1	21
GUM		2	9	4	3	8	2	1			1															30
HICKORY																										-
MAGNOLIA	1																									1
TOTALS (SIZE)	**1**	**3**	**10**	**6**	**7**	**11**	**3**	**4**	**1**	**2**	**5**	**1**	**1**	**2**	**-**	**1**	**-**	**1**	**2**	**2**	**1**	**-**	**2**	**1**	**1**	**48**

Summation:

Caliper inches of grand trees removed: 348 (highlighted in yellow)

Caliper inches of trees retained that can be used for mitigation: 480 (highlighted in green)

Caliper inches of hardwood trees planted on site per landscape plan: Red Maple- 5 @ 2.5"=12.5"; Amer. Elm-2 @3"=6"; 2 Cabbage Palm=**18.6"**

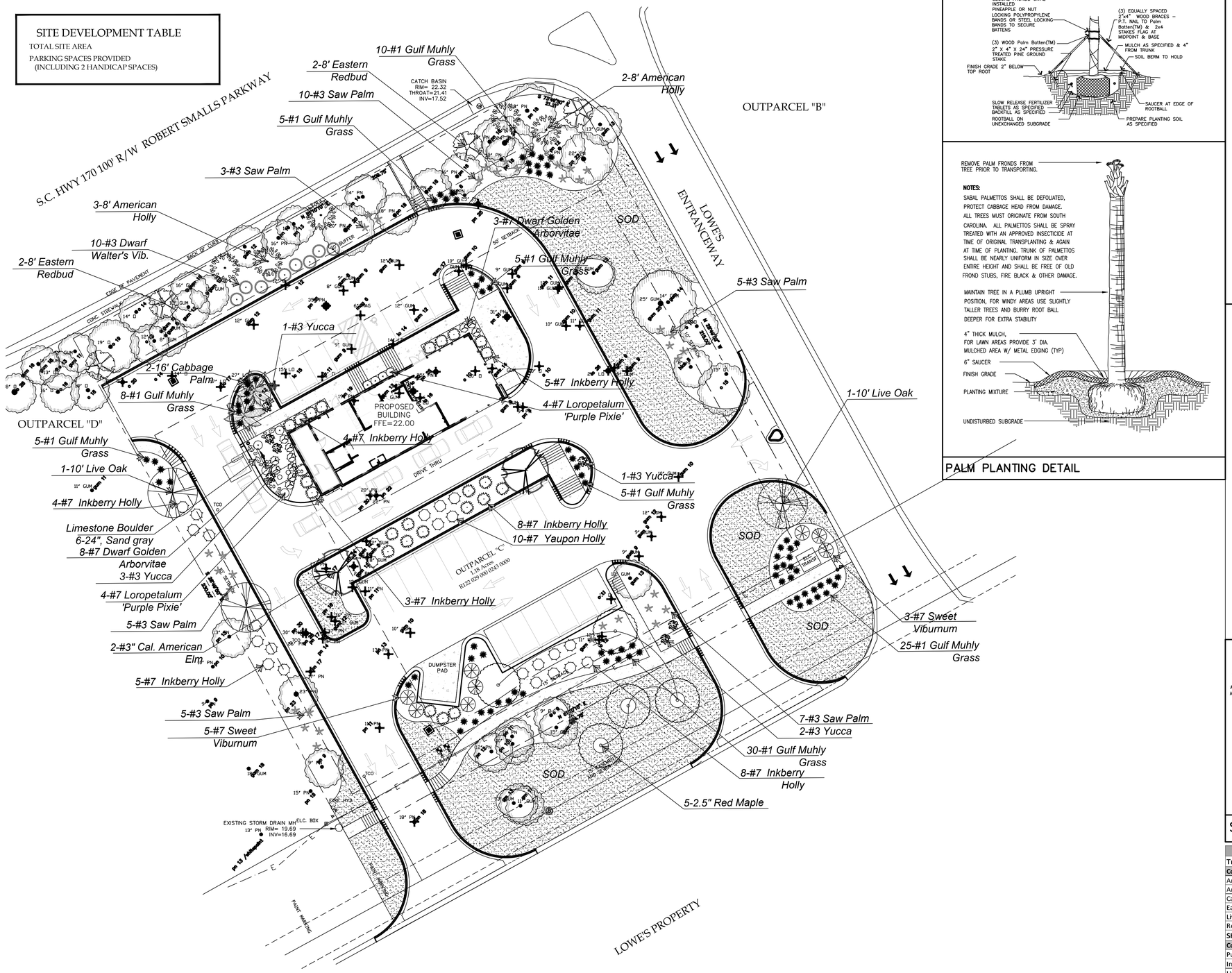
Unmitigated caliper inches subject to reforestation fee: 0 (348-480-18.6=-150.6")

Reforestation fee amount due: $0

SITE DEVELOPMENT TABLE

TOTAL SITE AREA

PARKING SPACES PROVIDED
(INCLUDING 2 HANDICAP SPACES)



LANDSCAPE PLAN
SCALE: 1.0"=20'

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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PALM PLANTING DETAIL

LANDSCAPE NOTES:

1. Materials list was prepared for estimating purposes, contractor shall make own quantity take-off using drawings and specifications to determine quantities to his satisfaction, reporting promptly any discrepancies which may effect bidding.

2. Root types may be freely substituted in case of balled and burlapped or container grown, all other specifications to remain unchanged. Now plant or variety substitutions shall be approved without approval from the owner or LA.

3. Contractor to verify that all plant materials are available as specified when proposal is submitted.

4. See tree, shrub, and ground cover planting details and special provisions for planting specifications. All plantings All plantings shall be guaranteed for 1 year from the date of acceptance.

5. Top soil shall be added to within 1" of top of curb / edge of pavement

6. "Treegator" portable or drip irrigation systems are required for trees during establishment period.

7. Contractor shall located and protect underground utilities during construction and is responsible for any damage to utilities which may occur as a result of his negligence in the execution of work.

8. All trees not located in plant beds must have a mulch ring at least 4' in diameter. All plant beds, tree rings, and disturbed areas to recieve 3" deep longleaf pinestraw mulch.

9. GUARANTEE:
The contractor shall guarantee all workmanship and plant material to be free of defects for a period of one (1) year from final acceptance of the project. Contractor shall replace any plant material found to be defective within the period of guarantee at no cost to the owner, except repairs or replacement necessitated by damage by others or dieback due to insufficient irrigation/watering schedule. Contractor to maintain the plantins and control weeds in mulch areas through the duration of construction until final acceptance.

10. All plant material must meet all minimum size/height standards and must comply with the american standard for nursery stock guidelines.

11. All sizes specified are a minimum size required at the time of planting based nursery stock availability at time of installation.

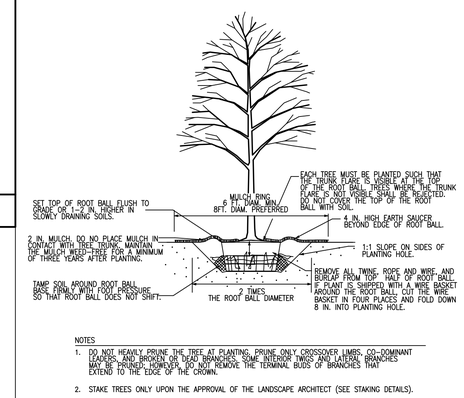
13. Median soil based to be inspected prior to plant installation. All debris from dot construction to be removed and soil amended as needed for positive sheet flow to gutter.

14. A drip irrigation system shall be installed for all plants and at least one zone for zoysia sod.

15. All plant bed and sod areas to recieve 100% irrigation coverage.
The underground irrigation system shall comply with all local codes and regulations and also comply with the latest national electric code rules for all electric works and materials. System shal incorporate separate zones for grass and shrub areas. avoid over spraying on to roads, parking, and sidewalks. Contractor shall use flex risers or swing joints adjacent to street and parking areas.

16. In plant schedule, plants notes as "specimen", shall be selected by the landscape architect at the nursery or photos of the planting stock shall be submitted to the landscape architect for approval.

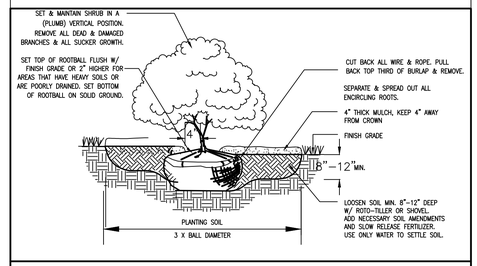
17. Pre-emergent herbicide shall be applied to planting areas prior to landscape installation and according to manufacturer's instructions.



NOTES
1. DO NOT HEAVILY PRUNE THE TREE AT PLANTING. PRUNE ONLY CROSSOVER LIMBS. CO-DOMINANT LEADERS, AND BROKEN OR DEAD BRANCHES. SOME INTERIOR TWIGS AND LATERAL BRANCHES MAY BE PRUNED. HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.

2. STAKE TREES ONLY UPON THE APPROVAL OF THE LANDSCAPE ARCHITECT (SEE STAKING DETAILS).

TREE PLANTING DETAIL
N.T.S.



SHRUB PLANTING DETAIL

TACO BELL PLANT SCHEDULE					
Trees:					
Common Name	**Botanical Name**	**Height**	**Spread**	**Gallon**	**QTY**
American Elm	*Ulmus american*	10'	8'	3"	2
American Holly	*Ilex opaca*	8'	6'	B&B	5
Cabbage Palm	*Sabal Palmetto*	16'	10'	B&B	2
Eastern Redbud	*Cercis Canadensis*	8'	6'	B&B	4
Live Oak	*Quercus virginiana*	10'	8'	2.5"	3
Red Maple	*Acer rubrum*	8'	6'	2.5"	5
SHRUBS:					
Common Name	**Botanical Name**	**Height**	**Spread**	**Gallon**	**QTY**
Purple Pixie Fringe flower	*Loropetalum chinensis 'Purple Pixie'*	12"	14"	7	8
Inkberry Holly	*Illex glabra*	18"	18"	3	34
Upright Yaupon Holly	*Ilex vomitoria*	24"	15"	7	13
Dwarf Golden Arborvitea	*Thuja occidentalis 'Rheingold'*	24"	24"	7	11
Sweet Viburnum	*Viburnum odoratissimum*	42"	30"	7	8
Dwarf Walter's Viburnum	*Viburnum obovatum 'Densa'*	18"	18"	3	10
Saw Palmetto	*Serenoa repens*	42"	30"	7	36
Spanish Bayonet	*Yucca aloifolia*	~	~	6	6
GROUNDCOVERS & PERENNIALS:					
Common Name	**Botanical Name**	**Height**	**Spread**	**Gallon**	**QTY**
Gulf Muhly Grass	*Muhlenbergia capillaris*	12-15"	6-8"	1	93
GRASS & MULCH:					
Mulch	Pine Straw				6000
Sod	Centipede (Eremochloa ophiuroides)				4100
IRRIGATION:					
Item	**Notes**				**QTY**
Irrigation system	Drip system with automatic timer				6

State of South Carolina
REGISTERED LANDSCAPE ARCHITECT
No. 1076
JOHN MICHAEL BROCK

No.	Issue / Revision Description	Date
2	Per Staff comments	051415
1	Per DRB comments	033115

TACO BELL
ROBERT SMALLS PKWY
Beaufort County, South Carolina

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Drawn By:	*M. Brock*
Drawn Date:	*02.20.15*
Chk'd By:	*M. Brock*
Project ID:	*14163*

Landscape Plan
Sheet No.
LS-101

SHEET 1 OF 1

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